Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*IDC **01** 00:09:41.7±0.7, 50.°91N×137.°09E, h0km, mb3.6/14, mbtmp3.6/17, ML3.1/3, MS3.3/13, Error ellipse: s-maj=17.9km s-min=12.5km az=142.0*

*MOS **01** 00:09:41.1±1.4, 50.°88N×137.°21E, h11km, mb4.2/7, Error ellipse: s-maj=12.3km s-min=8.6km az=91.4*

MOS Felt (IV) at Gorniy, Solnechniy, Hurmuli, Gorin, Kondon, Amursk, Boctor, Komsomol'sk-na-Amure; (III) at Harpichan, Evoron.

*SKHL **01** 00:09:44.2±0.4, 51.°09N×136.°97E, h18km±5km, mb4.9/7, Ms4.1/6, msh4.1/6, Felt (IV) at Khurmuly, Gorin, Boktor; (III-IV) at Kondon, Kharpichan;(III) at Solnechny, Gorny, Evoron, Komsomolsk na Amure, Amursk*

ISC 01 00:09:43.7±0.4, 51.°04N±0.°03×136.°89E±0.°02, h10km, n64, σ2s31/79, mb3.6/17, MS3.7/8, 2C-6D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GRNR	**Gornyy**	**0.40**	**228**	⇓*i*P		**Pb**	**00 09 53.0**	**0.0**
GRNR				*e*S		**Sb**	**00 09 59.4**	**+0.2**
GRNR				pmax	pmax			
	comp=E,2μm,0.5s							
GRNR				pmax	pmax			
	comp=N,3μm,0.4s							
GRNR				pmax	pmax			
	comp=Z,3μm,0.4s							
GRNR				smax	smax			
	comp=N,6μm,0.3s							
GRNR	**Gornyy**	**0.40**	**228**	⇓*i*Pg		**Pb**	**00 09 52.9**	**0.0**
GRNR				AMB	AMB		00 09 53.2	
	comp=N,4μm,0.2s							
GRNR				*e*Sg		**Sb**	**00 09 59.4**	**+0.2**
GRNR				A	A		00 10 00.3	
	comp=N,9μm,0.2s							
KHBR	**Khabarovsk**	**2.83**	**206**	*e*rx	rx		00 10 34.8	
KHBR				*e*Pg		**Pg**	**00 10 36.9**	**-1.1**
KHBR				AMB	AMB		00 10 39.1	
	comp=N,183nm,0.2s							
KHBR				*e*Sg		**Sg**	**00 11 15.1**	**+0.5**
KHBR				A	A		00 11 18.6	
	comp=N,3μm,0.4s							
KHBR				AMS	AMS		00 11 57.0	
	comp=N,1μm,4.0s							
KHBR				AMS	AMS		00 11 57.0	
	comp=N,1μm,4.0s							
KHBR				AMS	AMS		00 11 57.0	
	comp=N,950nm,4.0s							
NKL	**Nikolayevsk**	**3.15**	**46**	*e*P		**Pb**	**00 10 39.8**	**0.0**
NKL				pmax	pmax			
	comp=N,218nm,0.5s							
NKL				pmax	pmax			
	comp=E,286nm,0.4s							
NKL				pmax	pmax			
	comp=Z,434nm,0.4s							
NKL	**Nikolayevsk**	**3.15**	**46**	*e*Pn		**Pn**	**00 10 31.9**	**-1.4**
NKL				*e*Pg		**Pb**	**00 10 39.7**	**0.0**
NKL				AMB	AMB		00 10 40.8	
	comp=Z,430nm,0.4s							
NKL				*e*Sg		**Sb**	**00 11 20.4**	**+2.2**
NKL				A	A		00 11 22.4	
	comp=Z,1μm,0.5s							
NKL				A	A		00 11 22.4	
	comp=Z,1μm,0.5s							
NKL				AMS	AMS		00 11 55.3	
	comp=Z,2μm,3.0s							
EKMR	**Ekimchan**	**3.17**	**311**	*e*Pn		**Pn**	**00 10 33.5**	**-0.2**
EKMR				*e*Pg		**Pb**	**00 10 41.7**	**+1.6**
EKMR				AMB	AMB		00 10 44.3	
	comp=Z,345nm,0.8s							
EKMR				*e*Sg		**Sg**	**00 11 22.8**	**-2.7**
EKMR				A	A		00 11 26.9	
	comp=Z,1μm,0.8s							
TYV	**Tymovskoe**	**3.65**	**91**	*e*P		**Pb**	**00 10 49.6**	**+1.3**
TYV				pmax	pmax			
	comp=Z,200nm,0.9s							
TYV				pmax	pmax			
	comp=Z,102nm,0.8s							
TYV	**Tymovskoe**	**3.65**	**91**	*e*Pg		**Pb**	**00 10 49.6**	**+1.3**
TYV				*e*Sg		**Sb**	**00 11 37.4**	**+4.8**
TYV				A	A		00 11 43.0	
	comp=Z,1μm,0.7s							
TYV				AMS	AMS		00 12 44.0	
	comp=Z,970nm,7.0s							
TYV				AMS	AMS		00 12 44.1	
	comp=Z,1μm,8.0s							
KLR	**Kul'dur**	**3.77**	**243**	Pn		**Pn**	**00 10 43.3**	**+1.3**
	comp=Z,1.7nm,0.3s,baz=62,slow=13,SNR=25							
KLR				Pg		**Pg**	**00 10 53.2**	**-2.7**
	comp=Z,37nm,0.3s,baz=51,slow=19,SNR=58							
KLR				Lg	Lg		00 11 44.5	
	comp=Z,106nm,0.3s,baz=338,slow=23,SNR=20							
KLR				LR	LR		00 12 29.4	
	comp=Z,342nm,20.2s,baz=81,slow=44 comp=Z,4.9nm,0.2s							
KLR	**Kul'dur**	**3.77**	**243**	*e*Pn		**Pn**	**00 10 43.2**	**+1.3**
KLR				*e*Pg		**Pg**	**00 10 53.7**	**-2.2**
KLR				*e*Sg		**Sg**	**00 11 44.3**	**-0.5**
UGL	**Uglegorsk**	**3.87**	**119**	*e*P		**Pg**	**00 10 55.7**	**-2.1**
UGL				pmax	pmax			
	comp=Z,200nm,0.8s							
UGL				pmax	pmax			
	comp=Z,600nm,1.2s							
UGL	**Uglegorsk**	**3.87**	**119**	*e*Pg		**Pb**	**00 10 53.9**	**+1.9**
UGL				AMB	AMB		00 10 56.3	
	comp=Z,195nm,0.8s							
UGL				*e*Sn		**Sn**	**00 11 27.8**	**-0.9**
UGL				*e*Sg		**Sg**	**00 11 45.4**	**-2.5**
UGL				AMS	AMS		00 12 41.3	
	comp=Z,1μm,6.0s							
UGL				AMS	AMS		00 12 41.3	
	comp=Z,1μm,6.0s							
OKH	**Okha**	**4.48**	**54**	*e*Sg		**Sg**	**00 12 05.2**	**-2.2**
YSS	**Yuzh-Sakhalins**	**5.62**	**134**	*e*P		**Pn**	**00 11 08.4**	**+1.1**
YSS				*e*			00 12 09.5	
YSS				pmax	pmax			
	comp=Z,40nm,1.1s							
YSS				smax	smax			
	comp=N,50nm,0.8s							
YSS				smax	smax			
	comp=E,50nm,0.9s							
YSS				MLR	MLR			
	comp=Z,400nm,11.0s							
YSS				MLR	MLR			
	comp=N,300nm,14.0s							
YSS				MLR	MLR			
	comp=E,300nm,13.0s							
TEY	**Ternei**	**6.01**	**182**	*e*P		Pn	00 11 07.3	-5.4
TEY	**Ternei**	**6.01**	**182**	*e*Pn		**Pn**	**00 11 13.3**	**+0.6**
TEY				*e*Pg		**Pg**	**00 11 36.0**	**-2.8**
TEY				AMB	AMB		00 11 43.4	
	comp=E,15nm,0.6s							
TEY				*e*Sg		**Sg**	**00 12 52.4**	**-4.2**
TEY				A	A		00 13 00.2	
	comp=E,155nm,0.6s							
HEH	**HeiHe**	**6.08**	**266**	*e*Pn		**Pn**	**00 11 11.6**	**-2.0**
HEH				Pg		**Pg**	**00 11 36.9**	**-3.2**
HEH				Sg		**Sg**	**00 12 55.2**	**-3.6**
HEH				smax	smax			
	comp=N,1μm,1.0s							
HEH				smax	smax			
	comp=E,370nm,0.7s							
BMKR	**Bomnak**	**6.10**	**310**	*e*Pg		Pb	00 11 34.9	+4.9
BMKR				*e*Sg		**Sg**	**00 12 55.1**	**-4.4**
BMKR				A	A		00 12 57.8	
	comp=E,375nm,0.9s							
ZEA	**Zeya**	**6.49**	**298**	*e*P		**Pn**	**00 11 19.4**	**+0.2**
ZEA				*e*S		**Sn**	**00 12 42.0**	**+8.8**
ZEA				pmax	pmax			
	comp=N,20nm,0.5s							
ZEA				pmax	pmax			
	comp=E,20nm,0.5s							
ZEA				pmax	pmax			
	comp=Z,40nm,0.6s							
ZEA				smax	smax			
	comp=N,400nm,2.3s							
ZEA				smax	smax			
	comp=E,500nm,1.9s							
ZEA				smax	smax			
	comp=N,400nm,0.7s							
ZEA				smax	smax			
	comp=E,430nm,1.0s							
ZEA				MLR	MLR			
	comp=E,200nm,3.0s							
ZEA				MLR	MLR			
	comp=Z,200nm,4.0s							
ZEA	**Zeya**	**6.49**	**298**	*e*Pn		**Pn**	**00 11 19.2**	**0.0**
ZEA				*e*Pg		Pg	00 11 42.7	-5.2
ZEA				AMB	AMB		00 11 44.5	
	comp=Z,210nm,0.9s							
ZEA				*e*Sg		**Sg**	**00 13 06.1**	**-5.8**
ZEA				AMS	AMS		00 14 46.5	
	comp=Z,200nm,6.0s							
ZEA				AMS	AMS		00 14 46.5	
	comp=Z,180nm,6.0s							
ZEA				AMS	AMS		00 14 46.5	
	comp=Z,180nm,6.0s							
USA0B	**Ussuriysk Arra**	**7.60**	**208**	⇓*i*P		**Pn**	**00 11 36.7**	**+2.2**
USRK	**Ussuriysk Ar.**	**7.60**	**208**	Pn		**Pn**	**00 11 33.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=28,slow=18,SNR=1.8							
USRK				Pg		**Pb**	**00 11 58.6**	**+3.0**
	comp=Z,0.5nm,0.3s,baz=18,slow=15,SNR=4.6							
USRK				Sn		**Sn**	**00 13 02.6**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=25,slow=21,SNR=1.8							
USRK				Lg	Lg		00 13 40.4	
	comp=Z,1.4nm,0.3s,baz=26,slow=27,SNR=4.9							
USRK				LR	LR		00 14 50.2	
	comp=Z,98nm,20.4s,baz=17,slow=41 comp=Z,1.1nm,0.6s							
ASAJ	**Asahikawa**	**7.93**	**149**	Pn		**Pn**	**00 11 35.0**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=305,slow=16,SNR=1.5							
ASAJ				LR	LR		00 15 12.3	
	comp=Z,187nm,18.5s,baz=354,slow=43 comp=Z,2.0nm,0.3s							
GRTR	**Gornotajezhnoj**	**8.01**	**205**	*e*Pn		**Pn**	**00 11 42.4**	**+2.3**
GRTR				*e*Sg		**Sg**	**00 13 58.8**	**-1.8**
GRTR				A	A		00 14 09.7	
	comp=Z,67nm,0.9s							
BNX	**BinXian**	**8.24**	**234**	Pg		Pg	00 12 15.0	-6.4
BNX				Sg		**Sg**	**00 14 02.2**	**-5.9**
BNX				smax	smax			
	comp=N,280nm,1.0s							
BNX				smax	smax			
	comp=E,350nm,0.8s							
PSTR	**Posyet**	**9.37**	**209**	⇓*e*P		**Pn**	**00 11 58.8**	**+0.1**
PETK	**Petropavlovsk-**	**12.96**	**73**	LR		LR	00 18 34.8	
	comp=E,82nm,19.8s,baz=10,slow=41							
MJAR	**Matsushiro Arr**	**14.53**	**176**	Pn		**Pn**	**00 13 11.5**	**+2.2**
	baz=359,slow=11,SNR=1.4							
MJAR				LR	LR		00 18 25.9	
	comp=E,71nm,18.8s,baz=22,slow=36							
BOD	**Bodaibo**	**14.90**	**306**	*e*P		**P**	**00 13 18.8**	**-1.1**
BOD				pmax	pmax			
	comp=Z,4.0nm,1.7s							
KSRS	**Korea Array**	**15.01**	**209**	LR		LR	00 19 39.0	
	comp=Z,15nm,19.7s,baz=20,slow=40							
SONM	**Songino Array**	**20.02**	**273**	P		**Pn**	**00 14 19.2**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=78,slow=8.2,SNR=1.9							
SONM				Lg	Lg		00 20 19.1	
	comp=Z,0.1nm,0.3s,baz=74,slow=26,SNR=11 comp=Z,0.2nm,0.5s							
ZAK	**Zakamensk**	**21.19**	**281**	*e*P		**P**	**00 14 31.0**	**+1.7**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.4s							
BILL	**Bilibino**	**22.26**	**29**	*e*P		**P**	**00 14 40.9**	**+0.5**
BILL	**Bilibino**	**22.26**	**29**	P		**P**	**00 14 40.9**	**+0.5**
NRIK	**Noril'sk**	**29.42**	**327**	LR		LR	00 28 08.7	
	comp=Z,95nm,18.4s,baz=64,slow=37							
ZALV	**Zalesovo Beam**	**31.25**	**296**	*e*P		**P**	**00 16 04.4**	**+1.2**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**31.25**	**296**	P		**P**	**00 16 03.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=56,slow=7.5,SNR=3.8 comp=Z,0.6nm,0.6s							
MK31	**Makanchi Array**	**35.44**	**285**	⇑*e*P		**P**	**00 16 42.0**	**+2.2**
MKAR	**Makanchi Array**	**35.44**	**285**	*e*P		**P**	**00 16 43.1**	**+3.2**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**35.44**	**285**	P		**P**	**00 16 39.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=67,slow=9.4,SNR=6.2 comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**35.44**	**285**	P		**P**	**00 16 43.0**	**+3.2**
KURK	**Kurchatov**	**35.93**	**293**	⇓*e*P		**P**	**00 16 44.9**	**+0.9**
KURK				pmax	pmax			
	comp=Z,6.0nm,1.8s							
KURK	**Kurchatov**	**35.93**	**293**	P		**P**	**00 16 44.9**	**+0.9**
KURBB	**Kurchatov Arra**	**36.02**	**293**	P		**P**	**00 16 44.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=67,slow=9.1,SNR=4.2 comp=Z,0.3nm,0.5s							
BVAR	**Borovoye Array**	**39.64**	**300**	P		**P**	**00 17 15.8**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=63,slow=9.0,SNR=6.5 comp=Z,0.7nm,0.6s							
BRVK	**Borovoye**	**39.68**	**300**	⇑*e*P		**P**	**00 17 16.5**	**+0.9**
BRVK				pmax	pmax			
	comp=Z,13nm,3.8s							
BRVK	**Borovoye**	**39.68**	**300**	P		**P**	**00 17 16.5**	**+0.9**
KDAK	**Kodiak Island**	**39.86**	**52**	LR		LR	00 36 01.8	
	comp=Z,49nm,18.4s,baz=77,slow=40							
ILAR	**Eielson Array**	**40.08**	**40**	P		**P**	**00 17 19.0**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=281,slow=7.3,SNR=31 comp=Z,2.6nm,0.5s							
AKTO	**Aktyubinsk**	**47.61**	**302**	LR		LR	00 41 28.6	
	comp=Z,78nm,18.1s,baz=252,slow=40							
BELG	**Belogornoye**	**51.84**	**309**	⇓*e*P		**P**	**00 18 51.4**	**-0.2**
BELG				pmax	pmax			
	comp=Z,3.0nm,2.0s							
YKA	**Yellowknife Ar**	**53.57**	**33**	P		**P**	**00 19 04.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=311,slow=7.4,SNR=5.7 comp=Z,0.3nm,0.6s							
FINES	**FINESS Array B**	**55.09**	**327**	P		**P**	**00 19 15.2**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=68,slow=7.0,SNR=5.6							
FINES				LR	LR		00 43 01.0	
	comp=Z,75nm,18.5s,baz=30,slow=36 comp=Z,2.6nm,1.0s							
MNK	**Minsk**	**59.33**	**320**	*i* P		**P**	**00 19 44.2**	**-1.2**
MNK				*i*			00 20 32.0	
MNK				*i*			00 21 55.3	
MNK				*i* S		**S**	**00 27 54.2**	**+0.7**
MNK				*i*			00 29 35.1	
MNK				*i* SS		**SS**	**00 31 50.3**	**+2.9**
MNK				pmax	pmax			
	comp=E,9.0nm,0.9s							
MNK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MNK				pmax	pmax			
	comp=N,18nm,1.1s							
MNK				MLR	MLR			
	comp=N,442nm,25.0s							
MNK				MLR	MLR			
	comp=E,227nm,23.0s							
MNK				MLR	MLR			
	comp=Z,96nm,17.0s							
NOA	**NORSAR Array B**	**60.11**	**333**	LR		LR	00 48 55.6	
	comp=Z,24nm,18.3s,baz=265,slow=39							
AKASG	**Malin Array Be**	**61.53**	**316**	LR		LR	00 50 04.4	
	comp=Z,50nm,18.2s,baz=34,slow=39							
BRTR	**Keskin Array B**	**67.54**	**306**	P		**P**	**00 20 41.7**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=47,slow=5.4,SNR=2.7 comp=Z,0.5nm,0.7s							
VRAC	**Vranov**	**67.80**	**322**	LR		LR	00 56 05.3	
	comp=Z,106nm,19.1s,baz=8.0,slow=41							
NVAR	**Mina Array Bea**	**69.31**	**54**	P		**P**	**00 20 51.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=299,slow=3.9,SNR=1.2 comp=Z,0.2nm,0.5s							
PDAR	**Pinedale Array**	**70.19**	**46**	P		**P**	**00 20 56.6**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=336,slow=4.0,SNR=2.7 comp=Z,0.4nm,0.8s							
WRA	**Warramunga Arr**	**70.71**	**183**	P		**P**	**00 20 58.0**	**-1.7**
WRA	**Warramunga Arr**	**70.71**	**183**	P		**P**	**00 20 58.0**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=352,slow=6.8,SNR=1.9 comp=Z,0.4nm,0.9s							
MMAI	**Mount Meron Ar**	**71.64**	**300**	P		**P**	**00 21 06.4**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=39,slow=8.0,SNR=1.7 comp=Z,0.2nm,0.4s							
ASAR	**Alice Springs**	**74.42**	**183**	P		**P**	**00 21 19.8**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=359,slow=5.8,SNR=4.6 comp=Z,0.3nm,0.5s							

*NEIC **01** 00:12:55.0±1.6, 37.°49S±0.°04×74.°16W±0.°07, h4km±3km, mb5.0/59, Mwr4.8/56, Error ellipse: s-maj=8.6km s-min=5.2km az=118.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.55; Mθθ0.01; Mφφ-0.56; Mrθ-0.29; Mrφ-0.60; Mθφ-1.98; Fault plane solution: M₀2.17000×10¹⁶ NP1:φ65.46000°, δ15.69000°, λ145.81000°. NP2:φ188.65000°, δ81.26000°, λ76.92000°. Principal axes: T 2.0671, Plg52.0000°, Azm84.0000°; N 0.1873, Plg13.0000°, Azm191.0000°; P -2.2544, Plg35.0000°, Azm290.0000°;*

*NEIC **01** 00:12:55.1, 37.°48S×74.°13W, h4km*

*IDC **01** 00:12:56.3±0.5, 37.°45S×73.°68W, h0km, mb4.4/12, mbtmp4.4/16, ML4.0/4, MS4.1/27, Error ellipse: s-maj=23.0km s-min=15.7km az=84.0*

*GUC **01** 00:12:57.7±0.3, 37.°52S×74.°07W, h24km±3km, ML4.8*

*GCMT **01** 00:13:00.0±0.4, 37.°52S±0.°03×74.°17W±0.°03, h22km±1km, MW4.9/69, Moment Tensor Solution. s18,c22; s69,c80; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.20±.17; Mθθ-0.12±.09; Mφφ-2.08±.11; Mrθ-0.25±.14; Mθφ-0.20±.07; Mφr-1.45±.16; Best double couple: M₀2.60500×10¹⁶ NP1:φs188.00000°, δ62.00000°, λ92.00000°. NP2: φs4.00000°, δ28.00000°, λ86.00000°. Principal axes: T 2.6570, Plg73.0000°, Azm103.0000°; N -0.1040, Plg2.0000°, Azm7.0000°; P -2.5540, Plg17.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 00:12:56.2±1.1, 37.°49S±0.°03×73.°91W±0.°06, h7km±6km, n198, σ1s45/191, mb5.0/37, MS4.2/25, 15C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**0.92**	**179**	⇑*e*P		**Pb**	**00 13 13.5**	**-0.9**
BI04				*e*S		**Sb**	**00 13 25.1**	**-1.7**
BI04				IAML			00 13 33.9	
	comp=E,30μm,0.4s							
BI05	**Punta Hualpn**	**0.94**	**38**	Pg		**Pb**	**00 13 15.3**	**+0.5**
BI05				Sg		**Sn**	**00 13 29.7**	**+0.2**
BI05	**Punta Hualpn**	**0.94**	**38**	⇑*i*P		**Pb**	**00 13 15.5**	**+0.7**
BI05				*i* S		**Sg**	**00 13 29.0**	**+2.6**
BI05				IAML			00 13 37.0	
	comp=E,47μm,0.5s							
LC02	**Puerto Saavedr**	**1.36**	**162**	Pn		**Pn**	**00 13 20.6**	**-1.0**
LC02	**Puerto Saavedr**	**1.36**	**162**	⇑*i*P		**Pn**	**00 13 20.6**	**-1.0**
LC02				IAML			00 13 53.3	
	comp=N,41μm,0.3s							
LR04	**Coral**	**2.41**	**171**	Pn		**Pn**	**00 13 34.8**	**-1.3**
LR04				Sn		**Sn**	**00 14 00.3**	**-5.6**
LR04	**Coral**	**2.41**	**171**	*i* P		**Pn**	**00 13 34.8**	**-1.3**
LR03	**Panguipulli**	**2.46**	**151**	Pn		**Pn**	**00 13 37.2**	**+0.5**
ML02	**Panimavida**	**2.65**	**50**			**Pn**	**00 13 39.9**	**+0.6**
ML02	**Panimavida**	**2.65**	**50**	*e*P		**Pn**	**00 13 40.3**	**+1.0**
GO06	**Curarrehue**	**2.83**	**138**	Pn		**Pn**	**00 13 42.8**	**+0.8**
GO06	**Curarrehue**	**2.83**	**138**	⇑*i*P		**Pn**	**00 13 43.1**	**+1.2**
GO06				*e*S		**Sn**	**00 14 17.9**	**+1.5**
GO06				IAML			00 14 29.5	
	comp=N,2μm,0.9s							
GO05	**Huala**	**2.95**	**33**			**Pn**	**00 13 43.1**	**-0.5**
GO05	**Huala**	**2.95**	**33**	*e*P		**Pn**	**00 13 43.3**	**-0.2**
GO05				IAML			00 14 46.0	
	comp=E,5μm,0.7s							
LR05	**Currie**	**3.11**	**152**	Pn		**Pn**	**00 13 46.7**	**+1.0**
LR05	**Currie**	**3.11**	**152**	⇑*e*P		**Pn**	**00 13 46.6**	**+0.9**
LR05				*e*S		**Sn**	**00 14 23.9**	**+0.8**
LR05				IAML			00 14 47.9	
	comp=E,2μm,0.5s							
BO03	**Pichilemu**	**3.38**	**28**	*e*P		**Pn**	**00 13 48.9**	**-0.6**
BO03				IAML			00 15 01.8	
	comp=N,2μm,0.6s							
BO02	**Sierra Bellavi**	**3.70**	**44**			**Pn**	**00 13 54.4**	**+0.6**
BO02	**Sierra Bellavi**	**3.70**	**44**	⇑*i*P		**Pn**	**00 13 54.4**	**+0.6**
BO02				*e*S		**Sn**	**00 14 34.8**	**-2.9**
BO01	**Tunca**	**3.85**	**37**	Pn		**Pn**	**00 13 56.1**	**+0.2**
LL05	**Los Muermos**	**3.92**	**175**			**Pn**	**00 13 55.9**	**-0.9**
PLCA	**Paso Flores**	**4.16**	**142**			**Pn**	**00 14 01.2**	**+1.0**
PLCA	**Paso Flores**	**4.16**	**142**	Pn		**Pn**	**00 14 01.8**	**+1.6**
	comp=N,1.3nm,0.3s,baz=319,slow=12,SNR=37							
PLCA				Lg	Lg		00 15 02.8	
	comp=N,5.9nm,0.3s,baz=261,slow=14,SNR=3.4 comp=N,15nm,0.6s							
MT01	**Popeta**	**4.22**	**32**			**Pn**	**00 14 00.2**	**-0.7**
MT01	**Popeta**	**4.22**	**32**	⇑*i*P		**Pn**	**00 14 00.6**	**-0.3**
MT01				*e*S		**Sn**	**00 14 50.5**	**0.0**
VA05	**Santo Domingo**	**4.26**	**27**			**Pn**	**00 14 00.5**	**-1.0**
MT09	**Talagante**	**4.41**	**34**			**Pn**	**00 14 03.9**	**+0.3**
MT09	**Talagante**	**4.41**	**34**	⇑*i*P		**Pn**	**00 14 03.9**	**+0.3**
MT09				*i* S		**Sn**	**00 14 54.0**	**-1.3**
BO04	**La Punta**	**4.41**	**38**	Pn		**Pn**	**00 14 03.7**	**+0.1**
BO04	**La Punta**	**4.41**	**38**	⇑*i*P		**Pn**	**00 14 03.5**	**-0.1**
LL06	**Loncomilla**	**4.72**	**177**			**Pn**	**00 14 06.5**	**-1.3**
LMEL	**Las Melosas**	**4.73**	**41**			**Pn**	**00 14 08.6**	**+0.6**
MT13	**San Alfonso**	**4.76**	**39**			**Pn**	**00 14 08.9**	**+0.4**
MT13	**San Alfonso**	**4.76**	**39**	*e*P		**Pn**	**00 14 09.7**	**+1.1**
MT02	**Curacav**	**4.79**	**29**			**Pn**	**00 14 08.0**	**-0.8**
MT02	**Curacav**	**4.79**	**29**	*e*P		**Pn**	**00 14 08.2**	**-0.6**
VA01	**Torpederas**	**4.83**	**23**	Pn		**Pn**	**00 14 08.3**	**-1.0**
MT05	**Renca**	**4.84**	**33**	Pn		**Pn**	**00 14 10.0**	**+0.5**
MT03	**Universidad Ad**	**4.86**	**36**			**Pn**	**00 14 10.2**	**+0.3**
MT16	**CCHEN**	**4.91**	**35**			**Pn**	**00 14 10.4**	**0.0**
LL01	**San Ignacio de**	**5.01**	**167**			**Pn**	**00 14 12.0**	**+0.2**
PEL	**Peldehue**	**5.08**	**32**			**Pn**	**00 14 13.2**	**+0.5**
LL07	**Hotel Espejo d**	**5.34**	**177**	Pn		**Pn**	**00 14 15.7**	**-0.6**
VA06	**Catapilco**	**5.37**	**24**			**Pn**	**00 14 15.9**	**-0.8**
VA06	**Catapilco**	**5.37**	**24**	*e*P		**Pn**	**00 14 16.1**	**-0.6**
H03S1	**Juan Fernandez**	**5.46**	**310**	T		T	00 20 00.3	
	baz=129,slow=74,SNR=2243							
VA03	**San Esteban**	**5.46**	**31**			**Pn**	**00 14 17.8**	**-0.3**
H03S3	**Juan Fernandez**	**5.47**	**310**	T		T	00 20 00.9	
	baz=129,slow=74,SNR=1375							
H03S2	**Juan Fernandez**	**5.47**	**310**	T		T	00 19 59.9	
	baz=129,slow=74,SNR=1685							
VA04	**Juan Fernndez**	**5.55**	**312**			**Pn**	**00 14 17.4**	**-1.9**
GO07	**Milladeo Hill,**	**5.62**	**178**			**Pn**	**00 14 18.6**	**-1.6**
LL02	**Futaleuf**	**5.90**	**165**			**Pn**	**00 14 24.6**	**+0.5**
CO02	**Combarbal**	**6.72**	**22**			**Pn**	**00 14 34.5**	**-0.9**
AY01	**Puyuhuapi**	**6.99**	**173**			**Pn**	**00 14 38.7**	**-0.1**
CO06	**Fray Jorge**	**7.06**	**16**			**Pn**	**00 14 38.0**	**-2.0**
CO03	**El Pedregal**	**7.15**	**23**			**Pn**	**00 14 40.5**	**-0.8**
GO04	**Tololo Observa**	**7.75**	**20**			**Pn**	**00 14 49.3**	**-0.3**
CO05	**La Serena**	**7.88**	**17**			**Pn**	**00 14 49.7**	**-1.4**
CO01	**Juntas del Tor**	**8.14**	**24**			**Pn**	**00 14 54.4**	**-0.6**
COYC	**Coyhaique**	**8.19**	**171**			**Pn**	**00 14 56.1**	**+0.7**
LCO	**Las Campanas**	**8.88**	**19**			**Pn**	**00 15 04.4**	**-0.

ITAB IAmb IAmb 00 17 45.6
comp=Z,53nm,0.9s
LPAZ La Paz 21.73 15 P P 00 17 48.6 -0.2
AQDB Aquidauana 23.20 48 P P 00 18 02.1 -1.6
AQDB IAmb IAmb 00 18 15.9
comp=Z,43nm,0.8s
TRCB Terra Rica 23.44 57 P P 00 18 04.9 -1.3
SIV San Ignacio 24.24 31 LR LR 00 29 37.3
comp=Z,1µm,18.9s,baz=222,slow=42
PTLB Pontes e Lacer 25.56 35 P P 00 18 25.6 -0.2
PTLB IAmb IAmb 00 18 28.1
comp=Z,24nm,0.9s
SPB Sao Paulo 26.57 66 P P 00 18 34.6 -0.4
SPB IAmb IAmb 00 18 44.3
comp=Z,66nm,1.2s
VILB Vilhena 27.34 30 P P 00 18 41.0 -0.9
VILB IAmb IAmb 00 19 00.4
comp=Z,28nm,0.9s
PMSA Palmer Station 27.94 171 LR LR 00 30 49.1
comp=Z,512nm,18.1s,baz=360,slow=38
ETMB Extrema 28.42 16 P P 00 18 50.8 -0.7
ETMB IAmb IAmb 00 19 01.8
comp=Z,38nm,0.9s
CZSB Cruzeiro do Su 29.65 2 P P 00 18 59.7 -2.7
CZSB IAmb IAmb 00 19 22.5
comp=Z,17nm,0.8s
SAML Samuel 30.03 22 P P 00 19 04.8 -1.0
RPN Rapa Nui 31.51 279 LR LR 00 28 11.9
comp=Z,350nm,20.1s,baz=124,slow=29
BDFB Brasilia 31.60 53 P P 00 19 18.8 -1.0
BDFB IAmb IAmb 00 19 26.8
comp=Z,28nm,1.4s
BDFB Brasilia 31.60 53 P P 00 19 18.7 -1.1
comp=Z,4.7nm,0.8s,baz=225,slow=7.7,SNR=7.3
BDFB LR LR 00 33 19.8
comp=Z,661nm,18.1s,baz=232,slow=39
comp=Z,4.7nm,0.8s
MCRA Macar, Loja 33.43 349 P P 00 19 34.0 -1.8
BOSC San Juan Bosco 34.44 352 P P 00 19 43.0 -1.7
COHC Cochancay 35.20 351 P P 00 19 49.8 -1.3
BOAV Boa Vista 41.59 20 P P 00 20 43.6 -1.2
BOAV IAmb IAmb 00 20 53.7
comp=Z,16nm,0.9s
BELA Belgrano 2 43.73 169 P P 00 21 01.1 -0.5
SDV Santo Domingo 46.24 4 P P 00 21 21.1 -1.3
SDV IAmb IAmb 00 21 31.6
comp=Z,8.4nm,0.9s
BAUV El Baul 46.52 8 P P 00 21 24.0 -0.4
VNA3 Neumayer Olymp 46.74 156 P P 00 21 26.0 +0.5
VNA3 Neumayer Olymp 46.74 156 ⇑P P 00 21 26.0 +0.5
comp=Z,10nm,0.7s
MDP Montagnes des 46.78 30 LR LR 00 43 30.6
comp=Z,356nm,18.3s,baz=196,slow=39
RCBR Riachuelo 46.79 57 LR LR 00 40 22.9
comp=Z,322nm,18.4s,baz=219,slow=35
VNA2 Neumayer--Watz 47.42 156 P P 00 21 31.8 +1.0
baz=290,slow=9.2
VNA2 Neumayer--Watz 47.42 156 ⇑P P 00 21 31.8 +1.0
comp=Z,10nm,0.7s,baz=290,slow=9.2
SNAA Sanae 48.96 157 P P 00 21 43.6 +0.8
SNAA Sanae 48.96 157 P P 00 21 43.1 +0.3
SNAA Sanae 48.96 157 ⇓P P 00 21 43.6 +0.8
comp=Z,366nm,1.0s
SNAA Sanae 48.96 157 P P 00 21 43.3 +0.5
comp=Z,18nm,1.0s,baz=288,slow=6.8,SNR=19
comp=Z,18nm,1.0s
TROLL Troll, Antarti 50.65 157 P P 00 21 56.7 +0.9
TROLL Troll, Antarti 50.65 157 ⇑P P 00 21 56.7 +0.9
comp=Z,612nm,0.7s
QSPA South Pole Qui 52.75 180 P P 00 22 11.4 -0.1
QSPA IAmb IAmb 00 22 13.8
comp=Z,16nm,0.9s
QSPA South Pole Qui 52.75 180 P P 00 22 12.7 +1.2
comp=Z,13nm,0.8s,baz=142,slow=2.6,SNR=25
QSPA LR LR 00 43 54.8
comp=Z,139nm,18.5s,baz=172,slow=35
comp=Z,13nm,0.8s
VNDA Vanda 60.38 192 P P 00 23 06.5 +1.0
comp=Z,0.8nm,0.9s,baz=125,slow=8.3,SNR=1.9
comp=Z,0.8nm,0.9s
TBI Tubuai 65.08 259 *e*S **S 00 32 26.1 +5.4**
comp=Z,733nm,24.2s
TBI *e*S S 00 32 27.3 +6.6
comp=Z,1µm,26.5s
TBI Tubuai 65.08 259 *e*LR LR 00 43 18.8
comp=Z,565nm,21.0s
PPT2 Papeete2 68.29 264 *e*S **S 00 33 06.4 +6.6**
comp=Z,100nm,24.0s
PPT2 *e*S S 00 33 07.2 +7.4
comp=Z,112nm,24.0s
PPT2 *e*SS **SS 00 37 27.9 +5.2**
comp=Z,304nm,35.5s
PPT2 *e*LR LR 00 44 45.4
comp=Z,190nm,22.8s
PPT2 *e*LR LR 00 44 52.1
comp=Z,162nm,24.5s
PPT Papeete 68.30 264 LR LR 00 46 33.1
comp=Z,183nm,18.1s,baz=155,slow=30
LPIG La Paz 70.19 325 LR LR 00 48 07.8
comp=Z,124nm,19.0s,baz=161,slow=30
MAW Mawson 70.26 164 LR LR 00 55 23.2
comp=Z,205nm,18.4s,baz=230,slow=36
GOGA Godfrey 71.10 352 P P 00 24 14.5 -0.5
TX31 Lajitas Ar. Si 72.09 333 P P 00 24 19.8 -1.4
TX31 IAmb IAmb 00 24 32.2
comp=Z,14nm,1.5s
TXAR Lajitas Array 72.09 333 P 00 24 20.3 -0.9
TXAR Lajitas Array 72.09 333 P P 00 24 23.2 +2.0
comp=Z,0.6nm,0.7s,baz=156,slow=8.9,SNR=9.5
comp=Z,0.6nm,0.7s
SAND Sanderson 72.11 334 P P 00 24 19.8 -1.5
SAND IAmb IAmb 00 24 32.2
comp=Z,13nm,1.2s
W57A Gilead 72.50 355 P P 00 24 22.7 -0.7
W57A IAmb IAmb 00 26 26.3
comp=Z,20nm,1.3s
BG3 Lake Jocassee 72.61 352 P P 00 24 23.1 -1.0
BG3 IAmb IAmb 00 24 32.9
comp=Z,10nm,0.8s
CPCT Cooper Cave 73.24 351 P P 00 24 27.4 -0.4
V55A Taylorsville 73.29 354 P P 00 24 27.8 -0.3
TKL Tuckaleechee C 73.36 352 P P 00 24 27.6 -0.9
TKL IAmb IAmb 00 26 50.1
comp=Z,42nm,1.8s
V48A Smith Brothers 73.84 349 P P 00 24 30.9 -0.4
U54A Nelsons Funny 74.01 353 P P 00 24 31.4 -1.0
U54A IAmb IAmb 00 24 41.5
comp=Z,12nm,0.7s
RAR Rarotonga 74.24 255 LR LR 00 49 07.0
comp=Z,52nm,20.4s,baz=62,slow=29
WVT Waverly 74.38 348 P P 00 24 34.0 -0.4
WVT IAmb IAmb 00 24 43.5
comp=Z,16nm,1.1s
SUR Sutherland 74.48 119 LR LR 00 54 17.4
comp=Z,91nm,19.2s,baz=228,slow=33
BBTS Babate 74.78 58 LR LR 00 56 37.6
comp=Z,345nm,20.1s,baz=223,slow=35
CCM Cathedral Cave 76.86 346 P P 00 24 48.2 -0.4
LIC Lamto 77.31 72 *i* **P 00 24 52.5 +0.7**
comp=Z,32nm,0.7s
WIN Windhoek 77.39 109 P P 00 24 52.3 -0.1
TIC Toumodi 77.59 72 *i* **P 00 24 54.1 +0.7**
comp=Z,9.7nm,0.3s
KIC Kosan Boka 77.62 72 *i* **P 00 24 54.3 +0.8**
comp=Z,26nm,0.8s
DBIC Dimbokro 77.73 72 P P 00 24 54.5 +0.4
DBIC IAmb IAmb 00 25 02.5
comp=Z,18nm,0.9s
DBIC Dimbokro 77.73 72 P P 00 24 55.0 +0.8
comp=Z,13nm,0.9s,baz=212,slow=7.0,SNR=13
DBIC LR LR 00 56 59.6
comp=Z,128nm,18.5s,baz=230,slow=34
comp=Z,13nm,0.9s
ACSO Alum Creek Sta 77.80 353 P P 00 24 53.4 -0.5
ACSO IAmb IAmb 00 25 02.2
comp=Z,16nm,0.8s
ANMO Albuquerque 78.16 333 LR LR 00 54 36.3
comp=Z,46nm,18.6s,baz=228,slow=32
P40A Paris 78.44 346 P P 00 24 56.8 -0.6
P40A IAmb IAmb 00 25 06.7
comp=Z,21nm,1.1s
BOSA Boshof 79.78 118 P P 00 25 04.8 -0.6
BOSA IAmb IAmb 00 25 06.8
comp=Z,26nm,1.2s
BOSA Boshof 79.78 118 P P 00 25 05.8 +0.3
comp=Z,9.2nm,1.0s,baz=243,slow=4.6,SNR=7.8

BOSA LR LR 01 00 23.9
comp=Z,59nm,18.1s,baz=206,slow=36
comp=Z,9.2nm,1.0s
URZ Urewera 80.21 229 LR LR 00 52 43.1
comp=Z,74nm,21.9s,baz=300,slow=30
PFO Pinyon Flats O 81.08 325 LR LR 00 54 41.8
comp=Z,67nm,18.4s,baz=104,slow=31
SADO Sadowa 82.02 356 LR LR 01 06 08.0
comp=Z,49nm,18.2s,baz=91,slow=39
LBTB Lobatse 82.20 115 P P 00 25 17.8 -0.6
LBTB Lobatse 82.20 115 LR LR 01 00 45.5
comp=Z,100nm,18.1s,baz=217,slow=35
ECSD EROS Data Cent 83.43 344 P P 00 25 23.9 -0.1
ECSD IAmb IAmb 00 25 33.1
comp=Z,8.2nm,0.8s
LMQ La Malbaie 84.72 2 P P 00 25 29.8 -0.7
NVAR Mina Array Bea 85.92 327 P P 00 25 38.8 +1.9
comp=Z,0.6nm,0.7s,baz=149,slow=3.3,SNR=3.5
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 86.22 335 P P 00 25 39.5 +1.1
comp=Z,1.2nm,1.0s,baz=152,slow=6.7,SNR=6.1
comp=Z,1.2nm,1.0s
ELK Elko 86.58 330 LR LR 01 00 08.4
comp=Z,39nm,19.3s,baz=123,slow=33
TOA0 Torodi Ar. Sit 86.81 71 P P 00 25 41.4 -0.2
TORD Torodi Ar. Bea 86.81 71 P P 00 25 41.4 -0.2
TORD IAmb IAmb 00 25 50.9
comp=Z,11nm,1.2s
TORD Torodi Ar. Bea 86.81 71 P P 00 25 41.6 0.0
comp=Z,6.0nm,1.1s,baz=262,slow=2.7,SNR=13
TORD LR LR 01 04 00.8
comp=Z,109nm,18.5s,baz=150,slow=35
comp=Z,6.0nm,1.1s
ULM Lac du Bonnet 89.49 346 P P 00 25 54.3 +0.8
comp=Z,3.2nm,1.0s,baz=188,slow=9.2,SNR=3.3
comp=Z,3.2nm,1.0s
LSZ Lusaka 90.13 109 P P 00 25 57.2 -0.4
LSZ IAmb IAmb 00 26 00.8
comp=Z,14nm,1.2s
LSZ Lusaka 90.13 109 LR LR 01 06 17.9
comp=Z,140nm,18.3s,baz=234,slow=36
MDT Midelt 95.17 52 LR LR 01 09 01.1
comp=Z,192nm,20.1s,baz=244,slow=35
TAM Tamanrasset 95.67 66 P 00 26 23.7 +0.7
TAM IAmb IAmb 00 26 33.2
comp=Z,7.1nm,1.2s
DZM Mont Dzumac 97.96 234 LR LR 01 01 26.0
comp=Z,68nm,18.6s,baz=41,slow=30
ESDC Sonseca Array 100.07 47 P Pdif 00 26 42.9 +0.6
comp=Z,0.8nm,1.0s,baz=197,slow=6.7,SNR=2.9
comp=Z,0.8nm,1.0s
MMAI Mount Meron Ar 123.35 72 PKP PKiKP 00 31 54.4 +0.1
comp=Z,0.8nm,0.5s,baz=126,slow=2.0,SNR=2.2
BRTR Keskin Array B 124.81 64 PKP PKiKP 00 31 57.0 0.0
comp=Z,0.3nm,1.0s,baz=213,slow=3.3,SNR=14
AKASG Malin Array Be 125.64 50 PKP PKPdf 00 31 57.3 -0.4
comp=Z,0.3nm,0.3s,baz=265,slow=2.2,SNR=4.2
GEYT Alibeck 142.38 74 PKhKP PKPpre 00 32 26.3
comp=Z,2.9nm,0.8s,baz=231,slow=9.4,SNR=4.7
NRIK Noril'sk 146.54 12 PKPbc PKPbc 00 32 37.4 +0.1
comp=Z,8.4nm,1.1s,baz=23,slow=3.6,SNR=7.5
HYB Hyderabad 148.61 122 *e*PKiKP **PKiKP 00 32 45.0 -1.0**
BVAR Borovoye Array 150.83 46 PKP PKPdf 00 32 44.2 +1.0
comp=Z,8.2nm,0.7s,baz=300,slow=3.0,SNR=23
BVAR PKPbc **sPKPdf 00 32 49.7 +3.6**
comp=Z,8.4nm,0.8s,baz=310,slow=2.8,SNR=39
BVAR PKPab **PKPab 00 32 56.3 +0.2**
comp=Z,9.6nm,0.8s,baz=301,slow=2.0,SNR=16
MJAR Matsushiro Arr 154.40 278 PKP PKPdf 00 32 51.7 +2.7
comp=Z,0.5nm,0.4s,baz=236,slow=38,SNR=1.8
MJAR PKPab **PKPab 00 33 13.1 +1.5**
comp=Z,0.7nm,0.4s,baz=127,slow=3.7,SNR=2.3
KSH Kashi 156.39 76 PKP PKPdf 00 32 52.6 +0.9
KURBB Kurdatov Arra 156.40 47 PKP PKPdf 00 32 51.2 0.0
comp=Z,0.9nm,1.0s,baz=291,slow=1.9,SNR=7.3
KURBB PP **PP 00 36 59.2 +1.4**
comp=Z,1.2nm,1.1s,baz=294,slow=6.5,SNR=5.7
ZALV Zalesovo Beam 157.97 35 PKP PKPdf 00 32 52.9 -0.2
comp=Z,2.5nm,0.9s,baz=270,slow=2.7,SNR=12
ZALV PKPab **PKPab 00 33 27.2 +0.9**
comp=Z,7.8nm,0.9s,baz=305,slow=5.2,SNR=13
CMAR Chiang Mai Arr 160.03 160 PKPab PKPab 00 33 37.6 +1.5
MKAR Manchi Array 160.12 55 PKP PKPdf 00 32 56.8 +0.9
comp=Z,2.1nm,1.1s,baz=318,slow=1.6,SNR=9.5
MKAR PKPab **PKPab 00 33 36.2 +0.3**
comp=Z,1.5nm,0.8s,baz=293,slow=4.0,SNR=6.7
MKAR PP **PP 00 37 18.2 -0.2**
comp=Z,0.9nm,1.0s,baz=268,slow=3.6,SNR=3.9
NJ2 Nanjing 168.19 246 *e*P **PKPdf 00 33 02.5 -1.1**
NJ2 pmax pmax
comp=Z,13nm,0.7s
PZH PanZhiHua 168.44 160 PKP PKPdf 00 33 02.3 -1.8
SONM Songino Array 169.66 359 PKP PKPdf 00 33 04.1 -0.1
comp=Z,0.2nm,0.5s,baz=38,slow=2.6,SNR=2.0
SONM PKPab **PKPab 00 34 18.7 +0.8**
comp=Z,1.5nm,1.0s,baz=351,slow=2.4,SNR=6.9
HHC Hu-ho-hao-te 174.59 310 *e*P **PKPdf 00 33 00.3 -6.3**
GTA Gaotai 174.72 67 *e*PKP **PKPdf 00 33 06.8 0.0**

*BER **01** 00:48:22.3±2.0, 82°.37N×7°.91W, h10km, mb(Pn)3.6, Confirmed Earthquake*
*IDC **01** 00:48:26.8±9.3, 83°.22N×4°.20E, h0km, mb3.5/3, mbtmp3.6/5, ML3.2/2, MS3.4/3, Error ellipse: s-maj=162.3km s-min=31.3km az=93.0*
ISC 01 00:48:23.2±3.0, 82°.9N±0°.2×1°.3W±0°.3, h10km, n12, σ0s90/14, mb3.4/3, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.47**	**145**	*e*P		**Pn**		**00 49 30.5**	**-0.3**
KBS				*e*S		**Sn**		**00 50 21.1**	**-1.6**
KBS				IAML				00 50 29.3	
	comp=Z,5.6nm,0.6s								
BRBB	**Barentsburg B**	**5.41**	**144**	*e*P		**Pn**		**00 49 44.2**	**+0.5**
BRBB				*e*S		**Sn**		**00 50 45.4**	**-0.6**
SPA0	**Spitsbergen Ar**	**5.50**	**139**	*e*P		**Pn**		**00 49 45.3**	**+0.3**
SPA0				IAML				00 51 01.5	
	comp=Z,2.7nm,0.8s								
SPITS	**Spitsbergen Ar**	**5.50**	**139**	Pn		**Pn**		**00 49 45.5**	**+0.5**
	baz=350,slow=15								
SPITS				Sn		**Sn**		**00 50 48.4**	**+0.3**
	baz=313,slow=17								
	comp=Z,7.5nm,0.7s								
HSPB	**Hornsund (broa**	**6.54**	**145**	*e*P		**Pn**		**00 50 00.2**	**+1.0**
HOPEN	**Hopen**	**7.81**	**130**	*e*P		**Pn**		**00 50 18.0**	**+1.5**
HOPEN				*e*S		**Sn**		**00 51 44.4**	**-0.4**
ARCES	**ARCESS Array B**	**14.53**	**141**	Pn		**Pn**		**00 51 49.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=1.5								
ARCES				LR		LR		00 57 23.8	
	comp=Z,46nm,19.0s,baz=46,slow=37								
	comp=Z,2.7nm,0.9s								
ARU	**Arti**	**30.71**	**110**	LR		LR		01 09 50.7	
	comp=Z,36nm,18.3s,baz=126,slow=42								
ZALV	**Zalesovo Beam**	**36.37**	**84**	P		**P**		**00 55 26.2**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=353,slow=8.1,SNR=4.3								
	comp=Z,0.7nm,0.7s								
KURBB	**Kurchatov Arra**	**38.84**	**91**	P		**P**		**00 55 47.6**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=349,slow=7.4,SNR=7.7								
	comp=Z,0.7nm,0.9s								
MKAR	**Makanchi Array**	**43.08**	**89**	P		**P**		**00 56 22.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=345,slow=7.8,SNR=5.9								
	comp=Z,0.5nm,0.8s								
WSAR	**Wadi Sarin**	**63.46**	**117**	LR		LR		01 32 41.3	
	comp=Z,118nm,18.2s,baz=247,slow=42								

*IDC **01** 00:56:13.9±3.8, 19°.89S×176°.18W, h314km±35km, mb3.6/9, mbtmp4.3/11, Error ellipse: s-maj=23.4km s-min=13.4km az=124.0*
ISC 01 00:56:03.4±0.7, 19°.9S±0°.1×175°.9W±0°.2, h222km, n25, σ1s17/26, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**16.61**	**259**	P		**Pn**		**00 59 46.1**	**+2.0**
	7.7nm,0.6s,baz=74,slow=20,SNR=14								
URZ	**Urewera**	**19.27**	**197**	P		**Pn**		**01 00 16.2**	**+1.1**
	4.5nm,0.3s,baz=285,slow=24,SNR=1.6								
URZ				S		**S**		**01 03 35.7**	**-1.7**
	20nm,0.8s,baz=265,slow=16,SNR=1.4								
STKA	**Stephens Creek**	**39.80**	**244**	P		**P**		**01 03 16.1**	**+0.9**
	1.1nm,0.5s,baz=102,slow=9.3,SNR=1.7								
	1.1nm,0.5s								
ASAR	**Alice Springs**	**46.55**	**256**	P		**P**		**01 04 09.2**	**0.0**
	7.7nm,0.5s,baz=94,slow=8.2,SNR=120								

ASAR PcP **PcP 01 05 39.7 -0.1**
1.4nm,0.8s,baz=93,slow=4.4,SNR=5.2
7.7nm,0.5s
WRA Warramunga Arr 46.62 261 P P 01 04 08.9 -0.9
2.7nm,0.3s,baz=97,slow=7.3,SNR=82
2.7nm,0.3s
PETK Petropavlovsk- 76.21 344 P P 01 07 27.2 +0.2
1.5nm,0.6s,baz=134,slow=8.2,SNR=2.1
1.5nm,0.6s
NVAR Mina Array Bea 79.26 42 P P 01 07 46.0 +1.6
2.9nm,0.7s,baz=224,slow=9.4,SNR=25
2.9nm,0.7s
TXAR Lajitas Array 85.09 57 P P 01 08 17.1 +2.3
0.9nm,0.8s,baz=214,slow=7.5,SNR=9.6
0.9nm,0.8s
ILAR Eielson Array 87.31 12 P P 01 08 23.8 -0.7
0.8nm,0.6s,baz=224,slow=5.9,SNR=16
0.8nm,0.6s
CMAR Chiang Mai Arr 91.76 289 P P 01 08 46.8 +0.4
0.7nm,0.3s,baz=114,slow=2.2,SNR=5.5
0.7nm,0.3s
YKA Yellowknife Ar 95.16 24 P P 01 09 00.9 0.0
0.4nm,0.8s,baz=249,slow=4.2,SNR=6.4
0.4nm,0.8s
KURBB Kurchatov Arra 114.93 317 PKP PKiKP 01 14 16.4 -1.1
0.6nm,0.9s,baz=91,slow=1.8,SNR=9.4
BVAR Borovoye Array 119.87 320 PKP PKPdf 01 14 26.1 -0.8
0.9nm,0.4s,baz=110,slow=2.9,SNR=11
SPITS Spitsbergen Ar 121.38 357 PKP PKPdf 01 14 28.1 -1.1
6.9nm,1.0s,baz=293,slow=5.5,SNR=1.0
ARCES ARCESS Array B 128.67 351 PKP PKiKP 01 14 43.7 -0.4
5.8nm,1.1s,baz=5.7,slow=2.4,SNR=5.9
AKASG Malin Array Be 143.40 333 PKP PKPab 01 15 07.7 -0.1
0.6nm,0.3s,baz=44,slow=4.1,SNR=5.2
EKA Eskdalemuir Ar 144.20 7 PKP PKPab 01 15 10.1 -0.7
0.6nm,0.6s,baz=332,slow=2.8,SNR=3.6
BRTR Keskin Array B 147.85 314 PKPbc PKPbc 01 15 22.0 -0.5
3.2nm,0.5s,baz=138,slow=4.0,SNR=26
MMAI Mount Meron Ar 149.19 301 PKPbc PKiKP 01 15 26.5 -0.6
3.9nm,0.6s,baz=64,slow=5.7,SNR=24
GERES GERESS Array B 150.10 347 PKPbc PKiKP 01 15 28.0 -0.5
1.3nm,0.5s,baz=354,slow=1.0,SNR=4.7
RONA Rosalia, Austr 150.54 343 *e*PKP **PKiKP 01 15 29.0 -0.4**
4.2nm,0.8s
LESA Schwarzleotal 151.66 348 *e*PKP **PKPbc 01 15 28.8 -2.7**
6.1nm,0.7s
WTTA Wattenberg 152.01 349 *e*PKP **PKiKP 01 15 32.1 -0.6**
6.4nm,0.5s
ABTA Abfaltersbach 152.34 347 *e*PKP **PKPbc 01 15 32.2 -0.8**
3.5nm,0.5s
ESDC Sonseca Array 159.11 18 PKPab **PKPab 01 16 13.2 +0.1**
0.1nm,0.4s,baz=314,slow=3.6,SNR=5.1

*STR **01** 01:02:33.6±1.5, 45°.N±8°.×1°.2E±1°.2, h10km, MLv3.5/22, Error ellipse: s-maj=0.0km s-min=0.0km az=104.5, preliminary*
*PRU **01** 01:02:33.3, 44°.49N×12°.13E, h0km*
*GEN **01** 01:02:34.5, 44°.62N×11°.74E, h29km±1km, Ml2.8*
*LDG **01** 01:02:34.8±0.1, 44°.66N×11°.77E, h9km, Ml2.7/24, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*ROM **01** 01:02:36.0±0.1, 44°.654N±0°.004×11°.720E±0°.006, h36km, ML2.8/157, Error ellipse: s-maj=0.5km s-min=0.2km az=243.0*
ISC 01 01:02:36.3±1.0, 44°.63N±0°.02×11°.68E±0°.02, h34km±2km, n198, σ1s51/245, 2C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMPO	**Campotto Po**	**0.10**	**118**	⇑P		**Pb**		**01 02 41.8**	**-0.3**
CMPO				S		**Sb**		**01 02 47.0**	**+0.8**
CMPO				AML		AML			
	comp=E,17400µm,0.2s								
CMPO				AML		AML			
	comp=N,9585µm,0.4s								
CMPO				AML		AML			
	comp=E,17400µm,0.2s								
CMPO				AML		AML			
	comp=E,17395µm,0.2s								
CMPO				AML		AML			
	comp=N,9606µm,0.4s								
CMPO				AML		AML			
	comp=E,17350µm,0.2s								
FIU	**Minerbio Fiu**	**0.13**	**274**	P		**Pb**		**01 02 42.4**	**0.0**
FIU				S		**Sb**		**01 02 48.0**	**+1.5**
FIU				AML		AML			
	comp=N,5755µm,0.6s								
FIU				AML		AML			
	comp=N,5750µm,0.6s								
FIU				AML		AML			
	comp=E,14876µm,0.3s								
FIU				AML		AML			
	comp=N,5242µm,0.3s								
FIU				AML		AML			
	comp=E,14900µm,0.3s								
A307A	**Bentivoglio (B**	**0.17**	**280**	P		**Pb**		**01 02 42.7**	**0.0**
A307A				S		**Sb**		**01 02 48.7**	**+1.7**
A308A	**Longastrino (F**	**0.24**	**101**	P		**Pn**		**01 02 42.9**	**0.0**
A308A				S		**Sb**		**01 02 48.6**	**+0.4**
IMOL	**Imola, Italy**	**0.28**	**170**	P		**Pn**		**01 02 44.1**	**+0.4**
IMOL				S		**Sb**		**01 02 50.7**	**+1.9**
IMOL				AML		AML			
	comp=E,2045µm,0.2s								
IMOL				AML		AML			
	comp=N,3780µm,1.4s								
IMOL				AML		AML			
	comp=E,2044µm,0.2s								
IMOL				AML		AML			
	comp=N,3267µm,0.2s								
IMOL				AML		AML			
	comp=N,3780µm,0.6s								
IMOL	**Imola, Italy**	**0.28**	**170**	P		**Pn**		**01 02 44.1**	**+0.4**
IMOL				S		**Sb**		**01 02 51.1**	**+2.2**
FERS	**Ferrara-Casagl**	**0.29**	**341**	P		**Pb**		**01 02 43.5**	**-0.5**
FERS				S		**Sb**		**01 02 49.4**	**+0.2**
FERS				AML		AML			
	comp=N,7000µm,0.2s								
FERS				AML		AML			
	comp=E,6251µm,0.3s								
FERS				AML		AML			
	comp=N,7002µm,0.2s								
FERS				AML		AML			
	comp=E,6255µm,0.3s								
FAEN	**Faenza**	**0.37**	**157**	P		**Pb**		**01 02 44.9**	**-0.1**
FAEN				S		**Sn**		**01 02 52.9**	**+1.8**
RAVA	**Ravarino**	**0.42**	**288**	P		**Pn**		**01 02 46.7**	**+0.7**
RAVA				S		**Sn**		**01 02 53.8**	**+1.4**
RAVA				AML		AML			
	comp=E,4675µm,0.3s								
RAVA				AML		AML			
	comp=N,6555µm,0.2s								
RAVA				AML		AML			
	comp=N,6560µm,0.2s								
RAVA				AML		AML			
	comp=E,4677µm,0.3s								
RAVA				AML		AML			
	comp=N,6557µm,0.2s								
RAVA				AML		AML			
	comp=E,4680µm,0.3s								
RAVA	**Ravarino**	**0.42**	**288**	P		**Pn**		**01 02 46.7**	**+0.7**
RAVA				S		**Sn**		**01 02 55.1**	**+2.7**
BRSN	**Barisano**	**0.45**	**140**	P		**Pn**		**01 02 46.8**	**+0.3**
BRSN				S		**Sn**		**01 02 54.2**	**+0.9**
BRSN				AML		AML			
	comp=E,1815µm,0.4s								
BRSN				AML		AML			
	comp=N,1845µm,0.4s								
BRSN				AML		AML			
	comp=N,1610µm,0.8s								
BRSN				AML		AML			
	comp=E,1815µm,0.4s								
BRSN				AML		AML			
	comp=E,1820µm,0.4s								
BRSN				AML		AML			
	comp=N,1615µm,0.8s								
BRSN				AML		AML			
	comp=E,1815µm,0.4s								
BRSN				AML		AML			
	comp=N,1845µm,0.4s								
BRSN				AML		AML			
	comp=E,1823µm,0.4s								
BRSN				AML		AML			
	comp=N,1511µm,0.4s								
BRSN				AML		AML			
	comp=N,1845µm,0.4s								
A304A	**Bellombra (RO)**	**0.46**	**33**	P		**Pb**		**01 02 46.4**	**0.0**

A304A S **Sn** **01 02 54.6 +1.1**
SERM **Sermide** **0.47 325** P **Pn** **01 02 46.9 +0.3**
SERM S **Sn** **01 02 54.6 +1.0**
SERM AML AML
comp=E,1520µm,0.3s
SERM AML AML
comp=E,1520µm,0.3s
SERM AML AML
comp=E,1885µm,0.7s
SERM AML AML
comp=E,1517µm,0.3s
SERM AML AML
comp=N,2370µm,0.4s
SERM AML AML
comp=E,1843µm,0.3s
SERM AML AML
comp=N,2110µm,0.3s
SERM AML AML
comp=N,2450µm,0.8s
SERM AML AML
comp=N,2110µm,0.3s
SERM **Sermide** **0.47 325** P **Pn** **01 02 46.9 +0.3**
SERM S **Sn** **01 02 54.7 +1.0**
ADRI **Adria, Italy** **0.47 31**⇑ *e*Pg **Pn** **01 02 46.7 0.0**
ADRI *e*Sg **Sn** **01 02 55.4 +1.5**
BRIS **BRISIGHELLA** **0.49 194** P **Pb** **01 02 45.6 -1.3**
BRIS S **Sb** **01 02 53.0 -1.1**
BRIS AML AML
comp=N,868µm,1.2s
BRIS AML AML
comp=E,1315µm,0.4s
BRIS AML AML
comp=E,1380µm,0.4s
BRIS AML AML
comp=N,868µm,1.2s
BRIS AML AML
comp=N,810µm,0.4s
BRIS AML AML
comp=N,828µm,0.4s
BRIS AML AML
comp=N,810µm,0.4s
BRIS AML AML
comp=E,1314µm,0.4s
BRIS AML AML
comp=E,1380µm,0.4s
BRIS AML AML
comp=E,1380µm,1.6s
BRIS AML AML
comp=N,810µm,1.6s
BRIS AML AML
comp=N,868µm,0.8s
MODE **Modena** **0.52 270** P **Pb** **01 02 47.1 -0.1**
MODE S **Sn** **01 02 56.8 +1.9**
CAVE **Cavezzo** **0.53 296** P **Pn** **01 02 48.0 +0.5**
CAVE S **Sn** **01 02 55.9 +0.6**
CAVE AML AML
comp=N,3520µm,0.5s
CAVE AML AML
comp=N,3148µm,0.3s
CAVE AML AML
comp=E,2149µm,0.2s
CAVE AML AML
comp=E,2905µm,0.4s
CAVE **Cavezzo** **0.53 296** P **Pn** **01 02 48.0 +0.5**
CAVE S **Sn** **01 02 57.2 +1.9**
LMD **Lutirano** **0.55 178** P **Pb** **01 02 47.3 -0.5**
LMD S **Sn** **01 02 56.2 +0.4**
LMD AML AML
comp=N,1625µm,0.9s
LMD AML AML
comp=N,1383µm,0.2s
LMD AML AML
comp=E,1020µm,0.2s
LMD AML AML
comp=E,1084µm,0.4s
LMD **Lutirano** **0.55 178** P **Pb** **01 02 47.3 -0.5**
LMD S **Sn** **01 02 56.3 +0.4**
ZCCA **Zocca** **0.57 241** P **Pn** **01 02 49.0 +0.9**
ZCCA AML AML
comp=N,344µm,0.4s
ZCCA AML AML
comp=E,263µm,0.4s
ZCCA AML AML
comp=E,286µm,0.3s
ZCCA AML AML
comp=N,354µm,0.4s
ZCCA AML AML
comp=N,441µm,1.0s
ZCCA AML AML
comp=E,263µm,0.4s
ZCCA **Zocca** **0.57 241** P **Pn** **01 02 49.2 +1.1**
NDIM **Novi di Modena** **0.61 295** P **Pb** **01 02 49.0 +0.3**
NDIM AML AML
comp=E,3050µm,1.5s
NDIM AML AML
comp=N,2475µm,0.7s
NDIM AML AML
comp=N,2900µm,1.4s
NDIM AML AML
comp=E,2715µm,1.5s
NDIM AML AML
comp=N,2480µm,0.7s
NDIM AML AML
comp=N,1840µm,0.2s
NDIM AML AML
comp=E,2353µm,0.5s
NDIM AML AML
comp=E,2127µm,0.3s
NDIM AML AML
comp=N,2018µm,0.2s
NDIM AML AML
comp=N,2480µm,1.3s
NDIM AML AML
comp=N,2900µm,0.6s
NDIM AML AML
comp=E,3050µm,0.5s
NDIM AML AML
comp=E,2715µm,0.5s
SEI **Scarperia** **0.62 202** ⇓P **Pn** **01 02 48.6 0.0**
SEI S **Sn** **01 02 58.6 +1.1**
SEI AML AML
comp=E,1275µm,0.4s
SEI AML AML
comp=N,1940µm,0.9s
SEI AML AML
comp=N,1791µm,0.2s
SEI AML AML
comp=E,1275µm,0.4s
SEI **Scarperia** **0.62 202** P **Pn** **01 02 48.7 0.0**
SEI S **Sn** **01 02 58.7 +1.2**
GAZZ **Gazzo Veronese** **0.64 320** *e*Pg **Pb** **01 02 49.7 +0.6**
GAZZ *e*Sg **Sn** **01 03 00.5 +2.7**
MOCL **Monte Cuccoli** **0.72 210** P **Pb** **01 02 50.4 -0.1**
MOCL AML AML
comp=N,304µm,0.6s
MOCL AML AML
comp=E,334µm,0.5s
MOCL AML AML
comp=N,304µm,0.6s
MOCL AML AML
comp=E,335µm,0.5s
MOCL AML AML
comp=E,334µm,1.5s
TEOL **Teolo** **0.73 360** P **Pn** **01 02 49.8 -0.5**
TEOL AML AML
comp=E,2795µm,0.8s
TEOL AML AML
comp=N,1875µm,1.0s
TEOL AML AML
comp=E,2667µm,0.2s
TEOL AML AML
comp=N,1567µm,0.4s
TEOL AML AML
comp=E,2795µm,1.2s
TEOL AML AML
comp=N,1875µm,1.0s
SFI **Santa Sofia** **0.74 170** P **Pn** **01 02 50.2 -0.1**
SFI AML AML
comp=E,592µm,0.4s
SFI AML AML
comp=E,598µm,0.4s
SFI AML AML
comp=E,592µm,0.4s
SFI AML AML
comp=E,598µm,0.4s
SFI AML AML
comp=N,554µm,0.5s
SFI AML AML
comp=N,529µm,0.5s
SFI AML AML
comp=E,593µm,0.4s
SFI AML AML
comp=N,650µm,0.4s
SFI AML AML
comp=N,645µm,0.5s
BLLA **Bellaria** **0.75 130** P **Pb** **01 02 50.9 -0.1**
BLLA AML AML
comp=N,246µm,0.3s
BLLA AML AML
comp=E,203µm,0.3s
OPPE **Oppeano** **0.77 332** P **Pn** **01 02 50.9 +0.2**
OPPE AML AML
comp=E,1380µm,1.4s
OPPE AML AML
comp=E,1321µm,0.3s
OPPE AML AML
comp=N,1099µm,0.2s
OPPE AML AML
comp=N,1136µm,0.3s
OPPE **Oppeano** **0.77 332** P **Pn** **01 02 50.9 +0.2**
OPPE S **Sb** **01 03 02.7 +1.3**
MTCR **Monte La Croce** **0.78 219** P **Pn** **01 02 51.1 +0.1**
MTCR AML AML
comp=N,307µm,0.6s
MTCR AML AML
comp=E,547µm,1.4s
MTCR AML AML
comp=E,546µm,0.7s
MTCR AML AML
comp=N,243µm,0.3s
MTCR AML AML
comp=N,306µm,0.6s
MTCR **Monte La Croce** **0.78 219** P **Pn** **01 02 51.1 +0.1**
MPPT **Montemurlo** **0.79 212** P **Pb** **01 02 52.0 +0.2**
MPPT AML AML
comp=N,220µm,1.5s
MPPT AML AML
comp=E,239µm,1.4s
MPPT AML AML
comp=N,220µm,1.5s
MPPT AML AML
comp=N,182µm,1.0s
MPPT AML AML
comp=E,174µm,0.4s
MPPT AML AML
comp=E,239µm,0.6s
MPPT AML AML
comp=N,220µm,0.5s
RUFI **Rufina** **0.80 189** P **Pb** **01 02 51.9 +0.1**
RUFI S **Sb** **01 03 04.3 +2.0**
MNTV **Mantova** **0.82 310** P **Pb** **01 02 52.9 +0.7**
MNTV S **Sb** **01 03 06.0 +3.2**
GSCL **Gusciola** **0.83 251** P **Pb** **01 02 52.5 +0.2**
GSCL AML AML
comp=E,280µm,0.3s
GSCL AML AML
comp=E,279µm,0.3s
GSCL AML AML
comp=N,361µm,0.2s
GSCL AML AML
comp=N,361µm,0.2s
GSCL **Gusciola** **0.83 251** P **Pb** **01 02 52.6 +0.3**
GSCL S **Sb** **01 03 06.0 +2.7**
POPM **Popiglio** **0.88 229** P **Pb** **01 02 53.3 0.0**
POPM AML AML
comp=E,220µm,0.3s
POPM AML AML
comp=N,226µm,0.7s
POPM AML AML
comp=N,217µm,0.2s
POPM AML AML
comp=E,221µm,0.3s
POPM AML AML
comp=N,226µm,1.3s
POPM **Popiglio** **0.88 229** P **Pb** **01 02 53.6 +0.4**
CPGN **Carpegna, Ital** **0.95 151** P **Pn** **01 02 53.7 +0.3**
CPGN AML AML
comp=E,442µm,0.5s
CPGN AML AML
comp=N,502µm,0.6s
CPGN AML AML
comp=E,442µm,0.5s
CPGN AML AML
comp=N,503µm,0.6s
BDI **Bagni Di Lucca** **0.96 234** P **Pb** **01 02 54.5 -0.1**
BDI AML AML
comp=N,239µm,0.4s
BDI AML AML
comp=E,152µm,0.5s
BDI AML AML
comp=E,189µm,0.3s
BDI AML AML
comp=N,239µm,0.4s
BDI AML AML
comp=N,218µm,0.4s
BDI AML AML
comp=E,162µm,0.7s
BDI **Bagni Di Lucca** **0.96 234** P **Pb** **01 02 54.4 -0.1**
TREG **Tregnago** **0.96 338** S **Sb** **01 03 07.3 +0.2**
TREG AML AML
comp=N,2200µm,0.9s
TREG AML AML
comp=E,2575µm,1.0s
TREG AML AML
comp=N,2200µm,1.1s
CRE **Caprese Michel** **1.03 169** P **Pb** **01 02 55.3 -0.5**
CRE AML AML
comp=N,536µm,0.3s
CRE AML AML
comp=E,302µm,0.4s
CRE AML AML
comp=N,536µm,0.3s
CRE AML AML
comp=E,302µm,0.4s
VLC **Villacollemand** **1.04 243** P **Pb** **01 02 55.7 -0.1**
VLC AML AML
comp=E,122µm,1.0s
VLC AML AML
comp=N,90µm,1.1s
VLC AML AML
comp=E,75µm,0.5s
VLC AML AML
comp=N,72µm,0.2s
VLC **Villacollemand** **1.04 243** P **Pb** **01 02 55.7 -0.1**
CARD **Cardoso** **1.05 235** P **Pb** **01 02 55.5 -0.5**
CARD AML AML
comp=E,180µm,0.1s
CARD AML AML
comp=E,181µm,0.1s
CARD AML AML
comp=N,215µm,1.2s
CARD AML AML
comp=N,187µm,0.1s
CARD AML AML
comp=E,181µm,0.1s
CARD AML AML
comp=N,215µm,0.8s
CARD **Cardoso** **1.05 235** P **Pb** **01 02 55.7 -0.3**
MARN **Marana (Italy)** **1.06 342** *e*Pg **Pb** **01 02 56.3 +0.1**
PARC **Parchiule** **1.06 157** P **Pn** **01 02 55.5 +0.7**
PARC AML AML
comp=E,132µm,0.6s
PARC AML AML
comp=N,148µm,0.5s
PARC AML AML
comp=E,127µm,0.5s
PARC AML AML
comp=E,132µm,1.4s
PARC AML AML
comp=N,156µm,1.2s
IESO **Jesolo** **1.08 35** *e*Pg **Pb** **01 02 57.1 +0.6**
IESO *e*Sg **Sb** **01 03 12.3 +1.9**
PESA **Pesaro** **1.08 129** P **Pn** **01 02 55.6 +0.5**
PESA AML AML
comp=N,528µm,0.4s
PESA AML AML
comp=E,418µm,0.2s
PESA AML AML
comp=N,431µm,0.2s
PESA AML AML
comp=E,418µm,0.2s
PESA AML AML
comp=N,528µm,1.6s
ROVR **Rover Verones** **1.10 337** P **Pn** **01 02 55.0 -0.5**
ROVR AML AML
comp=E,721µm,1.2s
ROVR AML AML
comp=N,1485µm,0.2s
ROVR AML AML
comp=N,606µm,0.8s
ROVR AML AML
comp=N,1485µm,0.2s
ROVR AML AML
comp=E,633µm,0.2s
ROVR AML AML
comp=N,604µm,0.2s
ROVR AML AML
comp=E,267µm,0.2s
ROVR AML AML
comp=E,721µm,0.8s
ROVR AML AML
comp=E,267µm,0.2s
ROVR AML AML
comp=N,606µm,1.2s
SSP9 **Sansepolcro** **1.11 163** P **Pn** **01 02 56.1 +0.6**
SSP9 AML AML
comp=N,172µm,0.3s
SSP9 AML AML
comp=E,168µm,0.5s
SSP9 AML AML
comp=N,172µm,0.3s
SSP9 AML AML
comp=E,167µm,0.5s
SSP9 AML AML
comp=N,172µm,0.3s
MAIM **Mastiano** **1.11 230** P **Pn** **01 02 56.1 +0.7**
MAIM AML AML
comp=E,127µm,1.5s
MAIM AML AML
comp=N,106µm,0.4s
MAIM AML AML
comp=E,90µm,0.4s
MAIM AML AML
comp=N,110µm,0.5s
MAIM AML AML
comp=E,127µm,0.5s
OSSC **Osservatorio P** **1.15 196** P **Pn** **01 02 56.5 +0.4**
OSSC AML AML
comp=E,184µm,0.4s
OSSC AML AML
comp=E,184µm,0.4s
OSSC AML AML
comp=N,275µm,0.6s
OSSC AML AML
comp=E,196µm,0.6s
OSSC AML AML
comp=N,139µm,0.3s
OSSC AML AML
comp=N,280µm,1.2s
OSSC AML AML
comp=E,257µm,1.1s
OSSC AML AML
comp=E,184µm,1.6s
OSSC AML AML
comp=N,156µm,0.7s
OSSC **Osservatorio P** **1.15 196** P **Pn** **01 02 56.5 +0.4**
EQUI **Equi** **1.19 247** P **Pb** **01 02 57.6 -0.7**
EQUI AML AML
comp=N,59µm,0.3s
EQUI AML AML
comp=E,66µm,1.0s
CSNT **Castellina Chi** **1.19 194** P **Pn** **01 02 57.0 +0.4**
CSNT AML AML
comp=E,164µm,0.4s
CSNT AML AML
comp=N,169µm,0.6s
CSNT AML AML
comp=E,164µm,0.4s
CSNT AML AML
comp=N,169µm,0.6s
CSNT **Castellina Chi** **1.19 194** P **Pn** **01 02 57.1 +0.4**
NARO **Abbazia di Nar** **1.21 147** P **Pn** **01 02 57.0 +0.2**
NARO AML AML
comp=E,112µm,1.5s
NARO AML AML
comp=N,134µm,0.6s
NARO AML AML
comp=E,104µm,0.4s
NARO AML AML
comp=N,105µm,0.2s
NARO AML AML
comp=E,112µm,0.5s
BALD **Monte Baldo** **1.22 330** P **Pn** **01 02 56.7 -0.4**
FSSB **Fossombrone** **1.23 139** P **Pn** **01 02 57.5 +0.4**
FSSB AML AML
comp=E,316µm,1.1s
FSSB AML AML
comp=N,437µm,0.3s
FSSB AML AML
comp=N,437µm,0.3s
FSSB AML AML
comp=E,311µm,0.2s
FSSB AML AML
comp=N,437µm,1.7s
FSSB AML AML
comp=E,316µm,0.9s
PII **Pisa** **1.23 223** P **Pn** **01 02 57.6 +0.5**
PII AML AML
comp=E,219µm,0.3s
PII AML AML
comp=N,266µm,1.2s
PII AML AML
comp=E,219µm,0.3s
PII AML AML
comp=N,244µm,0.2s
PII AML AML
comp=E,219µm,1.7s
PII AML AML
comp=N,266µm,0.8s
PII **Pisa** **1.23 223** P **Pn** **01 02 57.7 +0.5**
CGRP **Cima Grappa** **1.25 4** P **Pn** **01 02 57.3 -0.3**
CGRP AML AML
comp=E,434µm,1.0s
CGRP AML AML
comp=N,402µm,0.4s
CGRP AML AML
comp=E,364µm,0.5s
CGRP AML AML
comp=N,402µm,0.4s
CGRP AML AML
comp=N,408µm,0.4s
CGRP AML AML
comp=E,400µm,0.5s
CGRP AML AML
comp=E,434µm,1.0s
CGRP AML AML
comp=N,408µm,0.4s
CGRP AML AML
comp=E,406µm,0.6s
PIEI **Pieia** **1.26 150** P **Pn** **01 02 57.6 +0.1**
PIEI AML AML
comp=N,123µm,0.2s
PIEI AML AML
comp=E,286µm,0.4s
PIEI AML AML
comp=N,166µm,0.4s
PIEI AML AML
comp=E,286µm,0.4s
SALO **Salr** **1.28 321** P **Pn** **01 02 58.0 +0.1**
SALO AML AML
comp=E,339µm,0.2s
SALO AML AML
comp=N,540µm,0.4s
SALO AML AML
comp=N,544µm,0.4s
SALO AML AML
comp=E,340µm,0.2s
SALO AML AML
comp=E,340µm,0.2s
SALO AML AML
comp=E,339µm,0.2s
SALO AML AML
comp=N,402µm,0.3s
SALO AML AML
comp=N,540µm,0.4s
DOSS **Dosso del Somm** **1.30 345** P **Pn** **01 02 57.7 -0.5**
DOSS AML AML
comp=E,591µm,0.4s
DOSS AML AML
comp=E,589µm,0.6s
DOSS AML AML
comp=E,592µm,0.4s

DOSS AML AML
comp=N,641µm,0.6s
DOSS AML AML
comp=N,614µm,1.3s
DOSS AML AML
comp=E,541µm,0.5s
DOSS AML AML
comp=E,525µm,0.6s
DOSS AML AML
comp=N,510µm,0.4s
DOSS AML AML
comp=N,542µm,0.6s
DOSS AML AML
comp=E,589µm,1.4s
DOSS AML AML
comp=N,641µm,1.4s
DOSS Dosso del Somm 1.30 345 P Pn 01 02 57.7 -0.5
CAFI Castiglion Fio 1.32 171 P Pn 01 02 59.2 +0.9
CAFI AML AML
comp=E,192µm,0.5s
CAFI AML AML
comp=N,128µm,1.0s
CAFI AML AML
comp=E,195µm,0.5s
CAFI AML AML
comp=E,193µm,0.5s
CAFI AML AML
comp=N,222µm,0.8s
CAFI AML AML
comp=N,104µm,0.5s
CAFI AML AML
comp=N,128µm,1.0s
MAGA Magasa 1.36 327 P Pn 01 02 58.7 -0.4
MAGA AML AML
comp=E,1110µm,1.5s
MAGA AML AML
comp=N,1100µm,0.2s
MAGA AML AML
comp=N,1104µm,0.2s
MAGA AML AML
comp=E,946µm,0.2s
MAGA AML AML
comp=N,1100µm,1.8s
COR1 Corinaldo 1.38 136 P Pn 01 03 00.2 +1.0
COR1 AML AML
comp=E,166µm,1.4s
COR1 AML AML
comp=N,233µm,1.5s
COR1 AML AML
comp=E,2275µm,1.2s
COR1 AML AML
comp=N,197µm,0.5s
COR1 AML AML
comp=E,123µm,0.6s
COR1 AML AML
comp=N,3978µm,0.8s
COR1 AML AML
comp=E,166µm,0.6s
COR1 AML AML
comp=N,233µm,0.5s
VARN Col Varnada, M 1.40 12 P Pn 01 02 58.8 -0.7
VARN AML AML
comp=N,492µm,1.5s
VARN AML AML
comp=E,665µm,0.4s
VARN AML AML
comp=E,655µm,0.5s
VARN AML AML
comp=N,468µm,0.2s
VARN AML AML
comp=N,473µm,0.2s
VARN AML AML
comp=N,493µm,1.5s
VARN AML AML
comp=E,665µm,0.4s
VARN AML AML
comp=E,655µm,0.5s
CTI Castel Tesino 1.42 359 P Pn 01 02 59.3 -0.5
CTI AML AML
comp=N,765µm,0.2s
CTI AML AML
comp=N,765µm,0.2s
CTI AML AML
comp=E,808µm,0.2s
CTI AML AML
comp=N,765µm,1.8s
CTI AML AML
comp=E,808µm,0.2s
CTI Castel Tesino 1.42 359 P Pn 01 02 59.4 -0.5
LUSI Trento, Gardas 1.43 339 P Pn 01 02 59.6 -0.2
LUSI AML AML
comp=E,538µm,1.5s
LUSI AML AML
comp=N,822µm,0.2s
LUSI AML AML
comp=N,822µm,0.2s
LUSI AML AML
comp=E,441µm,0.3s
LUSI AML AML
comp=E,538µm,0.5s
BRJN Brijuni 1.50 79 *e*Pn Pb 01 03 03.6 0.0
BRJN Sn **Sb 01 03 22.9 +0.6**
BRJN Brijuni 1.50 79 P Pn 01 03 00.4 -0.5
POLC Polcenigo 1.51 22 P Pn 01 03 00.7 -0.3
POLC AML AML
comp=E,416µm,1.5s
POLC AML AML
comp=E,414µm,0.3s
POLC AML AML
comp=N,754µm,0.3s
POLC AML AML
comp=N,754µm,0.3s
POLC AML AML
comp=E,416µm,0.5s
GAGG Gaggia 1.54 341 P Pn 01 03 01.4 -0.1
GAGG AML AML
comp=E,386µm,0.2s
GAGG AML AML
comp=N,344µm,0.7s
GAGG AML AML
comp=E,360µm,0.7s
GAGG AML AML
comp=N,426µm,0.2s
GAGG AML AML
comp=E,327µm,0.2s
GAGG AML AML
comp=N,425µm,0.2s
GAGG AML AML
comp=N,315µm,0.2s
GAGG AML AML
comp=E,386µm,0.2s
MAGO Bibbona 1.54 209 P Pn 01 03 01.2 -0.2
MAGO AML AML
comp=E,59µm,0.3s
MAGO AML AML
comp=N,67µm,0.4s
ZONE Zone 1.58 316 P Pn 01 03 02.4 +0.4
ZONE AML AML
comp=E,289µm,0.9s
ZONE AML AML
comp=E,156µm,1.0s
ZONE AML AML
comp=N,380µm,0.2s
ZONE AML AML
comp=N,184µm,1.1s
ZONE AML AML
comp=E,257µm,0.3s
ZONE AML AML
comp=N,380µm,0.2s
MABI Malga Bissina 1.64 330 P Pn 01 03 03.1 +0.1
MABI AML AML
comp=E,89µm,0.3s
MABI AML AML
comp=N,84µm,1.0s
MABI AML AML
comp=E,71µm,0.2s
MABI AML AML
comp=N,79µm,0.2s
GORR Gorreto 1.70 270 S Sb 01 03 30.6 +2.5
GORR Gorreto 1.70 270 P Pn 01 03 05.4 +1.7
RIBO Ribolla Roccas 1.74 195 P Pn 01 03 04.3 +0.2
RIBO Ribolla Roccas 1.74 195 AML AML
comp=E,76µm,1.4s
CIMO Cimolais 1.76 17 P Pn 01 03 03.9 -0.6
CIMO AML AML
comp=E,83µm,0.2s
CIMO AML AML
comp=N,63µm,0.2s
CIMO AML AML
comp=E,80µm,0.2s
CIMO AML AML
comp=E,83µm,0.2s
CIMO AML AML
comp=N,61µm,0.1s
CIMO AML AML
comp=E,83µm,1.8s
CIMO AML AML
comp=N,79µm,0.7s
STAL STALIGIAL 1.79 24 P Pn 01 03 04.1 -0.7
STAL AML AML
comp=E,286µm,0.3s
STAL AML AML
comp=E,394µm,0.2s
STAL AML AML
comp=N,380µm,0.2s
STAL AML AML
comp=N,306µm,0.2s
STAL AML AML
comp=N,412µm,0.8s
STAL AML AML
comp=E,394µm,0.2s
STAL AML AML
comp=N,306µm,0.2s
STAL AML AML
comp=E,292µm,0.7s
MDI Monti di Nese 1.80 310 AML AML
comp=N,158µm,0.4s
MDI AML AML
comp=E,159µm,1.2s
MDI AML AML
comp=E,134µm,0.2s
MDI AML AML
comp=E,136µm,0.3s
MDI AML AML
comp=N,205µm,0.4s
MDI AML AML
comp=N,144µm,0.3s
MDI AML AML
comp=E,159µm,0.8s
SMRN Sveta Marina 1.81 76 *e*Pn Pn 01 03 05.9 +0.9
TRI Trieste 1.83 53 P Pn 01 03 04.0 -1.3
TRI AML AML
comp=N,74µm,0.2s
TRI AML AML
comp=E,113µm,0.1s
TRI AML AML
comp=N,92µm,0.4s
TRI AML AML
comp=E,113µm,0.4s
MPRI Monte Prat 1.86 29 P Pn 01 03 05.5 -0.3
MPRI AML AML
comp=E,173µm,0.3s
MPRI AML AML
comp=N,196µm,0.5s
MPRI AML AML
comp=N,244µm,0.5s
MPRI AML AML
comp=E,218µm,0.3s
MPRI AML AML
comp=E,173µm,0.3s
MPRI AML AML
comp=N,196µm,0.5s
MPRI AML AML
comp=E,218µm,0.3s
MPRI AML AML
comp=N,244µm,0.5s
FDMO Fiordimonte 1.89 147 P Pn 01 03 06.1 -0.2
FDMO AML AML
comp=E,70µm,1.6s
FDMO AML AML
comp=N,57µm,0.7s
FDMO AML AML
comp=N,51µm,0.2s
FDMO AML AML
comp=E,62µm,0.4s
SKDS Skadanscina 1.89 60 *i* Pn Pn 01 03 04.8 -1.5
SKDS *i* pPn **Pb 01 03 10.2 0.0**
SKDS *i* Sn **Sn 01 03 26.9 -2.1**
SKDS *i* 01 03 35.3
SKDS IAML 01 03 38.6
comp=Z,36nm,0.2s
SABO M.te Sabotino 1.91 44 P Pn 01 03 06.0 -0.6
SABO AML AML
comp=E,1024µm,0.7s
SABO AML AML
comp=N,866µm,0.6s
SABO AML AML
comp=E,238µm,0.7s
SABO AML AML
comp=N,229µm,0.3s
SABO AML AML
comp=E,923µm,0.2s
SABO AML AML
comp=E,229µm,0.3s
SABO AML AML
comp=N,852µm,0.3s
SABO AML AML
comp=N,234µm,0.6s
SABO AML AML
comp=E,238µm,1.3s
SABO AML AML
comp=E,1024µm,1.3s
RNCA Ronca, Sant'Ol 1.96 266 P Pn 01 03 08.3 +1.2
RNCA Ronca, Sant'Ol 1.96 266 S Sn 01 03 32.8 +2.4
VINO Villanova 1.98 34 P Pn 01 03 06.6 -0.9
VINO AML AML
comp=E,161µm,0.3s
VINO AML AML
comp=N,120µm,0.4s
VINO AML AML
comp=N,120µm,0.4s
VINO AML AML
comp=E,162µm,0.3s
CLUD Cludinico 2.01 24 P Pn 01 03 07.4 -0.5
CLUD AML AML
comp=E,87µm,0.7s
CLUD AML AML
comp=N,62µm,1.2s
CLUD AML AML
comp=E,87µm,0.6s
CLUD AML AML
comp=N,66µm,0.6s
CLUD AML AML
comp=N,59µm,0.6s
CLUD AML AML
comp=E,101µm,0.6s
CLUD AML AML
comp=N,62µm,0.8s
CLUD AML AML
comp=E,87µm,1.3s
BRMO Bormio 2.06 334 P Pn 01 03 09.4 +0.8
NRCA Norcia 2.08 149 P Pn 01 03 09.2 +0.4
NRCA AML AML
comp=N,57µm,0.3s
NRCA AML AML
comp=E,111µm,0.8s
NRCA AML AML
comp=N,57µm,0.3s
NRCA AML AML
comp=E,46µm,0.2s
NRCA AML AML
comp=N,223µm,0.7s
NRCA AML AML
comp=E,51µm,0.8s
MF5 Montefalcone A 2.09 141 P Pn 01 03 09.0 0.0
MF5 AML AML
comp=E,134µm,0.9s
MF5 AML AML
comp=N,143µm,0.5s
MMO1 Montemonaco 2.10 145 P Pn 01 03 09.2 0.0
RIY Rijeka 2.11 70 *e*Pn Pn 01 03 09.2 0.0
FVI Forni Avoltri 2.11 21 P Pn 01 03 09.3 -0.1
FVI AML AML
comp=N,186µm,0.3s
FVI AML AML
comp=E,205µm,0.3s
FVI AML AML
comp=N,185µm,0.3s
FVI AML AML
comp=E,206µm,0.3s
ZOU Zoufplan 2.13 25 P Pn 01 03 09.6 -0.1
ZOU AML AML
comp=E,109µm,0.5s
ZOU AML AML
comp=N,95µm,1.5s
ZOU AML AML
comp=E,109µm,0.5s
ZOU AML AML
comp=N,84µm,0.6s
ZOU AML AML
comp=E,109µm,0.5s
ZOU AML AML
comp=E,109µm,0.5s
ZOU AML AML
comp=N,84µm,0.6s
ZOU AML AML
comp=N,89µm,0.5s
ZOU AML AML
comp=N,95µm,0.5s
CELB S.Piero in Cam 2.16 210 P Pn 01 03 09.7 -0.3
CELB AML AML
comp=N,48µm,1.3s
CELB AML AML
comp=E,32µm,0.2s
ABTA Abfaltersbach 2.20 15 *e*Pn Pn 01 03 11.0 +0.5
comp=E,0.3nm,0.2s
FUORN Ofenpass-Fuorn 2.22 334 P Pn 01 03 11.6 +0.6
PCP Piancastagn 2.24 269 P Pn 01 03 11.5 +0.5
NVLJ Novalja 2.28 91 *e*Pn Pn 01 03 11.5 0.0
ACOM Acomizza, Ital 2.31 33 P Pn 01 03 11.8 -0.4
MORSI Morsiglia 2.37 226 P Pn 01 03 12.5 -0.3
MYKA Terra Mystica 2.43 34 Pg Pn 01 03 15.5 +1.8
comp=E,0.6nm,0.2s
VIRC Vir 2.44 97 *e*Pn Pn 01 03 13.6 -0.1
FETA Feichten 2.48 345 *e*Pn Pn 01 03 16.5 +2.0
comp=E,0.3nm,0.1s
CANO Canova, Maglio 2.50 261 P Pn 01 03 13.7 -0.9
SQTA Sankt Quirin 2.61 353 *e*Pn Pn 01 03 18.3 +2.1
comp=E,1.9nm,0.1s
WTTA Wattenberg 2.63 359 *e*Pn Pn 01 03 17.6 +1.0
comp=E,0.4nm,0.2s
RORO Rocca Rossa 2.64 260 P Pn 01 03 15.8 -0.7
WATA Walderalm 2.71 359 *e*Pn Pn 01 03 20.4 +2.9
comp=E,2.1nm,0.1s
KBA Koelnbreinsper 2.71 25 Pn Pn 01 03 18.2 +0.6
comp=E,0.6nm,0.1s
MOTA Moosalm 2.74 352 Pn Pn 01 03 20.0 +2.0
comp=E,0.7nm,0.2s
OBKA Obir 2.76 46 Pn Pn 01 03 18.3 +0.1
comp=E,0.2nm,0.1s
GBOS Grotte di Boss 2.77 263 P Pn 01 03 18.2 -0.2
GBOS Grotte di Boss 2.77 263 S Sn 01 03 50.2 -0.6
PGF Pioggiola 2.85 224 *e*Pn Pn 01 03 18.8 -0.7
PGF Pioggiola 2.85 224 *e*P Pn 01 03 21.2 +1.7
PGF *e*Sn **Sn 01 03 50.4 -2.2**
comp=E,2.5nm,0.2s
PGF Pioggiola 2.85 224 P Pn 01 03 19.3 -0.1
OZLJ Ozalj 2.86 69 *e*Pn Pn 01 03 19.3 -0.1
LESA Schwarzleotal 2.88 14 Pn Pn 01 03 22.3 +2.4
comp=E,1.3nm,0.2s
TRAV Traversella 2.92 289 P Pn 01 03 19.3 -1.1
RETA Reutte 2.93 348 *e*Pn Pn 01 03 22.2 +1.7
comp=E,0.9nm,0.2s
DAVA Damuels 2.94 335 Pn Pn 01 03 22.9 +2.1
comp=E,1.9nm,0.3s
MORI Morici 3.00 103 *e*Pn Pn 01 03 21.4 0.0
SAOF Saorge 3.03 259 P Pn 01 03 22.0 +0.1
CIRO Champorcher 3.07 290 P Pn 01 03 20.9 -1.7
SOKA Soboth 3.12 48 *e*Pn Pn 01 03 25.4 +2.3
comp=E,0.4nm,0.2s
STV Sant Anna di V 3.14 264 P Pn 01 03 23.7 +0.2
SBF Sospel 3.14 257 *e*Pn Pn 01 03 22.6 -0.9
SBF Sospel 3.14 257 *e*P Pn 01 03 27.3 +3.8
SBF *e*Sn **Sn 01 03 58.2 -1.6**
comp=E,13nm,0.3s
BHB Bricherasio 3.15 275 P Pn 01 03 22.1 -1.4
RSP Reno Superiore 3.18 281 P Pn 01 03 21.6 -2.4
SPIF crte de Spivo 3.24 261 P Pn 01 03 25.4 +0.5
PZZ Stroppo 3.26 269 P Pn 01 03 24.9 -0.2
A251A Rujevac 3.30 80 *e*Pn Pn 01 03 27.3 +1.7
LOBO Lobor 3.45 62 *e*Pn Pn 01 03 28.1 +0.5
KIJV Kijevo 3.45 99 *e*Pn Pn 01 03 28.6 +1.0
SURF Saint Ours 3.48 269 P Pn 01 03 27.8 -0.4
MBDF Montbardon 3.50 273 *e*Pn Pn 01 03 27.7 -0.8
MBDF *e*Sn **Sn 01 04 05.4 -3.4**
comp=E,2.5nm,0.3s
JAUF Jausiers 3.53 268 P Pn 01 03 24.1 -4.7
CALF Calern 3.53 257 P Pn 01 03 26.4 -2.4
ENAUX Enaux 3.55 263 P Pn 01 03 30.6 +1.4
OGMO Fort Saint-Gob 3.59 281 P Pn 01 03 29.2 -0.5
LPG La Plagne 3.60 286 *e*Pn Pn 01 03 28.9 -1.0
LPG *e*Sn **Sn 01 04 08.7 -2.6**
comp=E,4.0nm,0.3s
CREF Crivoux 3.61 270 P Pn 01 03 30.3 +0.3
LPL La Plagne 3.61 286 *e*Pn Pn 01 03 29.5 -0.6
LPL *e*Sn **Sn 01 04 08.6 -3.0**
comp=E,2.8nm,0.3s
MOA Molln 3.69 28 *e*Pn Pn 01 03 31.2 +0.2
comp=E,0.4nm,0.2s
RSL Roselend 3.73 288 P Pn 01 03 33.7 +2.1
AIGLE Aigle 3.74 299 P Pn 01 03 33.9 +2.2
HVAR Hvar 3.74 111 *e*Pn Pn 01 03 31.2 -0.5
HVAR Sn **Sn 01 04 10.9 -3.6**
BALST Balsthal 3.88 316 P Pn 01 03 33.9 +0.3
LMR La Mourre 3.95 253 *e*Pn Pn 01 03 34.2 -0.3
LMR La Mourre 3.95 253 *e*P Pn 01 03 37.4 +2.9
LMR *e*Sn **Sn 01 04 16.5 -3.1**
comp=E,2.0nm,0.2s
RICI Ricice 4.09 104 *e*Pn Pn 01 03 36.4 -0.1
ORIF Oris-en-Rattie 4.14 276 *e*Pn Pn 01 03 37.4 +0.2
ORIF *e*Sn **Sn 01 04 21.5 -2.9**
comp=E,1.2nm,0.2s
ORIF Oris-en-Rattie 4.14 276 P Pn 01 03 37.7 +0.6
LSTV Lastovo 4.21 114 *e*Pn Pn 01 03 37.0 -1.1
KIZ Kirchzarten 4.22 323 P Pn 01 03 38.6 +0.3
OGSM Saint Maurice 4.34 285 P Pn 01 03 40.0 +0.1
CABF La Chapelle 4.39 299 *e*Pn Pn 01 03 41.9 +1.2
CABF *e*Sn **Sn 01 04 28.9 -1.8**
comp=E,2.6nm,0.3s
CONA Conrad Observa 4.39 40 *e*Pn Pn 01 03 43.0 +2.4
comp=E,0.4nm,0.3s
SMRF Simiane la Rot 4.43 264 *e*Pn Pn 01 03 40.2 -0.9
SMRF Simiane la Rot 4.43 264 *e*P Pn 01 03 46.1 +5.0
SMRF *e*Sn **Sn 01 04 29.3 -2.2**
comp=E,1.1nm,0.3s
RONA Rosalia, Austr 4.44 45 *e*Pn Pn 01 03 41.0 -0.3
comp=E,0.5nm,0.2s
RONA *e*Sn **Sn 01 04 27.7 -4.1**
comp=E,1.1nm,0.4s
CKRC Cesky Krumlov 4.56 22 *e*SG Sb 01 04 59.7 +10
HINF Hinteralfeld 4.62 315 *e*Pn Pn 01 03 42.8 -1.0
HINF *e*Sn **Sn 01 04 32.6 -3.6**
comp=E,1.8nm,0.2s
KHC Kasperske Hory 4.69 15 *e*PN Pb 01 04 03.5 +5.8
KHC *ex* x 01 04 34.5
KHC *e*SG Sb 01 05 05.9 +12
STON Ston 4.71 110 *e*Pn Pn 01 03 44.3 -0.5
ECH Echery 4.75 321 P Pn 01 03 45.4 -0.1
CDF Champ du Feu 4.85 323 *e*Pn Pn 01 03 46.7 -0.2
VIVF Saint-Julien-l 4.99 275 *e*Pn Pn 01 03 47.9 -1.0
VIVF *e*Sn **Sn 01 04 41.0 -4.4**
comp=E,1.3nm,0.2s
HAU Haudompre 5.00 314 *e*Pn Pn 01 03 48.7 -0.3
HAU *e*Sn **Sn 01 04 41.6 -4.0**
comp=E,4.5nm,0.2s
MODS Modra-Piesok 5.38 44 *e*PN Pn 01 03 54.1 -0.1
LASF Ste Croix 5.63 267 *e*Pn Pn 01 03 56.7 -1.0
LASF Ste Croix 5.63 267 *e*P Pn 01 04 01.6 +3.9
LASF *e*Sn **Sn 01 04 57.0 -4.2**
comp=E,0.1nm,0.1s
VRAC Vranov 5.76 34 *e*PG Pn 01 03 58.8 -0.6
VRAC *e*SG **Pb 01 04 17.5 +1.5**
SMF Signal de Mont 5.85 293 *e*Pn Pn 01 03 59.7 -0.9
SMF *e*Sn **Sn 01 05 02.3 -4.2**
comp=E,3.1nm,0.3s
LOR Lormes 6.05 299 *e*Pn Pn 01 04 03.4 0.0
baz=114
LOR *e*Sn **Sn 01 05 07.0 -4.5**
comp=E,3.1nm,0.3s
SSF Saint Saulge 6.20 296 *e*Pn Pn 01 04 04.4 -1.0
SSF *e*Sn **Sn 01 05 10.7 -4.4**
comp=E,2.3nm,0.4s
AVF Avril sur Loir 6.22 293 *e*Pn Pn 01 04 05.3 -0.3
AVF *e*Sn **Sn 01 05 10.9 -4.5**
comp=E,0.7nm,0.2s
BGF Bois d'Agland 6.49 290 *e*Pn Pn 01 04 09.2 -0.2
BGF *e*Sn **Sn 01 05 17.4 -4.8**
comp=E,1.3nm,0.3s

TCF Toulx Ste Croi 6.86 287 *e*Sn **Sn** 01 05 26.4 -5.0
comp=E,0.7nm,0.2s

*IDC **01** 01:07:56.9±1.8,22.92N×121.39E,h0km,mb3.6/8, mbtmp3.6/8,MS2.7/2,Error ellipse: s-maj=165.0km s-min=18.3km az=64.0*
*ASIES **01** 01:07:58.5,22.97N×120.98E,h6km,ML4.0,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr-1.61; Mθθ0.11; Mφφ 1.46; Mrθ1.00; Mθφ-0.76; Mφr-1.73; Fault plane solution: M0 2.63211×10²¹ NP1: φs331.19000°,δ69.82000°,λ-93.60000°. NP2: φs161.54000°,δ20.48000°,λ-80.29000°. Principal axes: T Plg24.7430°, Azm63.9940°; N Plg3.3830°, Azm332.4330°; P Plg64.9950°, Azm235.1520°;*
*JMA **01** 01:07:58.8±0.1,22.9N±0.4×121.3E±0.6,h0km,TAIWAN REGION*
*TAP **01** 01:07:58.5,22.97N×120.98E,h6km,ML4.0,C*
ISC 01 01:07:59.9±0.7,22.95N±0.01×121.04E±0.01,h14km±4km, n139,σ1§50/228,mb3.7/8,26C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LONT	**Longtian** baz=116	0.09	117	⇑*i*P			**Pg**	01 08 02.3	-0.7
LONT				*i*S			**Sg**	01 08 04.9	-0.2
TWG	**Pinlang** baz=149	0.13	167	⇑*i*P			**Pg**	01 08 02.8	-0.7
TWG				*i*S			**Sg**	01 08 05.3	-0.5
TWGBT	**Beinan** baz=150	0.14	164	⇑*i*P			**Pg**	01 08 02.8	-0.8
TWGBT				S			**Sg**	01 08 05.2	-0.8
TTN	**Taitung** baz=144	0.22	153	P			**Pg**	01 08 05.5	+0.7
TTN				S			**Sg**	01 08 10.3	+2.2
ECS	**Chishang** baz=61	0.22	49	⇑*i*P			**Pg**	01 08 04.3	-0.6
ECS				S			**Sg**	01 08 08.2	0.0
ELDTW	**Lidau** baz=10.0	0.24	355	⇑P			**Pg**	01 08 03.2	-2.1
ELDTW				S			**Sg**	01 08 06.0	-2.8
EDH	**Donghe** baz=85	0.24	85	*e*P			**Pg**	01 08 05.6	+0.3
EDH				*i*S			**Sg**	01 08 10.0	+1.2
EHD	**Haiduan** baz=49	0.25	38	⇑*i*P			**Pg**	01 08 04.2	-1.2
EHD				*e*S			**Sg**	01 08 07.6	-1.4
STYH	**Taoyuan** baz=315	0.33	312	⇑*i*P			**Pg**	01 08 04.6	-2.1
STYH				*e*S			**Sg**	01 08 08.3	-3.0
CHKT	**Chengkung** baz=71	0.34	64	⇑P			**Pb**	01 08 07.4	-0.3
CHKT				*e*S			**Sb**	01 08 13.7	+0.8
FULB	**Fuli** baz=40	0.34	43	⇑P			**Pg**	01 08 06.6	-0.3
FULB				*e*S			**Sb**	01 08 12.4	-0.7
ECL	**Taimali** baz=183	0.36	193	⇑P			**Pg**	01 08 06.1	-1.1
ECL				*e*S			**Sg**	01 08 10.8	-1.5
SLGT	**Liugui** baz=269	0.36	277	⇑P			**Pg**	01 08 05.3	-2.0
SLGT				*e*S			**Sg**	01 08 09.5	-2.9
CHKH	**Chenggong** baz=78	0.41	54	*e*P			**Pb**	01 08 08.0	-0.9
CHKH				*e*S			**Sb**	01 08 15.1	+0.1
TSMG	**Majia** baz=224	0.44	236	*e*P			**Pg**	01 08 06.4	-2.2
TSMG				*e*S			**Sg**	01 08 11.5	-3.1
SGST	**Jiashian** baz=291	0.44	287	⇑*i*P			**Pg**	01 08 06.2	-2.6
SGST				*e*S			**Sg**	01 08 12.5	-2.2
TWF1	**Yuli** baz=38	0.47	31	⇑P			**Pg**	01 08 08.0	-1.3
TWF1				*e*S			**Sg**	01 08 13.9	-1.5
EYUL	**Yuli** baz=40	0.47	33	⇑P			**Pg**	01 08 08.2	-1.1
EYUL				*e*S			**Sg**	01 08 14.2	-1.5
LDUT	**Ludao** baz=123	0.48	125	*e*P			**Pb**	01 08 10.1	-0.1
LDUT				*e*S			**Sb**	01 08 19.2	+2.1
WTP	**Ta-pu** baz=312	0.49	307	⇑*i*P			**Pg**	01 08 08.2	-1.4
WTP				*e*S			**Sg**	01 08 14.9	-1.4
YULB	**Yu-li** baz=35	0.50	28	⇑*i*P			**Pg**	01 08 08.3	-1.6
YULB				*e*S			**Sg**	01 08 15.4	-1.2
MASBT	**Mashibuluo** baz=218	0.50	228	⇑*i*P			**Pg**	01 08 07.8	-2.1
MASBT				*e*S			**Sg**	01 08 14.2	-2.4
SCST	**Cishan** baz=254	0.51	263	*e*P			**Pg**	01 08 08.6	-1.4
TPUB	**Ta-pu** baz=315	0.51	313	⇑P			**Pg**	01 08 08.7	-1.4
TPUB				*e*S			**Sg**	01 08 15.3	-1.7
CHN1	**Nanshi** baz=303	0.53	297	⇑P			**Pg**	01 08 09.2	-1.1
CHN1				*e*S			**Sg**	01 08 17.9	+0.5
ECBN	**Changbin** baz=69	0.53	46	*e*P			**Pb**	01 08 10.4	-0.6
ECBN				*e*S			**Sb**	01 08 18.8	+0.4
SGLT	**Jiouru** baz=242	0.55	246	*e*P			**Pg**	01 08 09.8	-1.0
SNST	**Tainan City** baz=299	0.57	298	*e*P			**Pg**	01 08 10.2	-0.9
SNST				*e*S			**Sg**	01 08 18.8	+0.2
TWM1	**Shoushan** baz=246	0.58	258	⇑P			**Pg**	01 08 10.6	-0.8
EAST	**Anshuo** baz=192	0.59	197	⇑P			**Pg**	01 08 10.4	-1.1
EAST				*e*S			**Sg**	01 08 18.2	-1.2
ALS	**Alishan** baz=344	0.60	339	*e*P			**Pg**	01 08 10.1	-1.7
ALS				*e*S			**Sg**	01 08 18.4	-1.4
TWK	**Hsinying** baz=308	0.60	302	⇑P			**Pg**	01 08 10.8	-0.9
TWK				*e*S			**Sg**	01 08 19.4	-0.3
TAW	**Tawu** baz=188	0.60	193	*e*P			**Pg**	01 08 10.8	-1.0
TAW				*e*S			**Sg**	01 08 19.3	-0.5
EHY	**Hungye** baz=31	0.61	25	*e*P			**Pg**	01 08 10.3	-1.7
EHY				*e*S			**Sg**	01 08 18.4	-1.7
TAWH	**Dawu Township** baz=189	0.62	193	*e*P			**Pg**	01 08 11.2	-1.0
TAWH				*e*S			**Sg**	01 08 19.2	-1.2
WCKO	**Fanlu** baz=323	0.63	321	*e*P			**Pg**	01 08 11.5	-0.8
WCKO				*e*S			**Sg**	01 08 20.5	-0.1
CHN3	**Shinhua** baz=281	0.63	282	*e*P			**Pb**	01 08 13.0	+0.2
CHN3				*e*S			**Sb**	01 08 24.2	+2.7
SHHT	**Tainan City** baz=275	0.64	277	*e*P			**Pb**	01 08 13.1	+0.2
HGSD	**Ruisui** baz=28	0.65	33	⇑P			**Pg**	01 08 12.0	-0.6
HGSD				*e*S			**Sg**	01 08 21.1	0.0
SCZT	**Fangliau** baz=210	0.69	214	⇑*i*P			**Pg**	01 08 11.8	-1.7
SCZT				*e*S			**Sg**	01 08 20.5	-2.1
SSHA	**Shanhua** baz=300	0.72	285	*e*P			**Pb**	01 08 14.5	+0.3
SSHA				*e*S			**Sb**	01 08 26.9	+3.1
TAI1	**Yung-k'ang** baz=275	0.75	277	*e*P			**Pb**	01 08 15.8	+1.1
TAI1				*e*S			**Sn**	01 08 29.1	+1.8
WHYT	**Xinyi Township** baz=351	0.76	347	*e*P			**Pg**	01 08 13.3	-1.5
WHYT				*e*S			**Sg**	01 08 23.0	-1.8
SLIU	**Shizi** baz=194	0.76	197	*e*P			**Pg**	01 08 13.6	-1.2
SLIU				*e*S			**Sg**	01 08 24.1	-0.8
WSSB	**Gushan** baz=243	0.78	247	*e*P			**Pb**	01 08 16.4	+1.1
WSSB				*e*S			**Sn**	01 08 29.1	+1.1
CHY	**Chiayi** baz=316	0.79	314	*e*P			**Pg**	01 08 15.3	+0.1
CHY				*e*S			**Sg**	01 08 25.3	-0.3
EGFH	**Guangfu** baz=41	0.80	26	*e*P			**Pg**	01 08 13.6	-1.9
VWDT	**VWDT** baz=14	0.81	7	*e*P			**Pg**	01 08 13.3	-2.3
VWDT				*e*S			**Sg**	01 08 26.2	0.0
ICHU	**Yijhu** baz=301	0.81	300	*e*P			**Pg**	01 08 15.5	-0.2
ICHU				*e*S			**Sg**	01 08 27.3	+1.0
SCLT	**Jiali** baz=300	0.81	286	*e*P			**Pg**	01 08 14.5	-1.2
SCLT				*e*S			**Sb**	01 08 28.9	+2.3
WARBT	**Fenglin Townsh** baz=34	0.83	23	⇑P			**Pg**	01 08 13.9	-2.2
WARBT				*e*S			**Sg**	01 08 26.2	-0.7
SSLB	**Suanglung** baz=359	0.84	355	*e*P			**Pg**	01 08 14.1	-2.1
WGK	**Gukeng** baz=332	0.85	329	*e*P			**Pg**	01 08 16.1	-0.5
WGK				*e*S			**Sb**	01 08 28.5	+0.7
CHN8	**Yiju** baz=298	0.86	298	*e*P			**Pg**	01 08 16.6	0.0
CHN8				*e*S			**Sb**	01 08 29.4	+1.4
WDLH	**Douliu** baz=330	0.87	328	*e*P			**Pg**	01 08 16.2	-0.6
WDLH				*e*S			**Sb**	01 08 29.5	+1.3
TSCK	**Chigu Township** baz=282	0.90	283	*e*P			**Pb**	01 08 18.1	+0.8
TSCK				*e*S			**Sb**	01 08 32.3	+3.1
WJS	**Zhushan** baz=345	0.91	342	*e*P			**Pb**	01 08 17.9	+0.3
WJS				*e*S			**Sb**	01 08 30.8	+1.2
ESL	**Shilin** baz=33	0.93	23	*e*P			**Pg**	01 08 16.1	-2.0
ESL				*e*S			**Sg**	01 08 29.5	-0.7
SMLT	**Sun Moon Lake** baz=4.0	0.94	352	*e*P			**Pg**	01 08 17.0	-1.1
SMLT				*e*S			**Sb**	01 08 32.2	+1.9
WSL	**Shuilin Townsh** baz=308	0.94	308	*e*P			**Pg**	01 08 17.4	-0.8
WSL				*e*S			**Sg**	01 08 30.6	+0.2
WTK	**Tuku** baz=323	0.95	321	*e*P			**Pg**	01 08 17.2	-1.0
WTK				*e*S			**Sb**	01 08 32.0	+1.4
SHUL	**Shoufeng** baz=34	0.96	30	*e*P			**Pg**	01 08 17.7	-0.8
SHUL				*e*S			**Sn**	01 08 33.2	+0.7
TYC	**Yuchr** baz=355	0.96	350	*e*P			**Pg**	01 08 18.3	-0.3
TYC				*e*S			**Sb**	01 08 32.4	+1.3
HEN	**Hengchun** baz=201	0.98	197	*e*P			**Pb**	01 08 18.8	+0.2
OWD	**Renai** baz=23	1.01	7	*e*P			**Pg**	01 08 16.9	-2.5
WSF	**Szhu** baz=314	1.02	313	*e*P			**Pg**	01 08 18.5	-1.1
WSF				*e*S			**Sg**	01 08 32.9	0.0
TWK1	**Hengchun** baz=179	1.02	192	*e*P			**Pg**	01 08 18.6	-1.1
TWKBT	**Hengchun** baz=190	1.03	192	*e*P			**Pb**	01 08 19.9	+0.4
TWKBT				*e*S			**Sb**	01 08 34.3	+1.5
WUSB	**Renai** baz=18	1.04	4	*e*P			**Pg**	01 08 17.4	-2.7
WUSB				*e*S			**Sg**	01 08 32.4	-1.3
LYUB	**Lan-yu** baz=150	1.07	152	*e*P			**Pg**	01 08 16.9	-3.7
ETM	**Tongmen** baz=36	1.09	22	*e*P			**Pg**	01 08 18.9	-2.1
WCS	**Beigang Elemen** baz=358	1.11	354	*e*P			**Pg**	01 08 20.4	-0.9
WCS				*e*S			**Sb**	01 08 35.9	+0.7
CHGB	**Renai** baz=21	1.11	6	*e*P			**Pg**	01 08 18.7	-2.7
LXIB	**Xiulin Townshi** baz=22	1.12	18	*e*P			**Pg**	01 08 19.5	-2.1
LXIB				*e*S			**Sg**	01 08 35.6	-0.7
WRL	**Guolierlin Hig** baz=329	1.12	327	*e*P			**Pg**	01 08 20.4	-1.3
WRL				*e*S			**Sg**	01 08 35.5	-0.9
WTCT	**Ta-ch'eng** baz=324	1.15	323	*e*P			**Pg**	01 08 20.8	-1.2
WTCT				*e*S			**Sg**	01 08 36.4	-0.6
WCHH	**Zhanghua** baz=325	1.21	339	*e*P			**Pg**	01 08 23.0	-0.2
WHF	**Hehuan Shan** baz=27	1.21	10	*e*P			**Pg**	01 08 21.2	-2.0
WHF				*e*S			**Sg**	01 08 38.8	-0.3
TWD	**Chiawan** baz=36	1.24	24	*e*P			**Pg**	01 08 21.9	-1.9
TWD				*e*S			**Sb**	01 08 39.5	+0.7
TDCB	**Techi** baz=18	1.30	5	*e*P			**Pg**	01 08 22.9	-2.1
TDCB				*e*S			**Sg**	01 08 39.8	-2.2
TWT	**Tachien** baz=20	1.30	5	*e*P			**Pg**	01 08 23.3	-1.7
TWT				*e*S			**Sb**	01 08 42.1	+1.1
FUSS	**Fushou** baz=29	1.30	8	*e*P			**Pg**	01 08 22.6	-2.5
WDGT	**Dungji** baz=282	1.31	284	*e*P			**Pg**	01 08 21.9	-3.2
WDGT				*e*S			**Sg**	01 08 39.6	-2.5
ETLH	**Xiulin Townshi** baz=36	1.31	18	*e*P			**Pg**	01 08 23.0	-2.3
ETLH				*e*S			**Sg**	01 08 41.1	-1.3
ETL	**Fush Village** baz=39	1.32	24	*e*P			**Pg**	01 08 23.1	-2.3
NACB	**Ninganchiao** baz=37	1.32	23	*e*P			**Pg**	01 08 22.6	-2.8
NACB				*e*S			**Sg**	01 08 39.6	-3.0
WHP	**Taichung City** baz=359	1.32	356	*e*P			**Pg**	01 08 24.4	-1.1
WHP				*e*S			**Sb**	01 08 43.2	+1.7
TWQ1	**Liyutan** baz=354	1.41	350	*e*P			**Pn**	01 08 26.2	+1.0
TWQ1				*e*S			**Sn**	01 08 46.2	+2.5
WDJ	**Dajia District** baz=348	1.44	345	*e*P			**Pn**	01 08 26.4	+0.9
WDJ				*e*S			**Sn**	01 08 46.9	+2.7
PHUB	**P'eng-hu** baz=292	1.46	293	*e*P			**Pn**	01 08 24.4	-1.4
PHUB				*e*S			**Sg**	01 08 43.3	-3.8
NSY	**Sanyi** baz=353	1.48	350	*e*P			**Pn**	01 08 27.6	+1.4
NSY				*e*S			**Sn**	01 08 48.5	+3.1
PNG	**Penghu** baz=293	1.50	295	*e*P			**Pn**	01 08 25.2	-1.2
PNG				*e*S			**Sn**	01 08 44.4	-1.3
NNSB	**Datong** baz=25	1.50	12	*e*P			**Pn**	01 08 26.6	0.0
NNSB				*e*S			**Sg**	01 08 46.3	-2.2
VCHM	**Qimei** baz=292	1.50	280	P			**Pn**	01 08 25.1	-1.4
VCHM				S			**Sn**	01 08 44.8	-1.1
NNS	**Nan Shan** baz=25	1.52	12	*e*P			**Pn**	01 08 26.9	+0.2
NNS				*e*S			**Sg**	01 08 47.3	-1.5
EAHA	**Aohua** baz=36	1.52	25	*e*P			**Pn**	01 08 27.0	+0.3
NMLH	**Miaoli** baz=354	1.60	352	*e*P			**Pb**	01 08 29.5	+0.3
NMLH				*e*S			**Sg**	01 08 51.2	-0.2
ENA	**Nanau** baz=27	1.61	23	*e*P			**Pn**	01 08 28.5	+0.6
EWUT	**Wuta** baz=28	1.64	24	*e*P			**Pn**	01 08 28.8	+0.5
LATG	**Datong** baz=33	1.64	16	⇑*e*P			**Pn**	01 08 28.9	+0.4
LATG				*e*S			**Sn**	01 08 49.5	+0.1
NSTT	**Nanjuang** baz=341	1.67	359	*e*P			**Pn**	01 08 30.1	+1.3
NSTT				*e*S			**Sn**	01 08 52.0	+2.0
NFF	**Wufeng Townshi** baz=345	1.68	2	*e*P			**Pn**	01 08 30.5	+1.6
NFF				*e*S			**Sb**	01 08 52.9	+1.2
LIOB	**Emei** baz=2.0	1.69	359	*e*P			**Pb**	01 08 31.1	+0.3
LIOB				*e*S			**Sn**	01 08 52.5	+2.0
NDT	**Datong Townshi** baz=33	1.70	15	*e*P			**Pn**	01 08 30.3	+1.1
NDT				*e*S			**Sn**	01 08 51.8	+1.0
YHNB	**Yeheng** baz=14	1.74	10	*e*P			**Pn**	01 08 31.0	+1.2
YHNB				*e*S			**Sn**	01 08 53.6	+1.7
NSK	**Sanguang** baz=13	1.74	10	*e*P			**Pn**	01 08 31.1	+1.3
NSK				*e*S			**Sn**	01 08 53.5	+1.6
ENTT	**Nioudou** baz=34	1.75	16	*e*P			**Pn**	01 08 31.1	+1.2
ENTT				*e*S			**Sn**	01 08 54.2	+2.2
EOS3	**EOS3** baz=57	1.77	41	*e*P			**Pn**	01 08 29.8	-0.2
EOS3				*e*S			**Sn**	01 08 52.4	+0.1
ESAO	**Su ao** baz=28	1.78	24	*e*P			**Pn**	01 08 31.8	+1.5
TWC	**Suao** baz=29	1.81	24	*e*P			**Pn**	01 08 32.0	+1.3
TWC				*e*S			**Sn**	01 08 55.2	+1.7
TWE	**Neicheng** baz=34	1.85	18	*e*P			**Pn**	01 08 32.9	+1.6
NWLT	**Wulai** baz=31	1.87	13	*e*P			**Pb**	01 08 33.5	-0.3
NWLT				*e*S			**Sg**	01 09 00.1	0.0
FUSB	**Fushanzhiwuyua** baz=33	1.87	15	*e*P			**Pn**	01 08 33.4	+1.9
FUSB				*e*S			**Sn**	01 08 57.6	+2.5
NHDH	**Xindian Distri** baz=27	2.05	12	*e*S			**Sg**	01 09 05.0	-1.0
TIPB	**Shuangxi** baz=38	2.14	20	*e*P			**Pn**	01 08 36.8	+1.6
TIPB				*e*S			**Sn**	01 09 04.4	+2.8
NWF	**Wu-fen Shan** baz=32	2.22	18	*e*P			**Pb**	01 08 39.5	-0.3
WFSB	**Wu-fen Shan** baz=35	2.22	18	*e*P			**Pb**	01 08 39.8	0.0
SXI1	**Grass Mountain** baz=33	2.27	20	*e*P			**Pb**	01 08 40.3	-0.4
ANP	**Anpu** baz=34	2.27	11	*e*P			**Pb**	01 08 41.0	+0.2
YM08	**YM08** baz=34	2.28	13	*e*P			**Pb**	01 08 40.2	-0.8
HATJ	**Hateruma jima**	2.77	66	P			**Pn**	01 08 43.6	-0.2
HATJ							*e*S	**Sn**	01 09 16.4	-0.7
JIJ	**Ishigaki jima**	3.17	63	P			**Pn**	01 08 49.3	-0.2
JIJ							S	**Sn**	01 09 26.9	-0.2
JISG	**Ishigakijimahi**	3.41	61	P			**Pn**	01 08 52.8	+0.1
JISG							S	**Sn**	01 09 32.3	-0.6
JNU	**Nakatsue** comp=Z,24nm,18.1s,baz=231,slow=40	13.34	38	LR			LR	01 16 36.8		
CMAR	**Chiang Mai Arr** comp=Z,23nm,18.6s,baz=75,slow=37	21.14	262	LR			LR	01 21 13.0		
SONM	**Songino Array** 0.6nm,0.7s,baz=157,slow=7.7,SNR=2.0 0.6nm,0.7s	27.45	338	P			**P**	01 13 46.1	+0.5	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=112,slow=10,SNR=7.2 0.4nm,0.7s	39.14	317	P			**P**	01 15 28.2	+1.2	
ZALV	**Zalesovo Beam** 1.3nm,0.7s,baz=115,slow=7.7,SNR=7.8 1.3nm,0.7s	41.21	328	P			**P**	01 15 44.2	+0.1	
H11N1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=5.4	42.70	85	T			T	02 01 12.4		
H11N2	**WAKE ISLAND Hy** baz=283,slow=74,SNR=8.0	42.70	85	T			T	02 01 09.5		
H11N3	**WAKE ISLAND Hy** baz=283,slow=74,SNR=7.0	42.72	85	T			T	02 01 10.5		
H11S3	**WAKE ISLAND Hy** baz=284,slow=75,SNR=9.1	42.80	87	T			T	02 01 27.2		
H11S1	**WAKE ISLAND Hy** baz=284,slow=75,SNR=8.8	42.81	87	T			T	02 01 18.5		
H11S2	**WAKE ISLAND Hy** baz=284,slow=75,SNR=6.8	42.81	87	T			T	02 01 19.2		
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=118,slow=7.0,SNR=3.3 0.3nm,0.6s	42.97	321	P			**P**	01 15 59.1	+0.6	
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=343,slow=8.5,SNR=8.7 0.6nm,0.6s	44.56	162	P			**P**	01 16 09.6	-2.0	
ASAR	**Alice Springs** 0.4nm,0.6s,baz=355,slow=15,SNR=7.0 0.4nm,0.6s	47.99	164	P			**P**	01 16 36.5	-2.0	
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=104,slow=11,SNR=3.2 0.5nm,0.6s	48.55	321	P			**P**	01 16 43.4	+0.9	
GERES	**GERESS Array B** 0.7nm,0.7s,baz=59,slow=5.9,SNR=1.7 0.7nm,0.7s	83.71	321	P			**P**	01 20 30.0	+1.4	

*RSNC **01** 01:08:35.3±1.5,7.20N×79.82W,h15km±10km,ML3.3, Mw3.7*
*UPA **01** 01:08:35.7±1.5,7.28N×79.84W,h6km±5km,MW3.3,Fault plane solution: NP1:φs130.00000°,δ60.00000°,*

λ-44.00000°.
ISC 01 01:08:33.5±1.4,7°20N±0°05×79°73W±0°03,h20km±5km, n29,σ0°66/55,9C-3D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEDA3	**Pedasi**	**0.44**	**318**	*iP*	**Pg**	**01 08 42.4**	**-0.2**
PEDA3				*eS*	**Sb**	**01 08 48.1**	**-0.6**
ACHO3	**Achotines, Los**	**0.49**	**296**	*iP*	**Pb**	**01 08 43.4**	**0.0**
ACHO3				*eS*	**Sg**	**01 08 50.0**	**-0.2**
TOSI3	**Tonosi**	**0.73**	**286**	*eP*	**Pg**	**01 08 48.3**	**+0.3**
TOSI3				*eS*	**Sn**	**01 08 59.4**	**0.0**
AZU	**Azuero**	**0.80**	**317**	*iP*	**Pb**	**01 08 48.5**	**-0.3**
AZU				*eS*	**Sb**	**01 08 58.8**	**-0.3**
AZU	**Azuero**	**0.80**	**317**	*eP*	**Pb**	**01 08 48.4**	**-0.3**
AZU				*eS*	**Sb**	**01 08 58.8**	**-0.3**
AZU	comp=Z,1μm,0.4s			*i*		01 09 03.7	
CHIT3	**Chitre**	**1.01**	**318**	*eP*	**Pn**	**01 08 52.8**	**+0.2**
CHIT3				*eS*	**Sb**	**01 09 04.6**	**-0.8**
PESE3	**Pese, Herrera**	**1.12**	**309**	*eP*	**Pb**	**01 08 54.0**	**-0.2**
PESE3				*eS*	**Sb**	**01 09 08.2**	**-0.2**
CACAO	**El Cacao, Vera**	**1.13**	**277**	*eP*	**Pn**	**01 08 53.3**	**-0.9**
CACAO				*eS*	**Sb**	**01 09 08.8**	**+0.1**
CACAO	**El Cacao, Vera**	**1.13**	**277**	*eP*	**Pn**	**01 08 53.3**	**-0.9**
CACAO				*eS*	**Sb**	**01 09 06.7**	**-2.0**
CACAO	comp=Z,109nm,0.1s			*i*		01 09 10.3	
MARI3	**Mariato, Verag**	**1.33**	**290**	*eP*	**Pb**	**01 08 58.2**	**+0.4**
MARI3				*eS*	**Sn**	**01 09 13.6**	**-0.4**
CRIS3	**El Cristo, Coc**	**1.37**	**320**	*eP*	**Pb**	**01 08 58.5**	**0.0**
CRIS3				*eS*	**Sb**	**01 09 15.5**	**0.0**
PNME	**Penonome**	**1.41**	**335**	*eP*	**Pb**	**01 08 58.7**	**-0.5**
PNME				*eS*	**Sb**	**01 09 16.4**	**-0.3**
PNME	**Penonome**	**1.41**	**335**	*eP*	**Pb**	**01 08 58.6**	**-0.5**
PNME				*eS*	**Sb**	**01 09 17.0**	**+0.3**
PNME	comp=Z,246nm,0.2s			*i*		01 09 19.6	
STIA3	**Santiago, Vera**	**1.52**	**306**	*eP*	**Pb**	**01 09 01.0**	**-0.1**
STIA3				*eS*	**Sb**	**01 09 20.7**	**+0.8**
CALO3	**Calobre, Verag**	**1.57**	**315**	*eP*	**Pn**	**01 09 01.1**	**+0.9**
CALO3				*eS*	**Sb**	**01 09 21.3**	**+0.1**
GMAL	**Guarumal, Vera**	**1.59**	**291**	*eP*	**Pn**	**01 09 01.3**	**+0.7**
GMAL				*eS*	**Sb**	**01 09 22.6**	**+0.6**
GMAL	**Guarumal, Vera**	**1.59**	**291**	*eP*	**Pn**	**01 09 01.0**	**+0.4**
GMAL				*eS*	**Sg**	**01 09 26.3**	**+1.3**
GMAL	comp=Z,105nm,0.4s			*i*		01 09 28.1	
TABO3	**Taboga, Panama**	**1.59**	**6**	*eS*	**Sb**	**01 09 22.1**	**+0.1**
RSUS3	**Rio de Jesus,**	**1.62**	**299**	*eP*	**Pn**	**01 09 01.9**	**+1.0**
RSUS3				*eS*	**Sb**	**01 09 24.0**	**+1.3**
FLAM	**Flamenco Islan**	**1.71**	**6**	*eS*	**Sb**	**01 09 25.7**	**+0.3**
ZANG	**Zanguenga, Cho**	**1.75**	**356**	*eP*	**Pb**	**01 09 05.3**	**+0.3**
ZANG				*eS*	**Sg**	**01 09 28.7**	**-1.4**
UPA	**Univ. de Panam**	**1.78**	**6**	*eP*	**Pb**	**01 09 05.8**	**+0.3**
UPA				*eS*	**Sb**	**01 09 27.5**	**+0.2**
UPA	**Univ. de Panam**	**1.78**	**6**	*eP*	**Pb**	**01 09 05.0**	**-0.4**
UPA				*eS*	**Sb**	**01 09 25.8**	**-1.6**
UPA	comp=Z,8μm,0.5s			*i*		01 09 34.3	
BCIP	**Isla Barro Col**	**1.96**	**357**	*iP*	**Pb**	**01 09 07.8**	**-0.7**
BCIP				*eS*	**Sb**	**01 09 33.0**	**+0.6**
BCIP	**Isla Barro Col**	**1.96**	**357**	*eP*	**Pb**	**01 09 07.6**	**-0.8**
BCIP				*eS*	**Sb**	**01 09 32.9**	**+0.4**
BCIP	comp=Z,191nm,0.4s			*i*		01 09 35.6	
UPD2	**Meteti**	**2.16**	**52**	*eP*	**Pn**	**01 09 09.1**	**+0.7**
UPD2				*eS*	**Sb**	**01 09 39.0**	**+0.6**
TOTI	**Torti**	**2.22**	**39**	*eP*	**Pb**	**01 09 12.9**	**0.0**
TOTI				*eS*	**Sb**	**01 09 40.6**	**+0.5**
NANC3	**Nancito, Chiri**	**2.24**	**298**	*eP*	**Pb**	**01 09 13.3**	**0.0**
NANC3				*eS*	**Sb**	**01 09 40.9**	**+0.3**
PLMC	**San Jos del P**	**4.12**	**123**	*eP*	**Pn**	**01 09 35.1**	**-0.3**

*KRNET **01** 01:42:21.2±0.1,40°.41N×77°.60E,h20km,mb2.7*
*SOME **01** 01:42:21.2,40°.47N×77°.65E,h5km*
*NNC **01** 01:42:22.6±1.2,40°.48N×77°.65E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=7.7km s-min=6.1km az=167.0*
ISC 01 01:42:24.1±2.5,40°54N±0°09×77°52E±0°.04,h1km±13km, n53,σ1°02/82,11C-11D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.21**	**10**	*iP*	**Pg**	**01 42 46.5**	**-0.8**
TARG	baz=7.0			*iS*	**Sn**	**01 43 05.4**	**-0.4**
NRN	**Naryn**	**1.46**	**308**	*eP*	**Pn**	**01 42 51.3**	**-0.6**
NRN	baz=10.0			*eS*	**Sg**	**01 43 13.2**	**+2.2**
KDJ	**Kajisay**	**1.61**	**351**	*iP*	**Pn**	**01 42 53.8**	**-0.1**
KDJ	baz=50			*iS*	**Sg**	**01 43 17.8**	**+2.0**
ULHL	**Ulahol**	**1.96**	**331**	*iP*	**Pb**	**01 43 00.1**	**-0.6**
ULHL	baz=31			*iS*	**Sg**	**01 43 28.1**	**+1.1**
ANVS	**Anan'yevo**	**2.24**	**3**	*eP*	**Pn**	**01 43 03.8**	**+1.2**
ANVS	baz=1.0			*eS*	**Sb**	**01 43 34.7**	**+0.8**
TNSS	**Tian-Shan**	**2.53**	**350**	Pg	**Pb**	**01 43 10.6**	**0.0**
TNSS	30nm,0.5s			Lg	Lg	01 43 46.9	
TNSS	**Tian-Shan**	**2.53**	**350**	*eP*	**Pb**	**01 43 10.9**	**+0.3**
TNSS	19nm,0.2s			*eS*	**Sg**	**01 43 46.6**	**+1.2**
IZV	**Izvestkoviy**	**2.58**	**345**	Pg	**Pb**	**01 43 11.8**	**+0.4**
IZV	8.5nm,0.5s			Lg	Lg	01 43 48.7	
IZV	**Izvestkoviy**	**2.58**	**345**	*eP*	**Pb**	**01 43 11.8**	**+0.4**
IZV	8.5nm,0.5s			*eS*	**Sg**	**01 43 48.7**	**+1.5**
SATY	**Saty**	**2.60**	**14**	Pg	**Pb**	**01 43 11.8**	**+0.1**
SATY	11nm,0.5s			Lg	Lg	01 43 48.0	
SATY	**Saty**	**2.60**	**14**	*eP*	**Pb**	**01 43 11.8**	**+0.1**
SATY	11nm,0.5s			*eS*	**Sg**	**01 43 48.0**	**+0.3**
MDOK	**Medeo**	**2.64**	**352**	Pg	**Pb**	**01 43 11.8**	**-0.6**
MDOK	8.6nm,0.4s			Pg	**Pb**	**01 43 12.9**	**+0.5**
MDOK	20nm,0.3s			Lg	Lg	01 43 50.0	
MDOK	46nm,0.6s			Lg	Lg	01 43 50.4	
MDOK	**Medeo**	**2.64**	**352**	*eP*	**Pb**	**01 43 12.9**	**+0.5**
MDOK	20nm,0.3s			*eS*	**Sg**	**01 43 50.0**	**+0.9**
KOTS	**Kotyrbulak**	**2.71**	**354**	Pg	**Pb**	**01 43 14.3**	**+0.8**
KOTS	21nm,0.5s			Lg	Lg	01 43 52.8	
KOTS	**Kotyrbulak**	**2.71**	**354**	*eP*	**Pb**	**01 43 13.6**	**0.0**
KOTS	2.1nm,0.1s			*eS*	**Sg**	**01 43 51.0**	**-0.2**
ZHN	**Zhinishke**	**2.71**	**14**	Pg	**Pb**	**01 43 13.6**	**+0.1**
ZHN	8.4nm,0.4s			Lg	Lg	01 43 51.1	
ZHN	**Zhinishke**	**2.71**	**14**	*eP*	**Pb**	**01 43 13.6**	**+0.1**
ZHN	8.4nm,0.4s			*eS*	**Sg**	**01 43 51.1**	**-0.2**
MTBS	**Maitube**	**2.71**	**343**	Pg	**Pb**	**01 43 13.9**	**+0.4**
MTBS	12nm,0.2s			Lg	Lg	01 43 51.7	
MTBS	**Maitube**	**2.71**	**343**	*eP*	**Pb**	**01 43 13.9**	**+0.4**
MTBS	12nm,0.2s			*eS*	**Sg**	**01 43 51.7**	**+0.4**
	17nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.75**	**300**	*eP*	**Pn**	**01 43 10.7**	**+1.1**
ARLS	baz=1.0			*eS*	**Sb**	**01 43 46.6**	**-1.9**
KST	**Kastek**	**2.76**	**336**	Pg	**Pb**	**01 43 15.2**	**+0.8**
KST	3.7nm,0.4s			Lg	Lg	01 43 54.0	
KST	**Kastek**	**2.76**	**336**	*eP*	**Pb**	**01 43 15.2**	**+0.8**
KST	3.7nm,0.4s			*eS*	**Sg**	**01 43 54.0**	**+1.2**
TKM2	**Tokmak 2**	**2.78**	**329**	Pg	**Pb**	**01 43 14.2**	**-0.6**
TKM2	0.7nm,0.3s			Lg	Lg	01 43 53.3	
TKM2	**Tokmak 2**	**2.78**	**329**	*iP*	**Pn**	**01 43 11.2**	**+1.2**
TKM2	baz=30			*iS*	**Sb**	**01 43 47.8**	**-1.6**
UCH	**Uchtor**	**2.82**	**308**	*eP*	**Pn**	**01 43 11.7**	**+0.9**
UCH	baz=9.0			*iS*	**Sb**	**01 43 48.9**	**-1.9**
UZB	**Uzynbulak**	**2.83**	**23**	Pg	**Pn**	**01 43 12.5**	**+1.8**
UZB	7.2nm,0.4s			Lg	Lg	01 43 49.2	
UZB	**Uzynbulak**	**2.83**	**23**	*eP*	**Pb**	**01 43 14.1**	**-1.6**
UZB	2.5nm,0.1s			*eS*	**Sb**	**01 43 51.9**	**+1.0**
KBK	**Karagaybulak**	**2.86**	**318**	*iP*	**Pn**	**01 43 12.2**	**+1.1**
KBK	baz=19			*iS*	**Sb**	**01 43 49.6**	**-2.1**
KURS	**Kuram**	**2.98**	**9**	Pg	**Pb**	**01 43 17.8**	**-0.3**
KURS	2.4nm,0.6s			Lg	Lg	01 43 58.5	
KURS	**Kuram**	**2.98**	**9**	*eP*	**Pb**	**01 43 17.8**	**-0.3**
KURS	2.4nm,0.6s			*eS*	**Sg**	**01 43 58.5**	**-1.5**
DGS	**Degeres**	**3.00**	**335**	Pg	**Pb**	**01 43 19.1**	**+0.6**
DGS	3.2nm,0.4s			Lg	Lg	01 44 00.8	
DGS	**Degeres**	**3.00**	**335**	*eP*	**Pb**	**01 43 19.1**	**+0.6**
DGS	3.2nm,0.4s			*eS*	**Sg**	**01 44 00.8**	**+0.3**
KPKS	**Kokpek**	**3.05**	**16**	Pg	**Pb**	**01 43 19.3**	**0.0**
KPKS	13nm,0.3s			Lg	Lg	01 44 01.1	
KPKS	**Kokpek**	**3.05**	**16**	*eP*	**Pb**	**01 43 19.3**	**0.0**
KPKS	13nm,0.3s			*eS*	**Sg**	**01 44 01.1**	**-1.0**
PDGK	**Podgornoye**	**3.15**	**27**	Pg	**Pb**	**01 43 20.0**	**-1.0**
PDGK	2.2nm,0.4s			Lg	Lg	01 44 02.6	
CHMS	**Chumysh**	**3.21**	**321**	Pg	**Pg**	**01 43 25.7**	**0.0**
CHMS	0.3nm,0.3s			Lg	Lg	01 44 07.0	
KTBS	**Karatobe**	**3.23**	**349**	Pg	**Pb**	**01 43 23.2**	**+0.9**
KTBS	6.2nm,0.3s			Lg	Lg	01 44 07.9	
KTBS	**Karatobe**	**3.23**	**349**	*eP*	**Pb**	**01 43 23.2**	**+0.9**
KTBS	6.2nm,0.3s			*eS*	**Sg**	**01 44 07.9**	**0.0**
CHKK	**Chushkaly**	**3.33**	**353**	Pg	**Pb**	**01 43 24.3**	**+0.2**
CHKK	8.0nm,0.4s			Lg	Lg	01 44 10.0	
CHKK	**Chushkaly**	**3.33**	**353**	*eP*	**Pb**	**01 43 24.3**	**+0.2**
CHKK	8.0nm,0.4s			*eS*	**Sg**	**01 44 10.1**	**-1.2**
KRBS	**Karabastau**	**3.44**	**337**	Pg	**Pb**	**01 43 26.6**	**+0.7**
KRBS	2.8nm,0.3s			Lg	Lg	01 44 13.7	
KRBS	**Karabastau**	**3.44**	**337**	*eP*	**Pb**	**01 43 26.6**	**+0.7**
KRBS	2.8nm,0.3s			*eS*	**Sg**	**01 44 13.7**	**-0.9**
KUU	**Kurty**	**3.46**	**346**	Pg	**Pb**	**01 43 26.9**	**+0.6**
KUU	3.0nm,0.3s			Lg	Lg	01 44 13.9	
KUU	**Kurty**	**3.46**	**346**	*eP*	**Pb**	**01 43 26.9**	**+0.6**
KUU	3.0nm,0.3s			*eS*	**Sg**	**01 44 13.9**	**-1.4**
SGDS	**Sogindy**	**3.62**	**324**	Pg	**Pb**	**01 43 29.8**	**+0.8**
SGDS	3.1nm,0.6s			Lg	Lg	01 44 19.3	
BLB	**Baldybastay**	**3.62**	**11**	Pg	**Pb**	**01 43 28.4**	**-0.7**
BLB	6.5nm,0.2s			Lg	Lg	01 44 17.0	
ARXS	**Arharly**	**3.68**	**3**	Pg	**Pb**	**01 43 30.9**	**+0.9**
ARXS	4.5nm,0.5s			Lg	Lg	01 44 21.3	
ARXS	**Arharly**	**3.68**	**3**	*eP*	**Pb**	**01 43 30.9**	**+0.9**
ARXS	4.5nm,0.5s			*eS*	**Sg**	**01 44 21.3**	**-0.9**
MRKS	**Merke**	**3.90**	**306**	Pg	**Pb**	**01 43 34.6**	**+0.8**
MRKS	1.2nm,0.4s			Lg	Lg	01 44 27.1	
MRKS	**Merke**	**3.90**	**306**	*eP*	**Pb**	**01 43 34.6**	**+0.8**
MRKS	1.2nm,0.4s			*eS*	**Sg**	**01 44 27.1**	**-2.3**
KNOS	**Konyrlen**	**4.01**	**17**	Pg	**Pb**	**01 43 36.1**	**+0.4**
KNOS	3.0nm,0.6s			Lg	Lg	01 44 29.8	
DJR	**Jarkent**	**4.14**	**23**	Pg	**Pb**	**01 43 39.4**	**+1.4**
DJR	1.3nm,0.2s			Lg	Lg	01 44 35.5	
DJR	**Jarkent**	**4.14**	**23**	*eP*	**Pb**	**01 43 39.4**	**+1.4**
DJR	1.3nm,0.2s			*eS*	**Sg**	**01 44 35.5**	**-1.7**
	4.7nm,0.4s						

*IDC **01** 01:46:10.7±1.1,47°.49N×27°.59W,h0km,mb3.6/6, mbtmp3.6/7,ML4.5/1,MS3.4/17,Error ellipse: s-maj=36.8km s-min=26.5km az=23.0*
ISC 01 01:46:11.7±1.1,47°4N±0°2×27°6W±0°2,h6km,n30, σ1°07/10,mb3.8/6,MS3.4/17,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.73**	**106**	P	**Pn**	**01 50 33.1**	**+1.6**
	0.3nm,0.3s,baz=295,slow=13,SNR=19 0.8nm,0.3s						
DAVOX	**Davos/Dischmat**	**25.36**	**77**	LR	LR	02 00 30.0	
	comp=Z,102nm,18.8s,baz=257,slow=34						
SCHQ	**Schefferville**	**25.46**	**302**	LR	LR	02 00 44.1	
	comp=Z,45nm,18.8s,baz=89,slow=34						
SUMG	**Summit**	**25.76**	**352**	*i* P	**P**	**01 51 45.0**	**+1.8**
HFS	**Hagfors**	**27.03**	**47**	LR	LR	02 00 51.6	
	comp=Z,47nm,21.7s,baz=258,slow=33						
GERES	**GERESS Array B**	**27.37**	**71**	LR	LR	02 00 54.6	
	comp=Z,80nm,18.5s,baz=272,slow=32						
VRAC	**Vranov**	**29.11**	**70**	LR	LR	02 03 01.2	
	comp=Z,96nm,19.7s,baz=282,slow=35						
KEST	**Kesra**	**29.72**	**100**	LR	LR	02 02 26.1	
	comp=Z,94nm,18.9s,baz=264,slow=33						
SADO	**Sadowa**	**35.33**	**285**	LR	LR	02 06 04.4	
	comp=Z,67nm,18.9s,baz=271,slow=34						
AKASG	**Malin Array Be**	**36.61**	**63**	LR	LR	02 07 28.9	
	comp=Z,84nm,18.2s,baz=302,slow=35						
TORD	**Torodi Ar. Bea**	**42.00**	**135**	P	**P**	**01 54 03.6**	**-0.1**
	1.7nm,0.7s,baz=342,slow=9.3,SNR=9.1 1.7nm,0.7s						
TKL	**Tuckaleechee C**	**42.80**	**275**	LR	LR	02 09 42.5	
	comp=Z,54nm,21.0s,baz=112,slow=33						
SJG	**San Juan**	**42.94**	**240**	LR	LR	02 06 58.1	
	comp=Z,42nm,21.0s,baz=76,slow=29						
BRTR	**Keskin Array B**	**44.01**	**77**	P	**P**	**01 54 19.4**	**-0.6**
	0.4nm,0.8s,baz=275,slow=7.1,SNR=2.1 0.4nm,0.8s						
BELG	**Belogornoye**	**46.68**	**55**	LR	LR	02 13 14.5	
	comp=Z,47nm,19.4s,baz=149,slow=35						
PDAR	**Pinedale Array**	**55.51**	**298**	LR	LR	02 16 58.9	
	comp=Z,28nm,18.1s,baz=58,slow=33						
H10N2	**ASCENSION HYDR**	**56.19**	**164**	T	T	02 56 10.1	
	baz=350,slow=75,SNR=7.9						
H10N3	**ASCENSION HYDR**	**56.20**	**164**	T	T	02 56 11.8	
	baz=350,slow=75,SNR=8.2						
H10N1	**ASCENSION HYDR**	**56.21**	**164**	T	T	02 56 12.4	
	baz=350,slow=75,SNR=9.7						
BVAR	**Borovoye Array**	**58.15**	**45**	LR	LR	02 23 09.3	
	comp=Z,20nm,18.8s,baz=287,slow=38						
TXAR	**Lajitas Array**	**59.98**	**282**	P	**P**	**01 56 19.2**	**+0.1**
	0.3nm,0.8s,baz=69,slow=7.1,SNR=4.6 0.3nm,0.8s						
GEYT	**Alibeck**	**60.70**	**65**	LR	LR	02 24 07.5	
	comp=Z,33nm,18.5s,baz=278,slow=38						
CMIG	**Matias Romero**	**62.28**	**265**	LR	LR	02 20 42.3	
	comp=Z,32nm,21.8s,baz=49,slow=33						
KURBB	**Kurchatov Arra**	**63.55**	**43**	P	**P**	**01 56 42.0**	**-0.7**
	0.6nm,0.9s,baz=317,slow=6.5,SNR=3.6 0.6nm,0.9s						
LPIG	**La Paz**	**67.88**	**282**	LR	LR	02 26 18.9	
	comp=Z,36nm,18.1s,baz=31,slow=36						
MKAR	**Makanchi Array**	**68.02**	**44**	P	**P**	**01 57 11.3**	**-0.3**
	0.4nm,0.7s,baz=332,slow=6.0,SNR=3.8 0.4nm,0.7s						
NNA	**Nana**	**73.59**	**231**	LR	LR	02 28 36.1	
	comp=Z,31nm,18.8s,baz=178,slow=35						
SONM	**Songino Array**	**77.04**	**30**	P	**P**	**01 58 04.9**	**-0.6**
	1.0nm,0.8s,baz=298,slow=3.1,SNR=5.6 1.0nm,0.8s						
WRA	**Warramunga Arr**	**148.92**	**34**	PKPbc	**PKPbc**	**02 06 00.0**	**-0.5**
	0.9nm,0.8s,baz=336,slow=3.0,SNR=3.8						
ASAR	**Alice Springs**	**152.09**	**38**	PKPbc	**PKPbc**	**02 06 07.3**	**-0.7**
	0.9nm,1.0s,baz=349,slow=1.9,SNR=4.1						

*ZUR **01** 01:47:33.0,47°.15N×10°.01E,h9km±1km,MLh4.1/129, Error ellipse: s-maj=3618.8km s-min=520.4km az=142.0*
*VIE **01** 01:47:33.0±0.1,47°.15N×10°.01E,h7km±1km,mb3.4/22, ml3.9/21,Error ellipse: s-maj=0.9km s-min=0.7km az=177.0,felt 5 ems98 at Wald am Arlberg / Vorarlberg*
*ROM **01** 01:47:33.2±0.1,47°.157N±0°.004×9°.998E±0°.005, h12km,ML3.8/204,Error ellipse: s-maj=0.5km s-min=0.2km az=196.0*
*NEIC **01** 01:47:33.4±2.0,47°.19N±0°.03×9°.92E±0°.07,h5km±2km, ML3.8/56,Error ellipse: s-maj=7.8km s-min=4.7km az=81.0*
*LDG **01** 01:47:34.5±0.2,47°.15N×10°.00E,h1km,Ml4.1/51,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*BGR **01** 01:47:34.2±0.2,47°.15N×10°.05E,h10km,ML4.0/37,Error ellipse: s-maj=4.4km s-min=2.2km az=162.0*
*PRU **01** 01:47:34.2,47°.33N×9°.93E,h1km*
*IDC **01** 01:47:34.5±1.8,47°.31N×10°.04E,h0km,mb3.2/1, mbtmp3.8/7,ML3.3/4,MS2.7/4, Error ellipse: s-maj=26.4km s-min=16.7km az=143.0*
*BUG **01** 01:47:36.0,47°.29N×9°.99E,h15km±4km,MD4.1/12, ML4.5/15*
*BNS **01** 01:47:35.0±0.5,47°.09N×10°.06E,h10km,ML3.7*
*STR **01** 01:47:36.4±0.6,47°N±2°×1°0E±°,h16km,MLv4.3/18,Error ellipse: s-maj=0.0km s-min=0.0km az=82.0,preliminary*
ISC 01 01:47:33.4±0.8,47°16N±0°01×9°99E±0°01,h7km±6km, n463,σ1°86/666,28C-61D,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.14**	**329**	*i* Pg	**Pg**	**01 47 36.1**	**-0.4**
	4μm,0.3s,SNR=5317						
DAVA	18μm,0.3s			*e*Sg	**Sg**	**01 47 38.5**	**-0.2**
DAVA	**Damuels**	**0.14**	**329**	⇓Pg	**Pg**	**01 47 36.1**	**-0.4**
DAVA	**Damuels**	**0.14**	**329**	*e*Pg	**Pg**	**01 47 36.2**	**-0.4**
DAVA				*e*Sg	**Sg**	**01 47 38.5**	**-0.2**
STRW	**Triesenberg, W**	**0.30**	**261**	Pg	**Pg**	**01 47 39.3**	**-0.1**
STRW				Sg	**Sg**	**01 47 44.2**	**+0.8**
SMFL	**Mauren, Feuerw**	**0.31**	**279**	⇑Pg	**Pg**	**01 47 39.4**	**0.0**
OBER	**Oberstdorf**	**0.32**	**40**	⇑Pg	**Pg**	**01 47 39.3**	**-0.3**
OBER				Sg	**Sg**	**01 47 44.4**	**+0.4**
OBER	**Oberstdorf**	**0.32**	**40**	*e*Pg	**Pg**	**01 47 39.4**	**-0.3**
OBER				*e*Sg	**Sg**	**01 47 44.3**	**+0.4**
SBUH	**Buchs, Hochsch**	**0.35**	**272**	Pg	**Pg**	**01 47 40.2**	**0.0**
SHEK	**Heerbrugg, Kan**	**0.35**	**316**	Pg	**Pg**	**01 47 41.2**	**+0.9**
SBUA2	**Buchs, Altendo**	**0.35**	**270**	⇑Pg	**Pg**	**01 47 40.1**	**-0.2**
SBUA2				Sg	**Sg**	**01 47 46.0**	**+1.0**
LIENZ	**Kamor/St.Gall**	**0.36**	**291**	⇑Pg	**Pg**	**01 47 40.5**	**0.0**
LIENZ				Sg	**Sg**	**01 47 47.1**	**+1.7**
LIENZ	**Kamor/St.Gall**	**0.36**	**291**	*i*Pg	**Pg**	**01 47 40.5**	**0.0**
LIENZ				Sg	**Sg**	**01 47 47.2**	**+1.9**
SDAK	**Davos, Kongres**	**0.38**	**197**	⇓Pg	**Pg**	**01 47 40.8**	**0.0**
SDAK				Sg	**Sg**	**01 47 46.7**	**+0.9**
SBUB	**Buchserberg Ma**	**0.38**	**268**	⇑Pg	**Pg**	**01 47 40.6**	**-0.2**
SBUB				Sg	**Sg**	**01 47 47.1**	**+1.3**
DAVOX	**Davos/Dischmat**	**0.39**	**191**	⇓Pg	**Pg**	**01 47 41.0**	**0.0**
DAVOX				Sg	**Sg**	**01 47 46.9**	**+0.7**
DAVOX	**Davos/Dischmat**	**0.39**	**191**	⇓P	**Pg**	**01 47 41.0**	**0.0**
DAVOX				S	**Sg**	**01 47 46.8**	**+0.7**
DAVOX	comp=E,10585μm,0.4s			AML	AML		
DAVOX	comp=N,8685μm,0.4s			AML	AML		
DAVOX	**Davos/Dischmat**	**0.39**	**191**	LR	LR	01 48 09.3	
	comp=N,682nm,19.8s,baz=256,slow=65						
SARD	**Ardez Schule,**	**0.41**	**159**	⇓Pg	**Pg**	**01 47 41.2**	**-0.2**
SCUC	**Scuol-Clozza**	**0.42**	**149**	⇓Pg	**Pg**	**01 47 41.3**	**-0.3**
SCUC				Sg	**Sg**	**01 47 47.0**	**-0.2**
PLONS	**Plons/SG**	**0.43**	**255**	⇑Pg	**Pg**	**01 47 41.5**	**-0.3**
PLONS				Sg	**Sg**	**01 47 48.0**	**+0.6**
PLONS	**Plons/SG**	**0.43**	**255**	⇑P	**Pg**	**01 47 41.5**	**-0.3**
PLONS				S	**Sg**	**01 47 48.1**	**+0.7**
PLONS	comp=E,7985μm,0.3s			AML	AML		
PLONS	comp=N,8905μm,0.3s			AML	AML		
PLONS	**Plons/SG**	**0.43**	**255**	*e*Pg	**Pg**	**01 47 41.6**	**-0.2**
PLONS				*e*Sg	**Sg**	**01 47 47.8**	**+0.3**
SCUG	**Chur Gewerbesc**	**0.44**	**226**	Sg	**Sg**	**01 47 47.9**	**+0.2**
SGT05	**Eggersriet**	**0.46**	**308**	⇓Pg	**Pg**	**01 47 43.0**	**+0.8**
SWAS	**Walenstadt, Sp**	**0.47**	**265**	Pg	**Pg**	**01 47 42.5**	**+0.1**
SZER	**Zernez**	**0.47**	**171**	⇓Pg	**Pg**	**01 47 42.4**	**-0.1**
SZER				Sg	**Sg**	**01 47 49.2**	**+0.6**
SGT04	**Schlatt-Haslen**	**0.47**	**293**	⇑Pg	**Pg**	**01 47 43.0**	**-0.4**
SGT04				Sg	**Sb**	**01 47 51.1**	**-0.2**
SCHK	**Churwalden Klo**	**0.49**	**220**	Sg	**Sg**	**01 47 49.8**	**+0.7**
STGK	**St. Gallen Klo**	**0.49**	**302**	⇑Pg	**Pg**	**01 47 43.8**	**+0.9**
SARE	**Arbon, Evangel**	**0.52**	**313**	Pg	**Pg**	**01 47 44.2**	**+0.8**
FETA	**Feichten**	**0.52**	**105**	*e*Pg	**Pg**	**01 47 42.7**	**-0.8**
FETA	comp=N,630nm,0.2s,SNR=368			Sg	**Sg**	**01 47 50.2**	**-0.2**
FETA	comp=N,904nm,0.3s			Sg	**Sg**	**01 47 52.0**	**-0.2**
FETA	**Feichten**	**0.52**	**105**	⇑Pg	**Pg**	**01 47 42.7**	**-0.8**
UBR	**Ueberruh**	**0.53**	**9**	⇓Pg	**Pg**	**01 47 44.2**	**+0.7**
UBR	**Ueberruh**	**0.53**	**9**	*e*Pg	**Pg**	**01 47 44.3**	**+0.7**
UBR				*e*Sg	**Sb**	**01 47 52.7**	**-0.1**
SGT00	**Sennhlsen**	**0.53**	**300**	Pg	**Pg**	**01 47 44.4**	**+0.8**
SBGN	**Bergn Schule**	**0.56**	**197**	⇓Pg	**Pg**	**01 47 44.1**	**-0.1**
SBGN				Sg	**Sg**	**01 47 52.2**	**+0.7**
TETT	**Tettnang**	**0.56**	**333**	*e*Pg	**Pg**	**01 47 45.0**	**+0.8**
FUORN	**Ofenpass-Fuorn**	**0.57**	**161**	⇓Pg	**Pg**	**01 47 44.2**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**0.57**	**161**	⇓P	**Pg**	**01 47 44.3**	**-0.2**
FUORN				S	**Sg**	**01 47 52.6**	**+0.6**
FUORN	comp=N,6580μm,0.4s			AML	AML		
FUORN	comp=E,5710μm,0.5s			AML	AML		
FUORN	comp=E,5710μm,0.5s			AML	AML		
ROMAN	**Romanshorn, Fo**	**0.

RETA eSg Sg 01 47 54.1 +0.8
comp=E,779nm,0.3s
RETA Reutte 0.62 58 Pg Pg 01 47 44.0 -1.3
SCEL Celerina 0.66 188 ⇓Pg Pg 01 47 45.9 -0.2
MOSI Grossmontoni 0.67 145 ⇓Pg Pg 01 47 46.0 -0.2
MOSI Grossmontoni 0.67 145 P Pg 01 47 46.0 -0.2
MOSI S Sg 01 47 55.4 +0.5
MOSI AML AML
comp=N,25250µm,0.6s
MOSI AML AML
comp=E,17950µm,0.4s
PANIX Pigniu (Panix) 0.69 241 ⇑Pg Pg 01 47 45.9 -0.7
PANIX Sg Sg 01 47 55.9 +0.2
SLTM2 Linthal, Matt 0.72 251 Sg Sg 01 47 57.2 +0.6
BRMO Bormio 0.73 159 ⇓Pg Pg 01 47 46.7 -0.8
BRMO Sg Sg 01 47 56.9 -0.2
BRMO Bormio 0.73 159 ⇓P Pg 01 47 46.7 -0.8
BRMO S Sg 01 47 56.7 -0.4
BRMO AML AML
comp=E,4075µm,0.7s
BRMO AML AML
comp=N,2390µm,0.5s
BERNI Berninapass 0.75 178 ⇓Pg Pg 01 47 47.5 -0.3
BERNI Berninapass 0.75 178 ⇓P Pg 01 47 47.5 -0.3
BERNI S Sg 01 47 57.7 +0.1
BERNI AML AML
comp=N,2340µm,0.5s
BERNI AML AML
comp=E,3700µm,1.6s
VDL Val di Lei 0.78 209 ⇓Pg Pg 01 47 47.8 -0.5
WEIN Weingarten 0.78 299 ⇑Pg Pg 01 47 49.0 +0.8
WEIN Sg Sb 01 48 00.7 +0.7
WILA Wila 0.78 289 ⇑Pg Pg 01 47 49.0 +0.7
WILA Wila 0.78 289 ePg Pg 01 47 49.0 +0.7
WILA eSg Sb 01 48 00.7 +0.6
MOTA Moosalm 0.78 76 Pg Pg 01 47 47.1 -1.2
comp=E,309nm,0.4s,SNR=180
MOTA Sg Sg 01 47 58.7 +0.2
comp=E,721nm,0.3s
TUE Stuetta 0.82 213 Pg Pg 01 47 48.3 -0.8
TUE Sg Sg 01 47 58.8 -0.9
TUE Stuetta 0.82 213 ⇓P Pg 01 47 48.5 -0.7
TUE S Sg 01 47 59.5 -0.3
TUE AML AML
comp=E,1850µm,0.4s
TUE AML AML
comp=E,1540µm,1.5s
TUE AML AML
comp=E,1540µm,0.5s
TUE AML AML
comp=N,2010µm,0.6s
TUE AML AML
comp=N,1665µm,0.6s
PART Garmisch-Parte 0.83 66 ePg Pg 01 47 48.1 -1.3
SQTA Sankt Quirin 0.83 86 i Pg Pg 01 47 47.9 -1.4
comp=N,264nm,0.3s,SNR=153
SQTA eSg Sg 01 47 59.9 -0.3
comp=N,541nm,0.3s
WALHA Wallhausen, DE 0.83 315 ⇓Pg Pg 01 47 50.1 +0.7
WALHA Wallhausen, DE 0.83 315 ⇓ePg Pg 01 47 50.1 +0.7
A107C Memmingen - Ei 0.87 9 Pg Pg 01 47 50.9 +0.9
A107C Sg Sg 01 47 52.2 -9.1
STEIN Stein am Rhein 0.92 304 ⇑Pg Pg 01 47 51.8 +0.8
A104A Biberach, Staf 0.92 348 Pg Pg 01 47 51.6 +0.6
A104A Sg Sg 01 47 53.6 -9.4
ZUR Degenried 0.98 283 Pn Pn 01 47 54.4 +0.8
ZUR Degenried 0.98 283 Sn Sn 01 48 10.2 +2.4
ZUR Degenried 0.98 283 Sg Sb 01 48 06.9 +1.1
ZUR Degenried 0.98 283 Pg Pg 01 47 52.6 +0.4
ROSI Rosskopf 1.00 103 ⇑P Pg 01 47 51.2 -1.3
ROSI AML AML
comp=N,6735µm,0.6s
ROSI AML AML
comp=E,5740µm,0.6s
ROSI AML AML
comp=E,5740µm,1.4s
ROSI AML AML
comp=N,6735µm,1.4s
OZOL Ozolo 1.05 136 ePg Pg 01 47 53.0 -0.6
OZOL Ozolo 1.05 136 P Pg 01 47 52.9 -0.6
EMING Emmingen-Lipti 1.07 314 ePg Pg 01 47 54.4 +0.6
EMING eSg Sb 01 48 09.4 +1.0
GUT Gutenstein 1.08 327 Sn Sn 01 48 10.5 +0.2
GUT Gutenstein 1.08 327 Pn Pn 01 47 55.6 +0.6
GUT Gutenstein 1.08 327 Pg Pg 01 47 54.3 +0.1
WATA Walderalm 1.09 80 ePg Pg 01 47 52.6 -1.7
comp=N,179nm,0.3s,SNR=186
WATA Sn Sn 01 48 13.7 +3.1
comp=N,2µm,0.4s
BNALP Bannalp 1.11 255 P Pg 01 47 54.0 -0.6
BNALP AML AML
comp=E,6085µm,0.5s
BNALP AML AML
comp=N,7230µm,0.4s
BNALP AML AML
comp=E,6085µm,1.5s
A102A Sigmaringen, J 1.11 332 Pg Pg 01 47 55.0 +0.2
WTTA Wattenberg 1.13 84 Pg Pg 01 47 53.1 -1.8
comp=E,126nm,0.4s,SNR=271
WTTA Sn Sn 01 48 15.2 +3.7
comp=E,2µm,0.3s
WTTA Wattenberg 1.13 84 P Pg 01 47 52.8 -2.2
WTTA AML AML
comp=N,6110µm,0.7s
WTTA AML AML
comp=E,6560µm,0.5s
WTTA AML AML
comp=N,6110µm,1.3s
BOSI Bolzano 1.13 126 P Pb 01 47 54.3 -0.8
BOSI AML AML
comp=N,5685µm,0.8s
BOSI AML AML
comp=E,7965µm,0.6s
BOSI AML AML
comp=N,5685µm,1.2s
FUSIO Fusio 1.15 233 ⇑P Pb 01 47 54.8 -0.9
FUSIO S Sg 01 48 10.0 -0.5
FUSIO AML AML
comp=E,6520µm,0.5s
FUSIO AML AML
comp=N,4580µm,1.2s
FUSIO AML AML
comp=N,4580µm,1.2s
ZWI Zwiefalten, Ha 1.15 342 ⇓ePg Pb 01 47 55.8 +0.1
MABI Malga Bissina 1.17 162 ⇓P Pg 01 47 54.7 -1.0
MABI S Sg 01 48 09.9 -0.9
MABI AML AML
comp=N,1440µm,0.5s
MABI AML AML
comp=E,1505µm,0.5s
SLE Schleitheim 1.18 301 Pg Pb 01 47 56.2 +0.1
SLE Schleitheim 1.18 301 ⇑Pn Pb 01 47 56.2 +0.1
SLE ePg Pg 01 47 57.1 +1.0
SLE eSg Sn 01 48 13.5 +0.9
A108A Ulm, Ringingen 1.19 355 Pg Pb 01 47 56.4 +0.1
FREU Neufra-Freuden 1.22 332 ⇓Pn Pn 01 47 56.9 0.0
MSS Messtetten 1.23 326 ⇓ePg Pn 01 47 57.1 +0.1
MSS Messtetten 1.23 326 ⇓Pn Pn 01 47 57.1 +0.1
RONC Roncone 1.26 160 ePg Pn 01 47 56.7 -0.8
RONC eSg Sg 01 48 14.7 +0.8
RONC Roncone 1.26 160 P Pn 01 47 56.7 -0.8
GAGG Gaggia 1.27 148 P Pn 01 47 56.8 -0.8
GAGG AML AML
comp=E,2305µm,1.6s
GAGG AML AML
comp=E,2505µm,0.6s
GAGG AML AML
comp=N,2390µm,1.6s
GAGG AML AML
comp=N,2415µm,0.6s
GAGG AML AML
comp=N,2390µm,0.4s
GAGG AML AML
comp=E,2305µm,0.4s
METMA Mettma DE 1.30 296 ePg Pn 01 47 58.3 +0.3
METMA eSg Sg 01 48 17.3 +2.1
FUR Furstenfeldbru 1.33 40 ePg Pn 01 47 58.9 +0.6
FUR eSg Sg 01 48 17.4 +1.4
SULZ Cheisacher 1.33 287 Pg Pn 01 47 58.8 +0.4
SULZ Cheisacher 1.33 287 ePg Pn 01 47 58.9 +0.6
SULZ eSg Sg 01 48 18.0 +2.0
BUCH Bad Urach 1.36 342 ⇓ePn Pn 01 47 58.8 +0.1
A101B Rottweil, Deis 1.36 315 Pg Pn 01 47 59.1 +0.2
LUSI Trento, Gardas 1.37 151 ⇓P Pn 01 47 58.5 -0.4

LUSI S Sb 01 48 16.9 -0.2
LUSI AML AML
comp=E,2585µm,0.5s
LUSI AML AML
comp=N,3605µm,0.3s
MDI Monti di Nese 1.40 188 P Pn 01 47 59.7 +0.4
MDI AML AML
comp=E,4725µm,0.4s
MDI AML AML
comp=E,4810µm,0.4s
MDI AML AML
comp=N,4035µm,0.5s
MDI AML AML
comp=N,4405µm,0.5s
ZONE Zone 1.40 176 P Pn 01 47 59.7 +0.4
ZONE AML AML
comp=E,1390µm,0.8s
ZONE AML AML
comp=N,3810µm,0.2s
ZONE AML AML
comp=N,942µm,0.3s
ZONE AML AML
comp=E,5630µm,0.8s
MUGIO Muggio 1.40 208 P Pn 01 47 59.4 0.0
MUGIO S Sb 01 48 17.5 -0.5
MUGIO AML AML
comp=N,4050µm,0.5s
MUGIO AML AML
comp=E,2380µm,0.5s
MUGIO AML AML
comp=N,4050µm,0.5s
MUGIO AML AML
comp=E,2380µm,1.5s
BERGE Lenzkirch (DE) 1.42 301 ePg Pg 01 48 01.3 +0.8
BERGE eSg Sg 01 48 20.3 +1.3
HDH Heidenheim-Cha 1.43 6 ⇓ePn Pn 01 47 59.4 -0.4
MAGA Magasa 1.46 162 P Pn 01 48 00.2 +0.1
MAGA AML AML
comp=E,15400µm,0.5s
MAGA AML AML
comp=N,6785µm,0.4s
A100A Rottenburg, We 1.48 331 Pg Pn 01 48 00.5 +0.1
FELD Feldberg im Sc 1.52 299 Sg Sg 01 48 23.7 +1.4
FELD Feldberg im Sc 1.52 299 Sn Sn 01 48 21.0 -0.3
FELD Feldberg im Sc 1.52 299 Pn Pn 01 48 01.3 +0.2
FELD Feldberg im Sc 1.52 299 ⇑ePn Pn 01 48 01.4 +0.2
BALST Balsthal 1.57 277 Pg Pn 01 48 02.2 +0.5
BALST Balsthal 1.57 277 ePn Pn 01 48 02.2 +0.5
BALST ePg Pb 01 48 03.9 +1.1
BALST eSg Sg 01 48 25.6 +1.6
SALO Salr 1.59 166 Pn Pn 01 48 02.4 +0.5
SALO IAML 01 48 33.5
comp=N,1µm,0.7s
SALO IAML 01 48 34.6
comp=E,2µm,0.6s
CTI Castel Tesino 1.60 134 Pn Pn 01 48 02.6 +0.5
A106B Goeppingen, Ma 1.60 354 Pn Pn 01 48 01.8 -0.3
KIZ Kirchzarten 1.61 300 Pg Pb 01 48 04.5 +1.1
KIZ Kirchzarten 1.61 300 Pg Pn 01 48 02.3 +0.1
NORI Noerdlinger Ri 1.62 15 ePn Pn 01 48 01.8 -0.5
NORI eSn Sb 01 48 24.9 +0.9
NORI eSg Sg 01 48 26.3 +1.0
BFO Black Forest 1.62 317 Pn Pn 01 48 02.4 +0.1
BFO Sn Sn 01 48 22.5 -1.0
BFO IAML 01 48 29.0
comp=E,2µm,0.8s
BFO IAML 01 48 29.0
comp=N,836nm,1.0s
BFO Black Forest 1.62 317 ePn Pn 01 48 02.7 +0.4
BFO eSg Sg 01 48 26.5 +1.1
ENDD Endenburg 1.63 291 Sg Sg 01 48 26.5 +0.9
ENDD Endenburg 1.63 291 Pg Pb 01 48 04.7 +1.0
ENDD Endenburg 1.63 291 Pn Pn 01 48 02.6 +0.2
STU Stuttgart 1.70 342 Pn Pn 01 48 03.0 -0.3
STU IAML 01 48 29.7
comp=N,1µm,0.9s
STU IAML 01 48 31.4
comp=E,2µm,0.5s
STU Stuttgart 1.70 342 ePn Pn 01 48 03.4 0.0
STU ePg Pb 01 48 06.1 +1.2
STU eSg Sg 01 48 28.7 +0.8
EMBD Embd, Matterta 1.76 238 Pn Pb 01 48 05.9 -0.2
ABTA Abfaltersbach 1.78 103 ePg Pn 01 48 05.6 +1.1
comp=E,371nm,0.6s,SNR=291
ABTA Sg Sb 01 48 29.9 +1.1
comp=E,355nm,0.5s
OPP Oppenau 1.81 318 Pg Pb 01 48 08.1 +1.4
OPP Oppenau 1.81 318 Sn Sn 01 48 27.1 -0.9
OPP Oppenau 1.81 318 Pn Pn 01 48 05.0 +0.1
VOGT Vogtsburg - To 1.82 301 Pn Pn 01 48 05.4 +0.4
LESA Schwarzleotal 1.85 81 ePg Pn 01 48 06.5 +1.0
comp=E,177nm,0.2s
LESA eSg Sg 01 48 33.7 +1.0
comp=E,980nm,0.6s
BOURR Bourrignon 1.89 278 Pn Pn 01 48 06.5 +0.4
BOURR Bourrignon 1.89 278 ⇑ePn Pn 01 48 06.6 +0.5
ILLF Illfurth 1.93 287 Pn Pn 01 48 06.7 +0.2
BABA Baden-Baden-Ne 1.97 323 Pn Pn 01 48 07.2 +0.1
RJOB Jochberg 1.99 72 ePg Pn 01 48 09.1 +1.6
WALT Westhalten 2.01 295 Pn Pn 01 48 08.2 +0.6
SENIN Lac Senin/Sane 2.02 248 Pn Pn 01 48 08.5 +0.6
MOF Molkenrain 2.06 291 Pn Pn 01 48 08.6 +0.2
STAL STALIGIAL 2.08 115 Pn Pn 01 48 10.3 +1.7
STAL IAML 01 48 44.6
comp=N,926nm,0.6s
STAL IAML 01 48 45.7
comp=E,1µm,0.6s
DIX Grande Dixence 2.08 240 Pn Pb 01 48 11.2 -0.4
DIX Grande Dixence 2.08 240 Pg Pg 01 48 13.4 +0.1
CLUD Cludinico 2.11 109 Pn Pn 01 48 10.6 +1.6
CLUD IAML 01 48 46.8
comp=E,651nm,0.8s
TEOL Teolo 2.15 147 Pn Pb 01 48 11.7 -0.9
WLS Welschbruch 2.17 306 Pn Pn 01 48 10.2 +0.3
ECH Echery 2.19 300 Pn Pn 01 48 10.1 0.0
ECH IAML 01 48 52.9
comp=N,503nm,0.7s
ECH Echery 2.19 300 Pn Pn 01 48 10.1 0.0
ECH Echery 2.19 300 ePn Pn 01 48 10.2 +0.1
ECH ePg Pg 01 48 16.6 +1.3
ECH eSn Sn 01 48 35.9 -1.5
ECH eSg Sb 01 48 42.9 +2.5
NEEW Neewiller pres 2.20 326 Pn Pn 01 48 10.8 +0.6
CDF Champ du Feu 2.22 305 ePn Pn 01 48 10.9 +0.3
CDF Champ du Feu 2.22 305 ePg Pg 01 48 16.3 +0.5
CDF eSg Sb 01 48 42.6 +1.2
comp=N,3µm,0.8s
HINF Hinteralfeld 2.23 288 ePn Pn 01 48 10.9 +0.2
HINF Hinteralfeld 2.23 288 ePg Pg 01 48 16.0 0.0
HINF eSn Sn 01 48 36.7 -1.7
HINF eSg Sb 01 48 42.5 +0.8
comp=N,936nm,0.6s
AIGLE Aigle 2.24 250 Pg Pg 01 48 16.3 0.0
AIGLE Aigle 2.24 250 Pn Pn 01 48 11.9 +1.0
TRAV Traversella 2.27 224 Pn Pn 01 48 12.8 +1.5
SZBH soultz borehol 2.27 322 Pn Pn 01 48 12.0 +0.7
CHMF Charmoille 2.28 273 Pn Pn 01 48 11.8 +0.4
CIRO Champorcher 2.29 228 Pn Pn 01 48 13.8 +2.1
KBA Koelnbreinsper 2.29 91 Pg Pb 01 48 14.2 -0.9
comp=N,336nm,0.3s,SNR=238
KBA Sg Sg 01 48 47.0 +0.1
comp=N,343nm,0.4s
KBA Koelnbreinsper 2.29 91 ePg Pb 01 48 14.2 -0.9
KBA eSg Sg 01 48 46.9 -0.1
STFL Fournets-Luisa 2.34 270 Pg Pb 01 48 17.7 +1.8
LEMB Lembach 2.40 322 Pn Pn 01 48 13.2 +0.3
CIEL Dossenheim-sur 2.43 314 Pn Pn 01 48 14.0 +0.5
OGSI Sixt 2.49 245 Pn Pn 01 48 15.5 +1.2
KTD Kalmit 2.51 330 Pn Pn 01 48 14.8 +0.2
BIOA Bad Ischl, Aus 2.53 77 Pn Pn 01 48 17.1 +2.2
comp=N,11nm,0.2s,SNR=80
BIOA Sg Sg 01 48 56.4 +1.7
comp=N,197nm,0.4s
BOUC Bouclans 2.55 273 Pn Pn 01 48 15.3 +0.3
PRED Cave del Predi 2.56 105 Pn Pn 01 48 17.1 +1.8
MYKA Terra Mystica 2.56 101 Pg Pb 01 48 18.2 -1.4
comp=N,51nm,0.4s,SNR=37
MYKA Sg Sb 01 48 53.5 +2.2
comp=N,154nm,0.8s
GORR Gorreto 2.60 191 Pn Pb 01 48 19.4 -0.9
HAU Haudompre 2.61 290 ePn Pn 01 48 16.6 +0.7
HAU Haudompre 2.61 290 ePg Pg 01 48 23.1 -0.2
HAU eSn Sn 01 48 45.4 -2.4

HAU eSg Sb 01 48 54.6 +2.0
comp=N,1µm,0.4s
GIMEL St. Georges / 2.63 258 Pn Pn 01 48 17.0 +0.7
GRFO Grafenberg 2.66 17 Pn Pn 01 48 15.3 -1.3
GRFO IAML 01 49 04.3
comp=N,488nm,0.9s
GRFO IAML 01 49 08.4
comp=N,489nm,1.0s
GRA1 Grafenberg Arr 2.66 17 Pn Pn 01 48 15.1 -1.5
GRA1 IAML 01 49 02.6
comp=N,663nm,0.8s
GRF Grafenberg Arr 2.66 17 ePn Pn 01 48 15.2 -1.5
GRF ePg Pb 01 48 23.2 +1.9
GRF eSn Sn 01 48 48.3 -0.8
GRF eSg Sg 01 48 59.0 +0.2
CABF La Chapelle 2.73 260 ePn Pn 01 48 18.6 +0.9
CABF La Chapelle 2.73 260 ePg Pb 01 48 24.8 +2.2
CABF eSg Sg 01 49 00.4 -0.7
comp=N,1µm,0.8s
CADS Cadrg 2.74 109 i Pn Pn 01 48 19.9 +2.1
RSL Roselend 2.75 239 Pn Pn 01 48 20.2 +2.1
SABO M.te Sabotino 2.76 114 Pn Pn 01 48 20.3 +2.3
SABO IAML 01 49 09.2
comp=E,522nm,0.7s
SABO IAML 01 49 13.8
comp=N,450nm,0.7s
RSP Reno Superiore 2.77 224 Pn Pn 01 48 19.3 +1.1
WET Wettzell 2.77 43 ePn Pn 01 48 17.7 -0.4
WET eSg Sb 01 49 00.5 +3.2
RNCA Ronca, Sant'Ol 2.79 195 Pn Pb 01 48 22.3 -1.1
LPL La Plagne 2.79 235 ePn Pn 01 48 21.6 +3.0
LPL eSn Sn 01 48 52.1 -0.6
comp=N,88nm,0.5s
LPG La Plagne 2.79 235 ePn Pn 01 48 21.4 +2.7
LPG La Plagne 2.79 235 ePg Pb 01 48 25.9 +2.2
LPG eSn Sn 01 48 51.9 -0.9
LPG eSg Sg 01 49 02.6 -0.5
comp=N,517nm,0.6s
PCP Piancastagn 2.81 202 Pn Pn 01 48 21.2 +2.5
RIVEL MONT RIVEL 2.81 263 Pn Pn 01 48 19.3 +0.5
MSSA Maissana 2.87 187 Pn Pb 01 48 22.9 -1.9
MSSA IAML 01 49 02.2
comp=E,235nm,0.8s
GORS Gorjuse 2.88 106 i Pn Pn 01 48 21.8 +2.1
MOA Molln 2.98 75 ePn Pn 01 48 22.5 +1.4
comp=E,8.0nm,0.2s,SNR=29
MOA Sg Sg 01 49 07.8 -1.1
comp=E,115nm,0.4s
MOA Molln 2.98 75 ePn Pn 01 48 22.4 +1.4
MOA ePg Pb 01 48 28.9 +2.2
MOA eSg Sg 01 49 06.8 -2.1
ROTZ Rotzenmuhle 3.00 29 ePn Pn 01 48 19.5 -1.7
ROTZ eSg Sb 01 49 06.5 +2.7
BHB Bricherasio 3.00 220 Pn Pn 01 48 22.0 +0.7
GEC2 GERESS Array S 3.01 55 Pn Pn 01 48 21.0 -0.5
GEC2 IAML 01 49 19.8
comp=E,223nm,0.7s
GEC2 IAML 01 49 22.1
comp=N,374nm,1.1s
GEC2 GERESS Array S 3.01 55 ePn Pn 01 48 21.5 +0.1
GEC2 ePg Pg 01 48 29.9 -1.1
GEC2 eSg Sb 01 49 07.0 +2.9
GERES GERESS Array B 3.01 55 Pn Pn 01 48 21.0 -0.5
GERES GERESS Array B 3.01 55 Pn Pn 01 48 21.5 +0.1
comp=N,7.2nm,0.3s,baz=240,slow=14,SNR=50
GERES Pg Pb 01 48 28.8 +1.5
comp=N,85nm,0.3s,baz=240,slow=16,SNR=71
GERES Sn Sn 01 48 58.3 +0.5
comp=N,27nm,0.3s,baz=245,slow=20,SNR=7.2
GERES Lg Lg 01 49 06.7
comp=N,78nm,0.3s,baz=242,slow=32,SNR=12
comp=N,14nm,0.4s
OGMO Fort Saint-Gob 3.02 231 Pn Pn 01 48 25.0 +3.4
KHC Kasperske Hory 3.11 49 Pn Pn 01 48 22.0 -0.7
KHC IAML 01 49 19.2
comp=E,304nm,1.0s
KHC Kasperske Hory 3.11 49 ePN Pn 01 48 22.8 0.0
KHC ePG Pb 01 48 29.1 +0.2
KHC eSN Sn 01 48 58.7 -1.4
KHC eSG Sb 01 49 10.7 +3.7
comp=E,353nm,0.3s
MANZ Manzenberg 3.16 26 ePn Pn 01 48 21.5 -1.9
MANZ eSn Sn 01 49 00.2 -1.2
MANZ eSg Sg 01 49 13.3 -1.3
RRL Rocca Remolon 3.16 226 Pn Pn 01 48 26.0 +2.3
ABH Alteburg 3.17 330 Pn Pn 01 48 24.2 +0.6
PAGF Fort de Pagny 3.19 297 ePn Pn 01 48 25.3 +1.4
baz=116
PAGF Fort de Pagny 3.19 297 ePg Pg 01 48 34.0 -0.5
PAGF eSg Sb 01 49 12.3 +2.9
comp=E,1µm,0.9s
OBKA Obir 3.20 100 ePn Pn 01 48 26.4 +2.4
comp=E,16nm,0.4s
OBKA Sg Sg 01 49 17.0 +1.0
comp=N,101nm,0.5s
OBKA Obir 3.20 100 ePn Pn 01 48 26.3 +2.2
CANO Canova, Maglio 3.20 203 Pn Pn 01 48 26.9 +2.8
SKDS Skadanscina 3.22 119 ePn Pn 01 48 25.6 +1.3
TNS Taunus Mts 3.23 342 ePn Pn 01 48 24.7 +0.2
TNS eSg Sg 01 49 17.4 +0.4
OG35 Corcelles 3.25 251 Pn Pn 01 48 25.0 +0.3
OG35 Pg Pg 01 48 34.8 -0.7
GBOS Grotte di Boss 3.29 208 Pn Pn 01 48 27.8 +2.5
MBDF Montbardon 3.31 224 ePn Pn 01 48 27.9 +2.2
MBDF eSn Sn 01 49 06.1 +0.7
comp=E,305nm,0.5s
PZZ Stroppo 3.33 218 Pn Pn 01 48 26.7 +0.8
RORO Rocca Rossa 3.34 205 Pn Pn 01 48 28.2 +2.4
CKRC Cesky Krumlov 3.34 59 ePN Pn 01 48 26.3 +0.3
CKRC ePG Pb 01 48 34.6 +1.7
CKRC eSN Sn 01 49 05.7 -0.2
CKRC eSG Sg 01 49 18.7 -1.9
NAST IGS Nastaetten 3.35 336 ePn Pn 01 48 27.2 +1.2
OGSM Saint Maurice 3.35 244 Pn Pn 01 48 27.7 +1.5
CEY Cerknica 3.38 113 ePn Pn 01 48 28.4 +1.9
ENR Entracque 3.44 212 Pn Pn 01 48 29.2 +1.8
STV Sant Anna di V 3.46 214 Pn Pn 01 48 28.8 +1.1
NKC Novy Kostel 3.48 27 ePN Pn 01 48 26.8 -1.1
SURF Saint Ours 3.48 221 Pn Pn 01 48 29.8 +1.7
SOKA Soboth 3.49 96 ePn Pn 01 48 29.8 +1.8
comp=E,10nm,0.3s,SNR=12
SOKA Sg Sg 01 49 25.4 0.0
comp=E,53nm,0.7s
SFTF Sexfontaines 3.50 289 ePn Pn 01 48 29.1 +0.9
baz=114
SFTF Sexfontaines 3.50 289 ePg Pg 01 48 39.6 -0.9
SFTF eSg Sb 01 49 22.3 +3.9
comp=E,502nm,0.8s
CREF Crivoux 3.52 223 Pn Pn 01 48 31.4 +2.8
BGG Burgeitz 3.52 331 ePn Pn 01 48 29.4 +1.1
JAUF Jausiers 3.55 221 Pn Pn 01 48 30.7 +1.7
WLF Walferdange 3.58 316 Pn Pn 01 48 29.4 +0.2
WLF IAML 01 49 29.5
comp=N,214nm,0.8s
WLF IAML 01 49 29.9
comp=E,301nm,0.8s
WLF Walferdange 3.58 316 dP Pn 01 48 30.9 +1.7
WLF Walferdange 3.58 316 Pn Pn 01 48 30.5 +1.3
WLF Walferdange 3.58 316 ePn Pn 01 48 31.0 +1.8
WLF ePg Pg 01 48 42.7 +0.8
SAVF Savonnieres en 3.58 296 ePn Pn 01 48 30.4 +1.1
SAVF Savonnieres en 3.58 296 ePg Pg 01 48 41.1 -0.9
SAVF eSg Sb 01 49 24.4 +3.8
comp=E,568nm,0.8s
MEZF Maizieres J'vi 3.59 294 ePn Pn 01 48 30.7 +1.4
baz=110
MEZF Maizieres J'vi 3.59 294 ePg Pg 01 48 41.2 -0.8
MEZF eSg Sb 01 49 25.0 +4.3
comp=E,478nm,0.8s
KOE Koeppel 3.59 336 ePn Pn 01 48 31.3 +1.9
PLYF Puligny Montra 3.59 269 Pn Pn 01 48 30.7 +1.3
SMRN Sveta Marina 3.59 125 ePn Pn 01 48 31.9 +2.5
SAOF Saorge 3.61 209 Pn Pn 01 48 32.2 +2.6
ZVC Zvikov 3.61 49 ePN Pn 01 48 30.0 +0.3
ZVC eSN Sn 01 49 11.5 -1.1
RIY Rijeka 3.62 119 ePn Pn 01 48 31.9 +2.1
PLN Plauen 3.62 22 ePn Pn 01 48 27.9 -1.9
PLN ePg Pg 01 48 44.1 +1.5
PLN eSg Sg 01 49 27.6 -2.0
ISO Isola 3.62 216 Pn Pn 01 48 31.4 +1.5
OGAG Argentiere 3.63 223 Pn Pn 01 48 30.4 +0.4
ORIF Oris-en-Rattie 3.64 233 ePn Pn 01 48 32.8 +2.7
ORIF Oris-en-Rattie 3.64 233 ePg Pg 01 48 43.7 +0.7

ORIF					*e*Sg	**Sg**	**01 49 29.2**	**-0.9**
	comp=E,219nm,0.7s								
ORIF	**Oris-en-Rattie**	**3.64**	**233**		Pn	**Pn**	**01 48 32.7**	**+2.5**
TANN	**Tannenbergstha**	**3.64**	**26**		*e*Pn	**Pn**	**01 48 28.0**	**-2.1**
TANN					*e*Pg	**Pg**	**01 48 43.7**	**+0.6**
TANN					*e*Sg	**Sg**	**01 49 28.8**	**-1.4**
MOX	**Moxa**	**3.65**	**16**		*e*Pn	**Pn**	**01 48 28.2**	**-2.0**
MOX					*e*Pg	**Pg**	**01 48 44.2**	**+1.1**
MOX					*e*Sn	**Sn**	**01 49 12.0**	**-1.4**
MOX					*e*Sg	**Sg**	**01 49 29.4**	**-1.0**
SPIF	**crte de Spivo**	**3.66**	**213**		Pn	**Pn**	**01 48 31.9**	**+1.4**
OSSC	**Osservatorio P**	**3.75**	**166**		Pn	**Pn**	**01 48 32.7**	**+1.2**
OSSC					IAML		01 49 22.9	
	comp=E,103nm,1.2s								
SBF	**Sospel**	**3.76**	**209**		*e*Pn	**Pn**	**01 48 34.5**	**+2.8**
SBF					*e*Sn	**Sn**	**01 49 16.1**	**-0.1**
	comp=E,241nm,0.4s								
ARSA	**Arzberg**	**3.77**	**87**		*e*Pn	**Pn**	**01 48 33.4**	**+1.5**
	comp=E,17nm,0.5s,SNR=12								
ARSA					Sg	**Sg**	**01 49 32.8**	**-1.7**
	comp=E,45nm,0.5s								
ARSA	**Arzberg**	**3.77**	**87**		*e*Pn	**Pn**	**01 48 32.9**	**+1.0**
BURV	**Giardini Botan**	**3.79**	**208**		Pn	**Pn**	**01 48 34.9**	**+2.8**
ENAUX	**Enaux**	**3.79**	**218**		Pn	**Pn**	**01 48 34.6**	**+2.3**
ESCA	**l'Escarene**	**3.81**	**210**		Pn	**Pn**	**01 48 35.0**	**+2.7**
HILG	**Hillesheim**	**3.82**	**326**		*e*Pn	**Pn**	**01 48 33.8**	**+1.2**
MVIF	**Mont Vial**	**3.83**	**212**		Pn	**Pn**	**01 48 35.0**	**+2.2**
MON	**Monaco**	**3.88**	**209**		Pn	**Pn**	**01 48 36.3**	**+3.0**
AHRW	**Bad Neuenahr-A**	**3.89**	**331**		*e*Pn	**Pn**	**01 48 34.2**	**+0.8**
OGDI	**Digne**	**4.00**	**222**		Pn	**Pn**	**01 48 38.5**	**+3.4**
BOJS	**Bojanci**	**4.00**	**113**		*e*Pn	**Pn**	**01 48 37.0**	**+1.9**
CRES	**Cresnjev**	**4.00**	**108**		*e*Pn	**Pn**	**01 48 36.8**	**+1.7**
STB	**Steinbach**	**4.01**	**330**		*e*Pn	**Pn**	**01 48 36.0**	**+0.8**
STB					*e*Sn	**Sn**	**01 49 22.9**	**+0.5**
	comp=E,76nm,0.5s								
SALSA	**La sagne**	**4.02**	**216**		Pn	**Pn**	**01 48 39.2**	**+3.9**
CALF	**Calern**	**4.04**	**213**		Pn	**Pn**	**01 48 38.6**	**+3.0**
CONA	**Conrad Observa**	**4.05**	**77**		*e*Pn	**Pn**	**01 48 36.6**	**+0.8**
	comp=E,2.7nm,0.2s,SNR=7.6								
CONA					Sg	**Sg**	**01 49 43.1**	**-0.2**
	comp=E,58nm,0.3s								
OZLJ	**Ozalj**	**4.09**	**110**		*e*Pn	**Pn**	**01 48 37.9**	**+1.6**
RABC	**Rab**	**4.12**	**124**		*e*Pn	**Pn**	**01 48 39.2**	**+2.6**
HSKC	**Hora Svate Kat**	**4.13**	**32**		*e*PN	**Pn**	**01 48 35.3**	**-1.5**
HSKC					*e*SG	**Sg**	**01 49 42.5**	**-3.3**
	comp=E,147nm,0.5s								
PRU	**Pruhonice**	**4.14**	**45**		*e*PN	**Pn**	**01 48 36.7**	**-0.2**
PRU					*e*SG	**Sg**	**01 49 43.2**	**-3.0**
	comp=E,240nm,0.6s								
BHOU	**Houvegnez**	**4.14**	**322**		*d*P	**Pn**	**01 48 38.0**	**+1.0**
BHOU					*d*S	**Sn**	**01 49 24.2**	**-1.4**
PRA	**Prague**	**4.14**	**44**		*e*SG	**Sg**	**01 49 43.4**	**-2.9**
	comp=E,321nm,0.8s								
KASTN	**Kahler Asten**	**4.17**	**346**		*e*Pn	**Pn**	**01 48 37.4**	**0.0**
KASTN					*e*Pg	**Pg**	**01 48 53.0**	**-0.3**
LOR	**Lormes**	**4.18**	**274**		*e*Pn	**Pn**	**01 48 38.9**	**+1.4**
	baz=96								
LOR	**Lormes**	**4.18**	**274**		*e*Pg	**Pb**	**01 48 51.1**	**+3.9**
	baz=89								
LOR					*e*Sn	**Sn**	**01 49 25.0**	**-1.6**
LOR					*e*Sg	**Sb**	**01 49 43.5**	**+5.6**
	comp=E,35nm,0.2s								
LOR	**Lormes**	**4.18**	**274**		Pn	**Pn**	**01 48 38.4**	**+0.9**
HOBG	**Hohbusch**	**4.20**	**336**		*e*Pn	**Pn**	**01 48 38.8**	**+1.0**
GOPC	**GO Pecny, Ondr**	**4.21**	**47**		*e*PN	**Pn**	**01 48 37.5**	**-0.4**
SSB	**Saint Sauveur**	**4.22**	**246**		Pn	**Pn**	**01 48 38.1**	**0.0**
SSB					IAML		01 49 50.8	
	comp=E,79nm,1.0s								
SSB					IAML		01 49 59.1	
	comp=N,81nm,1.1s								
SSB	**Saint Sauveur**	**4.22**	**246**		Pn	**Pn**	**01 48 38.2**	**+0.1**
SSB	**Saint Sauveur**	**4.22**	**246**		*e*Pn	**Pn**	**01 48 39.4**	**+1.3**
SSB					*e*Pg	**Pg**	**01 48 52.5**	**-1.8**
SSB					*e*Sn	**Sn**	**01 49 27.7**	**-0.1**
SSB					*e*Sg	**Sg**	**01 49 47.6**	**-1.4**
BNS	**Bensberg**	**4.23**	**335**		*e*Pn	**Pn**	**01 48 39.4**	**+1.2**
BLAF	**les Blancs**	**4.24**	**222**		Pn	**Pn**	**01 48 40.7**	**+2.4**
SMF	**Signal de Mont**	**4.25**	**265**		*e*Pn	**Pn**	**01 48 39.3**	**+0.9**
SMF	**Signal de Mont**	**4.25**	**265**		*e*Pg	**Pg**	**01 48 53.5**	**-1.2**
SMF					*e*Sg	**Sg**	**01 49 45.8**	**-3.9**
	comp=N,152nm,0.5s								
KLL	**Kalltalsperre**	**4.25**	**327**		*e*Pn	**Pn**	**01 48 39.7**	**+1.3**
TREC	**Trest**	**4.25**	**58**		*e*PN	**Pn**	**01 48 39.4**	**+1.0**
TREC					*e*SN	**Sn**	**01 49 27.2**	**-1.0**
BTNL	**Ternell**	**4.27**	**325**		*d*P	**Pn**	**01 48 39.9**	**+1.2**
BTNL					*d*S	**Sn**	**01 49 27.5**	**-1.3**
NVLJ	**Novalja**	**4.29**	**126**		*e*Pn	**Pn**	**01 48 41.4**	**+2.5**
DREG	**Dreilaegerbach**	**4.29**	**326**		*e*Pn	**Pn**	**01 48 40.2**	**+1.2**
MURB	**Monte Urbino**	**4.29**	**154**		Pn	**Pn**	**01 48 40.4**	**+1.3**
LOBO	**Lobor**	**4.30**	**101**		*e*Pn	**Pn**	**01 48 38.0**	**+1.2**
RONA	**Rosalia, Austr**	**4.31**	**81**		*i* Pn	**Pn**	**01 48 40.4**	**+1.0**
	comp=N,18nm,0.3s,SNR=16								
RONA					Sg	**Sg**	**01 49 48.7**	**-3.1**
	comp=N,106nm,0.5s								
MEM	**Membach**	**4.34**	**324**		*b*P	**Pn**	**01 48 40.8**	**+1.2**
MEM					*d*S	**Sn**	**01 49 28.2**	**-2.1**
MLYF	**Mely**	**4.34**	**225**		Pn	**Pn**	**01 48 42.4**	**+2.6**
RCHB	**Rochefort**	**4.35**	**315**		*d*P	**Pn**	**01 48 41.5**	**+1.7**
RCHB					*d*S	**Sn**	**01 49 30.3**	**-0.5**
RCHB	**Rochefort**	**4.35**	**315**		Pn	**Pn**	**01 48 41.4**	**+1.5**
VIVF	**Saint-Julien-l**	**4.36**	**240**		*e*Pn	**Pn**	**01 48 40.2**	**+0.1**
VIVF	**Saint-Julien-l**	**4.36**	**240**		*e*Pg	**Pg**	**01 48 56.3**	**-0.6**
VIVF					*e*Sn	**Sn**	**01 49 28.8**	**-2.3**
	comp=N,63nm,0.5s								
VIVF					*e*Sg	**Sg**	**01 49 51.0**	**-2.5**
	comp=N,72nm,0.5s								
GTTG	**Gottingen**	**4.39**	**360**		*e*Pn	**Pn**	**01 48 39.4**	**-0.9**
CASP	**Castiglione de**	**4.42**	**172**		Pn	**Pn**	**01 48 42.2**	**+1.4**
SSF	**Saint Saulge**	**4.43**	**271**		*e*Pn	**Pn**	**01 48 42.1**	**+1.2**
SSF	**Saint Saulge**	**4.43**	**271**		*e*Pg	**Pg**	**01 48 56.6**	**-1.6**
SSF					*e*Sn	**Sn**	**01 49 32.8**	**+0.1**
SSF					*e*Sg	**Sg**	**01 49 51.7**	**-3.8**
	comp=N,111nm,0.4s								
SMRF	**Simiane la Rot**	**4.45**	**226**		*e*Pn	**Pn**	**01 48 43.4**	**+2.2**
SMRF					*e*Sn	**Sn**	**01 49 33.3**	**+0.1**
	comp=N,30nm,0.5s								
BSTF	**la Bastide-des**	**4.48**	**225**		Pn	**Pn**	**01 48 44.6**	**+2.9**
BCLA	**Clavier**	**4.50**	**318**		*d*P	**Pn**	**01 48 43.5**	**+1.7**
	comp=Z,71nm,0.5s								
BCLA					*d*S	**Sn**	**01 49 32.5**	**-1.8**
BSTI	**Sart Tilman**	**4.50**	**321**		*d*P	**Pn**	**01 48 43.6**	**+1.7**
BSTI					*d*S	**Sn**	**01 49 33.2**	**-1.1**
GIVF	**Givet**	**4.52**	**313**		*e*Pn	**Pn**	**01 48 43.3**	**+1.2**
GIVF	**Givet**	**4.52**	**313**		*e*Pg	**Pg**	**01 48 58.5**	**-1.3**
GIVF					*e*Sn	**Sn**	**01 49 35.6**	**+0.8**
GIVF					*e*Sg	**Sg**	**01 49 54.7**	**-3.6**
	comp=Z,130nm,0.6s								
RUSF	**Rustrel**	**4.52**	**226**		Pn	**Pn**	**01 48 44.0**	**+1.9**
BRG	**Berggiesshubel**	**4.53**	**34**		Pn	**Pn**	**01 48 41.5**	**-0.9**
BRG					Pg	**Pg**	**01 49 01.1**	**+1.0**
BRG					Sg	**Sg**	**01 49 55.8**	**-3.1**
BRG					Amp		01 50 07.1	
	comp=Z,123nm,0.5s								
BRG	**Berggiesshubel**	**4.53**	**34**		*e*Pn	**Pn**	**01 48 41.9**	**-0.4**
PLIT	**Plitvice**	**4.54**	**118**		*e*Pn	**Pn**	**01 48 44.8**	**+2.4**
LMR	**La Mourre**	**4.55**	**214**		*e*Pn	**Pn**	**01 48 44.3**	**+1.7**
LMR					*e*Sn	**Sn**	**01 49 34.8**	**-0.8**
	comp=Z,42nm,0.4s								
AVF	**Avril sur Loir**	**4.56**	**268**		*e*Pn	**Pn**	**01 48 43.4**	**+0.7**
AVF	**Avril sur Loir**	**4.56**	**268**		*e*Pg	**Pg**	**01 48 59.2**	**-1.5**
AVF					*e*Sg	**Sb**	**01 49 55.0**	**+6.3**
	comp=Z,148nm,0.8s								
VIRC	**Vir**	**4.56**	**127**		*e*Pn	**Pn**	**01 48 45.2**	**+2.5**
VIRC					Sn	**Sn**	**01 49 38.8**	**+2.9**
BGES	**Gesves**	**4.57**	**317**		*d*P	**Pn**	**01 48 44.7**	**+1.9**
BGES					*d*S	**Sn**	**01 49 34.6**	**-1.6**
CLL	**Collm**	**4.59**	**24**		Pn	**Pn**	**01 48 40.7**	**-2.5**
CLL	**Collm**	**4.59**	**24**		*e*Pn	**Pn**	**01 48 41.0**	**-2.1**
CLL					*e*Pn(2)		01 48 42.7	
CLL					*e*Pg	**Pg**	**01 49 00.0**	**-1.3**
CLL					*e*Pg(2)		01 49 03.0	
CLL					*i* x	x	01 49 07.0	
CLL					*e*Sn	**Sn**	**01 49 35.0**	**-1.7**
CLL					*e*Sg	**Sg**	**01 49 58.0**	**-2.8**
	comp=Z,213nm,0.6s								
CLL					*i* x	x	01 50 09.9	
CLL	**Collm**	**4.59**	**24**		*e*Pn	**Pn**	**01 48 40.7**	**-2.5**
CLL					*e*Pg	**Pg**	**01 49 00.0**	**-1.3**
CLL					*e*Sg	**Sg**	**01 49 58.6**	**-2.2**
BEBN	**Eben Emael**	**4.61**	**324**		*d*P	**Pn**	**01 48 45.2**	**+1.8**
BEBN					*d*S	**Sn**	**01 49 36.9**	**-0.3**
DOU	**Dourbes**	**4.63**	**311**		*d*P	**Pn**	**01 48 45.2**	**+1.5**
DOU					*d*S	**Sn**	**01 49 36.2**	**-1.3**
DOU	**Dourbes**	**4.63**	**311**		Pn	**Pn**	**01 48 45.1**	**+1.5**
ARTF	**Artigues**	**4.63**	**221**		Pn	**Pn**	**01 48 45.7**	**+1.9**
BKLB	**Ruhr-Universit**	**4.64**	**338**		Pn	**Pn**	**01 48 45.5**	**+1.8**
BUG	**Bochum--Univer**	**4.64**	**338**		*e*Pn	**Pn**	**01 48 44.9**	**+1.2**
BULI	**Ruhr-Universit**	**4.65**	**338**		Pn	**Pn**	**01 48 45.8**	**+1.9**
COLF	**Collangettes**	**4.66**	**252**		Pn	**Pn**	**01 48 43.8**	**-0.3**
PGF	**Pioggiola**	**4.67**	**189**		*e*Pn	**Pn**	**01 48 46.2**	**+1.9**
PGF					*e*Sn	**Sn**	**01 49 39.7**	**+1.0**
	comp=Z,62nm,0.8s								
PGF	**Pioggiola**	**4.67**	**189**		Pn	**Pn**	**01 48 46.2**	**+1.9**
BMRD	**Maredsous**	**4.67**	**314**		*b*P	**Pn**	**01 48 45.8**	**+1.6**
BMRD					*d*S	**Sn**	**01 49 37.4**	**-1.2**
FDMO	**Fiordimonte**	**4.67**	**151**		Pn	**Pn**	**01 48 45.5**	**+1.2**
FDMO					IAML		01 49 53.8	
	comp=E,53nm,0.9s								
CLZ	**Clausthal**	**4.69**	**3**		*e*Pn	**Pn**	**01 48 43.3**	**-1.2**
CLZ					*e*Pg	**Pg**	**01 49 01.9**	**-1.3**
KRUC	**Moravsky**	**4.69**	**64**		*e*PN	**Pn**	**01 48 44.3**	**-0.2**
KRUC					*e*SN	**Sn**	**01 49 38.5**	**-0.6**
KRUC					*e*SG	**Sg**	**01 49 59.6**	**-4.3**
GUMA	**Gualdo di Mace**	**4.73**	**149**		Pn	**Pn**	**01 48 46.1**	**+1.0**
GUMA					IAML		01 49 54.7	
	comp=E,283nm,0.6s								
GUMA					IAML		01 49 57.1	
	comp=N,212nm,0.6s								
DUGI	**Dugi Otok**	**4.76**	**130**		*e*Pn	**Pn**	**01 48 48.1**	**+2.6**
DUGI					Sn	**Sn**	**01 49 43.5**	**+2.6**
BAIF	**Baives**	**4.81**	**309**		*e*Pn	**Pn**	**01 48 47.8**	**+1.7**
BAIF					*e*Sn	**Sn**	**01 49 38.4**	**-3.6**
BAIF					*e*Sg	**Sg**	**01 50 03.4**	**-4.2**
	comp=N,129nm,0.7s								
NRCA	**Norcia**	**4.86**	**152**		Pn	**Pn**	**01 48 48.4**	**+1.4**
NRCA					IAML		01 49 50.4	
	comp=N,50nm,0.7s								
NRCA					IAML		01 49 55.3	
	comp=E,54nm,0.8s								
VRAC	**Vranov**	**4.91**	**62**	⇓	P	**Pn**	**01 48 47.5**	**0.0**
VRAC	**Vranov**	**4.91**	**62**		ePN	**Pn**	**01 48 47.2**	**-0.3**
VRAC					*e*SN	**Sn**	**01 49 42.7**	**-1.8**
VRAC					*e*SG	**Sg**	**01 50 07.9**	**-2.9**
VRAC	**Vranov**	**4.91**	**62**		Pn	**Pn**	**01 48 47.6**	**+0.1**
	comp=E,2.3nm,0.3s,baz=253,slow=14,SNR=24								
VRAC					Pg	**Pb**	**01 48 59.1**	**-0.5**
	comp=E,1.4nm,0.3s,baz=271,slow=18,SNR=7.2								
VRAC					LR	LR	01 50 20.5		
	comp=E,73nm,18.2s,baz=173,slow=34								
	comp=E,5.9nm,0.3s								
CESX	**Cesi**	**4.91**	**157**		Pn	**Pn**	**01 48 47.7**	**+0.2**
CESX					IAML		01 49 58.5	
	comp=N,76nm,0.8s								
ZST	**Bratislava**	**4.91**	**75**		*e*PN	**Pn**	**01 48 48.5**	**+1.0**
ZST					*e*SG	**Sg**	**01 50 11.5**	**+0.4**
MOSL	**Moslavina**	**4.93**	**106**		*e*Pn	**Pn**	**01 48 47.8**	**0.0**
BGF	**Bois d'Agland**	**4.94**	**266**		*e*Pn	**Pn**	**01 48 48.4**	**+0.5**
BGF	**Bois d'Agland**	**4.94**	**266**		*e*Pg	**Pg**	**01 49 06.1**	**-1.8**
BGF					*e*Sn	**Sn**	**01 49 41.3**	**-3.9**
	comp=N,86nm,0.6s								
BGF					*e*Sg	**Sg**	**01 50 07.5**	**-4.3**
	comp=N,141nm,0.5s								
HYF	**Humbligny**	**5.01**	**274**		*e*Pn	**Pn**	**01 48 50.4**	**+1.5**
HYF	**Humbligny**	**5.01**	**274**		*e*Pg	**Pg**	**01 49 07.2**	**-2.1**
HYF					*e*Sg	**Sg**	**01 50 09.2**	**-5.0**
MODS	**Modra-Piesok**	**5.06**	**73**		*e*PN	**Pn**	**01 48 50.3**	**+0.7**
MODS					*e*SN	**Sn**	**01 49 47.7**	**-0.6**
MODS					*e*SG	**Sg**	**01 50 14.2**	**-1.6**
SMPL	**Sampolo**	**5.09**	**186**		Pn	**Pn**	**01 48 53.4**	**+3.3**
PRIJ	**Prijedor**	**5.17**	**113**		*e*Pn	Pb	01 48 58.8	-5.1
MORI	**Morici**	**5.20**	**127**		*e*Pn	**Pn**	**01 48 54.0**	**+2.5**
UPC	**Upice**	**5.20**	**48**		*e*PN	**Pn**	**01 48 51.4**	**0.0**
UPC					*e*SG	**Sg**	**01 50 16.0**	**-4.1**
FLTG	**Flechtingen**	**5.24**	**8**		*e*Pg	**Pg**	**01 49 11.4**	**-2.2**
FLTG					*e*Sg	**Sg**	**01 50 22.0**	**+0.7**
DPC	**Dobruska-Polom**	**5.26**	**50**		*e*PN	**Pn**	**01 48 52.6**	**+0.2**
CHVC	**Chvalec**	**5.27**	**47**		*e*PN	**Pn**	**01 48 52.0**	**-0.4**
A051A	**Mrakovica**	**5.27**	**112**		*e*Pn	**Pn**	**01 48 54.6**	**+2.1**
LASF	**Ste Croix**	**5.29**	**237**		*e*Pn	**Pn**	**01 48 53.9**	**+1.1**
LASF	**Ste Croix**	**5.29**	**237**		*e*Pg	**Pg**	**01 49 13.7**	**-1.0**
LASF					*e*Sn	**Sn**	**01 49 51.3**	**-2.8**
	comp=N,62nm,0.8s								
A050A	**Klekovaca**	**5.30**	**118**		*e*Pn	**Pn**	**01 48 55.7**	**+2.8**
OSTC	**Ostas**	**5.33**	**48**		*e*PN	**Pn**	**01 48 52.7**	**-0.6**
KRLC	**Kraliky**	**5.36**	**55**		*e*Pn	**Pn**	**01 48 53.9**	**+0.1**
VERF	**Verneugheol**	**5.38**	**258**		Pn	**Pn**	**01 48 53.8**	**-0.2**
TCF	**Toulx Ste Croi**	**5.42**	**264**		*e*Pn	**Pn**	**01 48 54.3**	**-0.3**
TCF	**Toulx Ste Croi**	**5.42**	**264**		*e*Pg	**Pg**	**01 49 15.6**	**-1.6**
TCF					*e*Sn	**Sn**	**01 49 53.2**	**-4.0**
	comp=N,53nm,0.7s								
TCF					*e*Sg	**Sg**	**01 50 22.4**	**-5.0**
	comp=N,76nm,0.5s								
JAVC	**Velka Javorina**	**5.43**	**69**		*e*PN	**Pn**	**01 48 56.4**	**+1.7**
JAVC					*e*SG	**Sg**	**01 50 29.0**	**+1.5**
FRNF	**Fournols**	**5.45**	**254**		Pn	**Pn**	**01 48 54.2**	**-0.7**
KIJV	**Kijevo**	**5.50**	**123**		*e*Pn	**Pn**	**01 48 58.1**	**+2.5**
BLY	**Banja Luka**	**5.57**	**113**		*e*Pn	**Pn**	**01 48 58.6**	**+2.1**
MORC	**Moravsky Berou**	**5.66**	**60**	⇓	P	**Pn**	**01 48 57.6**	**-0.3**
MORC	**Moravsky Berou**	**5.66**	**60**		Pn	**Pn**	**01 48 57.1**	**-0.8**
MORC	**Moravsky Berou**	**5.66**	**60**		*e*PN	**Pn**	**01 48 57.6**	**-0.3**
MORC					*e*SN	**Sn**	**01 50 01.2**	**-1.9**
MORC					*e*SG	**Sg**	**01 50 31.8**	**-3.3**
MGRS	**Mrkonjic Grad**	**5.67**	**116**		*e*Pn	Pn	01 49 03.4	+5.4
MAUC	**Maruska**	**5.68**	**64**		*e*PN	**Pn**	**01 48 59.6**	**+1.5**
INTR	**Introdacqua**	**5.86**	**150**		Pn	**Pn**	**01 49 03.3**	**+2.7**
CAF	**Calviac**	**5.95**	**251**		*e*Pn	**Pn**	**01 49 02.8**	**+0.9**
CAF					*e*Sn	**Sn**	**01 50 08.0**	**-2.3**
CAF					*e*Sg	**Sg**	**01 50 39.8**	**-4.6**
	comp=N,30nm,0.5s								
MORH	**Mrgy, Hungar**	**6.03**	**96**	⇓	P	**Pn**	**01 49 03.6**	**+0.8**
HVAR	**Hvar**	**6.06**	**129**		*e*Pn	**Pn**	**01 49 05.3**	**+2.1**
VYHS	**Vyhne**	**6.10**	**74**		*e*PN	**Pn**	**01 49 03.7**	**-0.2**
VYHS					*e*SN	**Sn**	**01 50 11.6**	**-2.3**
RJF	**Les Rejaudoux**	**6.17**	**256**		*e*Pn	**Pn**	**01 49 05.7**	**+0.9**
RJF					*e*Sn	**Sn**	**01 50 10.9**	**-4.6**
RJF					*e*Sg	**Sg**	**01 50 46.1**	**-5.1**
	comp=N,39nm,0.6s								
RICI	**Ricice**	**6.23**	**123**		*e*Pn	**Pn**	**01 49 07.8**	**+2.2**
MAKA	**Makarska**	**6.30**	**125**		*e*Pn	**Pn**	**01 49 08.1**	**+1.6**
CLAF	**Gruissan**	**6.33**	**233**		Pn	**Pn**	**01 49 09.7**	**+2.8**
LSTV	**Lastovo**	**6.58**	**129**		*e*Pn	**Pn**	**01 49 11.8**	**+1.4**
LANS	**Liptovska Anna**	**6.64**	**69**		*e*PN	**Pn**	**01 49 10.4**	**+1.0**
LANS					*e*PG	**Sg**	**01 49 39.6**	**-0.9**
LANS					*e*SN	**Sn**	**01 50 28.6**	**+1.3**
MTLF	**Montolieu**	**6.69**	**238**		*e*Pn	**Pn**	**01 49 13.1**	**+1.2**
MTLF	**Montolieu**	**6.69**	**238**		*e*Pg	**Pg**	**01 49 39.1**	**-2.2**
MTLF					*e*Sn	**Sn**	**01 50 24.9**	**-3.4**
	comp=N,9.0nm,0.3s								
MTLF					*e*Sg	**Sg**	**01 51 03.6**	**-4.3**
	comp=N,30nm,0.7s								
MTLF	**Montolieu**	**6.69**	**238**		Pn	**Pn**	**01 49 13.1**	**+1.2**
PSZ	**Piszkesteto**	**6.75**	**80**	⇓	P	**Pn**	**01 49 12.9**	**+0.1**
PSZ	**Piszkesteto**	**6.75**	**80**		Pn	**Pn**	**01 49 11.4**	**-1.4**
MONQ	**Montcuq**	**6.76**	**249**		Pn	**Pn**	**01 49 14.3**	**+1.5**
SGRT	**San Giovanni R**	**6.79**	**141**		Pn	**Pn**	**01 49 14.2**	**+0.8**
LFF	**La Frestale**	**6.81**	**254**		*e*Pn	**Pn**	**01 49 15.6**	**+2.2**
LFF					*e*Sn	**Sn**	**01 50 27.6**	**-3.7**
LFF					*e*Sg	**Sg**	**01 51 06.2**	**-5.7**
	comp=N,66nm,0.8s								
STON	**Ston**	**6.95**	**125**		*e*Pn	**Pn**	**01 49 17.4**	**+2.0**
LDF	**La Druitiere**	**6.95**	**286**		*e*Pn	**Pn**	**01 49 15.6**	**+0.1**
LDF	**La Druitiere**	**6.95**	**286**		*e*Pg	**Pg**	**01 49 43.0**	**-3.4**
LDF					*e*Sn	**Sn**	**01 50 30.9**	**-3.9**
LDF					*e*Sg	**Sg**	**01 51 09.7**	**-6.7**
	comp=N,102nm,0.8s								
MFF	**Saint Martin d**	**6.97**	**269**		*e*Pn	**Pn**	**01 49 16.2**	**+0.4**
MFF					*e*Sn	**Sn**	**01 50 30.7**	**-4.6**
MFF					*e*Sg	**Sg**	**01 51 12.0**	**-5.0**
	comp=N,22nm,0.5s								
HAPS	**Han Pijesak,Bl**	**6.99**	**113**		*e*Pn	**Pn**	**01 49 17.9**	**+1.7**
FNEB	**Nbias**	**7.02**	**236**		Pn	**Pn**	**01 49 18.1**	**+1.6**
FRGS	**Fruska Gora**	**7.11**	**103**		*e*Pn	**Pn**	**01 49 18.3**	**+0.6**
CARF	**Carcanieres**	**7.14**	**234**		Pn	**Pn**	**01 49 19.6**	**+1.3**
TEKS	**Tekeris**	**7.15**	**108**		*e*Pn	**Pn**	**01 49 18.0**	**-0.3**
OJC	**Ojcow**	**7.17**	**61**		*e*Pn	**Pn**	**01 49 19.8**	**+1.2**
OJC					*e*Sn	**Sn**	**01 50 37.7**	**-2.6**
OJC	**Ojcow**	**7.17**	**61**		Pn	**Pn**	**01 49 18.7**	**+0.1**
FLN	**La Foliniere**	**7.21**	**287**		*e*Pn	**Pn**	**01 49 19.8**	**+0.7**
	baz=102								
FLN	**La Foliniere**	**7.21**	**287**		*e*Pg	**Pg**	**01 49 48.0**	**-3.4**
	baz=107								
FLN					*e*Sn	**Sn**	**01 50 36.7**	**-4.5**
FLN					*e*Sg	**Sg**	**01 51 17.8**	**-6.9**
	comp=N,57nm,0.7s,baz=101								
CHIF	**Chize**	**7.23**	**266**		Pn	**Pn**	**01 49 19.9**	**+0.5**
NIE	**Niedzica**	**7.24**	**68**		*e*Pn	**Pn**	**01 49 21.4**	**+1.9**
NIE					*e*Sn	**Sn**	**01 50 41.1**	**-0.7**
DBRK	**Dubrovnik**	**7.33**	**125**		*e*Pn	**Pn**	**01 49 22.0**	**+1.4**
BBLS	**Lazići**	**7.39**	**113**		*e*Pn	**Pn**	**01 49 23.2**	**+1.6**
BRY	**Bratogost**	**7.40**	**122**		*e*Pn	**Pn**	**01 49 24.8**	**+2.9**
GRR	**Gorron**	**7.41**	**283**		*e*Pn	**Pn**	**01 49 22.1**	**+0.2**
GRR					*e*Sn	**Sn**	**01 50 41.9**	**-4.2**
GRR					*e*Sg	**Sg**	**01 51 23.9**	**-7.3**
	comp=N,42nm,0.6s								
RUDO	**Rudo**	**7.49**	**115**		*e*Pn	**Pn**	**01 49 24.5**	**+1.5**
VSL	**Villasalto**	**7.68**	**184**		Pn	**Pn**	**01 49 28.9**	**+3.4**
STHS	**Stebnicka Huta**	**7.84**	**69**		*e*PG	**Pn**	**01 49 26.2**	**-1.5**
EPF	**Esparros**	**7.98**	**242**		*e*Pn	**Pn**	**01 49 30.0**	**+0.3**
EPF					*e*Sn	**Sn**	**01 50 55.9**	**-4.3**
EPF					*e*Sg	**Sg**	**01 51 44.1**	**-5.2**
	comp=N,30nm,0.8s								
SJES	**Sjenica**	**8.05**	**115**		*e*Pn	**Pn**	**01 49 32.3**	**+1.5**
BZS	**Buzias**	**8.19**	**97**	⇓	P	**Pn**	**01 49 34.0**	**+1.5**
DRME	**Dracevica, Mon**	**8.22**	**124**		*e*Pn	**Pn**	**01 49 34.3**	**+1.3**
KOLS	**Kolonicke sedl**	**8.42**	**73**		*e*PG	**Pn**	**01 49 35.6**	**-0.1**
SURR	**Surduc**	**8.50**	**95**	⇑	P	**Pn**	**01 49 38.6**	**+1.9**
SGMF	**Saint Gilles**	**8.54**	**282**		*e*Pn	**P

MT02				*e*S	**Sb**	**01 57 00.8**	**-0.2**	
MT02				IAML		01 57 08.8		
	comp=Z,228nm,0.4s							
MT02	**Curacav**	**2.88**	**170**	*e*P	**Pn**	**01 56 21.2**	**+1.3**	
MT02				*e*S	**Sn**	**01 56 55.3**	**+1.6**	
MT02				IAML		01 57 11.0		
	comp=E,244nm,0.4s							
RTLL	**Cerro Villicun**	**2.93**	**109**	*e*P	**Pb**	**01 56 23.4**	**-3.8**	
RTLL				*e*S	**Sb**	**01 57 03.0**	**+0.3**	
AGUA	**GUANDACOL**	**2.95**	**73**	*e*P	**Pb**	**01 56 25.9**	**-1.6**	
AGUA				*e*S	Sb	01 57 11.5	+8.4	
AGUA				IAML		01 57 15.6		
	comp=Z,224nm,0.7s							
RTCV	**Cerro Valdivia**	**3.08**	**119**	*e*P	**Pb**	**01 56 27.0**	**-2.7**	
RTCV				*e*P	**Pb**	**01 56 27.1**	**-2.7**	
RTCV				*e*S	**Sb**	**01 57 08.6**	**+1.6**	
MT05	**Renca**	**3.08**	**165**	*e*P	**Pn**	**01 56 25.7**	**+2.9**	
MT05				*e*S	**Sb**	**01 57 04.6**	**-2.4**	
MT05				IAML		01 57 17.6		
	comp=Z,304nm,1.1s							
GO03	**Copiap**	**3.10**	**25**	*e*P	**Pn**	**01 56 24.6**	**+1.8**	
GO03				*e*S	**Sb**	**01 57 04.1**	**-3.2**	
GO03				*e*S	**Sn**	**01 57 04.6**	**+5.5**	
GO03				IAML		01 57 16.4		
	comp=Z,235nm,0.5s							
FCH	**Farellones**	**3.15**	**158**	*e*P	**Pn**	**01 56 25.5**	**+1.6**	
FCH				*e*S	**Sn**	**01 57 03.9**	**+3.1**	
FCH				IAML		01 57 14.3		
	comp=E,378nm,0.1s							
MT04	**Ro Olivares**	**3.27**	**156**	*e*P	**Pn**	**01 56 28.0**	**+2.5**	
ASAL	**Salagasta**	**3.28**	**132**	*e*P	**Pb**	**01 56 29.6**	**-3.6**	
ASAL				*e*S	**Sb**	**01 57 11.6**	**-1.1**	
ASAL				IAML		01 57 30.6		
	comp=Z,95nm,0.7s							
ARCO	**CERRO ARCO**	**3.39**	**136**	*e*P	Pn	01 56 16.9	-10	
ARCO				*e*S	**Sb**	**01 57 23.2**	**+7.2**	
ARCO				IAML		01 57 25.9		
	comp=Z,192nm,0.6s							
MT01	**Popeta**	**3.46**	**174**	*e*P	**Pn**	**01 56 31.4**	**+3.5**	
MT01				*e*S	**Sb**	**01 57 14.6**	**-3.3**	
MT01				IAML		01 57 28.4		
	comp=Z,128nm,0.6s							
VCA	**Vinchina**	**3.49**	**62**	*e*P	**Pb**	**01 56 32.4**	**-4.3**	
VCA				*e*P	Pn	01 56 33.1	+4.7	
VCA				*e*S	**Sb**	**01 57 18.6**	**-0.1**	
VCA				IAML		01 57 26.7		
	comp=Z,260nm,0.8s							
AVFE	**Valle Fertil**	**3.69**	**95**	*e*P	**Pn**	**01 56 34.6**	**+3.6**	
AVFE				IAML		01 57 36.6		
	comp=Z,107nm,0.5s							
BO01	**Tunca**	**4.00**	**172**	*e*P	**Pn**	**01 56 37.2**	**+1.9**	
BO01				IAML		01 57 49.2		
	comp=Z,55nm,0.4s							

*CNRM **01** 02:10:60.0,35˚.56N×3˚.69W,h10km,ML2.0*
*MDD **01** 02:11:00.4±0.7,35˚.42N×3˚.78W,h0km,mb_Lg2.3/11,*
Error ellipse: s-maj=6.3km s-min=3.3km az=5.0
*INMG **01** 02:11:01.7±1.4,35˚.45N×3˚.74W,h8km,ML1.9,Error*
ellipse: s-maj=3.0km s-min=2.6km az=45.0
*SFS **01** 02:11:02.0,35˚.46N×3˚.69W,h17km,ML2.1/10,ML2.5/7,*
MLv1.8/10

ISC 01 02:10:59.4±1.1,35˚.52N±0˚.02×3˚.71W±0˚.02,h6km±10km,
n44,σ1§29/72,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.35**	**212**	P		**Pb**	**02 11 07.7**	**-0.3**
PALE	**Palemas**	**0.35**	**212**	S		**Sg**	**02 11 13.0**	**+2.1**
EMEL	**Melilla**	**0.66**	**109**	Pg		**Pb**	**02 11 13.3**	**+0.1**
EMEL				Sg		**Sb**	**02 11 22.0**	**-0.5**
GOG	**Mont Gurugu**	**0.66**	**116**	P		**Pb**	**02 11 13.2**	**0.0**
GOG	**Mont Gurugu**	**0.66**	**116**	S		**Sb**	**02 11 22.1**	**-0.5**
EMLI	**Melilla**	**0.66**	**109**	Pg		**Pb**	**02 11 12.9**	**-0.3**
EMLI				Sg		**Sb**	**02 11 22.4**	**-0.2**
EALB	**Alboran**	**0.69**	**52**	Pg		**Pn**	**02 11 14.6**	**-1.1**
EALB				Sg		**Sn**	**02 11 25.7**	**-1.1**
EALB	**Alboran**	**0.69**	**52**	Pg		**Pn**	**02 11 14.6**	**-1.1**
EALB				Sg		**Sn**	**02 11 25.8**	**-0.9**
EALB				*i* Vmb_Lg			02 11 26.8	
AKLM	**AKL**	**1.01**	**187**	P		**Pb**	**02 11 20.1**	**+0.8**
AKLM	**AKL**	**1.01**	**187**	S		**Sg**	**02 11 32.5**	**+0.6**
TAF	**Taforalt**	**1.27**	**123**	P		**Pg**	**02 11 22.7**	**-1.1**
TAF	**Taforalt**	**1.27**	**123**	S		**Sn**	**02 11 42.7**	**+1.5**
ELGU	**Los Guajares,**	**1.35**	**3**	Pn		**Pn**	**02 11 24.6**	**-0.2**
ELGU				Sn		**Sb**	**02 11 42.6**	**-0.1**
ELGU	**Los Guajares,**	**1.35**	**3**	Pn		**Pn**	**02 11 24.7**	**-0.1**
ELGU				Sn		**Sg**	**02 11 42.2**	**-0.6**
ELGU				*i* Vmb_Lg			02 11 49.8	
EMIJ	**Mijas**	**1.35**	**321**	Pn		**Pn**	**02 11 25.1**	**+0.3**
EMIJ				Sn		**Sg**	**02 11 41.6**	**-1.3**
EMIJ	**Mijas**	**1.35**	**321**	Pg		**Pn**	**02 11 25.3**	**+0.5**
EMIJ				Sg		**Sg**	**02 11 41.9**	**-1.0**
EMIJ				*i* Vmb_Lg			02 11 53.9	
EMAL	**Malaga-Limoner**	**1.37**	**335**	Pn		**Pg**	**02 11 26.0**	**+0.3**
EMAL				Sn		**Sn**	**02 11 44.7**	**+1.2**
ECEU	**Ceuta**	**1.41**	**286**	Pg		**Pn**	**02 11 24.6**	**-0.9**
ECEU				Sg		**Sb**	**02 11 41.4**	**-2.7**
ECEU				*i* Vmb_Lg			02 11 47.2	
EBER	**Berja**	**1.53**	**26**	Pn		**Pn**	**02 11 27.5**	**+0.1**
EBER				Sn		**Sg**	**02 11 48.9**	**+0.3**
EBER	**Berja**	**1.53**	**26**	Pn		**Pg**	**02 11 28.7**	**0.0**
EBER				Sn		**Sg**	**02 11 48.6**	**0.0**
EBER				*i* Vmb_Lg			02 11 55.1	
EGOR	**Sierra Gorda,**	**1.62**	**349**	Pn		**Pg**	**02 11 30.5**	**0.0**
EGOR	**Sierra Gorda,**	**1.62**	**349**	Pn		**Pb**	**02 11 29.8**	**+0.1**
EGOR				Sn		**Sn**	**02 11 50.1**	**+0.2**
EGOR				*i* Vmb_Lg			02 11 54.9	
ENIJ	**Nijar**	**1.90**	**40**	Sn		**Sn**	**02 11 54.8**	**-1.7**
ENIJ	**Nijar**	**1.90**	**40**	Pn		**Pb**	**02 11 33.9**	**-0.5**
ENIJ				Sn		**Sn**	**02 11 55.1**	**-1.3**
ENIJ				*i* Vmb_Lg			02 11 58.0	
IFR	**Ifrane**	**2.31**	**211**	Pn		**Pn**	**02 11 37.3**	**-0.8**
IFR				Sn		**Sn**	**02 12 04.8**	**-2.2**
EQES	**Quesada**	**2.34**	**13**	Pn		**Pb**	**02 11 41.9**	**-0.1**
EQES				Sn		**Sb**	**02 12 10.7**	**-0.5**
EQES				*i* Vmb_Lg			02 12 17.7	
EADA	**Adamuz**	**2.73**	**346**	Pn		**Pb**	**02 11 46.7**	**-2.0**
EADA				Sn		**Sn**	**02 12 17.6**	**+0.4**
EADA	**Adamuz**	**2.73**	**346**	Pn		**Pn**	**02 11 46.3**	**+2.5**
EADA				Sn		**Sn**	**02 12 19.1**	**+2.0**
EADA				*i* Vmb_Lg			02 12 29.9	
MDT	**Midelt**	**2.80**	**196**	P		**Pn**	**02 11 46.2**	**+1.5**
ECAB	**El Cabril**	**2.90**	**332**	Pn		**Pn**	**02 11 47.7**	**+1.7**
ECAB				Sn		**Sn**	**02 12 22.6**	**+1.5**
ETOB	**Tobarra**	**3.57**	**28**	Pn		**Pn**	**02 11 58.1**	**+2.8**
ETOB				Sn		**Sn**	**02 12 40.7**	**+2.9**
EGRO	**El Granado**	**3.64**	**305**	Pn		**Pn**	**02 11 57.2**	**+1.0**
EGRO				Sn		**Sn**	**02 12 38.6**	**-0.9**
PVAQ	**Vaqueiros**	**3.74**	**301**	*e*P		**Pn**	**02 11 59.8**	**+2.3**
PVAQ				*e*S		**Sn**	**02 12 41.5**	**-0.3**
PBAR	**Barrancos**	**3.76**	**316**	*e*P		**Pn**	**02 11 59.7**	**+1.8**
PBAR				*e*S		**Sn**	**02 12 42.9**	**+0.4**
PBAR				A		A	02 13 12.6	
	1.4nm,0.8s							
PBDV	**Barranco-do-Ve**	**3.81**	**298**	*e*P		**Pn**	**02 11 59.7**	**+1.1**
PBDV				*e*S		**Sn**	**02 12 43.7**	**-0.1**
PCVE	**Castro Verde**	**4.07**	**302**	*e*S		**Sn**	**02 12 50.3**	**+0.2**
EBAD	**Badajoz**	**4.17**	**322**	Pn		**Pn**	**02 12 05.4**	**+1.9**
EBAD				Sn		**Sn**	**02 12 51.7**	**-0.9**
EBAD				*i* Vmb_Lg			02 12 58.2	
MESJ	**Messejana**	**4.30**	**304**	*e*P		**Pn**	**02 12 07.1**	**+1.8**
MESJ				*e*S		**Sn**	**02 12 55.9**	**+0.2**
MESJ				A		A	02 13 00.4	
	2.1nm,0.9s							
MORF	**Marmelete**	**4.37**	**296**	*e*P		**Pn**	**02 12 07.2**	**+1.0**
MORF				*e*S		**Sn**	**02 12 56.3**	**-1.1**
MORF				A		A	02 12 58.4	
	3.5nm,0.7s							
PFVI	**Vila Bisbo**	**4.43**	**293**	*e*S		**Sn**	**02 12 57.4**	**-1.6**
PTEO	**Sao Teotonio**	**4.51**	**298**	*e*S		**Sn**	**02 13 00.6**	**-0.4**
PESTR	**Estremoz**	**4.56**	**318**	*e*S		**Sn**	**02 13 04.0**	**+1.9**
PNCL	**Nicolau / Gran**	**4.65**	**305**	*e*P		**Pn**	**02 12 11.4**	**+1.3**
PNCL				*e*S		**Sn**	**02 13 03.6**	**-0.8**
PMRV	**Marv??o**	**4.88**	**324**	*e*P		**Pn**	**02 12 15.9**	**+2.6**

*IDC **01** 02:29:26.6±1.4,56˚.41N×149˚.17W,h0km,mb3.7/4,*
mbtmp3.5/7,ML3.0/3,Error ellipse: s-maj=31.4km
s-min=22.0km az=47.0

*NEIC **01** 02:29:26.6±1.1,56˚.48N±0˚.08×149˚.2W±0˚.1,h19km±6km,*
mb3.7/2,ML3.6/46,ML3.4(AEIC),Error ellipse:
s-maj=11.8km s-min=7.8km az=163.0
*AEIC **01** 02:29:30.8±1.2,56˚.52N±0˚.07×149˚.20W±0˚.10,h12km±5km,*
Error ellipse: s-maj=11.2km s-min=5.8km az=148.0

ISC 01 02:29:23.1±0.9,56˚.41N±0˚.08×149˚.53W±0˚.04,h10km,
n165,σ1§58/157,mb3.6/5,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.17**	**311**			**Pb**	**02 30 02.6**	**+0.3**
KDAK	**Kodiak Island**	**2.17**	**311**	IAML			02 30 29.2	
	108nm,0.3s							
KDAK				IAML			02 30 29.7	
	109nm,0.3s							
KDAK	**Kodiak Island**	**2.17**	**311**	P		**Pb**	**02 30 02.6**	**+0.3**
	baz=123							
KDAK	**Kodiak Island**	**2.17**	**311**	Pn		**Pb**	**02 30 03.4**	**+1.1**
	5.1nm,0.3s,baz=166,slow=19,SNR=60							
KDAK				Sn		**Sn**	**02 30 27.7**	**+1.7**
	17nm,0.3s,baz=226,slow=22,SNR=28							
	9.5nm,0.3s							
OHAK	**Old Harbor**	**2.22**	**293**			**Pg**	**02 30 04.0**	**-1.7**
OHAK	**Old Harbor**	**2.22**	**293**			**Sb**	**02 30 30.1**	**-0.8**
OHAK	**Old Harbor**	**2.22**	**293**	P		**Pg**	**02 30 04.0**	**-1.7**
OHAK	**Old Harbor**	**2.22**	**293**	P		**Pg**	**02 30 04.0**	**-1.7**
	baz=106							
OHAK				S		**Sb**	**02 30 30.1**	**-0.8**
	baz=106							
SII	**Sitkinak Islan**	**2.59**	**275**			**Pg**	**02 30 10.5**	**-2.2**
SII						**Sb**	**02 30 40.5**	**-0.9**
SII	**Sitkinak Islan**	**2.59**	**275**	IAML			02 30 41.4	
	comp=E,164nm,1.1s							
SII				IAML			02 31 01.7	
	comp=N,218nm,2.0s							
SII	**Sitkinak Islan**	**2.59**	**275**	P		**Pg**	**02 30 10.4**	**-2.2**
SII	**Sitkinak Islan**	**2.59**	**275**	P		**Pg**	**02 30 10.5**	**-2.2**
	baz=89							
SII				S		**Sb**	**02 30 40.5**	**-0.9**
	baz=89							
SYI	**Shuyak Island**	**2.69**	**326**			**Pb**	**02 30 09.6**	**-1.8**
SYI						**Sn**	**02 30 40.3**	**+1.2**
Q20K	**Shuyak Island**	**2.70**	**326**	P		**Pb**	**02 30 09.6**	**-1.8**
	baz=139							
Q20K				S		**Sn**	**02 30 40.3**	**+1.2**
	baz=139							
CNPM	**China Poot**	**3.26**	**344**			**Pn**	**02 30 16.2**	**+2.0**
CNPM						**Sn**	**02 30 52.0**	**-1.0**
Q19K	**Cape Douglas,**	**3.36**	**321**			**Pb**	**02 30 19.7**	**-3.0**
Q19K	**Cape Douglas,**	**3.36**	**321**	IAML			02 31 12.3	
	comp=N,264nm,0.9s							
Q19K	**Cape Douglas,**	**3.36**	**321**	P		**Pb**	**02 30 19.7**	**-3.0**
	baz=134							
BRSE	**Bradley Lake S**	**3.41**	**350**			**Pn**	**02 30 17.6**	**+1.4**
BRSE						**Sn**	**02 30 55.6**	**-1.0**
BRSE	**Bradley Lake S**	**3.41**	**350**	P		**Pn**	**02 30 17.6**	**+1.4**
	baz=165							
BRSE				S		**Sn**	**02 30 55.6**	**-1.0**
	baz=165							
BRLK	**Bradley Lake**	**3.44**	**348**			**Pn**	**02 30 18.2**	**+1.5**
Q23K	**Middleton Isla**	**3.47**	**28**			**Pn**	**02 30 16.8**	**-0.3**
Q23K	**Middleton Isla**	**3.47**	**28**	P		**Pn**	**02 30 16.8**	**-0.3**
	baz=209							
MID	**Middleton Isla**	**3.47**	**28**	P		**Pn**	**02 30 17.0**	**-0.1**
ACHA	**Anglo Creek He**	**3.63**	**302**			**Pb**	**02 30 25.0**	**-2.3**
ANCK	**Anglo Creek**	**3.70**	**301**			**Pb**	**02 30 25.8**	**-2.8**
SEW	**Seward**	**3.71**	**1**			**Pn**	**02 30 21.0**	**+0.6**
SEW	**Seward**	**3.71**	**1**	P		**Pn**	**02 30 21.0**	**+0.6**
	baz=178							
KAHC	**Katmai Hardscr**	**3.71**	**310**			**Pb**	**02 30 25.3**	**-3.5**
KAHC	**Katmai Hardscr**	**3.71**	**310**	P		**Pb**	**02 30 25.3**	**-3.5**
	baz=122							
P23K	**Montague Islan**	**3.77**	**16**			**Pn**	**02 30 21.4**	**+0.2**
P23K	**Montague Islan**	**3.77**	**16**	P		**Pn**	**02 30 21.4**	**+0.2**
	baz=196							
CNTC	**Contact Creek**	**3.92**	**301**			**Pb**	**02 30 28.4**	**-3.8**
Q17K	**Contact Creek**	**3.92**	**301**	P		**Pb**	**02 30 28.4**	**-3.9**
	baz=113							
IVE	**Iliamna Volcan**	**4.06**	**334**			**Pn**	**02 30 27.7**	**+2.4**
SLKM	**Skilak Lake**	**4.13**	**355**			**Pn**	**02 30 27.2**	**+1.1**
P18K	**Big Mountain,**	**4.27**	**317**			**Pn**	**02 30 31.4**	**+3.3**
P18K	**Big Mountain,**	**4.27**	**317**	IAML			02 33 17.5	
	comp=E,35nm,3.4s							
P18K	**Big Mountain,**	**4.27**	**317**	P		**Pn**	**02 30 31.4**	**+3.3**
	baz=129							
HIN	**Hinchinbrook I**	**4.30**	**20**			**Pn**	**02 30 28.9**	**+0.3**
HIN	**Hinchinbrook I**	**4.30**	**20**	IAML			02 31 26.3	
	comp=E,135nm,2.9s							
HIN				IAML			02 31 30.4	
	comp=N,139nm,2.8s							
RED	**Redoubt Volcan**	**4.37**	**338**			**Pn**	**02 30 31.7**	**+2.2**
RSO	**Redoubt South**	**4.41**	**339**	Pn		**Pn**	**02 30 32.0**	**+1.9**
RDT	**Redoubt**	**4.44**	**341**			**Pn**	**02 30 32.1**	**+1.5**
KAIM	**Kayak Island**	**4.45**	**35**			**Pn**	**02 30 30.4**	**0.0**
KAIM	**Kayak Island**	**4.45**	**35**	P		**Pn**	**02 30 30.4**	**0.0**
	baz=218							
RDWB	**Redoubt West**	**4.45**	**338**			**Pn**	**02 30 33.0**	**+2.3**
NCT	**North Crescent**	**4.53**	**338**			**Pn**	**02 30 34.4**	**+2.6**
O19K	**Port Alsworth**	**4.56**	**328**			**Pn**	**02 30 35.3**	**+3.2**
O19K	**Port Alsworth**	**4.56**	**328**	P		**Pn**	**02 30 35.3**	**+3.2**
	baz=142							
O18K	**Koktuh Hills**	**4.58**	**321**	Pn		**Pn**	**02 30 34.9**	**+2.5**
O18K				IAML			02 31 56.5	
	comp=N,35nm,3.4s							
O18K				IAML			02 32 22.2	
	comp=E,36nm,3.2s							
EYAK	**Cordova Ski Ar**	**4.60**	**24**			**Pn**	**02 30 32.9**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.60**	**24**	P		**Pn**	**02 30 33.3**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.60**	**24**	P		**Pn**	**02 30 32.8**	**+0.2**
	baz=206							
P17K	**Kvichak River**	**4.63**	**310**			Pn	02 30 37.9	+4.8
P17K	**Kvichak River**	**4.63**	**310**	P		Pn	02 30 37.9	+4.8
	baz=122							
RC01	**Rabbit Creek A**	**4.70**	**359**	Pn		**Pn**	**02 30 35.0**	**+1.0**
RC01				IAML			02 31 31.7	
	comp=N,34nm,0.4s							
RC01				IAML			02 31 38.0	
	comp=E,47nm,0.7s							
RC01	**Rabbit Creek A**	**4.70**	**359**	P		**Pn**	**02 30 35.0**	**+1.0**
	baz=176							
RAGM	**Ragged Mountai**	**4.74**	**31**			**Pn**	**02 30 34.5**	**0.0**
ANPB	**Aniakchak Plen**	**4.85**	**278**			Pb	02 30 41.9	-6.3
GOAT	**Goat Mountain**	**4.88**	**29**			**Pn**	**02 30 36.9**	**+0.3**
N20K	**Mount Spurr**	**5.00**	**345**	P		**Pn**	**02 30 40.0**	**+1.8**
	baz=160							
SPCR	**Spurr Chakacha**	**5.00**	**345**			**Pn**	**02 30 40.0**	**+1.8**
SPCN	**Chakachatna No**	**5.03**	**345**			**Pn**	**02 30 40.7**	**+2.2**
BERG	**Berg Lake**	**5.03**	**35**			**Pn**	**02 30 38.5**	**-0.1**
BERG				IAML			02 31 38.2	
	comp=N,98nm,1.1s							
BERG				IAML			02 31 44.6	
	comp=E,100nm,1.3s							
KNK	**Knik Glacier**	**5.05**	**6**			**Pn**	**02 30 39.8**	**+1.0**
KNK	**Knik Glacier**	**5.05**	**6**	IAML			02 31 44.7	
	comp=E,29nm,0.8s							
KNK				IAML			02 31 46.8	
	comp=N,34nm,0.7s							
KNK	**Knik Glacier**	**5.05**	**6**	P		**Pn**	**02 30 39.8**	**+1.0**
	baz=185							
SUA	**Susitna One**	**5.11**	**353**			**Pn**	**02 30 41.0**	**+1.3**
SUA	**Susitna One**	**5.11**	**353**	IAML			02 32 19.1	
	comp=E,44nm,3.4s							
SUA				IAML			02 32 19.2	
	comp=N,49nm,3.7s							
SUA	**Susitna One**	**5.11**	**353**	P		**Pn**	**02 30 41.0**	**+1.3**
	baz=170							
N19K	**Bonanza Creek**	**5.12**	**332**			**Pn**	**02 30 42.3**	**+2.4**
N19K	**Bonanza Creek**	**5.12**	**332**	IAML			02 31 46.8	
	comp=E,22nm,3.4s							
N19K				IAML			02 31 53.5	
	comp=N,26nm,3.5s							
N19K	**Bonanza Creek**	**5.12**	**332**	P		**Pn**	**02 30 42.3**	**+2.4**
	baz=145							
SNH	**Sunshine Point**	**5.17**	**40**			**Pn**	**02 30 40.5**	**0.0**
PMR	**Palmer**	**5.20**	**2**	P		**Pn**	**02 30 43.5**	**+2.6**
SPNN	**North Nagishla**	**5.24**	**343**			**Pn**	**02 30 43.7**	**+2.2**
BMRM	**Bremner River**	**5.24**	**27**			**Pn**	**02 30 41.8**	**+0.3**
BMRM	**Bremner River**	**5.24**	**27**	P		**Pn**	**02 30 41.8**	**+0.3**
	baz=210							
STLK	**Strandline Lak**	**5.24**	**348**			**Pn**	**02 30 43.6**	**+2.1**
KLU	**Klutina**	**5.43**	**19**			**Pn**	**02 30 44.7**	**+0.7**
KLU				IAML			02 31 49.5	
	comp=N,41nm,0.3s							
KLU				IAML			02 31 52.0	
	comp=E,29nm,1.3s							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KLU	**Klutina**	**5.43**	**19**	P		**Pn**	**02 30 44.8**	**+0.7**
	baz=200							
BARK	**Barkley Ridge**	**5.45**	**40**			**Pn**	**02 30 44.5**	**+0.1**
SML	**Sawmill**	**5.45**	**6**	Pn		**Pn**	**02 30 45.6**	**+1.3**
SML				IAML			02 31 51.4	
	comp=N,42nm,0.6s							
SML				IAML			02 32 09.3	
	comp=E,34nm,2.1s							
SML	**Sawmill**	**5.45**	**6**	P		**Pn**	**02 30 46.0**	**+1.6**
	baz=185							
M23K	**Glacier View**	**5.48**	**9**			**Pn**	**02 30 46.2**	**+1.5**
M23K	**Glacier View**	**5.48**	**9**	P		**Pn**	**02 30 46.2**	**+1.5**
	baz=189							
CRQM	**Cirque**	**5.49**	**35**			**Pn**	**02 30 45.1**	**+0.1**
CRQM				IAML			02 31 47.5	
	comp=N,44nm,0.7s							
CRQM				IAML			02 32 08.8	
	comp=E,39nm,3.6s							
SCM	**Sheep Creek Mo**	**5.56**	**11**			**Pn**	**02 30 47.1**	**+1.3**
SCM	**Sheep Creek Mo**	**5.56**	**11**	P		**Pn**	**02 30 47.2**	**+1.3**
	baz=191							
ISLE	**Juniper Island**	**5.64**	**39**			**Pn**	**02 30 47.1**	**0.0**
VRDI	**Verde Repeater**	**5.77**	**31**	Pn		**Pn**	**02 30 49.1**	**+0.3**
M20K	**Styx River**	**5.79**	**343**	Pn		**Pn**	**02 30 50.9**	**+1.8**
N25K	**Chitina, Valde**	**5.80**	**24**	Pn		**Pn**	**02 30 49.5**	**+0.3**
N25K	**Chitina, Valde**	**5.80**	**24**	P		**Pn**	**02 30 49.8**	**+0.6**
	baz=207							
GLB	**Gilahina Butte**	**5.85**	**28**	Pn		**Pn**	**02 30 50.2**	**+0.3**
KIAG	**Kiagna River**	**5.87**	**37**			**Pn**	**02 30 50.5**	**+0.3**
SAMH	**Samovar Hills**	**5.93**	**47**			**Pn**	**02 30 51.5**	**+0.5**
M24K	**Tolsona, Glenn**	**5.97**	**15**			**Pn**	**02 30 53.2**	**+1.8**
M24K	**Tolsona, Glenn**	**5.97**	**15**	P		**Pn**	**02 30 53.2**	**+1.8**
	baz=197							
TABL	**Table Mountain**	**5.98**	**44**			**Pn**	**02 30 51.7**	**0.0**
MCARA	**McCarthy VSAT**	**6.02**	**31**			**Pn**	**02 30 52.3**	**+0.2**
MCARA	**McCarthy VSAT**	**6.02**	**31**	P		**Pn**	**02 30 52.8**	**+0.7**
	baz=216							
PTPK	**Patty Peak**	**6.03**	**35**			**Pn**	**02 30 52.8**	**+0.3**
PCA	**Pinnacle**	**6.13**	**49**			**Pn**	**02 30 54.5**	**+0.8**
PINM	**Pinnacle**	**6.13**	**49**	P		**Pn**	**02 30 54.5**	**+0.8**
	baz=237							
BARN	**Barnard Glacie**	**6.21**	**38**			**Pn**	**02 30 55.1**	**+0.3**
CTG	**Chitna Glacier**	**6.25**	**40**	P		**Pn**	**02 30 55.5**	**+0.1**
	baz=226							
CTGM	**Chitina Glacie**	**6.25**	**40**			**Pn**	**02 30 55.6**	**+0.1**
SDPT	**Sand Point**	**6.25**	**265**	P		Pb	02 31 01.9	-10
WAT6	**Susitna Watana**	**6.26**	**8**			**Pn**	**02 30 56.8**	**+1.3**
WAT6	**Susitna Watana**	**6.26**	**8**	P		**Pn**	**02 30 56.8**	**+1.3**
	baz=188							
LOGN	**Logan Glacier**	**6.28**	**42**			**Pn**	**02 30 55.8**	**0.0**
PNL	**Peninsula**	**6.29**	**55**			**Pn**	**02 30 56.0**	**+0.1**
PNL	**Peninsula**	**6.29**	**55**	P		**Pn**	**02 30 56.2**	**+0.3**
PNL	**Peninsula**	**6.29**	**55**	P		**Pn**	**02 30 56.0**	**+0.1**
	baz=243							
BCPM	**Bancas Point**	**6.32**	**52**			**Pn**	**02 30 56.4**	**+0.2**
HARP	**HAARP**	**6.41**	**19**			**Pn**	**02 30 58.5**	**+1.0**
HARP	**HAARP**	**6.41**	**19**	P		**Pn**	**02 30 58.5**	**+1.0**
	baz=201							
WAT7	**Susitna Watana**	**6.46**	**3**			**Pn**	**02 30 59.9**	**+1.7**
WAT1	**Susitna Watana**	**6.46**	**4**			**Pn**	**02 30 59.8**	**+1.6**
WAT1	**Susitna Watana**	**6.46**	**4**	P		**Pn**	**02 30 59.8**	**+1.6**
	baz=183							
N15K	**Kwethluk River**	**6.72**	**308**	Pn		**Pn**	**02 31 05.8**	**+4.0**
DHY	**Denali Highway**	**6.78**	**8**			**Pn**	**02 31 04.2**	**+1.6**
DHY	**Denali Highway**	**6.78**	**8**	P		**Pn**	**02 31 04.2**	**+1.6**
	baz=189							
PAX	**Paxson**	**6.89**	**16**			**Pn**	**02 31 06.3**	**+2.2**
PAX	**Paxson**	**6.89**	**16**	P		**Pn**	**02 31 06.3**	**+2.2**
	baz=198							
O29M	**Mount Kennedy**	**6.96**	**51**			**Pn**	**02 31 05.6**	**+0.6**
YUK2	**White River**	**7.00**	**36**			**Pn**	**02 31 06.2**	**+0.5**
YUK8	**Steele Glacier**	**7.04**	**42**			**Pn**	**02 31

	comp=Z,239nm,0.8s							
GO03	**Copiap**	**2.67**	**285**	*e*P	Pn	02 42 50.0	-0.1
GO03				*e*S	Sn	02 43 21.2	-2.3
ACCO	**Cerro Coronel**	**2.73**	**213**	*e*P	Pn	02 42 51.9	+0.7
ACCO				*e*S	Sn	02 43 26.5	+1.2
ACCO				IAML		02 43 28.7	
	comp=Z,191nm,0.3s						
ACHE	**Chepes**	**2.90**	**169**	*e*P	Pn	02 42 54.7	+1.6
ACHE				*e*S	Sn	02 43 28.8	0.0
CO01	**Juntas del Tor**	**2.93**	**235**	*e*P	Pn	02 42 54.6	+0.9
CO01				*e*S	Sn	02 43 32.2	+2.4
CO01				IAML		02 43 34.5	
	comp=Z,113nm,0.7s						
DOCA	**Reserva Natura**	**3.04**	**210**	*e*P	Pn	02 42 55.7	+0.6
DOCA				*e*S	Sn	02 43 32.6	+0.2
LCO	**Las Campanas**	**3.04**	**256**	*e*P	Pn	02 42 55.2	+0.1
LCO				*e*S	Sn	02 43 31.1	-1.2
RTLL	**Cerro Villicun**	**3.17**	**198**	*e*P	Pn	02 42 57.3	+0.9
RTLL				IAML		02 43 37.3	
	comp=Z,70nm,0.4s						
AC04	**Llanos de Chal**	**3.31**	**271**	*e*P	Pn	02 42 54.5	-3.7
AC04				*e*S	Sn	02 43 34.8	-3.1
AC04				IAML		02 43 37.5	
	comp=Z,85nm,0.3s						
GO04	**Tololo Observa**	**3.56**	**238**	*e*P	Pn	02 43 01.6	0.0
GO04				*e*S	Sn	02 43 43.4	-0.6
AC01	**Pan de Azucar**	**3.62**	**306**	*e*P	Pn	02 43 01.7	-0.6
AC01				*e*S	Sn	02 43 43.5	-1.8
AC01				IAML		02 43 48.1	
	comp=Z,68nm,0.2s						
RTCV	**Cerro Valdivia**	**3.69**	**196**	*e*P	Pn	02 43 04.4	+1.2
GO02	**Mina Guanaco**	**3.73**	**327**	*e*P	Pn	02 43 04.8	+0.8
GO02				*e*S	Sn	02 43 48.0	-0.3
TCA	**Tanti**	**3.84**	**142**	*e*P	Pn	02 43 06.2	+1.2
TCA				*e*S	Sn	02 43 49.2	-1.1
TCA				IAML		02 43 49.8	
	comp=Z,42nm,1.0s						
CO03	**El Pedregal**	**3.86**	**229**	*e*P	Pn	02 43 05.6	+0.2
CO03				*e*S	Sn	02 43 52.2	+1.3
CO03				IAML		02 43 53.2	
	comp=Z,92nm,0.2s						
RTLS	**Leoncito**	**3.87**	**206**	*e*P	Pn	02 43 06.8	+1.0
RTLS				*e*S	Sn	02 43 52.3	+0.8
RTLS				IAML		02 43 53.9	
	comp=Z,116nm,0.4s						
CO02	**Combarbal**	**4.30**	**227**	*e*P	Pn	02 43 10.9	-0.3
CO02				*e*S	Sn	02 44 00.5	-0.7
CO02				IAML		02 44 03.9	
	comp=Z,85nm,0.4s						
PB14	**IPOC Station P**	**4.59**	**322**	*e*P	Pn	02 43 15.1	-0.2
PB14				*e*S	Sn	02 44 06.0	-2.4
PB14				IAML		02 44 07.1	
	comp=Z,63nm,0.5s						
VA03	**San Esteban**	**5.24**	**211**	*e*P	Pn	02 43 23.9	+0.4
VA03				IAML		02 44 25.7	
	comp=Z,31nm,0.7s						

*IDC **01** 02:44:02.9±12.0, 35°.73N×71°.37E, h106km±109km, mb3.3/1, mbtmp3.6/5, ML2.9/4, MS3.5/1, Error ellipse: s-maj=197.7km s-min=49.9km az=161.0*
*NNC **01** 02:44:12.9±3.1, 36°.77N×71°.22E, h206km±32km, mb2.5, mpv3.7, Error ellipse: s-maj=26.7km s-min=21.8km az=35.0*

ISC 01 02:44:11.3±1.8, 36°.7N±0°.1×71°.01E±0°.08, h200km, n17, σ1$41/19, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.20**	**25**	P	**Pn**	**02 45 41.4**	**0.0**
	SNR=8.4						
EKS2	**Erkin-Say**	**6.38**	**19**	P	**Pn**	**02 45 43.8**	**+0.3**
	SNR=20						
KK31	**Karatay Array**	**6.46**	**357**	⇓P	**Pn**	**02 45 44.6**	**+0.2**
	2.3nm,0.2s,baz=184,slow=13,SNR=119						
KK31				⇓S	**Sn**	**02 46 58.5**	**+0.2**
	2.0nm,0.5s,baz=184,slow=26,SNR=4.0						
AAK	**Ala-Archa**	**6.56**	**23**	P	**Pn**	**02 45 46.2**	**+0.4**
	SNR=16						
CHMS	**Chumysh**	**6.97**	**23**	P	**Pn**	**02 45 51.7**	**+0.7**
	SNR=5.5						
CHMS	**Chumysh**	**6.97**	**23**	⇑P	**Pn**	**02 45 50.5**	**-0.5**
	2.2nm,0.2s						
CHMS				⇑S	**Sn**	**02 47 08.0**	**-2.2**
	4.1nm,0.6s						
USP	**Ospenovka**	**7.13**	**21**	P	**Pn**	**02 45 53.9**	**+0.7**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.19**	**28**	P	Pn	02 45 46.8	-7.3
	SNR=5.6						
TKM2	**Tokmak 2**	**7.19**	**28**	⇑P	**Pn**	**02 45 53.2**	**-0.9**
	0.7nm,0.3s						
TKM2				⇓S	**Sn**	**02 47 13.8**	**-2.0**
	1.3nm,0.6s						
GEYT	**Alibeck**	**10.35**	**281**	P	**Pn**	**02 46 35.1**	**+0.1**
	0.3nm,0.3s,baz=112,slow=11,SNR=2.2						
GEYT				S	**Sn**	**02 48 27.6**	**-3.0**
	1.1nm,0.5s,baz=109,slow=22,SNR=2.4						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**13.17**	**36**	P	**P**	**02 47 12.8**	**-1.0**
	baz=226,slow=14,SNR=2.4						
	0.2nm,0.5s						
AB31	**Akbulak array**	**14.96**	**331**	⇑P	**P**	**02 47 35.8**	**+2.3**
	0.5nm,0.4s,baz=145,slow=13,SNR=52						
AB31				⇓S	**Sn**	**02 50 20.1**	**0.0**
	1.2nm,0.8s,baz=151,slow=23,SNR=5.1						
KURBB	**Kurchatov Arra**	**14.98**	**19**	P	P	02 47 39.3	+5.6
	baz=202,slow=11,SNR=2.8						
	0.7nm,0.2s						
BVAR	**Borovoye Array**	**16.38**	**359**	P	Pn	02 47 57.3	+7.3
	baz=186,slow=9.7,SNR=4.8						
	0.8nm,0.6s						
AKTO	**Aktyubinsk**	**16.66**	**330**	⇑P	**P**	**02 47 52.4**	**+0.2**
	0.2nm,0.4s						
AKTO				⇑S	**S**	**02 50 56.7**	**+0.8**
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**19.78**	**25**	P	**Pn**	**02 48 32.1**	**+2.1**
	1.4nm,0.4s,baz=215,slow=9.8,SNR=7.1						
	1.4nm,0.4s						
BRDH	**Bariadhala**	**22.64**	**122**	LR	LR	02 59 24.0	
	comp=Z,120nm,19.4s,baz=94,slow=42						

*JMA **01** 02:54:32.7±0.1, 35°.1N±0°.7×135°.8E±0°.6, h351km±1km, MV3.9/37, MID KYOTO PREF*
*IDC **01** 02:54:32.3±0.7, 35°.05N×135°.89E, h359km±7km, mb3.4/16, mbtmp4.1/22, Error ellipse: s-maj=13.0km s-min=10.5km az=74.0*
*NIED **01** 02:54:32.7, 35°.09N×135°.80E, h351km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.62; Mθθ=0.73; Mφφ=-0.12; Mrθ=0.69; Mθφ=-0.76; Mφr=-0.34; Fault plane solution: M₀1.18000×10¹⁵ NP1: φs=293.00000°, δ=66.00000°, λ=-99.00000°. NP2: φs=134.00000°, δ=26.00000°, λ=-71.00000°.*

ISC 01 02:54:31.9±0.6, 35°.11N±0°.07×135°.80E±0°.06, h354km±5km, n41, σ1$25/55, mb3.7/16, 11D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.37**	**298**	⇓*i*P	**Pn**	**02 55 17.0**	**+0.6**
JWT				⇓S	**S**	**02 55 51.5**	**-0.5**
JYTA	**Yamagatataniai**	**0.90**	**57**	⇓*i*P	**Pn**	**02 55 18.5**	**+0.8**
JWY	**Kouya**	**0.91**	**191**	⇓P	**Pn**	**02 55 18.4**	**+0.4**
JWY				⇓S	**S**	**02 55 53.6**	**-1.2**
JIE	**Ise**	**1.03**	**134**	⇓*i*P	**Pn**	**02 55 18.9**	**+0.6**
JIE				⇓S	**S**	**02 55 54.9**	**-0.6**
JKG	**Kaga**	**1.24**	**20**	⇓*i*P	**Pn**	**02 55 19.8**	**+0.7**
JTNC	**Tanabenakahech**	**1.30**	**187**	⇓P	**Pn**	**02 55 19.7**	**+0.2**
JTNC				⇓S	**S**	**02 55 56.3**	**-1.4**
TTO1	**TONANKAI O.B.S**	**1.69**	**151**	P	**Pn**	**02 55 22.4**	**+1.1**
JAI	**Aioi**	**1.72**	**221**	P	**Pn**	**02 55 22.1**	**+0.3**
TK02	**Tokai 2**	**1.99**	**125**	P	**Pn**	**02 55 24.2**	**+0.9**
JMN	**Monobe**	**2.10**	**230**	P	**Pn**	**02 55 24.9**	**+0.4**
JHS	**Saijyo**	**2.21**	**268**	P	**Pn**	**02 55 26.1**	**+1.0**
JYN	**Shimob**	**2.28**	**79**	P	**Pn**	**02 55 25.9**	**+0.2**
JFNN	**Fujinakano**	**2.37**	**87**	*e*P	**Pn**	**02 55 27.0**	**+0.8**
MAT	**Matsushiro**	**2.42**	**53**	P	**Pn**	**02 55 27.2**	**+0.5**
MAT				S	**S**	**02 56 11.5**	**+0.8**
MJAR	**Matsushiro Arr**	**2.42**	**53**	P	**Pn**	**02 55 27.7**	**+1.0**
	70nm,0.5s,baz=217,slow=8.8,SNR=160						
MJAR				S	**S**	**02 56 12.8**	**+2.0**
	12nm,0.7s,baz=239,slow=16,SNR=4.5						
JSZ	**Suzu**	**2.65**	**28**	⇓*e*P	**Pn**	**02 55 29.5**	**+1.0**
JRY	**Ryogami san**	**2.69**	**69**	P	**Pn**	**02 55 29.4**	**+0.6**
JRY				S	**S**	**02 56 17.0**	**+2.4**
JOD2	**Odawara 2**	**2.70**	**86**	P	**Pn**	**02 55 29.3**	**+0.3**
JGT2	**ShimaneMisato**	**2.70**	**270**	*e*P	**Pn**	**02 55 29.7**	**+0.7**
JGT2				S	**S**	**02 56 15.2**	**+0.4**
JTO	**Tosashimizu**	**3.35**	**229**	*i* P	**Pn**	**02 55 35.3**	**+0.4**
JNU	**Nakatsue**	**4.54**	**246**	P	**Pn**	**02 55 47.6**	**+0.7**
	18nm,0.5s,baz=58,slow=6.9,SNR=16						
KSRS	**Korea Array**	**6.78**	**292**	P	**Pn**	**02 56 13.3**	**+1.6**
	2.3nm,0.6s,baz=110,slow=12,SNR=11						
USRK	**Ussuriysk Ar.**	**9.54**	**343**	P	**Pn**	**02 56 46.0**	**+1.7**
	16nm,0.5s,baz=152,slow=11,SNR=59						
ASAJ	**Asahikawa**	**10.41**	**28**	P	**Pn**	**02 56 53.9**	**-0.6**
	10nm,0.3s,baz=232,slow=11,SNR=9.7						
ASAJ				S	**S**	**02 58 45.1**	**-6.5**
	17nm,0.8s,baz=21,slow=28,SNR=10						
KLR	**Kul'dur**	**14.42**	**349**	P	**P**	**02 57 39.3**	**-0.5**
	4.6nm,0.5s,baz=177,slow=6.8,SNR=17						
PETK	**Petropavlovsk-**	**23.73**	**34**	P	**P**	**02 59 13.0**	**-0.3**
	4.5nm,0.8s,baz=235,slow=5.2,SNR=3.6						
	4.5nm,0.8s						
SONM	**Songino Array**	**25.27**	**309**	P	**P**	**02 59 28.4**	**+1.1**
	0.9nm,0.4s,baz=122,slow=9.6,SNR=8.9						
	0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.60**	**253**	P	**P**	**03 01 05.5**	**-0.2**
	1.4nm,0.3s,baz=48,slow=10,SNR=4.1						
	1.4nm,0.3s						
ZALV	**Zalesovo Beam**	**39.92**	**314**	P	**P**	**03 01 32.3**	**-0.4**
	0.9nm,0.4s,baz=109,slow=7.4,SNR=6.2						
ZALV				PcP	**PcP**	**03 03 30.2**	**+0.1**
	1.1nm,0.5s,baz=83,slow=5.3,SNR=4.1						
ZALV				ScP	**ScP**	**03 06 44.1**	**-0.5**
	0.8nm,0.6s,baz=129,slow=4.0,SNR=3.9						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**41.32**	**303**	P	**P**	**03 01 45.2**	**+1.1**
	1.3nm,0.5s,baz=91,slow=9.5,SNR=18						
MKAR				ScP	**ScP**	**03 06 50.3**	**-0.2**
	0.3nm,0.5s,baz=76,slow=5.7,SNR=3.0						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**43.64**	**309**	P	**P**	**03 02 03.1**	**+0.6**
	0.7nm,0.3s,baz=90,slow=7.4,SNR=11						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	**48.52**	**313**	P	**P**	**03 02 40.7**	**+0.6**
	2.1nm,0.3s,baz=104,slow=9.4,SNR=27						
BVAR				PcP	**PcP**	**03 03 59.9**	**0.0**
	0.9nm,0.4s,baz=99,slow=2.5,SNR=5.5						
	2.1nm,0.3s						
ILAR	**Eielson Array**	**53.52**	**31**	P	**P**	**03 03 16.7**	**-0.1**
	0.4nm,0.6s,baz=262,slow=4.5,SNR=7.9						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**54.77**	**182**	P	**P**	**03 03 25.3**	**-0.9**
	1.4nm,0.5s,baz=356,slow=7.6,SNR=22						
WRA				PcP	**PcP**	**03 04 23.9**	**+0.2**
	0.5nm,0.4s,baz=356,slow=4.3,SNR=5.0						
	1.4nm,0.5s						
ARU	**Arti**	**54.78**	**318**	P	**P**	**03 03 26.0**	**+0.1**
	2.6nm,0.5s,baz=335,slow=2.5,SNR=5.7						
	2.6nm,0.5s						
AKTO	**Aktyubinsk**	**56.56**	**311**	P	**P**	**03 03 39.4**	**+0.9**
	3.9nm,0.7s,baz=72,slow=9.7,SNR=13						
	3.9nm,0.7s						
ASAR	**Alice Springs**	**58.48**	**182**	P	**P**	**03 03 51.6**	**-0.4**
	1.2nm,0.7s,baz=13,slow=14,SNR=14						
	1.2nm,0.7s						
FINES	**FINESS Array B**	**68.34**	**331**	P	**P**	**03 04 55.4**	**-0.1**
	0.9nm,0.5s,baz=64,slow=5.0,SNR=12						
	0.9nm,0.5s						
KBZ	**Khabaz**	**68.64**	**309**	P	**P**	**03 04 58.3**	**+0.6**
	2.0nm,0.8s,baz=97,slow=2.9,SNR=4.7						
	2.0nm,0.8s						
HFS	**Hagfors**	**73.88**	**334**	P	**P**	**03 05 28.7**	**+0.2**
	1.7nm,0.6s,baz=91,slow=10,SNR=6.0						
	1.7nm,0.6s						
BRTR	**Keskin Array B**	**76.63**	**309**	P	**P**	**03 05 45.5**	**+0.8**
	1.3nm,0.9s,baz=104,slow=5.2,SNR=7.8						
	1.3nm,0.9s						

*SKHL **01** 03:23:29.4±0.3, 43°.40N×149°.00E, h48km±2km, mb3.8/2*
*JMA **01** 03:23:30.6±0.5, 44°.N±2°×14°.8E±°, h126km, MV3.1/14, SE OFF ETOROFU*

ISC 01 03:23:32.4±3.9, 43°.5N±0°.1×148°.7E±0°.2, h35km, n10, σ1$88/17, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.40**	**285**	*e*P	**Pn**	**03 23 55.3**	**-0.1**
SHO				AMB	AMB	03 23 55.9	
	50nm,0.5s						
SHO				*e*S	**Sn**	**03 24 14.4**	**+1.8**
SHO				A	A	03 24 16.7	
	40nm,0.2s						
SHO				A	A	03 24 16.7	
	40nm,0.2s						
KUR	**Kuril'sk**	**1.81**	**341**	*e*P	**Pn**	**03 24 00.6**	**-0.4**
KUR				AMB	AMB	03 24 01.5	
	20nm,0.5s						
KUR				*e*S	**Sn**	**03 24 24.3**	**+1.7**
KUR				A	A	03 24 27.4	
	40nm,0.4s						
KUR				A	A	03 24 27.4	
	50nm,0.4s						
NEM2	**Nemuro 2**	**2.16**	**267**	*e*P	**Pn**	**03 24 05.9**	**0.0**
NEM2				*e*S	**Sn**	**03 24 33.0**	**+1.6**
NMR	**Nemuro--Hokkai**	**2.17**	**267**	*e*P	**Pn**	**03 24 05.7**	**-0.3**
NMR				*e*S	**Sn**	**03 24 32.9**	**+1.2**
JKHN	**Kushirohamanak**	**2.62**	**261**	*e*P	**Pn**	**03 24 12.4**	**+0.2**
JKHN				*e*S	**Sn**	**03 24 44.5**	**+1.7**
JRA	**Rausu**	**2.63**	**280**	*e*P	**Pn**	**03 24 08.0**	**-4.2**
JNSB	**Nemuroshibetsu**	**2.69**	**276**	*e*P	**Pn**	**03 24 10.1**	**-3.1**
AKK	**Akkeshi**	**2.86**	**261**	*e*P	**Pn**	**03 24 15.2**	**-0.3**
AKK				*e*S	**Sn**	**03 24 49.4**	**+0.6**
JNK	**Nakash**	**2.90**	**272**	*e*P	**Pn**	**03 24 13.2**	**-2.7**
JAK	**Akkeshi**	**2.97**	**261**	*e*P	**Pn**	**03 24 16.6**	**-0.5**
JAK				*e*S	**Sn**	**03 24 52.1**	**+0.6**

*TEH **01** 03:29:35.9, 33°.67N×45°.71E, h8km±36km, ML3.6*
*ISN **01** 03:29:35.7±1.1, 33°.69N×45°.74E, h20km±8km, ML3.5*
*IDC **01** 03:29:55.4±2.4, 35°.70N×47°.22E, h0km, mb3.9/4, mbtmp3.8/6, ML3.2/2, Error ellipse: s-maj=47.4km s-min=24.9km az=171.0*

ISC 01 03:29:37.6±0.7, 33°.66N±0°.03×45°.74E±0°.04, h13km, n36, σ1$35/41, mb3.9/4, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.39**	**95**	Pg	**Pg**	**03 29 44.9**	**-0.6**
IBDR	**Badra**	**0.57**	**164**	*e*Pg	**Pg**	**03 29 47.0**	**-1.7**
IBDR				*e*Sg	**Sg**	**03 29 56.0**	**-0.2**
IBDR				AML	AML	03 30 04.3	
	comp=N,933nm,0.2s						
KGS1	**Ghasr-e-Shirin**	**0.86**	**352**	Pg	**Pg**	**03 29 52.4**	**-1.8**
IGHG	**Ghaleghazi**	**0.96**	**46**	Pg	**Pg**	**03 29 54.7**	**-1.5**
IDHR	**Dehrash**	**1.17**	**27**	Pg	**Pb**	**03 29 58.2**	**-1.6**
BHD	**Baghdad**	**1.20**	**252**	*e*Pn	**Pb**	**03 29 59.0**	**-1.2**
BHD				*e*Sn	**Sn**	**03 30 17.0**	**+0.8**
BHD				AML	AML	03 30 22.4	
	comp=E,3μm,0.6s						
KCHF	**Cheshme Sefid,**	**1.24**	**60**	Pg	**Pn**	**03 30 00.2**	**-0.7**
KCHF				Sg	**Sg**	**03 30 19.1**	**+1.3**
ILIN	**Lien**	**1.61**	**38**	Pg	**Pb**	**03 30 06.9**	**-0.5**
IKFM	**Kafar-mosalman**	**1.76**	**94**	Pg	**Pb**	**03 30 09.6**	**-0.2**
IBZA	**Bozab**	**1.94**	**65**	Pn	**Pn**	**03 30 11.6**	**+1.2**
RAFI	**Al-Rafai**	**1.95**	**171**	*e*Pn	**Pn**	**03 30 11.0**	**+0.6**
RAFI				*e*Sn	**Sn**	**03 30 35.0**	**+0.2**
IALM	**Almabolaq**	**2.34**	**58**	Pn	**Pn**	**03 30 17.5**	**+1.4**
HSAM	**Samen**	**2.44**	**76**	Pn	**Pn**	**03 30 18.4**	**+1.0**
SDS1	**Sardasht. Az.**	**2.50**	**355**	Pn	**Pn**	**03 30 18.7**	**+0.7**
HAGD	**Aghdareh**	**3.05**	**67**	Pn	**Pn**	**03 30 27.2**	**+1.6**
MAHB	**Mahabad**	**3.10**	**359**	Pn	**Pn**	**03 30 27.3**	**+0.9**
IRAZ	**Razeghan**	**3.87**	**62**	Pn	**Pn**	**03 30 38.7**	**+1.6**
JHBN	**Jahan bin**	**4.38**	**108**	Pn	**Pn**	**03 30 44.8**	**+0.7**
IPIR	**Pirpir**	**4.43**	**101**	Pn	**Pn**	**03 30 45.7**	**+1.0**
ZNGN	**Zangian**	**4.57**	**108**	Pn	**Pn**	**03 30 46.9**	**+0.3**
IQOM	**Qom**	**4.57**	**74**	Pn	**Pn**	**03 30 47.0**	**+0.4**
QAMS	**Qamsar**	**4.71**	**87**	Pn	**Pn**	**03 30 50.0**	**+1.4**
IKLH	**Kolahrood**	**4.89**	**92**	Pn	**Pn**	**03 30 52.7**	**+1.7**
IVRN	**Varamin**	**5.13**	**73**	Pn	**Pn**	**03 30 54.7**	**+0.5**
KRSH	**Karshahi**	**5.33**	**85**	Pn	**Pn**	**03 30 58.4**	**+1.4**
ISFB	**Sefidab**	**5.44**	**81**	Pn	**Pn**	**03 30 58.9**	**+0.4**
IZEF	**Zefreh**	**5.57**	**96**	Pn	**Pn**	**03 31 01.5**	**+1.1**
KLNJ	**Kolanjah**	**5.61**	**116**	Pn	**Pn**	**03 31 01.9**	**+0.8**
IRAM	**Ramesheh**	**5.89**	**106**	Pn	**Pn**	**03 31 05.3**	**+0.5**
DSBU	**Dashti - Bushe**	**7.09**	**137**	Pn	**Pn**	**03 31 23.0**	**+1.8**
MMAI	**Mount Meron Ar**	**8.67**	**269**	Pn	**Pg**	**03 32 21.3**	**-2.3**
	comp=E,0.7nm,0.3s,baz=88,slow=15,SNR=2.2						
MMAI				Sn	**Sg**	**03 34 20.5**	**+4.6**
	comp=E,0.9nm,0.3s,baz=101,slow=35,SNR=2.7						
	comp=E,1.0nm,0.6s						
KBZ	**Khabaz**	**10.30**	**348**	Pn	**Pn**	**03 32 04.9**	**-0.1**
	comp=E,0.1nm,0.3s,baz=167,slow=10.0,SNR=1.9						
	comp=E,1.5nm,0.9s						
BVAR	**Borovoye Array**	**26.16**	**35**	P	**P**	**03 35 10.7**	**-0.8**
	comp=E,0.3nm,0.3s,baz=242,slow=9.5,SNR=4.5						
	comp=E,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**29.32**	**45**	P	**P**	**03 35 39.7**	**-0.1**
	comp=E,0.5nm,0.3s,baz=252,slow=9.0,SNR=4.1						
	comp=E,0.5nm,0.3s						
MKAR	**Makanchi Array**	**30.55**	**54**	P	**P**	**03 35 50.8**	**0.0**
	comp=E,1.0nm,0.6s,baz=251,slow=7.6,SNR=16						
	comp=E,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**34.14**	**42**	P	**P**	**03 36 20.8**	**-1.2**
	comp=E,1.2nm,0.3s,baz=248,slow=8.9,SNR=7.4						
	comp=E,1.2nm,0.3s						

*NEIC **01** 03:36:48.3±1.4, 36°.98N±0°.04×99°.42W±0°.04, h5km±2km, Error ellipse: s-maj=7.3km s-min=5.5km az=22.0*
TUL 01 03:36:49.3±2.3, 36°.96N±0°.04×99°.36W±0°.05, h4km±6km, ML2.7, mb_Lg2.3/15(NEIC), ML2.5/14(NEIC), Error ellipse: s-maj=6.5km s-min=5.4km az=215.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK035	**E0210 Rd and N**	**0.58**	**116**		Pg	03 37 00.8	+0.4
U32A	**Winter Ranch,**	**0.65**	**154**		Pg	03 37 02.0	+0.3
U32A				Sg	Sg	03 37 11.2	+1.0
U32A				IAML		03 37 13.4	
	comp=N,192nm,0.4s						
U32A				IAML		03 37 18.7	
	comp=E,201nm,0.1s						
OK038	**West end E0370**	**0.69**	**134**		Pg	03 37 02.8	+0.2
OK038				Sg	Sg	03 37 12.6	+1.1
ELIS	**Ellis County**	**0.90**	**183**		Pg	03 37 06.4	-0.1
ELIS				IAML		03 37 21.6	
	comp=E,269nm,0.3s						
OK032	**Salt Plains WL**	**0.93**	**99**		Pg	03 37 06.9	-0.3
OK032				Sg	Sg	03 37 19.8	+0.4
OK032				IAML		03 37 31.9	
	comp=E,122nm,0.2s						
OK032				IAML		03 37 35.1	
	comp=E,131nm,0.2s						
KAN10	**Anthony SW Sta**	**1.02**	**81**	Pg	Pg	03 37 08.7	-0.3
KAN14	**Manchester OK**	**1.12**	**90**	Pg	Pg	03 37 10.3	-0.5
CROK	**Carrier**	**1.20**	**112**		Pg	03 37 11.6	-0.6
CROK				IAML		03 37 30.9	
	comp=N,140nm,0.2s						
CROK				IAML		03 37 35.3	
	comp=E,142nm,0.3s						
GC02	**Grant County #**	**1.21**	**95**	Pg	Pg	03 37 12.0	-0.4
KAN06	**Argonia West S**	**1.23**	**76**	Pg	Pg	03 37 12.2	-0.7
KS21	**Milan North St**	**1.39**	**76**		Pn	03 37 14.8	-0.7
R32A	**Long Quarter,**	**1.54**	**19**		Pn	03 37 17.3	-0.3
BLOK	**Blackwell**	**1.73**	**96**		Pn	03 37 20.3	+0.1
CBKS	**Cedar Bluff**	**1.87**	**351**	Pn	Pn	03 37 22.0	-0.1
OK029	**Liberty Lake**	**1.93**	**127**	Pn	Pn	03 37 23.1	+0.2
SMWD	**Samnorwood**	**1.99**	**201**		Pn	03 37 24.2	+0.5
OK048	**Pawnee Station**	**2.02**	**105**		Pn	03 37 24.6	+0.6
OK033	**Mehan**	**2.15**	**114**	Pn	Pn	03 37 25.1	-0.8
OKCSW	**OKLAHOMA CITY**	**2.20**	**134**	Pn	Pn	03 37 26.1	-0.5
WMOK	**Wichita Mounta**	**2.27**	**168**		Pn	03 37 26.0	-1.6
WMOK				IAmb_Lg		03 38 00.3	
	comp=Z,15nm,1.1s						
OK052	**Battle Ridge R**	**2.28**	**114**	Pn	Pn	03 37 27.6	0.0
T35A	**Sooner Cattle**	**2.28**	**90**	Pn	Pn	03 37 27.3	-0.4
T35A				IAmb_Lg		03 38 02.0	
	comp=Z,12nm,0.7s						
FNO	**Franklin**	**2.33**	**136**	IAmb_Lg		03 38 08.7	
	comp=Z,8.2nm,0.8s						
X34A	**Smith Ranch, M**	**2.66**	**152**	Pn	Pn	03 37 33.7	+0.7
W35A	**Tecumseh**	**2.71**	**131**		Pn	03 37 33.2	-0.3
RTBA	**Rita Blanca**	**2.77**	**260**	Pn	Pn	03 37 33.7	-0.7
RTBA				IAmb_Lg		03 38 23.5	
	comp=Z,10nm,0.7s						
AMTX	**Amarillo**	**2.80**	**223**	Pn	Pn	03 37 35.2	+0.3
AMTX				IAmb_Lg		03 38 22.3	
	comp=Z,12nm,0.8s						
KSU1	**Kansas State U**	**3.04**	**45**	Pn	Pn	03 37 38.2	+0.1
KSU1				IAmb_Lg		03 38 26.1	
	comp=Z,8.6nm,0.8s						
DKNS	**Dickens**	**3.53**	**202**	Pn	Pn	03 37 44.8	-0.2
MSTX	**Muleshoe**	**4.08**	**224**	Pn	Pn	03 37 52.4	-0.2

comp=Z,98nm,0.5s
RNF Rovaniemi 3.21 254 PN **Pn** 03 53 00.1 +0.5
baz=71
RNF SN **Sn** 03 53 40.4 +1.9
RANF Ranua 3.22 242 PN **Pn** 03 53 00.4 +0.6
baz=55
RANF SG **Sb** 03 53 48.2 +2.5
KEV Kevo 3.24 313 Pn **Pn** 03 53 01.7 +1.8
KEV Sn **Sn** 03 53 40.6 +1.5
KEV Lg Lg 03 53 48.3
KEV Kevo 3.24 313 *e*P **Pn** 03 53 01.8 +1.8
KEV Sn **Sn** 03 53 40.6 +1.5
KEV Sg **Sb** 03 53 48.3 +2.1
KEV Kevo 3.24 313 PN **Pn** 03 53 00.8 +0.8
baz=130
KEV SN **Sn** 03 53 40.4 +1.3
ARA0 ARCESS Array S 3.56 306 Pn **Pn** 03 53 05.6 +1.1
baz=123,slow=16
ARA0 Sn **Sn** 03 53 46.8 -0.4
baz=121,slow=28
ARA0 Lg Lg 03 53 57.0
baz=116,slow=37
ARA0 ARCESS Array S 3.56 306 Pn **Pn** 03 53 05.6 +1.1
baz=123,slow=16
ARA0 Sn **Sn** 03 53 46.8 -0.4
baz=121,slow=28
ARA0 Sg **Sb** 03 53 57.0 +1.4
baz=116,slow=37
ARA0 ARCESS Array S 3.56 306 PN **Pn** 03 53 05.6 +1.1
baz=122
ARA0 SN **Sn** 03 53 47.8 +0.6
ARCES ARCESS Array B 3.56 306 P **Pn** 03 53 05.2 +0.8
ARCES S **Sn** 03 53 47.2 0.0
ARCES ARCESS Array B 3.56 306 Pn **Pn** 03 53 05.7 +1.2
comp=Z,8.3nm,0.3s,baz=118,slow=15,SNR=486
ARCES Pg **Pb** 03 53 12.7 +0.9
comp=Z,5.2nm,0.3s,baz=112,slow=17,SNR=13
ARCES Sn **Sn** 03 53 46.0 -1.2
comp=Z,5.8nm,0.3s,baz=120,slow=24,SNR=11
ARCES Lg Lg 03 53 57.9
comp=Z,14nm,0.3s,baz=114,slow=33,SNR=22
comp=Z,18nm,0.3s
KLF Kolari 3.81 268 PN **Pn** 03 53 08.1 +0.3
baz=76
KLF SN **Sn** 03 53 54.4 +1.3
RMF Romuvaara 3.81 206 PN **Pn** 03 53 07.8 0.0
HEF Hetta 3.87 286 Pn **Pn** 03 53 09.7 +1.0
HEF Sn **Sn** 03 53 55.1 +0.3
HEF Lg Lg 03 54 09.7
HEF Hetta 3.87 286 Pn **Pn** 03 53 09.7 +1.0
HEF Sn **Sn** 03 53 55.1 +0.3
HEF Sg **Sg** 03 54 09.7 -2.6
HEF Hetta 3.87 286 PN **Pn** 03 53 09.3 +0.6
baz=101
HEF SN **Sn** 03 53 55.4 +0.5
TOF Tornio 4.05 251 PN **Pn** 03 53 11.2 +0.1
OUL Oulu 4.10 234 PN **Pn** 03 53 13.4 +1.7
OUL SB **Sb** 03 54 10.0 -0.8
KTK1 Kautokeino 4.13 294 Pn **Pn** 03 53 13.0 +0.8
KTK1 Sn **Sn** 03 54 00.0 -1.2
KTK1 Lg Lg 03 54 14.0
KTK1 Kautokeino 4.13 294 Pn **Pn** 03 53 13.0 +0.8
KTK1 *e*P **Pn** 03 53 13.2 +0.9
KTK1 Sn **Sn** 03 54 00.0 -1.2
KTK1 Sg **Sb** 03 54 14.0 +2.1
KTK1 IAML 03 54 20.1
comp=Z,52nm,0.6s
KTK1 Kautokeino 4.13 294 PN **Pn** 03 53 13.1 +0.8
KTK1 SN **Sn** 03 54 00.2 -1.0
PAJU Pajala 4.18 266 PN **Pn** 03 53 12.7 -0.1
baz=81
PAJU SN **Sn** 03 54 02.6 +0.3
LANU Lannavaara 4.47 280 PN **Pn** 03 53 16.6 -0.3
LANU SN **Sn** 03 54 08.3 -1.3
KALU Kalix 4.51 251 PN **Pn** 03 53 17.9 +0.5
KALU SN **Sn** 03 54 10.2 -0.2
OBF4 Vikkela, Lumij 4.53 235 PN **Pn** 03 53 19.4 +1.7
baz=49
HAMF Hammerfest 4.68 314 Pn **Pn** 03 53 20.7 +1.0
HAMF Sn **Sn** 03 54 13.9 -0.7
HAMF Hammerfest 4.68 314 Pn **Pn** 03 53 20.7 +1.0
HAMF Sn **Sn** 03 54 13.9 -0.7
HAMF IAML 03 54 34.6
comp=Z,61nm,0.6s
KIF Kilpisjarvi 4.99 292 Pn **Pn** 03 53 24.6 +0.6
KIF Sn **Sn** 03 54 21.8 -0.4
KIF Kilpisjarvi 4.99 292 Pn **Pn** 03 53 24.6 +0.6
KIF Sn **Sn** 03 54 21.8 -0.4
JETT Jettan, Norway 5.25 297 Pn **Pn** 03 53 28.9 +1.4
JETT Sn **Sn** 03 54 27.5 -1.1
JETT Jettan, Norway 5.25 297 Pn **Pn** 03 53 28.9 +1.4
JETT Sn **Sn** 03 54 27.5 -1.1
TRO Tromso 5.77 297 Pn **Pn** 03 53 36.1 +1.5
TRO Sn **Sn** 03 54 39.2 -2.2
TRO Tromso 5.77 297 Pn **Pn** 03 53 36.1 +1.5
TRO Sn **Sn** 03 54 39.2 -2.2
FIA0 FINESS Array S 7.07 212 Pn **Pn** 03 53 52.5 -0.1
baz=28,slow=16
FIA0 Sn **Sn** 03 55 10.1 -3.3
baz=22,slow=28
FIA0 Lg Lg 03 55 38.6
baz=24,slow=28
FIA0 FINESS Array S 7.07 212 Pn **Pn** 03 53 52.5 -0.1
baz=28,slow=16
FIA0 Sn **Sn** 03 55 10.1 -3.3
baz=22,slow=28
FIA0 Sg **Sb** 03 55 38.6 +2.4
baz=24,slow=28
FINES FINESS Array B 7.07 212 Pn **Pn** 03 53 52.8 +0.3
comp=Z,0.3nm,0.3s,baz=27,slow=12,SNR=11
FINES Pg **Pb** 03 54 13.7 +2.3
comp=Z,0.3nm,0.3s,baz=17,slow=19,SNR=4.7
FINES Sn **Sn** 03 55 12.5 -0.9
comp=Z,0.6nm,0.3s,baz=31,slow=23,SNR=5.2
FINES Lg Lg 03 55 44.2
comp=Z,2.2nm,0.3s,baz=23,slow=25,SNR=8.7
comp=Z,0.7nm,0.3s
FAUS Fauske 7.09 276 P **Pn** 03 53 52.0 -0.7
FAUS S **Sn** 03 55 08.1 -5.8
HFS Hagfors 11.57 239 Pn **Pn** 03 54 52.6 -1.6
baz=56,slow=16
HFS Hagfors 11.57 239 Pn **Pn** 03 54 52.6 -1.6
baz=56,slow=16
HFS Hagfors 11.57 239 Pn **Pn** 03 54 52.1 -2.1
comp=Z,0.2nm,0.3s,baz=34,slow=11,SNR=6.8
HFS Sn **Sn** 03 56 57.4 -6.5
comp=Z,0.3nm,0.3s,baz=42,slow=25,SNR=5.0
HFS Lg Lg 03 58 05.2
comp=Z,0.8nm,0.3s,baz=47,slow=28,SNR=5.5
comp=Z,4.0nm,0.7s
SPA0 Spitsbergen Ar 11.64 342 Pn **Pn** 03 54 53.2 -1.8
baz=144,slow=16
SPA0 Spitsbergen Ar 11.64 342 Pn **Pn** 03 54 53.2 -1.8
baz=144,slow=16
SPITS Spitsbergen Ar 11.64 342 Pn **Pn** 03 54 51.3 -3.8
baz=141,slow=17
comp=Z,0.9nm,0.3s
NB2 NORSAR Subarra 11.76 246 Pn **Pn** 03 54 55.0 -1.8
baz=43,slow=11
NB2 NORSAR Subarra 11.76 246 Pn **Pn** 03 54 55.0 -1.8
baz=43,slow=11
NOA NORSAR Array B 11.76 246 Pn **Pn** 03 54 54.9 -1.8
baz=46,slow=11,SNR=7.7
NOA Sn **Sn** 03 57 00.9 -7.5
baz=41,slow=20,SNR=4.2
NOA Lg Lg 03 58 14.9
comp=Z,0.1nm,0.3s,baz=305,slow=20,SNR=4.8
comp=Z,0.9nm,0.9s
NRA0 NORESS Array S 11.86 245 Pn **Pn** 03 54 56.4 -1.7
baz=41,slow=10
NRA0 NORESS Array S 11.86 245 Pn **Pn** 03 54 56.4 -1.7
baz=41,slow=10
ARU Arti 16.03 122 Pn **Pn** 03 55 51.2 -3.2
comp=Z,1.1nm,0.3s,baz=282,slow=16,SNR=4.5
comp=Z,7.1nm,0.2s
AKTO Aktyubinsk 21.05 133 P **P** 03 56 54.3 +1.2
comp=Z,1.3nm,0.7s,baz=341,slow=15,SNR=4.2
comp=Z,1.3nm,0.7s
BVAR Borovoye Array 22.82 112 P **P** 03 57 13.8 +1.7
comp=Z,0.8nm,0.7s,baz=331,slow=12,SNR=3.9
comp=Z,0.8nm,0.7s

*VIE **01** 03:54:59.6±0.8, 49.°70N×18.°67E, h0km, mb2.6/3, ml2.2/7, Error ellipse: s-maj=8.5km s-min=4.5km az=151.0,*

Suspected Mining induced.
*IPEC **01** 03:55:00.6±0.2, 50.°04N×18.°54E, h1km, ML2.1/4, Error ellipse: s-maj=2.0km s-min=1.0km az=164.0*
*PRU **01** 03:55:02.5, 50.°04N×18.°40E, h0km*
ISC 01 03:55:00.2±0.8, 49.°99N±0.°03×18.°45E±0.°02, h0km, n35, σ1§33/58, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.19**	**298**	*e*PG		**Pg**	**03 55 06.0**	**+2.2**
RAC				*e*SG		**Sg**	**03 55 09.7**	**+3.5**
OKC	**Ostrava-Krasne**	**0.25**	**232**	*e*PG		**Pb**	**03 55 07.4**	**-0.2**
OKC				*e*SG		**Sb**	**03 55 11.8**	**-0.7**
	comp=Z,105nm,1.1s							
MORC	**Moravsky Berou**	**0.63**	**250**	*e*Pg		**Pb**	**03 55 13.8**	**-0.2**
	baz=67							
MORC				*e*Sg		**Sb**	**03 55 22.1**	**-1.3**
	49nm,0.4s,baz=67							
MORC	**Moravsky Berou**	**0.63**	**250**	*e*PG		**Pb**	**03 55 13.9**	**-0.1**
MORC				*e*SG		**Sb**	**03 55 22.2**	**-1.2**
OJC	**Ojcow**	**0.90**	**75**	*e*Pg		**Pg**	**03 55 16.9**	**-0.4**
OJC				*e*Sg		**Sg**	**03 55 29.1**	**+0.1**
LANS	**Liptovska Anna**	**1.07**	**142**	*e*PG		**Pb**	**03 55 21.7**	**+0.1**
LANS				*e*SG		**Sn**	**03 55 38.8**	**+0.7**
LANS				*e*LG		Lg	03 55 41.2	
KRLC	**Kraliky**	**1.08**	**275**	*e*PG		**Pg**	**03 55 20.9**	**+0.1**
KRLC				*e*SG		**Sb**	**03 55 35.9**	**-0.5**
	comp=Z,24nm,0.3s							
JAVC	**Velka Javorina**	**1.25**	**204**	*e*Pg		**Pn**	**03 55 25.4**	**+0.6**
	baz=25							
JAVC	**Velka Javorina**	**1.25**	**204**	*e*PG		**Pn**	**03 55 25.5**	**+0.6**
NIE	**Niedzica**	**1.33**	**115**	*e*Pg		**Pg**	**03 55 25.9**	**+0.2**
NIE				*e*Sg		**Sn**	**03 55 45.7**	**+1.2**
VRAC	**Vranov**	**1.39**	**241**	*e*Pg		**Pb**	**03 55 27.4**	**+0.5**
	baz=59							
VRAC				*e*Sg		**Sn**	**03 55 46.2**	**+0.4**
	23nm,0.4s,baz=59							
VRAC	**Vranov**	**1.39**	**241**	*e*PG		**Pb**	**03 55 27.5**	**+0.5**
VRAC				*e*SG		**Sn**	**03 55 46.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.42**	**285**	*e*PG		**Pb**	**03 55 27.5**	**0.0**
DPC				*e*SG		**Sn**	**03 55 46.9**	**+0.3**
	comp=Z,25nm,0.9s							
VYHS	**Vyhne**	**1.52**	**170**	*e*PG		**Pn**	**03 55 28.9**	**+0.3**
VYHS				*e*SG		**Sg**	**03 55 50.7**	**+1.7**
OSTC	**Ostas**	**1.54**	**292**	*e*PG		**Pb**	**03 55 29.2**	**-0.4**
OSTC				*e*SG		**Sn**	**03 55 50.6**	**+0.9**
KSP	**Ksiaz**	**1.62**	**302**	*e*Pg		**Pn**	**03 55 29.5**	**-0.5**
KSP				*e*Sg		**Sg**	**03 55 51.9**	**-0.4**
KRUC	**Moravsky**	**1.63**	**236**	*e*Pn		**Pb**	**03 55 31.2**	**+0.1**
	baz=54							
KRUC				*e*Sg		**Sg**	**03 55 53.8**	**+1.2**
	7.7nm,0.2s,baz=54							
KRUC	**Moravsky**	**1.63**	**236**	*e*PN		**Pb**	**03 55 31.3**	**+0.1**
KRUC				*e*SG		**Sg**	**03 55 53.9**	**+1.3**
CHVC	**Chvalec**	**1.65**	**292**	*e*PG		**Pb**	**03 55 31.0**	**-0.4**
UPC	**Upice**	**1.65**	**289**	*e*SG		**Sg**	**03 55 54.1**	**+1.0**
	comp=Z,12nm,0.6s							
MODS	**Modra-Piesok**	**1.80**	**206**	*e*PG		**Pb**	**03 55 34.7**	**+0.8**
MODS				*e*SN		**Sn**	**03 55 56.7**	**+0.8**
STHS	**Stebnicka Huta**	**1.90**	**107**	*e*PN		**Pb**	**03 55 35.9**	**+0.2**
GOPC	**GO Pecny, Ondr**	**2.37**	**269**	*e*SG		**Sg**	**03 56 15.6**	**-0.6**
PRU	**Pruhonice**	**2.52**	**271**	*e*SG		**Sg**	**03 56 20.1**	**-1.1**
CONA	**Conrad Observa**	**2.68**	**221**	*i* Pn		**Pn**	**03 55 42.5**	**-2.2**
	0.1nm,0.2s							
CONA				*e*Sn		**Sn**	**03 56 15.2**	**-2.6**
	0.8nm,0.2s							
RONA	**Rosalia, Austr**	**2.70**	**213**	*e*Pn		**Pn**	**03 55 41.8**	**-3.1**
	0.2nm,0.2s							
RONA				*i* Sn		**Sn**	**03 56 14.8**	**-3.4**
	1.7nm,0.4s							
KOLS	**Kolonicke sedl**	**2.71**	**112**	*e*PG		**Pb**	**03 55 49.8**	**+0.3**
CKRC	**Cesky Krumlov**	**2.95**	**248**	*e*SG		**Sg**	**03 56 34.9**	**0.0**
	comp=Z,6.0nm,0.4s							
BRG	**Berggiesshubel**	**3.02**	**289**	Pg		**Pg**	**03 55 56.9**	**-1.0**
BRG				Sg		**Sg**	**03 56 36.4**	**-0.5**
BRG				Amp			03 56 46.4	
	comp=Z,2.8nm,0.4s							
KHC	**Kasperske Hory**	**3.29**	**257**	*e*PN		**Pn**	**03 55 52.6**	**-0.3**
KHC				*e*PG		**Pb**	**03 56 00.9**	**+1.5**
KHC				*e*SG		**Sg**	**03 56 46.0**	**+0.3**
MOA	**Molln**	**3.50**	**234**	*i* Pn		**Pn**	**03 55 54.2**	**-1.6**
	comp=Z,0.3nm,0.2s							
MOA				*i* Sn		**Sn**	**03 56 39.5**	**+1.6**
	comp=Z,1.7nm,0.3s							
BIOA	**Bad Ischl, Aus**	**3.93**	**236**	*e*Sn		**Sn**	**03 56 51.7**	**+3.3**
	comp=Z,2.9nm,0.3s							
KBA	**Koelnbreinsper**	**4.47**	**231**	*e*Sg		**Sg**	**03 57 24.6**	**+0.8**
	comp=Z,1.0nm,0.4s							
LESA	**Schwarzleotal**	**4.61**	**238**	*e*Sg		**Sg**	**03 57 27.4**	**-0.7**
	comp=Z,0.7nm,0.2s							
WTTA	**Wattenberg**	**5.28**	**241**	*e*Sg		**Sg**	**03 57 52.4**	**+2.7**
	comp=Z,3.0nm,0.6s							

*CNRM **01** 04:15:40.3, 38.°73N×8.°06W, h0km*
*IGIL **01** 04:15:42.5, 38.°77N×7.°93W, h9km, ML3.0*
*LDG **01** 04:15:42.9±0.1, 38.°77N×7.°95W, h15km, Ml3.0/5, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*MDD **01** 04:15:42.2±0.2, 38.°79N×8.°00W, h12km, mb_Lg3.3/40, Error ellipse: s-maj=1.5km s-min=1.2km az=94.0*
*SFS **01** 04:15:42.1, 38.°78N×7.°97W, h9km, mb3.5/4, ML3.5/19, ML3.6/19, MLv3.5/19*
*INMG **01** 04:15:42.6±2.2, 38.°78N×7.°95W, h13km±3km, ML3.1, Error ellipse: s-maj=1.9km s-min=1.3km az=94.0*
ISC 01 04:15:41.1±0.9, 38.°79N±0.°01×7.°94W±0.°01, h17km±8km, n126, σ1§47/259, 1C-7D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EVO	**Evora**	**0.27**	**193**	*e*Pg		**Pb**	**04 15 47.2**	**-0.3**
EVO				*e*Sg		**Sb**	**04 15 50.8**	**-1.0**
EVO				A		A	04 15 51.1	
	5µm,0.1s							
EVO	**Evora**	**0.27**	**193**	Pg		**Pb**	**04 15 47.2**	**-0.3**
EVO				Sg		**Sg**	**04 15 50.7**	**-0.2**
PESTR	**Estremoz**	**0.28**	**75**	*i* Pg		**Pb**	**04 15 48.2**	**+0.5**
PESTR				*e*Sg		**Sb**	**04 15 52.6**	**+0.5**
PESTR				A		A	04 15 53.7	
	407nm,0.5s							
PESTR	**Estremoz**	**0.28**	**75**	Pg		**Pb**	**04 15 48.2**	**+0.5**
PESTR				Sg		**Sb**	**04 15 52.4**	**+0.2**
PESTR	**Estremoz**	**0.28**	**75**	P		**Pb**	**04 15 48.7**	**+1.1**
PESTR	**Estremoz**	**0.28**	**75**	S		**Sb**	**04 15 52.9**	**+0.7**
PMTG	**Montargil**	**0.36**	**321**	*i* Pg		**Pb**	**04 15 48.8**	**-0.2**
PMTG				*e*Sg		**Sb**	**04 15 54.0**	**-0.3**
PMTG				A		A	04 15 54.8	
	756nm,0.1s							
PACT	**Alcochete**	**0.70**	**268**	*e*P		**Pb**	**04 15 55.5**	**+0.7**
PACT				*e*S		**Sb**	**04 16 05.1**	**+0.9**
PACT				A		A	04 16 05.5	
	409nm,0.2s							
PBEN	**Benavente**	**0.71**	**283**	*e*P		**Pb**	**04 15 55.9**	**+0.9**
PBEN				*e*S		**Sb**	**04 16 05.0**	**+0.5**
EBAD	**Badajoz**	**0.72**	**93**	Pg		**Pb**	**04 15 56.1**	**+0.8**
EBAD				Sg		**Sb**	**04 16 05.8**	**+0.9**
EBAD	**Badajoz**	**0.72**	**93**	*i* Pg		**Pb**	**04 15 56.0**	**+0.8**
EBAD				Sg		**Sb**	**04 16 05.9**	**+1.1**
PSANT	**Santarm**	**0.74**	**307**	*e*P		**Pb**	**04 15 56.0**	**+0.5**
PSANT				*e*S		**Sb**	**04 16 05.8**	**+0.4**
PMRV	**Marv??o**	**0.76**	**34**	*i* P		**Pb**	**04 15 56.9**	**+1.0**
PMRV				*e*S		**Sb**	**04 16 07.4**	**+1.4**
PMRV				A		A	04 16 09.7	
	379nm,0.3s							
PBEJ	**Beja**	**0.77**	**176**	*e*P		**Pg**	**04 15 55.6**	**-0.4**
PBEJ				*e*S		**Sb**	**04 16 05.9**	**-0.2**
PBEJ				A		A	04 16 08.2	
	473nm,0.2s							
PNCL	**Nicolau / Gran**	**0.82**	**215**	*e*P		**Pb**	**04 15 56.9**	**0.0**
PNCL				*e*S		**Sb**	**04 16 08.0**	**+0.2**
PNCL				A		A	04 16 09.8	
	252nm,0.4s							
PVFX	**Vila Franca de**	**0.84**	**281**	*e*P		**Pb**	**04 15 57.9**	**+0.7**
PVFX				*e*S		**Sb**	**04 16 09.3**	**+1.2**
PVFX				A		A	04 16 10.4	
	753nm,0.5s							
INMG	**Instituto de M**	**0.93**	**269**	*e*P		**Pn**	**04 16 02.0**	**+2.6**
INMG				*e*S		**Sn**	**04 16 12.4**	**+0.1**
INMG				A		A	04 16 13.6	
	416nm,0.7s							
PBAR	**Barrancos**	**0.94**	**131**	*e*P		**Pb**	**04 15 59.1**	**+0.2**
PBAR				*e*S		**Sb**	**04 16 12.1**	**+1.1**
PBAR				A		A	04 16 14.0	
	303nm,0.2s							

PBAR	**Barrancos**	**0.94**	**131**	Pn		**Pb**	**04 15 59.0**	**+0.2**
PBAR				Sn		**Sn**	**04 16 13.1**	**+0.6**
LIS	**Lisbon**	**0.95**	**266**	*e*P		**Pn**	**04 15 59.8**	**+0.1**
LIS				*e*S		**Sb**	**04 16 12.8**	**+1.3**
LIS				A		A	04 16 14.9	
	149nm,0.3s							
LIS	**Lisbon**	**0.95**	**266**	*e*P		**Pb**	**04 15 59.4**	**+0.3**
LIS				*e*S		**Sb**	**04 16 11.7**	**+0.3**
LIS				IAML			04 16 14.1	
	comp=E,384nm,0.5s							
MESJ	**Messejana**	**0.98**	**193**	*e*P		**Pg**	**04 15 59.5**	**-0.6**
MESJ				*e*S		**Sb**	**04 16 12.3**	**+0.1**
MESJ				A		A	04 16 15.6	
	comp=E,163nm,0.2s							
MESJ	**Messejana**	**0.98**	**193**	*e*P		**Pg**	**04 15 59.4**	**-0.6**
MESJ				*e*S		**Sg**	**04 16 12.0**	**-0.9**
MESJ				IAML			04 16 13.6	
	comp=N,311nm,0.1s							
PSBE	**So Bento**	**0.98**	**317**	*i* P		**Pn**	**04 16 00.5**	**+0.3**
PSBE				*e*S		**Sb**	**04 16 13.8**	**+1.4**
PSBE				A		A	04 16 15.6	
	comp=N,297nm,0.3s							
PMAFR	**Mafra**	**1.06**	**279**	*e*P		**Pg**	**04 16 01.0**	**-0.6**
PMAFR				*e*S		**Sb**	**04 16 15.4**	**+0.7**
PMAFR				A		A	04 16 17.2	
	comp=N,354nm,0.2s							
PMAFR	**Mafra**	**1.06**	**279**	Pn		**Pb**	**04 16 01.3**	**+0.2**
PMAFR				Sn		**Sb**	**04 16 15.3**	**+0.7**
PCBR	**Castelo Branco**	**1.10**	**19**	*e*P		**Pn**	**04 16 03.0**	**+1.2**
PCBR				*e*S		**Sn**	**04 16 17.7**	**+1.0**
PCBR				A		A	04 16 18.1	
	comp=N,417nm,0.4s							
PCDRA	**Caldas da Rain**	**1.12**	**304**	*e*P		**Pn**	**04 16 03.0**	**+1.0**
PCDRA				*e*S		**Sn**	**04 16 18.4**	**+1.4**
PCDRA				A		A	04 16 19.6	
	comp=N,953nm,0.2s							
PCVE	**Castro Verde**	**1.16**	**184**	*e*P		**Pg**	**04 16 02.9**	**-0.6**
PCVE				*e*S		**Sn**	**04 16 18.5**	**+0.4**
PCVE				A		A	04 16 22.9	
	comp=N,195nm,0.7s							
PCVE	**Castro Verde**	**1.16**	**184**	Pn		**Pg**	**04 16 02.8**	**-0.6**
PCVE				Sn		**Sb**	**04 16 17.4**	**-0.1**
PCASC	**Cascais**	**1.21**	**269**	*e*S		**Sg**	**04 16 19.8**	**-0.5**
EGRO	**El Granado**	**1.31**	**164**	Pn		**Pg**	**04 16 05.9**	**-0.3**
EGRO				Sn		**Sn**	**04 16 22.2**	**+0.6**
EGRO	**El Granado**	**1.31**	**164**	Pn		**Pn**	**04 16 05.1**	**+0.5**
EGRO				Pg		**Pg**	**04 16 05.9**	**-0.3**
EGRO				Sg		**Sg**	**04 16 23.0**	**-0.3**
EGRO				*i* Vmb_Lg			04 16 27.0	
PCAS	**Casmilo, Conde**	**1.33**	**341**	*e*P		**Pg**	**04 16 06.6**	**-0.1**
PCAS				*e*S		**Sg**	**04 16 24.6**	**+0.5**
PCAS				A		A	04 16 26.4	
	comp=N,190nm,0.8s							
PTEO	**Sao Teotonio**	**1.39**	**207**	*e*P		**Pg**	**04 16 07.2**	**-0.7**
PTEO				*e*S		**Sb**	**04 16 24.1**	**0.0**
PTEO				A		A	04 16 27.3	
	comp=N,230nm,0.3s							
PVAQ	**Vaqueiros**	**1.40**	**173**	*e*Pn		**Pn**	**04 16 06.3**	**+0.5**
PVAQ	**Vaqueiros**	**1.40**	**173**	*e*Pg		**Pg**	**04 16 07.5**	**-0.5**
PVAQ				*e*Sg		**Sg**	**04 16 25.5**	**-0.7**
PVAQ	**Vaqueiros**	**1.40**	**173**	Pn		**Pg**	**04 16 07.6**	**-0.5**
PVAQ				Sn		**Sg**	**04 16 25.2**	**-1.0**
PVAQ	**Vaqueiros**	**1.40**	**173**	P		**Pg**	**04 16 07.8**	**-0.2**
PVAQ	**Vaqueiros**	**1.40**	**173**	S		**Sg**	**04 16 25.4**	**-0.8**
EMIN	**Mina Concepcio**	**1.43**	**135**	Pn		**Pb**	**04 16 07.5**	**+0.2**
EMIN				Sn		**Sg**	**04 16 26.6**	**-0.5**
EMIN	**Mina Concepcio**	**1.43**	**135**	Pn		**Pn**	**04 16 06.9**	**+0.7**
EMIN				Pg		**Pb**	**04 16 07.6**	**+0.4**
EMIN				Sg		**Sg**	**04 16 27.0**	**-0.2**
EMIN				*i* Vmb_Lg			04 16 29.9	
COI	**Coimbra**	**1.46**	**346**	*e*Pn		**Pg**	**04 16 08.8**	**-0.4**
COI				*e*Sg		**Sg**	**04 16 28.2**	**0.0**
COI				A		A	04 16 32.2	
	comp=N,173nm,0.2s							
PBDV	**Barranco-do-Ve**	**1.55**	**180**	*e*Pn		**Pn**	**04 16 08.3**	**+0.4**
PBDV	**Barranco-do-Ve**	**1.55**	**180**	*e*Pg		**Pg**	**04 16 10.1**	**-0.7**
PBDV				*e*Sg		**Sb**	**04 16 29.3**	**+0.7**
PBDV				A		A	04 16 35.2	
	comp=N,199nm,0.4s							
PBDV	**Barranco-do-Ve**	**1.55**	**180**	Pn		**Pn**	**04 16 08.3**	**+0.4**
PBDV				Sn		**Sb**	**04 16 28.7**	**+0.1**
MORF	**Marmelete**	**1.59**	**201**	*e*Pn		**Pn**	**04 16 08.4**	**-0.1**
MORF				*e*Sg		**Sb**	**04 16 30.4**	**+0.5**
MORF				A		A	04 16 33.6	
	comp=N,156nm,0.1s							
MORF	**Marmelete**	**1.59**	**201**	*e*P		**Pn**	**04 16 08.3**	**-0.1**
MORF				*e*S		**Sn**	**04 16 28.0**	**-0.7**
MORF				IAML			04 16 31.7	
	comp=E,174nm,0.1s							
PALJ	**Aljezur**	**1.62**	**205**	*e*Sg		**Sb**	**04 16 31.6**	**+0.9**
MTE	**Manteigas**	**1.63**	**11**	*e*Pn		**Pg**	**04 16 12.2**	**-0.3**
MTE	**Manteigas**	**1.63**	**11**	*e*Pg		**Pg**	**04 16 16.1**	**+3.6**
MTE				*e*Sg		**Sg**	**04 16 33.5**	**-0.2**
MTE				A		A	04 16 37.7	
	comp=E,145nm,0.7s							
PTAV	**Tavira**	**1.68**	**172**	*e*Sg		**Sg**	**04 16 35.2**	**0.0**
PALBU	**Albufeira**	**1.71**	**188**	*e*Sg		**Sg**	**04 16 34.8**	**-1.4**
PPOR	**Portimao**	**1.72**	**196**	*e*Sg		**Sg**	**04 16 35.0**	**-1.6**
PFARO	**Faro**	**1.77**	**180**	*e*Pn		**Pg**	**04 16 14.6**	**-0.4**
PFARO				*e*Sn		**Sg**	**04 16 36.5**	**-1.4**
PFARO				*e*Sg		**Sb**	**04 16 38.9**	**+4.1**
PLAGO	**Lagos**	**1.80**	**200**	*e*Sn		**Sn**	**04 16 33.6**	**-0.1**
PLAGO				*e*Sg		**Sg**	**04 16 39.0**	**+0.1**
PFVI	**Vila Bisbo**	**1.80**	**203**	*e*Pn		**Pn**	**04 16 11.6**	**+0.2**
PFVI				*e*Sn		**Sn**	**04 16 33.1**	**-0.7**
PFVI				*e*Sg		**Sg**	**04 16 37.9**	**-1.2**
PFVI				A		A	04 16 39.8	
	comp=E,122nm,0.2s							
PFVI	**Vila Bisbo**	**1.80**	**203**	Pn		**Pn**	**04 16 11.3**	**-0.1**
PFVI	**Vila Bisbo**	**1.80**	**203**	P		**Pn**	**04 16 11.6**	**+0.2**
PFVI	**Vila Bisbo**	**1.80**	**203**	S		**Sb**	**04 16 35.5**	**-0.4**
EPLA	**Plasencia**	**1.92**	**48**	Pn		**Pn**	**04 16 13.8**	**+0.8**
EPLA				Pg		**Pb**	**04 16 16.7**	**+1.0**
EPLA				Sn		**Sn**	**04 16 37.9**	**+1.1**
EPLA				Sg		**Sb**	**04 16 41.2**	**+2.0**
EPLA				*i* Vmb_Lg			04 16 44.9	
PVIS	**Viseu**	**1.92**	**1**	*e*Pn		**Pn**	**04 16 14.2**	**+1.1**
PVIS	**Viseu**	**1.92**	**1**	*e*Pg		**Pg**	**04 16 17.2**	**-0.7**
PVIS				*e*Sn		**Sn**	**04 16 37.5**	**+0.6**
PVIS				*e*Sg		**Sg**	**04 16 41.8**	**-1.1**
PVIS				A		A	04 16 45.9	
	comp=E,116nm,0.3s							
ECAB	**El Cabril**	**2.10**	**109**	Pn		**Pn**	**04 16 17.4**	**+1.8**
ECAB	**El Cabril**	**2.10**	**109**	Pn		**Pn**	**04 16 16.7**	**+1

EADA					Sg		Sg	04 17 07.2	-0.9
EADA					*i* Vmb_Lg			04 17 12.9	
EJUZ	**Juzbado, Salam**	**2.78**	**34**		Pn		**Pn**	**04 16 25.9**	**+1.1**
EJUZ					Sn		**Sn**	**04 16 59.2**	**+1.2**
EJUZ					Sg		**Sg**	**04 17 08.4**	**-2.0**
PAB	**San Pablo**	**2.89**	**74**		Pn		**Pn**	**04 16 26.6**	**+0.2**
PAB					Sn		**Sn**	**04 17 01.5**	**+0.8**
PAB					Sg		**Sg**	**04 17 10.8**	**-3.1**
PAB					*i* Vmb_Lg			04 17 15.2	
PCAB	**Cabril**	**2.91**	**359**		*e*Pn		**Pn**	**04 16 27.9**	**+1.2**
PCAB					*e*Sn		**Sn**	**04 17 01.2**	**-0.2**
PCAB					*e*Sg		**Sg**	**04 17 13.4**	**-1.3**
PCAB					A		A	04 17 15.9	
	comp=E,52nm,0.4s								
EJIF	**Jimena Fronter**	**3.05**	**139**		Pn		**Pn**	**04 16 29.1**	**+0.6**
EJIF					Pg		**Pg**	**04 16 38.1**	**-1.4**
EJIF					Sn		**Sn**	**04 17 06.0**	**+1.3**
EJIF					Sg		**Sg**	**04 17 20.0**	**+1.0**
ELOB	**Lobios**	**3.07**	**358**		Pn		**Pn**	**04 16 29.5**	**+0.6**
ELOB					Sn		**Sn**	**04 17 03.8**	**-1.5**
ELOB					Sg		**Sg**	**04 17 17.7**	**-2.0**
ELOB					*i* Vmb_Lg			04 17 21.6	
PBRG	**Braganca**	**3.14**	**17**		*e*Pn		**Pn**	**04 16 31.1**	**+1.2**
PBRG					*e*Sn		**Sn**	**04 17 06.3**	**-0.8**
PBRG					*e*Sg		**Sg**	**04 17 19.2**	**-2.8**
PBRG					A		A	04 17 26.8	
	comp=E,32nm,0.5s								
PGAV	**Gavieira, Arco**	**3.18**	**355**		*e*Pn		**Pn**	**04 16 31.0**	**+0.6**
PGAV					*e*Sn		**Sn**	**04 17 06.8**	**-1.2**
PGAV					*e*Sg		**Sg**	**04 17 21.4**	**-1.8**
PGAV					A		A	04 17 28.6	
	comp=E,29nm,0.4s								
ESDC	**Sonseca Array**	**3.21**	**73**		Pn		**Pn**	**04 16 31.3**	**+0.5**
ESDC					Sn		**Sn**	**04 17 08.6**	**-0.1**
ESDC					Sg		**Sg**	**04 17 21.3**	**-2.8**
ESDC					*i* Vmb_Lg			04 17 25.5	
ECAL	**Calabor**	**3.27**	**16**		Pn		**Pn**	**04 16 32.6**	**+0.9**
ECAL					Sn		**Sn**	**04 17 11.4**	**+1.0**
ECAL	**Calabor**	**3.27**	**16**		Pn		**Pn**	**04 16 33.1**	**+1.4**
ECAL					Sn		**Sn**	**04 17 10.0**	**-0.3**
ECAL					Sg		**Sb**	**04 17 21.8**	**+3.4**
ECAL					*i* Vmb_Lg			04 17 30.0	
EMIJ	**Mijas**	**3.35**	**131**		Pn		**Pn**	**04 16 34.2**	**+1.5**
EMIJ	**Mijas**	**3.35**	**131**		Pn		**Pn**	**04 16 34.8**	**+2.0**
EMIJ					Sn		**Sn**	**04 17 13.1**	**+0.9**
EMIJ					Sg		**Sg**	**04 17 27.7**	**-1.1**
EMIJ					*i* Vmb_Lg			04 17 38.0	
EZAM	**Zamans**	**3.40**	**350**		Pn		**Pn**	**04 16 34.4**	**+1.0**
EZAM					Sn		**Sn**	**04 17 11.6**	**-1.8**
EZAM					Sg		**Sg**	**04 17 26.7**	**-3.6**
EZAM					*i* Vmb_Lg			04 17 30.8	
GUD	**Guadarrama**	**3.45**	**56**		Pn		**Pn**	**04 16 35.0**	**+0.8**
GUD					Sn		**Sn**	**04 17 15.5**	**+0.7**
GUD					Sg		**Sg**	**04 17 28.4**	**-3.6**
GUD					*i* Vmb_Lg			04 17 35.8	
EGOR	**Sierra Gorda,**	**3.46**	**118**		Pn		**Pn**	**04 16 35.7**	**+1.4**
EGOR					Pg		**Pb**	**04 16 43.3**	**+1.4**
EGOR					Sn		**Sn**	**04 17 17.9**	**+2.9**
EGOR					Sg		**Sg**	**04 17 30.4**	**-1.8**
EGOR					*i* Vmb_Lg			04 17 31.1	
ELGU	**Los Guajares,**	**3.92**	**118**		Pn		**Pn**	**04 16 43.1**	**+2.6**
ELGU	**Los Guajares,**	**3.92**	**118**		Pn		**Pn**	**04 16 42.0**	**+1.4**
ELGU					Sn		**Sn**	**04 17 27.5**	**+1.4**
ELGU					Sg		**Sg**	**04 17 44.9**	**-1.9**
ELGU					*i* Vmb_Lg			04 17 59.0	
UCM	**Universidad Co**	**3.93**	**66**		Pn		**Pn**	**04 16 41.5**	**+0.8**
UCM					Sn		**Sn**	**04 17 26.7**	**+0.3**
EQES	**Quesada**	**3.95**	**103**		Pn		**Pn**	**04 16 41.7**	**+0.7**
EQES					Sn		**Sn**	**04 17 26.5**	**-0.6**
EQES					Sg		**Sg**	**04 17 45.7**	**-2.3**
EQES					*i* Vmb_Lg			04 17 56.1	
EAGO	**Agolada(Pontev**	**4.01**	**358**		Pn		**Pn**	**04 16 42.4**	**+0.7**
EAGO					Sn		**Sn**	**04 17 25.4**	**-2.9**
EAGO					Sg		**Sg**	**04 17 45.6**	**-4.1**
EAGO					*i* Vmb_Lg			04 17 51.8	
EMAZ	**Mazaricos**	**4.23**	**350**		Pn		**Pn**	**04 16 45.3**	**+0.6**
EMAZ					Sn		**Sn**	**04 17 30.8**	**-2.9**
EMAZ					Sg		**Sb**	**04 17 51.4**	**+5.7**
EMAZ					*i* Vmb_Lg			04 17 57.9	
EBER	**Berja**	**4.42**	**114**		Pn		**Pn**	**04 16 49.2**	**+2.1**
EBER	**Berja**	**4.42**	**114**		Pn		**Pn**	**04 16 49.6**	**+2.1**
EBER					Sn		**Sn**	**04 17 38.8**	**0.0**
EBER					Sg		**Sg**	**04 17 59.9**	**-3.1**
EBER					*i* Vmb_Lg			04 18 10.8	
EPON	**Pontenova**	**4.57**	**7**		Pn		**Pn**	**04 16 49.8**	**+0.4**
EPON					Sn		**Sn**	**04 17 41.5**	**-0.6**
EPON					Sg		**Sg**	**04 18 04.4**	**-3.3**
EPON					*i* Vmb_Lg			04 18 09.7	
EARI	**Arriondas**	**4.95**	**24**		Pn		**Pn**	**04 16 56.9**	**+2.1**
EARI					Sn		**Sn**	**04 17 49.9**	**-1.7**
EARI					Sg		**Sg**	**04 18 16.3**	**-3.7**
ETOR	**Torete**	**4.96**	**64**		Pn		**Pn**	**04 16 55.5**	**+0.6**
ETOR					Sn		**Sn**	**04 17 49.1**	**-2.8**
ETOR					Sg		**Sg**	**04 18 15.7**	**-4.5**
ETOR					*i* Vmb_Lg			04 18 31.1	
EZAR	**Zarzadilla de**	**4.99**	**99**		Pn		**Pn**	**04 16 55.9**	**+0.6**
EZAR					Sn		**Sn**	**04 17 52.0**	**-0.7**
EZAR					Sg		**Sg**	**04 18 18.7**	**-2.6**
EZAR					*i* Vmb_Lg			04 18 31.3	
ETOB	**Tobarra**	**5.00**	**90**		Pn		**Pn**	**04 16 54.8**	**-0.6**
ETOB	**Tobarra**	**5.00**	**90**		Pn		**Pn**	**04 16 55.9**	**+0.5**
ETOB					Sn		**Sn**	**04 17 51.6**	**-1.2**
ETOB					Sg		**Sg**	**04 18 19.3**	**-2.2**
ETOB					*i* Vmb_Lg			04 18 27.7	
AKLM	**AKL**	**5.38**	**141**		P		**Pn**	**04 17 03.4**	**+2.6**
AKLM	**AKL**	**5.38**	**141**		S		**Sn**	**04 18 01.6**	**-0.8**
ZHG	**ZHG**	**5.44**	**169**		P		**Pn**	**04 17 03.0**	**+1.5**
ECHE	**Chera**	**5.47**	**79**		Pn		**Pn**	**04 17 01.4**	**-0.5**
ECHE	**Chera**	**5.47**	**79**		Pn		**Pn**	**04 17 02.3**	**+0.4**
ECHE					Sn		**Sn**	**04 18 03.1**	**-1.4**
ECHE					Sg		**Sg**	**04 18 33.1**	**-3.6**
ECHE					*i* Vmb_Lg			04 18 44.4	
E0901	**Celadas (Terue**	**5.52**	**70**		Pn		**Pn**	**04 17 04.1**	**+1.5**
E0901					Sn		**Sn**	**04 18 05.2**	**-0.5**
E0901					Sg		**Sg**	**04 18 34.2**	**-4.0**
E0901					*i* Vmb_Lg			04 18 46.9	
ELAN	**Lanestosa**	**5.59**	**36**		Pn		**Pn**	**04 17 03.5**	**0.0**
ELAN					Sn		**Sn**	**04 18 05.9**	**-1.4**
ELAN					Sg		**Sg**	**04 18 37.7**	**-2.7**
IFR	**Ifrane**	**5.74**	**156**		Pn		**Pn**	**04 17 05.4**	**-0.2**
EMOS	**Mosqueruela**	**5.97**	**72**		Pn		**Pn**	**04 17 10.0**	**+1.1**
EMOS					Sn		**Sn**	**04 18 14.6**	**-2.4**
SRHM	**Skhour des Reh**	**6.31**	**180**		P		**Pn**	**04 17 14.5**	**+1.1**
MDT	**Midelt**	**6.55**	**155**		P		**Pn**	**04 17 17.1**	**+0.3**
SJPF	**Ste Jean**	**6.66**	**48**		*e*Pn		**Pn**	**04 17 19.1**	**+0.9**
SJPF					*e*Sn		**Sn**	**04 18 30.9**	**-2.9**
	comp=E,1.2nm,0.4s								
SJPF					*e*Sg		**Sg**	**04 19 11.2**	**-3.6**
	comp=E,7.6nm,0.8s								
ETSF	**Etsaut**	**6.93**	**51**		*e*Pn		**Pn**	**04 17 23.1**	**+1.1**
ETSF					*e*Sn		**Sn**	**04 18 37.4**	**-3.1**
	comp=E,0.8nm,0.3s								
EPF	**Esparros**	**7.56**	**53**		*e*Pn		**Pn**	**04 17 31.3**	**+0.7**
EPF					*e*Sn		**Sn**	**04 18 52.7**	**-3.2**
	comp=E,8.4nm,0.8s								
EPF					*e*Sg			04 19 39.3	
	comp=E,1.2nm,0.3s								
TIO	**Tiouine**	**7.87**	**176**		Pn		**Pn**	**04 17 34.8**	**-0.1**
OUZM	**OUZ**	**7.92**	**173**		P		**Pn**	**04 17 37.1**	**+1.4**
LFF	**La Frestale**	**8.92**	**44**		*e*Pn		**Pn**	**04 17 48.8**	**-0.3**
RJF	**Les Rejaudoux**	**9.57**	**44**		*e*Pn		**Pn**	**04 17 57.6**	**-0.5**
CAF	**Calviac**	**9.65**	**47**		*e*Pn		**Pn**	**04 17 55.5**	**-0.7**
GRR	**Gorron**	**10.87**	**26**		*e*Pn		**Pn**	**04 18 16.4**	**+0.6**

*IDC **01** 04:18:28.5±0.5,56°.93S×141°.08W,h0km,mb4.8/12, mbtmp4.8/12,MS4.8/46,Error ellipse: s-maj=19.9km s-min=15.3km az=10.0*

*MOS **01** 04:18:29.8±1.6,57°.01S×140°.75W,h10km,mb5.5/14, Error ellipse: s-maj=19.1km s-min=16.9km az=82.2*

*NEIC **01** 04:18:30.6±1.8,56°.9S±0°.1×140°.8W±0°.2,h10km±1km, mb5.4/74,Ms_20 5.3/113,Mwb5.5/14,Mww5.6/13,Error ellipse: s-maj=20.9km s-min=16.9km az=195.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; M_{rr}0.04; $M_{\theta\theta}$1.95; $M_{r\theta}$-1.99; $M_{r\phi}$-0.24; $M_{\theta\phi}$1.67; $M_{\theta r}$-0.54; Fault plane solution: M_o2.64000×10¹⁷ NP1: ϕ_s204.84000°,δ89.93000°,λ167.14000°. NP2: ϕ_s294.86000°,δ77.14000°,λ0.08000°. Principal axes: T 2.6262, Plg9.0000°, Azm159.0000°; N 0.0368, Plg77.0000°, Azm25.0000°; P -2.6630, Plg9.0000°, Azm251.0000°;*

*NEIC **01** 04:18:31.4,57°.05S×140°.80W,h10km*

*NEIC **01** 04:18:31.4,57°.00S×140°.80W,h26km*

*NEIC **01** 04:18:31.4,57°.00S×140°.80W,h26km,Moment Tensor Solution. Duration: ≥9 Moment tensor: Scale 10¹⁷Nm; M_{rr}-0.55; $M_{\theta\theta}$2.86; $M_{r\theta}$-2.31; $M_{r\phi}$-0.93; $M_{\theta\phi}$1.64; $M_{\theta r}$0.52; Fault plane solution: M_o3.25000×10¹⁷ NP1: ϕ_s117.62000°,δ85.30000°,λ-20.30000°. NP2: ϕ_s209.35000°,δ69.77000°,λ-174.99000°. Principal axes: T 3.4781, Plg11.0000°, Azm165.0000°; N -0.4471, Plg69.0000°, Azm285.0000°; P -3.0310, Plg18.0000°, Azm72.0000°;*

*GCMT **01** 04:18:33.6±0.1,57°.15S±0°.01×140°.95W±0°.01,h23km, MW5.6/154,Moment Tensor Solution. s140,c231; s154,c287; Duration: 1ᵗ6 Moment tensor: Scale 10¹⁷ Nm; M_{rr}-0.52±.04; $M_{\theta\theta}$2.52±.04; $M_{\phi\phi}$-2.00±.03; $M_{r\theta}$0.01±.06; $M_{r\phi}$2.29±.03; $M_{\theta r}$-0.32±.06; Best double couple: M_o3.23800×10¹⁷ NP1:ϕ_s23.00000°,δ86.00000°, λ-174.00000°. NP2:ϕ_s292.00000°,δ84.00000°, λ-4.00000°. Principal axes: T 3.4810, Plg2.0000°, Azm157.0000°; N -0.4900, Plg83.0000°, Azm54.0000°; P -2.9950, Plg7.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 04:18:30.5±0.3,56°.91S±0°.09×140°.88W±0°.07,h10km, n349,σ1ᵗ50/251,mb5.3/55,MS5.2/104,21C-10D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**28.29**	**203**	P		**P**	**P**	**04 24 23.9**	**+0.4**
	0.5nm,0.8s,baz=58,slow=14,SNR=1.6								
VNDA				LR		LR	LR	04 32 11.2	
	comp=Z,2μm,22.0s,baz=80,slow=29								
MRZ	**Mangatainoka R**	**32.31**	**281**	P		**P**	**P**	**04 25 01.6**	**+2.2**
RPZ	**Rata Peaks**	**32.69**	**273**	P		**P**	**P**	**04 25 02.7**	**-0.1**
	20nm,0.8s,baz=97,slow=8.1,SNR=2.5								
RPZ				LR		LR	LR	04 34 52.2	
	comp=Z,3μm,21.7s,baz=128,slow=30								
	20nm,0.8s								
THZ	**Tophouse**	**32.99**	**277**	P		**P**	**P**	**04 25 06.5**	**+1.1**
URZ	**Urewera**	**33.23**	**286**	LR		LR	LR	04 35 29.9	
	comp=Z,2μm,21.6s,baz=198,slow=31								
QSPA	**South Pole Qui**	**33.25**	**180**	P		**P**	**P**	**04 25 08.6**	**+1.0**
QSPA	**South Pole Qui**	**33.25**	**180**	P		**P**	**P**	**04 25 08.7**	**+1.0**
	38nm,1.1s,baz=71,slow=3.2,SNR=58								
QSPA				LR		LR	LR	04 36 01.6	
	comp=Z,4μm,21.2s,baz=70,slow=32								
	38nm,1.1s								
PMSA	**Palmer Station**	**36.00**	**135**	LR		LR	LR	04 36 13.4	
	comp=Z,2μm,20.1s,baz=240,slow=30								
RPN	**Rapa Nui**	**37.26**	**50**	LR		LR	LR	04 37 44.2	
	comp=Z,1μm,19.5s,baz=207,slow=31								
RAO	**Raoul Island**	**37.90**	**301**	LR		LR	LR	04 37 12.6	
	comp=Z,798nm,21.7s,baz=142,slow=30								
RAR	**Rarotonga**	**38.27**	**331**	LR		LR	LR	04 37 12.7	
	comp=Z,2μm,19.4s,baz=169,slow=29								
BELA	**Belgrano 2**	**38.30**	**161**	P		**P**	**P**	**04 25 50.8**	**+0.2**
BELA						IAmb	IAmb	04 25 52.4	
	comp=Z,99nm,1.2s								
PPT	**Papeete**	**39.81**	**347**	P		**P**	**P**	**04 26 04.1**	**+0.4**
	comp=Z,27nm,0.9s,baz=148,slow=15,SNR=2.6								
PPT				LR		LR	LR	04 38 10.3	
	comp=Z,2μm,18.9s,baz=190,slow=30								
	comp=Z,27nm,0.9s								
COYC	**Coyhaique**	**42.74**	**105**	P		**P**	**P**	**04 26 27.8**	**+0.3**
COYC						IAmb	IAmb	04 26 30.0	
	comp=Z,105nm,1.5s								
AY01	**Puyuhuapi**	**43.20**	**104**	P		**P**	**P**	**04 26 32.0**	**+0.7**
LL02	**Futaleuf**	**44.46**	**103**	P		**P**	**P**	**04 26 40.7**	**-0.7**
EFI	**East Falkland**	**45.82**	**121**	*d*	iP	**P**	**P**	**04 26 52.0**	**-0.1**
EFI					pmax	pmax			
	comp=Z,156nm,1.5s								
PLCA	**Paso Flores**	**46.86**	**101**	P		**P**	**P**	**04 27 01.6**	**+1.1**
PLCA						IAmb	IAmb	04 27 05.5	
	comp=Z,78nm,1.7s								
PLCA	**Paso Flores**	**46.86**	**101**	*e*P		**P**	**P**	**04 27 01.7**	**+1.1**
PLCA	**Paso Flores**	**46.86**	**101**	P		**P**	**P**	**04 26 59.8**	**-0.7**
	comp=Z,13nm,1.3s,baz=238,slow=9.6,SNR=7.7								
	comp=Z,13nm,1.3s								
GO06	**Curarrehue**	**47.17**	**99**	P		**P**	**P**	**04 27 04.0**	**+1.0**
GO06						IAmb	IAmb	04 27 07.8	
	comp=Z,46nm,1.6s								
H03S2	**Juan Fernandez**	**47.30**	**88**	T		T	T	05 18 10.1	
	baz=219,slow=74,SNR=190								
H03S1	**Juan Fernandez**	**47.31**	**88**	T		T	T	05 18 11.4	
	baz=219,slow=74,SNR=204								
H03S3	**Juan Fernandez**	**47.32**	**88**	T		T	T	05 18 10.6	
	baz=219,slow=74,SNR=241								
H03N3	**Juan Fernandez**	**47.59**	**88**	T		T	T	05 18 23.4	
	baz=222,slow=72,SNR=829								
H03N2	**Juan Fernandez**	**47.60**	**88**	T		T	T	05 18 15.6	
	baz=222,slow=72,SNR=1065								
H03N1	**Juan Fernandez**	**47.61**	**88**	T		T	T	05 18 28.0	
	baz=222,slow=72,SNR=823								
VNA3	**Neumayer Olymp**	**47.61**	**161**	⇑P			**P**	**04 27 05.1**	**-0.8**
	comp=Z,20nm,0.8s								
VNA2	**Neumayer--Watz**	**48.28**	**161**	⇑P			**P**	**04 27 10.6**	**-0.5**
	comp=Z,28nm,0.6s,baz=211,slow=8.0								
VNA1	**Neumayer--Stat**	**48.36**	**161**	⇑P			**P**	**04 27 11.4**	**-0.3**
	comp=Z,46nm,1.1s								
SNAA	**Sanae**	**48.39**	**164**	P		**P**	**P**	**04 27 11.0**	**-1.0**
SNAA						IAmb	IAmb	04 27 12.1	
	comp=Z,32nm,1.0s								
SNAA	**Sanae**	**48.39**	**164**	⇑P			**P**	**04 27 11.5**	**-0.5**
	comp=Z,350nm,0.8s								
SNAA	**Sanae**	**48.39**	**164**	*c*	iP		**P**	**04 27 11.3**	**-0.7**
SNAA						pmax	pmax		
	comp=Z,42nm,1.1s								
SNAA	**Sanae**	**48.39**	**164**	P		**P**	**P**	**04 27 11.0**	**-1.0**
	comp=Z,15nm,0.8s,baz=211,slow=7.9,SNR=31								
SNAA				LR		LR	LR	04 47 01.6	
	comp=Z,1μm,18.1s,baz=228,slow=35								
	comp=Z,15nm,0.8s								
TROLL	**Troll, Antarti**	**48.87**	**166**	⇑P			**P**	**04 27 15.9**	**+0.1**
	comp=Z,771nm,0.8s								
TOO	**Toolangi**	**50.91**	**259**	P		**P**	**P**	**04 27 32.8**	**+1.2**
TOO						IAmb	IAmb	04 27 34.1	
	comp=Z,75nm,1.6s								
TOO	**Toolangi**	**50.91**	**259**	P		**P**	**P**	**04 27 32.8**	**+1.2**
TOO						pmax	pmax		
	comp=Z,75nm,1.6s								
ELIB	**Princess Elisa**	**50.97**	**174**	*d*	P		**P**	**04 27 31.9**	**+0.2**
	comp=Z,34nm,1.2s								
BO02	**Sierra Bellavi**	**51.05**	**96**	P		**P**	**P**	**04 27 32.2**	**-0.6**
BO02						IAmb	IAmb	04 27 37.9	
	comp=Z,88nm,1.5s								
BO01	**Tunca**	**51.19**	**95**	P		**P**	**P**	**04 27 34.9**	**+1.3**
BO01						IAmb	IAmb	04 27 38.4	
	comp=Z,75nm,1.4s								
ONTNC	**Ouen Toro**	**51.42**	**290**	P		**P**	**P**	**04 27 34.8**	**-0.7**
MT01	**Popeta**	**51.49**	**95**	P		**P**	**P**	**04 27 36.7**	**+0.7**
DZM	**Mont Dzumac**	**51.62**	**290**	P		**P**	**P**	**04 27 37.5**	**+0.4**
DZM						IAmb	IAmb	04 27 42.3	
	comp=Z,49nm,1.3s								
DZM	**Mont Dzumac**	**51.62**	**290**	LR		LR	LR	04 44 40.0	
	comp=Z,793nm,21.5s,baz=142,slow=30								
MT09	**Talagante**	**51.70**	**95**	P		**P**	**P**	**04 27 38.0**	**+0.3**
MT09						IAmb	IAmb	04 27 42.4	
	comp=Z,62nm,1.2s								
LMEL	**Las Melosas**	**52.08**	**95**	P		**P**	**P**	**04 27 40.5**	**0.0**
LMEL						IAmb	IAmb	04 27 47.8	
	comp=Z,43nm,1.1s								
MT13	**San Alfonso**	**52.11**	**95**	P		**P**	**P**	**04 27 40.5**	**-0.2**
MT05	**Renca**	**52.13**	**95**	P		**P**	**P**	**04 27 40.8**	**0.0**
MT03	**Universidad Ad**	**52.17**	**95**	P		**P**	**P**	**04 27 42.1**	**+0.9**
MT03						IAmb	IAmb	04 28 03.1	
	comp=Z,82nm,1.4s								
PEL	**Peldehue**	**52.34**	**94**	P		**P**	**P**	**04 27 41.6**	**-0.7**
PEL						IAmb	IAmb	04 27 47.3	
	comp=Z,71nm,1.1s								
PEL	**Peldehue**	**52.34**	**94**	P		**P**	**P**	**04 27 41.7**	**-0.7**
PEL						pmax	pmax		
	comp=Z,71nm,1.1s								
VA03	**San Esteban**	**52.70**	**94**	P		**P**	**P**	**04 27 44.8**	**-0.3**
VA03						IAmb	IAmb	04 27 49.8	
	comp=Z,74nm,1.2s								
ARMA	**Armidale**	**52.94**	**270**	P		**P**	**P**	**04 27 47.4**	**+0.5**
TRQA	**Tornquist**	**53.37**	**105**	P		**P**	**P**	**04 27 49.7**	**-0.2**
TRQA						IAmb	IAmb	04 27 51.5	
	comp=Z,73nm,1.6s								
TRQA	**Tornquist**	**53.37**	**105**	*e*P		**P**	**P**	**04 27 49.7**	**-0.2**
CO02	**Combarbal**	**53.65**	**93**	P		**P**	**P**	**04 27 51.8**	**-0.3**
KOUNC	**Koumac, New Ca**	**53.99**	**289**	P		**P**	**P**	**04 27 54.0**	**-0.6**
KOUNC						IAmb	IAmb	04 28 06.4	
	comp=Z,68nm,1.5s								
CO03	**El Pedregal**	**54.10**	**93**	P		**P**	**P**	**04 27 54.8**	**-0.6**
CO03						IAmb	IAmb	04 28 19.1	
	comp=Z,64nm,1.4s								
MAW	**Mawson**	**54.56**	**191**	LR		LR	LR	04 48 22.5	
	comp=Z,1μm,20.7s,baz=156,slow=33								
LCO	**Las Campanas**	**55.50**	**91**	P		**P**	**P**	**04 28 05.5**	**-0.3**
LCO						IAmb	IAmb	04 28 10.3	
	comp=Z,40nm,1.3s								
LCO	**Las Campanas**	**55.50**	**91**	*e*P		**P**	**P**	**04 28 05.5**	**-0.3**
AC05	**El Transito**	**55.87**	**91**	P		**P**	**P**	**04 28 07.8**	**-0.5**
AC05						IAmb	IAmb	04 28 12.9	
	comp=Z,58nm,1.1s								
GO03	**Copiap**	**56.86**	**90**	P		**P**	**P**	**04 28 14.9**	**-0.4**
GO03						IAmb	IAmb	04 28 19.2	
	comp=Z,25nm,1.1s								
EIDS	**Eidsvold**	**57.19**	**273**	P		**P**	**P**	**04 28 16.9**	**-0.7**
EIDS						IAmb	IAmb	04 28 18.3	
	comp=Z,50nm,1.1s								
STKA	**Stephens Creek**	**57.30**	**261**	P		**P**	**P**	**04 28 18.2**	**0.0**
STKA	**Stephens Creek**	**57.30**	**261**	*e*P		**P**	**P**	**04 28 19.0**	**+0.7**
STKA						pmax	pmax		
	comp=Z,14nm,1.1s								
STKA	**Stephens Creek**	**57.30**	**261**	P		**P**	**P**	**04 28 17.1**	**-1.1**
	comp=Z,12nm,0.9s,baz=118,slow=7.2,SNR=9.9								
STKA				LR		LR	LR	04 47 47.3	
	comp=Z,957nm,20.9s,baz=133,slow=31								
	comp=Z,12nm,0.9s								
AC01	**Pan de Azucar**	**57.80**	**89**	P		**P**	**P**	**04 28 21.7**	**-0.2**
AC01						IAmb	IAmb	04 28 26.2	
	comp=Z,51nm,1.2s								
PB14	**IPOC Station P**	**59.11**	**88**	P		**P**	**P**	**04 28 31.4**	**0.0**
GO02	**Mina Guanaco**	**59.13**	**89**	P		**P**	**P**	**04 28 31.8**	**+0.2**
PB05	**IPOC Station P**	**60.64**	**87**	P		**P**	**P**	**04 28 41.6**	**0.0**
PB15	**IPOC Station P**	**60.76**	**88**	P		**P**	**P**	**04 28 42.0**	**-0.6**
PB15						IAmb	IAmb	04 28 47.3	
	comp=Z,28nm,1.0s								
LVC	**Limon Verde**	**61.54**	**88**	P		**P**	**P**	**04 28 48.0**	**-0.1**
LVC	**Limon Verde**	**61.54**	**88**	*e*P		**P**	**P**	**04 28 48.8**	**+0.7**
LVC	**Limon Verde**	**61.54**	**88**	LR		LR	LR	04 49 01.6	
	comp=Z,328nm,18.4s,baz=234,slow=30								
PB07	**IPOC Station P**	**61.72**	**87**	P		**P**	**P**	**04 28 49.5**	**+0.4**
PB01	**IPOC Station P**	**62.48**	**87**	P		**P**	**P**	**04 28 53.3**	**-0.8**
PB01						IAmb	IAmb	04 28 59.0	
	comp=Z,25nm,1.1s								
TA01	**Diego Aracena**	**62.49**	**86**	P		**P**	**P**	**04 28 53.7**	**-0.3**
PLTB	**Pedras Altas**	**62.60**	**107**	P		**P**	**P**	**04 28 53.9**	**-0.8**
ITQB	**Itaqui**	**62.64**	**103**	P		**P**	**P**	**04 28 54.6**	**-0.3**
PB11	**IPOC Station P**	**63.43**	**86**	P		**P**	**P**	**04 29 00.1**	**-0.4**
PB11						IAmb	IAmb	04 29 05.1	
	comp=Z,33nm,1.1s								
CTA	**Charters Tower**	**64.06**	**273**	LR		LR	LR	04 52 40.4	
	comp=Z,407nm,19.5s,baz=128,slow=32								
CTAO	**Charters Tower**	**64.06**	**273**	P		**P**	**P**	**04 29 04.3**	**-0.2**
CTAO	**Charters Tower**	**64.06**	**273**	P		**P**	**P**	**04 29 04.3**	**-0.2**
CTAO						pmax	pmax		
	comp=Z,43nm,1.1s								
PB16	**IPOC Station P**	**64.67**	**85**	P		**P**	**P**	**04 29 08.6**	**-0.5**
PB16						IAmb	IAmb	04 29 14.6	
	comp=Z,61nm,1.7s								
CPUP	**Villa Florida**	**64.90**	**100**	P		**P**	**P**	**04 29 09.1**	**-0.8**
CPUP			

	comp=Z,7.5nm,0.6s							
MACA	**Manacapuru-AM**	**82.00**	**83**	P	**P**	**04 30 49.0**	**-1.7**
MACA				IAmb	IAmb	04 30 54.5	
	comp=Z,28nm,0.9s							
CMIG	**Matias Romero**	**83.09**	**44**	LR	LR	05 00 32.6	
	comp=Z,132nm,18.5s,baz=200,slow=30							
SOEI	**Soe**	**84.55**	**261**	IAMs_20	IAMs_20	05 06 29.9	
	comp=Z,1μm,20.0s							
LPIG	**La Paz**	**84.71**	**28**	LR	LR	05 00 00.9	
	comp=Z,321nm,20.6s,baz=204,slow=29							
SDV	**Santo Domingo**	**86.85**	**69**	LR	LR	05 04 55.3	
	comp=Z,326nm,20.4s,baz=182,slow=32							
TEIG	**Tepich**	**88.53**	**48**	LR	LR	05 03 39.6	
	comp=Z,2μm,20.0s,baz=10,slow=31							
SUR	**Sutherland**	**89.72**	**165**	LR	LR	05 09 24.3	
	comp=Z,587nm,18.3s,baz=180,slow=34							
KAPI	**Kappang**	**90.94**	**259**	LR	LR	05 08 32.4	
	comp=Z,844nm,21.8s,baz=150,slow=33							
ESJX	**Sierra Juarez**	**91.05**	**21**	P	**P**	**04 31 34.7**	**-0.1**
PCRV	**Puerto La Cruz**	**91.05**	**73**	LR	LR	05 06 54.3	
	comp=Z,861nm,20.1s,slow=32							
TXAR	**Lajitas Array**	**91.49**	**32**	P	**P**	**04 31 37.1**	**+0.3**
	comp=Z,0.5nm,1.1s,baz=219,slow=3.2,SNR=5.4							
TXAR				PKKP	**PKKPbc**	**04 49 02.3**	**+6.3**
	comp=Z,0.6nm,1.0s,baz=75,slow=3.8,SNR=4.6							
TXAR				LR	LR	05 04 03.0		
	comp=Z,170nm,20.5s,baz=202,slow=30							
	comp=Z,0.5nm,1.1s							
TUC	**Tucson**	**92.45**	**25**	P	**P**	**04 31 39.8**	**-1.3**
TUC				IAmb	IAmb	04 31 54.6		
	comp=Z,19nm,1.6s							
TUC	**Tucson**	**92.45**	**25**	P	**P**	**04 31 39.8**	**-1.3**
TUC				pmax	pmax			
	comp=Z,19nm,1.6s							
VHRN	**Van Horn**	**92.48**	**30**	P	**P**	**04 31 39.4**	**-2.0**
VHRN				IAmb	IAmb	04 31 54.1		
	comp=Z,20nm,1.6s							
PFO	**Pinyon Flats O**	**92.51**	**20**⇑	*e*P	P	04 31 46.3	+4.9	
PFO				pmax	pmax			
	comp=Z,12nm,1.5s							
PFO	**Pinyon Flats O**	**92.51**	**20**	LR	LR	05 03 56.4		
	comp=Z,743nm,19.3s,baz=196,slow=30							
SAND	**Sanderson**	**92.53**	**33**	P	**P**	**04 31 41.2**	**-0.3**
SAND				IAmb	IAmb	04 31 53.8		
	comp=Z,17nm,1.5s							
RCBR	**Riachuelo**	**93.25**	**106**	LR	LR	05 10 24.1		
	comp=Z,342nm,19.1s,baz=212,slow=33							
MDP	**Montagnes des**	**93.27**	**86**	LR	LR	05 08 40.7		
	comp=Z,212nm,18.3s,baz=181,slow=32							
BOSA	**Boshof**	**94.01**	**168**	LR	LR	05 10 00.4		
	comp=Z,636nm,20.8s,baz=182,slow=33							
LEM	**Lembang**	**95.80**	**248**	LR	LR	05 06 03.7		
	comp=Z,178nm,21.0s,baz=183,slow=30							
ANMO	**Albuquerque**	**96.03**	**28**⇓	*e*P	**P**	**04 31 58.4**	**+0.8**	
ANMO				pmax	pmax			
	comp=Z,7.0nm,1.8s							
ANMO	**Albuquerque**	**96.03**	**28**	LR	LR	05 07 42.1		
	comp=Z,332nm,19.0s,baz=294,slow=31							
NVAR	**Mina Array Bea**	**96.87**	**18**	LR	LR	05 06 52.7		
	comp=Z,678nm,19.8s,baz=194,slow=30							
SJG	**San Juan**	**96.94**	**68**	LR	LR	05 09 33.7		
	comp=Z,106nm,19.7s,baz=229,slow=32							
LBTB	**Lobatse**	**97.61**	**168**	LR	LR	05 11 34.9		
	comp=Z,481nm,21.4s,baz=179,slow=33							
DAV	**Davao City (W)**	**97.81**	**271**	LR	LR	05 15 25.1		
	comp=Z,136nm,19.5s,baz=147,slow=35							
FOMA	**Nahampoana Res**	**98.17**	**187**	IAMs_20	IAMs_20	05 08 53.4		
	comp=Z,956nm,20.0s							
WIN	**Windhoek**	**98.69**	**159**	IAMs_20	IAMs_20	05 10 54.1		
	comp=Z,1μm,20.0s							
YBH	**Yreka Blue Hor**	**99.46**	**14**	LR	LR	05 06 32.0		
	comp=Z,878nm,21.9s,baz=180,slow=29							
ELK	**Elko**	**99.66**	**19**	LR	LR	05 07 25.7		
	comp=Z,423nm,21.5s,baz=207,slow=30							
OK051	**EG350 and S346**	**100.22**	**35**	IAMs_20	IAMs_20	05 06 21.6		
	comp=Z,1μm,21.0s							
H10S3	**ASCENSION HYDR**	**101.01**	**126**	T	T	06 25 37.6		
	baz=13,slow=74,SNR=38							
H10S2	**ASCENSION HYDR**	**101.01**	**126**	T	T	06 25 26.1		
	baz=207,slow=74,SNR=17							
VOI	**Vohitsoka**	**101.23**	**187**	IAMs_20	IAMs_20	05 13 46.5		
	comp=Z,1μm,19.0s							
TSUM	**Tsumeb**	**102.06**	**159**	IAMs_20	IAMs_20	05 12 38.4		
	comp=Z,952nm,20.0s							
H10N3	**ASCENSION HYDR**	**102.07**	**125**	T	T	06 26 48.3		
	baz=206,slow=75,SNR=64							
H10N1	**ASCENSION HYDR**	**102.07**	**125**	T	T	06 27 02.7		
	baz=206,slow=75,SNR=79							
H10N2	**ASCENSION HYDR**	**102.08**	**125**	T	T	06 27 04.1		
	baz=206,slow=75,SNR=64							
MFID	**Camas Ranch**	**102.15**	**18**	IAMs_20	IAMs_20	05 08 39.6		
	comp=Z,1μm,22.0s							
HLID	**Hailey**	**102.54**	**19**	IAMs_20	IAMs_20	05 09 47.0		
	comp=Z,815nm,20.0s							
BW06	**Boulder Array**	**102.74**	**23**	IAMs_20	IAMs_20	05 10 48.2		
	comp=Z,875nm,20.0s							
MSO	**Missoula**	**105.78**	**19**	IAMs_20	IAMs_20	05 10 44.8		
	comp=Z,914nm,21.0s							
ECSD	**EROS Data Cent**	**106.93**	**32**	IAMs_20	IAMs_20	05 12 49.1		
	comp=Z,833nm,21.0s							
LSZ	**Lusaka**	**107.51**	**169**	IAMs_20	IAMs_20	05 21 19.8		
	comp=Z,1μm,20.0s							
V35K	**Ketchikan**	**112.13**	**6**	IAMs_20	IAMs_20	05 14 49.7		
	comp=Z,1μm,20.0s							
MAJO	**Matsushiro**	**115.21**	**298**⇑	*i* PKIKP	**PKiKP**	**04 37 14.3**	**+2.9**	
LONY	**Lake Ozonia**	**115.32**	**46**		**PKiKP**	**04 37 11.2**	**-0.1**	
QIZ	**Qiongzhong**	**116.25**	**265**	PKP	**PKiKP**	**04 37 13.5**	**-0.4**	
QIZ				PP	**PP**	**04 38 18.6**	**-1.1**	
QIZ				SS	SS	04 54 26.7	+3.5	
QIZ				LR	LR			
	comp=Z,650nm,35.3s							
QIZ				LR	LR			
	comp=Z,410nm,30.3s							
P32M	**Atlin**	**116.29**	**4**	IAMs_20	IAMs_20	05 17 19.7		
	comp=Z,766nm,20.0s							
O29M	**Mount Kennedy**	**116.88**	**1**	IAMs_20	IAMs_20	05 18 26.3		
	comp=Z,791nm,20.0s							
O30N	**Mendenhall**	**117.39**	**3**	IAMs_20	IAMs_20	05 16 21.9		
	comp=Z,783nm,20.0s							
GLB	**Gilahina Butte**	**118.03**	**358**	IAMs_20	IAMs_20	05 14 45.8		
	comp=Z,653nm,21.0s							
KLU	**Klutina**	**118.12**	**357**	IAMs_20	IAMs_20	05 24 02.3		
	comp=Z,820nm,19.0s							
GHO	**Glory Hole Cre**	**118.51**	**356**	IAMs_20	IAMs_20	05 13 39.4		
	comp=Z,696nm,22.0s							
M31M	**Drury Creek, Y**	**118.88**	**3**	IAMs_20	IAMs_20	05 20 03.2		
	comp=Z,890nm,20.0s							
M30M	**Minto, Yukon**	**119.19**	**2**	IAMs_20	IAMs_20	05 18 30.4		
	comp=Z,697nm,20.0s							
CUT	**Chulitna**	**119.20**	**355**	IAMs_20	IAMs_20	05 23 31.7		
	comp=Z,769nm,20.0s							
L29M	**L29M**	**119.70**	**1**	IAMs_20	IAMs_20	05 19 01.9		
	comp=Z,652nm,19.0s							
DHY	**Denali Highway**	**119.75**	**357**	IAMs_20	IAMs_20	05 25 46.3		
	comp=Z,729nm,18.0s							
RND	**Reindeer**	**120.14**	**356**	IAMs_20	IAMs_20	05 19 12.5		
	comp=Z,625nm,19.0s							
TRF	**Thorofare Moun**	**120.24**	**355**	IAMs_20	IAMs_20	05 17 54.3		
	comp=Z,674nm,21.0s							
RIDG	**Independent Ri**	**120.35**	**358**	IAMs_20	IAMs_20	05 23 51.2		
	comp=Z,703nm,19.0s							
PETK	**Petropavlovsk-**	**120.59**	**322**	PKP	**PKPdf**	**04 37 20.7**	**-0.4**	
	comp=Z,1.9nm,0.7s,baz=132,slow=4.1,SNR=2.0							
YKA	**Yellowknife Ar**	**120.80**	**14**	PKP	**PKiKP**	**04 37 21.5**	**+0.1**	
	comp=Z,0.1nm,0.7s,baz=169,slow=3.7,SNR=1.8							
YKA				PKKPbc	**PKKPab**	**04 47 22.9**	**-0.6**	
	comp=Z,0.5nm,0.8s,baz=9.1,slow=4.1,SNR=4.2							
J16K	**Anvik River**	**120.82**	**350**	IAMs_20	IAMs_20	05 24 32.7		
	comp=Z,606nm,20.0s							
HDA	**Harding Lake**	**121.08**	**357**	IAMs_20	IAMs_20	05 24 13.3		
	comp=Z,691nm,19.0s							
J26L	**Joseph Creek**	**121.10**	**359**	IAMs_20	IAMs_20	05 24 05.8		
	comp=Z,626nm,18.0s							
J20K	**Nowinta River**	**121.18**	**353**		**PKiKP**	**04 37 23.0**	**+1.0**	
J30M	**Hart River**	**121.20**	**2**	IAMs_20	IAMs_20	05 19 33.6		
	comp=Z,750nm,20.0s							
J25K	**Salcha River,**	**121.24**	**358**	IAMs_20	IAMs_20	05 25 26.6		
	comp=Z,789nm,18.0s							
CCB	**Clear Creek Bu**	**121.34**	**357**		**PKiKP**	**04 37 22.1**	**-0.2**	
EGAK	**Eagle**	**121.36**	**360**	IAMs_20	IAMs_20	05 25 13.7		
	comp=Z,601nm,18.0s							
I17K	**Unalakleet**	**121.42**	**350**	IAMs_20	IAMs_20	05 24 58.6		
	comp=Z,706nm,20.0s							
IL31		**121.44**	**357**	PKPdf	**PKPdf**	**04 37 21.6**	**-0.7**	
ILAR	**Eielson Array**	**121.44**	**357**	PKPdf	**PKiKP**	**04 37 22.4**	**-0.1**	
ILAR	**Eielson Array**	**121.44**	**357**	PKP	**PKPdf**	**04 37 21.7**	**-0.7**	
	comp=Z,6.1nm,1.0s,baz=239,slow=1.7,SNR=20							
COLA	**College**	**121.57**	**357**		**PKiKP**	**04 37 22.5**	**-0.2**	
COLA	**College**	**121.57**	**357**	IAMs_20	IAMs_20	05 19 47.4		
	comp=Z,682nm,21.0s							
COLA	**College**	**121.57**	**357**	PKIKP	**PKiKP**	**04 37 22.5**	**-0.2**	
NJ2	**Nanjing**	**121.64**	**281**	*e*PKP	**PKiKP**	**04 37 25.1**	**+1.1**	
CMAR	**Chiang Mai Arr**	**121.66**	**255**	PKP	**PKiKP**	**04 37 24.1**	**-0.4**	
	comp=Z,1.5nm,0.4s,baz=221,slow=0.8,SNR=1.6							
MDM	**Murphy Dome**	**121.67**	**356**		**PKiKP**	**04 37 22.7**	**-0.3**	
POKR	**Poker Flat Res**	**121.80**	**357**	IAMs_20	IAMs_20	05 27 01.4		
	comp=Z,653nm,18.0s							
MLY	**Manley**	**121.84**	**355**	IAMs_20	IAMs_20	05 22 51.6		
	comp=Z,583nm,20.0s							
I30M	**Mount Dempster**	**121.85**	**2**	IAMs_20	IAMs_20	05 20 30.8		
	comp=Z,700nm,20.0s							
I28M	**Miner Creek**	**122.03**	**0**	IAMs_20	IAMs_20	05 20 16.6		
	comp=Z,654nm,20.0s							
H24K	**Noodor Dome**	**122.54**	**357**	IAMs_20	IAMs_20	05 21 46.9		
	comp=Z,677nm,19.0s							
ANM	**Nome**	**122.58**	**348**		**PKiKP**	**04 37 26.5**	**+1.7**	
ANM				IAMs_20	IAMs_20	05 19 25.2		
	comp=Z,646nm,21.0s							
ANM	**Nome**	**122.58**	**348**	PKIKP	**PKiKP**	**04 37 26.5**	**+1.7**	
H29M	**Whitestone**	**122.82**	**1**		**PKPdf**	**04 37 24.3**	**-0.8**	
IMAR	**Indian Mountai**	**122.95**	**354**	PKPdf	**PKPdf**	**04 37 24.9**	**-0.4**	
EPYK	**Eagle Plains**	**123.00**	**2**		**PKPdf**	**04 37 24.7**	**-0.7**	
G16K	**Koyuk River**	**123.06**	**349**		**PKiKP**	**04 37 26.6**	**+0.9**	
G16K				IAMs_20	IAMs_20	05 31 12.8		
	comp=Z,568nm,19.0s							
G18K	**Tagagawik**	**123.21**	**351**		**PKiKP**	**04 37 25.8**	**-0.3**	
G19K	**Purcell Mounta**	**123.33**	**352**		**PKiKP**	**04 37 26.2**	**-0.1**	
G19K				IAMs_20	IAMs_20	05 20 14.1		
	comp=Z,815nm,21.0s							
G24K	**Hadweenzic Riv**	**123.39**	**357**	IAMs_20	IAMs_20	05 28 18.4		
	comp=Z,649nm,19.0s							
G21K	**Allakaket**	**123.47**	**354**	PKPdf	**PKiKP**	**04 37 27.3**	**+0.7**	
G23K	**Bananza Creek**	**123.49**	**356**		**PKPdf**	**04 37 26.1**	**-0.3**	
G31M	**Satah River**	**123.61**	**3**	IAMs_20	IAMs_20	05 20 47.2		
	comp=Z,819nm,20.0s							
G30M	**tAoh Zraii Nji**	**123.62**	**2**		**PKPdf**	**04 37 25.8**	**-0.8**	
G30M				IAMs_20	IAMs_20	05 22 07.5		
	comp=Z,788nm,20.0s							
F17K	**Baldwin Pennin**	**123.98**	**350**	IAMs_20	IAMs_20	05 24 49.1		
	comp=Z,652nm,20.0s							
BMAR	**Burnt Mountain**	**124.05**	**358**	PKPdf	**PKiKP**	**04 37 27.3**	**+0.4**	
F19K	**Shaleruckik Mo**	**124.07**	**352**		**PKiKP**	**04 37 28.9**	**+1.3**	
F19K				IAMs_20	IAMs_20	05 21 28.4		
	comp=Z,772nm,20.0s							
F20K	**Avaraart Lake**	**124.13**	**353**		**PKiKP**	**04 37 29.5**	**+1.7**	
F21K	**Alatna River**	**124.17**	**354**		**PKiKP**	**04 37 27.7**	**-0.3**	
F28M	**Old Crow**	**124.21**	**0**	PKPdf	**PKPdf**	**04 37 24.8**	**-2.9**	
F28M				IAMs_20	IAMs_20	05 22 06.0		
	comp=Z,718nm,20.0s							
F24K	**Squaw Lake**	**124.22**	**357**		**PKiKP**	**04 37 27.9**	**-0.1**	
E29M	**Blow River**	**125.00**	**1**		**PKPdf**	**04 37 26.2**	**-3.0**	
E29M				IAMs_20	IAMs_20	05 24 40.1		
	comp=Z,614nm,19.0s							
E28M	**Babbage River**	**125.20**	**1**		**PKPdf**	**04 37 26.0**	**-3.5**	
D19K	**Kuna River**	**125.73**	**352**		**PKiKP**	**04 37 31.1**	**+0.1**	
D19K				IAMs_20	IAMs_20	05 23 35.4		
	comp=Z,809nm,20.0s							
D22K	**Ayikyak River**	**125.78**	**355**		**PKiKP**	**04 37 31.4**	**+0.4**	
D27M	**Malcolm River**	**125.84**	**360**	IAMs_20	IAMs_20	05 26 44.3		
	comp=Z,638nm,19.0s							
C16K	**Lisburne Hills**	**126.16**	**349**	IAMs_20	IAMs_20	05 33 46.8		
	comp=Z,618nm,18.0s							
C19K	**Lookout Ridge**	**126.44**	**352**		**PKPdf**	**04 37 31.6**	**-0.3**	
LODK	**Lodwar**	**126.59**	**175**	IAMs_20	IAMs_20	05 27 54.3		
	comp=Z,743nm,20.0s							
PZH	**PanZhiHua**	**126.67**	**263**	PKP	**PKiKP**	**04 37 34.5**	**+0.2**	
CN2	**Changchun**	**127.02**	**295**	PKP	**PKiKP**	**04 37 35.8**	**+1.5**	
TNCH	**TengChong**	**127.24**	**259**	PKP	**PKPdf**	**04 37 33.5**	**-1.6**	
TORD	**Torodi Ar. Bea**	**127.83**	**131**	PKP	**PKPdf**	**04 37 34.8**	**-1.4**	
	comp=Z,1.6nm,1.0s,baz=200,slow=0.9,SNR=3.6							
KLR	**Kul'dur**	**127.94**	**304**⇓	*i* PKIKP	**PKiKP**	**04 37 38.8**	**+2.9**	
A36M	**Sachs Harbour**	**129.07**	**6**	PKPdf	**PKPdf**	**04 37 35.8**	**-1.0**	
SEY	**Seymchan**	**130.12**	**327**⇑	*e*PKIKP	**PKiKP**	**04 37 41.4**	**+1.6**	
BILL	**Bilibino**	**130.55**	**337**	*e*PKIKP	**PKiKP**	**04 37 43.9**	**+3.3**	
HEH	**HeiHe**	**130.66**	**302**	*e*PKP	**PKiKP**	**04 37 42.4**	**+1.1**	
HYB	**Hyderabad**	**130.79**	**233**	*e*Pdif	**Pdif**	**04 34 32.5**	**-0.1**	
HYB				eSKSac	**SKSac**	**04 44 52.0**	**+0.3**	
HHC	**Hu-ho-hao-te**	**132.09**	**283**	*e*PKP	**PKPdf**	**04 37 39.7**	**-4.0**	
ZEA	**Zeya**	**133.09**	**306**	*e*PKIKP	**PKiKP**	**04 37 45.8**	**-0.4**	
ULN	**Ulaanbaatar**	**139.19**	**287**⇓	*i* PKIKP	**PKiKP**	**04 38 01.6**	**+2.6**	
SONM	**Songino Array**	**139.52**	**287**	PKP	**PKPdf**	**04 37 56.1**	**-1.2**	
	comp=Z,0.2nm,0.3s,baz=100,slow=3.2,SNR=1.6							
TIXI	**Tiksi**	**142.54**	**329**		**PKPdf**	**04 38 01.7**	**-0.1**	
TIXI	**Tiksi**	**142.54**	**329**	PKIKP	**PKPdf**	**04 38 01.7**	**-0.1**	
ZAK	**Zakamensk**	**142.69**	**288**	*e*PKHKP	PKPpre	04 37 57.0		
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.3s							
PBAR	**Barrancos**	**144.50**	**102**	*e*PKP	**PKPdf**	**04 38 06.4**	**+0.1**	
PMTG	**Montargil**	**144.50**	**100**	*e*PKP	**PKPdf**	**04 38 05.1**	**-1.2**	
MOY	**Mondy**	**144.61**	**288**	*e*PKIKP	**PKPab**	**04 38 03.8**	**-1.1**	
MOY				pmax	pmax			
	comp=Z,60nm,2.1s							
PESTR	**Estremoz**	**144.70**	**100**	*e*PKP	**PKPdf**	**04 38 06.0**	**-0.7**	
COI	**Coimbra**	**145.21**	**98**	*e*PKP	**PKPdf**	**04 38 07.7**	**+0.2**	
PMRV	**Marv??o**	**145.21**	**100**	*e*PKP	**PKiKP**	**04 38 10.8**	**-0.6**	
PCBR	**Castelo Branco**	**145.46**	**99**	*e*PKP	**PKPab**	**04 38 08.2**	**0.0**	
MTE	**Manteigas**	**145.82**	**99**	*e*PKP	**PKiKP**	**04 38 13.7**	**+1.0**	
PVIS	**Viseu**	**145.85**	**98**	*e*PKP	**PKiKP**	**04 38 13.0**	**+0.2**	
RAYN	**Ar Rayn**	**146.33**	**191**	PKPdf	**PKPdf**	**04 38 10.0**	**0.0**	
RAYN	**Ar Rayn**	**146.33**	**191**	⇑PKP2	**PKPbc**	**04 38 10.8**	**-0.4**	
POLO	**Lamas de Olo**	**146.36**	**97**	*e*PKP	**PKPab**	**04 38 10.9**	**-0.8**	
SUMG	**Summit**	**146.39**	**32**	PKPdf	**PKPbc**	**04 38 10.0**	**-0.4**	
SUMG	**Summit**	**146.39**	**32**	PKP2	**PKPbc**	**04 38 10.0**	**-0.4**	
SUMG	**Summit**	**146.39**	**32**	*i* P	**PKiKP**	**04 38 12.0**	**-1.3**	
WMQ	**Urumqi**	**147.10**	**268**	*e*PKPbc	**PKPbc**	**04 38 11.7**	**-1.2**	
PBRG	**Braganca**	**147.23**	**98**	*e*PKP	**PKPbc**	**04 38 13.6**	**+0.4**	
ESDC	**Sonseca Array**	**147.23**	**103**	PKPbc	**PKPbc**	**04 38 12.2**	**-1.2**	
	comp=Z,3.6nm,1.0s,baz=245,slow=2.2,SNR=13							
CART	**Cartagena**	**147.25**	**109**	IAMs_20	IAMs_20	05 55 07.7		
	comp=Z,524nm,21.0s							
KBL	**Kabul**	**149.81**	**235**	PKPdf	**PKPdf**	**04 38 15.2**	**-0.4**	
KBL	**Kabul**	**149.81**	**235**	PKHKP	PKPpre	04 38 15.2		
DGZ	**Jazzator, Alta**	**150.78**	**277**⇓	*i* PKIKP	**PKiKP**	**04 38 23.3**	**+0.5**	
KEST	**Kesra**	**150.87**	**124**	PKPbc	**PKPbc**	**04 38 22.2**	**-0.4**	
	comp=Z,4.5nm,0.9s,baz=243,slow=4.5,SNR=2.9							
TARG	**Taragay, Kyrgy**	**151.04**	**255**	PKPdf	**PKPdf**	**04 38 17.2**	**-0.4**	
TARG	**Taragay, Kyrgy**	**151.04**	**255**	PKIKP	**PKPdf**	**04 38 17.2**	**-0.4**	
NRN	**Naryn**	**151.78**	**253**	PKPdf	**PKPdf**	**04 38 16.4**	**-2.2**	
NRN	**Naryn**	**151.78**	**253**	PKIKP	**PKPdf**	**04 38 16.4**	**-2.2**	
MK31	**Makanchi Array**	**151.93**	**268**⇓	*e*PKIKP	**PKPdf**	**04 38 20.6**	**+2.4**	
MKAR	**Makanchi Array**	**151.93**	**268**	PKPdf	**PKPdf**	**04 38 18.7**	**+0.5**	
MKAR	**Makanchi Array**	**151.93**	**268**	PKIKP	**PKPdf**	**04 38 18.7**	**+0.5**	
MKAR	**Makanchi Array**	**151.93**	**268**	PKPbc	**PKPbc**	**04 38 22.9**	**-1.9**	
	comp=Z,4.4nm,0.8s,baz=117,slow=2.3,SNR=23							
MAKZ	**Makanchi**	**152.12**	**267**	PKPdf	**PKPdf**	**04 38 19.2**	**+0.7**	
MAKZ	**Makanchi**	**152.12**	**267**	PKIKP	**PKPdf**	**04 38 19.2**	**+0.7**	
WDD	**Wied Dalam**	**153.21**	**131**	IAMs_20	IAMs_20	05 54 40.8		
	comp=Z,447nm,18.0s							
ARSB	**Arslanbob**	**153.27**	**249**		**PKPdf**	**04 38 22.4**	**+1.8**	
ARSB	**Arslanbob**	**153.27**	**249**	PKIKP	**PKPdf**	**04 38 22.4**	**+1.8**	
AAK	**Ala-Archa**	**153.43**	**253**		**PKPdf**	**04 38 21.2**	**+0.5**	
AAK	**Ala-Archa**	**153.43**	**253**	PKIKP	**PKPdf**	**04 38 21.3**	**+0.5**	
ZALV	**Zalesovo Beam**	**154.27**	**283**		**PKiKP**	**04 38 34.8**	**+5.2**	
ZALV	**Zalesovo Beam**	**154.27**	**283**	PKIKP	**PKiKP**	**04 38 34.8**	**+5.2**	
ZALV	**Zalesovo Beam**	**154.27**	**283**	PKPbc	**PKPbc**	**04 38 28.7**	**-0.8**	
	comp=Z,0.3nm,0.3s,baz=105,slow=2.1,SNR=2.3							
GHAJ	**Ghor Haditha**	**154.28**	**173**	IAMs_20	IAMs_20	05 44 17.2		
	comp=Z,597nm,21.0s							
NRIK	**Noril'sk**	**155.62**	**320**	PKPab	**PKPab**	**04 38 48.8**	**-0.3**	
	comp=Z,3.8nm,0.8s,baz=78,slow=4.8,SNR=7.4							
MMAI	**Mount Meron Ar**	**155.97**	**172**	PKPab	**PKPab**	**04 38 50.5**	**-1.1**	
	comp=Z,0.3nm,0.3s,baz=242,slow=3.1,SNR=1.7							
KARP	**Karpathos**	**157.16**	**154**		**PKPab**	**04 38 57.2**	**+0.7**	
BMRD	**Maredsous**	**158.74**	**93**	*d*PKP	**PKPab**	**04 39 02.6**	**-0.5**	
DAVA	**Damuels**	**159.77**	**106**	*e*PKP	**PKPdf**	**04 38 31.1**	**+2.4**	
	comp=Z,14nm,1.4s							
FETA	**Feichten**	**160.04**	**108**	*e*PKP	**PKPdf**	**04 38 29.2**	**+0.1**	
	comp=Z,12nm,2.0s							
RETA	**Reutte**	**160.36**	**107**	*e*PKP	**PKPdf**	**04 38 30.5**	**+1.2**	
	comp=Z,12nm,1.6s							
SQTA	**Sankt Quirin**	**160.42**	**108**	*e*PKP	**PKPdf**	**04 38 29.0**	**-0.5**	
	comp=Z,6.6nm,1.2s							
MOTA	**Moosalm**	**160.45**	**107**	*e*PKP	**PKPdf**	**04 38 28.1**	**-1.4**	
	comp=Z,9.1nm,1.2s							
WTTA	**Wattenberg**	**160.67**	**108**	*e*PKP	**PKPdf**	**04 38 27.7**	**-2.1**	
	comp=Z,11nm,1.3s							
WATA	**Walderalm**	**160.69**	**108**	*e*PKP	**PKPdf**	**04 38 28.2**	**-1.6**	
	comp=Z,4.0nm,0.7s							
ABTA	**Abfaltersbach**	**160.79**	**111**	*e*pPKP	pPKPdf	04 38 34.4	+2.4	
	comp=Z,9.0nm,1.5s							
MYKA	**Terra Mystica**	**161.29**	**112**	*e*PKP	**PKPdf**	**04 38 30.1**	**-0.2**	
	comp=Z,5.4nm,1.1s							
LESA	**Schwarzleotal**	**161.32**	**109**	*e*PKP	**PKPdf**	**04 38 31.3**	**+0.9**	
	comp=Z,8.2nm,1.6s							
KBA	**Koelnbreinsper**	**161.44**	**111**	*e*PKP	**PKPdf**	**04 38 29.7**	**-1.0**	
	comp=Z,6.7nm,1.4s							
BVAR	**Borovoye Array**	**161.73**	**271**	PKPab	**PKPab**	**04 39 13.2**	**-2.9**	
	comp=Z,2.3nm,0.8s,baz=128,slow=4.3,SNR=5.0							
BIOA	**Bad Ischl, Aus**	**161.99**	**110**	*e*PKP	**PKPdf**	**04 38 31.2**	**+0.3**	
	comp=Z,12nm,1.4s							
SOKA	**Soboth**	**162.02**	**114**	*e*PKP	**PKPdf**	**04 38 33.3**	**+2.2**	
	comp=Z,13nm,1.5s							
MOA	**Molln**	**162.41**	**110**	*e*PKP	**PKPdf**	**04 38 31.9**	**+0.5**	
	comp=Z,6.9nm,1.4s							
BRTR	**Keskin Array B**	**162.44**	**166**	PKP	**PKPdf**	**04 38 32.7**	**+0.9**	
	comp=Z,0.2nm,0.5s,baz=182,slow=1.2,SNR=1.5							
BRTR				PKPab	**PKPab**	**04 39 18.2**	**-1.4**	
	comp=Z,5.5nm,1.2s,baz=184,slow=5.0,SNR=8.0							
ARSA	**Arzberg**	**162.66**	**114**	*e*PKP	**PKPdf**	**04 38 32.8**	**+1.1**	
	comp=Z,0.6nm,0.5s							
RONA	**Rosalia, Austr**	**163.35**	**114**	*i* PKP	**PKPdf**	**04 38 31.6**	**-0.7**	
	comp=Z,6.7nm,1.6s							
BRG	**Berggiesshubel**	**164.03**	**102**	*e*PKIKP	**PKPdf**	**04 38 36.0**	**+3.2**	
BRG				*e*		04 39 25.0		
MODS	**Modra-Piesok**	**164.29**	**114**	*e*PKP	**PKPdf**	**04 38 39.8**	**+6.7**	
MAK	**Makhachkala**	**165.05**	**205**	*e*PK

PULU Pululahua 1.78 333 Pn Pn 04 47 36.1 +0.6
COHC Cochancay 1.79 240 Pn Pn 04 47 35.2 -0.1
COHC Cochancay 1.79 240 eP Pn 04 47 35.4 +0.1
IMBA Imbabura, San 1.90 345 Pn Pn 04 47 37.5 +0.6
OTAV Otavalo 1.95 337 Pn Pn 04 47 37.8 +0.4
OTAV Otavalo 1.95 337 eP Pn 04 47 37.6 +0.2
OTAV Otavalo 1.95 337 eP Pn 04 47 37.9 +0.5
CUSE Cuicocha Este 1.99 339 eP Pn 04 47 38.7 +0.8
BONI La Bonita 2.02 5 eP Pn 04 47 38.9 +0.9
PAC1 Pacto, Paraso 2.13 329 eP Pn 04 47 39.6 +0.6
TULM Tulcn-Chalpat 2.27 358 Pn Pn 04 47 41.9 +0.9
TULM Tulcn-Chalpat 2.27 358 eP Pn 04 47 42.6 +1.6
CMBC Cumbal 2.50 357 eP Pn 04 47 45.0 +1.4
GCUF Volcan Galeras 2.80 7 eP Pn 04 47 48.5 +1.3
ARNL Arenillas 3.08 230 Pn Pn 04 47 48.1 -1.8
PPLP Puerto Lpez 3.08 270 eP Pn 04 47 49.5 -0.5
CRUC La Cruz 3.21 13 eP Pn 04 47 42.9 -9.0
SALI Salinas 3.35 259 Pn Pn 04 47 51.8 -1.5
PTLC Puerto Leguiza 3.38 59 eP Pn 04 47 52.3 -1.3
TUMC Tumaco 3.53 343 eP Pn 04 47 55.8 +0.3
MCRA Macar, Loja 3.58 219 Pn Pn 04 47 54.9 -1.3
MCRA Macar, Loja 3.58 219 eP Pn 04 47 55.0 -1.3
BBAC Balboa, Cauca 3.60 7 eP Pn 04 47 56.5 -0.1
POPC Popayan, Colom 4.21 14 eP Pn 04 48 04.4 0.0
GARC Garzon, Huila 4.33 31 eP Pn 04 48 07.3 +1.3
GR1C Gorgona, Isla 4.57 354 eP Pn 04 48 08.7 0.0
BETC Betania 4.79 28 eP Pn 04 48 13.8 +2.2
JAMC Jamundi, Valle 4.86 12 eP Pn 04 48 11.8 -1.0
MALC Bahia Malaga 5.56 4 eP Pn 04 48 20.4 -1.2
ATAH Atahualpa 5.57 187 P Pn 04 48 24.0 +1.9
209nm,0.6s,baz=12,slow=7.2,SNR=182
ATAH S Sn 04 49 27.3 +0.9
433nm,0.6s,baz=112,slow=21,SNR=4.3
YOTC Yotoco, Valle 5.68 14 eP Pn 04 48 21.2 -2.1
PRAC Prado 5.95 28 eP Pn 04 48 27.4 +0.6
ORTC Ortega, Tolima 5.97 24 eP Pn 04 48 28.8 +1.8
ANIL Santa Ana 6.44 21 eP Pn 04 48 33.0 -0.5
PLMC San Jos del P 6.59 12 eP Pn 04 48 32.3 -2.8
VILC Villavicencio, 6.92 35 eP Pn 04 48 41.2 +1.7
CVER Cruz Verde, Cu 7.05 31 eP Pn 04 48 42.2 +0.6
GUY2C Guyana, Caldas 7.14 19 eP Pn 04 48 40.9 -1.9
ROSC El Rosal 7.21 28 Pn Pn 04 48 45.3 +1.7
ROSC El Rosal 7.21 28 P Pn 04 48 40.5 -3.1
3.5nm,0.4s,baz=148,slow=23,SNR=1.5
CBOC Ciudad Bolivar 7.58 13 eP Pn 04 48 46.3 -1.9
CZSB Cruzeiro do Su 7.88 141 Pn Pn 04 48 53.0 +0.9
CZSB Cruzeiro do Su 7.88 141 eP Pn 04 48 52.7 +0.6
CZSB Cruzeiro do Su 7.88 141 eP Pn 04 48 52.7 +0.6
SPBC San Pablo de B 8.04 27 eP Pn 04 48 54.0 -0.2
DBBC Dabeiba 8.66 10 eP Pn 04 49 05.6 +3.2
PTBC PUERTO BERRIO, 8.68 22 eP Pn 04 49 02.4 -0.3
BARC Barichara 9.28 29 eP Pn 04 49 11.9 +1.3
CACAO El Cacao, Vera 9.40 340 eP Pn 04 49 13.2 +1.1
APAC Apartado, Choc 9.47 7 eP Pn 04 49 15.5 +2.4
UREC San Jos de Ur 9.51 13 eP Pn 04 49 14.6 +1.1
UPD2 Meteti 10.06 358 eP Pn 04 49 20.5 -0.1
PAMC Pamplona, Colo 10.16 29 eP Pn 04 49 23.6 +1.1
NNA Nana 10.38 175 Pn Pn 04 49 24.2 -0.7
NNA Nana 10.38 175 P Pn 04 49 26.5 +1.6
8.5nm,0.4s,baz=329,slow=14,SNR=5.3
NNA S Sn 04 51 13.7 -6.8
43nm,0.4s,baz=277,slow=18,SNR=8.8
OCAC Ocana 10.68 24 eP Pn 04 49 28.5 -0.4
SJCC San Jacinto, C 11.66 12 eP Pn 04 49 40.9 -0.7
ARGC Ariguani, Magd 11.86 17 eP Pn 04 49 45.6 +1.6
SDV Santo Domingo 12.55 34 Pn Pn 04 49 53.1 +0.1
SDV Santo Domingo 12.55 34 P Pn 04 49 51.2 -1.8
20nm,0.7s,baz=231,slow=8.5,SNR=26
SDV Santo Domingo 12.55 34 eP Pn 04 49 52.5 -0.5
SDV Santo Domingo 12.55 34 eP Pn 04 49 52.5 -0.5
HDC Heredia 13.15 331 eP Pn 04 50 03.8 +3.2
TEFE Tefe 13.19 99 eP Pn 04 49 59.0 -1.9
CRJC Cerrejon, Guaj 13.39 21 eP Pn 04 50 01.8 -1.8
ETMB Extrema 14.05 126 Pn Pn 04 50 10.2 -1.4
ETMB Extrema 14.05 126 eP Pn 04 50 10.3 -1.4
BAUV El Baul 14.20 42 Pn Pn 04 50 13.1 -0.5
SAML Samuel 16.19 117 P P 04 50 37.2 -0.5
SAML IAmb IAmb 04 50 42.2
comp=Z,17nm,0.6s
SAML Samuel 16.19 117 eP Pn 04 50 37.8 -0.2
MACA Manacapuru-AM 17.07 96 eP P 04 50 47.1 -0.3
LPAZ La Paz 17.39 148 P 04 50 51.8 +0.2
BOAV Boa Vista 17.61 77 P 04 50 52.7 -0.7
BOAV Boa Vista 17.61 77 eP P 04 50 51.9 -1.4
PB12 IPOC Station P 18.41 157 P P 04 51 00.8 -1.3
PB11 IPOC Station P 19.71 157 P P 04 51 14.2 -2.0
PB11 IAmb IAmb 04 51 27.9
comp=Z,24nm,0.8s
VILB Vilhena 20.69 124 eP P 04 51 25.1 -1.4
SIV San Ignacio 21.76 132 P P 04 51 39.0 +1.1
comp=Z,8.5nm,0.7s,baz=291,slow=8.0,SNR=36
SIV S S 04 55 28.4 +2.0
comp=Z,1.7nm,0.7s,baz=274,slow=18,SNR=3.5
comp=Z,8.5nm,0.7s
ITTB Itaituba 22.10 98 eP P 04 51 40.7 -0.5
LVC Limon Verde 22.59 158 P P 04 51 43.8 -2.3
LVC IAmb IAmb 04 51 50.7
comp=Z,17nm,1.1s
LVC Limon Verde 22.59 158 eP P 04 51 48.8 +2.7
BBSD Serra de San D 22.87 134 eP P 04 51 50.7 +2.4
PTLB Pontes e Lacer 22.92 128 P P 04 51 49.2 +0.4
PTLB IAmb IAmb 04 51 51.6
comp=Z,13nm,1.0s
PTLB Pontes e Lacer 22.92 128 eP P 04 51 50.1 +1.4
NPGB Novo Progresso 22.92 104 eP P 04 51 49.7 +0.9
MALB Monte Alegre 23.42 91 eP P 04 51 54.2 +0.9
CLDB Colider 23.63 114 eP P 04 51 55.9 +0.7
BBRB Robore, Bolivi 24.16 135 eP P 04 52 02.8 +2.8
GO02 Mina Guanaco 24.72 162 P P 04 52 04.1 -1.3
GO02 IAmb IAmb 04 52 09.5
comp=Z,12nm,0.9s
MCPB Macapa, AP 25.66 88 eP P 04 52 14.4 +0.7
SALV Santo Antonio 25.94 125 eP P 04 52 18.8 +2.6
PP1B Ponte de Pedra 27.50 127 eP P 04 52 32.2 +2.1
BDQN Bodoquena, MS 27.76 134 eP P 04 52 33.6 +1.2
MURT Porto Murtinho 27.95 137 eP P 04 52 34.9 +0.9
SNDB Serra Nova Dou 28.14 113 eP P 04 52 36.9 +1.0
RVDE Rio Verde (Bra 28.25 129 eP P 04 52 38.3 +1.5
AQDB Aquidauana 28.54 133 P P 04 52 39.2 0.0
AQDB Aquidauana 28.54 133 eP P 04 52 40.8 +1.5
ANTJ Antonio Joao (29.29 135 eP P 04 52 47.2 +1.3
TICA Tres Isletas 29.76 147 eP P 04 52 52.6 +2.6
CPUP Villa Florida 31.46 143 P P 04 53 05.1 +0.2
comp=Z,2.0nm,0.8s,baz=311,slow=11,SNR=4.7
comp=Z,2.0nm,0.8s
CPUP Villa Florida 31.46 143 eP P 04 53 05.8 +0.9
ITRB Iturama 32.24 126 eP P 04 53 14.5 +2.6
BDFB Brasilia 32.43 117 P P 04 53 14.2 +0.5
comp=Z,1.3nm,0.5s,baz=279,slow=12,SNR=5.6
comp=Z,1.3nm,0.5s
BO04 La Punta 32.92 169 P P 04 53 15.6 -2.1
IPMB Ipameri, GO 33.22 121 eP P 04 53 21.7 +1.2
LDASE Londrina, Braz 33.68 132 eP P 04 53 24.7 +0.4
CRSM Crissiumal (Br 34.32 141 eP P 04 53 30.0 +0.2
ITQB Itaqui 34.39 146 eP P 04 53 31.4 +1.1
UNIS Unistalda (Bra 34.82 144 eP P 04 53 34.4 +0.3
PMNB Patos De Minas 34.98 121 eP P 04 53 36.8 +1.1
ITAB Concordia 35.38 138 eP P 04 53 38.7 -0.2
JANB Januaria 35.57 114 eP P 04 53 41.9 +1.2
RODS Rosario do Sul 35.70 145 eP P 04 53 42.3 +0.7
ALGR Alto Alegre (B 35.87 141 eP P 04 53 42.7 -0.4
CPSB Cacapava Do Su 36.76 144 eP P 04 53 50.9 +0.3
Y45A Yeager Farm, C 36.97 343 P P 04 53 52.0 -0.2
PET01 Itanhaem-SP 37.09 130 eP P 04 53 56.8 +3.5
DIAM Diamantina, MG 37.28 119 eP P 04 53 56.2 +1.0
BSCB Bom Sucesso 37.46 123 eP P 04 53 57.4 +0.7
PLTB Pedras Altas 37.66 145 eP P 04 53 59.1 +1.0
DRIO Del Rio 37.82 326 P P 04 53 58.8 -0.7
DRIO IAmb IAmb 04 54 01.5
comp=Z,9.2nm,0.9s
T57A Hurt 38.40 358 P P 04 54 04.4 +0.2
WVT Waverly 38.68 347 P P 04 54 04.9 -1.6
WVT IAmb IAmb 04 54 05.4
comp=Z,4.8nm,0.6s
TRQA Tornquist 39.07 160 P P 04 54 10.4 +0.6
LCAR Lake Charles 39.50 343 P P 04 54 12.0 -1.3
LCAR IAmb IAmb 04 54 12.8
comp=Z,8.3nm,0.8s
PLCA Paso Flores 39.52 171 P P 04 54 12.5 -1.0
PLCA IAmb IAmb 04 54 16.6
comp=Z,17nm,0.9s
PLCA Paso Flores 39.52 171 P P 04 54 15.8 +2.3
comp=Z,16nm,1.1s,baz=347,slow=9.6,SNR=13
comp=Z,16nm,1.1s
PLCA Paso Flores 39.52 171 eP P 04 54 15.9 +2.4
TXAR Lajitas Array 39.52 323 P P 04 54 14.9 +1.2
comp=Z,0.7nm,0.6s,baz=142,slow=8.1,SNR=14
TXAR PcP PcP 04 56 18.2 +0.5
comp=Z,0.2nm,0.3s,baz=123,slow=3.3,SNR=2.6
comp=Z,0.7nm,0.6s
TX31 Lajitas Ar. Si 39.52 323 P P 04 54 12.5 -1.3
PBMO Poplar Bluff 39.95 344 P P 04 54 15.3 -1.7
PBMO IAmb IAmb 04 54 16.9
comp=Z,9.2nm,0.8s
MGMO Mountain Grove 40.84 342 P P 04 54 23.4 -0.9
MGMO IAmb IAmb 04 54 24.5
comp=Z,12nm,0.8s
PECS Pecos 41.13 325 P P 04 54 28.2 +1.4
PECS IAmb IAmb 04 54 29.3
comp=Z,18nm,1.4s
VHRN Van Horn 41.35 323 P P 04 54 28.5 -0.3
CCM Cathedral Cave 41.37 344 P P 04 54 27.7 -1.0
ACSO Alum Creek Sta 41.88 354 P P 04 54 33.1 +0.3
ACSO IAmb IAmb 04 54 33.6
comp=Z,14nm,0.8s
SMWD Samnorwood 42.15 332 P P 04 54 34.6 -0.5
MSTX Muleshoe 42.50 329 P P 04 54 37.5 -0.5
MSTX IAmb IAmb 04 54 40.2
comp=Z,18nm,1.4s
HDIL Hopedale 43.24 347 P P 04 54 42.0 -1.7
CBKS Cedar Bluff 45.02 336 P P 04 54 58.4 +0.4
ANMO Albuquerque 45.22 326 P P 04 55 01.3 +1.5
ANMO IAmb IAmb 04 55 02.0
comp=Z,6.6nm,0.6s
SDCO Great Sand Dun 46.82 330 P P 04 55 13.6 +1.3
PDAR Pinedale Array 52.64 331 P P 04 55 56.4 +0.3
comp=Z,0.6nm,0.5s,baz=126,slow=9.7,SNR=7.3
PDAR PcP PcP 04 57 03.5 -0.1
comp=Z,0.4nm,0.5s,baz=126,slow=8.3,SNR=5.7
comp=Z,0.6nm,0.5s
ULM Lac du Bonnet 53.93 346 P P 04 56 03.4 -1.7
comp=Z,5.6nm,0.8s,baz=155,slow=7.2,SNR=9.0
comp=Z,5.6nm,0.8s
OMMB Old Mammoth Mi 54.57 320 P P 04 56 10.0 -0.3
NVAR Mina Array Bea 54.61 321 P P 04 56 11.6 +1.1
comp=Z,0.6nm,0.5s,baz=126,slow=7.5,SNR=11
NVAR PcP PcP 04 57 11.9 +0.7
comp=Z,0.6nm,0.7s,baz=154,slow=6.8,SNR=3.9
comp=Z,0.6nm,0.5s
SCHQ Schefferville 56.92 7 P P 04 56 26.2 -0.2
comp=Z,5.5nm,0.9s,baz=222,slow=6.0,SNR=5.0
SCHQ PcP PcP 04 57 19.7 +0.1
comp=Z,3.3nm,0.9s,baz=248,slow=7.0,SNR=1.4
comp=Z,5.5nm,0.9s
J05D Fort Rock, OR 59.30 324 P P 04 56 44.4 +1.1
J05D IAmb IAmb 04 57 00.1
comp=Z,9.4nm,1.5s
YKA Yellowknife Ar 69.70 343 P P 04 57 49.6 -0.5
comp=Z,1.2nm,0.6s,baz=139,slow=5.8,SNR=26
comp=Z,1.2nm,0.6s
ILULI Ilulissat 72.92 10 *i* P P 04 58 07.7 -1.6
ILULI IAmb IAmb 04 58 10.0
comp=Z,10nm,0.7s
LIC Lamto 72.95 83⇑*i*P P 04 58 10.3 -0.3
comp=Z,11nm,0.5s
TIC Toumodi 72.99 83⇓*i*P P 04 58 07.2 -3.6
comp=Z,1.7nm,0.2s
DBIC Dimbokro 73.15 83 P P 04 58 11.4 -0.4
DBIC IAmb IAmb 04 58 12.9
comp=Z,22nm,1.4s
DBIC Dimbokro 73.15 83 P P 04 58 11.4 -0.4
comp=Z,7.1nm,0.7s,baz=261,slow=3.6,SNR=20
comp=Z,7.1nm,0.7s
KIC Kosan Boka 73.25 83⇑*i*P P 04 58 12.2 -0.1
comp=Z,15nm,0.4s
ICESG Greenland Ices 75.10 13 *i* P P 04 58 21.5 -0.9
ICESG IAmb IAmb 04 58 22.9
comp=Z,12nm,0.7s
SUMG Summit 78.04 11 P P 04 58 38.9 0.0
SUMG Summit 78.04 11 *i* P P 04 58 38.9 0.0
SUMG IAmb IAmb 04 58 40.2
comp=Z,8.5nm,0.7s
ESDC Sonseca Array 78.53 49 P P 04 58 40.1 -1.7
comp=Z,0.3nm,0.8s,baz=315,slow=41,SNR=1.6
comp=Z,0.3nm,0.8s
F31M Tsiigehtchic 79.03 341 P P 04 58 43.8 0.0
F31M IAmb IAmb 04 58 45.3
comp=Z,5.7nm,0.7s
A36M Sachs Harbour 79.40 346 P P 04 58 45.4 -0.4
A36M IAmb IAmb 04 58 46.5
comp=Z,12nm,0.8s
TORD Torodi Ar. Bea 80.03 76 P P 04 58 49.5 -0.9
comp=Z,1.4nm,0.3s,baz=285,slow=5.6,SNR=21
comp=Z,1.4nm,0.3s
NEEM North Greenlan 80.28 6 *i* P P 04 58 51.2 +0.4
NEEM IAmb IAmb 04 58 52.7
comp=Z,12nm,0.6s
VNA3 Neumayer Olymp 81.56 162 ⇑P P 04 58 57.4 +0.1
comp=Z,8.8nm,0.8s
VNA2 Neumayer-Watz 82.15 162 ⇑P P 04 59 00.9 +0.4
comp=Z,4.1nm,0.6s,baz=311,slow=4.0
IL31 82.67 336 P P 04 59 03.3 +0.2
ILAR Eielson Array 82.67 336 P P 04 59 03.1 -0.1
comp=Z,2.4nm,0.8s,baz=123,slow=3.8,SNR=20
comp=Z,2.4nm,0.8s
SNAA Sanae 83.77 162 P P 04 59 10.1 +1.3
comp=Z,5.2nm,1.0s,baz=240,slow=3.5,SNR=6.3
comp=Z,5.2nm,1.0s
CAST Castle Rocks 84.45 334 P P 04 59 12.1 -0.3
CAST IAmb IAmb 04 59 13.0
comp=Z,5.0nm,0.8s
TROLL Troll, Antarti 85.49 162 ⇑P P 04 59 19.1 +1.6
comp=Z,397nm,0.7s
E19K Redstone River 87.43 338 P P 04 59 27.0 +0.1
QSPA South Pole Qui 88.49 180 P P 04 59 32.3 +0.2
QSPA South Pole Qui 88.49 180 P P 04 59 33.9 +1.8
comp=Z,9.4nm,1.0s,baz=156,slow=2.9,SNR=19
comp=Z,9.4nm,1.0s
NOA NORSAR Array B 90.83 29 P P 04 59 44.2 +1.2
comp=Z,1.4nm,0.9s,baz=55,slow=16,SNR=2.0
comp=Z,1.4nm,0.9s
ELIB Princess Elisa 91.94 162 *d*P P 04 59 48.3 +0.3
comp=Z,3.8nm,0.8s
ELIB *d*PcP PcP 04 59 49.2 +0.5
ELIB *d*pP pP 05 00 33.2 -0.2
ZALV Zalesovo Beam 125.84 13 PKP PKPdf 05 05 40.2 -0.3
comp=Z,0.9nm,0.6s,baz=75,slow=6.3,SNR=4.7
KURBB Kurbatov Arra 127.14 19 PKP PKPdf 05 05 43.5 +0.4
comp=Z,1.1nm,0.7s,baz=324,slow=2.3,SNR=7.5
MKAR Makanchi Array 131.69 18 PKP PKPdf 05 05 51.3 -0.6
comp=Z,0.3nm,0.4s,baz=286,slow=3.1,SNR=9.0
KSRS Korea Array 137.21 330 PKP PKPdf 05 06 01.6 -0.8
comp=Z,0.6nm,0.4s,baz=66,slow=1.5,SNR=4.5
ASAR Alice Springs 140.33 229 PKhKP PKPpre 05 06 00.4
comp=Z,0.3nm,0.3s,baz=123,slow=3.6,SNR=4.8
ASAR PKP PKPdf 05 06 08.3 -0.3
comp=Z,1.0nm,0.8s,baz=106,slow=1.9,SNR=6.6
WRA Warramunga Arr 142.00 234 PKhKP PKPpre 05 06 06.8
comp=Z,1.0nm,0.6s,baz=124,slow=3.0,SNR=17
WRA PKP PKPdf 05 06 14.4 +2.8
comp=Z,0.7nm,0.3s,baz=113,slow=2.1,SNR=16
CMAR Chiang Mai Arr 162.90 11 PKPab PKPab 05 07 31.4 -0.3
comp=Z,1.0nm,0.3s,baz=317,slow=5.1,SNR=4.3

VAO ***01*** *05:35:46.5±0.5, 8.°62S×79.°05W, h10km, mb4.2*
NEIC ***01*** *05:35:52.0±2.0, 8.°40S±0.°06×79.°10W±0.°09, h63km±9km, mb4.3/26, Error ellipse: s-maj=15.6km s-min=5.0km az=58.0*
IDC ***01*** *05:35:52.8±1.4, 8.°40S×79.°04W, h76km±11km, mb3.7/12, mbtmp4.0/17, MS3.5/3, Error ellipse: s-maj=17.4km s-min=8.3km az=72.0*

ISC 01 05:35:48.6±0.5, 8.°47S±0.°05×79.°19W±0.°06, h35km, n97, σ1°72/96, mb4.3/20, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	1.54	31	P	Pn	05 36 18.6	+4.6
	1μm,0.7s,baz=212,slow=11,SNR=2044						
ATAH				S	Sn	05 36 35.2	+2.3
	646nm,0.4s,baz=285,slow=1.9,SNR=7.1						
MCRA	Macar, Loja	4.14	349	Pn	Pn	05 36 51.1	+1.7
MCRA				Sn	Sn	05 37 36.2	-0.5
NNA	Nana	4.19	147	Pn	Pn	05 36 53.3	+3.1
NNA				Sn	Sn	05 37 41.2	+3.2
NNA	Nana	4.19	147	P	Pn	05 36 52.9	+2.7
	152nm,0.3s,baz=332,slow=12,SNR=62						
NNA				S	Sn	05 37 41.8	+3.8
	142nm,0.4s,baz=261,slow=21,SNR=4.8						
ARNL	Arenillas	4.96	350		Pn	05 37 02.9	+2.2
BOSC	San Juan Bosco	5.32	7		Pn	05 37 07.5	+1.7
COHC	Cochancay	5.96	359	Pn	Pn	05 37 17.8	+3.3
CZSB	Cruzeiro do Su	6.46	84	Pn	Pn	05 37 24.1	+2.8
CZSB	Cruzeiro do Su	6.46	84	*e*S	Sn	05 38 34.3	+0.4
SALI	Salinas	6.49	344		Pn	05 37 25.5	+3.7
CHSH	Refugio Sur-Vo	6.93	3		Pn	05 37 33.0	+4.6
SLOR	San Lorenzo -	7.72	5		Pn	05 37 41.3	+2.3
PULU	Pululahua	8.46	5		Pn	05 37 52.7	+3.5
OTAV	Otavalo	8.68	5	Pn	Pn	05 37 54.3	+2.1
OTAV	Otavalo	8.68	5	*e*P	Pn	05 37 55.4	+3.2
IMBA	Imbabura, San	8.74	7		Pn	05 37 55.7	+2.7
TULM	Tulcn-Chalpat	9.23	9		Pn	05 38 01.9	+2.2
ETMB	Extrema	12.88	97	Pn	Pn	05 38 48.5	-0.9
ETMB	Extrema	12.88	97	*e*P	Pn	05 38 48.4	-0.9
LPAZ	La Paz	13.30	127		Pn	05 38 57.2	+1.5
PAYG	Puerto Ayora	13.50	304	Pn	Pn	05 39 02.1	+4.3
PB16	IPOC Station P	13.59	137		Pn	05 39 00.1	+0.6
ROSC	El Rosal	14.08	20	Pn	Pn	05 39 07.7	+1.6
ROSC	El Rosal	14.08	20	P	Pn	05 39 08.0	+1.9
	2.6nm,0.3s,baz=216,slow=19,SNR=1.5						
ROSC				LR	LR	05 45 15.2	
	comp=Z,221nm,19.1s,baz=220,slow=40						
PB11	IPOC Station P	14.54	142	Pn	Pn	05 39 13.9	+1.9
GO01	Chusmiza	14.75	140		Pn	05 39 16.1	+0.8
PB08	IPOC Station P	15.13	141	Pn	Pn	05 39 20.3	0.0
TEFE	Tefe	15.28	72	*e*P	Pn	05 39 21.9	0.0
PB01	IPOC Station P	15.62	144	Pn	Pn	05 39 26.9	+0.6
SAML	Samuel	15.83	93	Pn	Pn	05 39 26.6	-2.4
SAML	Samuel	15.83	93	*e*P	Pn	05 39 26.4	-2.6
PB07	IPOC Station P	15.94	147	Pn	Pn	05 39 30.8	+0.2
PB07				IAmb	IAmb	05 39 36.8	
	comp=Z,16nm,1.1s						
LVC	Limon Verde	17.18	146	P	P	05 39 49.0	+1.2
	comp=Z,2.5nm,0.6s,baz=324,slow=13,SNR=2.8						
LVC	Limon Verde	17.18	146	*e*P	Pn	05 39 44.0	-2.4
GO02	Mina Guanaco	18.96	152	P	Pn	05 40 07.4	-0.7
MACA	Manacapuru-AM	19.14	75	P	P	05 40 09.0	0.0
MACA				IAmb	IAmb	05 40 42.9	
	comp=Z,23nm,0.6s						
MACA	Manacapuru-AM	19.14	75	*e*P	P	05 40 09.5	+0.4
VILB	Vilhena	19.18	105	P	P	05 40 09.1	-0.4
VILB				IAmb	IAmb	05 40 51.8	
	comp=Z,18nm,1.3s						
SIV	San Ignacio	19.21	115	P	P	05 40 09.1	-0.7
	comp=Z,1.2nm,0.8s,baz=285,slow=14,SNR=5.5						
SIV				S	Sn	05 43 43.2	-2.2
	comp=Z,1.3nm,0.6s,baz=329,slow=17,SNR=1.8						
SDV	Santo Domingo	19.23	27		P	05 40 09.8	-0.4
SDV				IAmb	IAmb	05 40 17.4	
	comp=Z,12nm,0.9s						
SDV	Santo Domingo	19.23	27	P	P	05 40 09.2	-1.0
	comp=Z,3.9nm,0.5s,baz=277,slow=10.0,SNR=7.7						
SDV	Santo Domingo	19.23	27	*e*P	P	05 40 11.0	+0.8
JTS	Las Juntas de	19.50	343	LR	LR	05 46 20.5	
	comp=Z,68nm,19.6s,baz=166,slow=32						
ORTG	Ortega, Santa	19.72	341	P	P	05 40 15.2	-0.2
ORTG				IAmb	IAmb	05 40 41.3	
	comp=Z,16nm,1.2s						
BBSD	Serra de San D	20.07	117	*e*P	P	05 40 19.0	-0.2
BAUV	El Baul	20.55	33	P	P	05 40 25.4	+0.9
PTLB	Pontes e Lacer	20.80	111	P	P	05 40 26.0	-1.0
PTLB	Pontes e Lacer	20.80	111	*e*P	P	05 40 27.3	+0.3
BOAV	Boa Vista	21.51	61	P	P	05 40 34.5	-0.2
BOAV	Boa Vista	21.51	61	*e*P	P	05 40 35.1	+0.3
AC05	El Transito	21.93	159		P	05 40 37.1	-2.2
LCO	Las Campanas	21.94	160	P	P	05 40 38.8	-0.7
LCO				IAmb	IAmb	05 40 43.0	
	comp=Z,20nm,1.2s						
GO04	Tololo Observa	22.98	161	P	P	05 40 48.6	-2.0
PCRV	Puerto La Cruz	23.51	38	LR	LR	05 51 18.9	
	comp=Z,230nm,18.5s,slow=40						
ITTB	Itaituba	23.65	82	*e*P	P	05 40 55.5	-1.6
SALV	Santo Antonio	24.11	110	*e*P	P	05 41 01.3	0.0
MURT	Porto Murtinho	24.57	125	*e*P	P	05 41 04.8	-0.7
BDQN	Bodoquena, MS	24.74	121	*e*P	P	05 41 06.8	-0.2
H03N2	Juan Fernandez	24.85	179	T	T	06 06 18.5	
	baz=359,slow=75,SNR=12						
H03N1	Juan Fernandez	24.86	179	T	T	06 06 20.1	
	baz=359,slow=75,SNR=17						
H03N3	Juan Fernandez	24.87	179	T	T	06 06 18.9	
	baz=359,slow=75,SNR=19						
PP1B	Ponte de Pedra	25.33	113	*e*P	P	05 41 12.3	-0.2
RVDE	Rio Verde (Bra	25.75	117	*e*P	P	05 41 15.8	-0.5
ANTJ	Antonio Joao (	26.05	124	*e*P	P	05 41 18.8	-0.2
SNDB	Serra Nova Dou	27.66	100	*e*P	P	05 41 32.2	-0.4
ITRB	Iturama	30.05	115	*e*P	P	05 41 53.5	-1.3
PTGB	Pitanga	30.51	125	*e*P	P	05 41 58.7	-0.1
UNIS	Unistalda (Bra	30.56	135	*e*P	P	05 41 59.2	+0.1
IPMB	Ipameri, GO	31.56	111	*e*P	P	05 42 06.8	-1.3
PLCA	Paso Flores	33.04	168	P	P	05 42 21.6	+0.8
	comp=Z,4.0nm,0.9s,baz=344,slow=11,SNR=5.9						
	comp=Z,4.0nm,0.9s						
PLCA	Paso Flores	33.04	168	*e*P	P	05 42 20.8	-0.1
PLTB	Pedras Altas	33.21	138	*e*P	P	05 42 22.1	-0.3
SDBA	SAO DESIDERIO	33.93	100	*e*P	P	05 42 28.4	-0.5
BSCB	Bom Sucesso	35.45	114	*e*P	P	05 42 41.1	-0.9
DIAM	Diamantina, MG	35.84	110	*e*P	P	05 42 44.1	-1.3
DRIO	Del Rio	42.96	332	P	P	05 43 44.4	-0.1
DRIO				IAmb	IAmb	05 43 46.4	
	comp=Z,3.7nm,0.9s						
TXAR	Lajitas Array	44.37	329	P	P	05 43 56.2	+0.2
	comp=Z,0.5nm,0.7s,baz=150,slow=8.1,SNR=6.7						
	comp=Z,0.5nm,0.7s						
MNHN	Monahans	45.56	331	IAmb	IAmb	05 44 06.7	
	comp=Z,3.7nm,0.7s						
S39A	Bolivar	47.78	345	P	P	05 44 21.6	-1.0
S39A				IAmb	IAmb	05 45 01.0	
	comp=Z,7.9nm,1.1s						
ANMO	Albuquerque	50.29	331	P	P	05 44 41.8	-0.3
ANMO				IAmb	IAmb	05 44 43.2	
	comp=Z,3.1nm,1.0s						
PDAR	Pinedale Array	58.02	334	P	P	05 45 37.3	-1.1
	comp=Z,0.4nm,0.6s,baz=135,slow=9.7,SNR=5.0						
	comp=Z,0.4nm,0.6s						
NVAR	Mina Array Bea	59.18	325	P	P	05 45 46.3	-0.3
	comp=Z,0.8nm,0.7s,baz=127,slow=6.9,SNR=7.8						
	comp=Z,0.8nm,0.7s						
ULM	Lac du Bonnet	60.25	348	P	P	05 45 51.5	-1.8
	comp=Z,1.1nm,0.5s,baz=201,slow=8.0,SNR=2.6						
	comp=Z,1.1nm,0.5s						
YHL	Hebgen Lake	60.40	334	P	P	05 45 55.5	+0.7
YHL				IAmb	IAmb	05 45 56.2	
	comp=Z,2.9nm,0.7s						
BOZ	Bozeman (W)	61.18	335	P	P	05 45 59.9	-0.1
BOZ				IAmb	IAmb	05 46 06.3	
	comp=Z,2.5nm,1.4s						
DBIC	Dimbokro	75.61	81	P	P	05 47 29.9	-0.8
	comp=Z,1.6nm,0.5s,baz=266,slow=7.0,SNR=4.5						
	comp=Z,1.6nm,0.5s						
YKA	Yellowknife Ar	75.83	344	P	P	05 47 30.1	-0.8
	comp=Z,0.2nm,0.5s,baz=140,slow=6.0,SNR=4.6						
	comp=Z,0.2nm,0.5s						
SNAA	Sanae	77.72	162	P	P	05 47 41.6	0.0
SNAA				IAmb	IAmb	05 48 00.0	
	comp=Z,6.5nm,1.2s						
SNAA	Sanae	77.72	162	P	P	05 47 41.3	-0.4
	comp=Z,1.4nm,0.6s,baz=272,slow=8.0,SNR=12						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	81.64	180	P	P	05 48 03.6	+0.5
QSPA	South Pole Qui	81.64	180	P	P	05 48 03.5	+0.5
	comp=Z,4.2nm,1.0s,baz=146,slow=2.9,SNR=7.5						
	comp=Z,4.2

s-min=18.3km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.90**	**280**	Pg	Pn	05 46 30.6	+0.8
	0.7nm,0.3s,baz=97,slow=17,SNR=8.9						
ZALV				Lg	Lg	05 46 56.4	
	1.9nm,0.3s,baz=100,slow=25,SNR=13						
I46RU	**ZALESOVO INFRA**	**1.90**	**280**	I	I	05 58 45.0	
	baz=97,slow=333,SNR=21						
KURBB	**Kurchatov Arra**	**6.57**	**246**	Pn	Pn	05 47 34.2	+0.4
	0.1nm,0.3s,baz=63,slow=15,SNR=2.2						
	0.3nm,0.3s						
MK31	**Makanchi Array**	**7.78**	**210**	⇑Pg	Pg	05 48 20.8	-4.3
	0.2nm,0.5s,baz=112,slow=17,SNR=2.7						
MK31				⇑Lg	Lg	05 49 50.7	
	3.0nm,0.8s,baz=109,slow=25,SNR=3.9						
MKAR	**Makanchi Array**	**7.78**	**210**	Pn	Pn	05 47 51.8	+1.3
	0.1nm,0.3s,baz=28,slow=14,SNR=5.0						
	0.1nm,0.3s						
MAKZ	**Makanchi**	**7.87**	**212**	⇑Pg	Pg	05 48 21.6	-5.1
	0.6nm,0.5s						
MAKZ				⇓Lg	Lg	05 49 57.9	
	1.0nm,0.7s						

*UCR **01** 05:53:59.6±1.4, 10°.66N×84°.98W, h6km±4km, MW3.6*
*CATAC **01** 05:53:59.5±0.3, 10°.65N×84°.96W, h8km±3km, ML2.8*
ISC 01 05:54:00.3±1.0, 10°.65N±0°.03×84°.97W±0°.02, h20km±3km, n41, σ0°.99/67, 4C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUI	**Cuipilapa**	**0.19**	**271**	*e*P	**Pb**	**05 54 04.8**	**-0.8**
VERA	**Finca Concepci**	**0.22**	**27**	⇑*i*P	**Pb**	**05 54 05.0**	**-0.9**
VERA				*e*S	**Sb**	**05 54 09.2**	**-0.6**
CNAS	**Canas**	**0.25**	**208**	⇓*i*P	**Pb**	**05 54 06.6**	**+0.3**
CNAS				*e*S	**Sb**	**05 54 12.4**	**+2.0**
CEDE	**Laguna Cedeo**	**0.31**	**122**	⇓*e*P	**Pb**	**05 54 07.1**	**-0.2**
CEDE				*e*S	**Sb**	**05 54 12.8**	**+0.8**
VACR	**Volcan Arenal**	**0.34**	**122**	⇓*i*P	**Pb**	**05 54 07.5**	**-0.2**
VACR				*e*S	**Sb**	**05 54 13.6**	**+0.9**
JUNT	**Juntas**	**0.37**	**178**	⇓*i*P	**Pb**	**05 54 07.2**	**-1.0**
JUNT				*e*S	**Sb**	**05 54 12.6**	**-0.9**
SOCE	**Pocosol**	**0.44**	**128**	⇓*i*P	**Pb**	**05 54 08.8**	**-0.7**
SOCE				*e*S	**Sb**	**05 54 15.6**	**0.0**
SOCE	**Pocosol**	**0.44**	**128**	*i*P	**Pb**	**05 54 08.7**	**-0.7**
SOCE				*i*S	**Sb**	**05 54 15.6**	**0.0**
SOCE				IAML		05 54 17.7	
	comp=Z,2μm,1.0s						
LCHIL	**Los Chiles**	**0.46**	**34**	⇑*i*P	**Pb**	**05 54 09.9**	**+0.3**
LCHIL				*e*S	**Sb**	**05 54 17.2**	**+1.2**
PLVR	**Palo Verde**	**0.48**	**231**	*e*P	**Pb**	**05 54 09.6**	**-0.6**
PLVR				*e*S	**Sb**	**05 54 16.1**	**-0.8**
ORTG	**Ortega, Santa**	**0.56**	**239**	*i*P	**Pb**	**05 54 10.9**	**-0.6**
ORTG				IAML		05 54 17.0	
	comp=Z,94nm,1.0s						
ORTG				*i*S	**Sb**	**05 54 19.1**	**0.0**
COVE	**Coope Vega, Sa**	**0.57**	**83**	*i*P	**Pb**	**05 54 10.4**	**-1.2**
COVE				*i*S	**Sb**	**05 54 18.5**	**-0.8**
COVE				IAML		05 54 27.6	
	comp=Z,370nm,1.0s						
HZTE	**Horizontes, Gu**	**0.61**	**276**	*i*P	**Pb**	**05 54 12.3**	**-0.1**
HZTE				IAML		05 54 32.1	
	comp=Z,200nm,1.0s						
CPMI	**Catarata Coope**	**0.69**	**122**	*i*P	**Pb**	**05 54 12.9**	**-0.9**
CPMI				*i*S	**Sb**	**05 54 23.3**	**+0.3**
CPMI				IAML		05 54 29.6	
	comp=Z,260nm,1.0s						
NICO	**Nicoya**	**0.69**	**222**	*e*P	**Pb**	**05 54 13.4**	**-0.3**
NICO				*e*S	**Sb**	**05 54 23.7**	**+0.8**
NYURE	**Nandayure**	**0.71**	**203**	⇓*i*P	**Pb**	**05 54 13.3**	**-0.7**
NYURE				*e*S	**Sb**	**05 54 23.5**	**+0.1**
ARZA	**Esparza**	**0.72**	**155**	*e*P	**Pb**	**05 54 14.7**	**+0.4**
ARZA				*e*S	**Sn**	**05 54 24.8**	**-1.1**
ZARE	**Zarcero**	**0.74**	**129**	*e*P	**Pb**	**05 54 14.2**	**-0.5**
ZARE				*e*S	**Sn**	**05 54 26.9**	**+0.2**
SRA1	**San Ramn**	**0.75**	**139**	*e*P	**Pb**	**05 54 14.4**	**-0.3**
SRA1				*e*S	**Sb**	**05 54 25.1**	**+0.6**
DUNO	**Dulce Nombre,**	**0.77**	**222**	*i*P	**Pb**	**05 54 14.5**	**-0.5**
DUNO				*i*S	**Sb**	**05 54 25.9**	**+0.9**
DUNO				IAML		05 54 28.2	
	comp=Z,570nm,1.0s						
CMARA	**Lajas Hojancha**	**0.77**	**215**	*e*P	**Pb**	**05 54 14.7**	**-0.4**
CMARA				*e*S	**Sb**	**05 54 26.2**	**+1.1**
LAFE	**Finca La Fe, P**	**0.84**	**176**	*i*P	**Pb**	**05 54 15.6**	**-0.7**
LAFE				IAML		05 54 15.9	
	comp=Z,2.5nm,1.0s						
LAFE				*i*S	**Sb**	**05 54 26.9**	**-0.3**
TRB2	**Turrubares**	**0.90**	**145**	*e*P	**Pb**	**05 54 16.8**	**-0.5**
TCS1	**Tacares**	**0.90**	**132**	⇓*e*P	**Pb**	**05 54 16.9**	**-0.4**
TCS1				*e*S	**Sn**	**05 54 30.8**	**+0.4**
TCS1	**Tacares**	**0.90**	**132**	*i*P	**Pb**	**05 54 16.9**	**-0.4**
TCS1				IAML		05 54 32.5	
	comp=Z,970nm,1.0s						
SAJU	**San Juanillo,**	**0.93**	**231**	*i*P	**Pb**	**05 54 17.4**	**-0.4**
SAJU				*i*S	**Sn**	**05 54 31.0**	**0.0**
SAJU				IAML		05 54 35.2	
	comp=Z,150nm,1.0s						
INDI	**Punta indio, G**	**0.94**	**214**	*i*P	**Pb**	**05 54 17.5**	**-0.4**
INDI				IAML		05 54 20.1	
	comp=Z,120nm,1.0s						
BELE	**Belen**	**1.03**	**131**	⇑*i*P	**Pn**	**05 54 19.8**	**+0.2**
BELE				*e*S	**Sn**	**05 54 34.0**	**+0.5**
JACO	**JACO, Garabito**	**1.03**	**163**	*i*P	**Pb**	**05 54 18.9**	**-0.6**
JACO				IAML		05 54 19.2	
	comp=Z,95nm,1.0s						
CBL1	**Cabuya**	**1.07**	**186**	*e*P	**Pb**	**05 54 19.8**	**-0.3**
CBL1				*e*S	**Sn**	**05 54 35.3**	**+1.0**
ACOS	**Acosta**	**1.17**	**137**	*e*P	**Pn**	**05 54 21.2**	**-0.4**
AMPA	**Desamparados**	**1.17**	**130**	*e*P	**Pn**	**05 54 18.0**	**-3.8**
RITA	**Parrita**	**1.29**	**151**	*e*P	**Pb**	**05 54 27.4**	**+3.6**
ABE2	**San Pablo**	**1.31**	**136**	*e*P	**Pn**	**05 54 23.4**	**+0.3**
LCR2	**La Lucha 2**	**1.32**	**133**	*e*P	**Pn**	**05 54 23.3**	**-0.4**
LCR2	**La Lucha 2**	**1.32**	**133**	*i*P	**Pn**	**05 54 23.4**	**-0.4**
LCR2				*i*S	**Sb**	**05 54 41.4**	**+0.4**
LCR2				IAML		05 54 45.8	
	comp=Z,120nm,1.0s						
ACON	**Acoyapa**	**1.32**	**351**	⇑*e*P	**Pn**	**05 54 23.9**	**+0.2**
ACON	**Acoyapa**	**1.32**	**351**	*i*P	**Pn**	**05 54 23.8**	**+0.2**
ACON				IAML		05 54 24.6	
	comp=Z,400nm,1.0s						
ACON				*i*S	**Sb**	**05 54 41.9**	**+0.9**
RAZU	**San Marcos de**	**1.36**	**136**	*e*P	**Pb**	**05 54 25.5**	**+0.3**
LLNJ	**Naranjito**	**1.45**	**144**	*e*P	**Pb**	**05 54 29.4**	**+2.7**
BUS1	**Rivas**	**1.63**	**132**	*e*P	**Pn**	**05 54 28.5**	**+0.2**

IDC 01 06:18:48.0±3.0, 65°.50N×111°.99E, h0km, mb3.3/3, mbtmp3.4/4, ML2.5/1, Error ellipse: s-maj=257.6km s-min=25.8km az=143.0, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**17.75**	**242**	P	P	06 22 57.3	+0.2
	0.1nm,0.3s,baz=42,slow=8.3,SNR=4.7						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**22.74**	**245**	P	P	06 23 50.6	-0.7
	1.2nm,0.7s,baz=38,slow=11,SNR=14						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**24.59**	**235**	P	P	06 24 09.8	+0.3
	0.6nm,0.7s,baz=46,slow=10,SNR=5.9						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**38.12**	**43**	P	P	06 26 08.0	-0.1
	0.3nm,0.7s,baz=306,slow=6.2,SNR=2.1						
	0.3nm,0.7s						

*DJA **01** 06:20:40.1±0.1, 5°.5S×12°.5E±°, h486km±3km, M4.7/28, mB5.2/9, mb4.4/28, MLv4.9/19, Mw(mB)4.6/9*
*NEIC **01** 06:20:40.8±1.6, 4°.60S±0°.09×125°.4E±0°.1, h497km±9km, mb4.6/41, Error ellipse: s-maj=16.5km s-min=12.8km az=61.0*
*IDC **01** 06:20:41.4±1.5, 4°.60S×125°.49E, h516km±18km, mb3.5/16, mbtmp4.4/18, Error ellipse: s-maj=22.5km s-min=7.7km az=68.0*
ISC 01 06:20:40.4±0.3, 4°.60S±0°.05×125°.43E±0°.07, h500km, n150, σ0°.91/154, mb4.3/36, 3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**2.15**	**51**	P	**P**	**06 21 45.2**	**-1.1**
NLAI				S	**S**	**06 22 36.5**	**-3.2**
SANI	**Sanana**	**2.59**	**12**	P	**P**	**06 21 48.0**	**-0.9**
SANI	**Sanana**	**2.59**	**12**	P	**P**	**06 21 47.9**	**-0.9**
SANI				S	**S**	**06 22 42.5**	**-1.9**
LUWI	**Luwuk**	**4.42**	**323**	P	**P**	**06 22 01.9**	**-0.5**
LBMI	**Labuha**	**4.45**	**28**	P	**P**	**06 22 03.1**	**+0.5**
BNDI	**Bandanaira**	**4.46**	**89**	P	**P**	**06 22 01.1**	**-1.6**
SOEI	**Soe**	**5.25**	**193**	P	**P**	**06 22 09.6**	**-0.3**
SOEI	**Soe**	**5.25**	**193**	P	**P**	**06 22 09.6**	**-0.3**
SOEI	**Soe**	**5.25**	**193**	P	**P**	**06 22 09.4**	**-0.5**
BKSI	**Bulukumba**	**5.34**	**262**	P	**P**	**06 22 08.8**	**-1.7**
	26nm,0.6s,0.1nm						
KMSI	**Cibinong**	**5.34**	**344**	P	**P**	**06 22 09.9**	**-0.7**
	249nm,0.5s,3.5nm						
KAPI	**Kappang**	**5.67**	**266**	P	**P**	**06 22 14.3**	**+0.6**
	9.8nm,0.5s,baz=93,slow=3.7,SNR=6.9						
SAUI	**Saumlaki**	**6.73**	**120**	P	**P**	**06 22 25.4**	**+1.3**
SAUI	**Saumlaki**	**6.73**	**120**	P	**P**	**06 22 25.5**	**+1.5**
SAUI	**Saumlaki**	**6.73**	**120**	P	**P**	**06 22 23.7**	**-0.3**
	430nm,0.6s,19μm3.1nm						
SWI	**Sorong**	**6.91**	**58**	P	**P**	**06 22 25.3**	**-0.4**
	68nm,0.6s,1μm0.3nm						
FAKI	**Fak Fak**	**7.01**	**76**	P	**P**	**06 22 26.9**	**+0.1**
FAKI	**Fak Fak**	**7.01**	**76**	P	**P**	**06 22 27.7**	**+0.9**
FAKI	**Fak Fak**	**7.01**	**76**	P	**P**	**06 22 25.7**	**-1.1**
	45nm,0.7s,2μm0.6nm						
TOLI2	**Tolitoli**	**7.33**	**321**	P	**P**	**06 22 29.8**	**-0.2**
TOLI2	**Tolitoli**	**7.33**	**321**	P	**P**	**06 22 29.6**	**-0.4**
MPSI	**Mapaga**	**7.39**	**311**	P	**P**	**06 22 30.0**	**-0.6**
	33nm,0.4s,3μm0.4nm						
KMPI	**Kaimana, Papua**	**8.31**	**84**	P	**P**	**06 22 41.4**	**+1.3**
	105nm,0.5s						
PLAI	**Plampang**	**8.68**	**241**	P	**P**	**06 22 42.6**	**-1.4**
PLAI	**Plampang**	**8.68**	**241**	P	**P**	**06 22 42.3**	**-1.7**
	24nm,0.8s						
TWSI	**Taliwang, Sumb**	**9.43**	**244**	P	**P**	**06 22 51.3**	**-0.6**
	25nm,1.3s						
MTN	**Manton Dam**	**9.94**	**146**	P	**P**	**06 22 57.5**	**+0.3**
	baz=10,SNR=62						
MTN	**Manton Dam**	**9.94**	**146**	P	**P**	**06 22 57.8**	**+0.5**
MTN	**Manton Dam**	**9.94**	**146**	P	**P**	**06 22 57.8**	**+0.5**
KDU	**Kakadu**	**10.63**	**140**	P	**P**	**06 23 04.8**	**+0.3**
	baz=11,SNR=17						
MTKI	**Muara Teweh, K**	**11.13**	**289**	P	**P**	**06 23 09.4**	**-0.5**
	66nm,0.5s,11μm						
KNRA	**Kununurra**	**11.49**	**164**	P	**P**	**06 23 13.4**	**-0.2**
	baz=12,SNR=15						
KNRA	**Kununurra**	**11.49**	**164**	P	**P**	**06 23 13.2**	**-0.4**
KNRA	**Kununurra**	**11.49**	**164**	P	**P**	**06 23 14.0**	**+0.4**
MYLDM	**Lahad Datu**	**11.93**	**324**	P	**P**	**06 23 20.0**	**+1.7**
BLJI	**Banyuglugur**	**12.17**	**255**	P	**P**	**06 23 21.2**	**+0.3**
	28nm,0.6s						
FITZ	**Fitzroy Crossi**	**13.42**	**179**	P	**P**	**06 23 33.4**	**-0.6**
	baz=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	**13.42**	**179**	P	**P**	**06 23 33.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**13.42**	**179**	P	**P**	**06 23 33.4**	**-0.6**
KKM	**Kota Kinabalu**	**14.02**	**319**	P	**P**	**06 23 39.2**	**-1.4**
SBUM	**Sibu**	**14.94**	**298**	P	**P**	**06 23 49.7**	**-0.5**
UGM	**Wanagama**	**15.18**	**257**	P	**P**	**06 23 51.8**	**-0.8**
KSM	**Kuching**	**16.27**	**291**	P	**P**	**06 24 03.0**	**-1.1**
KSM				IAmb	IAmb	06 24 05.7	
	comp=Z,19nm,0.5s						
WB0	**Warramunga Arr**	**17.43**	**151**		**P**	**06 24 15.0**	**-0.6**
WRAB	**Tennant Creek**	**17.55**	**151**	P	**P**	**06 24 16.0**	**-0.7**
WRAB				IAmb	IAmb	06 24 17.6	
	comp=Z,14nm,0.7s						
WRA	**Warramunga Arr**	**17.55**	**151**	P	**P**	**06 24 15.7**	**-1.0**
WRA	**Warramunga Arr**	**17.55**	**151**	P	**P**	**06 24 16.1**	**-0.7**
	comp=Z,18nm,0.9s,baz=322,slow=11,SNR=161						
WRA				S	**S**	**06 27 13.6**	**+0.2**
	comp=Z,10nm,0.8s,baz=325,slow=17,SNR=10.0						
WB2	**Warramunga Arr**	**17.55**	**151**		**P**	**06 24 16.3**	**-0.5**
WB2				IAmb	IAmb	06 24 18.0	
	comp=Z,16nm,0.6s						
WR0	**Warramunga Arr**	**17.66**	**151**	P	**P**	**06 24 17.6**	**-0.2**
WR0				IAmb	IAmb	06 24 18.3	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**17.72**	**197**	P	**P**	**06 24 17.0**	**-1.3**
PSA00				IAmb	IAmb	06 24 26.4	
	comp=Z,27nm,1.3s						
PSA00	**Pilbara Seismi**	**17.72**	**197**	P	**P**	**06 24 18.3**	**0.0**
BBJI	**Bungbulang**	**17.91**	**260**	P	**P**	**06 24 19.3**	**-0.9**
COEN	**Coen**	**19.81**	**119**	P	**P**	**06 24 37.5**	**0.0**
COEN				IAmb	IAmb	06 25 01.6	
	comp=Z,31nm,1.4s						
WRKA	**Warakurna**	**20.51**	**173**	P	**P**	**06 24 44.4**	**+0.7**
	baz=21,SNR=49						
WRKA	**Warakurna**	**20.51**	**173**	P	**P**	**06 24 44.5**	**+0.7**
AS31	**Alice Springs**	**20.64**	**157**	P	**P**	**06 24 45.5**	**+0.5**
AS31				IAmb	IAmb	06 24 47.2	
	comp=Z,7.2nm,0.3s						
ASAR	**Alice Springs**	**20.64**	**157**	P	**P**	**06 24 45.6**	**+0.6**
	comp=Z,4.6nm,0.4s,baz=334,slow=9.8,SNR=105						
ASAR				S	**S**	**06 27 59.5**	**-4.1**
	comp=Z,1.0nm,0.6s,baz=332,slow=13,SNR=1.8						
ASAR				PcP	**PcP**	**06 28 33.3**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=356,slow=1.2,SNR=0.9						
	comp=Z,4.6nm,0.4s						
AS01	**Alice Springs**	**20.66**	**157**	P	**P**	**06 24 45.8**	**+0.6**
GIRL	**Giralia**	**20.95**	**210**	P	**P**	**06 24 48.2**	**+0.4**
	baz=21,SNR=3.5						
GIRL	**Giralia**	**20.95**	**210**	P	**P**	**06 24 48.0**	**+0.3**
GIRL	**Giralia**	**20.95**	**210**	P	**P**	**06 24 47.0**	**-0.8**
QIS	**Mount Isa**	**21.02**	**140**	P	**P**	**06 24 48.9**	**+0.4**
	baz=21,SNR=11						
QIS	**Mount Isa**	**21.02**	**140**	P	**P**	**06 24 49.1**	**+0.7**
MANU	**Manus Island**	**22.05**	**84**	P	**P**	**06 24 57.1**	**-0.6**
MEEK	**Meekatharra**	**22.86**	**196**	P	**P**	**06 25 04.6**	**-0.3**
	baz=23,SNR=10						
MEEK	**Meekatharra**	**22.86**	**196**	P	**P**	**06 25 04.7**	**-0.3**
OOD	**Oodnadatta**	**25.05**	**158**	P	**P**	**06 25 24.9**	**+0.5**
MORW	**Morawa**	**25.91**	**199**	P	**P**	**06 25 31.6**	**-0.5**
	baz=26,SNR=7.7						
MORW	**Morawa**	**25.91**	**199**	P	**P**	**06 25 31.7**	**-0.3**
MORW				IAmb	IAmb	06 25 55.3	
	comp=Z,21nm,1.4s						
MORW	**Morawa**	**25.91**	**199**	P	**P**	**06 25 31.5**	**-0.5**
FORT	**Forrest**	**26.16**	**175**	P	**P**	**06 25 34.6**	**+0.4**
	baz=26,SNR=29						
FORT	**Forrest**	**26.16**	**175**	P	**P**	**06 25 34.7**	**+0.6**
FORT	**Forrest**	**26.16**	**175**	P	**P**	**06 25 34.8**	**+0.6**
MULG	**Mulgathing**	**26.81**	**163**	P	**P**	**06 25 40.8**	**+0.9**
KMBL	**Kambalda**	**26.84**	**187**	P	**P**	**06 25 40.2**	**+0.1**
	baz=27,SNR=8.2						
KMBL	**Kambalda**	**26.84**	**187**	P	**P**	**06 25 40.2**	**+0.1**
BLDU	**Ballidu**	**27.15**	**197**	P	**P**	**06 25 42.5**	**-0.4**
	baz=27,SNR=10.0						
BLDU	**Ballidu**	**27.15**	**197**	P	**P**	**06 25 42.4**	**-0.5**
KLBR	**Kellerberrin**	**27.80**	**194**	P	**P**	**06 25 48.6**	**0.0**
UBPT	**Khong Chiam**	**27.95**	**315**	P	**P**	**06 25 50.5**	**+0.4**
UBPT				IAmb	IAmb	06 25 52.4	
	comp=Z,20nm,1.2s						
LCRK	**Leigh Creek**	**28.40**	**156**	P	**P**	**06 25 54.7**	**+0.8**
MUN	**Mundaring**	**28.58**	**197**	P	**P**	**06 25 54.9**	**-0.5**
	baz=29,SNR=3.7						
MUN	**Mundaring**	**28.58**	**197**	P	**P**	**06 25 55.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**29.20**	**194**	P	**P**	**06 26 00.8**	**-0.1**
NWAO	**Narrogin (SRO)**	**29.20**	**194**	P	**P**	**06 26 00.8**	**-0.1**
BBOO	**Buckleboo**	**29.77**	**162**	P	**P**	**06 26 06.1**	**+0.4**
	baz=30,SNR=12						
BBOO	**Buckleboo**	**29.77**	**162**	P	**P**	**06 26 06.0**	**+0.1**
BBOO				IAmb	IAmb	06 26 07.6	
	comp=Z,19nm,1.1s						
BBOO	**Buckleboo**	**29.77**	**162**	P	**P**	**06 26 06.2**	**+0.4**
RK1H	**Rockhampton Ha**	**30.56**	**130**	P	**P**	**06 26 13.2**	**+0.4**
STKA	**Stephens Creek**	**31.09**	**153**	P	**P**	**06 26 17.8**	**+0.6**
	baz=31,SNR=6.1						
STKA	**Stephens Creek**	**31.09**	**153**	P	**P**	**06 26 17.8**	**+0.6**
STKA	**Stephens Creek**	**31.09**	**153**	P	**P**	**06 26 17.7**	**+0.5**
STKA	**Stephens Creek**	**31.09**	**153**	P	**P**	**06 26 17.6**	**+0.4**
	comp=Z,3.9nm,0.5s,baz=326,slow=9.1,SNR=9.6						
	comp=Z,3.9nm,0.5s						
HTT	**Hallett**	**31.32**	**158**	P	**P**	**06 26 20.2**	**+1.0**
	baz=32,SNR=7.1						
HTT	**Hallett**	**31.32**	**158**	P	**P**	**06 26 20.4**	**+1.2**
CMSA	**Cobar Meteorol**	**32.87**	**147**	P	**P**	**06 26 33.6**	**+1.3**
	baz=33,SNR=9.9						
CMSA	**Cobar Meteorol**	**32.87**	**147**	P	**P**	**06 26 33.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**34.73**	**312**	P	**P**	**06 26 48.8**	**+0.5**
	comp=Z,3.5nm,0.5s,baz=137,slow=6.8,SNR=20						
	comp=Z,3.5nm,0.5s						
CHTO	**Chiang Mai**	**34.96**	**312**	P	**P**	**06 26 50.9**	**+0.7**
CHTO				IAmb	IAmb	06 26 51.1	
	comp=Z,7.6nm,0.7s						
ARMA	**Armidale**	**35.64**	**139**	P	**P**	**06 26 57.8**	**+1.9**
ARMA				IAmb	IAmb	06 27 07.9	
	comp=Z,23nm,1.3s						
NJ2	**Nanjing**	**36.98**	**351**	*e*P	**P**	**06 27 09.2**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,400nm,5.2s						
CAN	**Canberra**	**37.53**	**148**	P	**P**	**06 27 13.5**	**+2.1**
CAN				IAmb	IAmb	06 27 14.2	
	comp=Z,69nm,1.5s						
CAN	**Canberra**	**37.53**	**148**	P	**P**	**06 27 13.2**	**+1.8**
TOO	**Toolangi**	**37.59**	**153**	P	**P**	**06 27 13.7**	**+1.8**
TOO				IAmb	IAmb	06 27 30.8	
	comp=Z,19nm,1.5s						
PZH	**PanZhiHua**	**38.50**	**325**	P	**P**	**06 27 19.8**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PZH				pmax	pmax		
	comp=Z,110nm,4.3s						
XAN	**Xi'an**	**41.47**	**339**	⇓P	**P**	**06 27 42.5**	**-0.7**
XAN				pP	pP	06 27 48.2	-85
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
KSRS	**Korea Array**	**41.90**	**3**	P	**P**	**06 27 46.1**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=180,slow=9.3,SNR=6.2						
	comp=Z,1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**42.64**	**15**	P	**P**	**06 27 51.2**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=192,slow=7.7,SNR=4.1						
	comp=Z,1.4nm,0.5s						
HNS	**HongShan**	**42.96**	**347**	⇓P	**P**	**06 27 54.5**	**-0.2**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	**Lanzhou**	**45.24**	**335**	⇓P	**P**	**06 28 13.6**	**+0.9**
LZH				pP	PP	06 30 03.2	-4.0
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
HHC	**Hu-ho-hao-te**	**46.98**	**346**	*e*P	**P**	**06 28 26.8**	**+1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,64nm,5.3s						
LSA	**Lhasa**	**47.36**	**318**	P	**P**	**06 28 30.4**	**+1.1**
LSA				IAmb	IAmb	06 28 31.0	
	comp=Z,9.0nm,0.7s						
JTM	**Tenmabayashi**	**47.39**	**16**	P	**P**	**06 28 29.5**	**+0.8**
JTM				IAmb	IAmb	06 28 30.9	
	comp=Z,54nm,1.3s						
USA0B	**Ussuriysk Arra**	**48.93**	**6**	P	**P**	**06 28 40.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**48.93**	**6**	P	**P**	**06 28 40.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**48.93**	**6**	P	**P**	**06 28 40.3**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=189,slow=7.3,SNR=10						
	comp=Z,4.1nm,0.6s						
GTA	**Gaotai**	**49.76**	**334**	*e*P	**P**	**06 28 47.2**	**+0.6**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**54.83**	**344**	P	**P**	**06 29 23.1**	**+0.1**
SONM	**Songino Array**	**54.83**	**344**	P	**P**	**06 29 22.9**	**0.0**
	comp=Z,1.2nm,0.6s,baz=163,slow=8.9,SNR=12						
	comp=Z,1.2nm,0.6s						
BHW	**Baring Head**	**57.31**	**137**	P	**P**	**06 29 39.9**	**-0.2**
URZ	**Urewera**	**57.61**	**133**	P	**P**	**06 29 41.8**	**-0.4**
	comp=Z,5.4nm,0.4s,baz=357,slow=5.4,SNR=1.4						
	comp=Z,5.4nm,0.4s						
KSH	**Kashi**	**63.21**	**319**	P	**P**	**06 30 20.3**	**+0.8**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	**Makanchi Array**	**63.77**	**328**	P	**P**	**06 30 23.0**	**+0.2**
MKAR	**Makanchi Array**	**63.77**	**328**	P	**P**	**06 30 23.3**	**+0.5**
MKAR	**Makanchi Array**	**63.77**	**328**	P	**P**	**06 30 22.8**	**-0.1**
	comp=Z,3.3nm,0.4s,baz=117,slow=8.2,SNR=75						
	comp=Z,3.3nm,0.4s						
PET	**Petropavlovsk**	**63.88**	**22**	P	**P**	**06 30 24.1**	**+0.8**
MAKZ	**Makanchi**	**63.95**	**328**	P	**P**	**06 30 24.1**	**+0.2**
MAKZ				IAmb	IAmb	06 30 24.3	
	comp=Z,2.6nm,0.5s						
BOOM	**Boomskoye usch**	**64.83**	**322**	P	**P**	**06 30 30.4**	**+0.6**
BOOM				IAmb	IAmb	06 30 37.7	
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**65.81**	**321**	P	**P**	**06 30 37.2**	**+1.3**
ZAA0	**Zalesovo Array**	**67.48**	**335**	P	**P**	**06 30 45.4**	**-0.4**
ZALV	**Zalesovo Beam**	**67.48**	**335**	P	**P**	**06 30 45.5**	**-0.3**
ZALV	**

az=123.0

ISC 01 06:48:09.6±0.7, 28°15N±0°03×129°46E±0°04, h28km±4km, n146, σ1§37/137, mb4.2/45, MS3.2/8, 5C-4D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	**Amaminishikomi**	**0.27**	**291**	P	**Pb**	**06 48 14.9**	**-1.5**
JAMN				*i* S	**Sb**	**06 48 19.1**	**-2.0**
JAMN	**Amaminishikomi**	**0.27**	**291**	A	A	06 48 14.9	
	comp=E,95nm,0.3s,comp=N,87nm,0.2s						
JAM	**Amami Oshima**	**0.29**	**27**	P	**Pb**	**06 48 15.0**	**-1.8**
JAM				*e*S	**Sb**	**06 48 19.1**	**-2.6**
JAM	**Amami Oshima**	**0.29**	**27**	A	A	06 48 15.0	
	comp=E,36nm,0.4s,comp=N,84nm,1.1s						
JZK	**Kikaishima**	**0.48**	**70**	P	**Pb**	**06 48 20.0**	**+0.3**
JZK	**Kikaishima**	**0.48**	**70**	A	A	06 48 20.0	
	comp=E,81nm,0.3s,comp=N,101nm,1.9s						
JTK	**Tokunoshima**	**0.57**	**231**	P	**Pb**	**06 48 20.4**	**-0.8**
JTK				S	**Sb**	**06 48 28.2**	**-0.8**
JTK	**Tokunoshima**	**0.57**	**231**	A	A	06 48 20.4	
	comp=E,14nm,1.1s,comp=N,18nm,1.1s						
JTAJ	**Takarajima**	**1.03**	**348**	*e*S	**Sn**	**06 48 41.0**	**-0.6**
JTAJ	**Takarajima**	**1.03**	**348**	A	A	06 48 41.0	
	comp=E,9.0nm,1.2s,comp=N,10.0nm,3.8s						
JOKE	**Okinoerabujima**	**1.11**	**225**	P	**Pn**	**06 48 29.4**	**+0.2**
JYRO	**Yoronjima**	**1.43**	**219**	P	**Pn**	**06 48 34.8**	**+1.2**
JOW	**Kunigami**	**1.68**	**219**		**Pn**	**06 48 38.5**	**+1.4**
JOW	**Kunigami**	**1.68**	**219**	P	**Pn**	**06 48 38.4**	**+1.4**
JOW	**Kunigami**	**1.68**	**219**	A	A	06 48 38.4	
	comp=E,6.0nm,3.7s,comp=N,3.0nm,1.0s						
JOW	**Kunigami**	**1.68**	**219**	Pn	**Pn**	**06 48 38.6**	**+1.5**
	comp=N,188nm,0.3s,baz=101,slow=21,SNR=99						
JOW				Sn	**Sn**	**06 49 00.2**	**+2.6**
	comp=N,119nm,0.3s,baz=314,slow=29,SNR=19						
JIH	**Iheya**	**1.72**	**230**	P	**Pn**	**06 48 38.3**	**+0.6**
JIH	**Iheya**	**1.72**	**230**	A	A	06 48 38.3	
	comp=E,4.0nm,2.4s,comp=N,4.0nm,1.2s						
JNN	**Nakanoshima**	**1.73**	**12**	P	**Pn**	**06 48 36.9**	**-0.9**
JNN	**Nakanoshima**	**1.73**	**12**	A	A	06 48 36.9	
	comp=E,7.0nm,2.5s,comp=N,6.0nm,1.7s						
JNTH	**Nagotoyohara**	**2.06**	**219**	*e*P	**Pn**	**06 48 43.9**	**+1.6**
JYAK	**Yakushimahirau**	**2.28**	**24**	*e*P	**Pn**	**06 48 45.1**	**-0.2**
JKC	**Kuchinoerabu**	**2.40**	**15**	*e*P	**Pn**	**06 48 46.5**	**-0.4**
JKC				*e*S	**Sn**	**06 49 14.9**	**-0.4**
JMTN	**Minamitane**	**2.57**	**29**	P	**Pn**	**06 48 50.3**	**+0.9**
JKDJ	**Kitadaitoujima**	**2.74**	**143**	*e*P	**Pn**	**06 48 52.0**	**+0.4**
JKDJ				*e*S	**Sn**	**06 49 22.6**	**-1.1**
JMZ	**Minamidaito 2**	**2.80**	**145**	Pn	**Pn**	**06 48 53.9**	**+1.3**
JMZ				Sn	**Sn**	**06 49 24.1**	**-1.3**
JMZ	**Minamidaito 2**	**2.80**	**145**	*e*P	**Pn**	**06 48 52.6**	**+0.1**
JMZ				*e*S	**Sn**	**06 49 23.1**	**-2.3**
JTN	**Tanegashima 3**	**2.83**	**28**	*e*P	**Pn**	**06 48 54.5**	**+1.5**
JTN				*e*S	**Sn**	**06 49 28.3**	**+2.2**
JKE	**Kume jima 2**	**2.99**	**233**	*e*P	**Pn**	**06 48 56.5**	**+1.4**
JNU	**Nakatsue**	**5.11**	**14**	Pn	**Pn**	**06 49 27.7**	**+3.4**
JNU	**Nakatsue**	**5.11**	**14**	Pn	**Pn**	**06 49 26.4**	**+2.1**
	comp=N,3.8nm,0.3s,baz=183,slow=11,SNR=20						
JNU				Sn	**Sn**	**06 50 22.3**	**-0.1**
	baz=259,slow=19						
JNU				LR	LR	06 51 37.4	
	comp=N,160nm,21.0s,baz=162,slow=43						
JMN	**Monobe**	**6.74**	**33**		**Pn**	**06 49 48.2**	**+1.6**
YHNB	**Yeheng**	**8.03**	**246**	Pn	**Pn**	**06 50 06.7**	**+2.3**
NACB	**Ninganchiao**	**8.09**	**243**	Pn	**Pn**	**06 50 03.0**	**-2.3**
YULB	**Yu-li**	**8.74**	**239**	Pn	**Pn**	**06 50 12.2**	**-2.0**
SSLB	**Suanglung**	**8.79**	**242**		**Pn**	**06 50 14.2**	**-0.7**
TPUB	**Ta-pu**	**9.30**	**241**	Pn	**Pn**	**06 50 21.2**	**-0.7**
KSAR	**Wonju Array Be**	**9.36**	**352**	Pn	**Pn**	**06 50 23.6**	**+1.1**
KSAR	**Wonju Array Be**	**9.36**	**352**	P	**Pn**	**06 50 23.7**	**+1.1**
KSRS	**Korea Array**	**9.37**	**352**	Pn	**Pn**	**06 50 23.9**	**+1.2**
	comp=N,0.3nm,0.3s,baz=172,slow=15,SNR=7.8						
KSRS				LR	LR	06 54 15.6	
	comp=N,201nm,18.7s,baz=180,slow=40						
JHJ	**Hachijo jima 2**	**10.18**	**58**	LR	LR	06 53 52.9	
	comp=N,50nm,18.6s,baz=47,slow=34						
MJAR	**Matsushiro Arr**	**11.17**	**39**	Pn	**Pn**	**06 50 45.6**	**-1.8**
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=1.5						
MJAR				LR	LR	06 55 16.1	
	comp=N,61nm,18.7s,baz=227,slow=39						
	comp=N,0.8nm,0.3s						
MSHR	**Mys Shultsa**	**14.47**	**5**	*i* P	**Pn**	**06 51 32.5**	**+0.1**
HNS	**HongShan**	**15.44**	**310**	⇓P	**P**	**06 51 52.4**	**+2.7**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CN2	**Changchun**	**15.95**	**349**	P	P	06 52 03.5	+8.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,300nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
BJT	**Baijiatuau**	**16.14**	**321**	P	**P**	**06 51 56.7**	**-0.8**
BJT	**Baijiatuau**	**16.14**	**321**	P	**P**	**06 51 56.7**	**-0.8**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**16.15**	**7**	Pn	**Pn**	**06 51 55.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**16.15**	**7**	P	**Pn**	**06 51 55.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**16.15**	**7**	LR	LR	06 58 15.6	
	comp=Z,76nm,20.4s,baz=153,slow=38						
XAN	**Xi'an**	**18.53**	**294**	⇓P	**Pn**	**06 52 26.3**	**+2.0**
XAN				pP	pP	06 52 33.5	+1.9
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
ASAJ	**Asahikawa**	**19.11**	**30**	P	**P**	**06 52 28.4**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=221,slow=20,SNR=1.5						
	comp=Z,2.1nm,0.3s						
HHC	**Hu-ho-hao-te**	**19.40**	**315**	*e*P	**Pn**	**06 52 36.9**	**+2.2**
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC				pmax	pmax		
	comp=Z,97nm,4.3s						
GUMO	**Guam**	**20.39**	**132**	LR	LR	07 00 15.5	
	comp=Z,43nm,18.5s,baz=61,slow=36						
KLR	**Kul'dur**	**21.13**	**4**	*i* P	**P**	**06 52 51.6**	**-0.4**
KLR	**Kul'dur**	**21.13**	**4**	P	**P**	**06 52 49.2**	**-2.8**
	comp=Z,0.6nm,0.7s,baz=198,slow=3.2,SNR=1.5						
KLR				LR	LR	07 00 03.0	
	comp=Z,64nm,20.1s,baz=194,slow=34						
	comp=Z,0.6nm,0.7s						
YSS	**Yuzh-Sakhalins**	**21.48**	**25**	*i* P	**P**	**06 52 56.2**	**+0.4**
PZH	**PanZhiHua**	**24.66**	**273**	P	**P**	**06 53 28.4**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,4.7s						
TYV	**Tymovskoe**	**24.79**	**20**	*e*P	P	06 53 16.0	-13
TYV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.3s						
ZEA	**Zeya**	**25.62**	**357**	*e*P	P	06 53 45.9	+9.5
ULN	**Ulaanbaatar**	**26.28**	**325**	*i* P	**P**	**06 53 42.5**	**-0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.5s						
SONM	**Songino Array**	**26.60**	**324**	P	**P**	**06 53 45.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=83,slow=15,SNR=2.2						
	comp=Z,0.4nm,0.4s						
GTA	**Gaotai**	**26.96**	**302**	*e*P	**P**	**06 53 48.3**	**-0.6**
GTA				sP	pP	06 53 55.5	-1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.57**	**258**	*i* P	P	06 54 19.7	+7.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.57**	**258**	P	**P**	**06 54 13.0**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=34,slow=18,SNR=1.5						
CMAR				PcP	**PcP**	**06 57 17.2**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=64,slow=6.1,SNR=4.9						
CMAR				LR	LR	07 06 58.0	
	comp=Z,44nm,18.6s,baz=65,slow=38						
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**32.50**	**32**	LR	LR	07 07 42.1	
	comp=Z,55nm,22.0s,baz=248,slow=36						
KAPI	**Kappang**	**34.27**	**197**	LR	LR	07 08 32.0	
	comp=Z,25nm,21.5s,baz=38,slow=36						
H11N2	**WAKE ISLAND Hy**	**35.12**	**95**	T	T	07 32 11.2	
	baz=290,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**35.12**	**95**	T	T	07 32 14.8	
	baz=290,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**35.14**	**95**	T	T	07 32 15.8	
	baz=290,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**35.39**	**98**	T	T	07 32 36.6	
	baz=290,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**35.40**	**98**	T	T	07 32 34.9	
	baz=290,slow=74,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**35.41**	**98**	T	T	07 32 36.0	
	baz=290,slow=74,SNR=8.4						
MK31	**Makanchi Array**	**41.11**	**310**	P	**P**	**06 55 49.4**	**-1.6**
MK31	**Makanchi Array**	**41.11**	**310**	*i* P	**P**	**06 55 50.3**	**-0.7**
MKAR	**Makanchi Array**	**41.11**	**310**	P	**P**	**06 55 50.5**	**-0.5**
MKAR	**Makanchi Array**	**41.11**	**310**	*i* P	**P**	**06 55 51.4**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**41.11**	**310**	P	**P**	**06 55 49.4**	**-1.6**
	comp=Z,1.9nm,0.8s,baz=100,slow=9.8,SNR=19						
MKAR				PcP	**PcP**	**06 57 49.6**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=83,slow=3.1,SNR=5.2						
	comp=Z,1.9nm,0.8s						
MAKZ	**Makanchi**	**41.32**	**310**	P	**P**	**06 55 53.2**	**+0.4**
MAKZ	**Makanchi**	**41.32**	**310**	P	**P**	**06 55 53.2**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAA0	**Zalesovo Array**	**41.41**	**321**	P	**P**	**06 55 52.7**	**-0.7**
ZALV	**Zalesovo Beam**	**41.41**	**321**	P	**P**	**06 55 53.0**	**-0.4**
ZALV	**Zalesovo Beam**	**41.41**	**321**	*e*P	**P**	**06 55 53.1**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.41**	**321**	P	**P**	**06 55 52.2**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=111,slow=7.6,SNR=4.8						
ZALV				PcP	**PcP**	**06 57 50.7**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=74,slow=6.3,SNR=3.6						
	comp=Z,0.7nm,0.4s						
KURK	**Kurchatov**	**44.21**	**315**	P	**P**	**06 56 16.3**	**+0.2**
KURK				IAmb	IAmb	06 56 16.9	
	comp=Z,3.8nm,0.9s						
KURK	**Kurchatov**	**44.21**	**315**	*ce*P	**P**	**06 56 15.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KURBB	**Kurchatov Arra**	**44.25**	**315**	P	**P**	**06 56 14.6**	**-1.7**
	comp=Z,1.9nm,0.7s,baz=101,slow=8.9,SNR=16						
KURBB				PcP	**PP**	**06 58 00.6**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=113,slow=4.0,SNR=1.8						
	comp=Z,1.9nm,0.7s						
KSH	**Kashi**	**45.26**	**299**	P	**P**	**06 56 28.9**	**+4.1**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL	**Bilibino**	**45.52**	**18**	*i* P	**P**	**06 56 27.0**	**+0.8**
ADK	**Adak**	**46.29**	**44**	P	**P**	**06 56 34.5**	**+2.0**
ADK	**Adak**	**46.29**	**44**	P	**P**	**06 56 34.5**	**+2.0**
ADK				pmax	pmax		
	comp=Z,68nm,1.1s						
AAK	**Ala-Archa**	**46.30**	**303**	P	**P**	**06 56 31.5**	**-1.5**
AAK	**Ala-Archa**	**46.30**	**303**	*ce*P	**P**	**06 56 32.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ATKA	**Atka Island**	**47.85**	**44**	P	**P**	**06 56 45.0**	**+0.3**
WB0	**Warramunga Arr**	**47.87**	**174**	P	**P**	**06 56 43.5**	**-1.7**
WRA	**Warramunga Arr**	**48.04**	**174**	*i* P	P	06 56 51.7	+5.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**48.04**	**174**	P	**P**	**06 56 47.0**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=357,slow=8.0,SNR=2.1						
	comp=Z,0.9nm,0.9s						
WB2	**Warramunga Arr**	**48.04**	**174**	P	**P**	**06 56 44.4**	**-2.1**
WB2				IAmb	IAmb	06 57 07.9	
	comp=Z,5.9nm,1.1s						
KK31	**Karatay Array**	**49.22**	**304**	P	**P**	**06 56 56.0**	**+0.5**
KK31				IAmb	IAmb	06 56 57.5	
	comp=Z,3.8nm,0.9s						
KK31	**Karatay Array**	**49.22**	**304**	P	**P**	**06 56 56.0**	**+0.5**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**49.22**	**304**	P	**P**	**06 56 56.0**	**+0.5**
KKAR				IAmb	IAmb	06 56 57.5	
	comp=Z,3.8nm,0.9s						
KKAR	**Karatay Array**	**49.22**	**304**	P	**P**	**06 56 56.0**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**49.60**	**317**	P	**P**	**06 56 57.5**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=84,slow=10.0,SNR=15						
BVAR				PcP	**PcP**	**06 58 17.1**	**-2.3**
	comp=Z,1.4nm,0.8s,baz=104,slow=6.3,SNR=3.8						
BVAR				LR	LR	07 19 52.8	
	comp=Z,67nm,18.8s,baz=106,slow=39						
	comp=Z,2.1nm,0.6s						
BRVK	**Borovoye**	**49.66**	**317**	P	**P**	**06 56 59.1**	**+0.5**
BRVK				IAmb	IAmb	06 56 59.6	
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**49.66**	**317**	*ce*P	**P**	**06 56 58.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**51.69**	**175**	P	**P**	**06 57 14.1**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=8.0,slow=9.4,SNR=8.8						
ASAR				PcP	**PcP**	**06 58 28.6**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=339,slow=2.4,SNR=2.0						
	comp=Z,0.5nm,0.7s						
ANM	**Nome**	**54.31**	**29**	P	**P**	**06 57 34.6**	**+1.5**
ANM				IAmb	IAmb	06 57 44.7	
	comp=Z,3.1nm,1.1s						
ANM	**Nome**	**54.31**	**29**	P	**P**	**06 57 34.6**	**+1.5**
ANM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
C16K	**Lisburne Hills**	**55.01**	**24**	P	**P**	**06 57 39.3**	**+1.2**
C16K				IAmb	IAmb	06 57 47.8	
	comp=Z,3.8nm,0.8s						
ABKAR	**Akbulak array**	**56.15**	**312**	P	**P**	**06 57 46.8**	**+0.2**
ABKAR				IAmb	IAmb	06 57 47.0	
	comp=Z,2.2nm,0.8s						
ARU	**Arti**	**56.58**	**321**	*c i*P	**P**	**06 57 48.7**	**-0.8**
ARU				*PP	**sP**	**06 58 04.7**	**+3.0**
ARU						06 58 42.3	
ARU						06 59 53.0	
ARU				S	**S**	**07 05 36.7**	**-2.7**
ARU				pmax	pmax		
	comp=Z,11nm,1.4s						
ARU	**Arti**	**56.58**	**321**	LR	LR	07 24 48.0	
	comp=Z,64nm,19.6s,baz=60,slow=39						
D19K	**Kuna River**	**57.69**	**25**	P	**P**	**06 57 58.8**	**+1.5**
E19K	**Redstone River**	**57.94**	**26**	P	**P**	**06 57 60.0**	**+1.0**
E19K				IAmb	IAmb	06 58 09.2	
	comp=Z,3.0nm,0.8s						
GEYT	**Alibeck**	**59.29**	**299**	P	**P**	**06 58 09.3**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=78,slow=15,SNR=1.9						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**62.24**	**29**	*e*P	**P**	**06 58 32.0**	**+3.5**
ILAR	**Eielson Array**	**62.24**	**29**	P	**P**	**06 58 27.3**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=289,slow=6.6,SNR=3.3						
	comp=Z,0.4nm,0.7s						
BELG	**Belogornoye**	**63.40**	**317**	LR	LR	07 28 08.3	
	comp=Z,44nm,19.1s,baz=138,slow=38						
E28M	**Babbage River**	**64.48**	**24**	IAmb	IAmb	06 58 56.1	
	comp=Z,4.9nm,1.1s						
F28M	**Old Crow**	**64.56**	**25**	P	**P**	**06 58 45.3**	**+1.5**
F28M				IAmb	IAmb	06 58 54.2	
	comp=Z,4.9nm,1.1s						
SPITS	**Spitsbergen Ar**	**67.18**	**348**	P	**P**	**06 58 59.2**	**-1.3**
	comp=Z,17nm,1.2s,baz=26,slow=3.7,SNR=1.6						
A36M	**Sachs Harbour**	**68.07**	**19**	P	**P**	**06 59 06.9**	**+0.7**
ARCES	**ARCESS Array B**	**68.63**	**338**	P	**P**	**06 59 08.1**	**-1.6**
	comp=Z,4.4nm,1.1s,baz=67,slow=6.9,SNR=4.3						
	comp=Z,4.4nm,1.1s						
KBZ	**Khabaz**	**68.80**	**309**	*i* P	**P**	**06 59 11.5**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**68.80**	**309**	P	**P**	**06 59 11.0**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=135,slow=5.7,SNR=5.1						
	comp=Z,3.3nm,0.8s						
C36M	**Paulatuk**	**69.52**	**21**	P	**P**	**06 59 16.1**	**+0.9**
FINES	**FINESS Array B**	**71.74**	**331**	*i* P	**P**	**06 59 28.2**	**-0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**71.74**	**331**	P	**P**	**06 59 27.9**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=77,slow=5.6,SNR=18						
	comp=Z,1.8nm,0.5s						
AKASG	**Malin Array Be**	**74.79**	**320**	*ce*P	**P**	**06 59 46.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**74.79**	**320**	P	**P**	**06 59 46.1**	**-0.9**
	comp=Z,2.1nm,0.6s,baz=56,slow=6.3,SNR=9.2						
	comp=Z,2.1nm,0.6s						
AKBB	**Malin Array Si**	**74.79**	**320**	*i* P	**P**	**06 59 46.7**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**76.33**	**25**	*e*P	**P**	**06 59 56.6**	**+0.9**
YKA	**Yellowknife Ar**	**76.33**	**25**	P	**P**	**06 59 56.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=301,slow=5.5,SNR=8.6						
	comp=Z,0.4nm,0.6s						
BR131	**Keskin Array S**	**76.72**	**308**	P	**P**	**06 59 58.5**	**0.0**
BR131				IAmb	IAmb	06 59 59.6	
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	**76.72**	**308**	*i* P	**P**	**06 59 58.7**	**+0.2**
BRTR	**Keskin Array B**	**76.72**	**308**	P	P	**06 59 58.7**	**+0.2**
BRTR	**Keskin Array B**	**76.72**	**308**	*e*P	P	**06 59 58.8**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**76.72**	**308**	P	**P**	**06 59 58.0**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=95,slow=5.8,SNR=12						
	comp=Z,2.3nm,0.7s						
HFS	**Hagfors**	**77.63**	**333**	P	**P**	**07 00 01.5**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=70,slow=12,SNR=1.2						
	comp=Z,1.5nm,0.7s						
NB2	**NORSAR Subarra**	**78.08**	**334**	P	**P**	**07 00 04.3**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**78.08**	**334**	*e*P	**P**	**07 00 04.7**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**78.08**	**334**	P	**P**	**07 00 04.2**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=51,slow=5.6,SNR=3.8						
	comp=Z,1.3nm,0.7s						
BCLA	**Clavier**	**87.50**	**328**	*d*P	**P**	**07 00 53.3**	**-1.4**
	comp=Z,6.3nm,1.4s						
BMRD	**Maredsous**	**87.83**	**328**	*d*P	**P**	**07 00 55.4**	**-0.8**
	comp=Z,5.9nm,1.0s						
NVAR	**Mina Array Bea**	**88.40**	**47**	P	**P**	**07 01 00.2**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=271,slow=7.1,SNR=4.4						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**90.99**	**39**	P	**P**	**07 01 11.9**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=70,slow=1.7,SNR=4.1						
	comp=Z,0.3nm,0.8s						

IDC 01 06:59:07.5±3.1, 53°64N×87°87E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=26.0km s-min=15.6km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**281**	I	I	07 11 46.1	
	0.1nm,1.6s,baz=96,slow=332,SNR=11						
ZALV	**Zalesovo Beam**	**1.83**	**281**	Pg	Pn	06 59 40.8	+0.6
	0.9nm,0.3s,baz=100,slow=18,SNR=16						
ZALV				Lg	Lg	07 00 05.4	
	1.9nm,0.3s,baz=98,slow=22,SNR=11						
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	07 00 44.8	+0.6
	baz=61,slow=14,SNR=6.6						
KURBB				Sn	Sn	07 01 58.7	-0.1
	baz=61,slow=28,SNR=1.5						
	0.2nm,0.2s						
MKAR	**Makanchi Array**	**7.72**	**210**	Pn	Pn	07 01 02.5	+1.4
	0.1nm,0.3s,baz=29,slow=12,SNR=4.3						
MKAR				Sn	Sn	07 02 28.1	-1.1
	0.1nm,0.3s,baz=22,slow=30,SNR=1.6						
MKAR				Lg	Lg	07 03 10.6	
	0.1nm,0.3s,baz=20,slow=14,SNR=2.5						
	0.1nm,0.3s						

IDC 01 07:00:47.1±3.0, 55°57N×86°36E, h0km, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=27.9km s-min=20.8km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**209**	I	I	07 13 30.0	
	0.3nm,0.7s,baz=26,slow=336,SNR=38						
ZALV	**Zalesovo Beam**	**1.86**	**209**	Pg	Pn	07 01 20.1	-0.1
	3.2nm,0.3s,baz=28,slow=16,SNR=18						
ZALV				Lg	Lg	07 01 45.7	
	3.3nm,0.3s,baz=30,slow=27,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.84**	**227**	Pn	Pn	07 02 28.9	+0.3
	0.1nm,0.3s,baz=45,slow=13,SNR=7.9						
KURBB				Lg	Lg	07 04 26.8	
	baz=49,slow=32,SNR=2.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**9.15**	**198**	Pn	Pn	07 03 00.5	+0.1
	0.1nm,0.3s,baz=19,slow=13,SNR=2.1						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**9.68**	**261**	Pn	Pn	07 03 06.4	-1.2
	baz=75,slow=12,SNR=1.3						
	0.2nm,0.3s						

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*NNC **01** 07:10:26.0±4.3, 53°89N×90°93E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=32.1km s-min=25.3km az=53.0, Suspected Mining explosion.*

*IDC **01** 07:10:26.6±3.5, 53°96N×90°90E, h0km, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=29.6km s-min=24.3km az=49.0*

ISC 01 07:10:27.0±4.0, 53°9N±0°1×90°8E±0°2, h0km, n9, σ2§08/15, 10C-4D, Southwestern Siberia

| Code | Station Name | Δ° | AZ° | Phase ID | | Time | Res

PKGZ S Sn 07 15 31.1 -4.4
PUZ Puketiti 8.71 194 P Pn 07 14 00.3 -0.6
PUZ S Sn 07 15 36.1 -2.6
RUGZ Raukumara Rang 8.75 197 S Sn 07 15 37.8 -1.8
TWGZ Tauwhareparae 8.88 195 P Pn 07 14 04.3 +1.3
TWGZ S Sn 07 15 43.0 +0.4
CNGZ Carnagh Statio 9.12 194 P Pn 07 14 05.5 -0.6
CNGZ S Sn 07 15 46.8 -1.5
MWZ Matawai 9.14 197 P Pn 07 14 05.9 -0.5
MWZ S Sn 07 15 48.8 +0.1
TKGZ Te Karaka 9.16 196 S Sn 07 15 48.5 -0.7
URZ Urewera 9.18 199 P Pn 07 14 06.0 -0.9
20nm,1.1s,baz=19,slow=10,SNR=1.5
URZ S Sn 07 15 49.6 -0.1
11nm,0.4s,baz=316,slow=18,SNR=9.1
URZ Urewera 9.18 199 P Pn 07 14 06.3 -0.6
URZ S Sn 07 15 49.8 +0.1
RIGZ Rimuhau 9.43 196 S Sn 07 15 53.4 -2.3
KNZ Kokohu 9.75 195 P Pn 07 14 13.4 -0.9
KNZ S Sn 07 15 54.9 -8.4
BHHZ Black Hill Sta 10.63 201 P Pn 07 14 25.4 -0.3
BHHZ S Sn 07 16 22.2 -2.1
DZM Mont Dzumac 15.08 297 P P 07 15 25.2 +2.8
5.4nm,0.7s,baz=153,slow=15,SNR=8.4
STKA Stephens Creek 33.79 256 P P 07 18 24.4 +2.9
1.7nm,0.4s,baz=108,slow=15,SNR=7.4
1.7nm,0.4s
ASAR Alice Springs 42.26 267 P P 07 19 33.5 +1.1
1.6nm,0.4s,baz=107,slow=7.5,SNR=33
ASAR PcP PcP 07 21 21.6 -0.8
0.5nm,0.4s,baz=120,slow=4.0,SNR=5.7
ASAR ScP ScP 07 24 51.8 -2.2
0.3nm,0.7s,baz=116,slow=4.2,SNR=2.2
1.6nm,0.4s
WRA Warramunga Arr 43.18 272 P P 07 19 40.6 +0.8
3.3nm,0.5s,baz=110,slow=8.1,SNR=37
3.3nm,0.5s
VNDA Vanda 48.77 185 P P 07 20 25.0 +2.5
0.6nm,0.5s,baz=6.5,slow=6.9,SNR=7.5
0.6nm,0.5s
QSPA South Pole Qui 60.47 180 P P 07 21 49.0 +2.1
11nm,0.7s,baz=19,slow=1.6,SNR=28
11nm,0.7s
MAW Mawson 72.71 201 P P 07 23 05.0 +1.0
12nm,0.9s,baz=160,slow=8.1,SNR=1.9
12nm,0.9s
MJAR Matsushiro Arr 77.11 326 P P 07 23 28.4 -1.2
1.0nm,0.3s,baz=164,slow=4.8,SNR=3.3
1.0nm,0.3s
TROLL Troll, Antarti 78.63 180 ⇑P P 07 23 38.7 +0.9
comp=Z,389nm,0.8s
SNAA Sanae 78.94 179 ⇑P P 07 23 39.8 +0.5
comp=Z,64nm,0.7s
SNAA Sanae 78.94 179 P P 07 23 39.3 0.0
comp=Z,2.1nm,0.7s,baz=219,slow=8.8,SNR=11
comp=Z,2.1nm,0.7s
VNA3 Neumayer Olymp 79.12 177 ⇑P P 07 23 40.6 +0.3
comp=Z,22nm,0.7s
VNA2 Neumayer~Watz 79.55 177 ⇑P P 07 23 43.2 +0.7
comp=Z,9.8nm,0.6s,baz=191,slow=4.8
H03S2 Juan Fernandez 81.63 124 T T 08 53 53.3
baz=235
H03S1 Juan Fernandez 81.64 124 T T 08 54 00.1
baz=235
H03S3 Juan Fernandez 81.65 124 T T 08 53 48.4
baz=235
H03N3 Juan Fernandez 81.82 124 T T 08 54 19.1
baz=241
H03N2 Juan Fernandez 81.82 124 T T 08 54 20.9
baz=241
H03N1 Juan Fernandez 81.84 124 T T 08 54 12.9
baz=241
KSRS Korea Array 83.19 320 P P 07 24 02.3 +0.3
comp=Z,1.8nm,0.7s,baz=139,slow=5.2,SNR=7.0
comp=Z,1.8nm,0.7s
PETK Petropavlovsk- 84.86 346 P P 07 24 08.8 -1.3
comp=Z,3.6nm,0.5s,baz=118,slow=7.9,SNR=14
comp=Z,3.6nm,0.5s
USRK Ussuriysk Ar. 86.03 327 P P 07 24 16.3 +0.2
comp=Z,2.9nm,0.7s,baz=149,slow=4.4,SNR=4.2
comp=Z,2.9nm,0.7s
NVAR Mina Array Bea 88.29 43 P P 07 24 25.4 -1.9
comp=Z,0.8nm,0.7s,baz=218,slow=8.1,SNR=8.3
comp=Z,0.8nm,0.7s
CN2 Changchun 89.00 323 P P 07 24 29.6 -0.7
CN2 pmax pmax
comp=Z,10.0nm,0.9s
MKAR Makanchi Array 116.60 311 PKP **PKPdf** 07 30 16.1 -2.2
comp=Z,0.4nm,0.5s,baz=105,slow=1.1,SNR=6.3
KURBB Kurchatov Arra 119.92 314 PKP **PKPdf** 07 30 22.4 -2.1
comp=Z,1.0nm,0.5s,baz=96,slow=2.1,SNR=9.3
BVAR Borovoye Array 125.24 316 PKP **PKPdf** 07 30 33.3 -1.4
comp=Z,3.6nm,0.8s,baz=134,slow=0.6,SNR=11
GEYT Alibeck 132.43 296 PKP **PKPdf** 07 30 49.0 +0.1
comp=Z,1.8nm,0.7s,baz=90,slow=10,SNR=3.9
ARCES ARCESS Array B 137.65 347 PKhKP PKPpre 07 30 48.6
comp=Z,2.6nm,0.9s,baz=5.7,slow=0.9,SNR=5.5
ARCES PKP **PKPdf** 07 30 57.4 -0.3
comp=Z,4.5nm,1.0s,baz=84,slow=2.7,SNR=8.2
KBZ Khabaz 143.94 305 PKP PKPab 07 31 07.0 -0.6
comp=Z,3.2nm,0.7s,baz=148,slow=5.4,SNR=12
FINES FINESS Array B 144.12 340 PKP **PKPab** 07 31 05.9 -1.7
comp=Z,7.7nm,0.4s,baz=62,slow=3.7,SNR=108
NB2 NORSAR Subarra147.86 351 PKP **PKPdf** 07 31 17.3 +1.4
comp=Z,2.0nm,0.6s,baz=25,slow=3.0
NOA NORSAR Array B147.86 351 PKPbc **PKPdf** 07 31 16.8 +0.9
comp=Z,0.9nm,0.8s,baz=64,slow=1.5,SNR=5.1
HFS Hagfors 148.31 348 PKPbc **PKPdf** 07 31 17.5 +0.9
comp=Z,1.9nm,0.4s,baz=46,slow=4.3,SNR=17
AKASG Malin Array Be 150.15 323 PKPbc **PKPbc** 07 31 23.2 -1.8
comp=Z,1.3nm,0.3s,baz=46,slow=2.8,SNR=15
AKASG PKPab **PKPab** 07 31 29.7 -2.1
comp=Z,2.2nm,0.5s,baz=48,slow=4.4,SNR=13
MMAI Mount Meron Ar 150.47 285 PKPbc **PKPbc** 07 31 27.0 +0.5
comp=Z,12nm,0.4s,baz=79,slow=5.2,SNR=33
BRTR Keskin Array B 151.45 299 PKPbc **PKPbc** 07 31 27.4 -1.3
comp=Z,1.3nm,0.4s,baz=147,slow=5.8,SNR=8.1
EKA Eskdalemuir Ar 154.15 5 PKPab **PKPab** 07 31 45.5 -2.9
comp=Z,1.3nm,0.6s,baz=351,slow=3.6,SNR=2.4
TORD Torodi Ar. Bea 163.58 182 PKPab **PKPab** 07 32 29.9 -0.4
comp=Z,4.1nm,0.6s,baz=163,slow=2.9,SNR=20

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*IDC **01** 07:15:21.2± 1.2, 55.82N× 150.27W, h0km, mb3.5/7, mbtmp3.6/12, ML3.5/5, MS3.5/3, Error ellipse: s-maj=30.2km s-min=18.2km az=28.0*
*NEIC **01** 07:15:21.8± 1.9, 55.97N± 0.08× 150.29W± 0.10, h6km± 6km, mb3.9/3, ML4.1/44, ML4.0(AEIC), Error ellipse: s-maj=11.6km s-min=7.8km az=165.0*
*AEIC **01** 07:15:25.7± 1.4, 55.87N± 0.09× 150.2W± 0.1, h12km± 7km, Error ellipse: s-maj=12.8km s-min=9.1km az=168.0*
ISC 01 07:15:22.8± 0.8, 56.03N± 0.07× 150.24W± 0.05, h10km, n233, σ1§01/229, mb3.8/8, MS3.8/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.06 307**			**Sn**	**07 16 20.4**	**-2.8**
OHAK	**Old Harbor**	**2.06 307**			**Pn**	**07 15 56.7**	**-0.7**
OHAK	**Old Harbor**	**2.06 307**		IAML		07 16 21.6	
OHAK	comp=E,361nm,0.8s			IAML		07 16 22.0	
OHAK	**Old Harbor**	**2.06 307**		P	**Pn**	**07 15 57.0**	**-0.5**
OHAK	**Old Harbor**	**2.06 307**		P	**Pn**	**07 15 56.9**	**-0.6**
OHAK	baz=127			S	**Sn**	**07 16 20.9**	**-2.3**
KDAK	**Kodiak Island**	**2.17 325**			**Sn**	**07 16 23.6**	**-2.4**
KDAK	**Kodiak Island**	**2.17 325**		Pn	**Pn**	**07 15 58.2**	**-0.8**
KDAK	**Kodiak Island**	**2.17 325**		Pn	**Pn**	**07 15 59.0**	**0.0**
KDAK	comp=N,14nm,0.3s,baz=160,slow=4.9,SNR=228			Sn	**Sn**	**07 16 23.4**	**-2.6**
	comp=N,17nm,0.3s,baz=136,slow=22,SNR=17 comp=N,27nm,0.3s						
SII	**Sitkinak Islan**	**2.26 285**			**Sn**	**07 16 24.1**	**-4.0**
SII	**Sitkinak Islan**	**2.26 285**			**Pn**	**07 15 59.2**	**-1.0**
SII	**Sitkinak Islan**	**2.26 285**		IAML		07 16 33.5	
SII	comp=N,441nm,0.7s			IAML		07 16 33.9	
	comp=E,391nm,0.7s						
SII	**Sitkinak Islan**	**2.26 285**		P	**Pn**	**07 15 59.6**	**-0.6**
SII	**Sitkinak Islan**	**2.26 285**		P	**Pn**	**07 15 59.2**	**-1.0**
SII	baz=106			S	**Sn**	**07 16 25.9**	**-2.2**
	baz=106						
SYI	**Shuyak Island**	**2.83 337**			**Sn**	**07 16 41.7**	**-0.6**
SYI	**Shuyak Island**	**2.83 337**		Pn	**Pn**	**07 16 08.4**	**+0.3**
Q20K	**Shuyak Island**	**2.84 337**		P	**Pn**	**07 16 08.6**	**+0.5**
Q20K	baz=155			S	**Sn**	**07 16 41.7**	**-0.6**
	baz=155						
KAHG	**Katmai Hook Gl**	**3.40 318**			**Pn**	**07 16 17.4**	**+1.5**
KAHG					**Sn**	**07 16 57.3**	**+1.0**
Q19K	**Cape Douglas,**	**3.44 329**			**Pn**	**07 16 17.5**	**+1.1**
Q19K	**Cape Douglas,** baz=147	**3.44 329**		P	**Pn**	**07 16 17.5**	**+1.1**
KCE	**Katmai Mt Cerb**	**3.49 312**			**Pn**	**07 16 18.5**	**+1.4**
KCG	**Knife Ck. Glac**	**3.50 313**			**Pn**	**07 16 18.6**	**+1.3**
ACHA	**Angle Creek He**	**3.53 310**			**Pn**	**07 16 18.3**	**+0.6**
CNPM	**China Poot**	**3.54 352**			**Sn**	**07 16 59.4**	**-0.4**
CNPM	**China Poot**	**3.54 352**			**Pn**	**07 16 17.9**	**0.0**
CNPM	**China Poot** comp=E,218nm,0.6s	**3.54 352**		IAML		07 17 00.5	
CNPM	comp=N,196nm,0.4s			IAML		07 17 00.5	
ANCK	**Angle Creek**	**3.59 309**			**Pn**	**07 16 19.3**	**+0.7**
KVTA	**Katmai Vly 10**	**3.62 313**			**Pn**	**07 16 20.2**	**+1.3**
KAHC	**Katmai Hardscr**	**3.68 317**			**Pn**	**07 16 21.1**	**+1.3**
KAHC	**Katmai Hardscr** baz=135	**3.68 317**		P	**Pn**	**07 16 21.1**	**+1.3**
HOM	**Homer**	**3.71 349**		Pn	**Pn**	**07 16 20.7**	**+0.6**
HOM	comp=N,560nm,1.5s			IAML		07 18 49.0	
HOM	**Homer** baz=167	**3.71 349**		P	**Pn**	**07 16 20.5**	**+0.4**
BRSE	**Bradley Lake S**	**3.73 356**			**Pn**	**07 16 19.8**	**-0.6**
BRSE					**Sn**	**07 17 02.6**	**-1.8**
BRSE	**Bradley Lake S** baz=175	**3.73 356**		P	**Pn**	**07 16 19.8**	**-0.6**
BRSE	baz=175			S	**Sn**	**07 17 02.6**	**-1.8**
AUJK	**Augustine Jueg**	**3.74 334**			**Pn**	**07 16 21.8**	**+1.3**
BRLK	**Bradley Lake**	**3.76 355**			**Pn**	**07 16 20.1**	**-0.7**
AUL	**Augustine Lava**	**3.77 334**			**Pn**	**07 16 22.1**	**+1.1**
CNTC	**Contact Creek**	**3.80 308**			**Pn**	**07 16 22.3**	**+0.8**
CNTC					**Sn**	**07 17 04.6**	**-1.6**
Q17K	**Contact Creek** baz=125	**3.80 308**		P	**Pn**	**07 16 22.3**	**+0.8**
Q17K	baz=125			S	**Sn**	**07 17 04.6**	**-1.6**
KELA	**Mount Kelaz**	**3.84 311**			**Pn**	**07 16 22.8**	**+0.8**
P19K	**Oil Pt**	**3.97 337**			**Pn**	**07 16 22.9**	**-0.8**
P19K	comp=E,523nm,1.2s			IAML		07 18 50.9	
P19K	**Oil Pt** baz=155	**3.97 337**		P	**Pn**	**07 16 24.6**	**+0.9**
Q23K	**Middleton Isla**	**3.99 30**			**Pn**	**07 16 23.8**	**-0.2**
Q23K	**Middleton Isla** comp=N,309nm,2.2s	**3.99 30**		IAML		07 17 25.4	
Q23K	comp=E,273nm,3.1s			IAML		07 17 40.6	
MID	**Middleton Isla**	**4.00 30**		Pn	**Pn**	**07 16 23.7**	**-0.3**
MID	comp=N,270nm,2.7s			IAML		07 17 24.2	
MID	comp=E,307nm,2.0s			IAML		07 17 40.6	
MID	**Middleton Isla**	**4.00 30**		P	**Pn**	**07 16 24.4**	**+0.4**
SEW	**Seward**	**4.11 6**			**Pn**	**07 16 24.7**	**-0.8**
SEW	**Seward** baz=185	**4.11 6**		P	**Pn**	**07 16 24.7**	**-0.8**
O20K	**Slope Mountain**	**4.25 344**			**Pn**	**07 16 27.6**	**0.0**
O20K	**Slope Mountain** baz=126	**4.25 344**		P	**Pn**	**07 16 27.9**	**+0.2**
P23K	**Montague Islan**	**4.25 20**			**Pn**	**07 16 26.7**	**-0.9**
P23K	**Montague Islan** baz=201	**4.25 20**		P	**Pn**	**07 16 26.5**	**-1.1**
IVE	**Iliamna Volcan**	**4.26 341**			**Pn**	**07 16 27.7**	**-0.1**
P18K	**Big Mountain,**	**4.30 324**		Pn	**Pn**	**07 16 28.4**	**+0.1**
P18K	comp=N,246nm,1.4s			IAML		07 18 46.8	
P18K	comp=E,154nm,1.1s			IAML		07 18 47.3	
P18K	**Big Mountain,** baz=140	**4.30 324**		P	**Pn**	**07 16 28.8**	**+0.5**
R16K	**Pilot Point**	**4.32 294**			**Pn**	**07 16 28.6**	**+0.2**
R16K	**Pilot Point** comp=E,488nm,1.1s	**4.32 294**		IAML		07 18 50.9	
R16K	comp=N,541nm,2.5s			IAML		07 18 54.0	
R16K	**Pilot Point** baz=110	**4.32 294**		P	**Pn**	**07 16 28.8**	**+0.4**
Q16K	**King Salmon**	**4.37 310**			**Pn**	**07 16 29.7**	**+0.5**
Q16K	**King Salmon** baz=126	**4.37 310**		P	**Pn**	**07 16 30.0**	**+0.8**
O22K	**Cooper Landing**	**4.47 3**			**Pn**	**07 16 29.9**	**-0.6**
O22K	comp=E,316nm,0.7s			IAML		07 19 29.8	
O22K	comp=N,334nm,0.8s			IAML		07 19 30.0	
O22K	**Cooper Landing** baz=183	**4.47 3**		P	**Pn**	**07 16 30.1**	**-0.4**
SLKM	**Skilak Lake**	**4.49 0**			**Pn**	**07 16 29.9**	**-1.0**
ANPB	**Aniakchak Plen**	**4.53 283**			**Pn**	**07 16 32.1**	**+0.6**
CHGN	**Chignik**	**4.58 277**		Pn	**Pn**	**07 16 31.8**	**-0.2**
CHGN	comp=E,168nm,1.8s			IAML		07 18 58.8	
CHGN	comp=N,204nm,1.5s			IAML		07 19 06.0	
RED	**Redoubt Volcan**	**4.60 344**			**Pn**	**07 16 31.9**	**-0.5**
P17K	**Kvichak River**	**4.60 316**			**Pn**	**07 16 33.4**	**+1.1**
P17K	**Kvichak River** baz=132	**4.60 316**		P	**Pn**	**07 16 33.4**	**+1.1**
RDSO	**Redoubt South**	**4.63 344**			**Pn**	**07 16 32.0**	**-0.8**
RSO	**Redoubt South**	**4.64 344**			**Pn**	**07 16 32.9**	**-0.1**
O18K	**Koktuh Hills**	**4.66 327**		Pn	**Pn**	**07 16 33.2**	**+0.1**
O18K	comp=N,148nm,0.8s			IAML		07 18 58.7	
O18K	comp=E,124nm,1.6s			IAML		07 19 07.5	
O18K	**Koktuh Hills** baz=144	**4.66 327**		P	**Pn**	**07 16 33.5**	**+0.4**
RDWB	**Redoubt West**	**4.67 344**			**Pn**	**07 16 32.9**	**-0.6**
O19K	**Port Alsworth**	**4.70 334**			**Pn**	**07 16 34.1**	**+0.5**
O19K	**Port Alsworth** baz=151	**4.70 334**		P	**Pn**	**07 16 33.8**	**+0.1**
DFR	**Drift River**	**4.75 345**			**Pn**	**07 16 33.9**	**-0.6**
NCT	**North Crescent**	**4.76 344**			**Pn**	**07 16 33.9**	**-0.7**
HIN	**Hinchinbrook I**	**4.80 23**		Pn	**Pn**	**07 16 35.2**	**+0.1**
HIN	comp=E,239nm,1.3s			IAML		07 17 28.6	
HIN	comp=N,146nm,0.9s			IAML		07 17 33.5	
KAIM	**Kayak Island**	**4.98 36**		Pn	**Pn**	**07 16 37.3**	**-0.3**
RC01	**Rabbit Creek A**	**5.08 3**		Pn	**Pn**	**07 16 38.4**	**-0.5**
RC01	comp=E,89nm,0.6s			IAML		07 17 40.4	
RC01	**Rabbit Creek A** baz=182	**5.08 3**		P	**Pn**	**07 16 38.7**	**-0.3**
EYAK	**Cordova Ski Ar**	**5.11 26**			**Pn**	**07 16 39.2**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.11 26**		P	**Pn**	**07 16 39.7**	**+0.4**
EYAK	**Cordova Ski Ar** baz=208	**5.11 26**		P	**Pn**	**07 16 39.4**	**+0.1**
O17K	**Koliganek Bris**	**5.24 319**			**Pn**	**07 16 41.6**	**+0.6**
O17K	**Koliganek Bris** baz=134	**5.24 319**		P	**Pn**	**07 16 41.6**	**+0.6**
RAGM	**Ragged Mountai**	**5.26 32**			**Pn**	**07 16 41.4**	**-0.1**
RAGM	comp=E,139nm,0.7s			IAML		07 17 44.6	
N19K	**Bonanza Creek**	**5.29 337**			**Pn**	**07 16 41.9**	**+0.1**
N19K	**Bonanza Creek** comp=N,80nm,1.0s	**5.29 337**		IAML		07 19 23.5	
N19K	comp=E,83nm,1.6s			IAML		07 19 24.6	
N19K	**Bonanza Creek** baz=153	**5.29 337**		P	**Pn**	**07 16 41.9**	**+0.1**
SPCG	**Spurr Capps Gl**	**5.36 351**			**Pn**	**07 16 43.3**	**+0.4**
NICHA	**Nichawak Mount**	**5.37 36**			**Pn**	**07 16 43.2**	**+0.4**
GOAT	**Goat Mountain**	**5.41 30**			**Pn**	**07 16 43.8**	**+0.3**
SUA	**Susitna One**	**5.45 357**			**Pn**	**07 16 43.0**	**-1.1**
CNBA	**Chernabura Isl**	**5.46 261**			**Pn**	**07 16 42.4**	**-1.7**
KNK	**Knik Glacier**	**5.48 9**			**Pn**	**07 16 44.2**	**-0.1**
KNK	**Knik Glacier** baz=190	**5.48 9**		P	**Pn**	**07 16 44.0**	**-0.4**
O16K	**Kokwok River B**	**5.51 314**		Pn	**Pn**	**07 16 45.2**	**+0.4**
O16K	**Kokwok River B** baz=128	**5.51 314**		P	**Pn**	**07 16 45.5**	**+0.7**
N18K	**Kilae Creek**	**5.53 330**		Pn	**Pn**	**07 16 45.5**	**+0.4**
STLK	**Strandline Lak**	**5.54 352**			**Pn**	**07 16 45.0**	**-0.4**
BERG	**Berg Lake**	**5.57 36**			**Pn**	**07 16 45.5**	**-0.2**
PMR	**Palmer**	**5.61 5**		Pn	**Pn**	**07 16 45.8**	**-0.3**
PMR	**Palmer**	**5.61 5**		P	**Pn**	**07 16 47.8**	**+1.7**
DIV	**Divide**	**5.62 23**			**Pn**	**07 16 46.4**	**0.0**
SNH	**Sunshine Point**	**5.72 40**		Pn	**Pn**	**07 16 47.7**	**0.0**
KHIT	**Khitrov Hills**	**5.76 37**			**Pn**	**07 16 48.2**	**-0.2**
BMRM	**Bremner River**	**5.76 28**			**Pn**	**07 16 48.5**	**+0.1**
BMRM	**Bremner River** baz=212	**5.76 28**		P	**Pn**	**07 16 48.5**	**+0.1**
SVW2	**Sparrevohn**	**5.80 333**			**Pn**	**07 16 48.5**	**-0.3**
SVW2	**Sparrevohn**	**5.80 333**		P	**Pn**	**07 16 49.3**	**+0.5**
SDPT	**Sand Point**	**5.83 268**			**Pn**	**07 16 48.1**	**-1.1**
SDPT	**Sand Point**	**5.83 268**		P	**Pn**	**07 16 48.8**	**-0.4**
SML	**Sawmill**	**5.88 9**		Pn	**Pn**	**07 16 49.6**	**-0.3**
SML	**Sawmill** baz=190	**5.88 9**		P	**Pn**	**07 16 50.3**	**+0.4**
KLU	**Klutina**	**5.92 21**			**Pn**	**07 16 50.4**	**-0.1**
KLU	**Klutina** baz=203	**5.92 21**		P	**Pn**	**07 16 50.5**	**0.0**
BARK	**Barkley Ridge**	**6.00 40**			**Pn**	**07 16 51.8**	**+0.2**
SKT	**Skwentna**	**6.00 354**			**Pn**	**07 16 50.8**	**-0.8**
SCM	**Sheep Creek Mo**	**6.01 13**			**Pn**	**07 16 52.1**	**+0.3**
SCM	**Sheep Creek Mo** baz=195	**6.01 13**		P	**Pn**	**07 16 52.4**	**+0.7**
CRQM	**Cirque**	**6.03 35**			**Pn**	**07 16 52.2**	**+0.1**
O15K	**Ungalikthiuk R**	**6.04 305**			**Pn**	**07 16 52.5**	**+0.4**
O15K	**Ungalikthiuk R** baz=118	**6.04 305**		P	**Pn**	**07 16 52.8**	**+0.7**
CRQE	**Cirque** baz=220	**6.04 35**		P	**Pn**	**07 16 52.2**	**0.0**
M20K	**Styx River**	**6.05 347**			**Pn**	**07 16 51.8**	**-0.6**
M18K	**Stony River**	**6.20 334**			**Pn**	**07 16 54.2**	**0.0**
BAGL	**Bagley Icefiel**	**6.20 41**			**Pn**	**07 16 54.3**	**0.0**
VRDI	**Verde Repeater**	**6.30 31**		Pn	**Pn**	**07 16 55.7**	**-0.1**
N25K	**Chitina, Valde**	**6.31 25**		Pn	**Pn**	**07 16 56.0**	**+0.1**
N25K	**Chitina, Valde** baz=209	**6.31 25**		P	**Pn**	**07 16 56.4**	**+0.5**
N16K	**Nishlik Lake**	**6.33 318**			**Pn**	**07 16 57.3**	**+1.2**
N16K	**Nishlik Lake** baz=132	**6.33 318**		P	**Pn**	**07 16 57.3**	**+1.2**
GLB	**Gilahina Butte**	**6.37 29**		Pn	**Pn**	**07 16 57.0**	**+0.3**
KIAG	**Kiagna River**	**6.41 37**			**Pn**	**07 16 57.5**	**+0.1**
M24K	**Tolsona, Glenn**	**6.44 17**			**Pn**	**07 16 59.2**	**+1.5**
M24K	**Tolsona, Glenn** baz=200	**6.44 17**		P	**Pn**	**07 16 58.7**	**+1.0**
GRNC	**Granite Creek**	**6.49 40**			**Pn**	**07 16 58.3**	**-0.1**
TABL	**Table Mountain**	**6.53 44**			**Pn**	**07 16 59.0**	**+0.1**
PS1A	**Pavlof South-1**	**6.53 269**			**Pn**	**07 16 57.9**	**-0.9**
MCARA	**McCarthy VSAT**	**6.55 32**			**Pn**	**07 16 59.0**	**0.0**
MCARA	**McCarthy VSAT** baz=217	**6.55 32**		P	**Pn**	**07 16 59.5**	**+0.4**
M17K	**Holitna River**	**6.56 328**			**Pn**	**07 16 59.9**	**+0.7**
PTPK	**Patty Peak**	**6.57 35**			**Pn**	**07 16 59.7**	**+0.1**
N15K	**Kwethluk River**	**6.67 313**			**Pn**	**07 17 02.0**	**+1.3**
PN7A	**Pavlof North-7**	**6.67 270**			**Pn**	**07 17 00.0**	**-0.8**
PCA	**Pinnacle**	**6.68 48**			**Pn**	**07 17 01.1**	**+0.1**
PINM	**Pinnacle** baz=235	**6.68 48**		P	**Pn**	**07 17 01.1**	**+0.1**
WAT6	**Susitna Watana**	**6.69 10**			**Pn**	**07 17 01.3**	**+0.1**
WAT6	**Susitna Watana** baz=191	**6.69 10**		P	**Pn**	**07 17 01.3**	**+0.1**
O14K	**Tigyukauivet M**	**6.74 303**			**Pn**	**07 17 02.2**	**+0.6**
BARN	**Barnard Glacie**	**6.75 38**			**Pn**	**07 17 02.1**	**+0.1**
M16K	**Timber Creek**	**6.77 321**			**Pn**	**07 17 03.0**	**+0.9**
CTG	**Chitna Glacier** baz=226	**6.79 40**		P	**Pn**	**07 17 02.6**	**+0.1**
CTGM	**Chitina Glacie**	**6.80 40**			**Pn**	**07 17 02.6**	**0.0**
LOGN	**Logan Glacier**	**6.82 41**			**Pn**	**07 17 02.8**	**-0.2**
PNL	**Peninsula**	**6.84 53**			**Pn**	**07 17 02.7**	**-0.3**
PNL	**Peninsula**	**6.84 53**		P	**Pn**	**07 17 03.8**	**+0.7**
PNL	**Peninsula** baz=241	**6.84 53**		P	**Pn**	**07 17 02.7**	**-0.3**
WAT1	**Susitna Watana**	**6.87 6**			**Pn**	**07 17 04.3**	**+0.8**
WAT1	**Susitna Watana** baz=187	**6.87 6**		P	**Pn**	**07 17 04.3**	**+0.8**
HARP	**HAARP**	**6.90 20**			**Pn**	**07 17 04.7**	**+0.8**
HARP	**HAARP** baz=204	**6.90 20**		P	**Pn**	**07 17 04.7**	**+0.8**
M15K	**Kasigluk River**	**7.21 315**			**Pn**	**07 17 08.6**	**+0.5**
DHY	**Denali Highway**	**7.21 10**			**Pn**	**07 17 09.4**	**+1.0**
DHY	**Denali Highway** baz=192	**7.21 10**		P	**Pn**	**07 17 08.9**	**+0.6**
N14K	**Kuskokwak Cree**	**7.22 307**			**Pn**	**07 17 09.0**	**+0.7**
L17K	**Donlin**	**7.39 329**			**Pn**	**07 17 11.4**	**+0.8**
RND	**Reindeer**	**7.43 5**			**Pn**	**07 17 11.8**	**+0.6**
L16K	**Owhat River**	**7.43 324**			**Pn**	**07 17 11.6**	**+0.4**
L16K	**Owhat River** baz=136	**7.43 324**		P	**Pn**	**07 17 11.8**	**+0.7**
CAST	**Castle Rocks**	**7.47 354**			**Pn**	**07 17 13.7**	**+2.0**
CAST	**Castle Rocks** baz=172	**7.47 354**		P	**Pn**	**07 17 12.6**	**+0.9**
KTH	**Kantishna Hill**	**7.55 358**			**Pn**	**07 17 13.0**	**+0.1**
P29M	**Windy Craggy**	**7.58 56**			**Pn**	**07 17 13.0**	**-0.3**
MENT	**Mentasta**	**7.68 23**			**Pn**	**07 17 16.1**	**+1.5**
M14K	**Bethel**	**7.76 312**		Pn	**Pn**	**07 17 16.2**	**+0.6**
ISLZ	**Isanotski Laza**	**7.79 266**			**Pn**	**07 17 14.8**	**-1.3**
ISNN	**Isanotski Nort**	**7.80 267**			**Pn**	**07 17 15.2**	**-1.0**
L26K	**Log Cabin Wild**	**7.84 24**			**Pn**	**07 17 18.4**	**+1.6**
K17K	**Iditarod**	**7.86 332**			**Pn**	**07 17 17.6**	**+0.6**
S31K	**Pelican**	**7.89 70**			**Pn**	**07 17 15.6**	**-1.8**
SSLN	**Shishaldin Nor**	**7.92 267**			**Pn**	**07 17 17.5**	**-0.5**
L15K	**Ungalak Mounta**	**8.12 319**			**Pn**	**07 17 21.5**	**+1.0**
M13K	**Dall Lake**	**8.19 308**			**Pn**	**07 17 22.5**	**+1.0**
RIDG	**Independent Ri**	**8.19 17**			**Pn**	**07 17 22.8**	**+1.1**
HYT	**Haines Junctio**	**8.22 49**			**Pn**	**07 17 22.9**	**+0.7**
SIT	**Sitka**	**8.31 77**		P	**Pn**	**07 17 21.6**	**-1.6**
L14K	**Kuka Creek**	**8.38 315**		Pn	**Pn**	**07 17 24.4**	**+0.3**
J20K	**Nowinta River**	**8.40 348**			**Pn**	**07 17 23.7**	**-0.7**
K15K	**Wolf Creek Mou**	**8.54 322**			**Pn**	**07 17 27.2**	**+0.9**
SCRK	**Sand Creek**	**8.56 19**			**Pn**	**07 17 27.4**	**+0.7**
HDA	**Harding Lake**	**8.56 10**			**Pn**	**07 17 27.7**	**+1.1**
SKAG	**Skagway**	**8.68 61**		P	**Pn**	**07 17 27.6**	**-0.7**
CCB	**Clear Creek Bu**	**8.73 7**			**Pn**	**07 17 30.2**	**+1.3**
IL31		**8.92 9**			**Pn**	**07 17 32.4**	**+0.8**
ILAR	**Eielson Array** comp=E,0.9nm,0.3s,baz=195,slow=14,SNR=47	**8.92 9**		Pn	**Pn**	**07 17 32.1**	**+0.5**
ILAR	comp=E,0.2nm,0.3s,baz=201,slow=16,SNR=2.4 comp=E,2.7nm,0.5s			Sn	**Sn**	**07 19 05.5**	**-6.5**
J25K	**Salcha River,**	**8.94 14**			**Pn**	**07 17 32.1**	**+0.2**
COLA	**College**	**8.95 7**			**Pn**	**07 17 33.0**	**+1.0**
COLA	**College**	**8.95 7**		P	**Pn**	**07 17 33

baz=28,slow=74
H11S1 WAKE ISLAND Hy 49.44 239 T T 08 18 05.6
baz=28,slow=76,SNR=11
H11S2 WAKE ISLAND Hy 49.45 239 T T 08 18 12.0
baz=28,slow=76,SNR=3.7
H11S3 WAKE ISLAND Hy 49.45 239 T T 08 18 10.2
baz=28,slow=76,SNR=8.5
SONM Songino Array 58.39 310 P **P** **07 25 19.5 +1.4**
comp=Z,0.5nm,0.8s,baz=44,slow=4.8,SNR=3.8
comp=Z,0.5nm,0.8s
ZALV Zalesovo Beam 61.48 327 P **P** **07 25 40.3 +1.2**
comp=Z,0.4nm,0.4s,baz=43,slow=11,SNR=2.2
comp=Z,0.4nm,0.4s
KURBB Kurchatov Arra 66.27 328 P **P** **07 26 10.9 +0.2**
comp=Z,0.2nm,0.5s,baz=26,slow=2.6,SNR=1.3
comp=Z,0.2nm,0.5s
BVAR Borovoye Array 66.28 335 P **P** **07 26 11.4 +0.6**
comp=Z,0.4nm,0.4s,baz=34,slow=5.6,SNR=2.6
BVAR LR LR 07 59 34.8
comp=Z,56nm,19.3s,baz=28,slow=40
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 68.49 324 P **P** **07 26 25.8 +1.0**
comp=Z,0.4nm,0.4s,baz=30,slow=5.5,SNR=11
comp=Z,0.4nm,0.4s
AAK Ala-Archa 74.67 327 LR LR 08 03 19.7
comp=Z,40nm,18.3s,baz=20,slow=38

*IDC **01** 07:17:10.0±0.8,56°.92N×153°.03W,h0km,mb4.1/15, mbtmp4.0/17,ML3.3/2,MS3.4/8,Error ellipse: s-maj=16.4km s-min=11.5km az=112.0*
*NEIC **01** 07:17:11.8±1.6,56°.87N±0°.03×152°.62W±0°.07,h10km±2km, Error ellipse: s-maj=7.7km s-min=3.6km az=128.0*
*AEIC **01** 07:17:13.7±1.8,56°.88N±0°.04×152°.7W±0°.1,h15km±7km, ML3.5,ML3.8/22(NEIC),Error ellipse: s-maj=9.8km s-min=3.6km az=124.0*

ISC 01 07:17:12.9±0.6,56°.91N±0°.04×152°.63W±0°.04,h22km,n69, σ1§34/66,mb4.2/15,MS3.4/7,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.48**	**312**		**Pb**	**07 17 22.5**	**-0.1**
OHAK					**Sb**	**07 17 29.4**	**+0.1**
OHAK	**Old Harbor**	**0.48**	**312**	IAML		07 17 29.8	
	comp=E,6μm,0.7s						
OHAK	**Old Harbor**	**0.48**	**312**	P	**Pb**	**07 17 22.5**	**-0.1**
	baz=135						
OHAK				S	**Sb**	**07 17 29.4**	**+0.1**
	baz=135						
KDAK	**Kodiak Island**	**0.88**	**2**	IAML		07 17 43.9	
	comp=E,2μm,1.0s						
KDAK				IAML		07 17 44.6	
	comp=E,2μm,0.7s						
KDAK	**Kodiak Island**	**0.88**	**2**	Pg	**Pb**	**07 17 29.3**	**-0.1**
	comp=E,192nm,0.3s,baz=200,slow=5.1,SNR=68						
KDAK				Lg	Lg	07 17 41.3	
	comp=E,281nm,0.3s,baz=295,slow=19,SNR=19						
SII	**Sitkinak Islan**	**0.93**	**249**		**Pb**	**07 17 29.2**	**-1.1**
SII					**Sb**	**07 17 40.4**	**-1.7**
SII					**Sn**	**07 17 44.7**	**+1.5**
SII	**Sitkinak Islan**	**0.93**	**249**	IAML		07 17 48.7	
	comp=N,4μm,0.7s						
SII	**Sitkinak Islan**	**0.93**	**249**	P	**Pb**	**07 17 29.2**	**-1.1**
	baz=72						
SII				S	**Sb**	**07 17 40.4**	**-1.7**
	baz=72						
Q20K	**Shuyak Island**	**1.71**	**4**	P	**Pn**	**07 17 41.4**	**0.0**
	baz=183						
Q20K				S	**Sn**	**07 18 02.0**	**-0.6**
	baz=183						
SYI	**Shuyak Island**	**1.71**	**4**		**Pb**	**07 17 43.6**	**-0.1**
SYI	**Shuyak Island**	**1.71**	**4**		**Sn**	**07 18 02.0**	**-0.6**
SYI	**Shuyak Island**	**1.71**	**4**	IAML		07 18 10.6	
	comp=E,467nm,0.8s						
SYI				IAML		07 18 17.2	
	comp=N,554nm,1.4s						
KAHG	**Katmai Hook Gl**	**1.90**	**328**		**Pn**	**07 17 44.8**	**+0.7**
KAHG					**Sn**	**07 18 07.4**	**+0.1**
ACHA	**Angle Creek He**	**1.96**	**313**		**Pn**	**07 17 45.4**	**+0.6**
ANCK	**Angle Creek**	**2.02**	**311**		**Pn**	**07 17 46.5**	**+0.8**
ANCK					**Pb**	**07 17 49.5**	**+0.6**
KVTA	**Katmai Vly 10**	**2.06**	**317**		**Pn**	**07 17 47.0**	**+0.8**
Q19K	**Cape Douglas,**	**2.10**	**345**		**Pn**	**07 17 47.8**	**+1.0**
Q19K	**Cape Douglas,**	**2.10**	**345**	P	**Pn**	**07 17 48.0**	**+1.2**
	baz=164						
KAHC	**Katmai Hardscr**	**2.16**	**325**		**Pn**	**07 17 48.8**	**+1.1**
KAHC	**Katmai Hardscr**	**2.16**	**325**	P	**Pn**	**07 17 48.8**	**+1.1**
	baz=143						
CNTC	**Contact Creek**	**2.22**	**309**		**Pn**	**07 17 49.6**	**+1.1**
Q17K	**Contact Creek**	**2.22**	**309**	P	**Pn**	**07 17 49.6**	**+1.1**
	baz=128						
CNPM	**China Poot**	**2.73**	**15**	Pn	**Pn**	**07 17 55.3**	**-0.1**
CNPM				IAML		07 18 51.9	
	comp=E,294nm,0.7s						
CNPM				IAML		07 18 57.7	
	comp=N,234nm,1.2s						
R16K	**Pilot Point**	**2.77**	**286**		**Pn**	**07 17 56.6**	**+0.7**
R16K	**Pilot Point**	**2.77**	**286**	P	**Pn**	**07 17 56.6**	**+0.7**
	baz=103						
P19K	**Oil Pt**	**2.77**	**354**		**Pn**	**07 17 57.7**	**+1.6**
P19K				IAML		07 18 46.9	
	comp=N,482nm,0.8s						
P19K	**Oil Pt**	**2.77**	**354**	P	**Pn**	**07 17 57.6**	**+1.6**
	baz=173						
P18K	**Big Mountain,**	**2.85**	**332**		**Pn**	**07 17 57.0**	**-0.1**
P18K	**Big Mountain,**	**2.85**	**332**	P	**Pn**	**07 17 57.0**	**-0.1**
	baz=150						
BRLK	**Bradley Lake**	**3.01**	**17**		**Pn**	**07 17 58.7**	**-0.6**
BRLK	**Bradley Lake**	**3.01**	**17**	IAML		07 18 56.6	
	comp=E,187nm,1.5s						
BRSE	**Bradley Lake S**	**3.01**	**18**		**Pn**	**07 17 58.9**	**-0.4**
BRSE	**Bradley Lake S**	**3.01**	**18**	P	**Pn**	**07 17 58.9**	**-0.4**
	baz=199						
ANPB	**Aniakchak Plen**	**3.11**	**270**		**Pn**	**07 17 59.9**	**-0.7**
IVE	**Iliamna Volcan**	**3.13**	**356**		**Pn**	**07 18 01.4**	**+0.4**
O20K	**Slope Mountain**	**3.19**	**0**		**Pn**	**07 18 02.4**	**+0.7**
O20K	**Slope Mountain**	**3.19**	**0**	P	**Pn**	**07 18 02.4**	**+0.7**
	baz=180						
NCT	**North Crescent**	**3.67**	**358**		**Pn**	**07 18 08.8**	**+0.4**
RDJH	**Redoubt Jeurge**	**3.70**	**359**		**Pn**	**07 18 09.4**	**+0.6**
HIN	**Hinchinbrook I**	**4.74**	**40**	Pn	**Pn**	**07 18 24.3**	**+1.3**
M16K	**Timber Creek**	**5.27**	**324**	Pn	**Pn**	**07 18 34.0**	**+3.8**
M16K				IAML		07 20 10.1	
	comp=E,60nm,1.8s						
M16K				IAML		07 20 11.6	
	comp=N,60nm,2.0s						
KAIM	**Kayak Island**	**5.27**	**52**	Pn	**Pn**	**07 18 30.7**	**+0.4**
SNH	**Sunshine Point**	**6.09**	**53**	Pn	**Pn**	**07 18 41.9**	**+0.4**
ILAR	**Eielson Array**	**8.37**	**17**	Sn	**Sn**	**07 20 40.5**	**-6.0**
	baz=200,slow=28						
ILAR				LR	LR	07 23 01.2	
	comp=N,365nm,18.7s,baz=212,slow=42						
DLBC	**Dease Lake**	**12.18**	**73**	Pn	**Pn**	**07 20 08.0**	**+3.0**
	comp=N,0.1nm,0.3s,baz=202,slow=11,SNR=2.0						
	comp=N,2.0nm,0.8s						
INK	**Inuvik**	**14.33**	**29**	Pn	**P**	**07 20 40.4**	**-0.6**
	comp=N,0.2nm,0.3s,baz=218,slow=7.5,SNR=3.7						
YKA	**Yellowknife Ar**	**19.75**	**58**	P	**Pn**	**07 21 43.6**	**+1.1**
	comp=N,0.1nm,0.3s,baz=271,slow=11,SNR=4.5						
	comp=N,0.5nm,0.7s						
SEY	**Seymchan**	**27.45**	**306**	LR	LR	07 34 56.2	
	comp=N,172nm,19.2s,baz=31,slow=39						
PETK	**Petropavlovsk-**	**28.23**	**284**	P	**P**	**07 23 02.4**	**-1.4**
	comp=N,2.9nm,0.8s,baz=54,slow=13,SNR=1.8						
	comp=N,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**29.15**	**115**	P	**P**	**07 23 15.6**	**+3.2**
	comp=N,0.6nm,0.8s,baz=298,slow=8.1,SNR=4.3						
	comp=N,0.6nm,0.8s						
PDAR	**Pinedale Array**	**30.60**	**99**	P	**P**	**07 23 27.6**	**+2.4**
	comp=N,0.8nm,0.8s,baz=326,slow=5.2,SNR=7.5						
	comp=N,0.8nm,0.8s						
PFO	**Pinyon Flats O**	**33.88**	**118**	LR	LR	07 34 45.2	
	comp=N,67nm,18.9s,baz=338,slow=31						
TXAR	**Lajitas Array**	**43.78**	**108**	LR	LR	07 42 50.4	
	comp=N,32nm,18.4s,baz=332,slow=35						
SPITS	**Spitsbergen Ar**	**45.00**	**3**	P	**P**	**07 25 26.0**	**+0.1**
	comp=N,9.2nm,1.1s,baz=348,slow=3.5,SNR=1.7						
	comp=N,9.2nm,1.1s						
NRIK	**Noril'sk**	**46.78**	**335**	P	**P**	**07 25 39.8**	**-0.2**
	comp=N,3.4nm,0.7s,baz=55,slow=8.8,SNR=5.9						
	comp=N,3.4nm,0.7s						
MJAR	**Matsushiro Arr**	**49.25**	**276**	LR	LR	07 46 11.9	
	comp=N,30nm,21.4s,baz=61,slow=36						
TKL	**Tuckaleechee C**	**49.73**	**85**	LR	LR	07 46 00.6	
	comp=N,64nm,18.9s,baz=298,slow=35						
ARCES	**ARCESS Array B**	**53.86**	**1**	P	**P**	**07 26 33.2**	**-0.4**
	comp=N,7.7nm,1.1s,baz=0.0,slow=7.2,SNR=5.3						
	comp=N,7.7nm,1.1s						
KSRS	**Korea Array**	**54.11**	**285**	P	**P**	**07 26 35.5**	**-0.3**
KSRS	comp=N,0.5nm,0.3s,baz=70,slow=10,SNR=1.8			LR	LR	07 50 53.0	
	comp=N,11nm,18.2s,baz=50,slow=38						
	comp=N,0.5nm,0.3s						
SONM	**Songino Array**	**56.81**	**308**	P	**P**	**07 26 55.8**	**+0.5**
	comp=N,1.6nm,0.8s,baz=45,slow=7.6,SNR=8.4						
	comp=N,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**60.01**	**325**	P	**P**	**07 27 16.9**	**-0.3**
	comp=N,1.6nm,0.7s,baz=28,slow=6.7,SNR=5.0						
	comp=N,1.6nm,0.7s						
HFS	**Hagfors**	**62.80**	**8**	P	**P**	**07 27 35.6**	**-0.5**
	comp=N,7.3nm,1.0s,baz=44,slow=8.5,SNR=3.1						
	comp=N,7.3nm,1.0s						
KURBB	**Kurchatov Arra**	**64.83**	**327**	P	**P**	**07 27 49.2**	**-0.4**
	comp=N,0.9nm,0.8s,baz=27,slow=6.2,SNR=4.8						
	comp=N,0.9nm,0.8s						
BVAR	**Borovoye Array**	**64.91**	**333**	P	**P**	**07 27 49.6**	**-0.5**
	comp=N,1.4nm,0.5s,baz=38,slow=7.5,SNR=7.7						
	comp=N,1.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**65.41**	**19**	P	**P**	**07 27 53.2**	**0.0**
	comp=N,2.5nm,0.9s,baz=317,slow=5.9,SNR=4.1						
	comp=N,2.5nm,0.9s						
MKAR	**Makanchi Array**	**66.99**	**322**	P	**P**	**07 28 03.1**	**-0.5**
	comp=N,1.0nm,0.5s,baz=34,slow=6.6,SNR=14						
	comp=N,1.0nm,0.5s						
AKASG	**Malin Array Be**	**72.75**	**359**	P	**P**	**07 28 37.7**	**-1.1**
	comp=N,0.6nm,0.5s,baz=3.4,slow=6.2,SNR=2.9						
	comp=N,0.6nm,0.5s						
MLR	**Muntele Rosu**	**77.97**	**1**	LR	LR	08 08 05.1	
	comp=N,26nm,18.1s,baz=323,slow=39						
QSPA	**South Pole Qui**	**146.69**	**180**	PKPbc	**PKPab**	**07 36 53.3**	**+0.7**
	comp=N,1.3nm,0.3s,baz=349,slow=2.2,SNR=2.5						

IDC 01 07:20:38.6±3.2,54°.06N×86°.67E,h0km,mbtmp2.6/2, ML2.3/2,Error ellipse: s-maj=26.8km s-min=15.8km az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**265**	I	I	07 26 32.8	
	baz=84,slow=333,SNR=7.0						
ZALV	**Zalesovo Beam**	**1.10**	**265**	Pg	Pg	07 20 58.2	-1.4
	0.4nm,0.3s,baz=85,slow=16,SNR=4.1						
ZALV				Lg	Lg	07 21 15.5	
	0.9nm,0.3s,baz=92,slow=30,SNR=6.8						
KURBB	**Kurchatov Arra**	**6.06**	**239**	Pn	Pn	07 22 10.0	+0.6
	baz=56,slow=14,SNR=3.0						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**7.79**	**203**	Pn	Pn	07 22 34.5	+1.4
	0.1nm,0.3s,baz=24,slow=13,SNR=4.9						
MKAR				Lg	Lg	07 24 44.8	
	0.1nm,0.3s,baz=25,slow=31,SNR=4.4						
	0.1nm,0.3s						

IDC 01 07:20:52.1±4.9,12°.69N×124°.67E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=459.7km s-min=24.5km az=65.0,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.80**	**164**	P	P	07 27 35.5	-0.6
	0.6nm,1.0s,baz=342,slow=7.9,SNR=1.9						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**37.25**	**166**	P	P	07 28 06.0	+0.3
	0.4nm,0.8s,baz=347,slow=7.5,SNR=4.5						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**49.16**	**322**	P	P	07 29 41.6	-0.3
	0.6nm,0.8s,baz=111,slow=6.3,SNR=4.3						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**53.20**	**325**	P	P	07 30 12.3	+0.1
	0.6nm,0.4s,baz=111,slow=6.0,SNR=3.0						
	0.6nm,0.4s						

IDC 01 07:21:15.4±3.1,54°.34N×86°.75E,h0km,mbtmp2.9/3, ML2.4/3,Error ellipse: s-maj=28.3km s-min=16.6km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**252**	I	I	07 28 15.4	
	baz=68,slow=336,SNR=11						
ZALV	**Zalesovo Beam**	**1.20**	**252**	Pg	Pg	07 21 36.7	-1.7
	0.8nm,0.3s,baz=68,slow=16,SNR=8.7						
ZALV				Lg	Lg	07 21 55.1	
	1.2nm,0.3s,baz=72,slow=25,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.25**	**237**	Pn	Pn	07 22 49.2	+0.4
	0.1nm,0.3s,baz=54,slow=14,SNR=14						
	1.5nm,0.6s						
MKAR	**Makanchi Array**	**8.07**	**202**	Pn	Pn	07 23 14.5	+0.7
	0.1nm,0.3s,baz=18,slow=11,SNR=2.1						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**9.80**	**269**	Pn	Pn	07 23 37.7	+0.3
	baz=71,slow=15,SNR=2.3						
	0.3nm,0.4s						

*IDC **01** 07:30:45.9±0.8,23°.34S×176°.18W,h0km,mb4.0/8, mbtmp4.1/9,ML3.4/1,MS3.3/10,Error ellipse: s-maj=39.9km s-min=19.8km az=147.0*
*NEIC **01** 07:30:47.0±1.3,23°.6S±0°.1×175°.8W±0°.1,h10km±1km, mb4.2/19,Error ellipse: s-maj=24.5km s-min=18.0km az=141.0*

ISC 01 07:30:47.0±0.5,23°.60S±0°.09×175°.96W±0°.09,h10km,n56, σ1§41/45,mb4.2/18,MS3.4/8,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.20**	**52**	Pn	**Pn**	**07 32 30.0**	**-2.4**
AFI	**Afiamalu**	**10.42**	**23**	Pn	**Pn**	**07 33 14.4**	**-2.2**
RAR	**Rarotonga**	**15.16**	**84**	P	**Pn**	**07 34 21.8**	**+0.6**
RAR				IAmb	IAmb	07 34 41.0	
	comp=Z,9.0nm,1.0s						
RAR	**Rarotonga**	**15.16**	**84**	Pn	**Pn**	**07 34 20.7**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=250,slow=9.1,SNR=7.4						
RAR				Sn	Sn	07 36 53.1	-16
	comp=Z,3.8nm,0.3s,baz=228,slow=12,SNR=2.2						
RAR				LR	LR	07 40 44.1	
	comp=Z,44nm,19.0s,baz=314,slow=39						
URZ	**Urewera**	**15.76**	**200**	Pn	**Pn**	**07 34 30.3**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=73,slow=19,SNR=1.6						
URZ				Sn	**Sn**	**07 37 17.3**	**-6.5**
	comp=Z,0.5nm,0.3s,baz=29,slow=19,SNR=1.5						
	comp=Z,19nm,1.1s						
DZM	**Mont Dzumac**	**16.30**	**272**	P	**P**	**07 34 39.1**	**-0.1**
DZM	**Mont Dzumac**	**16.30**	**272**	Pn	**P**	**07 34 38.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=141,slow=16,SNR=1.5						
DZM				LR	LR	07 38 32.7	
	comp=Z,66nm,19.1s,baz=178,slow=29						
TUWZ	**Tuamarina**	**19.68**	**203**	P	**P**	**07 35 15.3**	**-0.9**
RPZ	**Rata Peaks**	**22.73**	**205**	LR	LR	07 43 49.1	
	comp=Z,112nm,19.5s,baz=62,slow=34						
PPT	**Papeete**	**25.39**	**81**	LR	LR	07 45 55.9	
	comp=Z,33nm,18.1s,baz=268,slow=36						
CTAO	**Charters Tower**	**35.18**	**268**	P	**P**	**07 37 42.5**	**+1.1**
CTAO				IAmb	IAmb	07 38 00.2	
	comp=Z,5.7nm,0.8s						
PMG	**Port Moresby**	**37.94**	**286**	LR	LR	07 50 29.9	
	comp=Z,42nm,18.8s,baz=100,slow=31						
STKA	**Stephens Creek**	**38.27**	**248**	P	**P**	**07 38 09.1**	**+1.5**
STKA	**Stephens Creek**	**38.27**	**248**	P	**P**	**07 38 08.1**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=101,slow=13,SNR=5.5						
STKA				LR	LR	07 52 11.8	
	comp=Z,34nm,19.9s,baz=29,slow=34						
	comp=Z,1.7nm,0.6s						
BBOO	**Buckleboo**	**42.96**	**247**	P	**P**	**07 38 47.4**	**+1.0**
BBOO				IAmb	IAmb	07 39 13.7	
	comp=Z,6.9nm,0.9s						
AS31	**Alice Springs**	**45.73**	**259**	P	**P**	**07 39 08.9**	**+0.2**
AS31				IAmb	IAmb	07 39 13.1	
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**45.73**	**259**	P	**P**	**07 39 08.8**	**0.0**
ASAR	**Alice Springs**	**45.73**	**259**	P	**P**	**07 39 08.1**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=93,slow=7.4,SNR=32						
ASAR				PcP	**PcP**	**07 40 46.8**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=104,slow=4.2,SNR=1.2						
ASAR				LR	LR	07 57 21.0	
	comp=Z,41nm,18.7s,baz=91,slow=35						
	comp=Z,1.3nm,0.4s						
WB2	**Warramunga Arr**	**46.11**	**265**	P	**P**	**07 39 11.0**	**-0.7**
WRA	**Warramunga Arr**	**46.12**	**265**	P	**P**	**07 39 11.4**	**-0.4**
WRA	**Warramunga Arr**	**46.12**	**265**	P	**P**	**07 39 10.6**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=97,slow=8.2,SNR=30						
	comp=Z,1.7nm,0.4s						
KNRA	**Kununurra**	**52.40**	**268**	P	**P**	**07 39 59.1**	**-0.7**
QSPA	**South Pole Qui**	**66.48**	**180**	P	**P**	**07 41 38.7**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=88,slow=5.6,SNR=3.1						
	comp=Z,0.5nm,0.3s						
BELA	**Belgrano 2**	**76.25**	**172**	P	**P**	**07 42 37.3**	**+2.0**
BELA				IAmb	IAmb	07 42 41.3	
	comp=Z,2.4nm,0.9s						
LPIG	**La Paz**	**79.40**	**58**	LR	LR	08 13 01.4	
	comp=Z,18nm,18.4s,baz=276,slow=32						
PETK	**Petropavlovsk-**	**79.75**	**344**	P	**P**	**07 42 54.8**	**0.0**
PFO	**Pinyon Flats O**	**80.26**	**47**	LR	LR	08 13 06.8	
	comp=Z,20nm,18.2s,baz=266,slow=32						
NVAR	**Mina Array Bea**	**82.01**	**42**	P	**P**	**07 43 08.4**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=221,slow=9.4,SNR=7.8						
	comp=Z,1.1nm,0.9s						
H03S2	**Juan Fernandez**	**82.69**	**124**	T	T	09 14 55.8	
	baz=245,slow=75,SNR=54						
H03S1	**Juan Fernandez**	**82.70**	**124**	T	T	09 14 56.9	
	baz=245,slow=75,SNR=66						
H03S3	**Juan Fernandez**	**82.71**	**124**	T	T	09 14 52.1	
	baz=245,slow=75,SNR=41						
H03N2	**Juan Fernandez**	**82.84**	**123**	T	T	09 15 03.0	
	baz=251,slow=72,SNR=50						
H03N3	**Juan Fernandez**	**82.84**	**123**	T	T	09 15 01.1	
	baz=251,slow=72,SNR=67						
H03N1	**Juan Fernandez**	**82.86**	**123**	T	T	09 14 58.0	
	baz=251,slow=72,SNR=54						
BBB	**Bella Bella**	**86.25**	**27**	LR	LR	08 16 35.5	
	comp=Z,24nm,19.7s,baz=322,slow=32						
TXAR	**Lajitas Array**	**87.16**	**56**	P	**P**	**07 43 35.0**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=213,slow=7.9,SNR=17						
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**89.94**	**42**	P	**P**	**07 43 47.0**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=186,slow=5.0,SNR=3.7						
	comp=Z,0.2nm,0.6s						
G19K	**Purcell Mounta**	**90.61**	**8**	P	**P**	**07 43 48.6**	**-0.4**
G19K				IAmb	IAmb	07 43 49.4	
	comp=Z,1.7nm,0.7s						
IMAR	**Indian Mountai**	**90.90**	**9**	P	**P**	**07 43 49.9**	**-0.4**
ILAR	**Eielson Array**	**90.92**	**12**	P	**P**	**07 43 49.6**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=216,slow=5.6,SNR=4.8						
	comp=Z,0.8nm,0.9s						
J26L	**Joseph Creek**	**91.36**	**13**	P	**P**	**07 43 53.0**	**+0.4**
G21K	**Allakaket**	**91.43**	**9**	P	**P**	**07 43 53.2**	**+0.4**
G21K				IAmb	IAmb	07 44 17.9	
	comp=Z,0.4nm,0.6s						
E18K	**Tukpahlearik C**	**91.47**	**6**	P	**P**	**07 43 52.9**	**-0.1**
E18K				IAmb	IAmb	07 43 53.9	
	comp=Z,2.0nm,0.8s						
F20K	**Avaraart Lake**	**91.64**	**8**	P	**P**	**07 43 53.8**	**+0.1**
F20K				IAmb	IAmb	07 44 15.2	
	comp=Z,0.6nm,0.8s						
E19K	**Redstone River**	**91.86**	**7**	P	**P**	**07 43 55.1**	**+0.4**
F21K	**Alatna River**	**92.10**	**9**	P	**P**	**07 43 56.0**	**+0.1**
F21K				IAmb	IAmb	07 44 00.7	
	comp=Z,0.7nm,0.9s						
D19K	**Kuna River**	**92.76**	**6**	P	**P**	**07 43 58.8**	**-0.1**
D19K				IAmb	IAmb	07 44 00.9	
	comp=Z,0.7nm,0.8s						
C19K	**Lookout Ridge**	**93.20**	**6**	P	**P**	**07 44 01.3**	**+0.3**
BMAR	**Burnt Mountain**	**93.72**	**12**	P	**P**	**07 44 03.6**	**+0.2**
MKAR	**Makanchi Array**	**114.69**	**312**	PKP	PKPdf	07 49 26.4	-1.1
	comp=Z,0.2nm,0.5s,baz=77,slow=3.1,SNR=1.9						
KURBB	**Kurchatov Arra**	**117.59**	**316**	PKP	**PKPdf**	**07 49 31.2**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=100,slow=2.2,SNR=4.5						
BVAR	**Borovoye Array**	**122.66**	**319**	PKP	**PKPdf**	**07 49 41.7**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=94,slow=9.1,SNR=4.8						
ARCES	**ARCESS Array B**	**132.30**	**350**	PKP	**PKPdf**	**07 50 00.8**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=25,slow=3.2,SNR=4.0						
AKASG	**Malin Array Be**	**146.63**	**331**	PKPbc	**PKPdf**	**07 50 27.4**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=40,slow=3.8,SNR=8.0						
BRTR	**Keskin Array B**	**150.30**	**310**	PKPbc	**PKPbc**	**07 50 37.4**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=2.4						
MMAI	**Mount Meron Ar**	**150.93**	**296**	PKPbc	**PKiKP**	**07 50 41.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=154,slow=10,SNR=1.5						

*SDD **01** 07:36:21.9±1.4,19°.51N×73°.15W,h24km±999km,MD3.1, ML2.8,MW2.8*
*OSPL **01** 07:36:23.2±1.0,19°.39N×73°.17W,h13km±10km,ML2.1*
*SSNC **01** 07:36:24.5±1.3,19°.30N×73°.25W,h16km±19km,MD3.1, ML2.0,MW2.0*

ISC 01 07:36:19.7±1.3,19°.48N±0°.07×73°.09W±0°.05,h14km±11km, n17,σ1§31/28,3C,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAPH	**Port-au-Prince**	**1.21**	**142**	⇑*e*Pg	**Pg**	**07 36 43.4**	**+0.4**
PAPH				⇑*e*Sg	**Sn**	**07 36 58.7**	**+0.3**
PAPH				IAML		07 36 58.9	
	comp=E,201nm,0.4s						
PAPH				IAML		07 36 58.9	
	comp=N,230nm,0.4s						
PAPH	**Port-au-Prince**	**1.21**	**142**	*e*P	**Pg**	**07 36 43.5**	**+0.4**
PAPH				*e*S	**Sn**	**07 36 58.7**	**+0.3**
PAPH				IAML		07 36 59.4	
	comp=N,87nm,0.1s						
PAPH				IAML		07 36 59.4	
	comp=E,56nm,0.1s						
PAPH	**Port-au-Prince**	**1.21**	**142**	*i* P	**Pg**	**07 36 43.4**	**+0.4**
PAPH				*e*S	**Sn**	**07 36 58.8**	**+0.4**
PAPH			

comp=E,84nm,0.1s
S22A IAML 07 55 12.2
comp=N,55nm,0.1s
Q24A Divide 2.04 353 Pb 07 54 48.7 -0.1
Q24A IAML 07 55 17.3
comp=N,33nm,0.2s
Q24A IAML 07 55 24.1
comp=E,44nm,0.8s
ANMO Albuquerque 2.39 214 Pn Pn 07 54 52.0 +0.8
KSCO Kaye Shedlock' 2.70 39 Pn Pn 07 54 57.2 +1.9
AMTX Amarillo 3.27 128 IAmb_Lg 07 56 02.5
comp=Z,18nm,1.1s
SMWD Samnorwood 4.13 115 IAmb_Lg 07 56 30.9
comp=Z,18nm,0.9s
CBKS Cedar Bluff 4.43 63 Pn Pn 07 55 20.6 +1.5
ELIS Ellis County 4.43 100 IAmb_Lg 07 56 41.3
comp=Z,21nm,1.0s
OGNE Ogallala 4.55 28 Pn Pn 07 55 22.9 +2.1
POST Post 4.72 144 IAmb_Lg 07 56 40.7
comp=Z,7.1nm,0.9s
R32A Long Quarter, 5.06 71 IAmb_Lg 07 57 03.5
comp=Z,14nm,0.8s
APMT Aspermont 5.27 132 IAmb_Lg 07 57 05.5
comp=Z,16nm,1.1s
X34A Smith Ranch, M 6.14 110 IAmb_Lg 07 57 26.1
comp=Z,9.5nm,0.8s
FNO Franklin 6.23 103 IAmb_Lg 07 57 35.2
comp=Z,12nm,0.8s
JCT Junction City 7.67 146 IAmb_Lg 07 58 27.2
comp=Z,5.1nm,0.9s

IDC 01 08:00:02.1±2.9, 53°55N×87°63E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=25.5km s-min=15.2km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**285**	I	I	08 11 49.7	
	baz=100,slow=331,SNR=3.0						
ZALV	**Zalesovo Beam**	**1.72**	**285**	Pn	Pn	08 00 33.6	+0.4
	1.2nm,0.3s,baz=103,slow=12,SNR=14						
ZALV				Lg	Lg	08 00 56.1	
	1.6nm,0.3s,baz=103,slow=25,SNR=9.7						
KURBB	**Kurchatov Arra**	**6.33**	**246**	Pn	Pn	08 01 37.4	+0.9
	baz=62,slow=14,SNR=1.9						
KURBB				Lg	Lg	08 03 20.7	
	baz=50,slow=38						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	Pn	08 01 54.7	+1.0
	0.2nm,0.3s,baz=30,slow=13,SNR=7.6						
MKAR				Sn	Sn	08 03 20.4	+0.1
	baz=30,slow=21,SNR=2.0						
MKAR				Lg	Lg	08 04 01.6	
	baz=29,slow=30,SNR=1.8						
	0.2nm,0.3s						

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*IDC **01** 08:06:50.3±1.1, 11°64S×166°79E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=39.1km s-min=28.4km az=99.0*

ISC 01 08:06:55.7±1.0, 11°6S±0°2×166°8E±0°3, h35km, n8, σ0s75/9, mb3.6/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.21**	**251**	P	**P**	**08 13 20.3**	**-0.6**
	0.4nm,0.7s,baz=84,slow=9.0,SNR=1.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**33.42**	**245**	P	**P**	**08 13 31.1**	**-0.3**
	0.6nm,0.8s,baz=71,slow=10.0,SNR=6.4						
ASAR				PcP	**PcP**	**08 16 11.9**	**-0.6**
	0.4nm,0.8s,baz=64,slow=2.3,SNR=5.9						
	0.6nm,0.8s						
VNDA	**Vanda**	**65.92**	**181**	P	**P**	**08 17 38.1**	**+0.4**
	0.6nm,0.7s,baz=349,slow=7.0,SNR=5.8						
	0.6nm,0.7s						
QSPA	**South Pole Qui**	**78.37**	**180**	P	**P**	**08 18 52.5**	**0.0**
	1.4nm,0.3s,baz=334,slow=2.6,SNR=4.7						
	1.4nm,0.3s						
SONM	**Songino Array**	**79.73**	**323**	P	**P**	**08 19 00.4**	**+0.2**
	0.4nm,0.6s,baz=139,slow=4.6,SNR=1.5						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**83.77**	**18**	P	**P**	**08 19 20.0**	**-1.0**
	0.4nm,0.8s,baz=216,slow=4.5,SNR=2.2						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**94.63**	**317**	P	**P**	**08 20 14.3**	**+1.2**
	0.9nm,0.5s,baz=89,slow=6.1,SNR=12						
	0.9nm,0.5s						
ARCES	**ARCESS Array B**	**117.15**	**346**	PKP	**PKiKP**	**08 25 37.0**	**+0.3**
	3.4nm,1.1s,baz=95,slow=1.7,SNR=7.7						

IDC 01 08:12:44.1±3.7, 53°66N×88°02E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=33.8km s-min=18.5km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**280**	I	I	08 25 12.7	
	baz=98,slow=333,SNR=27						
ZALV	**Zalesovo Beam**	**1.92**	**280**	Pg	Pn	08 13 19.0	+1.0
	0.6nm,0.3s,baz=99,slow=14,SNR=13						
ZALV				Lg	Lg	08 13 44.9	
	1.5nm,0.3s,baz=96,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**6.59**	**246**	Pn	Pn	08 14 22.7	+0.6
	0.1nm,0.3s,baz=63,slow=14,SNR=4.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.79**	**210**	Pn	Pn	08 14 39.7	+1.0
	0.1nm,0.3s,baz=28,slow=14,SNR=2.0						
MKAR				Lg	Lg	08 16 52.5	
	baz=26,slow=30,SNR=4.4						
	0.1nm,0.3s						

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*IDC **01** 08:13:13.9±2.1, 14°44N×92°17W, h58km±20km, mb3.3/4, mbtmp3.7/8, ML3.5/3, MS3.1/3, Error ellipse: s-maj=65.6km s-min=11.9km az=41.0*

*CATAC **01** 08:13:14.6±0.4, 14°33N×92°18W, h22km±3km, MB4.5, mb4.6, ML4.4*

*SNET **01** 08:13:14.0±0.7, 14°36N×92°28W, h46km±11km, ML3.8*

*MEX **01** 08:13:14.8±1.8, 14°31N×92°33W, h47km±27km, MD4.3*

*GCG **01** 08:13:22.9±0.3, 14°54N×91°63W, h23km±4km, MD4.2*

ISC 01 08:13:12.6±1.2, 14°28N±0°06×92°36W±0°06, h48km±11km, n90, σ1s37/122, mb3.6/4, 3C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.63**	**9**	*i* P	**Pn**	**08 13 25.9**	**+0.5**
THIG				*i* S	**Sn**	**08 13 35.5**	**+0.9**
SMCA	**Catarina**	**0.64**	**26**	*i* P	**Pn**	**08 13 25.3**	**-0.2**
SMCA				*i* S	**Sn**	**08 13 33.7**	**-1.1**
SMCA				IAML		08 13 34.6	
	comp=Z,9μm,1.0s						
RTAL	**Retalhuleu**	**0.69**	**69**	*i* P	**Pn**	**08 13 26.0**	**-0.2**
RTAL				*i* S	**Sn**	**08 13 35.4**	**-0.6**
RTAL	**Retalhuleu**	**0.69**	**69**	*e*P	**Pn**	**08 13 26.1**	**-0.1**
RTAL				*e*S	**Sn**	**08 13 35.6**	**-0.4**
RTAL				IAML		08 13 40.0	
	comp=Z,2μm,0.3s						
RTAL	**Retalhuleu**	**0.69**	**69**	*i* P	**Pn**	**08 13 25.9**	**-0.2**
RTAL				*i* S	**Sn**	**08 13 35.5**	**-0.4**
RTAL				IAML		08 13 54.3	
	comp=Z,6μm,1.0s						
SULM	**Suchitepequez,**	**0.77**	**88**	*e*P	**Pn**	**08 13 28.9**	**+1.6**
PATR	**El Naranjo**	**0.84**	**8**	*i* P	**Pn**	**08 13 27.9**	**-0.5**
PATR				*i* S	**Sn**	**08 13 38.7**	**-1.2**
CHUJ	**Union Juarez**	**0.85**	**17**	*i* P	**Pn**	**08 13 28.0**	**-0.4**
CHUJ				*i* S	**Sn**	**08 13 38.3**	**-1.7**
STG3	**Santiaguito 3,**	**0.88**	**61**	*e*P	**Pn**	**08 13 28.9**	**0.0**
SMSP	**San Marcos**	**0.89**	**39**	*i* P	**Pn**	**08 13 28.7**	**-0.4**
SMSP				*i* S	**Sn**	**08 13 39.4**	**-1.8**
SMSP	**San Marcos**	**0.89**	**39**	*i* P	**Pn**	**08 13 29.0**	**-0.1**
SMSP				IAML		08 13 47.1	
	comp=Z,16μm,1.0s						
PAVE	**Pavencul**	**0.93**	**11**	*i* P	**Pn**	**08 13 29.2**	**-0.3**
PAVE				*i* S	**Sn**	**08 13 40.6**	**-1.2**
HUEH	**Huehuetenango**	**1.33**	**39**	*i* P	**Pn**	**08 13 35.4**	**+0.5**
HUEH				*i* S	**Sn**	**08 13 51.8**	**+0.2**
HUEH	**Huehuetenango**	**1.33**	**39**	i/*e*P	**Pn**	**08 13 35.5**	**+0.6**
HUEH				*e*S	**Sn**	**08 13 51.9**	**+0.4**
HUEH				IAML		08 14 04.1	
	comp=Z,4μm,0.5s						
HUEH	**Huehuetenango**	**1.33**	**39**	*i* P	**Pn**	**08 13 35.2**	**+0.2**
HUEH				*i* S	**Sn**	**08 13 52.0**	**+0.4**
HUEH				IAML		08 13 56.9	
	comp=Z,10μm,1.0s						
ESSG	**Sabana Grande**	**1.49**	**86**	*i* P	**Pn**	**08 13 36.6**	**-0.4**
ESSG				*i* S	**Sn**	**08 13 52.4**	**-3.0**
ESSG				IAML		08 13 57.1	
	comp=Z,6μm,1.0s						
QUIS	**Sacapulas**	**1.59**	**51**	*i* P	**Pn**	**08 13 39.0**	**+0.6**
QUIS				*i* S	**Sn**	**08 13 58.3**	**+0.4**
QUIS				IAML		08 14 00.3	
	comp=Z,4μm,1.0s						
PCIG		**1.64**	**330**	*i* P	**Pn**	**08 13 40.1**	**+1.1**
PCIG				*i* S	**Sn**	**08 13 59.3**	**+0.3**
PCG	**Pacaya**	**1.71**	**86**	*e*P	**Pn**	**08 13 41.8**	**+1.6**
GUMI	**Mixco**	**1.73**	**78**	*i* P	**Pn**	**08 13 41.1**	**+0.6**
GUMI				*i* S	**Sn**	**08 14 00.9**	**-0.6**
GUMI				IAML		08 14 10.3	
	comp=Z,3μm,1.0s						
NBG	**Las Nubes**	**1.98**	**81**	*e*P	**Pn**	**08 13 45.6**	**+1.7**
GUNB	**GUNB**	**1.98**	**81**	*i* P	**Pn**	**08 13 44.4**	**+0.5**
GUNB				*i* S	**Sn**	**08 14 08.5**	**+0.8**
GUNB				IAML		08 14 19.2	
	comp=Z,1μm,1.0s						
CCIG	**Comitan**	**2.00**	**6**	*e*P	**Pn**	**08 13 46.1**	**+1.9**
CCIG				*e*S	**Sn**	**08 14 10.1**	**+2.0**
CCIG	**Comitan**	**2.00**	**6**	*i* P	**Pn**	**08 13 46.2**	**+2.0**
CCIG				*i* S	**Sn**	**08 14 11.0**	**+2.9**
CCIG				IAML		08 14 16.1	
	comp=Z,3μm,1.0s						
AVCB	**Coban**	**2.23**	**58**	*i* P	**Pn**	**08 13 48.2**	**+0.9**
AVCB				IAML		08 14 29.9	
	comp=Z,4μm,1.0s						
SLOZ	**Alcaldia de Sa**	**2.51**	**95**	*e*P	**Pn**	**08 13 51.7**	**+0.6**
SLOZ				*e*S	**Sn**	**08 14 21.2**	**+0.7**
LOAL	**Lomas de Alarc**	**2.52**	**96**	*i* P	**Pn**	**08 13 52.1**	**+1.0**
LOAL				IAML		08 14 50.1	
	comp=Z,2μm,1.0s						
NUBE	**Las Nubes**	**2.53**	**98**	*e*P	**Pn**	**08 13 51.9**	**+0.5**
NUBE	**Las Nubes**	**2.53**	**98**	*i* P	**Pn**	**08 13 51.6**	**+0.2**
NUBE				*i* S	**Sn**	**08 14 20.0**	**-1.2**
NUBE				IAML		08 14 28.8	
	comp=Z,840nm,1.0s						
TGIG		**2.59**	**344**	*e*P	**Pn**	**08 13 53.7**	**+1.6**
TGIG				*e*S	**Sn**	**08 14 21.0**	**-1.4**
CEVE	**Cerro Verde**	**2.69**	**99**	i/*i*P	**Pn**	**08 13 55.1**	**+1.3**
CEVE	**Cerro Verde**	**2.69**	**99**	*i* P	**Pn**	**08 13 55.0**	**+1.3**
CEVE				IAML		08 14 32.2	
	comp=Z,3μm,1.0s						
SNJE	**San Jose**	**2.71**	**98**	*e*P	**Pn**	**08 13 54.9**	**+1.1**
UNIC	**Universidad Ca**	**2.75**	**96**	*i* P	**Pn**	**08 13 54.6**	**+0.3**
UNIC				IAML		08 14 37.7	
	comp=Z,360nm,1.0s						
JAYA	**Jayaque - finc**	**2.90**	**102**	*e*P	**Pn**	**08 13 57.3**	**+0.9**
JAYA	**Jayaque - finc**	**2.90**	**102**	*i* P	**Pn**	**08 13 57.1**	**+0.7**
JAYA				*i* S	**Sn**	**08 14 27.7**	**-2.4**
JAYA				IAML		08 14 38.6	
	comp=Z,4μm,1.0s						
MTO3	**Montecristo**	**2.91**	**87**	*i* P	**Pn**	**08 13 56.6**	**-0.1**
MTO3				IAML		08 14 48.0	
	comp=Z,190nm,1.0s						
CEDA	**San Andres**	**2.92**	**99**	*e*P	**Pn**	**08 13 57.5**	**+0.9**
ESQI	**Esquipulas**	**2.94**	**84**	*i* P	**Pn**	**08 13 57.4**	**+0.4**
ESQI				IAML		08 14 50.5	
	comp=Z,310nm,1.0s						
PMON	**Piamonte**	**3.01**	**100**	*i* P	**Pn**	**08 13 58.8**	**+0.8**
PMON				IAML		08 14 45.4	
	comp=Z,2μm,1.0s						
QUEZ	**Alcaldia de Qu**	**3.03**	**98**	*i* P	**Pn**	**08 13 59.6**	**+1.5**
QUEZ				*i* S	**Sn**	**08 14 34.0**	**+0.7**
QUEZ				IAML		08 14 44.2	
	comp=Z,3μm,1.0s						
LALI	**Alcalda de L**	**3.06**	**105**	*e*P	**Pn**	**08 13 59.2**	**+0.8**
UEES	**Universidad Ev**	**3.08**	**100**	*e*P	**Pn**	**08 13 59.9**	**+1.0**
UEES	**Universidad Ev**	**3.08**	**100**	*i* P	**Pn**	**08 14 00.4**	**+1.5**
UEES				*i* S	**Sn**	**08 14 33.6**	**-1.0**
UEES				IAML		08 14 52.9	
	comp=Z,650nm,1.0s						
UTEC	**Universidad Te**	**3.12**	**100**	*i* P	**Pn**	**08 14 00.1**	**+0.7**
UTEC				*i* S	**Sn**	**08 14 35.5**	**0.0**
UTEC				IAML		08 14 49.8	
	comp=Z,650nm,1.0s						
PANCS	**Alcalda de**	**3.16**	**102**	*i* P	**Pn**	**08 14 00.9**	**+0.9**
PANCS				*i* S	**Sn**	**08 14 35.4**	**-1.1**
PANCS				IAML		08 14 36.4	
	comp=Z,2μm,1.0s						
LOMA	**Loma Larga**	**3.16**	**101**	*e*P	**Pn**	**08 14 01.7**	**+1.7**
LOMA	**Loma Larga**	**3.16**	**101**	*i* P	**Pn**	**08 14 01.7**	**+1.7**
LOMA				IAML		08 14 49.5	
	comp=Z,910nm,1.0s						
SJTE	**Alcalda de S**	**3.32**	**101**	*e*P	**Pn**	**08 14 03.3**	**+1.0**
SJTE	**Alcalda de S**	**3.32**	**101**	*i* P	**Pn**	**08 14 03.5**	**+1.3**
SJTE				IAML		08 14 56.3	
	comp=Z,590nm,1.0s						
PAVA	**Las Pavas**	**3.37**	**99**	*e*P	**Pn**	**08 14 03.6**	**+0.7**
PAVA	**Las Pavas**	**3.37**	**99**	*i* P	**Pn**	**08 14 03.6**	**+0.7**
PAVA				IAML		08 15 04.3	
	comp=Z,680nm,1.0s						
COEG	**Centro de Oper**	**3.44**	**101**	*e*P	**Pn**	**08 14 05.1**	**+1.2**
COEG	**Centro de Oper**	**3.44**	**101**	*i* P	**Pn**	**08 14 05.1**	**+1.2**
COEG				IAML		08 15 00.0	
	comp=Z,450nm,1.0s						
UXUV	**UXUV**	**3.48**	**331**	*e*P	**Pn**	**08 14 06.5**	**+2.3**
UXUV				*e*S	**Sn**	**08 14 48.0**	**+3.9**
TECO	**Alcaldia de Te**	**3.56**	**102**	*e*P	**Pn**	**08 14 06.0**	**+0.7**
TECO	**Alcaldia de Te**	**3.56**	**102**	*i* P	**Pn**	**08 14 06.3**	**+1.0**
TECO				IAML		08 14 57.1	
	comp=Z,240nm,1.0s						
PETF	**Flores**	**3.56**	**42**	*e*P	**Pn**	**08 14 05.2**	**-0.2**
PETF				*e*S	**Sn**	**08 14 46.6**	**+0.4**
PETF	**Flores**	**3.56**	**42**	*i* P	**Pn**	**08 14 05.6**	**+0.3**
PETF				IAML		08 15 12.3	
	comp=Z,250nm,1.0s						
SCLA	**Alcaldia de Sa**	**3.57**	**99**	*e*P	**Pn**	**08 14 06.1**	**+0.5**
SCLA	**Alcaldia de Sa**	**3.57**	**99**	*i* P	**Pn**	**08 14 06.4**	**+0.8**
SCLA				*i* S	**Sn**	**08 14 48.9**	**+2.2**
SCLA				IAML		08 15 04.9	
	comp=Z,190nm,1.0s						
CMIG	**Matias Romero**	**3.70**	**319**	P	**Pn**	**08 14 09.3**	**+2.0**
	comp=Z,2.4nm,0.3s,baz=145,slow=14,SNR=29						
CMIG				S	**Sn**	**08 14 50.8**	**+1.1**
	comp=Z,52nm,0.5s,baz=119,slow=14,SNR=6.6						
CMIG				LR	LR	08 15 35.2	
	comp=Z,62nm,20.1s,baz=141,slow=38						
	comp=Z,7.5nm,0.4s						
CMIG	**Matias Romero**	**3.70**	**319**	*e*P	**Pn**	**08 14 09.0**	**+1.6**
CMIG				*e*S	**Sn**	**08 14 51.2**	**+1.4**
PQSS	**Presa 15 de Se**	**3.75**	**100**	*i* P	**Pn**	**08 14 10.4**	**+2.4**
PQSS				*i* S	**Sn**	**08 14 52.4**	**+1.5**
PQSS				IAML		08 15 01.1	
	comp=Z,180nm,1.0s						
COEB	**Comit de Eme**	**3.80**	**101**	*e*P	**Pn**	**08 14 09.6**	**+0.8**
PACA	**Pacayal**	**4.00**	**101**	*i* P	**Pn**	**08 14 14.5**	**+2.9**
PACA				IAML		08 15 22.2	
	comp=Z,2μm,1.0s						
LCND	**La Caada**	**4.45**	**102**	*i* P	**Pn**	**08 14 18.3**	**+0.7**
LCND				IAML		08 15 27.3	
	comp=Z,240nm,1.0s						
CNCH	**Conchagua**	**4.51**	**102**	*i* P	**Pn**	**08 14 19.5**	**+0.9**
CNCH				IAML		08 15 20.5	
	comp=Z,550nm,1.0s						
TELN	**Telica**	**5.63**	**107**	*i* P	Pn	08 14 40.7	+6.8
ROCN	**Rota Cerro Neg**	**5.74**	**107**	*i* P	**Pn**	**08 14 35.0**	**-0.3**
ROCN				IAmb	IAmb	08 14 40.5	
	comp=Z,32nm,0.6s						
ROCN				IVmB_BB		08 14 54.2	
	comp=Z,770nm,1.0s						
ROCN				IAML		08 16 00.7	
	comp=Z,78nm,1.0s						
MACN	**El Madrono**	**5.82**	**107**	*i* P	**Pn**	**08 14 40.2**	**+3.7**
MACN				IAML		08 15 02.2	
	comp=Z,82nm,1.0s						
MACN				IVmB_BB		08 15 02.3	
	comp=Z,3μm,1.0s						
TOIG	**Toxpalan**	**5.90**	**311**	*e*P	**Pn**	**08 14 41.0**	**+3.4**
TOIG				*e*S	**Sn**	**08 15 43.3**	**-0.7**
LIMN	**Finca el Limon**	**5.95**	**101**	*i* P	**Pn**	**08 14 39.5**	**+1.2**
LIMN				IAmb	IAmb	08 15 05.8	
	comp=Z,34nm,1.5s						
LIMN				IAML		08 15 06.5	
	comp=Z,68nm,1.0s						
MOMN	**Momotombo**	**5.96**	**107**	*i* P	**Pn**	**08 14 39.2**	**+0.8**
MOMN				IAmb	IAmb	08 14 46.6	
	comp=Z,2.1nm,0.5s						
MOMN				IVmB_BB		08 14 46.8	
	comp=Z,52nm,1.0s						
MOMN				IAML		08 15 56.3	
	comp=Z,5.1nm,1.0s						
COPN	**Copaltepe**	**5.99**	**110**	*i* P	**Pn**	**08 14 35.8**	**-3.0**
COPN				IAmb	IAmb	08 14 41.3	
	comp=Z,100nm,0.9s						
COPN				IAML		08 16 00.5	
	comp=Z,160nm,1.0s						
MOM2	**El Cardon**	**6.01**	**107**	*i* P	**Pn**	**08 14 41.0**	**+2.0**
MOM2				IAmb	IAmb	08 14 51.9	
	comp=Z,79nm,0.7s						
MOM2				IAML		08 16 13.9	
	comp=Z,140nm,1.0s						
SAPS	**Ciudad Sandino**	**6.17**	**109**	*i* P	**Pn**	**08 14 42.7**	**+1.5**
SAPS				IAmb	IAmb	08 14 52.7	
	comp=Z,74nm,0.5s						
SAPS				IAML		08 16 06.3	
	comp=Z,160nm,1.0s						
UNAN	**Cigeo UNAN**	**6.31**	**109**	*i* P	**Pn**	**08 14 44.8**	**+1.6**
UNAN				IAmb	IAmb	08 14 52.8	
	comp=Z,400nm,1.1s						
UNAN				IAML		08 15 59.7	
	comp=Z,960nm,1.0s						
TEIG	**Tepich**	**7.09**	**33**	LR	LR	08 17 33.7	
	comp=Z,636nm,21.2s,baz=351,slow=38						
HZTE	**Horizontes, Gu**	**7.50**	**117**	*i* P	**Pn**	**08 15 02.0**	**+2.5**
ORTG	**Ortega, Santa**	**7.79**	**119**	*i* P	**Pn**	**08 15 05.1**	**+1.6**
ORTG				IAmb	IAmb	08 15 07.9	
	comp=Z,21nm,1.4s						
ORTG				IAML		08 16 17.2	
	comp=Z,110nm,1.0s						
JTS	**Las Juntas de**	**8.26**	**118**	P	**Pn**	**08 15 10.4**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=311,slow=20,SNR=1.6						
JTS				S	**Sn**	**08 16 43.2**	**+1.4**
	comp=Z,5.6nm,0.7s,baz=295,slow=19,SNR=1.5						
	comp=Z,3.0nm,0.4s						
TXAR	**Lajitas Array**	**18.27**	**327**	P	**Pn**	**08 17 23.4**	**+0.6**
	baz=148,slow=12,SNR=6.1						
	comp=Z,0.4nm,0.7s						
LPIG	**La Paz**	**19.54**	**303**	P	**Pn**	**08 17 39.0**	**+1.0**
	comp=Z,6.6nm,0.3s,baz=21,slow=2.9,SNR=4.5						
TKL	**Tuckaleechee C**	**22.64**	**18**	LR	LR	08 27 11.5	
	comp=Z,35nm,18.6s,baz=246,slow=37						
NVAR	**Mina Array Bea**	**33.23**	**321**	P	**P**	**08 19 47.4**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=138,slow=9.5,SNR=5.6						
	comp=Z,0.7nm,0.7s						
SIV	**San Ignacio**	**43.14**	**133**	P	**P**	**08 21 07.4**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=297,slow=7.0,SNR=8.8						
	comp=Z,1.9nm,0.8s						
YKA	**Yellowknife Ar**	**50.67**	**347**	P	**P**	**08 22 05.2**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=150,slow=7.1,SNR=5.3						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**62.45**	**337**	P	**P**	**08 23 29.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=130,slow=6.2,SNR=6.1						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**145.61**	**341**	PKPbc	**PKPdf**	**08 32 46.5**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=346,slow=4.4,SNR=6.3						

IDC 01 08:15:24.1±8.3, 16°25S×173°35W, h0km, mb3.8/3, mbtmp3.8/3, MS3.0/5, Error ellipse: s-maj=376.3km s-min=35.5km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.78**	**113**	LR	LR	08 22 26.7	
	comp=Z,62nm,20.0s,baz=348,slow=31						
DZM	**Mont Dzumac**	**19.94**	**250**	LR	LR	08 26 40.9	
	comp=Z,70nm,21.4s,baz=66,slow=34						
PPT	**Papeete**	**22.79**	**97**	LR	LR	08 26 44.1	
	comp=Z,34nm,20.8s,baz=346,slow=30						
HNR	**Honiara**	**26.88**	**281**	LR	LR	08 30 17.5	
	comp=Z,1μm,20.4s,baz=147,slow=33						
WRA	**Warramunga Arr**	**49.70**	**257**	P	P	08 24 17.4	-1.0
	0.6nm,0.7s,baz=96,slow=6.1,SNR=5.7						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**49.90**	**253**	P	P	08 24 20.1	+0.2
	2.7nm,0.6s,baz=87,slow=7.8,SNR=25						
ASAR				LR	LR	08 44 25.7	
	comp=Z,38nm,18.3s,baz=156,slow=35						
	2.7nm,0.6s						
KSRS	**Korea Array**	**76.79**	**316**	LR	LR	08 55 27.0	
	comp=Z,5.1nm,21.7s,baz=175,slow=31						
ILAR	**Eielson Array**	**83.26**	**11**	P	P	08 27 51.6	-0.6
	0.2nm,0.7s,baz=227,slow=7.3,SNR=6.2						
	0.2nm,0.7s						
BRTR	**Keskin Array B**	**146.84**	**320**	PKPbc	PKPab	08 35 09.5	-0.6
	0.7nm,0.8s,baz=45,slow=4.3,SNR=3.8						

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*IDC **01** 08:17:57.3±1.3, 9°13N×70°59W, h0km, mb3.3/4, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=30.4km s-min=24.9km az=154.0*

*FUNV **01** 08:18:00.2, 8°94N×70°63W, h5km, MW4.1*

ISC 01 08:17:58.5±1.2, 9°01N±0°03×70°59W±0°03, h10km±8km, n36, σ2s10/66, mb3.4/4, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.77**	**200**	*e*P	**Pg**	**08 18 12.5**	**-0.8**
SOCV				*e*S	**Sg**	**08 18 21.4**	**-2.0**
SANV	**Sanarito**	**1.15**	**65**	*e*P	**Pn**	**08 18 22.8**	**+2.0**
SANV				*e*S	**Sn**	**08 18 39.5**	**+2.8**
CURV	**Curarigua**	**1.17**	**32**	*e*P	**Pn**	**08 18 22.6**	**+1.4**
CURV				*e*S	**Sn**	**08 18 38.8**	**+1.5**
TEPV	**Terepaima**	**1.67**	**55**	*e*P	**Pg**	**08 18 31.3**	**+0.7**
TEPV				*e*S	**Sg**	**08 18 53.3**	**+1.0**
SIQV	**Siquisique**	**1.80**	**25**	*e*P	**Pg**	**08 18 32.8**	**-0.3**
SIQV				*e*S	**Sg**	**08 18 56.4**	**-0.1**
CAPV	**Capacho**	**2.05**	**237**	*e*P	**Pb**	**08 18 35.8**	**-0.3**
CAPV				*e*S	**Sn**	**08 18 59.2**	**+0.1**
MCQV	**Machiques**	**2.18**	**298**	*e*P	**Pn**	**08 18 36.1**	**+1.1**
MCQV				*e*S	**Sn**	**08 19 03.4**	**+1.3**
BAUV	**El Baul**	**2.52**	**91**	*e*P	**Pn**	**08 18 41.3**	**+1.8**
BAUV				*e*S	**Sn**	**08 19 12.4**	**+2.1**
PAMC	**Pamplona, Colo**	**2.67**	**232**	*e*P	**Pn**	**08 18 42.9**	**+0.8**
PAMC				*e*S	**Sn**	**08 19 16.7**	**+2.0**
PAMC				*i*		08 19 25.0	
	comp=N,441nm,0.3s						
PAMC				*i*		08

	comp=Z,5.0nm,0.3s,baz=86,slow=19,SNR=14						
ROSC				Sn	Sn	08 20 30.2	+4.2
	comp=Z,1.3nm,0.3s,baz=37,slow=20,SNR=1.3						
	comp=Z,16nm,0.6s						
DBBC	**Dabeiba**	**5.91**	**251**	*e*P	**Pn**	**08 19 28.3**	**+2.0**
DBBC				*i*		08 21 07.6	
	comp=Z,23nm,0.5s						
PCRV	**Puerto La Cruz**	**5.98**	**78**	*e*P	**Pn**	**08 19 29.1**	**+1.8**
PCRV				*e*S	**Sn**	**08 20 34.2**	**-1.7**
PCRV	**Puerto La Cruz**	**5.98**	**78**	Pn	**Pn**	**08 19 29.4**	**+2.1**
	comp=Z,2.8nm,0.3s,baz=295,slow=4.8,SNR=20						
PCRV				Sn	**Sn**	**08 20 37.9**	**+2.0**
	comp=Z,4.9nm,0.3s,baz=311,slow=19,SNR=7.6						
	comp=Z,6.0nm,0.4s						
GUY2C	**Guyana, Caldas**	**6.05**	**232**	*e*P	**Pn**	**08 19 29.9**	**+1.3**
GUY2C				*e*S	**Sn**	**08 20 39.3**	**+1.1**
GUY2C				*e*S	**Sn**	**08 20 41.1**	**+2.8**
GUY2C				*i*		08 20 57.5	
	comp=Z,22nm,0.6s						
CBOC	**Ciudad Bolivar**	**6.22**	**240**	*e*P	**Pn**	**08 19 33.7**	**+3.0**
CBOC				*i*		08 21 18.1	
	comp=Z,14nm,0.6s						
LUEV	**Luepa**	**9.58**	**109**	*e*P	**Pn**	**08 20 16.4**	**-0.4**
LUEV				*e*S	**Sn**	**08 21 56.8**	**-7.9**
TXAR	**Lajitas Array**	**37.01**	**308**	P	**P**	**08 25 07.7**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=141,slow=5.8,SNR=1.8						
	comp=Z,0.1nm,0.5s						
PDAR	**Pinedale Array**	**47.87**	**321**	P	**P**	**08 26 37.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=127,slow=11,SNR=7.3						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**51.81**	**312**	P	**P**	**08 27 08.1**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=117,slow=5.4,SNR=1.9						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**62.12**	**339**	P	**P**	**08 28 18.4**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=122,slow=7.2,SNR=5.7						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**152.41**	**235**	PKPbc	**PKPbc**	**08 37 56.0**	**0.0**
	comp=Z,0.3nm,0.8s,baz=112,slow=3.2,SNR=2.0						
WRA	**Warramunga Arr**	**153.57**	**243**	PKPbc	**PKPbc**	**08 37 57.2**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=102,slow=2.6,SNR=2.2						

IDC 01 08:30:29.0±3.5, 53.47N×87.40E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=33.6km s-min=17.1km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**288**	I	I	08 41 15.4	
	baz=106,slow=331,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.61**	**288**	Pg	Pn	08 30 58.0	-0.6
	0.5nm,0.3s,baz=107,slow=18,SNR=5.8						
ZALV				Lg	Lg	08 31 19.1	
	0.8nm,0.3s,baz=108,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.17**	**246**	Pn	Pn	08 32 02.8	+1.5
	baz=61,slow=14,SNR=4.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.45**	**208**	Pn	Pn	08 32 19.3	+0.4
	baz=29,slow=15,SNR=2.4						
	0.1nm,0.3s						

*ANF **01** 08:37:16.5±0.2, 32.93N×115.53W, h17km±1km, Error ellipse: s-maj=2.6km s-min=1.2km az=167.0*
*ECX **01** 08:37:17.5±0.6, 32.95N×115.56W, h20km±1km, MD2.4, ML2.6*
ISC 01 08:37:16.8±0.9, 32.93N±0.02×115.54W±0.02, h18km±3km, n39, σ0s77/57, 13C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WEMD	**Westmorland, C**	**0.11**	**343**	⇑*i*P	**Pg**	**08 37 20.7**	**+0.1**
WEMD				*i* S	**Sg**	**08 37 24.1**	**+0.8**
DREC	**Desert Rsrch C**	**0.15**	**147**	⇑*i*P	**Pg**	**08 37 21.4**	**+0.4**
DREC				*i* S	**Sg**	**08 37 25.4**	**+1.6**
COK2	**Cook Ranch 2**	**0.18**	**244**	⇓*i*P	**Pg**	**08 37 21.9**	**+0.5**
COK2				*e*S	**Sg**	**08 37 25.5**	**+1.0**
SWSC	**Sam W. Stewart**	**0.22**	**274**	P	**Pg**	**08 37 22.2**	**+0.1**
	baz=94,SNR=199						
SWSC				S	**Sg**	**08 37 25.5**	**-0.1**
	baz=94						
SWSC	**Sam W. Stewart**	**0.22**	**274**	⇑*i*P	**Pg**	**08 37 22.2**	**+0.1**
SWSC				*e*S	**Sg**	**08 37 25.8**	**+0.2**
SWSC				IAML		08 37 26.1	
	comp=E,1μm,0.2s						
SWSC				⇑*e*		08 37 26.1	
SWSC				⇓*e*		08 37 26.6	
SWSC				IAML		08 37 26.6	
	comp=N,776nm,0.2s						
WESC	**Westside Schoo**	**0.23**	**223**	⇓*i*P	**Pg**	**08 37 22.8**	**+0.5**
ICBC	**Inst. de Cultu**	**0.27**	**167**	⇑*e*P	**Pb**	**08 37 23.7**	**+0.6**
ICBC				*e*S	**Sb**	**08 37 28.7**	**+1.5**
UABX	**UABC, Campus M**	**0.31**	**164**	*e*P	**Pb**	**08 37 24.3**	**+0.5**
SGL	**Mount Signal**	**0.32**	**209**	⇓*i*P	**Pg**	**08 37 23.9**	**+0.2**
COA	**Coachella**	**0.36**	**100**	⇑*i*P	**Pg**	**08 37 24.6**	**+0.3**
CRR	**Carrizo Plain**	**0.36**	**263**	⇑*i*P	**Pb**	**08 37 24.8**	**+0.1**
JARAX	**Ej. Heriberto**	**0.39**	**185**	*e*P	**Pg**	**08 37 25.1**	**+0.2**
YUH2	**Yuha Desert**	**0.43**	**229**	⇓*i*P	**Pg**	**08 37 25.7**	**+0.1**
YUH2				*e*S	**Sg**	**08 37 31.8**	**+0.3**
YUCAX	**Ej. Yucatįn**	**0.50**	**130**	⇑*e*P	**Pb**	**08 37 27.4**	**+0.4**
EMSC	**East Mesa**	**0.51**	**112**	*e*P	**Pg**	**08 37 27.2**	**+0.3**
CPBX	**Cerro Prieto**	**0.55**	**158**	*e*P	**Pb**	**08 37 27.9**	**+0.1**
CPBX				*e*P	Pn	08 37 36.9	+7.2
CPBX				*e*		08 37 38.7	
CPBX				IAML		08 37 38.7	
	comp=E,2μm,0.2s						
CPBX				IAML		08 37 39.2	
	comp=N,3μm,0.2s						
CPBX				⇓*e*		08 37 39.2	
IKP	**In-Ko-Pah, Jac**	**0.55**	**240**	P	**Pb**	**08 37 28.2**	**+0.2**
	baz=60,SNR=79						
IKP				S	**Sg**	**08 37 35.6**	**+0.2**
	baz=60						
IKP	**In-Ko-Pah, Jac**	**0.55**	**240**	⇓*e*P	**Pb**	**08 37 28.1**	**+0.2**
IKP				*e*S	**Sg**	**08 37 35.4**	**0.0**
RMX	**La Rumorosa**	**0.56**	**234**	⇓*i*P	**Pg**	**08 37 28.2**	**+0.1**
RMX				*e*S	**Sg**	**08 37 35.6**	**0.0**
RMX				IAML		08 37 35.8	
	comp=E,147nm,0.3s						
RMX				⇑*e*		08 37 35.8	
RMX				⇑*e*		08 37 38.0	
RMX				IAML		08 37 38.0	
	comp=N,112nm,0.3s						
GLA	**Glamis**	**0.61**	**78**	P	**Pb**	**08 37 28.7**	**-0.3**
	baz=258						
GLA				S	**Sb**	**08 37 36.6**	**-0.7**
	baz=258						
GLA	**Glamis**	**0.61**	**78**	⇑*i*P	**Pb**	**08 37 28.7**	**-0.3**
BC3	**Big Chuckawall**	**0.73**	**6**	P	**Pb**	**08 37 31.0**	**0.0**
	baz=185,SNR=102						
BC3				S	**Sg**	**08 37 40.8**	**-0.1**
	baz=185						
AGSX	**Ej. Aguas Cali**	**0.73**	**154**	*e*P	**Pb**	**08 37 31.3**	**+0.2**
MONP2	**Monument Peak**	**0.74**	**267**	P	**Pb**	**08 37 31.3**	**0.0**
	baz=87,SNR=84						
MONP2				S	**Sg**	**08 37 41.4**	**+0.1**
	baz=87						
RHX	**Rio Hardy**	**0.82**	**165**	*e*P	**Pb**	**08 37 31.6**	**-0.9**
ALAMX	**Rancho Alamar**	**0.93**	**189**	⇓*e*P	**Pb**	**08 37 34.1**	**-0.3**
ALAMX				*e*S	**Sb**	**08 37 46.5**	**+0.1**
ALAMX				⇑*e*		08 37 47.6	
ALAMX				IAML		08 37 47.6	
	comp=N,204nm,0.2s						
ALAMX				IAML		08 37 49.0	
	comp=E,251nm,0.3s						
PFO	**Pinyon Flats O**	**1.03**	**312**	P	**Pb**	**08 37 35.5**	**-0.6**
	baz=131,SNR=73						
PFO				S	**Sg**	**08 37 49.9**	**-0.4**
	baz=131						
EML	**El Monte Cty P**	**1.10**	**268**	⇑*e*P	**Pb**	**08 37 36.4**	**-0.9**
BELC	**Belle Mtn. Jos**	**1.14**	**340**	P	**Pn**	**08 37 37.4**	**-0.6**
	baz=160,SNR=12						
SJX	**San Joaquin**	**1.22**	**197**	⇓*e*P	**Pn**	**08 37 35.1**	**-3.8**
IRM	**Iron Mountain**	**1.27**	**15**	P	**Pn**	**08 37 40.0**	**+0.3**
	baz=195,SNR=96						
109C	**Camp Elliot, M**	**1.32**	**269**	P	**Pb**	**08 37 40.8**	**-0.1**
	baz=88						
109C				S	**Sb**	**08 37 58.2**	**+0.7**
	baz=88						
MURC	**Murrieta**	**1.54**	**296**	P	**Pn**	**08 37 43.8**	**+0.4**
	baz=115						
MURC				Sb	**Sg**	**08 38 05.5**	**-1.1**
	baz=115						
GMRC	**Granite Mounta**	**1.85**	**357**	P	**Pn**	**08 37 48.1**	**+0.3**
	baz=177						
GMRC				Sb	**Sg**	**08 38 15.4**	**-1.2**
	baz=177						
HEC	**Hector,Ludlow**	**2.01**	**341**	P	**Pn**	**08 37 50.5**	**+0.6**
	baz=160						
BFSC	**Mount Baldy Ra**	**2.20**	**307**	P	**Pn**	**08 37 52.9**	**+0.4**
	baz=126						
CIS	**Catalina Islan**	**2.46**	**282**	P	**Pn**	**08 37 56.5**	**+0.5**
	baz=100						
214A	**Organ Pipe Nat**	**2.50**	**112**	P	**Pn**	**08 37 55.8**	**-0.9**
	baz=294						
EDW2	**Edwards Air Fo**	**2.82**	**314**	P	**Pn**	**08 38 01.6**	**+0.6**
	baz=133						

LJU 01 08:41:12.2, 46.16N×13.98E, h8km, ML0.7, 2C-2D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOJS	**Vojsko**	**0.14**	**207**	⇓*i*Pg	Pg	08 41 15.4	+0.1
VOJS				IAML		08 41 18.7	
	comp=Z,3.4nm,0.1s						
GORS	**Gorjuse**	**0.16**	**4**	⇓*i*Pg	Pg	08 41 15.6	0.0
GORS				*i* Sg	Sg	08 41 18.2	+0.4
GORS				IAML		08 41 18.5	
	comp=Z,9.6nm,0.1s						
CADS	**Cadrg**	**0.18**	**292**	⇑*i*Pg	Pg	08 41 15.9	-0.1
CADS				*i* Sg	Sg	08 41 18.9	+0.4
CADS				IAML		08 41 19.2	
	comp=Z,19nm,0.1s						
CRNS	**Crni Vrh**	**0.21**	**112**	⇑*i*Pg	Pg	08 41 16.5	+0.1
CRNS				IAML		08 41 21.1	
	comp=Z,6.1nm,0.1s						
JAVS	**Javornik**	**0.27**	**167**	*i* Pg	Pg	08 41 17.7	+0.1
JAVS				IAML		08 41 23.1	
	comp=Z,2.8nm,0.1s						
SABO	**M.te Sabotino**	**0.32**	**236**	*e*Pg	Pg	08 41 17.9	-0.6
SABO				*e*Sg	Sg	08 41 22.6	-0.1
MOZS	**Mozjanca**	**0.35**	**67**	*i* Pg	Pg	08 41 19.4	+0.3
MOZS				IAML		08 41 25.8	
	comp=Z,2.4nm,0.1s						
COLI	**Coloredo**	**0.42**	**267**	*e*Pg	Pg	08 41 20.6	+0.2
COLI				*e*Sg	Sg	08 41 26.7	+0.8
LSR	**Lussari**	**0.44**	**315**	*e*Pg	Pg	08 41 21.1	+0.2
LSR				*e*Sg	Sg	08 41 27.7	+1.0

VIE 01 08:42:09.8±0.2, 46.84N×14.51E, h0km, mb1.3/3, ml1.4/6, Error ellipse: s-maj=1.6km s-min=1.3km az=161.0, Suspected Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBKA	**Obir**	**0.33**	**176**	*e*Pg	Pg	08 42 16.5	+0.4
	1.0nm,0.2s						
OBKA				*e*Sg	Sg	08 42 22.0	+1.6
	22nm,0.4s						
SOKA	**Soboth**	**0.39**	**114**	*e*Sg	Sg	08 42 21.4	-0.9
	4.2nm,0.5s						
MYKA	**Terra Mystica**	**0.64**	**251**	*e*Pg	Pg	08 42 21.9	0.0
	1.0nm,0.2s						
MYKA				*e*Sg	Sg	08 42 30.7	+0.6
	0.5nm,0.2s						
ARSA	**Arzberg**	**0.80**	**59**	*e*Pg	Pg	08 42 24.7	-0.4
	0.1nm,0.1s						
ARSA				*i* Sg	Sg	08 42 36.3	+0.7
	0.4nm,0.2s						
KBA	**Koelnbreinsper**	**0.83**	**287**	*i* Pg	Pg	08 42 25.8	0.0
	1.3nm,0.4s						
KBA				*i* Sg	Sg	08 42 36.9	+0.4
	5.0nm,0.4s						
MOA	**Molln**	**1.02**	**351**	*i* Sg	Sb	08 42 44.3	-0.1
	0.5nm,0.2s						

*IDC **01** 08:42:49.7±4.1, 15.71N×95.32W, h0km, mb3.4/3, mbtmp3.3/4, ML3.7/1, MS3.3/2, Error ellipse: s-maj=88.6km s-min=21.3km az=122.0*
*MEX **01** 08:42:51.5±1.1, 15.42N×94.77W, h20km±16km, MD4.2*
ISC 01 08:42:47.1±1.5, 15.57N±0.05×94.86W±0.03, h11km±9km, n31, σ2s43/52, mb3.4/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.22**	**280**	*i* P	**Pg**	**08 43 12.2**	**+1.6**
HUIG				*e*S	**Sg**	**08 43 26.7**	**+0.1**
CMIG	**Matias Romero**	**1.52**	**359**	Pg	**Pg**	**08 43 16.6**	**+0.4**
	105nm,0.3s,baz=168,slow=12,SNR=1015						
CMIG				Lg	Lg	08 43 35.2	
	139nm,0.3s,baz=166,slow=13,SNR=16						
CMIG				LR	LR	08 43 56.5	
	comp=Z,208nm,21.2s,baz=198,slow=47						
CMIG	**Matias Romero**	**1.52**	**359**	*i* P	**Pg**	**08 43 16.5**	**+0.3**
CMIG				*i* S	**Sg**	**08 43 35.4**	**-0.6**
PCIG		**1.58**	**85**	*i* P	**Pn**	**08 43 14.3**	**-0.8**
PCIG				*i* S	**Sn**	**08 43 31.3**	**-4.3**
UXUV	**UXUV**	**1.87**	**21**	*i* P	**Pb**	**08 43 21.8**	**+0.4**
UXUV				*e*S	**Sb**	**08 43 44.3**	**-0.4**
TGIG		**2.06**	**54**	*i* P	**Pn**	**08 43 23.3**	**+1.7**
TGIG				*e*S	**Sb**	**08 43 49.0**	**-1.2**
PEIG	**Puerto Escondi**	**2.25**	**281**	*i* P	**Pb**	**08 43 26.7**	**-1.1**
PEIG				*e*S	**Sn**	**08 43 51.2**	**-0.9**
VHO	**Vista Hermosa**	**2.34**	**310**	*e*P	Pg	08 43 30.7	-1.4
VHO				*e*S	**Sb**	**08 43 58.9**	**+0.3**
CCIG	**Comitan**	**2.71**	**74**	*e*P	**Pn**	**08 43 32.5**	**+1.7**
CCIG				*e*S	**Sn**	**08 44 02.8**	**-1.0**
YOIG	**Yosondua**	**2.89**	**297**	*e*P	**Pb**	**08 43 38.4**	**-0.4**
YOIG				*e*S	**Sb**	**08 44 10.1**	**-4.2**
PMUV	**Sontecomapan**	**2.97**	**355**	*e*P	**Pn**	**08 43 35.5**	**+1.1**
PMUV				*e*S	**Sn**	**08 44 10.8**	**+0.7**
PNIG	**Pinotepa**	**3.25**	**285**	*e*P	**Pn**	**08 43 40.9**	**+2.8**
PNIG				*e*S	**Sn**	**08 44 15.8**	**-1.2**
TXIG	**Tlaxiaco**	**3.26**	**301**	*e*P	**Pb**	**08 43 44.3**	**-0.9**
TXIG				*e*S	**Sb**	**08 44 21.2**	**-3.9**
TOIG	**Toxpalan**	**3.29**	**320**	*e*P	**Pb**	**08 43 44.6**	**-1.0**
TOIG				*e*S	**Sb**	**08 44 23.4**	**-2.3**
HLIG	**Huajuapan de L**	**3.61**	**309**	*e*P	**Pb**	**08 43 49.5**	**-1.6**
HLIG				*e*S	**Sb**	**08 44 29.5**	**-5.6**
TPIG	**Tehuac#an**	**3.72**	**320**	*e*P	**Pn**	**08 43 47.4**	**+2.8**
TPIG				*e*S	**Sb**	**08 44 32.2**	**-5.9**
FTIG	**Fresnillo de T**	**3.91**	**307**	*e*P	**Pb**	**08 43 53.3**	**-2.9**
FTIG				*e*S	**Sn**	**08 44 35.8**	**+2.5**
TLIG	**Tlapa**	**4.08**	**300**	*e*P	**Pb**	**08 43 54.9**	**-4.1**
TLIG				*e*S	**Sn**	**08 44 35.3**	**-2.1**
CRIG	**Cruz Grande**	**4.27**	**286**	*e*P	**Pn**	**08 43 54.5**	**+2.4**
CRIG				*e*S	**Sn**	**08 44 38.8**	**-3.3**
LVIG	**Laguna Verde**	**4.39**	**340**	*e*P	**Pb**	**08 44 01.3**	**-3.0**
LVIG				*e*S	**Sn**	**08 44 44.9**	**-0.2**
DAIG	**Los Arroyos**	**4.83**	**288**	*e*P	**Pn**	**08 44 00.3**	**+0.5**
DAIG				*e*S	**Sn**	**08 44 53.0**	**-2.7**
SCIG	**Sabancuy**	**4.87**	**45**	*e*P	**Pn**	**08 44 00.6**	**+0.3**
SCIG				*e*S	**Sn**	**08 44 55.7**	**-1.1**
MEIG	**Mezcala**	**5.13**	**298**	*e*P	**Pn**	**08 44 06.8**	**+2.8**
MEIG				*e*S	**Sn**	**08 45 04.0**	**+0.6**
PLIG	**Platanillo**	**5.26**	**303**	*e*P	**Pn**	**08 44 08.2**	**+2.4**
PLIG				*e*S	**Sn**	**08 45 06.3**	**-0.3**
CAIG	**El Cayaco**	**5.40**	**287**	*e*P	**Pn**	**08 44 11.5**	**+3.8**
CAIG				*e*S	**Sn**	**08 45 06.2**	**-3.7**
TXAR	**Lajitas Array**	**15.93**	**331**	Pn	**P**	**08 46 35.5**	**+0.5**
	0.1nm,0.3s,baz=150,slow=13,SNR=7.8						
	0.5nm,0.7s						
PFO	**Pinyon Flats O**	**26.53**	**317**	LR	LR	08 59 10.6	
	comp=Z,62nm,21.0s,baz=128,slow=38						
NVAR	**Mina Array Bea**	**30.74**	**322**	P	**P**	**08 49 02.6**	**0.0**
	0.4nm,0.9s,baz=147,slow=10,SNR=1.8						
	0.4nm,0.9s						
YBH	**Yreka Blue Hor**	**35.45**	**323**	LR	LR	09 03 36.5	
	comp=Z,52nm,19.8s,baz=170,slow=36						
YKA	**Yellowknife Ar**	**48.90**	**348**	P	**P**	**08 51 34.5**	**+1.7**
	0.3nm,0.7s,baz=151,slow=7.4,SNR=5.2						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**60.33**	**337**	P	**P**	**08 52 58.5**	**+2.8**
	0.5nm,0.9s,baz=136,slow=4.4,SNR=5.4						
	0.5nm,0.9s						

IDC 01 08:45:43.8±3.2, 54.28N×87.15E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=28.7km s-min=17.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.41**	**257**	I	I	08 55 22.3	

	baz=76,slow=328,SNR=4.9						
ZALV	**Zalesovo Beam**	**1.41**	**257**	Pg	Pn	08 46 08.8	-1.9
	0.9nm,0.3s,baz=75,slow=16,SNR=15						
ZALV				Lg	Lg	08 46 28.4	
	1.3nm,0.3s,baz=74,slow=15,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.42**	**239**	Pn	Pn	08 47 21.0	+1.5
	0.1nm,0.3s,baz=55,slow=14,SNR=5.9						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**8.11**	**204**	Pn	Pn	08 47 43.5	+0.7
	0.1nm,0.3s,baz=18,slow=10,SNR=5.9						
MKAR				Sn	Sn	08 49 14.6	-0.4
	0.1nm,0.3s,baz=19,slow=26,SNR=6.0						
	0.3nm,0.5s						

*ISN **01** 08:47:36.6±1.4, 33.80N×45.63E, h27km±18km, ML2.7*
*TEH **01** 08:47:37.0, 33.81N×45.63E, h8km±55km, ML2.7*
ISC 01 08:47:37.2±1.1, 33.77N±0.05×45.58E±0.05, h10km, n12, σ1s17/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.54**	**106**	Pg	**Pg**	**08 47 47.3**	**-0.4**
ILBA				Sg	**Sg**	**08 47 54.8**	**0.0**
IBDR	**Badra**	**0.72**	**156**	*e*Pg	**Pg**	**08 47 50.0**	**-1.1**
	baz=340						
IBDR				*e*Sg	**Sb**	**08 48 01.0**	**-0.7**
IGHG	**Ghaleghazi**	**0.99**	**56**	Pg	**Pg**	**08 47 55.7**	**-0.5**
BHD	**Baghdad**	**1.12**	**244**	*e*Pn	**Pn**	**08 48 00.0**	**+1.1**
BHD				*e*Sn	**Sn**	**08 48 15.0**	**+0.6**
BHD				AML	AML	08 48 39.8	
	comp=E,34nm,0.7s						
IDHR	**Dehrash**	**1.14**	**36**	Pg	**Pb**	**08 47 57.6**	**-1.5**
KCHF	**Cheshme Sefid,**	**1.31**	**67**	Pg	**Pn**	**08 48 02.0**	**+0.2**
ILIN	**Lien**	**1.62**	**45**	Pg	**Pn**	**08 48 06.9**	**+0.9**
IKFM	**Kafar-mosalman**	**1.91**	**97**	Pn	**Pb**	**08 48 12.0**	**0.0**
IBZA	**Bozab**	**2.01**	**69**	Pn	**Pn**	**08 48 12.8**	**+1.3**
IALM	**Almabolaq**	**2.40**	**62**	Pn	**Pn**	**08 48 18.8**	**+2.0**
HSAM	**Samen**	**2.55**	**79**	Pn	**Pn**	**08 48 19.9**	**+1.1**
HAGD	**Aghdareh**	**3.13**	**69**	Pn	**Pn**	**08 48 28.4**	**+1.6**

*NNC **01** 08:48:18.9±1.4, 51.40N×75.00E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=51.7km s-min=6.9km az=23.0, Suspected Mining explosion.*
*IDC **01** 08:48:22.6±1.1, 51.75N×75.79E, h0km, mbtmp2.6/3, ML1.7/2, Error ellipse: s-maj=21.8km s-min=8.8km az=28.0*
ISC 01 08:48:19.2±1.1, 51.7N±0.1×75.37E±0.08, h0km, n10, σ1s27/11, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.28**	**118**	⇑Pn	**Pb**	**08 48 59.9**	**-1.3**
	1.2nm,0.3s						
KURBB				⇑Sn	**Sb**	**08 49 30.0**	**0.0**
	20nm,1.0s						
KURBB	**Kurchatov Arra**	**2.28**	**118**	Pg	**Pn**	**08 48 59.2**	**+1.1**
	0.2nm,0.3s,baz=305,slow=19,SNR=12						
KURBB				Lg	Lg	08 49 29.9	
	0.2nm,0.3s,baz=309,slow=31,SNR=15						
KURK	**Kurchatov**	**2.29**	**115**	⇑Pn	**Pn**	**08 48 58.9**	**+0.8**
	0.5nm,0.4s						
KURK				⇑Sn	**Sb**	**08 49 29.8**	**-0.3**
	5.9nm,0.7s						
BVA0	**Borovoye Array**	**3.31**	**295**	⇑Pg	**Pb**	**08 49 18.0**	**-0.8**
	0.5nm,0.5s,baz=119,slow=15						
BVA0				⇑Lg	Lg	08 50 07.0	
	4.3nm,0.8s,baz=112,slow=26,SNR=5.5						
BVAR	**Borovoye Array**	**3.31**	**295**	Pn	**Pb**	**08 49 18.9**	**+0.1**
	baz=114,slow=16,SNR=4.0						
BVAR				Sn	**Sb**	**08 50 00.3**	**+0.7**
	baz=110,slow=22,SNR=3.2						
	1.3nm,0.6s						
BRVK	**Borovoye**	**3.38**	**295**	⇓Pg	**Pb**	**08 49 17.6**	**-2.5**
	0.4nm,0.4s						
BRVK				⇓Lg	Lg	08 50 07.6	
	9.1nm,1.0s						
I46RU	**ZALESOVO INFRA**	**6.14**	**65**	I	I	09 23 40.0	
	baz=251,slow=331,SNR=2.2						
ZALV	**Zalesovo Beam**	**6.14**	**65**	Pn	**Pn**	**08 49 51.9**	**+0.9**
	0.6nm,0.6s,baz=258,slow=14,SNR=1.9						
ZALV				Lg	Lg	08 51 32.7	
	0.1nm,0.3s,baz=249,slow=28,SNR=3.1						
MK31	**Makanchi Array**	**6.71**	**135**	⇓Lg	Lg	08 51 50.0	
	2.1nm,0.8s,baz=320,slow=26,SNR=6.9						
MKAR	**Makanchi Array**	**6.71**	**135**	Pn	**Pn**	**08 50 00.1**	**+1.2**
	baz=327,slow=10,SNR=2.6						
MKAR				Lg	Lg	08 51 47.8	
	0.1nm,0.3s,baz=324,slow=27,SNR=8.9						
	0.2nm,0.6s						

IDC 01 09:00:19.5±2.8, 54.18N×86.41E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=22.4km s-min=13.3km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**257**	I	I	09 05 49.1	
	baz=76,slow=334,SNR=5.5						
ZALV	**Zalesovo Beam**	**0.96**	**257**	Pg	Pg	09 00 36.4	-1.5
	1.9nm,0.3s,baz=76,slow=16,SNR=22						
ZALV				Lg	Lg	09 00 52.1	
	1.3nm,0.3s,baz=74,slow=27,SNR=7.1						
ZALV				Rg	Rg	09 00 56.0	
	1.3nm,0.3s,baz=81,slow=29,SNR=11						
KURBB	**Kurchatov Arra**	**5.99**	**237**	Pn	Pn	09 01 51.0	+1.6
	baz=55,slow=

s-maj=40.5km s-min=14.8km az=2.0
*AEIC **01** 09:31:38.6±3.2,52°.1N±0°.2×171°.1W±0°.1, h26km±8km, Error ellipse: s-maj=24.4km s-min=4.7km az=161.0*
*NEIC **01** 09:31:40.1±2.5,52°.08N±0°.07×171°.09W±0°.09, h36km±41km, ML3.9/8, ML3.7(AEIC), Error ellipse: s-maj=12.6km s-min=2.2km az=139.0*

ISC 01 09:31:38.8±0.9, 52°.0N±0°.1×171°.08W±0°.06, h35km, n60, σ1§27/46, mb3.7/11, MS3.2/9, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.11**	**40**		**Pn**	**09 31 56.8**	**-0.9**
CLES	**Cleveland East**	**1.11**	**40**		**Sn**	**09 32 10.8**	**-1.0**
CLCO	**Concord Point,**	**1.16**	**46**		**Pn**	**09 31 57.4**	**-1.0**
CLCO					**Sn**	**09 32 12.8**	**-0.2**
NIKH	**Nikolski High**	**1.68**	**53**		**Pn**	**09 32 03.9**	**-1.7**
NIKH					**Sn**	**09 32 24.2**	**-1.7**
KOFP	**Korovin Flat P**	**1.88**	**280**		**Pn**	**09 32 09.3**	**+0.9**
ATKA	**Atka Island**	**1.93**	**278**		**Pn**	**09 32 09.3**	**+0.3**
ATKA					**Sn**	**09 32 32.4**	**+0.3**
OKWE	**Okmok W'ng Wal**	**2.28**	**48**		**Pn**	**09 32 14.2**	**+0.3**
OKER	**Okmok East Rim**	**2.36**	**50**		**Pn**	**09 32 15.6**	**+0.6**
OKFG	**Magazine Ridge**	**2.40**	**52**		**Pn**	**09 32 15.0**	**-0.4**
MAPS	**Pakushin South**	**3.10**	**52**		**Pn**	**09 32 25.3**	**+0.1**
MSW	**Makushin Switc**	**3.24**	**52**		**Pn**	**09 32 27.7**	**+0.7**
MNAT	**Makushin Natee**	**3.27**	**53**		**Pn**	**09 32 28.2**	**+0.7**
MNAT					**Sn**	**09 33 07.7**	**+2.6**
UNV	**Unalaska Valle**	**3.34**	**54**		**Pn**	**09 32 27.8**	**-0.6**
ADK	**Adak**	**3.47**	**271**		**Pn**	**09 32 32.0**	**+1.8**
ADK	**Adak**	**3.47**	**271**	IAML		09 33 26.1	
	373nm,1.1s						
ADK				IAML		09 33 26.4	
	366nm,0.8s						
ZRO	**Akutan Zero**	**3.73**	**54**		**Pn**	**09 32 35.5**	**+1.7**
AHB	**Akutan Harbor**	**3.83**	**54**		**Pn**	**09 32 36.8**	**+1.7**
AKUT	**Akutan**	**3.86**	**54**	Pn	**Pn**	**09 32 38.0**	**+2.5**
AKUT				IAML		09 33 39.8	
	comp=E,142nm,1.5s						
AKUT				IAML		09 33 49.1	
	comp=N,132nm,0.7s						
CHGN	**Chignik**	**8.60**	**55**	Pn	**Pn**	**09 33 41.7**	**+1.2**
SHEM	**Shemya Is, Ala**	**9.10**	**281**	LR	LR	09 36 02.7	
	comp=N,35nm,21.1s,baz=114,slow=30						
O14K	**Tigyukauivet M**	**9.15**	**33**	Pn	**Pn**	**09 33 50.3**	**+2.3**
N15K	**Kwethluk River**	**10.23**	**32**	Pn	**Pn**	**09 34 04.6**	**+1.7**
L14K	**Kuka Creek**	**10.44**	**23**	Pn	**Pn**	**09 34 07.1**	**+1.3**
O16K	**Kokwok River B**	**10.55**	**39**		**Pn**	**09 34 08.3**	**+1.1**
M16K	**Timber Creek**	**11.24**	**32**	Pn	**Pn**	**09 34 18.7**	**+2.0**
J14K	**Nanvaranak Lak**	**11.52**	**18**		**Pn**	**09 34 18.5**	**-1.9**
OHAK	**Old Harbor**	**11.56**	**56**	Pn	**Pn**	**09 34 21.0**	**0.0**
L16K	**Owhat River**	**11.61**	**28**		**Pn**	**09 34 22.7**	**+1.0**
KDAK	**Kodiak Island**	**12.11**	**54**	Pn	**Pn**	**09 34 28.0**	**-0.5**
	comp=N,0.3nm,0.3s,baz=38,slow=14,SNR=2.0 comp=N,14nm,1.0s						
ANM	**Nome**	**12.96**	**11**		**Pn**	**09 34 41.7**	**+1.5**
SCM	**Sheep Creek Mo**	**16.19**	**43**	Pn	**Pn**	**09 35 24.4**	**+1.0**
ILAR	**Eielson Array**	**17.87**	**35**	P	**Pn**	**09 35 43.5**	**-0.7**
	comp=N,0.1nm,0.3s,baz=224,slow=10.0,SNR=4.8 comp=N,0.2nm,0.6s						
PETK	**Petropavlovsk-**	**18.95**	**286**	P	**P**	**09 35 56.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=88,slow=15,SNR=8.1						
PETK				LR	LR	09 43 12.1	
	comp=N,21nm,20.8s,baz=105,slow=37 comp=N.1.8nm,0.6s						
SEY	**Seymchan**	**22.16**	**314**	LR	LR	09 45 08.6	
	comp=N,51nm,19.9s,baz=7.0,slow=37						
YKA	**Yellowknife Ar**	**31.29**	**48**	P	**P**	**09 37 56.1**	**+1.2**
	comp=N,0.1nm,0.3s,baz=276,slow=6.1,SNR=4.1 comp=N,0.1nm,0.3s						
YBH	**Yreka Blue Hor**	**34.04**	**88**	LR	LR	09 48 44.5	
	comp=N,42nm,20.1s,baz=295,slow=30						
H11N2	**WAKE ISLAND Hy**	**36.51**	**216**	T	T	10 18 02.5	
	baz=34,slow=79,SNR=10						
H11N3	**WAKE ISLAND Hy**	**36.52**	**216**	T	T	10 17 57.3	
	baz=34,slow=79,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**36.53**	**216**	T	T	10 17 51.4	
	baz=34,slow=79,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**37.70**	**216**	T	T	10 19 31.2	
	baz=22,slow=76,SNR=28						
H11S2	**WAKE ISLAND Hy**	**37.72**	**216**	T	T	10 19 33.4	
	baz=22,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**37.72**	**216**	T	T	10 19 24.2	
	baz=22,slow=76,SNR=21						
NVAR	**Mina Array Bea**	**38.72**	**89**	P	**P**	**09 39 00.5**	**+1.0**
	comp=N,0.5nm,0.7s,baz=289,slow=6.9,SNR=5.3 comp=N,0.5nm,0.7s						
PDAR	**Pinedale Array**	**41.51**	**78**	P	**P**	**09 39 22.9**	**+0.3**
	comp=N,0.5nm,0.6s,baz=297,slow=4.3,SNR=9.4						
PDAR				LR	LR	09 56 04.6	
	comp=N,22nm,18.2s,baz=7.5,slow=35 comp=N,0.5nm,0.6s						
KSRS	**Korea Array**	**44.40**	**276**	P	**P**	**09 39 46.0**	**+0.3**
	comp=N,0.9nm,0.8s,baz=143,slow=41,SNR=3.3 comp=N,0.9nm,0.8s						
ANMO	**Albuquerque**	**48.25**	**84**	LR	LR	09 59 50.3	
	comp=N,18nm,18.6s,baz=162,slow=35						
SONM	**Songino Array**	**50.59**	**300**	P	**P**	**09 40 33.2**	**-0.6**
	comp=N,0.4nm,0.7s,baz=64,slow=6.6,SNR=2.6						
SONM				LR	LR	10 05 07.0	
	comp=N,22nm,18.0s,baz=360,slow=40 comp=N,0.4nm,0.7s						
LPIG	**La Paz**	**53.48**	**97**	LR	LR	10 01 16.9	
	comp=N,11nm,18.2s,baz=11,slow=33						
TXAR	**Lajitas Array**	**53.81**	**87**	P	**P**	**09 40 58.1**	**+0.2**
	comp=N,0.8nm,0.7s,baz=294,slow=5.1,SNR=11 comp=N,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**56.99**	**317**	LR	LR	10 05 48.3	
	comp=N,22nm,20.4s,baz=56,slow=36						
KURBB	**Kurchatov Arra**	**62.06**	**317**	P	**P**	**09 41 53.8**	**-1.6**
	comp=N,1.3nm,0.2s,baz=47,slow=6.4,SNR=4.1 comp=N,1.3nm,0.2s						
MKAR	**Makanchi Array**	**63.30**	**313**	P	**P**	**09 42 02.4**	**-1.4**
	comp=N,0.2nm,0.5s,baz=97,slow=6.2,SNR=3.6 comp=N,0.2nm,0.5s						
BVAR	**Borovoye Array**	**63.39**	**324**	P	**P**	**09 42 03.4**	**-0.8**
	comp=N,1.0nm,0.7s,baz=57,slow=9.0,SNR=4.9 comp=N,1.0nm,0.7s						
HFS	**Hagfors**	**68.17**	**357**	LR	LR	10 13 34.3	
	comp=N,20nm,18.9s,baz=270,slow=37						
AKTO	**Aktyubinsk**	**69.81**	**329**	P	**P**	**09 42 43.8**	**-1.4**
	comp=N,1.8nm,0.6s,baz=58,slow=5.3,SNR=7.5 comp=N,1.8nm,0.6s						
AAK	**Ala-Archa**	**70.02**	**314**	LR	LR	10 17 26.4	
	comp=N,32nm,18.3s,baz=76,slow=39						
CMAR	**Chiang Mai Arr**	**75.67**	**282**	P	**P**	**09 43 21.2**	**+0.8**
	comp=N,0.9nm,0.3s,baz=22,slow=7.9,SNR=5.6 comp=N,0.9nm,0.3s						
H03N2	**Juan Fernandez**	**116.77**	**111**	T	T	11 57 53.2	
	baz=317,slow=78,SNR=4.5						
H03N1	**Juan Fernandez**	**116.78**	**111**	T	T	11 58 01.7	
	baz=317,slow=78,SNR=3.9						
H03N3	**Juan Fernandez**	**116.79**	**111**	T	T	11 58 08.2	
	baz=317,slow=78,SNR=5.7						

*ISN **01** 09:32:14.7±0.8, 33°.74N×45°.66E, h22km±12km, ML2.9*
*TEH **01** 09:32:16.0, 33°.73N×45°.68E, h12km±33km, ML2.9*

ISC 01 09:32:15.4±1.1, 33°.70N±0°.05×45°.70E±0°.05, h13km, n8, σ0§42/11, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.43**	**100**	Pg	**Pb**	**09 32 25.2**	**+0.2**
ILBA				Sg	**Sb**	**09 32 32.1**	**+0.7**
IBDR	**Badra**	**0.62**	**162**	*e*Pg	**Pg**	**09 32 27.0**	**-0.5**
	baz=340						
IBDR				*e*Sg	**Sb**	**09 32 37.0**	**+0.3**
IBDR				AML	AML	09 32 43.7	
	comp=E,68nm,0.2s						
IBDR				AML	AML	09 32 47.5	
	comp=N,71nm,0.5s						
IGHG	**Ghaleghazi**	**0.96**	**49**	Pg	**Pn**	**09 32 34.4**	**-0.4**
IDHR	**Dehrash**	**1.15**	**30**	Pg	**Pg**	**09 32 37.3**	**-0.2**
BHD	**Baghdad**	**1.18**	**249**	*e*Pn	**Pg**	**09 32 38.0**	**-0.2**
BHD				*e*Sn	**Sn**	**09 32 54.0**	**+0.4**
BHD				AML	AML	09 33 01.5	
	comp=E,54nm,0.8s						
KCHF	**Cheshme Sefid,**	**1.25**	**62**	Pg	**Pg**	**09 32 39.4**	**-0.1**
ILIN	**Lien**	**1.60**	**40**	Pg	**Pg**	**09 32 46.0**	**-0.2**
IBZA	**Bozab**	**1.95**	**66**	Pn	**Pb**	**09 32 50.9**	**-0.1**

IDC 01 09:35:17.8±2.4, 54°.04N×86°.45E, h0km, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=19.6km s-min=11.5km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**265**	I	I	09 40 54.9	
	baz=83,slow=333,SNR=14						
ZALV	**Zalesovo Beam**	**0.97**	**265**	Pg	Pg	09 35 35.4	-0.9
	0.7nm,0.3s,baz=83,slow=18,SNR=12						
ZALV				Lg	Lg	09 35 50.3	
	3.3nm,0.3s,baz=85,slow=31,SNR=10						
KURBB	**Kurchatov Arra**	**5.94**	**238**	Pn	Pn	09 36 48.0	+1.1
	0.2nm,0.3s,baz=56,slow=14,SNR=4.3						
KURBB				Lg	Lg	09 38 25.7	
	baz=60,slow=31,SNR=1.8 2.0nm,0.2s						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	09 37 12.5	+1.1
	0.3nm,0.3s,baz=22,slow=13,SNR=13						
MKAR				Sn	Sn	09 38 39.1	-0.4
	0.1nm,0.3s,baz=22,slow=30,SNR=1.9						
MKAR				Lg	Lg	09 39 21.1	
	baz=7.7,slow=34 0.4nm,0.3s						

*IDC **01** 09:38:51.4±0.7, 0°.36S×125°.22E, h0km, mb4.1/15, mbtmp4.1/16, ML3.4/1, MS3.2/5, Error ellipse: s-maj=25.8km s-min=15.5km az=79.0*
*DJA **01** 09:38:55.8±0.3, 0°.5S×125°.5E±°, h10km, M4.5/13, mb4.6/6, mB5.0/2, MLv4.4/13, Mw(mB)4.3/2*

ISC 01 09:38:53.2±0.6, 0°.31S±0°.07×125°.32E±0°.05, h10km, n30, σ1§41/29, mb4.2/15, MS3.1/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.60**	**303**	Pn	**Pb**	**09 39 22.4**	**-0.5**
SANI	**Sanana**	**1.85**	**159**	Pn	**Pn**	**09 39 25.7**	**+0.6**
LBMI	**Labuha**	**2.21**	**98**	P	**Pb**	**09 39 32.6**	**-0.7**
LUWI	**Luwuk**	**2.65**	**254**	P	**Pb**	**09 39 41.1**	**+0.3**
NLAI	**Namlea**	**3.41**	**149**	P	**Pn**	**09 39 48.3**	**+1.8**
MPSI	**Mapaga**	**5.46**	**277**	P	**Pn**	**09 40 18.1**	**+3.4**
	44nm,0.9s,1μm0.2nm						
TTSI	**Tana Toraja**	**6.13**	**244**	P	**Pn**	**09 40 26.7**	**+2.8**
	63nm,0.5s,1μm0.3nm						
BNDI	**Bandanaira**	**6.20**	**132**	P	**Pn**	**09 40 27.8**	**+2.9**
	102nm,0.9s,1.1nm						
BKSI	**Bukumba**	**7.19**	**226**	P	**Pn**	**09 40 41.1**	**+2.6**
	16nm,0.6s,0.1nm						
KAPI	**Kappang**	**7.26**	**230**	Pn	**Pn**	**09 40 39.1**	**-0.4**
	0.7nm,0.3s,baz=63,slow=7.5,SNR=1.6						
KAPI				Sn	**Sn**	**09 42 00.2**	**-1.8**
	2.5nm,0.3s,baz=66,slow=15,SNR=2.2 7.0nm,0.3s						
DAV	**Davao City (W)**	**7.34**	**2**	LR	LR	09 44 07.1	
	comp=Z,164nm,19.1s,baz=150,slow=43						
LEM	**Lembang**	**18.80**	**249**	LR	LR	09 51 01.7	
	comp=Z,122nm,21.6s,baz=216,slow=39						
WRA	**Warramunga Arr**	**21.42**	**156**	P	**P**	**09 43 40.6**	**-0.9**
	2.3nm,0.8s,baz=332,slow=12,SNR=13						
WRA				PcP	**PcP**	**09 47 45.3**	**0.0**
	0.2nm,0.6s,baz=337,slow=1.8,SNR=1.3 2.3nm,0.8s						
ASAR	**Alice Springs**	**24.67**	**161**	P	**P**	**09 44 13.6**	**-0.9**
	0.6nm,0.5s,baz=341,slow=9.1,SNR=18						
ASAR				PcP	**PcP**	**09 47 52.5**	**+0.6**
	0.6nm,0.5s,baz=345,slow=2.3,SNR=7.2 0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.93**	**307**	P	**P**	**09 45 18.0**	**-1.4**
	1.3nm,0.3s,baz=117,slow=8.1,SNR=4.1						
CMAR				LR	LR	09 59 51.7	
	comp=Z,9.9nm,18.0s,baz=165,slow=40 1.3nm,0.3s						
KSRS	**Korea Array**	**37.66**	**3**	P	**P**	**09 46 09.0**	**+0.4**
	0.5nm,0.5s,baz=195,slow=7.8,SNR=2.4 0.5nm,0.5s						
MJAR	**Matsushiro Arr**	**38.57**	**17**	P	**P**	**09 46 15.9**	**-0.5**
	3.1nm,1.0s,baz=199,slow=9.1,SNR=5.2 3.1nm,1.0s						
USRK	**Ussuriysk Ar.**	**44.72**	**7**	P	**P**	**09 47 06.8**	**+0.2**
	1.1nm,0.5s,baz=189,slow=7.4,SNR=5.7 1.1nm,0.5s						
PALK	**Pallekele**	**45.13**	**281**	LR	LR	10 06 44.0	
	comp=Z,21nm,18.4s,baz=206,slow=37						
SONM	**Songino Array**	**50.70**	**344**	P	**P**	**09 47 53.0**	**-0.2**
	1.2nm,0.8s,baz=158,slow=9.1,SNR=5.9 1.2nm,0.8s						
PETK	**Petropavlovsk-**	**59.68**	**22**	P	**P**	**09 48 59.5**	**+1.7**
	6.0nm,0.9s,baz=179,slow=3.6,SNR=5.2 6.0nm,0.9s						
MKAR	**Makanchi Array**	**60.11**	**327**	P	**P**	**09 49 00.5**	**-0.4**
	1.9nm,0.5s,baz=122,slow=8.3,SNR=24 1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**63.57**	**335**	P	**P**	**09 49 23.8**	**-0.1**
	0.6nm,0.4s,baz=59,slow=26,SNR=3.6 0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**64.41**	**329**	P	**P**	**09 49 29.7**	**+0.1**
	3.5nm,0.2s,baz=122,slow=6.0,SNR=6.7 3.5nm,0.2s						
BVAR	**Borovoye Array**	**69.95**	**328**	P	**P**	**09 50 04.0**	**-0.8**
	0.8nm,0.4s,baz=119,slow=9.2,SNR=6.4 0.8nm,0.4s						
NRIK	**Noril'sk**	**74.01**	**347**	P	**P**	**09 50 28.5**	**-0.2**
	1.3nm,0.2s,baz=101,slow=6.5,SNR=3.9 1.3nm,0.2s						
AKTO	**Aktyubinsk**	**75.96**	**323**	P	**P**	**09 50 40.2**	**-0.2**
	3.4nm,0.6s,baz=93,slow=5.8,SNR=11 3.4nm,0.6s						
ILAR	**Eielson Array**	**89.33**	**25**	P	**P**	**09 51 48.9**	**-0.8**
	0.2nm,0.6s,baz=270,slow=5.2,SNR=1.6 0.2nm,0.6s						
SPITS	**Spitsbergen Ar**	**94.14**	**349**	LR	LR	10 40 20.2	
	comp=Z,20nm,19.2s,baz=313,slow=39						
TXAR	**Lajitas Array**	**125.15**	**54**	PKP	**PKPdf**	**09 57 54.5**	**-0.5**
	0.6nm,1.0s,baz=204,slow=2.7,SNR=3.6						

IDC 01 09:46:02.9±3.0, 54°.09N×86°.59E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=23.4km s-min=13.7km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**263**	I	I	09 51 53.4	
	baz=83,slow=335,SNR=16						
ZALV	**Zalesovo Beam**	**1.05**	**263**	Pg	Pg	09 46 22.0	-1.0
	0.6nm,0.3s,baz=82,slow=17,SNR=8.2						
ZALV				Lg	Lg	09 46 37.9	
	3.1nm,0.3s,baz=82,slow=27,SNR=15						
KURBB	**Kurchatov Arra**	**6.03**	**238**	Pn	Pn	09 47 34.2	+0.9
	0.1nm,0.3s,baz=56,slow=13,SNR=2.0 1.2nm,0.2s						
MKAR	**Makanchi Array**	**7.80**	**202**	Pn	Pn	09 47 58.6	+1.0
	0.1nm,0.3s,baz=25,slow=14,SNR=4.6						
MKAR				Lg	Lg	09 50 12.9	
	0.1nm,0.3s,baz=23,slow=28,SNR=5.2 0.2nm,0.4s						

*SKHL **01** 09:57:45.7±0.2, 44°.40N×148°.50E, h60km±4km, mb5.1/3*
*MOS **01** 09:57:45.6±1.0, 44°.54N×148°.40E, h64km, mb4.5/1, Error ellipse: s-maj=9.5km s-min=8.7km az=138.9*
*JMA **01** 09:57:47.6±0.6, 44°.N±2°.×14°.8E±°, h0km, MW4.6/40, SE OFF ETOROFU*
*NIED **01** 09:57:47.6, 44°.07N×148°.03E, h0km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}=0.24; $M_{\theta\theta}$=0.06; $M_{\phi\phi}$=0.29; $M_{r\theta}$=0.93; $M_{\theta\phi}$=-0.21; $M_{\phi r}$=0.82; Fault plane solution: M_0=1.25000×10¹⁵ NP1: ϕ_s=225.00000°, δ=88.00000°, λ=-82.00000°. NP2: ϕ_s=328.00000°, δ=8.00000°, λ=-167.00000°.*
*IDC **01** 09:57:49.4±2.4, 44°.64N×148°.24E, h78km±21km, mb3.5/16, mbtmp3.8/23, MS2.8/5 Error ellipse: s-maj=18.9km s-min=14.0km az=145.0*

ISC 01 09:57:46.2±1.2, 44°.44N±0°.05×148°.44E±0°.07, h54km±10km, n81, σ1§46/94, mb3.7/16, 4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.90**	**333**	*d*iPN	**Pn**	**09 58 01.8**	**-0.9**
KUR				*e*S	**Sn**	**09 58 13.6**	**-1.1**
KUR				pmax	pmax		
	comp=N,829nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				smax	smax		
	comp=N,8μm,0.2s						
KUR				smax	smax		
	comp=E,4μm,0.2s						
KUR	**Kuril'sk**	**0.90**	**333**	*i* P	**Pn**	**09 58 01.8**	**-0.9**
KUR				AMB	AMB	09 58 02.5	
	comp=E,2μm,0.3s						
KUR				*e*S	**Sn**	**09 58 13.7**	**-1.0**
KUR				A	A	09 58 14.6	
	comp=E,6μm,0.4s						
KUR				A	A	09 58 14.6	
	comp=E,5μm,0.4s						
SHO	**Shikotan**	**1.29**	**245**	*i*PN	**Pn**	**09 58 07.3**	**-0.6**
SHO				*e*S	**Sn**	**09 58 21.5**	**-2.6**
SHO				pmax	pmax		
	comp=E,79nm,0.3s						
SHO				pmax	pmax		
	comp=Z,176nm,0.3s						
SHO				pmax	pmax		
	comp=N,59nm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.3s						
SHO				smax	smax		
	comp=E,5μm,0.2s						
SHO	**Shikotan**	**1.29**	**245**	*i* P	**Pn**	**09 58 07.3**	**-0.6**
SHO				AMB	AMB	09 58 07.7	
	comp=E,160nm,0.2s						
SHO				*e*S	**Sn**	**09 58 22.9**	**-1.2**
SHO				A	A	09 58 25.0	
	comp=E,2μm,0.3s						
SHO				A	A	09 58 25.0	
	comp=E,5μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.90**	**259**	*e*PN	**Pn**	**09 58 16.5**	**+0.3**
YUK				*e*S	**Sn**	**09 58 37.5**	**-1.4**
YUK				pmax	pmax		
	comp=Z,745nm,0.2s						
YUK				pmax	pmax		
	comp=N,84nm,0.1s						
YUK				pmax	pmax		
	comp=E,386nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.1s						
YUK				smax	smax		
	comp=E,3μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.90**	**259**	*e*P	**Pn**	**09 58 16.4**	**+0.3**
YUK				AMB	AMB	09 58 19.8	
	comp=E,750nm,0.2s						
YUK				*e*S	**Sn**	**09 58 38.4**	**-0.5**
YUK				A	A	09 58 43.7	
	comp=E,2μm,0.4s						
YUK				A	A	09 58 43.7	
	comp=E,3μm,0.4s						
NEM2	**Nemuro 2**	**2.23**	**242**	*e*P	**Pn**	**09 58 20.2**	**-0.4**
NEM2				*e*S	**Sn**	**09 58 44.3**	**-2.6**
NMR	**Nemuro--Hokkai**	**2.23**	**242**	*i*PN	**Pn**	**09 58 20.2**	**-0.5**
NMR				*e*S	**Sn**	**09 58 45.5**	**-1.6**
NMR	**Nemuro--Hokkai**	**2.23**	**242**	*i* P	**Pn**	**09 58 20.3**	**-0.5**
NMR				*e*S	**Sn**	**09 58 45.5**	**-1.6**
RUSJ	**Misakicho**	**2.32**	**263**	*i*PN	**Pn**	**09 58 23.2**	**+1.3**
RUSJ				*e*S	**Sn**	**09 58 51.6**	**+2.4**
JRA	**Rausu**	**2.44**	**259**	*e*P	**Pn**	**09 58 24.8**	**+1.3**
JNSB	**Nemuroshibetsu**	**2.56**	**256**	*e*P	**Pn**	**09 58 26.4**	**+1.1**
JKHN	**Kushirohamanak**	**2.73**	**241**	*e*P	**Pn**	**09 58 27.7**	**+0.1**
JNK	**Nakash**	**2.82**	**254**	*e*P	**Pn**	**09 58 29.7**	**+0.9**
JNK				*e*S	**Sn**	**09 59 00.9**	**-0.6**
AKK	**Akkeshi**	**2.97**	**243**	*e*P	**Pn**	**09 58 31.0**	**+0.2**
JAK	**Akkeshi**	**3.07**	**243**	P	**Pn**	**09 58 32.5**	**+0.2**
JAK				*e*S	**Sn**	**09 59 05.8**	**-2.0**
JTKR	**Abashiri--Toko**	**3.29**	**263**	*e*P	**Pn**	**09 58 36.1**	**+0.9**
JAR	**Ashorobuto**	**3.57**	**253**	*i* P	**Pn**	**09 58 40.7**	**+1.6**
JAR				*e*S	**Sn**	**09 59 20.0**	**+0.1**
JOB	**Onbets**	**3.68**	**247**	P	**Pn**	**09 58 41.5**	**+1.0**
JOB				*e*S	**Sn**	**09 59 21.4**	**-1.2**
JMP	**Maruseppu**	**3.68**	**265**	P	**Pn**	**09 58 42.0**	**+1.4**
JCH	**Churui**	**4.12**	**246**	*e*P	**Pn**	**09 58 46.8**	**+0.2**
JKK2	**Kamakawa 2**	**4.14**	**264**	P	**Pn**	**09 58 49.2**	**+2.4**
JKA	**Kamikawa-asahi**	**4.21**	**268**	*e*P	**Pn**	**09 58 49.1**	**+1.3**
JSE	**Soyaes**	**4.21**	**279**	P	**Pn**	**09 58 48.8**	**+1.0**
ASAJ	**Asahikawa**	**4.21**	**268**	*e*P	**Pn**	**09 58 49.1**	**+1.2**
	comp=E,8.8nm,0.3s,baz=71,slow=20,SNR=23						
ASAJ				S	Sn	09 59 46.8	+11
	comp=E,15nm,0.5s,baz=12,slow=32,SNR=4.0						
ERM	**Erimo**	**4.56**	**240**	*i* PN	**Pn**	**09 58 55.0**	**+2.4**
JNBK	**Urakawa-nobuka**	**4.67**	**245**	*e*P	**Pn**	**09 58 54.9**	**+0.6**
YSS	**Yuzh-Sakhalins**	**4.71**	**304**	*e*PN	**Pn**	**09 58 55.0**	**+0.3**
YSS				*e*S	**Sn**	**09 59 46.1**	**-1.9**
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				smax	smax		
	comp=N,10.0nm,0.8s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.71**	**304**	*e*P	**Pn**	**09 58 55.2**	**+0.5**
YSS				AMB	AMB	09 59 04.7	
	comp=E,40nm,0.6s						
YSS				*e*S	**Sn**	**09 59 47.4**	**-0.6**
YSS				A	A	09 59 52.3	
	comp=E,10.0nm,0.8s						
YSS				A	A	09 59 52.3	
	comp=E,20nm,0.8s						
JSS	**Shosan**	**4.72**	**272**	*e*P	**Pn**	**09 58 59.0**	**+4.2**
JWK2	**Keihoku**	**4.73**	**283**	*e*P	**Pn**	**09 58 57.3**	**+2.3**
JHR	**Hokuryu**	**4.89**	**264**	*e*P	**Pn**	**09 59 01.0**	**+3.8**
JEW	**Eniwo**	**5.32**	**255**	P	**Pn**	**09 59 07.1**	**+4.0**
JRBN	**Rebuntou**	**5.33**	**283**	*e*P	**Pn**	**09 59 04.8**	**+1.7**
JOT	**Ohata**	**6.23**	**243**	P	**Pn**	**09 59 15.9**	**+0.5**
JOT				*e*S	**Sn**	**10 00 22.1**	**-3.1**
UGL	**Uglegorsk**	**6.38**	**319**	*e*P	**Pn**	**09 59 19.1**	**+1.6**
UGL				AMB	AMB	09 59 20.2	
	comp=E,30nm,0.3s						
TYV	**Tymovskoe**	**7.52**	**331**	*e*PN	**Pn**	**09 59 34.9**	**+1.7**
TYV				*e*S	**Sn**	**10 00 56.5**	**-0.4**
TYV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,3.1s						
TYV				smax	smax		
	comp=

baz=333,slow=76,SNR=204
H11S2 WAKE ISLAND Hy 30.05 144 T T 10 35 49.6
baz=333,slow=76,SNR=200
ILAR Eielson Array 40.38 37 *e*P **P** **10 05 18.7 +0.3**
ILAR Eielson Array 40.38 37 P **P** **10 05 18.1 -0.4**
comp=Z,0.6nm,0.7s,baz=267,slow=8.5,SNR=6.7
comp=Z,0.6nm,0.7s
ZALV Zalesovo Beam 41.33 307 P **P** **10 05 24.2 -2.1**
comp=Z,0.4nm,0.4s,baz=54,slow=7.5,SNR=1.7
ZALV PcP **PcP** **10 07 23.5 -0.2**
comp=Z,1.1nm,0.6s,baz=90,slow=3.0,SNR=4.4
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 45.09 297 *e*P **P** **10 05 57.8 +1.0**
MKAR Makanchi Array 45.09 297 P **P** **10 05 56.4 -0.5**
comp=Z,0.2nm,0.4s,baz=70,slow=7.4,SNR=6.1
MKAR PcP **PcP** **10 07 36.4 -0.2**
comp=Z,0.4nm,0.5s,baz=64,slow=5.5,SNR=5.7
MKAR LR LR 10 26 05.7
comp=Z,27nm,20.0s,baz=46,slow=38
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 45.09 297 *e*P **P** **10 05 57.8 +1.0**
YKA Yellowknife Ar 54.71 34 P **P** **10 07 10.0 +0.5**
comp=Z,0.5nm,0.6s,baz=300,slow=7.1,SNR=8.2
comp=Z,0.5nm,0.6s
FINES FINESS Array B 64.68 333 *e*P **P** **10 08 17.4 -0.6**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 64.68 333 P **P** **10 08 15.6 -2.4**
comp=Z,1.7nm,0.6s,baz=54,slow=9.7,SNR=6.1
comp=Z,1.7nm,0.6s
WRA Warramunga Arr 65.35 195 P **P** **10 08 23.4 +0.7**
comp=Z,0.8nm,0.8s,baz=12,slow=6.6,SNR=3.1
comp=Z,0.8nm,0.8s
NVAR Mina Array Bea 66.43 59 P **P** **10 08 31.3 +1.4**
comp=Z,0.4nm,0.6s,baz=302,slow=6.9,SNR=4.7
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 68.75 51 P **P** **10 08 45.2 +0.6**
comp=Z,0.2nm,0.5s,baz=358,slow=2.3,SNR=4.3
comp=Z,0.2nm,0.5s
ASAR Alice Springs 69.06 194 P **P** **10 08 48.1 +1.8**
comp=Z,0.6nm,0.6s,baz=8.9,slow=6.2,SNR=9.9
comp=Z,0.6nm,0.6s
NOA NORSAR Array B 69.29 339 P **P** **10 08 46.3 -1.0**
comp=Z,0.4nm,0.4s,baz=31,slow=6.6,SNR=5.3
comp=Z,0.4nm,0.4s
HFS Hagfors 69.41 338 P **P** **10 08 46.5 -1.6**
comp=Z,2.0nm,0.7s,baz=20,slow=4.7,SNR=4.0
comp=Z,2.0nm,0.7s
CLL Collm 77.13 333 *e*P **P** **10 09 33.0 -0.6**
BRG Berggiesshubel 77.19 332 *e*P **P** **10 09 33.0 -1.0**
EKA Eskdalemuir Ar 77.73 344 P **P** **10 09 35.5 -1.4**
comp=Z,2.2nm,0.7s,baz=33,slow=5.0,SNR=4.4
comp=Z,2.2nm,0.7s
BRTR Keskin Array B 77.74 314 P **P** **10 09 38.1 +0.7**
comp=Z,0.2nm,0.4s,baz=302,slow=2.5,SNR=1.6
comp=Z,0.2nm,0.4s
TXAR Lajitas Array 81.50 57 P **P** **10 09 58.9 +0.9**
comp=Z,0.6nm,0.5s,baz=298,slow=4.4,SNR=14
comp=Z,0.6nm,0.5s
MMAI Mount Meron Ar 81.79 309 P **P** **10 09 59.2 -0.2**
comp=Z,1.2nm,0.4s,baz=45,slow=13,SNR=4.4
comp=Z,1.2nm,0.4s
PLCA Paso Flores 151.24 96 PKPbc **PKiKP** **10 17 32.9 -0.8**
comp=Z,1.9nm,0.9s,baz=253,slow=6.3,SNR=3.6

*ISN **01** 10:02:17.5±0.8,33.77N×45.80E,h26km±9km, ML3.4*
*TEH **01** 10:02:19.2,33.73N×45.79E,h7km±46km, ML3.1*
ISC 01 10:02:18.9±0.9,33.65N±0.04×45.78E±0.04,h10km,n15,
σ1§45/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ILBA	**Ilam Banvizeh**	**0.36**	**93**	Pg		**Pb**	**10 02 26.9**	**-0.5**
ILBA				Sg		**Sb**	**10 02 32.3**	**-0.9**
IBDR	**Badra**	**0.55**	**166**	*e*Pg		**Pb**	**10 02 30.0**	**-0.6**
	baz=350							
IBDR				*e*Sg		**Sn**	**10 02 40.0**	**-2.0**
KGS1	**Ghasr-e-Shirin**	**0.87**	**350**	Pg		**Pg**	**10 02 34.4**	**-1.3**
IGHG	**Ghaleghazi**	**0.95**	**44**	Pg		**Pg**	**10 02 37.1**	**-0.1**
IDHR	**Dehrash**	**1.17**	**26**	Pg		**Pb**	**10 02 39.9**	**-1.4**
KCHF	**Cheshme Sefid,**	**1.22**	**59**	Pg		**Pb**	**10 02 42.0**	**-0.2**
BHD	**Baghdad**	**1.23**	**253**	*e*Pn		**Pg**	**10 02 42.0**	**-0.4**
BHD				*e*Sn		**Sn**	**10 02 59.0**	**+0.4**
BHD				AML		AML	10 03 04.9	
	comp=E,758nm,0.6s							
ILIN	**Lien**	**1.60**	**37**	Pg		**Pg**	**10 02 49.1**	**-0.6**
IKFM	**Kafar-mosalman**	**1.73**	**93**	Pg		**Pg**	**10 02 51.5**	**-0.7**
IBZA	**Bozab**	**1.92**	**64**	Pn		**Pb**	**10 02 54.2**	**+0.1**
IALM	**Almabolaq**	**2.32**	**58**	Pn		**Pb**	**10 03 00.0**	**-1.0**
HSAM	**Samen**	**2.42**	**76**	Pn		**Pb**	**10 03 00.7**	**-2.0**
SDS1	**Sardasht. Az.**	**2.51**	**355**	Pn		**Pn**	**10 03 01.8**	**+1.9**
HAGD	**Aghdareh**	**3.02**	**66**	Pn		**Pn**	**10 03 09.6**	**+2.6**
QAMS	**Qamsar**	**4.69**	**87**	Pn		**Pn**	**10 03 32.4**	**+2.5**

*IDC **01** 10:04:59.4±1.4, 17.36S×174.12W,h0km,mb4.3/9, mbtmp4.3/9, Error ellipse: s-maj=63.3km s-min=19.9km az=143.0*
*NEIC **01** 10:05:08.2±0.7, 17.3S±0.1×174.5W±0.1,h35km±10km, mb4.7/14, Error ellipse: s-maj=20.0km s-min=15.2km az=103.0*
ISC 01 10:05:06.2±0.7,17.1S±0.1×174.4W±0.1,h35km,n30,
σ0§72/30,mb4.5/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**4.03**	**40**			Pn	10 06 10.2	+4.6
NIUE	**Niue**	**4.72**	**116**			**Pn**	**10 06 15.8**	**+0.8**
PINNC	**Pines Island,**	**17.93**	**249**			**P**	**10 09 13.5**	**+0.3**
PINNC				IAmb		IAmb	10 09 20.9	
	comp=Z,58nm,1.2s							
LTZ	**Lake Taylor**	**28.04**	**201**	P		**P**	**10 10 54.0**	**-0.2**
WHZ	**Wether Hill Ro**	**32.30**	**203**	P		**P**	**10 11 32.1**	**+0.4**
ARMA	**Armidale**	**33.66**	**240**	P		**P**	**10 11 43.8**	**-0.2**
CTA	**Charters Tower**	**37.34**	**259**	P		**P**	**10 12 15.7**	**0.0**
	comp=Z,2.3nm,0.5s,baz=116,slow=8.1,SNR=3.6							
	comp=Z,2.3nm,0.5s							
CTAO	**Charters Tower**	**37.34**	**259**	P		**P**	**10 12 16.3**	**+0.6**
CTAO				IAmb		IAmb	10 12 26.3	
	comp=Z,12nm,1.5s							
TOO	**Toolangi**	**40.67**	**232**	P		**P**	**10 12 42.2**	**-1.1**
TOO				IAmb		IAmb	10 12 53.2	
	comp=Z,25nm,1.4s							
STKA	**Stephens Creek**	**42.37**	**241**	P		**P**	**10 12 58.1**	**+0.8**
STKA	**Stephens Creek**	**42.37**	**241**	P		**P**	**10 12 56.8**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=93,slow=9.6,SNR=18							
	comp=Z,3.9nm,0.7s							
BBOO	**Buckleboo**	**47.15**	**241**	P		**P**	**10 13 34.9**	**-0.4**
WR0	**Warramunga Arr**	**48.34**	**258**	P		**P**	**10 13 44.9**	**+0.1**
WB0	**Warramunga Arr**	**48.49**	**258**	P		**P**	**10 13 46.3**	**+0.3**
WB2	**Warramunga Arr**	**48.52**	**258**	P		**P**	**10 13 46.3**	**+0.1**
WB2				IAmb		IAmb	10 13 46.4	
	comp=Z,6.1nm,0.7s							
WRAB	**Tennant Creek**	**48.52**	**258**	P		**P**	**10 13 46.4**	**+0.3**
WRAB				IAmb		IAmb	10 13 51.7	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**48.53**	**258**	P		**P**	**10 13 46.4**	**+0.1**
WRA	**Warramunga Arr**	**48.53**	**258**	P		**P**	**10 13 46.2**	**+0.1**
	comp=Z,3.7nm,0.4s,baz=97,slow=7.1,SNR=101							
	comp=Z,3.7nm,0.4s							
AS31	**Alice Springs**	**48.68**	**253**	P		**P**	**10 13 47.5**	**+0.2**
AS31				IAmb		IAmb	10 13 48.3	
	comp=Z,6.2nm,0.8s							
ASAR	**Alice Springs**	**48.68**	**253**	P		**P**	**10 13 47.6**	**+0.2**
ASAR	**Alice Springs**	**48.68**	**253**	P		**P**	**10 13 47.2**	**-0.2**
	comp=Z,21nm,0.6s,baz=89,slow=8.4,SNR=369							
ASAR				PcP		**PcP**	**10 15 11.3**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=101,slow=3.6,SNR=2.4							
	comp=Z,21nm,0.6s							
PSA00	**Pilbara Seismi**	**61.80**	**254**	P		**P**	**10 15 21.5**	**-0.5**
PETK	**Petropavlovsk-**	**73.91**	**343**	P		**P**	**10 16 38.6**	**+1.2**
	comp=Z,3.8nm,0.7s,baz=103,slow=9.5,SNR=6.3							
	comp=Z,3.8nm,0.7s							
NVAR	**Mina Array Bea**	**76.21**	**42**	P		**P**	**10 16 50.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=264,slow=7.9,SNR=3.7							
	comp=Z,0.7nm,0.8s							
KSRS	**Korea Array**	**76.66**	**316**	P		**P**	**10 16 54.9**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=134,slow=4.3,SNR=4.3							
	comp=Z,1.1nm,0.7s							
PDAR	**Pinedale Array**	**84.14**	**42**	P		**P**	**10 17 33.3**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=188,slow=5.5,SNR=3.5							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**84.25**	**11**	P		**P**	**10 17 33.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=229,slow=5.7,SNR=9.1							
	comp=Z,0.6nm,0.6s							
BVAR	**Borovoye Array 118.57 322**			PKP		**PKPdf**	**10 23 48.2**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=152,slow=1.4,SNR=4.0							
BRTR	**Keskin Array B 146.78 319**			PKPbc		**PKPbc**	**10 24 44.8**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=130,slow=1.9,SNR=7.1							
MMAI	**Mount Meron Ar 148.79 306**			PKPbc		**PKPbc**	**10 24 50.6**	**0.0**
	comp=Z,1.5nm,0.5s,baz=96,slow=4.2,SNR=4.2							

*IDC **01** 10:09:41.1±0.9,56.04N×149.81W,h0km,mb3.7/11, mbtmp3.7/15,ML3.7/4,MS3.8/57, Error ellipse: s-maj=24.9km s-min=14.0km az=-34.0*
*NEIC **01** 10:09:43.1±2.2,56.08N±0.03×149.9W±0.1,h19km±6km, mb4.0/4,ML4.1/44,ML3.9(AEIC), Error ellipse: s-maj=8.4km s-min=4.1km az=84.0*
*AEIC **01** 10:09:43.5±2.9,56.01N±0.08×149.73W±0.10,h1km±5km, Error ellipse: s-maj=11.8km s-min=7.9km az=165.0*
*GCMT **01** 10:09:44.1±0.4,56.00N±0.03×149.73W±0.03,h15km±2km, MW4.8/84,Moment Tensor Solution. s8,c9; s84,c109; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.00±.08; Mθθ=-0.17±.08; Mφφ=0.17±.07; Mrθ=0.31±.23; Mrφ=1.56±.07; Mθφ=0.54±.27; Best double couple: M0=1.68000×10^16 NP1:φs=356.00000°,δ81.00000°,λ163.00000°. NP2: φs=89.00000°,δ73.00000°,λ10.00000°. Principal axes: T 1.7780, Plg19.0000°, Azm311.0000°; N -0.1960, Plg70.0000°, Azm148.0000°; P -1.5820, Plg5.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 10:09:42.3±0.7,56.13N±0.06×149.82W±0.05,h10km,
n291,σ1§08/242,mb3.7/11,MS3.8/51,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHAK	**Old Harbor**	**2.21**	**301**			**Pn**	**10 10 17.9**	**-1.0**
OHAK	**Old Harbor**	**2.21**	**301**			**Sn**	**10 10 43.5**	**-2.7**
OHAK	**Old Harbor**	**2.21**	**301**	P		**Pn**	**10 10 17.8**	**-1.1**
OHAK	**Old Harbor**	**2.21**	**301**	P		**Pn**	**10 10 17.7**	**-1.1**
	baz=120							
OHAK				S		**Sn**	**10 10 43.5**	**-2.7**
	baz=120							
KDAK	**Kodiak Island**	**2.25**	**319**	Pn		**Pn**	**10 10 18.6**	**-0.9**
	26nm,0.3s,baz=137,slow=4.5,SNR=168							
KDAK				Sn		**Sn**	**10 10 46.1**	**-1.1**
	35nm,0.3s,baz=92,slow=9.3,SNR=5.2							
KDAK				LR		LR	10 11 31.5	
	comp=Z,5μm,19.3s,baz=212,slow=48							
	55nm,0.3s							
SII	**Sitkinak Islan**	**2.47**	**282**			**Pn**	**10 10 20.7**	**-1.8**
SII						**Sn**	**10 10 50.2**	**-2.5**
SII	**Sitkinak Islan**	**2.47**	**282**	IAML			10 10 51.6	
	comp=E,1μm,0.7s							
SII				IAML			10 11 00.4	
	comp=N,883nm,0.6s							
SII	**Sitkinak Islan**	**2.47**	**282**	P		**Pn**	**10 10 21.5**	**-1.1**
SII	**Sitkinak Islan**	**2.47**	**282**	S		**Sn**	**10 10 50.4**	**-2.3**
	baz=101							
SYI	**Shuyak Island**	**2.85**	**332**			**Pn**	**10 10 26.6**	**-1.2**
SYI						**Sn**	**10 11 02.7**	**+0.6**
Q20K	**Shuyak Island**	**2.85**	**332**	P		**Pn**	**10 10 27.4**	**-0.4**
	baz=150							
Q20K				S		**Sn**	**10 11 03.1**	**+0.9**
	baz=150							
Q19K	**Cape Douglas,**	**3.48**	**325**			**Pn**	**10 10 36.4**	**-0.1**
Q19K						**Sn**	**10 11 15.5**	**-2.3**
Q19K	**Cape Douglas,**	**3.48**	**325**	P		**Pn**	**10 10 36.7**	**+0.2**
	baz=143							
Q19K				S		**Sn**	**10 11 15.5**	**-2.3**
	baz=143							
CNPM	**China Poot**	**3.49**	**348**			**Pn**	**10 10 35.2**	**-1.4**
CNPM						**Sn**	**10 11 16.9**	**-1.0**
CNPM	**China Poot**	**3.49**	**348**	IAML			10 11 19.6	
	comp=E,210nm,0.8s							
KAHG	**Katmai Hook Gl**	**3.49**	**315**			**Pn**	**10 10 37.4**	**+0.7**
KCE	**Katmai Mt Cerb**	**3.61**	**308**			**Pn**	**10 10 38.8**	**+0.5**
KCG	**Knife Ck. Glac**	**3.61**	**309**			**Pn**	**10 10 38.6**	**+0.3**
ACHA	**Angle Creek He**	**3.65**	**307**			**Pn**	**10 10 38.8**	**-0.1**
BRSE	**Bradley Lake S**	**3.66**	**353**			**Pn**	**10 10 37.5**	**-1.4**
BRSE						**Sn**	**10 11 21.9**	**-0.2**
BRSE	**Bradley Lake S**	**3.66**	**353**	P		**Pn**	**10 10 37.6**	**-1.3**
	baz=171							
BRSE				S		**Sn**	**10 11 21.9**	**-0.2**
	baz=171							
HOM	**Homer**	**3.67**	**345**			**Pn**	**10 10 38.4**	**-0.6**
HOM	**Homer**	**3.67**	**345**	IAML			10 11 28.0	
	comp=E,524nm,0.8s							
HOM	**Homer**	**3.67**	**345**	P		**Pn**	**10 10 38.4**	**-0.6**
	baz=163							
BRLK	**Bradley Lake**	**3.69**	**352**			**Pn**	**10 10 37.9**	**-1.4**
BRLK	**Bradley Lake**	**3.69**	**352**	IAML			10 11 26.2	
	comp=N,144nm,0.7s							
BRLK				IAML			10 11 26.6	
	comp=E,211nm,0.6s							
ANCK	**Angle Creek**	**3.72**	**306**			**Pn**	**10 10 40.0**	**+0.1**
KAHC	**Katmai Hardscr**	**3.78**	**314**	P		**Pn**	**10 10 41.1**	**+0.5**
	baz=131							
Q23K	**Middleton Isla**	**3.80**	**28**			**Pn**	**10 10 39.5**	**-1.3**
Q23K	**Middleton Isla**	**3.80**	**28**	IAML			10 11 59.5	
	comp=N,206nm,1.4s							
Q23K				IAML			10 12 26.4	
	comp=E,241nm,1.4s							
Q23K	**Middleton Isla**	**3.80**	**28**	P		**Pn**	**10 10 40.3**	**-0.5**
	baz=209							
MID	**Middleton Isla**	**3.80**	**28**			**Pn**	**10 10 39.4**	**-1.4**
MID	**Middleton Isla**	**3.80**	**28**	IAML			10 11 50.1	
	comp=N,252nm,1.5s							
MID				IAML			10 12 26.4	
	comp=E,239nm,1.4s							
MID	**Middleton Isla**	**3.80**	**28**	P		**Pn**	**10 10 39.8**	**-1.0**
CNTC	**Contact Creek**	**3.93**	**306**			**Pn**	**10 10 42.2**	**-0.6**
Q17K	**Contact Creek**	**3.93**	**305**	P		**Pn**	**10 10 42.5**	**-0.3**
	baz=122							
P19K	**Oil Pt**	**3.98**	**334**			**Pn**	**10 10 42.5**	**-0.8**
P19K	**Oil Pt**	**3.98**	**334**	IAML			10 11 42.8	
	comp=E,467nm,0.6s							
P19K	**Oil Pt**	**3.98**	**334**	P		**Pn**	**10 10 43.3**	**0.0**
	baz=151							
SEW	**Seward**	**3.99**	**3**			**Pn**	**10 10 41.7**	**-1.7**
SEW	**Seward**	**3.99**	**3**	P		**Pn**	**10 10 42.1**	**-1.4**
	baz=182							
P23K	**Montague Islan**	**4.09**	**17**			**Pn**	**10 10 42.7**	**-2.1**
O20K	**Slope Mountain**	**4.24**	**341**			**Pn**	**10 10 45.9**	**-0.9**
O20K	**Slope Mountain**	**4.24**	**341**	P		**Pn**	**10 10 46.6**	**-0.3**
	baz=156							
O22K	**Cooper Landing**	**4.37**	**1**			**Pn**	**10 10 49.0**	**+0.4**
P18K	**Big Mountain,**	**4.37**	**321**	Pn		**Pn**	**10 10 47.9**	**-0.7**
P18K	**Big Mountain,**	**4.37**	**321**	P		**Pn**	**10 10 48.0**	**-0.7**
	baz=137							
SLKM	**Skilak Lake**	**4.40**	**357**			**Pn**	**10 10 47.4**	**-1.7**
Q16K	**King Salmon**	**4.50**	**307**			**Pn**	**10 10 49.4**	**-0.9**
Q16K	**King Salmon**	**4.50**	**307**	P		**Pn**	**10 10 49.4**	**-0.9**
	baz=123							
RDSO	**Redoubt South**	**4.61**	**342**			**Pn**	**10 10 51.0**	**-1.0**
RSO	**Redoubt South**	**4.62**	**342**			**Pn**	**10 10 53.3**	**+1.1**
HIN	**Hinchinbrook I**	**4.63**	**21**			**Pn**	**10 10 51.2**	**-1.0**
HIN	**Hinchinbrook I**	**4.63**	**21**	IAML			10 11 44.9	
	comp=E,170nm,1.1s							
HIN				IAML			10 11 48.9	
	comp=N,197nm,0.6s							
RDWB	**Redoubt West**	**4.65**	**341**			**Pn**	**10 10 51.5**	**-1.2**
P17K	**Kvichak River**	**4.70**	**314**	P		**Pn**	**10 10 53.3**	**+0.2**
	baz=129							
CAPN	**Captain Cook N**	**4.71**	**352**	Pn		**Pn**	**10 10 54.3**	**+1.1**
O18K	**Koktuh Hills**	**4.71**	**325**	Pn		**Pn**	**10 10 52.5**	**-0.8**
O18K				IAML			10 11 50.3	
	comp=N,132nm,0.8s							
O18K				IAML			10 11 51.4	
	comp=E,103nm,0.7s							
O18K	**Koktuh Hills**	**4.71**	**325**	P		**Pn**	**10 10 52.6**	**-0.7**
	baz=141							
O19K	**Port Alsworth**	**4.72**	**332**			**Pn**	**10 10 52.5**	**-0.9**
O19K	**Port Alsworth**	**4.72**	**332**	IAML			10 11 58.4	
	comp=N,276nm,0.5s							
O19K	**Port Alsworth**	**4.72**	**332**	P		**Pn**	**10 10 52.5**	**-0.9**
	baz=148							
NCT	**North Crescent**	**4.74**	**341**			**Pn**	**10 10 52.9**	**-0.9**
ANPB	**Aniakchak Plen**	**4.74**	**282**			**Pn**	**10 10 53.4**	**-0.4**
KAIM	**Kayak Island**	**4.77**	**35**			**Pn**	**10 10 52.5**	**-1.6**
KAIM	**Kayak Island**	**4.77**	**35**	IAML			10 11 53.6	
	comp=N,234nm,1.3s							
KAIM				IAML			10 11 55.8	
	comp=E,209nm,1.1s							
CHGN	**Chignik**	**4.80**	**276**	Pn		**Pn**	**10 10 54.4**	**-0.1**
CHGN						**Sn**	**10 11 49.0**	**-1.2**
CHGN				IAML			10 11 52.5	
	comp=N,128nm,0.5s							
CHGN				IAML			10 11 58.1	
	comp=E,117nm,0.6s							
EYAK	**Cordova Ski Ar**	**4.92**	**24**			**Pn**	**10 10 55.0**	**-1.2**
EYAK	**Cordova Ski Ar**	**4.92**	**24**	P		**Pn**	**10 10 55.6**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.92**	**24**	P		**Pn**	**10 10 55.8**	**-0.5**
	baz=206							
RC01	**Rabbit Creek A**	**4.98**	**0**			**Pn**	**10 10 55.9**	**-1.1**
RC01	**Rabbit Creek A**	**4.98**	**0**	IAML			10 11 56.9	
	comp=E,102nm,0.5s							
RC01				IAML			10 11 58.9	
	comp=N,66nm,0.5s							
RC01	**Rabbit Creek A**	**4.98**	**0**	P		**Pn**	**10 10 55.9**	**-1.1**
	baz=180							
RAGM	**Ragged Mountai**	**5.06**	**30**			**Pn**	**10 10 57.8**	**-0.4**
GOAT	**Goat Mountain**	**5.21**	**29**			**Pn**	**10 10 59.8**	**-0.4**
N20K	**Mount Spurr**	**5.24**	**347**	P		**Pn**	**10 11 00.1**	**-0.5**
	baz=165							
SPCR	**Spurr Chakacha**	**5.24**	**347**			**Pn**	**10 10 59.3**	**-1.3**
P16K	**Nushagak River**	**5.27**	**307**	P		**Pn**	**10 11 01.1**	**0.0**
	baz=121							
N19K	**Bonanza Creek**	**5.30**	**334**			**Pn**	**10 10 60.0**	**-1.5**
O17K	**Koliganek Bris**	**5.33**	**316**	P		**Pn**	**10 11 01.5**	**-0.3**
	baz=131							
KNK	**Knik Glacier**	**5.35**	**7**			**Pn**	**10 11 01.8**	**-0.3**
KNK	**Knik Glacier**	**5.35**	**7**	P		**Pn**	**10 11 01.8**	**-0.3**
	baz=187							
BERG	**Berg Lake**	**5.36**	**35**			**Pn**	**10 11 01.1**	**-1.1**
SUA	**Susitna One**	**5.37**	**355**			**Pn**	**10 11 00.7**	**-1.8**
STLK	**Strandline Lak**	**5.49**	**350**			**Pn**	**10 11 03.5**	**-0.6**
SNH	**Sunshine Point**	**5.49**	**39**			**Pn**	**10 11 03.1**	**-0.9**
PMR	**Palmer**	**5.49**	**3**	Pn		**Pn**	**10 11 05.2**	**+1.2**
PMR	**Palmer**	**5.49**	**3**	P		**Pn**	**10 11 05.7**	**+1.7**
KHIT	**Khitrov Hills**	**5.54**	**36**			**Pn**	**10 11 03.9**	**-0.9**
BMRM	**Bremner River**	**5.57**	**27**	P		**Pn**	**10 11 04.5**	**-0.7**
	baz=210							
N18K	**Kilae Creek**	**5.57**	**328**			**Pn**	**10 11 03.9**	**-1.2**
O16K	**Kokwok River B**	**5.62**	**312**	Pn		**Pn**	**10 11 06.0**	**+0.2**
O16K	**Kokwok River B**	**5.62**	**312**	P		**Pn**	**10 11 05.8**	**+0.1**
	baz=125							
CNBA	**Chernabura Isl**	**5.71**	**261**	Pn		**Pn**	**10 11 06.0**	**-1.0**
KLU	**Klutina**	**5.75**	**19**			**Pn**	**10 11 07.1**	**-0.5**
KLU	**Klutina**	**5.75**	**19**	P		**Pn**	**10 11 07.5**	**-0.2**
	baz=201							
SML	**Sawmill**	**5.75**	**7**			**Pn**	**10 11 07.4**	**-0.2**
SML	**Sawmill**	**5.75**	**7**	P		**Pn**	**10 11 07.4**	**-0.2**
	baz=188							
BARK	**Barkley Ridge**	**5.77**	**39**			**Pn**	**10 11 07.2**	**-0.8**
M23K	**Glacier View**	**5.79**	**10**			**Pn**	**10 11 07.5**	**-0.6**
M23K	**Glacier View**	**5.79**	**10**	P		**Pn**	**10 11 07.5**	**-0.6**
	baz=191							
MESA	**MESA**	**5.82**	**42**			**Pn**	**10 11 09.6**	**+0.9**
SVW2	**Sparrevohn**	**5.82**	**331**			**Pn**	**10 11 07.3**	**-1.3**
SVW2	**Sparrevohn**	**5.82**	**331**	P		**Pn**	**10 11 07.3**	**-1.3**
SCM	**Sheep Creek Mo**	**5.87**	**12**			**Pn**	**10 11 08.8**	**-0.5**
SCM	**Sheep Creek Mo**	**5.87**	**12**	P		**Pn**	**10 11 08.8**	**-0.5**
	baz=193							
N17K	**Nushagak Hills**	**5.87**	**322**			**Pn**	**10 11 08.5**	**-0.8**
SKT	**Skwentna**	**5.94**	**352**			**Pn**	**10 11 10.8**	**+0.6**
ISLE	**Juniper Island**	**5.97**	**38**			**Pn**	**10 11 10.1**	**-0.6**
BAGL	**Bagley Icefiel**	**5.98**	**40**			**Pn**	**10 11 09.8**	**-0.9**
M20K	**Styx River**	**6.02**	**345**			**Pn**	**10 11 08.9**	**-2.5**
SDPT	**Sand Point**	**6.07**	**267**			**Pn**	**10 11 09.9**	**-2.0**
SDPT	**Sand Point**	**6.07**	**267**	P		**Pn**	**10 11 11.0**	**-1.0**
VRDI	**Verde Repeater**	**6.10**	**30**			**Pn**	**10 11 11.6**	**-0.9**
N25K	**Chitina, Valde**	**6.12**	**24**	P		**Pn**	**10 11 12.6**	**-0.2**
	baz=208							
GLB	**Gilahina Butte**	**6.18**	**28**			**Pn**	**10 11 13.1**	**-0.3**
O15K	**Ungalikthiuk R**	**6.18**	**304**	P		**Pn**	**10 11 13.3**	**-0.1**
	baz=116							
KIAG	**Kiagna River**	**6.19**	**36**			**Pn**	**10 11 12.9**	**-1.0**
M18K	**Stony River**	**6.22**	**332**	P		**Pn**	**10 11 13.0**	**-1.0**
	baz=147							
SAMH	**Samovar Hills**	**6.25**	**46**			**Pn**	**10 11 14.0**	**-0.5**
M19K	**Big River Lodg**	**6.25**	**340**			**Pn**	**10 11 14.3**	**-0.2**
M24K	**Tolsona, Glenn**	**6.28**	**16**			**Pn**	**10 11 15.3**	**+0.3**
M24K	**Tolsona, Glenn**	**6.28**	**16**	P		**Pn**	**10 11 15.3**	**+0.3**
	baz=198							
MCARA	**McCarthy VSAT**	**6.34**	**31**			**Pn**	**10 11 15.0**	**-0.7**
MCARA	**McCarthy VSAT**	**6.34**	**31**	P		**Pn**	**10 11 15.0**	**-0.7**
	baz=216							
N16K	**Nishlik Lake**	**6.42**	**316**			**Pn**	**10 11 16.8**	**0.0**
PCA	**Pinnacle**	**6.44**	**48**			**Pn**	**10 11 16.4**	**-0.7**
PINM	**Pinnacle**	**6.44**	**48**	P		**Pn**

J18K	Innoko River	8.13	338	Pn		Pn	10 11 40.4	+0.1
SSLS	Shishaldin Sou	8.19	266			Pn	10 11 39.7	-1.5
J20K	Nowinta River	8.36	347			Pn	10 11 43.2	-0.1
SCRK	Sand Creek	8.39	18	Pn		Pn	10 11 45.2	+1.3
J19K	Poorman	8.40	342			Pn	10 11 43.8	-0.1
SKAG	Skagway	8.43	61			Pn	10 11 44.0	-0.2
SKAG	Skagway	8.43	61	P		Pn	10 11 43.9	-0.4
HDA	Harding Lake	8.43	9			Pn	10 11 45.4	+1.1
NEA2	Nenana	8.50	2			Pn	10 11 46.4	+1.1
O30N	Mendenhall	8.56	51			Pn	10 11 46.4	+0.1
K15K	Wolf Creek Mou	8.61	321			Pn	10 11 48.1	+1.3
JIS	Juneau Island	8.65	69	P		Pn	10 11 46.8	-0.5
ILAR	Eielson Array	8.79	8	Pn		Pn	10 11 50.8	+1.5
ILAR	Eielson Array	8.79	8	Pn		Pn	10 11 48.5	-0.8
	comp=N,0.6nm,0.3s,baz=190,slow=13,SNR=28							
ILAR				Sn		Sn	10 13 23.0	-5.3
	comp=N,0.2nm,0.3s,baz=182,slow=14,SNR=1.1							
ILAR				LR		LR	10 15 27.0	
	comp=N,495nm,19.5s,baz=233,slow=39 comp=N,1.9nm,0.5s							
K27K	Chicken	8.81	23			Pn	10 11 49.3	-0.2
COLA	College	8.83	5			Pn	10 11 51.7	+2.0
COLA	College	8.83	5	P		Pn	10 11 51.3	+1.6
MDM	Murphy Dome	8.90	4			Pn	10 11 51.4	+0.7
MLY	Manley	8.95	357			Pn	10 11 52.1	+0.7
J16K	Anvik River	9.00	327	Pn		Pn	10 11 52.4	+0.3
WHY	Whitehorse	9.06	54	Pn		Pn	10 11 53.3	+0.3
POKR	Poker Plat Res	9.10	6	Pn		Pn	10 11 55.5	+2.0
DAWY	Dawson	9.50	29	Pn		Pn	10 11 59.4	+0.4
EGAK	Eagle	9.66	23	Pn		Pn	10 12 02.1	+0.9
H18K	Honhosa River	9.97	339			Pn	10 12 05.5	+0.1
M31M	Drury Creek, Y	9.97	46			Pn	10 12 06.0	+0.5
IMAR	Indian Mountai	10.07	351	Pn		Pn	10 12 07.3	+0.6
G21K	Allakaket	10.57	352	Pn		Pn	10 12 14.2	+0.6
G23K	Bananza Creek	10.62	360	Pn		Pn	10 12 13.1	-1.2
DLBC	Dease Lake	10.95	70	Pn		Pn	10 12 18.6	-0.3
	comp=N,0.5nm,0.3s,baz=249,slow=9.8,SNR=7.4							
DLBC				LR		LR	10 15 48.2	
	comp=N,859nm,19.6s,baz=279,slow=33 comp=N,1.5nm,0.4s							
ANM	Nome	11.41	324	Pn		Pn	10 12 26.2	+1.2
E19K	Redstone River	11.88	346	Pn		Pn	10 12 31.6	+0.1
F28M	Old Crow	12.42	18	Pn		Pn	10 12 42.0	+3.1
G30M	tAoh Zraii Nji	12.63	25	Pn		Pn	10 12 44.1	+2.3
G31M	Satah River	13.07	28	Pn		Pn	10 12 48.4	+0.7
BBB	Bella Bella	13.30	98	LR		LR	10 16 21.2	
	comp=N,392nm,20.2s,baz=301,slow=30							
INK	Inuvik	14.31	25	LR		LR	10 19 05.1	
	comp=N,562nm,18.1s,baz=184,slow=39							
C36M	Paulatuk	17.53	31	IAmb		IAmb	10 13 58.5	
	comp=Z,8.6nm,0.8s							
YKA	Yellowknife Ar	18.88	56	P		Pn	10 14 02.5	-0.4
	comp=Z,0.1nm,0.3s,baz=265,slow=9.6,SNR=13							
YKA				LR		LR	10 21 04.2	
	comp=Z,461nm,19.8s,baz=288,slow=36 comp=Z,0.5nm,0.8s							
A36M	Sachs Harbour	18.94	23	P		Pn	10 14 03.5	-0.1
SHEM	Shemya Is, Ala	21.11	276	LR		LR	10 22 24.2	
	comp=Z,223nm,21.1s,baz=326,slow=36							
NEW	Newport	21.26	98	P		P	10 14 29.7	+0.1
	comp=Z,1.9nm,0.9s,baz=130,slow=20,SNR=3.3							
NEW				LR		LR	10 21 27.3	
	comp=Z,226nm,21.3s,baz=296,slow=33 comp=Z,1.9nm,0.9s							
HUMO	Hull Mountain	21.93	117	P		P	10 14 36.3	+0.6
YBH	Yreka Blue Hor	22.70	118	LR		LR	10 21 18.7	
	comp=Z,563nm,21.0s,baz=317,slow=31							
ELK	Elko	27.26	110	LR		LR	10 24 14.7	
	comp=Z,251nm,20.6s,baz=318,slow=32							
NVAR	Mina Array Bea	27.41	117	P		P	10 15 28.2	+0.1
	comp=Z,0.6nm,0.7s,baz=306,slow=9.0,SNR=6.4							
NVAR				LR		LR	10 24 35.3	
	comp=Z,506nm,18.2s,baz=308,slow=33 comp=Z,0.6nm,0.7s							
RES	Resolute Bay	27.84	28	LR		LR	10 27 08.0	
	comp=Z,364nm,18.5s,baz=225,slow=38							
PDAR	Pinedale Array	28.93	100	P		P	10 15 41.3	-0.4
PDAR	Pinedale Array	28.93	100	P		P	10 15 40.8	-0.9
	comp=Z,0.3nm,0.7s,baz=282,slow=1.4,SNR=3.7							
PDAR				LR		LR	10 25 23.2	
	comp=Z,106nm,20.6s,baz=317,slow=33 comp=Z,0.3nm,0.7s							
SEY	Seymchan	29.16	307	LR		LR	10 28 39.9	
	comp=Z,616nm,18.1s,baz=101,slow=39							
PETK	Petropavlovsk-	29.93	287	LR		LR	10 28 53.1	
	comp=Z,110nm,18.8s,baz=81,slow=38							
ULM	Lac du Bonnet	32.13	77	LR		LR	10 28 33.9	
	comp=Z,142nm,18.5s,baz=281,slow=35							
PFO	Pinyon Flats O	32.14	120	LR		LR	10 26 23.0	
	comp=Z,315nm,20.9s,baz=323,slow=31							
ANMO	Albuquerque	36.21	107	LR		LR	10 30 49.6	
	comp=Z,74nm,18.3s,baz=46,slow=35							
FRB	Frobisher Bay	38.75	45	LR		LR	10 33 13.3	
	comp=Z,632nm,18.5s,baz=328,slow=36							
YAK	Yakutsk	39.26	313	LR		LR	10 33 50.4	
	comp=Z,172nm,20.9s,baz=94,slow=37							
TXAR	Lajitas Array	42.05	110	P		P	10 17 34.6	+0.6
	comp=Z,0.3nm,0.7s,baz=312,slow=7.5,SNR=5.0							
TXAR				LR		LR	10 34 06.3	
	comp=Z,128nm,19.0s,baz=314,slow=35 comp=Z,0.3nm,0.7s							
LPIG	La Paz	43.01	122	LR		LR	10 32 51.6	
	comp=Z,142nm,20.0s,baz=335,slow=32							
ASAJ	Asahikawa	43.23	284	LR		LR	10 35 09.1	
	comp=Z,52nm,20.4s,baz=38,slow=35							
SCHQ	Schefferville	44.33	55	LR		LR	10 36 25.1	
	comp=Z,221nm,18.1s,baz=282,slow=36							
SADO	Sadowa	44.48	74	LR		LR	10 36 15.2	
	comp=Z,104nm,19.4s,baz=74,slow=36							
KLR	Kul'dur	45.63	296	P		P	10 18 03.1	+0.6
	comp=Z,0.8nm,0.7s,baz=68,slow=10,SNR=3.8							
KLR				LR		LR	10 39 26.6	
	comp=Z,157nm,18.3s,baz=52,slow=39 comp=Z,0.8nm,0.7s							
NRIK	Noril'sk	48.13	336	LR		LR	10 41 27.8	
	comp=Z,250nm,19.5s,baz=22,slow=40							
TKL	Tuckaleechee C	48.24	86	LR		LR	10 38 38.7	
	comp=Z,262nm,19.1s,baz=294,slow=36							
H11N2	WAKE ISLAND Hy	48.55	240	T		T	11 11 09.2	
	baz=29,slow=76,SNR=8.2							
H11N3	WAKE ISLAND Hy	48.55	239	T		T	11 11 09.6	
	baz=29,slow=76,SNR=13							
H11N1	WAKE ISLAND Hy	48.56	240	T		T	11 11 07.9	
	baz=29,slow=76,SNR=9.7							
USRK	Ussuriysk Ar.	48.85	291	LR		LR	10 39 06.8	
	comp=Z,69nm,19.6s,baz=67,slow=36							
H11S1	WAKE ISLAND Hy	49.69	239	T		T	11 12 38.7	
	baz=28,slow=76,SNR=19							
H11S2	WAKE ISLAND Hy	49.70	239	T		T	11 12 39.1	
	baz=28,slow=76,SNR=13							
H11S3	WAKE ISLAND Hy	49.70	239	T		T	11 12 40.1	
	baz=28,slow=76,SNR=16							
JMIC	Jan Mayen	50.24	15	LR		LR	10 40 57.8	
	comp=Z,52nm,21.1s,baz=321,slow=37							
MJAR	Matsushiro Arr	50.90	279	LR		LR	10 38 03.3	
	comp=Z,266nm,21.7s,baz=48,slow=33							
JHJ	Hachijo jima 2	52.54	275	LR		LR	10 38 11.5	
	comp=Z,24nm,21.3s,baz=82,slow=33							
BORG	Borgarnes	53.20	25	LR		LR	10 42 57.4	
	comp=Z,106nm,21.2s,baz=323,slow=38							
JCJ	Chichijima	55.78	268	LR		LR	10 40 18.7	
	comp=Z,27nm,20.8s,baz=106,slow=33							
KSRS	Korea Array	55.82	288	LR		LR	10 43 27.9	
	comp=Z,32nm,19.4s,baz=55,slow=36							
CMIG	Matias Romero	56.66	110	LR		LR	10 42 35.7	
	comp=Z,122nm,19.9s,baz=321,slow=35							
TEIG	Tepich	57.63	102	LR		LR	10 47 24.2	
	comp=Z,341nm,19.0s,baz=150,slow=39							
SONM	Songino Array	58.51	310	P		P	10 19 38.9	+0.4
	comp=Z,0.4nm,0.6s,baz=59,slow=6.0,SNR=3.9							
SONM				LR		LR	10 47 26.3	
	comp=Z,246nm,18.4s,baz=22,slow=39 comp=Z,0.4nm,0.6s							
ZALV	Zalesovo Beam	61.53	327	P		P	10 19 59.6	+0.7
	comp=Z,0.5nm,0.3s,baz=27,slow=6.8,SNR=1.5							
ZALV				LR		LR	10 51 26.7	
	comp=Z,65nm,21.4s,baz=16,slow=41 comp=Z,0.5nm,0.3s							
NOA	NORSAR Array B	62.22	10	LR		LR	10 47 37.8	
	comp=Z,40nm,20.9s,baz=340,slow=36							
FINES	FINESS Array B	62.73	2	P		P	10 20 09.1	+2.3
	comp=Z,5.9nm,1.2s,baz=329,slow=4.9,SNR=3.9 comp=Z,5.9nm,1.2s							
HFS	Hagfors	63.35	9	LR		LR	10 49 42.4	
	comp=Z,45nm,18.3s,baz=330,slow=38							
KIRV	Kirov	64.60	349	LR		LR	10 52 50.1	
	comp=Z,76nm,18.3s,baz=18,slow=40							
ARU	Arti	65.47	343	LR		LR	10 52 28.6	
	comp=Z,65nm,19.2s,baz=12,slow=39							
BVAR	Borovoye Array	66.30	335	P		P	10 20 30.6	+0.3
	comp=Z,0.7nm,0.5s,baz=15,slow=6.0,SNR=2.5							
BVAR				LR		LR	10 53 30.7	
	comp=Z,148nm,18.8s,baz=25,slow=40 comp=Z,0.7nm,0.5s							
KURBB	Kurchatov Arra	66.32	329	P		P	10 20 31.0	+0.5
	comp=Z,0.5nm,0.2s,baz=30,slow=6.8,SNR=1.7							
KURBB				LR		LR	10 52 13.0	
	comp=Z,131nm,18.2s,baz=154,slow=38 comp=Z,0.5nm,0.2s							
JTS	Las Juntas de	67.60	105	LR		LR	10 52 18.4	
	comp=Z,36nm,18.2s,baz=285,slow=38							
MKAR	Makanchi Array	68.55	324	P		P	10 20 43.9	-0.8
MKAR	Makanchi Array	68.55	324	P		P	10 20 45.2	+0.5
	comp=Z,0.2nm,0.4s,baz=43,slow=5.5,SNR=4.3							
MKAR				LR		LR	10 55 00.4	
	comp=Z,150nm,18.6s,baz=47,slow=40 comp=Z,0.2nm,0.4s							
BELG	Belogornoye	70.89	349	LR		LR	10 55 52.8	
	comp=Z,78nm,18.5s,baz=134,slow=39							
AKTO	Aktyubinsk	71.32	342	LR		LR	10 57 10.6	
	comp=Z,69nm,18.1s,baz=44,slow=40							
ABKAR	Akbulak array	72.09	340	P		P	10 21 06.9	+0.6
VRAC	Vranov	74.32	9	LR		LR	10 54 35.0	
	comp=Z,21nm,19.6s,baz=352,slow=36							
GERES	GERESS Array B	74.50	11	LR		LR	10 57 21.5	
	comp=Z,34nm,19.5s,baz=314,slow=38							
AAK	Ala-Archa	74.72	328	LR		LR	10 57 02.8	
	comp=Z,135nm,18.6s,baz=25,slow=38							
DAVOX	Davos/Dischmat	76.06	14	LR		LR	11 00 16.9	
	comp=Z,29nm,18.3s,baz=264,slow=40							
SDV	Santo Domingo	76.65	94	LR		LR	10 57 00.0	
	comp=Z,40nm,18.7s,baz=124,slow=37							
MLR	Mutnle Rosu	78.69	3	LR		LR	10 56 39.5	
	comp=Z,52nm,20.9s,baz=7.0,slow=36							
GNI	Garni	83.30	349	LR		LR	11 04 42.4	
	comp=Z,57nm,18.0s,baz=27,slow=40							
GEYT	Alibeck	83.34	338	LR		LR	11 07 43.5	
	comp=Z,43nm,19.8s,baz=17,slow=42							
QSPA	South Pole Qui	145.92	180	PKPbc		PKiKP	10 29 20.8	-3.0
	comp=Z,0.7nm,0.3s,baz=167,slow=1.7,SNR=3.5							

*NOU **01** 10:12:17.1, 14°.68S×167°.54E, h143km, MLv4.9/12, Vanuatu Islands*
*IDC **01** 10:12:18.4±4.5, 14°.80S×167°.46E, h141km±40km, mb3.7/9, mbtmp4.1/10, MS3.1/1, Error ellipse: s-maj=29.4km s-min=26.3km az=154.0*
ISC 01 10:12:18.1±0.8, 14°.81S±0°.08×167°.4E±0°.2, h129km, n41, σ2s 91/38, mb3.8/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KOUNC	Koumac, New Ca	6.42	207	P		P	Pn	10 13 51.3	+1.0
YATNC	Mamie plateau,	7.22	184	P		P	Pn	10 14 00.8	-0.4
DZM	Mont Dzumac	7.28	187	P		P	Pn	10 14 02.8	+0.9
DZM	Mont Dzumac	7.28	187	P		P	Pn	10 14 02.3	+0.3
	19nm,0.3s,baz=14,slow=13,SNR=95								
DZM				S		S	Sn	10 15 19.8	-3.4
	5.6nm,0.4s,baz=135,slow=23,SNR=0.9								
NOUC	Port Laguerre	7.32	188	P		P	Pn	10 14 03.7	+1.2
ONTNC	Ouen Toro	7.51	187	P		P	Pn	10 14 06.9	+1.9
OUENC	Ouen Island, N	7.58	184	P		P	Pn	10 14 07.1	+1.1
PINNC	Pines Island,	7.76	179	P		P	Pn	10 14 09.6	+1.2
CTA	Charters Tower	20.81	252	P		P		10 16 50.8	+1.3
	4.9nm,0.8s,baz=103,slow=8.2,SNR=6.0 4.9nm,0.8s								
PNHZ	Pukenui	26.18	164	P		P		10 17 48.7	+8.1
KAHZ	Kahuranaki	26.25	163	P		P		10 17 51.4	+10
TSZ	Takapari Road	26.25	165	P		P		10 17 48.0	+6.7
WPHZ	Waipukurau	26.38	164	P		P		10 17 45.9	+3.5
PXZ	Pawanui	26.46	163	P		P		10 17 48.0	+4.9
POWZ	Post Office Ro	26.52	166	P		P		10 17 47.5	+3.9
DVHZ	Dannevirke	26.53	165	P		P		10 17 43.4	-0.3
PRHZ	Porangahau	26.62	164	P		P		10 17 43.3	-1.3
PRWZ	Pori Road	26.73	165	P		P		10 17 45.1	-0.4
MRZ	Mangatainoka R	26.73	166	P		P		10 17 49.6	+4.0
ANWZ	Angora Road	26.76	164	P		P		10 17 40.5	-5.3
BFZ	Birch Farm	26.91	165	P		P		10 17 42.8	-4.3
TIWZ	Tintock	26.91	166	P		P		10 17 47.4	+0.2
HOWZ	Holdsworth Sta	26.94	166	P		P		10 17 51.5	+4.0
CAW	Cannon Point	27.04	167	P		P		10 17 56.9	+8.6
CPWZ	Castlepoint	27.12	165	P		P		10 17 47.0	-1.9
MTW	Mount Morrison	27.19	166	P		P		10 17 53.1	+3.5
TMWZ	Te Maipa	27.23	166	P		P		10 17 50.5	+0.4
PAWZ	Paruwai Farm	27.38	167	P		P		10 17 55.8	+4.4
TRWZ	Traveller	27.46	166	P		P		10 17 54.3	+2.3
PLWZ	Palliser	27.52	167	P		P		10 17 58.6	+5.9
STKA	Stephens Creek	29.02	230	P		P		10 18 06.8	+0.7
	2.8nm,0.4s,baz=54,slow=9.8,SNR=12 2.8nm,0.4s								
WRA	Warramunga Arr	31.90	256	P		P		10 18 30.2	-1.4
	0.4nm,0.5s,baz=84,slow=8.5,SNR=5.0 0.4nm,0.5s								
ASAR	Alice Springs	32.74	249	P		P		10 18 38.2	-0.7
	1.0nm,0.4s,baz=78,slow=9.4,SNR=20								
ASAR				PcP		PcP		10 21 20.3	-1.3
	0.6nm,0.9s,baz=73,slow=3.1,SNR=2.7 1.0nm,0.4s								
KAPI	Kappang	47.81	277	LR		LR		10 41 54.6	
	comp=Z,18nm,18.1s,baz=120,slow=37								
VNDA	Vanda	62.78	181	P		P		10 22 28.4	-1.0
	1.7nm,0.8s,baz=4.5,slow=6.3,SNR=6.3 1.7nm,0.8s								
USRK	Ussuriysk Ar.	67.00	333	P		P		10 22 59.9	+2.8
	0.7nm,0.7s,baz=158,slow=7.8,SNR=4.7								
SONM	Songino Array	82.62	324	P		P		10 24 26.8	-0.3
	0.4nm,0.5s,baz=152,slow=6.3,SNR=2.8 0.4nm,0.5s								
ILAR	Eielson Array	86.57	18	P		P		10 24 45.2	-1.2
	0.5nm,0.8s,baz=234,slow=5.3,SNR=9.5 0.5nm,0.8s								
MKAR	Makanchi Array	97.33	316	P		Pdif		10 25 36.8	0.0
	0.7nm,0.7s,baz=112,slow=6.2,SNR=1.7 0.7nm,0.7s								
ZALV	Zalesovo Beam	97.52	324	P		P		10 25 35.9	-1.5
	0.4nm,0.4s,baz=128,slow=2.4,SNR=1.7 0.4nm,0.4s								
ARCES	ARCESS Array B	120.36	345	PKP		PKPdf		10 30 51.7	-1.9
	3.2nm,1.0s,baz=3.8,slow=3.6,SNR=6.1								

IDC 01 10:15:33.9±5.6, 17°.17S×174°.06W, h0km, mb4.0/3, mbtmp4.0/3, MS3.3/1, Error ellipse: s-maj=184.9km s-min=110.7km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.62	241	P		P		10 23 32.7	+0.4
	2.7nm,0.8s,baz=104,slow=8.3,SNR=3.8 2.7nm,0.8s								
WRA	Warramunga Arr	48.85	258	P		P		10 24 21.1	-0.6
	0.4nm,0.6s,baz=97,slow=6.8,SNR=8.8 0.4nm,0.6s								
ASAR	Alice Springs	48.98	253	P		P		10 24 22.5	-0.2
	3.1nm,0.7s,baz=89,slow=8.4,SNR=29								
ASAR				PcP		PcP		10 25 46.7	-0.2
	0.8nm,1.1s,baz=103,slow=3.7,SNR=1.6 3.1nm,0.7s								
GUMO	Guam	50.78	304	LR		LR		10 44 07.5	
	comp=Z,28nm,20.4s,baz=66,slow=34								

*TRN **01** 10:18:53.8, 10°.20N×60°.47W, h82km, MD3.9, East of Trinidad.*
*IDC **01** 10:18:57.3±1.9, 11°.61N×60°.75W, h0km, mb3.3/5, mbtmp3.6/6, ML2.9/1, Error ellipse: s-maj=68.0km s-min=27.8km az=11.0*
ISC 01 10:18:56.4±3.3, 10°.4N±0°.1×60°.4W±0°.2, h47km±23km, n18, σ1s 04/26, mb3.3/5, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	1.03	284	eP		P	Pn	10 19 13.2	-1.3
TRN				eS		S	Sn	10 19 27.1	-0.8
GRFF	Grenada Fort F	2.12	321	eP		P	Pn	10 19 29.7	+0.3
GRFF				eS		S	Sn	10 19 55.1	+0.6
GRGR	Grenville	2.13	324	eP		P	Pn	10 19 30.3	+0.7
GRHS	Sauteurs	2.20	326	eP		P	Pn	10 19 30.5	0.0
GRHS				eS		S	Sn	10 19 57.3	+0.7
GCMP	Grenada, Carri	2.32	334	eP		P	Pn	10 19 32.9	+0.7
GCMP				eS		S	Sn	10 19 59.8	+0.3
SVOC	Richmond Hill,	2.87	343	eP		P	Pn	10 19 39.7	+0.1
SVOC				eS		S	Sn	10 20 12.4	-0.5
SVB	Belmont	2.99	344	eP		P	Pn	10 19 42.2	+0.8
SVB				eS		S	Sn	10 20 17.0	+1.0
SLBI	Saint Lucia, B	3.66	351	eP		P	Pn	10 19 51.3	+0.8
SLBI				eS		S	Sn	10 20 32.3	-0.1
MPOM	Morne Pois Mar	4.06	353	eP		P	Pn	10 19 55.6	-0.4
MPOM				eS		S	Sn	10 20 41.4	-0.9
BIM	Bigot	4.16	351	eP		P	Pn	10 19 56.8	-0.6
BIM				eS		S	Sn	10 20 44.6	-0.2
ANBD	Bethesda, Anti	6.75	349	eP		P	Pn	10 20 33.7	+0.7
ANBD				eS		S	Sn	10 21 45.7	-2.9
BAUV	El Baúl	7.69	260	eP		P	Pn	10 20 40.6	-5.3
BAUV				eS		S	Sn	10 22 01.0	-11
ROSC	El Rosal	14.87	249	Pn		P		10 22 30.9	+1.8
	1.1nm,0.3s,baz=0.0,slow=23,SNR=4.9 13nm,0.6s								
TXAR	Lajitas Array	44.55	301	P		P		10 27 04.2	+0.1
	0.2nm,0.6s,baz=108,slow=8.6,SNR=5.3 0.2nm,0.6s								
PDAR	Pinedale Array	53.50	316	P		P		10 28 10.9	-1.6
	0.5nm,0.6s,baz=112,slow=10,SNR=5.6 0.5nm,0.6s								
NVAR	Mina Array Bea	58.58	309	P		P		10 28 49.1	+0.1
	0.1nm,0.4s,baz=116,slow=8.4,SNR=2.3 0.1nm,0.4s								
TORD	Torodi Ar. Bea	60.71	81	P		P		10 29 12.2	+8.5
	0.3nm,0.3s,baz=270,slow=8.6,SNR=6.6 0.3nm,0.3s								
YKA	Yellowknife Ar	64.80	335	P		P		10 29 29.5	-0.6
	0.1nm,0.5s,baz=105,slow=7.3,SNR=2.4 0.1nm,0.5s								

*IDC **01** 10:26:35.8±2.2, 55°.95N×149°.64W, h0km, mb3.3/3, mbtmp3.5/8, ML3.5/5, MS2.9/4, Error ellipse: s-maj=38.7km s-min=19.7km az=62.0*
*NEIC **01** 10:26:36.9±2.0, 55°.98N±0°.1×149°.8W±0°.1, h22km±10km, ML3.9/42, ML3.6(AEIC), Error ellipse: s-maj=14.6km s-min=8.9km az=156.0*
*AEIC **01** 10:26:39.9±1.9, 55°.95N±0°.09×149°.8W±0°.1, h12km±8km, Error ellipse: s-maj=13.4km s-min=9.6km az=147.0*
ISC 01 10:26:35.8±0.9, 56°.05N±0°.07×149°.84W±0°.05, h10km, n193, σ0s 98/185, mb3.2/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.24	303				Sn	10 27 38.2	-2.3
OHAK	Old Harbor	2.24	303	Pn		Pn	Pn	10 27 12.9	0.0
OHAK	Old Harbor	2.24	303	IAML				10 27 40.1	
	comp=N,110nm,0.6s								
OHAK				IAML				10 27 40.2	
	comp=E,98nm,1.0s								
OHAK	Old Harbor	2.24	303	P		Pn		10 27 12.8	0.0
OHAK	Old Harbor	2.24	303	P		Pn		10 27 12.6	-0.2
	baz=122								
OHAK				S		Sn		10 27 38.6	-1.9
	baz=122								
KDAK	Kodiak Island	2.30	320					10 27 13.8	+0.1
KDAK	Kodiak Island	2.30	320				Sn	10 27 40.7	-1.3
KDAK	Kodiak Island	2.30	320	S			Sn	10 27 40.9	-1.1
	baz=139								
KDAK	Kodiak Island	2.30	320	Pn		Pn		10 27 13.8	+0.1
	comp=E,11nm,0.3s,baz=157,slow=5.4,SNR=9.6								
KDAK				Sn		Sn		10 27 40.9	-1.1
	comp=E,37nm,0.3s,baz=131,slow=20,SNR=21								
KDAK				LR		LR		10 28 25.2	
	comp=E,278nm,21.5s,baz=194,slow=45 comp=E,43nm,0.4s								
SII	Sitkinak Islan	2.47	284				Pn	10 27 15.8	-0.4
SII							Sn	10 27 43.7	-2.7
SII	Sitkinak Islan	2.47	284	IAML				10 27 45.5	
	comp=E,500nm,0.6s								
SII				IAML				10 27 49.7	
	comp=N,306nm,0.6s								
SII	Sitkinak Islan	2.47	284	P		Pn		10 27 15.5	-0.6
SII	Sitkinak Islan	2.47	284	P		Pn		10 27 15.8	-0.4
	baz=102								
SII				S		Sn		10 27 44.7	-1.6
	baz=102								
SYI	Shuyak Island	2.92	333				Pn	10 27 22.9	+0.7
SYI							Sn	10 27 56.8	-0.5
Q20K	Shuyak Island	2.92	333	P		Pn		10 27 22.9	+0.7
	baz=151								
Q20K				S		Sn		10 27 57.2	-0.1
	baz=151								
KAHG	Katmai Hook Gl	3.54	316				Pn	10 27 32.3	+1.4
Q19K	Cape Douglas,	3.54	326				Pn	10 27 32.4	+1.5
Q19K							Sn	10 28 11.0	-1.8
Q19K	Cape Douglas,	3.54	326	P		Pn		10 27 32.4	+1.5
	baz=144								
Q19K				S		Sn		10 28 11.0	-1.8
	baz=144								
CNPM	China Poot	3.57	349				Pn	10 27 31.1	0.0
CNPM							Sn	10 28 12.5	-0.8
CNPM	China Poot	3.57	349	IAML				10 28 13.6	
	comp=E,153nm,0.7s								
CNPM

O19K	Port Alsworth	4.79	332	P	Pn	10 27 48.2	+0.3
	baz=149						
CHGN	Chignik	4.80	277	Pn	Pn	10 27 48.3	+0.3
CHGN				IAML		10 28 47.4	
	comp=N,69nm,0.3s						
KAIM	Kayak Island	4.84	34		Pn	10 27 48.4	-0.3
KAIM	Kayak Island	4.84	34	IAML		10 28 47.3	
	comp=N,81nm,1.1s						
KAIM				IAML		10 29 54.3	
	comp=E,84nm,1.5s						
KAIM	Kayak Island	4.84	34	P	Pn	10 27 48.9	+0.2
	baz=218						
EYAK	Cordova Ski Ar	5.00	24		Pn	10 27 50.7	-0.2
EYAK	Cordova Ski Ar	5.00	24	P	Pn	10 27 51.1	+0.3
EYAK	Cordova Ski Ar	5.00	24	P	Pn	10 27 50.9	+0.1
	baz=207						
RC01	Rabbit Creek A	5.06	1	Pn	Pn	10 27 51.5	-0.1
RC01				IAML		10 28 50.8	
	comp=E,72nm,0.6s						
RC01				IAML		10 28 59.9	
	comp=N,44nm,0.4s						
RC01	Rabbit Creek A	5.06	1	P	Pn	10 27 51.5	-0.1
	baz=180						
RAGM	Ragged Mountai	5.14	30		Pn	10 27 53.0	+0.2
RAGM	Ragged Mountai	5.14	30	IAML		10 29 02.8	
	comp=N,119nm,0.8s						
RAGM				IAML		10 29 04.0	
	comp=E,84nm,0.8s						
GOAT	Goat Mountain	5.29	29		Pn	10 27 54.9	+0.1
P16K	Nushagak River	5.31	308		Pn	10 27 55.9	+0.8
P16K	Nushagak River	5.31	308	P	Pn	10 27 55.9	+0.8
	baz=122						
N19K	Bonanza Creek	5.36	335		Pn	10 27 55.4	-0.5
N19K	Bonanza Creek	5.36	335	P	Pn	10 27 56.2	+0.3
	baz=151						
O17K	Koliganek Bris	5.37	317		Pn	10 27 56.7	+0.8
O17K	Koliganek Bris	5.37	317	P	Pn	10 27 57.0	+1.1
	baz=132						
BERG	Berg Lake	5.43	34		Pn	10 27 56.9	+0.1
SUA	Susitna One	5.45	355	Pn	Pn	10 27 56.5	-0.6
GRIN	Grindle Hills	5.47	36		Pn	10 27 57.8	+0.5
SNH	Sunshine Point	5.56	39		Pn	10 27 58.7	+0.1
PMR	Palmer	5.57	4	Pn	Pn	10 27 59.6	+0.9
PMR	Palmer	5.57	4	P	Pn	10 27 59.4	+0.7
KHIT	Khitrov Hills	5.62	36		Pn	10 27 59.3	-0.1
N18K	Kilae Creek	5.63	328		Pn	10 27 59.8	+0.3
N18K	Kilae Creek	5.63	328	P	Pn	10 28 00.2	+0.7
	baz=143						
O16K	Kokwok River B	5.66	312		Pn	10 28 00.5	+0.6
SML	Sawmill	5.83	7	Pn	Pn	10 28 02.9	+0.7
MESA	MESA	5.88	42		Pn	10 28 03.0	-0.2
MESA	MESA	5.88	42	P	Pn	10 28 03.0	-0.2
	baz=228						
SVW2	Sparrevohn	5.88	332		Pn	10 28 02.5	-0.4
SVW2	Sparrevohn	5.88	332	P	Pn	10 28 02.7	-0.3
N17K	Nushagak Hills	5.93	322		Pn	10 28 03.8	+0.2
SKT	Skwentna	6.01	352	Pn	Pn	10 28 04.6	-0.1
ISLE	Juniper Island	6.04	38		Pn	10 28 05.2	0.0
BAGL	Bagley Icefiel	6.05	39		Pn	10 28 05.4	+0.2
VRDI	Verde Repeater	6.17	30	Pn	Pn	10 28 07.1	0.0
N25K	Chitina, Valde	6.20	24	P	Pn	10 28 08.4	+1.0
	baz=208						
O15K	Ungalikthiuk R	6.21	304		Pn	10 28 08.7	+1.2
O15K	Ungalikthiuk R	6.21	304	P	Pn	10 28 08.7	+1.2
	baz=117						
GLB	Gilahina Butte	6.25	28	Pn	Pn	10 28 08.4	+0.3
SAMH	Samovar Hills	6.31	46		Pn	10 28 09.7	+0.8
M19K	Big River Lodg	6.33	340	Pn	Pn	10 28 10.5	+1.5
GRNC	Granite Creek	6.33	39		Pn	10 28 09.5	+0.1
TABL	Table Mountain	6.36	43		Pn	10 28 10.0	+0.3
MCARA	McCarthy VSAT	6.42	31		Pn	10 28 08.1	-2.2
MCARA	McCarthy VSAT	6.42	31	P	Pn	10 28 11.3	+0.9
	baz=216						
PCA	Pinnacle	6.50	47		Pn	10 28 11.8	+0.2
PINM	Pinnacle	6.51	47	P	Pn	10 28 11.7	+0.2
	baz=235						
BARN	Barnard Glacie	6.60	37		Pn	10 28 13.3	+0.4
CTG	Chitna Glacier	6.64	39	P	Pn	10 28 13.8	+0.3
	baz=225						
PNL	Peninsula	6.65	53		Pn	10 28 13.8	+0.3
PNL	Peninsula	6.65	53	P	Pn	10 28 13.9	+0.4
PNL	Peninsula	6.65	53	P	Pn	10 28 13.8	+0.3
	baz=241						
M17K	Holitna River	6.66	327		Pn	10 28 14.7	+1.1
M17K	Holitna River	6.66	327	P	Pn	10 28 14.7	+1.1
	baz=141						
LOGN	Logan Glacier	6.67	40		Pn	10 28 13.7	-0.2
L19K	White Mountain	6.67	339		Pn	10 28 13.9	+0.1
BCPM	Bancas Point	6.69	50		Pn	10 28 14.3	+0.3
HARP	HAARP	6.81	19		Pn	10 28 16.9	+1.2
HARP	HAARP	6.81	19	P	Pn	10 28 16.9	+1.2
	baz=202						
N15K	Kwethluk River	6.82	311		Pn	10 28 17.2	+1.4
N15K	Kwethluk River	6.82	311	P	Pn	10 28 17.2	+1.4
	baz=123						
PN7A	Pavlof North-7	6.89	270		Pn	10 28 17.3	+0.4
M16K	Timber Creek	6.90	320		Pn	10 28 18.4	+1.5
M16K	Timber Creek	6.90	320	P	Pn	10 28 18.3	+1.5
	baz=133						
O14K	Tigyukauivet M	6.92	302	Pn	Pn	10 28 18.4	+1.3
O29M	Mount Kennedy	7.32	50		Pn	10 28 23.4	+0.6
O29M	Mount Kennedy	7.32	50	P	Pn	10 28 23.5	+0.6
	baz=238						
M15K	Kasigluk River	7.36	314		Pn	10 28 24.3	+1.2
M15K	Kasigluk River	7.36	314	P	Pn	10 28 24.3	+1.2
	baz=125						
P29M	Windy Craggy	7.39	56		Pn	10 28 23.2	-0.5
P29M	Windy Craggy	7.39	56	P	Pn	10 28 23.2	-0.5
	baz=245						
RND	Reindeer	7.40	3	Pn	Pn	10 28 23.4	-0.4
YUK2	White River	7.40	35		Pn	10 28 24.4	+0.6
YUK8	Steele Glacier	7.42	41		Pn	10 28 24.8	+0.5
YUK8	Steele Glacier	7.42	41	P	Pn	10 28 24.8	+0.5
	baz=229						
TRF	Thorofare Moun	7.43	358	Pn	Pn	10 28 26.1	+1.8
CAST	Castle Rocks	7.48	352	Pn	Pn	10 28 26.0	+1.1
YUK3	Moose Creek	7.52	36		Pn	10 28 26.4	+0.8
YUK3	Moose Creek	7.52	36	P	Pn	10 28 26.4	+0.8
	baz=224						
KTH	Kantishna Hill	7.55	356	Pn	Pn	10 28 26.4	+0.5
L16K	Owhat River	7.55	323	P	Pn	10 28 27.5	+1.7
	baz=135						
TTA	Tatalina	7.58	338	Pn	Pn	10 28 25.5	-0.7
YUK6	Outpost Mounta	7.76	46		Pn	10 28 29.8	+0.9
YUK6	Outpost Mounta	7.76	46	P	Pn	10 28 29.8	+0.9
	baz=235						
BVCY	Beaver Creek	7.87	32		Pn	10 28 31.2	+1.0
BVCY	Beaver Creek	7.87	32	P	Pn	10 28 31.2	+1.0
	baz=219						
YUK4	Talbot Arm	7.88	43	P	Pn	10 28 32.5	+2.0
	baz=232						
M14K	Bethel	7.92	312	Pn	Pn	10 28 32.7	+1.9
P30M	Million Dollar	7.95	54	P	Pn	10 28 32.0	+0.6
	baz=244						
K17K	Iditarod	7.95	331	Pn	Pn	10 28 31.9	+0.6
PLBC	Pleasant Camp	7.98	59	P	Pn	10 28 32.0	+0.3
	baz=250						
ISNN	Isanotski Nort	8.02	267		Pn	10 28 32.6	+0.3
HYT	Haines Junctio	8.05	48	Pn	Pn	10 28 33.2	+0.4
YUK5	Granite Creek	8.07	46		Pn	10 28 33.5	+0.5
RIDG	Independent Ri	8.11	16	Pn	Pn	10 28 34.7	+1.1
BCAR	Beaver Creek A	8.14	27	Pn	Pn	10 28 35.2	+1.3
J18K	Innoko River	8.20	338	Pn	Pn	10 28 36.8	+2.1
SCRK	Sand Creek	8.47	18	Pn	Pn	10 28 39.8	+1.2
J19K	Poorman	8.48	342	Pn	Pn	10 28 39.5	+1.0
SKAG	Skagway	8.48	60	Pn	Pn	10 28 39.1	+0.6
SKAG	Skagway	8.48	60	P	Pn	10 28 39.1	+0.6
O30N	Mendenhall	8.63	51		Pn	10 28 40.7	+0.1
O30N	Mendenhall	8.63	51	P	Pn	10 28 40.7	+0.1
	baz=242						
CCB	Clear Creek Bu	8.69	6		Pn	10 28 42.9	+1.5
JIS	Juneau Island	8.69	69	P	Pn	10 28 42.8	+1.4
J25K	Salcha River,	8.87	13		Pn	10 28 45.0	+1.0
J25K	Salcha River,	8.87	13	P	Pn	10 28 45.0	+1.0
	baz=196						
IL31		8.87	8		Pn	10 28 45.4	+1.5
ILAR	Eielson Array	8.87	8	Pn	Pn	10 28 44.9	+1.0
	comp=E,0.5nm,0.3s,baz=188,slow=14,SNR=27						
ILAR				Sn	Sn	10 30 19.2	-4.6
	comp=E,0.6nm,0.3s,baz=202,slow=23,SNR=11 comp=E,1.4nm,0.4s						
COLA	College	8.91	6	P	Pn	10 28 45.5	+1.1
MDM	Murphy Dome	8.98	4		Pn	10 28 46.4	+1.0
N31M	Braeburn, Yuko	9.11	47	Pn	Pn	10 28 48.2	+1.1
WHY	Whitehorse	9.12	53	Pn	Pn	10 28 47.8	+0.4
POKR	Poker Plat Res	9.18	6	Pn	Pn	10 28 49.3	+1.2
P32M	Atlin	9.30	61	Pn	Pn	10 28 49.6	-0.3
DLBC	Dease Lake	10.99	69	Pn	Pn	10 29 13.3	+0.3
	comp=E,0.7nm,0.3s,baz=147,slow=18,SNR=3.0 comp=E,1.6nm,0.4s						
BBB	Bella Bella	13.30	98	LR	LR	10 33 00.7	
	comp=E,46nm,19.6s,baz=300,slow=29						
INK	Inuvik	14.39	25	Pn	Pn	10 30 00.7	+1.4
	comp=E,0.1nm,0.3s,baz=211,slow=12,SNR=7.1 comp=E,3.7nm,1.0s						
YKA	Yellowknife Ar	18.93	56	P	Pn	10 30 57.3	+0.2
	comp=E,0.1nm,0.3s,baz=266,slow=9.9,SNR=11 comp=E,0.9nm,0.9s						
YBH	Yreka Blue Hor	22.68	118	LR	LR	10 37 47.4	
	comp=E,27nm,18.5s,baz=347,slow=30						
NVAR	Mina Array Bea	27.38	117	P	P	10 32 22.1	+0.7
	comp=E,0.5nm,0.8s,baz=309,slow=9.0,SNR=4.6 comp=E,0.5nm,0.8s						
PDAR	Pinedale Array	28.93	100	P	P	10 32 35.0	-0.1
	comp=E,0.2nm,0.5s,baz=308,slow=3.3,SNR=2.1 comp=E,0.2nm,0.5s						
PFO	Pinyon Flats O	32.11	120	LR	LR	10 43 06.6	
	comp=E,34nm,19.7s,baz=344,slow=31						
TXAR	Lajitas Array	42.04	110	P	P	10 34 27.6	+0.1
	comp=E,0.2nm,0.8s,baz=297,slow=6.7,SNR=2.2 comp=E,0.2nm,0.8s						
H11N2	WAKE ISLAND Hy	48.49	240	T	T	11 28 08.5	
	baz=29						
H11N3	WAKE ISLAND Hy	48.50	240	T	T	11 28 10.9	
	baz=29						
H11N1	WAKE ISLAND Hy	48.51	240	T	T	11 28 06.8	
	baz=29						
H11S1	WAKE ISLAND Hy	49.63	239	T	T	11 29 36.9	
	baz=29,slow=74						
H11S2	WAKE ISLAND Hy	49.65	239	T	T	11 29 37.5	
	baz=29						
H11S3	WAKE ISLAND Hy	49.65	239	T	T	11 29 38.2	
	baz=29,slow=74						

*IDC **01** 10:30:44.2±4.0,55°.51N×149°.16W,h0^{km},mb3.4/1, mbtmp3.5/5,ML3.1/4, Error ellipse: s-maj=62.5km s-min=38.2km az=172.0*

*NEIC **01** 10:30:45.7±1.4,55°.7N±0°.1×149°.2W±0°.1,h8^{km}±8^{km}, ML3.7/40,ML3.4(AEIC), Error ellipse: s-maj=16.5km s-min=8.1km az=154.0*

*AEIC **01** 10:30:51.3±1.3,55°.8N±0°.1×149°.2W±0°.1,h10^{km}±8^{km}, Error ellipse: s-maj=17.9km s-min=8.7km az=165.0*

ISC 01 10:30:46.5±1.5,55°.81N±0°.09×149°.20W±0°.05,h10^{km}, n125,σ1^{s}05/134,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.67	304			Pn		10 31 29.2	-0.3
OHAK						Sn		10 31 59.5	-2.4
OHAK	Old Harbor	2.67	304	P		Pn		10 31 29.2	-0.3
	baz=121								
OHAK				S		Sn		10 32 00.0	-1.9
	baz=121								
KDAK	Kodiak Island	2.72	318			Sn		10 32 00.8	-2.2
KDAK	Kodiak Island	2.72	318	IAML				10 32 02.0	
	60nm,0.3s								
KDAK				IAML				10 32 02.8	
	41nm,0.6s								
KDAK	Kodiak Island	2.72	318	P		Pn		10 31 30.3	+0.1
	baz=136								
KDAK	Kodiak Island	2.72	318	Pn		Pn		10 31 30.3	+0.1
	2.5nm,0.3s,baz=140,slow=6.9,SNR=23								
KDAK				Sn		Sn		10 32 00.9	-2.1
	13nm,0.3s,baz=147,slow=12,SNR=22 8.3nm,0.2s								
SII	Sitkinak Islan	2.89	287			Pn		10 31 31.9	-0.6
SII						Sn		10 32 04.9	-2.4
SII	Sitkinak Islan	2.89	287	IAML				10 32 12.3	
	comp=N,132nm,1.4s								
SII				IAML				10 32 27.3	
	comp=E,137nm,1.3s								
SII	Sitkinak Islan	2.89	287	P		Pn		10 31 31.9	-0.6
	baz=104								
SII				S		Sn		10 32 05.7	-1.6
	baz=104								
Q20K	Shuyak Island	3.30	330	P		Pn		10 31 38.7	+0.5
	baz=147								
Q20K				S		Sn		10 32 17.3	-0.2
	baz=147								
SYI	Shuyak Island	3.30	330			Pn		10 31 38.7	+0.5
SYI						Sn		10 32 16.6	-0.8
CNPM	China Poot	3.88	344			Pn		10 31 46.2	-0.1
CNPM	China Poot	3.88	344	IAML				10 32 33.0	
	comp=E,50nm,0.8s								
CNPM				IAML				10 32 33.1	
	comp=N,56nm,1.3s								
Q23K	Middleton Isla	3.94	22			Pn		10 31 46.9	0.0
MID	Middleton Isla	3.94	22			Pn		10 31 46.9	0.0
Q19K	Cape Douglas,	3.95	324			Pn		10 31 48.1	+1.0
Q19K						Sn		10 32 33.2	-0.2
Q19K	Cape Douglas,	3.95	324	IAML				10 32 40.7	
	comp=N,155nm,0.9s								
Q19K	Cape Douglas,	3.95	324	P		Pn		10 31 48.1	+1.0
	baz=141								
Q19K				S		Sn		10 32 33.2	-0.2
	baz=141								
KAHG	Katmai Hook Gl	3.97	315			Pn		10 31 48.9	+1.5
KAHG						Sn		10 32 33.5	-0.4
BRSE	Bradley Lake S	4.03	349			Pn		10 31 48.2	0.0
BRSE	Bradley Lake S	4.03	349	P		Pn		10 31 48.2	0.0
	baz=168								
BRLK	Bradley Lake	4.07	348			Pn		10 31 48.5	-0.3
BRLK	Bradley Lake	4.07	348	IAML				10 32 38.1	
	comp=E,39nm,0.4s								
HOM	Homer	4.08	342	Pn		Pn		10 31 49.1	+0.3
ACHA	Angle Creek He	4.13	308			Pn		10 31 50.8	+1.2
ANCK	Angle Creek	4.19	307			Pn		10 31 51.6	+1.1
P23K	Montague Islan	4.31	12			Pn		10 31 52.1	+0.1
P23K	Montague Islan	4.31	12	P		Pn		10 31 52.1	+0.1
	baz=193								
SEW	Seward	4.31	358			Pn		10 31 51.7	-0.3
SEW	Seward	4.31	358	P		Pn		10 31 51.7	-0.3
	baz=178								
Q17K	Contact Creek	4.41	307	P		Pn		10 31 54.3	+0.9
	baz=122								
P19K	Oil Pt	4.42	332	Pn		Pn		10 31 53.9	+0.4
P19K				IAML				10 32 49.9	
	comp=E,92nm,0.7s								
P19K				IAML				10 32 49.9	
	comp=N,89nm,0.6s								
IVE	Iliamna Volcan	4.68	336			Pn		10 31 57.6	+0.4
O22K	Cooper Landing	4.69	357	Pn		Pn		10 31 58.0	+0.7
O22K				IAML				10 33 06.0	
	comp=E,76nm,0.8s								
HIN	Hinchinbrook I	4.82	16	Pn		Pn		10 31 59.5	+0.5
HIN				IAML				10 32 53.9	
	comp=N,69nm,0.6s								
HIN				IAML				10 34 06.0	
	comp=E,83nm,1.5s								
P18K	Big Mountain,	4.84	320			Pn		10 31 59.3	0.0
P18K	Big Mountain,	4.84	320	P		Pn		10 31 59.3	0.0
	baz=136								
KAIM	Kayak Island	4.85	30	Pn		Pn		10 31 59.8	+0.3
KAIM				IAML				10 33 13.3	
	comp=E,74nm,1.3s								
KAIM				IAML				10 35 03.1	
	comp=N,84nm,1.2s								
RSO	Redoubt South	5.03	339	Pn		Pn		10 32 02.5	+0.3
RSO						Sn		10 32 59.4	-1.0
O18K	Koktuh Hills	5.17	324			Pn		10 32 04.1	+0.2
O18K	Koktuh Hills	5.17	324	IAML				10 33 05.1	
	comp=N,22nm,1.4s								
O18K	Koktuh Hills	5.17	324	P		Pn		10 32 04.1	+0.2
	baz=139								
O19K	Port Alsworth	5.17	330			Sn		10 33 03.2	-0.3
O19K				IAML				10 33 06.0	
	comp=N,68nm,0.5s								
O19K	Port Alsworth	5.17	330			Pn		10 32 03.5	-0.3
O19K	Port Alsworth	5.17	330	P		Pn		10 32 03.5	-0.3
	baz=146								
P17K	Kvichak River	5.17	314			Pn		10 32 05.0	+1.1
P17K	Kvichak River	5.17	314	P		Pn		10 32 05.0	+1.1
	baz=128								
RAGM	Ragged Mountai	5.18	26			Pn		10 32 04.3	+0.3
RAGM				IAML				10 33 10.9	
	comp=E,66nm,1.4s								
CHGN	Chignik	5.19	279	Pn		Pn		10 32 03.8	-0.3
CHGN				IAML				10 33 00.1	
	comp=E,46nm,1.2s								
CHGN				IAML				10 33 03.1	
	comp=N,53nm,0.1s								
NICHA	Nichawak Mount	5.24	30			Pn		10 32 05.5	+0.7
RC01	Rabbit Creek A	5.30	357			Sn		10 33 05.8	-0.9
RC01				IAML				10 33 07.3	
	comp=E,24nm,0.7s								
RC01				IAML				10 33 12.0	
	comp=N,20nm,0.6s								
RC01	Rabbit Creek A	5.30	357			Pn		10 32 05.8	+0.2
RC01	Rabbit Creek A	5.30	357	P		Pn		10 32 05.8	+0.2
	baz=177								
BERG	Berg Lake	5.44	30			Pn		10 32 07.8	+0.2
GRIN	Grindle Hills	5.46	32			Pn		10 32 08.5	+0.6
SNH	Sunshine Point	5.53	35	Pn		Pn		10 32 09.4	+0.5
KNK	Knik Glacier	5.63	4	Pn		Pn		10 32 10.8	+0.6
BMRM	Bremner River	5.71	23	P		Pn		10 32 11.6	+0.4
	baz=207								
SUA	Susitna One	5.73	353	Pn		Pn		10 32 11.8	+0.2
N19K	Bonanza Creek	5.74	333			Pn		10 32 11.4	-0.3
N19K	Bonanza Creek	5.74	333	P		Pn		10 32 11.4	-0.3
	baz=149								
WAX	Waxell Ridge	5.74	33			Pn		10 32 11.8	+0.1
BARK	Barkley Ridge	5.82	35			Pn		10 32 13.0	+0.2
S14K	Fog Glacier	5.83	279	P		Pn		10 32 13.5	+0.6
	baz=91								
VNFG	Fog Glacier, M	5.83	279			Pn		10 32 13.5	+0.6
MESA	MESA	5.83	38	Pn		Pn		10 32 13.1	0.0
STLK	Strandline Lak	5.87	348			Pn		10 32 13.5	0.0
KLU	Klutina	5.95	15			Pn		10 32 15.4	+0.7
KLU						Sn		10 33 20.5	-2.3
KLU	Klutina	5.95	15	P		Pn		10 32 15.3	+0.7
	baz=198								
ISLE	Juniper Island	6.02	34	Pn		Pn		10 32 16.0	+0.4
N18K	Kilae Creek	6.03	327	Pn		Pn		10 32 15.9	+0.3
SML	Sawmill	6.03	4	P		Pn		10 32 16.7	+1.0
	baz=185								
O16K	Kokwok River B	6.09	312	Pn		Pn		10 32 16.9	+0.4
SCM	Sheep Creek Mo	6.12	8			Pn		10 32 17.9	+1.0
SCM	Sheep Creek Mo	6.12	8	P		Pn		10 32 17.9	+1.0
	baz=190								
SAMH	Samovar Hills	6.23	42			Pn		10 32 19.4	+1.0
KIAG	Kiagna River	6.26	32			Pn		10 32 19.2	+0.2
SVW2	Sparrevohn	6.27	330	Pn		Pn		10 32 19.4	+0.5
N25K	Chitina, Valde	6.29	20			Pn		10 32 20.1	+0.8
N25K						Sn		10 33 29.6	-1.5
N25K	Chitina, Valde	6.29	20	P		Pn		10 32 20.0	+0.8
	baz=204								
TABL	Table Mountain	6.30	39			Pn		10 32 20.0	+0.5
GRNC	Granite Creek	6.30	35			Pn		10 32 19.9	+0.3
SKT	Skwentna	6.31	350	Pn		Pn		10 32 21.0	+1.5
GLB	Gilahina Butte	6.31	24			Pn		10 32 20.1	+0.6
GLB						Sn		10 33 28.8	-2.8
PCA	Pinnacle	6.41	44			Pn		10 32 21.6	+0.7
PINM	Pinnacle	6.41	44	P		Pn		10 32 21.6	+0.7
	baz=231								
M20K	Styx River	6.42	343	Pn		Pn		10 32 22.8	+1.7
PTPK	Patty Peak	6.44	30			Pn		10 32 21.9	+0.4
MCARA	McCarthy VSAT	6.45	27			Pn		10 32 22.2	+0.7
MCARA	McCarthy VSAT	6.45	27	P		Pn		10 32 22.1	+0.7
	baz=212								
PNL	Peninsula	6.52	50	P		Pn		10 32 22.9	+0.5
	baz=237								
BARN	Barnard Glacie	6.58	34			Pn		10 32 23.9	+0.5
CTG	Chitna Glacier	6.61	35	P		Pn		10 32 23.9	+0.2
	baz=222								
LOGN	Logan Glacier	6.62	37			Pn		10 32 24.4	+0.4
WAT6	Susitna Watana	6.83	6			Pn		10 32 27.6	+0.8
WAT6	Susitna Watana	6.83	6	P		Pn		10 32 27.6	+0.8
	baz=187								
HARP	HAARP	6.93	16	P		Pn		10 32 29.6	+1.6
	baz=199								
WAT7	Susitna Watana	7.05	1			Pn		10 32 31.0	+1.3
M17K	Holitna River	7.07	326	Pn		Pn		10 32 30.4	+0.6
O29M	Mount Kennedy	7.21	47			Pn		10 32 33.0	+1.0
P29M	Windy Craggy	7.23	53			Pn		10 32 32.5	+0.4
N15K	Kwethluk River	7.25	312	Pn		Pn		10 32 33.9	+1.5
DHY	Denali Highway	7.35	6			Pn		10 32 35.5	+1.7
DHY	Denali Highway	7.35	6	P		Pn		10 32 35.5	+1.7
	baz=188								
YUK8	Steele Glacier	7.38	38			Pn		10 32 35.9	+1.5
YUK8	Steele Glacier	7.38	38	P		Pn		10 32 35.9	+1.5
	baz=226								
YUK2	White River	7.39	32			Pn		10 32 35.7	+1.3
PAX	Paxson	7.43	13			Pn		10 32 36.2	+1.3
PAX	Paxson	7.43	13	P		Pn		10 32 36.2	+1.3
	baz=196								
YUK3	Moose Creek	7.50	34	P		Pn		10 32 37.4	+1.3
	baz=221								
M27K	Edge Creek, AK	7.57	27			Pn		10 32 37.8	+0.9
M27K	Edge Creek, AK	7.57	27	P		Pn		10 32 37.8	+0.9
	baz=213								
YUK6	Outpost Mounta	7.67	43	P		Pn		10 32 40.0	+1.7
	baz=233								
TRF	Thorofare Moun	7.69	356	Pn		Pn		10 32 38.8	+0.3
CAST	Castle Rocks	7.77	350	Pn		Pn		10 32 40.7	+1.1
PLBC	Pleasant Camp	7.79	57	P		Pn		10 32 40.3	+0.5
	baz=247								
P30M	Million Dollar	7.81	51			Pn		10 32 41.2	+1.2
P30M	Million Dollar	7.81	51	P		Pn		10 32 41.2	+1.2
	baz=241								
KTH	Kantishna Hill	7.82

KURBB	**Kurchatov Arra**	**72.66**	**329**	P		**P**		**10 43 21.7**	**+0.5**
	0.8nm,0.6s,baz=133,slow=5.5,SNR=9.6								
	0.8nm,0.6s								
BVAR	**Borovoye Array**	**78.19**	**328**	P		**P**		**10 43 54.3**	**+1.4**
	0.3nm,0.5s,baz=153,slow=7.3,SNR=2.5								
	0.3nm,0.5s								

*NNC **01** 10:33:38.5±1.7,51°.68N×75°.69E,h3km±19km,mb3.0, mpv2.6,Error ellipse: s-maj=51.0km s-min=12.2km az=30.0,Suspected Mining explosion.*

*IDC **01** 10:33:40.3±0.9,51°.54N×75°.85E,h0km,mbtmp2.8/3, ML2.2/3,Error ellipse: s-maj=24.6km s-min=7.3km az=28.0*

ISC 01 10:33:38.7±0.9,51°.5N±0°.1×75°.73E±0°.06,h0km,n10, σ1§54/13,5C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.99**	**116**	⇓Pn	**Pb**	**10 34 14.7**	**-1.1**
	10nm,0.4s						
KURBB				⇑Sn	**Sg**	**10 34 41.6**	**-1.0**
	45nm,0.7s						
KURBB	**Kurchatov Arra**	**1.99**	**116**	Pn	**Pn**	**10 34 13.7**	**+0.1**
	1.0nm,0.3s,baz=297,slow=18,SNR=64						
KURBB				Lg	Lg	10 34 41.6	
	1.1nm,0.3s,baz=303,slow=32,SNR=15						
KURK	**Kurchatov**	**2.00**	**113**	⇑Pn	**Pb**	**10 34 14.7**	**-1.2**
	2.3nm,0.4s						
KURK				⇓Sn	**Sb**	**10 34 41.6**	**+0.3**
	8.3nm,0.6s						
BVA0	**Borovoye Array**	**3.60**	**296**	⇑Pg	**Pb**	**10 34 42.3**	**-1.0**
	0.2nm,0.3s,baz=102,slow=16,SNR=5.1						
BVA0				⇑Lg	Lg	10 35 29.7	
	3.7nm,0.6s,baz=111,slow=28,SNR=5.5						
BVAR	**Borovoye Array**	**3.60**	**296**	Pn	**Pn**	**10 34 37.4**	**+1.6**
	0.1nm,0.3s,baz=114,slow=14,SNR=4.3						
BVAR				Pg	**Pg**	**10 34 45.4**	**-2.4**
	0.1nm,0.3s,baz=101,slow=16,SNR=6.4						
BVAR				Sn	**Sn**	**10 35 20.7**	**+1.7**
	0.3nm,0.3s,baz=103,slow=24,SNR=10						
BVAR				Lg	Lg	10 35 36.6	
	0.3nm,0.3s,baz=113,slow=27,SNR=7.3						
	0.5nm,0.3s						
BRVK	**Borovoye**	**3.67**	**297**	⇑Pg	**Pb**	**10 34 43.4**	**-1.1**
	0.4nm,0.4s						
BRVK				⇓Lg	Lg	10 35 34.4	
	3.7nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.02**	**63**	I	I	11 08 10.0	
	baz=249,slow=342,SNR=5.6						
ZALV	**Zalesovo Beam**	**6.02**	**63**	Pn	**Pn**	**10 35 10.8**	**+1.8**
	0.5nm,0.3s,baz=254,slow=14,SNR=8.4						
	1.5nm,0.4s						
MK31	**Makanchi Array**	**6.41**	**135**	⇓Lg	Lg	10 37 03.7	
	2.0nm,0.6s,baz=339,slow=26,SNR=3.8						
MKAR	**Makanchi Array**	**6.41**	**135**	Pn	**Pn**	**10 35 15.2**	**+0.9**
	0.1nm,0.3s,baz=318,slow=12,SNR=2.4						
MKAR				Sn	**Sn**	**10 36 29.8**	**+1.7**
	0.2nm,0.3s,baz=329,slow=26,SNR=2.5						
MKAR				Lg	Lg	10 36 59.7	
	0.6nm,0.3s,baz=316,slow=28,SNR=8.2						
	0.2nm,0.4s						

*IDC **01** 10:59:57.6±0.5,16°.35S×177°.49W,h0km,mb4.5/16, mbtmp4.5/17,ML3.3/1,Error ellipse: s-maj=22.7km s-min=15.7km az=145.0*

*NEIC **01** 10:59:58.3±1.9,16°.38S±0°.06×177°.29W±0°.09,h10km±1km, mb5.1/123,Mww5.4/9,Error ellipse: s-maj=15.0km s-min=9.0km az=252.0*

*NEIC **01** 10:59:58.8,16°.25S×177°.14W,h12km,Moment Tensor Solution. Duration: 28 Moment tensor: Scale 10^17^Nm; Mrr=0.78; Mθθ=0.35; Mϕϕ=1.12; Mrθ=0.85; Mθϕ=0.74; Mϕr=0.02; Fault plane solution: M0=1.51000×10^17^ NP1: ϕs=236.90000°,δ66.37000°,λ-44.72000°. NP2: ϕs=348.55000°,δ49.86000°,λ-148.38000°. Principal axes: T 1.4947, Plg10.0000°, Azm296.0000°; N 0.0248, Plg41.0000°, Azm35.0000°; P -1.5196, Plg48.0000°, Azm195.0000°;*

*NEIC **01** 10:59:58.8,16°.35S×177°.35W,h12km*

*BJI **01** 10:59:59.0±0.0,16°.24S×177°.15W,h12km,mb4.9/48, mB5.5/31,Ms5.6/28,Ms7 5.3/29*

*MOS **01** 10:59:59.0±1.9,16°.45S×177°.61W,h10km,mb5.1/14, Error ellipse: s-maj=13.6km s-min=12.3km az=27.7*

*BGR **01** 11:00:01.9,18°.08S×179°.46W,h33km*

*GCMT **01** 11:00:05.3±0.2,16°.38S±0°.01×177°.46W±0°.01,h16km±1km, MW5.5/121,Moment Tensor Solution. s92,c123; s121,c189; Duration: 1s3 Moment tensor: Scale 10^17^ Nm; Mrr=0.09±.04; Mθθ=1.59±.04; Mϕϕ=1.67±.04; Mrθ=0.05±.10; Mϕθ=0.81±.04; Mϕr=0.44±.11; Best double couple: M0=1.86800×10^17^ NP1:ϕs=328.00000°,δ83.00000°, λ170.00000°. NP2:ϕs=59.00000°,δ80.00000°,λ7.00000°. Principal axes: T 1.9550, Plg12.0000°, Azm283.0000°; N -0.1800, Plg78.0000°, Azm112.0000°; P -1.7820, Plg2.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 10:59:58.9±0.8,16°.55S±0°.07×177°.26W±0°.06,h13km±4km, n297,σ1§56/261,mb5.1/103,MS5.4/13,33C-15D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.91**	**64**		**Pn**	**11 01 24.2**	**-2.0**
AFI	**Afiamalu**	**5.91**	**64**	P	**Pn**	**11 01 24.3**	**-2.0**
DZM	**Mont Dzumac**	**16.33**	**248**	Pn	**Pn**	**11 03 47.4**	**-0.8**
DZM	**Mont Dzumac**	**16.33**	**248**	Pn	**Pn**	**11 03 48.2**	**+0.1**
	0.1nm,0.3s,baz=91,slow=18,SNR=3.6						
	12nm,1.1s						
KOUNC	**Koumac, New Ca**	**17.94**	**254**		**P**	**11 04 08.6**	**-0.2**
KOUNC				IAmb	IAmb	11 04 19.2	
	comp=Z,345nm,1.7s						
TARA	**Tarawa**	**20.26**	**331**	P	**P**	**11 04 30.8**	**-3.4**
TARA				IAmb	IAmb	11 04 53.2	
	comp=Z,250nm,1.7s						
TOZ	**Tahuroa Road**	**22.04**	**195**	P	**P**	**11 04 55.0**	**+1.7**
URZ	**Urewera**	**22.18**	**192**	P	**P**	**11 04 56.8**	**+2.0**
	comp=Z,32nm,0.9s,baz=246,slow=12,SNR=2.9						
	comp=Z,32nm,0.9s						
RTZ	**Ruatahuna**	**22.55**	**192**	P	**P**	**11 05 00.8**	**+2.0**
RTZ				IAmb	IAmb	11 05 18.2	
	comp=Z,137nm,1.6s						
PPT	**Papeete**	**26.48**	**96**	P	**P**	**11 05 39.6**	**+3.5**
	comp=Z,47nm,1.2s,baz=47,slow=23,SNR=2.6						
	comp=Z,47nm,1.2s						
THZ	**Tophouse**	**26.51**	**197**	P	**P**	**11 05 36.5**	**+0.3**
THZ				IAmb	IAmb	11 05 53.6	
	comp=Z,100nm,1.4s						
LTZ	**Lake Taylor**	**27.63**	**197**	P	**P**	**11 05 46.4**	**+0.1**
EIDS	**Eidsvold**	**30.77**	**248**	P	**P**	**11 06 12.6**	**-1.8**
EIDS				IAmb	IAmb	11 06 16.1	
	comp=Z,53nm,1.6s						
ARMA	**Armidale**	**31.57**	**238**	P	**P**	**11 06 21.0**	**-0.5**
ARMA				IAmb	IAmb	11 06 29.7	
	comp=Z,65nm,1.6s						
CTAO	**Charters Tower**	**34.77**	**259**	P	**P**	**11 06 49.0**	**-0.4**
CTAO	**Charters Tower**	**34.77**	**259**	P	**P**	**11 06 49.0**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,144nm,1.6s						
TOO	**Toolangi**	**38.88**	**230**	P	**P**	**11 07 23.1**	**-1.1**
TOO	**Toolangi**	**38.88**	**230**	P	**P**	**11 07 23.1**	**-1.1**
TOO				pmax	pmax		
	comp=Z,48nm,1.6s						
STKA	**Stephens Creek**	**40.25**	**240**	P	**P**	**11 07 34.4**	**-1.3**
STKA	**Stephens Creek**	**40.25**	**240**	*e*P	**P**	**11 07 35.7**	**0.0**
STKA				pmax	pmax		
	comp=Z,25nm,1.2s						
STKA	**Stephens Creek**	**40.25**	**240**	P	**P**	**11 07 35.0**	**-0.6**
	comp=Z,25nm,1.2s,baz=84,slow=7.3,SNR=9.9						
	comp=Z,25nm,1.2s						
BBOO	**Buckleboo**	**45.03**	**240**	P	**P**	**11 08 14.8**	**+0.3**
WR0	**Warramunga Arr**	**45.78**	**258**	P	**P**	**11 08 20.4**	**-0.2**
WB0	**Warramunga Arr**	**45.93**	**258**	P	**P**	**11 08 20.1**	**-1.7**
WB2	**Warramunga Arr**	**45.96**	**258**	P	**P**	**11 08 20.9**	**-1.2**
WRAB	**Tennant Creek**	**45.96**	**258**	P	**P**	**11 08 21.1**	**-1.0**
WRAB	**Tennant Creek**	**45.96**	**258**	P	**P**	**11 08 21.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,72nm,1.7s						
WRA	**Warramunga Arr**	**45.97**	**258**	P	**P**	**11 08 19.9**	**-2.3**
WRA	**Warramunga Arr**	**45.97**	**258**	*e*P	**P**	**11 08 22.5**	**+0.3**
WRA				pmax	pmax		
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**45.97**	**258**	P	**P**	**11 08 19.6**	**-2.6**
	comp=Z,13nm,1.3s,baz=91,slow=8.1,SNR=18						
WRA				PcP	**PcP**	**11 10 00.2**	**+1.2**
	comp=Z,4.1nm,1.1s,baz=79,slow=4.1,SNR=5.5						
	comp=Z,13nm,1.3s						
AS31	**Alice Springs**	**46.22**	**253**	P	**P**	**11 08 22.6**	**-1.5**
ASAR	**Alice Springs**	**46.23**	**253**	P	**P**	**11 08 22.7**	**-1.5**
ASAR	**Alice Springs**	**46.23**	**253**	P	**P**	**11 08 22.7**	**-1.5**
ASAR	**Alice Springs**	**46.23**	**253**	P	**P**	**11 08 22.4**	**-1.8**
	comp=Z,18nm,0.8s,baz=85,slow=8.3,SNR=119						
ASAR				PcP	**PcP**	**11 10 01.0**	**+1.1**
	comp=Z,3.9nm,1.1s,baz=116,slow=3.1,SNR=2.2						
	comp=Z,18nm,0.8s						
MTN	**Manton Dam**	**49.95**	**267**	P	**P**	**11 08 51.6**	**-1.4**
FAKI	**Fak Fak**	**51.41**	**280**	P	**P**	**11 09 03.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**54.34**	**259**	P	**P**	**11 09 24.3**	**-1.4**
FITZ				IAmb	IAmb	11 09 28.3	
	comp=Z,23nm,1.5s						
SOEI	**Soe**	**57.18**	**269**	P	**P**	**11 09 45.1**	**-1.2**
PSA00	**Pilbara Seismi**	**59.32**	**254**	P	**P**	**11 09 59.4**	**-1.7**
PSA00				IAmb	IAmb	11 10 02.0	
	comp=Z,21nm,1.4s						
LUWI	**Luwuk**	**60.98**	**278**	P	**P**	**11 10 11.4**	**-1.2**
MYLDM	**Lahad Datu**	**67.06**	**283**	P	**P**	**11 10 50.4**	**-2.1**
MJA0	**Matsu Arr-Jizo**	**67.47**	**322**	*e*P	**P**	**11 10 55.2**	**+0.5**
MJA0				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR	**Matsushiro Arr**	**67.50**	**322**	P	**P**	**11 10 54.1**	**-0.7**
	comp=Z,3.7nm,1.1s,baz=153,slow=5.4,SNR=5.0						
	comp=Z,3.7nm,1.1s						
MAJO	**Matsushiro**	**67.50**	**322**	P	**P**	**11 10 54.6**	**-0.2**
MAJO	**Matsushiro**	**67.50**	**322**	P	**P**	**11 10 54.6**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,52nm,1.8s						
MJB9	**Matsu-Tunnel**	**67.50**	**322**	P	**P**	**11 10 53.5**	**-1.3**
YSS	**Yuzh-Sakhalins**	**72.71**	**333**	*e*P	**P**	**11 11 24.8**	**-1.7**
YSS				*e*S	**S**	**11 20 49.6**	**-2.0**
YSS				*e*SS	**SS**	**11 25 30.0**	**-1.8**
YSS				pmax	pmax		
	comp=Z,300nm,2.7s						
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
QSPA	**South Pole Qui**	**73.50**	**180**	P	**P**	**11 11 33.5**	**+2.3**
QSPA	**South Pole Qui**	**73.50**	**180**	P	**P**	**11 11 34.0**	**+2.8**
	comp=Z,5.1nm,0.8s,baz=24,slow=2.6,SNR=9.2						
	comp=Z,5.1nm,0.8s						
KSRS	**Korea Array**	**74.44**	**318**	*e*P	**P**	**11 11 39.7**	**+2.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSRS	**Korea Array**	**74.44**	**318**	P	**P**	**11 11 36.6**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=355,slow=21,SNR=1.8						
	comp=Z,1.1nm,0.8s						
KSAR	**Wonju Array Be**	**74.45**	**318**	P	**P**	**11 11 35.4**	**-1.6**
KSAR	**Wonju Array Be**	**74.45**	**318**	P	**P**	**11 11 35.4**	**-1.6**
DBJI	**Dramaga**	**74.77**	**268**	P	**PKiKP**	**11 17 32.5**	**+1.2**
	comp=Z,76nm,0.9s						
ELS	**Elsinore Mount**	**75.77**	**48**	P	**P**	**11 11 45.3**	**+0.5**
USRK	**Ussuriysk Ar.**	**76.13**	**325**	P	**P**	**11 11 47.5**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=79,slow=9.9,SNR=4.0						
	comp=Z,1.7nm,0.7s						
PNTR	**Pine Nut**	**77.20**	**42**	P	**P**	**11 11 51.2**	**-1.8**
PNTR				IAmb	IAmb	11 12 03.1	
	comp=Z,15nm,1.3s						
NVAR	**Mina Array Bea**	**77.69**	**44**	P	**P**	**11 11 53.8**	**-1.9**
NVAR	**Mina Array Bea**	**77.69**	**44**	P	**P**	**11 11 56.0**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=226,slow=7.2,SNR=15						
	comp=Z,1.9nm,0.8s						
MDJ	**Mudanjiang**	**77.72**	**324**	P	**P**	**11 11 57.4**	**+1.9**
MDJ				PcP	**PcP**	**11 12 06.2**	**+0.7**
MDJ				S	**S**	**11 21 50.2**	**+2.7**
MDJ				sS	sS	11 21 55.5	+2.0
MDJ				SS	**SS**	**11 26 50.2**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,13nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,190nm,5.2s						
MDJ				LR	LR		
	comp=Z,1μm,15.4s						
MDJ				LR	LR		
	comp=Z,1μm,20.6s						
MDJ				LR	LR		
	comp=Z,880nm,14.2s						
NV11	**Mina Array Sit**	**77.79**	**44**	IAmb	IAmb	11 12 03.3	
	comp=Z,40nm,1.7s						
NJ2	**Nanjing**	**77.94**	**309**	*e*P	**P**	**11 11 59.1**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,17nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.8s						
J05D	**Fort Rock, OR**	**78.58**	**38**	P	**P**	**11 11 59.2**	**-1.3**
J05D				IAmb	IAmb	11 12 06.8	
	comp=Z,15nm,1.1s						
O19K	**Port Alsworth**	**78.70**	**11**	P	**P**	**11 11 58.4**	**-2.1**
BMN	**Battle Mountai**	**79.47**	**42**	P	**P**	**11 12 03.0**	**-2.5**
BMN	**Battle Mountai**	**79.47**	**42**	P	**P**	**11 12 03.0**	**-2.5**
BMN				pmax	pmax		
	comp=Z,15nm,1.3s						
CN2	**Changchun**	**79.63**	**322**	P	**P**	**11 12 08.2**	**+2.2**
CN2				S	**S**	**11 22 14.0**	**+6.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.9s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
CN2				LR	LR		
	comp=Z,2μm,20.0s						
BNX	**BinXian**	**79.64**	**324**	⇑P	**P**	**11 12 07.3**	**+1.3**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BNX				pmax	pmax		
	comp=Z,160nm,4.9s						
O22K	**Cooper Landing**	**79.91**	**13**	P	**P**	**11 12 05.8**	**-1.3**
QIZ	**Qiongzhong**	**79.92**	**293**	P	**P**	**11 12 06.8**	**-1.3**
QIZ				S	**S**	**11 22 11.3**	**-0.6**
QIZ				SS	**SS**	**11 27 23.4**	**+1.5**
QIZ				LR	LR		
	comp=Z,880nm,18.5s						
QIZ				LR	LR		
	comp=Z,1μm,18.5s						
QIZ				LR	LR		
	comp=Z,960nm,30.3s						
K17K	**Iditarod**	**80.40**	**9**	P	**P**	**11 12 08.3**	**-1.5**
K17K				IAmb	IAmb	11 12 15.9	
	comp=Z,35nm,1.2s						
J16K	**Anvik River**	**80.63**	**8**	IAmb	IAmb	11 12 17.1	
	comp=Z,23nm,1.1s						
WHN	**Wuhan**	**80.70**	**306**	⇓P	**P**	**11 12 15.1**	**+3.0**
WHN				pP	**PcP**	**11 12 17.9**	**-0.9**
TTA	**Tatalina**	**80.95**	**10**	IAmb	IAmb	11 12 18.6	
	comp=Z,26nm,1.2s						
G08A	**Pilot Rock**	**81.07**	**37**	IAmb	IAmb	11 12 19.9	
	comp=Z,19nm,1.3s						
J18K	**Innoko River**	**81.35**	**9**	IAmb	IAmb	11 12 21.2	
	comp=Z,28nm,1.3s						
K20K	**Telida**	**81.68**	**10**	IAmb	IAmb	11 12 20.0	
	comp=Z,25nm,1.6s						
HEH	**HeiHe**	**82.35**	**328**	*e*P	**P**	**11 12 18.2**	**-2.1**
HEH				S	**S**	**11 22 34.4**	**-1.5**
HEH				pmax	pmax		
	comp=Z,11nm,1.8s						
HEH				pmax	pmax		
	comp=Z,140nm,3.7s						
HEH				LR	LR		
	comp=Z,2μm,18.8s						
HEH				LR	LR		
	comp=Z,2μm,20.4s						
HEH				LR	LR		
	comp=Z,4μm,19.1s						
J20K	**Nowinta River**	**82.43**	**10**	IAmb	IAmb	11 12 25.9	
	comp=Z,24nm,1.4s						
KTH	**Kantishna Hill**	**82.43**	**12**	IAmb	IAmb	11 12 23.6	
	comp=Z,24nm,1.5s						
G16K	**Koyuk River**	**82.48**	**6**	IAmb	IAmb	11 12 26.5	
	comp=Z,18nm,1.4s						
F15K	**North Star Dit**	**82.56**	**5**	IAmb	IAmb	11 12 24.1	
	comp=Z,24nm,1.8s						
SEY	**Seymchan**	**82.71**	**347**	*i* P	**P**	**11 12 20.2**	**-1.8**
SEY				pmax	pmax		
	comp=Z,28nm,2.3s						
HLID	**Hailey**	**82.89**	**41**	IAmb	IAmb	11 12 29.9	
	comp=Z,14nm,1.3s						
HVU	**Hansel Valley**	**83.05**	**43**	IAmb	IAmb	11 12 30.5	
	comp=Z,12nm,1.2s						
M26K	**Nabesna, AK**	**83.19**	**15**	IAmb	IAmb	11 12 29.7	
	comp=Z,24nm,1.2s						
H19K	**Roundabout Mou**	**83.33**	**9**	IAmb	IAmb	11 12 31.0	
	comp=Z,19nm,1.3s						
IPM	**Ipoh**	**83.35**	**277**	P	**P**	**11 12 24.3**	**-2.2**
BELA	**Belgrano 2**	**83.36**	**173**	P	**P**	**11 12 26.9**	**+1.5**
G18K	**Tagagawik**	**83.39**	**8**	IAmb	IAmb	11 12 30.6	
	comp=Z,13nm,1.2s						
HNS	**HongShan**	**83.43**	**312**	⇓P	**P**	**11 12 29.1**	**+2.9**
HNS				pmax	pmax		
	comp=Z,13nm,1.4s						
M27K	**Edge Creek, AK**	**83.44**	**16**	P	**P**	**11 12 25.2**	**-0.7**
M27K				IAmb	IAmb	11 12 31.6	
	comp=Z,27nm,1.2s						
BJI	**Beijing**	**83.60**	**315**	P	**P**	**11 12 27.7**	**+0.6**
BJI				S	**S**	**11 22 53.8**	**+4.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BJI				LR	LR		
	comp=Z,950nm,17.6s						
BJI				LR	LR		
	comp=Z,340nm,17.3s						
BJI				LR	LR		
	comp=Z,1μm,25.4s						
F17K	**Baldwin Pennin**	**83.61**	**6**	IAmb	IAmb	11 12 32.1	
	comp=Z,16nm,1.2s						
TCUT	**Toone Canyon**	**83.63**	**44**	IAmb	IAmb	11 12 33.8	
	comp=Z,23nm,1.2s						
MLY	**Manley**	**83.81**	**11**	IAmb	IAmb	11 12 32.0	
	comp=Z,20nm,1.2s						
G19K	**Purcell Mounta**	**83.83**	**8**	IAmb	IAmb	11 12 33.3	
	comp=Z,18nm,1.2s						
LYN	**LuoYang**	**83.84**	**309**	*e*P	**P**	**11 12 31.6**	**+3.2**
LYN				pmax	pmax		
	comp=Z,32nm,1.1s						
H21K	**Melozitna Rive**	**84.02**	**10**	IAmb	IAmb	11 12 34.4	
	comp=Z,24nm,1.4s						
IMAR	**Indian Mountai**	**84.17**	**9**	P	**P**	**11 12 28.8**	**-0.6**
I23K	**Minto, Yukon-K**	**84.17**	**11**	IAmb	IAmb	11 12 34.8	
	comp=Z,24nm,1.4s						
COLA	**College**	**84.22**	**12**	P	**P**	**11 12 28.8**	**-0.9**
COLA	**College**	**84.22**	**12**	P	**P**	**11 12 28.8**	**-0.9**
COLA				pmax	pmax		
	comp=Z,58nm,1.4s						
SCRK	**Sand Creek**	**84.28**	**14**	IAmb	IAmb	11 12 35.3	
	comp=Z,18nm,1.4s						
ILAR	**Eielson Array**	**84.33**	**13**	P	**P**	**11 12 28.5**	**-1.8**
ILAR	**Eielson Array**	**84.33**	**13**	*e*P	**P**	**11 12 32.0**	**+1.7**
ILAR				pmax	pmax		
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	**84.33**	**13**	P	**P**	**11 12 29.9**	**-0.3**
	comp=Z,17nm,1.2s,baz=225,slow=5.6,SNR=17						
	comp=Z,17nm,1.2s						
TXAR	**Lajitas Array**	**84.34**	**57**	P	**P**	**11 12 32.8**	**+1.5**
	comp=Z,1.9nm,1.1s,baz=242,slow=2.7,SNR=11						
	comp=Z,1.9nm,1.1s						
F19K	**Shaleruckik Mo**	**84.39**	**8**	IAmb	IAmb	11 12 35.7	
	comp=Z,14nm,1.3s						
ANMO	**Albuquerque**	**84.40**	**51**	P	**P**	**11 12 31.5**	**-0.1**
ANMO				IAmb	IAmb	11 12 38.8	
	comp=Z,23nm,1.6s						
ANMO	**Albuquerque**	**84.40**	**51**	*i* P	**P**	**11 12 33.3**	**+1.7**
ANMO				pmax	pmax		
	comp=Z,16nm,1.5s						
J25K	**Salcha River,**	**84.52**	**13**	IAmb	IAmb	11 12 36.3	
	comp=Z,25nm,1.3s						
ZEA	**Zeya**	**84.55**	**331**	*e*P	**P**	**11 12 33.5**	**+1.9**
E18K	**Tukpahlearik C**	**84.63**	**6**	IAmb	IAmb	11 12 52.0	
	comp=Z,27nm,1.7s						
G21K	**Allakaket**	**84.70**	**9**	IAmb	IAmb	11 12 37.6	
	comp=Z,15nm,1.2s						
K27K	**Chicken**	**84.78**	**15**	IAmb	IAmb	11 12 38.4	
	comp=Z,20nm,1.3s						
J26L	**Joseph Creek**	**84.83**	**14**	IAmb	IAmb	11 12 38.6	
	comp=Z,24nm,1.2s						
F20K	**Avaraart Lake**	**84.87**	**8**	IAmb	IAmb	11 12 38.3	
	comp=Z,15nm,1.4s						
M30M	**Minto, Yukon**	**85.02**	**18**	IAmb	IAmb	11 12 39.7	
	comp=Z,18nm,1.3s						
C16K	**Lisburne Hills**	**85.03**	**4**	IAmb	IAmb	11 12 50.2	
	comp=Z,25nm,1.6s						
TPAW	**Teton Pass**	**85.05**	**42**	IAmb	IAmb	11 12 41.0	
	comp=Z,13nm,1.2s						
E19K	**Redstone River**	**85.06**	**8**	IAmb	IAmb	11 12 39.2	
	comp=Z,12nm,1.2s						
SNOW	**Snow King Moun**	**85.16**	**42**	P	**P**	**11 12 33.4**	**-1.9**
SNOW				IAmb	IAmb	11 12 44.9	
	comp=Z,19nm,1.4s						
TIY	**Taiyuan**	**85.19**	**311**	*e*P	P	11 12 39.5	+4.2
TIY				S	S	11 23 12.3	+7.0
TIY				LR	LR		
	comp=Z,2μm,16.7s						
TIY				LR	LR		
	comp=Z,1μm,23.1s						
TIY				LR	LR		
	comp=Z,2μm,21.4s						
BILL	**Bilibino**	**85.20**	**354**	P	**P**	**11 12 32.7**	**-1.9**
BILL				IAmb	IAmb	11 12 53.0	
	comp=Z,37nm,1.8s						
BILL	**Bilibino**	**85.20**	**354**	*i* P	**P**	**11 12 33.1**	**-1.5**
S22A	**4UR Ranch, Cre**	**85.29**	**49**	IAmb	IAmb	11 12 42.8	
	comp=Z,14nm,1.2s						
GYA	**Guiyang**	**85.33**	**299**	⇓P	**P**	**11 12 35.8**	**-0.5**
GYA				S	**S**	**11 23 05.6**	**-1.7**
GYA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,220nm,3.8s						
GYA				LR	LR		
	comp=Z,2μm,33.1s						
F21K	**Alatna River**	**85.36**	**9**	IAmb	IAmb	11 12 40.7	
	comp=Z,12nm,1.3s						
G23K	**Bananza Creek**	**85.45**	**11**	IAmb	IAmb	11 12 42.0	
	comp=Z,16nm,1.4s						
XLT	**XiLinHaoTe**	**85.47**	**318**	*e*P	**P**	**11 12 38.2**	**+1.6**
XLT				S	**S**	**11 23 13.0**	**+5.2**
XLT				sS	ScS	11 23 16.0	-1.8
XLT				SS	**SS**	**11 28 48.2**	**+4.5**
XLT				pmax	pmax		
	comp=Z,9.0nm,1.4s						
XLT				pmax	pmax		
	comp=Z,150nm,3.7s						
XLT				LR	LR		
	comp=Z,170nm,16.8s						
XLT				LR	LR		
	comp=Z,1μm,22.8s						
XLT				LR	LR		
	comp=Z,1μm,22.1s						
DAWY	**Dawson**	**85.49**	**16**	P	**P**	**11 12 36.3**	**+0.1**
DAWY				IAmb	IAmb	11 12 42.1	
	comp=Z,12nm,1.1s						
YHL	**Hebgen Lake**	**

HHC				LR	LR				
	comp=Z,3μm,22.4s								
H29M	**Whitestone**	**87.48**	**15**	IAmb	IAmb	11 12 51.1			
	comp=Z,21nm,1.4s								
H03S2	**Juan Fernandez**	**87.64**	**124**	T	T	12 49 57.2			
	baz=250,slow=75,SNR=4.0								
H03S1	**Juan Fernandez**	**87.65**	**124**	T	T	12 49 58.9			
	baz=250,slow=75,SNR=3.7								
H03S3	**Juan Fernandez**	**87.65**	**124**	T	T	12 49 57.4			
	baz=250,slow=75,SNR=5.1								
BTO	**Baotou**	**88.09**	**313**	*e*P	**P**	**11 12 50.8**	**+1.3**		
BTO				pP	**pwP**	**11 12 55.8**	**+0.6**		
BTO				sP	**sP**	**11 12 57.8**	**+3.3**		
BTO				S	**S**	**11 23 33.5**	**+0.1**		
BTO				sS	**ScS**	**11 23 41.8**	**+2.2**		
BTO				SS	**SS**	**11 29 24.0**	**+1.7**		
BTO				pmax	pmax				
	comp=Z,38nm,2.2s								
BTO				pmax	pmax				
	comp=Z,370nm,6.8s								
BTO				LR	LR				
	comp=Z,5μm,18.3s								
BTO				LR	LR				
	comp=Z,2μm,20.1s								
BTO				LR	LR				
	comp=Z,4μm,20.7s								
G29M	**Pine Creek**	**88.12**	**14**	IAmb	IAmb	11 12 46.9			
	comp=Z,6.0nm,0.6s								
KMI	**Kunming**	**88.20**	**297**	⇑P	**P**	**11 12 51.7**	**+1.2**		
KMI				pmax	pmax				
	comp=Z,24nm,1.9s								
KMI				pmax	pmax				
	comp=Z,310nm,4.2s								
EDM	**Edmonton**	**88.43**	**33**	IAmb	IAmb	11 12 56.0			
	comp=Z,20nm,1.4s								
YAK	**Yakutsk**	**88.74**	**338**	*i* P	**P**	**11 12 53.8**	**+2.0**		
YAK				pmax	pmax				
	comp=Z,6.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**89.47**	**289**	P	**P**	**11 12 55.7**	**-0.7**		
CMAR	**Chiang Mai Arr**	**89.47**	**289**	*e*P	**P**	**11 12 59.6**	**+3.3**		
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**89.47**	**289**	P	**P**	**11 12 57.8**	**+1.4**		
	comp=Z,0.6nm,0.3s,baz=119,slow=3.5,SNR=9.5								
	comp=Z,0.6nm,0.3s								
PZH	**PanZhiHua**	**89.50**	**298**	P	**P**	**11 12 57.1**	**+0.6**		
PZH				S	**S**	**11 23 46.1**	**-1.2**		
PZH				SS	**SS**	**11 29 44.6**	**+1.3**		
PZH				pmax	pmax				
	comp=Z,10.0nm,1.2s								
PZH				pmax	pmax				
	comp=Z,180nm,5.3s								
PZH				LR	LR				
	comp=Z,910nm,23.0s								
PZH				LR	LR				
	comp=Z,630nm,22.6s								
PZH				LR	LR				
	comp=Z,910nm,23.0s								
ELIB	**Princess Elisa**	**90.62**	**186**	*d*P	**P**	**11 12 59.5**	**-1.4**		
ELIB				*d*x	x	11 13 03.1			
LZH	**Lanzhou**	**90.94**	**307**	⇑P	P	11 13 07.8	+4.8		
LZH				pmax	pmax				
	comp=Z,10.0nm,1.4s								
TNCH	**TengChong**	**91.81**	**295**	P	**P**	**11 13 06.2**	**-1.1**		
TNCH				pmax	pmax				
	comp=Z,86nm,3.2s								
SNAA	**Sanae**	**91.92**	**178**	*i* P	**P**	**11 13 06.2**	**-0.6**		
SNAA				pmax	pmax				
	comp=Z,2.0nm,0.9s								
YKA	**Yellowknife Ar**	**92.65**	**24**	*e*P	**P**	**11 13 13.2**	**+3.1**		
YKA				pmax	pmax				
	comp=Z,1.0nm,0.9s								
YKA	**Yellowknife Ar**	**92.65**	**24**	P	**P**	**11 13 09.4**	**-0.6**		
	comp=Z,0.3nm,0.7s,baz=248,slow=4.9,SNR=6.7								
	comp=Z,0.3nm,0.7s								
ULN	**Ulaanbaatar**	**92.85**	**319**	*i* P	**P**	**11 13 12.5**	**+0.9**		
ULN				pmax	pmax				
	comp=Z,9.0nm,1.4s								
SONM	**Songino Array**	**93.25**	**319**	P	**P**	**11 13 13.7**	**+0.3**		
SONM				IAmb	IAmb	11 13 15.8			
	comp=Z,9.7nm,1.7s								
SONM	**Songino Array**	**93.25**	**319**	*e*P	P	11 13 19.4	+6.0		
SONM				pmax	pmax				
	comp=Z,1.0nm,0.9s								
SONM	**Songino Array**	**93.25**	**319**	P	**P**	**11 13 11.4**	**-2.0**		
	comp=Z,0.5nm,0.9s,baz=60,slow=43,SNR=2.7								
	comp=Z,0.5nm,0.9s								
A36M	**Sachs Harbour**	**94.90**	**14**	IAmb	IAmb	11 13 22.7			
	comp=Z,7.2nm,1.1s								
GTA	**Gaotai**	**95.02**	**309**	*e*P	**P**	**11 13 25.3**	**+3.5**		
GTA				pP	pwP	11 13 30.3	+2.8		
GTA				pmax	pmax				
	comp=Z,3.0nm,1.5s								
GTA				LR	LR				
	comp=Z,880nm,21.9s								
GTA				LR	LR				
	comp=Z,800nm,20.3s								
GTA				LR	LR				
	comp=Z,830nm,22.3s								
GOMU	**GeErMu**	**97.95**	**305**	P	Pdif	11 13 38.4	+2.9		
GOMU				pmax	pmax				
	comp=Z,190nm,5.5s								
GOMU				LR	LR				
	comp=Z,670nm,18.8s								
GOMU				LR	LR				
	comp=Z,640nm,21.8s								
GOMU				LR	LR				
	comp=Z,670nm,21.6s								
ZALV	**Zalesovo Beam**	**107.85**	**322**	PKiKP	**PKiKP**	**11 18 25.9**	**-0.1**		
	comp=Z,0.3nm,0.3s,baz=98,slow=2.0,SNR=2.0								
MKAR	**Makanchi Array**	**108.98**	**314**	PKiKP	**PKiKP**	**11 18 29.6**	**+1.3**		
	comp=Z,0.9nm,0.8s,baz=101,slow=3.9,SNR=6.8								
KURK	**Kurchatov**	**111.55**	**318**	*i* PKIKP	**PKiKP**	**11 18 34.2**	**+1.2**		
KURBB	**Kurchatov Arra**	**111.61**	**318**	PKiKP	**PKiKP**	**11 18 34.1**	**+1.1**		
	comp=Z,1.6nm,1.1s,baz=96,slow=2.0,SNR=7.2								
BVAR	**Borovoye Array**	**116.48**	**321**	PKP	**PKPdf**	**11 18 41.8**	**-0.6**		
	comp=Z,2.4nm,0.9s,baz=103,slow=3.3,SNR=8.7								
BRVK	**Borovoye**	**116.54**	**321**		**PKPdf**	**11 18 40.5**	**-2.0**		
BRVK	**Borovoye**	**116.54**	**321**	PKIKP	**PKPdf**	**11 18 40.5**	**-2.0**		
KKAR	**Karatay Array**	**117.29**	**310**	PKPdf	**PKPdf**	**11 18 41.1**	**-3.2**		
KKAR	**Karatay Array**	**117.29**	**310**	PKIKP	**PKPdf**	**11 18 41.1**	**-3.2**		
ARU	**Arti**	**122.33**	**327**	*i* PKIKP	**PKiKP**	**11 18 55.1**	**+1.4**		
ARU						11 20 36.4			
ARU						11 26 06.7			
AKTO	**Aktyubinsk**	**124.54**	**320**	PKP	**PKPdf**	**11 18 57.4**	**-0.6**		
	comp=Z,1.3nm,0.6s,baz=54,slow=3.8,SNR=3.5								
GEYT	**Alibeck**	**127.17**	**305**	PKP	**PKiKP**	**11 19 04.3**	**+0.4**		
	comp=Z,3.7nm,0.7s,baz=80,slow=1.6,SNR=7.5								
KLMR	**Klimovskoe**	**128.53**	**338**	*e*PKiKP	**PKiKP**	**11 19 05.6**	**-0.3**		
KLMR				pmax	pmax				
	comp=Z,32nm,2.1s								
AKASG	**Malin Array Be**	**139.85**	**334**	*e*PKiKP	**PKiKP**	**11 19 30.5**	**+1.4**		
AKASG	**Malin Array Be**	**139.85**	**334**	PKP	**PKiKP**	**11 19 28.1**	**-1.0**		
	comp=Z,0.2nm,0.3s,baz=34,slow=1.7,SNR=4.4								
BNN	**Bunyan**	**143.53**	**314**	PKPdf	PKPbc	11 19 30.9	-0.4		
BURAR	**Bucovina Array**	**143.91**	**334**	⇑P	PKPbc	11 19 32.6	+0.6		
BURAR	**Bucovina Array**	**143.91**	**334**	⇑PKIKP	PKPbc	11 19 32.6	+0.6		
KOLS	**Kolonicke sedl**	**143.99**	**338**	*e*PKiKP	**PKiKP**	**11 19 38.0**	**+0.3**		
KOLS	**Kolonicke sedl**	**143.99**	**338**	*e*PKP	**PKiKP**	**11 19 38.0**	**+0.3**		
CLL	**Collm**	**144.37**	**349**	*e*PKPbc	**PKPdf**	**11 19 34.9**	**+0.1**		
	baz=19,slow=2.9								
TPGR	**Topolog**	**144.47**	**328**	⇑P	**PKiKP**	**11 19 37.0**	**-1.8**		
DPC	**Dobruska-Polom**	**144.55**	**345**	*e*PKP	**PKPdf**	**11 19 34.4**	**-0.8**		
DPC	**Dobruska-Polom**	**144.55**	**345**	*e*PKiKP	**PKPdf**	**11 19 34.4**	**-0.8**		
BRTR	**Keskin Array B**	**144.58**	**317**	PKPdf	PKPbc	11 19 34.3	-0.1		
BRTR	**Keskin Array B**	**144.58**	**317**	*e*PKiKP	**PKPdf**	**11 19 36.8**	**+1.1**		
BRTR				pmax	pmax				
	comp=Z,14nm,1.1s								
BRTR	**Keskin Array B**	**144.58**	**317**	PKP	**PKPdf**	**11 19 35.1**	**-0.6**		
	comp=Z,14nm,1.1s,baz=114,slow=1.5,SNR=29								
BRG	**Berggiesshubel**	**144.60**	**348**	*e*PKP	**PKiKP**	**11 19 38.3**	**-0.6**		
BRG				Amp		11 19 46.1			
	comp=Z,16nm,1.4s								
BRG	**Berggiesshubel**	**144.60**	**348**	*i* PKIKP	**PKPdf**	**11 19 35.5**	**+0.3**		
BRG				*e*		11 19 40.0			
BRG				pmax	pmax				
	comp=Z,22nm,1.4s								
KRLC	**Kraliky**	**144.69**	**344**	*e*PKP	**PKPdf**	**11 19 36.2**	**+0.7**		
KRLC	**Kraliky**	**144.69**	**344**	*e*PKiKP	**PKPdf**	**11 19 36.2**	**+0.7**		
LANS	**Liptovska Anna**	**144.75**	**341**	*e*PKiKP	**PKiKP**	**11 19 38.1**	**-1.2**		
LANS	**Liptovska Anna**	**144.75**	**341**	*e*PKP	**PKiKP**	**11 19 38.1**	**-1.2**		
TIRR	**Tirgusor**	**144.75**	**327**	⇑P	**PKiKP**	**11 19 37.6**	**-1.8**		
TIRR	**Tirgusor**	**144.75**	**327**	⇑PKIKP	**PKiKP**	**11 19 37.6**	**-1.8**		
MORC	**Moravsky Berou**	**144.76**	**343**	⇑P	**PKiKP**	**11 19 37.7**	**-1.6**		
MORC	**Moravsky Berou**	**144.76**	**343**	PKPdf	PKPbc	11 19 34.2	-0.3		
MORC	**Moravsky Berou**	**144.76**	**343**	*e*PKP	PKPbc	11 19 34.6	+0.1		
MORC	**Moravsky Berou**	**144.76**	**343**	PKIKP	PKPbc	11 19 34.2	-0.3		
TURR	**Turia**	**144.76**	**332**	⇑P	**PKiKP**	**11 19 38.3**	**-1.1**		
DOPR	**Dopca**	**145.11**	**332**	⇑P	**PKPdf**	**11 19 37.5**	**+1.2**		
PRU	**Pruhonice**	**145.31**	**347**	*e*PKP	**PKiKP**	**11 19 39.1**	**-1.3**		
PRU	**Pruhonice**	**145.31**	**347**	*e*PKIKP	**PKiKP**	**11 19 39.1**	**-1.3**		
PLN	**Plauen**	**145.31**	**349**	*e*PKPbc	**PKiKP**	**11 19 39.1**	**-1.3**		
	baz=19,slow=2.9								
GOPC	**GO Pecny, Ondr**	**145.32**	**346**	*e*PKP	**PKiKP**	**11 19 39.4**	**-1.1**		
GOPC	**GO Pecny, Ondr**	**145.32**	**346**	*e*PKIKP	**PKiKP**	**11 19 39.4**	**-1.1**		
TANN	**Tannenbergstha**	**145.32**	**349**	*e*PKPbc	**PKPdf**	**11 19 37.8**	**+1.2**		
	baz=19,slow=2.9								
VRAC	**Vranov**	**145.44**	**344**	⇑P	**PKPdf**	**11 19 38.0**	**+1.3**		
VRAC	**Vranov**	**145.44**	**344**	*e*PKP	**PKPdf**	**11 19 36.8**	**+0.1**		
VRAC	**Vranov**	**145.44**	**344**	⇑PKIKP	**PKPdf**	**11 19 38.0**	**+1.3**		
NKC	**Novy Kostel**	**145.50**	**349**	*e*PKP	**PKiKP**	**11 19 39.2**	**-1.6**		
NKC	**Novy Kostel**	**145.50**	**349**	*e*PKIKP	**PKiKP**	**11 19 39.2**	**-1.6**		
MARR	**Marísel-Cluj**	**145.52**	**335**	⇑P	**PKPdf**	**11 19 38.0**	**+0.9**		
VYHS	**Vyhne**	**145.52**	**341**	*e*PKP	**PKPdf**	**11 19 37.8**	**+0.9**		
JAVC	**Velka Javorina**	**145.55**	**342**	*e*PKP	**PKPdf**	**11 19 38.1**	**+1.1**		
DRGR		**145.59**	**335**	⇑P	**PKPdf**	**11 19 37.2**	**0.0**		
DRGR		**145.59**	**335**	⇑PKIKP	**PKPdf**	**11 19 37.2**	**0.0**		
VOIR		**145.67**	**332**	⇑P	**PKPab**	**11 19 38.9**	**+1.0**		
VOIR		**145.67**	**332**	⇑PKIKP	**PKPab**	**11 19 38.9**	**+1.0**		
PSZ	**Piszkesteto**	**145.68**	**339**	⇑P	**PKPab**	**11 19 38.0**	**+0.1**		
PSZ	**Piszkesteto**	**145.68**	**339**	⇑PKIKP	**PKPab**	**11 19 38.0**	**+0.1**		
KRUC	**Moravsky**	**145.72**	**344**	*e*PKP	**PKPab**	**11 19 37.6**	**-0.3**		
MANZ	**Manzenberg**	**145.80**	**349**	*e*PKPbc	**PKiKP**	**11 19 40.1**	**-1.4**		
	baz=19,slow=2.9								
ZVC	**Zvikov**	**145.90**	**347**	*e*PKP	**PKPab**	**11 19 38.9**	**+0.3**		
ARR	**Arges**	**145.91**	**332**	⇑P	**PKPab**	**11 19 39.4**	**+0.5**		
AHRW	**Bad Neuenahr-A**	**145.91**	**355**	*e*PKPbc	**PKiKP**	**11 19 41.2**	**-0.4**		
	baz=19,slow=2.9								
MEM	**Membach**	**145.92**	**356**	*d*PKP	**PKPab**	**11 19 39.6**	**+1.0**		
BTNL	**Ternell**	**145.94**	**356**	*d*PKP	**PKPab**	**11 19 38.9**	**+0.2**		
BSTI	**Sart Tilman**	**145.98**	**357**	*d*PKP	**PKPbc**	**11 19 37.9**	**-0.4**		
ROTZ	**Rotzenmuhle**	**145.99**	**349**	*e*PKPbc	**PKPab**	**11 19 39.1**	**+0.2**		
	baz=19,slow=2.9								
TNS	**Taunus Mts**	**146.10**	**353**	*e*PKPbc	**PKPab**	**11 19 40.4**	**+1.0**		
	baz=19,slow=2.9								
MODS	**Modra-Piesok**	**146.10**	**343**	*e*PKP	**PKPab**	**11 19 39.7**	**+0.3**		
BCLA	**Clavier**	**146.15**	**357**	*d*PKP	**PKiKP**	**11 19 41.0**	**-1.1**		
BHOU	**Houvegnez**	**146.18**	**356**	*d*PKP	**PKPbc**	**11 19 38.3**	**-0.6**		
BGES	**Gesves**	**146.20**	**357**	*d*PKP	**PKPab**	**11 19 40.3**	**+0.6**		
GRF	**Grafenberg Arr**	**146.24**	**350**	*e*PKPbc	**PKiKP**	**11 19 41.4**	**-0.9**		
	baz=19,slow=2.9								
DEV	**Deva**	**146.25**	**334**	⇑P	**PKiKP**	**11 19 41.5**	**-0.9**		
BMRD	**Maredsous**	**146.29**	**358**	*d*PKP	**PKPab**	**11 19 40.2**	**+0.2**		
MMAI	**Mount Meron Ar**	**146.30**	**305**	PKPbc	**PKPab**	**11 19 39.8**	**-1.0**		
	comp=Z,27nm,1.1s,baz=75,slow=4.4,SNR=18								
KHC	**Kasperske Hory**	**146.33**	**347**	*e*PKP	**PKPab**	**11 19 40.0**	**-0.2**		
KHC	**Kasperske Hory**	**146.33**	**347**	*e*PKP2	**PKPab**	**11 19 40.0**	**-0.2**		
CKRC	**Cesky Krumlov**	**146.46**	**346**	*e*PKP	**PKiKP**	**11 19 42.3**	**-0.5**		
CKRC	**Cesky Krumlov**	**146.46**	**346**	*e*PKP2	**PKiKP**	**11 19 42.3**	**-0.5**		
WET	**Wettzell**	**146.46**	**348**	*e*PKPbc	**PKPab**	**11 19 40.7**	**0.0**		
	baz=19,slow=2.9								
DOU	**Dourbes**	**146.51**	**358**	*d*PKP	**PKPab**	**11 19 40.5**	**-0.3**		
GEC2	**GERESS Array S**	**146.57**	**347**	*e*PKPbc	**PKPbc**	**11 19 40.3**	**0.0**		
	baz=19,slow=2.9								
GERES	**GERESS Array B**	**146.57**	**347**	PKPbc	**PKPbc**	**11 19 40.0**	**-0.3**		
	comp=Z,3.2nm,0.9s,baz=355,slow=4.6,SNR=12								
SURR	**Surduc**	**146.68**	**335**	⇑P	**PKPab**	**11 19 41.5**	**-0.1**		
GZR	**Gura Zlata**	**146.70**	**334**	⇑P	**PKPdf**	**11 19 37.7**	**-1.4**		
GZR	**Gura Zlata**	**146.70**	**334**	⇑PKHKP	PKPpre	11 19 37.7			
WLF	**Walferdange**	**146.86**	**356**	*d*PKP	**PKPbc**	**11 19 40.6**	**-0.3**		
WLF	**Walferdange**	**146.86**	**356**	*e*PKPbc	**PKiKP**	**11 19 43.1**	**-0.4**		
	baz=19,slow=2.9								
CONA	**Conrad Observa**	**146.90**	**344**	*i* pPKP	**PKPab**	**11 19 41.9**	**-0.7**		
	comp=Z,20nm,1.2s,SNR=6.6								
RONA	**Rosalia, Austr**	**146.99**	**343**	*i* pPKP	pPKPdf	11 19 42.6	-0.7		
	comp=Z,23nm,1.2s,SNR=8.2								
BZS	**Buzias**	**146.99**	**335**	⇑P	**PKPab**	**11 19 42.5**	**-0.4**		
BZS	**Buzias**	**146.99**	**335**	⇑PKP2	**PKPab**	**11 19 42.5**	**-0.4**		
ELND	**Elena**	**147.13**	**328**	⇑P	**PKPab**	**11 19 43.5**	**-0.1**		
HERR	**Herculane**	**147.26**	**334**	⇑P	**PKPab**	**11 19 43.6**	**-0.4**		
MOA	**Molln**	**147.38**	**346**	*i* PKiKP	**PKPab**	**11 19 43.3**	**-1.0**		
	comp=Z,27nm,1.3s								
PLVB	**Pleven**	**147.42**	**330**	⇑P	**PKiKP**	**11 19 45.8**	**+0.9**		
MORH	**Mrgy, Hungar**	**147.59**	**339**	⇑P	**PKPbc**	**11 19 43.2**	**+0.2**		
ARSA	**Arzberg**	**147.61**	**344**	*i* pPKP	**PKiKP**	**11 19 45.0**	**-0.2**		
	comp=Z,19nm,1.6s,SNR=5.3								
BIOA	**Bad Ischl, Aus**	**147.67**	**346**	*i* pPKP	**PKPbc**	**11 19 42.8**	**-0.6**		
	comp=Z,19nm,1.1s								
RJOB	**Jochberg**	**147.81**	**347**	*e*PKPbc	**PKPab**	**11 19 46.0**	**-0.1**		
	baz=19,slow=2.9								
BFO	**Black Forest**	**147.98**	**353**		**PKPbc**	**11 19 43.5**	**-0.6**		
BFO	**Black Forest**	**147.98**	**353**	PKIKP	**PKPbc**	**11 19 43.5**	**-0.6**		
BFO	**Black Forest**	**147.98**	**353**	*e*PKPbc	**PKiKP**	**11 19 46.0**	**0.0**		
	baz=19,slow=2.9								
FRGS	**Fruska Gora**	**148.08**	**337**	⇑P	**PKiKP**	**11 19 46.1**	**-0.2**		
LESA	**Schwarzleotal**	**148.14**	**347**	*i* pPKP	**PKiKP**	**11 19 46.0**	**-0.4**		
	comp=Z,27nm,1.3s								
SOKA	**Soboth**	**148.27**	**344**	*i* PKiKP	**PKPbc**	**11 19 44.5**	**-0.5**		
	comp=Z,14nm,1.3s								
KBA	**Koelnbreinsper**	**148.32**	**346**	*i* PKP	**PKiKP**	**11 19 46.1**	**-0.8**		
	comp=Z,8.5nm,1.1s								
WATA	**Walderalm**	**148.44**	**348**	*i* pPKP	**PKiKP**	**11 19 47.2**	**+0.1**		
	comp=Z,14nm,1.0s								
RETA	**Reutte**	**148.45**	**350**	*i* pPKP	**PKPab**	**11 19 47.7**	**-1.0**		
	comp=Z,9.2nm,1.2s								
WTTA	**Wattenberg**	**148.50**	**348**	*i* pPKP	**PKPbc**	**11 19 44.6**	**-1.2**		
	comp=Z,15nm,1.1s								
MOTA	**Moosalm**	**148.52**	**349**	*i* pPKP	**PKiKP**	**11 19 47.5**	**+0.2**		
	comp=Z,19nm,1.4s								
BOVS	**Bovan**	**148.56**	**333**	⇑P	**PKiKP**	**11 19 46.8**	**-0.5**		
SQTA	**Sankt Quirin**	**148.62**	**349**	*i* pPKP	**PKiKP**	**11 19 47.7**	**+0.2**		
	comp=Z,7.6nm,1.0s								
MYKA	**Terra Mystica**	**148.67**	**345**	*i* pPKP	**PKiKP**	**11 19 47.8**	**+0.3**		
	comp=Z,21nm,1.4s								
DAVA	**Damuels**	**148.79**	**351**	*i* pPKP	**PKiKP**	**11 19 47.4**	**-0.5**		
	comp=Z,32nm,1.4s								
ABTA	**Abfaltersbach**	**148.82**	**347**	*i* PKiKP	**PKiKP**	**11 19 47.0**	**-0.9**		
	comp=Z,17nm,1.2s								
FETA	**Feichten**	**148.90**	**349**	*i* PKiKP	**PKPbc**	**11 19 46.1**	**-0.7**		
	comp=Z,22nm,2.2s								
FUORN	**Ofenpass-Fuorn**	**149.37**	**350**		**PKiKP**	**11 19 49.1**	**-0.1**		
CTI	**Castel Tesino**	**149.66**	**348**		**PKPab**	**11 19 51.3**	**-2.4**		
CTI	**Castel Tesino**	**149.66**	**348**	PKP2	**PKPab**	**11 19 51.3**	**-2.4**		
TUE	**Stuetta**	**149.66**	**351**		**PKiKP**	**11 19 50.2**	**+0.4**		
ARG	**Arkhangelos**	**150.14**	**316**		**PKPab**	**11 19 52.8**	**-3.1**		
ARG	**Arkhangelos**	**150.14**	**316**	PKP2	**PKPab**	**11 19 52.8**	**-3.1**		
TORD	**Torodi Ar. Bea**	**176.47**	**163**	PKP	**PKPdf**	**11 20 11.2**	**+1.3**		
	comp=Z,0.6nm,0.8s,baz=338,slow=1.6,SNR=6.4								

*IDC **01** 11:03:15.2±14.0, 25°.20S×177°.85W, h170km±109km, mb3.6/5, mbtmp4.3/6, Error ellipse: s-maj=97.3km s-min=28.0km az=41.0*

ISC 01 11:03:23.2±2.2, 25°.5S±0°.2×178°.1W±0°.3, h230km, n22, σ1§19/21, mb3.6/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**12.64**	**193**	P	**P**	**11 06 17.0**	**-0.9**
HAZ	**Te Kaha**	**12.71**	**195**	P	**Pn**	**11 06 16.1**	**+0.1**
PUZ	**Puketiti**	**12.91**	**193**	P	**Pn**	**11 06 19.8**	**+1.3**
RUGZ	**Raukumara Rang**	**12.93**	**195**	P	**Pn**	**11 06 20.2**	**+1.3**
TWGZ	**Tauwhareparae**	**13.07**	**194**	P	**Pn**	**11 06 21.4**	**+0.9**
CNGZ	**Carnagh Statio**	**13.32**	**193**	P	**Pn**	**11 06 23.8**	**+0.2**
MWZ	**Matawai**	**13.32**	**195**	P	**Pn**	**11 06 23.6**	**0.0**
TOZ	**Tahuroa Road**	**13.35**	**202**	P	**P**	**11 06 27.2**	**+1.4**
TKGZ	**Te Karaka**	**13.35**	**194**	P	**Pn**	**11 06 21.3**	**-2.6**
URZ	**Urewera**	**13.35**	**196**	P	**Pn**	**11 06 23.9**	**-0.1**
	19nm,0.3s,baz=356,slow=4.1,SNR=33						
URZ				S	S	11 08 38.1	-14
	17nm,0.5s,baz=150,slow=23,SNR=17						
URZ	**Urewera**	**13.35**	**196**	P	**Pn**	**11 06 23.8**	**-0.1**
RIGZ	**Rimuhau**	**13.62**	**194**	P	**Pn**	**11 06 27.8**	**+0.5**
MUGZ	**Murupara**	**13.65**	**197**	P	**Pn**	**11 06 24.8**	**-2.8**
PRRZ	**Plateau Road**	**13.77**	**198**	P	**P**	**11 06 30.1**	**-0.4**
SNGZ	**Shannon Statio**	**13.79**	**195**	P	**Pn**	**11 06 30.1**	**+0.7**
DZM	**Mont Dzumac**	**14.52**	**280**	P	P	11 06 48.0	+9.0
	1.7nm,0.6s,baz=201,slow=9.1,SNR=1.1						
RPZ	**Rata Peaks**	**20.21**	**203**	P	**P**	**11 07 39.0**	**-1.6**
	17nm,0.8s,baz=179,slow=19,SNR=1.7						
	17nm,0.8s						
STKA	**Stephens Creek**	**35.74**	**250**	P	**P**	**11 10 00.8**	**+0.5**
	1.5nm,0.5s,baz=97,slow=13,SNR=9.7						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**43.47**	**262**	P	**P**	**11 11 03.7**	**-0.3**
	0.6nm,0.4s,baz=95,slow=7.6,SNR=12						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**44.01**	**267**	P	**P**	**11 11 08.2**	**-0.1**
	1.1nm,0.3s,baz=101,slow=6.4,SNR=50						
	1.1nm,0.3s						
VNDA	**Vanda**	**52.95**	**185**	P	**P**	**11 12 15.9**	**+0.5**
	1.0nm,0.6s,baz=14,slow=7.5,SNR=6.4						
	1.0nm,0.6s						
HFS	**Hagfors**	**144.42**	**350**	PKP	**PKPdf**	**11 22 31.1**	**-0.3**
	3.6nm,0.9s,baz=58,slow=3.6,SNR=5.1						

*IDC **01** 11:05:48.7±0.4, 16°.46S×177°.51W, h0km, mb4.7/21, mbtmp4.6/21, MS5.5/59, Error ellipse: s-maj=17.3km s-min=13.3km az=137.0*

*MOS **01** 11:05:50.1±1.6, 16°.49S×177°.60W, h10km, mb5.3/35, MS5.6/17, Error ellipse: s-maj=10.2km s-min=8.6km az=126.1*

*NEIC **01** 11:05:50.6±2.3, 16°.52S±0°.09×177°.46W±0°.08, h10km±1km, mb5.3/291, Ms_20 5.8/426, Mww6.0/36, Error ellipse: s-maj=15.8km s-min=12.7km az=166.0*

*BJI **01** 11:05:51.5±0.0, 16°.05S×177°.22W, h10km, mb5.0/58, mB5.7/53, Ms5.7/70, Ms7 5.5/67*

*NEIC **01** 11:05:51, 16°.68S×177°.43W, h24km*

*NEIC **01** 11:05:51, 16°.48S×177°.22W, h24km, Moment Tensor Solution. Duration: 5s0 Moment tensor: Scale 10^18Nm; Mrr=0.05; Mθθ=0.86; Mϕϕ=0.91; Mrθ=0.12; Mrϕ=0.56; Mθϕ=0.22; Fault plane solution: M0=1.07000×10^18 NP1:ϕs61.85000°, δ83.84000°, λ.10.63000°. NP2:ϕs330.70000°, δ79.43000°, λ173.73000°. Principal axes: T 1.1225, Plg12.0000°, Azm287.0000°; N -0.0983, Plg78.0000°, Azm92.0000°; P -1.0242, Plg3.0000°, Azm196.0000°;*

*NOU **01** 11:05:55.5, 16°.70S×177°.48W, h20km, mb5.2/75, Fiji Islands Region*

*GCMT **01** 11:05:55.6±0.1, 16°.35S×177°.41W, h17km, MW6.0/168, Moment Tensor Solution. s154,c315; s168,c557; Duration: 2s4 Moment tensor: Scale 10^18Nm; Mrr=0.02±.01; Mθθ=0.94±.01; Mϕϕ=0.92±.01; Mrθ=0.09±.02; Mθϕ=0.61±.01; Mrϕ=0.11±.02; Best double couple: M0=1.12400×10^18 NP1:ϕs62.00000°, δ87.00000°, λ7.00000°. NP2:ϕs331.00000°, δ83.00000°, λ177.00000°. Principal axes: T 1.1220, Plg7.0000°, Azm287.0000°; N 0.0050, Plg83.0000°, Azm84.0000°; P -1.1260, Plg3.0000°, Azm196.0000°;

comp=Z,17µm,18.9s,baz=84,slow=34
CTAO Charters Tower 34.64 259 P **P** **11 12 39.4 -1.6**
CTAO Charters Tower 34.64 259 IAMs_20 IAMs_20 11 24 53.4
comp=Z,17µm,19.0s
CTAO Charters Tower 34.64 259 P **P** **11 12 43.1 +2.1**
CTAO Charters Tower 34.64 259 P **P** **11 12 39.4 -1.6**
CTAO pmax pmax
comp=Z,88nm,1.2s
CNB Canberra Magne 34.96 232 P **P** **11 12 45.3 +1.7**
baz=35,SNR=5.0
CNB Canberra Magne 34.96 232 P **P** **11 12 45.4 +1.8**
PMG Port Moresby 35.26 277 P **P** **11 12 44.8 -1.5**
PMG IAmb IAmb 11 12 55.5
comp=Z,50nm,1.0s
PMG Port Moresby 35.26 277 *i* P **P** **11 12 45.4 -0.9**
PMG pmax pmax
comp=Z,83nm,1.6s
PMG Port Moresby 35.26 277 LR LR 11 25 21.9
comp=Z,7µm,18.4s,baz=98,slow=33
YNG Young 35.31 234 P **P** **11 12 47.5 +0.9**
AUSMG Snowy Mountain 35.97 230 P **P** **11 12 53.2 +1.0**
MTSU Mount Surprise 36.55 262 P **P** **11 12 55.6 -1.7**
baz=36,SNR=27
MTSU Mount Surprise 36.55 262 P **P** **11 12 59.3 +1.9**
CMSA Cobar Meteorol 36.62 239 P **P** **11 12 58.6 +0.8**
baz=37,SNR=11
CMSA Cobar Meteorol 36.62 239 P **P** **11 12 58.9 +1.1**
QLP Quilpie 36.91 248 P **P** **11 13 00.6 +0.3**
baz=37,SNR=5.8
QLP Quilpie 36.91 248 P **P** **11 13 01.9 +1.6**
COEN Coen 38.11 269 P **P** **11 13 08.7 -1.9**
baz=38,SNR=12
COEN Coen 38.11 269 P **P** **11 13 08.6 -2.0**
COEN IAmb IAmb 11 13 13.7
comp=Z,56nm,1.0s
COEN Coen 38.11 269 P **P** **11 13 11.7 +1.1**
TOO Toolangi 38.71 230 P **P** **11 13 17.9 +2.4**
baz=39,SNR=5.3
TOO Toolangi 38.71 230 P **P** **11 13 13.8 -1.7**
TOO Toolangi 38.71 230 P **P** **11 13 16.9 +1.4**
TOO Toolangi 38.71 230 P **P** **11 13 13.8 -1.7**
TOO pmax pmax
comp=Z,29nm,1.0s
BRAT Ballarat 39.86 231 P **P** **11 13 27.0 +2.0**
STKA Stephens Creek 40.09 240 P **P** **11 13 27.0 -0.1**
baz=40,SNR=20
STKA Stephens Creek 40.09 240 P **P** **11 13 25.7 -1.3**
STKA Stephens Creek 40.09 240 P **P** **11 13 28.4 +1.3**
STKA Stephens Creek 40.09 240 P **P** **11 13 26.3 -0.8**
comp=Z,37nm,1.1s,baz=68,slow=8.3,SNR=20
STKA PcP **PcP** **11 15 30.9 -0.7**
comp=Z,12nm,1.2s,baz=138,slow=3.6,SNR=2.8
STKA LR LR 11 28 05.3
comp=Z,6µm,21.9s,baz=71,slow=33
comp=Z,37nm,1.1s
INKA Innaminka 40.13 247 P **P** **11 13 28.6 +1.2**
QIS Mount Isa 40.87 258 P **P** **11 13 37.3 +3.6**
HTT Hallett 42.63 239 P **P** **11 13 48.9 +1.0**
baz=43,SNR=8.9
HTT Hallett 42.63 239 P **P** **11 13 49.3 +1.4**
LCRK Leigh Creek 42.69 243 P **P** **11 13 50.0 +1.6**
WHYH Whyalla 43.66 239 P **P** **11 13 57.9 +1.8**
OOD Oodnadatta 44.60 247 P **P** **11 14 07.8 +4.0**
MIDW Midway 44.63 360 IAMs_20 IAMs_20 11 26 14.6
comp=Z,9µm,20.0s
PTCN Pitcairn Islan 44.77 109 IAMs_20 IAMs_20 11 27 39.2
comp=Z,9µm,21.0s
BBOO Buckleboo 44.87 240 P **P** **11 14 04.9 -1.0**
BBOO Buckleboo 44.87 240 P **P** **11 14 09.8 +3.9**
WR0 Warramunga Arr 45.65 258 P **P** **11 14 10.5 -1.8**
WR0 IAmb IAmb 11 14 16.4
comp=Z,49nm,1.5s
WB0 Warramunga Arr 45.80 258 P **P** **11 14 08.9 -4.6**
WB0 IAmb IAmb 11 14 17.5
comp=Z,54nm,1.4s
WB2 Warramunga Arr 45.83 258 P **P** **11 14 11.9 -1.8**
WB2 IAmb IAmb 11 14 15.4
comp=Z,58nm,1.5s
WRAB Tennant Creek 45.83 258 P **P** **11 14 12.2 -1.6**
WRAB IAmb IAmb 11 14 15.3
comp=Z,70nm,1.6s
WRAB Tennant Creek 45.83 258 P **P** **11 14 12.2 -1.6**
WRAB pmax pmax
comp=Z,70nm,1.6s
WRA Warramunga Arr 45.84 258 P **P** **11 14 10.1 -3.7**
WRA Warramunga Arr 45.84 258 P **P** **11 14 10.1 -3.7**
WRA pmax pmax
comp=Z,4.0nm,1.4s
WRA Warramunga Arr 45.84 258 P **P** **11 14 11.7 -2.1**
comp=Z,16nm,1.1s,baz=92,slow=9.0,SNR=26
WRA PcP **PcP** **11 15 50.6 -0.6**
comp=Z,6.8nm,1.1s,baz=89,slow=3.0,SNR=5.8
WRA S **S** **11 20 53.1 -4.8**
comp=Z,0.7nm,1.0s,baz=79,slow=17,SNR=2.4
WRA LR LR 11 32 10.1
comp=Z,8µm,19.8s,baz=102,slow=35
comp=Z,16nm,1.1s
AS31 Alice Springs 46.09 253 P **P** **11 14 13.4 -2.3**
ASAR Alice Springs 46.09 253 P **P** **11 14 13.7 -2.0**
ASAR Alice Springs 46.09 253 P **P** **11 14 13.4 -2.3**
comp=Z,38nm,0.8s,baz=85,slow=8.5,SNR=110
ASAR PcP **PcP** **11 15 51.3 -0.8**
comp=Z,3.9nm,0.8s,baz=104,slow=3.9,SNR=1.4
ASAR S **S** **11 21 01.2 -0.2**
comp=Z,0.8nm,1.1s,baz=81,slow=12,SNR=2.7
ASAR LR LR 11 32 28.3
comp=Z,16µm,18.9s,baz=98,slow=35
comp=Z,38nm,0.8s
MULG Mulgathing 46.23 244 P **P** **11 14 17.4 +0.6**
KDU Kakadu 48.59 268 P **P** **11 14 33.0 -2.2**
baz=48,SNR=10
KDU Kakadu 48.59 268 P **P** **11 14 35.5 +0.3**
KMPI Kaimana, Papua 49.72 280 P **P** **11 14 42.1 -1.8**
comp=Z,129nm,0.9s,comp=Z,2µm
MTN Manton Dam 49.84 267 P **P** **11 14 43.6 -1.2**
baz=50,SNR=5.8
MTN Manton Dam 49.84 267 P **P** **11 14 42.5 -2.4**
MTN Manton Dam 49.84 267 P **P** **11 14 45.1 +0.3**
WRKA Warakurna 51.17 251 P **P** **11 14 53.0 -1.9**
baz=51,SNR=19
WRKA Warakurna 51.17 251 P **P** **11 14 55.9 +1.0**
FAKI Fak Fak 51.33 280 P **P** **11 14 54.9 -1.2**
FAKI IAMs_20 IAMs_20 11 34 45.8
comp=Z,7µm,22.0s
FAKI Fak Fak 51.33 280 P **P** **11 14 58.2 +2.1**
FAKI Fak Fak 51.33 280 P **P** **11 14 55.2 -0.9**
comp=Z,34nm,1.5s,comp=Z,1µmcomp=Z,3µm
KNRA Kununurra 51.61 263 P **P** **11 14 57.1 -1.1**
baz=52,SNR=7.5
KNRA Kununurra 51.61 263 P **P** **11 14 59.5 +1.3**
SWI Sorong 52.95 282 P **P** **11 15 07.9 -0.3**
comp=Z,53nm,1.5s,comp=Z,2µmcomp=Z,3µm
FITZ Fitzroy Crossi 54.22 259 P **P** **11 15 17.5 +0.1**
baz=54,SNR=9.1
FITZ Fitzroy Crossi 54.22 259 P **P** **11 15 16.0 -1.5**
NLAI Namlea 56.11 277 P **P** **11 15 31.5 +0.3**
comp=Z,35nm,1.5s
LBMI Labuha 56.56 281 P **P** **11 15 34.7 +0.3**
comp=Z,93nm,1.9s,comp=Z,3µm
SOEI Soe 57.07 269 P **P** **11 15 37.3 -0.9**
SOEI Soe 57.07 269 P **P** **11 15 40.7 +2.5**
SOEI Soe 57.07 269 P **P** **11 15 41.4 +3.3**
SOEI Soe 57.07 269 P **P** **11 15 36.9 -1.3**
comp=Z,291nm,1.1s,comp=Z,4µm
SANI Sanana 57.53 278 P **P** **11 15 42.1 +0.8**
SANI Sanana 57.53 278 P **P** **11 15 41.2 -0.1**
SANI Sanana 57.53 278 P **P** **11 15 38.3 -3.0**
comp=Z,71nm,1.4s,comp=Z,2µm
JCJ Chichijima 58.60 317 LR LR 11 37 15.1
comp=Z,4µm,19.8s,baz=132,slow=32
PSA00 Pilbara Seismi 59.19 255 P **P** **11 15 50.6 -2.1**
PSA00 IAmb IAmb 11 15 56.5
comp=Z,36nm,1.1s
PSA00 Pilbara Seismi 59.19 255 P **P** **11 15 53.4 +0.6**
MEEK Meekatharra 59.80 249 P **P** **11 15 55.9 -1.0**
baz=60,SNR=3.8
KLBR Kellerberrin 60.27 243 P **P** **11 15 58.4 -1.7**
baz=60,SNR=5.0
KLBR Kellerberrin 60.27 243 P **P** **11 16 01.5 +1.4**
NWAO Narrogin (SRO) 60.66 241 IAMs_20 IAMs_20 11 42 14.3
comp=Z,6µm,18.0s
NWAO Narrogin (SRO) 60.66 241 LR LR 11 42 17.2
comp=Z,5µm,19.0s,baz=80,slow=36
LUWI Luwuk 60.90 278 P **P** **11 16 06.8 +2.2**
LUWI Luwuk 60.90 278 P **P** **11 16 06.0 +1.4**
LUWI Luwuk 60.90 278 P **P** **11 16 02.3 -2.3**
comp=Z,103nm,1.3s,comp=Z,3µmcomp=Z,2µm
DAV Davao City (W) 61.15 288 LR LR 11 40 26.9
comp=Z,2µm,18.9s,baz=106,slow=34
VNDA Vanda 61.75 185 P **P** **11 16 10.1 +0.8**
VNDA Vanda 61.75 185 P **P** **11 16 10.1 +0.8**
VNDA pmax pmax
comp=Z,15nm,1.4s
VNDA Vanda 61.75 185 P **P** **11 16 09.4 +0.1**
comp=Z,4.3nm,1.1s,baz=305,slow=2.1,SNR=3.4
VNDA LR LR 11 38 40.5
comp=Z,3µm,19.7s,baz=24,slow=32
comp=Z,4.3nm,1.1s
MORW Morawa 61.89 246 P **P** **11 16 11.9 +0.8**
baz=62,SNR=3.5
MORW Morawa 61.89 246 P **P** **11 16 07.9 -3.2**
MORW Morawa 61.89 246 P **P** **11 16 13.3 +2.2**
BKSI Bulukumba 62.17 273 P **P** **11 16 12.5 -0.7**
comp=Z,21nm,1.2s,comp=Z,773nm
KAPI Kapang 62.61 273 LR LR 11 41 36.6
comp=Z,2µm,21.6s,baz=86,slow=34
TTSI Tana Toraja 63.10 275 P **P** **11 16 19.9 +0.5**
comp=Z,22nm,1.4s
RPN Rapa Nui 63.33 112 LR LR 11 36 33.3
comp=Z,5µm,21.6s,baz=264,slow=29
TOLI2 Tolitoli 63.47 280 P **P** **11 16 22.8 +0.9**
PLAI Plampang 63.51 268 P **P** **11 16 23.2 +1.0**
PLAI Plampang 63.51 268 P **P** **11 16 18.9 -3.3**
comp=Z,93nm,1.1s,comp=Z,2µmcomp=Z,2µm
MPSI Magaga 64.06 279 P **P** **11 16 23.8 -2.0**
comp=Z,25nm,1.1s,comp=Z,1µm
JHJ Hachijo jima 2 64.24 321 LR LR 11 44 41.9
comp=Z,2µm,18.0s,baz=153,slow=36
TWSI Taliwang, Sumb 64.39 268 P **P** **11 16 24.5 -3.4**
comp=Z,117nm,1.1s
SRBI Singaraja 66.15 268 P **P** **11 16 39.8 +0.4**
comp=Z,76nm,1.6s
JAGI Jajag, Banyuwa 67.07 268 P **P** **11 16 43.7 -1.6**
comp=Z,80nm,1.2s
MJAR Matsushiro Arr 67.53 322 P **P** **11 16 45.3 -2.4**
comp=Z,18nm,1.2s,baz=151,slow=5.8,SNR=9.6
MJAR LR LR 11 40 48.7
comp=Z,3µm,22.0s,baz=124,slow=31
comp=Z,18nm,1.2s
MAJO Matsushiro 67.53 322 P P 11 16 51.8 +4.1
MAJO Matsushiro 67.53 322 *i* P **P** **11 16 44.6 -3.1**
MAJO pmax pmax
comp=Z,10.0nm,1.2s
CASY Casey 67.66 205 IAMs_20 IAMs_20 11 41 56.8
comp=Z,7µm,20.0s
BLJI Banyuglugur 67.79 268 P **P** **11 16 49.4 -0.4**
comp=Z,63nm,0.9s
TGY Tagaytay City 68.17 293 LR LR 11 42 01.8
comp=Z,5µm,21.8s,baz=117,slow=32
JOW Kunigami 68.22 309 LR LR 11 43 58.4
comp=Z,2µm,19.4s,baz=116,slow=34
ADK Adak 68.27 0 IAMs_20 IAMs_20 11 39 27.4
comp=Z,8µm,21.0s
SHEM Shemya Is, Ala 69.51 354 LR LR 11 41 07.5
comp=Z,3µm,21.3s,baz=148,slow=31
JNU Nakatsue 69.95 315 P **P** **11 17 06.0 +3.1**
JNU Nakatsue 69.95 315 LR LR 11 42 41.6
comp=Z,3µm,21.4s,baz=122,slow=32
JKA Kamikawa-asahi 70.69 331 P **P** **11 17 05.3 -1.8**
JKA IAmb IAmb 11 17 19.4
comp=Z,37nm,1.1s
ASAJ Asahikawa 70.69 331 P **P** **11 17 05.3 -1.8**
ASAJ pmax pmax
comp=Z,37nm,1.1s
ASAJ Asahikawa 70.69 331 LR LR 11 47 04.2
comp=Z,4µm,18.0s,baz=154,slow=35
STKI Sintang 71.98 276 P **P** **11 17 16.7 +1.1**
comp=Z,26nm,0.6s
SBUM Sibu 72.00 278 P **P** **11 17 15.1 -0.7**
NACB Ninganchiao 72.08 303 P **P** **11 17 15.2 -0.7**
NACB Ninganchiao 72.08 303 P **P** **11 17 18.3 +2.4**
KPJI Karang Pucung 72.36 267 P **P** **11 17 18.1 +0.2**
comp=Z,41nm,1.8s
PET Petropavlovsk 72.44 345 *e*P **P** **11 17 17.3 -0.1**
PET *e*S **S** **11 26 41.7 +0.8**
PET pmax pmax
comp=Z,600nm,5.0s
PET pmax pmax
comp=Z,2µm,4.4s
PEA0B Petropavlovsk- 72.76 345 *i* P **P** **11 17 17.5 -1.9**
PETK Petropavlovsk- 72.76 345 P **P** **11 17 19.2 -0.2**
PETK Petropavlovsk- 72.76 345 P **P** **11 17 18.1 -1.3**
comp=Z,16nm,1.0s,baz=115,slow=10.0,SNR=6.7
PETK LR LR 11 44 42.6
comp=Z,3µm,20.0s,baz=159,slow=32
comp=Z,16nm,1.0s
YSS Yuzh-Sakhalins 72.78 333 P **P** **11 17 19.6 0.0**
YSS IAMs_20 IAMs_20 11 42 26.3
comp=Z,6µm,22.0s
YSS Yuzh-Sakhalins 72.78 333 P **P** **11 17 21.3 +1.7**
YSS Yuzh-Sakhalins 72.78 333 *e*P **P** **11 17 20.5 +0.9**
YSS *e*S **S** **11 26 43.4 -1.6**
YSS *e*SS **SS** **11 31 24.0 -1.4**
YSS pmax pmax
comp=Z,20nm,1.3s
YSS pmax pmax
comp=Z,300nm,2.8s
CNBA Chernabura Isl 72.81 11 IAMs_20 IAMs_20 11 41 28.5
comp=Z,7µm,22.0s
P08K Saint George I 73.29 5 P **P** **11 17 25.3 +2.9**
baz=188
QSPA South Pole Qui 73.37 180 P **P** **11 17 22.1 -1.0**
QSPA IAmb IAmb 11 17 34.2
comp=Z,22nm,0.9s
QSPA South Pole Qui 73.37 180 IAMs_20 IAMs_20 11 44 08.8
comp=Z,6µm,22.0s
QSPA South Pole Qui 73.37 180 P **P** **11 17 23.8 +0.7**
comp=Z,15nm,0.9s,baz=34,slow=2.3,SNR=18
QSPA LR LR 11 44 53.7
comp=Z,6µm,21.8s,baz=44,slow=32
comp=Z,15nm,0.9s
LEM Lembang 73.75 268 LR LR 11 49 46.9
comp=Z,3µm,19.9s,baz=120,slow=36
LEM Lembang 73.75 268 P **P** **11 17 25.6 -0.7**
comp=Z,71nm,1.4s,comp=Z,2µm
KSRS Korea Array 74.46 318 P **P** **11 17 27.5 -2.2**
comp=Z,3.3nm,0.9s,baz=128,slow=7.1,SNR=9.3
KSRS LR LR 11 44 25.1
comp=Z,2µm,21.7s,baz=120,slow=31
comp=Z,3.3nm,0.9s
KSAR Wonju Array Be 74.48 318 P **P** **11 17 29.1 -0.7**
KSAR Wonju Array Be 74.48 318 P **P** **11 17 29.1 -0.7**
SCZ2 Santa Cruz Isl 74.55 47 P **P** **11 17 30.0 -0.4**
baz=237
MCCM Marconi Confer 74.72 42 IAMs_20 IAMs_20 11 42 03.3
comp=Z,4µm,21.0s
QZH Quanzhou 74.86 302 *i* P **P** **11 17 35.9 +3.6**
QZH S **S** **11 27 13.4 +4.1**
QZH SS **SS** **11 32 00.2 +2.3**
QZH LR LR
comp=Z,2µm,21.6s
QZH LR LR
comp=Z,2µm,18.9s
PKM Mcpherson Peak 74.91 46 P **P** **11 17 32.3 -0.4**
baz=237
SMMC Simmler 75.02 45 P **P** **11 17 33.3 +0.2**
baz=237
SII Sitkinak Islan 75.51 13 IAMs_20 IAMs_20 11 44 09.7
comp=Z,5µm,20.0s
MSHR Mys Shultsa 75.60 323 *i* P **P** **11 17 32.7 -3.5**
MSHR pmax pmax
comp=Z,24nm,1.5s
JCC Jacoby Creek, 75.61 39 IAMs_20 IAMs_20 11 44 02.5
comp=Z,5µm,20.0s
ARVC Arvin 75.72 46 P **P** **11 17 37.7 +0.6**
baz=237
SSE Sheshan 75.73 309 P P 11 17 42.0 +4.8
SSE S **S** **11 27 20.9 +2.0**
SSE pmax pmax
comp=Z,8.0nm,1.2s
SSE pmax pmax
comp=Z,270nm,6.5s
SSE LR LR
comp=Z,440nm,16.3s
SSE LR LR
comp=Z,680nm,16.3s
R16K Pilot Point 75.78 11 P **P** **11 17 37.6 +0.8**
baz=200
TYV Tymovskoe 75.83 335 *e*P **P** **11 17 38.4 +1.1**
TYV *e*S **S** **11 27 24.0 +4.9**
TYV pmax pmax
comp=Z,15nm,1.4s
TYV pmax pmax
comp=Z,200nm,2.7s
TYV smax smax
comp=N,800nm,6.6s
TYV smax smax
comp=E,1µm,6.6s
PSTR Posyet 75.85 323 *i* P **P** **11 17 35.6 -2.0**
VES Vestal, Richgr 75.93 45 P **P** **11 17 38.2 0.0**
baz=237
VTX Valle De La Tr 75.98 51 P **P** **11 17 38.5 -0.3**
MURC Murrieta 76.07 48 P **P** **11 17 39.3 +0.2**
baz=239
BFSC Mount Baldy Ra 76.07 47 P **P** **11 17 39.2 0.0**
baz=238
HHU Hamhung 76.15 319 P **P** **11 17 40.6 +1.3**
HHU AMS AMS
comp=Z,2µm,12.9s
EDW2 Edwards Air Fo 76.17 47 P **P** **11 17 39.5 -0.3**
baz=238
USA0B Ussuriysk Arra 76.17 325 P **P** **11 17 37.9 -1.5**
USA0B Ussuriysk Arra 76.17 325 *i* P **P** **11 17 37.9 -1.5**
USRK Ussuriysk Ar. 76.17 325 P **P** **11 17 37.6 -1.8**
USRK Ussuriysk Ar. 76.17 325 P **P** **11 17 37.9 -1.5**
comp=Z,5.2nm,0.8s,baz=132,slow=4.1,SNR=3.0
USRK LR LR 11 46 40.0
comp=Z,1µm,18.9s,baz=134,slow=32
comp=Z,5.2nm,0.8s
HJU Haeju 76.22 317 P **P** **11 17 40.6 +0.8**
ISA Isabella, Lake 76.25 46 IAmb IAmb 11 17 52.5
comp=Z,25nm,1.4s
ISA Isabella, Lake 76.25 46 P **P** **11 17 40.3 +0.1**
baz=238
MONP2 Monument Peak 76.27 49 P **P** **11 17 40.1 -0.4**
baz=240
OHAK Old Harbor 76.31 13 P **P** **11 17 41.0 +1.1**
baz=204
IKP In-Ko-Pah, Jac 76.37 50 P **P** **11 17 40.9 -0.1**
baz=240
ORV Oroville 76.42 41 IAMs_20 IAMs_20 11 43 08.1
comp=Z,4µm,21.0s
PFO Pinyon Flats O 76.60 49 P **P** **11 17 43.5 +1.2**
PFO Pinyon Flats O 76.60 49 P **P** **11 17 42.5 +0.3**
baz=239
PFO Pinyon Flats O 76.60 49 *i* P **P** **11 17 41.9 -0.4**
PFO pmax pmax
comp=Z,16nm,1.6s
PFO Pinyon Flats O 76.60 49 LR LR 11 42 59.6
comp=Z,3µm,22.0s,baz=242,slow=29
TPFO Pinon Flats 76.60 49 P **P** **11 17 42.5 +0.3**
baz=239
BBRC Big Bear Solar 76.61 48 P **P** **11 17 42.8 +0.4**
baz=239
PMD Palm Desert 76.68 49 P **P** **11 17 41.4 -1.2**
LRMC Laurel Mtn Rad 76.70 46 P **P** **11 17 43.3 +0.5**
baz=238
SWSC Sam W. Stewart 76.74 49 P **P** **11 17 43.2 +0.3**
baz=240
Q17K Contact Creek 76.75 11 P **P** **11 17 43.8 +1.3**
baz=201
PYAG Pyongyang 76.77 318 P **P** **11 17 44.6 +1.7**
PYAG S **S** **11 27 34.8 +4.9**
PYAG AmB
comp=Z,469nm,2.8s
PYAG AMS AMS
comp=Z,4µm,22.4s
O14K Tigyukauivet M 76.80 8 IAMs_20 IAMs_20 11 43 57.7
comp=Z,4µm,22.0s
O14K Tigyukauivet M 76.80 8 P **P** **11 17 44.1 +1.5**
baz=196
O15K Ungalikthiuk R 76.94 9 P **P** **11 17 44.7 +1.3**
baz=197
CWC Cottonwood Cre 76.94 45 P **P** **11 17 44.3 +0.1**
baz=238
OMMB Old Mammoth Mi 76.95 44 IAmb IAmb 11 18 05.8
comp=Z,28nm,1.6s
YBH Yreka Blue Hor 76.95 39 IAmb IAmb 11 18 01.0
comp=Z,22nm,1.2s
YBH IAMs_20 IAMs_20 11 43 45.1
comp=Z,5µm,20.0s
YBH Yreka Blue Hor 76.95 39 LR LR 11 44 06.7
comp=Z,5µm,20.8s,baz=233,slow=30
LPIG La Paz 76.97 60 LR LR 11 44 19.5
comp=Z,3µm,19.6s,baz=240,slow=30
KDAK Kodiak Island 76.98 13 P **P** **11 17 45.2 +1.5**
baz=204
KDAK Kodiak Island 76.98 13 P **P** **11 17 41.1 -2.5**
comp=Z,6.3nm,0.8s,baz=114,slow=18,SNR=1.0
KDAK LR LR 11 44 25.1
comp=Z,6µm,21.8s,baz=237,slow=30
comp=Z,6.3nm,0.8s
Q16K King Salmon 76.99 11 P **P** **11 17 44.9 +1.3**
baz=200
MLAC Mammoth, Mammo 77.07 44 P **P** **11 17 45.0 +0.1**
baz=237
P16K Nushagak River 77.09 10 P **P** **11 17 44.9 +0.7**
baz=199
BELC Belle Mtn. Jos 77.13 48 P **P** **11 17 45.2 -0.1**
baz=240
MPMC Manual Prospec 77.14 46 P **P** **11 17 45.5 +0.1**
baz=238
WAKR Walker 77.15 43 IAmb IAmb 11 18 10.4
comp=Z,37nm,1.5s
MPK Martis Peak 77.21 42 IAmb IAmb 11 18 02.4
comp=Z,42nm,1.2s
GSC Goldstone, Bar 77.22 47 P **P** **11 17 45.4 -0.3**
baz=239
HEC Hector,Ludlow 77.31 48 P **P** **11 17 46.0 -0.2**
baz=239
M11K Mekoryuk 77.32 6 P **P** **11 17 46.4 +0.9**
baz=191
HUMO Hull Mountain 77.33 38 IAmb IAmb 11 18 05.8
comp=Z,28nm,1.4s
HUMO IAMs_20 IAMs_20 11 45 06.0
comp=Z,5µm,20.0s
BC3 Big Chuckawall 77.35 49 P **P** **11 17 45.9 -0.5**
baz=240
PNTR Pine Nut 77.37 42 IAmb IAmb 11 18 02.6
comp=Z,27nm,1.1s
N14K Kuskokwak Cree 77.39 8 P **P** **11 17 46.8 +0.9**
baz=195
HKPS Hong Kong Po S 77.41 298 IAMs_20 IAMs_20 11 46 38.0
comp=Z,5µm,22.0s
L04D Klamath Falls 77.48 39 IAmb IAmb 11 18 03.0
comp=Z,38nm,1.3s
GLA Glamis 77.51 50 P **P** **11 17 47.1 -0.1**
baz=240
DSP Deep Springs 77.51 45 IAmb IAmb 11 18 04.3
comp=Z,32nm,1.6s
P17K Kvichak River 77.52 11 P **P** **11 17 47.6 +1.0**
baz=200
PMBI Palembang 77.54 271 P **P** **11 17 49.1 +1.3**
comp=Z,242nm,0.4s,comp=Z,8µmcomp=Z,13µm
O16K Kokwok River B 77.61 10 IAmb IAmb 11 17 49.6
comp=Z,30nm,1.1s
O16K IAMs_20 IAMs_20 11 45 57.1
comp=Z,4µm,20.0s
O16K Kokwok River B 77.61 10 P **P** **11 17 48.1 +1.0**
baz=199
LHV Little Huntoon 77.62 44 IAmb IAmb 11 18 04.8
comp=Z,40nm,1.3s
LWLI Liwa 77.64 268 P **P** **11 17 47.9 -0.7**
M13K Dall Lake 77.65 7 IAMs_20 IAMs_20 11 45 00.7
comp=Z,5µm,21.0s
M13K Dall Lake 77.65 7 P **P** **11 17 48.4 +1.0**
baz=194
GRAC Grapevine Rang 77.72 45 P **P** **11 17 48.4 0.0**
baz=238
GMRC Granite Mounta 77.77 48 P **P** **11 17 48.7 -0.1**
baz=240
MDJ Mudanjiang 77.77 324 P **P** **11 17 52.2 +3.8**
SYI Shuyak Island 77.78 13 IAMs_20 IAMs_20 11 44 18.7
comp=Z,5µm,22.0s
FURC Furnace Creek, 77.78 46 P **P** **11 17 48.4 -0.2**
baz=238
Q19K Cape Douglas, 77.81 12 IAMs_20 IAMs_20 11 45 39.5
comp=Z,6µm,20.0s
Q19K Cape Douglas, 77.81 12 P **P** **11 17 49.3 +1.0**
baz=203
RYN Ryan 77.82 43 IAmb IAmb 11 18 02.4
comp=Z,101nm,2.4s
IRM Iron Mountain 77.82 49 P **P** **11 17 48.9 -0.1**
baz=240
N15K Kwethluk River 77.85 9 IAMs_20 IAMs_20 11 44 53.4
comp=Z,5µm,22.0s
N15K Kwethluk River 77.85 9 P **P** **11 17 48.9 +0.4**
baz=197
PAHR Pah Rah Range 77.85 42 IAmb IAmb 11 18 02.1
comp=Z,86nm,2.3s

NVAR **Mina Array Bea** 77.85 44 P **P** 11 17 48.3 -1.0
NVAR **Mina Array Bea** 77.85 44 P **P** 11 17 47.6 -1.7
comp=Z,2.9nm,0.7s,baz=228,slow=9.2,SNR=18
NVAR LR LR 11 47 56.3
comp=Z,2µm,18.6s,baz=242,slow=32
comp=Z,2.9nm,0.7s
SHOC **Shoshone, Teco** 77.90 47 P **P** 11 17 50.1 +0.7
baz=239
TUQ **Turquoise Moun** 77.91 47 P **P** 11 17 49.2 -0.4
baz=239
P18K **Big Mountain,** 77.92 11 IAMs_20 IAMs_20 11 46 41.6
comp=Z,4µm,20.0s
P18K **Big Mountain,** 77.92 11 P **P** 11 17 47.7 -1.3
baz=202
NJ2 **Nanjing** 77.94 309 *e*P **P** 11 17 50.4 +0.8
NJ2 pP **sP** 11 17 53.2 -1.1
NJ2 sP **pwP** 11 17 55.5 -0.4
NJ2 S **S** 11 27 49.2 +6.3
NJ2 SS **SS** 11 32 46.3 +1.9
NJ2 pmax pmax
comp=Z,22nm,1.0s
NJ2 pmax pmax
comp=Z,580nm,5.7s
NJ2 LR LR
comp=Z,2µm,19.4s
NJ2 LR LR
comp=Z,1µm,19.9s
NJ2 LR LR
comp=Z,2µm,18.6s
O17K **Koliganek Bris** 77.95 10 P **P** 11 17 47.7 -1.3
baz=200
NV11 **Mina Array Sit** 77.95 44 IAmb IAmb 11 18 02.8
comp=Z,24nm,1.2s
113A **Mohawk Valley,** 78.15 50 P **P** 11 17 50.0 -0.8
M14K **Bethel** 78.15 8 IAMs_20 IAMs_20 11 47 45.9
comp=Z,3µm,20.0s
M14K **Bethel** 78.15 8 P **P** 11 17 49.5 -0.6
baz=195
SUJ **Sinuiju** 78.17 318 P **P** 11 17 51.6 +1.0
SUJ S **S** 11 27 49.7 +4.7
SUJ AmB
comp=Z,746nm,3.8s
SUJ AMS AMS
comp=Z,2µm,13.3s
M15K **Kasigluk River** 78.27 8 P **P** 11 17 50.3 -0.5
baz=196
COR **Corvallis** 78.33 36 IAMs_20 IAMs_20 11 44 35.3
comp=Z,5µm,21.0s
N16K **Nishlik Lake** 78.34 9 P **P** 11 17 50.8 -0.5
baz=196
I04A **Tendick Farm,** 78.36 37 IAmb IAmb 11 18 07.3
comp=Z,22nm,1.2s
O18K **Koktuh Hills** 78.36 11 IAMs_20 IAMs_20 11 47 07.0
comp=Z,3µm,20.0s
O18K **Koktuh Hills** 78.36 11 P **P** 11 17 50.8 -0.6
baz=202
GRNR **Gornyy** 78.42 332 ⇑*i*P **P** 11 17 51.3 -0.6
GRNR pmax pmax
comp=N,2.0nm,0.9s
GRNR pmax pmax
comp=Z,6.0nm,1.2s
TPNV **Topopah Spring** 78.46 46 IAmb IAmb 11 18 08.0
comp=Z,70nm,2.2s
TPNV IAMs_20 IAMs_20 11 46 30.3
comp=Z,4µm,19.0s
TPNV **Topopah Spring** 78.46 46 P **P** 11 17 51.3 -1.3
baz=239
214A **Organ Pipe Nat** 78.48 52 IAmb IAmb 11 18 06.5
comp=Z,70nm,2.1s
214A **Organ Pipe Nat** 78.48 52 P **P** 11 17 52.0 -0.7
baz=242
P19K **Oil Pt** 78.56 12 P **P** 11 17 53.2 +0.8
baz=204
PDMCI **Parker Dam,Lak** 78.62 49 P **P** 11 17 53.4 +0.1
baz=241
K05A **Summer Lake** 78.62 39 P **P** 11 17 53.0 -0.5
K05A IAmb IAmb 11 18 02.7
comp=Z,56nm,1.5s
L14K **Kuka Creek** 78.64 7 IAmb IAmb 11 17 58.0
comp=Z,18nm,0.9s
L14K IAMs_20 IAMs_20 11 45 30.7
comp=Z,4µm,22.0s
L14K **Kuka Creek** 78.64 7 P **P** 11 17 52.8 0.0
baz=194
N17K **Nushagak Hills** 78.64 10 IAMs_20 IAMs_20 11 46 18.5
comp=Z,4µm,21.0s
N17K **Nushagak Hills** 78.64 10 P **P** 11 17 53.4 +0.5
baz=200
J05D **Fort Rock, OR** 78.75 38 P **P** 11 17 52.6 -1.5
J05D IAmb IAmb 11 18 01.7
comp=Z,18nm,0.9s
M16K **Timber Creek** 78.83 9 IAmb IAmb 11 17 59.0
comp=Z,41nm,1.0s
M16K IAMs_20 IAMs_20 11 45 11.4
comp=Z,5µm,22.0s
M16K **Timber Creek** 78.83 9 P **P** 11 17 53.4 -0.5
baz=198
O19K **Port Alsworth** 78.84 11 IAMs_20 IAMs_20 11 47 19.9
comp=Z,4µm,20.0s
O19K **Port Alsworth** 78.84 11 P **P** 11 17 52.9 -1.1
baz=202
N18K **Kilae Creek** 79.01 11 IAMs_20 IAMs_20 11 45 02.2
comp=Z,4µm,22.0s
N18K **Kilae Creek** 79.01 11 P **P** 11 17 53.8 -1.2
baz=201
H04A **Detroit Lake** 79.02 37 IAmb IAmb 11 18 03.9
comp=Z,27nm,1.1s
L15K **Ungalak Mounta** 79.11 8 P **P** 11 17 54.7 -0.7
baz=196
BRSE **Bradley Lake S** 79.17 13 P **P** 11 17 54.9 -0.9
baz=206
PINE **Pine Mountain** 79.22 38 P **P** 11 17 55.0 -1.7
PINE IAmb IAmb 11 18 02.1
comp=Z,21nm,0.9s
I05D **Terrebonne, OR** 79.30 37 IAmb IAmb 11 18 18.5
comp=Z,33nm,1.3s
N19K **Bonanza Creek** 79.39 11 IAMs_20 IAMs_20 11 50 55.2
comp=Z,3µm,19.0s
N19K **Bonanza Creek** 79.39 11 P **P** 11 17 55.5 -1.6
baz=202
DL2 **Dalian** 79.39 316 P **P** 11 17 58.3 +0.8
DL2 S **S** 11 28 01.2 +3.0
DL2 pmax pmax
comp=Z,23nm,1.2s
DL2 pmax pmax
comp=Z,410nm,5.5s
DL2 LR LR
comp=Z,3µm,18.7s
DL2 LR LR
comp=Z,900nm,20.0s
DL2 LR LR
comp=Z,1µm,20.8s
L16K **Owhat River** 79.41 9 P **P** 11 17 58.9 +1.8
L16K IAMs_20 IAMs_20 11 47 36.8
comp=Z,3µm,20.0s
L16K **Owhat River** 79.41 9 P **P** 11 17 56.3 -0.8
baz=197
M17K **Holitna River** 79.43 10 IAmb IAmb 11 18 01.9
comp=Z,46nm,1.1s
M17K IAMs_20 IAMs_20 11 47 54.2
comp=Z,4µm,20.0s
M17K **Holitna River** 79.43 10 P **P** 11 17 56.8 -0.3
baz=199
SVW2 **Sparrevohn** 79.45 11 P **P** 11 17 59.6 +2.3
KLR **Kul'dur** 79.57 329 *i*P **P** 11 17 58.5 +0.3
KLR pmax pmax
comp=Z,24nm,2.0s
KLR **Kul'dur** 79.57 329 LR LR 11 49 17.2
comp=Z,3µm,20.0s,baz=130,slow=33
R11B **Troy Canyon, C** 79.63 45 P **P** 11 17 57.4 -1.7
baz=239
BMN **Battle Mountai** 79.64 42 IAmb IAmb 11 18 14.0
comp=Z,75nm,2.1s
CN2 **Changchun** 79.67 322 P **P** 11 18 01.6 +2.7
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,600nm,5.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,2µm,20.0s
BNX **BinXian** 79.68 324 ⇓P **P** 11 17 59.0 +0.1
BNX pP **sP** 11 18 02.5 -1.0
BNX sP **pwP** 11 18 03.8 -1.4
BNX PP **PP** 11 20 59.0 -1.1
BNX S **S** 11 28 01.7 +0.8
BNX sS **sS** 11 28 07.7 +0.9
BNX pmax pmax
comp=Z,15nm,0.9s
BNX pmax pmax
comp=Z,520nm,5.1s
BNX LR LR
comp=Z,2µm,17.9s
BNX LR LR
comp=Z,1µm,15.7s
BNX LR LR
comp=Z,2µm,21.7s
K15K **Wolf Creek Mou** 79.70 7 IAmb IAmb 11 18 03.7
comp=Z,28nm,1.1s
K15K **Wolf Creek Mou** 79.70 7 P **P** 11 17 57.7 -0.9
baz=195
NLWA **Neilton Lookou** 79.74 34 IAMs_20 IAMs_20 11 50 02.7
comp=Z,4µm,19.0s
M18K **Stony River** 79.78 10 P **P** 11 17 58.3 -0.8
baz=201
SEW **Seward** 79.78 14 P **P** 11 17 58.2 -0.9
baz=207
QIZ **Qiongzhong** 79.87 293 P **P** 11 17 59.9 -0.6
QIZ S **S** 11 28 03.2 -0.9
QIZ SS **SS** 11 33 14.3 +0.4
QIZ LR LR
comp=Z,1µm,16.8s
QIZ LR LR
comp=Z,2µm,16.8s
QIZ LR LR
comp=Z,4µm,26.1s
QIZ **Qiongzhong** 79.87 293 IAMs_20 IAMs_20 11 49 04.3
comp=Z,3µm,20.0s
J14K **Nanvaranak Lak** 79.91 6 P **P** 11 17 58.7 -1.0
baz=193
Q23K **Middleton Isla** 79.94 16 IAMs_20 IAMs_20 11 47 01.1
comp=Z,4µm,20.0s
L17K **Deinin** 79.99 9 P **P** 11 17 59.2 -1.0
baz=199
O22K **Cooper Landing** 80.06 13 IAMs_20 IAMs_20 11 47 12.0
comp=Z,4µm,20.0s
TUC **Tucson** 80.17 52 P **P** 11 18 00.2 -1.7
TUC IAmb IAmb 11 18 18.2
comp=Z,95nm,2.4s
TUC **Tucson** 80.17 52 P **P** 11 18 00.5 -1.5
baz=243
TUC **Tucson** 80.17 52 P **P** 11 18 00.3 -1.7
TUC pmax pmax
comp=Z,95nm,2.4s
N20K **Mount Spurr** 80.18 12 P **P** 11 17 59.7 -1.6
baz=204
G06A **Carlson Farm,** 80.23 37 IAmb IAmb 11 18 06.2
comp=Z,53nm,1.7s
GAMB **Gambell** 80.32 3 P **P** 11 18 00.8 -1.1
baz=186
L18K **Granite Mounta** 80.32 10 IAmb IAmb 11 18 07.2
comp=Z,33nm,0.9s
L18K IAMs_20 IAMs_20 11 49 00.8
comp=Z,4µm,20.0s
L18K **Granite Mounta** 80.32 10 P **P** 11 18 01.6 -0.4
baz=200
M19K **Big River Lodg** 80.42 11 P **P** 11 18 01.7 -0.9
baz=202
LON **Longmire** 80.47 35 IAmb IAmb 11 18 24.1
comp=Z,34nm,1.6s
K17K **Iditarod** 80.54 9 IAmb IAmb 11 18 08.9
comp=Z,65nm,1.4s
K17K IAMs_20 IAMs_20 11 46 24.7
comp=Z,5µm,22.0s
K17K **Iditarod** 80.54 9 P **P** 11 18 02.2 -0.9
baz=198
FIS **Fire Island** 80.55 13 IAMs_20 IAMs_20 11 47 24.9
comp=Z,4µm,20.0s
LCMT **Little Creek M** 80.57 47 P **P** 11 18 03.0 -1.1
L19K **White Mountain** 80.59 10 IAMs_20 IAMs_20 11 47 28.1
comp=Z,3µm,20.0s
RC01 **Rabbit Creek A** 80.60 13 IAMs_20 IAMs_20 11 48 01.3
comp=Z,4µm,20.0s
M20K **Styx River** 80.63 11 IAMs_20 IAMs_20 11 51 35.9
comp=Z,4µm,19.0s
M20K **Styx River** 80.63 11 P **P** 11 18 02.9 -0.8
baz=204
WHN **Wuhan** 80.69 306 P **P** 11 18 06.7 +2.0
WHN sP **PcP** 11 18 11.7 +0.3
WHN S **SKSac** 11 28 18.6 -4.5
WHN LR LR
comp=Z,3µm,14.3s
WHN LR LR
comp=Z,3µm,14.5s
WHN LR LR
comp=Z,4µm,17.2s
SUA **Susitna One** 80.72 13 P **P** 11 18 02.5 -1.8
SUA IAmb IAmb 11 18 10.1
comp=Z,25nm,1.1s
SUA **Susitna One** 80.72 13 P **P** 11 18 03.3 -1.0
baz=206
HIN **Hinchinbrook I** 80.74 15 IAMs_20 IAMs_20 11 47 03.1
comp=Z,4µm,20.0s
BBB **Bella Bella** 80.77 28 LR LR 11 47 13.9
comp=Z,4µm,19.9s,baz=238,slow=31
J16K **Anvik River** 80.77 8 IAmb IAmb 11 18 09.6
comp=Z,38nm,1.0s
J16K IAMs_20 IAMs_20 11 46 13.2
comp=Z,3µm,22.0s
J16K **Anvik River** 80.77 8 P **P** 11 18 03.8 -0.6
baz=196
KAIM **Kayak Island** 80.87 16 IAMs_20 IAMs_20 11 45 04.7
comp=Z,5µm,21.0s
319A **Douglas** 80.90 53 IAmb IAmb 11 18 16.1
comp=Z,22nm,1.1s
SKT **Skwentna** 81.03 12 IAMs_20 IAMs_20 11 48 40.6
comp=Z,4µm,20.0s
L20K **Farewell, AK** 81.04 11 P **P** 11 18 05.7 -0.2
baz=203
ELK **Elko** 81.09 43 IAmb IAmb 11 18 20.3
comp=Z,112nm,2.6s
ELK **Elko** 81.09 43 LR LR 11 46 19.4
comp=Z,2µm,21.4s,baz=237,slow=30
TTA **Tatalina** 81.10 10 P **P** 11 18 05.2 -1.0
TTA IAmb IAmb 11 18 11.1
comp=Z,37nm,1.1s
TTA **Tatalina** 81.10 10 P **P** 11 18 06.0 -0.3
baz=201
TTA **Tatalina** 81.10 10 P **P** 11 18 05.2 -1.0
TTA pmax pmax
comp=Z,37nm,1.1s
TIA **Tai'an** 81.17 312 *e*P **P** 11 18 06.2 -0.9
TIA pmax pmax
comp=Z,8.0nm,2.2s
TIA LR LR
comp=Z,790nm,19.6s
TIA LR LR
comp=Z,760nm,22.5s
TIA LR LR
comp=Z,1µm,22.1s
KNK **Knik Glacier** 81.17 14 IAMs_20 IAMs_20 11 47 55.5
comp=Z,4µm,20.0s
KNK **Knik Glacier** 81.17 14 P **P** 11 18 05.3 -1.3
baz=208
PMR **Palmer** 81.18 13 P **P** 11 18 09.8 +3.2
WUAZ **Wupatki** 81.19 49 P **P** 11 18 06.7 -0.8
baz=242
MXC **Moxie City** 81.21 36 IAmb IAmb 11 18 33.4
comp=Z,59nm,2.7s
G08A **Pilot Rock** 81.24 37 P **P** 11 18 05.6 -1.8
G08A IAmb IAmb 11 18 16.3
comp=Z,26nm,1.1s
I17K **Unalakleet** 81.34 7 IAMs_20 IAMs_20 11 48 30.2
comp=Z,3µm,20.0s
I17K **Unalakleet** 81.34 7 P **P** 11 18 06.9 -0.5
baz=196
GHO **Glory Hole Cre** 81.39 13 IAMs_20 IAMs_20 11 51 23.1
comp=Z,3µm,18.0s
E07A **Sunyside** 81.44 36 IAmb IAmb 11 18 24.3
comp=Z,87nm,1.9s
J18K **Innoko River** 81.49 9 IAmb IAmb 11 18 13.0
comp=Z,37nm,1.0s
J18K IAMs_20 IAMs_20 11 47 04.8
comp=Z,5µm,22.0s
J18K **Innoko River** 81.49 9 P **P** 11 18 08.1 -0.2
baz=200
ANM **Nome** 81.51 5 IAMs_20 IAMs_20 11 47 32.7
comp=Z,5µm,20.0s
ANM **Nome** 81.51 5 P **P** 11 18 07.6 -0.7
baz=192,SNR=6.4
HAWA **Hanford** 81.53 36 IAmb IAmb 11 18 17.7
comp=Z,24nm,1.2s
HAWA IAMs_20 IAMs_20 11 47 27.2
comp=Z,4µm,20.0s
SML **Sawmill** 81.55 13 IAMs_20 IAMs_20 11 48 06.5
comp=Z,4µm,21.0s
BMRM **Bremner River** 81.71 15 P **P** 11 18 08.4 -1.1
baz=212
PPLA **Purkeypile** 81.74 11 P **P** 11 18 10.1 +0.4
baz=204
GULI **GuiLin** 81.77 299 P **P** 11 18 09.2 -1.4
GULI pmax pmax
comp=Z,20nm,1.8s
GULI LR LR
comp=Z,1µm,22.9s
GULI LR LR
comp=Z,1µm,20.6s
GULI LR LR
comp=Z,2µm,22.8s
SCM **Sheep Creek Mo** 81.80 14 IAMs_20 IAMs_20 11 46 16.1
comp=Z,3µm,22.0s
SCM **Sheep Creek Mo** 81.80 14 P **P** 11 18 09.4 -0.6
baz=209
MTPU **Mount Pierson** 81.80 46 IAmb IAmb 11 18 24.2
comp=Z,26nm,1.6s
K20K **Telida** 81.82 10 IAmb IAmb 11 18 14.3
comp=Z,24nm,1.0s
K20K **Telida** 81.82 10 P **P** 11 18 09.4 -0.6
baz=202
KLU **Klutina** 81.84 15 IAMs_20 IAMs_20 11 47 59.1
comp=Z,4µm,20.0s
H16K **Elim** 81.89 7 P **P** 11 18 09.4 -0.8
baz=195,SNR=22
TCRU **Three Creeks R** 81.89 46 IAmb IAmb 11 18 38.8
comp=Z,93nm,2.5s
BMO **Blue Mountains** 81.97 38 P **P** 11 18 10.2 -1.1
BMO IAmb IAmb 11 18 26.9
comp=Z,26nm,1.5s
BMO IAMs_20 IAMs_20 11 47 58.9
comp=Z,5µm,20.0s
BMO **Blue Mountains** 81.97 38 P **P** 11 18 10.2 -1.1
BMO pmax pmax
comp=Z,26nm,1.5s
MVU **Marysvale** 82.00 46 IAmb IAmb 11 18 24.7
comp=Z,46nm,1.2s
BKNI **Bangkinang** 82.04 273 P **P** 11 18 15.3 +3.1
G15K **Niukluk** 82.06 6 P **P** 11 18 10.4 -0.7
baz=193,SNR=21
MFID **Camas Ranch** 82.10 40 IAMs_20 IAMs_20 11 46 54.4
comp=Z,4µm,21.0s
J19K **Poorman** 82.16 9 IAMs_20 IAMs_20 11 47 24.4
comp=Z,5µm,21.0s
J19K **Poorman** 82.16 9 P **P** 11 18 11.3 -0.4
baz=201
VRDI **Verde Repeater** 82.23 16 P **P** 11 18 10.4 -2.0
VRDI IAmb IAmb 11 18 37.6
comp=Z,26nm,1.2s
VRDI IAMs_20 IAMs_20 11 48 27.5
comp=Z,3µm,19.0s
CAST **Castle Rocks** 82.23 11 P **P** 11 18 08.9 -3.2
CAST IAmb IAmb 11 18 15.3
comp=Z,16nm,1.0s
CAST IAMs_20 IAMs_20 11 53 30.5
comp=Z,4µm,18.0s
CAST **Castle Rocks** 82.23 11 P **P** 11 18 09.7 -2.5
baz=204,SNR=6.2
PDSI **Padang** 82.24 271 P **P** 11 18 13.2 -0.1
BCPM **Bancas Point** 82.24 18 IAMs_20 IAMs_20 11 47 58.0
comp=Z,5µm,20.0s
D08A **Wollman Farm,** 82.26 36 IAmb IAmb 11 18 27.6
comp=Z,34nm,1.4s
N25K **Chitina, Valde** 82.26 15 IAmb IAmb 11 18 16.1
comp=Z,16nm,0.9s
N25K IAMs_20 IAMs_20 11 46 39.3
comp=Z,4µm,22.0s
N25K **Chitina, Valde** 82.26 15 P **P** 11 18 11.0 -1.4
baz=212
TNA **Tin City** 82.30 4 P **P** 11 18 11.3 -1.0
baz=189,SNR=25
M24K **Tolsona, Glenn** 82.31 14 P **P** 11 18 10.2 -2.4
M24K IAMs_20 IAMs_20 11 49 12.5
comp=Z,3µm,21.0s
M24K **Tolsona, Glenn** 82.31 14 P **P** 11 18 11.4 -1.2
baz=210
GLB **Gilahina Butte** 82.32 16 IAmb IAmb 11 18 26.2
comp=Z,28nm,1.2s
GLB IAMs_20 IAMs_20 11 47 00.9
comp=Z,3µm,20.0s
F14K **Arctic Creek** 82.33 5 P **P** 11 18 11.8 -0.7
baz=191,SNR=21
WAT6 **Susitna Watana** 82.37 13 P **P** 11 18 12.4 -0.7
baz=209
HEH **HeiHe** 82.40 328 *e*P **P** 11 18 13.4 +0.1
HEH sP **PcP** 11 18 19.2 +0.8
HEH S **SKSac** 11 28 30.0 -3.8
HEH SS **SS** 11 33 49.2 -1.3
HEH pmax pmax
comp=Z,10.0nm,2.2s
HEH pmax pmax
comp=Z,600nm,5.7s
HEH LR LR
comp=Z,1µm,22.7s
HEH LR LR
comp=Z,730nm,22.0s
HEH LR LR
comp=Z,3µm,20.4s
WAT1 **Susitna Watana** 82.41 13 P **P** 11 18 11.8 -1.3
baz=208
DUG **Dugway, Tooele** 82.41 44 P **P** 11 18 12.6 -1.2
baz=241
H17K **Granite Mounta** 82.45 7 IAMs_20 IAMs_20 11 47 14.5
comp=Z,4µm,22.0s
H17K **Granite Mounta** 82.45 7 P **P** 11 18 12.0 -1.2
baz=197
MCARA **McCarthy VSAT** 82.47 16 IAMs_20 IAMs_20 11 47 56.0
comp=Z,3µm,20.0s
MCARA **McCarthy VSAT** 82.47 16 P **P** 11 18 13.6 +0.2
baz=213
121A **Cookes Peak, D** 82.54 53 IAmb IAmb 11 18 23.7
comp=Z,16nm,1.0s
121A **Cookes Peak, D** 82.54 53 P **P** 11 18 13.7 -1.0
baz=245
LOGN **Logan Glacier** 82.56 17 P **P** 11 18 13.2 -0.9
LOGN IAmb IAmb 11 18 18.3
comp=Z,16nm,0.8s
LOGN IAMs_20 IAMs_20 11 46 22.2
comp=Z,6µm,22.0s
P29M **Windy Craggy** 82.57 19 P **P** 11 18 14.0 0.0
baz=218
J20K **Nowinta River** 82.57 10 P **P** 11 18 12.3 -1.6
J20K IAmb IAmb 11 18 39.4
comp=Z,59nm,1.8s
J20K IAMs_20 IAMs_20 11 46 28.3
comp=Z,3µm,22.0s
J20K **Nowinta River** 82.57 10 P **P** 11 18 13.3 -0.5
baz=202
BARN **Barnard Glacie** 82.57 17 P **P** 11 18 11.4 -2.8
BARN IAmb IAmb 11 18 22.1
comp=Z,30nm,1.0s
BARN IAMs_20 IAMs_20 11 48 17.5
comp=Z,5µm,20.0s
KTH **Kantishna Hill** 82.58 12 IAmb IAmb 11 18 29.3
comp=Z,69nm,1.8s
KTH IAMs_20 IAMs_20 11 47 28.5
comp=Z,4µm,22.0s
CTG **Chitna Glacier** 82.58 17 P **P** 11 18 12.7 -1.5
baz=215
CTGM **Chitina Glacie** 82.58 17 IAMs_20 IAMs_20 11 46 10.8
comp=Z,5µm,22.0s
TRF **Thorofare Moun** 82.61 12 IAmb IAmb 11 18 22.0
comp=Z,24nm,0.9s
TRF **Thorofare Moun** 82.61 12 P **P** 11 18 12.6 -1.7
baz=206
G16K **Koyuk River** 82.61 6 P **P** 11 18 12.6 -1.4
baz=194
CHUM **Lake Minchumin** 82.62 11 P **P** 11 18 12.6 -1.5
baz=204
BGU **Big Grassy Mou** 82.62 44 P **P** 11 18 14.1 -0.9
BGU IAmb IAmb 11 18 32.2
comp=Z,65nm,2.6s
F10A **Beach Ranch, E** 82.63 38 P **P** 11 18 12.6 -2.1
F10A IAmb IAmb 11 18 26.3
comp=Z,59nm,1.9s
GCSA **Galena City Sc** 82.68 9 P **P** 11 18 13.2 -1.2
baz=200
F15K **North Star Dit** 82.70 5 IAmb IAmb 11 18 31.4
comp=Z,48nm,2.0s
F15K IAMs_20 IAMs_20 11 50 54.0
comp=Z,5µm,20.0s

F15K	North Star Dit	82.70	5	P	P	11 18 13.5	-1.0	
	baz=192							
HARP	HAARP	82.80	14	P	P	11 18 14.1	-1.1	
	baz=211							
SEY	Seymchan	82.81	347	*i* P	P	11 18 13.4	-1.7	
SEY				pmax	pmax			
	comp=Z,23nm,1.0s							
SEY	Seymchan	82.81	347	LR	LR	11 51 02.1		
	comp=Z,2µm,20.0s,baz=152,slow=33							
H18K	Honhosa River	82.86	8	IAMs_20	IAMs_20	11 48 02.3		
	comp=Z,3µm,22.0s							
H18K	Honhosa River	82.86	8	P	P	11 18 14.2	-1.1	
	baz=198							
PLBC	Pleasant Camp	82.87	20	P	P	11 18 14.4	-1.1	
	baz=219							
PLID	Pearl Lake	82.88	39	P	P	11 18 14.9	-1.3	
PLID				IAMs_20	IAMs_20	11 48 58.9		
	comp=Z,4µm,20.0s							
DHY	Denali Highway	82.88	13	P	P	11 18 13.7	-2.0	
DHY				IAmb	IAmb	11 18 38.4		
	comp=Z,75nm,2.1s							
DHY	Denali Highway	82.88	13	P	P	11 18 14.1	-1.6	
	baz=209							
G17K	Kiwalik Mounta	82.91	7	P	P	11 18 14.7	-0.9	
	baz=196							
HLID	Hailey	83.06	41	IAMs_20	IAMs_20	11 50 28.8		
	comp=Z,3µm,19.0s							
HLID	Hailey	83.06	41	P	P	11 18 16.0	-1.1	
	baz=239							
TMUT	Trail Mountain	83.07	46	IAmb	IAmb	11 18 25.5		
	comp=Z,19nm,0.9s							
I20K	Naaghedeneel	83.09	10	IAMs_20	IAMs_20	11 48 03.1		
	comp=Z,4µm,21.0s							
I20K	Naaghedeneel	83.09	10	P	P	11 18 15.6	-0.9	
	baz=202							
MCK	McKinley	83.13	12	P	P	11 18 15.8	-1.1	
	baz=207							
P30M	Million Dollar	83.20	19	P	P	11 18 15.4	-1.9	
	baz=219							
HVU	Hansel Valley	83.21	43	IAmb	IAmb	11 18 25.2		
	comp=Z,14nm,1.0s							
BELA	Belgrano 2	83.25	173	P	P	11 18 17.3	-0.1	
BELA				IAmb	IAmb	11 18 24.7		
	comp=Z,17nm,1.0s							
IPM	Ipoh	83.26	277	P	P	11 18 18.8	+0.2	
YUK8	Steele Glacier	83.28	17	P	P	11 18 17.1	-0.9	
	baz=216							
M26K	Nabesna, AK	83.34	15	P	P	11 18 16.1	-1.9	
M26K				IAmb	IAmb	11 18 22.2		
	comp=Z,25nm,0.9s							
M26K				IAMs_20	IAMs_20	11 47 23.8		
	comp=Z,4µm,21.0s							
M26K	Nabesna, AK	83.34	15	P	P	11 18 16.8	-1.1	
	baz=213							
CTU	Camp Tracy	83.36	44	P	P	11 18 17.5	-1.3	
CTU				IAmb	IAmb	11 18 27.5		
	comp=Z,16nm,1.0s							
HNS	HongShan	83.43	312	⇑P	P	11 18 20.3	+1.4	
HNS				PP	PP	11 21 34.9	+3.6	
HNS				S	S	11 28 46.0	+5.8	
HNS				SS	SS	11 34 06.4	+0.1	
HNS				pmax	pmax			
	comp=Z,25nm,1.6s							
HNS				LR	LR			
	comp=Z,2µm,19.2s							
HNS				LR	LR			
	comp=Z,2µm,20.6s							
HNS				LR	LR			
	comp=Z,2µm,21.6s							
SRU	San Rafael Swe	83.45	46	IAmb	IAmb	11 18 27.4		
	comp=Z,20nm,1.0s							
P17A	Butcher Ranch,	83.47	46	IAmb	IAmb	11 18 47.4		
	comp=Z,20nm,1.3s							
H19K	Roundabout Mou	83.48	9	IAmb	IAmb	11 18 23.4		
	comp=Z,26nm,1.1s							
H19K				IAMs_20	IAMs_20	11 50 11.7		
	comp=Z,3µm,19.0s							
H19K	Roundabout Mou	83.48	9	P	P	11 18 17.3	-1.2	
	baz=200							
YUK3	Moose Creek	83.49	17	P	P	11 18 18.0	-0.9	
	baz=215,SNR=5.1							
G18K	Tagagawik	83.53	8	IAmb	IAmb	11 18 23.0		
	comp=Z,17nm,1.0s							
G18K				IAMs_20	IAMs_20	11 50 19.0		
	comp=Z,3µm,20.0s							
G18K	Tagagawik	83.53	8	P	P	11 18 17.8	-1.0	
	baz=198,SNR=7.3							
S34M	Telegraph Cree	83.53	23	IAmb	IAmb	11 18 23.7		
	comp=Z,21nm,1.1s							
S34M	Telegraph Cree	83.53	23	P	P	11 18 18.3	-0.6	
	baz=224							
HYT	Haines Junctio	83.58	18	IAmb	IAmb	11 18 41.0		
	comp=Z,26nm,1.3s							
HYT	Haines Junctio	83.58	18	P	P	11 18 18.3	-1.1	
	baz=218							
M27K	Edge Creek, AK	83.59	16	IAmb	IAmb	11 18 24.1		
	comp=Z,25nm,1.0s							
M27K				IAMs_20	IAMs_20	11 49 02.5		
	comp=Z,4µm,20.0s							
M27K	Edge Creek, AK	83.59	16	P	P	11 18 18.2	-1.2	
	baz=214							
MENT	Mentasta	83.61	15	P	P	11 18 22.9	+3.6	
BJT	Baijiatuau	83.61	315	P	P	11 18 18.8	-1.0	
BJT	Baijiatuau	83.61	315	P	P	11 18 24.0	+4.2	
BJT	Baijiatuau	83.61	315	P	P	11 18 18.8	-1.0	
BJT				pmax	pmax			
	comp=Z,93nm,1.7s							
BJT				MLR	MLR			
	comp=Z,2µm,20.0s							
BJI	Beijing	83.62	315	P	P	11 18 20.0	+0.2	
BJI				S	S	11 28 45.8	+3.9	
BJI				pmax	pmax			
	comp=Z,14nm,1.3s							
BJI				pmax	pmax			
	comp=Z,230nm,5.9s							
BJI				LR	LR			
	comp=Z,500nm,17.0s							
BJI				LR	LR			
	comp=Z,340nm,16.3s							
BJI				LR	LR			
	comp=Z,1µm,20.3s							
YUK4	Talbot Arm	83.66	18	P	P	11 18 19.0	-0.8	
	baz=217							
H20K	Anotleneega Mo	83.68	9	P	P	11 18 19.1	-0.5	
	baz=202							
F17K	Baldwin Pennin	83.75	6	IAmb	IAmb	11 18 24.6		
	comp=Z,20nm,1.0s							
F17K	Baldwin Pennin	83.75	6	P	P	11 18 19.2	-0.6	
	baz=196,SNR=7.4							
L26K	Log Cabin Wild	83.78	15	IAMs_20	IAMs_20	11 50 01.4		
	comp=Z,5µm,20.0s							
L26K	Log Cabin Wild	83.78	15	P	P	11 18 19.6	-0.6	
	baz=213							
LYN	LuoYang	83.83	309	⇑P	P	11 18 22.3	+1.2	
LYN				S	SKSac	11 28 44.7	+0.7	
LYN				SS	SS	11 34 14.6	+2.2	
LYN				pmax	pmax			
	comp=Z,15nm,0.9s							
LYN				pmax	pmax			
	comp=Z,690nm,6.2s							
LYN				LR	LR			
	comp=Z,4µm,15.8s							
LYN				LR	LR			
	comp=Z,2µm,15.8s							
LYN				LR	LR			
	comp=Z,4µm,16.1s							
KULM	Kulim	83.86	277	P	P	11 18 23.1	+1.4	
KULM				IAmb	IAmb	11 18 26.4		
	comp=Z,20nm,1.0s							
K24K	Donnelly Dome	83.87	14	P	P	11 18 19.9	-0.8	
	baz=210							
NEA2	Nenana	83.87	12	P	P	11 18 20.3	-0.3	
	baz=207							
BVCY	Beaver Creek	83.91	16	P	P	11 18 20.0	-0.9	
	baz=215							
HWUT	Hardware Ranch	83.92	43	IAmb	IAmb	11 18 35.6		
	comp=Z,18nm,1.2s							
NEW	Newport	83.94	36	P	P	11 18 19.8	-1.5	
	baz=237							
NEW	Newport	83.94	36	LR	LR	11 48 11.1		
	comp=Z,3µm,20.7s,baz=232,slow=30							
MLY	Manley	83.95	11	P	P	11 18 19.0	-2.0	
MLY				IAmb	IAmb	11 18 25.0		
	comp=Z,28nm,1.2s							
MLY				IAMs_20	IAMs_20	11 54 21.8		
	comp=Z,3µm,19.0s							
MLY	Manley	83.95	11	P	P	11 18 19.2	-1.8	
	baz=206,SNR=20							
BSUT	Blindstream Ca	83.95	45	P	P	11 18 20.4	-1.6	
BSUT				IAmb	IAmb	11 18 31.1		
	comp=Z,20nm,1.1s							
WRH	Wood River Hil	83.96	12	IAMs_20	IAMs_20	11 50 26.2		
	comp=Z,3µm,20.0s							
G19K	Purcell Mounta	83.97	8	IAmb	IAmb	11 18 25.7		
	comp=Z,18nm,1.0s							
G19K	Purcell Mounta	83.97	8	P	P	11 18 19.9	-1.2	
	baz=200,SNR=16							
O30N	Mendenhall	83.97	19	IAmb	IAmb	11 18 47.0		
	comp=Z,37nm,1.4s							
O30N	Mendenhall	83.97	19	P	P	11 18 20.0	-1.2	
	baz=220							
MVCO	Mesa Verde	84.03	48	P	P	11 18 21.0	-1.4	
MVCO	Mesa Verde	84.03	48	P	P	11 18 20.9	-1.4	
	baz=244							
RIDG	Independent Ri	84.03	14	P	P	11 18 20.4	-1.1	
RIDG				IAmb	IAmb	11 18 24.9		
	comp=Z,33nm,1.2s							
RIDG				IAMs_20	IAMs_20	11 49 12.0		
	comp=Z,5µm,20.0s							
RIDG	Independent Ri	84.03	14	P	P	11 18 19.8	-1.7	
	baz=211							
MNTX	Cornudas Mount	84.06	55	P	P	11 18 21.2	-1.1	
	baz=246							
HDA	Harding Lake	84.14	13	IAMs_20	IAMs_20	11 49 46.0		
	comp=Z,4µm,21.0s							
HDA	Harding Lake	84.14	13	P	P	11 18 20.6	-1.4	
	baz=209,SNR=15							
H21K	Melozitna Rive	84.16	10	IAmb	IAmb	11 18 28.1		
	comp=Z,26nm,1.2s							
H21K	Melozitna Rive	84.16	10	P	P	11 18 21.3	-0.8	
	baz=204							
CCB	Clear Creek Bu	84.18	12	IAmb	IAmb	11 18 25.7		
	comp=Z,25nm,0.9s							
CCB				IAMs_20	IAMs_20	11 48 13.8		
	comp=Z,6µm,22.0s							
L27K	Beaver Creek,	84.19	15	IAmb	IAmb	11 18 39.1		
	comp=Z,33nm,1.7s							
L27K				IAMs_20	IAMs_20	11 49 04.3		
	comp=Z,4µm,21.0s							
L27K	Beaver Creek,	84.19	15	P	P	11 18 21.7	-0.6	
	baz=214							
BCAR	Beaver Creek A	84.20	15	P	P	11 18 20.0	-2.4	
WHY	Whitehorse	84.27	20	P	P	11 18 22.1	-0.8	
	baz=221							
E17K	Hotham Inlet	84.31	6	P	P	11 18 21.7	-1.0	
	baz=195,SNR=14							
IMAR	Indian Mountai	84.31	9	P	P	11 18 20.0	-2.8	
I23K	Minto, Yukon-K	84.31	12	IAmb	IAmb	11 18 26.5		
	comp=Z,31nm,1.4s							
I23K				IAMs_20	IAMs_20	11 49 37.5		
	comp=Z,5µm,21.0s							
I23K	Minto, Yukon-K	84.31	12	P	P	11 18 21.5	-1.3	
	baz=207							
DLBC	Dease Lake	84.32	23	P	P	11 18 21.6	-1.5	
	baz=225							
DLBC	Dease Lake	84.32	23	LR	LR	11 48 56.5		
	comp=Z,11µm,20.1s,baz=240,slow=31							
COLA	College	84.37	12	P	P	11 18 19.8	-3.2	
COLA	College	84.37	12	P	P	11 18 21.5	-1.5	
	baz=208							
COLA	College	84.37	12	P	P	11 18 19.8	-3.2	
COLA				pmax	pmax			
	comp=Z,45nm,0.9s							
ENH	Enshi	84.41	304	P	P	11 18 24.4	+0.2	
ENH	Enshi	84.41	304	P	P	11 18 25.9	+1.7	
SCRK	Sand Creek	84.43	14	IAmb	IAmb	11 18 27.8		
	comp=Z,12nm,0.9s							
SCRK				IAMs_20	IAMs_20	11 48 31.6		
	comp=Z,4µm,22.0s							
SCRK	Sand Creek	84.43	14	P	P	11 18 22.2	-1.4	
	baz=212							
IL31		84.47	13	P	P	11 18 20.7	-2.9	
ILAR	Eielson Array	84.47	13	P	P	11 18 20.9	-2.7	
	comp=Z,13nm,1.1s,baz=231,slow=6.2,SNR=27							
ILAR				LR	LR	11 49 06.9		
	comp=Z,3µm,21.4s,baz=207,slow=31							
	comp=Z,13nm,1.1s							
TXAR	Lajitas Array	84.50	57	P	P	11 18 24.9	+0.2	
	comp=Z,1.9nm,0.9s,baz=235,slow=4.4,SNR=15							
TXAR				LR	LR	11 48 32.3		
	comp=Z,1µm,19.6s,baz=242,slow=30							
	comp=Z,1.9nm,0.9s							
F19K	Shaleruckik Mo	84.53	8	IAMs_20	IAMs_20	11 48 52.6		
	comp=Z,4µm,22.0s							
F19K	Shaleruckik Mo	84.53	8	P	P	11 18 22.6	-1.3	
	baz=199							
PMSA	Palmer Station	84.54	157	LR	LR	11 51 46.7		
	comp=Z,1µm,18.4s,baz=240,slow=32							
ANMO	Albuquerque	84.56	51	P	P	11 18 24.7	-0.3	
ANMO				IAmb	IAmb	11 18 34.5		
	comp=Z,18nm,1.1s							
ANMO	Albuquerque	84.56	51	P	P	11 18 24.5	-0.5	
	baz=245							
ANMO	Albuquerque	84.56	51	*i* P	P	11 18 23.7	-1.3	
ANMO				pmax	pmax			
	comp=Z,18nm,1.2s							
ANMO	Albuquerque	84.56	51	LR	LR	11 48 15.9		
	comp=Z,1µm,21.9s,baz=338,slow=30							
M29M	Somme Creek	84.59	17	IAmb	IAmb	11 18 28.9		
	comp=Z,16nm,1.2s							
M29M				IAMs_20	IAMs_20	11 47 37.9		
	comp=Z,5µm,22.0s							
M29M	Somme Creek	84.59	17	P	P	11 18 22.8	-1.6	
	baz=217							
ZEA	Zeya	84.61	331	*e*P	P	11 18 25.1	+0.6	
ZEA				*e*S	S	11 28 54.7	+3.4	
ZEA				pmax	pmax			
	comp=E,10.0nm,1.7s							
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.6s							
ZEA				pmax	pmax			
	comp=N,100nm,5.5s							
ZEA				pmax	pmax			
	comp=Z,300nm,5.0s							
ZEA				smax	smax			
	comp=N,600nm,13.8s							
P33M	Teslin, Yukon	84.61	21	P	P	11 18 23.5	-1.0	
	baz=222							
H22K	Ishtalitna Cre	84.62	10	P	P	11 18 23.6	-0.8	
	baz=205							
N31M	Braeburn, Yuko	84.62	19	P	P	11 18 23.1	-1.5	
	baz=220							
R33M	Jennings River	84.66	22	P	P	11 18 23.2	-1.7	
	baz=224							
J25K	Salcha River,	84.66	13	IAMs_20	IAMs_20	11 53 12.7		
	comp=Z,3µm,19.0s							
J25K	Salcha River,	84.66	13	P	P	11 18 23.1	-1.5	
	baz=211,SNR=17							
POKR	Poker Plat Res	84.67	12	P	P	11 18 22.7	-1.9	
POKR	Poker Plat Res	84.67	12	P	P	11 18 23.0	-1.6	
	baz=209,SNR=26							
RPSI	Rantau Prapat	84.74	274	P	P	11 18 25.4	-0.8	
RPSI				IAmb	IAmb	11 18 30.7		
	comp=Z,34nm,1.2s							
E18K	Tukpahlearik C	84.76	6	IAmb	IAmb	11 18 41.9		
	comp=Z,21nm,1.2s							
E18K	Tukpahlearik C	84.76	6	P	P	11 18 23.0	-2.0	
	baz=196							
PSI	Prapat	84.77	274	P	P	11 18 28.5	+2.0	
PSI	Prapat	84.77	274	P	P	11 18 25.4	-1.1	
PSI				pmax	pmax			
	comp=Z,34nm,1.2s							
PSI				MLR	MLR			
	comp=Z,1µm,19.0s							
AHID	Auburn Hatcher	84.78	43	IAmb	IAmb	11 18 34.9		
	comp=Z,32nm,1.4s							
RDMU	Red Mountain	84.78	45	IAmb	IAmb	11 18 34.8		
	comp=Z,40nm,1.5s							
G21K	Allakaket	84.84	9	IAmb	IAmb	11 18 30.0		
	comp=Z,23nm,1.1s							
G21K				IAMs_20	IAMs_20	11 50 12.3		
	comp=Z,4µm,20.0s							
G21K	Allakaket	84.84	9	P	P	11 18 24.5	-1.0	
	baz=203							
K27K	Chicken	84.93	15	IAmb	IAmb	11 18 31.4		
	comp=Z,22nm,1.2s							
K27K				IAMs_20	IAMs_20	11 48 26.9		
	comp=Z,4µm,22.0s							
K27K	Chicken	84.93	15	P	P	11 18 24.4	-1.6	
	baz=214							
J26L	Joseph Creek	84.97	14	IAMs_20	IAMs_20	11 49 51.0		
	comp=Z,4µm,20.0s							
J26L	Joseph Creek	84.97	14	P	P	11 18 25.6	-0.7	
	baz=212							
MSO	Missoula	85.01	38	IAmb	IAmb	11 18 53.7		
	comp=Z,17nm,1.4s							
MSO				IAMs_20	IAMs_20	11 49 52.3		
	comp=Z,4µm,20.0s							
MSO	Missoula	85.01	38	P	P	11 18 25.7	-1.3	
	baz=239							
F20K	Avaraart Lake	85.01	8	IAmb	IAmb	11 18 30.8		
	comp=Z,12nm,0.9s							
F20K				IAMs_20	IAMs_20	11 54 39.2		
	comp=Z,3µm,19.0s							
F20K	Avaraart Lake	85.01	8	P	P	11 18 25.4	-0.8	
	baz=201							
C16K	Lisburne Hills	85.17	4	P	P	11 18 25.7	-1.3	
	baz=192							
M30M	Minto, Yukon	85.17	18	IAmb	IAmb	11 18 31.5		
	comp=Z,18nm,1.0s							
M30M	Minto, Yukon	85.17	18	P	P	11 18 25.6	-1.7	
	baz=219							
E19K	Redstone River	85.19	8	IAmb	IAmb	11 18 31.2		
	comp=Z,14nm,0.9s							
E19K				IAMs_20	IAMs_20	11 49 37.1		
	comp=Z,3µm,21.0s							
E19K	Redstone River	85.19	8	P	P	11 18 26.0	-1.2	
	baz=199							
L29M	L29M	85.21	17	IAMs_20	IAMs_20	11 49 53.4		
	comp=Z,5µm,20.0s							
L29M	L29M	85.21	17	P	P	11 18 26.7	-0.8	
	baz=218							
TPAW	Teton Pass	85.21	42	P	P	11 18 27.4	-0.8	
TPAW				IAmb	IAmb	11 18 37.4		
	comp=Z,25nm,1.3s							
H24K	Noodor Dome	85.21	12	P	P	11 18 26.6	-0.8	
	baz=208							
REDW	Red Top Meadow	85.22	42	P	P	11 18 27.7	-0.5	
N32M	Quiet Lake	85.22	20	P	P	11 18 27.1	-0.5	
	baz=222							
GYA	Guiyang	85.30	299	⇑P	P	11 18 29.4	+0.5	
GYA				S	S	11 29 01.0	+1.4	
GYA				SS	SS	11 34 34.2	-0.4	
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
GYA				pmax	pmax			
	comp=Z,460nm,4.7s							
GYA				LR	LR			
	comp=Z,600nm,12.8s							
GYA				LR	LR			
	comp=Z,800nm,16.9s							
GYA				LR	LR			
	comp=Z,1µm,19.4s							
BILL	Bilibino	85.32	354	P	P	11 18 26.1	-1.7	
BILL				IAmb	IAmb	11 18 34.4		
	comp=Z,48nm,1.6s							
BILL	Bilibino	85.32	354	*i* P	P	11 18 25.5	-2.3	
SNOW	Snow King Moun	85.33	42	IAmb	IAmb	11 18 43.6		
	comp=Z,32nm,1.2s							
MAW	Mawson	85.34	199	LR	LR	11 54 25.9		
	comp=Z,8µm,18.9s,baz=102,slow=34							
S22A	4UR Ranch, Cre	85.45	49	IAmb	IAmb	11 18 45.1		
	comp=Z,20nm,1.2s							
S22A	4UR Ranch, Cre	85.45	49	P	P	11 18 28.3	-1.3	
	baz=245							
MOOW	Moose Ponds	85.47	42	P	P	11 18 28.2	-1.2	
MOOW				IAmb	IAmb	11 18 44.7		
	comp=Z,31nm,1.8s							
O20A	White River Ci	85.49	46	P	P	11 18 28.3	-1.3	
	baz=244							
XLT	XiLinHaoTe	85.49	318	*e*P	P	11 18 30.0	+0.6	
XLT				pP	pwP	11 18 34.3	-1.4	
XLT				sP	sP	11 18 37.5	+3.5	
XLT				SKS	SKSac	11 28 54.2	-0.3	
XLT				S	S	11 28 59.5	-1.2	
XLT				sS	ScS	11 29 09.4	-1.2	
XLT				pmax	pmax			
	comp=Z,12nm,1.1s							
XLT				pmax	pmax			
	comp=Z,250nm,4.3s							
XLT				LR	LR			
	comp=Z,1µm,19.1s							
XLT				LR	LR			
	comp=Z,2µm,20.8s							
LOHW	Long Hollow	85.49	42	IAmb	IAmb	11 18 57.5		
	comp=Z,35nm,1.9s							
F21K	Alatna River	85.50	9	IAMs_20	IAMs_20	11 51 33.7		
	comp=Z,5µm,20.0s							
F21K	Alatna River	85.50	9	P	P	11 18 28.5	-0.3	
	baz=203							
NONG	Nongkai	85.50	290	P	P	11 18 31.6	+1.8	
G22K	Bettles	85.53	10	P	P	11 18 28.6	-0.2	
	baz=205							
C17K	DeLong Mountai	85.54	5	P	P	11 18 29.0	0.0	
	baz=194							
G23K	Bananza Creek	85.60	11	IAMs_20	IAMs_20	11 57 37.3		
	comp=Z,3µm,18.0s							
G23K	Bananza Creek	85.60	11	P	P	11 18 28.7	-0.6	
	baz=206							
M31M	Drury Creek, Y	85.60	19	P	P	11 18 28.9	-0.4	
	baz=221							
GSI	Gunungsitoli	85.63	273	P	P	11 18 28.6	-2.0	
GSI				IAMs_20	IAMs_20	11 56 01.9		
	comp=Z,4µm,22.0s							
GSI	Gunungsitoli	85.63	273	P	P	11 18 33.4	+2.7	
DAWY	Dawson	85.64	16	IAmb	IAmb	11 18 34.0		
	comp=Z,18nm,1.0s							
DAWY	Dawson	85.64	16	P	P	11 18 28.8	-0.8	
	baz=216,SNR=16							
YHL	Hebgen Lake	85.71	41	IAmb	IAmb	11 18 40.5		
	comp=Z,26nm,1.0s							
EGAK	Eagle	85.78	15	P	P	11 18 28.1	-2.1	
EGAK				IAmb	IAmb	11 18 35.0		
	comp=Z,29nm,1.1s							
EGAK				IAMs_20	IAMs_20	11 48 29.3		
	comp=Z,5µm,22.0s							
EGAK	Eagle	85.78	15	P	P	11 18 29.2	-0.9	
	baz=215,SNR=7.6							
BW06	Boulder Array	85.78	43	P	P	11 18 29.4	-1.6	
	baz=243							
PDAR	Pinedale Array	85.78	43	P	P	11 18 28.9	-2.1	
PDAR	Pinedale Array	85.78	43	P	P	11 18 29.0	-2.0	
	comp=Z,1.3nm,0.9s,baz=238,slow=2.8,SNR=13							
PDAR				LR	LR	11 52 40.7		
	comp=Z,1µm,18.4s,baz=248,slow=33							
	comp=Z,1.3nm,0.9s							
BOZ	Bozeman (W)	85.79	40	P	P	11 18 29.5	-1.4	
	baz=241							
H17A	Grant Village	85.88	41	P	P	11 18 30.5	-1.0	
	baz=242							
C18K	Utukok River	85.89	6	IAmb	IAmb	11 18 41.6		
	comp=Z,23nm,1.6s							
C18K	Utukok River	85.89	6	P	P	11 18 30.7	0.0	
	baz=196							
SLVN	Son La	85.90	294	IAMs_20	IAMs_20	11 52 51.9		
	comp=Z,3µm,21.0s							
FARO	Faro, Yukon	85.94	19	P	P	11 18 30.6	-0.5	
	baz=222							
WTLY	Watson Lake, Y	85.95	22	IAmb	IAmb	11 18 48.4		
	comp=Z,28nm,1.4s							
WTLY	Watson Lake, Y	85.95	22	P	P	11 18 30.5	-0.7	
	baz=226							
HIA	Hailar	85.95	324	IAMs_20	IAMs_20	11 53 33.9		
	comp=Z,3µm,19.0s							
HIA	Hailar	85.95	324	P	P	11 18 36.1	+4.7	
K29M	Barlow Dome	85.96	17	IAMs_20	IAMs_20	11 50 34.2		
	comp=Z,4µm,20.0s							
K29M	Barlow Dome	85.96	17	P	P	11 18 30.7	-0.5	
	baz=218							
NAYO	Nakonasyok	85.97	286	P	P	11 18 34.5	+2.3	
SAND	Sanderson	85.98	57	P	P	11 18 31.1	-0.9	
COLD	Coldfoot	86.03	10	P	P	11 18 30.5	-0.9	
	baz=206,SNR=9.9							
G24K	Hadweenzic Riv	86.05	11	P	P	11 18 30.9	-0.6	
	baz=209							
D19K	Kuna River	86.07	7	IAmb	IAmb	11 18 43.7		
	comp=Z,32nm,1.9s							
D19K				IAMs_20	IAMs_20	11 50 17.2		
	comp=Z,5µm,22.0s							
D19K	Kuna River	86.07	7	P	P	11 18 30.8	-0.9	
	baz=198							
E20K

XAN pP pwP 11 18 43.0 +3.0
XAN sP sP 11 18 47.9 +10
XAN S **SKSac** **11 29 02.5 +2.5**
XAN pmax pmax
comp=Z,22nm,1.3s
XAN pmax pmax
comp=Z,500nm,5.7s
XAN LR LR
comp=Z,2µm,19.2s
XAN LR LR
comp=Z,2µm,19.2s
XAN LR LR
comp=Z,3µm,21.1s
I27K Kandik River **86.35 14** P **P** **11 18 32.3 -0.8**
baz=214,SNR=5.3
G25K Bearman Lake **86.38 12** P **P** **11 18 32.7 -0.3**
baz=210
FYU Fort Yukon **86.38 12** IAMs_20 IAMs_20 11 49 42.5
comp=Z,5µm,22.0s
SDCO Great Sand Dun **86.41 49** P **P** **11 18 32.5 -1.9**
baz=246
D20K Etivluk River **86.46 7** P **P** **11 18 32.8 -0.7**
baz=200
C19K Lookout Ridge **86.49 6** P **P** **11 18 36.2 +2.5**
C19K IAmb IAmb 11 18 50.6
comp=Z,44nm,1.9s
C19K Lookout Ridge **86.49 6** P **P** **11 18 33.3 -0.4**
baz=197
B18K Kokolik River **86.53 5** P **P** **11 18 33.5 -0.3**
baz=195
E21K Killik River **86.56 8** IAMs_20 IAMs_20 11 50 05.7
comp=Z,3µm,21.0s
I28M Miner Creek **86.63 15** IAmb IAmb 11 18 51.1
comp=Z,28nm,1.4s
I28M Miner Creek **86.63 15** P **P** **11 18 34.2 -0.2**
baz=216
F24K Squaw Lake **86.70 11** IAMs_20 IAMs_20 11 55 04.5
comp=Z,4µm,19.0s
F24K Squaw Lake **86.70 11** P **P** **11 18 33.8 -0.9**
baz=208
J30M Hart River **86.86 16** IAmb IAmb 11 19 01.2
comp=Z,19nm,1.2s
J30M IAMs_20 IAMs_20 11 48 48.9
comp=Z,4µm,22.0s
J30M Hart River **86.86 16** P **P** **11 18 35.1 -0.6**
baz=219
RWWY Rawlins **86.87 45** IAMs_20 IAMs_20 11 53 37.9
comp=Z,4µm,18.0s
E23K Chandalar **86.88 10** P **P** **11 18 35.0 -0.7**
baz=207
H27K Steamboat Moun **86.90 14** P **P** **11 18 35.3 -0.5**
baz=214,SNR=5.2
DRIO Del Rio **87.01 58** IAmb IAmb 11 18 43.8
comp=Z,15nm,0.9s
BRLDA Berland Lookou **87.01 31** IAmb IAmb 11 18 41.0
comp=Z,24nm,1.1s
RLMT Red Lodge **87.04 41** IAMs_20 IAMs_20 11 49 13.3
comp=Z,3µm,21.0s
RLMT Red Lodge **87.04 41** P **P** **11 18 35.9 -1.2**
baz=243
C21K Knifeblade Rid **87.11 8** P **P** **11 18 36.3 -0.4**
baz=202
HHC Hu-ho-hao-te **87.13 314** ⇑*i*P **P** **11 18 39.8 +2.3**
HHC sP pwP 11 18 51.4 +7.5
HHC SKS **SKSac** **11 29 05.0 +0.1**
HHC S **S** **11 29 16.3 -0.6**
HHC sS ScS 11 29 27.7 +3.4
HHC SS **SS** **11 34 58.1 -2.8**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,260nm,4.6s
HHC LR LR
comp=Z,540nm,16.2s
HHC LR LR
comp=Z,2µm,17.2s
HHC LR LR
comp=Z,2µm,16.0s
OZNA Ozona **87.13 57** IAmb IAmb 11 18 47.1
comp=Z,29nm,1.3s
D22K Ayikyak River **87.15 9** IAMs_20 IAMs_20 11 53 17.2
comp=Z,3µm,20.0s
D22K Ayikyak River **87.15 9** P **P** **11 18 37.0 +0.2**
baz=204
Q24A Divide **87.16 48** P **P** **11 18 37.1 -0.9**
baz=246
ISCO Idaho Springs **87.17 47** P **P** **11 18 36.7 -1.3**
baz=246
F25K Christian Rive **87.19 12** P **P** **11 18 37.3 +0.2**
baz=210
BMAR Burnt Mountain **87.25 12** P **P** **11 18 35.4 -2.0**
I30M Mount Dempster **87.35 16** IAMs_20 IAMs_20 11 50 40.9
comp=Z,4µm,22.0s
I30M Mount Dempster **87.35 16** P **P** **11 18 37.2 -0.9**
baz=219
A19K Wainwright **87.41 5** P **P** **11 18 37.7 -0.3**
baz=196
F26K Sheenjek River **87.57 12** P **P** **11 18 38.8 -0.2**
baz=212
B20K Meade River **87.62 7** IAmb IAmb 11 18 47.8
comp=Z,22nm,1.6s
B20K IAMs_20 IAMs_20 11 53 03.8
comp=Z,5µm,20.0s
B20K Meade River **87.62 7** P **P** **11 18 39.0 -0.1**
baz=199
H29M Whitestone **87.63 15** IAmb IAmb 11 18 47.3
comp=Z,24nm,1.3s
H29M IAMs_20 IAMs_20 11 49 58.2
comp=Z,4µm,22.0s
H29M Whitestone **87.63 15** P **P** **11 18 37.5 -1.7**
baz=217
H03S2 Juan Fernandez **87.65 125** T T 12 55 53.3
baz=250,slow=75,SNR=11
E25K Arctic Village **87.66 11** P **P** **11 18 38.2 -1.2**
baz=210
H03S1 Juan Fernandez **87.67 125** T T 12 55 50.9
baz=250,slow=75,SNR=10
H03S3 Juan Fernandez **87.67 125** T T 12 55 52.4
baz=250,slow=75,SNR=9.8
KOTAN Kotaneelee Air **87.73 24** P **P** **11 18 39.9 +0.1**
baz=230
PHWY Pilot Hill **87.90 46** IAMs_20 IAMs_20 11 51 41.3
comp=Z,3µm,20.0s
CMIG Matias Romero **87.90 72** LR LR 11 49 24.1
comp=Z,4µm,19.4s,baz=253,slow=30
D24K Happy Valley **87.99 10** IAMs_20 IAMs_20 11 56 28.6
comp=Z,3µm,19.0s
SRDT SRDT **88.01 286** P **P** **11 18 46.1 +4.0**
FLDN Fort Liard **88.02 24** P **P** **11 18 41.6 +0.4**
baz=231
JCT Junction City **88.04 58** P **P** **11 18 41.6 -0.4**
baz=249
EGMT Eagleton **88.07 38** P **P** **11 18 41.8 -0.1**
baz=242
BTO Baotou **88.10 313** *e*P **P** **11 18 43.7 +1.5**
BTO pP **pwP** **11 18 48.5 -0.1**
BTO sP **sP** **11 18 51.0 +4.1**
BTO PP **PP** **11 22 13.3 +4.0**
BTO S **S** **11 29 29.7 +3.5**
BTO sS **ScS** **11 29 35.9 +3.5**
BTO pmax pmax
comp=Z,40nm,2.0s
BTO LR LR
comp=Z,5µm,19.4s
BTO LR LR
comp=Z,2µm,20.2s
BTO LR LR
comp=Z,4µm,21.3s
HNDO Hondo **88.14 59** IAmb IAmb 11 18 52.6
comp=Z,26nm,1.1s
AMTX Amarillo **88.14 53** P **P** **11 18 42.3 -0.2**
baz=248
EPYK Eagle Plains **88.16 15** IAMs_20 IAMs_20 11 50 15.3
comp=Z,4µm,22.0s
EPYK Eagle Plains **88.16 15** P **P** **11 18 42.3 +0.5**
baz=219
KMI Kunming **88.16 297** ⇓P **P** **11 18 45.1 +2.1**
KMI SKS **SKSac** **11 29 13.6 +1.6**
KMI S **S** **11 29 28.7 +1.0**
KMI SS **SS** **11 35 20.4 +3.6**
KMI pmax pmax
comp=Z,22nm,1.0s
KMI pmax pmax
comp=Z,380nm,6.5s
KMI LR LR
comp=Z,2µm,22.9s
KMI LR LR
comp=Z,2µm,22.2s
KMI LR LR
comp=Z,4µm,21.8s
G29M Pine Creek **88.27 14** IAMs_20 IAMs_20 11 51 53.1
comp=Z,5µm,20.0s
B22K Teshekpuk Lake **88.39 8** IAMs_20 IAMs_20 11 57 20.0
comp=Z,4µm,18.0s
B22K Teshekpuk Lake **88.39 8** P **P** **11 18 42.6 -0.1**
baz=203
F28M Old Crow **88.41 13** IAMs_20 IAMs_20 11 53 35.7
comp=Z,3µm,20.0s
F28M Old Crow **88.41 13** P **P** **11 18 42.5 -0.4**
baz=216
C24K Franklin Bluff **88.52 10** P **P** **11 18 43.0 -0.3**
baz=207
COYC Coyhaique **88.54 137** IAMs_20 IAMs_20 12 01 55.5
comp=Z,2µm,18.0s
D25K Kavik River **88.56 11** IAMs_20 IAMs_20 11 55 01.6
comp=Z,3µm,20.0s
D25K Kavik River **88.56 11** P **P** **11 18 42.7 -1.0**
baz=210
EDM Edmonton **88.59 33** P **P** **11 18 43.0 -1.1**
EDM Edmonton **88.59 33** P **P** **11 18 43.0 -1.1**
EDM pmax pmax
comp=Z,95nm,1.9s
G30M tAoh Zrail Nji **88.76 15** IAMs_20 IAMs_20 11 51 26.2
comp=Z,4µm,21.0s
G30M tAoh Zrail Nji **88.76 15** P **P** **11 18 44.3 -0.3**
baz=219
YAK Yakutsk **88.81 338** *e*P **P** **11 18 47.1 +2.2**
YAK *e**PP **pwP** **11 18 52.8 +1.5**
YAK *e* 11 22 18.8
YAK *e*S **SKSac** **11 29 16.5 +2.8**
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.8s
YAK pmax pmax
comp=Z,8.0nm,0.6s
YAK smax smax
comp=N,164nm,11.2s
YAK smax smax
comp=E,410nm,14.1s
YAK MLR MLR
comp=Z,1µm,17.0s
YAK MLR MLR
comp=E,1µm,20.0s
YAK MLR MLR
comp=N,908nm,17.0s
YAK Yakutsk **88.81 338** LR LR 12 00 27.1
comp=N,1µm,18.2s,baz=122,slow=37
G31M Satah River **89.21 16** IAMs_20 IAMs_20 11 50 47.6
comp=Z,4µm,22.0s
G31M Satah River **89.21 16** P **P** **11 18 45.7 -0.9**
baz=221
CD2 Chengdu **89.25 302** P **P** **11 18 49.9 +2.1**
CD2 S **S** **11 29 41.7 +4.4**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,240nm,4.9s
CD2 LR LR
comp=Z,640nm,12.3s
CD2 LR LR
comp=Z,540nm,11.2s
CD2 LR LR
comp=Z,2µm,22.1s
E28M Babbage River **89.29 13** IAMs_20 IAMs_20 11 56 15.0
comp=Z,3µm,19.0s
E28M Babbage River **89.29 13** P **P** **11 18 45.5 -1.5**
baz=216
CMAR Chiang Mai Arr **89.41 289** P **P** **11 18 47.5 -1.2**
comp=Z,0.5nm,0.4s,baz=116,slow=3.0,SNR=8.3
CMAR LR LR 11 55 57.9
comp=Z,2µm,20.1s,baz=115,slow=34
comp=Z,0.5nm,0.4s
PZH PanZhiHua **89.46 298** P **P** **11 18 50.6 +1.6**
PZH SKS **SKSac** **11 29 18.2 -1.3**
PZH S **SKKSac** **11 29 27.3 -4.5**
PZH pmax pmax
comp=Z,20nm,1.5s
PZH pmax pmax
comp=Z,570nm,6.1s
PZH LR LR
comp=Z,1µm,20.0s
PZH LR LR
comp=Z,2µm,22.0s
PZH LR LR
comp=Z,2µm,23.0s
E29M Blow River **89.48 14** IAMs_20 IAMs_20 11 55 36.0
comp=Z,3µm,19.0s
D27M Malcolm River **89.51 12** IAMs_20 IAMs_20 11 51 52.9
comp=Z,4µm,21.0s
D27M Malcolm River **89.51 12** P **P** **11 18 47.6 -0.6**
baz=215
CHTO Chiang Mai **89.52 290** P **P** **11 18 48.9 -0.3**
CHTO Chiang Mai **89.52 290** P **P** **11 18 51.5 +2.3**
CHTO Chiang Mai **89.52 290** P **P** **11 18 48.9 -0.3**
CHTO pmax pmax
comp=Z,106nm,2.7s
LAO LASA Array **89.64 41** IAmb IAmb 11 19 02.4
comp=Z,29nm,1.4s
LAO IAMs_20 IAMs_20 11 50 54.9
comp=Z,3µm,22.0s
LAO LASA Array **89.64 41** P **P** **11 18 48.4 -0.9**
baz=245
F31M Tsiigehtchic **89.74 15** IAMs_20 IAMs_20 11 50 50.0
comp=Z,4µm,22.0s
F31M Tsiigehtchic **89.74 15** P **P** **11 18 48.5 -0.6**
baz=221
WRGLY Wrigley **89.92 21** P **P** **11 18 49.3 -0.7**
baz=231
RSSD Black Hills **90.00 44** P **P** **11 18 49.9 -1.3**
baz=247
D28M Stokes Point **90.05 13** P **P** **11 18 50.1 -0.3**
baz=217
WMOK Wichita Mounta **90.32 54** P **P** **11 18 51.7 -1.0**
baz=250
INK Inuvik **90.45 15** P **P** **11 18 50.6 -1.8**
INK Inuvik **90.45 15** P **P** **11 18 52.6 +0.2**
baz=222
INK Inuvik **90.45 15** P **P** **11 18 50.6 -1.8**
INK pmax pmax
comp=Z,10.0nm,1.3s
INK Inuvik **90.45 15** LR LR 11 53 10.5
comp=Z,3µm,20.7s,baz=188,slow=32
ELIB Princess Elisa **90.49 186** *d*P **P** **11 18 52.9 -0.1**
ELIB *dx* x 11 18 56.6
LZH Lanzhou **90.94 307** *e*P P 11 18 49.9 -5.8
LZH sP pwP 11 19 04.0 +1.9
LZH Lanzhou **90.94 307** S **S** **11 29 53.0 0.0**
LZH Lanzhou **90.94 307** SS SS 11 35 44.4 -12
LZH pmax pmax
comp=Z,260nm,4.8s
LZH LR LR
comp=N,660nm,14.1s
LZH LR LR
comp=E,2µm,14.8s
LZH LR LR
comp=Z,2µm,16.1s
PAF Port-aux-Franc **91.33 217** IAMs_20 IAMs_20 11 51 48.0
comp=Z,3µm,18.0s
PLCA Paso Flores **91.45 133** P **P** **11 18 57.6 -0.4**
comp=Z,2.6nm,1.1s,baz=159,slow=9.0,SNR=3.1
PLCA LR LR 11 50 53.5
comp=Z,2µm,21.7s,baz=243,slow=30
comp=Z,2.6nm,1.1s
TROLL Troll, Antarti **91.53 180** ⇑P **P** **11 19 00.6 +2.8**
comp=Z,423nm,1.1s
DGMT Dagmar **91.62 40** P **P** **11 18 56.7 -1.7**
DGMT Dagmar **91.62 40** P **P** **11 18 58.2 -0.1**
baz=247
TNCH TengChong **91.77 295** P **P** **11 19 02.5 +2.7**
TNCH pP pwP 11 19 10.1 +3.5
TNCH S S 11 29 50.7 -10
TNCH SS **SS** **11 36 10.9 +1.9**
TNCH pmax pmax
comp=Z,53nm,0.6s
TNCH pmax pmax
comp=Z,190nm,4.5s
TNCH LR LR
comp=Z,340nm,18.4s
TNCH LR LR
comp=Z,710nm,19.4s
TNCH LR LR
comp=Z,1µm,20.6s
SNAA Sanae **91.79 178** P **P** **11 19 01.1 +2.2**
SNAA Sanae **91.79 178** ⇑P **P** **11 19 01.6 +2.7**
SNAA Sanae **91.79 178** *i*P **P** **11 19 00.3 +1.4**
SNAA pmax pmax
comp=Z,11nm,1.3s
SNAA Sanae **91.79 178** P **P** **11 18 58.9 -0.1**
comp=Z,3.8nm,0.9s,baz=153,slow=3.4,SNR=4.9
SNAA LR LR 11 56 14.8
comp=Z,2µm,20.9s,baz=190,slow=33
comp=Z,3.8nm,0.9s
VNA3 Neumayer Olymp **91.89 176** ⇑P **P** **11 19 01.1 +1.8**
SNET Serv Nac Est T **92.11 76** IAMs_20 IAMs_20 11 52 10.6
comp=Z,3µm,19.0s
OK052 Battle Ridge R **92.26 53** IAMs_20 IAMs_20 11 53 08.7
comp=Z,2µm,18.0s
OK048 Pawnee Station **92.29 53** IAMs_20 IAMs_20 11 52 51.4
comp=Z,2µm,20.0s
OK051 E0350 and S346 **92.40 53** IAMs_20 IAMs_20 11 59 31.4
comp=Z,2µm,19.0s
VNA1 Neumayer-Stat **92.57 176** ⇑P P 11 18 58.0 -4.4
YKA Yellowknife Ar **92.81 24** P **P** **11 19 01.8 -1.7**
comp=Z,0.2nm,0.6s,baz=235,slow=23,SNR=3.7
YKA LR LR 11 53 12.0
comp=Z,9µm,21.5s,baz=244,slow=31
comp=Z,0.2nm,0.6s
ULN Ulaanbaatar **92.88 319** P **P** **11 19 05.2 +0.8**
ULN Ulaanbaatar **92.88 319** ⇓*i*P **P** **11 19 03.6 -0.8**
ULN pmax pmax
comp=Z,22nm,1.5s
BOD Bodaibo **93.10 330** *e*P **P** **11 19 06.7 +1.8**
BOD pmax pmax
comp=Z,14nm,1.6s
SONM Songino Array **93.28 319** IAmb IAmb 11 19 13.4
comp=Z,26nm,1.8s
SONM Songino Array **93.28 319** P **P** **11 19 05.6 -0.6**
comp=Z,2.8nm,1.2s,baz=108,slow=4.8,SNR=8.5
SONM PP **PP** **11 22 46.8 -3.4**
comp=Z,1.2nm,1.1s,baz=132,slow=6.4,SNR=3.5
SONM LR LR 11 56 35.4
comp=Z,1µm,21.0s,baz=110,slow=33
comp=Z,2.8nm,1.2s
C36M Paulatuk **93.64 17** IAmb IAmb 11 19 10.4
comp=Z,16nm,1.1s
C36M IAMs_20 IAMs_20 11 56 02.1
comp=Z,3µm,20.0s
C36M Paulatuk **93.64 17** P **P** **11 19 07.4 +0.2**
baz=230
TGUH Tegucigalpa,Un **94.04 77** IAMs_20 IAMs_20 11 51 14.0
comp=Z,3µm,22.0s
MDND Maddock **94.25 41** P **P** **11 19 09.7 -0.8**
baz=250
TEIG Tepich **94.81 70** LR LR 11 53 21.2
comp=Z,13µm,21.3s,baz=25,slow=30
GTA Gaotai **95.02 310** *e*P **P** **11 19 14.7 +0.3**
GTA pP pwP 11 19 19.1 -1.7
GTA SKS **SKSac** **11 29 49.3 -0.9**
GTA S **S** **11 30 27.2 -1.9**
GTA SS **SS** **11 36 50.0 -5.0**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA LR LR
comp=Z,1µm,18.3s
GTA LR LR
comp=Z,940nm,18.7s
GTA LR LR
comp=Z,1µm,21.1s
A36M Sachs Harbour **95.05 14** IAmb IAmb 11 19 17.5
comp=Z,15nm,0.8s
A36M Sachs Harbour **95.05 14** P **P** **11 19 13.3 -0.3**
baz=229
JTS Las Juntas de **95.19 81** LR LR 11 51 32.3
comp=Z,5µm,21.7s,baz=247,slow=29
TIXI Tiksi **95.23 345** P **P** **11 19 17.0 +2.6**
TIXI IAmb IAmb 11 19 17.6
comp=Z,23nm,1.8s
TIXI Tiksi **95.23 345** IAMs_20 IAMs_20 11 55 03.4
comp=Z,4µm,22.0s
TIXI Tiksi **95.23 345** P **P** **11 19 17.0 +2.6**
TIXI pmax pmax
comp=Z,23nm,1.8s
S39A Bolivar **95.44 52** IAmb IAmb 11 19 24.3
comp=Z,14nm,1.2s
HDC Heredia **95.90 81** IAMs_20 IAMs_20 11 51 31.6
comp=Z,3µm,22.0s
LCO Las Campanas **95.92 122** IAMs_20 IAMs_20 11 52 31.4
comp=Z,4µm,21.0s
ZAK Zakamensk **96.07 321** *e*P **P** **11 19 17.2 -1.7**
ZAK pmax pmax
comp=Z,5.0nm,1.6s
MGMO Mountain Grove **96.09 53** IAmb IAmb 11 19 37.4
comp=Z,19nm,1.3s
NNA Nana **96.46 104** LR LR 11 54 23.4
comp=Z,1µm,18.6s,baz=242,slow=30
ATAH Atahualpa **96.50 99** LR LR 11 53 06.1
comp=Z,5µm,21.4s,baz=242,slow=29
SCIA State Center **96.72 48** IAMs_20 IAMs_20 11 54 50.8
comp=Z,3µm,22.0s
AGMN Agassiz Nation **96.77 42** IAMs_20 IAMs_20 11 58 02.6
comp=Z,4µm,20.0s
BRDH Bariadhala **97.16 291** LR LR 12 00 42.6
comp=Z,2µm,21.5s,baz=91,slow=34
ULM Lac du Bonnet **97.34 40** LR LR 11 56 12.6
comp=Z,4µm,21.6s,baz=258,slow=31
OXF Oxford **97.63 56** IAMs_20 IAMs_20 12 00 13.9
comp=Z,2µm,18.0s
TRQA Tornquist **98.59 134** IAMs_20 IAMs_20 12 03 00.8
comp=Z,2µm,18.0s
JFWS Jewell Farm **99.10 48** IAMs_20 IAMs_20 11 57 59.9
comp=Z,2µm,19.0s
WVT Waverly **99.28 55** IAMs_20 IAMs_20 11 58 15.5
comp=Z,2µm,20.0s
EYMN Ely **99.49 43** IAMs_20 IAMs_20 11 59 32.6
comp=Z,3µm,19.0s
COWI Conover **100.62 45** IAMs_20 IAMs_20 11 59 39.8
comp=Z,2µm,20.0s
O48B Farmland **102.24 51** IAMs_20 IAMs_20 11 59 29.5
comp=Z,2µm,20.0s
P49A Miami Univ. Ec **102.42 52** IAMs_20 IAMs_20 12 02 38.6
comp=Z,2µm,20.0s
TZTN Tazewell **102.74 55** IAMs_20 IAMs_20 12 00 01.2
comp=Z,3µm,21.0s
GLMI Grayling **103.48 47** IAMs_20 IAMs_20 11 59 03.7
comp=Z,3µm,21.0s
AAM Ann Arbor **103.73 50** IAMs_20 IAMs_20 12 03 05.5
comp=Z,3µm,18.0s
ACSO Alum Creek Sta **103.86 52** IAMs_20 IAMs_20 12 00 58.7
comp=Z,3µm,21.0s
P52A Corning **104.41 53** IAMs_20 IAMs_20 12 07 37.0
comp=Z,2µm,18.0s
O53A New Philadelph **105.20 52** IAMs_20 IAMs_20 12 06 45.1
comp=Z,2µm,18.0s
BLA Blacksburg **105.33 55** IAMs_20 IAMs_20 12 01 54.7
comp=Z,3µm,21.0s
MCWV Mont Chateau **106.15 53** IAMs_20 IAMs_20 12 17 07.3
comp=Z,2µm,19.0s
CBN Corbin Frederi **107.86 55** IAMs_20 IAMs_20 12 04 56.8
comp=Z,2µm,20.0s
ZALV Zalesovo Beam **107.88 322** PKiKP **PKiKP** **11 24 17.9 -0.7**
comp=Z,0.7nm,0.5s,baz=102,slow=4.7,SNR=2.0
MKAR Makanchi Array **108.99 314** PKiKP **PKiKP** **11 24 20.1 -0.9**
comp=Z,1.4nm,0.8s,baz=83,slow=1.4,SNR=12
MKAR PKKPbc **PKKPbc** **11 35 29.3 -0.5**
comp=Z,0.4nm,0.7s,baz=259,slow=2.9,SNR=4.0
SAML Samuel **110.11 106** IAMs_20 IAMs_20 12 02 01.9
comp=Z,3µm,19.0s
TRY Troy **111.11 50** IAMs_20 IAMs_20 12 03 44.8
comp=Z,3µm,22.0s
WSPT Westport, CT **111.26 52** IAMs_20 IAMs_20 12 11 10.4
comp=Z,2µm,18.0s
KURK Kurchatov **111.57 318** *i* PKiKP **PKiKP** **11 24 24.2 -1.5**
KURK pmax pmax
comp=Z,11nm,1.9s
KURBB Kurchatov Arra **111.63 318** PKiKP **PKiKP** **11 24 25.0 -0.8**
comp=Z,2.1nm,0.9s,baz=98,slow=2.0,SNR=13
KURBB PP **PP** **11 25 05.7 -2.0**
comp=Z,2.2nm,1.1s,baz=100,slow=6.9,SNR=6.7
L61B Northampton **111.82 50** IAMs_20 IAMs_20 12 03 04.7
comp=Z,3µm,22.0s
VT1 Waterbury **111.85 48** IAMs_20 IAMs_20 12 06 57.4
comp=Z,3µm,19.0s
LBNH Lisbon **112.44 49** IAMs_20 IAMs_20 12 07 54.0
comp=Z,3µm,20.0s
HRV Adam Dziewonsk **112.65 50** IAMs_20 IAMs_20 12 05 13.7
comp=Z,2µm,21.0s
PKME Peaks-Kenny Pk **114.33 47** IAMs_20 IAMs_20 12 08 33.8
comp=Z,3µm,20.0s
AAK Ala-Archa **114.37 310** *c* *i* PKiKP PKPdf 11 24 30.1 -1.4
AAK pmax pmax
comp=Z,5.0nm,1.7s

AAK	Ala-Archa	114.37 310	PKP	PKPdf	11 24 28.5	-3.0	
	comp=Z,1.1nm,0.6s,baz=195,slow=22,SNR=1.4						
BVAR	Borovoye Array	116.52 321	PKP	PKPdf	11 24 32.1	-3.0	
	comp=Z,2.2nm,0.6s,baz=95,slow=2.2,SNR=9.1						
BVAR			PP	PP	11 25 41.5	-0.7	
	comp=Z,2.3nm,1.0s,baz=89,slow=6.4,SNR=4.2						
BRVK	Borovoye	116.58 321		PKPdf	11 24 34.5	-0.7	
BRVK	Borovoye	116.58 321	*c i* PKIKP	PKiKP	11 24 35.8	+0.6	
BRVK			pmax	pmax			
	comp=Z,11nm,1.7s						
SPB	Sao Paulo	116.80 128	IAMs_20	IAMs_20	12 06 13.0		
	comp=Z,3μm,20.0s						
KKAR	Karatay Array	117.29 310		PKPdf	11 24 35.2	-1.7	
KKAR	Karatay Array	117.29 310	PKIKP	PKPdf	11 24 35.2	-1.7	
FOMA	Nahampoana Res	120.15 227	IAMs_20	IAMs_20	12 05 32.4		
	comp=Z,2μm,21.0s						
VOI	Vohitsoka	122.19 230	IAMs_20	IAMs_20	12 07 41.9		
	comp=Z,3μm,22.0s						
ARU	Arti	122.38 327	*i* PKIKP	PKiKP	11 24 47.6	+1.2	
ARU					11 26 27.0		
ARU					11 31 59.2		
ARU			SS	SS	11 43 10.7	+8.5	
ARU	Arti	122.38 327	PKP	PKPdf	11 24 44.5	-1.7	
	comp=Z,5.1nm,0.2s,baz=296,slow=16,SNR=1.3						
ABKAR	Akbulak array	123.69 318	PKPdf	PKPdf	11 24 46.8	-2.2	
AKTO	Aktyubinsk	124.57 320	PKIKP	PKPdf	11 24 49.0	-1.7	
AKTO	Aktyubinsk	124.57 320	PKP	PKPdf	11 24 49.0	-1.7	
	comp=Z,4.0nm,0.9s,baz=52,slow=1.6,SNR=8.4						
KEV	Kevo	124.84 350	IAMs_20	IAMs_20	12 15 42.1		
	comp=Z,2μm,22.0s						
ARCES	ARCESS Array B	125.28 350	PKP	PKPdf	11 24 51.1	-0.4	
	comp=Z,5.4nm,0.9s,baz=336,slow=1.1,SNR=3.4						
KIRV	Kirov	125.93 332	*i* PKIKP	PKPdf	11 24 53.0	0.0	
GEYT	Alibeck	127.16 305	PKP	PKPdf	11 24 53.2	-2.9	
	comp=Z,2.6nm,0.6s,baz=288,slow=0.9,SNR=0.6						
KLMR	Klimovskoe	128.61 338	*e*PKIKP	PKiKP	11 24 59.1	+0.4	
KLMR			pmax	pmax			
	comp=Z,44nm,1.7s						
KLMR			MLR	MLR			
	comp=Z,2μm,20.0s						
BELG	Belogornoye	129.85 326	*i* PKIKP	PKiKP	11 25 01.9	+0.5	
VRH	Novokhopyorsk	133.61 327	*e*PKIKP	PKPdf	11 25 07.9	+0.1	
VRH			pmax	pmax			
	comp=Z,30nm,1.9s						
OBN	Obninsk	133.66 334	*i* PKIKP	PKPdf	11 25 08.1	+0.3	
OBN			*i*		11 27 34.5		
OBN			pmax	pmax			
	comp=Z,17nm,1.6s						
OBN			MLR	MLR			
	comp=Z,2μm,21.0s						
MAK	Makhachkala	133.81 314	*e*P	Pdif	11 22 00.6	-6.3	
MAK			*e*PPP	PPP	11 30 26.8		
MAK			*e*		11 32 18.1		
MAK			*e*SS	SS	11 45 18.5	-6.3	
MAK			pmax	pmax			
	comp=Z,194nm,1.3s						
LPSR	Galich'ya Gora	134.20 330	*e*PKIKP	PKPdf	11 25 06.7	-2.2	
LPSR			pmax	pmax			
	comp=Z,10.0nm,1.7s						
VORR	Voronezh	134.63 329	*e*PKIKP	PKiKP	11 25 14.7	+3.6	
VORR			pmax	pmax			
	comp=Z,40nm,0.4s						
VSR	Storozhevoye	134.92 328	*e*PKIKP	PKPdf	11 25 09.9	-0.4	
VSR			pmax	pmax			
	comp=Z,10.0nm,1.3s						
RCBR	Riachuelo	135.82 117	IAMs_20	IAMs_20	12 18 57.2		
	comp=Z,2μm,20.0s						
MNK	Minsk	137.50 338	*i* PKIKP	PKPdf	11 25 10.7	-4.3	
MNK			*i*		11 27 55.6		
MNK			*i*		11 32 21.4		
MNK			*i* PS	PS	11 38 21.6	-6.6	
MNK			*i* SS	SS	11 46 03.4	-4.1	
MNK			*i* SSS	SSS	11 51 09.1		
MNK			pmax	pmax			
	comp=Z,5.0nm,0.5s						
MNK			pmax	pmax			
	comp=E,8.0nm,0.8s						
MNK			pmax	pmax			
	comp=N,37nm,1.0s						
MNK			MLR	MLR			
	comp=N,1μm,21.0s						
MNK			MLR	MLR			
	comp=Z,2μm,22.0s						
MNK			MLR	MLR			
	comp=E,397nm,21.0s						
PABE	Paberze	137.94 342	IAMs_20	IAMs_20	12 21 34.7		
	comp=Z,2μm,22.0s						
SOC	Sochi	138.73 318	*i* PKIKP	PKPdf	11 25 17.1	-0.5	
SOC			*e*		11 28 05.7		
SOC			*e*PPP	PPP	11 31 05.8		
SOC			*e*SS	SS	11 46 16.9	-6.3	
SOC			*e*SSS	SSS	11 51 27.1		
SUW	Suwalki	139.46 341	IAMs_20	IAMs_20	12 22 41.8		
	comp=Z,2μm,22.0s						
ANN	Anapa	139.52 321	*i* PKIKP	PKPdf	11 25 17.1	-1.9	
ANN			*e*		11 28 09.2		
ANN			pmax	pmax			
	comp=Z,64nm,1.1s						
ANN			MLR	MLR			
	comp=Z,2μm,21.0s						
AKASG	Malin Array Be	139.92 334	PKP	PKPdf	11 25 19.0	-0.5	
	comp=Z,2.6nm,0.9s,baz=32,slow=2.1,SNR=9.5						
KIEV	Kiev	139.93 334	⇓P	PKPdf	11 25 20.0	+0.5	
KIEV	Kiev	139.93 334		PKPdf	11 25 20.2	+0.6	
KIEV	Kiev	139.93 334	PKIKP	PKPdf	11 25 20.2	+0.6	
KIEV			MLR	MLR			
	comp=Z,2μm,20.0s						
KIBK	Kibwezi	140.26 245	IAMs_20	IAMs_20	12 23 47.0		
	comp=Z,2μm,20.0s						
ATD	Arta Tunnel	140.71 268	IAMs_20	IAMs_20	12 25 10.5		
	comp=Z,2μm,19.0s						
KMBO	Kilima Mbogo	141.54 246	IAMs_20	IAMs_20	12 27 32.2		
	comp=Z,1μm,20.0s						
KMBO	Kilima Mbogo	141.54 246	PKhKP	PKPpre	11 25 17.6		
	comp=Z,1.0nm,0.3s,baz=96,slow=8.1,SNR=3.6						
LVV	L'vov	142.69 337	*e*PKIKP	PKPdf	11 25 23.5	-1.1	
KWP	Kalwaria Pacla	143.33 338	IAMs_20	IAMs_20	12 30 35.3		
	comp=Z,2μm,20.0s						
BURAR	Bucovina Array	143.98 334	⇑P	PKPdf	11 25 26.6	-0.5	
BURAR	Bucovina Array	143.98 334	⇑PKIKP	PKPdf	11 25 26.6	-0.5	
FURI	Furi	144.05 262	IAMs_20	IAMs_20	12 32 13.9		
	comp=Z,1μm,19.0s						
KOLS	Kolonicke sedl	144.07 338	*e*PKIKP	PKPdf	11 25 27.0	0.0	
KOLS	Kolonicke sedl	144.07 338	*e*PKP	PKPdf	11 25 27.0	0.0	
CFR	Carcaliu	144.44 328	⇑P	PKiKP	11 25 31.1	-0.3	
CFR	Carcaliu	144.44 328	⇑PKIKP	PKiKP	11 25 31.1	-0.3	
CLL	Collm	144.47 349	IAMs_20	IAMs_20	12 33 04.2		
	comp=Z,2μm,19.0s						
CLL	Collm	144.47 349	*e*PKPbc	PKPdf	11 25 29.4	+1.8	
	baz=13,slow=3.0						
OSTC	Oetas	144.48 345	AMS	AMS	12 37 00.0		
	comp=Z,1μm,16.2s						
CHVC	Chvalec	144.49 345	*e*PKP	PKPab	11 25 25.5	-0.5	
CHVC			AMS	AMS	12 36 50.0		
	comp=Z,1μm,22.0s						
CHVC	Chvalec	144.49 345	*e*PKIKP	PKPab	11 25 25.5	-0.5	
CHVC			MLR	MLR			
	comp=Z,1μm,22.0s						
TPGR	Topolog	144.52 328	⇑P	PKPdf	11 25 27.3	-0.6	
BR131	Keskin Array S	144.60 317	PKPdf	PKPbc	11 25 27.5	+0.4	
BR131	Keskin Array S	144.60 317	PKIKP	PKPbc	11 25 27.5	+0.4	
BRTR	Keskin Array B	144.60 317	PKPdf	PKPab	11 25 26.4	-0.6	
BRTR	Keskin Array B	144.60 317	PKIKP	PKPab	11 25 26.4	-0.6	
BRTR	Keskin Array B	144.60 317	PKP	PKPab	11 25 25.6	-1.4	
	comp=Z,13nm,0.9s,baz=123,slow=1.2,SNR=20						
OKC	Ostrava-Krasne	144.62 343	AMS	AMS	12 31 50.0		
	comp=Z,2μm,22.1s						
VRI	Vrincioaia	144.63 330	⇑P	PKPab	11 25 23.4	-3.3	
VRI	Vrincioaia	144.63 330	⇑PKHKP	PKPpre	11 25 23.4		
DPC	Dobruska-Polom	144.65 345	*e*PKP	PKPab	11 25 25.8	-0.8	
DPC			AMS	AMS	12 35 30.0		
	comp=Z,2μm,19.5s						
DPC	Dobruska-Polom	144.65 345	*e*PKIKP	PKPab	11 25 25.8	-0.8	
DPC			MLR	MLR			
	comp=Z,2μm,19.5s						
PLOR	Plostina	144.68 331	⇑P	PKPdf	11 25 28.5	+0.2	
PLOR	Plostina	144.68 331	⇑PKIKP	PKPdf	11 25 28.5	+0.2	
BRG	Berggiesshubel	144.70 348	*e*PKP	PKPdf	11 25 28.9	+0.8	
BRG			Amp		11 25 30.7		
	comp=Z,3.3nm,0.8s						
BRG	Berggiesshubel	144.70 348	P	PKiKP	11 25 38.2	+6.4	
BRG			Amp		11 25 38.6		
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	144.70 348	*e*PKIKP	PKPdf	11 25 28.0	-0.1	
BRG			*i*		11 25 32.5		
	comp=Z,38nm,1.6s						
BRG			pmax	pmax			
	comp=Z,2μm,18.8s						
KRLC	Kraliky	144.78 344	*e*PKP	PKPbc	11 25 27.1	-0.1	
KRLC			MLR	MLR			
	comp=Z,1μm,19.1s						
KRLC	Kraliky	144.78 344	*e*PKIKP	PKPbc	11 25 27.1	-0.1	
KRLC			AMS	AMS	12 35 50.0		
	comp=Z,1μm,19.1s						
TIRR	Tirgusor	144.80 327	⇑P	PKPdf	11 25 28.2	-0.2	
TIRR	Tirgusor	144.80 327	⇑PKIKP	PKPdf	11 25 28.2	-0.2	
TURR	Turia	144.82 331	⇑P	PKPdf	11 25 28.9	+0.5	
LANS	Liptovska Anna	144.83 341	*e*PKIKP	PKPdf	11 25 28.7	+0.3	
LANS	Liptovska Anna	144.83 341	*e*PKP	PKPdf	11 25 28.7	+0.3	
MORC	Moravsky Berou	144.85 343	⇑P	PKPbc	11 25 27.7	+0.3	
MORC	Moravsky Berou	144.85 343	PKPdf	PKPbc	11 25 27.8	+0.4	
MORC	Moravsky Berou	144.85 343	*e*PKP	PKPab	11 25 26.5	-0.9	
MORC	Moravsky Berou	144.85 343	⇑PKIKP	PKPbc	11 25 27.7	+0.2	
OZUR		144.89 332	⇑P	PKPbc	11 25 27.8	0.0	
RICC	Richard	144.98 347	AMS	AMS	12 31 40.0		
	comp=Z,2μm,22.7s						
HSKC	Hora Svate Kat	145.06 348	*e*PKP	PKiKP	11 25 30.8	-1.8	
MAUC	Maruska	145.14 343	*e*PKP	PKPab	11 25 27.7	-0.8	
DOPR	Dopca	145.17 332	⇑P	PKPab	11 25 27.0	-1.7	
LODK	Lodwar	145.26 251	IAMs_20	IAMs_20	12 28 35.4		
	comp=Z,2μm,19.0s						
ISR	Istrita	145.26 330	⇑P	PKPdf	11 25 30.1	+0.8	
ISR	Istrita	145.26 330	⇑PKIKP	PKPdf	11 25 30.1	+0.8	
MLR	Muntele Rosu	145.28 331	⇑P	PKPdf	11 25 30.8	+1.4	
MLR	Muntele Rosu	145.28 331	⇑PKIKP	PKPdf	11 25 30.8	+1.4	
PRA	Prague	145.35 347	AMS	AMS	12 27 40.0		
	comp=Z,2μm,19.8s						
MOX	Moxa	145.36 350	*e*PKPbc	PKiKP	11 25 32.3	-0.8	
	baz=13,slow=3.0						
CJR	Cluj-Napoca	145.37 334	⇓P	PKiKP	11 25 33.6	+0.2	
CJR	Cluj-Napoca	145.37 334	⇓PKIKP	PKiKP	11 25 33.6	+0.2	
PRU	Pruhonice	145.41 346	*e*PKP	PKPab	11 25 29.1	-0.3	
PRU			AMS	AMS	12 22 40.0		
	comp=Z,2μm,21.7s						
PRU	Pruhonice	145.41 346	*e*PKIKP	PKPab	11 25 29.1	-0.3	
PRU			MLR	MLR			
	comp=Z,2μm,21.7s						
PLN	Plauen	145.42 349	*e*PKPbc	PKPbc	11 25 28.6	-0.6	
	baz=13,slow=3.0						
GOPC	GO Pecny, Ondr	145.42 346	*e*PKP	PKPab	11 25 29.2	-0.3	
GOPC			AMS	AMS	12 38 40.0		
	comp=Z,2μm,21.5s						
GOPC	GO Pecny, Ondr	145.42 346	*e*PKIKP	PKPab	11 25 29.2	-0.3	
GOPC			MLR	MLR			
	comp=Z,2μm,21.5s						
TANN	Tannenbergstha	145.43 349	*e*PKPbc	PKiKP	11 25 31.9	-1.5	
	baz=13,slow=3.0						
VRAC	Vranov	145.53 344	⇓P	PKPdf	11 25 29.9	+0.4	
VRAC	Vranov	145.53 344	*e*PKP	PKPbc	11 25 28.8	-0.8	
VRAC	Vranov	145.53 344	PKPbc	PKPbc	11 25 28.3	-1.3	
	comp=Z,64nm,1.2s,baz=60,slow=2.2,SNR=12						
MARR	Marisel-Cluj	145.59 335	⇑P	PKPbc	11 25 27.8	-2.2	
NKC	Novy Kostel	145.60 349	AMS	AMS	12 31 40.0		
	comp=Z,2μm,19.1s						
VYHS	Vyhne	145.61 341	*e*PKP	PKPbc	11 25 29.0	-0.9	
JAVC	Velka Javorina	145.64 342	*e*PKP	PKPab	11 25 30.1	-0.2	
DRGR		145.67 335	⇑P	PKPbc	11 25 28.0	-2.2	
DRGR		145.67 335	⇑PKP2	PKPbc	11 25 28.0	-2.2	
VOIR		145.73 332	⇑P	PKPab	11 25 30.5	-0.3	
VOIR		145.73 332	⇑PKIKP	PKPab	11 25 30.5	-0.3	
PSZ	Piszkesteto	145.77 339	⇑P	PKiKP	11 25 32.6	-1.6	
PSZ	Piszkesteto	145.77 339	IAMs_20	IAMs_20	12 29 27.7		
	comp=Z,2μm,21.0s						
PSZ	Piszkesteto	145.77 339	⇑PKIKP	PKiKP	11 25 32.6	-1.6	
KRUC	Moravsky	145.81 344	*e*PKP	PKPdf	11 25 28.3	-1.7	
MANZ	Manzenberg	145.90 349	*e*PKPbc	PKPab	11 25 31.8	+0.5	
	baz=13,slow=3.0						
ARR	Arges	145.97 332	⇑P	PKPdf	11 25 30.4	-0.1	
ZVC	Zvikov	146.00 346	*e*PKP	PKPdf	11 25 30.1	-0.2	
ZVC			AMS	AMS	12 28 40.0		
	comp=Z,2μm,18.4s						
AHRW	Bad Neuenahr-A	146.03 355	*e*PKPbc	PKiKP	11 25 33.2	-1.3	
	baz=13,slow=3.0						
MEM	Membach	146.04 356	*d*PKP	PKiKP	11 25 34.4	-0.1	
BTNL	Ternell	146.06 356	*d*PKP	PKPab	11 25 32.2	+0.4	
BSTI	Sart Tilman	146.10 357	*d*PKP	PKPab	11 25 32.2	+0.3	
ROTZ	Rotzenmuhle	146.10 349	*e*PKPbc	PKiKP	11 25 33.2	-1.5	
	baz=13,slow=3.0						
MODS	Modra-Piesok	146.19 342	*e*PKP	PKPab	11 25 32.1	-0.3	
TNS	Taunus Mts	146.21 353	*e*PKPbc	PKPab	11 25 32.9	+0.4	
	baz=13,slow=3.0						
BCLA	Clavier	146.27 357	*d*PKP	PKiKP	11 25 34.6	-0.4	
MMAI	Mount Meron Ar	146.28 305	PKPbc	PKPdf	11 25 31.2	-0.2	
	comp=Z,18nm,0.8s,baz=63,slow=3.8,SNR=17						
BHOU	Houvegnez	146.30 356	*d*PKP	PKPbc	11 25 31.7	-0.2	
BGES	Gesves	146.32 357	*d*PKP	PKiKP	11 25 34.6	-0.5	
DEV	Deva	146.32 334	⇓P	PKiKP	11 25 34.3	-1.0	
DEV	Deva	146.32 334	⇓PKP2	PKiKP	11 25 34.3	-1.0	
GRA1	Grafenberg Arr	146.34 350	IAMs_20	IAMs_20	12 28 41.6		
	comp=Z,2μm,22.0s						
GRF	Grafenberg Arr	146.34 350	*e*PKPbc	PKiKP	11 25 34.0	-1.2	
	baz=13,slow=3.0						
GRFO	Grafenberg	146.34 350	IAMs_20	IAMs_20	12 28 40.7		
	comp=Z,2μm,22.0s						
ZST	Bratislava	146.40 342	*e*PKP	PKPab	11 25 33.0	-0.1	
BMRD	Maredsous	146.42 358	*d*PKP	PKiKP	11 25 35.5	+0.2	
KHC	Kasperske Hory	146.43 347	*e*PKP	PKPbc	11 25 32.4	0.0	
KHC			AMS	AMS	12 32 50.0		
	comp=Z,2μm,18.5s						
KHC	Kasperske Hory	146.43 347	*e*PKP2	PKPbc	11 25 32.4	0.0	
KHC			MLR	MLR			
	comp=Z,2μm,18.5s						
RCHB	Rochefort	146.54 357	*d*PKP	PKiKP	11 25 34.5	-1.1	
CKRC	Cesky Krumlov	146.56 346	*e*PKP	PKPbc	11 25 32.3	-0.5	
CKRC			AMS	AMS	12 37 00.0		
	comp=Z,2μm,18.1s						
CKRC	Cesky Krumlov	146.56 346	*e*PKP2	PKPbc	11 25 32.3	-0.5	
CKRC			MLR	MLR			
	comp=Z,2μm,18.1s						
WET	Wettzell	146.56 348	*e*PKPbc	PKPab	11 25 34.0	+0.2	
	baz=13,slow=3.0						
DOU	Dourbes	146.63 358	*d*PKP	PKiKP	11 25 36.4	+0.6	
GEC2	GERESS Array S	146.67 347	*e*PKPbc	PKPab	11 25 33.7	-0.6	
	baz=13,slow=3.0						
GERES	GERESS Array B	146.67 347	PKPbc	PKPdf	11 25 31.8	+0.1	
	comp=Z,6.1nm,0.7s,baz=35,slow=4.9,SNR=12						
SURR	Surduc	146.75 335	⇑P	PKPdf	11 25 32.2	+0.5	
GZR	Gura Zlata	146.77 334	⇑P	PKPbc	11 25 33.6	0.0	
GZR	Gura Zlata	146.77 334	⇑PKP2	PKPbc	11 25 33.6	0.0	
WLF	Walferdange	146.97 356	*d*PKP	PKPbc	11 25 33.7	-0.2	
WLF	Walferdange	146.97 356	PKP	PKPbc	11 25 33.5	-0.4	
WLF	Walferdange	146.97 356	*e*PKPbc	PKPab	11 25 35.3	0.0	
	baz=13,slow=3.0						
CONA	Conrad Observa	146.99 344	*i* PKiKP	PKiKP	11 25 36.1	-0.6	
	comp=Z,33nm,1.2s,SNR=18						
BZS	Buzias	147.06 335	⇑P	PKPdf	11 25 33.2	+0.9	
BZS	Buzias	147.06 335	⇑PKP2	PKPdf	11 25 33.2	+0.9	
RONA	Rosalia, Austr	147.08 343	*i* PKiKP	PKPab	11 25 35.7	-0.1	
	comp=Z,43nm,1.2s,SNR=12						
CSS	Mathiatis	147.10 309	IAMs_20	IAMs_20	12 38 54.5		
	comp=Z,1μm,21.0s						
ELND	Elena	147.18 328	⇑P	PKPbc	11 25 34.2	-0.5	
HERR	Herculane	147.33 334	⇑P	PKPbc	11 25 34.4	-0.7	
MBAR	Mbarara	147.39 241		PKPbc	11 25 35.7	-0.7	
MBAR	Mbarara	147.39 241	*c i* PKP2	PKPab	11 25 38.4	+0.1	
MBAR			pmax	pmax			
	comp=Z,29nm,1.3s						
MBAR	Mbarara	147.39 241	*e*P	PKPab	11 25 38.7	+0.4	
MOA	Molln	147.47 345	*i* PKiKP	PKPab	11 25 36.5	-0.9	
	comp=Z,64nm,1.3s,SNR=7.6						
PLVB	Pleven	147.47 329	⇑P	PKiKP	11 25 38.3	+0.6	
MORH	Mrgy, Hungar	147.67 339	⇑P	PKPbc	11 25 36.6	+0.7	
ISP	Isparta	147.67 316	IAMs_20	IAMs_20	12 41 25.0		
	comp=Z,1μm,20.0s						
ARSA	Arzberg	147.71 343	*i* PKP	PKPbc	11 25 36.4	+0.3	
	comp=Z,32nm,1.3s,SNR=12						
MDVR	Moldovita	147.71 334	⇑P	PKPdf	11 25 34.0	+0.6	
BIOA	Bad Ischl, Aus	147.77 346	*i* PKP	PKPbc	11 25 36.9	+0.7	
	comp=Z,36nm,1.0s						
FUR	Furstenfeldbru	147.81 349	*e*PKPbc	PKPab	11 25 37.5	-1.2	
	baz=13,slow=3.0						
RJOB	Jochberg	147.92 347	*e*PKPbc	PKPab	11 25 39.3	+0.2	
	baz=13,slow=3.0						
BFO	Black Forest	148.09 353		PKPbc	11 25 36.7	-0.4	
BFO	Black Forest	148.09 353	PKP2	PKPbc	11 25 36.7	-0.4	
BFO	Black Forest	148.09 353	*e*PKPbc	PKiKP	11 25 38.1	-0.8	
	baz=13,slow=3.0						
FRGS	Fruska Gora	148.15 337	⇑P	PKiKP	11 25 39.4	+0.3	
BLKB	Belogradchik	148.21 332	⇑P	PKPbc	11 25 37.6	0.0	
LESA	Schwarzleotal	148.24 347	*i* PKP	PKiKP	11 25 38.7	-0.6	
	comp=Z,35nm,1.2s						
SOKA	Soboth	148.36 344	*i* PKiKP	PKPbc	11 25 38.4	+0.4	
	comp=Z,27nm,1.4s						
KBA	Koelnbreinsper	148.41 346	*i* PKP	PKPdf	11 25 34.9	+0.2	
	comp=Z,26nm,1.3s						
UBR	Ueberruh	148.48 350	*e*PKPbc	PKPab	11 25 42.3	+0.9	
	baz=13,slow=3.0						
WATA	Walderalm	148.55 348	*e*PKiKP	PKPbc	11 25 38.5	0.0	
	comp=Z,34nm,1.2s						
RETA	Reutte	148.55 349	*i* pPKiKP	PKPab	11 25 42.1	+0.4	
	comp=Z,20nm,0.9s						
WTTA	Wattenberg	148.60 348	*i* pPKP	PKiKP	11 25 39.7	-0.5	
	comp=Z,42nm,1.3s						
MOTA	Moosalm	148.63 349	*i* pPKP	PKiKP	11 25 39.8	-0.4	
	comp=Z,12nm,1.1s						
BOVS	Bovan	148.63 333	⇑P	PKPdf	11 25 35.3	+0.4	
ELL	Elmali	148.66 315		PKPbc	11 25 38.4	-0.7	
ELL	Elmali	148.66 315	PKP2	PKPbc	11 25 38.4	-0.7	
SQTA	Sankt Quirin	148.73 349	*i* PKiKP	PKPbc	11 25 39.5	+0.6	
	comp=Z,57nm,2.0s						
MYKA	Terra Mystica	148.76 345	*e*PKP	PKPab	11 25 41.6	-1.0	
	comp=Z,44nm,1.6s,SNR=6.7						
DAVA	Damuels	148.90 350	*e*PKP	PKPbc	11 25 38.5	-0.9	
	comp=Z,43nm,1.2s						
ABTA	Abfaltersbach	148.92 347	*e*PKP	PKPbc	11 25 37.8	-1.6	
	comp=Z,32nm,1.1s						
FETA	Feichten	149.01 349	*i* pPKiKP	PKPab	11 25 43.3	-0.4	
	comp=Z,31nm,1.3s,SNR=8.2						
CIMO	Cimolais	149.35 347		PKPbc	11 25 38.8	-1.6	
DAVOX	Davos/Dischmat	149.39 350	PKPbc	PKPdf	11 25 37.8	+1.5	
	comp=Z,14nm,0.7s,baz=217,slow=4.2,SNR=14						
FUORN	Ofenpass-Fuorn	149.48 350	IAMs_20	IAMs_20	12 33 32.6		
	comp=Z,2μm,21.0s						
STIP	Stip	149.93 330	*i* P	PKPbc	11 25 42.0	0.0	
VAY	Valandovo	150.03 329	*i* P	PKPbc	11 25 42.0	-0.1	
SKO	Skopje	150.07 331	*i* P	PKiKP	11 25 43.8	+0.7	
OHR	Ohrid	151.04 331	*i* P	PKiKP	11 25 46.6	+1.3	
KARP	Karpathos	151.18 315		PKPdf	11 25 40.0	+0.8	
KARP			IAMs_20	IAMs_20	12 42 02.0		
	comp=Z,1μm,20.0s						
ZCCA	Zocca	151.53 347		PKPdf	11 25 40.7	+1.2	
IDI	Anoyia	152.84 317	PKP	PKPdf	11 25 43.5	+1.7	
INTR	Introdacqua	152.96 341		PKPdf	11 25 42.7	+0.9	
PGAV	Gavieira, Arco	153.12 18	*e*LR	LR	12 17 46.6		
	comp=Z,4μm,18.0s						
ECAL	Calabor	153.57 16	PKP	PKPdf	11 25 41.8	-0.9	
MVO	Moncorvo	154.21 17	*e*LR	LR	12 18 15.8		
	comp=Z,3μm,22.0s						
MTE	Manteigas	154.77 18	*e*LR	LR	12 18 34.1		
	comp=Z,3μm,20.0s						
PMAFR	Mafra	155.48 23	PKP	PKPdf	11 25 43.2	-2.1	
PMRV	Marv??o	155.71 19	*e*LR	LR	12 19 01.3		
	comp=Z,3μm,20.0s						
ESDC	Sonseca Array	156.38 13	PKP	PKPdf	11 25 46.4	-0.1	
	comp=Z,0.3nm,0.2s,baz=355,slow=1.4,SNR=2.1						
MAHO	Mahon	156.82 357	IAMs_20	IAMs_20	12 29 48.9		
	comp=Z,2μm,22.0s						
TOA0	Torodi Ar. Sit	176.37 165		PKPdf	11 25 56.7	-5.9	
TORD	Torodi Ar. Bea	176.37 165	PKP	PKPdf	11 26 00.9	-1.7	
	comp=Z,2.5nm,1.0s,baz=345,slow=4.6,SNR=3.7						

TEH ***01*** *11:07:31.9, 34.˚73N×45.˚66E, h8km, 28km, ML3.5*
IDC ***01*** *11:07:32.8±2.0, 35.˚11N×45.˚52E, h0km, mb4.0/4, mbtmp4.0/4, MS2.8/2, Error ellipse: s-maj=64.5km s-min=27.9km az=155.0*
ISN ***01*** *11:07:34.2±1.1, 34.˚75N×45.˚76E, h32km±9km, ML3.7*
ISC 01 11:07:33.1±0.8, **34.˚75N**±0.˚04×**45.˚70E**±0.˚04, **h10km, n35,** σ1°**39**/36, **mb3.8/4, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.26	200	Pg	**Pg**	**11 07 37.0**	**-1.3**
IDHR	Dehrash	0.57	95	Pg	**Pg**	**11 07 43.4**	**-0.8**
IDHR				Sg	**Sb**	**11 07 53.4**	**-0.2**
IGHG	Ghaleghazi	0.83	120

MLv1.8/9
*IGIL **01** 11:42:09.1,36˚.78N×9˚.64W,h18km,ML1.4*
ISC 01 11:42:02.5±1.8,36˚.58N±0˚.03×9˚.87W±0˚.07,h27km±15km,
n45,σ1ŝ71/71,1C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.00**	**56**	*iP*	**Pn**	**11 42 22.9**	**+2.2**
PFVI				*eS*	**Sn**	**11 42 33.5**	**-0.5**
PFVI				A	A	11 42 33.9	
	9.6nm,0.3s						
PFVI	**Vila Bisbo**	**1.00**	**56**	Pg	**Pn**	**11 42 22.9**	**+2.2**
PFVI				Sg	**Sn**	**11 42 33.2**	**-0.8**
PFVI	**Vila Bisbo**	**1.00**	**56**	P	**Pn**	**11 42 22.2**	**+1.4**
MORF	**Marmelete**	**1.21**	**53**	*eP*	**Pb**	**11 42 25.9**	**+1.1**
MORF				*eS*	**Sb**	**11 42 38.6**	**-1.5**
MORF				A	A	11 42 40.6	
	8.0nm,0.2s						
MORF	**Marmelete**	**1.21**	**53**	*eP*	**Pb**	**11 42 25.9**	**+1.1**
MORF				*eS*	**Sn**	**11 42 38.0**	**-1.2**
MORF				IAML		11 42 38.9	
	comp=E,16nm,0.1s						
PTEO	**Sao Teotonio**	**1.33**	**43**	*eP*	**Pb**	**11 42 26.4**	**-0.3**
PTEO				*eS*	**Sn**	**11 42 41.5**	**-0.6**
PTEO				A	A	11 42 45.9	
	comp=E,8.2nm,0.8s						
PBDV	**Barranco-do-Ve**	**1.69**	**66**	*eP*	**Pb**	**11 42 32.8**	**-0.1**
PBDV				*eS*	**Sn**	**11 42 50.6**	**-0.4**
PBDV				A	A	11 42 52.7	
	comp=E,5.3nm,1.0s						
PBDV	**Barranco-do-Ve**	**1.69**	**66**	Pn	**Pb**	**11 42 32.8**	**-0.1**
PBDV				Sn	**Sn**	**11 42 50.4**	**-0.5**
PCVE	**Castro Verde**	**1.80**	**54**	*eP*	**Pb**	**11 42 34.1**	**-0.7**
PCVE				*eS*	**Sn**	**11 42 53.2**	**-0.5**
PCVE				A	A	11 42 55.0	
	comp=E,4.5nm,0.2s						
PCVE	**Castro Verde**	**1.80**	**54**	Pn	**Pb**	**11 42 33.9**	**-0.9**
PCVE				Sn	**Sn**	**11 42 53.0**	**-0.7**
MESJ	**Messejana**	**1.82**	**46**	*eP*	**Pb**	**11 42 34.0**	**-1.1**
MESJ				*eS*	**Sn**	**11 42 53.0**	**-1.2**
MESJ				A	A	11 43 09.3	
	comp=E,4.3nm,0.8s						
MESJ	**Messejana**	**1.82**	**46**	*eP*	**Pb**	**11 42 34.0**	**-1.1**
MESJ				*eS*	**Sn**	**11 42 52.5**	**-1.6**
MESJ				IAML		11 42 53.0	
	comp=N,2.1nm,0.2s						
PNCL	**Nicolau / Gran**	**1.86**	**35**	*eP*	**Pb**	**11 42 34.6**	**-1.2**
PNCL				*eS*	**Sn**	**11 42 54.1**	**-1.2**
PNCL				A	A	11 42 58.0	
	comp=N,3.7nm,0.4s						
PNCL	**Nicolau / Gran**	**1.86**	**35**	Pn	**Pb**	**11 42 34.6**	**-1.2**
PNCL				Sn	**Sn**	**11 42 53.7**	**-1.6**
PVAQ	**Vaqueiros**	**1.91**	**64**	*eP*	**Pb**	**11 42 36.0**	**-0.6**
PVAQ				*eS*	**Sn**	**11 42 55.6**	**-0.8**
PVAQ	**Vaqueiros**	**1.91**	**64**	Sn	**Sn**	**11 42 55.5**	**-0.8**
PVAQ	**Vaqueiros**	**1.91**	**64**	P	**Pb**	**11 42 36.1**	**-0.6**
PVAQ	**Vaqueiros**	**1.91**	**64**	S	**Sn**	**11 42 56.5**	**+0.2**
PBEJ	**Beja**	**2.15**	**47**	*eS*	**Sn**	**11 43 00.3**	**-2.1**
PACT	**Alcochete**	**2.33**	**20**	*eS*	**Sn**	**11 43 07.5**	**+0.7**
PMAFR	**Mafra**	**2.42**	**11**	*eS*	**Sn**	**11 43 09.0**	**+0.1**
EVO	**Evora**	**2.44**	**37**	*eP*	**Pn**	**11 42 42.3**	**+1.7**
EVO				*eS*	**Sn**	**11 43 07.8**	**-1.8**
EVO				A	A	11 43 22.5	
	comp=N,12nm,0.1s						
EVO	**Evora**	**2.44**	**37**	Pn	**Pn**	**11 42 42.1**	**+1.6**
EVO				Sn	**Sn**	**11 43 07.4**	**-2.2**
PBAR	**Barrancos**	**2.76**	**54**	*eP*	**Pn**	**11 42 47.4**	**+2.4**
PBAR				*eS*	**Sn**	**11 43 16.4**	**-1.0**
PBAR				A	A	11 43 31.7	
	comp=N,1.9nm,0.6s						
PBAR	**Barrancos**	**2.76**	**54**	Pn	**Pn**	**11 42 47.3**	**+2.4**
PBAR				Sn	**Sn**	**11 43 16.0**	**-1.3**
PMTG	**Montargil**	**2.81**	**27**	*eP*	**Pn**	**11 42 47.3**	**+2.3**
PMTG				*eS*	**Sn**	**11 43 16.7**	**-1.8**
PMTG				A	A	11 43 17.6	
	comp=N,3.3nm,1.1s						
EMIN	**Mina Concepcio**	**2.81**	**64**	Sn	**Sn**	**11 43 16.8**	**-1.9**
EMIN				Pn	**Pn**	**11 42 47.6**	**+2.0**
EMIN	**Mina Concepcio**	**2.81**	**64**	P	**Pn**	**11 42 48.2**	**+2.5**
EMIN				S	**Sn**	**11 43 17.0**	**-1.7**
EMIN				*i* Vmb_Lg		11 43 25.7	
PESTR	**Estremoz**	**2.91**	**38**	*eS*	**Sn**	**11 43 19.6**	**-1.5**
EBAD	**Badajoz**	**3.14**	**45**	Pn	**Pn**	**11 42 51.5**	**+1.3**
EBAD				Sn	**Sn**	**11 43 24.9**	**-1.8**
EBAD	**Badajoz**	**3.14**	**45**	P	**Pn**	**11 42 51.2**	**+1.0**
EBAD				S	**Sn**	**11 43 24.6**	**-2.1**
EBAD				*i* Vmb_Lg		11 43 24.9	
ESPR	**Espera**	**3.24**	**84**	Sn	**Sn**	**11 43 28.3**	**-0.8**
ESPR	**Espera**	**3.24**	**84**	S	**Sn**	**11 43 28.9**	**-0.2**
PMRV	**Marv??o**	**3.45**	**34**	*eP*	**Pn**	**11 42 56.3**	**+1.8**
PMRV				*eS*	**Sn**	**11 43 32.5**	**-2.0**
PMRV				A	A	11 43 38.8	
	comp=N,2.2nm,0.9s						
PCAS	**Casmilo, Conde**	**3.63**	**17**	*eS*	**Sn**	**11 43 38.3**	**-0.6**
ECAB	**El Cabril**	**3.85**	**66**	P	**Pn**	**11 43 02.3**	**+2.3**
ECAB				S	**Sn**	**11 43 41.6**	**-2.7**
ECAB				*i* Vmb_Lg		11 43 47.4	
EADA	**Adamuz**	**4.50**	**68**	P	**Pn**	**11 43 11.6**	**+2.7**
EADA				S	**Sn**	**11 43 59.3**	**-1.1**
EADA				*i* Vmb_Lg		11 44 03.0	
MD31	**MD31**	**5.61**	**130**	P	**Pn**	**11 43 26.9**	**+2.7**
MD31	**MD31**	**5.61**	**130**	S	**Sn**	**11 44 24.6**	**-3.1**
MDT	**Midelt**	**5.74**	**129**	P	**Pn**	**11 43 28.1**	**+2.2**
MDT	**Midelt**	**5.74**	**129**	S	**Sn**	**11 44 28.8**	**-2.1**
TTIG	**Tnine Tigouga,**	**6.13**	**168**	P	**Pn**	**11 43 33.5**	**+2.1**
TTIG	**Tnine Tigouga,**	**6.13**	**168**	S	**Sn**	**11 44 35.9**	**-4.9**
OUZM	**OUZ**	**6.22**	**155**	P	**Pn**	**11 43 35.1**	**+2.5**
OUZM	**OUZ**	**6.22**	**155**	S	**Sn**	**11 44 42.3**	**-0.6**

*NEIC **01** 11:55:04.5±1.1,56˚.1N±0˚.1×149˚.4W±0˚.1,h21km±11km,*
ML3.5/46,ML3.2(AEIC),Error ellipse: s-maj=15.7km
s-min=8.7km az=159.0
*AEIC **01** 11:55:09.0±1.1,56˚.1N±0˚.1×149˚.4W±0˚.1,h11km±8km,*
Error ellipse: s-maj=15.5km s-min=9.1km az=165.0
ISC 01 11:55:03.0±2.1,56˚.1N±0˚.1×149˚.41W±0˚.05,h10km,n127,
σ0ŝ88/127,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.42**	**299**		**Pn**	**11 55 43.7**	**+1.2**
OHAK					**Sn**	**11 56 11.7**	**-0.4**
OHAK	**Old Harbor**	**2.42**	**299**	P	**Pn**	**11 55 43.7**	**+1.2**
	baz=117						
OHAK				S	**Sn**	**11 56 11.7**	**-0.4**
	baz=117						
KDAK	**Kodiak Island**	**2.42**	**316**		**Pn**	**11 55 42.4**	**-0.2**
KDAK					**Sn**	**11 56 08.8**	**-3.4**
KDAK	**Kodiak Island**	**2.42**	**316**	P	**Pn**	**11 55 42.4**	**-0.2**
	baz=133						
SII	**Sitkinak Islan**	**2.70**	**282**	Pn	**Pn**	**11 55 46.8**	**+0.3**
SII				IAML		11 56 20.1	
	comp=E,200nm,0.7s						
SII				IAML		11 56 25.7	
	comp=N,128nm,1.1s						
Q20K	**Shuyak Island**	**2.99**	**329**	P	**Pn**	**11 55 51.1**	**+0.6**
	baz=146						
Q20K				S	**Sn**	**11 56 25.7**	**-0.6**
	baz=146						
SYI	**Shuyak Island**	**2.99**	**329**		**Pn**	**11 55 51.1**	**+0.7**
SYI					**Sn**	**11 56 25.7**	**-0.5**
CNPM	**China Poot**	**3.57**	**345**		**Pn**	**11 55 59.3**	**+0.8**
CNPM					**Sn**	**11 56 40.5**	**-0.2**
CNPM	**China Poot**	**3.57**	**345**	IAML		11 56 42.9	
	comp=N,42nm,0.4s						
CNPM				IAML		11 56 43.3	
	comp=E,33nm,0.8s						
Q19K	**Cape Douglas,**	**3.64**	**323**		**Pn**	**11 56 00.3**	**+0.9**
Q19K	**Cape Douglas,**	**3.64**	**323**	IAML		11 57 54.6	
	comp=N,116nm,1.4s						
KAHG	**Katmai Hook Gl**	**3.68**	**313**		**Pn**	**11 56 00.6**	**+0.7**
Q23K	**Middleton Isla**	**3.72**	**25**		**Pn**	**11 56 00.5**	**+0.1**
BRSE	**Bradley Lake S**	**3.72**	**350**		**Pn**	**11 56 01.1**	**+0.6**
BRSE					**Sn**	**11 56 43.4**	**-0.9**
BRSE	**Bradley Lake S**	**3.72**	**350**	P	**Pn**	**11 56 01.1**	**+0.6**
	baz=168						
BRSE				S	**Sn**	**11 56 43.4**	**-0.9**
	baz=168						
MID	**Middleton Isla**	**3.72**	**25**		**Pn**	**11 56 00.6**	**+0.2**
BRLK	**Bradley Lake**	**3.76**	**349**		**Pn**	**11 56 01.6**	**+0.6**
BRLK					**Sn**	**11 56 44.1**	**-1.2**
BRLK	**Bradley Lake**	**3.76**	**349**	IAML		11 56 49.9	
	comp=E,38nm,1.1s						
HOM	**Homer**	**3.76**	**342**	Pn	**Pn**	**11 56 01.4**	**+0.4**
KCG	**Knife Ck. Glac**	**3.81**	**308**		**Pn**	**11 56 02.5**	**+0.8**
ACHA	**Angle Creek He**	**3.85**	**306**		**Pn**	**11 56 02.6**	**+0.2**
ANCK	**Angle Creek**	**3.92**	**305**		**Pn**	**11 56 04.0**	**+0.7**
SEW	**Seward**	**4.02**	**360**		**Pn**	**11 56 04.8**	**+0.3**
SEW	**Seward**	**4.02**	**360**	P	**Pn**	**11 56 04.8**	**+0.3**
	baz=179						
P23K	**Montague Islan**	**4.05**	**14**		**Pn**	**11 56 05.2**	**+0.2**
P23K	**Montague Islan**	**4.05**	**14**	P	**Pn**	**11 56 05.2**	**+0.2**
	baz=195						
P19K	**Oil Pt**	**4.11**	**332**		**Pn**	**11 56 07.2**	**+1.4**
P19K	**Oil Pt**	**4.11**	**332**	IAML		11 56 59.4	
	comp=N,74nm,0.7s						
P19K				IAML		11 56 59.7	
	comp=E,72nm,1.1s						
P19K	**Oil Pt**	**4.11**	**332**	P	**Pn**	**11 56 07.2**	**+1.4**
	baz=148						
Q17K	**Contact Creek**	**4.14**	**304**	P	**Pn**	**11 56 06.3**	**+0.1**
	baz=119						
IVE	**Iliamna Volcan**	**4.37**	**336**		**Pn**	**11 56 10.2**	**+0.7**
O22K	**Cooper Landing**	**4.40**	**358**	Pn	**Pn**	**11 56 10.6**	**+0.8**
O22K				IAML		11 57 05.0	
	comp=N,74nm,1.1s						
O22K				IAML		11 57 07.0	
	comp=E,85nm,0.8s						
P18K	**Big Mountain,**	**4.54**	**319**		**Pn**	**11 56 11.8**	**0.0**
P18K	**Big Mountain,**	**4.54**	**319**	P	**Pn**	**11 56 11.8**	**0.0**
	baz=134						
HIN	**Hinchinbrook I**	**4.58**	**18**		**Pn**	**11 56 12.6**	**+0.4**
HIN	**Hinchinbrook I**	**4.58**	**18**	IAML		11 57 04.2	
	comp=N,54nm,0.6s						
HIN				IAML		11 57 08.1	
	comp=E,51nm,1.4s						
KAIM	**Kayak Island**	**4.67**	**33**		**Pn**	**11 56 13.7**	**+0.2**
KAIM	**Kayak Island**	**4.67**	**33**	IAML		11 57 58.0	
	comp=E,72nm,1.4s						
KAIM	**Kayak Island**	**4.67**	**33**	P	**Pn**	**11 56 13.7**	**+0.2**
	baz=216						
R16K	**Pilot Point**	**4.72**	**292**		**Pn**	**11 56 14.7**	**+0.6**
R16K	**Pilot Point**	**4.72**	**292**	IAML		11 58 15.7	
	comp=N,64nm,1.4s						
R16K				IAML		11 58 33.1	
	comp=E,57nm,1.3s						
R16K	**Pilot Point**	**4.72**	**292**	P	**Pn**	**11 56 14.7**	**+0.6**
	baz=105						
RSO	**Redoubt South**	**4.72**	**339**	Pn	**Pn**	**11 56 15.2**	**+0.9**
RDT	**Redoubt**	**4.76**	**342**		**Pn**	**11 56 15.1**	**+0.4**
DFR	**Drift River**	**4.83**	**340**		**Pn**	**11 56 16.2**	**+0.5**
NCT	**North Crescent**	**4.84**	**339**		**Pn**	**11 56 16.5**	**+0.5**
O19K	**Port Alsworth**	**4.86**	**330**	P	**Pn**	**11 56 17.2**	**+1.1**
	baz=145						
EYAK	**Cordova Ski Ar**	**4.86**	**22**		**Pn**	**11 56 16.5**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.86**	**22**	P	**Pn**	**11 56 16.5**	**+0.4**
	baz=204						
O18K	**Koktuh Hills**	**4.87**	**323**		**Pn**	**11 56 16.3**	**+0.1**
O18K	**Koktuh Hills**	**4.87**	**323**	P	**Pn**	**11 56 16.3**	**+0.1**
	baz=138						
P17K	**Kvichak River**	**4.89**	**312**	P	**Pn**	**11 56 17.1**	**+0.7**
	baz=126						
RAGM	**Ragged Mountai**	**4.97**	**28**	Pn	**Pn**	**11 56 18.6**	**+0.9**
RAGM				IAML		11 57 18.5	
	comp=E,46nm,1.2s						
RC01	**Rabbit Creek A**	**5.01**	**358**		**Pn**	**11 56 18.7**	**+0.6**
RC01	**Rabbit Creek A**	**5.01**	**358**	IAML		11 57 15.7	
	comp=E,20nm,1.0s						
RC01				IAML		11 57 18.9	
	comp=N,19nm,0.7s						
RC01	**Rabbit Creek A**	**5.01**	**358**	P	**Pn**	**11 56 18.7**	**+0.6**
	baz=177						
CHGN	**Chignik**	**5.03**	**276**	Pn	**Pn**	**11 56 19.3**	**+0.9**
CHGN				IAML		11 58 36.2	
	comp=N,40nm,1.0s						
CHGN				IAML		11 58 55.9	
	comp=E,37nm,1.0s						
NICHA	**Nichawak Mount**	**5.05**	**33**		**Pn**	**11 56 19.3**	**+0.6**
GOAT	**Goat Mountain**	**5.13**	**27**		**Pn**	**11 56 20.6**	**+0.8**
BERG	**Berg Lake**	**5.26**	**33**		**Pn**	**11 56 21.8**	**+0.2**
BERG	**Berg Lake**	**5.26**	**33**	IAML		11 57 28.0	
	comp=N,44nm,1.2s						
BERG				IAML		11 59 03.6	
	comp=E,39nm,1.5s						
GRIN	**Grindle Hills**	**5.29**	**35**		**Pn**	**11 56 22.6**	**+0.6**
N20K	**Mount Spurr**	**5.32**	**345**	P	**Pn**	**11 56 23.3**	**+0.8**
	baz=162						
SPCR	**Spurr Chakacha**	**5.32**	**345**		**Pn**	**11 56 23.3**	**+0.8**
KNK	**Knik Glacier**	**5.35**	**5**	Pn	**Pn**	**11 56 24.1**	**+1.2**
KNK				IAML		11 57 30.1	
	comp=E,13nm,1.5s						
KNK				IAML		11 57 32.5	
	comp=N,11nm,1.2s						
SNH	**Sunshine Point**	**5.37**	**38**		**Pn**	**11 56 23.6**	**+0.5**
N19K	**Bonanza Creek**	**5.42**	**333**		**Pn**	**11 56 24.7**	**+0.8**
N19K	**Bonanza Creek**	**5.42**	**333**	P	**Pn**	**11 56 24.7**	**+0.8**
	baz=148						
SUA	**Susitna One**	**5.43**	**353**	Pn	**Pn**	**11 56 24.0**	**0.0**
KHIT	**Khitrov Hills**	**5.44**	**34**		**Pn**	**11 56 24.3**	**+0.2**
BMRM	**Bremner River**	**5.49**	**25**		**Pn**	**11 56 25.6**	**+1.7**
BMRM	**Bremner River**	**5.49**	**25**	P	**Pn**	**11 56 25.6**	**+0.7**
	baz=208						
BARK	**Barkley Ridge**	**5.65**	**37**		**Pn**	**11 56 27.3**	**+0.2**
MESA	**MESA**	**5.69**	**41**		**Pn**	**11 56 27.7**	**+0.1**
MESA	**MESA**	**5.69**	**41**	P	**Pn**	**11 56 27.7**	**+0.1**
	baz=226						
KLU	**Klutina**	**5.71**	**17**		**Pn**	**11 56 28.8**	**+1.0**
KLU	**Klutina**	**5.71**	**17**	P	**Pn**	**11 56 28.8**	**+1.0**
	baz=199						
N18K	**Kilae Creek**	**5.72**	**326**		**Pn**	**11 56 28.0**	**+0.1**
N18K	**Kilae Creek**	**5.72**	**326**	P	**Pn**	**11 56 28.0**	**+0.1**
	baz=140						
SML	**Sawmill**	**5.75**	**5**		**Pn**	**11 56 29.9**	**+1.5**
SML	**Sawmill**	**5.75**	**5**	P	**Pn**	**11 56 29.9**	**+1.5**
	baz=185						
O16K	**Kokwok River B**	**5.81**	**311**	Pn	**Pn**	**11 56 29.6**	**+0.5**
ISLE	**Juniper Island**	**5.85**	**37**	Pn	**Pn**	**11 56 29.4**	**-0.4**
SCM	**Sheep Creek Mo**	**5.85**	**10**	Pn	**Pn**	**11 56 31.9**	**+2.1**
BAGL	**Bagley Icefiel**	**5.86**	**38**		**Pn**	**11 56 29.9**	**+0.2**
SVW2	**Sparrevohn**	**5.96**	**330**	Pn	**Pn**	**11 56 31.7**	**+0.5**
SKT	**Skwentna**	**6.00**	**350**	Pn	**Pn**	**11 56 32.2**	**+0.4**
VRDI	**Verde Repeater**	**6.01**	**29**		**Pn**	**11 56 32.2**	**+0.2**
N25K	**Chitina, Valde**	**6.06**	**22**	Pn	**Pn**	**11 56 33.4**	**+0.7**
GLB	**Gilahina Butte**	**6.10**	**26**	Pn	**Pn**	**11 56 33.4**	**+0.3**
SAMH	**Samovar Hills**	**6.10**	**45**		**Pn**	**11 56 34.1**	**+0.9**
M20K	**Styx River**	**6.11**	**343**	Pn	**Pn**	**11 56 35.0**	**+1.7**
TABL	**Table Mountain**	**6.16**	**42**		**Pn**	**11 56 34.4**	**+0.2**
M24K	**Tolsona, Glenn**	**6.25**	**14**	Pn	**Pn**	**11 56 36.6**	**+1.3**
MCARA	**McCarthy VSAT**	**6.25**	**29**		**Pn**	**11 56 36.2**	**+1.0**
MCARA	**McCarthy VSAT**	**6.25**	**29**	P	**Pn**	**11 56 36.2**	**+1.0**
	baz=214						
PTPK	**Patty Peak**	**6.26**	**33**		**Pn**	**11 56 36.1**	**+0.6**
PCA	**Pinnacle**	**6.29**	**47**		**Pn**	**11 56 36.1**	**+0.3**
PINM	**Pinnacle**	**6.29**	**47**	P	**Pn**	**11 56 36.1**	**+0.3**
	baz=234						
M18K	**Stony River**	**6.35**	**331**		**Pn**	**11 56 36.7**	**+0.1**
M18K	**Stony River**	**6.35**	**331**	P	**Pn**	**11 56 36.7**	**+0.1**
	baz=145						
M19K	**Big River Lodg**	**6.36**	**338**	Pn	**Pn**	**11 56 38.5**	**+1.8**
PNL	**Peninsula**	**6.43**	**52**	P	**Pn**	**11 56 37.9**	**+0.3**
	baz=240						
CTG	**Chitna Glacier**	**6.45**	**38**	P	**Pn**	**11 56 38.4**	**+0.3**
	baz=224						
CTGM	**Chitina Glacie**	**6.46**	**38**		**Pn**	**11 56 38.4**	**+0.2**
WACK	**Wrangell Chich**	**6.46**	**22**		**Pn**	**11 56 39.1**	**+0.8**
LOGN	**Logan Glacier**	**6.47**	**39**	Pn	**Pn**	**11 56 38.6**	**+0.3**
HARP	**HAARP**	**6.69**	**17**		**Pn**	**11 56 42.9**	**+1.7**
HARP	**HAARP**	**6.69**	**17**	P	**Pn**	**11 56 42.9**	**+1.7**
	baz=200						
M16K	**Timber Creek**	**7.02**	**319**		**Pn**	**11 56 46.4**	**+0.7**
M16K	**Timber Creek**	**7.02**	**319**	P	**Pn**	**11 56 46.4**	**+0.7**
	baz=130						
O29M	**Mount Kennedy**	**7.11**	**49**		**Pn**	**11 56 47.9**	**+0.8**
O29M	**Mount Kennedy**	**7.11**	**49**	P	**Pn**	**11 56 47.9**	**+0.8**
	baz=238						
P29M	**Windy Craggy**	**7.16**	**56**		**Pn**	**11 56 47.5**	**-0.2**
P29M	**Windy Craggy**	**7.16**	**56**	P	**Pn**	**11 56 47.5**	**-0.2**
	baz=245						
YUK8	**Steele Glacier**	**7.23**	**40**		**Pn**	**11 56 50.0**	**+1.1**
YUK8	**Steele Glacier**	**7.23**	**40**	P	**Pn**	**11 56 50.0**	**+1.1**
	baz=228						
YUK3	**Moose Creek**	**7.33**	**35**		**Pn**	**11 56 51.3**	**+1.1**
YUK3	**Moose Creek**	**7.33**	**35**	P	**Pn**	**11 56 51.3**	**+1.1**
	baz=222						
M27K	**Edge Creek, AK**	**7.37**	**28**	Pn	**Pn**	**11 56 52.1**	**+1.5**
YUK7	**Dusty Glacier**	**7.41**	**49**		**Pn**	**11 56 51.9**	**+0.6**
YUK6	**Outpost Mounta**	**7.55**	**45**		**Pn**	**11 56 54.1**	**+0.9**
	baz=234						
YUK6	**Outpost Mounta**	**7.55**	**45**	P	**Pn**	**11 56 54.1**	**+0.9**
YUK4	**Talbot Arm**	**7.68**	**42**	P	**Pn**	**11 56 57.3**	**+2.3**
	baz=231						
HYT	**Haines Junctio**	**7.83**	**48**	Pn	**Pn**	**11 56 57.7**	**+0.7**
BCAR	**Beaver Creek A**	**7.98**	**26**	Pn	**Pn**	**11 57 00.8**	**+1.8**
K17K	**Iditarod**	**8.03**	**329**	Pn	**Pn**	**11 56 60.0**	**+0.4**

IDC 01 11:58:43.6±5.1,2˚.32S×140˚.03E,h0km,mb3.4/2,
mbtmp3.4/3,ML3.5/1,Error ellipse: s-maj=197.1km
s-min=31.4km az=88.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.38**	**197**	P	Pn	12 02 58.1	-2.0
	0.1nm,0.3s,baz=19,slow=12,SNR=7.1						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**22.04**	**195**	P	P	12 03 41.0	+0.9
	0.9nm,0.6s,baz=22,slow=10,SNR=10						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**70.29**	**322**	P	P	12 09 59.1	+0.1
	0.2nm,0.4s,baz=110,slow=6.8,SNR=2.4						
	0.2nm,0.4s						

*NEIC **01** 12:01:43.5±1.6,56˚.16N±0˚.09×149˚.5W±0˚.1,h21km±10km,*
ML3.7/54,ML3.5(AEIC),Error ellipse: s-maj=14.5km
s-min=7.6km az=156.0
*AEIC **01** 12:01:47.0±1.9,56˚.17N±0˚.10×149˚.4W±0˚.1,h12km±8km,*
Error ellipse: s-maj=14.6km s-min=8.1km az=164.0
ISC 01 12:01:40.8±1.4,56˚.12N±0˚.08×149˚.48W±0˚.06,h10km,
n173,σ1ŝ36/178,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.37**	**299**		**Pn**	**12 02 20.3**	**+0.7**
OHAK					**Sn**	**12 02 46.9**	**-1.8**
OHAK	**Old Harbor**	**2.37**	**299**	P	**Pn**	**12 02 20.3**	**+0.7**
OHAK	**Old Harbor**	**2.37**	**299**	P	**Pn**	**12 02 20.3**	**+0.7**
	baz=115						
OHAK				S	**Sn**	**12 02 46.9**	**-1.8**
	baz=115						
KDAK	**Kodiak Island**	**2.38**	**316**		**Pn**	**12 02 20.6**	**+0.9**
KDAK					**Sn**	**12 02 47.2**	**-1.7**
KDAK	**Kodiak Island**	**2.38**	**316**	P	**Pn**	**12 02 20.6**	**+0.9**
	baz=132						
KDAK				S	**Sn**	**12 02 47.2**	**-1.7**
	baz=132						
SII	**Sitkinak Islan**	**2.65**	**281**		**Pn**	**12 02 24.2**	**+0.6**
SII					**Sn**	**12 02 54.2**	**-1.6**
SII	**Sitkinak Islan**	**2.65**	**281**	IAML		12 02 55.6	
	comp=E,274nm,0.8s						
SII				IAML		12 02 58.0	
	comp=N,202nm,1.2s						
SII	**Sitkinak Islan**	**2.65**	**281**	P	**Pn**	**12 02 24.2**	**+0.6**
SII	**Sitkinak Islan**	**2.65**	**281**	P	**Pn**	**12 02 24.2**	**+0.6**
	baz=96						
SII				S	**Sn**	**12 02 54.2**	**-1.6**
	baz=96						
Q20K	**Shuyak Island**	**2.95**	**329**	P	**Pn**	**12 02 28.5**	**+1.0**
	baz=145						
Q20K				S	**Sn**	**12 03 02.8**	**-0.2**
	baz=145						
SYI	**Shuyak Island**	**2.95**	**329**		**Pn**	**12 02 28.5**	**+1.0**
SYI					**Sn**	**12 03 02.8**	**-0.2**
CNPM	**China Poot**	**3.54**	**345**		**Sn**	**12 03 16.4**	**-1.2**
CNPM				IAML		12 03 18.3	
	comp=N,150nm,0.5s						
CNPM				IAML		12 03 19.2	
	comp=E,143nm,0.6s						
CNPM	**China Poot**	**3.54**	**345**		**Pn**	**12 02 36.3**	**+0.6**
Q19K	**Cape Douglas,**	**3.60**	**323**		**Pn**	**12 02 38.5**	**+1.9**
Q19K					**Sn**	**12 03 15.5**	**-3.6**
Q19K	**Cape Douglas,**	**3.60**	**323**	IAML		12 03 23.5	
	comp=N,242nm,0.8s						
Q19K	**Cape Douglas,**	**3.60**	**323**	P	**Pn**	**12 02 38.4**	**+1.9**
	baz=139						
Q19K				S	**Sn**	**12 03 15.5**	**-3.6**
	baz=139						
KAHG	**Katmai Hook Gl**	**3.63**	**313**		**Pn**	**12 02 39.3**	**+2.2**
BRSE	**Bradley Lake S**	**3.69**	**350**		**Pn**	**12 02 38.1**	**+0.3**
BRSE					**Sn**	**12 03 19.1**	**-2.2**
BRSE	**Bradley Lake S**	**3.69**	**350**	P	**Pn**	**12 02 38.1**	**+0.3**
	baz=168						
BRSE				S	**Sn**	**12 03 19.1**	**-2.2**
	baz=168						
KARR	**Katmai Rainbow**	**3.70**	**312**		**Pn**	**12 02 40.8**	**+2.9**
Q23K	**Middleton Isla**	**3.71**	**26**		**Pn**	**12 02 38.3**	**+0.2**
Q23K	**Middleton Isla**	**3.71**	**26**	IAML

comp=N,41nm,1.1s
O18K IAML 12 03 50.0
comp=E,36nm,0.8s
O18K Koktuh Hills 4.82 323 P Pn **12 02 54.3 +1.0**
baz=138
P17K Kvichak River 4.84 312 P Pn **12 02 55.4 +1.9**
baz=126
EYAK Cordova Ski Ar 4.85 22 P Pn **12 02 54.8 +1.1**
EYAK Cordova Ski Ar 4.85 22 P Pn **12 02 54.5 +0.8**
baz=205
ANPB Aniakchak Plen 4.93 282 Pn **12 02 56.5 +1.7**
RAGM Ragged Mountai 4.97 29 Pn Pn **12 02 56.4 +1.0**
RAGM IAML 12 03 58.4
comp=E,68nm,0.5s
RC01 Rabbit Creek A 4.98 359 Sn **12 03 50.4 -2.7**
RC01 IAML 12 03 52.4
comp=E,76nm,0.6s
RC01 IAML 12 03 54.1
comp=N,55nm,0.4s
RC01 Rabbit Creek A 4.98 359 P Pn **12 02 55.9 +0.4**
baz=178
CHGN Chignik 4.99 276 Pn Pn **12 02 56.5 +0.9**
CHGN IAML 12 03 54.9
comp=E,56nm,1.2s
CHGN IAML 12 03 56.1
comp=N,54nm,0.3s
NICHA Nichawak Mount 5.05 33 Pn **12 02 57.5 +1.0**
GOAT Goat Mountain 5.12 27 Pn **12 02 58.6 +1.0**
BERG Berg Lake 5.26 33 Pn **12 03 00.1 +0.7**
GRIN Grindle Hills 5.29 35 Pn **12 03 01.1 +1.3**
KNK Knik Glacier 5.33 5 IAML 12 04 12.2
comp=E,32nm,0.5s
KNK IAML 12 04 13.7
comp=N,22nm,0.8s
KNK Knik Glacier 5.33 5 P Pn **12 03 01.3 +1.0**
baz=186
SNH Sunshine Point 5.38 38 Pn **12 03 01.3 +0.3**
SNH Sunshine Point 5.38 38 IAML 12 04 59.9
comp=N,70nm,1.5s
SNH IAML 12 05 06.2
comp=E,47nm,1.3s
N19K Bonanza Creek 5.38 333 Pn **12 03 01.5 +0.3**
N19K Bonanza Creek 5.38 333 P Pn **12 03 01.5 +0.3**
baz=148
SUA Susitna One 5.40 354 Pn Pn **12 03 01.8 +0.5**
KHIT Khitrov Hills 5.44 35 Pn **12 03 02.5 +0.7**
O17K Koliganek Bris 5.46 315 Pn **12 03 03.3 +1.2**
O17K Koliganek Bris 5.46 315 P Pn **12 03 03.3 +1.2**
baz=128
BMRM Bremner River 5.49 26 P Pn **12 03 03.5 +1.0**
baz=210
STLK Strandline Lak 5.53 348 Pn **12 03 03.6 +0.6**
N18K Kilae Creek 5.67 326 Pn **12 03 05.6 +0.6**
N18K Kilae Creek 5.67 326 P Pn **12 03 05.6 +0.6**
baz=140
KLU Klutina 5.69 17 Pn **12 03 06.5 +1.1**
KLU Klutina 5.69 17 P Pn **12 03 06.5 +1.1**
baz=200
SML Sawmill 5.73 5 Pn Pn **12 03 06.9 +1.0**
SML Sawmill 5.73 5 P Pn **12 03 07.1 +1.3**
baz=186
M23K Glacier View 5.76 8 P Pn **12 03 07.5 +1.4**
baz=190
O16K Kokwok River B 5.76 311 Pn **12 03 07.9 +1.7**
O16K Kokwok River B 5.76 311 P Pn **12 03 07.9 +1.7**
baz=123
SCM Sheep Creek Mo 5.83 10 Pn Pn **12 03 09.1 +1.8**
ISLE Juniper Island 5.86 37 Pn Pn **12 03 08.5 +0.9**
CNBA Chernabura Isl 5.89 261 Pn Pn **12 03 08.9 +0.9**
SVW2 Sparrevohn 5.92 330 Pn Pn **12 03 09.3 +0.9**
SVW2 Sparrevohn 5.92 330 P Pn **12 03 08.8 +0.4**
SKT Skwentna 5.97 351 Pn Pn **12 03 10.3 +1.3**
N17K Nushagak Hills 6.00 321 Pn Pn **12 03 10.8 +1.4**
N25K Chitina, Valde 6.05 23 Pn Pn **12 03 11.6 +1.3**
N25K Chitina, Valde 6.05 23 P Pn **12 03 11.7 +1.4**
baz=207
M20K Styx River 6.08 343 Pn Pn **12 03 10.9 +0.3**
GLB Gilahina Butte 6.09 27 Pn **12 03 12.0 +1.2**
SAMH Samovar Hills 6.11 45 Pn **12 03 12.5 +1.4**
TABL Table Mountain 6.17 42 Pn **12 03 13.0 +1.0**
M24K Tolsona, Glenn 6.24 14 Pn **12 03 14.5 +1.7**
M24K Tolsona, Glenn 6.24 14 P Pn **12 03 14.5 +1.7**
baz=197
MCARA McCarthy VSAT 6.25 30 Pn **12 03 14.1 +1.2**
MCARA McCarthy VSAT 6.25 30 P Pn **12 03 14.1 +1.2**
baz=215
PTPK Patty Peak 6.26 33 Pn **12 03 14.3 +1.1**
SDPT Sand Point 6.26 267 Pn Pn **12 03 13.7 +0.7**
SDPT Sand Point 6.26 267 P Pn **12 03 14.4 +1.4**
PCA Pinnacle 6.30 47 Pn **12 03 14.5 +0.8**
PINM Pinnacle 6.30 47 P Pn **12 03 14.5 +0.7**
baz=235
M19K Big River Lodg 6.33 338 Pn Pn **12 03 14.4 +0.4**
BARN Barnard Glacie 6.42 36 Pn **12 03 16.4 +1.1**
PNL Peninsula 6.44 52 P Pn **12 03 16.7 +1.1**
PNL Peninsula 6.44 52 P Pn **12 03 16.6 +1.1**
baz=241
CTG Chitna Glacier 6.46 38 P Pn **12 03 16.7 +0.8**
baz=225
LOGN Logan Glacier 6.48 40 Pn **12 03 17.0 +0.8**
BCPM Bancas Point 6.49 50 Pn Pn **12 03 16.4 +0.2**
WAT6 Susitna Watana 6.54 7 P Pn **12 03 18.1 +1.1**
baz=188
N16K Nishlik Lake 6.55 316 Pn **12 03 18.8 +1.7**
N16K Nishlik Lake 6.55 316 P Pn **12 03 18.8 +1.7**
baz=127
HARP HAARP 6.67 18 Pn **12 03 20.0 +1.3**
HARP HAARP 6.67 18 P Pn **12 03 20.0 +1.3**
baz=201
M16K Timber Creek 6.97 319 Pn **12 03 24.2 +1.3**
M16K Timber Creek 6.97 319 P Pn **12 03 24.2 +1.3**
baz=130
O14K Tigyukauivet M 7.05 301 Pn Pn **12 03 25.8 +1.9**
DHY Denali Highway 7.05 8 Pn **12 03 25.8 +1.7**
DHY Denali Highway 7.05 8 P Pn **12 03 25.8 +1.7**
baz=189
PN7A Pavlof North-7 7.09 270 Pn **12 03 26.0 +1.4**
O29M Mount Kennedy 7.12 49 Pn **12 03 26.6 +1.7**
PAX Paxson 7.16 15 Pn **12 03 26.6 +1.1**
PAX Paxson 7.16 15 P Pn **12 03 26.7 +1.1**
baz=198
P29M Windy Craggy 7.18 56 Pn **12 03 26.8 +1.1**
RND Reindeer 7.31 2 Pn **12 03 28.9 +1.3**
TRF Thorofare Moun 7.36 357 Pn Pn **12 03 29.0 +1.1**
M27K Edge Creek, AK 7.36 29 Pn **12 03 29.9 +1.6**
M27K Edge Creek, AK 7.36 29 P Pn **12 03 29.9 +1.6**
baz=215
YUK7 Dusty Glacier 7.42 49 Pn **12 03 30.6 +1.4**
CAST Castle Rocks 7.43 351 Pn Pn **12 03 31.9 +2.7**
S31K Pelican 7.46 70 Pn Pn **12 03 29.0 -0.5**
KTH Kantishna Hill 7.49 355 Pn Pn **12 03 32.8 +2.9**
L16K Owhat River 7.62 321 Pn **12 03 33.2 +1.5**
L16K Owhat River 7.62 321 P Pn **12 03 33.2 +1.5**
baz=132
HYT Haines Junctio 7.84 48 Pn Pn **12 03 35.7 +0.8**
SIT Sitka 7.87 77 P Pn **12 03 33.5 -1.7**
L27K Beaver Creek, 7.96 26 Pn **12 03 38.3 +1.9**
BCAR Beaver Creek A 7.98 26 Pn **12 03 38.1 +1.5**
K17K Iditarod 7.99 329 Pn Pn **12 03 37.0 +0.3**
FALS False Pass 8.02 267 P Pn **12 03 38.3 +1.2**
SKAG Skagway 8.27 60 P Pn **12 03 41.8 +1.3**
SCRK Sand Creek 8.34 17 Pn Pn **12 03 41.6 -0.1**
M29M Somme Creek 8.47 37 Pn **12 03 45.4 +1.9**
JIS Juneau Island 8.48 69 P Pn **12 03 44.7 +1.3**
L14K Kuka Creek 8.62 313 Pn Pn **12 03 47.5 +2.1**
ILAR Eielson Array 8.77 7 Pn Pn **12 03 50.4 +2.9**
COLA College 8.82 5 P Pn **12 03 50.7 +2.7**
J26L Joseph Creek 8.90 17 Pn **12 03 50.6 +1.3**
P32M Atlin 9.09 61 Pn Pn **12 03 52.6 +0.7**
CRAG Craig 9.24 87 P Pn **12 03 53.2 -0.7**
DAWY Dawson 9.41 28 Pn Pn **12 03 57.8 +1.5**
P33M Teslin, Yukon 9.70 58 Pn Pn **12 04 01.4 +1.1**
K29M Barlow Dome 9.77 33 Pn Pn **12 04 02.5 +1.2**
IMAR Indian Mountai 10.10 350 Pn Pn **12 04 07.3 +1.6**
BMAR Burnt Mountain 11.57 9 Pn Pn **12 04 26.4 +0.6**

*ASIES **01** 12:06:03.5,23°.20N×121°.36E,h17km,ML3.5,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}3.01; $M_{\theta\theta}$-1.64; $M_{\phi\phi}$-1.38; $M_{r\theta}$-0.38; $M_{\theta\phi}$-1.82; $M_{\phi r}$-3.26; Fault plane solution: $M_0$4.57367×10^{21} NP1: ϕ_s201.03000°,δ68.89000°,λ68.92000°. NP2:ϕ_s67.97000°,*

δ29.49000°,λ132.97000°. Principal axes: T Plg60.4810°, Azm79.9510°; N Plg19.6050°, Azm208.9330°; P Plg21.1490°, Azm306.8530°;
*TAP **01** 12:06:03.5,23°.20N×121°.36E,h17km,ML3.5,B*
ISC 01 12:06:02.5±0.9,23°.17N±0°.02×121°.50E±0°.03,h23km±4km, n114,$_{r0}$98/171,2C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHKH	**Chenggong**	**0.10**	**283**	*i*	P	**Pb**	**12 06 06.8**	**-0.1**
baz=109								
CHKH				*i*	S	**Sb**	**12 06 09.2**	**-0.7**
baz=109								
CHKT	**Chengkung**	**0.14**	**242**	*i*	P	**Pb**	**12 06 07.5**	**+0.1**
baz=165								
CHKT				*i*	S	**Sb**	**12 06 10.5**	**-0.1**
baz=165								
ECBN	**Changbin**	**0.15**	**342**	*i*	P	**Pb**	**12 06 08.0**	**+0.5**
baz=44								
ECBN				*i*	S	**Sb**	**12 06 11.4**	**+0.6**
baz=44								
FULB	**Fuli**	**0.20**	**279**	*i*	P	**Pb**	**12 06 07.3**	**-0.7**
baz=265								
FULB				*i*	S	**Sb**	**12 06 10.3**	**-1.4**
baz=265								
EYUL	**Yuli**	**0.25**	**316**	*i*	P	**Pb**	**12 06 08.5**	**-0.1**
baz=338								
EYUL					S	**Sb**	**12 06 12.9**	**+0.1**
baz=338								
TWF1	**Yuli**	**0.26**	**314**	*i*	P	**Pb**	**12 06 08.3**	**-0.6**
baz=334								
TWF1				*i*	S	**Sb**	**12 06 12.3**	**-1.0**
baz=334								
EDH	**Donghe**	**0.27**	**223**		P	**Pb**	**12 06 09.3**	**+0.3**
baz=187								
EDH					S	**Sb**	**12 06 13.8**	**+0.5**
baz=187								
ECS	**Chishang**	**0.27**	**254**	*i*	P	**Pb**	**12 06 09.0**	**0.0**
baz=241								
ECS					S	**Sb**	**12 06 14.2**	**+0.7**
baz=241								
EHD	**Haiduan**	**0.28**	**266**	*i*	P	**Pb**	**12 06 08.1**	**-0.9**
baz=260								
EHD				*i*	S	**Sb**	**12 06 11.8**	**-1.7**
baz=260								
YULB	**Yu-li**	**0.29**	**320**		P	**Pb**	**12 06 08.6**	**-0.7**
YULB	**Yu-li**	**0.29**	**320**	*i*	P	**Pb**	**12 06 08.8**	**-0.5**
baz=332								
YULB				*i*	S	**Sb**	**12 06 12.7**	**-1.3**
baz=332								
HGSD	**Ruisui**	**0.33**	**347**		P	**Pn**	**12 06 11.2**	**-0.7**
baz=16								
HGSD					S	**Sn**	**12 06 17.9**	**-0.1**
baz=16								
EHY	**Hungye**	**0.38**	**334**	*i*	P	**Pb**	**12 06 10.4**	**-0.2**
baz=342								
EHY				*i*	S	**Sb**	**12 06 15.6**	**-0.5**
baz=342								
LONT	**Longtian**	**0.43**	**233**		P	**Pb**	**12 06 11.2**	**-0.3**
baz=216								
LONT					S	**Sb**	**12 06 17.8**	**+0.1**
baz=216								
ELDTW	**Lidau**	**0.45**	**273**	*i*	P	**Pb**	**12 06 10.3**	**-1.6**
baz=267								
ELDTW				*i*	S	**Sb**	**12 06 15.3**	**-2.9**
baz=267								
LDUT	**Ludao**	**0.49**	**184**		P	**Pn**	**12 06 13.7**	**-0.4**
baz=170								
LDUT					S	**Sn**	**12 06 22.1**	**+0.1**
baz=170								
EGFH	**Guangfu**	**0.50**	**352**	*e*	P	**Pb**	**12 06 12.9**	**+0.2**
baz=350								
TWGBT	**Beinan**	**0.53**	**228**		P	**Pb**	**12 06 12.8**	**-0.3**
TWGBT	**Beinan**	**0.53**	**228**	*i*	P	**Pb**	**12 06 12.6**	**-0.5**
baz=215								
TWGBT					S	**Sb**	**12 06 19.0**	**-1.3**
baz=215								
TTN	**Taitung**	**0.53**	**219**	*i*	P	**Pn**	**12 06 14.3**	**-0.3**
baz=204								
TTN				*i*	S	**Sn**	**12 06 23.2**	**+0.4**
baz=204								
TWG	**Pinlang**	**0.53**	**229**	*i*	P	**Pb**	**12 06 12.7**	**-0.5**
baz=225								
TWG				*i*	S	**Sb**	**12 06 19.5**	**-0.9**
baz=225								
TEGC	**Jichi Village**	**0.54**	**3**	*e*	S	**Sn**	**12 06 23.6**	**+0.5**
baz=29								
WARBT	**Fenglin Townsh**	**0.56**	**349**		P	**Pb**	**12 06 13.0**	**-0.7**
SHUL	**Shoufeng**	**0.62**	**5**		P	**Pn**	**12 06 15.8**	**0.0**
baz=27								
SHUL					S	**Sn**	**12 06 26.4**	**+1.4**
baz=27								
ESL	**Shilin**	**0.65**	**354**	*i*	P	**Pb**	**12 06 14.8**	**-0.4**
baz=355								
ESL					S	**Sn**	**12 06 25.3**	**-0.5**
baz=355								
STYH	**Taoyuan**	**0.67**	**270**		P	**Pb**	**12 06 14.0**	**-1.6**
baz=265								
STYH					S	**Sb**	**12 06 21.9**	**-2.5**
baz=265								
VWDT	**VWDT**	**0.67**	**330**	*i*	P	**Pb**	**12 06 15.3**	**-0.3**
baz=339								
VWDT					S	**Sb**	**12 06 23.4**	**-1.0**
baz=339								
ALS	**Alishan**	**0.73**	**298**	*i*	P	**Pb**	**12 06 15.8**	**-0.9**
baz=293								
ALS				*i*	S	**Sb**	**12 06 24.2**	**-2.2**
baz=293								
ECL	**Taimali**	**0.76**	**222**		P	**Pb**	**12 06 16.1**	**-1.0**
baz=212								
ECL					S	**Sb**	**12 06 25.6**	**-1.4**
baz=212								
ETM	**Tongmen**	**0.79**	**359**	*e*	P	**Pb**	**12 06 17.6**	**0.0**
baz=7.0								
SSLB	**Suanglung**	**0.80**	**321**		P	**Pb**	**12 06 16.9**	**-0.8**
SSLB	**Suanglung**	**0.80**	**321**	*i*	P	**Pb**	**12 06 16.9**	**-0.8**
baz=335								
SSLB					S	**Sb**	**12 06 26.4**	**-1.7**
baz=335								
WHYT	**Xinyi Township**	**0.80**	**311**	*i*	P	**Pb**	**12 06 17.4**	**-0.3**
baz=316								
WHYT					S	**Sb**	**12 06 26.9**	**-1.2**
baz=316								
SLGT	**Liugui**	**0.81**	**258**	*i*	P	**Pb**	**12 06 17.4**	**-0.5**
baz=256								
SLGT					S	**Sb**	**12 06 26.9**	**-1.6**
baz=256								
HWA	**Hwalien**	**0.81**	**7**	*e*	P	**Pn**	**12 06 18.4**	**-0.1**
baz=360								
TPUB	**Ta-pu**	**0.81**	**279**		P	**Pb**	**12 06 17.4**	**-0.6**
TPUB	**Ta-pu**	**0.81**	**279**		P	**Pb**	**12 06 17.4**	**-0.6**
baz=284								
TPUB					S	**Sb**	**12 06 27.1**	**-1.5**
baz=284								
WTP	**Ta-pu**	**0.82**	**276**	*i*	P	**Pb**	**12 06 17.5**	**-0.7**
baz=272								
WTP				*i*	S	**Sb**	**12 06 27.4**	**-1.4**
baz=272								
OWD	**Renai**	**0.84**	**339**		P	**Pb**	**12 06 18.4**	**-0.1**
baz=346								
OWD					S	**Sb**	**12 06 28.7**	**-0.7**
baz=346								
LXIB	**Xiulin Townshi**	**0.85**	**354**		P	**Pb**	**12 06 17.9**	**-0.9**
SGST	**Jiashian**	**0.85**	**264**	*i*	P	**Pb**	**12 06 17.3**	**-1.4**
baz=257								
SGST				*i*	S	**Sb**	**12 06 28.0**	**-1.7**
baz=257								
WCKO	**Fanlu**	**0.87**	**288**		P	**Pn**	**12 06 19.7**	**+0.4**
baz=287								
WCKO					S	**Sn**	**12 06 30.6**	**-0.7**
baz=287								
CHN5	**Tsauling**	**0.87**	**299**	*i*	P	**Pb**	**12 06 18.8**	**-0.3**
baz=302								
WUSB	**Renai**	**0.89**	**337**		P	**Pb**	**12 06 18.9**	**-0.5**
baz=343								
WUSB					S	**Sb**	**12 06 29.8**	**-1.2**
baz=343								
CHN1	**Nanshi**	**0.90**	**271**	*i*	P	**Pb**	**12 06 18.9**	**-0.5**
baz=268								
CHN1				*i*	S	**Sb**	**12 06 30.8**	**-0.3**
baz=268								
SMLT	**Sun Moon Lake**	**0.90**	**322**	*i*	P	**Pb**	**12 06 18.8**	**-0.7**
baz=333								
SMLT					S	**Sb**	**12 06 31.1**	**-0.1**
baz=333								
TWD	**Chiawan**	**0.91**	**5**		P	**Pn**	**12 06 19.9**	**+0.1**
baz=1.0								
TWD					S	**Sn**	**12 06 34.1**	**+1.8**
baz=1.0								
TSMG	**Majia**	**0.92**	**240**	*e*	P	**Pb**	**12 06 19.0**	**-0.7**
baz=236								
SNST	**Tainan City**	**0.93**	**273**		P	**Pb**	**12 06 19.6**	**-0.4**
baz=270								
SNST				*e*	S	**Sb**	**12 06 31.4**	**-0.4**
baz=270								
CHGB	**Renai**	**0.94**	**341**		P	**Pb**	**12 06 19.9**	**-0.4**
baz=348								
CHGB					S	**Sn**	**12 06 33.1**	**-0.2**
baz=348								
TWK	**Hsinying**	**0.94**	**276**	*i*	P	**Pb**	**12 06 19.6**	**-0.5**
baz=273								
TWK				*i*	S	**Sn**	**12 06 32.2**	**-0.9**
baz=273								
TYC	**Yuchr**	**0.94**	**321**	*i*	P	**Pb**	**12 06 19.9**	**-0.3**
baz=337								
TYC				*i*	S	**Sn**	**12 06 32.8**	**-0.3**
baz=337								
WJS	**Zhushan**	**0.96**	**313**		P	**Pn**	**12 06 21.0**	**+0.4**
baz=315								
WJS					S	**Sn**	**12 06 34.2**	**+0.5**
baz=315								
SCST	**Cishan**	**0.97**	**253**	*e*	P	**Pn**	**12 06 20.6**	**-0.1**
baz=251								
MASBT	**Mashibuluo**	**0.98**	**236**		P	**Pb**	**12 06 20.3**	**-0.4**
baz=223								
EAST	**Anshuo**	**0.99**	**218**		P	**Pb**	**12 06 20.0**	**-1.0**
baz=210								
EAST					S	**Sb**	**12 06 32.8**	**-0.8**
baz=210								
WHF	**Hehuan Shan**	**1.00**	**347**		P	**Pn**	**12 06 21.4**	**-0.1**
baz=7.0								
WHF					S	**Sb**	**12 06 33.0**	**-1.2**
baz=7.0								
TAWH	**Dawu Township**	**1.00**	**215**	*e*	P	**Pb**	**12 06 19.8**	**-1.4**
baz=207								
TAWH				*e*	S	**Sb**	**12 06 33.2**	**-0.7**
baz=207								
NACB	**Ninganchiao**	**1.00**	**5**		P	**Pb**	**12 06 21.6**	**+0.4**
NACB	**Ninganchiao**	**1.00**	**5**	*e*	P	**Pn**	**12 06 20.8**	**-0.4**
baz=9.0								
WGK	**Gukeng**	**1.01**	**301**	*i*	P	**Pn**	**12 06 21.6**	**+0.4**
baz=302								
WGK					S	**Sn**	**12 06 34.7**	**+0.1**
baz=302								
CHN2	**Minshiung**	**1.01**	**291**		P	**Pn**	**12 06 21.8**	**+0.5**
baz=290								
CHN2					S	**Sn**	**12 06 36.5**	**+1.7**
baz=290								
WDLH	**Douliu**	**1.03**	**300**	*e*	P	**Pb**	**12 06 22.1**	**+0.5**
baz=302								
WNT	**Mingjian**	**1.03**	**313**		P	**Pb**	**12 06 21.9**	**+0.2**
baz=316								
WNT					S	**Sn**	**12 06 36.2**	**+0.9**
baz=316								
ETLH	**Xiulin Townshi**	**1.03**	**359**	*e*	P	**Pn**	**12 06 20.5**	**-1.2**
baz=3.0								
WCS	**Beigang Elemen**	**1.04**	**329**		P	**Pb**	**12 06 21.6**	**-0.2**
baz=341								
WCS					S	**Sn**	**12 06 35.9**	**+0.5**
baz=341								
CHN3	**Shinhua**	**1.05**	**265**		P	**Pb**	**12 06 22.7**	**+0.6**
baz=271								
CHN3					S	**Sn**	**12 06 38.4**	**+2.6**
baz=271								
TWM1	**Shoushan**	**1.05**	**251**		P	**Pb**	**12 06 23.8**	**+1.7**
baz=249								
SHHT	**Tainan City**	**1.07**	**262**		P	**Pb**	**12 06 23.4**	**+1.0**
baz=258								
SHHT				*e*	S	**Sn**	**12 06 39.4**	**+3.0**
baz=258								
FUSS	**Fushou**	**1.10**	**348**	*e*	P	**Pn**	**12 06 22.3**	**-0.4**
baz=2.0								
SSHA	**Shanhua**	**1.12**	**269**	*e*	P	**Pb**	**12 06 23.4**	**+0.2**
baz=275								
TWT	**Tachien**	**1.12**	**344**	*e*	P	**Pb**	**12 06 23.6**	**+0.2**
baz=346								
TDCB	**Techi**	**1.12**	**344**	*e*	P	**Pb**	**12 06 23.2**	**-0.2**
baz=346								
LAY	**Lan-yu**	**1.13**	**178**	*e*	P	**Pn**	**12 06 22.5**	**-0.4**
baz=162								
SCZT	**Fangliau**	**1.14**	**226**	*e*	P	**Pn**	**12 06 22.4**	**-0.6**
baz=218								
ICHU	**Yijhu**	**1.14**	**280**	*e*	P	**Pb**	**12 06 23.2**	**-0.4**
baz=277								
ICHU					S	**Sn**	**12 06 39.1**	**+1.1**
baz=277								
WTK	**Tuku**	**1.15**	**297**	*e*	P	**Pn**	**12 06 22.7**	**-0.4**
baz=297								
WTK				*e*	S	**Sn**	**12 06 39.2**	**+1.1**
baz=297								
SLIU	**Shizi**	**1.15**	**215**	*e*	P	**Pn**	**12 06 22.1**	**-1.1**
baz=201								
SNJT	**Kaohsiung City**	**1.15**	**249**	*e*	P	**Pb**	**12 06 26.1**	**+2.3**
baz=248								
LYUB	**Lan-yu**	**1.16**	**176**	*e*	P	**Pn**	**12 06 22.4**	**-1.0**
baz=163								
EAHA	**Aohua**	**1.18**	**11**	*e*	P	**Pb**	**12 06 25.6**	**+1.4**
baz=359								
CHN8	**Yiju**	**1.20**	**279**		P	**Pb**	**12 06 24.5**	**-0.1**
baz=276								
CHN8					S	**Sb**	**12 06 41.6**	**+1.9**
baz=276								
SCLT	**Jiali**	**1.21**	**271**	*e*	S	**Sb**	**12 06 41.5**	**+1.7**
baz=267								
WHP	**Taichung City**	**1.22**	**335**		P	**Pb**	**12 06 25.9**	**+1.0**
baz=343								
WSL	**Shuilin Townsh**	**1.23**	**287**	*e*	P	**Pb**	**12 06 24.9**	**-0.1**
baz=285								
WSL				*e*	S	**Sb**	**12 06 41.6**	**+1.3**
baz=285								
WCHH	**Zhanghua**	**1.25**	**316**	*e*	P	**Pb**	**12 06 26.7**	**+1.2**
baz=318								
NNSB	**Datong**	**1.26**	**355**	*e*	P	**Pn**	**12 06 24.8**	**0.0**
baz=9.0								
WSSB	**Gushan**	**1.26**	**246**	*e*	P	**Pb**	**12 06 27.1**	**+1.5**
baz=243								
WSSB				*e*	S	**Sb**	**12 06 45.2**	**+3.8**
baz=243								
WRL	**Guolierlin Hig**	**1.27**	**305**		P	**Pb**	**12 06 25.7**	**0.0**
baz=307								
WSF	**Szhu**	**1.27**	**292**		P	**Pb**	**12 06 25.6**	**-0.1**
baz=291								
WSF					S	**Sb**	**12 06 42.5**	**+0.9**
baz=291								
NNS	**Nan Shan**	**1.27**	**355**	*e*	P	**Pb**	**12 06 26.5**	**+0.6**
baz=9.0								
ENA	**Nanau**	**1.27**	**10**	*e*	P	**Pb**	**12 06 26.4**	**+0.6**
EWUT	**Wuta**	**1.29**	**11**	*e*	P	**Pb**	**12 06 27.0**	**+0.8**
baz=1.0								
SMST	**Manzhou Townsh**	**1.30**	**208**	*e*	P	**Pb**	**12 06 26.9**	**+0.6**
baz=197								
TSCK	**Chigu Township**	**1.30**	**269**	*e*	P	**Pb**	**12 06 26.7**	**+0.3**
baz=266								
TSCK				*e*	S	**Sb**	**12 06 43.6**	**+1.0**
baz=266								
EOS3	**EOS3**	**1.34**	**34**	*e*	P	**Pb**	**12 06 27.2**	**+0.3**
baz=31								
LATG	**Datong**	**1.36**	**1**	*e*	P	**Pb**	**12 06 25.7**	**-0.5**
baz=2.0								
TWKBT	**Hengchun**	**1.38**	**208**	*e*	P	**Pb**	**12 06 27.4**	**-0.3**
baz=197								
WDJ	**Dajia District**	**1.42**	**326**	*e*	P	**Pb**	**12 06 28.4**	**+0.1**
baz=327								
NSY	**Sanyi**	**1.42**	**331**	*e*	P	**Pb**	**12 06 28.6**	**+0.4**
baz=336								
NDT	**Datong Townshi**	**1.43**	**0**	*e*	P	**Pb**	**12 06 28.6**	**+0.1**
baz=12								
ENTT	**Nioudou**	**1.47**	**2**	*e*	P	**Pb**	**12 06 28.8**	**-0.4**
baz=3.0								
NFF	**Wufeng Townshi**	**1.50**	**346**	*e*	P	**Pb**	**12 06 30.1**	**+0.4**
baz=356								
YHNB	**Yeheng**	**1.50**	**356**		P	**Pb**	**12 06 29.2**	**-0.5**
YHNB	**Yeheng**	**1.50**	**356**	*e*	P	**Pb**	**12 06 29.3**	**-0.4**
baz=9.0								
NSK	**Sanguang**	**1.51**	**355**	*e*	P	**Pn**	**12 06 28.9**	**+0.7**
baz=9.0								
NMLH	**Miaoli**	**1.51**	**335**	*e*	P	**Pb**	**12 06 29.6**	**-0.2**
baz=334								
NSTT	**Nanjuang**	**1.53**	**343**	*e*	P	**Pb**	**12 06 30.1**	**0.0**
baz=343								
LIOB	**Emei**	**1.54**	**343**	*e*	P	**Pb**	**12 06 29.4**	**-0.9**
baz=343								
TWE	**Neicheng**	**1.55**	**5**	*e*	P	**Pb**	**12 06 30.9**	**+0.4**
baz=5.0								
FUSB	**Fushanzhiwuyua**	**1.58**	**3**	*e*	P	**Pn**	**12 06 29.7**	**+0.5**
baz=2.0								

NWLT	**Wulai** baz=14	1.60	360	*e*P	Pb	12 06 31.4	0.0
TIPB	**Shuangxi** baz=7.0	1.82	9	*e*P	Pb	12 06 34.1	-1.0
PNG	**Penghu** baz=283	1.83	283	*e*P	Pn	12 06 33.2	+0.6

IDC 01 12:07:10.4±315.0, 64°58N×24°09E, h0km, Error ellipse: s-maj=156.1km s-min=98.8km az=162.0, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO** baz=153,slow=307,SNR=1.3	5.00	337	I	I	12 38 40.0	
I43RU	**DUBNA INFRASON** baz=329,slow=329,SNR=1.3	0.16	135	I	I	13 06 20.0	
I46RU	**ZALESOVO INFRA** 0.1nm,2.2s,baz=314,slow=334,SNR=8.8	31.53	80	I	I	15 21 03.0	

*IDC **01** 12:09:14.7±0.8,56°.53N×148°.65W,h0km, mb3.8/13, mbtmp3.9/18,ML3.7/5,MS4.0/2, Error ellipse: s-maj=23.7km s-min=14.4km az=27.0*

*NEIC **01** 12:09:16.2±1.6,56°.47N±0°.08×148°.60W±0°.09,h20km±8km, mb4.3/31,ML4.3/64,ML4.0(AEIC), Error ellipse: s-maj=11.4km s-min=7.0km az=168.0*

*AEIC **01** 12:09:19.2±1.9,56°.47N±0°.07×148°.56W±0°.09,h11km±6km, Error ellipse: s-maj=10.9km s-min=6.5km az=157.0*

ISC 01 12:09:15.8±0.6, 56°58N±0°.06×148°62W±0°.04, h10km, n275, σ1s21/267, mb4.2/24, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	2.47	301		Pn	12 09 55.4	-0.7
KDAK					Sn	12 10 23.4	-2.9
KDAK	**Kodiak Island** 15nm,0.3s,baz=130,slow=4.9,SNR=64	2.47	301	Pn	Pn	12 09 55.4	-0.7
KDAK	12nm,0.3s,baz=42,slow=7.1,SNR=7.0			Sn	Sn	12 10 21.6	-4.7
KDAK	comp=Z,1μm,18.6s,baz=194,slow=38 51nm,0.4s			LR	LR	12 10 48.4	
OHAK	**Old Harbor**	2.64	286		Pn	12 09 57.0	-1.4
OHAK					Sn	12 10 26.6	-3.8
OHAK	**Old Harbor** baz=104	2.64	286	P	Pn	12 09 57.1	-1.2
OHAK	baz=104			S	Sn	12 10 26.6	-3.8
SYI	**Shuyak Island**	2.87	317		Pn	12 10 01.5	-0.1
SYI					Sn	12 10 36.0	-0.1
Q20K	**Shuyak Island** baz=134	2.88	317	P	Pn	12 10 01.7	+0.1
Q20K	baz=134			S	Sn	12 10 36.0	-0.2
SII	**Sitkinak Islan**	3.08	272		Pn	12 10 03.2	-1.2
SII					Sn	12 10 37.3	-4.0
SII	**Sitkinak Islan** comp=N,638nm,0.9s	3.08	272	IAML		12 10 45.0	
SII	comp=E,607nm,0.8s			IAML		12 10 51.2	
SII	**Sitkinak Islan**	3.08	272	P	Pn	12 10 04.2	-0.3
SII	**Sitkinak Islan** baz=89	3.08	272	P	Pn	12 10 03.2	-1.2
SII	baz=89			S	Sn	12 10 37.3	-4.0
Q23K	**Middleton Isla**	3.10	22		Pn	12 10 04.2	-0.5
Q23K					Sn	12 10 39.7	-2.0
Q23K	**Middleton Isla** comp=E,451nm,1.0s	3.10	22	IAML		12 10 42.9	
Q23K	**Middleton Isla** baz=203	3.10	22	P	Pn	12 10 04.2	-0.5
Q23K	baz=203			S	Sn	12 10 39.7	-2.0
MID	**Middleton Isla**	3.10	22		Pn	12 10 03.9	-0.8
MID					Sn	12 10 39.9	-1.8
MID	**Middleton Isla** comp=E,433nm,1.1s	3.10	22	IAML		12 10 42.9	
MID	**Middleton Isla**	3.10	22	P	Pn	12 10 04.2	-0.5
CNPM	**China Poot**	3.26	336		Pn	12 10 07.0	0.0
CNPM	comp=E,390nm,0.9s			IAML		12 10 50.3	
CNPM	**China Poot**	3.26	336		Sn	12 10 45.2	-0.7
BRSE	**Bradley Lake S**	3.36	341		Pn	12 10 08.2	-0.1
BRSE					Sn	12 10 46.8	-1.5
BRSE	**Bradley Lake S** baz=160	3.36	341	P	Pn	12 10 08.5	+0.2
BRSE	baz=160			S	Sn	12 10 46.8	-1.5
BRLK	**Bradley Lake**	3.41	340		Pn	12 10 08.9	0.0
HOM	**Homer**	3.48	334		Pn	12 10 10.4	+0.6
HOM	comp=N,802nm,1.5s			IAML		12 10 55.6	
HOM	**Homer** baz=152	3.48	334	P	Pn	12 10 10.5	+0.7
P23K	**Montague Islan**	3.48	10		Sn	12 10 49.1	-2.2
P23K	**Montague Islan** baz=190	3.48	10	P	Pn	12 10 09.6	-0.4
P23K	baz=190			S	Sn	12 10 49.1	-2.2
SEW	**Seward**	3.56	353		Sn	12 10 50.1	-2.9
SEW	**Seward** baz=172	3.56	353	P	Pn	12 10 10.5	-0.5
SEW	baz=172			S	Sn	12 10 50.1	-2.9
Q19K	**Cape Douglas,**	3.58	313		Sn	12 10 51.6	-1.9
Q19K	**Cape Douglas,**	3.58	313		Pn	12 10 11.9	+0.6
Q19K	**Cape Douglas,** baz=130	3.58	313	P	Pn	12 10 12.2	+1.0
Q19K	baz=130			S	Sn	12 10 51.6	-1.9
P19K	**Oil Pt**	3.93	323		Pn	12 10 16.8	+0.7
P19K	**Oil Pt** comp=E,513nm,0.6s	3.93	323	IAML		12 11 05.1	
P19K	comp=N,644nm,0.6s			IAML		12 11 08.2	
P19K	**Oil Pt** baz=140	3.93	323	P	Pn	12 10 16.8	+0.7
Q22K	**Cooper Landing**	3.95	352		Pn	12 10 17.4	+1.0
Q22K	**Cooper Landing** baz=171	3.95	352	P	Pn	12 10 17.6	+1.2
ACHA	**Angle Creek He**	3.98	297		Pn	12 10 17.4	+0.5
HIN	**Hinchinbrook I**	3.98	15		Pn	12 10 16.9	+0.1
HIN	comp=N,625nm,1.0s			IAML		12 11 03.2	
HIN	comp=E,591nm,0.8s			IAML		12 11 15.0	
KAHC	**Katmai Hardscr**	4.01	304		Pn	12 10 17.9	+0.5
KAHC	**Katmai Hardscr** baz=120	4.01	304	P	Pn	12 10 18.1	+0.8
KAIM	**Kayak Island**	4.02	32		Pn	12 10 17.4	+0.1
KAIM	**Kayak Island** comp=E,608nm,0.7s	4.02	32	IAML		12 11 13.2	
KAIM	**Kayak Island** baz=214	4.02	32	P	Pn	12 10 17.5	+0.2
SLKM	**Skilak Lake**	4.03	349		Pn	12 10 17.2	-0.3
ANCK	**Angle Creek**	4.06	296		Pn	12 10 18.0	+0.1
O20K	**Slope Mountain**	4.09	331		Pn	12 10 18.5	+0.1
IVE	**Iliamna Volcan**	4.15	328		Pn	12 10 18.8	-0.5
EYAK	**Cordova Ski Ar**	4.25	19	P	Pn	12 10 20.6	+0.1
EYAK	**Cordova Ski Ar** baz=201	4.25	19	P	Pn	12 10 20.5	+0.1
KELA	**Mount Kelaz**	4.27	299		Pn	12 10 21.1	+0.3
Q17K	**Contact Creek** baz=111	4.28	296	P	Pn	12 10 21.4	+0.5
RAGM	**Ragged Mountai**	4.34	27		Pn	12 10 21.9	+0.1
CAPN	**Captain Cook N**	4.40	344	Pn	Pn	12 10 23.6	+1.1
HMT	**Hamilton**	4.40	29		Pn	12 10 22.9	+0.2
NICHA	**Nichawak Mount**	4.40	32		Pn	12 10 22.9	+0.3
RED	**Redoubt Volcan**	4.42	332		Pn	12 10 22.1	-0.8
RSO	**Redoubt South**	4.45	333		Pn	12 10 23.2	-0.3
RDT	**Redoubt**	4.47	335		Pn	12 10 22.9	-0.7
P18K	**Big Mountain,** baz=127	4.51	311	P	Pn	12 10 23.5	-0.6
RC01	**Rabbit Creek A**	4.56	353		Pn	12 10 25.1	+0.4
RC01	**Rabbit Creek A** comp=E,417nm,0.6s	4.56	353	IAML		12 11 18.8	
RC01	comp=N,190nm,0.6s			IAML		12 11 22.1	
RC01	**Rabbit Creek A** baz=172	4.56	353	P	Pn	12 10 25.1	+0.4
RDJH	**Redoubt Jeurge**	4.58	333		Pn	12 10 24.8	-0.4
BERG	**Berg Lake**	4.61	32		Pn	12 10 25.2	-0.2
BERG	**Berg Lake** comp=N,365nm,0.9s	4.61	32	IAML		12 11 20.5	
GRIN	**Grindle Hills**	4.64	35		Pn	12 10 26.0	+0.2
SNH	**Sunshine Point**	4.72	38		Pn	12 10 26.9	0.0
SNH	**Sunshine Point** comp=E,241nm,0.9s	4.72	38	IAML		12 11 32.1	
SNH	comp=N,165nm,1.3s			IAML		12 12 02.7	
KHIT	**Khitrov Hills**	4.78	34		Pn	12 10 27.7	-0.2
O18K	**Koktuh Hills** baz=131	4.79	316	P	Pn	12 10 27.6	-0.3
DIV	**Divide**	4.79	17		Pn	12 10 28.1	+0.1
Q16K	**King Salmon**	4.80	299		Pn	12 10 28.5	+0.5
Q16K	**King Salmon** baz=114	4.80	299	P	Pn	12 10 28.6	+0.5
KNK	**Knik Glacier**	4.85	1		Pn	12 10 29.0	+0.3
KNK	comp=E,176nm,0.6s			IAML		12 11 26.6	
KNK	comp=N,110nm,0.9s			IAML		12 11 28.1	
BMRM	**Bremner River** baz=206	4.87	24	P	Pn	12 10 29.0	0.0
WAX	**Waxell Ridge**	4.91	36		Pn	12 10 29.6	-0.1
WAX	**Waxell Ridge** comp=E,296nm,0.6s	4.91	36	IAML		12 11 29.3	
P17K	**Kvichak River**	4.93	305		Pn	12 10 30.3	+0.6
P17K	**Kvichak River** baz=120	4.93	305	P	Pn	12 10 30.3	+0.6
N20K	**Mount Spurr** baz=157	4.99	340	P	Pn	12 10 30.9	+0.2
SPCR	**Spurr Chakacha**	4.99	340		Pn	12 10 30.6	-0.1
BARK	**Barkley Ridge**	5.00	37		Pn	12 10 30.8	-0.1
SUA	**Susitna One**	5.02	348		Pn	12 10 31.2	+0.1
SUA	**Susitna One** comp=E,131nm,0.8s	5.02	348	IAML		12 11 32.7	
SUA	comp=N,101nm,0.9s			IAML		12 11 49.4	
SUA	**Susitna One** baz=166	5.02	348	P	Pn	12 10 31.2	+0.1
MESA	**MESA**	5.03	41		Pn	12 10 31.2	-0.2
MESA	comp=N,149nm,1.0s			IAML		12 11 32.8	
MESA	comp=E,151nm,1.3s			IAML		12 11 43.9	
PMR	**Palmer**	5.03	357		Pn	12 10 31.4	+0.2
PMR	comp=N,131nm,0.8s			IAML		12 11 28.2	
PMR	comp=E,192nm,0.9s			IAML		12 11 28.3	
PMR	**Palmer**	5.03	357	P	Pn	12 10 32.2	+1.0
SPCG	**Spurr Capps Gl**	5.04	341		Pn	12 10 31.6	+0.2
SPCP	**Crater Peak Br**	5.04	340		Pn	12 10 32.1	+0.6
SPBG	**Spurr Blockage**	5.08	339		Pn	12 10 32.0	+0.1
KLU	**Klutina**	5.12	15		Pn	12 10 32.9	+0.4
KLU	comp=E,144nm,0.8s			IAML		12 11 33.0	
KLU	comp=N,150nm,0.7s			IAML		12 11 38.2	
KLU	**Klutina** baz=196	5.12	15	P	Pn	12 10 32.8	+0.4
ISLE	**Juniper Island**	5.20	37		Pn	12 10 33.5	-0.2
ISLE	**Juniper Island** comp=N,157nm,1.2s	5.20	37	IAML		12 11 44.4	
ISLE	comp=E,119nm,1.2s			IAML		12 11 50.2	
BAGL	**Bagley Icefiel**	5.20	38		Pn	12 10 33.4	-0.1
N19K	**Bonanza Creek**	5.23	327		Pn	12 10 33.5	-0.5
N19K	**Bonanza Creek** comp=E,84nm,0.9s	5.23	327	IAML		12 11 50.9	
SML	**Sawmill**	5.24	1		Pn	12 10 34.9	+0.7
SML	comp=N,197nm,0.9s			IAML		12 11 36.6	
SML	comp=E,174nm,1.0s			IAML		12 11 37.6	
SML	**Sawmill** baz=181	5.24	1	P	Pn	12 10 34.6	+0.5
M23K	**Glacier View** baz=185	5.25	5	P	Pn	12 10 35.1	+0.9
SCM	**Sheep Creek Mo**	5.31	7		Pn	12 10 35.7	+0.6
SCM	**Sheep Creek Mo** baz=187	5.31	7	P	Pn	12 10 35.7	+0.6
ANPB	**Aniakchak Plen**	5.33	276		Pn	12 10 34.8	-0.6
VRDI	**Verde Repeater**	5.37	28		Pn	12 10 36.0	0.0
SAMH	**Samovar Hills**	5.44	46		Pn	12 10 37.1	+0.1
CHGN	**Chignik**	5.45	271		Pn	12 10 36.6	-0.2
N25K	**Chitina, Valde** baz=203	5.45	21	P	Pn	12 10 37.2	+0.3
GRNC	**Granite Creek**	5.49	38		Pn	12 10 37.5	-0.2
TABL	**Table Mountain**	5.50	42		Pn	12 10 37.7	-0.2
O17K	**Koliganek Bris** baz=123	5.51	309	P	Pn	12 10 37.4	-0.4
N18K	**Kilae Creek**	5.59	320		Pn	12 10 38.1	-0.8
MCARA	**McCarthy VSAT**	5.61	29		Pn	12 10 39.4	+0.2
MCARA	**McCarthy VSAT** baz=213	5.61	29	P	Pn	12 10 39.2	0.0
SKT	**Skwentna**	5.62	346		Pn	12 10 40.7	+1.5
PINM	**Pinnacle** baz=234	5.64	48	P	Pn	12 10 39.5	-0.1
M24K	**Tolsona, Glenn** baz=193	5.68	12	P	Pn	12 10 41.2	+1.0
BARN	**Barnard Glacie**	5.76	36		Pn	12 10 41.7	+0.3
PNL	**Peninsula**	5.78	54		Pn	12 10 41.5	0.0
PNL	**Peninsula**	5.78	54	P	Pn	12 10 41.9	+0.4
PNL	**Peninsula** baz=240	5.78	54	P	Pn	12 10 41.5	0.0
SVW2	**Sparrevohn**	5.79	324		Pn	12 10 41.0	-0.7
SVW2	**Sparrevohn**	5.79	324	P	Pn	12 10 41.0	-0.7
CTG	**Chitna Glacier** baz=223	5.80	38	P	Pn	12 10 41.8	-0.1
CTGM	**Chitina Glacie**	5.80	38		Pn	12 10 41.7	-0.2
LOGN	**Logan Glacier**	5.81	40		Pn	12 10 42.0	-0.1
BCPM	**Bancas Point**	5.82	51		Pn	12 10 42.2	+0.2
O16K	**Kokwok River B** baz=118	5.86	305	P	Pn	12 10 42.9	+0.3
CUT	**Chulitna**	5.90	352		Pn	12 10 44.8	+1.6
N17K	**Nushagak Hills**	5.98	315		Pn	12 10 43.5	-0.7
WAT6	**Susitna Watana** baz=184	6.03	4	P	Pn	12 10 45.6	+0.5
HARP	**HAARP** baz=198	6.09	15	P	Pn	12 10 46.8	+1.0
M19K	**Big River Lodg**	6.10	333		Pn	12 10 45.2	-0.8
M18K	**Stony River** baz=140	6.17	326	P	Pn	12 10 46.1	-0.7
WAT1	**Susitna Watana**	6.27	0		Pn	12 10 49.0	+0.8
WAT1	**Susitna Watana** baz=180	6.27	0	P	Pn	12 10 49.1	+0.9
CNBA	**Chernabura Isl**	6.45	259	Pn	Pn	12 10 49.6	-1.1
O29M	**Mount Kennedy**	6.45	51		Pn	12 10 51.1	+0.3
O15K	**Ungalikthiuk R** baz=110	6.52	298	P	Pn	12 10 52.2	+0.6
P29M	**Windy Craggy**	6.52	58		Pn	12 10 51.4	-0.3
P29M	**Windy Craggy** baz=246	6.52	58	P	Pn	12 10 51.4	-0.3
DHY	**Denali Highway**	6.54	5		Pn	12 10 52.8	+0.7
DHY	**Denali Highway** baz=186	6.54	5	P	Pn	12 10 52.8	+0.7
N16K	**Nishlik Lake** baz=122	6.59	310	P	Pn	12 10 52.9	+0.2
PAX	**Paxson**	6.60	13		Pn	12 10 53.3	+0.5
PAX	**Paxson** baz=195	6.60	13	P	Pn	12 10 53.8	+0.9
M17K	**Holitna River**	6.64	320		Pn	12 10 52.9	-0.3
YUK3	**Moose Creek**	6.68	35		Pn	12 10 54.5	+0.5
YUK3	**Moose Creek** baz=222	6.68	35	P	Pn	12 10 54.5	+0.5
M27K	**Edge Creek, AK**	6.73	28		Pn	12 10 55.2	+0.6
M27K	**Edge Creek, AK** baz=213	6.73	28	P	Pn	12 10 55.2	+0.6
SDPT	**Sand Point**	6.77	264		Pn	12 10 54.7	-0.4
SDPT	**Sand Point**	6.77	264	P	Pn	12 10 55.4	+0.3
MENT	**Mentasta**	6.83	19		Pn	12 10 56.9	+0.9
MENT	**Mentasta**	6.83	19	P	Pn	12 10 57.7	+1.7
RND	**Reindeer**	6.85	359		Pn	12 10 57.0	+0.8
S31K	**Pelican**	6.86	73		Pn	12 10 54.1	-2.1
S31K	**Pelican** baz=263	6.86	73	P	Pn	12 10 54.7	-1.5
TRF	**Thorofare Moun**	6.94	354		Pn	12 10 58.1	+0.5
TRF	**Thorofare Moun** baz=172	6.94	354	P	Pn	12 10 58.1	+0.5
M16K	**Timber Creek**	6.97	314		Pn	12 10 58.0	+0.2
N15K	**Kwethluk River**	7.02	306		Pn	12 10 58.9	+0.4
N15K	**Kwethluk River** baz=116	7.02	306	P	Pn	12 10 58.9	+0.4
BVCY	**Beaver Creek**	7.05	31		Pn	12 10 59.4	+0.4
BVCY	**Beaver Creek** baz=217	7.05	31	P	Pn	12 10 59.4	+0.4
CAST	**Castle Rocks**	7.07	347		Pn	12 10 59.9	+0.7
CAST	**Castle Rocks** baz=164	7.07	347	P	Pn	12 10 59.9	+0.7
KTH	**Kantishna Hill**	7.09	352	Pn	Pn	12 11 01.2	+1.7
MCK	**McKinley**	7.17	359		Pn	12 11 01.9	+1.3
MCK	**McKinley** baz=178	7.17	359	P	Pn	12 11 01.9	+1.3
HYT	**Haines Junctio**	7.18	49		Pn	12 11 00.6	-0.2
HYT	**Haines Junctio** baz=238	7.18	49	P	Pn	12 11 00.6	-0.2
O14K	**Tigyukauivet M**	7.25	297		Pn	12 11 02.1	+0.5
SIT	**Sitka**	7.31	81		Pn	12 10 58.4	-4.0
SIT	**Sitka**	7.31	81	P	Pn	12 10 59.5	-3.0
K20K	**Telida**	7.32	340		Pn	12 11 03.5	+0.9
L27K	**Beaver Creek,**	7.34	25		Pn	12 11 03.0	+0.1
BCAR	**Beaver Creek A**	7.35	25	Pn	Pn	12 11 03.1	0.0
TTA	**Tatalina**	7.38	333		Pn	12 11 02.9	-0.5
TTA	**Tatalina**	7.38	333	P	Pn	12 11 03.7	+0.2
K24K	**Donnelly Dome**	7.38	10		Pn	12 11 04.9	+1.5
K24K	**Donnelly Dome** baz=192	7.38	10	P	Pn	12 11 04.9	+1.5
RIDG	**Independent Ri**	7.42	13	Pn	Pn	12 11 04.8	+0.8
L17K	**Donlin**	7.44	322		Pn	12 11 03.6	-0.7
L16K	**Owhat River** baz=128	7.58	317	P	Pn	12 11 05.9	-0.3
SKAG	**Skagway**	7.62	62		Pn	12 11 06.5	-0.2
SKAG	**Skagway**	7.62	62	P	Pn	12 11 07.6	+0.9
SKAG	**Skagway** baz=253	7.62	62	P	Pn	12 11 06.5	-0.2
BPAW	**Bear Paw Mtn.**	7.63	352	Pn	Pn	12 11 05.7	-1.3
S32K	**Killisnoo**	7.71	78	Pn	Pn	12 11 06.8	-1.2
O30N	**Mendenhall** baz=242	7.76	52	P	Pn	12 11 08.8	+0.2
SCRK	**Sand Creek**	7.76	15		Pn	12 11 09.6	+0.8
SCRK	**Sand Creek** baz=199	7.76	15	P	Pn	12 11 09.6	+0.8
JIS	**Juneau Island**	7.87	72	Pn	Pn	12 11 09.7	-0.4
JIS	**Juneau Island**	7.87	72	P	Pn	12 11 09.7	-0.4
J20K	**Nowinta River**	8.09	343	Pn	Pn	12 11 13.9	+0.7
WHY	**Whitehorse**	8.24	55	Pn	Pn	12 11 15.7	+0.3
IL31		8.26	5		Pn	12 11 15.9	+0.5
ILAR	**Eielson Array**	8.26	5	Pn	Pn	12 11 16.8	+1.3
ILAR	**Eielson Array** comp=E,0.7nm,0.3s,baz=189,slow=13,SNR=26	8.26	5	Pn	Pn	12 11 15.0	-0.5
ILAR	comp=E,0.5nm,0.3s,baz=199,slow=14,SNR=4.5 comp=E,2.0nm,0.4s			Sn	Sn	12 12 41.4	-7.4
COLA	**College**	8.33	2		Pn	12 11 17.5	+1.1
COLA	**College**	8.33	2	P	Pn	12 11 18.6	+2.2
P32M	**Atlin**	8.45	63		Pn	12 11 17.6	-0.5
P32M	**Atlin** baz=255	8.45	63	P	Pn	12 11 17.6	-0.5
M30M	**Minto, Yukon**	8.48	40		Pn	12 11 18.8	+0.2
M30M	**Minto, Yukon** baz=230	8.48	40	P	Pn	12 11 18.8	+0.2
POKR	**Poker Plat Res**	8.58	3		Pn	12 11 20.5	+0.6
I23K	**Minto, Yukon-K**	8.60	358		Pn	12 11 20.6	+0.5
I23K	**Minto, Yukon-K** baz=177	8.60	358	P	Pn	12 11 20.6	+0.5
L14K	**Kuka Creek** baz=118	8.69	309	P	Pn	12 11 22.0	+0.7
ISLZ	**Isanotski Laza**	8.74	264		Pn	12 11 21.1	-1.0
CRAG	**Craig**	8.75	91	P	Pn	12 11 20.9	-1.3
DAWY	**Dawson**	8.78	28	Pn	Pn	12 11 23.0	+0.3
EGAK	**Eagle**	8.99	21	Pn	Pn	12 11 26.6	+1.1
P33M	**Teslin, Yukon** baz=252	9.05	60	P	Pn	12 11 26.2	-0.2
H24K	**Noodor Dome**	9.29	2	Pn	Pn	12 11 32.0	+2.3
FARO	**Faro, Yukon**	9.61	48		Pn	12 11 34.8	+0.8
IMAR	**Indian Mountai**	9.75	348	Pn	Pn	12 11 36.9	+1.1
I28M	**Miner Creek**	9.83	22	Pn	Pn	12 11 38.4	+1.3
FYU	**Fort Yukon**	10.14	8		Pn	12 11 42.1	+0.8
DLBC	**Dease Lake**	10.17	72	Pn	Pn	12 11 42.2	+0.5
DLBC	**Dease Lake** comp=E,0.7nm,0.3s,baz=273,slow=7.1,SNR=19	10.17	72	Pn	Pn	12 11 41.8	+0.1
DLBC	comp=E,0.3nm,0.3s,baz=249,slow=22,SNR=1.3 comp=E,2.7nm,0.5s			Sn	Sn	12 13 29.6	-6.1
G23K	**Bananza Creek**	10.19	357	Pn	Pn	12 11 42.6	+0.7
G18K	**Tagagawik**	10.50	337		Pn	12 11 46.1	-0.1
UNV	**Unalaska Valle**	10.58	262	P	Pn	12 11 46.8	-0.4
H29M	**Whitestone**	10.82	23	Pn	Pn	12 11 52.0	+1.4
F24K	**Squaw Lake**	10.98	1	Pn	Pn	12 11 53.9	+1.1
F20K	**Avaraart Lake**	11.02	345	Pn	Pn	12 11 53.8	+0.7
BMAR	**Burnt Mountain**	11.05	8	Pn	Pn	12 11 54.0	+0.4
ANM	**Nome**	11.45	321	Pn	Pn	12 11 59.3	+0.2
E25K	**Arctic Village**	11.66	6		Pn	12 12 02.6	+0.5
G31M	**Satah River**	12.35	27	Pn	Pn	12 12 11.9	+0.4
INK	**Inuvik**	13.62	24	Pn	Pn	12 12 30.1	+1.5
INK	**Inuvik** comp=E,0.2nm,0.3s,baz=206,slow=15,SNR=17 comp=E,7.6nm,0.9s	13.62	24	Pn	Pn	12 12 29.0	+0.3
FLDN	**Fort Liard**	13.64	64		Pn	12 12 30.7	+1.7
C36M	**Paulatuk** comp=Z,18nm,1.0s	16.79	31	IAmb	IAmb	12 13 22.9	
HILA	**High Level**	16.98	70		Pn	12 13 14.1	+1.0
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.3s,baz=266,slow=11,SNR=31 comp=Z,4.7nm,0.8s	18.07	57	P	Pn	12 13 26.2	-0.3
H04A	**Detroit Lake**	20.41	114		P	12 13 53.3	+0.5
H04A	comp=Z,26nm,1.5s			IAmb	IAmb	12 14 04.9	
NEW	**Newport**	20.77	100		P	12 13 57.2	+0.5
NEW	comp=Z,26nm,1.5s			IAmb	IAmb	12 14 10.7	
NEW	**Newport** comp=Z,0.8nm,0.5s,baz=294,slow=15,SNR=3.9 comp=Z,0.8nm,0.5s	20.77	100	P	Pn	12 13 58.2	-0.9
HUMO	**Hull Mountain**	21.56	120	P	P	12 14 05.4	+0.3
HUMO	comp=Z,13nm,1.1s			IAmb	IAmb	12 14 08.6	
G08A	**Pilot Rock**	21.65	109	P	P	12 14 06.3	+0.1
PINE	**Pine Mountain**	21.68	114	P	P	12 14 06.9	+0.3
J05D	**Fort Rock, OR**	21.90	116	P	P	12 14 09.4	+0.4
J05D	comp=Z,17nm,1.2s			IAmb	IAmb	12 14 15.8	
I07A	**Izee** comp=Z,12nm,1.4s	22.20	112	IAmb	IAmb	12 14 52.6	
YBH	**Yreka Blue Hor** comp=Z,15nm,1.2s	22.34	121	P	P	12 14 13.8	+0.1
YBH				IAmb	IAmb	12 14 23.8	
BILL	**Bilibino**	23.27	318	P	P	12 14 22.7	-0.3
WVOR	**Wild Horse Val** comp=Z,8.1nm,1.1s	23.82	114	P	P	12 14 29.9	+1.1
WVOR				IAmb	IAmb	12 14 31.0	
AFDM	**Forest Hills D** comp=Z,9.1nm,1.3s	25.35	122	P	P	12 14 43.5	+0.8
AFDM				IAmb	IAmb	12 14 45.9	
PAHR	**Pah Rah Range** comp=Z,8.2nm,1.4s	25.51	119	IAmb	IAmb	12 14 47.9	
EMB	**Emerald Bay** comp=Z,6.3nm,1.1s	25.74	121	IAmb	IAmb	12 14 50.0	
NVAR	**Mina Array Bea** comp=Z,1.3nm,0.8s,baz=303,slow=9.5,SNR=11 comp=Z,1.3nm,0.8s	27.03	119	P	P	12 14 58.9	+0.8
MDPB	**Devils Postpil** comp=Z,6.8nm,1.4s	27.29	121	IAmb	IAmb	12 15 03.0	
PRN	**Pahroc Range** comp=Z,5.8nm,1.2s	29.43	116	IAmb	IAmb	12 15 37.0	
WUAZ	**Wupatki** comp=Z,5.0nm,1.1s	32.74	114	IAmb	IAmb	12 15 51.1	
TXAR	**Lajitas Array** comp=Z,0.4nm,0.8s,baz=305,slow=4.4,SNR=5.2	41.59	112	P	P	12 17 04.0	+0.3
TXAR	comp=Z,326nm,18.6s,baz=322,slow=38 comp=Z,0.4nm,0.8s			LR	LR	12 35 16.4	
KLR	**Kul'dur** comp=Z,1.5nm,0.6s,baz=60,slow=8.5,SNR=7.5 comp=Z,1.5nm,0.6s	46

baz=28,slow=76,SNR=14
SONM Songino Array 58.73 310 P **P** **12 19 12.8 -0.7**
comp=Z,1.1nm,0.8s,baz=40,slow=7.0,SNR=5.2
comp=Z,1.1nm,0.8s
ZALV Zalesovo Beam 61.51 327 P **P** **12 19 32.1 -0.1**
comp=Z,1.3nm,0.7s,baz=31,slow=6.8,SNR=6.9
comp=Z,1.3nm,0.7s
FINES FINESS Array B 62.24 3 P **P** **12 19 38.3 +1.3**
comp=Z,6.4nm,1.0s,baz=0.2,slow=8.3,SNR=11
comp=Z,6.4nm,1.0s
BVAR Borovoye Array 66.16 335 P **P** **12 20 04.1 +1.1**
comp=Z,1.2nm,0.7s,baz=54,slow=7.9,SNR=5.1
comp=Z,1.2nm,0.7s
KURBB Kurchatov Arra 66.27 329 P **P** **12 20 04.8 +1.1**
comp=Z,0.6nm,0.6s,baz=30,slow=6.6,SNR=4.0
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 68.56 325 P **P** **12 20 18.5 +0.3**
comp=Z,0.3nm,0.5s,baz=34,slow=7.0,SNR=4.9
comp=Z,0.3nm,0.5s
AKASG Malin Array Be 73.07 1 P **P** **12 20 44.9 -0.6**
comp=Z,0.3nm,0.4s,baz=359,slow=5.9,SNR=2.2
comp=Z,0.3nm,0.4s
CMAR Chiang Mai Arr 86.47 298 P **P** **12 21 59.6 +0.9**
comp=Z,0.2nm,0.3s,baz=1.1,slow=4.5,SNR=1.2
comp=Z,0.2nm,0.3s
QSPA South Pole Qui 146.38 180 PKPbc **PKPdf** **12 28 54.2 +0.3**
comp=Z,0.9nm,0.2s,baz=86,slow=4.5,SNR=1.9
BOSA Boshof 151.71 11 PKPbc **PKiKP** **12 29 11.8 +1.2**
comp=Z,11nm,1.0s,baz=141,slow=5.0,SNR=6.7

*TRN **01** 12:23:18.8, 10˚.89N×62˚.00W, h99km, MD3.3, North of the Paria peninsula.*
*FUNV **01** 12:23:19.5, 10˚.81N×62˚.12W, h33km, MW4.0*
ISC 01 12:23:15.5±1.4, 10˚.81N±0˚.04×62˚.17W±0˚.05, h113km±11km, n14, σ1§78/26, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.77**	**102**	*eP*		**Pn**		**12 23 36.0**	**+1.3**
TRN				*eS*		**Sn**		**12 23 47.4**	**-1.8**
TPP	**Pointe-a-Pierr**	**0.86**	**125**	*eP*		**Pn**		**12 23 36.8**	**+1.2**
TPP				*eS*		**Sn**		**12 23 50.7**	**+0.1**
CRUV	**Carupano**	**1.06**	**263**	*eP*		**Pn**		**12 23 39.1**	**+1.6**
CRUV				*eS*		**Sn**		**12 23 52.0**	**-2.1**
GRFF	**Grenada Fort F**	**1.30**	**19**	*eP*		**Pn**		**12 23 40.9**	**+0.7**
GRFF				*eS*		**Sn**		**12 23 57.7**	**-1.3**
GRGR	**Grenville**	**1.41**	**21**	*eP*		**Pn**		**12 23 42.3**	**+0.9**
GRGR				*eS*		**Sn**		**12 23 59.9**	**-1.1**
GRHS	**Sauteurs**	**1.50**	**20**	*eP*		**Pn**		**12 23 43.5**	**+1.1**
GRHS				*eS*		**Sn**		**12 24 01.8**	**-1.1**
GCMP	**Grenada, Carri**	**1.82**	**23**	*eP*		**Pn**		**12 23 47.5**	**+1.2**
GCMP				*eS*		**Sn**		**12 24 08.7**	**-1.2**
PCRV	**Puerto La Cruz**	**2.51**	**256**	*eP*		**Pn**		**12 23 57.3**	**+2.1**
PCRV				*eS*		**Sn**		**12 24 25.2**	**-0.5**
SVB	**Belmont**	**2.61**	**20**	*eP*		**Pn**		**12 23 58.0**	**+1.5**
SVB				*eS*		**Sn**		**12 24 25.9**	**-2.0**
SLBI	**Saint Lucia, B**	**3.40**	**20**	*eP*		**Pn**		**12 24 08.2**	**+1.3**
SLBI				*eS*		**Sn**		**12 24 44.8**	**-1.8**
LUEV	**Luepa**	**4.98**	**172**	*eP*		**Pn**		**12 24 30.4**	**+2.0**
LUEV				*eS*		**Sn**		**12 25 23.1**	**-1.9**
CACV	**CAICARA DEL OR**	**5.39**	**234**	*eP*		**Pn**		**12 24 31.0**	**-2.6**
CACV				*eS*		Sn		12 25 24.2	-10
BENV	**Beln**	**5.41**	**262**	*eP*		**Pn**		**12 24 37.1**	**+3.1**
BAUV	**El Baul**	**6.08**	**253**	*eP*		**Pn**		**12 24 44.5**	**+1.6**
BAUV				*eS*		**Sn**		**12 25 49.2**	**-2.1**

*IDC **01** 12:23:23.8±0.8, 56˚.03N×149˚.19W, h0km, mb3.8/15, mbtmp3.9/20, ML3.6/5, MS4.0/14, Error ellipse: s-maj=20.6km s-min=12.7km az=33.0*
*NEIC **01** 12:23:24.8±2.4, 56˚.01N±0˚.08×149˚.19W±0˚.06, h19km±6km, mb4.4/3, ML4.2/50, ML4.1(AEIC), Error ellipse: s-maj=12.0km s-min=5.1km az=180.0*
*AEIC **01** 12:23:28.8±2.1, 56˚.08N±0˚.07×149˚.15W±0˚.08, h12km±5km, Error ellipse: s-maj=11.4km s-min=4.8km az=156.0*
ISC 01 12:23:24.8±0.6, 56˚.14N±0˚.06×149˚.17W±0˚.04, h10km, n282, σ1§12/276, mb4.0/17, MS3.9/10, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.49**	**313**			**Pn**		**12 24 04.7**	**-0.6**
KDAK						**Sn**		**12 24 33.8**	**-1.9**
KDAK	**Kodiak Island**	**2.49**	**313**	Pn		**Pn**		**12 24 04.7**	**-0.6**
	11nm,0.3s,baz=145,slow=5.2,SNR=84								
KDAK				Sn		**Sn**		**12 24 32.8**	**-2.9**
	12nm,0.3s,baz=115,slow=15,SNR=5.7								
KDAK				LR		LR		12 25 19.3	
	comp=Z,2μm,19.0s,baz=164,slow=45								
	37nm,0.5s								
OHAK	**Old Harbor**	**2.52**	**297**			**Pn**		**12 24 04.8**	**-0.8**
OHAK						**Sn**		**12 24 33.6**	**-2.7**
OHAK	**Old Harbor**	**2.52**	**297**	P		**Pn**		**12 24 05.0**	**-0.7**
OHAK	**Old Harbor**	**2.52**	**297**	P		**Pn**		**12 24 04.8**	**-0.8**
	baz=115								
OHAK				S		**Sn**		**12 24 33.6**	**-2.7**
	baz=115								
SII	**Sitkinak Islan**	**2.82**	**281**			**Pn**		**12 24 08.7**	**-1.2**
SII						**Sn**		**12 24 40.1**	**-3.8**
SII	**Sitkinak Islan**	**2.82**	**281**	IAML				12 24 48.8	
	comp=E,502nm,1.2s								
SII	**Sitkinak Islan**	**2.82**	**281**	P		**Pn**		**12 24 08.9**	**-1.0**
SII	**Sitkinak Islan**	**2.82**	**281**	P		**Pn**		**12 24 08.7**	**-1.2**
	baz=98								
SII				S		**Sn**		**12 24 40.1**	**-3.8**
	baz=98								
Q20K	**Shuyak Island**	**3.03**	**326**	P		**Pn**		**12 24 12.4**	**-0.3**
	baz=144								
Q20K				S		**Sn**		**12 24 47.7**	**-1.3**
	baz=144								
SYI	**Shuyak Island**	**3.03**	**326**			**Pn**		**12 24 12.4**	**-0.3**
SYI						**Sn**		**12 24 47.7**	**-1.2**
CNPM	**China Poot**	**3.57**	**343**			**Pn**		**12 24 19.7**	**-0.5**
CNPM						**Sn**		**12 25 00.6**	**-1.8**
CNPM	**China Poot**	**3.57**	**343**	IAML				12 25 03.9	
	comp=E,271nm,0.7s								
Q23K	**Middleton Isla**	**3.63**	**23**			**Pn**		**12 24 20.8**	**-0.1**
Q23K						**Sn**		**12 25 01.4**	**-2.3**
Q23K	**Middleton Isla**	**3.63**	**23**	IAML				12 25 07.7	
	comp=N,265nm,1.2s								
Q23K				IAML				12 25 26.5	
	comp=E,329nm,1.2s								
Q23K	**Middleton Isla**	**3.63**	**23**	P		**Pn**		**12 24 20.8**	**-0.1**
	baz=205								
Q23K				S		**Sn**		**12 25 01.4**	**-2.3**
	baz=205								
MID	**Middleton Isla**	**3.63**	**24**			**Pn**		**12 24 20.6**	**-0.3**
MID						**Sn**		**12 25 01.4**	**-2.4**
MID	**Middleton Isla**	**3.63**	**24**	IAML				12 25 07.6	
	comp=N,275nm,1.2s								
MID				IAML				12 25 26.4	
	comp=E,320nm,1.2s								
MID	**Middleton Isla**	**3.63**	**24**	P		**Pn**		**12 24 20.6**	**-0.3**
Q19K	**Cape Douglas,**	**3.69**	**321**			**Pn**		**12 24 22.5**	**+0.6**
Q19K						**Sn**		**12 25 01.6**	**-3.8**
Q19K	**Cape Douglas,**	**3.69**	**321**	P		**Pn**		**12 24 22.5**	**+0.6**
	baz=138								
Q19K				S		**Sn**		**12 25 01.6**	**-3.8**
	baz=138								
BRSE	**Bradley Lake S**	**3.71**	**348**			**Sn**		**12 25 03.9**	**-1.8**
BRSE	**Bradley Lake S**	**3.71**	**348**	P		**Pn**		**12 24 21.5**	**-0.5**
	baz=166								
BRSE				S		**Sn**		**12 25 03.9**	**-1.8**
	baz=166								
BRLK	**Bradley Lake**	**3.75**	**347**			**Pn**		**12 24 22.4**	**-0.3**
BRLK				IAML				12 25 10.9	
	comp=E,259nm,0.7s								
HOM	**Homer**	**3.76**	**341**			**Pn**		**12 24 23.6**	**+0.8**
HOM	**Homer**	**3.76**	**341**	IAML				12 25 27.4	
	comp=E,790nm,0.8s								
KCE	**Katmai Mt Cerb**	**3.89**	**305**			**Pn**		**12 24 26.1**	**+1.5**
ACHA	**Angle Creek He**	**3.94**	**304**			**Pn**		**12 24 25.9**	**+0.6**
SEW	**Seward**	**3.98**	**358**	P		**Pn**		**12 24 24.9**	**-0.8**
	baz=178								
P23K	**Montague Islan**	**3.98**	**13**			**Pn**		**12 24 25.4**	**-0.4**
P23K	**Montague Islan**	**3.98**	**13**	P		**Pn**		**12 24 25.6**	**-0.2**
	baz=194								
ANCK	**Angle Creek**	**4.01**	**304**			**Pn**		**12 24 27.1**	**+0.8**
KVTA	**Katmai Vly 10**	**4.01**	**307**			**Pn**		**12 24 27.1**	**+0.9**
KAHC	**Katmai Hardscr**	**4.03**	**311**	P		**Pn**		**12 24 27.5**	**+0.9**
	baz=126								
P19K	**Oil Pt**	**4.13**	**330**			**Pn**		**12 24 28.4**	**+0.4**
P19K	**Oil Pt**	**4.13**	**330**	IAML				12 25 19.3	
	comp=N,556nm,0.7s								
P19K						IAML		12 25 26.3	
	comp=E,382nm,0.7s								
P19K	**Oil Pt**	**4.13**	**330**	P		**Pn**		**12 24 28.7**	**+0.8**
	baz=147								
CNTC	**Contact Creek**	**4.22**	**303**			**Pn**		**12 24 29.6**	**+0.3**
Q17K	**Contact Creek**	**4.22**	**303**	P		**Pn**		**12 24 30.1**	**+0.8**
	baz=118								
O22K	**Cooper Landing**	**4.36**	**356**			**Pn**		**12 24 31.0**	**0.0**
O22K	**Cooper Landing**	**4.36**	**356**	P		**Pn**		**12 24 30.7**	**-0.3**
	baz=176								
IVE	**Iliamna Volcan**	**4.39**	**334**			**Pn**		**12 24 31.4**	**-0.1**
SLKM	**Skilak Lake**	**4.41**	**353**			**Pn**		**12 24 31.0**	**-0.8**
HIN	**Hinchinbrook I**	**4.49**	**17**	Pn		**Pn**		**12 24 32.7**	**-0.2**
HIN				IAML				12 25 33.7	
	comp=E,262nm,1.0s								
HIN				IAML				12 25 37.1	
	comp=N,262nm,0.9s								
KAIM	**Kayak Island**	**4.56**	**32**			**Pn**		**12 24 32.6**	**-1.2**
KAIM	**Kayak Island**	**4.56**	**32**	IAML				12 25 31.0	
	comp=E,290nm,0.9s								
KAIM				IAML				12 25 38.7	
	comp=N,294nm,1.2s								
P18K	**Big Mountain,**	**4.60**	**318**	Pn		**Pn**		**12 24 34.2**	**-0.1**
P18K	**Big Mountain,**	**4.60**	**318**	P		**Pn**		**12 24 34.0**	**-0.3**
	baz=133								
RED	**Redoubt Volcan**	**4.69**	**338**			**Pn**		**12 24 34.9**	**-0.8**
RSO	**Redoubt South**	**4.72**	**338**			**Pn**		**12 24 36.5**	**+0.3**
CAPN	**Captain Cook N**	**4.75**	**348**	Pn		**Pn**		**12 24 37.0**	**+0.6**
RDT	**Redoubt**	**4.76**	**340**			**Pn**		**12 24 35.8**	**-0.8**
EYAK	**Cordova Ski Ar**	**4.77**	**21**	P		**Pn**		**12 24 36.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.77**	**21**	P		**Pn**		**12 24 36.5**	**-0.2**
	baz=203								
Q16K	**King Salmon**	**4.78**	**305**			**Pn**		**12 24 36.8**	**+0.1**
Q16K	**King Salmon**	**4.78**	**305**	P		**Pn**		**12 24 37.4**	**+0.7**
	baz=119								
R16K	**Pilot Point**	**4.83**	**291**			**Pn**		**12 24 36.9**	**-0.5**
R16K	**Pilot Point**	**4.83**	**291**	IAML				12 25 45.8	
	comp=E,159nm,1.3s								
R16K				IAML				12 27 11.9	
	comp=N,180nm,1.4s								
DFR	**Drift River**	**4.83**	**339**			**Pn**		**12 24 37.0**	**-0.6**
NCT	**North Crescent**	**4.85**	**338**			**Pn**		**12 24 37.4**	**-0.5**
RAGM	**Ragged Mountai**	**4.87**	**27**			**Pn**		**12 24 37.8**	**-0.3**
O19K	**Port Alsworth**	**4.89**	**328**	Pn		**Pn**		**12 24 38.1**	**-0.2**
O19K				IAML				12 25 38.1	
	comp=N,297nm,0.6s								
O19K	**Port Alsworth**	**4.89**	**328**	P		**Pn**		**12 24 38.1**	**-0.2**
	baz=144								
O18K	**Koktuh Hills**	**4.91**	**322**			**Pn**		**12 24 38.6**	**0.0**
O18K				IAML				12 25 35.8	
	comp=N,173nm,0.8s								
O18K				IAML				12 25 48.5	
	comp=E,108nm,1.2s								
O18K	**Koktuh Hills**	**4.91**	**322**	P		**Pn**		**12 24 38.6**	**0.0**
	baz=137								
HMT	**Hamilton**	**4.94**	**30**			**Pn**		**12 24 38.9**	**-0.1**
P17K	**Kvichak River**	**4.96**	**311**	P		**Pn**		**12 24 39.7**	**+0.5**
	baz=125								
RC01	**Rabbit Creek A**	**4.97**	**357**			**Pn**		**12 24 39.0**	**-0.5**
RC01	**Rabbit Creek A**	**4.97**	**357**	IAML				12 25 49.3	
	comp=E,101nm,0.6s								
RC01	**Rabbit Creek A**	**4.97**	**357**	P		**Pn**		**12 24 39.2**	**-0.2**
	baz=176								
GOAT	**Goat Mountain**	**5.03**	**26**			**Pn**		**12 24 40.5**	**+0.2**
ANNW	**Aniakchak Nort**	**5.07**	**283**			**Pn**		**12 24 41.3**	**+0.5**
ANPB	**Aniakchak Plen**	**5.09**	**281**			**Pn**		**12 24 41.1**	**0.0**
BERG	**Berg Lake**	**5.15**	**32**	IAML				12 25 50.3	
	comp=N,236nm,1.5s								
BERG				IAML				12 26 00.2	
	comp=E,289nm,1.1s								
CHGN	**Chignik**	**5.16**	**276**	Pn		**Pn**		**12 24 41.4**	**-0.6**
CHGN				IAML				12 25 47.6	
	comp=E,155nm,1.3s								
CHGN				IAML				12 26 00.7	
	comp=N,104nm,1.0s								
SNH	**Sunshine Point**	**5.26**	**37**			**Pn**		**12 24 43.4**	**0.0**
SNH	**Sunshine Point**	**5.26**	**37**	IAML				12 25 57.0	
	comp=N,151nm,1.2s								
SNH				IAML				12 26 04.5	
	comp=E,159nm,1.1s								
KNK	**Knik Glacier**	**5.30**	**4**			**Pn**		**12 24 43.9**	**0.0**
KNK	**Knik Glacier**	**5.30**	**4**	P		**Pn**		**12 24 44.2**	**+0.2**
	baz=184								
DIV	**Divide**	**5.31**	**18**			**Pn**		**12 24 44.1**	**0.0**
N20K	**Mount Spurr**	**5.31**	**344**	P		**Pn**		**12 24 43.9**	**-0.3**
	baz=161								
SPCR	**Spurr Chakacha**	**5.31**	**344**			**Pn**		**12 24 43.9**	**-0.3**
KHIT	**Khitrov Hills**	**5.32**	**33**			**Pn**		**12 24 44.0**	**-0.3**
SPCP	**Crater Peak Br**	**5.37**	**344**			**Pn**		**12 24 45.4**	**+0.4**
SPCG	**Spurr Capps Gl**	**5.37**	**345**			**Pn**		**12 24 45.0**	**-0.1**
BMRM	**Bremner River**	**5.40**	**24**	P		**Pn**		**12 24 45.5**	**+0.2**
	baz=208								
SUA	**Susitna One**	**5.40**	**352**			**Pn**		**12 24 44.9**	**-0.5**
SUA	**Susitna One**	**5.40**	**352**	P		**Pn**		**12 24 44.9**	**-0.5**
	baz=171								
N19K	**Bonanza Creek**	**5.45**	**331**			**Pn**		**12 24 45.5**	**-0.5**
N19K	**Bonanza Creek**	**5.45**	**331**	P		**Pn**		**12 24 45.9**	**-0.2**
	baz=147								
WAX	**Waxell Ridge**	**5.45**	**35**			**Pn**		**12 24 45.9**	**-0.2**
PMR	**Palmer**	**5.47**	**0**	Pn		**Pn**		**12 24 46.6**	**+0.4**
PMR	**Palmer**	**5.47**	**0**	P		**Pn**		**12 24 47.1**	**+0.9**
BARK	**Barkley Ridge**	**5.54**	**37**			**Pn**		**12 24 47.1**	**-0.2**
STLK	**Strandline Lak**	**5.55**	**347**			**Pn**		**12 24 47.2**	**-0.2**
SPNN	**North Nagishla**	**5.55**	**342**			**Pn**		**12 24 47.6**	**+0.1**
MESA	**MESA**	**5.56**	**40**			**Pn**		**12 24 48.3**	**+0.6**
O17K	**Koliganek Bris**	**5.57**	**314**			**Pn**		**12 24 47.7**	**+0.1**
O17K	**Koliganek Bris**	**5.57**	**314**	P		**Pn**		**12 24 48.3**	**+0.7**
	baz=128								
KLU	**Klutina**	**5.62**	**16**	P		**Pn**		**12 24 48.5**	**0.0**
	baz=199								
SML	**Sawmill**	**5.70**	**4**	Pn		**Pn**		**12 24 49.8**	**+0.3**
SML	**Sawmill**	**5.70**	**4**	P		**Pn**		**12 24 49.7**	**+0.3**
	baz=185								
M23K	**Glacier View**	**5.72**	**7**			**Pn**		**12 24 50.0**	**+0.3**
M23K	**Glacier View**	**5.72**	**7**	P		**Pn**		**12 24 50.2**	**+0.6**
	baz=188								
ISLE	**Juniper Island**	**5.74**	**36**			**Pn**		**12 24 50.2**	**+0.1**
BAGL	**Bagley Icefiel**	**5.74**	**38**			**Pn**		**12 24 49.8**	**-0.1**
N18K	**Kilae Creek**	**5.76**	**325**			**Pn**		**12 24 49.2**	**-1.0**
SCM	**Sheep Creek Mo**	**5.79**	**9**			**Pn**		**12 24 51.2**	**+0.5**
SCM	**Sheep Creek Mo**	**5.79**	**9**	P		**Pn**		**12 24 51.2**	**+0.5**
	baz=190								
VNFG	**Foggy Glacier, M**	**5.79**	**276**			**Pn**		**12 24 50.6**	**-0.2**
O16K	**Kolwok River B**	**5.88**	**310**			**Pn**		**12 24 51.5**	**-0.4**
VRDI	**Verde Repeater**	**5.91**	**28**			**Pn**		**12 24 52.1**	**-0.3**
N25K	**Chitina, Valde**	**5.97**	**22**	P		**Pn**		**12 24 53.5**	**+0.2**
	baz=205								
KIAG	**Kiagna River**	**5.97**	**34**			**Pn**		**12 24 53.0**	**-0.4**
SAMH	**Samovar Hills**	**5.98**	**45**			**Pn**		**12 24 53.3**	**0.0**
SKT	**Skwentna**	**5.98**	**349**			**Pn**		**12 24 53.2**	**0.0**
SVW2	**Sparrevohn**	**5.99**	**329**			**Pn**		**12 24 52.9**	**-0.5**
SVW2	**Sparrevohn**	**5.99**	**329**	P		**Pn**		**12 24 53.1**	**-0.3**
GLB	**Gilahina Butte**	**6.00**	**25**	Pn		**Pn**		**12 24 53.5**	**-0.1**
GRNC	**Granite Creek**	**6.03**	**37**			**Pn**		**12 24 53.8**	**-0.3**
TABL	**Table Mountain**	**6.04**	**41**			**Pn**		**12 24 54.1**	**-0.2**
CNBA	**Chernabura Isl**	**6.07**	**262**			**Pn**		**12 24 53.4**	**-1.1**
N17K	**Nushagak Hills**	**6.09**	**319**			**Pn**		**12 24 53.5**	**-1.3**
M20K	**Styx River**	**6.11**	**342**			**Pn**		**12 24 54.3**	**-0.8**
PTPK	**Patty Peak**	**6.15**	**32**			**Pn**		**12 24 55.9**	**+0.1**
MCARA	**McCarthy VSAT**	**6.15**	**29**			**Pn**		**12 24 56.5**	**+0.8**
MCARA	**McCarthy VSAT**	**6.15**	**29**	P		**Pn**		**12 24 56.0**	**+0.4**
	baz=214								
PCA	**Pinnacle**	**6.17**	**46**			**Pn**		**12 24 56.0**	**+0.1**
PINM	**Pinnacle**	**6.17**	**46**	P		**Pn**		**12 24 56.0**	**+0.1**
	baz=233								
M24K	**Tolsona, Glenn**	**6.18**	**13**			**Pn**		**12 24 56.7**	**+0.7**
M24K	**Tolsona, Glenn**	**6.18**	**13**	P		**Pn**		**12 24 56.7**	**+0.7**
	baz=196								
PNL	**Peninsula**	**6.29**	**52**			**Pn**		**12 24 57.8**	**+0.2**
PNL	**Peninsula**	**6.29**	**52**	P		**Pn**		**12 24 58.4**	**+0.8**
PNL	**Peninsula**	**6.29**	**52**	P		**Pn**		**12 24 57.8**	**+0.2**
	baz=240								
CTG	**Chitna Glacier**	**6.34**	**37**	P		**Pn**		**12 24 58.3**	**0.0**
	baz=223								
CTGM	**Chitina Glacie**	**6.34**	**37**			**Pn**		**12 24 58.3**	**0.0**
LOGN	**Logan Glacier**	**6.35**	**39**			**Pn**		**12 24 58.5**	**0.0**
M19K	**Big River Lodg**	**6.37**	**337**			**Pn**		**12 24 58.2**	**-0.5**
M18K	**Stony River**	**6.38**	**330**			**Pn**		**12 24 58.1**	**-0.6**
SDPT	**Sand Point**	**6.43**	**268**			**Pn**		**12 24 58.8**	**-0.7**
SDPT	**Sand Point**	**6.43**	**268**	P		**Pn**		**12 24 59.1**	**-0.4**
O15K	**Ungalikthiuk R**	**6.47**	**302**			**Pn**		**12 25 00.4**	**+0.4**
O15K	**Ungalikthiuk R**	**6.47**	**302**	P		**Pn**		**12 25 00.4**	**+0.4**
	baz=114								
WAT6	**Susitna Watana**	**6.50**	**6**			**Pn**		**12 25 00.7**	**+0.1**
	baz=187								
WAT6	**Susitna Watana**	**6.50**	**6**	P		**Pn**		**12 25 00.8**	**+0.2**
HARP	**HAARP**	**6.60**	**16**			**Pn**		**12 25 03.0**	**+1.2**
HARP	**HAARP**	**6.60**	**16**	P		**Pn**		**12 25 03.2**	**+1.4**
	baz=200								
N16K	**Nishlik Lake**	**6.66**	**315**			**Pn**		**12 25 03.0**	**+0.4**
WAT1	**Susitna Watana**	**6.72**	**2**	P		**Pn**		**12 25 04.0**	**+0.6**
	baz=183								
M17K	**Holitna River**	**6.80**	**324**			**Pn**		**12 25 04.4**	**-0.1**
O29M	**Mount Kennedy**	**6.98**	**49**			**Pn**		**12 25 07.2**	**+0.2**
DHY	**Denali Highway**	**7.01**	**7**			**Pn**		**12 25 07.9**	**+0.3**
DHY	**Denali Highway**	**7.01**	**7**	P		**Pn**		**12 25 07.9**	**+0.3**
	baz=188								
P29M	**Windy Craggy**	**7.03**	**55**			**Pn**		**12 25 07.1**	**-0.5**
M26K	**Nabesna, AK**	**7.03**	**24**			**Pn**		**12 25 09.1**	**+1.4**
N15K	**Kwethluk River**	**7.04**	**309**			**Pn**		**12 25 08.6**	**+0.7**
M16K	**Timber Creek**	**7.07**	**318**			**Pn**		**12 25 08.4**	**+0.1**
PAX	**Paxson**	**7.10**	**14**			**Pn**		**12 25 09.6**	**+0.8**
PAX	**Paxson**	**7.10**	**14**	P		**Pn**		**12 25 09.6**	**+0.8**
	baz=197								
YUK2	**White River**	**7.11**	**34**			**Pn**		**12 25 09.9**	**+1.1**
YUK8	**Steele Glacier**	**7.11**	**40**			**Pn**		**12 25 10.2**	**+1.3**
YUK8	**Steele Glacier**	**7.11**	**40**	P		**Pn**		**12 25 10.2**	**+1.3**
	baz=227								
O14K	**Tigyukauivet M**	**7.19**	**301**			**Pn**		**12 25 10.5**	**+0.7**
L18K	**Granite Mounta**	**7.21**	**331**	Pn		**Pn**		**12 25 09.8**	**-0.3**
YUK3	**Moose Creek**	**7.22**	**35**			**Pn**		**12 25 11.2**	**+0.7**
YUK3	**Moose Creek**	**7.22**	**35**	P		**Pn**		**12 25 11.2**	**+0.7**
	baz=222								
M27K	**Edge Creek, AK**	**7.26**	**28**			**Pn**		**12 25 12.2**	**+1.2**
PN7A	**Pavlof North-7**	**7.27**	**270**			**Pn**		**12 25 10.6**	**-0.4**
YUK7	**Dusty Glacier**	**7.28**	**48**			**Pn**		**12 25 11.6**	**+0.3**
S31K	**Pelican**	**7.29**	**70**			**Pn**		**12 25 09.7**	**-1.5**
S31K	**Pelican**	**7.29**	**70**	P		**Pn**		**12 25 09.8**	**-1.4**
	baz=261								
YUK6	**Outpost Mounta**	**7.42**	**45**			**Pn**		**12 25 14.0**	**+0.7**
YUK6	**Outpost Mounta**	**7.42**	**45**	P		**Pn**		**12 25 14.0**	**+0.7**
	baz=234								
CAST	**Castle Rocks**	**7.45**	**350**			**Pn**		**12 25 14.5**	**+1.1**
CAST	**Castle Rocks**	**7.45**	**350**	P		**Pn**		**12 25 14.5**	**+1.1**
	baz=167								
KTH	**Kantishna Hill**	**7.49**	**354**	Pn		**Pn**		**12 25 16.1**	**+2.1**
YUK4	**Talbot Arm**	**7.56**	**42**	P		**Pn**		**12 25 17.7**	**+2.7**
	baz=230								
M15K	**Kasigluk River**	**7.57**	**312**			**Pn**		**12 25 15.6**	**+0.5**
M15K	**Kasigluk River**	**7.57**	**312**	P		**Pn**		**12 25 15.9**	**+0.9**
	baz=122								
BVCY	**Beaver Creek**	**7.59**	**31**			**Pn**		**12 25 16.0**	**+0.6**
BVCY	**Beaver Creek**	**7.59**	**31**	P		**Pn**		**12 25 16.0**	**+0.6**
	baz=218								
PLBC	**Pleasant Camp**	**7.60**	**59**	P		**Pn**		**12 25 15.8**	**+0.3**
	baz=249								
MCK	**McKinley**	**7.62**	**1**			**Pn**		**12 25 16.5**	**+0.8**
MCK	**McKinley**	**7.62**	**1**	P		**Pn**		**12 25 16.5**	**+0.8**
	baz=181								
TTA	**Tatalina**	**7.64**	**336**	Pn		**Pn**		**12 25 15.9**	**-0.2**
TTA	**Tatalina**	**7.64**	**336**	P		**Pn**		**12 25 17.6**	**+1.5**
K20K	**Telida**	**7.74**	**343**			**Pn**		**12 25 17.8**	**+1.7**
SIT	**Sitka**	**7.70**	**77**			**Pn**		**12 25 13.7**	**-3.1**
SIT	**Sitka**	**7.70**	**77**	P		**Pn**		**12 25 14.6**	**-2.2**
HYT	**Haines Junctio**	**7.70**	**48**	Pn		**Pn**		**12 25 17.5**	**+0.5**

NVAR LR LR 12 38 10.5
comp=Z,506nm,18.3s,baz=347,slow=33
comp=Z,1.2nm,0.8s
RES Resolute Bay 27.66 28 LR LR 12 39 28.5
comp=Z,321nm,18.6s,baz=214,slow=35
PDAR Pinedale Array 28.58 101 P P **12 29 21.5 +0.5**
comp=Z,0.2nm,0.4s,baz=300,slow=4.0,SNR=5.0
comp=Z,0.2nm,0.4s
PETK Petropavlovsk- 30.27 287 P P **12 29 36.2 +0.6**
comp=Z,2.5nm,0.8s,baz=75,slow=9.3,SNR=8.3
PETK LR LR 12 41 04.4
comp=Z,156nm,21.9s,baz=72,slow=35
comp=Z,2.5nm,0.8s
ANMO Albuquerque 35.87 108 LR LR 12 43 19.2
comp=Z,280nm,19.5s,baz=86,slow=33
TXAR Lajitas Array 41.72 111 P P **12 31 14.8 +0.9**
comp=Z,1.0nm,1.0s,baz=316,slow=6.0,SNR=8.1
TXAR LR LR 12 47 58.7
comp=Z,166nm,18.1s,baz=3.0,slow=35
comp=Z,1.0nm,1.0s
ASAJ Asahikawa 43.58 284 LR LR 12 49 48.1
comp=Z,121nm,18.4s,baz=336,slow=36
H11N2 WAKE ISLAND Hy 48.87 240 T T 13 25 12.7
baz=26
H11N3 WAKE ISLAND Hy 48.87 240 T T 13 25 14.5
baz=26,slow=74
H11N1 WAKE ISLAND Hy 48.88 240 T T 13 25 25.6
baz=26,slow=74
USRK Ussuriysk Ar. 49.18 291 LR LR 12 53 13.0
comp=Z,149nm,20.1s,baz=29,slow=36
H11S1 WAKE ISLAND Hy 50.01 240 T T 13 26 47.2
baz=28,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 50.02 240 T T 13 26 48.9
baz=28,slow=76,SNR=7.4
H11S3 WAKE ISLAND Hy 50.02 240 T T 13 26 53.3
baz=28,slow=76,SNR=7.8
ARCES ARCESS Array B 54.57 2 P P **12 32 53.2 +0.8**
comp=Z,2.7nm,0.9s,baz=20,slow=3.9,SNR=4.1
comp=Z,2.7nm,0.9s
SONM Songino Array 58.78 310 P P **12 33 24.2 +1.4**
comp=Z,2.5nm,1.0s,baz=52,slow=6.6,SNR=10
comp=Z,2.5nm,1.0s
ZALV Zalesovo Beam 61.71 327 P P **12 33 42.9 +0.3**
comp=Z,0.9nm,0.6s,baz=38,slow=7.5,SNR=3.9
comp=Z,0.9nm,0.6s
FINES FINESS Array B 62.69 3 P P **12 33 50.4 +1.3**
comp=Z,5.0nm,1.0s,baz=350,slow=10,SNR=4.4
comp=Z,5.0nm,1.0s
BVAR Borovoye Array 66.44 335 P P **12 34 15.9 +2.2**
comp=Z,0.4nm,0.6s,baz=38,slow=7.3,SNR=2.0
comp=Z,0.4nm,0.6s
KURBB Kurchatov Arra 66.49 329 P P **12 34 14.8 +0.7**
comp=Z,0.2nm,0.5s,baz=34,slow=4.8,SNR=2.1
comp=Z,0.2nm,0.5s
MKAR Makanchi Array 68.74 325 P P **12 34 28.4 0.0**
MKAR Makanchi Array 68.74 325 P P **12 34 29.6 +1.1**
comp=Z,0.4nm,0.4s,baz=28,slow=6.4,SNR=9.4
comp=Z,0.4nm,0.4s
ABKAR Akbulak array 72.20 340 P P **12 34 47.7 -1.7**
AKASG Malin Array Be 73.52 1 P P **12 34 58.3 +1.2**
comp=Z,0.7nm,0.5s,baz=1.9,slow=6.7,SNR=5.5
comp=Z,0.7nm,0.5s
RAR Rarotonga 77.57 190 LR LR 13 06 43.2
comp=Z,53nm,18.6s,baz=336,slow=34
CMAR Chiang Mai Arr 86.40 298 P P **12 36 08.2 +0.9**
comp=Z,0.3nm,0.3s,baz=34,slow=6.6,SNR=5.0
comp=Z,0.3nm,0.3s
QSPA South Pole Qui 145.94 180 PKPbc **PKPab 12 43 03.1 -0.5**
comp=Z,1.4nm,0.4s,baz=110,slow=0.5,SNR=5.8

IDC 01 12:24:28.9±1.3, 2°63.S×139°24.E, h0km, mb3.6/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=72.6km s-min=26.3km az=92.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.86**	**195**	P	Pn	12 28 38.2	-0.8
	0.2nm,0.3s,baz=18,slow=13,SNR=9.5						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**21.54**	**193**	P	P	12 29 19.9	0.0
	0.5nm,0.6s,baz=22,slow=11,SNR=7.3						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**70.05**	**322**	P	P	12 35 42.9	0.0
	0.4nm,0.7s,baz=103,slow=6.2,SNR=1.7						
	0.4nm,0.7s						
VNDA	**Vanda**	**75.81**	**175**	P	P	12 36 16.9	+0.5
	1.8nm,0.7s,baz=343,slow=7.2,SNR=9.2						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**85.54**	**24**	P	P	12 37 08.3	-0.5
	0.3nm,0.6s,baz=272,slow=4.6,SNR=2.4						
	0.3nm,0.6s						

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*IDC **01** 12:25:46.8±1.1, 56°.08N×149°.20W, h0km, mb3.6/8, mbtmp3.7/13, ML3.5/5, Error ellipse: s-maj=25.5km s-min=17.3km az=26.0*
*NEIC **01** 12:25:48.8±1.5, 56°.14N±0°.08×149°.23W±0°.09, h22km±10km, ML3.9/48, ML3.7(AEIC), Error ellipse: s-maj=12.2km s-min=7.2km az=173.0*
*AEIC **01** 12:25:51.1±1.7, 56°.1N±0°.1×149°.2W±0°.1, h12km±8km, Error ellipse: s-maj=15.8km s-min=9.5km az=159.0*
ISC 01 12:25:48.0±0.8, 56°.17N±0°.07×149°.18W±0°.04, h10km, n129, σ1§16/124, mb3.7/8, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.47**	**312**	P	**Pn**	**12 26 27.6**	**-0.6**
	baz=131						
KDAK				S	**Sn**	**12 26 56.1**	**-2.2**
	baz=131						
KDAK	**Kodiak Island**	**2.47**	**312**	Pn	**Pn**	**12 26 27.5**	**-0.6**
	6.0nm,0.3s,baz=125,slow=23,SNR=1.5						
KDAK				Sn	**Sn**	**12 26 56.3**	**-2.0**
	16nm,0.3s,baz=207,slow=22,SNR=6.6						
	42nm,0.6s						
OHAK	**Old Harbor**	**2.50**	**297**		**Pn**	**12 26 27.7**	**-0.9**
OHAK					**Sn**	**12 26 56.2**	**-2.9**
OHAK	**Old Harbor**	**2.50**	**297**	P	**Pn**	**12 26 27.7**	**-0.9**
	baz=114						
OHAK				S	**Sn**	**12 26 56.2**	**-2.9**
	baz=114						
SII	**Sitkinak Islan**	**2.81**	**280**		**Pn**	**12 26 31.9**	**-1.0**
SII					**Sn**	**12 27 02.7**	**-4.2**
SII	**Sitkinak Islan**	**2.81**	**280**	IAML		12 27 11.7	
	comp=E,511nm,0.8s						
SII				IAML		12 27 14.8	
	comp=N,322nm,0.8s						
SII	**Sitkinak Islan**	**2.81**	**280**	P	**Pn**	**12 26 31.9**	**-1.0**
	baz=96						
SII				S	**Sn**	**12 27 02.7**	**-4.2**
	baz=96						
SYI	**Shuyak Island**	**3.00**	**326**		**Pn**	**12 26 35.3**	**-0.2**
SYI					**Sn**	**12 27 10.8**	**-0.6**
SYI	**Shuyak Island**	**3.00**	**326**	IAML		12 27 12.5	
	comp=E,202nm,0.5s						
Q20K	**Shuyak Island**	**3.00**	**326**	P	**Pn**	**12 26 35.3**	**-0.2**
	baz=144						
Q20K				S	**Sn**	**12 27 10.8**	**-0.7**
	baz=144						
CNPM	**China Poot**	**3.54**	**343**		**Pn**	**12 26 42.5**	**-0.4**
CNPM					**Sn**	**12 27 23.0**	**-1.8**
Q23K	**Middleton Isla**	**3.60**	**24**		**Pn**	**12 26 43.0**	**-0.7**
Q23K					**Sn**	**12 27 23.6**	**-2.7**
Q23K	**Middleton Isla**	**3.60**	**24**	IAML		12 27 33.8	
	comp=E,215nm,1.5s						
Q23K				IAML		12 27 58.1	
	comp=N,234nm,1.2s						
Q23K	**Middleton Isla**	**3.60**	**24**	P	**Pn**	**12 26 43.4**	**-0.3**
	baz=207						
Q23K				S	**Sn**	**12 27 24.1**	**-2.1**
	baz=207						
MID	**Middleton Isla**	**3.60**	**24**		**Pn**	**12 26 43.0**	**-0.8**
MID	**Middleton Isla**	**3.60**	**24**	IAML		12 27 20.9	
	comp=E,244nm,1.5s						
MID				IAML		12 27 58.1	
	comp=N,255nm,1.3s						
Q19K	**Cape Douglas,**	**3.67**	**321**		**Pn**	**12 26 44.6**	**-0.1**
Q19K	**Cape Douglas,**	**3.67**	**321**	IAML		12 27 38.0	
	comp=N,382nm,1.1s						
Q19K	**Cape Douglas,**	**3.67**	**321**	P	**Pn**	**12 26 44.6**	**-0.1**
	baz=138						
BRSE	**Bradley Lake S**	**3.68**	**348**		**Pn**	**12 26 44.2**	**-0.6**
BRSE	**Bradley Lake S**	**3.68**	**348**	P	**Pn**	**12 26 44.2**	**-0.6**
	baz=167						
BRLK	**Bradley Lake**	**3.72**	**347**		**Pn**	**12 26 44.8**	**-0.6**
BRLK	**Bradley Lake**	**3.72**	**347**	IAML		12 27 33.4	
	comp=N,124nm,0.4s						
BRLK				IAML		12 27 33.6	
	comp=E,168nm,0.6s						
KAHG	**Katmai Hook Gl**	**3.73**	**311**		**Pn**	**12 26 45.7**	**+0.2**
HOM	**Homer**	**3.74**	**340**		**Pn**	**12 26 45.9**	**+0.3**
HOM	**Homer**	**3.74**	**340**	P	**Pn**	**12 26 45.9**	**+0.3**
	baz=159						
ACHA	**Angle Creek He**	**3.92**	**304**		**Pn**	**12 26 49.0**	**+0.8**
SEW	**Seward**	**3.95**	**358**		**Pn**	**12 26 47.7**	**-0.8**
SEW	**Seward**	**3.95**	**358**	P	**Pn**	**12 26 47.7**	**-0.8**
	baz=178						
P23K	**Montague Islan**	**3.95**	**13**		**Pn**	**12 26 47.9**	**-0.7**
P23K	**Montague Islan**	**3.95**	**13**	P	**Pn**	**12 26 47.9**	**-0.7**
	baz=195						
P19K	**Oil Pt**	**4.11**	**330**		**Pn**	**12 26 50.8**	**+0.1**
P19K	**Oil Pt**	**4.11**	**330**	IAML		12 27 41.9	
	comp=N,279nm,0.7s						
P19K				IAML		12 27 43.3	
	comp=E,200nm,0.5s						
P19K	**Oil Pt**	**4.11**	**330**	P	**Pn**	**12 26 50.8**	**+0.1**
	baz=147						
CNTC	**Contact Creek**	**4.21**	**303**		**Pn**	**12 26 52.2**	**+0.1**
Q17K	**Contact Creek**	**4.21**	**303**	P	**Pn**	**12 26 52.7**	**+0.6**
	baz=118						
O20K	**Slope Mountain**	**4.33**	**336**		**Pn**	**12 26 53.8**	**0.0**
O20K	**Slope Mountain**	**4.33**	**336**	P	**Pn**	**12 26 54.7**	**+0.9**
	baz=154						
IVE	**Iliamna Volcan**	**4.36**	**334**		**Pn**	**12 26 53.8**	**-0.5**
SLKM	**Skilak Lake**	**4.38**	**353**		**Pn**	**12 26 53.6**	**-0.9**
HIN	**Hinchinbrook I**	**4.47**	**17**		**Pn**	**12 26 55.2**	**-0.5**
HIN	**Hinchinbrook I**	**4.47**	**17**	IAML		12 27 47.8	
	comp=N,146nm,0.5s						
HIN				IAML		12 27 53.8	
	comp=E,108nm,0.8s						
KAIM	**Kayak Island**	**4.54**	**32**		**Pn**	**12 26 56.4**	**-0.2**
KAIM	**Kayak Island**	**4.54**	**32**	IAML		12 28 02.6	
	comp=N,214nm,1.4s						
KAIM	**Kayak Island**	**4.54**	**32**	P	**Pn**	**12 26 56.4**	**-0.2**
	baz=216						
P18K	**Big Mountain,**	**4.57**	**317**		**Pn**	**12 26 56.4**	**-0.7**
P18K	**Big Mountain,**	**4.57**	**317**	P	**Pn**	**12 26 56.7**	**-0.5**
	baz=133						
RDSO	**Redoubt South**	**4.69**	**338**		**Pn**	**12 26 58.2**	**-0.6**
RSO	**Redoubt South**	**4.70**	**338**	Pn	**Pn**	**12 27 00.4**	**+1.4**
RDT	**Redoubt**	**4.73**	**340**		**Pn**	**12 26 58.6**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.75**	**21**		**Pn**	**12 26 59.5**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.75**	**21**	P	**Pn**	**12 26 59.5**	**+0.1**
	baz=204						
DFR	**Drift River**	**4.80**	**339**		**Pn**	**12 26 59.8**	**-0.5**
NCT	**North Crescent**	**4.83**	**337**		**Pn**	**12 27 00.1**	**-0.5**
RAGM	**Ragged Mountai**	**4.85**	**27**	Pn	**Pn**	**12 27 01.3**	**+0.4**
O19K	**Port Alsworth**	**4.87**	**328**		**Pn**	**12 27 00.2**	**-0.9**
O19K	**Port Alsworth**	**4.87**	**328**	P	**Pn**	**12 27 00.5**	**-0.6**
	baz=144						
O18K	**Koktuh Hills**	**4.89**	**322**		**Pn**	**12 27 01.1**	**-0.3**
O18K	**Koktuh Hills**	**4.89**	**322**	IAML		12 28 01.4	
	comp=N,64nm,0.9s						
O18K	**Koktuh Hills**	**4.89**	**322**	P	**Pn**	**12 27 01.2**	**-0.3**
	baz=137						
HMT	**Hamilton**	**4.92**	**30**		**Pn**	**12 27 01.8**	**-0.1**
NICHA	**Nichawak Mount**	**4.92**	**32**		**Pn**	**12 27 01.6**	**-0.3**
P17K	**Kvichak River**	**4.94**	**311**		**Pn**	**12 27 01.8**	**-0.3**
P17K	**Kvichak River**	**4.94**	**311**	P	**Pn**	**12 27 02.4**	**+0.3**
	baz=125						
RC01	**Rabbit Creek A**	**4.94**	**357**		**Pn**	**12 27 01.9**	**-0.2**
RC01	**Rabbit Creek A**	**4.94**	**357**	IAML		12 28 10.2	
	comp=N,52nm,0.8s						
RC01				IAML		12 28 15.2	
	comp=E,63nm,1.2s						
RC01	**Rabbit Creek A**	**4.94**	**357**	P	**Pn**	**12 27 02.0**	**-0.2**
	baz=177						
ANPB	**Aniakchak Plen**	**5.08**	**281**		**Pn**	**12 27 04.0**	**-0.1**
BERG	**Berg Lake**	**5.12**	**32**		**Pn**	**12 27 04.3**	**-0.4**
CHGN	**Chignik**	**5.16**	**275**	Pn	**Pn**	**12 27 04.7**	**-0.4**
CHGN				IAML		12 28 10.4	
	comp=N,74nm,0.8s						
CHGN				IAML		12 28 40.3	
	comp=E,55nm,1.5s						
SNH	**Sunshine Point**	**5.24**	**37**		**Pn**	**12 27 05.8**	**-0.4**
SNH	**Sunshine Point**	**5.24**	**37**	IAML		12 28 04.1	
	comp=E,92nm,1.5s						
SNH				IAML		12 28 15.4	
	comp=N,88nm,1.5s						
KNK	**Knik Glacier**	**5.27**	**4**		**Pn**	**12 27 06.8**	**+0.1**
KNK	**Knik Glacier**	**5.27**	**4**	P	**Pn**	**12 27 07.2**	**+0.5**
	baz=185						
KHIT	**Khitrov Hills**	**5.30**	**34**		**Pn**	**12 27 07.0**	**-0.2**
CKL	**Chakachamna La**	**5.30**	**343**		**Pn**	**12 27 07.0**	**-0.2**
SUA	**Susitna One**	**5.37**	**352**	Pn	**Pn**	**12 27 08.6**	**+0.4**
SUA				IAML		12 28 16.1	
	comp=N,36nm,0.8s						
SUA				IAML		12 28 19.7	
	comp=E,44nm,1.1s						
BMRM	**Bremner River**	**5.37**	**25**		**Pn**	**12 27 08.2**	**+0.1**
BMRM	**Bremner River**	**5.37**	**25**	P	**Pn**	**12 27 08.2**	**+0.1**
	baz=209						
WAX	**Waxell Ridge**	**5.43**	**35**		**Pn**	**12 27 08.8**	**-0.2**
PMR	**Palmer**	**5.44**	**0**	Pn	**Pn**	**12 27 09.2**	**+0.2**
BARK	**Barkley Ridge**	**5.52**	**37**		**Pn**	**12 27 09.8**	**-0.3**
SPNN	**North Nagishla**	**5.52**	**342**		**Pn**	**12 27 10.4**	**+0.1**
MESA	**MESA**	**5.55**	**41**		**Pn**	**12 27 10.2**	**-0.4**
MESA	**MESA**	**5.55**	**41**	P	**Pn**	**12 27 10.2**	**-0.4**
	baz=227						
KLU	**Klutina**	**5.60**	**16**		**Pn**	**12 27 11.5**	**+0.3**
KLU	**Klutina**	**5.60**	**16**	P	**Pn**	**12 27 11.5**	**+0.3**
	baz=199						
SML	**Sawmill**	**5.67**	**4**	Pn	**Pn**	**12 27 13.1**	**+0.8**
M23K	**Glacier View**	**5.69**	**7**		**Pn**	**12 27 12.8**	**+0.4**
M23K	**Glacier View**	**5.69**	**7**	P	**Pn**	**12 27 13.2**	**+0.8**
	baz=189						
ISLE	**Juniper Island**	**5.71**	**36**	Pn	**Pn**	**12 27 13.3**	**+0.4**
SCM	**Sheep Creek Mo**	**5.76**	**9**	Pn	**Pn**	**12 27 14.8**	**+1.4**
VRDI	**Verde Repeater**	**5.88**	**28**		**Pn**	**12 27 15.0**	**-0.2**
N25K	**Chitina, Valde**	**5.95**	**22**	Pn	**Pn**	**12 27 16.6**	**+0.6**
SKT	**Skwentna**	**5.95**	**349**	Pn	**Pn**	**12 27 18.4**	**+2.3**
KIAG	**Kiagna River**	**5.95**	**34**		**Pn**	**12 27 15.8**	**-0.4**
GRNC	**Granite Creek**	**6.01**	**37**		**Pn**	**12 27 16.6**	**-0.4**
TABL	**Table Mountain**	**6.02**	**41**		**Pn**	**12 27 17.2**	**+0.1**
CNBA	**Chernabura Isl**	**6.07**	**261**	Pn	**Pn**	**12 27 16.1**	**-1.5**
PTPK	**Patty Peak**	**6.13**	**32**		**Pn**	**12 27 18.8**	**+0.2**
MCARA	**McCarthy VSAT**	**6.13**	**29**	Pn	**Pn**	**12 27 19.3**	**+0.9**
BARN	**Barnard Glacie**	**6.28**	**36**	Pn	**Pn**	**12 27 21.4**	**+0.7**
PNL	**Peninsula**	**6.28**	**52**		**Pn**	**12 27 20.3**	**-0.2**
PNL	**Peninsula**	**6.28**	**52**	P	**Pn**	**12 27 20.5**	**0.0**
	baz=240						
CTG	**Chitna Glacier**	**6.32**	**37**	P	**Pn**	**12 27 21.0**	**-0.2**
	baz=224						
CTGM	**Chitina Glacie**	**6.32**	**37**		**Pn**	**12 27 21.0**	**-0.2**
BCPM	**Bancas Point**	**6.32**	**49**		**Pn**	**12 27 21.1**	**-0.1**
LOGN	**Logan Glacier**	**6.33**	**39**		**Pn**	**12 27 21.0**	**-0.4**
SDPT	**Sand Point**	**6.43**	**267**	Pn	**Pn**	**12 27 21.4**	**-1.2**
BCAR	**Beaver Creek A**	**7.86**	**25**	Pn	**Pn**	**12 27 43.0**	**+0.7**
RIDG	**Independent Ri**	**7.90**	**14**	Pn	**Pn**	**12 27 43.3**	**+0.5**
ILAR	**Eielson Array**	**8.70**	**7**	Pn	**Pn**	**12 27 53.9**	**+0.1**
	comp=E,0.9nm,0.3s,baz=190,slow=13,SNR=2.3						
ILAR				Sn	**Sn**	**12 29 28.4**	**-3.3**
	comp=E,0.4nm,0.3s,baz=271,slow=32,SNR=2.5						
	comp=E,2.3nm,0.4s						
DLBC	**Dease Lake**	**10.60**	**70**	Pn	**Pn**	**12 28 19.0**	**-0.8**
	comp=E,0.5nm,0.3s,baz=68,slow=14,SNR=3.4						
DLBC				Sn	**Sn**	**12 30 13.6**	**-4.9**
	comp=E,0.1nm,0.3s,baz=278,slow=8.9,SNR=1.3						
	comp=E,3.8nm,0.7s						
INK	**Inuvik**	**14.12**	**24**	Pn	**Pn**	**12 29 09.9**	**+2.2**
	comp=E,0.2nm,0.3s,baz=200,slow=15,SNR=4.3						
	comp=E,8.3nm,1.0s						
YKA	**Yellowknife Ar**	**18.55**	**56**	P	**Pn**	**12 30 05.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=268,slow=11,SNR=3.3						
	comp=E,1.3nm,0.9s						
NVAR	**Mina Array Bea**	**27.11**	**118**	P	**P**	**12 31 32.3**	**+1.2**
	comp=E,0.3nm,0.7s,baz=308,slow=9.0,SNR=1.9						
	comp=E,0.3nm,0.7s						
PETK	**Petropavlovsk-**	**30.26**	**287**	P	**P**	**12 31 59.8**	**+1.1**
	comp=E,2.1nm,0.8s,baz=75,slow=14,SNR=5.0						
	comp=E,2.1nm,0.8s						
TXAR	**Lajitas Array**	**41.73**	**111**	P	**P**	**12 33 37.3**	**+0.2**
	comp=E,0.3nm,0.8s,baz=135,slow=44,SNR=2.3						
	comp=E,0.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**48.88**	**240**	T	T	13 27 30.9	
	baz=30						
H11N3	**WAKE ISLAND Hy**	**48.88**	**240**	T	T	13 27 36.2	
	baz=30						
H11N1	**WAKE ISLAND Hy**	**48.90**	**240**	T	T	13 27 28.4	
	baz=30						
H11S1	**WAKE ISLAND Hy**	**50.02**	**240**	T	T	13 29 00.1	
	baz=25						
H11S2	**WAKE ISLAND Hy**	**50.03**	**240**	T	T	13 29 04.2	
	baz=25,slow=74						
H11S3	**WAKE ISLAND Hy**	**50.04**	**240**	T	T	13 29 00.7	
	baz=25,slow=74						
SONM	**Songino Array**	**58.76**	**310**	P	**P**	**12 35 48.0**	**+2.1**
	comp=E,0.5nm,0.4s,baz=46,slow=8.3,SNR=1.9						
	comp=E,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**61.69**	**327**	P	**P**	**12 36 06.8**	**+1.2**
	comp=E,0.4nm,0.5s,baz=35,slow=5.3,SNR=1.6						
	comp=E,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**66.47**	**329**	P	**P**	**12 36 37.0**	**-0.1**
	comp=E,0.3nm,0.6s,baz=12,slow=5.4,SNR=1.9						
	comp=E,0.3nm,0.6s						
MKAR	**Makanchi Array**	**68.72**	**325**	P	**P**	**12 36 50.6**	**-0.8**
	comp=E,0.3nm,0.6s,baz=32,slow=10.0,SNR=2.4						
	comp=E,0.3nm,0.6s						
AKASG	**Malin Array Be**	**73.49**	**1**	P	**P**	**12 37 20.6**	**+0.4**
	comp=E,0.2nm,0.4s,baz=2.9,slow=5.6,SNR=1.8						
	comp=E,0.2nm,0.4s						

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*IDC **01** 12:33:52.3±1.0, 16°.94S×176°.80W, h0km, mb3.9/8, mbtmp3.9/8, MS3.9/1, Error ellipse: s-maj=49.1km s-min=23.2km az=150.0*
ISC 01 12:33:57.6±0.9, 16°.9S±0°.3×176°.9W±0°.2, h35km, n9, σ0§87/9, mb4.0/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.05**	**259**	P	**P**	**12 40 47.3**	**-0.2**
	4.4nm,0.9s,baz=84,slow=14,SNR=4.0						
CTA				LR	LR	12 53 11.6	
	comp=Z,165nm,19.6s,baz=112,slow=33						
	4.4nm,0.9s						
STKA	**Stephens Creek**	**40.40**	**240**	P	**P**	**12 41 31.6**	**-0.9**
	2.1nm,0.8s,baz=25,slow=19,SNR=2.7						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**46.25**	**258**	P	**P**	**12 42 20.1**	**+0.2**
	1.1nm,1.0s,baz=90,slow=7.1,SNR=4.4						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**46.47**	**253**	P	**P**	**12 42 22.1**	**+0.5**
	3.3nm,0.7s,baz=85,slow=8.2,SNR=31						
	3.3nm,0.7s						
QSPA	**South Pole Qui**	**73.18**	**180**	P	**P**	**12 45 25.1**	**+0.4**
	0.8nm,0.2s,baz=297,slow=6.8,SNR=1.4						
	0.8nm,0.2s						
TXAR	**Lajitas Array**	**84.22**	**57**	P	**P**	**12 46 25.0**	**-1.0**
	baz=234,slow=3.1,SNR=1.4						
ILAR	**Eielson Array**	**84.56**	**12**	P	**P**	**12 46 26.6**	**-0.1**
	1.1nm,1.2s,baz=218,slow=5.3,SNR=2.3						
	1.1nm,1.2s						
PDAR	**Pinedale Array**	**85.61**	**43**	P	**P**	**12 46 33.2**	**+0.4**
	0.2nm,0.6s,baz=222,slow=4.9,SNR=2.2						
	0.2nm,0.6s						
BRTR	**Keskin Array B**	**145.05**	**317**	PKPbc	**PKPdf**	**12 53 33.2**	**+1.5**
	1.4nm,1.0s,baz=26,slow=3.1,SNR=5.5						

IDC 01 12:37:33.4±309.0, 64°.97N×24°.13E, h0km, Error ellipse: s-maj=139.7km s-min=89.4km az=162.0, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**4.66**	**335**	I	I	13 06 20.0	
	0.1nm,0.5s,baz=149,slow=327,SNR=1.4						
I43RU	**DUBNA INFRASONI**	**0.43**	**136**	I	I	13 36 40.0	
	baz=330,slow=324,SNR=1.5						
I46RU	**ZALESOVO INFRA**	**31.45**	**81**	I	I	15 52 55.7	
	baz=314,slow=334,SNR=12						

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*IDC **01** 12:47:47.6±0.8, 32°.75N×73°.16E, h0km, mb4.0/16, mbtmp3.9/18, ML3.1/2, MS4.2/1, Error ellipse: s-maj=24.0km s-min=15.9km az=48.0*
*NNC **01** 12:48:00.2±10.0, 33°.53N×72°.48E, h0km, mb4.1, Error ellipse: s-maj=113.8km s-min=85.3km az=105.0*
ISC 01 12:47:49.5±0.8, 32°.89N±0°.07×73°.1E±0°.1, h10km, n25, σ1§55/27, mb4.0/14, 1C-5D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**7.00**	**18**	Pn	**Pn**	**12 49 33.0**	**+0.8**
KSH				Sn	Sn	12 50 44.3	-7.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				smax	smax		
	comp=N,38nm,0.6s						
KSH				smax	smax		
	comp=E,35nm,0.5s						
AAK	**Ala-Archa**	**9.79**	**6**	Pn	Pn	12 50 16.8	+6.2
	comp=E,1.5nm,0.3s,baz=192,slow=13,SNR=19						
AAK				Sn	**Sn**	**12 51 57.7**	**-2.9**
	comp=E,0.2nm,0.3s,baz=236,slow=9.3,SNR=1.5						
CHMS	**Chumysh**	**10.18**	**7**	⇓P	Pn	12 50 21.1	+5.5
	comp=E,0.9nm,0.3s						
CHMS				⇓S	**Sn**	**12 52 09.4**	**-0.4**
	comp=E,3.2nm,0.8s						
TKM2	**Tokmak 2**	**10.20**	**10**	⇑P	**Pn**	**12 50 19.5**	**+3.2**
	comp=E,1.5nm,0.4s						
TKM2				⇓S	**Sn**	**12 52 08.9**	**-1.9**
	comp=E,3.8nm,0.8s						
KK31	**Karatay Array**	**10.41**	**349**	⇓P	**Pn**	**12 50 21.4**	**+2.5**
	comp=E,3.6nm,0.4s,baz=176,slow=12,SNR=50						
KK31				⇓S	**Sn**	**12 52 14.4**	**-1.2**
	comp=E,3.3nm,0.6s,baz=174,slow=22,SNR=5.4						
GEYT	**Alibeck**	**13.25**	**297**	Pn	**Pn**	**12 50 55.2**	**-2.5**
	comp=E,0.2nm,0.3s,baz=61,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**15.55**	**24**	Pn	**Pn**	**12 51 29.6**	**+0.8**
	comp=E,0.1nm,0.3s,baz=214,slow=39,SNR=3.5						
	comp=E,0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**18.16**	**11**	P	**Pn**	**12 52 01.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=204,slow=9.8,SNR=12						
	comp=E,0.8nm,0.7s						
BVAR	**Borovoye Array**	**20.23**	**355**	P	**P**	**12 52

mbtmp3.4/5,ML3.4/4,Error ellipse: s-maj=42.3km s-min=24.5km az=4.0
*NEIC **01** 13:01:26.1±2.1,56°.17N±0°.08×149°.5W±0°.1,h26km±6km, mb3.8/3,ML3.7/48,ML3.4(AEIC),Error ellipse: s-maj=12.6km s-min=7.5km az=163.0*
*AEIC **01** 13:01:29.8±1.9,56°.23N±0°.09×149°.5W±0°.1,h12km±7km, Error ellipse: s-maj=13.4km s-min=8.1km az=187.0*

ISC 01 13:01:23.9±1.1,56°.20N±0°.08×149°.45W±0°.05,h10km, n174,σ1$38/182,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.34**	**314**	Pn	**Pn**	**13 02 03.0**	**+0.6**
KDAK	**Kodiak Island**	**2.34**	**314**		**Sn**	**13 02 28.0**	**-3.0**
KDAK	**Kodiak Island** baz=131	**2.34**	**314**	P	**Pn**	**13 02 02.8**	**+0.5**
KDAK	**Kodiak Island** 3.3nm,0.3s,baz=133,slow=6.8,SNR=23	**2.34**	**314**	Pn	**Pn**	**13 02 02.9**	**+0.6**
KDAK	7.1nm,0.3s,baz=214,slow=23,SNR=2.8			Sn	**Sn**	**13 02 28.6**	**-2.4**
OHAK	**Old Harbor** 6.3nm,0.3s	**2.35**	**297**	Pn	**Pn**	**13 02 02.8**	**+0.3**
OHAK	**Old Harbor**	**2.35**	**297**		**Sn**	**13 02 29.1**	**-2.3**
OHAK	**Old Harbor**	**2.35**	**297**	P	**Pn**	**13 02 03.0**	**+0.5**
OHAK	**Old Harbor** baz=114	**2.35**	**297**	P	**Pn**	**13 02 02.8**	**+0.3**
OHAK	baz=114			S	**Sn**	**13 02 29.1**	**-2.3**
SII	**Sitkinak Islan**	**2.66**	**280**	Pn	**Pn**	**13 02 05.4**	**-1.4**
SII	comp=N,135nm,1.1s			IAML		13 02 42.3	
SII	comp=E,171nm,1.2s			IAML		13 02 43.7	
SII	**Sitkinak Islan**	**2.66**	**280**		**Sn**	**13 02 37.0**	**-2.0**
SII	**Sitkinak Islan**	**2.66**	**280**	P	**Pn**	**13 02 07.9**	**+1.1**
SII	**Sitkinak Islan** baz=95	**2.66**	**280**	P	**Pn**	**13 02 07.4**	**+0.7**
SII	baz=95			S	**Sn**	**13 02 37.0**	**-2.0**
SYI	**Shuyak Island**	**2.90**	**328**	Pn	**Pn**	**13 02 10.4**	**+0.4**
SYI	**Shuyak Island**	**2.90**	**328**		**Sn**	**13 02 44.0**	**-0.8**
Q20K	**Shuyak Island** baz=145	**2.90**	**328**	P	**Pn**	**13 02 10.6**	**+0.6**
Q20K	baz=145			S	**Sn**	**13 02 44.0**	**-0.8**
CNPM	**China Poot**	**3.47**	**345**	Pn	**Pn**	**13 02 17.9**	**0.0**
CNPM	comp=N,56nm,0.5s			IAML		13 03 01.3	
CNPM	**China Poot**	**3.47**	**345**		**Sn**	**13 02 57.5**	**-1.5**
Q19K	**Cape Douglas,**	**3.55**	**322**		**Pn**	**13 02 21.1**	**+2.0**
Q19K	**Cape Douglas,** baz=139	**3.55**	**322**	P	**Pn**	**13 02 20.4**	**+1.4**
KAHG	**Katmai Hook Gl**	**3.59**	**312**		**Pn**	**13 02 21.5**	**+1.8**
BRSE	**Bradley Lake S**	**3.62**	**350**		**Pn**	**13 02 19.9**	**0.0**
BRSE					**Sn**	**13 03 00.4**	**-2.3**
BRSE	**Bradley Lake S** baz=169	**3.62**	**350**	P	**Pn**	**13 02 19.9**	**0.0**
BRSE	baz=169			S	**Sn**	**13 03 00.4**	**-2.3**
Q23K	**Middleton Isla**	**3.64**	**26**	Pn	**Pn**	**13 02 20.6**	**+0.5**
Q23K	comp=N,243nm,1.3s			IAML		13 03 07.1	
Q23K	comp=E,206nm,1.3s			IAML		13 03 13.7	
MID	**Middleton Isla**	**3.64**	**26**	Pn	**Pn**	**13 02 20.6**	**+0.5**
MID	comp=N,188nm,1.0s			IAML		13 03 02.0	
MID	comp=E,224nm,1.5s			IAML		13 04 18.6	
MID	**Middleton Isla**	**3.64**	**26**	P	**Pn**	**13 02 22.1**	**+1.9**
BRLK	**Bradley Lake**	**3.66**	**348**		**Pn**	**13 02 20.4**	**0.0**
BRLK	comp=E,57nm,0.7s			IAML		13 03 05.9	
HOM	**Homer**	**3.66**	**342**	Pn	**Pn**	**13 02 22.0**	**+1.5**
HOM	comp=N,258nm,1.2s			IAML		13 03 14.8	
ACHA	**Angle Creek He**	**3.78**	**305**		**Pn**	**13 02 23.8**	**+1.6**
ANCK	**Angle Creek**	**3.85**	**304**		**Pn**	**13 02 24.8**	**+1.6**
KAHC	**Katmai Hardscr**	**3.88**	**312**		**Pn**	**13 02 25.4**	**+1.7**
KAHC	**Katmai Hardscr** baz=127	**3.88**	**312**	P	**Pn**	**13 02 25.4**	**+1.7**
SEW	**Seward**	**3.92**	**360**		**Pn**	**13 02 23.9**	**0.0**
SEW	**Seward** baz=180	**3.92**	**360**	P	**Pn**	**13 02 23.9**	**0.0**
P23K	**Montague Islan**	**3.96**	**15**		**Pn**	**13 02 24.8**	**+0.1**
P23K	**Montague Islan** baz=197	**3.96**	**15**	P	**Pn**	**13 02 24.8**	**+0.1**
P19K	**Oil Pt**	**4.01**	**331**	Pn	**Pn**	**13 02 26.3**	**+1.0**
P19K	comp=N,174nm,0.5s			IAML		13 03 18.5	
P19K	comp=E,184nm,0.5s			IAML		13 03 22.9	
CNTC	**Contact Creek**	**4.07**	**303**		**Pn**	**13 02 27.8**	**+1.6**
Q17K	**Contact Creek** baz=118	**4.07**	**303**	P	**Pn**	**13 02 27.8**	**+1.6**
IVE	**Iliamna Volcan**	**4.27**	**335**		**Pn**	**13 02 29.8**	**+0.9**
P18K	**Big Mountain,**	**4.45**	**318**		**Pn**	**13 02 32.0**	**+0.6**
P18K	comp=E,28nm,1.4s			IAML		13 03 29.5	
P18K	**Big Mountain,** baz=133	**4.45**	**318**	P	**Pn**	**13 02 32.3**	**+0.9**
HIN	**Hinchinbrook I**	**4.49**	**19**	Pn	**Pn**	**13 02 32.3**	**+0.4**
HIN	comp=E,123nm,1.0s			IAML		13 03 24.9	
HIN	comp=N,140nm,0.7s			IAML		13 03 30.8	
KAIM	**Kayak Island**	**4.59**	**33**	Pn	**Pn**	**13 02 34.5**	**+1.2**
RSO	**Redoubt South**	**4.62**	**339**		**Pn**	**13 02 34.1**	**+0.3**
RDT	**Redoubt**	**4.66**	**342**		**Pn**	**13 02 34.5**	**+0.3**
NCT	**North Crescent**	**4.74**	**339**		**Pn**	**13 02 35.5**	**0.0**
O19K	**Port Alsworth** baz=145	**4.76**	**329**	P	**Pn**	**13 02 36.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.78**	**22**		**Pn**	**13 02 36.8**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.78**	**22**	P	**Pn**	**13 02 37.1**	**+1.3**
EYAK	**Cordova Ski Ar** baz=206	**4.78**	**22**	P	**Pn**	**13 02 36.8**	**+1.0**
O18K	**Koktuh Hills**	**4.78**	**323**	Pn	**Pn**	**13 02 36.0**	**+0.1**
O18K	comp=E,29nm,0.7s			IAML		13 03 39.0	
O18K	comp=N,38nm,0.8s			IAML		13 03 44.5	
O18K	**Koktuh Hills** baz=138	**4.78**	**323**	P	**Pn**	**13 02 36.2**	**+0.4**
RAGM	**Ragged Mountai**	**4.89**	**29**		**Pn**	**13 02 38.0**	**+0.5**
RC01	**Rabbit Creek A**	**4.91**	**358**	Pn	**Pn**	**13 02 38.3**	**+0.7**
RC01	comp=E,40nm,0.5s			IAML		13 03 41.6	
RC01	comp=N,30nm,1.2s			IAML		13 03 42.7	
RC01	**Rabbit Creek A** baz=178	**4.91**	**358**	P	**Pn**	**13 02 37.8**	**+0.1**
CHGN	**Chignik**	**5.00**	**275**	Pn	**Pn**	**13 02 41.1**	**+2.2**
CHGN	comp=E,37nm,1.3s			IAML		13 04 14.0	
CHGN	comp=N,40nm,0.9s			IAML		13 05 55.9	
GOAT	**Goat Mountain**	**5.05**	**28**		**Pn**	**13 02 41.1**	**+1.5**
BERG	**Berg Lake**	**5.18**	**33**		**Pn**	**13 02 42.5**	**+1.1**
KNK	**Knik Glacier**	**5.25**	**5**		**Pn**	**13 02 43.1**	**+0.7**
KNK	comp=E,28nm,0.9s			IAML		13 03 54.3	
KNK	comp=N,20nm,1.2s			IAML		13 04 05.4	
SPCP	**Crater Peak Br**	**5.27**	**346**		**Pn**	**13 02 43.7**	**+0.9**
SNH	**Sunshine Point**	**5.30**	**38**	Pn	**Pn**	**13 02 44.2**	**+1.1**
SNH	comp=N,74nm,1.5s			IAML		13 05 44.9	
SUA	**Susitna One**	**5.32**	**353**		**Pn**	**13 02 44.2**	**+0.8**
SUA	comp=N,19nm,1.3s			IAML		13 04 20.1	
N19K	**Bonanza Creek**	**5.33**	**332**	Pn	**Pn**	**13 02 43.5**	**0.0**
BMRM	**Bremner River**	**5.41**	**26**		**Pn**	**13 02 45.6**	**+1.1**
BMRM	**Bremner River** baz=210	**5.41**	**26**	P	**Pn**	**13 02 45.6**	**+1.1**
PMR	**Palmer**	**5.41**	**2**	Pn	**Pn**	**13 02 43.6**	**-0.9**
PMR	**Palmer**	**5.41**	**2**	P	**Pn**	**13 02 46.0**	**+1.5**
STLK	**Strandline Lak**	**5.46**	**348**		**Pn**	**13 02 45.2**	**0.0**
KLU	**Klutina**	**5.61**	**18**		**Pn**	**13 02 48.3**	**+0.9**
KLU	**Klutina** baz=201	**5.61**	**18**	P	**Pn**	**13 02 48.3**	**+0.9**
N18K	**Kilae Creek**	**5.62**	**326**	Pn	**Pn**	**13 02 47.4**	**-0.1**
SML	**Sawmill**	**5.65**	**5**	Pn	**Pn**	**13 02 48.3**	**+0.4**
SML	**Sawmill** baz=186	**5.65**	**5**	P	**Pn**	**13 02 49.0**	**+1.1**
M23K	**Glacier View**	**5.68**	**8**	P	**Pn**	**13 02 49.6**	**+1.4**
	baz=190						
O16K	**Kokwok River B**	**5.73**	**310**		**Pn**	**13 02 49.7**	**+0.8**
TGL	**Tana Glacier**	**5.74**	**34**		**Pn**	**13 02 50.2**	**+1.1**
SCM	**Sheep Creek Mo**	**5.76**	**10**		**Pn**	**13 02 50.9**	**+1.6**
SVW2	**Sparrevohn**	**5.86**	**329**	Pn	**Pn**	**13 02 50.9**	**+0.1**
SVW2	**Sparrevohn**	**5.86**	**329**	P	**Pn**	**13 02 51.0**	**+0.3**
SKT	**Skwentna**	**5.90**	**350**	Pn	**Pn**	**13 02 51.0**	**-0.2**
VRDI	**Verde Repeater**	**5.93**	**29**	Pn	**Pn**	**13 02 52.4**	**+0.6**
N17K	**Nushagak Hills**	**5.95**	**320**	Pn	**Pn**	**13 02 51.7**	**-0.2**
N25K	**Chitina, Valde**	**5.97**	**23**		**Pn**	**13 02 53.4**	**+1.0**
N25K	**Chitina, Valde** baz=207	**5.97**	**23**	P	**Pn**	**13 02 54.0**	**+1.6**
KIAG	**Kiagna River**	**6.01**	**35**		**Pn**	**13 02 53.8**	**+0.8**
GLB	**Gilahina Butte**	**6.02**	**27**	Pn	**Pn**	**13 02 54.6**	**+1.7**
TABL	**Table Mountain**	**6.10**	**42**		**Pn**	**13 02 55.4**	**+1.3**
M24K	**Tolsona, Glenn**	**6.16**	**14**	Pn	**Pn**	**13 02 57.1**	**+2.2**
M24K	**Tolsona, Glenn** baz=197	**6.16**	**14**	P	**Pn**	**13 02 56.5**	**+1.6**
MCARA	**McCarthy VSAT**	**6.18**	**30**		**Pn**	**13 02 57.8**	**+2.8**
MCARA	**McCarthy VSAT** baz=216	**6.18**	**30**	P	**Pn**	**13 02 56.7**	**+1.6**
PTPK	**Patty Peak**	**6.18**	**33**		**Pn**	**13 02 56.5**	**+1.2**
M19K	**Big River Lodg**	**6.26**	**338**	Pn	**Pn**	**13 02 55.8**	**-0.4**
BARN	**Barnard Glacie**	**6.34**	**37**		**Pn**	**13 02 58.5**	**+0.9**
WACK	**Wrangell Chich**	**6.37**	**22**		**Pn**	**13 02 59.8**	**+1.8**
PNL	**Peninsula**	**6.38**	**53**	P	**Pn**	**13 02 59.9**	**+2.0**
CTGM	**Chitina Glacie**	**6.39**	**38**	Pn	**Pn**	**13 02 59.2**	**+1.2**
LOGN	**Logan Glacier**	**6.41**	**40**	Pn	**Pn**	**13 03 01.1**	**+2.8**
WAT6	**Susitna Watana**	**6.46**	**7**		**Pn**	**13 03 00.1**	**+1.0**
WAT6	**Susitna Watana** baz=189	**6.46**	**7**	P	**Pn**	**13 03 00.1**	**+1.0**
HARP	**HAARP**	**6.59**	**18**		**Pn**	**13 03 02.3**	**+1.6**
HARP	**HAARP** baz=202	**6.59**	**18**	P	**Pn**	**13 03 02.3**	**+1.6**
L19K	**White Mountain**	**6.61**	**337**	Pn	**Pn**	**13 03 00.8**	**-0.2**
M17K	**Holitna River**	**6.66**	**325**	Pn	**Pn**	**13 03 00.6**	**-1.1**
N15K	**Kwethluk River**	**6.89**	**310**		**Pn**	**13 03 07.1**	**+2.2**
M16K	**Timber Creek**	**6.93**	**318**	Pn	**Pn**	**13 03 06.8**	**+1.5**
DHY	**Denali Highway**	**6.98**	**8**		**Pn**	**13 03 07.4**	**+1.3**
DHY	**Denali Highway** baz=190	**6.98**	**8**	P	**Pn**	**13 03 07.2**	**+1.0**
O14K	**Tigyukauivet M**	**7.03**	**301**	Pn	**Pn**	**13 03 07.9**	**+1.2**
O29M	**Mount Kennedy**	**7.05**	**50**		**Pn**	**13 03 08.9**	**+1.7**
O29M	**Mount Kennedy** baz=239	**7.05**	**50**	P	**Pn**	**13 03 08.6**	**+1.4**
P29M	**Windy Craggy**	**7.12**	**56**	Pn	**Pn**	**13 03 09.4**	**+1.4**
RND	**Reindeer**	**7.24**	**2**		**Pn**	**13 03 11.6**	**+2.0**
TRF	**Thorofare Moun**	**7.29**	**357**	Pn	**Pn**	**13 03 10.4**	**0.0**
M27K	**Edge Creek, AK**	**7.29**	**29**	Pn	**Pn**	**13 03 11.9**	**+1.5**
YUK7	**Dusty Glacier**	**7.36**	**49**		**Pn**	**13 03 13.8**	**+2.3**
CAST	**Castle Rocks**	**7.36**	**351**	Pn	**Pn**	**13 03 11.0**	**-0.3**
CAST	**Castle Rocks** baz=168	**7.36**	**351**	P	**Pn**	**13 03 13.3**	**+1.9**
KTH	**Kantishna Hill**	**7.42**	**355**	Pn	**Pn**	**13 03 12.6**	**+0.5**
S31K	**Pelican**	**7.42**	**71**		**Pn**	**13 03 11.5**	**-0.5**
TTA	**Tatalina**	**7.53**	**336**	Pn	**Pn**	**13 03 15.2**	**+1.6**
L16K	**Owhat River**	**7.57**	**321**	Pn	**Pn**	**13 03 14.9**	**+0.7**
YUK4	**Talbot Arm** baz=232	**7.62**	**43**	P	**Pn**	**13 03 18.1**	**+3.1**
BVCY	**Beaver Creek**	**7.62**	**32**		**Pn**	**13 03 16.6**	**+1.8**
BVCY	**Beaver Creek** baz=219	**7.62**	**32**	P	**Pn**	**13 03 16.6**	**+1.8**
HYT	**Haines Junctio**	**7.78**	**49**	Pn	**Pn**	**13 03 18.2**	**+1.1**
SIT	**Sitka**	**7.84**	**78**	P	**Pn**	**13 03 18.4**	**+0.6**
L27K	**Beaver Creek,**	**7.89**	**26**	Pn	**Pn**	**13 03 20.8**	**+2.3**
BCAR	**Beaver Creek A**	**7.90**	**26**	Pn	**Pn**	**13 03 20.6**	**+1.9**
K17K	**Iditarod**	**7.93**	**329**	Pn	**Pn**	**13 03 19.1**	**-0.1**
J18K	**Innoko River**	**8.15**	**336**	Pn	**Pn**	**13 03 23.7**	**+1.6**
SKAG	**Skagway**	**8.21**	**61**	P	**Pn**	**13 03 24.9**	**+2.0**
HDA	**Harding Lake**	**8.33**	**8**		**Pn**	**13 03 27.6**	**+3.0**
M29M	**Somme Creek**	**8.40**	**37**		**Pn**	**13 03 27.7**	**+2.1**
JIS	**Juneau Island**	**8.43**	**69**	Pn	**Pn**	**13 03 26.2**	**+0.3**
JIS	**Juneau Island**	**8.43**	**69**	P	**Pn**	**13 03 26.9**	**+1.0**
CCB	**Clear Creek Bu**	**8.51**	**5**		**Pn**	**13 03 28.6**	**+1.6**
L14K	**Kuka Creek**	**8.59**	**312**	Pn	**Pn**	**13 03 29.5**	**+1.4**
IL31		**8.69**	**7**	Pn	**Pn**	**13 03 30.0**	**+0.5**
ILAR	**Eielson Array** comp=N,0.5nm,0.3s,baz=242,slow=16,SNR=19	**8.69**	**7**	Pn	**Pn**	**13 03 30.1**	**+0.5**
ILAR	comp=N,0.3nm,0.3s,baz=195,slow=27,SNR=4.9 comp=N,1.2nm,0.5s			Sn	**Sn**	**13 05 06.7**	**-0.7**
COLA	**College**	**8.74**	**4**	P	**Pn**	**13 03 31.8**	**+1.7**
MDM	**Murphy Dome**	**8.81**	**3**		**Pn**	**13 03 31.9**	**+0.7**
J26L	**Joseph Creek**	**8.82**	**17**		**Pn**	**13 03 32.5**	**+1.2**
MLY	**Manley**	**8.88**	**356**		**Pn**	**13 03 32.6**	**+0.4**
I23K	**Minto, Yukon-K**	**8.98**	**0**		**Pn**	**13 03 33.7**	**+0.3**
P32M	**Atlin**	**9.04**	**61**	Pn	**Pn**	**13 03 35.1**	**+0.8**
EGAK	**Eagle**	**9.52**	**22**	Pn	**Pn**	**13 03 42.1**	**+1.3**
H21K	**Melozitna Rive**	**9.63**	**352**	Pn	**Pn**	**13 03 43.9**	**+1.5**
P33M	**Teslin, Yukon**	**9.64**	**59**	Pn	**Pn**	**13 03 44.4**	**+1.7**
K29M	**Barlow Dome**	**9.70**	**33**	Pn	**Pn**	**13 03 44.8**	**+1.4**
M31M	**Drury Creek, Y**	**9.77**	**46**	Pn	**Pn**	**13 03 44.8**	**+0.4**
H18K	**Honhosa River**	**9.98**	**338**	Pn	**Pn**	**13 03 49.0**	**+1.9**
IMAR	**Indian Mountai**	**10.03**	**350**	Pn	**Pn**	**13 03 50.0**	**+2.2**
P33M	**Jennings River**	**10.36**	**64**	Pn	**Pn**	**13 03 53.7**	**+1.2**
G23K	**Bananza Creek**	**10.55**	**359**	Pn	**Pn**	**13 03 56.2**	**+1.2**
G24K	**Hadweenzic Riv**	**10.58**	**4**	Pn	**Pn**	**13 03 54.7**	**-0.7**
J30M	**Hart River**	**10.59**	**32**	Pn	**Pn**	**13 03 57.6**	**+2.0**
G19K	**Purcell Mounta**	**10.63**	**343**	Pn	**Pn**	**13 03 57.2**	**+1.3**
DLBC	**Dease Lake**	**10.73**	**70**	Pn	**Pn**	**13 04 00.1**	**+2.5**
DLBC	**Dease Lake** comp=N,0.5nm,0.3s,baz=265,slow=10,SNR=12	**10.73**	**70**	Pn	**Pn**	**13 03 56.4**	**-1.1**
DLBC	baz=286,slow=24 comp=N,0.9nm,0.4s			Sn	**Sn**	**13 05 54.7**	**-2.9**
F21K	**Alatna River**	**11.22**	**352**		**Pn**	**13 04 05.2**	**+1.1**
F20K	**Avaart Lake**	**11.28**	**347**	Pn	**Pn**	**13 04 04.9**	**+0.1**
BMAR	**Burnt Mountain**	**11.50**	**9**	Pn	**Pn**	**13 04 09.5**	**+1.6**
F17K	**Baldwin Pennin**	**11.71**	**336**	Pn	**Pn**	**13 04 12.0**	**+1.3**
E19K	**Redstone River**	**11.87**	**345**	Pn	**Pn**	**13 04 13.3**	**+0.4**
G31M	**Satah River**	**12.91**	**28**	Pn	**Pn**	**13 04 27.4**	**+0.3**
INK	**Inuvik**	**14.16**	**25**	Pn	**Pn**	**13 04 45.6**	**+1.4**
B20K	**Meade River**	**14.27**	**349**	Pn	**Pn**	**13 04 45.4**	**-0.3**
B22K	**Teshekpuk Lake**	**14.30**	**355**	Pn	**Pn**	**13 04 46.4**	**+0.3**
CLRS	**Cowichan Lake**	**17.02**	**105**	Pn	**Pn**	**13 05 18.9**	**-2.8**
CLRS	comp=Z,38nm,1.4s			IAmb	IAmb	13 05 27.2	
C36M	**Paulatuk**	**17.36**	**31**		**Pn**	**13 05 27.0**	**+1.1**
C36M	comp=Z,9.1nm,1.4s			IAmb	IAmb	13 05 39.6	
YKA	**Yellowknife Ar** baz=266,slow=11,SNR=5.8 comp=Z,0.5nm,0.9s	**18.66**	**56**	P	**Pn**	**13 05 43.6**	**+1.7**
A36M	**Sachs Harbour**	**18.79**	**23**	P	**P**	**13 05 44.3**	**+1.4**
A36M	comp=Z,3.7nm,0.8s			IAmb	IAmb	13 06 07.5	
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=43,slow=6.5,SNR=2.2 comp=Z,0.2nm,0.5s	**68.61**	**325**	P	**P**	**13 12 28.3**	**+1.6**

*NEIC **01** 13:09:30.8±1.1,56°.54N±0°.08×148°.7W±0°.1,h22km±9km, ML3.3/52,ML3.1(AEIC),Error ellipse: s-maj=13.1km s-min=7.7km az=155.0*
*AEIC **01** 13:09:33.4±1.4,56°.5N±0°.1×148°.6W±0°.1,h12km±8km, Error ellipse: s-maj=15.7km s-min=9.2km az=168.0*

ISC 01 13:09:28.1±2.0,56°.50N±0°.10×148°.66W±0°.05,h10km, n114,σ1$22/124,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.49**	**303**		**Pn**	**13 10 09.7**	**+1.0**
KDAK	**Kodiak Island**	**2.49**	**303**		**Sn**	**13 10 37.6**	**-1.5**
KDAK	**Kodiak Island** baz=120	**2.49**	**303**	P	**Pn**	**13 10 09.7**	**+1.0**
OHAK	**Old Harbor**	**2.64**	**288**		**Pn**	**13 10 10.9**	**+0.3**
OHAK					**Sn**	**13 10 40.3**	**-2.4**
OHAK	**Old Harbor** baz=104	**2.64**	**288**	P	**Pn**	**13 10 10.9**	**+0.3**
OHAK	baz=104			S	**Sn**	**13 10 40.3**	**-2.4**
SYI	**Shuyak Island**	**2.92**	**318**		**Pn**	**13 10 15.7**	**+1.2**
SYI					**Sn**	**13 10 48.8**	**-0.7**
Q20K	**Shuyak Island** baz=135	**2.92**	**318**	P	**Pn**	**13 10 15.7**	**+1.2**
Q20K	baz=135			S	**Sn**	**13 10 48.8**	**-0.7**
CNPM	**China Poot**	**3.33**	**337**		**Pn**	**13 10 21.1**	**+1.0**
CNPM	**China Poot**	**3.33**	**337**		**Sn**	**13 10 58.5**	**-1.2**
CNPM	**China Poot** comp=N,16nm,1.2s	**3.33**	**337**	IAML		13 10 55.0	
BRSE	**Bradley Lake S**	**3.43**	**342**		**Pn**	**13 10 22.3**	**+0.7**
BRSE					**Sn**	**13 11 01.7**	**-0.5**
BRSE	**Bradley Lake S** baz=160	**3.43**	**342**	P	**Pn**	**13 10 22.3**	**+0.7**
BRSE	baz=160			S	**Sn**	**13 11 01.7**	**-0.5**
BRLK	**Bradley Lake**	**3.48**	**341**		**Pn**	**13 10 22.7**	**+0.5**
BRLK					**Sn**	**13 11 02.6**	**-0.8**
BRLK	**Bradley Lake** comp=N,31nm,0.6s	**3.48**	**341**	IAML		13 12 11.2	
HOM	**Homer**	**3.54**	**335**	Pn	**Pn**	**13 10 24.8**	**+1.8**
P23K	**Montague Islan**	**3.57**	**10**		**Pn**	**13 10 24.0**	**+0.6**
P23K					**Sn**	**13 11 03.3**	**-2.3**
P23K	**Montague Islan** baz=191	**3.57**	**10**	P	**Pn**	**13 10 24.0**	**+0.6**
P23K	baz=191			S	**Sn**	**13 11 03.3**	**-2.3**
Q19K	**Cape Douglas,**	**3.61**	**314**		**Pn**	**13 10 25.5**	**+1.4**
Q19K	**Cape Douglas,** baz=130	**3.61**	**314**	P	**Pn**	**13 10 25.5**	**+1.4**
SEW	**Seward**	**3.63**	**354**		**Pn**	**13 10 24.8**	**+0.5**
SEW					**Sn**	**13 11 05.6**	**-1.6**
SEW	**Seward** baz=173	**3.63**	**354**	P	**Pn**	**13 10 24.8**	**+0.5**
SEW	baz=173			S	**Sn**	**13 11 05.6**	**-1.6**
KAHG	**Katmai Hook Gl**	**3.75**	**305**		**Pn**	**13 10 27.6**	**+1.6**
P19K	**Oil Pt**	**3.98**	**324**		**Pn**	**13 10 31.0**	**+1.8**
P19K					**Sn**	**13 11 16.1**	**+0.3**
P19K	**Oil Pt** baz=141	**3.98**	**324**	P	**Pn**	**13 10 31.0**	**+1.8**
O22K	**Cooper Landing**	**4.03**	**352**	Pn	**Pn**	**13 10 28.7**	**-1.0**
O22K	comp=N,72nm,0.6s			IAML		13 13 10.8	
O22K	comp=E,74nm,0.6s			IAML		13 13 11.3	
HIN	**Hinchinbrook I**	**4.07**	**15**		**Pn**	**13 10 31.2**	**+0.9**
SLKM	**Skilak Lake**	**4.10**	**349**		**Pn**	**13 10 31.6**	**+0.8**
SLKM					**Sn**	**13 11 17.5**	**-1.3**
KAIM	**Kayak Island**	**4.10**	**31**		**Pn**	**13 10 31.5**	**+0.8**
KAIM	**Kayak Island** comp=E,55nm,1.1s	**4.10**	**31**	IAML		13 12 26.6	
KAIM	comp=N,44nm,1.0s			IAML		13 12 53.8	
KAIM	**Kayak Island** baz=214	**4.10**	**31**	P	**Pn**	**13 10 31.5**	**+0.8**
O20K	**Slope Mountain**	**4.15**	**331**		**Pn**	**13 10 32.4**	**+0.8**
O20K	**Slope Mountain** baz=148	**4.15**	**331**	P	**Pn**	**13 10 32.4**	**+0.8**
CNTC	**Contact Creek**	**4.29**	**297**		**Pn**	**13 10 34.9**	**+1.4**
Q17K	**Contact Creek** baz=112	**4.29**	**297**	P	**Pn**	**13 10 34.9**	**+1.4**
FID	**Port Fidalgo**	**4.41**	**14**	Pn	**Pn**	**13 10 37.0**	**+2.0**
RAGM	**Ragged Mountai**	**4.42**	**27**	Pn	**Pn**	**13 10 36.4**	**+1.2**
RAGM	comp=E,49nm,0.9s			IAML		13 13 32.2	
RED	**Redoubt Volcan**	**4.48**	**333**		**Pn**	**13 10 36.8**	**+0.7**
NICHA	**Nichawak Mount**	**4.48**	**31**		**Pn**	**13 10 37.2**	**+1.2**
HMT	**Hamilton**	**4.49**	**29**	Pn	**Pn**	**13 10 37.2**	**+1.1**
RDSO	**Redoubt South**	**4.50**	**333**		**Pn**	**13 10 37.2**	**+0.8**
RDT	**Redoubt**	**4.53**	**336**		**Pn**	**13 10 37.3**	**+0.6**
RDT					**Sn**	**13 11 29.3**	**-0.1**
P18K	**Big Mountain,** baz=127	**4.54**	**312**	P	**Pn**	**13 10 37.9**	**+1.0**
DFR	**Drift River**	**4.61**	**334**		**Pn**	**13 10 38.4**	**+0.6**
RC01	**Rabbit Creek A**	**4.63**	**354**		**Pn**	**13 10 39.5**	**+1.4**
RC01					**Sn**	**13 11 30.9**	**-1.0**
RC01	**Rabbit Creek A** baz=172	**4.63**	**354**	P	**Pn**	**13 10 39.5**	**+1.4**
BERG	**Berg Lake**	**4.69**	**32**	Pn	**Pn**	**13 10 39.4**	**+0.5**
O18K	**Koktuh Hills**	**4.83**	**317**		**Pn**	**13 10 41.9**	**+1.2**
O18K	**Koktuh Hills** baz=131	**4.83**	**317**	P	**Pn**	**13 10 41.9**	**+1.2**
KHIT	**Khitrov Hills**	**4.86**	**33**		**Pn**	**13 10 42.1**	**+0.8**
KNK	**Knik Glacier**	**4.93**	**1**		**Pn**	**13 10 43.6**	**+1.5**
KNK	**Knik Glacier** baz=181	**4.93**	**1**	P	**Pn**	**13 10 43.6**	**+1.5**
WAX	**Waxell Ridge**	**4.99**	**35**	Pn	**Pn**	**13 10 43.6**	**+0.5**
N20K	**Mount Spurr** baz=157	**5.06**	**340**	P	**Pn**	**13 10 44.4**	**+0.5**
SPCR	**Spurr Chakacha**	**5.06**	**340**		**Pn**	**13 10 44.4**	**+0.5**
SUA	**Susitna One**	**5.09**	**349**		**Pn**	**13 10 45.4**	**+0.9**
SUA	**Susitna One** baz=167	**5.09**	**349**	P	**Pn**	**13 10 45.4**	**+0.9**
KLU	**Klutina**	**5.20**	**15**	Pn	**Pn**	**13 10 47.1**	**+1.2**
KLU					Pb	13 10 47.6	-11
KLU	comp=N,23nm,0.9s			IAML		13 13 40.7	
KLU	comp=E,18nm,1.1s			IAML		13 13 45.2	
TGL	**Tana Glacier**	**5.24**	**33**		**Pn**	**13 10 47.4**	**+0.9**
TGL	**Tana Glacier** comp=E,20nm,0.8s	**5.24**	**33**	IAML		13 13 48.9	
TGL	comp=N,14nm,1.1s			IAML		13 13 50.7	
STLK	**Strandline Lak**	**5.27**	**343**		**Pn**	**13 10 48.2**	**+1.3**
ISLE	**Juniper Island**	**5.28**	**36**	Pn	**Pn**	**13 10 48.1**	**+1.0**
ISLE	comp=N,21nm,1.1s			IA

L29M	**L29M**	**8.48**	**34**	Pn	**Pn**	**13 11 32.1**	**+1.3**
P32M	**Atlin**	**8.51**	**62**	Pn	**Pn**	**13 11 31.3**	**+0.1**
M31M	**Drury Creek, Y**	**9.25**	**46**	Pn	**Pn**	**13 11 43.3**	**+1.9**
H21K	**Melozitna Rive**	**9.40**	**349**	Pn	**Pn**	**13 11 44.2**	**+0.8**
FARO	**Faro, Yukon**	**9.68**	**47**	Pn	**Pn**	**13 11 48.6**	**+1.3**

*BUT **01** 13:31:44.9±1.1,43.°13N±0.°01×110.°83W±0.°03,h5km±1km, Error ellipse: s-maj=3.4km s-min=2.9km az=98.0*
*NEIC **01** 13:31:44.4±1.0,43.°14N±0.°01×110.°85W±0.°01,h5km±1km, ML3.5/85,ML3.7/24(BUT),Error ellipse: s-maj=2.9km s-min=1.9km az=280.0*
*ANF **01** 13:31:45.8±0.3,43.°17N×110.°78W,h5km, Error ellipse: s-maj=3.9km s-min=3.0km az=73.0*
*IDC **01** 13:31:45.1±0.7,43.°11N×110.°88W,h0km, mbtmp3.4/6, ML3.0/6,Error ellipse: s-maj=9.7km s-min=5.8km az=8.0*
ISC 01 13:31:47.0±0.7,**43.°17N**±0.°02×**110.°83W**±0.°03,**h10**km, **n111,σ2⁰08**/127,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
REDW	**Red Top Meadow**	**0.20**	**356**			**Pg**	**13 31 49.1**	**-2.2**
SNOW	**Snow King Moun**	**0.30**	**11**			**Pg**	**13 31 51.5**	**-1.8**
SNOW				Sg		**Sg**	**13 31 57.1**	**-0.2**
TPAW	**Teton Pass**	**0.34**	**345**	Pg		**Pg**	**13 31 51.9**	**-2.0**
TPAW				Sg		**Sg**	**13 31 57.7**	**-0.7**
TPAW				IAML			13 31 59.5	
	9μm,0.2s							
AHID	**Auburn Hatcher**	**0.45**	**206**	Pg		**Pg**	**13 31 52.5**	**-3.4**
AHID				IAML			13 31 59.4	
	7μm,0.3s							
AHID				IAML			13 31 59.6	
	6μm,0.4s							
AHID	**Auburn Hatcher**	**0.45**	**206**			**Sg**	**13 31 59.1**	**-2.7**
LOHW	**Long Hollow**	**0.48**	**20**	Pg		**Pg**	**13 31 54.5**	**-1.9**
LOHW	**Long Hollow**	**0.48**	**20**			**Sg**	**13 32 01.8**	**-1.0**
LOHW	**Long Hollow**	**0.48**	**20**	IAML			13 32 02.5	
	4μm,0.3s							
LOHW				IAML			13 32 04.5	
	3μm,0.3s							
MOOW	**Moose Ponds**	**0.59**	**6**	Pg		**Pg**	**13 31 56.5**	**-2.0**
MOOW	**Moose Ponds**	**0.59**	**6**			**Sg**	**13 32 05.0**	**-1.3**
MOOW	**Moose Ponds**	**0.59**	**6**	IAML			13 32 05.0	
	1μm,0.2s							
MOOW				IAML			13 32 05.6	
	1μm,0.2s							
FLWY	**Flagg Ranch**	**0.92**	**6**	Pg		**Pg**	**13 32 02.7**	**-2.1**
FLWY				IAML			13 32 17.7	
	722nm,0.6s							
FLWY				IAML			13 32 18.5	
	1μm,0.5s							
BW06	**Boulder Array**	**1.02**	**113**			**Pg**	**13 32 04.0**	**-2.7**
BW06	**Boulder Array**	**1.02**	**113**	P		**Pg**	**13 32 04.2**	**-2.5**
	baz=292,SNR=475							
BW06				Sb		**Sb**	**13 32 19.3**	**-1.1**
	baz=292							
PD31	**Pinedale Array**	**1.02**	**113**			**Pg**	**13 32 03.7**	**-2.9**
PDAR	**Pinedale Array**	**1.02**	**113**			**Pg**	**13 32 03.7**	**-2.9**
PDAR	**Pinedale Array**	**1.02**	**113**	Pg		**Pg**	**13 32 04.0**	**-2.6**
	68nm,0.3s,baz=304,slow=15,SNR=1317							
PDAR				Lg		Lg	13 32 19.1	
	89nm,0.3s,baz=324,slow=17,SNR=4.6							
MCID	**Moose Creek**	**1.05**	**346**			**Pg**	**13 32 05.3**	**-2.0**
YPP	**Pitchstone Pla**	**1.10**	**1**			**Pg**	**13 32 06.3**	**-2.0**
YMS	**Mount Sheridan**	**1.12**	**11**			**Pg**	**13 32 06.6**	**-2.0**
H17A	**Grant Village**	**1.24**	**8**	Pg		**Pn**	**13 32 09.0**	**-1.7**
H17A				IAML			13 32 27.8	
	comp=N,1μm,0.2s							
H17A				IAML			13 32 27.8	
	comp=E,700nm,0.3s							
H17A	**Grant Village**	**1.24**	**8**	P		**Pn**	**13 32 09.0**	**-1.7**
	baz=189,SNR=264							
H17A				S		**Sb**	**13 32 25.2**	**-1.8**
	baz=189							
YLT	**Little Thumb C**	**1.28**	**8**			**Pn**	**13 32 09.9**	**-1.3**
YFT	**Old Faithful**	**1.28**	**360**			**Pn**	**13 32 09.6**	**-1.7**
YTP	**The Promontory**	**1.29**	**18**			**Pn**	**13 32 09.2**	**-2.2**
YPLA	**Lake Butte**	**1.41**	**17**			**Pn**	**13 32 11.7**	**-1.4**
LKWY	**Lake**	**1.43**	**12**			**Pn**	**13 32 12.5**	**-0.8**
LKWY				IAML			13 32 20.0	
	comp=E,367nm,0.4s							
LKWY				IAML			13 32 42.5	
	comp=E,408nm,0.6s							
YML	**Mary Lake**	**1.45**	**5**			**Pb**	**13 32 13.8**	**-0.4**
YPWB	**West Boundary**	**1.45**	**352**			**Pn**	**13 32 12.5**	**-1.1**
CMI	**Centennial Mou**	**1.47**	**337**			**Pn**	**13 32 12.2**	**-1.8**
YPM	**Purple Mountai**	**1.49**	**359**			**Pn**	**13 32 13.7**	**-0.5**
YPPC	**Pelican Cone**	**1.55**	**17**			**Pb**	**13 32 15.0**	**-1.1**
YNR	**Norris Junctio**	**1.55**	**4**			**Pn**	**13 32 14.3**	**-0.7**
YPDC	**Denny Creek**	**1.57**	**349**			**Pn**	**13 32 14.2**	**-1.0**
YMC	**Maple Creek**	**1.60**	**356**			**Pn**	**13 32 14.6**	**-1.0**
YHB	**Horse Butte**	**1.61**	**351**			**Pn**	**13 32 14.8**	**-1.0**
YHH	**Holmes Hill**	**1.62**	**360**			**Pn**	**13 32 14.9**	**-1.0**
YJC	**Joseph's Coat**	**1.63**	**12**			**Pb**	**13 32 17.0**	**-0.3**
GCR	**Grayling Creek**	**1.64**	**353**			**Pn**	**13 32 16.1**	**-0.1**
YMP	**Mirror Lake Pl**	**1.65**	**17**			**Pn**	**13 32 16.0**	**-0.3**
HWUT	**Hardware Ranch**	**1.65**	**199**			**Pn**	**13 32 15.0**	**-1.3**
HWUT				IAML			13 32 39.3	
	comp=E,384nm,0.9s							
HWUT				IAML			13 32 39.3	
	comp=E,392nm,1.2s							
YPK	**Parker Peak, Y**	**1.70**	**22**			**Pn**	**13 32 16.5**	**-0.5**
YHL	**Hebgen Lake**	**1.70**	**352**			**Pn**	**13 32 16.6**	**-0.5**
YHL				IAML			13 32 43.1	
	comp=E,380nm,0.6s							
YHL				IAML			13 32 47.1	
	comp=N,421nm,1.0s							
YPSB	**Soda Butte**	**1.79**	**16**			**Pn**	**13 32 18.0**	**-0.1**
HVU	**Hansel Valley**	**2.00**	**227**			**Pn**	**13 32 18.7**	**-2.3**
HVU				IAML			13 32 49.0	
	comp=N,495nm,0.7s							
HVU				IAML			13 32 54.0	
	comp=E,436nm,0.8s							
TCUT	**Toone Canyon**	**2.09**	**192**			**Pn**	**13 32 21.5**	**-0.9**
SPUT	**South Promonto**	**2.21**	**213**			**Pn**	**13 32 22.3**	**-1.7**
SPUT				IAML			13 32 59.2	
	comp=E,193nm,1.0s							
SPUT				IAML			13 33 01.2	
	comp=N,206nm,0.9s							
RLMT	**Red Lodge**	**2.26**	**29**			**Pn**	**13 32 24.6**	**0.0**
RLMT				IAML			13 32 57.1	
	comp=N,179nm,1.1s							
RLMT				IAML			13 33 00.4	
	comp=N,173nm,0.3s							
RLMT	**Red Lodge**	**2.26**	**29**	P		**Pn**	**13 32 23.9**	**-0.7**
	baz=210,SNR=50							
RLMT				Sb		**Sb**	**13 32 55.9**	**-0.1**
	baz=210							
BOZ	**Bozeman (W)**	**2.50**	**347**	P		**Pn**	**13 32 29.1**	**+1.2**
	baz=167,SNR=136							
BOZ				Sb		**Sb**	**13 33 03.1**	**+0.2**
	baz=167							
CTU	**Camp Tracy**	**2.56**	**196**			**Pn**	**13 32 27.9**	**-0.9**
CTU				IAML			13 33 09.9	
	comp=E,320nm,0.6s							
CTU				IAML			13 33 10.8	
	comp=N,274nm,0.7s							
BSUT	**Blindstream Ca**	**2.63**	**179**			**Pn**	**13 32 28.1**	**-1.8**
BSUT				IAML			13 33 14.4	
	comp=E,190nm,0.6s							
HLID	**Hailey**	**2.64**	**280**			**Pn**	**13 32 29.7**	**-0.2**
HLID				IAML			13 33 10.3	
	comp=E,116nm,0.6s							
HLID				IAML			13 33 15.0	
	comp=E,163nm,0.8s							
HLID	**Hailey**	**2.64**	**280**	P		**Pn**	**13 32 29.5**	**-0.4**
	baz=98,SNR=389							
HLID				Sb		**Sb**	**13 33 07.7**	**+0.6**
	baz=98							
RDMU	**Red Mountain**	**2.76**	**160**			**Pn**	**13 32 31.3**	**-0.3**
RDMU				IAML			13 33 17.6	
	comp=N,167nm,0.8s							
RDMU				IAML			13 33 29.4	
	comp=E,134nm,1.0s							
BGU	**Big Grassy Mou**	**2.77**	**217**			**Pn**	**13 32 29.8**	**-1.9**
RWWY	**Rawlins**	**3.06**	**118**			**Pn**	**13 32 34.9**	**-0.9**
MPU	**Maple Canyon**	**3.21**	**191**			**Pn**	**13 32 35.8**	**-1.8**
K22A	**Casper**	**3.21**	**98**	Pn		**Pn**	**13 32 38.0**	**+0.4**
K22A	**Casper**	**3.21**	**98**	P		**Pn**	**13 32 38.0**	**+0.4**
	baz=280,SNR=153							
K22A				Sb		**Sb**	**13 33 21.6**	**-1.7**
	baz=280							
DUG	**Dugway, Tooele**	**3.32**	**207**			**Pn**	**13 32 38.2**	**-1.0**
DUG	**Dugway, Tooele**	**3.32**	**207**	P		**Pn**	**13 32 38.1**	**-1.0**
	baz=26,SNR=28							
DUG				Sb		**Sg**	**13 33 29.4**	**-4.3**
	baz=26							
NLU	**North Lily Min**	**3.34**	**197**			**Pn**	**13 32 38.3**	**-1.2**
NLU				IAML			13 33 37.6	
	comp=N,70nm,0.7s							
P18A	**Preston Nutter**	**3.56**	**173**			**Pn**	**13 32 42.2**	**-0.4**
O20A	**White River Ci**	**3.60**	**146**	Pn		**Pn**	**13 32 43.4**	**+0.4**
O20A				IAML			13 33 46.0	
	comp=N,177nm,0.9s							
O20A	**White River Ci**	**3.60**	**146**	P		**Pn**	**13 32 42.9**	**-0.1**
	baz=328,SNR=31							
O20A				S		**Sn**	**13 33 27.1**	**+1.5**
	baz=328							
MFID	**Camas Ranch**	**3.66**	**276**			**Pn**	**13 32 44.7**	**+1.0**
MFID				IAML			13 33 47.6	
	comp=N,112nm,0.8s							
MFID				IAML			13 33 48.1	
	comp=N,110nm,0.9s							
P17A	**Butcher Ranch,**	**3.69**	**179**			**Pn**	**13 32 43.4**	**-0.9**
BPMT	**Black Pine Rid**	**3.76**	**331**			**Pn**	**13 32 46.8**	**+1.4**
TMUT	**Trail Mountain**	**3.88**	**184**			**Pn**	**13 32 45.9**	**-1.0**
SRU	**San Rafael Swe**	**4.06**	**177**	Pn		**Pn**	**13 32 48.9**	**-0.5**
ELK	**Elko**	**4.08**	**235**			**Pn**	**13 32 48.6**	**-1.2**
ELK	**Elko**	**4.08**	**235**	Pn		**Pn**	**13 32 47.9**	**-1.9**
	comp=N,0.9nm,0.3s,baz=59,slow=10.0,SNR=14							
ELK				Lg		Lg	13 33 52.4	
	comp=N,2.1nm,0.3s,baz=341,slow=21,SNR=4.6							
	comp=N,2.1nm,0.6s							
PLID	**Pearl Lake**	**4.19**	**299**	Pn		**Pn**	**13 32 50.4**	**-0.8**
PLID				IAML			13 34 00.9	
	comp=N,42nm,0.8s							
PLID				IAML			13 34 08.9	
	comp=N,34nm,1.3s							
Q16A	**Castle Valley**	**4.25**	**184**			**Pn**	**13 32 50.2**	**-1.8**
MSO	**Missoula**	**4.28**	**330**			**Pn**	**13 32 53.0**	**+0.8**
MSO	**Missoula**	**4.28**	**330**	IAML			13 34 05.0	
	comp=N,55nm,0.7s							
MSO	**Missoula**	**4.28**	**330**	Pb		**Pb**	**13 33 02.5**	**+0.2**
	baz=148							
MSO				Sb		**Sb**	**13 33 57.4**	**+3.3**
	baz=148							
N23A	**Red Feather La**	**4.29**	**120**	Pn		**Pn**	**13 32 52.0**	**-0.7**
N23A	**Red Feather La**	**4.29**	**120**	P		**Pn**	**13 32 52.1**	**-0.5**
	baz=303,SNR=36							
N23A				Sb		**Sb**	**13 33 55.0**	**+0.4**
	baz=303							
PHWY	**Pilot Hill**	**4.40**	**113**			**Pn**	**13 32 53.6**	**-0.6**
LAO	**LASA Array**	**4.81**	**41**			**Pn**	**13 33 00.3**	**+0.7**
LAO	**LASA Array**	**4.81**	**41**	P		**Pn**	**13 33 00.1**	**+0.5**
	baz=224							
LAO				Sb		**Sb**	**13 34 11.6**	**+2.3**
	baz=224							
EGMT	**Eagleton**	**4.92**	**8**			**Pn**	**13 33 02.4**	**+1.3**
EGMT				IAML			13 34 29.6	
	comp=N,40nm,1.1s							
EGMT				IAML			13 34 36.7	
	comp=N,38nm,0.7s							
EGMT	**Eagleton**	**4.92**	**8**	Sb		**Sb**	**13 34 16.0**	**+3.6**
	baz=189							
BMO	**Blue Mountains**	**4.96**	**292**	Pn		**Pn**	**13 33 01.7**	**0.0**
BMO				IAML			13 34 27.1	
	comp=N,26nm,1.1s							
RSSD	**Black Hills**	**5.02**	**77**	Pn		**Pn**	**13 33 02.4**	**-0.2**
RSSD	**Black Hills**	**5.02**	**77**	P		**Pn**	**13 33 02.4**	**-0.2**
	baz=261							
RSSD				Sb		**Sb**	**13 34 17.9**	**+2.2**
	baz=261							
ISCO	**Idaho Springs**	**5.16**	**129**	Pn		**Pn**	**13 33 04.2**	**-0.5**
ISCO				IAML			13 34 31.0	
	comp=N,19nm,0.8s							
ISCO				IAML			13 34 41.4	
	comp=N,16nm,0.9s							
ISCO	**Idaho Springs**	**5.16**	**129**	P		**Pn**	**13 33 04.5**	**-0.2**
	baz=312,SNR=6.7							
ISCO				Sb		**Sb**	**13 34 21.8**	**+2.0**
	baz=312							
MTPU	**Mount Pierson**	**5.22**	**192**	Pn		**Pn**	**13 33 03.8**	**-1.8**
F10A	**Beach Ranch, E**	**5.36**	**304**	Pn		**Pn**	**13 33 07.1**	**-0.1**
F10A				IAML			13 34 48.6	
	comp=E,43nm,1.1s							
Q24A	**Divide**	**6.00**	**132**	Sb		**Sb**	**13 34 48.8**	**+4.8**
	baz=316							
R11B	**Troy Canyon, C**	**6.01**	**218**	Sb		**Sb**	**13 34 49.3**	**+5.1**
	baz=35							
MVCO	**Mesa Verde**	**6.21**	**163**	P		**Pn**	**13 33 19.0**	**0.0**
	baz=344							
MVCO				Sb		**Sb**	**13 34 55.1**	**+5.3**
	baz=344							
S22A	**4UR Ranch, Cre**	**6.21**	**149**	Sb		**Sb**	**13 34 54.6**	**+4.6**
	baz=332							
NEW	**Newport**	**6.74**	**321**	P		**Pn**	**13 33 27.2**	**+1.2**
	baz=137							
NEW				Sb		**Sb**	**13 35 12.2**	**+7.5**
	baz=137							
NEW	**Newport**	**6.74**	**321**	Pn		**Pn**	**13 33 25.7**	**-0.3**
	comp=E,0.4nm,0.3s,baz=143,slow=19,SNR=5.9							
NEW				Sn		**Sn**	**13 34 45.8**	**+3.0**
	comp=E,0.4nm,0.3s,baz=271,slow=20,SNR=3.7							
NEW				Lg		Lg	13 35 13.7	
	comp=E,1.0nm,0.3s,baz=55,slow=20,SNR=3.1							
	comp=E,2.7nm,0.5s							
SDCO	**Great Sand Dun**	**6.77**	**141**	Pn		**Pn**	**13 33 24.3**	**-2.4**
OGNE	**Ogallala**	**6.91**	**106**	P		**Pn**	**13 33 27.6**	**-0.9**
	baz=291							
OGNE				Sb		**Sb**	**13 35 14.1**	**+4.2**
	baz=291							
C09A	**Chrisman Ranch**	**6.99**	**314**	Pn		**Pn**	**13 33 29.4**	**0.0**
DGMT	**Dagmar**	**7.04**	**39**	Pn		**Pn**	**13 33 31.2**	**+1.1**
DGMT	**Dagmar**	**7.04**	**39**	Sb		**Sb**	**13 35 19.1**	**+5.6**
	baz=223							
NVAR	**Mina Array Bea**	**7.38**	**233**	Pn		**Pn**	**13 33 37.0**	**+1.9**
	comp=E,0.2nm,0.3s,baz=55,slow=11,SNR=10							
NVAR				Lg		Lg	13 35 33.1	
	comp=E,0.2nm,0.3s,baz=48,slow=26,SNR=3.6							
	comp=E,1.3nm,0.7s							
KSCO	**Kaye Shedlock'**	**7.46**	**121**	Sb		**Sb**	**13 35 32.2**	**+6.6**
	baz=306							
WUAZ	**Wupatki**	**7.65**	**183**	Pn		**Pn**	**13 33 37.8**	**-0.9**
WUAZ	**Wupatki**	**7.65**	**183**	P		**Pn**	**13 33 37.8**	**-0.9**
	baz=2.9,SNR=8.0							
E28A	**Huff**	**7.97**	**61**	Pn		**Pn**	**13 33 38.9**	**-3.9**
ANMO	**Albuquerque**	**8.88**	**156**	Pn		**Pn**	**13 33 53.9**	**-1.7**
	comp=E,0.1nm,0.3s,baz=56,slow=11,SNR=2.1							
ANMO				Lg		Lg	13 36 17.4	
	comp=E,0.1nm,0.3s,baz=8.2,slow=8.6,SNR=4.2							
	comp=E,0.6nm,0.6s							
ULM	**Lac du Bonnet**	**12.46**	**50**	Pn		**Pn**	**13 34 42.5**	**-1.8**
	comp=E,0.6nm,0.3s,baz=233,slow=13,SNR=6.2							
ULM				Lg		Lg	13 38 09.5	
	comp=E,0.2nm,0.3s,baz=193,slow=8.7,SNR=3.4							
	comp=E,2.0nm,0.5s							
YKA	**Yellowknife Ar**	**19.49**	**355**	P		**Pn**	**13 36 14.2**	**-0.9**
	comp=E,0.1nm,0.3s,baz=167,slow=10,SNR=8.7							
	comp=E,0.6nm,0.8s							

*KRNET **01** 13:33:05.9±0.1,40.°68N×73.°23E,h24km,mb3.1*
*KNET **01** 13:33:08.0±0.7,40.°74N×73.°43E,h23km±3km, ml3.0,Error ellipse: s-maj=7.2km s-min=4.7km az=125.0*
*SOME **01** 13:33:07.4,40.°82N×73.°28E,h5km*
*NNC **01** 13:33:08.8±1.2,40.°88N×73.°23E,h1km±14km, mb3.5, mpv3.2,Error ellipse: s-maj=9.8km s-min=5.0km az=179.0*
ISC 01 13:33:04.0±1.1,**40.°76N**±0.°02×**73.°25E**±0.°02,**h3**km±10km, **n83,σ1⁰56**/136,**41C-30D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.42**	**237**	⇑*iP*		**Pg**	**13 33 13.7**	**+1.6**
	baz=45							
OHH				⇑*iS*		**Sg**	**13 33 19.1**	**+1.6**
	baz=45							
ARSB	**Arslanbob**	**0.60**	**341**	⇑*iP*		**Pn**	**13 33 18.8**	**-0.9**
ARSB	baz=44			⇑*iS*		**Sb**	**13 33 28.0**	**+1.7**
	baz=44							
SFK	**Sufi-Kurgan**	**0.77**	**165**	⇓*eP*		**Pg**	**13 33 19.2**	**+0.5**
	baz=62							
SFK				⇓*eS*		**Sg**	**13 33 29.1**	**+0.5**
	baz=62							
ARLS	**Aral**	**1.37**	**36**	⇓*iP*		**Pg**	**13 33 32.2**	**+1.9**
	baz=35							
ARLS				⇓*iS*		**Sn**	**13 33 51.1**	**+2.1**
	baz=35							
ARK	**Arkit**	**1.42**	**318**	⇓*iP*		**Pg**	**13 33 32.8**	**+1.5**
	baz=20							
ARK				⇓*iS*		**Sn**	**13 33 52.2**	**+1.9**
	baz=20							
DRK	**Karamyk**	**1.69**	**222**	⇑*eP*		**Pn**	**13 33 35.3**	**+0.6**
	baz=23							
DRK				⇑*eS*		**Sn**	**13 33 56.8**	**-0.3**
	baz=23							
UCH	**Uchtor**	**1.75**	**32**	⇓*P*		**Pg**	**13 33 39.1**	**+1.5**
	16nm,0.2s,SNR=43							
UCH				⇑*S*		**Sg**	**13 34 03.2**	**+2.8**
	174nm,0.4s							
UCH	**Uchtor**	**1.75**	**32**	⇑*iP*		**Pg**	**13 33 38.5**	**+0.9**
	baz=32							
UCH				⇑*iS*		**Sg**	**13 34 02.2**	**+1.9**
	baz=32							
TRKS	**Terek-Say**	**1.77**	**297**	⇑*iP*		**Pg**	**13 33 37.5**	**-0.4**
	baz=97							
TRKS				⇑*iS*		**Sg**	**13 33 59.6**	**-1.3**
	baz=97							
MNAS	**Manas**	**1.82**	**342**	⇑*eP*		**Pg**	**13 33 38.9**	**+0.1**
	baz=44							
MNAS				⇑*eS*		**Sg**	**13 34 04.2**	**+1.8**
	baz=44							
EKS2	**Erkin-Say**	**1.95**	**12**	⇑*P*		**Pg**	**13 33 42.1**	**+0.8**
	11nm,0.1s,SNR=76							
EKS2				⇑*S*		**Sg**	**13 34 09.6**	**+3.0**
	42nm,0.2s							
EKS2	**Erkin-Say**	**1.95**	**12**	⇑*iP*		**Pg**	**13 33 41.2**	**-0.1**
	baz=12							
EKS2				⇑*iS*		**Sg**	**13 34 06.7**	**+0.2**
	baz=12							
BTK	**Batken**	**1.98**	**250**	⇓*iP*		**Pb**	**13 33 40.0**	**-0.8**
	baz=52							
BTK				⇓*iS*		**Sb**	**13 34 04.8**	**-1.1**
	baz=52							
MRKS	**Merke**	**1.99**	**360**	Pg		**Pg**	**13 33 43.6**	**+1.5**
	59nm,0.4s							
MRKS				Lg		Lg	13 34 10.9	
	181nm,0.4s							
MRKS	**Merke**	**1.99**	**360**	*eP*		**Pg**	**13 33 43.6**	**+1.5**
	59nm,0.4s							
MRKS				*eS*		**Sg**	**13 34 09.9**	**+2.0**
	189nm,0.3s							
AAK	**Ala-Archa**	**2.10**	**26**	⇑*P*		**Pg**	**13 33 44.5**	**+0.2**
	17nm,0.2s,SNR=35							
AAK				⇓*S*		**Sg**	**13 34 12.4**	**+0.9**
	81nm,0.2s							
AAK	**Ala-Archa**	**2.10**	**26**	⇓*iP*		**Pg**	**13 33 43.3**	**-0.9**
	baz=26							
AAK				⇓*iS*		**Sg**	**13 34 10.3**	**-1.2**
	baz=26							
NRN	**Naryn**	**2.19**	**71**	⇓*iP*		**Pb**	**13 33 43.7**	**-0.7**
	baz=69							
NRN				⇓*iS*		**Sn**	**13 34 10.8**	**+1.4**
	baz=69							
KBK	**Karagaybulak**	**2.29**	**33**	⇑*P*		**Pg**	**13 33 47.5**	**-0.4**
	7.6nm,0.1s,SNR=13							
KBK				⇓*S*		**Sg**	**13 34 17.0**	**-0.5**
	24nm,0.1s							
KBK	**Karagaybulak**	**2.29**	**33**	⇑*iP*		**Pb**	**13 33 45.7**	**-0.4**
	baz=33							
KBK				⇑*iS*		**Sb**	**13 34 14.8**	**0.0**
	baz=33							
FRU1	**Bishkek**	**2.30**	**26**	⇑*iP*		**Pb**	**13 33 46.2**	**0.0**
	baz=26							
FRU1				⇑*iS*		**Sg**	**13 34 15.4**	**-2.5**
	baz=26							
CHMS	**Chumysh**	**2.51**	**26**	⇓*P*		**Pb**	**13 33 50.0**	**+0.3**
	11nm,0.3s							
CHMS				⇑*S*		**Sg**	**13 34 22.9**	**-1.7**
	41nm,0.4s							
CHMS	**Chumysh**	**2.51**	**26**	⇑*Pg*		**Pb**	**13 33 49.6**	**-0.1**
	7.0nm,0.4s							
CHMS				⇓*Lg*		Lg	13 34 22.5	
	33nm,0.7s							
CHMS	**Chumysh**	**2.51**	**26**	⇑*iP*		**Pb**	**13 33 48.8**	**-0.9**
	baz=26							
CHMS				⇑*iS*		**Sb**	**13 34 19.8**	**-1.2**
	baz=26							
DZA	**Taraz**	**2.57**	**327**	Pg		**Pg**	**13 33 54.8**	**+1.5**
	64nm,0.1s							
DZA				Lg		Lg	13 34 29.4	
	218nm,0.4s							
DZA	**Taraz**	**2.57**	**327**	*eP*		**Pg**	**13 33 54.8**	**+1.5**
	64nm,0.1s							
DZA				*eS*		**Sg**	**13 34 29.4**	**+2.8**
	218nm,0.4s							
BOOM	**Boomskoye usch**	**2.66**	**48**	⇓*iP*		**Pb**	**13 33 51.0**	**-1.4**
	baz=48							
BOOM				⇓*iS*		**Sb**	**13 34 23.4**	**-2.2**
	baz=48							
USP	**Ospenovka**	**2.68**	**20**	⇓*P*		**Pb**	**13 33 51.9**	**-0.7**
	5.0nm,0.2s							
USP	**Ospenovka**	**2.68**	**20**	⇓*iP*		**Pb**	**13 33 51.3**	**-1.3**
	baz=20							
USP				⇓*iS*		**Sb**	**13 34 24.0**	**-1.9**
	baz=20							
ULHL	**Ulahol**	**2.70**	**56**	⇑*P*		**Pb**	**13 33 51.6**	**-1.4**
	5.5nm,0.2s,SNR=5.8							
ULHL				⇓*S*		**Sb**	**13 34 24.9**	**-1.8**
	26nm,0.3s							
ULHL	**Ulahol**	**2.70**	**56**	⇑*eP*		**Pb**	**13 33 51.4**	**-1.7**
	baz=54							
ULHL				⇑*iS*		**Sb**	**13 34 24.2**	**-2.5**
	baz=54							
TKM2	**Tokmak 2**	**2.79**	**38**	⇓*P*		**Pb**	**13 33 53.7**	**-0.9**
	3.2nm,0.1s,SNR=6.7							
TKM2	**Tokmak 2**	**2.79**	**38**	⇑*Pg*		**Pg**	**13 34 00.0**	**+2.6**
	2.4nm,0.3s							
TKM2				⇓*Lg*		Lg	13 34 32.8	
	11nm,0.6s							
TKM2	**Tokmak 2**	**2.79**

KRBS	**Karabastau**	**3.45**	**31**	*eP*		**Pg**	**13 34 09.6**	**-0.5**
	2.5nm,0.3s							
KRBS				*eS*		**Sg**	**13 34 54.1**	**-0.7**
	21nm,0.5s							
TNSS	**Tian-Shan**	**3.58**	**49**	Pg		**Pg**	**13 34 12.4**	**-0.2**
	2.2nm,0.2s							
TNSS				Lg		Lg	13 34 59.0	
	11nm,0.3s							
TNSS	**Tian-Shan**	**3.58**	**49**	*eP*		**Pg**	**13 34 12.4**	**-0.2**
	2.2nm,0.2s							
TNSS				*eS*		**Sg**	**13 34 59.0**	**-0.1**
	11nm,0.3s							
KNDC	**Almaty**	**3.71**	**47**	⇑Pg		**Pg**	**13 34 17.6**	**+2.6**
	6.9nm,0.3s							
KNDC				⇑Lg		Lg	13 35 04.9	
	41nm,0.7s							
MDOK	**Medeo**	**3.72**	**48**	Pg		**Pg**	**13 34 15.6**	**+0.4**
	2.3nm,0.6s							
MDOK				Pg		Pb	13 34 17.3	+6.9
	0.7nm,0.3s							
MDOK				Lg		Lg	13 35 03.6	
	16nm,0.5s							
MDOK				Lg		Lg	13 35 04.6	
	14nm,0.5s							
MDOK	**Medeo**	**3.72**	**48**	*eP*		**Pg**	**13 34 15.6**	**+0.4**
	2.3nm,0.6s							
MDOK				*eS*		**Sg**	**13 35 04.6**	**+1.2**
	14nm,0.5s							
KOTS	**Kotyrbulak**	**3.80**	**48**	Pg		**Pg**	**13 34 17.1**	**+0.3**
	4.4nm,0.5s							
KOTS				Lg		Lg	13 35 07.5	
	33nm,0.5s							
KOTS	**Kotyrbulak**	**3.80**	**48**	*eP*		**Pg**	**13 34 17.1**	**+0.3**
	4.4nm,0.5s							
KOTS				*eS*		**Sg**	**13 35 07.5**	**+1.5**
	33nm,0.5s							
ANVS	**Anan'yevo**	**3.88**	**57**	⇓*i*P		**Pn**	**13 34 07.6**	**+2.9**
	baz=56							
ANVS				⇓*i*S		**Sn**	**13 34 52.5**	**+1.6**
	baz=56							
KUU	**Kurty**	**3.88**	**35**	Pg		**Pg**	**13 34 18.3**	**-0.1**
	3.5nm,0.5s							
KUU				Lg		Lg	13 35 09.2	
	20nm,0.5s							
KUU	**Kurty**	**3.88**	**35**	*eP*		**Pg**	**13 34 18.3**	**-0.1**
	3.5nm,0.5s							
KUU				*eS*		**Sg**	**13 35 09.2**	**+0.4**
	20nm,0.5s							
KTBS	**Karatobe**	**3.90**	**40**	Pg		**Pg**	**13 34 18.4**	**-0.3**
	1.4nm,0.3s							
KTBS				Lg		Lg	13 35 09.6	
	24nm,0.5s							
KTBS	**Karatobe**	**3.90**	**40**	*eP*		**Pg**	**13 34 18.4**	**-0.3**
	1.4nm,0.3s							
KTBS				*eS*		**Sg**	**13 35 09.6**	**+0.2**
	24nm,0.5s							
CHKK	**Chushkaly**	**4.16**	**41**	Pg		**Pg**	**13 34 22.9**	**-0.7**
	1.2nm,0.1s							
CHKK				Lg		Lg	13 35 17.8	
	17nm,0.6s							
CHKK	**Chushkaly**	**4.16**	**41**	*eP*		**Pg**	**13 34 22.9**	**-0.7**
	1.2nm,0.1s							
CHKK				*eS*		**Sg**	**13 35 17.8**	**+0.3**
	17nm,0.6s							
PRZ	**Przheval'sk**	**4.23**	**64**	⇑*i*P		**Pn**	**13 34 12.6**	**+3.0**
	baz=63							
PRZ				⇑*i*S		**Sn**	**13 35 01.1**	**+1.5**
	baz=63							
BTLS	**Baital**	**4.32**	**8**	Pg		**Pg**	**13 34 26.1**	**-0.7**
BTLS				Lg		Lg	13 35 22.5	
BTLS	**Baital**	**4.32**	**8**	*eP*		**Pg**	**13 34 26.1**	**-0.7**
	2.6nm,0.4s							
BTLS				*eS*		**Sg**	**13 35 22.5**	**-0.4**
	8.2nm,0.3s							
SATY	**Saty**	**4.49**	**57**	Pg		**Pg**	**13 34 30.3**	**+0.4**
	3.4nm,0.4s							
SATY				Lg		Lg	13 35 29.7	
	25nm,0.5s							
SATY	**Saty**	**4.49**	**57**	*eP*		**Pg**	**13 34 30.3**	**+0.4**
	3.4nm,0.4s							
SATY				*eS*		**Sg**	**13 35 29.7**	**+1.7**
	25nm,0.5s							
ZHN	**Zhinishke**	**4.56**	**56**	Pg		**Pg**	**13 34 30.7**	**-0.7**
	1.6nm,0.4s							
ZHN				Lg		Lg	13 35 30.3	
	19nm,0.2s							
ZHN	**Zhinishke**	**4.56**	**56**	*eP*		**Pg**	**13 34 30.7**	**-0.7**
	1.6nm,0.4s							
ZHN				*eS*		**Sg**	**13 35 30.3**	**-0.1**
	19nm,0.2s							
KURS	**Kuram**	**4.57**	**52**	Pg		**Pg**	**13 34 31.6**	**+0.1**
	2.3nm,0.5s							
KURS				Lg		Lg	13 35 32.1	
	7.7nm,0.7s							
KURS	**Kuram**	**4.57**	**52**	*eP*		**Pg**	**13 34 31.6**	**+0.1**
	2.3nm,0.5s							
KURS				*eS*		**Sg**	**13 35 32.1**	**+1.4**
	7.7nm,0.7s							
ARXS	**Arharly**	**4.84**	**43**	Pg		**Pg**	**13 34 34.3**	**-2.4**
	1.1nm,0.6s							
ARXS				Lg		Lg	13 35 37.8	
	14nm,0.5s							
ARXS	**Arharly**	**4.84**	**43**	*eP*		**Pg**	**13 34 34.3**	**-2.4**
	1.1nm,0.6s							
ARXS				*eS*		**Sg**	**13 35 37.8**	**-1.5**
	14nm,0.5s							
KPKS	**Kokpek**	**4.87**	**54**	Pg		**Pg**	**13 34 35.7**	**-1.6**
	2.7nm,0.6s							
KPKS				Lg		Lg	13 35 39.3	
	12nm,0.5s							
KPKS	**Kokpek**	**4.87**	**54**	*eP*		**Pg**	**13 34 35.7**	**-1.6**
	2.7nm,0.6s							
KPKS				*eS*		**Sg**	**13 35 39.3**	**-1.0**
	12nm,0.5s							
UZB	**Uzynbulak**	**4.92**	**59**	Pg		**Pg**	**13 34 36.7**	**-1.7**
	5.0nm,0.3s							
UZB				Lg		Lg	13 35 40.6	
	9.4nm,1.0s							
UZB	**Uzynbulak**	**4.92**	**59**	*eP*		**Pg**	**13 34 36.6**	**-1.7**
	5.0nm,0.3s							
UZB				*eS*		**Sg**	**13 35 40.5**	**-1.6**
	9.4nm,1.0s							
PDGK	**Podgornoye**	**5.31**	**59**	Pg		**Pg**	**13 34 44.7**	**-1.0**
	0.8nm,0.4s							
PDGK				Lg		Lg	13 35 54.5	
	3.7nm,0.7s							
KNOS	**Konyrlen**	**5.67**	**49**	Pg		**Pg**	**13 34 50.5**	**-2.1**
	0.9nm,0.6s							
KNOS				Lg		Lg	13 36 04.8	
	4.1nm,0.6s							
KTMS	**Ketmen**	**5.93**	**61**	Pg		**Pg**	**13 34 55.4**	**-2.2**
	0.4nm,0.2s							
KTMS				Lg		Lg	13 36 12.9	
	4.4nm,0.4s							
KTMS	**Ketmen**	**5.93**	**61**	*eP*		**Pg**	**13 34 55.4**	**-2.2**
	0.4nm,0.2s							
KTMS				*eS*		**Sg**	**13 36 12.9**	**-1.5**
	4.4nm,0.4s							
DJR	**Jarkent**	**6.01**	**51**	Pg		**Pg**	**13 34 55.6**	**-3.5**
	0.5nm,0.1s							
DJR				Lg		Lg	13 36 13.7	
	6.0nm,0.7s							
DJR	**Jarkent**	**6.01**	**51**	*eP*		**Pg**	**13 34 57.3**	**-1.8**
	0.5nm,0.1s							
DJR				*eS*		**Sg**	**13 36 15.9**	**-1.1**
	5.7nm,0.5s							

*AEIC **01** 13:40:02.6±0.7, 61°.17N±0°.01×139°.85W±0°.03, h8km±4km, Error ellipse: s-maj=2.1km s-min=1.8km az=186.0*
NEIC 01 13:40:02.6±0.8, **61°.18N**±0°.01×**139°.85W**±0°.03, **h10**km±2km, **ML2.9**/12, **ML2.7**(AEIC), **Error ellipse: s-maj=3.0km s-min=2.1km az=286.0, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier**	**0.12**	**20**		**Pg**	13 40 07.8	+2.1
LOGN	**Logan Glacier**	**0.67**	**239**		**Pg**	13 40 15.6	+0.2
LOGN	**Logan Glacier**	**0.67**	**239**		**Sg**	13 40 24.7	+0.5
LOGN	**Logan Glacier**	**0.67**	**239**	IAML		13 40 18.5	
	comp=N,15nm,3.6s						
LOGN				IAML		13 40 23.7	
	comp=E,14nm,4.0s						
YUK3	**Moose Creek**	**0.67**	**334**		**Pg**	13 40 15.2	-0.4
YUK3					Sg	13 40 24.4	0.0
CTGM	**Chitina Glacie**	**0.75**	**254**		**Pg**	13 40 16.9	-0.2
CTGM	**Chitina Glacie**	**0.75**	**254**	IAML		13 40 43.4	
	comp=E,202nm,0.5s						
YUK6	**Outpost Mounta**	**0.76**	**107**		**Pg**	13 40 17.4	+0.2
YUK6					Sb	13 40 28.1	-0.4
YUK2	**White River**	**0.78**	**322**		**Pg**	13 40 17.3	-0.3
YUK2					Sb	13 40 28.4	-0.5
BARN	**Barnard Glacie**	**0.89**	**263**		**Pg**	13 40 19.5	-0.2
BARN	**Barnard Glacie**	**0.89**	**263**	IAML		13 40 48.0	
	comp=E,310nm,0.4s						
BARN				IAML		13 40 49.7	
	comp=N,206nm,0.4s						
YUK5	**Granite Creek**	**0.96**	**92**		**Pg**	13 40 20.8	-0.3
YUK5					Sg	13 40 33.6	0.0
GRNC	**Granite Creek**	**1.03**	**245**		**Pg**	13 40 22.3	-0.2
GRNC	**Granite Creek**	**1.03**	**245**	IAML		13 40 50.3	
	comp=N,383nm,0.5s						
YUK7	**Dusty Glacier**	**1.06**	**127**		**Pg**	13 40 22.8	-0.1
YUK7					Sn	13 40 38.2	-0.3
O29M	**Mount Kennedy**	**1.08**	**144**		**Pg**	13 40 23.0	-0.2
O29M					Sb	13 40 37.4	-0.1
O29M	**Mount Kennedy**	**1.08**	**144**	IAML		13 40 54.1	
	comp=N,588nm,0.5s						
PCA	**Pinnacle**	**1.10**	**191**		**Pn**	13 40 24.9	+0.7
HYT	**Haines Junctio**	**1.19**	**106**		**Pb**	13 40 24.7	-0.6
HYT	**Haines Junctio**	**1.19**	**106**	IAML		13 41 09.5	
	comp=E,667nm,0.6s						
KIAG	**Kiagna River**	**1.25**	**259**		**Pn**	13 40 26.2	0.0
BAGL	**Bagley Icefiel**	**1.30**	**239**		**Pb**	13 40 26.9	-0.1
BVCY	**Beaver Creek**	**1.33**	**339**		**Pn**	13 40 26.9	-0.4
HMT	**Hamilton**	**2.33**	**251**		**Sn**	13 41 09.3	-0.2

*AEIC **01** 13:40:26.8±3.0, 61°.21N±0°.02×139°.84W±0°.03, h13km±3km, Error ellipse: s-maj=3.1km s-min=2.1km az=190.0*
*ANF **01** 13:40:27.9±0.1, 61°.18N×139°.80W, h5km, Error ellipse: s-maj=1.8km s-min=1.3km az=39.0*
*NEIC **01** 13:40:27.7±1.8, 61°.174N±0°.005×139°.86W±0°.02, h5km±2km, mb3.6/1, ML3.9/125, Mwr3.7/34, ML3.7(OTT), ML3.7(AEIC), Error ellipse: s-maj=3.0km s-min=2.1km az=20.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.97; $M_{\theta\theta}$-3.71; $M_{\phi\phi}$2.74; $M_{r\theta}$0.35; $M_{\theta\phi}$3.23; $M_{\phi r}$0.01; Fault plane solution: M_o4.65000×10^{14} NP1: ϕ_s337.54000°, δ86.01000°, λ-179.65000°. NP2: ϕ_s247.52000°, δ89.66000°, λ-3.99000°. Principal axes: T 4.0831, Plg3.0000°, Azm293.0000°; N 0.9796, Plg86.0000°, Azm63.0000°; P -5.0627, Plg3.0000°, Azm202.0000°;*
*NEIC **01** 13:40:28.2, 61°.20N×139°.82W, h5km*
*PGC **01** 13:40:28.2, 61°.20N×139°.87W, h5km, ML3.7/18, 135km west of Haines Jct., Yt Southern Yukon Territory, Canada*
ISC 01 13:40:28.3±0.8, **61°.18N**±0°.02×**139°.85W**±0°.01, **h10**km±6km, **n369, σ1°23/416, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier**	**0.11**	**22**		**Pg**	**13 40 32.3**	**+1.0**
YUK8	**Steele Glacier**	**0.11**	**22**		**Pg**	**13 40 32.2**	**+1.0**
YUK8	**Steele Glacier**	**0.11**	**22**	P	**Pg**	**13 40 30.2**	**-1.0**
	baz=196						
YUK8				S	**Sg**	**13 40 32.5**	**-1.0**
	baz=196						
YUK8	**Steele Glacier**	**0.11**	**22**	P	**Pg**	**13 40 30.3**	**-1.0**
YUK8				S	**Pg**	**13 40 32.2**	**+1.0**
YUK4	**Talbot Arm**	**0.60**	**74**		**Pg**	**13 40 40.5**	**+0.5**
YUK4					**Sb**	**13 40 49.3**	**-0.3**
YUK4	**Talbot Arm**	**0.60**	**74**	P	**Pg**	**13 40 40.5**	**+0.5**
	baz=249						
YUK4				S	**Sb**	**13 40 49.5**	**-0.1**
	baz=249						
YUK4	**Talbot Arm**	**0.60**	**74**	P	**Pg**	**13 40 40.5**	**+0.5**
YUK4				S	**Sb**	**13 40 49.3**	**-0.3**
YUK3	**Moose Creek**	**0.66**	**334**		**Pg**	**13 40 39.9**	**-1.3**
YUK3					**Sg**	**13 40 48.8**	**-1.2**
YUK3	**Moose Creek**	**0.66**	**334**		**Pg**	**13 40 39.9**	**-1.3**
YUK3					**Sg**	**13 40 48.7**	**-1.2**
YUK3	**Moose Creek**	**0.66**	**334**	P	**Pg**	**13 40 39.9**	**-1.3**
	baz=152						
YUK3				S	**Sg**	**13 40 48.9**	**-1.0**
	baz=152						
YUK3	**Moose Creek**	**0.66**	**334**	P	**Pg**	**13 40 39.9**	**-1.3**
YUK3				S	**Sg**	**13 40 48.7**	**-1.2**
LOGN	**Logan Glacier**	**0.67**	**238**		**Pg**	**13 40 40.1**	**-1.1**
LOGN				Sg	**Sg**	**13 40 49.9**	**-0.1**
LOGN	**Logan Glacier**	**0.67**	**238**	P	**Pg**	**13 40 40.1**	**-1.1**
LOGN				S	**Sg**	**13 40 49.7**	**-0.3**
CTGM	**Chitina Glacie**	**0.75**	**254**		**Pg**	**13 40 41.5**	**-1.3**
CTGM				Sg	**Sg**	**13 40 51.8**	**-0.9**
CTGM				IAML		13 40 52.3	
	comp=N,2μm,0.6s						
CTGM				IAML		13 40 53.4	
	comp=E,2μm,0.5s						
CTGM	**Chitina Glacie**	**0.75**	**254**	P	**Pg**	**13 40 41.6**	**-1.3**
CTGM				S	**Sg**	**13 40 51.6**	**-1.0**
CTG	**Chitna Glacier**	**0.76**	**254**	P	**Pg**	**13 40 41.6**	**-1.3**
	baz=72,SNR=295						
CTG				S	**Sg**	**13 40 51.8**	**-1.0**
	baz=72						
YUK6	**Outpost Mounta**	**0.76**	**108**		**Pg**	**13 40 42.0**	**-1.0**
YUK6					**Sg**	**13 40 52.8**	**-0.2**
YUK6	**Outpost Mounta**	**0.76**	**108**		**Pg**	**13 40 42.0**	**-1.0**
YUK6					**Sg**	**13 40 51.9**	**-1.1**
YUK6	**Outpost Mounta**	**0.76**	**108**	P	**Pg**	**13 40 42.0**	**-1.0**
	baz=290						
YUK6				S	**Sg**	**13 40 52.5**	**-0.5**
	baz=290						
YUK6	**Outpost Mounta**	**0.76**	**108**	P	**Pg**	**13 40 42.0**	**-1.0**
YUK6				S	**Sg**	**13 40 51.9**	**-1.1**
YUK2	**White River**	**0.77**	**322**		**Pg**	**13 40 41.7**	**-1.4**
YUK2					**Sg**	**13 40 53.0**	**-0.3**
YUK2	**White River**	**0.77**	**322**		**Pg**	**13 40 41.7**	**-1.4**
YUK2	**White River**	**0.77**	**322**	P	**Pg**	**13 40 41.7**	**-1.4**
BARN	**Barnard Glacie**	**0.89**	**263**		**Pg**	**13 40 43.6**	**-1.8**
BARN				IAML		13 41 00.0	
	comp=E,2μm,0.4s						
BARN				IAML		13 41 03.6	
	comp=N,2μm,0.6s						
YUK5	**Granite Creek**	**0.97**	**92**		**Pg**	**13 40 45.6**	**-1.3**
YUK5	**Granite Creek**	**0.97**	**92**		**Pg**	**13 40 45.6**	**-1.3**
YUK5					**Sg**	**13 40 58.1**	**-1.4**
YUK5	**Granite Creek**	**0.97**	**92**	P	**Pg**	**13 40 45.6**	**-1.3**
YUK5				S	**Sg**	**13 40 58.1**	**-1.4**
TABL	**Table Mountain**	**0.98**	**221**		**Pg**	**13 40 45.4**	**-1.6**
TABL					**Sg**	**13 40 58.6**	**-1.2**
TABL	**Table Mountain**	**0.98**	**221**	P	**Pg**	**13 40 45.4**	**-1.6**
TABL				S	**Sg**	**13 40 58.6**	**-1.2**
GRNC	**Granite Creek**	**1.03**	**245**		**Pg**	**13 40 46.4**	**-1.7**
GRNC					**Sg**	**13 41 00.5**	**-1.1**
GRNC	**Granite Creek**	**1.03**	**245**	P	**Pg**	**13 40 46.4**	**-1.7**
GRNC				S	**Sg**	**13 41 00.5**	**-1.1**
YUK7	**Dusty Glacier**	**1.06**	**127**		**Pg**	**13 40 47.3**	**-1.3**
YUK7					**Sb**	**13 41 02.7**	**-0.1**
YUK7	**Dusty Glacier**	**1.06**	**127**		**Pg**	**13 40 47.3**	**-1.3**
YUK7					**Sg**	**13 41 02.4**	**-0.1**
YUK7	**Dusty Glacier**	**1.06**	**127**	P	**Pg**	**13 40 47.3**	**-1.3**
YUK7				S	**Sg**	**13 41 02.4**	**-0.1**
O29M	**Mount Kennedy**	**1.08**	**144**		**Pg**	**13 40 47.5**	**-1.6**
O29M	**Mount Kennedy**	**1.08**	**144**		**Pg**	**13 40 47.4**	**-1.6**
O29M					**Sg**	**13 41 01.8**	**-1.3**
O29M	**Mount Kennedy**	**1.08**	**144**	IAML		13 41 04.1	
	comp=N,3μm,0.3s						
O29M				IAML		13 41 04.9	
	comp=E,3μm,0.6s						
O29M	**Mount Kennedy**	**1.08**	**144**	P	**Pg**	**13 40 47.4**	**-1.6**
	baz=326						
O29M				S	**Sg**	**13 41 02.0**	**-1.1**
	baz=326						
O29M	**Mount Kennedy**	**1.08**	**144**	P	**Pg**	**13 40 47.4**	**-1.6**
O29M				S	**Sg**	**13 41 01.8**	**-1.3**
PCA	**Pinnacle**	**1.11**	**191**		**Pg**	**13 40 48.5**	**-1.1**
PCA					**Sb**	**13 41 04.1**	**+0.2**
PCA	**Pinnacle**	**1.11**	**191**	P	**Pg**	**13 40 48.5**	**-1.1**
PCA				S	**Sb**	**13 41 04.1**	**+0.2**
PINM	**Pinnacle**	**1.11**	**191**	P	**Pg**	**13 40 48.6**	**-0.9**
	baz=11,SNR=299						
PINM				Sb	**Sn**	**13 41 04.7**	**-0.5**
	baz=11						
SAMH	**Samovar Hills**	**1.15**	**204**		**Pb**	**13 40 49.3**	**-1.0**
SAMH	**Samovar Hills**	**1.15**	**204**	P	**Pb**	**13 40 49.3**	**-1.0**
HYT	**Haines Junctio**	**1.20**	**106**		**Pb**	**13 40 49.1**	**-1.9**
HYT				IAML		13 41 10.5	
	comp=E,1μm,0.6s						
HYT				IAML		13 41 12.3	
	comp=N,1μm,0.8s						
HYT	**Haines Junctio**	**1.20**	**106**		**Pb**	**13 40 49.3**	**-1.8**
HYT					**Sb**	**13 41 06.3**	**-0.3**
HYT	**Haines Junctio**	**1.20**	**106**	P	**Pb**	**13 40 49.3**	**-1.8**
	baz=289,SNR=360						
HYT				S	**Sb**	**13 41 06.0**	**-0.7**
	baz=289						
HYT	**Haines Junctio**	**1.20**	**106**	P	**Pb**	**13 40 49.3**	**-1.8**
HYT				S	**Sb**	**13 41 06.3**	**-0.3**
BCPM	**Bancas Point**	**1.24**	**175**		**Pn**	**13 40 50.7**	**-0.9**
BCPM				Sg	**Sb**	**13 41 07.5**	**-0.2**
KIAG	**Kiagna River**	**1.25**	**259**		**Pn**	**13 40 49.9**	**-1.9**
KIAG	**Kiagna River**	**1.25**	**259**	P	**Pn**	**13 40 49.9**	**-1.9**
PTPK	**Patty Peak**	**1.27**	**271**		**Pn**	**13 40 50.5**	**-1.6**
PTPK	**Patty Peak**	**1.27**	**271**	P	**Pn**	**13 40 50.5**	**-1.6**
BAGL	**Bagley Icefiel**	**1.30**	**239**		**Pn**	**13 40 51.2**	**-1.2**
BVCY	**Beaver Creek**	**1.33**	**339**		**Pn**	**13 40 51.8**	**-1.0**
BVCY	**Beaver Creek**	**1.33**	**339**	P	**Pn**	**13 40 51.9**	**-0.9**
	baz=158,SNR=189						
BVCY				S	**Sn**	**13 41 10.6**	**+0.1**
	baz=158						
BVCY	**Beaver Creek**	**1.33**	**339**	P	**Pn**	**13 40 51.8**	**-1.0**
ISLE	**Juniper Island**	**1.35**	**246**		**Pn**	**13 40 51.9**	**-1.3**
ISLE	**Juniper Island**	**1.35**	**246**	IAML		13 41 13.5	
	comp=E,3μm,0.8s						
ISLE				IAML		13 41 14.2	
	comp=N,2μm,0.9s						
M29M	**Somme Creek**	**1.43**	**27**		**Pn**	**13 40 54.1**	**-0.2**
M29M					**Sn**	**13 41 11.9**	**-1.2**
M29M	**Somme Creek**	**1.43**	**27**		**Pn**	**13 40 54.2**	**0.0**
M29M	**Somme Creek**	**1.43**	**27**	IAML		13 41 15.5	
	comp=N,1μm,0.6s						
M29M				IAML		13 41 17.0	
	comp=E,2μm,0.5s						
M29M	**Somme Creek**	**1.43**	**27**	P	**Pn**	**13 40 54.0**	**-0.3**
	baz=208						
M29M	**Somme Creek**	**1.43**	**27**	P	**Pn**	**13 40 54.2**	**0.0**
MESA	**MESA**	**1.44**	**227**		**Pb**	**13 40 55.1**	**-0.3**
MESA	**MESA**	**1.44**	**227**	IAML		13 41 19.1	
	comp=N,1μm,0.6s						
MESA				IAML		13 41 23.8	
	comp=E,2μm,0.6s						
MESA	**MESA**	**1.44**	**227**	P	**Pb**	**13 40 55.0**	**-0.3**
	baz=45						
MESA	**MESA**	**1.44**	**227**	P	**Pb**	**13 40 55.1**	**-0.3**
BARK	**Barkley Ridge**	**1.51**	**240**		**Pn**	**13 40 55.2**	**-0.3**
M27K	**Edge Creek, AK**	**1.52**	**322**		**Pn**	**13 40 54.9**	**-0.7**
M27K	**Edge Creek, AK**	**1.52**	**322**	IAML		13 41 20.5	
	comp=E,2μm,0.8s						
M27K				IAML		13 41 20.9	
	comp=N,2μm,0.7s						
M27K	**Edge Creek, AK**	**1.52**	**322**	P	**Pn**	**13 40 55.0**	**-0.7**
	baz=139						
M27K				S	**Sb**	**13 41 16.1**	**0.0**
	baz=139						
M27K	**Edge Creek, AK**	**1.52**	**322**	P	**Pn**	**13 40 54.9**	**-0.7**
PNL	**Peninsula**	**1.54**	**171**		**Pb**	**13 40 56.3**	**-0.5**
PNL	**Peninsula**	**1.54**	**171**	Pn	**Pn**	**13 40 56.1**	**+0.4**
PNL	**Peninsula**	**1.54**	**171**	P	**Pn**	**13 40 55.3**	**-0.4**
	baz=352,SNR=57						
PNL				S	**Sb**	**13 41 16.5**	**+0.3**
	baz=352						
PNL	**Peninsula**	**1.54**	**171**	Pn	**Pn**	**13 40 56.1**	**+0.4**
MCARA	**McCarthy VSAT**	**1.55**	**279**		**Pn**	**13 40 55.5**	**-0.3**
MCARA				IAML		13 41 19.3	
	comp=E,2μm,0.6s						
MCARA				IAML		13 41 22.2	
	comp=N,2μm,0.8s						
MCARA	**McCarthy VSAT**	**1.55**	**279**	P	**Pn**	**13 40 55.4**	**-0.5**
	baz=96,SNR=863						
MCARA				S	**Sb**	**13 41 17.0**	**+0.5**
	baz=96						
MCARA	**McCarthy VSAT**	**1.55**	**279**	P	**Pn**	**13 40 55.6**	**-0.3**
WAX	**Waxell Ridge**	**1.65**	**245**		**Pn**	**13 40 57.3**	**0.0**
WAX	**Waxell Ridge**	**1.65**	**245**	IAML		13 41 34.1	
	comp=E,2μm,0.9s						
YKU2	**Yakutat**	**1.68**	**177**		**Pb**	**13 40 59.5**	**+0.4**
YKU2					**Sb**	**13 41 20.9**	**+0.6**
CYK	**Cape Yakataga**	**1.70**	**231**		**Pb**	**13 40 59.7**	**+0.2**
VRDI	**Verde Repeater**	**1.75**	**273**	Pn	**Pn**	**13 40 58.7**	**0.0**
VRDI				IAML		13 41 25.9	
	comp=N,1μm,1.0s						
VRDI				IAML		13 41 29.1	
	comp=E,952nm,0.9s						
VRDI	**Verde Repeater**	**1.75**	**273**		**Sb**	**13 41 22.0**	**-0.4**
P30M	**Million Dollar**	**1.78**	**126**		**Pn**	**13 40 59.4**	**+0.3**
P30M	**Million Dollar**	**1.78**	**126**	Pn	**Pn**	**13 40 59.3**	**+0.3**
P30M	**Million Dollar**	**1.78**	**126**	P	**Pn**	**13 40 59.4**	**+0.3**
	baz=309						
P30M	**Million Dollar**	**1.78**	**126**	Pn	**Pn**	**13 40 59.3**	**+0.3**
SNH	**Sunshine Point**	**1.78**	**237**		**Pb**	**13 41 01.3**	**+0.3**
SNH				IAML		13 41 32.8	
	comp=N,792nm,1.0s						
KHIT	**Khitrov Hills**	**1.82**	**247**		**Pb**	**13 41 01.2**	**-0.5**
P29M	**Windy Craggy**	**1.88**	**145**		**Pb**	**13 41 01.6**	**-1.0**
P29M	**Windy Craggy**	**1.88**	**145**	Pn	**Pn**	**13 41 01.4**	**+1.0**
P29M	**Windy Craggy**	**1.88**	**145**	Pb	**Pb**	**13 41 01.7**	**-0.9**
	baz=328,SNR=706						
P29M				Sb	**Sg**	**13 41 27.5**	**-1.0**
	baz=328						
P29M	**Windy Craggy**	**1.88**	**145**	Pn	**Pn**	**13 41 01.4**	**+1.0**
O30N	**Mendenhall**	**1.88**	**101**		**Pn**	**13 41 00.1**	**-0.3**
O30N				IAML		13 41 28.3	
	comp=N,893nm,0.7s						
O30N				IAML		13 41 30.5	
	comp=E,681nm,0.8s						
O30N	**Mendenhall**	**1.88**	**101**	P	**Pn**	**13 41 00.1**	**-0.3**
	baz=285,SNR=573						
O30N				S	**Sn**	**13 41 25.0**	**+0.9**
	baz=285						
GLB	**Gilahina Butte**	**1.93**	**279**	Pn	**Pn**	**13 41 02.1**	**+1.0**
GLB				IAML		13 41 33.4	
	comp=N,716nm,1.2s						
GLB	**G

PLBC	**Pleasant Camp**	2.45	133	Pn	Pn	13 41 08.7	+0.5
PLBC				Pg	Pb	13 41 11.7	-0.6
PLBC	**Pleasant Camp** baz=317,SNR=71	2.45	133	P	Pn	13 41 08.9	+0.7
PLBC	**Pleasant Camp**	2.45	133	Pn	Pn	13 41 08.7	+0.5
PLBC				Pg	Pb	13 41 11.7	-0.6
L26K	**Log Cabin Wild**	2.48	320		Pn	13 41 09.0	+0.4
L26K	comp=N,593nm,0.5s			IAML		13 42 00.4	
L26K	**Log Cabin Wild** baz=136,SNR=146	2.48	320	P	Pn	13 41 08.9	+0.4
L26K	baz=136			S	Sn	13 41 40.5	+1.6
WHY	**Whitehorse**	2.48	100	Pn	Pn	13 41 08.7	-0.1
WHY	comp=N,472nm,0.7s			IAML		13 41 56.0	
WHY	comp=E,376nm,0.7s			IAML		13 41 56.5	
WHY	**Whitehorse**	2.48	100	Pn	Pn	13 41 08.7	-0.1
WHY				Pg	Pb	13 41 12.6	-0.4
WHY	**Whitehorse** baz=285,SNR=161	2.48	100	P	Pn	13 41 08.7	-0.1
WHY	baz=285			S	Sb	13 41 45.1	+1.6
WHY	**Whitehorse**	2.48	100	Pn	Pn	13 41 08.7	-0.1
WHY				Pg	Pb	13 41 12.6	-0.4
RAGM	**Ragged Mountai**	2.50	253		Pb	13 41 11.8	-1.4
MENT	**Mentasta**	2.53	316		Pn	13 41 10.1	+0.7
MENT	comp=E,571nm,0.7s			IAML		13 41 57.7	
MENT	comp=N,371nm,0.7s			IAML		13 42 05.5	
KAIM	**Kayak Island**	2.58	243		Pb	13 41 12.4	-2.2
KAIM	**Kayak Island** comp=N,365nm,2.4s	2.58	243	IAML		13 42 08.0	
KAIM	comp=E,376nm,2.7s			IAML		13 42 09.8	
M31M	**Drury Creek, Y**	2.79	66		Pn	13 41 13.7	+0.7
M31M	**Drury Creek, Y** baz=251,SNR=40	2.79	66	P	Pn	13 41 13.5	+0.5
HARP	**HAARP**	2.80	298		Pn	13 41 14.3	+1.3
HARP	**HAARP** baz=113	2.80	298	P	Pn	13 41 14.3	+1.3
SKAG	**Skagway**	2.84	126	Pn	Pn	13 41 13.9	+0.5
SKAG	**Skagway** baz=310,SNR=27	2.84	126	P	Pn	13 41 13.8	+0.3
K29M	**Barlow Dome**	2.88	21	Pn	Pn	13 41 14.8	+0.6
K29M	comp=E,322nm,0.7s			IAML		13 42 08.3	
K29M	**Barlow Dome** baz=203	2.88	21	P	Pn	13 41 14.8	+0.6
DAWY	**Dawson**	2.90	4	Pn	Pn	13 41 14.7	+0.2
DAWY	comp=N,294nm,0.4s			IAML		13 42 04.5	
DAWY	comp=E,378nm,0.8s			IAML		13 42 05.3	
DAWY	**Dawson**	2.90	4	Pn	Pn	13 41 14.7	+0.2
DAWY	**Dawson** baz=184,SNR=106	2.90	4	P	Pn	13 41 14.7	+0.2
DAWY	**Dawson**	2.90	4	Pn	Pn	13 41 14.7	+0.2
KLU	**Klutina**	2.94	279		Pn	13 41 17.6	+2.5
KLU	comp=E,278nm,0.6s			IAML		13 42 02.4	
KLU	comp=N,340nm,0.9s			IAML		13 42 02.7	
KLU	**Klutina** baz=93	2.94	279	P	Pn	13 41 17.4	+2.4
EYAK	**Cordova Ski Ar**	2.96	260		Pn	13 41 17.2	+2.1
EYAK	**Cordova Ski Ar** baz=75	2.96	260	P	Pn	13 41 16.0	+0.9
K27K	**Chicken**	3.04	341		Pn	13 41 16.4	+0.1
K27K	**Chicken** comp=N,321nm,1.3s	3.04	341	IAML		13 42 06.6	
K27K	**Chicken** baz=159	3.04	341	P	Pn	13 41 16.5	+0.3
MAYO	**Mayo, Yukon** baz=219,SNR=9.5	3.04	36	P	Pn	13 41 16.7	+0.4
M24K	**Tolsona, Glenn** baz=104	3.16	290	P	Pn	13 41 18.3	+0.3
PAX	**Paxson**	3.19	307		Pn	13 41 20.6	+2.1
PAX	**Paxson** baz=121	3.19	307	P	Pn	13 41 19.2	+0.7
FARO	**Faro, Yukon**	3.27	68		Pn	13 41 20.0	+0.5
FARO	comp=N,279nm,0.8s			IAML		13 42 15.8	
FARO	**Faro, Yukon** baz=254,SNR=16	3.27	68	P	Pn	13 41 19.8	+0.3
N32M	**Quiet Lake**	3.28	88		Pn	13 41 19.6	0.0
N32M	**Quiet Lake** baz=274	3.28	88	P	Pn	13 41 19.6	0.0
HIN	**Hinchinbrook I**	3.36	259		Pn	13 41 20.3	-0.4
HIN	comp=N,248nm,1.0s			IAML		13 42 27.1	
HIN	comp=E,250nm,0.9s			IAML		13 42 27.7	
J29N	**Klondike Camp**	3.37	12		Pn	13 41 21.4	+0.5
J29N	comp=E,1µm,0.6s			IAML		13 42 17.6	
J29N	comp=N,908nm,0.6s			IAML		13 42 31.8	
J29N	**Klondike Camp** baz=193,SNR=14	3.37	12	P	Pn	13 41 20.8	-0.1
SCRK	**Sand Creek**	3.40	327		Pn	13 41 21.3	0.0
SCRK	**Sand Creek** baz=144,SNR=56	3.40	327	P	Pn	13 41 21.1	-0.2
P32M	**Atlin**	3.44	115		Pn	13 41 21.6	-0.3
P32M	**Atlin** baz=301	3.44	115	P	Pn	13 41 21.7	-0.1
RIDG	**Independent Ri**	3.46	320		Pn	13 41 22.8	+0.7
RIDG	comp=N,219nm,1.5s			IAML		13 42 20.4	
RIDG	comp=E,249nm,1.2s			IAML		13 42 23.2	
RIDG	**Independent Ri** baz=135	3.46	320	P	Pn	13 41 21.8	-0.3
R31K	**City Hall, Gus** baz=325	3.47	141	Pb	Pb	13 41 29.7	+0.1
P33M	**Teslin, Yukon**	3.59	103		Pn	13 41 24.1	+0.2
P33M	comp=N,211nm,0.8s			IAML		13 42 23.6	
P33M	comp=E,148nm,1.1s			IAML		13 42 30.9	
P33M	**Teslin, Yukon** baz=289	3.59	103	P	Pn	13 41 24.0	0.0
BESE	**Bessie Mountai**	3.63	134		Pn	13 41 25.1	+0.7
SCM	**Sheep Creek Mo**	3.64	284		Pn	13 41 26.7	+2.0
SCM	comp=N,255nm,1.2s			IAML		13 42 28.7	
SCM	comp=E,201nm,1.0s			IAML		13 42 37.3	
SCM	**Sheep Creek Mo** baz=97	3.64	284	P	Pn	13 41 25.8	+1.1
EGAK	**Eagle**	3.66	351	Pn	Pn	13 41 25.5	+0.7
EGAK	**Eagle** baz=170,SNR=204	3.66	351	P	Pn	13 41 25.3	+0.5
S31K	**Pelican**	3.72	149		Pn	13 41 27.5	+2.0
S31K	**Pelican** baz=332,SNR=29	3.72	149	P	Pn	13 41 26.8	+1.2
J26L	**Joseph Creek**	3.74	335		Pn	13 41 26.8	+0.7
J26L	**Joseph Creek** baz=151,SNR=85	3.74	335	P	Pn	13 41 26.4	+0.3
J30M	**Hart River**	3.77	24		Pn	13 41 27.5	+1.1
J30M	comp=E,289nm,0.6s			IAML		13 42 29.6	
J30M	comp=N,181nm,0.5s			IAML		13 42 30.2	
J30M	**Hart River** baz=207,SNR=241	3.77	24	P	Pn	13 41 27.3	+0.9
K24K	**Donnelly Dome** baz=131	3.81	316	P	Pn	13 41 27.7	+0.9
M23K	**Glacier View** baz=96	3.83	283	P	Pn	13 41 29.1	+1.9
P23K	**Montague Islan**	3.91	256		Pn	13 41 29.6	+1.4
P23K	**Montague Islan** baz=69	3.91	256	P	Pn	13 41 29.3	+1.0
R32K	**Eaglecrest**	3.97	135		Pn	13 41 30.1	+1.0
R32K	comp=N,113nm,1.2s			IAML		13 42 43.9	
R32K	**Eaglecrest** baz=320	3.97	135	P	Pn	13 41 30.0	+0.9
WAT6	**Susitna Watana** baz=107	3.99	294	P	Pn	13 41 31.7	+2.2
DHY	**Denali Highway**	4.01	302		Pn	13 41 32.7	+2.9
DHY	**Denali Highway** baz=115	4.01	302	P	Pn	13 41 32.1	+2.3
JIS	**Juneau Island**	4.02	134		Pn	13 41 30.7	+1.0
JIS	comp=E,214nm,0.8s			IAML		13 42 38.9	
SML	**Sawmill**	4.11	282		Pn	13 41 33.6	+2.4
SML	comp=N,112nm,0.9s			IAML		13 42 39.5	
SML	**Sawmill** baz=95	4.11	282	P	Pn	13 41 32.6	+1.5
KNK	**Knik Glacier**	4.16	277		Pn	13 41 33.9	+2.2
KNK	comp=N,197nm,0.8s			IAML		13 42 41.7	
KNK	comp=E,112nm,0.7s			IAML		13 42 42.2	
KNK	**Knik Glacier** baz=89	4.16	277	P	Pn	13 41 33.4	+1.7
J25K	**Salcha River,** baz=141	4.27	326	P	Pn	13 41 33.2	0.0
I28M	**Miner Creek**	4.28	360		Pn	13 41 33.8	+0.3
I28M	**Miner Creek** comp=N,157nm,0.9s	4.28	360	IAML		13 42 44.2	
I28M	**Miner Creek** baz=179	4.28	360	P	Pn	13 41 33.7	+0.2
I30M	**Mount Dempster**	4.35	20		Pn	13 41 35.9	+1.5
I30M	comp=N,170nm,0.7s			IAML		13 42 47.6	
I30M	**Mount Dempster** baz=203	4.35	20	P	Pn	13 41 35.4	+1.0
WAT1	**Susitna Watana**	4.42	296		Pn	13 41 37.8	+2.5
WAT1	**Susitna Watana** baz=108	4.42	296	P	Pn	13 41 37.5	+2.1
PMR	**Palmer** baz=91	4.48	279	Pb	Pb	13 41 45.0	-1.9
I27K	**Kandik River**	4.51	351		Pn	13 41 37.3	+0.8
I27K	**Kandik River** baz=169	4.51	351	P	Pn	13 41 37.4	+0.9
WAT7	**Susitna Watana**	4.55	295		Pn	13 41 39.5	+2.4
HDA	**Harding Lake**	4.59	318		Pn	13 41 37.3	-0.3
HDA	comp=E,66nm,0.9s			IAML		13 43 02.1	
HDA	comp=N,83nm,1.2s			IAML		13 43 06.7	
HDA	**Harding Lake** baz=131	4.59	318	P	Pn	13 41 38.3	+0.7
S32K	**Killisnoo**	4.60	142		Pn	13 41 38.4	+0.7
S32K	comp=N,88nm,1.8s			IAML		13 42 59.2	
S32K	comp=E,110nm,3.2s			IAML		13 44 28.2	
S32K	**Killisnoo** baz=326	4.60	142	P	Pn	13 41 38.2	+0.5
RND	**Reindeer**	4.76	302		Pn	13 41 43.3	+3.3
R33M	**Jennings River**	4.77	108	Pn	Pn	13 41 41.0	+0.8
R33M	comp=N,135nm,0.8s			IAML		13 43 00.3	
R33M	comp=E,138nm,0.6s			IAML		13 43 08.5	
R33M	**Jennings River** baz=296	4.77	108	P	Pn	13 41 41.0	+0.8
RC01	**Rabbit Creek A**	4.79	273		Pn	13 41 43.2	+2.8
RC01	comp=N,86nm,1.1s			IAML		13 43 07.7	
RC01	**Rabbit Creek A** baz=84	4.79	273	P	Pn	13 41 43.0	+2.6
IL31		4.82	321	Pn	Pn	13 41 39.7	-1.0
ILAR	**Eielson Array**	4.82	321	Pn	Pn	13 41 42.1	+1.4
SEW	**Seward** baz=73	4.85	261	P	Pn	13 41 42.7	+1.5
O22K	**Cooper Landing** baz=77	4.88	266	P	Pn	13 41 43.7	+2.1
MCK	**McKinley**	4.93	305		Pn	13 41 45.3	+3.1
MCK	**McKinley** baz=117	4.93	305	P	Pn	13 41 45.4	+3.1
H29M	**Whitestone**	5.10	7		Pn	13 41 44.3	-0.3
H29M	**Whitestone** baz=188	5.10	7	P	Pn	13 41 44.6	+0.1
SLKM	**Skilak Lake**	5.12	267		Pn	13 41 46.4	+1.5
H27K	**Steamboat Moun**	5.12	352		Pn	13 41 45.4	+0.5
H27K	**Steamboat Moun** baz=171	5.12	352	P	Pn	13 41 45.4	+0.5
POKR	**Poker Plat Res** baz=135	5.23	322	P	Pn	13 41 47.0	+0.6
SUA	**Susitna One** baz=88	5.26	278	P	Pn	13 41 49.6	+2.8
TRF	**Thorofare Moun** baz=110	5.37	300	P	Pn	13 41 50.8	+2.3
EPYK	**Eagle Plains** baz=196	5.39	14	P	Pn	13 41 48.6	0.0
NEA2	**Nenana** baz=125	5.43	313	P	Pn	13 41 50.9	+1.8
S34M	**Telegraph Cree** baz=310	5.51	123	P	Pn	13 41 51.7	+1.5
BRSE	**Bradley Lake S**	5.58	260		Pn	13 41 52.4	+1.2
BRSE	**Bradley Lake S** baz=70	5.58	260	P	Pn	13 41 52.1	+0.9
SKT	**Skwentna** baz=93	5.64	283	P	Pn	13 41 53.6	+1.6
DLBC	**Dease Lake**	5.67	115		Pn	13 41 52.5	+0.1
DLBC	**Dease Lake** baz=303,SNR=8.9	5.67	115	P	Pn	13 41 52.6	+0.1
STLK	**Strandline Lak**	5.78	278		Pn	13 41 56.4	+2.5
G29M	**Pine Creek** baz=189	5.81	7	P	Pn	13 41 54.0	-0.3
I23K	**Minto, Yukon-K** baz=128	5.86	317	P	Pn	13 41 55.2	+0.2
H24K	**Noodor Dome**	5.89	326		Pn	13 41 56.3	+0.8
H24K	**Noodor Dome** baz=139	5.89	326	P	Pn	13 41 56.6	+1.2
BPAW	**Bear Paw Mtn.** baz=114	5.91	305	P	Pn	13 41 57.3	+1.6
N20K	**Mount Spurr** baz=85	5.98	276	P	Pn	13 41 58.5	+1.8
SPCR	**Spurr Chakacha**	5.98	276		Pn	13 41 58.6	+1.9
G30M	**tAoh Zraii Nji**	6.03	14		Pn	13 41 57.5	0.0
G30M	**tAoh Zraii Nji** baz=197	6.03	14	P	Pn	13 41 57.7	+0.2
PPLA	**Purkeypile** baz=101	6.05	292	P	Pn	13 41 58.7	+0.9
CAST	**Castle Rocks** baz=106	6.13	297	P	Pn	13 41 59.3	+0.5
WRAK	**Wrangell Islan** baz=324	6.16	137	P	Pn	13 41 59.8	+0.7
U33K	**White Pass**	6.17	142		Pn	13 41 59.6	+0.3
G25K	**Bearman Lake**	6.24	337		Pn	13 42 00.5	+0.3
G25K	**Bearman Lake** baz=151	6.24	337	P	Pn	13 42 00.9	+0.7
G31M	**Satah River**	6.26	21	Pn	Pn	13 41 59.8	-0.6
G31M	**Satah River** baz=206	6.26	21	P	Pn	13 42 00.5	+0.1
MLY	**Manley** baz=123	6.27	313	P	Pn	13 42 02.0	+1.4
RSO	**Redoubt South**	6.35	269	Pn	Pn	13 42 02.1	+0.1
CHUM	**Lake Minchumin** baz=109	6.37	301	P	Pn	13 42 03.8	+1.8
M20K	**Styx River**	6.39	282		Pn	13 42 04.4	+2.0
M20K	**Styx River** baz=90	6.39	282	P	Pn	13 42 03.3	+0.9
F28M	**Old Crow** baz=180	6.46	360	P	Pn	13 42 03.6	+0.4
G24K	**Hadweenzic Riv**	6.47	332		Pn	13 42 04.0	+0.5
G24K	**Hadweenzic Riv** baz=145	6.47	332	P	Pn	13 42 04.0	+0.5
T35M	**Bob Quinn**	6.50	126	Pn	Pn	13 42 05.2	+1.4
BMAR	**Burnt Mountain**	6.60	344	Pn	Pn	13 42 06.3	+1.1
F30M	**Barrier River**	6.69	13		Pn	13 42 05.0	-1.4
F30M	**Barrier River** baz=197	6.69	13	P	Pn	13 42 06.4	0.0
L20K	**Farewell, AK**	6.77	287		Pn	13 42 07.6	+0.1
L20K	**Farewell, AK** baz=95	6.77	287	P	Pn	13 42 08.3	+0.8
F26K	**Sheenjek River**	6.80	346		Pn	13 42 08.8	+0.9
F26K	**Sheenjek River** baz=162	6.80	346	P	Pn	13 42 08.8	+0.9
F31M	**Tsiigehtchic**	6.82	20	Pn	Pn	13 42 07.4	-0.7
F31M	**Tsiigehtchic** baz=206	6.82	20	P	Pn	13 42 08.2	+0.1
F25K	**Christian Rive**	6.91	341		Pn	13 42 10.5	+1.1
F25K	**Christian Rive** baz=156	6.91	341	P	Pn	13 42 10.2	+0.8
H22K	**Ishtalitna Cre** baz=127	6.98	318	P	Pn	13 42 10.8	+0.3
K20K	**Telida**	6.98	294	Pn	Pn	13 42 07.8	-2.7
M19K	**Big River Lodg**	6.99	282	Pn	Pn	13 42 12.1	+1.5
G23K	**Bananza Creek**	7.12	326		Pn	13 42 13.2	+0.8
G23K	**Bananza Creek** baz=136	7.12	326	P	Pn	13 42 13.6	+1.2
L19K	**White Mountain**	7.21	285	Pn	Pn	13 42 11.1	-2.5
J20K	**Nowinta River**	7.23	301		Pn	13 42 15.7	+2.0
J20K	**Nowinta River** baz=108	7.23	301	P	Pn	13 42 15.8	+2.0
F24K	**Squaw Lake**	7.25	335		Pn	13 42 15.2	+1.1
F24K	**Squaw Lake** baz=147	7.25	335	P	Pn	13 42 15.1	+1.1
Q19K	**Cape Douglas,**	7.26	258	Pn	Pn	13 42 14.4	0.0
Q19K	**Cape Douglas,** baz=66	7.26	258	P	Pn	13 42 16.9	+2.6
E29M	**Blow River**	7.28	6		Pn	13 42 13.9	-0.6
E29M	**Blow River** baz=187	7.28	6	P	Pn	13 42 14.4	-0.2
V35K	**Ketchikan**	7.30	140	Pn	Pn	13 42 15.6	+0.9
V35K	**Ketchikan** baz=327	7.30	140	P	Pn	13 42 15.4	+0.7
KDAK	**Kodiak Island**	7.32	248	Pn	Pn	13 42 16.9	+1.9
H21K	**Melozitna Rive**	7.34	313		Pn	13 42 18.1	+2.9
H21K	**Melozitna Rive** baz=122	7.34	313	P	Pn	13 42 17.5	+2.2
E25K	**Arctic Village**	7.38	343	Pn	Pn	13 42 16.7	+0.8
E25K	**Arctic Village** baz=158,SNR=14	7.38	343	P	Pn	13 42 17.1	+1.2
E28M	**Babbage River**	7.46	1		Pn	13 42 16.5	-0.3
E28M	**Babbage River** baz=181	7.46	1	P	Pn	13 42 16.7	-0.2
COLD	**Coldfoot**	7.55	328		Pn	13 42 18.8	+0.5
COLD	**Coldfoot** baz=138	7.55	328	P	Pn	13 42 19.2	+1.0
SVW2	**Sparrevohn**	7.62	276	Pn	Pn	13 42 17.9	-1.2
INK	**Inuvik**	7.64	18	Pn	Pn	13 42 20.4	+1.1
INK	**Inuvik** baz=204	7.64	18	P	Pn	13 42 19.3	-0.1
Q18K	**Koktuh Hills**	7.70	267	Pn	Pn	13 42 20.6	+0.4
TTA	**Tatalina**	7.79	290	Pn	Pn	13 42 21.9	+0.3
TTA	**Tatalina** baz=96	7.79	290	P	Pn	13 42 21.9	+0.3
J19K	**Poorman**	7.80	298	Pn	Pn	13 42 22.1	+0.4
J19K	**Poorman** baz=104	7.80	298	P	Pn	13 42 22.2	+0.5
N18K	**Kilae Creek**	7.83	273	Pn	Pn	13 42 23.0	+0.9
KOTAN	**Kotaneelee Air** baz=285	7.83	91	P	Pn	13 42 23.5	+1.4
IMAR	**Indian Mountai**	7.84	314	Pn	Pn	13 42 23.9	+1.7
P18K	**Big Mountain,**	7.85	264	Pn	Pn	13 42 23.9	+1.5
OHAK	**Old Harbor**	7.95	246	Pn	Pn	13 42 25.3	+1.6
H20K	**Anotleneega Mo** baz=116	8.01	309	P	Pn	13 42 26.2	+1.6
G21K	**Allakaket**	8.05	317	Pn	Pn	13 42 25.6	+0.6
G21K	**Allakaket** baz=125	8.05	317	P	Pn	13 42 26.5	+1.5
E23K	**Chandalar** baz=144	8.07	333	P	Pn	13 42 26.9	+1.6
D27M	**Malcolm River**	8.11	357	Pn	Pn	13 42 26.1	+0.3
D27M	**Malcolm River** baz=176	8.11	357	P	Pn	13 42 26.8	+1.0
J18K	**Innoko River**	8.17	294	Pn	Pn	13 42 28.4	+1.7
D28M	**Stokes Point** baz=184	8.19	3	P	Pn	13 42 28.0	+1.0
F21K	**Alatna River**	8.47	321	Pn	Pn	13 42 32.0	+1.1
F21K	**Alatna River** baz=129	8.47	321	P	Pn	13 42 32.2	+1.3
N17K	**Nushagak Hills**	8.49	273	Pn	Pn	13 42 31.7	+0.6
N17K	**Nushagak Hills** baz=78	8.49	273	P	Pn	13 42 32.3	+1.3
D25K	**Kavik River**	8.61	344	Pn	Pn	13 42 33.5	+0.7
D25K	**Kavik River** baz=158,SNR=11	8.61	344	P	Pn	13 42 35.1	+2.4
H19K	**Roundabout Mou**	8.62	307	Pn	Pn	13 42 34.8	+2.0
H19K	**Roundabout Mou** baz=112	8.62	307	P	Pn	13 42 35.0	+2.1
L17K	**Donlin** baz=88	8.82	284	P	Pn	13 42 36.5	+0.9
K17K	**Iditarod**	8.83	288	Pn	Pn	13 42 36.3	+0.7
D24K	**Happy Valley** baz=150	8.84	339	P	Pn	13 42 37.3	+1.6
GRNB	**Grenville Isla**	9.07	140	Pn	Pn	13 42 40.0	+0.9
G19K	**Purcell Mounta**	9.12	310	Pn	Pn	13 42 40.4	+0.8
G19K	**Purcell Mounta** baz=115	9.12	310	P	Pn	13 42 42.1	+2.5
M16K	**Timber Creek**	9.25	277	Pn	Pn	13 42 43.2	+1.8
H18K	**Honhosa River**	9.25	303	Pn	Pn	13 42 43.4	+1.8
C24K	**Franklin Bluff** baz=152	9.32	341	P	Pn	13 42 45.0	+2.6
G18K	**Tagagawik**	9.61	308	Pn	Pn	13 42 47.4	+1.0
G18K	**Tagagawik** baz=111	9.61	308	P	Pn	13 42 48.7	+2.3
F19K	**Shaleruckik Mo** baz=117	9.67	314	P	Pn	13 42 50.5	+3.3
E19K	**Redstone River**	9.79	317	Pn	Pn	13 42 51.2	+2.3
H17K	**Granite Mounta** baz=103	9.83	301	P	Pn	13 42 52.8	+3.4
I17K	**Unalakleet**	9.99	295	Pn	Pn	13 42 51.3	-0.2
C21K	**Knifeblade Rid** baz=135	10.14	328	P	Pn	13 42 55.7	+2.1
D20K	**Etivluk River** baz=129	10.33	324	P	Pn	13 42 58.6	+2.3
C36M	**Paulatuk**	10.49	32	Pn	Pn	13 42 56.9	-1.4
C36M	**Paulatuk** baz=236,SNR=14	10.49	32	P	Pn	13 42 56.9	-1.4
B22K	**Teshekpuk Lake**	10.71	335	Pn	Pn	13 43 01.6	+0.2
E18K	**Tukpahlearik C**	10.92	314	Pn	Pn	13 43 05.3	+1.0
BBB	**Bella Bella**	11.07	139	Pn	Pn	13 43 08.1	+1.7
E17K	**Hotham Inlet** baz=111	11.22	311	P	Pn	13 43 10.4	+2.0
J14K	**Nanvaranak Lak**	11.24	288	Pn	Pn	13 43 11.5	+2.8
B20K	**Meade River**	11.33	329	Pn	Pn	13 43 11.9	+2.1
C18K	**Utukok River**	11.68	319	Pn	Pn	13 43 16.1	+1.3
YKAB2	**New Yellowknif**	11.98	73	Pn	Pn	13 43 18.8	0.0
A36M	**Sachs Harbour**	12.25	22	Pn	Pn	13 43 20.8	-1.6
A36M	**Sachs Harbour** baz=215	12.25	22	P	Pn	13 43 21.3	-1.1
B08A	**Colville Reser**	17.36	128	Pn	Pn	13 44 28.7	-1.7
B08A	comp=Z,3.6nm,0.8s			IAmb	IAmb	13 44 48.4	

IDC 01 13:44:17.0±8.8, 1°49N×97°03W, h0km, mb3.5/4, mbtmp3.5/4, MS3.6/3, Error ellipse: s-maj=423.2km s-min=146.6km az=89.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de** comp=Z,169nm,18.0s,baz=355,slow=31	14.84	53	LR	LR	13 52 00.6	
CMIG	**Matias Romero** comp=Z,168nm,19.3s,baz=196,slow=31	15.64	8	LR	LR	13 52 26.2	
TXAR	**Lajitas Array** 0.3nm,0.7s,baz=181,slow=9.0,SNR=4.2 0.3nm,0.7s	28.40	348	P	P	13 50 13.9	+0.5
PFO	**Pinyon Flats O** comp=Z,140nm,19.2s,baz=17,slow=30	36.78	332	LR	LR	14 02 54.8	
PDAR	**Pinedale Array** 0.7nm,0.8s,baz=148,slow=10,SNR=7.1 0.7nm,0.8s	42.60	346	P	P	13 52 14.4	-0.8
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=160,slow=5.7,SNR=3.3 0.3nm,0.8s	62.27	351	P	P	13 54 40.5	0.0
ILAR	**Eielson Array** 0.4nm,0.7s,baz=148,slow=4.2,SNR=5.6 0.4nm,0.7s	72.57	340	P	P	13 55 46.0	+0.2

IDC 01 13:50:33.5±282.0, 54°38N×42°70E, h0km, Error ellipse: s-maj=120.5km s-min=79.0km az=138.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON** 0.1nm,1.1s,baz=127,slow=333,SNR=3.2	3.90	309	I	I	14 15 50.0	
I31KZ	**AKTYUBINSK INF** 0.1nm,0.7s,baz=303,slow=321,SNR=2.4	10.18	107	I	I	14 50 11.6	
I46RU	**ZALESOVO INFRA** baz=291,slow=338,SNR=1.2	24.40	74	I	I	16 19 30.0	

NEIC ***01*** *14:00:43.2±0.5, 19°21N±0°03×155°48W±0°03, h41km±4km, Error ellipse: s-maj=5.0km s-min=2.8km az=138.0*

HVO 01 14:00:44.7±0.8, 19°19N±0°04×155°47W±0°06, h35km±5km, ML2.9/40, ML3.1/52(NEIC), Error ellipse: s-maj=8.9km s-min=6.4km az=86.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	0.08	54		Pb	14 00 50.4	-0.4
HTC					Sb	14 00 53.4	-1.4
HPO	**Honuapo**	0.13	219		Pb	14 00 50.4	-0.5

HPO						Sb	14 00 54.5	-0.6
KHU	**Kahuku**	**0.15**	**293**			Pb	14 00 50.6	-0.8
HLP	**Hilina Pali**	**0.19**	**55**	Pg		Pn	14 00 50.8	+0.4
HLP				IAML			14 00 56.9	
	comp=E,2µm,0.4s							
HLP				IAML			14 00 58.9	
	comp=N,2µm,0.2s							
SDHHI	**Sand Hill**	**0.26**	**40**	Pg		Pn	14 00 51.7	-0.2
WRMHI	**West Rim**	**0.27**	**36**			Pn	14 00 51.2	-0.9
RIM	**Rim**	**0.28**	**42**	Pg		Pn	14 00 51.1	-1.2
RIM				IAML			14 00 59.6	
	comp=N,2µm,0.4s							
RIM				IAML			14 01 04.1	
	comp=E,1µm,0.5s							
KKO	**Keanakako`i**	**0.28**	**43**			Pn	14 00 51.6	-0.8
KKO						Sn	14 00 56.4	-0.6
KKO	**Keanakako`i**	**0.28**	**43**	IAML			14 00 59.3	
	comp=N,2µm,0.5s							
KKO				IAML			14 01 00.7	
	comp=E,1µm,0.4s							
NPH	**North Pit**	**0.28**	**39**			Pn	14 00 50.9	-1.5
NPH	**North Pit**	**0.28**	**39**			Sn	14 00 56.4	-0.7
NPH	**North Pit**	**0.28**	**39**	IAML			14 00 56.6	
	comp=E,566nm,0.4s							
NPH				IAML			14 01 03.0	
	comp=N,785nm,0.3s							
UWE	**Uwekahuna**	**0.28**	**36**			Pn	14 00 51.2	-1.2
UWE				IAML			14 00 59.4	
	comp=N,2µm,0.5s							
OBL	**Observatory Le**	**0.29**	**37**	Pg		Pn	14 00 51.5	-1.0
OBL				IAML			14 00 57.9	
	comp=N,2µm,0.5s							
UWB	**Uwekahuna B**	**0.30**	**38**	Pg		Pn	14 00 51.4	-1.2
BYL	**Byron's Ledge**	**0.30**	**42**	Pg		Pn	14 00 51.3	-1.3
BYL						Sn	14 00 51.6	-5.8
BYL				IAML			14 00 57.2	
	comp=E,1µm,0.5s							
PUH	**Pauahi**	**0.30**	**52**	Pg		Pn	14 00 51.7	-1.1
PUH	**Pauahi**	**0.30**	**52**			Sn	14 00 56.7	-0.8
SBLHI	**Steaming Bluff**	**0.30**	**39**	Pg		Pn	14 00 51.6	-1.2
SBLHI				IAML			14 00 56.9	
	comp=E,2µm,0.2s							
HATHI	**Halema'uma'u T**	**0.30**	**40**	Pg		Pn	14 00 51.5	-1.2
HATHI				IAML			14 00 57.1	
	comp=E,2µm,0.3s							
HATHI				IAML			14 00 57.2	
	comp=N,2µm,0.6s							
HATHI	**Halema'uma'u T**	**0.30**	**40**			Sn	14 00 56.9	-0.8
MLH	**Mauna Loa**	**0.31**	**14**	Pg		Pn	14 00 51.8	-1.3
MLH						Sn	14 00 51.9	-6.1
MLH				IAML			14 00 57.7	
	comp=N,2µm,0.4s							
MWH	**Moku'aweowe**	**0.32**	**338**			Sn	14 00 57.7	-0.5
MWH	**Moku'aweowe**	**0.32**	**338**	Pg		Pn	14 00 52.0	-1.3
MWH	**Moku'aweowe**	**0.32**	**338**	IAML			14 00 57.8	
	comp=E,1µm,0.6s							
MWH				IAML			14 00 58.9	
	comp=N,813nm,0.4s							
RSD	**Rainshed**	**0.33**	**33**	Pg		Pb	14 00 51.8	-1.3
RSD				IAML			14 00 60.0	
	comp=E,1µm,0.2s							
KNHH	**Kane Nui o Ham**	**0.34**	**56**			Pb	14 00 52.1	-1.2
MLOA	**Mauna Loa Obse**	**0.36**	**344**	Pg		Pb	14 00 52.3	-1.5
MLOA						Sn	14 00 52.5	-7.1
MLOA				IAML			14 00 58.2	
	comp=E,976nm,0.3s							
STCH	**Steam Cracks**	**0.38**	**59**			Pb	14 00 52.4	-1.3
STCH				IAML			14 00 58.4	
	comp=E,2µm,0.2s							
STCH				IAML			14 00 58.5	
	comp=N,1µm,0.1s							
ALEP	**Alea Permanent**	**0.39**	**335**			Pb	14 00 52.6	-1.6
ALEP						Pn	14 00 58.4	+4.1
NPOC	**North of Pu'u**	**0.40**	**59**			Pb	14 00 52.7	-1.3
NPOC				IAML			14 00 58.8	
	comp=E,2µm,0.2s							
JCUZ	**Jacuzzi**	**0.40**	**61**			Pb	14 00 52.7	-1.4
JCUZ				IAML			14 00 59.0	
	comp=N,2µm,0.4s							
JCUZ				IAML			14 00 59.2	
	comp=E,1µm,0.6s							
HMH	**Humu'ula Sheep**	**0.41**	**358**	Pg		Pb	14 00 53.3	-1.1
HMH						Pn	14 00 53.5	-1.1
HMH				IAML			14 00 60.0	
	comp=N,1µm,0.3s							
JOKA	**Jonika Flow**	**0.50**	**61**			Pb	14 00 53.9	-1.6
JOKA						Sb	14 01 00.7	-2.3
CPH	**Captain Cook**	**0.52**	**305**			Pn	14 00 53.9	-1.8
KHLU	**Kahalu`u**	**0.57**	**315**			Pn	14 00 54.5	-1.9
KHLU				IAML			14 01 02.0	
	comp=N,934nm,0.2s							
KHLU				IAML			14 01 02.0	
	comp=E,951nm,0.4s							
POHA	**Pohakuloa**	**0.57**	**354**			Pn	14 00 54.7	-1.9
POHA				IAML			14 01 18.4	
	comp=E,962nm,0.2s							
POHA	**Pohakuloa**	**0.57**	**354**	Pg		Pn	14 00 55.2	-1.4
HUH	**Hualalai**	**0.60**	**325**			Pn	14 00 55.4	-1.6
HUH				IAML			14 01 19.1	
	comp=N,1µm,0.4s							
HUH				IAML			14 01 19.5	
	comp=E,1µm,0.3s							
KKH	**Kailua Kona**	**0.70**	**312**			Pn	14 00 56.2	-1.9
KKH						Sn	14 01 04.7	-3.0
HPAH	**Hawaii Prepara**	**0.86**	**346**			Pn	14 00 57.6	-2.9
HPAH				Pg		Pb	14 00 58.3	-3.1
MHA	**Mahukona**	**1.07**	**338**			Pn	14 01 01.4	-2.0
KHLH	**Kahului Airpor**	**1.92**	**332**	Pn		Pn	14 01 13.7	-1.3

ANF 01 14:17:35.0±0.1, 61°18N×139°85W, h8km±1km, ML2.6/15, Error ellipse: s-maj=1.4km s-min=1.3km az=21.0, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier**	**0.12**	**22**	P	Pg	14 17 38.3	+0.4
	baz=203						
YUK8				S	Sg	14 17 40.3	+0.4
	baz=203						
YUK4	**Talbot Arm**	**0.61**	**73**	P	Pb	14 17 48.5	+0.5
	baz=248						
YUK4				S	Sb	14 17 57.3	+0.6
	baz=248						
YUK3	**Moose Creek**	**0.67**	**334**	P	Pg	14 17 47.9	0.0
	baz=154						
YUK3				S	Sg	14 17 56.8	+0.1
	baz=154						
CTG	**Chitna Glacier**	**0.75**	**254**	P	Pg	14 17 49.6	0.0
	baz=73,SNR=68						
CTG				S	Sg	14 17 59.8	+0.5
	baz=73						
YUK6	**Outpost Mounta**	**0.76**	**107**	P	Pg	14 17 50.0	+0.3
	baz=288						
YUK6				S	Sb	14 18 00.5	-0.7
	baz=288						
O29M	**Mount Kennedy**	**1.08**	**144**	P	Pg	14 17 55.4	-0.3
	baz=325,SNR=30						
O29M				S	Sg	14 18 09.9	+0.2
	baz=325						
PINM	**Pinnacle**	**1.10**	**190**	P	Pn	14 17 56.7	-0.1
	baz=10.0,SNR=147						
PINM				Sn	Sn	14 18 12.8	+0.6
	baz=10.0						
HYT	**Haines Junctio**	**1.20**	**106**	P	Pb	14 17 57.4	-0.6
	baz=288,SNR=51						
HYT				S	Sb	14 18 14.0	+0.4
	baz=288						
BVCY	**Beaver Creek**	**1.33**	**339**	P	Pn	14 17 59.5	-0.4
	baz=159,SNR=13						
BVCY				S	Sg	14 18 18.2	+0.5
	baz=159						
M29M	**Somme Creek**	**1.43**	**27**	Pb	Pb	14 18 02.0	+0.1
	baz=208						
MESA	**MESA**	**1.44**	**227**	Pg	Pg	14 18 03.0	+0.4
	baz=45						
M27K	**Edge Creek, AK**	**1.53**	**322**	Pb	Pb	14 18 03.1	-0.4
	baz=140						
MCARA	**McCarthy VSAT**	**1.54**	**279**	Pb	Pb	14 18 03.7	-0.1
	baz=96,SNR=95						
MCARA				Sb	Sg	14 18 24.9	+0.3
	baz=96						
P30M	**Million Dollar**	**1.78**	**125**	Pb	Pb	14 18 07.8	0.0
	baz=308						
P29M	**Windy Craggy**	**1.87**	**145**	Pb	Pb	14 18 09.6	+0.2
	baz=327						
O30N	**Mendenhall**	**1.88**	**101**	P	Pn	14 18 07.6	+0.2
	baz=284						
M26K	**Nabesna, AK**	**1.93**	**311**	Pb	Pb	14 18 10.5	0.0
	baz=128						
M30M	**Minto, Yukon**	**2.02**	**45**	Pb	Pb	14 18 12.3	+0.4
	baz=227						
L29M	**L29M**	**2.10**	**22**	Pb	Pb	14 18 13.6	+0.3
	baz=204						
L27K	**Beaver Creek,**	**2.11**	**335**	Pb	Pb	14 18 13.7	+0.3
	baz=153						
L26K	**Log Cabin Wild**	**2.48**	**320**	P	Pn	14 18 16.4	+0.8
	baz=137						

*AEIC **01** 14:18:06.9±3.7, 61°20N±0°03×139°86W±0°05, h15km±4km, Error ellipse: s-maj=3.7km s-min=3.4km az=176.0*
*NEIC **01** 14:18:07.7±1.8, 61°17N±0°02×139°86W±0°03, h5km±2km, ML3.0/80, ML2.7(AEIC), Error ellipse: s-maj=3.0km s-min=2.9km az=333.0*

ISC 01 14:18:07.3±0.9, 61°17N±0°02×139°87W±0°01, h8km±7km, n88, σ0°84/104, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier**	**0.12**	**24**		Pg	14 18 10.3	0.0
YUK8					Sg	14 18 12.3	0.0
YUK8	**Steele Glacier**	**0.12**	**24**	P	Pg	14 18 10.3	0.0
	baz=212,SNR=1000						
YUK8				S	Sg	14 18 12.1	-0.2
	baz=212						
YUK4	**Talbot Arm**	**0.61**	**73**	P	Pb	14 18 20.4	0.0
	baz=250,SNR=39						
YUK4				S	Sb	14 18 29.5	+0.2
	baz=250						
LOGN	**Logan Glacier**	**0.66**	**238**		Pg	14 18 20.1	+0.2
LOGN					Sg	14 18 29.3	+0.8
YUK3	**Moose Creek**	**0.67**	**335**		Pg	14 18 19.8	-0.4
YUK3					Sg	14 18 28.9	0.0
YUK3	**Moose Creek**	**0.67**	**335**	P	Pg	14 18 19.9	-0.4
	baz=155,SNR=198						
YUK3				S	Sg	14 18 28.8	-0.2
	baz=155						
CTGM	**Chitina Glacie**	**0.74**	**254**		Pg	14 18 21.6	0.0
CTGM					Sg	14 18 31.7	+0.4
CTGM	**Chitina Glacie**	**0.74**	**254**	IAML		14 18 32.2	
	comp=N,430nm,0.4s						
CTG	**Chitna Glacier**	**0.75**	**254**	P	Pg	14 18 21.6	-0.1
	baz=72						
CTG				S	Sg	14 18 31.9	+0.5
	baz=72						
YUK6	**Outpost Mounta**	**0.77**	**107**		Pg	14 18 22.0	-0.2
YUK6	**Outpost Mounta**	**0.77**	**107**	P	Pg	14 18 21.9	-0.2
	baz=289,SNR=377						
YUK6				S	Sg	14 18 32.7	+0.6
	baz=289						
YUK2	**White River**	**0.77**	**323**		Pg	14 18 21.8	-0.4
YUK2					Sb	14 18 32.9	-0.9
BARN	**Barnard Glacie**	**0.88**	**263**		Pg	14 18 23.9	-0.3
BARN					Sg	14 18 36.0	+0.4
BARN	**Barnard Glacie**	**0.88**	**263**	IAML		14 18 39.9	
	comp=E,321nm,0.4s						
TABL	**Table Mountain**	**0.96**	**221**		Pg	14 18 25.4	-0.5
TABL					Sg	14 18 38.9	+0.5
YUK5	**Granite Creek**	**0.97**	**92**		Pg	14 18 25.5	-0.5
YUK7	**Dusty Glacier**	**1.06**	**127**		Pg	14 18 27.3	-0.5
O29M	**Mount Kennedy**	**1.08**	**143**		Pg	14 18 27.5	-0.6
O29M	**Mount Kennedy**	**1.08**	**143**	IAML		14 18 43.9	
	comp=N,458nm,0.3s						
O29M				IAML		14 18 44.5	
	comp=E,258nm,0.5s						
O29M	**Mount Kennedy**	**1.08**	**143**	P	Pg	14 18 27.5	-0.6
	baz=324						
O29M				S	Sg	14 18 41.9	-0.2
	baz=324						
PCA	**Pinnacle**	**1.10**	**190**		Pn	14 18 28.9	-0.2
PCA					Sn	14 18 44.4	0.0
PINM	**Pinnacle**	**1.10**	**190**	P	Pn	14 18 28.8	-0.2
	baz=9.0						
PINM				Sb	Sn	14 18 44.6	+0.2
	baz=9.0						
SAMH	**Samovar Hills**	**1.14**	**204**		Pn	14 18 29.8	+0.1
HYT	**Haines Junctio**	**1.20**	**106**		Pb	14 18 29.3	-1.2
HYT	**Haines Junctio**	**1.20**	**106**	S	Sg	14 18 46.1	0.0
	baz=288						
BCPM	**Bancas Point**	**1.23**	**175**	Pg	Pb	14 18 30.8	0.0
KIAG	**Kiagna River**	**1.24**	**259**		Pn	14 18 30.5	-0.6
PTPK	**Patty Peak**	**1.26**	**272**		Pn	14 18 30.7	-0.7
BAGL	**Bagley Icefiel**	**1.29**	**239**		Pn	14 18 31.2	-0.4
BVCY	**Beaver Creek**	**1.33**	**340**		Pb	14 18 32.2	-0.3
BVCY					Sg	14 18 50.5	+0.5
BVCY	**Beaver Creek**	**1.33**	**340**	S	Sg	14 18 50.6	+0.5
	baz=159						
ISLE	**Juniper Island**	**1.34**	**246**		Pn	14 18 32.2	-0.2
ISLE	**Juniper Island**	**1.34**	**246**	IAML		14 18 52.9	
	comp=N,289nm,1.1s						
MESA	**MESA**	**1.43**	**227**		Pg	14 18 35.2	+0.5
MESA	**MESA**	**1.43**	**227**	IAML		14 19 00.3	
	comp=E,210nm,0.5s						
MESA				IAML		14 19 01.4	
	comp=N,238nm,0.5s						
M29M	**Somme Creek**	**1.44**	**27**		Pb	14 18 34.1	-0.3
M29M					Sg	14 18 53.7	+0.1
BARK	**Barkley Ridge**	**1.50**	**240**		Pb	14 18 35.5	+0.1
TGL	**Tana Glacier**	**1.50**	**255**		Pb	14 18 35.0	-0.5
TGL	**Tana Glacier**	**1.50**	**255**	IAML		14 18 56.6	
	comp=N,220nm,0.4s						
TGL				IAML		14 18 57.3	
	comp=E,204nm,1.0s						
M27K	**Edge Creek, AK**	**1.52**	**322**		Pb	14 18 35.2	-0.7
M27K	**Edge Creek, AK**	**1.52**	**322**	IAML		14 19 00.3	
	comp=E,150nm,0.8s						
M27K				IAML		14 19 00.7	
	comp=N,213nm,0.8s						
PNL	**Peninsula**	**1.53**	**171**		Pg	14 18 36.4	-0.2
PNL	**Peninsula**	**1.53**	**171**	P	Pb	14 18 35.9	+0.1
	baz=351						
PNL				S	Sg	14 18 56.6	+0.2
	baz=351						
MCARA	**McCarthy VSAT**	**1.54**	**279**		Pb	14 18 35.6	-0.5
MCARA	**McCarthy VSAT**	**1.54**	**279**	P	Pb	14 18 35.9	-0.1
	baz=96						
MCARA				S	Sg	14 18 57.0	+0.3
	baz=96						
WAX	**Waxell Ridge**	**1.63**	**245**	Pn	Pg	14 18 38.2	-0.4
WAX				IAML		14 19 12.0	
	comp=E,212nm,0.9s						
YKU2	**Yakutat**	**1.67**	**177**	Pn	Pg	14 18 39.0	-0.3
VRDI	**Verde Repeater**	**1.74**	**273**		Pb	14 18 39.3	-0.2
VRDI	**Verde Repeater**	**1.74**	**273**	IAML		14 19 05.2	
	comp=N,123nm,1.1s						
SNH	**Sunshine Point**	**1.77**	**237**		Pb	14 18 39.8	-0.2
SNH	**Sunshine Point**	**1.77**	**237**	IAML		14 19 22.6	
	comp=N,111nm,2.4s						
P30M	**Million Dollar**	**1.78**	**125**		Pb	14 18 39.4	-0.8
P29M	**Windy Craggy**	**1.88**	**145**		Pg	14 18 42.6	-0.7
P29M				IAML		14 19 10.0	
	comp=E,180nm,0.6s						
P29M				IAML		14 19 10.5	
	comp=N,178nm,0.6s						
P29M	**Windy Craggy**	**1.88**	**145**	Pb	Pb	14 18 42.2	+0.4
	baz=326						
P29M				Sb	Sg	14 19 07.5	0.0
	baz=326						
O30N	**Mendenhall**	**1.89**	**101**	Pn	Pn	14 18 40.5	+0.6
O30N				IAML		14 19 08.3	
	comp=N,94nm,1.1s						
O30N	**Mendenhall**	**1.89**	**101**	S	Sb	14 19 04.9	-0.8
	baz=284						
GLB	**Gilahina Butte**	**1.92**	**280**		Pb	14 18 42.4	-0.2
GLB					Sb	14 19 06.7	0.0
GLB	**Gilahina Butte**	**1.92**	**280**	IAML		14 19 13.2	
	comp=N,81nm,1.1s						
M26K	**Nabesna, AK**	**1.93**	**311**		Pb	14 18 42.5	-0.2
M26K	**Nabesna, AK**	**1.93**	**311**	Pb	Pb	14 18 42.9	+0.1
	baz=128						
M26K				Sb	Sg	14 19 09.0	-0.3
	baz=128						
N31M	**Braeburn, Yuko**	**2.00**	**79**	Sb	Sg	14 19 10.9	-0.5
	baz=263						
M30M	**Minto, Yukon**	**2.03**	**45**		Pb	14 18 44.5	+0.1
M30M	**Minto, Yukon**	**2.03**	**45**	IAML		14 19 12.6	
	comp=E,124nm,0.2s						
M30M				IAML		14 19 15.4	
	comp=N,96nm,0.5s						
M30M	**Minto, Yukon**	**2.03**	**45**	Pb	Pb	14 18 44.8	+0.5
	baz=228						
M30M				Sb	Sg	14 19 11.7	-0.7
	baz=228						
BERG	**Berg Lake**	**2.04**	**249**	Pg	Pg	14 18 46.3	0.0
BERG				IAML		14 19 19.1	
	comp=N,151nm,0.8s						
BCAR	**Beaver Creek A**	**2.10**	**335**	Pn	Pn	14 18 42.3	-0.5
L29M	**L29M**	**2.11**	**22**	Pn	Pn	14 18 42.9	0.0
L29M				IAML		14 19 16.3	
	comp=E,118nm,0.5s						
L29M				IAML		14 19 17.3	
	comp=N,125nm,0.3s						
BMRM	**Bremner River**	**2.31**	**267**	Sb	Sg	14 19 20.2	-1.3
	baz=82						
N25K	**Chitina, Valde**	**2.32**	**283**	Pb	Pb	14 18 49.6	+0.2
	baz=98						
N25K				Sb	Sg	14 19 20.8	-0.9
	baz=98						
L26K	**Log Cabin Wild**	**2.48**	**320**	Pn	Pn	14 18 48.6	+0.7
L26K				IAML		14 19 29.2	
	comp=N,57nm,0.6s						
L26K				IAML		14 19 32.8	
	comp=E,96nm,0.4s						
L26K	**Log Cabin Wild**	**2.48**	**320**	P	Pn	14 18 48.6	+0.7
	baz=137						
L26K				S	Sb	14 19 20.4	-2.2
	baz=137						
WHY	**Whitehorse**	**2.49**	**100**	Pb	Pb	14 18 52.8	+0.5
	baz=284						
WHY				Sb	Sg	14 19 25.3	-1.9
	baz=284						
SKAG	**Skagway**	**2.84**	**125**	Pb	Pb	14 18 58.4	+0.2
	baz=309						
K29M	**Barlow Dome**	**2.89**	**21**	Pn	Pn	14 18 55.0	+1.2
K29M				IAML		14 19 41.4	
	comp=E,40nm,0.6s						
DAWY	**Dawson**	**2.91**	**4**	Pn	Pn	14 18 55.0	+1.1
DAWY				IAML		14 19 44.4	
	comp=N,35nm,0.4s						
DAWY				IAML		14 19 45.2	
	comp=E,44nm,0.6s						
DAWY	**Dawson**	**2.91**	**4**	P	Pn	14 18 54.9	+0.9
	baz=185						
DAWY				Sb	Sg	14 19 37.9	-2.8
	baz=185						
KLU	**Klutina**	**2.94**	**279**	Pn	Pb	14 18 57.7	-2.2
KLU				IAML		14 19 45.9	
	comp=E,31nm,0.4s						
KLU				IAML		14 19 50.0	
	comp=N,39nm,0.6s						
K27K	**Chicken**	**3.04**	**341**	Pn	Pn	14 18 56.8	+1.2
K27K				IAML		14 19 45.0	
	comp=E,48nm,1.2s						
MAYO	**Mayo, Yukon**	**3.06**	**36**	S	Sn	14 19 34.1	+1.5
	baz=219						
HIN	**Hinchinbrook I**	**3.34**	**259**	Pn	Pn	14 19 02.3	+2.4
SCM	**Sheep Creek Mo**	**3.64**	**284**	Pn	Pn	14 19 06.7	+2.8
EGAK	**Eagle**	**3.67**	**351**	Pn	Pn	14 19 05.6	+1.4
J26L	**Joseph Creek**	**3.75**	**335**	Pn	Pn	14 19 06.4	+1.0
J26L				IAML		14 20 09.5	
	comp=N,30nm,0.9s						
J30M	**Hart River**	**3.78**	**24**	Pn	Pn	14 19 07.5	+1.6
J30M				IAML		14 20 09.5	
	comp=E,27nm,0.5s						
J30M				IAML		14 20 18.0	
	comp=N,17nm,0.6s						
J25K	**Salcha River,**	**4.27**	**326**	Pn	Pn	14 19 13.1	+0.5
J25K				IAML		14 20 09.4	
	comp=N,12nm,3.5s						
J25K				IAML		14 20 39.1	
	comp=E,13nm,3.3s						
I28M	**Miner Creek**	**4.29**	**360**		Pn	14 19 14.3	+1.4
I28M				IAML		14 20 22.6	
	comp=N,19nm,3.3s						
I28M				IAML		14 20 23.9	
	comp=E,24nm,1.3s						
I30M	**Mount Dempster**	**4.36**	**20**	Pn	Pn	14 19 16.0	+2.1
I30M				IAML		14 20 27.5	
	comp=N,13nm,0.8s						
I30M				IAML		14 20 28.2	
	comp=E,18nm,0.6s						
H29M	**Whitestone**	**5.11**	**7**	Pn	Pn	14 19 24.7	+0.6

*NEIC **01** 14:20:39.0±2.0, 56°56N±0°08×148°7W±0°1, h25km±9km, ML3.5/60, ML3.2(AEIC), Error ellipse: s-maj=11.9km s-min=8.4km az=165.0*
*AEIC **01** 14:20:41.8±2.2, 56°58N±0°08×148°6W±0°1, h7km±7km, Error ellipse: s-maj=11.5km s-min=8.5km az=162.0*

ISC 01 14:20:37.2±1.4, 56°61N±0°08×148°67W±0°06, h10km, n180, σ1°15/175, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.43**	**301**		Pn	14 21 17.8	+0.8
KDAK	**Kodiak Island**	**2.43**	**301**		Sn	14 21 45.6	-1.1
KDAK	**Kodiak Island**	**2.43**	**301**	IAML		14 21 48.6	
	43nm,0.6s						
KDAK				IAML		14 21 49.9	
	29nm,1.0s						
KDAK	**Kodiak Island**	**2.43**	**301**	P	Pn	14 21 17.8	+0.8
	baz=117						
OHAK	**Old Harbor**	**2.60**	**286**		Pn	14 21 19.6	+0.4
OHAK					Sn	14 21 48.9	-2.0
OHAK	**Old Harbor**	**2.60**	**286**	P	Pn	14 21 19.7	+0.4
OHAK	**Old Harbor**	**2.60**	**286**	P	Pn	14 21 19.6	+0.4
	baz=102						
OHAK				S	Sn	14 21 48.9	-2.0
	baz=102						
SYI	**Shuyak Island**	**2.83**	**317**		Pn	14 21 23.5	+1.1
SYI					Sn	14 21 56.6	0.0
Q20K	**Shuyak Island**	**2.83**	**317**	P	Pn	14 21 23.5	+1.0
	baz=133						
Q20K				S	Sn	14 21 56.6	0.0
	baz=133						
SII	**Sitkinak Islan**	**3.05**	**271**		Sn	14 22 00.2	-1.8
SII	**Sitkinak Islan**	**3.05**	**271**	S	Sn	14 22 00.2	-1.8
	baz=87						
Q23K	**Middleton Isla**	**3.08**	**23**		Pn	14 21 25.9	+0.1
Q23K	**Middleton Isla**	**3.08**	**23**	IAML		14 22 29.9	
	comp=E,165nm,1.2s						
Q23K				IAML		14 23 15.5	
	comp=N,157nm,0.9s						
MID	**Middleton Isla**	**3.08**	**23**		Pn	14 21 25.9	+0.1
MID	**Middleton Isla**	**3.08**	**23**	IAML		14 22 29.1	
	comp=E,173nm,1.2s						
MID				IAML		14 23 15.5	
	comp=N,161nm,1.0s						
MID	**Middleton Isla**	**3.08**	**23**	P	Pn	14 21 26.2	+0.3
CNPM	**China Poot**	**3.23**	**336**		Pn	14 21 28.6	+0.7
CNPM					Sn	14 22 05.3	-1.0
BRSE	**Bradley Lake S**	**3.33**	**342**		Pn	14 21 29.6	+0.4
BRSE					Sn	14 22 07.6	-1.2
BRSE	**Bradley Lake S**	**3.33**	**342**	P	Pn	14 21 29.6	+0.4
	baz=160						
BRSE				S	Sn	14 22 07.6	-1.2
	baz=160						
BRLK	**Bradley Lake**	**3.37**	**341**	Pn	Pn	14 21 30.2	+0.3
BRLK				IAML		14 22 12.2	
	comp=N,35nm,0.8s						
BRLK				IAML		14 22 12.6	
	comp=E,43nm,0.7s						
BRLK	**Bradley Lake**	**3.37**	**341**		Sn	14 22 08.3	-1.6
HOM	**Homer**	**3.44**	**334**	Pn	Pn	14 21 32.5	+1.8
P23K	**Montague Islan**	**3.46**	**11**		Pn	14 21 31.4	+0.4
P23K	**Montague Islan**	**3.46**	**11**	P	Pn	14 21 31.4	+0.4
	baz=191						
SEW	**Seward**	**3.53**	**354**		Pn	14 21 32.0	0.0
SEW	**Seward**	**3.53**	**354**	P	Pn	14 21 32.0	0.0

KAIM	Kayak Island	4.01	32			Pn	14 21 38.9	+0.3
KAIM	Kayak Island	4.01	32	IAML			14 22 28.1	
	comp=E,56nm,1.2s							
KAIM				IAML			14 22 36.5	
	comp=N,74nm,1.1s							
KAIM	Kayak Island	4.01	32	P		Pn	14 21 38.9	+0.3
	baz=215							
O20K	Slope Mountain	4.06	331				14 21 40.4	+1.0
O20K	Slope Mountain	4.06	331	P		Pn	14 21 40.3	+1.0
	baz=147							
IVE	Iliamna Volcan	4.11	328			Pn	14 21 40.5	+0.4
EYAK	Cordova Ski Ar	4.24	20			Pn	14 21 42.4	+0.8
EYAK	Cordova Ski Ar	4.24	20	P		Pn	14 21 42.4	+0.8
EYAK	Cordova Ski Ar	4.24	20	P		Pn	14 21 42.4	+0.8
	baz=202							
CNTC	Contact Creek	4.24	296			Pn	14 21 43.7	+1.9
Q17K	Contact Creek	4.24	296	P		Pn	14 21 43.7	+1.9
	baz=110							
RAGM	Ragged Mountai	4.33	27			Pn	14 21 43.8	+0.8
RED	Redoubt Volcan	4.38	332			Pn	14 21 44.1	+0.3
HMT	Hamilton	4.39	30			Pn	14 21 44.9	+0.9
NICHA	Nichawak Mount	4.40	32			Pn	14 21 45.0	+1.1
RSO	Redoubt South	4.42	333	Pn		Pn	14 21 45.2	+0.8
RDT	Redoubt	4.43	335			Pn	14 21 44.7	+0.3
RDWB	Redoubt West	4.46	332			Pn	14 21 45.4	+0.4
P18K	Big Mountain,	4.47	311			Pn	14 21 45.5	+0.6
P18K	Big Mountain,	4.47	311	P		Pn	14 21 45.5	+0.6
	baz=126							
DFR	Drift River	4.51	334			Pn	14 21 45.8	+0.2
RC01	Rabbit Creek A	4.53	353	Pn		Pn	14 21 46.8	+1.1
RC01				IAML			14 22 43.4	
	comp=E,33nm,0.9s							
RC01				IAML			14 22 57.4	
	comp=N,24nm,1.0s							
NCT	North Crescent	4.54	332			Pn	14 21 46.5	+0.5
BERG	Berg Lake	4.60	32			Pn	14 21 47.3	+0.5
BERG	Berg Lake	4.60	32	IAML			14 22 51.9	
	comp=N,56nm,0.9s							
GRIN	Grindle Hills	4.63	35			Pn	14 21 48.0	+0.9
O19K	Port Alsworth	4.66	323	Pn		Pn	14 21 49.0	+1.5
SNH	Sunshine Point	4.71	38			Pn	14 21 48.9	+0.6
SNH	Sunshine Point	4.71	38	IAML			14 22 35.9	
	comp=N,44nm,1.2s							
SNH				IAML			14 23 12.6	
	comp=E,45nm,1.1s							
O18K	Koktuh Hills	4.74	316			Pn	14 21 49.6	+0.9
O18K	Koktuh Hills	4.74	316	P		Pn	14 21 49.6	+0.9
	baz=130							
KHIT	Khitrov Hills	4.78	34			Pn	14 21 49.5	+0.3
KNK	Knik Glacier	4.82	1	Pn		Pn	14 21 51.0	+1.3
KNK				IAML			14 22 47.9	
	comp=E,20nm,0.8s							
KNK				IAML			14 23 01.2	
	comp=N,20nm,0.6s							
BMRM	Bremner River	4.85	24			Pn	14 21 51.0	+0.7
BMRM	Bremner River	4.85	24	P		Pn	14 21 51.0	+0.7
	baz=207							
WAX	Waxell Ridge	4.91	36			Pn	14 21 50.8	-0.2
WAX				IAML			14 22 52.5	
	comp=E,44nm,0.8s							
N20K	Mount Spurr	4.95	340	P		Pn	14 21 52.5	+0.9
	baz=156							
SPCR	Spurr Chakacha	4.95	340			Pn	14 21 52.5	+0.9
SUA	Susitna One	4.98	348			Pn	14 21 52.7	+0.6
SUA	Susitna One	4.98	348	IAML			14 22 52.5	
	comp=E,14nm,1.1s							
SUA	Susitna One	4.98	348	P		Pn	14 21 52.7	+0.6
	baz=166							
BARK	Barkley Ridge	5.00	38			Pn	14 21 52.8	+0.6
PMR	Palmer	5.00	357	P		Pn	14 21 55.0	+2.8
SPCG	Spurr Capps Gl	5.00	341			Pn	14 21 54.3	+1.9
MESA	MESA	5.03	42			Pn	14 21 53.2	+0.5
MESA	MESA	5.03	42	IAML			14 22 55.6	
	comp=N,39nm,1.1s							
MESA				IAML			14 22 57.0	
	comp=E,32nm,1.1s							
MESA	MESA	5.03	42	P		Pn	14 21 53.2	+0.5
	baz=227							
KLU	Klutina	5.10	15			Pn	14 21 54.6	+1.0
KLU	Klutina	5.10	15	IAML			14 22 52.6	
	comp=N,17nm,0.9s							
KLU				IAML			14 22 59.6	
	comp=E,18nm,0.8s							
KLU	Klutina	5.10	15	P		Pn	14 21 54.6	+1.0
	baz=197							
TGL	Tana Glacier	5.15	34			Pn	14 21 53.8	-0.6
STLK	Strandline Lak	5.17	343			Pn	14 21 55.6	+1.0
GHO	Glory Hole Cre	5.18	359	Pn		Pn	14 21 55.1	+0.4
N19K	Bonanza Creek	5.19	327			Pn	14 21 55.4	+0.5
N19K	Bonanza Creek	5.19	327	P		Pn	14 21 55.4	+0.5
	baz=142							
ISLE	Juniper Island	5.19	37			Pn	14 21 55.3	+0.3
ISLE	Juniper Island	5.19	37	IAML			14 23 05.1	
	comp=E,18nm,1.1s							
ISLE				IAML			14 23 18.1	
	comp=N,30nm,1.1s							
SPNN	North Nagishla	5.20	338			Pn	14 21 56.4	+1.2
SML	Sawmill	5.21	2	Pn		Pn	14 21 56.4	+1.2
SML				IAML			14 22 58.6	
	comp=E,25nm,0.6s							
SML				IAML			14 23 15.5	
	comp=N,24nm,1.1s							
M23K	Glacier View	5.22	5			Pn	14 21 56.7	+1.4
M23K	Glacier View	5.22	5	P		Pn	14 21 56.7	+1.4
	baz=185							
SCM	Sheep Creek Mo	5.28	7	Pn		Pn	14 21 57.8	+1.6
SCM				IAML			14 23 12.3	
	comp=N,29nm,1.2s							
SCM				IAML			14 23 12.3	
	comp=E,28nm,0.9s							
VRDI	Verde Repeater	5.36	28			Pn	14 21 57.9	+0.6
CHGN	Chignik	5.41	271	Pn		Pn	14 21 58.4	+0.5
N25K	Chitina, Valde	5.43	21	P		Pn	14 21 59.5	+1.3
	baz=204							
SAMH	Samovar Hills	5.45	46			Pn	14 21 59.4	+0.9
GLB	Gilahina Butte	5.46	25			Pn	14 21 59.3	+0.8
TABL	Table Mountain	5.50	43			Pn	14 22 00.0	+0.7
N18K	Kilae Creek	5.55	320			Pn	14 22 00.4	+0.6
N18K	Kilae Creek	5.55	320	P		Pn	14 22 00.4	+0.6
	baz=134							
PTPK	Patty Peak	5.60	32			Pn	14 22 01.4	+0.8
MCARA	McCarthy VSAT	5.61	29	Pn		Pn	14 21 58.7	-1.8
M24K	Tolsona, Glenn	5.66	12			Pn	14 22 02.7	+1.4
M24K	Tolsona, Glenn	5.66	12	P		Pn	14 22 02.7	+1.4
	baz=194							
SVW2	Sparrevohn	5.75	324	Pn		Pn	14 22 02.4	-0.2
SVW2	Sparrevohn	5.75	324	P		Pn	14 22 02.7	+0.2
M20K	Styx River	5.76	338	Pn		Pn	14 22 03.3	+0.6
PNL	Peninsula	5.79	54	P		Pn	14 22 04.0	+1.0
CTG	Chitna Glacier	5.79	38	P		Pn	14 22 03.8	+0.6
	baz=224							
CTGM	Chitina Glacie	5.80	38			Pn	14 22 03.8	+0.6
LOGN	Logan Glacier	5.81	40			Pn	14 22 04.1	+0.6
O16K	Kokwok River B	5.82	305	Pn		Pn	14 22 04.2	+0.7
WACK	Wrangell Chich	5.83	21			Pn	14 22 05.4	+1.5
N17K	Nushagak Hills	5.94	315	Pn		Pn	14 22 06.4	+1.3
M19K	Big River Lodg	6.06	333			Pn	14 22 07.2	+0.4
M19K	Big River Lodg	6.06	333	P		Pn	14 22 07.2	+0.4
	baz=148							
M18K	Stony River	6.13	326			Pn	14 22 08.1	+0.4
M18K	Stony River	6.13	326	P		Pn	14 22 08.1	+0.4
	baz=140							
L19K	White Mountain	6.42	333	Pn		Pn	14 22 10.8	-0.8
CNBA	Chernabura Isl	6.43	258	Pn		Pn	14 22 11.8	+0.1
O29M	Mount Kennedy	6.46	51			Pn	14 22 13.3	+0.9
O29M	Mount Kennedy	6.46	51	P		Pn	14 22 13.4	+1.1
	baz=239							
O15K	Ungalikthiuk R	6.48	298			Pn	14 22 14.2	+1.7
O15K	Ungalikthiuk R	6.48	298	P		Pn	14 22 14.2	+1.7
	baz=109							
M26K	Nabesna, AK	6.48	24	Pn		Pn	14 22 13.6	+0.9
DHY	Denali Highway	6.52	5			Pn	14 22 14.9	+1.8
DHY	Denali Highway	6.52	5	P		Pn	14 22 14.9	+1.8
	baz=186							
P29M	Windy Craggy	6.53	58			Pn	14 22 13.9	+0.7
N16K	Nishlik Lake	6.55	310			Pn	14 22 14.3	+0.8
N16K	Nishlik Lake	6.55	310	P		Pn	14 22 14.3	+0.8
	baz=122							
M17K	Holitna River	6.60	320	Pn		Pn	14 22 13.1	-1.0
M27K	Edge Creek, AK	6.72	28	Pn		Pn	14 22 17.2	+1.3
YUK7	Dusty Glacier	6.76	50			Pn	14 22 17.7	+1.1
RND	Reindeer	6.82	359	Pn		Pn	14 22 19.2	+2.0
S31K	Pelican	6.88	73			Pn	14 22 17.3	-0.6
YUK6	Outpost Mounta	6.89	47			Pn	14 22 19.5	+1.1
YUK6	Outpost Mounta	6.89	47	P		Pn	14 22 19.5	+1.1
	baz=235							
M16K	Timber Creek	6.93	314			Pn	14 22 19.9	+1.2
M16K	Timber Creek	6.93	314	P		Pn	14 22 19.9	+1.2
	baz=125							
N15K	Kwethluk River	6.98	305	Pn		Pn	14 22 18.4	-1.0
YUK4	Talbot Arm	7.02	43	P		Pn	14 22 22.3	+2.2
	baz=231							
P30M	Million Dollar	7.09	55			Pn	14 22 22.5	+1.5
P30M	Million Dollar	7.09	55	P		Pn	14 22 22.5	+1.5
	baz=245							
YUK5	Granite Creek	7.20	47			Pn	14 22 23.9	+1.4
O14K	Tigyukauivet M	7.21	297	Pn		Pn	14 22 22.1	-0.4
SIT	Sitka	7.34	81	Pn		Pn	14 22 21.9	-2.3
SIT	Sitka	7.34	81	P		Pn	14 22 21.9	-2.3
RIDG	Independent Ri	7.40	13	Pn		Pn	14 22 26.1	+1.0
SKAG	Skagway	7.63	63	P		Pn	14 22 28.6	+0.3
S32K	Killisnoo	7.74	78	Pn		Pn	14 22 29.2	-0.5
M29M	Somme Creek	7.81	37	Pn		Pn	14 22 31.6	+0.7
R32K	Eaglecrest	7.82	72	Pn		Pn	14 22 31.2	+0.3
K17K	Iditarod	7.82	325	Pn		Pn	14 22 30.8	-0.1
JIS	Juneau Island	7.89	72	Pn		Pn	14 22 31.4	-0.4
JIS	Juneau Island	7.89	72	P		Pn	14 22 32.8	+1.0
WHY	Whitehorse	8.25	55	Pn		Pn	14 22 38.5	+1.6
COLA	College	8.30	2	P		Pn	14 22 40.8	+3.4
J26L	Joseph Creek	8.30	15	Pn		Pn	14 22 39.5	+1.9
MDM	Murphy Dome	8.38	1	Pn		Pn	14 22 40.7	+2.1
L29M	L29M	8.39	35	Pn		Pn	14 22 40.3	+1.5
P32M	Atlin	8.46	63	Pn		Pn	14 22 40.3	+0.6
U33K	Whale Pass	8.65	87	Pn		Pn	14 22 40.1	-2.1
I21K	Tanana	8.75	351	Pn		Pn	14 22 44.0	+0.4
P33M	Teslin, Yukon	9.06	60	Pn		Pn	14 22 48.8	+0.8
M31M	Drury Creek, Y	9.18	46	Pn		Pn	14 22 51.2	+1.8
N32M	Quiet Lake	9.26	54	Pn		Pn	14 22 49.8	-0.8
H21K	Melozitna Rive	9.29	349	Pn		Pn	14 22 52.0	+1.0
J14K	Nanvaranak Lak	9.70	315	Pn		Pn	14 22 55.5	-1.2
IMAR	Indian Mountai	9.71	348	Pn		Pn	14 22 55.7	-1.1
H18K	Honhosa River	9.77	335	Pn		Pn	14 22 57.6	+0.1
R33M	Jennings River	9.80	66	Pn		Pn	14 22 58.6	+0.6
T35M	Bob Quinn	10.11	80	Pn		Pn	14 23 04.4	+2.1
G24K	Hadweenzic Riv	10.14	3	Pn		Pn	14 23 03.1	+0.5
DLBC	Dease Lake	10.19	72	Pn		Pn	14 23 02.6	-0.8
F17K	Baldwin Pennin	11.51	334	Pn		Pn	14 23 22.2	+0.9

IDC 01 14:32:02.6±8.8, 25°89S×28°92E, h0km, mbtmp2.6/1, ML2.5/1, Error ellipse: s-maj=100.3km s-min=56.4km az=139.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	4.24	229	Pn	Pn	14 33 08.6	-0.1
BOSA	0.2nm,0.3s,baz=48,slow=12,SNR=0.8			Lg	Lg	14 34 17.7	
	6.6nm,0.3s,baz=322,slow=17,SNR=17 0.5nm,0.3s						
I47ZA	BOSHOF INFRASO	4.26	229	I	I	14 58 20.0	
	0.3nm,0.7s,baz=50,slow=312,SNR=1.1						
I35NA	TSUMEB INFRASO	12.41	300	I	I	15 49 00.0	
	baz=126,slow=316,SNR=4.3						

*NEIC **01** 14:38:36.0±2.6, 5°.24S±0°.09×146°.2E±0°.1, h10km±1km, mb4.5/21, Error ellipse: s-maj=18.2km s-min=14.6km az=68.0*

*DJA **01** 14:38:40.3±0.4, 6°S±4°×14°6E±°, h10km, M4.9/22, mB5.4/7, mb4.7/22, MLv5.0/3, Mw(mB)4.9/7*

*IDC **01** 14:38:41.4±3.0, 5°.53S×146°.06E, h54km±30km, mb3.7/13, mbtmp3.9/16, ML3.9/2, MS3.6/14, Error ellipse: s-maj=29.4km s-min=16.4km az=85.0*

ISC 01 14:38:36.1±0.5, 5°34S±0°.06×146°23E±0°.07, h10km, n95, σ1§51/81, mb4.3/24, MS3.5/11, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.15	167		Pn	14 39 40.7	+1.1
PMG	Port Moresby	4.15	167	P	Pn	14 39 40.7	+1.1
PMG	Port Moresby	4.15	167	P	Pn	14 39 40.8	+1.3
	34nm,0.4s,baz=12,slow=5.9,SNR=46						
PMG				S	Sn	14 40 26.3	-1.8
	205nm,0.7s,baz=318,slow=24,SNR=5.6						
PMG				LR	LR	14 41 52.6	
	comp=Z,459nm,21.4s,baz=330,slow=48						
TABU	Tabubil	4.98	271	P	Pn	14 39 52.9	+1.8
RABL	Rabaul	6.03	79	P	Pn	14 40 12.0	+6.6
GENI	Genyem	6.63	294	P	Pn	14 40 15.1	+1.4
	185nm,1.0s,4μm0.9nm						
COEN	Coen	9.08	199		Pn	14 40 47.4	0.0
COEN	Coen	9.08	199	P	Pn	14 40 47.4	0.0
FAKI	Fak Fak	14.15	279	Pn	Pn	14 41 51.9	-4.9
FAKI	Fak Fak	14.15	279	P	Pn	14 41 58.6	+1.9
HNR	Honiara	14.20	107	Pn	Pn	14 41 54.6	-2.9
HNR	Honiara	14.20	107	LR	LR	14 47 01.7	
	comp=Z,1μm,21.5s,baz=270,slow=35						
CTA	Charters Tower	14.66	180	P	Pn	14 42 05.5	+1.7
CTA	Charters Tower	14.66	180	P	Pn	14 42 03.4	-0.4
	0.3nm,0.3s,baz=0.0,slow=17,SNR=1.5						
CTA				LR	LR	14 48 11.4	
	comp=Z,175nm,19.0s,baz=3.5,slow=39 0.9nm,0.3s						
CTAO	Charters Tower	14.66	180	Pn	Pn	14 42 05.9	+2.1
CTAO	Charters Tower	14.66	180	P	Pn	14 42 05.3	+1.5
KDU	Kakadu	15.42	241	P	Pn	14 42 13.9	0.0
SWI	Sorong	15.59	286	P	Pn	14 42 16.6	+0.5
	222nm,0.8s,2μm						
MTN	Manton Dam	16.66	242	Pn	Pn	14 42 27.0	-2.9
MTN				IAmb	IAmb	14 42 31.5	
	comp=Z,40nm,1.1s						
MTN	Manton Dam	16.66	242	P	Pn	14 42 30.1	+0.2
WB0	Warramunga Arr	18.40	218		Pn	14 42 52.4	+0.9
WB0				IAmb	IAmb	14 43 11.3	
	comp=Z,28nm,1.4s						
WR0	Warramunga Arr	18.45	217	P	P	14 42 51.9	-0.3
WB2	Warramunga Arr	18.56	217	P	P	14 42 52.0	-1.2
WRA	Warramunga Arr	18.56	217	P	P	14 42 51.9	-1.5
WRA	Warramunga Arr	18.56	217	P	P	14 42 50.5	-2.9
	comp=Z,0.4nm,0.3s,baz=38,slow=12,SNR=20						
WRA				PcP	PcP	14 47 22.5	-0.5
	comp=Z,1.0nm,0.8s,baz=19,slow=1.9,SNR=5.6 comp=Z,0.5nm,0.3s						
NLAI	Namlea	19.19	275	P	Pn	14 43 02.0	+0.9
	comp=Z,23nm,0.6s						
LBMI	Labuha	19.27	283	P	Pn	14 43 02.8	+0.7
	comp=Z,89nm,1.0s						
TNTI	Ternate	19.79	287	P	P	14 43 06.3	-0.5
	comp=Z,40nm,1.2s						
KNRA	Kununurra	19.99	238	P	P	14 43 06.9	-2.1
KNRA				IAmb	IAmb	14 43 29.3	
	comp=Z,30nm,1.1s						
KNRA	Kununurra	19.99	238	P	P	14 43 08.6	-0.4
SANI	Sanana	20.46	278	P	Pn	14 43 15.9	-0.3
SANI	Sanana	20.46	278	P	P	14 43 11.7	-2.4
	comp=Z,36nm,0.8s,comp=Z,526nm						
AS01	Alice Springs	21.73	212	P	P	14 43 28.0	+0.2
AS31	Alice Springs	21.75	212	P	P	14 43 28.0	-0.1
ASAR	Alice Springs	21.75	212	P	P	14 43 28.4	+0.4
ASAR	Alice Springs	21.75	212	P	P	14 43 26.0	-2.0
	comp=Z,0.6nm,0.5s,baz=44,slow=7.9,SNR=21						
ASAR				PcP	PcP	14 47 28.4	-0.4
	comp=Z,1.0nm,0.9s,baz=45,slow=1.4,SNR=3.9						
ASAR				LR	LR	14 52 45.7	
	comp=Z,246nm,18.3s,baz=46,slow=39 comp=Z,0.6nm,0.5s						
SOEI	Soe	22.20	257	P	P	14 43 33.1	+0.1
SOEI	Soe	22.20	257	P	P	14 43 33.9	+0.8
SOEI	Soe	22.20	257	P	P	14 43 31.2	-1.9
	comp=Z,27nm,1.1s						
INKA	Innaminka	22.89	193	P	P	14 43 40.9	+0.9
KMSI	Cibinong	22.98	284	P	P	14 43 37.3	-3.9
	comp=Z,199nm,1.2s						
KOUNC	Koumac, New Ca	23.16	132	P	P	14 43 46.5	+3.5
FITZ	Fitzroy Crossi	23.78	236	P	P	14 43 47.2	-1.9
FITZ	Fitzroy Crossi	23.78	236	P	P	14 43 49.5	+0.4
LUWI	Luwuk	23.80	280	P	P	14 43 48.1	-1.2
LUWI	Luwuk	23.80	280	P	P	14 43 49.1	-0.3
	comp=Z,143nm,1.5s,comp=Z,2μm						
DAV	Davao City (W)	24.01	301	LR	LR	14 55 27.1	
	comp=Z,43nm,18.2s,baz=20,slow=42						
OOD	Oodnadatta	24.48	203	P	P	14 43 53.6	-2.0
ARMA	Armidale	25.46	169	P	P	14 44 04.6	0.0
ARMA				IAmb	IAmb	14 44 14.5	
	comp=Z,17nm,1.1s						
DZM	Mont Dzumac	25.68	132	P	P	14 44 05.7	-0.9
DZM				IAmb	IAmb	14 44 12.3	
	comp=Z,13nm,0.8s						
DZM	Mont Dzumac	25.68	132	P	P	14 44 09.8	+3.2
DZM	Mont Dzumac	25.68	132	LR	LR	14 53 48.7	
	comp=Z,159nm,19.9s,baz=295,slow=35						
WRKA	Warakurna	26.07	219	P	P	14 44 08.2	-1.9
LCRK	Leigh Creek	26.09	196	P	P	14 44 11.2	+1.0
TOLI2	Tolitoli	26.21	283	P	P	14 44 10.5	-0.9
TOLI2	Tolitoli	26.21	283	P	P	14 44 12.1	+0.7
KAPI	Kappang	26.37	269	LR	LR	14 56 10.1	
	comp=Z,72nm,20.1s,baz=90,slow=40						
TTSI	Tana Toraja	26.43	274	P	P	14 44 11.1	-2.3
	comp=Z,15nm,1.0s						
STKA	Stephens Creek	26.76	189	P	P	14 44 13.9	-2.3
	comp=Z,0.8nm,0.4s,baz=15,slow=8.1,SNR=3.9						
STKA				LR	LR	14 55 41.3	
	comp=Z,80nm,19.5s,baz=16,slow=38 comp=Z,0.8nm,0.4s						
MULG	Mulgathing	27.34	203	P	P	14 44 20.1	-1.3
H11S3	WAKE ISLAND Hy	31.11	40	T	T	15 18 04.5	
	baz=223,slow=75,SNR=38						
H11S2	WAKE ISLAND Hy	31.12	40	T	T	15 18 03.8	
	baz=223,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	31.12	40	T	T	15 18 04.4	
	baz=223,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	32.14	39	T	T	15 19 20.3	
	baz=221,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	32.15	39	T	T	15 19 20.4	
	baz=221,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	32.16	39	T	T	15 19 23.0	
	baz=221,slow=76,SNR=9.1						
MEEK	Meekatharra	33.81	228	P	P	14 45 19.6	+0.9
BLDU	Ballidu	37.46	224	P	P	14 45 50.3	+0.3
BBJI	Bungbulang	38.39	265	P	P	14 45 57.5	-0.6
NWAO	Narrogin (SRO)	38.52	221	LR	LR	15 01 39.6	
	comp=Z,103nm,21.6s,baz=198,slow=36						
JMN	Monobe	40.57	344	P	P	14 46 15.0	-1.0
URZ	Urewera	43.14	144	LR	LR	15 03 01.6	
	comp=Z,76nm,21.1s,baz=138,slow=34						
RPZ	Rata Peaks	44.04	154	LR	LR	15 03 59.0	
	comp=Z,157nm,19.0s,baz=330,slow=34						
BFZ	Birch Farm	44.30	147	P	P	14 46 48.8	+2.5
KSRS	Korea Array	45.86	340	P	P	14 47 00.1	+1.4
	comp=Z,2.9nm,0.8s,baz=158,slow=9.4,SNR=10.0						
KSRS				LR	LR	15 04 13.0	
	comp=Z,46nm,19.6s,baz=135,slow=33 comp=Z,2.9nm,0.8s						
GSI	Gunungsitoli	49.04	276	P	P	14 47 25.9	+2.1
USRK	Ussuriysk Ar.	50.95	347	P	P	14 47 38.6	+0.8
	comp=Z,3.7nm,0.8s,baz=161,slow=8.7,SNR=5.7 comp=Z,3.7nm,0.8s						
CMAR	Chiang Mai Arr	52.26	298	P	P	14 47 47.8	-0.3
	comp=Z,1.9nm,0.8s,baz=121,slow=5.7,SNR=16						
CMAR				LR	LR	15 12 50.9	
	comp=Z,13nm,18.3s,baz=185,slow=39 comp=Z,1.9nm,0.8s						
PETK	Petropavlovsk-	59.03	8	P	P	14 48 38.0	+1.9
	comp=Z,4.3nm,1.0s,baz=157,slow=4.7,SNR=5.8 comp=Z,4.3nm,1.0s						
SONM	Songino Array	63.45	331	P	P	14 49 05.0	-1.4
	comp=Z,0.2nm,0.5s,baz=116,slow=6.6,SNR=2.0 comp=Z,0.2nm,0.5s						
PALK	Pallekele	66.57	280	LR	LR	15 22 53.6	
	comp=Z,42nm,18.6s,baz=211,slow=40						
VNDA	Vanda	72.62	176	P	P	14 50 03.8	+0.4
VNDA				IAmb	IAmb	14 50 14.4	
	comp=Z,6.5nm,1.2s						
MKAR	Makanchi Array	76.50	321	P	P	14 50 25.4	-1.0
	comp=Z,0.3nm,0.4s,baz=109,slow=6.8,SNR=8.2 comp=Z,0.3nm,0.4s						
ZALV	Zalesovo Beam	78.04	328	P	P	14 50 34.0	-0.9
	comp=Z,0.6nm,0.5s,baz=111,slow=8.1,SNR=4.3 comp=Z,0.6nm,0.5s						
KSH	Kashi	78.36	312	P	P	14 50 38.0	+0.8
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	Kurchatov Arra	80.24	323	P	P	14 50 46.6	-0.4
	comp=Z,0.3nm,0.3s,baz=112,slow=3.9,SNR=2.2 comp=Z,0.3nm,0.3s						
E19K	Redstone River	82.73	19	P	P	14 50 60.0	+0.1
E19K				IAmb	IAmb	14 51 17.7	
	comp=Z,4.0nm,1.1s						
QSPA	South Pole Qui	84.63	180	P	P	14 51 09.8	-0.1
QSPA				IAmb	IAmb	14 51 28.3	
	comp=Z,3.6nm,1.1s						
QSPA	South Pole Qui	84.63	180	P	P	14 51 07.5	-2.4
	comp=Z,1.2nm,0.9s,baz=335,slow=14,SNR=1.8 comp=Z,1.2nm,0.9s						
CCB	Clear Creek Bu	84.77	23	P	P	14 51 09.3	-1.0
CCB				IAmb	IAmb	14 51 10.8	
	comp=Z,5.7nm,1.2s						
G23K	Bananza Creek	84.81	21	P	P	14 51 11.1	+0.5
G23K				IAmb	IAmb	14 51 13.4	
	comp=Z,1.8nm,0.9s						
ILAR	Eielson Array	85.18	23	P	P	14 51 12.0	-0.4
	comp=Z,2.0nm,0.9s,baz=251,slow=5.8,SNR=15 comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	85.78	324	P	P	14 51 14.7	-1.0
	comp=Z,0.3nm,0.3s,baz=106,slow

HPIG				IAmb	IAmb	14 48 46.6		
	comp=Z,10nm,1.4s							
NNA	**Nana**	**26.31 123**		LR	LR	14 56 46.7		
	comp=Z,140nm,20.7s,baz=280,slow=31							
HNDO	**Hondo**	**27.03 360**		P	**P**	**14 48 52.5**	**-0.4**	
HNDO				IAmb	IAmb	14 48 57.1		
	comp=Z,4.8nm,0.7s							
TXAR	**Lajitas Array**	**27.19 351**		P	**P**	**14 48 53.8**	**-0.7**	
TXAR	**Lajitas Array**	**27.19 351**		P	**P**	**14 48 56.5**	**+2.1**	
	comp=Z,1.8nm,0.9s,baz=176,slow=12,SNR=17							
TXAR				LR	LR	14 58 49.6		
	comp=Z,407nm,18.3s,baz=166,slow=34							
	comp=Z,1.8nm,0.9s							
TX31	**Lajitas Ar. Si**	**27.19 351**		P	**P**	**14 48 53.1**	**-1.3**	
TX31				IAmb	IAmb	14 49 03.0		
	comp=Z,6.4nm,1.2s							
SAND	**Sanderson**	**27.61 354**		P	**P**	**14 48 57.8**	**-0.4**	
SAND				IAmb	IAmb	14 49 10.5		
	comp=Z,7.5nm,1.4s							
JCT	**Junction City**	**27.99 359**		P	**P**	**14 49 01.6**	**+0.1**	
JCT				IAmb	IAmb	14 49 04.4		
	comp=Z,5.8nm,0.8s							
CZSB	**Cruzeiro do Su**	**28.17 111**		P	**P**	**14 49 04.5**	**+1.2**	
ALPN	**Alpine**	**28.21 352**		P	**P**	**14 49 03.7**	**+0.1**	
ALPN				IAmb	IAmb	14 49 06.5		
	comp=Z,6.0nm,1.2s							
BRDY	**Brady**	**28.78**	**0**	P	**P**	**14 49 07.0**	**-1.7**	
SDV	**Santo Domingo**	**29.05**	**76**	LR	LR	14 59 13.2		
	comp=Z,79nm,19.6s,baz=269,slow=33							
MNTX	**Cornudas Mount**	**29.79 349**		P	**P**	**14 49 16.6**	**-0.9**	
MNTX				IAmb	IAmb	14 49 24.4		
	comp=Z,5.3nm,1.3s							
APMT	**Aspermont**	**30.83 358**		P	**P**	**14 49 26.8**	**0.0**	
APMT				IAmb	IAmb	14 50 07.8		
	comp=Z,10nm,1.4s							
RPN	**Rapa Nui**	**30.92 198**		LR	LR	14 58 24.1		
	comp=Z,270nm,21.6s,baz=34,slow=30							
ANMO	**Albuquerque**	**33.15 349**		LR	LR	15 02 32.2		
	comp=Z,775nm,18.3s,baz=272,slow=35							
ETMB	**Extrema**	**34.91 111**		P	**P**	**14 50 05.1**	**+2.4**	
ETMB				IAmb	IAmb	14 50 06.9		
	comp=Z,5.9nm,0.9s							
PFO	**Pinyon Flats O**	**35.09 334**		LR	LR	15 02 01.3		
	comp=Z,138nm,19.9s,baz=164,slow=32							
PCRV	**Puerto La Cruz**	**35.10**	**76**	LR	LR	15 03 18.9		
	comp=Z,109nm,18.2s,slow=34							
WVT	**Waverly**	**35.20**	**16**	P	**P**	**14 50 06.2**	**+1.4**	
HODGE	**Hodges**	**35.40**	**24**	P	**P**	**14 50 09.4**	**+2.8**	
HODGE				IAmb	IAmb	14 50 10.2		
	comp=Z,6.6nm,0.9s							
SJG	**San Juan**	**35.90**	**62**	LR	LR	15 01 39.5		
	comp=Z,72nm,20.9s,baz=208,slow=31							
TKL	**Tuckaleechee C**	**36.06**	**21**	LR	LR	15 05 38.1		
	comp=Z,162nm,18.2s,baz=225,slow=37							
R40A	**Maddies Statio**	**36.32**	**9**	P	**P**	**14 50 16.5**	**+2.1**	
R40A				IAmb	IAmb	14 50 19.9		
	comp=Z,7.7nm,1.1s							
V53A	**Saluda**	**36.43**	**23**	P	**P**	**14 50 17.1**	**+1.6**	
V53A				IAmb	IAmb	14 50 20.4		
	comp=Z,7.3nm,1.1s							
KMSC	**Kings Mountain**	**36.57**	**25**	P	**P**	**14 50 18.8**	**+2.2**	
HMU	**Henry Mountain**	**37.00 345**		P	**P**	**14 50 21.3**	**+0.7**	
SAML	**Samuel**	**37.51 108**		P	**P**	**14 50 26.4**	**+1.5**	
SAML				IAmb	IAmb	14 50 29.3		
	comp=Z,11nm,1.3s							
TPNV	**Topopah Spring**	**37.89 337**		P	**P**	**14 50 29.6**	**+1.6**	
LVC	**Limon Verde**	**38.51 132**		LR	LR	15 02 30.8		
	comp=Z,190nm,19.2s,baz=298,slow=30							
GMN	**Gold Mountain**	**38.59 337**		P	**P**	**14 50 34.8**	**+0.8**	
MZP	**Montezuma Peak**	**38.99 337**		P	**P**	**14 50 38.1**	**+0.8**	
SSFO	**Shawnee State**	**38.99**	**20**	P	**P**	**14 50 39.4**	**+2.4**	
Q52A	**Bidwell**	**39.55**	**21**	P	**P**	**14 50 43.9**	**+2.2**	
NVAR	**Mina Array Bea**	**39.98 336**		P	**P**	**14 50 47.1**	**+1.6**	
	comp=Z,0.7nm,0.7s,baz=155,slow=8.8,SNR=7.6							
NVAR				LR	LR	15 04 30.7		
	comp=Z,288nm,20.8s,baz=172,slow=32							
	comp=Z,0.7nm,0.7s							
H03N2	**Juan Fernandez**	**40.36 154**		T	T	15 33 58.7		
	baz=330,slow=77,SNR=119							
H03N1	**Juan Fernandez**	**40.37 154**		T	T	15 33 53.4		
	baz=330,slow=77,SNR=125							
H03N3	**Juan Fernandez**	**40.38 154**		T	T	15 33 53.4		
	baz=330,slow=77,SNR=162							
BGU	**Big Grassy Mou**	**40.41 344**		P	**P**	**14 50 49.7**	**+0.7**	
HWUT	**Hardware Ranch**	**40.66 346**		P	**P**	**14 50 51.9**	**+0.7**	
HWUT				IAmb	IAmb	14 50 53.7		
	comp=Z,7.3nm,1.1s							
PNTR	**Pine Nut**	**41.07 335**		P	**P**	**14 50 56.2**	**+1.6**	
PNTR				IAmb	IAmb	14 50 57.4		
	comp=Z,5.4nm,0.8s							
HVU	**Hansel Valley**	**41.14 344**		P	**P**	**14 50 55.9**	**+0.9**	
HVU				IAmb	IAmb	14 50 57.7		
	comp=Z,12nm,1.3s							
ECSD	**EROS Data Cent**	**41.27**	**3**	P	**P**	**14 50 56.9**	**+1.0**	
ECSD				IAmb	IAmb	14 50 58.0		
	comp=Z,4.6nm,0.8s							
BW06	**Boulder Array**	**41.32 348**		P	**P**	**14 50 57.2**	**+0.6**	
BW06				IAmb	IAmb	14 50 58.5		
	comp=Z,5.2nm,0.9s							
PD31	**Pinedale Array**	**41.32 348**		P	**P**	**14 50 56.4**	**-0.2**	
PD31				IAmb	IAmb	14 50 58.5		
	comp=Z,4.7nm,0.9s							
PDAR	**Pinedale Array**	**41.32 348**		P	**P**	**14 50 56.0**	**-0.6**	
PDAR	**Pinedale Array**	**41.32 348**		P	**P**	**14 50 57.8**	**+1.2**	
	comp=Z,3.6nm,0.9s,baz=152,slow=7.9,SNR=26							
PDAR				LR	LR	15 06 37.0		
	comp=Z,127nm,21.8s,baz=178,slow=34							
	comp=Z,3.6nm,0.9s							
SIV	**San Ignacio**	**41.77 117**		LR	LR	15 06 46.8		
	comp=Z,129nm,19.2s,baz=280,slow=34							
LOHW	**Long Hollow**	**42.34 348**		P	**P**	**14 51 05.5**	**+0.5**	
LOHW				IAmb	IAmb	14 51 06.9		
	comp=Z,5.1nm,0.9s							
MOOW	**Moose Ponds**	**42.51 347**		P	**P**	**14 51 05.7**	**-0.6**	
HLID	**Hailey**	**43.24 344**		P	**P**	**14 51 09.9**	**-2.3**	
PTLB	**Pontes e Lacer**	**43.30 115**		P	**P**	**14 51 14.5**	**+1.7**	
YBH	**Yreka Blue Hor**	**44.58 335**		LR	LR	15 07 10.7		
	comp=Z,165nm,20.9s,baz=162,slow=32							
L04D	**Klamath Falls**	**44.81 335**		P	**P**	**14 51 24.2**	**-0.6**	
J55A	**Hilton**	**44.94**	**22**	P	**P**	**14 51 25.9**	**+0.4**	
J05D	**Fort Rock, OR**	**45.28 337**		P	**P**	**14 51 28.6**	**+0.1**	
PINE	**Pine Mountain**	**45.60 338**		P	**P**	**14 51 30.6**	**-0.5**	
BPMT	**Black Pine Rid**	**45.67 346**		P	**P**	**14 51 31.0**	**-0.7**	
SADO	**Sadowa**	**45.77**	**20**	LR	LR	15 11 12.5		
	comp=Z,95nm,18.8s,baz=190,slow=37							
G08A	**Pilot Rock**	**46.20 341**		P	**P**	**14 51 35.4**	**-0.3**	
MDP	**Montagnes des**	**46.43**	**85**	LR	LR	15 08 56.3		
	comp=Z,63nm,18.6s,baz=179,slow=33							
ULM	**Lac du Bonnet**	**47.81**	**3**	P	**P**	**14 51 48.0**	**0.0**	
	comp=Z,3.2nm,0.7s,baz=178,slow=9.5,SNR=6.1							
ULM				LR	LR	15 11 44.0		
	comp=Z,66nm,18.3s,baz=239,slow=36							
	comp=Z,3.2nm,0.7s							
NEW	**Newport**	**48.31 344**		LR	LR	15 10 42.0		
	comp=Z,164nm,20.4s,baz=177,slow=34							
CPUP	**Villa Florida**	**49.40 128**		LR	LR	15 10 37.1		
	comp=Z,49nm,21.1s,baz=306,slow=34							
PLCA	**Paso Flores**	**50.17 152**		LR	LR	15 08 30.8		
	comp=Z,182nm,19.8s,baz=308,slow=30							
EDM	**Edmonton**	**52.06 349**		P	**P**	**14 52 21.2**	**+0.9**	
PPT	**Papeete**	**53.53 246**		LR	LR	15 09 47.6		
	comp=Z,47nm,22.0s,baz=24,slow=30							
BBB	**Bella Bella**	**55.25 339**		LR	LR	15 15 18.8		
	comp=Z,66nm,18.3s,baz=178,slow=35							
SCHQ	**Schefferville**	**58.53**	**21**	LR	LR	15 18 08.8		
	comp=Z,278nm,20.1s,baz=240,slow=36							
YKA	**Yellowknife Ar**	**61.12 352**		P	**P**	**14 53 24.6**	**0.0**	
	comp=Z,1.4nm,0.8s,baz=159,slow=6.7,SNR=13							
YKA				LR	LR	15 18 09.7		
	comp=Z,146nm,21.3s,baz=144,slow=34							
	comp=Z,1.4nm,0.8s							
RCBR	**Riachuelo**	**63.63**	**98**	LR	LR	15 20 04.6		
	comp=Z,63nm,18.4s,baz=228,slow=35							
FRB	**Frobisher Bay**	**65.22**	**14**	LR	LR	15 24 23.0		
	comp=Z,121nm,18.0s,baz=214,slow=38							
INK	**Inuvik**	**69.87 347**		LR	LR	15 26 27.9		
	comp=Z,55nm,19.5s,baz=176,slow=37							
ILAR	**Eielson Array**	**71.07 340**		P	**P**	**14 54 28.1**	**-0.5**	
	comp=Z,1.5nm,0.8s,baz=150,slow=5.0,SNR=19							
ILAR				LR	LR	15 26 37.9		
	comp=Z,109nm,18.4s,baz=114,slow=37							
	comp=Z,1.5nm,0.8s							
PMSA	**Palmer Station**	**71.71 165**		LR	LR	15 18 17.7		
	comp=Z,128nm,21.8s,baz=15,slow=30							
RES	**Resolute Bay**	**72.30**	**1**	LR	LR	15 25 33.5		
	comp=Z,107nm,20.6s,baz=208,slow=35							
SFJD	**Kangerlussuaq**	**72.68**	**18**	LR	LR	15 26 29.0		
	comp=Z,113nm,19.2s,baz=282,slow=36							
BORG	**Borgarnes**	**82.67**	**25**	LR	LR	15 28 27.0		
	comp=Z,35nm,21.0s,baz=275,slow=33							
JMIC	**Jan Mayen**	**87.99**	**19**	LR	LR	15 36 21.9		
	comp=Z,58nm,18.4s,baz=258,slow=36							
QSPA	**South Pole Qui**	**92.36 180**		P	**P**	**14 56 20.6**	**-0.4**	
	comp=Z,1.6nm,0.9s,baz=141,slow=5.4,SNR=3.5							
	comp=Z,1.6nm,0.9s							
MDT	**Midelt**	**92.52**	**57**	LR	LR	15 30 39.1		
	comp=Z,50nm,21.2s,baz=350,slow=31							
SPITS	**Spitsbergen Ar**	**92.80**	**11**	LR	LR	15 40 36.9		
	comp=Z,46nm,18.1s,baz=286,slow=37							
H11N3	**WAKE ISLAND Hy**	**92.97 290**		T	T	16 39 24.7		
	baz=87							
H11N2	**WAKE ISLAND Hy**	**92.99 290**		T	T	16 39 08.9		
	baz=87							
H11N1	**WAKE ISLAND Hy**	**92.99 290**		T	T	16 39 09.3		
	baz=87							
H11S2	**WAKE ISLAND Hy**	**93.24 289**		T	T	16 39 29.2		
	baz=85,slow=74,SNR=7.6							
H11S1	**WAKE ISLAND Hy**	**93.25 289**		T	T	16 39 29.8		
	baz=85,slow=74,SNR=9.1							
H11S3	**WAKE ISLAND Hy**	**93.26 289**		T	T	16 39 30.3		
	baz=85,slow=74,SNR=6.9							
SNAA	**Sanae**	**94.19 162**		LR	LR	15 34 18.5		
	comp=Z,54nm,18.2s,baz=282,slow=33							
NOA	**NORSAR Array B**	**97.66**	**27**	LR	LR	15 42 52.9		
	comp=Z,31nm,18.3s,baz=285,slow=37							
ZALV	**Zalesovo Beam**	**123.81 357**		PKP	**PKPdf**	**15 02 06.8**	**-1.8**	
	comp=Z,0.6nm,0.6s,baz=311,slow=2.9,SNR=3.8							
BVAR	**Borovoye Array**	**124.12**	**8**	PKP	**PKPdf**	**15 02 09.0**	**-0.3**	
	comp=Z,0.6nm,0.7s,baz=307,slow=3.2,SNR=3.7							
ASAR	**Alice Springs**	**124.58 243**		PKP	**PKPdf**	**15 02 09.2**	**-1.9**	
	comp=Z,0.5nm,1.0s,baz=66,slow=1.1,SNR=2.4							
KURBB	**Kurchatov Arra**	**127.20**	**2**	PKP	**PKPdf**	**15 02 14.6**	**-0.7**	
	comp=Z,0.2nm,0.3s,baz=336,slow=2.2,SNR=4.5							
MKAR	**Makanchi Array**	**131.05 359**		PKP	**PKPdf**	**15 02 21.9**	**-0.9**	
	comp=Z,0.5nm,0.9s,baz=356,slow=1.9,SNR=3.8							
CMAR	**Chiang Mai Arr**	**152.75 320**		PKPbc	**PKPbc**	**15 03 06.5**	**-2.1**	
	comp=Z,0.5nm,0.3s,baz=352,slow=2.7,SNR=1.6							

*WEL **01** 15:14:43.2±0.8, 41°S±4°×17°3E±°, h122km±5km, M3.0/10, MLv3.0/10, Error ellipse: s-maj=0.0km s-min=0.0km az=141.2, confirmed*
*NOU **01** 15:14:43.8, 41°24S×172°89E, h118km, MLv3.8/6, South Island, New Zealand*
ISC 01 15:14:41.0±1.5, 41°30S±0°04×172°81E±0°04, h146km±8km, n74, σ0°91/90, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRNZ	**Matariki Terra**	**0.10**	**204**	P	**Pn**	**15 15 01.1**	**+0.5**
MRNZ				S	**Sn**	**15 15 14.6**	**-1.0**
TKNZ	**Takaka Hill**	**0.29**	**22**	P	**Pn**	**15 15 01.3**	**+0.2**
TKNZ				S	**Sn**	**15 15 15.0**	**-1.2**
NNZ	**Nelson**	**0.43**	**79**	P	**Pn**	**15 15 02.0**	**+0.5**
NNZ				S	**Sn**	**15 15 16.8**	**-0.3**
THZ	**Tophouse**	**0.46**	**172**	P	**Pn**	**15 15 02.6**	**+0.9**
THZ				S	**Sn**	**15 15 17.3**	**-0.3**
QRZ	**Quartz Range**	**0.52**	**336**	P	**Pn**	**15 15 02.4**	**+0.4**
QRZ	**Quartz Range**	**0.52**	**336**	P	**Pn**	**15 15 02.2**	**+0.2**
QRZ				S	**Sn**	**15 15 16.2**	**-1.7**
TUWZ	**Tuamarina**	**0.86**	**99**	P	**Pn**	**15 15 05.1**	**+0.9**
TUWZ				S	**Sn**	**15 15 21.6**	**-0.2**
DSZ	**Denniston Nort**	**0.88**	**239**	P	**Pn**	**15 15 04.8**	**+0.4**
DSZ				S	**Sn**	**15 15 20.2**	**-2.0**
BSWZ	**Blackbirch Sta**	**0.90**	**118**	P	**Pn**	**15 15 05.7**	**+1.2**
BSWZ				S	**Sn**	**15 15 23.6**	**+1.2**
DUWZ	**D'Urville Isla**	**0.98**	**59**	P	**Pn**	**15 15 06.3**	**+1.1**
DUWZ				S	**Sn**	**15 15 23.9**	**+0.3**
TCW	**Tory Channel**	**1.11**	**86**	P	**Pn**	**15 15 07.3**	**+1.0**
TCW				S	**Sn**	**15 15 25.1**	**-0.4**
CMWZ	**Cape Campbell**	**1.14**	**113**	P	**Pn**	**15 15 08.0**	**+1.4**
KHZ	**Kahutara**	**1.24**	**154**	P	**Pn**	**15 15 08.8**	**+1.3**
KHZ	**Kahutara**	**1.24**	**154**	P	**Pn**	**15 15 08.8**	**+1.3**
KHZ				S	**Sn**	**15 15 27.0**	**-0.8**
SNZO	**South Karori**	**1.43**	**91**	P	**Pn**	**15 15 10.0**	**+0.6**
WEL	**Wellington**	**1.47**	**90**	P	**Pn**	**15 15 10.6**	**+0.6**
WEL				S	**Sn**	**15 15 31.0**	**-1.0**
LTZ	**Lake Taylor**	**1.53**	**195**	P	**Pn**	**15 15 11.8**	**+1.2**
LTZ				S	**Sn**	**15 15 32.7**	**-0.7**
BHW	**Baring Head**	**1.55**	**95**	P	**Pn**	**15 15 11.2**	**+0.4**
BHW				S	**Sn**	**15 15 32.2**	**-1.4**
KIW	**Kapiti Island**	**1.65**	**75**	P	**Pn**	**15 15 12.4**	**+0.6**
KIW				S	**Sn**	**15 15 34.7**	**-0.7**
GVZ	**Greta Valley S**	**1.67**	**174**	P	**Pn**	**15 15 13.6**	**+1.5**
GVZ				S	**Sn**	**15 15 35.0**	**-1.0**
CAW	**Cannon Point**	**1.71**	**84**	P	**Pn**	**15 15 12.9**	**+0.4**
INZ	**Inchbonnie**	**1.75**	**215**	P	**Pn**	**15 15 13.8**	**+0.8**
OGWZ	**Otaki Gorge**	**1.85**	**76**	P	**Pn**	**15 15 14.5**	**+0.5**
OGWZ				S	**Sn**	**15 15 39.0**	**-0.4**
PLWZ	**Palliser**	**1.85**	**99**	P	**Pn**	**15 15 14.6**	**+0.4**
PAWZ	**Paruwai Farm**	**1.97**	**93**	P	**Pn**	**15 15 15.8**	**+0.3**
MTW	**Mount Morrison**	**2.03**	**87**	P	**Pn**	**15 15 16.3**	**+0.1**
HOWZ	**Holdsworth Sta**	**2.08**	**80**	P	**Pn**	**15 15 16.8**	**-0.1**
OXZ	**Oxford**	**2.10**	**196**	P	**Pn**	**15 15 17.9**	**+0.9**
TRWZ	**Traveller**	**2.17**	**93**	P	**Pn**	**15 15 18.4**	**+0.5**
NBEZ	**Newall Road No**	**2.19**	**22**	P	**Pn**	**15 15 19.3**	**+1.2**
MRZ	**Mangatainoka R**	**2.19**	**74**	P	**Pn**	**15 15 18.0**	**-0.1**
LREZ	**Lake Rotokare**	**2.21**	**34**	P	**Pn**	**15 15 19.9**	**+1.5**
KHEZ	**Kahui Hut**	**2.21**	**25**	P	**Pn**	**15 15 19.4**	**+0.9**
KHEZ	**Kahui Hut**	**2.21**	**25**	P	**Pn**	**15 15 19.4**	**+0.9**
PREZ	**Palmer Road**	**2.21**	**28**	P	**Pn**	**15 15 19.7**	**+1.2**
NEZ	**North Egmont**	**2.25**	**26**	P	**Pn**	**15 15 20.2**	**+1.1**
WAZ	**Wanganui**	**2.27**	**48**	P	**Pn**	**15 15 20.6**	**+1.6**
PKE	**Pukeiti**	**2.29**	**23**	P	**Pn**	**15 15 20.5**	**+1.1**
TMWZ	**Te Maipa**	**2.33**	**86**	P	**Pn**	**15 15 20.1**	**+0.3**
MQZ	**McQueen's Vall**	**2.40**	**183**	P	**Pn**	**15 15 21.3**	**+0.7**
MHCZ	**Mount Hutt**	**2.41**	**202**	P	**Pn**	**15 15 22.0**	**+1.1**
OKCZ	**Okains Bay**	**2.43**	**176**	P	**Pn**	**15 15 22.3**	**+1.3**
RACZ	**Rakaia**	**2.47**	**191**	P	**Pn**	**15 15 22.2**	**+0.7**
VRZ	**Vera Road**	**2.64**	**35**	P	**Pn**	**15 15 23.1**	**-0.5**
BFZ	**Birch Farm**	**2.67**	**78**	P	**Pn**	**15 15 24.3**	**+0.3**
BFZ	**Birch Farm**	**2.67**	**78**	P	**Pn**	**15 15 24.1**	**+0.1**
TSZ	**Takapari Road**	**2.70**	**64**	P	**Pn**	**15 15 24.3**	**-0.1**
WAKZ	**Wakaui South**	**2.73**	**195**	P	**Pn**	**15 15 26.0**	**+1.3**
RPZ	**Rata Peaks**	**2.74**	**208**	P	**Pn**	**15 15 25.2**	**+0.3**
WNVZ	**Wahianoa**	**2.90**	**48**	P	**Pn**	**15 15 27.9**	**+0.8**
ARCZ	**Arundel**	**2.91**	**204**	P	**Pn**	**15 15 27.1**	**+0.1**
PNHZ	**Pukenui**	**2.93**	**63**	P	**Pn**	**15 15 27.1**	**-0.2**
MOVZ	**Moawhango**	**2.94**	**51**	P	**Pn**	**15 15 27.4**	**-0.1**
NGZ	**Ngauruhoe**	**3.01**	**46**	P	**Pn**	**15 15 29.5**	**+1.0**
NNVZ	**North Ngauruho**	**3.05**	**46**	P	**Pn**	**15 15 29.8**	**+0.8**
BHHZ	**Black Hill Sta**	**3.07**	**55**	P	**Pn**	**15 15 29.1**	**-0.1**
PRHZ	**Porangahau**	**3.08**	**72**	P	**Pn**	**15 15 29.6**	**+0.4**
FOZ	**Fox Glacier**	**3.15**	**224**	P	**Pn**	**15 15 30.1**	**+0.1**
KRHZ	**Kereru**	**3.18**	**60**	P	**Pn**	**15 15 30.0**	**-0.5**
HIZ	**Hauiti**	**3.20**	**30**	P	**Pn**	**15 15 31.3**	**+0.5**
HIZ	**Hauiti**	**3.20**	**30**	P	**Pn**	**15 15 30.9**	**+0.1**
TMZ	**Timaru**	**3.35**	**203**	P	**Pn**	**15 15 33.0**	**+0.3**
KAHZ	**Kahuranaki**	**3.44**	**65**	P	**Pn**	**15 15 33.8**	**-0.1**
TLZ	**Tolley Road**	**3.64**	**36**	P	**Pn**	**15 15 36.8**	**+0.3**
NMHZ	**Naumai**	**3.77**	**56**	P	**Pn**	**15 15 45.3**	**+7.1**
ODZ	**Otahua Downs**	**4.06**	**202**	P	**Pn**	**15 15 42.2**	**+0.3**
TOZ	**Tahuroa Road**	**4.13**	**31**	P	**Pn**	**15 15 43.4**	**+0.5**
MKAZ	**Moumakai**	**4.57**	**24**	P	**Pn**	**15 15 49.8**	**+1.1**
ETAZ	**East Tamaki Re**	**4.64**	**21**	P	**Pn**	**15 15 50.9**	**+1.2**
MWZ	**Matawai**	**4.69**	**52**	P	**Pn**	**15 15 49.4**	**-0.8**
RVAZ	**Riverhead Bore**	**4.73**	**17**	P	**Pn**	**15 15 52.9**	**+2.2**
MBAZ	**Motutapu North**	**4.81**	**20**	P	**Pn**	**15 15 53.4**	**+1.6**
WIAZ	**Waiheke Island**	**4.85**	**23**	P	**Pn**	**15 15 54.2**	**+1.7**
TWGZ	**Tauwhareparae**	**5.06**	**54**	P	**Pn**	**15 15 54.0**	**-1.2**

*IDC **01** 15:25:52.7±0.6, 16°29S×177°60W, h0km, mb4.0/17, mbtmp4.0/18, ML3.1/1, MS4.0/47, Error ellipse: s-maj=27.7km s-min=16.6km az=139.0*
*NEIC **01** 15:25:57.2±2.1, 16°3S±0°1×177°4W±0°1, h26km±5km, mb4.9/57, Error ellipse: s-maj=23.1km s-min=12.9km az=148.0*
*GCMT **01** 15:26:01.2±0.2, 16°27S±0°01×177°49W±0°01, h16km±1km, MW5.0/107, Moment Tensor Solution. s39,c44; s107,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.12; $M_{\theta\theta}$-3.31±.11; $M_{\phi\phi}$3.61±.11; $M_{r\theta}$0.16±.32; $M_{r\phi}$1.79±.10; $M_{\theta\phi}$1.89±.38; Best double couple: M_o4.25900×10^{16} NP1,φ327.00000°,δ80.00000°, λ161.00000°. NP2:φ61.00000°,δ72.00000°,λ11.00000°. Principal axes: T 4.7440, Plg20.0000°, Azm283.0000°; N -0.9670, Plg69.0000°, Azm119.0000°; P -3.7730, Plg5.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 15:25:54.5±0.5, 16°3S±0°1×177°51W±0°10, h10km, n138, σ1°42/103, mb4.7/47, MS4.0/45, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.04**	**67**	Pn	**Pn**	**15 27 22.2**	**-1.9**
DZM	**Mont Dzumac**	**16.18**	**247**	Pn	**P**	**15 29 44.6**	**-0.8**
DZM	**Mont Dzumac**	**16.18**	**247**	Pn	**Pn**	**15 29 42.8**	**+0.6**
	0.1nm,0.3s,baz=74,slow=16,SNR=1.5						
DZM				LR	LR	15 34 58.8	
	comp=Z,538nm,20.6s,baz=78,slow=34						
	2.8nm,0.8s						
RAR	**Rarotonga**	**17.48**	**109**	LR	LR	15 35 16.4	
	comp=Z,524nm,19.5s,baz=306,slow=32						
KOUNC	**Koumac, New Ca**	**17.77**	**254**	P	**P**	**15 30 03.9**	**+1.0**
URZ	**Urewera**	**22.34**	**191**	LR	LR	15 38 01.7	
	comp=Z,868nm,19.5s,baz=124,slow=33						
RTZ	**Ruatahuna**	**22.71**	**191**	P	**P**	**15 30 54.6**	**-1.9**
RTZ				IAmb	IAmb	15 31 17.9	
	comp=Z,51nm,1.3s						
QRZ	**Quartz Range**	**25.88**	**197**	P	**P**	**15 31 26.3**	**-0.1**
THZ	**Tophouse**	**26.64**	**196**	P	**P**	**15 31 34.6**	**+1.2**
PPT	**Papeete**	**26.74**	**97**	LR	LR	15 39 10.9	
	comp=Z,369nm,21.9s,baz=270,slow=30						
LTZ	**Lake Taylor**	**27.76**	**196**	P	**P**	**15 31 45.4**	**+1.9**
LTZ				IAmb	IAmb	15 31 54.5	
	comp=Z,38nm,1.2s						
ARMA	**Armidale**	**31.48**	**238**	P	**P**	**15 32 17.6**	**+0.9**
ARMA				IAmb	IAmb	15 32 38.2	
	comp=Z,44nm,1.4s						
WHZ	**Wether Hill Ro**	**31.88**	**199**	P	**P**	**15 32 21.2**	**+1.4**
CTA	**Charters Tower**	**34.58**	**258**	LR	LR	15 45 17.7	
	comp=Z,600nm,19.4s,baz=85,slow=34						
CTAO	**Charters Tower**	**34.58**	**258**	P	**P**	**15 32 43.4**	**-0.4**
PMG	**Port Moresby**	**35.08**	**277**	LR	LR	15 44 46.7	
	comp=Z,343nm,21.7s,baz=105,slow=32						
TOO	**Toolangi**	**38.83**	**230**	P	**P**	**15 33 20.2**	**+0.4**
TOO				IAmb	IAmb	15 34 19.4	
	comp=Z,30nm,1.6s						
STKA	**Stephens Creek**	**40.14**	**240**	P	**P**	**15 33 30.6**	**-0.2**
STKA	**Stephens Creek**	**40.14**	**240**	P	**P**	**15 33 30.7**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=90,slow=9.8,SNR=4.4						
STKA				LR	LR	15 48 21.6	
	comp=Z,202nm,21.1s,baz=49,slow=34						
	comp=Z,3.5nm,0.8s						
WR0	**Warramunga Arr**	**45.59**	**258**	P	**P**	**15 34 15.8**	**+0.6**
WR0				IAmb	IAmb	15 34 21.4	
	comp=Z,24nm,1.5s						
WB0	**Warramunga Arr**	**45.74**	**258**	P	**P**	**15 34 15.1**	**-1.2**
WRA	**Warramunga Arr**	**45.78**	**258**	P	**P**	**15 34 15.6**	**-1.1**
WRA	**Warramunga Arr**	**45.78**	**258**	P	**P**	**15 34 15.4**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=92,slow=7.2,SNR=8.7						
	comp=Z,1.8nm,0.9s						
AS31	**Alice Springs**	**

ELK LR LR 16 06 11.0
comp=Z,54nm,19.0s,baz=246,slow=30
comp=Z,0.6nm,0.6s
J18K Innoko River 81.18 9 P P 15 38 09.8 -0.2
J18K IAmb IAmb 15 38 18.6
comp=Z,12nm,1.1s
BMO Blue Mountains 81.79 39 P P 15 38 13.0 -0.8
HEH HeiHe 82.04 328 *eP* P 15 38 21.4 +6.6
HEH pmax pmax
comp=Z,5.0nm,1.3s
G16K Koyuk River 82.29 6 P P 15 38 15.7 0.0
SEY Seymchan 82.45 347 LR LR 16 07 41.1
comp=Z,115nm,21.6s,baz=46,slow=30
RND Reindeer 82.56 13 P P 15 38 17.5 +0.2
RND IAmb IAmb 15 38 25.1
comp=Z,12nm,1.1s
HLID Hailey 82.89 41 P P 15 38 18.9 -0.8
HLID IAmb IAmb 15 38 30.9
comp=Z,6.9nm,1.3s
M26K Nabesna, AK 83.05 15 P P 15 38 19.0 -0.9
M26K IAmb IAmb 15 38 28.5
comp=Z,13nm,1.1s
G18K Tagagawik 83.21 8 P P 15 38 20.6 0.0
G18K IAmb IAmb 15 38 27.9
comp=Z,14nm,1.6s
NEW Newport 83.75 36 LR LR 16 07 19.3
comp=Z,65nm,19.1s,baz=232,slow=30
HWUT Hardware Ranch 83.77 44 P P 15 38 22.6 -1.7
HWUT IAmb IAmb 15 38 54.8
comp=Z,17nm,1.9s
H21K Melozitna Rive 83.85 10 P P 15 38 22.6 -1.3
H21K IAmb IAmb 15 38 39.4
comp=Z,9.5nm,1.4s
CCB Clear Creek Bu 83.88 12 P P 15 38 23.2 -0.8
CCB IAmb IAmb 15 38 31.4
comp=Z,8.8nm,1.0s
IMAR Indian Mountai 84.00 10 P P 15 38 24.4 -0.2
DLBC Dease Lake 84.06 23 LR LR 16 08 48.4
comp=Z,233nm,19.9s,baz=280,slow=31
MDM Murphy Dome 84.07 12 P P 15 38 24.2 -0.8
IL31 84.18 13 P P 15 38 25.1 -0.4
ILAR Eielson Array 84.18 13 P P 15 38 24.6 -0.9
ILAR Eielson Array 84.18 13 P P 15 38 24.2 -1.4
comp=Z,2.3nm,1.1s,baz=234,slow=6.0,SNR=7.9
ILAR LR LR 16 07 24.4
comp=Z,99nm,20.6s,baz=231,slow=30
comp=Z,2.3nm,1.1s
J25K Salcha River, 84.37 13 P P 15 38 25.9 -0.8
J25K IAmb IAmb 15 38 41.3
comp=Z,17nm,1.4s
TXAR Lajitas Array 84.44 57 P P 15 38 28.9 +1.1
comp=Z,0.6nm,1.0s,baz=236,slow=8.9,SNR=4.5
comp=Z,0.6nm,1.0s
E18K Tukpahlearik C 84.44 6 P P 15 38 26.6 -0.3
E18K IAmb IAmb 15 38 34.7
comp=Z,11nm,1.4s
ANMO Albuquerque 84.46 51 P P 15 38 27.7 -0.2
comp=Z,0.6nm,0.5s,baz=336,slow=10.0,SNR=2.0
ANMO LR LR 16 12 15.9
comp=Z,56nm,18.4s,baz=343,slow=33
comp=Z,0.6nm,0.5s
J26L Joseph Creek 84.68 14 P P 15 38 27.6 -0.6
J26L IAmb IAmb 15 38 39.9
comp=Z,21nm,1.4s
M30M Minto, Yukon 84.89 18 P P 15 38 28.6 -0.7
M30M IAmb IAmb 15 38 40.9
comp=Z,14nm,1.2s
EGAK Eagle 85.49 15 P P 15 38 31.8 -0.4
EGAK IAmb IAmb 15 38 43.7
comp=Z,15nm,1.2s
MAW Mawson 85.61 200 LR LR 16 14 21.9
comp=Z,231nm,19.0s,baz=108,slow=34
PDAR Pinedale Array 85.63 43 P P 15 38 34.5 +0.9
comp=Z,0.9nm,1.0s,baz=172,slow=4.5,SNR=4.1
PDAR LR LR 16 12 43.8
comp=Z,53nm,18.9s,baz=268,slow=33
comp=Z,0.9nm,1.0s
K29M Barlow Dome 85.68 17 P P 15 38 32.0 -1.3
K29M IAmb IAmb 15 38 41.7
comp=Z,7.4nm,1.1s
I28M Miner Creek 86.34 15 P P 15 38 35.3 -1.2
I28M IAmb IAmb 15 38 54.1
comp=Z,24nm,1.9s
CMIG Matias Romero 87.93 72 LR LR 16 09 28.3
comp=Z,128nm,19.6s,baz=208,slow=30
YAK Yakutsk 88.45 338 LR LR 16 13 30.2
comp=Z,30nm,20.1s,baz=326,slow=32
CMAR Chiang Mai Arr 89.17 289 P P 15 38 51.2 +0.2
comp=Z,0.5nm,0.3s,baz=130,slow=3.6,SNR=1.6
CMAR LR LR 16 15 49.6
comp=Z,55nm,20.5s,baz=90,slow=34
comp=Z,0.5nm,0.3s
INK Inuvik 90.16 15 LR LR 16 11 46.8
comp=Z,78nm,21.5s,baz=191,slow=31
PLCA Paso Flores 91.78 133 LR LR 16 11 22.0
comp=Z,76nm,20.7s,baz=212,slow=30
SNAA Sanae 92.13 178 LR LR 16 16 11.1
comp=Z,42nm,21.2s,baz=213,slow=33
YKA Yellowknife Ar 92.56 24 P P 15 39 06.2 +0.4
comp=Z,0.3nm,0.9s,baz=239,slow=11,SNR=2.0
comp=Z,0.3nm,0.9s
SONM Songino Array 92.93 319 P P 15 39 07.8 -0.2
SONM LR LR 16 16 37.5
comp=Z,36nm,20.0s,baz=268,slow=33
comp=Z,0.2nm,0.3s
TEIG Tepich 94.82 70 LR LR 16 13 24.7
comp=Z,506nm,21.1s,baz=358,slow=30
JTS Las Juntas de 95.27 81 LR LR 16 11 37.1
comp=Z,171nm,21.7s,baz=352,slow=29
NNA Nana 96.68 105 LR LR 16 14 19.5
comp=Z,49nm,18.6s,baz=210,slow=30
ATAH Atahualpa 96.69 99 LR LR 16 13 11.5
comp=Z,175nm,21.1s,baz=247,slow=29
ULM Lac du Bonnet 97.17 40 LR LR 16 16 26.7
comp=Z,90nm,19.5s,baz=268,slow=31
BRTR Keskin Array B 144.26 317 PKP PKPbc 15 45 29.6 +0.2
comp=Z,1.4nm,1.0s,baz=116,slow=3.4,SNR=5.8
DPC Dobruska-Polom 144.29 345 *e*PKP **PKiKP 15 45 36.2 +1.8**
KRLC Kraliky 144.42 344 *e*PKP **PKiKP 15 45 36.6 +1.9**
PRU Pruhonice 145.05 346 *e*PKP **PKiKP 15 45 38.5 +2.6**
ZVC Zvikov 145.64 346 *e*PKP **PKPab 15 45 33.7 0.0**
ZVC *ex* x 15 45 39.9
MMAI Mount Meron Ar 145.98 305 PKPbc **PKPdf 15 45 33.8 -0.6**
comp=Z,0.6nm,0.3s,baz=46,slow=4.2,SNR=2.4
KHC Kasperske Hory 146.07 347 *e*PKP **PKPab 15 45 35.0 -0.3**
KHC *ep*PKP sPKPab 15 45 41.0 +1.9
CKRC Cesky Krumlov 146.20 346 *e*PKP **PKiKP 15 45 41.5 +3.1**
GERES GERESS Array B 146.31 347 PKPbc **PKPdf 15 45 34.7 +0.3**
comp=Z,0.9nm,0.7s,baz=340,slow=8.3,SNR=2.2
CONA Conrad Observa 146.63 344 *e*PKP **PKPab 15 45 37.2 -0.4**
comp=Z,3.6nm,0.9s
RONA Rosalia, Austr 146.72 343 *e*PKP **PKPdf 15 45 35.6 +0.4**
comp=Z,2.5nm,0.6s
RONA *ep*PKiKP sPKPab 15 45 44.0 +2.4
comp=Z,17nm,1.2s
ARSA Arzberg 147.34 343 *e*PKP **PKPbc 15 45 39.0 +0.5**
comp=Z,6.1nm,1.8s
BIOA Bad Ischl, Aus 147.41 346 *ep*PKiKP **PKiKP 15 45 45.7 +4.7**
comp=Z,7.0nm,0.8s
LESA Schwarzleotal 147.88 347 *ep*PKiKP **PKPab 15 45 46.9 +4.4**
comp=Z,9.5nm,1.0s
SOKA Soboth 148.00 344 *ep*PKP **PKPbc 15 45 41.0 +0.6**
comp=Z,8.4nm,1.1s
KBA Koelnbreinsper 148.06 346 *ep*PKP **PKPab 15 45 44.1 +0.7**
comp=Z,2.1nm,0.6s
RETA Reutte 148.20 349 *ep*PKiKP **PKPab 15 45 47.9 +4.1**
comp=Z,6.8nm,0.8s
WTTA Wattenberg 148.25 348 *ep*PKP **PKPab 15 45 48.1 +4.0**
comp=Z,13nm,0.9s
MOTA Moosalm 148.27 349 *ep*PKP **PKPab 15 45 48.0 +3.9**
comp=Z,8.3nm,1.0s
OBKA Obir 148.29 344 *e*PKiKP **PKiKP 15 45 42.7 -0.1**
comp=Z,19nm,1.3s
MYKA Terra Mystica 148.41 345 *ep*PKiKP **PKPab 15 45 47.1 +2.4**
comp=Z,8.9nm,1.0s
DAVA Damuels 148.54 350 *ep*PKiKP **PKPab 15 45 46.8 +1.6**
comp=Z,13nm,1.6s
ABTA Abfaltersbach 148.56 347 *e*PKiKP **PKiKP 15 45 43.5 +0.1**
comp=Z,11nm,1.4s
ABTA *ep*PKiKP **pPKPab 15 45 47.8 -0.3**
comp=Z,15nm,1.2s
FETA Feichten 148.65 349 pPKP **PKPab 15 45 49.5 +3.7**
comp=Z,9.6nm,1.6s

*IDC **01** 15:37:49.8±0.7, 37.°08N×141.°92E, h0km, mb4.2/24,*

mbtmp4.2/30, ML3.5/6, MS3.8/22, Error ellipse: s-maj=16.9km s-min=14.0km az=126.0
*BJI **01** 15:37:49.3±0.0, 37.°21N×141.°92E, h8km, mb4.6/61, mB4.9/33, Ms4.1/28, Ms7 4.0/30*
*MOS **01** 15:37:50.0±1.2, 37.°22N×142.°02E, h15km, mb4.9/23, Error ellipse: s-maj=7.5km s-min=4.6km az=103.7*
*JMA **01** 15:37:52.1±0.2, 37.°1N±0.°6×14.°2E±°, h45km±4km, MD4.4/39, MV4.5/39, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **01** 15:37:52.1, 37.°13N×142.°02E, h45km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.51; Mθθ0.58; Mφφ-1.09; Mrθ2.56; Mθφ-0.77; Mφr2.58; Fault plane solution: M0 3.81000×10^15^ NP1:φs46.00000°, δ84.00000°, λ103.00000°. NP2:φs160.00000°, δ14.00000°, λ24.00000°.*
*NEIC **01** 15:37:53.3±2.4, 37.°20N±0.°06×142.°02E±0.°08, h24km±6km, mb4.5/74 Error ellipse: s-maj=9.9km s-min=8.1km az=100.0*

ISC 01 15:37:51.4±0.7, 37.°12N±0.°04×142.°09E±0.°04, h15km±3km, n313, σ1$69/302, mb4.6/90, MS3.9/28, 34C-33D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.00**	**284**	⇓*i*	P		**Pb**	**15 38 09.2**	**-1.3**
JFK				⇓	S		**Sb**	**15 38 21.2**	**-2.3**
JFK	**Kawauchi**	**1.00**	**284**	A	A			15 38 09.2	
comp=E,9.0nm,0.5s,comp=N,8.0nm,0.6s									
ONAJ	**Iwakimizuishiy**	**1.03**	**269**	⇓*i*	P		**Pg**	**15 38 09.4**	**-2.0**
ONAJ	**Iwakimizuishiy**	**1.03**	**269**	A	A			15 38 09.4	
comp=E,15nm,0.2s,comp=N,14nm,2.2s									
JMST	**Minamisoumatoc**	**1.13**	**302**	⇓*i*	P		**Pb**	**15 38 11.1**	**-1.5**
JMST				⇓	S		**Sb**	**15 38 24.6**	**-2.5**
JMST	**Minamisoumatoc**	**1.13**	**302**	A	A			15 38 11.1	
comp=E,7.0nm,1.9s,comp=N,9.0nm,0.3s									
JFFD	**Fukushimafurud**	**1.22**	**269**	⇓*i*	P		**Pb**	**15 38 12.1**	**-2.1**
JFFD				⇓*e*	S		**Sb**	**15 38 26.8**	**-3.0**
JFFD	**Fukushimafurud**	**1.22**	**269**	A	A			15 38 12.1	
comp=E,7.0nm,0.6s,comp=N,6.0nm,2.3s									
JMM	**Marumori**	**1.27**	**306**				**Pb**	**15 38 13.0**	**-2.1**
JMM					Sn		**Sb**	**15 38 27.3**	**-3.9**
JMM	**Marumori**	**1.27**	**306**	⇓*i*	P		**Pb**	**15 38 13.3**	**-1.7**
JMM				⇓*e*	S		**Sb**	**15 38 28.4**	**-2.8**
JMM	**Marumori**	**1.27**	**306**	A	A			15 38 13.3	
comp=E,8.0nm,5.2s,comp=N,8.0nm,0.5s									
JIKH	**Ishinomakikobu**	**1.28**	**338**	A	A			15 38 13.8	
comp=E,16nm,0.6s,comp=N,7.0nm,0.7s									
JHYU	**Hitachinakayam**	**1.44**	**238**	A	A			15 38 15.7	
comp=E,6.0nm,1.0s,comp=N,5.0nm,0.7s									
JIO	**Ouri**	**1.45**	**336**	⇓*i*	P		**Pn**	**15 38 16.1**	**-1.0**
JIO				⇓	S		**Sb**	**15 38 32.5**	**-3.9**
JOTO	**OTAMA OYAMA**	**1.47**	**288**	*i*	P		**Pb**	**15 38 17.0**	**-1.4**
JOTO					S		**Sb**	**15 38 34.2**	**-2.6**
JOTO	**OTAMA OYAMA**	**1.47**	**288**	A	A			15 38 17.0	
comp=E,24nm,1.1s,comp=N,30nm,0.6s									
JOU	**Okura**	**1.68**	**318**	*i*	P		**Pb**	**15 38 20.0**	**-2.0**
JOU					S		**Sb**	**15 38 40.4**	**-2.6**
JOU	**Okura**	**1.68**	**318**	A	A			15 38 20.0	
comp=E,12nm,1.0s,comp=N,19nm,0.6s									
JYAR	**Yonezawaarcadi**	**1.74**	**298**	A	A			15 38 19.9	
comp=E,33nm,1.1s,comp=N,28nm,1.0s									
JSB	**Shiboa**	**1.74**	**266**	A	A			15 38 20.0	
comp=E,16nm,0.9s,comp=N,21nm,1.3s									
JOFO	**Osakifurukawao**	**1.75**	**328**	A	A			15 38 20.3	
comp=E,28nm,0.7s,comp=N,30nm,1.7s									
JYT	**Yasato**	**1.77**	**240**	A	A			15 38 20.4	
comp=E,5.0nm,3.6s,comp=N,6.0nm,4.2s									
JFY	**Yanaizu**	**1.92**	**279**	P			**Pn**	**15 38 23.5**	**-0.1**
JFY				S			**Sn**	**15 38 46.8**	**-0.8**
JFY	**Yanaizu**	**1.92**	**279**	A	A			15 38 23.5	
comp=E,4.0nm,3.1s,comp=N,7.0nm,2.4s									
JYS	**Shirataka**	**1.94**	**305**	P			**Pb**	**15 38 24.3**	**-2.3**
JYS				S			**Sb**	**15 38 48.2**	**-2.4**
JYS	**Shirataka**	**1.94**	**305**	A	A			15 38 24.3	
comp=E,14nm,1.1s,comp=N,12nm,1.7s									
JMK	**Ichinoseki**	**1.95**	**340**	*i*	P		**Pn**	**15 38 23.8**	**-0.2**
JMK	**Ichinoseki**	**1.95**	**340**	A	A			15 38 23.8	
comp=E,7.0nm,3.0s,comp=N,6.0nm,0.6s									
JAG	**Ashikaga**	**2.23**	**253**	P			**Pn**	**15 38 27.1**	**-0.8**
JAG				S			**Sn**	**15 38 52.5**	**-2.6**
JYK	**Kaneyama**	**2.25**	**323**	A	A			15 38 27.6	
comp=E,3.0nm,4.3s,comp=N,4.0nm,3.4s									
JNS	**Sasagawa**	**2.31**	**288**	A	A			15 38 28.1	
comp=E,2.0nm,2.7s,comp=N,2.0nm,3.2s									
JYA	**Atsumi**	**2.39**	**309**	A	A			15 38 29.3	
comp=E,7.0nm,0.7s,comp=N,6.0nm,1.0s									
JOM	**Ohasama**	**2.43**	**345**	A	A			15 38 30.3	
comp=E,7.0nm,0.7s,comp=N,3.0nm,2.3s									
JRG	**Rokugo**	**2.54**	**334**	A	A			15 38 31.8	
comp=E,8.0nm,0.6s,comp=N,8.0nm,0.9s									
JYYZ	**Yamagatayuza**	**2.54**	**319**	A	A			15 38 31.6	
comp=E,10.0nm,3.3s,comp=N,8.0nm,6.5s									
JIZZ	**Izumozaki**	**2.73**	**280**	A	A			15 38 34.0	
comp=E,10.0nm,2.0s,comp=N,9.0nm,2.5s									
JGK	**Kuni**	**2.82**	**260**	A	A			15 38 35.4	
comp=E,4.0nm,5.2s,comp=N,4.0nm,4.4s									
JYW	**Yuwa**	**2.83**	**329**	A	A			15 38 35.8	
comp=E,10.0nm,0.9s,comp=N,7.0nm,2.3s									
JOD2	**Odawara 2**	**3.06**	**234**	A	A			15 38 38.8	
comp=E,3.0nm,2.0s,comp=N,3.0nm,5.7s									
JKEN	**Kujiedanarisaw**	**3.09**	**355**	A	A			15 38 39.8	
comp=E,8.0nm,4.2s,comp=N,10.0nm,1.2s									
JJN	**Nakama**	**3.14**	**271**	A	A			15 38 39.8	
comp=E,3.0nm,2.1s,comp=N,3.0nm,5.7s									
MJAR	**Matsushiro Arr**	**3.17**	**261**	Pn			**Pn**	**15 38 40.6**	**-0.2**
comp=N,1.8nm,0.3s,baz=82,slow=15,SNR=66									
MJAR				Sn			**Sb**	**15 39 21.5**	**-4.3**
comp=N,2.2nm,0.3s,baz=82,slow=25,SNR=5.0									
MJAR				LR			LR	15 40 12.5	
comp=N,1μm,18.6s,baz=106,slow=47									
comp=N,12nm,0.3s									
MAJO	**Matsushiro**	**3.17**	**261**	Pn			**Pn**	**15 38 41.7**	**+0.9**
MAJO				Sn			**Sn**	**15 39 18.8**	**+0.5**
MAJO	**Matsushiro**	**3.17**	**261**	*i*	P		**Pn**	**15 38 41.2**	**+0.4**
MJB9	**Matsu-Tunnel**	**3.17**	**261**	Pn			**Pn**	**15 38 40.7**	**-0.1**
MJB9				Sn			**Sn**	**15 39 19.1**	**+0.8**
JTM	**Tenmabayashi**	**3.75**	**348**	Pn			**Pn**	**15 38 49.1**	**+0.4**
JSG	**Sagara**	**4.00**	**234**				**Pn**	**15 38 54.7**	**+2.5**
JHJ2	**Mitsune**	**4.41**	**206**				**Pn**	**15 38 58.9**	**+1.0**
JHJ	**Hachijo jima 2**	**4.42**	**206**	Pn			**Pn**	**15 38 57.2**	**-0.8**
comp=N,23nm,0.3s,baz=82,slow=15,SNR=8.6									
JHJ				Sn			**Sn**	**15 39 45.8**	**-3.3**
comp=N,34nm,0.3s,baz=94,slow=22,SNR=7.7									
JHJ				LR			LR	15 40 00.1	
comp=N,102nm,20.2s,baz=46,slow=30									
comp=N,118nm,0.9s									
ERM	**Erimo**	**4.96**	**9**	Pn			**Pn**	**15 39 05.5**	**+0.2**
ERM	**Erimo**	**4.96**	**9**	*i*	P		**Pn**	**15 39 05.5**	**+0.2**
NMR	**Nemuro--Hokkai**	**6.83**	**23**	*e*	P		**Pn**	**15 39 29.1**	**-1.9**
NMR				*e*	S		**Sn**	**15 40 41.7**	**-6.8**
ASAJ	**Asahikawa**	**7.00**	**3**	Pn			**Pn**	**15 39 33.2**	**-0.1**
comp=N,5.9nm,0.3s,baz=217,slow=7.9,SNR=43									
ASAJ				Sn			**Sn**	**15 40 51.5**	**-1.1**
comp=N,1.8nm,0.3s,baz=342,slow=31,SNR=4.4									
comp=N,17nm,0.4s									
JKA	**Kamikawa-asahi**	**7.00**	**3**				**Pn**	**15 39 33.1**	**-0.2**
RUSJ	**Misakicho**	**7.38**	**18**	*e*	P		**Pn**	**15 39 37.7**	**-0.8**
RUSJ				*e*	S		**Sn**	**15 40 58.0**	**-3.9**
YUK	**Yuzh-Kuril'sk**	**7.48**	**21**	*e*	P		**Pn**	**15 39 38.7**	**-1.2**
YUK				*e*	S		**Sn**	**15 40 58.4**	**-5.9**
YUK				pmax	pmax				
comp=N,26nm,0.2s									
YUK				pmax	pmax				
comp=Z,102nm,0.2s									
YUK				pmax	pmax				
comp=E,41nm,0.3s									
JMN	**Monobe**	**7.51**	**246**	Pn			**Pn**	**15 39 42.0**	**+1.6**
SHO	**Shikotan**	**7.64**	**27**	P			**Pn**	**15 39 39.7**	**-2.5**
SHO				*e*	S		**Sn**	**15 41 00.9**	**-7.6**
KUR	**Kuril'sk**	**9.20**	**26**	*e*	P		**Pn**	**15 40 02.2**	**-1.2**
KUR				*e*	S		**Sn**	**15 41 39.2**	**-7.4**
KUR				pmax	pmax				
comp=Z,39nm,0.8s									
KUR				smax	smax				
comp=E,124nm,0.5s									
KUR				smax	smax				
comp=N,86nm,0.4s									
YSS	**Yuzh-Sakhalins**	**9.84**	**3**				**Pn**	**15 40 12.8**	**+0.6**
YSS	**Yuzh-Sakhalins**	**9.84**	**3**	*e*	P		**Pn**	**15 40 12.8**	**+0.6**
YSS				*e*	S		**Sn**	**15 41 57.6**	**-4.7**
YSS				pmax	pmax				
comp=Z,30nm,0.6s									
YSS				MLR	MLR				
comp=N,200nm,16.0s									
YSS				MLR	MLR				
comp=E,300nm,16.0s									
JCJ	**Chichijima**	**10.00**	**180**	Pn			**Pn**	**15 40 14.2**	**-0.3**
JCJ	**Chichijima**	**10.00**	**180**	Pn			Pn	15 40 08.7	-5.8
comp=E,5.4nm,0.3s,baz=17,slow=20,SNR=7.7									
JCJ				Sn			Sn	15 41 52.7	-14
comp=E,5.1nm,0.3s,baz=309,slow=20,SNR=1.7									
JNU	**Nakatsue**	**10.01**	**250**	Pn			**Pn**	**15 40 14.6**	**-0.1**
JNU	**Nakatsue**	**10.01**	**250**	Pn			**Pn**	**15 40 13.1**	**-1.7**
comp=E,0.1nm,0.3s,baz=92,slow=10,SNR=3.5									
comp=E,11nm,0.9s									
MSHR	**Mys Shultsa**	**10.02**	**306**	*i*	P		**Pn**	**15 40 16.2**	**+1.5**
USA0B	**Ussuriysk Arra**	**10.43**	**316**	Pn			**Pn**	**15 40 19.8**	**-0.5**
USA0B	**Ussuriysk Arra**	**10.43**	**316**	*i*	P		**Pn**	**15 40 20.7**	**+0.4**
USRK	**Ussuriysk Ar.**	**10.43**	**316**	Pn			**Pn**	**15 40 20.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**10.43**	**316**	P			**Pn**	**15 40 20.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**10.43**	**316**	Pn			**Pn**	**15 40 22.6**	**+2.3**
comp=E,0.7nm,0.3s,baz=123,slow=14,SNR=18									
USRK				LR			LR	15 44 06.1	
comp=E,471nm,19.3s,baz=138,slow=36									
KSRS	**Korea Array**	**11.29**	**276**	Pn			**Pn**	**15 40 36.1**	**+3.9**
comp=E,0.3nm,0.3s,baz=90,slow=14,SNR=30									
KSRS				LR			LR	15 44 44.7	
comp=E,374nm,19.2s,baz=80,slow=37									
KSAR	**Wonju Array Be**	**11.32**	**276**	Pn			**Pn**	**15 40 31.4**	**-1.2**
KSAR	**Wonju Array Be**	**11.32**	**276**	P			**Pn**	**15 40 31.4**	**-1.2**
KS19	**Wonju Array Si**	**11.34**	**276**				**Pn**	**15 40 31.9**	**-0.9**
MDJ	**Mudanjiang**	**12.05**	**312**	P			**Pn**	**15 40 44.6**	**+2.0**
MDJ				pP				15 40 46.5	
MDJ				sP				15 40 48.6	
MDJ				PP			**PnPn**	**15 40 52.9**	**+2.6**
MDJ				S			**Sn**	**15 42 57.9**	**+1.2**
MDJ				sS				15 43 03.3	
MDJ				SS			**SnSn**	**15 43 09.3**	**+0.6**
MDJ				pmax	pmax				
comp=E,4.0nm,0.6s									
MDJ				pmax	pmax				
comp=E,130nm,6.0s									
MDJ				LR	LR				
comp=E,320nm,17.9s									
MDJ				LR	LR				
comp=E,310nm,20.8s									
MDJ				LR	LR				
comp=E,540nm,17.4s									
MDJ	**Mudanjiang**	**12.05**	**312**	Pn			**Pn**	**15 40 40.2**	**-2.4**
TYV	**Tymovskoe**	**13.74**	**2**	*e*	P		**Pn**	**15 41 05.8**	**+0.2**
TYV				*e*	S		**Sn**	**15 43 39.7**	**+1.8**
TYV				pmax	pmax				
comp=Z,200nm,3.4s									
TYV				pmax	pmax				
comp=Z,5.0nm,1.3s									
TYV				smax	smax				
comp=E,400nm,5.7s									
GRNR	**Gornyy**	**14.23**	**345**	⇓*i*	P		**Pn**	**15 41 11.6**	**-0.7**
GRNR				pmax	pmax				
comp=E,2.0nm,0.7s									
GRNR				pmax	pmax				
comp=N,4.0nm,0.9s									
GRNR				pmax	pmax				
comp=Z,5.0nm,0.8s									
GRNR				MLR	MLR				
comp=E,130nm,11.0s									
GRNR				MLR	MLR				
comp=N,140nm,14.0s									
KLR	**Kul'dur**	**14.24**	**331**	*ce*	P		**Pn**	**15 41 12.6**	**+0.1**
KLR				pmax	pmax				
comp=Z,11nm,2.5s									
KLR	**Kul'dur**	**14.24**	**331**	Pn			**Pn**	**15 41 12.0**	**-0.4**
comp=Z,0.4nm,0.3s,baz=134,slow=12,SNR=11									
KLR				LR			LR	15 46 39.2	
comp=Z,352nm,18.6s,baz=133,slow=37									
comp=Z,1.6nm,0.5s									
HEH	**HeiHe**	**16.84**	**326**	*e*	P		**Pn**	**15 41 43.3**	**-3.2**
HEH				LR	LR				
comp=Z,260nm,15.0s									
HEH				LR	LR				
comp=Z,340nm,15.9s									
HEH				LR	LR				
comp=Z,380nm,15.5s									
PETK	**Petropavlovsk-**	**19.34**	**29**	P			**Pn**	**15 42 18.9**	**+1.7**
comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=1.3									
comp=Z,4.6nm,0.8s									
ZEA	**Zeya**	**19.54**	**333**	*e*	P		**P**	**15 42 17.0**	**-1.3**
ZEA				pmax	pmax				
comp=E,10.0nm,0.6s									
ZEA				pmax	pmax				
comp=N,20nm,0.7s									
ZEA				pmax	pmax				
comp=Z,30nm,0.8s									
ZEA				MLR	MLR				
comp=E,100nm,12.0s									
ZEA				MLR	MLR				
comp=Z,200nm,14.0s									
NJ2	**Nanjing**	**19.77**	**262**	*e*	P		**P**	**15 42 20.5**	**-0.4**
NJ2				pP			**sP**	**15 42 27.6**	**+0.8**
NJ2				sP			pP	15 42 32.8	+7.9
NJ2				pmax	pmax				
comp=Z,11nm,0.8s									
NJ2				pmax	pmax				
comp=Z,380nm,3.8s									
TIA	**Tai'an**	**20.04**	**275**	*e*	P		**P**	**15 42 22.6**	**-1.2**
TIA				pmax	pmax				
comp=Z,9.0nm,1.0s									
TIA				LR	LR				
comp=Z,120nm,14.2s									
TIA				LR	LR				
comp=Z,130nm,14.7s									
TIA				LR	LR				
comp=Z,190nm,16.7s									
BJI	**Beijing**	**20.45**	**286**	P			Pn	15 42 29.1	-1.3
BJI				pmax	pmax				
comp=Z,5.0nm,1.0s									
BJT	**Baijiatuao**	**20.45**	**286**	P			**P**	**15 42 25.7**	**-2.6**
BJT	**Baijiatuao**	**20.45**	**286**	P			**P**	**15 42 25.7**	**-2.6**
BJT				pmax	pmax				
comp=Z,7.0nm,0.7s									
YOJ	**Yonaguni jima**	**20.64**	**238**	P			**P**	**15 42 30.3**	**-0.1**
YOJ	**Yonaguni jima**	**20.64**	**238**	P			**P**	**15 42 30.3**	**-0.1**
YOJ				pmax	pmax				
comp=Z,242nm,1.4s									
XLT	**XiLinHaoTe**	**20.85**	**297**	*e*	P		**P**	**15 42 30.5**	**-2.2**
XLT				pP			pP	15 42 34.5	-2.2
XLT				pmax	pmax				
comp=Z,26nm,1.0s									
XLT				pmax	pmax				
comp=Z,130nm,4.0s									
XLT				LR	LR				
comp=Z,270nm,16.1s									
XLT				LR	LR				
comp=Z,290nm,17.9s									
HNS	**HongShan**	**21.77**	**279**	⇑*i*	P		**P**	**15 42 40.8**	**-1.7**
HNS				*e*	S		**S**	**15 46 42.4**	**-0.5**
HNS				pmax	pmax				
comp=Z,46nm,0.7s

comp=Z,300nm,14.1s
BTO Baotou 25.14 288 *e*P **P** **15 43 17.3 +1.4**
BTO pP **sP** **15 43 21.5 -0.3**
BTO sP **pP** **15 43 24.4 +4.4**
BTO PP **PnPn** **15 43 55.5 +5.8**
BTO S **S** **15 47 40.9 +0.6**
BTO sS **sS** **15 47 48.2 +0.7**
BTO pmax pmax
comp=Z,25nm,1.0s
BTO pmax pmax
comp=Z,210nm,4.5s
BTO LR LR
comp=Z,470nm,14.4s
BTO LR LR
comp=Z,430nm,10.2s
BTO LR LR
comp=Z,310nm,10.4s
YAK Yakutsk 26.11 347 P **P** **15 43 22.6 -1.7**
YAK Yakutsk 26.11 347 *e*P **P** **15 43 23.5 -0.8**
YAK *e* 15 44 24.6
YAK *e*S **S** **15 48 01.4 +6.4**
YAK *e*SS SnSn 15 49 21.1 +28
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,105nm,3.8s
YAK pmax pmax
comp=E,48nm,2.4s
YAK pmax pmax
comp=N,78nm,4.0s
YAK smax smax
comp=E,18nm,1.5s
YAK smax smax
comp=N,34nm,2.7s
YAK MLR MLR
comp=Z,323nm,15.0s
YAK MLR MLR
comp=E,73nm,13.0s
YAK MLR MLR
comp=N,153nm,13.0s
YAK Yakutsk 26.11 347 LR LR 15 54 01.8
comp=N,185nm,18.8s,baz=112,slow=37
SEY Seymchan 26.60 11⇑ *i*P **P** **15 43 30.0 +1.2**
SEY pmax pmax
comp=Z,29nm,1.8s
SEY Seymchan 26.60 11 LR LR 15 56 13.4
comp=Z,83nm,18.5s,baz=330,slow=41
XAN Xi'an 27.07 273⇑P **P** **15 43 32.0 -1.5**
XAN pP sP 15 43 37.4 -1.9
XAN pmax pmax
comp=Z,13nm,0.9s
H11N2 WAKE ISLAND Hy 27.73 122 T T 16 13 07.2
baz=314,slow=75,SNR=156
H11N1 WAKE ISLAND Hy 27.74 122 T T 16 13 07.8
baz=314,slow=75,SNR=176
BOD Bodaibo 27.75 327 *e*P **P** **15 43 39.0 -0.2**
BOD pmax pmax
comp=Z,17nm,0.8s
H11N3 WAKE ISLAND Hy 27.75 122 T T 16 13 08.5
baz=314,slow=75,SNR=145
ULN Ulaanbaatar 27.75 304 P **P** **15 43 37.1 -2.4**
ULN Ulaanbaatar 27.75 304 *i*P **P** **15 43 39.5 -0.1**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ENH Enshi 27.88 265 P **P** **15 43 39.8 -0.9**
SONM Songino Array 28.18 304 P **P** **15 43 41.1 -2.3**
SONM IAmb IAmb 15 43 50.4
comp=Z,6.6nm,0.8s
SONM Songino Array 28.18 304 P **P** **15 43 41.1 -2.3**
SONM pmax pmax
comp=Z,7.0nm,0.8s
SONM Songino Array 28.18 304 P **P** **15 43 43.3 -0.1**
comp=Z,5.9nm,0.8s,baz=104,slow=9.5,SNR=26
SONM LR LR 15 55 08.7
comp=Z,94nm,19.3s,baz=14,slow=37
comp=Z,5.9nm,0.8s
H11S1 WAKE ISLAND Hy 28.46 124 T T 16 14 04.1
baz=316,slow=76,SNR=98
H11S3 WAKE ISLAND Hy 28.46 124 T T 16 14 20.2
baz=316,slow=76,SNR=106
H11S2 WAKE ISLAND Hy 28.47 124 T T 16 14 13.9
baz=316,slow=76,SNR=95
LZH Lanzhou 30.59 280 *e*P **P** **15 44 06.8 +2.0**
LZH pmax pmax
comp=Z,13nm,1.5s
LZH LR LR
comp=Z,280nm,11.7s
LZH LR LR
comp=Z,250nm,12.7s
LZH LR LR
comp=Z,270nm,11.7s
ZAK Zakamensk 30.64 308 *e*P **P** **15 44 04.7 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.1s
GYA Guiyang 31.77 261⇑ *i*P **P** **15 44 15.2 -0.1**
GYA pmax pmax
comp=Z,23nm,1.1s
GTA Gaotai 33.05 287 *e*P **P** **15 44 27.8 +1.3**
GTA pP sP 15 44 31.6 -0.7
GTA pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 33.79 16 *i*P **P** **15 44 32.5 +0.1**
KMI Kunming 35.51 262⇑P **P** **15 44 48.7 +0.7**
KMI pmax pmax
comp=Z,26nm,0.8s
KMI LR LR
comp=Z,110nm,21.9s
KMI LR LR
comp=Z,170nm,16.6s
KMI LR LR
comp=Z,200nm,24.1s
PZH PanZhiHua 35.65 265 P **P** **15 44 48.8 -0.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,160nm,5.3s
GOMU GeErMu 37.63 283 P **P** **15 45 06.7 +0.6**
GOMU pP sP 15 45 11.1 -0.9
GOMU sP pP 15 45 12.3 +2.0
GOMU pmax pmax
comp=Z,9.0nm,0.8s
TNCH TengChong 38.90 265⇑P **P** **15 45 18.5 +1.7**
TNCH pmax pmax
comp=Z,19nm,0.7s
TNCH pmax pmax
comp=Z,100nm,4.1s
UBPT Khong Chiam 39.06 246 P **P** **15 45 16.7 -1.2**
CRAI Chiangrai 39.93 257 P **P** **15 45 24.9 -0.3**
DGZ Jazzator, Alta 40.78 306 *i*P **P** **15 45 32.9 +0.9**
DGZ pmax pmax
comp=Z,25nm,0.9s
WMQ Urumqi 41.28 297 *e*P **P** **15 45 37.4 +1.2**
WMQ pP sP 15 45 44.2 +2.1
WMQ pmax pmax
comp=Z,24nm,0.9s
CM31 Chiang Mai Arr 42.04 256 P **P** **15 45 43.1 +0.5**
CMAR Chiang Mai Arr 42.04 256 P **P** **15 45 42.4 -0.2**
CMAR Chiang Mai Arr 42.04 256*ce*P **P** **15 45 43.5 +0.9**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 42.04 256 P **P** **15 45 43.0 +0.4**
comp=Z,1.8nm,0.8s,baz=45,slow=6.2,SNR=15
comp=Z,1.8nm,0.8s
ZAA0 Zalesovo Array 42.26 312 P **P** **15 45 43.4 -0.5**
ZAA0 IAmb IAmb 15 45 53.8
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 42.26 312 P **P** **15 45 42.8 -1.1**
ZALV Zalesovo Beam 42.26 312 *i*P **P** **15 45 44.2 +0.3**
ZALV pmax pmax
comp=Z,8.0nm,0.8s
ZALV Zalesovo Beam 42.26 312 P **P** **15 45 43.9 +0.1**
comp=Z,7.7nm,0.8s,baz=90,slow=7.4,SNR=29
ZALV LR LR 16 03 56.7
comp=Z,142nm,18.9s,baz=62,slow=37
comp=Z,7.7nm,0.8s
C16K Lisburne Hills 42.38 26 P **P** **15 45 45.5 +0.8**
LSA Lhasa 42.74 275 P **P** **15 45 48.4 -0.3**
LSA Lhasa 42.74 275 P **P** **15 45 48.4 -0.3**
LSA pmax pmax
comp=Z,6.0nm,0.9s
F17K Baldwin Pennin 43.38 29 P **P** **15 45 52.6 -0.2**
NRIK Noril'sk 43.41 335 P **P** **15 45 52.2 -0.9**
NRIK Noril'sk 43.41 335⇓ *i*P **P** **15 45 53.4 +0.3**
NRIK pmax pmax
comp=Z,10.0nm,1.5s
NRIK Noril'sk 43.41 335 P **P** **15 45 53.0 0.0**
comp=Z,1.5nm,0.3s,baz=96,slow=7.2,SNR=2.8
NRIK LR LR 16 04 46.6
comp=Z,141nm,19.0s,baz=72,slow=37
comp=Z,1.5nm,0.3s
E18K Tukpahleark C 43.86 28 P **P** **15 45 57.6 +1.0**
C18K Utukok River 43.96 26 P **P** **15 45 58.8 +1.2**
H18K Honhosa River 44.29 31 P **P** **15 46 00.8 +0.7**
G18K Tagagawik 44.30 30 P **P** **15 46 00.9 +0.6**
MK31 Makanchi Array 44.53 302 P **P** **15 46 02.1 -0.2**
MK31 IAmb IAmb 15 46 03.7
comp=Z,6.7nm,0.8s
MK31 Makanchi Array 44.53 302⇑ *i*P **P** **15 46 02.2 -0.2**
MKAR Makanchi Array 44.53 302 P **P** **15 46 01.8 -0.6**
MKAR Makanchi Array 44.53 302 P **P** **15 46 02.4 0.0**
comp=Z,6.6nm,0.7s,baz=88,slow=9.7,SNR=73
comp=Z,6.6nm,0.7s
C19K Lookout Ridge 44.64 26 P **P** **15 46 02.9 -0.1**
C19K IAmb IAmb 15 46 18.1
comp=Z,5.4nm,0.8s
L18K Granite Mounta 44.67 36 P **P** **15 46 04.4 +1.2**
MAKZ Makanchi 44.74 302 P **P** **15 46 03.3 -0.7**
MAKZ IAmb IAmb 15 46 05.0
comp=Z,7.0nm,0.8s
MAKZ Makanchi 44.74 302 P **P** **15 46 03.3 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,0.8s
N18K Kilae Creek 44.95 38 P **P** **15 46 05.2 -0.4**
G19K Purcell Mounta 44.97 30 P **P** **15 46 05.3 -0.3**
G19K IAmb IAmb 15 46 18.3
comp=Z,7.3nm,1.4s
D19K Kuna River 45.02 27 P **P** **15 46 07.4 +1.4**
D19K IAmb IAmb 15 46 36.5
comp=Z,4.5nm,0.9s
E19K Redstone River 45.14 28 P **P** **15 46 08.2 +1.3**
O18K Koktuh Hills 45.27 39 P **P** **15 46 08.3 +0.3**
O18K IAmb IAmb 15 46 12.5
comp=Z,12nm,1.1s
IMAR Indian Mountai 46.30 31 P **P** **15 46 16.6 +0.5**
KURK Kurchatov 46.30 308 P **P** **15 46 15.6 -0.8**
KURK Kurchatov 46.30 308*ce*P **P** **15 46 16.0 -0.3**
KURK pmax pmax
comp=Z,23nm,0.8s
KURBB Kurchatov Arra 46.37 308 P **P** **15 46 16.6 -0.3**
comp=Z,14nm,0.6s,baz=84,slow=8.1,SNR=73
KURBB LR LR 16 06 28.9
comp=Z,137nm,18.8s,baz=163,slow=37
comp=Z,14nm,0.6s
G21K Allakaket 46.45 30 P **P** **15 46 17.8 +0.5**
H21K Melozitna Rive 46.66 31 P **P** **15 46 19.2 +0.2**
H21K IAmb IAmb 15 46 44.9
comp=Z,5.7nm,1.4s
D22K Ayikyak River 47.04 27 P **P** **15 46 23.1 +1.1**
D22K IAmb IAmb 15 46 27.4
comp=Z,6.7nm,1.4s
BRLK Bradley Lake 47.45 39 P **P** **15 46 27.3 +2.1**
SUA Susitna One 47.46 37 P **P** **15 46 27.8 +2.4**
MLY Manley 47.49 32 P **P** **15 46 26.6 +1.1**
G23K Bananza Creek 47.85 30 P **P** **15 46 30.0 +1.7**
G23K IAmb IAmb 15 46 57.8
comp=Z,4.7nm,1.1s
PRZ Przheval'sk 48.21 297 P **P** **15 46 30.4 -1.2**
PRZ IAmb IAmb 15 46 39.8
comp=Z,7.5nm,0.9s
PRZ Przheval'sk 48.21 297 P **P** **15 46 30.4 -1.2**
PRZ pmax pmax
comp=Z,8.0nm,0.9s
MCK McKinley 48.26 34 P **P** **15 46 32.7 +1.3**
MCK IAmb IAmb 15 47 01.8
comp=Z,6.1nm,1.2s
MCK McKinley 48.26 34 P **P** **15 46 32.7 +1.3**
MCK pmax pmax
comp=Z,6.0nm,1.2s
RND Reindeer 48.30 34 P **P** **15 46 33.0 +1.3**
RND IAmb IAmb 15 47 12.6
comp=Z,8.6nm,1.2s
RND Reindeer 48.30 34 P **P** **15 46 33.1 +1.3**
RND pmax pmax
comp=Z,9.0nm,1.2s
D24K Happy Valley 48.45 27 P **P** **15 46 34.0 +1.2**
D24K IAmb IAmb 15 46 55.5
comp=Z,12nm,1.5s
MDM Murphy Dome 48.55 32 P **P** **15 46 35.0 +1.4**
MDM IAmb IAmb 15 46 38.8
comp=Z,6.4nm,1.1s
H24K Noodor Dome 48.70 31 P **P** **15 46 35.8 +1.0**
H24K IAmb IAmb 15 46 43.6
comp=Z,4.0nm,1.1s
IL31 49.13 32 P **P** **15 46 38.4 +0.4**
IL31 IAmb IAmb 15 46 41.9
comp=Z,3.6nm,0.9s
ILAR Eielson Array 49.13 32 P **P** **15 46 39.5 +1.4**
comp=Z,2.2nm,0.8s,baz=269,slow=6.8,SNR=20
comp=Z,2.2nm,0.8s
IL03 Eielson Array 49.15 32 P **P** **15 46 38.0 -0.2**
HNR Honiara 49.25 156 LR LR 16 06 34.0
comp=Z,916nm,20.0s,baz=340,slow=35
E25K Arctic Village 49.61 28 P **P** **15 46 41.8 +0.1**
E25K IAmb IAmb 15 47 19.5
comp=Z,5.8nm,1.4s
Q23K Middleton Isla 49.78 39 P **P** **15 46 41.9 -1.1**
MID Middleton Isla 49.78 39 P **P** **15 46 41.7 -1.4**
MID Middleton Isla 49.78 39 P **P** **15 46 41.7 -1.4**
MID pmax pmax
comp=Z,416nm,1.2s
BMAR Burnt Mountain 49.99 29 P **P** **15 46 46.1 +1.4**
NRN Naryn 50.23 297 P **P** **15 46 45.5 -1.7**
NRN IAmb IAmb 15 47 24.6
comp=Z,2.9nm,0.5s
NRN Naryn 50.23 297 P **P** **15 46 45.5 -1.7**
NRN pmax pmax
comp=Z,3.0nm,0.5s
SCRK Sand Creek 50.44 33 P **P** **15 46 48.2 +0.1**
SCRK IAmb IAmb 15 46 57.9
comp=Z,9.2nm,1.5s
KSH Kashi 50.86 294 P **P** **15 46 56.1 +4.3**
KSH pP sP 15 47 05.0 +7.2
KSH pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 50.91 312 P **P** **15 46 51.8 0.0**
comp=Z,1.6nm,0.7s,baz=90,slow=7.9,SNR=10
BVAR LR LR 16 09 25.9
comp=Z,136nm,18.3s,baz=69,slow=37
comp=Z,1.6nm,0.7s
AAK Ala-Archa 50.92 299 P **P** **15 46 50.8 -1.4**
AAK IAmb IAmb 15 47 06.7
comp=Z,4.7nm,0.9s
AAK Ala-Archa 50.92 299*ce*P **P** **15 46 51.6 -0.6**
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 50.92 299 LR LR 16 09 48.9
comp=Z,183nm,18.8s,baz=56,slow=38
BRVK Borovoye 50.97 312 P **P** **15 46 50.5 -1.7**
BRVK IAmb IAmb 15 47 02.0
comp=Z,4.4nm,0.9s
BRVK Borovoye 50.97 312*ce*P **P** **15 46 52.4 +0.2**
BRVK pmax pmax
comp=Z,13nm,2.1s
K27K Chicken 51.27 33 P **P** **15 46 52.3 -2.0**
K27K IAmb IAmb 15 47 27.4
comp=Z,5.9nm,1.2s
ARSB Arslanbob 52.41 297 P **P** **15 47 03.3 -0.1**
ARSB Arslanbob 52.41 297 P **P** **15 47 03.3 -0.1**
ARSB pmax pmax
comp=Z,2.0nm,0.8s
E29M Blow River 52.44 27 P **P** **15 47 03.2 +0.3**
E29M IAmb IAmb 15 47 08.3
comp=Z,4.9nm,0.9s
EPYK Eagle Plains 53.18 30 P **P** **15 47 09.6 +1.1**
EPYK IAmb IAmb 15 47 13.5
comp=Z,8.1nm,0.8s
G30M tAoh Zraii Nji 53.28 29 P **P** **15 47 10.2 +1.0**
G30M IAmb IAmb 15 47 15.9
comp=Z,5.0nm,0.8s
KK31 Karatay Array 53.55 300 P **P** **15 47 09.7 -1.8**
KK31 IAmb IAmb 15 47 23.1
comp=Z,3.8nm,0.8s
KK31 Karatay Array 53.55 300 P **P** **15 47 09.7 -1.8**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 53.55 300 P **P** **15 47 09.6 -2.0**
KKAR Karatay Array 53.55 300 P **P** **15 47 09.7 -1.8**
KKAR IAmb IAmb 15 47 23.1
comp=Z,3.8nm,0.8s
KKAR Karatay Array 53.55 300 P **P** **15 47 09.6 -2.0**
KKAR 15 47 09.7
KKAR pmax pmax
comp=Z,4.0nm,0.9s
BTK Batken 54.40 297 P **P** **15 47 16.5 -1.3**
BTK IAmb IAmb 15 47 50.0
comp=Z,8.2nm,1.2s
BTK Batken 54.40 297 P **P** **15 47 16.5 -1.3**
BTK pmax pmax
comp=Z,8.0nm,1.3s
SVE Sverdlovsk 55.44 319 *e*P **P** **15 47 24.7 -0.3**
SVE pmax pmax
comp=Z,14nm,0.8s
ARU Arti 56.65 319 P **P** **15 47 32.2 -1.5**
ARU Arti 56.65 319*d i*P **P** **15 47 33.6 -0.1**
ARU 15 49 37.1
ARU S **S** **15 55 27.0 +1.8**
ARU SS **SS** **15 59 15.3 +3.0**
ARU pmax pmax
comp=Z,11nm,0.8s
C36M Paulatuk 57.12 25 P **P** **15 47 37.4 +0.6**
C36M IAmb IAmb 15 47 49.0
comp=Z,3.7nm,0.8s
WRA Warramunga Arr 57.23 189 P **P** **15 47 37.7 -0.4**
comp=Z,1.6nm,0.7s,baz=7.8,slow=7.7,SNR=22
comp=Z,1.6nm,0.7s
ABKAR Akbulak array 58.30 310 P **P** **15 47 45.1 -0.3**
ABKAR IAmb IAmb 15 47 46.0
comp=Z,7.0nm,0.8s
ABKAR Akbulak array 58.30 310 P **P** **15 47 44.7 -0.7**
AKTO Aktyubinsk 59.02 312 LR LR 16 13 51.0
comp=Z,69nm,19.3s,baz=307,slow=37
KIRV Kirov 60.50 323 *i*P **P** **15 48 01.2 +0.7**
SPITS Spitsbergen Ar 60.54 349 P **P** **15 48 03.2 +2.7**
comp=Z,6.7nm,0.9s,baz=54,slow=5.6,SNR=1.9
comp=Z,6.7nm,0.9s
ASAR Alice Springs 60.95 189 P **P** **15 48 03.7 -0.2**
comp=Z,0.7nm,0.8s,baz=21,slow=8.9,SNR=4.4
comp=Z,0.7nm,0.8s
DZM Mont Dzumac 63.20 155 LR LR 16 13 17.0
comp=Z,80nm,20.9s,baz=357,slow=34
YKA Yellowknife Ar 63.46 30 P **P** **15 48 21.7 +1.4**
comp=Z,0.4nm,0.6s,baz=304,slow=6.9,SNR=8.5
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 64.10 340 P **P** **15 48 25.3 +0.9**
comp=Z,2.7nm,0.8s,baz=33,slow=5.4,SNR=5.1
comp=Z,2.7nm,0.8s
BELG Belogornoye 64.10 317 *i*P **P** **15 48 25.1 +0.4**
BELG pmax pmax
comp=Z,2.0nm,0.9s
GEYT Alibeck 64.27 299 P **P** **15 48 26.5 +0.4**
comp=Z,1.8nm,0.6s,baz=300,slow=5.8,SNR=4.9
comp=Z,1.8nm,0.6s
SGF Sodankyl 65.08 337 P **P** **15 48 35.1 +4.3**
OBN Obninsk 68.35 323 *i*P **P** **15 48 51.1 -0.7**
OBN pmax pmax
comp=Z,8.0nm,0.6s
OBN MLR MLR
comp=Z,91nm,14.0s
FINES FINESS Array B 68.99 332 *i*P **P** **15 48 56.0 +0.3**
FINES pmax pmax
comp=Z,7.0nm,0.8s
FINES FINESS Array B 68.99 332 P **P** **15 48 56.1 +0.4**
comp=Z,6.8nm,0.8s,baz=36,slow=7.3,SNR=13
comp=Z,6.8nm,0.8s
PINE Pine Mountain 69.87 50 P **P** **15 49 02.6 +0.8**
PINE IAmb IAmb 15 49 17.6
comp=Z,5.1nm,0.9s
KBZ Khabaz 71.25 311 *i*P **P** **15 49 10.8 +0.8**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 71.25 311 P **P** **15 49 10.5 +0.5**
comp=Z,4.8nm,0.8s,baz=38,slow=5.9,SNR=11
comp=Z,4.8nm,0.8s
KIV Kislovodsk 71.26 311⇑P **P** **15 49 09.4 -0.7**
KIV Kislovodsk 71.26 311⇑P **P** **15 49 09.4 -0.7**
KIV *e* 15 49 12.5
MNK Minsk 72.72 326 *i*P **P** **15 49 17.8 -0.8**
MNK *i* 15 49 35.0
MNK *i* 15 52 07.9
MNK *i* PPP PPP 15 53 48.0
MNK *i*S **S** **15 58 43.2 -0.1**
MNK *i* 15 59 24.8
MNK *i*SS **SS** **16 03 23.2 +1.3**
MNK pmax pmax
comp=Z,17nm,0.8s
MNK pmax pmax
comp=E,11nm,0.8s
MNK pmax pmax
comp=N,23nm,0.8s
MNK MLR MLR
comp=Z,62nm,14.0s
MNK MLR MLR
comp=N,167nm,19.0s
MNK MLR MLR
comp=E,102nm,20.0s
HFS Hagfors 74.23 336 P **P** **15 49 27.0 -0.4**
comp=E,7.8nm,0.8s,baz=58,slow=8.9,SNR=7.5
comp=E,7.8nm,0.8s
NB2 NORSAR Subarra 74.31 338 P **P** **15 49 28.3 +0.4**
comp=Z,6.3nm,0.8s,baz=39,slow=6.2
NOA NORSAR Array B 74.31 338 P **P** **15 49 27.9 0.0**
comp=Z,3.8nm,0.8s,baz=39,slow=5.8,SNR=12
comp=Z,3.8nm,0.8s
NVAR Mina Array Bea 74.50 53 P **P** **15 49 31.3 +1.7**
comp=Z,0.4nm,0.8s,baz=280,slow=5.1,SNR=2.6
comp=Z,0.4nm,0.8s
AKASG Malin Array Be 74.56 323 P **P** **15 49 29.4 0.0**
comp=Z,6.7nm,0.7s,baz=45,slow=6.2,SNR=25
AKASG LR LR 16 25 45.6
comp=Z,74nm,20.0s,baz=41,slow=39
comp=Z,6.7nm,0.7s
AKBB Malin Array Si 74.56 323 P **P** **15 49 28.8 -0.7**
AKBB IAmb IAmb 15 49 30.3
comp=Z,7.4nm,0.8s
AKBB Malin Array Si 74.56 323 *i*P **P** **15 49 29.6 +0.2**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
KIEV Kiev 74.57 323⇓P **P** **15 49 29.6 +0.2**
KIEV Kiev 74.57 323 P **P** **15 49 29.0 -0.5**
KIEV IAmb IAmb 15 49 30.3
comp=Z,6.6nm,0.8s
KIEV Kiev 74.57 323 P **P** **15 49 29.0 -0.5**
KIEV pmax pmax
comp=Z,7.0nm,0.8s
FRB Frobisher Bay 76.56 13 LR LR 16 29 23.6
comp=Z,49nm,18.5s,baz=312,slow=40
SORM Soroca 76.67 321⇑P **P** **15 49 41.3 -0.3**
SORM Soroca 76.67 321⇑P **P** **15 49 41.3 -0.3**
ARPR Arapgir-MALATY 76.73 309 P **P** **15 49 42.7 +0.4**
PDAR Pinedale Array 77.22 46 P **P** **15 49 48.1 +3.0**
comp=Z,0.4nm,0.6s,baz=240,slow=2.9,SNR=4.7
comp=Z,0.4nm,0.6s
GIRR Girov 78.39 321⇓P **P** **15 49 51.6 +0.4**
VARL Varlezi 78.41 319⇓P **P** **15 49 50.2 -1.1**
PFO Pinyon Flats O 78.54 57 LR LR 16 18 33.2
comp=Z,31nm,20.4s,baz=252,slow=31
BUR08 Bucovina Ar. S 78.56 322 P **P** **15 49 52.2 -0.1**
BUR08 IAmb IAmb 15 50 03.3
comp=Z,5.3nm,0.9s
BURAR Bucovina Array 78.58 322⇑P **P** **15 49 53.1 +0.7**
BURAR Bucovina Array 78.58 322⇑P **P** **15 49 53.1 +0.7**
BIZ Bicaz 78.60 321⇓P **P** **15 49 53.3 +0.9**
TESR Tescani 78.61 320⇑P **P** **15 49 52.0 -0.4**
CFR Carcaliu 78.74 319⇑P **P** **15 49 53.9 +0.8**
CFR Carcaliu 78.74 319⇑P **P** **15 49 53.9 +0.8**
TPGR Topolog 78.80 318⇓P **P** **15 49 53.1 -0.5**
VRI Vrincioaia 79.01 320⇑P **P** **15 49 55.2 +0.5**
VRI Vrincioaia 79.01 320⇑P **P** **15 49 55.2 +0.5**
BRTR Keskin Array B 79.20 312 P **P** **15 49 57.0 +1.0**
comp=Z,0.9nm,0.6s,baz=66,slow=3.0,SNR=5.5
comp=Z,0.9nm,0.6s
BISRR Bisoca 79.23 320⇓P **P** **15 49 56.6 +0.6**
TURR Turia 79.24 320⇓P **P** **15 49 56.6 +0.5**
COVR Voineasa-Covas 79.29 320⇑P **P** **15 49 57.0 +0.8**
ARCR ARCALIA 79.37 322⇓P **P** **15 49 57.8 +1.1**
SHAB Shabla 79.58 317⇑P **P** **15 49 58.9 +1.1**
DOPR Dopca 79.62 321⇑P **P** **15 49 58.3 +0.2**
ICOR Ion Corvin 79.63 318⇓P **P** **15 49 58.7 +0.6**
MLR Muntele Rosu 79.67 320⇓P **P** **15 49 59.2 +0.7**
MLR Muntele Rosu 79.67 320⇓P **P** **15 49 59.2 +0.7**
VOIR 80.16 320 P **P** **15 50 00.7 -0.3**
VOIR 80.16 320⇓P **P** **15 50 00.7 -0.3**
MARR Marisel-Cluj 80.26 322⇓P **P** **15 50 02.0 +0.4**
DRGR 80.38 323 P **P** **15 50 01.6 -0.6**
DRGR 80.38 323⇑P **P** **15 50 01.6 -0.6**

ARR	**Arges**	**80.42**	**321**	⇑P	**P**	**15 50 03.6**	**+1.1**
KUBB	**Kubrat**	**80.53**	**319**	⇑P	**P**	**15 50 03.2**	**+0.2**
BORR	**Bors**	**80.61**	**323**	⇓P	**P**	**15 50 03.5**	**+0.2**
DPC	**Dobruska-Polom**	**80.67**	**328**	*e*P	**P**	**15 50 05.1**	**+1.4**
DPC	**Dobruska-Polom**	**80.67**	**328**	*e*P	**P**	**15 50 05.1**	**+1.4**
KRLC	**Kraliky**	**80.68**	**328**	*e*P	**P**	**15 50 04.8**	**+1.1**
KRLC	**Kraliky**	**80.68**	**328**	*e*P	**P**	**15 50 04.8**	**+1.1**
VYHS	**Vyhne**	**80.96**	**326**	*e*P	**P**	**15 50 06.8**	**+1.6**
RAYN	**Ar Rayn**	**81.12**	**293**	⇑P	**P**	**15 50 06.6**	**+0.1**
BRG	**Berggiesshubel**	**81.25**	**330**	*e*P	**P**	**15 50 07.0**	**+0.3**
CLL	**Collm**	**81.29**	**330**	*e*P	**P**	**15 50 07.0**	**+0.2**
CLL				*e*pP	**PcP**	**15 50 14.0**	**+1.0**
GZR	**Gura Zlata**	**81.33**	**322**	⇓P	**P**	**15 50 07.6**	**+0.3**
GZR	**Gura Zlata**	**81.33**	**322**	⇓P	**P**	**15 50 07.6**	**+0.3**
SURR	**Surduc**	**81.40**	**322**	⇓P	**P**	**15 50 08.1**	**+0.6**
URZ	**Urewera**	**81.68**	**153**	LR	LR	16 21 25.1	
	comp=Z,86nm,19.7s,baz=120,slow=32						
BZS	**Buzias**	**81.75**	**322**	⇑P	**P**	**15 50 09.3**	**-0.1**
BZS	**Buzias**	**81.75**	**322**	⇑P	**P**	**15 50 09.3**	**-0.1**
MDVR	**Moldovita**	**82.30**	**322**	⇑P	**P**	**15 50 13.2**	**+0.8**
MMAI	**Mount Meron Ar**	**82.35**	**306**	LR	LR	16 29 43.7	
	comp=Z,65nm,19.3s,baz=12,slow=38						
KHC	**Kasperske Hory**	**82.75**	**329**	*e*P	**P**	**15 50 15.6**	**+1.0**
KHC	**Kasperske Hory**	**82.75**	**329**	*e*P	**P**	**15 50 15.6**	**+1.0**
GERES	**GERESS Array B**	**82.92**	**329**	P	**P**	**15 50 15.7**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=41,slow=9.1,SNR=4.8						
	comp=Z,1.6nm,0.8s						
BOVS	**Bovan**	**83.12**	**321**	⇓P	**P**	**15 50 17.2**	**+0.5**
PPT	**Papeete**	**84.19**	**117**	LR	LR	16 17 59.6	
	comp=Z,40nm,21.9s,baz=266,slow=29						
SCHQ	**Schefferville**	**85.10**	**16**	LR	LR	16 29 41.8	
	comp=Z,40nm,20.8s,baz=280,slow=36						
TXAR	**Lajitas Array**	**89.64**	**53**	P	**P**	**15 50 51.1**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=324,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.7s						
H03N2	**Juan Fernandez**	**146.50**	**96**	T	T	18 41 40.8	
	baz=291,slow=76,SNR=6.3						
H03N3	**Juan Fernandez**	**146.51**	**96**	T	T	18 41 40.6	
	baz=291,slow=76,SNR=8.0						
H03N1	**Juan Fernandez**	**146.51**	**96**	T	T	18 41 40.7	
	baz=291,slow=76,SNR=9.4						

*IDC **01** 15:53:16.3±1.2,67.90N×20.51E,h0km,mbtmp3.4/3, ML2.1/4,Error ellipse: s-maj=18.6km s-min=6.6km az=122.0*
*BER **01** 15:53:17.0±3.1,67.73N×20.36E,h0km,ML1.9,Suspected explosion*
ISC 01 15:53:15.2±1.0,**67.80N**±0.07×**20.17E**±0.07,**h0**km,**n9,** σ**2**°**26/13,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**1.40**	**336**	I	I	16 02 50.0	
	baz=150,slow=312,SNR=2.0						
HEF	**Hetta**	**1.44**	**64**	*e*P	**Pn**	**15 53 41.2**	**-1.3**
HEF				*e*S	**Sg**	**15 54 01.8**	**+0.2**
KTK1	**Kautokeino**	**1.66**	**42**	*e*P	**Pn**	**15 53 43.0**	**-2.6**
KTK1				*e*S	**Sb**	**15 54 08.4**	**+0.3**
KTK1				IAML		15 54 13.6	
	comp=Z,21nm,0.3s						
JETT	**Jettan, Norway**	**1.76**	**3**	*e*P	**Pn**	**15 53 47.2**	**+0.2**
FAUS	**Fauske**	**1.92**	**259**	*e*P	**Pb**	**15 53 51.0**	**0.0**
ARCES	**ARCESS Array B**	**2.61**	**46**	Pn	**Pn**	**15 53 57.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=227,slow=15,SNR=26						
ARCES				Lg	Lg	15 54 33.7	
	comp=Z,1.2nm,0.3s,baz=230,slow=27,SNR=15						
FINES	**FINESS Array B**	**6.87**	**156**	Pn	**Pn**	**15 55 00.5**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=2.3						
FINES				Sn	**Sn**	**15 56 16.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=349,slow=21,SNR=2.5						
FINES				Lg	Lg	15 56 50.9	
	comp=Z,0.2nm,0.3s,baz=349,slow=27,SNR=2.1						
	comp=Z,4.0nm,0.9s						
NOA	**NORSAR Array B**	**7.81**	**214**	Pn	**Pn**	**15 55 12.2**	**+2.2**
	baz=16,slow=12,SNR=1.9						
NOA				Sn	**Sn**	**15 56 34.1**	**-4.9**
	baz=24,slow=19,SNR=1.7						
NOA				Lg	Lg	15 57 20.1	
	baz=43,slow=23,SNR=1.3						
	comp=Z,0.6nm,0.8s						
HFS	**Hagfors**	**8.20**	**203**	Pn	**Pn**	**15 55 15.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=12,slow=9.3,SNR=2.6						
HFS				Sn	**Sn**	**15 56 48.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=27,slow=23,SNR=2.4						
HFS				Lg	Lg	15 57 37.1	
	comp=Z,0.2nm,0.3s,baz=28,slow=28,SNR=1.6						
	comp=Z,5.1nm,1.0s						

*NEIC **01** 15:55:27.6±0.4,5.51S±0.09×153.3E±0.1,h24km±15km, mb4.2/10,Error ellipse: s-maj=20.7km s-min=13.0km az=91.0*
*IDC **01** 15:55:56.3±5.4,6.23S×153.04E,h281km±54km,mb3.4/9, mbtmp4.1/9,Error ellipse: s-maj=27.3km s-min=19.4km az=45.0*
ISC 01 15:55:30.0±1.0,**5.8S**±0.1×**153.3E**±0.1,**h35**km,**n23,** σ**1**°**08/21,mb4.2/13,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.00**	**324**		Pn	15 55 56.2	-5.2
PMG	**Port Moresby**	**7.09**	**239**	Pn	**Pn**	**15 57 11.5**	**+0.2**
COEN	**Coen**	**12.87**	**230**	Pn	**Pn**	**15 58 30.5**	**-0.1**
DZM	**Mont Dzumac**	**20.53**	**143**	P	**P**	**16 00 06.7**	**+1.1**
DZM				IAmb	IAmb	16 00 11.7	
	comp=Z,5.8nm,1.0s						
DZM	**Mont Dzumac**	**20.53**	**143**	P	Pn	16 00 12.6	+4.6
	comp=Z,5.8nm,0.7s,baz=256,slow=9.0,SNR=14						
	comp=Z,5.8nm,0.7s						
MTN	**Manton Dam**	**22.99**	**251**	P	**P**	**16 00 30.6**	**-1.3**
MTN				IAmb	IAmb	16 01 03.2	
	comp=Z,29nm,1.2s						
WR0	**Warramunga Arr**	**23.06**	**231**	P	**P**	**16 00 32.5**	**-0.1**
WR0				IAmb	IAmb	16 00 56.2	
	comp=Z,5.4nm,1.2s						
WB0	**Warramunga Arr**	**23.06**	**231**	P	**P**	**16 00 32.2**	**-0.4**
WB0				IAmb	IAmb	16 00 38.6	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**23.20**	**231**	P	**P**	**16 00 35.5**	**+1.6**
WB2				IAmb	IAmb	16 01 14.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**23.20**	**231**	P	**P**	**16 00 35.2**	**+1.2**
WRA	**Warramunga Arr**	**23.20**	**231**	P	**P**	**16 00 33.5**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=56,slow=10,SNR=5.4						
	comp=Z,1.0nm,0.9s						
AS31	**Alice Springs**	**25.79**	**225**	P	**P**	**16 00 58.9**	**+1.0**
ASAR	**Alice Springs**	**25.79**	**225**	P	**P**	**16 00 58.2**	**+0.3**
	comp=Z,9.1nm,0.4s,baz=58,slow=9.3,SNR=5.3						
	comp=Z,9.1nm,0.4s						
KNRA	**Kununurra**	**26.03**	**246**	P	**P**	**16 01 00.6**	**+0.5**
CAN	**Canberra**	**29.63**	**187**	P	**P**	**16 01 33.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**29.67**	**243**	P	**P**	**16 01 31.7**	**-1.0**
FITZ				IAmb	IAmb	16 02 15.2	
	comp=Z,6.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**58.80**	**296**	P	**P**	**16 05 25.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=101,slow=5.3,SNR=4.2						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**67.47**	**328**	P	**P**	**16 06 22.9**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=144,slow=5.9,SNR=3.7						
	comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**71.80**	**178**	P	**P**	**16 06 45.8**	**-2.7**
	comp=Z,0.8nm,0.3s,baz=5.4,slow=1.6,SNR=19						
	comp=Z,0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**82.29**	**326**	P	**P**	**16 07 47.2**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=95,slow=4.1,SNR=4.0						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**84.93**	**322**	P	**P**	**16 08 01.2**	**-0.3**
	comp=Z,1.1nm,0.2s,baz=113,slow=4.0,SNR=1.7						
	comp=Z,1.1nm,0.2s						
BVAR	**Borovoye Array**	**90.38**	**323**	P	**P**	**16 08 26.6**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=111,slow=8.2,SNR=3.7						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**151.13**	**287**	PKPbc	**PKPdf**	**16 15 15.9**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=45,slow=3.5,SNR=5.3						

*TAP **01** 16:02:20.2,23.85N×122.78E,h19km,ML2.6,D*
*JMA **01** 16:02:21.3±0.2,23.9N±0.7×122.7E±0.7,h29km,MV2.5/13, NW OFF ISHIGAKIJIMA IS*
ISC 01 16:02:20.0±1.4,**23.79N**±0.04×**122.76E**±0.02,**h21**km±4km, **n73,** σ**0**°**69/97,1D,Taiwan region**

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

EOS4	**EOS4**	**0.52**	**310**	*i* P	**Pb**	**16 02 30.3**	**+0.1**
	baz=302						
EOS3	**EOS3**	**0.64**	**321**	P	**Pb**	**16 02 32.4**	**-0.1**
	baz=327						
JYNG	**Yonagunijimaku**	**0.68**	**15**	P	**Pb**	**16 02 33.0**	**-0.3**
JYNG				S	**Sb**	**16 02 40.9**	**-1.4**
YOJ	**Yonaguni jima**	**0.71**	**19**	*e*P	**Pb**	**16 02 33.5**	**-0.2**
YOJ				*e*S	**Sb**	**16 02 41.7**	**-1.4**
EOS2	**EOS2**	**0.79**	**323**	P	**Pn**	**16 02 35.6**	**-0.2**
	baz=314						
EOS2				S	**Sn**	**16 02 46.4**	**-0.6**
	baz=314						
HATJ	**Hateruma jima**	**1.00**	**74**	P	**Pn**	**16 02 38.9**	**+0.2**
HATJ				S	**Sn**	**16 02 52.1**	**-0.1**
IRIF	**Iriomote-Funau**	**1.04**	**58**	P	**Pb**	**16 02 39.8**	**+0.4**
IRIF				S	**Sn**	**16 02 53.0**	**-0.4**
EAHA	**Aohua**	**1.08**	**300**	*e*P	**Pn**	**16 02 39.9**	**+0.1**
	baz=298						
SHUL	**Shoufeng**	**1.09**	**270**	*e*P	**Pn**	**16 02 38.9**	**-1.2**
	baz=268						
ETL	**Fush Village**	**1.10**	**290**	*e*P	**Pn**	**16 02 39.4**	**-0.8**
	baz=287						
EWUT	**Wuta**	**1.11**	**306**	P	**Pn**	**16 02 40.1**	**-0.2**
	baz=304						
EWUT				S	**Sb**	**16 02 54.2**	**-0.2**
	baz=304						
ENA	**Nanau**	**1.13**	**305**	*i* P	**Pn**	**16 02 40.5**	**-0.1**
	baz=302						
ENA				S	**Sn**	**16 02 55.3**	**-0.1**
	baz=302						
NACB	**Ninganchiao**	**1.13**	**290**	*e*P	**Pn**	**16 02 39.1**	**-1.5**
	baz=288						
ESAO	**Su ao**	**1.15**	**313**	*e*P	**Pn**	**16 02 40.6**	**-0.2**
	baz=322						
ESAO				*e*S	**Sn**	**16 02 55.6**	**-0.3**
	baz=322						
TWC	**Suao**	**1.17**	**315**	P	**Pn**	**16 02 40.6**	**-0.5**
	baz=313						
ETM	**Tongmen**	**1.17**	**279**	*e*P	**Pn**	**16 02 40.6**	**-0.5**
	baz=276						
ESL	**Shilin**	**1.21**	**272**	P	**Pn**	**16 02 41.1**	**-0.7**
	baz=269						
EGFH	**Guangfu**	**1.22**	**265**	*e*P	**Pn**	**16 02 42.0**	**+0.1**
	baz=263						
JKRS	**Kuro-shima**	**1.23**	**68**	P	**Pb**	**16 02 42.9**	**+0.4**
JKRS				*e*S	**Sb**	**16 02 58.9**	**+1.0**
ETLH	**Xiulin Townshi**	**1.24**	**290**	P	**Pn**	**16 02 42.5**	**+0.3**
	baz=288						
ETLH				*e*S	**Sn**	**16 02 58.3**	**0.0**
	baz=288						
LXIB	**Xiulin Townshi**	**1.25**	**281**	*e*P	**Pn**	**16 02 41.5**	**-0.9**
	baz=264						
HGSD	**Ruisui**	**1.26**	**257**	*e*P	**Pn**	**16 02 41.6**	**-0.8**
	baz=255						
HGSD				*e*S	**Sn**	**16 02 58.5**	**-0.1**
	baz=255						
WARBT	**Fenglin Townsh**	**1.26**	**267**	P	**Pn**	**16 02 41.6**	**-0.8**
	baz=251						
NDS	**Dongshan**	**1.27**	**312**	P	**Pb**	**16 02 43.3**	**0.0**
	baz=310						
NDS				S	**Sb**	**16 03 01.0**	**+1.8**
	baz=310						
EHY	**Hungye**	**1.34**	**258**	*e*P	**Pn**	**16 02 43.0**	**-0.5**
	baz=256						
LATG	**Datong**	**1.35**	**304**	P	**Pb**	**16 02 44.8**	**+0.1**
	baz=303						
TWE	**Neicheng**	**1.36**	**313**	*i* P	**Pb**	**16 02 44.6**	**-0.2**
	baz=312						
TWE				S	**Sb**	**16 03 01.4**	**-0.4**
	baz=312						
ENTT	**Nioudou**	**1.38**	**308**	⇓*i*P	**Pb**	**16 02 45.2**	**+0.1**
	baz=307						
ENTT				S	**Sb**	**16 03 02.0**	**-0.3**
	baz=307						
EYUL	**Yuli**	**1.39**	**252**	*e*P	**Pn**	**16 02 44.3**	**+0.1**
	baz=250						
JIJ	**Ishigaki jima**	**1.39**	**65**	P	**Pb**	**16 02 45.2**	**-0.1**
JIJ				S	**Sb**	**16 03 02.9**	**+0.3**
NDT	**Datong Townshi**	**1.40**	**306**	P	**Pb**	**16 02 45.8**	**+0.3**
	baz=305						
NDT				S	**Sn**	**16 03 02.2**	**+0.1**
	baz=305						
YULB	**Yu-li**	**1.40**	**254**	P	**Pn**	**16 02 44.6**	**+0.3**
	baz=252						
TWF1	**Yuli**	**1.41**	**252**	P	**Pn**	**16 02 44.7**	**+0.2**
	baz=250						
NNSB	**Datong**	**1.41**	**297**	P	**Pb**	**16 02 45.3**	**-0.4**
	baz=296						
NNSB				*e*S	**Sb**	**16 03 03.4**	**+0.1**
	baz=296						
WHF	**Hehuan Shan**	**1.41**	**285**	*e*P	**Pn**	**16 02 45.2**	**+0.4**
	baz=283						
NNS	**Nan Shan**	**1.42**	**297**	P	**Pb**	**16 02 45.5**	**-0.4**
	baz=296						
NNS				S	**Sb**	**16 03 04.8**	**+1.2**
	baz=296						
FUSB	**Fushanzhiwuyua**	**1.44**	**312**	P	**Pb**	**16 02 46.5**	**+0.3**
	baz=311						
FUSB				S	**Sb**	**16 03 05.0**	**+0.9**
	baz=311						
CHKT	**Chengkung**	**1.45**	**242**	*e*P	**Pn**	**16 02 44.5**	**-0.5**
	baz=240						
TIPB	**Shuangxi**	**1.45**	**324**	P	**Pb**	**16 02 47.2**	**+0.8**
	baz=324						
TIPB				*e*S	**Sb**	**16 03 04.0**	**-0.4**
	baz=324						
OWD	**Renai**	**1.46**	**277**	*e*P	**Pn**	**16 02 45.7**	**+0.5**
	baz=275						
FUSS	**Fushou**	**1.46**	**289**	*e*P	**Pn**	**16 02 46.0**	**+0.6**
	baz=287						
FULB	**Fuli**	**1.47**	**247**	*e*P	**Pn**	**16 02 45.0**	**-0.3**
	baz=245						
CHGB	**Renai**	**1.47**	**281**	P	**Pn**	**16 02 46.0**	**+0.5**
	baz=266						
VWDT	**VWDT**	**1.48**	**269**	P	**Pn**	**16 02 46.0**	**+0.6**
	baz=254						
NWLT	**Wulai**	**1.51**	**311**	*e*P	**Pb**	**16 02 47.5**	**+0.1**
	baz=310						
NWLT				S	**Sb**	**16 03 07.4**	**+1.3**
	baz=310						
WUSB	**Renai**	**1.52**	**278**	*e*P	**Pn**	**16 02 45.6**	**-0.4**
	baz=277						
TWT	**Tachien**	**1.52**	**288**	*e*P	**Pb**	**16 02 47.3**	**-0.3**
	baz=287						
SXI1	**Grass Mountain**	**1.53**	**328**	*e*P	**Pn**	**16 02 46.5**	**+0.3**
	baz=327						
TDCB	**Techi**	**1.53**	**288**	*e*P	**Pb**	**16 02 47.4**	**-0.4**
	baz=287						
YHNB	**Yeheng**	**1.54**	**305**	*e*P	**Pn**	**16 02 47.1**	**+0.8**
	baz=305						
YHNB				*e*S	**Sb**	**16 03 06.6**	**-0.3**
	baz=305						
NSK	**Sanguang**	**1.55**	**305**	P	**Pb**	**16 02 47.9**	**-0.2**
	baz=305						
NSK				S	**Sb**	**16 03 07.7**	**+0.3**
	baz=305						
EHD	**Haiduan**	**1.56**	**246**	*e*P	**Pn**	**16 02 46.9**	**+0.3**
	baz=245						
NHDH	**Xindian Distri**	**1.62**	**316**	*e*P	**Pb**	**16 02 50.1**	**+0.9**
	baz=332						
JISG	**Ishigakijimahi**	**1.63**	**60**	P	**Pb**	**16 02 48.8**	**-0.6**
JISG				S	**Sn**	**16 03 07.6**	**-0.1**
SSLB	**Suanglung**	**1.65**	**270**	*e*P	**Pn**	**16 02 47.2**	**-0.6**
	baz=269						
SMLT	**Sun Moon Lake**	**1.70**	**274**	P	**Pn**	**16 02 49.4**	**+0.8**
	baz=260						
ELDTW	**Lidau**	**1.71**	**250**	*e*P	**Pn**	**16 02 49.1**	**+0.4**
	baz=248						
WCS	**Beigang Elemen**	**1.71**	**279**	*e*P	**Pn**	**16 02 49.4**	**+0.8**
	baz=278						
NFF	**Wufeng Townshi**	**1.72**	**300**	*e*P	**Pb**	**16 02 50.9**	**-0.1**
	baz=299						
WHP	**Taichung City**	**1.73**	**287**	*e*P	**Pb**	**16 02 51.6**	**+0.5**
	baz=274						
WHYT	**Xinyi Township**	**1.75**	**267**	*e*P	**Pn**	**16 02 50.1**	**+1.0**
	baz=256						
LIOB	**Emei**	**1.81**	**299**	*e*P	**Pb**	**16 02 52.3**	**-0.1**
	baz=299						
NSTT	**Nanjuang**	**1.81**	**298**	*e*P	**Pb**	**16 02 52.6**	**+0.2**
	baz=298						
ALS	**Alishan**	**1.81**	**262**	P	**Pn**	**16 02 51.4**	**+1.2**
	baz=261						
TWGBT	**Beinan**	**1.82**	**238**	*e*P	**Pn**	**16 02 50.4**	**+0.3**
	baz=226						
TWG	**Pinlang**	**1.82**	**238**	*e*P	**Pn**	**16 02 50.7**	**+0.5**
	baz=226						
TWQ1	**Liyutan**	**1.90**	**288**	*e*P	**Pb**	**16 02 53.3**	**-0.6**
	baz=288						
STYH	**Taoyuan**	**1.92**	**252**	*e*P	**Pn**	**16 02 53.0**	**+1.5**
	baz=251						
TPUB	**Ta-pu**	**2.01**	**256**	*e*P	**Pb**	**16 02 55.0**	**-0.9**
	baz=256						
WTP	**Ta-pu**	**2.04**	**255**	*e*P	**Pn**	**16 02 55.0**	**+1.9**
	baz=254						
SLGT	**Liugui**	**2.09**	**248**	*e*P	**Pb**	**16 02 56.5**	**-0.9**
	baz=237						
CHN1	**Nanshi**	**2.13**	**254**	*e*P	**Pn**	**16 02 56.2**	**+1.8**
	baz=253						
TWK	**Hsinying**	**2.15**	**256**	*e*P	**Pb**	**16 02 57.2**	**-1.0**
	baz=256						

*RSNC **01** 16:31:30.8±1.2,6.51N×73.47W,h130km±4km,ML3.5, Mw3.8*
*IDC **01** 16:31:30.1±1.0,6.41N×73.24W,h144km±11km,mb4.0/1, mbtmp4.4/3,Error ellipse: s-maj=71.8km s-min=7.7km az=134.0*
ISC 01 16:31:30.5±0.9,**6.51N**±0.03×**73.45W**±0.03,**h128**km±6km, **n44,** σ**1**°**94/78,4C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**73**	⇑*i*P	**Pn**	**16 31 48.8**	**+0.1**
BARC				*e*S	**Sn**	**16 32 03.0**	**+0.7**
BARC				*i*		16 32 04.2	
	comp=Z,884nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.00**	**272**	⇑*i*P	**Pn**	**16 31 52.4**	**-0.9**
PTBC				*e*S	**Sn**	**16 32 09.5**	**-1.0**
PTBC				*i*		16 32 13.0	
	comp=Z,429nm,0.1s						
SPBC	**San Pablo de B**	**1.05**	**216**	⇑*i*P	**Pn**	**16 31 53.5**	**-0.4**
SPBC				*e*S	**Sn**	**16 32 11.1**	**-0.5**
SPBC				*i*		16 32 12.6	
	comp=Z,726nm,0.4s						
PAMC	**Pamplona, Colo**	**1.11**	**42**	⇓*i*P	**Pn**	**16 31 55.6**	**+0.8**
PAMC				*e*S	**Sn**	**16 32 14.3**	**+1.0**
PAMC				*i*		16 32 17.1	
	comp=Z,430nm,0.3s						
TAMC	**Tame, Arauca**	**1.65**	**93**	*e*P	**Pn**	**16 32 00.3**	**0.0**
TAMC				*e*S	**Sn**	**16 32 23.1**	**+0.1**
NORC	**Norcasia**	**1.69**	**236**	*e*P	**Pn**	**16 32 00.2**	**-0.6**
NORC				*e*S	**Sn**	**16 32 22.7**	**-1.2**
OCAC	**Ocana**	**1.72**	**4**	*e*P	**Pn**	**16 32 01.4**	**+0.2**
OCAC				*e*S	**Sn**	**16 32 25.2**	**+0.5**
ROSC	**El Rosal**	**1.87**	**208**	P	**Pn**	**16 32 04.5**	**+1.2**
	comp=Z,107nm,0.3s,baz=78,slow=20,SNR=52						
ROSC				S	**Sn**	**16 32 30.4**	**+2.1**
	comp=Z,124nm,0.3s,baz=61,slow=20,SNR=8.9						
ROSC	**El Rosal**	**1.87**	**208**	*e*P	**Pn**	**16 32 04.2**	**+0.9**
ROSC				*e*S	**Sn**	**16 32 30.0**	**+1.8**
ROSC				*i*		16 32 38.3	
	comp=Z,483nm,0.5s						
CVER	**Cruz Verde, Cu**	**2.07**	**197**	*e*P	**Pn**	**16 32 06.8**	**+1.0**
CVER				*e*S	**Sn**	**16 32 33.5**	**+0.8**
CVER				*i*		16 32 41.1	
	comp=Z,396nm,0.3s						
MEDEC	**Medelln, Ant**	**2.14**	**264**	*e*P	**Pn**	**16 32 06.1**	**-0.2**
MEDEC				*e*S	**Sn**	**16 32 34.2**	**+0.6**
GUY2C	**Guyana, Caldas**	**2.29**	**236**	*e*P	**Pn**	**16 32 09.0**	**+0.5**
GUY2C				*e*S	**Sn**	**16 32 38.3**	**+0.8**
GUY2C				*i*		16 32 44.6	
	comp=Z,317nm,0.4s						
VILC	**Villavicencio,**	**2.40**	**186**	*e*P	**Pn**	**16 32 08.8**	**-0.7**
VILC				*e*S	**Sn**	**16 32 39.4**	**0.0**
VILC				*i*		16 32 43.4	
	comp=Z,438nm,0.3s						
UREC	**San Jos de Ur**	**2.40**	**301**	*e*P	**Pn**	**16 32 08.7**	**-0.8**
UREC				*e*S	**Sn**	**16 32 37.0**	**-2.4**
UREC				*i*		16 32 46.4	
	comp=Z,393nm,0.2s						
NIZA	**Niza - Manizal**	**2.47**	**234**	*e*S	**Sn**	**16 32 45.5**	**+4.1**
CBOC	**Ciudad Bolivar**	**2.62**	**256**	*e*P	**Pn**	**16 32 12.6**	**+0.2**
CBOC				*e*S	**Sn**	**16 32 44.0**	**-0.7**
CBOC				*i*		16 32 53.5	
	comp=Z,88nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.65**	**150**	⇓*i*P	**Pn**	**16 32 10.9**	**-1.6**
PTGC				*e*S	**Sn**	**16 32 42.3**	**-2.6**
PTGC				*i*		16 32 45.6	
	comp=Z,183nm,0.4s						
DBBC	**Dabeiba**	**2.78**	**281**	*e*P	**Pn**	**16 32 14.1**	**-0.3**
DBBC				*e*S	**Sn**	**16 32 47.2**	**-0.9**
DBBC				*i*		16 32 51.9	
	comp=Z,236nm,0.3s						
PRAC	**Prado**	**3.12**	**207**	*e*P	**Pn**	**16 32 18.1**	**-0.6**
PRAC				*e*S	**Sn**	**16 32 55.6**	**-0.4**
PRAC				*i*		16 33 03.0	
	comp=Z,273nm,0.2s						
ORTC	**Ortega, Tolima**	**3.14**	**215**	*e*P	**Pn**	**16 32 19.0**	**0.0**
ORTC				*e*S	**Sn**	**16 32 57.3**	**+0.9**
ORTC				*i*		16 33 03.1	
	comp=Z,202nm,0.7s						
LL6C	**La Loma 6 Bece**	**3.21**	**3**	*e*P	**Pn**	**16 32 20.0**	**+0.2**
LL6C				*i*		16 33 09.7	
	comp=Z,60nm,0.5s						
PLMC	**San Jos del P**	**3.24**	**241**	*e*P	**Pn**	**16 32 20.0**	**-0.2**
PLMC				*e*S	**Sn**	**16 32 57.2**	**-1.4**
PLMC				*i*		16 32 59.8	
	comp=Z,80nm,0.3s						
APAC	**Apartado, Choc**	**3.40**	**294**	*e*P	**Pn**	**16 32 22.8**	**+0.5**
APAC				*e*S	**Sn**	**16 33 01.6**	**-0.7**
APAC				*i*		16 33 05.0	
	comp=Z,137nm,0.4s						
ARGC	**Ariguani, Magd**	**3.42**	**347**	*e*P	**Pn**	**16 32 25.7**	**+3.1**
ARGC				*e*S	**Sn**	**16 33 08.2**	**+5.3**
ARGC				*i*		16 33 13.9	
	comp=Z,50nm,0.3s						
SDV	**Santo Domingo**	**3.66**	**50**	P	**Pn**

comp=Z,0.4nm,0.7s,baz=110,slow=2.4,SNR=2.3
CMAR Chiang Mai Arr 154.08 17 PKPbc **PKPdf 16 51 15.2 +7.2**
comp=Z,1.0nm,0.7s,baz=6.9,slow=4.7,SNR=8.0

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*IDC **01** 16:38:30.2±1.1,55°.64N×149°.23W,h0km,mb3.8/9, mbtmp3.8/12,ML3.3/3,MS3.0/3,Error ellipse: s-maj=33.2km s-min=21.4km az=43.0*
*NEIC **01** 16:38:30.7±1.6,55°.62N±0°.09×149°.2W±0°.1,h9km±7km, ML3.8/24,ML3.8(AEC),Error ellipse: s-maj=13.6km s-min=9.5km az=176.0*
*AEIC **01** 16:38:34.8±2.5,55°.62N±0°.08×149°.06W±0°.08,h9km±7km, Error ellipse: s-maj=12.9km s-min=5.2km az=158.0*
ISC 01 16:38:32.2±4.3,**55°.70N**±0°.08×**149°.20W**±0°.06,
h16km±29km,**n124,**σ1s**22**/124,**mb4.0/9,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.73**	**306**		**Pn**	**16 39 14.6**	**-0.7**
OHAK					**Sn**	**16 39 45.4**	**-2.7**
OHAK	**Old Harbor**	**2.73**	**306**	P	**Pn**	**16 39 14.8**	**-0.5**
	baz=122						
OHAK				S	**Sn**	**16 39 45.4**	**-2.7**
	baz=122						
KDAK	**Kodiak Island**	**2.80**	**320**		**Pn**	**16 39 16.1**	**-0.1**
KDAK					**Sn**	**16 39 47.4**	**-2.3**
KDAK	**Kodiak Island**	**2.80**	**320**	P	**Pn**	**16 39 16.1**	**-0.1**
	baz=136						
KDAK				S	**Sn**	**16 39 47.8**	**-1.8**
	baz=136						
KDAK	**Kodiak Island**	**2.80**	**320**	Pn	**Pn**	**16 39 16.1**	**-0.1**
	3.9nm,0.3s,baz=132,slow=4.7,SNR=36						
KDAK				Sn	**Sn**	**16 39 47.7**	**-1.9**
	13nm,0.3s,baz=24,slow=20,SNR=8.9 12nm,0.4s						
SII	**Sitkinak Islan**	**2.92**	**289**		**Pn**	**16 39 16.8**	**-1.2**
SII					**Sn**	**16 39 52.4**	**-0.3**
SII	**Sitkinak Islan**	**2.92**	**289**	IAML		16 39 57.0	
	comp=E,196nm,0.9s						
SII				IAML		16 40 02.1	
	comp=N,197nm,0.7s						
SII	**Sitkinak Islan**	**2.92**	**289**	P	**Pn**	**16 39 17.1**	**-0.9**
	baz=106						
SII				S	**Sn**	**16 39 53.1**	**+0.4**
	baz=106						
SYI	**Shuyak Island**	**3.40**	**331**		**Pn**	**16 39 24.6**	**+0.2**
SYI	**Shuyak Island**	**3.40**	**331**	IAML		16 40 04.0	
	comp=E,89nm,2.2s						
Q20K	**Shuyak Island**	**3.40**	**330**	P	**Pn**	**16 39 24.7**	**+0.3**
	baz=147						
Q20K				S	**Sn**	**16 40 01.8**	**-2.6**
	baz=147						
R18K	**Karluk**	**3.45**	**305**		**Pn**	**16 39 24.6**	**-0.6**
R18K				IAML		16 40 09.8	
	comp=N,186nm,0.6s						
R18K				IAML		16 40 13.1	
	comp=E,180nm,0.5s						
R18K	**Karluk**	**3.45**	**305**		**Sn**	**16 40 04.5**	**-1.2**
R18K	**Karluk**	**3.45**	**305**	P	**Pn**	**16 39 25.4**	**+0.2**
	baz=121						
R18K				S	**Sn**	**16 40 04.5**	**-1.2**
	baz=121						
CNPM	**China Poot**	**3.99**	**345**		**Pn**	**16 39 32.4**	**-0.2**
Q19K	**Cape Douglas,**	**4.04**	**325**	Pn	**Pn**	**16 39 32.6**	**-0.7**
Q19K	**Cape Douglas,**	**4.04**	**325**	P	**Pn**	**16 39 34.2**	**+0.9**
	baz=141						
Q19K				S	**Sn**	**16 40 19.1**	**-1.1**
	baz=141						
Q23K	**Middleton Isla**	**4.04**	**21**		**Pn**	**16 39 32.7**	**-0.6**
Q23K				IAML		16 40 15.6	
	comp=N,272nm,1.8s						
MID	**Middleton Isla**	**4.04**	**21**		**Pn**	**16 39 32.1**	**-1.2**
MID				IAML		16 40 15.6	
	comp=N,267nm,2.1s						
KAHG	**Katmai Hook Gl**	**4.04**	**316**		**Pn**	**16 39 33.7**	**+0.3**
KAHG					**Sn**	**16 40 18.4**	**-2.0**
BRSE	**Bradley Lake S**	**4.14**	**349**		**Pn**	**16 39 34.5**	**-0.2**
BRSE	**Bradley Lake S**	**4.14**	**349**	P	**Pn**	**16 39 34.5**	**-0.2**
	baz=167						
ACHA	**Angle Creek He**	**4.19**	**309**		**Pn**	**16 39 35.9**	**+0.4**
ANCK	**Angle Creek**	**4.26**	**309**		**Pn**	**16 39 37.2**	**+0.8**
KAHC	**Katmai Hardscr**	**4.33**	**315**		**Pn**	**16 39 38.6**	**+1.3**
KAHC	**Katmai Hardscr**	**4.33**	**315**	P	**Pn**	**16 39 38.6**	**+1.3**
	baz=130						
P23K	**Montague Islan**	**4.41**	**12**		**Pn**	**16 39 38.6**	**+0.2**
P23K	**Montague Islan**	**4.41**	**12**	P	**Pn**	**16 39 38.6**	**+0.2**
	baz=192						
SEW	**Seward**	**4.42**	**358**	P	**Pn**	**16 39 41.6**	**+3.1**
	baz=177						
CNTC	**Contact Creek**	**4.47**	**308**		**Pn**	**16 39 39.8**	**+0.4**
Q17K	**Contact Creek**	**4.47**	**308**	P	**Pn**	**16 39 39.8**	**+0.4**
	baz=122						
P19K	**Oil Pt**	**4.51**	**333**		**Pn**	**16 39 40.0**	**+0.1**
O20K	**Slope Mountain**	**4.76**	**339**		**Pn**	**16 39 43.9**	**+0.7**
O20K	**Slope Mountain**	**4.76**	**339**	P	**Pn**	**16 39 43.9**	**+0.7**
	baz=155						
IVE	**Iliamna Volcan**	**4.78**	**336**		**Pn**	**16 39 43.5**	**-0.1**
P18K	**Big Mountain,**	**4.92**	**321**		**Pn**	**16 39 45.6**	**+0.1**
P18K				IAML		16 41 02.7	
	comp=E,29nm,3.7s						
P18K	**Big Mountain,**	**4.92**	**321**	P	**Pn**	**16 39 45.3**	**-0.2**
	baz=136						
R16K	**Pilot Point**	**4.99**	**295**		**Pn**	**16 39 46.4**	**+0.1**
R16K	**Pilot Point**	**4.99**	**295**	P	**Pn**	**16 39 46.4**	**+0.1**
	baz=109						
ANPB	**Aniakchak Plen**	**5.18**	**286**		**Pn**	**16 39 49.2**	**+0.1**
EYAK	**Cordova Ski Ar**	**5.19**	**19**		**Pn**	**16 39 49.5**	**+0.4**
EYAK	**Cordova Ski Ar**	**5.19**	**19**	P	**Pn**	**16 39 49.5**	**+0.4**
	baz=201						
P17K	**Kvichak River**	**5.25**	**315**		**Pn**	**16 39 50.8**	**+0.9**
P17K	**Kvichak River**	**5.25**	**315**	P	**Pn**	**16 39 50.8**	**+0.9**
	baz=129						
O18K	**Koktuh Hills**	**5.26**	**325**	IAML		16 42 12.1	
	comp=E,33nm,3.9s						
O18K	**Koktuh Hills**	**5.26**	**325**	P	**Pn**	**16 39 49.9**	**-0.2**
	baz=139						
O18K	**Koktuh Hills**	**5.26**	**325**	IAML		16 40 27.4	
	comp=N,31nm,2.9s						
O18K	**Koktuh Hills**	**5.26**	**325**	Pn	**Pn**	**16 39 50.1**	**0.0**
NICHA	**Nichawak Mount**	**5.33**	**29**		**Pn**	**16 39 51.0**	**0.0**
HMT	**Hamilton**	**5.34**	**27**		**Pn**	**16 39 51.4**	**+0.2**
GOAT	**Goat Mountain**	**5.44**	**24**		**Pn**	**16 39 52.6**	**+0.1**
FIS	**Fire Island**	**5.49**	**355**		**Pn**	**16 39 53.4**	**+0.3**
BERG	**Berg Lake**	**5.54**	**30**		**Pn**	**16 39 54.0**	**+0.2**
GRIN	**Grindle Hills**	**5.55**	**32**		**Pn**	**16 39 54.5**	**+0.4**
SNH	**Sunshine Point**	**5.62**	**34**	Pn	**Pn**	**16 39 55.3**	**+0.2**
KHIT	**Khitrov Hills**	**5.71**	**31**		**Pn**	**16 39 56.0**	**-0.3**
KNK	**Knik Glacier**	**5.74**	**4**	Pn	**Pn**	**16 39 53.0**	**-3.7**
P16K	**Nushagak River**	**5.81**	**309**		**Pn**	**16 39 57.7**	**+0.1**
WAX	**Waxell Ridge**	**5.83**	**33**		**Pn**	**16 39 57.7**	**-0.2**
VNFG	**Fog Glacier, M**	**5.84**	**280**		**Pn**	**16 39 56.9**	**-1.2**
MESA	**MESA**	**5.92**	**38**		**Pn**	**16 39 58.8**	**-0.5**
CNBA	**Chernabura Isl**	**6.01**	**266**	Pn	**Pn**	**16 39 59.4**	**-1.0**
BAGL	**Bagley Icefiel**	**6.10**	**35**		**Pn**	**16 40 01.7**	**+0.1**
ISLE	**Juniper Island**	**6.11**	**34**		**Pn**	**16 40 01.7**	**-0.1**
O16K	**Kokwok River B**	**6.17**	**313**	Pn	**Pn**	**16 40 02.5**	**+0.1**
TABL	**Table Mountain**	**6.39**	**39**		**Pn**	**16 40 05.9**	**+0.2**
GRNC	**Granite Creek**	**6.39**	**35**		**Pn**	**16 40 06.0**	**+0.1**
SDPT	**Sand Point**	**6.42**	**272**		**Pn**	**16 40 04.1**	**-1.8**
PCA	**Pinnacle**	**6.49**	**44**	Pn	**Pn**	**16 40 06.8**	**-0.2**
PNL	**Peninsula**	**6.59**	**49**		**Pn**	**16 40 08.6**	**+0.3**
BCPM	**Bancas Point**	**6.65**	**46**		**Pn**	**16 40 09.2**	**0.0**
BARN	**Barnard Glacie**	**6.67**	**33**	Pn	**Pn**	**16 40 10.2**	**+0.5**
O15K	**Ungalikthiuk R**	**6.71**	**306**		**Pn**	**16 40 10.4**	**+0.4**
PN7A	**Pavlof North-7**	**7.26**	**273**		**Pn**	**16 40 15.0**	**-2.6**
O29M	**Mount Kennedy**	**7.29**	**46**		**Pn**	**16 40 18.8**	**+0.8**
P29M	**Windy Craggy**	**7.30**	**53**		**Pn**	**16 40 18.1**	**+0.1**
N15K	**Kwethluk River**	**7.32**	**312**	Pn	**Pn**	**16 40 18.8**	**+0.4**
O14K	**Tigyukauivet M**	**7.41**	**304**	Pn	**Pn**	**16 40 18.6**	**-1.0**
S31K	**Pelican**	**7.46**	**67**	Pn	**Pn**	**16 40 17.9**	**-2.4**
SIT	**Sitka**	**7.82**	**74**	Pn	**Pn**	**16 40 21.9**	**-3.3**
P30M	**Million Dollar**	**7.88**	**51**		**Pn**	**16 40 25.2**	**-0.8**
S32K	**Killisnoo**	**8.27**	**72**		**Pn**	**16 40 28.7**	**-2.6**
BESE	**Bessie Mountai**	**8.32**	**64**	Pn	**Pn**	**16 40 30.3**	**-1.7**
SKAG	**Skagway**	**8.35**	**57**		**Pn**	**16 40 32.6**	**+0.2**
ISNN	**Isanotski Nort**	**8.38**	**270**		**Pn**	**16 40 31.3**	**-1.5**
R32K	**Eaglecrest**	**8.42**	**66**	Pn	**Pn**	**16 40 32.4**	**-1.0**
JIS	**Juneau Island**	**8.49**	**66**	Pn	**Pn**	**16 40 32.2**	**-2.1**
O30N	**Mendenhall**	**8.57**	**48**		**Pn**	**16 40 35.5**	**-0.1**
M29M	**Somme Creek**	**8.72**	**35**	Pn	**Pn**	**16 40 38.5**	**+0.8**
WHY	**Whitehorse**	**9.04**	**51**	Pn	**Pn**	**16 40 42.6**	**+0.6**
U33K	**Whale Pass**	**9.04**	**81**	Pn	**Pn**	**16 40 38.6**	**-3.3**
K27K	**Chicken**	**9.08**	**20**	Pn	**Pn**	**16 40 41.5**	**-1.0**
N31M	**Braeburn, Yuko**	**9.08**	**45**	Pn	**Pn**	**16 40 42.6**	**+0.1**
P32M	**Atlin**	**9.16**	**58**		**Pn**	**16 40 43.2**	**-0.4**
ILAR	**Eielson Array**	**9.17**	**6**	Sn	**Sn**	**16 42 22.4**	**-4.0**
	baz=184,slow=22						
ILAR				LR	LR	16 44 23.9	
	comp=N,72nm,18.2s,baz=325,slow=38						
P33M	**Teslin, Yukon**	**9.80**	**56**		**Pn**	**16 40 52.5**	**+0.1**
M31M	**Drury Creek, Y**	**10.03**	**43**	Pn	**Pn**	**16 40 57.2**	**+1.7**
N32M	**Quiet Lake**	**10.05**	**51**		**Pn**	**16 40 56.1**	**+0.4**
FARO	**Faro, Yukon**	**10.46**	**45**	Pn	**Pn**	**16 41 02.8**	**+1.5**
R33M	**Jennings River**	**10.46**	**62**	Pn	**Pn**	**16 41 01.7**	**+0.2**
T35M	**Bob Quinn**	**10.59**	**75**		**Pn**	**16 41 03.1**	**-0.1**
DLBC	**Dease Lake**	**10.78**	**67**	Pn	**Pn**	**16 41 04.7**	**-1.1**
RUBB	**Prince Rupert**	**10.96**	**89**	Pn	**Pn**	**16 41 07.9**	**-0.3**
ANM	**Nome**	**11.96**	**325**	Pn	**Pn**	**16 41 24.2**	**+2.4**
HOLB	**Holberg**	**13.59**	**103**	Pn	**Pn**	**16 41 43.9**	**-0.2**
INK	**Inuvik**	**14.56**	**24**	Pn	**Pn**	**16 41 57.8**	**+0.6**
	comp=N,0.1nm,0.3s,baz=188,slow=10,SNR=4.8						
INK				LR	LR	16 47 50.9	
	comp=N,46nm,19.5s,baz=183,slow=38 comp=N,7.5nm,1.1s						
YKA	**Yellowknife Ar**	**18.83**	**55**	P	**Pn**	**16 42 52.5**	**+0.9**
	comp=N,0.1nm,0.3s,baz=265,slow=10,SNR=4.1 comp=N,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**26.90**	**117**	P	**P**	**16 44 13.0**	**+0.4**
	comp=N,0.3nm,0.5s,baz=308,slow=8.7,SNR=1.3 comp=N,0.3nm,0.5s						
FRB	**Frobisher Bay**	**38.81**	**44**	LR	LR	17 01 42.3	
	comp=N,35nm,18.7s,baz=286,slow=36						
H11N2	**WAKE ISLAND Hy**	**48.63**	**241**	T	T	17 38 43.1	
	baz=30,slow=74						
H11N3	**WAKE ISLAND Hy**	**48.64**	**240**	T	T	17 39 25.1	
	baz=30						
H11N1	**WAKE ISLAND Hy**	**48.65**	**240**	T	T	17 39 10.8	
	baz=30,slow=74						
H11S1	**WAKE ISLAND Hy**	**49.77**	**240**	T	T	17 42 09.0	
	baz=24						
H11S2	**WAKE ISLAND Hy**	**49.78**	**240**	T	T	17 42 10.0	
	baz=24						
H11S3	**WAKE ISLAND Hy**	**49.79**	**240**	T	T	17 42 13.7	
	baz=24						
ARCES	**ARCESS Array B**	**55.01**	**2**	P	**P**	**16 48 02.9**	**+0.8**
	comp=N,4.1nm,1.0s,baz=8.0,slow=9.1,SNR=1.6 comp=N,4.1nm,1.0s						
SONM	**Songino Array**	**59.05**	**310**	P	**P**	**16 48 31.8**	**+0.6**
	comp=N,0.4nm,0.8s,baz=45,slow=8.6,SNR=1.9 comp=N,0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**62.08**	**327**	P	**P**	**16 48 52.0**	**+0.5**
	comp=N,0.7nm,0.5s,baz=37,slow=7.6,SNR=3.9 comp=N,0.7nm,0.5s						
FINES	**FINESS Array B**	**63.14**	**3**	P	**P**	**16 49 00.0**	**+1.5**
	comp=N,2.5nm,0.8s,baz=15,slow=8.1,SNR=5.4 comp=N,2.5nm,0.8s						
BVAR	**Borovoye Array**	**66.83**	**335**	P	**P**	**16 49 23.5**	**+0.8**
	comp=N,1.0nm,0.7s,baz=29,slow=6.8,SNR=6.6 comp=N,1.0nm,0.7s						
KURBB	**Kuhatov Arra**	**66.86**	**329**	P	**P**	**16 49 23.6**	**+0.7**
	comp=N,0.4nm,0.4s,baz=33,slow=5.6,SNR=1.8 comp=N,0.4nm,0.4s						
MKAR	**Makanchi Array**	**69.10**	**325**	P	**P**	**16 49 38.0**	**+0.9**
	comp=N,0.6nm,0.5s,baz=40,slow=6.0,SNR=8.6 comp=N,0.6nm,0.5s						
AKASG	**Malin Array Be**	**73.96**	**1**	P	**P**	**16 50 06.8**	**+0.6**
	comp=N,0.3nm,0.3s,baz=2.0,slow=6.5,SNR=1.7 comp=N,0.3nm,0.3s						
QSPA	**South Pole Qui**	**145.49**	**180**	PKPbc	**PKPdf**	**16 58 07.8**	**-0.1**
	comp=N,4.3nm,0.8s,baz=166,slow=0.6,SNR=13						

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*IDC **01** 16:38:55.9±6.0,63°.01N×150°.78W,h121km±52km, mb3.3/3, mbtmp3.6/6,Error ellipse: s-maj=62.3km s-min=37.3km az=31.0*
*NEIC **01** 16:38:55.8±1.0,62°.99N±0°.03×150°.86W±0°.08, h117km±6km,Error ellipse: s-maj=5.1km s-min=5.0km az=73.0*
*AEIC **01** 16:38:56.7±1.1,62°.96N±0°.03×150°.86W±0°.08, h109km±3km,ML3.1,ML3.3/182(NEIC),Error ellipse: s-maj=4.9km s-min=4.7km az=120.0*
ISC 01 16:38:55.7±0.8,**62°.98N**±0°.03×**150°.85W**±0°.03,
h116km±5km,**n215,**σ0s**65**/242,**mb3.8**/3,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.54**	**28**		**Pn**	**16 39 13.9**	**+0.4**
TRF				Sn	**Sn**	**16 39 27.4**	**+0.2**
TRF				IAML		16 39 27.9	
	comp=E,1μm,0.5s						
TRF				IAML		16 39 28.1	
	comp=N,1μm,0.7s						
TRF	**Thorofare Moun**	**0.54**	**28**	P	**Pn**	**16 39 14.0**	**+0.4**
	baz=208						
TRF				S	**Sn**	**16 39 27.5**	**+0.4**
	baz=208						
KTH	**Kantishna Hill**	**0.57**	**357**		**Pn**	**16 39 14.3**	**+0.5**
KTH				Sn	**Sn**	**16 39 27.2**	**-0.2**
KTH				IAML		16 39 28.2	
	comp=N,1μm,0.8s						
KTH				IAML		16 39 28.4	
	comp=E,590nm,0.9s						
PPLA	**Purkeypile**	**0.62**	**263**		**Pn**	**16 39 14.7**	**+0.6**
PPLA					**Sn**	**16 39 28.3**	**+0.3**
PPLA	**Purkeypile**	**0.62**	**263**	P	**Pn**	**16 39 14.7**	**+0.6**
	baz=83						
PPLA				S	**Sn**	**16 39 28.3**	**+0.3**
	baz=83						
CUT	**Chulitna**	**0.64**	**155**		**Pn**	**16 39 14.4**	**+0.3**
CUT				Sn	**Sn**	**16 39 27.9**	**-0.1**
CUT	**Chulitna**	**0.64**	**155**	P	**Pn**	**16 39 14.5**	**+0.3**
	baz=334						
CUT				S	**Sn**	**16 39 28.2**	**+0.2**
	baz=334						
CAST	**Castle Rocks**	**0.71**	**309**		**Pn**	**16 39 14.9**	**+0.2**
CAST				Sn	**Sn**	**16 39 28.4**	**-0.7**
CAST				IAML		16 39 29.3	
	comp=E,474nm,0.8s						
CAST				IAML		16 39 29.5	
	comp=N,723nm,0.7s						
CAST	**Castle Rocks**	**0.71**	**309**	P	**Pn**	**16 39 15.0**	**+0.2**
	baz=129						
CAST				S	**Sn**	**16 39 28.6**	**-0.5**
	baz=129						
WAT7	**Susitna Watana**	**0.93**	**98**		**Pn**	**16 39 17.2**	**+0.4**
WAT7					**Sn**	**16 39 33.0**	**+0.3**
RND	**Reindeer**	**1.00**	**64**		**Pn**	**16 39 17.9**	**+0.5**
RND				Sn	**Sn**	**16 39 33.5**	**-0.4**
RND				IAML		16 39 35.0	
	comp=N,473nm,0.6s						
RND				IAML		16 39 37.4	
	comp=E,462nm,0.5s						
SKT	**Skwentna**	**1.05**	**198**		**Pn**	**16 39 18.0**	**0.0**
SKT				Sn	**Sn**	**16 39 34.2**	**-0.5**
SKT	**Skwentna**	**1.05**	**198**	P	**Pn**	**16 39 18.1**	**+0.2**
	baz=17						
WAT1	**Susitna Watana**	**1.06**	**97**		**Sn**	**16 39 35.3**	**+0.4**
WAT1	**Susitna Watana**	**1.06**	**97**	P	**Pn**	**16 39 18.4**	**+0.3**
	baz=278						
WAT1				S	**Sn**	**16 39 35.3**	**+0.4**
	baz=278						
CHUM	**Lake Minchumin**	**1.12**	**325**		**Pn**	**16 39 19.1**	**+0.6**
CHUM	**Lake Minchumin**	**1.12**	**325**	P	**Pn**	**16 39 19.1**	**+0.6**
	baz=144						
BPAW	**Bear Paw Mtn.**	**1.12**	**357**		**Pn**	**16 39 19.0**	**+0.5**
BPAW				Sn	**Sn**	**16 39 35.3**	**-0.7**
BPAW				IAML		16 39 36.3	
	comp=N,292nm,0.6s						
BPAW				IAML		16 39 36.9	
	comp=E,347nm,0.8s						
BPAW	**Bear Paw Mtn.**	**1.12**	**357**	P	**Pn**	**16 39 19.1**	**+0.5**
	baz=177						
MCK	**McKinley**	**1.15**	**48**		**Sn**	**16 39 37.0**	**+0.5**
MCK	**McKinley**	**1.15**	**48**	P	**Pn**	**16 39 19.5**	**+0.6**
	baz=229						
MCK				S	**Sn**	**16 39 37.0**	**+0.5**
	baz=229						
BWN	**Browne**	**1.35**	**27**		**Pn**	**16 39 22.2**	**+1.2**
BWN				Sn	**Sn**	**16 39 40.8**	**+0.5**
BWN				IAML		16 39 43.7	
	comp=E,237nm,1.0s						
BWN				IAML		16 39 46.5	
	comp=N,289nm,1.0s						
L20K	**Farewell, AK**	**1.48**	**251**		**Pn**	**16 39 22.8**	**+0.2**
L20K	**Farewell, AK**	**1.48**	**251**	P	**Pn**	**16 39 22.8**	**+0.2**
	baz=69						
WAT6	**Susitna Watana**	**1.49**	**104**		**Sn**	**16 39 43.6**	**+0.2**
WAT6	**Susitna Watana**	**1.49**	**104**	P	**Pn**	**16 39 23.0**	**+0.2**
	baz=286						
WAT6				S	**Sn**	**16 39 43.6**	**+0.2**
	baz=286						
K20K	**Telida**	**1.51**	**286**		**Pn**	**16 39 23.2**	**+0.3**
K20K				IAML		16 39 44.4	
	comp=E,146nm,0.8s						
K20K	**Telida**	**1.51**	**286**	P	**Pn**	**16 39 23.4**	**+0.5**
	baz=104						
GHO	**Glory Hole Cre**	**1.51**	**143**		**Pn**	**16 39 23.6**	**+0.5**
GHO				Sn	**Sn**	**16 39 44.1**	**+0.3**
SUA	**Susitna One**	**1.52**	**178**		**Pn**	**16 39 23.5**	**+0.2**
SUA				IAML		16 39 49.2	
	comp=E,255nm,0.7s						
SUA				IAML		16 39 51.0	
	comp=N,299nm,0.6s						
SUA	**Susitna One**	**1.52**	**178**		**Sn**	**16 39 45.0**	**+0.8**
SUA	**Susitna One**	**1.52**	**178**	P	**Pn**	**16 39 23.8**	**+0.6**
	baz=358						
SUA				S	**Sn**	**16 39 45.0**	**+0.8**
	baz=358						
M20K	**Styx River**	**1.53**	**225**		**Pn**	**16 39 23.1**	**-0.1**
M20K	**Styx River**	**1.53**	**225**	P	**Pn**	**16 39 23.1**	**-0.1**
	baz=43						
DHY	**Denali Highway**	**1.59**	**85**		**Pn**	**16 39 24.4**	**+0.4**
DHY				IAML		16 39 47.8	
	comp=E,596nm,0.4s						
DHY	**Denali Highway**	**1.59**	**85**	P	**Pn**	**16 39 24.4**	**+0.4**
	baz=267						
PMR	**Palmer**	**1.61**	**149**		**Pn**	**16 39 24.1**	**0.0**
PMR				IAML		16 39 52.1	
	comp=N,235nm,0.2s						
PMR				IAML		16 39 53.2	
	comp=E,319nm,0.5s						
PMR	**Palmer**	**1.61**	**149**		**Sn**	**16 39 46.3**	**+0.6**
PMR	**Palmer**	**1.61**	**149**	P	**Pn**	**16 39 24.2**	**+0.1**
	baz=330						
PMR				S	**Sn**	**16 39 46.3**	**+0.6**
	baz=330						
SML	**Sawmill**	**1.66**	**134**		**Pn**	**16 39 25.0**	**+0.2**
SML				IAML		16 39 48.2	
	comp=E,446nm,0.4s						
SML				IAML		16 39 48.4	
	comp=N,511nm,0.6s						
SML	**Sawmill**	**1.66**	**134**	P	**Pn**	**16 39 25.0**	**+0.2**
	baz=316						
SPCG	**Spurr Capps Gl**	**1.78**	**198**		**Sn**	**16 39 50.2**	**+0.5**
NEA2	**Nenana**	**1.80**	**25**		**Pn**	**16 39 26.9**	**+0.5**
NEA2				IAML		16 39 49.8	
	comp=N,135nm,0.5s						
NEA2				IAML		16 39 50.0	
	comp=E,198nm,0.9s						
NEA2	**Nenana**	**1.80**	**25**		**Sn**	**16 39 49.3**	**-0.6**
NEA2	**Nenana**	**1.80**	**25**	P	**Pn**	**16 39 26.9**	**+0.5**
	baz=207						
NEA2				S	**Sn**	**16 39 49.3**	**-0.6**
	baz=207						
M23K	**Glacier View**	**1.88**	**128**	P	**Pn**	**16 39 27.3**	**-0.1**
	baz=310						
J20K	**Nowinta River**	**1.90**	**311**		**Pn**	**16 39 28.1**	**+0.5**
J20K				IAML		16 39 53.7	
	comp=E,140nm,0.6s						
J20K	**Nowinta River**	**1.90**	**311**		**Sn**	**16 39 51.9**	**-0.1**
J20K	**Nowinta River**	**1.90**	**311**	P	**Pn**	**16 39 28.2**	**+0.6**
	baz=128						
J20K				S	**Sn**	**16 39 51.9**	**-0.1**
	baz=128						
N20K	**Mount Spurr**	**1.90**	**200**	P	**Pn**	**16 39 28.1**	**+0.4**
	baz=19						
KNK	**Knik Glacier**	**1.93**	**143**		**Pn**	**16 39 28.1**	**0.0**
KNK				IAML		16 40 03.3	
	comp=N,354nm,0.5s						
KNK	**Knik Glacier**	**1.93**	**143**	P	**Pn**	**16 39 28.3**	**+0.2**
	baz=325						
WRH	**Wood River Hil**	**1.94**	**38**		**Pn**	**16 39 28.4**	**+0.4**
M19K	**Big River Lodg**	**1.97**	**238**		**Pn**	**16 39 28.3**	**-0.3**
M19K	**Big River Lodg**	**1.97**	**238**		**Sn**	**16 39 53.7**	**+0.1**
M19K	**Big River Lodg**	**1.97**	**238**	P	**Pn**	**16 39 28.2**	**-0.3**
	baz=56						
M19K				S	**Sn**	**16 39 53.7**	**+0.1**
	baz=56						
RC01	**Rabbit Creek A**	**1.97**	**164**		**Pn**	**16 39 28.6**	**+0.1**
RC01				IAML		16 39 54.5	
	comp=E,288nm,0.3s						
RC01				IAML		16 39 55.3	
	comp=N,361nm,0.2s						
RC01	**Rabbit Creek A**	**1.97**	**164**	P	**Pn**	**16 39 28.9**	**+0.3**
	baz=345						
SCM	**Sheep Creek Mo**	**2.01**	**124**		**Pn**	**16 39 29.0**	**-0.1**
SCM				IAML		16 39 55.8	
	comp=E,344nm,0.8s						
SCM	**Sheep Creek Mo**	**2.01**	**124**		**Sn**	**16 39 55.0**	**+0.5**
SCM	**Sheep Creek Mo**	**2.01**	**124**	P	**Pn**	**16 39 29.3**	**+0.3**
	baz=306						
SCM				S	**Sn**	**16 39 55.0**	**+0.5**
	baz=306						
L19K	**White Mountain**	**2.02**	**248**		**Pn**	**16 39 29.1**	**-0.1**
MLY	**Manley**	**2.06**	**1**		**Sn**	**16 39 55.8**	**+0.1**
MLY	**Manley**	**2.06**	**1**	P	**Pn**	**16 39 30.3**	**+0.6**
	baz=181						
MLY				S	**Sn**	**16 39 55.7**	**+0.1**
	baz=181						
CCB	**Clear Creek Bu**	**2.15**	**38**		**Pn**	**16 39 31.3**	**+0.6**
CAPN	**Captain Cook N**	**2.23**	**184**	Pn	**Pn**	**16 39 33.1**	**+1.4**
HDA	**Harding Lake**	**2.25**	**49**		**Pn**	**16 39 32.5**	**+0.5**

J18K	**Innoko River**	**2.70**	**283**	P		**Pn**	**16 39 38.4**	**+0.6**
	baz=98							
KLU	**Klutina**	**2.75**	**121**	Pn		**Pn**	**16 39 38.0**	**-0.6**
KLU				IAML			16 40 21.0	
	comp=N,163nm,0.4s							
KLU	**Klutina**	**2.75**	**121**	P		**Pn**	**16 39 38.0**	**-0.6**
	baz=305							
M18K	**Stony River**	**2.77**	**239**	P		**Pn**	**16 39 38.8**	**+0.1**
	baz=55							
N19K	**Bonanza Creek**	**2.77**	**220**	Pn		**Pn**	**16 39 39.2**	**+0.3**
L18K	**Granite Mounta**	**2.81**	**257**	Pn		**Pn**	**16 39 39.5**	**+0.3**
L18K	**Granite Mounta**	**2.81**	**257**	P		**Pn**	**16 39 39.6**	**+0.3**
	baz=72							
RIDG	**Independent Ri**	**2.81**	**72**	Pn		**Pn**	**16 39 40.6**	**+1.3**
RIDG				IAML			16 40 20.3	
	comp=N,154nm,0.4s							
RIDG	**Independent Ri**	**2.81**	**72**	P		**Pn**	**16 39 40.6**	**+1.3**
	baz=257							
H21K	**Melozitna Rive**	**2.82**	**343**			**Pn**	**16 39 39.9**	**+0.5**
H21K	**Melozitna Rive**	**2.82**	**343**	P		**Pn**	**16 39 40.1**	**+0.7**
	baz=162							
SVW2	**Sparrevohn**	**2.92**	**232**			**Pn**	**16 39 40.7**	**-0.1**
SVW2				IAML			16 40 15.2	
	comp=N,64nm,0.8s							
SVW2				IAML			16 40 15.7	
	comp=E,64nm,0.7s							
J25K	**Salcha River,**	**2.93**	**54**			**Pn**	**16 39 41.5**	**+0.5**
J25K	**Salcha River,**	**2.93**	**54**	P		**Pn**	**16 39 41.6**	**+0.7**
	baz=238							
H22K	**Ishtalitna Cre**	**2.93**	**356**			**Pn**	**16 39 41.8**	**+0.9**
H22K	**Ishtalitna Cre**	**2.93**	**356**	P		**Pn**	**16 39 41.8**	**+0.9**
	baz=175							
SEW	**Seward**	**2.96**	**166**			**Pn**	**16 39 40.9**	**-0.4**
DIV	**Divide**	**3.03**	**126**			**Pn**	**16 39 41.7**	**-0.6**
H24K	**Noodor Dome**	**3.14**	**23**			**Pn**	**16 39 44.6**	**+0.9**
GCSA	**Galena City Sc**	**3.20**	**306**			**Pn**	**16 39 45.3**	**+1.0**
GCSA	**Galena City Sc**	**3.20**	**306**	P		**Pn**	**16 39 45.3**	**+1.0**
	baz=121							
BRLK	**Bradley Lake**	**3.23**	**180**	Pn		**Pn**	**16 39 44.9**	**0.0**
BRLK				IAML			16 40 35.2	
	comp=E,86nm,0.6s							
BRLK				IAML			16 40 36.6	
	comp=N,70nm,0.6s							
N25K	**Chitina, Valde**	**3.23**	**112**	Pn		**Pn**	**16 39 45.0**	**+0.1**
N25K				IAML			16 40 35.0	
	comp=E,81nm,0.6s							
N25K				IAML			16 40 36.7	
	comp=N,69nm,0.7s							
N25K	**Chitina, Valde**	**3.23**	**112**	P		**Pn**	**16 39 45.1**	**+0.2**
	baz=298							
SCRK	**Sand Creek**	**3.24**	**69**	Pn		**Pn**	**16 39 45.3**	**+0.3**
SCRK				IAML			16 40 29.0	
	comp=N,81nm,0.5s							
SCRK				IAML			16 40 32.2	
	comp=E,96nm,0.5s							
SCRK	**Sand Creek**	**3.24**	**69**	P		**Pn**	**16 39 45.3**	**+0.3**
	baz=255							
O19K	**Port Alsworth**	**3.25**	**212**	Pn		**Pn**	**16 39 44.9**	**-0.1**
O19K				IAML			16 40 53.4	
	comp=N,146nm,0.4s							
MENT	**Mentasta**	**3.26**	**88**			**Pn**	**16 39 45.6**	**+0.4**
IMAR	**Indian Mountai**	**3.26**	**339**	Pn		**Pn**	**16 39 44.8**	**-0.4**
HIN	**Hinchinbrook I**	**3.32**	**139**	Pn		**Pn**	**16 39 45.5**	**-0.5**
N18K	**Kilae Creek**	**3.32**	**228**	Pn		**Pn**	**16 39 46.3**	**+0.2**
N18K				IAML			16 41 23.8	
	comp=E,29nm,3.4s							
N18K	**Kilae Creek**	**3.32**	**228**	P		**Pn**	**16 39 46.2**	**+0.2**
	baz=44							
HOM	**Homer**	**3.36**	**187**	Pn		**Pn**	**16 39 47.1**	**+0.7**
L26K	**Log Cabin Wild**	**3.42**	**86**			**Pn**	**16 39 48.3**	**+0.9**
K17K	**Iditarod**	**3.42**	**269**			**Pn**	**16 39 47.8**	**+0.4**
K17K				IAML			16 40 27.3	
	comp=E,53nm,0.7s							
K17K				IAML			16 40 42.2	
	comp=N,26nm,1.1s							
M17K	**Holitna River**	**3.47**	**246**			**Pn**	**16 39 47.6**	**-0.3**
M17K				IAML			16 41 16.1	
	comp=N,42nm,0.9s							
M17K				IAML			16 41 19.4	
	comp=E,35nm,0.9s							
CNPM	**China Poot**	**3.47**	**183**	Pn		**Pn**	**16 39 48.4**	**+0.3**
CNPM				IAML			16 40 38.0	
	comp=E,94nm,1.4s							
CNPM				IAML			16 40 41.6	
	comp=N,98nm,0.4s							
P19K	**Oil Pt**	**3.53**	**200**			**Pn**	**16 39 48.4**	**-0.5**
P19K				IAML			16 40 46.6	
	comp=N,129nm,0.5s							
P19K				IAML			16 40 53.0	
	comp=E,121nm,0.6s							
BMRM	**Bremner River**	**3.58**	**122**			**Pn**	**16 39 49.9**	**+0.5**
BMRM	**Bremner River**	**3.58**	**122**	P		**Pn**	**16 39 49.9**	**+0.5**
	baz=307							
J26L	**Joseph Creek**	**3.58**	**62**			**Pn**	**16 39 50.1**	**+0.6**
GLB	**Gilahina Butte**	**3.64**	**112**	Pn		**Pn**	**16 39 49.7**	**-0.6**
GLB				IAML			16 40 32.6	
	comp=E,73nm,0.4s							
GLB				IAML			16 40 32.8	
	comp=N,91nm,0.5s							
G21K	**Allakaket**	**3.73**	**343**	Pn		**Pn**	**16 39 50.6**	**-0.8**
G21K	**Allakaket**	**3.73**	**343**	P		**Pn**	**16 39 52.1**	**+0.7**
	baz=161							
G23K	**Bananza Creek**	**3.76**	**5**			**Pn**	**16 39 51.8**	**-0.1**
N17K	**Nushagak Hills**	**3.89**	**234**	Pn		**Pn**	**16 39 53.5**	**-0.1**
N17K				IAML			16 41 20.2	
	comp=N,29nm,3.1s							
N17K				IAML			16 41 26.5	
	comp=E,21nm,2.9s							
VRDI	**Verde Repeater**	**3.90**	**114**	Pn		**Pn**	**16 39 52.8**	**-1.1**
VRDI				IAML			16 40 54.6	
	comp=N,53nm,1.1s							
VRDI				IAML			16 40 55.3	
	comp=E,32nm,1.1s							
RAGM	**Ragged Mountai**	**3.93**	**129**			**Pn**	**16 39 50.7**	**-3.4**
H18K	**Honhosa River**	**3.95**	**307**			**Pn**	**16 39 54.6**	**+0.2**
G24K	**Hadweenzic Riv**	**4.00**	**20**			**Pn**	**16 39 55.7**	**+0.7**
G24K				IAML			16 41 13.0	
	comp=E,17nm,3.6s							
MCARA	**McCarthy VSAT**	**4.00**	**110**			**Pn**	**16 39 55.4**	**+0.3**
MCARA	**McCarthy VSAT**	**4.00**	**110**	P		**Pn**	**16 39 55.9**	**+0.8**
	baz=297							
K27K	**Chicken**	**4.07**	**71**			**Pn**	**16 39 56.1**	**+0.1**
K27K				IAML			16 40 46.7	
	comp=E,57nm,0.5s							
K27K				IAML			16 40 48.0	
	comp=N,57nm,0.9s							
K27K	**Chicken**	**4.07**	**71**	P		**Pn**	**16 39 56.3**	**+0.3**
	baz=259							
L27K	**Beaver Creek,**	**4.11**	**85**			**Pn**	**16 39 56.0**	**-0.6**
L27K				IAML			16 40 51.4	
	comp=E,35nm,0.6s							
L27K				IAML			16 41 09.3	
	comp=N,39nm,1.1s							
BCAR	**Beaver Creek A**	**4.13**	**85**	Pn		**Pn**	**16 39 56.6**	**-0.3**
G19K	**Purcell Mounta**	**4.16**	**322**			**Pn**	**16 39 57.2**	**0.0**
M27K	**Edge Creek, AK**	**4.19**	**95**			**Pn**	**16 39 58.2**	**+0.5**
M27K				IAML			16 41 14.1	
	comp=E,52nm,1.0s							
L16K	**Owhat River**	**4.22**	**256**	Pn		**Pn**	**16 39 58.0**	**+0.1**
L16K				IAML			16 42 36.4	
	comp=N,19nm,3.5s							
L16K				IAML			16 42 38.7	
	comp=E,22nm,3.6s							
L16K	**Owhat River**	**4.22**	**256**	P		**Pn**	**16 39 58.2**	**+0.3**
	baz=69							
COLD	**Coldfoot**	**4.27**	**3**	Pn		**Pn**	**16 39 58.7**	**0.0**
COLD	**Coldfoot**	**4.27**	**3**	P		**Pn**	**16 39 59.5**	**+0.8**
	baz=184							
M16K	**Timber Creek**	**4.30**	**246**	Pn		**Pn**	**16 39 58.5**	**-0.5**
M16K				IAML			16 40 51.5	
	comp=N,26nm,3.3s							
M16K				IAML			16 42 42.2	
	comp=E,23nm,4.4s							
PTPK	**Patty Peak**	**4.33**	**111**			**Pn**	**16 40 00.1**	**+0.4**
F21K	**Alatna River**	**4.40**	**347**			**Pn**	**16 40 01.2**	**+0.8**
J16K	**Anvik River**	**4.43**	**278**			**Pn**	**16 40 01.2**	**+0.4**
J16K				IAML			16 41 24.4	
	comp=E,12nm,3.4s							
J16K				IAML			16 41 48.0	
	comp=N,13nm,4.1s							
H17K	**Granite Mounta**	**4.45**	**300**			**Pn**	**16 40 01.7**	**+0.7**
H17K				IAML			16 40 52.4	
	comp=N,14nm,0.6s							
H17K				IAML			16 40 55.5	
	comp=E,12nm,1.1s							
SYI	**Shuyak Island**	**4.45**	**190**	Pn		**Pn**	**16 40 01.8**	**+0.7**
SYI				IAML			16 40 38.2	
	comp=N,72nm,2.4s							
SYI				IAML			16 42 16.8	
	comp=E,88nm,2.5s							
G18K	**Tagagawik**	**4.47**	**314**			**Pn**	**16 40 01.9**	**+0.6**
I17K	**Unalakleet**	**4.51**	**286**	Pn		**Pn**	**16 40 02.2**	**+0.3**
I17K				IAML			16 41 28.5	
	comp=N,16nm,4.5s							
I17K				IAML			16 42 22.8	
	comp=E,13nm,4.4s							
I17K	**Unalakleet**	**4.51**	**286**	P		**Pn**	**16 40 02.9**	**+1.0**
	baz=97							
BVCY	**Beaver Creek**	**4.64**	**93**	P		**Pn**	**16 40 04.0**	**+0.3**
	baz=281							
EGAK	**Eagle**	**4.65**	**63**	Pn		**Pn**	**16 40 04.2**	**+0.6**
EGAK	**Eagle**	**4.65**	**63**	P		**Pn**	**16 40 04.3**	**+0.6**
	baz=251							
F24K	**Squaw Lake**	**4.72**	**14**			**Pn**	**16 40 05.1**	**+0.4**
BARN	**Barnard Glacie**	**4.74**	**110**			**Pn**	**16 40 04.9**	**-0.3**
BARN				IAML			16 41 25.6	
	comp=E,71nm,0.7s							
BARN				IAML			16 41 27.7	
	comp=N,34nm,1.1s							
SNH	**Sunshine Point**	**4.75**	**123**	Pn		**Pn**	**16 40 03.5**	**-1.7**
SNH				IAML			16 40 58.9	
	comp=E,98nm,2.0s							
SNH				IAML			16 43 00.0	
	comp=N,113nm,2.8s							
F19K	**Shaleruckik Mo**	**4.86**	**326**	Pn		**Pn**	**16 40 06.2**	**-0.3**
O16K	**Kokwok River B**	**4.87**	**229**			**Pn**	**16 40 07.0**	**+0.2**
O16K				IAML			16 42 11.2	
	comp=E,20nm,4.0s							
O16K				IAML			16 42 24.1	
	comp=N,17nm,4.0s							
CTG	**Chitna Glacier**	**4.92**	**110**	P		**Pn**	**16 40 09.0**	**+1.5**
	baz=298							
CTGM	**Chitina Glacie**	**4.93**	**110**			**Pn**	**16 40 07.4**	**-0.2**
CTGM				IAML			16 41 29.3	
	comp=N,37nm,1.8s							
CTGM				IAML			16 41 43.4	
	comp=E,26nm,3.0s							
K15K	**Wolf Creek Mou**	**4.98**	**267**			**Pn**	**16 40 08.1**	**0.0**
K15K				IAML			16 42 33.6	
	comp=N,19nm,4.0s							
K15K				IAML			16 42 45.1	
	comp=E,14nm,4.5s							
YUK3	**Moose Creek**	**4.99**	**99**	P		**Pn**	**16 40 09.4**	**+0.9**
	baz=288							
LOGN	**Logan Glacier**	**5.13**	**111**			**Pn**	**16 40 10.4**	**-0.1**
LOGN				IAML			16 41 30.9	
	comp=N,33nm,0.9s							
LOGN				IAML			16 41 39.8	
	comp=E,29nm,2.8s							
BMAR	**Burnt Mountain**	**5.18**	**28**	Pn		**Pn**	**16 40 11.7**	**+0.8**
E19K	**Redstone River**	**5.23**	**332**	Pn		**Pn**	**16 40 11.3**	**-0.2**
E19K				IAML			16 41 44.7	
	comp=N,8.8nm,4.9s							
E19K				IAML			16 41 48.0	
	comp=E,10.0nm,3.9s							
N15K	**Kwethluk River**	**5.24**	**242**	Pn		**Pn**	**16 40 11.6**	**-0.1**
N15K				IAML			16 41 49.7	
	comp=N,21nm,3.0s							
N15K				IAML			16 41 59.4	
	comp=E,37nm,2.5s							
DAWY	**Dawson**	**5.24**	**73**	Pn		**Pn**	**16 40 11.8**	**0.0**
E25K	**Arctic Village**	**5.61**	**21**	Pn		**Pn**	**16 40 16.9**	**+0.3**
E25K	**Arctic Village**	**5.61**	**21**	P		**Pn**	**16 40 17.6**	**+1.0**
	baz=205							
F17K	**Baldwin Pennin**	**5.65**	**313**	Pn		**Pn**	**16 40 17.9**	**+0.8**
M14K	**Bethel**	**5.71**	**252**	Pn		**Pn**	**16 40 18.4**	**+0.4**
L14K	**Kuka Creek**	**5.78**	**259**	Pn		**Pn**	**16 40 19.2**	**+0.2**
L29M	**L29M**	**5.79**	**83**			**Pn**	**16 40 19.2**	**0.0**
L29M	**L29M**	**5.79**	**83**	P		**Pn**	**16 40 19.3**	**+0.1**
	baz=274							
J29N	**Klondike Camp**	**5.81**	**70**	Pn		**Pn**	**16 40 19.1**	**-0.3**
J14K	**Nanvaranak Lak**	**5.82**	**273**	Pn		**Pn**	**16 40 19.5**	**0.0**
D22K	**Ayikyak River**	**5.97**	**354**	Pn		**Pn**	**16 40 21.9**	**+0.4**
K29M	**Barlow Dome**	**6.05**	**76**	Pn		**Pn**	**16 40 22.6**	**-0.2**
YUK6	**Outpost Mounta**	**6.24**	**104**	P		**Pn**	**16 40 25.9**	**+0.6**
	baz=294							
D19K	**Kuna River**	**6.29**	**335**	Pn		**Pn**	**16 40 26.3**	**+0.4**
M30M	**Minto, Yukon**	**6.46**	**87**	Pn		**Pn**	**16 40 27.6**	**-0.7**
F28M	**Old Crow**	**6.54**	**40**	Pn		**Pn**	**16 40 28.8**	**-0.4**
F28M	**Old Crow**	**6.54**	**40**	P		**Pn**	**16 40 29.4**	**+0.2**
	baz=230							
F15K	**North Star Dit**	**6.58**	**301**	Pn		**Pn**	**16 40 28.7**	**-1.0**
ANM	**Nome**	**6.63**	**290**	Pn		**Pn**	**16 40 28.7**	**-1.7**
J30M	**Hart River**	**6.63**	**70**			**Pn**	**16 40 29.2**	**-1.4**
J30M	**Hart River**	**6.63**	**70**	P		**Pn**	**16 40 31.5**	**+0.9**
	baz=262							
HYT	**Haines Junctio**	**6.67**	**103**	Pn		**Pn**	**16 40 29.0**	**-2.1**
MAYO	**Mayo, Yukon**	**6.77**	**78**	Pn		**Pn**	**16 40 30.9**	**-1.5**
EPYK	**Eagle Plains**	**6.94**	**55**	Pn		**Pn**	**16 40 33.7**	**-1.0**
C18K	**Utukok River**	**7.09**	**328**	Pn		**Pn**	**16 40 36.9**	**+0.2**
C19K	**Lookout Ridge**	**7.09**	**334**	Pn		**Pn**	**16 40 36.5**	**-0.2**
G30M	**tAoh Zraii Nji**	**7.38**	**51**			**Pn**	**16 40 39.4**	**-1.2**
E29M	**Blow River**	**7.61**	**39**	Pn		**Pn**	**16 40 42.6**	**-0.9**
M31M	**Drury Creek, Y**	**7.64**	**89**	Pn		**Pn**	**16 40 44.9**	**+0.8**
TNA	**Tin City**	**7.86**	**297**	Pn		**Pn**	**16 40 48.1**	**+1.1**
INK	**Inuvik**	**8.91**	**46**	P		**Pn**	**16 41 01.1**	**0.0**
	comp=E,2.7nm,0.9s,baz=229,slow=15,SNR=6.0							
YKA	**Yellowknife Ar**	**16.48**	**75**	P		**Pn**	**16 42 39.0**	**-0.6**
	comp=E,0.6nm,0.7s,baz=288,slow=11,SNR=9.8							
SONM	**Songino Array**	**53.88**	**306**	P		**P**	**16 48 07.7**	**+1.1**
	comp=E,0.7nm,0.7s,baz=29,slow=7.2,SNR=4.7							
	comp=E,0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**55.57**	**324**	P		**P**	**16 48 17.1**	**-1.4**
	comp=E,0.8nm,0.6s,baz=12,slow=7.9,SNR=5.1							
	comp=E,0.8nm,0.6s							
MKAR	**Makanchi Array**	**62.73**	**322**	P		**P**	**16 49 07.0**	**-0.9**
	comp=E,0.3nm,0.5s,baz=33,slow=6.3,SNR=6.0							
	comp=E,0.3nm,0.5s							

*IDC **01** 17:01:00.5±1.6, 1°.00S×120°.79E, h0km, mb3.3/4, mbtmp3.3/4, MS1.8/1, Error ellipse: s-maj=199.6km s-min=23.3km az=63.0*
*DJA **01** 17:01:02.5±0.3, 1°.5S±2°×12°.0E±°, h10km, M4.0/10, mb4.2/2, MLv3.8/10*
ISC 01 17:01:02.7±0.9, **1°.25S**±0°.06×**120°.43E**±0°.07, **h23**km, **n12,**
σ1ᵎ**31**/12, **mb3.3**/4, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MPSI	**Mapaga**	**1.67**	**341**	P		**Pn**	**17 01 29.8**	**-0.7**
TTSI	**Tana Toraja**	**1.88**	**199**	P		**Pb**	**17 01 34.7**	**-1.7**
MRSI	**Marisa**	**2.29**	**41**	P		**Pn**	**17 01 38.8**	**-0.3**
LUWI	**Luwuk**	**2.35**	**85**	P		**Pn**	**17 01 39.4**	**-0.6**
LUWI				S		**Sb**	**17 02 13.1**	**0.0**
KAPI	**Kappang**	**3.80**	**190**	LR		LR	17 03 07.9	
	comp=Z,12nm,21.0s,baz=34,slow=31							
BKSI	**Bulukumba**	**4.05**	**184**	P		**Pn**	**17 02 02.8**	**-0.6**
BBSI	**Bau Bau**	**4.72**	**153**	P		**Pn**	**17 02 13.5**	**+1.0**
SANI	**Sanana**	**5.61**	**98**	P		**Pn**	**17 02 23.4**	**-1.4**
	9.2nm,1.0s,0.1nm							
WRA	**Warramunga Arr**	**23.03**	**145**	P		**P**	**17 06 06.1**	**-0.3**
	0.6nm,0.8s,baz=323,slow=11,SNR=2.9							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**25.83**	**151**	P		**P**	**17 06 35.3**	**+2.7**
	0.4nm,0.9s,baz=325,slow=9.4,SNR=5.2							
	0.4nm,0.9s							
SONM	**Songino Array**	**50.40**	**348**	P		**P**	**17 09 58.8**	**+0.4**
	0.2nm,0.4s,baz=178,slow=5.6,SNR=2.3							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**58.37**	**330**	P		**P**	**17 10 57.0**	**+0.8**
	0.3nm,0.7s,baz=131,slow=8.3,SNR=5.3							
	0.3nm,0.7s							

*IDC **01** 17:06:02.4±3.9, 3°.25S×130°.87E, h0km, mb3.5/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=281.5km s-min=28.5km az=72.0*
*DJA **01** 17:06:05.9±0.4, 3°.5S±3°×13°.1E±°, h10km, M3.4/7, MLv3.4/7*
ISC 01 17:06:05.4±1.0, **3°.21S**±0°.07×**130°.69E**±0°.09, **h24**km, **n9,**
σ1ᵎ**73**/9, **Seram**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**1.52**	**211**	P		**Pn**	**17 06 31.9**	**+0.9**
FAKI	**Fak Fak**	**1.59**	**80**	P		**Pb**	**17 06 35.9**	**+1.9**
SWI	**Sorong**	**2.40**	**14**	P		**Pb**	**17 06 46.6**	**-1.3**
KMPI	**Kaimana, Papua**	**3.04**	**99**	P		**Pb**	**17 06 56.1**	**-2.8**
LBMI	**Labuha**	**4.08**	**309**	P		**Pn**	**17 07 06.6**	**+0.3**
SANI	**Sanana**	**4.83**	**284**	P		**Pn**	**17 07 16.0**	**-0.7**
WRA	**Warramunga Arr**	**17.01**	**168**	Pn		**Pn**	**17 10 01.2**	**-0.6**
	0.2nm,0.3s,baz=349,slow=11,SNR=18							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**20.57**	**172**	P		**P**	**17 10 42.1**	**-0.5**
	1.6nm,0.7s,baz=351,slow=12,SNR=49							
	1.6nm,0.7s							
MKAR	**Makanchi Array**	**65.48**	**326**	P		**P**	**17 16 48.3**	**+1.7**
	0.2nm,0.3s,baz=111,slow=8.4,SNR=5.8							
	0.2nm,0.3s							

OMAN 01 17:25:23.5±1.2, **16°.45N**×**59°.54E**, **h10**km, **ml3.5**/5, **Error ellipse: s-maj=10.0km s-min=5.1km az=145.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DQM	**DQM**	**3.95**	**332**	P		**Pn**	17 26 24.9	**+0.7**
DQM				S		Sn	17 27 13.5	+2.9
SHAO	**Shalim**	**4.05**	**293**	P		**Pn**	17 26 25.7	**+0.1**
	SNR=21							
SHAO				S		Sn	17 27 13.8	+0.6
DMTO	**DMTO**	**4.56**	**287**	P		**Pn**	17 26 32.4	-0.3
	SNR=36							
DMTO				S		Sn	17 27 25.1	-0.8
MHTO	**MHTO**	**4.75**	**342**	P		**Pn**	17 26 35.3	0.0
	SNR=9.8							
MHTO				S		Sn	17 27 33.5	+3.0
RBK	**Rabkut**	**5.21**	**282**	P		**Pn**	17 26 40.7	-0.9
RBK				S		Sn	17 27 42.3	+0.5
DOK	**Doka**	**5.59**	**294**	P		**Pn**	17 26 47.7	+0.9
	SNR=6.6							
DOK				S		Sn	17 27 53.8	+2.6
JLN	**Jalan Bani Buh**	**5.68**	**359**	P		**Pn**	17 26 46.8	-1.2
WHFO	**Wadi Hawf**	**5.70**	**286**	P		**Pn**	17 26 48.3	0.0
WHFO				S		Sn	17 27 54.8	+0.9
ABTO	**Aybut**	**6.04**	**279**	P		**Pn**	17 26 53.1	+0.1
ABTO				S		Sn	17 28 03.0	+0.7
JMDO	**Jabal Madar**	**6.05**	**347**	P		**Pn**	17 26 53.6	+0.6
JMDO				S		Sn	17 28 03.7	+1.3
WBK	**Wadi Bani Khal**	**6.16**	**355**	P		**Pn**	17 26 55.8	+1.2
WBK				S		Sn	17 28 05.7	+0.6
BSY	**Bisya**	**6.64**	**341**	P		**Pn**	17 27 03.2	+1.9
BSY				S		Sn	17 28 18.0	+0.9
SMDO	**Samad**	**6.73**	**348**	P		**Pn**	17 27 03.1	+0.6
SMDO				S		Sn	17 28 19.1	-0.2
WSAR	**Wadi Sarin**	**6.81**	**353**	P		**Pn**	17 27 04.7	+1.1
WSAR				S		Sn	17 28 21.3	+0.1
ARQ	**Araqi**	**7.42**	**338**	P		**Pn**	17 27 13.5	+1.6
UMZA	**Um Al Zommool**	**7.47**	**327**	P		**Pn**	17 27 14.8	+2.1

IDC 01 17:25:33.6±3.8, **10°.71S**×**167°.34E**, **h0**km, **mb3.8**/4, **mbtmp3.8**/4, **MS3.6**/5, **Error ellipse: s-maj=157.4km s-min=32.7km az=136.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**7.39**	**279**	LR		LR	17 30 02.9	
	comp=Z,3μm,18.0s,baz=100,slow=36							
PMG	**Port Moresby**	**19.91**	**272**	LR		LR	17 37 20.9	
	comp=Z,99nm,18.8s,baz=328,slow=36							
CTA	**Charters Tower**	**22.34**	**243**	LR		LR	17 38 07.4	
	comp=Z,53nm,18.7s,baz=52,slow=34							
H11S2	**WAKE ISLAND Hy**	**29.02**	**359**	T		T	18 02 06.3	
	baz=181,slow=76,SNR=6.5							
H11S3	**WAKE ISLAND Hy**	**29.02**	**359**	T		T	18 02 16.9	
	baz=181,slow=76,SNR=5.5							
H11S1	**WAKE ISLAND Hy**	**29.04**	**359**	T		T	18 02 05.7	
	baz=181,slow=76,SNR=3.9							
WRA	**Warramunga Arr**	**33.07**	**250**	P		P	17 32 11.8	+0.5
	2.2nm,0.7s,baz=82,slow=8.9,SNR=11							
	2.2nm,0.7s							
ASAR	**Alice Springs**	**34.34**	**244**	P		P	17 32 22.2	-0.2
	0.6nm,0.9s,baz=67,slow=10,SNR=4.6							
ASAR				LR		LR	17 44 55.5	
	comp=Z,43nm,18.4s,baz=126,slow=34							
	0.6nm,0.9s							
NWAO	**Narrogin (SRO)**	**50.95**	**236**	LR		LR	17 55 38.1	
	comp=Z,50nm,19.6s,baz=234,slow=35							
ILAR	**Eielson Array**	**82.70**	**18**	P		P	17 37 59.6	+0.8
	0.6nm,0.9s,baz=228,slow=6.3,SNR=4.6							
	0.6nm,0.9s							
MKAR	**Makanchi Array**	**94.35**	**317**	P		P	17 38 53.6	-1.7
	0.3nm,0.6s,baz=101,slow=5.1,SNR=3.8							
	0.3nm,0.6s							

*IDC **01** 17:34:13.9±0.6, 55°.58N×166°.30E, h0km, mb3.9/21, mbtmp4.0/24, ML3.3/2, MS2.8/1, Error ellipse: s-maj=18.2km s-min=11.3km az=157.0*
*NEIC **01** 17:34:16.4±1.5, 55°.6N±0°.1×166°.3E±0°.2, h10km±2km, mb4.0/45, Error ellipse: s-maj=25.3km s-min=13.6km az=144.0*
*MOS **01** 17:34:17.1±1.0, 55°.55N×166°.46E, h38km, mb4.4/6, Error ellipse: s-maj=9.2km s-min=7.1km az=142.1*
*KRSC **01** 17:34:18.1±1.4, 55°.47N×166°.08E, h40km±13km, Ml4.2*
ISC 01 17:34:17.3±0.5, **55°.60N**±0°.05×**166°.34E**±0°.05, **h20**km, **n135,**
σ1ᵎ**19**/147, **mb4.1**/35, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res

ASAK	**Asacha**	**5.93**	**241**	PN	**Pn**	17 35 46.1	**+2.2**			
ASAK	**Asacha**	**5.93**	**241**	*e*P	**Pn**	17 35 46.1	**+2.2**			
KDTR	**Khodutka, Kamc**	**6.20**	**236**	*e*S	**Sn**	17 36 55.0	**-2.8**			
K13K	**Kusilvak Mount**	**16.22**	**55**	Pn	**Pn**	17 38 03.5	**-0.2**			
K13K				IAmb	IAmb	17 38 17.1				
	comp=Z,8.3nm,1.1s									
ANM	**Nome**	**16.58**	**46**	Pn	**Pn**	17 38 06.7	**-1.5**			
ANM	**Nome**	**16.58**	**46**	P	**Pn**	17 38 06.7	**-1.5**			
ANM				pmax	pmax					
	comp=Z,3.0nm,0.9s									
J14K	**Nanvaranak Lak**	**16.88**	**53**	Pn	**Pn**	17 38 11.2	**-0.8**			
L14K	**Kuka Creek**	**17.08**	**58**	Pn	**Pn**	17 38 14.3	**-0.2**			
L14K				IAmb	IAmb	17 38 36.0				
	comp=Z,25nm,1.4s									
F15K	**North Star Dit**	**17.27**	**43**	Pn	**Pn**	17 38 16.9	**0.0**			
K15K	**Wolf Creek Mou**	**17.73**	**55**		**P**	17 38 25.2	**+1.8**			
K15K				IAmb	IAmb	17 38 25.7				
	comp=Z,20nm,1.2s									
C16K	**Lisburne Hills**	**18.17**	**35**	P	**P**	17 38 27.9	**-0.2**			
J16K	**Anvik River**	**18.30**	**52**	P	**P**	17 38 30.4	**+0.8**			
I17K	**Unalakleet**	**18.37**	**50**	P	**Pn**	17 38 33.8	**+3.4**			
I17K				IAmb	IAmb	17 38 41.5				
	comp=Z,8.4nm,0.9s									
JKA	**Kamikawa-asahi**	**19.03**	**243**		**P**	17 38 37.9	**+0.1**			
JKA				IAmb	IAmb	17 38 45.6				
	comp=Z,21nm,1.3s									
ASAJ	**Asahikawa**	**19.03**	**243**	P	**P**	17 38 37.9	**+0.2**			
ASAJ				pmax	pmax					
	comp=Z,21nm,1.3s									
ASAJ	**Asahikawa**	**19.03**	**243**	P	**Pn**	17 38 38.6	**+0.1**			
	comp=Z,0.2nm,0.3s,baz=96,slow=10,SNR=4.2									
	comp=Z,4.8nm,0.8s									
K17K	**Iditarod**	**19.27**	**54**	P	**P**	17 38 40.0	**-0.3**			
K17K				IAmb	IAmb	17 39 07.8				
	comp=Z,20nm,1.4s									
H18K	**Honhosa River**	**19.62**	**47**	P	**Pn**	17 38 44.7	**-0.8**			
G18K	**Tagagawik**	**19.68**	**44**	P	**Pn**	17 38 45.7	**-0.5**			
C18K	**Utukok River**	**19.70**	**36**	P	**P**	17 38 45.3	**+0.3**			
C18K				IAmb	IAmb	17 39 06.1				
	comp=Z,9.7nm,1.5s									
YAK	**Yakutsk**	**19.82**	**304**	*e*P	**P**	17 38 46.7	**+0.4**			
YAK				pmax	pmax					
	comp=Z,37nm,0.9s									
YAK				pmax	pmax					
	comp=E,12nm,1.2s									
YAK	**Yakutsk**	**19.82**	**304**	P	**P**	17 38 45.6	**-0.7**			
	comp=E,26nm,0.5s,baz=120,slow=1.0,SNR=18									
J18K	**Innoko River**	**20.06**	**52**	P	Pn	17 38 49.8	-1.0			
TTA	**Tatalina**	**20.33**	**54**	P	**P**	17 38 52.2	**+0.3**			
TTA				IAmb	IAmb	17 39 07.8				
	comp=Z,10nm,1.3s									
TTA	**Tatalina**	**20.33**	**54**	P	**P**	17 38 52.2	**+0.3**			
TTA				pmax	pmax					
	comp=Z,10.0nm,1.3s									
G19K	**Purcell Mounta**	**20.36**	**44**	P	**P**	17 38 52.3	**+0.2**			
C19K	**Lookout Ridge**	**20.42**	**35**	P	Pn	17 38 53.8	-1.1			
C19K				IAmb	IAmb	17 39 03.5				
	comp=Z,12nm,0.8s									
H19K	**Roundabout Mou**	**20.48**	**46**	P	Pn	17 38 54.4	-1.3			
H19K				IAmb	IAmb	17 39 03.8				
	comp=Z,7.2nm,0.9s									
J19K	**Poorman**	**20.60**	**51**	P	**P**	17 38 55.0	**+0.3**			
J19K				IAmb	IAmb	17 39 04.7				
	comp=Z,8.5nm,0.8s									
E19K	**Redstone River**	**20.65**	**40**	P	**P**	17 38 54.9	**-0.4**			
E19K				IAmb	IAmb	17 39 06.5				
	comp=Z,5.9nm,1.0s									
D19K	**Kuna River**	**20.68**	**37**	P	**P**	17 38 56.4	**+0.8**			
D19K				IAmb	IAmb	17 39 05.6				
	comp=Z,8.2nm,1.1s									
F20K	**Avaraart Lake**	**21.11**	**42**	P	**P**	17 39 01.0	**+0.8**			
J20K	**Nowinta River**	**21.27**	**50**	P	**P**	17 39 01.8	**-0.1**			
J20K				IAmb	IAmb	17 39 20.2				
	comp=Z,9.9nm,1.2s									
B20K	**Meade River**	**21.57**	**34**	P	**P**	17 39 05.8	**+0.8**			
IMAR	**Indian Mountai**	**21.66**	**45**	P	**P**	17 39 06.9	**+0.8**			
KLR	**Kul'dur**	**21.87**	**268**	P	**P**	17 39 07.1	**-1.3**			
	comp=Z,0.7nm,0.7s,baz=33,slow=16,SNR=2.4									
	comp=Z,0.7nm,0.7s									
TIXI	**Tiksi**	**22.54**	**330**	P	**P**	17 39 15.8	**+0.3**			
TIXI				IAmb	IAmb	17 39 17.5				
	comp=Z,4.1nm,0.8s									
TIXI	**Tiksi**	**22.54**	**330**	P	**P**	17 39 15.8	**+0.3**			
TIXI				pmax	pmax					
	comp=Z,4.0nm,0.9s									
E22K	**Anaktuvuk Pass**	**22.82**	**40**	P	**P**	17 39 19.2	**+0.7**			
B22K	**Teshekpuk Lake**	**22.88**	**34**	P	**P**	17 39 19.6	**+0.6**			
B22K				IAmb	IAmb	17 39 20.3				
	comp=Z,5.2nm,1.1s									
I23K	**Minto, Yukon-K**	**23.39**	**48**	P	**P**	17 39 24.8	**+0.6**			
I23K				IAmb	IAmb	17 39 39.1				
	comp=Z,7.7nm,1.4s									
CCB	**Clear Creek Bu**	**24.04**	**49**	P	**P**	17 39 29.9	**-0.5**			
CCB				IAmb	IAmb	17 39 47.4				
	comp=Z,4.6nm,1.1s									
IL31		**24.43**	**49**	P	**P**	17 39 34.4	**+0.3**			
IL31				IAmb	IAmb	17 39 48.7				
	comp=Z,8.3nm,1.1s									
ILAR	**Eielson Array**	**24.43**	**49**	P	**P**	17 39 34.0	**-0.2**			
ILAR	**Eielson Array**	**24.43**	**49**	P	**P**	17 39 34.0	**-0.2**			
	comp=Z,2.7nm,0.8s,baz=256,slow=8.6,SNR=26									
ILAR				LR	LR	17 48 52.5				
	comp=Z,23nm,21.5s,baz=1.0,slow=36									
	comp=Z,2.7nm,0.8s									
D25K	**Kavik River**	**24.99**	**38**	P	**P**	17 39 39.2	**-0.1**			
D25K				IAmb	IAmb	17 39 50.8				
	comp=Z,4.0nm,1.1s									
J25K	**Salcha River,**	**25.09**	**49**	P	**P**	17 39 40.0	**-0.2**			
J25K				IAmb	IAmb	17 39 49.6				
	comp=Z,6.4nm,1.4s									
BMAR	**Burnt Mountain**	**25.45**	**43**	P	**P**	17 39 44.0	**+0.6**			
J26L	**Joseph Creek**	**25.87**	**50**	P	**P**	17 39 46.3	**-1.0**			
J26L				IAmb	IAmb	17 39 59.1				
	comp=Z,2.3nm,0.8s									
MJAR	**Matsushiro Arr**	**26.98**	**237**	P	**P**	17 39 56.5	**-0.9**			
	comp=Z,1.5nm,0.7s,baz=29,slow=8.2,SNR=5.1									
	comp=Z,1.5nm,0.7s									
INK	**Inuvik**	**29.61**	**41**	P	**P**	17 40 20.5	**-0.1**			
	comp=Z,0.6nm,0.6s,baz=280,slow=5.5,SNR=2.7									
	comp=Z,0.6nm,0.6s									
KSRS	**Korea Array**	**31.52**	**251**	P	**P**	17 40 36.5	**-1.2**			
	comp=Z,1.5nm,0.7s,baz=40,slow=10.0,SNR=5.7									
	comp=Z,1.5nm,0.7s									
SONM	**Songino Array**	**36.88**	**284**	P	**P**	17 41 24.4	**+0.3**			
SONM	**Songino Array**	**36.88**	**284**	P	**P**	17 41 24.5	**+0.3**			
SONM				pmax	pmax					
	comp=Z,1.0nm,0.8s									
SONM	**Songino Array**	**36.88**	**284**	P	**P**	17 41 24.2	**0.0**			
	comp=Z,1.1nm,0.7s,baz=64,slow=7.8,SNR=7.1									
SONM				PcP	**PcP**	17 43 45.7	**+0.2**			
	comp=Z,0.2nm,0.4s,baz=61,slow=2.8,SNR=3.0									
	comp=Z,1.1nm,0.7s									
BBB	**Bella Bella**	**37.50**	**67**	P	**P**	17 41 30.3	**+1.1**			
	comp=Z,20nm,0.9s,baz=207,slow=2.3,SNR=3.2									
YKA	**Yellowknife Ar**	**38.81**	**47**	P	**P**	17 41 38.9	**-1.3**			
	comp=Z,0.4nm,0.8s,baz=296,slow=8.1,SNR=4.5									
YKA				PcP	**PcP**	17 43 51.7	**+0.8**			
	comp=Z,0.1nm,0.4s,baz=208,slow=5.7,SNR=2.4									
	comp=Z,0.4nm,0.8s									
ZALV	**Zalesovo Beam**	**44.47**	**303**	PcP	**PcP**	17 44 10.1	**+0.4**			
	comp=Z,0.8nm,0.6s,baz=27,slow=2.8,SNR=4.2									
SPITS	**Spitsbergen Ar**	**45.23**	**352**	P	**P**	17 42 33.4	**+1.0**			
SPITS				pmax	pmax					
	comp=Z,35nm,1.4s									
SPITS	**Spitsbergen Ar**	**45.23**	**352**	P	**P**	17 42 32.4	**0.0**			
	comp=Z,4.8nm,0.6s,baz=82,slow=7.7,SNR=12									
	comp=Z,4.8nm,0.6s									
SPB2	**Spitsbergen Ar**	**45.23**	**352**	P	**P**	17 42 33.4	**+1.1**			
KURK	**Kurchatov**	**49.47**	**303**	P	**P**	17 43 06.0	**+0.4**			
KURK	**Kurchatov**	**49.47**	**303**	P	**P**	17 43 06.0	**+0.4**			
KURK				pmax	pmax					
	comp=Z,7.0nm,1.0s									
KURBB	**Kurchatov Arra**	**49.57**	**303**	P	**P**	17 43 05.9	**-0.5**			
	comp=Z,4.4nm,0.7s,baz=53,slow=7.6,SNR=36									
	comp=Z,4.4nm,0.7s									
MKAR	**Makanchi Array**	**50.31**	**297**	P	**P**	17 43 12.1	**0.0**			
MKAR	**Makanchi Array**	**50.31**	**297**	P	**P**	17 43 12.1	**0.0**			
MKAR	**Makanchi Array**	**50.31**	**297**	P	**P**	17 43 11.5	**-0.6**			
	comp=Z,1.3nm,0.5s,baz=55,slow=7.1,SNR=13									
	comp=Z,1.3nm,0.5s									
MAKZ	**Makanchi**	**50.45**	**298**	P	**P**	17 43 12.8	**-0.5**			
MAKZ				IAmb	IAmb	17 43 13.2				
	comp=Z,1.5nm,0.7s									
MAKZ	**Makanchi**	**50.45**	**298**	P	**P**	17 43 12.8	**-0.5**			
MAKZ				pmax	pmax					
	comp=Z,2.0nm,0.7s									

NVAR	**Mina Array Bea**	**51.52**	**76**	P	**P**	17 43 21.2	**-0.3**			
	comp=Z,0.2nm,0.5s,baz=307,slow=1.8,SNR=1.5									
	comp=Z,0.2nm,0.5s									
BVAR	**Borovoye Array**	**51.64**	**310**	P	**P**	17 43 22.1	**+0.1**			
	comp=Z,3.4nm,0.6s,baz=48,slow=8.1,SNR=19									
BVAR				PcP	**PcP**	17 44 35.1	**-0.4**			
	comp=Z,0.7nm,0.4s,baz=48,slow=2.4,SNR=4.7									
	comp=Z,3.4nm,0.6s									
BRVK	**Borovoye**	**51.66**	**310**	P	**P**	17 43 22.7	**+0.5**			
BRVK	**Borovoye**	**51.66**	**310**	P	**P**	17 43 22.7	**+0.5**			
BRVK				pmax	pmax					
	comp=Z,5.0nm,0.6s									
PDAR	**Pinedale Array**	**53.13**	**66**	P	**P**	17 43 33.8	**+0.2**			
	comp=Z,0.3nm,0.7s,baz=299,slow=3.1,SNR=2.7									
	comp=Z,0.3nm,0.7s									
ARU	**Arti**	**53.96**	**319**	P	**P**	17 43 39.5	**+0.4**			
AAK	**Ala-Archa**	**57.17**	**299**	P	**P**	17 44 02.7	**+0.1**			
AAK	**Ala-Archa**	**57.17**	**299**	P	**P**	17 44 02.7	**+0.1**			
AAK				pmax	pmax					
	comp=Z,3.0nm,0.9s									
ABKAR	**Akbulak array**	**58.87**	**313**	P	**P**	17 44 14.1	**0.0**			
FINES	**FINESS Array B**	**59.18**	**339**	P	**P**	17 44 15.8	**-0.3**			
	comp=Z,2.4nm,0.8s,baz=64,slow=3.2,SNR=2.0									
	comp=Z,2.4nm,0.8s									
NC204	**NORSAR Array S**	**61.89**	**347**	P	**P**	17 44 34.8	**+0.2**			
NC405	**NORSAR Array S**	**61.92**	**346**	P	**P**	17 44 34.7	**-0.1**			
NB201	**NORSAR Array S**	**62.04**	**347**	P	**P**	17 44 35.9	**+0.3**			
NOA	**NORSAR Array B**	**62.06**	**347**	P	**P**	17 44 36.0	**+0.2**			
	comp=Z,0.7nm,0.4s,baz=19,slow=6.1,SNR=5.4									
	comp=Z,0.7nm,0.4s									
CMAR	**Chiang Mai Arr**	**62.21**	**262**	P	**P**	17 44 38.0	**+0.6**			
	comp=Z,0.8nm,0.6s,baz=22,slow=7.4,SNR=7.5									
	comp=Z,0.8nm,0.6s									
HFS	**Hagfors**	**62.58**	**345**	P	**P**	17 44 38.5	**-0.8**			
	comp=Z,1.2nm,0.5s,baz=333,slow=1.7,SNR=7.1									
	comp=Z,1.2nm,0.5s									
TXAR	**Lajitas Array**	**66.34**	**72**	P	**P**	17 45 04.8	**+0.4**			
	comp=Z,1.1nm,0.7s,baz=304,slow=4.8,SNR=12									
	comp=Z,1.1nm,0.7s									
AKASG	**Malin Array Be**	**68.23**	**332**	P	**P**	17 45 15.4	**-0.5**			
	comp=Z,0.6nm,0.4s,baz=27,slow=6.5,SNR=3.3									
	comp=Z,0.6nm,0.4s									
WRA	**Warramunga Arr**	**80.00**	**210**	P	**P**	17 46 24.2	**-0.7**			
	comp=Z,0.5nm,0.6s,baz=20,slow=5.9,SNR=4.7									
	comp=Z,0.5nm,0.6s									
ASAR	**Alice Springs**	**83.65**	**210**	P	**P**	17 46 44.1	**+0.1**			
	comp=Z,1.3nm,0.9s,baz=16,slow=4.6,SNR=19									
	comp=Z,1.3nm,0.9s									
QSPA	**South Pole Qui**	**145.35**	**180**	PKPbc	**PKPbc**	17 53 50.1	**-1.9**			
	comp=Z,3.4nm,0.8s,baz=64,slow=1.0,SNR=12									

*ANF **01** 17:56:50.2±0.1,33°.48N×116°.79W,h10$^{km}_{\pm 1km}$, ML2.9/24, Error ellipse: s-maj=1.2km s-min=1.1km az=5.0*
*NEIC **01** 17:56:50.1±1.6,33°.45N±0°.01×116°.770W±0°.006, h5$^{km}_{\pm 2km}$, Error ellipse: s-maj=3.1km s-min=2.3km az=346.0*
*PAS **01** 17:56:50.8±1.7,33°.48N±0°.02×116°.80W±0°.02, h4$^{km}_{\pm 6km}$, ML3.0/184, ML2.7/46(NEIC), Error ellipse: s-maj=2.7km s-min=1.8km az=167.0*

ISC 01 17:56:50.6±0.8, 33°.46N±0°.01×116°.79W±0°.02, h15$^{km}_{\pm 5km}$, n98, σ0^{s}.84/137, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRY	**Cary Ranch**	**0.12**	**23**			**Pg**	**17 56 54.4**	**+0.3**
PLM	**Palomar**	**0.12**	**210**			**Sg**	**17 56 56.7**	**0.0**
FRD	**Ford Ranch, An**	**0.16**	**77**			**Pg**	**17 56 56.4**	**+1.6**
DNR	**Dunn Ranch,Anz**	**0.17**	**51**			**Pg**	**17 56 54.3**	**-0.7**
DNR						**Sg**	**17 56 56.8**	**-1.0**
SNDA	**J Saunders Pla**	**0.18**	**58**			**Pg**	**17 56 54.4**	**-0.6**
GVDA	**Garner Valley**	**0.23**	**25**			**Pg**	**17 56 55.0**	**-0.9**
POB	**Polly Butte**	**0.25**	**334**			**Pg**	**17 56 55.4**	**-0.8**
POB						**Sg**	**17 56 58.5**	**-1.4**
MATG	**Mataguay Scout**	**0.28**	**155**			**Sb**	**17 57 01.5**	**-0.6**
HMTC	**Hemet**	**0.31**	**325**			**Pg**	**17 56 56.2**	**-0.8**
HMTC						**Sg**	**17 57 00.0**	**-1.4**
PFO	**Pinyon Flats O**	**0.32**	**61**	Pg		**Pg**	**17 56 56.6**	**-0.6**
PFO				IAML			17 57 02.0	
	991nm,0.5s							
PFO	**Pinyon Flats O**	**0.32**	**61**	P		**Pg**	**17 56 56.8**	**-0.4**
	baz=246,SNR=681							
PFO				S		**Sg**	**17 57 00.7**	**-1.0**
	baz=246							
BORC	**Borrego Spring**	**0.37**	**121**			**Pb**	**17 56 58.4**	**-0.4**
BORC						**Sb**	**17 57 03.6**	**-0.7**
MURC	**Murrieta**	**0.37**	**293**			**Pg**	**17 56 57.7**	**-0.3**
MURC						**Sg**	**17 57 03.2**	**0.0**
MURC	**Murrieta**	**0.37**	**293**	P		**Pg**	**17 56 57.7**	**-0.3**
	baz=109,SNR=109							
MURC				S		**Sg**	**17 57 03.1**	**-0.1**
	baz=109							
PMD	**Palm Desert**	**0.39**	**61**			**Pg**	**17 56 58.0**	**-0.5**
GORC	**Green Oak Ranc**	**0.48**	**230**			**Pg**	**17 57 00.1**	**0.0**
DEVC	**Devers**	**0.51**	**20**			**Sg**	**17 57 06.9**	**-0.6**
SLH	**Sleepy Hollow**	**0.52**	**120**			**Pb**	**17 57 01.4**	**0.0**
PEC	**Perris**	**0.53**	**325**			**Sg**	**17 57 07.0**	**-1.2**
ELS	**Elsinore Mount**	**0.56**	**290**	Pg		**Pg**	**17 57 01.2**	**-0.5**
ELS	**Elsinore Mount**	**0.56**	**290**			**Sg**	**17 57 08.7**	**-0.6**
EML	**El Monte Cty P**	**0.57**	**185**			**Pb**	**17 57 01.8**	**-0.5**
EW2	**E Wide Canyon**	**0.58**	**33**			**Sg**	**17 57 08.9**	**-0.8**
109C	**Camp Elliot, M**	**0.63**	**205**	Pg		**Pg**	**17 57 02.6**	**-0.2**
109C				IAML			17 57 11.7	
	comp=E,481nm,0.2s							
109C				IAML			17 57 12.1	
	comp=N,390nm,0.2s							
109C	**Camp Elliot, M**	**0.63**	**205**	P		**Pg**	**17 57 02.8**	**-0.1**
	baz=23,SNR=15							
109C				S		**Sb**	**17 57 11.5**	**-0.3**
	baz=23							
CPE	**Camp Elliot**	**0.63**	**205**			**Sg**	**17 57 11.2**	**+0.1**
CFT	**Crafton Hills**	**0.63**	**335**			**Pg**	**17 57 02.6**	**-0.4**
CFT						**Sg**	**17 57 11.0**	**-0.5**
MONP2	**Monument Peak**	**0.64**	**151**			**Sb**	**17 57 12.4**	**-0.2**
MONP2	**Monument Peak**	**0.64**	**151**	P		**Pb**	**17 57 03.6**	**0.0**
	baz=332,SNR=38							
MONP2				S		**Sb**	**17 57 12.5**	**-0.1**
	baz=332							
MTRP	**Mission Trails**	**0.67**	**199**			**Pg**	**17 57 03.5**	**-0.3**
MTRP						**Sb**	**17 57 12.8**	**-0.4**
RSBC	**Riverside Bore**	**0.68**	**319**			**Pg**	**17 57 03.0**	**-0.9**
RSBC						**Sg**	**17 57 11.6**	**-1.4**
RSBC	**Riverside Bore**	**0.68**	**319**			**Pg**	**17 57 03.0**	**-0.9**
RSBC						**Sg**	**17 57 11.7**	**-1.2**
SVD	**Seven Oaks Dam**	**0.69**	**338**			**Pg**	**17 57 03.6**	**-0.6**
SVD						**Sg**	**17 57 12.8**	**-0.6**
BLAC	**Blackrock camp**	**0.70**	**29**			**Sg**	**17 57 12.5**	**-0.9**
CTCC	**Cactus City**	**0.70**	**73**			**Sb**	**17 57 13.8**	**-0.2**
RVR	**Riverside**	**0.72**	**318**			**Pg**	**17 57 03.6**	**-1.1**
RVR						**Sg**	**17 57 12.7**	**-1.5**
SDRC	**San Diego Road**	**0.73**	**190**			**Pg**	**17 57 04.5**	**-0.3**
SDRC						**Sb**	**17 57 14.6**	**-0.2**
SDMC	**San Diego Miss**	**0.73**	**204**			**Pg**	**17 57 04.7**	**-0.2**
SDMC						**Sb**	**17 57 15.3**	**+0.4**
HLNC	**Highland**	**0.75**	**332**			**Pg**	**17 57 04.6**	**-0.6**
HLNC						**Sg**	**17 57 14.3**	**-0.8**
CRNC	**Corona**	**0.77**	**303**			**Pg**	**17 57 04.7**	**-0.8**
CRNC						**Sg**	**17 57 14.6**	**-0.9**
BAR	**Barrett**	**0.78**	**173**	Pg		**Pb**	**17 57 05.5**	**-0.5**
BAR				IAML			17 57 16.8	
	comp=E,285nm,0.5s							
BAR	**Barrett**	**0.78**	**173**			**Sb**	**17 57 16.3**	**0.0**
CTW	**Cottonwood Mou**	**0.80**	**74**			**Pb**	**17 57 05.9**	**-0.3**
CTW						**Sb**	**17 57 16.4**	**-0.4**
BBRC	**Big Bear Solar**	**0.81**	**352**			**Pg**	**17 57 05.7**	**-0.7**
BBRC						**Sg**	**17 57 16.1**	**-1.0**
BBRC	**Big Bear Solar**	**0.81**	**352**	P		**Pg**	**17 57 05.7**	**-0.7**
	baz=172,SNR=21							
BBRC				S		**Sg**	**17 57 16.3**	**-0.7**
	baz=172							
DUZA	**Dulzura**	**0.85**	**179**			**Pg**	**17 57 06.6**	**-0.5**
DUZA						**Sb**	**17 57 18.3**	**0.0**
BELC	**Belle Mtn. Jos**	**0.85**	**50**			**Sg**	**17 57 17.8**	**-0.7**
BELC	**Belle Mtn. Jos**	**0.85**	**50**	P		**Pg**	**17 57 06.6**	**-0.6**
	baz=232,SNR=175							
BELC				S		**Sg**	**17 57 17.9**	**-0.6**
	baz=232							
OLP	**Otay Lakes Par**	**0.86**	**188**			**Sg**	**17 57 18.1**	**-0.3**
ERRC	**Elmore Ranch**	**0.88**	**113**			**Pn**	**17 57 08.7**	**+0.3**
ERRC						**Sn**	**17 57 21.1**	**+0.1**
CRR	**Carrizo Plain**	**0.89**	**129**			**Pb**	**17 57 08.3**	**+0.5**
CRR						**Sn**	**17 57 21.1**	**-0.2**
TKX	**Tecate**	**0.90**	**170**			**Pg**	**17 57 07.5**	**-0.5**

TKX						**Sb**	**17 57 19.8**	**0.0**		
TKX	**Tecate**	**0.90**	**170**	IAML			17 57 19.9			
	comp=E,302nm,0.5s									
GTM	**Goat Mountain**	**0.91**	**23**			**Pg**	**17 57 07.2**	**-1.0**		
GTM						**Sg**	**17 57 18.4**	**-1.8**		
CHNC	**Chino**	**0.92**	**306**			**Pg**	**17 57 07.5**	**-0.9**		
SS2	**San Sevaine**	**0.95**	**322**			**Pg**	**17 57 07.8**	**-1.2**		
TJX	**Tijuana**	**0.97**	**193**	Pg		**Pg**	**17 57 08.5**	**-0.9**		
TJX				IAML			17 57 25.5			
	comp=E,312nm,0.5s									
TJX				IAML			17 57 33.6			
	comp=N,250nm,0.7s									
SWSC	**Sam W. Stewart**	**0.98**	**121**	P		**Pb**	**17 57 09.0**	**-0.2**		
	baz=303,SNR=34									
SWSC				S		**Sb**	**17 57 23.0**	**+1.1**		
	baz=303									
IKP	**In-Ko-Pah, Jac**	**0.99**	**144**	P		**Pn**	**17 57 09.9**	**-0.1**		
	baz=326,SNR=29									
IKP				S		**Sb**	**17 57 23.3**	**+1.0**		
	baz=326									
RMX	**La Rumorosa**	**1.04**	**145**			**Pn**	**17 57 11.8**	**+1.0**		
RMX				IAML			17 57 27.5			
	comp=E,157nm,0.5s									
BFSC	**Mount Baldy Ra**	**1.06**	**317**	P		**Pg**	**17 57 09.6**	**-1.5**		
	baz=136,SNR=52									
BFSC				S		**Sg**	**17 57 23.4**	**-1.6**		
	baz=136									
YUH	**Yuha Desert**	**1.09**	**138**	Pg		**Pb**	**17 57 11.1**	**-0.1**		
BC3	**Big Chuckawall**	**1.13**	**80**	P		**Pb**	**17 57 12.0**	**0.0**		
	baz=262									
BC3				S		**Sb**	**17 57 26.7**	**+0.1**		
	baz=262									
CBX	**Cerro Bola**	**1.15**	**175**			**Pg**	**17 57 12.0**	**-0.7**		
FMP	**Fort Macarthur**	**1.28**	**282**	S		**Sg**	**17 57 31.0**	**-0.9**		
	baz=100									
CIS	**Catalina Islan**	**1.36**	**268**	P		**Pn**	**17 57 14.3**	**-0.8**		
	baz=86,SNR=15									
CIS				S		**Sb**	**17 57 33.8**	**+0.9**		
	baz=86									
PASC	**Pasadena Art C**	**1.36**	**302**	Pg		**Pn**	**17 57 14.6**	**-0.5**		
PASC				IAML			17 57 33.6			
	comp=N,175nm,0.3s									
HEC	**Hector,Ludlow**	**1.42**	**15**	Pb		**Pn**	**17 57 16.5**	**+0.5**		
	baz=196									
HEC				S		**Sb**	**17 57 35.5**	**+0.7**		
	baz=196									
RRX	**Edison Barstow**	**1.42**	**353**	Pb		**Pn**	**17 57 16.7**	**+0.7**		
	baz=173									
RRX				S		**Sb**	**17 57 35.4**	**+0.5**		
	baz=173									
DECC	**Green Verdugo**	**1.51**	**302**	P		**Pn**	**17 57 17.0**	**-0.1**		
	baz=121									
DECC				S		**Sn**	**17 57 37.6**	**+1.0**		
	baz=121									
IRM	**Iron Mountain**	**1.54**	**63**	P		**Pn**	**17 57 17.5**	**0.0**		
	baz=244,SNR=51									
IRM				S		**Sb**	**17 57 38.7**	**+0.6**		
	baz=244									
CCX	**Cicese**	**1.59**	**

PANCS	**Alcalda de**	**0.72**	**50**	*eP*	**Pb**	**18 04 07.8**	**+0.2**
PANCS	**Alcalda de**	**0.72**	**50**	*i* P	**Pb**	**18 04 07.8**	**+0.2**
PANCS				IAML		18 04 17.7	
	comp=Z,19μm,1.0s						
SNJE	**San Jose**	**0.73**	**11**	*eP*	**Pn**	**18 04 08.3**	**0.0**
SNET	**Serv Nac Est T**	**0.73**	**43**	*i* P	**Pb**	**18 04 07.9**	**+0.1**
SNET				*i* S	**Sn**	**18 04 17.8**	**-0.8**
SNET				IAML		18 04 19.5	
	comp=Z,9μm,1.0s						
CEDA	**San Andres**	**0.74**	**27**	*eP*	**Pb**	**18 04 06.8**	**-1.0**
CEDA				eS	**Sn**	**18 04 18.4**	**-0.1**
BOQS	**Boqueron**	**0.74**	**38**	*eP*	**Pb**	**18 04 08.4**	**0.0**
LOMA	**Loma Larga**	**0.75**	**48**	*eP*	**Pb**	**18 04 08.4**	**+0.4**
LOMA				eS	**Sn**	**18 04 18.8**	**-0.2**
LOMA	**Loma Larga**	**0.75**	**48**	*i* P	**Pb**	**18 04 08.5**	**+0.4**
LOMA				*i* S	**Sn**	**18 04 18.8**	**-0.2**
LOMA				IAML		18 04 20.2	
	comp=Z,8μm,1.0s						
UEES	**Universidad Ev**	**0.75**	**41**	*i* P	**Pb**	**18 04 08.3**	**+0.2**
UEES				*i* S	**Sn**	**18 04 18.2**	**-0.8**
UEES				IAML		18 04 19.1	
	comp=Z,3μm,1.0s						
SEMO	**Seminario San**	**0.75**	**42**	*i* P	**Sn**	**18 04 18.8**	**-0.2**
NUBE	**Las Nubes**	**0.75**	**357**	*eP*	**Pb**	**18 04 08.5**	**+0.3**
NUBE				eS	**Sn**	**18 04 18.5**	**-0.6**
NUBE	**Las Nubes**	**0.75**	**357**	*i* P	**Pb**	**18 04 08.5**	**+0.3**
NUBE				*i* S	**Sn**	**18 04 18.5**	**-0.6**
NUBE				IAML		18 04 19.2	
	comp=Z,3μm,1.0s						
RTR	**El Retiro**	**0.75**	**7**	*eP*	**Pn**	**18 04 08.6**	**0.0**
PIC2	**El Picacho**	**0.76**	**39**	*eP*	**Pn**	**18 04 08.8**	**0.0**
PIC2				eS	**Sn**	**18 04 22.0**	**+2.5**
UTEC	**Universidad Te**	**0.76**	**44**	*i* P	**Pb**	**18 04 08.5**	**+0.2**
UTEC				IAML		18 04 19.8	
	comp=Z,4μm,1.0s						
IGN	**Direccin Gen**	**0.79**	**45**	*eP*	**Pb**	**18 04 09.1**	**+0.2**
IGN				eS	**Sn**	**18 04 19.8**	**-0.3**
IGN	**Direccin Gen**	**0.79**	**45**	*i* P	**Pb**	**18 04 09.1**	**+0.2**
IGN				IAML		18 04 21.8	
	comp=Z,15μm,1.0s						
UDBS	**Universidad Do**	**0.81**	**45**	*i* P	**Pb**	**18 04 09.3**	**+0.3**
UDBS				IAML		18 04 20.8	
	comp=Z,7μm,1.0s						
LFRS	**El Faro**	**0.82**	**54**	*eP*	**Pb**	**18 04 09.5**	**+0.2**
AEIL	**Aeropuerto Ilo**	**0.82**	**48**	*eP*	**Pn**	**18 04 09.8**	**+0.4**
QUEZ	**Alcaldia de Qu**	**0.82**	**34**	*i* P	**Pb**	**18 04 09.5**	**+0.2**
QUEZ				IAML		18 04 27.6	
	comp=Z,10μm,1.0s						
LOAL	**Lomas de Alarc**	**0.85**	**358**	*i* P	**Pn**	**18 04 10.2**	**+0.4**
LOAL				IAML		18 04 27.5	
	comp=Z,4μm,1.0s						
UNIC	**Universidad Ca**	**0.85**	**13**	*i* P	**Pb**	**18 04 09.9**	**+0.1**
UNIC				IAML		18 04 10.6	
	comp=Z,760nm,1.0s						
SJTE	**Alcalda de S**	**0.86**	**57**	*eP*	**Pb**	**18 04 10.0**	**+0.1**
SJTE	**Alcalda de S**	**0.86**	**57**	*i* P	**Pb**	**18 04 09.9**	**+0.1**
SJTE				IAML		18 04 25.8	
	comp=Z,4μm,1.0s						
SLOZ	**Alcaldia de Sa**	**0.88**	**358**	*eP*	**Pn**	**18 04 10.5**	**+0.3**
SLOZ				eS	**Sn**	**18 04 22.6**	**+0.6**
COEG	**Centro de Oper**	**0.96**	**61**	*eP*	**Pn**	**18 04 11.5**	**+0.1**
COEG				eS	**Sn**	**18 04 24.2**	**0.0**
COEG	**Centro de Oper**	**0.96**	**61**	*i* P	**Pn**	**18 04 11.5**	**+0.1**
COEG				IAML		18 04 26.5	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**0.97**	**54**	*eP*	**Pb**	**18 04 11.9**	**+0.1**
PAVA				eS	**Sn**	**18 04 25.2**	**+0.8**
PAVA	**Las Pavas**	**0.97**	**54**	*i* P	**Pb**	**18 04 11.9**	**+0.1**
PAVA				IAML		18 04 25.9	
	comp=Z,5μm,1.0s						
SNVI	**San Vicente**	**1.00**	**62**	*eP*	**Pn**	**18 04 12.2**	**+0.3**
TECO	**Alcaldia de Te**	**1.02**	**67**	*i* S	**Sb**	**18 04 24.7**	**-0.8**
UESV	**Universidad de**	**1.05**	**62**	*eP*	**Pn**	**18 04 12.8**	**+0.2**
UESV				eS	**Sn**	**18 04 26.4**	**+0.1**
UESV	**Universidad de**	**1.05**	**62**	*i* P	**Pn**	**18 04 12.9**	**+0.4**
UESV				*i* S	**Sn**	**18 04 26.4**	**+0.1**
UESV				IAML		18 04 28.0	
	comp=Z,3μm,1.0s						
SCLA	**Alcaldia de Sa**	**1.13**	**61**	*eP*	**Pn**	**18 04 14.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.13**	**61**	*i* P	**Pn**	**18 04 14.2**	**+0.6**
SCLA				IAML		18 04 33.1	
	comp=Z,530nm,1.0s						
COEB	**Comit de Eme**	**1.23**	**73**	*eP*	**Pn**	**18 04 15.2**	**+0.1**
PQSS	**Presa 15 de Se**	**1.25**	**67**	*i* P	**Pn**	**18 04 15.8**	**+0.6**
PQSS				IAML		18 04 35.8	
	comp=Z,1μm,1.0s						
TECA	**Tecapa**	**1.26**	**74**	*eP*	**Pn**	**18 04 15.6**	**+0.1**
MTO3	**Montecristo**	**1.30**	**17**	*eP*	**Pn**	**18 04 16.2**	**+0.1**
MTO3	**Montecristo**	**1.30**	**17**	*i* P	**Pn**	**18 04 16.2**	**+0.1**
MTO3				IAML		18 04 16.3	
	comp=Z,880nm,1.0s						
PACA	**Pacayal**	**1.42**	**77**	*eP*	**Pn**	**18 04 19.0**	**+1.3**
PACA				eS	**Sb**	**18 04 37.4**	**+0.2**
PACA	**Pacayal**	**1.42**	**77**	*i* P	**Pb**	**18 04 19.2**	**-0.3**
PACA				IAML		18 04 46.1	
	comp=Z,8μm,1.0s						
RANC	**El Ranchito**	**1.45**	**78**	*eP*	**Pn**	**18 04 18.5**	**+0.4**
ESQI	**Esquipulas**	**1.46**	**16**	*i* P	**Pn**	**18 04 17.9**	**-0.3**
ESQI				IAML		18 04 20.1	
	comp=Z,920nm,1.0s						
JUCU	**Jucuarjn**	**1.46**	**86**	*eP*	**Pn**	**18 04 18.6**	**+0.3**
JUCU				eS	**Sn**	**18 04 36.1**	**-0.4**
GUNB	**GUNB**	**1.56**	**338**	*i* P	**Pn**	**18 04 19.7**	**0.0**
GUNB				IAML		18 04 41.2	
	comp=Z,440nm,1.0s						
GUMI	**Mixco**	**1.70**	**330**	*i* P	**Pn**	**18 04 22.4**	**+0.7**
GUMI				IAML		18 04 37.8	
	comp=Z,5μm,1.0s						
LCND	**La Caada**	**1.81**	**85**	*eP*	**Pn**	**18 04 23.7**	**+0.7**
LCND				eS	**Sn**	**18 04 46.0**	**+0.9**
LCND	**La Caada**	**1.81**	**85**	*i* P	**Pn**	**18 04 23.8**	**+0.8**
LCND				IAML		18 04 52.0	
	comp=Z,820nm,1.0s						
CNCH	**Conchagua**	**1.86**	**86**	*i* P	**Pn**	**18 04 24.6**	**+0.8**
CNCH				IAML		18 04 53.9	
	comp=Z,2μm,1.0s						
POTN	**Potosi Cosigui**	**2.19**	**94**	*i* P	**Pn**	**18 04 29.1**	**+1.0**
POTN				IAML		18 05 05.0	
	comp=Z,82nm,1.0s						
CRIN	**San Cristobal**	**2.66**	**99**	*i* P	**Pn**	**18 04 31.5**	**-3.3**
LIMN	**Finca el Limon**	**3.29**	**91**	*i* P	**Pn**	**18 04 44.2**	**+0.8**
LIMN				IAML		18 05 28.1	
	comp=Z,71nm,1.0s						

*NEIC **01** 18:18:36.1±2.1,55.˙59N±0.˙09×149.˙2W±0.˙1, h7^{km}±6^{km}, mb4.1/10, ML4.2/40, ML4.0(AEIC), Error ellipse: s-maj=13.0km s-min=8.9km az=172.0*

*IDC **01** 18:18:37.1±0.9,55.˙74N×149.˙03W, h0^{km}, mb3.8/15, mbtmp3.7/20, ML3.7/5, MS3.3/21, Error ellipse: s-maj=23.0km s-min=14.1km az=32.0*

*AEIC **01** 18:18:42.0±1.7,55.˙66N±0.˙09×149.˙2W±0.˙1, h8^{km}±6^{km}, Error ellipse: s-maj=13.4km s-min=9.1km az=164.0*

ISC 01 18:18:38.5±0.7,**55.˙78N**±0.˙07×**149.˙14W**±0.˙04,**h10**^{km}, **n269**,σ**1**^{s}**02**/252,**mb3.9**/19,**MS3.2**/17,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.72**	**304**	Pn	**Pn**	**18 19 21.4**	**-0.7**
OHAK	**Old Harbor**	**2.72**	**304**		**Sn**	**18 19 52.8**	**-2.2**
OHAK	**Old Harbor**	**2.72**	**304**	P	**Pn**	**18 19 21.5**	**-0.6**
OHAK	**Old Harbor**	**2.72**	**304**	P	**Pn**	**18 19 21.4**	**-0.7**
	baz=123						
OHAK				S	**Sn**	**18 19 52.8**	**-2.2**
	baz=123						
KDAK	**Kodiak Island**	**2.76**	**318**		**Pn**	**18 19 22.7**	**0.0**
KDAK	**Kodiak Island**	**2.76**	**318**	Pn	**Pn**	**18 19 22.1**	**-0.6**
	21nm,0.3s,baz=132,slow=6.0,SNR=456						
KDAK				Sn	**Sn**	**18 19 54.5**	**-1.6**
	36nm,0.3s,baz=39,slow=22,SNR=12						
KDAK				LR	LR	18 20 42.1	
	comp=Z,549nm,21.1s,baz=199,slow=44 64nm,0.3s						
SII	**Sitkinak Islan**	**2.93**	**288**	Pn	**Pn**	**18 19 23.8**	**-1.2**
SII				IAML		18 20 00.1	
	comp=N,996nm,0.5s						
SII				IAML		18 20 04.3	
	comp=E,1μm,0.4s						
SII	**Sitkinak Islan**	**2.93**	**288**		**Sn**	**18 19 56.8**	**-3.5**
SII	**Sitkinak Islan**	**2.93**	**288**	P	**Pn**	**18 19 23.9**	**-1.1**
SII	**Sitkinak Islan**	**2.93**	**288**	P	**Pn**	**18 19 23.8**	**-1.2**
	baz=106						
SII				S	**Sn**	**18 19 56.8**	**-3.5**
Q20K	**Shuyak Island**	**3.35**	**329**	P	**Pn**	**18 19 31.0**	**+0.2**
	baz=148						
Q20K				S	**Sn**	**18 20 10.3**	**-0.2**
	baz=148						
SYI	**Shuyak Island**	**3.35**	**329**		**Pn**	**18 19 31.0**	**+0.2**
SYI	**Shuyak Island**	**3.35**	**329**		**Sn**	**18 20 10.3**	**-0.2**
R18K	**Karluk**	**3.44**	**304**	IAML		18 20 14.5	
	comp=N,351nm,0.5s						
R18K				IAML		18 20 26.2	
	comp=E,431nm,0.5s						
R18K	**Karluk**	**3.44**	**304**		**Pn**	**18 19 31.2**	**-0.8**
R18K					**Sn**	**18 20 10.9**	**-1.8**
R18K	**Karluk**	**3.44**	**304**	P	**Pn**	**18 19 31.6**	**-0.4**
	baz=121						
R18K				S	**Sn**	**18 20 10.9**	**-1.8**
	baz=121						
CNPM	**China Poot**	**3.93**	**344**		**Pn**	**18 19 38.6**	**-0.1**
CNPM				IAML		18 20 26.7	
	comp=N,231nm,0.3s						
CNPM	**China Poot**	**3.93**	**344**		**Sn**	**18 20 24.7**	**-0.1**
Q23K	**Middleton Isla**	**3.96**	**21**		**Pn**	**18 19 39.0**	**-0.2**
Q23K					**Sn**	**18 20 23.2**	**-2.4**
Q23K	**Middleton Isla**	**3.96**	**21**	IAML		18 20 25.0	
	comp=E,263nm,0.9s						
Q23K				IAML		18 20 31.9	
	comp=N,207nm,1.1s						
Q23K	**Middleton Isla**	**3.96**	**21**	P	**Pn**	**18 19 39.0**	**-0.2**
	baz=203						
Q23K				S	**Sn**	**18 20 23.2**	**-2.4**
	baz=203						
MID	**Middleton Isla**	**3.96**	**21**		**Pn**	**18 19 39.1**	**0.0**
MID	**Middleton Isla**	**3.96**	**21**	IAML		18 20 18.6	
	comp=E,237nm,1.5s						
MID				IAML		18 20 31.8	
	comp=N,218nm,1.3s						
MID	**Middleton Isla**	**3.96**	**21**	P	**Pn**	**18 19 39.5**	**+0.3**
Q19K	**Cape Douglas,**	**3.99**	**324**	Pn	**Pn**	**18 19 40.1**	**+0.4**
Q19K				IAML		18 20 39.0	
	comp=N,552nm,0.9s						
Q19K	**Cape Douglas,**	**3.99**	**324**	P	**Pn**	**18 19 40.4**	**+0.7**
	baz=142						
KAHG	**Katmai Hook Gl**	**4.01**	**315**		**Pn**	**18 19 41.0**	**+1.0**
KAWH	**Katmai**	**4.05**	**313**		**Pn**	**18 19 41.2**	**+0.8**
BRSE	**Bradley Lake S**	**4.07**	**349**		**Pn**	**18 19 40.7**	**0.0**
BRSE					**Sn**	**18 20 27.2**	**-1.1**
BRSE	**Bradley Lake S**	**4.07**	**349**	P	**Pn**	**18 19 40.7**	**0.0**
	baz=167						
BRSE				S	**Sn**	**18 20 27.2**	**-1.1**
	baz=167						
BRLK	**Bradley Lake**	**4.11**	**348**	IAML		18 20 30.2	
	comp=N,166nm,0.3s						
BRLK				IAML		18 20 31.4	
	comp=E,227nm,0.5s						
KCE	**Katmai Mt Cerb**	**4.13**	**309**		**Pn**	**18 19 42.4**	**+0.9**
ANCK	**Angle Creek**	**4.24**	**308**		**Pn**	**18 19 43.9**	**+0.8**
AUL	**Augustine Lava**	**4.29**	**329**		**Pn**	**18 19 44.9**	**+1.2**
KAHC	**Katmai Hardscr**	**4.30**	**315**	P	**Pn**	**18 19 44.8**	**+0.9**
	baz=131						
P23K	**Montague Islan**	**4.34**	**12**		**Pn**	**18 19 44.5**	**+0.2**
SEW	**Seward**	**4.34**	**358**		**Pn**	**18 19 44.2**	**-0.3**
SEW	**Seward**	**4.34**	**358**	P	**Pn**	**18 19 44.7**	**+0.3**
	baz=178						
CNTC	**Contact Creek**	**4.45**	**307**		**Sn**	**18 20 37.0**	**-0.8**
Q17K	**Contact Creek**	**4.45**	**307**	P	**Pn**	**18 19 46.4**	**+0.3**
	baz=122						
P19K	**Oil Pt**	**4.46**	**332**		**Pn**	**18 19 46.6**	**+0.5**
P19K	**Oil Pt**	**4.46**	**332**	P	**Pn**	**18 19 46.7**	**+0.5**
	baz=150						
KELA	**Mount Kelaz**	**4.48**	**309**		**Pn**	**18 19 47.0**	**+0.6**
O20K	**Slope Mountain**	**4.70**	**338**		**Pn**	**18 19 49.4**	**0.0**
O22K	**Cooper Landing**	**4.73**	**356**		**Pn**	**18 19 49.9**	**+0.2**
O22K	**Cooper Landing**	**4.73**	**356**	P	**Pn**	**18 19 50.3**	**+0.6**
	baz=176						
HIN	**Hinchinbrook I**	**4.84**	**16**		**Pn**	**18 19 51.7**	**+0.4**
HIN				IAML		18 20 53.6	
	comp=E,224nm,0.9s						
KAIM	**Kayak Island**	**4.87**	**29**		**Pn**	**18 19 51.8**	**+0.2**
KAIM				IAML		18 20 57.3	
	comp=N,247nm,1.3s						
KAIM				IAML		18 21 01.3	
	comp=E,222nm,0.8s						
P18K	**Big Mountain,**	**4.89**	**320**	Pn	**Pn**	**18 19 51.6**	**-0.3**
P18K	**Big Mountain,**	**4.89**	**320**		**Sn**	**18 20 47.7**	**-0.9**
P18K	**Big Mountain,**	**4.89**	**320**	P	**Pn**	**18 19 51.8**	**-0.1**
	baz=136						
R16K	**Pilot Point**	**4.99**	**295**		**Pn**	**18 19 52.8**	**-0.5**
R16K	**Pilot Point**	**4.99**	**295**	IAML		18 20 59.0	
	comp=E,84nm,0.7s						
R16K				IAML		18 20 59.1	
	comp=N,125nm,1.1s						
R16K	**Pilot Point**	**4.99**	**295**	P	**Pn**	**18 19 53.0**	**-0.3**
	baz=109						
Q16K	**King Salmon**	**5.01**	**309**		**Pn**	**18 19 53.6**	**0.0**
Q16K					**Sn**	**18 20 51.4**	**-0.1**
Q16K	**King Salmon**	**5.01**	**309**	P	**Pn**	**18 19 54.1**	**+0.5**
	baz=123						
RED	**Redoubt Volcan**	**5.04**	**339**		**Pn**	**18 19 53.3**	**-0.7**
RDSO	**Redoubt South**	**5.07**	**339**		**Pn**	**18 19 53.8**	**-0.7**
RSO	**Redoubt South**	**5.08**	**339**		**Pn**	**18 19 54.1**	**-0.6**
EYAK	**Cordova Ski Ar**	**5.11**	**19**		**Pn**	**18 19 55.5**	**+0.5**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**18 19 55.9**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**18 19 55.7**	**+0.8**
	baz=201						
RDT	**Redoubt**	**5.11**	**342**		**Pn**	**18 19 54.0**	**-1.1**
RDWB	**Redoubt West**	**5.12**	**339**		**Pn**	**18 19 54.4**	**-0.9**
ANNW	**Aniakchak Nort**	**5.18**	**287**		**Pn**	**18 19 55.8**	**-0.2**
ANPB	**Aniakchak Plen**	**5.20**	**285**		**Pn**	**18 19 55.5**	**-0.7**
RAGM	**Ragged Mountai**	**5.20**	**25**		**Pn**	**18 19 56.7**	**+0.5**
NCT	**North Crescent**	**5.20**	**339**		**Pn**	**18 19 55.9**	**-0.5**
O19K	**Port Alsworth**	**5.22**	**330**		**Pn**	**18 19 56.2**	**-0.3**
O19K	**Port Alsworth**	**5.22**	**330**	P	**Pn**	**18 19 56.3**	**-0.1**
	baz=147						
O18K	**Koktuh Hills**	**5.22**	**324**	Pn	**Pn**	**18 19 56.3**	**-0.2**
O18K				IAML		18 21 10.9	
	comp=N,64nm,1.0s						
O18K	**Koktuh Hills**	**5.22**	**324**	P	**Pn**	**18 19 56.3**	**-0.2**
	baz=140						
P17K	**Kvichak River**	**5.22**	**314**		**Pn**	**18 19 57.0**	**+0.5**
P17K	**Kvichak River**	**5.22**	**314**	P	**Pn**	**18 19 57.2**	**+0.8**
	baz=129						
CHGN	**Chignik**	**5.23**	**280**	Pn	**Pn**	**18 19 55.3**	**-1.3**
CHGN				IAML		18 20 55.8	
	comp=N,174nm,0.6s						
CHGN				IAML		18 20 56.6	
	comp=E,218nm,0.5s						
NICHA	**Nichawak Mount**	**5.25**	**29**		**Pn**	**18 19 57.5**	**+0.6**
HMT	**Hamilton**	**5.26**	**28**		**Pn**	**18 19 57.5**	**+0.5**
RC01	**Rabbit Creek A**	**5.34**	**357**	Pn	**Pn**	**18 19 58.2**	**+0.1**
RC01	**Rabbit Creek A**	**5.34**	**357**	P	**Pn**	**18 19 58.4**	**+0.3**
	baz=176						
GOAT	**Goat Mountain**	**5.36**	**24**		**Pn**	**18 19 59.1**	**+0.7**
BERG	**Berg Lake**	**5.46**	**30**		**Pn**	**18 19 60.0**	**+0.2**
GRIN	**Grindle Hills**	**5.47**	**32**		**Pn**	**18 20 00.7**	**+0.7**
SNH	**Sunshine Point**	**5.54**	**35**		**Pn**	**18 20 01.5**	**+0.5**
KHIT	**Khitrov Hills**	**5.63**	**31**		**Pn**	**18 20 02.4**	**+0.2**
VNHG	**Veniaminof 1**	**5.64**	**279**		**Pn**	**18 20 01.9**	**-0.5**
KNK	**Knik Glacier**	**5.67**	**3**		**Pn**	**18 20 03.2**	**+0.6**
N20K	**Mount Spurr**	**5.67**	**345**	P	**Pn**	**18 20 02.2**	**-0.6**
	baz=162						
BMRM	**Bremner River**	**5.73**	**23**	P	**Pn**	**18 20 04.1**	**+0.6**
	baz=206						
SPCP	**Crater Peak Br**	**5.73**	**345**		**Pn**	**18 20 04.1**	**+0.5**
SPCG	**Spurr Capps Gl**	**5.74**	**346**		**Pn**	**18 20 03.7**	**0.0**
WAX	**Waxell Ridge**	**5.75**	**33**		**Pn**	**18 20 04.2**	**+0.4**
SUA	**Susitna One**	**5.77**	**352**	Pn	**Pn**	**18 20 03.8**	**-0.3**
SUA	**Susitna One**	**5.77**	**352**	P	**Pn**	**18 20 04.2**	**+0.1**
	baz=171						
N19K	**Bonanza Creek**	**5.78**	**333**	Pn	**Pn**	**18 20 03.9**	**-0.4**
P16K	**Nushagak River**	**5.79**	**308**		**Pn**	**18 20 04.7**	**+0.4**
P16K	**Nushagak River**	**5.79**	**308**	P	**Pn**	**18 20 04.7**	**+0.4**
	baz=122						
PMR	**Palmer**	**5.83**	**0**		**Pn**	**18 20 04.4**	**-0.5**
PMR	**Palmer**	**5.83**	**0**	P	**Pn**	**18 20 06.0**	**+1.1**
O17K	**Koliganek Bris**	**5.84**	**317**		**Pn**	**18 20 05.3**	**+0.3**
O17K	**Koliganek Bris**	**5.84**	**317**	P	**Pn**	**18 20 05.5**	**+0.5**
	baz=131						
S14K	**Fog Glacier**	**5.86**	**279**	P	**Pn**	**18 20 05.2**	**-0.2**
	baz=92						
VNFG	**Fog Glacier, M**	**5.86**	**279**		**Pn**	**18 20 05.2**	**-0.2**
CRQM	**Cirque**	**5.91**	**30**		**Pn**	**18 20 06.5**	**+0.3**
KLU	**Klutina**	**5.97**	**15**	Pn	**Pn**	**18 20 07.8**	**+0.8**
KLU	**Klutina**	**5.97**	**15**	P	**Pn**	**18 20 07.7**	**+0.8**
	baz=197						
GHO	**Glory Hole Cre**	**6.02**	**1**	Pn	**Pn**	**18 20 05.5**	**-2.0**
BAGL	**Bagley Icefiel**	**6.02**	**35**		**Pn**	**18 20 07.9**	**+0.5**
ISLE	**Juniper Island**	**6.03**	**34**		**Pn**	**18 20 08.0**	**+0.3**
CNBA	**Chernabura Isl**	**6.04**	**265**	Pn	**Pn**	**18 20 03.9**	**-3.9**
SML	**Sawmill**	**6.07**	**4**		**Pn**	**18 20 09.2**	**+1.0**
SML	**Sawmill**	**6.07**	**4**	P	**Pn**	**18 20 09.4**	**+1.2**
	baz=184						
N18K	**Kilae Creek**	**6.07**	**327**	Pn	**Pn**	**18 20 07.8**	**-0.4**
O16K	**Kokwok River B**	**6.14**	**312**	Pn	**Pn**	**18 20 09.3**	**+0.2**
O16K	**Kokwok River B**	**6.14**	**312**	P	**Pn**	**18 20 09.5**	**+0.4**
	baz=126						
SCM	**Sheep Creek Mo**	**6.15**	**8**		**Pn**	**18 20 10.5**	**+1.2**
SCM	**Sheep Creek Mo**	**6.15**	**8**	P	**Pn**	**18 20 10.5**	**+1.2**
	baz=189						
VRDI	**Verde Repeater**	**6.23**	**26**		**Pn**	**18 20 10.8**	**+0.4**
SAMH	**Samovar Hills**	**6.23**	**42**		**Pn**	**18 20 11.5**	**+1.0**
N25K	**Chitina, Valde**	**6.31**	**20**	P	**Pn**	**18 20 12.5**	**+1.0**
	baz=204						
TABL	**Table Mountain**	**6.31**	**39**		**Pn**	**18 20 12.2**	**+0.6**
SVW2	**Sparrevohn**	**6.32**	**330**		**Pn**	**18 20 11.3**	**-0.2**
SVW2	**Sparrevohn**	**6.32**	**330**	P	**Pn**	**18 20 11.2**	**-0.3**
GLB	**Gilahina Butte**	**6.33**	**24**		**Pn**	**18 20 12.2**	**+0.5**
N17K	**Nushagak Hills**	**6.39**	**322**		**Pn**	**18 20 12.3**	**-0.2**
PCA	**Pinnacle**	**6.41**	**44**		**Pn**	**18 20 13.5**	**+0.6**
PINM	**Pinnacle**	**6.41**	**44**	P	**Pn**	**18 20 13.5**	**+0.6**
	baz=230						
SDPT	**Sand Point**	**6.45**	**271**		**Pn**	**18 20 11.9**	**-1.4**
SDPT	**Sand Point**	**6.45**	**271**	P	**Pn**	**18 20 12.0**	**-1.3**
M20K	**Styx River**	**6.47**	**343**		**Pn**	**18 20 13.3**	**-0.3**
MCARA	**McCarthy VSAT**	**6.47**	**27**		**Pn**	**18 20 14.2**	**+0.6**
MCARA	**McCarthy VSAT**	**6.47**	**27**	P	**Pn**	**18 20 14.2**	**+0.6**
	baz=212						
PNL	**Peninsula**	**6.51**	**49**		**Pn**	**18 20 14.6**	**+0.3**
PNL	**Peninsula**	**6.51**	**49**	P	**Pn**	**18 20 15.0**	**+0.7**
PNL	**Peninsula**	**6.51**	**49**	P	**Pn**	**18 20 14.6**	**+0.3**
	baz=236						
M24K	**Tolsona, Glenn**	**6.53**	**12**		**Pn**	**18 20 16.0**	**+1.4**
M24K	**Tolsona, Glenn**	**6.53**	**12**	P	**Pn**	**18 20 16.3**	**+1.8**
	baz=194						
BCPM	**Bancas Point**	**6.58**	**47**		**Pn**	**18 20 15.8**	**+0.8**
CTG	**Chitna Glacier**	**6.62**	**35**	P	**Pn**	**18 20 16.5**	**+0.6**
	baz=221						
CTGM	**Chitina Glacie**	**6.63**	**35**		**Pn**	**18 20 16.4**	**+0.5**
O15K	**Ungalikthiuk R**	**6.69**	**305**	P	**Pn**	**18 20 16.9**	**+0.3**
	baz=117						
M18K	**Stony River**	**6.71**	**331**		**Pn**	**18 20 16.3**	**-0.6**
WACK	**Wrangell Chich**	**6.71**	**20**		**Pn**	**18 20 18.4**	**+1.2**
WAT6	**Susitna Watana**	**6.87**	**5**		**Pn**	**18 20 20.1**	**+0.9**
WAT6	**Susitna Watana**	**6.87**	**5**	P	**Pn**	**18 20 20.4**	**+1.2**
	baz=186						
N16K	**Nishlik Lake**	**6.94**	**317**		**Pn**	**18 20 20.5**	**+0.5**
HARP	**HAARP**	**6.95**	**16**		**Pn**	**18 20 21.6**	**+1.3**
HARP	**HAARP**	**6.95**	**16**	P	**Pn**	**18 20 21.0**	**+0.7**
	baz=198						
WAT1	**Susitna Watana**	**7.08**	**2**		**Pn**	**18 20 23.4**	**+1.3**
WAT1	**Susitna Watana**	**7.08**	**2**	P	**Pn**	**18 20 23.4**	**+1.3**
	baz=183						
M17K	**Holitna River**	**7.11**	**326**		**Pn**	**18 20 22.6**	**+0.2**
O29M	**Mount Kennedy**	**7.21**	**47**		**Pn**	**18 20 24.6**	**+0.6**
P29M	**Windy Craggy**	**7.23**	**53**		**Pn**	**18 20 24.5**	**+0.5**
P29M	**Windy Craggy**	**7.23**	**53**	P	**Pn**	**18 20 24.5**	**+0.5**
	baz=242						
PN7A	**Pavlof North-7**	**7.29**	**273**		**Pn**	**18 20 23.5**	**-1.5**
N15K	**Kwethluk River**	**7.30**	**312**		**Pn**	**18 20 25.7**	**+0.7**
M16K	**Timber Creek**	**7.36**	**320**		**Pn**	**18 20 26.2**	**+0.3**
DHY	**Denali Highway**	**7.38**	**6**		**Pn**	**18 20 27.6**	**+1.3**
DHY	**Denali Highway**	**7.38**	**6**	P	**Pn**	**18 20 27.9**	**+1.7**
	baz=188						
O14K	**Tigyukauivet M**	**7.40**	**303**		**Pn**	**18 20 26.7**	**+0.4**
S31K	**Pelican**	**7.41**	**67**		**Pn**	**18 20 23.8**	**-2.6**
YUK2	**White River**

comp=E,0.1nm,0.3s,baz=263,slow=10,SNR=12
YKA LR LR 18 29 07.5
comp=E,63nm,19.1s,baz=33,slow=34
comp=E,0.5nm,0.7s
A36M **Sachs Harbour 19.12 23 Pn 18 23 03.2 +1.3**
A36M IAmb IAmb 18 23 15.7
comp=Z,14nm,0.9s
H04A **Detroit Lake 20.37 112** P **P 18 23 14.7 -0.3**
NEW **Newport 20.94 98** IAmb IAmb 18 23 34.2
comp=Z,14nm,1.4s
NEW **Newport 20.94 98** P **P 18 23 20.9 -0.3**
NEW LR LR 18 30 11.6
comp=Z,3.9nm,0.9s,baz=279,slow=7.7,SNR=3.4
comp=Z,50nm,19.8s,baz=290,slow=33
comp=Z,3.9nm,0.9s
K02D **Willamette Mer 21.01 118** IAmb IAmb 18 23 23.5
comp=Z,7.9nm,1.1s
HUMO **Hull Mountain 21.43 117** IAmb IAmb 18 23 28.1
comp=Z,6.2nm,0.9s
J05D **Fort Rock, OR 21.83 113** P **P 18 23 30.0 -0.9**
J05D IAmb IAmb 18 23 32.3
comp=Z,11nm,1.1s
YBH **Yreka Blue Hor 22.20 118** LR LR 18 29 59.8
comp=Z,75nm,20.7s,baz=343,slow=31
F10A **Beach Ranch, E 22.21 103** IAmb IAmb 18 23 50.8
comp=Z,6.8nm,1.1s
BMO **Blue Mountains 22.87 105** P **P 18 23 40.8 -1.1**
ELK **Elko 26.78 110** LR LR 18 32 45.7
comp=Z,46nm,21.5s,baz=291,slow=32
NVAR **Mina Array Bea 26.91 117** P **P 18 24 18.9 -0.8**
comp=Z,0.9nm,0.7s,baz=303,slow=8.6,SNR=8.6
NVAR LR LR 18 33 08.1
comp=Z,58nm,18.5s,baz=290,slow=32
comp=Z,0.9nm,0.7s
PDAR **Pinedale Array 28.49 100** P **P 18 24 33.1 -0.8**
comp=Z,0.2nm,0.6s,baz=318,slow=4.2,SNR=2.7
comp=Z,0.2nm,0.6s
SEY **Seymchan 29.68 308** LR LR 18 36 47.0
comp=Z,63nm,20.2s,baz=358,slow=37
PETK **Petropavlovsk- 30.40 288** P **P 18 24 51.1 +0.7**
comp=Z,6.7nm,1.1s,baz=76,slow=16,SNR=2.2
comp=Z,6.7nm,1.1s
PFO **Pinyon Flats O 31.63 121** LR LR 18 35 14.5
comp=Z,47nm,18.9s,baz=302,slow=32
ANMO **Albuquerque 35.74 108** LR LR 18 38 02.0
comp=Z,37nm,19.3s,baz=88,slow=33
YAK **Yakutsk 39.78 313** LR LR 18 44 01.9
comp=Z,38nm,18.6s,baz=42,slow=38
TXAR **Lajitas Array 41.57 110** P **P 18 26 26.9 +0.6**
comp=Z,0.2nm,0.4s,baz=345,slow=2.8,SNR=2.5
TXAR LR LR 18 43 31.2
comp=Z,23nm,18.1s,baz=248,slow=36
comp=Z,0.2nm,0.4s
LPIG **La Paz 42.50 122** LR LR 18 40 29.5
comp=Z,30nm,21.1s,baz=326,slow=31
SFJD **Kangerlussuaq 43.47 34** LR LR 18 43 33.2
comp=Z,37nm,21.5s,baz=327,slow=34
KLR **Kul'dur 46.13 297** LR LR 18 46 23.2
comp=Z,31nm,21.5s,baz=52,slow=36
NRIK **Noril'sk 48.60 337** LR LR 18 49 41.3
comp=Z,57nm,18.6s,baz=23,slow=38
H11N2 **WAKE ISLAND Hy 48.70 241** T T 19 19 47.8
baz=32,slow=76,SNR=10
H11N3 **WAKE ISLAND Hy 48.70 240** T T 19 19 46.7
baz=32,slow=76,SNR=14
H11N1 **WAKE ISLAND Hy 48.72 241** T T 19 19 44.6
baz=32,slow=76,SNR=6.5
H11S1 **WAKE ISLAND Hy 49.84 240** T T 19 22 10.5
baz=27,slow=74,SNR=6.6
H11S2 **WAKE ISLAND Hy 49.85 240** T T 19 22 05.8
baz=303,slow=74,SNR=6.1
H11S3 **WAKE ISLAND Hy 49.85 240** T T 19 21 12.8
SNR=7.4
ARCES **ARCESS Array B 54.94 2** P **P 18 28 08.7 -0.1**
comp=Z,1.7nm,0.8s,baz=10,slow=7.6,SNR=6.0
comp=Z,1.7nm,0.8s
SONM **Songino Array 59.03 310** P **P 18 28 38.8 +0.5**
comp=Z,0.7nm,0.9s,baz=59,slow=3.8,SNR=4.2
SONM LR LR 18 53 59.2
comp=Z,40nm,20.4s,baz=350,slow=36
comp=Z,0.7nm,0.9s
NOA **NORSAR Array B 62.50 11** P **P 18 29 02.4 +0.9**
comp=Z,0.7nm,0.8s,baz=12,slow=5.9,SNR=2.4
comp=Z,0.7nm,0.8s
FINES **FINESS Array B 63.06 3** P **P 18 29 05.3 +0.1**
comp=Z,2.0nm,0.8s,baz=336,slow=4.2,SNR=7.2
comp=Z,2.0nm,0.8s
BVAR **Borovoye Array 66.78 335** P **P 18 29 29.7 +0.1**
comp=Z,0.8nm,0.7s,baz=24,slow=8.4,SNR=5.7
comp=Z,0.8nm,0.7s
KURBB **Kurchatov Arra 66.82 329** P **P 18 29 30.4 +0.6**
comp=Z,0.4nm,0.7s,baz=30,slow=6.4,SNR=5.0
comp=Z,0.4nm,0.7s
MKAR **Makanchi Array 69.06 325** P **P 18 29 44.5 +0.4**
comp=Z,0.7nm,0.7s,baz=23,slow=5.6,SNR=8.8
MKAR LR LR 19 04 07.0
comp=Z,37nm,19.7s,baz=40,slow=40
comp=Z,0.7nm,0.7s
AKASG **Malin Array Be 73.88 1** P **P 18 30 12.9 -0.1**
comp=Z,0.4nm,0.4s,baz=359,slow=6.3,SNR=2.9
comp=Z,0.4nm,0.4s
VRAC **Vranov 74.61 10** LR LR 19 04 04.8
comp=Z,7.9nm,18.0s,baz=336,slow=36
AAK **Ala-Archa 75.22 328** LR LR 19 09 03.4
comp=Z,27nm,18.2s,baz=34,slow=40
PZH **PanZhiHua 78.44 300** P **P 18 30 38.0 -1.5**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,180nm,4.9s
BRTR **Keskin Array B 84.84 358** P **P 18 31 14.1 +0.9**
comp=Z,0.3nm,0.6s,baz=37,slow=9.8,SNR=2.3
comp=Z,0.3nm,0.6s
CMAR **Chiang Mai Arr 86.59 298** P **P 18 31 24.2 +2.2**
comp=Z,0.2nm,0.5s,baz=1.1,slow=4.5,SNR=2.2
comp=Z,0.2nm,0.5s

*IDC **01** 18:22:09.9±2.9,27.96S×64.91E,h0km,mb3.6/6, mbtmp3.6/6,MS3.2/6,Error ellipse: s-maj=90.3km s-min=36.0km az=49.0*

ISC 01 18:22:10.8±3.4,28.1S±0.5×64.8E±0.6,h10km,n15, σ0§24/7,mb3.7/6,MS3.1/6,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**20.79**	**206**	T		T	18 48 31.2	
	baz=35,slow=72,SNR=88							
H04N1	**CROZET ISLANDS**	**20.80**	**206**	T		T	18 48 32.0	
	baz=35,slow=72,SNR=87							
H04N3	**CROZET ISLANDS**	**20.81**	**206**	T		T	18 48 32.0	
	baz=35,slow=72,SNR=111							
LSZ	**Lusaka**	**36.16**	**283**	LR		LR	18 41 55.3	
	comp=Z,30nm,20.1s,baz=280,slow=33							
SUR	**Sutherland**	**38.05**	**252**	LR		LR	18 42 49.6	
	comp=Z,34nm,20.1s,baz=178,slow=32							
PALK	**Pallekele**	**38.33**	**26**	LR		LR	18 41 20.1	
	comp=Z,26nm,18.1s,baz=230,slow=30							
CMAR	**Chiang Mai Arr**	**56.84**	**40**	P		**P**	**18 31 55.8**	**+0.1**
	1.0nm,0.7s,baz=232,slow=7.0,SNR=11							
CMAR				LR		LR	18 52 14.2	
	comp=Z,10nm,20.9s,baz=305,slow=32							
	1.0nm,0.7s							
ASAR	**Alice Springs**	**61.61**	**103**	P		**P**	**18 32 28.8**	**-0.1**
	0.2nm,0.5s,baz=241,slow=6.3,SNR=4.4							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**63.32**	**99**	P		**P**	**18 32 40.4**	**0.0**
	0.7nm,1.0s,baz=254,slow=5.8,SNR=2.4							
	0.7nm,1.0s							
MMAI	**Mount Meron Ar**	**66.83**	**333**	LR		LR	18 59 06.9	
	comp=Z,18nm,18.7s,baz=330,slow=33							
KBZ	**Khabaz**	**74.19**	**344**	LR		LR	19 04 21.2	
	comp=Z,32nm,20.6s,baz=37,slow=34							
MKAR	**Makanchi Array**	**76.15**	**12**	P		**P**	**18 33 58.5**	**-0.2**
	0.4nm,0.8s,baz=206,slow=5.3,SNR=3.8							
	0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**79.26**	**9**	P		**P**	**18 34 15.6**	**-0.3**
	0.3nm,0.8s,baz=208,slow=6.5,SNR=4.6							
	0.3nm,0.8s							
ZALV	**Zalesovo Beam**	**83.48**	**12**	P		**P**	**18 34 38.4**	**+0.2**
	0.5nm,0.5s,baz=208,slow=5.0,SNR=2.6							
	0.5nm,0.5s							
YKA	**Yellowknife Ar**	**145.55**	**359**	PKPbc		**PKPab**	**18 41 49.1**	**+0.2**
	0.6nm,0.8s,baz=345,slow=3.2,SNR=8.5							

*IDC **01** 18:32:28.1±1.6,44.03N×38.83E,h0km,mbtmp3.2/3, ML2.6/3,Error ellipse: s-maj=30.1km s-min=11.5km az=159.0*

*CFUSG **01** 18:32:29.3,44.25N×38.60E,h0km,Black Sea*
*MOS **01** 18:32:31.6,44.16N×38.67E,h15km,MPVA3.5*

ISC 01 18:32:31.3±1.7,44.11N±0.04×38.66E±0.02,h7km±12km, n30,σ1§37/56,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GOYR	**Goytkh**	**0.53**	**75**	*i* Pg		**Pb**	**18 32 42.7**	**-0.2**
GOYR				*e*Sg		**Sb**	**18 32 50.2**	**-0.6**
MRNR	**Maryino**	**0.61**	**106**	*i* Pg		**Pb**	**18 32 45.1**	**+0.8**
MRNR				*i* Sg		**Sb**	**18 32 53.8**	**+0.7**
GELR	**Gelenjik**	**0.68**	**314**	*e*Pg		**Pb**	**18 32 45.3**	**-0.1**
GELR				*e*Sg		**Sb**	**18 32 54.4**	**-0.5**
SPGR	**Shapsug**	**0.76**	**326**	*i* Pg		**Pb**	**18 32 46.8**	**0.0**
SPGR				*e*Sg		**Sb**	**18 32 57.6**	**+0.2**
SOC	**Sochi**	**0.93**	**124**	*e*Pg		**Pn**	**18 32 50.7**	**0.0**
SOC				*i* Sg		**Sn**	**18 33 04.2**	**+0.1**
GUZR	**Guzeripl'**	**1.05**	**96**	*i* Pg		**Pg**	**18 32 51.8**	**+0.3**
GUZR				*i* Sg		**Sb**	**18 33 06.3**	**+0.4**
ANN	**Anapa**	**1.12**	**308**	*e*Pg		**Pn**	**18 32 54.2**	**+0.9**
ANN				*i* Sg		**Sn**	**18 33 10.9**	**+2.0**
VSLR	**Vesyoloye**	**1.19**	**123**	*i* Pg		**Pb**	**18 32 54.2**	**+0.1**
VSLR				*e*Sg		**Sn**	**18 33 10.7**	**+0.1**
RPOR	**Krasnaya Polya**	**1.23**	**109**	*e*Pg		**Pb**	**18 32 54.6**	**-0.2**
RPOR				*i* Sg		**Sn**	**18 33 11.8**	**+0.1**
LABN	**Labinsk**	**1.57**	**70**	*e*Pg		**Pb**	**18 33 00.4**	**-0.2**
LABN				*e*Sg		**Sb**	**18 33 21.0**	**+0.4**
ARXR	**Arkhyz**	**1.97**	**105**	*e*Pg		**Pb**	**18 33 06.8**	**-0.7**
ARXR				*e*Sg		**Sn**	**18 33 31.0**	**+0.9**
ERBR	**Yeremizino-Bor**	**2.06**	**38**	*e*Pg		**Pn**	**18 33 05.5**	**-0.7**
ERBR				*e*Sg		**Sn**	**18 33 30.2**	**-2.0**
DOMR	**Dombai**	**2.30**	**110**	*e*Pn		**Pn**	**18 33 09.1**	**-0.6**
DOMR				*e*Sn		**Sn**	**18 33 38.0**	**-0.3**
SUDU	**Sudak**	**2.73**	**288**	*e*Pn		**Pn**	**18 33 16.0**	**+0.5**
SUDU				*e*Sn		**Sn**	**18 33 47.6**	**-1.2**
SUDU	**Sudak**	**2.73**	**288**	Snm			18 33 48.9	
	comp=N,9.0nm,0.2s							
SUDU				Snm			18 33 48.9	
	comp=E,9.0nm,0.5s							
KIV	**Kislovodsk**	**2.91**	**92**	*e*Pn		**Pn**	**18 33 17.2**	**-0.7**
KIV				*e*Sn		**Sn**	**18 33 52.5**	**-0.7**
SHA1	**Shidzhatmaz**	**2.91**	**96**	*e*Pn		**Pn**	**18 33 18.8**	**+0.7**
SHA1				*e*Sn		**Sn**	**18 33 54.2**	**+0.7**
BEYR	**Belyy Ugol+**	**3.00**	**90**	*e*Pn		**Pb**	**18 33 22.9**	**-2.0**
BEYR				*e*Sn		**Sn**	**18 33 57.5**	**+2.1**
KBZ	**Khabaz**	**3.08**	**96**	*e*Pn		**Pn**	**18 33 19.7**	**-0.6**
KBZ				*e*Sn		**Sn**	**18 33 57.0**	**-0.3**
KBZ	**Khabaz**	**3.08**	**96**	Pn		**Pn**	**18 33 19.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=275,slow=6.3,SNR=8.3							
KBZ				Lg		Lg	18 33 59.5	
	comp=E,0.5nm,0.3s,baz=290,slow=22,SNR=2.0							
	comp=E,0.6nm,0.4s							
ALU	**Alushta**	**3.11**	**282**	*e*Pn		**Pn**	**18 33 20.0**	**-0.6**
ALU				*e*Sn		**Sn**	**18 33 56.0**	**-2.0**
ALU	**Alushta**	**3.11**	**282**	*e*Sn		**Sn**	**18 33 56.0**	**-2.0**
ALU				Snm			18 33 56.6	
	comp=N,9.0nm,0.4s							
ALU				Snm			18 33 56.6	
	comp=E,3.0nm,0.3s							
ALER	**Alexandrovskoy**	**3.11**	**76**	*e*Pn		**Pn**	**18 33 20.6**	**-0.1**
ALER				*e*Sn		**Sn**	**18 33 56.6**	**-1.6**
YAL	**Yalta**	**3.26**	**278**	*e*Pn		**Pn**	**18 33 25.0**	**+2.3**
YAL				*e*Pn		**Sn**	**18 34 01.0**	**-0.7**
YAL	**Yalta**	**3.26**	**278**	*e*Sn		**Sn**	**18 34 01.0**	**-0.7**
YAL				Snm			18 34 05.1	
	comp=N,3.0nm,0.2s							
YAL				Snm			18 34 05.1	
	comp=E,7.0nm,0.3s							
SEV	**Sevastopol'**	**3.61**	**279**	*e*Pn		**Pn**	**18 33 30.0**	**+2.4**
SEV				*e*Sn		**Sn**	**18 34 06.8**	**-3.6**
SEV	**Sevastopol'**	**3.61**	**279**	*e*Sn		**Sn**	**18 34 06.8**	**-3.6**
SEV				Snm			18 34 11.6	
	comp=N,4.0nm,0.3s							
SEV				Snm			18 34 11.6	
	comp=E,4.0nm,0.3s							
BRTR	**Keskin Array B**	**5.77**	**222**	Pn		**Pn**	**18 33 57.3**	**0.0**
	comp=E,0.2nm,0.3s,baz=46,slow=13,SNR=7.5							
BRTR				Sn		**Sn**	**18 35 02.2**	**-1.6**
	comp=E,0.1nm,0.3s,baz=72,slow=11,SNR=1.3							
	comp=E,0.9nm,0.5s							
MNK	**Minsk**	**12.54**	**330**	*i* P		**Pn**	**18 35 30.3**	**+0.4**
	comp=E,7.0nm,0.8s							
MNK				*i* P		**Pn**	**18 35 30.3**	**+0.4**
	comp=N,9.0nm,0.8s							
MNK				*i* P		**Pn**	**18 35 30.3**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=142							
MNK				*i* S		**Sn**	**18 37 51.7**	**+2.0**
MNK				*i* SS		**SnSn**	**18 38 04.9**	**+3.3**
MNK				*i* LQ		LQ	18 39 11.1	
MNK				*i* LR		LR	18 40 08.6	
MNK				*i* LRM		MLR	18 40 46.5	
	comp=E,74nm,18.9s							
MNK				*i* LRM		MLR	18 40 46.5	
	comp=N,160nm,19.8s							
MNK				*i* LRM		MLR	18 40 46.5	
	comp=Z,53nm,14.6s							
FINES	**FINESS Array B**	**18.89**	**341**	P		**P**	**18 36 50.0**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=156,slow=9.6,SNR=1.5							
	comp=Z,2.6nm,0.9s							

*IDC **01** 18:34:59.0±1.5,83.03N×5.77W,h0km,mb3.6/7, mbtmp3.7/9,ML3.4/2,MS3.2/7,Error ellipse: s-maj=37.5km s-min=25.6km az=17.0*
*BER **01** 18:35:03.4±2.0,82.56N×7.79W,h10km,mb(Pn)3.7, Confirmed Earthquake*
*FCIAR **01** 18:35:06.0,82.89N×3.32W,h10km,station ZFI2 has station magnitude of 3.60*
*KOLA **01** 18:35:07.5,82.65N×4.18W,h0km,ML2.5,Arctic Ocean,Gakkel ridge,Knipovich ridge, north*

ISC 01 18:35:05.1±1.7,82.91N±0.07×0.7W±0.1,h10km,n30, σ1§44/36,mb3.6/7,MS3.3/6,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**4.47**	**147**	P		**Pn**	**18 36 12.5**	**-0.2**
KBS				S		**Sn**	**18 37 02.5**	**-2.2**
KBS	**Kingsbay**	**4.47**	**147**	*e*P		**Pn**	**18 36 12.6**	**0.0**
KBS				IAML			18 37 11.5	
	comp=Z,8.4nm,0.5s							
KBS	**Kingsbay**	**4.47**	**147**	*e*P		**Pn**	**18 36 12.7**	**0.0**
KBS				*e*S		**Sn**	**18 37 03.0**	**-1.6**
BRBB	**Barentsburg B**	**5.41**	**145**	P		**Pn**	**18 36 26.4**	**+0.7**
BRBB				S		**Sn**	**18 37 27.3**	**-0.5**
BRBB	**Barentsburg B**	**5.41**	**145**	*e*P		**Pn**	**18 36 26.8**	**+1.2**
BRBB				*e*S		**Sn**	**18 37 27.3**	**-0.5**
BRBA	**Barentsburg A**	**5.44**	**145**	*e*P		**Pn**	**18 36 29.8**	**+3.7**
BRBA				*e*S		**Sn**	**18 37 28.4**	**-0.3**
SPA0	**Spitsbergen Ar**	**5.49**	**141**	*e*P		**Pn**	**18 36 27.7**	**+0.9**
SPA0				IAML			18 37 38.2	
	comp=Z,3.5nm,0.4s							
SPA0	**Spitsbergen Ar**	**5.49**	**141**	*e*P		**Pn**	**18 36 27.4**	**+0.6**
SPA0				*e*S		**Sn**	**18 37 28.2**	**-1.7**
SPITS	**Spitsbergen Ar**	**5.49**	**141**	P		**Pn**	**18 36 27.6**	**+0.8**
SPITS				S		**Sn**	**18 37 28.6**	**-1.3**
SPITS	**Spitsbergen Ar**	**5.49**	**141**	Pn		**Pn**	**18 36 27.4**	**+0.6**
	baz=5.7,slow=9.2							
SPITS				Sn		**Sn**	**18 37 29.9**	**0.0**
	baz=343,slow=8.2							
	comp=Z,2.3nm,0.4s							
HSPB	**Hornsund (broa**	**6.54**	**146**	P		**Pn**	**18 36 42.6**	**+1.5**
HSPB	**Hornsund (broa**	**6.54**	**146**	*e*P		**Pn**	**18 36 42.7**	**+1.5**
HSPB				*e*S		**Sn**	**18 37 56.5**	**+0.8**
HSPB				IAML			18 38 01.5	
	comp=Z,3.1nm,0.3s							
ZFI2	**Zemlya Franca-**	**6.97**	**82**	*e*P		**Pn**	**18 36 48.4**	**+1.4**
ZFI2				*e*S		**Sn**	**18 38 04.8**	**-1.4**
	comp=Z,17nm,1.4s							
OMEGA	**Omega**	**7.00**	**82**	P		**Pn**	**18 36 48.6**	**+1.2**
OMEGA				*e*S		**Sn**	**18 38 05.4**	**-1.4**
HOPEN	**Hopen**	**7.78**	**131**	*e*P		**Pn**	**18 37 00.2**	**+2.1**
HOPEN				*e*S		**Sn**	**18 38 27.1**	**+0.9**
HOPEN				IAML			18 38 32.3	
	comp=Z,2.8nm,0.4s							
HOPEN	**Hopen**	**7.78**	**131**	*e*P		**Pn**	**18 36 59.9**	**+1.7**
HOPEN				*e*S		**Sn**	**18 38 23.7**	**-2.5**
ARCES	**ARCESS Array B**	**14.53**	**142**	Pn		**Pn**	**18 38 30.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=334,slow=14,SNR=1.8							
ARCES				LR		LR	18 44 07.1	
	comp=Z,35nm,20.5s,baz=183,slow=36							
	comp=Z,3.6nm,0.9s							
NRIK	**Noril'sk**	**21.72**	**73**	P		**P**	**18 39 57.2**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=22,slow=6.1,SNR=5.1							
	comp=Z,2.8nm,0.6s							
ARU	**Arti**	**30.65**	**110**	LR		LR	18 55 29.7	
	comp=Z,20nm,19.3s,baz=16,slow=39							
ZALV	**Zalesovo Beam**	**36.29**	**85**	P		**P**	**18 42 08.6**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=342,slow=6.8,SNR=3.7							
	comp=Z,0.6nm,0.6s							
AKTO	**Aktyubinsk**	**36.48**	**113**	LR		LR	18 58 49.0	
	comp=Z,50nm,21.7s,baz=280,slow=38							
MLR	**Muntele Rosu**	**38.43**	**149**	LR		LR	18 58 40.9	
	comp=Z,21nm,21.3s,baz=5.0,slow=37							
KURBB	**Kurchatov Arra**	**38.77**	**92**	P		**P**	**18 42 30.6**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=352,slow=7.7,SNR=13							
	comp=Z,1.5nm,0.9s							
MKAR	**Makanchi Array**	**43.00**	**89**	P		**P**	**18 43 04.5**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=343,slow=6.7,SNR=9.8							
	comp=Z,1.3nm,1.0s							
SONM	**Songino Array**	**44.88**	**66**	P		**P**	**18 43 18.9**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=350,slow=4.4,SNR=2.8							
	comp=Z,0.4nm,0.9s							
PDAR	**Pinedale Array**	**50.07**	**295**	LR		LR	19 05 36.5	
	comp=Z,35nm,18.2s,baz=86,slow=37							
ELK	**Elko**	**52.70**	**300**	LR		LR	19 06 31.7	
	comp=Z,36nm,18.7s,baz=32,slow=36							
ANMO	**Albuquerque**	**57.44**	**290**	LR		LR	19 09 42.8	
	comp=Z,50nm,19.5s,baz=124,slow=37							
TXAR	**Lajitas Array**	**62.65**	**287**	P		P	18 45 21.1	-8.4
	comp=Z,0.1nm,0.3s,baz=57,slow=6.7,SNR=1.7							
	comp=Z,0.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**73.00**	**78**	P		**P**	**18 46 32.0**	**-2.6**
	comp=Z,0.6nm,0.8s,baz=343,slow=7.5,SNR=5.7							
	comp=Z,0.6nm,0.8s							

DJA 01 18:47:07.4±0.6,8°S±2°×107°E±°,h14km±4km,M4.1/14, mb4.3/6,MLv4.0/14,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SKJI	**Sukabumi**	**0.80**	**7**	P		Pb	18 47 23.6	+0.6
SKJI				S		Sg	18 47 33.4	+0.1
CNJI	**Cibinong**	**0.82**	**54**	P		Pn	18 47 24.6	0.0
CNJI				S		Sb	18 47 34.6	+0.1
DBJI	**Dramaga**	**1.27**	**13**	P		Pb	18 47 31.3	+0.1
DBJI				S		Sn	18 47 47.9	+0.2
LEM	**Lembang**	**1.50**	**50**	P		Pb	18 47 35.7	+0.5
LEM				S		Sb	18 47 54.2	0.0
TNG	**Tangerang**	**1.63**	**7**	P		Pn	18 47 35.6	-0.1
SBJI	**Serang**	**1.70**	**349**	P		Pn	18 47 36.7	0.0
SBJI				S		Sn	18 47 58.8	+0.6
CMJI	**Cimerak**	**1.97**	**90**	P		Pn	18 47 40.5	+0.1
KPJI	**Karang Pucung**	**2.49**	**79**	P		Pn	18 47 49.2	+1.6
KASI	**Kota Agung**	**2.99**	**319**	P		Pn	18 47 53.7	-0.7
LWLI	**Liwa**	**3.65**	**319**	P		Pn	18 48 03.7	+0.1
SMRI	**Semarang**	**4.02**	**80**	P		Pn	18 48 08.4	-0.2
UGM	**Wanagama**	**4.03**	**92**	P		Pn	18 48 08.5	-0.2
JAGI	**Jajag, Banyuwa**	**7.64**	**96**	P		Pn	18 48 58.7	+0.2
	35nm,1.6s,0.2nm							
PPSI	**Pulau Pagai**	**8.14**	**308**	P		Pn	18 49 05.0	-0.3
	74nm,1.1s							
SRBI	**Singaraja**	**8.67**	**92**	P		Pn	18 49 13.4	+0.8
	18nm,0.7s							
PDSI	**Padang**	**9.09**	**319**	P		Pn	18 49 18.5	+0.2
	9.1nm,0.6s							
SISI	**Saibi**	**9.76**	**311**	P		Pn	18 49 25.6	-1.9

*IDC **01** 18:48:37.1±1.1,28.11S×68.85W,h0km,mb3.8/2, mbtmp3.7/4,ML3.7/2,MS2.9/3,Error ellipse: s-maj=27.1km s-min=23.4km az=77.0*
*GUC **01** 18:48:38.7±0.6,28.08S×69.14W,h56km±14km,ML3.8*

ISC 01 18:48:36.0±1.6,28.25S±0.04×68.99W±0.05,h3km±11km, n23,σ1§45/31,3C,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VCA	**Vinchina**	**0.84**	**125**	↑*i*P		**Pn**	**18 48 54.3**	**-0.5**
GO03	**Copiap**	**1.28**	**301**	*e*P		**Pn**	**18 48 59.0**	**-1.9**
GO03				*i* S		**Sb**	**18 49 14.9**	**-2.8**
LCO	**Las Campanas**	**1.68**	**243**	*e*P		**Pg**	**18 49 08.6**	**+0.3**
LCO				*i* S		**Sg**	**18 49 30.8**	**+0.6**
AC04	**Llanos de Chal**	**1.84**	**271**	↑*e*P		**Pb**	**18 49 08.8**	**-0.5**
AC04				*i* S		**Sb**	**18 49 32.9**	**-0.8**
AC04				IAML			18 49 37.6	
	comp=N,800nm,0.7s							
CO01	**Juntas del Tor**	**1.97**	**209**	*e*P		**Pg**	**18 49 15.3**	**+1.5**
GO04	**Tololo Observa**	**2.48**	**219**	*e*P		**Pg**	**18 49 23.4**	**-0.2**
GO04				*i* S		**Sg**	**18 49 56.9**	**+1.1**
AC01	**Pan de Azucar**	**2.54**	**325**	*e*P		**Pn**	**18 49 19.4**	**+1.3**
AC01				*i* S		**Sn**	**18 49 50.3**	**+0.7**
AC01				IAML			18 49 53.0	
	comp=N,679nm,0.1s							
CO05	**La Serena**	**2.58**	**229**	*e*P		**Pb**	**18 49 23.8**	**+1.0**
CO05				*i* S		**Sg**	**18 49 58.4**	**-0.4**
CO05				IAML			18 50 05.5	
	comp=N,739nm,0.5s							
CO03	**El Pedregal**	**2.97**	**209**	*e*P		**Pb**	**18 49 30.9**	**+1.2**
CO03				IAML			18 50 15.8	
	comp=N,162nm,0.5s							
GO02	**Mina Guanaco**	**3.13**	**350**	↑*e*P		**Pb**	**18 49 30.5**	**-1.9**
GO02				*i* S		**Sb**	**18 50 09.8**	**-1.2**
GO02				IAML			18 50 16.1	
	comp=E,590nm,0.5s							
CO06	**Fray Jorge**	**3.34**	**223**	*e*P		**Pb**	**18 49 33.7**	**-2.2**
CO06				IAML			18 50 27.3	
	comp=E,121nm,0.6s							
CO02	**Combarbal**	**3.42**	**210**	*e*P		**Pb**	**18 49 36.0**	**-1.3**
PB14	**IPOC Station P**	**3.83**	**340**	*e*P		**Pn**	**18 49 39.2**	**+3.1**
LVC	**Limon Verde**	**5.62**	**1**	Pn		**Pn**	**18 50 00.1**	**-0.7**
	comp=E,1.2nm,0.3s,baz=185,slow=7.8,SNR=3.1							
LVC				Pg		**Pb**	**18 50 16.1**	**+1.2**
	comp=E,5.3nm,0.3s,baz=182,slow=12,SNR=13							
LVC				Lg		Lg

of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTJ3	Kamata3	0.16	302	*i* P	Pg	19 08 04.5	+0.1
AJI	Ajiro2	0.23	329	*e*S	Sg	19 08 09.1	+0.4
JIZS	Izushimoda	0.32	246	P	Pg	19 08 07.5	+0.2

*IDC **01** 19:08:10.5±1.2, 35°.25N×137°.57E, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=30.8km s-min=18.7km az=97.0*
*JMA **01** 19:08:13.0±0.1, 36°.3N±0°.3×140°.0E±0°.4, h73km, MV3.4/36, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF .

ISC 01 19:08:11.9±1.0, 36°.30N±0°.05×140°.04E±0°.07, h100km, n16, σ2s19/23, mb3.5/6, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.14	120	*i* P	Pn	19 08 23.8	-2.0
JYT				S	Sn	19 08 31.9	-4.4
JAG	Ashikaga	0.49	285	⇓*i* P	Pn	19 08 25.8	-1.8
JAG				⇓S	Sn	19 08 35.2	-4.2
JKT	Katashina	0.79	306	⇓*i* P	Pn	19 08 29.1	-1.2
JKT				⇓S	Sn	19 08 41.3	-2.8
JRY	Ryogami san	0.97	253	⇓*i* P	Pn	19 08 31.2	-0.8
JRY				⇓S	Sn	19 08 44.5	-2.6
JFY	Yanaizu	1.14	346	P	Pn	19 08 33.2	-0.7
JUON	Uonuma	1.21	319	⇓*i* P	Pn	19 08 34.0	-0.7
JUON				⇓S	Sn	19 08 50.0	-1.8
JOTO	OTAMA OYAMA	1.28	10	*i* P	Pn	19 08 35.3	-0.2
JOTO				S	Sn	19 08 52.5	-0.9
JOD2	Odawara 2	1.29	217	⇓*i* P	Pn	19 08 35.2	-0.4
JOD2				⇓S	Sn	19 08 51.4	-2.3
JYN	Shimob	1.46	237	*i* P	Pn	19 08 37.9	+0.2
MJAR	Matsushiro Arr	1.50	280	Pn	Pn	19 08 36.6	-1.6
	3.4nm,0.3s,baz=170,slow=1.2,SNR=207						
MJAR				Sn	Sn	19 08 58.5	+0.4
	1.8nm,0.3s,baz=139,slow=13,SNR=3.8						
SONM	Songino Array	27.30	306	P	P	19 13 46.2	-0.8
	0.2nm,0.5s,baz=96,slow=5.8,SNR=2.0						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	41.60	313	P	P	19 15 55.3	+5.5
	0.3nm,0.4s,baz=89,slow=7.4,SNR=2.0						
	0.3nm,0.4s						
MKAR	Makanchi Array	43.58	303	P	P	19 16 08.1	+2.2
	0.5nm,0.8s,baz=89,slow=7.4,SNR=4.8						
	0.5nm,0.8s						
KURBB	Kurchatov Arra	45.59	308	P	P	19 16 23.9	+2.1
	0.4nm,0.5s,baz=77,slow=7.2,SNR=7.0						
	0.4nm,0.5s						
WRA	Warramunga Arr	56.20	186	P	P	19 17 42.8	+1.3
	0.2nm,0.3s,baz=0.9,slow=7.5,SNR=6.3						
	0.2nm,0.3s						
ASAR	Alice Springs	59.92	187	P	P	19 18 10.7	+3.2
	0.5nm,1.0s,baz=19,slow=11,SNR=2.1						
	0.5nm,1.0s						

*NOU **01** 19:23:25.2, 15°.66S×168°.67E, h183km, mb4.8/29, Vanuatu Islands*
*NEIC **01** 19:23:27.8±1.1, 15°.80S±0°.09×168°.0E±0°.1, h153km±9km, mb4.6/33, Error ellipse: s-maj=19.8km s-min=13.6km az=81.0*
*IDC **01** 19:23:28.1±3.1, 15°.90S×167°.95E, h158km±24km, mb4.1/8, mbtmp4.7/10, MS3.7/2, Error ellipse: s-maj=32.6km s-min=19.3km az=90.0*

ISC 01 19:23:30.0±0.7, 15°.89S±0°.07×167°.9E±0°.1, h177km, n83, σ1s40/86, mb4.5/28, 2C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	Koumac, New Ca	5.79	216		Pn	19 24 51.8	-2.3
KOUNC	Koumac, New Ca	5.79	216	P	Pn	19 24 56.3	+2.1
YATNC	Mamie plateau,	6.21	189	P	Pn	19 24 59.8	0.0
DZM	Mont Dzumac	6.31	193		Pn	19 24 59.5	-1.6
DZM				Sn	Sn	19 26 12.7	-0.1
DZM	Mont Dzumac	6.31	193	P	Pn	19 25 00.7	-0.4
DZM	Mont Dzumac	6.31	193	P	Pn	19 24 59.0	-2.1
	30nm,0.3s,baz=50,slow=18,SNR=62						
DZM				S	Sn	19 26 10.1	-2.8
	25nm,0.7s,baz=308,slow=22,SNR=1.0						
NOUC	Port Laguerre	6.37	194	P	Pn	19 25 01.7	-0.1
ONTNC	Ouen Toro	6.53	192		Pn	19 25 02.7	-1.3
ONTNC	Ouen Toro	6.53	192	P	Pn	19 25 06.2	+2.3
OUENC	Ouen Island, N	6.57	189		Pn	19 25 03.6	-0.9
OUENC	Ouen Island, N	6.57	189	P	Pn	19 25 05.6	+1.1
PINNC	Pines Island,	6.70	184		Pn	19 25 04.7	-1.5
PINNC	Pines Island,	6.70	184	P	Pn	19 25 05.8	-0.3
HNR	Honiara	10.10	309	Pn	Pn	19 25 48.5	-2.5
HNR	Honiara	10.10	309	P	Pn	19 25 49.4	-1.5
	1μm,0.7s,baz=153,slow=4.7,SNR=4.2						
HNR				LR	LR	19 28 55.2	
	comp=Z,452nm,20.1s,baz=189,slow=32						
EIDS	Eidsvold	18.36	236		P	19 27 33.2	+1.8
EIDS				IAmb	IAmb	19 27 34.4	
	comp=Z,22nm,0.7s						
EIDS	Eidsvold	18.36	236	P	Pn	19 27 34.2	+0.6
RAO	Raoul Island	18.61	138	P	P	19 27 24.9	-9.1
TV1H	Townsville Har	20.43	257	P	P	19 27 55.4	+1.7
ARMA	Armidale	20.79	223	P	P	19 27 57.8	+0.2
ARMA				IAmb	IAmb	19 28 15.0	
	comp=Z,23nm,1.4s						
CTA	Charters Tower	21.04	255	P	P	19 28 02.7	+2.5
CTA	Charters Tower	21.04	255	P	P	19 28 00.6	+0.4
	comp=Z,22nm,0.7s,baz=83,slow=11,SNR=42						
	comp=Z,22nm,0.7s						
CTAO	Charters Tower	21.04	255	P	P	19 28 00.9	+0.7
CTAO				IAmb	IAmb	19 28 03.7	
	comp=Z,22nm,0.7s						
CTAO	Charters Tower	21.04	255	P	P	19 28 02.6	+2.4
MTSU	Mount Surprise	22.70	261	P	P	19 28 18.3	+1.5
COEN	Coen	24.00	271	P	P	19 28 28.6	-0.1
COEN				IAmb	IAmb	19 28 31.2	
	comp=Z,20nm,0.8s						
COEN	Coen	24.00	271	P	P	19 28 29.8	+1.1
BKZ	Black Stump Fm	24.37	164	P	P	19 28 33.2	+1.4
BKZ				IAmb	IAmb	19 28 33.5	
	comp=Z,32nm,1.4s						
QLP	Quilpie	24.48	240	P	P	19 28 34.6	+1.7
CMSA	Cobar Meteorol	25.56	229	P	P	19 28 43.6	+1.0
LTZ	Lake Taylor	27.05	173	P	P	19 28 56.2	+0.3
INKA	Innaminka	27.80	240	P	P	19 29 03.9	+1.3
STKA	Stephens Creek	28.76	232	P	P	19 29 12.4	+1.3
STKA	Stephens Creek	28.76	232	P	P	19 29 13.1	+2.0
STKA	Stephens Creek	28.76	232	P	P	19 29 11.9	+0.8
	comp=Z,15nm,0.6s,baz=52,slow=8.0,SNR=27						
STKA				PcP	PcP	19 32 17.1	+0.3
	comp=Z,2.4nm,1.0s,baz=114,slow=10.0,SNR=3.4						
	comp=Z,15nm,0.6s						
PYZ	Puysegur Point	30.20	182	P	P	19 29 23.9	+0.2
LCRK	Leigh Creek	30.81	237	P	P	19 29 30.1	+0.8
WR0	Warramunga Arr	32.00	258	P	P	19 29 38.4	-1.4
WR0				IAmb	IAmb	19 29 45.7	
	comp=Z,9.2nm,1.2s						
OOD	Oodnadatta	32.09	243	P	P	19 29 42.0	+1.5
WB0	Warramunga Arr	32.14	258	P	P	19 29 39.8	-1.3
WB0				IAmb	IAmb	19 29 40.6	
	comp=Z,10nm,0.8s						
WB2	Warramunga Arr	32.18	258	P	P	19 29 40.1	-1.3
WB2				IAmb	IAmb	19 29 40.7	
	comp=Z,7.8nm,0.9s						
WRAB	Tennant Creek	32.18	258	P	P	19 29 38.3	-3.1
WRAB				IAmb	IAmb	19 30 06.0	
	comp=Z,5.9nm,0.9s						
WRA	Warramunga Arr	32.19	258	P	P	19 29 39.9	-1.6
WRA	Warramunga Arr	32.19	258	P	P	19 29 39.9	-1.6
	comp=Z,3.4nm,0.5s,baz=80,slow=6.0,SNR=42						
WRA				PcP	PcP	19 32 25.9	-0.2
	comp=Z,0.6nm,0.6s,baz=85,slow=3.3,SNR=5.4						
	comp=Z,3.4nm,0.5s						
AS01	Alice Springs	32.84	251	P	P	19 29 47.2	0.0
AS31	Alice Springs	32.88	251	P	P	19 29 46.7	-0.8
ASAR	Alice Springs	32.89	251	P	P	19 29 47.1	-0.4
	comp=Z,20nm,0.6s,baz=79,slow=8.9,SNR=328						
ASAR				PcP	PcP	19 32 27.6	-0.4
	comp=Z,1.0nm,0.8s,baz=100,slow=3.2,SNR=4.5						
	comp=Z,20nm,0.6s						
BBOO	Buckleboo	33.40	234	P	P	19 29 52.5	+0.7
BBOO	Buckleboo	33.40	234	P	P	19 29 52.5	+0.7
MULG	Mulgathing	34.15	239	P	P	19 29 58.9	+0.6
FAKI	Fak Fak	37.41	286	P	P	19 30 25.2	-1.1
FAKI				IAmb	IAmb	19 30 26.7	
	comp=Z,14nm,0.8s						
KNRA	Kununurra	37.66	265	P	P	19 30 27.6	-0.7
FITZ	Fitzroy Crossi	40.45	261	P	P	19 30 51.3	-0.2
FITZ				IAmb	IAmb	19 30 52.3	
	comp=Z,6.8nm,0.7s						
SOEI	Soe	42.96	273	P	P	19 31 11.7	-0.3
PSA00	Pilbara Seismi	45.76	255	P	P	19 31 33.7	-0.3
PSA00	Pilbara Seismi	45.76	255	P	P	19 31 34.7	+0.6
PSA00				IAmb	IAmb	19 31 46.6	
	comp=Z,27nm,1.2s						
NWAO	Narrogin (SRO)	48.72	240	P	P	19 31 56.8	0.0
NWAO	Narrogin (SRO)	48.72	240	P	P	19 31 56.8	0.0
MORW	Morawa	49.36	245	P	P	19 32 01.8	+0.1
MORW				IAmb	IAmb	19 32 05.2	
	comp=Z,12nm,1.1s						
VNDA	Vanda	61.72	182	LR	LR	19 55 30.3	
	comp=Z,64nm,21.0s,baz=28,slow=31						
KSRS	Korea Array	65.06	326	P	P	19 33 51.6	+0.1
	comp=Z,1.8nm,1.0s,baz=129,slow=12,SNR=3.2						
	comp=Z,1.8nm,1.0s						
NJ2	Nanjing	66.96	316	*e*P	P	19 34 05.1	+1.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	Ussuriysk Ar.	68.21	333	P	P	19 34 12.0	+0.7
	comp=Z,1.8nm,0.8s,baz=104,slow=8.0,SNR=4.7						
	comp=Z,1.8nm,0.8s						
CN2	Changchun	70.97	329	P	P	19 34 28.2	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LYN	LuoYang	72.75	315	⇑P	P	19 34 39.6	+0.6
LYN				pmax	pmax		
	comp=Z,17nm,0.7s						
LYN				pmax	pmax		
	comp=Z,170nm,7.6s						
HNS	HongShan	72.90	318	⇑P	P	19 34 40.7	+0.9
HNS				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI	Kunming	75.47	302	⇓P	P	19 34 56.3	+1.1
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	76.01	294	P	P	19 34 58.2	0.0
CMAR	Chiang Mai Arr	76.01	294	P	P	19 34 59.1	+1.0
	comp=Z,2.6nm,0.8s,baz=131,slow=4.6,SNR=20						
	comp=Z,2.6nm,0.8s						
CHTO	Chiang Mai	76.15	294	P	P	19 34 58.2	-0.7
PZH	PanZhiHua	76.87	303	P	P	19 35 05.3	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PZH				pmax	pmax		
	comp=Z,130nm,4.7s						
HHC	Hu-ho-hao-te	76.89	320	*e*P	P	19 35 03.4	+0.6
HHC				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC				pmax	pmax		
	comp=Z,76nm,5.0s						
ULN	Ulaanbaatar	83.45	324	P	P	19 35 37.6	-0.1
SONM	Songino Array	83.81	323	P	P	19 35 39.8	+0.2
SONM	Songino Array	83.81	323	P	P	19 35 39.3	-0.3
	comp=Z,2.2nm,1.0s,baz=135,slow=5.2,SNR=11						
	comp=Z,2.2nm,1.0s						
GTA	Gaotai	83.94	314	*e*P	P	19 35 40.8	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHL	Shillong	84.69	298	P	P	19 35 44.4	-0.2
SHL				IAmb	IAmb	19 35 45.4	
	comp=Z,11nm,0.7s						
BELA	Belgrano 2	85.52	175	P	P	19 35 47.2	-0.4
BELA				IAmb	IAmb	19 35 48.6	
	comp=Z,7.1nm,1.1s						
ELIB	Princess Elisa	89.19	190	*d*P	P	19 36 05.7	+0.3
L34A	Svendsen Farm,	104.62	50	Pdif	Pdif	19 37 09.4	-6.1
BMRD	Marendous	143.08	342	*d*PKPdf	PKPdf	19 42 41.1	-1.6
WLF	Walferdange	143.21	340	*d*PKP	PKPdf	19 42 43.5	+0.6
TORD	Torodi Ar. Bea	166.41	260	PKPab	PKPab	19 44 17.1	-0.6
	comp=Z,0.9nm,0.7s,baz=80,slow=4.2,SNR=4.6						

*NEIC **01** 19:51:15.7±1.8, 56°.06N±0°.08×149°.30W±0°.08, h10km±2km, ML3.4/36, ML3.0(AEIC), Error ellipse: s-maj=14.4km s-min=7.3km az=185.0*
*IDC **01** 19:51:16.1±2.9, 56°.16N×149°.15W, h0km, mb3.2/1, mbtmp3.1/5, ML3.1/4, Error ellipse: s-maj=43.4km s-min=28.5km az=4.0*
*AEIC **01** 19:51:20.4±1.9, 56°.06N±0°.09×149°.3W±0°.1, h10km±7km, Error ellipse: s-maj=13.2km s-min=9.4km az=172.0*

ISC 01 19:51:17.2±1.4, 56°.2N±0°.1×149°.27W±0°.06, h10km, n97, σ1s32/101, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.38	312	Pn	Pn	19 51 55.8	-0.4
KDAK	Kodiak Island	2.38	312		Sn	19 52 24.6	-0.9
KDAK	Kodiak Island	2.38	312	Pn	Pn	19 51 56.1	-0.2
	1.9nm,0.3s,baz=131,slow=6.2,SNR=39						
KDAK				Sn	Sn	19 52 23.4	-2.0
	2.9nm,0.3s,baz=225,slow=7.1,SNR=2.2						
	5.4nm,0.3s						
OHAK	Old Harbor	2.42	296	Pn	Pn	19 51 56.5	-0.3
OHAK	Old Harbor	2.42	296		Sn	19 52 24.1	-2.3
SYI	Shuyak Island	2.92	326	Pn	Pn	19 52 03.3	-0.3
SYI				IAML		19 53 54.7	
	comp=N,50nm,1.1s						
SYI				IAML		19 53 59.7	
	comp=E,78nm,1.3s						
SYI	Shuyak Island	2.92	326		Sn	19 52 39.0	+0.4
R18K	Karluk	3.14	297		Sn	19 52 42.6	-1.5
CNPM	China Poot	3.46	343	Pn	Pn	19 52 11.3	+0.2
CNPM	China Poot	3.46	343		Sn	19 52 52.7	+0.6
Q19K	Cape Douglas,	3.58	321	Pn	Pn	19 52 14.4	+1.6
Q19K				IAML		19 54 19.6	
	comp=N,140nm,1.2s						
BRSE	Bradley Lake S	3.60	348		Pn	19 52 13.4	+0.4
BRSE					Sn	19 52 55.4	-0.1
BRLK	Bradley Lake	3.64	347	Pn	Pn	19 52 13.6	0.0
BRLK				IAML		19 53 01.4	
	comp=N,27nm,1.5s						
BRLK				IAML		19 54 10.9	
	comp=E,30nm,1.0s						
KAHG	Katmai Hook Gl	3.64	311		Pn	19 52 14.7	+1.1
KAHG					Sn	19 52 55.7	-1.0
ANCK	Angle Creek	3.91	303		Pn	19 52 18.6	+1.2
P19K	Oil Pt	4.02	330	Pn	Pn	19 52 18.9	+0.1
P19K				IAML		19 53 13.3	
	comp=E,55nm,0.7s						
P19K				IAML		19 54 25.0	
	comp=N,67nm,1.1s						
CNTC	Contact Creek	4.12	302		Pn	19 52 20.7	+0.4
O22K	Cooper Landing	4.26	357	Pn	Pn	19 52 22.4	+0.4
O22K				IAML		19 54 48.6	
	comp=E,94nm,1.0s						
IVE	Iliamna Volcan	4.28	334		Pn	19 52 23.2	+0.8
SLKM	Skilak Lake	4.31	354		Pn	19 52 23.4	+0.6
HIN	Hinchinbrook I	4.42	18	Pn	Pn	19 52 25.4	+1.1
HIN				IAML		19 53 38.2	
	comp=E,57nm,1.4s						
HIN				IAML		19 54 44.5	
	comp=N,50nm,1.2s						
P18K	Big Mountain,	4.49	317	Pn	Pn	19 52 25.5	+0.2
KAIM	Kayak Island	4.51	33	Pn	Pn	19 52 26.2	+0.8
RSO	Redoubt South	4.62	338	Pn	Pn	19 52 26.7	-0.5
O18K	Koktuh Hills	4.80	321	Pn	Pn	19 52 29.8	+0.3
O18K				IAML		19 53 25.9	
	comp=N,17nm,1.4s						
RAGM	Ragged Mountai	4.81	28	Pn	Pn	19 52 30.8	+1.0
RC01	Rabbit Creek A	4.87	357	Pn	Pn	19 52 31.7	+1.2
RC01				IAML		19 54 37.1	
	comp=N,18nm,1.0s						
RC01				IAML		19 54 39.0	
	comp=E,16nm,0.9s						
HMT	Hamilton	4.89	31	Pn	Pn	19 52 33.1	+2.5
NICHA	Nichawak Mount	4.89	33		Pn	19 52 31.9	+1.2
GOAT	Goat Mountain	4.97	27		Pn	19 52 33.2	+1.3
BERG	Berg Lake	5.10	33	Pn	Pn	19 52 34.6	+1.1
BERG				IAML		19 54 39.2	
	comp=N,54nm,0.8s						
CHGN	Chignik	5.10	274	Pn	Pn	19 52 31.3	-2.2
CHGN				IAML		19 53 30.6	
	comp=N,46nm,0.4s						
CHGN				IAML		19 53 40.6	
	comp=E,44nm,0.1s						
KNK	Knik Glacier	5.21	4	Pn	Pn	19 52 36.5	+1.4
KNK				IAML		19 54 46.3	
	comp=E,12nm,1.3s						
KNK				IAML		19 54 59.9	
	comp=N,11nm,1.3s						
SUA	Susitna One	5.30	352	Pn	Pn	19 52 37.1	+0.7
N19K	Bonanza Creek	5.34	331	Pn	Pn	19 52 36.8	-0.1
MESA	MESA	5.53	41	Pn	Pn	19 52 38.8	-0.9
KLU	Klutina	5.55	17	Pn	Pn	19 52 41.3	+1.5
CRQM	Cirque	5.55	33	Pn	Pn	19 52 40.8	+0.8
SML	Sawmill	5.61	5	Pn	Pn	19 52 41.3	+0.7
N18K	Kilae Creek	5.65	325	Pn	Pn	19 52 41.4	+0.3
ISLE	Juniper Island	5.69	37	Pn	Pn	19 52 43.4	+1.5
SCM	Sheep Creek Mo	5.70	9	Pn	Pn	19 52 43.8	+1.9
O16K	Kokwok River B	5.78	309	Pn	Pn	19 52 43.3	+0.9
VRDI	Verde Repeater	5.85	29	Pn	Pn	19 52 46.0	+1.9
SKT	Skwentna	5.88	350	Pn	Pn	19 52 43.5	-0.7
SVW2	Sparrevohn	5.88	329	Pn	Pn	19 52 44.1	-0.1
N25K	Chitina, Valde	5.90	22	Pn	Pn	19 52 45.9	+1.3
GLB	Gilahina Butte	5.94	26	Pn	Pn	19 52 46.3	+1.2
N17K	Nushagak Hills	5.98	319	Pn	Pn	19 52 45.2	-0.5
GRNC	Granite Creek	5.99	38	Pn	Pn	19 52 46.3	+0.4
M20K	Styx River	6.00	342	Pn	Pn	19 52 46.8	+0.8
TABL	Table Mountain	6.00	42	Pn	Pn	19 52 46.9	+0.6
MCARA	McCarthy VSAT	6.09	30	Pn	Pn	19 52 49.8	+2.5
M24K	Tolsona, Glenn	6.10	14	Pn	Pn	19 52 45.9	-1.5
BARN	Barnard Glacie	6.25	36	Pn	Pn	19 52 49.2	-0.5
CTGM	Chitina Glacie	6.30	38	Pn	Pn	19 52 50.4	+0.2
LOGN	Logan Glacier	6.31	40	Pn	Pn	19 52 51.2	+0.8
SDPT	Sand Point	6.38	267	Pn	Pn	19 52 50.3	-0.9
M17K	Holitna River	6.69	324	Pn	Pn	19 52 55.6	+0.2
DHY	Denali Highway	6.92	7	Pn	Pn	19 52 59.6	+0.8
N15K	Kwethluk River	6.94	309	Pn	Pn	19 53 00.3	+1.4
O29M	Mount Kennedy	6.96	50	Pn	Pn	19 52 59.6	+0.4
M16K	Timber Creek	6.96	317	Pn	Pn	19 53 00.3	+1.1
P29M	Windy Craggy	7.02	56	Pn	Pn	19 53 00.3	+0.4
O14K	Tigyukauivet M	7.09	300	Pn	Pn	19 53 02.1	+1.2
RND	Reindeer	7.19	2	Pn	Pn	19 53 04.4	+2.0
M27K	Edge Creek, AK	7.21	29	Pn	Pn	19 53 05.2	+2.6
TRF	Thorofare Moun	7.25	356	Pn	Pn	19 53 03.7	+0.4
S31K	Pelican	7.31	71	Pn	Pn	19 53 02.1	-1.8
CAST	Castle Rocks	7.34	350	Pn	Pn	19 53 05.6	+1.2
TTA	Tatalina	7.53	336	Pn	Pn	19 53 07.2	+0.2
L16K	Owhat River	7.60	320	Pn	Pn	19 53 06.4	-1.5
K17K	Iditarod	7.95	328	Pn	Pn	19 53 12.2	-0.5
S32K	Killisnoo	8.15	75	Pn	Pn	19 53 15.0	-0.4
O30N	Mendenhall	8.26	51	Pn	Pn	19 53 14.9	-2.0
M29M	Somme Creek	8.31	37	Pn	Pn	19 53 19.0	+1.3
J20K	Nowinta River	8.32	345	Pn	Pn	19 53 17.1	-0.7
CCB	Clear Creek Bu	8.47	4	Pn	Pn	19 53 20.2	+0.5
J25K	Salcha River,	8.62	11	Pn	Pn	19 53 23.3	+1.4
L14K	Kuka Creek	8.63	312	Pn	Pn	19 53 23.0	+1.1
IL31		8.64	7	Pn	Pn	19 53 23.6	+1.5
ILAR	Eielson Array	8.64	7	Pn	Pn	19 53 19.4	-2.7
	comp=N,0.1nm,0.3s,baz=186,slow=13,SNR=2.2						
ILAR				Sn	Sn	19 54 55.4	-4.2
	comp=N,0.1nm,0.3s,baz=187,slow=14,SNR=4.2						
	comp=N,0.5nm,1.0s						
N31M	Braeburn, Yuko	8.74	47	Pn	Pn	19 53 20.6	-2.9
WHY	Whitehorse	8.74	54	Pn	Pn	19 53 19.7	-4.0
L29M	L29M	8.89	35	Pn	Pn	19 53 25.5	-0.1
P32M	Atlin	8.93	62	Pn	Pn	19 53 25.1	-1.1
U32K	Whale Pass	9.01	84	Pn	Pn	19 53 25.4	-1.8
J16K	Anvik River	9.07	326	Pn	Pn	19 53 28.4	+0.4
P33M	Teslin, Yukon	9.54	59	Pn	Pn	19 53 34.5	-0.1
H21K	Melozitna Rive	9.60	351	Pn	Pn	19 53 36.7	+1.4
IMAR	Indian Mountai	10.01	349	Pn	Pn	19 53 42.0	+1.1
G23K	Bananza Creek	10.52	358	Pn	Pn	19 53 48.2	+0.4
DLBC	Dease Lake	10.63	70	Pn	Pn	19 53 48.3	-1.1
DLBC	Dease Lake	10.63	70	Pn	Pn	19 53 49.0	-0.4
	comp=N,0.2nm,0.3s,baz=257,slow=12,SNR=3.7						
	comp=N,3.1nm,0.7s						
MMPY	Sheldon Lake,	11.15	48	Pn	Pn	19 53 57.9	+1.3
YKA	Yellowknife Ar	18.56	56	P	Pn	19 55 34.6	+0.6
	comp=N,0.1nm,0.3s,baz=267,slow=12,SNR=1.6						
	comp=N,0.2nm,0.8s						
MKAR	Makanchi Array	68.63	325	P	P	20 02 21.4	+1.3
	comp=N,0.1nm,0.5s,baz=38,slow=6.4,SNR=1.9						
	comp=N,0.1nm,0.5s						

IDC 01 19:52:49.8±26.0, 41°.68S×88°.37E, h0km, mb3.8/3, mbtmp3.8/3, MS3.2/1, Error ellipse: s-maj=878.4km s-min=52.2km az=20.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	21.28	80	T	T	20 19 28.8	
	baz=243,slow=74,SNR=43						
H01W3	Cape Leeuwin H	21.29	80	T	T	20 19 28.9	
	baz=243,slow=74,SNR=50						
H01W1	Cape Leeuwin H	21.30	80	T	T	20 19 30.1	
	baz=243,slow=74,SNR=50						
H04S1	CROZET ISLANDS	26.45	246	T	T	20 26 16.7	
	baz=92,slow=76,SNR=27						
H04S2	CROZET ISLANDS	26.46	246	T	T	20 26 17.4	
	baz=92,slow=76,SNR=39						
H04S3	CROZET ISLANDS	26.47	246	T	T	20 26 15.2	
	baz=92,slow=76,SNR=35						
H04N2	CROZET ISLANDS	26.56	248	T	T	20 26 31.3	
	baz=93,slow=75,SNR=657						
H04N3	CROZET ISLANDS	26.57	248	T	T	20 26 27.4	
	baz=93,slow=75,SNR=538						
H04N1	CROZET ISLANDS	26.58	248	T	T	20 26 28.6	
	baz=93,slow=75,SNR=409						
H08S2	Diego Garcia H	36.71	333	T	T	20 38 52.9	
	baz=160,slow=76,SNR=41						
H08S1	Diego Carcia H

IBDR eSg **Sg** **20 15 41.0 +2.7**
IBDR AML AML 20 15 55.9
comp=E,480nm,0.5s
IBDR AML AML 20 15 57.7
comp=Z,252nm,0.5s
BHD Baghdad 1.59 213 eP**g** **Pg** **20 15 22.0 +3.0**
BHD eSg **Sg** **20 15 45.0 +5.4**
IBZA Bozab 2.01 93 Pn **Pb** **20 15 25.0 -0.3**
MAHB Mahabad 2.17 6 Pn **Pb** **20 15 27.5 -0.3**
IALM Almabolaq 2.27 83 Pn **Pb** **20 15 28.5 -1.2**
IKFM Kafar-mosalman 2.28 118 Pn **Pb** **20 15 29.1 -0.5**
HSAM Samen 2.66 98 Pn **Pn** **20 15 33.7 +2.1**
RAFI Al-Rafai 2.93 168 ePn **Pb** **20 15 40.0 -0.8**
RAFI eSn **Sb** **20 16 14.0 -2.7**
RAFI AML AML 20 16 23.4
comp=N,106nm,0.3s
CUKT Cukurca 3.02 331 e**P** **Pb** **20 15 40.7 -1.7**
HAGD Aghdareh 3.07 85 Pn **Pn** **20 15 40.0 +2.8**
IHSH Hashtrud 3.08 28 Pn **Pn** **20 15 39.9 +2.5**
IAZR Azarshahr 3.10 8 Pn **Pn** **20 15 40.2 +2.6**
ISRB Sarab 3.69 29 Pn **Pn** **20 15 48.3 +2.6**
IMRD Marand 4.11 3 Pn **Pn** **20 15 54.7 +3.3**
AKDM Akdamar-Van 4.21 333 e**P** Pn 20 15 57.8 +5.0
VANB Van 4.30 338 e**P** **Pb** **20 16 00.9 -3.3**
GRMI Germi 4.64 25 Pn **Pn** **20 16 01.4 +2.8**
IQOM Qom 4.65 86 Pn **Pn** **20 16 00.9 +1.9**
GAS1 Astara - Iran 4.67 35 Pn **Pn** **20 16 02.2 +3.3**
MAKU Maku 4.78 353 Pn **Pn** **20 16 03.9 +3.3**
GURO Guroymak-BITLI 4.79 326 e**P** **Pn** **20 16 03.8 +3.0**
GURO Guroymak-BITLI 4.79 326 **Pn** **20 15 59.9 -0.9**
SVAN Silvan-Diyarba 4.91 317 e**P** **Pn** **20 16 05.0 +2.6**
MAZI Mazidag 4.94 307 e**P** Pn 20 16 07.9 +5.1
KLST Kelardasht - M 4.97 66 Pn **Pn** **20 16 06.3 +2.8**
JHBN Jahan bin 4.98 117 Pn **Pn** **20 16 05.5 +2.0**
IVRN Varamin 5.20 84 Pn **Pn** **20 16 08.1 +1.8**
IKLH Kolahrood 5.27 102 Pn **Pn** **20 16 10.0 +2.5**
AGRB Hanur-Agry 5.33 339 e**P** Pb 20 16 15.6 -6.1
DYBB Diyarbakir 5.42 310 e**P** **Pn** **20 16 12.9 +3.5**
TASB TASBURUN-IGDIR 5.45 350 e**P** **Pb** **20 16 23.1 -0.6**
IDMV Damavand 5.50 78 Pn **Pn** **20 16 12.8 +2.1**
VRTB Varto-Mus 5.55 326 e**P** **Pn** **20 16 14.4 +3.2**
GNI Garni 5.56 355 **Pn** **20 16 09.8 -1.5**
GNI Garni 5.56 355 Pn **Pn** **20 16 15.4 +4.0**
comp=N,0.3nm,0.3s,baz=197,slow=19,SNR=1.5
GNI Lg Lg 20 17 46.3
baz=347,slow=17
comp=N,2.9nm,0.8s
IBRJ Brojen 5.58 117 Pn **Pn** **20 16 14.6 +2.8**
ISFB Sefidab 5.63 91 Pn **Pn** **20 16 13.7 +1.4**
BNGB Bingl 5.80 320 e**P** **Pn** **20 16 17.4 +2.8**
IGAR Gharneh 5.95 110 Pn **Pn** **20 16 18.5 +1.7**
IZEF Zefreh 6.00 105 Pn **Pn** **20 16 19.6 +2.1**
IFIR Firoozkooh 6.09 78 Pn **Pn** **20 16 21.2 +2.4**
KLNJ Kolanjah 6.31 123 Pn **Pn** **20 16 23.9 +2.1**
SENK Senkaya-Erzuru 6.43 339 e**P** Pn 20 16 29.7 +6.4
PTK Pertek 6.46 313 e**P** **Pn** **20 16 26.6 +2.8**
GAZ Gaziantep 7.14 293 e**P** Pb 20 16 43.5 -9.1
GAZ Gaziantep 7.14 293 Pn **Pn** **20 16 32.5 -0.5**
ARPR Arapgir-MALATY 7.24 310 e**P** **Pn** **20 16 38.9 +4.5**
ARPR Arapgir-MALATY 7.24 310 Pn **Pn** **20 16 36.1 +1.8**
DARE Darende-Malaty 7.51 304 e**P** Pn 20 16 43.4 +5.3
ASF Jabal al Asfar 7.54 254 Pn **Pn** **20 16 37.4 -1.0**
comp=N,0.2nm,0.3s,baz=243,slow=23,SNR=1.7
ASF Sn **Sn** **20 18 03.5 -0.5**
comp=N,0.9nm,0.3s,baz=62,slow=21,SNR=1.8
ASF Lg Lg 20 18 46.9
comp=N,1.3nm,0.3s,baz=355,slow=20,SNR=2.1
comp=N,0.7nm,0.4s
HSUJ Al Zarqa 8.12 255 P **Pg** **20 17 20.4 -3.4**
GEM Giv'at Ha'Em 8.23 263 P Pb 20 17 16.7 +5.6
SHMJ Saham 8.27 260 P Pb 20 17 19.2 +7.5
MMAI Mount Meron Ar 8.49 262 Pn **Pn** **20 16 52.3 +0.8**
baz=140,slow=52
MMAI Lg Lg 20 19 16.7
comp=N,2.0nm,0.3s,baz=255,slow=9.4,SNR=4.8
MMAI LR LR 20 21 00.9
comp=N,54nm,19.3s,baz=72,slow=44
QRNJ Al-Qirein 8.54 257 P Pg 20 17 26.4 -5.4
BALJ Balqa 8.56 256 Pn **Pn** **20 16 52.7 +0.2**
BALJ Balqa 8.56 256 P Pg 20 17 26.9 -5.5
HMDT Nahal Hemdat 8.60 257 P Pg 20 17 26.5 -6.6
GHAJ Ghor Haditha 8.91 251 P **Pg** **20 17 36.4 -2.7**
KARJ KARJ 8.93 250 P Pg 20 17 29.3 -10
KBZ Khabaz 9.32 349 Pn **Pn** **20 17 06.7 +4.0**
comp=N,1.2nm,0.8s,baz=88,slow=23,SNR=1.5
KBZ LR LR 20 20 27.4
comp=N,18nm,18.1s,baz=125,slow=36
EIL Elat 10.15 244 Pn **Pn** **20 17 14.7 +0.4**
comp=N,0.3nm,0.3s,baz=26,slow=13,SNR=1.7
EIL Lg Lg 20 20 09.6
comp=N,0.3nm,0.3s,baz=160,slow=16,SNR=1.7
EIL LR LR 20 21 55.5
comp=N,32nm,18.9s,baz=65,slow=42
comp=N,1.3nm,0.5s
BRTR Keskin Array B 10.70 302 Pn **Pn** **20 17 24.4 +2.5**
comp=N,0.1nm,0.3s,baz=139,slow=13,SNR=1.3
BRTR LR LR 20 22 16.5
comp=N,57nm,18.8s,baz=132,slow=42
GEYT Ailbeck 10.77 68 Pn **Pn** **20 17 24.2 +1.5**
comp=N,0.1nm,0.3s,baz=240,slow=23,SNR=2.0
comp=N,1.7nm,0.9s
RAYN Ar Rayn 11.04 180 Pn **Pn** **20 17 25.3 -1.3**
UOSS Minazif 13.42 133 Pn **Pn** **20 17 57.5 -1.4**
WSAR Wadi Sarin 16.16 131 Pn **Pn** **20 18 33.5 -2.3**
comp=N,0.8nm,0.3s,baz=296,slow=7.1,SNR=9.4
WSAR Sn **Sn** **20 21 27.1 -8.1**
comp=N,0.2nm,0.3s,baz=269,slow=12,SNR=1.0
comp=N,3.5nm,0.5s
ABKAR Akbulak array 18.14 32 P **Pn** **20 19 00.3 0.0**
ABKAR Akbulak array 18.14 32 **Pn** **20 19 00.3 0.0**
PLOR Plostina 18.16 314 ⇓P P 20 19 12.8 +12
AKTO Aktyubinsk 18.30 26 P **P** **20 19 02.8 +0.4**
comp=N,0.1nm,0.3s,baz=219,slow=8.2,SNR=9.6
comp=N,2.5nm,0.8s
MLR Muntele Rosu 18.41 312 ⇓P **Pn** **20 19 10.5 +6.8**
MLR Muntele Rosu 18.41 312 P **Pn** **20 19 04.2 +0.4**
comp=N,0.2nm,0.3s,baz=120,slow=16,SNR=2.7
comp=N,2.3nm,1.1s
COVR Voineasa-Covas 18.43 313 ⇓P Pn 20 19 14.5 +11
TESR Tescani 18.52 316 ⇑P Pn 20 19 13.4 +8.4
SORM Soroca 18.57 322 ⇑P **P** **20 19 05.1 -0.2**
TURR Turia 18.65 314 ⇓P **Pn** **20 19 10.4 +3.8**
VOIR 18.93 311 ⇓P **Pn** **20 19 11.9 +1.8**
DOPR Dopca 18.98 313 ⇑P **Pn** **20 19 11.2 +0.6**
ARR Arges 19.16 310 ⇑P **Pn** **20 19 16.3 +3.4**
LOT Lotru 19.75 310 ⇑P **Pn** **20 19 20.2 +0.3**
BLKB Belogradchik 19.77 304 ⇓P **P** **20 19 19.0 +0.4**
BURAR Bucovina Array 19.94 317 ⇑P **Pn** **20 19 22.7 +0.5**
BURAR Bucovina Array 19.94 317 **Pn** **20 19 22.6 +0.4**
AKASG Malin Array Be 19.95 329 P **P** **20 19 20.7 +0.3**
comp=N,0.8nm,0.5s,baz=139,slow=9.2,SNR=8.2
comp=N,0.8nm,0.5s
AKBB Malin Array Si 19.95 329 P **P** **20 19 19.6 -0.8**
KIEV Kiev 19.95 329 ⇑P **Pn** **20 19 21.9 -0.2**
KIEV Kiev 19.95 329 P **P** **20 19 19.6 -0.8**
BUR08 Bucovina Ar. S 19.97 317 P **P** **20 19 20.2 -0.6**
FNA Florina 19.98 295 P **P** **20 19 20.3 -0.6**
DJES Djerdap 20.24 307 ⇑P Pn 20 19 26.3 +0.6
DJES Djerdap 20.24 307 P Pn 20 19 25.1 -0.6
GZR Gura Zlata 20.36 309 ⇓P **P** **20 19 26.3 +1.3**
HERR Herculane 20.39 307 ⇑P Pn 20 19 27.0 -0.4
MARR Marisel-Cluj 20.70 312 ⇑P Pn 20 19 30.3 -0.8
DRGR 21.00 312 ⇑P **P** **20 19 34.1 +2.1**
KOLS Kolonicke sedl 22.31 317 e**P** **P** **20 19 49.2 +3.2**
MORH Mrgy, Hungar 23.34 308 ⇓P **P** **20 19 57.6 +0.8**
LANS Liptovska Anna 24.03 315 e**P** **P** **20 20 04.7 +1.3**
VYHS Vyhne 24.11 313 e**P** **P** **20 20 06.6 +2.4**
OJC Ojcow 24.35 318 P **P** **20 20 07.1 +0.7**
OJC IAmb IAmb 20 20 08.9
comp=Z,4.3nm,0.6s
SUW Suwalki 24.91 328 P **P** **20 20 11.9 +0.5**
RONA Rosalia, Austr 25.37 310 e**P** **P** **20 20 17.1 +1.4**
comp=Z,1.5nm,0.4s
MORC Moravsky Berou 25.43 315 P **P** **20 20 16.6 +0.4**
BVAR Borovoye Array 25.54 36 P **P** **20 20 17.4 +0.3**
comp=Z,1.1nm,0.5s,baz=245,slow=6.9,SNR=9.9
comp=Z,1.1nm,0.5s
PABE Paberze 25.62 331 P **P** **20 20 18.5 +0.7**
CONA Conrad Observa 25.72 310 epP pP 20 20 24.9 +2.9
comp=Z,1.1nm,0.4s
OBKA Obir 26.13 306 epP pP 20 20 29.4 +3.7
comp=Z,2.7nm,0.7s
MOTA Moosalm 28.63 307 e**P** **P** **20 20 45.7 +0.6**
comp=Z,1.3nm,0.5s
KURBB Kurchatov Arra 28.84 46 P **P** **20 20 47.8 +1.0**
comp=Z,1.1nm,0.9s,baz=254,slow=8.9,SNR=7.1
KURBB PcP **PcP** **20 23 56.2 +0.1**
comp=Z,0.2nm,0.6s,baz=245,slow=1.9,SNR=1.9
comp=Z,1.1nm,0.9s
DAVA Damuels 29.42 306 e**P** **P** **20 20 52.3 +0.1**
comp=Z,1.7nm,0.4s
FINES FINESS Array B 29.57 341 P **P** **20 20 53.1 0.0**
comp=Z,1.4nm,0.4s,baz=146,slow=10,SNR=27
comp=Z,1.4nm,0.4s
MK31 Makanchi Array 30.21 55 P **P** **20 20 58.3 -0.8**
MKAR Makanchi Array 30.21 55 P **P** **20 20 59.0 0.0**
MKAR Makanchi Array 30.21 55 P **P** **20 20 59.8 +0.8**
comp=Z,1.8nm,0.9s,baz=252,slow=8.1,SNR=16
comp=Z,1.8nm,0.9s
BNI Bardonecchia 31.26 301 P **P** **20 21 09.7 +1.3**
BNI IAmb IAmb 20 21 10.2
comp=Z,6.3nm,0.8s
HFS Hagfors 32.80 331 P **P** **20 21 21.8 +0.2**
comp=Z,8.9nm,0.4s,baz=127,slow=9.4,SNR=68
ZALV Zalesovo Beam 33.61 43 P **P** **20 21 28.5 -0.2**
comp=Z,0.6nm,0.5s,baz=240,slow=12,SNR=3.8
comp=Z,0.6nm,0.5s
NB2 NORSAR Subarra 34.32 331 P **P** **20 21 34.5 -0.5**
comp=Z,0.7nm,0.5s,baz=124,slow=9.3
NOA NORSAR Array B 34.32 331 P **P** **20 21 34.4 -0.5**
comp=Z,0.9nm,0.6s,baz=125,slow=8.6,SNR=5.0
comp=Z,0.9nm,0.6s
ARCES ARCESS Array B 36.68 348 P **P** **20 21 54.8 -0.2**
comp=Z,0.7nm,0.4s,baz=153,slow=8.2,SNR=16
comp=Z,0.7nm,0.4s
EKA Eskdalemuir Ar 39.13 317 P **P** **20 22 16.1 +0.3**
comp=Z,1.2nm,0.6s,baz=98,slow=9.0,SNR=3.5
comp=Z,1.2nm,0.6s
TORD Torodi Ar. Bea 44.90 253 P **P** **20 23 01.9 -1.5**
comp=Z,0.5nm,0.4s,baz=40,slow=9.4,SNR=3.4
comp=Z,0.5nm,0.4s
SPITS Spitsbergen Ar 45.42 352 P **P** **20 23 06.0 -0.8**
comp=Z,1.3nm,0.5s,baz=138,slow=11,SNR=7.1
comp=Z,1.3nm,0.5s
CMAR Chiang Mai Arr 49.95 94 P **P** **20 23 41.6 -1.1**
comp=Z,1.2nm,0.7s,baz=294,slow=8.7,SNR=11
comp=Z,1.2nm,0.7s
TIXI Tiksi 55.52 22 P **P** **20 24 22.8 -0.4**
TIXI IAmb IAmb 20 24 24.1
comp=Z,2.8nm,0.6s
FRB Frobisher Bay 69.06 334 LR LR 20 55 02.7
comp=Z,17nm,18.2s,baz=251,slow=35
MJAR Matsushiro Arr 72.37 58 LR LR 20 59 13.7
comp=Z,46nm,19.2s,baz=204,slow=37
B20K Meade River 74.40 8 P **P** **20 26 27.0 +1.0**
C16K Lisburne Hills 74.88 11 P **P** **20 26 28.0 -0.8**
C19K Lookout Ridge 74.96 9 P **P** **20 26 28.3 -1.1**
C19K IAmb IAmb 20 27 03.7
comp=Z,4.3nm,1.5s
C18K Utukok River 75.17 10 P **P** **20 26 30.9 +0.3**
C18K IAmb IAmb 20 26 32.1
comp=Z,3.2nm,0.6s
D19K Kuna River 75.72 9 P **P** **20 26 33.1 -0.7**
D19K IAmb IAmb 20 27 03.7
comp=Z,5.4nm,1.3s
D22K Ayikyak River 75.95 7 P **P** **20 26 35.9 +0.9**
D22K IAmb IAmb 20 26 46.7
comp=Z,4.4nm,1.4s
D25K Kavik River 76.01 4 P **P** **20 26 34.2 -1.2**
D25K IAmb IAmb 20 26 47.1
comp=Z,2.4nm,0.9s
C36M Paulatuk 76.06 356 P **P** **20 26 34.7 -0.9**
E18K Tukpahlearik C 76.39 10 P **P** **20 26 37.9 +0.3**
E18K IAmb IAmb 20 26 38.9
comp=Z,2.6nm,0.7s
E22K Anaktuvuk Pass 76.76 7 P **P** **20 26 40.1 +0.5**
E22K IAmb IAmb 20 26 41.1
comp=Z,7.4nm,1.5s
E19K Redstone River 76.81 9 P **P** **20 26 40.4 +0.5**
E19K IAmb IAmb 20 26 41.3
comp=Z,2.5nm,0.6s
E28M Babbage River 77.03 2 P **P** **20 26 40.8 -0.4**
F17K Baldwin Pennin 77.21 11 P **P** **20 26 42.5 +0.3**
F17K IAmb IAmb 20 27 10.8
comp=Z,7.4nm,1.4s
E25K Arctic Village 77.25 4 P **P** **20 26 41.6 -0.8**
E29M Blow River 77.29 1 P **P** **20 26 43.1 +0.6**
F20K Avaraart Lake 77.39 8 P **P** **20 26 43.9 +0.7**
F20K IAmb IAmb 20 26 45.8
comp=Z,3.4nm,1.4s
F21K Alatna River 77.47 7 P **P** **20 26 44.7 +1.1**
F21K IAmb IAmb 20 27 06.3
comp=Z,5.1nm,1.4s
F24K Squaw Lake 77.69 5 P **P** **20 26 45.8 +0.9**
F24K IAmb IAmb 20 26 56.7
comp=Z,4.2nm,1.4s
G16K Koyuk River 78.00 12 P **P** **20 26 45.4 -1.2**
G16K IAmb IAmb 20 27 03.9
comp=Z,5.0nm,1.4s
F28M Old Crow 78.02 2 P **P** **20 26 46.1 -0.6**
G19K Purcell Mounta 78.08 9 P **P** **20 26 47.7 +0.7**
G18K Tagagawik 78.10 10 P **P** **20 26 46.5 -0.7**
G18K IAmb IAmb 20 27 12.1
comp=Z,4.6nm,1.4s
G21K Allakaket 78.15 8 P **P** **20 26 47.8 +0.3**
G21K IAmb IAmb 20 26 50.8
comp=Z,3.8nm,1.1s
IMAR Indian Mountai 78.64 8 P **P** **20 26 50.8 +0.7**
G30M tAoh Zraii Nji 78.72 1 P **P** **20 26 50.8 +0.1**
G31M Satah River 78.79 360 P **P** **20 26 50.5 -0.3**
H18K Honhosa River 78.84 10 P **P** **20 26 51.7 +0.4**
H18K IAmb IAmb 20 27 20.1
comp=Z,4.8nm,1.3s
H21K Melozitna Rive 79.06 8 P **P** **20 26 53.5 +1.0**
H21K IAmb IAmb 20 26 54.2
comp=Z,2.7nm,0.7s
I28M Miner Creek 80.18 2 P **P** **20 26 58.3 -0.4**
I28M IAmb IAmb 20 27 02.1
comp=Z,3.4nm,0.9s
J20K Nowinta River 80.34 9 P **P** **20 27 00.8 +1.4**
ILAR Eielson Array 80.48 5 P **P** **20 27 00.2 0.0**
comp=Z,0.7nm,0.9s,baz=332,slow=4.3,SNR=6.9
comp=Z,0.7nm,0.9s
I30M Mount Dempster 80.49 1 P **P** **20 27 00.5 +0.2**
I30M IAmb IAmb 20 27 02.0
comp=Z,6.5nm,1.1s
J30M Hart River 81.14 1 P **P** **20 27 04.0 +0.1**
J30M IAmb IAmb 20 27 06.1
comp=Z,3.9nm,1.0s
K29M Barlow Dome 81.85 1 P **P** **20 27 08.4 +0.7**
K29M IAmb IAmb 20 27 33.6
comp=Z,5.9nm,1.4s
YKA Yellowknife Ar 81.91 351 P **P** **20 27 07.7 -0.1**
comp=Z,1.1nm,0.8s,baz=16,slow=5.6,SNR=10
comp=Z,1.1nm,0.8s
SUA Susitna One 83.37 8 P **P** **20 27 15.6 +0.1**
KLU Klutina 83.80 5 P **P** **20 27 17.5 -0.2**

*SJA **01** 20:41:25.3±0.7,24.04S×66.87W,h222km±6km,ML3.6, MW3.6*
*IDC **01** 20:41:27.9±2.0,23.81S×66.78W,h198km±26km,mb3.6/2, mbtmp3.9/6,Error ellipse: s-maj=40.7km s-min=25.5km az=149.0*
*GUC **01** 20:41:28.3±0.6,24.03S×67.28W,h240km±8km,ML4.1*
ISC 01 20:41:27.0±0.8,**24.04S**±0.04×**66.93W**±0.05,**h209**km±8km, **n44,σ1s21/74,4C,Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.47**	**118**	e**P**	**Pn**	**20 42 00.8**	**-0.7**
FSA	**Cafayete**	**2.24**	**157**	e**P**	**Pn**	**20 42 08.1**	**-0.8**
YJA	**Yavi**	**2.27**	**35**	e**P**	**Pn**	**20 42 09.4**	**-0.1**
LVC	**Limon Verde**	**2.31**	**308**	e**P**	**Pn**	**20 42 09.9**	**0.0**
LVC				e**S**	**S**	**20 42 43.3**	**+0.6**
LVC				IAML		20 42 45.1	
	comp=Z,83nm,0.8s						
LVC	**Limon Verde**	**2.31**	**308**	P	**Pn**	**20 42 10.5**	**+0.6**
	comp=Z,25nm,0.2s,baz=167,slow=6.5,SNR=192						
LVC				S	**S**	**20 42 42.4**	**-0.3**
	comp=Z,60nm,0.4s,baz=271,slow=22,SNR=44						
LVC	**Limon Verde**	**2.31**	**308**	⇑P	**Pn**	**20 42 10.5**	**+0.6**
LVC				e**S**	**S**	**20 42 42.7**	**0.0**
LVC				IAML		20 42 44.7	
	comp=Z,971nm,0.7s						
PB15	**IPOC Station P**	**2.47**	**289**	e**P**	**Pn**	**20 42 12.0**	**+0.7**
PB15				e**S**	**S**	**20 42 45.8**	**+0.3**
PB15	**IPOC Station P**	**2.47**	**289**	⇑i**P**	**Pn**	**20 42 12.1**	**+0.7**
PB15				e**S**	**S**	**20 42 44.9**	**-0.6**
GO02	**Mina Guanaco**	**2.66**	**245**	e**P**	**Pn**	**20 42 14.0**	**+0.4**
GO02				e**S**	**S**	**20 42 49.9**	**+0.3**
GO02	**Mina Guanaco**	**2.66**	**245**	⇑i**P**	**Pn**	**20 42 13.9**	**+0.4**
GO02				e**S**	**S**	**20 42 49.4**	**-0.2**
GO02				IAML		20 42 50.5	
	comp=N,491nm,0.2s						
PB06	**IPOC Station P**	**2.76**	**298**	e**P**	**Pn**	**20 42 15.1**	**+0.4**
PB06				e**S**	**S**	**20 42 49.8**	**-1.5**
PB06				IAML		20 42 53.2	
	comp=Z,146nm,0.2s						
PB06	**IPOC Station P**	**2.76**	**298**	⇑i**P**	**Pn**	**20 42 15.3**	**+0.6**
PB06				e**S**	**S**	**20 42 50.2**	**-1.1**
PB06				IAML		20 42 53.6	
	comp=N,304nm,0.2s						
PB09	**IPOC Station P**	**3.08**	**316**	e**P**	**Pn**	**20 42 19.5**	**+1.1**
PB09				e**S**	**S**	**20 42 59.2**	**+1.1**
PB09				IAML		20 43 03.7	
	comp=Z,74nm,0.5s						
PB09	**IPOC Station P**	**3.08**	**316**	e**P**	**Pn**	**20 42 19.4**	**+1.1**
PB09				e**S**	**S**	**20 42 57.8**	**-0.2**
PB09				IAML		20 43 00.1	
	comp=E,75nm,0.2s						
AHML	**Horco Molle**	**3.09**	**152**	e**P**	**Pn**	**20 42 18.0**	**-0.2**
PB14	**IPOC Station P**	**3.22**	**259**	e**P**	**Pn**	**20 42 20.0**	**0.0**
PB14				e**S**	**S**	**20 42 59.8**	**-1.2**
PB14				IAML		20 43 02.6	
	comp=Z,60nm,0.2s						
PB14	**IPOC Station P**	**3.22**	**259**	e**P**	**Pn**	**20 42 20.0**	**0.0**
PB14				e**S**	**S**	**20 42 59.0**	**-2.0**
PB05	**IPOC Station P**	**3.23**	**291**	e**P**	**Pn**	**20 42 20.2**	**+0.3**
PB05				e**S**	**S**	**20 43 00.2**	**-0.7**
PB05				IAML		20 43 03.0	
	comp=Z,61nm,0.3s						
PB05	**IPOC Station P**	**3.23**	**291**	e**P**	**Pn**	**20 42 20.0**	**+0.1**
PB05				e**S**	**S**	**20 42 58.5**	**-2.4**
PB10	**IPOC Station P**	**3.36**	**278**	e**P**	**Pn**	**20 42 22.0**	**+0.6**
PB10				e**S**	**S**	**20 43 02.7**	**-0.8**
PB10				IAML		20 43 07.1	
	comp=Z,47nm,0.3s						
PB04	**IPOC Station P**	**3.41**	**299**	e**P**	**Pn**	**20 42 22.7**	**+0.5**
PB04				e**S**	**S**	**20 43 03.8**	**-1.2**
PB04				IAML		20 43 08.6	
	comp=Z,142nm,0.1s						
PB04	**IPOC Station P**	**3.41**	**299**	e**P**	**Pn**	**20 42 22.2**	**0.0**
PB04				e**S**	**S**	**20 43 03.2**	**-1.7**
PB07	**IPOC Station P**	**3.56**	**310**	e**P**	**Pn**	**20 42 23.6**	**-0.5**
PB07				e**S**	**S**	**20 43 06.4**	**-1.9**
PB07				IAML		20 43 11.1	
	comp=Z,166nm,0.2s						
PB07	**IPOC Station P**	**3.56**	**310**	e**P**	**Pn**	**20 42 24.3**	**+0.3**
PB07				e**S**	**S**	**20 43 06.4**	**-1.9**
PB01	**IPOC Station P**	**3.80**	**321**	e**P**	**Pn**	**20 42 26.9**	**0.0**
PB01				e**S**	**S**	**20 43 13.2**	**-0.2**
PB01				IAML		20 43 14.2	
	comp=Z,77nm,0.2s						
PB02	**IPOC Station P**	**3.85**	**314**	e**P**	**Pn**	**20 42 27.1**	**-0.4**
PB02				e**S**	**S**	**20 43 12.8**	**-1.6**
PB02				IAML		20 43 18.7	
	comp=Z,232nm,0.2s						
PB02	**IPOC Station P**	**3.85**	**314**	e**P**	**Pn**	**20 42 27.4**	**0.0**
PB02				e**S**	**S**	**20 43 11.8**	**-2.6**
AC01	**Pan de Azucar**	**3.93**	**237**	e**P**	**Pn**	**20 42 27.3**	**-1.0**
AC01				e**S**	**S**	**20 43 13.6**	**-2.4**
AC01				IAML		20 43 17.1	
	comp=Z,56nm,0.3s						
GUSE	**Guasayan**	**4.27**	**154**	e**P**	**Pn**	**20 42 34.2**	**+1.8**
PATCX	**Punta Patache**	**4.37**	**316**	e**P**	**Pn**	**20 42 33.7**	**-0.2**
PATCX				e**S**	**S**	**20 43 24.8**	**-1.4**
PATCX				IAML		20 43 34.9	
	comp=Z,64nm,0.5s						
PB08	**IPOC Station P**	**4.39**	**332**	e**P**	**Pn**	**20 42 35.3**	**+0.9**
PB08				e**S**	**S**	**20 43 27.4**	**+0.4**
PB08				IAML		20 43 30.2	
	comp=Z,46nm,0.3s						
CYA	**Choya**	**4.50**	**167**	e**P**	**Pn**	**20 42 36.0**	**+0.6**
CYA				IAML		20 44 15.7	
	comp=Z,8.3nm,4.4s						
TA01	**Diego Aracena**	**4.58**	**318**	e**P**	**Pn**	**20 42 36.1**	**-0.3**
TA01				e**S**	**S**	**20 43 28.3**	**-2.4**
GO03	**Copiap**	**4.62**	**219**	e**P**	**Pn**	**20 42 36.0**	**-0.9**
GO03				e**S**	**S**	**20 43 30.0**	**-1.8**
HMBC	**Humberstone**	**4.64**	**323**	e**P**	**Pn**	**20 42 35.9**	**-1.3**
HMBC				e**S**	**S**	**20 43 29.7**	**-2.5**
HMBC				IAML		20 43 34.2	
	comp=Z,82nm,0.5s						
GO01	**Chusmiza**	**4.83**	**334**	e**P**	**Pn**	**20 42 41.4**	**+1.4**
PB11	**IPOC Station P**	**4.95**	**329**	e**P**	**Pn**	**20 42 40.3**	**-1.0**
PB11				e**S**	**S**	**20 43 36.9**	**-2.6**
PB11				IAML		20 43 37.8	
	comp=Z,57nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.36**	**180**	e**P**	**Pn**	**20 42 45.9**	**-0.6**
ACLC				IAML		20 44 02.4	
	comp=Z,10nm,3.3s						
SIV	**San Ignacio**	**9.72**	**36**	P	**Pn**	**20 43 40.5**	**-2.2**
	comp=Z,1.0nm,0.3s,baz=230,slow=12,SNR=4.2						
PLCA	**Paso Flores**	**16.92**	**189**	P	**Pn**	**20 45 14.9**	**+3.0**
	comp=Z,0.8nm,0.4s,baz=23,slow=20,SNR=1.5						
BDFB	**Brasilia**	**19.64**	**68**	P	**P**	**20 45 40.4**	**+0.2**
	comp=Z,5.4nm,0.7s,baz=248,slow=14,SNR=7.5						
DBIC	**Dimbokro**	**67.76**	**71**	P	**P**	**20 52 02.4**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=225,slow=5.7,SNR=1.6						
	comp=Z,2.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.53**	**69**	P	**P**	**20 52 54.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=257,slow=5.5,SNR=5.8						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**146.52**	**40**	PKPbc	**PKPab**	**21 00 45.8**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=285,slow=2.4,SNR=4.4						

TAP 01 20:52:49.6,24.06N×121.61E,h8km,ML1.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.03**	**342**	e**P**	**Pg**	**20 52 52.1**	**+0.9**
TWD				*i* S	Sg	20 52 53.3	+1.0
HWA	**Hwalien**	**0.08**	**180**	*i* P	Pg	20 52 52.5	+0.8
	baz=174						
HWA				*i* S	Sg	20 52 54.5	+1.3
	baz=174						
ETL	**Fush Village**	**0.10**	**9**	*i* P	Pg	20 52 52.9	+0.7
	baz=9.0						
ETL				S	Sg	20 52 54.8	+0.8
	baz=9.0						
NACB	**Ninganchiao**	**0.12**	**355**	P	Pg	20 52 53.1	+0.7
	baz=355						
NACB				S	Sg	20 52 55.5	+1.2
	baz=355						
ETM	**Tongmen**	**0.14**	**229**	*i* P	Pg	20 52 53.5	+0.9
	baz=228						
ETM				e**S**	Sg	20 52 55.6	+0.9
	baz=228						
LXIB	**Xiulin Townshi**	**0.18**	**259**	e**P**	Pg	20 52 54.6	+1.2
	baz=259						
LXIB				S	Sg	20 52 57.3	+1.3
	baz=259						
ETLH	**Xiulin Townshi**	**0.19**	**323**	P	Pg	20 52 54.7	+1.1
	baz=323						
ETLH				S	Sg	20 52 57.9	+1.7
	baz=323						
SHUL	**Shoufeng**	**0.27**	**188**	*i* P	Pb	20 52 56.0	-0.7
	baz=188						
SHUL				S	Sb	20 53 00.6	-0.8
	baz=188						
CHGB	**Renai**	**0.39**	**271**	P	Pb	20 52 58.7	-0.3
	baz=270						
WUSB	**Renai**	**0.45**	**262**	*i* P	Pb	20 52 59.4	-0.5
	baz=261						
LATG	**Datong**	**0.48**	**351**	e**P**	Pb	20 53 00.3	-0.1
	baz=351						
NDT	**Datong Townshi**	**0.55**	**351**	e**P**	Pb	20 53 01.6	+0.1
	baz=351						

*IDC **01** 21:15:21.2±0.7,56.05N×149.98W,h0km,mb4.2/28, mbtmp4.2/33,ML4.1/5,MS

MW4.8/102,Moment Tensor Solution. s15,c19; s102,c148; Duration:0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.08; $M_{\theta\theta}$-0.68±.07; $M_{\phi\phi}$0.67±.07; $M_{r\theta}$0.61±.23; $M_{\theta\phi}$2.13±.07; $M_{r\phi}$-0.05±.22; Best double couple: M_o2.31700×10^{16} NP1:ϕ_s261.00000°,δ87.00000°, λ-15.00000°. NP2:ϕ_s352.00000°,δ75.00000°, λ-177.00000°. Principal axes: T 2.2780, Plg8.0000°, Azm307.0000°; N 0.0770, Plg75.0000°, Azm70.0000°; P -2.3550, Plg13.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 01 21:15:22.7±0.5,**56°09N**±0'.06×**150°05W**±0'.04,**h10**km, **n422,**σ**0°92/375,mb4.3**/54,**MS4.0**/79,**1C, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**2.12**	**304**			**Pn**	**21 15 56.6**	**-1.5**
OHAK						**Sn**	**21 16 22.0**	**-2.4**
OHAK	**Old Harbor**	**2.12**	**304**	P		**Pn**	**21 15 56.8**	**-1.3**
OHAK	**Old Harbor** baz=125	**2.12**	**304**	P		**Pn**	**21 15 56.6**	**-1.5**
OHAK	baz=125			S		**Sn**	**21 16 22.0**	**-2.4**
KDAK	**Kodiak Island**	**2.19**	**322**			**Sn**	**21 16 25.3**	**-1.0**
KDAK	**Kodiak Island**	**2.19**	**322**			**Pn**	**21 15 58.3**	**-0.8**
KDAK	**Kodiak Island** 91nm,0.3s,baz=149,slow=4.7,SNR=305	**2.19**	**322**	Pn		**Pn**	**21 15 58.5**	**-0.6**
KDAK	42nm,0.3s,baz=232,slow=23,SNR=12			Sn		**Sn**	**21 16 24.9**	**-1.3**
KDAK	comp=Z,6μm,20.0s,baz=179,slow=49 307nm,0.4s			LR		LR	21 17 10.8	
SII	**Sitkinak Islan**	**2.35**	**283**			**Pn**	**21 15 58.7**	**-2.7**
SII						**Sn**	**21 16 26.0**	**-4.2**
SII	comp=E,2μm,0.6s			IAML			21 16 35.8	
SII	comp=N,2μm,0.6s			IAML			21 16 36.3	
SII	**Sitkinak Islan**	**2.35**	**283**	P		**Pn**	**21 15 58.8**	**-2.6**
SII	**Sitkinak Islan** baz=104	**2.35**	**283**	P		**Pn**	**21 15 59.0**	**-2.3**
SII	baz=104			S		**Sn**	**21 16 28.8**	**-1.4**
Q20K	**Shuyak Island** baz=153	**2.82**	**334**	P		**Pn**	**21 16 07.8**	**-0.1**
Q20K	baz=153			S		**Sn**	**21 16 42.1**	**+0.2**
SYI	**Shuyak Island**	**2.82**	**334**	Pn		**Pn**	**21 16 06.9**	**-0.9**
SYI						**Sn**	**21 16 41.2**	**-0.6**
R18K	**Karluk**	**2.83**	**303**			**Pn**	**21 16 06.8**	**-1.2**
R18K	comp=N,973nm,0.5s			IAML			21 16 48.5	
R18K	comp=E,705nm,0.5s			IAML			21 16 53.7	
R18K	**Karluk** baz=122	**2.83**	**303**	P		**Pn**	**21 16 07.6**	**-0.4**
KAHG	**Katmai Hook Gl**	**3.43**	**316**			**Pn**	**21 16 17.2**	**+1.0**
Q19K	**Cape Douglas,**	**3.44**	**327**	Pn		**Pn**	**21 16 16.0**	**-0.4**
Q19K	**Cape Douglas,** baz=145	**3.44**	**327**	P		**Pn**	**21 16 16.9**	**+0.6**
Q19K	baz=145			S		**Sn**	**21 16 58.3**	**+1.1**
CNPM	**China Poot**	**3.50**	**350**			**Pn**	**21 16 16.4**	**-0.7**
CNPM				Sn		**Sn**	**21 16 57.8**	**-0.8**
CNPM	comp=E,512nm,0.6s			IAML			21 16 59.7	
HOM	**Homer**	**3.67**	**347**			**Pn**	**21 16 18.8**	**-0.7**
HOM	comp=E,1μm,1.0s			IAML			21 17 25.8	
BRSE	**Bradley Lake S**	**3.68**	**355**			**Pn**	**21 16 18.8**	**-0.8**
BRSE	**Bradley Lake S** baz=174	**3.68**	**355**	P		**Pn**	**21 16 18.8**	**-0.8**
BRSE	baz=174			S		**Sn**	**21 17 01.6**	**-1.4**
BRLK	**Bradley Lake**	**3.71**	**353**			**Pn**	**21 16 18.7**	**-1.3**
BRLK	comp=E,366nm,0.8s			IAML			21 17 07.7	
KAHC	**Katmai Hardscr** baz=133	**3.71**	**316**	P		**Pn**	**21 16 20.6**	**+0.4**
CNTC	**Contact Creek**	**3.85**	**307**			**Pn**	**21 16 21.9**	**-0.1**
CNTC						**Sn**	**21 17 05.6**	**-1.7**
Q17K	**Contact Creek** baz=124	**3.85**	**307**	P		**Pn**	**21 16 21.9**	**-0.1**
Q17K	baz=124			S		**Sn**	**21 17 05.6**	**-1.7**
Q23K	**Middleton Isla**	**3.89**	**29**	Pn		**Pn**	**21 16 21.6**	**-0.8**
Q23K	comp=N,268nm,1.5s			IAML			21 17 09.5	
Q23K	comp=E,305nm,1.1s			IAML			21 17 33.0	
Q23K	**Middleton Isla** baz=210	**3.89**	**29**	P		**Pn**	**21 16 22.0**	**-0.4**
MID	**Middleton Isla**	**3.89**	**29**	Pn		**Pn**	**21 16 21.3**	**-1.1**
MID	comp=N,320nm,1.3s			IAML			21 17 07.4	
P19K	**Oil Pt**	**3.95**	**336**			**Pn**	**21 16 22.5**	**-0.9**
P19K	comp=E,993nm,0.6s			IAML			21 17 14.8	
P19K	**Oil Pt** baz=154	**3.95**	**336**	P		**Pn**	**21 16 23.3**	**-0.1**
SEW	**Seward**	**4.03**	**4**	Pn		**Pn**	**21 16 23.5**	**-0.9**
P23K	**Montague Islan** baz=199	**4.16**	**19**	P		**Pn**	**21 16 25.8**	**-0.3**
O20K	**Slope Mountain** baz=160	**4.23**	**342**	P		**Pn**	**21 16 26.8**	**-0.4**
P18K	**Big Mountain,**	**4.32**	**322**	Pn		**Pn**	**21 16 27.5**	**-0.9**
P18K	**Big Mountain,** baz=139	**4.32**	**322**	P		**Pn**	**21 16 28.2**	**-0.2**
O22K	**Cooper Landing**	**4.40**	**2**	Pn		**Pn**	**21 16 28.7**	**-0.8**
Q16K	**King Salmon** baz=125	**4.41**	**309**	P		**Pn**	**21 16 29.7**	**+0.1**
RSO	**Redoubt South**	**4.61**	**343**			**Pn**	**21 16 32.5**	**0.0**
P17K	**Kvichak River** baz=131	**4.63**	**315**	P		**Pn**	**21 16 32.9**	**+0.3**
O18K	**Koktuh Hills**	**4.66**	**326**	Pn		**Pn**	**21 16 32.6**	**-0.5**
O18K	comp=E,212nm,0.9s			IAML			21 17 42.1	
O18K	comp=N,315nm,0.9s			IAML			21 17 43.5	
O18K	**Koktuh Hills** baz=143	**4.66**	**326**	P		**Pn**	**21 16 32.8**	**-0.3**
CHGN	**Chignik**	**4.68**	**276**			**Pn**	**21 16 32.2**	**-1.0**
CHGN	comp=N,222nm,0.6s			IAML			21 17 31.2	
CHGN	comp=E,184nm,0.6s			IAML			21 17 31.4	
O19K	**Port Alsworth**	**4.69**	**333**			**Pn**	**21 16 33.1**	**-0.3**
HIN	**Hinchinbrook I**	**4.70**	**22**	Pn		**Pn**	**21 16 33.0**	**-0.7**
HIN	comp=E,319nm,1.1s			IAML			21 17 30.1	
HIN	comp=N,374nm,0.8s			IAML			21 17 33.0	
CAPN	**Captain Cook N**	**4.72**	**353**			**Pn**	**21 16 33.8**	**-0.1**
KAIM	**Kayak Island**	**4.87**	**36**	Pn		**Pn**	**21 16 35.8**	**-0.1**
KAIM	comp=N,307nm,0.9s			IAML			21 17 37.4	
KAIM	comp=E,238nm,1.3s			IAML			21 17 58.1	
EYAK	**Cordova Ski Ar**	**5.01**	**25**	P		**Pn**	**21 16 37.8**	**0.0**
EYAK	**Cordova Ski Ar** baz=207	**5.01**	**25**	P		**Pn**	**21 16 37.7**	**-0.1**
RC01	**Rabbit Creek A**	**5.01**	**2**	Pn		**Pn**	**21 16 37.3**	**-0.6**
RC01	comp=N,161nm,0.6s			IAML			21 17 40.1	
RC01	comp=E,207nm,0.5s			IAML			21 17 44.3	
RAGM	**Ragged Mountai**	**5.16**	**31**			**Pn**	**21 16 39.8**	**-0.1**
RAGM	comp=E,322nm,1.0s			IAML			21 17 51.4	
P16K	**Nushagak River** baz=123	**5.19**	**308**	P		**Pn**	**21 16 40.2**	**-0.1**
N20K	**Mount Spurr** baz=167	**5.24**	**348**	P		**Pn**	**21 16 40.2**	**-0.9**
O17K	**Koliganek Bris** baz=133	**5.26**	**317**	P		**Pn**	**21 16 41.2**	**-0.1**
N19K	**Bonanza Creek**	**5.27**	**336**			**Pn**	**21 16 41.3**	**-0.3**
N19K	comp=N,107nm,1.2s			IAML			21 18 04.0	
N19K	comp=E,101nm,0.9s			IAML			21 18 04.2	
SUA	**Susitna One**	**5.40**	**356**	Pn		**Pn**	**21 16 42.7**	**-0.6**
SUA	**Susitna One** baz=176	**5.40**	**356**	P		**Pn**	**21 16 42.6**	**-0.7**
KNK	**Knik Glacier**	**5.40**	**8**			**Pn**	**21 16 43.0**	**-0.2**
KNK	**Knik Glacier** baz=189	**5.40**	**8**	P		**Pn**	**21 16 42.8**	**-0.4**
BERG	**Berg Lake**	**5.46**	**35**			**Pn**	**21 16 43.2**	**-0.8**
N18K	**Kilae Creek**	**5.53**	**329**	Pn		**Pn**	**21 16 43.8**	**-1.2**
PMR	**Palmer**	**5.54**	**5**	Pn		**Pn**	**21 16 45.1**	**0.0**
PMR	**Palmer**	**5.54**	**5**	P		**Pn**	**21 16 46.2**	**+1.2**
PMR	**Palmer** baz=185	**5.54**	**5**	P		**Pn**	**21 16 44.8**	**-0.2**
O16K	**Kokwok River B**	**5.55**	**313**	Pn		**Pn**	**21 16 44.3**	**-0.8**
O16K	**Kokwok River B** baz=127	**5.55**	**313**	P		**Pn**	**21 16 45.1**	**-0.1**
SNH	**Sunshine Point**	**5.60**	**40**			**Pn**	**21 16 45.6**	**-0.4**
BMRM	**Bremner River** baz=211	**5.66**	**28**	P		**Pn**	**21 16 46.7**	**-0.1**
GHO	**Glory Hole Cre**	**5.72**	**5**			**Pn**	**21 16 46.7**	**-1.0**
WAX	**Waxell Ridge**	**5.79**	**38**			**Pn**	**21 16 48.6**	**+0.1**
SVW2	**Sparrevohn**	**5.79**	**332**			**Pn**	**21 16 47.8**	**-0.8**
SVW2	**Sparrevohn** baz=127	**5.79**	**332**	P		**Pn**	**21 16 48.5**	**-0.1**
SML	**Sawmill**	**5.80**	**8**	Pn		**Pn**	**21 16 48.6**	**-0.1**
SML	**Sawmill** baz=189	**5.80**	**8**	P		**Pn**	**21 16 49.1**	**+0.3**
N17K	**Nushagak Hills**	**5.82**	**323**	Pn		**Pn**	**21 16 48.6**	**-0.4**
KLU	**Klutina**	**5.82**	**20**	Pn		**Pn**	**21 16 48.9**	**-0.2**
KLU	**Klutina** baz=202	**5.82**	**20**	P		**Pn**	**21 16 49.2**	**+0.1**
SCM	**Sheep Creek Mo**	**5.92**	**13**			**Pn**	**21 16 51.0**	**+0.5**
SCM	**Sheep Creek Mo** baz=194	**5.92**	**13**	P		**Pn**	**21 16 50.6**	**+0.1**
SDPT	**Sand Point**	**5.94**	**267**	Pn		**Pn**	**21 16 49.2**	**-1.5**
SDPT	**Sand Point** baz=81	**5.94**	**267**	P		**Pn**	**21 16 49.1**	**-1.5**
SKT	**Skwentna**	**5.95**	**353**	Pn		**Pn**	**21 16 51.1**	**+0.3**
SKT	**Skwentna** baz=172	**5.95**	**353**	P		**Pn**	**21 16 50.9**	**+0.1**
M20K	**Styx River**	**6.02**	**346**			**Pn**	**21 16 52.3**	**+0.5**
M20K	**Styx River** baz=163	**6.02**	**346**	P		**Pn**	**21 16 51.2**	**-0.6**
O15K	**Ungalikthiuk R** baz=118	**6.09**	**305**	P		**Pn**	**21 16 52.5**	**-0.2**
N25K	**Chitina, Valde**	**6.21**	**25**			**Pn**	**21 16 54.3**	**-0.1**
N25K	**Chitina, Valde** baz=208	**6.21**	**25**	P		**Pn**	**21 16 54.4**	**+0.1**
M19K	**Big River Lodg**	**6.24**	**341**			**Pn**	**21 16 53.9**	**-0.9**
M19K	**Big River Lodg** baz=157	**6.24**	**341**	P		**Pn**	**21 16 54.7**	**0.0**
GLB	**Gilahina Butte**	**6.26**	**29**	Pn		**Pn**	**21 16 55.0**	**-0.2**
CUT	**Chulitna**	**6.33**	**359**			**Pn**	**21 16 56.9**	**+0.9**
M24K	**Tolsona, Glenn**	**6.35**	**17**	Pn		**Pn**	**21 16 55.5**	**-0.8**
M24K	**Tolsona, Glenn** baz=199	**6.35**	**17**	P		**Pn**	**21 16 56.8**	**+0.5**
MCARA	**McCarthy VSAT**	**6.44**	**32**			**Pn**	**21 16 57.3**	**-0.2**
MCARA	**McCarthy VSAT** baz=216	**6.44**	**32**	P		**Pn**	**21 16 57.4**	**-0.1**
PINM	**Pinnacle** baz=235	**6.56**	**48**	P		**Pn**	**21 16 59.0**	**-0.1**
M17K	**Holitna River**	**6.56**	**327**			**Pn**	**21 16 58.7**	**-0.4**
L19K	**White Mountain**	**6.59**	**340**			**Pn**	**21 16 58.4**	**-1.1**
WAT6	**Susitna Watana** baz=191	**6.61**	**9**	P		**Pn**	**21 17 00.1**	**+0.1**
BARN	**Barnard Glacie**	**6.63**	**38**			**Pn**	**21 17 00.0**	**-0.3**
CTG	**Chitna Glacier** baz=225	**6.68**	**39**	P		**Pn**	**21 17 00.6**	**-0.3**
CTGM	**Chitina Glacier**	**6.68**	**39**			**Pn**	**21 17 00.5**	**-0.4**
L20K	**Farewell, AK** baz=161	**6.70**	**345**	P		**Pn**	**21 17 01.6**	**+0.6**
N15K	**Kwethluk River**	**6.70**	**312**	Pn		**Pn**	**21 17 01.2**	**+0.1**
LOGN	**Logan Glacier**	**6.71**	**41**			**Pn**	**21 17 00.6**	**-0.6**
PNL	**Peninsula**	**6.71**	**53**	P		**Pn**	**21 17 01.3**	**+0.1**
PNL	**Peninsula** baz=241	**6.71**	**53**	P		**Pn**	**21 17 00.6**	**-0.6**
BCPM	**Bancas Point**	**6.75**	**51**			**Pn**	**21 17 02.0**	**+0.3**
M16K	**Timber Creek**	**6.79**	**320**			**Pn**	**21 17 01.0**	**-1.3**
O14K	**Tigyukauivet M**	**6.80**	**302**	Pn		**Pn**	**21 17 00.9**	**-1.4**
O14K	**Tigyukauivet M** baz=114	**6.80**	**302**	P		**Pn**	**21 17 02.1**	**-0.2**
WAT1	**Susitna Watana** baz=186	**6.80**	**6**	P		**Pn**	**21 17 03.1**	**+0.7**
HARP	**HAARP** baz=203	**6.80**	**20**	P		**Pn**	**21 17 03.2**	**+0.8**
L18K	**Granite Mounta**	**7.03**	**334**			**Pn**	**21 17 05.6**	**+0.1**
DHY	**Denali Highway**	**7.13**	**10**			**Pn**	**21 17 06.7**	**-0.4**
DHY	**Denali Highway** baz=192	**7.13**	**10**	P		**Pn**	**21 17 08.0**	**+0.9**
PAX	**Paxson** baz=200	**7.28**	**17**	P		**Pn**	**21 17 09.5**	**+0.5**
M26K	**Nabesna, AK**	**7.28**	**27**			**Pn**	**21 17 09.2**	**+0.1**
RND	**Reindeer**	**7.36**	**4**			**Pn**	**21 17 10.0**	**-0.2**
TRF	**Thorofare Moun**	**7.38**	**359**	Pn		**Pn**	**21 17 11.0**	**+0.5**
TRF	**Thorofare Moun** baz=179	**7.38**	**359**	P		**Pn**	**21 17 10.7**	**+0.2**
CAST	**Castle Rocks**	**7.42**	**353**	Pn		**Pn**	**21 17 12.2**	**+1.3**
CAST	**Castle Rocks** baz=171	**7.42**	**353**	P		**Pn**	**21 17 11.1**	**+0.2**
L16K	**Owhat River**	**7.45**	**323**	Pn		**Pn**	**21 17 10.5**	**-0.8**
L16K	**Owhat River** baz=136	**7.45**	**323**	P		**Pn**	**21 17 11.3**	**+0.1**
P29M	**Windy Craggy**	**7.46**	**57**			**Pn**	**21 17 11.2**	**-0.3**
TTA	**Tatalina**	**7.49**	**339**			**Pn**	**21 17 11.6**	**-0.4**
TTA	**Tatalina**	**7.49**	**339**	P		**Pn**	**21 17 13.2**	**+1.2**
KTH	**Kantishna Hill**	**7.50**	**357**	Pn		**Pn**	**21 17 10.7**	**-1.3**
M27K	**Edge Creek, AK**	**7.55**	**30**			**Pn**	**21 17 12.9**	**+0.1**
K20K	**Telida**	**7.56**	**346**			**Pn**	**21 17 12.1**	**-0.8**
K20K	**Telida** baz=163	**7.56**	**346**	P		**Pn**	**21 17 12.7**	**-0.2**
MENT	**Mentasta**	**7.58**	**22**			**Pn**	**21 17 13.2**	**+0.1**
MENT	**Mentasta**	**7.58**	**22**	P		**Pn**	**21 17 14.3**	**+1.2**
MCK	**McKinley** baz=184	**7.68**	**4**	P		**Pn**	**21 17 15.4**	**+0.9**
L26K	**Log Cabin Wild**	**7.74**	**23**			**Pn**	**21 17 15.6**	**+0.4**
S31K	**Pelican**	**7.77**	**70**	Pn		**Pn**	**21 17 14.9**	**-0.7**
M14K	**Bethel**	**7.80**	**312**	Pn		**Pn**	**21 17 15.2**	**-0.8**
M14K	**Bethel** baz=122	**7.80**	**312**	P		**Pn**	**21 17 16.4**	**+0.4**
K17K	**Iditarod**	**7.86**	**331**	Pn		**Pn**	**21 17 16.7**	**-0.2**
K17K	**Iditarod** baz=144	**7.86**	**331**	P		**Pn**	**21 17 16.9**	**0.0**
BVCY	**Beaver Creek** baz=220	**7.89**	**33**	P		**Pn**	**21 17 17.2**	**-0.2**
K24K	**Donnelly Dome** baz=197	**8.02**	**14**	P		**Pn**	**21 17 20.3**	**+1.1**
RIDG	**Independent Ri**	**8.10**	**17**	Pn		**Pn**	**21 17 20.2**	**-0.1**
HYT	**Haines Junctio**	**8.10**	**49**	Pn		**Pn**	**21 17 21.6**	**+1.2**
J18K	**Innoko River**	**8.12**	**338**	Pn		**Pn**	**21 17 20.1**	**-0.4**
L27K	**Beaver Creek,**	**8.13**	**27**			**Pn**	**21 17 20.0**	**-0.7**
BCAR	**Beaver Creek A**	**8.15**	**28**	Pn		**Pn**	**21 17 21.1**	**+0.1**
M13K	**Dall Lake**	**8.24**	**307**	Pn		**Pn**	**21 17 21.5**	**-0.6**
J20K	**Nowinta River**	**8.36**	**348**	Pn		**Pn**	**21 17 24.1**	**+0.3**
J19K	**Poorman**	**8.40**	**343**			**Pn**	**21 17 24.5**	**+0.2**
L14K	**Kuka Creek**	**8.41**	**314**			**Pn**	**21 17 23.0**	**-1.5**
WRH	**Wood River Hil**	**8.46**	**6**	Pn		**Pn**	**21 17 24.1**	**-1.0**
SCRK	**Sand Creek**	**8.46**	**18**	Pn		**Pn**	**21 17 25.3**	**0.0**
SCRK	**Sand Creek** baz=203	**8.46**	**18**	P		**Pn**	**21 17 26.1**	**+0.8**
HDA	**Harding Lake**	**8.48**	**9**			**Pn**	**21 17 26.0**	**+0.6**
NEA2	**Nenana**	**8.54**	**3**	Pn		**Pn**	**21 17 26.0**	**-0.3**
K15K	**Wolf Creek Mou**	**8.55**	**321**	Pn		**Pn**	**21 17 25.9**	**-0.5**
K15K	**Wolf Creek Mou** baz=132	**8.55**	**321**	P		**Pn**	**21 17 27.3**	**+0.8**
SKAG	**Skagway**	**8.55**	**61**			**Pn**	**21 17 25.4**	**-1.0**
SKAG	**Skagway**	**8.55**	**61**	P		**Pn**	**21 17 26.3**	**-0.1**
N30M	**Aishikik Lake**	**8.61**	**46**			**Pn**	**21 17 26.9**	**-0.3**
CCB	**Clear Creek Bu**	**8.65**	**6**			**Pn**	**21 17 27.7**	**0.0**
O30N	**Mendenhall**	**8.69**	**52**			**Pn**	**21 17 28.2**	**-0.1**
O30N	**Mendenhall** baz=242	**8.69**	**52**	P		**Pn**	**21 17 27.7**	**-0.6**
M29M	**Somme Creek**	**8.69**	**38**			**Pn**	**21 17 28.7**	**+0.3**
R32K	**Eaglecrest**	**8.71**	**69**	Pn		**Pn**	**21 17 27.6**	**-1.1**
JIS	**Juneau Island**	**8.78**	**69**	Pn		**Pn**	**21 17 30.5**	**+1.0**
IL31		**8.84**	**9**	Pn		**Pn**	**21 17 31.1**	**+0.8**
ILAR	**Eielson Array**	**8.84**	**9**	Pn		**Pn**	**21 17 31.1**	**+0.7**
ILAR	**Eielson Array** comp=E,1.6nm,0.3s,baz=187,slow=13,SNR=72	**8.84**	**9**	Pn		**Pn**	**21 17 29.2**	**-1.3**
ILAR	comp=E,0.3nm,0.3s,baz=223,slow=53,SNR=1.3			Sn		**Sn**	**21 19 04.6**	**-5.4**
ILAR	comp=E,948nm,20.8s,baz=226,slow=39 comp=E,4.3nm,0.5s			LR		LR	21 21 10.1	
J25K	**Salcha River,**	**8.85**	**13**			**Pn**	**21 17 30.9**	**+0.3**
J25K	**Salcha River,** baz=197	**8.85**	**13**	P		**Pn**	**21 17 31.0**	**+0.3**
COLA	**College**	**8.88**	**6**			**Pn**	**21 17 30.4**	**-0.4**
COLA	**College**	**8.88**	**6**	P		**Pn**	**21 17 31.8**	**+1.0**
K27K	**Chicken**	**8.89**	**23**			**Pn**	**21 17 30.9**	**-0.1**
MDM	**Murphy Dome**	**8.94**	**5**			**Pn**	**21 17 31.4**	**-0.4**
J16K	**Anvik River**	**8.96**	**328**	Pn		**Pn**	**21 17 30.9**	**-1.1**
J16K	**Anvik River** baz=139	**8.96**	**328**	P		**Pn**	**21 17 32.8**	**+0.8**
MLY	**Manley**	**8.97**	**358**	Pn		**Pn**	**21 17 32.4**	**+0.2**
MLY	**Manley** baz=177	**8.97**	**358**	P		**Pn**	**21 17 33.1**	**+0.9**
I20K	**Naaghedeneel**	**9.00**	**348**	Pn		**Pn**	**21 17 32.1**	**-0.4**
J26L	**Joseph Creek**	**9.02**	**18**			**Pn**	**21 17 32.7**	**-0.2**
I23K	**Minto, Yukon-K**	**9.09**	**2**			**Pn**	**21 17 33.9**	**+0.2**
I23K	**Minto, Yukon-K** baz=182	**9.09**	**2**	P		**Pn**	**21 17 34.4**	**+0.7**
POKR	**Poker Plat Res**	**9.14**	**7**			**Pn**	**21 17 35.0**	**+0.5**
N31M	**Braeburn, Yuko**	**9.16**	**48**	Pn		**Pn**	**21 17 35.1**	**+0.3**
N31M	**Braeburn, Yuko** baz=239	**9.16**	**48**	P		**Pn**	**21 17 34.5**	**-0.2**
I21K	**Tanana**	**9.17**	**355**			**Pn**	**21 17 34.5**	**-0.3**
WHY	**Whitehorse**	**9.18**	**54**	Pn		**Pn**	**21 17 34.9**	**-0.3**
AKUT	**Akutan**	**9.22**	**264**	Pn		**Pn**	**21 17 34.4**	**-1.2**
L29M	**L29M**	**9.26**	**36**			**Pn**	**21 17 36.3**	**+0.1**
M30M	**Minto, Yukon**	**9.37**	**41**	Pn		**Pn**	**21 17 37.9**	**+0.2**
M30M	**Minto, Yukon** baz=231	**9.37**	**41**	P		**Pn**	**21 17 37.7**	**0.0**
P32M	**Atlin**	**9.38**	**61**	Pn		**Pn**	**21 17 37.0**	**-0.8**
P32M	**Atlin** baz=254	**9.38**	**61**	P		**Pn**	**21 17 36.0**	**-1.9**
I17K	**Unalakleet**	**9.45**	**330**	Pn		**Pn**	**21 17 38.2**	**-0.5**
I17K	**Unalakleet** baz=141	**9.45**	**330**	P		**Pn**	**21 17 38.9**	**+0.2**
J14K	**Nanvaranak Lak**	**9.57**	**320**			**Pn**	**21 17 40.1**	**-0.2**
DAWY	**Dawson**	**9.59**	**29**	Pn		**Pn**	**21 17 41.1**	**+0.5**
H21K	**Melozitna Rive**	**9.69**	**353**			**Pn**	**21 17 41.7**	**-0.3**
PRP	**Porcupine Dome**	**9.71**	**11**			**Pn**	**21 17 43.3**	**+0.9**
PRP	**Porcupine Dome** baz=195	**9.71**	**11**	P		**Pn**	**21 17 42.6**	**+0.2**
EGAK	**Eagle**	**9.74**	**23**			**Pn**	**21 17 43.1**	**+0.4**
I26K	**Coal Creek Min**	**9.83**	**17**			**Pn**	**21 17 45.0**	**+1.0**
H24K	**Noodor Dome**	**9.83**	**5**	Pn		**Pn**	**21 17 44.5**	**+0.5**
H18K	**Honhosa River**	**9.95**	**339**			**Pn**	**21 17 46.1**	**+0.5**
H19K	**Roundabout Mou**	**9.96**	**344**			**Pn**	**21 17 45.4**	**-0.3**
K29M	**Barlow Dome**	**9.97**	**34**	Pn		**Pn**	**21 17 45.6**	**-0.4**
P33M	**Teslin, Yukon**	**9.99**	**59**	Pn		**Pn**	**21 17 45.3**	**-0.8**
IMAR	**Indian Mountai**	**10.08**	**351**			**Pn**	**21 17 47.2**	**-0.2**
M31M	**Drury Creek, Y**	**10.09**	**46**	Pn		**Pn**	**21 17 47.1**	**-0.4**
H17K	**Granite Mounta**	**10.10**	**335**	Pn		**Pn**	**21 17 47.2**	**-0.4**
N32M	**Quiet Lake**	**10.18**	**53**			**Pn**	**21 17 49.4**	**+0.6**
J29N	**Klondike Camp**	**10.22**	**30**	Pn		**Pn**	**21 17 49.0**	**-0.2**
MAYO	**Mayo, Yukon**	**10.34**	**38**	Pn		**Pn**	**21 17 50.9**	**+0.1**
FARO	**Faro, Yukon**	**10.53**	**47**	Pn		**Pn**	**21 17 54.2**	**+0.7**
G21K	**Allakaket**	**10.59**	**352**			**Pn**	**21 17 55.1**	**+0.8**
I28M	**Miner Creek**	**10.59**	**24**	Pn		**Pn**	**21 17 55.6**	**+1.2**
G19K	**Purcell Mounta**	**10.63**	**344**	Pn		**Pn**	**21 17 55.4**	**+0.5**
G23K	**Bananza Creek**	**10.65**	**0**	Pn		**Pn**	**21 17 55.6**	**+0.4**
G18K	**Tagagawik**	**10.67**	**341**	Pn		**Pn**	**21 17 56.0**	**+0.6**
R33M	**Jennings River**	**10.71**	**64**			**Pn**	**21 17 55.5**	**-0.6**
G24K	**Hadweenzic Riv**	**10.71**	**6**			**Pn**	**21 17 56.8**	**+0.8**
FYU	**Fort Yukon**	**10.76**	**10**			**Pn**	**21 17 57.2**	**+0.7**
J30M	**Hart River**	**10.86**	**33**	Pn		**Pn**	**21 17 59.5**	**+1.4**
G16K	**Koyuk River**	**11.08**	**332**			**Pn**	**21 18 01.9**	**+1.0**
DLBC	**Dease Lake** comp=E,0.9nm,0.3s,baz=246,slow=5.6,SNR=6.0	**11.08**	**70**	Pn		**Pn**	**21 18 00.6**	**-0.5**
DLBC	comp=E,0.3nm,0.3s,baz=276,slow=25,SNR=1.4			Sn		**Sn**	**21 20 01.7**	**-3.4**
DLBC	comp=E,970nm,19.0s,baz=276,slow=34 comp=E,2.0nm,0.3s			LR		LR	21 21 33.2	
F21K	**Alatna River**	**11.28**	**353**	Pn		**Pn**	**21 18 03.9**	**+0.1**
F20K	**Avaraart Lake**	**11.31**	**349**	Pn		**Pn**	**21 18 04.0**	**-0.2**
I30M	**Mount Dempster**	**11.32**	**31**	Pn		**Pn**	**21 18 04.4**	**0.0**
ANM	**Nome**	**11.36**	**325**	Pn		**Pn**	**21 18 04.2**	**-0.6**
F19K	**Shaleruckik Mo**	**11.38**	**344**			**Pn**	**21 18 04.6**	**-0.4**
F24K	**Squaw Lake**	**11.51**	**4**	Pn		**Pn**	**21 18 08.2**	**+1.2**
MMPY	**Sheldon Lake,**	**11.57**	**48**			**Pn**	**21 18 08.4**	**+0.7**
H29M	**Whitestone**	**11.59**	**24**	Pn		**Pn**	**21 18 09.4**	**+1.4**
BMAR	**Burnt Mountain**	**11.66**	**10**	Pn		**Pn**	**21 18 09.4**	**+0.4**
F17K	**Baldwin Pennin**	**11.67**	**337**	Pn		**Pn**	**21 18 08.8**	**-0.3**
E19K	**Redstone River**	**11.89**	**346**			**Pn**	**21 18 12.4**	**+0.4**
F15K	**North Star Dit**	**11.94**	**330**			**Pn**	**21 18 11.7**	**-1.0**
EPYK	**Eagle Plains**	**12.11**	**26**			**Pn**	**21 18 15.8**	**+0.8**
E25K	**Arctic Village**	**12.25**	**8**	Pn		**Pn**	**21 18 17.2**	**+0.3**
E18K	**Tukpahlearik C**	**12.39**	**341**			**Pn**	**21 18 19.5**	**+0.6**
F28M	**Old Crow**	**12.49**	**18**	Pn		**Pn**	**21 18 20.9**	**+0.6**
E21K	**Killik River**	**12.52**	**353**	Pn		**Pn**	**21 18 19.

PINE	**Pine Mountain**	**22.22**	**111**	P	**P**	**21 20 20.0**	**+0.6**
G08A	**Pilot Rock**	**22.27**	**106**	P	**P**	**21 20 18.3**	**-1.5**
J05D	**Fort Rock, OR**	**22.42**	**113**	P	**P**	**21 20 21.7**	**+0.2**
K04D	**Chiloquin, OR**	**22.63**	**115**	P	**P**	**21 20 23.3**	**-0.4**
L04D	**Klamath Falls**	**22.64**	**116**	P	**P**	**21 20 23.7**	**-0.1**
F10A	**Beach Ranch, E**	**22.78**	**102**	P	**P**	**21 20 24.7**	**-0.5**
F10A				IAmb	IAmb	21 20 36.2	
	comp=Z,7.2nm,0.9s						
I07A	**Izee**	**22.78**	**109**	P	**P**	**21 20 23.9**	**-1.3**
YBH	**Yreka Blue Hor**	**22.80**	**118**	P	**P**	**21 20 26.0**	**+0.6**
YBH	**Yreka Blue Hor**	**22.80**	**118**	LR	LR	21 27 01.8	
	comp=Z,844nm,21.3s,baz=319,slow=31						
K05A	**Summer Lake**	**23.00**	**113**	P	**P**	**21 20 27.6**	**0.0**
K05A				IAmb	IAmb	21 20 29.8	
	comp=Z,15nm,1.2s						
BILL	**Bilibino**	**23.10**	**319**	P	**P**	**21 20 27.4**	**-0.8**
BILL				IAmb	IAmb	21 20 38.1	
	comp=Z,9.3nm,0.9s						
WVOR	**Wild Horse Val**	**24.38**	**111**	P	**P**	**21 20 40.8**	**-0.1**
WVOR				IAmb	IAmb	21 21 04.8	
	comp=Z,11nm,0.9s						
BPMT	**Black Pine Rid**	**24.58**	**98**	P	**P**	**21 20 40.8**	**-2.2**
HLJD	**Hailey**	**25.86**	**104**	P	**P**	**21 20 55.6**	**+1.1**
MPK	**Martis Peak**	**25.98**	**118**	P	**P**	**21 20 55.3**	**-0.3**
MPK				IAmb	IAmb	21 21 04.0	
	comp=Z,5.3nm,0.8s						
PAHR	**Pah Rah Range**	**25.99**	**116**	P	**P**	**21 20 55.1**	**-0.5**
KVN	**Kaiserville**	**27.14**	**115**	P	**P**	**21 21 04.5**	**-1.5**
KVN				IAmb	IAmb	21 21 09.7	
	comp=Z,8.1nm,1.3s						
ELK	**Elko**	**27.37**	**109**	P	**P**	**21 21 07.4**	**-0.7**
ELK	**Elko**	**27.37**	**109**	LR	LR	21 30 09.0	
	comp=Z,321nm,20.0s,baz=315,slow=32						
NVAR	**Mina Array Bea**	**27.51**	**117**	P	**P**	**21 21 09.1**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=313,slow=7.5,SNR=6.8						
	comp=Z,1.6nm,0.8s						
RES	**Resolute Bay**	**27.93**	**28**	LR	LR	21 32 53.3	
	comp=Z,489nm,19.0s,baz=292,slow=38						
R11B	**Troy Canyon, C**	**28.95**	**113**	P	**P**	**21 21 21.1**	**-1.1**
PDAR	**Pinedale Array**	**29.05**	**100**	P	**P**	**21 21 22.5**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=304,slow=5.4,SNR=3.7						
PDAR				LR	LR	21 32 09.2	
	comp=Z,175nm,18.3s,baz=318,slow=35						
	comp=Z,0.5nm,0.7s						
SEY	**Seymchan**	**29.08**	**307**	LR	LR	21 34 18.2	
	comp=Z,868nm,18.6s,baz=62,slow=39						
SPR3	**Spring Creek 3**	**29.12**	**111**	P	**P**	**21 21 23.8**	**0.0**
SPR3				IAmb	IAmb	21 21 26.0	
	comp=Z,7.7nm,1.3s						
WCT	**Wildcat Mounta**	**29.61**	**117**	P	**P**	**21 21 27.2**	**-0.7**
WCT				IAmb	IAmb	21 21 29.5	
	comp=Z,5.2nm,1.2s						
PETK	**Petropavlovsk-**	**29.82**	**287**	P	**P**	**21 21 30.4**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=69,slow=13,SNR=9.4						
PETK				LR	LR	21 34 38.6	
	comp=Z,163nm,19.0s,baz=81,slow=39						
	comp=Z,1.9nm,0.6s						
PRN	**Pahroc Range**	**29.94**	**114**	P	**P**	**21 21 30.4**	**-0.5**
PRN				IAmb	IAmb	21 21 34.8	
	comp=Z,8.0nm,1.1s						
GWY	**Greenwater Val**	**30.07**	**117**	P	**P**	**21 21 32.3**	**+0.2**
MVU	**Marysvale**	**30.60**	**109**	P	**P**	**21 21 36.9**	**0.0**
MSU	**Marysvale**	**30.61**	**109**	P	**P**	**21 21 35.7**	**-1.2**
O20A	**White River Ci**	**31.57**	**103**	P	**P**	**21 21 44.4**	**-0.9**
PFO	**Pinyon Flats O**	**32.23**	**120**	LR	LR	21 33 14.3	
	comp=Z,450nm,18.7s,baz=342,slow=33						
ULM	**Lac du Bonnet**	**32.26**	**77**	LR	LR	21 33 50.9	
	comp=Z,90nm,19.7s,baz=282,slow=34						
X16A	**Lo Mia Camp, P**	**34.10**	**113**	P	**P**	**21 22 07.5**	**-0.1**
X16A				IAmb	IAmb	21 22 16.8	
	comp=Z,2.9nm,0.9s						
113A	**Mohawk Valley,**	**34.23**	**118**	P	**P**	**21 22 07.3**	**-1.2**
113A				IAmb	IAmb	21 22 35.4	
	comp=Z,5.2nm,1.3s						
ANMO	**Albuquerque**	**36.32**	**107**	LR	LR	21 36 49.1	
	comp=Z,136nm,18.3s,baz=48,slow=36						
FRB	**Frobisher Bay**	**38.86**	**45**	LR	LR	21 38 58.2	
	comp=Z,778nm,19.4s,baz=317,slow=36						
YAK	**Yakutsk**	**39.19**	**313**	LR	LR	21 41 34.2	
	comp=Z,265nm,18.2s,baz=92,slow=40						
WMOK	**Wichita Mounta**	**40.66**	**100**	P	**P**	**21 23 02.8**	**-0.1**
WMOK				IAmb	IAmb	21 23 06.7	
	comp=Z,6.0nm,1.1s						
TX31	**Lajitas Ar. Si**	**42.16**	**110**	P	**P**	**21 23 14.6**	**-0.7**
TXAR	**Lajitas Array**	**42.16**	**110**	P	**P**	**21 23 15.6**	**+0.3**
TXAR	**Lajitas Array**	**42.16**	**110**	P	**P**	**21 23 15.4**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=309,slow=6.3,SNR=8.0						
TXAR				LR	LR	21 39 49.6	
	comp=Z,246nm,18.6s,baz=311,slow=35						
	comp=Z,1.4nm,0.9s						
LPIG	**La Paz**	**43.10**	**121**	LR	LR	21 38 44.2	
	comp=Z,218nm,19.6s,baz=8.0,slow=33						
ASAJ	**Asahikawa**	**43.12**	**283**	LR	LR	21 42 01.6	
	comp=Z,67nm,18.5s,baz=4.0,slow=37						
SUMG	**Summit**	**43.31**	**24**	P	**P**	**21 23 25.3**	**+0.7**
SUMG	**Summit**	**43.31**	**24**	*i* P	**P**	**21 23 25.0**	**+0.4**
JCT	**Junction City**	**43.33**	**105**	P	**P**	**21 23 23.7**	**-1.0**
JCT				IAmb	IAmb	21 23 28.7	
	comp=Z,7.9nm,1.0s						
SFJD	**Kangerlussuaq**	**43.49**	**34**	LR	LR	21 41 18.7	
	comp=Z,314nm,21.2s,baz=320,slow=36						
SCHQ	**Schefferville**	**44.45**	**55**	LR	LR	21 41 49.9	
	comp=Z,248nm,19.3s,baz=294,slow=36						
SADO	**Sadowa**	**44.61**	**73**	LR	LR	21 41 58.6	
	comp=Z,95nm,19.3s,baz=138,slow=36						
KLR	**Kul'dur**	**45.53**	**296**	LR	LR	21 44 33.8	
	comp=Z,160nm,19.2s,baz=52,slow=38						
SPITS	**Spitsbergen Ar**	**45.73**	**4**	LR	LR	21 42 30.1	
	comp=Z,172nm,20.1s,baz=319,slow=36						
WBO	**Williamsburg**	**46.52**	**71**	P	**P**	**21 23 49.2**	**-0.7**
NRIK	**Noril'sk**	**48.11**	**336**	P	**P**	**21 24 02.0**	**+0.1**
NRIK	**Noril'sk**	**48.11**	**336**	P	**P**	**21 24 03.9**	**+2.0**
	comp=Z,4.6nm,0.5s,baz=44,slow=9.0,SNR=6.5						
NRIK				LR	LR	21 46 58.4	
	comp=Z,292nm,19.9s,baz=42,slow=39						
	comp=Z,4.6nm,0.5s						
TKL	**Tuckaleechee C**	**48.37**	**86**	LR	LR	21 44 23.7	
	comp=Z,531nm,18.5s,baz=318,slow=36						
H11N2	**WAKE ISLAND Hy**	**48.42**	**239**	T	T	22 16 09.4	
	baz=31,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**48.42**	**239**	T	T	22 16 07.5	
	baz=31,slow=76,SNR=19						
H11N1	**WAKE ISLAND Hy**	**48.44**	**239**	T	T	22 16 10.8	
	baz=31,slow=76,SNR=17						
USRK	**Ussuriysk Ar.**	**48.74**	**291**	LR	LR	21 44 34.4	
	comp=Z,175nm,21.7s,baz=58,slow=36						
H11S1	**WAKE ISLAND Hy**	**49.56**	**239**	T	T	22 17 34.9	
	baz=30,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**49.57**	**239**	T	T	22 17 35.9	
	baz=30,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**49.58**	**239**	T	T	22 17 36.3	
	baz=30,slow=76,SNR=23						
BNX	**BinXian**	**50.05**	**295**	⇑P	**P**	**21 24 15.4**	**-1.8**
BNX				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BNX				pmax	pmax		
	comp=Z,130nm,3.8s						
JMIC	**Jan Mayen**	**50.31**	**15**	LR	LR	21 47 51.0	
	comp=Z,89nm,18.4s,baz=344,slow=39						
MJAR	**Matsushiro Arr**	**50.77**	**279**	LR	LR	21 44 29.5	
	comp=Z,46nm,21.4s,baz=62,slow=34						
CN2	**Changchun**	**52.40**	**295**	P	**P**	**21 24 35.9**	**+1.1**
CN2				pP	pwP	21 24 43.1	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
BORG	**Borgarnes**	**53.29**	**25**	LR	LR	21 48 31.6	
	comp=Z,230nm,19.3s,baz=157,slow=37						
ARCES	**ARCESS Array B**	**54.63**	**2**	P	**P**	**21 24 52.7**	**+1.9**
	comp=Z,4.7nm,0.9s,baz=359,slow=7.3,SNR=4.0						
ARCES				LR	LR	21 48 03.7	
	comp=Z,78nm,21.9s,baz=2.0,slow=36						
	comp=Z,4.7nm,0.9s						
KSRS	**Korea Array**	**55.71**	**287**	P	**P**	**21 25 00.5**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=46,slow=7.1,SNR=2.9						
KSRS				LR	LR	21 48 54.6	
	comp=Z,54nm,19.9s,baz=40,slow=36						
	comp=Z,1.3nm,0.9s						
CMIG	**Matias Romero**	**56.77**	**110**	LR	LR	21 48 19.0	
	comp=Z,161nm,19.9s,baz=342,slow=35						
TEIG	**Tepich**	**57.75**	**102**	LR	LR	21 51 54.4	
	comp=Z,606nm,18.9s,baz=155,slow=38						
ULN	**Ulaanbaatar**	**58.12**	**309**	P	**P**	**21 25 16.3**	**+0.1**
ULN				IAmb	IAmb	21 25 26.4	
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**58.43**	**310**	P	**P**	**21 25 19.1**	**+0.7**
SONM	**Songino Array**	**58.43**	**310**	P	**P**	**21 25 18.7**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=40,slow=6.8,SNR=23						
SONM				LR	LR	21 53 04.2	
	comp=Z,349nm,18.4s,baz=8.0,slow=39						
	comp=Z,3.1nm,0.7s						
APG	**El Apazote**	**60.84**	**107**	LR	LR	21 52 37.5	
	comp=Z,6.5nm,19.7s,baz=146,slow=37						
ZALV	**Zalesovo Beam**	**61.48**	**327**	P	**P**	**21 25 37.7**	**-1.3**
ZALV	**Zalesovo Beam**	**61.48**	**327**	P	**P**	**21 25 39.6**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=30,slow=6.7,SNR=14						
ZALV				LR	LR	21 53 32.9	
	comp=Z,82nm,18.7s,baz=24,slow=37						
	comp=Z,2.6nm,0.6s						
NB2	**NORSAR Subarra**	**62.28**	**10**	P	**P**	**21 25 44.6**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=348,slow=6.9						
NOA	**NORSAR Array B**	**62.28**	**10**	P	**P**	**21 25 44.5**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=349,slow=6.8,SNR=3.0						
NOA				LR	LR	21 53 32.9	
	comp=Z,53nm,20.6s,baz=355,slow=37						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**62.76**	**2**	P	**P**	**21 25 46.7**	**-0.7**
	comp=Z,5.9nm,1.0s,baz=2.9,slow=8.4,SNR=6.2						
FINES				LR	LR	21 56 11.8	
	comp=Z,70nm,18.1s,baz=21,slow=39						
	comp=Z,5.9nm,1.0s						
HFS	**Hagfors**	**63.40**	**9**	P	**P**	**21 25 51.0**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=46,slow=4.2,SNR=4.8						
HFS				LR	LR	21 55 19.6	
	comp=Z,78nm,18.1s,baz=339,slow=38						
	comp=Z,0.9nm,0.5s						
KIRV	**Kirov**	**64.61**	**349**	LR	LR	21 58 30.6	
	comp=Z,136nm,18.1s,baz=25,slow=40						
ARU	**Arti**	**65.46**	**343**	P	**P**	**21 26 05.4**	**+0.1**
ARU	**Arti**	**65.46**	**343**	P	**P**	**21 26 05.0**	**-0.2**
	comp=Z,9.0nm,0.5s,baz=31,slow=2.2,SNR=25						
ARU				LR	LR	21 58 00.5	
	comp=Z,126nm,18.9s,baz=10.0,slow=39						
	comp=Z,9.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**65.70**	**20**	P	**P**	**21 26 06.5**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=318,slow=4.1,SNR=2.0						
	comp=Z,1.1nm,0.6s						
BVAR	**Borovoye Array**	**66.27**	**335**	P	**P**	**21 26 10.6**	**0.0**
	comp=Z,1.8nm,0.7s,baz=30,slow=6.5,SNR=14						
BVAR				LR	LR	22 01 47.0	
	comp=Z,177nm,18.2s,baz=23,slow=42						
	comp=Z,1.8nm,0.7s						
KURBB	**Kurchatov Arra**	**66.28**	**329**	P	**P**	**21 26 10.8**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=29,slow=6.5,SNR=6.1						
KURBB				LR	LR	21 59 44.8	
	comp=Z,221nm,18.1s,baz=156,slow=40						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**68.50**	**324**	P	**P**	**21 26 25.0**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=34,slow=6.4,SNR=27						
MKAR				LR	LR	22 00 37.3	
	comp=Z,223nm,18.7s,baz=31,slow=40						
	comp=Z,2.0nm,0.5s						
OBN	**Obninsk**	**69.02**	**356**	LR	LR	22 03 24.8	
	comp=Z,39nm,18.0s,baz=346,slow=42						
BELG	**Belogornoye**	**70.90**	**349**	P	**P**	**21 26 40.1**	**+0.7**
	comp=Z,14nm,0.8s,baz=26,slow=2.8,SNR=8.2						
BELG				LR	LR	22 01 52.6	
	comp=Z,101nm,19.3s,baz=144,slow=39						
	comp=Z,14nm,0.8s						
AKTO	**Aktyubinsk**	**71.31**	**341**	P	**P**	**21 26 42.3**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=8.3,slow=5.5,SNR=12						
AKTO				LR	LR	22 02 23.0	
	comp=Z,105nm,18.7s,baz=8.5,slow=40						
	comp=Z,3.2nm,0.6s						
SJG	**San Juan**	**71.79**	**85**	LR	LR	21 58 39.6	
	comp=Z,66nm,19.4s,baz=123,slow=36						
PPT	**Papeete**	**73.38**	**180**	LR	LR	21 52 44.3	
	comp=Z,98nm,20.0s,baz=354,slow=31						
AKASG	**Malin Array Be**	**73.57**	**0**	P	**P**	**21 26 55.1**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=360,slow=5.5,SNR=3.1						
AKASG				LR	LR	21 59 22.7	
	comp=Z,74nm,21.9s,baz=18,slow=36						
	comp=Z,0.5nm,0.4s						
VRAC	**Vranov**	**74.38**	**9**	LR	LR	21 59 57.9	
	comp=Z,48nm,20.7s,baz=348,slow=36						
GERES	**GERESS Array B**	**74.55**	**11**	P	**P**	**21 27 01.1**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=334,slow=8.7,SNR=3.2						
GERES				LR	LR	22 03 17.4	
	comp=Z,49nm,18.1s,baz=328,slow=39						
	comp=Z,0.9nm,0.6s						
AAK	**Ala-Archa**	**74.68**	**328**	P	**P**	**21 27 02.9**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=38,slow=4.3,SNR=7.2						
AAK				LR	LR	22 02 43.3	
	comp=Z,161nm,19.6s,baz=27,slow=38						
	comp=Z,1.6nm,0.8s						
MOA	**Molln**	**75.60**	**11**	*e*PcP	**PcP**	**21 27 18.4**	**-1.8**
	comp=Z,0.6nm,0.5s						
LESA	**Schwarzleotal**	**75.84**	**12**	*e*PcP	**PcP**	**21 27 20.8**	**-0.5**
	comp=Z,1.0nm,0.5s						
WTTA	**Wattenberg**	**75.87**	**13**	*e*PcP	**PcP**	**21 27 19.1**	**-2.5**
	comp=Z,2.0nm,0.5s						
FETA	**Feichten**	**76.00**	**13**	*e*PcP	**PcP**	**21 27 21.1**	**-1.0**
	comp=Z,2.5nm,0.8s						
DAVOX	**Davos/Dischmat**	**76.12**	**14**	LR	LR	22 01 55.9	
	comp=Z,49nm,21.7s,baz=2.5,slow=37						
KBA	**Konbrepinsp Br**	**76.26**	**12**	*e*PcP	P	21 27 20.6	+9.3
	comp=Z,2.0nm,0.6s						
SDV	**Santo Domingo**	**76.77**	**94**	LR	LR	22 02 43.0	
	comp=Z,51nm,19.9s,baz=7.0,slow=37						
OBKA	**Obir**	**76.95**	**11**	*e*pP	**P**	**21 27 18.1**	**+3.0**
	comp=Z,4.9nm,0.7s						
HNR	**Honiara**	**77.26**	**231**	LR	LR	21 54 10.1	
	comp=Z,2μm,19.4s,baz=353,slow=30						
RAR	**Rarotonga**	**77.44**	**189**	LR	LR	21 52 09.6	
	comp=Z,64nm,21.1s,baz=33,slow=28						
ROSC	**El Rosal**	**78.05**	**99**	LR	LR	22 05 44.2	
	comp=Z,42nm,18.1s,baz=83,slow=39						
MLR	**Muntele Rosu**	**78.73**	**3**	LR	LR	22 02 11.2	
	comp=Z,86nm,21.2s,baz=4.0,slow=36						
PCRV	**Puerto La Cruz**	**79.08**	**88**	LR	LR	22 03 38.7	
	comp=Z,68nm,18.4s,slow=37						
KVAR	**Kislovodsk Arr**	**79.74**	**351**	LR	LR	22 08 00.8	
	comp=Z,92nm,18.0s,baz=76,slow=40						
KBZ	**Khabaz**	**79.95**	**351**	P	**P**	**21 27 32.7**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=5.1,slow=9.5,SNR=4.1						
KBZ				LR	LR	22 08 21.3	
	comp=Z,48nm,18.7s,baz=5.0,slow=40						
	comp=Z,1.7nm,0.8s						
ESDC	**Sonseca Array**	**80.34**	**26**	P	**P**	**21 27 34.6**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=328,slow=5.6,SNR=4.2						
	comp=Z,1.2nm,0.8s						
DAV	**Davao City (W)**	**81.04**	**269**	LR	LR	21 57 24.4	
	comp=Z,41nm,21.5s,baz=19,slow=31						
PMG	**Port Moresby**	**83.20**	**242**	LR	LR	21 58 59.7	
	comp=Z,59nm,21.2s,baz=84,slow=32						
GEYT	**Alibeck**	**83.32**	**338**	P	**P**	**21 27 50.4**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=44,slow=9.0,SNR=2.2						
GEYT				LR	LR	22 11 22.9	
	comp=Z,84nm,18.2s,baz=22,slow=40						
	comp=Z,1.4nm,0.7s						
BRTR	**Kein Array B**	**84.50**	**357**	P	**P**	**21 27 57.5**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=9.5,slow=4.4,SNR=2.1						
BRTR				LR	LR	22 07 07.6	
	comp=Z,55nm,21.6s,baz=11,slow=37						
	comp=Z,0.4nm,0.7s						
VAE	**Valguarnera**	**85.86**	**12**	LR	LR	22 09 40.0	
	comp=Z,111nm,18.1s,baz=332,slow=38						
CMAR	**Chiang Mai Arr**	**85.99**	**297**	P	**P**	**21 28 03.5**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=16,slow=4.2,SNR=5.0						
CMAR				LR	LR	22 11 21.0	
	comp=Z,81nm,18.3s,baz=20,slow=39						
	comp=Z,0.6nm,0.3s						
DZM	**Mont Dzumac**	**86.12**	**220**	LR	LR	21 58 58.8	
	comp=Z,122nm,21.4s,baz=48,slow=30						
MDT	**Midelt**	**86.67**	**29**	LR	LR	22 07 14.8	
	comp=Z,120nm,18.9s,baz=339,slow=36						
KEST	**Kesra**	**86.86**	**17**	LR	LR	22 09 17.2	
	comp=Z,86nm,19.9s,baz=235,slow=37						
IDI	**Anoyia**	**88.88**	**4**	LR	LR	22 08 42.4	
	comp=Z,29nm,21.7s,baz=24,slow=36						
RPN	**Rapa Nui**	**89.83**	**144**	LR	LR	21 59 18.5	
	comp=Z,69nm,20.5s,baz=344,slow=29						
MDP	**Montagnes des**	**89.93**	**81**	LR	LR	22 07 02.9	
	comp=Z,35nm,20.8s,baz=322,slow=34						
NNA	**Nana**	**90.72**	**110**	LR	LR	22 06 22.5	
	comp=Z,24nm,20.8s,baz=340,slow=34						
MMAI	**Mount Meron Ar**	**91.12**	**355**	LR	LR	22 15 43.2	
	comp=Z,20nm,20.4s,baz=351,slow=40						
CTA	**Charters Tower**	**92.83**	**238**	LR	LR	22 04 13.2	
	comp=Z,52nm,20.4s,baz=78,slow=32						
EIL	**Elat**	**94.47**	**356**	LR	LR	22 19 01.1	
	comp=Z,14nm,18.2s,baz=66,slow=40						
WSAR	**Wadi Sarin**	**97.31**	**334**	LR	LR	22 18 49.3	
	comp=Z,53nm,19.3s,baz=51,slow=39						
URZ	**Urewera**	**98.05**	**206**	LR	LR	22 06 45.1	
	comp=Z,82nm,19.5s,baz=121,slow=32						
QSPA	**South Pole Qui**	**145.88**	**180**	PKPbc	**PKPdf**	**21 34 59.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=85,slow=0.6,SNR=2.0						

ISC 01 21:20:49.2±2.7, 56°.1N±0°.1×150°.09W±0°.08, h10km, n26, σ0.97/30, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.11**	**305**	P	**Pn**	**21 21 24.9**	**+0.5**
	baz=124						
OHAK				S	**Sn**	**21 21 49.1**	**-1.6**
	baz=124						
KDAK	**Kodiak Island**	**2.20**	**323**	P	**Pn**	**21 21 25.9**	**+0.2**
	baz=142						
KDAK				S	**Sn**	**21 21 52.7**	**-0.2**
	baz=142						
SII	**Sitkinak Islan**	**2.33**	**284**	P	Pn	21 21 26.3	-1.3
	baz=103						
SII				S	**Sn**	**21 21 54.8**	**-1.5**
	baz=103						
R18K	**Karluk**	**2.83**	**304**	P	**Pn**	**21 21 34.7**	**+0.3**
	baz=122						
Q20K	**Shuyak Island**	**2.84**	**335**	P	**Pn**	**21 21 34.9**	**+0.4**
	baz=154						
Q20K				S	**Sn**	**21 22 08.4**	**-0.3**
	baz=154						
Q19K	**Cape Douglas,**	**3.45**	**328**	P	**Pn**	**21 21 44.4**	**+1.4**
	baz=146						
BRSE	**Bradley Lake S**	**3.70**	**355**	P	**Pn**	**21 21 46.2**	**-0.2**
	baz=175						
BRSE				S	**Sn**	**21 22 29.2**	**-0.8**
	baz=175						
KAHC	**Katmai Hardscr**	**3.71**	**316**	P	**Pn**	**21 21 47.7**	**+1.1**
	baz=133						
Q17K	**Contact Creek**	**3.85**	**307**	P	**Pn**	**21 21 49.0**	**+0.6**
	baz=124						
P19K	**Oil Pt**	**3.97**	**336**	P	**Pn**	**21 21 51.5**	**+1.5**
	baz=154						
O20K	**Slope Mountain**	**4.25**	**343**	P	**Pn**	**21 21 54.9**	**+1.1**
	baz=161						
P18K	**Big Mountain,**	**4.33**	**323**	P	**Pn**	**21 21 55.4**	**+0.4**
	baz=139						
Q16K	**King Salmon**	**4.41**	**309**	P	**Pn**	**21 21 57.8**	**+1.8**
	baz=125						
P17K	**Kvichak River**	**4.63**	**315**	P	**Pn**	**21 22 00.6**	**+1.4**
	baz=131						
O18K	**Koktuh Hills**	**4.67**	**326**	P	**Pn**	**21 22 00.1**	**+0.3**
	baz=143						
O19K	**Port Alsworth**	**4.71**	**333**	P	**Pn**	**21 22 01.2**	**+1.1**
	baz=150						
KAIM	**Kayak Island**	**4.91**	**36**	P	**Pn**	**21 22 03.2**	**+0.3**
	baz=220						
EYAK	**Cordova Ski Ar**	**5.04**	**25**	P	**Pn**	**21 22 05.3**	**+0.6**
	baz=208						
P16K	**Nushagak River**	**5.19**	**308**	P	**Pn**	**21 22 07.1**	**+0.4**
	baz=123						
O17K	**Koliganek Bris**	**5.27**	**318**	P	**Pn**	**21 22 09.4**	**+1.6**
	baz=133						
N19K	**Bonanza Creek**	**5.29**	**336**	P	**Pn**	**21 22 09.3**	**+1.1**
	baz=153						
N18K	**Kilae Creek**	**5.54**	**329**	P	**Pn**	**21 22 11.6**	**-0.1**
	baz=145						
BMRM	**Bremner River**	**5.69**	**28**	P	**Pn**	**21 22 14.1**	**+0.4**
	baz=212						
O15K	**Ungalikthiuk R**	**6.09**	**305**	P	**Pn**	**21 22 19.6**	**+0.5**
	baz=118						
M18K	**Stony River**	**6.20**	**334**	P	**Pn**	**21 22 20.3**	**-0.3**
	baz=149						
M17K	**Holitna River**	**6.57**	**327**	P	**Pn**	**21 22 26.6**	**+0.8**
	baz=142						

*NEIC **01** 21:28:25.0±1.6, 55°.96N±0°.08×150°.2W±0°.1, h10km±2km, ML3.5/46, ML3.3(AEIC), Error ellipse: s-maj=12.8km s-min=10.1km az=184.0*
*AEIC **01** 21:28:29.0±1.5, 55°.90N±0°.09×150°.1W±0°.1, h12km±7km, Error ellipse: s-maj=13.2km s-min=9.3km az=171.0*

ISC 01 21:28:25.3±1.7, 56°.0N±0°.1×150°.12W±0°.06, h10km, n201, σ0.96/203, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.12**	**305**		**Pn**	**21 28 59.9**	**-0.8**
OHAK	**Old Harbor**	**2.12**	**305**		**Sn**	**21 29 24.9**	**-2.0**
OHAK	**Old Harbor**	**2.12**	**305**	P	**Pn**	**

	baz=139								
O22K	**Cooper Landing**	**4.46**	**2**	Pn	**Pn**	**21 29 33.1**	**+0.2**		
O22K				IAML		21 30 29.6			
	comp=E,67nm,0.7s								
O22K				IAML		21 30 38.5			
	comp=N,106nm,1.4s								
ANNW	**Aniakchak Nort**	**4.58**	**285**		**Pn**	**21 29 35.5**	**+0.9**		
ANPB	**Aniakchak Plen**	**4.60**	**283**		**Pn**	**21 29 35.3**	**+0.5**		
P17K	**Kvichak River**	**4.64**	**316**	P	**Pn**	**21 29 36.6**	**+1.2**		
	baz=131								
CHGN	**Chignik**	**4.65**	**277**	Pn	**Pn**	**21 29 35.4**	**0.0**		
CHGN				IAML		21 30 35.0			
	comp=N,35nm,1.0s								
CHGN				IAML		21 31 24.5			
	comp=E,40nm,1.5s								
RSO	**Redoubt South**	**4.65**	**344**		**Sn**	**21 30 29.9**	**+0.2**		
O18K	**Koktuh Hills**	**4.69**	**327**		**Pn**	**21 29 36.4**	**+0.3**		
O18K	**Koktuh Hills**	**4.69**	**327**	IAML		21 30 31.0			
	comp=N,21nm,1.1s								
O18K				IAML		21 30 45.2			
	comp=E,28nm,0.8s								
O18K	**Koktuh Hills**	**4.69**	**327**	P	**Pn**	**21 29 36.4**	**+0.3**		
	baz=143								
O19K	**Port Alsworth**	**4.73**	**334**		**Pn**	**21 29 37.0**	**+0.5**		
DFR	**Drift River**	**4.76**	**345**		**Pn**	**21 29 37.8**	**+0.7**		
HIN	**Hinchinbrook I**	**4.77**	**22**		**Pn**	**21 29 37.0**	**-0.2**		
HIN	**Hinchinbrook I**	**4.77**	**22**	IAML		21 30 30.7			
	comp=N,44nm,1.2s								
HIN				IAML		21 31 54.4			
	comp=E,63nm,1.4s								
NCT	**North Crescent**	**4.77**	**343**		**Pn**	**21 29 36.5**	**-0.7**		
CAPN	**Captain Cook N**	**4.78**	**354**	Pn	**Pn**	**21 29 36.6**	**-0.6**		
KAIM	**Kayak Island**	**4.94**	**36**		**Pn**	**21 29 39.7**	**+0.3**		
KAIM	**Kayak Island**	**4.94**	**36**	P	**Pn**	**21 29 39.1**	**-0.3**		
	baz=219								
RC01	**Rabbit Creek A**	**5.07**	**2**		**Pn**	**21 29 40.9**	**-0.3**		
RC01				IAML		21 30 42.0			
	comp=E,19nm,0.3s								
RC01				IAML		21 30 51.0			
	comp=N,20nm,1.2s								
EYAK	**Cordova Ski Ar**	**5.08**	**25**		**Pn**	**21 29 41.2**	**-0.1**		
EYAK	**Cordova Ski Ar**	**5.08**	**25**	P	**Pn**	**21 29 41.2**	**-0.1**		
	baz=208								
RAGM	**Ragged Mountai**	**5.22**	**31**	Pn	**Pn**	**21 29 43.4**	**+0.1**		
RAGM				IAML		21 31 08.8			
	comp=E,49nm,1.5s								
SUCK	**Suckling Hills**	**5.26**	**37**		**Pn**	**21 29 43.8**	**0.0**		
SUCK				IAML		21 30 48.6			
	comp=E,58nm,1.5s								
SUCK				IAML		21 32 21.4			
	comp=N,42nm,1.3s								
O17K	**Koliganek Bris**	**5.28**	**318**		**Pn**	**21 29 45.0**	**+0.9**		
O17K	**Koliganek Bris**	**5.28**	**318**	P	**Pn**	**21 29 45.0**	**+0.9**		
	baz=133								
HMT	**Hamilton**	**5.31**	**33**		**Pn**	**21 29 44.7**	**+0.2**		
HMT	**Hamilton**	**5.31**	**33**	IAML		21 30 52.1			
	comp=N,56nm,0.8s								
N19K	**Bonanza Creek**	**5.31**	**336**		**Pn**	**21 29 44.7**	**+0.1**		
N19K	**Bonanza Creek**	**5.31**	**336**	IAML		21 31 03.9			
	comp=E,12nm,1.3s								
N19K	**Bonanza Creek**	**5.31**	**336**	P	**Pn**	**21 29 44.7**	**+0.1**		
	baz=153								
NICHA	**Nichawak Mount**	**5.32**	**35**		**Pn**	**21 29 44.8**	**+0.1**		
GOAT	**Goat Mountain**	**5.37**	**30**		**Pn**	**21 29 45.7**	**+0.3**		
SUA	**Susitna One**	**5.45**	**357**	Pn	**Pn**	**21 29 46.6**	**+0.1**		
KNK	**Knik Glacier**	**5.46**	**8**		**Pn**	**21 29 47.0**	**+0.4**		
KNK	**Knik Glacier**	**5.46**	**8**	P	**Pn**	**21 29 47.0**	**+0.4**		
	baz=189								
BERG	**Berg Lake**	**5.53**	**35**		**Pn**	**21 29 47.1**	**-0.4**		
CNBA	**Chernabura Isl**	**5.53**	**261**	Pn	**Pn**	**21 29 46.6**	**-1.0**		
O16K	**Kokwok River B**	**5.56**	**313**		**Pn**	**21 29 48.5**	**+0.6**		
O16K	**Kokwok River B**	**5.56**	**313**	P	**Pn**	**21 29 48.8**	**+0.9**		
	baz=127								
N18K	**Kilae Creek**	**5.56**	**329**	Pn	**Pn**	**21 29 48.0**	**+0.1**		
GRIN	**Grindle Hills**	**5.57**	**37**		**Pn**	**21 29 48.7**	**+0.6**		
SNH	**Sunshine Point**	**5.67**	**40**	Pn	**Pn**	**21 29 49.0**	**-0.5**		
KHIT	**Khitrov Hills**	**5.71**	**37**		**Pn**	**21 29 49.8**	**-0.3**		
BMRM	**Bremner River**	**5.72**	**28**		**Pn**	**21 29 50.4**	**+0.1**		
BMRM	**Bremner River**	**5.72**	**28**	P	**Pn**	**21 29 50.4**	**+0.1**		
	baz=212								
GHO	**Glory Hole Cre**	**5.78**	**6**	Pn	**Pn**	**21 29 52.2**	**+1.1**		
SVW2	**Sparrevohn**	**5.82**	**333**	Pn	**Pn**	**21 29 51.0**	**-0.6**		
N17K	**Nushagak Hills**	**5.84**	**323**	Pn	**Pn**	**21 29 52.6**	**+0.7**		
WAX	**Waxell Ridge**	**5.85**	**38**	Pn	**Pn**	**21 29 52.6**	**+0.5**		
SML	**Sawmill**	**5.86**	**8**	Pn	**Pn**	**21 29 53.6**	**+1.4**		
KLU	**Klutina**	**5.89**	**20**		**Pn**	**21 29 53.1**	**+0.5**		
KLU	**Klutina**	**5.89**	**20**	P	**Pn**	**21 29 52.6**	**0.0**		
	baz=203								
BARK	**Barkley Ridge**	**5.95**	**39**		**Pn**	**21 29 53.2**	**-0.1**		
SCM	**Sheep Creek Mo**	**5.99**	**13**	Pn	**Pn**	**21 29 55.2**	**+1.3**		
MESA	**MESA**	**6.00**	**43**	Pn	**Pn**	**21 29 55.1**	**+1.0**		
SKT	**Skwentna**	**6.00**	**354**	Pn	**Pn**	**21 29 55.0**	**+0.9**		
M20K	**Styx River**	**6.07**	**346**	Pn	**Pn**	**21 29 55.5**	**+0.5**		
TGL	**Tana Glacier**	**6.08**	**36**		**Pn**	**21 29 55.3**	**0.0**		
O15K	**Ungalikthiuk R**	**6.09**	**305**		**Pn**	**21 29 56.2**	**+0.9**		
O15K	**Ungalikthiuk R**	**6.09**	**305**	P	**Pn**	**21 29 56.2**	**+0.9**		
	baz=118								
ISLE	**Juniper Island**	**6.14**	**39**		**Pn**	**21 29 56.0**	**-0.1**		
BAGL	**Bagley Icefiel**	**6.15**	**40**		**Pn**	**21 29 56.0**	**0.0**		
M18K	**Stony River**	**6.22**	**334**		**Pn**	**21 29 56.5**	**-0.5**		
M18K	**Stony River**	**6.22**	**334**	P	**Pn**	**21 29 56.5**	**-0.5**		
	baz=149								
VRDI	**Verde Repeater**	**6.26**	**31**		**Pn**	**21 29 57.7**	**0.0**		
N25K	**Chitina, Valde**	**6.27**	**25**		**Pn**	**21 29 58.7**	**+0.8**		
N25K	**Chitina, Valde**	**6.27**	**25**	P	**Pn**	**21 29 58.5**	**+0.7**		
	baz=209								
M19K	**Big River Lodg**	**6.28**	**341**	Pn	**Pn**	**21 29 59.3**	**+1.4**		
GLB	**Gilahina Butte**	**6.33**	**29**		**Pn**	**21 29 59.2**	**+0.6**		
N16K	**Nishlik Lake**	**6.37**	**318**		**Pn**	**21 30 00.2**	**+1.1**		
N16K	**Nishlik Lake**	**6.37**	**318**	P	**Pn**	**21 30 00.2**	**+1.1**		
	baz=131								
M24K	**Tolsona, Glenn**	**6.42**	**17**	Pn	**Pn**	**21 30 01.8**	**+2.0**		
TABL	**Table Mountain**	**6.47**	**43**	Pn	**Pn**	**21 30 01.1**	**+0.4**		
MCARA	**McCarthy VSAT**	**6.51**	**32**		**Pn**	**21 30 01.4**	**+0.5**		
MCARA	**McCarthy VSAT**	**6.51**	**32**	P	**Pn**	**21 30 01.9**	**+0.9**		
	baz=217								
PTPK	**Patty Peak**	**6.53**	**35**		**Pn**	**21 30 01.9**	**+0.4**		
M17K	**Holitna River**	**6.59**	**328**		**Pn**	**21 30 03.0**	**+0.9**		
M17K	**Holitna River**	**6.59**	**328**	P	**Pn**	**21 30 02.8**	**+0.7**		
	baz=142								
PCA	**Pinnacle**	**6.62**	**48**		**Pn**	**21 30 03.4**	**+0.7**		
L19K	**White Mountain**	**6.62**	**340**	Pn	**Pn**	**21 30 01.4**	**-1.2**		
PINM	**Pinnacle**	**6.62**	**48**	P	**Pn**	**21 30 03.1**	**+0.5**		
	baz=235								
WACK	**Wrangell Chich**	**6.67**	**24**		**Pn**	**21 30 04.1**	**+0.7**		
BARN	**Barnard Glacie**	**6.70**	**38**		**Pn**	**21 30 04.2**	**+0.4**		
N15K	**Kwethluk River**	**6.71**	**312**		**Pn**	**21 30 05.0**	**+1.2**		
N15K	**Kwethluk River**	**6.71**	**312**	P	**Pn**	**21 30 05.4**	**+1.6**		
	baz=124								
PN7A	**Pavlof North-7**	**6.74**	**270**		**Pn**	**21 30 04.1**	**-0.1**		
CTG	**Chitna Glacier**	**6.75**	**39**	P	**Pn**	**21 30 04.6**	**+0.3**		
	baz=226								
CTGM	**Chitina Glacie**	**6.75**	**39**		**Pn**	**21 30 04.6**	**+0.2**		
LOGN	**Logan Glacier**	**6.77**	**41**		**Pn**	**21 30 04.7**	**-0.1**		
O14K	**Tigyukauivet M**	**6.79**	**303**	Pn	**Pn**	**21 30 05.2**	**+0.4**		
M16K	**Timber Creek**	**6.81**	**321**		**Pn**	**21 30 06.1**	**+1.0**		
M16K	**Timber Creek**	**6.81**	**321**	P	**Pn**	**21 30 06.3**	**+1.2**		
	baz=134								
M15K	**Kasigluk River**	**7.25**	**314**		**Pn**	**21 30 12.7**	**+1.5**		
M15K	**Kasigluk River**	**7.25**	**314**	P	**Pn**	**21 30 12.7**	**+1.5**		
	baz=126								
PAX	**Paxson**	**7.34**	**17**		**Pn**	**21 30 13.8**	**+1.3**		
PAX	**Paxson**	**7.34**	**17**	P	**Pn**	**21 30 13.9**	**+1.5**		
	baz=200								
M26K	**Nabesna, AK**	**7.35**	**27**	Pn	**Pn**	**21 30 13.7**	**+1.1**		
RND	**Reindeer**	**7.42**	**4**	Pn	**Pn**	**21 30 14.5**	**+1.0**		
L17K	**Donlin**	**7.42**	**329**		**Pn**	**21 30 15.3**	**+1.8**		
L17K	**Donlin**	**7.42**	**329**	P	**Pn**	**21 30 15.3**	**+1.8**		
	baz=142								
TRF	**Thorofare Moun**	**7.44**	**359**	Pn	**Pn**	**21 30 14.2**	**+0.4**		
O29M	**Mount Kennedy**	**7.45**	**50**		**Pn**	**21 30 14.6**	**+0.5**		
O29M	**Mount Kennedy**	**7.45**	**50**	P	**Pn**	**21 30 14.5**	**+0.5**		
	baz=239								
L16K	**Owhat River**	**7.47**	**323**		**Pn**	**21 30 14.8**	**+0.6**		
L16K	**Owhat River**	**7.47**	**323**	P	**Pn**	**21 30 15.2**	**+1.1**		
	baz=136								
CAST	**Castle Rocks**	**7.47**	**353**	Pn	**Pn**	**21 30 16.1**	**+1.9**		
P29M	**Windy Craggy**	**7.52**	**56**	Pn	**Pn**	**21 30 14.9**	**0.0**		
TTA	**Tatalina**	**7.53**	**339**	Pn	**Pn**	**21 30 15.1**	**0.0**		
KTH	**Kantishna Hill**	**7.55**	**357**	Pn	**Pn**	**21 30 14.9**	**-0.4**		
K20K	**Telida**	**7.61**	**346**	Pn	**Pn**	**21 30 16.2**	**+0.2**		
M27K	**Edge Creek, AK**	**7.61**	**30**	Pn	**Pn**	**21 30 17.4**	**+1.2**		
MENT	**Mentasta**	**7.64**	**23**	Pn	**Pn**	**21 30 16.5**	**0.0**		
L26K	**Log Cabin Wild**	**7.80**	**23**	Pn	**Pn**	**21 30 19.7**	**+1.0**		
M14K	**Bethel**	**7.81**	**312**	Pn	**Pn**	**21 30 16.3**	**-2.4**		
S31K	**Pelican**	**7.82**	**70**	Pn	**Pn**	**21 30 18.1**	**-0.9**		
K17K	**Iditarod**	**7.89**	**331**	Pn	**Pn**	**21 30 21.4**	**+1.5**		
HYT	**Haines Junctio**	**8.17**	**49**	Pn	**Pn**	**21 30 24.8**	**+1.0**		
L27K	**Beaver Creek,**	**8.20**	**27**	Pn	**Pn**	**21 30 25.1**	**+1.0**		
BCAR	**Beaver Creek A**	**8.21**	**28**	Pn	**Pn**	**21 30 25.1**	**+0.7**		
M13K	**Dall Lake**	**8.24**	**308**	Pn	**Pn**	**21 30 25.6**	**+0.9**		
J20K	**Nowinta River**	**8.41**	**348**		**Pn**	**21 30 28.3**	**+1.3**		
L14K	**Kuka Creek**	**8.42**	**314**	Pn	**Pn**	**21 30 28.6**	**+1.4**		
J19K	**Poorman**	**8.44**	**343**	Pn	**Pn**	**21 30 25.6**	**-1.8**		
HDA	**Harding Lake**	**8.54**	**9**	Pn	**Pn**	**21 30 31.1**	**+2.3**		
K15K	**Wolf Creek Mou**	**8.57**	**322**	Pn	**Pn**	**21 30 30.7**	**+1.4**		
N30M	**Aishikik Lake**	**8.67**	**46**	Pn	**Pn**	**21 30 31.2**	**+0.5**		
CCB	**Clear Creek Bu**	**8.71**	**7**	Pn	**Pn**	**21 30 32.4**	**+1.2**		
O30N	**Mendenhall**	**8.75**	**51**	Pn	**Pn**	**21 30 32.2**	**+0.5**		
M29M	**Somme Creek**	**8.76**	**38**		**Pn**	**21 30 33.0**	**+1.0**		
IL31		**8.90**	**9**	Pn	**Pn**	**21 30 35.6**	**+1.9**		
ILAR	**Eielson Array**	**8.90**	**9**	Pn	**Pn**	**21 30 36.5**	**+2.7**		
J25K	**Salcha River,**	**8.92**	**13**	Pn	**Pn**	**21 30 35.1**	**+1.1**		
K27K	**Chicken**	**8.96**	**23**	Pn	**Pn**	**21 30 35.0**	**+0.5**		
J16K	**Anvik River**	**8.99**	**328**	Pn	**Pn**	**21 30 35.9**	**+1.0**		
MDM	**Murphy Dome**	**9.00**	**5**	Pn	**Pn**	**21 30 35.5**	**+0.4**		
J26L	**Joseph Creek**	**9.09**	**18**	Pn	**Pn**	**21 30 37.4**	**+1.0**		
I23K	**Minto, Yukon-K**	**9.15**	**2**	Pn	**Pn**	**21 30 37.3**	**+0.2**		
I21K	**Tanana**	**9.22**	**355**	Pn	**Pn**	**21 30 38.2**	**+0.2**		
WHY	**Whitehorse**	**9.24**	**54**	Pn	**Pn**	**21 30 39.4**	**+0.8**		
L29M	**L29M**	**9.33**	**36**	Pn	**Pn**	**21 30 40.3**	**+0.7**		
M30M	**Minto, Yukon**	**9.44**	**41**	Pn	**Pn**	**21 30 41.6**	**+0.4**		
P32M	**Atlin**	**9.44**	**61**	Pn	**Pn**	**21 30 40.7**	**-0.5**		
J14K	**Nanvaranak Lak**	**9.59**	**320**	Pn	**Pn**	**21 30 44.5**	**+1.3**		
CRAG	**Craig**	**9.60**	**86**	Pn	**Pn**	**21 30 42.0**	**-1.3**		
DAWY	**Dawson**	**9.66**	**29**	Pn	**Pn**	**21 30 42.7**	**-1.4**		
H21K	**Melozitna Rive**	**9.74**	**353**	Pn	**Pn**	**21 30 45.8**	**+0.6**		
PRP	**Porcupine Dome**	**9.77**	**11**	Pn	**Pn**	**21 30 46.7**	**+0.9**		
I26K	**Coal Creek Min**	**9.90**	**17**	Pn	**Pn**	**21 30 47.7**	**+0.3**		
H18K	**Honhosa River**	**9.99**	**340**	Pn	**Pn**	**21 30 48.9**	**+0.2**		
K29M	**Barlow Dome**	**10.04**	**34**	Pn	**Pn**	**21 30 49.8**	**+0.3**		
P33M	**Teslin, Yukon**	**10.05**	**58**	Pn	**Pn**	**21 30 49.2**	**-0.4**		
IMAR	**Indian Mountai**	**10.13**	**352**	Pn	**Pn**	**21 30 51.8**	**+1.2**		
H17K	**Granite Mounta**	**10.13**	**336**	Pn	**Pn**	**21 30 50.9**	**+0.3**		
M31M	**Drury Creek, Y**	**10.15**	**46**	Pn	**Pn**	**21 30 52.3**	**+1.4**		
G21K	**Allakaket**	**10.64**	**353**	Pn	**Pn**	**21 30 59.3**	**+1.8**		
I28M	**Miner Creek**	**10.65**	**24**	Pn	**Pn**	**21 30 59.5**	**+1.6**		
G23K	**Bananza Creek**	**10.71**	**0**		**Pn**	**21 30 59.4**	**+0.8**		
R33M	**Jennings River**	**10.77**	**64**	Pn	**Pn**	**21 30 59.8**	**+0.4**		
G24K	**Hadweenzic Riv**	**10.77**	**6**	Pn	**Pn**	**21 30 60.0**	**+0.6**		
J30M	**Hart River**	**10.93**	**33**	Pn	**Pn**	**21 31 03.3**	**+1.7**		
ANM	**Nome**	**11.38**	**325**	Pn	**Pn**	**21 31 08.9**	**+1.2**		
BMAR	**Burnt Mountain**	**11.72**	**11**	Pn	**Pn**	**21 31 13.1**	**+0.7**		
E19K	**Redstone River**	**11.93**	**347**	Pn	**Pn**	**21 31 16.0**	**+0.8**		
F15K	**North Star Dit**	**11.97**	**330**	Pn	**Pn**	**21 31 16.8**	**+1.1**		

*KRNET **01** 21:33:38.8±0.1, 42°.79N×78°.91E, h22km, mb2.6*
*NNC **01** 21:33:38.5±0.5, 42°.80N×78°.93E, h3km±2km, mb2.9,*
mpv3.0, Error ellipse: s-maj=3.9km s-min=1.8km az=171.0
*SOME **01** 21:33:39.2, 42°.82N×78°.87E, h10km*

ISC 01 21:33:38.9±1.1, 42°.78N±0°.03×78°.91E±0°.02, h9km±9km, n54, σ0°85/103, 8C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UZB	**Uzunbulak**	**0.37**	**13**	P		**Pg**		**21 33 46.6**	**+0.3**
	9.9nm,0.1s								
UZB				S		**Sb**		**21 33 52.0**	**-1.7**
	55nm,0.1s								
UZB	**Uzunbulak**	**0.37**	**13**	*eP*		**Pg**		**21 33 46.5**	**+0.3**
	9.9nm,0.1s								
UZB				*eS*		**Sb**		**21 33 52.0**	**-1.7**
	55nm,0.1s								
UZB	**Uzunbulak**	**0.37**	**13**	*eP*		**Pg**		**21 33 46.6**	**+0.3**
	baz=13								
UZB				*eS*		**Sb**		**21 33 52.1**	**-1.7**
	baz=13								
SATY	**Saty**	**0.46**	**307**	P		**Pg**		**21 33 48.1**	**+0.3**
	8.1nm,0.1s								
SATY				S		**Sg**		**21 33 54.6**	**+0.6**
	16nm,0.1s								
SATY	**Saty**	**0.46**	**307**	*eP*		**Pg**		**21 33 48.1**	**+0.3**
	8.1nm,0.1s								
SATY				*eS*		**Sg**		**21 33 54.6**	**+0.6**
	16nm,0.1s								
SATY	**Saty**	**0.46**	**307**	*eP*		**Pg**		**21 33 48.1**	**+0.3**
	baz=6.0								
SATY				*eS*		**Sg**		**21 33 54.5**	**+0.6**
	baz=6.0								
PRZ	**Przheval'sk**	**0.48**	**231**	*eP*		**Pg**		**21 33 48.4**	**+0.2**
	baz=33								
PRZ				*eS*		**Sg**		**21 33 55.4**	**+0.9**
	baz=33								
ZHN	**Zhinishke**	**0.52**	**318**	P		**Pg**		**21 33 49.2**	**+0.3**
	7.8nm,0.1s								
ZHN				S		**Sg**		**21 33 56.2**	**+0.5**
	21nm,0.1s								
ZHN	**Zhinishke**	**0.52**	**318**	*eP*		**Pg**		**21 33 49.2**	**+0.3**
	7.8nm,0.1s								
ZHN				*eS*		**Sg**		**21 33 56.2**	**+0.5**
	21nm,0.1s								
ZHN	**Zhinishke**	**0.52**	**318**	*eP*		**Pg**		**21 33 49.2**	**+0.3**
	baz=18								
ZHN				*eS*		**Sg**		**21 33 56.2**	**+0.5**
	baz=18								
SHLS	**Shalkode**	**0.55**	**47**	P		**Pn**		**21 33 54.2**	**+1.1**
	18nm,0.1s								
SHLS				S		**Sn**		**21 34 05.2**	**+2.7**
	16nm,0.2s								
SHLS	**Shalkode**	**0.55**	**47**	*eP*		**Pn**		**21 33 54.2**	**+1.1**
	18nm,0.1s								
SHLS				*eS*		**Sn**		**21 34 05.2**	**+2.7**
	16nm,0.2s								
SHLS	**Shalkode**	**0.55**	**47**	*eP*		**Pn**		**21 33 54.2**	**+1.1**
	baz=62								
SHLS				*eS*		**Sn**		**21 34 05.2**	**+2.7**
	baz=62								
PDGK	**Podgornoye**	**0.69**	**38**	P		**Pg**		**21 33 51.8**	**-0.5**
	5.4nm,0.1s								
PDGK				S		**Sg**		**21 34 00.8**	**-0.5**
	3.4nm,0.2s								
KPKS	**Kokpek**	**0.70**	**347**	P		**Pg**		**21 33 52.3**	**-0.1**
	6.5nm,0.1s								
KPKS				S		**Sg**		**21 34 01.6**	**0.0**
	30nm,0.3s								
KPKS	**Kokpek**	**0.70**	**347**	*eP*		**Pg**		**21 33 52.3**	**-0.1**
	6.5nm,0.1s								
KPKS				*eS*		**Sg**		**21 34 01.6**	**0.0**
	30nm,0.3s								
KPKS	**Kokpek**	**0.70**	**347**	*eP*		**Pg**		**21 33 52.3**	**-0.1**
	baz=46								
KPKS				*eS*		**Sg**		**21 34 01.6**	**0.0**
	baz=46								
KURS	**Kuram**	**0.89**	**323**	P		**Pg**		**21 33 55.8**	**-0.1**
	6.7nm,0.2s								
KURS				S		**Sg**		**21 34 07.1**	**-0.4**
	1.9nm,0.2s								
KURS	**Kuram**	**0.89**	**323**	*eP*		**Pg**		**21 33 55.8**	**-0.1**
	6.7nm,0.2s								
KURS				*eS*		**Sb**		**21 34 07.6**	**-0.8**
	1.9nm,0.2s								
KURS	**Kuram**	**0.89**	**323**	*eP*		**Pg**		**21 33 55.8**	**-0.1**
	baz=22								
KURS				*eS*		**Sb**		**21 34 07.6**	**-0.8**
	baz=22								
ANVS	**Anan'yevo**	**0.91**	**270**	⇑*iP*		**Pg**		**21 33 56.3**	**-0.1**
	baz=70								
ANVS				⇑*iS*		**Sb**		**21 34 08.8**	**-0.5**
	baz=70								
KTMS	**Ketmen**	**1.25**	**57**	P		**Pn**		**21 34 01.4**	**-1.2**
KTMS				S		**Sb**		**21 34 17.4**	**-1.5**
	2.5nm,0.2s								
KTMS	**Ketmen**	**1.25**	**57**	*eP*		**Pn**		**21 34 01.4**	**-1.2**
KTMS				*eS*		**Sb**		**21 34 17.4**	**-1.5**
	2.5nm,0.2s								
TARG	**Taragay, Kyrgy**	**1.33**	**218**	⇑*iP*		**Pn**		**21 34 03.1**	**-0.9**
	baz=18								
TARG				⇑*iS*		**Sb**		**21 34 21.3**	**-0.3**
	baz=18								
KOTS	**Kotyrbulak**	**1.39**	**289**	P		**Pn**		**21 34 04.7**	**+0.1**
	1.9nm,0.1s								
KOTS				S		**Sg**		**21 34 23.3**	**-0.3**
	6.0nm,0.2s								
KOTS	**Kotyrbulak**	**1.39**	**289**	*eP*		**Pn**		**21 34 04.7**	**+0.1**
	1.9nm,0.1s								
KOTS				*eS*		**Sg**		**21 34 23.3**	**-0.3**
	6.0nm,0.2s								
MDOK	**Medeo**	**1.42**	**286**	Pg		**Pn**		**21 34 04.5**	**-0.4**
	1.6nm,0.2s								
MDOK					Lg		Lg	21 34 23.2	
	4.4nm,0.3s								
MDOK	**Medeo**	**1.42**	**286**	*eP*		**Pn**		**21 34 04.5**	**-0.4**
	1.6nm,0.2s								
MDOK				*eS*		**Sn**		**21 34 23.2**	**-0.6**
	4.4nm,0.3s								
MDOK	**Medeo**	**1.42**	**286**	*eP*		**Pn**		**21 34 04.5**	**-0.4**
	baz=86								
MDOK				*eS*		**Sn**		**21 34 23.2**	**-0.6**
	baz=86								
KDJ	**Kajisay**	**1.44**	**243**	⇓*eP*		**Pn**		**21 34 04.8**	**-0.4**
	baz=43								
KDJ				⇓*eS*		**Sn**		**21 34 23.8**	**-0.5**
	baz=43								
TNSS	**Tian-Shan**	**1.46**	**281**	P		**Pn**		**21 34 05.9**	**+0.1**
	1.3nm,0.2s								
TNSS				S		**Sg**		**21 34 25.5**	**-0.4**
	2.1nm,0.3s								
TNSS	**Tian-Shan**	**1.46**	**281**	*eP*		**Pn**		**21 34 05.9**	**+0.1**
	1.3nm,0.2s								
TNSS				*eS*		**Sg**		**21 34 25.5**	**-0.4**
	2.1nm,0.3s								
TNSS	**Tian-Shan**	**1.46**	**281**	*eP*		**Pn**		**21 34 05.9**	**+0.1**
	baz=81								
TNSS				*eS*		**Sg**		**21 34 25.5**	**-0.4**
	baz=81								
KNOS	**Konyrlen**	**1.59**	**7**	P		**Pb**		**21 34 07.6**	**-0.8**
	2.9nm,0.1s								
KNOS				S		**Sb**		**21 34 28.1**	**-0.6**
	12nm,0.1s								
ARXS	**Arharly**	**1.63**	**332**	P		**Pb**		**21 34 08.9**	**-0.3**
	1.5nm,0.1s								
ARXS				S		**Sg**		**21 34 30.2**	**-1.1**
	5.2nm,0.3s								
ARXS	**Arharly**	**1.63**	**332**	*eP*		**Pb**		**21 34 08.9**	**-0.3**
	1.5nm,0.1s								
ARXS				*eS*		**Sg**		**21 34 30.2**	**-1.1**
	5.2nm,0.3s								
DJR	**Jarkent**	**1.68**	**22**	P		**Pb**		**21 34 09.2**	**-0.7**
	2.2nm,0.1s								
DJR				S		**Sb**		**21 34 31.1**	**0.0**
	6.9nm,0.2s								
DJR	**Jarkent**	**1.68**	**22**	*eP*		**Pb**		**21 34 09.2**	**-0.7**
	2.2nm,0.1s								
DJR				*eS*		**Sb**		**21 34 31.1**	**0.0**
	6.9nm,0.2s								
CHKK	**Chushkaly**	**1.76**	**308**	P		**Pb**		**21 34 10.5**	**-0.9**
	1.5nm,0.3s								
CHKK				S		**Sb**		**21 34 33.8**	**+0.2**
	7.5nm,0.4s								
CHKK	**Chushkaly**	**1.76**	**308**	*eP*		**Pb**		**21 34 10.4**	**-0.9**
	1.5nm,0.3s								
CHKK				*eS*		**Sb**		**21 34 33.1**	**-0.4**
	8.4nm,0.2s								
CHKK	**Chushkaly**	**1.76**	**308**	*eP*		**Pb**		**21

MTN	Manton Dam	14.86	109	Pn	Pn	22 06 09.2	-0.3
FAKI	Fak Fak	16.33	72	Pn	Pn	22 06 26.6	-2.1
FAKI				IAmb	IAmb	22 06 29.7	
	comp=Z,16nm,0.9s						
FAKI	Fak Fak	16.33	72	P	Pn	22 06 29.3	+0.6
	comp=Z,21nm,0.9s						
MEEK	Meekatharra	18.34	175	P	P	22 06 54.1	+0.2
WRKA	Warakurna	19.98	148	P	P	22 07 12.1	+0.2
WB0	Warramunga Arr	20.56	126	P	P	22 07 18.3	+0.1
WB0				IAmb	IAmb	22 07 19.0	
	comp=Z,7.8nm,0.6s						
WRA	Warramunga Arr	20.61	126	P	P	22 07 18.1	-0.6
WRA	Warramunga Arr	20.61	126	P	P	22 07 18.8	+0.1
	comp=Z,4.3nm,0.5s,baz=300,slow=12,SNR=81						
WRA				S	S	22 11 04.7	-4.6
	comp=Z,0.8nm,1.0s,baz=287,slow=25,SNR=1.9						
	comp=Z,4.3nm,0.5s						
WB2	Warramunga Arr	20.62	126	P	P	22 07 19.0	+0.1
WB2				IAmb	IAmb	22 07 33.4	
	comp=Z,7.8nm,0.9s						
MORW	Morawa	20.69	182	P	P	22 07 19.1	-0.4
MORW				IAmb	IAmb	22 07 25.3	
	comp=Z,9.0nm,1.1s						
MORW	Morawa	20.69	182	P	Pn	22 07 21.6	-0.2
WR0	Warramunga Arr	20.78	126	P	P	22 07 20.7	+0.1
BLDU	Ballidu	22.22	180	P	P	22 07 36.3	+0.3
AS31	Alice Springs	22.46	135	P	P	22 07 38.8	+0.1
AS31				IAmb	IAmb	22 07 40.7	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	22.46	135	P	P	22 07 38.7	0.0
ASAR	Alice Springs	22.46	135	P	P	22 07 39.0	+0.3
	comp=Z,7.6nm,0.8s,baz=311,slow=9.5,SNR=65						
	comp=Z,7.6nm,0.8s						
AS01	Alice Springs	22.49	135	P	P	22 07 39.4	+0.3
KMBL	Kambalda	23.46	169	P	P	22 07 48.9	-0.1
NWAO	Narrogin (SRO)	24.53	179	P	P	22 07 58.6	-0.4
QIS	Mount Isa	25.24	121	P	P	22 08 09.1	+3.5
OOD	Oodnadatta	26.41	140	P	P	22 08 16.1	0.0
COEN	Coen	26.53	105	P	P	22 08 17.2	-0.2
MULG	Mulgathing	27.24	146	P	P	22 08 23.8	+0.2
BBOO	Buckleboo	30.27	146	P	P	22 08 50.5	0.0
CMAR	Chiang Mai Arr	31.85	327	P	P	22 09 05.0	+0.4
	comp=Z,1.2nm,0.3s,baz=156,slow=7.7,SNR=2.3						
CMAR				LR	LR	22 22 42.8	
	comp=Z,29nm,19.3s,baz=100,slow=38						
	comp=Z,1.2nm,0.3s						
STKA	Stephens Creek	32.94	139	P	P	22 09 14.2	+0.1
	comp=Z,2.8nm,0.6s,baz=314,slow=9.8,SNR=8.1						
	comp=Z,2.8nm,0.6s						
TOO	Toolangi	39.08	143	P	P	22 10 06.0	-0.6
TOO				IAmb	IAmb	22 10 16.6	
	comp=Z,9.8nm,1.1s						
JGF	Kuroka	47.78	23	P	P	22 11 14.8	-2.0
JGF				IAmb	IAmb	22 11 31.6	
	comp=Z,2.6nm,0.9s						
MJAR	Matsushiro Arr	48.94	23	P	P	22 11 28.1	+2.4
	comp=Z,0.7nm,0.5s,baz=204,slow=10.0,SNR=1.9						
	comp=Z,0.7nm,0.5s						
SONM	Songino Array	56.62	352	P	P	22 12 22.9	+0.4
SONM	Songino Array	56.62	352	P	P	22 12 23.1	+0.6
	comp=Z,0.4nm,0.8s,baz=158,slow=7.5,SNR=4.4						
	comp=Z,0.4nm,0.8s						
MKAR	Makanchi Array	62.82	334	P	P	22 13 04.6	-0.5
	comp=Z,0.4nm,0.8s,baz=148,slow=7.1,SNR=9.2						
	comp=Z,0.4nm,0.8s						
BVAR	Borovoye Array	72.63	333	P	P	22 14 07.9	+1.1
	comp=Z,0.5nm,0.8s,baz=151,slow=3.3,SNR=1.9						
	comp=Z,0.5nm,0.8s						
VNDA	Vanda	73.04	171	P	P	22 14 08.9	0.0
VNDA				IAmb	IAmb	22 14 13.0	
	comp=Z,2.5nm,1.0s						
BOSA	Boshof	87.38	242	P	P	22 15 26.5	-0.8
	comp=Z,2.0nm,0.8s,baz=354,slow=5.4,SNR=3.8						
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	116.13	281	PKP	PKPdf	22 21 21.7	-2.0
	comp=Z,0.5nm,0.7s,baz=52,slow=2.4,SNR=2.3						
CPUP	Villa Florida	145.11	189	PKP	PKPab	22 22 17.6	+0.4
	comp=Z,4.9nm,0.7s,baz=124,slow=2.7,SNR=11						
BDFB	Brasilia	151.84	212	PKPbc	PKPbc	22 22 35.0	-0.5
	comp=Z,1.1nm,0.4s,baz=8.1,slow=20,SNR=3.0						

NEIC ***01*** *22:17:44.0±1.1,55.78N±0.09×149.6W±0.1,h8km±8km, ML3.5/42,ML3.3(AEIC),Error ellipse: s-maj=13.7km s-min=7.4km az=150.0*
AEIC ***01*** *22:17:47.6±1.2,55.7N±0.1×149.6W±0.1,h4km±8km,Error ellipse: s-maj=15.8km s-min=9.4km az=167.0*

ISC 01 22:17:43.4±2.1,55.8N±0.1×149.65W±0.06,h10km,n113,
σ0.95/117,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.50	308			Pn	22 18 24.1	+0.1
OHAK	Old Harbor	2.50	308			Sn	22 18 53.0	-1.5
OHAK	Old Harbor	2.50	308	P		Pn	22 18 24.6	+0.6
	baz=125							
OHAK				S		Sn	22 18 53.0	-1.5
	baz=125							
KDAK	Kodiak Island	2.59	323			Pn	22 18 26.0	+0.6
KDAK	Kodiak Island	2.59	323			Sn	22 18 55.7	-1.2
KDAK	Kodiak Island	2.59	323	P		Pn	22 18 26.0	+0.6
	baz=140							
KDAK				S		Sn	22 18 55.7	-1.2
	baz=140							
SII	Sitkinak Islan	2.66	289			Pn	22 18 26.2	-0.1
SII				IAML			22 19 02.6	
	comp=E,118nm,1.2s							
SII				IAML			22 19 16.1	
	comp=N,119nm,1.1s							
SII	Sitkinak Islan	2.66	289			Sn	22 18 58.9	+0.3
SII	Sitkinak Islan	2.66	289	P		Pn	22 18 26.3	-0.1
	baz=106							
SII				S		Sn	22 18 58.9	+0.3
	baz=106							
R18K	Karluk	3.21	306			Pn	22 18 34.9	+1.1
R18K				IAML			22 19 17.6	
	comp=N,114nm,0.4s							
R18K				IAML			22 19 23.9	
	comp=E,94nm,0.4s							
R18K	Karluk	3.21	306	P		Pn	22 18 35.0	+1.1
	baz=123							
Q20K	Shuyak Island	3.23	334	P		Pn	22 18 35.1	+1.0
	baz=151							
Q20K				S		Sn	22 19 12.3	-0.2
	baz=151							
SYI	Shuyak Island	3.23	334			Pn	22 18 34.2	+0.2
SYI				IAML			22 19 12.9	
	comp=E,63nm,1.0s							
SYI				IAML			22 19 14.8	
	comp=N,62nm,1.4s							
SYI	Shuyak Island	3.23	334			Sn	22 19 12.3	-0.2
KAHG	Katmai Hook Gl	3.83	318			Pn	22 18 43.9	+1.5
Q19K	Cape Douglas,	3.85	327			Pn	22 18 44.4	+1.8
Q19K						Sn	22 19 26.8	-1.1
Q19K	Cape Douglas,	3.85	327	IAML			22 20 56.3	
	comp=N,142nm,1.1s							
Q19K	Cape Douglas,	3.85	327	P		Pn	22 18 44.4	+1.8
	baz=144							
Q19K				S		Sn	22 19 26.8	-1.1
	baz=144							
CNPM	China Poot	3.87	348			Sn	22 19 28.0	-0.5
CNPM				IAML			22 19 29.7	
	comp=E,48nm,1.0s							
CNPM	China Poot	3.87	348			Pn	22 18 43.4	+0.4
KCG	Knife Ck. Glac	3.93	313			Pn	22 18 45.6	+1.8
ANCK	Angle Creek	4.03	310			Pn	22 18 46.9	+1.7
BRSE	Bradley Lake S	4.04	352			Pn	22 18 45.6	+0.4
BRSE	Bradley Lake S	4.04	352	P		Pn	22 18 45.6	+0.4
	baz=171							
BRSE				S		Sn	22 19 31.1	-1.4
	baz=171							
HOM	Homer	4.05	346	Pn		Pn	22 18 45.2	-0.2
Q17K	Contact Creek	4.24	309	P		Pn	22 18 49.3	+1.2
	baz=124							
Q17K				S		Sn	22 19 36.7	-0.8
	baz=124							
P19K	Oil Pt	4.35	335	Pn		Pn	22 18 49.1	-0.4
P19K				IAML			22 19 45.0	
	comp=E,83nm,0.6s							
P19K				IAML			22 19 45.2	
	comp=N,73nm,0.5s							
P23K	Montague Islan	4.42	15			Pn	22 18 50.3	-0.1
P23K	Montague Islan	4.42	15	P		Pn	22 18 50.3	-0.1
	baz=196							
P18K	Big Mountain,	4.72	323			Pn	22 18 55.0	+0.4
P18K	Big Mountain,	4.72	323	P		Pn	22 18 55.1	+0.4
	baz=138							
O22K	Cooper Landing	4.74	360	Pn		Pn	22 18 55.0	+0.2
ANNW	Aniakchak Nort	4.92	288			Pn	22 18 58.5	+1.2
HIN	Hinchinbrook I	4.94	18			Pn	22 18 57.9	+0.2
HIN				IAML			22 19 49.5	
	comp=E,47nm,1.4s							
HIN				IAML			22 21 08.1	
	comp=N,49nm,1.4s							
CHGN	Chignik	4.95	280			Pn	22 18 58.2	+0.5
CHGN				IAML			22 19 53.6	
	comp=E,33nm,1.3s							
CHGN				IAML			22 19 56.6	
	comp=N,40nm,1.0s							
CHGN	Chignik	4.95	280	P		Pn	22 18 58.3	+0.6
	baz=93							
KAIM	Kayak Island	5.03	32			Pn	22 18 59.1	+0.3
KAIM	Kayak Island	5.03	32	P		Pn	22 18 59.1	+0.3
	baz=215							
P17K	Kvichak River	5.03	316	P		Pn	22 19 00.4	+1.6
	baz=130							
O18K	Koktuh Hills	5.07	326			Pn	22 19 00.1	+0.6
O18K				IAML			22 19 58.1	
	comp=N,17nm,0.5s							
O18K	Koktuh Hills	5.07	326	P		Pn	22 19 00.4	+1.0
	baz=142							
O19K	Port Alsworth	5.10	333	Pn		Pn	22 19 00.1	+0.3
O19K				IAML			22 20 02.9	
	comp=N,49nm,0.5s							
RAGM	Ragged Mountai	5.34	28	Pn		Pn	22 19 03.1	0.0
RAGM				IAML			22 22 00.9	
	comp=E,48nm,1.4s							
SUCK	Suckling Hills	5.34	33			Pn	22 19 03.6	+0.5
SUCK				IAML			22 20 16.2	
	comp=N,55nm,1.4s							
RC01	Rabbit Creek A	5.35	360			Pn	22 19 03.2	0.0
RC01				IAML			22 20 03.8	
	comp=E,24nm,0.6s							
RC01				IAML			22 20 05.6	
	comp=N,18nm,0.4s							
RC01	Rabbit Creek A	5.35	360	P		Pn	22 19 03.2	0.0
	baz=179							
HMT	Hamilton	5.41	30			Pn	22 19 04.7	+0.7
HMT	Hamilton	5.41	30	IAML			22 21 59.1	
	comp=E,46nm,1.5s							
HMT				IAML			22 22 02.4	
	comp=N,40nm,1.4s							
NICHA	Nichawak Mount	5.41	32			Pn	22 19 04.7	+0.6
GOAT	Goat Mountain	5.49	26			Pn	22 19 06.2	+1.0
P16K	Nushagak River	5.58	309			Pn	22 19 07.6	+1.3
P16K	Nushagak River	5.58	309	P		Pn	22 19 07.6	+1.3
	baz=123							
BERG	Berg Lake	5.61	32	Pn		Pn	22 19 07.1	+0.3
O17K	Koliganek Bris	5.66	318			Pn	22 19 08.4	+0.9
O17K	Koliganek Bris	5.66	318	P		Pn	22 19 08.4	+0.9
	baz=132							
N19K	Bonanza Creek	5.67	335			Pn	22 19 08.0	+0.2
N19K	Bonanza Creek	5.67	335	P		Pn	22 19 07.8	0.0
	baz=151							
KNK	Knik Glacier	5.71	6			Pn	22 19 08.6	+0.5
KNK	Knik Glacier	5.71	6	P		Pn	22 19 08.6	+0.5
	baz=186							
SNH	Sunshine Point	5.72	36	Pn		Pn	22 19 08.8	+0.4
SUA	Sunshine Creek	5.75	355	Pn		Pn	22 19 09.0	+0.2
KHIT	Khitrov Hills	5.79	33			Pn	22 19 09.6	+0.2
BMRM	Bremner River	5.86	25			Pn	22 19 10.7	+0.4
BMRM	Bremner River	5.86	25	P		Pn	22 19 10.7	+0.4
	baz=209							
N18K	Kilae Creek	5.94	329	Pn		Pn	22 19 11.8	+0.5
O16K	Kokwok River B	5.94	314			Pn	22 19 11.8	+0.5
O16K	Kokwok River B	5.94	314	P		Pn	22 19 12.7	+1.4
	baz=127							
MESA	MESA	6.03	40	Pn		Pn	22 19 10.5	-2.2
GHO	Glory Hole Cre	6.04	3	Pn		Pn	22 19 13.7	+0.9
KLU	Klutina	6.07	17			Pn	22 19 13.9	+0.7
KLU	Klutina	6.07	17	P		Pn	22 19 13.9	+0.7
	baz=200							
CRQM	Cirque	6.07	32			Pn	22 19 13.6	+0.3
CRQE	Cirque	6.08	32	P		Pn	22 19 13.6	+0.2
	baz=217							
SML	Sawmill	6.11	6	Pn		Pn	22 19 14.1	+0.4
SVW2	Sparrevohn	6.19	332	Pn		Pn	22 19 15.5	+0.7
ISLE	Juniper Island	6.20	35			Pn	22 19 15.6	+0.5
BAGL	Bagley Icefiel	6.21	37			Pn	22 19 15.4	+0.5
SCM	Sheep Creek Mo	6.21	10			Pn	22 19 16.2	+1.1
SCM	Sheep Creek Mo	6.21	10	P		Pn	22 19 16.6	+1.5
	baz=192							
N17K	Nushagak Hills	6.23	323	Pn		Pn	22 19 16.2	+1.0
VRDI	Verde Repeater	6.37	28			Pn	22 19 18.0	+0.6
M20K	Styx River	6.40	345	Pn		Pn	22 19 10.0	-7.7
N25K	Chitina, Valde	6.43	22			Pn	22 19 18.9	+0.8
N25K	Chitina, Valde	6.43	22	P		Pn	22 19 19.0	+1.0
	baz=206							
KIAG	Kiagna River	6.44	34			Pn	22 19 18.9	+0.5
GLB	Gilahina Butte	6.46	26	Pn		Pn	22 19 19.0	+0.4
O15K	Ungalikthiuk R	6.47	306			Pn	22 19 19.8	+1.2
O15K	Ungalikthiuk R	6.47	306	P		Pn	22 19 19.8	+1.2
	baz=118							
TABL	Table Mountain	6.50	40	Pn		Pn	22 19 19.6	+0.3
M24K	Tolsona, Glenn	6.62	14	Pn		Pn	22 19 22.5	+1.8
MCARA	McCarthy VSAT	6.62	29	Pn		Pn	22 19 21.7	+1.1
BARN	Barnard Glacie	6.77	35			Pn	22 19 23.4	+0.5
BCPM	Bancas Point	6.79	48	Pn		Pn	22 19 23.6	+0.5
CTGM	Chitina Glacie	6.81	37	Pn		Pn	22 19 23.3	0.0
LOGN	Logan Glacier	6.82	38	Pn		Pn	22 19 24.0	+0.4
M17K	Holitna River	6.97	327	Pn		Pn	22 19 26.1	+0.7
N15K	Kwethluk River	7.10	313			Pn	22 19 29.1	+1.8
O14K	Tigyukauivet M	7.17	304	Pn		Pn	22 19 29.4	+1.2
M16K	Timber Creek	7.19	321	Pn		Pn	22 19 29.9	+1.4
DHY	Denali Highway	7.43	8	Pn		Pn	22 19 32.8	+0.9
O29M	Mount Kennedy	7.43	48	Pn		Pn	22 19 32.3	+0.4
P29M	Windy Craggy	7.46	54	Pn		Pn	22 19 32.7	+0.4
M26K	Nabesna, AK	7.49	24	Pn		Pn	22 19 33.6	+1.0
S31K	Pelican	7.68	68	Pn		Pn	22 19 33.6	-1.5
RND	Reindeer	7.68	3	Pn		Pn	22 19 37.4	+2.1
TRF	Thorofare Moun	7.72	358	Pn		Pn	22 19 37.0	+1.1
M27K	Edge Creek, AK	7.73	28	Pn		Pn	22 19 37.5	+1.5
CAST	Castle Rocks	7.78	352	Pn		Pn	22 19 39.2	+2.6
L16K	Owhat River	7.85	323	Pn		Pn	22 19 38.3	+0.8
TTA	Tatalina	7.89	338	Pn		Pn	22 19 37.9	-0.2
HYT	Haines Junctio	8.16	47	Pn		Pn	22 19 42.0	+0.1
K17K	Iditarod	8.26	331	Pn		Pn	22 19 43.5	+0.4
M31M	Drury Creek, Y	10.16	44			Pn	22 20 04.7	-4.6

IDC ***01*** *22:28:07.9±1.4,6.57S×128.43E,h340km±13km,mb3.8/16, mbtmp4.6/19,Error ellipse: s-maj=20.2km s-min=7.6km az=68.0*
DJA ***01*** *22:28:07.3±0.2,7.5S±2.×12.9E±.,h319km±5km,M4.4/20, mb4.6/20,mB4.9/12,MLv4.7/16,Mw(mB)4.2/12, MwMwp5.3/1,Mwp5.5/1*
NEIC ***01*** *22:28:07.6±1.1,6.44S±0.08×128.65E±0.08,h337km±8km, mb4.3/45,Error ellipse: s-maj=12.5km s-min=11.3km az=219.0*

ISC 01 22:28:07.0±0.3,6.48S±0.05×128.61E±0.06,h334km,n141,
σ1.902/149,**mb4.2/43,3D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.33	34	P		Pn	22 29 00.3	+0.8
BNDI				S		S	22 29 40.5	-1.0
SAUI	Saumlaki	3.06	119			Pn	22 29 05.8	0.0
SAUI	Saumlaki	3.06	119	P		Pn	22 29 07.1	+1.3
SAUI	Saumlaki	3.06	119	P		Pn	22 29 06.3	+0.5
SAUI				S		S	22 29 50.3	-2.7
NLAI	Namlea	3.55	335	P		Pn	22 29 10.2	-0.4
FAKI	Fak Fak	5.07	46			Pn	22 29 26.3	-0.5
FAKI	Fak Fak	5.07	46	P		Pn	22 29 27.2	+0.4
FAKI	Fak Fak	5.07	46	P		Pn	22 29 26.2	-0.5
	72nm,0.9s,834nm0.6nm							
SANI	Sanana	5.12	329	P		Pn	22 29 28.0	+0.7
SANI	Sanana	5.12	329	P		Pn	22 29 27.4	+0.1
	51nm,1.1s,785nm0.3nm							
SOEI	Soe	5.39	233			Pn	22 29 30.4	-0.1
SOEI	Soe	5.39	233	P		Pn	22 29 30.4	-0.1
SOEI	Soe	5.39	233	P		Pn	22 29 30.1	-0.4
	251nm,0.8s,4μm2.6nm							
KMPI	Kaimana, Papua	5.80	61	P		Pn	22 29 34.9	-0.2
	85nm,0.7s,0.7nm							
LBMI	Labuha	5.91	349	P		Pn	22 29 35.8	-0.5
	43nm,0.8s,2μm0.4nm							
BBSI	Bau Bau	6.08	279	P		Pn	22 29 40.2	+1.8
	153nm,1.1s,2μm0.5nm							
SWI	Sorong	6.18	25	P		Pn	22 29 38.9	-0.5
	24nm,0.6s,1μm0.4nm							
MMRI	Maumere	6.67	251	P		Pn	22 29 44.8	-0.4
	67nm,0.9s,0.3nm							
MTN	Manton Dam	6.80	159	Pn		Pn	22 29 46.2	-0.5
MTN	Manton Dam	6.80	159	P		Pn	22 29 46.7	0.0
KDU	Kakadu	7.25	149	P		Pn	22 29 52.1	0.0
LUWI	Luwuk	7.94	313	Pn		Pn	22 30 01.1	+0.7
LUWI	Luwuk	7.94	313	P		Pn	22 30 02.4	+2.1
LUWI	Luwuk	7.94	313	P		Pn	22 30 01.8	+1.5
	103nm,0.9s,5μm0.4nm							
BKSI	Bulukumba	8.52	277	P		Pn	22 30 08.3	+1.1
	24nm,0.7s							
BASI	Baing, Sumba	8.77	244	P		Pn	22 30 10.3	+0.1
	153nm,1.1s							
KAPI	Kappang	8.93	279	Pn		Pn	22 30 13.0	+0.8
KAPI	Kappang	8.93	279	P		P	22 30 15.3	0.0
	21nm,0.6s,baz=105,slow=9.4,SNR=9.6							
KNRA	Kununurra	9.14	179	Pn		Pn	22 30 14.8	+0.1
KNRA	Kununurra	9.14	179	P		Pn	22 30 15.4	+0.7
TTSI	Tana Toraja	9.40	291	P		Pn	22 30 18.8	+1.0
	39nm,0.5s,4μm							
SGSI	Sangihe	10.55	343	P		Pn	22 30 32.3	+0.5
	317nm,0.7s,8μm							
TOLI2	Tolitoli	10.86	314			Pn	22 30 35.1	-0.3
TOLI2	Tolitoli	10.86	314	P		P	22 30 37.0	+0.2
PLAI	Plampang	10.98	257	P		Pn	22 30 36.5	-0.4
	26nm,0.6s							
MPSI	Mapaga	11.02	308	P		P	22 30 39.4	+0.9
	46nm,1.2s,785nm							
TABU	Tabubil	12.61	85	P		Pn	22 30 59.1	+2.7
WB0	Warramunga Arr	14.36	157	P		P	22 31 15.8	+0.4
WRAB	Tennant Creek	14.49	158	P		P	22 31 16.9	-0.1
WRA	Warramunga Arr	14.49	158	P		P	22 31 16.3	-0.6
WRA	Warramunga Arr	14.49	158	P		P	22 31 17.4	+0.4
	33nm,0.9s,baz=338,slow=12,SNR=155							
WRA				S		S	22 33 51.5	-3.0
	37nm,0.8s,baz=341,slow=16,SNR=15							
WRA				ScP		ScP	22 39 08.4	-0.9
	3.3nm,0.5s,baz=342,slow=1.6,SNR=16							
WB2	Warramunga Arr	14.50	158	P		P	22 31 17.3	+0.3
WB1	Warramunga Ar.	14.51	158	P		P	22 31 17.7	+0.5
WR0	Warramunga Arr	14.59	157	P		P	22 31 18.3	+0.3
COEN	Coen	16.14	119			P	22 31 35.6	+0.7
COEN	Coen	16.14	119	P		P	22 31 36.1	+1.1
QIS	Mount Isa	17.60	144	P		P	22 31 51.8	+1.2
AS31	Alice Springs	17.83	164	P		P	22 31 53.9	+0.8
ASAR	Alice Springs	17.83	164			P	22 31 53.6	+0.4
ASAR	Alice Springs	17.83	164	P		P	22 31 53.9	+0.7
	81nm,0.8s,baz=345,slow=11,SNR=295							
ASAR				S		S	22 34 59.6	-1.1
	92nm,0.8s,baz=344,slow=17,SNR=71							
ASAR				ScP		ScP	22 39 15.0	-0.8
	6.6nm,0.5s,baz=354,slow=1.9,SNR=26							
AS01	Alice Springs	17.84	164	P		P	22 31 54.4	+1.1
WRKA	Warakurna	18.46	181	P		P	22 32 00.8	+1.0
PMG	Port Moresby	18.60	100	P		P	22 32 01.0	-0.4
PMG	Port Moresby	18.60	100	P		P	22 32 05.2	+3.8
	32nm,0.7s,baz=227,slow=19,SNR=5.3							
SBUM	Sibu	18.61	298	P		P	22 32 02.4	+0.9
SBUM				IAmb		IAmb	22 32 06.5	
	comp=Z,11nm,0.9s							
MTSU	Mount Surprise	19.21	128	P		P	22 32 09.2	+1.4
TV1H	Townsville Har	21.78	127	P		P	22 32 34.7	+2.1
CTA	Charters Tower	21.83	130	P		P	22 32 35.1	+2.0
CTA	Charters Tower	21.83	130	P		P	22 32 35.0	+2.0
	comp=Z,27nm,0.8s,baz=313,slow=10.0,SNR=37							
CTA				ScP		ScP	22 39 25.5	+0.3
	comp=Z,2.8nm,0.7s,baz=314,slow=1.9,SNR=7.3							
	comp=Z,27nm,0.8s							
CTAO	Charters Tower	21.83	130	P		P	22 32 33.2	+0.2
CTAO	Charters Tower	21.83	130	P		P	22 32 35.2	+2.2
INKA	Innaminka	24.08	153	P		P	22 32 56.2	+2.9
LCRK	Leigh Creek	25.50	160	P		P	22 33 06.6	+0.6
STKA	Stephens Creek	28.03	156	P		P	22 33 28.3	-0.2
STKA	Stephens Creek	28.03	156	P		P	22 33 29.6	+1.1
STKA	Stephens Creek	28.03	156	P		P	22 33 29.1	+0.6
	comp=Z,13nm,0.7s,baz=328,slow=9.2,SNR=26							
	comp=Z,13nm,0.7s							
CMSA	Cobar Meteorol	29.61	149	P		P	22 33 43.8	+1.4
RPSI	Rantau Prapat	31.00	286	P		P	22 33 53.4	-1.4
RPSI				IAmb		IAmb	22 33 57.1	
	comp=Z,12nm,1.0s							
PSI	Prapat	31.04	286	P		P	22 33 56.1	+0.9
AUDCS	Dubbo College	31.70	146	P		P	22 34 02.3	+1.6
ARPS	Mount Arapiles	32.48	160	P		P	22 34 08.4	+1.1
YNG	Young	33.18	149	P		P	22 34 15.3	+1.9
CAN	Canberra	34.29	150	P		P	22 34 23.1	+0.2
CAN	Canberra	34.29	150	P		P	22 34 24.9	+2.0
SRDT	SRDT	35.83	305	P		P	22 34 38.5	+2.3
SLVN	Son La	36.76	319	P		P	22 34 44.0	0.0
SLVN				IAmb		IAmb	22 34 45.8	
	comp=Z,11nm,1.1s							
CM31	Chiang Mai Arr	38.34	311	P		P	22 34 57.7	+0.6
CM31				IAmb		IAmb	22 35 02.5	
	comp=Z,10nm,0.9s							
CMAR	Chiang Mai Arr	38.34	311	P		P	22 34 56.6	-0.5
CMAR	Chiang Mai Arr

KSH	**Kashi**	**66.70**	**318**	P	**P**	**22**	**38**	**24.1 +0.9**
KSH				pmax	pmax			
	comp=Z,4.0nm,0.9s							
PRZ	**Przheval'sk**	**66.73**	**322**	P	**P**	**22**	**38**	**23.3 -0.1**
MK31	**Makanchi Array**	**67.04**	**327**	P	**P**	**22**	**38**	**25.2 +0.2**
MK31				IAmb	IAmb	22	38	26.5
	comp=Z,7.5nm,0.8s							
MKAR	**Makanchi Array**	**67.04**	**327**	P	**P**	**22**	**38**	**24.4 -0.6**
MKAR	**Makanchi Array**	**67.04**	**327**	P	**P**	**22**	**38**	**25.8 +0.8**
	comp=Z,8.4nm,0.7s,baz=126,slow=7.8,SNR=89							
	comp=Z,8.4nm,0.7s							
MAKZ	**Makanchi**	**67.22**	**327**	P	**P**	**22**	**38**	**25.6 -0.5**
MAKZ				IAmb	IAmb	22	38	27.4
	comp=Z,7.2nm,0.8s							
NRN	**Naryn**	**67.67**	**320**	P	**P**	**22**	**38**	**29.6 +0.2**
YAK	**Yakutsk**	**68.31**	**1**	P	**P**	**22**	**38**	**31.1 -1.4**
AAK	**Ala-Archa**	**69.26**	**320**	P	**P**	**22**	**38**	**39.9 +1.0**
AAK				IAmb	IAmb	22	38	41.0
	comp=Z,6.2nm,0.9s							
KBL	**Kabul**	**69.37**	**310**	P	**P**	**22**	**38**	**39.7 -0.1**
ARSB	**Arslanbob**	**69.58**	**318**	P	**P**	**22**	**38**	**41.1 +0.2**
BTK	**Batken**	**70.45**	**316**	P	**P**	**22**	**38**	**46.0 -0.1**
BTK				IAmb	IAmb	22	38	48.5
	comp=Z,4.9nm,1.1s							
ZAA0	**Zalesovo Array**	**70.51**	**334**	P	**P**	**22**	**38**	**45.5 -0.5**
ZAA0				IAmb	IAmb	22	38	46.5
	comp=Z,5.9nm,1.0s							
ZALV	**Zalesovo Beam**	**70.51**	**334**	P	**P**	**22**	**38**	**45.4 -0.6**
ZALV	**Zalesovo Beam**	**70.51**	**334**	P	**P**	**22**	**38**	**45.9 -0.1**
	comp=Z,2.5nm,0.6s,baz=132,slow=4.4,SNR=15							
	comp=Z,2.5nm,0.6s							
KURBB	**Kurchatov Arra**	**71.35**	**329**	P	**P**	**22**	**38**	**51.2 +0.1**
	comp=Z,5.1nm,0.9s,baz=129,slow=4.8,SNR=40							
	comp=Z,5.1nm,0.9s							
KURK	**Kurchatov**	**71.36**	**329**	P	**P**	**22**	**38**	**50.7 -0.4**
KURK				IAmb	IAmb	22	38	53.1
	comp=Z,12nm,1.2s							
SEY	**Seymchan**	**71.56**	**11**	P	**P**	**22**	**38**	**53.4 +1.3**
	comp=Z,2.8nm,0.6s,baz=194,slow=8.7,SNR=6.0							
	comp=Z,2.8nm,0.6s							
KK31	**Karatay Array**	**72.04**	**319**	P	**P**	**22**	**38**	**55.5 0.0**
KK31				IAmb	IAmb	22	38	56.9
	comp=Z,4.9nm,1.1s							
KKAR	**Karatay Array**	**72.04**	**319**	P	**P**	**22**	**38**	**55.5 0.0**
KKAR				IAmb	IAmb	22	38	56.9
	comp=Z,4.9nm,1.1s							
KKAR	**Karatay Array**	**72.04**	**319**	P	**P**	**22**	**38**	**55.0 -0.4**
VNDA	**Vanda**	**73.13**	**173**	P	**P**	**22**	**39**	**00.9 -0.3**
	comp=Z,2.7nm,0.8s,baz=315,slow=6.7,SNR=8.0							
	comp=Z,2.7nm,0.8s							
BVAR	**Borovoye Array**	**76.89**	**328**	P	**P**	**22**	**39**	**22.9 +0.1**
	comp=Z,3.6nm,0.9s,baz=121,slow=5.7,SNR=18							
	comp=Z,3.6nm,0.9s							
BRVK	**Borovoye**	**76.96**	**328**	P	**P**	**22**	**39**	**23.0 -0.3**
BRVK				IAmb	IAmb	22	39	24.3
	comp=Z,5.3nm,1.0s							
TIXI	**Tiksi**	**77.97**	**0**	P	**P**	**22**	**39**	**27.4 -1.0**
TIXI				IAmb	IAmb	22	39	29.5
	comp=Z,7.5nm,1.4s							
NRIK	**Noril'sk**	**80.73**	**346**	P	**P**	**22**	**39**	**43.8 +0.6**
	comp=Z,2.7nm,0.8s,baz=131,slow=6.6,SNR=3.8							
	comp=Z,2.7nm,0.8s							
ABKAR	**Akbulak array**	**81.25**	**322**	P	**P**	**22**	**39**	**46.0 -0.4**
ABKAR				IAmb	IAmb	22	39	47.0
	comp=Z,2.2nm,0.6s							
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**22**	**39**	**57.1 -0.6**
	comp=Z,2.8nm,0.6s,baz=294,slow=1.7,SNR=21							
	comp=Z,2.8nm,0.6s							
ARU	**Arti**	**84.54**	**328**	P	**P**	**22**	**40**	**02.8 -0.1**
ARU				IAmb	IAmb	22	40	03.5
	comp=Z,5.1nm,0.9s							
RAYN	**Ar Rayn**	**86.27**	**294**	P	**P**	**22**	**40**	**11.8 -0.5**
RAYN				IAmb	IAmb	22	40	12.9
	comp=Z,5.2nm,1.0s							
ESDC	**Sonseca Array**	**126.16**	**315**	SKPbc	SKPbc	22	49	13.4
	comp=Z,1.0nm,1.1s,baz=194,slow=9.9,SNR=4.0							
TORD	**Torodi Ar. Bea**	**127.35**	**282**	PKP	**PKPdf**	**22**	**46**	**33.2 -0.2**
	comp=Z,5.8nm,0.7s,baz=67,slow=2.6,SNR=1.7							
TORD				SKPbc	SKPbc	22	49	18.3
	comp=Z,2.4nm,0.8s,baz=96,slow=5.8,SNR=12							
SCHQ	**Schefferville**	**130.21**	**12**	SKPbc	**SKPbc**	**22**	**49**	**27.8 -1.1**
	comp=Z,6.4nm,0.7s,baz=336,slow=3.6,SNR=16							
DBIC	**Dimbokro**	**133.78**	**273**	SKPbc	**SKPbc**	**22**	**49**	**41.0 -1.7**
	comp=Z,5.0nm,0.6s,baz=91,slow=4.0,SNR=9.7							
CPUP	**Villa Florida**	**146.88**	**170**	PKPbc	**PKPdf**	**22**	**47**	**09.4 +0.7**
	comp=Z,6.0nm,0.9s,baz=240,slow=0.7,SNR=8.4							

*SJA **01** 22:33:15.1±0.6,23.°10S×66.°84W,h228km±5km,ML3.6, MW3.6*
*GUC **01** 22:33:18.3±0.6,23.°11S×67.°25W,h239km±7km,ML3.7*
ISC 01 22:33:15.6±1.8,23.°17S±0.°04×66.°92W±0.°05, h220km±15km,n37,σ1°32/69,8C-1D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.63**	**53**	*e*P	**Pn**	**22 33 52.5**	**-0.2**
YJA				*e*S	**S**	**22 34 19.1**	**-2.3**
LVC	**Limon Verde**	**1.92**	**286**	*e*P	**Pn**	**22 33 56.2**	**+0.9**
LVC				*e*S	**S**	**22 34 26.7**	**+0.7**
LVC	**Limon Verde**	**1.92**	**286**	⇑*e*P	**Pn**	**22 33 56.3**	**+0.9**
LVC				*e*S	**S**	**22 34 25.6**	**-0.4**
LVC				IAML		22 34 27.6	
	284nm,0.3s						
SLA	**San Lorenzo**	**2.02**	**140**	*e*P	**Pn**	**22 33 57.2**	**+1.2**
PB06	**IPOC Station P**	**2.49**	**280**	*e*P	**Pn**	**22 34 02.0**	**+1.1**
PB06				*e*S	**S**	**22 34 36.5**	**+0.5**
PB06				IAML		22 34 39.1	
	comp=Z,179nm,0.3s						
PB06	**IPOC Station P**	**2.49**	**280**	⇑*i*P	**Pn**	**22 34 01.8**	**+0.9**
PB06				*i* S	**S**	**22 34 34.9**	**-1.0**
PB06				IAML		22 34 37.5	
	comp=E,307nm,0.2s						
PB09	**IPOC Station P**	**2.54**	**302**	*e*P	**Pn**	**22 34 02.9**	**+1.4**
PB09				*e*S	**S**	**22 34 38.5**	**+1.4**
PB09				IAML		22 34 39.9	
	comp=Z,94nm,0.4s						
PB09	**IPOC Station P**	**2.54**	**302**	*e*P	**Pn**	**22 34 02.9**	**+1.4**
PB09				*i* S	**S**	**22 34 36.6**	**-0.5**
PB09				IAML		22 34 40.2	
	comp=N,96nm,0.1s						
PB05	**IPOC Station P**	**3.04**	**275**	*e*P	**Pn**	**22 34 07.8**	**+0.9**
PB05				*e*S	**S**	**22 34 46.2**	**-0.7**
PB05				IAML		22 34 47.7	
	comp=Z,68nm,0.3s						
PB05	**IPOC Station P**	**3.04**	**275**	⇑*i*P	**Pn**	**22 34 07.9**	**+0.9**
PB05				*e*S	**S**	**22 34 44.4**	**-2.5**
PB05				IAML		22 34 53.7	
	comp=E,112nm,0.5s						
FSA	**Cafayete**	**3.06**	**164**	*e*P	**Pn**	**22 34 08.4**	**+1.3**
PB04	**IPOC Station P**	**3.10**	**285**	*e*P	**Pn**	**22 34 08.7**	**+1.1**
PB04				*e*S	**S**	**22 34 47.0**	**-1.2**
PB04				IAML		22 34 49.6	
	comp=Z,195nm,0.2s						
PB04	**IPOC Station P**	**3.10**	**285**	*e*P	**Pn**	**22 34 07.9**	**+0.2**
PB04				*e*S	**S**	**22 34 45.8**	**-2.4**
PB07	**IPOC Station P**	**3.10**	**297**	*e*P	**Pn**	**22 34 08.3**	**+0.7**
PB07				*e*S	**S**	**22 34 46.6**	**-1.6**
PB07				IAML		22 34 47.6	
	comp=Z,247nm,0.3s						
PB07	**IPOC Station P**	**3.10**	**297**	⇑*i*P	**Pn**	**22 34 08.5**	**+0.8**
PB07				⇑*i*S	**S**	**22 34 46.2**	**-2.0**
GO02	**Mina Guanaco**	**3.15**	**230**	*e*P	**Pn**	**22 34 09.4**	**+1.0**
GO02	**Mina Guanaco**	**3.15**	**230**	⇓*e*P	**Pn**	**22 34 10.1**	**+1.8**
GO02				*e*S	**S**	**22 34 50.3**	**+0.9**
GO02				IAML		22 34 54.2	
	comp=N,121nm,0.2s						
PB01	**IPOC Station P**	**3.18**	**311**	*e*P	**Pn**	**22 34 09.6**	**+1.0**
PB01				*e*S	**S**	**22 34 49.5**	**-0.3**
PB01				IAML		22 34 51.2	
	comp=Z,196nm,0.2s						
PB01	**IPOC Station P**	**3.18**	**311**	*e*P	**Pn**	**22 34 09.6**	**+1.0**
PB01				*e*S	**S**	**22 34 48.3**	**-1.6**
PB02	**IPOC Station P**	**3.31**	**303**	*e*P	**Pn**	**22 34 10.9**	**+0.7**
PB02				*e*S	**S**	**22 34 51.0**	**-1.6**
PB02				IAML		22 34 53.1	
	comp=Z,196nm,0.2s						
PB02	**IPOC Station P**	**3.31**	**303**	*e*P	**Pn**	**22 34 11.0**	**+0.8**
PB02				*e*S	**S**	**22 34 50.3**	**-2.3**
PB10	**IPOC Station P**	**3.36**	**263**	*e*P	**Pn**	**22 34 11.8**	**+1.2**
PB10				*e*S	**S**	**22 34 52.0**	**-1.4**
PB10				IAML		22 34 53.4	
	comp=Z,43nm,0.4s						
PB10	**IPOC Station P**	**3.36**	**263**	⇑*i*P	**Pn**	**22 34 11.7**	**+1.2**
PB10				*i* S	**S**	**22 34 51.4**	**-2.0**
PB14	**IPOC Station P**	**3.51**	**245**	*e*P	**Pn**	**22 34 13.6**	**+1.1**
PB14				*e*S	**S**	**22 34 56.6**	**-0.4**
PB14				IAML		22 34 59.1	
	comp=Z,57nm,0.2s						
PB14	**IPOC Station P**	**3.51**	**245**	⇑*i*P	**Pn**	**22 34 13.6**	**+1.1**
PB14				*e*S	**S**	**22 34 56.0**	**-1.0**
PB08	**IPOC Station P**	**3.66**	**325**	*e*P	**Pn**	**22 34 16.2**	**+1.8**
PB08				*e*S	**S**	**22 35 01.2**	**+0.8**
PB08				IAML		22 35 06.4	
	comp=Z,50nm,0.4s						
PB08	**IPOC Station P**	**3.66**	**325**	⇑*e*P	**Pn**	**22 34 16.1**	**+1.7**
PB08				*i* S	**S**	**22 35 00.3**	**-0.2**
PATCX	**Punta Patache**	**3.80**	**307**	*e*P	**Pn**	**22 34 16.4**	**+0.5**
PATCX	**Punta Patache**	**3.80**	**307**	*e*P	**Pn**	**22 34 16.7**	**+0.8**
PATCX				*e*S	**S**	**22 35 00.5**	**-2.5**
TA01	**Diego Aracena**	**3.98**	**310**	*e*P	**Pn**	**22 34 18.5**	**+0.5**
TA01				*e*S	**S**	**22 35 05.4**	**-1.5**
TA01				IAML		22 35 07.9	
	comp=Z,65nm,0.6s						
GO01	**Chusmiza**	**4.08**	**328**	*e*P	**Pn**	**22 34 20.9**	**+1.3**
GO01				*e*S	**S**	**22 35 10.7**	**+1.0**
GO01	**Chusmiza**	**4.08**	**328**	*e*P	**Pn**	**22 34 21.4**	**+1.8**
GO01				*e*S	**S**	**22 35 09.1**	**-0.6**
AC02	**Maricunga**	**4.17**	**208**	*e*P	**Pn**	**22 34 21.9**	**+1.2**
PB11	**IPOC Station P**	**4.24**	**322**	*e*P	**Pn**	**22 34 21.2**	**-0.1**
PB11				*e*S	**S**	**22 35 10.7**	**-2.2**
PB11				IAML		22 35 12.5	
	comp=Z,68nm,0.3s						
AC01	**Pan de Azucar**	**4.48**	**228**	*e*P	**Pn**	**22 34 24.0**	**0.0**
AC01				*e*S	**S**	**22 35 16.2**	**-1.7**
GO03	**Copiap**	**5.33**	**214**	*e*P	**Pn**	**22 34 34.8**	**0.0**
GO03				*e*S	**S**	**22 35 35.5**	**-1.9**
PB16	**IPOC Station P**	**5.38**	**333**	*e*P	**Pn**	**22 34 37.2**	**+1.2**
PB16				*e*S	**S**	**22 35 39.1**	**-0.3**
PB16				IAML		22 35 44.1	
	comp=Z,11nm,0.4s						

*IDC **01** 22:37:18.8±2.0,56.°13N×150.°33W,h0km,mb3.2/2, mbtmp3.1/6,ML2.8/4,Error ellipse: s-maj=35.6km s-min=25.4km az=50.0*
*AEIC **01** 22:37:19.5±3.2,56.°1N±0.°1×149.°3W±0.°1,h10km±9km, Error ellipse: s-maj=16.5km s-min=9.7km az=147.0*
*NEIC **01** 22:37:20.8±2.4,56.°31N±0.°02×150.°16W±0.°08,h10km±2km, ML3.1/42,ML3.0(AEIC),Error ellipse: s-maj=7.5km s-min=4.1km az=255.0*
ISC 01 22:37:15.1±1.7,56.°04N±0.°10×149.°51W±0.°06,h10km,n55, σ1°60/53,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.40**	**301**	Pn	**Pn**	**22 37 53.2**	**-1.1**
OHAK	**Old Harbor**	**2.40**	**301**		**Sn**	**22 38 22.5**	**-1.3**
KDAK	**Kodiak Island**	**2.43**	**317**	Pn	**Pn**	**22 37 53.6**	**-1.1**
KDAK	**Kodiak Island**	**2.43**	**317**		**Sn**	**22 38 22.5**	**-1.9**
KDAK	**Kodiak Island**	**2.43**	**317**	Pn	**Pn**	**22 37 55.3**	**+0.6**
	1.4nm,0.3s,baz=137,slow=6.5,SNR=13						
KDAK				Sn	**Sn**	**22 38 22.4**	**-2.1**
	2.6nm,0.3s,baz=42,slow=22,SNR=5.0						
	10nm,0.6s						
SII	**Sitkinak Islan**	**2.66**	**283**	Pn	**Pn**	**22 37 54.6**	**-3.3**
SII				IAML		22 38 22.8	
	comp=E,141nm,1.5s						
SII				IAML		22 38 33.1	
	comp=N,172nm,1.0s						
SII	**Sitkinak Islan**	**2.66**	**283**		**Sn**	**22 38 29.9**	**-0.3**
SYI	**Shuyak Island**	**3.02**	**330**	Pn	**Pn**	**22 38 02.6**	**-0.2**
SYI				IAML		22 38 39.4	
	comp=E,63nm,1.4s						
SYI				IAML		22 38 45.7	
	comp=N,53nm,1.4s						
SYI	**Shuyak Island**	**3.02**	**330**		**Sn**	**22 38 38.2**	**-0.8**
CNPM	**China Poot**	**3.62**	**346**	Pn	**Pn**	**22 38 11.2**	**0.0**
CNPM				IAML		22 38 53.8	
	comp=E,31nm,1.5s						
CNPM				IAML		22 38 58.6	
	comp=N,37nm,1.4s						
CNPM	**China Poot**	**3.62**	**346**		**Sn**	**22 38 51.2**	**-2.7**
Q19K	**Cape Douglas,**	**3.66**	**324**	Pn	**Pn**	**22 38 12.3**	**+0.7**
KAHG	**Katmai Hook Gl**	**3.68**	**314**		**Pn**	**22 38 13.5**	**+1.5**
KAHG					**Sn**	**22 38 55.2**	**-0.2**
BRSE	**Bradley Lake S**	**3.77**	**351**		**Pn**	**22 38 12.3**	**-1.0**
BRLK	**Bradley Lake**	**3.81**	**349**	Pn	**Pn**	**22 38 13.0**	**-0.8**
BRLK				IAML		22 39 00.7	
	comp=E,30nm,1.2s						
ACHA	**Angle Creek He**	**3.85**	**307**		**Pn**	**22 38 15.8**	**+1.5**
ANCK	**Angle Creek**	**3.92**	**306**		**Pn**	**22 38 17.1**	**+1.9**
CNTC	**Contact Creek**	**4.13**	**305**		**Pn**	**22 38 20.2**	**+2.0**
P23K	**Montague Islan**	**4.13**	**15**		**Pn**	**22 38 16.2**	**-1.9**
P19K	**Oil Pt**	**4.13**	**333**	Pn	**Pn**	**22 38 17.9**	**-0.3**
P19K				IAML		22 39 09.3	
	comp=N,56nm,0.7s						
P19K				IAML		22 40 38.0	
	comp=E,57nm,1.2s						
IVE	**Iliamna Volcan**	**4.40**	**336**		**Pn**	**22 38 21.5**	**-0.5**
SLKM	**Skilak Lake**	**4.50**	**356**		**Pn**	**22 38 22.4**	**-0.9**
P18K	**Big Mountain,**	**4.55**	**320**	Pn	**Pn**	**22 38 24.2**	**+0.3**
P18K				IAML		22 39 19.4	
	comp=E,14nm,1.3s						
HIN	**Hinchinbrook I**	**4.65**	**19**	Pn	**Pn**	**22 38 28.8**	**+3.5**
RSO	**Redoubt South**	**4.76**	**340**	Pg	**Pg**	**22 38 46.7**	**+0.7**
O18K	**Koktuh Hills**	**4.88**	**324**	Pn	**Pn**	**22 38 28.0**	**-0.5**
O18K				IAML		22 39 40.5	
	comp=N,13nm,1.2s						
O19K	**Port Alsworth**	**4.89**	**331**	Pn	**Pn**	**22 38 28.7**	**+0.2**
P17K	**Kvichak River**	**4.89**	**313**		**Pn**	**22 38 29.6**	**+1.2**
EYAK	**Cordova Ski Ar**	**4.94**	**22**		**Pn**	**22 38 28.6**	**-0.7**
CHGN	**Chignik**	**4.98**	**277**		**Pn**	**22 38 30.0**	**+0.3**
CHGN				IAML		22 40 00.7	
	comp=E,30nm,1.2s						
CHGN				IAML		22 40 38.8	
	comp=N,28nm,1.2s						
RAGM	**Ragged Mountai**	**5.06**	**28**	Pn	Pb	22 38 36.9	-6.6
RC01	**Rabbit Creek A**	**5.07**	**359**	Pn	**Pn**	**22 38 33.7**	**+2.7**
RC01				IAML		22 39 31.7	
	comp=N,13nm,1.5s						
RC01				IAML		22 39 50.4	
	comp=E,12nm,1.4s						
NICHA	**Nichawak Mount**	**5.13**	**33**		**Pn**	**22 38 30.6**	**-1.3**
BERG	**Berg Lake**	**5.34**	**33**	Pn	**Pn**	**22 38 35.3**	**+0.5**
N19K	**Bonanza Creek**	**5.46**	**333**	Pn	**Pn**	**22 38 36.8**	**+0.4**
SNH	**Sunshine Point**	**5.46**	**38**	Pn	Pn	22 38 42.4	+6.0
SUA	**Susitna One**	**5.48**	**354**	Pn	**Pn**	**22 38 38.6**	**+1.8**
SUA				IAML		22 39 26.8	
	comp=N,9.2nm,1.4s						
SUA				IAML		22 41 18.1	
	comp=E,6.5nm,1.4s						
KHIT	**Khitrov Hills**	**5.52**	**34**		**Pn**	**22 38 35.8**	**-1.4**
PMR	**Palmer**	**5.58**	**2**	Pn	**Pn**	**22 38 40.9**	**+2.9**
PMR				IAML		22 39 54.2	
	comp=E,7.6nm,1.4s						
PMR				IAML		22 40 18.6	
	comp=N,8.0nm,1.2s						
N18K	**Kilae Creek**	**5.74**	**327**	Pn	**Pn**	**22 38 39.8**	**-0.4**
N18K				IAML		22 39 52.1	
	comp=E,6.8nm,1.1s						
N18K				IAML		22 40 18.5	
	comp=N,6.3nm,1.3s						
KLU	**Klutina**	**5.78**	**17**	Pn	**Pn**	**22 38 42.7**	**+1.8**
CRQM	**Cirque**	**5.80**	**33**	Pn	**Pn**	**22 38 40.9**	**-0.3**
O16K	**Kokwok River B**	**5.81**	**311**	Pn	**Pn**	**22 38 41.5**	**+0.4**
O16K				IAML		22 40 24.6	
	comp=N,5.8nm,1.3s						
SML	**Sawmill**	**5.82**	**6**	Pn	**Pn**	**22 38 42.1**	**+0.7**
SCM	**Sheep Creek Mo**	**5.92**	**10**	Pn	**Pn**	**22 38 46.0**	**+3.2**
ISLE	**Juniper Island**	**5.94**	**37**	Pn	**Pn**	**22 38 43.2**	**+0.2**
SVW2	**Sparrevohn**	**5.98**	**330**	Pn	**Pn**	**22 38 43.8**	**+0.2**
N25K	**Chitina, Valde**	**6.14**	**23**	Pn	Pn	22 38 50.2	+4.4
M20K	**Styx River**	**6.15**	**344**	Pn	**Pn**	**22 38 46.0**	**0.0**
M19K	**Big River Lodg**	**6.40**	**339**	Pn	**Pn**	**22 38 48.4**	**-0.9**
ILAR	**Eielson Array**	**8.86**	**7**	Pn	**Pn**	**22 39 24.5**	**+1.5**
	comp=N,0.1nm,0.3s,baz=188,slow=13,SNR=2.0						
ILAR				Sn	**Sn**	**22 40 58.1**	**-4.6**
	comp=N,0.1nm,0.3s,baz=190,slow=20,SNR=2.6						
	comp=N,0.2nm,0.4s						
INK	**Inuvik**	**14.32**	**24**	Pn	**P**	**22 40 44.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=198,slow=7.7,SNR=2.2						
	comp=N,1.1nm,0.9s						
YKA	**Yellowknife Ar**	**18.79**	**56**	P	Pn	22 41 42.6	+8.0
	baz=266,slow=11,SNR=5.0						
	comp=N,0.3nm,0.7s						
TXAR	**Lajitas Array**	**41.86**	**110**	P	P	22 45 15.0	+10
	comp=N,0.3nm,0.7s,baz=325,slow=7.7,SNR=3.6						
	comp=N,0.3nm,0.7s						
MKAR	**Makanchi Array**	**68.72**	**325**	P	**P**	**22 48 19.9**	**+1.4**
	comp=N,0.1nm,0.4s,baz=25,slow=7.4,SNR=1.8						
	comp=N,0.1nm,0.4s						

*JMA **01** 22:41:37.8±0.2,41.°0N±0.°4×142.°8E±0.°7,h11km±3km, MV3.8/37,E OFF AOMORI PREF*
*NIED **01** 22:41:37.8,40.°99N×142.°78E,h11km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.96; Mθθ-0.25; Mφφ-2.70; Mrθ0.64; Mrφ1.05; Mθφ1.35; Fault plane solution: M₀3.37000×10¹⁴ NP1: φs357.00000°,δ57.00000°,λ110.00000°. NP2: φs143.00000°,δ38.00000°,λ62.00000°.*
*NEIC **01** 22:41:41.7±1.8,41.°10N±0.°05×142.°72E±0.°05,h53km±9km, mb4.2/5 Error ellipse: s-maj=7.6km s-min=5.2km az=147.0*
*IDC **01** 22:41:42.3±2.4,40.°99N×142.°92E,h66km±19km,mb3.5/11, mbtmp3.8/14,MS2.6/1,Error ellipse: s-maj=33.4km s-min=15.0km az=91.0*
ISC 01 22:41:34.5±1.5,40.°96N±0.°03×142.°91E±0.°04,h5km±9km, n50,σ1°24/59,mb3.9/14,7D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.07**	**10**	P	**Pn**	**22 41 58.2**	**+2.1**
ERM				Sn	**Sn**	**22 42 11.8**	**+0.4**
JEM	**Erimo**	**1.07**	**10**	*e*P	**Pn**	**22 41 56.9**	**+0.8**
JEM				S	**Sn**	**22 42 10.8**	**-0.6**
JARK	**Aomorirokkasho**	**1.17**	**273**	⇓*i*P	**Pn**	**22 41 57.7**	**+0.3**
JARK				⇓S	**Sg**	**22 42 11.5**	**-0.5**
JKEN	**Kujiedanarisaw**	**1.18**	**231**	⇓P	**Pn**	**22 41 58.4**	**+0.8**
JANG	**Nango**	**1.21**	**242**	*i* P	**Pn**	**22 41 58.9**	**+0.8**
JAHD	**Aomorihigashid**	**1.22**	**285**	*e*P	**Pb**	**22 41 58.4**	**+0.3**
JAHD				S	**Sg**	**22 42 13.3**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.32**	**355**	P	**Pb**	**22 42 02.1**	**+2.2**
JNBK				*e*S	**Sn**	**22 42 18.9**	**+1.3**
JTM	**Tenmabayashi**	**1.40**	**264**	Pn	**Pg**	**22 42 01.9**	**+0.5**
JTM				Sn	**Sb**	**22 42 19.0**	**-0.4**
JTM	**Tenmabayashi**	**1.40**	**264**	*i* P	**Pg**	**22 42 01.8**	**+0.5**
JTM				S	**Sb**	**22 42 18.9**	**-0.4**
JOT	**Ohata**	**1.47**	**287**	⇓*i*P	**Pn**	**22 42 02.2**	**+0.6**
JOT				⇓S	**Sb**	**22 42 19.5**	**-1.6**
JKB	**Kayabe**	**1.69**	**304**	P	**Pb**	**22 42 05.5**	**-0.4**
JKB				*e*S	**Sn**	**22 42 24.2**	**-2.4**
JCH	**Churui**	**1.69**	**12**	P	**Pg**	**22 42 07.3**	**+0.5**
JCH				S	**Sg**	**22 42 28.2**	**-0.6**
JIAM	**Iburiatsuma**	**1.82**	**336**	P	**Pg**	**22 42 09.8**	**+0.5**
JIAM				*e*S	**Sg**	**22 42 32.5**	**-0.4**
JBT2	**Biratori 2**	**1.86**	**348**	P	**Pg**	**22 42 10.4**	**+0.2**
JBT2				*e*S	**Sg**	**22 42 34.1**	**-0.2**
JAH	**Hinai**	**1.89**	**247**	⇓*i*P	**Pb**	**22 42 09.8**	**+0.3**
JAH				⇓S	**Sn**	**22 42 33.0**	**+1.3**
JOM	**Ohasama**	**1.93**	**220**	*i* P	**Pb**	**22 42 10.5**	**+0.4**
JOM				*e*S	**Sn**	**22 42 34.3**	**+1.7**
JSR	**Shiriuchi**	**1.96**	**288**	P	**Pb**	**22 42 10.2**	**-0.4**
JSR				S	**Sn**	**22 42 33.1**	**-0.3**
JEW	**Eniwo**	**2.17**	**330**	*e*P	**Pb**	**22 42 14.2**	**-0.1**
JEW				*e*S	**Sb**	**22 42 41.2**	**-0.3**
JOMM	**Oshimamatsumae**	**2.26**	**285**	P	**Pb**	**22 42 14.5**	**-1.2**
JOMM				*e*S	**Sn**	**22 42 41.4**	**+0.7**
ASAJ	**Asahikawa**	**3.16**	**356**	P	**Pb**	**22 42 28.3**	**-2.9**
	7.9nm,0.3s,baz=201,slow=16,SNR=21						
ASAJ				S	**Sb**	**22 43 06.5**	**-3.5**
	23nm,0.4s,baz=135,slow=30,SNR=2.4						
JKA	**Kamikawa-asahi**	**3.16**	**356**		**Pn**	**22 42 27.5**	**+2.6**
JMM	**Marumori**	**3.50**	**209**		**Pb**	**22 42 34.3**	**-2.5**
MJAR	**Matsushiro Arr**	**5.74**	**221**	P	Pn	22 43 06.2	+5.9
	2.7nm,0.6s,baz=31,slow=12,SNR=8.9						
MJAR				LR	LR	22 45 40.3	
	comp=Z,57nm,20.8s,baz=84,slow=41						
MJB9	**Matsu-Tunnel**	**5.74**	**221**		Pn	22 43 08.2	+7.9
MAJO	**Matsushiro**	**5.74**	**221**		Pn	22 43 07.4	+7.1
USRK	**Ussuriysk Ar.**	**8.68**	**296**	P	**Pn**	**22 43 44.5**	**+3.8**
	1.3nm,0.7s,baz=102,slow=13,SNR=3.2						

NEIC ***01*** *23:07:56.1±1.7,30°.78S±0°.09×179°.4W±0°.2, h285km±17km, mb4.1/5, Error ellipse: s-maj=32.5km s-min=4.9km az=113.0*

IDC ***01*** *23:07:57.0±5.3,30°.75S×179°.49W, h292km±46km, mb3.2/3, mbtmp3.9/4, Error ellipse: s-maj=45.1km s-min=23.4km az=49.0*

WEL ***01*** *23:08:05.4±1.0,31°.5S±6°×17°.9E±1°.1, h33km, M4.9/9, mB5.1/4, ML4.9/13, MLv5.0/9, Mw(mB)4.4/4, Error ellipse: s-maj=0.0km s-min=0.0km az=117.3, confirmed*

ISC 01 23:08:01.8±0.8,30°.95S±0°.08×179°.8E±0°.1, h300km, n43, σ1ᵍ96/59, mb3.9/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.62**	**51**	P	**Pn**	**23 08 55.2**	**+1.2**
GLKZ				S	**S**	**23 09 36.3**	**+0.6**
MXZ	**Matakaoa Point**	**6.71**	**190**	S	**S**	**23 10 58.6**	**+0.2**
WMGZ	**Waiomatatini S**	**6.94**	**189**	P	**Pn**	**23 09 44.2**	**+1.8**
WMGZ				S	**S**	**23 11 04.0**	**+0.3**
HAZ	**Te Kaha**	**6.99**	**193**	P	**Pn**	**23 09 44.9**	**+2.0**
HAZ				S	**S**	**23 11 06.5**	**+1.9**
PKGZ	**Pakihiroa**	**7.06**	**191**	S	**S**	**23 11 05.2**	**-1.2**
RUGZ	**Raukumara Rang**	**7.21**	**193**	P	**Pn**	**23 09 49.0**	**+3.3**
RUGZ				S	**S**	**23 11 09.0**	**-0.8**
PUZ	**Puketiti**	**7.21**	**189**	P	**Pn**	**23 09 46.7**	**+1.0**
PUZ				S	**S**	**23 11 08.5**	**-1.2**
TWGZ	**Tauwhareparae**	**7.36**	**191**	P	**Pn**	**23 09 50.2**	**+2.7**
TWGZ				S	**S**	**23 11 12.9**	**-0.1**
MWZ	**Matawai**	**7.59**	**193**	P	**Pn**	**23 09 52.4**	**+2.0**
MWZ				S	**S**	**23 11 17.8**	**-0.5**
URZ	**Urewera**	**7.61**	**196**	P	**Pn**	**23 09 50.9**	**+0.3**
	3.5nm,0.3s,baz=346,slow=5.5,SNR=16						
URZ				S	**S**	**23 11 20.3**	**+1.7**
	22nm,0.3s,baz=165,slow=23,SNR=22						
URZ	**Urewera**	**7.61**	**196**	P	**Pn**	**23 09 54.6**	**+4.1**
URZ				S	**S**	**23 11 18.8**	**+0.2**
CNGZ	**Carnagh Statio**	**7.63**	**189**	P	**Pn**	**23 09 52.2**	**+1.5**
RAGZ	**Rawiri**	**7.77**	**194**	P	**Pn**	**23 09 57.3**	**+4.7**
RAGZ				S	**S**	**23 11 23.4**	**+1.1**
MUGZ	**Murupara**	**7.90**	**197**	P	**Pn**	**23 09 57.5**	**+3.4**
MUGZ				S	**S**	**23 11 26.1**	**+0.9**
RIGZ	**Rimuhau**	**7.91**	**191**	P	**Pn**	**23 09 56.9**	**+2.7**
RIGZ				S	**S**	**23 11 23.6**	**-1.8**
SNGZ	**Shannon Statio**	**8.06**	**194**	P	**Pn**	**23 10 00.3**	**+4.2**
SNGZ				S	**S**	**23 11 28.4**	**-0.4**
MTHZ	**Maungataniwha**	**8.24**	**196**	P	**Pn**	**23 09 59.3**	**+1.0**
MTHZ				S	**S**	**23 11 32.8**	**0.0**
RAHZ	**Arahi**	**8.25**	**195**	P	**Pn**	**23 10 02.2**	**+3.8**
RAHZ				S	**S**	**23 11 32.6**	**-0.3**
BKZ	**Black Stump Fm**	**8.62**	**197**	P	**Pn**	**23 10 05.6**	**+2.6**
BKZ				S	**S**	**23 11 42.1**	**+0.6**
KWHZ	**Kaweka Forest**	**8.89**	**197**	P	**Pn**	**23 10 08.4**	**+2.2**
KWHZ				S	**S**	**23 11 45.1**	**-2.3**
MRZ	**Mangatainoka R**	**10.27**	**198**	Pn	**Pn**	**23 10 23.0**	**-0.1**
TCW	**Tory Channel**	**11.16**	**202**	Pn	**Pn**	**23 10 33.6**	**-0.3**
PLWZ	**Palliser**	**11.20**	**198**	P	**Pn**	**23 10 35.2**	**+0.6**
TUWZ	**Tuamarina**	**11.46**	**203**	Pn	**Pn**	**23 10 37.4**	**-0.3**
NNZ	**Nelson**	**11.47**	**205**	P	**Pn**	**23 10 38.3**	**+0.5**
MRNZ	**Matariki Terra**	**11.86**	**206**	P	**P**	**23 10 43.6**	**-0.4**
THZ	**Tophouse**	**12.12**	**205**		**Pn**	**23 10 45.1**	**-0.6**
KHZ	**Kahutara**	**12.48**	**202**	P	**Pn**	**23 10 48.7**	**-1.3**
DSZ	**Denniston Nort**	**12.53**	**208**	P	**P**	**23 10 53.1**	**+1.6**
OXZ	**Oxford**	**13.79**	**204**	P	**P**	**23 11 04.5**	**-1.0**
NIUE	**Niue**	**15.06**	**41**	P	P	23 11 07.6	-12
LBZ	**Lake Benmore**	**15.39**	**207**	P	**P**	**23 11 23.2**	**+0.1**
BBOO	**Buckleboo**	**36.96**	**255**	P	**P**	**23 14 43.3**	**+0.3**
ASAR	**Alice Springs**	**41.15**	**269**	P	**P**	**23 15 18.8**	**+1.1**
	0.4nm,0.8s,baz=107,slow=7.9,SNR=2.0 0.4nm,0.8s						
WB2	**Warramunga Arr**	**42.18**	**274**	P	**P**	**23 15 26.8**	**+0.8**
WRAB	**Tennant Creek**	**42.19**	**274**	P	**P**	**23 15 29.8**	**+3.7**
WRAB				IAmb	IAmb	23 15 35.9	
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**42.19**	**274**	P	**P**	**23 15 26.6**	**+0.5**
WRA	**Warramunga Arr**	**42.19**	**274**	P	**P**	**23 15 27.0**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=111,slow=8.0,SNR=22 comp=Z,0.6nm,0.3s						
WB0	**Warramunga Arr**	**42.22**	**274**	P	**P**	**23 15 26.7**	**+0.4**
WB0				IAmb	IAmb	23 15 33.0	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**59.16**	**180**	P	**P**	**23 17 28.6**	**-2.8**
QSPA				IAmb	IAmb	23 17 30.0	
	comp=Z,5.7nm,0.9s						
QSPA	**South Pole Qui**	**59.16**	**180**	P	**P**	**23 17 29.0**	**-2.4**
	comp=Z,2.8nm,0.6s,baz=52,slow=0.5,SNR=11 comp=Z,2.8nm,0.6s						
FINES	**FINESS Array**	**144.96**	**338**	PKPbc	**PKPdf**	**23 26 58.1**	**-4.5**
	comp=Z,1.1nm,0.4s,baz=46,slow=4.3,SNR=21						
HFS	**Hagfors**	**149.35**	**346**	PKPbc	**PKPdf**	**23 27 09.3**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=95,slow=9.1,SNR=5.7						

IDC ***01*** *23:09:24.6±7.1,20°.24S×176°.55W, h263km±69km, mb3.2/5, mbtmp3.9/6, Error ellipse: s-maj=28.6km s-min=18.0km az=100.0*

ISC 01 23:09:24.2±1.1,20°.2S±0°.2×176°.6W±0°.2, h263km, n6, σ1ᵍ42/7, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.82**	**196**	P	**P**	**23 13 23.6**	**-1.2**
	6.9nm,0.3s,baz=240,slow=15,SNR=2.7						
URZ				S	**S**	**23 16 43.5**	**-1.1**
	3.2nm,0.4s,baz=229,slow=20,SNR=1.6						
ASAR	**Alice Springs**	**45.91**	**256**	P	**P**	**23 17 21.9**	**+0.6**
	0.7nm,0.5s,baz=96,slow=8.0,SNR=7.9 0.7nm,0.5s						
WRA	**Warramunga Arr**	**45.99**	**261**	P	**P**	**23 17 22.2**	**+0.3**
	0.2nm,0.3s,baz=94,slow=8.4,SNR=11 0.2nm,0.3s						
QSPA	**South Pole Qui**	**69.88**	**180**	P	**P**	**23 20 08.3**	**+1.7**
	1.8nm,0.7s,baz=0.8,slow=1.2,SNR=6.9 1.8nm,0.7s						
TXAR	**Lajitas Array**	**85.75**	**57**	P	**P**	**23 21 34.6**	**+0.3**
	0.5nm,0.9s,baz=214,slow=8.7,SNR=4.0 0.5nm,0.9s						
ILAR	**Eielson Array**	**87.72**	**12**	P	**P**	**23 21 41.4**	**-1.4**
	0.4nm,0.8s,baz=228,slow=5.3,SNR=2.4 0.4nm,0.8s						

VAO ***01*** *23:13:41.5±0.6,31°.80S×70°.35W, h10km, mb5.4*

MOS ***01*** *23:13:52.9±0.9,31°.45S×69°.83W, h100km, mb5.0/27, Error ellipse: s-maj=13.9km s-min=6.3km az=104.9*

NEIC ***01*** *23:13:53.7, 31°.51S×69°.90W, h100km, Moment Tensor Solution. Duration: 2ˢ0 Moment tensor: Scale 10¹⁶Nm; Mrr0.20; Mθθ3.51; Mϕϕ-3.71; Mrθ0.77; Mrϕ6.26; Mθϕ0.51; Fault plane solution: M₀7.29000×10¹⁶ NP1:ϕs14.72000°, δ85.06000°, λ174.39000°. NP2:ϕs105.21000°, δ84.41000°, λ4.96000°. Principal axes: T 7.2484, Plg7.0000°, Azm330.0000°; N 0.0813, Plg83.0000°, Azm153.0000°; P -7.3297, Plg0.0000°, Azm60.0000°.*

NEIC ***01*** *23:13:53.7, 31°.51S×69°.90W, h100km*

SJA ***01*** *23:13:53.1±0.7, 31°.54S×70°.04W, h123km±3km, ML5.1, MW5.1*

NEIC ***01*** *23:13:54.1±1.5, 31°.56S±0°.04×70°.04W±0°.07, h101km±4km, mb4.9/353, Mww5.2/15, Error ellipse: s-maj=9.0km s-min=6.0km az=91.0*

GUC ***01*** *23:13:54.8±0.8, 31°.56S×70°.30W, h133km±4km, ML5.2*

IDC ***01*** *23:13:56.1±0.5, 31°.53S×69°.84W, h114km±4km, mb4.6/15, mbtmp5.0/16, MS3.6/20, Error ellipse: s-maj=16.9km s-min=11.4km az=74.0*

GCMT ***01*** *23:14:00.8±0.2, 31°.50S±0°.01×69°.95W±0°.02, h118km±1km, MW5.2/86, Moment Tensor Solution. s61,c80; s86,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.39±.15; Mθθ0.72±.18; Mϕϕ-0.33±.23; Mrθ1.61±.11; Mϕϕ7.05±.15; Mrϕ0.58±.17; Best double couple: M₀7.26100×10¹⁶ NP1:ϕs92.00000°, δ86.00000°, λ12.00000°. NP2: ϕs2.00000°, δ78.00000°, λ176.00000°. Principal axes: T 7.5760, Plg11.0000°, Azm318.0000°; N -0.6310, Plg77.0000°, Azm109.0000°; P -6.9450, Plg6.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 23:13:54.6±0.3,31°.54S±0°.02×70°.08W±0°.03, h109km±2km, h109km:pP-P, n887, σ1ᵍ33/951, mb4.9/205, 16C-27D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.71**	**112**	*e*P	**Pn**	**23 14 13.7**	**+0.4**
RTLS				*e*S	**Sn**	**23 14 28.1**	**+0.7**
RTLS				IAML		23 14 29.2	
	comp=Z,154μm,0.8s						
CO02	**Combarbal**	**0.86**	**293**		**Pn**	**23 14 14.7**	**+0.2**
CO02				Sn	**Sn**	**23 14 30.5**	**+1.2**
CO02	**Combarbal**	**0.86**	**293**	*e*P	**Pn**	**23 14 14.9**	**+0.4**
CO02				*e*S	**Sn**	**23 14 30.8**	**+1.4**
CO02				IAML		23 14 31.6	
	comp=Z,174μm,0.5s						
CO02	**Combarbal**	**0.86**	**293**	⇓*i*P	**Pn**	**23 14 15.1**	**+0.7**
CO02				*i* S	**Sn**	**23 14 30.6**	**+1.2**
CO02				IAML		23 14 31.5	
	comp=N,244μm,0.3s						
CO03	**El Pedregal**	**0.87**	**323**	Pn	**Pn**	**23 14 15.3**	**+0.8**
CO03				Sn	**Sn**	**23 14 31.2**	**+1.6**
CO03	**El Pedregal**	**0.87**	**323**	*e*P	**Pn**	**23 14 15.4**	**+0.8**
CO03				*e*S	**Sn**	**23 14 31.6**	**+2.1**
CO03				IAML		23 14 32.4	
	comp=Z,38μm,0.9s						
CO03	**El Pedregal**	**0.87**	**323**	⇑*i*P	**Pn**	**23 14 15.5**	**+0.9**
CO03				*i* S	**Sn**	**23 14 30.9**	**+1.3**
CO03				IAML		23 14 33.0	
	comp=E,110μm,0.5s						
DOCA	**Reserva Natura**	**1.03**	**56**	*e*P	**Pn**	**23 14 16.7**	**+0.2**
DOCA				*e*S	**Sn**	**23 14 34.0**	**+1.1**
ACCO	**Cerro Coronel**	**1.28**	**43**	*e*P	**Pn**	**23 14 19.8**	**+0.6**
ACCO				IAML		23 15 12.3	
	comp=Z,1μm,2.7s						
VA03	**San Esteban**	**1.29**	**198**		**Pn**	**23 14 19.4**	**+0.4**
VA03	**San Esteban**	**1.29**	**198**	*e*P	**Pn**	**23 14 19.6**	**+0.6**
VA03				*e*S	**Sn**	**23 14 39.3**	**+1.8**
VA03				IAML		23 14 42.3	
	comp=Z,20μm,0.7s						
VA03	**San Esteban**	**1.29**	**198**	⇓*i*P	**Pn**	**23 14 19.5**	**+0.5**
VA03				⇑*i* S	**Sn**	**23 14 38.3**	**+0.8**
VA03				IAML		23 14 40.2	
	comp=E,54μm,0.6s						
RTCV	**Cerro Valdivia**	**1.35**	**104**	*e*P	**Pn**	**23 14 19.8**	**+0.2**
RTCV				IAML		23 14 54.7	
	comp=Z,494nm,1.5s						
RTLL	**Cerro Villicun**	**1.38**	**82**	*e*P	**Pn**	**23 14 19.7**	**-0.3**
RTLL				*e*S	**Sn**	**23 14 39.1**	**-0.2**
RTLL				IAML		23 14 40.5	
	comp=Z,42μm,0.5s						
VA06	**Catapilco**	**1.46**	**225**		**Pn**	**23 14 20.3**	**-0.5**
VA06	**Catapilco**	**1.46**	**225**	⇓*i*P	**Pn**	**23 14 20.3**	**-0.5**
VA06				*i* S	**Sn**	**23 14 40.3**	**-0.4**
VA06				IAML		23 14 44.9	
	comp=E,22μm,0.3s						
AROD	**Rodeo**	**1.46**	**21**	*e*P	**Pn**	**23 14 22.9**	**+1.6**
ASAL	**Salagasta**	**1.49**	**135**	*e*P	**Pn**	**23 14 21.9**	**+0.7**
ASAL				IAML		23 14 58.3	
	comp=Z,2μm,0.8s						
GO04	**Tololo Observa**	**1.50**	**335**		**Pn**	**23 14 22.1**	**+0.5**
GO04	**Tololo Observa**	**1.50**	**335**	*e*P	**Pn**	**23 14 22.1**	**+0.5**
GO04				*e*S	**Sn**	**23 14 43.5**	**+1.5**
GO04	**Tololo Observa**	**1.50**	**335**	⇑*i*P	**Pn**	**23 14 22.2**	**+0.7**
GO04				*i* S	**Sn**	**23 14 43.0**	**+1.1**
CO01	**Juntas del Tor**	**1.56**	**359**		**Pn**	**23 14 23.2**	**+0.9**
CO01	**Juntas del Tor**	**1.56**	**359**	*e*P	**Pn**	**23 14 23.8**	**+1.5**
CO01				IAML		23 14 49.5	
	comp=Z,6μm,0.5s						
CO01	**Juntas del Tor**	**1.56**	**359**	⇑*i*P	**Pn**	**23 14 24.0**	**+1.7**
CO01				*i* S	**Sn**	**23 14 44.9**	**+1.7**
CO01				IAML		23 14 50.1	
	comp=N,11μm,0.7s						
ACDV	**Cuesta del Vie**	**1.59**	**31**	*e*P	**Pn**	**23 14 23.8**	**+1.1**
ACDV				*e*S	**Sn**	**23 14 46.4**	**+2.5**
ACDV				IAML		23 15 02.3	
	comp=Z,16μm,0.8s						
CO06	**Fray Jorge**	**1.59**	**302**		**Pn**	**23 14 22.3**	**-0.1**
CO06	**Fray Jorge**	**1.59**	**302**	⇑*i*P	**Pn**	**23 14 22.4**	**-0.1**
CO06				*i* S	**Sn**	**23 14 42.7**	**-1.0**
CO06				IAML		23 14 48.8	
	comp=E,20μm,0.6s						
ARCO	**CERRO ARCO**	**1.62**	**144**	*e*P	**Pn**	**23 14 23.9**	**+0.9**
ARCO				*e*S	**Sn**	**23 14 47.5**	**+2.9**
ARCO				IAML		23 14 48.0	
	comp=Z,15μm,0.8s						
ROCH	**El Roble**	**1.64**	**209**	⇓*i*P	**Pn**	**23 14 23.1**	**-0.2**
ROCH				*i* S	**Sn**	**23 14 44.6**	**-0.4**
ROCH				IAML		23 14 46.7	
	comp=N,53μm,0.6s						
PEL	**Peldehue**	**1.68**	**198**		**Pn**	**23 14 23.1**	**-0.6**
PEL	**Peldehue**	**1.68**	**198**	P	**Pn**	**23 14 23.1**	**-0.6**
PEL	**Peldehue**	**1.68**	**198**	*e*P	**Pn**	**23 14 23.7**	**0.0**
PEL	**Peldehue**	**1.68**	**198**	⇓*i*P	**Pn**	**23 14 23.6**	**0.0**
PEL				*i* S	**Sn**	**23 14 45.4**	**-0.3**
PEL				IAML		23 14 54.8	
	comp=N,10μm,0.5s						
MT10	**Hacienda Santa**	**1.77**	**193**	⇓*i*P	**Pn**	**23 14 25.4**	**+0.5**
MT10				*i* S	**Sn**	**23 14 48.8**	**+0.9**
MT10				IAML		23 14 51.0	
	comp=E,51μm,0.4s						
FCH	**Farellones**	**1.79**	**186**	⇓*i*P	**Pn**	**23 14 26.2**	**+0.9**
FCH				*i* S	**Sn**	**23 14 50.1**	**+1.5**
FCH				IAML		23 14 53.5	
	comp=E,14μm,0.4s						
MT04	**Ro Olivares**	**1.86**	**182**	⇓*i*P	**Pn**	**23 14 27.2**	**+1.2**
MT04				*i* S	**Sn**	**23 14 51.8**	**+1.7**
MT04				IAML		23 14 55.3	
	comp=E,14μm,0.7s						
AAGR	**Agrelo**	**1.87**	**146**	*e*P	**Pn**	**23 14 27.1**	**+1.1**
AAGR				IAML		23 15 20.1	
	comp=Z,1μm,1.6s						
MT14	**Cerro Calᵢn**	**1.89**	**192**	⇓*i*P	**Pn**	**23 14 26.8**	**+0.5**
MT14				*i* S	**Sn**	**23 14 50.9**	**+0.4**
MT14				IAML		23 14 54.4	
	comp=E,24μm,0.4s						
CO05	**La Serena**	**1.90**	**328**		**Pn**	**23 14 25.8**	**-0.5**
CO05	**La Serena**	**1.90**	**328**	⇑*i*P	**Pn**	**23 14 26.2**	**-0.1**
CO05				*i* S	**Sn**	**23 14 49.2**	**-1.2**
CO05				IAML		23 14 51.9	
	comp=N,39μm,0.3s						
MT16	**CCHEN**	**1.92**	**191**		**Pn**	**23 14 27.2**	**+0.6**
MT05	**Renca**	**1.93**	**197**		**Pn**	**23 14 26.8**	**+0.1**
MT05	**Renca**	**1.93**	**197**	*e*P	**Pn**	**23 14 26.9**	**+0.1**
MT05				*e*S	**Sn**	**23 14 52.5**	**+1.2**
MT05				IAML		23 15 00.7	
	comp=Z,11μm,0.9s						
MT05	**Renca**	**1.93**	**197**	⇓*i*P	**Pn**	**23 14 26.9**	**+0.1**
MT05				*i* S	**Sn**	**23 14 51.2**	**-0.1**
MT02	**Curacav**	**1.94**	**207**		**Pn**	**23 14 25.6**	**-1.1**
MT02	**Curacav**	**1.94**	**207**	*e*P	**Pn**	**23 14 25.9**	**-0.9**
MT02				*e*S	**Sn**	**23 14 52.1**	**+0.7**
MT02				IAML		23 14 55.8	
	comp=Z,12μm,1.5s						
MT02	**Curacav**	**1.94**	**207**	⇓*i*P	**Pn**	**23 14 26.1**	**-0.7**
MT02				*i* S	**Sn**	**23 14 50.2**	**-1.1**
MT03	**Universidad Ad**	**1.99**	**191**		**Pn**	**23 14 27.2**	**-0.2**
MT03	**Universidad Ad**	**1.99**	**191**	*e*P	**Pn**	**23 14 28.5**	**+1.0**
MT03				*e*S	**Sn**	**23 14 54.6**	**+2.1**
MT03				IAML		23 14 57.0	
	comp=Z,22μm,0.8s						
MT03	**Universidad Ad**	**1.99**	**191**	⇓*i*P	**Pn**	**23 14 28.0**	**+0.5**
MT03				*i* S	**Sn**	**23 14 52.8**	**+0.2**
MT03				IAML		23 14 57.0	
	comp=E,28μm,0.4s						
VA01	**Torpederas**	**1.99**	**222**	Pn	**Pn**	**23 14 26.5**	**-0.9**
VA01	**Torpederas**	**1.99**	**222**	*e*P	**Pn**	**23 14 26.3**	**-1.1**
VA01				IAML		23 14 55.5	
	comp=Z,6μm,0.7s						
VA01	**Torpederas**	**1.99**	**222**	⇓*i*P	**Pn**	**23 14 26.5**	**-0.9**
MT15	**Las Vizcachas**	**2.09**	**190**	⇓*i*P	**Pn**	**23 14 29.2**	**+0.5**
MT15				*i* S	**Sn**	**23 14 54.6**	**-0.3**
MT13	**San Alfonso**	**2.21**	**185**		**Pn**	**23 14 30.7**	**+0.4**
MT13	**San Alfonso**	**2.21**	**185**	⇓*i*P	**Pn**	**23 14 31.0**	**+0.7**
MT13				*i* S	**Sn**	**23 14 58.3**	**+0.6**
MT13				IAML		23 15 00.4	
	comp=N,15μm,0.3s						
MT12	**Pirque**	**2.23**	**190**	*e*P	**Pn**	**23 14 30.7**	**+0.2**
MT12				*i* S	**Sn**	**23 14 57.9**	**-0.1**
LMEL	**Las Melosas**	**2.31**	**183**		**Pn**	**23 14 31.7**	**0.0**
LMEL	**Las Melosas**	**2.31**	**183**	*e*P	**Pn**	**23 14 32.4**	**+0.8**
LMEL				*i* S	**Sn**	**23 15 00.8**	**+0.8**
LMEL				IAML		23 15 06.6	
	comp=N,11μm,0.2s						
AVIZ	**Vizcacheras**	**2.34**	**146**	*e*P	**Pn**	**23 14 32.5**	**+0.6**
MT09	**Talagante**	**2.36**	**199**		**Pn**	**23 14 31.1**	**-1.2**
MT09	**Talagante**	**2.36**	**199**	⇓*i*P	**Pn**	**23 14 31.5**	**-0.8**
MT09				*i* S	**Sn**	**23 14 59.8**	**-1.5**
AVFE	**Valle Fertil**	**2.41**	**69**	*e*P	**Pn**	**23 14 32.7**	**-0.2**
AVFE				*e*S	**Sn**	**23 15 02.3**	**0.0**
AVFE				IAML		23 15 04.8	
	comp=Z,8μm,0.7s						
AGUA	**GUANDACOL**	**2.46**	**34**	*e*P	**Pn**	**23 14 34.9**	**+1.3**
AGUA				*e*S	**Sn**	**23 15 06.3**	**+2.9**
AGUA				IAML		23 15 14.4	
	comp=Z,19μm,0.6s						
VA05	**Santo Domingo**	**2.48**	**211**			**23 14 32.5**	**-1.3**
VA05	**Santo Domingo**	**2.48**	**211**	⇓*i*P	**Pn**	**23 14 32.5**	**-1.3**
BO04	**La Punta**	**2.49**	**190**	Pn	**Pn**	**23 14 33.4**	**-0.5**
BO04	**La Punta**	**2.49**	**190**	⇓*i*P	**Pn**	**23 14 33.7**	**-0.2**
BO04				*i* S	**Sn**	**23 15 03.1**	**-0.9**
BO04				IAML		23 15 05.0	
	comp=N,13μm,0.3s						
MT01	**Popeta**	**2.52**	**203**		**Pn**	**23 14 33.4**	**-0.9**
MT01	**Popeta**	**2.52**	**203**	*e*P	**Pn**	**23 14 33.6**	**-0.7**
MT01				*e*S	**Sn**	**23 15 04.8**	**0.0**
MT01				IAML		23 15 05.2	
	comp=Z,5μm,0.7s						
MT01	**Popeta**	**2.52**	**203**	⇓*i*P	**Pn**	**23 14 33.3**	**-0.9**
MT01				*i* S	**Sn**	**23 15 00.6**	**-4.2**
MT01				IAML		23 15 05.7	
	comp=E,8μm,0.6s						
LCO	**Las Campanas**	**2.58**	**348**	Pn	**Pn**	**23 14 35.4**	**+0.1**
LCO	**Las Campanas**	**2.58**	**348**	P	**Pn**	**23 14 35.4**	**+0.1**
LCO	**Las Campanas**	**2.58**	**348**	*e*P	**Pn**	**23 14 35.5**	**+0.2**
LCO				*e*S	**Sn**	**23 15 06.7**	**+0.3**
LCO				IAML		23 15 11.5	
	comp=Z,73μm,0.4s						
LCO	**Las Campanas**	**2.58**	**348**	*e*P	**Pn**	**23 14 34.9**	**-0.4**
LCO				*i* S	**Sn**	**23 15 04.6**	**-1.8**
AC05	**El Transito**	**2.70**	**356**		**Pn**	**23 14 37.3**	**+0.5**
ACHE	**Chepes**	**2.94**	**84**	*e*P	**Pn**	**23 14 39.5**	**-0.5**
BO01	**Tunca**	**2.97**	**196**	Pn	**Pn**	**23 14 39.0**	**-1.2**
BO01	**Tunca**	**2.97**	**196**	*e*P	**Pn**	**23 14 38.9**	**-1.2**
BO01				*e*S	**Sn**	**23 15 14.3**	**-1.0**
BO01				IAML		23 15 14.8	
	comp=Z,6μm,0.3s						
BO01	**Tunca**	**2.97**	**196**	⇓*i*P	**Pn**	**23 14 39.1**	**-1.2**
BO01				*i* S	**Sn**	**23 15 07.5**	**-7.8**
BO01				IAML		23 15 15.0	
	comp=N,8μm,0.5s						
VCA	**Vinchina**	**3.23**	**31**	*e*P	**Pn**	**23 14 44.7**	**+0.9**
VCA				*e*S	**Sn**	**23 15 24.0**	**+2.3**
VCA				IAML		23 15 27.2	
	comp=Z,14μm,0.4s						
BO02	**Sierra Bellavi**	**3.30**	**190**	Pn	**Pn**	**23 14 43.6**	**-1.0**
BO02	**Sierra Bellavi**	**3.30**	**190**	*e*S	**Sn**	**23 15 22.9**	**-0.4**
BO02				IAML		23 15 23.3	
	comp=Z,7μm,0.6s						
BO02	**Sierra Bellavi**	**3.30**	**190**	⇓*i*P	**Pn**	**23 14 44.0**	**-0.7**
BO02				*i* S	**Sn**	**23 15 21.7**	**-1.6**
BO02				IAML		23 15 24.8	
	comp=E,11μm,0.5s						
BO03	**Pichilemu**	**3.35**	**208**	⇓*i*P	**Pn**	**23 14 42.7**	**-2.5**
ACLC	**CERRO LA CRUZ**	**3.42**	**53**	*e*P	**Pn**	**23 14 45.7**	**-0.6**
ACLC				IAML		23 15 55.0	
	comp=Z,5μm,0.8s						
AC04	**Llanos de Chal**	**3.43**	**345**	Pn	**Pn**	**23 14 46.0**	**-0.3**
AC04	**Llanos de Chal**	**3.43**	**345**	⇑*i*P	**Pn**	**23 14 46.4**	**0.0**
AC04				*i* S	**Sn**	**23 15 24.5**	**-1.8**
RFA	**San Rafael**	**3.50**	**158**	*e*P	**Pn**	**23 14 46.5**	**-0.7**
RFA				*e*S	**Sn**	**23 15 27.1**	**-0.8**
RFA				IAML		23 15 51.3	
	comp=Z,2μm,0.9s						
GO05	**Huala**	**3.80**	**204**		**Pn**	**23 14 47.7**	**-3.5**
GO05	**Huala**	**3.80**	**204**	*e*P	**Pn**	**23 14 48.5**	**-2.6**
GO05				*e*S	**Sn**	**23 15 33.0**	**-2.1**
GO05	**Huala**	**3.80**	**204**	⇓*i*P	**Pn**	**23 14 48.6**	**-2.6**
GO05				*i* S	**Sn**	**23 15 30.5**	**-4.5**
GO03	**Copiap**	**3.93**	**358**		**Pn**	**23 14 52.9**	**-0.2**
GO03	**Copiap**	**3.93**	**358**	*e*P	**Pn**	**23 14 52.9**	**-0.2**
GO03				*e*S	**Sn**	**23 15 37.9**	**-0.5**
GO03	**Copiap**	**3.93**	**358**	⇑*i*P	**Pn**	**23 14 53.1**	**-0.1**
GO03				*i* S	**Sn**	**23 15 37.0**	**-1.4**
EDS3	**Malargue**	**4.26**	**173**	*e*P	**Pn**	**23 14 57.5**	**-0.1**
ML02	**Panimavida**	**4.36**	**195**	Pn	**Pn**	**23 14 56.8**	**-2.0**
ML02	**Panimavida**	**4.36**	**195**	⇓*i*P	**Pn**	**23 14 56.9**	**-1.9**
TCA	**Tanti**	**4.69**	**89**	*e*P	**Pn**	**23 15 02.0**	**-1.3**
TCA				*i* S	**Sn**	**23 15 53.5**	**-3.2**
TCA				IAML		23 15 53.9	
	comp=Z,6μm,0.7s						
AC02	**Maricunga**	**4.76**	**10**	Pn	**Pn**	**23 15 04.0**	**-0.7**
AC02	**Maricunga**	**4.76**	**10**	*e*P	**Pn**	**23

CNLB Canela 16.73 87 eP P 23 17 39.4 -3.1
AQDB Aquidauana 16.96 53 P Pn 23 17 42.5 -2.8
AQDB Aquidauana 16.96 53 eP Pn 23 17 42.8 -2.5
GO08 Villa O'Higgin 17.01 186 Pn 23 17 45.1 -0.6
PTGB Pitanga 17.27 71 eP P 23 17 47.3 -1.6
SIV San Ignacio 17.52 30 P P 23 17 50.2 -1.5
comp=Z,120nm,0.8s,baz=214,slow=12,SNR=230
SIV S Sn 23 21 04.9 -2.6
comp=Z,5.2nm,0.8s,baz=123,slow=20,SNR=1.4
SIV LR LR 23 24 40.5
comp=Z,122nm,20.7s,baz=226,slow=37
TRCB Terra Rica 17.78 65 P P 23 17 52.0 -2.6
RPRD Ribas do Rio P 18.36 57 eP P 23 18 00.7 -0.2
RVDE Rio Verde (Bra 18.48 51 eP P 23 18 01.5 -0.7
LDASE Londrina, Braz 18.66 69 eP P 23 18 03.6 -0.6
PTLB Pontes e Lacer 18.87 34 P P 23 18 05.5 -1.0
PTLB Pontes e Lacer 18.87 34 eP P 23 18 05.2 -1.2
PCMB Pacaembu 19.49 64 eP P 23 18 12.7 -0.5
PP1B Ponte de Pedra 19.55 48 eP P 23 18 13.2 -0.6
GO09 Cerro Castillo 19.79 184 P P 23 18 15.7 -0.4
FRTB Fartura 19.93 71 eP P 23 18 17.4 -0.6
SALV Santo Antonio 20.35 43 eP P 23 18 22.0 -0.5
NNA Nana 20.43 341 P P 23 18 24.1 +0.7
NNA Nana 20.43 341 i P P 23 18 24.3 +0.9
NNA pmax pmax
comp=Z,264nm,1.6s
NNA Nana 20.43 341 P Pn 23 18 25.0 -1.5
comp=Z,62nm,0.6s,baz=169,slow=15,SNR=23
NNA S S 23 22 09.9 +3.5
comp=Z,4.3nm,0.4s,baz=238,slow=15,SNR=1.4
comp=Z,62nm,0.6s
NNA Nana 20.43 341 eP P 23 18 24.5 +1.0
VILB Vilhena 20.61 28 P P 23 18 24.1 -1.2
VILB Vilhena 20.61 28 eP P 23 18 25.1 -0.2
ITRB Iturama 21.29 61 eP P 23 18 30.9 -1.6
MG04 Isla Riesco 21.33 182 P P 23 18 32.0 -0.7
PET01 Itanhaem-SP 21.38 76 eP P 23 18 32.2 -1.3
SPB Sao Paulo 21.55 74 P P 23 18 34.0 -1.3
SPB Sao Paulo 21.55 74 eP P 23 18 35.1 -0.2
GO10 Punta Arenas 21.62 182 P P 23 18 36.9 +1.1
ETMB Extrema 21.91 10 P P 23 18 38.6 -0.5
ETMB Extrema 21.91 10 eP P 23 18 39.7 +0.5
BB19B Bebedouro 21.91 67 eP P 23 18 37.0 -2.3
EFI East Falkland 21.98 160 P P 23 18 38.2 -1.4
EFI East Falkland 21.98 160 i P P 23 18 38.2 -1.4
EFI pmax pmax
comp=Z,368nm,0.8s
RCLB Rio Claro- Sao 22.01 71 eP P 23 18 38.8 -1.5
PARB Paraibuna 23.15 75 eP P 23 18 50.9 -0.8
SAML Samuel 23.37 17 P P 23 18 52.9 -0.8
SAML Samuel 23.37 17 P P 23 18 52.9 -0.8
SAML Samuel 23.37 17 eP P 23 18 54.0 +0.4
SAML Samuel 23.37 17 eP P 23 18 52.9 -0.8
MG01 Puerto William 23.45 176 P P 23 18 53.7 -0.3
CZSB Cruzeiro do Su 23.81 354 P P 23 18 57.6 0.0
CZSB Cruzeiro do Su 23.81 354 eP P 23 18 58.4 +0.7
CZSB Cruzeiro do Su 23.81 354 eP P 23 18 57.1 -0.6
IPMB Ipameri, GO 23.94 61 eP P 23 18 57.6 -1.3
CLDB Colider 24.44 36 eP P 23 19 03.4 0.0
BSCB Bom Sucesso 24.94 71 eP P 23 19 08.0 0.0
PMNB Patos De Minas 24.96 64 eP P 23 19 08.2 0.0
VAS01 Vassouras-RJ 25.42 75 eP P 23 19 12.3 +0.1
ATAH Atahualpa 25.49 341 P P 23 19 14.9 +1.6
comp=Z,16nm,0.7s,baz=166,slow=8.9,SNR=9.8
comp=Z,16nm,0.7s
BDFB Brasilia 25.59 57 P P 23 19 12.3 -1.7
BDFB Brasilia 25.59 57 P P 23 19 12.3 -1.7
BDFB pmax pmax
comp=Z,161nm,1.2s
BDFB Brasilia 25.59 57 P P 23 19 13.2 -0.7
comp=Z,105nm,0.8s,baz=228,slow=8.2,SNR=130
BDFB LR LR 23 30 10.6
comp=Z,261nm,21.6s,baz=206,slow=38
comp=Z,105nm,0.8s
SNDB Serra Nova Dou 26.06 46 eP P 23 19 17.3 -0.7
DUB01 Friburgo-RJ 26.39 76 eP P 23 19 21.1 0.0
DIAM Diamantina, MG 27.25 67 eP P 23 19 28.4 -0.5
NPGB Novo Progresso 27.98 33 eP P 23 19 34.0 -1.2
TEFE Tefe 28.35 11 eP P 23 19 38.8 +0.3
ALF01 Guarapari-ES 28.43 75 eP P 23 19 39.0 -0.2
MCRA Macar, Loja 28.58 339 P P 23 19 40.5 -0.1
MCRA Macar, Loja 28.58 339 eP P 23 19 40.0 -0.5
JANB Januaria 28.68 61 eP P 23 19 40.6 -0.9
SJMB Sao Joao De Ma 29.01 71 eP P 23 19 43.4 -1.0
BOSC San Juan Bosco 29.33 343 P P 23 19 46.8 -0.6
RIB01 Linhares ES 29.34 73 eP P 23 19 46.9 -0.4
ARNL Arenillas 29.39 339 P P 23 19 47.8 +0.2
MACA Manacapuru-AM 29.58 19 P P 23 19 48.1 -1.2
MACA IAmb IAmb 23 20 41.9
comp=Z,30nm,0.8s
MACA Manacapuru-AM 29.58 19 eP P 23 19 49.2 -0.2
SDBA SAO DESIDERIO 29.90 56 eP P 23 19 52.3 -0.8
COHC Cochancay 30.18 342 P P 23 19 55.2 +0.5
COHC Cochancay 30.18 342 eP P 23 19 55.9 +1.1
ITTB Itaituba 30.20 29 eP P 23 19 53.8 -1.1
CHSH Refugio Sur-Vo 31.02 343 P P 23 20 04.2 +1.4
GUA01 Guaratinga, BA 31.26 69 eP P 23 20 03.3 -0.9
PIAT Ana Tenorio 31.35 344 eP P 23 20 08.0 +2.6
ABR01 Abrolhos, BA 31.41 72 eP P 23 20 04.8 -0.7
SLOR San Lorenzo - 31.66 344 P P 23 20 09.0 +0.7
SLOR IAmb IAmb 23 20 15.6
comp=Z,26nm,0.9s
PULU Pululahua 32.39 344 P P 23 20 15.6 +1.1
IMBA Imbabura, San 32.56 345 P P 23 20 17.7 +1.6
OTAV Otavalo 32.58 344 P P 23 20 15.8 -0.5
OTAV IAmb IAmb 23 20 21.4
comp=Z,28nm,1.1s
OTAV Otavalo 32.58 344 P P 23 20 15.8 -0.5
OTAV pmax pmax
comp=Z,28nm,1.2s
OTAV Otavalo 32.58 344 eP P 23 20 16.7 +0.3
OTAV Otavalo 32.58 344 eP P 23 20 17.2 +0.9
OTAV Otavalo 32.58 344 P P 23 20 18.7 +2.4
TULM Tulcn-Chalpat 32.90 346 P P 23 20 18.5 -0.6
TULM IAmb IAmb 23 20 23.0
comp=Z,32nm,0.9s
MALB Monte Alegre 33.09 30 eP P 23 20 19.1 -1.0
GCUF Volcan Galeras 33.31 347 eP P 23 20 25.8 +3.1
BBAC Balboa, Caca 34.06 347 eP P 23 20 31.0 +2.1
PAPC Popayan, Colom 34.47 348 eP P 23 20 34.2 +1.8
BOAV Boa Vista 34.95 17 P P 23 20 35.1 -1.2
BOAV IAmb IAmb 23 21 22.4
comp=Z,22nm,1.1s
BOAV Boa Vista 34.95 17 eP P 23 20 35.8 -0.5
BOAV Boa Vista 34.95 17 eP P 23 20 34.7 -1.6
JAMC Jamundi, Valle 35.12 348 eP P 23 20 38.6 +0.5
PRAC Prado 35.35 352 eP P 23 20 41.4 +1.6
MCPB Macapa, AP 35.39 32 eP P 23 20 40.4 +0.3
ORTC Ortega, Tolima 35.59 351 eP P 23 20 43.9 +2.0
VILC Villavicencio, 35.62 354 eP P 23 20 43.9 +1.7
YOTC Yotoco, Valle 35.82 349 eP P 23 20 44.7 +0.8
CVER Cruz Verde, Cu 36.06 353 eP P 23 20 47.4 +1.1
PAYG Puerto Ayora 36.17 324 P P 23 20 49.4 +2.7
ANIL Santa Ana 36.19 351 eP P 23 20 48.6 +1.4
ROSC El Rosal 36.40 353 P P 23 20 49.0 -0.1
ROSC El Rosal 36.40 353 P P 23 20 49.0 -0.1
ROSC pmax pmax
comp=Z,26nm,0.7s
ROSC El Rosal 36.40 353 P P 23 20 51.4 +2.3
comp=Z,32nm,0.7s,baz=195,slow=4.3,SNR=8.5
ROSC LR LR 23 35 02.1
comp=Z,229nm,21.2s,baz=228,slow=35
comp=Z,32nm,0.7s
ROSC El Rosal 36.40 353 eP P 23 20 50.9 +1.8
PLMC San Jos del P 36.72 350 eP P 23 20 52.6 +1.2
GUY2C Guyana, Caldas 36.90 351 eP P 23 20 54.4 +0.9
SPBC San Pablo de B 37.18 353 eP P 23 20 56.2 +0.8
CBOC Ciudad Bolivar 37.62 350 eP P 23 21 00.6 +1.4
TAMC Tame, Arauca 37.79 357 eP P 23 21 00.9 +0.4
BARC Barichara 38.03 355 eP P 23 21 02.5 -0.3
PTBC PUERTO BERRIO, 38.09 353 eP P 23 21 02.0 -1.0
PAMC Pamplona, Colo 38.74 356 eP P 23 21 08.1 -0.8
DBBC Dabeiba 38.78 350 eP P 23 21 10.9 +2.1
MDP Montagnes des 40.05 28 LR LR 23 39 11.3
comp=Z,129nm,19.6s,baz=212,slow=38
MPGF Montagnes des 40.06 28 P P 23 21 18.9 -0.5
MPGF pP pP 23 21 45.7 +0.6
SDV Santo Domingo 40.20 359 P P 23 21 18.4 -2.3
SDV IAmb IAmb 23 22 21.0
comp=Z,19nm,0.9s
SDV Santo Domingo 40.20 359 eP P 23 21 20.8 +0.1
SDV Santo Domingo 40.20 359 eP P 23 21 19.8 -0.9

BAUV El Baul 40.30 3 P P 23 21 18.8 -2.5
RCBR Riachuelo 40.95 59 eP P 23 21 27.2 +0.4
RCBR Riachuelo 40.95 59 P P 23 21 27.0 +0.2
RCBR pP pP 23 21 53.4 +1.2
SJCC San Jacinto, C 41.49 352 eP P 23 21 32.0 +0.9
BRU2 Volcan 41.88 341 P P 23 21 34.2 -0.2
CRJC Cerrejon, Guaj 42.40 356 eP P 23 21 36.4 -2.1
DRK0 Durika 42.48 341 P P 23 21 39.3 -0.1
PEZE Perez Zeledon, 42.72 340 P P 23 21 41.1 -0.1
RIMA Rio Macho 43.14 340 P P 23 21 43.9 -0.8
RIMA IAmb IAmb 23 21 47.7
comp=Z,19nm,1.0s
LCR2 La Lucha 2 43.16 340 P P 23 21 44.5 -0.4
JACO JACO, Garabito 43.28 339 P P 23 21 45.0 -0.6
SOCE Pocosol 43.95 339 P P 23 21 51.5 +0.5
SOCE IAmb IAmb 23 21 55.0
comp=Z,81nm,1.1s
JTS Las Juntas de 43.97 339 i P P 23 21 53.7 +2.6
JTS Las Juntas de 43.97 339 P P 23 21 53.5 +2.4
ORTG Ortega, Santa 44.19 338 P P 23 21 53.5 +0.5
COVE Coope Vega, Sa 44.20 340 P P 23 21 53.8 +0.8
ACON Acoyapa 45.62 339 P P 23 22 04.0 -0.1
BOAB BOACO BROADBAN 46.22 339 P P 23 22 08.8 -0.1
MATN Matagalpa 46.76 339 P P 23 22 12.3 -0.9
MATN IAmb IAmb 23 22 16.8
comp=Z,16nm,0.8s
TGUH Tegucigalpa,Un 48.24 337 P P 23 22 23.5 -1.2
BELA Belgrano 2 49.02 171 P P 23 22 30.1 +0.3
MTO3 Montecristo 49.28 335 P P 23 22 31.4 -1.4
MTO3 IAmb IAmb 23 22 34.8
comp=Z,14nm,0.8s
MLPR Magueyes Islan 49.31 4 P P 23 22 30.8 -1.8
MLPR pP 23 22 55.2 -4.1
IGPR InterUniversit 49.37 5 P P 23 22 31.6 -1.5
OBIP Obispado Ponce 49.41 4 P P 23 22 32.0 -1.4
OBIP pP 23 22 55.8 -4.4
CELP Cerrillos 49.44 4 P P 23 22 32.5 -1.1
SJG San Juan 49.51 5 P P 23 22 34.2 0.0
AOPR Arecibo Observ 49.70 4 P P 23 22 34.2 -1.4
GCPR Guaynabo City 49.71 5 P P 23 22 34.2 -1.5
VNA3 Neumayer Olymp 51.03 159 ⇑P P 23 22 45.8 +0.7
comp=Z,4.9nm,0.6s
VNA2 Neumayer--Watz 51.66 158 ⇑P P 23 22 50.3 +0.5
comp=Z,7.2nm,0.5s,baz=286,slow=8.0
PETF Flores 51.79 336 P P 23 22 51.8 +0.5
SNAA Sanae 53.25 159 P P 23 23 02.4 +0.7
SNAA Sanae 53.25 159 ⇑P P 23 23 02.2 +0.6
SNAA Sanae 53.25 159 i P P 23 23 02.1 +0.5
SNAA pmax pmax
comp=Z,26nm,1.4s
SNAA Sanae 53.25 159 P P 23 23 02.4 +0.7
comp=Z,6.4nm,0.8s,baz=276,slow=7.7,SNR=12
SNAA LR LR 23 46 02.7
comp=Z,64nm,18.4s,baz=310,slow=36
comp=Z,6.4nm,0.8s
CMIG Matias Romero 53.90 330 LR LR 23 41 17.7
comp=Z,40nm,19.8s,baz=178,slow=30
TEIG Tepich 54.35 339 P P 23 23 11.0 +1.0
TEIG Tepich 54.35 339 eP P 23 23 11.1 +1.0
TEIG Tepich 54.35 339 ⇑P P 23 23 11.1 +1.0
TEIG pP pP 23 23 37.6 +0.2
TROLL Troll, Antarti 54.97 159 ⇑P P 23 23 14.6 +0.4
comp=Z,248nm,0.7s
SOR Soroa 55.42 345 P P 23 23 17.9 +0.1
SOR Soroa 55.42 345 P P 23 23 17.9 +0.1
SOR pmax pmax
comp=Z,35nm,0.9s
QSPA South Pole Qui 58.69 180 P P 23 23 40.5 -0.1
QSPA South Pole Qui 58.69 180 P P 23 23 41.7 +1.2
comp=Z,16nm,0.7s,baz=175,slow=1.3,SNR=38
QSPA LR LR 23 47 04.7
comp=Z,58nm,21.5s,baz=165,slow=34
comp=Z,16nm,0.7s
QSPA South Pole Qui 58.69 180 P P 23 23 41.8 +1.2
QSPA pP pP 23 24 09.9 +1.5
QSPA sP sP 23 24 20.7 -0.3
TIGA Tifton 63.93 347 P P 23 24 16.5 +0.6
baz=167
HBVL Hebbronville 64.34 332 P P 23 24 20.1 +1.3
BRAL Brewton 64.41 344 P P 23 24 19.0 -0.1
baz=164
NHSC New Hope 65.00 351 P P 23 24 24.1 +1.2
baz=170
833A Chaparral WMA, 65.75 332 P P 23 24 28.9 +1.0
833A Chaparral WMA, 65.75 332 P P 23 24 29.6 +1.7
baz=153
GOGA Godfrey 65.83 348 P P 23 24 28.9 +0.7
baz=168
LRAL Lakeview Retre 66.19 344 P P 23 24 31.0 +0.5
baz=164
Y52A Lilburn 66.38 347 P P 23 24 31.1 -0.6
Y52A IAmb IAmb 23 25 16.6
comp=Z,16nm,1.0s
HNVL Huntsville, TX 66.47 336 P P 23 24 32.3 -0.1
HNVL IAmb IAmb 23 24 35.5
comp=Z,17nm,0.8s
BIRD Birdtown, Kers 66.55 351 P P 23 24 32.6 -0.2
BIRD IAmb IAmb 23 24 34.5
comp=Z,32nm,1.5s
Z47A Carrollton 66.59 344 P P 23 24 33.2 +0.1
Z47A IAmb IAmb 23 25 04.5
comp=Z,19nm,0.9s
HNDO Hondo 66.78 332 P P 23 24 35.4 +1.0
VNDA Vanda 66.83 191 P P 23 24 36.2 +2.0
comp=Z,3.1nm,0.8s,baz=129,slow=5.2,SNR=6.8
comp=Z,3.1nm,0.8s
VNDA Vanda 66.83 191 P P 23 24 36.2 +2.0
VNDA pP pP 23 25 04.6 +2.2
VNDA sP sP 23 25 14.5 -0.1
CNNC Cliffs of the 66.83 353 P P 23 24 36.0 +1.4
baz=173
PAULI Pauline 66.92 350 P P 23 24 34.4 -0.8
PAULI IAmb IAmb 23 25 20.1
comp=Z,27nm,1.4s
W57A Gilead 66.99 351 P P 23 24 35.5 -0.1
W57A IAmb IAmb 23 25 19.6
comp=Z,13nm,0.9s
143A Socs Landing, 67.00 341 P P 23 24 35.7 0.0
NATX Nacogdoches 67.12 337 P P 23 24 37.1 +0.6
NATX Nacogdoches 67.12 337 P P 23 24 37.8 +1.3
baz=157
KMSC Kings Mountain 67.17 350 P P 23 24 36.4 -0.4
KMSC IAmb IAmb 23 25 20.8
comp=Z,15nm,1.1s
KMSC Kings Mountain 67.17 350 P P 23 24 37.9 +1.2
baz=170
X51A Calhoun 67.21 347 P P 23 24 37.4 +0.4
DRIO Del Rio 67.22 331 P P 23 24 38.2 +1.0
BG3 Lake Jocassee 67.27 349 P P 23 24 37.8 +0.3
BG3 IAmb IAmb 23 24 38.6
comp=Z,50nm,1.9s
HPIG 67.33 326 P P 23 24 39.7 +1.5
HPIG IAmb IAmb 23 24 40.6
comp=Z,14nm,0.8s
FPAL Fort Paine 67.33 346 P P 23 24 38.2 +0.3
FPAL IAmb IAmb 23 25 23.0
comp=Z,25nm,1.3s
V58A Windy Hill, Pi 67.51 352 P P 23 24 39.4 +0.5
V58A IAmb IAmb 23 24 40.3
comp=Z,12nm,0.8s
W52A Murphy 67.55 348 P P 23 24 39.5 +0.3
W52A IAmb IAmb 23 25 24.3
comp=Z,15nm,0.9s
X48A Hartselle 67.56 345 P P 23 24 39.5 +0.3
X48A IAmb IAmb 23 25 25.5
comp=Z,24nm,1.2s
Y45A Yeager Farm, C 67.59 343 P P 23 24 38.3 -1.1
237A Washetta, Mont 67.73 337 P P 23 24 40.5 +0.2
JCT Junction City 67.83 332 P P 23 24 42.1 +1.1
JCT Junction City 67.83 332 P P 23 24 42.5 +1.4
baz=153
JCT Junction City 67.83 332 P P 23 24 42.1 +1.1
JCT pmax pmax
comp=Z,57nm,1.3s
V55A Taylorsville 67.85 350 P P 23 24 41.2 +0.2
V55A IAmb IAmb 23 25 25.8
comp=Z,31nm,1.4s
W50A Signal Mountai 67.91 347 P P 23 24 41.3 -0.2
W50A IAmb IAmb 23 25 26.2
comp=Z,26nm,1.1s
V53A Saluda 67.92 349 P P 23 24 41.5 0.0
V53A IAmb IAmb 23 24 42.4
comp=Z,10nm,0.8s
U59A Littleton 67.92 353 P P 23 24 42.5 +1.1

U59A IAmb IAmb 23 25 12.3
comp=Z,18nm,1.1s
Z41A Richland Creek 67.93 340 P P 23 24 42.0 +0.5
CPCT Cooper Cave 68.00 347 P P 23 24 41.5 -0.5
CPCT IAmb IAmb 23 25 27.1
comp=Z,22nm,1.1s
SWET Sewanee 68.05 346 P P 23 24 42.9 +0.5
OXF Oxford 68.17 343 P P 23 24 43.6 +0.5
baz=162
V52A Sevierville 68.22 348 P P 23 24 43.3 0.0
V52A IAmb IAmb 23 25 27.5
comp=Z,18nm,1.0s
BRDY Brady 68.23 334 P P 23 24 43.7 +0.1
BRDY IAmb IAmb 23 24 45.8
comp=Z,23nm,1.1s
WHTX Lake Whitney, 68.29 335 P P 23 24 45.0 +1.1
baz=155
PLAL Pickwick Lake 68.30 344 P P 23 24 44.0 +0.1
PLAL IAmb IAmb 23 25 29.3
comp=Z,14nm,1.1s
SAND Sanderson 68.31 330 P P 23 24 45.2 +1.1
V51A Loudon 68.31 348 P P 23 24 43.3 -0.6
V51A IAmb IAmb 23 24 45.1
comp=Z,15nm,0.9s
WLAR White Oak Lake 68.42 339 P P 23 24 45.6 +1.0
TXAR Lajitas Array 68.45 329 P P 23 24 45.8 +0.7
TXAR Lajitas Array 68.45 329 P P 23 24 46.6 +1.6
comp=Z,8.0nm,0.6s,baz=154,slow=8.5,SNR=105
TXAR pP pP 23 25 15.1 +1.9
comp=Z,3.1nm,0.7s,baz=147,slow=7.2,SNR=5.6
comp=Z,8.0nm,0.6s
TX31 Lajitas Ar. Si 68.45 329 P P 23 24 45.8 +0.7
TX31 IAmb IAmb 23 24 47.1
comp=Z,10nm,0.7s
U54A Nelsons Funny 68.59 350 P P 23 24 45.7 0.0
U54A IAmb IAmb 23 25 44.9
comp=Z,20nm,0.9s
FW13 Cleburne 68.61 335 P P 23 24 45.0 -0.8
OZNA Ozona 68.75 332 P P 23 24 47.7 +0.9
V48A Smith Brothers 68.75 345 P P 23 24 46.0 -0.6
V48A IAmb IAmb 23 25 32.2
comp=Z,30nm,1.1s
TZTN Tazewell 68.89 348 P P 23 24 48.3 +0.8
baz=168
CLTN Cedars of Leba 68.98 346 P P 23 24 47.9 -0.1
CLTN IAmb IAmb 23 25 33.5
comp=Z,27nm,1.2s
BLA Blacksburg 69.07 351 P P 23 24 50.0 +1.4
baz=170
ALPN Alpine 69.33 329 P P 23 24 51.1 +0.5
WVT Waverly 69.34 345 P P 23 24 50.2 -0.1
WVT Waverly 69.34 345 P P 23 24 50.9 +0.6
baz=164
WVT Waverly 69.34 345 P P 23 24 50.2 -0.1
WVT pmax pmax
comp=Z,30nm,0.8s
WVT Waverly 69.34 345 P P 23 24 50.8 +0.5
WVT pP pP 23 25 18.4 -0.3
PLPT Palo Pinto 69.35 335 P P 23 24 51.0 +0.6
PLPT IAmb IAmb 23 24 52.5
comp=Z,22nm,0.9s
MIAR Mount Ida 69.36 339 P P 23 24 51.1 +0.7
MIAR Mount Ida 69.36 339 P P 23 24 51.5 +1.0
baz=159,SNR=6.6
MIAR Mount Ida 69.36 339 P P 23 24 51.1 +0.7
MIAR pmax pmax
comp=Z,13nm,1.0s
Z35A Perchaven, San 69.44 336 P P 23 24 50.7 -0.2
S57A Dark Hollow, R 69.44 352 P P 23 24 51.3 +0.4
S57A IAmb IAmb 23 25 35.9
comp=Z,12nm,0.8s
FW03 Perrin-Whitt E 69.46 335 P P 23 24 51.3 +0.2
R58B Mineral 69.53 353 P P 23 24 50.7 -0.7
R58B IAmb IAmb 23 25 22.7
comp=Z,34nm,1.3s
SGCY Sterling City 69.62 332 P P 23 24 51.8 -0.4
SGCY IAmb IAmb 23 24 54.1
comp=Z,17nm,0.8s
ABTX Abilene, Hawle 69.67 334 P P 23 24 53.5 +1.1
baz=153
LNXT Lenox 69.71 343 P P 23 24 53.3 +0.8
S54A Dingess, Beckl 69.77 351 P P 23 24 52.1 -0.9
S54A IAmb IAmb 23 24 54.2
comp=Z,15nm,0.7s
MNHN Monahans 69.79 331 P P 23 24 54.0 +0.8
S51A Beattyville 69.97 349 P P 23 24 53.2 -0.9
S51A IAmb IAmb 23 24 54.9
comp=Z,10nm,0.7s
T47A Sharon Grove 70.01 346 P P 23 24 54.0 -0.3
T47A IAmb IAmb 23 25 39.7
comp=Z,21nm,1.1s
LOOK Love County 70.01 336 P P 23 24 54.0 -0.5
LOOK IAmb IAmb 23 25 40.9
comp=Z,18nm,0.9s
R55A Marlinton 70.09 352 P P 23 24 55.4 +0.5
R55A IAmb IAmb 23 25 39.8
comp=Z,23nm,1.0s
LCAR Lake Charles 70.10 342 P P 23 24 53.9 -1.0
LCAR IAmb IAmb 23 25 41.2
comp=Z,27nm,0.9s
FCAR Ozark Folk Cen 70.19 341 P P 23 24 55.7 +0.2
FCAR IAmb IAmb 23 25 27.3
comp=Z,30nm,1.6s
WTFS Witchita Falls 70.26 335 P P 23 24 56.6 +0.7
WTFS IAmb IAmb 23 24 58.0
comp=Z,26nm,0.9s
VHRN Van Horn 70.28 328 P P 23 24 56.5 +0.2
PECS Pecos 70.28 330 P P 23 24 57.1 +0.8
PECS IAmb IAmb 23 24 58.8
comp=Z,10nm,0.6s
SN01 Snyder 1 70.36 333 P P 23 24 57.1 +0.5
SN01 IAmb IAmb 23 24 58.7
comp=Z,17nm,0.9s
ODSA Odessa 70.38 331 P P 23 24 57.2 +0.4
APMT Aspermont 70.47 334 P P 23 24 58.2 +0.9
PBMO Poplar Bluff 70.58 343 P P 23 24 57.5 -0.4
PBMO IAmb IAmb 23 25 44.1
comp=Z,21nm,0.8s
R50A Paris 70.72 348 P P 23 24 58.4 -0.3
POST Post 70.78 332 P P 23 24 59.8 +0.6
POST IAmb IAmb 23 25 01.0
comp=Z,16nm,0.8s
X34A Smith Ranch, M 70.79 336 P P 23 24 59.2 0.0
X34A IAmb IAmb 23 25 01.4
comp=Z,30nm,1.0s
R49A Shelbyville 70.88 347 P P 23 24 59.2 -0.4
SSFO Shawnee State 70.93 349 P P 23 25 00.4 +0.4
W35A Tecumseh 70.96 337 P P 23 25 00.6 +0.3
W35A IAmb IAmb 23 26 21.3
comp=Z,36nm,1.6s
SRIG Santa Rosalia 71.01 321 P P 23 25 01.8 +1.2
WCI Wyandotte Cave 71.04 347 P P 23 25 00.1 -0.5
WCI IAmb IAmb 23 25 01.4
comp=Z,14nm,0.9s
WCI Wyandotte Cave 71.04 347 P P 23 25 00.5 -0.1
baz=165
WCI Wyandotte Cave 71.04 347 P P 23 25 00.1 -0.5
WCI pmax pmax
comp=Z,14nm,0.9s
WCI Wyandotte Cave 71.04 347 P P 23 25 00.6 +0.1
P57A Homestead Farm 71.04 354 P P 23 25 00.3 -0.3
P57A IAmb IAmb 23 25 03.2
comp=Z,16nm,0.8s
Q52A Bidwell 71.05 350 IAmb IAmb 23 25 02.0
comp=Z,21nm,1.1s
USIN University of 71.07 345 P P 23 25 00.5 -0.2
USIN IAmb IAmb 23 25 45.4
comp=Z,21nm,1.0s
HHAR Hobbs 71.08 340 P P 23 25 01.2 +0.3
HHAR IAmb IAmb 23 25 55.2
comp=Z,17nm,1.2s
DKNS Dickens 71.08 333 P P 23 24 59.4 -1.7
DKNS IAmb IAmb 23 25 02.9
comp=Z,27nm,0.8s
CLN7 Carlsbad 7 71.16 330 P P 23 25 02.6 +1.0
S44A Carbondale 71.17 344 P P 23 25 01.1 -0.3
S44A IAmb IAmb 23 25 47.1
comp=Z,19nm,0.9s
SIUC Southern Illin 71.18 344 P P 23 25 00.7 -0.7
SIUC IAmb IAmb 23 25 55.6
comp=Z,20nm,1.0s
MNTX Cornudas Mount 71.23 329 P P 23 25 01.8 -0.1
MNTX IAmb IAmb 23 25 03.3
comp=Z,15nm,0.8s
MNTX Cornudas Mount 71.23 329 P P 23 25 02.1 +0.2

baz=149
FNO Franklin 71.23 337 P **P** **23 25 01.5 -0.4**
FNO lAmb lAmb 23 25 50.2
comp=Z,40nm,1.3s
WMOK Wichita Mounta 71.25 335 P **P** **23 25 02.1 +0.2**
WMOK Wichita Mounta 71.25 335 P **P** **23 25 02.4 +0.4**
baz=154
WMOK Wichita Mounta 71.25 335 P **P** **23 25 02.2 +0.2**
WMOK pmax pmax
comp=Z,8.0nm,1.0s
Q51A Peebles 71.28 349 P **P** **23 25 01.4 -0.7**
Q51A lAmb lAmb 23 25 03.4
comp=Z,13nm,0.8s
WUPA West Chester U 71.29 356 P **P** **23 25 01.9 -0.2**
RLO Rose Lookout 71.30 339 P **P** **23 25 01.4 -0.8**
RLO lAmb lAmb 23 25 19.2
comp=Z,21nm,0.9s
TUL3 Leonard 71.30 338 P **P** **23 25 01.9 -0.4**
TUL3 lAmb lAmb 23 25 04.0
comp=Z,17nm,0.8s
TUL3 Leonard 71.30 338 P **P** **23 25 02.8 +0.6**
baz=157
U38A Gravette 71.36 339 P **P** **23 25 02.3 -0.2**
MCWV Mont Chateau 71.41 352 P **P** **23 25 03.4 +0.6**
baz=171
DEOK Depew 71.47 338 P **P** **23 25 03.7 +0.5**
P51A Williamsport 71.68 349 P **P** **23 25 04.3 -0.1**
P51A lAmb lAmb 23 25 05.6
comp=Z,20nm,0.8s
HSIG 71.68 323 P **P** **23 25 05.7 +1.0**
HSIG lAmb lAmb 23 25 07.1
comp=Z,10nm,0.7s
P52A Corning 71.69 350 P **P** **23 25 03.9 -0.6**
P52A lAmb lAmb 23 25 05.3
comp=Z,17nm,0.8s
P52A Corning 71.69 350 P **P** **23 25 04.9 +0.4**
baz=169
OK052 Battle Ridge R 71.70 337 P **P** **23 25 04.6 -0.1**
OK052 lAmb lAmb 23 25 06.3
comp=Z,42nm,1.3s
CPRX Cap Rock 71.72 331 P **P** **23 25 07.1 +2.1**
FVM French Village 71.72 343 P **P** **23 25 04.5 -0.2**
FVM lAmb lAmb 23 25 06.4
comp=Z,22nm,0.8s
FVM French Village 71.72 343 P **P** **23 25 04.5 -0.2**
FVM pmax pmax
comp=Z,22nm,0.8s
OK029 Liberty Lake 71.74 337 P **P** **23 25 04.9 +0.1**
OK029 lAmb lAmb 23 25 06.6
comp=Z,25nm,1.0s
OK033 Mehan 71.80 337 P **P** **23 25 05.5 +0.3**
OK033 lAmb lAmb 23 25 37.4
comp=Z,24nm,1.0s
QUOK Quay 71.84 338 P **P** **23 25 05.6 +0.2**
QUOK lAmb lAmb 23 25 37.6
comp=Z,16nm,0.9s
OLIL Olney 71.90 345 P **P** **23 25 05.6 -0.1**
OLIL lAmb lAmb 23 25 51.0
comp=Z,30nm,1.2s
BLO Bloomington 71.99 347 P **P** **23 25 06.5 +0.2**
BLO lAmb lAmb 23 25 50.9
comp=Z,14nm,0.8s
BLO Bloomington 71.99 347 P **P** **23 25 06.5 +0.2**
BLO pmax pmax
comp=Z,14nm,0.9s
CCM Cathedral Cave 72.00 343 P **P** **23 25 07.0 +0.7**
CCM lAmb lAmb 23 25 08.0
comp=Z,17nm,0.8s
CCM Cathedral Cave 72.00 343 P **P** **23 25 07.0 +0.7**
baz=161
CCM Cathedral Cave 72.00 343 P **P** **23 25 07.0 +0.7**
CCM pmax pmax
comp=Z,17nm,0.8s
P49A Miami Univ. Ec 72.01 348 P **P** **23 25 07.0 +0.6**
baz=167
CSTR Hydro, Custer 72.03 336 P **P** **23 25 06.5 -0.1**
P48A Milroy 72.06 348 P **P** **23 25 06.7 0.0**
P48A lAmb lAmb 23 25 07.5
comp=Z,18nm,0.7s
MSTX Muleshoe 72.08 332 P **P** **23 25 07.7 +0.6**
MSTX Muleshoe 72.08 332 P **P** **23 25 08.0 +0.9**
baz=151
SMWD Samnorwood 72.10 334 P **P** **23 25 07.4 +0.3**
SMWD lAmb lAmb 23 25 09.3
comp=Z,26nm,0.9s
O52A Adamsville 72.12 351 P **P** **23 25 06.9 -0.1**
O52A lAmb lAmb 23 25 08.3
comp=Z,16nm,0.8s
OK048 Pawnee Station 72.14 337 **P** **23 25 07.6 +0.3**
OK048 lAmb lAmb 23 25 09.2
comp=Z,29nm,0.9s
O53A New Philadelph 72.17 351 P **P** **23 25 08.0 +0.7**
baz=170
SSPA Standing Stone 72.17 354 P **P** **23 25 08.4 +1.1**
baz=173
S39A Bolivar 72.21 341 P **P** **23 25 08.3 +0.6**
S39A lAmb lAmb 23 25 55.2
comp=Z,28nm,1.2s
ACSO Alum Creek Sta 72.40 350 P **P** **23 25 08.9 +0.2**
ACSO Alum Creek Sta 72.40 350 P **P** **23 25 09.0 +0.3**
baz=168
LIC Lamto 72.42 71⇓ *i*P **P** **23 25 09.2 -0.2**
comp=Z,30nm,0.3s
AMTX Amarillo 72.45 333 P **P** **23 25 10.1 +0.8**
AMTX lAmb lAmb 23 25 11.5
comp=Z,40nm,1.2s
AMTX Amarillo 72.45 333 P **P** **23 25 10.6 +1.3**
baz=152
T35A Sooner Cattle 72.45 338 P **P** **23 25 09.7 +0.6**
T35A lAmb lAmb 23 25 11.2
comp=Z,17nm,1.0s
R40A Maddies Statio 72.49 342 P **P** **23 25 09.3 +0.1**
BLOK Blackwell 72.54 337 P **P** **23 25 09.8 +0.2**
BLOK lAmb lAmb 23 25 11.7
comp=Z,31nm,1.2s
P46A Rosedale 72.56 346 P **P** **23 25 09.3 -0.4**
P46A lAmb lAmb 23 25 59.2
comp=Z,22nm,0.9s
O49A Covington 72.58 349 P **P** **23 25 09.4 -0.4**
O49A lAmb lAmb 23 25 54.9
comp=Z,29nm,1.0s
ELIS Ellis County 72.66 335 P **P** **23 25 10.9 +0.4**
ELIS lAmb lAmb 23 26 03.1
comp=Z,19nm,0.8s
TIC Toumodi 72.67 71⇑ *i*P **P** **23 25 11.1 +0.2**
comp=Z,32nm,0.5s
KIC Kosan Boka 72.73 71⇓ *i*P **P** **23 25 11.2 -0.1**
comp=Z,84nm,0.7s
319A Douglas 72.77 326 P **P** **23 25 12.9 +1.6**
319A lAmb lAmb 23 25 14.5
comp=Z,26nm,0.8s
O48B Farmland 72.79 348 P **P** **23 25 10.6 -0.4**
O48B Farmland 72.79 348 P **P** **23 25 11.4 +0.4**
baz=167
OK038 West end E0370 72.80 336 P **P** **23 25 12.2 +1.0**
OK038 lAmb lAmb 23 25 59.4
comp=Z,27nm,1.0s
U32A Winter Ranch, 72.80 336 P **P** **23 25 11.5 +0.3**
DBIC Dimbokro 72.81 71 P **P** **23 25 11.1 -0.7**
DBIC Dimbokro 72.81 71 P **P** **23 25 11.1 -0.7**
DBIC pmax pmax
comp=Z,39nm,0.9s
DBIC Dimbokro 72.81 71 P **P** **23 25 11.8 0.0**
comp=Z,36nm,0.7s,baz=221,slow=6.3,SNR=52
DBIC pP **pP** **23 25 39.6 -0.3**
comp=Z,14nm,0.6s,baz=219,slow=5.8,SNR=4.2
DBIC LR LR 23 55 10.5
comp=Z,40nm,19.6s,baz=200,slow=34
comp=Z,36nm,0.7s
OK032 Salt Plains WL 72.91 337 P **P** **23 25 11.9 +0.1**
OK032 lAmb lAmb 23 25 13.9
comp=Z,22nm,1.1s
KAN17 Caldwell West 72.98 337 P **P** **23 25 12.2 0.0**
KAN17 lAmb lAmb 23 25 13.8
comp=Z,30nm,0.9s
KAN09 Caldwell North 73.01 337 P **P** **23 25 13.1 +0.7**
121A Cookes Peak, D 73.02 327 P **P** **23 25 13.6 +0.8**
121A lAmb lAmb 23 25 16.1
comp=Z,22nm,0.9s
121A Cookes Peak, D 73.02 327 P **P** **23 25 15.0 +2.2**
baz=147
KAN01 Argonia South 73.08 337 P **P** **23 25 12.2 -0.6**
M55A Ridgway 73.08 353 P **P** **23 25 13.1 +0.3**
M55A lAmb lAmb 23 25 57.9
comp=Z,17nm,0.8s
KAN06 Argonia West S 73.19 337 P **P** **23 25 14.5 +1.0**
KAN06 lAmb lAmb 23 26 08.0
comp=Z,27nm,1.1s
N49A Columbus Grove 73.27 349 P **P** **23 25 13.7 -0.1**
M53A WI Miller and 73.27 352 P **P** **23 25 14.7 +0.9**
baz=170
KAN12 Harper NE Stat 73.29 337 P **P** **23 25 14.0 0.0**
P40A Paris 73.59 342 P **P** **23 25 16.3 +0.6**
DUN6 Lazy B Ranch 73.65 326 P **P** **23 25 16.9 +0.5**
HRV Adam Dziewonsk 73.69 359 P **P** **23 25 16.9 +0.6**
baz=179
ERPA Erie 73.86 352 P **P** **23 25 17.9 +0.6**
baz=171
BNM Barren Site 73.86 329 P **P** **23 25 17.9 +0.1**
HDIL Hopedale 73.91 345 P **P** **23 25 18.4 +0.9**
baz=163
LENM Lemitar 74.03 329 P **P** **23 25 20.1 +1.5**
P38A Dawn 74.08 341 lAmb lAmb 23 26 04.2
comp=Z,12nm,0.7s
TUC Tucson 74.26 325 P **P** **23 25 20.1 +0.2**
TUC Tucson 74.26 325 P **P** **23 25 21.5 +1.6**
baz=145
TUC Tucson 74.26 325 P **P** **23 25 20.1 +0.2**
TUC pmax pmax
comp=Z,16nm,1.7s
L48A N Adams 74.31 349 P **P** **23 25 19.2 -0.6**
N41A Harden Midland 74.41 344 P **P** **23 25 19.9 -0.6**
ANMO Albuquerque 74.46 330 P **P** **23 25 22.1 +0.9**
ANMO lAmb lAmb 23 25 24.3
comp=Z,23nm,1.4s
ANMO Albuquerque 74.46 330 P **P** **23 25 23.0 +1.9**
baz=148
ANMO Albuquerque 74.46 330 *i*P **P** **23 25 22.6 +1.4**
ANMO pmax pmax
comp=Z,17nm,1.5s
ANMO Albuquerque 74.46 330 LR LR 23 54 00.7
comp=Z,45nm,21.2s,baz=221,slow=32
214A Organ Pipe Nat 74.99 323 P **P** **23 25 25.8 +1.7**
214A lAmb lAmb 23 25 27.5
comp=Z,17nm,0.9s
214A Organ Pipe Nat 74.99 323 P **P** **23 25 26.6 +2.5**
baz=143
PIX Pinacate 75.01 323 P **P** **23 25 25.2 +1.0**
MAW Mawson 75.06 163 LR LR 23 57 37.1
comp=Z,47nm,20.6s,baz=212,slow=35
N38A Joes South For 75.09 342 P **P** **23 25 24.6 +0.2**
N38A lAmb lAmb 23 25 25.8
comp=Z,15nm,0.7s
CBKS Cedar Bluff 75.24 336 P **P** **23 25 25.9 +0.6**
CBKS lAmb lAmb 23 26 14.1
comp=Z,28nm,1.1s
CBKS Cedar Bluff 75.24 336 P **P** **23 25 26.5 +1.1**
baz=154
CBKS Cedar Bluff 75.24 336 P **P** **23 25 26.0 +0.6**
CBKS pmax pmax
comp=Z,28nm,1.1s
SFX San Felipe 75.33 321 P **P** **23 25 27.2 +1.2**
X18A Snowflake 75.68 327 P **P** **23 25 29.6 +1.4**
X18A lAmb lAmb 23 26 13.9
comp=Z,24nm,1.7s
L40A Anamosa 75.78 344 P **P** **23 25 28.5 +0.2**
N35A Tabor 75.82 340 P **P** **23 25 28.8 +0.2**
W18A Petrified Fore 76.07 327 P **P** **23 25 32.1 +1.8**
baz=146
113A Mohawk Valley, 76.13 323 P **P** **23 25 31.2 +0.7**
X16A Lo Mia Camp, P 76.30 326 P **P** **23 25 32.5 +0.8**
X16A lAmb lAmb 23 25 34.9
comp=Z,17nm,1.0s
PKME Peaks-Kenny Pk 76.44 1 P **P** **23 25 33.7 +1.7**
baz=181
SDCO Great Sand Dun 76.45 332 P **P** **23 25 33.4 +0.8**
SDCO Great Sand Dun 76.45 332 P **P** **23 25 34.6 +2.0**
baz=149,SNR=12
ESJX Sierra Juarez 76.67 321 P **P** **23 25 35.1 +1.3**
Y14A Wickenburg 76.67 324 P **P** **23 25 34.1 +0.5**
GLA Glamis 76.89 323 P **P** **23 25 36.5 +1.6**
GLA Glamis 76.89 323 P **P** **23 25 36.9 +2.0**
baz=142
GLA Glamis 76.89 323 P **P** **23 25 36.5 +1.6**
GLA pmax pmax
comp=Z,8.0nm,0.8s
S22A 4UR Ranch, Cre 77.00 331 P **P** **23 25 37.0 +1.3**
S22A 4UR Ranch, Cre 77.00 331 P **P** **23 25 37.8 +2.2**
baz=148,SNR=11
BGNE Belgrade 77.07 339 P **P** **23 25 37.5 +1.9**
baz=156
YUH Yuha Desert 77.16 322 P **P** **23 25 36.1 -0.2**
WUAZ Wupatki 77.16 326 P **P** **23 25 38.6 +2.2**
WUAZ lAmb lAmb 23 26 31.6
comp=Z,21nm,1.1s
WUAZ Wupatki 77.16 326 P **P** **23 25 38.8 +2.3**
baz=145,SNR=9.5
RMX La Rumorosa 77.20 321 P **P** **23 25 36.7 0.0**
RMX lAmb lAmb 23 25 39.8
comp=Z,14nm,0.9s
MVCO Mesa Verde 77.25 329 P **P** **23 25 37.6 +0.6**
MVCO lAmb lAmb 23 25 40.0
comp=Z,19nm,1.1s
MVCO Mesa Verde 77.25 329 P **P** **23 25 39.1 +2.0**
baz=147,SNR=11
IKP In-Ko-Pah, Jac 77.26 321 P **P** **23 25 39.3 +2.3**
baz=141,SNR=5.2
BLYC Blythe 77.29 323 P **P** **23 25 36.8 -0.2**
BLYC lAmb lAmb 23 25 40.3
comp=Z,16nm,0.8s
SWSC Sam W. Stewart 77.32 322 P **P** **23 25 39.6 +2.4**
baz=141
Q24A Divide 77.36 333 P **P** **23 25 38.2 +0.5**
Q24A lAmb lAmb 23 25 40.6
comp=Z,16nm,0.8s
Q24A Divide 77.36 333 P **P** **23 25 39.6 +1.9**
baz=150,SNR=10
PDMCI Parker Dam,Lak 77.53 324 P **P** **23 25 40.5 +2.2**
baz=143
BAR Barrett 77.58 321 P **P** **23 25 39.8 +1.0**
BAR lAmb lAmb 23 25 41.9
comp=Z,14nm,0.9s
MONP2 Monument Peak 77.61 321 P **P** **23 25 41.0 +1.9**
baz=141,SNR=6.9
BC3 Big Chuckawall 77.69 323 P **P** **23 25 41.4 +2.0**
baz=142,SNR=16
IRM Iron Mountain 77.93 323 P **P** **23 25 42.6 +2.0**
baz=142,SNR=12
OGNE Ogallala 77.94 336 P **P** **23 25 42.4 +1.8**
baz=152
W13A Hualapai Mount 78.03 325 P **P** **23 25 42.1 +0.7**
PV01 Paradox Valley 78.06 330 P **P** **23 25 42.2 +0.7**
I37A Lemond, Waseca 78.15 343 lAmb lAmb 23 26 27.9
comp=Z,31nm,0.9s
PMD Palm Desert 78.17 322 P **P** **23 25 42.6 +0.7**
TPFO Pinon Flats 78.18 322 P **P** **23 25 44.5 +2.3**
baz=141,SNR=10
PFO Pinyon Flats O 78.19 322 P **P** **23 25 42.8 +0.6**
PFO lAmb lAmb 23 25 45.6
comp=Z,16nm,1.0s
PFO Pinyon Flats O 78.19 322 P **P** **23 25 44.7 +2.5**
baz=141,SNR=11
PFO Pinyon Flats O 78.19 322⇑ *i*P **P** **23 25 44.6 +2.5**
PFO pmax pmax
comp=Z,27nm,1.0s
PFO Pinyon Flats O 78.19 322 LR LR 23 54 30.9
comp=Z,56nm,20.7s,baz=102,slow=31
PV02 Paradox Valley 78.19 330 P **P** **23 25 42.7 +0.4**
PV15 Paradox Valley 78.19 330 P **P** **23 25 43.4 +1.1**
PV15 lAmb lAmb 23 26 34.1
comp=Z,27nm,1.5s
PV05 Paradox Valley 78.24 329 P **P** **23 25 43.2 +0.7**
PV05 lAmb lAmb 23 26 33.2
comp=Z,16nm,1.0s
BELC Belle Mtn. Jos 78.25 322 P **P** **23 25 44.6 +2.1**
baz=141,SNR=6.1
D62A Allapoint, All 78.26 1 P **P** **23 25 42.9 +0.9**
ISCO Idaho Springs 78.26 333 P **P** **23 25 42.9 +0.2**
ISCO Idaho Springs 78.26 333 P **P** **23 25 44.6 +1.9**
baz=150,SNR=6.9
ISCO Idaho Springs 78.26 333 P **P** **23 25 42.9 +0.2**
ISCO pmax pmax
comp=Z,6.0nm,0.9s
SMCO Snowmass 78.27 332 P **P** **23 25 44.4 +1.5**
SMCO lAmb lAmb 23 26 18.6
comp=Z,19nm,0.9s
PV03 Paradox Valley 78.28 330 P **P** **23 25 42.7 +0.1**
PV03 lAmb lAmb 23 26 34.1
comp=Z,27nm,1.6s
TSUM Tsumeb 78.28 105 P **P** **23 25 42.8 -0.4**
TSUM lAmb lAmb 23 25 45.1
comp=Z,35nm,1.6s
PV18 Skein Mesa, Pa 78.30 330 P **P** **23 25 43.3 +0.5**
PV12 Saucer Basin, 78.31 330 P **P** **23 25 43.5 +0.6**
PV12 lAmb lAmb 23 26 37.1
comp=Z,16nm,1.1s
PV11 David Mesa, Pa 78.33 330 P **P** **23 25 43.7 +0.8**
U15A North Rim 78.33 326 P **P** **23 25 43.6 +0.5**
PV17 East Wray Mesa 78.35 330 P **P** **23 25 42.8 -0.2**
PV16 Nyswonger Mesa 78.36 330 P **P** **23 25 43.3 +0.2**
PV19 Morning Glory 78.38 330 P **P** **23 25 43.6 +0.3**
PV14 Lion Creek, Pa 78.45 330 P **P** **23 25 43.4 -0.3**
PV10 Paradox Valley 78.46 330 P **P** **23 25 43.9 +0.2**
PV10 lAmb lAmb 23 25 46.0
comp=Z,11nm,0.8s
PV22 Blue Mesa, Par 78.49 330 P **P** **23 25 44.5 +0.6**
PV23 Carpenter Ridg 78.51 330 P **P** **23 25 44.0 0.0**
MURC Murrieta 78.57 321 P **P** **23 25 46.4 +2.2**
baz=140
K30B Basset 78.68 338 P **P** **23 25 45.7 +1.2**
GMRC Granite Mounta 78.68 323 P **P** **23 25 47.2 +2.4**
baz=142,SNR=12
ELS Elsinore Mount 78.73 321 P **P** **23 25 46.1 +1.0**
ELS lAmb lAmb 23 25 48.3
comp=Z,13nm,0.8s
ECSD EROS Data Cent 78.75 341 P **P** **23 25 45.0 +0.1**
ECSD lAmb lAmb 23 26 43.5
comp=Z,16nm,0.8s
HMU Henry Mountain 78.85 328 P **P** **23 25 46.3 +0.4**
V12A Nelson 79.01 324 P **P** **23 25 47.8 +1.1**
KNB Kanab 79.06 326 P **P** **23 25 47.9 +0.9**
KNB lAmb lAmb 23 26 42.4
comp=Z,25nm,1.2s
KNB Kanab 79.06 326 P **P** **23 25 47.9 +0.9**
KNB pmax pmax
comp=Z,25nm,1.2s
HEC Hector,Ludlow 79.06 323 P **P** **23 25 49.4 +2.5**
baz=141,SNR=12
CIS Catalina Islan 79.07 320 P **P** **23 25 49.1 +2.2**
baz=140
PKCU Pink Cliffs 79.16 327 P **P** **23 25 46.9 -0.8**
LCMT Little Creek M 79.25 326 P **P** **23 25 48.4 +0.4**
BFSC Mount Baldy Ra 79.30 322 P **P** **23 25 50.4 +2.1**
baz=140
TUQ Turquoise Moun 79.33 323 P **P** **23 25 50.6 +2.3**
baz=142,SNR=12
N23A Red Feather La 79.33 333 P **P** **23 25 50.3 +1.8**
baz=149
PHWY Pilot Hill 79.50 334 P **P** **23 25 50.5 +1.2**
PASC Pasadena Art C 79.53 321 P **P** **23 25 50.6 +1.2**
PASC lAmb lAmb 23 25 52.6
comp=Z,14nm,0.9s
SNCC San Nicolas Is 79.56 320 P **P** **23 25 51.6 +2.1**
baz=139
VLDQ Val d'Or 79.56 355 P **P** **23 25 49.9 +0.8**
MTPU Mount Pierson 79.59 327 P **P** **23 25 50.6 +0.6**
O20A White River Ci 79.60 331 P **P** **23 25 50.7 +0.8**
O20A lAmb lAmb 23 26 41.3
comp=Z,20nm,1.1s
O20A White River Ci 79.60 331 P **P** **23 25 51.6 +1.8**
baz=148,SNR=5.7
SZCU Shurtz Canyon 79.65 327 P **P** **23 25 51.4 +1.2**
SZCU lAmb lAmb 23 26 45.5
comp=Z,25nm,1.6s
GSC Goldstone, Bar 79.67 323 P **P** **23 25 50.8 +0.6**
GSC Goldstone, Bar 79.67 323 P **P** **23 25 52.4 +2.2**
baz=141,SNR=5.7
GSC Goldstone, Bar 79.67 323 P **P** **23 25 50.8 +0.6**
GSC pmax pmax
comp=Z,19nm,1.5s
DECC Green Verdugo 79.67 321 P **P** **23 25 52.3 +2.2**
baz=140
SRU San Rafael Swe 79.72 329 P **P** **23 25 51.3 +0.8**
SRU San Rafael Swe 79.72 329 P **P** **23 25 51.3 +0.8**
SRU pmax pmax
comp=Z,11nm,0.8s
BOSA Boshof 79.73 117 P **P** **23 25 50.1 -0.8**
comp=Z,5.5nm,0.7s,baz=262,slow=2.5,SNR=11
BOSA pP **pP** **23 26 19.9 +0.5**
comp=Z,13nm,0.9s,baz=232,slow=4.8,SNR=6.8
comp=Z,5.5nm,0.7s
SHPR Sheep Range 79.78 325 P **P** **23 25 51.2 +0.4**
Q16A Castle Valley 79.84 329 P **P** **23 25 52.5 +1.4**
F36A Milaca 79.92 344 P **P** **23 25 51.5 +0.3**
MSU Marysvale 79.97 328 P **P** **23 25 52.4 +0.5**
MSU Marysvale 79.97 328 P **P** **23 25 52.4 +0.5**
EDW2 Edwards Air Fo 79.97 322 P **P** **23 25 53.7 +1.9**
baz=140,SNR=9.6
MVU Marysvale 79.97 328 P **P** **23 25 52.4 +0.4**
P18A Preston Nutter 80.02 330 P **P** **23 25 52.5 +0.2**
P18A lAmb lAmb 23 25 55.1
comp=Z,16nm,0.9s
SUSD Miller 80.08 339 P **P** **23 25 52.5 +0.4**
SUSD lAmb lAmb 23 25 53.1
comp=Z,21nm,1.0s
SUSD Miller 80.08 339 P **P** **23 25 52.6 +0.6**
baz=155
P17A Butcher Ranch, 80.11 329 P **P** **23 25 53.3 +0.7**
TMUT Trail Mountain 80.17 329 P **P** **23 25 52.5 -0.6**
SCZ2 Santa Cruz Isl 80.19 320 P **P** **23 25 55.1 +2.2**
baz=139,SNR=5.1
CCAC Calif City Air 80.19 322 P **P** **23 25 53.5 +0.5**
CCAC lAmb lAmb 23 25 56.0
comp=Z,17nm,0.8s
QSM Queen of Sheba 80.22 323 P **P** **23 25 53.6 +0.6**
LRMC Laurel Mtn Rad 80.27 322 P **P** **23 25 55.3 +1.8**
baz=140,SNR=8.4
GWY Greenwater Val 80.29 323 P **P** **23 25 54.4 +0.8**
PRN Pahroc Range 80.44 325 P **P** **23 25 55.0 +0.7**
PRN lAmb lAmb 23 25 57.8
comp=Z,15nm,0.9s
RWWY Rawlins 80.50 333 P **P** **23 25 55.4 +0.6**
RWWY lAmb lAmb 23 28 55.6
comp=Z,16nm,0.7s
RDMU Red Mountain 80.52 331 P **P** **23 25 54.6 -0.2**
RDMU lAmb lAmb 23 26 45.3
comp=Z,11nm,0.8s
F33A 5 Mile Ranch, 80.60 342 P **P** **23 25 54.9 +0.1**
F33A lAmb lAmb 23 26 26.6
comp=Z,16nm,1.1s
FURC Furnace Creek, 80.60 323 P **P** **23 25 57.4 +2.4**
baz=141
MPMC Manual Prospec 80.61 323 P **P** **23 25 57.3 +1.9**
baz=140,SNR=6.6
TPNV Topopah Spring 80.67 324 P **P** **23 25 56.3 +0.7**
TPNV Topopah Spring 80.67 324 P **P** **23 25 57.9 +2.2**
baz=141
TPNV Topopah Spring 80.67 324 P **P** **23 25 56.3 +0.7**
TPNV pmax pmax
comp=Z,10.0nm,1.0s
WCT Wildcat Mounta 80.74 324 P **P** **23 25 56.4 +0.5**
BCW Bitter Crk WRg 80.77 321 P **P** **23 25 56.6 +0.4**
BCW lAmb lAmb 23 25 59.6
comp=Z,32nm,1.1s
ISA Isabella, Lake 80.82 322 P **P** **23 25 57.5 +1.2**
ISA Isabella, Lake 80.82 322 P **P** **23 25 58.3 +2.0**
baz=140,SNR=8.2
ISA Isabella, Lake 80.82 322 P **P** **23 25 57.5 +1.2**
ISA pmax pmax
comp=Z,10.0nm,0.8s
MPU Maple Canyon 80.95 329 P **P** **23 25 57.8 +0.7**
PKM Mcpherson Peak 80.95 321 P **P** **23 25 59.4 +2.2**
baz=139
BSUT Blindstream Ca 81.00 330 P **P** **23 25 58.0 +0.5**
K22A Casper 81.06 334 P **P** **23 25 58.3 +0.8**
K22A lAmb lAmb 23 26 43.0
comp=Z,17nm,1.0s
K22A Casper 81.06 334 P **P** **23 25 59.5 +2.0**
baz=149
NLU North Lily Min 81.09 329 P **P** **23 25 58.2 +0.4**
CWC Cottonwood Cre 81.21 323 P **P** **23 26 00.6 +2.1**
baz=140
GRAC Grapevine Rang 81.27 323 P **P** **23 25 58.3 -0.3**
GRAC lAmb lAmb 23 27 07.9
comp=Z,24nm,1.6s
GRAC Grapevine Rang 81.27 323 P **P** **23 26 00.8 +2.1**
baz=141
VES Vestal, Richgr 81.28 322 P **P** **23 26 01.0 +2.4**
baz=139
SPR3 Spring Creek 3 81.36 327 P **P** **23 26 00.2 +0.8**
SMMC Simmler 81.37 321 P **P** **23 26 01.3 +2.1**
baz=139
EYMN Ely 81.42 346 P **P** **23 26 00.9 +1.8**
baz=162
RSSD Black Hills 81.43 336 P **P** **23 25 59.5 -0.1**
RSSD Black Hills 81.43 336 P **P** **23 26 00.9 +1.3**
baz=151

RSSD Black Hills 81.43 336 P P 23 25 59.5 -0.1
RSSD pmax pmax
comp=Z,11nm,0.9s
R11B Troy Canyon, C 81.44 325 P P 23 26 00.4 +0.7
R11B Troy Canyon, C 81.44 325 P P 23 26 01.9 +2.2
baz=142,SNR=12
GMN Gold Mountain 81.45 324 P P 23 26 00.1 +0.3
DUG Dugway, Tooele 81.62 328 P P 23 26 01.2 +0.6
DUG IAmb IAmb 23 26 03.5
comp=Z,35nm,1.9s
DUG Dugway, Tooele 81.62 328 P P 23 26 02.1 +1.6
baz=144
DUG Dugway, Tooele 81.62 328 P P 23 26 01.2 +0.6
DUG pmax pmax
comp=Z,35nm,1.9s
TOA0 Torodi Ar. Sit 81.80 69 P P 23 26 01.4 -0.5
TORD Torodi Ar. Bea 81.80 69 P P 23 26 01.0 -0.9
TORD Torodi Ar. Bea 81.80 69 P P 23 26 01.8 -0.1
comp=Z,23nm,0.7s,baz=282,slow=4.6,SNR=93
comp=Z,23nm,0.7s
LBTB Lobatse 81.82 114 P P 23 26 00.9 -1.2
LBTB IAmb IAmb 23 26 02.7
comp=Z,14nm,0.6s
LBTB Lobatse 81.82 114 P P 23 26 00.9 -1.2
LBTB pmax pmax
comp=Z,14nm,0.6s
LBTB Lobatse 81.82 114 LR LR 23 58 14.1
comp=Z,23nm,18.3s,baz=236,slow=33
MZP Montezuma Peak 81.82 324 P P 23 26 02.7 +0.8
DSP Deep Springs 81.86 323 P P 23 26 02.6 +0.9
D32A Dogwood Acres, 81.99 342 P P 23 26 02.2 +0.1
D32A IAmb IAmb 23 26 37.3
comp=Z,42nm,1.4s
TPH Tonopah 82.03 324 P P 23 26 02.3 -0.5
TPH Tonopah 82.03 324 P P 23 26 02.3 -0.5
TPH pmax pmax
comp=Z,55nm,1.0s
HWUT Hardware Ranch 82.22 330 P P 23 26 04.2 +0.4
HWUT IAmb IAmb 23 26 48.6
comp=Z,28nm,1.5s
BGU Big Grassy Mou 82.31 329 P P 23 26 04.7 +0.6
BW06 Boulder Array 82.35 332 P P 23 26 04.2 -0.2
BW06 Boulder Array 82.35 332 P P 23 26 05.5 +1.0
baz=147
PD31 Pinedale Array 82.35 332 P P 23 26 04.8 +0.4
PDAR Pinedale Array 82.35 332 P P 23 26 05.0 +0.6
PDAR Pinedale Array 82.35 332 P P 23 26 05.3 +0.9
comp=Z,3.1nm,0.9s,baz=140,slow=5.3,SNR=18
PDAR LR LR 23 59 36.0
comp=Z,26nm,19.2s,baz=118,slow=33
comp=Z,3.1nm,0.9s
SPUT South Promonto 82.36 329 P P 23 26 05.2 +0.8
SPUT IAmb IAmb 23 26 49.5
comp=Z,23nm,1.5s
E28A Huff 82.53 339 P P 23 26 06.3 +1.3
E28A IAmb IAmb 23 26 51.7
comp=Z,18nm,0.9s
OMMB Old Mammoth Mi 82.58 323 P P 23 26 07.0 +1.2
MDPB Devils Postpil 82.63 323 P P 23 26 06.5 +0.4
LHV Little Huntoon 82.81 324 P P 23 26 08.0 +1.4
LHV IAmb IAmb 23 27 06.4
comp=Z,18nm,1.1s
HVU Hansel Valley 82.89 329 P P 23 26 07.5 +0.4
HVU Hansel Valley 82.89 329 P P 23 26 07.5 +0.4
HVU pmax pmax
comp=Z,6.0nm,0.9s
RYN Ryan 83.11 324 P P 23 26 09.1 +0.7
ELK Elko 83.17 327 P P 23 26 09.6 +0.9
ELK Elko 83.17 327 P P 23 26 09.6 +0.9
ELK pmax pmax
comp=Z,6.0nm,0.9s
KVN Kaiserville 83.22 324 P P 23 26 09.3 +0.4
KVN Kaiserville 83.22 324 P P 23 26 09.3 +0.4
KVN pmax pmax
comp=Z,9.0nm,1.1s
MDND Maddock 83.35 340 P P 23 26 09.7 +0.5
MDND Maddock 83.35 340 P P 23 26 11.0 +1.8
baz=155
LOHW Long Hollow 83.47 332 P P 23 26 10.9 +0.7
LOHW IAmb IAmb 23 26 12.2
comp=Z,27nm,1.9s
WAKR Walker 83.48 323 P P 23 26 11.2 +0.9
CMB Columbia Colle 83.61 322 P P 23 26 11.5 +0.7
CMB Columbia Colle 83.61 322 P P 23 26 11.5 +0.7
CMB pmax pmax
comp=Z,13nm,1.6s
MOOW Moose Ponds 83.64 332 P P 23 26 11.2 +0.2
FXWY Fox Creek 83.67 331 P P 23 26 11.2 0.0
YERR Yerington 83.74 324 P P 23 26 12.7 +1.1
YERR IAmb IAmb 23 26 57.4
comp=Z,16nm,1.2s
IMW Indian Meadow 83.85 332 P P 23 26 11.1 -1.1
IMW IAmb IAmb 23 27 02.4
comp=Z,19nm,1.6s
FLWY Flagg Ranch 83.90 332 P P 23 26 13.4 +1.1
FLWY IAmb IAmb 23 26 55.8
comp=Z,29nm,1.7s
PNTR Pine Nut 84.00 323 P P 23 26 13.6 +0.6
PNTR IAmb IAmb 23 26 16.1
comp=Z,16nm,0.8s
EMB Emerald Bay 84.17 323 P P 23 26 14.2 +0.3
RLMT Red Lodge 84.21 333 P P 23 26 14.2 +0.3
RLMT IAmb IAmb 23 27 07.1
comp=Z,32nm,1.7s
RLMT Red Lodge 84.21 333 P P 23 26 15.3 +1.4
baz=147
PAHR Pah Rah Range 84.36 324 P P 23 26 15.8 +1.1
PAHR IAmb IAmb 23 27 00.5
comp=Z,22nm,1.4s
MPK Martis Peak 84.38 323 P P 23 26 15.2 +0.2
MPK IAmb IAmb 23 27 00.9
comp=Z,21nm,1.2s
LAO LASA Array 84.43 336 P P 23 26 14.8 0.0
LAO IAmb IAmb 23 26 48.6
comp=Z,14nm,0.9s
LAO LASA Array 84.43 336 P P 23 26 16.1 +1.3
baz=150
YHH Holmes Hill 84.55 332 P P 23 26 16.9 +1.1
ULM Lac du Bonnet 84.58 344 P P 23 26 15.0 -0.3
ULM IAmb IAmb 23 27 02.3
comp=Z,16nm,1.1s
ULM Lac du Bonnet 84.58 344 P P 23 26 15.8 +0.4
comp=Z,7.1nm,0.8s,baz=154,slow=4.4,SNR=14
ULM LR LR 00 05 12.6
comp=Z,31nm,19.9s,baz=127,slow=36
comp=Z,7.1nm,0.8s
AFDM Forest Hills D 84.60 323 P P 23 26 15.4 -0.4
AFDM IAmb IAmb 23 27 01.0
comp=Z,17nm,1.5s
HLID Hailey 85.04 329 P P 23 26 18.8 +0.7
HLID Hailey 85.04 329 P P 23 26 19.7 +1.7
baz=143
DGMT Dagmar 85.30 338 P P 23 26 18.6 -0.5
DGMT Dagmar 85.30 338 P P 23 26 20.1 +1.1
baz=151
ORV Oroville 85.33 323 P P 23 26 20.8 +1.4
ORV IAmb IAmb 23 27 05.1
comp=Z,24nm,1.4s
ORV Oroville 85.33 323 P P 23 26 20.8 +1.4
ORV pmax pmax
comp=Z,24nm,1.4s
MCMT McKenzie Canyo 85.39 331 P P 23 26 20.9 +1.0
BOZ Bozeman (W) 85.53 332 P P 23 26 21.0 +0.6
BOZ Bozeman (W) 85.53 332 P P 23 26 21.6 +1.2
baz=145
BOZ Bozeman (W) 85.53 332 P P 23 26 21.0 +0.6
BOZ pmax pmax
comp=Z,7.0nm,1.4s
MFID Camas Ranch 85.54 328 P P 23 26 19.9 -0.6
MFID IAmb IAmb 23 27 12.5
comp=Z,18nm,1.6s
SCHQ Schefferville 86.06 2 P P 23 26 22.6 0.0
comp=Z,1.8nm,0.6s,baz=169,slow=6.6,SNR=8.6
SCHQ pP **pP 23 26 51.8 -0.4**
comp=Z,15nm,1.1s,baz=177,slow=4.4,SNR=7.3
comp=Z,1.8nm,0.6s
WVOR Wild Horse Val 86.08 326 P P 23 26 23.7 +0.5
WVOR Wild Horse Val 86.08 326 P P 23 26 23.7 +0.5
WVOR pmax pmax
comp=Z,6.0nm,1.1s
J08A Circle Bar Ran 86.71 327 P P 23 26 27.5 +1.3
EGMT Eagleton 86.83 335 P P 23 26 26.7 +0.1
EGMT IAmb IAmb 23 27 19.6
comp=Z,16nm,1.1s
EGMT Eagleton 86.83 335 P P 23 26 27.6 +1.0
baz=147
PLID Pearl Lake 86.94 329 IAmb IAmb 23 26 29.7
comp=Z,12nm,0.8s
BPMT Black Pine Rid 86.94 332 P P 23 26 27.6 +0.1
KMPM Mount Pierce 87.33 322 P P 23 26 28.7 -0.6
BMO Blue Mountains 87.33 328 P P 23 26 29.5 +0.3
BMO Blue Mountains 87.33 328 P P 23 26 29.5 +0.3
BMO pmax pmax
comp=Z,11nm,1.5s
K05A Summer Lake 87.38 325 P P 23 26 30.5 +0.9
K05A IAmb IAmb 23 26 32.6
comp=Z,18nm,0.9s
YBH Yreka Blue Hor 87.55 323 P P 23 26 31.1 +0.8
YBH Yreka Blue Hor 87.55 323 P P 23 26 31.1 +0.8
YBH pmax pmax
comp=Z,5.0nm,1.0s
YBH Yreka Blue Hor 87.55 323 LR LR 00 01 41.3
comp=Z,26nm,18.8s,baz=132,slow=33
L04D Klamath Falls 87.71 324 P P 23 26 31.2 +0.1
L04D IAmb IAmb 23 27 26.4
comp=Z,13nm,1.2s
I07A Izee 87.74 327 P P 23 26 32.1 +1.0
I07A IAmb IAmb 23 26 33.9
comp=Z,9.8nm,1.0s
J05D Fort Rock, OR 87.97 325 P P 23 26 32.7 +0.4
J05D IAmb IAmb 23 26 35.0
comp=Z,13nm,1.0s
PINE Pine Mountain 88.20 326 P P 23 26 34.6 +1.1
K02D Willamette Mer 88.74 324 P P 23 26 35.9 0.0
K02D IAmb IAmb 23 27 31.5
comp=Z,19nm,1.4s
I05D Terrebonne, OR 88.81 326 P P 23 26 36.6 +0.5
I05D IAmb IAmb 23 26 38.9
comp=Z,13nm,0.9s
LSZ Lusaka 88.98 107 P P 23 26 37.0 -0.8
LSZ IAmb IAmb 23 27 26.1
comp=Z,7.6nm,1.0s
LSZ Lusaka 88.98 107 P P 23 26 37.0 -0.8
LSZ pmax pmax
comp=Z,8.0nm,1.0s
LSZ Lusaka 88.98 107 LR LR 00 04 08.5
comp=Z,36nm,19.7s,baz=228,slow=34
H04A Detroit Lake 89.47 326 P P 23 26 39.6 +0.4
H04A IAmb IAmb 23 27 31.5
comp=Z,13nm,1.2s
NEW Newport 89.91 331 P P 23 26 42.5 +1.4
baz=141
NEW Newport 89.91 331 LR LR 00 04 25.0
comp=Z,32nm,19.8s,baz=122,slow=34
TAM Tamanrasset 90.26 63 P P 23 26 42.7 -0.8
TAM IAmb IAmb 23 27 29.7
comp=Z,9.3nm,1.3s
TAM Tamanrasset 90.26 63 P P 23 26 42.7 -0.8
TAM pmax pmax
comp=Z,9.0nm,1.3s
FCC Fort Churchill 92.16 348 P P 23 26 51.7 +0.5
FCC Fort Churchill 92.16 348 P P 23 26 51.7 +0.5
FCC pmax pmax
comp=Z,38nm,1.7s
ESDC Sonseca Array 93.67 45 P P 23 26 58.8 0.0
comp=Z,1.6nm,0.9s,baz=243,slow=4.7,SNR=5.4
comp=Z,1.6nm,0.9s
MBAR Mbarara 98.90 96 *i* P Pdif 23 27 23.4 0.0
MBAR pmax pmax
comp=Z,4.0nm,0.9s
SFJD Kangerlussuaq 99.33 8 LR LR 00 14 18.2
comp=Z,17nm,19.7s,baz=178,slow=36
YKA Yellowknife Ar 100.28 341 P Pdif 23 27 28.3 +0.3
comp=Z,0.1nm,0.5s,baz=90,slow=8.4,SNR=2.7
YKA pP pP 23 27 59.9 +2.0
comp=Z,0.8nm,0.9s,baz=138,slow=4.4,SNR=3.6
S32K Killisnoo 103.85 330 P Pdif 23 27 44.2 +0.2
baz=128
P33M Teslin, Yukon 104.81 333 P PKiKP 23 32 03.0 +0.1
baz=128
SKAG Skagway 105.37 331 P PKiKP 23 32 04.4 +0.6
baz=126
PLBC Pleasant Camp 105.79 331 P PKiKP 23 32 06.0 +1.3
baz=126
YUK6 Outpost Mounta 107.46 332 P PKiKP 23 32 08.4 +0.3
baz=124
M30M Minto, Yukon 107.76 333 P PKiKP 23 32 09.1 +0.8
baz=124
N25K Chitina, Valde 110.38 331 P PKiKP 23 32 14.8 +1.4
baz=119
HARP HAARP 110.99 331 P PKiKP 23 32 15.9 +1.6
baz=118
J26L Joseph Creek 111.36 334 P PKiKP 23 32 16.6 +1.5
baz=118
F28M Old Crow 111.58 337 P PKiKP 23 32 16.6 +1.2
baz=120
E28M Babbage River 111.98 338 P PKiKP 23 32 17.3 +1.3
baz=120
DHY Denali Highway 112.21 331 P PKiKP 23 32 18.1 +1.3
baz=116
PMR Palmer 112.31 330 P PKiKP 23 32 18.3 +1.5
baz=115
SDPT Sand Point 115.51 321 P PKiKP 23 32 24.4 +1.3
baz=109
TTA Tatalina 115.80 330 P PKiKP 23 32 24.9 +1.2
baz=109
F20K Avaraart Lake 116.96 334 P PKiKP 23 32 27.7 +2.1
baz=107
J16K Anvik River 117.89 329 P PKiKP 23 32 28.9 +1.4
baz=105
C19K Lookout Ridge 118.90 336 P PKiKP 23 32 30.8 +1.4
baz=103
BRTR Keskin Array B 119.17 59 *e*PKIKP **PKiKP 23 32 31.5 +0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 119.17 59 PKP **PKiKP 23 32 31.1 +0.1**
comp=Z,1.0nm,0.7s,baz=190,slow=3.8,SNR=7.6
BRTR pPKP **pPKPdf 23 33 02.9 +0.7**
comp=Z,1.1nm,0.8s,baz=198,slow=3.6,SNR=4.0
AKBB Malin Array Si 119.30 46 *i* PKIKP **PKiKP 23 32 31.6 +0.9**
M11K Mekoryuk 119.80 325 P **PKiKP 23 32 32.3 +1.0**
baz=102
FINES FINESS Array B 120.03 33 *e*PKIKP **PKiKP 23 32 33.1 +1.4**
FINES pmax pmax
comp=Z,4.0nm,1.1s
FINES FINESS Array B 120.03 33 PKP **PKiKP 23 32 32.1 +0.4**
comp=Z,3.9nm,1.1s,baz=259,slow=9.3,SNR=3.8
ANM Nome 120.23 330 P **PKiKP 23 32 33.0 +0.9**
baz=100
ASAR Alice Springs 120.50 206 PKP **PKPdf 23 32 33.4 -0.6**
comp=Z,0.8nm,0.4s,baz=126,slow=1.6,SNR=10.0
ASAR pPKP **pPKPdf 23 33 04.9 +0.2**
comp=Z,1.2nm,0.8s,baz=138,slow=2.5,SNR=5.7
ASAR PKKPbc **PKKPbc 23 42 40.3 +0.7**
comp=Z,1.2nm,0.7s,baz=334,slow=3.2,SNR=8.6
WRA Warramunga Arr 123.71 208 PKPdf 23 32 39.9 -0.3
WRA Warramunga Arr 123.71 208 PKP **PKPdf 23 32 40.0 -0.2**
comp=Z,3.0nm,0.5s,baz=160,slow=1.6,SNR=52
WRA pPKP **pPKPdf 23 33 11.4 +0.5**
comp=Z,2.0nm,0.7s,baz=165,slow=1.7,SNR=5.7
WRA PKKPbc **PKKPbc 23 42 26.9 -0.3**
comp=Z,0.9nm,0.5s,baz=335,slow=4.4,SNR=9.0
OBN Obninsk 124.51 42 *i* PKIKP **PKPdf 23 32 40.4 0.0**
OBN *i* 23 33 12.5
OBN pmax pmax
comp=Z,5.0nm,1.0s
KLMR Klimovskoe 126.44 35 *e*PKIKP **PKPdf 23 32 43.6 -0.4**
KLMR *e* 23 33 14.3
KLMR pmax pmax
comp=Z,26nm,2.0s
BELG Belogornoye 130.88 46 *i* PKIKP **PKPdf 23 32 53.2 +0.5**
KIRV Kirov 131.57 38 *i* PKIKP **PKiKP 23 32 57.0 +2.2**
ARU Arti 136.80 39 *i* PKIKP **PKiKP 23 33 05.6 +0.1**
ARU 23 35 46.7
ARU SS SS 23 53 42.0 -1.3
SEY Seymchan 138.68 332 *i* PKIKP **PKiKP 23 33 08.4 -0.7**
BRVK Borovoye 144.28 41 PKPdf 23 33 17.4 +0.1
BRVK Borovoye 144.28 41 *i* PKIKP **PKPdf 23 33 17.4 +0.1**
BVAR Borovoye Array 144.35 41 PKP **PKPdf 23 33 17.5 +0.1**
comp=Z,9.6nm,0.6s,baz=291,slow=2.7,SNR=48
CHM Chimkent 146.30 60 *e*PKPbc **PKPab 23 33 23.1 -0.4**
baz=60
CHM Chimkent 146.30 60 *e*PKP2 **PKPab 23 33 23.1 -0.4**
BRZS Berezniki 146.75 45 *e*PKPbc **PKPbc 23 33 24.3 +0.7**
baz=46
BRZS Berezniki 146.75 45 *e*PKP2 **PKPbc 23 33 24.2 +0.7**
YAK Yakutsk 146.92 343 *e*PKP2 **PKPdf 23 33 22.6 +1.1**
YAK pmax pmax
comp=Z,14nm,0.8s
DZA Taraz 147.50 59 *e*PKPbc **PKPbc 23 33 25.6 -0.4**
baz=59
DZA *e*PKPab **PKiKP 23 33 28.0 0.0**
baz=59
DZA Taraz 147.50 59 *e*PKP2 **PKPbc 23 33 25.5 -0.4**
TOLI2 Tolitoli 148.04 201 PKPdf 23 33 25.9 +1.0
HYB Hyderabad 148.31 109 *e*PKPbc **PKPbc 23 33 28.0 -0.7**
HYB *ep*PKPbc **pPKPdf 23 33 55.2 -1.2**
BTLS Baital 149.04 54 *e*PKPbc **PKiKP 23 33 30.8 -0.2**
baz=54
BTLS *i* PKPab **PKPab 23 33 35.2 +0.9**
baz=54
BTLS Baital 149.04 54 *e*PKP2 **PKiKP 23 33 30.8 -0.2**
NIL Nilore 149.13 76 PKPbc 23 33 30.4 0.0
NIL Nilore 149.13 76 PKP2 **PKPbc 23 33 30.4 0.0**
EKS2 Erkin-Say 149.32 59 P **PKiKP 23 33 32.2 +0.4**
SNR=11
RPSI Rantau Prapat 149.49 158 PKPbc **PKPbc 23 33 31.2 -0.6**
PSI Prapat 149.59 158 PKP2 **PKPbc 23 33 31.3 -1.0**
USP Ospenovka 149.74 57 P **PKiKP 23 33 32.8 +0.2**
SNR=14
SGDS Sogindy 149.79 57 *e*PKPbc **PKiKP 23 33 32.6 -0.1**
baz=57
SGDS Sogindy 149.79 57 *e*PKP2 **PKiKP 23 33 32.6 -0.1**
AAK Ala-Archa 149.85 58 P **PKiKP 23 33 33.6 +0.7**
SNR=18
AAK Ala-Archa 149.85 58 PKPdf 23 33 29.2 +2.0
AAK Ala-Archa 149.85 58 PKHKP PKPpre 23 33 29.2
FRU1 Bishkek 149.91 58 PKPbc **PKiKP 23 33 33.4 +0.4**
FRU1 Bishkek 149.91 58 PKP2 **PKiKP 23 33 33.4 +0.4**
UCH Uchtor 149.93 59 P **PKiKP 23 33 34.3 +0.8**
SNR=16
KURBB Kurchatov Arra 149.94 41 PKPbc **PKiKP 23 33 32.8 +0.2**
comp=Z,6.0nm,0.7s,baz=297,slow=3.1,SNR=34
KURK Kurchatov 149.95 41 PKP2 **PKiKP 23 33 32.8 +0.1**
CHMS Chumysh 149.97 58 P **PKiKP 23 33 33.4 +0.4**
SNR=13
KBK Karagaybulak 150.17 58 P **PKiKP 23 33 34.3 +0.7**
SNR=12
TKM2 Tokmak 2 150.59 58 P **PKiKP 23 33 34.9 +0.3**
SNR=12
KUU Kurty 150.91 55 *e*PKPbc **PKiKP 23 33 34.7 -0.2**
baz=56
KUU *e*PKPab **PKPab 23 33 42.5 +0.3**
baz=56
KUU Kurty 150.91 55 *e*PKIKP **PKiKP 23 33 34.7 -0.2**
SEM Semipalatinsk 151.01 41 *e*PKPbc **PKiKP 23 33 35.2 0.0**
baz=41
SEM Semipalatinsk 151.01 41 *e*PKIKP **PKiKP 23 33 35.1 0.0**
ZALV Zalesovo Beam 151.27 31 PKiKP 23 33 35.4 +0.1
ZALV Zalesovo Beam 151.27 31 PKPbc **PKiKP 23 33 35.6 +0.3**
comp=Z,22nm,0.5s,baz=270,slow=1.5,SNR=99
ZALV PKPab **PKPab 23 33 44.2 +1.1**
comp=Z,17nm,0.6s,baz=301,slow=3.7,SNR=19
ZALV pPKPbc **pPKPbc 23 34 06.4 +0.7**
comp=Z,19nm,0.6s,baz=296,slow=2.7,SNR=6.7
KSH Kashi 151.37 64 PKPbc **PKiKP 23 33 36.3 +0.1**
KSH sPKP 23 34 08.9
KSH LR LR
comp=N,500nm,16.8s
KSH LR LR
comp=E,430nm,16.1s
KSH LR LR
comp=Z,530nm,19.6s
CHKK Chushkaly 151.38 55 *e*PKPbc **PKPbc 23 33 35.7 +0.2**
baz=55
CHKK Chushkaly 151.38 55 *e*PKIKP **PKPbc 23 33 35.7 +0.2**
AAA Alma-Ata 151.48 57 *e*PKPbc **PKiKP 23 33 36.4 +0.1**
baz=57
AAA Alma-Ata 151.48 57 *e*PKIKP **PKiKP 23 33 36.3 +0.1**
MDOK Medeo 151.58 57 *e*PKPbc **PKiKP 23 33 37.0 +0.5**
baz=57
MDOK *e*PKPab **PKPab 23 33 45.3 +0.2**
baz=57
MDOK Medeo 151.58 57 *e*PKIKP **PKiKP 23 33 37.0 +0.5**
TDK Taldyqorghan 152.03 52 *e*PKPab **PKPab 23 33 46.9 +0.1**
baz=52
SATY Saty 152.57 56 *i* PKPbc **PKiKP 23 33 38.7 +0.1**
baz=56
SATY *e*PKPab **PKPab 23 33 49.6 +0.3**
baz=56
SATY Saty 152.57 56 *i* PKIKP **PKiKP 23 33 38.7 +0.1**
KPKS Kokpek 152.66 55 *e*PKPbc **PKPbc 23 33 38.6 +0.1**
baz=56
KPKS *e*PKPab **PKPab 23 33 50.0 +0.4**
baz=56
KPKS Kokpek 152.66 55 *e*PKIKP **PKPbc 23 33 38.6 +0.1**
SHLS Shalkode 153.29 56 *e*PKPbc **PKiKP 23 33 41.7 +1.6**
baz=56
SHLS *e*PKPab **PKPab 23 33 54.2 +1.9**
baz=56
SHLS Shalkode 153.29 56 *e*PKIKP **PKiKP 23 33 41.6 +1.6**
BOD Bodaibo 153.57 355 *e*PKP2 **PKPab 23 33 53.6 +0.9**
BOD pmax pmax
comp=Z,9.0nm,1.6s
MKAR Makanchi Array 153.89 46 PKiKP 23 33 41.2 +0.2
MKAR Makanchi Array 153.89 46 PKPbc **PKiKP 23 33 41.3 +0.3**
comp=Z,2.7nm,0.8s,baz=316,slow=2.1,SNR=26
MKAR PKPab **PKPab 23 33 55.4 +0.9**
comp=Z,7.1nm,0.6s,baz=288,slow=4.0,SNR=22
ZSN Zaisan 155.12 43 *e*PKPab **PKPab 23 34 01.1 +1.3**
baz=43
ZSN Zaisan 155.12 43 *e*PKP2 **PKPab 23 34 01.1 +1.3**
MJAR Matsushiro Arr 156.08 290 PKPab **PKPab 23 34 05.7 +1.4**
comp=Z,2.1nm,0.7s,baz=85,slow=3.4,SNR=4.8
HEH HeiHe 157.20 330 *e*P PKPab 23 33 57.8 -11
HEH pmax pmax
comp=Z,3.0nm,0.6s
WMQ Urumqi 158.63 49 *e*P **PKPdf 23 33 39.6 +0.3**
WMQ LR LR
comp=N,2μm,15.1s
WMQ LR LR
comp=E,1μm,17.1s
WMQ LR LR
comp=Z,1μm,22.7s
CMAR Chiang Mai Arr 163.62 140 PKP **PKPdf 23 33 45.8 +0.5**
comp=Z,0.5nm,0.3s,baz=248,slow=2.9,SNR=5.5
HHC Hu-ho-hao-te 170.61 352 *e*P **PKPdf 23 33 47.5 -2.3**
PZH PanZhiHua 171.26 123 PKP **PKPdf 23 33 49.6 -1.0**
NJ2 Nanjing 172.38 276 *e*P **PKPdf 23 33 51.1 +0.3**
NJ2 pmax pmax
comp=Z,13nm,1.4s
CD2 Chengdu 174.68 95 PKP **PKPdf 23 33 50.5 -1.3**

TEH ***01*** *23:21:42.9, 33.˚76N×45.˚74E, h10km±21km, ML2.7*
ISN ***01*** *23:21:43.6±0.9, 33.˚72N×45.˚71E, h11km±4km, ML2.6*
ISC 01 23:21:43.6±0.9**, 33.74N**±0.˚03×**45.73E**±0.˚04**, h13km, n14,**
σ0$**85**/18**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.41**	**106**	Pg	**Pg**	**23 21 51.2**	**-0.6**
ILBA				Sg	**Sg**	**23 21 57.6**	**+0.1**
IBDR	**Badra**	**0.65**	**165**	*e*Pg	**Pg**	**23 21 56.0**	**-0.2**
IBDR				*e*Sg	**Sg**	**23 22 05.0**	**+0.2**
IBDR				AML	AML	23 22 26.4	
	comp=N,52nm,0.6s						
KGS1	**Ghasr-e-Shirin**	**0.77**	**351**	Pg	**Pg**	**23 21 57.9**	**-0.7**
IGHG	**Ghaleghazi**	**0.91**	**50**	Pg	**Pg**	**23 22 00.7**	**-0.6**
IDHR	**Dehrash**	**1.10**	**29**	Pg	**Pb**	**23 22 03.5**	**-1.1**
KCHF	**Cheshme Sefid,**	**1.21**	**64**	Pg	**Pn**	**23 22 06.0**	**-0.4**
BHD	**Baghdad**	**1.22**	**248**	*e*Pg	**Pg**	**23 22 07.0**	**-0.1**
BHD				*e*Sg	**Sg**	**23 22 23.0**	**0.0**
BHD				AML	AML	23 22 26.5	
	comp=E,621nm,0.4s						
ILIN	**Lien**	**1.56**	**41**	Pg	**Pb**	**23 22 12.1**	**-0.3**
IKFM	**Kafar-mosalman**	**1.78**	**96**	Pg	**Pb**	**23 22 16.2**	**+0.2**
IBZA	**Bozab**	**1.91**	**67**	Pn	**Pn**	**23 22 17.2**	**+1.1**
RAFI	**Al-Rafai**	**2.04**	**171**	*e*Pn	**Pb**	**23 22 19.0**	**-1.4**
RAFI				*e*Sn	**Sb**	**23 22 46.0**	**+0.3**
IALM	**Almabolaq**	**2.31**	**60**	Pn	**Pn**	**23 22 23.1**	**+1.5**
SDS1	**Sardasht. Az.**	**2.41**	**355**	Pn	**Pn**	**23 22 24.1**	**+1.2**
HSAM	**Samen**	**2.43**	**78**	Pn	**Pn**	**23 22 24.2**	**+0.9**

TEH ***01*** *23:31:07.4, 38.˚38N×46.˚76E, h6km±41km, ML3.0*
NSSP ***01*** *23:31:07.9, 38.˚48N×46.˚82E, h6km, Ms3.1*
ISC 01 23:31:07.4±0.8**, 38.30N**±0.˚03×**46.74E**±0.˚03**, h10km, n23,**
σ1$**46**/35**, 7C-1D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITBZ	**Tabriz**	**0.47**	**262**	Pg	**Pg**	**23 31 16.8**	**+0.3**
ITBZ				Sg	**Sb**	**23 31 24.7**	**-0.1**
IAZR	**Azarshahr**	**0.86**	**224**	Pg	**Pn**	**23 31 25.7**	**-0.1**
ISRB	**Sarab**	**0.88**	**123**	Pg	**Pg**	**23 31 24.3**	**0.0**

ISRB			Sg	**Sb**	**23 31 37.2**	**+0.6**
ISHB	**Shabestar**	**0.88 269**	Pg	**Pg**	**23 31 24.2**	**-0.2**
IMRD	**Marand**	**0.91 297**	Pg	**Pg**	**23 31 24.4**	**-0.4**
GRMI	**Germi**	**1.04 61**	Pg	**Pg**	**23 31 26.3**	**-1.1**
IHSH	**Hashtrud**	**1.08 157**	Pg	**Pn**	**23 31 28.8**	**-0.1**
GAS1	**Astara - Iran**	**1.66 86**	Pg	**Pb**	**23 31 38.2**	**+0.2**
MAHB	**Mahabad**	**1.74 208**	Pn	**Pg**	**23 31 40.5**	**-0.2**
MAKU	**Maku**	**1.92 304**	Pn	**Pb**	**23 31 41.4**	**-1.1**
CSN1	**Caspian**	**2.01 111**	Pn	**Pb**	**23 31 43.8**	**-0.1**
NRKZ	**NAREK**	**2.34 317**⇑	*iP*	**Pg**	**23 31 51.0**	**-1.2**
NRKZ		⇑	*iS*	**Sg**	**23 32 22.0**	**-0.6**
SDS1	**Sardasht. Az.**	**2.37 205**	Pn	**Pb**	**23 31 50.1**	**-0.1**
GNI	**Garni**	**2.41 321**⇑	*iP*	**Pb**	**23 31 50.7**	**-0.1**
GNI		⇓	*iS*	**Sg**	**23 32 23.4**	**-1.3**
KAPZ	**Kaputan**	**2.56 323**⇑	*iP*	**Pb**	**23 31 54.4**	**+0.9**
KAPZ		⇑	*iS*	**Sg**	**23 32 28.1**	**-1.6**
AMBZ	**Amberd**	**2.83 318**⇑	*iP*	**Pb**	**23 31 59.3**	**+1.1**
AMBZ		⇑	*iS*	**Sg**	**23 32 36.2**	**-2.2**
LHJ2	**Lahijan - Gila**	**2.87 112**	Pn	**Pn**	**23 31 53.9**	**+0.8**
VSHL	**Vashlovani**	**2.94 355**	P	**Pb**	**23 31 59.7**	**-0.1**
VSHL			S	**Sb**	**23 32 38.0**	**+2.2**
DDFL	**Dedoflistskaro**	**3.17 352**	P	**Pb**	**23 32 04.3**	**+0.4**
DDFL			S	**Sb**	**23 32 45.1**	**+2.5**
STEZ	**Stepenevan**	**3.24 327**	*e*P	**Pb**	**23 32 05.2**	**+0.1**
STEZ			*e*S	**Sg**	**23 32 48.7**	**-2.8**
LGD	**Lagodekhi**	**3.55 354**	P	**Pb**	**23 32 08.0**	**-2.3**
LGD			S	**Sb**	**23 32 54.5**	**+1.1**
CHRG	**Chargali**	**4.25 342**	P	**Pb**	**23 32 22.1**	**-0.2**
CHRG			S	**Sb**	**23 33 15.3**	**+1.6**
ALIG	**Mtskhetisjvari**	**4.47 329**	P	**Pb**	**23 32 26.9**	**+0.9**
ALIG			S	**Sb**	**23 33 24.9**	**+4.9**

*IDC **01** 23:59:16.1±0.9,5°.76S×147°.71E, h0km, mb3.9/9, mbtmp4.0/12, ML3.5/3, MS3.1/2, Error ellipse: s-maj=41.7km s-min=17.3km az=91.0*
*NEIC **01** 23:59:19.6±0.8,5°.8S±0°.1×147°.76E±0°.10, h21km±7km, mb4.3/17, Error ellipse: s-maj=19.9km s-min=8.3km az=141.0*

ISC 01 23:59:21.1±0.6,**5°.86S**±0°.07×**147°.70E**±0°.09,**h35**km,**n49,** σ1§**40**/52,**mb4.0**/13,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.56 189**				**Pn**	**00 00 14.0**	**0.0**
PMG					Sn	**Sn**	**00 00 55.5**	**+0.6**
PMG	**Port Moresby**	**3.56 189**		P		**Pn**	**00 00 15.2**	**+1.3**
PMG	**Port Moresby**	**3.56 189**		P		**Pn**	**00 00 15.3**	**+1.3**
PMG	**Port Moresby**	**3.56 189**		Pn		**Pn**	**00 00 14.9**	**+0.9**
	36nm,0.3s,baz=9.3,slow=7.9,SNR=38							
PMG					Sn	**Sn**	**00 00 55.4**	**+0.6**
	38nm,0.3s,baz=205,slow=18,SNR=8.8							
	51nm,0.3s							
RABL	**Rabaul**	**4.75 70**		Pn		**Pn**	**00 00 27.7**	**-2.6**
COEN	**Coen**	**9.20 209**		Pn		**Pn**	**00 01 31.8**	**+0.4**
COEN	**Coen**	**9.20 209**		P		**Pn**	**00 01 33.3**	**+1.9**
CTA	**Charters Tower**	**14.21 186**		Pn		**Pn**	**00 02 41.5**	**+1.4**
	0.2nm,0.3s,baz=205,slow=23,SNR=1.9							
CTA				LR		LR	00 07 37.3	
	comp=Z,58nm,21.4s,baz=302,slow=35							
	2.1nm,0.8s							
KDU	**Kakadu**	**16.48 245**		P		**P**	**00 03 11.7**	**-0.5**
QIS	**Mount Isa**	**16.59 208**		P		**P**	**00 03 13.8**	**+0.4**
MTN	**Manton Dam**	**17.75 246**				**P**	**00 03 25.9**	**-0.3**
MTN				IAmb		IAmb	00 03 38.2	
	comp=Z,42nm,1.2s							
WB0	**Warramunga Arr**	**18.94 222**		P		**P**	**00 03 39.4**	**+0.1**
WR0	**Warramunga Arr**	**18.98 221**		P		**P**	**00 03 39.2**	**-0.5**
WR0				IAmb		IAmb	00 03 47.4	
	comp=Z,9.9nm,1.1s							
WB2	**Warramunga Arr**	**19.09 222**		P		**P**	**00 03 40.9**	**0.0**
WB2				IAmb		IAmb	00 03 45.0	
	comp=Z,7.3nm,0.8s							
WRA	**Warramunga Arr**	**19.10 222**		P		**P**	**00 03 40.6**	**-0.5**
WRA	**Warramunga Arr**	**19.10 222**		P		**P**	**00 03 40.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=49,slow=11,SNR=25							
WRA				S		**Sn**	**00 07 07.5**	**-7.6**
	comp=Z,0.5nm,0.9s,baz=39,slow=23,SNR=1.8							
WRA				PcP		**PcP**	**00 08 06.2**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=34,slow=2.0,SNR=5.6							
	comp=Z,5.0nm,0.7s							
EIDS	**Eidsvold**	**19.67 171**		P		**P**	**00 03 47.1**	**-0.1**
EIDS				IAmb		IAmb	00 04 06.5	
	comp=Z,28nm,1.4s							
QLP	**Quilpie**	**20.87 189**		P		**P**	**00 04 01.3**	**+1.0**
KNRA	**Kununurra**	**20.99 241**		P		**P**	**00 04 01.5**	**-0.1**
KNRA				IAmb		IAmb	00 04 30.6	
	comp=Z,39nm,1.3s							
TNTI	**Ternate**	**21.34 287**		P		**P**	**00 04 05.1**	**-0.4**
AS01	**Alice Springs**	**22.10 215**		P		**P**	**00 04 14.3**	**+0.7**
AS31	**Alice Springs**	**22.13 215**		P		**P**	**00 04 13.6**	**-0.3**
ASAR	**Alice Springs**	**22.13 215**		P		**P**	**00 04 14.0**	**0.0**
ASAR	**Alice Springs**	**22.13 215**		P		**P**	**00 04 14.4**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=51,slow=9.1,SNR=67							
ASAR				S		**S**	**00 08 16.0**	**0.0**
	comp=Z,3.0nm,1.1s,baz=33,slow=21,SNR=6.5							
	comp=Z,3.7nm,0.5s							
DZM	**Mont Dzumac**	**24.25 133**		P		**P**	**00 04 34.2**	**-0.9**
DZM				IAmb		IAmb	00 04 52.2	
	comp=Z,22nm,1.5s							
ONTNC	**Ouen Toro**	**24.41 134**		P		**P**	**00 04 36.1**	**-0.4**
OOD	**Oodnadatta**	**24.62 206**		P		**P**	**00 04 38.9**	**+0.5**
ARMA	**Armidale**	**24.71 172**		P		**P**	**00 04 39.0**	**-0.3**
ARMA				IAmb		IAmb	00 05 13.6	
	comp=Z,22nm,1.4s							
FITZ	**Fitzroy Crossi**	**24.73 239**		P		**P**	**00 04 40.5**	**+1.0**
FITZ				IAmb		IAmb	00 04 41.6	
	comp=Z,3.7nm,0.6s							
FITZ	**Fitzroy Crossi**	**24.73 239**		P		**P**	**00 04 41.2**	**+1.7**
STKA	**Stephens Creek**	**26.51 192**		P		**P**	**00 04 56.9**	**+1.4**
	comp=Z,1.5nm,0.5s,baz=18,slow=4.8,SNR=3.5							
STKA				LR		LR	00 15 18.8	
	comp=Z,46nm,19.7s,baz=30,slow=36							
	comp=Z,1.5nm,0.5s							
WRKA	**Warakurna**	**26.64 222**		P		**P**	**00 04 57.5**	**+0.7**
MULG	**Mulgathing**	**27.48 206**		P		**P**	**00 05 05.0**	**+0.8**
BBOO	**Buckleboo**	**28.93 201**		P		**P**	**00 05 15.1**	**-1.9**
SONM	**Songino Array**	**64.62 331**		P		**P**	**00 09 55.7**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=126,slow=8.4,SNR=4.4							
	comp=Z,0.7nm,0.8s							
CLES	**Cleveland East**	**68.58 26**				P	00 10 26.8	+6.5
YAK	**Yakutsk**	**69.11 351**				P	00 10 30.0	+6.6
VNDA	**Vanda**	**72.01 177**		P		P	**00 10 41.8**	**+0.8**
VNDA	**Vanda**	**72.01 177**		P		**P**	**00 10 41.9**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=328,slow=7.3,SNR=6.6							
	comp=Z,1.5nm,0.9s							
MKAR	**Makanchi Array**	**77.83 320**		P		**P**	**00 11 15.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=95,slow=7.4,SNR=7.3							
	comp=Z,0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**79.27 328**		P		**P**	**00 11 22.8**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=118,slow=6.9,SNR=2.6							
	comp=Z,0.5nm,0.4s							
TRF	**Thorofare Moun**	**83.15 24**		P		**P**	**00 11 43.7**	**+0.2**
RND	**Reindeer**	**83.71 24**		P		**P**	**00 11 46.3**	**0.0**
RND				IAmb		IAmb	00 11 48.8	
	comp=Z,2.4nm,1.0s							
QSPA	**South Pole Qui**	**84.11 180**		P		**P**	**00 11 48.5**	**+0.1**
QSPA	**South Pole Qui**	**84.11 180**		P		**P**	**00 11 48.4**	**0.0**
	comp=Z,1.1nm,0.5s,baz=328,slow=1.7,SNR=3.7							
	comp=Z,1.1nm,0.5s							
ILAR	**Eielson Array**	**85.08 23**		P		**P**	**00 11 53.2**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=256,slow=3.9,SNR=4.3							
	comp=Z,0.5nm,0.8s							
BVAR	**Borovoye Array**	**87.07 324**		P		**P**	**00 12 01.9**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=82,slow=4.4,SNR=3.3							
	comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**145.73 285**		PKPbc		**PKPdf**	**00 18 57.2**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=67,slow=3.5,SNR=6.5							
BDFB	**Brasilia**	**153.57 144**		PKPbc		**PKPbc**	**00 19 17.9**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=240,slow=2.2,SNR=4.7							

IDC 02 00:06:34.6±3.6,**3°.39S**×**101°.99E**,**h0**km,**mb3.4**/4,
mbtmp3.4/4,**Error ellipse: s-maj=155.8km s-min=26.3km az=56.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**29.66 261**			T	T	00 42 33.0	
	baz=85							
H08S3	**Diego Garcia H**	**29.67 261**			T	T	00 42 26.6	
	baz=85							
H08S1	**Diego Carcia H**	**29.68 261**			T	T	00 42 37.5	
	baz=85							

WRA	**Warramunga Arr**	**35.58 120**		P		P	00 13 34.2	+0.1
	0.5nm,1.0s,baz=305,slow=8.9,SNR=2.0							
	0.5nm,1.0s							
ASAR	**Alice Springs**	**36.83 126**		P		P	00 13 44.5	-0.3
	0.2nm,0.3s,baz=298,slow=8.5,SNR=2.0							
	0.2nm,0.3s							
SONM	**Songino Array**	**51.16 4**		P		P	00 15 40.5	+1.0
	0.3nm,0.5s,baz=189,slow=8.5,SNR=5.0							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**52.91 343**		P		P	00 15 51.9	-0.7
	0.5nm,0.6s,baz=147,slow=8.6,SNR=5.6							
	0.5nm,0.6s							
H04N2	**CROZET ISLANDS**	**60.90 218**		T		T	01 21 30.3	
	baz=62,slow=75,SNR=10							
H04N1	**CROZET ISLANDS**	**60.91 218**		T		T	01 21 42.3	
	baz=62,slow=75,SNR=9.6							
H04N3	**CROZET ISLANDS**	**60.91 218**		T		T	01 21 29.2	
	baz=62,slow=75,SNR=12							
TXAR	**Lajitas Array**	**144.52 41**		PKP		PKPab	00 26 12.3	0.0
	0.4nm,0.5s,baz=329,slow=1.1,SNR=6.2							

*IDC **02** 00:08:09.4±1.0,55°.09S×30°.82W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=45.0km s-min=24.8km az=77.0*

ISC 02 00:08:11.0±0.9,**55°.1S**±0°.1×**30°.9W**±0°.3,**h10**km,**n8,** σ0§**54**/9, **mb4.0**/4,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.48 155**		P		**P**	**00 12 48.9**	**+0.3**
	1.8nm,0.9s,baz=238,slow=20,SNR=1.6							
	1.8nm,0.9s							
CPUP	**Villa Florida**	**34.62 315**		P		**P**	**00 15 00.3**	**+0.1**
	1.3nm,0.8s,baz=63,slow=11,SNR=1.5							
	1.3nm,0.8s							
QSPA	**South Pole Qui**	**35.14 180**		P		**P**	**00 15 04.3**	**-0.2**
	0.6nm,0.2s,baz=116,slow=14,SNR=1.6							
	0.6nm,0.2s							
VNDA	**Vanda**	**47.39 184**		P		**P**	**00 16 44.7**	**+0.1**
	1.1nm,0.8s,baz=153,slow=2.3,SNR=1.8							
	1.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**73.35 33**		P		**P**	**00 19 42.9**	**+0.1**
	0.4nm,0.5s,baz=184,slow=3.9,SNR=2.2							
	0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**143.87 65**		PKP		**PKPab**	**00 27 43.2**	**+0.8**
	0.2nm,0.3s,baz=250,slow=4.2,SNR=2.0							
ILAR	**Eielson Array**	**147.92 313**		PKPbc		**PKPbc**	**00 27 54.5**	**-0.4**
	1.1nm,0.9s,baz=125,slow=1.7,SNR=9.0							
SONM	**Songino Array**	**152.79 88**		PKPbc		**PKPbc**	**00 28 07.2**	**-0.1**
	0.4nm,0.7s,baz=194,slow=3.1,SNR=3.7							
SONM				PKPab		**PKPab**	**00 28 17.5**	**-0.9**
	0.3nm,0.4s,baz=217,slow=7.1,SNR=3.9							

*BJI **02** 00:20:36.7±0.0,0°.86S×125°.29E, h57km, mb5.3/88, mB5.5/59, Ms5.0/87, Ms7 4.9/83*
*MOS **02** 00:20:39.5±0.9,0°.14S×125°.02E, h38km, mb5.9/65, MS4.8/32, Error ellipse: s-maj=7.4km s-min=4.0km az=117.2*
*NEIC **02** 00:20:41.3,0°.26S×125°.21E, h29km*
*NEIC **02** 00:20:41.3,0°.25S×125°.23E, h30km*
*NEIC **02** 00:20:41.3,0°.35S×125°.13E, h30km, Moment Tensor Solution. Duration: 3s0 Moment tensor: Scale 10¹⁷Nm; Mrr1.52; Mθθ-1.43; Mφφ-0.09; Mrθ0.36; Mθφ-1.43; Mφr1.31; Fault plane solution: M0 2.45000×10¹⁷ NP1:φs30.63000°, δ65.49000°, λ57.84000°. NP2:φs267.22000°, δ39.62000°, λ139.42000°. Principal axes: T 2.2998, Plg57.0000°, Azm257.0000°; N 0.2998, Plg29.0000°, Azm45.0000°; P -2.5996, Plg15.0000°, Azm144.0000°;*
*IDC **02** 00:20:43.0±1.0,0°.23S×125°.08E, h60km±8km, mb5.2/31, mbtmp5.5/35, MS4.7/46 Error ellipse: s-maj=13.0km s-min=6.6km az=81.0*
*NEIC **02** 00:20:42.2±2.8,0°.25S±0°.06×125°.18E±0°.05, h38km±1km, mb5.8/329, Ms_20 5.0/141, Mwb5.3/53, Mww5.5/20, Error ellipse: s-maj=9.7km s-min=8.7km az=155.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.08; Mθθ-0.80; Mφφ-0.28; Mrθ0.32; Mθφ-0.61; Mφr0.57; Fault plane solution: M0 1.32000×10¹⁷ NP1: φs250.77000°, δ33.15000°, λ113.74000°. NP2: φs43.05000°, δ59.96000°, λ75.26000°. Principal axes: T 1.2915, Plg71.0000°, Azm279.0000°; N 0.0540, Plg13.0000°, Azm51.0000°; P -1.3455, Plg14.0000°, Azm144.0000°;*
*IPGP **02** 00:20:42.0,0°.23S×125°.21E, h35km, Mw5.5, Fault plane solution: NP1:φs34.00000°, δ72.00000°, λ73.00000°. NP2:φs258.00000°, δ25.00000°, λ131.00000°.*
*DJA **02** 00:20:42.6±0.2,0°S±1°×12°.5E±°, h58km±2km, M5.6/107, mb5.7/107, mB6.1/85, MLv5.9/19, Mw5.6/82, Mw(mB)5.7/85, MwMwp5.3/42, Mwp5.5/42*
*GCMT **02** 00:20:43.2±0.2,0°.32S±0°.01×125°.13E±0°.01, h31km, MW5.6/81, Moment Tensor Solution. s76,c143; s81,c155; Duration: 1s5 Moment tensor: Scale 10¹⁷Nm; Mrr2.38±.05; Mθθ-1.70±.04; Mφφ-0.68±.04; Mrθ0.26±.07; Mθφ-1.42±.03; Mφr1.84±.07; Best double couple: Mo3.15200×10¹⁷ NP1:φs31.00000°, δ63.00000°, λ65.00000°. NP2:φs257.00000°, δ36.00000°, λ130.00000°. Principal axes: T 3.2720, Plg63.0000°, Azm260.0000°; N -0.2440, Plg22.0000°, Azm43.0000°; P -3.0310, Plg15.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 00:20:43.3±0.3,**0°.25S**±0°.03×**125°.13E**±0°.03,**h60**km±1km, **h61**km:**pP-P,n1436,** σ1§**47**/1477,**mb5.7**/272,**66C-45D, Southern Moluccan Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.41 305**		P		**Pn**	**00 21 04.9**	**-1.9**
SANI	**Sanana**	**1.98 154**		P		**Pn**	**00 21 12.1**	**-2.4**
SANI	**Sanana**	**1.98 154**		P		**Pn**	**00 21 11.7**	**-2.8**
LBMI	**Labuha**	**2.40 99**		P		**Pn**	**00 21 18.3**	**-1.9**
LBMI				S		**Sn**	**00 21 45.9**	**-2.6**
TNTI	**Ternate**	**2.45 66**		P		**Pn**	**00 21 20.2**	**-0.8**
TNTI	**Ternate**	**2.45 66**		P		**Pn**	**00 21 21.0**	**+0.1**
TNTI	**Ternate**	**2.45 66**		P		**Pn**	**00 21 20.2**	**-0.8**
LUWI	**Luwuk**	**2.49 252**		Pn		**Pn**	**00 21 21.6**	**+0.2**
LUWI	**Luwuk**	**2.49 252**		P		**Pn**	**00 21 24.0**	**+2.5**
LUWI	**Luwuk**	**2.49 252**		P		**Pn**	**00 21 21.6**	**+0.2**
LUWI				S		**Sn**	**00 21 52.4**	**+1.7**
NLAI	**Namlea**	**3.56 147**		P		**Pn**	**00 21 34.3**	**-1.8**
SGSI	**Sangihe**	**3.93 6**		P		**Pn**	**00 21 40.7**	**-0.5**
TOLI2	**Tolitoli**	**4.56 287**		Pn		**Pn**	**00 21 49.5**	**-0.2**
TOLI2	**Tolitoli**	**4.56 287**		P		**Pn**	**00 21 50.4**	**+0.6**
BBSI	**Bau Bau**	**5.80 206**		P		**Pn**	**00 22 07.8**	**+1.0**
	844nm,1.0s,7µm3.0nm							
TTSI	**Tana Toraja**	**6.00 242**		P		**Pn**	**00 22 10.1**	**+0.6**
	2µm,0.8s,27µm15µm13nm							
SWI	**Sorong**	**6.16 96**		P		**Pn**	**00 22 10.4**	**-1.3**
	510nm,0.8s,5µm21µm1.8nm							
BNDI	**Bandanaira**	**6.38 132**		P		**Pn**	**00 22 14.0**	**-0.8**
BNDI	**Bandanaira**	**6.38 132**		P		**Pn**	**00 22 12.8**	**-2.0**
	3µm,1.2s,41µm30µm12nm							
BKSI	**Bulukumba**	**7.10 225**		P		**Pn**	**00 22 25.3**	**+0.7**
	449nm,0.8s,10µm2.5nm							
KAPI	**Kappang**	**7.16 229**		Pn		**Pn**	**00 22 26.6**	**+1.2**
KAPI	**Kappang**	**7.16 229**		P		**Pn**	**00 22 25.8**	**+0.3**
	177nm,0.4s,baz=29,slow=5.6,SNR=98							
KAPI				S		**Sn**	**00 23 44.4**	**-1.0**
	229nm,0.5s,baz=55,slow=19,SNR=7.3							
KAPI				LR		LR	00 26 00.1	
	comp=Z,23µm,19.9s,baz=55,slow=44							
DAV	**Davao City (W)**	**7.28 3**⇑	*e*P			**Pn**	**00 22 31.0**	**+3.8**
DAV	**Davao City (W)**	**7.28 3**		Pn		**Pn**	**00 22 26.6**	**-0.6**
DAV	**Davao City (W)**	**7.28 3**		P		**Pn**	**00 22 29.7**	**+2.5**
DAV	**Davao City (W)**	**7.28 3**		P		**Pn**	**00 22 28.6**	**+1.4**
	388nm,0.9s,baz=132,slow=2.5,SNR=23							
DAV				S		**Sn**	**00 23 48.8**	**+0.3**
	279nm,0.6s,baz=192,slow=23,SNR=0.9							
DAV				LR		LR	00 25 37.9	
	comp=Z,20µm,18.7s,baz=198,slow=41							
DAV	**Davao City (W)**	**7.28 3**		P		**Pn**	**00 22 29.9**	**+2.8**
DAV				P		**Pn**	**00 22 29.9**	**+2.8**
FAKI	**Fak Fak**	**7.59 111**		Pn		**Pn**	**00 22 28.3**	**-3.0**
FAKI	**Fak Fak**	**7.59 111**		P		**Pn**	**00 22 28.7**	**-2.6**
FAKI	**Fak Fak**	**7.59 111**		P		**Pn**	**00 22 28.0**	**-3.3**
	359nm,0.7s,4µm14µm2.0nm							
BKB	**Balikpapan**	**8.30 263**				**Pn**	**00 22 41.4**	**+0.4**
BKB	**Balikpapan**	**8.30 263**		P		**Pn**	**00 22 42.3**	**+1.3**

BKB	**Balikpapan**	**8.30 263**		P		**Pn**	**00 22 43.3**	**+2.3**
	1µm,0.9s,12µm16µm							
MYLDM	**Lahad Datu**	**8.54 309**				**Pn**	**00 22 44.5**	**+0.1**
MMRI	**Maumere**	**8.82 199**		Pn		**Pn**	**00 22 48.6**	**+0.5**
MMRI	**Maumere**	**8.82 199**		P		**Pn**	**00 22 49.1**	**+0.9**
MMRI	**Maumere**	**8.82 199**		P		**Pn**	**00 22 49.0**	**+0.9**
	226nm,1.4s,6µm7µm							
KMPI	**Kaimana, Papua**	**9.21 112**		P		**Pn**	**00 22 50.7**	**-2.8**
	673nm,0.6s,6µm13µm							
SOEI	**Soe**	**9.48 185**		Pn		**Pn**	**00 22 55.8**	**-1.6**
SOEI	**Soe**	**9.48 185**		P		**Pn**	**00 23 00.2**	**+2.8**
SOEI	**Soe**	**9.48 185**		P		**Pn**	**00 23 00.9**	**+3.5**
	1µm,0.9s,14µm12µm							
SAUI	**Saumlaki**	**9.84 141**		Pn		**Pn**	**00 23 00.1**	**-2.0**
SAUI	**Saumlaki**	**9.84 141**		P		**Pn**	**00 23 03.8**	**+1.7**
SAUI	**Saumlaki**	**9.84 141**		P		**Pn**	**00 23 02.5**	**+0.4**
	792nm,1.2s,15µm14µm							
MTKI	**Muara Teweh, K**	**10.26 266**		P		**Pn**	**00 23 10.0**	**+2.1**
	350nm,1.2s,9µm10µm							
BASI	**Baing, Sumba**	**10.89 204**		P		**Pn**	**00 23 13.2**	**-3.3**
	216nm,1.1s,6µm8µm							
PLAI	**Plampang**	**11.24 220**		P		**Pn**	**00 23 22.6**	**+1.3**
PLAI	**Plampang**	**11.24 220**		P		**Pn**	**00 23 22.2**	**+0.9**
	163nm,0.9s,2µm4µm							
SRBI	**Singaraja**	**12.58 232**		P		**Pn**	**00 23 40.4**	**+0.8**
	280nm,1.0s,4µm4µm							
DNP	**Denpasar**	**12.95 229**		P		**Pn**	**00 23 46.9**	**+2.2**
	2µm,1.4s							
SBUM	**Sibu**	**13.19 282**		Pn		**Pn**	**00 23 47.0**	**-0.8**
BWJI	**Bawean**	**13.64 246**		P		**Pn**	**00 23 55.9**	**+1.9**
	1µm,1.4s,20µm							
JAGI	**Jajag, Banyuwa**	**13.65 233**				**Pn**	**00 23 54.6**	**+0.4**
JAGI	**Jajag, Banyuwa**	**13.65 233**		P		**Pn**	**00 23 56.1**	**+1.9**
JAGI	**Jajag, Banyuwa**	**13.65 233**		P		**Pn**	**00 23 54.6**	**+0.4**
	603nm,1.6s,7µm4µm							
STKI	**Sintang**	**13.66 271**		P		**Pn**	**00 23 55.2**	**+0.9**
	633nm,1.2s,10µm21µm							
BLJI	**Banyuglugur**	**13.70 237**		P		**Pn**	**00 23 56.1**	**+1.3**
	601nm,0.9s,6µm							
MTN	**Manton Dam**	**13.85 155**		P		**Pn**	**00 23 55.5**	**-1.4**
	baz=14,SNR=34							
MTN	**Manton Dam**	**13.85 155**		Pn		**Pn**	**00 23 55.1**	**-1.8**
MTN	**Manton Dam**	**13.85 155**		P		**Pn**	**00 23 56.2**	**-0.7**
GRJI	**Gresik**	**14.25 242**		P		**Pn**	**00 24 04.1**	**+1.9**
	2µm,1.1s,19µm4µm							
KDU	**Kakadu**	**14.34 150**		P		**Pn**	**00 24 00.9**	**-2.4**
	baz=14,SNR=151							
KDU	**Kakadu**	**14.34 150**		P		**Pn**	**00 24 01.2**	**-2.1**
TGY	**Tagaytay City**	**14.85 344**		P		**Pn**	**00 24 10.6**	**+0.6**
	105nm,0.3s,baz=76,slow=6.2,SNR=5.2							
GENI	**Genyem**	**15.21 99**		P		**Pn**	**00 24 14.0**	**-0.5**
GENI	**Genyem**	**15.21 99**		P		**Pn**	**00 24 13.1**	**-1.4**
	205nm,1.0s,4µm8µm							
NGJI	**Ngawi**	**15.36 242**		P		**P**	**00 24 19.5**	**-0.5**
	3µm,1.1s,26µm							
KNRA	**Kununurra**	**15.74 167**		P		**Pn**	**00 24 20.4**	**-0.9**
	baz=16,SNR=201							
KNRA	**Kununurra**	**15.74 167**		Pn		**Pn**	**00 24 20.1**	**-1.3**
KNRA	**Kununurra**	**15.74 167**		P		**Pn**	**00 24 20.8**	**-0.6**
SMRI	**Semarang**	**16.14 245**		P		**P**	**00 24 30.3**	**+1.6**
SMRI	**Semarang**	**16.14 245**		P		**P**	**00 24 30.0**	**+1.3**
SMRI	**Semarang**	**16.14 245**		P		**P**	**00 24 30.6**	**+1.9**
	1µm,0.9s,22µm10µm							
UGM	**Wanagama**	**16.43 242**		Pn		**Pn**	**00 24 30.1**	**0.0**
UGM				IAmb		IAmb	00 24 39.2	
	comp=Z,845nm,1.2s							
UGM	**Wanagama**	**16.43 242**		P		**P**	**00 24 33.8**	**+1.8**
UGM	**Wanagama**	**16.43 242**		P		**P**	**00 24 33.4**	**+1.4**
	comp=Z,965nm,1.4s,comp=Z,11µmcomp=Z,8µm							
TABU	**Tabubil**	**16.82 108**		P		**Pn**	**00 24 33.9**	**-1.1**
KPJI	**Karang Pucung**	**17.62 246**		P		**P**	**00 24 46.9**	**+1.8**
	comp=Z,2µm,1.0s,comp=Z,18µm							
FITZ	**Fitzroy Crossi**	**17.74 178**		P		**

comp=Z,528nm,1.3s
PMG Port Moresby 23.74 113 P **P** **00 25 50.2 0.0**
PMG Port Moresby 23.74 113 P **P** **00 25 50.1 -0.1**
PMG Port Moresby 23.74 113 *i* P **P** **00 25 50.1 -0.1**
PMG pmax pmax
comp=Z,162nm,1.4s
PMG MLR MLR
comp=Z,4μm,23.0s
KRJI Kerinci 23.74 265 P **P** **00 25 50.4 0.0**
comp=Z,2μm,1.1s,comp=Z,85μmcomp=Z,5μm
YULB Yu-li 23.79 351 IAMs_20 IAMs_20 00 35 45.3
comp=Z,3μm,20.0s
YULB Yu-li 23.79 351 P **P** **00 25 49.2 -1.5**
TPUB Ta-pu 23.82 350 IAmb IAmb 00 26 16.5
comp=Z,245nm,0.9s
TPUB IAMs_20 IAMs_20 00 34 55.9
comp=Z,4μm,21.0s
TPUB Ta-pu 23.82 350 P **P** **00 25 48.1 -2.8**
GUMO Guam 23.90 54 P **P** **00 25 50.8 -0.9**
GUMO IAmb IAmb 00 26 10.9
comp=Z,195nm,0.8s
GUMO Guam 23.90 54 P **P** **00 25 50.8 -0.9**
GUMO pmax pmax
comp=Z,195nm,0.8s
BKNI Bangkinang 24.10 271 P **P** **00 25 52.8 -0.8**
BKNI IAmb IAmb 00 25 56.1
comp=Z,376nm,1.2s
BKNI Bangkinang 24.10 271 P **P** **00 25 54.6 +1.0**
BKNI Bangkinang 24.10 271 P **P** **00 25 53.1 -0.5**
comp=Z,270nm,1.2s,comp=Z,4μmcomp=Z,5μm
SSLB Suanglung 24.24 351 P **P** **00 25 53.3 -1.4**
SSLB Suanglung 24.24 351 P **P** **00 25 54.5 -0.2**
QIZ Qiongzhong 24.34 323 P **P** **00 25 55.3 -0.3**
QIZ pP **pP** **00 26 08.6 -0.8**
QIZ S **S** **00 30 04.2 -6.7**
QIZ pmax pmax
comp=Z,67nm,1.7s
QIZ pmax pmax
comp=Z,980nm,2.8s
QIZ LR LR
comp=Z,2μm,13.5s
QIZ LR LR
comp=Z,1μm,13.5s
QIZ LR LR
comp=Z,3μm,15.1s
IPM Ipoh 24.54 281 P **P** **00 25 57.7 +0.1**
IPM IAmb IAmb 00 26 00.2
comp=Z,293nm,1.3s
IPM Ipoh 24.54 281 P **P** **00 25 57.1 -0.5**
YOJ Yonaguni jima 24.65 355 IAMs_20 IAMs_20 00 34 41.0
comp=Z,4μm,22.0s
QIS Mount Isa 24.65 146 P **P** **00 25 59.4 +0.9**
baz=25,SNR=309
QIS Mount Isa 24.65 146 P **P** **00 25 59.2 +0.7**
GIRL Giralia 24.66 205 P **P** **00 26 00.1 +1.6**
baz=25,SNR=14
GIRL Giralia 24.66 205 P **P** **00 25 59.5 +1.0**
GIRL IAmb IAmb 00 26 01.6
comp=Z,411nm,0.9s
GIRL Giralia 24.66 205 P **P** **00 25 59.5 +1.0**
PDSI Padang 24.68 268 P **P** **00 25 57.1 -1.8**
comp=Z,427nm,1.3s
AS31 Alice Springs 24.79 161 P **P** **00 26 00.4 +0.6**
ASPA Alice Springs 24.79 161 P **P** **00 26 00.1 +0.3**
baz=25
ASAR Alice Springs 24.79 161 P **P** **00 25 59.4 -0.4**
ASAR Alice Springs 24.79 161 P **P** **00 25 59.6 -0.1**
comp=Z,156nm,1.0s,baz=336,slow=8.3,SNR=282
ASAR PcP **PcP** **00 29 35.3 +0.2**
comp=Z,7.8nm,0.6s,baz=344,slow=2.3,SNR=7.3
ASAR S **S** **00 30 16.9 -1.2**
comp=Z,2.4nm,0.6s,baz=348,slow=23,SNR=2.9
ASAR ScP **ScP** **00 33 09.3 +0.3**
comp=Z,13nm,1.1s,baz=339,slow=3.0,SNR=10
ASAR LR LR 00 37 41.4
comp=Z,2μm,21.1s,baz=312,slow=41
comp=Z,156nm,1.0s
UBPT Khong Chiam 24.81 309 P **P** **00 25 59.5 -0.5**
UBPT Khong Chiam 24.81 309 P **P** **00 25 59.6 -0.4**
HKPS Hong Kong Po S 24.82 335 IAMs_20 IAMs_20 00 35 14.2
comp=Z,4μm,19.0s
WRKA Warakurna 24.83 173 P **P** **00 26 00.8 +0.6**
baz=25,SNR=139
WRKA Warakurna 24.83 173 P **P** **00 26 00.7 +0.6**
YHNB Yeheng 25.04 352 P **P** **00 26 02.6 +0.5**
YHNB IAMs_20 IAMs_20 00 35 31.2
comp=Z,6μm,22.0s
YHNB Yeheng 25.04 352 P **P** **00 26 02.7 +0.7**
KULM Kulim 25.06 283 P **P** **00 26 01.8 -0.6**
KULM IAMs_20 IAMs_20 00 37 31.3
comp=Z,5μm,21.0s
PPSI Pulau Pagai 25.24 264 P **P** **00 26 03.3 -0.6**
comp=Z,787nm,1.4s,comp=Z,9μm
TATO Taipei 25.32 352 IAMs_20 IAMs_20 00 35 39.7
comp=Z,5μm,22.0s
KNMB Chin-men Tao 25.42 346 P **P** **00 26 05.3 -0.1**
SKLT Songkhla 25.54 287 P **P** **00 26 06.6 0.0**
QZH Quanzhou 25.83 346 ⇑*i* P **P** **00 26 03.5 -5.6**
QZH S **S** **00 30 27.8 -6.7**
QZH LR LR
comp=N,1μm,20.6s
QZH LR LR
comp=E,2μm,21.3s
QZH LR LR
comp=Z,2μm,25.1s
MTSU Mount Surprise 25.91 134 P **P** **00 26 10.8 +0.8**
baz=26,SNR=62
MTSU Mount Surprise 25.91 134 P **P** **00 26 10.1 +0.1**
SISI Saibi 26.06 268 P **P** **00 26 09.3 -2.1**
comp=Z,198nm,1.3s,comp=Z,2μm
PSI Prapat 26.38 277 P **P** **00 26 13.2 -1.2**
PBSI Pulau Batu 26.86 270 P **P** **00 26 19.9 +1.4**
comp=Z,122nm,1.4s,comp=Z,3μm
SRIT Nakonsritamara 26.91 290 P **P** **00 26 17.8 -1.2**
SRIT Nakonsritamara 26.91 290 P **P** **00 26 19.0 -0.1**
MEEK Meekatharra 26.98 193 P **P** **00 26 19.1 -0.5**
baz=27,SNR=25
MEEK Meekatharra 26.98 193 P **P** **00 26 19.8 +0.3**
SURA Surathani 27.07 291 P **P** **00 26 21.8 +1.4**
JOW Kunigami 27.09 6 P **P** **00 26 20.6 0.0**
JOW IAMs_20 IAMs_20 00 35 58.6
comp=Z,3μm,22.0s
JOW Kunigami 27.09 6 P **P** **00 26 21.5 +1.0**
JOW Kunigami 27.09 6 P **P** **00 26 21.1 +0.6**
comp=Z,345nm,0.9s,baz=189,slow=7.8,SNR=34
JOW LR LR 00 36 49.0
comp=Z,2μm,21.0s,baz=140,slow=36
comp=Z,345nm,0.9s
RABL Rabaul 27.29 99 IAMs_20 IAMs_20 00 37 46.4
comp=Z,4μm,22.0s
GSI Gunungsitoli 27.60 273 IAmb IAmb 00 26 25.1
comp=Z,145nm,1.1s
GSI **PcP** **00 29 44.2 +2.4**
GSI IAMs_20 IAMs_20 00 38 20.1
comp=Z,3μm,21.0s
GSI Gunungsitoli 27.60 273 P **P** **00 26 23.1 -2.1**
GSI Gunungsitoli 27.60 273 P **P** **00 26 22.9 -2.3**
comp=Z,138nm,1.6s,comp=Z,3μm
KCSI Kotacane, Aceh 27.60 278 P **P** **00 26 22.8 -2.5**
comp=Z,82nm,1.6s,comp=Z,1μm
NAYO Nakonayok 27.66 303 P **P** **00 26 25.5 -0.2**
NONG Nongkai 28.26 311 P **P** **00 26 29.9 -1.2**
TV1H Townsville Har 28.43 133 P **P** **00 26 33.0 +0.5**
CTA Charters Tower 28.57 135 P **P** **00 26 34.3 +0.5**
CTAO Charters Tower 28.57 135 P **P** **00 26 33.5 -0.3**
CTAO IAmb IAmb 00 26 57.9
comp=Z,186nm,1.4s
CTAO Charters Tower 28.57 135 P **P** **00 26 34.6 +0.8**
CTAO Charters Tower 28.57 135 P **P** **00 26 33.5 -0.3**
CTAO pmax pmax
comp=Z,186nm,1.4s
SNSI Sinabang, Aceh 28.92 275 P **P** **00 26 36.0 -1.0**
comp=Z,76nm,1.0s
MLSI Meulaboh, Aceh 29.05 279 P **P** **00 26 35.9 -2.3**
comp=Z,57nm,1.2s
GULI GuiLin 29.13 332 P **P** **00 26 34.7 -4.0**
GULI S **S** **00 31 19.8 -6.8**
GULI pmax pmax
comp=Z,30nm,1.7s
GULI LR LR
comp=N,1μm,16.3s
GULI LR LR
comp=E,1μm,16.8s
GULI LR LR
comp=Z,2μm,17.4s
OOD Oodnadatta 29.20 161 P **P** **00 26 40.1 +0.8**

SRDT SRDT 29.55 300 P **P** **00 26 42.9 +0.4**
MORW Morawa 29.95 196 P **P** **00 26 45.8 0.0**
baz=30,SNR=11
MORW Morawa 29.95 196 P **P** **00 26 45.9 0.0**
MORW Morawa 29.95 196 P **P** **00 26 45.9 0.0**
COCO West Island 30.48 246 P **P** **00 26 50.5 -0.2**
COCO IAMs_20 IAMs_20 00 38 46.4
comp=Z,4μm,20.0s
COCO West Island 30.48 246 P **P** **00 26 50.5 -0.2**
COCO pmax pmax
comp=Z,305nm,1.1s
COCO MLR MLR
comp=Z,4μm,20.0s
FORT Forrest 30.49 175 P **P** **00 26 51.1 +0.5**
baz=31,SNR=12
FORT Forrest 30.49 175 P **P** **00 26 50.7 +0.1**
FORT IAmb IAmb 00 26 55.2
comp=Z,110nm,0.9s
FORT Forrest 30.49 175 P **P** **00 26 51.3 +0.7**
CNSH ChangSha 30.59 338 ⇑P P 00 27 02.0 +10
CNSH S S 00 32 11.4 +22
CNSH LR LR
comp=N,1μm,19.5s
CNSH LR LR
comp=E,2μm,19.6s
CNSH LR LR
comp=Z,2μm,17.4s
MULG Mulgathing 31.05 165 P **P** **00 26 56.5 +0.9**
KMBL Kambalda 31.10 185 P **P** **00 26 56.5 +0.4**
baz=31,SNR=13
KMBL Kambalda 31.10 185 P **P** **00 26 56.2 +0.1**
INKA Innaminka 31.17 153 P **P** **00 26 58.1 +1.4**
BLDU Ballidu 31.24 194 P **P** **00 26 57.2 -0.1**
baz=31,SNR=20
BLDU Ballidu 31.24 194 P **P** **00 26 57.0 -0.3**
SSE Sheshan 31.40 353 P **P** **00 27 00.0 +1.4**
SSE S **S** **00 32 04.2 +2.3**
SSE pmax pmax
comp=Z,19nm,1.4s
SSE pmax pmax
comp=Z,170nm,3.7s
SSE LR LR
comp=Z,770nm,23.9s
SSE LR LR
comp=Z,240nm,23.3s
CM31 Chiang Mai Arr 31.75 307 P **P** **00 27 02.2 +0.2**
CM31 IAmb IAmb 00 27 03.3
comp=Z,163nm,1.4s
CM31 Chiang Mai Arr 31.75 307 P **P** **00 27 01.7 -0.2**
CMAR Chiang Mai Arr 31.75 307 P **P** **00 27 01.4 -0.5**
comp=Z,48nm,1.2s,baz=135,slow=6.8,SNR=119
CMAR PcP **PcP** **00 29 53.1 +0.8**
comp=Z,18nm,1.0s,baz=170,slow=1.6,SNR=13
CMAR ScP **ScP** **00 33 30.9 +0.1**
comp=Z,1.1nm,0.3s,baz=150,slow=1.3,SNR=1.5
CMAR LR LR 00 39 49.9
comp=Z,1μm,21.9s,baz=120,slow=36
comp=Z,48nm,1.2s
JCJ Chichijima 31.75 30 P **P** **00 27 01.3 -0.5**
JCJ Chichijima 31.75 30 P **P** **00 27 01.6 -0.2**
CHTO Chiang Mai 31.94 308 P **P** **00 27 03.4 -0.2**
CHTO IAmb IAmb 00 27 04.8
comp=Z,151nm,1.1s
CHTO Chiang Mai 31.94 308 P **P** **00 27 03.4 -0.2**
CHTO Chiang Mai 31.94 308 P **P** **00 27 03.4 -0.2**
CHTO pmax pmax
comp=Z,151nm,1.2s
CHTO MLR MLR
comp=Z,2μm,22.0s
CHTO Chiang Mai 31.94 308 P **P** **00 27 03.2 -0.4**
CHTO P **P** **00 27 03.2 -0.4**
CHTO Chiang Mai 31.94 308 ⇑P **P** **00 27 03.4 -0.2**
CHTO pP **pP** **00 27 17.2 -0.4**
CHTO PcP **PcP** **00 29 54.5 +1.6**
KLBR Kellerberrin 31.95 192 P **P** **00 27 03.0 -0.5**
baz=32,SNR=6.4
KLBR Kellerberrin 31.95 192 P **P** **00 27 03.7 +0.2**
GYA Guiyang 31.97 328 ⇓P P **00 27 04.2 +0.3**
GYA pP pP 00 27 17.4 -0.6
GYA PP **PP** **00 28 16.8 -0.3**
GYA PcP **PcP** **00 29 54.3 +1.3**
GYA S **S** **00 32 14.7 +3.4**
GYA sS sS 00 32 38.2 +2.7
GYA SS **SnSn** **00 34 10.7 +5.2**
GYA pmax pmax
comp=Z,39nm,1.2s
GYA pmax pmax
comp=Z,280nm,3.8s
GYA LR LR
comp=Z,1μm,15.1s
GYA LR LR
comp=Z,890nm,15.6s
GYA LR LR
comp=Z,1μm,15.2s
QLP Quilpie 31.99 146 P **P** **00 27 04.9 +0.9**
WHN Wuhan 32.30 342 P **P** **00 27 07.3 +0.8**
WHN PcP **PcP** **00 29 55.1 +1.5**
WHN S **S** **00 32 13.2 -2.8**
WHN sS **sS** **00 32 40.2 0.0**
WHN pmax pmax
comp=Z,160nm,1.0s
WHN pmax pmax
comp=Z,2μm,4.0s
WHN LR LR
comp=Z,4μm,16.5s
WHN LR LR
comp=Z,2μm,11.8s
WHN LR LR
comp=Z,7μm,22.9s
LCRK Leigh Creek 32.51 159 P **P** **00 27 09.4 +1.0**
MUN Mundaring 32.67 194 P **P** **00 27 09.7 -0.1**
baz=33,SNR=4.4
NJ2 Nanjing 32.67 350 ⇓P **P** **00 27 09.8 0.0**
NJ2 pP **pP** **00 27 24.9 +1.0**
NJ2 S **S** **00 32 23.4 +1.6**
NJ2 sS **sS** **00 32 48.8 +2.7**
NJ2 pmax pmax
comp=Z,63nm,1.0s
NJ2 pmax pmax
comp=Z,220nm,5.0s
NJ2 LR LR
comp=Z,1μm,24.6s
NJ2 LR LR
comp=Z,1μm,23.7s
NJ2 LR LR
comp=Z,2μm,20.8s
KMI Kunming 33.25 321 ⇑P **P** **00 27 15.8 +0.6**
KMI PP **PnPn** **00 28 28.8 +1.4**
KMI S **S** **00 32 32.1 +0.7**
KMI sS sS 00 32 54.7 -1.1
KMI pmax pmax
comp=Z,43nm,1.3s
KMI pmax pmax
comp=Z,410nm,3.4s
KMI LR LR
comp=Z,1μm,16.6s
KMI LR LR
comp=Z,970nm,17.5s
KMI LR LR
comp=Z,2μm,18.8s
NWAO Narrogin (SRO) 33.34 192 P **P** **00 27 16.2 +0.5**
baz=34,SNR=4.3
NWAO P **P** **00 27 16.2 +0.5**
baz=34,SNR=4.3
NWAO Narrogin (SRO) 33.34 192 P **P** **00 27 15.0 -0.7**
NWAO Narrogin (SRO) 33.34 192 P **P** **00 27 15.0 -0.7**
NWAO pmax pmax
comp=Z,65nm,1.3s
NWAO Narrogin (SRO) 33.34 192 LR LR 00 44 20.0
comp=Z,557nm,18.8s,baz=16,slow=42
JNU Nakatsue 33.63 9 IAmb IAmb 00 27 19.8
comp=Z,114nm,1.0s
JNU Nakatsue 33.63 9 P **P** **00 27 18.3 +0.1**
JNU Nakatsue 33.63 9 P **P** **00 27 17.7 -0.5**
comp=Z,94nm,0.9s,baz=174,slow=4.4,SNR=33
JNU LR LR 00 40 56.2
comp=Z,811nm,21.3s,baz=194,slow=36
comp=Z,94nm,0.9s
RK1H Rockhampton Ha 33.70 135 P **P** **00 27 19.7 +0.8**
ENH Enshi 33.81 335 P **P** **00 27 19.4 -0.4**
ENH IAmb IAmb 00 27 21.7
comp=Z,88nm,1.0s
ENH IAMs_20 IAMs_20 00 40 52.8
comp=Z,3μm,19.0s
ENH Enshi 33.81 335 P **P** **00 27 20.4 +0.6**

BBOO Buckleboo 33.98 163 P **P** **00 27 21.8 +0.5**
baz=34,SNR=8.0
BBOO Buckleboo 33.98 163 IAmb IAmb 00 27 42.2
comp=Z,85nm,1.0s
BBOO Buckleboo 33.98 163 P **P** **00 27 22.0 +0.7**
WHYH Whyalla 34.65 161 P **P** **00 27 27.7 +0.7**
JMN Monobe 34.78 13 IAmb IAmb 00 27 38.7
comp=Z,135nm,1.1s
JMN Monobe 34.78 13 P **P** **00 27 29.0 +0.8**
JTU Tsushima 34.82 6 P **P** **00 27 28.3 -0.1**
JTU IAmb IAmb 00 27 42.9
comp=Z,80nm,1.0s
JTU Tsushima 34.82 6 P **P** **00 27 29.7 +1.3**
PZH PanZhiHua 34.86 322 P **P** **00 27 28.7 -0.4**
PZH pP **pP** **00 27 42.3 -0.7**
PZH S **S** **00 32 56.0 -0.2**
PZH pmax pmax
comp=Z,60nm,1.2s
PZH pmax pmax
comp=Z,390nm,5.5s
PZH LR LR
comp=Z,1μm,19.6s
PZH LR LR
comp=Z,1μm,20.2s
PZH LR LR
comp=Z,1μm,19.4s
RKGY Rocky Gully 35.02 192 P **P** **00 27 31.6 +1.3**
baz=35,SNR=5.4
RKGY Rocky Gully 35.02 192 P **P** **00 27 31.7 +1.5**
STKA Stephens Creek 35.10 155 P **P** **00 27 31.9 +1.0**
baz=35,SNR=25
STKA Stephens Creek 35.10 155 P **P** **00 27 31.6 +0.7**
STKA Stephens Creek 35.10 155 P **P** **00 27 31.1 +0.2**
comp=Z,154nm,1.1s,baz=326,slow=8.7,SNR=88
STKA S **S** **00 33 00.0 +0.6**
comp=Z,26nm,1.2s,baz=315,slow=17,SNR=5.5
comp=Z,154nm,1.1s
EIDS Eidsvold 35.38 137 IAmb IAmb 00 27 56.1
comp=Z,162nm,1.7s
EIDS Eidsvold 35.38 137 P **P** **00 27 33.5 +0.1**
HTT Hallett 35.46 160 P **P** **00 27 35.0 +0.9**
baz=36,SNR=6.7
HTT Hallett 35.46 160 P **P** **00 27 35.1 +1.0**
MND Mandalay 35.92 310 P **P** **00 27 37.3 -0.8**
TNCH TengChong 35.98 316 ⇑P **P** **00 27 38.4 -0.4**
TNCH pP pP 00 27 51.1 -1.7
TNCH PP **PP** **00 29 02.2 +0.6**
TNCH S **S** **00 33 10.8 -2.6**
TNCH sS sS 00 33 36.7 -1.2
TNCH pmax pmax
comp=Z,90nm,2.2s
TNCH LR LR
comp=Z,560nm,24.2s
TNCH LR LR
comp=Z,550nm,23.6s
TNCH LR LR
comp=Z,2μm,27.8s
AULRC Lightning Ridg 36.29 145 P **P** **00 27 41.8 +0.7**
TJN Taejon 36.50 3 P **P** **00 27 43.7 +0.9**
TJN Taejon 36.50 3 P **P** **00 27 44.3 +1.5**
TJN Taejon 36.50 3 *i* P **P** **00 27 40.3 -2.5**
LYN LuoYang 36.60 342 ⇓P **P** **00 27 43.1 -0.6**
LYN pP pP 00 27 55.5 -2.4
LYN S **S** **00 33 18.4 -3.8**
LYN sS ScP 00 33 49.8 +2.2
LYN pmax pmax
comp=Z,100nm,1.0s
LYN pmax pmax
comp=Z,340nm,3.8s
LYN LR LR
comp=Z,2μm,19.8s
LYN LR LR
comp=Z,1μm,25.7s
LYN LR LR
comp=Z,3μm,22.2s
JWT Wachi 36.63 14 P **P** **00 27 45.0 +1.1**
CMSA Cobar Meteorol 36.70 150 P **P** **00 27 46.1 +1.4**
baz=37,SNR=35
CMSA Cobar Meteorol 36.70 150 P **P** **00 27 46.1 +1.4**
JSG Sagara 36.83 18 P **P** **00 27 45.1 -0.5**
TIA Tai'an 37.03 349 *eP* **P** **00 27 45.7 -1.7**
TIA pmax pmax
comp=Z,51nm,1.8s
TIA pmax pmax
comp=Z,340nm,8.8s
TIA LR LR
comp=Z,1μm,25.0s
TIA LR LR
comp=Z,1μm,21.6s
TIA LR LR
comp=Z,3μm,24.5s
CD2 Chengdu 37.05 329 P **P** **00 27 46.5 -1.1**
CD2 pP pP 00 28 01.9 0.0
CD2 S **S** **00 33 23.4 -5.9**
CD2 SS **SnSn** **00 36 09.0 +0.8**
CD2 pmax pmax
comp=Z,80nm,1.1s
CD2 pmax pmax
comp=Z,380nm,4.8s
CD2 LR LR
comp=Z,480nm,17.9s
CD2 LR LR
comp=Z,410nm,11.9s
CD2 LR LR
comp=Z,2μm,19.6s
XAN Xi'an 37.35 338 ⇓P **P** **00 27 50.0 -0.1**
XAN S **S** **00 33 27.9 -5.9**
XAN sS sS 00 33 58.5 +0.1
XAN SS **SS** **00 36 21.4 +2.3**
XAN pmax pmax
comp=Z,130nm,1.1s
XAN pmax pmax
comp=Z,510nm,3.7s
XAN LR LR
comp=Z,2μm,20.6s
XAN LR LR
comp=Z,2μm,19.2s
XAN LR LR
comp=Z,4μm,15.8s
XAN Xi'an 37.35 338 P **P** **00 27 49.7 -0.4**
XAN PcP **PcP** **00 30 08.9 +0.7**
INCN Inchon 37.57 2 P **P** **00 27 51.9 0.0**
INCN IAmb IAmb 00 27 54.6
comp=Z,82nm,1.1s
INCN Inchon 37.57 2 P **P** **00 27 52.6 +0.7**
INCN Inchon 37.57 2 P **P** **00 27 51.9 0.0**
INCN pmax pmax
comp=Z,82nm,1.1s
INCN MLR MLR
comp=Z,2μm,22.0s
KSRS Korea Array 37.60 4 P **P** **00 27 52.6 +0.5**
comp=Z,50nm,1.0s,baz=180,slow=10,SNR=97
KSRS PcP **PcP** **00 30 09.4 +0.5**
comp=Z,6.7nm,0.8s,baz=195,slow=2.9,SNR=5.3
KSRS ScP **ScP** **00 33 51.0 -0.2**
comp=Z,1.9nm,0.7s,baz=208,slow=5.0,SNR=4.3
KSRS LR LR 00 43 10.4
comp=Z,1μm,20.8s,baz=185,slow=36
comp=Z,50nm,1.0s
KS19 Wonju Array Si 37.65 4 P **P** **00 27 53.2 +0.6**
KS19 IAmb IAmb 00 28 07.0
comp=Z,80nm,0.9s
HJU Haeju 38.11 1 P **P** **00 27 56.6 +0.2**
HJU S **S** **00 33 48.1 +3.0**
HJU AmB
comp=Z,597nm,2.0s
MAJO Matsushiro 38.57 17 P **P** **00 27 59.7 -0.7**
MAJO Matsushiro 38.57 17 P **P** **00 27 59.9 -0.4**
MAJO Matsushiro 38.57 17 *i* P **P** **00 27 59.6 -0.7**
MAJO pmax pmax
comp=Z,96nm,1.4s
MAJO MLR MLR
comp=Z,907nm,18.0s
MAJO Matsushiro 38.57 17 P **P** **00 27 59.6 -0.7**
MAJO PcP **PcP** **00 30 13.0 +1.1**
MJAR Matsushiro Arr 38.57 17 P **P** **00 27 59.4 -1.0**
comp=Z,33nm,1.0s,baz=191,slow=8.8,SNR=42
MJAR PcP **PcP** **00 30 12.2 +0.2**
comp=Z,13nm,0.8s,baz=194,slow=3.6,SNR=6.1
MJAR ScP **S** **00 33 53.4 +1.3**
comp=Z,1.0nm,0.4s,baz=176,slow=1.8,SNR=2.4
comp=Z,33nm,1.0s
HNS HongShan 38.68 347 ⇑P **P** **00 27 59.9 -1.3**
HNS PP **PnPn** **00 29 35.8 +2.3**
HNS PcP **PcP** **00 30 13.7 +1.5**

HNS S **S** **00 33 56.1 +2.4**
HNS pmax pmax
comp=Z,52nm,1.3s
HNS LR LR
comp=Z,1µm,20.7s
HNS LR LR
comp=Z,870nm,20.7s
HNS LR LR
comp=Z,2µm,22.1s
AUDCS Dubbo College 38.78 147 P **P** **00 28 03.8 +1.6**
DL2 Dalian 39.10 356 P **P** **00 28 04.5 -0.2**
DL2 S **S** **00 34 05.4 +5.4**
DL2 pmax pmax
comp=Z,72nm,1.3s
DL2 LR LR
comp=Z,1µm,23.4s
DL2 LR LR
comp=Z,930nm,22.4s
DL2 LR LR
comp=Z,2µm,23.5s
PYAG Pyongyang 39.11 1 P **P** **00 28 05.7 +0.9**
PYAG S **S** **00 34 04.0 +3.8**
PYAG AmB
comp=Z,439nm,2.8s
ARMA Armidale 39.17 142 P **P** **00 28 05.9 +0.3**
baz=39,SNR=10.0
ARMA Armidale 39.17 142 P **P** **00 28 06.4 +0.8**
ARMA Armidale 39.17 142 P **P** **00 28 07.4 +1.8**
ARPS Mount Arapiles 39.50 159 P **P** **00 28 09.1 +1.0**
baz=40,SNR=22
ARPS Mount Arapiles 39.50 159 P **P** **00 28 09.6 +1.5**
TIY Taiyuan 39.55 344 *e*P **P** **00 28 09.3 +0.7**
TIY S **S** **00 34 07.6 +0.6**
TIY pmax pmax
comp=Z,41nm,0.7s
TIY pmax pmax
comp=Z,370nm,4.7s
BRDH Bariadhala 39.77 307 LR LR 00 45 50.8
comp=Z,2µm,21.8s,baz=79,slow=38
HHU Hamhung 40.05 3 P **P** **00 28 12.3 -0.3**
HHU AmB
comp=Z,606nm,1.7s
SUJ Sinuiju 40.16 359 P **P** **00 28 13.5 0.0**
SUJ S **S** **00 34 19.4 +3.5**
SUJ AmB
comp=Z,606nm,2.1s
YNG Yong 40.27 150 P **P** **00 28 16.6 +2.0**
baz=40
YNG Young 40.27 150 P **P** **00 28 16.1 +1.5**
JMM Marumori 40.59 19 IAmb IAmb 00 28 35.0
comp=Z,228nm,1.1s
JMM Marumori 40.59 19 P **P** **00 28 18.0 +0.9**
BJT Baijiatuan 40.91 349 P **P** **00 28 19.9 +0.2**
BJT sP **sP** **00 28 40.2 -0.6**
BJT PcP **PcP** **00 30 20.7 +1.5**
BJI Beijing 40.92 349 P **P** **00 28 18.9 -0.9**
BJI sP **sP** **00 28 40.0 -1.0**
BJI pmax pmax
comp=Z,23nm,1.2s
BRAT Ballarat 40.97 157 P **P** **00 28 22.3 +2.1**
SHL Shillong 41.11 311 P **P** **00 28 21.1 -0.7**
SHL Shillong 41.11 311 P **P** **00 28 21.1 -0.7**
SHL pmax pmax
comp=Z,70nm,0.9s
SHL Shillong 41.11 311 P **P** **00 28 20.7 -1.1**
SNR=35
LZH Lanzhou 41.22 333 *e*P **P** **00 28 21.9 -0.6**
LZH sP pwP 00 28 39.0 -2.1
LZH S **S** **00 34 29.3 -2.8**
LZH SS **SS** **00 37 35.0 -2.4**
LZH pmax pmax
comp=Z,160nm,1.2s
LZH pmax pmax
comp=Z,550nm,4.3s
LZH LR LR
comp=Z,2µm,16.1s
LZH LR LR
comp=Z,2µm,17.7s
LZH LR LR
comp=Z,3µm,19.8s
CAN Canberra 41.38 150 P **P** **00 28 24.0 +0.2**
CAN IAmb IAmb 00 28 45.9
comp=Z,117nm,0.9s
CAN Canberra 41.38 150 P **P** **00 28 26.1 +2.3**
CAN Canberra 41.38 150 P **P** **00 28 24.0 +0.2**
CAN pmax pmax
comp=Z,117nm,0.9s
CAN Canberra 41.38 150 P **P** **00 28 26.3 +2.5**
CNB Canberra Magne 41.56 150 P **P** **00 28 27.0 +1.7**
baz=42,SNR=4.8
CNB Canberra Magne 41.56 150 P **P** **00 28 27.7 +2.5**
TOO Toolangi 41.62 155 P **P** **00 28 28.3 +2.6**
baz=42,SNR=18
TOO Toolangi 41.62 155 P **P** **00 28 25.2 -0.5**
TOO IAmb IAmb 00 28 29.4
comp=Z,124nm,1.1s
TOO Toolangi 41.62 155 P **P** **00 28 28.2 +2.6**
TOO Toolangi 41.62 155 P **P** **00 28 25.2 -0.5**
TOO pmax pmax
comp=Z,124nm,1.1s
WOLH Wollongong Har 41.65 147 P **P** **00 28 28.8 +2.9**
GEXS Deakin Univers 41.68 157 P **P** **00 28 27.2 +1.2**
SNY Shenyang 41.91 358 ⇓P **P** **00 28 28.3 +0.5**
SNY S **S** **00 34 43.5 +1.8**
SNY pmax pmax
comp=Z,60nm,1.0s
SNY LR LR
comp=Z,680nm,19.7s
SNY LR LR
comp=Z,940nm,19.9s
SNY LR LR
comp=Z,1µm,19.2s
AUSMG Snowy Mountain 42.07 151 P **P** **00 28 28.2 -1.2**
HHC Hu-ho-hao-te 42.73 345 *e*P **P** **00 28 35.1 +0.4**
HHC sP pwP 00 28 51.2 -1.7
HHC PP **PP** **00 30 21.1 +6.2**
HHC S **S** **00 34 50.7 -3.4**
HHC sS sS 00 35 20.5 +1.5
HHC SS **SS** **00 38 01.1 -5.7**
HHC pmax pmax
comp=Z,30nm,1.2s
HHC pmax pmax
comp=Z,300nm,5.4s
HHC LR LR
comp=Z,780nm,17.6s
HHC LR LR
comp=Z,400nm,15.9s
HHC LR LR
comp=Z,2µm,19.9s
BTO Baotou 42.93 343 *e*P **P** **00 28 38.7 +2.4**
BTO pP **pwP** **00 28 54.1 -0.4**
BTO sP **sP** **00 29 01.2 +3.6**
BTO PP **PP** **00 30 22.2 +5.2**
BTO S **S** **00 35 02.4 +5.3**
BTO sS **sS** **00 35 26.2 +4.2**
BTO SS **SS** **00 38 10.6 -0.2**
BTO pmax pmax
comp=Z,52nm,1.8s
BTO pmax pmax
comp=Z,600nm,7.8s
BTO LR LR
comp=Z,3µm,21.8s
BTO LR LR
comp=Z,2µm,19.0s
BTO LR LR
comp=Z,3µm,21.9s
MSHR Mys Shultsa 42.98 7 *i*P **P** **00 28 37.3 +0.8**
MSHR pmax pmax
comp=Z,61nm,0.9s
MSHR MLR MLR
comp=Z,519nm,22.0s
KOUNC Koumac, New Ca 43.26 120 P **P** **00 28 40.2 +1.0**
JTM Tenmabayashi 43.34 18 P **P** **00 28 40.4 +1.0**
JTM IAmb IAmb 00 28 41.7
comp=Z,151nm,1.0s
JTM Tenmabayashi 43.34 18 P **P** **00 28 40.7 +1.2**
CN2 Changchun 43.86 0 *e*P **P** **00 28 42.0 -1.6**
CN2 SS SS 00 38 21.3 -7.3
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,600nm,15.0s
CN2 LR LR
comp=Z,500nm,15.0s
CN2 LR LR
comp=Z,700nm,16.0s
LSA Lhasa 44.00 316 *i*P **P** **00 28 45.4 -0.2**
SNR=23
LSA Lhasa 44.00 316 P **P** **00 28 44.2 -1.4**
LSA Lhasa 44.00 316 P **P** **00 28 45.6 0.0**
USA0B Ussuriysk Arra 44.68 7 ⇑*i*P **P** **00 28 50.3 +0.2**
USRK Ussuriysk Ar. 44.68 7 P **P** **00 28 49.7 -0.4**
comp=Z,74nm,0.9s,baz=191,slow=7.1,SNR=45
USRK PcP **PcP** **00 30 31.3 -0.5**
comp=Z,6.6nm,0.8s,baz=160,slow=5.6,SNR=1.3
USRK LR LR 00 47 42.7
comp=Z,676nm,21.3s,baz=182,slow=36
comp=Z,74nm,0.9s
XLT XiLinHaoTe 44.69 351 *e*P **P** **00 28 49.4 -1.0**
XLT pP pP 00 29 03.0 -2.1
XLT sP pwP 00 29 07.2 -1.6
XLT PcP **PcP** **00 30 26.9 -5.1**
XLT S **S** **00 35 19.0 -3.7**
XLT pmax pmax
comp=Z,89nm,1.2s
XLT pmax pmax
comp=Z,240nm,3.2s
XLT LR LR
comp=Z,88nm,25.5s
XLT LR LR
comp=Z,610nm,21.7s
XLT LR LR
comp=Z,1µm,27.6s
MDJ Mudanjiang 44.85 5 P **P** **00 28 51.7 +0.3**
MDJ pP pP 00 29 05.5 -0.7
MDJ sP sP 00 29 11.7 -1.2
MDJ S **S** **00 35 27.8 +3.1**
MDJ SS **SS** **00 38 49.1 +1.2**
MDJ pmax pmax
comp=Z,64nm,1.1s
MDJ pmax pmax
comp=Z,670nm,3.6s
MDJ LR LR
comp=Z,660nm,22.7s
MDJ LR LR
comp=Z,730nm,20.6s
MDJ LR LR
comp=Z,1µm,22.0s
MDJ Mudanjiang 44.85 5 IAmb IAmb 00 29 06.8
comp=Z,113nm,0.9s
MDJ Mudanjiang 44.85 5 P **P** **00 28 51.8 +0.3**
MDJ pP **pP** **00 29 05.5 -0.8**
ERM Erimo 45.11 19 *i*P **P** **00 28 53.6 0.0**
ERM pmax pmax
comp=Z,84nm,1.2s
ERM MLR MLR
comp=Z,816nm,19.0s
AULHS Lilydale High 45.45 157 P **P** **00 28 58.5 +2.2**
CORO Coronation Par 45.59 157 P **P** **00 29 00.1 +2.7**
NOUC Port Laguerre 45.59 121 P **P** **00 28 58.8 +1.0**
NOUC Port Laguerre 45.59 121 P **P** **00 28 59.0 +1.2**
DZM Mont Dzumac 45.70 121 P **P** **00 28 58.1 -0.7**
DZM Mont Dzumac 45.70 121 P **P** **00 29 00.1 +1.3**
DZM Mont Dzumac 45.70 121 *e*P **P** **00 28 58.2 -0.6**
comp=Z,82nm,1.1s
DZM Mont Dzumac 45.70 121 *e*PP PP 00 30 42.1 -4.8
comp=Z,114nm,22.9s
DZM *e*S **S** **00 35 34.6 -3.3**
comp=Z,828nm,37.8s
DZM *e*SS **SS** **00 39 01.8 -1.4**
comp=Z,1µm,27.0s
DZM *e*LR LR 00 41 46.4
comp=Z,2µm,24.6s
DZM Mont Dzumac 45.70 121 P **P** **00 29 00.2 +1.4**
DZM pP **pP** **00 29 14.8 +1.2**
GTA Gaotai 45.77 332 ⇑P **P** **00 28 58.1 -1.0**
GTA pP pP 00 29 08.9 -4.8
GTA S **S** **00 35 37.7 -0.8**
GTA sS sS 00 36 09.1 +5.5
GTA ScS **ScS** **00 38 50.1 +0.3**
GTA pmax pmax
comp=Z,79nm,1.5s
GTA LR LR
comp=Z,1µm,19.9s
GTA LR LR
comp=Z,1µm,17.9s
GTA LR LR
comp=Z,2µm,19.5s
ONTNC Ouen Toro 45.80 121 P **P** **00 28 58.9 -0.6**
BNX BinXian 45.84 2 ⇑P **P** **00 28 58.7 -0.6**
BNX pP **pP** **00 29 13.8 -0.3**
BNX sP **sP** **00 29 19.7 -1.1**
BNX PP **PP** **00 30 47.4 -0.4**
BNX S **S** **00 35 40.0 +1.1**
BNX sS **sS** **00 36 05.4 +1.4**
BNX pmax pmax
comp=Z,53nm,1.1s
BNX pmax pmax
comp=Z,380nm,4.6s
BNX LR LR
comp=Z,980nm,20.1s
BNX LR LR
comp=Z,520nm,19.0s
BNX LR LR
comp=Z,1µm,20.6s
GOMU GeErMu 45.92 325 P **P** **00 28 59.2 -1.4**
GOMU PcP **PcP** **00 30 38.2 +1.4**
GOMU S **S** **00 35 37.1 -4.1**
GOMU SS **SS** **00 39 05.6 -1.2**
GOMU pmax pmax
comp=Z,62nm,1.3s
GOMU LR LR
comp=Z,1µm,23.8s
GOMU LR LR
comp=Z,900nm,20.4s
GOMU LR LR
comp=Z,1µm,21.3s
YATNC Mamie plateau, 46.08 121 P **P** **00 29 03.7 +2.0**
TEY Ternei 46.23 11 ⇓*e*P **P** **00 29 02.3 0.0**
TEY *e* 00 35 46.6
TEY pmax pmax
comp=Z,30nm,1.0s
TEY pmax pmax
comp=N,20nm,1.0s
PINNC Pines Island, 46.77 121 P **P** **00 29 06.9 -0.1**
PINNC IAmb IAmb 00 29 34.5
comp=Z,118nm,1.2s
ASAJ Asahikawa 46.84 17 P **P** **00 29 08.0 +0.8**
ASAJ pmax pmax
comp=Z,114nm,1.2s
JKA Kamikawa-asahi 46.84 17 P **P** **00 29 08.0 +0.8**
JKA IAmb IAmb 00 29 09.5
comp=Z,114nm,1.2s
HYB Hyderabad 49.09 293 *e*P **P** **00 29 23.4 -1.7**
HYB *e*PcP **PcP** **00 30 49.0 +0.9**
HYB *e*PP **PP** **00 31 20.7 +1.4**
HYB *e*S **S** **00 36 30.5 +4.5**
YSS Yuzh-Sakhalins 49.48 16 P **P** **00 29 27.5 0.0**
YSS IAmb IAmb 00 29 44.3
comp=Z,102nm,1.2s
YSS Yuzh-Sakhalins 49.48 16 P **P** **00 29 27.9 +0.4**
YSS Yuzh-Sakhalins 49.48 16 *c*P **P** **00 29 27.7 +0.2**
YSS *e**PP **pP** **00 29 40.3 -2.2**
YSS *e* 00 31 23.8
YSS *e*S **S** **00 36 28.9 -1.6**
YSS *e*SS **SS** **00 39 56.4 -6.9**
YSS pmax pmax
comp=Z,50nm,1.3s
YSS pmax pmax
comp=N,40nm,1.4s
YSS pmax pmax
comp=N,200nm,4.9s
YSS pmax pmax
comp=Z,400nm,4.9s
YSS smax smax
comp=N,200nm,6.4s
YSS MLR MLR
comp=Z,700nm,15.0s
YSS MLR MLR
comp=E,400nm,14.0s
HIA Hailar 49.54 355 IAMs_20 IAMs_20 00 52 11.5
comp=Z,1µm,20.0s
HIA Hailar 49.54 355 IAmb IAmb 00 29 32.2
comp=Z,84nm,1.0s
HIA Hailar 49.54 355 P **P** **00 29 27.9 -0.1**
KLR Kul'dur 49.62 6 *e*P **P** **00 29 28.4 -0.2**
KLR pmax pmax
comp=Z,96nm,1.7s
KLR Kul'dur 49.62 6 P **P** **00 29 28.3 -0.2**
comp=Z,37nm,1.0s,baz=205,slow=5.3,SNR=45
KLR S **S** **00 36 32.7 +0.3**
comp=Z,0.9nm,0.9s,baz=234,slow=19,SNR=1.4
comp=Z,37nm,1.0s
HEH HeiHe 50.35 2 *e*P **P** **00 29 33.8 -0.2**
HEH pP **pP** **00 29 47.4 -1.6**
HEH S **S** **00 36 40.7 -1.9**
HEH SS **SS** **00 40 14.4 -2.7**
HEH pmax pmax
comp=Z,82nm,1.2s
HEH pmax pmax
comp=Z,590nm,3.8s
HEH LR LR
comp=Z,650nm,22.5s
HEH LR LR
comp=Z,460nm,22.4s
HEH LR LR
comp=Z,1µm,24.2s
ULN Ulaanbaatar 50.44 344 P **P** **00 29 34.3 -0.7**
ULN IAmb IAmb 00 29 37.9
comp=Z,69nm,1.1s
ULN Ulaanbaatar 50.44 344 IAMs_20 IAMs_20 00 51 57.4
comp=Z,1µm,21.0s
ULN Ulaanbaatar 50.44 344 ⇑*i*P **P** **00 29 33.7 -1.3**
ULN pmax pmax
comp=Z,77nm,1.1s
ULN MLR MLR
comp=Z,1µm,20.0s
ULN Ulaanbaatar 50.44 344 P **P** **00 29 34.1 -0.9**
ULN P **P** **00 29 34.1 -0.9**
ULN Ulaanbaatar 50.44 344 P **P** **00 29 34.0 -0.9**
SONM Songino Array 50.59 344 P **P** **00 29 34.9 -1.2**
SONM IAmb IAmb 00 29 38.8
comp=Z,69nm,1.0s
SONM Songino Array 50.59 344 P **P** **00 29 34.9 -1.2**
SONM pmax pmax
comp=Z,69nm,1.0s
SONM Songino Array 50.59 344 P **P** **00 29 35.3 -0.8**
comp=Z,43nm,0.9s,baz=159,slow=8.5,SNR=55
SONM PcP **PcP** **00 30 51.6 -1.5**
comp=Z,13nm,1.0s,baz=169,slow=4.3,SNR=2.0
SONM LR LR 00 52 13.0
comp=Z,1µm,20.0s,baz=161,slow=37
comp=Z,43nm,0.9s
GRNR Gornyy 51.73 9 ⇑*i*P **P** **00 29 45.3 +0.9**
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,40nm,1.1s
MNCI Minicoy 52.58 281 IAMs_20 IAMs_20 00 52 36.3
comp=Z,2µm,21.0s
CIT Chita 52.99 351 *e*P **P** **00 29 55.0 +1.2**
CIT *e* 00 30 04.1
CIT *e* 00 31 04.0
CIT pmax pmax
comp=Z,147nm,1.9s
TYV Tymovskoe 53.06 14 *e*P **P** **00 29 55.6 +1.4**
TYV *e*S **S** **00 37 24.8 +5.0**
TYV pmax pmax
comp=Z,17nm,1.2s
TYV pmax pmax
comp=Z,600nm,4.4s
TYV smax smax
comp=N,300nm,6.1s
TYV smax smax
comp=E,200nm,6.1s
ZAK Zakamensk 53.78 343 *e*P **P** **00 29 57.6 -2.1**
ZAK pmax pmax
comp=Z,23nm,1.1s
ZEA Zeya 53.83 2 *e*P **P** **00 29 59.2 -0.6**
ZEA *e*S **S** **00 37 32.3 +2.1**
ZEA pmax pmax
comp=Z,200nm,4.4s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA smax smax
comp=N,200nm,9.1s
NKL Nikolayevsk 54.77 11 *e*P **P** **00 30 04.2 -2.5**
NKL *e*S **S** **00 37 43.9 +1.1**
NKL pmax pmax
comp=E,192nm,0.9s
NKL pmax pmax
comp=N,187nm,1.0s
NKL pmax pmax
comp=Z,459nm,1.0s
NKL smax smax
comp=E,163nm,1.9s
NKL smax smax
comp=N,292nm,6.8s
WMQ Urumqi 55.13 328 *e*P **P** **00 30 09.0 -0.6**
WMQ pP pP 00 30 24.0 -0.5
WMQ PcS **PcS** **00 35 09.2 -1.0**
WMQ S **S** **00 37 48.9 +0.7**
WMQ ScS **ScS** **00 39 51.3 -2.2**
WMQ pmax pmax
comp=N,110nm,1.3s
WMQ pmax pmax
comp=N,430nm,3.6s
WMQ LR LR
comp=N,2µm,20.1s
WMQ LR LR
comp=N,1µm,16.9s
WMQ LR LR
comp=N,1µm,24.2s
MOY Mondy 55.60 342 *e*P **P** **00 30 12.6 -0.3**
MOY pmax pmax
comp=Z,97nm,2.2s
DGTI Dogotuki 56.12 109 P **P** **00 30 19.1 +2.0**
LKBA Tubou, Lakemba 57.85 111 P **P** **00 30 30.0 +0.7**
JCZ Jackson Bay 58.36 144 P **P** **00 30 33.5 +1.0**
WUS Wushi 58.52 321 P **P** **00 30 33.1 -0.6**
WUS pP **pP** **00 30 48.2 -0.7**
BOD Bodaibo 58.57 353 *e*P **P** **00 30 33.6 0.0**
BOD pmax pmax
comp=Z,217nm,1.5s
WHZ Wether Hill Ro 58.97 146 P **P** **00 30 37.5 +0.9**
ZSN Zaisan 59.02 329 *e*P **P** **00 30 35.7 -1.3**
comp=Z,30nm,1.0s,baz=329
ZSN *e*S **S** **00 38 39.5 +0.2**
baz=329
ZSN Zaisan 59.02 329 *e*P **P** **00 30 35.6 -1.3**
ZSN *e*S **S** **00 38 39.4 +0.2**
ZSN pmax pmax
comp=Z,30nm,1.0s
NIL Nilore 59.17 310 P **P** **00 30 37.0 -1.2**
NIL IAmb IAmb 00 30 52.1
comp=Z,144nm,1.4s
NIL Nilore 59.17 310 P **P** **00 30 37.0 -1.2**
NIL pmax pmax
comp=Z,144nm,1.4s
NIL Nilore 59.17 310 P **P** **00 30 36.8 -1.5**
NIL P **P** **00 30 36.8 -1.5**
NIL Nilore 59.17 310 P **P** **00 30 37.1 -1.1**
NIL pP **pP** **00 30 52.1 -1.4**
DGZ Jazzator, Alta 59.31 332 ⇑*i*P **P** **00 30 38.0 -1.1**
DGZ pmax pmax
comp=Z,65nm,0.9s
DGZ MLR MLR
comp=Z,2µm,19.0s
SHLS Shalkode 59.44 323 *e*P **P** **00 30 37.6 -2.5**
comp=Z,65nm,1.1s,baz=323
SHLS Shalkode 59.44 323 *e*P **P** **00 30 37.6 -2.5**
SHLS pmax pmax
comp=Z,65nm,1.1s
RPZ Rata Peaks 59.51 143 P **P** **00 30 41.5 +1.1**
RPZ Rata Peaks 59.51 143 LR LR 00 57 22.2
comp=Z,598nm,21.8s,baz=300,slow=37
PEA0B Petropavlovsk- 59.69 22 P **P** **00 30 42.7 +1.3**
PEA0B IAmb IAmb 00 30 44.3
comp=Z,101nm,1.1s
PEA0B Petropavlovsk- 59.69 22 *i*P **P** **00 30 42.4 +1.0**
PETK Petropavlovsk- 59.69 22 P **P** **00 30 41.2 -0.2**
comp=Z,54nm,0.9s,baz=203,slow=6.7,SNR=28
comp=Z,54nm,0.9s
UZB Uzynbulak 59.71 322 *e*P **P** **00 30 40.9 -1.0**
comp=Z,74nm,1.6s,baz=322
UZB *e*S **S** **00 38 47.7 -0.7**
baz=322
UZB Uzynbulak 59.71 322 *e*P **P** **00 30 40.9 -1.0**
UZB *e*S **S** **00 38 47.7 -0.7**
UZB pmax pmax
comp=Z,74nm,1.6s
KSH Kashi 59.80 317 P **P** **00 30 42.3 -0.3**
KSH PcP **PcP** **00 31 30.1 +1.3**
KSH S **S** **00 38 52.3 +2.6**

KSH ScS **ScS** **00 40 24.2 -3.8**
KSH pmax pmax
comp=Z,120nm,1.0s
KSH LR LR
comp=Z,760nm,19.9s
KSH LR LR
comp=Z,690nm,18.6s
KSH LR LR
comp=Z,1µm,23.4s
MK31 Makanchi Array 59.96 327 P **P** **00 30 42.3 -1.2**
MK31 IAmb IAmb 00 30 45.7
comp=Z,60nm,1.0s
MK31 Makanchi Array 59.96 327 P **P** **00 30 42.3 -1.2**
MK31 pmax pmax
comp=Z,60nm,1.0s
MKAR Makanchi Array 59.96 327 *i* P **P** **00 30 42.2 -1.2**
MKAR pmax pmax
comp=Z,53nm,0.8s
MKAR Makanchi Array 59.96 327 P **P** **00 30 42.5 -0.9**
comp=Z,52nm,0.8s,baz=122,slow=8.5,SNR=162
MKAR S **S** **00 38 51.0 -0.3**
comp=Z,2.3nm,1.1s,baz=110,slow=12,SNR=4.5
MKAR LR LR 00 58 14.6
comp=Z,2µm,19.4s,baz=130,slow=38
MKAR PKP2bc 01 00 18.1
comp=Z,0.8nm,0.9s,baz=300,slow=2.7,SNR=4.1
MKAR P4KPbc 01 07 45.7
comp=Z,1,3nm,0.8s,baz=129,slow=5.2,SNR=12
comp=Z,52nm,0.8s
PET Petropavlovsk 59.99 23 P **P** **00 30 43.5 +0.1**
PET IAmb IAmb 00 30 46.3
comp=Z,150nm,1.3s
PET Petropavlovsk 59.99 23 P **P** **00 30 45.0 +1.6**
PET Petropavlovsk 59.99 23 *eP* **P** **00 30 44.7 +1.3**
PET *e**PP **pwP** **00 31 00.1 -1.7**
PET *eS* **S** **00 38 53.5 +2.2**
PET pmax pmax
comp=Z,92nm,1.3s
PET pmax pmax
comp=Z,1µm,5.8s
PET pmax pmax
comp=Z,400nm,6.1s
PET Petropavlovsk 59.99 23 P **P** **00 30 45.0 +1.6**
SATY Saty 60.04 322⇑ *i* P **P** **00 30 43.4 -0.8**
comp=Z,60nm,0.8s,baz=322
SATY *eS* **S** **00 38 51.6 -1.0**
baz=322
SATY Saty 60.04 322 *c i* P **P** **00 30 43.4 -0.8**
SATY *eS* **S** **00 38 51.6 -1.0**
SATY pmax pmax
comp=Z,60nm,0.8s
KPKS Kokpek 60.09 322⇑ *i* P **P** **00 30 43.4 -1.1**
comp=Z,53nm,1.0s,baz=322
KPKS Kokpek 60.09 322 *c i* P **P** **00 30 43.3 -1.1**
KPKS pmax pmax
comp=Z,53nm,1.0s
TUWZ Tuamarina 60.13 139 P **P** **00 30 44.3 -0.3**
MAKZ Makanchi 60.14 327 P **P** **00 30 43.5 -1.2**
MAKZ IAmb IAmb 00 30 46.9
comp=Z,180nm,1.6s
MAKZ Makanchi 60.14 327 P **P** **00 30 43.5 -1.2**
MAKZ pmax pmax
comp=Z,180nm,1.6s
MAKZ MLR MLR
comp=Z,2µm,19.0s
MAKZ Makanchi 60.14 327 P **P** **00 30 44.9 +0.2**
NRN Naryn 60.72 319 IAmb IAmb 00 30 51.4
comp=Z,49nm,0.9s
BKZ Black Stump Fm 60.78 136 P **P** **00 30 48.6 -0.6**
BKZ IAmb IAmb 00 31 24.6
comp=Z,77nm,1.2s
BKZ Black Stump Fm 60.78 136 P **P** **00 30 50.2 +1.0**
URZ Urewera 60.82 135 LR LR 01 00 58.9
comp=Z,579nm,18.1s,baz=32,slow=40
RTZ Ruatahuna 60.88 135 P **P** **00 30 51.0 +1.1**
MDOK Medeo 60.93 321 *eP* **P** **00 30 49.7 -0.7**
baz=322
MDOK *eS* **S** **00 39 04.3 +0.1**
baz=322
MDOK Medeo 60.93 321 *eP* **P** **00 30 49.6 -0.7**
MDOK *eS* **S** **00 39 04.2 +0.1**
ULHL Ulahol 60.97 320 P **P** **00 30 50.5 -0.1**
SNR=12
KNDC Almaty 61.01 321 P **P** **00 30 50.8 +0.1**
ARXS Arharly 61.02 323 *i* P **P** **00 30 51.3 +0.5**
AAA Alma-Ata 61.04 321 *eP* **P** **00 30 50.4 -0.6**
comp=Z,80nm,0.9s,baz=321
AAA Alma-Ata 61.04 321 *eP* **P** **00 30 50.3 -0.6**
AAA pmax pmax
comp=Z,80nm,0.9s
TDK Taldyqorghan 61.10 324 *eP* **P** **00 30 50.4 -0.8**
comp=Z,89nm,0.9s,baz=324
TDK Taldyqorghan 61.10 324 *eP* **P** **00 30 50.4 -0.8**
TDK pmax pmax
comp=Z,89nm,0.9s
CHKK Chushkaly 61.33 322 *eP* **P** **00 30 51.4 -1.4**
baz=322
CHKK Chushkaly 61.33 322 *eP* **P** **00 30 51.4 -1.4**
RAO Raoul Island 61.40 123 LR LR 00 57 01.1
comp=Z,275nm,20.8s,baz=164,slow=35
TKM2 Tokmak 2 61.72 321 P **P** **00 30 54.8 -0.9**
SNR=52
TKM2 Tokmak 2 61.72 321 P **P** **00 30 54.4 -1.3**
KUU Kurty 61.75 322⇑ *i* P **P** **00 30 54.5 -1.2**
baz=322
KUU *eS* **S** **00 39 14.5 +0.2**
baz=322
KUU Kurty 61.75 322 *c i* P **P** **00 30 54.4 -1.2**
KUU *eS* **S** **00 39 14.5 +0.2**
KBK Karagaybulak 62.00 320 P **P** **00 30 59.5 +1.9**
SNR=66
UCH Uchtor 62.07 319 P **P** **00 30 58.1 -0.3**
SNR=72
YAK Yakutsk 62.22 2 P **P** **00 30 58.7 +0.3**
YAK Yakutsk 62.22 2 *c i* P **P** **00 30 58.6 +0.3**
YAK *e**PP **pP** **00 31 13.7 -0.1**
YAK *e* 00 31 39.9
YAK *e* 00 33 16.9
YAK *eS* **S** **00 39 18.8 -0.5**
YAK *e**SS **sS** **00 39 47.3 +1.7**
YAK *e* 00 40 44.0
YAK *eSS* **SS** **00 43 24.5 +1.0**
YAK pmax pmax
comp=Z,194nm,0.9s
YAK pmax pmax
comp=N,53nm,1.0s
YAK pmax pmax
comp=E,18nm,1.1s
YAK pmax pmax
comp=Z,81nm,2.3s
YAK pmax pmax
comp=E,55nm,1.9s
YAK pmax pmax
comp=N,55nm,2.1s
YAK smax smax
comp=E,430nm,2.6s
YAK smax smax
comp=N,245nm,1.9s
YAK MLR MLR
comp=Z,727nm,24.0s
YAK Yakutsk 62.22 2 LR LR 00 59 41.6
comp=Z,544nm,20.4s,baz=186,slow=38
YAK Yakutsk 62.22 2 P **P** **00 30 58.6 +0.2**
YAK pP **pP** **00 31 13.5 -0.3**
FRU1 Bishkek 62.28 320 IAMs_20 IAMs_20 00 59 16.0
comp=Z,699nm,20.0s
AAK Ala-Archa 62.29 320 P **P** **00 31 01.4 +1.9**
SNR=62
AAK Ala-Archa 62.29 320 P **P** **00 30 58.9 -0.5**
AAK IAmb IAmb 00 31 02.5
comp=Z,77nm,1.0s
AAK Ala-Archa 62.29 320 IAMs_20 IAMs_20 00 58 49.0
comp=Z,2µm,22.0s
AAK Ala-Archa 62.29 320 *i* P **P** **00 30 59.0 -0.5**
SNR=92
AAK Ala-Archa 62.29 320 *ceP* **P** **00 30 58.7 -0.8**
AAK pmax pmax
comp=Z,146nm,1.7s
AAK MLR MLR
comp=Z,2µm,22.0s
AAK Ala-Archa 62.29 320 LR LR 00 59 12.3
comp=Z,1µm,21.9s,baz=108,slow=37
AAK Ala-Archa 62.29 320 P **P** **00 30 58.5 -1.0**
AAK P **P** **00 30 58.5 -1.0**
AAK Ala-Archa 62.29 320 P **P** **00 31 00.5 +1.1**
CHMS Chumysh 62.30 320 P **P** **00 31 00.6 +1.2**
SNR=17
USP Ospenovka 62.59 320 P **P** **00 31 00.4 -0.9**
SNR=120
SGDS Sogindy 62.60 321 *eP* **P** **00 31 00.1 -1.3**
baz=321
SGDS Sogindy 62.60 321 *eP* **P** **00 31 00.1 -1.3**
ARSB Arslanbob 62.66 318 P **P** **00 31 01.9 -0.1**
ARSB Arslanbob 62.66 318 P **P** **00 31 01.9 -0.1**
ARSB MLR MLR
comp=Z,300nm,22.0s
KBL Kabul 62.74 310 P **P** **00 31 01.0 -1.7**
KBL IAmb IAmb 00 31 17.3
comp=Z,86nm,0.9s
KBL Kabul 62.74 310 P **P** **00 31 01.0 -1.7**
KBL pmax pmax
comp=Z,86nm,0.9s
KBL MLR MLR
comp=Z,500nm,22.0s
KBL Kabul 62.74 310 P **P** **00 31 01.0 -1.7**
SNR=85
EKS2 Erkin-Say 62.76 320 P **P** **00 31 02.2 -0.4**
SNR=96
MA2 Magadan 62.93 14 P **P** **00 31 04.8 +1.6**
MA2 pP **pP** **00 31 18.4 -0.4**
SEM Semipalatinsk 63.25 330 *eP* **P** **00 31 03.6 -2.2**
baz=330
SEM Semipalatinsk 63.25 330 *eP* **P** **00 31 03.6 -2.2**
ZAA0 Zalesovo Array 63.43 335 IAMs_20 IAMs_20 00 59 00.6
comp=Z,1µm,20.0s
ZALV Zalesovo Beam 63.43 335 *i* P **P** **00 31 04.6 -2.0**
ZALV pmax pmax
comp=Z,34nm,0.9s
ZALV Zalesovo Beam 63.43 335 P **P** **00 31 04.7 -2.0**
comp=Z,33nm,0.9s,baz=120,slow=5.8,SNR=66
ZALV S **S** **00 39 30.0 -4.9**
comp=Z,0.3nm,0.4s,baz=139,slow=13,SNR=2.8
ZALV LR LR 00 59 21.9
comp=Z,942nm,19.6s,baz=130,slow=37
ZALV PKPPKP **P'P'df** **01 00 04.7 +1.7**
comp=Z,1.5nm,0.8s,baz=267,slow=3.0,SNR=4.3
ZALV P4KPbc 01 08 01.6
comp=Z,0.2nm,0.4s,baz=127,slow=3.8,SNR=1.7
comp=Z,33nm,0.9s
ROCAM Rodrigues Isla 63.45 248 P **P** **00 31 08.1 +0.8**
BTLS Baital 63.75 322⇑ *i* P **P** **00 31 07.4 -1.5**
baz=322
BTLS Baital 63.75 322 *c i* P **P** **00 31 07.4 -1.5**
KURBB Kurchatov Arra 64.26 329 P **P** **00 31 10.7 -1.4**
comp=Z,58nm,0.9s,baz=127,slow=6.1,SNR=130
KURBB S **S** **00 39 46.5 +1.2**
comp=Z,0.4nm,0.2s,baz=130,slow=8.9,SNR=5.7
KURBB PKPPKP **P'P'df** **01 00 01.0 -1.0**
comp=Z,0.8nm,0.9s,baz=293,slow=3.4,SNR=5.1
KURBB P4KPbc 01 08 04.9
comp=Z,0.1nm,0.3s,baz=140,slow=3.6,SNR=4.8
comp=Z,58nm,0.9s
KURK Kurchatov 64.27 329 P **P** **00 31 10.9 -1.3**
KURK IAmb IAmb 00 31 14.0
comp=Z,105nm,0.8s
KURK Kurchatov 64.27 329 *ceP* **P** **00 31 10.9 -1.3**
KURK pmax pmax
comp=Z,140nm,1.0s
KURK MLR MLR
comp=Z,387nm,19.0s
KURK Kurchatov 64.27 329 P **P** **00 31 11.2 -1.0**
KURK P **P** **00 31 11.2 -1.0**
KURK Kurchatov 64.27 329 P **P** **00 31 10.8 -1.4**
SIMJ Simiganj 64.30 314 P **P** **00 31 11.3 -1.5**
DZA Taraz 64.46 319 *eP* **P** **00 31 12.2 -1.5**
baz=319
DZA Taraz 64.46 319 *eP* **P** **00 31 12.2 -1.5**
KK31 Karatay Array 65.10 319 IAmb IAmb 00 31 20.1
comp=Z,93nm,1.1s
KK31 Karatay Array 65.10 319 *i* P **P** **00 31 15.9 -1.9**
KKAR Karatay Array 65.10 319 P **P** **00 31 17.2 -0.6**
KKAR Karatay Array 65.10 319 IAmb IAmb 00 31 20.1
comp=Z,92nm,1.1s
KKAR Karatay Array 65.10 319 P **P** **00 31 17.2 -0.6**
CHM Chimkent 65.36 318 *eP* **P** **00 31 19.3 -0.3**
baz=318
CHM Chimkent 65.36 318 *eP* **P** **00 31 19.2 -0.3**
SEY Seymchan 66.24 13 *i* P **P** **00 31 25.8 +1.1**
SEY pmax pmax
comp=Z,83nm,1.4s
SEY Seymchan 66.24 13 LR LR 00 59 48.3
comp=Z,195nm,21.7s,baz=221,slow=35
OTUK Ortayu 66.36 324 P **P** **00 31 24.7 -1.1**
BRZS Berezniki 67.04 326 *eP* **P** **00 31 29.0 -1.2**
baz=326
BRZS Berezniki 67.04 326 *eP* **P** **00 31 28.9 -1.2**
JLN Jalan Bani Buh 67.69 294 P **P** **00 31 32.8 -1.9**
WBK Wadi Bani Khal 68.17 294 P **P** **00 31 36.8 -1.0**
WSAR Wadi Sarin 68.59 295 LR LR 01 06 29.9
comp=Z,221nm,18.3s,baz=111,slow=40
WSAR Wadi Sarin 68.59 295 P **P** **00 31 39.9 -0.5**
MHTO MHTO 68.83 293 P **P** **00 31 40.2 -1.7**
SNR=7.1
MHTO P **P** **00 31 40.2 -1.7**
SNR=7.1
MHTO P **P** **00 31 40.2 -1.7**
SNR=7.1
JMDO Jabal Madar 68.92 294 P **P** **00 31 40.9 -1.6**
JMDO P **P** **00 31 40.9 -1.6**
DQM DQM 69.08 291 P **P** **00 31 42.2 -1.2**
SMDO Samad 69.09 295 P **P** **00 31 43.4 -0.2**
BIDO Bidbid 69.09 295 P **P** **00 31 41.9 -1.6**
MSEY Mahe Island 69.70 265 IAMs_20 IAMs_20 01 01 27.2
comp=Z,780nm,21.0s
MSEY Mahe Island 69.70 265 P **P** **00 31 48.1 +0.6**
BVA0 Borovoye Array 69.81 328 *i* P **P** **00 31 46.0 -1.3**
BVAR Borovoye Array 69.81 328 P **P** **00 31 46.4 -0.9**
comp=Z,103nm,1.1s,baz=126,slow=7.5,SNR=98
BVAR S **S** **00 40 50.3 -1.7**
comp=Z,0.3nm,0.4s,baz=159,slow=12,SNR=2.1
BVAR LR LR 01 05 01.6
comp=Z,142nm,19.3s,baz=118,slow=38
comp=Z,103nm,1.1s
BSY Bisya 69.81 294 P **P** **00 31 46.5 -1.4**
BRVK Borovoye 69.88 328 P **P** **00 31 46.7 -1.0**
BRVK IAmb IAmb 00 31 49.9
comp=Z,102nm,1.1s
BRVK Borovoye 69.88 328 *ceP* **P** **00 31 46.5 -1.2**
BRVK pmax pmax
comp=Z,127nm,1.3s
BRVK MLR MLR
comp=Z,545nm,18.0s
BRVK Borovoye 69.88 328 P **P** **00 31 46.9 -0.8**
BRVK P **P** **00 31 46.9 -0.8**
BRVK Borovoye 69.88 328 P **P** **00 31 46.7 -1.0**
ARQ Araqi 70.52 295 P **P** **00 31 51.0 -1.2**
ARQ P **P** **00 31 51.0 -1.2**
SHAO Shalim 70.62 289 P **P** **00 31 51.7 -1.3**
SHAO P **P** **00 31 51.7 -1.3**
SOHO SOHO 70.64 296 P **P** **00 31 50.6 -2.3**
SOHO SOHO 70.64 296 P **P** **00 31 51.4 -1.5**
RER Riviere de l'E 70.72 248 P **P** **00 31 55.6 +2.0**
RER Riviere de l'E 70.72 248 P **P** **00 31 56.1 +2.5**
RER Riviere de l'E 70.72 248 P **P** **00 31 55.6 +2.0**
HATD Hatta, Dubai 71.11 296 P **P** **00 31 55.6 -0.2**
HATD Hatta, Dubai 71.11 296 P **P** **00 31 54.6 -1.2**
ASHO Ashiyiah 71.15 296 P **P** **00 31 56.4 +0.2**
DMTO DMTO 71.23 289 P **P** **00 31 57.1 +0.4**
SHME Shamm 71.30 298 P **P** **00 31 55.5 -1.4**
SHME P **P** **00 31 55.5 -1.4**
ALNE Al Ain 71.33 295 *i* P **P** **00 31 55.7 -1.4**
SNR=17
ALNE Al Ain 71.33 295 P **P** **00 31 56.3 -0.8**
SNR=6.7
NAZ Nazwa, Dubai 71.56 296 P **P** **00 31 59.2 +0.7**
FAQ Al Faqa, Dubai 71.58 296 P **P** **00 31 57.8 -0.9**
FAQ Al Faqa, Dubai 71.58 296 P **P** **00 31 58.3 -0.3**
UMQ Umm Al-Quwin 71.64 297 P **P** **00 31 58.6 -0.4**
UMZA Um Al Zommool 71.67 294 P **P** **00 31 57.6 -1.6**
UMZA P **P** **00 31 57.6 -1.6**
ASUD Al Ashush, Dub 71.80 296 P **P** **00 31 59.3 -0.7**
ASUD Al Ashush, Dub 71.80 296 P **P** **00 31 58.8 -1.2**
TIXI Tiksi 71.82 1 P **P** **00 31 58.5 -0.6**
TIXI IAmb IAmb 00 32 16.7
comp=Z,126nm,1.2s
TIXI Tiksi 71.82 1 IAMs_20 IAMs_20 01 04 12.2
comp=Z,930nm,21.0s
TIXI Tiksi 71.82 1 P **P** **00 31 58.5 -0.6**
TIXI pmax pmax
comp=Z,126nm,1.2s
TIXI MLR MLR
comp=Z,900nm,21.0s
TIXI Tiksi 71.82 1 P **P** **00 31 58.6 -0.6**
TIXI pP **pP** **00 32 14.7 -0.2**
AJN Ajban 72.09 296 *i* P **P** **00 32 00.4 -1.3**
SNR=8.6
AJN Ajban 72.09 296 P **P** **00 32 00.8 -0.9**
AJN P **P** **00 32 00.8 -0.9**
DOK Doka 72.10 290 P **P** **00 32 00.2 -1.7**
SNR=6.2
DOK P **P** **00 32 00.2 -1.7**
SNR=6.2
GEYT Alibeck 72.17 310 P **P** **00 32 01.0 -1.0**
comp=Z,28nm,1.0s,baz=140,slow=4.8,SNR=28
GEYT LR LR 01 07 17.8
comp=Z,473nm,20.5s,baz=104,slow=39
comp=Z,28nm,1.0s
GYA0B ALIBECK ARRAY 72.17 310 IAMs_20 IAMs_20 01 07 06.5
comp=Z,590nm,21.0s
WHFO Wadi Hawf 72.37 289 P **P** **00 32 02.5 -1.0**
WHFO P **P** **00 32 02.5 -1.0**
ABTO Aybut 72.76 288 P **P** **00 32 02.8 -3.1**
ABTO P **P** **00 32 02.8 -3.1**
MZWR Madinat Zayed 72.98 295 P **P** **00 32 06.0 -1.0**
MZWR P **P** **00 32 06.0 -1.0**
MZR Muzera 73.24 294 P **P** **00 32 08.5 -0.1**
BILL Bilibino 73.78 15 P **P** **00 32 11.1 +0.2**
BILL Bilibino 73.78 15 *i* P **P** **00 32 11.0 +0.2**
NRIK Noril'sk 73.91 347 IAmb IAmb 00 32 13.1
comp=Z,112nm,0.8s
NRIK IAMs_20 IAMs_20 01 05 39.9
comp=Z,676nm,22.0s
NRIK Noril'sk 73.91 347⇑ *i* P **P** **00 32 11.8 +0.3**
NRIK pmax pmax
comp=Z,126nm,0.9s
NRIK MLR MLR
comp=Z,602nm,20.0s
NRIK Noril'sk 73.91 347 P **P** **00 32 11.3 -0.2**
comp=Z,80nm,0.8s,baz=132,slow=6.1,SNR=266
NRIK S **S** **00 41 39.2 +0.8**
comp=Z,0.9nm,0.3s,baz=196,slow=7.4,SNR=12
NRIK LR LR 01 08 21.4
comp=Z,339nm,19.5s,baz=147,slow=39
comp=Z,80nm,0.8s
AB31 Akbulak array 74.24 322 *i* P **P** **00 32 12.7 -1.2**
ABKAR Akbulak array 74.24 322 IAmb IAmb 00 32 16.6
comp=Z,73nm,1.0s
AKTO Aktyubinsk 75.80 323 P **P** **00 32 21.8 -1.1**
AKTO Aktyubinsk 75.80 323 LR LR 01 08 00.5
comp=Z,966nm,19.9s,baz=76,slow=38
SMRA Abu-Samra 75.87 295 P **P** **00 32 23.0 -0.8**
RAR Rarotonga 76.02 112 LR LR 01 06 05.0
comp=Z,140nm,21.4s,baz=278,slow=36
SVE Sverdlovsk 76.52 329 *deP* **P** **00 32 26.1 -0.7**
SVE *eS* **S** **00 42 05.0 -3.0**
SVE pmax pmax
comp=Z,175nm,1.3s
ARU Arti 77.45 329 P **P** **00 32 30.7 -1.4**
ARU IAmb IAmb 00 32 34.2
comp=Z,87nm,1.0s
ARU Arti 77.45 329 *c i* P **P** **00 32 30.7 -1.4**
ARU *PP **PcP** **00 32 44.3 +2.1**
ARU 00 35 23.4
ARU S **S** **00 42 18.3 +0.2**
ARU SS **SS** **00 47 17.1 -0.9**
ARU pmax pmax
comp=Z,129nm,1.1s
UNV Unalaska Valle 77.58 34 P **P** **00 32 33.3 +0.5**
baz=252
AKUT Akutan 78.08 34 P **P** **00 32 35.4 -0.1**
AKUT Akutan 78.08 34 P **P** **00 32 37.2 +1.6**
ABPO Ambohimpanom 78.49 251 P **P** **00 32 38.5 -0.2**
ABPO IAmb IAmb 00 32 41.0
comp=Z,273nm,1.9s
ABPO Ambohimpanom 78.49 251 IAMs_20 IAMs_20 01 02 51.4
comp=Z,1µm,21.0s
ABPO Ambohimpanom 78.49 251 P **P** **00 32 38.6 -0.2**
ABPO pmax pmax
comp=Z,273nm,1.9s
GAMB Gambell 78.66 24 P **P** **00 32 40.1 +1.6**
baz=245,SNR=6.6
VOI Vohitsoka 79.09 248 IAmb IAmb 00 32 43.8
comp=Z,77nm,0.9s
VOI Vohitsoka 79.09 248 P **P** **00 32 42.6 +0.6**
VOI Vohitsoka 79.09 248 P **P** **00 32 42.1 +0.1**
SNR=9.3
FOMA Nahampoana Res 79.16 245 P **P** **00 32 42.9 +0.7**
MAW Mawson 79.49 200 P **P** **00 32 44.7 +1.7**
MAW Mawson 79.49 200 P **P** **00 32 44.7 +1.7**
MAW pmax pmax
comp=Z,13nm,1.1s
MAW Mawson 79.49 200 P **P** **00 32 42.8 -0.2**
comp=Z,24nm,1.1s,baz=62,slow=12,SNR=2.6
MAW LR LR 01 04 06.5
comp=Z,389nm,20.8s,baz=54,slow=33
comp=Z,24nm,1.1s
LKRN Lenkeran, Azer 79.52 309 P **P** **00 32 43.8 0.0**
VNDA Vanda 79.71 172 P **P** **00 32 45.4 +1.3**
VNDA Vanda 79.71 172 P **P** **00 32 45.4 +1.3**
VNDA pmax pmax
comp=Z,20nm,1.1s
VNDA Vanda 79.71 172 P **P** **00 32 44.9 +0.7**
comp=Z,9.4nm,0.9s,baz=312,slow=4.6,SNR=16
VNDA LR LR 01 08 19.6
comp=Z,439nm,21.7s,baz=332,slow=36
comp=Z,9.4nm,0.9s
M11K Mekoryuk 79.81 28 P **P** **00 32 47.3 +2.4**
baz=251
RAYN Ar Rayn 80.59 294 P **P** **00 32 48.8 -1.2**
RAYN IAmb IAmb 00 32 53.7
comp=Z,92nm,1.1s
RAYN Ar Rayn 80.59 294 IAMs_20 IAMs_20 01 12 39.3
comp=Z,722nm,20.0s
RAYN Ar Rayn 80.59 294 *i* P **P** **00 32 49.0 -1.0**
SNR=69
RAYN Ar Rayn 80.59 294 P **P** **00 32 48.8 -1.2**
RAYN pmax pmax
comp=Z,92nm,1.1s
RAYN MLR MLR
comp=Z,700nm,20.0s
RAYN Ar Rayn 80.59 294 P **P** **00 32 49.2 -0.8**
TNA Tin City 80.85 23 P **P** **00 32 52.3 +1.9**
baz=249,SNR=15
SEKA Sheki 81.09 312 P **P** **00 32 51.8 -0.5**
MNGR Mingechevir, A 81.11 311 P **P** **00 32 52.4 +0.1**
M13K Dall Lake 81.17 28 P **P** **00 32 54.0 +1.8**
M13K IAmb IAmb 00 32 56.0
comp=Z,118nm,1.2s
M13K Dall Lake 81.17 28 P **P** **00 32 54.4 +2.3**
baz=254
SDPT Sand Point 81.36 34 P **P** **00 32 54.4 +1.1**
SDPT Sand Point 81.36 34 P **P** **00 32 54.5 +1.1**
baz=257
F14K Arctic Creek 81.44 23 P **P** **00 32 55.7 +2.1**
baz=250
ANM Nome 81.52 24 P **P** **00 32 56.2 +2.1**
baz=251,SNR=19
ZKTA Zakatala 81.58 312 P **P** **00 32 54.7 -0.2**
GANJ Ganja 81.67 311 P **P** **00 32 54.7 -0.7**
L14K Kuka Creek 81.74 28 IAmb IAmb 00 32 58.9
comp=Z,130nm,1.1s
L14K Kuka Creek 81.74 28 P **P** **00 32 57.5 +2.4**
baz=254
J14K Nanvaranak Lak 81.74 26 P **P** **00 32 55.6 +0.5**
J14K IAmb IAmb 00 32 59.0
comp=Z,150nm,1.4s
J14K Nanvaranak Lak 81.74 26 P **P** **00 32 57.7 +2.6**
baz=253
CNBA Chernabura Isl 81.75 34 P **P** **00 32 56.0 +0.7**
CNBA IAmb IAmb 00 33 14.1
comp=Z,83nm,1.1s
N14K Kuskokwak Cree 81.84 29 P **P** **00 32 57.7 +2.0**
baz=255
O14K Tigyukauivet M 81.88 30 P **P** **00 32 56.3 +0.4**
O14K IAmb IAmb 00 32 59.1
comp=Z,64nm,1.1s
O14K Tigyukauivet M 81.88 30 P **P** **00 32 57.8 +1.9**
baz=256,SNR=7.2
M14K Bethel 81.92 28 P **P** **00 32 56.8 +0.7**
M14K IAmb IAmb 00 32 59.1
comp=Z,95nm,1.1s
M14K Bethel 81.92 28 P **P** **00 32 58.4 +2.3**
baz=255
HARA HARA 82.00 279 *eP* P 00 32 49.1 -8.8
HARA *eS* **S** **00 43 03.7 -4.5**
S14K Fog Glacier 82.08 33 P **P** **00 32 58.8 +1.5**
baz=258

NAX	Nakhchivan		82.12	309	P		P	00 32 57.6	-0.2
F15K	North Star Dit		82.18	23	P		P	00 32 59.7	+2.3
	baz=252								
G15K	Niukluk		82.20	24	P		P	00 32 59.5	+1.9
	baz=252								
L15K	Ungalak Mounta		82.38	27	P		P	00 33 00.4	+1.9
	baz=255								
GROC	Groznyy		82.39	314	*e*P		P	00 32 58.6	-0.4
GROC					*e*PP		pP	00 33 12.5	-2.3
GROC					*e*S		S	00 43 12.5	+1.8
GROC					pmax		pmax		
	comp=Z,192nm,1.2s								
ATD	Arta Tunnel		82.49	282	IAMs_20		IAMs_20	01 09 40.3	
	comp=Z,445nm,20.0s								
ATD	Arta Tunnel		82.49	282	LR		LR	01 07 54.3	
	comp=Z,17nm,21.2s,baz=80,slow=34								
ATD	Arta Tunnel		82.49	282	P		P	00 33 02.0	+1.8
M15K	Kasigluk River		82.51	29	P		P	00 33 01.0	+1.7
	baz=256								
K15K	Wolf Creek Mou		82.52	27	P		P	00 33 01.7	+2.5
	baz=255								
O15K	Ungalikthiuk R		82.58	30	P		P	00 33 01.5	+1.9
	baz=257								
BELG	Belogornoye	⇓	82.58	323	*i*P		P	00 32 59.4	-0.4
BELG					pmax		pmax		
	comp=Z,53nm,1.0s								
BELG					MLR		MLR		
	comp=Z,78nm,20.0s								
BELG	Belogornoye		82.58	323	LR		LR	01 11 00.5	
	comp=Z,418nm,21.4s,baz=121,slow=37								
N15K	Kwethluk River		82.67	29	P		P	00 33 01.1	+0.9
N15K					IAmb		IAmb	00 33 04.5	
	comp=Z,116nm,1.1s								
N15K	Kwethluk River		82.67	29	P		P	00 33 02.0	+1.9
	baz=257								
CHGN	Chignik		82.70	33	P		P	00 33 02.8	+2.5
	baz=258								
C16K	Lisburne Hills		82.75	21	P		P	00 33 02.5	+2.2
	baz=251								
KIRV	Kirov	⇓	82.79	329	*i*P		P	00 33 00.5	-0.2
GNI	Garni		82.81	310	P		P	00 33 02.3	+0.8
GNI					IAmb		IAmb	00 33 27.0	
	comp=Z,94nm,1.1s								
GNI	Garni		82.81	310	P		P	00 33 01.6	+0.1
GNI	Garni		82.81	310	*i* P		P	00 33 01.9	+0.4
GNI					pmax		pmax		
	comp=Z,115nm,1.8s								
GNI	Garni		82.81	310	P		P	00 33 02.3	+0.8
H16K	Elim		82.84	24	P		P	00 33 03.0	+2.1
	baz=254,SNR=163								
G16K	Koyuk River		83.00	24	P		P	00 33 03.9	+2.2
	baz=254								
J16K	Anvik River		83.18	26	P		P	00 33 05.2	+2.5
	baz=256								
I17K	Unalakleet		83.29	25	P		P	00 33 06.1	+2.9
	baz=256,SNR=85								
L16K	Owhat River		83.32	28	P		P	00 33 04.2	+0.7
L16K	Owhat River		83.32	28	P		P	00 33 05.6	+2.2
	baz=257								
N16K	Nishlik Lake		83.38	29	P		P	00 33 06.2	+2.4
	baz=258								
M16K	Timber Creek		83.41	28	P		P	00 33 05.3	+1.4
M16K	Timber Creek		83.41	28	P		P	00 33 06.1	+2.2
	baz=257								
P16K	Nushagak River		83.47	30	P		P	00 33 06.2	+1.9
	baz=258,SNR=13								
O16K	Kokwok River B		83.53	30	P		P	00 33 06.5	+1.9
	baz=258								
RDOG	Red Dog Mine		83.55	21	P		P	00 33 06.8	+2.3
	baz=253,SNR=41								
C17K	DeLong Mountai		83.57	21	P		P	00 33 06.8	+2.1
	baz=253								
E17K	Hotham Inlet		83.67	22	P		P	00 33 07.5	+2.4
	baz=254,SNR=159								
G17K	Kiwalik Mounta		83.71	24	P		P	00 33 07.7	+2.4
	baz=255								
F17K	Baldwin Pennin		83.72	23	P		P	00 33 07.6	+2.2
	baz=255								
ZEI	Tsey		83.73	313	*e*P		P	00 33 06.2	0.0
ZEI					pmax		pmax		
	comp=Z,175nm,1.5s								
H17K	Granite Mounta		83.88	24	P		P	00 33 08.6	+2.3
	baz=256,SNR=65								
L17K	Donlin		83.95	27	P		P	00 33 09.3	+2.6
	baz=258								
ONI	Oni		84.03	313	P		P	00 33 08.2	+0.6
ONI					IAmb		IAmb	00 33 30.4	
	comp=Z,68nm,1.3s								
ONI					IAMs_20		IAMs_20	01 17 02.2	
	comp=Z,503nm,20.0s								
ONI	Oni		84.03	313	P		P	00 33 08.2	+0.6
ONI					pmax		pmax		
	comp=Z,68nm,1.3s								
O17K	Koliganek Bris		84.06	30	P		P	00 33 09.2	+2.0
	baz=259,SNR=24								
K17K	Iditarod		84.07	27	P		P	00 33 09.3	+2.0
K17K	Iditarod		84.07	27	P		P	00 33 09.5	+2.2
	baz=258,SNR=43								
KARS	Kars		84.12	311	IAMs_20		IAMs_20	01 18 05.4	
	comp=Z,1μm,22.0s								
N17K	Nushagak Hills		84.16	29	P		P	00 33 09.2	+1.4
N17K					IAmb		IAmb	00 33 11.6	
	comp=Z,98nm,1.1s								
N17K	Nushagak Hills		84.16	29	P		P	00 33 10.1	+2.3
	baz=259								
M17K	Holitna River		84.21	28	P		P	00 33 09.1	+1.1
M17K					IAmb		IAmb	00 33 11.9	
	comp=Z,147nm,1.4s								
M17K	Holitna River		84.21	28	P		P	00 33 10.5	+2.5
	baz=259								
E18K	Tukpahlearik C		84.22	22	P		P	00 33 10.1	+2.2
	baz=255								
P17K	Kvichak River		84.29	30	P		P	00 33 09.9	+1.6
	baz=260								
B18K	Kokolik River		84.31	20	P		P	00 33 11.0	+2.7
	baz=254								
C18K	Utukok River		84.32	21	P		P	00 33 10.4	+1.9
	baz=255,SNR=101								
F18K	Selawik		84.38	23	P		P	00 33 10.5	+1.8
	baz=256								
Q17K	Contact Creek		84.41	31	P		P	00 33 09.8	+0.6
	baz=260								
KBZ	Khabaz		84.55	314	*i* P		P	00 33 10.2	+0.1
KBZ	Khabaz		84.55	314	P		P	00 33 09.7	-0.4
	comp=Z,46nm,1.0s,baz=106,slow=4.5,SNR=48								
KBZ					LR		LR	01 14 40.3	
	comp=Z,78nm,21.6s,baz=70,slow=38								
	comp=Z,46nm,1.0s								
H18K	Honhosa River		84.57	24	IAmb		IAmb	00 33 30.7	
	comp=Z,102nm,1.2s								
H18K	Honhosa River		84.57	24	P		P	00 33 11.4	+1.6
	baz=258								
GOF	Gofitskoye		84.58	315	*c i*P		P	00 33 10.1	-0.1
G18K	Tagagawik		84.61	24	IAmb		IAmb	00 33 30.8	
	comp=Z,88nm,1.4s								
G18K	Tagagawik		84.61	24	P		P	00 33 11.6	+1.7
	baz=257								
L18K	Granite Mounta		84.71	27	IAmb		IAmb	00 33 14.2	
	comp=Z,92nm,1.4s								
L18K	Granite Mounta		84.71	27	P		P	00 33 12.8	+2.3
	baz=259								
KIV	Kislovodsk		84.72	314	⇑P		P	00 33 11.0	-0.1
KIV	Kislovodsk		84.72	314	P		P	00 33 11.2	+0.1
KIV					IAmb		IAmb	00 33 13.7	
	comp=Z,91nm,1.1s								
KIV	Kislovodsk		84.72	314	*i* P		P	00 33 11.3	+0.2
	SNR=16								
KIV	Kislovodsk		84.72	314	P		P	00 33 11.0	-0.1
KIV	Kislovodsk		84.72	314	P		P	00 33 11.9	+0.7
KIV					P		P	00 33 11.9	+0.7
A19K	Wainwright		84.78	19	P		P	00 33 13.5	+2.9
	baz=255								
N18K	Kilae Creek		84.82	29	P		P	00 33 11.4	+0.3
N18K					IAmb		IAmb	00 33 14.7	
	comp=Z,156nm,1.6s								
N18K	Kilae Creek		84.82	29	P		P	00 33 13.3	+2.2
	baz=260								
J18K	Innoko River		84.93	26	IAmb		IAmb	00 33 15.6	
	comp=Z,175nm,1.8s								
J18K	Innoko River		84.93	26	P		P	00 33 13.0	+1.4
	baz=259								
P18K	Big Mountain,		84.93	30	P		P	00 33 12.1	+0.3
P18K	Big Mountain,		84.93	30	P		P	00 33 12.6	+0.9
	baz=261,SNR=5.5								
M18K	Stony River		84.98	28	P		P	00 33 13.6	+1.7
	baz=260								
C19K	Lookout Ridge		85.00	20	P		P	00 33 14.4	+2.5
	baz=256								
O18K	Koktuh Hills		85.02	30	P		P	00 33 14.1	+2.0
O18K	Koktuh Hills		85.02	30	P		P	00 33 13.5	+1.4
	baz=261,SNR=6.7								
SVW2	Sparrevohn		85.03	29	IAmb		IAmb	00 33 15.6	
	comp=Z,109nm,1.6s								
R18K	Karluk		85.06	32	P		P	00 33 13.5	+1.1
	baz=262								
SII	Sitkinak Islan		85.06	33	P		P	00 33 14.4	+2.0
	baz=262								
GCSA	Galena City Sc		85.10	25	P		P	00 33 13.8	+1.5
	baz=259								
TTA	Tatalina		85.15	27	P		P	00 33 14.1	+1.3
	baz=260								
F19K	Shaleruckik Mo		85.16	23	IAmb		IAmb	00 33 15.6	
	comp=Z,117nm,1.9s								
F19K	Shaleruckik Mo		85.16	23	P		P	00 33 13.9	+1.2
	baz=258								
G19K	Purcell Mounta		85.29	24	IAmb		IAmb	00 33 34.5	
	comp=Z,119nm,1.2s								
G19K	Purcell Mounta		85.29	24	P		P	00 33 15.0	+1.7
	baz=259								
BCA	Borcka		85.29	311	⇓P		P	00 33 14.9	+1.0
D19K	Kuna River		85.38	21	P		P	00 33 15.5	+1.7
	baz=258								
H19K	Roundabout Mou		85.43	24	IAmb		IAmb	00 33 17.1	
	comp=Z,60nm,1.0s								
H19K	Roundabout Mou		85.43	24	P		P	00 33 15.7	+1.7
	baz=259								
PPT	Papeete		85.43	107	LR		LR	01 10 55.0	
	comp=Z,138nm,19.3s,baz=264,slow=35								
PPT2	Papeete2		85.43	108	*e*PKIKP		P	00 33 12.4	-2.7
	comp=Z,111nm,28.2s								
PPT2	Papeete2		85.43	108	*e*S		SKSac	00 43 34.3	-1.5
	comp=Z,484nm,25.8s								
PPT2					*e*SS		SS	00 49 17.8	-0.9
	comp=Z,551nm,32.8s								
PPT2	Papeete2		85.43	108	*e*LR		LR	01 00 08.7	
	comp=Z,1μm,26.5s								
PPT2					*e*LR		LR	01 00 16.1	
	comp=Z,731nm,33.2s								
E19K	Redstone River		85.49	22	IAmb		IAmb	00 33 18.7	
	comp=Z,88nm,0.9s								
E19K	Redstone River		85.49	22	P		P	00 33 16.1	+1.8
	baz=258								
J19K	Poornan		85.50	26	P		P	00 33 16.0	+1.6
	baz=260								
O19K	Port Alsworth		85.51	30	P		P	00 33 14.4	-0.1
O19K					IAmb		IAmb	00 33 18.0	
	comp=Z,159nm,1.9s								
O19K	Port Alsworth		85.51	30	P		P	00 33 15.8	+1.3
	baz=262								
N19K	Bonanza Creek		85.52	29	P		P	00 33 16.3	+1.6
N19K	Bonanza Creek		85.52	29	P		P	00 33 16.3	+1.6
	baz=261								
L19K	White Mountain		85.55	28	IAmb		IAmb	00 33 19.2	
	comp=Z,85nm,1.4s								
L19K	White Mountain		85.55	28	P		P	00 33 16.5	+1.7
	baz=261								
OHAK	Old Harbor		85.64	33	P		P	00 33 16.0	+0.8
OHAK					IAmb		IAmb	00 33 18.0	
	comp=Z,49nm,1.0s								
OHAK	Old Harbor		85.64	33	P		P	00 33 16.6	+1.4
	baz=263								
Q19K	Cape Douglas,		85.67	31	P		P	00 33 16.1	+0.7
	baz=262								
TBI	Tubuai		85.68	113	*e*P		P	00 33 12.2	-4.0
	comp=Z,354nm,25.0s								
TBI	Tubuai		85.68	113	*e*LQ		LQ	00 56 52.0	
	comp=Z,2μm,34.5s								
TBI					*e*LR		LR	01 00 28.8	
	comp=Z,3μm,29.0s								
M19K	Big River Lodg		85.72	28	P		P	00 33 17.0	+1.4
M19K	Big River Lodg		85.72	28	P		P	00 33 17.2	+1.6
	baz=261								
D20K	Etivluk River		85.97	21	P		P	00 33 18.2	+1.6
	baz=259								
P19K	Oil Pt		85.98	30	P		P	00 33 16.3	-0.7
P19K					IAmb		IAmb	00 34 19.3	
	comp=Z,92nm,1.1s								
F20K	Avaraart Lake		85.99	23	P		P	00 33 17.8	+1.0
F20K	Avaraart Lake		85.99	23	P		P	00 33 18.6	+1.9
	baz=260								
B20K	Meade River		86.03	20	IAmb		IAmb	00 33 38.2	
	comp=Z,82nm,1.1s								
B20K	Meade River		86.03	20	P		P	00 33 19.2	+2.2
	baz=258								
E20K	Nigu River		86.03	21	P		P	00 33 18.7	+1.6
	baz=259								
L20K	Farewell, AK		86.05	27	P		P	00 33 18.8	+1.6
	baz=262								
VRH	Novokhopyorsk		86.05	321	*e*P		P	00 33 15.9	-1.5
VRH					pmax		pmax		
	comp=Z,380nm,1.1s								
H20K	Anotleneega Mo		86.07	24	P		P	00 33 18.8	+1.6
	baz=261								
KDAK	Kodiak Island		86.08	32	P		P	00 33 18.6	+1.2
	baz=263								
K20K	Telida		86.09	26	P		P	00 33 18.8	+1.4
	baz=262								
I20K	Naaghedeneel		86.12	25	P		P	00 33 18.8	+1.4
I20K					IAmb		IAmb	00 33 20.4	
	comp=Z,36nm,1.0s								
I20K	Naaghedeneel		86.12	25	P		P	00 33 18.9	+1.4
	baz=261								
J20K	Nowinta River		86.17	26	P		P	00 33 19.4	+1.7
	baz=262								
LABN	Labinsk		86.19	315	*e*P		P	00 33 18.0	-0.3
LABN					pmax		pmax		
	comp=Z,310nm,1.3s								
M20K	Styx River		86.31	28	IAmb		IAmb	00 33 23.1	
	comp=Z,52nm,1.1s								
M20K	Styx River		86.31	28	P		P	00 33 19.9	+1.3
	baz=262								
ERBR	Yeremizino-Bor		86.43	316	*e*P		P	00 33 19.3	-0.1
ERBR					*e*PP		pP	00 33 34.2	-1.4
ERBR					*e*			00 43 42.2	
ERBR					pmax		pmax		
	comp=Z,361nm,1.2s								
ERBR					pmax		pmax		
	comp=E,36nm,1.4s								
ERBR					pmax		pmax		
	comp=N,29nm,1.2s								
A21K	Barrow		86.47	18	P		P	00 33 20.6	+1.5
	baz=259,SNR=10								
FURI	Furi		86.54	279	P		P	00 33 22.6	+1.6
FURI	Furi		86.54	279	IAMs_20		IAMs_20	01 08 12.5	
	comp=Z,558nm,21.0s								
KTUT	Trabzon		86.66	311	⇑P		P	00 33 20.8	+0.2
N20K	Mount Spurr		86.67	29	P		P	00 33 20.7	+0.3
	baz=263,SNR=6.3								
C21K	Knifeblade Rid		86.70	21	P		P	00 33 21.8	+1.6
	baz=261								
G21K	Allakaket		86.78	23	IAmb		IAmb	00 33 23.3	
	comp=Z,39nm,1.0s								
G21K	Allakaket		86.78	23	P		P	00 33 21.9	+1.2
	baz=262								
SOC	Sochi		86.84	313	*e*P		P	00 33 19.6	-1.9
SOC					*e*PP		pP	00 33 32.5	-5.2
SOC					*e*SP		pwP	00 33 39.9	-1.1
SOC					*e*			00 36 37.6	
SOC					*e*S		SKSac	00 43 41.3	-2.1
SOC					*e*SS		SS	00 49 31.5	-6.6
SOC					*e*SSS		SSS	00 53 08.5	
SOC					pmax		pmax		
	comp=Z,67nm,0.7s								
SOC					MLR		MLR		
	comp=Z,213nm,18.0s								
PPLA	Purkeypile		86.87	27	P		P	00 33 21.9	+0.5
	baz=263								
E21K	Killik River		86.88	21	P		P	00 33 22.6	+1.4
	baz=261								
F21K	Alatna River		86.88	23	P		P	00 33 22.3	+1.1
	baz=262								
CHUM	Lake Minchumin		86.93	26	P		P	00 33 22.9	+1.5
	baz=263,SNR=10								
H21K	Melozitna Rive		86.94	24	P		P	00 33 22.7	+1.1
	baz=263								
CAST	Castle Rocks		86.98	27	P		P	00 33 22.4	+0.6
	baz=263,SNR=7.6								
SKT	Skwentna		87.08	28	P		P	00 33 22.1	-0.1
	baz=264,SNR=9.4								
KIBK	Kibwezi		87.08	268	IAMs_20		IAMs_20	01 09 58.1	
	comp=Z,516nm,22.0s								
KIBK	Kibwezi		87.08	268	P		P	00 33 24.9	+1.5
	SNR=27								
CAPN	Captain Cook N		87.13	29	P		P	00 33 23.9	+1.4
	baz=264								
BRLK	Bradley Lake		87.17	30	IAmb		IAmb	00 33 42.3	
	comp=Z,102nm,1.6s								
I21K	Tanana		87.23	25	P		P	00 33 23.7	+0.8
I21K	Tanana		87.23	25	P		P	00 33 24.2	+1.3
	baz=263,SNR=14								
BRSE	Bradley Lake S		87.24	30	P		P	00 33 23.8	+0.8
	baz=265								
B22K	Teshekpuk Lake		87.35	20	IAmb		IAmb	00 33 44.6	
	comp=Z,84nm,1.1s								
B22K	Teshekpuk Lake		87.35	20	P		P	00 33 24.6	+1.3
	baz=262								
SUA	Susitna One		87.40	29	P		P	00 33 23.8	-0.1
SUA					IAmb		IAmb	00 33 25.2	
	comp=Z,42nm,1.0s								
SUA	Susitna One		87.40	29	P		P	00 33 24.0	+0.1
	baz=265,SNR=13								
D22K	Ayikyak River		87.41	21	IAmb		IAmb	00 33 26.9	
	comp=Z,61nm,1.6s								
D22K	Ayikyak River		87.41	21	P		P	00 33 25.2	+1.5
	baz=263								
KTH	Kantishna Hill		87.51	26	IAmb		IAmb	00 33 26.7	
	comp=Z,87nm,1.8s								
BPAW	Bear Paw Mtn.		87.54	26	P		P	00 33 25.0	+0.6
	baz=264								
H22K	Ishtalitna Cre		87.56	24	P		P	00 33 25.8	+1.3
	baz=264								
VORD	Divnogorie		87.56	321	*e*P		P	00 33 23.2	-1.6
VORD					pmax		pmax		
	comp=Z,300nm,1.4s								
G22K	Bettles		87.61	23	P		P	00 33 25.9	+1.2
	baz=264								
VORR	Voronezh		87.66	322	*e*P		P	00 33 24.8	-0.4
VORR					pmax		pmax		
	comp=Z,400nm,1.1s								
VSR	Storozhevoye		87.66	321	*e*P		P	00 33 23.2	-2.0
VSR					pmax		pmax		
	comp=Z,230nm,1.4s								
CUT	Chulitna		87.71	28	P		P	00 33 25.3	+0.1
CUT					IAmb		IAmb	00 35 43.0	
	comp=Z,37nm,0.6s								
CUT	Chulitna		87.71	28	P		P	00 33 25.0	-0.2
	baz=265								
MLY	Manley		87.73	25	P		P	00 33 26.4	+1.0
	baz=264,SNR=30								
TRF	Thorofare Moun		87.79	27	IAmb		IAmb	00 33 27.3	
	comp=Z,57nm,1.6s								
TRF	Thorofare Moun		87.79	27	P		P	00 33 25.8	0.0
	baz=265,SNR=5.7								
O22K	Cooper Landing		87.81	30	IAmb		IAmb	00 34 14.2	
	comp=Z,49nm,0.8s								
O22K	Cooper Landing		87.81	30	P		P	00 33 26.2	+0.5
	baz=266								
RC01	Rabbit Creek A		87.85	29	P		P	00 33 26.2	+0.3
	baz=266,SNR=5.3								
KMBO	Kilima Mbogo		87.88	269	P		P	00 33 29.2	+1.8
KMBO	Kilima Mbogo		87.88	269	IAMs_20		IAMs_20	01 12 13.2	
	comp=Z,782nm,20.0s								
KMBO	Kilima Mbogo		87.88	269	*i* P		P	00 33 28.3	+0.8
	SNR=104								
KMBO	Kilima Mbogo		87.88	269	*i* P		P	00 33 29.2	+1.8
KMBO					pmax		pmax		
	comp=Z,82nm,1.0s								
KMBO	Kilima Mbogo		87.88	269	P		P	00 33 27.9	+0.4
	comp=Z,82nm,1.0s,baz=65,slow=6.3,SNR=128								
KMBO					LR		LR	01 11 45.7	
	comp=Z,728nm,20.0s,baz=90,slow=35								
	comp=Z,82nm,1.0s								
KMBO	Kilima Mbogo		87.88	269	P		P	00 33 29.2	+1.8
KMBO					P		P	00 33 29.2	+1.8
LPSR	Galich'ya Gora		87.88	322	*e*P		P	00 33 24.4	-1.9
LPSR					pmax		pmax		
	comp=Z,250nm,1.0s								
SEW	Seward		87.92	30	P		P	00 33 26.8	+0.5
	baz=266								
KLMR	Klimovskoe		88.07	331	*e*P		P	00 33 23.9	-3.1
KLMR					*e*			00 36 51.0	
KLMR					pmax		pmax		
	comp=Z,203nm,1.4s								
COLD	Coldfoot		88.15	23	P		P	00 33 28.6	+1.4
	baz=265								
G23K	Bananza Creek		88.18	23	IAmb		IAmb	00 33 30.4	
	comp=Z,77nm,1.1s								
G23K	Bananza Creek		88.18	23	P		P	00 33 29.0	+1.5
	baz=265								
PMR	Palmer		88.18	28	IAmb		IAmb	00 33 28.9	
	comp=Z,43nm,1.4s								
PMR	Palmer		88.18	28	P		P	00 33 27.6	+0.1
	baz=266								
I23K	Minto, Yukon-K		88.33	25	IAmb		IAmb	00 33 30.4	
	comp=Z,81nm,1.1s								
I23K	Minto, Yukon-K		88.33	25	P		P	00 33 28.9	+0.9
	baz=266,SNR=41								
NEA2	Nenana		88.41	25	P		P	00 33 29.4	+0.9
	baz=266,SNR=6.8								
MCK	McKinley		88.41	26	P		P	00 33 28.7	+0.1
	baz=266,SNR=18								
RND	Reindeer		88.43	27	IAmb		IAmb	00 33 29.8	
	comp=Z,44nm,1.0s								
E23K	Chandalar		88.45	22	P		P	00 33 30.4	+1.6
	baz=266								
KNK	Knik Glacier		88.49	29	IAmb		IAmb	00 33 31.0	
	comp=Z,62nm,1.1s								
KNK	Knik Glacier		88.49	29	P		P	00 33 29.7	+0.7
	baz=267,SNR=11								
WAT1	Susitna Watana		88.53	27	P		P	00 33 29.4	+0.2
	baz=267								
ANN	Anapa		88.54	315	*e*P		P	00 33 28.7	-0.8
ANN					*e*PP		pP	00 33 43.2	-2.6
ANN					*e*			00 43 53.2	
ANN					pmax		pmax		
	comp=Z,357nm,1.2s								
ANN					pmax		pmax		
	comp=N,129nm,1.1s								
ANN					pmax		pmax		
	comp=E,74nm,1.4s								
SML	Sawmill		88.57	28	IAmb		IAmb	00 33 31.2	
	comp=Z,61nm,1.0s								
SML	Sawmill		88.57	28	P		P	00 33 30.1	+0.6
	baz=267,SNR=13								
ASF	Jabal al Asfar		88.64	302	LR		LR	01 18 41.7	
	comp=Z,268nm,20.4s,baz=153,slow=39								
MOS	Moscow		88.80	326	*e*P		P	00 33 27.4	-3.1
MOS					*e*			00 33 37.6	
MOS					*e*			00 43 53.4	
MOS					*e*S		S	00 44 08.4	-4.6
MOS					pmax		pmax		
	comp=Z,400nm,1.6s								
MOS					pmax		pmax		
	comp=Z,237nm,1.3s								
D24K	Happy Valley		88.82	21	IAmb		IAmb	00 33 33.2	
	comp=Z,65nm,1.2s								
D24K	Happy Valley		88.82	21	P		P	00 33 31.9	+1.6
	baz=266								
WRH	Wood River Hil		88.83	26	P		P	00 33 30.6	+0.1
M23K	Glacier View		88.86	28	P		P	00 33 31.4	+0.7
	baz=267,SNR=6.9								
WAT6	Susitna Watana		88.89	28	P	

G24K Hadweenzic Riv 89.19 23 IAmb IAmb 00 33 34.9
comp=Z,39nm,1.0s
G24K Hadweenzic Riv 89.19 23 P **P** **00 33 33.5 +1.3**
baz=268
HDA Harding Lake 89.32 26 P **P** **00 33 33.2 +0.4**
baz=268,SNR=14
ILAR Eielson Array 89.36 25 P **P** **00 33 31.8 -1.2**
comp=Z,10.0nm,1.1s,baz=257,slow=3.7,SNR=35
ILAR PKKP **PKKPdf** **00 51 06.8 +0.5**
comp=Z,0.9nm,0.8s,baz=86,slow=1.2,SNR=7.4
ILAR PKPPKP **P'P'df** **00 59 16.4 -0.8**
comp=Z,0.3nm,0.7s,baz=186,slow=3.6,SNR=4.3
comp=Z,10.0nm,1.1s
OBN Obninsk 89.38 325 ⇓P **P** **00 33 32.8 -0.4**
OBN Obninsk 89.38 325 P **P** **00 33 32.8 -0.4**
OBN Obninsk 89.38 325 *c iP* **P** **00 33 32.4 -0.8**
OBN *i* *PP **pP** **00 33 45.4 -4.0**
OBN *i* *SP **pwP** **00 33 53.1 +0.1**
OBN *e* 00 43 58.4
OBN *e* 00 44 14.6
OBN *e*SSS SSS 00 53 50.1
OBN pmax pmax
comp=Z,264nm,1.1s
OBN Obninsk 89.38 325 LR LR 01 15 03.2
comp=Z,503nm,21.6s,baz=98,slow=36
Q23K Middleton Isla 89.45 31 P **P** **00 33 33.7 +0.2**
baz=269
BNN Bunyan 89.60 309 IAMs_20 IAMs_20 01 16 59.8
comp=Z,900nm,22.0s
M24K Tolsona, Glenn 89.60 28 IAmb IAmb 00 33 37.3
comp=Z,75nm,1.1s
M24K Tolsona, Glenn 89.60 28 P **P** **00 33 35.5 +1.2**
baz=269,SNR=11
QSPA South Pole Qui 89.68 180 P **P** **00 33 36.0 +1.3**
QSPA IAmb IAmb 00 33 37.4
comp=Z,60nm,1.1s
QSPA South Pole Qui 89.68 180 P **P** **00 33 34.4 -0.2**
comp=Z,34nm,0.9s,baz=326,slow=2.2,SNR=57
QSPA S **SKSac** **00 43 59.3 -0.5**
comp=Z,3.1nm,1.0s,baz=101,slow=2.8,SNR=12
comp=Z,34nm,0.9s
D25K Kavik River 89.69 21 P **P** **00 33 35.1 +0.6**
baz=268
BALJ Balqa 89.70 302 IAmb IAmb 00 33 37.3
comp=Z,126nm,1.0s
BALJ IAMs_20 IAMs_20 01 20 37.1
comp=Z,473nm,21.0s
KLU Klutina 89.71 29 P **P** **00 33 35.7 +0.9**
baz=269
G25K Bearman Lake 89.74 23 P **P** **00 33 36.2 +1.5**
baz=269
GHAJ Ghor Haditha 89.76 301 IAMs_20 IAMs_20 01 20 44.7
comp=Z,502nm,20.0s
EYAK Cordova Ski Ar 89.78 30 P **P** **00 33 36.3 +1.3**
baz=269
LODK Lodwar 89.79 273 IAmb IAmb 00 33 39.2
comp=Z,88nm,1.3s
LODK IAMs_20 IAMs_20 01 13 09.8
comp=Z,430nm,21.0s
LODK Lodwar 89.79 273 P **P** **00 33 37.8 +1.6**
SNR=32
K24K Donnelly Dome 89.82 26 P **P** **00 33 35.7 +0.5**
baz=269,SNR=10
MMAI Mount Meron Ar 89.91 303 P **P** **00 33 36.0 -0.3**
comp=Z,87nm,1.1s,baz=87,slow=5.9,SNR=65
MMAI LR LR 01 21 40.2
comp=Z,259nm,19.0s,baz=64,slow=41
comp=Z,87nm,1.1s
F25K Christian Rive 89.93 23 P **P** **00 33 37.0 +1.3**
baz=269
PAX Paxson 89.94 27 P **P** **00 33 36.9 +1.0**
baz=269,SNR=18
PRP Porcupine Dome 89.95 25 P **P** **00 33 36.5 +0.6**
baz=269
E25K Arctic Village 89.97 22 IAmb IAmb 00 33 38.7
comp=Z,58nm,1.1s
E25K Arctic Village 89.97 22 P **P** **00 33 37.5 +1.7**
baz=269
J25K Salcha River, 90.01 26 P **P** **00 33 35.7 -0.5**
baz=269
FYU Fort Yukon 90.08 24 IAmb IAmb 00 33 39.3
comp=Z,105nm,1.4s
HARP HAARP 90.08 28 P **P** **00 33 37.0 +0.6**
baz=270,SNR=6.5
RIDG Independent Ri 90.23 26 IAmb IAmb 00 33 38.8
comp=Z,49nm,1.0s
RIDG Independent Ri 90.23 26 P **P** **00 33 37.7 +0.5**
baz=270,SNR=9.8
EIL Elat 90.28 300 LR LR 01 22 22.5
comp=Z,340nm,18.1s,baz=82,slow=41
BMRM Bremner River 90.34 29 P **P** **00 33 38.9 +1.2**
baz=270
N25K Chitina, Valde 90.34 29 P **P** **00 33 38.9 +1.1**
baz=270,SNR=6.2
LVZ Lovozero 90.41 338 *i* P **P** **00 33 38.5 +0.6**
F26K Sheenjek River 90.50 22 P **P** **00 33 39.9 +1.5**
baz=270
SCRK Sand Creek 90.61 26 P **P** **00 33 38.9 -0.1**
SCRK IAmb IAmb 00 33 58.3
comp=Z,50nm,1.8s
SCRK Sand Creek 90.61 26 P **P** **00 33 39.8 +0.8**
baz=271,SNR=7.3
GLB Gilahina Butte 90.72 29 P **P** **00 33 40.1 +0.6**
GLB IAmb IAmb 00 33 41.8
comp=Z,32nm,1.1s
MENT Mentasta 90.75 27 P **P** **00 33 40.2 +0.7**
MENT IAmb IAmb 00 33 41.8
comp=Z,31nm,1.2s
J26L Joseph Creek 90.79 26 P **P** **00 33 39.5 -0.3**
J26L Joseph Creek 90.79 26 P **P** **00 33 40.4 +0.6**
baz=271
BERG Berg Lake 90.79 30 P **P** **00 33 40.5 +0.7**
BERG IAmb IAmb 00 33 42.4
comp=Z,66nm,1.2s
SIM Simferopol' 90.90 315 *eP* **P** **00 33 39.3 -1.3**
SIM pmax pmax
comp=Z,253nm,1.3s
L26K Log Cabin Wild 90.91 27 P **P** **00 33 41.2 +0.8**
baz=271,SNR=10
I26K Coal Creek Min 90.94 25 P **P** **00 33 41.1 +0.8**
baz=271
M26K Nabesna, AK 91.09 28 IAmb IAmb 00 33 43.6
comp=Z,62nm,1.7s
M26K Nabesna, AK 91.09 28 P **P** **00 33 42.3 +1.1**
baz=272
MCARA McCarthy VSAT 91.10 29 IAmb IAmb 00 33 60.0
comp=Z,39nm,1.1s
MCARA McCarthy VSAT 91.10 29 P **P** **00 33 42.5 +1.3**
baz=272
BR131 Keskin Array S 91.31 310 IAmb IAmb 00 33 43.2
comp=Z,23nm,0.9s
BR131 Keskin Array S 91.31 310 *i* P **P** **00 33 42.3 -0.5**
BR131 Keskin Array S 91.31 310 P **P** **00 33 42.1 -0.7**
SNR=15
BR131 P **P** **00 33 42.1 -0.7**
SNR=15
BRTR Keskin Array B 91.31 310 P **P** **00 33 41.9 -1.0**
comp=Z,16nm,1.0s,baz=127,slow=4.6,SNR=67
BRTR LR LR 01 22 00.1
comp=Z,259nm,20.1s,baz=94,slow=40
comp=Z,16nm,1.0s
K27K Chicken 91.45 26 P **P** **00 33 44.2 +1.5**
K27K Chicken 91.45 26 P **P** **00 33 44.6 +1.9**
baz=272
ISLE Juniper Island 91.46 30 P **P** **00 33 43.3 +0.2**
ISLE IAmb IAmb 00 33 49.1
comp=Z,63nm,1.5s
I27K Kandik River 91.58 25 P **P** **00 33 44.9 +1.6**
baz=273
H27K Steamboat Moun 91.58 24 P **P** **00 33 45.1 +1.7**
baz=273
L27K Beaver Creek, 91.60 27 IAmb IAmb 00 33 46.3
comp=Z,31nm,1.0s
L27K Beaver Creek, 91.60 27 P **P** **00 33 45.2 +1.6**
baz=273
M27K Edge Creek, AK 91.61 28 P **P** **00 33 44.7 +0.9**
baz=272,SNR=5.5
D27M Malcolm River 91.62 21 P **P** **00 33 44.8 +1.2**
D27M IAmb IAmb 00 33 46.2
comp=Z,36nm,1.1s
D27M Malcolm River 91.62 21 P **P** **00 33 44.9 +1.4**
baz=274
MESA MESA 91.67 30 P **P** **00 33 45.5 +1.4**
baz=272
BARN Barnard Glacie 91.78 29 P **P** **00 33 45.3 +0.7**
BARN IAmb IAmb 00 33 47.5
comp=Z,54nm,1.0s
EGAK Eagle 91.81 25 P **P** **00 33 45.2 +0.8**
baz=273,SNR=7.3
CTG Chitna Glacier 91.94 29 P **P** **00 33 46.9 +1.7**
baz=273,SNR=9.5
CTGM Chitina Glacie 91.94 29 IAmb IAmb 00 33 48.3
comp=Z,60nm,1.0s
ANTO Ankara 91.96 310 P **P** **00 33 45.3 -0.4**
ANTO IAmb IAmb 00 33 46.4
comp=Z,59nm,1.5s
ANTO Ankara 91.96 310 P **P** **00 33 45.3 -0.4**
ANTO pmax pmax
comp=Z,59nm,1.5s
ANTO Ankara 91.96 310 P **P** **00 33 45.3 -0.4**
TABL Table Mountain 92.06 30 P **P** **00 33 46.6 +0.7**
TABL IAmb IAmb 00 33 48.7
comp=Z,62nm,1.2s
BVCY Beaver Creek 92.08 28 P **P** **00 33 47.2 +1.4**
baz=273
LOGN Logan Glacier 92.11 29 P **P** **00 33 46.7 +0.6**
LOGN IAmb IAmb 00 33 48.9
comp=Z,45nm,1.2s
F28M Old Crow 92.14 22 IAmb IAmb 00 33 48.3
comp=Z,61nm,1.1s
F28M Old Crow 92.14 22 P **P** **00 33 47.2 +1.3**
baz=274
E28M Babbage River 92.18 21 P **P** **00 33 47.2 +1.2**
baz=275
I28M Miner Creek 92.28 25 P **P** **00 33 48.0 +1.3**
baz=274,SNR=33
YUK3 Moose Creek 92.31 28 P **P** **00 33 48.2 +1.2**
baz=274,SNR=6.8
D28M Stokes Point 92.40 21 P **P** **00 33 48.5 +1.5**
baz=276
PINM Pinnacle 92.52 30 P **P** **00 33 49.2 +1.3**
baz=274
DAWY Dawson 92.63 26 IAmb IAmb 00 33 50.8
comp=Z,62nm,1.3s
DAWY Dawson 92.63 26 P **P** **00 33 49.5 +1.2**
baz=275,SNR=22
YUK8 Steele Glacier 92.68 29 P **P** **00 33 50.4 +1.6**
baz=274,SNR=6.2
E29M Blow River 92.81 22 IAmb IAmb 00 33 51.1
comp=Z,48nm,1.3s
E29M Blow River 92.81 22 P **P** **00 33 49.8 +0.9**
baz=276
G29M Pine Creek 92.92 23 P **P** **00 33 50.6 +1.1**
baz=276
POGA Pongola 92.94 243 P **P** **00 33 49.9 -0.5**
POGA IAmb IAmb 00 37 11.2
comp=Z,29nm,0.8s
J29N Klondike Camp 93.10 26 P **P** **00 33 51.5 +1.0**
J29N IAmb IAmb 00 33 53.6
comp=Z,66nm,1.4s
J29N Klondike Camp 93.10 26 P **P** **00 33 52.3 +1.8**
baz=276,SNR=7.6
M29M Somme Creek 93.19 28 IAmb IAmb 00 33 54.1
comp=Z,41nm,1.1s
M29M Somme Creek 93.19 28 P **P** **00 33 52.6 +1.6**
baz=276,SNR=15
YUK4 Talbot Arm 93.21 29 P **P** **00 33 52.9 +1.7**
baz=275,SNR=6.8
L29M L29M 93.28 27 P **P** **00 33 53.0 +1.7**
L29M L29M 93.28 27 P **P** **00 33 53.4 +2.1**
baz=276
O29M Mount Kennedy 93.34 30 P **P** **00 33 52.7 +0.9**
O29M IAmb IAmb 00 33 54.8
comp=Z,39nm,1.4s
O29M Mount Kennedy 93.34 30 P **P** **00 33 53.4 +1.6**
baz=275
YUK6 Outpost Mounta 93.39 29 P **P** **00 33 53.7 +1.7**
baz=276
ELIB Princess Elisa 93.42 198 *dP* **P** **00 33 53.9 +2.0**
comp=Z,31nm,1.2s
K29M Barlow Dome 93.47 26 IAmb IAmb 00 33 55.2
comp=Z,87nm,1.5s
K29M Barlow Dome 93.47 26 P **P** **00 33 53.6 +1.4**
baz=276
EPYK Eagle Plains 93.50 24 P **P** **00 33 53.0 +0.8**
baz=277,SNR=27
ARCES ARCESS Array B 93.61 340 IAmb IAmb 00 34 16.6
comp=Z,41nm,1.2s
ARCES ARCESS Array B 93.61 340 P **P** **00 33 51.6 -1.0**
comp=Z,16nm,1.0s,baz=47,slow=5.3,SNR=10
comp=Z,16nm,1.0s
G30M tAoh Zraii Nji 93.62 23 IAmb IAmb 00 33 54.4
comp=Z,68nm,1.1s
G30M tAoh Zraii Nji 93.62 23 P **P** **00 33 53.4 +0.6**
baz=278
F30M Barrier River 93.69 22 P **P** **00 33 53.9 +0.8**
baz=278
I30M Mount Dempster 93.79 25 IAmb IAmb 00 33 55.9
comp=Z,35nm,1.2s
I30M Mount Dempster 93.79 25 P **P** **00 33 54.4 +0.7**
baz=278
ISP Isparta 93.80 308 P **P** **00 33 52.9 -1.4**
ISP IAMs_20 IAMs_20 01 20 54.2
comp=Z,396nm,22.0s
ISP Isparta 93.80 308 P **P** **00 33 52.9 -1.4**
ISP pmax pmax
comp=Z,137nm,1.6s
PURM Purcari 93.81 316 ⇓P **P** **00 33 53.6 -0.3**
HYT Haines Junctio 93.82 29 P **P** **00 33 54.7 +0.8**
HYT IAmb IAmb 00 33 56.7
comp=Z,34nm,1.0s
HYT IAMs_20 IAMs_20 01 15 25.5
comp=Z,474nm,20.0s
HYT Haines Junctio 93.82 29 P **P** **00 33 55.3 +1.4**
baz=276,SNR=7.3
P29M Windy Craggy 93.83 30 IAmb IAmb 00 33 57.0
comp=Z,59nm,1.1s
P29M Windy Craggy 93.83 30 P **P** **00 33 55.4 +1.6**
baz=276
J30M Hart River 93.90 25 IAmb IAmb 00 33 56.9
comp=Z,59nm,1.4s
J30M Hart River 93.90 25 P **P** **00 33 55.4 +1.2**
baz=278
AKASG Malin Array Be 93.95 321 IAmb IAmb 00 33 55.0
comp=Z,77nm,1.4s
AKASG Malin Array Be 93.95 321 *i* P **P** **00 33 53.4 -1.1**
AKASG pmax pmax
comp=Z,17nm,0.8s
AKASG Malin Array Be 93.95 321 P **P** **00 33 53.3 -1.2**
comp=Z,15nm,0.9s,baz=73,slow=4.1,SNR=37
AKASG LR LR 01 22 45.9
comp=Z,240nm,18.1s,baz=80,slow=40
comp=Z,15nm,0.9s
AKBB Malin Array Si 93.95 321 IAmb IAmb 00 33 54.7
comp=Z,77nm,1.4s
AKBB Malin Array Si 93.95 321 *i* P **P** **00 33 53.6 -0.9**
AKBB pmax pmax
comp=Z,75nm,1.5s
AKBB MLR MLR
comp=Z,564nm,20.0s
M30M Minto, Yukon 93.95 27 IAmb IAmb 00 33 57.5
comp=Z,75nm,1.2s
M30M IAMs_20 IAMs_20 01 12 20.9
comp=Z,504nm,18.0s
M30M Minto, Yukon 93.95 27 P **P** **00 33 55.9 +1.6**
baz=277,SNR=22
KIEV Kiev 93.96 321 ⇓P **P** **00 33 53.2 -1.4**
KIEV Kiev 93.96 321 P **P** **00 33 53.3 -1.2**
KIEV IAmb IAmb 00 33 54.7
comp=Z,76nm,1.4s
KIEV Kiev 93.96 321 *i* P **P** **00 33 53.1 -1.5**
SNR=14
KIEV Kiev 93.96 321 P **P** **00 33 53.3 -1.2**
KIEV pmax pmax
comp=Z,76nm,1.4s
SPITS Spitsbergen Ar 94.05 349 P **P** **00 33 53.2 -1.3**
comp=Z,20nm,0.9s,baz=94,slow=8.4,SNR=26
SPITS LR LR 01 22 47.6
comp=Z,252nm,18.5s,baz=32,slow=40
comp=Z,20nm,0.9s
P30M Million Dollar 94.16 30 P **P** **00 33 56.7 +1.3**
baz=277
MAYO Mayo, Yukon 94.22 26 P **P** **00 33 56.3 +0.7**
MAYO Mayo, Yukon 94.22 26 P **P** **00 33 56.8 +1.3**
baz=278
G31M Satah River 94.39 23 P **P** **00 33 56.8 +0.6**
baz=280,SNR=37
MBAR Mbarara 94.39 269 P **P** **00 33 58.8 +1.2**
MBAR Mbarara 94.39 269 IAMs_20 IAMs_20 01 17 10.7
comp=Z,488nm,21.0s
MBAR Mbarara 94.39 269 ⇓*iP* **P** **00 33 58.4 +0.8**
MBAR pmax pmax
comp=Z,20nm,1.6s
MBAR MLR MLR
comp=Z,408nm,19.0s
MBAR Mbarara 94.39 269 LR LR 01 14 17.1
comp=Z,417nm,21.9s,baz=67,slow=34
MBAR Mbarara 94.39 269 P **P** **00 33 58.6 +1.0**
INK Inuvik 94.42 21 IAmb IAmb 00 33 58.1
comp=Z,51nm,1.1s
INK Inuvik 94.42 21 P **P** **00 33 56.9 +0.5**
baz=280,SNR=41
MNK Minsk 94.42 325 *i* P **P** **00 33 56.3 -0.3**
MNK *i* *PP **pP** **00 34 11.0 -1.9**
MNK *i* S **SKSac** **00 44 26.7 +0.1**
MNK *i* *SS **SKKSac** **00 44 52.8 +4.7**
MNK *i* SS **SS** **00 51 27.7 +0.8**
MNK pmax pmax
comp=E,27nm,1.0s
MNK pmax pmax
comp=N,20nm,1.0s
MNK pmax pmax
comp=Z,141nm,1.0s
MNK MLR MLR
comp=Z,447nm,18.0s
MNK MLR MLR
comp=E,127nm,18.0s
MNK MLR MLR
comp=N,219nm,17.0s
F31M Tsiigehtchic 94.50 22 P **P** **00 33 57.2 +0.5**
baz=280,SNR=43
KIS Kishinev 94.50 317 ⇑*iP* **P** **00 33 55.9 -1.3**
comp=N,50nm,1.3s
KIS LRM MLR 01 21 40.0
comp=N,200nm,22.0s
MILM Milestii Mici 94.51 317 ⇑*iP* **P** **00 33 55.8 -1.4**
comp=N,210nm,2.0s
MILM *e*L L 01 12 59.0
MILM LRM MLR 01 21 54.0
comp=N,500nm,20.5s
O30N Mendenhall 94.51 29 P **P** **00 33 57.2 +0.2**
O30N IAmb IAmb 00 33 59.9
comp=Z,29nm,1.1s
O30N Mendenhall 94.51 29 P **P** **00 33 58.6 +1.6**
baz=278,SNR=7.7
FINES FINESS Array B 94.56 332 *i* P **P** **00 33 56.0 -1.1**
FINES pmax pmax
comp=Z,8.0nm,0.8s
FINES FINESS Array B 94.56 332 P **P** **00 33 55.9 -1.2**
comp=Z,6.2nm,0.7s,baz=117,slow=6.6,SNR=11
FINES LR LR 01 18 34.6
comp=Z,522nm,21.9s,baz=74,slow=37
comp=Z,6.2nm,0.7s
N31M Braeburn, Yuko 94.56 28 P **P** **00 33 58.6 +1.4**
N31M IAmb IAmb 00 34 00.2
comp=Z,57nm,1.1s
N31M Braeburn, Yuko 94.56 28 P **P** **00 33 58.8 +1.6**
baz=278,SNR=12
HSPB Hornsund (broa 94.60 348 *eP* **P** **00 33 56.5 -0.5**
KBS Kingsbay 94.61 350 IAMs_20 IAMs_20 01 21 39.8
comp=Z,682nm,20.0s
VSU Vasula 94.61 329 *ceP* **P** **00 33 57.3 -0.1**
VSU pmax pmax
comp=Z,28nm,1.3s
VSU Vasula 94.61 329 *eP* **P** **00 33 57.9 +0.5**
TAOE Nuku Hiva Isla 94.62 99 *e*PKIKP P 00 33 50.5 -8.1
comp=Z,170nm,27.6s
TAOE Nuku Hiva Isla 94.62 99 *e*LR LR 01 04 26.4
comp=Z,900nm,25.0s
TLCR 94.64 315 ⇓P **P** **00 33 57.4 -0.5**
TLCR 94.64 315 P **P** **00 33 57.3 -0.5**
SORM Soroca 94.72 318 ⇓P **P** **00 33 57.5 -0.7**
SORM Soroca 94.72 318 P **P** **00 33 57.4 -0.7**
MANR Mangalia 94.91 314 ⇑P **P** **00 33 58.8 -0.3**
LEOM Leova 94.93 316 ⇓P **P** **00 33 58.9 -0.3**
LEOM Leova 94.93 316 P **P** **00 33 58.8 -0.3**
TPGR Topolog 94.94 315 ⇓P **P** **00 33 58.8 -0.5**
TIRR Tirgusor 94.98 314 ⇓P **P** **00 33 59.2 -0.3**
TIRR Tirgusor 94.98 314 P **P** **00 33 59.1 -0.3**
IDID Didziasalis 94.99 325 *eP* **P** **00 33 59.1 -0.1**
MFTR Murfatlar 95.00 314 ⇑P **P** **00 33 58.7 -0.8**
SKAG Skagway 95.07 30 P **P** **00 33 59.6 +0.2**
SKAG IAmb IAmb 00 34 02.5
comp=Z,46nm,1.1s
SKAG Skagway 95.07 30 P **P** **00 34 01.2 +1.7**
baz=278
M31M Drury Creek, Y 95.11 28 IAmb IAmb 00 34 02.2
comp=Z,72nm,1.6s
M31M Drury Creek, Y 95.11 28 P **P** **00 34 00.7 +1.0**
baz=279,SNR=10.0
WHY Whitehorse 95.11 29 P **P** **00 34 00.8 +1.0**
WHY IAmb IAmb 00 34 02.7
comp=Z,35nm,1.0s
WHY Whitehorse 95.11 29 P **P** **00 34 01.4 +1.6**
baz=279,SNR=14
CFR Carcaliu 95.12 315 ⇑P **P** **00 33 59.4 -0.7**
CFR Carcaliu 95.12 315 P **P** **00 33 59.3 -0.7**
IZAR Zarasai 95.22 326 *eP* **P** **00 34 00.7 +0.5**
VASR Vaslui 95.23 317 ⇑P **P** **00 34 00.6 0.0**
TLBR Topalu 95.23 315 ⇑P **P** **00 34 00.2 -0.4**
PSN Preselentsi 95.25 314 P **P** **00 33 59.6 -1.1**
IIGN Ignalina 95.28 325 *eP* **P** **00 34 01.1 +0.6**
HARR Harsova 95.31 315 ⇑P **P** **00 34 00.4 -0.5**
HARR Harsova 95.31 315 P **P** **00 34 00.4 -0.5**
ISAL Salakas 95.31 326 *eP* **P** **00 34 01.0 +0.4**
SLCR Slobozia Conac 95.34 316 ⇓P **P** **00 34 01.5 +0.4**
ICOR Ion Corvin 95.45 314 ⇑P **P** **00 34 01.6 0.0**
GHRR 95.55 316 ⇓P **P** **00 34 02.4 +0.4**
FARO Faro, Yukon 95.59 27 P **P** **00 34 03.0 +1.1**
FARO Faro, Yukon 95.59 27 P **P** **00 34 03.1 +1.3**
baz=280,SNR=40
PANC Panciu 95.75 316 ⇑P **P** **00 34 03.4 +0.5**
BALB Balikesir 95.75 310 P **P** **00 34 02.7 -0.4**
BALB IAmb IAmb 00 34 03.2
comp=Z,35nm,1.1s
ARG Arkhangelos 95.81 306 P **P** **00 34 02.0 -1.4**
ARG Arkhangelos 95.81 306 P **P** **00 34 02.0 -1.4**
ARG pmax pmax
comp=Z,98nm,1.2s
PRD Provadia 95.81 313 P **P** **00 34 02.9 -0.3**
ODBI Odobesti 95.82 316 ⇓P **P** **00 34 04.2 +0.9**
P32M Atlin 95.86 30 P **P** **00 34 03.0 -0.2**
P32M Atlin 95.86 30 P **P** **00 34 04.3 +1.1**
baz=280
N32M Quiet Lake 95.90 29 P **P** **00 34 04.4 +1.1**
N32M Quiet Lake 95.90 29 P **P** **00 34 04.9 +1.5**
baz=280
GRER 95.92 315 ⇑P **P** **00 34 05.0 +1.3**
TESR Tescani 96.03 317 ⇓P **P** **00 34 03.4 -0.8**
VRI Vrincioaia 96.04 316 ⇑P **P** **00 34 04.5 +0.2**
VRI Vrincioaia 96.04 316 P **P** **00 34 04.5 +0.2**
PLOR Plostina 96.10 316 ⇑P **P** **00 34 04.1 -0.4**
PLOR Plostina 96.10 316 P **P** **00 34 04.1 -0.4**
P33M Teslin, Yukon 96.20 29 P **P** **00 34 05.2 +0.5**
P33M Teslin, Yukon 96.20 29 P **P** **00 34 06.0 +1.3**
baz=280
PRAR RASCA 96.22 317 ⇓P **P** **00 34 04.2 -0.8**
A36M Sachs Harbour 96.23 17 P **P** **00 34 04.8 +0.3**
A36M Sachs Harbour 96.23 17 P **P** **00 34 04.8 +0.3**
baz=289,SNR=11
LOZB Loznitsa 96.39 313 ⇑P **P** **00 34 05.0 -0.9**
NEHR Nehoiu 96.39 316 ⇑P **P** **00 34 06.1 +0.3**
COVR Voineasa-Covas 96.41 316 ⇑P **P** **00 34 05.2 -0.8**
RAZG Razgrad 96.43 314 ⇑P **P** **00 34 05.4 -0.6**
VSVD Vaisvydziai 96.48 326 *eP* **P** **00 34 06.3 +0.4**
SULR 96.50 315 ⇑P **P** **00 34 06.8 +0.5**
TURR Turia 96.52 316 ⇓P **P** **00 34 06.7 +0.2**
PABE Paberze 96.53 326 *eP* **P** **00 34 06.1 -0.1**
MLR Muntele Rosu 96.63 316 ⇓P **P** **00 34 07.0 -0.1**
MLR Muntele Rosu 96.63 316 IAMs_20 IAMs_20 01 23 17.0
comp=Z,715nm,21.0s
MLR Muntele Rosu 96.63 316 P **P** **00 34 07.0 -0.1**
MLR Muntele Rosu 96.63 316 LR LR 01 23 41.5
comp=Z,280nm,19.4s,baz=60,slow=39
LSZ Lusaka 96.64 255 P **P** **00 34 08.0 +0.3**
LSZ IAmb IAmb 00 34 09.3
comp=Z,45nm,1.0s
LSZ Lusaka 96.64 255 P **P** **00 34 08.0 +0.3**
LSZ pmax pmax
comp=Z,45nm,1.0s
LSZ Lusaka 96.64 255 LR LR 01 13 43.6
comp=Z,2µm,21.9s,baz=109,slow=33
LSZ Lusaka 96.64 255 P **P** **00 34 08.2 +0.5**
LSZ P **P** **00 34 08.2 +0.5**
OZUR 96.67 316 ⇓P **P** **00 34 05.7 -1.5**
SGRR Singureni 96.75 314 ⇑P **P** **00 34 07.3 -0.2**
BURAR Bucovina Array 96.88 318 ⇓P **P** **00 34 08.5 +0.4**
BURAR Bucovina Array 96.88 318 P **P** **00 34 08.5 +0.4**

ELND	**Elena**		**96.96**	**313**	⇑P		**P**		**00 34 08.1**	**-0.4**
DOPR	**Dopca**		**96.96**	**316**	⇓P		**P**		**00 34 07.2**	**-1.3**
GRHM	**Grahamstown, E**		**97.19**	**237**	P		Pdif		00 34 10.1	+0.2
GRHM					IAmb		IAmb		00 34 11.9	
	comp=Z,46nm,1.1s									
SUW	**Suwalki**		**97.22**	**324**	*e*P		**P**		**00 34 08.9**	**-0.5**
SUW	**Suwalki**		**97.22**	**324**	*e*P		**P**		**00 34 09.2**	**-0.2**
VOIR			**97.26**	**316**	⇓P		**P**		**00 34 07.8**	**-2.1**
VOIR			**97.26**	**316**	P		**P**		**00 34 07.8**	**-2.1**
R33M	**Jennings River**		**97.27**	**30**	P		Pdif		00 34 09.9	+0.2
R33M					IAmb		IAmb		00 34 12.8	
	comp=Z,23nm,1.2s									
R33M	**Jennings River**		**97.27**	**30**	P		Pdif		00 34 10.8	+1.1
	baz=282									
LVV	**L'vov**		**97.36**	**320**	*e*P		**P**		**00 34 09.8**	**-0.3**
LVV					*e*				00 38 07.3	
LVV					pmax		pmax			
	comp=Z,110nm,1.3s									
LVV					MLR		MLR			
	comp=E,300nm,20.0s									
LVV					MLR		MLR			
	comp=Z,300nm,20.0s									
LVV					MLR		MLR			
	comp=N,200nm,21.0s									
RDO	**Rodhopi**		**97.40**	**311**	IAmb		IAmb		00 34 09.7	
	comp=Z,20nm,1.1s									
HUMR	**Humele**		**97.42**	**315**	⇓P		**P**		**00 34 10.0**	**-0.5**
C36M	**Paulatuk**		**97.47**	**20**	IAmb		IAmb		00 34 11.8	
	comp=Z,39nm,1.1s									
C36M	**Paulatuk**		**97.47**	**20**	P		Pdif		00 34 10.8	+0.6
	baz=289,SNR=24									
S34M	**Telegraph Cree**		**97.49**	**32**	P		Pdif		00 34 12.2	+1.7
	baz=282									
ARR	**Arges**		**97.56**	**316**	⇑P		**P**		**00 34 10.5**	**-0.7**
PLVB	**Pleven**		**97.81**	**314**	⇓P		**P**		**00 34 11.2**	**-1.1**
RZN	**Rozhen**		**97.93**	**312**	P		**P**		**00 34 11.8**	**-1.3**
DLBC	**Dease Lake**		**97.95**	**31**	P		Pdif		00 34 13.7	+1.0
DLBC					IAmb		IAmb		00 34 15.8	
	comp=Z,34nm,1.5s									
DLBC	**Dease Lake**		**97.95**	**31**	P		Pdif		00 34 14.2	+1.5
	baz=283									
DLBC	**Dease Lake**		**97.95**	**31**	LR		LR		01 14 42.3	
	comp=Z,155nm,19.6s,baz=282,slow=33									
BMR	**Baia Mare**		**98.02**	**318**	⇑P		Pdif		00 34 13.6	+0.4
BMR	**Baia Mare**		**98.02**	**318**	P		Pdif		00 34 13.5	+0.3
TGTN	**Hyland Airport**		**98.08**	**28**	P		Pdif		00 34 14.9	+1.7
	baz=284									
CJR	**Cluj-Napoca**		**98.09**	**317**	⇓P		Pdif		00 34 13.8	+0.2
CJR	**Cluj-Napoca**		**98.09**	**317**	P		Pdif		00 34 13.8	+0.2
LOT	**Lotru**		**98.15**	**316**	⇑P		**P**		**00 34 13.5**	**-0.4**
WTLY	**Watson Lake, Y**		**98.19**	**29**	P		Pdif		00 34 14.9	+1.2
WTLY					IAmb		IAmb		00 34 16.7	
	comp=Z,65nm,1.3s									
WTLY					IAMs_20		IAMs_20		01 22 55.0	
	comp=E,448nm,20.0s									
WTLY	**Watson Lake, Y**		**98.19**	**29**	P		Pdif		00 34 15.2	+1.5
	baz=284									
MARR	**Marisel-Cluj**		**98.42**	**317**	⇑P		**P**		**00 34 13.5**	**-1.6**
MPEP	**Malo Peshtene**		**98.46**	**314**	P		**P**		**00 34 14.9**	**-0.3**
MESR	**Meseseni**		**98.47**	**318**	⇓P		Pdif		00 34 15.9	+0.7
LBTB	**Lobatse**		**98.54**	**245**	LR		LR		01 14 32.1	
	comp=E,288nm,20.6s,baz=87,slow=33									
BOSA	**Boshof**		**98.56**	**241**			Pdif		00 34 16.6	+0.4
BOSA					IAmb		IAmb		00 38 16.9	
	comp=Z,32nm,1.4s									
BOSA	**Boshof**		**98.56**	**241**	P		**P**		**00 34 15.0**	**-1.2**
BOSA	**Boshof**		**98.56**	**241**	P		**P**		**00 34 14.9**	**-1.2**
	comp=Z,12nm,1.1s,baz=100,slow=5.3,SNR=7.6									
BOSA					PP		**PP**		**00 38 16.6**	**-0.9**
	comp=Z,9.3nm,1.2s,baz=82,slow=7.6,SNR=4.5									
BOSA					LR		LR		01 15 08.3	
	comp=Z,834nm,20.2s,baz=88,slow=33									
	comp=Z,12nm,1.1s									
KOLS	**Kolonicke sedl**		**98.63**	**319**	*e*P		Pdif		00 34 16.1	+0.2
KOLS	**Kolonicke sedl**		**98.63**	**319**	*e*PDIFF		Pdif		00 34 16.1	+0.2
VALD	**Valchedram**		**98.63**	**314**	P		**P**		**00 34 16.0**	**+0.1**
DRGR			**98.68**	**317**	⇑P		**P**		**00 34 15.8**	**-0.5**
DRGR			**98.68**	**317**	P		**P**		**00 34 15.7**	**-0.5**
MMB	**Musomishta**		**98.69**	**312**	P		**P**		**00 34 14.9**	**-1.4**
GZR	**Gura Zlata**		**98.85**	**316**	⇓P		**P**		**00 34 15.9**	**-1.1**
GZR	**Gura Zlata**		**98.85**	**316**	P		**P**		**00 34 15.9**	**-1.1**
DJES	**Djerdap**		**99.14**	**315**	⇓P		**Pdif**		**00 34 18.4**	**+0.1**
HERR	**Herculane**		**99.18**	**315**	⇑P		**Pdif**		**00 34 18.4**	**0.0**
BLKB	**Belogradchik**		**99.19**	**314**	⇑P		**Pdif**		**00 34 18.2**	**-0.3**
SURR	**Surduc**		**99.25**	**316**	⇑P		**Pdif**		**00 34 18.5**	**-0.1**
VAY	**Valandovo**		**99.59**	**312**	*i* P		**Pdif**		**00 34 19.1**	**-1.2**
BZS	**Buzias**		**99.62**	**316**	⇓P		**Pdif**		**00 34 20.0**	**-0.4**
BZS	**Buzias**		**99.62**	**316**	P		**Pdif**		**00 34 19.9**	**-0.4**
MDVR	**Moldovita**		**99.69**	**315**	⇓P		**Pdif**		**00 34 20.9**	**+0.1**
WRGLY	**Wrigley**		**99.74**	**25**	Pdif		**Pdif**		**00 34 21.0**	**+0.6**
WRGLY	**Wrigley**		**99.74**	**25**	Pdiff		**Pdif**		**00 34 21.4**	**+1.0**
	baz=289									
NIE	**Niedzica**		**99.81**	**320**	*e*P		**Pdif**		**00 34 21.8**	**+0.6**
STIP	**Stip**		**99.83**	**312**	*i* P		**Pdif**		**00 34 19.2**	**-2.1**
BOVS	**Bovan**		**99.88**	**314**	⇓P		**Pdif**		**00 34 20.7**	**-0.8**
OJC	**Ojcow**		**99.97**	**321**	*e*P		**Pdif**		**00 34 21.9**	**+0.1**
OJC	**Ojcow**		**99.97**	**321**	Pdif		**Pdif**		**00 34 21.9**	**+0.1**
OJC	**Ojcow**		**99.97**	**321**	*i* P		**Pdif**		**00 34 21.9**	**+0.1**
BANR	**Banloc**		**99.99**	**316**	⇓P		**Pdif**		**00 34 22.2**	**+0.3**
PSZ	**Piszkesteto**		**100.37**	**319**	⇑P		**Pdif**		**00 34 22.8**	**-0.9**
PSZ	**Piszkesteto**		**100.37**	**319**	Pdif		**Pdif**		**00 34 23.3**	**-0.5**
PSZ	**Piszkesteto**		**100.37**	**319**	*i* P		**Pdif**		**00 34 23.3**	**-0.5**
LANS	**Liptovska Anna**		**100.40**	**320**	*e*P		**Pdif**		**00 34 24.5**	**+0.7**
LANS	**Liptovska Anna**		**100.40**	**320**	*e*PDIFF		**Pdif**		**00 34 24.5**	**+0.7**
KOTAN	**Kotaneelee Air**		**100.46**	**28**	Pdiff		**Pdif**		**00 34 24.5**	**+0.8**
	baz=288									
HFS	**Hagfors**		**100.76**	**332**	P		**Pdif**		**00 34 23.7**	**-1.3**
	comp=Z,9.0nm,1.1s,baz=93,slow=7.7,SNR=6.2									
VYHS	**Vyhne**		**100.95**	**319**	*e*P		**Pdif**		**00 34 26.1**	**-0.1**
VYHS					*e*				00 38 40.6	
VYHS	**Vyhne**		**100.95**	**319**	*e*PDIFF		**Pdif**		**00 34 26.1**	**-0.1**
VYHS					*e*PP		**PP**		**00 38 40.6**	**+5.8**
FRGS	**Fruska Gora**		**100.95**	**316**	⇓P		**Pdif**		**00 34 25.9**	**-0.4**
SNAA	**Sanae**		**100.99**	**195**	Pdif		**Pdif**		**00 34 27.3**	**+1.4**
SNAA	**Sanae**		**100.99**	**195**	*i* P		**Pdif**		**00 34 27.3**	**+1.4**
SNAA	**Sanae**		**100.99**	**195**	P		**Pdif**		**00 34 24.8**	**-1.1**
	comp=Z,4.7nm,1.0s,baz=124,slow=7.2,SNR=4.1									
OKC	**Ostrava-Krasne**		**101.10**	**321**	*e*PDIFF		**Pdif**		**00 34 27.6**	**+0.8**
OKC	**Ostrava-Krasne**		**101.10**	**321**	*e*P		**Pdif**		**00 34 27.6**	**+0.8**
SRO	**Srobarova**		**101.43**	**319**	*e*P		**Pdif**		**00 34 28.8**	**+0.5**
SRO	**Srobarova**		**101.43**	**319**	*e*PDIFF		**Pdif**		**00 34 28.8**	**+0.5**
MORC	**Moravsky Berou**		**101.49**	**321**	⇑P		**Pdif**		**00 34 28.7**	**0.0**
MORC	**Moravsky Berou**		**101.49**	**321**	Pdif		**Pdif**		**00 34 28.5**	**-0.1**
MORC	**Moravsky Berou**		**101.49**	**321**	*e*P		**Pdif**		**00 34 28.6**	**0.0**
MORC					*e*PP		**PP**		**00 38 40.4**	**+1.5**
MORC	**Moravsky Berou**		**101.49**	**321**	*i* P		**Pdif**		**00 34 28.5**	**-0.1**
MORH	**Mrgy, Hungar**		**101.55**	**317**	⇓P		**Pdif**		**00 34 29.0**	**+0.1**
NB2	**NORSAR Subarra**		**101.60**	**333**	P		**Pdif**		**00 34 27.2**	**-1.7**
	comp=Z,26nm,1.4s,baz=69,slow=5.1									
NB2	**NORSAR Subarra**		**101.60**	**333**	P		**Pdif**		**00 34 27.2**	**-1.7**
	baz=69,slow=5.1									
NOA	**NORSAR Array B**		**101.60**	**333**	P		**Pdif**		**00 34 27.7**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=68,slow=4.8,SNR=5.2									
JAVC	**Velka Javorina**		**101.62**	**320**	*e*P		**Pdif**		**00 34 30.3**	**+1.0**
RES	**Resolute Bay**		**101.98**	**10**	Pdif		**Pdif**		**00 34 31.2**	**+1.0**
RES	**Resolute Bay**		**101.98**	**10**	*i* P		**Pdif**		**00 34 31.2**	**+1.0**
MODS	**Modra-Piesok**		**101.99**	**320**	*e*P		**Pdif**		**00 34 30.7**	**-0.1**
MODS	**Modra-Piesok**		**101.99**	**320**	*e*PDIFF		**Pdif**		**00 34 30.7**	**-0.1**
KSP	**Ksiaz**		**102.01**	**322**	*e*P		**Pdif**		**00 34 31.4**	**+0.5**
DPC	**Dobruska-Polom**		**102.12**	**322**	*e*PDIFF		**Pdif**		**00 34 31.9**	**+0.5**
DPC	**Dobruska-Polom**		**102.12**	**322**	*e*P		**Pdif**		**00 34 31.9**	**+0.5**
OSTC	**Ostas**		**102.13**	**322**	*e*PDIFF		**Pdif**		**00 34 31.9**	**+0.5**
OSTC	**Ostas**		**102.13**	**322**	*e*P		**Pdif**		**00 34 31.9**	**+0.5**
VRAC	**Vranov**		**102.20**	**321**	⇓P		**Pdif**		**00 34 32.2**	**+0.4**
VRAC	**Vranov**		**102.20**	**321**	*e*P		**Pdif**		**00 34 32.2**	**+0.4**
VRAC					*e*PP		**PP**		**00 38 47.1**	**+2.9**
VRAC	**Vranov**		**102.20**	**321**	P		**Pdif**		**00 34 32.1**	**+0.4**
CHVC	**Chvalec**		**102.22**	**322**	*e*PDIFF		**Pdif**		**00 34 32.5**	**+0.7**
CHVC	**Chvalec**		**102.22**	**322**	*e*P		**Pdif**		**00 34 32.5**	**+0.7**
KRUC	**Moravsky**		**102.39**	**320**	*e*P		**Pdif**		**00 34 32.8**	**+0.2**
KRUC					*e*PP		**PP**		**00 38 46.4**	**+0.8**
RONA	**Rosalia, Austr**		**102.78**	**319**	*e*Pdiff		**Pdif**		**00 34 34.3**	**-0.1**
	comp=Z,11nm,1.4s									
CONA	**Conrad Observa**		**103.01**	**319**	*i* Pdiff		**Pdif**		**00 34 35.8**	**+0.3**
	comp=Z,15nm,1.6s									
CONA					*e*PP		**PP**		**00 38 52.0**	**+1.6**
	comp=Z,15nm,1.4s									
RUE	**Ruedersdorf**		**103.07**	**324**	*e*P		**Pdif**		**00 34 36.5**	**+1.0**
PVCC	**Panska Ves**		**103.15**	**322**	*e*PDIFF		**Pdif**		**00 34 37.0**	**+1.1**
PVCC	**Panska Ves**		**103.15**	**322**	*e*P		**Pdif**		**00 34 37.0**	**+1.1**
PRU	**Pruhonice**		**103.32**	**322**	*e*PDIFF		**Pdif**		**00 34 36.6**	**-0.1**
PRU	**Pruhonice**		**103.32**	**322**	*e*P		**Pdif**		**00 34 36.6**	**-0.1**
ARSA	**Arzberg**		**103.40**	**319**	*i* Pdiff		**Pdif**		**00 34 37.4**	**+0.2**
	comp=Z,12nm,1.5s									
ARSA					*e*PP		**PP**		**00 38 52.5**	**-0.7**
	comp=Z,2.4nm,0.8s									
BRG	**Berggiesshubel**		**103.44**	**323**	*i* P		**Pdif**		**00 34 37.5**	**+0.3**
BRG					Amp				00 34 39.6	
	comp=Z,34nm,1.3s									
ZVC	**Zvikov**		**103.69**	**321**	*e*PDIFF		**Pdif**		**00 34 38.7**	**+0.3**
ZVC					*ex*		x		00 34 49.4	
YKA	**Yellowknife Ar**		**103.76**	**24**	Pdiff		**Pdif**		**00 34 37.5**	**-0.8**
	comp=Z,1.6nm,1.0s,baz=298,slow=4.8,SNR=16									
YKA					PKiKP		**PP**		**00 38 53.9**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=303,slow=2.6,SNR=4.2									
YKA					PKKPbc		**PKKPbc**		**00 50 30.1**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=107,slow=2.5,SNR=13									
CKRC	**Cesky Krumlov**		**103.78**	**321**	*e*PDIFF		**Pdif**		**00 34 39.4**	**+0.6**
CKRC	**Cesky Krumlov**		**103.78**	**321**	*e*P		**Pdif**		**00 34 39.4**	**+0.6**
SOKA	**Soboth**		**103.87**	**318**	*i* Pdiff		**Pdif**		**00 34 39.5**	**+0.2**
	comp=Z,9.7nm,1.5s									
SOKA					*i* PKiKP		**PKiKP**		**00 38 58.1**	**+1.2**
	comp=Z,11nm,1.6s									
CLL	**Collm**		**103.88**	**323**	*i* P		**Pdif**		**00 34 39.1**	**0.0**
CLL					pmax		pmax			
	comp=Z,44nm,2.0s									
CLL					MLR		MLR			
	comp=Z,400nm,20.3s									
MOA	**Molln**		**104.07**	**320**	*i* Pdiff		**Pdif**		**00 34 40.6**	**+0.5**
	comp=Z,18nm,1.4s									
MOA					*e*PP		**PP**		**00 38 58.0**	**-0.2**
	comp=Z,11nm,1.7s									
KHC	**Kasperske Hory**		**104.16**	**321**	*e*PDIFF		**Pdif**		**00 34 40.8**	**+0.3**
KHC					*e*pP		**pPdif**		**00 34 51.8**	**-5.0**
KHC					AMS		AMS		01 23 50.0	
	comp=Z,700nm,18.1s									
KHC	**Kasperske Hory**		**104.16**	**321**	*e*P		**Pdif**		**00 34 40.8**	**+0.3**
KHC					MLR		MLR			
	comp=Z,700nm,18.1s									
GERES	**GERESS Array B**		**104.16**	**321**	Pdiff		**Pdif**		**00 34 40.1**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=101,slow=6.9,SNR=9.8									
GERES					PKiKP		**PKiKP**		**00 38 56.5**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=95,slow=2.4,SNR=2.0									
BIOA	**Bad Ischl, Aus**		**104.52**	**320**	*e*Pdiff		**Pdif**		**00 34 42.4**	**+0.2**
	comp=Z,8.3nm,1.2s									
SGRT	**San Giovanni R**		**104.55**	**313**	IAMs_20		IAMs_20		01 28 46.0	
	comp=Z,557nm,20.0s									
MYKA	**Terra Mystica**		**104.81**	**318**	*e*Pdiff		**Pdif**		**00 34 43.3**	**-0.2**
	comp=Z,5.8nm,1.1s									
KBA	**Koelnbreinsper**		**104.88**	**319**	*e*Pdiff		**Pdif**		**00 34 43.6**	**-0.3**
	comp=Z,9.7nm,1.3s									
LESA	**Schwarzleotal**		**105.22**	**319**	*i* Pdiff		**Pdif**		**00 34 45.0**	**-0.3**
	comp=Z,18nm,1.8s									
LESA					*e*PKiKP		**PKiKP**		**00 39 01.2**	**+1.8**
	comp=Z,14nm,1.4s									
ABTA	**Abfaltersbach**		**105.52**	**319**	*i* Pdiff		**Pdif**		**00 34 45.4**	**-1.3**
	comp=Z,8.4nm,1.1s									
WTTA	**Wattenberg**		**105.94**	**319**	*e*Pdiff		**Pdif**		**00 34 48.3**	**-0.4**
	comp=Z,21nm,1.3s									
WTTA					*e*PKiKP		**PKiKP**		**00 39 02.3**	**+1.5**
	comp=Z,16nm,1.7s									
WATA	**Walderalm**		**105.96**	**320**	*i* Pdiff		**Pdif**		**00 34 48.2**	**-0.5**
	comp=Z,15nm,1.3s									
WATA					*e*PKiKP		**PKiKP**		**00 39 01.6**	**+0.8**
	comp=Z,3.7nm,0.7s									
GUMA	**Gualdo di Mace**		**105.97**	**315**	IAMs_20		IAMs_20		01 29 55.2	
	comp=Z,486nm,20.0s									
SQTA	**Sankt Quirin**		**106.24**	**320**	*i* Pdiff		**Pdif**		**00 34 49.9**	**0.0**
	comp=Z,18nm,1.4s									
SQTA					*e*PKiKP		**PKiKP**		**00 39 02.8**	**+1.6**
	comp=Z,13nm,1.4s									
MOTA	**Moosalm**		**106.27**	**320**	*i* Pdiff		**Pdif**		**00 34 49.6**	**-0.5**
	comp=Z,11nm,1.1s									
MOTA					*e*PKiKP		**PKiKP**		**00 39 04.3**	**+3.0**
	comp=Z,13nm,1.6s									
CTI	**Castel Tesino**		**106.30**	**318**	IAMs_20		IAMs_20		01 25 22.6	
	comp=Z,660nm,20.0s									
RETA	**Reutte**		**106.44**	**320**	*i* Pdiff		**Pdif**		**00 34 51.5**	**+0.7**
	comp=Z,8.7nm,1.4s									
TEOL	**Teolo**		**106.49**	**318**	IAMs_20		IAMs_20		01 08 34.5	
	comp=Z,404nm,21.0s									
FETA	**Feichten**		**106.61**	**319**	*e*Pdiff		**Pdif**		**00 34 52.1**	**+0.5**
	comp=Z,8.5nm,1.3s									
FETA					*e*PKiKP		**PKiKP**		**00 39 05.5**	**+3.4**
	comp=Z,8.1nm,1.1s									
FUORN	**Ofenpass-Fuorn**		**107.04**	**319**	IAMs_20		IAMs_20		01 24 05.0	
	comp=Z,514nm,21.0s									
DAVA	**Damuels**		**107.07**	**320**	*e*Pdiff		**Pdif**		**00 34 49.9**	**-3.7**
	comp=Z,13nm,1.6s									
DAVA					*e*PKiKP		**PKiKP**		**00 39 03.9**	**+1.0**
	comp=Z,19nm,1.2s									
OSSC	**Osservatorio P**		**107.31**	**316**	IAMs_20		IAMs_20		01 20 13.6	
	comp=Z,404nm,21.0s									
PKM	**Mcpherson Peak**		**110.52**	**53**	PKiKP		**PKiKP**		**00 39 10.1**	**+0.3**
	baz=285									
BMN	**Battle Mountai**		**110.91**	**46**	IAMs_20		IAMs_20		01 18 09.9	
	comp=Z,562nm,22.0s									
CWC	**Cottonwood Cre**		**111.47**	**51**	PKiKP		**PKiKP**		**00 39 12.1**	**+0.6**
	baz=286									
HLID	**Hailey**		**111.80**	**42**	PKiKP		**PKiKP**		**00 39 13.1**	**+1.2**
	baz=292									
EDW2	**Edwards Air Fo**		**111.97**	**52**	PKiKP		**PKiKP**		**00 39 13.6**	**+1.2**
	baz=286									
CIS	**Catalina Islan**		**112.02**	**54**	PKiKP		**PKiKP**		**00 39 13.3**	**+0.9**
	baz=285									
MPMC	**Manual Prospec**		**112.03**	**51**	PKiKP		**PKiKP**		**00 39 14.1**	**+1.4**
	baz=287									
LRMC	**Laurel Mtn Rad**		**112.05**	**52**	PKiKP		**PKiKP**		**00 39 13.8**	**+1.2**
	baz=286									
ELK	**Elko**		**112.23**	**46**	IAMs_20		IAMs_20		01 16 30.8	
	comp=Z,560nm,22.0s									
TPNV	**Topopah Spring**		**112.72**	**50**	PKiKP		**PKiKP**		**00 39 15.1**	**+1.3**
	baz=288									
R11B	**Troy Canyon, C**		**112.78**	**48**	PKiKP		**PKiKP**		**00 39 15.4**	**+1.4**
	baz=289									
GSC	**Goldstone, Bar**		**112.78**	**52**	IAMs_20		IAMs_20		01 25 56.8	
	comp=Z,526nm,19.0s									
GSC	**Goldstone, Bar**		**112.78**	**52**	PKiKP		**PKiKP**		**00 39 15.5**	**+1.6**
	baz=287									
BOZ	**Bozeman (W)**		**112.82**	**40**	PKiKP		**PKiKP**		**00 39 15.5**	**+1.7**
	baz=295									
EGMT	**Eagleton**		**112.91**	**37**	PKiKP		**PKiKP**		**00 39 15.7**	**+1.9**
	baz=297									
Q12A	**Willow Creek R**		**113.11**	**47**	IAMs_20		IAMs_20		01 10 38.1	
	comp=Z,280nm,22.0s									
HEC	**Hector,Ludlow**		**113.29**	**52**	PKiKP		**PKiKP**		**00 39 16.5**	**+1.6**
	baz=287									
TUQ	**Turquoise Moun**		**113.43**	**51**	PKiKP		**PKiKP**		**00 39 16.9**	**+1.6**
	baz=288									
PFO	**Pinyon Flats O**		**113.54**	**53**	PKiKP		**PKiKP**		**00 39 17.0**	**+1.5**
	baz=286									
TPFO	**Pinon Flats**		**113.55**	**53**	PKiKP		**PKiKP**		**00 39 17.3**	**+1.8**
	baz=286									
BAR	**Barrett**		**113.63**	**54**	IAMs_20		IAMs_20		01 19 06.3	
	comp=Z,596nm,21.0s									
TKX	**Tecate**		**113.71**	**54**	IAMs_20		IAMs_20		01 31 01.5	
	comp=Z,658nm,22.0s									
MONP2	**Monument Peak**		**113.77**	**54**	PKiKP		**PKiKP**		**00 39 17.7**	**+1.7**
	baz=286									
BELC	**Belle Mtn. Jos**		**113.80**	**53**	PKiKP		**PKiKP**		**00 39 17.7**	**+1.8**
	baz=287									
GMRC	**Granite Mounta**		**113.83**	**52**	PKiKP		**PKiKP**		**00 39 17.9**	**+1.9**
	baz=287									
IMW	**Indian Meadow**		**113.98**	**41**	IAMs_20		IAMs_20		01 22 15.5	
	comp=Z,574nm,20.0s									
IKP	**In-Ko-Pah, Jac**		**114.09**	**54**	PKiKP		**PKiKP**		**00 39 18.5**	**+2.1**
	baz=286									
DUG	**Dugway, Tooele**		**114.16**	**45**	IAMs_20		IAMs_20		01 20 03.7	
	comp=Z,441nm,21.0s									
DUG	**Dugway, Tooele**		**114.16**	**45**	PKiKP		**PKiKP**		**00 39 18.8**	**+2.3**
	baz=292									
SWSC	**Sam W. Stewart**		**114.26**	**54**	PKiKP		**PKiKP**		**00 39 18.9**	**+2.2**
	baz=287									
BC3	**Big Chuckawall**		**114.33**	**53**	PKiKP		**PKiKP**		**00 39 19.1**	**+2.2**
	baz=287									
IRM	**Iron Mountain**		**114.43**	**52**	PKiKP		**PKiKP**		**00 39 18.0**	**+1.0**
	baz=288									
VTX	**Valle De La Tr**		**114.70**	**55**	IAMs_20		IAMs_20		01 13 17.9	
	comp=Z,294nm,18.0s									
PDMCI	**Parker Dam,Lak**		**115.17**	**52**	PKiKP		**PKPdf**		**00 39 19.7**	**+1.3**
	baz=288									
BW06	**Boulder Array**		**115.37**	**42**			**PKPdf**		**00 39 20.7**	**+1.8**
BW06	**Boulder Array**		**115.37**	**42**	PKiKP		**PKPdf**		**00 39 19.9**	**+1.0**
	baz=296									
PDAR	**Pinedale Array**		**115.38**	**42**	PKP		**PKiKP**		**00 39 18.3**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=221,slow=1.6,SNR=11									
PDAR					PKKPbc		**PKKPbc**		**00 49 52.7**	**-1.7**
	comp=Z,4.2nm,0.9s,baz=131,slow=4.1,SNR=11									
LAO	**LASA Array**		**115.66**	**37**	PKiKP		**PKPdf**		**00 39 20.5**	**+1.4**
	baz=300									
DGMT	**Dagmar**		**115.91**	**34**	PKiKP		**PKPdf**		**00 39 20.5**	**+1.0**
	baz=303									
WUAZ	**Wupatki**		**116.92**	**50**	PKiKP		**PKiKP**		**00 39 22.9**	**+0.9**
	baz=291									
214A	**Organ Pipe Nat**		**116.96**	**54**	PKiKP		**PKiKP**		**00 39 23.3**	**+1.4**
	baz=288									
TAM	**Tamanrasset**		**117.23**	**296**	PKPdf		**PKiKP**		**00 39 25.2**	**+2.3**
TAM					IAMs_20		IAMs_20		01 29 35.0	
	comp=Z,442nm,22.0s									
TAM	**Tamanrasset**		**117.23**	**296**	PKiKP		**PKiKP**		**00 39 25.2**	**+2.3**
TAM					MLR		MLR			
	comp=Z,400nm,22.0s									
O20A	**White River Ci**		**117.40**	**44**	PKiKP		**PKiKP**		**00 39 24.0**	**+1.2**
	baz=295									
K22A	**Casper**		**117.42**	**41**	PKiKP		**PKiKP**		**00 39 24.1**	**+1.3**
	baz=298									
RSSD	**Black Hills**		**118.29**	**38**	PKPdf		**PKiKP**		**00 39 25.4**	**+0.9**
RSSD	**Black Hills**		**118.29**	**38**	PKiKP		**PKiKP**		**00 39 24.9**	**+0.5**
	baz=301									
RSSD	**Black Hills**		**118.29**	**38**	PKiKP		**PKiKP**		**00 39 25.4**	**+0.9**
W18A	**Petrified Fore**		**118.31**	**50**	PKiKP		**PKPdf**		**00 39 24.4**

PKME	Peaks-Kenny Pk	133.39	14	PKiKP	PKiKP	00 39 53.9	-0.2		
	baz=340								
O53A	New Philadelph	133.52	28	PKiKP	PKPdf	00 39 54.0	+0.6		
	baz=322								
P52A	Corning	133.56	29	PKiKP	PKPdf	00 39 54.1	+0.6		
	baz=321								
LBNH	Lisbon	133.64	17	PKiKP	PKPdf	00 39 54.1	+0.7		
	baz=336								
BINY	Binghamton	134.11	22	PKiKP	PKPdf	00 39 55.1	+0.7		
	baz=330								
MCWV	Mont Chateau	134.63	27	PKiKP	PKPdf	00 39 56.0	+0.6		
	baz=324								
SSPA	Standing Stone	134.69	25	PKiKP	PKiKP	00 39 56.7	-0.2		
	baz=327								
Z47A	Carrollton	134.74	40	PKPpre	PKPpre	00 39 45.5			
Z47A				PKPdf	PKPdf	00 39 56.5	+0.7		
L61B	Northampton	135.03	19	PKiKP	PKiKP	00 39 57.0	-0.5		
	baz=334								
TZTN	Tazewell	135.16	33	PKPdf	PKiKP	00 39 58.5	+0.4		
TZTN	Tazewell	135.16	33	PKiKP	PKPdf	00 39 57.4	+0.9		
	baz=317								
HRV	Adam Dziewonsk	135.33	18	PKiKP	PKiKP	00 39 57.7	-0.4		
	baz=336								
Y49A	Blount Mountai	135.36	38	PKPdf	PKPdf	00 39 57.7	+0.7		
S54A	Dingess, Beckl	135.39	30	PKPdf	PKiKP	00 39 58.2	-0.3		
FPAL	Fort Paine	135.39	37	PKPdf	PKPdf	00 39 55.9	-1.1		
CPCT	Cooper Cave	135.40	35	PKPdf	PKiKP	00 39 58.2	-0.3		
KSCT	Kent School, K	135.42	20	PKPdf	PKPdf	00 39 56.7	-0.1		
LRAL	Lakeview Retre	135.53	40	PKiKP	PKiKP	00 39 58.2	-0.6		
	baz=311								
P57A	Homestead Farm	135.59	26	PKPdf	PKPdf	00 39 56.9	-0.3		
X51A	Calhoun	135.82	36	PKPdf	PKPdf	00 39 57.9	+0.1		
PAL	Palisades	135.91	21	PKiKP	PKPdf	00 39 58.5	+0.8		
	baz=332								
W52A	Murphy	135.99	35	PKPdf	PKiKP	00 39 59.6	-0.2		
CPNY	Central Park	136.08	21	PKPdf	PKPdf	00 39 58.5	+0.5		
WUPA	West Chester U	136.21	23	PKPdf	PKPdf	00 39 59.2	+0.8		
BLA	Blacksburg	136.29	30	PKPdf	PKiKP	00 39 59.7	-0.6		
BLA	Blacksburg	136.29	30	PKiKP	PKPdf	00 39 59.5	+0.8		
	baz=321								
BLA	Blacksburg	136.29	30	PKiKP	PKiKP	00 39 59.7	-0.6		
Z51A	Franklin	136.49	38	PKPdf	PKPdf	00 39 59.9	+0.9		
BG3	Lake Jocassee	136.63	34	PKPdf	PKiKP	00 40 00.6	-0.4		
250A	Grady	136.69	40	PKPdf	PKiKP	00 40 00.9	-0.4		
Y52A	Lilburn	136.78	36	PKPdf	PKPdf	00 40 00.5	+0.9		
PLCA	Paso Flores	136.79	163	PKPdf	PKiKP	00 40 01.6	+0.3		
PLCA	Paso Flores	136.79	163	PKPdf	PKPdf	00 39 57.8	-1.8		
	comp=Z,12nm,1.0s,baz=200,slow=3.9,SNR=12								
PLCA				SKPab	SKiKP	00 43 31.7	-0.8		
	comp=Z,8.4nm,1.1s,baz=247,slow=2.5,SNR=6.3								
CBN	Corbin Frederi	136.93	26	PKPdf	PKPdf	00 39 56.7	-3.0		
V55A	Taylorsville	136.93	32	PKPdf	PKPdf	00 40 00.6	+0.8		
U56A	King	136.98	31	PKPdf	PKPdf	00 40 01.0	-0.7		
T57A	Hurt	137.03	29	PKPdf	PKPdf	00 40 00.1	+0.1		
152A	Waverly Hall	137.21	38	PKPdf	PKPdf	00 40 00.6	+0.1		
LR03	Panguipulli	137.21	160	PKPdf	PKPdf	00 40 00.7	+0.5		
PAULI	Pauline	137.38	33	PKPdf	PKiKP	00 40 02.0	-0.6		
KMSC	Kings Mountain	137.40	33	PKPdf	PKPdf	00 40 02.1	+0.6		
KMSC	Kings Mountain	137.40	33	PKiKP	PKPdf	00 40 01.4	+0.7		
	baz=319								
GOGA	Godfrey	137.45	36		PKPpre	00 39 52.1			
GOGA				PKPdf	PKPdf	00 40 01.4	+0.6		
GOGA	Godfrey	137.45	36	PKiKP	PKiKP	00 40 02.2	-0.6		
	baz=315								
GOGA	Godfrey	137.45	36	PKHKP	PKPpre	00 39 52.1			
GOGA						00 40 01.4			
GO06	Curarrehue	137.54	161	PKPdf	PKPdf	00 40 01.5	+0.5		
HODGE	Hodges	137.56	34	PKPdf	PKiKP	00 40 02.9	0.0		
T59A	Double "B" Far	137.86	27	PKPdf	PKPdf	00 40 02.6	+1.2		
V58A	Windy Hill, Pi	138.05	30	PKPdf	PKPdf	00 40 02.1	+0.3		
JSC	Jenkinsville	138.09	33	PKiKP	PKiKP	00 40 03.6	-0.4		
JSC	Jenkinsville	138.09	33	PKIKP	PKiKP	00 40 03.6	-0.4		
T60A	Surry	138.09	26	PKPpre	PKPpre	00 39 52.2			
T60A				PKPdf	PKPdf	00 40 02.9	+1.0		
W57A	Gilead	138.10	31	PKPdf	PKPdf	00 40 01.8	-0.2		
BIRD	Birdtown, Kers	138.25	32	PKPdf	PKiKP	00 40 03.5	-0.9		
U59A	Littleton	138.25	28	PKPpre	PKPpre	00 39 54.6			
U59A				PKPdf	PKPdf	00 40 02.5	+0.3		
TIGA	Tifton	138.75	39	PKPpre	PKPpre	00 39 55.2			
TIGA				PKPdf	PKPdf	00 40 04.4	+1.1		
TIGA	Tifton	138.75	39	PKiKP	PKPdf	00 40 04.0	+0.7		
	baz=313								
Y57A	Sumter	138.76	33	PKPdf	PKiKP	00 40 04.5	-0.8		
W59A	Clinton	138.88	30	PKPpre	PKPpre	00 39 54.3			
W59A				PKPdf	PKPdf	00 40 04.5	+1.1		
X58A	Rowland	138.91	31	PKPpre	PKPpre	00 39 53.4			
X58A				PKPdf	PKPdf	00 40 03.4	-0.1		
255A	Hazlehurst	139.09	37	PKPdf	PKiKP	00 40 05.4	-0.7		
CNNC	Cliffs of the	139.10	29	PKPdf	PKiKP	00 40 05.3	-0.7		
Y58A	Scranton	139.23	32	PKPdf	PKPdf	00 40 04.6	+0.5		
V61A	Roper	139.27	27	PKPpre	PKPpre	00 39 52.8			
V61A				PKPdf	PKPdf	00 40 04.2	+0.1		
NHSC	New Hope	139.56	34	PKiKP	PKPdf	00 40 05.9	+1.2		
	baz=319								
TRQA	Tornquist	141.32	171		PKPpre	00 40 03.5			
TRQA	Tornquist	141.32	171	PKIKP	PKPdf	00 40 03.5	-4.3		
DWPF	Disney Wildern	142.38	40	PKiKP	PKPdf	00 40 11.3	+1.4		
	baz=313								
MT13	San Alfonso	143.21	158	PKPdf	PKPdf	00 40 10.6	-0.9		
SOR	Soroa	144.63	49	IAMs_20	IAMs_20	01 26 33.4			
	comp=Z,275nm,19.0s								
BOAB	BOACO BROADBAND	147.13	67		PKPbc	00 40 20.9	+0.3		
LCO	Las Campanas	147.20	154		PKPbc	00 40 21.1	+0.2		
LCO	Las Campanas	147.20	154	PKP2	PKPbc	00 40 21.1	+0.2		
ORTG	Ortega, Santa	147.96	71		PKPbc	00 40 22.8	-0.3		
JTS	Las Juntas de	148.46	71	PKPab	PKiKP	00 40 26.1	+0.2		
JTS	Las Juntas de	148.46	71	PKP2	PKiKP	00 40 26.1	+0.2		
COVE	Coope Vega, Sa	148.85	70	PKPbc	PKPbc	00 40 24.5	-0.8		
JACO	JACO, Garabito	148.91	72		PKPab	00 40 28.7	-0.8		
HDC	Heredia	149.34	71	PKPab	PKiKP	00 40 29.5	+1.7		
LCR2	La Lucha 2	149.51	71	PKPab	PKiKP	00 40 30.1	+1.8		
AC01	Pan de Azucar	149.68	151	PKPab	PKiKP	00 40 29.4	+1.3		
AC02	Maricunga	149.77	154	PKPab	PKiKP	00 40 30.8	+1.9		
ITQB	Itaqui	150.20	177	PKPab	PKiKP	00 40 30.6	+1.5		
DRK0	Durika	150.36	72	PKPab	PKiKP	00 40 32.1	+2.1		
ITAB	Concordia	152.55	185		PKiKP	00 40 35.7	+1.8		
CPUP	Villa Florida	153.47	175	PKP	PKPdf	00 40 26.8	-1.3		
	comp=Z,11nm,1.1s,baz=122,slow=0.7,SNR=9.5								
CPUP				PKPbc	PKiKP	00 40 37.4	+1.6		
	comp=Z,35nm,1.1s,baz=161,slow=0.9,SNR=24								
IGPR	InterUniversit	159.21	32	PKPab	PKPab	00 41 13.9	+1.1		
ROSC	El Rosal	160.04	76	PKP	PKPdf	00 40 37.0	-0.3		
	comp=Z,14nm,1.0s,baz=330,slow=3.5,SNR=9.2								
ROSC				PKPab	PKPab	00 41 18.4	+1.1		
	comp=Z,11nm,0.6s,baz=90,slow=2.0,SNR=4.0								
BDFB	Brasilia	162.82	203	PKP	PKPdf	00 40 39.2	-0.7		
	comp=Z,7.6nm,1.0s,baz=101,slow=5.1,SNR=8.7								
BDFB				PKPab	PKPab	00 41 29.8	+1.1		
	comp=Z,14nm,1.0s,baz=131,slow=6.2,SNR=8.0								
BAUV	El Baul	164.29	56	PKPab	PKPab	00 41 36.6	+1.3		
FDF	Fort de France	164.32	23	PKPdf	PKPdf	00 40 42.2	+1.0		
FDF	Fort de France	164.32	23	PKIKP	PKPdf	00 40 42.2	+1.0		
TBTG	Tabatinga, AM	164.34	107	PKPdf	PKPdf	00 40 42.0	+0.8		
ETMB	Extrema	164.91	132	PKPdf	PKPdf	00 40 42.8	+1.2		
VILB	Vilhena	165.86	158	PKPdf	PKPdf	00 40 43.9	+1.5		
SAML	Samuel	167.67	138	PKPdf	PKPdf	00 40 45.7	+1.9		
SAML	Samuel	167.67	138	PKIKP	PKPdf	00 40 45.7	+1.9		
MACA	Manacapuru-AM	173.27	120	PKPdf	PKPdf	00 40 48.2	+1.3		
BOAV	Boa Vista	173.96	69	PKPdf	PKPdf	00 40 47.3	+0.1		

*ISK **02** 00:44:08.6,39˚.28N×29˚.26E,h5km,ML3.4/45*
*AFAD **02** 00:44:08.3±0.0,39˚.26N×29˚.24E,h6km±2km,MW3.5*
ISC 02 00:44:08.7±0.8,**39˚.27N**±0˚.02×**29˚.26E**±0˚.02,**h13**km±5km,
n89,σ1§02/121,**7C-17D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMET	Ktahya-Emet	0.12	24	P	Pg	00 44 11.8	-0.2
EMET				S	Sg	00 44 13.7	-0.7
TVSB	Tavsanli	0.24	41	Pg	Pg	00 44 13.8	-0.1
TVSB				Sg	Sg	00 44 17.3	-0.1
GDZ	Gediz	0.25	136	P	Pg	00 44 13.8	-0.3
GDZ				S	Sg	00 44 16.9	-0.9
GEDZ	Gediz	0.25	152	Pg	Pg	00 44 14.2	+0.1
GEDZ				Sg	Sg	00 44 18.0	+0.2
SIMA	Simav-Kutahya	0.28	229	Pg	Pg	00 44 14.7	0.0
SIMA				Sg	Sg	00 44 19.2	+0.5
DEMI	Demirci	0.48	242	P	Pg	00 44 18.3	+0.1
DEMI				S	Sg	00 44 24.0	-0.6
ANDZ	Kutahya, Merke	0.55	64	P	Pg	00 44 19.1	-0.4
ANDZ				S	Sg	00 44 26.0	-0.9

USAK	Uak-Merkez	0.59	199	P	Pg	00 44 20.1	0.0		
USAK				S	Sg	00 44 27.1	-0.9		
DST	Dursunbey	0.60	304	Pg	Pb	00 44 20.7	-0.3		
DOMA	Ktahya-Doman	0.61	33	P	Pg	00 44 20.2	-0.6		
DURS	Dursunbey	0.69	299	P	Pg	00 44 22.2	0.0		
DURS				S	Sg	00 44 31.1	-0.3		
BNAZ	Uak-Banaz	0.76	141	P	Pg	00 44 23.6	+0.1		
BNAZ				S	Sg	00 44 31.5	-2.0		
ORLT	Orhaneli	0.82	340	Pg	Pg	00 44 24.2	-0.5		
ULDT	Uludag	0.88	354	P	Pg	00 44 25.6	-0.1		
KULA	Kula-Manisa	0.89	212	Pg	Pg	00 44 25.6	-0.3		
AUKUT	KUTAHYA	0.90	40	P	Pg	00 44 20.1	-6.0		
AUKUT				S	Sg	00 44 27.3	-11		
PASA	Karahalli, USA	0.94	169	P	Pg	00 44 26.6	-0.3		
PASA				S	Sg	00 44 37.0	-2.1		
AFYO	Afyonkarahisar	0.94	120	P	Pb	00 44 27.6	+0.7		
AFYO				S	Sb	00 44 39.8	+0.5		
KHL	Karahalli	0.97	168	Pg	Pn	00 44 28.8	+0.8		
AUKIR	Kırka- Seyitga	0.99	89	P	Pb	00 44 28.4	+0.8		
IGD	Bursa	0.99	357	P	Pg	00 44 27.6	-0.3		
IGD				S	Sb	00 44 42.0	+1.3		
BILE	Bilecik/Merkez	1.01	28	P	Pg	00 44 27.6	-0.6		
BILE				S	Sn	00 44 43.4	+0.7		
CAVI	Cavuskoy	1.03	26	Pg	Pb	00 44 28.9	+0.5		
BORA	Eskisehir	1.11	56	P	Pg	00 44 29.2	-0.8		
BORA				S	Sg	00 44 43.3	-1.1		
BKES	Balkesir-Mer	1.13	295	P	Pn	00 44 30.6	+0.5		
BKES				S	Sb	00 44 45.1	+0.5		
BALB	Balikesir	1.13	290	Pn	Pn	00 44 31.1	+1.0		
MDNY	Mudanya-Bursa	1.14	345	Pn	Pg	00 44 30.3	-0.3		
GEMT	Gemlik	1.17	357	Pn	Pn	00 44 31.3	+0.7		
BLKS	Balkesir-Sus	1.17	302	P	Pb	00 44 31.0	+0.3		
BLKS				P	Pb	00 44 31.0	+0.3		
BLKS				S	Sb	00 44 46.7	+1.0		
BLKS				S	Sn	00 44 46.9	+0.5		
GOMA	Golmarmara-Man	1.19	242	Pn	Pn	00 44 31.9	+1.0		
AKHS	Akhisar	1.19	251	P	Pg	00 44 31.2	-0.4		
AKHS				S	Sb	00 44 46.8	+0.4		
STEP	BALIKESIR_Sava	1.20	276	P	Pn	00 44 31.8	+0.7		
STEP				S	Sn	00 44 47.9	+0.6		
KCTX	Karacabey (Bur	1.21	325	Pn	Pn	00 44 32.0	+0.7		
ADVT	Abdulvahap	1.22	17	Pn	Pg	00 44 31.8	-0.3		
KZIL	AFYON_Kizioren	1.22	145	P	Pg	00 44 31.6	-0.6		
SHUT	Suhut-Afyon	1.24	125	Pn	Pn	00 44 32.9	+1.2		
SGAZ	Eskisehir, Sey	1.25	78	P	Pg	00 44 32.1	-0.6		
SGAZ				S	Sg	00 44 47.5	-1.5		
YLV	Yalova	1.30	4	Pn	Pg	00 44 35.1	+1.4		
HISA	Bilecik-Osmane	1.30	23	P	Pn	00 44 33.1	+0.6		
HISA				S	Sg	00 44 50.5	-0.1		
GPA	Golpazari	1.30	38	Pn	Pg	00 44 34.3	+0.6		
SRCK	Saricakaya, Es	1.31	53	Pn	Pn	00 44 33.2	+0.6		
KURT	Yalova, Merkez	1.32	358	P	Pn	00 44 33.6	+0.8		
ARMT	Armutlu	1.33	347	Pn	Pg	00 44 34.6	+0.3		
OSMT	Osmaniye	1.37	14	Pn	Pg	00 44 35.6	+0.5		
BAND	Balkesir-Ban	1.41	321	P	Pn	00 44 34.5	+0.5		
BAND				S	Sb	00 44 51.9	-0.7		
GONE	Gonen-Balikesi	1.44	303	Pn	Pg	00 44 36.1	-0.3		
GEYV	SAKARYA_Geyve	1.45	33	P	Pb	00 44 35.9	+0.4		
GEYV				S	Sn	00 44 53.5	+0.1		
BASM	Basmaki-Afyon	1.48	155	Pn	Pb	00 44 36.6	+0.5		
GULT	Gulveren	1.51	39	Pn	Pg	00 44 38.0	+0.3		
EDC	Edincik	1.52	315	Pn	Pg	00 44 38.2	+0.3		
HRT	Hereke	1.58	11	Pn	Pb	00 44 37.8	0.0		
SAUV	Serdivan-Sakar	1.68	29	Pn	Pn	00 44 38.9	+1.2		
ISP	Isparta	1.75	145	Pn	Pb	00 44 41.3	+0.6		
SVRH	Sivrihisar-ESK	1.76	84	Pn	Pb	00 44 41.1	+0.2		
APMY	Acipayam-Deniz	1.80	179	Pn	Pb	00 44 41.8	+0.4		
KAVV	Kandilli-Istan	1.80	355	Pn	Pn	00 44 40.7	+1.4		
ISK	Istanbul-Kandi	1.80	355	Pn	Pb	00 44 41.5	0.0		
DKL	Dikili	1.84	265	Pn	Pn	00 44 41.3	+1.4		
RFT7	Candarli	1.85	261	Pn	Pb	00 44 42.4	+0.2		
CANM	Can-anakkale	1.86	294	Pn	Pb	00 44 42.4	0.0		
KRBG	Karabiga-Canak	1.88	307	Pn	Pn	00 44 42.0	+1.5		
SILT	Sile	1.90	9	Pn	Pn	00 44 42.4	+1.6		
MDUB	Mudurnu	1.91	51	Pn	Pn	00 44 42.4	+1.4		
BLCB	Balcova	1.94	244	Pn	Pb	00 44 43.2	-0.7		
BGKT	Bogazkoy	1.94	349	Pn	Pb	00 44 43.3	-0.6		
KLYT	Kilyos	1.99	355	Pn	Pb	00 44 44.3	-0.3		
CTKS	Kestanelik-??a	2.05	344	Pn	Pb	00 44 44.9	-0.8		
SLVT	Silivri	2.12	338	Pn	Pn	00 44 45.4	+1.7		
RKY	Sarkoy-Tekirda	2.14	312	Pn	Pb	00 44 46.2	-1.0		
YUVA	Yuva-Kibriscik	2.18	58	Pn	Pb	00 44 47.1	-0.9		
CRLT	Corlu	2.19	328	Pn	Pn	00 44 46.9	+2.1		
CTYL	Yalikoy Yolu	2.32	342	Pn	Pb	00 44 49.6	-0.8		
KIYI	Yalikoy-Catalc	2.33	342	Pn	Pn	00 44 49.0	+2.4		
ELND	Elena	4.46	326	⇓S	Pn	00 45 16.9	+1.0		
ELND				⇓S	Sn	00 46 06.0	-1.6		
TIRR	Tirgusor	5.22	353	⇑P	Pn	00 45 27.5	+1.2		
TIRR				⇓S	Sn	00 46 26.2	-0.2		
PLVB	Pleven	5.39	321	⇓P	Pn	00 45 30.6	+1.8		
PLVB				⇓S	Sn	00 46 28.5	-2.2		
TPGR	Topolog	5.62	354	⇑P	Pn	00 45 32.9	+1.0		
TPGR				⇓S	Sn	00 46 35.4	-0.8		
CFR	Carcaliu	5.96	352	⇓P	Pn	00 45 37.3	+0.8		
CFR				⇑S	Sn	00 46 43.1	-1.5		
MLR	Muntele Rosu	6.68	340	⇓P	Pn	00 45 48.7	+2.1		
VRI	Vrincioaia	6.85	345	⇓P	Pn	00 45 50.5	+1.8		
PLOR	Plostina	6.85	345	⇓P	Pn	00 45 51.1	+2.3		
VOIR		6.91	335	⇓P	Pn	00 45 50.9	+1.4		
COVR	Voineasa-Covas	6.95	342	⇓P	Pn	00 45 51.4	+1.3		
ARR	Arges	6.99	332	⇑P	Pn	00 45 52.4	+1.6		
TURR	Turia	7.19	342	⇓P	Pn	00 45 54.3	+0.8		
DOPR	Dopca	7.28	338	⇑P	Pn	00 45 56.0	+1.4		
DOPR				⇓S	Sn	00 47 14.7	-2.3		
LOT	Lotru	7.39	328	⇓S	Sn	00 47 18.4	-1.6		
HERR	Herculane	7.57	320	⇓P	Pn	00 45 58.9	+0.3		
HERR				⇓S	Sn	00 47 22.5	-1.7		
GZR	Gura Zlata	7.78	324	⇑P	Pn	00 46 02.7	+1.2		
GZR				⇓S	Sn	00 47 27.3	-2.1		

*IDC **02** 00:48:21.5±1.2,23˚.89N×97˚.52E,h0km,mb3.3/6,*
mbtmp3.3/7,ML3.8/1,Error ellipse: s-maj=70.6km
s-min=15.3km az=72.0
ISC 02 00:48:22.0±1.2,**23˚.7N**±0˚.1×**97˚.3E**±0˚.5,**h10**km,**n7,σ1§75/8,**
mb3.4/6,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	5.45	164	P	Pn	00 49 44.9	+1.5
	0.8nm,0.3s,baz=341,slow=13,SNR=4.3						
CMAR				Pg	Pg	00 50 04.2	-2.2
	1.3nm,0.3s,baz=344,slow=17,SNR=9.5						
CMAR				Lg	Lg	00 51 16.7	
	1.5nm,0.3s,baz=348,slow=30,SNR=4.3						
	0.9nm,0.3s						
SONM	Songino Array	25.13	14	P	P	00 53 46.0	-1.3
	0.3nm,0.3s,baz=199,slow=8.5,SNR=3.1						
	0.3nm,0.3s						
MKAR	Makanchi Array	26.00	336	P	P	00 53 56.3	+1.2
	0.4nm,0.7s,baz=142,slow=9.9,SNR=5.8						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	30.57	336	P	P	00 54 35.3	-0.4
	0.1nm,0.3s,baz=148,slow=7.6,SNR=1.9						
	0.1nm,0.3s						
ZALV	Zalesovo Beam	31.62	346	P	P	00 54 44.3	-0.7
	0.2nm,0.3s,baz=171,slow=10,SNR=1.7						
	0.2nm,0.3s						
WRA	Warramunga Arr	56.44	137	P	P	00 58 05.7	+1.5
	0.3nm,0.7s,baz=324,slow=7.6,SNR=1.4						
	0.3nm,0.7s						
ASAR	Alice Springs	58.99	140	P	P	00 58 23.5	+1.3
	0.2nm,0.6s,baz=317,slow=7.6,SNR=2.5						
	0.2nm,0.6s						

*ISN **02** 00:49:14.5±0.5,34˚.71N×45˚.55E,h14km±3km,ML3.1*
*TEH **02** 00:49:14.6,34˚.64N×45˚.54E,h14km±22km,ML3.1*
ISC 02 00:49:14.4±1.4,**34˚.68N**±0˚.03×**45˚.56E**±0˚.04,**h1**km±13km,
n18,σ0§96/22,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.17	172	Pg	Pg	00 49 18.3	+0.6
IDHR	Dehrash	0.68	88	Pg	Pg	00 49 27.7	+0.2
IDHR				Sg	Sb	00 49 38.9	-0.4
IGHG	Ghaleghazi	0.90	112	Pg	Pb	00 49 32.5	-0.6
ILIN	Lien	1.18	78	Pg	Pg	00 49 37.8	+0.8
ILBA	Ilam Banvizeh	1.18	153	Pg	Pn	00 49 36.6	-1.6
KCHF	Cheshme Sefid,	1.29	108	Pg	Pg	00 49 39.7	+0.6
SDS1	Sardasht. Az.	1.47	358	Pg	Pg	00 49 42.8	+0.3

IBDR	Badra	1.60	169	ePg	Pb	00 49 44.0	-0.7		
IBDR				eSg	Sg	00 50 06.0	+0.3		
IBDR				AML	AML	00 50 11.6			
	comp=N,126nm,0.8s								
BHD	Baghdad	1.71	215	ePg	Pb	00 49 46.0	-0.7		
BHD				eSg	Sg	00 50 09.0	-0.5		
BHD				AML	AML	00 50 10.8			
	comp=E,534nm,0.2s								
IBZA	Bozab	1.91	96	Pn	Pb	00 49 49.8	-0.4		
MAHB	Mahabad	2.09	3	Pn	Pb	00 49 51.5	-1.7		
IALM	Almaboliaq	2.15	84	Pn	Pb	00 49 52.7	-1.8		
IKFM	Kafar-mosalman	2.22	121	Pn	Pn	00 49 52.4	0.0		
HSAM	Samen	2.56	100	Pn	Pn	00 49 57.6	+0.3		
HAGD	Aghdareh	2.95	86	Pn	Pn	00 50 03.4	+0.7		
RAFI	Al-Rafai	2.98	171	ePn	Pn	00 50 04.0	+1.1		
RAFI				eSn	Sn	00 50 40.0	+0.7		
ISRB	Sarab	3.57	28	Pn	Pn	00 50 12.3	+1.1		
ISHB	Shabestar	3.60	1	Pn	Pn	00 50 12.7	+1.1		

*NEIC **02** 00:52:26.1±1.4,36˚.070N×0˚.009×96˚.78W±0˚.01,h6km±2km,*
Error ellipse: s-maj=1.3km s-min=1.3km az=115.0
TUL 02 00:52:26±1.1,**36˚.073N**±0˚.009×**96˚.77W**±0˚.01,**h5**km±1km,
ML2.5,mb_Lg1.9/5(NEIC),**ML2.0/28**(NEIC),**Error ellipse:**
s-maj=1.4km s-min=1.2km az=128.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK052	Battle Ridge R	0.08	201	Pg	Pg	00 52 27.8	0.0
OK052				Sg	Sg	00 52 29.6	+0.5
OK052				IAML		00 52 30.6	
	1μm,0.2s						
QUOK	Quay	0.11	25	Pg	Pg	00 52 28.8	+0.5
QUOK				Sg	Sg	00 52 30.6	+0.7
QUOK				IAML		00 52 30.9	
	comp=N,606nm,0.2s						
OK033	Mehan	0.14	259	Pg	Pg	00 52 29.1	+0.3
OK033				Sg	Sg	00 52 31.4	+0.7
OK033				IAML		00 52 31.7	
	comp=N,586nm,0.1s						
DEOK	Depew	0.32	137	Pg	Pg	00 52 32.4	+0.3
DEOK				Sg	Sg	00 52 37.0	+0.8
OK048	Pawnee Station	0.37	337		Pg	00 52 33.5	+0.3
OK048				Sg	Sg	00 52 38.6	+0.5
OK048				IAML		00 52 38.9	
	comp=N,126nm,0.4s						
OK048				IAML		00 52 38.9	
	comp=N,199nm,0.2s						
OK051	E0350 and S346	0.44	353		Sg	00 52 40.9	+0.8
OK029	Liberty Lake	0.62	244	Pg	Pg	00 52 38.2	+0.2

TUZ	**Tuapeka**	**1.77**	**114**	P	Pn	01 56 19.7 +0.6
TUZ				S	Sn	01 56 40.6 -0.5
SYZ	**Scrubby Hill**	**1.80**	**136**	P	Pn	01 56 20.2 +0.6
SYZ				S	Sn	01 56 42.4 +0.5
LBZ	**Lake Benmore**	**2.22**	**68**	P	Pn	01 56 24.2 -1.0
ODZ	**Otahua Downs**	**2.36**	**86**	P	Pn	01 56 26.4 -0.7
HHSZ	**Highcliff Hill**	**2.39**	**106**	P	Pn	01 56 26.8 -0.6
TMZ	**Timaru**	**2.77**	**73**	P	Pn	01 56 31.0 -1.6
WEL	**Wellington**	**6.73**	**56**	P	Pn	01 57 28.7 +2.2

NEIC ***02*** *01:56:24.0±0.9, 15°.2N±0°.2×94°.71W±0°.05, h30km±9km, mb4.0/2, Md4.4/64(MEX), Error ellipse: s-maj=21.9km s-min=7.1km az=177.0*
MEX ***02*** *01:56:24.5±1.0, 15°.28N×94°.70W, h17km±10km, MD4.4*
ISC 02 01:56:20.4±1.0, 15°.26N±0°.04×94°.70W±0°.02, h10km, n62, σ2s33/102, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CARR	**Arriaga**	**1.24**	**38**	*eP*		**Pn**	**01 56 43.0**	**-0.8**
CARR				*eS*		**Sb**	**01 56 56.2**	**-3.7**
NILT	**Santiago Nilte**	**1.30**	**4**	*eP*		**Pn**	**01 56 44.0**	**-0.7**
NILT				*eS*		**Sb**	**01 56 58.3**	**-3.4**
HUIG	**Huatulco**	**1.45**	**291**			**Pn**	**01 56 46.9**	**+0.3**
HUIG						**Sn**	**01 57 02.5**	**-3.2**
HUIG	**Huatulco**	**1.45**	**291**	*eP*		**Pn**	**01 56 46.9**	**+0.3**
HUIG				*eS*		**Sn**	**01 57 02.5**	**-3.2**
CMIG	**Matias Romero**	**1.83**	**355**			**Pn**	**01 56 52.4**	**+0.5**
CMIG						**Sn**	**01 57 13.5**	**-1.6**
CMIG	**Matias Romero**	**1.83**	**355**	*eP*		**Pn**	**01 56 52.4**	**+0.5**
CMIG				*eS*		**Sn**	**01 57 13.5**	**-1.6**
UXUV	**UXUV**	**2.12**	**15**	*eP*		**Pn**	**01 56 57.3**	**+1.5**
UXUV				*eS*		**Sn**	**01 57 21.8**	**-0.4**
TGIG		**2.14**	**45**			**Pn**	**01 56 57.7**	**+1.4**
TGIG						**Sn**	**01 57 22.5**	**-0.4**
TGIG		**2.14**	**45**	*eP*		**Pn**	**01 56 57.7**	**+1.4**
TGIG				*eS*		**Sn**	**01 57 22.5**	**-0.4**
TGBT	**Tuxtla Gutierr**	**2.16**	**46**			**Pn**	**01 56 57.9**	**+1.4**
TGBT						**Sn**	**01 57 24.0**	**+0.6**
TGBT	**Tuxtla Gutierr**	**2.16**	**46**	*eP*		**Pn**	**01 56 57.9**	**+1.4**
TGBT				*eS*		**Sn**	**01 57 24.0**	**+0.6**
THIG		**2.38**	**98**			**Pn**	**01 57 02.8**	**+3.4**
THIG						**Sn**	**01 57 26.8**	**-1.9**
THIG		**2.38**	**98**	*eP*		**Pn**	**01 57 02.8**	**+3.4**
THIG				*eS*		**Sn**	**01 57 26.8**	**-1.9**
PATR	**El Naranjo**	**2.39**	**93**	*eP*		**Pn**	**01 57 00.3**	**+0.5**
PATR				*eS*		**Sn**	**01 57 26.9**	**-2.4**
PAVE	**Pavencul**	**2.44**	**91**	*eP*		**Pn**	**01 57 01.2**	**+0.7**
PAVE				*eS*		**Sn**	**01 57 28.4**	**-2.0**
PEIG	**Puerto Escondi**	**2.47**	**288**			**Pn**	**01 57 01.4**	**+0.7**
PEIG						**Sn**	**01 57 27.3**	**-3.7**
PEIG	**Puerto Escondi**	**2.47**	**288**	*eP*		**Pn**	**01 57 01.4**	**+0.7**
PEIG				*eS*		**Sn**	**01 57 27.3**	**-3.7**
CHUJ	**Union Juarez**	**2.51**	**93**	*eP*		**Pn**	**01 57 02.2**	**+0.8**
CHUJ				*eS*		**Sn**	**01 57 29.4**	**-2.9**
OXIG	**Oaxaca**	**2.66**	**313**			**Pn**	**01 57 06.2**	**+2.7**
OXIG						**Sn**	**01 57 34.1**	**-1.7**
VHO	**Vista Hermosa**	**2.66**	**313**	*eP*		**Pn**	**01 57 06.2**	**+2.7**
VHO				*eS*		**Sn**	**01 57 34.1**	**-1.7**
NEUV	**Arroyo Zacate**	**2.66**	**337**	*eP*		**Pn**	**01 57 04.1**	**+0.8**
NEUV				*eS*		**Sn**	**01 57 34.3**	**-1.3**
CCIG	**Comitan**	**2.67**	**67**			**Pn**	**01 57 05.5**	**+1.8**
CCIG	**Comitan**	**2.67**	**67**	*eP*		**Pn**	**01 57 06.0**	**+2.3**
CCIG				*eS*		**Sn**	**01 57 37.4**	**+1.3**
TUIG	**Tuzandepetl**	**2.77**	**5**	*eP*		**Pn**	**01 57 06.1**	**+1.2**
TUIG				*eS*		Sn	01 57 32.1	-6.3
SMSP	**San Marcos**	**2.83**	**95**	*eS*		**Sn**	**01 57 37.3**	**-3.0**
RTAL	**Retalhuleu**	**3.00**	**104**	*eS*		**Sn**	**01 57 41.1**	**-2.9**
HUEH	**Huehuetenango**	**3.09**	**89**			**Pn**	**01 57 10.9**	**+1.5**
HUEH	**Huehuetenango**	**3.09**	**89**	*eP*		**Pn**	**01 57 13.6**	**+4.2**
HUEH				*eS*		**Sn**	**01 57 49.8**	**+3.3**
YOIG	**Yosondua**	**3.16**	**301**			**Pn**	**01 57 13.2**	**+2.7**
YOIG						**Sn**	**01 57 47.4**	**-1.0**
YOIG	**Yosondua**	**3.16**	**301**	*eP*		**Pn**	**01 57 13.2**	**+2.7**
YOIG				*eS*		**Sn**	**01 57 47.4**	**-1.0**
PMUV	**Sontecomapan**	**3.29**	**353**	*eP*		**Pn**	**01 57 12.0**	**-0.1**
PMUV				*eS*		Sn	01 57 41.1	-10
PNIG	**Pinotepa**	**3.48**	**289**			**Pn**	**01 57 16.2**	**+1.5**
PNIG						**Sn**	**01 57 53.6**	**-2.5**
PNIG	**Pinotepa**	**3.48**	**289**	*eP*		**Pn**	**01 57 16.2**	**+1.5**
PNIG				*eS*		**Sn**	**01 57 53.6**	**-2.5**
TXIG	**Tlaxiaco**	**3.55**	**304**			**Pn**	**01 57 19.2**	**+3.4**
TXIG						**Sn**	**01 57 57.9**	**-0.1**
TXIG	**Tlaxiaco**	**3.55**	**304**	*eP*		**Pn**	**01 57 19.2**	**+3.4**
TXIG				*eS*		**Sn**	**01 57 57.9**	**-0.1**
TOIG	**Toxpalan**	**3.62**	**322**			**Pn**	**01 57 20.8**	**+4.2**
TOIG						**Sn**	**01 57 58.9**	**-0.6**
TOIG	**Toxpalan**	**3.62**	**322**	*eP*		**Pn**	**01 57 20.8**	**+4.2**
TOIG				*eS*		**Sn**	**01 57 58.9**	**-0.6**
HLIG	**Huajuapan de L**	**3.92**	**311**			**Pn**	**01 57 24.5**	**+3.6**
HLIG						**Sn**	**01 58 06.1**	**-1.0**
HLIG	**Huajuapan de L**	**3.92**	**311**	*eP*		**Pn**	**01 57 24.5**	**+3.6**
HLIG				*eS*		**Sn**	**01 58 06.1**	**-1.0**
TPIG	**Tehuac#an**	**4.04**	**321**	*e*		**Sn**	**01 58 09.1**	**-1.0**
FTIG	**Fresnillo de T**	**4.21**	**309**			**Pn**	**01 57 28.9**	**+4.0**
FTIG						**Sn**	**01 58 13.1**	**-1.1**
FTIG	**Fresnillo de T**	**4.21**	**309**	*eP*		**Pn**	**01 57 28.9**	**+4.0**
FTIG				*eS*		**Sn**	**01 58 13.1**	**-1.1**
MGIG	**Malinaltepec**	**4.26**	**298**			**Pn**	**01 57 28.8**	**+3.2**
MGIG						**Sn**	**01 58 14.2**	**-1.2**
MGIG	**Malinaltepec**	**4.26**	**298**	*eP*		**Pn**	**01 57 28.6**	**+3.2**
MGIG				*eS*		**Sn**	**01 58 14.2**	**-1.2**
TLIG	**Tlapa**	**4.36**	**302**	Pn		**Pn**	**01 57 30.3**	**+3.5**
TLIG	**Tlapa**	**4.36**	**302**	*eP*		**Pn**	**01 57 30.6**	**+3.7**
TLIG				*eS*		**Sn**	**01 58 16.6**	**-1.2**
CRIG	**Cruz Grande**	**4.51**	**290**			**Pn**	**01 57 30.7**	**+1.9**
CRIG						Sn	01 58 15.7	-5.6
CRIG	**Cruz Grande**	**4.51**	**290**	*eP*		**Pn**	**01 57 30.7**	**+1.9**
CRIG				*eS*		Sn	01 58 15.7	-5.6
JAUV	**Jalcomulco**	**4.55**	**334**	*eP*		**Pn**	**01 57 30.3**	**+0.9**
JAUV				*eS*		**Sn**	**01 58 18.6**	**-3.8**
PETF	**Flores**	**4.93**	**70**			**Pn**	**01 57 36.3**	**+1.7**
PETF	**Flores**	**4.93**	**70**	*eP*		**Pn**	**01 57 37.0**	**+2.5**
PETF				*eS*		**Sn**	**01 58 27.4**	**-4.4**
SCIG	**Sabancuy**	**4.99**	**42**	*e*		Sn	01 58 25.5	-7.6
DAIG	**Los Arroyos**	**5.07**	**291**	*eP*		**Pn**	**01 57 38.2**	**+1.7**
DAIG				*eS*		**Sn**	**01 58 31.2**	**-4.0**
MTO3	**Montecristo**	**5.24**	**99**	Pn		**Pn**	**01 57 40.3**	**+1.3**
PPM	**Popocatepetl**	**5.33**	**316**	*eP*		Pn	01 57 45.9	+5.3
PPM				*e*			01 58 34.0	
PPIG	**Popocatepetl**	**5.33**	**316**			Pn	01 57 45.9	+5.3
MEIG	**Mezcala**	**5.41**	**300**	*eP*		**Pn**	**01 57 44.3**	**+3.1**
MEIG				*eS*		**Sn**	**01 58 43.1**	**-0.5**
YAIG	**Yautepec**	**5.50**	**311**	*eP*		**Pn**	**01 57 45.6**	**+3.1**
YAIG				*eS*		**Sn**	**01 58 44.0**	**-2.0**
CAIG	**El Cayaco**	**5.64**	**289**	*eP*		**Pn**	**01 57 46.7**	**+2.4**
CAIG				*eS*		Sn	01 58 43.9	-5.2
TEIG	**Tepich**	**7.86**	**50**	Pn		**Pn**	**01 58 15.8**	**+0.9**
Z35A	**Perchaven, San**	**18.14**	**353**	P		Pn	**02 00 33.9**	**+1.4**
Z35A				IAmb		IAmb	02 01 01.9	
	comp=Z,10nm,0.8s							
Z47A	**Carrollton**	**18.84**	**17**	P		**P**	**02 00 42.0**	**+1.4**
Z47A				IAmb		IAmb	02 01 07.7	
	comp=Z,9.0nm,1.0s							

JMA ***02*** *01:57:44.5±0.3, 23°.1±1°.1×124°.5E±0°.9, h41km, MV2.7/13, NEAR ISHIGAKIJIMA ISLAND*
ISC 02 01:57:43.3±1.1, 23°.1N±0°.1×124°.49E±0°.08, h10km±13km, n14, σ0s69/19, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
HATJ	**Hateruma jima**	**1.15**	**327**	P		**Pg**	**01 58 05.4**	**0.0**
HATJ				S		**Sg**	**01 58 20.4**	**0.0**
JKRS	**Kuro-shima**	**1.22**	**339**	S		**Sg**	**01 58 23.5**	**+0.8**
JIJ	**Ishigaki jima**	**1.30**	**346**	P		**Pn**	**01 58 07.7**	**+0.1**
JIJ				S		**Sg**	**01 58 24.1**	**-1.3**
JISG	**Ishigakijimahi**	**1.50**	**354**	P		**Pn**	**01 58 10.4**	**+0.2**
JISG				*eS*		**Sn**	**01 58 29.1**	**-0.7**
JTJ	**Tarama**	**1.55**	**7**	P		**Pn**	**01 58 11.3**	**+0.3**
JTJ				*eS*		**Sn**	**01 58 31.8**	**+0.6**
JMJ2	**Miyako jima3**	**1.81**	**25**	*eP*		**Pn**	**01 58 14.9**	**+0.4**
JMJ2				*eS*		**Sn**	**01 58 36.6**	**-1.0**
JOGS	**Gusukube**	**1.86**	**27**	P		**Pn**	**01 58 16.2**	**+1.0**
YOJ	**Yonaguni jima**	**1.92**	**315**	P		**Pn**	**01 58 16.5**	**+0.4**
YOJ				S		**Sn**	**01 58 40.4**	**+0.1**
JIKM	**Ikemajima**	**1.95**	**21**	*eP*		**Pn**	**01 58 16.4**	**-0.1**
NACB	**Ninganchiao**	**2.87**	**293**	P		**Pn**	**01 58 29.3**	**+0.3**
YULB	**Yu-li**	**2.95**	**276**	P		Pn	01 58 28.6	-1.7
YHNB	**Yeheng**	**3.25**	**299**	P		**Pn**	**01 58 35.6**	**+1.1**
SSLB	**Suanglung**	**3.32**	**283**	P		**Pn**	**01 58 34.7**	**-0.6**
TPUB	**Ta-pu**	**3.56**	**274**	P		**Pn**	**01 58 38.6**	**0.0**

CRAAG ***02*** *02:03:20.5, 36°.55N×1°.37E, Ml2.7, Algerie 05km NE Tenes*
MDD ***02*** *02:03:21.9±0.6, 36°.53N×1°.34E, h0km, Mb3.9/6, M_mb3.3/7, Error ellipse: s-maj=10.8km s-min=4.3km az=31.0*
ISC 02 02:03:22.2±1.3, 36°.55N±0°.07×1°.35E±0°.06, h17km±12km, n14, σ0s93/19, 6C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
EBNH	**Beni Haoua**	**0.17**	**99**	P		**Pg**	**02 03 26.5**	**-0.2**
EBNR	**Beni Rached**	**0.30**	**150**	P		**Pg**	**02 03 28.3**	**-0.3**
ECHA	**Ech Chlef**	**0.40**	**178**	P		**Pg**	**02 03 29.4**	**-0.9**
EARB	**Arib**	**0.59**	**115**	P		**Pb**	**02 03 34.6**	**+0.6**
EANR	**'Ain N'Sour**	**0.63**	**199**	P		**Pg**	**02 03 34.2**	**-0.4**
EHRZ	**Djelida**	**0.71**	**119**	P		**Pg**	**02 03 35.6**	**-0.5**
EDDR	**Deurdeur**	**0.89**	**127**	P		**Pb**	**02 03 39.8**	**+0.7**
EMUR	**La Murta**	**2.44**	**303**	Pn		Pn	**02 04 01.2**	**0.0**
EIBI	**Ibiza**	**2.48**	**360**	Pn		**Pn**	**02 04 02.1**	**+0.4**
EIBI				⇑*i*	Vmb_V		02 04 04.8	
	486nm,SNR=0.8							
EIBI				Sn		**Sn**	**02 04 28.7**	**-2.8**
ETOB	**Tobarra**	**3.11**	**313**	Pn		**Pn**	**02 04 11.0**	**+0.6**
ETOB				⇑*i*	Vmb_V		02 04 12.6	
	328nm,SNR=0.6							
ETOB				Sn		**Sn**	**02 04 47.7**	**+0.5**
EVIV	**Cofrentes, Val**	**3.34**	**325**	Pn		**Pn**	**02 04 14.3**	**+0.6**
EVIV				⇑*i*	Vmb_V		02 04 16.6	
	208nm,SNR=0.7							
EVIV				Sn		**Sn**	**02 04 53.3**	**+0.4**
EBER	**Berja**	**3.42**	**277**	Pn		**Pn**	**02 04 14.6**	**-0.3**
EBER				⇑*i*	Vmb_V		02 04 15.6	
	224nm,SNR=0.8							
EQES	**Quesada**	**3.74**	**291**	Pn		**Pn**	**02 04 19.9**	**+0.7**
EQES				⇑*i*	Vmb_V		02 04 20.6	
	176nm,SNR=0.8							
EQES				Sn		**Sn**	**02 05 02.8**	**-0.2**
EMOS	**Mosqueruela**	**4.07**	**340**	Pn		**Pn**	**02 04 24.4**	**+0.6**
EMOS				⇑*i*	Vmb_V		02 04 25.4	
	189nm,SNR=1.0							
EMOS				Sn		**Sn**	**02 05 10.1**	**-0.9**

NEIC ***02*** *02:05:41.3±1.1, 4°.2S±0°.1×146°.7E±0°.2, h42km±13km, mb4.1/11, Error ellipse: s-maj=32.6km s-min=17.7km az=103.0*
IDC ***02*** *02:05:54.6±2.7, 5°.35S×146°.29E, h88km±25km, mb3.5/6, mbtmp3.9/8, Error ellipse: s-maj=29.4km s-min=12.6km az=111.0*
ISC 02 02:05:51.2±1.0, 5°.18S±0°.09×146°.3E±0°.1, h50km, n32, σ1s70/33, mb4.0/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PMG	**Port Moresby**	**4.29**	**168**			**Pn**	**02 06 55.8**	**+1.8**
PMG	**Port Moresby**	**4.29**	**168**	P		**Pn**	**02 06 56.4**	**+2.4**
PMG	**Port Moresby**	**4.29**	**168**	P		**Pn**	**02 06 56.2**	**+2.2**
	43nm,0.4s,baz=61,slow=5.1,SNR=19							
PMG				S		**Sn**	**02 07 42.8**	**0.0**
	43nm,0.3s,baz=333,slow=10,SNR=4.7							
COEN	**Coen**	**9.23**	**199**			**Pn**	**02 08 05.4**	**+3.6**
CTA	**Charters Tower**	**14.81**	**180**	P		**P**	**02 09 22.7**	**0.0**
CTA	**Charters Tower**	**14.81**	**180**	P		**P**	**02 09 22.6**	**0.0**
	11nm,0.4s,baz=358,slow=14,SNR=39							
CTAO	**Charters Tower**	**14.81**	**180**	P		**P**	**02 09 22.6**	**0.0**
CTAO				IAmb		IAmb	02 09 23.6	
	comp=Z,11nm,0.8s							
CTAO	**Charters Tower**	**14.81**	**180**	P		**P**	**02 09 22.7**	**0.0**
KDU	**Kakadu**	**15.52**	**240**	P		**Pn**	**02 09 29.4**	**+2.5**
QIS	**Mount Isa**	**16.59**	**202**	P		**P**	**02 09 46.7**	**+4.3**
WB0	**Warramunga Arr**	**18.54**	**218**	P		**P**	**02 10 04.4**	**+0.6**
WB0				IAmb		IAmb	02 10 21.3	
	comp=Z,9.7nm,1.3s							
WR0	**Warramunga Arr**	**18.59**	**217**	P		**P**	**02 10 05.0**	**+0.6**
WR0				IAmb		IAmb	02 10 08.6	
	comp=Z,14nm,1.4s							
WRAB	**Tennant Creek**	**18.69**	**217**	P		**P**	**02 10 06.3**	**+0.8**
WRAB				IAmb		IAmb	02 10 07.9	
	comp=Z,6.3nm,0.8s							
WB2	**Warramunga Arr**	**18.69**	**217**	P		**P**	**02 10 05.8**	**+0.3**
WRA	**Warramunga Arr**	**18.70**	**217**	P		**P**	**02 10 05.6**	**-0.1**
WRA	**Warramunga Arr**	**18.70**	**217**	P		**P**	**02 10 06.2**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=42,slow=11,SNR=26							
WRA				S		**Sn**	**02 13 31.0**	**-3.9**
	comp=Z,0.6nm,0.8s,baz=34,slow=24,SNR=2.0							
WRA				PcP		**PcP**	**02 14 31.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=27,slow=2.0,SNR=1.5							
EIDS	**Eidsvold**	**20.60**	**168**	P		**P**	**02 10 25.8**	**-0.4**
EIDS				IAmb		IAmb	02 10 50.9	
	comp=Z,15nm,1.2s							
ASAR	**Alice Springs**	**21.89**	**212**	P		**P**	**02 10 40.0**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=44,slow=11,SNR=12							
ASAR				S		**S**	**02 14 37.2**	**-2.4**
	comp=Z,1.3nm,0.8s,baz=26,slow=21,SNR=6.8							
	comp=Z,0.5nm,0.3s							
INKA	**Innaminka**	**23.04**	**193**	P		**P**	**02 10 52.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**23.89**	**236**	P		**P**	**02 11 00.4**	**-0.1**
FITZ				IAmb		IAmb	02 11 01.5	
	comp=Z,5.2nm,0.8s							
OOD	**Oodnadatta**	**24.63**	**203**	P		**P**	**02 11 07.4**	**+0.3**
WRKA	**Warakurna**	**26.21**	**219**	P		**P**	**02 11 21.3**	**-0.2**
STKA	**Stephens Creek**	**26.91**	**189**	P		**P**	**02 11 26.2**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=7.1,slow=16,SNR=1.5							
	comp=Z,0.6nm,0.3s							
PSA00	**Pilbara Seismi**	**30.34**	**235**	P		**P**	**02 11 56.6**	**-1.7**
PSA00				IAmb		IAmb	02 12 15.3	
	comp=Z,7.6nm,1.3s							
FORT	**Forrest**	**30.68**	**212**	P		**P**	**02 12 00.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**52.22**	**298**	P		**P**	**02 14 58.1**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=119,slow=6.5,SNR=4.0							
	comp=Z,1.2nm,0.3s							
SONM	**Songino Array**	**63.34**	**331**	P		**P**	**02 16 15.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=168,slow=7.4,SNR=1.7							
	comp=Z,0.2nm,0.3s							
QSPA	**South Pole Qui**	**84.78**	**180**	P		**P**	**02 18 18.2**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=273,slow=0.8,SNR=1.2							
	comp=Z,0.7nm,0.6s							
ILAR	**Eielson Array**	**85.03**	**23**	P		P	02 18 20.1	-1.0
	comp=Z,0.8nm,0.6s,baz=252,slow=5.2,SNR=13							
	comp=Z,0.8nm,0.6s							
L27K	**Beaver Creek,**	**86.51**	**26**	P		P	02 18 14.2	-14
BCAR	**Beaver Creek A**	**86.53**	**26**	P		P	02 18 14.6	-14
TORD	**Torodi Ar. Bea**	**144.17**	**285**	PKP		**PKPab**	**02 25 19.4**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=61,slow=4.4,SNR=3.1							

UPP ***02*** *02:11:25.2±0.0, 67°.20N×20°.65E, h0km, ML2.3, Confirmed Induced event*
HEL ***02*** *02:11:25.8±0.1, 67°.19N×20°.64E, h0km, ML2.3, ML2.3(UPP), Confirmed Induced event*
IDC ***02*** *02:11:25.1±0.9, 67°.19N×20°.95E, h0km, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=14.9km s-min=6.9km az=116.0*
BER ***02*** *02:11:26.3±0.6, 67°.00N×21°.03E, h0km, ML2.3, Confirmed Induced event*
ISC 02 02:11:24.0±0.7, 67°.20N±0°.02×20°.75E±0°.03, h0km, n34, σ1s08/49, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
DUNU	**Dundret**	**0.10**	**224**	P		**Pg**	**02 11 27.1**	**+1.2**
DUNU				S		**Sg**	**02 11 28.3**	**+1.1**
DUNU	**Dundret**	**0.10**	**224**	*i* P		**Pg**	**02 11 27.1**	**+1.2**
DUNU				*i* S		**Sg**	**02 11 28.3**	**+1.1**
MASU	**Masugnsbyn**	**0.55**	**61**	P		**Pb**	**02 11 36.5**	**0.0**
MASU				S		**Sb**	**02 11 44.4**	**-0.6**
MASU	**Masugnsbyn**	**0.55**	**61**	*i* P		**Pb**	**02 11 36.5**	**0.0**
MASU				*i* S		**Sb**	**02 11 44.4**	**-0.6**
RATU	**Laukkuluspa**	**0.77**	**325**	P		**Pg**	**02 11 39.4**	**+0.6**
RATU	**Laukkuluspa**	**0.77**	**325**	*i* P		**Pg**	**02 11 39.4**	**+0.6**
KUA	**Kurravaara**	**0.78**	**348**	P		**Pg**	**02 11 39.5**	**+0.7**
KUA	**Kurravaara**	**0.78**	**348**	*i* P		**Pg**	**02 11 39.5**	**+0.7**
SALU	**Saltoluokta**	**0.89**	**283**	P		**Pg**	**02 11 41.4**	**+0.4**
SALU	**Saltoluokta**	**0.89**	**283**	*i* P		**Pg**	**02 11 41.4**	**+0.4**
PAJU	**Pajala**	**0.94**	**99**	P		**Pb**	**02 11 43.2**	**0.0**
PAJU	**Pajala**	**0.94**	**99**	*eP*		**Pb**	**02 11 43.2**	**0.0**
PAJU				*eS*		**Sb**	**02 11 56.5**	**+0.3**
LANU	**Lannavaara**	**0.98**	**29**	P		**Pb**	**02 11 43.7**	**-0.1**
LANU	**Lannavaara**	**0.98**	**29**	*eP*		**Pb**	**02 11 43.7**	**-0.1**
LANU				*eS*		**Sb**	**02 11 57.2**	**-0.1**
HARU	**Harads**	**1.04**	**175**	P		**Pg**	**02 11 44.2**	**+0.3**
HARU	**Harads**	**1.04**	**175**	*eP*		**Pg**	**02 11 44.2**	**+0.3**
KLF	**Kolari**	**1.25**	**87**	*eP*		**Pn**	**02 11 48.9**	**+0.2**
KLF				*eS*		**Sn**	**02 12 06.1**	**-0.1**
HEF	**Hetta**	**1.65**	**41**	*eP*		**Pb**	**02 11 55.5**	**+0.3**
HEF				*eS*		**Sg**	**02 12 17.2**	**+0.4**
HEF	**Hetta**	**1.65**	**41**	*eP*		**Pb**	**02 11 55.4**	**+0.3**
HEF				*eS*		**Sg**	**02 12 17.1**	**+0.4**
HEF				MSG			02 12 20.8	
	comp=Z,15nm,0.2s							
KALU	**Kalix**	**1.70**	**141**	P		**Pb**	**02 11 56.1**	**+0.2**
KALU	**Kalix**	**1.70**	**141**	*eP*		**Pb**	**02 11 56.2**	**+0.2**
KALU				*eSG*		**Sg**	**02 12 19.0**	**+0.5**
SJUU	**Sjulsmark**	**1.73**	**168**	P		**Pb**	**02 11 56.4**	**-0.1**
SJUU	**Sjulsmark**	**1.73**	**168**	*eP*		**Pb**	**02 11 56.4**	**-0.1**
TOF	**Tornio**	**1.81**	**127**	*eP*		**Pg**	**02 11 58.3**	**-0.3**
TOF				*eSG*		**Sg**	**02 12 22.6**	**+0.5**
TOF				MSG			02 12 24.5	
	comp=Z,25nm,0.3s							
KTK1	**Kautokeino**	**2.05**	**26**	*eP*		**Pb**	**02 12 02.3**	**+0.3**
KTK1	**Kautokeino**	**2.05**	**26**	*ePG*		**Pb**	**02 12 02.5**	**+0.5**
KTK1				*eSG*		**Sg**	**02 12 29.4**	**-0.3**
FAUS	**Fauske**	**2.13**	**278**	*eP*		**Pb**	**02 12 02.8**	**-0.5**
FAUS				*eS*		**Sb**	**02 12 30.4**	**+0.1**
FAUS				IAML			02 12 35.0	
	comp=Z,33nm,0.5s							
ARCES	**ARCESS Array B**	**2.94**	**35**	Pn		**Pn**	**02 12 13.6**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=216,slow=13,SNR=74							
ARCES				Sn		**Sn**	**02 12 45.5**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=222,slow=14,SNR=1.5							
ARCES				Lg		Lg	02 12 53.9	
	comp=Z,0.8nm,0.3s,baz=221,slow=24,SNR=11							
	comp=Z,1.3nm,0.3s							
OBF4	**Vikkela, Lumij**	**2.98**	**141**	MSG			02 13 00.4	
	comp=Z,6.8nm,0.4s							
OBF0	**Syolatti, Pyha**	**3.06**	**150**	MSG			02 13 08.8	
	comp=Z,13nm,0.4s							
KEV	**Kevo**	**3.45**	**39**	*eP*		**Pn**	**02 12 20.8**	**+1.9**
FINES	**FINESS Array B**	**6.22**	**156**	Pn		**Pn**	**02 12 58.9**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=342,slow=12,SNR=14							
FINES				Sn		**Sn**	**02 14 07.0**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=348,slow=23,SNR=6.6							
FINES				Lg		Lg	02 14 38.2	
	comp=Z,0.4nm,0.3s,baz=342,slow=26,SNR=5.6							
	comp=Z,0.8nm,0.4s							
NOA	**NORSAR Array B**	**7.45**	**218**	Pn		**Pn**	**02 13 15.0**	**+1.2**
	baz=24,slow=11,SNR=3.9							
NOA				Sn		**Sn**	**02 14 36.2**	**-2.6**
	baz=38,slow=21,SNR=2.0							
NOA				Lg		Lg	02 15 18.4	
	baz=44,slow=24,SNR=2.4							
	comp=Z,0.1nm,0.3s							
HFS	**Hagfors**	**7.75**	**207**	Pn		**Pn**	**02 13 17.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=6.9							
HFS				Sn		**Sn**	**02 14 42.0**	**-4.2**
	comp=Z,0.3nm,0.3s,baz=18,slow=20,SNR=6.0							
HFS				Lg		Lg	02 15 27.4	
	comp=Z,0.3nm,0.3s,baz=30,slow=27,SNR=2.1							

baz=25
MDOK Medeo 3.10 4 Pg **Pg** 02 15 35.5 -1.5
11nm,0.7s
MDOK Pg **Pg** 02 15 35.6 -1.5
8.3nm,0.5s
MDOK Lg Lg 02 16 17.3
98nm,0.8s
MDOK ⇑Lg Lg 02 16 17.9
105nm,0.7s
MDOK Medeo 3.10 4 *eP* **Pg** 02 15 35.6 -1.5
8.3nm,0.3s
MDOK *eS* **Sg** 02 16 17.3 +0.1
97nm,0.5s
ARSB Arslanbob 3.13 295⇑ *eP* **Pb** 02 15 33.8 +0.3
baz=93
ARSB ⇑*eS* **Sb** 02 16 13.0 +1.2
baz=93
FRU1 Bishkek 3.17 330⇑ *eP* **Pb** 02 15 33.8 -0.3
baz=29
FRU1 ⇑*eS* **Sb** 02 16 13.0 +0.1
baz=29
KOTS Kotyrbulak 3.18 5 Pg **Pg** 02 15 37.7 -0.8
10nm,0.2s
KOTS Lg Lg 02 16 21.0
135nm,0.6s
KOTS Kotyrbulak 3.18 5 *eP* **Pg** 02 15 37.7 -0.8
10.0nm,0.2s
KOTS *eS* **Sg** 02 16 20.9 +1.3
135nm,0.6s
SATY Saty 3.24 22 Pg **Pb** 02 15 37.2 +2.0
5.5nm,0.6s
SATY Lg Lg 02 16 20.6
45nm,0.3s
SATY Saty 3.24 22 *eP* **Pb** 02 15 37.2 +2.0
5.5nm,0.4s
SATY *eS* **Sg** 02 16 20.5 -1.1
45nm,0.3s
DGS Degeres 3.26 347 Pg **Pg** 02 15 39.2 -0.8
19nm,0.6s
DGS Lg Lg 02 16 23.8
DGS Degeres 3.26 347 *eP* **Pg** 02 15 39.2 -0.8
19nm,0.6s
DGS *eS* **Sg** 02 16 23.8 +1.5
31nm,0.5s
CHMS Chumysh 3.29 333 ⇑Pg **Pb** 02 15 36.6 +0.4
12nm,0.7s
CHMS ⇑Lg Lg 02 16 25.2
28nm,0.6s
ZHN Zhinishke 3.34 22 Pg **Pb** 02 15 39.1 +2.0
3.1nm,0.2s
ZHN Lg Lg 02 16 23.6
68nm,0.5s
ZHN Zhinishke 3.34 22 *eP* **Pb** 02 15 39.1 +2.0
3.1nm,0.1s
ZHN *eS* **Sg** 02 16 23.6 -1.4
68nm,0.2s
EKS2 Erkin-Say 3.43 320 P **Pb** 02 15 38.4 -0.1
SNR=11
EKS2 Erkin-Say 3.43 320⇑ *eP* **Pb** 02 15 37.0 -1.5
baz=18
EKS2 ⇑*eS* **Sb** 02 16 18.9 -1.3
baz=18
UZB Uzynbulak 3.52 28 Pg **Pb** 02 15 42.1 +2.1
5.7nm,0.5s
UZB Lg Lg 02 16 29.2
19nm,0.7s
UZB Uzynbulak 3.52 28 *eP* **Pb** 02 15 42.1 +2.1
5.6nm,0.2s
UZB *eS* **Sg** 02 16 29.1 -1.4
19nm,0.3s
KURS Kuram 3.58 17 *eP* **Pg** 02 15 43.9 -2.2
8.0nm,0.6s
KURS *eS* **Sg** 02 16 32.2 -0.4
22nm,0.4s
USP Ospenovka 3.62 333⇑ *eP* **Pb** 02 15 39.3 -2.4
baz=31
USP ⇑*eS* **Sb** 02 16 22.7 -2.9
baz=31
KTBS Karatobe 3.64 359 Pg **Pb** 02 15 44.7 +2.6
5.9nm,0.5s
KTBS Lg Lg 02 16 33.6
54nm,0.8s
KTBS Karatobe 3.64 359 *eP* **Pb** 02 15 44.7 +2.6
6.1nm,0.3s
KTBS *eS* **Sg** 02 16 33.6 -1.0
54nm,0.5s
KPKS Kokpek 3.69 22 Pg **Pb** 02 15 45.2 +2.2
5.4nm,0.3s
KPKS Lg Lg 02 16 34.5
66nm,0.6s
KPKS Kokpek 3.69 22 *eP* **Pb** 02 15 45.2 +2.2
5.4nm,0.3s
KPKS *eS* **Sg** 02 16 34.5 -1.6
66nm,0.6s
SHLS Shalkode 3.69 32 *eP* **Pg** 02 15 49.2 +0.8
13nm,0.2s
SHLS *eS* **Sg** 02 16 40.5 +4.2
25nm,0.4s
KRBS Karabastau 3.71 348 Pg **Pg** 02 15 47.5 -1.3
5.5nm,0.5s
KRBS Lg Lg 02 16 38.3
66nm,0.8s
KRBS Karabastau 3.71 348 *eP* **Pg** 02 15 47.5 -1.3
5.7nm,0.4s
KRBS *eS* **Sg** 02 16 38.3 +1.4
66nm,0.8s
MRKS Merke 3.77 316 Pg **Pb** 02 15 45.7 +1.3
10.0nm,0.6s
MRKS Lg Lg 02 16 35.3
18nm,0.6s
MRKS Merke 3.77 316 *eP* **Pb** 02 15 45.6 +1.3
10.0nm,0.4s
MRKS *eS* **Sb** 02 16 34.5 +4.5
18nm,0.3s
CHKK Chushkaly 3.79 3 Pg **Pg** 02 15 48.0 -2.2
6.4nm,0.4s
CHKK Lg Lg 02 16 38.8
44nm,0.5s
CHKK Chushkaly 3.79 3 *eP* **Pg** 02 15 48.0 -2.2
6.4nm,0.2s
CHKK *eS* **Sg** 02 16 38.8 -0.5
44nm,0.5s
KUU Kurty 3.84 356 Pg **Pb** 02 15 48.3 +2.9
3.0nm,0.2s
KUU Lg Lg 02 16 39.1
37nm,0.7s
KUU Kurty 3.84 356 *eP* **Pb** 02 15 48.3 +2.9
3.0nm,0.2s
KUU *eS* **Sg** 02 16 39.1 -1.7
37nm,0.4s
MNAS Manas 4.01 308⇑ *eP* **Pb** 02 15 45.7 -2.8
baz=7.0
MNAS ⇑*eS* **Sb** 02 16 33.7 -3.4
baz=7.0
ARXS Arharly 4.22 11 Pg **Pb** 02 15 55.0 +3.1
8.9nm,0.6s
ARXS Lg Lg 02 16 51.4
40nm,0.7s
ARXS Arharly 4.22 11 *eP* **Pb** 02 15 55.0 +3.1
8.9nm,0.4s
ARXS *eS* **Sg** 02 16 51.4 -1.7
40nm,0.5s
BLB Baldybastay 4.23 17 Pg **Pb** 02 15 55.5 +3.4
11nm,0.2s
BLB Lg Lg 02 16 51.6
14nm,0.4s
KTMS Ketmen 4.32 37 Pg **Pg** 02 15 57.7 -2.6
1.9nm,0.5s
KTMS Lg Lg 02 16 55.2
10nm,0.7s
KTMS Ketmen 4.32 37 *eP* **Pg** 02 15 57.7 -2.6
1.9nm,0.2s
KTMS *eS* **Sg** 02 16 55.2 -1.1
10nm,0.3s
KNOS Konyrlen 4.65 22 Pg **Pb** 02 16 02.9 +3.6
6.3nm,0.8s
KNOS Lg Lg 02 17 04.2
4.6nm,0.9s
DJR Jarkent 4.82 27 Pg **Pb** 02 16 05.2 +3.0
2.7nm,0.5s
DJR Lg Lg 02 17 08.2
7.6nm,0.8s
DJR Jarkent 4.82 27 *eP* **Pb** 02 16 05.2 +3.0
2.7nm,0.5s
DJR *eS* **Sg** 02 17 08.2 -4.2
7.6nm,0.8s
BTLS Baital 5.36 339 Pg **Pg** 02 16 16.9 -3.3
1.2nm,0.5s
BTLS Lg Lg 02 17 28.4
7.2nm,0.8s
BTLS Baital 5.36 339 *eP* **Pg** 02 16 16.9 -3.3
1.4nm,0.4s
BTLS *eS* **Sg** 02 17 28.4 -1.2
7.2nm,0.8s
KK31 Karatay Array 5.58 305 ⇓Pg **Pg** 02 16 21.3 -3.1
0.6nm,0.5s,baz=120,slow=16,SNR=4.9
KK31 ⇑Lg Lg 02 17 36.8
2.0nm,0.5s,baz=113,slow=28,SNR=6.9

*TEH **02** 02:25:19.1,30°.79N×57°.36E,h6km±31km,ML3.6*
*IDC **02** 02:25:20.7±1.3,30°.82N×57°.27E,h0km,mb3.5/8,*
mbtmp3.5/12,ML3.3/4,Error ellipse: s-maj=25.9km
s-min=19.5km az=137.0
ISC 02 02:25:21.7±0.7,30.75N±0°.04×57°.34E±0°.04,h10km,n40,
σ0s89/40,mb3.5/8,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRM1	**Kerman Provinc**	**0.26**	**193**	Pg	**Pg**	**02 25 26.4**	**-0.7**
ZRDN	**Zarand Kerman**	**0.72**	**287**	Pg	**Pg**	**02 25 34.2**	**-1.5**
KHGB	**Koh Gabri**	**0.83**	**243**	Pg	**Pg**	**02 25 36.8**	**-1.0**
CHMN	**Cheshme madani**	**0.91**	**169**	Pg	**Pg**	**02 25 38.0**	**-1.2**
TVBK	**TV Kerman**	**0.91**	**213**	Pg	**Pg**	**02 25 38.7**	**-0.6**
NGRK	**Negar Kerman**	**1.22**	**206**	Pg	**Pn**	**02 25 44.7**	**-0.5**
IBAF	**Bafgh**	**1.73**	**299**	Pg	**Pn**	**02 25 52.6**	**+0.6**
KBAM	**BAM**	**1.88**	**149**	Pn	**Pn**	**02 25 54.7**	**+0.7**
BSRN	**Basiran**	**1.95**	**51**	Pn	**Pn**	**02 25 55.0**	**0.0**
IKOO	**Kooshah**	**2.19**	**40**	Pn	**Pn**	**02 25 58.8**	**+0.4**
TPRV	**Parvadeh(Tabas**	**2.33**	**346**	Pn	**Pn**	**02 26 00.3**	**0.0**
NHDN	**Nehbandan**	**2.41**	**74**	Pn	**Pn**	**02 26 02.1**	**+0.7**
IMEH	**Mehriz**	**2.42**	**286**	Pn	**Pn**	**02 26 03.0**	**+1.4**
ITEG	**Tejag**	**2.45**	**29**	Pn	**Pn**	**02 26 01.9**	**-0.1**
BAGH	**Bagheran - Bir**	**2.57**	**38**	Pn	**Pn**	**02 26 03.9**	**+0.1**
TKDS	**Koohdasht(Taba**	**2.86**	**356**	Pn	**Pn**	**02 26 07.8**	**+0.3**
ICHK	**Chekchek**	**2.91**	**301**	Pn	**Pn**	**02 26 09.2**	**+0.9**
AFRZ	**Afriz**	**3.02**	**28**	Pn	**Pn**	**02 26 10.1**	**+0.4**
TNSJ	**Nastanj**	**3.26**	**349**	Pn	**Pn**	**02 26 12.9**	**0.0**
ZHDN	**Zahedan**	**3.30**	**113**	Pn	**Pn**	**02 26 14.8**	**+1.3**
ISAD	**Sadrabad**	**3.33**	**291**	Pn	**Pn**	**02 26 15.6**	**+1.5**
SHRT	**Shahrakht**	**3.82**	**40**	Pn	**Pn**	**02 26 21.6**	**+0.9**
ANAR	**Anarak**	**3.91**	**309**	Pn	**Pn**	**02 26 22.6**	**+0.6**
IRAM	**Ramesheh**	**4.37**	**285**	Pn	**Pn**	**02 26 29.5**	**+1.1**
IZEF	**Zefreh**	**4.77**	**298**	Pn	**Pn**	**02 26 35.4**	**+1.5**
TBJM	**Torbat-e-JAM**	**5.16**	**28**	Pn	**Pn**	**02 26 39.8**	**+0.7**
IAKL	**Akhelmad**	**5.95**	**11**	Pn	**Pn**	**02 26 51.3**	**+1.2**
IDMV	**Damavand**	**6.55**	**319**	Pn	**Pn**	**02 26 59.4**	**+1.1**
GEYT	**Alibeck**	**7.19**	**5**	Pn	**Pn**	**02 27 08.3**	**+1.4**
	0.4nm,0.3s,baz=208,slow=12,SNR=2.5						
GEYT				Lg	Lg	02 29 03.8	
	0.1nm,0.3s,baz=216,slow=25,SNR=1.8						
	0.6nm,0.3s						
WSAR	**Wadi Sarin**	**7.57**	**171**	Pn	**Pn**	**02 27 14.0**	**+1.8**
	0.9nm,0.3s,baz=5.0,slow=9.6,SNR=11						
	6.7nm,0.6s						
ASF	**Jabal al Asfar**	**17.50**	**280**	P	**Pn**	**02 29 25.4**	**-0.5**
	0.1nm,0.3s,baz=45,slow=19,SNR=2.0						
	0.7nm,0.4s						
AAK	**Ala-Archa**	**18.12**	**44**	P	**Pn**	**02 29 33.6**	**0.0**
	0.1nm,0.3s,baz=163,slow=22,SNR=2.0						
	0.5nm,0.4s						
BRTR	**Keskin Array B**	**21.28**	**301**	P	**P**	**02 30 08.2**	**-0.2**
	0.5nm,0.8s,baz=121,slow=14,SNR=4.2						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**24.21**	**19**	P	**P**	**02 30 39.0**	**+0.6**
	1.1nm,0.7s,baz=188,slow=8.7,SNR=5.2						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**25.05**	**43**	P	**P**	**02 30 46.6**	**+0.5**
	0.3nm,0.7s,baz=226,slow=8.1,SNR=3.5						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**25.38**	**32**	P	**P**	**02 30 49.5**	**+0.6**
	0.8nm,0.8s,baz=233,slow=9.2,SNR=6.5						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**30.48**	**33**	P	**P**	**02 31 34.5**	**0.0**
	1.2nm,0.6s,baz=239,slow=9.1,SNR=4.9						
	1.2nm,0.6s						
FINES	**FINESS Array B**	**36.89**	**335**	P	**P**	**02 32 30.6**	**+0.5**
	1.5nm,0.7s,baz=126,slow=9.7,SNR=4.9						
	1.5nm,0.7s						
SONM	**Songino Array**	**40.88**	**51**	P	**P**	**02 33 03.9**	**-0.1**
	0.3nm,0.8s,baz=241,slow=5.9,SNR=1.9						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**53.97**	**264**	P	**P**	**02 34 45.1**	**-1.0**
	0.5nm,0.7s,baz=54,slow=7.1,SNR=2.3						
	0.5nm,0.7s						

IDC 02 02:35:36.9±1.6,7.70S×127°.69E,h0km,mb4.0/3,
mbtmp4.0/5,ML4.3/2,Error ellipse: s-maj=246.4km
s-min=29.2km az=64.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.77**	**153**	Pn	Pn	02 38 52.8	-0.7
	1.7nm,0.3s,baz=328,slow=14,SNR=48						
WRA				Sn	Sn	02 41 15.7	-12
	1.2nm,0.3s,baz=330,slow=23,SNR=7.9						
	2.7nm,0.5s						
ASAR	**Alice Springs**	**16.96**	**160**	Pn	Pn	02 39 36.4	+0.6
	0.6nm,0.3s,baz=343,slow=9.5,SNR=33						
ASAR				Sn	Sn	02 42 34.5	-10
	0.2nm,0.3s,baz=322,slow=33,SNR=1.9						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**67.58**	**328**	P	P	02 46 35.5	+0.1
	1.2nm,0.4s,baz=121,slow=8.2,SNR=22						
	1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**71.22**	**335**	P	P	02 46 57.2	-0.5
	0.4nm,0.4s,baz=72,slow=5.2,SNR=1.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**71.93**	**330**	P	P	02 47 02.2	+0.2
	0.7nm,0.4s,baz=133,slow=5.1,SNR=7.9						
	0.7nm,0.4s						

*CATAC **02** 02:37:59.1±0.5,13°.12N×89°.32W,h27km±3km,ML3.8*
*SNET **02** 02:38:00.2±0.9,13°.18N×89°.29W,h46km,ML3.8*
*GCG **02** 02:38:00.5±2.9,13°.93N×89°.15W,h144km±56km,MD3.8*
ISC 02 02:37:59.0±1.5,13°.10N±0°.07×89°.33W±0°.03,h28km±13km,
n63,σ0s46/92,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.38**	**1**	*i* P	**Pn**	**02 38 08.9**	**+0.1**
LALI				*i* S	**Sn**	**02 38 16.1**	**+0.9**
LALI				IAML		02 38 17.3	
	comp=Z,690nm,1.0s						
PANCS	**Alcalda de**	**0.53**	**16**	*eP*	**Pn**	**02 38 10.6**	**-0.2**
PANCS	**Alcalda de**	**0.53**	**16**	*i* P	**Pn**	**02 38 10.4**	**-0.4**
PANCS				*i* S	**Sn**	**02 38 19.0**	**+0.2**
PANCS				IAML		02 38 20.0	
	comp=Z,20μm,1.0s						
LOMA	**Loma Larga**	**0.56**	**16**	*eP*	**Pn**	**02 38 11.3**	**-0.1**
LOMA				*eS*	**Sn**	**02 38 20.9**	**+1.1**
LOMA	**Loma Larga**	**0.56**	**16**	*i* P	**Pn**	**02 38 11.2**	**-0.1**
LOMA				*i* S	**Sn**	**02 38 20.6**	**+0.8**
LOMA				IAML		02 38 21.9	
	comp=Z,8μm,1.0s						
JAYA	**Jayaque - finc**	**0.56**	**348**	*eP*	**Pn**	**02 38 11.0**	**-0.4**
ITCA	**Escuela Especi**	**0.57**	**5**	*i* P	**Pn**	**02 38 11.1**	**-0.3**
ITCA				*i* S	**Sn**	**02 38 19.9**	**-0.1**
ITCA				IAML		02 38 24.3	
	comp=Z,10μm,1.0s						
LFRS	**El Faro**	**0.58**	**26**	*eP*	**Pn**	**02 38 11.4**	**-0.1**
MAGS	**Ministerio de**	**0.58**	**4**	*i* P	**Pn**	**02 38 11.2**	**-0.4**
MAGS				*i* S	**Sn**	**02 38 20.2**	**0.0**
MAGS				IAML		02 38 25.2	
	comp=Z,3μm,1.0s						
SNET	**Serv Nac Est T**	**0.59**	**9**	*eP*	**Pn**	**02 38 11.4**	**-0.2**
SNET	**Serv Nac Est T**	**0.59**	**9**	*i* P	**Pn**	**02 38 11.4**	**-0.2**
SNET				IAML		02 38 11.6	
	comp=Z,6μm,1.0s						
SNET				*i* S	**Sn**	**02 38 21.2**	**+0.8**
SJTE	**Alcalda de S**	**0.59**	**31**	*eP*	**Pn**	**02 38 11.4**	**-0.4**
SJTE				*eS*	**Sn**	**02 38 20.6**	**0.0**
SJTE	**Alcalda de S**	**0.59**	**31**	*i* P	**Pn**	**02 38 11.5**	**-0.3**
SJTE				*i* S	**Sn**	**02 38 20.9**	**+0.3**
SJTE				IAML		02 38 21.6	
	comp=Z,3μm,1.0s						
SEMO	**Seminario San**	**0.60**	**9**	*i* P	**Pn**	**02 38 11.6**	**-0.3**
SEMO				IAML		02 38 11.8	
	comp=Z,8μm,1.0s						
SEMO				*i* S	**Sn**	**02 38 21.4**	**+0.6**
PMON	**Piamonte**	**0.60**	**1**	*eP*	**Pn**	**02 38 11.6**	**-0.3**
PMON	**Piamonte**	**0.60**	**1**	*i* P	**Pn**	**02 38 11.7**	**-0.3**
PMON				*i* S	**Sn**	**02 38 20.7**	**-0.2**
PMON				IAML		02 38 24.2	
	comp=Z,6μm,1.0s						
UTEC	**Universidad Te**	**0.61**	**12**	*i* P	**Pn**	**02 38 11.6**	**-0.3**
UTEC				IAML		02 38 26.4	
	comp=Z,2μm,1.0s						
UEES	**Universidad Ev**	**0.61**	**8**	*eP*	**Pn**	**02 38 11.8**	**-0.2**
UEES	**Universidad Ev**	**0.61**	**8**	*i* P	**Pn**	**02 38 11.7**	**-0.4**
UEES				*i* S	**Sn**	**02 38 20.2**	**-0.9**
UEES				IAML		02 38 22.9	
	comp=Z,5μm,1.0s						
IGN	**Direccin Gen**	**0.62**	**14**	*i* P	**Pn**	**02 38 12.2**	**0.0**
IGN				*i* S	**Sn**	**02 38 20.7**	**-0.6**
IGN				IAML		02 38 24.4	
	comp=Z,12μm,1.0s						
BOQS	**Boqueron**	**0.63**	**4**	*eP*	**Pn**	**02 38 12.3**	**-0.1**
UDBS	**Universidad Do**	**0.63**	**15**	*i* P	**Pn**	**02 38 12.2**	**0.0**
UDBS				*i* S	**Sn**	**02 38 22.2**	**+0.8**
UDBS				IAML		02 38 22.6	
	comp=Z,2μm,1.0s						
PIC2	**El Picacho**	**0.64**	**6**	*eP*	**Pn**	**02 38 12.7**	**+0.1**
COEG	**Centro de Oper**	**0.67**	**40**	*eP*	**Pb**	**02 38 12.3**	**0.0**
COEG	**Centro de Oper**	**0.67**	**40**	*i* P	**Pb**	**02 38 12.2**	**-0.1**
COEG				IAML		02 38 28.5	
	comp=Z,1μm,1.0s						
LFU	**La Fuente**	**0.67**	**18**	*eP*	**Pn**	**02 38 13.0**	**+0.1**
TECO	**Alcaldia de Te**	**0.68**	**51**	*eP*	**Pb**	**02 38 12.2**	**-0.2**
TECO				*eS*	**Sn**	**02 38 22.6**	**-0.1**
TECO	**Alcaldia de Te**	**0.68**	**51**	*i* P	**Pb**	**02 38 12.2**	**-0.2**
TECO				*i* S	**Sn**	**02 38 22.6**	**-0.1**
TECO				IAML		02 38 26.4	
	comp=Z,1μm,1.0s						
CEDA	**San Andres**	**0.70**	**355**	*eP*	**Pn**	**02 38 12.9**	**-0.3**
CEDA	**San Andres**	**0.70**	**355**	*i* P	**Pn**	**02 38 12.8**	**-0.3**
CEDA				*i* S	**Sn**	**02 38 23.5**	**+0.4**
CEDA				IAML		02 38 27.0	
	comp=Z,7μm,1.0s						
PAVA	**Las Pavas**	**0.71**	**32**	*eP*	**Pn**	**02 38 13.2**	**-0.2**
PAVA				*eS*	**Sn**	**02 38 24.1**	**+0.5**
PAVA	**Las Pavas**	**0.71**	**32**	*i* P	**Pn**	**02 38 13.3**	**-0.2**
PAVA				*i* S	**Sn**	**02 38 23.9**	**+0.3**
PAVA				IAML		02 38 27.0	
	comp=Z,4μm,1.0s						
QUEZ	**Alcaldia de Qu**	**0.73**	**4**	*i* P	**Pn**	**02 38 13.4**	**-0.2**
QUEZ				*i* S	**Sn**	**02 38 24.7**	**+0.9**
QUEZ				IAML		02 38 31.4	
	comp=Z,5μm,1.0s						
UESV	**Universidad de**	**0.75**	**45**	*i* P	**Pb**	**02 38 13.1**	**-0.4**
UESV				*i* S	**Sn**	**02 38 24.1**	**-0.1**
UESV				IAML		02 38 25.2	
	comp=Z,1μm,1.0s						
CEVE	**Cerro Verde**	**0.78**	**338**	*i* P	**Pb**	**02 38 14.1**	**-0.1**
CEVE				IAML		02 38 34.0	
	comp=Z,3μm,1.0s						
SNJE	**San Jose**	**0.81**	**340**	*eP*	**Pb**	**02 38 14.6**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.83**	**44**	*eP*	**Pn**	**02 38 15.0**	**0.0**
SCLA	**Alcaldia de Sa**	**0.83**	**44**	*i* P	**Pb**	**02 38 14.8**	**-0.2**
SCLA				IAML		02 38 15.2	
	comp=Z,400nm,1.0s						
COEB	**Comit de Eme**	**0.87**	**63**	*eP*	**Pb**	**02 38 15.1**	**-0.5**
TECA	**Tecapa**	**0.89**	**64**	*eP*	**Pn**	**02 38 15.6**	**-0.3**
UNIC	**Universidad Ca**	**0.90**	**346**	*i* P	**Pn**	**02 38 15.7**	**-0.2**
UNIC				IAML		02 38 31.2	
	comp=Z,520nm,1.0s						
NUBE	**Las Nubes**	**0.91**	**331**	*i* P	**Pn**	**02 38 15.4**	**-0.7**
NUBE				IAML		02 38 29.1	
	comp=Z,3μm,1.0s						
PQSS	**Presa 15 de Se**	**0.91**	**55**	*i* P	**Pn**	**02 38 15.6**	**-0.4**
PQSS				IAML		02 38 28.9	
	comp=Z,2μm,1.0s						
LOAL	**Lomas de Alarc**	**0.99**	**334**	*i* P	**Pn**	**02 38 17.0**	**-0.2**
LOAL				IAML		02 38 37.6	
	comp=Z,3μm,1.0s						
PACA	**Pacayal**	**1.04**	**69**	*eP*	**Pb**	**02 38 18.4**	**-0.2**
PACA				*eS*	**Sb**	**02 38 33.0**	**+1.1**
PACA	**Pacayal**	**1.04**	**69**	*i* P	**Pb**	**02 38 18.3**	**-0.2**
PACA				*i* S	**Sb**	**02 38 32.7**	**+0.8**
PACA				IAML		02 38 33.6	
	comp=Z,34μm,1.0s						
LCY	**Lacayo**	**1.05**	**72**	*eP*	**Pn**	**02 38 18.3**	**+0.2**
RANC	**El Ranchito**	**1.06**	**72**	*eP*	**Pn**	**02 38 18.2**	**-0.1**
VSM	**San Miguel**	**1.07**	**72**	*eP*	**Pb**	**02 38 18.8**	**-0.4**
BLLM	**Bellamira**	**1.11**	**72**	*eP*	**Pn**	**02 38 19.0**	**+0.1**
LLGN	**La Laguna**	**1.12**	**19**	*i* P	**Pn**	**02 38 18.4**	**-0.6**
LLGN				*i* S	**Sn**	**02 38 33.1**	**-0.4**
LLGN				IAML		02 39 09.9	
	comp=Z,980nm,1.0s						
MTO3	**Montecristo**	**1.29**	**359**	*i* P	**Pn**	**02 38 21.0**	**-0.4**
MTO3				*i* S	**Sn**	**02 38 37.4**	**-0.5**
MTO3				IAML		02 38 37.7	
	comp=Z,300nm,1.0s						
LCND	**La Caada**	**1.41**	**82**	*eP*	**Pn**	**02 38 22.9**	**-0.1**
LCND				*eS*	**Sb**	**02 38 41.7**	**-0.7**
LCND	**La Caada**	**1.41**	**82**	*i* P	**Pn**	**02 38 23.1**	**+0.1**
LCND				IAML		02 38 45.1	
	comp=Z,1μm,1.0s						
ESQI	**Esquipulas**	**1.45**	**359**	*i* P	**Pn**	**02 38 23.6**	**+0.1**
ESQI				IAML		02 38 42.4	
	comp=Z,360nm,1.0s						
CNCH	**Conchagua**	**1.46**	**83**	*eP*	**Pn**	**02 38 23.7**	**0.0**
CNCH	**Conchagua**	**1.46**	**83**	*i* P	**Pn**	**02 38 23.5**	**-0.3**
CNCH				IAML		02 38 44.7	
	comp=Z,2μm,1.0s						
NBG	**Las Nubes**	**1.78**	**326**	*i* P	**Pn**	**02 38 28.6**	**+0.4**
PCG	**Pacaya**	**1.79**	**316**	*i* P	**Pb**	**02 38 30.1**	**-1.1**
PCG				*i* S	**Sb**	**02 38 53.4**	**0.0**
ESSG	**Sabana Grande**	**1.94**	**311**	*i* P	**Pn**	**02 38 30.0**	**-0.2**
ESSG				IAML		02 39 02.2	
	comp=Z,630nm,1.0s						
FUG	**Fuego 3**	**1.99**	**312**	*i* P	**Pn**	**02 38 32.4**	**+1.4**
FUG				*i* S	**Sb**	**02 38 59.1**	**0.0**
SULM	**Suchitepequez,**	**2.48**	**299**	*i* P	**Pn**	**02 38 37.2**	**-0.5**
STG3	**Santiaguito 3,**	**2.70**	**307**	*eP*	**Pn**	**02 38 41.8**	**+0.9**
STG3				*eS*	**Sn**	**02 39 13.5**	**+0.7**

*IDC **02** 02:59:27.3±6.0,21°.53S×168°.48E,h0km,mb3.8/3,*
mbtmp3.8/3,MS3.3/2,Error ellipse: s-maj=216.6km
s-min=44.2km az=147.0
*NOU **02** 02:59:36.0,21°.625S×167°.99E,h0km,MLv4.1/6,Loyalty Islands*
ISC 02 02:59:33.0±1.8,21°.4S±0°.2×168°.4E±0°.2,h35km,n12,
σ0s72/10,mb3.9/3,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**1.46**	**216**	P	**Pn**	**02 59 56.7**	**-0.1**
YATNC	**Mamie plateau,**	**1.52**	**246**	P	**Pn**	**02 59 56.3**	**-1.4**
OUIENC	**Ouen Island, N**	**1.73**	**235**	P	**Pn**	**03 00 01.2**	**+0.6**
DZM	**Mont Dzumac**	**1.91**	**250**	P	**Pn**	**03 00 03.2**	**+0.1**
ONTNC	**Ouen Toro**	**1.99**	**244**	P	**Pn**	**03 00 04.5**	**+0.3**
NOUC	**Port Laguerre**	**2.04**	**251**	P	**Pn**	**03 00 05.6**	**+0.7**
URZ	**Urewera**	**18.38**	**158**	LR	LR	03 10 13.5	
	comp=Z,80nm,19.7s,baz=251,slow=35						
WRA	**Warramunga Arr**	**31.85**	**266**	P	**P**	**03 05 54.4**	**-0.5**
	0.5nm,0.7s,baz=101,slow=7.5,SNR=1.9						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**31.88**	**259**	P	**P**	**03 05 55.5**	**+0.3**
	1.3nm,0.8s,baz=84,slow=9.2,SNR=14						
	1.3nm,0.8s						
GUMO	**Guam**	**41.77**	**324**	LR	LR	03 23 59.4	
	comp=Z,53nm,18.8s,baz=286,slow=35						
SONM	**Songino Array**	**88.49**	**323**	P	**P**	**03 12 22.3**	**+0.4**
	0.5nm,0.7s,baz=138,slow=3.3,SNR=5.3						
	0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**145.56**	**351**	PKPbc	**PKPdf**	**03 19 06.8**	**-0.4**
	2.8nm,0.9s,baz=20,slow=2.3,SNR=4.1						

HEL 02 03:13:08.3±0.1,67°.64N×33°.76E,h0km,ML1.0,
Suspected explosion,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**53**	PG	Pg	03 13 15.9	-0.5
LVZ				SG	Sg	03 13 21.3	-0.6
VRF	**Varrio**	**1.59**	**276**	MSG		03 13 55.7	
	comp=Z,1.2nm,0.2s						
VRF				SG	Sn	03 13 56.9	-1.9
OLKF	**Oulanka, Finla**	**2.17

comp=Z,0.7nm,0.2s

OLKF				SG	Sb	03 14 15.3	-0.4
RAJF	**Raja-Jooseppi**	**2.21**	**295**	SN	Sn	03 14 14.1	0.0
KU6	**Riekki**	**2.23**	**225**	PG	Pb	03 13 48.1	-1.3
	baz=44						
KU6				MSG		03 14 14.4	
	comp=Z,0.4nm,0.2s						
KU6				SG	Sb	03 14 17.8	+0.2
MSF	**Maaselka**	**2.55**	**229**	SG	Sb	03 14 27.9	+1.1
SGF	**Sodankyl**	**2.78**	**269**	SB	Sb	03 14 32.4	-1.0
KMNF	**Kaamanen**	**2.92**	**304**	SG	Sb	03 14 37.4	0.0
KEV	**Kevo**	**3.25**	**314**	PN	Pn	03 14 00.8	+0.4
ARA0	**ARCESS Array S**	**3.57**	**306**	PN	Pn	03 14 03.8	-1.1

*SKHL **02** 03:13:38.9±0.2, 44˚30N×148˚10E, h86km±3km, mb4.5/3, msha5.4/3*
*JMA **02** 03:13:39.5±0.3, 44˚N±2˚×14˚8E±˚, h95km, MV3.5/22, SE OFF ETOROFU*
ISC 02 03:13:36.7±3.1, 44˚2N±0˚.1×148˚3E±0˚.2, h76km±27km, n15, σ1§01/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**1.07**	**255**	*eP*	**Pn**	**03 13 57.4**	**+1.0**
SHO				AMB	AMB	03 13 58.1	
	110nm,0.2s						
SHO				*eS*	**Sn**	**03 14 11.3**	**+0.1**
SHO				A	A	03 14 12.6	
	660nm,0.3s						
SHO				A	A	03 14 12.6	
	670nm,0.3s						
KUR	**Kuril'sk**	**1.11**	**345**	*eP*	**Pn**	**03 13 57.2**	**+0.3**
KUR				AMB	AMB	03 13 57.7	
	80nm,0.2s						
KUR				*i* S	**Sn**	**03 14 11.1**	**-0.9**
KUR				A	A	03 14 12.0	
	230nm,0.3s						
KUR				A	A	03 14 12.0	
	670nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.73**	**267**	*eP*	**Pn**	**03 14 05.2**	**+0.3**
YUK				AMB	AMB	03 14 07.1	
	140nm,0.2s						
YUK				*eS*	**Sn**	**03 14 25.0**	**-1.4**
YUK				A	A	03 14 27.8	
	420nm,0.3s						
YUK				A	A	03 14 27.8	
	700nm,0.3s						
NEM2	**Nemuro 2**	**1.99**	**247**	*eP*	**Pn**	**03 14 09.2**	**+0.8**
NEM2				*eS*	**Sn**	**03 14 31.3**	**-1.1**
NMR	**Nemuro--Hokkai**	**2.00**	**248**	*i* P	**Pn**	**03 14 09.2**	**+0.7**
NMR				*eS*	**Sn**	**03 14 31.8**	**-0.9**
JRA	**Rausu**	**2.28**	**265**	*eP*	**Pn**	**03 14 13.3**	**+1.1**
JRA				*eS*	**Sn**	**03 14 39.2**	**-0.1**
JNSB	**Nemuroshibetsu**	**2.38**	**262**	P	**Pn**	**03 14 15.0**	**+1.4**
JNSB				*eS*	**Sn**	**03 14 42.0**	**+0.1**
JKHN	**Kushirohamanak**	**2.50**	**246**	*eP*	**Pn**	**03 14 16.2**	**+1.0**
JKHN				*eS*	**Sn**	**03 14 43.5**	**-1.1**
JNK	**Nakash**	**2.63**	**259**	*eP*	**Pn**	**03 14 18.0**	**+1.1**
AKK	**Akkeshi**	**2.74**	**246**	*eP*	**Pn**	**03 14 18.8**	**+0.4**
AKK				*eS*	**Sn**	**03 14 48.6**	**-1.8**
JAK	**Akkeshi**	**2.84**	**247**	*eP*	**Pn**	**03 14 20.4**	**+0.5**
JAK				*eS*	**Sn**	**03 14 51.3**	**-1.6**
JTKR	**Abashiri--Toko**	**3.15**	**268**	*eP*	**Pn**	**03 14 24.4**	**+0.5**
JAR	**Ashorobuto**	**3.37**	**257**	*eP*	**Pn**	**03 14 28.3**	**+1.3**
JAR				*eS*	**Sn**	**03 15 05.7**	**-0.1**
JCH	**Churui**	**3.89**	**248**	*eP*	**Pn**	**03 14 34.6**	**+0.5**
JNBK	**Urakawa-nobuka**	**4.44**	**247**	*eP*	**Pn**	**03 14 41.7**	**+0.1**

HEL 02 03:13:37.6±0.6, 67˚17N×20˚63E, h0km, ML0.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAJU	**Pajala**	**0.98**	**97**	PG	Pg	03 13 55.4	-1.0
PAJU				SB	Sg	03 14 08.6	-0.5
LANU	**Lannavaara**	**1.03**	**30**	PG	Pg	03 13 55.8	-1.4
HEF	**Hetta**	**1.70**	**41**	PN	Pn	03 14 08.0	-0.4
HEF	**Hetta**	**1.70**	**41**	PG	Pn	03 14 08.0	-0.4
	baz=218						
HEF				MSG		03 14 28.4	
	comp=Z,0.4nm,0.2s						
HEF				SG	Sn	03 14 30.2	-0.7
KALU	**Kalix**	**1.71**	**139**	PG	Pn	03 14 08.5	-0.1
TOF	**Tornio**	**1.83**	**125**	PN	Pn	03 14 09.8	-0.4
TOF	**Tornio**	**1.83**	**125**	PG	Pn	03 14 09.8	-0.4
TOF				MSG		03 14 32.3	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sb	03 14 35.5	+0.1
KTK1	**Kautokeino**	**2.10**	**27**	SG	Sb	03 14 42.3	-0.7
RNF	**Rovaniemi**	**2.20**	**102**	SG	Sb	03 14 45.2	-0.7
BURU	**Burvik**	**2.61**	**173**	SG	Sg	03 14 59.7	-1.8
KEV	**Kevo**	**3.50**	**39**	PG	Pb	03 14 38.5	-1.9

*JMA **02** 03:21:10.4±0.2, 36˚2N±0˚.8×129˚5E±0˚.7, h1km, MV3.2/15, S KOREAN PENINSULA REG*
*KMA **02** 03:21:12.8±0.1, 36˚.12N×129˚.36E, h8km±1km, Error ellipse: s-maj=1.2km s-min=0.7km az=85.0*
*KEA **02** 03:21:18.4, 36˚.53N×129˚.08E, h1km, ML3.2/4*
ISC 02 03:21:12.1±0.9, 36˚.18N±0˚.03×129˚38E±0˚.04, h15km±5km, n28, σ0§86/44, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSPHA	**Pohang**	**0.01**	**344**	P	**Pg**	**03 21 14.9**	**+0.1**
KSPHA				S	**Sg**	**03 21 16.3**	**-0.3**
YODB	**Yeongdeok**	**0.35**	**4**	P	**Pb**	**03 21 20.9**	**+0.8**
	SNR=44						
YODB				P	**Pb**	**03 21 20.9**	**+0.8**
	SNR=44						
KSADO	**Andong**	**0.42**	**304**	P	**Pb**	**03 21 21.6**	**+0.4**
	SNR=449						
KSADO				P	**Pb**	**03 21 21.6**	**+0.4**
	SNR=449						
YEYB	**Yeongyang**	**0.50**	**333**	P	**Pb**	**03 21 23.6**	**+0.9**
	SNR=51						
YEYB				P	**Pb**	**03 21 23.6**	**+0.9**
	SNR=51						
KSUSN	**Ulsan**	**0.52**	**203**	P	**Pg**	**03 21 21.8**	**-0.6**
KSUSN				P	**Pg**	**03 21 21.8**	**-0.6**
KSULJ	**Uljin**	**0.52**	**3**	P	**Pb**	**03 21 24.0**	**+1.0**
	SNR=335						
KSULJ				P	**Pb**	**03 21 24.0**	**+1.0**
	SNR=335						
KSDAG	**Daegu**	**0.56**	**224**	P	**Pg**	**03 21 22.8**	**-0.4**
	SNR=702						
KSDAG				P	**Pg**	**03 21 22.8**	**-0.4**
	SNR=702						
EUSB	**Uiseong**	**0.58**	**288**	P	**Pb**	**03 21 24.3**	**+0.3**
	SNR=82						
EUSB				P	**Pb**	**03 21 24.3**	**+0.3**
	SNR=82						
GUWB	**Gunwi**	**0.63**	**270**	P	**Pg**	**03 21 24.8**	**+0.2**
	SNR=74						
GUWB				P	**Pg**	**03 21 24.8**	**+0.2**
	SNR=74						
ADOA	**Andong Acc Bor**	**0.67**	**306**	P	**Pb**	**03 21 26.4**	**+0.9**
	SNR=30						
KSDAU	**Deagu-acc**	**0.68**	**245**	P	**Pg**	**03 21 25.2**	**-0.1**
	SNR=54						
UJN	**ULJIN**	**0.81**	**2**	P	**Pb**	**03 21 29.3**	**+1.4**
	SNR=20						
KSCIG	**Chilgok**	**0.82**	**260**	P	**Pg**	**03 21 28.0**	**0.0**
	SNR=98						
KSCIG				P	**Pg**	**03 21 28.0**	**0.0**
	SNR=98						
MIYA	**Miryang-si**	**0.86**	**217**	P	**Pg**	**03 21 28.2**	**-0.5**
	SNR=12						
KSGUM	**GUMI**	**0.88**	**274**	P	**Pb**	**03 21 29.5**	**+0.5**
	SNR=30						
KSBUS	**Busan**	**0.95**	**193**	P	**Pg**	**03 21 29.4**	**-1.1**
	SNR=40						
KSBUS				P	**Pg**	**03 21 29.4**	**-1.1**
	SNR=40						
JTU	**Tsushima**	**1.65**	**179**	*eP*	**Pn**	**03 21 40.5**	**0.0**
JTU				*eS*	**Sn**	**03 22 02.2**	**+0.8**
JTSM	**Tsushimamitsus**	**1.84**	**180**	*eP*	**Pn**	**03 21 43.7**	**+0.6**
JTSM				*eS*	**Sn**	**03 22 07.7**	**+1.7**
JHGM	**Hagimishima**	**2.00**	**134**	*eS*	**Sn**	**03 22 10.5**	**+0.4**
JTY	**Toyota**	**2.36**	**144**	*eP*	**Pn**	**03 21 49.9**	**-0.3**
JII	**Iki**	**2.40**	**173**	*eS*	**Sn**	**03 22 21.1**	**+1.4**
JGT2	**ShimaneMisato**	**2.78**	**113**	*eP*	**Pn**	**03 21 55.8**	**-0.2**
JGT2				*eS*	**Sn**	**03 22 29.1**	**-0.3**
JHS	**Saijyo**	**3.27**	**110**	*eP*	**Pn**	**03 22 02.9**	**+0.2**
JHS				*eS*	**Sn**	**03 22 41.1**	**-0.3**
WOSN	**Wonsan**	**3.36**	**333**	Pg	**Pg**	**03 22 15.3**	**-1.2**
WOSN				Sg	**Sg**	**03 22 58.2**	**-1.8**
WOSN				AML	AML		
	comp=N,55nm,0.4s						
WOSN				AML	AML		
	comp=E,62nm,0.2s						
WOSN				AML	AML		
	comp=Z,31nm,0.2s						
HJU	**Haeju**	**3.46**	**304**	Sg	**Sg**	**03 23 02.1**	**-1.1**
HJU				AML	AML		
	comp=N,201nm,0.6s						
HJU				AML	AML		
	comp=E,134nm,0.5s						
HJU				AML	AML		
	comp=Z,100nm,0.7s						
HHU	**Hamhung**	**4.02**	**339**	Sg	**Sg**	**03 23 20.1**	**-0.9**
PYAG	**Pyongyang**	**4.06**	**316**	Sg	**Sg**	**03 23 22.5**	**+0.1**
PYAG				AML	AML		
	comp=N,90nm,0.2s						
PYAG				AML	AML		
	comp=E,95nm,0.3s						
PYAG				AML	AML		
	comp=Z,42nm,0.4s						
PYS	**Pyongsong**	**4.15**	**319**	Sg	**Sg**	**03 23 23.2**	**-2.0**
PYS				AML	AML		
	comp=N,85nm,0.4s						
PYS				AML	AML		
	comp=E,105nm,0.3s						
PYS				AML	AML		
	comp=Z,52nm,0.4s						

*IDC **02** 03:55:34.4±1.3, 0˚.78N×125˚.73E, h0km, mb3.7/5, mbtmp3.8/5, MS3.2/1, Error ellipse: s-maj=143.6km s-min=19.7km az=67.0*
*DJA **02** 03:55:35.9±0.4, 1˚N±6˚×12˚6E±˚, h10km, M3.9/4, MLv3.9/4*
ISC 02 03:55:36.4±1.0, 0˚.9N±0˚.1×126˚38E±0˚.06, h10km, n9, σ1§14/9, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.99**	**97**	P	**Pg**	**03 55 55.0**	**-0.5**
TNTI				S	**Sg**	**03 56 09.0**	**+0.5**
LBMI	**Labuha**	**1.88**	**143**	P	**Pn**	**03 56 09.5**	**+0.8**
LBMI				S	**Sn**	**03 56 31.3**	**-1.2**
KMSI	**Cibinong**	**2.42**	**263**	P	**Pn**	**03 56 16.6**	**+0.6**
KMSI				S	**Sn**	**03 56 44.9**	**-0.8**
WRA	**Warramunga Arr**	**22.12**	**160**	P	**P**	**04 00 31.4**	**-0.9**
	5.9nm,1.1s,baz=337,slow=11,SNR=27 5.9nm,1.1s						
ASAR	**Alice Springs**	**25.48**	**164**	P	**P**	**04 01 06.8**	**+1.8**
	1.5nm,0.8s,baz=347,slow=12,SNR=9.3 1.5nm,0.8s						
CTA	**Charters Tower**	**28.53**	**138**	LR	LR	04 14 54.7	
	comp=Z,46nm,18.5s,baz=26,slow=40						
SONM	**Songino Array**	**49.88**	**342**	P	**P**	**04 04 29.9**	**-0.3**
	0.3nm,0.4s,baz=165,slow=6.0,SNR=2.8 0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.70**	**326**	P	P	04 05 38.9	-2.3
	0.8nm,0.8s,baz=120,slow=8.5,SNR=7.3 0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**63.94**	**328**	P	P	04 06 06.9	-2.8
	0.5nm,0.6s,baz=133,slow=6.3,SNR=6.4 0.5nm,0.6s						

*NEIC **02** 03:58:58.6±1.7, 16˚.14N±0˚.10×95˚.10W±0˚.06, h35km±2km, mb4.3/24, Md4.5/16(MEX), Error ellipse: s-maj=17.0km s-min=8.9km az=191.0*
*MEX **02** 03:58:59.0±0.5, 16˚.10N×95˚.14W, h43km±16km, MD4.4*
*IDC **02** 03:59:05.0±1.7, 16˚.47N×94˚.74W, h0km, mb3.7/4, mbtmp3.7/5, ML3.5/1, MS3.2/2, Error ellipse: s-maj=114.4km s-min=14.0km az=78.0*
ISC 02 03:58:57.3±0.8, 16˚.08N±0˚.04×95˚.13W±0˚.02, h35km, n96, σ2§13/128, mb4.0/6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NILT	**Santiago Nilte**	**0.69**	**45**	*eP*	**Pn**	**03 59 10.2**	**-0.3**
NILT				*i* S	**Sn**	**03 59 19.8**	**-0.2**
HUIG	**Huatulco**	**0.99**	**252**		**Pn**	**03 59 14.6**	**-0.2**
HUIG	**Huatulco**	**0.99**	**252**	*eP*	**Pn**	**03 59 14.6**	**-0.2**
HUIG				*i* S	**Sn**	**03 59 27.4**	**-0.2**
CMIG	**Matias Romero**	**1.03**	**13**		**Pn**	**03 59 14.9**	**-0.4**
CMIG	**Matias Romero**	**1.03**	**13**	Pg	**Pn**	**03 59 15.1**	**-0.2**
	182nm,0.3s,baz=193,slow=13,SNR=3336						
CMIG				Lg	Lg	03 59 27.2	
	786nm,0.3s,baz=85,slow=19,SNR=29						
CMIG				LR	LR	03 59 44.8	
	comp=Z,258nm,19.7s,baz=172,slow=63						
CMIG	**Matias Romero**	**1.03**	**13**	*eP*	**Pn**	**03 59 14.9**	**-0.4**
CMIG				*i* S	**Sn**	**03 59 27.4**	**-1.1**
CARR	**Arriaga**	**1.18**	**82**	*eP*	**Pn**	**03 59 16.4**	**-0.9**
CARR				*i* S	**Sn**	**03 59 30.8**	**-1.3**
UXUV	**UXUV**	**1.55**	**37**	*eP*	**Pn**	**03 59 22.4**	**0.0**
UXUV				*i* S	**Sn**	**03 59 40.5**	**-0.8**
NEUV	**Arroyo Zacate**	**1.75**	**338**	*eP*	**Pn**	**03 59 25.1**	**0.0**
NEUV				*i* S	**Sn**	**03 59 45.1**	**-1.1**
VHO	**Vista Hermosa**	**1.83**	**303**	*eP*	**Pn**	**03 59 28.0**	**+1.5**
VHO				*i* S	**Sn**	**03 59 51.8**	**+3.3**
PEIG	**Puerto Escondi**	**1.94**	**268**		**Pn**	**03 59 27.5**	**-0.4**
PEIG	**Puerto Escondi**	**1.94**	**268**	*i* P	**Pn**	**03 59 27.5**	**-0.4**
PEIG				*i* S	**Sn**	**03 59 49.0**	**-2.2**
TGIG		**2.04**	**70**	*eP*	**Pn**	**03 59 29.8**	**+0.5**
TGIG				*i* S	**Sn**	**03 59 55.6**	**+1.9**
TUIG	**Tuzandepetl**	**2.06**	**19**	*i* P	**Pn**	**03 59 30.2**	**+0.8**
TUIG				*i* S	**Sn**	**03 59 53.5**	**-0.3**
TGBT	**Tuxtla Gutierr**	**2.07**	**70**	*eP*	**Pn**	**03 59 29.8**	**+0.2**
TGBT				*eS*	**Sn**	**03 59 54.8**	**+0.5**
YOIG	**Yosondua**	**2.45**	**289**	*eP*	**Pn**	**03 59 36.2**	**+1.1**
YOIG				*eS*	**Sn**	**04 00 03.5**	**-0.4**
PMUV	**Sontecomapan**	**2.45**	**0**	*eP*	**Pn**	**03 59 33.3**	**-1.6**
PMUV				*eS*	**Sn**	**03 59 59.9**	**-3.8**
TOIG	**Toxpalan**	**2.73**	**317**	*eP*	**Pn**	**03 59 41.3**	**+2.5**
TOIG				*eS*	**Sn**	**04 00 14.0**	**+3.3**
TXIG	**Tlaxiaco**	**2.79**	**295**	*eP*	**Pn**	**03 59 41.6**	**+1.9**
TXIG				*eS*	**Sn**	**04 00 11.2**	**-1.1**
CCIG	**Comitan**	**2.88**	**86**	Pn	**Pn**	**03 59 41.2**	**+0.3**
CCIG	**Comitan**	**2.88**	**86**	*eP*	**Pn**	**03 59 41.0**	**+0.1**
CCIG				*i* S	**Sn**	**04 00 17.1**	**+2.7**
PNIG	**Pinotepa**	**2.90**	**277**	*eP*	**Pn**	**03 59 41.1**	**+0.1**
PNIG				*eS*	**Sn**	**04 00 11.5**	**-3.2**
PATR	**El Naranjo**	**2.95**	**109**	*eP*	**Pn**	**03 59 42.3**	**+0.4**
PATR				*i* S	**Sn**	**04 00 17.6**	**+1.4**
PAVE	**Pavencul**	**2.98**	**107**	*eP*	**Pn**	**03 59 43.3**	**+1.0**
PAVE				*eS*	**Sn**	**04 00 16.7**	**-0.2**
THIG		**3.00**	**113**	*eP*	**Pn**	**03 59 42.0**	**-0.3**
THIG				*i* S	**Sn**	**04 00 15.9**	**-1.2**
CHUJ	**Union Juarez**	**3.07**	**108**	*eP*	**Pn**	**03 59 44.1**	**+0.6**
CHUJ				*eS*	**Sn**	**04 00 18.3**	**-1.0**
HLIG	**Huajuapan de L**	**3.10**	**305**		**Pn**	**03 59 46.2**	**+2.3**
HLIG	**Huajuapan de L**	**3.10**	**305**	*eP*	**Pn**	**03 59 46.2**	**+2.3**
HLIG				*i* S	**Sn**	**04 00 25.0**	**+5.2**
TPIG	**Tehuac#an**	**3.16**	**318**	*eP*	**Pn**	**03 59 46.5**	**+1.8**
TPIG				*i* S	**Sn**	**04 00 28.5**	**+7.2**
FTIG	**Fresnillo de T**	**3.40**	**303**		**Pn**	**03 59 50.6**	**+2.6**
FTIG	**Fresnillo de T**	**3.40**	**303**	*eP*	**Pn**	**03 59 50.1**	**+2.1**
FTIG				*eS*	**Sn**	**04 00 26.5**	**-0.8**
SMSP	**San Marcos**	**3.41**	**108**	*eS*	**Sn**	**04 00 27.5**	**-0.1**
MGIG	**Malinaltepec**	**3.55**	**289**	*eP*	**Pn**	**03 59 51.8**	**+1.6**
MGIG				*eS*	**Sn**	**04 00 29.4**	**-1.6**
HUEH	**Huehuetenango**	**3.57**	**102**		**Pn**	**03 59 51.2**	**+0.8**
HUEH	**Huehuetenango**	**3.57**	**102**	*eP*	**Pn**	**03 59 51.1**	**+0.6**
HUEH				*eS*	**Sn**	**04 00 32.8**	**+1.2**
TLIG	**Tlapa**	**3.61**	**295**	Pn	**Pn**	**03 59 53.4**	**+2.5**
TLIG	**Tlapa**	**3.61**	**295**	*eP*	**Pn**	**03 59 52.9**	**+1.9**
TLIG				*eS*	**Sn**	**04 00 29.9**	**-2.5**
JAUV	**Jalcomulco**	**3.64**	**334**	*eP*	**Pn**	**03 59 49.8**	**-1.4**
JAUV				*eS*	**Sn**	**04 00 31.4**	**-1.5**
RTAL	**Retalhuleu**	**3.66**	**115**		**Pn**	**03 59 52.5**	**+1.1**
RTAL	**Retalhuleu**	**3.66**	**115**	*eP*	**Pn**	**03 59 52.4**	**+1.0**
RTAL				*eS*	**Sn**	**04 00 33.4**	**0.0**
LVIG	**Laguna Verde**	**3.83**	**341**	*eP*	**Pn**	**03 59 52.1**	**-1.6**
LVIG				*eS*	**Sn**	**04 00 30.6**	**-6.9**
CRIG	**Cruz Grande**	**3.90**	**280**	*eP*	**Pn**	**03 59 55.1**	**+0.3**
CRIG				*eS*	**Sn**	**04 00 34.5**	**-4.9**
DAIG	**Los Arroyos**	**4.44**	**283**	*eP*	**Pn**	**04 00 02.8**	**+0.6**
DAIG				*eS*	**Sn**	**04 00 47.1**	**-5.6**
PPM	**Popocatepetl**	**4.47**	**312**	*eP*	**Pn**	**04 00 06.4**	**+3.3**
PPM				*eS*	**Sn**	**04 00 59.1**	**+5.0**
YAIG	**Yautepec**	**4.67**	**307**	*eP*	**Pn**	**04 00 08.2**	**+2.7**
YAIG				*eS*	**Sn**	**04 00 56.5**	**-2.0**
MEIG	**Mezcala**	**4.67**	**294**	*i* P	**Pn**	**04 00 07.8**	**+2.3**
MEIG				*i* S	**Sn**	**04 00 56.4**	**-2.2**
SCIG	**Sabancuy**	**4.73**	**52**	*i* P	**Pn**	**04 00 05.8**	**-0.4**
SCIG				*eS*	**Sn**	**04 00 54.1**	**-5.7**
PLIG	**Platanillo**	**4.77**	**299**	*eP*	**Pn**	**04 00 08.3**	**+1.5**
PLIG				*eS*	**Sn**	**04 00 58.8**	**-2.2**
CAIG	**El Cayaco**	**5.02**	**282**	*i* P	**Pn**	**04 00 10.8**	**+0.5**
CAIG				*i* S	**Sn**	**04 00 59.9**	**-7.2**
PETF	**Flores**	**5.11**	**80**		**Pn**	**04 00 12.3**	**+0.8**
PETF	**Flores**	**5.11**	**80**	*eP*	**Pn**	**04 00 12.0**	**+0.5**
PETF				*eS*	**Sn**	**04 01 04.8**	**-4.6**
ESQI	**Esquipulas**	**5.78**	**104**	Pn	**Pn**	**04 00 21.3**	**+0.5**
MTO3	**Montecristo**	**5.81**	**106**		**Pn**	**04 00 21.7**	**+0.4**
TEIG	**Tepich**	**7.71**	**57**	Pn	**Pn**	**04 00 45.9**	**-1.1**
TEIG	**Tepich**	**7.71**	**57**	LR	LR	04 04 25.0	
	comp=Z,338nm,21.4s,baz=306,slow=45						
BOAB	**BOACO BROADBAN**	**0.86**	**110**	Pn	**Pn**	**04 01 17.4**	**+0.8**
ORTG	**Ortega, Santa**	**10.99**	**120**	Pn	**Pn**	**04 01 34.7**	**+2.4**
JTS	**Las Juntas de**	**11.46**	**119**	Pn	**Pn**	**04 01 40.7**	**+2.1**
JTS	**Las Juntas de**	**11.46**	**119**	Pn	**Pn**	**04 01 42.8**	**+4.3**
	1.8nm,0.3s,baz=308,slow=17,SNR=5.9						
LCR2	**La Lucha 2**	**12.54**	**119**	Pn	**Pn**	**04 01 55.8**	**+2.3**
RIMA	**Rio Macho**	**12.64**	**118**	Pn	**Pn**	**04 01 56.0**	**+1.1**
833A	**Chaparral WMA,**	**12.81**	**343**	Pn	**Pn**	**04 01 58.7**	**+1.7**
PEZE	**Perez Zeledon,**	**13.00**	**119**	Pn	**Pn**	**04 01 59.4**	**-0.4**
DRK0	**Durika**	**13.42**	**119**	Pn	**Pn**	**04 02 07.3**	**+1.7**
HNDO	**Hondo**	**13.92**	**345**		**Pn**	**04 02 12.8**	**+0.6**
435B	**Jarrell**	**14.81**	**352**	Pn	**Pn**	**04 02 25.7**	**+1.5**
JCT	**Junction City**	**14.96**	**344**	Pn	**Pn**	**04 02 26.6**	**+0.3**
TXAR	**Lajitas Array**	**15.35**	**331**	Pn	P	04 02 44.1	+8.2
	baz=144,slow=12,SNR=1.5 1.4nm,0.9s						
BRDY	**Brady**	**15.54**	**348**		**Pn**	**04 02 35.2**	**+1.3**
OZNA	**Ozona**	**15.76**	**341**	Pn	**Pn**	**04 02 37.9**	**+1.2**
OZNA				IAmb	IAmb	04 02 53.1	
	comp=Z,12nm,0.9s						
WHTX	**Lake Whitney,**	**15.98**	**353**	Pn	**Pn**	**04 02 40.1**	**+0.6**
LPIG	**La Paz**	**16.33**	**302**	LR	LR	04 08 29.7	
	comp=Z,42nm,21.4s,baz=108,slow=34						
FW13	**Cleburne**	**16.33**	**353**	Pn	**Pn**	**04 02 44.5**	**+0.5**
MNHN	**Monahans**	**16.71**	**337**	Pn	**Pn**	**04 02 48.0**	**-0.8**
MNHN				IAmb	IAmb	04 03 03.6	
	comp=Z,18nm,0.7s						
FW07	**Weatherford**	**16.72**	**352**	Pn	**Pn**	**04 02 49.3**	**+0.3**
ABTX	**Abilene, Hawle**	**16.97**	**347**	Pn	**Pn**	**04 02 52.1**	**0.0**
ABTX				IAmb	IAmb	04 03 05.3	
	comp=Z,14nm,0.8s						
FW03	**Perrin-Whitt E**	**17.09**	**352**		**Pn**	**04 02 53.9**	**+0.3**
FW03				IAmb	IAmb	04 03 06.3	
	comp=Z,24nm,0.7s						
ODSA	**Odessa**	**17.33**	**338**	Pn	**Pn**	**04 02 56.7**	**0.0**
ODSA				IAmb	IAmb	04 03 10.0	
	comp=Z,16nm,1.1s						
APMT	**Aspermont**	**17.75**	**346**		**P**	**04 03 02.3**	**-0.1**
WTFS	**Witchita Falls**	**17.86**	**351**		**Pn**	**04 03 03.2**	**+0.1**
WTFS				IAmb	IAmb	04 03 08.9	
	comp=Z,14nm,0.5s						
LOOK	**Love County**	**17.93**	**354**		**Pn**	**04 03 03.5**	**-0.5**
MIAR	**Mount Ida**	**18.44**	**4**	P	**P**	**04 03 09.9**	**+0.1**
MSTX	**Muleshoe**	**19.10**	**340**	P	**Pn**	**04 03 17.8**	**-0.4**
GTBY	**Guantanamo Bay**	**19.41**	**76**	P	**P**	**04 03 18.1**	**-2.6**
OK052	**Battle Ridge R**	**19.89**	**356**		**P**	**04 03 25.2**	**-0.5**
FCAR	**Ozark Folk Cen**	**19.91**	**7**	P	**P**	**04 03 24.9**	**-1.0**
FCAR				IAmb	IAmb	04 03 43.6	
	comp=Z,8.1nm,0.7s						
QUOK	**Quay**	**20.06**	**356**		**P**	**04 03 27.7**	**+0.1**
QUOK				IAmb	IAmb	04 03 44.3	
	comp=Z,14nm,0.7s						
U38A	**Gravette**	**20.29**	**2**	P	**P**	**04 03 29.3**	**-0.8**
OK048	**Pawnee Station**	**20.32**	**356**		**P**	**04 03 28.9**	**-1.5**
OK048				IAmb	IAmb	04 03 45.5	
	comp=Z,13nm,0.8s						
T35A	**Sooner Cattle**	**20.79**	**357**		**P**	**04 03 35.0**	**-0.5**
T35A				IAmb	IAmb	04 03 50.6	
	comp=Z,13nm,0.8s						
RTBA	**Rita Blanca**	**21.38**	**343**		**P**	**04 03 41.9**	**0.0**
RTBA				IAmb	IAmb	04 03 53.7	
	comp=Z,8.2nm,0.8s						
P40A	**Paris**	**23.52**	**6**	P	**P**	**04 04 04.5**	**+0.4**
P40A				IAmb	IAmb	04 04 14.8	
	comp=Z,13nm,0.8s						
PDAR	**Pinedale Array**	**29.32**	**338**	P	P	04 05 08.3	+11
	comp=Z,0.5nm,0.8s,baz=127,slow=7.8,SNR=3.6 comp=Z,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**34.09**	**359**	P	P	04 05 48.2	+10
	comp=Z,4.1nm,0.9s,baz=182,slow=7.1,SNR=7.1 comp=Z,4.1nm,0.9s						
YKA	**Yellowknife Ar**	**48.35**	**348**	P	P	04 07 46.0	+11
	comp=Z,0.7nm,0.7s,baz=153,slow=7.3,SNR=12 comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**59.75**	**337**	P	P	04 09 10.5	+12
	comp=Z,0.2nm,0

JMA 02 04:23:59.0±0.4, 24°N±1°×122°4E±°, h32km±3km, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.65**	**329**	P	Pb	04 24 11.6	-0.4
JIJ	**Ishigaki jima**	**0.86**	**358**	*e*P	Pn	04 24 15.0	0.0
JIJ				*e*S	Sn	04 24 26.2	-0.3
JTJ	**Tarama**	**1.23**	**23**	*e*S	Sb	04 24 37.1	-0.3

TAP 02 04:24:22.3, 23.93N×122.40E, h20km±1km, ML1.5, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.21**	**338**	*i* P	Pg	04 24 27.5	+0.2
	baz=337						
EOS4				*i* S	Sg	04 24 31.1	+0.4
	baz=337						
EOS3	**EOS3**	**0.37**	**348**	P	Pg	04 24 29.9	-0.1
	baz=347						
EOS3				*i* S	Sb	04 24 35.5	+0.1
	baz=347						
EOS2	**EOS2**	**0.52**	**342**	*e*P	Pb	04 24 31.8	-0.8
	baz=342						
ETL	**Fush Village**	**0.75**	**288**	*e*P	Pb	04 24 36.2	-0.5
	baz=287						
YOJ	**Yonaguni jima**	**0.77**	**46**	*e*P	Pb	04 24 36.4	-0.6
	baz=45						
NACB	**Ninganchiao**	**0.78**	**289**	*e*P	Pb	04 24 37.3	+0.1
	baz=288						
SHUL	**Shoufeng**	**0.78**	**260**	*e*P	Pg	04 24 37.9	+0.2
	baz=259						

*SJA **02** 04:27:16.7±0.6, 29.12S×73.23W, h40km±19km, ML3.6, MW3.3*

*GUC **02** 04:27:24.2±0.6, 29.32S×72.52W, h45km±4km, ML2.6*

ISC 02 04:27:19.2±2.5, 29.26S±0.06×73.1W±0.1, h35km, n25, σ3.24/36, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**1.78**	**112**	*e*P	**Pn**	**04 27 46.4**	**-1.1**
CO05				*e*S	**Sn**	**04 28 02.6**	**-6.3**
CO05				IAML		04 28 04.9	
	comp=E,108nm,0.3s						
CO06	**Fray Jorge**	**1.92**	**138**	⇑*i*P	**Pn**	**04 27 49.3**	**-0.2**
CO06				*i* S	**Sn**	**04 28 08.5**	**-4.0**
CO06				IAML		04 28 11.7	
	comp=N,75nm,0.1s						
LCO	**Las Campanas**	**2.15**	**84**	*e*P	**Pn**	**04 27 51.4**	**-1.4**
LCO				*i* S	**Sn**	**04 28 12.6**	**-5.8**
LCO				IAML		04 28 13.5	
	comp=N,660nm,0.3s						
GO04	**Tololo Observa**	**2.23**	**115**	*e*P	**Pn**	**04 27 53.1**	**-0.8**
GO04				*i* S	**Sn**	**04 28 15.5**	**-4.8**
AC05	**El Transito**	**2.54**	**81**	⇓*i*P	**Pn**	**04 27 57.5**	**-0.6**
AC05				IAML		04 28 26.0	
	comp=N,61nm,0.2s						
CO03	**El Pedregal**	**2.65**	**127**	*e*P	**Pn**	**04 27 59.8**	**+0.3**
CO03				*i* S	**Sn**	**04 28 26.4**	**-4.0**
CO03				IAML		04 28 30.4	
	comp=E,64nm,0.1s						
CO02	**Combarbal**	**2.68**	**137**	*e*P	**Pn**	**04 28 01.0**	**+1.0**
CO01	**Juntas del Tor**	**2.75**	**106**	*e*P	**Pn**	**04 28 01.1**	**+0.1**
CO01				*i* S	**Sn**	**04 28 28.8**	**-4.3**
CO01				IAML		04 28 31.9	
	comp=N,43nm,0.4s						
GO03	**Copiap**	**3.05**	**58**	*e*P	**Pn**	**04 28 04.7**	**-0.3**
GO03				*e*S	**Sn**	**04 28 36.9**	**-3.3**
AROD	**Rodeo**	**3.31**	**107**	*e*P	**Pn**	**04 28 10.9**	**+2.0**
AROD				*e*S	**Sn**	**04 28 51.2**	**+3.9**
ACCO	**Cerro Coronel**	**3.78**	**112**	*e*P	**Pn**	**04 28 18.3**	**+3.0**
ACCO				*e*S	**Sn**	**04 29 02.5**	**+3.9**
AGUA	**GUANDACOL**	**4.06**	**94**	*e*P	**Pn**	**04 28 22.2**	**+3.2**
AGUA				*e*S	**Sn**	**04 29 08.3**	**+2.9**
ROC1	**El Roble**	**4.13**	**154**	*e*P	**Pn**	**04 28 21.9**	**+1.9**
ROC1				*e*S	**Sn**	**04 29 03.9**	**-3.4**
VA03	**San Esteban**	**4.14**	**148**	*e*P	**Pn**	**04 28 22.4**	**+2.3**
VA03				IAML		04 29 30.5	
	comp=Z,99nm,0.8s						
RTLS	**Leoncito**	**4.17**	**128**	*e*P	**Pn**	**04 28 24.4**	**+3.8**
RTLS				*e*S	**Sn**	**04 29 03.3**	**-5.1**
RTLS				IAML		04 29 40.1	
	comp=Z,108nm,0.5s						
AC02	**Maricunga**	**4.29**	**57**	*e*P	**Pn**	**04 28 22.9**	**+0.5**
AC02				*e*S	**Sn**	**04 29 11.7**	**+0.2**
VCA	**Vinchina**	**4.35**	**84**	*e*P	Pn	04 28 27.5	+4.5
VCA				*e*S	**Sn**	**04 29 16.9**	**+4.3**
AUSP	**Uspallata**	**4.38**	**133**	*e*P	**Pn**	**04 28 27.4**	**+3.9**
PEL	**Peldehue**	**4.41**	**152**	*e*S	Sn	04 29 24.8	+11
ASAL	**Salagasta**	**4.97**	**133**	*e*P	Pn	04 28 36.0	+4.5
ARCO	**CERRO ARCO**	**5.08**	**136**	*e*P	Pn	04 28 38.4	+5.4
ARCO				IAML		04 29 43.7	
	comp=Z,19nm,0.5s						
AVFE	**Valle Fertil**	**5.12**	**107**	*e*P	**Pn**	**04 28 35.5**	**+1.9**
AVFE				IAML		04 30 16.2	
	comp=Z,30nm,0.3s						
AAGR	**Agrelo**	**5.31**	**137**	*e*P	**Pn**	**04 28 39.7**	**+3.6**
AAGR				IAML		04 29 50.3	
	comp=Z,24nm,2.9s						
ACLC	**CERRO LA CRUZ**	**5.40**	**93**	*e*P	**Pn**	**04 28 39.5**	**+2.0**
TCA	**Tanti**	**7.67**	**108**	*e*P	**Pn**	**04 29 10.2**	**+1.7**
TCA				*e*S	**Sn**	**04 30 36.2**	**+1.9**

*NNC **02** 04:46:23.7±5.1, 53.58N×90.67E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=38.7km s-min=28.0km az=51.0, Suspected Mining explosion.*

*IDC **02** 04:46:23.4±3.1, 53.70N×90.70E, h0km, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=27.2km s-min=21.7km az=48.0*

ISC 02 04:46:26.0±4.0, 53.7N±0.1×90.4E±0.2, h0km, n8, σ0s41/13, 4C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.32**	**277**	⇓Pg	**Pb**	**04 47 26.3**	**+0.5**
	1.6nm,0.8s						
ZAA0				⇑Lg	Lg	04 48 17.9	
	12nm,1.0s						
ZALV	**Zalesovo Beam**	**3.32**	**277**	Pn	**Pn**	**04 47 19.4**	**+0.2**
	0.6nm,0.3s,baz=96,slow=16,SNR=7.1						
ZALV				Pg	**Pb**	**04 47 25.5**	**-0.3**
	1.4nm,0.3s,baz=93,slow=16,SNR=14						
ZALV				Lg	Lg	04 48 15.4	
	4.1nm,0.3s,baz=94,slow=23,SNR=8.6						
	1.1nm,0.4s						
KURK	**Kurchatov**	**7.83**	**252**	⇓Pn	**Pn**	**04 48 20.8**	**-0.3**
	2.5nm,0.7s						
KURK				⇑Sn	**Sn**	**04 49 50.6**	**+0.1**
	11nm,0.7s						
KURK				⇓Lg	Lg	04 50 35.7	
	18nm,0.7s						
KURBB	**Kurchatov Arra**	**7.93**	**252**	⇑Pn	**Pn**	**04 48 22.1**	**-0.3**
	4.4nm,0.6s						
KURBB				⇑Sn	**Sn**	**04 49 52.4**	**-0.3**
	21nm,0.8s						
KURBB				⇓Lg	Lg	04 50 39.2	
	33nm,0.7s						
KURBB	**Kurchatov Arra**	**7.93**	**252**	Pn	**Pn**	**04 48 21.8**	**-0.7**
	0.2nm,0.3s,baz=65,slow=15,SNR=18						
KURBB				Sn	**Sn**	**04 49 52.8**	**+0.1**
	0.1nm,0.3s,baz=67,slow=25,SNR=10						
KURBB				Lg	Lg	04 50 38.3	
	0.1nm,0.3s,baz=69,slow=29,SNR=6.6						
	2.7nm,0.6s						
MK31	**Makanchi Array**	**8.65**	**220**	⇓Pn	**Pn**	**04 48 32.1**	**-0.2**
	0.4nm,0.5s,baz=41,slow=14,SNR=16						
MK31				⇓Sn	**Sn**	**04 50 11.1**	**+0.6**
	1.4nm,0.6s						
MK31				Lg	Lg	04 51 00.2	
	14nm,1.1s,baz=38,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	**8.65**	**220**	Pn	**Pn**	**04 48 32.1**	**-0.2**
	0.3nm,0.3s,baz=36,slow=12,SNR=16						
MKAR				Sn	**Sn**	**04 50 10.7**	**+0.2**
	0.2nm,0.3s,baz=40,slow=21,SNR=3.3						
MKAR				Lg	Lg	04 50 59.0	
	0.1nm,0.3s,baz=39,slow=30,SNR=3.8						
	0.8nm,0.5s						
I34MN	**SONGINO INFRAS**	**11.72**	**114**	I	I	05 54 00.0	
	baz=306,slow=333,SNR=1.1						

KRSC 02 05:01:54.8±2.7, 55.33N×166.42E, h41km±14km, Ml4.1, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.28**	**245**	*e*P	Pn	05 02 03.2	+0.2
BKI				*e*S	Sn	05 02 09.2	+0.5
KBG	**Krutoberegovo**	**2.30**	**295**	*e*P	Pn	05 02 31.7	+1.6
SMKR	**Semkarok**	**3.06**	**296**	*e*P	Pn	05 02 42.7	+2.0
BDR	**Baidarnaya**	**3.19**	**295**	*e*P	Pn	05 02 45.9	+3.5
ZLN	**Zelenaya**	**3.26**	**285**	*e*P	Pn	05 02 44.9	+1.4
BZGR	**Bezymyannyi-Gr**	**3.30**	**283**	*e*P	Pn	05 02 48.6	+4.5
BZGR				*e*S	Sn	05 03 29.5	+7.4
LGNR	**Loginova**	**3.33**	**286**	*e*P	Pn	05 02 48.4	+3.8
BZP	**Bezymyannyi-Pe**	**3.39**	**282**	*e*P	Pn	05 02 49.6	+4.3
BZWR	**Bezymyannyi-We**	**3.42**	**283**	*e*P	Pn	05 02 49.0	+3.3
KRSR	**Krestovskiy**	**3.43**	**288**	*e*P	Pn	05 02 48.1	+2.3
TUMD	**Tumrok D**	**3.45**	**270**	*e*P	Pn	05 02 49.9	+3.9
TUMD				*e*S	Sn	05 03 31.2	+5.6
KIRR	**Kirishev**	**3.50**	**283**	*e*P	Pn	05 02 51.9	+5.0
KMNR	**Kamenistaya**	**3.54**	**280**	*e*P	Pn	05 02 51.7	+4.4
KPT	**Kopyto**	**3.57**	**283**	*e*P	Pn	05 02 52.2	+4.5
TUMR	**Tumrok**	**3.59**	**272**	*e*P	Pn	05 02 52.2	+4.3
SRDR	**Sredinnyy**	**3.91**	**287**	*e*P	Pn	05 02 56.7	+4.3
SPN	**Mys Shipunski**	**4.37**	**242**	*e*S	Sn	05 03 50.9	+2.8
SMAR	**Somma**	**4.92**	**248**	*e*P	Pn	05 03 11.0	+4.7
UGLR	**Uglovaya**	**4.93**	**248**	*e*P	Pn	05 03 11.4	+5.0
AVH	**Avacha**	**4.95**	**249**	*e*P	Pn	05 03 11.6	+4.9
KRX	**Arik**	**4.96**	**250**	*e*P	Pn	05 03 11.7	+4.9
KOK	**Koryaka**	**4.99**	**249**	*e*P	Pn	05 03 12.0	+4.7
KRMR	**Karymshinskiy**	**5.48**	**246**	*e*P	Pn	05 03 18.8	+4.9
GRL	**Gorelyy**	**5.66**	**244**	*e*P	Pn	05 03 21.5	+5.1
ASAK	**Asacha**	**5.84**	**243**	*e*P	Pn	05 03 24.3	+5.5
APC	**Apacha**	**5.95**	**250**	*e*P	Pn	05 03 25.7	+5.4
KDTR	**Khodutka, Kamc**	**6.09**	**238**	*e*S	Sn	05 04 31.8	+1.2

KRSC 02 05:02:45.0±2.4, 55.21N×166.42E, h36km±7km, Ml3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.25**	**268**	*e*P	Pn	05 02 52.7	-0.5
BKI				*e*S	Sn	05 02 58.6	-2.0
BZGR	**Bezymyannyi-Gr**	**3.33**	**285**	*e*S	Sn	05 04 17.3	+4.5
TUMD	**Tumrok D**	**3.45**	**272**	*e*S	Sn	05 04 20.5	+4.8
TUMR	**Tumrok**	**3.59**	**274**	*e*S	Sn	05 04 24.1	+4.8
SPN	**Mys Shipunski**	**4.31**	**243**	*e*S	Sn	05 04 41.3	+4.4
SMAR	**Somma**	**4.87**	**250**	*e*S	Sn	05 04 56.9	+5.7
AVH	**Avacha**	**4.91**	**250**	*e*S	Sn	05 04 57.9	+6.2
KRX	**Arik**	**4.91**	**251**	*e*S	Sn	05 04 57.2	+5.3
KRMR	**Karymshinskiy**	**5.44**	**247**	*e*S	Sn	05 05 09.5	+4.9

*IDC **02** 05:19:15.5±1.1, 52.91N×35.21W, h0km, mb3.7/11, mbtmp3.7/13, ML3.4/2, MS3.3/15, Error ellipse: s-maj=35.6km s-min=16.3km az=19.0*

ISC 02 05:19:17.3±1.0, 52.9N±0.2×35.2W±0.1, h13km, n28, σ0s43/16, mb3.8/10, MS3.2/15, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.67**	**289**	P	**Pn**	**05 23 35.1**	**0.0**
	0.2nm,0.3s,baz=66,slow=10,SNR=5.1						
	3.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**18.85**	**70**	P	**Pn**	**05 23 36.5**	**-0.8**
	baz=282,slow=11						
	3.2nm,0.8s						
FRB	**Frobisher Bay**	**20.32**	**315**	P	**P**	**05 23 52.7**	**0.0**
	2.9nm,0.8s,baz=98,slow=11,SNR=4.9						
FRB				LR	LR	05 29 33.1	
	comp=Z,64nm,19.3s,baz=355,slow=30						
	2.9nm,0.8s						
ESDC	**Sonseca Array**	**25.09**	**109**	P	**P**	**05 24 41.5**	**0.0**
	3.0nm,0.9s,baz=306,slow=8.2,SNR=8.9						
	3.0nm,0.9s						
HFS	**Hagfors**	**27.35**	**55**	LR	LR	05 33 40.3	
	comp=Z,59nm,19.1s,baz=286,slow=32						
DAVOX	**Davos/Dischmat**	**29.32**	**84**	LR	LR	05 35 40.2	
	comp=Z,48nm,19.6s,baz=258,slow=34						
GERES	**GERESS Array B**	**30.64**	**78**	LR	LR	05 36 05.0	
	comp=Z,53nm,18.2s,baz=288,slow=33						
RES	**Resolute Bay**	**31.96**	**334**	LR	LR	05 36 25.1	
	comp=Z,44nm,18.6s,baz=28,slow=32						
FINES	**FINESS Array B**	**33.10**	**51**	LR	LR	05 37 23.1	
	comp=Z,52nm,20.2s,baz=20,slow=33						
MLR	**Muntele Rosu**	**39.54**	**75**	LR	LR	05 42 01.1	
	comp=Z,41nm,20.6s,baz=338,slow=34						
YKA	**Yellowknife Ar**	**40.84**	**316**	P	**P**	**05 26 57.8**	**-0.4**
	0.5nm,0.8s,baz=70,slow=7.8,SNR=5.8						
	0.5nm,0.8s						
IDI	**Anoyia**	**45.20**	**88**	LR	LR	05 46 35.7	
	comp=Z,20nm,20.6s,baz=276,slow=36						
BRTR	**Keskin Array B**	**47.53**	**77**	P	**P**	**05 27 52.3**	**0.0**
	1.0nm,0.6s,baz=306,slow=6.7,SNR=6.7						
	1.0nm,0.6s						
PDAR	**Pinedale Array**	**48.80**	**290**	P	**P**	**05 28 02.2**	**0.0**
	0.4nm,0.6s,baz=61,slow=10.0,SNR=4.8						
PDAR				LR	LR	05 46 46.8	
	comp=Z,44nm,18.4s,baz=94,slow=34						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**49.34**	**130**	P	**P**	**05 28 06.4**	**+0.3**
	0.6nm,0.8s,baz=339,slow=7.6,SNR=2.6						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**51.46**	**329**	P	**P**	**05 28 22.1**	**+0.4**
	1.1nm,1.0s,baz=40,slow=4.4,SNR=7.3						
ILAR				PcP	**PcP**	**05 29 35.7**	**-0.2**
	0.5nm,0.8s,baz=13,slow=1.2,SNR=5.4						
	1.1nm,1.0s						
ANMO	**Albuquerque**	**52.15**	**280**	LR	LR	05 49 45.2	
	comp=Z,73nm,19.1s,baz=151,slow=35						
ELK	**Elko**	**53.34**	**291**	LR	LR	05 50 55.9	
	comp=Z,26nm,18.6s,baz=46,slow=36						
AKTO	**Aktyubinsk**	**53.84**	**52**	LR	LR	05 51 20.0	
	comp=Z,31nm,18.4s,baz=251,slow=36						
TXAR	**Lajitas Array**	**54.41**	**273**	LR	LR	05 51 30.1	
	comp=Z,15nm,18.1s,baz=54,slow=36						
YBH	**Yreka Blue Hor**	**56.81**	**297**	LR	LR	05 52 14.7	
	comp=Z,38nm,19.4s,baz=36,slow=35						
BVAR	**Borovoye Array**	**57.60**	**44**	P	**P**	**05 29 06.9**	**+0.5**
	0.7nm,0.6s,baz=300,slow=6.3,SNR=4.3						
	0.7nm,0.6s						
CMIG	**Matias Romero**	**58.34**	**256**	LR	LR	05 53 57.1	
	comp=Z,15nm,19.0s,baz=60,slow=36						
KURBB	**Kurchatov Arra**	**62.73**	**41**	P	**P**	**05 29 41.9**	**+0.3**
	0.3nm,0.3s,baz=325,slow=6.9,SNR=5.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**67.29**	**41**	P	**P**	**05 30 11.6**	**+0.2**
	0.6nm,0.8s,baz=339,slow=6.5,SNR=6.5						
	0.6nm,0.8s						
SONM	**Songino Array**	**74.44**	**26**	P	**P**	**05 30 55.4**	**+0.4**
	0.4nm,0.7s,baz=338,slow=5.3,SNR=3.7						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**146.10**	**18**	PKPbc	**PKPbc**	**05 38 56.7**	**-0.3**
	1.3nm,0.8s,baz=342,slow=3.5,SNR=7.4						
ASAR	**Alice Springs**	**149.64**	**20**	PKPbc	**PKiKP**	**05 39 06.6**	**-0.9**
	1.1nm,0.7s,baz=341,slow=2.2,SNR=8.9						

*UCR **02** 05:21:18.7±0.6, 8.60N×83.01W, h44km±3km, MW4.0*

*UPA **02** 05:21:19.5±1.1, 8.68N×83.06W, h33km±4km, MW3.9*

*CATAC **02** 05:21:19.7±0.3, 8.65N×83.08W, h20km±2km, ML3.7*

ISC 02 05:21:19.7±1.0, 8.66N±0.03×83.05W±0.02, h33km±2km, n54, σ0s82/78, 5C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITO	**Golfito**	**0.11**	**253**	*e*P	**Pb**	**05 21 25.4**	**-0.1**
EDAD	**Golfito**	**0.11**	**268**	*e*P	**Pb**	**05 21 25.6**	**0.0**
EDAD				*e*S	**Sb**	**05 21 30.9**	**+1.2**
VITO	**San Vito**	**0.18**	**27**	*e*P	**Pb**	**05 21 26.9**	**+0.7**
CDITO	**Canoas**	**0.20**	**115**	⇓*i*P	**Pb**	**05 21 26.2**	**-0.1**
CDITO				*e*S	**Sb**	**05 21 31.4**	**+0.6**
CDITO	**Canoas**	**0.20**	**115**	*i* P	**Pb**	**05 21 26.1**	**-0.1**
CDITO				*i* S	**Sb**	**05 21 32.1**	**+1.3**
CDITO				IAML		05 21 32.8	
	comp=Z,11μm,1.0s						
PTJ1	**Puerto Jimnez**	**0.28**	**244**	*e*P	**Pb**	**05 21 27.2**	**+0.1**
JIME	**Puerto Jimenez**	**0.29**	**246**	*e*P	**Pn**	**05 21 27.4**	**-0.1**
PIRO	**Carate, Puerto**	**0.38**	**228**	*e*P	**Pb**	**05 21 27.9**	**-0.6**
PIRO	**Carate, Puerto**	**0.38**	**228**	*i* P	**Pb**	**05 21 28.1**	**-0.4**
PIRO				*i* S	**Sn**	**05 21 35.9**	**+1.1**
PIRO				IAML		05 21 37.1	
	comp=Z,22μm,1.0s						
BRU2	**Volcan**	**0.38**	**69**	⇑*i*P	**Pb**	**05 21 28.4**	**-0.3**
BRU2				*e*S	**Sn**	**05 21 36.0**	**+0.9**
BRU2	**Volcan**	**0.38**	**69**	*e*P	**Pb**	**05 21 28.4**	**-0.3**
POTG	**Potrero Grande**	**0.40**	**350**	*e*P	**Pn**	**05 21 28.9**	**-0.3**
POTG	**Potrero Grande**	**0.40**	**350**	*i* P	**Pn**	**05 21 29.1**	**-0.1**
POTG				*i* S	**Sn**	**05 21 37.1**	**+1.6**
POTG				IAML		05 21 39.1	
	comp=Z,12μm,1.0s						
BC3P	**Paso Ancho**	**0.46**	**70**	⇑*i*P	**Pb**	**05 21 29.3**	**-0.6**
BC3P				*e*S	**Sn**	**05 21 37.8**	**+0.5**
PTPM	**Petroterminale**	**0.48**	**159**	⇑*i*P	**Pb**	**05 21 29.4**	**-0.6**
PTPM				*e*S	**Sn**	**05 21 38.6**	**+1.1**
EDPN	**Palmar Norte**	**0.50**	**307**	*e*P	**Pb**	**05 21 30.2**	**-0.2**
BCO2	**Palmira**	**0.52**	**83**	⇑*i*P	**Pb**	**05 21 30.2**	**-0.6**
BCO2				*e*S	**Sn**	**05 21 39.1**	**+0.4**
EDBA	**Buenos Aires**	**0.55**	**336**	*e*P	**Pn**	**05 21 31.1**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.55**	**86**	*e*P	**Pb**	**05 21 30.5**	**-0.6**
PTAR3				*e*S	**Sb**	**05 21 38.9**	**-0.2**
LIMO3	**Limones**	**0.58**	**161**	*e*P	**Pn**	**05 21 30.8**	**-0.8**
BURE	**Buenos Aires**	**0.59**	**331**	*e*P	**Pn**	**05 21 31.4**	**-0.2**
PLAN	**Los Planes de**	**0.62**	**271**	*i* P	**Pn**	**05 21 31.7**	**-0.4**
PLAN				*i* S	**Sn**	**05 21 41.9**	**+1.0**
PLAN				IAML		05 21 46.9	
	comp=Z,19μm,1.0s						
DVD	**David**	**0.63**	**110**	*e*P	**Pn**	**05 21 31.3**	**-1.0**
DVD				*e*S	**Sb**	**05 21 40.9**	**-0.3**
PSOM3	**Paja de Sombre**	**0.72**	**88**	*e*P	**Pn**	**05 21 32.5**	**-1.1**
PSOM3				*e*S	**Sn**	**05 21 43.2**	**-0.3**
OCHAL	**Ojochal**	**0.73**	**307**	*i* P	**Pn**	**05 21 33.0**	**-0.7**
OCHAL				*i* S	**Sb**	**05 21 43.9**	**0.0**
OCHAL				IAML		05 21 52.3	
	comp=Z,44nm,1.0s						
PEZE	**Perez Zeledon,**	**0.95**	**319**	*e*P	**Pn**	**05 21 35.8**	**-0.9**
PEZE	**Perez Zeledon,**	**0.95**	**319**	*i* P	**Pn**	**05 21 36.0**	**-0.8**
PEZE				*i* S	**Sn**	**05 21 49.1**	**-0.1**
PEZE				IAML		05 21 52.8	
	comp=Z,2μm,1.0s						
CNI2	**El Empalme, Bo**	**0.95**	**37**	⇑*e*P	**Pn**	**05 21 36.3**	**-0.4**
CNI2				*e*S	**Sb**	**05 21 50.2**	**+0.1**
BRIBI	**Bribri**	**0.98**	**12**	*e*P	**Pb**	**05 21 38.3**	**0.0**
BUS1	**Rivas**	**1.12**	**322**	*e*P	**Pn**	**05 21 38.9**	**-0.6**
CDM	**Cerro de Muert**	**1.14**	**322**	*e*P	**Pn**	**05 21 39.1**	**-0.6**
CDM	**Cerro de Muert**	**1.14**	**322**	*i* P	**Pn**	**05 21 39.0**	**-0.6**
CDM				*i* S	**Sn**	**05 21 54.8**	**+0.5**
CDM				IAML		05 21 57.5	
	comp=Z,700nm,1.0s						
VINA	**Juan Vinas**	**1.41**	**331**	*e*P	**Pn**	**05 21 43.4**	**+0.3**
LCR2	**La Lucha 2**	**1.43**	**319**	*e*P	**Pn**	**05 21 43.0**	**-0.5**
LCR2	**La Lucha 2**	**1.43**	**319**	*i* P	**Pn**	**05 21 43.9**	**+0.4**
LCR2				*i* S	**Sb**	**05 22 03.1**	**-0.8**
LCR2				IAML		05 22 07.1	
	comp=Z,760nm,1.0s						
ABE2	**San Pablo**	**1.44**	**317**	*e*P	**Pn**	**05 21 43.5**	**-0.1**
RVSTA	**Santa Teresita**	**1.44**	**336**	*e*P	**Pn**	**05 21 44.5**	**+1.0**
PCAYA	**Pacayas**	**1.46**	**329**	*e*P	**Pn**	**05 21 44.4**	**+0.5**
OCM	**Ochomogo**	**1.52**	**324**	*i* P	**Pn**	**05 21 44.9**	**+0.2**
OCM				*i* S	**Sb**	**05 22 06.8**	**+0.3**
OCM				IAML		05 22 13.2	
	comp=Z,630nm,1.0s						
VTRT	**Volcan Turrial**	**1.52**	**331**	*i* P	**Pn**	**05 21 45.4**	**+0.5**
VTRT				IAML		05 22 12.1	
	comp=Z,2μm,1.0s						
HAYA	**Volcan Irazu**	**1.53**	**329**	*i* P	**Pn**	**05 21 45.6**	**+0.6**
HAYA				IAML		05 22 09.0	
	comp=Z,1μm,1.0s						
VTUC	**Crater, Volcan**	**1.53**	**333**	*i* P	**Pb**	**05 21 46.4**	**-1.3**
VTUC				IAML		05 22 10.0	
	comp=Z,940nm,1.0s						
VIRE	**VIRE**	**1.55**	**327**	*i* P	**Pn**	**05 21 46.1**	**+0.9**
VIRE				*i* S	**Sn**	**05 22 05.5**	**+1.2**
VIRE				IAML		05 22 15.2	
	comp=Z,1μm,1.0s						
HDC3	**Heredia 3**	**1.70**	**322**	*i* P	**Pb**	**05 21 49.6**	**-0.8**
HDC3				*i* S	**Sb**	**05 22 09.9**	**-1.5**
HDC3				IAML		05 22 25.1	
	comp=Z,710nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.86**	**333**	*i* P	**Pn**	**05 21 50.6**	**+1.4**
RIFO				IAML		05 22 28.6	
	comp=Z,460nm,1.0s						
JACO	**JACO, Garabito**	**1.88**	**302**	*i* P	**Pn**	**05 21 49.3**	**-0.1**
JACO				*i* S	**Sb**	**05 22 15.1**	**-1.3**
JACO				IAML		05 22 19.9	
	comp=Z,260nm,1.0s						
SAFE3	**Santa Fe, Vera**	**1.96**	**94**	*e*P	**Pn**	**05 21 51.4**	**+0.8**
SAFE3				*e*S	**Sn**	**05 22 14.5**	**+0.5**
GMAL	**Guarumal, Vera**	**2.01**	**116**	*e*P	**Pn**	**05 21 51.0**	**-0.2**
GMAL				*e*S	**Sn**	**05 22 15.2**	**0.0**
CPMI	**Catarata Coope**	**2.08**	**321**	*i* P	**Pn**	**05 21 53.1**	**+0.7**
CPMI				IAML		05 22

LBMI	**Labuha**	**7.91**	**306**	P	**Pn**	**05 45 27.5**	**+0.1**
	1µm,0.7s,10µm4.0nm						
SANI	**Sanana**	**8.53**	**292**	P	**Pn**	**05 45 33.3**	**-2.6**
	337nm,0.5s,6µm						
TNTI	**Ternate**	**8.91**	**313**	Pn	**Pn**	**05 45 41.2**	**0.0**
TNTI	**Ternate**	**8.91**	**313**	P	**Pn**	**05 45 41.8**	**+0.6**
TNTI	**Ternate**	**8.91**	**313**	P	**Pn**	**05 45 43.9**	**+2.7**
SOEI	**Soe**	**10.47**	**245**		**Pn**	**05 46 01.2**	**-1.5**
SOEI	**Soe**	**10.47**	**245**	P	**Pn**	**05 46 02.1**	**-0.6**
SOEI	**Soe**	**10.47**	**245**	P	**Pn**	**05 46 03.0**	**+0.3**
	563nm,0.9s,4µm						
KNRA	**Kununurra**	**11.41**	**206**	P	**Pn**	**05 46 13.8**	**-1.5**
	baz=12,SNR=182						
KNRA	**Kununurra**	**11.41**	**206**		**Pn**	**05 46 13.9**	**-1.5**
KNRA	**Kununurra**	**11.41**	**206**	P	**Pn**	**05 46 14.2**	**-1.2**
KMSI	**Cibinong**	**11.51**	**301**	P	**Pn**	**05 46 16.4**	**-0.4**
	435nm,0.7s,6µm						
LUWI	**Luwuk**	**11.89**	**291**		**Pn**	**05 46 20.6**	**-1.3**
LUWI	**Luwuk**	**11.89**	**291**	P	**Pn**	**05 46 21.4**	**-0.5**
LUWI	**Luwuk**	**11.89**	**291**	P	**Pn**	**05 46 21.9**	**0.0**
	244nm,0.9s,3µm						
MMRI	**Maumere**	**12.00**	**254**		**Pn**	**05 46 23.7**	**+0.3**
COEN	**Coen**	**12.52**	**134**	P	**Pn**	**05 46 27.2**	**-3.3**
	baz=12,SNR=53						
COEN	**Coen**	**12.52**	**134**		**Pn**	**05 46 27.6**	**-3.0**
MRSI	**Marisa**	**13.26**	**296**	P	**Pn**	**05 46 38.9**	**-1.8**
	99nm,0.5s,1µm						
BKSI	**Bulukumba**	**13.70**	**270**	P	**P**	**05 46 51.3**	**-3.6**
	118nm,1.1s,954nm						
PMG	**Port Moresby**	**13.77**	**108**		**Pn**	**05 46 45.6**	**-2.0**
PMG	**Port Moresby**	**13.77**	**108**	P	**Pn**	**05 46 48.5**	**+0.9**
PMG	**Port Moresby**	**13.77**	**108**	Pn	**Pn**	**05 46 48.3**	**+0.7**
	5.1nm,0.3s,baz=331,slow=8.0,SNR=4.1						
PMG				LR	LR	05 53 18.4	
	comp=Z,581nm,20.4s,baz=301,slow=42						
	39nm,0.8s						
KAPI	**Kappang**	**14.07**	**271**	P	**Pn**	**05 46 52.7**	**+0.9**
TTSI	**Tana Toraja**	**14.21**	**279**	P	**Pn**	**05 46 55.1**	**+1.5**
	37nm,0.9s						
WB0	**Warramunga Arr**	**14.32**	**178**		**Pn**	**05 46 50.7**	**-4.5**
WRA	**Warramunga Arr**	**14.49**	**178**	Pn	**Pn**	**05 46 53.2**	**-4.4**
WRA	**Warramunga Arr**	**14.49**	**178**	Pn	**Pn**	**05 46 53.4**	**-4.1**
	1.1nm,0.3s,baz=9.0,slow=12,SNR=39						
WRA				Sn	Sn	05 49 25.7	-12
	2.3nm,0.3s,baz=360,slow=23,SNR=3.1						
WC3	**Warramunga Arr**	**14.51**	**178**	P	**Pn**	**05 46 53.9**	**-3.9**
	baz=15						
TOLI2	**Tolitoli**	**14.58**	**296**		**Pn**	**05 46 56.8**	**-1.9**
TOLI2	**Tolitoli**	**14.58**	**296**	P	**Pn**	**05 46 58.2**	**-0.5**
DAV	**Davao City (W)**	**14.87**	**326**	LR	LR	05 53 46.0	
	comp=Z,327nm,20.0s,baz=156,slow=42						
FITZ	**Fitzroy Crossi**	**14.99**	**212**	P	**Pn**	**05 47 00.3**	**-4.0**
	baz=15,SNR=32						
FITZ	**Fitzroy Crossi**	**14.99**	**212**	Pn	**Pn**	**05 47 00.8**	**-3.5**
MPSI	**Mapaga**	**15.07**	**292**	P	**Pn**	**05 47 05.6**	**+0.4**
	79nm,0.7s,952nm						
QIS	**Mount Isa**	**16.09**	**160**	P	**Pn**	**05 47 15.3**	**-3.2**
	baz=16,SNR=7.5						
QIS	**Mount Isa**	**16.09**	**160**	P	**Pn**	**05 47 18.7**	**+0.1**
MTSU	**Mount Surprise**	**16.28**	**142**	P	**Pn**	**05 47 18.6**	**-2.3**
	baz=16,SNR=42						
PLAI	**Plampang**	**16.34**	**257**	P	**Pn**	**05 47 21.1**	**-0.6**
PLAI	**Plampang**	**16.34**	**257**	P	**Pn**	**05 47 20.9**	**-0.8**
	158nm,0.8s,1µm						
AS31	**Alice Springs**	**18.19**	**180**	P	**Pn**	**05 47 42.0**	**-2.8**
ASAR	**Alice Springs**	**18.19**	**180**	P	**Pn**	**05 47 41.8**	**-3.0**
	1.0nm,0.3s,baz=356,slow=11,SNR=60						
ASAR				S	Sn	05 50 53.0	-14
	5.5nm,0.8s,baz=358,slow=26,SNR=4.5						
ASAR				LR	LR	05 55 12.2	
	comp=Z,331nm,18.4s,baz=2.0,slow=39						
	34nm,0.7s						
ASPA	**Alice Springs**	**18.19**	**180**	P	**Pn**	**05 47 42.1**	**-2.7**
	baz=18						
MYLDM	**Lahad Datu**	**18.59**	**304**	P	**P**	**05 47 49.6**	**+0.4**
MYLDM				IAmb	IAmb	05 48 01.6	
	comp=Z,42nm,0.8s						
TV1H	**Townsville Har**	**18.69**	**139**	P	**Pn**	**05 47 51.3**	**+0.5**
SRBI	**Singaraja**	**18.73**	**261**	P	**Pn**	**05 47 52.1**	**+0.8**
	comp=Z,82nm,0.8s						
CTA	**Charters Tower**	**18.95**	**142**	P	**Pn**	**05 47 54.0**	**0.0**
	comp=Z,1.1nm,0.3s,baz=323,slow=12,SNR=17						
CTA				LR	LR	05 56 04.8	
	comp=Z,915nm,20.6s,baz=321,slow=40						
	comp=Z,30nm,1.0s						
CTAO	**Charters Tower**	**18.95**	**142**	P	**Pn**	**05 47 54.1**	**+0.1**
CTAO	**Charters Tower**	**18.95**	**142**	P	**Pn**	**05 47 54.1**	**+0.1**
WRKA	**Warakurna**	**20.28**	**195**	P	**P**	**05 48 07.8**	**+0.1**
	baz=20,SNR=86						
WRKA	**Warakurna**	**20.28**	**195**	P	**P**	**05 48 08.2**	**+0.5**
BLJI	**Banyuglugur**	**20.29**	**262**	P	Pn	05 48 09.2	-0.7
	comp=Z,101nm,0.8s,comp=Z,4µm						
KKM	**Kota Kinabalu**	**20.96**	**302**	P	**P**	**05 48 14.9**	**-0.3**
KKM				IAmb	IAmb	05 48 18.0	
	comp=Z,37nm,0.8s						
KKM	**Kota Kinabalu**	**20.96**	**302**	P	**P**	**05 48 15.7**	**+0.5**
PSA00	**Pilbara Seismi**	**21.08**	**219**	P	**P**	**05 48 16.8**	**+0.5**
PSA00				IAmb	IAmb	05 48 34.0	
	comp=Z,33nm,0.8s						
PSA00	**Pilbara Seismi**	**21.08**	**219**	P	**P**	**05 48 15.7**	**-0.6**
PSA00				IAmb	IAmb	05 48 34.0	
	comp=Z,18nm,1.1s						
PSA00	**Pilbara Seismi**	**21.08**	**219**	P	**P**	**05 48 17.0**	**+0.7**
GUMO	**Guam**	**21.77**	**30**	LR	LR	05 57 08.8	
	comp=Z,99nm,18.1s,baz=160,slow=38						
OOD	**Oodnadatta**	**22.37**	**176**	P	**P**	**05 48 31.2**	**+1.1**
SBUM	**Sibu**	**22.98**	**289**	P	**P**	**05 48 36.3**	**-0.4**
STKI	**Sintang**	**23.01**	**283**	P	**P**	**05 48 38.0**	**+1.0**
	comp=Z,47nm,0.5s						
INKA	**Innaminka**	**23.19**	**164**	P	**P**	**05 48 39.9**	**+1.2**
QLP	**Quilpie**	**23.30**	**156**	P	**P**	**05 48 39.9**	**+0.1**
	baz=23,SNR=5.0						
QLP	**Quilpie**	**23.30**	**156**	P	**P**	**05 48 40.1**	**+0.3**
UGM	**Wanagama**	**23.33**	**263**	P	**P**	**05 48 39.7**	**-0.5**
RK1H	**Rockhampton Ha**	**24.03**	**140**	P	**P**	**05 48 47.3**	**+0.5**
KSM	**Kuching**	**24.50**	**285**	P	**P**	**05 48 50.3**	**-1.0**
KSM				IAmb	IAmb	05 48 53.2	
	comp=Z,65nm,0.9s						
KSM	**Kuching**	**24.50**	**285**	P	**P**	**05 48 52.5**	**+1.3**
MULG	**Mulgathing**	**24.78**	**180**	P	**P**	**05 48 55.2**	**+1.6**
KPJI	**Karang Pucung**	**24.87**	**264**	P	**P**	**05 48 55.8**	**+1.2**
	comp=Z,46nm,0.7s,comp=Z,2µm						
LCRK	**Leigh Creek**	**25.28**	**171**	P	**P**	**05 48 59.2**	**+1.1**
GIRL	**Giralia**	**25.59**	**226**	P	**P**	**05 49 03.6**	**+2.6**
MEEK	**Meekatharra**	**25.68**	**213**	P	**P**	**05 49 02.3**	**+0.4**
	baz=26,SNR=5.1						
EIDS	**Eidsvold**	**25.84**	**142**	P	**P**	**05 49 03.3**	**+0.1**
EIDS				IAmb	IAmb	05 49 11.8	
	comp=Z,52nm,1.4s						
EIDS	**Eidsvold**	**25.84**	**142**	P	**P**	**05 49 04.7**	**+1.5**
FORT	**Forrest**	**25.86**	**192**	P	**P**	**05 49 04.1**	**+0.8**
	baz=26,SNR=14						
FORT	**Forrest**	**25.86**	**192**	P	**P**	**05 49 03.8**	**+0.4**
FORT	**Forrest**	**25.86**	**192**	P	**P**	**05 49 04.8**	**+1.4**
BBJI	**Bungbulang**	**26.14**	**264**	P	**P**	**05 49 05.1**	**-1.1**
HNR	**Honiara**	**26.16**	**100**	LR	LR	06 00 14.8	
	comp=Z,3µm,18.1s,baz=312,slow=38						
CNJI	**Cibinong**	**26.65**	**264**	P	**P**	**05 49 13.9**	**+3.2**
	comp=Z,51nm,1.2s						
STKA	**Stephens Creek**	**27.35**	**166**	P	**P**	**05 49 16.6**	**-0.2**
	baz=28,SNR=10						
STKA	**Stephens Creek**	**27.35**	**166**	P	**P**	**05 49 15.4**	**-1.3**
STKA	**Stephens Creek**	**27.35**	**166**	P	**P**	**05 49 16.6**	**-0.2**
STKA	**Stephens Creek**	**27.35**	**166**	P	**P**	**05 49 15.9**	**-0.9**
	comp=Z,12nm,0.9s,baz=330,slow=10,SNR=17						
STKA				LR	LR	06 01 16.9	
	comp=Z,446nm,21.0s,baz=2.7,slow=39						
	comp=Z,12nm,0.9s						
BBOO	**Buckleboo**	**27.38**	**176**	P	**P**	**05 49 17.3**	**+0.2**
BBOO				IAmb	IAmb	05 49 50.8	
	comp=Z,13nm,0.8s						
KMBL	**Kambalda**	**28.21**	**202**	P	**P**	**05 49 24.2**	**-0.3**
	baz=28,SNR=5.4						
CMSA	**Cobar Meteorol**	**28.30**	**158**	P	**P**	**05 49 25.3**	**+0.1**
	baz=28,SNR=5.1						
CMSA	**Cobar Meteorol**	**28.30**	**158**	P	**P**	**05 49 25.4**	**+0.1**
HTT	**Hallett**	**28.31**	**171**	P	**P**	**05 49 26.0**	**+0.5**
	baz=28,SNR=4.8						
MORW	**Morawa**	**29.00**	**214**	P	**P**	**05 49 30.9**	**-0.7**
MORW				IAmb	IAmb	05 50 24.6	
	comp=Z,36nm,1.6s						
ARMA	**Armidale**	**30.01**	**148**	P	**P**	**05 49 40.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**31.51**	**207**	LR	LR	06 04 07.8	
	comp=Z,395nm,18.4s,baz=308,slow=39						
ARPS	**Mount Arapiles**	**32.09**	**168**	P	**P**	**05 49 59.5**	**+0.7**
	baz=32,SNR=10						

ARPS	**Mount Arapiles**	**32.09**	**168**	P	**P**	**05 49 59.5**	**+0.7**
JOW	**Kunigami**	**32.47**	**351**	LR	LR	06 02 25.6	
	comp=Z,142nm,21.8s,baz=90,slow=35						
BKNI	**Bangkinang**	**33.27**	**279**	P	**P**	**05 50 09.0**	**-0.5**
PDSI	**Padang**	**33.65**	**276**	P	**P**	**05 50 11.8**	**-0.9**
	comp=Z,44nm,0.9s,comp=Z,11µm						
TOO	**Toolangi**	**33.76**	**163**	P	**P**	**05 50 14.3**	**+0.8**
	baz=34,SNR=4.7						
TOO	**Toolangi**	**33.76**	**163**	P	**P**	**05 50 13.2**	**-0.2**
TOO				IAmb	IAmb	05 50 15.3	
	comp=Z,9.3nm,0.8s						
IPM	**Ipoh**	**34.24**	**286**	P	**P**	**05 50 16.0**	**-1.8**
IPM				IAmb	IAmb	05 50 19.8	
	comp=Z,20nm,0.7s						
IPM	**Ipoh**	**34.24**	**286**	P	**P**	**05 50 19.2**	**+1.4**
NOUC	**Port Laguerre**	**35.49**	**121**	P	**P**	**05 50 26.6**	**-2.0**
NOUC				pP	**sP**	**05 50 41.4**	**+1.2**
DZM	**Mont Dzumac**	**35.60**	**121**	P	**P**	**05 50 28.4**	**-1.2**
DZM				IAmb	IAmb	05 50 46.2	
	comp=Z,20nm,1.0s						
DZM	**Mont Dzumac**	**35.60**	**121**	P	**P**	**05 50 29.2**	**-0.4**
DZM	**Mont Dzumac**	**35.60**	**121**	*e*S	S	05 55 54.1	-10
	comp=Z,74nm,32.5s						
DZM				*e*LR	LR	06 00 05.8	
	comp=Z,126nm,23.5s						
DZM	**Mont Dzumac**	**35.60**	**121**	LR	LR	06 04 45.2	
	comp=Z,94nm,19.5s,baz=254,slow=36						
DZM	**Mont Dzumac**	**35.60**	**121**	P	**P**	**05 50 28.8**	**-0.8**
DZM				pP	**sP**	**05 50 44.0**	**+2.8**
RPSI	**Rantau Prapat**	**35.82**	**282**	P	**P**	**05 50 30.0**	**-1.5**
RPSI				IAmb	IAmb	05 50 31.7	
	comp=Z,22nm,1.0s						
PSI	**Prapat**	**35.84**	**282**	P	**P**	**05 50 31.0**	**-0.8**
YATNC	**Mamie plateau,**	**35.98**	**121**	P	**P**	**05 50 32.5**	**-0.3**
JNU	**Nakatsue**	**38.38**	**356**	P	**P**	**05 50 52.2**	**-0.8**
JNU	**Nakatsue**	**38.38**	**356**	LR	LR	06 07 24.9	
	comp=Z,72nm,19.4s,baz=174,slow=37						
MLSI	**Meulaboh, Aceh**	**38.63**	**284**	P	**P**	**05 50 54.6**	**-0.7**
	comp=Z,58nm,1.0s						
NJ2	**Nanjing**	**39.87**	**340**	*e*P	**P**	**05 51 07.6**	**+2.3**
NJ2				pP	**sP**	**05 51 16.2**	**-0.7**
NJ2				sP	**pwP**	**05 51 19.7**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,180nm,4.0s						
WHN	**Wuhan**	**40.31**	**334**	P	**P**	**05 51 13.2**	**+4.2**
WHN				pmax	pmax		
	comp=Z,48nm,0.7s						
GYA	**Guiyang**	**41.18**	**321**	*e*P	**P**	**05 51 16.4**	**-0.1**
GYA				pmax	pmax		
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.79**	**305**	P	**P**	**05 51 20.5**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=135,slow=7.0,SNR=18						
CMAR				LR	LR	06 08 14.1	
	comp=Z,36nm,21.8s,baz=135,slow=36						
	comp=Z,2.4nm,0.6s						
MJAR	**Matsushiro Arr**	**41.89**	**5**	LR	LR	06 06 33.7	
	comp=Z,88nm,21.0s,baz=182,slow=33						
CHTO	**Chiang Mai**	**41.98**	**306**	P	**P**	**05 51 22.3**	**-0.6**
CHTO				IAmb	IAmb	05 51 23.9	
	comp=Z,22nm,1.5s						
CHTO	**Chiang Mai**	**41.98**	**306**	P	**P**	**05 51 22.8**	**-0.2**
KSAR	**Wonju Array Be**	**42.95**	**353**	P	**P**	**05 51 29.0**	**-1.6**
KSRS	**Korea Array**	**42.96**	**353**	P	**P**	**05 51 29.6**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=184,slow=9.3,SNR=2.0						
KSRS				LR	LR	06 08 30.3	
	comp=Z,50nm,20.5s,baz=170,slow=35						
	comp=Z,0.7nm,0.4s						
PZH	**PanZhiHua**	**44.41**	**317**	P	**P**	**05 51 44.4**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,130nm,5.2s						
TNCH	**TengChong**	**45.77**	**313**	P	**P**	**05 51 54.8**	**+1.2**
TNCH				pP	pP	05 51 57.8	-4.1
TNCH				sP	sP	05 51 59.9	-5.3
TNCH				pmax	pmax		
	comp=Z,190nm,0.5s						
HNS	**HongShan**	**46.15**	**339**	⇑P	**P**	**05 51 59.6**	**+3.5**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
CD2	**Chengdu**	**46.15**	**323**	*e*P	**P**	**05 51 57.0**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**49.37**	**358**	P	**P**	**05 52 20.3**	**-0.7**
USRK	**Ussuriysk Ar.**	**49.37**	**358**	P	**P**	**05 52 20.7**	**-0.2**
USRK	**Ussuriysk Ar.**	**49.37**	**358**	P	**P**	**05 52 20.4**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=184,slow=7.3,SNR=5.0						
	comp=Z,1.5nm,0.5s						
ASAJ	**Asahikawa**	**49.88**	**8**	LR	LR	06 14 31.4	
	comp=Z,42nm,18.4s,baz=94,slow=37						
JKA	**Kamikawa-asahi**	**49.88**	**8**	P	**P**	**05 52 24.0**	**-0.9**
MRNZ	**Matariki Terra**	**49.88**	**142**	P	**P**	**05 52 24.2**	**-0.8**
MDJ	**Mudanjiang**	**49.91**	**356**	P	**P**	**05 52 26.4**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,91nm,4.1s						
RPZ	**Rata Peaks**	**50.27**	**145**	LR	LR	06 13 30.3	
	comp=Z,356nm,18.7s,baz=305,slow=36						
HHC	**Hu-ho-hao-te**	**50.34**	**338**	*e*P	**P**	**05 52 31.9**	**+3.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
TUWZ	**Tuamarina**	**50.64**	**141**	P	**P**	**05 52 30.1**	**-0.7**
BTO	**Baotou**	**50.72**	**337**	*e*P	**P**	**05 52 34.4**	**+2.9**
BTO				pP	**pP**	**05 52 38.5**	**-1.4**
BTO				sP	**sP**	**05 52 41.4**	**-1.8**
BTO				S	**S**	**05 59 53.4**	**+8.4**
BTO				pmax	pmax		
	comp=Z,22nm,0.5s						
BTO				pmax	pmax		
	comp=Z,310nm,4.9s						
URZ	**Urewera**	**51.07**	**136**	LR	LR	06 15 04.4	
	comp=Z,236nm,18.3s,baz=121,slow=37						
BNX	**BinXian**	**51.21**	**354**	⇑P	**P**	**05 52 34.4**	**-0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,160nm,5.2s						
XLT	**XiLinHaoTe**	**51.60**	**344**	*e*P	**P**	**05 52 40.1**	**+2.1**
XLT				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,100nm,3.9s						
GTA	**Gaotai**	**54.53**	**328**	*e*P	**P**	**05 53 00.4**	**+0.7**
GTA				sP	pwP	05 53 13.5	+0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**58.23**	**339**	P	**P**	**05 53 24.5**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=157,slow=8.3,SNR=4.7						
SONM				LR	LR	06 18 34.3	
	comp=Z,35nm,20.5s,baz=227,slow=36						
	comp=Z,0.6nm,0.5s						
DRV	**Dumont d'Urvil**	**61.34**	**177**	P	**P**	**05 53 47.3**	**+0.4**
DRV				pP	**pwP**	**05 54 03.2**	**+3.1**
WMQ	**Urumqi**	**64.22**	**325**	*e*P	**P**	**05 54 07.7**	**+1.2**
WMQ				pP	sP	05 54 19.1	+0.7
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,120nm,24.1s						
SHEM	**Shemya Is, Ala**	**67.13**	**25**	LR	LR	06 21 22.8	
	comp=Z,34nm,20.4s,baz=329,slow=34						
MK31	**Makanchi Array**	**69.05**	**325**	P	**P**	**05 54 37.5**	**+0.2**
MK31				IAmb	IAmb	05 54 56.1	
	comp=Z,7.4nm,0.9s						
MKAR	**Makanchi Array**	**69.05**	**325**	P	**P**	**05 54 37.4**	**+0.1**
MKAR	**Makanchi Array**	**69.05**	**325**	P	**P**	**05 54 37.1**	**-0.1**
	comp=Z,6.2nm,0.7s,baz=115,slow=8.4,SNR=40						
	comp=Z,6.2nm,0.7s						
KSH	**Kashi**	**69.49**	**316**	P	**P**	**05 54 42.3**	**+2.0**
KSH				pP	pwP	05 54 55.0	+1.4
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCD	**Concordia, Ant**	**69.95**	**183**	P	**P**	**05 54 43.6**	**+0.8**
AAK	**Ala-Archa**	**71.85**	**318**	P	**P**	**05 54 56.2**	**+1.6**
AAK				pP	**PcP**	**05 55 13.5**	**+0.1**
ZAA0	**Zalesovo Array**	**71.90**	**332**	P	**P**	**05 54 53.6**	**-0.8**
ZALV	**Zalesovo Beam**	**71.90**	**332**	P	**P**	**05 54 53.0**	**-1.5**
ZALV	**Zalesovo Beam**	**71.90**	**332**	P	**P**	**05 54 53.3**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=96,slow=4.5,SNR=6.5						
	comp=Z,0.8nm,0.4s						

KURBB	**Kurchatov Arra**	**73.20**	**327**	P	**P**	**05 55 01.3**	**-0.9**
	comp=Z,4.5nm,0.9s,baz=123,slow=4.7,SNR=25						
	comp=Z,4.5nm,0.9s						
KURK	**Kurchatov**	**73.20**	**327**	P	**P**	**05 55 01.8**	**-0.5**
KURK				IAmb	IAmb	05 55 18.5	
	comp=Z,11nm,1.0s						
VNDA	**Vanda**	**73.62**	**174**	P	**P**	**05 55 04.2**	**-0.1**
VNDA				IAmb	IAmb	05 55 05.8	
	comp=Z,8.5nm,0.9s						
VNDA	**Vanda**	**73.62**	**174**	P	**P**	**05 55 04.3**	**-0.1**
	comp=Z,6.5nm,0.8s,baz=316,slow=7.0,SNR=15						
VNDA				LR	LR	06 26 39.0	
	comp=Z,122nm,18.2s,baz=339,slow=35						
	comp=Z,6.5nm,0.8s						
KK31	**Karatay Array**	**74.71**	**317**	P	**P**	**05 55 11.1**	**-0.2**
KKAR	**Karatay Array**	**74.71**	**317**	P	**P**	**05 55 11.4**	**+0.1**
PPT2	**Papeete2**	**75.59**	**107**	*e*LR	LR	06 18 28.7	
	comp=Z,53nm,24.2s						
PPT	**Papeete**	**75.59**	**107**	LR	LR	06 28 43.2	
	comp=Z,26nm,18.2s,baz=304,slow=36						
BVAR	**Borovoye Array**	**78.79**	**327**	P	**P**	**05 55 33.4**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=116,slow=6.8,SNR=23						
	comp=Z,4.9nm,0.8s						
BRVK	**Borovoye**	**78.86**	**327**	P	**P**	**05 55 33.8**	**-0.7**
BRVK				IAmb	IAmb	05 55 50.7	
	comp=Z,9.2nm,0.8s						
NRIK	**Noril'sk**	**80.96**	**345**	P	**P**	**05 55 44.5**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=104,slow=4.6,SNR=3.5						
	comp=Z,1.3nm,0.4s						
ABKAR	**Akbulak array**	**83.67**	**321**	P	**P**	**05 55 59.6**	**-0.4**
L16K	**Owhat River**	**83.90**	**26**	P	**P**	**05 56 00.9**	**-0.1**
L16K				IAmb	IAmb	05 58 14.4	
	comp=Z,29nm,1.7s						
QSPA	**South Pole Qui**	**84.60**	**180**	P	**P**	**05 56 04.2**	**-0.5**
QSPA				IAmb	IAmb	05 56 22.2	
	comp=Z,17nm,0.8s						
QSPA	**South Pole Qui**	**84.60**	**180**	P	**P**	**05 56 04.4**	**-0.3**
	comp=Z,12nm,0.8s,baz=328,slow=1.8,SNR=26						
QSPA				LR	LR	06 33 26.8	
	comp=Z,62nm,20.3s,baz=298,slow=35						
	comp=Z,12nm,0.8s						
TAOE	**Nuku Hiva Isla**	**85.22**	**98**	*e*LR	LR	06 23 05.1	
	comp=Z,77nm,21.7s						
RDOG	**Red Dog Mine**	**85.27**	**20**	P	**P**	**05 56 05.4**	**-2.4**
RDOG				IAmb	IAmb	05 56 28.3	
	comp=Z,7.1nm,0.7s						
BRLK	**Bradley Lake**	**87.23**	**29**	P	**P**	**05 56 17.3**	**-0.4**
SKT	**Skwentna**	**87.53**	**27**	P	**P**	**05 56 18.1**	**-0.9**
CAST	**Castle Rocks**	**87.70**	**26**	P	**P**	**05 56 19.3**	**-0.5**
CAST				IAmb	IAmb	05 56 38.9	
	comp=Z,9.8nm,1.4s						
IMAR	**Indian Mountai**	**87.79**	**23**	P	**P**	**05 56 19.9**	**-0.3**
DHY	**Denali Highway**	**89.67**	**27**	P	**P**	**05 56 28.8**	**-0.5**
DHY				IAmb	IAmb	05 58 50.1	
	comp=Z,15nm,1.4s						
ILAR	**Eielson Array**	**90.24**	**25**	P	**P**	**05 56 29.8**	**-2.0**
	comp=Z,0.7nm,0.7s,baz=273,slow=4.3,SNR=6.5						
	comp=Z,0.7nm,0.7s						
ELIB	**Princess Elisa**	**91.18**	**197**	*d*P	**P**	**05 56 37.0**	**+0.8**
BMAR	**Burnt Mountain**	**91.67**	**22**	P	**P**	**05 56 37.8**	**-0.6**
BELA	**Belgrano 2**	**96.63**	**182**	P	**P**	**05 56 59.7**	**-1.3**
BELA				IAmb	IAmb	05 57 19.6	
	comp=Z,6.1nm,1.0s						
SNAA	**Sanae**	**98.11**	**193**	LR	LR	06 40 32.6	
	comp=Z,94nm,20.2s,baz=236,slow=35						
BMRD	**Maredsous**	**118.30**	**326**	*d*PKPdf	**PKPdf**	**06 02 18.6**	**-0.1**
PLCA	**Paso Flores**	**128.94**	**156**	PKP	**PKPdf**	**06 02 39.6**	**0.0**
	comp=Z,3.0nm,0.8s,baz=230,slow=5.5,SNR=6.3						
TORD	**Terodi Ar. Bea**	**132.24**	**283**	PKP	**PKPdf**	**06 02 46.1**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=46,slow=3.2,SNR=10						
CPUP	**Villa Florida**	**146.67**	**161**	PKPbc	**PKPbc**	**06 03 14.1**	**+0.2**
	comp=Z,27nm,0.9s,baz=217,slow=2.4,SNR=72						
ROSC	**El Rosal**	**151.91**	**90**	PKPbc	**PKiKP**	**06 03 28.2**	**-0.1**
	comp=Z,5.2nm,0.5s,baz=131,slow=19,SNR=7.0						

IDC ***02*** *05:59:11.1±2.4, 7.°88S×116.°14E, h0km, mb3.8/6, mbtmp3.9/6, MS3.3/1, Error ellipse: s-maj=146.7km s-min=19.7km az=52.0*

NEIC ***02*** *05:59:12.3±1.8, 8.°2S±0.°1×115.°84E±0.°08, h10km±1km, mb4.2/8, Error ellipse: s-maj=21.0km s-min=12.0km az=14.0*

DJA ***02*** *05:59:13.9±0.6, 8.°5S±4.°×11.°6E±.°, h21km±5km, M4.7/15, mb4.7/6, mB5.1/1, MLv4.7/15, Mw(mB)4.4/1*

ISC 02 05:59:11.7±0.6, 8.°07S±0.°06×115.°95E±0.°04, h10km, n40, σ1848/40, mb4.0/7, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.73**	**268**

az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**260**	I	I	06 11 10.0	
	baz=79,slow=341,SNR=14						
ZALV	**Zalesovo Beam**	**0.96**	**260**	Pg	Pg	06 05 52.4	-1.0
	1.1nm,0.3s,baz=80,slow=17,SNR=11						
ZALV				Lg	Lg	06 06 07.2	
	2.3nm,0.3s,baz=80,slow=29,SNR=11						
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn	Pn	06 07 05.4	+0.8
	0.2nm,0.3s,baz=54,slow=13,SNR=2.9						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.80**	**201**	Pn	Pn	06 07 30.8	+1.0
	0.3nm,0.3s,baz=25,slow=14,SNR=14						
MKAR				Sn	Sn	06 08 59.0	+0.3
	0.1nm,0.3s,baz=19,slow=25,SNR=1.7						
	0.3nm,0.3s						

PRU ***02*** *06:15:21.4, 50.°26N×12.°47E, h10km, West Bohemia*

WBNET 02 06:15:22.2, 50.°24N×12.°44E, h8km, Ml0.6, 9C-11D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.01**	**152**	*e*Pg	Pg	06 15 23.8	+0.1
NKC				*e*Sg	Sg	06 15 24.8	+0.1
	comp=Z,14nm,0.2s						
NKC	**Novy Kostel**	**0.01**	**152**	⇓P	Pg	06 15 23.7	0.0
NKC				S	Sg	06 15 24.7	0.0
NKC	**Novy Kostel**	**0.01**	**152**	⇓P	Pg	06 15 23.8	+0.1
NKC				S	Sg	06 15 24.8	+0.1
LBCW	**Luby**	**0.03**	**323**	⇓P	Pg	06 15 23.9	0.0
LBCW				S	Sg	06 15 25.1	+0.1
LBCW	**Luby**	**0.03**	**323**	⇓P	Pg	06 15 24.0	+0.1
LBCW				S	Sg	06 15 25.2	+0.2
VAC	**Vackov**	**0.04**	**264**	⇓P	Pg	06 15 23.9	0.0
VAC				S	Sg	06 15 25.1	-0.1
VAC	**Vackov**	**0.04**	**264**	⇓P	Pg	06 15 24.0	+0.1
VAC				S	Sg	06 15 25.1	0.0
STCW	**Studenec**	**0.05**	**68**	⇑P	Pg	06 15 24.0	-0.1
STCW				S	Sg	06 15 25.1	-0.2
KVC	**Kvetna**	**0.06**	**126**	⇑P	Pg	06 15 24.0	-0.1
KVC				S	Sg	06 15 25.2	-0.2
POCW	**Potky**	**0.08**	**353**	⇓P	Pg	06 15 24.5	+0.1
POCW				S	Sg	06 15 26.0	0.0
POCW	**Potky**	**0.08**	**353**	⇓P	Pg	06 15 24.5	+0.1
POCW				S	Sg	06 15 26.1	+0.1
SKC	**Skalna**	**0.09**	**217**	⇑P	Pg	06 15 24.4	0.0
SKC				S	Sg	06 15 26.0	0.0
SKC	**Skalna**	**0.09**	**217**	⇑P	Pg	06 15 24.5	+0.1
SKC				S	Sg	06 15 26.0	+0.1
KRCW	**Kraslice**	**0.11**	**31**	⇑P	Pg	06 15 24.8	0.0
KRCW				S	Sg	06 15 26.4	-0.2
KRCW	**Kraslice**	**0.11**	**31**	⇑P	Pg	06 15 24.8	0.0
KRCW				S	Sg	06 15 26.5	-0.1
KOCW	**Kopaniny**	**0.14**	**281**	⇓P	Pg	06 15 25.2	0.0
KOCW				S	Sg	06 15 27.3	0.0
KOCW	**Kopaniny**	**0.14**	**281**	⇓P	Pg	06 15 25.3	+0.1
KOCW				S	Sg	06 15 27.3	0.0
ZHC	**Zelena Hora**	**0.19**	**207**	⇑P	Pg	06 15 26.1	0.0
ZHC				S	Sg	06 15 28.8	+0.1
ZHC	**Zelena Hora**	**0.19**	**207**	⇑P	Pg	06 15 26.2	+0.1
ZHC				S	Sg	06 15 28.9	+0.1
TRCW	**Trojmez**	**0.20**	**289**	⇓P	Pg	06 15 26.4	0.0
TRCW				S	Sg	06 15 29.2	+0.1
TRCW	**Trojmez**	**0.20**	**289**	⇑P	Pg	06 15 26.5	+0.1

IDC ***02*** *06:22:24.6±1.6, 8.°14S×124.°99E, h0km, mb3.7/2, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=183.5km s-min=29.5km az=59.0*

DJA ***02*** *06:22:32.4±0.6, 9.°5S±5.°×123.°3E±.°, h97km±7km, M3.9/7, mb4.2/2, MLv3.7/7*

ISC 02 06:22:33.4±1.0, 9.°3S±0.°1×123.°30E±0.°08, h100km, n15, α252.°22/17, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.07**	**117**	P	**Pn**	**06 22 54.4**	**-0.3**
SOEI	**Soe**	**1.07**	**117**	P	**Pn**	**06 22 54.3**	**-0.4**
SOEI				S	**Sn**	**06 23 12.1**	**+1.3**
MMRI	**Maumere**	**1.22**	**301**	P	**Pn**	**06 22 55.5**	**-0.8**
MMRI	**Maumere**	**1.22**	**301**	P	**Pn**	**06 22 55.2**	**-1.1**
MMRI				S	**Sn**	**06 23 11.5**	**-2.1**
BASI	**Baing, Sumba**	**2.84**	**250**	P	**Pn**	**06 23 18.0**	**+0.9**
PLAI	**Plampang**	**5.47**	**274**	P	**Pn**	**06 23 54.1**	**+1.6**
PLAI	**Plampang**	**5.47**	**274**	P	**Pn**	**06 23 51.9**	**-0.6**
KNRA	**Kununurra**	**8.31**	**141**	P	**Pn**	**06 24 28.6**	**-2.5**
MTN	**Manton Dam**	**8.47**	**116**	P	**Pn**	**06 24 31.5**	**-1.8**
FITZ	**Fitzroy Crossi**	**9.07**	**166**	P	**Pn**	**06 24 39.1**	**-2.3**
KDU	**Kakadu**	**9.63**	**111**	P	**Pn**	**06 24 46.3**	**-2.7**
WRA	**Warramunga Arr**	**15.05**	**136**	Pn	**Pn**	**06 25 56.6**	**-4.2**
	0.2nm,0.3s,baz=318,slow=14,SNR=14						
WRA				Sn	Sn	06 28 33.9	-13
	0.8nm,0.3s,baz=305,slow=23,SNR=8.5						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.55**	**146**	P	**Pn**	**06 26 31.7**	**0.0**
	0.3nm,0.3s,baz=325,slow=14,SNR=12						
ASAR				S	Sn	06 29 33.2	-14
	2.3nm,0.9s,baz=321,slow=23,SNR=8.6						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**66.70**	**331**	P	**P**	**06 33 16.7**	**+3.0**
	0.4nm,0.4s,baz=127,slow=8.1,SNR=8.2						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**71.15**	**332**	P	**P**	**06 33 43.8**	**+2.7**
	0.4nm,0.6s,baz=138,slow=5.2,SNR=2.1						
	0.4nm,0.6s						

KRSC 02 06:23:35.6±1.8, 49.°56N×156.°80E, h7km±24km, Ml3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.21**	**339**	*e*P	Pg	06 23 56.6	-2.1
PAU	**Pauzhetka**	**1.91**	**0**	*e*P	Pb	06 24 10.8	+0.1
PAU				*e*S	Sb	06 24 35.6	+0.8
KDTR	**Khodutka, Kamc**	**2.39**	**19**	*e*P	Pn	06 24 15.8	+0.6
KDTR				*e*S	Sb	06 24 47.4	-1.3
ASAK	**Asacha**	**2.91**	**13**	*e*P	Pn	06 24 24.8	+2.4
GRL	**Gorelyy**	**3.10**	**15**	*e*P	Pn	06 24 27.2	+2.2
KRMR	**Karymshinskiy**	**3.38**	**14**	*e*P	Pn	06 24 31.6	+2.9
DALK	**Dalny**	**3.69**	**19**	*e*P	Pn	06 24 36.4	+3.5
UGLR	**Uglovaya**	**3.87**	**18**	*e*P	Pn	06 24 39.8	+4.3
AVH	**Avacha**	**3.90**	**17**	*e*P	Pn	06 24 40.3	+4.3
KOK	**Koryaka**	**3.91**	**16**	*e*P	Pb	06 24 41.0	-3.9
KRX	**Arik**	**3.98**	**16**	*e*P	Pb	06 24 41.8	-4.2

BJI ***02*** *06:23:52.3±0.0, 53.°13N×36.°02W, h12km, mb4.7/43, mB5.4/24, Ms5.0/26, Ms7 4.7/27*

IDC ***02*** *06:23:54.3±0.4, 53.°11N×35.°14W, h0km, mb4.6/30, mbtmp4.7/33, ML4.2/3, MS4.5/87, Error ellipse: s-maj=13.5km s-min=9.7km az=180.0*

MOS ***02*** *06:23:54.3±0.8, 53.°15N×35.°11W, h12km, mb5.2/65, MS4.7/16, Error ellipse: s-maj=7.0km s-min=4.6km az=142.5*

NEIC ***02*** *06:23:56.1±1.5, 53.°1N±0.°1×35.°2W±0.°1, h10km±1km, mb5.3/159, Mww5.3/40, Error ellipse: s-maj=17.5km s-min=14.3km az=169.0*

NEIC ***02*** *06:23:56.1, 53.°13N×35.°18W, h12km*

NEIC ***02*** *06:23:56.1, 52.°83N×35.°18W, h12km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^17 Nm; Mrr~0.62; Mθθ~0.03; Mϕϕ0.65; Mrθ~0.62; Mϕϕ~0.04; Mϕr~0.53; Fault plane solution: M0 1.01000×10^17 NP1: ϕs32.22000°, δ72.25000°, λ-67.87000°. NP2:ϕs159.08000°, δ28.08000°, λ-139.64000°. Principal axes: T 0.8789, Plg24.0000°, Azm105.0000°; N 0.2572, Plg21.0000°, Azm205.0000°; P -1.1361, Plg57.0000°, Azm332.2000°;*

GCMT ***02*** *06:23:57.1±0.2, 53.°30N±0.°02×35.°09W±0.°01, h12km, MW5.2/84, Moment Tension Solution. s43,c59; s84,c148; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr~0.70±.02; Mθθ~0.05±.02; Mϕϕ0.75±.01; Mrθ0.20±.05; Mθϕ~0.02±.01; Mϕr~0.24±.04; Best double couple: M0 0.79700×10^17 NP1:ϕs344.00000°, δ56.00000°, λ-107.00000°. NP2:ϕs193.00000°, δ37.00000°, λ-66.00000°. Principal axes: T 0.7980, Plg10.0000°, Azm86.0000°; N -0.0020, Plg14.0000°, Azm354.0000°; P*

-0.7960, Plg73.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR ***02*** *06:23:59.1, 53.°1N×34.°65W, h20km, mb4.6, Ms4.7*

ISC 02 06:23:55.9±0.5, 53.°17N±0.°05×35.°18W±0.°04, h11km±2km, h11km:pP-P, n990, σ0s98/933, mb5.1/226, MS4.6/121, 46C-17D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.59**	**26**	LR	LR	06 30 40.6	
	comp=Z,1μm,20.7s,baz=226,slow=30						
H07N1	**FLORES T-PHASE**	**13.77**	**167**	T	T	06 41 14.1	
	SNR=49						
H07S1	**FLORES T-PHASE**	**14.06**	**167**	*e*LR	LR	06 30 24.3	
	1μm,17.9s						
DY2G	**Dye2**	**14.43**	**342**	*e*P	**Pn**	**06 27 20.8**	**+0.8**
DRLN	**Deer Lake**	**14.51**	**263**		**Pn**	**06 27 17.9**	**-3.2**
PGRA	**Graciosa**	**14.98**	**158**	*e*LR	LR	06 30 48.6	
	1μm,16.8s						
ROSA	**Rosais**	**15.22**	**159**	*e*P	**P**	**06 27 36.9**	**+1.2**
ROSA	165nm,1.2s			*e*LR	LR	06 30 42.6	
	1μm,17.0s						
CALA	**Caldeira**	**15.26**	**160**	*e*P	**P**	**06 27 38.8**	**+2.6**
	186nm,1.0s						
CALA				*e*LR	LR	06 30 39.6	
	1μm,17.2s						
HOR	**Horta**	**15.33**	**160**	*e*P	**P**	**06 27 39.1**	**+2.3**
	136nm,1.2s						
PMAN	**Manadas**	**15.34**	**159**	*e*P	**P**	**06 27 39.7**	**+2.7**
	234nm,1.4s						
PICO	**Pico**	**15.39**	**160**	*e*LR	LR	06 30 48.6	
	1μm,17.1s						
PCAN	**Candelaria**	**15.42**	**160**	*e*P	**P**	**06 27 41.0**	**+3.1**
	128nm,1.1s						
PAGU	**Agualva, Azore**	**15.42**	**156**	*e*LR	LR	06 31 15.7	
	1μm,16.9s						
PPNO	**Prainha do Nor**	**15.46**	**159**	*e*P	**P**	**06 27 41.0**	**+2.7**
	186nm,0.9s						
PID	**Ribeirinha**	**15.52**	**159**	*e*P	**P**	**06 27 41.8**	**+2.8**
	223nm,1.1s						
SFJD	**Kangerlussuaq**	**15.79**	**337**		**Pn**	**06 27 37.9**	**0.0**
SFJD				IAmb	IAmb	06 27 44.0	
	comp=Z,233nm,1.2s						
SFJD	**Kangerlussuaq**	**15.79**	**337**	P	**Pn**	**06 27 37.9**	**0.0**
SFJD				pmax	pmax		
	comp=Z,233nm,1.3s						
SFJD	**Kangerlussuaq**	**15.79**	**337**	*e*P	**P**	**06 27 41.3**	**-0.4**
SFJD	**Kangerlussuaq**	**15.79**	**337**	Pn	**Pn**	**06 27 39.0**	**+1.2**
	comp=Z,2.7nm,0.3s,baz=152,slow=11,SNR=21						
SFJD				LR	LR	06 32 31.1	
	comp=Z,3μm,19.5s,baz=150,slow=33						
	comp=Z,127nm,1.1s						
ICESG	**Greenland Ices**	**16.11**	**354**	*e*P	**P**	**06 27 45.3**	**-0.5**
PSET	**Sete Cidades**	**16.69**	**153**	*e*LR	LR	06 31 49.0	
	comp=Z,1μm,17.9s						
CMLA	**Cha da Macela**	**16.80**	**153**	*e*LR	LR	06 31 45.9	
	comp=Z,2μm,17.3s						
BART	**Pico Bartolome**	**16.89**	**152**	*e*LR	LR	06 32 12.7	
	comp=Z,1μm,17.2s						
DSB	**Dublin**	**17.21**	**78**	P	**P**	**06 27 57.6**	**0.0**
PSMN	**Pico do Norte,**	**17.64**	**152**	*e*LR	LR	06 32 18.3	
	comp=Z,1μm,17.5s						
ILULI	**Ilulissat**	**17.73**	**341**	P	**Pn**	**06 28 02.0**	**-0.3**
ILULI				IAmb	IAmb	06 28 12.0	
	comp=Z,324nm,1.8s						
ILULI	**Ilulissat**	**17.73**	**341**	P	**Pn**	**06 28 02.0**	**-0.3**
ILULI				pmax	pmax		
	comp=Z,323nm,1.8s						
ILULI	**Ilulissat**	**17.73**	**341**	*e*P	**P**	**06 28 04.1**	**+0.9**
SCHQ	**Schefferville**	**18.60**	**288**	P	**P**	**06 28 12.6**	**-0.4**
SCHQ				IAmb	IAmb	06 28 15.5	
	comp=Z,228nm,1.4s						
SCHQ	**Schefferville**	**18.60**	**288**	P	**P**	**06 28 13.2**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=95,slow=9.6,SNR=36						
SCHQ				LR	LR	06 34 09.9	
	comp=Z,2μm,21.2s,baz=85,slow=33						
	comp=Z,162nm,1.3s						
ESK	**Eskdalemuir**	**18.72**	**71**	P	**P**	**06 28 13.6**	**-0.6**
ESK	**Eskdalemuir**	**18.72**	**71**	P	**P**	**06 28 13.6**	**-0.6**
ESK				pmax	pmax		
	comp=Z,116nm,1.4s						
EKB	**Eskdalemuir**	**18.73**	**71**	P	**Pn**	**06 28 14.4**	**-0.3**
EKA	**Eskdalemuir Ar**	**18.75**	**71**	P	**P**	**06 28 14.2**	**-0.3**
	baz=274,slow=10						
	comp=Z,34nm,0.9s						
GBN	**Guysborough**	**18.77**	**256**	P	**P**	**06 28 14.0**	**-0.8**
UMMG	**Uummannaq**	**19.16**	**343**	*e*P	**P**	**06 28 18.5**	**-0.4**
SUMG	**Summit**	**19.53**	**357**		**P**	**06 28 24.2**	**+0.8**
SUMG	**Summit**	**19.53**	**357**	P	**P**	**06 28 24.3**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,47nm,1.0s						
SUMG	**Summit**	**19.53**	**357**	*e*P	**P**	**06 28 23.5**	**+0.1**
FRB	**Frobisher Bay**	**20.16**	**315**	P	**P**	**06 28 30.4**	**+0.6**
	comp=Z,78nm,1.1s,baz=105,slow=10,SNR=27						
FRB				LR	LR	06 34 42.1	
	comp=Z,3μm,18.3s,baz=105,slow=32						
	comp=Z,78nm,1.1s						
HAL	**Halifax**	**20.42**	**257**	P	**P**	**06 28 33.9**	**+1.0**
HAL	**Halifax**	**20.42**	**257**	P	**P**	**06 28 33.9**	**+1.0**
HAL				pmax	pmax		
	comp=Z,132nm,1.5s						
LMN	**Caledonia Moun**	**20.48**	**261**	P	**P**	**06 28 33.0**	**-0.4**
BATG	**Bathurst New B**	**20.51**	**266**	P	**P**	**06 28 33.5**	**-0.4**
ROSF	**Rostrenen**	**20.65**	**91**	*e*P	Pn	06 28 37.8	+0.2
QUIF	**Quistinic**	**20.90**	**92**	*e*P	**P**	**06 28 37.1**	**-0.9**
SGMF	**Saint Gilles**	**21.12**	**90**	*e*P	**P**	**06 28 39.5**	**-0.9**
PGAV	**Gavieira, Arco**	**21.20**	**111**	*e*P	**P**	**06 28 41.8**	**+0.3**
	comp=Z,172nm,1.7s						
PGAV				*e*LR	LR	06 33 44.9	
	comp=Z,3μm,18.0s						
JMIC	**Jan Mayen**	**21.46**	**24**	LR	LR	06 34 55.4	
	comp=Z,1μm,21.6s,baz=230,slow=31						
PTO	**Porto**	**21.57**	**113**	*e*P	**P**	**06 28 46.1**	**+0.8**
UPNV	**Upernavik**	**21.62**	**343**	*e*P	**P**	**06 28 45.8**	**+0.3**
UPNV				IAmb	IAmb	06 28 53.5	
	comp=Z,172nm,1.3s						
POLO	**Lamas de Olo**	**21.86**	**112**	*e*P	**P**	**06 28 48.7**	**+0.2**
	comp=Z,69nm,1.8s						
PVRL	**Vila Real**	**21.97**	**112**	*e*P	**P**	**06 28 50.0**	**+0.4**
	comp=Z,191nm,1.5s						
PQI	**Presque Isle**	**21.98**	**266**	P	**P**	**06 28 49.6**	**-0.1**
PQI				IAmb	IAmb	06 29 01.0	
	comp=Z,200nm,1.3s						
GGN	**Saint George**	**22.08**	**261**	P	**P**	**06 28 49.1**	**-1.6**
GGN				IAmb	IAmb	06 29 00.4	
	comp=Z,215nm,1.3s						
GRR	**Gorron**	**22.08**	**89**	*e*P	**P**	**06 28 49.8**	**-0.9**
FLN	**La Foliniere**	**22.15**	**87**	*e*P	**P**	**06 28 52.5**	**+1.0**
PBRG	**Braganca**	**22.17**	**109**	*e*P	**P**	**06 28 52.0**	**+0.2**
	comp=Z,152nm,1.5s						
PVIS	**Viseu**	**22.25**	**113**	*e*P	**P**	**06 28 51.9**	**-0.8**
COI	**Coimbra**	**22.32**	**115**	P	**P**	**06 28 55.3**	**+2.0**
PCAS	**Casmilo, Conde**	**22.38**	**115**	*e*P	**P**	**06 28 53.7**	**-0.3**
	comp=Z,148nm,1.7s						
D62A	**Allapoint, All**	**22.40**	**268**	P	**P**	**06 28 54.2**	**+0.1**
MVO	**Moncorvo**	**22.43**	**111**	*e*P	**P**	**06 28 55.2**	**+0.6**
	comp=Z,142nm,1.6s						
MVO				*e*LR	LR	06 34 22.8	
	comp=Z,3μm,20.0s						
LDF	**La Druitiere**	**22.44**	**88**	*e*P	**P**	**06 28 53.3**	**-1.2**
G65A	**Princeton**	**22.46**	**262**	P	**P**	**06 28 54.0**	**-0.8**
G65A				IAmb	IAmb	06 28 57.4	
	comp=Z,155nm,1.1s						
F64A	**Sherman**	**22.59**	**265**	P	**P**	**06 28 54.6**	**-1.5**
F64A				IAmb	IAmb	06 29 02.1	
	comp=Z,216nm,1.6s						
PSBE	**So Bento**	**22.60**	**117**	*e*P	**P**	**06 28 55.4**	**-1.0**
	comp=Z,188nm,1.6s						
MTE	**Manteigas**	**22.66**	**113**	*e*P	**P**	**06 28 59.3**	**+2.2**
	comp=Z,69nm,1.7s						
MTE				*e*LR	LR	06 34 25.7	
	comp=Z,3μm,20.0s						
EMMW	**East Machias**	**22.67**	**261**	P	**P**	**06 28 56.5**	**-0.5**
EMMW				IAmb	IAmb	06 28 59.4	
	comp=Z,112nm,1.1s						
PMAFR	**Mafra**	**22.74**	**118**	*e*P	**P**	**06 28 58.5**	**+0.6**
	comp=Z,381nm,1.5s						
E62A	**Clayton Lake**	**22.91**	**267**	P	**P**	**06 28 58.6**	**-0.9**
LMQ	**La Malbaie**	**22.95**	**270**	P	**P**	**06 28 58.9**	**-1.2**
PCBR	**Castelo Branco**	**23.09**	**114**	*e*P	**P**	**06 29 00.1**	**-1.3**
	comp=Z,160nm,1.4s						
F63A	**Nahmakanta, Br**	**23.12**	**265**	P	**P**	**06 28 59.9**	**-1.9**
F63A				IAmb	IAmb	06 29 10.1	
	comp=Z,136nm,1.5s						
PMTG	**Montargil**	**23.23**	**117**	*e*P	**P**	**06 29 01.6**	**-1.3**
	comp=Z,110nm,1.6s						
LDAQ	**Lac Daran**	**23.32**	**272**	P	**P**	**06 29 01.3**	**-2.5**
MFF	**Saint Martin d**	**23.33**	**92**	*e*P	**P**	**06 29 02.3**	**-1.6**
PMRV	**Marv??o**	**23.42**	**115**	*e*P	**P**	**06 29 04.8**	**-0.1**
	comp=Z,73nm,1.7s						
PMRV				*e*LR	LR	06 34 43.3	
	comp=Z,3μm,20.0s						
PKME	**Peaks-Kenny Pk**	**23.46**	**264**	P	**P**	**06 29 04.3**	**-0.9**
PKME				IAmb	IAmb	06 29 16.7	
	comp=Z,204nm,1.6s						
PKME	**Peaks-Kenny Pk**	**23.46**	**264**	P	**P**	**06 29 04.5**	**-0.7**
	baz=58						
PESTR	**Estremoz**	**23.71**	**116**	*e*P	**P**	**06 29 05.9**	**-1.8**
	comp=Z,73nm,1.6s						
PESTR	**Estremoz**	**23.71**	**116**	P	**P**	**06 29 06.0**	**-1.8**
PESTR				IAmb	IAmb	06 29 32.4	
	comp=Z,80nm,1.4s						
EVO	**Evora**	**23.73**	**117**	*e*P	**P**	**06 29 06.6**	**-1.3**
	comp=Z,62nm,1.7s						
PNCL	**Nicolau / Gran**	**23.76**	**119**	*e*P	**P**	**06 29 07.4**	**-0.8**
	comp=Z,158nm,1.9s						
WVL	**Waterville**	**24.06**	**263**	P	**P**	**06 29 10.1**	**-0.8**
WVL				IAmb	IAmb	06 29 12.7	
	comp=Z,65nm,1.1s						
PTEO	**Sao Teotonio**	**24.08**	**120**	*e*P	**P**	**06 29 12.4**	**+1.2**
	comp=Z,227nm,1.4s						
CLF	**Chambon-Foret**	**24.12**	**87**	P	**P**	**06 29 09.9**	**-1.5**
CLF				IAmb	IAmb	06 29 31.1	
	comp=Z,159nm,1.5s						
MESJ	**Messejana**	**24.13**	**119**	*e*P	**P**	**06 29 10.6**	**-1.0**
	comp=Z,135nm,2.3s						
MESJ	**Messejana**	**24.13**	**119**	P	**P**	**06 29 09.2**	**-2.4**
MESJ	**Messejana**	**24.13**	**119**	*e*P	**P**	**06 29 11.4**	**-0.2**
MESJ				IAmb	IAmb	06 29 13.8	
	comp=Z,440nm,2.0s						
MESJ				*e*S	**S**	**06 33 30.1**	**+1.0**
MESJ	**Messejana**	**24.13**	**119**	P	**P**	**06 29 09.2**	**-2.4**
MESJ				pmax	pmax		
	comp=Z,340nm,1.9s						
PBEJ	**Beja**	**24.18**	**118**	*e*P	**P**	**06 29 11.5**	**-0.6**
	comp=Z,85nm,1.8s						
G62A	**West of Eustis**	**24.23**	**265**	P	**P**	**06 29 12.1**	**-0.5**
MORF	**Marmelete**	**24.30**	**120**	*e*P	**P**	**06 29 12.0**	**-1.3**
	comp=Z,146nm,1.6s						
MORF	**Marmelete**	**24.30**	**120**	P	**P**	**06 29 11.7**	**-1.6**
MORF				IAmb	IAmb	06 29 15.8	
	comp=Z,138nm,1.4s						
MORF	**Marmelete**	**24.30**	**120**	*e*P	**P**	**06 29 13.0**	**-0.3**
MORF				IAmb	IAmb	06 29 16.4	
	comp=Z,205nm,1.6s						
MORF				*e*S	**S**	**06 33 32.9**	**+0.9**
MORF	**Marmelete**	**24.30**	**120**	P	**P**	**06 29 11.7**	**-1.6**
MORF				pmax	pmax		
	comp=Z,138nm,1.4s						
PCVE	**Castro Verde**	**24.38**	**119**	*e*P	**P**	**06 29 13.5**	**-0.4**
	comp=Z,140nm,1.7s						
BAIF	**Baives**	**24.44**	**81**	*e*P	**P**	**06 29 13.8**	**-0.6**
PBAR	**Barrancos**	**24.51**	**116**	*e*P	**P**	**06 29 15.2**	**0.0**
	comp=Z,144nm,1.9s						
DOU	**Dourbes**	**24.66**	**81**	*d*P	**P**	**06 29 15.3**	**-1.0**
BMRD	**Maredsous**	**24.68**	**80**	*d*P	**P**	**06 29 16.1**	**-0.4**
	comp=Z,25nm,1.2s						
LFF	**La Frestale**	**24.72**	**95**	*e*P	**P**	**06 29 16.3**	**-0.6**
PVAQ	**Vaqueiros**	**24.72**	**119**	*e*P	**P**	**06 29 17.5**	**+0.5**
PVAQ	**Vaqueiros**	**24.72**	**119**	P	**P**	**06 29 16.0**	**-1.0**
PBDV	**Barranco-do-Ve**	**24.73**	**119**	*e*P	**P**	**06 29 18.0**	**+0.9**
	comp=Z,140nm,1.6s						
GIVF	**Givet**	**24.79**	**81**	*e*P	**P**	**06 29 16.0**	**-1.6**
BGES	**Gesves**	**24.84**	**80**	*d*P	**P**	**06 29 16.7**	**-1.3**
	comp=Z,11nm,1.1s						
I63A	**Otisfield**	**24.90**	**263**	P	**P**	**06 29 17.0**	**-1.5**
TCF	**Toulx Ste Croi**	**24.91**	**91**	*e*P	**P**	**06 29 18.4**	**-0.3**
BCLA	**Clavier**	**24.95**	**80**	*d*P	**P**	**06 29 18.1**	**-0.9**
RCHB	**Rochefort**	**25.01**	**80**	*d*P	**P**	**06 29 18.8**	**-0.7**
	comp=Z,26nm,1.1s						
PAB	**San Pablo**	**25.03**	**111**	P	**P**	**06 29 18.4**	**-1.5**
PAB				IAmb	IAmb	06 29 24.8	
	comp=Z,94nm,1.4s						
PAB	**San Pablo**	**25.03**	**111**	P	**P**	**06 29 18.5**	**-1.5**
PAB				pmax	pmax		
	comp=Z,94nm,1.4s						
BSTI	**Sart Tilman**	**25.05**	**79**	*d*P	**P**	**06 29 19.2**	**-0.6**
NEEM	**North Greenlan**	**25.07**	**352**	*e*P	**P**	**06 29 20.6**	**+0.4**
NEEM				IAmb	IAmb	06 29 23.2	
	comp=Z,57nm,1.2s						
BGF	**Bois d'Agland**	**25.16**	**90**	*e*P	**P**	**06 29 19.6**	**-1.3**
ESBB	**Sonseca Array**	**25.16**	**110**	P	**P**	**06 29 19.5**	**-1.6**
ESBB				IAmb	IAmb	06 29 22.2	
	comp=Z,70nm,1.1s						
ESDC	**Sonseca Array**	**25.16**	**110**	P	**P**	**06 29 20.3**	**-0.8**
ESDC	**Sonseca Array**	**25.16**	**110**	P	**P**	**06 29 20.2**	**-0.8**
	comp=Z,44nm,0.9s,baz=312,slow=8.8,SNR=86						
ESDC				LR	LR	06 37 24.1	
	comp=Z,3μm,18.2s,baz=319,slow=32						
	comp=Z,44nm,0.9s						
HLG	**Helgoland**	**25.24**	**70**	*e*P	**P**	**06 29 22.1**	**+0.6**
	comp=Z,138nm,0.8s,baz=294,slow=8.8						
MEM	**Membach**	**25.30**	**79**	*d*P	**P**	**06 29 21.4**	**-0.7**
	comp=Z,30nm,1.2s						
SSF	**Saint Saulge**	**25.31**	**88**

HINF Hinteralfeld 26.97 84 *e*P **P 06 29 36.3 -1.0**
ECH Echery 26.97 83 P **P 06 29 37.6 +0.3**
ECH Echery 26.97 83 P **P 06 29 37.6 +0.3**
ECH pmax pmax
comp=Z,36nm,1.3s
VLDQ Val d'Or 26.98 276 P **P 06 29 38.4 +1.0**
LONY Lake Ozonia 26.98 268 P **P 06 29 37.1 -0.3**
baz=57
NRDL Niedersach Rie 27.02 73 *e*P **P 06 29 38.0 +0.4**
comp=Z,46nm,1.3s,baz=294,slow=8.8
L61B Northampton 27.07 262 P **P 06 29 38.7 +0.5**
baz=54
NCB Newcomb 27.12 266 P **P 06 29 38.7 0.0**
NCB IAmb IAmb 06 29 51.4
comp=Z,124nm,1.8s
VIVF Saint-Julien-l 27.12 92 *e*P **P 06 29 38.1 -0.7**
HFS Hagfors 27.20 56 P **P 06 29 39.4 +0.2**
comp=Z,6.4nm,1.0s,baz=264,slow=11,SNR=2.8
HFS LR LR 06 39 20.1
comp=Z,1μm,18.7s,baz=278,slow=34
comp=Z,6.4nm,1.0s
GTTG Gottingen 27.27 75 *e*P **P 06 29 40.7 +0.7**
comp=Z,24nm,1.0s,baz=294,slow=8.8
CLZ Clausthal 27.40 74 *e*P **P 06 29 41.9 +0.7**
comp=Z,20nm,1.1s,baz=294,slow=8.8
UBBA Unterbreizbach 27.57 76 *e*P **P 06 29 42.4 -0.1**
comp=Z,4.5nm,1.1s,baz=294,slow=8.8
BFO Black Forest 27.62 82 P **P 06 29 42.9 -0.3**
BFO Black Forest 27.62 82 P **P 06 29 42.9 -0.3**
BFO pmax pmax
comp=Z,28nm,1.2s
BFO Black Forest 27.62 82 *e*P **P 06 29 42.6 -0.6**
comp=Z,13nm,1.0s,baz=294,slow=8.8
FLTG Flechtingen 27.73 73 *e*P **P 06 29 43.7 -0.3**
comp=Z,9.2nm,0.9s,baz=294,slow=8.8
SENIN Lac Senin/Sane 27.93 87 P **P 06 29 46.2 0.0**
SLE Schleitheim 27.97 83 *e*P **P 06 29 46.2 -0.1**
KSCT Kent School, K 27.98 261 P **P 06 29 46.8 +0.4**
KSCT IAmb IAmb 06 29 53.7
comp=Z,65nm,1.4s
LPL La Plagne 28.02 89 *e*P **P 06 29 45.9 -1.1**
MBDF Montbardon 28.46 90 *e*P **P 06 29 49.7 -1.1**
MOX Moxa 28.58 76 *e*P **P 06 29 51.8 +0.1**
comp=Z,5.7nm,0.9s,baz=294,slow=8.8
MOX *e*L L 06 40 32.7
comp=Z,2μm,18.1s
GRA1 Grafenberg Arr 28.74 78 P **P 06 29 53.5 +0.3**
GRA1 IAmb IAmb 06 30 05.1
comp=Z,125nm,1.8s
GRF Grafenberg Arr 28.74 78 P **P 06 29 53.5 +0.3**
GRF pmax pmax
comp=Z,125nm,1.8s
GRF Grafenberg Arr 28.74 78 *e*L L 06 40 24.9
comp=Z,1μm,18.2s
GRFO Grafenberg 28.74 78 P **P 06 29 53.0 -0.1**
GRFO IAmb IAmb 06 30 05.0
comp=Z,116nm,1.8s
GRFO Grafenberg 28.74 78 P **P 06 29 53.0 -0.1**
GRFO pmax pmax
comp=Z,116nm,1.8s
TRNY Table Rock, Ra 28.78 261 P **P 06 29 54.5 +0.9**
TRNY IAmb IAmb 06 30 09.3
comp=Z,111nm,1.8s
UBR Ueberruh 28.98 82 *e*P **P 06 29 55.6 +0.3**
comp=Z,5.3nm,0.8s,baz=294,slow=8.8
DAVA Damuels 29.03 83 *i* pP **P 06 29 56.8 +0.9**
comp=Z,9.9nm,0.9s
CLL Collm 29.13 74 P **P 06 29 55.8 -0.7**
CLL Collm 29.13 74 P **P 06 29 55.8 -0.7**
CLL pmax pmax
comp=Z,34nm,1.1s
CLL Collm 29.13 74⇑ *i*P **P 06 29 56.1 -0.4**
comp=Z,26nm,0.9s
CLL *i* x x 06 30 06.2
CLL *e*x x 06 30 44.0
CLL *e*PPP PPP 06 30 57.0
CLL *e*S **S 06 34 51.0 +3.0**
CLL AMS AMS 06 42 00.0
CLL Collm 29.13 74 *e*P **P 06 29 56.6 +0.1**
comp=Z,21nm,0.9s,baz=294,slow=8.8
MANZ Manzenberg 29.14 77 *e*P **P 06 29 56.2 -0.5**
comp=Z,1.6nm,1.1s,baz=294,slow=8.8
TANN Tannenbergstha 29.17 76 *e*P **P 06 29 57.0 0.0**
comp=Z,15nm,1.0s,baz=294,slow=8.8
BINY Binghamton 29.20 265 P **P 06 29 57.4 +0.2**
baz=54
NKC Novy Kostel 29.23 76 AMS AMS 06 41 00.0
comp=Z,3μm,18.4s
DAVOX Davos/Dischmat 29.27 84 LR LR 06 41 21.0
comp=Z,1μm,18.1s,baz=318,slow=36
ROTZ Rotzenmuhle 29.29 77 *e*P **P 06 29 58.2 +0.3**
comp=Z,1.1nm,1.0s,baz=294,slow=8.8
RETA Reutte 29.46 82 *i* P **P 06 29 59.9 +0.3**
comp=Z,13nm,1.0s
FUORN Ofenpass-Fuorn 29.58 84 P **P 06 30 01.3 +0.4**
SADO Sadowa 29.65 272 LR LR 06 40 51.6
comp=Z,2μm,21.0s,baz=87,slow=34
HSKC Hora Svate Kat 29.65 75 *e*P **P 06 30 01.2 0.0**
HSKC AMS AMS 06 42 00.0
comp=Z,2μm,14.5s
FETA Feichten 29.66 83 *i* P **P 06 30 02.2 +0.7**
comp=Z,13nm,1.4s
MOTA Moosalm 29.73 82 *i* P **P 06 30 02.3 +0.2**
comp=Z,21nm,1.4s
BRG Berggiesshubel 29.84 74 *i* P **P 06 30 02.6 -0.3**
BRG Amp 06 30 03.8
comp=Z,16nm,1.0s
BRG Amp 06 42 41.0
comp=E,1.4nm,13.6s
BRG Amp 06 42 42.0
comp=N,1.1nm,15.4s
BRG Amp 06 42 45.0
comp=Z,2.3nm,14.2s
BRG Berggiesshubel 29.84 74 *i* P **P 06 30 02.5 -0.3**
BRG pmax pmax
comp=Z,16nm,1.0s
BRG Berggiesshubel 29.84 74 *e*P **P 06 30 02.7 -0.2**
comp=Z,7.7nm,0.9s,baz=294,slow=8.8
SQTA Sankt Quirin 29.85 82 *e*P **P 06 30 03.6 +0.5**
comp=Z,20nm,0.9s,SNR=5.5
WET Wettzell 29.95 78 *e*P **P 06 30 03.8 -0.1**
comp=Z,7.5nm,1.2s,baz=294,slow=8.8
WATA Waldviertl 30.02 82 *e*P **P 06 30 04.8 +0.2**
comp=Z,14nm,1.1s
RICC Richard 30.07 75 AMS AMS 06 42 30.0
comp=Z,2μm,15.0s
WTTA Wattenberg 30.09 82 *i* pP **P 06 30 06.1 +0.8**
comp=Z,33nm,1.5s,SNR=7.1
PVCC Panska Ves 30.35 75 AMS AMS 06 41 30.0
comp=Z,2μm,17.9s
KHC Kasperske Hory 30.37 78 P **P 06 30 07.5 -0.1**
KHC Kasperske Hory 30.37 78 *e*P **P 06 30 07.5 -0.1**
KHC AMS AMS 06 41 30.0
comp=Z,2μm,18.0s
KHC Kasperske Hory 30.37 78*ce*P **P 06 30 07.6 0.0**
KHC pmax pmax
comp=Z,33nm,1.3s
PRA Prague 30.46 75 AMS AMS 06 41 40.0
comp=Z,2μm,16.3s
PRU Pruhonice 30.56 76 AMS AMS 06 41 40.0
comp=Z,2μm,17.0s
GEC2 GERESS Array S 30.57 78 *e*P **P 06 30 09.8 +0.4**
comp=Z,12nm,1.1s,baz=294,slow=8.8
GERES GERESS Array B 30.57 78 P **P 06 30 09.6 +0.1**
comp=Z,6.5nm,0.9s,baz=309,slow=8.4,SNR=15
GERES LR LR 06 41 50.3
comp=Z,1μm,18.0s,baz=292,slow=35
comp=Z,6.5nm,0.9s
ZVC Zvikov 30.59 77 *e*P **P 06 30 09.9 +0.4**
ZVC AMS AMS 06 41 50.0
comp=Z,3μm,20.2s
LESA Schwarzleotal 30.63 81 *i* P **P 06 30 10.1 +0.1**
comp=Z,16nm,1.5s
GOPC GO Pecny, Ondr 30.73 76 AMS AMS 06 42 00.0
comp=Z,2μm,16.1s
ABTA Abfaltersbach 30.86 82 *i* P **P 06 30 12.6 +0.6**
comp=Z,12nm,1.2s
CKRC Cesky Krumlov 30.94 78 *e*P **P 06 30 12.8 +0.2**
CKRC AMS AMS 06 42 00.0
comp=Z,2μm,16.9s
CKRC Cesky Krumlov 30.94 78 *e*P **P 06 30 12.8 +0.2**
CKRC MLR MLR
comp=Z,2μm,16.9s
BIOA Bad Ischl, Aus 31.07 80 *i* P **P 06 30 13.9 +0.1**
comp=Z,13nm,1.0s
CHVC Chvalec 31.18 74 *e*P **P 06 30 14.4 -0.3**
CHVC Chvalec 31.18 74 *e*P **P 06 30 14.4 -0.3**
UPC Upice 31.19 74 AMS AMS 06 43 30.0
comp=Z,2μm,14.5s
KBA Koelnbreinsper 31.20 81 *i* P **P 06 30 15.5 +0.5**
comp=Z,18nm,1.6s
CLUD Cludinico 31.23 83 P **P 06 30 15.2 0.0**
SSPA Standing Stone 31.28 264 P **P 06 30 15.8 +0.2**
baz=52
OSTC Ostas 31.29 74 *e*P **P 06 30 15.9 +0.2**
OSTC AMS AMS 06 43 20.0
comp=Z,2μm,13.6s
OSTC Ostas 31.29 74 *e*P **P 06 30 15.9 +0.2**
OSTC MLR MLR
comp=Z,2μm,13.6s
MOA Molln 31.37 79 *i* P **P 06 30 16.9 +0.5**
comp=Z,24nm,1.5s
TREC Trest 31.42 76 AMS AMS 06 42 30.0
comp=Z,2μm,16.4s
DPC Dobruska-Polom 31.44 74 *e*P **P 06 30 16.7 -0.3**
DPC AMS AMS 06 43 30.0
comp=Z,2μm,14.5s
DPC Dobruska-Polom 31.44 74 *e*P **P 06 30 16.7 -0.3**
DPC MLR MLR
comp=Z,2μm,14.5s
MYKA Terra Mystica 31.59 82 *i* P **P 06 30 18.4 -0.1**
comp=Z,37nm,1.7s
PRED Cave del Predi 31.64 82 P **P 06 30 18.6 -0.3**
PRED IAmb IAmb 06 30 21.2
comp=Z,48nm,1.7s
ERPA Erie 31.65 268 P **P 06 30 18.8 -0.1**
baz=54
ARCES ARCESS Array B 31.66 36 P **P 06 30 18.9 +0.1**
comp=Z,0.8nm,0.5s,baz=260,slow=7.3,SNR=12
ARCES LR LR 06 40 04.5
comp=Z,550nm,20.9s,baz=283,slow=31
comp=Z,0.8nm,0.5s
RES Resolute Bay 31.74 334 P **P 06 30 19.7 +0.4**
comp=Z,23nm,1.2s,baz=99,slow=9.0,SNR=18
RES LR LR 06 41 39.2
comp=Z,666nm,21.6s,baz=94,slow=34
comp=Z,23nm,1.2s
KRLC Kraliky 31.82 74 *e*P **P 06 30 20.8 +0.4**
KRLC AMS AMS 06 43 40.0
comp=Z,2μm,15.1s
KRLC Kraliky 31.82 74 *e*P **P 06 30 20.8 +0.4**
KRLC MLR MLR
comp=Z,2μm,15.1s
KLNR Kaliningrad 31.96 65 *i* P **P 06 30 22.4 +0.9**
KLNR pmax pmax
comp=Z,84nm,0.9s
KRUC Moravsky 32.05 76 *e*P **P 06 30 21.6 -0.8**
VRAC Vranov 32.06 76 *e*P **P 06 30 22.0 -0.4**
VRAC Vranov 32.06 76 LR LR 06 42 49.5
comp=Z,2μm,18.6s,baz=312,slow=35
OBKA Obir 32.20 81 *i* P **P 06 30 23.4 -0.4**
comp=Z,10nm,0.8s
CONA Conrad Observa 32.27 78 *i* pP pP 06 30 25.9 -1.1
comp=Z,4.7nm,1.0s
MORC Moravsky Berou 32.40 74⇑ *i*P **P 06 30 25.6 +0.1**
MORC Moravsky Berou 32.40 74 *e*P **P 06 30 25.3 -0.1**
MORC Moravsky Berou 32.40 74 P **P 06 30 25.5 +0.1**
SOKA Soboth 32.40 81 *e*P **P 06 30 24.9 -0.6**
comp=Z,13nm,1.2s
ARSA Arzberg 32.40 80 *i* P **P 06 30 25.5 0.0**
comp=Z,17nm,1.4s
M53A WI Miller and 32.46 267 P **P 06 30 25.6 -0.4**
baz=53
FCC Fort Churchill 32.49 304 P **P 06 30 26.6 +0.6**
FCC Fort Churchill 32.49 304 P **P 06 30 26.6 +0.6**
FCC pmax pmax
comp=Z,67nm,1.2s
CBN Corbin Frederi 32.52 260 P **P 06 30 26.5 -0.1**
baz=49
RONA Rosalia, Austr 32.64 78 *e*P **P 06 30 27.5 -0.1**
comp=Z,24nm,1.3s
OKC Ostrava-Krasne 32.72 74 AMS AMS 06 44 10.0
comp=Z,2μm,13.8s
MAUC Maruska 32.75 75 *e*P **P 06 30 28.8 +0.3**
ZST Bratislava 32.88 77 *e*P **P 06 30 30.1 +0.5**
ZST Bratislava 32.88 77 *e*P **P 06 30 30.1 +0.5**
MODS Modra-Piesok 32.89 77 *e*P **P 06 30 29.6 -0.2**
MODS pmax pmax
comp=Z,52nm,1.5s
MODS Modra-Piesok 32.89 77 *e*P **P 06 30 29.6 -0.2**
JAVC Velka Javorina 32.89 76 *e*P **P 06 30 29.8 0.0**
GLMI Grayling 32.91 276 P **P 06 30 30.4 +0.5**
baz=57
FINES FINESS Array B 32.93 51 P **P 06 30 29.9 0.0**
comp=Z,9.5nm,0.9s,baz=297,slow=8.4,SNR=15
FINES LR LR 06 42 11.8
comp=Z,1μm,21.6s,baz=277,slow=33
comp=Z,9.5nm,0.9s
MCWV Mont Chateau 33.06 264 P **P 06 30 31.1 -0.2**
baz=51
OJC Ojcow 33.50 72 *e*P **P 06 30 34.7 -0.3**
O53A New Philadelph 33.51 266 P **P 06 30 34.9 -0.4**
baz=52,SNR=7.5
PABE Paberze 33.66 62 *e*P **P 06 30 36.6 +0.2**
VYHS Vyhne 33.75 76 *e*P **P 06 30 37.2 0.0**
VYHS pmax pmax
comp=Z,21nm,1.4s
VYHS Vyhne 33.75 76 *e*P **P 06 30 37.2 0.0**
AAM Ann Arbor 33.75 271 P **P 06 30 37.3 0.0**
baz=54
SRO Srobarova 33.77 77 *e*P **P 06 30 38.1 +0.7**
SRO Srobarova 33.77 77 *e*P **P 06 30 38.1 +0.7**
LANS Liptovska Anna 33.80 74 *e*P **P 06 30 38.8 +1.1**
LANS pmax pmax
comp=Z,20nm,1.3s
LANS Liptovska Anna 33.80 74 *e*P **P 06 30 38.8 +1.1**
SUW Suwalki 33.80 65 P **P 06 30 36.9 -0.6**
SUW Suwalki 33.80 65 P **P 06 30 36.9 -0.6**
SUW pmax pmax
comp=Z,74nm,1.1s
SUW Suwalki 33.80 65 *e*P **P 06 30 37.9 +0.4**
VSU Vasula 34.08 56 *i* P **P 06 30 39.2 -0.7**
VSU Vasula 34.08 56 *e*P **P 06 30 39.8 -0.1**
Q54A Cox Mills 34.08 264 P **P 06 30 40.2 0.0**
Q54A IAmb IAmb 06 30 49.1
comp=Z,62nm,1.5s
NIE Niedzica 34.16 73 *e*P **P 06 30 41.3 +0.6**
T57A Hurt 34.44 260 P **P 06 30 42.5 -0.8**
P52A Corning 34.45 266 P **P 06 30 43.6 +0.3**
baz=51,SNR=7.1
ACSO Alum Creek Sta 34.59 268 P **P 06 30 45.2 +0.6**
baz=52,SNR=9.3
PSZ Piszkesteto 34.65 76 P **P 06 30 45.3 +0.3**
PSZ Piszkesteto 34.65 76 P **P 06 30 45.3 +0.3**
PSZ pmax pmax
comp=Z,21nm,1.1s
APA Apatity 34.74 39⇓ *i*P **P 06 30 45.3 -0.3**
APA pmax pmax
comp=Z,14nm,1.0s
ISAL Salakas 34.78 61 *e*P **P 06 30 46.7 +0.7**
MORH Mrgy, Hungar 34.78 79⇑ P **P 06 30 44.9 -1.2**
CNNC Cliffs of the 34.84 256 P **P 06 30 46.7 0.0**
baz=46
IIGN Ignalina 34.91 61 *e*P **P 06 30 48.0 +0.8**
COWI Conover 34.92 281 P **P 06 30 48.0 +0.6**
COWI IAmb IAmb 06 30 53.8
comp=Z,66nm,1.4s
Q52A Bidwell 34.95 265 P **P 06 30 48.2 +0.5**
BLA Blacksburg 34.99 261 P **P 06 30 48.5 +0.4**
baz=48
R53A Hurricane 35.17 264 P **P 06 30 50.1 +0.5**
R53A IAmb IAmb 06 30 57.4
comp=Z,43nm,1.2s
IDID Didziasalis 35.20 61 *e*P **P 06 30 48.8 -0.9**
EYMN Ety 35.36 285 P **P 06 30 51.0 -0.1**
baz=60,SNR=14
NACGM Naroch 35.38 62 *e*P **P 06 30 51.5 +0.3**
comp=Z,22nm,1.1s,baz=294
KOLS Kolonicke sedl 35.53 73 *e*P **P 06 30 52.9 +0.3**
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 35.53 73 *e*P **P 06 30 52.9 +0.3**
U56A King 35.55 260 P **P 06 30 53.3 +0.4**
U56A IAmb IAmb 06 30 56.8
comp=Z,83nm,1.8s
KEST Kesra 35.56 101 P **P 06 30 52.5 -0.6**
comp=Z,27nm,1.0s,baz=304,slow=2.7,SNR=14
KEST LR LR 06 43 35.9
comp=Z,1μm,19.6s,baz=298,slow=33
comp=Z,27nm,1.0s
SSFO Shawnee State 35.68 266 P **P 06 30 54.2 +0.2**
O48B Farmland 35.88 269 P **P 06 30 56.0 +0.3**
baz=52
G40A Rib Lake 36.00 280 P **P 06 30 56.7 +0.1**
G40A IAmb IAmb 06 30 58.6
comp=Z,38nm,1.4s
FRGS Fruska Gora 36.03 80⇑ P **P 06 30 56.8 -0.1**
P49A Miami Univ. Ec 36.06 268 P **P 06 30 57.5 +0.2**
baz=51
LVV L'vov 36.10 71 *e*P **P 06 30 57.4 -0.1**
LVV *e* 06 32 27.1
LVV *e*PPP PPP 06 32 44.1
LVV *e*S **S 06 36 34.1 -2.4**
LVV *e*SSS SSS 06 38 57.8
LVV pmax pmax
comp=Z,50nm,1.3s
LVV MLR MLR
comp=E,500nm,14.0s
LVV MLR MLR
comp=Z,1μm,14.0s
LVV MLR MLR
comp=N,2μm,15.0s
MNK Minsk 36.13 62 *i* P **P 06 30 56.4 -1.2**
comp=E,9.0nm,0.9s
MNK *i* P **P 06 30 56.4 -1.2**
comp=N,24nm,0.9s
MNK *i* P **P 06 30 56.4 -1.2**
comp=Z,23nm,0.9s,baz=295
MNK *i* PP PnPn 06 32 00.1 -19
MNK *i* PPP PPP 06 32 26.2
MNK *i* S **S 06 36 37.0 +0.2**
MNK *i* SS **SnSn 06 39 03.8 +2.0**
MNK *i* LQ LQ 06 41 18.8
MNK *i* LR LR 06 45 32.5
MNK *i* LRM MLR 06 45 44.6
comp=N,508nm,16.3s
MNK *i* LRM MLR 06 46 32.9
comp=Z,756nm,16.8s
MNK *i* LRM MLR 06 46 36.7
comp=E,284nm,16.8s
MNK Minsk 36.13 62 *i* P **P 06 30 56.4 -1.2**
MNK *i* PPP PPP 06 32 26.2
MNK *i* S **S 06 36 37.0 +0.2**
MNK *i* SS **SnSn 06 39 03.8 +2.0**
MNK pmax pmax
comp=Z,23nm,0.9s
MNK pmax pmax
comp=N,24nm,0.9s
MNK pmax pmax
comp=E,9.0nm,0.9s
MNK MLR MLR
comp=N,508nm,16.0s
MNK MLR MLR
comp=Z,756nm,17.0s
MNK MLR MLR
comp=E,284nm,17.0s
W57A Gilead 36.14 258 P **P 06 30 57.8 -0.1**
B35A Bob, Littlefor 36.44 287 P **P 06 31 00.0 -0.4**
B35A IAmb IAmb 06 31 07.5
comp=Z,63nm,1.3s
R50A Paris 36.63 266 P **P 06 31 01.8 -0.3**
R50A IAmb IAmb 06 31 09.7
comp=Z,88nm,1.5s
ULM Lac du Bonnet 36.74 291 P **P 06 31 02.4 -0.5**
ULM Lac du Bonnet 36.74 291 P **P 06 31 02.4 -0.5**
ULM pmax pmax
comp=Z,36nm,1.2s
ULM Lac du Bonnet 36.74 291 P **P 06 31 02.6 -0.3**
comp=Z,24nm,1.1s,baz=72,slow=8.2,SNR=14
ULM LR LR 06 44 43.9
comp=Z,1μm,19.0s,baz=54,slow=34
comp=Z,24nm,1.1s
MATE Matera 36.78 89⇑ P **P 06 31 02.2 -1.2**
BZS Buzias 36.85 78⇑ P **P 06 31 03.8 -0.2**
BZS Buzias 36.85 78 P **P 06 31 03.7 -0.2**
DRGR 36.87 76⇓ P **P 06 31 04.2 0.0**
DRGR 36.87 76 P **P 06 31 04.1 0.0**
KMSC Kings Mountain 36.94 260 P **P 06 31 05.2 +0.5**
baz=46
SFIN Lafayette 36.97 271 P **P 06 31 05.4 +0.5**
baz=52
I40A Norwalk 37.01 278 P **P 06 31 05.9 +0.6**
I40A IAmb IAmb 06 31 13.2
comp=Z,66nm,1.4s
SURR Surduc 37.08 78⇑ P **P 06 31 05.8 -0.1**
TZTN Tazewell 37.30 263 P **P 06 31 08.6 +0.8**
baz=48
JFWS Jewell Farm 37.35 277 P **P 06 31 08.5 +0.4**
baz=54
MDVR Moldovita 37.37 79⇑ P **P 06 31 07.4 -1.0**
VAE Valguarnera 37.41 94 LR LR 06 45 45.6
comp=Z,799nm,18.2s,baz=334,slow=35
P46A Rosedale 37.51 270 P **P 06 31 10.2 +0.7**
P46A IAmb IAmb 06 31 17.1
comp=Z,123nm,1.7s
SPMN Marine on St. 37.56 282 P **P 06 31 10.0 +0.1**
baz=56,SNR=8.1
GZR Gura Zlata 37.66 78⇑ P **P 06 31 09.7 -1.1**
GZR Gura Zlata 37.66 78 P **P 06 31 09.7 -1.1**
ARCR ARCALIA 37.67 75⇑ P **P 06 31 09.6 -1.2**
NHSC New Hope 37.69 256 P **P 06 31 11.5 +0.4**
NHSC New Hope 37.69 256 P **P 06 31 11.8 +0.7**
baz=44
HERR Herculane 37.73 79⇑ P **P 06 31 11.6 +0.2**
T50A Nancy 37.76 265 P **P 06 31 11.9 +0.2**
T50A IAmb IAmb 06 31 19.5
comp=Z,66nm,1.7s
WCI Wyandotte Cave 37.84 268 P **P 06 31 13.2 +0.8**
WCI IAmb IAmb 06 31 20.1
comp=Z,63nm,1.4s
WCI Wyandotte Cave 37.84 268 P **P 06 31 13.1 +0.8**
baz=50
WCI Wyandotte Cave 37.84 268 P **P 06 31 13.2 +0.8**
WCI pmax pmax
comp=Z,63nm,1.4s
BURAR Bucovina Array 37.89 73⇑ P **P 06 31 13.2 +0.4**
BURAR Bucovina Array 37.89 73 P **P 06 31 12.9 +0.1**
BURAR Bucovina Array 37.89 73 P **P 06 31 13.2 +0.4**
DJES Djerdap 37.91 79⇑ P **P 06 31 12.7 -0.2**
FFC Flin Flon 38.00 300 P **P 06 31 13.8 +0.2**
FFC Flin Flon 38.00 300 P **P 06 31 13.8 +0.2**
FFC pmax pmax
comp=Z,38nm,1.3s
BOVS Bovan 38.01 81⇓ P **P 06 31 13.6 -0.1**
HDIL Hopedale 38.19 273 P **P 06 31 15.6 +0.3**
HDIL IAmb IAmb 06 31 20.0
comp=Z,64nm,1.1s
HDIL Hopedale 38.19 273 P **P 06 31 16.4 +1.2**
baz=52
LOT Lotru 38.21 77⇑ P **P 06 31 15.1 -0.4**
V51A Loudon 38.28 263 P **P 06 31 16.3 +0.2**
V51A IAmb IAmb 06 31 23.9
comp=Z,68nm,1.9s
KIEV Kiev 38.58 67⇓ P **P 06 31 17.8 -0.7**
KIEV Kiev 38.58 67 P **P 06 31 17.8 -0.7**
AKASG Malin Array Be 38.59 67 P **P 06 31 17.9 -0.7**
comp=Z,3.8nm,0.7s,baz=299,slow=8.6,SNR=21
AKASG LR LR 06 46 54.7
comp=Z,808nm,18.8s,baz=290,slow=36
comp=Z,3.8nm,0.7s
AKBB Malin Array Si 38.59 67 P **P 06 31 17.8 -0.7**
AKBB Malin Array Si 38.59 67*ce*P **P 06 31 17.3 -1.2**
AKBB pmax pmax
comp=Z,36nm,1.5s
BLKB Belogradchik 38.60 80⇑ P **P 06 31 18.4 -0.3**
U49A Red Boiling Sp 38.66 265 P **P 06 31 19.5 +0.2**
U49A IAmb IAmb 06 31 26.9
comp=Z,59nm,1.5s
DOPR Dopca 38.87 75⇑ P **P 06 31 19.7 -1.3**
VOIR 38.97 76⇑ P **P 06 31 20.7 -1.2**
VOIR 38.97 76 P **P 06 31 20.7 -1.2**
K38A Parkersburg 39.01 278 P **P 06 31 22.8 +0.6**
OZUR 39.03 75⇑ P **P 06 31 21.7 -0.7**
Q44A Meyer Farm, Va 39.05 271 P **P 06 31 22.4 -0.1**
Q44A IAmb IAmb 06 31 29.9
comp=Z,146nm,1.6s
T47A Sharon Grove 39.14 267 P **P 06 31 23.5 +0.2**
KBN Korca 39.26 85 P **P 06 31 24.8 +0.5**
KBN IAmb IAmb 06 31 27.7
comp=Z,98nm,1.3s
KBN Korca 39.26 85 P **P 06 31 24.8 +0.5**
KBN pmax pmax
comp=Z,98nm,1.3s
W50A Signal Mountai 39.26 263 P **P 06 31 24.8 +0.4**
KLMR Klimovskoe 39.28 48 *e*P **P 06 31 20.9 -3.3**
KLMR pmax pmax
comp=Z,89nm,1.3s

KLMR MLR MLR
comp=Z,1µm,18.0s
TESR Tescani 39.31 74 ⇑P P 06 31 24.9 +0.3
GOGA Godfrey 39.41 260 P P 06 31 24.4 -1.1
GOGA Godfrey 39.41 260 P P 06 31 25.9 +0.3
baz=45
GOGA Godfrey 39.41 260 P P 06 31 24.4 -1.1
GOGA pmax pmax
comp=Z,46nm,1.6s
SORM Soroca 39.41 71 ⇑P P 06 31 24.4 -1.0
SORM Soroca 39.41 71 P P 06 31 24.4 -1.0
COVR Voineasa-Covas 39.41 75 ⇑P P 06 31 25.6 +0.1
MLR Muntele Rosu 39.46 76 ⇑P P 06 31 26.6 +0.5
MLR Muntele Rosu 39.46 76 P P 06 31 26.5 +0.5
MLR Muntele Rosu 39.46 76 LR LR 06 49 01.7
comp=Z,1µm,18.2s,baz=297,slow=38
SWET Sewanee 39.62 264 P P 06 31 27.6 +0.1
PLOR Plostina 39.67 75 ⇑P P 06 31 28.3 +0.5
PLOR Plostina 39.67 75 P P 06 31 28.2 +0.5
NEHR Nehoiu 39.70 76 ⇑P P 06 31 27.9 0.0
VRI Vrincioaia 39.71 75 ⇑P P 06 31 27.8 -0.2
VRI Vrincioaia 39.71 75 P P 06 31 27.7 -0.2
SCIA State Center 39.72 278 P P 06 31 27.6 -0.5
baz=53
255A Hazlehurst 39.88 257 P P 06 31 30.1 +0.6
255A IAmb IAmb 06 31 37.3
comp=Z,138nm,1.4s
S44A Carbondale 39.97 270 P P 06 31 30.6 +0.4
T45A Paducah 40.05 268 P P 06 31 31.5 +0.7
MDND Maddock 40.07 289 P P 06 31 31.0 +0.1
baz=58
WVT Waverly 40.15 267 P P 06 31 32.2 +0.5
baz=48
KIS Kishinev 40.29 72 *eP* **P 06 31 33.0 +0.3**
comp=Z,12nm,0.1s
KIS *eL* L 06 43 53.0
KIS LRM MLR 06 48 15.0
comp=Z,300nm,15.0s
KIS Kishinev 40.29 72 *eP* **P 06 31 33.0 +0.3**
KIS pmax pmax
comp=Z,12nm,0.1s
KIS MLR MLR
comp=Z,300nm,15.0s
MILM Milestii Mici 40.33 72⇑ *iP* **P 06 31 32.0 -1.1**
comp=Z,30nm,0.6s
MILM *eL* L 06 44 11.0
MILM LRM MLR 06 48 17.0
comp=Z,800nm,21.0s
MILM Milestii Mici 40.33 72 *c iP* **P 06 31 32.0 -1.1**
MILM pmax pmax
comp=Z,30nm,0.6s
MILM MLR MLR
comp=Z,800nm,21.0s
MILM MLR MLR
comp=E,900nm,16.5s
OBN Obninsk 40.37 57⇓ *iP* **P 06 31 33.3 0.0**
OBN *e**PP **sP 06 31 37.9 +1.0**
OBN *e* 06 33 04.2
OBN *i* S **S 06 37 46.0 +5.2**
OBN *e*SSS SSS 06 41 11.3
OBN pmax pmax
comp=Z,65nm,1.7s
OBN MLR MLR
comp=Z,417nm,15.0s
OBN Obninsk 40.37 57 LR LR 06 47 29.6
comp=Z,1µm,18.3s,baz=314,slow=35
MOS Moscow 40.61 56 *eP* **P 06 31 32.1 -3.2**
MOS MLR MLR
comp=Z,800nm,18.0s
A36M Sachs Harbour 40.66 331 P P 06 31 36.5 +1.0
baz=68,SNR=19
YKA Yellowknife Ar 40.67 316 P P 06 31 36.0 +0.2
comp=Z,13nm,1.1s,baz=63,slow=8.1,SNR=55
YKA PcP **PcP 06 33 36.5 -0.6**
comp=Z,4.1nm,0.8s,baz=62,slow=3.6,SNR=14
YKA LR LR 06 46 59.9
comp=Z,951nm,18.2s,baz=72,slow=34
comp=Z,13nm,1.1s
TIGA Tifton 40.89 258 P P 06 31 38.1 +0.3
baz=43
ELND Elena 40.90 79 ⇑P P 06 31 37.7 -0.1
CFR Carcaliu 40.91 75 ⇑P P 06 31 36.9 -1.0
CFR Carcaliu 40.91 75 P P 06 31 36.9 -1.0
CCM Cathedral Cave 40.94 272 P P 06 31 37.8 -0.4
baz=50
BBTS Babate 41.16 152 LR LR 06 45 52.2
comp=Z,489nm,18.4s,baz=296,slow=32
C36M Paulatuk 41.35 328 P P 06 31 40.5 -0.8
baz=66,SNR=7.3
SUSD Miller 41.61 285 P P 06 31 43.9 +0.2
baz=54
LRAL Lakeview Retre 41.77 262 P P 06 31 45.0 -0.1
baz=45,SNR=8.5
H05N1 Guadeloupe/Mar 42.01 219 T T 07 16 12.5
SNR=22
DWPF Disney Wildern 42.10 252 P P 06 31 47.6 -0.2
baz=40
OXF Oxford 42.19 266 P P 06 31 47.6 -0.9
baz=47,SNR=7.9
DGMT Dagmar 42.32 293 P P 06 31 49.8 +0.3
baz=57,SNR=8.6
SJG San Juan 42.47 226 LR LR 06 46 28.3
comp=Z,215nm,20.4s,baz=23,slow=32
LPSR Galich'ya Gora 42.84 60 *eP* **P 06 31 52.0 -1.5**
LPSR pmax pmax
comp=Z,20nm,0.8s
BGNE Belgrade 42.95 280 P P 06 31 54.2 -0.5
baz=52,SNR=8.6
BRAL Brewton 43.13 261 P P 06 31 56.5 +0.3
baz=44
TAM Tamanrasset 43.22 118 P P 06 31 56.7 -0.5
TAM Tamanrasset 43.22 118 P P 06 31 56.7 -0.5
TAM pmax pmax
comp=Z,23nm,1.4s
WHAR Wooly Hollow 43.39 269 P P 06 31 58.1 -0.2
WHAR IAmb IAmb 06 32 05.2
comp=Z,78nm,1.4s
VORR Voronezh 43.48 61 P P 06 31 58.4 -0.3
VORR pmax pmax
comp=Z,44nm,1.4s
KSU1 Kansas State U 43.48 277 P P 06 31 58.5 -0.5
baz=50,SNR=17
HILA High Level 43.55 311 P P 06 32 00.0 +0.7
VSR Storozhevoye 43.70 61 *eP* **P 06 31 58.9 -1.6**
VSR pmax pmax
comp=Z,20nm,1.2s
HHAR Hobbs 43.72 272 P P 06 32 00.8 -0.2
HHAR IAmb IAmb 06 32 07.9
comp=Z,83nm,1.4s
VORD Divnogorie 43.91 61 *eP* **P 06 31 59.8 -2.4**
VORD pmax pmax
comp=Z,40nm,1.2s
WRGLY Wrigley 43.94 319 P P 06 32 02.5 +0.2
baz=60
LAO LASA Array 44.46 292 P P 06 32 07.9 +1.1
LAO LASA Array 44.46 292 P P 06 32 07.8 +1.1
baz=54,SNR=26
143A Socs Landing, 44.64 266 P P 06 32 07.7 -0.6
MIAR Mount Ida 44.67 270 P P 06 32 08.0 -0.5
baz=47,SNR=17
RSSD Black Hills 44.74 287 P P 06 32 09.3 +0.1
baz=53
KIRV Kirov 44.77 48 *ceP* **P 06 32 08.8 -0.2**
KIRV Kirov 44.77 48 LR LR 06 49 42.1
comp=Z,981nm,19.5s,baz=298,slow=35
INK Inuvik 44.87 329 P P 06 32 09.5 -0.1
baz=58,SNR=31
INK Inuvik 44.87 329 LR LR 06 49 28.5
comp=Z,432nm,21.2s,baz=5.5,slow=34
VRH Novokhopyorsk 45.05 60 *eP* **P 06 32 09.5 -1.8**
VRH pmax pmax
comp=Z,9.0nm,0.5s
TUL3 Leonard 45.08 273 P P 06 32 11.5 -0.3
baz=48,SNR=6.7
IDI Anoyia 45.17 88 LR LR 06 51 53.8
comp=Z,585nm,19.9s,baz=336,slow=37
F31M Tsiigehtchic 45.41 328 P P 06 32 13.9 -0.1
baz=57,SNR=40
OGNE Ogallala 45.53 283 P P 06 32 15.3 -0.2
baz=51
CBKS Cedar Bluff 45.53 279 P P 06 32 14.6 -0.8
baz=50,SNR=9.6
EGMT Eagleton 45.63 295 P P 06 32 16.6 +0.5
baz=54,SNR=20
KOTAN Kotaneelee Air 45.80 316 P P 06 32 18.1 +0.9
baz=57,SNR=12

D28M Stokes Point 45.87 331 P P 06 32 18.1 +0.5
baz=55
G31M Satah River 45.87 327 P P 06 32 17.6 0.0
baz=56
F30M Barrier River 45.97 328 P P 06 32 18.8 +0.4
baz=55
E29M Blow River 46.17 330 P P 06 32 20.1 +0.1
baz=54
ANN Anapa 46.46 70 *eP* **P 06 32 23.8 +1.2**
ANN MLR MLR
comp=N,2µm,20.0s
ANN MLR MLR
comp=E,427nm,13.0s
ANN MLR MLR
comp=Z,2µm,16.0s
G30M tAoh Zraii Nji 46.47 328 P P 06 32 22.2 -0.2
baz=55
E28M Babbage River 46.53 331 P P 06 32 23.3 +0.5
baz=54
EPYK Eagle Plains 46.99 327 P P 06 32 26.7 +0.2
baz=54,SNR=27
K22A Casper 47.07 287 P P 06 32 27.6 0.0
baz=51,SNR=22
G29M Pine Creek 47.08 328 P P 06 32 27.4 +0.2
baz=53
RLMT Red Lodge 47.10 292 P P 06 32 29.1 +1.2
baz=52,SNR=27
KSCO Kaye Shedlock' 47.12 281 P P 06 32 28.1 +0.1
baz=49
F28M Old Crow 47.23 330 P P 06 32 28.1 -0.2
F28M Old Crow 47.23 330 P P 06 32 28.6 +0.2
baz=52,SNR=33
NATX Nacogdoches 47.26 268 P P 06 32 28.9 -0.1
baz=45
BELG Belogornoye 47.38 56 *i P* **P 06 32 28.7 -0.9**
BELG pmax pmax
comp=Z,7.0nm,1.5s
BELG Belogornoye 47.38 56 LR LR 06 50 40.9
comp=Z,417nm,21.1s,baz=332,slow=34
BR131 Keskin Array S 47.46 77 P P 06 32 30.8 +0.1
BR131 IAmb IAmb 06 32 32.5
comp=Z,20nm,0.9s
BR131 Keskin Array S 47.46 77 *i P* **P 06 32 31.4 +0.7**
BRTR Keskin Array B 47.46 77 P P 06 32 30.7 0.0
BRTR Keskin Array B 47.46 77 P P 06 32 31.4 +0.7
comp=Z,13nm,0.8s,baz=307,slow=5.6,SNR=50
BRTR LR LR 06 53 59.1
comp=Z,1µm,18.2s,baz=310,slow=38
comp=Z,13nm,0.8s
I30M Mount Dempster 47.56 326 P P 06 32 29.8 -1.3
baz=53
ERBR Yeremizino-Bor 47.61 67 *eP* **P 06 32 32.2 +0.7**
ERBR MLR MLR
comp=Z,756nm,14.0s
WMOK Wichita Mounta 47.67 274 P P 06 32 32.1 -0.1
WMOK Wichita Mounta 47.67 274 P P 06 32 32.3 +0.1
baz=47,SNR=21
WMOK Wichita Mounta 47.67 274 P P 06 32 32.1 -0.1
WMOK pmax pmax
comp=Z,59nm,1.5s
WTLY Watson Lake, Y 47.77 318 P P 06 32 32.0 -0.7
baz=54,SNR=11
N23A Red Feather La 47.85 285 P P 06 32 34.7 +0.9
N23A Red Feather La 47.85 285 P P 06 32 33.5 -0.3
baz=50,SNR=35
J30M Hart River 47.94 325 P P 06 32 34.0 0.0
baz=53,SNR=25
D25K Kavik River 48.00 334 P P 06 32 34.7 +0.3
baz=49
RWWY Rawlins 48.08 287 P P 06 32 36.3 +0.8
BOZ Bozeman (W) 48.12 294 P P 06 32 36.0 +0.3
baz=52,SNR=17
YNR Norris Junctio 48.14 292 P P 06 32 35.6 -0.4
YNR IAmb IAmb 06 32 49.8
comp=Z,56nm,1.9s
FW06 Azle 48.16 271 P P 06 32 35.4 -0.5
YHH Holmes Hill 48.19 292 P P 06 32 37.0 +0.6
H17A Grant Village 48.28 292 P P 06 32 37.3 +0.2
baz=51
FARO Faro, Yukon 48.29 322 P P 06 32 36.9 +0.3
baz=53
C24K Franklin Bluff 48.35 335 P P 06 32 37.7 +0.7
baz=48
ISCO Idaho Springs 48.37 284 P P 06 32 38.9 +1.1
ISCO IAmb IAmb 06 32 46.1
comp=Z,44nm,1.4s
ISCO Idaho Springs 48.37 284 P P 06 32 39.0 +1.1
baz=49,SNR=14
ISCO Idaho Springs 48.37 284 P P 06 32 38.9 +1.1
ISCO pmax pmax
comp=Z,44nm,1.4s
MAYO Mayo, Yukon 48.38 324 P P 06 32 38.5 +1.2
MAYO Mayo, Yukon 48.38 324 P P 06 32 38.2 +0.9
baz=52
YFT Old Faithful 48.39 292 P P 06 32 39.0 +1.1
YFT IAmb IAmb 06 32 47.2
comp=Z,50nm,1.3s
FW03 Perrin-Whitt E 48.41 272 P P 06 32 37.4 -0.5
F26K Sheenjek River 48.45 331 P P 06 32 37.9 +0.1
baz=50
SOC Sochi 48.51 69 *eP* **P 06 32 36.9 -1.6**
SOC *e* 06 34 28.4
SOC *e*PPP PPP 06 35 19.7
SOC *e*S **S 06 39 39.1 -0.2**
SOC *e*SS **SS 06 43 08.0 -0.7**
SOC *e*SSS SSS 06 44 21.6
E25K Arctic Village 48.58 332 P P 06 32 39.0 +0.2
baz=49,SNR=11
BPMT Black Pine Rid 48.59 295 P P 06 32 40.1 +0.6
I28M Miner Creek 48.60 327 P P 06 32 39.7 +0.6
baz=51,SNR=20
H27K Steamboat Moun 48.60 329 P P 06 32 39.8 +0.7
baz=50,SNR=15
Q24A Divide 48.64 283 P 06 32 40.2 +0.2
Q24A IAmb IAmb 06 32 47.5
comp=Z,52nm,1.6s
Q24A Divide 48.64 283 P P 06 32 40.8 +0.8
baz=49
J29N Klondike Camp 48.66 326 P P 06 32 40.2 +0.8
J29N IAmb IAmb 06 32 48.2
comp=Z,50nm,1.2s
J29N Klondike Camp 48.66 326 P P 06 32 40.4 +0.9
baz=51,SNR=16
M31M Drury Creek, Y 48.69 322 P P 06 32 40.9 +1.2
baz=52
BW06 Boulder Array 48.73 289 P P 06 32 40.2 -0.4
baz=50,SNR=18
PDAR Pinedale Array 48.73 289 P P 06 32 40.5 -0.1
comp=Z,4.2nm,0.7s,baz=62,slow=6.9,SNR=35
PDAR LR LR 06 52 10.7
comp=Z,953nm,18.6s,baz=47,slow=35
comp=Z,4.2nm,0.7s
D24K Happy Valley 48.77 334 P P 06 32 40.5 +0.4
baz=47
WHTX Lake Whitney, 48.78 270 P P 06 32 40.2 -0.6
baz=45
LOHW Long Hollow 48.79 291 P P 06 32 41.5 +0.6
LOHW IAmb IAmb 06 32 48.8
comp=Z,39nm,1.6s
K29M Barlow Dome 48.80 325 P P 06 32 40.3 -0.4
baz=51
N32M Quiet Lake 48.84 320 P P 06 32 41.2 +0.3
baz=52,SNR=6.0
F25K Christian Rive 48.95 332 P P 06 32 41.8 +0.2
baz=48
PCRV Puerto La Cruz 48.99 220 LR LR 06 51 51.5
comp=Z,246nm,19.4s,slow=34
I27K Kandik River 49.04 328 P P 06 32 43.0 +0.6
baz=50
R33M Jeegs River 49.08 318 P P 06 32 42.6 -0.3
baz=52
B22K Teshekpuk Lake 49.09 337 P P 06 32 43.3 +0.7
baz=45
A21K Barrow 49.10 339 P P 06 32 43.3 +0.6
baz=43
DLBC Dease Lake 49.28 316 P P 06 32 43.9 -0.4
baz=52
DLBC Dease Lake 49.28 316 LR LR 06 52 21.6
comp=Z,829nm,18.5s,baz=94,slow=35
DAWY Dawson 49.30 326 P P 06 32 45.0 +0.6
baz=50,SNR=20
AMTX Amarillo 49.31 276 P P 06 32 45.3 +0.4
AMTX Amarillo 49.31 276 P P 06 32 45.9 +1.0
baz=47
P33M Teslin, Yukon 49.32 319 P P 06 32 45.2 +0.6
baz=52
M30M Minto, Yukon 49.34 323 P P 06 32 45.1 +0.4
baz=51,SNR=8.6
EGAK Eagle 49.43 327 P P 06 32 46.2 +0.9
EGAK IAmb IAmb 06 32 49.2
comp=Z,57nm,1.3s
EGAK Eagle 49.43 327 P P 06 32 46.0 +0.8
baz=50,SNR=19
NEW Newport 49.43 299 P P 06 32 46.1 +0.5
baz=52,SNR=12
NEW Newport 49.43 299 LR LR 06 52 25.6
comp=Z,1µm,18.5s,baz=52,slow=35
GOF Gofitskoye 49.43 66 *ceP* **P 06 32 46.1 +0.5**
L29M L29M 49.47 324 P P 06 32 46.7 +1.0
baz=50
TORD Torodi Ar. Bea 49.49 130 P P 06 32 44.8 -1.5
comp=Z,5.4nm,0.7s,baz=338,slow=8.6,SNR=31
TORD LR LR 06 51 49.0
comp=Z,903nm,18.0s,baz=332,slow=34
comp=Z,5.4nm,0.7s
F24K Squaw Lake 49.63 332 P P 06 32 48.3 +1.4
baz=47,SNR=8.7
G25K Bearman Lake 49.64 331 P P 06 32 48.5 +1.7
baz=48
SDCO Great Sand Dun 49.65 282 P P 06 32 47.8 +0.1
baz=48,SNR=17
ABTX Abilene, Hawle 49.65 272 P P 06 32 47.1 -0.4
baz=45
N31M Braeburn, Yuko 49.66 322 P P 06 32 46.8 -0.3
baz=51
O20A White River Ci 49.68 286 P P 06 32 47.8 0.0
baz=49,SNR=10
435B Jarrell 49.71 269 P P 06 32 48.1 +0.2
baz=44
E23K Chandalar 49.73 333 P P 06 32 47.9 +0.2
baz=46
WHY Whitehorse 49.84 321 P P 06 32 49.4 +0.8
baz=51
KIV Kislovodsk 49.93 67 *eP* **P 06 32 50.3 +0.8**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,402nm,16.0s
D22K Ayikyak River 49.95 335 P P 06 32 50.1 +0.9
baz=44
MDP Montagnes des 50.02 203 LR LR 06 49 20.9
comp=Z,154nm,19.9s,baz=36,slow=31
M29M Somme Creek 50.02 324 P P 06 32 51.3 +1.3
baz=50,SNR=8.9
ARU Arti 50.05 46 P P 06 32 50.0 -0.1
ARU IAmb IAmb 06 33 05.7
comp=Z,22nm,1.0s
ARU Arti 50.05 46 *c iP* **P 06 32 50.6 +0.5**
ARU 06 34 45.3
ARU S **S 06 40 05.1 +4.4**
ARU SS **SS 06 43 36.4 +3.4**
ARU pmax pmax
comp=Z,32nm,1.5s
ARU Arti 50.05 46 LR LR 06 52 35.9
comp=Z,869nm,20.9s,baz=294,slow=34
S34M Telegraph Cree 50.07 316 P P 06 32 50.7 +0.4
baz=51
G24K Hadweenzic Riv 50.08 331 P P 06 32 51.4 +1.1
baz=47
KBZ Khabaz 50.20 67 *ceP* **P 06 32 52.3 +0.9**
KBZ pmax pmax
comp=Z,19nm,1.1s
KBZ Khabaz 50.20 67 P P 06 32 52.1 +0.7
comp=Z,5.9nm,1.0s,baz=298,slow=7.8,SNR=7.7
KBZ LR LR 06 53 18.6
comp=Z,685nm,21.9s,baz=312,slow=35
comp=Z,5.9nm,1.0s
BRDY Brady 50.21 271 P P 06 32 50.5 -1.2
BRDY IAmb IAmb 06 32 57.8
comp=Z,43nm,1.3s
K27K Chicken 50.22 327 P P 06 32 52.5 +1.2
baz=49
O30N Mendenhall 50.23 321 P P 06 32 52.2 +0.7
baz=50,SNR=8.3
E22K Anaktuvuk Pass 50.27 334 P P 06 32 52.5 +0.8
baz=44
C21K Knifeblade Rid 50.27 336 P P 06 32 52.8 +1.1
baz=43
T35M Bob Quinn 50.28 315 P P 06 32 53.2 +1.3
baz=51
PRP Porcupine Dome 50.31 329 P P 06 32 53.2 +1.0
baz=47
J26L Joseph Creek 50.39 328 P P 06 32 53.7 +1.0
baz=48
S22A 4UR Ranch, Cre 50.43 283 P P 06 32 54.5 +0.8
baz=48,SNR=9.6
COLD Coldfoot 50.48 333 P P 06 32 53.7 +0.4
baz=45
MSTX Muleshoe 50.60 276 P P 06 32 55.2 +0.5
baz=46,SNR=14
E21K Killik River 50.60 335 P P 06 32 54.0 -0.2
baz=43
HWUT Hardware Ranch 50.62 289 P P 06 32 55.0 +0.2
SVE Sverdlovsk 50.69 45 *eP* **P 06 32 56.0 +1.0**
SVE pmax pmax
comp=Z,25nm,1.4s
HYT Haines Junctio 50.72 322 P P 06 32 56.3 +1.0
baz=50,SNR=6.5
SKAG Skagway 50.78 320 P P 06 32 56.3 +0.7
baz=50
L27K Beaver Creek, 50.78 326 P P 06 32 57.0 +1.3
baz=48
G23K Bananza Creek 50.80 332 P P 06 32 56.0 +0.3
baz=45
H24K Noodor Dome 50.80 331 P P 06 32 56.8 +1.1
baz=46
YUK4 Talbot Arm 50.80 323 P P 06 32 55.9 -0.1
baz=49
PLID Pearl Lake 50.83 296 P P 06 32 56.4 -0.1
NRIK Noril'sk 50.88 23 P P 06 32 56.8 +0.6
NRIK Noril'sk 50.88 23 *ceP* **P 06 32 57.1 +0.9**
NRIK pmax pmax
comp=Z,25nm,1.3s
NRIK Noril'sk 50.88 23 P P 06 32 57.0 +0.7
comp=Z,1.3nm,0.3s,baz=327,slow=6.2,SNR=6.8
NRIK LR LR 06 53 03.8
comp=Z,156nm,20.6s,baz=326,slow=34
comp=Z,1.3nm,0.3s
SCRK Sand Creek 50.88 327 P P 06 32 57.3 +0.9
baz=47,SNR=28
BVCY Beaver Creek 50.88 325 P P 06 32 56.8 +0.4
baz=48,SNR=11
J25K Salcha River, 50.88 329 P P 06 32 57.2 +0.8
baz=47
A19K Wainwright 50.92 339 P P 06 32 57.4 +0.9
baz=39
HLID Hailey 50.95 293 P P 06 32 58.6 +1.3
baz=50,SNR=19
YUK6 Outpost Mounta 50.96 322 P P 06 32 57.1 -0.2
baz=49
P30M Million Dollar 50.98 321 P P 06 32 57.7 +0.6
baz=49
D20K Etivluk River 51.05 336 P P 06 32 58.4 +0.8
baz=41
G22K Bettles 51.06 333 P P 06 32 58.0 +0.4
baz=44
YUK3 Moose Creek 51.17 324 P P 06 32 59.5 +0.7
baz=48,SNR=6.1
POKR Poker Plat Res 51.17 330 P P 06 32 59.7 +1.2
baz=46,SNR=16
PLBC Pleasant Camp 51.18 320 P P 06 32 59.3 +0.7
baz=49
IL31 51.25 329 P P 06 32 59.4 +0.5
ILAR Eielson Array 51.25 329 P P 06 33 00.1 +1.1
ILAR Eielson Array 51.25 329 P P 06 32 60.0 +0.9
comp=Z,36nm,1.2s,baz=41,slow=4.9,SNR=63
ILAR PcP **PcP 06 34 14.0 +0.1**
comp=Z,3.7nm,0.8s,baz=15,slow=2.7,SNR=9.0
ILAR LR LR 06 54 52.5
comp=Z,276nm,18.9s,baz=63,slow=36
comp=Z,36nm,1.2s
YUK8 Steele Glacier 51.25 323 P P 06 32 59.7 +0.3
baz=48
GAZ Gaziantep 51.25 77 P P 06 32 59.8 +0.2
JCT Junction City 51.27 271 P P 06 32 58.4 -1.2
baz=44,SNR=8.9
M27K Edge Creek, AK 51.27 325 P P 06 33 00.6 +1.2
baz=48,SNR=5.8
E20K Nigu River 51.29 336 P P 06 32 59.4 0.0
baz=41
L26K Log Cabin Wild 51.32 326 P P 06 33 00.5 +0.8
baz=47
RIDG Independent Ri 51.32 328 P P 06 33 00.5 +0.8
baz=47
ZEI Tsey 51.36 68 *eP* **P 06 33 00.4 -0.1**

ZEI pmax pmax
comp=Z,15nm,1.1s
F21K Alatna River 51.37 334 P P 06 33 00.0 0.0
baz=43
C19K Lookout Ridge 51.45 338 P P 06 33 01.0 +0.5
baz=39
O29M Mount Kennedy 51.47 322 P P 06 33 00.7 -0.2
baz=48
COLA College 51.47 330 P P 06 33 01.3 +0.6
baz=45
HDA Harding Lake 51.52 329 P P 06 33 02.2 +1.1
baz=46,SNR=15
T33K Petersburg 51.53 316 P P 06 33 01.9 +0.7
baz=50
D19K Kuna River 51.57 337 P P 06 33 02.0 +0.5
baz=40
K24K Donnelly Dome 51.58 328 P P 06 33 03.4 +1.8
baz=46,SNR=22
P29M Windy Craggy 51.60 321 P P 06 33 03.4 +1.6
baz=49
M26K Nabesna, AK 51.63 326 P P 06 33 02.8 +0.8
baz=47
I23K Minto, Yukon-K 51.73 331 P P 06 33 03.7 +1.1
I23K Minto, Yukon-K 51.73 331 P P 06 33 03.7 +1.1
baz=44,SNR=22
B18K Kokolik River 51.74 339 P P 06 33 04.0 +1.4
baz=38
H22K Ishtalitna Cre 51.77 332 P P 06 33 03.5 +0.5
baz=44
MVCO Mesa Verde 51.77 283 P P 06 33 04.7 +1.0
baz=47,SNR=15
S32K Killisnoo 51.77 317 P P 06 33 04.0 +1.0
baz=49
MFID Camas Ranch 51.82 294 P P 06 33 04.9 +1.1
MFID IAmb IAmb 06 33 12.0
comp=Z,72nm,1.6s
G21K Allakaket 51.90 333 P P 06 33 04.5 +0.6
baz=42
V35K Ketchikan 51.93 314 P P 06 33 04.7 +0.5
baz=50
CTG Chitna Glacier 52.03 324 P P 06 33 06.0 +0.9
baz=47
NEA2 Nenana 52.04 330 P P 06 33 05.8 +0.9
baz=44
PAX Paxson 52.06 327 P P 06 33 06.1 +0.9
baz=46,SNR=15
F20K Avaraart Lake 52.08 335 P P 06 33 06.1 +0.9
baz=41
ANMO Albuquerque 52.12 280 P P 06 33 07.5 +1.3
baz=46
ANMO Albuquerque 52.12 280 *ce*P P 06 33 07.9 +1.7
ANMO pmax pmax
comp=Z,52nm,2.5s
ANMO Albuquerque 52.12 280 LR LR 06 54 33.4
comp=Z,3µm,18.9s,baz=144,slow=35
TEIG Tepich 52.13 252 LR LR 06 56 14.9
comp=Z,4µm,18.0s,baz=188,slow=37
E19K Redstone River 52.16 336 P P 06 33 06.6 +0.8
baz=40
MXC Moxie City 52.16 300 P P 06 33 06.4 +0.2
MXC IAmb IAmb 06 33 09.4
comp=Z,48nm,1.5s
C18K Utukok River 52.17 338 P P 06 33 06.7 +0.8
baz=38
MLY Manley 52.22 331 P P 06 33 07.0 +0.7
baz=43,SNR=9.3
PINM Pinnacle 52.23 322 P P 06 33 07.4 +0.9
baz=47
DUG Dugway, Tooele 52.26 289 P P 06 33 07.6 +0.5
DUG IAmb IAmb 06 33 15.1
comp=Z,69nm,1.4s
DUG Dugway, Tooele 52.26 289 P P 06 33 08.0 +0.8
baz=48,SNR=25
DUG Dugway, Tooele 52.26 289 P P 06 33 07.6 +0.5
DUG pmax pmax
comp=Z,69nm,1.4s
MCARA McCarthy VSAT 52.34 325 P P 06 33 06.4 -0.8
baz=46
H21K Melozitna Rive 52.34 332 P P 06 33 08.3 +1.1
baz=42
HARP HAARP 52.36 326 P P 06 33 07.7 +0.3
baz=46
BBB Bella Bella 52.40 309 LR LR 06 54 19.3
comp=Z,872nm,18.2s,baz=54,slow=35
I21K Tanana 52.46 332 P P 06 33 09.4 +1.3
baz=43,SNR=7.6
DBIC Dimbokro 52.53 141 P P 06 33 09.0 -0.1
DBIC Dimbokro 52.53 141 P P 06 33 09.0 -0.1
comp=Z,5.1nm,0.9s,baz=340,slow=5.5,SNR=4.4
DBIC LR LR 06 52 44.7
comp=Z,894nm,20.8s,baz=338,slow=33
comp=Z,5.1nm,0.9s
833A Chaparral WMA, 52.58 268 P P 06 33 08.6 -0.8
baz=43
DHY Denali Highway 52.60 328 P P 06 33 10.2 +0.9
baz=45,SNR=14
MCK McKinley 52.62 329 P P 06 33 09.9 +0.6
baz=44,SNR=23
SDV Santo Domingo 52.62 226 P P 06 33 09.7 -0.3
SDV IAmb IAmb 06 33 20.5
comp=Z,45nm,1.6s
SDV Santo Domingo 52.62 226 LR LR 06 51 45.7
comp=Z,134nm,21.9s,baz=40,slow=32
SDV Santo Domingo 52.62 226 *eP* P 06 33 11.2 +1.1
N25K Chitina, Valde 52.72 325 P P 06 33 10.2 0.0
baz=46
C17K DeLong Mountai 52.75 339 P P 06 33 10.1 -0.1
baz=37
F19K Shaleruckik Mo 52.77 335 P P 06 33 10.7 +0.4
baz=40
M24K Tolsona, Glenn 52.90 327 P P 06 33 11.8 +0.3
baz=45,SNR=6.8
BPAW Bear Paw Mtn. 52.97 330 P P 06 33 11.8 -0.1
baz=43
Y22D IRIS PASSCAL I 53.00 279 P P 06 33 13.0 +0.3
baz=46
Y22F Passcal Instru 53.00 279 P P 06 33 12.8 +0.1
baz=46
E18K Tukpahlearik C 53.00 337 P P 06 33 12.4 +0.4
baz=38
RDOG Red Dog Mine 53.03 338 P P 06 33 12.9 +0.6
RDOG IAmb IAmb 06 33 16.1
comp=Z,41nm,1.2s
RDOG Red Dog Mine 53.03 338 P P 06 33 12.4 +0.1
baz=37
MSU Marysvale 53.03 287 P P 06 33 12.5 -0.5
MSU Marysvale 53.03 287 P P 06 33 12.5 -0.5
H20K Anotleneega Mo 53.04 333 P P 06 33 13.0 +0.6
baz=41
MMAI Mount Meron Ar 53.05 83 P P 06 33 12.9 0.0
comp=Z,0.8nm,0.3s,baz=311,slow=6.4,SNR=9.5
MMAI LR LR 06 56 15.7
comp=Z,258nm,21.0s,baz=270,slow=37
comp=Z,0.8nm,0.3s
WAT6 Susitna Watana 53.07 328 P P 06 33 13.3 +0.4
baz=44,SNR=13
PECS Pecos 53.08 275 P P 06 33 13.6 +0.4
PECS IAmb IAmb 06 33 21.1
comp=Z,99nm,2.0s
G19K Purcell Mounta 53.13 334 P P 06 33 13.6 +0.6
baz=40
WAT1 Susitna Watana 53.15 328 P P 06 33 14.2 +0.9
baz=44
BMRM Bremner River 53.18 325 P P 06 33 14.3 +0.8
baz=45
MAK Makhachkala 53.24 65 *eP* P 06 33 09.4 -4.7
MAK *eS* S 06 40 37.4 -7.5
MAK *eSS* SS 06 44 20.3 -3.6
MAK *eSSS* SSS 06 46 13.8
MAK pmax pmax
comp=Z,73nm,1.1s
MAK MLR MLR
comp=Z,616nm,15.0s
TRF Thorofare Moun 53.24 329 P P 06 33 14.9 +0.9
baz=43,SNR=10
KLU Klutina 53.25 326 P P 06 33 14.4 +0.3
baz=45
ELK Elko 53.27 291 LR LR 06 54 56.7
comp=Z,1µm,18.6s,baz=57,slow=35
C16K Lisburne Hills 53.38 339 P P 06 33 15.3 +0.5
baz=35
F18K Selawik 53.42 336 P P 06 33 15.8 +0.7
baz=38,SNR=14
H19K Roundabout Mou 53.44 334 P P 06 33 16.1 +0.9
baz=40
I20K Naaghedeneel 53.46 332 P P 06 33 15.9 +0.5
baz=41
SCM Sheep Creek Mo 53.48 327 P P 06 33 16.0 +0.3
baz=44
CHUM Lake Minchumin 53.53 331 P P 06 33 15.9 0.0
baz=42,SNR=10
E17K Hotham Inlet 53.56 337 P P 06 33 16.3 +0.2
baz=37,SNR=12
GNI Garni 53.59 70 *ce*P P 06 33 18.5 +1.6
GNI pmax pmax
comp=Z,40nm,1.3s
GNI Garni 53.59 70 LR LR 06 55 53.8
comp=Z,821nm,22.0s,baz=319,slow=36
M23K Glacier View 53.64 327 P P 06 33 17.8 +0.9
baz=44
AKTO Aktyubinsk 53.67 52 LR LR 06 54 52.0
comp=Z,825nm,21.3s,baz=315,slow=35
G18K Tagagawik 53.73 335 P P 06 33 18.2 +0.8
baz=38
MNTX Cornudas Mount 53.75 276 P P 06 33 19.0 +1.0
baz=45,SNR=18
CAST Castle Rocks 53.80 330 P P 06 33 18.3 +0.3
baz=42,SNR=26
SML Sawmill 53.83 327 P P 06 33 18.8 +0.5
baz=43,SNR=8.3
J20K Nowinta River 53.84 332 P P 06 33 18.3 0.0
baz=41
KAIM Kayak Island 53.85 324 P P 06 33 18.3 -0.1
baz=45
EYAK Cordova Ski Ar 53.87 325 P P 06 33 18.9 +0.4
baz=44
W18A Petrified Fore 53.94 282 P P 06 33 20.4 +0.8
baz=46
F17K Baldwin Pennin 53.94 336 P P 06 33 19.5 +0.6
baz=37
CUT Chulitna 54.01 329 P P 06 33 19.6 +0.2
baz=42,SNR=6.7
KNK Knik Glacier 54.16 327 P P 06 33 22.0 +1.4
baz=43,SNR=7.9
GCSA Galena City Sc 54.16 333 P P 06 33 21.1 +0.6
baz=39
PPLA Purkeypile 54.23 330 P P 06 33 21.7 +0.4
baz=41
H18K Honhosa River 54.24 334 P P 06 33 22.0 +0.8
baz=38
PMR Palmer 54.24 327 P P 06 33 22.5 +1.3
baz=43,SNR=8.6
J19K Poorman 54.39 332 P P 06 33 23.1 +0.8
baz=40
TXAR Lajitas Array 54.41 273 P P 06 33 23.3 +0.3
comp=Z,5.3nm,1.1s,baz=64,slow=5.7,SNR=14
TXAR PcP PcP 06 34 27.1 +0.4
comp=Z,5.3nm,1.1s,baz=58,slow=3.3,SNR=4.7
TXAR LR LR 06 56 03.9
comp=Z,535nm,18.4s,baz=52,slow=35
comp=Z,5.3nm,1.1s
K20K Telida 54.44 331 P P 06 33 23.2 +0.6
baz=40
ASF Jabal al Asfar 54.53 82 LR LR 06 56 40.8
comp=Z,304nm,20.7s,baz=333,slow=36
G17K Kiwalik Mounta 54.55 335 P P 06 33 23.7 +0.4
baz=37,SNR=9.0
121A Cookes Peak, D 54.59 279 P P 06 33 25.6 +1.2
baz=45,SNR=12
WUAZ Wupatki 54.62 284 P P 06 33 25.3 +0.8
baz=46
SKT Skwentna 54.72 329 P P 06 33 24.8 +0.1
baz=41,SNR=18
H17K Granite Mounta 54.81 335 P P 06 33 26.1 +0.8
baz=37,SNR=9.4
RC01 Rabbit Creek A 54.81 327 P P 06 33 26.3 +1.0
baz=42,SNR=9.5
P23K Montague Islan 54.84 325 P P 06 33 26.6 +1.1
baz=43
J05D Fort Rock, OR 54.85 297 P P 06 33 26.9 +0.8
SUA Susitna One 54.86 328 P P 06 33 25.9 +0.1
baz=42,SNR=13
PAMC Pamplona, Colo 54.90 228 *eP* P 06 33 26.4 -0.7
G16K Koyuk River 55.05 336 P P 06 33 27.8 +0.7
baz=36
L20K Farewell, AK 55.06 330 P P 06 33 27.4 +0.3
baz=40
R11B Troy Canyon, C 55.09 289 P P 06 33 28.5 +0.6
baz=46,SNR=16
J18K Innoko River 55.11 332 P P 06 33 28.1 +0.5
baz=39
EIL Elat 55.16 86 LR LR 07 01 13.1
comp=Z,170nm,18.4s,baz=250,slow=41
MCPB Macapa, AP 55.17 201 *eP* P 06 33 28.9 +0.5
O22K Cooper Landing 55.26 327 P P 06 33 29.5 +0.9
baz=42
M20K Styx River 55.29 329 P P 06 33 28.7 -0.2
baz=40
F15K North Star Dit 55.35 337 P P 06 33 29.7 +0.6
baz=34
DUN6 Lazy B Ranch 55.35 279 P P 06 33 30.6 +0.7
ABKAR Akbulak array 55.39 52 P P 06 33 29.1 -0.6
SEW Seward 55.45 326 P P 06 33 30.6 +0.6
baz=42
N20K Mount Spurr 55.52 328 P P 06 33 29.9 -0.6
baz=41,SNR=7.8
L19K White Mountain 55.58 330 P P 06 33 30.9 0.0
baz=39
H16K Elim 55.64 335 P P 06 33 31.9 +0.6
baz=36,SNR=8.0
M19K Big River Lodg 55.65 330 P P 06 33 32.1 +0.7
baz=40
G15K Niukluk 55.79 336 P P 06 33 33.4 +1.0
baz=34
I17K Unalakleet 55.86 334 P P 06 33 33.7 +0.9
baz=36
F14K Arctic Creek 55.93 338 P P 06 33 33.7 +0.4
baz=33,SNR=9.5
L18K Granite Mounta 56.09 331 P P 06 33 35.1 +0.6
baz=38
SHPR Sheep Range 56.13 287 P P 06 33 36.0 +0.6
K17K Iditarod 56.15 332 P P 06 33 35.6 +0.7
baz=37
BRSE Bradley Lake S 56.16 327 P P 06 33 36.1 +1.1
baz=41
TNA Tin City 56.22 338 P P 06 33 36.4 +1.1
baz=32
PAHR Pah Rah Range 56.29 293 P P 06 33 36.9 +0.4
J16K Anvik River 56.32 334 P P 06 33 36.9 +0.7
baz=36
PTBC PUERTO BERRIO, 56.40 229 *eP* P 06 33 36.6 -0.7
M18K Stony River 56.40 330 P P 06 33 37.4 +0.6
baz=38
TPNV Topopah Spring 56.44 288 P P 06 33 38.1 +0.4
baz=46,SNR=28
ANM Nome 56.47 337 P P 06 33 37.8 +0.5
baz=34
O20K Slope Mountain 56.51 328 P P 06 33 37.8 +0.2
baz=40
N19K Bonanza Creek 56.53 329 P P 06 33 38.0 +0.2
baz=39
TUC Tucson 56.53 281 P P 06 33 39.0 +0.8
TUC IAmb IAmb 06 33 46.4
comp=Z,38nm,1.4s
TUC Tucson 56.53 281 P P 06 33 38.7 +0.5
baz=44
TUC Tucson 56.53 281 P P 06 33 39.0 +0.8
TUC pmax pmax
comp=Z,38nm,1.4s
L17K Donlin 56.61 332 P P 06 33 38.6 +0.3
baz=37
YBH Yreka Blue Hor 56.71 297 LR LR 06 57 10.9
comp=Z,1µm,18.5s,baz=40,slow=35
DBBC Dabeiba 56.79 231 *eP* P 06 33 40.0 -0.2
M17K Holitna River 56.95 331 P P 06 33 40.8 +0.1
baz=37
O19K Port Alsworth 56.96 329 P P 06 33 40.9 +0.2
baz=39
SPBC San Pablo de B 57.01 228 *eP* P 06 33 41.1 -0.6
P19K Oil Pt 57.04 328 P P 06 33 41.7 +0.3
baz=39
NEE2 Needles Airpor 57.04 285 P P 06 33 41.9 +0.2
baz=45
GRAC Grapevine Rang 57.05 289 P P 06 33 42.4 +0.6
baz=45,SNR=7.7
N18K Kilae Creek 57.06 330 P P 06 33 41.7 +0.2
baz=38
PDMCI Parker Dam,Lak 57.09 285 P P 06 33 42.9 +0.9
baz=45,SNR=8.4
MALB Monte Alegre 57.11 203 *eP* P 06 33 42.6 +0.3
FURC Furnace Creek, 57.13 288 P P 06 33 43.3 +1.0
baz=45,SNR=8.4
SHOC Shoshone, Teco 57.20 287 P P 06 33 43.7 +0.9
baz=45
L16K Owhat River 57.29 332 P P 06 33 43.4 +0.4
baz=36
TUQ Turquoise Moun 57.32 287 P P 06 33 44.4 +0.6
baz=45,SNR=8.1
BRVK Borovoye 57.33 44 P P 06 33 43.6 +0.1
BRVK IAmb IAmb 06 33 46.8
comp=Z,35nm,1.6s
BRVK Borovoye 57.33 44 *ce*P P 06 33 43.9 +0.4
BRVK pmax pmax
comp=Z,23nm,1.5s
K15K Wolf Creek Mou 57.38 333 P P 06 33 44.0 +0.3
baz=35
BVAR Borovoye Array 57.40 44 P P 06 33 44.7 +0.7
comp=Z,7.4nm,0.8s,baz=317,slow=6.3,SNR=31
BVAR LR LR 06 56 39.9
comp=Z,888nm,21.5s,baz=298,slow=34
comp=Z,7.4nm,0.8s
MLAC Mammoth, Mammo 57.44 291 P P 06 33 45.3 +0.6
baz=45
TIN Tinemaha, Big 57.50 290 P P 06 33 45.8 +0.8
baz=45
O18K Koktuh Hills 57.51 329 P P 06 33 44.7 0.0
baz=38
J14K Nanvaranak Lak 57.53 335 P P 06 33 45.6 +0.8
baz=34
OMMB Old Mammoth Mi 57.54 291 P P 06 33 46.3 +0.7
OMMB IAmb IAmb 06 33 53.8
comp=Z,33nm,1.6s
MDPB Devils Postpil 57.57 291 P P 06 33 46.6 +0.9
Q20K Shuyak Island 57.57 327 P P 06 33 46.1 +1.1
baz=39
N17K Nushagak Hills 57.58 330 P P 06 33 46.0 +0.9
baz=37
GMRC Granite Mounta 57.63 286 P P 06 33 46.8 +0.8
baz=45,SNR=11
M16K Timber Creek 57.70 331 P P 06 33 45.8 -0.1
baz=36
AFDM Forest Hills D 57.70 293 P P 06 33 47.1 +0.8
AFDM IAmb IAmb 06 33 53.7
comp=Z,29nm,1.5s
CBOC Ciudad Bolivar 57.71 230 *eP* P 06 33 47.3 +0.5
IRM Iron Mountain 57.78 285 P P 06 33 48.1 +1.2
baz=44,SNR=11
MPMC Manual Prospec 57.78 288 P P 06 33 47.9 +0.8
baz=45,SNR=20
ROSC El Rosal 57.84 228 P P 06 33 48.6 +0.7
comp=Z,62nm,1.0s,baz=45,slow=4.2,SNR=24
ROSC LR LR 06 56 42.9
comp=Z,175nm,21.8s,baz=40,slow=34
comp=Z,62nm,1.0s
ROSC El Rosal 57.84 228 *eP* P 06 33 48.4 +0.5
CWC Cottonwood Cre 57.85 289 P P 06 33 48.3 +0.7
baz=45
KHMM Horse Mountain 57.86 296 P P 06 33 47.7 +0.1
KHMM IAmb IAmb 06 33 55.1
comp=Z,63nm,1.4s
L15K Ungalak Mounta 57.87 333 P P 06 33 47.7 +0.6
baz=35
P18K Big Mountain, 57.88 328 P P 06 33 46.7 -0.6
baz=38
GSC Goldstone, Bar 57.92 287 P P 06 33 48.1 +0.1
GSC IAmb IAmb 06 33 56.3
comp=Z,44nm,1.6s
GSC Goldstone, Bar 57.92 287 P P 06 33 49.2 +1.2
baz=45,SNR=11
GSC Goldstone, Bar 57.92 287 P P 06 33 48.1 +0.1
GSC pmax pmax
comp=Z,44nm,1.6s
GUY2C Guyana, Caldas 57.98 229 *eP* P 06 33 49.0 -0.1
214A Organ Pipe Nat 57.98 282 P P 06 33 49.6 +1.2
baz=44,SNR=19
HEC Hector,Ludlow 57.99 287 P P 06 33 49.7 +1.2
baz=44
CMB Columbia Colle 58.02 292 P P 06 33 49.2 +0.6
CMB IAmb IAmb 06 33 56.3
comp=Z,32nm,1.6s
CMB Columbia Colle 58.02 292 P P 06 33 49.2 +0.6
CMB pmax pmax
comp=Z,33nm,1.6s
N16K Nishlik Lake 58.09 331 P P 06 33 49.5 +0.8
baz=36
O17K Koliganek Bris 58.15 330 P P 06 33 50.7 +1.6
baz=37
HDC Heredia 58.18 241 *eP* P 06 33 51.8 +1.8
KDAK Kodiak Island 58.28 326 LR LR 06 58 11.1
comp=Z,478nm,18.8s,baz=51,slow=35
LRMC Laurel Mtn Rad 58.30 288 P P 06 33 51.6 +0.9
baz=44,SNR=10
BC3 Big Chuckawall 58.31 285 P P 06 33 51.7 +0.9
baz=44,SNR=25
JTS Las Juntas de 58.38 242 LR LR 06 55 34.0
comp=Z,592nm,21.9s,baz=12,slow=32
GLA Glamis 58.38 284 P P 06 33 52.5 +1.3
baz=44,SNR=7.0
BELC Belle Mtn. Jos 58.38 286 P P 06 33 52.8 +1.5
baz=44,SNR=24
CMIG Matias Romero 58.42 256 LR LR 06 58 49.3
comp=Z,333nm,21.8s,baz=46,slow=36
M15K Kasigluk River 58.46 332 P P 06 33 51.1 -0.2
baz=35
L14K Kuka Creek 58.48 333 P P 06 33 51.8 +0.5
baz=34
O16K Kokwok River B 58.60 330 P P 06 33 52.9 +0.7
baz=36
ISA Isabella, Lake 58.62 289 P P 06 33 54.1 +1.2
baz=44,SNR=10
VOG Valley Oaks Go 58.67 290 P P 06 33 53.5 +0.4
baz=44
N15K Kwethluk River 58.72 331 P P 06 33 54.3 +1.2
baz=35
BBRC Big Bear Solar 58.73 286 P P 06 33 54.2 +0.3
baz=44,SNR=11
M14K Bethel 58.77 333 P P 06 33 53.9 +0.5
baz=34
RCBR Riachuelo 58.78 181 LR LR 06 53 11.7
comp=Z,96nm,18.8s,baz=272,slow=30
VES Vestal, Richgr 58.84 289 P P 06 33 54.7 +0.4
baz=44,SNR=5.8
Q16K King Salmon 58.89 329 P P 06 33 54.9 +0.6
baz=37
EDW2 Edwards Air Fo 58.91 288 P P 06 33 55.6 +0.8
baz=44,SNR=22
PFO Pinyon Flats O 58.93 286 P P 06 33 56.0 +0.8
baz=44,SNR=9.4
PFO Pinyon Flats O 58.93 286 *i*P P 06 33 56.7 +1.6
PFO pmax pmax
comp=Z,66nm,1.5s
PFO Pinyon Flats O 58.93 286 LR LR 06 58 35.4
comp=Z,417nm,21.5s,baz=52,slow=35
TPFO Pinon Flats 58.93 286 P P 06 33 55.9 +0.7
baz=44,SNR=11
Q17K Contact Creek 58.98 328 P P 06 33 54.8 -0.3
baz=37
SWSC Sam W. Stewart 59.02 285 P P 06 33 56.7 +1.0
baz=44,SNR=7.4
ORTC Ortega, Tolima 59.09 228 *eP* P 06 33 55.1 -1.1
PRAC Prado 59.10 228 *eP* P 06 33 56.5 +0.2
BFSC Mount Baldy Ra 59.17 287 P P 06 33 57.8 +1.0
baz=44,SNR=10
ARVC Arvin 59.21 288 P P 06 33 57.1 +0.3
baz=44
MURC Murrieta 59.36 286 P P 06 33 58.3 +0.3
baz=44,SNR=9.7
N14K Kuskokwak Cree 59.38 332 P P 06 33 57.5 -0.1
baz=34
IKP In-Ko-Pah, Jac 59.42 285 P P 06 33 59.6 +1.1
baz=44,SNR=10.0
MONP2 Monument Peak 59.43 285 P P 06 33 59.5 +0.9
baz=44,SNR=11
M13K Dall Lake 59.43 333 P P 06 33 57.6 -0.4
baz=33
O15K Ungalikthiuk R 59.45 331 P P 06 33 58.2 0.0
baz=35
SMMC Simmler 59.74 289 P P 06 34 00.7 +0.1
baz=44
ITTB Itaituba 59.89 204 *eP* P 06 34 01.8 +0.2
PKM Mcpherson Peak 59.94 289 P P 06 34 02.9 +0.7
baz=44
MACA Manacapuru-AM 60.08 210 *eP* P 06 34 03.0 0.0
CIS Catalina Islan 60.21 287 P P 06 34 04.7 +0.8
baz=44,SNR=7.1
JAMC Jamundi, Valle 60.35 230 *eP* P 06 33 59.7 -5.5
SCZ2 Santa Cruz Isl 60.48 288 P P 06 34 06.2 +0.5
baz=44
BRZS Berezniki 60.62 45 *eP* P 06 34 07.0 +0.6
comp=Z,14nm,1.4s,baz=45
BRZS Berezniki 60.62 45 *eP* P 06 34 06.9 +0.6
BRZS pmax pmax
comp=Z,14nm,1.4s

TEFE	**Tefe**	**61.66**	**214**	*eP*		**P**		**06 34 13.6**	**-0.2**
ZALV	**Zalesovo Beam**	**62.22**	**35**	*i* P		P		06 34 22.6	+5.5
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**62.22**	**35**	P		**P**		**06 34 17.9**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=337,slow=9.4,SNR=2.0								
ZALV				LR		LR		07 00 45.5	
	comp=Z,192nm,21.1s,baz=306,slow=36								
	comp=Z,0.5nm,0.4s								
LPIG	**La Paz**	**62.26**	**274**	LR		LR		07 01 27.3	
	comp=Z,834nm,19.3s,baz=48,slow=36								
SLBS	**Sierra La Lagu**	**62.36**	**273**	P		**P**		**06 34 18.2**	**-0.3**
NPGB	**Novo Progresso**	**62.38**	**203**	*eP*		**P**		**06 34 18.1**	**-0.4**
KURK	**Kurchatov**	**62.49**	**41**	P		**P**		**06 34 19.4**	**+0.5**
GEYT	**Alibeck**	**62.52**	**63**	P		**P**		**06 34 20.1**	**+0.7**
GEYT				IAmb		IAmb		06 34 22.8	
	comp=Z,23nm,1.3s								
GEYT	**Alibeck**	**62.52**	**63**	P		**P**		**06 34 20.1**	**+0.7**
	comp=Z,13nm,1.1s,baz=302,slow=8.5,SNR=9.9								
GEYT				LR		LR		07 04 39.1	
	comp=Z,190nm,18.2s,baz=345,slow=39								
	comp=Z,13nm,1.1s								
GYA0B	**ALIBECK ARRAY**	**62.52**	**63**	P		**P**		**06 34 20.0**	**+0.5**
GYA0B				IAmb		IAmb		06 34 26.9	
	comp=Z,49nm,1.8s								
KURBB	**Kurchatov Arra**	**62.53**	**41**	P		**P**		**06 34 19.4**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=323,slow=7.2,SNR=18								
KURBB				LR		LR		07 01 54.2	
	comp=Z,303nm,18.6s,baz=242,slow=36								
	comp=Z,4.6nm,0.9s								
CHNA	**Chernabura Isl**	**62.97**	**328**	P		**P**		**06 34 22.9**	**+0.8**
	baz=34								
TULM	**Tulcn-Chalpat**	**63.07**	**229**	*eP*		**P**		**06 34 23.8**	**0.0**
SEM	**Semipalatinsk**	**63.37**	**40**	*eP*		**P**		**06 34 25.7**	**+0.6**
	baz=40								
SEM	**Semipalatinsk**	**63.37**	**40**	*eP*		**P**		**06 34 25.7**	**+0.6**
OTAV	**Otavalo**	**63.79**	**230**	*eP*		**P**		**06 34 29.6**	**+1.0**
PULU	**Pululahua**	**64.01**	**230**	P		**P**		**06 34 29.1**	**-0.8**
SEY	**Seymchan**	**64.09**	**356**	*ceP*		**P**		**06 34 28.6**	**-0.7**
SEY				pmax		pmax			
	comp=Z,10.0nm,1.4s								
SEY	**Seymchan**	**64.09**	**356**	LR		LR		07 01 16.6	
	comp=Z,295nm,21.2s,baz=348,slow=35								
YAK	**Yakutsk**	**64.52**	**8**	*eP*		**P**		**06 34 31.9**	**-0.3**
YAK				*e**PP		**sP**		**06 34 36.2**	**+0.2**
YAK				*e*				06 35 08.4	
YAK				*eS*		**S**		**06 43 12.2**	**+1.5**
YAK				*e*				06 44 27.0	
YAK				pmax		pmax			
	comp=Z,14nm,1.3s								
YAK				pmax		pmax			
	comp=E,2.0nm,1.1s								
YAK				pmax		pmax			
	comp=N,6.0nm,1.4s								
YAK				pmax		pmax			
	comp=Z,130nm,4.7s								
YAK				pmax		pmax			
	comp=N,82nm,5.1s								
YAK				pmax		pmax			
	comp=E,91nm,5.2s								
YAK				smax		smax			
	comp=E,203nm,5.2s								
YAK	**Yakutsk**	**64.52**	**8**	LR		LR		07 02 27.1	
	comp=E,141nm,18.1s,baz=360,slow=36								
BTLS	**Baital**	**65.00**	**48**⇑	*iP*		**P**		**06 34 36.1**	**+0.5**
	comp=E,14nm,1.8s,baz=48								
BTLS	**Baital**	**65.00**	**48**	*c iP*		**P**		**06 34 36.1**	**+0.5**
BTLS				pmax		pmax			
	comp=Z,14nm,1.8s								
CHM	**Chimkent**	**65.06**	**52**	*eP*		**P**		**06 34 35.5**	**-0.6**
	baz=52								
CHM	**Chimkent**	**65.06**	**52**	*eP*		**P**		**06 34 35.4**	**-0.6**
DZA	**Taraz**	**65.43**	**51**	*i* P		**P**		**06 34 38.9**	**+0.4**
	baz=51								
DZA	**Taraz**	**65.43**	**51**	*i* P		**P**		**06 34 38.9**	**+0.4**
UNV	**Unalaska Valle**	**65.94**	**331**	P		**P**		**06 34 41.8**	**+0.3**
	baz=30								
SAML	**Samuel**	**66.31**	**210**	*eP*		**P**		**06 34 41.6**	**-2.7**
SNDB	**Serra Nova Dou**	**66.34**	**197**	*eP*		**P**		**06 34 45.3**	**+0.9**
SGDS	**Sogindy**	**66.51**	**48**	*eP*		**P**		**06 34 46.1**	**+0.6**
	baz=48								
SGDS	**Sogindy**	**66.51**	**48**	*eP*		**P**		**06 34 46.0**	**+0.6**
BOD	**Bodaibo**	**66.56**	**17**	*eP*		**P**		**06 34 43.6**	**-1.8**
BOD				pmax		pmax			
	comp=Z,15nm,1.5s								
KUU	**Kurty**	**66.92**	**47**	*eP*		**P**		**06 34 48.3**	**+0.3**
	comp=Z,24nm,1.5s,baz=47								
KUU	**Kurty**	**66.92**	**47**	*eP*		**P**		**06 34 48.3**	**+0.3**
KUU				pmax		pmax			
	comp=Z,24nm,1.5s								
TDK	**Taldyqorghan**	**66.93**	**45**	*eP*		**P**		**06 34 48.6**	**+0.5**
	baz=45								
TDK	**Taldyqorghan**	**66.93**	**45**	*eP*		**P**		**06 34 48.5**	**+0.5**
MK31	**Makanchi Array**	**67.08**	**41**	*ceP*		**P**		**06 34 49.3**	**+0.3**
MKAR	**Makanchi Array**	**67.08**	**41**	P		**P**		**06 34 48.8**	**-0.2**
MKAR	**Makanchi Array**	**67.08**	**41**	P		**P**		**06 34 48.8**	**-0.2**
MKAR	**Makanchi Array**	**67.08**	**41**	P		**P**		**06 34 49.4**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=331,slow=5.7,SNR=23								
	comp=Z,2.5nm,0.6s								
AAK	**Ala-Archa**	**67.09**	**49**	P		**P**		**06 34 50.0**	**+0.8**
AAK				IAmb		IAmb		06 35 01.6	
	comp=Z,29nm,1.4s								
AAK	**Ala-Archa**	**67.09**	**49**	*ceP*		**P**		**06 34 51.2**	**+1.9**
AAK				pmax		pmax			
	comp=Z,24nm,1.4s								
AAK	**Ala-Archa**	**67.09**	**49**	LR		LR		07 03 27.8	
	comp=Z,734nm,19.6s,baz=321,slow=35								
CHKK	**Chushkaly**	**67.24**	**47**	*eP*		**P**		**06 34 50.2**	**+0.1**
	baz=47								
CHKK	**Chushkaly**	**67.24**	**47**	*eP*		**P**		**06 34 50.1**	**+0.1**
BTK	**Batken**	**67.39**	**53**	P		**P**		**06 34 51.4**	**+0.3**
BTK				IAmb		IAmb		06 35 08.3	
	comp=Z,26nm,1.2s								
BTK	**Batken**	**67.39**	**53**	P		**P**		**06 34 51.4**	**+0.3**
BTK				pmax		pmax			
	comp=Z,26nm,1.3s								
ZSN	**Zaisan**	**67.55**	**39**	*eP*		**P**		**06 34 52.2**	**+0.3**
	baz=40								
ZSN	**Zaisan**	**67.55**	**39**	*eP*		**P**		**06 34 52.2**	**+0.3**
AAA	**Alma-Ata**	**67.72**	**47**	*eP*		**P**		**06 34 53.7**	**+0.6**
	baz=47								
AAA	**Alma-Ata**	**67.72**	**47**	*eP*		**P**		**06 34 53.6**	**+0.5**
MDOK	**Medeo**	**67.81**	**47**	*eP*		**P**		**06 34 54.1**	**+0.2**
	baz=47								
MDOK	**Medeo**	**67.81**	**47**	*eP*		**P**		**06 34 54.0**	**+0.2**
ETMB	**Extrema**	**68.09**	**213**	*eP*		**P**		**06 34 54.2**	**-1.4**
KPKS	**Kokpek**	**68.28**	**46**	*eP*		**P**		**06 34 57.5**	**+0.7**
	comp=Z,28nm,1.9s,baz=46								
KPKS	**Kokpek**	**68.28**	**46**	*eP*		**P**		**06 34 57.4**	**+0.7**
KPKS				pmax		pmax			
	comp=Z,28nm,1.9s								
JANB	**Januaria**	**68.40**	**189**	*eP*		**P**		**06 34 56.5**	**-1.1**
ZHN	**Zhinishke**	**68.42**	**46**	*eP*		**P**		**06 34 58.1**	**+0.5**
	baz=46								
ZHN	**Zhinishke**	**68.42**	**46**	*eP*		**P**		**06 34 58.1**	**+0.5**
SATY	**Saty**	**68.49**	**46**	*eP*		**P**		**06 34 58.5**	**+0.4**
	comp=Z,15nm,1.5s,baz=46								
SATY	**Saty**	**68.49**	**46**	*eP*		**P**		**06 34 58.4**	**+0.4**
SATY				pmax		pmax			
	comp=Z,15nm,1.5s								
CZSB	**Cruzeiro do Su**	**68.50**	**220**	*eP*		**P**		**06 34 57.0**	**-1.1**
UZB	**Uzynbulak**	**68.69**	**46**	*eP*		**P**		**06 34 59.9**	**+0.6**
	baz=46								
UZB	**Uzynbulak**	**68.69**	**46**	*eP*		**P**		**06 34 59.9**	**+0.6**
NRN	**Naryn**	**68.72**	**49**	P		**P**		**06 35 01.6**	**+1.8**
NRN				IAmb		IAmb		06 35 15.2	
	comp=Z,18nm,1.3s								
NRN	**Naryn**	**68.72**	**49**	P		**P**		**06 35 01.6**	**+1.8**
NRN				pmax		pmax			
	comp=Z,18nm,1.3s								
SHLS	**Shalkode**	**68.87**	**45**	*eP*		**P**		**06 35 01.9**	**+1.5**
	baz=45								
SHLS	**Shalkode**	**68.87**	**45**	*eP*		**P**		**06 35 01.9**	**+1.5**
MOY	**Mondy**	**69.25**	**27**	*eP*		**P**		**06 35 03.6**	**+0.9**
MOY				pmax		pmax			
	comp=Z,36nm,3.2s								
BDFB	**Brasilia**	**69.42**	**193**	P		**P**		**06 35 03.9**	**0.0**
	comp=Z,7.7nm,1.0s,baz=13,slow=8.5,SNR=7.1								
BDFB				LR		LR		07 00 01.0	
	comp=Z,161nm,18.6s,baz=333,slow=31								
	comp=Z,7.7nm,1.0s								
KSH	**Kashi**	**70.25**	**50**	P		**P**		**06 35 12.4**	**+3.4**
KSH				pP		pwP		06 35 16.6	+1.4
KSH				PP		**PP**		**06 37 45.0**	**+1.1**
KSH				pmax		pmax			
	comp=Z,18nm,1.7s								
KSH				LR		LR			
	comp=Z,470nm,17.5s								
KSH				LR		LR			
	comp=Z,400nm,18.2s								
KSH				LR		LR			
	comp=Z,620nm,18.9s								
ATAH	**Atahualpa**	**70.31**	**226**	LR		LR		07 03 38.7	
	comp=Z,112nm,21.9s,baz=9.6,slow=34								
SALV	**Santo Antonio**	**71.03**	**201**	*eP*		**P**		**06 35 14.2**	**+0.6**
ZAK	**Zakamensk**	**71.04**	**27**	*eP*		**P**		**06 35 13.5**	**-0.1**
ZAK				pmax		pmax			
	comp=Z,7.0nm,1.9s								
PTLB	**Pontes e Lacer**	**71.39**	**204**	*eP*		**P**		**06 35 16.2**	**+0.4**
SHEM	**Shemya Is, Ala**	**71.67**	**342**	LR		LR		07 08 08.0	
	comp=Z,130nm,20.1s,baz=52,slow=37								
WMQ	**Urumqi**	**71.67**	**40**	*eP*		**P**		**06 35 20.3**	**+2.8**
WMQ				pmax		pmax			
	comp=Z,18nm,1.1s								
WMQ				LR		LR			
	comp=Z,610nm,14.5s								
WMQ				LR		LR			
	comp=Z,280nm,20.7s								
RIB01	**Linhares ES**	**72.32**	**185**	*eP*		**P**		**06 35 21.6**	**+0.3**
SIV	**San Ignacio**	**72.41**	**206**	LR		LR		07 02 16.4	
	comp=Z,202nm,21.9s,baz=40,slow=32								
BBSD	**Serra de San D**	**73.43**	**205**	*eP*		**P**		**06 35 27.9**	**-0.1**
PETK	**Petropavlovsk-**	**73.55**	**352**	LR		LR		07 10 12.5	
	comp=Z,382nm,18.1s,baz=15,slow=38								
ITRB	**Iturama**	**73.75**	**195**	*eP*		**P**		**06 35 31.7**	**+1.8**
RVDE	**Rio Verde (Bra**	**73.91**	**199**	*eP*		**P**		**06 35 31.7**	**+0.9**
WSAR	**Wadi Sarin**	**73.95**	**73**	LR		LR		07 11 23.7	
	comp=Z,103nm,19.8s,baz=323,slow=38								
NNA	**Nana**	**74.02**	**223**	LR		LR		07 08 16.1	
	comp=Z,91nm,19.3s,baz=351,slow=36								
SONM	**Songino Array**	**74.20**	**26**	P		**P**		**06 35 32.8**	**+0.4**
	comp=Z,3.5nm,1.0s,baz=330,slow=5.7,SNR=17								
SONM				LR		LR		07 12 00.7	
	comp=Z,125nm,18.4s,baz=353,slow=39								
	comp=Z,3.5nm,1.0s								
BBRB	**Robore, Bolivi**	**74.27**	**204**	*eP*		**P**		**06 35 33.4**	**+0.5**
ULN	**Ulaanbaatar**	**74.34**	**25**	P		**P**		**06 35 33.8**	**+0.4**
ULN				IAmb		IAmb		06 35 41.6	
	comp=Z,31nm,1.3s								
ULN	**Ulaanbaatar**	**74.34**	**25**	*ceP*		**P**		**06 35 34.0**	**+0.7**
ULN				pmax		pmax			
	comp=Z,27nm,1.3s								
LPAZ	**La Paz**	**74.78**	**213**	P		**P**		**06 35 35.8**	**-0.8**
LPAZ	**La Paz**	**74.78**	**213**	P		**P**		**06 35 35.8**	**-0.8**
AQDB	**Aquidauana**	**75.47**	**200**	P		**P**		**06 35 40.0**	**+0.3**
AQDB				IAmb		IAmb		06 35 41.4	
	comp=Z,36nm,1.8s								
AQDB	**Aquidauana**	**75.47**	**200**	*eP*		**P**		**06 35 41.4**	**+1.6**
BDQN	**Bodoquena, MS**	**75.66**	**201**	*eP*		**P**		**06 35 41.1**	**+0.2**
HEH	**HeiHe**	**75.91**	**11**	*eP*		**P**		**06 35 41.9**	**-0.2**
HEH				pP		**pP**		**06 35 44.6**	**-0.3**
HEH				PP		**PP**		**06 38 33.6**	**+2.1**
HEH				pmax		pmax			
	comp=Z,12nm,1.3s								
HEH				pmax		pmax			
	comp=Z,190nm,4.8s								
HEH				LR		LR			
	comp=Z,140nm,15.4s								
HEH				LR		LR			
	comp=Z,170nm,16.1s								
HEH				LR		LR			
	comp=Z,280nm,18.8s								
MBAR	**Mbarara**	**76.27**	**110**	LR		LR		07 09 07.1	
	comp=Z,376nm,19.4s,baz=310,slow=36								
PB16	**IPOC Station P**	**77.14**	**213**	P		**P**		**06 35 49.2**	**-0.8**
PB16				IAmb		IAmb		06 35 51.0	
	comp=Z,28nm,1.2s								
KLR	**Kul'dur**	**77.38**	**9**	*i* P		**P**		**06 35 49.5**	**-0.9**
KLR				pmax		pmax			
	comp=Z,10.0nm,2.2s								
KLR	**Kul'dur**	**77.38**	**9**	LR		LR		07 10 14.8	
	comp=Z,182nm,18.2s,baz=24,slow=36								
GTA	**Gaotai**	**79.91**	**34**	*eP*		**P**		**06 36 05.0**	**+0.2**
GTA				pP		pwP		06 36 10.5	-0.6
GTA				pmax		pmax			
	comp=Z,5.0nm,1.0s								
GTA				LR		LR			
	comp=Z,230nm,16.3s								
GTA				LR		LR			
	comp=Z,210nm,17.9s								
GTA				LR		LR			
	comp=Z,270nm,19.5s								
XLT	**XiLinHaoTe**	**80.20**	**21**	*eP*		**P**		**06 36 07.5**	**+1.3**
XLT				sP		PcP		06 36 14.2	+0.8
XLT				pmax		pmax			
	comp=Z,5.0nm,0.9s								
XLT				pmax		pmax			
	comp=Z,130nm,4.1s								
YSS	**Yuzh-Sakhalins**	**80.24**	**1**	*eP*		P		06 35 57.0	-9.2
YSS				MLR		MLR			
	comp=Z,400nm,18.0s								
YSS				MLR		MLR			
	comp=N,300nm,16.0s								
LVC	**Limon Verde**	**80.94**	**211**	LR		LR		07 09 20.9	
	comp=N,118nm,20.8s,baz=350,slow=34								
LVC	**Limon Verde**	**80.94**	**211**	*eP*		**P**		**06 36 11.4**	**+0.9**
GOMU	**GeErMu**	**80.99**	**39**	P		**P**		**06 36 11.9**	**+1.0**
GOMU				SS		SS		06 51 35.5	+2.5
GOMU				LR		LR			
	comp=N,340nm,17.5s								
GOMU				LR		LR			
	comp=N,330nm,15.8s								
GOMU				LR		LR			
	comp=N,610nm,18.0s								
CPUP	**Villa Florida**	**81.48**	**200**	P		**P**		**06 36 13.0**	**+0.1**
CPUP	**Villa Florida**	**81.48**	**200**	P		**P**		**06 36 12.9**	**+0.1**
	comp=N,1.6nm,0.8s,baz=20,slow=8.1,SNR=5.0								
CPUP				LR		LR		07 07 59.1	
	comp=N,107nm,20.2s,baz=9.5,slow=32								
	comp=N,1.6nm,0.8s								
CPUP	**Villa Florida**	**81.48**	**200**	*eP*		**P**		**06 36 12.6**	**-0.2**
MDJ	**Mudanjiang**	**81.72**	**11**	P		**P**		**06 36 14.4**	**+0.3**
MDJ				pmax		pmax			
	comp=N,14nm,2.2s								
MDJ				pmax		pmax			
	comp=N,230nm,5.3s								
BTO	**Baotou**	**81.88**	**26**	*eP*		**P**		**06 36 12.0**	**-3.2**
BTO				pP		**pP**		**06 36 16.8**	**-1.1**
BTO				sP		**sP**		**06 36 19.0**	**+0.1**
BTO				PP		**PP**		**06 39 14.8**	**-6.9**
BTO	**Baotou**	**81.88**	**26**	S		**S**		**06 46 23.4**	**-5.1**
BTO	**Baotou**	**81.88**	**26**	SS		SS		06 51 31.2	-14
BTO				pmax		pmax			
	comp=Z,17nm,0.9s								
BTO				pmax		pmax			
	comp=Z,240nm,4.1s								
BTO				LR		LR			
	comp=N,170nm,7.0s								
BTO				LR		LR			
	comp=E,250nm,6.0s								
BTO				LR		LR			
	comp=Z,250nm,8.4s								
CN2	**Changchun**	**81.98**	**14**	*eP*		**P**		**06 36 16.9**	**+1.4**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
HHC	**Hu-ho-hao-te**	**82.05**	**25**	*eP*		**P**		**06 36 16.0**	**-0.1**
HHC				S		**S**		**06 46 29.8**	**-0.4**
HHC				pmax		pmax			
	comp=Z,7.0nm,0.9s								
HHC				pmax		pmax			
	comp=Z,110nm,4.5s								
HHC				LR		LR			
	comp=Z,120nm,15.4s								
HHC				LR		LR			
	comp=Z,170nm,16.8s								
HHC				LR		LR			
	comp=Z,340nm,18.3s								
USRK	**Ussuriysk Ar.**	**82.38**	**9**	LR		LR		07 13 30.1	
	comp=Z,103nm,18.1s,baz=342,slow=36								
ASAJ	**Asahikawa**	**83.07**	**2**	LR		LR		07 14 40.1	
	comp=Z,93nm,18.0s,baz=10.0,slow=37								
ALGR	**Alto Alegre (B**	**83.09**	**196**	*eP*		**P**		**06 36 21.7**	**+0.4**
CNLB	**Canela**	**83.26**	**194**	*eP*		**P**		**06 36 23.5**	**+1.3**
UNIS	**Unistalda (Bra**	**83.71**	**197**	*eP*		**P**		**06 36 24.6**	**+0.2**
LZH	**Lanzhou**	**84.26**	**32**	*eP*		**P**		**06 36 30.0**	**+2.4**
LZH				sP		pwP		06 36 38.3	+4.3
LZH				pmax		pmax			
	comp=Z,12nm,1.0s								
LZH				LR		LR			
	comp=Z,240nm,15.6s								
LZH				LR		LR			
	comp=Z,260nm,15.1s								
LZH				LR		LR			
	comp=Z,280nm,15.8s								
ITQB	**Itaqui**	**84.58**	**199**	*eP*		**P**		**06 36 28.3**	**-0.5**
CPSB	**Cacapava Do Su**	**84.73**	**196**	*eP*		**P**		**06 36 29.5**	**-0.1**
RODS	**Rosario do Sul**	**84.98**	**197**	*eP*		**P**		**06 36 31.2**	**+0.4**
TSUM	**Tsumeb**	**85.22**	**131**	LR		LR		07 12 54.1	
	comp=Z,158nm,18.3s,baz=336,slow=34								
HNS	**HongShan**	**86.09**	**24**	⇑P		**P**		**06 36 38.0**	**+1.4**
HNS				pmax		pmax			
	comp=Z,19nm,2.1s								
HNS				LR		LR			
	comp=Z,270nm,19.6s								
HNS				LR		LR			
	comp=Z,180nm,18.6s								
LYN	**LuoYang**	**88.22**	**26**	⇓P		**P**		**06 36 46.3**	**-0.7**
LYN				pP		sP		06 36 51.9	+1.2
LYN				sP		pwP		06 36 53.2	-0.1
LYN				S		**S**		**06 47 26.6**	**-4.7**
LYN				pmax		pmax			
	comp=Z,12nm,0.8s								
LYN				pmax		pmax			
	comp=Z,290nm,4.2s								
LYN				LR		LR			
	comp=Z,320nm,13.6s								
LYN				LR		LR			
	comp=Z,350nm,14.8s								
LYN				LR		LR			
	comp=Z,400nm,15.1s								
KSRS	**Korea Array**	**88.56**	**13**	LR		LR		07 19 36.1	
	comp=Z,66nm,18.5s,baz=330,slow=38								
CD2	**Chengdu**	**88.97**	**34**	*eP*		**P**		**06 36 50.0**	**-0.6**
HYB	**Hyderabad**	**89.64**	**61**	*eP*		**P**		**06 36 54.5**	**+0.5**
HYB				*eS*		**S**		**06 47 46.0**	**+0.8**
MJAR	**Matsushiro Arr**	**90.47**	**5**	LR		LR		07 16 53.3	
	comp=Z,57nm,19.2s,baz=356,slow=35								
NJ2	**Nanjing**	**92.17**	**22**	*eP*		**P**		**06 37 03.7**	**-1.7**
NJ2				pP		**pP**		**06 37 08.1**	**-0.1**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.7s								
NJ2				pmax		pmax			
	comp=Z,200nm,4.3s								
PZH	**PanZhiHua**	**92.27**	**38**	P		**P**		**06 37 06.8**	**+0.6**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.4s								
PZH				pmax		pmax			
	comp=Z,140nm,5.3s								
LBTB	**Lobatse**	**93.96**	**127**	LR		LR		07 16 52.9	
	comp=Z,197nm,21.7s,baz=332,slow=34								
BOSA	**Boshof**	**96.85**	**130**	LR		LR		07 20 13.9	
	comp=Z,330nm,18.5s,baz=1.5,slow=35								
SUR	**Sutherland**	**98.08**	**135**	LR		LR		07 18 36.6	
	comp=Z,139nm,19.7s,baz=332,slow=34								
PLCA	**Paso Flores**	**98.39**	**206**	LR		LR		07 20 08.4	
	comp=Z,95nm,21.8s,baz=13,slow=34								
PALK	**Pallekele**	**99.22**	**65**	LR		LR		07 26 36.9	
	comp=Z,136nm,18.5s,baz=87,slow=38								
TAOE	**Nuku Hiva Isla**	**106.01**	**277**	*e*LR		LR		07 13 00.1	
	comp=Z,482nm,22.6s								
PPT2	**Papeete2**	**118.49**	**279**	*e*SS		SS		07 00 22.5	+4.8
	comp=Z,315nm,29.5s								
PPT2	**Papeete2**	**118.49**	**279**	*e*LR		LR		07 18 47.4	
PPT2				*e*LR		LR		07 18 57.3	
	comp=Z,393nm,32.5s								
	comp=Z,333nm,21.2s								
MPSI	**Mapaga**	**122.77**	**30**	PKP		**PKiKP**		**06 42 54.4**	**+2.2**
TBI	**Tubuai**	**122.83**	**274**	*e*LR		LR		07 20 47.8	
	comp=Z,998nm,26.5s								
TBI				*e*LR		LR		07 20 57.1	
	comp=Z,2μm,23.0s								
SNAA	**Sanae**	**126.62**	**168**	PKP		**PKPdf**		**06 42 57.5**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=0.0,slow=1.0,SNR=2.0								
HNR	**Honiara**	**134.70**	**339**	PKhKP		PKPpre		06 43 10.6	
	comp=Z,2μm,0.6s,baz=90,slow=1.0,SNR=1.9								
DZM	**Mont Dzumac**	**144.83**	**324**	*e*SS		SS		07 05 44.5	+6.5
	comp=Z,59nm,26.2s								
DZM	**Mont Dzumac**	**144.83**	**324**	*e*LR		LR		07 31 07.6	
	comp=Z,195nm,30.4s								
WRA	**Warramunga Arr**	**145.86**	**18**	PKPbc		**PKPdf**		**06 43 34.5**	**-0.1**
	comp=Z,10nm,0.8s,baz=351,slow=2.7,SNR=29								
ASAR	**Alice Springs**	**149.40**	**20**	PKPbc		**PKPbc**		**06 43 44.1**	**-0.7**
	comp=Z,6.8nm,0.9s,baz=352,slow=2.3,SNR=38								

IDC 02 07:06:01.2±2.5, 54°18'N×86°37'E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=20.6km s-min=12.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**257**	I	I	07 11 40.0	
	baz=73,slow=341,SNR=16						
ZALV	**Zalesovo Beam**	**0.94**	**257**	Pg	Pg	07 06 18.3	-1.0
	2.2nm,0.3s,baz=74,slow=17,SNR=29						
ZALV				Lg	Lg	07 06 33.0	
	6.5nm,0.3s,baz=79,slow=29,SNR=23						
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn	Pn	07 07 31.9	+1.1
	0.1nm,0.3s,baz=52,slow=13,SNR=4.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn	07 07 57.4	+1.0
	0.3nm,0.3s,baz=22,slow=13,SNR=12						
	0.5nm,0.5s						

*IDC **02** 07:08:57.3±1.0, 34°32'N×26°38'E, h0km, mb3.9/11, mbtmp3.7/19, ML3.8/7, Error ellipse: s-maj=20.9km s-min=14.9km az=1.0*
*ISK **02** 07:08:58.

APE	**Apeiranthos**	**2.91**	**345**	P	**Pn**	**07 09 45.2**	**+0.8**
RFTAA	**Mazikoy-Bodrum**	**2.91**	**20**	Pn	**Pn**	**07 09 46.1**	**+1.7**
ANKY	**Antikythira Is**	**3.07**	**302**	P	**Pn**	**07 09 48.9**	**+2.2**
DALY	**Dalyan (Mula)**	**3.09**	**34**	Pn	**Pn**	**07 09 48.4**	**+1.4**
KSL	**Kastellorizon**	**3.15**	**52**	P	**Pn**	**07 09 49.7**	**+1.9**
FETY	**Fethiye**	**3.17**	**41**	Pn	**Pn**	**07 09 49.5**	**+1.4**
YER	**Yerkesik**	**3.21**	**26**	Pn	**Pn**	**07 09 50.2**	**+1.5**
AKAS	**Kas**	**3.21**	**51**	Pn	**Pn**	**07 09 49.8**	**+1.1**
GCAM	**G?zelcaml?**	**3.48**	**10**	Pn	**Pn**	**07 09 54.1**	**+1.8**
CAME	**Cameli-Denizli**	**3.51**	**40**	Pn	**Pn**	**07 09 54.3**	**+1.4**
ELL	**Elmali**	**3.72**	**47**	Pn	**Pn**	**07 09 57.4**	**+1.6**
VLI	**Veliai**	**3.80**	**311**	P	**Pn**	**07 09 57.8**	**+1.1**
APMY	**Acipayam-Deniz**	**3.92**	**35**	Pn	**Pn**	**07 10 00.3**	**+1.8**
URLA	**Izmir**	**4.09**	**1**	Pn	**Pn**	**07 10 02.9**	**+2.2**
KORT	**Korkueli**	**4.16**	**48**	Pn	**Pn**	**07 10 03.5**	**+1.7**
VIL2	**Platees**	**4.72**	**327**	P	**Pn**	**07 10 10.8**	**+1.4**
GUR	**Goura**	**4.97**	**319**	P	**Pn**	**07 10 14.3**	**+1.4**
GAZI	**Gazipasa**	**5.15**	**66**	Pn	**Pn**	**07 10 17.2**	**+1.9**
KLV	**Kalavryta, Ach**	**5.16**	**318**	P	**Pn**	**07 10 16.6**	**+1.2**
DRO	**Drossia**	**5.34**	**315**	P	**Pn**	**07 10 20.5**	**+2.5**
SEYD	**Seydisehir-KON**	**5.35**	**53**	Pn	**Pn**	**07 10 20.6**	**+2.5**
CSS	**Mathiatis**	**5.68**	**81**	P	**Pn**	**07 10 24.7**	**+2.2**
ANX	**Ano Chora**	**5.68**	**321**	P	**Pn**	**07 10 24.9**	**+2.3**
MAKR	**Makrakomi, Fth**	**5.90**	**325**	P	**Pn**	**07 10 28.3**	**+2.8**
LADK	**Ladik-KONYA**	**6.15**	**49**	Pn	**Pn**	**07 10 32.2**	**+3.0**
KZIT	**Kziot**	**7.46**	**115**	P	**Pn**	**07 10 46.7**	**-0.3**
MMAI	**Mount Meron Ar**	**7.53**	**97**	Pn	**Pn**	**07 10 49.3**	**+1.2**
	1.8nm,0.3s,baz=270,slow=13,SNR=2.6						
MMAI				Sn	**Sn**	**07 12 16.5**	**+3.2**
	2.7nm,0.3s,baz=262,slow=21,SNR=4.2						
	0.9nm,0.3s						
SALP	**Salfit**	**7.61**	**104**	P	**Pn**	**07 10 51.1**	**+2.0**
SALP	**Salfit**	**7.61**	**104**	S	**Sn**	**07 12 11.2**	**-4.1**
YTIR	**Yattir**	**7.81**	**109**	P	**Pn**	**07 10 49.7**	**-2.2**
HMDT	**Nahal Hemdat**	**7.82**	**102**	P	**Pn**	**07 10 53.6**	**+1.6**
BRTR	**Keskin Array B**	**7.89**	**44**	Pn	**Pn**	**07 10 55.0**	**+1.9**
	0.8nm,0.7s,baz=226,slow=14,SNR=4.3						
DSI	**Dead Sea**	**7.94**	**107**	P	**Pn**	**07 10 53.8**	**+0.3**
DSI	**Dead Sea**	**7.94**	**107**	S	**Sn**	**07 12 19.4**	**-3.8**
MSBI	**Mazada**	**8.02**	**109**	P	**Pn**	**07 10 54.8**	**+0.2**
KRMI	**Paran Flat**	**8.11**	**118**	P	**Pn**	**07 10 55.1**	**-0.8**
KRMI	**Paran Flat**	**8.11**	**118**	S	**Sn**	**07 12 21.2**	**-6.3**
GHAJ	**Ghor Haditha**	**8.19**	**109**	P	**Pn**	**07 10 58.1**	**+1.1**
PRNI	**Paran**	**8.19**	**116**	S	**Sn**	**07 12 23.7**	**-5.8**
PRNI	**Paran**	**8.19**	**116**	P	**Pn**	**07 10 56.6**	**-0.4**
HRFI	**Mount Harif**	**8.38**	**118**	S	**Sn**	**07 12 35.7**	**+1.6**
HRFI	**Mount Harif**	**8.38**	**118**	P	**Pn**	**07 10 59.8**	**+0.2**
MBRI	**Mt Berech**	**8.42**	**120**	P	**Pn**	**07 11 00.4**	**+0.1**
EIL	**Elat**	**8.52**	**120**	Pn	**Pn**	**07 11 02.3**	**+0.8**
	0.4nm,0.3s,baz=26,slow=21,SNR=2.6						
EIL				Sn	**Sn**	**07 12 32.4**	**-5.2**
	1.6nm,0.3s,baz=268,slow=0.3,SNR=6.7						
	2.8nm,0.5s						
EIL	**Elat**	**8.52**	**120**	P	**Pn**	**07 11 01.6**	**+0.1**
ASF	**Jabal al Asfar**	**8.96**	**101**	Pn	**Pn**	**07 11 10.6**	**+2.9**
	0.5nm,0.3s,baz=59,slow=24,SNR=2.7						
	1.8nm,0.6s						
MLR	**Muntele Rosu**	**11.22**	**358**	Pn	**Pn**	**07 11 38.1**	**-0.5**
	0.2nm,0.3s,baz=196,slow=11,SNR=3.2						
	1.5nm,0.5s						
KBZ	**Khabaz**	**15.84**	**49**	Pn	**P**	**07 12 44.2**	**-0.7**
	0.1nm,0.3s,baz=238,slow=8.3,SNR=3.0						
	1.6nm,0.8s						
AKASG	**Malin Array Be**	**16.55**	**6**	Pn	**Pn**	**07 12 50.1**	**0.0**
	0.9nm,0.3s,baz=192,slow=10,SNR=3.4						
	0.2nm,0.3s						
GERES	**GERESS Array B**	**17.39**	**331**	P	**P**	**07 13 01.6**	**-0.6**
	0.2nm,0.3s,baz=122,slow=9.3,SNR=1.7						
	0.7nm,0.7s						
ESDC	**Sonseca Array**	**24.86**	**291**	P	**P**	**07 14 20.2**	**-0.6**
	1.2nm,0.9s,baz=82,slow=9.7,SNR=7.6						
	1.2nm,0.9s						
GEYT	**Alibeck**	**25.74**	**73**	P	**P**	**07 14 31.0**	**+2.2**
	0.5nm,0.3s,baz=282,slow=7.2,SNR=2.1						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**27.20**	**360**	P	**P**	**07 14 40.7**	**-0.9**
	1.0nm,0.6s,baz=167,slow=9.3,SNR=4.5						
	1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.40**	**325**	P	**P**	**07 15 01.6**	**+0.3**
	1.1nm,0.8s,baz=116,slow=11,SNR=1.1						
	1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.80**	**233**	P	**P**	**07 15 14.0**	**0.0**
	2.5nm,0.8s,baz=41,slow=10,SNR=14						
	2.5nm,0.8s						
ARCES	**ARCESS Array B**	**35.33**	**359**	P	**P**	**07 15 53.0**	**0.0**
	3.5nm,1.0s,baz=186,slow=8.3,SNR=4.3						
	3.5nm,1.0s						
KURBB	**Kurchatov Arra**	**40.84**	**50**	P	**P**	**07 16 41.0**	**+1.3**
	1.5nm,0.9s,baz=277,slow=8.8,SNR=9.1						
	1.5nm,0.9s						
MKAR	**Makanchi Array**	**43.35**	**56**	P	**P**	**07 17 01.7**	**+1.4**
	1.1nm,0.9s,baz=261,slow=7.7,SNR=3.4						
	1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**44.83**	**46**	P	**P**	**07 17 12.9**	**+0.8**
	1.0nm,0.5s,baz=273,slow=8.7,SNR=4.9						
	1.0nm,0.5s						
SONM	**Songino Array**	**59.20**	**51**	P	**P**	**07 19 01.4**	**+2.0**
	0.6nm,0.8s,baz=294,slow=11,SNR=3.6						
	0.6nm,0.8s						
SCHQ	**Schefferville**	**64.58**	**320**	P	**P**	**07 19 35.9**	**+0.7**
	0.8nm,0.4s,baz=72,slow=4.0,SNR=6.9						
	0.8nm,0.4s						

UPA ***02*** *07:13:12.8±0.7,5°.82N×79°.46W,h7km±7km,MW4.6*
RSNC ***02*** *07:13:16.2±0.8,5°.79N×79°.12W,h32km±8km,ML2.5*
ISC 02 07:13:10.3±3.6,5.75N±0°.04×79.33W±0°.04,h10km±24km,
n32,σ2§15/56,1C-2D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACHO3	**Achotines, Los**	**1.86**	**333**	*eP*	**Pn**	**07 13 42.1**	**-0.1**
SOLC	**Bahia Solano**	**1.97**	**76**	*eP*	**Pn**	**07 13 43.9**	**+0.1**
SOLC				*eS*	**Sn**	**07 14 04.5**	**-4.0**
SOLC				*i*		07 14 06.7	
	comp=Z,2μm,0.4s						
PTAC	**Punta Ardita,**	**2.06**	**47**	*eP*	**Pn**	**07 13 44.9**	**-0.1**
PTAC				*eS*	**Sn**	**07 14 08.1**	**-2.6**
PTAC				*i*		07 14 10.7	
	comp=Z,65nm,0.1s						
PIZC	**Pizarro, Choco**	**2.11**	**111**	*eP*	**Pn**	**07 13 46.0**	**+0.3**
PIZC				*eS*	**Sn**	**07 14 08.8**	**-3.2**
PIZC				*i*		07 14 12.4	
	comp=Z,52nm,0.3s						
CACAO	**El Cacao, Vera**	**2.20**	**316**	*eP*	**Pn**	**07 13 46.6**	**-0.3**
CACAO				*eS*	**Sn**	**07 14 12.9**	**-1.3**
CACAO	**El Cacao, Vera**	**2.20**	**316**	*eP*	**Pn**	**07 13 46.4**	**-0.5**
CACAO				*eS*	**Sn**	**07 14 11.8**	**-2.4**
CACAO				*i*		07 14 15.3	
	comp=Z,23nm,0.1s						
AZU	**Azuero**	**2.24**	**335**	*eP*	**Pn**	**07 13 48.0**	**+0.5**
AZU				*eS*	**Sn**	**07 14 14.9**	**-0.3**
AZU	**Azuero**	**2.24**	**335**	*eP*	**Pn**	**07 13 47.8**	**+0.4**
AZU				*eS*	**Sn**	**07 14 14.6**	**-0.5**
AZU				*i*		07 14 15.9	
	comp=Z,23nm,0.3s						
CHIT3	**Chitre**	**2.45**	**334**	*eP*	**Pn**	**07 13 51.1**	**+0.8**
CHIT3				*eS*	**Sn**	**07 14 19.5**	**-0.8**
MALC	**Bahia Malaga**	**2.63**	**131**	*eP*	**Pn**	**07 13 54.1**	**+1.3**
MALC				*eS*	**Sn**	**07 14 23.4**	**-1.4**
GMAL	**Guarumal, Vera**	**2.75**	**317**	*eP*	**Pn**	**07 13 55.7**	**+1.1**
GMAL				*eS*	**Sn**	**07 14 27.8**	**-0.1**
GMAL	**Guarumal, Vera**	**2.75**	**317**	*eP*	**Pn**	**07 13 55.7**	**+1.1**
GMAL				*eS*	**Sn**	**07 14 29.0**	**+1.1**
GMAL				*i*		07 14 31.6	
	comp=Z,10nm,0.6s						
CRIS3	**El Cristo, Coc**	**2.80**	**333**	*eP*	**Pn**	**07 13 55.9**	**+0.7**
UPD2	**Meteti**	**3.07**	**25**	*eP*	**Pn**	**07 14 01.2**	**+2.3**
UPD2				*eS*	**Sn**	**07 14 37.5**	**+1.7**
PLMC	**San Jos del P**	**3.15**	**105**	*eP*	**Pn**	**07 14 00.8**	**+0.8**
PLMC				*eS*	**Sn**	**07 14 34.5**	**-3.2**
PLMC				*i*		07 14 39.1	
	comp=Z,32nm,0.3s						
UPA	**Univ. de Panam**	**3.22**	**356**	*eP*	**Pn**	**07 14 02.0**	**+1.1**
UPA				*eS*	**Sn**	**07 14 40.2**	**+0.8**
UPA	**Univ. de Panam**	**3.22**	**356**	*eS*	**Sn**	**07 14 38.0**	**-1.4**
CBOC	**Ciudad Bolivar**	**3.30**	**88**	*eP*	**Pn**	**07 14 02.7**	**+0.4**
CBOC				*eS*	**Sn**	**07 14 37.9**	**-3.8**
CBOC				*i*		07 14 53.1	
	comp=Z,3.4nm,0.3s						
DBBC	**Dabeiba**	**3.35**	**68**	*eP*	**Pn**	**07 14 05.5**	**+2.6**
DBBC				*eS*	**Sn**	**07 14 39.0**	**-3.7**
DBBC				*i*		07 14 45.0	
	comp=Z,8.7nm,0.2s						
BCIP	**Isla Barro Col**	**3.44**	**352**	*eP*	**Pn**	**07 14 06.6**	**+2.7**
BCIP				*eS*	**Sn**	**07 14 46.0**	**+1.2**
BCIP				*i*		07 14 53.7	
	comp=Z,13nm,0.5s						
YOTC	**Yotoco, Valle**	**3.45**	**120**	*eP*	**Pn**	**07 14 05.2**	**+0.9**
YOTC				*eS*	**Sn**	**07 14 42.8**	**-2.6**
YOTC				*i*		07 14 45.7	
	comp=Z,6.3nm,0.5s						
APAC	**Apartado, Choc**	**3.47**	**52**	*eP*	**Pb**	**07 14 09.9**	**-1.9**
JAMC	**Jamundi, Valle**	**3.65**	**133**	*eP*	**Pn**	**07 14 07.7**	**+0.6**
JAMC				*eS*	**Sn**	**07 14 46.6**	**-3.8**
JAMC				*i*		07 14 51.4	
	comp=Z,4.1nm,0.2s						
ANIL	**Santa Ana**	**4.11**	**108**	*eP*	**Pn**	**07 14 15.7**	**+2.3**
POPC	**Popayan, Colom**	**4.14**	**140**	*eP*	**Pn**	**07 14 14.8**	**+1.0**
POPC				*eS*	**Sn**	**07 15 04.7**	**+2.2**
BBAC	**Balboa, Cauca**	**4.24**	**151**	*eP*	**Pn**	**07 14 15.8**	**+0.5**
URDC	**San Jos de Ur**	**4.26**	**62**	*eP*	**Pn**	**07 14 18.8**	**+3.4**
URDC	**San Jos de Ur**	**4.26**	**62**	*eP*	**Pn**	**07 14 18.8**	**+3.4**
URDC				*eS*	**Sn**	**07 15 06.9**	**+1.6**
URDC				*i*		07 15 09.2	
	comp=Z,3.3nm,0.4s						
ORTC	**Ortega, Tolima**	**4.46**	**114**	*eP*	**Pn**	**07 14 21.6**	**+3.6**
ORTC				*eS*	**Sn**	**07 15 12.2**	**+2.0**
ORTC				*i*		07 15 16.0	
	comp=Z,7.2nm,0.4s						
PRAC	**Prado**	**4.87**	**114**	*eP*	**Pn**	**07 14 27.5**	**+3.8**
PRAC				*eS*	**Sn**	**07 15 22.1**	**+2.0**
PRAC				*i*		07 15 28.9	
	comp=N,5.0nm,0.5s						
GARC	**Garzon, Huila**	**5.21**	**133**	*eP*	**Pn**	**07 14 32.2**	**+3.6**
GARC				*eS*	**Sn**	**07 15 30.6**	**+1.7**
GARC				*i*		07 15 34.9	
	comp=Z,8.6nm,0.3s						
CRJC	**Cerrejon, Guaj**	**8.25**	**50**	*eP*	**Pn**	**07 15 13.4**	**+3.1**

NNC ***02*** *07:23:51.6±0.4,50°.01N×78°.81E,h0km,mb3.2,mpv2.8,*
Error ellipse: s-maj=6.2km s-min=1.9km az=79.0,
Suspected Mining explosion.
IDC ***02*** *07:23:53.1±0.9,50°.03N×78°.70E,h0km,mbtmp2.7/3,*
ML2.0/3,Error ellipse: s-maj=8.9km s-min=6.1km az=52.0
ISC 02 07:23:53.0±0.9,50°.12N±0°.05×78°.84E±0°.05,h0km,n25,
σ1§09/38,18C-10D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.51**	**336**	⇑P	**Pg**	**07 24 03.4**	**+0.7**
KUR07				⇑S	**Sb**	**07 24 12.9**	**+0.3**
KUR14	**Kurchatov Arra**	**0.52**	**342**	⇑P	**Pg**	**07 24 03.6**	**+0.7**
KUR14				⇓S	**Sb**	**07 24 13.2**	**+0.2**
KUR06	**Kurchatov Arra**	**0.52**	**337**	⇑P	**Pg**	**07 24 03.8**	**+0.9**
KUR06				⇓S	**Sb**	**07 24 13.3**	**+0.2**
KUR15	**Kurchatov Arra**	**0.53**	**340**	⇑P	**Pg**	**07 24 04.0**	**+0.9**
KUR15				⇓S	**Sb**	**07 24 13.5**	**+0.2**
KURBB	**Kurchatov Arra**	**0.54**	**338**	⇑P	**Pg**	**07 24 04.0**	**+0.8**
	17nm,0.3s						
KURBB				⇓S	**Sb**	**07 24 13.1**	**-0.5**
	81nm,0.7s						
KURBB	**Kurchatov Arra**	**0.54**	**338**	Pg	**Pg**	**07 24 04.1**	**+0.8**
	1.3nm,0.3s,baz=166,slow=18,SNR=162						
KURBB				Lg	Lg	07 24 13.6	
	2.2nm,0.3s,baz=172,slow=34,SNR=19						
KUR16	**Kurchatov Arra**	**0.55**	**337**	⇑P	**Pg**	**07 24 04.1**	**+0.6**
KUR16				⇑S	**Sb**	**07 24 13.7**	**-0.3**
KUR05	**Kurchatov Arra**	**0.56**	**339**	⇑P	**Pg**	**07 24 04.3**	**+0.7**
KUR05				⇓S	**Sb**	**07 24 13.7**	**-0.3**
KUR17	**Kurchatov Arra**	**0.56**	**335**	⇑P	**Pg**	**07 24 04.4**	**+0.6**
KUR17				⇑S	**Sb**	**07 24 13.9**	**-0.4**
KUR04	**Kurchatov Arra**	**0.57**	**341**	⇑P	**Pg**	**07 24 04.8**	**+0.8**
KUR04				⇑S	**Sb**	**07 24 14.2**	**-0.3**
KURK	**Kurchatov**	**0.61**	**347**	⇑P	**Pg**	**07 24 05.4**	**+0.7**
	12nm,0.7s						
KURK				⇑S	**Sb**	**07 24 15.4**	**-0.3**
	58nm,0.9s						
MAKZ	**Makanchi**	**3.92**	**147**	⇑Pg	**Pb**	**07 25 02.8**	**-0.2**
	2.0nm,0.6s						
MAKZ				⇓Lg	Lg	07 25 50.4	
	9.7nm,0.6s						
BRZS	**Berezniki**	**3.98**	**270**	Pg	**Pb**	**07 25 03.3**	**-0.6**
	1.8nm,0.6s						
BRZS				Lg	Lg	07 25 54.3	
	3.5nm,0.7s						
MK31	**Makanchi Array**	**4.05**	**144**	⇑Pn	**Pn**	**07 24 56.2**	**0.0**
	0.1nm,0.2s,baz=322,slow=10,SNR=11						
MK31				⇓Pg	**Pb**	**07 25 04.0**	**-1.1**
	0.2nm,0.2s,baz=322,slow=14,SNR=13						
MK31				⇓Lg	Lg	07 25 58.7	
	14nm,0.7s,baz=328,slow=27,SNR=18						
MKAR	**Makanchi Array**	**4.05**	**144**	Pn	**Pn**	**07 24 56.4**	**+0.2**
	0.3nm,0.3s,baz=319,slow=10,SNR=16						
MKAR				Pg	**Pb**	**07 25 03.5**	**-1.6**
	0.6nm,0.3s,baz=319,slow=14,SNR=11						
MKAR				Lg	Lg	07 25 59.4	
	1.5nm,0.3s,baz=324,slow=27,SNR=18						
	0.3nm,0.3s						
OTUK	**Ortayu**	**4.66**	**249**	Pg	**Pb**	**07 25 16.4**	**+0.8**
	0.6nm,0.4s						
OTUK				Lg	Lg	07 26 16.5	
	2.3nm,0.7s						
OTUK	**Ortayu**	**4.66**	**249**	⇓Pn	**Pn**	**07 25 03.4**	**-1.2**
	0.4nm,0.3s						
OTUK				⇑Pg	**Pb**	**07 25 14.8**	**-0.8**
	2.6nm,1.1s						
OTUK				⇓Lg	Lg	07 26 17.1	
	3.0nm,0.6s						
KAPS	**Kapalarasan**	**4.85**	**176**	Pg	**Pb**	**07 25 18.1**	**-0.8**
	1.3nm,0.5s						
KAPS				Lg	Lg	07 26 19.5	
	13nm,0.8s						
I46RU	**ZALESOVO INFRA**	**5.32**	**42**	I	I	07 55 40.0	
	baz=225,slow=330,SNR=2.2						
ZALV	**Zalesovo Beam**	**5.32**	**42**	Pn	**Pn**	**07 25 15.7**	**+2.1**
	0.5nm,0.3s,baz=231,slow=14,SNR=9.1						
ZALV				Lg	Lg	07 26 46.2	
	0.3nm,0.3s,baz=227,slow=26,SNR=4.3						
	1.0nm,0.3s						
KNOS	**Konyrlen**	**5.77**	**178**	Pg	**Pb**	**07 25 32.8**	**-1.8**
	0.6nm,0.2s						
KNOS				Lg	Lg	07 26 45.3	
	2.9nm,0.6s						
DJR	**Jarkent**	**5.83**	**173**	Pg	**Pb**	**07 25 36.5**	**+0.9**
	0.4nm,0.3s						
DJR				Lg	Lg	07 26 51.9	
	4.1nm,0.9s						
ARXS	**Arharly**	**5.95**	**187**	Pg	**Pb**	**07 25 39.3**	**+1.7**
	0.9nm,0.8s						
ARXS				Lg	Lg	07 26 56.0	
	8.5nm,0.8s						
BVAR	**Borovoye Array**	**6.02**	**302**	Pn	**Pn**	**07 25 23.2**	**0.0**
	baz=104,slow=15,SNR=1.2						
BVAR				Sn	**Sn**	**07 26 29.9**	**-2.8**
	0.1nm,0.3s,baz=111,slow=23,SNR=8.6						
BVAR				Lg	Lg	07 27 04.1	
	baz=135,slow=30,SNR=3.7						
	0.2nm,0.3s						
BTLS	**Baital**	**6.03**	**214**	Pg	**Pb**	**07 25 41.6**	**+2.7**
	0.8nm,0.3s						
BTLS				Lg	Lg	07 26 59.9	
	2.8nm,0.7s						

KRSC 02 07:37:12.2±1.7,49°.68N×157°.00E,h15km±35km,MI3.6,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.16**	**331**	*eP*	**Pn**	**07 37 32.9**	**-1.0**
SKR				*eS*	**Sb**	**07 37 47.3**	**-1.5**
PAU	**Pauzhetka**	**1.80**	**356**	*eP*	**Pb**	**07 37 46.3**	**+0.4**
PAU				*eS*	**Sb**	**07 38 07.8**	**+0.6**
KDTR	**Khodutka, Kamc**	**2.24**	**17**	*eP*	**Pb**	**07 37 51.3**	**-1.2**
KDTR				*eS*	**Sb**	**07 38 19.0**	**-1.0**
ASAK	**Asacha**	**2.77**	**11**	*eP*	**Pn**	**07 37 58.8**	**+2.6**
GRL	**Gorelyy**	**2.96**	**13**	*eP*	**Pn**	**07 38 01.4**	**+2.6**
KRMR	**Karymshinskiy**	**3.24**	**12**	*eP*	**Pn**	**07 38 05.7**	**+3.3**
UGLR	**Uglovaya**	**3.72**	**17**	*eP*	**Pn**	**07 38 12.5**	**+3.3**
AVH	**Avacha**	**3.75**	**16**	*eP*	**Pn**	**07 38 12.6**	**+2.9**
KOK	**Koryaka**	**3.76**	**15**	*eP*	**Pn**	**07 38 13.5**	**+3.7**
SMAR	**Somma**	**3.77**	**17**	*eP*	**Pn**	**07 38 13.9**	**+4.0**
KRX	**Arik**	**3.83**	**15**	*eP*	**Pn**	**07 38 14.6**	**+3.8**
SPN	**Mys Shipunski**	**3.92**	**28**	*eP*	**Pn**	**07 38 15.0**	**+3.2**

IDC ***02*** *07:42:43.9±1.4,6°.06S×129°.84E,h0km,mb4.1/5,*
mbtmp4.2/7,ML4.7/2,MS3.3/3,Error ellipse: s-maj=98.8km
s-min=26.9km az=74.0
DJA ***02*** *07:42:56.8±0.4,6°.S×3°×13°.0E±°,h184km±8km,M4.7/12,*
mb4.5/7,mB5.3/7,MLv4.9/12,Mw(mB)4.7/7
NEIC ***02*** *07:42:58.8±1.6,6°.22S±0°.07×130°.2E±0°.1,h144km±9km,*
mb4.2/14,Error ellipse: s-maj=15.2km s-min=10.6km
az=91.0
ISC 02 07:42:58.8±0.5,6°.34S±0°.05×130°.30E±0°.06,h150km,n73,
σ1§71/72,mb4.2/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.84**	**348**	P	**Pn**	**07 43 30.5**	**-1.6**
BNDI	**Bandanaira**	**1.84**	**348**	P	**Pn**	**07 43 32.0**	**-0.1**
BNDI				S	**Sn**	**07 44 00.1**	**+2.3**
SAUI	**Saumlaki**	**1.91**	**149**	Pn	**Pn**	**07 43 34.6**	**+1.6**
SAUI	**Saumlaki**	**1.91**	**149**	P	**Pn**	**07 43 32.3**	**-0.6**
SAUI	**Saumlaki**	**1.91**	**149**	P	**Pn**	**07 43 33.2**	**+0.3**
FAKI	**Fak Fak**	**3.91**	**30**	Pn	**Pn**	**07 43 55.8**	**-2.2**
FAKI	**Fak Fak**	**3.91**	**30**	P	**Pn**	**07 43 55.9**	**-2.0**
FAKI	**Fak Fak**	**3.91**	**30**	P	**Pn**	**07 43 55.3**	**-2.6**
NLAI	**Namlea**	**4.43**	**314**	P	**Pn**	**07 44 05.6**	**+0.9**
SWI	**Sorong**	**5.52**	**10**	P	**Pn**	**07 44 15.9**	**-3.2**
SANI	**Sanana**	**6.05**	**315**	P	**Pn**	**07 44 24.6**	**-1.6**
LBMI	**Labuha**	**6.31**	**334**	P	**Pn**	**07 44 28.0**	**-1.7**
	203nm,1.0s,3μm0.7nm						
MTN	**Manton Dam**	**6.52**	**173**	Pn	**Pn**	**07 44 32.0**	**-0.4**
MTN	**Manton Dam**	**6.52**	**173**	P	**Pn**	**07 44 32.0**	**-0.4**
KDU	**Kakadu**	**6.67**	**161**	P	**Pn**	**07 44 33.9**	**-0.5**
SOEI	**Soe**	**6.87**	**240**		**Pn**	**07 44 36.4**	**-0.9**
SOEI	**Soe**	**6.87**	**240**	P	**Pn**	**07 44 35.3**	**-2.0**
SOEI	**Soe**	**6.87**	**240**	P	**Pn**	**07 44 36.6**	**-0.7**
	54nm,1.0s,0.6nm						
TNTI	**Ternate**	**7.64**	**337**	Pn	**Pn**	**07 44 44.1**	**-3.3**
EDFI	**Ende, Flores**	**8.87**	**254**	P	**Pn**	**07 45 03.3**	**-0.6**
	31nm,1.5s						
KNRA	**Kununurra**	**9.40**	**189**	Pn	**Pn**	**07 45 09.0**	**-1.9**
KNRA	**Kununurra**	**9.40**	**189**	P	**Pn**	**07 45 09.4**	**-1.5**
TABU	**Tabubil**	**10.92**	**85**	P	**Pn**	**07 45 31.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**12.54**	**201**	Pn	**Pn**	**07 45 49.2**	**-2.9**
FITZ	**Fitzroy Crossi**	**12.54**	**201**	P	**Pn**	**07 45 50.1**	**-2.1**
PLAI	**Plampang**	**12.66**	**258**	P	**Pn**	**07 45 53.0**	**-0.7**
WB0	**Warramunga Arr**	**13.93**	**164**		**Pn**	**07 46 07.8**	**-2.2**
WRA	**Warramunga Arr**	**14.08**	**164**	Pn	**Pn**	**07 46 10.3**	**-1.5**
WRA	**Warramunga Arr**	**14.08**	**164**	Pn	**Pn**	**07 46 09.4**	**-2.4**
	3.2nm,0.3s,baz=337,slow=13,SNR=41						
WRA				Sn	**Sn**	**07 48 38.2**	**-10**
	4.0nm,0.3s,baz=353,slow=22,SNR=9.0						
	5.0nm,0.4s						
COEN	**Coen**	**14.76**	**122**	Pn	**P**	**07 46 21.4**	**-1.1**
COEN	**Coen**	**14.76**	**122**	P	**P**	**07 46 23.8**	**+1.4**
BLJI	**Banyuglugur**	**16.64**	**264**	P	**Pn**	**07 46 46.4**	**+3.0**
QIS	**Mount Isa**	**16.77**	**148**	P	**Pn**	**07 46 46.7**	**+1.7**
AS31	**Alice Springs**	**17.58**	**169**	P	**Pn**	**07 46 54.5**	**-0.1**
AS31				IAmb	IAmb	07 46 58.3	
	comp=Z,6.6nm,0.5s						
ASAR	**Alice Springs**	**17.58**	**169**	P	**Pn**	**07 46 54.5**	**-0.1**
ASAR	**Alice Springs**	**17.58**	**169**	P	**Pn**	**07 46 55.5**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=344,slow=9.8,SNR=101						
ASAR				S	**S**	**07 50 01.5**	**-7.2**
	comp=Z,3.2nm,0.6s,baz=352,slow=25,SNR=6.7						
	comp=Z,15nm,0.7s						
AS01	**Alice Springs**	**17.58**	**169**	P	**Pn**	**07 46 55.3**	**+0.5**
PSA00	**Pilbara Seismi**	**18.21**	**213**		**P**	**07

comp=N,171nm,1.1s
Q23K IAML 07 46 06.0
comp=E,210nm,1.5s
Q23K Middleton Isla 3.42 25 P Pn 07 45 20.6 0.0
baz=208
MID Middleton Isla 3.42 26 Pn 07 45 20.6 0.0
MID Middleton Isla 3.42 26 IAML 07 46 03.2
comp=N,175nm,1.1s
MID IAML 07 46 59.0
comp=E,174nm,1.2s
MID Middleton Isla 3.42 26 P Pn 07 45 21.8 +1.2
BRSE Bradley Lake S 3.46 347 Pn 07 45 21.6 +0.3
BRSE **Sn 07 46 00.3 -2.0**
BRSE Bradley Lake S 3.46 347 P Pn 07 45 21.5 +0.3
baz=165
BRSE S **Sn 07 46 00.3 -2.0**
baz=165
Q19K Cape Douglas, 3.48 319 Pn 07 45 22.9 +1.3
Q19K Cape Douglas, 3.48 319 IAML 07 46 10.4
comp=E,256nm,1.5s
Q19K IAML 07 46 19.3
comp=N,146nm,0.8s
Q19K Cape Douglas, 3.48 319 P Pn 07 45 22.9 +1.3
baz=135
BRLK Bradley Lake 3.50 346 Pn 07 45 22.1 +0.2
BRLK Bradley Lake 3.50 346 IAML 07 46 04.8
comp=E,72nm,0.5s
BRLK IAML 07 46 07.5
comp=N,70nm,0.3s
HOM Homer 3.52 340 Pn 07 45 22.6 +0.5
HOM Homer 3.52 340 IAML 07 46 38.5
comp=E,276nm,1.3s
HOM Homer 3.52 340 P Pn 07 45 22.6 +0.5
baz=157
KAHG Katmai Hook Gl 3.57 309 Pn 07 45 24.6 +1.8
SEW Seward 3.73 358 Pn 07 45 25.1 +0.2
SEW Seward 3.73 358 P Pn 07 45 25.1 +0.2
baz=178
P23K Montague Islan 3.75 14 Pn 07 45 25.3 +0.1
P23K **Sn 07 46 06.6 -2.8**
P23K Montague Islan 3.75 14 P Pn 07 45 25.3 +0.1
baz=195
P23K S **Sn 07 46 06.6 -2.8**
baz=195
P19K Oil Pt 3.91 329 Pn 07 45 27.5 +0.1
P19K Oil Pt 3.91 329 IAML 07 46 16.3
comp=N,143nm,0.4s
P19K IAML 07 46 16.5
comp=E,186nm,0.4s
P19K Oil Pt 3.91 329 P Pn 07 45 27.5 +0.1
baz=145
CNTC Contact Creek 4.07 300 Pn 07 45 30.8 +1.1
Q17K Contact Creek 4.07 300 P Pn 07 45 30.8 +1.1
baz=114
O22K Cooper Landing 4.12 357 Pn 07 45 30.5 +0.3
O22K Cooper Landing 4.12 357 P Pn 07 45 30.5 +0.3
baz=176
O20K Slope Mountain 4.12 336 Pn 07 45 30.9 +0.5
O20K Slope Mountain 4.12 336 P Pn 07 45 30.9 +0.5
baz=152
IVE Iliamna Volcan 4.16 333 Pn 07 45 31.1 +0.2
SLKM Skilak Lake 4.17 353 Pn 07 45 31.2 +0.2
HIN Hinchinbrook I 4.27 18 Pn 07 45 32.9 +0.5
HIN Hinchinbrook I 4.27 18 IAML 07 46 20.6
comp=N,154nm,0.5s
HIN IAML 07 46 21.2
comp=E,153nm,0.3s
KAIM Kayak Island 4.37 34 Pn 07 45 33.9 +0.2
KAIM Kayak Island 4.37 34 P Pn 07 45 33.9 +0.2
baz=217
P18K Big Mountain, 4.40 316 Pn 07 45 34.5 +0.4
P18K Big Mountain, 4.40 316 P Pn 07 45 34.5 +0.4
baz=130
RED Redoubt Volcan 4.45 337 Pn 07 45 35.0 +0.1
RDSO Redoubt South 4.48 337 Pn 07 45 35.3 -0.1
RSO Redoubt South 4.49 337 Pn 07 45 35.8 +0.3
RDT Redoubt 4.52 340 Pn 07 45 36.1 +0.3
RDWB Redoubt West 4.53 337 Pn 07 45 36.0 -0.1
EYAK Cordova Ski Ar 4.56 22 Pn 07 45 36.8 +0.6
EYAK Cordova Ski Ar 4.56 22 P Pn 07 45 37.3 +1.0
EYAK Cordova Ski Ar 4.56 22 P Pn 07 45 36.8 +0.6
baz=205
DFR Drift River 4.59 338 Pn 07 45 36.8 0.0
NCT North Crescent 4.62 337 Pn 07 45 37.1 -0.1
O19K Port Alsworth 4.67 327 Pn 07 45 37.9 +0.1
O19K Port Alsworth 4.67 327 IAML 07 46 35.4
comp=N,110nm,0.4s
O19K Port Alsworth 4.67 327 P Pn 07 45 37.9 +0.1
baz=142
RAGM Ragged Mountai 4.67 29 Pn Pn 07 45 39.1 +1.2
SUCK Suckling Hills 4.69 36 Pn Pn 07 45 39.0 +1.0
SUCK IAML 07 46 31.5
comp=N,96nm,0.6s
SUCK IAML 07 46 36.4
comp=E,112nm,1.3s
O18K Koktuh Hills 4.71 320 Pn 07 45 38.9 +0.5
O18K Koktuh Hills 4.71 320 IAML 07 46 33.2
comp=E,22nm,0.6s
O18K Koktuh Hills 4.71 320 P Pn 07 45 38.9 +0.5
baz=135
RC01 Rabbit Creek A 4.73 357 Pn 07 45 39.1 +0.5
RC01 Rabbit Creek A 4.73 357 IAML 07 46 32.6
comp=N,63nm,0.4s
RC01 IAML 07 46 34.1
comp=E,86nm,0.5s
RC01 Rabbit Creek A 4.73 357 P Pn 07 45 39.1 +0.5
baz=176
HMT Hamilton 4.75 31 Pn 07 45 40.2 +1.3
P17K Kvichak River 4.78 309 Pn 07 45 40.4 +1.1
P17K Kvichak River 4.78 309 P Pn 07 45 40.4 +1.1
baz=123
GOAT Goat Mountain 4.82 27 Pn 07 45 40.3 +0.3
BERG Berg Lake 4.96 34 Pn 07 45 42.4 +0.6
KNK Knik Glacier 5.06 4 Pn 07 45 43.9 +0.7
KNK Knik Glacier 5.06 4 IAML 07 46 47.0
comp=N,28nm,1.3s
KNK IAML 07 46 48.3
comp=E,39nm,0.6s
KNK Knik Glacier 5.06 4 P Pn 07 45 43.9 +0.7
baz=184
N20K Mount Spurr 5.07 343 P Pn 07 45 43.5 +0.1
baz=160
SPCR Spurr Chakacha 5.07 343 Pn 07 45 43.5 +0.1
SPCP Crater Peak Br 5.13 344 Pn 07 45 44.4 +0.2
SPCG Spurr Capps Gl 5.13 345 Pn 07 45 44.7 +0.4
SUA Susitna One 5.15 352 Pn 07 45 44.5 -0.1
SUA Susitna One 5.15 352 IAML 07 46 43.7
comp=E,15nm,0.4s
SUA IAML 07 46 54.6
comp=N,18nm,1.2s
SUA Susitna One 5.15 352 P Pn 07 45 44.5 -0.1
baz=170
BMRM Bremner River 5.19 26 Pn 07 45 45.8 +0.7
BMRM Bremner River 5.19 26 P Pn 07 45 45.7 +0.7
baz=209
N19K Bonanza Creek 5.22 330 Pn 07 45 45.6 +0.1
N19K Bonanza Creek 5.22 330 P Pn 07 45 45.6 +0.1
baz=146
PMR Palmer 5.22 0 Pn 07 45 46.1 +0.7
PMR Palmer 5.22 0 IAML 07 46 48.1
comp=N,20nm,0.8s
PMR IAML 07 46 48.2
comp=E,30nm,0.9s
PMR Palmer 5.22 0 P Pn 07 45 46.1 +0.7
baz=180
STLK Strandline Lak 5.30 346 Pn 07 45 47.4 +0.8
SPNN North Nagishla 5.31 342 Pn 07 45 47.6 +0.8
BARK Barkley Ridge 5.36 39 Pn 07 45 48.2 +0.7
KLU Klutina 5.40 17 Pn 07 45 48.9 +0.9
KLU Klutina 5.40 17 P Pn 07 45 48.8 +0.9
baz=200
SML Sawmill 5.46 4 Pn 07 45 49.8 +1.1
SML Sawmill 5.46 4 P Pn 07 45 49.8 +1.1
baz=185
M23K Glacier View 5.48 7 Pn 07 45 50.2 +1.3
M23K Glacier View 5.48 7 P Pn 07 45 50.2 +1.3
baz=188
N18K Kilae Creek 5.54 324 Pn 07 45 49.9 +0.1
N18K Kilae Creek 5.54 324 P Pn 07 45 49.9 +0.1
baz=138
SCM Sheep Creek Mo 5.55 9 Pn 07 45 51.4 +1.4
SCM Sheep Creek Mo 5.55 9 P Pn 07 45 51.4 +1.4
baz=191
ISLE Juniper Island 5.56 38 Pn 07 45 50.8 +0.6
BAGL Bagley Icefiel 5.56 39 Pn 07 45 51.0 +1.0

O16K Kokwok River B 5.71 308 Pn 07 45 52.4 +0.3
O16K Kokwok River B 5.71 308 P Pn 07 45 52.4 +0.3
baz=120
SKT Skwentna 5.74 349 Pn Pn 07 45 53.2 +0.7
N25K Chitina, Valde 5.75 23 Pn 07 45 54.0 +1.2
N25K Chitina, Valde 5.75 23 P Pn 07 45 54.0 +1.2
baz=206
SVW2 Sparrevohn 5.77 328 P Pn 07 45 53.6 +0.7
KIAG Kiagna River 5.79 35 Pn 07 45 54.2 +0.8
GLB Gilahina Butte 5.79 27 Pn 07 45 54.3 +1.0
M20K Styx River 5.87 342 Pn 07 45 54.3 0.0
M20K Styx River 5.87 342 P Pn 07 45 54.3 0.0
baz=158
TABL Table Mountain 5.88 43 Pn 07 45 56.0 +1.3
N17K Nushagak Hills 5.89 318 Pn 07 45 54.7 +0.1
N17K Nushagak Hills 5.89 318 P Pn 07 45 54.7 +0.1
baz=131
M24K Tolsona, Glenn 5.95 14 Pn 07 45 56.8 +1.3
MCARA McCarthy VSAT 5.95 30 Pn 07 45 56.9 +1.4
MCARA McCarthy VSAT 5.95 30 P Pn 07 45 56.9 +1.4
baz=215
PTPK Patty Peak 5.96 33 Pn 07 45 56.9 +1.1
YKU2 Yakutat 5.97 54 P Pn 07 45 55.7 0.0
PCA Pinnacle 6.02 48 Pn 07 45 57.0 +0.6
PINM Pinnacle 6.02 48 P Pn 07 45 57.0 +0.6
baz=236
CHNA Chernabura Isl 6.08 259 P Pn 07 45 57.1 -0.1
baz=71
CNBA Chernabura Isl 6.08 259 Pn 07 45 57.1 -0.1
BARN Barnard Glacie 6.12 37 Pn 07 45 59.1 +1.1
M19K Big River Lodg 6.14 337 Pn 07 45 58.2 +0.2
M19K Big River Lodg 6.14 337 P Pn 07 45 58.2 +0.2
baz=152
M18K Stony River 6.15 329 Pn 07 45 58.4 +0.2
M18K Stony River 6.15 329 P Pn 07 45 58.4 +0.2
baz=143
CTG Chitna Glacier 6.16 39 P Pn 07 45 59.2 +0.8
baz=225
CTGM Chitina Glacie 6.17 39 Pn 07 45 59.2 +0.7
PNL Peninsula 6.17 54 Pn 07 45 58.9 +0.4
LOGN Logan Glacier 6.18 41 Pn 07 45 59.1 +0.3
WAT6 Susitna Watana 6.26 6 Pn 07 46 00.4 +0.6
WAT6 Susitna Watana 6.26 6 P Pn 07 46 00.4 +0.6
baz=187
HARP HAARP 6.38 17 Pn 07 46 01.9 +0.6
HARP HAARP 6.38 17 P Pn 07 46 01.9 +0.6
baz=200
SDPT Sand Point 6.42 265 Pn 07 46 01.9 +0.1
SDPT Sand Point 6.42 265 P Pn 07 46 02.8 +1.0
SDPT Sand Point 6.42 265 P Pn 07 46 01.9 +0.1
baz=76
N16K Nishlik Lake 6.47 313 Pn 07 46 03.2 +0.6
N16K Nishlik Lake 6.47 313 P Pn 07 46 03.2 +0.6
baz=125
WAT7 Susitna Watana 6.47 2 Pn 07 46 04.5 +1.8
L19K White Mountain 6.49 336 Pn 07 46 02.7 -0.1
L19K White Mountain 6.49 336 P Pn 07 46 02.7 -0.1
baz=151
L20K Farewell, AK 6.55 341 Pn 07 46 03.8 0.0
L20K Farewell, AK 6.55 341 P Pn 07 46 03.7 0.0
baz=156
M17K Holitna River 6.58 323 Pn 07 46 04.5 +0.3
M17K Holitna River 6.58 323 P Pn 07 46 04.5 +0.3
baz=136
DHY Denali Highway 6.78 7 Pn 07 46 07.2 +0.3
DHY Denali Highway 6.78 7 P Pn 07 46 07.2 +0.3
baz=188
O29M Mount Kennedy 6.84 51 Pn 07 46 09.6 +1.8
N15K Kwethluk River 6.87 308 Pn 07 46 10.1 +2.1
PAX Paxson 6.87 14 Pn 07 46 08.8 +0.6
PAX Paxson 6.87 14 P Pn 07 46 08.8 +0.6
baz=197
M16K Timber Creek 6.88 317 Pn 07 46 09.1 +1.0
M16K Timber Creek 6.88 317 P Pn 07 46 09.1 +1.0
baz=128
P29M Windy Craggy 6.92 57 Pn 07 46 08.7 0.0
P29M Windy Craggy 6.92 57 P Pn 07 46 08.7 0.0
baz=247
L18K Granite Mounta 6.98 330 Pn 07 46 09.6 0.0
L18K Granite Mounta 6.98 330 P Pn 07 46 09.6 0.0
baz=143
O14K Tigyukauivet M 7.04 299 Pn Pn 07 46 12.2 +1.8
CAST Castle Rocks 7.20 350 Pn 07 46 12.6 0.0
CAST Castle Rocks 7.20 350 P Pn 07 46 12.6 0.0
baz=167
S31K Pelican 7.24 72 Pn 07 46 11.8 -1.3
S31K Pelican 7.24 72 P Pn 07 46 11.8 -1.3
baz=263
L16K Owhat River 7.51 320 Pn Pn 07 46 17.1 +0.4
PLBC Pleasant Camp 7.51 60 Pn 07 46 17.1 +0.4
PLBC Pleasant Camp 7.51 60 P Pn 07 46 17.1 +0.4
baz=251
HYT Haines Junctio 7.56 49 Pn Pn 07 46 18.9 +1.2
SIT Sitka 7.68 79 P Pn 07 46 17.2 -1.9
K17K Iditarod 7.84 328 Pn Pn 07 46 21.5 +0.2
SKAG Skagway 8.01 62 Pn Pn 07 46 24.4 +0.8
SKAG Skagway 8.01 62 P Pn 07 46 24.5 +0.8
HDA Harding Lake 8.13 7 Pn 07 46 26.9 +1.6
M29M Somme Creek 8.18 38 Pn 07 46 28.0 +1.9
FALS False Pass 8.18 265 P Pn 07 46 26.5 +0.5
JIS Juneau Island 8.25 71 P Pn 07 46 27.0 +0.1
CCB Clear Creek Bu 8.32 4 Pn Pn 07 46 29.6 +1.7
IL31 8.49 7 Pn 07 46 30.8 +0.6
COLA College 8.54 4 P Pn 07 46 33.3 +2.4
J26L Joseph Creek 8.61 17 Pn 07 46 33.4 +1.5
L29M L29M 8.76 35 Pn 07 46 35.0 +1.1
L29M L29M 8.76 35 P Pn 07 46 35.0 +1.1
baz=224
P32M Atlin 8.84 62 Pn 07 46 35.5 +0.5
P32M Atlin 8.84 62 P Pn 07 46 35.5 +0.5
baz=255
P33M Teslin, Yukon 9.44 59 Pn Pn 07 46 43.6 +0.2
UNV Unalaska Valle 10.22 263 P Pn 07 46 53.5 -0.4
C36M Paulatuk 17.14 31 Pn 07 48 27.2 +0.7
C36M IAmb IAmb 07 48 32.2
comp=Z,6.7nm,1.4s
A36M Sachs Harbour 18.57 23 P P 07 48 44.7 +0.7
A36M IAmb IAmb 07 48 48.6
comp=Z,3.6nm,0.8s
AMKA Amchitka 19.11 268 P P 07 48 51.2 +1.2

IDC 02 07:46:30.0±0.3, 7°.07S×155°.09E, h0km, mb3.9/4, mbtmp3.8/4, MS2.9/1, Error ellipse: s-maj=102.9km s-min=61.7km az=171.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.19**	**253**	LR	LR		07 51 20.1	
comp=Z,95nm,21.9s,baz=233,slow=35								
SONM	**Songino Array**	**69.45**	**327**	P	P		07 57 39.9	-0.4
0.5nm,0.5s,baz=128,slow=7.4,SNR=4.2								
0.5nm,0.5s								
ILAR	**Eielson Array**	**83.40**	**21**	P	P		07 58 58.6	-0.4
0.4nm,0.8s,baz=232,slow=5.3,SNR=6.4								
0.4nm,0.8s								
MKAR	**Makanchi Array**	**83.52**	**319**	P	P		07 59 00.6	+0.6
0.5nm,0.7s,baz=100,slow=6.3,SNR=5.6								
0.5nm,0.7s								
YKA	**Yellowknife Ar**	**96.35**	**28**	P	P		08 00 00.8	+0.4
0.5nm,0.8s,baz=267,slow=4.3,SNR=7.0								
0.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**153.13**	**285**	PKPbc	PKPbc		08 06 30.5	-0.4
0.7nm,0.7s,baz=67,slow=3.5,SNR=3.8								

*IDC **02** 07:53:21.4±1.3, 53°.99N×35°.17W, h0km, mb3.9/12, mbtmp3.9/13, MLM.4.0/1, MS3.3/3, Error ellipse: s-maj=38.2km s-min=17.0km az=11.0*

*NEIC **02** 07:53:23.4±1.4, 53°.1N±0°.1×35°.20W±0°.03, h10km±2km, mb4.6/27, Error ellipse: s-maj=20.6km s-min=3.2km az=174.0*

ISC 02 07:53:23.6±0.6, 53°.1N±0°.1×35°.16W±0°.07, h13km, n46, σ0.69/44, mb4.5/24, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**14.52**	**264**	Pn	Pn		07 56 48.8	+0.2
ROSA	**Rosais**	**15.15**	**159**	Pn	Pn		07 56 58.5	+1.3
SFJD	**Kangerlussuaq**	**15.86**	**337**		Pn		07 57 05.5	-0.8
SFJD	**Kangerlussuaq**	**15.86**	**337**	LR	LR		08 02 00.2	
comp=Z,73nm,21.2s,baz=166,slow=32								
DSB	**Dublin**	**17.21**	**78**	Pn	Pn		07 57 21.7	-1.8

SCHQ Schefferville 18.64 288 LR LR 08 03 14.8
comp=Z,96nm,20.5s,baz=74,slow=32
EKA Eskdalemuir Ar 18.76 70 P Pn 07 57 42.4 -0.2
baz=279,slow=9.3
2.7nm,0.8s
GBN Guysborough 18.76 256 P P 07 57 41.5 -0.7
GBN IAmb IAmb 07 58 21.2
comp=Z,89nm,1.5s
SUMG Summit 19.61 357 P P 07 57 52.2 +0.5
FRB Frobisher Bay 20.22 315 P Pn 07 57 58.9 -0.9
comp=Z,5.1nm,0.9s,baz=115,slow=5.3,SNR=7.0
comp=Z,5.1nm,0.9s
BATG Bathurst New B 20.52 266 P P 07 58 01.2 -0.2
PQI Presque Isle 21.99 266 P P 07 58 15.8 -1.3
D62A Allapoint, All 22.41 268 P P 07 58 20.8 -0.9
D62A IAmb IAmb 07 58 32.5
comp=Z,26nm,1.4s
F63A Nahmakanta, Br 23.12 265 P P 07 58 28.9 -0.3
F63A IAmb IAmb 07 58 46.3
comp=Z,20nm,1.3s
WVL Waterville 24.06 263 P P 07 58 37.4 -0.9
H62A Milan 24.95 265 P P 07 58 46.2 -0.3
H62A IAmb IAmb 07 59 24.2
comp=Z,28nm,1.4s
ESDC Sonseca Array 25.12 110 P P 07 58 47.6 -0.5
comp=Z,4.0nm,1.0s,baz=316,slow=9.1,SNR=8.6
comp=Z,4.0nm,1.0s
MNTQ Montreal, Queb 25.95 269 P P 07 58 56.2 +0.7
MNTQ IAmb IAmb 07 59 26.7
comp=Z,19nm,1.4s
HRV Adam Dziewonsk 26.37 261 P P 07 58 57.8 -1.5
CLL Collm 29.14 74 eP P 07 59 24.0 0.0
K57A Scipio Center 29.21 266 P P 07 59 24.3 -0.4
KHC Kasperske Hory 30.38 78 P P 07 59 34.1 -0.9
ARCES ARCESS Array B 31.72 36 P P 07 59 46.8 +0.2
comp=Z,1.7nm,0.9s,baz=257,slow=8.0,SNR=3.9
comp=Z,1.7nm,0.9s
RES Resolute Bay 31.82 334 P P 07 59 47.9 +0.4
RES IAmb IAmb 07 59 50.1
comp=Z,12nm,1.4s
FINES FINESS Array B 32.97 51 P P 07 59 57.7 +0.1
comp=Z,5.0nm,0.9s,baz=264,slow=11,SNR=4.8
comp=Z,5.0nm,0.9s
PABE Paberze 33.69 62 P P 08 00 04.1 +0.1
YKA Yellowknife Ar 40.73 316 P P 08 01 03.9 +0.3
comp=Z,1.2nm,1.1s,baz=63,slow=8.2,SNR=7.6
YKA PcP **PcP 08 03 04.3 -0.4**
comp=Z,0.5nm,0.7s,baz=64,slow=3.5,SNR=6.7
comp=Z,1.2nm,1.1s
INK Inuvik 44.94 329 P P 08 01 37.2 -0.4
INK IAmb IAmb 08 01 38.2
comp=Z,8.8nm,1.2s
F31M Tsiigehtchic 45.48 328 P P 08 01 41.8 -0.1
G31M Satah River 45.94 327 P P 08 01 45.2 -0.4
G31M IAmb IAmb 08 01 46.4
comp=Z,8.7nm,0.9s
BRTR Keskin Array B 47.47 77 P P 08 01 58.8 +0.6
comp=Z,2.2nm,0.9s,baz=302,slow=5.6,SNR=8.2
comp=Z,2.2nm,0.9s
I30M Mount Dempster 47.63 326 P P 08 01 58.7 -0.3
I30M IAmb IAmb 08 02 00.3
comp=Z,5.0nm,1.1s
D25K Kavik River 48.08 334 P P 08 02 02.1 -0.2
D25K IAmb IAmb 08 02 05.6
comp=Z,6.4nm,1.1s
I28M Miner Creek 48.67 327 P P 08 02 07.0 0.0
I28M IAmb IAmb 08 02 08.7
comp=Z,5.2nm,1.1s
PDAR Pinedale Array 48.77 289 P P 08 02 08.0 -0.2
comp=Z,0.8nm,1.0s,baz=64,slow=6.8,SNR=4.7
comp=Z,0.8nm,1.0s
B22K Teshekpuk Lake 49.16 337 P P 08 02 11.3 +0.8
B22K IAmb IAmb 08 02 12.2
comp=Z,11nm,1.2s
SCRK Sand Creek 50.95 327 P P 08 02 25.4 +1.1
SCRK IAmb IAmb 08 02 26.4
comp=Z,9.2nm,1.0s
ILAR Eielson Array 51.32 329 P P 08 02 27.5 +0.5
comp=Z,1.7nm,1.0s,baz=50,slow=5.5,SNR=12
ILAR PcP **PcP 08 03 41.7 0.0**
comp=Z,0.6nm,0.8s,baz=12,slow=1.6,SNR=4.2
comp=Z,1.7nm,1.0s
C19K Lookout Ridge 51.52 338 P P 08 02 29.2 +0.7
C19K IAmb IAmb 08 02 30.5
comp=Z,7.5nm,1.2s
BVAR Borovoye Array 57.45 44 P P 08 03 12.7 +0.9
comp=Z,1.2nm,0.7s,baz=317,slow=6.1,SNR=6.5
comp=Z,1.2nm,0.7s
KURBB Kurchatov Arra 62.58 41 P P 08 03 46.9 0.0
comp=Z,0.8nm,0.7s,baz=323,slow=6.5,SNR=6.6
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 67.14 41 P P 08 04 16.7 0.0
comp=Z,0.7nm,0.6s,baz=326,slow=5.5,SNR=5.6
comp=Z,0.7nm,0.6s
SONM Songino Array 74.27 26 P P 08 05 00.7 +0.4
comp=Z,1.0nm,0.9s,baz=316,slow=4.0,SNR=5.5
comp=Z,1.0nm,0.9s
MJAR Matsushiro Arr 90.55 5 LR LR 08 45 14.3
comp=Z,18nm,18.1s,baz=153,slow=34
WRA Warramunga Arr 145.93 18 PKPbc PKPbc 08 13 02.3 -0.5
comp=Z,3.7nm,0.8s,baz=341,slow=3.3,SNR=17
ASAR Alice Springs 149.47 20 PKPbc PKPbc 08 13 11.9 -0.5
comp=Z,1.4nm,0.6s,baz=350,slow=2.2,SNR=26

IDC 02 07:59:21.8±3.8, 55°.61N×86°.25E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=31.4km s-min=26.3km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**207**	I	I		08 12 30.0	
0.1nm,0.7s,baz=28,slow=332,SNR=4.5								
ZALV	**Zalesovo Beam**	**1.86**	**207**	Pg	Pn		07 59 54.2	-0.7
2.3nm,0.3s,baz=25,slow=18,SNR=23								
ZALV				Lg	Lg		08 00 21.1	
1.2nm,0.3s,baz=22,slow=30,SNR=5.5								
KURBB	**Kurchatov Arra**	**6.82**	**226**	Pn	Pn		08 01 03.1	+0.1
baz=42,slow=13,SNR=5.1								
0.3nm,0.4s								
MKAR	**Makanchi Array**	**9.17**	**197**	Pn	Pn		08 01 35.7	+0.5
0.1nm,0.3s,baz=18,slow=14,SNR=2.1								
0.1nm,0.4s								

*SJA **02** 08:00:28.5±0.8, 31°.93S×69°.62W, h108km±4km, ML3.6, MW3.7*

*GUC **02** 08:00:29.0±0.9, 31°.93S×69°.94W, h148km±5km, ML4.0*

ISC 02 08:00:28.9±1.4, 31°.93S±0°.02×69°.66W±0°.03, h117km±9km, n60, σ1.04/105, 12C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.34**	**67**	*e*P	**Pn**		**08 00 45.1**	**-1.0**
RTLS				*e*S	**Sn**		**08 00 57.2**	**-1.7**
RTLS				IAML			08 00 57.9	
comp=Z,7μm,0.2s								
RTCV	**Cerro Valdivia**	**0.96**	**86**	*e*P	**Pn**		**08 00 49.6**	**-0.7**
RTCV				*e*S	**Sn**		**08 01 05.4**	**-1.0**
RTCV				IAML			08 01 07.2	
comp=Z,683nm,4.6s								
ASAL	**Salagasta**	**0.96**	**133**	*e*P	**Pn**		**08 00 50.0**	**-0.3**
ASAL				*e*S	**Sn**		**08 01 05.3**	**-1.4**
ASAL				IAML			08 01 06.7	
comp=Z,732nm,0.5s								
SJA	**San Juan**	**1.02**	**67**	*e*P	Pn		08 00 45.6	-5.3
SJA				*e*S	Sn		08 00 50.7	-17
SJA				IAML			08 01 08.3	
comp=Z,1μm,0.2s								
DOCA	**Reserva Natura**	**1.10**	**27**	*e*P	**Pn**		**08 00 51.5**	**-0.6**
DOCA				*e*S	**Sn**		**08 01 08.9**	**-0.7**
ARCO	**CERRO ARCO**	**1.10**	**146**	*e*P	**Pn**		**08 00 51.9**	**+0.1**
ARCO				*e*S	**Sn**		**08 01 10.1**	**+0.9**
ARCO				IAML			08 01 10.5	
comp=Z,1μm,0.3s								
VA03	**San Esteban**	**1.12**	**222**	*e*P	**Pn**		**08 00 52.2**	**+0.3**
VA03				*e*S	**Sn**		**08 01 10.6**	**+1.1**
VA03				IAML			08 01 15.1	
comp=Z,2μm,0.3s								
VA03	**San Esteban**	**1.12**	**222**	*i*P	**Pn**		**08 00 52.3**	**+0.3**
VA03				*i*S	**Sn**		**08 01 10.0**	**+0.5**
RTLL	**Cerro Villicun**	**1.18**	**60**	*e*P	**Pn**		**08 00 51.7**	**-0.8**
RTLL				*e*S	**Sn**		**08 01 09.6**	**-0.9**
RTLL				IAML			08 01 10.8	
comp=Z,1μm,0.5s								
AAGR	**Agrelo**	**1.35**	**149**	*e*P	**Pn**		**08 00 54.6**	**+0.1**

AAGR eS Sn 08 01 15.0 +1.1
AAGR IAML 08 01 21.6
comp=Z,424nm,0.2s
CO02 Combarbal 1.35 302 eP Pn 08 00 54.5 0.0
CO02 eS Sn 08 01 15.0 +1.0
CO02 IAML 08 01 16.4
comp=Z,900nm,0.3s
CO02 Combarbal 1.35 302⇑ iP Pn 08 00 54.5 0.0
CO02 i S Sn 08 01 14.5 +0.5
CO02 IAML 08 01 18.6
comp=N,4µm,0.2s
CO03 El Pedregal 1.40 321 eP Pn 08 00 55.5 +0.4
CO03 eS Sn 08 01 16.2 +1.3
CO03 IAML 08 01 19.9
comp=Z,494nm,0.2s
CO03 El Pedregal 1.40 321⇑ iP Pn 08 00 55.5 +0.4
CO03 i S Sn 08 01 15.6 +0.7
CO03 IAML 08 01 20.3
comp=E,1µm,0.2s
ACCO Cerro Coronel 1.43 21 eP Pn 08 00 55.9 +0.2
ACCO eS Sn 08 01 17.0 +1.0
ACCO IAML 08 01 22.9
comp=Z,291nm,0.5s
PEL Peldehue 1.49 215 eP Pn 08 00 56.1 +0.2
PEL eS Sn 08 01 17.8 +1.1
PEL Peldehue 1.49 215⇓ iP Pn 08 00 56.0 0.0
PEL i S Sn 08 01 17.0 +0.4
PEL IAML 08 01 19.4
comp=E,2µm,0.3s
FCH Farellones 1.49 201⇓ iP Pn 08 00 57.2 +0.9
FCH i S Sn 08 01 19.0 +1.8
FCH IAML 08 01 24.7
comp=E,1µm,0.3s
VA06 Catapilco 1.52 245⇑ iP Pn 08 00 55.6 -0.7
VA06 i S Sn 08 01 15.7 -1.5
VA06 IAML 08 01 16.9
comp=E,3µm,0.6s
MT04 Ro Olivares 1.52 195⇓ iP Pn 08 00 57.7 +1.0
MT04 i S Sn 08 01 19.6 +1.9
MT10 Hacienda Santa 1.53 209⇓ iP Pn 08 00 57.1 +0.5
MT10 i S Sn 08 01 19.1 +1.4
MT10 IAML 08 01 22.1
comp=N,2µm,0.2s
ROCH El Roble 1.54 227⇑ iP Pn 08 00 56.6 -0.2
ROCH i S Sn 08 01 17.7 -0.3
ROCH IAML 08 01 20.3
comp=N,2µm,0.3s
ROC1 El Roble 1.55 227 eP Pn 08 00 56.6 -0.3
ROC1 eS Sn 08 01 18.3 +0.1
MT14 Cerro Cal¡n 1.64 207⇑ iP Pn 08 00 58.4 +0.6
MT14 i S Sn 08 01 20.9 +1.0
MT14 IAML 08 01 24.7
comp=N,1µm,0.3s
MT16 CCHEN 1.66 206 i P Pn 08 00 58.7 +0.7
MT16 i S Sn 08 01 21.1 +0.8
MT16 IAML 08 01 24.8
comp=E,1µm,0.9s
MT03 Universidad Ad 1.71 204 eP Pn 08 00 59.6 +0.8
MT03 eS Sn 08 01 24.2 +2.6
MT03 IAML 08 01 25.6
comp=Z,1µm,0.2s
MT03 Universidad Ad 1.71 204 i P Pn 08 00 59.4 +0.7
MT03 i S Sn 08 01 22.0 +0.4
MT03 IAML 08 01 25.4
comp=E,3µm,0.1s
MT05 Renca 1.72 212 eP Pn 08 00 59.2 +0.4
MT05 eS Sn 08 01 23.4 +1.9
MT05 IAML 08 01 24.6
comp=Z,755nm,0.2s
MT05 Renca 1.72 212⇑ iP Pn 08 00 59.2 +0.4
MT05 i S Sn 08 01 22.1 +0.6
MT05 IAML 08 01 24.4
comp=N,3µm,0.3s
AROD Rodeo 1.77 5 eP Pn 08 01 00.7 +1.1
AROD eS Sn 08 01 24.7 +1.7
MT15 Las Vizcachas 1.81 203 i P Pn 08 01 00.5 +0.6
MT15 i S Sn 08 01 24.8 +1.2
MT15 IAML 08 01 27.4
comp=N,2µm,0.3s
ACDV Cuesta del Vie 1.82 15 eP Pn 08 01 01.0 +0.9
ACDV eS Sn 08 01 25.6 +1.8
AVIZ Vizcacheras 1.82 148 eP Pn 08 01 00.3 +0.3
AVIZ eS Sn 08 01 23.2 -0.6
MT02 Curacav 1.82 223 eP Pn 08 00 59.5 -0.5
MT02 eS Sn 08 01 24.1 +0.5
MT02 IAML 08 01 28.6
comp=Z,235nm,0.2s
MT02 Curacav 1.82 223 i P Pn 08 00 59.3 -0.6
MT02 i S Sn 08 01 22.6 -1.0
MT13 San Alfonso 1.88 196 i P Pn 08 01 01.8 +1.0
MT13 i S Sn 08 01 26.4 +1.1
MT12 Pirque 1.94 202 i P Pn 08 01 02.1 +0.5
MT12 i S Sn 08 01 27.2 +0.6
MT12 IAML 08 01 33.5
comp=E,1µm,0.3s
LMEL Las Melosas 1.96 193 i P Pn 08 01 02.8 +0.9
CO01 Juntas del Tor 1.98 349 eP Pn 08 01 03.9 +1.7
CO01 eS Sn 08 01 27.2 -0.4
VA01 Torpederas 2.00 236 eP Pn 08 01 01.3 -0.8
VA01 eS Sn 08 01 25.8 -1.8
VA01 IAML 08 01 35.4
comp=Z,254nm,0.5s
VA01 Torpederas 2.00 236 i P Pn 08 01 01.3 -0.8
VA01 i S Sn 08 01 25.4 -2.2
GO04 Tololo Observa 2.01 331 eP Pn 08 01 03.0 +0.5
GO04 eS Sn 08 01 29.0 +0.8
GO04 Tololo Observa 2.01 331⇑ iP Pn 08 01 02.1 -0.5
GO04 i S Sn 08 01 28.0 -0.2
GO04 IAML 08 01 30.9
comp=E,1µm,0.3s
CO06 Fray Jorge 2.10 306⇑ iP Pn 08 01 02.6 -0.9
MT09 Talagante 2.15 211⇑ iP Pn 08 01 03.8 -0.5
MT09 i S Sn 08 01 30.7 -0.6
MT09 IAML 08 01 34.8
comp=E,826nm,0.4s
BO04 La Punta 2.20 201⇑ iP Pn 08 01 05.2 +0.4
BO04 i S Sn 08 01 32.9 +0.6
BO04 IAML 08 01 35.3
comp=E,586nm,0.6s
AVFE Valle Fertil 2.27 57 eP Pn 08 01 05.4 -0.4
AVFE eS Sn 08 01 33.2 -0.8
MT01 Popeta 2.34 214 IAML 08 01 43.5
comp=Z,338nm,0.2s
MT01 Popeta 2.34 214⇑ iP Pn 08 01 05.7 -0.9
MT01 i S Sn 08 01 34.0 -1.5
MT01 IAML 08 01 40.2
comp=E,602nm,0.2s
VA05 Santo Domingo 2.38 223 i P Pn 08 01 06.1 -0.9
VA05 IAML 08 01 43.7
comp=E,1µm,0.3s
CO05 La Serena 2.42 326⇑ iP Pn 08 01 06.7 -0.8
CO05 i S Sn 08 01 35.6 -1.6
CO05 IAML 08 01 40.9
comp=N,431nm,0.3s
AGUA GUANDACOL 2.64 23 eS Sn 08 01 44.2 +1.8
LCO Las Campanas 3.04 343 IAML 08 01 54.4
comp=Z,641nm,0.2s
AC05 El Transito 3.13 350 IAML 08 01 56.5
comp=Z,78nm,0.2s
AC05 IAML 08 01 56.5
comp=Z,78nm,0.2s
ACLC CERRO LA CRUZ 3.42 44 IAML 08 02 04.9
comp=Z,126nm,0.6s
VCA Vinchina 3.42 22 eP Pn 08 01 21.8 +0.9
VCA eP Pn 08 01 21.8 +0.9
VCA eP Pn 08 01 21.8 +0.9
VCA eS Sn 08 02 03.0 +2.0
GO05 Huala 3.61 211 eP Pn 08 01 21.1 -2.0
AC04 Llanos de Chal 3.91 341 eP Pn 08 01 26.6 -0.6
AC04 eP Pn 08 01 26.6 -0.6
CYA Choya 4.82 45 eS Sn 08 02 31.4 -2.9
AC02 Maricunga 5.10 5 eP Pn 08 01 43.8 +0.2

*IDC **02** 08:00:43.7±3.4,**54°35N×86°68E,h0km,mbtmp2.8/2,***
ML2.4/2,Error ellipse: s-maj=29.8km s-min=16.5km
az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**251**	I	I	08 07 10.0	
	baz=69,slow=341,SNR=8.3						
ZALV	**Zalesovo Beam**	**1.17**	**251**	Pg	Pg	08 01 04.5	-1.5
	0.6nm,0.3s,baz=67,slow=17,SNR=12						
ZALV				Lg	Lg	08 01 22.7	
	1.2nm,0.3s,baz=72,slow=27,SNR=2.8						
KURBB	**Kurchatov Arra**	**6.22**	**236**	Pn	Pn	08 02 17.5	+0.9
	baz=53,slow=14,SNR=18						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**8.06**	**202**	Pn	Pn	08 02 42.8	+0.9
	0.1nm,0.3s,baz=22,slow=12,SNR=1.9						
	0.1nm,0.3s						

*IDC **02** 08:03:56.8±0.7,53°.01N×35°.17W,h0km,mb4.1/20,*
mbtmp4.1/23,ML3.3/3,MS3.5/40,Error ellipse:
s-maj=22.0km s-min=11.7km az=3.0
*NEIC **02** 08:03:59.3±0.7,53°.2N±0°.1×35°.19W±0°.06,h10km±1km,*
mb4.7/50,Error ellipse: s-maj=18.0km s-min=5.4km
az=168.0
ISC 02 08:03:59.4±0.4,53°.13N±0°.08×35°.22W±0°.06,h13km,n317,
σ0s95/294,mb4.6/53,MS3.5/37,2D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.64**	**26**	LR	LR	08 10 53.3	
	comp=Z,108nm,18.3s,baz=169,slow=30						
H07N1	**FLORES T-PHASE**	**13.73**	**167**	T	T	08 21 42.9	
	SNR=7.0						
DY2G	**Dye2**	**14.46**	**342**	eP	**P**	**08 07 30.6**	**+0.2**
ROSA	**Rosais**	**15.19**	**159**	Pn	**Pn**	**08 07 33.4**	**-0.1**
SFJD	**Kangerlussuaq**	**15.81**	**337**	Pn	**Pn**	**08 07 41.5**	**+0.1**
SFJD	**Kangerlussuaq**	**15.81**	**337**	eP	**P**	**08 07 44.6**	**-0.7**
SFJD	**Kangerlussuaq**	**15.81**	**337**	Pn	**P**	**08 07 44.0**	**-1.2**
	0.3nm,0.3s,baz=150,slow=11,SNR=11						
SFJD				LR	LR	08 12 35.2	
	comp=Z,161nm,18.9s,baz=164,slow=32						
	44nm,1.0s						
ICESG	**Greenland Ices**	**16.15**	**354**	eP	**P**	**08 07 49.2**	**-0.1**
CMLA	**Cha da Macela**	**16.78**	**152**		**P**	**08 07 54.3**	**-1.8**
ILULI	**Ilulissat**	**17.76**	**341**	P	**P**	**08 08 07.0**	**+0.4**
ILULI				IAmb	IAmb	08 08 16.0	
	comp=Z,54nm,1.2s						
ILULI	**Ilulissat**	**17.76**	**341**	eP	**P**	**08 08 10.3**	**+3.6**
SCHQ	**Schefferville**	**18.59**	**288**	P	**P**	**08 08 15.8**	**-0.2**
SCHQ	**Schefferville**	**18.59**	**288**	P	**P**	**08 08 15.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=100,slow=8.3,SNR=5.6						
SCHQ				LR	LR	08 14 14.4	
	comp=Z,99nm,21.8s,baz=75,slow=33						
	comp=Z,12nm,1.2s						
EKB	**Eskdalemuir**	**18.77**	**70**	P	**P**	**08 08 16.3**	**-1.6**
EKB				IAmb	IAmb	08 08 25.9	
	comp=Z,46nm,1.3s						
EKA	**Eskdalemuir Ar**	**18.79**	**70**	P	**Pn**	**08 08 18.1**	**-0.5**
	baz=289,slow=7.8						
	comp=Z,8.0nm,1.0s						
FRB				LR	LR	08 14 36.4	
	comp=Z,190nm,18.9s,baz=353,slow=32						
	comp=Z,11nm,1.1s						
UMMG	**Uummannaq**	**19.19**	**343**	eP	**P**	**08 08 22.1**	**-0.3**
SUMG	**Summit**	**19.57**	**357**	P	**P**	**08 08 26.5**	**-0.6**
SUMG	**Summit**	**19.57**	**357**	eP	**P**	**08 08 27.0**	**-0.1**
FRB	**Frobisher Bay**	**20.17**	**315**	P	**P**	**08 08 33.7**	**+0.6**
	comp=Z,11nm,1.1s,baz=101,slow=18,SNR=8.2						
FRB				LR	LR	08 14 36.4	
	comp=Z,190nm,18.9s,baz=353,slow=32						
	comp=Z,11nm,1.1s						
LMN	**Caledonia Moun**	**20.44**	**261**	P	**P**	**08 08 35.5**	**-0.7**
BATG	**Bathurst New B**	**20.48**	**266**	P	**P**	**08 08 36.9**	**+0.2**
JMIC	**Jan Mayen**	**21.51**	**24**	LR	LR	08 14 33.7	
	comp=Z,58nm,18.6s,baz=322,slow=30						
UPNV	**Upernavik**	**21.65**	**343**	eP	**P**	**08 08 49.7**	**+0.7**
UPNV				IAmb	IAmb	08 08 55.0	
	comp=Z,24nm,1.0s						
PBRG	**Braganca**	**22.18**	**109**	eP	**P**	**08 09 01.1**	**+6.0**
PVIS	**Viseu**	**22.26**	**113**	eP	**P**	**08 09 01.9**	**+6.0**
D62A	**Allapoint, All**	**22.38**	**268**	P	**P**	**08 08 57.6**	**+0.5**
D62A				IAmb	IAmb	08 09 02.7	
	comp=Z,31nm,1.1s						
PCAS	**Casmilo, Conde**	**22.38**	**115**	eP	**P**	**08 09 02.5**	**+5.3**
G65A	**Princeton**	**22.43**	**262**	P	**P**	**08 08 59.4**	**+1.7**
G65A				IAmb	IAmb	08 09 21.8	
	comp=Z,31nm,1.1s						
MVO	**Moncorvo**	**22.44**	**111**	eP	**P**	**08 09 03.4**	**+5.5**
	comp=Z,64nm,2.3s						
E62A	**Clayton Lake**	**22.88**	**267**	P	**P**	**08 09 02.7**	**+0.3**
E62A				IAmb	IAmb	08 09 35.8	
	comp=Z,24nm,1.3s						
PCBR	**Castelo Branco**	**23.09**	**114**	eP	**P**	**08 09 04.8**	**+0.1**
PBAR	**Barrancos**	**24.52**	**116**	eP	**P**	**08 09 18.4**	**0.0**
	comp=Z,51nm,1.8s						
BMRD	**Maredsous**	**24.71**	**80**	dP	**P**	**08 09 20.4**	**+0.4**
NEEM	**North Greenlan**	**25.11**	**352**	eP	**P**	**08 09 22.5**	**-1.2**
NEEM				IAmb	IAmb	08 09 26.5	
	comp=Z,21nm,1.2s						
ESDC	**Sonseca Array**	**25.17**	**110**	P	**P**	**08 09 24.3**	**0.0**
ESDC	**Sonseca Array**	**25.17**	**110**	P	**P**	**08 09 22.9**	**-1.4**
	comp=Z,6.4nm,1.1s,baz=310,slow=8.6,SNR=10						
	comp=Z,6.4nm,1.1s						
NOA	**NORSAR Array B**	**25.94**	**54**	P	**P**	**08 09 30.6**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=273,slow=9.0,SNR=4.3						
NOA				LR	LR	08 17 41.4	
	comp=Z,61nm,20.0s,baz=275,slow=32						
	comp=Z,1.6nm,0.9s						
HFS	**Hagfors**	**27.24**	**56**	LR	LR	08 18 09.2	
	comp=Z,87nm,19.3s,baz=304,slow=31						
CLL	**Collm**	**29.16**	**74**	eP	**P**	**08 10 00.0**	**0.0**
	comp=Z,10.0nm,1.1s						
DAVOX	**Davos/Dischmat**	**29.30**	**84**	LR	LR	08 19 40.8	
	comp=Z,91nm,18.5s,baz=294,slow=32						
SADO	**Sadowa**	**29.62**	**272**	LR	LR	08 20 53.4	
	comp=Z,111nm,20.9s,baz=245,slow=34						
GERES	**GERESS Array B**	**30.61**	**78**	P	**P**	**08 10 12.6**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=310,slow=13,SNR=2.4						
GERES				LR	LR	08 23 06.8	
	comp=Z,28nm,18.3s,baz=290,slow=38						
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**31.72**	**36**	LR	LR	08 19 53.5	
	comp=Z,40nm,19.1s,baz=337,slow=30						
RES	**Resolute Bay**	**31.77**	**334**	P	**P**	**08 10 23.0**	**+0.2**
RES				IAmb	IAmb	08 10 25.9	
	comp=Z,7.9nm,1.1s						
RES	**Resolute Bay**	**31.77**	**334**	LR	LR	08 21 42.6	
	comp=Z,52nm,19.9s,baz=14,slow=33						
VRAC	**Vranov**	**32.09**	**76**	LR	LR	08 22 49.8	
	comp=Z,109nm,18.1s,baz=312,slow=35						
MORC	**Moravsky Berou**	**32.44**	**74**	P	**P**	**08 10 28.6**	**-0.4**
MORC				IAmb	IAmb	08 10 29.9	
	comp=Z,12nm,1.4s						
FCC	**Fort Churchill**	**32.49**	**304**	P	**P**	**08 10 29.8**	**+0.6**
FCC				IAmb	IAmb	08 10 31.1	
	comp=Z,13nm,1.3s						
GLMI	**Grayling**	**32.88**	**276**	P	**P**	**08 10 33.0**	**+0.1**
	baz=57						
FINES	**FINESS Array B**	**32.97**	**51**	P	**P**	**08 10 33.2**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=318,slow=10,SNR=5.7						
FINES				LR	LR	08 21 49.9	
	comp=Z,90nm,19.3s,baz=248,slow=32						
	comp=Z,4.7nm,0.8s						
O53A	**New Philadelph**	**33.48**	**266**	P	**P**	**08 10 37.4**	**-0.7**
	baz=52						
PABE	**Paberze**	**33.71**	**62**	P	**P**	**08 10 39.6**	**-0.2**
P52A	**Corning**	**34.42**	**266**	P	**P**	**08 10 45.5**	**-0.8**
	baz=51						
EYMN	**Ely**	**35.34**	**285**	P	**P**	**08 10 53.5**	**-0.6**
	baz=60						
ULM	**Lac du Bonnet**	**36.73**	**291**	P	**P**	**08 11 05.6**	**-0.4**
	comp=Z,4.6nm,1.2s,baz=75,slow=8.6,SNR=3.5						
ULM				LR	LR	08 24 56.2	
	comp=Z,76nm,19.5s,baz=78,slow=34						
	comp=Z,4.6nm,1.2s						
SFIN	**Lafayette**	**36.95**	**271**	P	**P**	**08 11 07.5**	**-0.4**
	baz=52						
TZTN	**Tazewell**	**37.27**	**263**	P	**P**	**08 11 10.7**	**-0.1**
	baz=48						
JFWS	**Jewell Farm**	**37.33**	**277**	P	**P**	**08 11 10.8**	**-0.3**
	baz=54						
SPMN	**Marine on St.**	**37.54**	**282**	P	**P**	**08 11 12.7**	**-0.2**
	baz=56						
NHSC	**New Hope**	**37.65**	**256**	P	**P**	**08 11 14.1**	**+0.1**
	baz=44						
BUR08	**Bucovina Ar. S**	**37.90**	**73**	P	**P**	**08 11 16.1**	**0.0**
BURAR	**Bucovina Array**	**37.93**	**73**	P	**P**	**08 11 16.4**	**+0.2**
AKASG	**Malin Array Be**	**38.63**	**67**	P	**P**	**08 11 20.9**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=303,slow=8.3,SNR=7.1						
AKASG				LR	LR	08 25 41.9	
	comp=Z,54nm,20.8s,baz=249,slow=34						
	comp=Z,1.8nm,0.7s						
GOGA	**Godfrey**	**39.37**	**260**	P	**P**	**08 11 29.2**	**+0.8**
	baz=45						
MLR	**Muntele Rosu**	**39.50**	**76**	LR	LR	08 28 09.1	
	comp=Z,65nm,18.5s,baz=274,slow=37						
SCIA	**State Center**	**39.70**	**278**	P	**P**	**08 11 31.1**	**+0.1**
	baz=53						
MDND	**Maddock**	**40.06**	**289**	P	**P**	**08 11 33.7**	**-0.4**
	baz=58						
ECSD	**EROS Data Cent**	**40.63**	**282**	P	**P**	**08 11 38.8**	**0.0**
ECSD				IAmb	IAmb	08 11 41.3	
	comp=E,15nm,1.2s						
A36M	**Sachs Harbour**	**40.68**	**331**	P	**P**	**08 11 39.3**	**+0.5**
A36M	**Sachs Harbour**	**40.68**	**331**	P	**P**	**08 11 38.6**	**-0.2**
	baz=68						
YKA	**Yellowknife Ar**	**40.68**	**316**	P	**P**	**08 11 38.8**	**-0.1**
	comp=Z,2.7nm,1.1s,baz=64,slow=8.2,SNR=15						
YKA				PcP	**PcP**	**08 13 39.5**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=61,slow=3.6,SNR=8.3						
YKA				LR	LR	08 26 24.3	
	comp=Z,47nm,19.5s,baz=24,slow=33						
	comp=Z,2.7nm,1.1s						
CCM	**Cathedral Cave**	**40.91**	**272**	P	**P**	**08 11 40.5**	**-0.6**
	baz=50						
C36M	**Paulatuk**	**41.37**	**328**	P	**P**	**08 11 44.0**	**-0.6**
	baz=66						
LRAL	**Lakeview Retre**	**41.74**	**262**	P	**P**	**08 11 48.1**	**+0.1**
	baz=45						
DGMT	**Dagmar**	**42.31**	**293**	P	**P**	**08 11 52.4**	**-0.1**
	baz=57						
SJG	**San Juan**	**42.42**	**226**	LR	LR	08 26 18.7	
	comp=Z,22nm,19.3s,baz=28,slow=32						
BGNE	**Belgrade**	**42.93**	**280**	P	**P**	**08 11 57.3**	**-0.4**
	baz=52						
KSU1	**Kansas State U**	**43.46**	**277**	P	**P**	**08 12 01.6**	**-0.4**
KSU1				IAmb	IAmb	08 12 07.1	
	comp=Z,14nm,0.8s						
KSU1	**Kansas State U**	**43.46**	**277**	P	**P**	**08 12 01.4**	**-0.5**
	baz=50						
HILA	**High Level**	**43.56**	**311**	P	**P**	**08 12 02.7**	**+0.2**
LAO	**LASA Array**	**44.45**	**292**	P	**P**	**08 12 09.9**	**+0.1**
LAO	**LASA Array**	**44.45**	**292**	P	**P**	**08 12 10.0**	**+0.1**
	baz=54						
MIAR	**Mount Ida**	**44.65**	**270**	P	**P**	**08 12 12.0**	**+0.6**
	baz=47						
KIRV	**Kirov**	**44.82**	**48**	LR	LR	08 30 06.6	
	comp=Z,34nm,18.3s,baz=279,slow=35						
INK	**Inuvik**	**44.89**	**329**	P	**P**	**08 12 13.1**	**+0.1**
INK				IAmb	IAmb	08 12 13.5	
	comp=Z,14nm,1.2s						
INK	**Inuvik**	**44.89**	**329**	P	**P**	**08 12 12.8**	**-0.2**
	baz=58,SNR=12						
INK	**Inuvik**	**44.89**	**329**	LR	LR	08 30 31.6	
	comp=Z,45nm,19.4s,baz=54,slow=35						
TUL3	**Leonard**	**45.06**	**273**	P	**P**	**08 12 14.1**	**-0.7**
	baz=48						
IDI	**Anoyia**	**45.20**	**88**	LR	LR	08 31 21.6	
	comp=Z,54nm,18.1s,baz=6.0,slow=36						
KAN13	**South Haven SW**	**45.34**	**275**	P	**P**	**08 12 16.2**	**-0.8**
F31M	**Tsiigehtchic**	**45.43**	**328**	P	**P**	**08 12 17.1**	**-0.1**
F31M	**Tsiigehtchic**	**45.43**	**328**	P	**P**	**08 12 16.4**	**-0.8**
	baz=57,SNR=18						
CBKS	**Cedar Bluff**	**45.51**	**279**	P	**P**	**08 12 18.3**	**-0.1**
	baz=50						
EGMT	**Eagleton**	**45.62**	**295**	P	**P**	**08 12 19.1**	**0.0**
	baz=54						
KOTAN	**Kotaneelee Air**	**45.81**	**316**	P	**P**	**08 12 20.4**	**0.0**
	baz=57						
G31M	**Satah River**	**45.89**	**327**	P	**P**	**08 12 20.9**	**0.0**
	baz=56						
F30M	**Barrier River**	**45.99**	**328**	P	**P**	**08 12 21.6**	**-0.1**
	baz=55						
E29M	**Blow River**	**46.19**	**330**	P	**P**	**08 12 22.5**	**-0.8**
	baz=54						
G30M	**tAoh Zraii Nji**	**46.49**	**328**	P	**P**	**08 12 25.6**	**-0.2**
	baz=55						
E28M	**Babbage River**	**46.55**	**331**	P	**P**	**08 12 26.1**	**0.0**
	baz=54						
EPYK	**Eagle Plains**	**47.01**	**327**	P	**P**	**08 12 29.7**	**0.0**
	baz=54,SNR=10						
K22A	**Casper**	**47.06**	**287**	P	**P**	**08 12 30.8**	**+0.1**
	baz=51						
RLMT	**Red Lodge**	**47.09**	**292**	P	**P**	**08 12 30.9**	**0.0**
RLMT				IAmb	IAmb	08 12 36.0	
	comp=Z,8.6nm,1.4s						
RLMT	**Red Lodge**	**47.09**	**292**	P	**P**	**08 12 30.8**	**-0.1**
	baz=52						
G29M	**Pine Creek**	**47.10**	**328**	P	**P**	**08 12 30.4**	**-0.1**
	baz=53						
F28M	**Old Crow**	**47.25**	**330**	P	**P**	**08 12 32.1**	**+0.5**
	baz=52,SNR=9.3						
BR131	**Keskin Array S**	**47.50**	**77**	P	**P**	**08 12 34.1**	**0.0**
BR131				IAmb	IAmb	08 12 40.3	
	comp=Z,7.0nm,0.8s						
BRTR	**Keskin Array B**	**47.50**	**77**	P	**P**	**08 12 34.0**	**-0.1**
BRTR	**Keskin Array B**	**47.50**	**77**	P	**P**	**08 12 33.8**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=300,slow=5.4,SNR=12						
BRTR				LR	LR	08 33 51.0	
	comp=Z,73nm,18.0s,baz=298,slow=38						
	comp=Z,3.3nm,0.9s						
I30M	**Mount Dempster**	**47.58**	**326**	P	**P**	**08 12 34.4**	**+0.1**
	baz=53						
WMOK	**Wichita Mounta**	**47.65**	**274**	P	**P**	**08 12 35.6**	**+0.4**
	baz=47						
WTLY	**Watson Lake, Y**	**47.78**	**318**	P	**P**	**08 12 35.5**	**-0.3**
	baz=54						
N23A	**Red Feather La**	**47.84**	**285**	P	**P**	**08 12 36.9**	**+0.1**
	baz=50						
J30M	**Hart River**	**47.95**	**325**	P	**P**	**08 12 37.6**	**+0.3**
J30M				IAmb	IAmb	08 12 40.3	
	comp=Z,13nm,1.4s						
J30M	**Hart River**	**47.95**	**325**	P	**P**	**08 12 37.1**	**-0.2**
	baz=53						
D25K	**Kavik River**	**48.03**	**334**	P	**P**	**08 12 37.4**	**-0.3**
	baz=49						
BOZ	**Bozeman (W)**	**48.11**	**294**	P	**P**	**08 12 38.7**	**-0.1**
BOZ	**Bozeman (W)**	**48.11**	**294**	P	**P**	**08 12 38.6**	**-0.1**
	baz=52						
ISCO	**Idaho Springs**	**48.35**	**284**	P	**P**	**08 12 40.8**	**0.0**
	baz=49						
C24K	**Franklin Bluff**	**48.38**	**335**	P	**P**	**08 12 40.1**	**-0.1**
	baz=48						
BPMT	**Black Pine Rid**	**48.59**	**295**	P	**P**	**08 12 42.9**	**+0.4**
E25K	**Arctic Village**	**48.60**	**332**	P	**P**	**08 12 41.9**	**-0.2**
	baz=49						
I28M	**Miner Creek**	**48.62**	**327**	P	**P**	**08 12 42.2**	**-0.2**
	baz=51						
H27K	**Steamboat Moun**	**48.63**	**329**	P	**P**	**08 12 42.4**	**0.0**
	baz=50						
BW06	**Boulder Array**	**48.72**	**289**	P	**P**	**08 12 43.6**	**0.0**
	baz=50						
PDAR	**Pinedale Array**	**48.72**	**289**	P	**P**	**08 12 42.7**	**-0.9**
	comp=Z,1.3nm,1.0s,baz=66,slow=7.2,SNR=7.1						
PDAR				LR	LR	08 32 03.5	
	comp=Z,63nm,18.4s,baz=48,slow=35						
	comp=Z,1.3nm,1.0s						
D24K	**Happy Valley**	**48.79**	**334**	P	**P**	**08 12 43.4**	**-0.1**
	baz=47						
K29M	**Barlow Dome**	**48.82**	**325**	P	**P**	**08 12 43.9**	**-0.1**
	baz=51						
PCRV	**Puerto La Cruz**	**48.94**	**220**	LR	LR	08 32 48.3	
	comp=Z,14nm,18.0s,slow=35						
F25K	**Christian Rive**	**48.97**	**332**	P	**P**	**08 12 44.8**	**-0.1**
	baz=48						
I27K	**Kandik River**	**49.06**	**328**	P	**P**	**08 12 46.3**	**+0.7**
	baz=50,SNR=7.3						
B22K	**Teshekpuk Lake**	**49.11**	**337**	P	**P**	**08 12 46.3**	**+0.4**
	baz=45						
A21K	**Barrow**	**49.13**	**339**	P	**P**	**08 12 46.5**	**+0.4**
	baz=43						
AMTX	**Amarillo**	**49.29**	**276**	P	**P**	**08 12 48.3**	**+0.5**
AMTX	**Amarillo**	**49.29**	**276**	P	**P**	**08 12 48.8**	**+1.0**
	baz=47						
DLBC	**Dease Lake**	**49.30**	**316**	P	**P**	**08 12 48.9**	**+1.3**
	baz=52						
DAWY	**Dawson**	**49.32**	**326**	P	**P**	**08 12 47.5**	**-0.1**
	baz=50						
P33M	**Teslin, Yukon**	**49.33**	**319**	P	**P**	**08 12 47.8**	**-0.1**
	baz=52						
BNN	**Bunyan**	**49.37**	**77**	P	**P**	**08 12 48.9**	**+0.4**
NEW	**Newport**	**49.42**	**299**	P	**P**	**08 12 48.7**	**0.0**
	baz=52						
NEW	**Newport**	**49.42**	**299**	LR	LR	08 32 19.1	
	comp=Z,77nm,19.5s,baz=52,slow=34

SDCO	Great Sand Dun	49.63 282	P	P	08 12 50.9	+0.2
	baz=48					
F24K	Squaw Lake	49.66 332	P	P	08 12 50.3	+0.1
	baz=47					
G25K	Bearman Lake	49.66 331	P	P	08 12 51.0	+0.9
	baz=48					
O20A	White River Ci	49.66 286	P	P	08 12 51.3	+0.5
	baz=49					
E23K	Chandalar	49.76 333	P	P	08 12 51.5	+0.5
	baz=46					
D22K	Ayikyak River	49.98 335	P	P	08 12 52.9	+0.3
	baz=44					
M29M	Somme Creek	50.04 324	P	P	08 12 54.0	+0.7
	baz=50					
G24K	Hadweenzic Riv	50.10 331	P	P	08 12 53.8	+0.3
	baz=47					
KBZ	Khabaz	50.24 67	P	P	08 12 54.5	-0.4
	comp=Z,4.8nm,1.2s,baz=303,slow=9.5,SNR=3.4					
	comp=Z,4.8nm,1.2s					
K27K	Chicken	50.24 327	P	P	08 12 55.7	+1.1
	baz=48					
O30N	Mendenhall	50.24 321	P	P	08 12 55.1	+0.3
	baz=50					
T35M	Bob Quinn	50.29 315	P	P	08 12 56.5	+1.4
	baz=51					
E22K	Anaktuvuk Pass	50.29 334	P	P	08 12 55.3	+0.3
	baz=44					
C21K	Knifeblade Rid	50.30 336	P	P	08 12 55.8	+0.8
	baz=43					
PRP	Porcupine Dome	50.34 329	P	P	08 12 55.9	+0.4
	baz=47					
J26L	Joseph Creek	50.41 328	P	P	08 12 56.5	+0.5
	baz=48					
COLD	Coldfoot	50.51 333	P	P	08 12 56.8	+0.3
	baz=45					
MSTX	Muleshoe	50.57 276	P	P	08 12 57.4	-0.3
MSTX	Muleshoe	50.57 276	P	P	08 12 57.8	+0.2
	baz=46					
L27K	Beaver Creek,	50.80 326	P	P	08 12 59.6	+0.7
	baz=48					
YUK4	Talbot Arm	50.82 323	P	P	08 12 58.6	-0.7
	baz=49					
H24K	Noodor Dome	50.82 331	P	P	08 12 59.3	+0.2
H24K			IAmb	IAmb	08 13 01.0	
	comp=Z,7.7nm,1.2s					
H24K	Noodor Dome	50.82 331	P	P	08 13 00.0	+1.0
	baz=46					
G23K	Bananza Creek	50.82 332	P	P	08 13 00.0	+1.0
	baz=45					
SCRK	Sand Creek	50.90 327	P	P	08 13 00.5	+0.8
SCRK			IAmb	IAmb	08 13 02.2	
	comp=Z,18nm,1.2s					
SCRK	Sand Creek	50.90 327	P	P	08 13 00.3	+0.6
	baz=47,SNR=8.8					
BVCY	Beaver Creek	50.90 325	P	P	08 13 00.5	+0.8
	baz=48					
J25K	Salcha River,	50.91 329	P	P	08 13 00.6	+0.8
J25K			IAmb	IAmb	08 13 01.4	
	comp=Z,12nm,1.1s					
J25K	Salcha River,	50.91 329	P	P	08 13 00.1	+0.4
	baz=47					
HLID	Hailey	50.94 293	P	P	08 13 00.9	+0.5
	baz=50					
A19K	Wainwright	50.95 339	P	P	08 12 59.9	+0.1
	baz=39					
D20K	Etivluk River	51.08 336	P	P	08 13 01.4	+0.5
	baz=41					
G22K	Bettles	51.08 333	P	P	08 13 01.2	+0.3
	baz=44					
POKR	Poker Plat Res	51.19 330	P	P	08 13 02.3	+0.5
	baz=46,SNR=7.6					
PLBC	Pleasant Camp	51.20 320	P	P	08 13 02.8	+0.9
	baz=49					
YUK8	Steele Glacier	51.27 323	P	P	08 13 03.1	+0.4
	baz=48					
ILAR	Eielson Array	51.27 329	P	P	08 13 02.7	+0.4
ILAR	Eielson Array	51.27 329	P	P	08 13 03.0	+0.7
	comp=Z,4.0nm,1.1s,baz=39,slow=5.5,SNR=23					
ILAR			PcP	PcP	08 14 16.6	-0.6
	comp=Z,1.0nm,0.9s,baz=17,slow=2.3,SNR=7.7					
	comp=Z,4.0nm,1.1s					
M27K	Edge Creek, AK	51.29 325	P	P	08 13 03.4	+0.7
	baz=48					
E20K	Nigu River	51.31 336	P	P	08 13 03.2	+0.5
	baz=41					
L26K	Log Cabin Wild	51.34 326	P	P	08 13 03.3	+0.3
	baz=47					
F21K	Alatna River	51.40 334	P	P	08 13 03.9	+0.6
F21K	Alatna River	51.40 334	P	P	08 13 04.1	+0.8
	baz=43					
C19K	Lookout Ridge	51.47 338	P	P	08 13 04.0	+0.1
C19K			IAmb	IAmb	08 13 06.3	
	comp=Z,11nm,1.1s					
C19K	Lookout Ridge	51.47 338	P	P	08 13 04.6	+0.7
	baz=39					
HDA	Harding Lake	51.54 329	P	P	08 13 04.9	+0.5
	baz=46					
MDM	Murphy Dome	51.55 330	P	P	08 13 04.8	+0.3
MDM			IAmb	IAmb	08 13 06.6	
	comp=Z,15nm,1.2s					
K24K	Donnelly Dome	51.60 328	P	P	08 13 06.5	+1.7
	baz=46,SNR=9.8					
D19K	Kuna River	51.60 337	P	P	08 13 05.0	+0.1
D19K			IAmb	IAmb	08 13 07.0	
	comp=Z,12nm,1.1s					
D19K	Kuna River	51.60 337	P	P	08 13 05.4	+0.5
	baz=40					
P29M	Windy Craggy	51.61 321	P	P	08 13 05.4	+0.4
	baz=48					
M26K	Nabesna, AK	51.65 326	P	P	08 13 05.3	+0.1
	baz=47					
I23K	Minto, Yukon-K	51.75 331	P	P	08 13 07.2	+1.3
	baz=44,SNR=8.6					
B18K	Kokolik River	51.77 339	P	P	08 13 06.8	+0.8
	baz=38					
G21K	Allakaket	51.92 333	P	P	08 13 07.7	+0.5
	baz=42					
V35K	Ketchikan	51.94 314	P	P	08 13 08.6	+1.2
	baz=49					
NEA2	Nenana	52.06 330	P	P	08 13 09.3	+1.0
	baz=44					
PAX	Paxson	52.08 327	P	P	08 13 09.5	+0.9
	baz=46					
TEIG	Tepich	52.09 252	LR	LR	08 35 59.2	
	comp=Z,248nm,18.4s,baz=214,slow=37					
ANMO	Albuquerque	52.10 280	P	P	08 13 10.4	+1.2
	baz=46					
ANMO	Albuquerque	52.10 280	LR	LR	08 34 36.2	
	comp=Z,125nm,19.2s,baz=146,slow=35					
F20K	Avaraart Lake	52.11 335	P	P	08 13 08.9	+0.4
	baz=41					
E19K	Redstone River	52.18 336	P	P	08 13 09.7	+0.5
	baz=40					
C18K	Utukok River	52.20 338	P	P	08 13 10.2	+0.9
	baz=38					
MLY	Manley	52.24 331	P	P	08 13 10.9	+1.2
	baz=43					
DUG	Dugway, Tooele	52.25 289	P	P	08 13 11.2	+1.0
	baz=48					
H21K	Melozitna Rive	52.37 332	P	P	08 13 11.3	+0.8
	baz=42					
HARP	HAARP	52.38 326	P	P	08 13 11.4	+0.7
	baz=46					
IMAR	Indian Mountai	52.39 333	P	P	08 13 11.0	+0.4
I21K	Tanana	52.49 332	P	P	08 13 11.4	0.0
	baz=43					
DBIC	Dimbokro	52.51 141	LR	LR	08 32 43.9	
	comp=Z,58nm,20.2s,baz=9.5,slow=33					
HMU	Henry Mountain	52.58 285	P	P	08 13 13.2	+0.4
DHY	Denali Highway	52.62 328	P	P	08 13 13.2	+0.5
	baz=44					
MCK	McKinley	52.64 329	P	P	08 13 13.3	+0.7
	baz=44					
N25K	Chitina, Valde	52.74 325	P	P	08 13 14.2	+0.7
	baz=46					
F19K	Shaleruckik Mo	52.80 335	P	P	08 13 13.9	+0.3
	baz=40					
RND	Reindeer	52.85 329	P	P	08 13 14.5	+0.3
RND			IAmb	IAmb	08 13 20.8	
	comp=Z,11nm,1.1s					
E18K	Tukpahlearik C	53.03 337	P	P	08 13 15.7	+0.3
	baz=38					
H20K	Anotleneega Mo	53.07 333	P	P	08 13 16.7	+1.0
	baz=41,SNR=5.2					
MMAI	Mount Meron Ar	53.08 82	P	P	08 13 15.8	-0.5
	comp=Z,0.7nm,0.4s,baz=287,slow=10,SNR=1.3					
MMAI			LR	LR	08 39 32.3	
	comp=Z,26nm,18.1s,baz=256,slow=40					
	comp=Z,0.7nm,0.4s					
WAT6	Susitna Watana	53.09 328	P	P	08 13 16.7	+0.6
	baz=44					
G19K	Purcell Mounta	53.16 334	P	P	08 13 16.9	+0.5
	baz=40					
WAT1	Susitna Watana	53.17 328	P	P	08 13 17.1	+0.5
	baz=44					
ELK	Elko	53.26 291	LR	LR	08 34 59.4	
	comp=Z,78nm,18.5s,baz=58,slow=35					
TRF	Thorofare Moun	53.26 329	P	P	08 13 17.7	+0.4
	baz=43					
KLU	Klutina	53.27 326	P	P	08 13 17.6	+0.2
	baz=45					
BGLC	Bering Glacier	53.33 324	P	P	08 13 18.0	+0.4
	baz=46					
C16K	Lisburne Hills	53.41 339	P	P	08 13 18.5	+0.3
	baz=35					
F18K	Selawik	53.45 336	P	P	08 13 18.8	+0.3
	baz=38					
H19K	Roundabout Mou	53.46 334	P	P	08 13 19.4	+0.8
	baz=40					
CHUM	Lake Minchumin	53.55 331	P	P	08 13 19.8	+0.6
	baz=42					
E17K	Hotham Inlet	53.59 337	P	P	08 13 19.6	+0.1
	baz=37					
GNI	Garni	53.63 70	LR	LR	08 36 06.2	
	comp=Z,43nm,21.6s,baz=308,slow=36					
G18K	Tagagawik	53.75 335	P	P	08 13 20.6	-0.1
	baz=38					
CAST	Castle Rocks	53.83 330	P	P	08 13 21.3	-0.1
CAST	Castle Rocks	53.83 330	P	P	08 13 21.5	+0.2
	baz=42,SNR=7.5					
J20K	Nowinta River	53.86 332	P	P	08 13 21.9	+0.3
	baz=41					
EYAK	Cordova Ski Ar	53.89 325	P	P	08 13 22.3	+0.5
	baz=44					
F17K	Baldwin Pennin	53.97 336	P	P	08 13 22.7	+0.5
	baz=37					
KNK	Knik Glacier	54.18 327	P	P	08 13 24.7	+0.8
	baz=43					
PPLA	Purkeypile	54.25 330	P	P	08 13 22.6	-2.0
	baz=41					
H18K	Honhosa River	54.26 334	P	P	08 13 25.5	+1.0
	baz=38					
PMR	Palmer	54.26 327	P	P	08 13 25.1	+0.6
	baz=43					
TXAR	Lajitas Array	54.39 273	P	P	08 13 25.4	-0.6
	comp=Z,0.6nm,0.8s,baz=66,slow=3.0,SNR=3.5					
TXAR			PcP	PcP	08 14 29.3	-0.4
	comp=Z,0.6nm,0.7s,baz=79,slow=4.7,SNR=3.2					
TXAR			LR	LR	08 36 05.5	
	comp=Z,28nm,18.2s,baz=78,slow=35					
	comp=Z,0.6nm,0.8s					
K20K	Telida	54.46 331	P	P	08 13 26.5	+0.5
	baz=40					
G17K	Kiwalik Mounta	54.57 335	P	P	08 13 27.0	+0.3
	baz=37					
121A	Cookes Peak, D	54.57 279	P	P	08 13 27.7	+0.3
	baz=45					
WUAZ	Wupatki	54.60 284	P	P	08 13 28.3	+0.8
	baz=46					
SKT	Skwentna	54.74 329	P	P	08 13 28.4	+0.5
	baz=41,SNR=5.3					
RC01	Rabbit Creek A	54.83 327	P	P	08 13 29.4	+0.7
	baz=42					
H17K	Granite Mounta	54.84 335	P	P	08 13 29.6	+1.0
	baz=37					
P23K	Montague Islan	54.86 325	P	P	08 13 29.6	+0.7
	baz=43					
SUA	Susitna One	54.88 328	P	P	08 13 29.7	+0.5
	baz=42					
L20K	Farewell, AK	55.08 330	P	P	08 13 30.1	-0.3
	baz=40,SNR=5.2					
R11B	Troy Canyon, C	55.08 289	P	P	08 13 31.1	+0.1
	baz=46					
J18K	Innoko River	55.14 332	P	P	08 13 30.9	0.0
	baz=39					
F15K	North Star Dit	55.38 337	P	P	08 13 33.0	+0.5
	baz=34					
X16A	Lo Mia Camp, P	55.41 283	P	P	08 13 34.6	+1.2
X16A			IAmb	IAmb	08 13 36.2	
	comp=Z,7.0nm,1.2s					
L19K	White Mountain	55.60 330	P	P	08 13 34.6	+0.4
	baz=39					
H16K	Elim	55.67 335	P	P	08 13 35.1	+0.5
	baz=36					
G15K	Niukluk	55.82 336	P	P	08 13 36.0	+0.3
	baz=34					
I17K	Unalakleet	55.88 334	P	P	08 13 37.2	+1.0
	baz=36					
F14K	Arctic Creek	55.96 338	P	P	08 13 37.7	+1.0
	baz=33					
L18K	Granite Mounta	56.11 331	P	P	08 13 39.0	+1.2
	baz=38					
K17K	Iditarod	56.17 332	P	P	08 13 38.1	-0.2
	baz=37					
TPNV	Topopah Spring	56.43 288	P	P	08 13 40.1	-0.6
	baz=45					
TUC	Tucson	56.51 281	P	P	08 13 41.7	+0.5
	baz=44					
N19K	Bonanza Creek	56.55 329	P	P	08 13 40.6	-0.5
	baz=39					
YBH	Yreka Blue Hor	56.70 297	LR	LR	08 37 13.7	
	comp=Z,74nm,18.6s,baz=43,slow=35					
PNTR	Pine Nut	56.83 292	P	P	08 13 44.0	+0.4
PNTR			IAmb	IAmb	08 13 46.3	
	comp=Z,6.6nm,1.1s					
FURC	Furnace Creek,	57.12 288	P	P	08 13 45.5	+0.2
	baz=45					
BRVK	Borovoye	57.38 44	P	P	08 13 46.7	-0.3
BRVK			IAmb	IAmb	08 13 53.3	
	comp=Z,10nm,1.4s					
BVAR	Borovoye Array	57.45 44	P	P	08 13 47.8	+0.3
	comp=Z,1.5nm,0.6s,baz=317,slow=6.3,SNR=12					
	comp=Z,1.5nm,0.6s					
O18K	Koktuh Hills	57.53 329	P	P	08 13 47.7	-0.3
	baz=38					
GMRC	Granite Mounta	57.62 286	P	P	08 13 49.1	0.0
	baz=45					
M16K	Timber Creek	57.72 331	P	P	08 13 48.8	-0.4
	baz=36					
IRM	Iron Mountain	57.76 285	P	P	08 13 50.6	+0.6
	baz=44					
MPMC	Manual Prospec	57.77 288	P	P	08 13 50.8	+0.6
	baz=45					
ROSC	El Rosal	57.80 228	P	P	08 13 51.1	+0.4
	comp=Z,4.7nm,0.3s,baz=350,slow=15,SNR=4.4					
	comp=Z,4.7nm,0.3s					
CWC	Cottonwood Cre	57.83 289	P	P	08 13 50.8	+0.2
	baz=45					
P18K	Big Mountain,	57.90 328	P	P	08 13 50.3	-0.2
	baz=38					
GSC	Goldstone, Bar	57.91 287	P	P	08 13 51.1	+0.1
	baz=45					
214A	Organ Pipe Nat	57.97 282	P	P	08 13 51.7	+0.3
	baz=44					
BC3	Big Chuckawall	58.30 285	P	P	08 13 54.9	+1.0
	baz=44					
JTS	Las Juntas de	58.33 242	LR	LR	08 35 24.8	
	comp=Z,32nm,21.8s,baz=55,slow=32					
BELC	Belle Mtn. Jos	58.37 286	P	P	08 13 54.9	+0.5
	baz=44					
CMIG	Matias Romero	58.38 256	LR	LR	08 37 44.2	
	comp=Z,26nm,21.3s,baz=46,slow=35					
ISA	Isabella, Lake	58.61 289	P	P	08 13 56.7	+0.8
	baz=44					
BBRC	Big Bear Solar	58.72 286	P	P	08 13 57.5	+0.7
	baz=44					
EDW2	Edwards Air Fo	58.89 288	P	P	08 13 58.3	+0.4
	baz=44					
PFO	Pinyon Flats O	58.91 286	P	P	08 13 58.6	+0.5
	baz=44					
TPFO	Pinon Flats	58.92 286	P	P	08 13 58.7	+0.6
	baz=44					
BFSC	Mount Baldy Ra	59.16 287	P	P	08 14 00.1	+0.3
	baz=44					
IKP	In-Ko-Pah, Jac	59.40 285	P	P	08 14 02.4	+0.9
	baz=44					
MONP2	Monument Peak	59.41 285	P	P	08 14 02.6	+0.9
	baz=44					
LPIG	La Paz	62.24 274	LR	LR	08 41 37.4	
	comp=Z,48nm,18.0s,baz=48,slow=36					
KURK	Kurchatov	62.54 41	P	P	08 14 22.6	+0.2
KURK			IAmb	IAmb	08 14 28.2	
	comp=Z,3.4nm,0.8s					
KURBB	Kurchatov Arra	62.58 41	P	P	08 14 22.3	-0.3
	comp=Z,2.3nm,1.0s,baz=323,slow=7.1,SNR=12					
	comp=Z,2.3nm,1.0s					
MK31	Makanchi Array	67.14 41	P	P	08 14 51.9	-0.6
MKAR	Makanchi Array	67.14 41	P	P	08 14 52.2	-0.2
	comp=Z,1.0nm,0.6s,baz=336,slow=6.1,SNR=12					
	comp=Z,1.0nm,0.6s					
AAK	Ala-Archa	67.14 49	LR	LR	08 44 08.4	
	comp=Z,44nm,18.2s,baz=347,slow=36					
KSH	Kashi	70.29 50	P	P	08 15 14.9	+2.5
KSH			sP	pwP	08 15 19.4	+0.1
KSH			pmax	pmax		
	comp=Z,4.0nm,1.0s					
WMQ	Urumqi	71.72 40	eP	P	08 15 23.1	+2.2
SONM	Songino Array	74.25 26	P	P	08 15 35.9	0.0
	comp=Z,1.4nm,0.9s,baz=324,slow=5.1,SNR=8.1					
	comp=Z,1.4nm,0.9s					
KLR	Kul'dur	77.42 9	LR	LR	08 48 35.3	
	comp=Z,15nm,18.6s,baz=70,slow=35					
MDJ	Mudanjiang	81.77 11	P	P	08 16 17.1	-0.4
MDJ			pmax	pmax		
	comp=Z,9.0nm,1.5s					
MDJ			pmax	pmax		
	comp=Z,170nm,3.8s					
HHC	Hu-ho-hao-te	82.10 25	eP	P	08 16 18.6	-0.9
HHC			pmax	pmax		
	comp=Z,11nm,0.7s					
HHC			pmax	pmax		
	comp=Z,93nm,5.7s					
LZH	Lanzhou	84.31 32	eP	P	08 16 25.9	-5.1
LZH			pP	pwP	08 16 36.6	-1.4
LZH			pmax	pmax		
	comp=Z,11nm,1.1s					
HNS	HongShan	86.14 24	⇓P	P	08 16 40.2	+0.3
HNS			pmax	pmax		
	comp=Z,7.0nm,1.0s					
NJ2	Nanjing	92.22 22	eP	P	08 17 07.3	-1.5
NJ2			pP	pP	08 17 10.6	-1.6
NJ2			sP	sP	08 17 12.6	-0.8
NJ2			pmax	pmax		
	comp=Z,11nm,0.6s					
PZH	PanZhiHua	92.32 38	P	P	08 17 10.1	+0.6
PZH			pmax	pmax		
	comp=Z,10.0nm,0.5s					
PZH			pmax	pmax		
	comp=Z,140nm,4.5s					
WRA	Warramunga Arr	145.91 18	PKPbc	PKPdf	08 23 37.5	-0.3
	comp=Z,9.7nm,1.1s,baz=344,slow=3.4,SNR=24					
ASAR	Alice Springs	149.45 20	PKPbc	PKPbc	08 23 47.0	-1.1
	comp=Z,2.1nm,0.6s,baz=351,slow=2.5,SNR=40					

IDC 02 08:25:26.8±2.3, 54°27N×86°07E, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=18.3km s-min=11.3km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.80	247	I	I	08 30 00.0	
	baz=67,slow=341,SNR=8.4						
ZALV	Zalesovo Beam	0.80	247	Pg	Pg	08 25 41.1	-1.1
	1.4nm,0.3s,baz=63,slow=16,SNR=18						
ZALV				Lg	Lg	08 25 53.8	
	7.6nm,0.3s,baz=68,slow=28,SNR=12						
KURBB	Kurchatov Arra	5.88	235	Pn	Pn	08 26 56.1	+1.0
	0.1nm,0.3s,baz=51,slow=13,SNR=16						
KURBB				Lg	Lg	08 28 33.5	
	baz=43,slow=30,SNR=1.7						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.86	199	Pn	Pn	08 27 23.0	+0.7
	0.6nm,0.3s,baz=24,slow=14,SNR=14						
	0.8nm,0.3s						

*IDC **02** 08:29:50.2±1.4, 34°41N×26°29E, h0km, mb3.7/6, mbtmp3.7/6, MS2.9/1, Error ellipse: s-maj=49.4km s-min=22.0km az=149.0*

*ATH **02** 08:29:53.1±0.7, 34°33N×26°43E, h10km, ML3.0/7, Manual Solution by G.Panopoulou This location: 2020/05/10 13:42:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 4 km*

ISC 02 08:29:52.0±1.9, 34°34N±0°.08×26°37E±0°.06, h12km±11km, n23, σ0°97/28, mb3.7/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.79	351	P	Pb	08 30 07.9	+0.3
ZKR				S	Sn	08 30 19.4	-1.2
ZKR	Zakros	0.79	351	P	Pb	08 30 08.0	+0.3
ZKR				S	Sn	08 30 20.4	-0.2
FRMA	Ierapetra Chan	0.85	322	P	Pb	08 30 08.8	0.0
FRMA				S	Sn	08 30 22.9	+0.7
FRMA	Ierapetra Chan	0.85	322	P	Pb	08 30 08.8	0.0
FRMA				S	Sn	08 30 21.4	-0.8
SIT2	Siteia	0.89	346	P	Pn	08 30 10.8	+0.5
SIT2				S	Sn	08 30 23.6	+0.4
AGNA	Agios Nikolaos	1.00	328	P	Pn	08 30 13.2	+1.4
AGNA				S	Sn	08 30 27.5	+1.6
KARP	Karpathos	1.37	28	P	Pg	08 30 19.0	+0.6
KARP	Karpathos	1.37	28	P	Pg	08 30 18.3	-0.1
IDI	Anoyia	1.54	308	P	Pg	08 30 21.4	-0.3
GVD	Gavdhos	1.95	286	P	Pb	08 30 27.2	-0.3
SNT5	Nea Kammeni, S	2.21	339	P	Pb	08 30 30.1	-1.8
THR3	Thira Island,	2.21	339	P	Pb	08 30 30.1	-1.9
IMMV	Iera Moni Meta	2.26	300	P	Pb	08 30 31.8	-1.0
RODP	Rodopos	2.47	300	P	Pn	08 30 33.6	+1.6
APE	Apeiranthos	2.81	346	P	Pn	08 30 38.1	+1.4
VLI	Velai	3.67	311	P	Pn	08 30 49.9	+1.3
AKASG	Malin Array Be	16.49	6	LR	LR	08 40 24.0	
	comp=Z,40nm,19.1s,baz=98,slow=39						
ESDC	Sonseca Array	24.73	291	P	P	08 35 12.6	-0.7
	0.4nm,0.6s,baz=73,slow=10,SNR=2.5						
	0.4nm,0.6s						
TORD	Torodi Ar. Bea	30.75	233	P	P	08 36 07.1	-0.2
	1.6nm,0.9s,baz=36,slow=11,SNR=9.3						
	1.6nm,0.9s						
ARCES	ARCESS Array B	35.25	359	P	P	08 36 45.6	-0.4
	3.6nm,1.1s,baz=174,slow=9.7,SNR=1.4						
	3.6nm,1.1s						
KURBB	Kurchatov Arra	40.87	50	P	P	08 37 33.9	+0.2
	0.3nm,0.5s,baz=279,slow=8.7,SNR=2.7						
	0.3nm,0.5s						
MKAR	Makanchi Array	43.40	56	P	P	08 37 54.4	0.0
	0.4nm,0.5s,baz=273,slow=6.2,SNR=6.7						
	0.4nm,0.5s						
ZALV	Zalesovo Beam	44.86	46	P	P	08 38 05.6	-0.3
	1.1nm,0.5s,baz=271,slow=8.5,SNR=5.5						
	1.1nm,0.5s						

*IDC **02** 08:42:40.3±1.3, 4°.63S×153°.38E, h0km, mb4.0/6, mbtmp4.0/6, MS3.9/1, Error ellipse: s-maj=52.9km s-min=26.3km az=98.0*

*NEIC **02** 08:42:48.7±1.5, 4°.7S±0°.1×153°.4E±0°.1, h60km±7km, mb4.6/20, Error ellipse: s-maj=16.8km s-min=13.6km az=58.0*

ISC 02 08:42:51.0±0.6, 4°.72S±0°.08×153°.3E±0°.1, h85km, n34, σ0°85/36, mb4.3/14, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.24	295		Pn	08 43 11.5	-1.7
PMG	Port Moresby	7.66	232	Pn	Pn	08 44 39.9	+0.1
PMG	Port Moresby	7.66	232	Pn	Pn	08 44 39.1	-0.7
	2.4nm,0.3s,baz=45,slow=13,SNR=2.3						
PMG				Sn	Sn	08 46 03.8	-1.3
	1.1nm,0.3s,baz=195,slow=16,SNR=1.9						
HNR	Honiara	8.10	126	LR	LR	08 48 23.9	
	comp=Z,782nm,18.2s,baz=330,slow=42						
DZM	Mont Dzumac	21.45	145	P	P	08 47 30.7	-1.9
DZM				IAmb	IAmb	08 47 41.1	
	comp=Z,10nm,1.1s						
MTN	Manton Dam	23.32	248	P	P	08 47 52.9	+1.1
MTN				IAmb	IAmb	08 48 11.4	
	comp=Z,42nm,1.2s						
WB0	Warramunga Arr	23.72	229	P	P	08 47 54.4	-1.1
WR0	Warramunga Arr	23.72	229	P	P	08 47 55.9	+0.4
WR0				IAmb	IAmb	08 48 17.2	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	23.86	229	P	P	08 47 57.0	+0.2
WRA	Warramunga Arr	23.86	229	P	P	08 47 57.2	+0.5
	comp=Z,0.7nm,0.4s,baz=52,slow=9.8,SNR=7.5						
WRA				PcP	PcP	08 51 39.1	+1.3
	comp=Z,0.8nm,0.9s,baz=70,slow=2.8,SNR=3.2						
	comp=Z,0.7nm,0.4s						
KNRA	Kununurra	26.44	244	P	P	08 48 20.6	+0.5

KNRA IAmb IAmb 08 48 22.6
comp=Z,57nm,1.4s
ASAR Alice Springs 26.54 223 P **P** **08 48 21.9 +0.9**
comp=Z,0.5nm,0.8s,baz=56,slow=9.1,SNR=8.8
ASAR PcP **PcP** **08 51 44.5 +0.7**
comp=Z,0.5nm,0.6s,baz=64,slow=2.7,SNR=6.1
comp=Z,0.5nm,0.8s
STKA Stephens Creek 29.16 201 P **P** **08 48 43.5 -0.7**
FITZ Fitzroy Crossi 30.12 242 P **P** **08 48 52.8 -0.1**
FORT Forrest 35.16 220 P **P** **08 49 38.0 +1.3**
TUWZ Tuamarina 40.96 156 P **P** **08 50 24.4 -0.9**
LTZ Lake Taylor 41.48 159 P **P** **08 50 29.7 +0.1**
GVZ Greta Valley S 41.92 158 P **P** **08 50 33.3 +0.1**
NWAO Narrogin (SRO) 43.79 226 P **P** **08 50 48.7 +0.2**
USA0B Ussuriysk Arra 52.33 341 P **P** **08 51 53.4 -0.7**
USA0B IAmb IAmb 08 52 34.7
comp=Z,6.3nm,0.8s
USRK Ussuriysk Ar. 52.33 341 P **P** **08 51 53.9 -0.1**
VNDA Vanda 72.89 178 P **P** **08 54 10.4 0.0**
VNDA IAmb IAmb 08 54 49.0
comp=Z,9.8nm,1.3s
H17K Granite Mounta 77.49 19 P **P** **08 54 37.5 +0.6**
H17K IAmb IAmb 08 54 57.3
comp=Z,5.5nm,1.4s
MK31 Makanchi Array 80.58 319 P **P** **08 54 55.1 +0.8**
MKAR Makanchi Array 80.58 319 P **P** **08 54 54.9 +0.6**
MKAR Makanchi Array 80.58 319 P **P** **08 54 55.5 +1.3**
comp=Z,0.7nm,0.5s,baz=100,slow=7.4,SNR=9.8
comp=Z,0.7nm,0.5s
ZAA0 Zalesovo Array 81.36 326 P **P** **08 54 58.5 +0.4**
ZALV Zalesovo Beam 81.36 326 P **P** **08 54 57.7 -0.5**
ZALV Zalesovo Beam 81.36 326 P **P** **08 54 58.8 +0.6**
comp=Z,0.5nm,0.4s,baz=116,slow=5.4,SNR=3.6
comp=Z,0.5nm,0.4s
QSPA South Pole Qui 85.24 180 P **P** **08 55 18.6 +0.5**
QSPA IAmb IAmb 08 55 19.5
comp=Z,6.6nm,0.8s
QSPA South Pole Qui 85.24 180 P **P** **08 55 19.0 +0.9**
comp=Z,4.2nm,0.6s,baz=349,slow=1.6,SNR=14
comp=Z,4.2nm,0.6s
WHY Whitehorse 85.30 28 P **P** **08 55 17.5 -0.9**
WHY IAmb IAmb 08 55 58.3
comp=Z,11nm,1.4s
BVAR Borovoye Array 89.47 323 P **P** **08 55 39.0 +0.4**
comp=Z,1.8nm,0.6s,baz=117,slow=5.2,SNR=11
comp=Z,1.8nm,0.6s
TORD Torodi Ar. Bea 150.74 289 PKPbc **PKiKP** **09 02 34.8 -0.4**
comp=Z,1.9nm,0.7s,baz=53,slow=3.3,SNR=14

IDC 02 09:00:45.6±3.8, 55°.47N×86°.36E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=30.7km s-min=28.9km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**211**	I	I	09 13 10.0	
	0.1nm,0.9s,baz=31,slow=332,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.77**	**211**	Pg	Pn	09 01 16.4	-1.0
	2.0nm,0.3s,baz=30,slow=16,SNR=17						
ZALV				Lg	Lg	09 01 42.1	
	2.7nm,0.3s,baz=31,slow=22,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.77**	**227**	Pn	Pn	09 02 25.9	-0.2
	baz=43,slow=14,SNR=1.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**9.06**	**198**	Pn	Pn	09 02 58.5	+1.0
	baz=10,slow=10,SNR=1.8						
	0.1nm,0.4s						

TRN 02 09:11:35.2, 11°.68N×61°.72W, h81km, MD3.5, South of Grenada., Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRFF	**Grenada Fort F**	**0.36**	**357**	*eP*	Pn	09 11 48.0	0.0
GRFF				*eS*	Sn	09 11 58.6	+1.2
GRHS	**Sauteurs**	**0.54**	**8**	*eP*	Pn	09 11 49.1	-0.2
GRHS				*eS*	Sn	09 12 00.1	+0.2
GCMP	**Grenada, Carri**	**0.85**	**20**	*eP*	Pn	09 11 52.1	-0.4
GCMP				*eS*	Sn	09 12 04.7	-0.7
TRN	**Trinidad (W)**	**1.07**	**163**	*eP*	Pn	09 11 55.5	+0.3
TRN				*eS*	Sn	09 12 10.0	-0.2
SVOC	**Richmond Hill,**	**1.54**	**18**	*eP*	Pn	09 12 00.7	-0.3
SVOC				*eS*	Sn	09 12 20.1	-0.5
SVB	**Belmont**	**1.64**	**16**	*eP*	Pn	09 12 02.2	-0.2
SVB				*eS*	Sn	09 12 21.1	-2.0
SVV	**Soufriere Volc**	**1.70**	**17**	*eP*	Pn	09 12 03.5	+0.3
SLB	**Belfond**	**2.23**	**17**	*eP*	Pn	09 12 10.7	+0.4
SLB				*eS*	Sn	09 12 37.8	+0.8
SLBI	**Saint Lucia, B**	**2.44**	**17**	*eP*	Pn	09 12 12.8	-0.1
SLBI				*eS*	Sn	09 12 41.1	-0.7
BBGH	**Gun Hill**	**2.56**	**55**	*eP*	Pn	09 12 14.5	-0.1
BBGH				*eS*	Sn	09 12 44.9	0.0
BIM	**Bigot**	**2.89**	**13**	*eP*	Pn	09 12 19.3	+0.3
BIM				*eS*	Sn	09 12 52.1	-0.7
ANBD	**Bethesda, Anti**	**5.33**	**360**	*eP*	Pn	09 12 53.3	+1.0
BAUV	**El Baul**	**6.79**	**247**	*eP*	Pn	09 13 12.8	+0.5
BAUV				*eS*	Sn	09 14 26.7	-1.4

NEIC ***02*** *09:13:30.4±0.3, 36°.28N±0°.01×97°.51W±0°.01, h5km±5km, Error ellipse: s-maj=1.5km s-min=1.3km az=192.0*
TUL 02 09:13:30.5±0.2, 36°.285N±0°.010×97°.509W±0°.007, h7km±4km, ML2.5, mb_Lg2.5/9(NEIC), ML2.5/64(NEIC), Error ellipse: s-maj=1.5km s-min=0.4km az=204.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.44**	**300**	Pg	Pg	09 13 39.3	+0.2
CROK				Sg	Sg	09 13 45.4	+0.6
CROK				IAML		09 13 45.6	
	comp=E,490nm,0.3s						
OK048	**Pawnee Station**	**0.47**	**74**	Pg	Pg	09 13 39.9	+0.2
OK029	**Liberty Lake**	**0.49**	**175**	Pg	Pg	09 13 40.1	+0.1
OK029				Sg	Sg	09 13 46.8	+0.5
OK033	**Mehan**	**0.52**	**117**	Pg	Pg	09 13 40.6	0.0
OK033				Sg	Sg	09 13 48.1	+0.7
OK033				IAML		09 13 51.5	
	comp=E,309nm,0.1s						
BLOK	**Blackwell**	**0.53**	**26**	Pg	Pg	09 13 41.0	+0.2
BLOK				IAML		09 13 49.2	
	comp=N,420nm,0.2s						
OK051	**E0350 and S346**	**0.59**	**68**		Pg	09 13 42.0	+0.1
GC02	**Grant County #**	**0.63**	**334**	Pg	Pg	09 13 42.7	0.0
ADOK	**Arcadia Dam**	**0.64**	**170**	Pg	Pg	09 13 42.9	+0.1
OK052	**Battle Ridge R**	**0.64**	**117**		Pg	09 13 43.0	+0.1
OK052				Sg	Sg	09 13 51.7	+0.5
OK052				IAML		09 13 51.8	
	comp=N,261nm,0.2s						
QUOK	**Quay**	**0.66**	**100**	Pg	Pg	09 13 43.2	+0.1
QUOK				IAML		09 13 52.3	
	comp=N,330nm,0.2s						
QUOK				Sg	Sg	09 13 52.3	+0.6
KAN13	**South Haven SW**	**0.73**	**2**	Pg	Pg	09 13 44.5	0.0
KAN13				Sg	Sg	09 13 54.4	+0.4
KAN13				IAML		09 14 02.2	
	comp=E,290nm,0.2s						
KAN13				IAML		09 14 02.4	
	comp=N,217nm,0.3s						
KAN14	**Manchester OK**	**0.76**	**332**	Pg	Pg	09 13 45.0	-0.2
KAN14				IAML		09 14 04.7	
	comp=N,210nm,0.1s						
OK032	**Salt Plains WL**	**0.77**	**313**	Pg	Pg	09 13 45.1	-0.2
KAN17	**Caldwell West**	**0.79**	**345**		Pg	09 13 45.5	-0.1
KAN17				IAML		09 13 59.9	
	comp=E,171nm,0.2s						
KAN17				IAML		09 14 03.1	
	comp=N,220nm,0.2s						
KAN09	**Caldwell North**	**0.85**	**354**		Pg	09 13 46.8	-0.2
KAN05	**Bluff City Nor**	**0.87**	**341**		Pg	09 13 47.1	-0.1
KAN05				IAML		09 14 04.2	
	comp=N,217nm,0.1s						
KAN05				IAML		09 14 05.3	
	comp=E,191nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.88**	**176**	Pg	Pg	09 13 47.2	-0.2
OKCSW				IAML		09 14 00.5	
	comp=E,187nm,0.2s						
OKCSW				IAML		09 14 01.6	
	comp=N,215nm,0.1s						
KAN01	**Argonia South**	**0.89**	**347**		Pg	09 13 47.4	-0.2
KAN01				IAML		09 14 05.7	
	comp=E,147nm,0.1s						
KAN01				IAML		09 14 06.9	
	comp=N,150nm,0.2s						
DEOK	**Depew**	**0.93**	**118**	Pg	Pg	09 13 48.0	-0.4
DEOK				IAML		09 14 03.1	
	comp=E,160nm,0.4s						
KAN10	**Anthony SW Sta**	**0.96**	**331**		Pg	09 13 48.6	-0.4
KAN06	**Argonia West S**	**1.00**	**344**		Pg	09 13 49.5	-0.3
KAN06				IAML		09 14 05.8	
	comp=N,178nm,0.1s						
KAN06				IAML		09 14 05.9	
	comp=E,162nm,0.1s						
KS21	**Milan North St**	**1.01**	**353**	IAML		09 14 08.6	
	comp=E,146nm,0.1s						
KS21				IAML		09 14 10.2	
	comp=E,132nm,0.1s						
KS21	**Milan North St**	**1.01**	**353**	Pg	Pg	09 13 49.5	-0.3
KAN08	**Anthony NE Sta**	**1.01**	**339**	Pg	Pg	09 13 49.6	-0.4
KAN08				IAML		09 14 08.2	
	comp=E,140nm,0.1s						
OK038	**West end E0370**	**1.01**	**281**	Pg	Pg	09 13 49.5	-0.4
T35A	**Sooner Cattle**	**1.02**	**52**	Pg	Pg	09 13 49.7	-0.4
T35A				IAML		09 14 04.2	
	comp=N,142nm,0.3s						
T35A				IAML		09 14 04.2	
	comp=E,124nm,0.2s						
FNO	**Franklin**	**1.03**	**175**		Pg	09 13 49.8	-0.5
FNO				IAML		09 14 06.0	
	comp=E,108nm,0.1s						
CSTR	**Hydro, Custer**	**1.15**	**237**		Pg	09 13 51.9	-0.7
NOKA	**Waynoka**	**1.20**	**287**	Pg	Pg	09 13 53.0	-0.6
U32A	**Winter Ranch,**	**1.21**	**275**		Pg	09 13 52.9	-0.8
U32A				IAML		09 14 12.3	
	comp=E,106nm,0.2s						
U32A				IAML		09 14 12.6	
	comp=N,97nm,0.3s						
W35A	**Tecumseh**	**1.24**	**155**		Pb	09 13 53.2	-1.1
W35A				IAML		09 14 17.9	
	comp=E,109nm,0.4s						
TUL3	**Leonard**	**1.44**	**105**		Pn	09 13 56.5	-0.5
ELIS	**Ellis County**	**1.56**	**262**		Pn	09 13 59.1	+0.4
X34A	**Smith Ranch, M**	**1.70**	**189**		Pb	09 14 01.5	-0.6
WMOK	**Wichita Mounta**	**1.86**	**214**		Pn	09 14 02.9	+0.1
PLPT	**Palo Pinto**	**3.53**	**191**	IAmb_Lg		09 15 23.7	
	comp=Z,8.5nm,1.3s						
Z38A	**Mt. Pleasant**	**3.66**	**145**	IAmb_Lg		09 15 32.5	
	comp=Z,17nm,1.0s						
N35A	**Tabor**	**4.80**	**17**	IAmb_Lg		09 16 09.2	
	comp=Z,5.8nm,0.8s						
JCT	**Junction City**	**6.10**	**199**	IAmb_Lg		09 16 49.5	
	comp=Z,5.8nm,0.8s						
ALPN	**Alpine**	**7.81**	**223**	IAmb_Lg		09 17 42.0	
	comp=Z,4.7nm,0.8s						

VAO ***02*** *09:14:50.9±1.2, 19°.99S×69°.31W, h86km, mb4.3*
SJA ***02*** *09:14:57.8±1.5, 20°.34S×68°.71W, h100km, ML3.8, MW3.8*
GUC ***02*** *09:14:59.6±0.8, 20°.42S×68°.89W, h127km±3km, ML3.8*
NEIC ***02*** *09:14:59.2±1.2, 20°.42S±0°.04×69°.01W±0°.08, h132km±6km, mb4.2/12, Error ellipse: s-maj=11.5km s-min=6.0km az=96.0*
ISC 02 09:14:58.2±0.6, 20°.42S±0°.03×68°.92W±0°.05, h131km±5km, n120, σ1$30/155, mb4.1/6, 12C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.35**	**322**		**Pn**	**09 15 17.8**	**+0.7**
PB08				Sn	**Sn**	**09 15 31.8**	**+0.5**
PB08	**IPOC Station P**	**0.35**	**322**	*eP*	**Pn**	**09 15 17.6**	**+0.5**
PB08				*eS*	**Sn**	**09 15 32.0**	**+0.6**
PB08				IAML		09 15 32.4	
	comp=Z,5μm,0.3s						
PB08	**IPOC Station P**	**0.35**	**322**	⇑*iP*	**Pn**	**09 15 17.6**	**+0.5**
PB08				*i* S	**Sn**	**09 15 31.6**	**+0.3**
GO01	**Chusmiza**	**0.79**	**341**		**Pn**	**09 15 20.8**	**+0.9**
GO01				Sn	**Sn**	**09 15 36.8**	**+0.5**
GO01	**Chusmiza**	**0.79**	**341**	⇑*iP*	**Pn**	**09 15 20.6**	**+0.8**
GO01				*i* S	**Sn**	**09 15 36.8**	**+0.5**
PB01	**IPOC Station P**	**0.81**	**220**		**Pn**	**09 15 20.3**	**+0.7**
PB01				Sn	**Sn**	**09 15 36.3**	**+0.4**
PB01	**IPOC Station P**	**0.81**	**220**	*eP*	**Pn**	**09 15 20.3**	**+0.7**
PB01				*eS*	**Sn**	**09 15 36.7**	**+0.8**
PB01				IAML		09 15 37.2	
	comp=Z,2μm,0.4s						
PB01	**IPOC Station P**	**0.81**	**220**	⇑*iP*	**Pn**	**09 15 20.3**	**+0.7**
PB01				*i* S	**Sn**	**09 15 36.0**	**+0.1**
PB01				IAML		09 15 38.3	
	comp=N,3μm,0.2s						
HMBC	**Humberstone**	**0.92**	**279**	*eP*	**Pn**	**09 15 21.1**	**+0.6**
HMBC				*eS*	**Sn**	**09 15 39.0**	**+1.6**
HMBC				IAML		09 15 45.8	
	comp=Z,2μm,0.3s						
HMBC	**Humberstone**	**0.92**	**279**	⇑*iP*	**Pn**	**09 15 21.1**	**+0.6**
HMBC				*i* S	**Sn**	**09 15 37.8**	**+0.4**
HMBC				IAML		09 15 43.1	
	comp=N,2μm,0.6s						
PB11	**IPOC Station P**	**0.95**	**313**	Pn	**Pn**	**09 15 21.6**	**+0.7**
PB11	**IPOC Station P**	**0.95**	**313**	*eP*	**Pn**	**09 15 21.5**	**+0.7**
PB11				*eS*	**Sn**	**09 15 39.1**	**+1.1**
PB11				IAML		09 15 41.0	
	comp=Z,2μm,0.2s						
PB11	**IPOC Station P**	**0.95**	**313**	⇑*iP*	**Pn**	**09 15 21.5**	**+0.7**
PB11				*i* S	**Sn**	**09 15 38.7**	**+0.6**
PB11				IAML		09 15 40.9	
	comp=E,5μm,0.3s						
TA02	**Huaiquique**	**1.14**	**277**		**Pn**	**09 15 23.1**	**+0.7**
TA02	**Huaiquique**	**1.14**	**277**	*eP*	**Pn**	**09 15 23.3**	**+0.8**
TA02				*eS*	**Sn**	**09 15 42.9**	**+1.9**
TA02				IAML		09 15 46.0	
	comp=Z,999nm,0.1s						
TA02	**Huaiquique**	**1.14**	**277**	*i* P	**Pn**	**09 15 23.1**	**+0.7**
TA02				*i* S	**Sn**	**09 15 41.4**	**+0.4**
TA01	**Diego Aracena**	**1.19**	**263**		**Pn**	**09 15 23.4**	**+0.5**
TA01	**Diego Aracena**	**1.19**	**263**	*eP*	**Pn**	**09 15 23.5**	**+0.5**
TA01				*eS*	**Sn**	**09 15 42.0**	**+0.3**
TA01				IAML		09 15 47.1	
	comp=Z,488nm,0.4s						
TA01	**Diego Aracena**	**1.19**	**263**	⇑*iP*	**Pn**	**09 15 23.4**	**+0.5**
TA01				*i* S	**Sn**	**09 15 41.7**	**-0.1**
TA01				IAML		09 15 43.6	
	comp=N,1μm,0.6s						
PATCX	**Punta Patache**	**1.22**	**251**		**Pn**	**09 15 24.1**	**+0.8**
PATCX	**Punta Patache**	**1.22**	**251**	*eP*	**Pn**	**09 15 24.2**	**+0.8**
PATCX				*eS*	**Sn**	**09 15 43.6**	**+1.1**
PATCX				IAML		09 15 44.9	
	comp=Z,1μm,0.7s						
PATCX	**Punta Patache**	**1.22**	**251**	⇑*iP*	**Pn**	**09 15 24.1**	**+0.8**
PATCX				*i* S	**Sn**	**09 15 43.1**	**+0.6**
PATCX				IAML		09 15 44.1	
	comp=E,2μm,0.4s						
PB02	**IPOC Station P**	**1.28**	**225**		**Pn**	**09 15 25.0**	**+1.0**
PB02	**IPOC Station P**	**1.28**	**225**	*eP*	**Pn**	**09 15 24.9**	**+1.0**
PB02				*eS*	**Sn**	**09 15 44.8**	**+1.2**
PB02				IAML		09 15 46.6	
	comp=Z,4μm,0.4s						
PB02	**IPOC Station P**	**1.28**	**225**	⇑*iP*	**Pn**	**09 15 24.9**	**+0.9**
PB02				*i* S	**Sn**	**09 15 44.4**	**+0.7**
PB09	**IPOC Station P**	**1.40**	**192**		**Pn**	**09 15 26.8**	**+1.4**
PB09	**IPOC Station P**	**1.40**	**192**	*eP*	**Pn**	**09 15 26.6**	**+1.2**
PB09				*eS*	**Sn**	**09 15 48.0**	**+1.8**
PB09				IAML		09 15 50.2	
	comp=Z,670nm,0.5s						
PB09	**IPOC Station P**	**1.40**	**192**	⇑*iP*	**Pn**	**09 15 26.6**	**+1.2**
PB09				*i* S	**Sn**	**09 15 47.5**	**+1.3**
PB07	**IPOC Station P**	**1.58**	**214**	Pn	**Pn**	**09 15 28.3**	**+0.9**
PB07	**IPOC Station P**	**1.58**	**214**	*eP*	**Pn**	**09 15 28.1**	**+0.8**
PB07				*eS*	**Sn**	**09 15 50.8**	**+1.1**
PB07				IAML		09 15 53.5	
	comp=Z,696nm,0.4s						
PB07	**IPOC Station P**	**1.58**	**214**	⇑*iP*	**Pn**	**09 15 28.2**	**+0.8**
PB07				*i* S	**Sn**	**09 15 49.5**	**-0.2**
PB07				IAML		09 15 55.4	
	comp=E,952nm,0.4s						
PB16	**IPOC Station P**	**2.15**	**345**	Pn	**Pn**	**09 15 36.2**	**+1.7**
PB16	**IPOC Station P**	**2.15**	**345**	*eP*	**Pn**	**09 15 36.1**	**+1.6**
PB16				*eS*	**Sn**	**09 16 04.0**	**+1.7**
PB16				IAML		09 16 08.2	
	comp=Z,294nm,0.5s						
PB16	**IPOC Station P**	**2.15**	**345**	⇑*iP*	**Pn**	**09 15 36.2**	**+1.7**
PB16				*i* S	**Sn**	**09 16 03.7**	**+1.3**
LVC	**Limon Verde**	**2.18**	**180**	Pn	**Pn**	**09 15 36.1**	**+1.3**
LVC	**Limon Verde**	**2.18**	**180**	*eP*	**Pn**	**09 15 36.0**	**+1.3**
LVC				*eS*	**Sn**	**09 16 04.3**	**+1.5**
LVC	**Limon Verde**	**2.18**	**180**	*i* P	**Pn**	**09 15 36.0**	**+1.3**
LVC				*i* S	**Sn**	**09 16 03.3**	**+0.5**
PB04	**IPOC Station P**	**2.22**	**211**		**Pn**	**09 15 35.9**	**+0.8**
PB04	**IPOC Station P**	**2.22**	**211**	*eP*	**Pn**	**09 15 35.8**	**+0.7**
PB04				*eS*	**Sn**	**09 16 02.6**	**-0.8**
PB04				IAML		09 16 07.0	
	comp=Z,367nm,0.5s						
PB12	**IPOC Station P**	**2.23**	**323**	Pn	**Pn**	**09 15 35.1**	**0.0**
PB12	**IPOC Station P**	**2.23**	**323**	*eP*	**Pn**	**09 15 35.2**	**0.0**
PB12				*eS*	**Sn**	**09 16 03.3**	**-0.2**
PB12				*eS*		09 16 05.0	
PB12				IAML		09 16 06.1	
	comp=Z,272nm,0.4s						
PB12	**IPOC Station P**	**2.23**	**323**	⇑*iP*	**Pn**	**09 15 35.1**	**0.0**
PB12				*i* S	**Sn**	**09 16 03.1**	**-0.4**
PB12				IAML		09 16 09.5	
	comp=N,583nm,0.3s						
PB06	**IPOC Station P**	**2.35**	**195**		**Pn**	**09 15 37.7**	**+1.0**
PB06	**IPOC Station P**	**2.35**	**195**	*eP*	**Pn**	**09 15 37.5**	**+0.8**
PB06				*eS*	**Sn**	**09 16 07.5**	**+1.1**
PB06				IAML		09 16 13.4	
	comp=Z,282nm,0.7s						
PB06	**IPOC Station P**	**2.35**	**195**	⇓*iP*	**Pn**	**09 15 37.5**	**+0.8**
PB06				*i* S	**Sn**	**09 16 05.8**	**-0.5**
PB06				IAML		09 16 09.7	
	comp=N,282nm,0.2s						
AP01	**Chacalluta**	**2.44**	**326**	Pn	**Pn**	**09 15 37.9**	**+0.3**
AF01	**San Pedro de A**	**2.61**	**165**	Pn	**Pn**	**09 15 41.7**	**+1.6**
PB05	**IPOC Station P**	**2.70**	**206**	Pn	**Pn**	**09 15 41.4**	**+0.4**
PB05	**IPOC Station P**	**2.70**	**206**	*eP*	**Pn**	**09 15 41.5**	**+0.4**
PB05				*eS*	**Sn**	**09 16 11.6**	**-2.4**
PB05				IAML		09 16 14.9	
	comp=Z,166nm,0.4s						
PB15	**IPOC Station P**	**2.82**	**190**		**Pn**	**09 15 43.6**	**+1.0**
PB15	**IPOC Station P**	**2.82**	**190**	*eP*	**Pn**	**09 15 43.7**	**+1.0**
PB15				IAML		09 16 22.1	
	comp=Z,598nm,0.3s						
PB15	**IPOC Station P**	**2.82**	**190**	*i* P	**Pn**	**09 15 43.5**	**+0.7**
PB15				*i* S	**Sn**	**09 16 18.0**	**+0.9**
PB10	**IPOC Station P**	**3.43**	**206**	Pn	**Pn**	**09 15 50.4**	**0.0**
LPAZ	**La Paz**	**4.18**	**11**	Pn	**Pn**	**09 16 02.1**	**+1.2**
PB14	**IPOC Station P**	**4.41**	**198**	Pn	**Pn**	**09 16 03.6**	**0.0**
PB14	**IPOC Station P**	**4.41**	**198**	*eP*	**Pn**	**09 16 03.7**	**0.0**
PB14				IAML		09 17 07.8	
	comp=Z,48nm,0.7s						
GO02	**Mina Guanaco**	**4.76**	**187**		**Pn**	**09 16 08.2**	**-0.2**
AC01	**Pan de Azucar**	**5.91**	**195**	Pn	**Pn**	**09 16 21.5**	**-1.9**
AC02	**Maricunga**	**6.39**	**182**	Pn	**Pn**	**09 16 30.0**	**-0.4**
AC05	**El Transito**	**8.47**	**188**	Pn	**Pn**	**09 16 56.0**	**-2.1**
BBSD	**Serra de San D**	**8.51**	**69**	*eP*	**Pn**	**09 16 55.4**	**-3.1**
SIV	**San Ignacio**	**8.66**	**61**	Pn	**Pn**	**09 16 57.9**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=255,slow=9.6,SNR=75						
SIV				Lg	Lg	09 18 40.5	
	baz=261,slow=19						
	comp=Z,7.7nm,0.4s						
LCO	**Las Campanas**	**8.71**	**190**	Pn	**Pn**	**09 16 59.2**	**-2.1**
BBRB	**Robore, Bolivi**	**8.87**	**78**	*eP*	**Pn**	**09 16 59.2**	**-4.1**
CO01	**Juntas del Tor**	**9.58**	**186**	Pn	**Pn**	**09 17 12.1**	**-0.9**
CO03	**El Pedregal**	**10.50**	**188**	Pn	**Pn**	**09 17 21.4**	**-3.8**
PTLB	**Pontes e Lacer**	**10.54**	**64**	Pn	**Pn**	**09 17 24.5**	**-1.3**
PTLB	**Pontes e Lacer**	**10.54**	**64**	*eP*	**Pn**	**09 17 21.8**	**-4.0**
VILB	**Vilhena**	**11.18**	**50**	Pn	**Pn**	**09 17 33.6**	**-0.7**
NNA	**Nana**	**11.31**	**317**	Pn	**Pn**	**09 17 33.6**	**-2.5**
ANTJ	**Antonio Joao (**	**12.15**	**100**	*eP*	**Pn**	**09 17 46.2**	**-0.9**
CPUP	**Villa Florida**	**12.16**	**121**		**Pn**	**09 17 46.4**	**-0.8**
AQDB	**Aquidauana**	**12.40**	**93**	*eP*	**Pn**	**09 17 50.9**	**+0.6**
MT16	**CCHEN**	**13.04**	**186**	Pn	**Pn**	**09 17 57.9**	**-0.6**
RVDE	**Rio Verde (Bra**	**13.24**	**86**	*eP*	**Pn**	**09 18 00.3**	**-0.9**
SALV	**Santo Antonio**	**13.35**	**72**	*eP*	**Pn**	**09 18 00.2**	**-2.4**
PP1B	**Ponte de Pedra**	**13.57**	**80**	*eP*	**Pn**	**09 18 02.8**	**-2.8**
RPRD	**Ribas do Rio P**	**14.27**	**93**	*eP*	**Pn**	**09 18 13.7**	**-0.7**
CRSM	**Crissiumal (Br**	**15.31**	**120**	*eP*	**P**	**09 18 29.0**	**-0.1**
FRBT	**Francisco Belt**	**15.59**	**114**	*eP*	**P**	**09 18 33.9**	**+1.5**
RODS	**Rosario do Sul**	**15.85**	**131**	*eP*	**P**	**09 18 36.3**	**+1.2**
PTGB	**Pitanga**	**16.15**	**108**	*eP*	**P**	**09 18 40.2**	**+1.6**
PCMB	**Pacaembu**	**16.54**	**97**	*eP*	**Pn**	**09 18 42.6**	**+0.1**
ALGR	**Alto Alegre (B**	**16.68**	**123**	*eP*	**P**	**09 18 45.2**	**+0.8**
ITAB	**Concordia**	**16.79**	**117**	P	**Pn**	**09 18 45.9**	**+0.3**
ITAB				IAmb	IAmb	09 18 46.6	
	comp=Z,11nm,0.7s						
ITAB	**Concordia**	**16.79**	**117**	*eP*	**Pn**	**09 18 45.8**	**+0.3**
LDASE	**Londrina, Braz**	**16.79**	**103**	*eP*	**P**	**09 18 45.5**	**-0.1**
CPSB	**Cacapava Do Su**	**17.14**	**129**	*eP*	**Pn**	**09 18 50.0**	**+0.2**
ITRB	**Iturama**	**17.46**	**91**	*eP*	**Pn**	**09 18 53.4**	**-0.4**
PLTB	**Pedras Altas**	**17.78**	**133**	P	**P**	**09 18 56.4**	**-0.1**
PLTB				IAmb	IAmb	09 19 26.6	
	comp=Z,14nm,1.3s						
PLTB	**Pedras Altas**	**17.78**	**133**	*eP*	**Pn**	**09 18 59.5**	**+2.0**
FRTB	**Fartura**	**18.20**	**103**	*eP*	**P**	**09 19 01.1**	**-0.1**
TRQA	**Tornquist**	**18.58**	**163**	P	**Pn**	**09 19 06.5**	**-0.4**
TRQA				IAmb	IAmb	09 19 10.6	
	comp=Z,21nm,1.4s						
CNLB	**Canela**	**18.62**	**122**	*eP*	**Pn**	**09 19 08.8**	**+1.3**
NPGB	**Novo Progresso**	**18.70**	**47**	*eP*	**P**	**09 19 01.1**	**-5.5**
SNDB	**Serra Nova Dou**	**18.88**	**66**	*eP*	**P**	**09 19 08.1**	**-0.6**
BB19B	**Bebedouro**	**19.09**	**96**	*eP*	**P**	**09 19 11.3**	**+0.5**
BOSC	**San Juan Bosco**	**19.54**	**330

KNDC ⇓S **Sg** **09 20 47.5 +0.1**
2µm,0.2s
KNDC Almaty 0.06 63 PG **Pg** **09 20 46.8 +0.6**
MDOK Medeo 0.11 104 ⇑P **Pg** **09 20 46.8 -0.4**
148nm,0.3s
MDOK Pg **Pg** **09 20 46.9 -0.2**
561nm,0.1s
MDOK ⇓S **Sg** **09 20 48.6 -0.3**
1µm,0.4s
MDOK Lg Lg 09 20 48.6
2µm,0.1s
MDOK Medeo 0.11 104 *e*P **Pg** **09 20 46.9 -0.2**
561nm,0.1s
MDOK *e*S **Sg** **09 20 48.6 -0.3**
2µm,0.1s
MDOK Medeo 0.11 104 PG **Pg** **09 20 46.7 -0.4**
MDOK Medeo 0.11 104 *e*P **Pg** **09 20 46.9 -0.2**
baz=11
MDOK *e*S **Sg** **09 20 48.7 -0.3**
baz=11
TNSS Tian-Shan 0.16 167 P **Pg** **09 20 48.1 +0.2**
691nm,0.1s
TNSS S **Sg** **09 20 51.0 +0.6**
2µm,0.2s
TNSS Tian-Shan 0.16 167 *e*P **Pg** **09 20 48.1 +0.2**
691nm,0.1s
TNSS *e*S **Sg** **09 20 51.0 +0.6**
2µm,0.2s
TNSS Tian-Shan 0.16 167 *e*P **Pg** **09 20 48.1 +0.2**
baz=72
TNSS *e*S **Sg** **09 20 50.9 +0.6**
baz=72
KOTS Kotyrbulak 0.16 75 P **Pg** **09 20 47.9 0.0**
389nm,0.2s
KOTS S **Sg** **09 20 50.4 +0.1**
3µm,0.3s
KOTS Kotyrbulak 0.16 75 *e*P **Pg** **09 20 47.9 0.0**
389nm,0.2s
KOTS *e*S **Sg** **09 20 50.4 +0.1**
3µm,0.3s
KOTS Kotyrbulak 0.16 75 *e*P **Pg** **09 20 47.9 0.0**
baz=77
KOTS *e*S **Sg** **09 20 50.4 +0.1**
baz=77
IZV Izvestkoviy 0.26 233 P **Pg** **09 20 50.0 +0.3**
217nm,0.2s
IZV S **Sg** **09 20 54.1 +1.0**
1µm,0.5s
IZV Izvestkoviy 0.26 233 *e*P **Pg** **09 20 50.0 +0.3**
217nm,0.2s
IZV *e*S **Sg** **09 20 54.1 +1.0**
1µm,0.5s
IZV Izvestkoviy 0.26 233 *e*P **Pg** **09 20 50.0 +0.3**
baz=33
IZV *e*S **Sg** **09 20 54.1 +1.0**
baz=33
MTBS Maitube 0.35 260 P **Pg** **09 20 51.5 +0.2**
79nm,0.2s
MTBS S **Sg** **09 20 56.6 +0.6**
679nm,0.4s
MTBS Maitube 0.35 260 *e*P **Pg** **09 20 51.5 +0.2**
79nm,0.2s
MTBS *e*S **Sg** **09 20 56.6 +0.6**
679nm,0.4s
MTBS Maitube 0.35 260 *e*P **Pg** **09 20 51.6 +0.2**
baz=59
MTBS *e*S **Sg** **09 20 56.6 +0.6**
baz=59
KTBS Karatobe 0.54 343 P **Pg** **09 20 54.7 -0.3**
75nm,0.2s
KTBS S **Sg** **09 21 02.2 +0.1**
828nm,0.3s
KTBS Karatobe 0.54 343 *e*P **Pg** **09 20 54.7 -0.3**
75nm,0.2s
KTBS *e*S **Sg** **09 21 02.2 +0.1**
828nm,0.3s
KTBS Karatobe 0.54 343 *e*P **Pg** **09 20 54.7 -0.3**
baz=42
KTBS *e*S **Sg** **09 21 02.2 +0.1**
baz=42
CHKK Chushkaly 0.67 6 P **Pg** **09 20 56.8 -0.6**
185nm,0.2s
CHKK S **Sg** **09 21 05.7 -0.3**
373nm,0.2s
CHKK Chushkaly 0.67 6 *e*P **Pg** **09 20 56.8 -0.6**
185nm,0.2s
CHKK *e*S **Sg** **09 21 05.7 -0.3**
373nm,0.2s
CHKK Chushkaly 0.67 6 *e*P **Pg** **09 20 56.8 -0.6**
baz=5.0
CHKK *e*S **Sg** **09 21 05.7 -0.3**
baz=5.0
ANVS Anan'yevo 0.70 126 ⇑*i*P **Pg** **09 20 57.3 -0.6**
baz=27
ANVS ⇑*i*S **Sg** **09 21 06.8 -0.2**
baz=27
KST Kastek 0.70 258 P **Pg** **09 20 57.9 -0.1**
41nm,0.2s
KST S **Sg** **09 21 07.4 +0.3**
225nm,0.4s
KST Kastek 0.70 258 *e*P **Pg** **09 20 57.9 -0.1**
41nm,0.2s
KST *e*S **Sg** **09 21 07.4 +0.3**
225nm,0.4s
KST Kastek 0.70 258 *e*P **Pg** **09 20 57.9 -0.1**
baz=58
KST *e*S **Sg** **09 21 07.4 +0.3**
baz=58
KUU Kurty 0.81 330 P **Pg** **09 20 59.1 -1.0**
44nm,0.3s
KUU S **Sg** **09 21 09.6 -1.1**
297nm,0.3s
KUU Kurty 0.81 330 *e*P **Pg** **09 20 59.1 -1.0**
44nm,0.3s
KUU *e*S **Sg** **09 21 09.6 -1.1**
297nm,0.3s
KUU Kurty 0.81 330 *e*P **Pg** **09 20 59.1 -1.0**
baz=29
KUU *e*S **Sg** **09 21 09.6 -1.1**
baz=29
DGS Degeres 0.82 274 P **Pg** **09 20 59.9 -0.4**
20nm,0.3s
DGS S **Sg** **09 21 11.1 +0.1**
151nm,0.5s
DGS Degeres 0.82 274 *e*P **Pg** **09 20 59.9 -0.4**
20nm,0.3s
DGS *e*S **Sg** **09 21 11.1 +0.1**
151nm,0.5s
DGS Degeres 0.82 274 *e*P **Pg** **09 20 59.9 -0.4**
baz=73
DGS *e*S **Sg** **09 21 11.1 +0.1**
baz=73
TKM2 Tokmak 2 0.99 255 ⇓P **Pg** **09 21 03.1 -0.4**
18nm,0.1s,SNR=117
TKM2 ⇓S **Sg** **09 21 16.6 +0.1**
158nm,0.1s
TKM2 Tokmak 2 0.99 255 ⇑P **Pg** **09 21 03.0 -0.6**
5.2nm,0.2s
TKM2 ⇑S **Sg** **09 21 16.6 +0.1**
66nm,0.5s
TKM2 Tokmak 2 0.99 255 *e*PG **Pg** **09 21 03.1 -0.4**
TKM2 Tokmak 2 0.99 255 ⇓*i*P **Pg** **09 21 03.0 -0.6**
baz=54
TKM2 ⇓*e*S **Sg** **09 21 16.5 +0.1**
baz=54
BOOM Boomskoye usch 0.99 225 **Pg** **09 21 02.9 -0.7**
BOOM Sg **Sg** **09 21 15.2 -1.3**
BOOM Boomskoye usch 0.99 225 PG **Pg** **09 21 02.9 -0.7**
BOOM 09 21 15.2
BOOM Boomskoye usch 0.99 225 ⇑*i*P **Pg** **09 21 02.7 -0.9**
baz=26
BOOM ⇑*e*S **Sg** **09 21 16.0 -0.5**
baz=26
KRBS Karabastau 1.02 300 P **Pb** **09 21 03.2 -1.4**
38nm,0.1s
KRBS S **Sg** **09 21 16.7 -0.7**
121nm,0.1s
KRBS Karabastau 1.02 300 *e*P **Pb** **09 21 03.2 -1.4**
38nm,0.1s
KRBS *e*S **Sg** **09 21 16.7 -0.7**
121nm,0.1s
KRBS Karabastau 1.02 300 *e*P **Pb** **09 21 03.2 -1.4**
baz=99
KRBS *e*S **Sg** **09 21 16.7 -0.7**
baz=99
ULHL Ulahol 1.06 207 ⇓P **Pb** **09 21 04.4 -1.0**
83nm,0.2s,SNR=56
ULHL ⇓S **Sg** **09 21 18.7 0.0**
151nm,0.3s
ULHL Ulahol 1.06 207 *e*PG **Pb** **09 21 04.2 -1.2**
ULHL Ulahol 1.06 207 ⇑*i*P **Pb** **09 21 03.9 -1.5**
baz=8.0
ULHL ⇑*i*S **Sg** **09 21 18.3 -0.4**
baz=8.0
KDJ Kajisay 1.08 169 *i* PG **Pb** **09 21 04.3 -1.4**
KDJ Kajisay 1.08 169 ⇑*i*P **Pb** **09 21 04.4 -1.3**
baz=69
KDJ ⇑*e*S **Sb** **09 21 18.8 -1.3**
baz=69
SATY Saty 1.11 96 P **Pb** **09 21 04.8 -1.4**
59nm,0.1s
SATY S **Sb** **09 21 19.2 -1.8**
287nm,0.1s
SATY Saty 1.11 96 *e*P **Pb** **09 21 04.8 -1.4**
59nm,0.1s
SATY *e*S **Sb** **09 21 19.2 -1.8**
287nm,0.1s
SATY Saty 1.11 96 *e*P **Pb** **09 21 04.8 -1.4**
baz=97
SATY *e*S **Sb** **09 21 19.2 -1.8**
baz=97
ZHN Zhinishke 1.12 91 P **Pb** **09 21 04.8 -1.6**
46nm,0.1s
ZHN S **Sb** **09 21 19.4 -1.8**
586nm,0.2s
ZHN Zhinishke 1.12 91 *e*P **Pb** **09 21 04.8 -1.6**
46nm,0.1s
ZHN *e*S **Sb** **09 21 19.4 -1.8**
586nm,0.2s
ZHN Zhinishke 1.12 91 *e*PG **Pb** **09 21 04.6 -1.8**
ZHN Zhinishke 1.12 91 *e*P **Pb** **09 21 04.8 -1.6**
baz=91
ZHN *e*S **Sb** **09 21 19.5 -1.8**
baz=91
ARXS Arharly 1.22 33 P **Pn** **09 21 06.6 -1.5**
147nm,0.3s
ARXS S **Sb** **09 21 22.7 -1.4**
569nm,0.2s
ARXS Arharly 1.22 33 *e*P **Pn** **09 21 06.6 -1.5**
147nm,0.3s
ARXS *e*S **Sb** **09 21 22.7 -1.4**
569nm,0.2s
ARXS Arharly 1.22 33 *e*PG **Pn** **09 21 06.6 -1.5**
PRZ Przheval'sk 1.31 122 Pn **Pg** **09 21 09.8 +0.1**
PRZ Sn **Sg** **09 21 27.6 +0.9**
PRZ Przheval'sk 1.31 122 *e*PG **Pb** **09 21 09.0 -0.6**
PRZ Przheval'sk 1.31 122 ⇓*i*P **Pn** **09 21 08.0 -1.5**
baz=22
PRZ ⇓*i*S **Sb** **09 21 25.0 -1.7**
baz=22
KPKS Kokpek 1.33 78 P **Pn** **09 21 08.8 -0.8**
96nm,0.1s
KPKS S **Sn** **09 21 26.2 -1.5**
384nm,0.2s
KPKS Kokpek 1.33 78 *e*P **Pn** **09 21 08.8 -0.8**
96nm,0.1s
KPKS *e*S **Sn** **09 21 26.2 -1.5**
384nm,0.2s
KPKS Kokpek 1.33 78 *e*PG **Pn** **09 21 08.9 -0.8**
KPKS Kokpek 1.33 78 *e*P **Pn** **09 21 08.8 -0.8**
baz=78
KPKS *e*S **Sn** **09 21 26.2 -1.5**
baz=78
BLB Baldybastay 1.46 51 P **Pn** **09 21 10.8 -0.7**
92nm,0.2s
BLB S **Sb** **09 21 29.7 -1.3**
179nm,0.3s
KBK Karagaybulak 1.53 250 ⇑P **Pb** **09 21 12.8 -0.5**
35nm,0.1s,SNR=24
KBK ⇓S **Sg** **09 21 33.9 +0.2**
249nm,0.3s
KBK Karagaybulak 1.53 250 *eP** **Pb** **09 21 12.8 -0.5**
KBK Karagaybulak 1.53 250 ⇓*i*P **Pb** **09 21 12.6 -0.7**
baz=50
KBK ⇓*i*S **Sb** **09 21 32.9 0.0**
baz=50
UZB Uzynbulak 1.56 91 P **Pb** **09 21 12.4 -1.3**
52nm,0.2s
UZB S **Sb** **09 21 32.4 -1.2**
264nm,0.2s
UZB Uzynbulak 1.56 91 *e*P **Pb** **09 21 12.4 -1.3**
52nm,0.2s
UZB *e*S **Sb** **09 21 32.5 -1.2**
264nm,0.2s
UZB Uzynbulak 1.56 91 *eP** **Pb** **09 21 12.5 -1.3**
UZB Uzynbulak 1.56 91 *e*P **Pb** **09 21 12.5 -1.3**
baz=91
UZB *e*S **Sb** **09 21 32.5 -1.2**
baz=91
CHMS Chumysh 1.58 264 ⇑P **Pb** **09 21 13.4 -0.7**
25nm,0.2s,SNR=24
CHMS ⇓S **Sb** **09 21 34.4 0.0**
113nm,0.2s
CHMS Chumysh 1.58 264 ⇑P **Pb** **09 21 13.4 -0.7**
21nm,0.6s
CHMS ⇓S **Sb** **09 21 34.1 -0.3**
75nm,0.3s
CHMS Chumysh 1.58 264 *e*PN **Pb** **09 21 13.4 -0.7**
CHMS Chumysh 1.58 264 ⇓*e*P **Pb** **09 21 13.5 -0.7**
baz=63
CHMS ⇓*i*S **Sb** **09 21 34.5 +0.1**
baz=63
TARG Taragay, Kyrgy 1.61 155 Pn **Pb** **09 21 14.1 -0.7**
TARG Sn **Sn** **09 21 32.5 -2.5**
TARG Taragay, Kyrgy 1.61 155 PN **Pb** **09 21 14.1 -0.7**
TARG 09 21 32.5
SGDS Sogindy 1.68 280 P **Pb** **09 21 14.8 -1.0**
31nm,0.3s
SGDS S **Sb** **09 21 36.3 -0.8**
52nm,0.2s
SGDS Sogindy 1.68 280 *e*PN **Pb** **09 21 14.9 -0.8**
FRU1 Bishkek 1.71 258 Pn **Pn** **09 21 14.2 -0.6**
FRU1 Bishkek 1.71 258 PN **Pn** **09 21 14.2 -0.6**
FRU1 Bishkek 1.71 258 ⇓*i*P **Pb** **09 21 15.8 -0.5**
baz=58
FRU1 ⇓*i*S **Sb** **09 21 38.3 +0.3**
baz=58
USP Ospenovka 1.75 273 ⇑P **Pb** **09 21 16.7 -0.4**
26nm,0.2s,SNR=28
USP ⇑S **Sb** **09 21 39.9 +0.6**
82nm,0.2s
USP Ospenovka 1.75 273 *e*PN **Pb** **09 21 16.5 -0.6**
USP Ospenovka 1.75 273 ⇑*i*P **Pb** **09 21 16.5 -0.6**
baz=73
USP ⇑*i*S **Sb** **09 21 39.6 +0.3**
baz=73
AAK Ala-Archa 1.85 253 ⇓P **Pb** **09 21 18.3 -0.5**
32nm,0.3s,SNR=29
AAK ⇑S **Sb** **09 21 43.1 +0.9**
61nm,0.3s
AAK Ala-Archa 1.85 253 Pn **Pn** **09 21 16.5 -0.3**
AAK Ala-Archa 1.85 253 *d* iPN **Pb** **09 21 18.1 -0.7**
AAK Ala-Archa 1.85 253 ⇓*i*P **Pb** **09 21 18.2 -0.6**
baz=53
AAK ⇓*i*S **Sb** **09 21 42.3 +0.1**
baz=53
SHLS Shalkode 1.88 90 Pg **Pg** **09 21 24.4 +3.9**
75nm,0.3s
SHLS Lg Lg 09 21 52.7
186nm,0.3s
SHLS Shalkode 1.88 90 *e*P **Pg** **09 21 24.4 +3.9**
75nm,0.3s
SHLS *e*S **Sg** **09 21 52.7 +7.9**
186nm,0.3s
NRN Naryn 1.88 201 Pn **Pn** **09 21 16.7 -0.7**
NRN Naryn 1.88 201 *e*PN **Pb** **09 21 19.1 -0.3**
NRN Naryn 1.88 201 ⇑*i*P **Pb** **09 21 18.9 -0.5**
baz=2.0
NRN ⇑*i*S **Sb** **09 21 43.5 +0.3**
baz=2.0
PDGK Podgornoye 1.90 85 P **Pb** **09 21 18.8 -0.8**
12nm,0.2s
PDGK S **Sb** **09 21 43.2 -0.4**
54nm,0.3s
PDGK Podgornoye 1.90 85 PN **Pn** **09 21 17.0 -0.5**
UCH Uchtor 2.00 242 ⇑P **Pb** **09 21 21.2 -0.4**
28nm,0.3s,SNR=21
UCH ⇓S **Sg** **09 21 48.3 -0.6**
44nm,0.3s
UCH Uchtor 2.00 242 *e*PN **Pb** **09 21 20.9 -0.7**
UCH Uchtor 2.00 242 ⇓*e*P **Pb** **09 21 20.1 -1.5**
baz=42
UCH ⇓*i*S **Sb** **09 21 46.3 -0.6**
baz=42
KNOS Konyrlen 2.02 54 Pg **Pb** **09 21 21.1 -0.6**
62nm,0.2s
KNOS Lg Lg 09 21 47.2
112nm,0.1s
TDK Taldyqorghan 2.11 30 Pg **Pb** **09 21 21.9 -1.2**
214nm,0.4s
TDK Lg Lg 09 21 49.1
601nm,0.4s
TDK Taldyqorghan 2.11 30 *e*P **Pb** **09 21 21.9 -1.2**
214nm,0.4s
TDK *e*S **Sb** **09 21 49.1 -0.4**
601nm,0.4s
ARLS Aral 2.32 236 *e*PN **Pb** **09 21 25.4 -1.4**
ARLS Aral 2.32 236 ⇓*i*P **Pn** **09 21 24.4 +1.1**
baz=36
ARLS ⇓*i*S **Sb** **09 21 53.6 -2.1**
baz=36
EKS2 Erkin-Say 2.35 258 ⇑P **Pb** **09 21 26.0 -1.3**
9.1nm,0.2s,SNR=17
EKS2 Erkin-Say 2.35 258 *e*PN **Pb** **09 21 25.6 -1.7**
EKS2 Erkin-Say 2.35 258 ⇑*i*P **Pn** **09 21 24.7 +1.0**
baz=58
EKS2 ⇑*e*S **Sb** **09 21 54.3 -2.3**
baz=58
DJR Jarkent 2.39 60 Pg **Pb** **09 21 27.3 -0.6**
19nm,0.1s
DJR Lg Lg 09 21 57.7
160nm,0.3s
DJR Jarkent 2.39 60 *e*P **Pb** **09 21 27.3 -0.6**
19nm,0.1s
DJR *e*S **Sb** **09 21 57.7 +0.2**
160nm,0.3s
KTMS Ketmen 2.53 83 Pg **Pb** **09 21 29.9 -0.5**
9.1nm,0.2s
KTMS Lg Lg 09 22 02.1
214nm,0.6s
KTMS Ketmen 2.53 83 *e*P **Pb** **09 21 29.9 -0.5**
9.1nm,0.2s
KTMS *e*S **Sb** **09 22 02.1 +0.3**
214nm,0.6s
MRKS Merke 2.73 262 Pg **Pb** **09 21 35.0 +1.3**
11nm,0.5s
MRKS Lg Lg 09 22 10.9
67nm,0.4s
MRKS Merke 2.73 262 *e*P **Pb** **09 21 35.0 +1.3**
11nm,0.5s
MRKS *e*S **Sg** **09 22 10.9 -1.3**
67nm,0.4s
KAPS Kapalarasan 2.74 39 Pg **Pb** **09 21 33.5 -0.3**
30nm,0.4s
KAPS Lg Lg 09 22 08.7
79nm,0.2s
KAPS Kapalarasan 2.74 39 *e*P **Pb** **09 21 33.5 -0.3**
30nm,0.4s
KAPS *e*S **Sb** **09 22 08.7 +1.0**
79nm,0.2s
BTLS Baital 2.76 313 Pg **Pb** **09 21 34.3 +0.1**
8.1nm,0.3s
BTLS Lg Lg 09 22 09.8
15nm,0.4s
BTLS Baital 2.76 313 *e*P **Pb** **09 21 34.3 +0.1**
8.1nm,0.3s
BTLS *e*S **Sb** **09 22 09.8 +1.5**
15nm,0.4s
MNAS Manas 3.31 259 ⇑*e*P **Pn** **09 21 38.1 +1.3**
baz=59
MNAS ⇑*e*S **Sn** **09 22 17.4 +0.9**
baz=59
ARSB Arslanbob 3.45 239 Pn **Pn** **09 21 39.9 +1.1**
ARSB Arslanbob 3.45 239 PN **Pn** **09 21 39.9 +1.1**
ARSB Arslanbob 3.45 239 ⇑*i*P **Pn** **09 21 40.1 +1.2**
baz=39
ARSB ⇑*i*S **Sn** **09 22 20.9 +0.8**
baz=39
KK31 Karatay Array 4.67 271 ⇑Pg **Pg** **09 22 10.6 -3.4**
1.2nm,0.4s
KK31 ⇓Lg Lg 09 23 10.9
10.0nm,0.5s,baz=82,slow=28,SNR=8.8
KK31 Karatay Array 4.67 271 Pn **Pn** **09 21 56.0 +0.6**
KK31 Karatay Array 4.67 271 PN **Pn** **09 21 56.1 +0.6**
KKAR Karatay Array 4.67 271 Pn **Pn** **09 21 56.0 +0.5**
KKAR Karatay Array 4.67 271 PN **Pn** **09 21 56.0 +0.5**
MAKZ Makanchi 5.10 43 ⇑Lg Lg 09 23 26.5
5.1nm,0.6s
MK31 Makanchi Array 5.25 45 Pn **Pn** **09 22 04.7 +1.3**
0.9nm,0.3s,baz=225,slow=15,SNR=26
MK31 ⇓Pg **Pg** **09 22 22.3 -2.8**
1.3nm,0.3s,baz=221,slow=13,SNR=4.6
MK31 ⇓Sn **Sn** **09 23 08.2 +3.9**
3.7nm,0.6s,baz=224,slow=24,SNR=5.1
MK31 ⇑Lg Lg 09 23 30.7
4.0nm,0.5s
MK31 Makanchi Array 5.25 45 Pn **Pn** **09 22 05.0 +1.5**
MK31 Makanchi Array 5.25 45 *d* iPN **Pn** **09 22 05.0 +1.5**
MKAR Makanchi Array 5.25 45 Pn **Pn** **09 22 04.8 +1.4**
MKAR Makanchi Array 5.25 45 *i* PN **Pn** **09 22 05.0 +1.5**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
BTK Batken 5.53 238 Pn **Pn** **09 22 07.1 -0.2**
BTK Batken 5.53 238 PN **Pn** **09 22 07.1 -0.2**
OTUK Ortayu 5.98 329 ⇑Pn **Pn** **09 22 13.4 0.0**
comp=Z,1.1nm,0.3s
OTUK ⇑Sn **Sn** **09 23 24.5 +2.4**
comp=Z,5.4nm,0.7s
OTUK ⇑Lg Lg 09 23 54.8
comp=Z,6.3nm,0.5s
OTUK Ortayu 5.98 329 PN **Pn** **09 22 13.4 0.0**
OTUK S **Sn** **09 23 24.5 +2.4**
KURBB Kurchatov Arra 7.52 8 ⇑Pn **Pn** **09 22 36.2 +1.7**
comp=Z,5.5nm,1.4s
KURBB ⇑Lg Lg 09 24 45.1
comp=Z,18nm,0.7s
KURBB Kurchatov Arra 7.52 8 P **Pn** **09 22 36.1 +1.7**
KURK Kurchatov 7.62 8 ⇑Lg Lg 09 24 45.4
comp=Z,25nm,1.1s
BRVK Borovoye 10.81 338 Pn **Pn** **09 23 20.7 +1.1**
BRVK Borovoye 10.81 338 ⇓*e*P **Pn** **09 23 20.0 +0.4**
BRVK pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 13.20 303 Pn **Pn** **09 23 52.9 +0.6**
ARU Arti 17.68 325 P **P** **09 24 52.1 0.0**
ARU S **S** **09 28 12.3 -3.4**
ULN Ulaanbaatar 21.56 67 ⇑*e*P **P** **09 25 37.1 +2.5**
ULN pmax pmax
comp=Z,4.0nm,1.6s
NRIK Noril'sk 26.79 8 ⇑*e*P **P** **09 26 23.8 -0.9**
NRIK pmax pmax
comp=Z,2.0nm,1.3s

*IDC **02** 09:39:21.8±1.0,36°.65N×105°.95E,h0km,mb3.5/7, mbtmp3.6/8,ML3.3/1,MS3.0/4,Error ellipse: s-maj=44.6km s-min=17.6km az=66.0*

ISC 02 09:39:27.1±1.2,36.7N±0°.1×106°.0E±0°.3,h35km,n10, σ0s13/9,mb3.5/6,MS2.9/3,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**11.14**	**2**	Pn	Pn		**Pn**	**09 42 04.0**	**+0.1**
	0.2nm,0.3s,baz=190,slow=15,SNR=10.0								
SONM				Sn	Sn		**Sn**	**09 44 07.0**	**-0.1**
	0.3nm,0.3s,baz=197,slow=23,SNR=2.8								
SONM				Lg	Lg		Lg	09 45 18.5	
	0.2nm,0.3s,baz=183,slow=22,SNR=2.2								
	1.5nm,0.5s								
KSRS	**Korea Array**	**17.55**	**81**	LR	LR		LR	09 49 50.6	
	comp=Z,21nm,19.8s,baz=260,slow=36								
MKAR	**Makanchi Array**	**20.27**	**307**	P	P		**P**	**09 43 59.4**	**0.0**
	0.5nm,0.7s,baz=104,slow=11,SNR=6.3								
MKAR				LR	LR		LR	09 51 22.8	
	comp=Z,46nm,18.8s,baz=35,slow=36								
	0.5nm,0.7s								
ZALV	**Zalesovo Beam**	**22.63**	**326**	P	P		**P**	**09 44 24.5**	**-0.2**
	0.7nm,0.6s,baz=129,slow=12,SNR=2.2								
ZALV				LR	LR		LR	09 53 15.7	
	comp=Z,25nm,20.8s,baz=120,slow=37								
	0.7nm,0.6s								
KURBB	**Kurchatov Arra**	**24.06**	**314**	P	P		**P**	**09 44 38.8**	**-0.1**
	1.0nm,0.7s,baz=114,slow=11,SNR=4.9								
	1.0nm,0.7s								
NRIK	**Noril'sk**	**34.22**	**349**	P	P		**P**	**09 46 09.0**	**+0.1**
	1.1nm,0.4s,baz=180,slow=14,SNR=8.0								
	1.1nm,0.4s								
WRA	**Warramunga Arr**	**62.39**	**150**	P	P		**P**	**09 49 46.2**	**-0.1**
	1.3nm,1.0s,baz=342,slow=7.2,SNR=3.9								
	1.3nm,1.0s								
ASAR	**Alice Springs**	**65.58**	**152**	P	P		**P**	**09 50 07.3**	**+0.1**

0.4nm,0.6s,baz=332,slow=6.5,SNR=8.6
0.4nm,0.6s

BORG	**Borgarnes**	**70.82**	**339**	LR	LR	10 26 00.2		
	comp=E,41nm,18.0s,baz=176,slow=40							
YKA	**Yellowknife Ar**	**75.91**	**18**	P	**P**	**09 51 09.6**	**0.0**	
	0.2nm,0.6s,baz=332,slow=5.1,SNR=1.7							
	0.2nm,0.6s							

ISN ***02*** *09:42:56.6±0.7, 34°.80N×45°.72E, h13km±999km, ML3.9*
IDC ***02*** *09:42:57.2±1.5, 34°.72N×45°.69E, h0km, mb3.7/6, mbtmp3.6/10, ML3.4/4, MS3.4/18, Error ellipse: s-maj=31.8km s-min=19.7km az=163.0*
TEH ***02*** *09:42:57.0, 34°.80N×45°.76E, h8km±20km, ML4.0*
DSN ***02*** *09:43:04.1±1.8, 34°.68N×46°.49E, h10km, Error ellipse: s-maj=117.6km s-min=16.6km az=44.0*
GII ***02*** *09:43:51.0±0.6, 35°.24N×45°.42E, h8km, Mws4.5, confirmed*

ISC 02 09:42:58.5±0.6, 34°.74N±0°.03×45°.73E±0°.04, h10km, n73, σ1§67/54, mb3.5/6, MS3.4/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.26**	**207**	Pg	**Pg**	**09 43 04.6**	**+0.8**
IDHR	**Dehrash**	**0.54**	**94**	Pg	**Pg**	**09 43 08.3**	**-0.8**
IGHG	**Ghaleghazi**	**0.80**	**120**	Pg	**Pg**	**09 43 14.0**	**0.0**
ILIN	**Lien**	**1.03**	**80**	Pg	**Pg**	**09 43 17.3**	**-1.0**
KCHF	**Cheshme Sefid,**	**1.17**	**113**	Pg	**Pb**	**09 43 21.0**	**0.0**
ILBA	**Ilam Banvizeh**	**1.18**	**160**	Pg	**Pb**	**09 43 21.0**	**0.0**
SDS1	**Sardasht. Az.**	**1.42**	**352**	Pg	**Pn**	**09 43 23.7**	**-0.9**
IBDR	**Badra**	**1.63**	**174**	*e*Pn	**Pn**	**09 43 28.0**	**+0.7**
IBDR				*e*Sn	**Sb**	**09 43 50.0**	**+0.7**
IBZA	**Bozab**	**1.77**	**98**	Pg	**Pb**	**09 43 30.9**	**-0.5**
BHD	**Baghdad**	**1.84**	**218**	*e*Pn	**Pn**	**09 43 30.0**	**-0.2**
BHD				*e*Sn	**Sn**	**09 43 55.0**	**+1.4**
BHD				AML	AML	09 44 17.5	
	comp=E,1μm,0.2s						
IALM	**Almabolaq**	**2.01**	**86**	Pn	**Pb**	**09 43 34.6**	**-0.7**
MAHB	**Mahabad**	**2.02**	**359**	Pn	**Pn**	**09 43 33.4**	**+0.5**
IKFM	**Kafar-mosalman**	**2.13**	**124**	Pn	**Pb**	**09 43 36.5**	**-0.7**
HSAM	**Samen**	**2.43**	**102**	Pn	**Pn**	**09 43 40.3**	**+1.8**
HAGD	**Aghdareh**	**2.81**	**87**	Pn	**Pn**	**09 43 45.6**	**+1.9**
IHSH	**Hashtrud**	**2.85**	**25**	Pn	**Pn**	**09 43 45.5**	**+1.1**
IAZR	**Azarshahr**	**2.94**	**4**	Pn	**Pn**	**09 43 46.6**	**+1.0**
RAFI	**Al-Rafai**	**3.02**	**174**	*e*Pn	**Pn**	**09 43 47.0**	**+0.6**
RAFI				*e*Sn	**Sn**	**09 44 24.0**	**+1.3**
ISRB	**Sarab**	**3.46**	**26**	Pn	**Pn**	**09 43 54.1**	**+1.5**
IMRD	**Marand**	**3.97**	**360**	Pn	**Pn**	**09 44 01.1**	**+1.4**
IQOM	**Qom**	**4.39**	**87**	Pn	**Pn**	**09 44 06.9**	**+1.4**
GRMI	**Germi**	**4.42**	**22**	Pn	**Pn**	**09 44 07.0**	**+1.3**
QAMS	**Qamsar**	**4.80**	**100**	Pn	**Pn**	**09 44 13.4**	**+2.3**
JHBN	**Jahan bin**	**4.82**	**120**	Pn	**Pn**	**09 44 13.3**	**+1.9**
IVRN	**Varamin**	**4.94**	**85**	Pn	**Pn**	**09 44 14.3**	**+1.5**
ZNGN	**Zangian**	**5.02**	**120**	Pn	**Pn**	**09 44 15.6**	**+1.5**
IKLH	**Kolahrood**	**5.06**	**105**	Pn	**Pn**	**09 44 16.9**	**+2.3**
ISFB	**Sefidab**	**5.38**	**92**	Pn	**Pn**	**09 44 20.1**	**+1.1**
GNI	**Garni**	**5.46**	**352**	Pn	Pb	09 44 27.8	-6.2
	comp=E,0.5nm,0.3s,baz=234,slow=19,SNR=2.1						
GNI				Lg	Lg	09 45 51.4	
	comp=E,0.6nm,0.3s,baz=41,slow=19,SNR=1.2						
IZEF	**Zefreh**	**5.79**	**107**	Pn	**Pn**	**09 44 27.0**	**+2.3**
KLNJ	**Kolanjah**	**6.17**	**125**	Pn	**Pn**	**09 44 31.6**	**+1.5**
ASF	**Jabal al Asfar**	**7.81**	**253**	Pn	**Pn**	**09 44 52.9**	**+0.5**
	comp=E,0.5nm,0.3s,baz=233,slow=20,SNR=2.7						
ASF				Pg	Pg	09 45 22.9	-5.2
	comp=E,0.4nm,0.3s,baz=72,slow=20,SNR=4.2						
ASF				Lg	Lg	09 47 04.8	
	comp=E,0.3nm,0.3s,baz=221,slow=20,SNR=1.3						
	comp=E,0.7nm,0.3s						
GEM	**Giv'at Ha'Em**	**8.50**	**263**	S	**Sg**	**09 47 26.1**	**-5.2**
GEM	**Giv'at Ha'Em**	**8.50**	**263**	P	Pg	09 45 52.7	+11
MMA0B	**Mount Meron ar**	**8.76**	**262**	P	Pg	09 45 55.9	+10
MMAI	**Mount Meron Ar**	**8.76**	**262**	Lg	Lg	09 47 34.9	
	comp=E,0.7nm,0.3s,baz=82,slow=39,SNR=2.3						
MMAI				LR	LR	09 49 25.3	
	comp=E,210nm,18.1s,baz=45,slow=44						
HMDT	**Nahal Hemdat**	**8.88**	**257**	P	Pg	09 45 57.9	+9.5
SALP	**Salfit**	**9.21**	**256**	P	Pn	09 46 03.8	+52
KBZ	**Khabaz**	**9.24**	**347**	LR	LR	09 49 25.4	
	comp=E,145nm,18.8s,baz=158,slow=42						
MSBI	**Mazada**	**9.36**	**251**	P	Pn	09 46 05.5	+52
EIL	**Elat**	**10.44**	**244**	Lg	Lg	09 48 18.6	
	comp=E,0.2nm,0.3s,baz=60,slow=20,SNR=3.0						
EIL	**Elat**	**10.44**	**244**	P	Pn	09 46 20.4	+52
EIL	**Elat**	**10.44**	**244**	S	Sn	09 48 19.2	+54
GEYT	**Alibeck**	**10.49**	**69**	LR	LR	09 50 27.8	
	comp=E,231nm,18.2s,baz=296,slow=43						
BRTR	**Keskin Array B**	**10.85**	**301**	Pn	**Pn**	**09 45 36.7**	**+2.7**
	baz=128,slow=12,SNR=1.5						
	comp=E,0.4nm,0.6s						
SHME	**Shamm**	**12.47**	**131**	P	**Pn**	**09 45 55.8**	**-0.3**
NAZ	**Nazwa, Dubai**	**12.98**	**136**	P	**Pn**	**09 46 03.5**	**+0.5**
MSFE	**Esma-Masafi**	**12.99**	**133**	P	**Pn**	**09 46 02.6**	**-0.6**
MSFE				S	**Sn**	**09 48 22.9**	**-4.9**
MDH	**Madha**	**13.12**	**133**	P	**Pn**	**09 46 03.0**	**-1.9**
UOSS	**Minazif**	**13.32**	**134**	P	**Pn**	**09 46 05.3**	**-2.4**
HATD	**Hatta, Dubai**	**13.37**	**135**	P	**Pn**	**09 46 07.5**	**-0.9**
ASHO	**Ashiyiah**	**13.44**	**135**	P	**Pn**	**09 46 08.0**	**-1.3**
SOHO	**SOHO**	**14.14**	**135**	P	**Pn**	**09 46 18.9**	**0.0**
WSAR	**Wadi Sarin**	**16.06**	**132**	Pn	**Pn**	**09 46 43.0**	**-1.5**
	comp=E,0.2nm,0.3s,baz=305,slow=19,SNR=2.3						
WSAR				Sn	**Sn**	**09 49 40.0**	**-2.7**
	comp=E,0.3nm,0.3s,baz=4.4,slow=18,SNR=2.5						
	comp=E,11nm,1.1s						
BELG	**Belogornoye**	**17.70**	**4**	LR	LR	09 56 09.2	
	comp=E,113nm,18.8s,baz=106,slow=45						
AKTO	**Aktyubinsk**	**18.07**	**26**	LR	LR	09 55 55.7	
	comp=E,51nm,19.5s,baz=139,slow=43						
AKASG	**Malin Array Be**	**19.97**	**328**	P	**P**	**09 47 29.9**	**-0.8**
	comp=E,0.6nm,0.3s,baz=134,slow=9.4,SNR=5.4						
AKASG				LR	LR	09 55 47.7	
	comp=E,44nm,18.5s,baz=58,slow=39						
	comp=E,0.2nm,0.3s						
OBN	**Obninsk**	**21.35**	**345**	LR	LR	09 56 07.1	
	comp=E,51nm,21.3s,baz=168,slow=37						
KIRV	**Kirov**	**23.98**	**5**	LR	LR	09 59 34.0	
	comp=E,73nm,19.8s,baz=186,slow=42						
BVAR	**Borovoye Array**	**25.29**	**36**	P	**P**	**09 48 26.1**	**+1.1**
	comp=E,0.4nm,0.4s,baz=224,slow=10,SNR=2.4						
BVAR				LR	LR	10 00 46.2	
	comp=E,76nm,19.0s,baz=246,slow=42						
	comp=E,0.4nm,0.4s						
FINES	**FINESS Array B**	**29.53**	**341**	P	**P**	**09 49 02.7**	**-0.1**
	comp=E,3.0nm,1.1s,baz=150,slow=11,SNR=1.8						
	comp=E,3.0nm,1.1s						
MKAR	**Makanchi Array**	**29.93**	**55**	P	**P**	**09 49 07.3**	**+0.7**
	comp=E,0.4nm,0.7s,baz=255,slow=7.4,SNR=4.3						
MKAR				LR	LR	10 03 45.1	
	comp=E,46nm,18.1s,baz=22,slow=42						
	comp=E,0.4nm,0.7s						
HFS	**Hagfors**	**32.81**	**331**	P	**P**	**09 49 31.3**	**-0.5**
	comp=E,3.4nm,0.9s,baz=123,slow=10,SNR=2.3						
	comp=E,3.4nm,0.9s						
ZALV	**Zalesovo Beam**	**33.34**	**43**	LR	LR	10 06 16.2	
	comp=E,72nm,18.2s,baz=242,slow=42						
KMBO	**Kilima Mbogo**	**36.55**	**194**	LR	LR	10 03 33.7	
	comp=E,55nm,21.6s,baz=90,slow=34						
MBAR	**Mbarara**	**37.86**	**205**	LR	LR	10 07 16.6	
	comp=E,52nm,18.5s,baz=185,slow=39						
TORD	**Torodi Ar. Bea**	**45.18**	**253**	P	**P**	**09 51 15.2**	**-0.6**
	comp=E,0.7nm,1.0s,baz=59,slow=6.7,SNR=2.7						
	comp=E,0.7nm,1.0s						
YAK	**Yakutsk**	**57.24**	**34**	LR	LR	10 21 24.3	
	comp=E,64nm,19.4s,baz=282,slow=40						
TSUM	**Tsumeb**	**59.95**	**211**	LR	LR	10 21 06.1	
	comp=E,43nm,18.2s,baz=158,slow=38						
LBTB	**Lobatse**	**62.42**	**201**	LR	LR	10 21 24.3	
	comp=E,48nm,20.4s,baz=185,slow=37						
SUR	**Sutherland**	**70.75**	**202**	LR	LR	10 25 34.5	
	comp=E,56nm,19.6s,baz=260,slow=36						
PETK	**Petropavlovsk-**	**74.52**	**35**	LR	LR	10 31 51.7	
	comp=E,44nm,21.1s,baz=105,slow=39						
YKA	**Yellowknife Ar**	**81.82**	**351**	P	**P**	**09 55 19.1**	**+1.7**
	comp=E,0.1nm,0.8s,baz=28,slow=6.4,SNR=1.9						
	comp=E,0.1nm,0.8s						

IDC 02 09:45:04.7±2.8, 54°.29N×85°.95E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=19.4km s-min=10.4km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.75**	**243**	I	I	09 49 20.0	
	baz=61,slow=338,SNR=3.8						

ZALV	**Zalesovo Beam**	**0.75**	**243**	Pg	Pg	09 45 18.4	-0.7	
	0.7nm,0.3s,baz=59,slow=18,SNR=7.6							
ZALV				Lg	Lg	09 45 29.9		
	2.9nm,0.3s,baz=64,slow=30,SNR=21							
KURBB	**Kurchatov Arra**	**5.84**	**234**	Pn	Pn	09 46 34.1	+1.6	
	0.1nm,0.3s,baz=51,slow=14,SNR=2.2							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	09 47 00.6	+0.3	
	0.1nm,0.3s,baz=23,slow=11,SNR=4.4							
	0.3nm,0.5s							

KRSC ***02*** *09:46:26.1±0.9, 52°.59N×159°.84E, h42km±11km, Ml3.9*
IDC ***02*** *09:46:26.7±4.2, 52°.60N×159°.98E, h53km±33km, mb3.6/9, mbtmp3.9/9, Error ellipse: s-maj=30.1km s-min=23.9km az=91.0*

ISC 02 09:46:27.8±1.2, 52°.60N±0°.05×159°.77E±0°.06, h45km±12km, n48, σ1§76/49, mb3.8/9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.52**	**17**	*e*P	**Pn**	**09 46 37.8**	**-1.1**
SPN				*e*S	**Sn**	**09 46 45.9**	**-1.0**
DALK	**Dalny**	**0.75**	**305**	*e*P	**Pn**	**09 46 41.7**	**-0.4**
DALK				*e*S	**Sn**	**09 46 52.4**	**0.0**
PET	**Petropavlovsk**	**0.80**	**302**	*e*P	**Pn**	**09 46 42.3**	**-0.3**
PET				*e*S	**Sn**	**09 46 53.6**	**+0.1**
UGLR	**Uglovaya**	**0.84**	**317**	*e*P	**Pn**	**09 46 43.4**	**+0.2**
INSR	**Institute**	**0.85**	**304**	*e*P	**Pn**	**09 46 43.1**	**-0.2**
INSR				*e*S	**Sn**	**09 46 55.2**	**+0.6**
SMAR	**Somma**	**0.89**	**319**	*e*P	**Pn**	**09 46 43.9**	**-0.1**
AVH	**Avacha**	**0.91**	**317**	*e*P	**Pn**	**09 46 44.6**	**+0.3**
KOK	**Koryaka**	**0.98**	**316**	*e*P	**Pn**	**09 46 45.4**	**+0.3**
KRX	**Arik**	**1.02**	**319**	*e*P	**Pn**	**09 46 45.7**	**-0.1**
KRMR	**Karymshinskiy**	**1.02**	**284**	*e*P	**Pn**	**09 46 45.6**	**-0.1**
KRMR				*e*S	**Sn**	**09 46 59.2**	**+0.3**
GRL	**Gorelyy**	**1.04**	**268**	*e*P	**Pn**	**09 46 46.5**	**+0.5**
ASAK	**Asacha**	**1.17**	**260**	*e*P	**Pn**	**09 46 48.2**	**+0.5**
ASAK				*e*S	**Sn**	**09 47 04.1**	**+1.6**
KDTR	**Khodutka, Kamc**	**1.31**	**233**	*e*P	**Pn**	**09 46 50.0**	**+0.4**
KDTR				*e*S	**Sn**	**09 47 07.1**	**+1.2**
PETK	**Petropavlovsk-**	**1.36**	**293**	P	**Pn**	**09 46 50.9**	**+0.6**
	77nm,0.3s,baz=101,slow=20,SNR=88						
PETK				S	**Sn**	**09 47 08.9**	**+1.8**
	62nm,0.3s,baz=92,slow=39,SNR=8.9						
PETK				LR	LR	09 47 38.2	
	comp=Z,95nm,20.8s,baz=110,slow=49						
APC	**Apacha**	**1.62**	**283**	*e*P	**Pn**	**09 46 55.3**	**+1.4**
APC				*e*S	**Sn**	**09 47 16.6**	**+3.1**
PAU	**Pauzhetka**	**2.15**	**239**	*e*P	**Pn**	**09 47 03.8**	**+2.7**
TUMD	**Tumrok D**	**2.63**	**8**	*e*P	**Pn**	**09 47 08.5**	**+0.7**
TUMD				*e*S	**Sn**	**09 47 40.1**	**+1.6**
TUMR	**Tumrok**	**2.70**	**5**	*e*P	**Pn**	**09 47 10.6**	**+1.9**
SKR	**Severo-Kuril's**	**2.98**	**231**	*e*S	**Sn**	**09 47 47.6**	**+0.7**
KMNR	**Kamenistaya**	**3.17**	**5**	*e*P	**Pn**	**09 47 17.4**	**+2.2**
KIRR	**Kirishev**	**3.38**	**5**	*e*P	**Pn**	**09 47 20.3**	**+2.2**
KPT	**Kopyto**	**3.38**	**4**	*e*P	**Pn**	**09 47 20.3**	**+2.2**
BZGR	**Bezymyannyi-Gr**	**3.39**	**9**	*e*P	**Pn**	**09 47 20.4**	**+2.2**
ESO	**Esso**	**3.39**	**350**	*e*P	**Pn**	**09 47 19.9**	**+1.7**
BZWR	**Bezymyannyi-We**	**3.40**	**7**	*e*P	**Pn**	**09 47 20.6**	**+2.2**
KOZ	**Kozyrevsk**	**3.46**	**1**	*e*P	**Pn**	**09 47 22.3**	**+3.2**
ZLN	**Zelenaya**	**3.48**	**10**	*e*P	**Pn**	**09 47 22.1**	**+2.7**
CIRR	**Tsirk**	**3.57**	**9**	*e*P	**Pn**	**09 47 23.9**	**+3.2**
KRSR	**Krestovskiy**	**3.65**	**7**	*e*P	**Pn**	**09 47 23.6**	**+1.8**
SRDR	**Sredinnyy**	**3.72**	**360**	*e*P	**Pn**	**09 47 25.2**	**+2.5**
KBG	**Krutoberegovo**	**4.04**	**24**	*e*P	**Pn**	**09 47 28.9**	**+1.9**
BDR	**Baidarnaya**	**4.06**	**11**	*e*P	**Pn**	**09 47 31.8**	**+4.4**
SMKR	**Semkarok**	**4.11**	**13**	*e*P	**Pn**	**09 47 30.0**	**+1.9**
MJAR	**Matsushiro Arr**	**22.09**	**232**	P	**P**	**09 51 19.9**	**+1.0**
	1.5nm,0.7s,baz=20,slow=12,SNR=4.5						
	1.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.27**	**168**	T	T	10 28 44.8		
	baz=353,slow=76							
H11N3	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	10 28 45.0		
	baz=353,slow=76							
H11N1	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	10 28 44.2		
	baz=353,slow=76							
H11S1	**WAKE ISLAND Hy**	**34.45**	**168**	T	T	10 30 21.5		
	baz=352,slow=74							
H11S3	**WAKE ISLAND Hy**	**34.47**	**168**	T	T	10 30 14.6		
	baz=352,slow=74							
H11S2	**WAKE ISLAND Hy**	**34.47**	**168**	T	T	10 30 26.9		
	baz=352							
SPITS	**Spitsbergen Ar**	**47.59**	**350**	P	**P**	**09 54 57.5**	**-0.9**	
	14nm,1.1s,baz=36,slow=7.6,SNR=13							
	14nm,1.1s							
MKAR	**Makanchi Array**	**48.19**	**296**	P	P	09 55 01.0	-2.5	
	0.4nm,0.5s,baz=60,slow=7.7,SNR=4.7							
	0.4nm,0.5s							
BVAR	**Borovoye Array**	**50.54**	**309**	P	P	09 55 18.3	-3.0	
	0.7nm,0.4s,baz=57,slow=8.8,SNR=3.5							
	0.7nm,0.4s							
FINES	**FINESS Array B**	**60.49**	**336**	P	**P**	**09 56 31.0**	**-1.5**	
	1.4nm,0.9s,baz=46,slow=8.2,SNR=3.6							
	1.4nm,0.9s							
NOA	**NORSAR Array B**	**63.96**	**344**	P	**P**	**09 56 54.7**	**-1.1**	
	0.5nm,0.6s,baz=23,slow=5.9,SNR=4.5							
	0.5nm,0.6s							
HFS	**Hagfors**	**64.36**	**342**	P	**P**	**09 56 57.3**	**-1.0**	
	3.2nm,0.9s,baz=53,slow=7.9,SNR=5.9							
	3.2nm,0.9s							
TXAR	**Lajitas Array**	**71.01**	**67**	P	P	09 57 36.4	-4.5	
	0.5nm,0.7s,baz=261,slow=3.6,SNR=2.3							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**79.23**	**204**	P	**P**	**09 58 25.9**	**-2.0**	
	0.2nm,0.8s,baz=17,slow=5.5,SNR=1.6							
	0.2nm,0.8s							

NEIC ***02*** *09:54:51.8±1.2, 52°.1N±0°.1×34°.4W±0°.2, h10km±2km, mb4.5/19, Error ellipse: s-maj=32.1km s-min=3.5km az=134.0*
IDC ***02*** *09:54:57.9±1.0, 52°.97N×35°.25W, h0km, mb3.7/10, mbtmp3.8/12, ML3.2/2, MS3.5/42, Error ellipse: s-maj=39.7km s-min=16.1km az=24.0*

ISC 02 09:54:55.8±1.1, 52°.4N±0°.2×34°.94W±0°.09, h14km, n69, σ1§49/33, mb4.1/19, MS3.6/41, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILULI	**Ilulissat**	**18.54**	**342**	P	**Pn**	**09 59 10.8**	**-1.0**
ILULI				IAmb	IAmb	09 59 23.3	
	comp=Z,37nm,1.5s						
EKA	**Eskdalemuir Ar**	**18.89**	**68**	P	**Pn**	**09 59 19.2**	**+3.1**
	baz=275,slow=10.0						
	comp=Z,4.9nm,0.9s						
SCHQ	**Scheffervilla**	**19.01**	**290**	P	**Pn**	**09 59 17.7**	**+0.2**
SCHQ	**Scheffervilla**	**19.01**	**290**	P	**Pn**	**09 59 17.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=81,slow=18,SNR=4.0						
SCHQ				LR	LR	10 05 14.5	
	comp=Z,179nm,21.5s,baz=76,slow=33						
	comp=Z,5.9nm,1.1s						
FRB	**Frobisher Bay**	**20.84**	**316**	P	**P**	**09 59 35.8**	**-0.8**
	comp=Z,5.3nm,1.0s,baz=119,slow=6.9,SNR=6.2						
FRB				LR	LR	10 05 16.1	
	comp=Z,159nm,20.9s,baz=307,slow=30						
	comp=Z,5.3nm,1.0s						
JMIC	**Jan Mayen**	**22.14**	**23**	LR	LR	10 05 58.8	
	comp=Z,90nm,18.8s,baz=318,slow=30						
D62A	**Allapoint, All**	**22.54**	**270**	P	**P**	**09 59 56.5**	**+1.4**
ESDC	**Sonseca Array**	**24.76**	**108**	P	P	10 00 24.8	+8.0
	comp=Z,4.8nm,1.0s,baz=315,slow=8.8,SNR=11						
	comp=Z,4.8nm,1.0s						
NOA	**NORSAR Array B**	**26.26**	**52**	LR	LR	10 09 34.3	
	comp=Z,86nm,18.5s,baz=270,slow=34						
NCB	**Newcomb**	**27.23**	**268**	P	**P**	**10 00 38.5**	**-0.6**
HFS	**Hagfors**	**27.54**	**54**	LR	LR	10 10 15.6	
	comp=Z,93nm,18.9s,baz=285,slow=34						
TRNY	**Table Rock, Ra**	**28.81**	**263**	P	**P**	**10 00 51.2**	**-2.0**
CLL	**Collm**	**29.22**	**73**	*e*P	**P**	**10 00 52.0**	**-4.7**
DAVOX	**Davos/Dischmat**	**29.22**	**83**	LR	LR	10 11 33.5	
	comp=Z,84nm,19.1s,baz=256,slow=34						
SADO	**Sadowa**	**29.83**	**273**	LR	LR	10 11 55.2	
	comp=Z,168nm,20.4s,baz=122,slow=34						
GERES	**GERESS Array B**	**30.60**	**77**	LR	LR	10 13 05.8	
	comp=Z,68nm,18.5s,baz=278,slow=36						
VRAC	**Vranov**	**32.12**	**75**	LR	LR	10 13 44.5	
	comp=Z,124nm,18.9s,baz=316,slow=35						
ARCES	**ARCESS Array B**	**32.24**	**35**	LR	LR	10 11 09.7	
	comp=Z,102nm,18.3s,baz=264,slow=30						
ULM	**Lac du Bonnet**	**37.17**	**292**	LR	LR	10 15 47.9	
	comp=Z,89nm,18.7s,baz=36,slow=34						
AKASG	**Malin Array Be**	**38.78**	**66**	LR	LR	10 16 57.2	
	comp=Z,55nm,20.2s,baz=244,slow=34						

MLR	**Muntele Rosu**	**39.52**	**75**	LR	LR	10 20 15.1		
	comp=Z,74nm,18.9s,baz=282,slow=38							
OBN	**Obninsk**	**40.69**	**57**	LR	LR	10 17 56.9		
	comp=Z,70nm,18.2s,baz=184,slow=34							
YKA	**Yellowknife Ar**	**41.35**	**316**	P	**P**	**10 02 39.7**	**-1.0**	
	comp=Z,0.7nm,0.9s,baz=65,slow=8.0,SNR=6.5							
YKA				PcP	**PcP**	**10 04 41.0**	**+2.3**	
	comp=Z,1.0nm,1.0s,baz=66,slow=3.7,SNR=7.7							
	comp=Z,0.7nm,0.9s							
A36M	**Sachs Harbour**	**41.44**	**332**	P	**P**	**10 02 41.6**	**+0.3**	
SJG	**San Juan**	**42.02**	**227**	LR	LR	10 16 58.6		
	comp=Z,21nm,21.9s,baz=16,slow=31							
INK	**Inuvik**	**45.64**	**329**	P	**P**	**10 03 13.6**	**-1.5**	
	comp=Z,2.6nm,1.0s,baz=57,slow=4.8,SNR=6.4							
	comp=Z,2.6nm,1.0s							
F31M	**Tsiigehtchic**	**46.17**	**328**	P	**P**	**10 03 19.3**	**0.0**	
G31M	**Satah River**	**46.63**	**328**	P	**P**	**10 03 22.7**	**-0.3**	
E29M	**Blow River**	**46.94**	**330**	P	**P**	**10 03 24.2**	**-1.2**	
E29M				IAmb	IAmb	10 03 34.6		
	comp=Z,4.8nm,1.4s							
BRTR	**Keskin Array B**	**47.50**	**77**	P	P	10 03 35.0	+4.7	
	comp=Z,1.3nm,0.9s,baz=308,slow=7.1,SNR=1.6							
BRTR				LR	LR	10 24 54.0		
	comp=Z,59nm,18.9s,baz=314,slow=38							
	comp=Z,1.3nm,0.9s							
BELG	**Belogornoye**	**47.71**	**55**	LR	LR	10 21 23.0		
	comp=Z,40nm,18.0s,baz=208,slow=33							
F28M	**Old Crow**	**48.00**	**330**	P	**P**	**10 03 33.4**	**-0.3**	
F28M				IAmb	IAmb	10 03 57.5		
	comp=Z,5.7nm,1.4s							
I30M	**Mount Dempster**	**48.31**	**326**	P	**P**	**10 03 35.8**	**-0.4**	
I30M				IAmb	IAmb	10 04 19.9		
	comp=Z,5.8nm,1.4s							
J30M	**Hart River**	**48.69**	**326**	P	**P**	**10 03 40.3**	**+1.1**	
J30M				IAmb	IAmb	10 03 53.6		
	comp=Z,7.8nm,1.4s							
D25K	**Kavik River**	**48.80**	**334**	P	**P**	**10 03 39.5**	**-0.3**	
D25K				IAmb	IAmb	10 03 40.6		
	comp=Z,4.7nm,1.1s							
TORD	**Torodi Ar. Bea**	**48.86**	**129**	P	P	10 03 48.9	+8.1	
	comp=Z,0.5nm,0.9s,baz=318,slow=3.9,SNR=2.0							
	comp=Z,0.5nm,0.9s							
PDAR	**Pinedale Array**	**49.15**	**290**	P	**P**	**10 03 43.6**	**+0.5**	
	comp=Z,0.4nm,0.8s,baz=46,slow=5.2,SNR=2.8							
PDAR				LR	LR	10 22 54.9		
	comp=Z,58nm,19.5s,baz=73,slow=34							
	comp=Z,0.4nm,0.8s							
I28M	**Miner Creek**	**49.36**	**328**	P	**P**	**10 03 44.8**	**+0.6**	
I28M				IAmb	IAmb	10 03 45.2		
	comp=Z,4.8nm,1.1s							
B22K	**Teshekpuk Lake**	**49.89**	**337**	P	**P**	**10 03 48.5**	**+0.5**	
B22K				IAmb	IAmb	10 03 49.7		
	comp=Z,8.0nm,1.2s							
NEW	**Newport**	**49.96**	**300**	LR	LR	10 23 00.2		
	comp=Z,96nm,20.1s,baz=37,slow=34							
KBZ	**Khabaz**	**50.37**	**67**	LR	LR	10 26 41.7		
	comp=Z,23nm,18.9s,baz=336,slow=38							
ARU	**Arti**	**50.51**	**46**	LR	LR	10 23 29.7		
	comp=Z,67nm,18.9s,baz=292,slow=34							
M29M	**Somme Creek**	**50.76**	**324**	P	**P**	**10 03 54.2**	**-0.8**	
M29M				IAmb	IAmb	10 04 24.6		
	comp=Z,7.8nm,1.4s							
DBIC	**Dimbokro**	**51.81

MKAR Lg Lg 10 05 10.2
0.3nm,0.3s,baz=18,slow=29,SNR=7.6
0.1nm,0.4s

*IDC **02** 10:04:47.9±2.7,56°.07N×149°.25W,h0km,mb3.6/3, mbtmp3.5/8,ML3.2/5,MS3.0/4,Error ellipse: s-maj=51.2km s-min=25.3km az=174.0*
*NEIC **02** 10:04:49.6±1.5,56°.35N±0°.08×149°.33W±0°.09,h10km±2km, mb3.9/3,ML3.7/50,ML3.5(AEIC),Error ellipse: s-maj=13.3km s-min=8.2km az=168.0*
*AEIC **02** 10:04:52.9±2.3,56°.25N±0°.09×149°.16W±0°.10,h12km±7km, Error ellipse: s-maj=12.6km s-min=7.7km az=169.0*

ISC 02 10:04:50.4±0.9,56°.45N±0°.08×149°.30W±0°.05,h10km, n202,σ1$07/202,mb3.6/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.24**	**308**			**Pn**	**10 05 27.6**	**+0.2**
KDAK	**Kodiak Island**	**2.24**	**308**			**Sn**	**10 05 53.3**	**-1.8**
KDAK	**Kodiak Island** baz=128	**2.24**	**308**	S		**Sn**	**10 05 53.0**	**-2.2**
KDAK	**Kodiak Island** 6.1nm,0.3s,baz=135,slow=4.7,SNR=95	**2.24**	**308**	Pn		**Pn**	**10 05 27.4**	**-0.1**
KDAK	8.9nm,0.3s,baz=336,slow=20,SNR=3.2			Sn		**Sn**	**10 05 52.7**	**-2.4**
KDAK	comp=Z,452nm,21.3s,baz=125,slow=44 15nm,0.3s			LR		LR	10 06 39.0	
OHAK	**Old Harbor**	**2.33**	**291**			**Pn**	**10 05 28.2**	**-0.5**
OHAK				Sn		**Sn**	**10 05 54.6**	**-2.7**
OHAK	**Old Harbor**	**2.33**	**291**	P		**Pn**	**10 05 28.0**	**-0.7**
OHAK	**Old Harbor** baz=111	**2.33**	**291**	P		**Pn**	**10 05 28.1**	**-0.5**
OHAK	baz=111			S		**Sn**	**10 05 55.0**	**-2.3**
SII	**Sitkinak Islan** baz=94	**2.71**	**274**	S		**Sn**	**10 06 04.0**	**-2.9**
SYI	**Shuyak Island**	**2.74**	**324**	Pn		**Pn**	**10 05 34.8**	**+0.5**
SYI				Sn		**Sn**	**10 06 07.4**	**0.0**
SYI	comp=E,129nm,0.8s			IAML			10 06 09.5	
Q20K	**Shuyak Island** baz=142	**2.74**	**324**	P		**Pn**	**10 05 34.7**	**+0.4**
Q20K	baz=142			S		**Sn**	**10 06 07.8**	**+0.4**
CNPM	**China Poot**	**3.25**	**342**			**Pn**	**10 05 41.8**	**+0.3**
CNPM	**China Poot**	**3.25**	**342**			**Sn**	**10 06 20.0**	**-0.3**
CNPM	**China Poot** comp=E,73nm,0.9s	**3.25**	**342**	IAML			10 06 26.7	
CNPM	comp=N,66nm,0.5s			IAML			10 06 31.1	
Q23K	**Middleton Isla** baz=206	**3.38**	**26**	Pn		**Pn**	**10 05 43.0**	**-0.1**
Q23K	comp=E,182nm,1.4s			IAML			10 06 08.8	
Q23K	comp=N,158nm,1.2s			IAML			10 07 20.6	
Q23K	**Middleton Isla** baz=206	**3.38**	**26**	P		**Pn**	**10 05 41.9**	**-1.2**
MID	**Middleton Isla**	**3.38**	**27**	Pn		**Pn**	**10 05 43.1**	**0.0**
MID	comp=E,199nm,1.4s			IAML			10 06 08.8	
MID	comp=N,141nm,1.2s			IAML			10 07 20.5	
MID	**Middleton Isla**	**3.38**	**27**	P		**Pn**	**10 05 42.8**	**-0.3**
BRSE	**Bradley Lake S**	**3.39**	**348**			**Pn**	**10 05 43.4**	**0.0**
BRSE						**Sn**	**10 06 22.7**	**-0.9**
BRSE	**Bradley Lake S** baz=166	**3.39**	**348**	P		**Pn**	**10 05 43.3**	**0.0**
BRSE	baz=166			S		**Sn**	**10 06 22.7**	**-0.9**
Q19K	**Cape Douglas,**	**3.41**	**319**	Pn		**Pn**	**10 05 45.0**	**+1.3**
Q19K	comp=N,259nm,0.7s			IAML			10 06 31.3	
Q19K	**Cape Douglas,** baz=136	**3.41**	**319**	P		**Pn**	**10 05 44.4**	**+0.7**
BRLK	**Bradley Lake**	**3.43**	**346**			**Pn**	**10 05 44.0**	**+0.1**
BRLK						**Sn**	**10 06 23.6**	**-1.0**
BRLK	comp=E,72nm,0.8s			IAML			10 06 30.9	
HOM	**Homer**	**3.45**	**340**	Pn		**Pn**	**10 05 45.6**	**+1.5**
HOM	comp=E,259nm,1.3s			IAML			10 06 49.1	
KAHG	**Katmai Hook Gl**	**3.50**	**308**			**Pn**	**10 05 46.4**	**+1.5**
SEW	**Seward**	**3.67**	**359**			**Pn**	**10 05 46.2**	**-0.9**
SEW	**Seward** baz=178	**3.67**	**359**	P		**Pn**	**10 05 46.8**	**-0.3**
P23K	**Montague Islan**	**3.70**	**15**			**Pn**	**10 05 46.9**	**-0.6**
P23K						**Sn**	**10 06 28.8**	**-2.3**
P23K	**Montague Islan** baz=195	**3.70**	**15**	P		**Pn**	**10 05 46.9**	**-0.6**
P23K	baz=195			S		**Sn**	**10 06 28.8**	**-2.3**
P19K	**Oil Pt**	**3.83**	**329**	Pn		**Pn**	**10 05 50.2**	**+0.8**
P19K	comp=E,155nm,0.6s			IAML			10 06 37.5	
P19K	comp=N,128nm,0.8s			IAML			10 06 41.8	
P19K	**Oil Pt** baz=146	**3.83**	**329**	P		**Pn**	**10 05 49.0**	**-0.4**
CNTC	**Contact Creek**	**4.01**	**300**			**Pn**	**10 05 52.3**	**+0.5**
Q17K	**Contact Creek** baz=116	**4.01**	**300**	P		**Pn**	**10 05 52.3**	**+0.5**
O20K	**Slope Mountain**	**4.05**	**336**			**Pn**	**10 05 52.1**	**-0.3**
O20K	**Slope Mountain** baz=153	**4.05**	**336**	P		**Pn**	**10 05 52.1**	**-0.3**
O22K	**Cooper Landing**	**4.05**	**357**			**Pn**	**10 05 53.2**	**+0.8**
O22K	**Cooper Landing** baz=176	**4.05**	**357**	P		**Pn**	**10 05 52.2**	**-0.2**
IVE	**Iliamna Volcan**	**4.08**	**333**			**Pn**	**10 05 52.7**	**-0.2**
SLKM	**Skilak Lake**	**4.10**	**354**			**Pn**	**10 05 52.9**	**-0.2**
HIN	**Hinchinbrook I**	**4.22**	**19**	Pn		**Pn**	**10 05 55.1**	**+0.3**
HIN	comp=E,89nm,1.1s			IAML			10 06 45.1	
HIN	comp=N,95nm,0.7s			IAML			10 06 52.6	
P18K	**Big Mountain,**	**4.33**	**315**	Pn		**Pn**	**10 05 56.6**	**+0.4**
P18K	**Big Mountain,** baz=132	**4.33**	**315**	P		**Pn**	**10 05 56.0**	**-0.2**
KAIM	**Kayak Island**	**4.34**	**34**	Pn		**Pn**	**10 05 57.2**	**+0.9**
KAIM	comp=N,140nm,1.5s			IAML			10 06 53.6	
KAIM	comp=E,129nm,1.3s			IAML			10 06 56.3	
RDSO	**Redoubt South**	**4.41**	**337**			**Pn**	**10 05 58.0**	**+0.6**
RSO	**Redoubt South**	**4.42**	**337**			**Pn**	**10 05 57.8**	**+0.3**
CAPN	**Captain Cook N**	**4.44**	**348**	Pn		**Pn**	**10 05 58.2**	**+0.5**
RDWB	**Redoubt West**	**4.46**	**337**			**Pn**	**10 05 58.1**	**0.0**
EYAK	**Cordova Ski Ar**	**4.51**	**23**			**Pn**	**10 05 59.2**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.51**	**23**	P		**Pn**	**10 05 59.1**	**+0.4**
EYAK	**Cordova Ski Ar** baz=204	**4.51**	**23**	P		**Pn**	**10 05 59.1**	**+0.4**
O19K	**Port Alsworth**	**4.60**	**327**			**Pn**	**10 06 00.2**	**+0.4**
O19K	comp=E,105nm,0.5s			IAML			10 07 05.7	
O18K	**Koktuh Hills**	**4.63**	**320**	Pn		**Pn**	**10 06 00.7**	**+0.3**
O18K	comp=E,27nm,0.7s			IAML			10 07 09.5	
O18K	comp=N,38nm,0.8s			IAML			10 07 11.0	
O18K	**Koktuh Hills** baz=136	**4.63**	**320**	P		**Pn**	**10 06 00.5**	**+0.1**
RAGM	**Ragged Mountai**	**4.64**	**30**			**Pn**	**10 06 00.6**	**+0.2**
SUCK	**Suckling Hills**	**4.66**	**36**			**Pn**	**10 06 01.2**	**+0.5**
SUCK	comp=N,70nm,0.8s			IAML			10 07 01.3	
SUCK	comp=E,104nm,1.4s			IAML			10 07 06.7	
RC01	**Rabbit Creek A**	**4.66**	**357**			**Pn**	**10 06 01.1**	**+0.4**
RC01	comp=E,50nm,0.5s			IAML			10 06 56.6	
RC01	comp=N,42nm,0.5s			IAML			10 06 56.9	
P17K	**Kvichak River**	**4.71**	**309**			**Pn**	**10 06 01.5**	**+0.1**
P17K	**Kvichak River** baz=124	**4.71**	**309**	P		**Pn**	**10 06 01.5**	**+0.1**
HMT	**Hamilton**	**4.71**	**32**			**Pn**	**10 06 02.6**	**+1.1**
GOAT	**Goat Mountain**	**4.79**	**28**			**Pn**	**10 06 02.3**	**-0.3**
BERG	**Berg Lake**	**4.93**	**34**			**Pn**	**10 06 04.5**	**+0.1**
BERG	comp=N,75nm,1.0s			IAML			10 07 07.5	
SPCP	**Crater Peak Br**	**5.05**	**344**			**Pn**	**10 06 06.5**	**+0.2**
SNH	**Sunshine Point**	**5.06**	**40**			**Pn**	**10 06 06.4**	**+0.2**
SNH	comp=N,47nm,1.1s			IAML			10 07 27.8	
SNH	comp=E,47nm,1.5s			IAML			10 07 42.9	
N19K	**Bonanza Creek**	**5.15**	**330**	Pn		**Pn**	**10 06 07.0**	**-0.5**
N19K	**Bonanza Creek** baz=146	**5.15**	**330**	P		**Pn**	**10 06 07.5**	**0.0**
BMRM	**Bremner River**	**5.15**	**26**			**Pn**	**10 06 07.3**	**-0.2**
BMRM	**Bremner River** baz=209	**5.15**	**26**	P		**Pn**	**10 06 07.5**	**0.0**
PMR	**Palmer**	**5.16**	**1**	Pn		**Pn**	**10 06 08.1**	**+0.5**
PMR	comp=N,20nm,0.7s			IAML			10 07 08.6	
PMR	comp=E,20nm,0.7s			IAML			10 07 23.3	
STLK	**Strandline Lak**	**5.23**	**347**			**Pn**	**10 06 09.1**	**+0.4**
SPNN	**North Nagishla**	**5.24**	**342**			**Pn**	**10 06 09.7**	**+0.9**
BARK	**Barkley Ridge**	**5.34**	**39**			**Pn**	**10 06 09.7**	**-0.4**
GHO	**Glory Hole Cre**	**5.34**	**2**	Pn		**Pn**	**10 06 10.7**	**+0.5**
KLU	**Klutina**	**5.35**	**18**	Pn		**Pn**	**10 06 11.1**	**+0.8**
KLU	**Klutina** baz=199	**5.35**	**18**	P		**Pn**	**10 06 10.4**	**+0.1**
MESA	**MESA**	**5.38**	**43**			**Pn**	**10 06 11.3**	**+0.5**
SML	**Sawmill**	**5.40**	**5**	Pn		**Pn**	**10 06 12.3**	**+1.4**
N18K	**Kilae Creek**	**5.47**	**324**			**Pn**	**10 06 12.0**	**+0.1**
SCM	**Sheep Creek Mo**	**5.50**	**10**			**Pn**	**10 06 14.1**	**+1.8**
ISLE	**Juniper Island**	**5.53**	**38**			**Pn**	**10 06 12.7**	**-0.2**
BAGL	**Bagley Icefiel**	**5.54**	**40**			**Pn**	**10 06 13.0**	**+0.2**
O16K	**Kokwok River B**	**5.64**	**308**	Pn		**Pn**	**10 06 13.0**	**-1.2**
SKT	**Skwentna**	**5.67**	**349**			**Pn**	**10 06 15.4**	**+0.9**
VRDI	**Verde Repeater**	**5.67**	**30**			**Pn**	**10 06 15.2**	**+0.4**
SVW2	**Sparrevohn**	**5.69**	**328**	Pn		**Pn**	**10 06 15.2**	**+0.2**
SVW2	**Sparrevohn**	**5.69**	**328**	P		**Pn**	**10 06 15.0**	**+0.1**
N25K	**Chitina, Valde**	**5.71**	**23**			**Pn**	**10 06 16.0**	**+0.8**
N25K	**Chitina, Valde** baz=206	**5.71**	**23**	P		**Pn**	**10 06 16.2**	**+0.9**
GLB	**Gilahina Butte**	**5.76**	**27**	Pn		**Pn**	**10 06 16.2**	**+0.4**
KIAG	**Kiagna River**	**5.76**	**36**			**Pn**	**10 06 16.6**	**+0.5**
M20K	**Styx River**	**5.80**	**342**	Pn		**Pn**	**10 06 18.7**	**+2.3**
N17K	**Nushagak Hills**	**5.82**	**318**			**Pn**	**10 06 16.7**	**+0.1**
TABL	**Table Mountain**	**5.86**	**44**			**Pn**	**10 06 17.7**	**+0.3**
M24K	**Tolsona, Glenn**	**5.90**	**14**			**Pn**	**10 06 18.7**	**+0.9**
MCARA	**McCarthy VSAT**	**5.92**	**31**			**Pn**	**10 06 18.2**	**+0.2**
MCARA	**McCarthy VSAT** baz=214	**5.92**	**31**	P		**Pn**	**10 06 17.9**	**-0.1**
PTPK	**Patty Peak**	**5.93**	**34**			**Pn**	**10 06 18.4**	**+0.1**
PCA	**Pinnacle**	**6.01**	**49**			**Pn**	**10 06 18.8**	**-0.5**
PINM	**Pinnacle** baz=235	**6.01**	**49**	P		**Pn**	**10 06 19.5**	**+0.1**
CHNA	**Chernabura Isl** baz=72	**6.05**	**259**	P		**Pn**	**10 06 19.1**	**-0.7**
CNBA	**Chernabura Isl**	**6.05**	**259**			Pn	10 06 17.7	-2.2
M19K	**Big River Lodg**	**6.07**	**337**	Pn		**Pn**	**10 06 20.6**	**+0.6**
BARN	**Barnard Glacie**	**6.09**	**37**			**Pn**	**10 06 20.9**	**+0.3**
CTG	**Chitna Glacier** baz=224	**6.14**	**39**	P		**Pn**	**10 06 21.0**	**-0.1**
CTGM	**Chitina Glacie**	**6.14**	**39**			**Pn**	**10 06 21.5**	**+0.3**
LOGN	**Logan Glacier**	**6.16**	**41**			**Pn**	**10 06 21.4**	**-0.1**
PNL	**Peninsula**	**6.17**	**54**	P		**Pn**	**10 06 22.0**	**+0.6**
HARP	**HAARP**	**6.33**	**18**			**Pn**	**10 06 24.4**	**+0.7**
HARP	**HAARP** baz=200	**6.33**	**18**	P		**Pn**	**10 06 24.4**	**+0.7**
L19K	**White Mountain**	**6.42**	**336**	Pn		**Pn**	**10 06 25.9**	**+1.1**
M17K	**Holitna River**	**6.51**	**323**			**Pn**	**10 06 26.3**	**+0.1**
DHY	**Denali Highway**	**6.72**	**7**			**Pn**	**10 06 29.4**	**+0.3**
N15K	**Kwethluk River**	**6.80**	**308**			**Pn**	**10 06 31.1**	**+1.0**
M16K	**Timber Creek**	**6.80**	**316**	Pn		**Pn**	**10 06 30.5**	**+0.3**
O29M	**Mount Kennedy**	**6.83**	**51**			**Pn**	**10 06 31.3**	**+0.6**
P29M	**Windy Craggy**	**6.91**	**58**			**Pn**	**10 06 32.1**	**+0.4**
YUK8	**Steele Glacier**	**6.92**	**42**			**Pn**	**10 06 31.3**	**-0.7**
YUK8	**Steele Glacier** baz=228	**6.92**	**42**	P		**Pn**	**10 06 31.3**	**-0.7**
RND	**Reindeer**	**6.99**	**2**	Pn		**Pn**	**10 06 32.5**	**-0.3**
CAST	**Castle Rocks**	**7.13**	**350**	Pn		**Pn**	**10 06 34.1**	**-0.5**
KTH	**Kantishna Hill**	**7.17**	**354**	Pn		**Pn**	**10 06 36.3**	**+1.0**
L26K	**Log Cabin Wild**	**7.25**	**22**	Pn		**Pn**	**10 06 37.4**	**+1.1**
S31K	**Pelican**	**7.26**	**73**	Pn		**Pn**	**10 06 35.5**	**-0.8**
S31K	**Pelican** baz=262	**7.26**	**73**	P		Pn	10 06 34.2	-2.2
K20K	**Telida**	**7.33**	**343**	Pn		**Pn**	**10 06 36.4**	**-1.0**
L16K	**Owhat River**	**7.43**	**319**	Pn		**Pn**	**10 06 39.3**	**+0.5**
HYT	**Haines Junctio**	**7.55**	**50**	Pn		**Pn**	**10 06 40.4**	**-0.2**
RIDG	**Independent Ri**	**7.64**	**15**	Pn		**Pn**	**10 06 43.6**	**+1.9**
K17K	**Iditarod**	**7.77**	**328**			**Pn**	**10 06 42.7**	**-0.6**
J18K	**Innoko River**	**7.96**	**335**	Pn		**Pn**	**10 06 45.7**	**-0.3**
HDA	**Harding Lake**	**8.07**	**7**			**Pn**	**10 06 48.4**	**+0.8**
O30N	**Mendenhall**	**8.14**	**52**	Pn		**Pn**	**10 06 48.2**	**-0.3**
M29M	**Somme Creek**	**8.15**	**38**			**Pn**	**10 06 48.8**	**0.0**
J19K	**Poorman**	**8.19**	**340**	Pn		**Pn**	**10 06 48.9**	**-0.3**
R32K	**Eaglecrest**	**8.20**	**71**	Pn		**Pn**	**10 06 48.9**	**-0.4**
CCB	**Clear Creek Bu**	**8.26**	**4**	Pn		**Pn**	**10 06 50.1**	**0.0**
IL31		**8.44**	**7**			**Pn**	**10 06 53.1**	**+0.6**
ILAR	**Eielson Array** comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=14	**8.44**	**7**	Pn		**Pn**	**10 06 53.5**	**+1.1**
ILAR	comp=E,0.2nm,0.3s,baz=226,slow=17,SNR=1.7			Sn		**Sn**	**10 08 22.8**	**-4.8**
ILAR	comp=E,36nm,18.0s,baz=282,slow=40 comp=E,0.6nm,0.4s			LR		LR	10 10 38.9	
K15K	**Wolf Creek Mou**	**8.56**	**318**	Pn		**Pn**	**10 06 53.1**	**-1.0**
MDM	**Murphy Dome**	**8.56**	**3**			**Pn**	**10 06 55.0**	**+0.8**
J26L	**Joseph Creek**	**8.56**	**17**			**Pn**	**10 06 55.3**	**+1.1**
J26L	**Joseph Creek** baz=201	**8.56**	**17**	P		**Pn**	**10 06 55.1**	**+0.8**
N31M	**Braeburn, Yuko**	**8.61**	**49**			**Pn**	**10 06 55.9**	**+1.0**
WHY	**Whitehorse**	**8.63**	**55**			**Pn**	**10 06 56.4**	**+1.1**
MLY	**Manley**	**8.64**	**356**	Pn		**Pn**	**10 06 56.7**	**+1.3**
L29M	**L29M**	**8.73**	**35**			**Pn**	**10 06 58.0**	**+1.5**
I23K	**Minto, Yukon-K**	**8.73**	**360**			**Pn**	**10 06 58.6**	**+2.1**
M30M	**Minto, Yukon**	**8.83**	**41**	Pn		**Pn**	**10 06 57.9**	**0.0**
P32M	**Atlin**	**8.85**	**63**	Pn		**Pn**	**10 06 58.7**	**+0.5**
I21K	**Tanana**	**8.86**	**353**	Pn		**Pn**	**10 07 00.2**	**+1.9**
J16K	**Anvik River**	**8.90**	**325**	Pn		**Pn**	**10 06 58.3**	**-0.5**
DAWY	**Dawson**	**9.08**	**29**	Pn		**Pn**	**10 07 01.8**	**+0.4**
EGAK	**Eagle**	**9.26**	**22**	Pn		**Pn**	**10 07 04.4**	**+0.7**
H21K	**Melozitna Rive**	**9.39**	**351**			**Pn**	**10 07 05.4**	**-0.3**
H21K	**Melozitna Rive** baz=168	**9.39**	**351**	P		**Pn**	**10 07 06.0**	**+0.3**
K29M	**Barlow Dome**	**9.44**	**33**			**Pn**	**10 07 07.6**	**+1.2**
P33M	**Teslin, Yukon**	**9.45**	**60**			**Pn**	**10 07 06.8**	**+0.4**
P33M	**Teslin, Yukon** baz=252	**9.45**	**60**	P		**Pn**	**10 07 05.8**	**-0.6**
H24K	**Noodor Dome**	**9.45**	**4**	Pn		**Pn**	**10 07 09.2**	**+2.8**
M31M	**Drury Creek, Y**	**9.54**	**47**			**Pn**	**10 07 09.1**	**+1.4**
H19K	**Roundabout Mou**	**9.74**	**342**	Pn		**Pn**	**10 07 10.2**	**-0.1**
H18K	**Honhosa River**	**9.78**	**337**	Pn		**Pn**	**10 07 09.8**	**-1.1**
IMAR	**Indian Mountai**	**9.80**	**349**	Pn		**Pn**	**10 07 11.6**	**+0.3**
H17K	**Granite Mounta**	**9.96**	**333**	Pn		**Pn**	**10 07 12.6**	**-0.8**
FARO	**Faro, Yukon**	**9.98**	**48**	Pn		**Pn**	**10 07 14.4**	**+0.8**
R33M	**Jennings River**	**10.18**	**66**	Pn		**Pn**	**10 07 17.0**	**+0.4**
G21K	**Allakaket**	**10.30**	**351**	Pn		**Pn**	**10 07 20.6**	**+2.6**
G23K	**Bananza Creek**	**10.31**	**358**	Pn		**Pn**	**10 07 18.6**	**+0.5**
G24K	**Hadweenzic Riv**	**10.33**	**4**	Pn		**Pn**	**10 07 20.8**	**+2.4**
J30M	**Hart River**	**10.34**	**33**	Pn		**Pn**	**10 07 21.3**	**+2.6**
G19K	**Purcell Mounta**	**10.41**	**342**	Pn		**Pn**	**10 07 19.5**	**0.0**
DLBC	**Dease Lake** comp=E,0.2nm,0.3s,baz=259,slow=10,SNR=1.6 comp=E,1.5nm,0.6s	**10.57**	**71**	Pn		**Pn**	**10 07 21.8**	**0.0**
F20K	**Avaraart Lake**	**11.06**	**347**	Pn		**Pn**	**10 07 30.4**	**+2.0**
F24K	**Squaw Lake**	**11.13**	**3**	Pn		**Pn**	**10 07 32.1**	**+2.6**
F19K	**Shaleruckik Mo**	**11.16**	**342**	Pn		**Pn**	**10 07 29.0**	**-0.7**
ANM	**Nome**	**11.32**	**322**	Pn		**Pn**	**10 07 31.7**	**-0.3**
E19K	**Redstone River**	**11.65**	**345**	Pn		**Pn**	**10 07 38.2**	**+1.8**
G29M	**Pine Creek**	**11.76**	**22**	Pn		**Pn**	**10 07 38.7**	**+0.8**
F28M	**Old Crow**	**12.02**	**18**	Pn		**Pn**	**10 07 41.2**	**-0.4**
E18K	**Tukpahlearik C**	**12.20**	**339**	Pn		**Pn**	**10 07 45.0**	**+1.1**
G30M	**tAoh Zrail Nji**	**12.21**	**25**	Pn		**Pn**	**10 07 45.1**	**+0.9**
G31M	**Satah River**	**12.65**	**28**	Pn		**Pn**	**10 07 51.7**	**+1.7**
E29M	**Blow River**	**13.06**	**19**	Pn		**Pn**	**10 07 56.1**	**+0.5**
BBB	**Bella Bella** comp=E,80nm,19.8s,baz=64,slow=32	**13.06**	**100**	LR		LR	10 11 45.5	
F31M	**Tsiigehtchic**	**13.18**	**27**	Pn		**Pn**	**10 07 57.2**	**-0.1**
INK	**Inuvik**	**13.90**	**25**	Pn		**Pn**	**10 08 08.2**	**+1.2**
INK	**Inuvik** baz=214,slow=11,SNR=3.0 comp=E,0.7nm,0.6s	**13.90**	**25**	Pn		**Pn**	**10 08 10.8**	**+3.7**
B22K	**Teshekpuk Lake**	**14.06**	**354**	Pn		**Pn**	**10 08 11.1**	**+1.7**
C36M	**Paulatuk**	**17.10**	**31**	Pn		**Pn**	**10 08 49.3**	**+0.1**
C36M	comp=Z,4.2nm,0.8s			IAmb		IAmb	10 08 58.7	
YKAB2	**New Yellowknif**	**18.45**	**57**	P		**P**	**10 09 05.2**	**-0.6**
YKA	**Yellowknife Ar**	**18.45**	**57**	P		**P**	**10 09 05.1**	**-0.7**
YKA	**Yellowknife Ar** baz=267,slow=11,SNR=9.6	**18.45**	**57**	P		**P**	**10 09 07.4**	**+1.5**
	comp=Z,0.8nm,0.9s							
A36M	**Sachs Harbour**	**18.53**	**24**	P		**P**	**10 09 06.0**	**-0.6**
A36M	comp=Z,8.4nm,0.8s			IAmb		IAmb	10 09 20.2	
F04A	**Amboy**	**19.73**	**111**	P		**P**	**10 09 19.5**	**-0.4**
F04A	comp=Z,18nm,1.1s			IAmb		IAmb	10 09 29.6	
SFJD	**Kangerlussuaq** comp=Z,33nm,19.4s,baz=303,slow=35	**42.96**	**35**	LR		LR	10 30 04.0	
H11N2	**WAKE ISLAND Hy** baz=31,slow=76,SNR=9.7	**48.96**	**240**	T		T	11 06 23.9	
H11N3	**WAKE ISLAND Hy** baz=31,slow=76,SNR=9.5	**48.96**	**240**	T		T	11 06 22.5	
H11N1	**WAKE ISLAND Hy** baz=31,slow=76,SNR=8.0	**48.98**	**240**	T		T	11 06 25.3	
H11S1	**WAKE ISLAND Hy** baz=30,slow=76,SNR=9.4	**50.10**	**239**	T		T	11 07 45.8	
H11S2	**WAKE ISLAND Hy** baz=30,slow=76,SNR=8.6	**50.12**	**239**	T		T	11 07 50.0	
H11S3	**WAKE ISLAND Hy** baz=30,slow=76,SNR=9.7	**50.12**	**239**	T		T	11 07 47.1	
SONM	**Songino Array** comp=Z,0.3nm,0.5s,baz=53,slow=7.6,SNR=2.7 comp=Z,0.3nm,0.5s	**58.53**	**310**	P		**P**	**10 14 48.4**	**+1.7**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,baz=15,slow=6.0,SNR=1.2 comp=Z,0.5nm,0.3s	**61.42**	**327**	P		**P**	**10 15 07.6**	**+1.4**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=34,slow=6.1,SNR=4.5 comp=Z,0.2nm,0.5s	**68.45**	**325**	P		**P**	**10 15 53.0**	**+0.7**

*IDC **02** 10:22:03.9±0.4,18°.55S×173°.85W,h0km,mb4.6/17, mbtmp4.5/18,ML3.5/1,MS4.0/47,Error ellipse: s-maj=19.8km s-min=14.9km az=129.0*
*MOS **02** 10:22:04.5±1.0,18°.54S×173°.94W,h10km,mb5.0/29, Error ellipse: s-maj=12.6km s-min=8.5km az=47.5*
*BGR **02** 10:22:06.6,18°.81S×172°.80W,h10km*
*NEIC **02** 10:22:06.4±1.7,18°.60S±0°.09×173°.7W±0°.1,h10km±1km, mb5.0/237,Error ellipse: s-maj=16.6km s-min=14.4km az=243.0*
*NOU **02** 10:22:10.2,18°.59S×173°.11W,h42km,mb4.9/15,Tonga Islands*

ISC 02 10:22:05.9±0.3,18°.61S±0°.08×173°.66W±0°.07,h10km, n739,σ1$56/666,mb5.0/153,MS4.0/46,24C-40D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIUE	**Niue**	**3.57**	**98**	Pn		Pn	10 22 58.0	-3.3
NIUE				Sn		Sn	10 23 34.8	-8.8
NIUE	**Niue**	**3.57**	**98**	P		Pn	10 22 57.3	-4.0
AFI	**Afiamalu**	**5.01**	**21**	Pn		Pn	10 23 18.4	-2.7
AFI	**Afiamalu**	**5.01**	**21**	P		Pn	10 23 19.5	-1.7
AFI	**Afiamalu**	**5.01**	**21**	P		Pn	10 23 18.5	-2.7
TAVE	**Taveuni**	**6.25**	**287**	P		Pn	10 23 45.9	+7.8
DGTI	**Dogotuki**	**6.71**	**289**	P		Pn	10 23 52.5	+8.0
YSA	**Yasawairara**	**8.57**	**281**	P		Pn	10 24 19.3	+9.3
RAR	**Rarotonga**	**13.32**	**104**	Pn		Pn	10 25 11.6	-3.4
RAR	**Rarotonga**	**13.32**	**104**	P		Pn	10 25 11.6	-3.5
RAR	**Rarotonga** 4.7nm,0.3s,baz=276,slow=8.5,SNR=11	**13.32**	**104**	Pn		Pn	10 25 11.0	-4.0
RAR	1.1nm,0.3s,baz=143,slow=20,SNR=1.8			Sn		Sn	10 27 24.9	-18
RAR	comp=Z,487nm,20.4s,baz=311,slow=31			LR		LR	10 29 04.5	
PINNC	**Pines Island,**	**18.13**	**254**			**Pn**	**10 26 14.0**	**-3.8**
PINNC	comp=Z,98nm,1.1s			IAmb		IAmb	10 26 31.2	
PINNC	**Pines Island,**	**18.13**	**254**	P		P	10 26 26.0	+7.8
YATNC	**Mamie plateau,**	**18.56**	**256**	P		**Pn**	**10 26 29.8**	**+6.6**
OUENC	**Ouen Island, N**	**18.65**	**255**			**P**	**10 26 24.0**	**0.0**
OUENC	comp=Z,89nm,1.4s			IAmb		IAmb	10 26 30.4	
OUENC	**Ouen Island, N**	**18.65**	**255**	P		**Pn**	**10 26 29.6**	**+5.3**
DZM	**Mont Dzumac**	**18.97**	**256**	P		**P**	**10 26 27.5**	**-0.1**
DZM	**Mont Dzumac**	**18.97**	**256**	P		**Pn**	**10 26 33.3**	**+5.0**
DZM	**Mont Dzumac** comp=Z,91nm,1.2s	**18.97**	**256**	eP		**Pn**	**10 26 29.7**	**+1.4**
DZM	comp=Z,306nm,26.1s			eS		**S**	**10 30 07.7**	**+4.4**
DZM	comp=Z,1μm,24.6s			eLR		LR	10 31 13.0	
DZM	**Mont Dzumac** comp=Z,0.1nm,0.3s,baz=120,slow=17,SNR=1.2	**18.97**	**256**	P		**P**	**10 26 25.7**	**-1.9**
DZM	comp=Z,662nm,20.7s,baz=82,slow=33 comp=Z,7.8nm,1.1s			LR		LR	10 32 25.0	
NOUC	**Port Laguerre**	**19.10**	**256**	P		**Pn**	**10 26 36

comp=Z,183nm,18.1s,baz=128,slow=35
TOO Toolangi 40.31 233 P **P** **10 29 42.4 -1.2**
TOO Toolangi 40.31 233 P **P** **10 29 42.4 -1.2**
TOO pmax pmax
comp=Z,21nm,1.3s
TAU Tasmania Unive 40.84 225 P **P** **10 29 47.4 -0.4**
TAU IAmb IAmb 10 29 53.2
comp=Z,22nm,1.1s
TAU Tasmania Unive 40.84 225 P **P** **10 29 47.4 -0.4**
TAU pmax pmax
comp=Z,22nm,1.1s
COEN Coen 41.62 270 P **P** **10 29 53.3 -1.2**
STKA Stephens Creek 42.29 243⇑ *e*P **P** **10 29 57.9 -2.0**
STKA Stephens Creek 42.29 243 P **P** **10 29 57.7 -2.2**
comp=Z,1.8nm,0.4s,baz=96,slow=8.2,SNR=4.9
STKA LR LR 10 45 55.4
comp=Z,218nm,18.7s,baz=41,slow=34
comp=Z,1.8nm,0.4s
BBOO Buckleboo 47.05 242 P **P** **10 30 37.2 -0.6**
BBOO IAmb IAmb 10 30 47.7
comp=Z,20nm,1.2s
WR0 Warramunga Arr 48.75 259 P **P** **10 30 49.2 -2.0**
WR0 IAmb IAmb 10 30 51.8
comp=Z,13nm,1.3s
WB0 Warramunga Arr 48.91 260 P **P** **10 30 49.9 -2.6**
WB0 IAmb IAmb 10 30 56.6
comp=Z,7.1nm,0.8s
WB2 Warramunga Arr 48.93 259 P **P** **10 30 50.0 -2.7**
WRAB Tennant Creek 48.93 259 P P 10 30 49.9 -2.8
WRAB Tennant Creek 48.93 259 P **P** **10 30 49.9 -2.7**
WRAB pmax pmax
comp=Z,6.0nm,0.8s
WRA Warramunga Arr 48.94 259 P **P** **10 30 50.0 -2.7**
WRA Warramunga Arr 48.94 259 P **P** **10 30 50.0 -2.7**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 48.94 259 P P 10 30 49.8 -3.0
comp=Z,2.9nm,0.5s,baz=97,slow=7.6,SNR=36
WRA PcP **PcP** **10 32 16.0 -1.0**
comp=Z,1.8nm,1.0s,baz=90,slow=3.6,SNR=1.9
WRA S S 10 37 46.2 -11
comp=Z,1.2nm,0.9s,baz=94,slow=14,SNR=4.5
comp=Z,2.9nm,0.5s
AS31 Alice Springs 48.95 255 P **P** **10 30 50.9 -1.8**
ASAR Alice Springs 48.95 255 P **P** **10 30 51.8 -0.9**
ASAR Alice Springs 48.95 255 P **P** **10 30 50.5 -2.2**
comp=Z,8.7nm,0.6s,baz=87,slow=8.3,SNR=33
ASAR PcP **PcP** **10 32 16.2 -0.8**
comp=Z,2.0nm,0.7s,baz=98,slow=4.3,SNR=1.4
ASAR S S 10 37 47.1 -10
comp=Z,2.3nm,0.8s,baz=93,slow=16,SNR=13
ASAR LR LR 10 50 57.1
comp=Z,135nm,18.3s,baz=100,slow=36
comp=Z,8.7nm,0.6s
GUMO Guam 51.91 305 LR LR 10 52 58.8
comp=Z,65nm,18.4s,baz=110,slow=36
MTN Manton Dam 53.28 268 P **P** **10 31 23.1 -2.3**
FORT Forrest 53.80 245 P **P** **10 31 28.8 -0.2**
KNRA Kununurra 54.90 264 P **P** **10 31 35.8 -1.4**
SWI Sorong 56.80 282 P **P** **10 31 48.9 -1.9**
FITZ Fitzroy Crossi 57.36 260 P **P** **10 31 54.3 -0.5**
RPN Rapa Nui 59.34 111 LR LR 10 51 15.4
comp=Z,135nm,20.5s,baz=319,slow=29
VNDA Vanda 60.18 186 P **P** **10 32 14.2 +0.8**
VNDA Vanda 60.18 186 P **P** **10 32 14.2 +0.8**
VNDA pmax pmax
comp=Z,6.0nm,1.1s
VNDA Vanda 60.18 186 P **P** **10 32 14.4 +1.0**
comp=Z,3.1nm,1.0s,baz=32,slow=8.1,SNR=4.4
comp=Z,3.1nm,1.0s
SOEI Soe 60.58 269 P **P** **10 32 15.6 -1.8**
PSA00 Pilbara Seismi 62.09 255 P **P** **10 32 26.7 -0.7**
JCJ Chichijima 62.42 316 LR LR 10 53 59.7
comp=Z,91nm,20.1s,baz=130,slow=31
NWAO Narrogin (SRO) 62.87 242 LR LR 10 57 22.2
comp=Z,107nm,21.8s,baz=91,slow=34
DAV Davao City (W) 65.10 287 LR LR 11 00 09.1
comp=Z,55nm,18.7s,baz=108,slow=35
KIWB Kanaga Island 70.22 358 P **P** **10 33 18.3 -0.5**
MJAR Matsushiro Arr 71.23 321 P **P** **10 33 23.5 -1.8**
comp=Z,1.0nm,0.6s,baz=355,slow=16,SNR=2.2
MJAR LR LR 10 59 02.6
comp=Z,80nm,21.3s,baz=118,slow=31
comp=Z,1.0nm,0.6s
QSPA South Pole Qui 71.46 180 P **P** **10 33 27.1 +0.6**
QSPA IAmb IAmb 10 33 28.4
comp=Z,15nm,1.2s
QSPA South Pole Qui 71.46 180 P **P** **10 33 26.8 +0.4**
comp=Z,6.6nm,0.8s,baz=316,slow=1.0,SNR=13
QSPA LR LR 10 59 24.0
comp=Z,113nm,22.0s,baz=90,slow=31
comp=Z,6.6nm,0.8s
SHEM Shemya Is, Ala 71.83 352 LR LR 10 59 37.8
comp=Z,106nm,19.2s,baz=342,slow=31
JOW Kunigami 72.19 307 LR LR 11 00 35.3
comp=Z,89nm,18.1s,baz=286,slow=32
AKUT Akutan 72.76 5 P **P** **10 33 34.2 +0.1**
JNU Nakatsue 73.81 314 LR LR 11 00 12.3
comp=Z,41nm,19.9s,baz=100,slow=31
ASAJ Asahikawa 74.13 329 LR LR 11 02 07.3
comp=Z,56nm,19.9s,baz=172,slow=32
ARVC Arvin 74.57 44 P **P** **10 33 44.9 -0.3**
baz=233
KMRM Mail Ridge 74.74 37 P **P** **10 33 47.9 +1.8**
ESJX Sierra Juarez 74.74 48 P **P** **10 33 47.1 +0.6**
VES Vestal, Richgr 74.83 43 P **P** **10 33 47.2 +0.6**
baz=233
BFSC Mount Baldy Ra 74.83 45 P **P** **10 33 46.7 -0.2**
baz=234
MONP2 Monument Peak 74.91 47 P **P** **10 33 47.6 +0.1**
baz=236
LPIG La Paz 74.94 58 LR LR 10 58 26.4
comp=Z,91nm,19.2s,baz=236,slow=29
EDW2 Edwards Air Fo 74.98 45 P **P** **10 33 48.2 +0.6**
baz=234
IKP In-Ko-Pah, Jac 74.99 47 P **P** **10 33 48.0 +0.3**
baz=236
ISA Isabella, Lake 75.12 44 P **P** **10 33 49.5 +1.1**
ISA Isabella, Lake 75.12 44 P **P** **10 33 49.3 +0.8**
baz=234
ISA Isabella, Lake 75.12 44 P **P** **10 33 49.5 +1.1**
ISA pmax pmax
comp=Z,10.0nm,1.4s
PFO Pinyon Flats O 75.29 46 P **P** **10 33 50.0 +0.5**
baz=235
PFO Pinyon Flats O 75.29 46 LR LR 10 57 40.1
comp=Z,110nm,21.3s,baz=257,slow=28
TPFO Pinon Flats 75.29 46 P **P** **10 33 49.3 -0.2**
baz=235
CMB Columbia Colle 75.33 41 P **P** **10 33 49.9 +0.3**
CMB Columbia Colle 75.33 41 P **P** **10 33 49.9 +0.3**
CMB pmax pmax
comp=Z,8.0nm,1.1s
SWSC Sam W. Stewart 75.37 47 P **P** **10 33 50.1 +0.3**
baz=236
KRMB Red Mountain 75.48 36 P **P** **10 33 51.8 +1.4**
KRMB IAmb IAmb 10 33 52.7
comp=Z,10.0nm,0.9s
LRMC Laurel Mtn Rad 75.53 44 P **P** **10 33 51.2 +0.3**
baz=234
AFDM Forest Hills D 75.54 40 P **P** **10 33 51.5 +0.8**
PEA0B Petropavlovsk- 75.59 343 P **P** **10 33 51.0 +0.4**
PEA0B Petropavlovsk- 75.59 343⇑ *e*P **P** **10 33 48.7 -2.0**
PETK Petropavlovsk- 75.59 343 P **P** **10 33 51.7 +1.0**
PETK Petropavlovsk- 75.59 343 P **P** **10 33 50.3 -0.4**
comp=Z,5.9nm,0.7s,baz=111,slow=8.5,SNR=7.0
comp=Z,5.9nm,0.7s
ORV Oroville 75.60 39 P **P** **10 33 51.9 +0.9**
ORV Oroville 75.60 39 P **P** **10 33 51.9 +0.9**
ORV pmax pmax
comp=Z,6.0nm,1.1s
KSXB Camp Six Broad 75.70 36 P **P** **10 33 52.5 +0.8**
KSXB IAmb IAmb 10 33 54.7
comp=Z,12nm,1.0s
BELC Belle Mtn. Jos 75.82 46 P **P** **10 33 52.8 +0.2**
baz=236
CWC Cottonwood Cre 75.83 43 P **P** **10 33 52.9 +0.3**
baz=234
MDPB Devils Postpil 75.90 42 P **P** **10 33 53.9 +0.7**
OMMB Old Mammoth Mi 75.94 42 P **P** **10 33 53.8 +0.4**
MPMC Manual Prospec 76.00 44 P **P** **10 33 54.2 +0.6**
baz=234,SNR=7.7
BC3 Big Chuckawall 76.01 47 P **P** **10 33 54.0 +0.4**
baz=236
GSC Goldstone, Bar 76.01 45 P **P** **10 33 54.3 +0.7**
baz=235

L02F Cave Junction 76.07 36 P **P** **10 33 54.7 +1.0**
L02F IAmb IAmb 10 33 55.9
comp=Z,15nm,1.3s
WAKR Walker 76.21 41 P **P** **10 33 55.4 +0.6**
YBH Yreka Blue Hor 76.30 37 P **P** **10 33 56.6 +1.5**
YBH IAmb IAmb 10 33 57.0
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 76.30 37 P **P** **10 33 56.6 +1.5**
YBH pmax pmax
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 76.30 37 LR LR 10 59 38.0
comp=Z,176nm,21.0s,baz=218,slow=30
MPK Martis Peak 76.33 40 P **P** **10 33 56.3 +0.7**
MPK IAmb IAmb 10 33 57.3
comp=Z,14nm,1.1s
QSM Queen of Sheba 76.35 44 P **P** **10 33 56.3 +0.9**
DSP Deep Springs 76.45 43 P **P** **10 33 57.7 +1.8**
PNTR Pine Nut 76.47 40 P **P** **10 33 57.5 +1.2**
PNTR IAmb IAmb 10 33 58.1
comp=Z,12nm,1.0s
GMRC Granite Mounta 76.49 46 P **P** **10 33 56.7 +0.3**
baz=236
IRM Iron Mountain 76.50 47 P **P** **10 33 57.0 +0.7**
baz=236
YERR Yerington 76.62 41 P **P** **10 33 58.0 +0.9**
YERR IAmb IAmb 10 33 58.7
comp=Z,9.9nm,1.1s
GRAC Grapevine Rang 76.62 43 P **P** **10 33 58.5 +1.5**
GRAC IAmb IAmb 10 33 59.3
comp=Z,18nm,1.4s
GRAC Grapevine Rang 76.62 43 P **P** **10 33 57.9 +0.9**
baz=234
LHV Little Huntoon 76.64 42 P **P** **10 33 58.3 +1.4**
LHV IAmb IAmb 10 34 03.4
comp=Z,9.3nm,1.2s
FURC Furnace Creek, 76.65 44 P **P** **10 33 57.8 +0.8**
baz=234
TUQ Turquoise Moun 76.68 45 P **P** **10 33 57.9 +0.5**
baz=235
113A Mohawk Valley, 76.70 48 P **P** **10 33 58.2 +0.7**
L04D Klamath Falls 76.84 37 IAmb IAmb 10 33 59.9
comp=Z,15nm,0.9s
RYN Ryan 76.85 41 P **P** **10 33 59.3 +0.9**
RYN IAmb IAmb 10 34 00.1
comp=Z,9.1nm,1.2s
GMN Gold Mountain 76.87 43 IAmb IAmb 10 34 00.8
comp=Z,13nm,1.4s
214A Organ Pipe Nat 76.96 50 P **P** **10 33 59.5 +0.6**
baz=238
LEM Lembang 77.19 267 LR LR 11 07 34.2
comp=Z,44nm,21.8s,baz=209,slow=36
PDMCI Parker Dam,Lak 77.27 47 P **P** **10 34 01.1 +0.5**
baz=237
TPNV Topopah Spring 77.33 44 P **P** **10 34 02.1 +1.0**
TPNV Topopah Spring 77.33 44 P **P** **10 34 02.2 +1.1**
baz=235,SNR=5.8
TPNV Topopah Spring 77.33 44 P **P** **10 34 02.1 +1.0**
TPNV pmax pmax
comp=Z,6.0nm,1.1s
TPH Tonopah 77.35 42 P **P** **10 34 01.8 +0.6**
TPH Tonopah 77.35 42 P **P** **10 34 01.8 +0.6**
TPH pmax pmax
comp=Z,47nm,1.1s
KVN Kaiserville 77.37 41 IAmb IAmb 10 34 02.8
comp=Z,9.2nm,1.2s
SHPR Sheep Range 77.80 45 P **P** **10 34 04.8 +1.1**
Y14A Wickenburg 77.87 48 P **P** **10 34 04.8 +0.8**
K05A Summer Lake 77.97 37 P **P** **10 34 05.4 +0.8**
K05A IAmb IAmb 10 34 07.1
comp=Z,25nm,1.1s
Q17K Contact Creek 77.99 9 P **P** **10 34 04.8 +0.6**
baz=197
KDAK Kodiak Island 78.10 11 P **P** **10 34 05.0 +0.4**
baz=200
KDAK Kodiak Island 78.10 11 LR LR 11 01 00.8
comp=Z,128nm,19.3s,baz=220,slow=30
J05D Fort Rock, OR 78.13 36 P **P** **10 34 06.3 +0.9**
J05D IAmb IAmb 10 34 07.3
comp=Z,15nm,1.0s
O14K Tigyukauivet M 78.24 6 P **P** **10 34 05.7 +0.3**
baz=192
Q16K King Salmon 78.27 9 P **P** **10 34 05.4 -0.2**
baz=196
KSRS Korea Array 78.27 316 LR LR 11 03 13.9
comp=Z,32nm,21.7s,baz=120,slow=32
O15K Ungalikthiuk R 78.33 7 P **P** **10 34 05.3 -0.7**
baz=193
PRN Pahroc Range 78.37 44 IAmb IAmb 10 34 09.1
comp=Z,12nm,1.2s
R11B Troy Canyon, C 78.56 43 P **P** **10 34 08.3 +0.4**
R11B Troy Canyon, C 78.56 43 P **P** **10 34 08.3 +0.4**
baz=235
TUC Tucson 78.61 50 P **P** **10 34 09.4 +1.1**
TUC Tucson 78.61 50 P **P** **10 34 09.3 +1.0**
baz=239
TUC Tucson 78.61 50 P **P** **10 34 09.4 +1.1**
TUC pmax pmax
comp=Z,8.0nm,1.2s
PINE Pine Mountain 78.62 36 P **P** **10 34 09.0 +0.8**
PINE IAmb IAmb 10 34 10.2
comp=Z,10nm,0.8s
BMN Battle Mountai 78.74 40 P **P** **10 34 09.5 +0.7**
BMN IAmb IAmb 10 34 10.4
comp=Z,8.9nm,1.0s
BMN Battle Mountai 78.74 40 P **P** **10 34 09.5 +0.7**
BMN pmax pmax
comp=Z,9.0nm,1.0s
P17K Kvichak River 78.80 9 P **P** **10 34 08.4 0.0**
baz=196
N14K Kuskokwak Cree 78.85 6 P **P** **10 34 08.4 -0.4**
baz=191
M11K Mekoryuk 78.94 4 P **P** **10 34 10.3 +1.1**
baz=187
O16K Kokwok River B 78.95 8 P **P** **10 34 08.7 -0.7**
baz=195
WVOR Wild Horse Val 79.09 38 P **P** **10 34 11.6 +0.9**
WVOR Wild Horse Val 79.09 38 P **P** **10 34 11.6 +0.9**
WVOR pmax pmax
comp=Z,6.0nm,0.9s
P18K Big Mountain, 79.17 9 P **P** **10 34 10.4 -0.2**
P18K Big Mountain, 79.17 9 P **P** **10 34 10.7 +0.1**
baz=198
M13K Dall Lake 79.18 5 P **P** **10 34 11.1 +0.6**
baz=190
X16A Lo Mia Camp, P 79.22 48 P **P** **10 34 12.7 +1.0**
O17K Koliganek Bris 79.26 8 P **P** **10 34 11.0 0.0**
baz=196
N15K Kwethluk River 79.27 7 P **P** **10 34 11.2 +0.2**
baz=193
LCMT Little Creek M 79.36 45 P **P** **10 34 13.0 +0.7**
I07A Izee 79.61 36 P **P** **10 34 14.6 +1.1**
O18K Koktuh Hills 79.61 9 P **P** **10 34 13.9 +0.9**
O18K IAmb IAmb 10 34 14.5
comp=Z,28nm,1.1s
O18K Koktuh Hills 79.61 9 P **P** **10 34 13.5 +0.5**
baz=198
M14K Bethel 79.64 6 P **P** **10 34 14.2 +1.2**
M14K IAmb IAmb 10 34 14.8
comp=Z,23nm,0.8s
M14K Bethel 79.64 6 P **P** **10 34 14.3 +1.2**
baz=191,SNR=5.0
KNB Kanab 79.64 45 P **P** **10 34 14.7 +0.8**
KNB Kanab 79.64 45 P **P** **10 34 14.7 +0.8**
KNB pmax pmax
comp=Z,5.0nm,1.0s
U15A North Rim 79.69 46 P **P** **10 34 15.2 +1.0**
M15K Kasigluk River 79.71 6 P **P** **10 34 14.2 +0.7**
baz=192,SNR=12
N16K Nishlik Lake 79.72 7 P **P** **10 34 14.4 +0.8**
baz=194
SPR3 Spring Creek 3 79.73 43 P **P** **10 34 14.3 -0.2**
P19K Oil Pt 79.74 10 P **P** **10 34 14.8 +1.1**
baz=200
J08A Circle Bar Ran 79.75 37 P **P** **10 34 13.4 -0.8**
USRK Ussuriysk Ar. 79.79 324 P **P** **10 34 13.2 -1.1**
comp=Z,0.5nm,0.7s,baz=170,slow=4.5,SNR=1.9
USRK LR LR 11 03 16.5
comp=Z,130nm,21.9s,baz=138,slow=31
WUAZ Wupatki 79.84 47 P **P** **10 34 14.9 -0.1**
WUAZ Wupatki 79.84 47 P **P** **10 34 15.6 +0.6**
baz=238
N17K Nushagak Hills 79.97 8 P **P** **10 34 15.4 +0.5**
baz=196
O19K Port Alsworth 80.08 10 P **P** **10 34 15.6 +0.2**
O19K Port Alsworth 80.08 10 P **P** **10 34 15.2 -0.2**
baz=198

ELK Elko 80.15 41 P **P** **10 34 15.1 -1.5**
ELK Elko 80.15 41 P **P** **10 34 15.1 -1.5**
ELK pmax pmax
comp=Z,4.0nm,1.1s
ELK Elko 80.15 41 LR LR 11 01 49.4
comp=Z,147nm,21.5s,baz=237,slow=30
L14K Kuka Creek 80.16 5 P **P** **10 34 16.7 +0.9**
L14K IAmb IAmb 10 34 17.7
comp=Z,14nm,0.9s
L14K Kuka Creek 80.16 5 P **P** **10 34 17.1 +1.3**
baz=190
M16K Timber Creek 80.23 7 P **P** **10 34 17.3 +1.0**
M16K Timber Creek 80.23 7 P **P** **10 34 17.5 +1.2**
baz=194
N18K Kilae Creek 80.30 9 P **P** **10 34 16.4 -0.3**
baz=197
L15K Ungalak Mounta 80.60 6 P **P** **10 34 18.7 +0.5**
baz=192
MTPU Mount Pierson 80.62 45 P **P** **10 34 20.8 +1.4**
N19K Bonanza Creek 80.64 9 P **P** **10 34 18.3 -0.4**
N19K IAmb IAmb 10 34 18.5
comp=Z,18nm,1.1s
N19K Bonanza Creek 80.64 9 P **P** **10 34 18.7 +0.1**
baz=198
G08A Pilot Rock 80.67 36 P **P** **10 34 20.0 +0.8**
G08A IAmb IAmb 10 34 20.7
comp=Z,11nm,1.0s
M17K Holitna River 80.78 8 P **P** **10 34 20.5 +1.3**
M17K IAmb IAmb 10 34 21.3
comp=Z,28nm,1.0s
M17K Holitna River 80.78 8 P **P** **10 34 20.9 +1.6**
baz=195
L16K Owhat River 80.84 7 P **P** **10 34 20.8 +1.3**
L16K IAmb IAmb 10 34 21.6
comp=Z,26nm,1.1s
L16K Owhat River 80.84 7 P **P** **10 34 20.9 +1.4**
baz=194,SNR=6.1
BELA Belgrano 2 80.88 172 P **P** **10 34 19.7 0.0**
MSU Marysvale 80.88 44 P **P** **10 34 22.3 +1.7**
MSU Marysvale 80.88 44 P **P** **10 34 22.3 +1.7**
121A Cookes Peak, D 80.93 51 P **P** **10 34 21.5 +0.5**
baz=241
M18K Stony River 81.09 9 P **P** **10 34 21.3 +0.5**
baz=197
P23K Montague Islan 81.18 13 P **P** **10 34 21.8 +0.4**
baz=205
K15K Wolf Creek Mou 81.20 6 P **P** **10 34 23.0 +1.6**
K15K Wolf Creek Mou 81.20 6 P **P** **10 34 22.6 +1.2**
baz=192
BMO Blue Mountains 81.33 37 P **P** **10 34 22.7 0.0**
BMO IAmb IAmb 10 34 23.9
comp=Z,12nm,1.4s
BMO Blue Mountains 81.33 37 P **P** **10 34 22.7 0.0**
BMO pmax pmax
comp=Z,12nm,1.5s
MFID Camas Ranch 81.33 39 P **P** **10 34 23.0 +0.2**
DUG Dugway, Tooele 81.37 43 P **P** **10 34 23.1 +0.1**
baz=237
N20K Mount Spurr 81.38 10 P **P** **10 34 22.6 +0.1**
baz=200
CRAG Craig 81.39 22 P **P** **10 34 22.9 +0.4**
baz=218
L17K Donlin 81.39 7 P **P** **10 34 23.7 +1.3**
baz=195
J14K Nanvaranak Lak 81.47 5 P **P** **10 34 23.5 +0.7**
baz=190
L18K Granite Mounta 81.67 8 IAmb IAmb 10 34 27.2
comp=Z,19nm,1.4s
L18K Granite Mounta 81.67 8 P **P** **10 34 25.0 +1.0**
baz=196
M19K Big River Lodg 81.69 9 P **P** **10 34 24.0 -0.1**
baz=198
RC01 Rabbit Creek A 81.72 11 P **P** **10 34 24.3 0.0**
RC01 IAmb IAmb 10 34 25.0
comp=Z,30nm,1.2s
RC01 Rabbit Creek A 81.72 11 P **P** **10 34 24.2 0.0**
baz=203
D08A Wollman Farm, 81.78 34 P **P** **10 34 25.8 +0.9**
D08A IAmb IAmb 10 34 26.4
comp=Z,12nm,1.1s
M20K Styx River 81.87 10 P **P** **10 34 25.4 +0.3**
baz=200
SUA Susitna One 81.88 11 P **P** **10 34 25.0 -0.2**
SUA IAmb IAmb 10 34 25.7
comp=Z,12nm,0.7s
SUA Susitna One 81.88 11 P **P** **10 34 25.2 0.0**
baz=202,SNR=5.5
NJ2 Nanjing 81.90 308 *e*P **P** **10 34 26.0 +0.2**
NJ2 pP **pP** **10 34 29.5 +0.9**
NJ2 sP **sP** **10 34 31.3 +1.7**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 pmax pmax
comp=Z,250nm,5.7s
K17K Iditarod 81.95 7 P **P** **10 34 26.7 +1.3**
baz=195
F10A Beach Ranch, E 82.04 36 P **P** **10 34 26.6 +0.2**
F10A IAmb IAmb 10 34 27.3
comp=Z,9.9nm,1.1s
PLID Pearl Lake 82.21 37 P **P** **10 34 28.1 +0.6**
SKT Skwentna 82.22 10 P **P** **10 34 26.9 0.0**
baz=201
VHRN Van Horn 82.22 54 P **P** **10 34 29.4 +1.6**
VHRN IAmb IAmb 10 34 30.1
comp=Z,14nm,1.4s
HLID Hailey 82.26 39 P **P** **10 34 28.6 +0.9**
HLID Hailey 82.26 39 P **P** **10 34 28.7 +1.0**
baz=235,SNR=5.3
J16K Anvik River 82.26 6 P **P** **10 34 28.3 +1.2**
J16K Anvik River 82.26 6 P **P** **10 34 27.8 +0.8**
baz=192
SRU San Rafael Swe 82.29 44 P **P** **10 34 29.1 +1.1**
SRU IAmb IAmb 10 34 29.8
comp=Z,11nm,1.2s
SRU San Rafael Swe 82.29 44 P **P** **10 34 29.1 +1.1**
SRU pmax pmax
comp=Z,11nm,1.2s
PMR Palmer 82.29 12 P **P** **10 34 27.1 -0.1**
baz=203
L20K Farewell, AK 82.32 9 P **P** **10 34 27.4 0.0**
baz=199
MNTX Cornudas Mount 82.34 53 P **P** **10 34 28.9 +0.7**
baz=243
C09A Chrisman Ranch 82.59 34 P **P** **10 34 29.8 +0.7**
C09A IAmb IAmb 10 34 44.5
comp=Z,7.6nm,1.1s
TX31 Lajitas Ar. Si 82.60 56 P **P** **10 34 30.9 +1.1**
TX31 IAmb IAmb 10 34 32.2
comp=Z,18nm,1.4s
TXAR Lajitas Array 82.60 56 P **P** **10 34 31.0 +1.2**
TXAR Lajitas Array 82.60 56 P **P** **10 34 29.7 0.0**
comp=Z,4.0nm,1.0s,baz=219,slow=5.8,SNR=17
TXAR LR LR 11 03 10.4
comp=Z,34nm,19.9s,baz=240,slow=30
comp=Z,4.0nm,1.0s
MESA MESA 82.61 15 P **P** **10 34 29.2 0.0**
baz=210
BMRM Bremner River 82.67 14 P **P** **10 34 29.4 +0.1**
baz=208
MVCO Mesa Verde 82.70 47 P **P** **10 34 30.0 -0.3**
baz=240
M23K Glacier View 82.75 12 P **P** **10 34 29.5 -0.2**
baz=205
CUT Chulitna 82.84 11 P **P** **10 34 29.9 -0.1**
baz=202
I17K Unalakleet 82.84 6 P **P** **10 34 30.3 +0.3**
baz=192
KLU Klutina 82.85 13 P **P** **10 34 30.4 +0.2**
baz=206
SCM Sheep Creek Mo 82.87 12 P **P** **10 34 30.7 +0.4**
SCM Sheep Creek Mo 82.87 12 P **P** **10 34 30.1 -0.3**
baz=205
SCM Sheep Creek Mo 82.87 12 P **P** **10 34 30.7 +0.4**
SCM pmax pmax
comp=Z,23nm,0.7s
J18K Innoko River 82.87 8 P **P** **10 34 31.1 +0.9**
J18K IAmb IAmb 10 34 31.2
comp=Z,12nm,0.9s
J18K Innoko River 82.87 8 P **P** **10 34 30.4 +0.2**
baz=196
ISLE Juniper Island 82.89 15 P **P** **10 34 31.3 +0.8**
ISLE IAmb IAmb 10 34 33.7
comp=Z,20nm,1.1s
PPLA Purkeypile 82.97 10 P **P** **10 34 31.1 +0.2**
baz=200
ANMO Albuquerque 83.05 50 P **P** **10 34 31.2 -0.9**

ANMO Albuquerque 83.05 50 P **P** **10 34 32.5 +0.4**
baz=242
ANMO Albuquerque 83.05 50 P **P** **10 34 31.2 -0.9**
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 83.05 50 LR LR 11 02 16.3
comp=Z,90nm,21.6s,baz=340,slow=29
KLR Kul'dur 83.06 327 LR LR 11 06 22.4
comp=Z,36nm,21.0s,baz=168,slow=32
K20K Telida 83.12 9 P **P** **10 34 31.9 +0.4**
K20K IAmb IAmb 10 34 32.7
comp=Z,22nm,1.4s
K20K Telida 83.12 9 P **P** **10 34 32.1 +0.6**
baz=199
ANM Nome 83.15 4 P **P** **10 34 31.7 +0.1**
ANM IAmb IAmb 10 34 33.4
comp=Z,12nm,1.3s
ANM Nome 83.15 4 P **P** **10 34 32.1 +0.5**
baz=188
ANM Nome 83.15 4 P **P** **10 34 31.7 +0.1**
ANM pmax pmax
comp=Z,13nm,1.3s
N25K Chitina, Valde 83.24 14 P **P** **10 34 32.4 +0.1**
N25K Chitina, Valde 83.24 14 P **P** **10 34 32.4 +0.1**
baz=208,SNR=5.4
GLB Gilahina Butte 83.27 14 P **P** **10 34 32.4 0.0**
GLB IAmb IAmb 10 34 33.4
comp=Z,9.6nm,0.9s
P29M Windy Craggy 83.28 17 P **P** **10 34 33.5 +1.0**
baz=214
M24K Tolsona, Glenn 83.35 13 P **P** **10 34 33.7 +0.9**
baz=206
CN2 Changchun 83.38 320 *e*P P 10 34 29.9 -3.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
H16K Elim 83.44 5 P **P** **10 34 34.1 +1.0**
baz=191,SNR=12
CTG Chitna Glacier 83.45 15 P **P** **10 34 33.2 -0.2**
baz=211
BARN Barnard Glacie 83.45 15 P **P** **10 34 33.9 +0.4**
BARN IAmb IAmb 10 34 34.7
comp=Z,13nm,0.8s
WAT6 Susitna Watana 83.47 12 P **P** **10 34 33.7 +0.2**
baz=204,SNR=6.2
CAST Castle Rocks 83.48 10 P **P** **10 34 32.4 -1.0**
CAST IAmb IAmb 10 34 32.8
comp=Z,7.9nm,0.8s
CAST Castle Rocks 83.48 10 P **P** **10 34 32.3 -1.0**
baz=200,SNR=5.5
NEW Newport 83.48 34 P **P** **10 34 33.1 -0.7**
baz=233
NEW Newport 83.48 34 LR LR 11 03 49.9
comp=Z,172nm,20.9s,baz=214,slow=30
J19K Poorman 83.52 8 P **P** **10 34 33.9 +0.4**
baz=197
PLBC Pleasant Camp 83.53 18 P **P** **10 34 34.8 +1.1**
baz=215
WAT1 Susitna Watana 83.54 11 P **P** **10 34 33.4 -0.3**
baz=204
H03S2 Juan Fernandez 83.65 123 T T 12 07 07.7
baz=250,slow=75,SNR=260
G15K Niukluk 83.66 4 P **P** **10 34 35.1 +0.8**
baz=189
H03S1 Juan Fernandez 83.66 123 T T 12 07 08.7
baz=250,slow=75,SNR=221
H03S3 Juan Fernandez 83.67 123 T T 12 07 07.5
baz=250,slow=75,SNR=193
RDMU Red Mountain 83.67 44 P **P** **10 34 35.6 +0.4**
RDMU IAmb IAmb 10 34 36.0
comp=Z,4.9nm,0.8s
H03N2 Juan Fernandez 83.77 123 T T 12 07 15.0
baz=257,slow=72,SNR=102
H03N3 Juan Fernandez 83.77 123 T T 12 07 16.2
baz=257,slow=72,SNR=106
H03N1 Juan Fernandez 83.78 123 T T 12 07 16.6
baz=257,slow=72,SNR=64
KTH Kantishna Hill 83.80 10 P **P** **10 34 33.9 -1.1**
KTH IAmb IAmb 10 34 36.0
comp=Z,9.3nm,0.9s
TRF Thorofare Moun 83.81 10 P **P** **10 34 35.0 -0.2**
TRF Thorofare Moun 83.81 10 P **P** **10 34 35.1 -0.2**
baz=202,SNR=9.6
HARP HAARP 83.83 13 P **P** **10 34 35.7 +0.5**
baz=207
AHID Auburn Hatcher 83.84 41 P **P** **10 34 36.4 +0.4**
AHID IAmb IAmb 10 34 38.0
comp=Z,6.0nm,0.9s
CHUM Lake Minchumin 83.88 9 P **P** **10 34 34.8 -0.6**
baz=200
J20K Nowinta River 83.89 8 P **P** **10 34 36.1 +0.6**
J20K Nowinta River 83.89 8 P **P** **10 34 35.7 +0.3**
baz=198
P30M Million Dollar 83.91 18 P **P** **10 34 36.7 +1.0**
baz=215
H17K Granite Mounta 83.95 6 P **P** **10 34 36.0 +0.3**
H17K IAmb IAmb 10 34 37.2
comp=Z,9.1nm,1.1s
H17K Granite Mounta 83.95 6 P **P** **10 34 36.4 +0.7**
baz=193,SNR=5.6
S34M Telegraph Cree 83.98 21 P **P** **10 34 35.9 -0.2**
baz=220
DHY Denali Highway 83.99 12 P **P** **10 34 36.2 +0.1**
DHY IAmb IAmb 10 34 47.4
comp=Z,6.3nm,0.9s
DHY Denali Highway 83.99 12 P **P** **10 34 36.0 -0.1**
baz=205
F14K Arctic Creek 84.00 3 P **P** **10 34 36.2 +0.3**
baz=187,SNR=9.5
RND Reindeer 84.02 11 P **P** **10 34 36.6 +0.4**
RND Reindeer 84.02 11 P **P** **10 34 36.6 +0.4**
RND pmax pmax
comp=Z,16nm,0.8s
TNA Tin City 84.02 2 P **P** **10 34 36.4 +0.4**
baz=185,SNR=5.7
SAND Sanderson 84.08 56 P **P** **10 34 38.6 +1.3**
GCSA Galena City Sc 84.09 7 P **P** **10 34 37.1 +0.7**
baz=196,SNR=5.0
YUK8 Steele Glacier 84.12 16 P **P** **10 34 37.6 +0.6**
baz=212
S22A 4UR Ranch, Cre 84.12 47 P **P** **10 34 39.0 +1.4**
S22A IAmb IAmb 10 34 39.8
comp=Z,7.7nm,0.8s
S22A 4UR Ranch, Cre 84.12 47 P **P** **10 34 38.8 +1.2**
baz=241
G16K Koyuk River 84.18 5 P **P** **10 34 37.4 +0.5**
G16K IAmb IAmb 10 34 38.5
comp=Z,11nm,1.1s
G16K Koyuk River 84.18 5 P **P** **10 34 37.6 +0.7**
baz=191
PAX Paxson 84.27 13 P **P** **10 34 37.1 -0.4**
baz=207
MCK McKinley 84.30 11 P **P** **10 34 37.6 0.0**
baz=203,SNR=17
M26K Nabesna, AK 84.30 14 P **P** **10 34 38.8 +1.1**
M26K Nabesna, AK 84.30 14 P **P** **10 34 38.4 +0.7**
baz=209
H18K Honhosa River 84.31 6 IAmb IAmb 10 34 38.8
comp=Z,14nm,1.1s
H18K P **P** **10 34 39.1 +1.6**
H18K Honhosa River 84.31 6 P **P** **10 34 38.0 +0.4**
baz=194
O20A White River Ci 84.33 44 P **P** **10 34 38.4 -0.1**
baz=240
F15K North Star Dit 84.33 4 P **P** **10 34 38.4 +0.7**
F15K IAmb IAmb 10 34 39.1
comp=Z,13nm,1.4s
F15K North Star Dit 84.33 4 P **P** **10 34 37.9 +0.2**
baz=188
HYT Haines Junctio 84.33 17 P **P** **10 34 38.2 +0.2**
baz=214
YUK3 Moose Creek 84.36 15 P **P** **10 34 37.9 -0.3**
baz=211,SNR=7.5
SNOW Snow King Moun 84.43 41 IAmb IAmb 10 34 40.5
comp=Z,13nm,1.1s
G17K Kiwalik Mounta 84.43 5 P **P** **10 34 38.3 +0.2**
baz=192
I20K Naaghedeneel 84.44 8 P **P** **10 34 38.5 +0.3**
baz=198
YUK4 Talbot Arm 84.46 16 P **P** **10 34 39.0 +0.3**
baz=213
M27K Edge Creek, AK 84.52 14 P **P** **10 34 40.3 +1.4**
M27K Edge Creek, AK 84.52 14 P **P** **10 34 39.9 +1.0**
baz=210,SNR=11
IMW Indian Meadow 84.54 40 P **P** **10 34 39.6 0.0**
IMW IAmb IAmb 10 34 41.1
comp=Z,5.3nm,0.8s
LOHW Long Hollow 84.60 41 P **P** **10 34 39.5 -0.3**
LOHW IAmb IAmb 10 34 41.3
comp=Z,10.0nm,1.5s
BWN Browne 84.61 10 P **P** **10 34 38.3 -0.8**
MENT Mentasta 84.61 13 P **P** **10 34 39.2 +0.1**
MENT IAmb IAmb 10 34 40.6
comp=Z,13nm,1.1s
O30N Mendenhall 84.69 17 P P 10 34 37.6 -2.1
O30N Mendenhall 84.69 17 P **P** **10 34 40.3 +0.6**
baz=215
MAW Mawson 84.69 199 LR LR 11 10 25.7
comp=Z,79nm,20.2s,baz=204,slow=34
SMCO Snowmass 84.71 46 IAmb IAmb 10 34 42.3
comp=Z,6.6nm,1.1s
L26K Log Cabin Wild 84.77 13 P **P** **10 34 40.6 +0.6**
L26K IAmb IAmb 10 34 41.5
comp=Z,11nm,0.9s
L26K Log Cabin Wild 84.77 13 P **P** **10 34 40.4 +0.4**
baz=209,SNR=5.5
FLWY Flagg Ranch 84.79 40 P **P** **10 34 41.7 +0.9**
FLWY IAmb IAmb 10 34 42.6
comp=Z,12nm,1.1s
BW06 Boulder Array 84.81 42 P **P** **10 34 41.4 +0.5**
BW06 IAmb IAmb 10 34 41.7
comp=Z,8.1nm,1.3s
BW06 Boulder Array 84.81 42 P **P** **10 34 40.3 -0.7**
baz=239
PD31 Pinedale Array 84.81 42 P **P** **10 34 41.1 +0.2**
PDAR Pinedale Array 84.81 42 P **P** **10 34 40.9 -0.1**
PDAR Pinedale Array 84.81 42 P **P** **10 34 40.5 -0.4**
comp=Z,2.0nm,0.6s,baz=216,slow=3.7,SNR=24
PDAR LR LR 11 05 01.0
comp=Z,87nm,19.5s,baz=260,slow=30
comp=Z,2.0nm,0.6s
BVCY Beaver Creek 84.81 15 P **P** **10 34 40.6 +0.4**
baz=211,SNR=6.8
H19K Roundabout Mou 84.89 7 P **P** **10 34 41.4 +1.0**
H19K Roundabout Mou 84.89 7 P **P** **10 34 41.0 +0.5**
baz=196,SNR=13
YHL Hebgen Lake 84.90 39 P **P** **10 34 42.5 +1.1**
YHL IAmb IAmb 10 34 43.5
comp=Z,10nm,0.9s
WHY Whitehorse 84.94 18 P **P** **10 34 41.7 +0.7**
baz=216
K24K Donnelly Dome 84.96 12 P **P** **10 34 41.5 +0.6**
baz=206,SNR=6.2
G18K Tagagawik 85.00 6 P **P** **10 34 41.2 +0.1**
G18K IAmb IAmb 10 34 42.2
comp=Z,13nm,0.9s
G18K Tagagawik 85.00 6 P **P** **10 34 41.1 0.0**
baz=194
H17A Grant Village 85.03 40 P **P** **10 34 42.3 +0.3**
baz=238
BOZ Bozeman (W) 85.04 38 P **P** **10 34 42.7 +0.8**
BOZ Bozeman (W) 85.04 38 P **P** **10 34 42.1 +0.2**
baz=237
BOZ Bozeman (W) 85.04 38 P **P** **10 34 42.7 +0.8**
BOZ pmax pmax
comp=Z,4.0nm,1.0s
SDCO Great Sand Dun 85.05 48 P **P** **10 34 42.6 +0.3**
baz=242
DRIO Del Rio 85.05 57 P **P** **10 34 42.9 +0.7**
DRIO IAmb IAmb 10 34 43.4
comp=Z,6.1nm,0.8s
H20K Anotleneega Mo 85.05 8 P **P** **10 34 41.8 +0.5**
baz=198
NEA2 Nenana 85.07 10 P **P** **10 34 41.3 -0.1**
NEA2 IAmb IAmb 10 34 42.5
comp=Z,10nm,0.9s
NEA2 Nenana 85.07 10 P **P** **10 34 42.0 +0.5**
baz=203
L27K Beaver Creek, 85.14 14 P **P** **10 34 41.8 -0.1**
L27K IAmb IAmb 10 34 43.1
comp=Z,6.9nm,0.9s
L27K Beaver Creek, 85.14 14 P **P** **10 34 42.6 +0.7**
baz=210,SNR=5.0
I21K Tanana 85.15 9 P **P** **10 34 41.9 +0.1**
I21K IAmb IAmb 10 34 42.8
comp=Z,15nm,1.1s
I21K Tanana 85.15 9 P **P** **10 34 42.0 +0.2**
baz=200,SNR=6.8
R33M Jennings River 85.17 20 P **P** **10 34 43.1 +0.9**
baz=220
CMIG Matias Romero 85.19 70 LR LR 11 05 38.9
comp=Z,91nm,18.2s,baz=240,slow=31
MLY Manley 85.20 10 P **P** **10 34 41.9 -0.2**
MLY IAmb IAmb 10 34 42.4
comp=Z,10nm,0.8s
MLY Manley 85.20 10 P **P** **10 34 41.8 -0.2**
baz=202,SNR=9.6
P33M Teslin, Yukon 85.21 19 P **P** **10 34 42.8 +0.4**
baz=218
HDA Harding Lake 85.28 11 P **P** **10 34 42.3 -0.2**
HDA Harding Lake 85.28 11 P **P** **10 34 42.5 0.0**
baz=205,SNR=18
F17K Baldwin Pennin 85.30 5 P **P** **10 34 42.9 +0.4**
F17K IAmb IAmb 10 34 43.9
comp=Z,14nm,0.8s
F17K Baldwin Pennin 85.30 5 P **P** **10 34 42.9 +0.4**
baz=192
MSTX Muleshoe 85.31 52 P **P** **10 34 44.4 +0.8**
MSTX Muleshoe 85.31 52 P **P** **10 34 44.2 +0.7**
baz=244
CCB Clear Creek Bu 85.34 11 P **P** **10 34 42.4 -0.3**
N31M Braeburn, Yuko 85.36 17 P **P** **10 34 43.3 +0.3**
baz=216
G19K Purcell Mounta 85.41 7 P **P** **10 34 43.6 +0.6**
G19K IAmb IAmb 10 34 44.6
comp=Z,15nm,0.9s
G19K Purcell Mounta 85.41 7 P **P** **10 34 43.7 +0.6**
baz=196
M29M Somme Creek 85.43 16 P **P** **10 34 43.9 +0.5**
M29M IAmb IAmb 10 34 45.3
comp=Z,11nm,1.0s
M29M Somme Creek 85.43 16 P **P** **10 34 44.1 +0.7**
baz=213,SNR=6.5
SCRK Sand Creek 85.48 13 P **P** **10 34 44.0 +0.4**
SCRK IAmb IAmb 10 34 44.8
comp=Z,12nm,0.9s
SCRK Sand Creek 85.48 13 P **P** **10 34 44.2 +0.6**
baz=208,SNR=9.0
H21K Melozitna Rive 85.48 9 P **P** **10 34 44.1 +0.6**
H21K Melozitna Rive 85.48 9 P **P** **10 34 44.1 +0.6**
baz=200
I23K Minto, Yukon-K 85.53 10 P **P** **10 34 43.6 -0.1**
baz=203
SEY Seymchan 85.53 345 ‖ *e*P **P** **10 34 43.6 -0.1**
SEY pmax pmax
comp=Z,11nm,1.3s
SEY Seymchan 85.53 345 LR LR 11 07 20.9
comp=Z,42nm,20.1s,baz=42,slow=32
COLA College 85.54 11 P **P** **10 34 43.8 +0.1**
COLA College 85.54 11 P **P** **10 34 44.3 +0.6**
baz=204
COLA College 85.54 11 P **P** **10 34 43.8 +0.1**
COLA pmax pmax
comp=Z,55nm,0.8s
MDM Murphy Dome 85.55 11 P **P** **10 34 43.4 -0.4**
F18K Selawik 85.60 6 P **P** **10 34 44.0 0.0**
baz=193,SNR=6.7
IL31 85.62 11 P **P** **10 34 43.9 -0.2**
IL31 IAmb IAmb 10 34 44.3
comp=Z,8.5nm,0.7s
ILAR Eielson Array 85.62 11 P **P** **10 34 43.8 -0.4**
comp=Z,7.9nm,0.8s,baz=233,slow=6.3,SNR=122
ILAR LR LR 11 05 42.4
comp=Z,38nm,19.6s,baz=216,slow=31
comp=Z,7.9nm,0.8s
IMAR Indian Mountai 85.66 8 P **P** **10 34 45.2 +0.9**
LL02 Futaleuf 85.74 134 P **P** **10 34 46.3 +0.8**
LL02 IAmb IAmb 10 34 47.3
comp=Z,10nm,0.9s
J25K Salcha River, 85.77 12 P **P** **10 34 45.4 +0.4**
J25K Salcha River, 85.77 12 P **P** **10 34 45.4 +0.4**
baz=207
POKR Poker Plat Res 85.84 11 P **P** **10 34 45.5 +0.3**
POKR Poker Plat Res 85.84 11 P **P** **10 34 45.0 -0.2**
baz=205,SNR=8.2
N32M Quiet Lake 85.87 18 P **P** **10 34 46.0 +0.5**
baz=218
POST Post 85.89 53 P **P** **10 34 47.1 +0.8**
E17K Hotham Inlet 85.89 5 P **P** **10 34 46.2 +0.8**
baz=191,SNR=14
H22K Ishtalitna Cre 85.91 9 P **P** **10 34 46.0 +0.4**
baz=201
K27K Chicken 85.93 13 P **P** **10 34 46.4 +0.7**
K27K IAmb IAmb 10 34 47.6
comp=Z,11nm,1.0s
K27K Chicken 85.93 13 P **P** **10 34 46.7 +1.0**
baz=210
ISCO Idaho Springs 85.93 46 P **P** **10 34 46.6 -0.1**
baz=242
M30M Minto, Yukon 85.97 16 P **P** **10 34 46.4 +0.4**
M30M IAmb IAmb 10 34 47.2
comp=Z,15nm,1.1s
M30M Minto, Yukon 85.97 16 P **P** **10 34 46.6 +0.6**
baz=215,SNR=5.7
F19K Shaleruckik Mo 86.01 6 P **P** **10 34 46.4 +0.4**
F19K IAmb IAmb 10 34 47.2
comp=Z,14nm,0.8s
F19K Shaleruckik Mo 86.01 6 P **P** **10 34 46.4 +0.4**
baz=195,SNR=19
J26L Joseph Creek 86.03 13 P **P** **10 34 46.8 +0.5**
baz=208
L29M L29M 86.07 15 P **P** **10 34 46.9 +0.4**
baz=213
JCT Junction City 86.13 56 P **P** **10 34 47.3 -0.2**
baz=246
G21K Allakaket 86.20 8 P **P** **10 34 47.5 +0.5**
G21K IAmb IAmb 10 34 48.4
comp=Z,12nm,0.8s
G21K Allakaket 86.20 8 P **P** **10 34 47.2 +0.2**
baz=199
RLMT Red Lodge 86.20 40 P **P** **10 34 47.1 -0.7**
baz=239
E18K Tukpahlearik C 86.32 5 IAmb IAmb 10 34 49.0
comp=Z,14nm,1.0s
E18K Tukpahlearik C 86.32 5 P **P** **10 34 48.2 +0.6**
baz=192
M31M Drury Creek, Y 86.33 17 P **P** **10 34 47.5 -0.3**
baz=217
H24K Noodor Dome 86.42 10 P **P** **10 34 47.8 -0.4**
baz=204
WTLY Watson Lake, Y 86.44 21 P **P** **10 34 48.8 +0.4**
baz=222
F20K Avaraart Lake 86.44 7 P **P** **10 34 48.4 +0.3**
F20K IAmb IAmb 10 34 49.6
comp=Z,12nm,0.9s
F20K Avaraart Lake 86.44 7 P **P** **10 34 48.5 +0.4**
baz=197
AMTX Amarillo 86.52 52 IAmb IAmb 10 34 50.9
comp=Z,11nm,0.9s
AMTX Amarillo 86.52 52 P **P** **10 34 49.6 +0.1**
baz=244
PRP Porcupine Dome 86.55 11 P **P** **10 34 47.8 -1.1**
PRP Porcupine Dome 86.55 11 P **P** **10 34 49.1 +0.2**
baz=206,SNR=13
DAWY Dawson 86.57 14 P **P** **10 34 49.4 +0.4**
DAWY Dawson 86.57 14 P **P** **10 34 49.3 +0.4**
baz=212,SNR=19
DKNS Dickens 86.58 53 IAmb IAmb 10 34 52.1
comp=Z,13nm,1.0s
FARO Faro, Yukon 86.64 18 P **P** **10 34 49.6 +0.3**
baz=218
E19K Redstone River 86.67 6 P **P** **10 34 49.7 +0.5**
baz=196
K22A Casper 86.69 43 P **P** **10 34 49.8 -0.4**
baz=241
RDOG Red Dog Mine 86.77 4 P **P** **10 34 50.2 +0.5**
baz=190
EGAK Eagle 86.78 13 P **P** **10 34 50.1 +0.2**
EGAK IAmb IAmb 10 34 51.2
comp=Z,15nm,0.9s
EGAK Eagle 86.78 13 P **P** **10 34 49.6 -0.2**
baz=211,SNR=7.3
K29M Barlow Dome 86.84 15 P **P** **10 34 51.0 +0.7**
baz=214
C16K Lisburne Hills 86.84 3 P **P** **10 34 50.3 +0.2**
baz=188
G22K Bettles 86.86 9 P **P** **10 34 50.7 +0.6**
baz=201
F21K Alatna River 86.88 8 IAmb IAmb 10 34 51.5
comp=Z,7.2nm,1.1s
F21K Alatna River 86.88 8 P **P** **10 34 50.4 +0.1**
baz=199
G23K Bananza Creek 86.88 9 P **P** **10 34 50.2 -0.1**
G23K IAmb IAmb 10 34 51.8
comp=Z,10nm,1.1s
G23K Bananza Creek 86.88 9 P **P** **10 34 50.8 +0.5**
baz=202
BRDY Brady 87.08 56 IAmb IAmb 10 34 53.6
comp=Z,13nm,1.2s
ABTX Abilene, Hawle 87.12 54 P **P** **10 34 52.7 +0.3**
baz=246
C17K DeLong Mountai 87.17 4 P **P** **10 34 52.4 +0.7**
baz=190
J29N Klondike Camp 87.18 15 P **P** **10 34 53.0 +1.1**
J29N IAmb IAmb 10 34 53.9
comp=Z,23nm,0.8s
J29N Klondike Camp 87.18 15 P **P** **10 34 52.9 +1.0**
baz=213,SNR=12
COLD Coldfoot 87.33 9 P **P** **10 34 53.5 +1.0**
baz=202
HNS HongShan 87.35 311 ‖ P **P** **10 34 53.9 +0.6**
I27K Kandik River 87.40 13 P **P** **10 34 53.1 +0.1**
baz=210
C18K Utukok River 87.48 5 IAmb IAmb 10 35 14.1
comp=Z,9.3nm,1.4s
C18K Utukok River 87.48 5 P **P** **10 34 54.0 +0.7**
baz=192
BJT Baijiatuau 87.48 314 P **P** **10 34 52.0 -1.9**
BJT IAmb IAmb 10 34 53.9
comp=Z,13nm,1.1s
BJT Baijiatuau 87.48 314 P **P** **10 34 52.0 -1.9**
BJT pmax pmax
comp=Z,13nm,1.1s
E20K Nigu River 87.55 6 P **P** **10 34 54.1 +0.5**
baz=196
PLCA Paso Flores 87.55 132 P **P** **10 34 54.1 -0.3**
comp=Z,1.6nm,0.9s,baz=257,slow=8.3,SNR=3.7
PLCA LR LR 11 04 58.2
comp=Z,53nm,20.8s,baz=197,slow=29
comp=Z,1.6nm,0.9s
D19K Kuna River 87.59 6 IAmb IAmb 10 34 54.8
comp=Z,6.9nm,0.9s
D19K Kuna River 87.59 6 P **P** **10 34 53.8 0.0**
baz=195
I28M Miner Creek 87.62 13 P **P** **10 34 54.6 +0.6**
I28M IAmb IAmb 10 34 55.1
comp=Z,7.3nm,0.8s
I28M Miner Creek 87.62 13 P **P** **10 34 54.5 +0.4**
baz=212
BILL Bilibino 87.64 353 P **P** **10 34 53.9 0.0**
BILL IAmb IAmb 10 34 54.9
comp=Z,14nm,1.2s
BILL Bilibino 87.64 353 *e*P **P** **10 34 54.1 +0.1**
J30M Hart River 87.74 15 P **P** **10 34 54.8 +0.1**
J30M IAmb IAmb 10 34 56.2
comp=Z,8.6nm,0.8s
J30M Hart River 87.74 15 P **P** **10 34 55.5 +0.9**
baz=215,SNR=7.1
D20K Etivluk River 87.94 6 P **P** **10 34 55.6 +0.1**
baz=196
E22K Anaktuvuk Pass 87.95 8 P **P** **10 34 56.1 +0.6**
E22K IAmb IAmb 10 34 56.7
comp=Z,6.1nm,0.8s
E22K Anaktuvuk Pass 87.95 8 P **P** **10 34 56.0 +0.4**
baz=201
F24K Squaw Lake 87.95 10 P **P** **10 34 56.4 +0.9**
baz=204
H27K Steamboat Moun 87.96 12 P **P** **10 34 56.5 +0.9**
baz=210
C19K Lookout Ridge 88.05 5 P **P** **10 34 56.1 +0.1**
C19K Lookout Ridge 88.05 5 P **P** **10 34 56.7 +0.7**
baz=193
KOTAN Kotaneelee Air 88.10 22 P **P** **10 34 57.2 +0.9**
baz=226
B18K Kokolik River 88.14 4 P **P** **10 34 56.5 +0.2**
baz=191
E23K Chandalar 88.19 9 P **P** **10 34 57.3 +0.6**
baz=203
I30M Mount Dempster 88.26 15 P **P** **10 34 57.3 +0.2**
I30M Mount Dempster 88.26 15 P **P** **10 34 57.3 +0.2**
baz=215
EDM Edmonton 88.33 32 P **P** **10 34 57.3 -0.4**
EDM IAmb IAmb 10 34 58.5
comp=Z,14nm,1.1s
EDM Edmonton 88.33 32 P **P** **10 34 57.3 -0.4**
EDM pmax pmax
comp=Z,14nm,1.1s
F25K Christian Rive 88.39 10 P **P** **10 34 58.5 +0.8**
baz=206
D22K Ayikyak River 88.55 7 P **P** **10 34 59.0 +0.7**
D22K Ayikyak River 88.55 7 P **P** **10 34 58.8 +0.5**

baz=200
C21K **Knifeblade Rid** 88.56 7 P P 10 34 59.0 +0.6
baz=198
WMOK **Wichita Mounta** 88.63 53 P P 10 34 59.3 -0.3
baz=246
F26K **Sheenjek River** 88.74 11 P P 10 34 59.9 +0.6
baz=208
LAO **LASA Array** 88.83 39 P P 10 35 00.2 0.0
baz=241
E25K **Arctic Village** 88.88 10 P P 10 35 00.5 +0.6
baz=206
ELIB **Princess Elisa** 88.94 185 *d*P P 10 35 00.5 0.0
ELIB *d*PcP PcP 10 35 01.3 -0.7
RSSD **Black Hills** 88.98 42 P P 10 35 00.3 -0.9
baz=243
A19K **Wainwright** 89.02 4 P P 10 35 00.9 +0.5
baz=192
EPYK **Eagle Plains** 89.12 14 P P 10 35 01.4 +0.3
EPYK IAmb IAmb 10 35 01.9
comp=Z,5.1nm,0.8s
EPYK **Eagle Plains** 89.12 14 P P 10 35 00.9 -0.2
baz=215
G29M **Pine Creek** 89.28 13 P P 10 35 02.3 +0.6
baz=213
D24K **Happy Valley** 89.31 9 P P 10 35 02.3 +0.4
D24K IAmb IAmb 10 35 03.5
comp=Z,4.8nm,0.8s
D24K **Happy Valley** 89.31 9 P P 10 35 02.8 +0.9
baz=203
F28M **Old Crow** 89.49 12 P P 10 35 02.9 +0.2
F28M **Old Crow** 89.49 12 P P 10 35 03.4 +0.7
baz=212
SNAA **Sanae** 89.73 177⇓ *e*P P 10 35 04.1 0.0
SNAA pmax pmax
comp=Z,14nm,2.5s
SNAA **Sanae** 89.73 177 P P 10 35 03.6 -0.6
comp=Z,4.7nm,0.9s,baz=113,slow=1.2,SNR=5.9
comp=Z,4.7nm,0.9s
G30M **tAoh Zraii Nji** 89.74 14 P P 10 35 04.1 +0.1
G30M IAmb IAmb 10 35 05.2
comp=Z,9.7nm,0.9s
G30M **tAoh Zraii Nji** 89.74 14 P P 10 35 04.0 +0.1
baz=215
D25K **Kavik River** 89.83 9 P P 10 35 04.5 +0.1
baz=206
B22K **Teshekpuk Lake** 89.84 7 P P 10 35 04.8 +0.5
B22K IAmb IAmb 10 35 05.4
comp=Z,8.2nm,0.9s
B22K **Teshekpuk Lake** 89.84 7 P P 10 35 04.6 +0.3
baz=199
C24K **Franklin Bluff** 89.85 8 P P 10 35 05.0 +0.6
baz=204
OK032 **Salt Plains WL** 89.88 51 IAmb IAmb 10 35 07.9
comp=Z,12nm,1.1s
G31M **Satah River** 90.14 14 P P 10 35 05.9 +0.1
G31M **Satah River** 90.14 14 P P 10 35 06.6 +0.9
baz=217
R32A **Long Quarter,** 90.16 49 IAmb IAmb 10 35 08.8
comp=Z,12nm,0.9s
F30M **Barrier River** 90.35 14 P P 10 35 07.8 +1.0
baz=216
E28M **Babbage River** 90.40 12 IAmb IAmb 10 35 08.4
comp=Z,5.1nm,0.9s
E28M **Babbage River** 90.40 12 P P 10 35 07.4 +0.5
baz=212
WRGLY **Wrigley** 90.45 20 P P 10 35 07.8 +0.5
WRGLY **Wrigley** 90.45 20 P P 10 35 08.4 +1.2
baz=227
A21K **Barrow** 90.46 5 P P 10 35 07.5 +0.3
baz=196
E29M **Blow River** 90.54 13 P P 10 35 07.6 0.0
baz=214
F31M **Tsiigehtchic** 90.68 14 P P 10 35 08.8 +0.6
F31M **Tsiigehtchic** 90.68 14 P P 10 35 08.4 +0.1
baz=217
DGMT **Dagmar** 90.88 39 IAmb IAmb 10 35 11.7
comp=Z,6.3nm,0.8s
DGMT **Dagmar** 90.88 39 P P 10 35 10.0 +0.3
baz=243
HHC **Hu-ho-hao-te** 91.01 313 *e*P P 10 35 10.4 -0.2
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,150nm,4.6s
D28M **Stokes Point** 91.17 12 P P 10 35 10.4 0.0
baz=213
TUL3 **Leonard** 91.34 53 P P 10 35 10.9 -1.2
baz=248
INK **Inuvik** 91.42 14 P P 10 35 11.5 -0.2
INK IAmb IAmb 10 35 12.7
comp=Z,7.1nm,0.9s
INK **Inuvik** 91.42 14 P P 10 35 11.8 +0.1
baz=218
INK **Inuvik** 91.42 14 P P 10 35 11.5 -0.2
INK pmax pmax
comp=Z,7.0nm,0.9s
INK **Inuvik** 91.42 14 LR LR 11 09 54.2
comp=Z,46nm,20.1s,baz=185,slow=31
YAK **Yakutsk** 91.94 337⇑ *e*P P 10 35 14.1 -0.1
YAK pmax pmax
comp=Z,5.0nm,0.7s
YAK **Yakutsk** 91.94 337 LR LR 11 14 05.3
comp=Z,23nm,18.6s,baz=218,slow=34
JTS **Las Juntas de** 92.02 80 LR LR 11 07 37.3
comp=Z,106nm,18.3s,baz=243,slow=30
TEIG **Tepich** 92.14 70 LR LR 11 08 02.0
comp=Z,619nm,20.7s,baz=9.5,slow=30
NNA **Nana** 92.56 103 LR LR 11 07 32.8
comp=Z,61nm,20.3s,baz=242,slow=29
ATAH **Atahualpa** 92.71 98 LR LR 11 09 08.4
comp=Z,98nm,18.1s,baz=247,slow=30
YKA **Yellowknife Ar** 93.12 24 P P 10 35 18.7 -1.0
comp=Z,0.6nm,0.7s,baz=232,slow=4.0,SNR=8.4
comp=Z,0.6nm,0.7s
CD2 **Chengdu** 93.26 301 *e*P P 10 35 21.0 -0.2
CMAR **Chiang Mai Arr** 93.38 288 P P 10 35 20.4 -1.6
comp=Z,1.2nm,0.3s,baz=113,slow=2.1,SNR=1.7
CMAR LR LR 11 14 26.7
comp=Z,26nm,20.4s,baz=115,slow=34
comp=Z,1.2nm,0.3s
PZH **PanZhiHua** 93.48 297 P P 10 35 23.0 +0.6
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,120nm,5.3s
C36M **Paulatuk** 94.50 16 P P 10 35 26.1 +0.2
baz=226
R40A **Maddies Statio** 94.82 51 P P 10 35 27.8 -0.3
CCM **Cathedral Cave** 95.50 52 P P 10 35 30.5 -0.7
baz=251
LVC **Limon Verde** 95.85 116 LR LR 11 08 29.4
comp=Z,54nm,21.0s,baz=228,slow=29
A36M **Sachs Harbour** 96.06 14 P P 10 35 32.7 -0.3
FVM **French Village** 96.09 52 IAmb IAmb 10 35 35.5
comp=Z,7.6nm,0.9s
ULM **Lac du Bonnet** 96.57 39 P P 10 35 34.2 -1.6
comp=Z,1.8nm,0.8s,baz=299,slow=4.7,SNR=3.3
ULM LR LR 11 11 05.4
comp=Z,188nm,19.4s,baz=230,slow=30
comp=Z,1.8nm,0.8s
SONM **Songino Array** 97.05 318 LR LR 11 14 25.0
comp=Z,39nm,20.8s,baz=188,slow=32
GOGA **Godfrey** 100.17 58 P Pdif 10 35 50.5 -1.8
baz=254
NRIK **Noril'sk** 110.36 338 *i* PKIKP PKiKP 10 40 37.6 0.0
ZALV **Zalesovo Beam** 111.58 321 PKiKP PKiKP 10 40 39.5 -0.8
comp=Z,1.2nm,0.3s,baz=50,slow=2.3,SNR=6.0
MK31 **Makanchi Array** 112.87 314⇓ *i* PKIKP PKiKP 10 40 42.1 -1.0
MKAR **Makanchi Array** 112.87 314 PKiKP PKiKP 10 40 42.2 -0.9
comp=Z,1.7nm,0.5s,baz=230,slow=0.2,SNR=24
KURK **Kurchatov** 115.36 318 PKiKP PKiKP 10 40 46.8 -0.9
KURBB **Kurchatov Arra** 115.42 318 PKP PKiKP 10 40 46.8 -1.0
comp=Z,1.9nm,0.7s,baz=89,slow=1.7,SNR=11
BVAR **Borovoye Array** 120.23 321 PKP PKPdf 10 40 56.4 -0.6
comp=Z,7.3nm,0.6s,baz=99,slow=1.7,SNR=46
BRVK **Borovoye** 120.28 321 PKPdf PKPdf 10 40 56.4 -0.7
BRVK **Borovoye** 120.28 321 *d* PKIKP PKPdf 10 40 56.7 -0.4
BRVK pmax pmax
comp=Z,3.0nm,0.7s
ARU **Arti** 125.91 327 *i* PKIKP PKPdf 10 41 07.2 -0.6
ARU 10 43 03.4
ARU 10 48 18.4
ARU SS SS 11 00 04.4 +2.6
ARU **Arti** 125.91 327 PKP PKPdf 10 41 07.4 -0.4
comp=Z,6.5nm,0.2s,baz=0.0,slow=2.0,SNR=1.4
ARCES **ARCESS Array B** 127.73 352 PKP PKPdf 10 41 10.2 -0.7
comp=Z,5.2nm,0.8s,baz=38,slow=2.2,SNR=12

AKTO **Aktyubinsk** 128.31 320 PKP PKPdf 10 41 12.1 -0.5
comp=Z,1.5nm,1.0s,baz=45,slow=1.4,SNR=4.4
KIRV **Kirov** 129.27 332 *c* PKIKP PKPdf 10 41 14.9 +0.8
BOSA **Boshof** 129.62 202 PKP PKPdf 10 41 16.3 +0.3
comp=Z,4.4nm,1.1s,baz=90,slow=2.0,SNR=2.5
KLMR **Klimovskoe** 131.69 339 *e*PKIKP PKPdf 10 41 17.1 -1.6
KLMR pmax pmax
comp=Z,23nm,1.7s
BELG **Belogorsnoye** 133.42 326 *c* PKIKP PKPdf 10 41 22.2 0.0
BELG **Belogornoye** 133.42 326 PKP PKPdf 10 41 21.9 -0.3
comp=Z,20nm,0.9s,baz=155,slow=1.1,SNR=15
FINES **FINESS Array B** 135.00 347 PKP PKPdf 10 41 24.4 -0.5
comp=Z,3.8nm,0.7s,baz=27,slow=4.7,SNR=12
OBN **Obninsk** 136.92 335⇑ *i* PKIKP PKPdf 10 41 29.4 +0.8
OBN *i* SS SS 11 02 12.1 -3.6
OBN pmax pmax
comp=Z,8.0nm,0.5s
VSU **Vasula** 137.48 344⇓ *i* PKIKP PKPdf 10 41 30.6 +1.0
VSU pmax pmax
comp=Z,47nm,2.5s
HFS **Hagfors** 138.19 354 PKhKP PKPpre 10 41 20.9
comp=Z,2.2nm,0.7s,baz=60,slow=5.8,SNR=4.9
HFS PKP PKPdf 10 41 30.8 0.0
comp=Z,2.3nm,0.8s,baz=189,slow=7.5,SNR=4.1
AKASG **Malin Array Be** 143.16 336 PKhKP PKPpre 10 41 35.3
comp=Z,2.2nm,0.6s,baz=39,slow=3.8,SNR=10
KMBO **Kilima Mbogo** 143.83 241 PKP PKPab 10 41 39.7 -0.1
comp=Z,1.4nm,0.4s,baz=142,slow=4.7,SNR=4.0
BSEG **Bad Segeberg** 144.60 356 *e*PKPbc PKPab 10 41 43.1 +2.0
baz=7.4,slow=2.7
SORM **Soroca** 145.53 334 ⇓P PKPdf 10 41 44.4 +0.1
SORM **Soroca** 145.53 334 ⇓PKIKP PKPdf 10 41 44.4 +0.1
NRDL **Niedersach Rie** 146.05 356 *e*PKPbc PKPdf 10 41 46.6 +1.6
baz=7.4,slow=2.7
FLTG **Flechtingen** 146.13 355 *e*PKPbc PKPdf 10 41 46.7 +1.5
baz=7.4,slow=2.7
IBBN **Ibbenburen** 146.35 358 *e*PKPbc PKPdf 10 41 47.7 +2.1
baz=7.4,slow=2.7
ASSE **Asse, Remlinge** 146.37 355 *e*PKPbc PKPdf 10 41 47.6 +2.1
baz=7.4,slow=2.7
OJC **Ojcow** 146.67 344 *e*PKP PKPdf 10 41 48.0 +1.7
CLZ **Clausthal** 146.68 355 *e*PKPbc PKPdf 10 41 48.8 +2.6
baz=7.4,slow=2.7
KSP **Ksiaz** 146.87 348 *e*PKP PKPdf 10 41 49.0 +2.5
CLL **Collm** 146.94 352⇑ *i* PKP2 PKPdf 10 41 48.6 +2.0
CLL pmax pmax
comp=Z,41nm,0.9s
CLL **Collm** 146.94 352 *ex* x 10 42 06.0
CLL **Collm** 146.94 352 *e*PKPbc PKPdf 10 41 49.3 +2.7
baz=7.4,slow=2.7
CLL **Collm** 146.94 352⇑ *i* PKPbc PKPdf 10 41 48.6 +2.0
comp=Z,41nm,0.9s
CLL **Collm** 146.94 352 *ex* x 10 41 59.0
GTTG **Gottingen** 147.01 356 *e*PKPbc PKPdf 10 41 49.5 +2.8
baz=7.4,slow=2.7
OSTC **Ostas** 147.16 348 *e*PKP PKPdf 10 41 50.3 +3.2
OSTC **Ostas** 147.16 348 *e*PKP2 PKPdf 10 41 50.3 +3.2
CHVC **Chvalec** 147.16 349 *e*PKP PKPdf 10 41 50.2 +3.1
CHVC **Chvalec** 147.16 349 *e*PKP2 PKPdf 10 41 50.2 +3.1
NEUB **Neuenburg** 147.19 354 *e*PKPbc PKPdf 10 41 50.1 +3.1
baz=7.4,slow=2.7
BURAR **Bucovina Array** 147.21 336 ⇓P PKPdf 10 41 50.4 +3.1
BUG **Bochum–Univer** 147.23 359 *e*PKPbc PKPdf 10 41 50.0 +2.9
baz=7.4,slow=2.7
BRG **Berggiesshubel** 147.24 351 *e*PKP PKPdf 10 41 47.7 +0.6
BRG Amp 10 41 48.6
comp=Z,6.2nm,1.1s
BRG **Berggiesshubel** 147.24 351 P PKPdf 10 41 50.2 +3.1
BRG Amp 10 41 50.6
comp=Z,15nm,0.8s
BRG **Berggiesshubel** 147.24 351 *e*PKPbc PKPdf 10 41 50.3 +3.1
baz=7.4,slow=2.7
NIE **Niedzica** 147.27 343 *e*PKP PKPdf 10 41 50.4 +3.1
DPC **Dobruska-Polom** 147.34 348 *e*PKP PKPdf 10 41 50.7 +3.3
DPC **Dobruska-Polom** 147.34 348 *e*PKP2 PKPdf 10 41 50.7 +3.3
VLDR **Vladesti** 147.41 331 ⇑P PKPdf 10 41 51.1 +3.5
KASTN **Kahler Asten** 147.43 358 *e*PKPbc PKPdf 10 41 50.8 +3.3
baz=7.4,slow=2.7
PVCC **Panska Ves** 147.48 350 *e*PKP PKPdf 10 41 51.0 +3.5
PVCC **Panska Ves** 147.48 350 *e*PKP2 PKPdf 10 41 51.0 +3.5
KRLC **Kraliky** 147.51 347 *e*PKP PKPdf 10 41 51.0 +3.3
KRLC **Kraliky** 147.51 347 *e*PKP2 PKPdf 10 41 51.0 +3.3
TESR **Tescani** 147.52 333 ⇓P PKPdf 10 41 50.4 +2.7
TLCR 147.56 330 ⇑P PKPdf 10 41 51.1 +3.3
TLCR 147.56 330 ⇑PKP2 PKPdf 10 41 51.1 +3.3
HSKC **Hora Svate Kat** 147.57 352 *e*PKP PKPdf 10 41 50.9 +3.1
MORC **Moravsky Berou** 147.63 346 ⇓P PKPdf 10 41 50.9 +3.0
MORC **Moravsky Berou** 147.63 346 *e*PKP PKPdf 10 41 50.9 +3.0
MORC **Moravsky Berou** 147.63 346 ⇓PKP2 PKPdf 10 41 50.9 +3.0
LANS **Liptovska Anna** 147.74 344 *e*PKP2 PKPbc 10 41 52.3 +1.4
LANS **Liptovska Anna** 147.74 344 *e*PKP PKPbc 10 41 52.3 +1.4
MOX **Moxa** 147.76 354 *e*PKPbc PKPdf 10 41 51.6 +3.6
baz=7.4,slow=2.7
CFR **Carcaliu** 147.89 330 ⇑P PKPdf 10 41 51.5 +3.1
CFR **Carcaliu** 147.89 330 ⇑PKP2 PKPdf 10 41 51.5 +3.1
TANN **Tannenbergstba** 147.89 353 *e*PKPbc PKPdf 10 41 52.2 +3.8
baz=7.4,slow=2.7
MAUC **Maruska** 147.95 346 *e*PKP PKPdf 10 41 52.5 +4.1
TPGR **Topolog** 147.99 330 ⇓P PKPbc 10 41 53.1 +1.4
VRI **Vrincioaia** 148.00 333 ⇓P PKPdf 10 41 52.0 +3.4
VRI **Vrincioaia** 148.00 333 ⇓PKP2 PKPdf 10 41 52.0 +3.4
PRU **Pruhonice** 148.01 350 *e*PKP PKPdf 10 41 52.4 +4.0
PRU **Pruhonice** 148.01 350 *e*PKP2 PKPdf 10 41 52.4 +4.0
GOPC **GO Pecny, Ondr** 148.04 350 *e*PKP PKPdf 10 41 52.5 +4.0
GOPC **GO Pecny, Ondr** 148.04 350 *e*PKP2 PKPdf 10 41 52.5 +4.0
PLOR **Plostina** 148.04 333 ⇓P PKPdf 10 41 52.1 +3.4
PLOR **Plostina** 148.04 333 ⇓PKP2 PKPdf 10 41 52.1 +3.4
MEM **Membach** 148.07 0 *d*PKP PKPdf 10 41 52.1 +3.6
BSTI **Sart Tilman** 148.09 1 *d*PKP PKPdf 10 41 52.5 +4.0
BTNL **Ternell** 148.09 0 *d*PKP PKPdf 10 41 52.3 +3.7
AHRW **Bad Neuenahr-A** 148.13 359 *e*PKPbc PKPdf 10 41 52.4 +3.8
baz=7.4,slow=2.7
BCLA **Clavier** 148.25 1 *d*PKPdf PKPdf 10 41 47.6 -1.2
VRAC **Vranov** 148.27 347 *e*PKP PKPdf 10 41 52.8 +3.9
VRAC **Vranov** 148.27 347 PKPbc PKPdf 10 41 52.4 +3.5
comp=Z,2.2nm,0.5s,baz=315,slow=3.6,SNR=7.3
BGES **Gesves** 148.28 2 *d*PKPdf PKPdf 10 41 45.8 -3.0
TIRR **Tirgusor** 148.29 329 ⇑P PKPdf 10 41 52.4 +3.4
TIRR **Tirgusor** 148.29 329 ⇑PKP2 PKPdf 10 41 52.4 +3.4
BHOU **Houvegnez** 148.32 0 *d*PKP PKPbc 10 41 53.9 +1.5
HARR **Harsova** 148.35 330 ⇓P PKPdf 10 41 53.1 +4.0
BMRD **Maredsous** 148.35 2 *d*PKPdf PKPdf 10 41 46.6 -2.3
MANZ **Manzenberg** 148.35 353 *e*PKPbc PKPdf 10 41 53.4 +4.3
baz=7.4,slow=2.7
BR131 **Keskin Array S** 148.41 318 *c* PKP2 PKPdf 10 41 52.6 +3.0
BRTR **Keskin Array B** 148.41 318 PKP PKPdf 10 41 48.6 -1.0
comp=Z,3.1nm,0.8s,baz=51,slow=5.3,SNR=5.5
BRTR PKPbc pPKPdf 10 41 52.2 +0.2
comp=Z,3.3nm,0.8s,baz=96,slow=2.5,SNR=9.7
TNS **Taunus Mts** 148.41 357 *e*PKPbc PKPdf 10 41 53.7 +4.5
baz=7.4,slow=2.7
JAVC **Velka Javorina** 148.46 346 *e*PKP PKPbc 10 41 54.2 +1.4
DOPR **Dopca** 148.49 334 ⇑P PKPbc 10 41 53.9 +1.0
KRUC **Moravsky** 148.55 347 *e*PKP PKPdf 10 41 53.1 +3.7
DOU **Dourbes** 148.55 2 *d*PKP PKPdf 10 41 52.8 +3.4
ROTZ **Rotzenmuhle** 148.56 353 *e*PKPbc PKPbc 10 41 54.0 +1.0
baz=7.4,slow=2.7
MLR **Muntele Rosu** 148.63 333 ⇑P PKPdf 10 41 53.1 +3.3
GRF **Grafenberg Arr** 148.74 354 *e*PKPbc PKPdf 10 41 54.3 +4.6
baz=7.4,slow=2.7
MARR **Marisel-Cluj** 148.78 337 ⇓P PKPdf 10 41 54.2 +4.3
DRGR 148.83 338 ⇓P PKPdf 10 41 54.2 +4.2
DRGR 148.83 338 ⇓PKP2 PKPdf 10 41 54.2 +4.2
KHC **Kasperske Hory** 148.99 351 *e*PKP PKPdf 10 41 54.8 +4.7
KHC **Kasperske Hory** 148.99 351 *c* PKP2 PKPdf 10 41 54.6 +4.5
KHC pmax pmax
comp=Z,85nm,1.7s
MODS **Modra-Piesok** 149.00 346 *e*PKP2 PKPbc 10 41 55.4 +1.2
MODS **Modra-Piesok** 149.00 346 *e*PKP PKPbc 10 41 55.4 +1.2
WLF **Walferdange** 149.01 0 *d*PKP PKPbc 10 41 55.5 +1.4
VOIR 149.05 334 ⇓P PKPbc 10 41 55.6 +1.1
VOIR 149.05 334 ⇓PKP2 PKPbc 10 41 55.6 +1.1
WET **Wettzell** 149.08 352 *e*PKPbc PKPbc 10 41 55.3 +0.9
baz=7.4,slow=2.7
CKRC **Cesky Krumlov** 149.18 350 *e*PKP PKPbc 10 41 55.3 +0.7
CKRC *ex* x 10 42 02.0
CKRC **Cesky Krumlov** 149.18 350 *e*PKP2 PKPbc 10 41 55.3 +0.7
GEC2 **GERESS Array S** 149.25 350 *e*PKPbc PKPbc 10 41 55.7 +0.7
baz=7.4,slow=2.7
GERES **GERESS Array B** 149.25 350 PKPbc PKPdf 10 41 54.7 +4.1
comp=Z,9.9nm,0.8s,baz=29,slow=3.0,SNR=21
ARR **Arges** 149.28 334 ⇓P PKPbc 10 41 56.0 +0.9
CONA **Conrad Observa** 149.74 347 *i* PKiKP PKPbc 10 41 57.0 +0.9
comp=Z,33nm,1.4s,SNR=6.8

RONA **Rosalia, Austr** 149.86 347 *i* PKiKP PKPbc 10 41 57.2 +0.9
comp=Z,18nm,0.7s,SNR=7.9
RAZG **Razgrad** 149.87 330 ⇓P PKPbc 10 41 56.9 +0.4
SURR **Surduc** 149.93 338 ⇓P PKPdf 10 41 56.2 +4.6
LOZB **Loznitsa** 149.98 330 ⇑P PKPdf 10 41 56.9 +5.0
MOA **Molln** 150.12 349 *i* PKiKP PKPbc 10 41 57.3 +0.3
comp=Z,8.9nm,0.6s
BZS **Buzias** 150.23 338 ⇓P PKPbc 10 41 57.7 +0.5
BZS **Buzias** 150.23 338 ⇓PKiKP PKPbc 10 41 57.7 +0.5
FUR **Furstenfeldbru** 150.24 353 *e*PKPbc PKPbc 10 41 58.1 +0.8
baz=7.4,slow=2.7
MMAI **Mount Meron Ar** 150.28 305 PKPbc PKPdf 10 41 57.5 +4.8
comp=Z,8.3nm,0.7s,baz=67,slow=4.8,SNR=16
BFO **Black Forest** 150.31 357 *e*PKPbc PKPbc 10 41 58.2 +0.8
baz=7.4,slow=2.7
BIOA **Bad Ischl, Aus** 150.38 350 *i* PKiKP PKPbc 10 41 57.8 +0.2
comp=Z,12nm,0.9s
ARSA **Arzberg** 150.45 347 *i* PKiKP PKPbc 10 41 58.8 +1.0
comp=Z,6.8nm,0.7s
RJOB **Jochberg** 150.47 351 *e*PKPbc PKPbc 10 41 58.4 +0.6
baz=7.4,slow=2.7
HERR **Herculane** 150.56 336 ⇑P PKPbc 10 41 58.3 +0.2
LESA **Schwarzleotal** 150.79 351 *e*PKiKP PKPbc 10 41 58.8 +0.1
comp=Z,6.0nm,0.5s
UBR **Ueberruh** 150.84 355 *e*PKPbc PKPbc 10 41 59.7 +1.0
baz=7.4,slow=2.7
PLVB **Pleven** 150.88 332 ⇓P PKPbc 10 41 59.1 +0.2
RETA **Reutte** 150.97 354 *i* PKiKP PKPbc 10 41 59.4 +0.3
comp=Z,11nm,0.7s
KBA **Koelnbreinsper** 151.03 350 *i* PKiKP PKPdf 10 41 59.1 +5.5
comp=Z,15nm,0.5s,SNR=5.7
WATA **Walderalm** 151.03 353 *i* PKiKP PKPbc 10 41 59.5 +0.2
comp=Z,15nm,0.5s,SNR=5.9
MOTA **Moosalm** 151.07 353 *i* PKiKP PKPbc 10 41 59.5 +0.1
comp=Z,32nm,1.0s,SNR=7.9
WTTA **Wattenberg** 151.09 353 *i* PKiKP PKPbc 10 41 59.8 +0.3
comp=Z,37nm,0.5s,SNR=9.7
SOKA **Soboth** 151.10 348 *i* PKiKP PKPbc 10 41 59.5 +0.1
comp=Z,17nm,0.9s,SNR=5.3
PERS **Pernice** 151.12 347 *i* PKPbc PKPdf 10 41 59.0 +5.4
SQTA **Sankt Quirin** 151.18 353 *i* PKiKP PKPbc 10 42 00.1 +0.5
comp=Z,18nm,0.6s,SNR=5.5
FRGS **Fruska Gora** 151.24 340 ⇑P PKPbc 10 42 00.1 +0.3
DAVA **Damuels** 151.25 355 *i* PKiKP PKPbc 10 42 00.7 +0.9
comp=Z,42nm,1.1s,SNR=7.5
OBKA **Obir** 151.36 348 *i* PKiKP PKPdf 10 41 59.4 +5.4
comp=Z,8.7nm,0.7s
MYKA **Terra Mystica** 151.41 349 *i* PKiKP PKPdf 10 41 59.6 +5.6
comp=Z,15nm,0.6s
FETA **Feichten** 151.43 354 *i* PKiKP PKPbc 10 42 00.8 +0.5
comp=Z,19nm,0.8s,SNR=5.9
ABTA **Abfaltersbach** 151.48 351 *i* PKiKP PKPbc 10 42 00.3 0.0
comp=Z,33nm,0.6s,SNR=12
BLKB **Belogradchik** 151.51 335 ⇑P PKPbc 10 42 00.5 +0.1
PDKS **Podkum** 151.70 347 *i* PKPbc PKPbc 10 42 00.7 0.0
VNDS **Vrh nad Dolski** 151.72 348 *i* PKPbc PKPbc 10 42 00.8 0.0
ESDC **Sonseca Array** 157.19 21 PKPab PKPab 10 42 31.7 -1.2
comp=Z,0.8nm,0.7s,baz=337,slow=3.7,SNR=2.2
TORD **Torodi Ar. Bea** 172.97 140 PKP PKPdf 10 42 14.6 -1.7
comp=Z,2.1nm,0.9s,baz=11,slow=3.3,SNR=8.4
TORD PKPab PKPab 10 43 42.3 -0.6
comp=Z,1.0nm,0.9s,baz=234,slow=1.5,SNR=3.3

IDC 02 10:34:08.9±966.0, 55.35N×3.66E, h0km, Error ellipse: s-maj=424.2km s-min=178.3km az=112.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**8.97**	**132**		I I	11 29 36.8	
	0.1nm,1.0s,baz=319,slow=322,SNR=2.5						
I43RU	**DUBNA INFRASONI**	**8.69**	**72**		I I	12 28 50.0	
	baz=278,slow=327,SNR=1.3						
I31KZ	**AKTYUBINSK INF**	**32.47**	**76**		I I	13 49 50.1	
	0.1nm,2.1s,baz=301,slow=334,SNR=11						

RHSSO 02 10:39:02.4±0.5, 44.88N×16.94E, h5km±3km, ML1.3/3, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
A051A	**Mrakovica**	**0.14**	**350**	⇑ *i* Pg	Pg	10 39 04.7	-0.6
A051A				*e*Sg	Sg	10 39 07.8	+0.6
BLY	**Banja Luka**	**0.21**	**126**	⇑ *i* Pg	Pg	10 39 06.1	-0.5
BLY				*e*Sg	Sg	10 39 10.5	+1.1
MGRS	**Mrkonjic Grad**	**0.47**	**167**	*e*Pg	Pg	10 39 10.8	-0.6
MGRS				*e*Sg	Sg	10 39 18.4	+0.9
A050A	**Klekovaca**	**0.49**	**217**	⇑ *i* Pg	Pg	10 39 11.2	-0.6
A050A				*e*Sg	Sg	10 39 18.4	+0.2
BOJS	**Bojanci**	**1.35**	**298**	*e*Pg	Pn	10 39 26.4	-1.6
BOJS				*e*Sg	Sg	10 39 45.6	-0.2
CRES	**Cresnjev**	**1.42**	**313**	*e*Pg	Pn	10 39 28.1	-0.8
CRES				*e*Sg	Sb	10 39 47.7	0.0

VIE 02 10:40:26.1±0.5, 47.52N×15.04E, h0km, mb1.9/3, ml1.2/4, Error ellipse: s-maj=5.2km s-min=4.0km az=30.0, Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
ARSA	**Arzberg**	**0.43**	**129**	*i* Pg	Pg	10 40 34.9	+0.7
	0.3nm,0.1s						
ARSA				*i* Sg	Sg	10 40 38.6	-1.2
	0.7nm,0.1s						
MOA	**Molln**	**0.62**	**303**	*e*Pg	Pg	10 40 36.8	-1.2
	0.6nm,0.1s						
MOA				*e*Sg	Sg	10 40 46.2	+0.2
	0.8nm,0.1s						
CONA	**Conrad Observa**	**0.69**	**53**	*i* Pg	Pb	10 40 41.0	-0.2
	0.4nm,0.1s						
CONA				*e*Sg	Sg	10 40 48.0	-0.4
	0.4nm,0.1s						
LESA	**Schwarzleotal**	**1.60**	**268**	*e*Pn	Pn	10 40 55.9	+0.1
	0.5nm,0.1s						
KRUC	**Moravsky**	**1.79**	**30**	*e*PN	Pn	10 40 58.3	0.0
KRUC				*e*SG	Sb	10 41 22.4	-0.5

MOS ***02*** *10:44:42.7±1.0, 38.46N×141.93E, h15km, mb4.4/11, Error ellipse: s-maj=11.3km s-min=5.9km az=94.5*
NIED ***02*** *10:44:50.1, 38.62N×141.90E, h48km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.79; Mθθ-0.08; Mφφ-0.71; Mrθ0.32; Mθφ-0.37; Mφr0.94; Fault plane solution: M₀1.30000×10¹⁵ NP1:φ₀20.00000°, δ70.00000°, λ87.00000°. NP2:φ₀210.00000°, δ20.00000°, λ99.00000°.*
JMA ***02*** *10:44:50.1±0.1, 38.6N±0.2×141.9E±0.5, h48km, MD4.0/40, MV4.1/40, KINKAZAN REGION*
JMA Felt II J1 at KINKAZAN REGION .
IDC ***02*** *10:44:50.9±1.9, 38.66N×141.98E, h62km±15km, mb3.7/18, mbtmp4.0/24, MS3.0/5, Error ellipse: s-maj=18.8km s-min=10.2km az=116.0*
ISC 02 10:44:48.3±0.6, 38.56N±0.05×142.13E±0.05, h39km±3km, n84, σ1.956/87, mb4.2/27, 9C-23D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JKMT	**Kesennumamotoy**	**0.57**	**296**	⇓ *i* P	Pn	**10 44 60.0**	**0.0**
JKMT				⇓S	Sn	**10 45 06.7**	**-1.5**
JKMT	**Kesennumamotoy**	**0.57**	**296**	A	A	10 44 60.0	
	comp=E,12nm,0.6s,comp=N,5.0nm,0.7s						
JIKH	**Ishinomakikobu**	**0.57**	**244**	⇓ *i* P	Pn	**10 45 00.6**	**+0.6**
JIKH				⇓S	Sn	**10 45 07.9**	**-0.4**
JIKH	**Ishinomakikobu**	**0.57**	**244**	A	A	10 45 00.6	
	comp=E,26nm,1.0s,comp=N,15nm,1.4s						
JIO	**Ouri**	**0.62**	**260**	⇓ *i* P	Pn	**10 45 00.7**	**+0.1**
JIO				⇓S	Sn	**10 45 08.0**	**-1.4**
JIO	**Ouri**	**0.62**	**260**	A	A	10 45 00.7	
	comp=E,27nm,0.4s,comp=N,22nm,0.4s						
OFUJ	**Ofunato**	**0.63**	**326**	⇓ *i* P	Pn	**10 45 01.2**	**+0.4**
OFUJ				⇓S	Sn	**10 45 08.9**	**-0.8**
OFUJ	**Ofunato**	**0.63**	**326**	A	A	10 45 01.2	
	comp=E,26nm,1.4s,comp=N,16nm,0.7s						
JMK	**Ichinoseki**	**0.81**	**299**	⇓ *i* P	Pn	**10 45 02.9**	**-0.3**
JMK				⇓S	Sn	**10 45 12.1**	**-1.9**
JMK	**Ichinoseki**	**0.81**	**299**	A	A	10 45 02.9	
	comp=E,10.0nm,0.8s,comp=N,10.0nm,0.3s						
JOFO	**Osakifurukawao**	**0.95**	**273**	A	A	10 45 04.8	
	comp=E,18nm,0.3s,comp=N,38nm,0.8s						
JOM	**Ohasama**	**1.12**	**325**	⇓ *i* P	Pn	**10 45 07.6**	**+0.1**
JOM				⇓ *e*S	Sn	**10 45 20.6**	**-1.0**

JOM	**Ohasama**	**1.12**	**325**	A	A	10 45 07.6	
	comp=E,8.0nm,0.3s,comp=N,4.0nm,0.7s						
JOU	**Okura**	**1.16**	**261**	⇓*i*P	**Pn**	**10 45 07.8**	**-0.3**
JOU				⇓*e*S	**Sn**	**10 45 21.2**	**-1.6**
JOU	**Okura**	**1.16**	**261**	A	A	10 45 07.8	
	comp=E,7.0nm,0.5s,comp=N,6.0nm,0.5s						
JMM	**Marumori**	**1.26**	**237**	⇓*i*P	**Pn**	**10 45 09.4**	**0.0**
JMM				⇓*e*S	**Sn**	**10 45 23.6**	**-1.4**
JYK	**Kaneyama**	**1.43**	**285**	⇓*i*P	**Pn**	**10 45 11.2**	**-0.5**
JRG	**Rokugo**	**1.43**	**306**	⇓*i*P	**Pn**	**10 45 11.3**	**-0.4**
JRG	**Rokugo**	**1.43**	**306**	A	A	10 45 11.3	
	comp=E,4.0nm,2.5s,comp=N,2.0nm,3.9s						
JFK	**Kawauchi**	**1.55**	**220**	*i*P	**Pn**	**10 45 14.1**	**+0.7**
JYS	**Shirataka**	**1.65**	**259**	A	A	10 45 15.1	
	comp=E,5.0nm,1.8s,comp=N,4.0nm,2.1s						
JKEN	**Kujiedanarisaw**	**1.67**	**349**	A	A	10 45 16.5	
	comp=E,9.0nm,0.4s,comp=N,8.0nm,0.4s						
JYW	**Yuwa**	**1.78**	**304**	A	A	10 45 16.7	
	comp=E,6.0nm,5.0s,comp=N,8.0nm,5.2s						
JYA	**Atsumi**	**1.89**	**272**	A	A	10 45 18.2	
	comp=E,3.0nm,0.5s,comp=N,3.0nm,0.7s						
ERM	**Erimo**	**3.54**	**13**	⇓eP	**Pn**	**10 45 42.2**	**+1.5**
MJAR	**Matsushiro Arr**	**3.71**	**238**	P	**Pn**	**10 45 45.0**	**+2.0**
	comp=N,12nm,0.5s,baz=39,slow=12,SNR=61						
MJAR				S	**Sn**	**10 46 27.9**	**+2.4**
	comp=N,4.8nm,0.4s,baz=310,slow=33,SNR=4.9						
MJAR				LR	LR	10 47 41.7	
	comp=N,60nm,19.4s,baz=89,slow=47						
NMR	**Nemuro--Hokkai**	**5.52**	**28**	*e*P	**Pn**	**10 46 08.2**	**+0.3**
NMR				*e*S	**Sn**	**10 47 07.6**	**-2.5**
ASAJ	**Asahikawa**	**5.56**	**4**	P	**Pn**	**10 46 09.8**	**+1.3**
	comp=N,6.1nm,0.3s,baz=244,slow=11,SNR=13						
ASAJ				S	**Sn**	**10 47 11.0**	**-0.1**
	comp=N,16nm,0.8s,baz=198,slow=20,SNR=2.2						
RUSJ	**Misakicho**	**6.02**	**22**	*e*P	**Pn**	**10 46 16.1**	**+1.4**
RUSJ				*e*S	**Sn**	**10 47 20.7**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**6.15**	**26**	*e*P	**Pn**	**10 46 18.4**	**+1.9**
YUK				*e*S	**Sn**	**10 47 21.9**	**-3.6**
YUK				pmax	pmax		
	comp=Z,125nm,0.2s						
YUK				smax	smax		
	comp=N,323nm,0.5s						
YUK				smax	smax		
	comp=E,285nm,0.5s						
SHO	**Shikotan**	**6.38**	**32**	*e*P	**Pn**	**10 46 20.8**	**+1.1**
SHO				*e*S	**Sn**	**10 47 26.7**	**-4.5**
SHO				smax	smax		
	comp=N,115nm,0.2s						
SHO				smax	smax		
	comp=E,120nm,0.4s						
TEY	**Ternei**	**7.67**	**329**	⇑eP	Pn	10 46 42.9	+5.5
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
KUR	**Kuril'sk**	**7.92**	**31**	*e*P	**Pn**	**10 46 44.0**	**+3.2**
KUR				*i* S	**Sn**	**10 48 07.3**	**-1.8**
KUR				smax	smax		
	comp=E,47nm,0.5s						
KUR				smax	smax		
	comp=N,34nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.40**	**3**	⇓eP	**Pn**	**10 46 46.0**	**-1.4**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**9.47**	**310**	⇑eP	**Pn**	**10 47 01.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**9.47**	**310**	P	**Pn**	**10 47 02.1**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=122,slow=14,SNR=15						
JNU	**Nakatsue**	**10.62**	**243**	P	**Pn**	**10 47 18.6**	**+0.8**
	comp=Z,4.6nm,0.7s,baz=78,slow=1.0,SNR=5.6						
JNU				LR	LR	10 51 51.9	
	comp=Z,39nm,19.0s,baz=30,slow=40						
KSRS	**Korea Array**	**11.26**	**269**	P	**Pn**	**10 47 29.3**	**+2.7**
	comp=Z,2.4nm,0.8s,baz=76,slow=14,SNR=5.7						
KSRS				LR	LR	10 51 31.9	
	comp=Z,41nm,19.6s,baz=85,slow=36						
KLR	**Kul'dur**	**13.01**	**328**	⇑eP	**Pn**	**10 47 51.3**	**+0.8**
KLR				pmax	pmax		
	comp=Z,12nm,3.8s						
KLR	**Kul'dur**	**13.01**	**328**	P	**Pn**	**10 47 51.8**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=144,slow=14,SNR=2.3						
KLR				LR	LR	10 52 42.6	
	comp=Z,60nm,18.2s,baz=146,slow=37						
ZEA	**Zeya**	**18.29**	**331**	*e*P	**P**	**10 48 57.6**	**-1.0**
YAK	**Yakutsk**	**24.72**	**346**	*e*P	**P**	**10 50 04.8**	**-0.7**
YAK				*e**PP	pP	10 50 09.0	-7.2
YAK				*e*		10 50 36.1	
YAK				*e*		10 53 42.0	
YAK				*e*S	**S**	**10 54 28.2**	**+3.6**
YAK				*e**SS	sS	10 54 33.1	-8.9
YAK				*e*SS	**SnSn**	**10 55 16.7**	**+3.7**
YAK				*e*		11 01 08.2	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,87nm,3.2s						
YAK				pmax	pmax		
	comp=E,38nm,3.8s						
YAK				pmax	pmax		
	comp=N,40nm,3.6s						
YAK				smax	smax		
	comp=N,22nm,2.3s						
YAK				smax	smax		
	comp=E,11nm,2.0s						
SEY	**Seymchan**	**25.19**	**11**	⇓eP	**P**	**10 50 11.0**	**+1.2**
SEY				pmax	pmax		
	comp=Z,16nm,2.5s						
ULN	**Ulaanbaatar**	**27.00**	**302**	⇑eP	**P**	**10 50 23.2**	**-3.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**27.44**	**301**	P	**P**	**10 50 29.4**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=104,slow=6.9,SNR=3.8						
SONM				PcP	**PcP**	**10 53 48.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=90,slow=1.4,SNR=1.8						
	comp=Z,0.8nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	11 21 10.2	
	baz=317,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	11 21 09.9	
	baz=317,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	11 21 10.5	
	baz=317,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	11 21 58.2	
	baz=319,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	11 21 57.0	
	baz=319,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	11 21 59.1	
	baz=319,slow=76						
ZAK	**Zakamensk**	**29.80**	**306**	*e*P	**P**	**10 50 50.2**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ZALV	**Zalesovo Beam**	**41.32**	**311**	*e*P	**P**	**10 52 29.3**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.32**	**311**	P	**P**	**10 52 29.1**	**-0.8**
	comp=Z,2.6nm,0.4s,baz=86,slow=8.6,SNR=17						
ZALV				PcP	**PcP**	**10 54 26.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=85,slow=3.2,SNR=3.9						
	comp=Z,2.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**42.44**	**254**	P	**P**	**10 52 38.5**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=47,slow=8.7,SNR=1.5						
	comp=Z,0.4nm,0.4s						
MK31	**Makanchi Array**	**43.80**	**301**	*de*P	**P**	**10 52 49.5**	**-0.7**
MKAR	**Makanchi Array**	**43.80**	**301**	*e*P	**P**	**10 52 49.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**43.80**	**301**	P	**P**	**10 52 49.0**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=86,slow=9.8,SNR=18						
MKAR				PcP	**PcP**	**10 54 35.6**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=50,slow=4.5,SNR=1.4						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**45.45**	**307**	*c i*P	**P**	**10 53 02.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
KURBB	**Kurchatov Arra**	**45.52**	**307**	P	**P**	**10 53 02.8**	**-1.0**
	comp=Z,10nm,0.5s,baz=82,slow=8.2,SNR=54						
KURBB				PcP	**PcP**	**10 54 41.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=83,slow=3.9,SNR=1.0						
	comp=Z,10nm,0.5s						
ILAR	**Eielson Array**	**47.91**	**33**	*e*P	**P**	**10 53 22.9**	**+0.6**
ILAR	**Eielson Array**	**47.91**	**33**	P	**P**	**10 53 21.8**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=256,slow=6.3,SNR=5.6						
	comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**49.97**	**311**	P	**P**	**10 53 36.7**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=75,slow=6.6,SNR=8.9						
BVAR				PcP	**PcP**	**10 54 57.6**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=111,slow=2.0,SNR=3.9						
	comp=Z,1.5nm,0.5s						
BRVK	**Borovoye**	**50.03**	**312**	⇑*e*P	**P**	**10 53 37.0**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**52.77**	**28**	P	**P**	**10 53 59.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=299,slow=7.1,SNR=4.8						
	comp=Z,0.7nm,0.7s						
ARU	**Arti**	**55.60**	**318**	*c i*P	**P**	**10 54 19.3**	**-0.4**
ARU						10 56 21.2	
ARU				S	**S**	**11 02 08.0**	**+5.5**
ARU				SS	**SS**	**11 05 48.3**	**+1.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WRA	**Warramunga Arr**	**58.65**	**189**	*i* P	**P**	**10 54 41.9**	**+0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**58.65**	**189**	P	**P**	**10 54 41.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=4.9,slow=7.2,SNR=9.1						
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**62.21**	**31**	P	**P**	**10 55 05.5**	**0.0**
	comp=Z,0.2nm,0.6s,baz=312,slow=6.5,SNR=2.7						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**62.38**	**189**	P	**P**	**10 55 07.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=20,slow=5.8,SNR=5.8						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**62.77**	**339**	P	**P**	**10 55 08.7**	**-0.4**
	comp=Z,3.2nm,1.0s,baz=55,slow=6.9,SNR=1.3						
	comp=Z,3.2nm,1.0s						
BELG	**Belogornoye**	**63.07**	**317**	⇑*e*P	**P**	**10 55 11.6**	**+0.3**
BELG				pmax	pmax		
	comp=Z,1.0nm,1.1s						
FINES	**FINESS Array B**	**67.73**	**332**	*i* P	**P**	**10 55 41.5**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**67.73**	**332**	P	**P**	**10 55 40.2**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=40,slow=9.9,SNR=4.8						
	comp=Z,1.8nm,0.7s						
KBZ	**Khabaz**	**70.34**	**311**	⇓eP	**P**	**10 55 58.0**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**70.34**	**311**	P	**P**	**10 55 57.2**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=59,slow=5.7,SNR=5.2						
	comp=Z,2.6nm,0.8s						
HFS	**Hagfors**	**72.93**	**336**	P	**P**	**10 56 12.1**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=38,slow=7.3,SNR=9.8						
	comp=Z,2.1nm,0.5s						
NB2	**NORSAR Subarra**	**73.00**	**337**	P	**P**	**10 56 13.4**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**73.00**	**337**	*e*P	**P**	**10 56 13.2**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**73.00**	**337**	P	**P**	**10 56 12.7**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=37,slow=6.0,SNR=4.9						
	comp=Z,1.3nm,0.7s						
AKASG	**Malin Array Be**	**73.44**	**322**	P	**P**	**10 56 14.7**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=43,slow=6.1,SNR=4.2						
	comp=Z,0.9nm,0.5s						
PDAR	**Pinedale Array**	**76.20**	**46**	P	**P**	**10 56 34.0**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=287,slow=1.5,SNR=4.0						
	comp=Z,0.3nm,0.6s						
BORG	**Borgarnes**	**76.21**	**353**	LR	LR	11 31 48.1	
	comp=Z,63nm,19.3s,baz=328,slow=37						
KHC	**Kasperske Hory**	**81.54**	**329**	⇑*e*P	**P**	**10 57 01.5**	**-0.1**
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						

*IDC **02** 11:00:54.2±1.2,52°.78N×35°.09W,h0km,mb3.5/7, mbtmp3.6/9,ML2.8/2,MS3.3/1,Error ellipse: s-maj=40.0km s-min=22.0km az=26.0*
ISC 02 11:00:55.7±1.0,**52°.6N**±0°.2×**35°.3W**±0°.2,**h10**km,**n12,** σ1**s50**/12,**mb3.6/8,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**16.27**	**338**	Pn		**Pn**	**11 04 43.9**	**+0.1**
	0.2nm,0.3s,baz=133,slow=18,SNR=2.3							
	7.4nm,1.0s							
SCHQ	**Schefferville**	**18.73**	**289**	P		**P**	**11 05 13.9**	**-0.4**
	0.1nm,0.3s,baz=67,slow=15,SNR=1.4							
	1.0nm,0.6s							
ESDC	**Sonseca Array**	**25.02**	**109**	P		**P**	**11 06 19.9**	**+0.1**
	1.0nm,0.8s,baz=306,slow=3.0,SNR=1.7							
ESDC				LR		LR	11 14 13.2	
	comp=Z,77nm,21.6s,baz=118,slow=32							
	1.0nm,0.8s							
PDAR	**Pinedale Array**	**48.87**	**290**	P		**P**	**11 09 42.0**	**+0.5**
	0.3nm,0.7s,baz=43,slow=1.7,SNR=1.7							
	0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**49.18**	**129**	P		**P**	**11 09 43.8**	**0.0**
	0.9nm,1.0s,baz=303,slow=13,SNR=2.9							
	0.9nm,1.0s							
ILAR	**Eielson Array**	**51.69**	**329**	P		**P**	**11 10 01.8**	**-0.4**
	0.6nm,0.9s,baz=41,slow=5.8,SNR=6.0							
	0.6nm,0.9s							
BVAR	**Borovoye Array**	**57.82**	**43**	P		**P**	**11 10 46.7**	**-0.1**
	0.9nm,0.6s,baz=356,slow=7.7,SNR=2.1							
	0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**62.68**	**35**	P		**P**	**11 11 23.4**	**+3.4**
	0.3nm,0.3s,baz=289,slow=8.7,SNR=1.9							
KURBB	**Kurchatov Arra**	**62.96**	**41**	P		**P**	**11 11 20.6**	**-1.4**
	0.5nm,0.9s,baz=338,slow=7.0,SNR=3.1							
	0.5nm,0.9s							
MKAR	**Makanchi Array**	**67.51**	**41**	P		**P**	**11 11 49.2**	**-2.4**
	0.4nm,0.9s,baz=323,slow=5.8,SNR=2.8							
	0.4nm,0.9s							
WRA	**Warramunga Arr**	**146.38**	**18**	PKPbc		**PKPdf**	**11 20 36.0**	**+0.6**
	0.6nm,0.7s,baz=347,slow=2.2,SNR=2.9							
ASAR	**Alice Springs**	**149.91**	**20**	PKPbc		**PKPbc**	**11 20 45.5**	**-0.5**
	0.5nm,0.9s,baz=348,slow=2.3,SNR=9.7							

*TRN **02** 11:00:56.5,18°.25N×63°.82W,h89km,MD4.5,North-west of Anguilla. Felt in Tortola, B.V.I. MMI III.*
*NEIC **02** 11:00:58.0±2.1,17°.97N±0°.1×63°.93W±0°.04,h10km±2km, ML3.8/40,Md3.8/11(RSPR),Error ellipse: s-maj=16.5km s-min=5.5km az=194.0*
*RSPR **02** 11:01:00.2,18°.42N×63°.91W,h11km±3km,MD3.8/11*
ISC 02 11:00:57.1±1.9,**18°.3N**±0°.1×**63°.81W**±0°.06,**h103**km±15km, **n55,**σ0**s93**/68,**13C-5D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.73**	**106**	⇑eP		**Pn**	**11 01 16.2**	**+1.1**
SMRT	**St. Maarten**	**0.73**	**106**			**Pn**	**11 01 16.3**	**+1.1**
SMRT	**St. Maarten**	**0.73**	**106**	⇑eP		**Pn**	**11 01 16.2**	**+1.1**
SMRT				*e*S		**Sn**	**11 01 26.6**	**-2.0**
SABA	**Saba**	**0.83**	**139**	⇓eP		**Pn**	**11 01 16.8**	**+0.7**
SABA	**Saba**	**0.83**	**139**			**Pn**	**11 01 16.8**	**+0.7**
SABA						Sn	11 01 23.8	-6.4
SABA				IAML			11 01 35.7	
	comp=E,4μm,0.4s							
SABA				IAML			11 01 38.4	
	comp=N,3μm,0.3s							
SABA	**Saba**	**0.83**	**139**	⇓eP		**Pn**	**11 01 16.8**	**+0.7**
SABA				*e*S		**Sn**	**11 01 30.1**	**-0.1**
SEUS	**St. Eustatius**	**1.09**	**133**	Pn		**Pn**	**11 01 19.4**	**+0.6**
HUMP	**Col San Antoni**	**1.94**	**267**	⇑eP		**Pn**	**11 01 29.6**	**+0.6**
HUMP	**Col San Antoni**	**1.94**	**267**			**Pn**	**11 01 30.1**	**+1.1**
HUMP				IAML			11 01 55.4	
	comp=E,1μm,0.2s							
HUMP	**Col San Antoni**	**1.94**	**267**	⇑eP		**Pn**	**11 01 29.6**	**+0.6**
HUMP				*e*S		**Sn**	**11 01 52.0**	**-1.4**
MBFL	**Flemmings, Mon**	**2.14**	**134**	*e*P		**Pn**	**11 01 32.7**	**+1.1**
MBFL				*e*S		**Sn**	**11 01 58.6**	**+0.6**
GCPR	**Guaynabo City**	**2.16**	**272**	⇑eP		**Pn**	**11 01 32.7**	**+0.9**
GCPR	**Guaynabo City**	**2.16**	**272**	*e*S		**Sn**	**11 01 57.8**	**-0.6**
GCPR	**Guaynabo City**	**2.16**	**272**			**Pn**	**11 01 32.3**	**+0.4**
GCPR				IAML			11 02 00.0	
	comp=N,461nm,0.8s							
GCPR				IAML			11 02 01.4	
	comp=E,532nm,0.3s							
MLYT	**Lee's Yard**	**2.17**	**134**	x		x	11 01 37.5	
IGPR	**InterUniversit**	**2.20**	**263**	⇑eP		**Pn**	**11 01 33.5**	**+1.1**
IGPR	**InterUniversit**	**2.20**	**263**	*e*S		**Sn**	**11 01 58.7**	**-0.6**
IGPR	**InterUniversit**	**2.20**	**263**			**Pn**	**11 01 33.2**	**+0.8**
IGPR				IAML			11 02 04.3	
	comp=N,776nm,0.3s							
SJG	**San Juan**	**2.23**	**267**			**Pn**	**11 01 34.2**	**+1.4**
SJG				IAML			11 02 04.1	
	comp=N,551nm,0.2s							
SJG				IAML			11 02 04.3	
	comp=N,558nm,0.5s							
SJG	**San Juan**	**2.23**	**267**	*e*P		**Pn**	**11 01 34.4**	**+1.7**
SJG				*e*S		**Sn**	**11 01 59.4**	**-0.6**
SJG				*e*S			11 01 59.5	
ANBD	**Bethesda, Anti**	**2.29**	**121**	*e*P		**Pn**	**11 01 34.0**	**+0.4**
ANBD				*e*S		**Sn**	**11 02 00.3**	**-1.2**
EMPR	**Esperanza - Ma**	**2.59**	**275**	⇑*e*P		**Pn**	**11 01 37.0**	**-0.5**
EMPR	**Esperanza - Ma**	**2.59**	**275**	*e*S		**Sn**	**11 02 07.6**	**-0.9**
EMPR	**Esperanza - Ma**	**2.59**	**275**			**Pn**	**11 01 37.1**	**-0.3**
EMPR				IAML			11 02 12.4	
	comp=E,599nm,0.4s							
EMPR				IAML			11 02 17.6	
	comp=N,538nm,0.5s							
CELP	**Cerrillos**	**2.63**	**267**	⇑eP		**Pn**	**11 01 39.3**	**+1.2**
CELP	**Cerrillos**	**2.63**	**267**			**Pn**	**11 01 39.5**	**+1.4**
CELP				IAML			11 02 15.1	
	comp=E,338nm,0.6s							
CELP	**Cerrillos**	**2.63**	**267**	⇑eP		**Pn**	**11 01 39.3**	**+1.2**
CELP				*e*S		**Sn**	**11 02 09.2**	**-0.5**
OBIP	**Obispado Ponce**	**2.66**	**266**	⇓eP		**Pn**	**11 01 38.9**	**+0.4**
OBIP	**Obispado Ponce**	**2.66**	**266**			**Pn**	**11 01 39.1**	**+0.6**
OBIP	**Obispado Ponce**	**2.66**	**266**	⇓eP		**Pn**	**11 01 38.9**	**+0.4**
OBIP				*e*S		**Sn**	**11 02 09.9**	**-0.4**
GDHS	**Morne Mazeau,**	**2.77**	**135**	Pn		**Pn**	**11 01 41.1**	**+1.0**
AOPR	**Arecibo Observ**	**2.79**	**272**	⇑eP		**Pn**	**11 01 41.4**	**+1.1**
AOPR	**Arecibo Observ**	**2.79**	**272**			**Pn**	**11 01 40.7**	**+0.4**
AOPR	**Arecibo Observ**	**2.79**	**272**	⇑eP		**Pn**	**11 01 41.4**	**+1.1**
AOPR				*e*S		**Sn**	**11 02 12.3**	**-1.1**
ABD	**La Joyeuse, An**	**2.84**	**128**	Pn		**Pn**	**11 01 41.7**	**+0.9**
ABD				IAML			11 02 15.6	
	comp=E,426nm,0.5s							
ABD				IAML			11 02 18.2	
	comp=N,426nm,0.6s							
CBE	**Ff, Capester**	**3.03**	**135**	Pn		**Pn**	**11 01 44.9**	**+1.6**
MLPR	**Magueyes Islan**	**3.08**	**265**	⇓eP		**Pn**	**11 01 43.8**	**-0.3**
MLPR	**Magueyes Islan**	**3.08**	**265**	*e*S		**Sn**	**11 02 20.7**	**+0.4**
MLPR	**Magueyes Islan**	**3.08**	**265**			**Pn**	**11 01 43.8**	**-0.3**
AGPR	**Aguadilla, PR**	**3.14**	**274**	⇑eP		**Pn**	**11 01 45.3**	**+0.5**
AGPR	**Aguadilla, PR**	**3.14**	**274**			**Pn**	**11 01 45.6**	**+0.8**
AGPR				IAML			11 02 26.0	
	comp=E,329nm,0.5s							
AGPR				IAML			11 02 28.1	
	comp=N,377nm,0.3s							
AGPR	**Aguadilla, PR**	**3.14**	**274**	⇑eP		**Pn**	**11 01 45.3**	**+0.5**
AGPR				*e*S		**Sn**	**11 02 20.9**	**-0.8**
CRPR	**Cabo Rojo, PR**	**3.14**	**266**	*e*S		**Sn**	**11 02 22.7**	**+1.0**
CRPR	**Cabo Rojo, PR**	**3.14**	**266**			**Pn**	**11 01 45.8**	**+1.0**
CRPR	**Cabo Rojo, PR**	**3.14**	**266**	*e*S		**Sn**	**11 02 22.7**	**+1.0**
TBG	**Guadaloupe-3**	**3.16**	**139**	*e*P		**Pn**	**11 01 45.9**	**+0.7**
TBG				*e*S		**Sn**	**11 02 23.1**	**+0.9**
TDBA	**Terre de Bas,**	**3.17**	**139**	*e*P		**Pn**	**11 01 44.5**	**-0.7**
TDBA				*e*S		**Sn**	**11 02 21.1**	**-1.2**
GDSD	**La Dsirade Is**	**3.26**	**126**	Pn		**Pn**	**11 01 46.6**	**+0.2**
GDSD				IAML			11 02 24.7	
	comp=N,189nm,0.3s							
MAGL	**Barre de l'ile**	**3.33**	**133**	Pn		**Pn**	**11 01 47.8**	**+0.4**
MAGL				IAML			11 02 27.6	
	comp=N,332nm,0.3s							
MAGL				IAML			11 02 36.6	
	comp=E,293nm,1.1s							
BIM	**Bigot**	**4.55**	**144**	Pn		**Pn**	**11 02 04.6**	**+0.7**
BIM				IAML			11 03 55.0	
	comp=E,86nm,1.9s							
BIM				IAML			11 03 56.1	
	comp=N,88nm,2.1s							
BIM	**Bigot**	**4.55**	**144**	*e*P		**Pn**	**11 02 04.0**	**+0.1**
BIM				*e*S		**Sn**	**11 02 54.7**	**-1.0**
SLBI	**Saint Lucia, B**	**5.01**	**147**	*e*P		**Pn**	**11 02 10.5**	**+0.4**
SLBI				*e*S		**Sn**	**11 03 06.4**	**-0.5**
SDDR	**Presa de Saban**	**7.12**	**277**			**Pn**	**11 02 40.2**	**+1.4**
AUA1	**Aruba**	**8.27**	**227**	Pn		**Pn**	**11 02 53.9**	**-0.4**
BAUV	**El Baul**	**10.12**	**204**	Pn		**Pn**	**11 03 18.3**	**-1.2**

*ISK **02** 11:06:23.4,36°.27N×36°.19E,h7km,ML3.0/23*
*AFAD **02** 11:06:24.0±0.0,36°.33N×36°.17E,h12km±4km, ML3.2*
*GRAL **02** 11:06:28.0±0.7,36°.28N×35°.99E,h34km±903km,MD3.4*
ISC 02 11:06:23.6±1.0,**36°.27N**±0°.03×**36°.20E**±0°.02,**h9**km±8km, **n50,**σ0**s83**/71,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TAHT	**Tahtakopru-Hat**	**0.10**	**353**	Pg		**Pg**	**11 06 26.1**	**-0.1**
RHAN	**Hatay/Reyhanl**	**0.33**	**92**	P		**Pb**	**11 06 31.5**	**-0.1**
RHAN				S		**Sb**	**11 06 37.0**	**+0.1**
ASUZ	**Hatay-Arsuz**	**0

BNN	**Bunyan**	**2.59 354**	Pn	**Pn**	**11 07 07.2**	**+1.3**
GULA	**Gulagac**	**2.59 323**	Pn	**Pn**	**11 07 07.3**	**+1.4**
DQRL	**Deir Qamar**	**2.61 192**	*eP*	**Pn**	**11 07 06.9**	**+0.8**
RCY	**Rachaya**	**2.78 186**	*eP*	**Pn**	**11 07 09.6**	**+1.0**
RCY			*eS*	**Sn**	**11 07 40.8**	**-1.5**

*IDC **02** 11:14:32.2±4.4, 11°.30N×140°.78E, h0km, mb3.8/8, mbtmp3.8/8, MS2.8/1, Error ellipse: s-maj=116.6km s-min=50.3km az=174.0*

ISC 02 11:14:37.7±3.7, 11°.3N±0°.7×140°.8E±0°.3, h35km, n9, σ0§92/8, mb3.9/8, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
KSRS	**Korea Array**	**28.50**	**338**	LR		LR	LR	11 29 54.2	
	comp=Z,20nm,21.4s,baz=195,slow=32								
CMAR	**Chiang Mai Arr**	**40.96**	**285**	P		**P**	**P**	**11 22 17.9**	**+0.6**
	0.4nm,0.4s,baz=84,slow=6.1,SNR=2.0								
	0.4nm,0.4s								
SONM	**Songino Array**	**46.43**	**328**	P		**P**	**P**	**11 23 01.9**	**+0.7**
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.1								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**60.41**	**318**	P		**P**	**P**	**11 24 43.4**	**-0.3**
	0.4nm,0.6s,baz=94,slow=10,SNR=4.4								
	0.4nm,0.6s								
ZALV	**Zalesovo Beam**	**61.21**	**326**	P		**P**	**P**	**11 24 48.3**	**-0.6**
	0.6nm,0.4s,baz=90,slow=8.6,SNR=1.9								
	0.6nm,0.4s								
KURBB	**Kurchatov Arra**	**63.83**	**321**	P		**P**	**P**	**11 25 06.1**	**-0.4**
	1.2nm,0.7s,baz=106,slow=6.5,SNR=9.6								
	1.2nm,0.7s								
BVAR	**Borovoye Array**	**69.27**	**323**	P		**P**	**P**	**11 25 41.4**	**+0.1**
	0.6nm,0.3s,baz=117,slow=5.2,SNR=5.3								
	0.6nm,0.3s								
YKA	**Yellowknife Ar**	**86.74**	**27**	P		**P**	**P**	**11 27 18.7**	**+0.8**
	0.3nm,0.6s,baz=294,slow=4.6,SNR=3.8								
	0.3nm,0.6s								
FINES	**FINESS Array B**	**91.51**	**334**	P		**P**	**P**	**11 27 39.0**	**-1.5**
	0.6nm,0.6s,baz=60,slow=8.2,SNR=5.0								
	0.6nm,0.6s								

*IDC **02** 11:26:12.3±1.2, 22°.96N×93°.80E, h0km, mb3.3/4, mbtmp3.4/6, ML3.6/2, Error ellipse: s-maj=28.9km s-min=22.0km az=32.0*

ISC 02 11:26:18.7±1.0, 22°.8N±0°.1×93°.76E±0°.08, h58km, n6, σ1§71/8, mb3.4/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
BRDH	**Bariadhala**	**1.96**	**267**	Pn		**Pn**	**Pn**	**11 26 48.9**	**-0.6**
	71nm,0.3s,baz=90,slow=20,SNR=1.8								
BRDH				Sn		**Sn**	**Sn**	**11 27 12.9**	**0.0**
	58nm,0.3s,baz=270,slow=20,SNR=2.8								
	168nm,0.3s								
CMAR	**Chiang Mai Arr**	**6.50**	**131**	Pn		**Pn**	**Pn**	**11 27 52.2**	**+0.4**
	0.1nm,0.3s,baz=310,slow=13,SNR=2.2								
CMAR				Sn		**Sn**	**Sn**	**11 29 02.0**	**-2.5**
	0.2nm,0.3s,baz=302,slow=14,SNR=1.4								
	0.6nm,0.4s								
MKAR	**Makanchi Array**	**25.67**	**342**	P		**P**	**P**	**11 31 41.6**	**-1.5**
	0.2nm,0.5s,baz=142,slow=7.2,SNR=2.6								
	0.2nm,0.5s								
SONM	**Songino Array**	**26.96**	**19**	P		**P**	**P**	**11 31 55.3**	**+0.5**
	0.2nm,0.4s,baz=192,slow=11,SNR=1.3								
	0.2nm,0.4s								
WRA	**Warramunga Arr**	**58.08**	**134**	P		**P**	**P**	**11 36 06.9**	**+0.6**
	0.7nm,1.0s,baz=319,slow=7.5,SNR=1.5								
	0.7nm,1.0s								
ASAR	**Alice Springs**	**60.46**	**137**	P		**P**	**P**	**11 36 24.9**	**+2.2**
	0.3nm,0.5s,baz=318,slow=7.3,SNR=4.6								
	0.3nm,0.5s								

*SJA **02** 11:36:07.7±0.8, 21°.12S×68°.63W, h148km±3km, ML3.7, MW3.7*
*NEIC **02** 11:36:09.2±1.4, 21°.09S±0°.04×68°.77W±0°.07, h146km±8km, mb4.5/3, Error ellipse: s-maj=10.2km s-min=4.8km az=60.0*
*GUC **02** 11:36:10.2±0.6, 21°.10S×68°.55W, h129km±2km, ML3.7*

ISC 02 11:36:08.6±1.0, 21°.12S±0°.03×68°.67W±0°.05, h145km±7km, n67, σ0§68/97, 6C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PB01	**IPOC Station P**	**0.77**	**275**			**Pn**	**Pn**	**11 36 30.9**	**-0.3**
PB01				Sn		**Sn**	**Sn**	**11 36 47.5**	**-1.0**
PB01	**IPOC Station P**	**0.77**	**275**	*iP*		**Pn**	**Pn**	**11 36 30.6**	**-0.6**
PB01				*iS*		**Sn**	**Sn**	**11 36 48.8**	**+0.4**
PB01				IAML				11 36 49.7	
	comp=Z,2μm,0.1s								
PB01	**IPOC Station P**	**0.77**	**275**	⇑*iP*		**Pn**	**Pn**	**11 36 31.2**	**0.0**
PB01				*eS*		**Sn**	**Sn**	**11 36 47.4**	**-1.0**
PB01				IAML				11 36 50.3	
	comp=E,2μm,0.3s								
PB09	**IPOC Station P**	**0.86**	**218**			**Pn**	**Pn**	**11 36 32.2**	**+0.2**
PB09				Sn		**Sn**	**Sn**	**11 36 49.8**	**-0.1**
PB09	**IPOC Station P**	**0.86**	**218**	*iP*		**Pn**	**Pn**	**11 36 32.1**	**0.0**
PB09				*iS*		**Sn**	**Sn**	**11 36 49.9**	**0.0**
PB09				IAML				11 36 53.4	
	comp=Z,815nm,0.4s								
PB09	**IPOC Station P**	**0.86**	**218**	⇑*iP*		**Pn**	**Pn**	**11 36 32.6**	**+0.6**
PB09				*eS*		**Sn**	**Sn**	**11 36 50.1**	**+0.1**
PB08	**IPOC Station P**	**1.07**	**335**			**Pn**	**Pn**	**11 36 33.5**	**-0.5**
PB08				Sn		**Sn**	**Sn**	**11 36 52.6**	**-0.8**
PB08	**IPOC Station P**	**1.07**	**335**	*iP*		**Pn**	**Pn**	**11 36 33.6**	**-0.5**
PB08				*iS*		**Sn**	**Sn**	**11 36 53.6**	**+0.2**
PB08				IAML				11 36 55.2	
	comp=Z,740nm,0.5s								
PB08	**IPOC Station P**	**1.07**	**335**	⇓*iP*		**Pn**	**Pn**	**11 36 34.2**	**+0.1**
PB08				*eS*		**Sn**	**Sn**	**11 36 52.5**	**-0.8**
PB08				IAML				11 36 56.1	
	comp=E,931nm,0.3s								
PB02	**IPOC Station P**	**1.16**	**260**			**Pn**	**Pn**	**11 36 34.8**	**+0.1**
PB02	**IPOC Station P**	**1.16**	**260**	*iP*		**Pn**	**Pn**	**11 36 34.7**	**+0.1**
PB02				*iS*		**Sn**	**Sn**	**11 36 55.1**	**+0.7**
PB02	**IPOC Station P**	**1.16**	**260**	⇑*iP*		**Pn**	**Pn**	**11 36 35.3**	**+0.7**
PB02				*eS*		**Sn**	**Sn**	**11 36 54.5**	**+0.2**
PB07	**IPOC Station P**	**1.29**	**242**			**Pn**	**Pn**	**11 36 35.9**	**0.0**
PB07	**IPOC Station P**	**1.29**	**242**	*iP*		**Pn**	**Pn**	**11 36 35.9**	**0.0**
PB07				*iS*		**Sn**	**Sn**	**11 36 57.5**	**+0.8**
PB07				IAML				11 36 57.9	
	comp=Z,711nm,0.3s								
PB07	**IPOC Station P**	**1.29**	**242**	⇑*iP*		**Pn**	**Pn**	**11 36 36.5**	**+0.7**
PB07				*eS*		**Sn**	**Sn**	**11 36 56.6**	**-0.1**
PB07				IAML				11 36 57.4	
	comp=N,1μm,0.3s								
HMBC	**Humberstone**	**1.41**	**306**	*iP*		**Pn**	**Pn**	**11 36 37.3**	**+0.2**
HMBC				⇓*iS*		**Sn**	**Sn**	**11 36 59.1**	**+0.3**
HMBC				IAML				11 36 59.5	
	comp=Z,1μm,0.4s								
HMBC	**Humberstone**	**1.41**	**306**	*eP*		**Pn**	**Pn**	**11 36 37.3**	**+0.2**
HMBC				*eS*		**Sn**	**Sn**	**11 36 58.6**	**-0.2**
HMBC				IAML				11 37 00.0	
	comp=E,2μm,0.4s								
PATCX	**Punta Patache**	**1.42**	**282**			**Pn**	**Pn**	**11 36 37.8**	**+0.7**
PATCX	**Punta Patache**	**1.42**	**282**	*iP*		**Pn**	**Pn**	**11 36 37.5**	**+0.4**
PATCX				*iS*		**Sn**	**Sn**	**11 36 59.4**	**+0.6**
PATCX				IAML				11 37 01.1	
	comp=Z,974nm,0.6s								
PATCX	**Punta Patache**	**1.42**	**282**	*eP*		**Pn**	**Pn**	**11 36 37.8**	**+0.7**
LVC	**Limon Verde**	**1.50**	**189**			**Pn**	**Pn**	**11 36 38.7**	**+0.4**
TA01	**Diego Aracena**	**1.52**	**291**	Pn		**Pn**	**Pn**	**11 36 38.3**	**+0.3**
TA01	**Diego Aracena**	**1.52**	**291**	*iP*		**Pn**	**Pn**	**11 36 37.8**	**-0.3**
TA01				*iS*		**Sn**	**Sn**	**11 37 01.6**	**+1.1**
TA01	**Diego Aracena**	**1.52**	**291**	⇓*iP*		**Pn**	**Pn**	**11 36 38.5**	**+0.4**
TA01				*eS*		**Sn**	**Sn**	**11 37 00.4**	**-0.1**
TA01				IAML				11 37 03.0	
	comp=N,780nm,0.3s								
GO01	**Chusmiza**	**1.52**	**341**			**Pn**	**Pn**	**11 36 39.0**	**+0.3**
GO01	**Chusmiza**	**1.52**	**341**	*iP*		**Pn**	**Pn**	**11 36 38.5**	**-0.1**
GO01				*iS*		**Sn**	**Sn**	**11 37 02.0**	**+0.5**
GO01	**Chusmiza**	**1.52**	**341**	*eP*		**Pn**	**Pn**	**11 36 39.1**	**+0.5**
GO01				*eS*		**Sn**	**Sn**	**11 37 01.1**	**-0.4**
GO01				IAML				11 37 04.3	
	comp=N,2μm,0.2s								
TA02	**Huaiquique**	**1.61**	**301**			**Pn**	**Pn**	**11 36 39.1**	**0.0**
PB11	**IPOC Station P**	**1.64**	**325**	Pn		**Pn**	**Pn**	**11 36 39.4**	**-0.1**
PB11	**IPOC Station P**	**1.64**	**325**	*iP*		**Pn**	**Pn**	**11 36 39.6**	**0.0**
PB11				IAML				11 37 05.3	
	comp=Z,369nm,0.2s								
PB11	**IPOC Station P**	**1.64**	**325**	⇑*iP*		**Pn**	**Pn**	**11 36 39.4**	**-0.1**
PB11				*eS*		**Sn**	**Sn**	**11 37 02.6**	**-0.6**
PB11				IAML				11 37 03.3	
	comp=E,984nm,0.2s								
PB06	**IPOC Station P**	**1.79**	**208**			**Pn**	**Pn**	**11 36 41.7**	**+0.4**
PB06	**IPOC Station P**	**1.79**	**208**	*iP*		**Pn**	**Pn**	**11 36 41.4**	**+0.1**
PB06	**IPOC Station P**	**1.79**	**208**	⇑*iP*		**Pn**	**Pn**	**11 36 42.0**	**+0.7**
PB06				*eS*		**Sn**	**Sn**	**11 37 06.5**	**+0.2**
PB06				IAML				11 37 07.8	
	comp=E,398nm,0.4s								
PB04	**IPOC Station P**	**1.83**	**228**			**Pn**	**Pn**	**11 36 42.2**	**+0.5**
PB04	**IPOC Station P**	**1.83**	**228**	*iP*		**Pn**	**Pn**	**11 36 42.2**	**+0.5**
PB04				IAML				11 37 10.3	
	comp=Z,464nm,0.2s								
PB04	**IPOC Station P**	**1.83**	**228**	*eP*		**Pn**	**Pn**	**11 36 42.5**	**+0.8**
PB04				*eS*		**Sn**	**Sn**	**11 37 07.6**	**+0.5**
PB04				IAML				11 37 10.8	
	comp=N,439nm,0.2s								
AF01	**San Pedro de A**	**1.88**	**166**			**Pn**	**Pn**	**11 36 43.5**	**+1.0**
PB15	**IPOC Station P**	**2.21**	**200**			**Pn**	**Pn**	**11 36 47.0**	**+0.7**
PB15	**IPOC Station P**	**2.21**	**200**	*iP*		**Pn**	**Pn**	**11 36 46.7**	**+0.5**
PB15				*iS*		**Sn**	**Sn**	**11 37 14.9**	**-0.2**
PB15	**IPOC Station P**	**2.21**	**200**	⇓*iP*		**Pn**	**Pn**	**11 36 47.1**	**+0.9**
PB15				*eS*		**Sn**	**Sn**	**11 37 13.1**	**-2.1**
PB05	**IPOC Station P**	**2.24**	**219**	Pn		**Pn**	**Pn**	**11 36 47.1**	**+0.6**
PB05	**IPOC Station P**	**2.24**	**219**	*iP*		**Pn**	**Pn**	**11 36 46.7**	**+0.2**
PB05				IAML				11 37 20.7	
	comp=Z,189nm,0.7s								
PB05	**IPOC Station P**	**2.24**	**219**	*eP*		**Pn**	**Pn**	**11 36 47.4**	**+0.9**
PB05				*eS*		**Sn**	**Sn**	**11 37 15.7**	**+0.1**
PB16	**IPOC Station P**	**2.88**	**344**	Pn		**Pn**	**Pn**	**11 36 55.5**	**+0.6**
PB16	**IPOC Station P**	**2.88**	**344**	*iP*		**Pn**	**Pn**	**11 36 55.2**	**+0.3**
PB16				⇓*iS*		**Sn**	**Sn**	**11 37 30.4**	**0.0**
PB12	**IPOC Station P**	**2.94**	**328**	Pn		**Pn**	**Pn**	**11 36 54.5**	**-0.7**
PB12	**IPOC Station P**	**2.94**	**328**	*iP*		**Pn**	**Pn**	**11 36 54.9**	**-0.3**
PB12				*iS*		**Sn**	**Sn**	**11 37 30.8**	**-0.3**
PB10	**IPOC Station P**	**2.96**	**216**	Pn		**Pn**	**Pn**	**11 36 55.4**	**+0.1**
PB10	**IPOC Station P**	**2.96**	**216**	*iP*		**Pn**	**Pn**	**11 36 55.3**	**+0.1**
YJA	**Yavi**	**3.12**	**110**	*iP*		**Pn**	**Pn**	**11 36 58.5**	**+0.7**
YJA				*iS*		**Sn**	**Sn**	**11 37 35.2**	**-0.4**
AP01	**Chacalluta**	**3.15**	**330**	Pn		**Pn**	**Pn**	**11 36 57.2**	**-0.6**
PB14	**IPOC Station P**	**3.84**	**204**	Pn		**Pn**	**Pn**	**11 37 06.7**	**-0.3**
PB14	**IPOC Station P**	**3.84**	**204**	*iP*		**Pn**	**Pn**	**11 37 07.0**	**0.0**
PB14				IAML				11 37 53.9	
	comp=Z,58nm,0.2s								
GO02	**Mina Guanaco**	**4.12**	**192**	Pn		**Pn**	**Pn**	**11 37 10.9**	**+0.3**
GO02	**Mina Guanaco**	**4.12**	**192**	*iP*		**Pn**	**Pn**	**11 37 10.8**	**+0.2**
GO02				*iS*		**Sn**	**Sn**	**11 37 58.0**	**-0.7**
LPAZ	**La Paz**	**4.83**	**6**	Pn		**Pn**	**Pn**	**11 37 20.7**	**+0.3**
LPAZ	**La Paz**	**4.83**	**6**	*iP*		**Pn**	**Pn**	**11 37 20.8**	**+0.5**
AC01	**Pan de Azucar**	**5.31**	**199**	Pn		**Pn**	**Pn**	**11 37 25.2**	**-1.0**
AC01	**Pan de Azucar**	**5.31**	**199**	*eP*		**Pn**	**Pn**	**11 37 24.9**	**-1.2**
AC02	**Maricunga**	**5.71**	**184**	Pn		**Pn**	**Pn**	**11 37 31.8**	**0.0**
GO03	**Copiap**	**6.61**	**192**			**Pn**	**Pn**	**11 37 41.8**	**-1.7**
AC05	**El Transito**	**7.82**	**190**			**Pn**	**Pn**	**11 37 58.0**	**-1.9**
LCO	**Las Campanas**	**8.07**	**193**	Pn		**Pn**	**Pn**	**11 38 00.4**	**-2.9**
BI05	**Punta Hualpn**	**16.07**	**193**	P		**Pn**	**Pn**	**11 39 46.1**	**-0.3**
BI05				IAmb		IAmb	IAmb	11 39 51.5	
	comp=Z,79nm,1.1s								
MACA	**Manacapuru-AM**	**19.46**	**25**	P		**P**	**P**	**11 40 24.9**	**+0.6**
MACA				IAmb		IAmb	IAmb	11 40 26.2	
	comp=Z,17nm,0.7s								
BOAV	**Boa Vista**	**24.69**	**20**	P		**P**	**P**	**11 41 16.8**	**+0.5**
BOAV				IAmb		IAmb	IAmb	11 41 17.6	
	comp=Z,7.2nm,1.1s								

*IDC **02** 11:37:50.8±0.5, 65°.66S×175°.70W, h0km, mb4.7/9, mbtmp4.7/10, ML4.0/1, MS5.4/34, Error ellipse: s-maj=26.7km s-min=15.5km az=46.0*
*MOS **02** 11:37:52.3±1.2, 65°.85S×175°.75W, h10km, mb5.5/19, MS5.5/9, Error ellipse: s-maj=29.5km s-min=10.6km az=96.8*
*NEIC **02** 11:37:53.4, 65°.78S×175°.57W, h10km*
*NEIC **02** 11:37:53.4, 65°.78S×175°.57W, h22km*
*NEIC **02** 11:37:53.4, 66°.38S×176°.79W, h22km, Moment Tensor Solution. Duration: 3s8 Moment tensor: Scale 10^17Nm; Mrr=0.56; Mθθ 6.40; Mϕϕ -5.84; Mrθ -2.34; Mθϕ 0.82; Mϕr -0.57; Fault plane solution: M0 6.56000×10^17 NP1: ϕs220.20000°, δ81.50000°, λ164.32000°. NP2: ϕs312.57000°, δ74.49000°, λ8.82000°. Principal axes: T 7.1831, Plg17.0000°, Azm176.0000°; N -1.2557, Plg72.0000°, Azm12.0000°; P -5.9274, Plg5.0000°, Azm267.0000°;*
*NEIC **02** 11:37:53.2±1.4, 65°.77S±0°.10×175°.76W±0°.3, h10km±1km, mb5.5/84, Ms_20 5.7/838, Mwb5.7/20, Mww5.8/12 Error ellipse: s-maj=20.4km s-min=15.5km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=0.80; Mθθ 4.41; Mϕϕ -3.61; Mrθ 0.79; Mθϕ 0.29; Mϕr -0.77; Fault plane solution: M0 4.22000×10^17 NP1: ϕs311.97000°, δ85.27000°, λ-16.69000°. NP2:ϕs43.38000°, δ73.37000°, λ-175.06000°. Principal axes: T 4.5269, Plg8.0000°, Azm359.0000°; N -0.6948, Plg73.0000°, Azm117.0000°; P -3.8321, Plg15.0000°, Azm267.0000°;*
*GCMT **02** 11:37:55.2±0.1, 65°.70S±0°.01×175°.84W±0°.01, h12km, MW5.7/90, Moment Tensor Solution. s83,c162; s90,c273; Duration: 1s8 Moment tensor: Scale 10^17Nm; Mrr=0.90±.04; Mθθ 5.13±.04; Mϕϕ -4.23±.04; Mrθ -1.44±.11; Mθϕ -0.10±.04; Mϕr 0.57±.11; Best double couple: M0 4.89500×10^17 NP1:ϕs315.00000°, δ88.00000°, λ16.00000°. NP2:ϕs225.00000°, δ74.00000°, λ178.00000°. Principal axes: T 5.4610, Plg13.0000°, Azm181.0000°; N -1.1340, Plg74.0000°, Azm323.0000°; P -4.3280, Plg10.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 11:37:52.9±0.2, 65°.80S±0°.05×175°.45W±0°.07, h10km, n749, σ1§67/317, mb5.4/58, MS5.7/442, 14C-15D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SBA	**Scott Base**	**13.21**	**196**	Pn		**Pn**	**Pn**	**11 40 59.0**	**-1.2**
SBA	**Scott Base**	**13.21**	**196**	P		**Pn**	**Pn**	**11 40 59.0**	**-1.2**
VNDA	**Vanda**	**13.59**	**201**	Pn		**Pn**	**Pn**	**11 41 04.8**	**-0.6**
VNDA	**Vanda**	**13.59**	**201**	Pn		**Pn**	**Pn**	**11 41 05.2**	**-0.2**
	0.7nm,0.3s,baz=51,slow=18,SNR=30								
VNDA				Sn		**Sn**	**Sn**	**11 43 30.6**	**-5.6**
	0.4nm,0.3s,baz=128,slow=12,SNR=2.2								
VNDA				LR		LR	LR	11 45 13.6	
	comp=Z,54μm,20.5s,baz=38,slow=32								
	12nm,0.9s								
MCQ	**Macquarie Isla**	**16.88**	**300**	P		**P**	**P**	**11 41 51.0**	**0.0**
WHZ	**Wether Hill Ro**	**21.88**	**328**	P		**P**	**P**	**11 42 45.8**	**+0.2**
WHZ				IAmb		IAmb	IAmb	11 42 52.0	
	comp=Z,194nm,1.4s								
CTZ	**Chatham Island**	**22.12**	**358**	IAMs_20		IAMs_20	IAMs_20	11 48 48.6	
	comp=Z,27μm,20.0s								
ODZ	**Otahua Downs**	**22.14**	**333**	P		**P**	**P**	**11 42 46.5**	**-1.9**
ODZ				IAmb		IAmb	IAmb	11 42 53.0	
	comp=Z,299nm,1.7s								
ODZ				IAMs_20		IAMs_20	IAMs_20	11 49 09.3	
	comp=Z,25μm,19.0s								
MLZ	**Mavora Lakes**	**22.34**	**328**	P		**P**	**P**	**11 42 50.4**	**-0.2**
MLZ				IAmb		IAmb	IAmb	11 42 58.5	
	comp=Z,337nm,1.8s								
MLZ				IAMs_20		IAMs_20	IAMs_20	11 49 08.4	
	comp=Z,19μm,18.0s								
DCZ	**Deep Cove**	**22.46**	**327**	P		**P**	**P**	**11 42 49.5**	**-2.4**
WKZ	**Wanaka**	**22.67**	**330**	P		**P**	**P**	**11 42 52.2**	**-1.9**
WKZ				IAMs_20		IAMs_20	IAMs_20	11 50 07.1	
	comp=Z,28μm,18.0s								
LBZ	**Lake Benmore**	**22.86**	**333**	P		**P**	**P**	**11 42 54.2**	**-1.9**
LBZ				IAmb		IAmb	IAmb	11 42 58.4	
	comp=Z,256nm,1.8s								
LBZ				IAMs_20		IAMs_20	IAMs_20	11 49 32.4	
	comp=Z,25μm,19.0s								
MQZ	**McQueen's Vall**	**23.09**	**338**	P		**P**	**P**	**11 42 57.5**	**-1.0**
MQZ				IAMs_20		IAMs_20	IAMs_20	11 49 50.7	
	comp=Z,18μm,19.0s								
RPZ	**Rata Peaks**	**23.35**	**335**	P		**P**	**P**	**11 42 59.7**	**-1.5**
RPZ				IAmb		IAmb	IAmb	11 43 14.2	
	comp=Z,342nm,1.9s								
RPZ				IAMs_20		IAMs_20	IAMs_20	11 49 21.4	
	comp=Z,21μm,21.0s								
RPZ	**Rata Peaks**	**23.35**	**335**	LR		LR	LR	11 49 44.5	
	comp=Z,19μm,21.4s,baz=166,slow=31								
OXZ	**Oxford**	**23.56**	**337**	P		**P**	**P**	**11 43 02.6**	**-0.7**
OXZ				IAmb		IAmb	IAmb	11 43 16.6	
	comp=Z,209nm,1.8s								
OXZ				IAMs_20		IAMs_20	IAMs_20	11 50 06.1	
	comp=Z,19μm,18.0s								
GVZ	**Greta Valley S**	**23.76**	**339**	IAMs_20		IAMs_20	IAMs_20	11 49 52.3	
	comp=Z,20μm,20.0s								
LTZ	**Lake Taylor**	**24.06**	**337**	P		**P**	**P**	**11 43 08.2**	**+0.2**
LTZ				IAmb		IAmb	IAmb	11 43 18.6	
	comp=Z,276nm,1.7s								
LTZ				IAMs_20		IAMs_20	IAMs_20	11 51 07.2	
	comp=Z,16μm,18.0s								
KHZ	**Kahutara**	**24.23**	**340**	IAMs_20		IAMs_20	IAMs_20	11 50 45.7	
	comp=Z,21μm,20.0s								
INZ	**Inchbonnie**	**24.25**	**336**	IAMs_20		IAMs_20	IAMs_20	11 50 47.1	
	comp=Z,19μm,19.0s								
QSPA	**South Pole Qui**	**24.29**	**180**	P		**P**	**P**	**11 43 11.2**	**+1.0**
QSPA				IAmb		IAmb	IAmb	11 43 21.4	
	comp=Z,133nm,1.1s								
QSPA	**South Pole Qui**	**24.29**	**180**	IAMs_20		IAMs_20	IAMs_20	11 51 38.5	
	comp=Z,20μm,20.0s								
QSPA	**South Pole Qui**	**24.29**	**180**	P		**P**	**P**	**11 43 10.9**	**+0.7**
	comp=Z,23nm,0.9s,baz=33,slow=4.6,SNR=27								
	comp=Z,23nm,0.9s								
THZ	**Tophouse**	**24.96**	**339**	IAMs_20		IAMs_20	IAMs_20	11 51 20.0	
	comp=Z,20μm,19.0s								
MRNZ	**Matariki Terra**	**25.34**	**339**	P		**P**	**P**	**11 43 19.6**	**0.0**
BFZ	**Birch Farm**	**25.60**	**345**	IAMs_20		IAMs_20	IAMs_20	11 51 35.3	
	comp=Z,18μm,18.0s								
MRZ	**Mangatainoka R**	**25.69**	**344**	P		**P**	**P**	**11 43 21.4**	**-1.5**
QRZ	**Quartz Range**	**25.93**	**339**	IAMs_20		IAMs_20	IAMs_20	11 51 59.8	
	comp=Z,16μm,19.0s								
BKZ	**Black Stump Fm**	**27.08**	**346**	IAMs_20		IAMs_20	IAMs_20	11 52 16.4	
	comp=Z,17μm,19.0s								
RTZ	**Ruatahuna**	**27.57**	**347**	IAMs_20		IAMs_20	IAMs_20	11 52 20.2	
	comp=Z,27μm,20.0s								
URZ	**Urewera**	**27.92**	**347**	LR		LR	LR	11 53 18.8	
	comp=Z,23μm,18.4s,baz=268,slow=33								
MXZ	**Matakaoa Point**	**28.51**	**350**	IAMs_20		IAMs_20	IAMs_20	11 52 13.9	
	comp=Z,15μm,21.0s								
TOZ	**Tahuroa Road**	**28.60**	**345**	IAMs_20		IAMs_20	IAMs_20	11 52 44.2	
	comp=Z,16μm,20.0s								
BELA	**Belgrano 2**	**34.62**	**166**	P		**P**	**P**	**11 44 42.4**	**+0.9**
MILA	**Mila**	**35.36**	**307**	P		**P**	**P**	**11 44 46.2**	**-2.1**
	baz=35,SNR=3.2								
TOO	**Toolangi**	**36.14**	**302**	P		**P**	**P**	**11 44 53.0**	**-2.0**
	baz=36,SNR=5.0								
TOO	**Toolangi**	**36.14**	**302**	P		**P**	**P**	**11 44 54.9**	**-0.1**
TOO				IAmb		IAmb	IAmb	11 45 05.1	
	comp=Z,86nm,1.8s								
TOO	**Toolangi**	**36.14**	**302**	P		**P**	**P**	**11 44 57.2**	**+2.2**
TOO	**Toolangi**	**36.14**	**302**	P		**P**	**P**	**11 44 54.9**	**-0.1**
TOO				pmax		pmax			
	comp=Z,86nm,1.8s								
RAO	**Raoul Island**	**36.60**	**356**	LR		LR	LR	11 59 33.7	
	comp=Z,5μm,18.2s,baz=170,slow=36								
BRAT	**Ballarat**	**36.71**	**300**	P		**P**	**P**	**11 45 02.1**	**+2.3**
CAN	**Canberra**	**37.00**	**308**	P		**P**	**P**	**11 45 02.2**	**-0.1**
CAN	**Canberra**	**37.00**	**308**	P		**P**	**P**	**11 45 02.2**	**-0.1**
CAN				pmax		pmax			
	comp=Z,45nm,1.4s								
LHI	**Lord Howe Isla**	**37.65**	**323**	P		**P**	**P**	**11 45 07.5**	**-0.2**
YNG	**Young**	**38.13**	**308**	P		**P**	**P**	**11 45 12.7**	**+0.8**
PMSA	**Palmer Station**	**40.65**	**142**

CTAO pmax pmax
comp=Z,25nm,1.3s
AY03 Cochrane 52.81 124 P **P** **11 47 08.7 +0.8**
AY03 IAmb IAmb 11 48 28.8
comp=Z,83nm,0.2s
AY03 IAMs_20 IAMs_20 12 04 12.5
comp=Z,3µm,19.0s
AS31 Alice Springs 52.89 297 P **P** **11 47 07.2 -1.6**
ASAR Alice Springs 52.89 297 P **P** **11 47 07.5 -1.3**
ASAR Alice Springs 52.89 297 P **P** **11 47 07.0 -1.8**
comp=Z,9.7nm,1.0s,baz=156,slow=7.5,SNR=30
ASAR PcP **PcP** **11 48 16.0 -1.8**
comp=Z,4.9nm,1.0s,baz=149,slow=4.7,SNR=6.8
comp=Z,9.7nm,1.0s
BLDU Ballidu 53.43 276 P **P** **11 47 13.1 +0.4**
EFI East Falkland 53.50 137 P **P** **11 47 13.3 +0.5**
EFI IAmb IAmb 11 47 15.6
comp=Z,57nm,0.8s
EFI East Falkland 53.50 137 *de*P **P** **11 47 14.6 +1.7**
EFI pmax pmax
comp=Z,108nm,1.2s
QIS Mount Isa 53.74 305 P **P** **11 47 13.0 -2.1**
baz=54,SNR=7.4
WRKA Warakurna 53.76 291 P **P** **11 47 13.7 -1.4**
baz=54,SNR=4.3
COYC Coyhaique 54.44 123 P **P** **11 47 20.8 +0.9**
COYC IAmb IAmb 11 47 54.4
comp=Z,87nm,1.8s
MTSU Mount Surprise 54.47 311 P **P** **11 47 19.2 -1.2**
baz=54,SNR=6.3
PAF Port-aux-Franc 54.68 227 IAMs_20 IAMs_20 12 10 16.1
comp=Z,6µm,20.0s
MORW Morawa 55.07 277 IAMs_20 IAMs_20 12 05 50.2
comp=Z,6µm,19.0s
AY01 Puyuhuapi 55.25 122 P **P** **11 47 26.5 +0.8**
RPN Rapa Nui 55.81 80 LR LR 12 05 45.5
comp=Z,6µm,21.5s,baz=213,slow=30
WR0 Warramunga Arr 56.05 300 P **P** **11 47 31.4 -0.4**
WR0 IAmb IAmb 11 47 35.5
comp=Z,48nm,1.3s
WR8 Warramunga Arr 56.07 300 IAMs_20 IAMs_20 12 07 32.6
comp=Z,5µm,21.0s
WR7 Warramunga Arr 56.08 300 IAMs_20 IAMs_20 12 07 33.8
comp=Z,5µm,22.0s
WR5 Warramunga Arr 56.10 300 IAMs_20 IAMs_20 12 07 33.3
comp=Z,5µm,22.0s
WR4 Warramunga Arr 56.11 300 IAMs_20 IAMs_20 12 07 33.6
comp=Z,5µm,22.0s
WC3 Warramunga Arr 56.12 300 IAMs_20 IAMs_20 12 07 33.7
comp=Z,5µm,22.0s
WR3 Warramunga Arr 56.12 300 IAMs_20 IAMs_20 12 07 34.8
comp=Z,5µm,22.0s
WB1 Warramunga Ar. 56.12 299 IAMs_20 IAMs_20 12 07 35.0
comp=Z,5µm,22.0s
WC4 Warramunga Arr 56.12 299 IAMs_20 IAMs_20 12 07 34.0
comp=Z,5µm,22.0s
WR2 Warramunga Arr 56.13 300 IAMs_20 IAMs_20 12 07 35.1
comp=Z,5µm,22.0s
WB2 Warramunga Arr 56.14 300 IAmb IAmb 11 47 38.7
comp=Z,73nm,1.6s
WB2 IAMs_20 IAMs_20 12 08 07.3
comp=Z,5µm,22.0s
WR1 Warramunga Arr 56.14 299 IAMs_20 IAMs_20 12 07 35.4
comp=Z,5µm,22.0s
WRA Warramunga Arr 56.14 299 P **P** **11 47 30.0 -2.4**
comp=Z,15nm,1.0s,baz=160,slow=5.9,SNR=33
WRA LR LR 12 09 43.8
comp=Z,4µm,18.0s,baz=157,slow=34
comp=Z,15nm,1.0s
WRAB Tennant Creek 56.15 300 P **P** **11 47 31.3 -1.2**
WRAB IAmb IAmb 11 47 38.8
comp=Z,100nm,1.9s
WRAB Tennant Creek 56.15 300 P **P** **11 47 31.3 -1.2**
WRAB pmax pmax
comp=Z,100nm,1.9s
WB3 Warramunga Arr 56.16 300 IAMs_20 IAMs_20 12 08 17.8
comp=Z,4µm,19.0s
WC1 Warramunga Arr 56.16 299 IAMs_20 IAMs_20 12 07 35.9
comp=Z,5µm,22.0s
WB5 Warramunga Arr 56.19 300 IAMs_20 IAMs_20 12 07 36.8
comp=Z,5µm,22.0s
WB6 Warramunga Arr 56.21 300 IAMs_20 IAMs_20 12 09 09.3
comp=Z,4µm,18.0s
WB8 Warramunga Arr 56.25 300 IAMs_20 IAMs_20 12 07 48.2
comp=Z,5µm,22.0s
WB9 Warramunga Arr 56.27 300 IAMs_20 IAMs_20 12 07 38.7
comp=Z,5µm,22.0s
WB0 Warramunga Arr 56.28 300 IAMs_20 IAMs_20 12 07 48.2
comp=Z,5µm,22.0s
LL02 Futaleuf 56.61 122 P **P** **11 47 36.2 +0.7**
LL02 IAmb IAmb 11 47 55.5
comp=Z,60nm,1.4s
LL01 San Ignacio de 57.12 121 P **P** **11 47 40.0 +0.9**
LL01 IAmb IAmb 11 47 50.8
comp=Z,55nm,1.6s
COEN Coen 58.75 311 P **P** **11 47 51.2 +0.4**
COEN IAmb IAmb 11 48 00.4
comp=Z,52nm,1.4s
HNR Honiara 58.79 331 IAMs_20 IAMs_20 12 07 48.4
comp=Z,5µm,22.0s
HNR Honiara 58.79 331 LR LR 12 08 44.9
comp=Z,62µm,21.9s,baz=176,slow=32
LR05 Currie 59.16 120 P **P** **11 47 54.4 +1.0**
PLCA Paso Flores 59.23 121 IAmb IAmb 11 47 57.2
comp=Z,61nm,1.6s
PLCA Paso Flores 59.23 121 P **P** **11 47 54.6 +0.6**
comp=Z,9.0nm,0.9s,baz=212,slow=7.1,SNR=16
PLCA LR LR 12 08 21.6
comp=Z,955nm,18.9s,baz=214,slow=31
comp=Z,9.0nm,0.9s
GO06 Curarrehue 59.92 120 P **P** **11 47 58.6 -0.2**
GO06 IAmb IAmb 11 48 07.1
comp=Z,52nm,1.2s
PSAD3 Pilbara Seismi 60.16 284 IAMs_20 IAMs_20 12 08 45.3
comp=Z,6µm,20.0s
PSAB3 Pilbara Seismi 60.17 284 IAMs_20 IAMs_20 12 08 46.7
comp=Z,6µm,20.0s
PSAC2 Pilbara Seismi 60.18 284 IAMs_20 IAMs_20 12 08 46.0
comp=Z,7µm,21.0s
PSAA3 Pilbara Seismi 60.19 284 IAMs_20 IAMs_20 12 08 46.1
comp=Z,6µm,20.0s
PSA00 Pilbara Seismi 60.20 284 IAMs_20 IAMs_20 12 08 47.3
comp=Z,6µm,20.0s
PSAA1 Pilbara Seismi 60.20 284 IAMs_20 IAMs_20 12 08 46.3
comp=Z,7µm,20.0s
PSAB2 Pilbara Seismi 60.21 284 IAMs_20 IAMs_20 12 08 46.6
comp=Z,6µm,20.0s
PSAB1 Pilbara Seismi 60.21 284 IAMs_20 IAMs_20 12 09 14.9
comp=Z,6µm,19.0s
PSAD1 Pilbara Seismi 60.31 284 IAMs_20 IAMs_20 12 08 50.3
comp=Z,6µm,20.0s
FITZ Fitzroy Crossi 61.06 291 P **P** **11 48 06.3 -0.3**
GIRL Giralia 61.51 278 IAMs_20 IAMs_20 12 09 40.1
comp=Z,4µm,20.0s
PMG Port Moresby 61.89 317⇑ *e*P **P** **11 48 11.0 -1.3**
PMG pmax pmax
comp=Z,123nm,2.8s
PMG MLR MLR
comp=Z,2µm,15.0s
PMG Port Moresby 61.89 317 LR LR 12 10 04.4
comp=Z,2µm,21.4s,baz=162,slow=31
H03S2 Juan Fernandez 62.23 111 T T 12 56 29.9
baz=205,slow=74
H03S1 Juan Fernandez 62.23 111 T T 12 56 33.9
baz=205,slow=74
H03S3 Juan Fernandez 62.24 111 T T 12 56 34.4
baz=205,slow=74
H03N3 Juan Fernandez 62.57 111 T T 12 56 55.9
baz=236,slow=76,SNR=368
H03N2 Juan Fernandez 62.58 111 T T 12 56 56.4
baz=236,slow=76,SNR=587
H03N1 Juan Fernandez 62.58 111 T T 12 56 56.7
baz=236,slow=76,SNR=155
BO02 Sierra Bellavi 64.43 118 P **P** **11 48 29.7 +0.6**
BO02 IAmb IAmb 11 48 37.6
comp=Z,38nm,1.1s
TRQA Tornquist 64.56 127 P **P** **11 48 30.5 +0.7**
TRQA Tornquist 64.56 127 P **P** **11 48 30.5 +0.7**
TRQA pmax pmax
comp=Z,79nm,1.5s
BO01 Tunca 64.68 118 P **P** **11 48 30.1 -0.5**
BO01 IAmb IAmb 11 48 49.0
comp=Z,56nm,1.4s
BO04 La Punta 65.22 118 P **P** **11 48 33.9 -0.3**
LMEL Las Melosas 65.49 118 P **P** **11 48 36.7 +0.6**
MT13 San Alfonso 65.55 118 P **P** **11 48 36.8 +0.3**
RABL Rabaul 65.58 324 IAMs_20 IAMs_20 12 14 38.7
comp=Z,4µm,20.0s
VA03 San Esteban 66.34 117 IAmb IAmb 11 48 48.1
comp=Z,31nm,1.1s
CO01 Juntas del Tor 69.01 116 IAmb IAmb 11 49 17.7
comp=Z,44nm,1.6s
SOEI Soe 69.22 294 IAMs_20 IAMs_20 12 17 30.8
comp=Z,3µm,18.0s
LCO Las Campanas 69.66 115 P **P** **11 49 02.9 +0.2**
LCO IAmb IAmb 11 49 33.2
comp=Z,28nm,1.2s
LCO Las Campanas 69.66 115 *e*P **P** **11 49 02.8 +0.2**
MMRI Maumere 71.01 292 P **P** **11 49 10.5 -0.2**
PLTB Pedras Altas 73.03 131 P **P** **11 49 22.8 +0.1**
PLTB IAmb IAmb 11 49 25.8
comp=Z,70nm,1.4s
NLAI Namlea 74.18 299 P **P** **11 49 31.0 +1.5**
comp=Z,45nm,1.2s
SWI Sorong 74.93 304 P **P** **11 49 36.8 +3.0**
comp=Z,52nm,1.4s
PATS Pohnpei 74.96 333 P **P** **11 49 30.9 -3.1**
baz=75,SNR=5.7
PB15 IPOC Station P 75.37 114 IAmb IAmb 11 49 44.8
comp=Z,75nm,1.6s
PB05 IPOC Station P 75.42 113 IAmb IAmb 11 49 54.0
comp=Z,44nm,1.4s
SANI Sanana 75.68 298 P **P** **11 49 37.7 -0.5**
SANI Sanana 75.68 298 P **P** **11 49 41.2 +3.0**
comp=Z,13nm,1.1s
LVC Limon Verde 76.13 114 P **P** **11 49 41.5 +0.3**
LVC IAmb IAmb 11 49 52.0
comp=Z,42nm,1.1s
LVC Limon Verde 76.13 114 *e*P **P** **11 49 42.8 +1.6**
LVC Limon Verde 76.13 114 LR LR 12 16 25.2
comp=Z,2µm,19.8s,baz=210,slow=30
UGM Wanagama 76.29 281 IAMs_20 IAMs_20 12 19 14.8
comp=Z,3µm,19.0s
LBMI Labuha 76.45 300 P **P** **11 49 46.6 +4.0**
comp=Z,96nm,2.2s,comp=Z,2µm
PB07 IPOC Station P 76.56 113 IAmb IAmb 11 49 51.7
comp=Z,73nm,1.5s
PB09 IPOC Station P 76.74 114 IAmb IAmb 11 49 53.5
comp=Z,67nm,1.5s
CPUP Villa Florida 76.85 126 P **P** **11 49 45.4 +0.6**
CPUP Villa Florida 76.85 126 P **P** **11 49 45.4 +0.6**
CPUP pmax pmax
comp=Z,19nm,1.0s
CPUP Villa Florida 76.85 126 P **P** **11 49 45.1 +0.4**
comp=Z,5.4nm,0.7s,baz=212,slow=4.8,SNR=17
CPUP LR LR 12 20 16.4
comp=Z,2µm,18.8s,baz=204,slow=33
comp=Z,5.4nm,0.7s
PB01 IPOC Station P 77.33 113 IAmb IAmb 11 49 56.0
comp=Z,90nm,1.8s
PB01 IAMs_20 IAMs_20 12 16 25.3
comp=Z,2µm,20.0s
ITAB Concordia 77.70 130 P **P** **11 49 50.0 +0.5**
ITAB IAmb IAmb 11 49 59.9
comp=Z,84nm,1.6s
TA02 Huaiquique 77.79 112 P **P** **11 49 50.6 +0.6**
TA02 IAmb IAmb 11 50 00.0
comp=Z,37nm,0.9s
LUWI Luwuk 77.80 296 P **P** **11 49 48.0 -2.1**
LUWI Luwuk 77.80 296 P **P** **11 49 53.3 +3.2**
TNTI Ternate 77.81 301 P **P** **11 49 50.1 0.0**
PB08 IPOC Station P 78.28 113 IAMs_20 IAMs_20 12 16 24.4
comp=Z,2µm,19.0s
PB11 IPOC Station P 78.43 112 IAmb IAmb 11 50 04.1
comp=Z,26nm,0.9s
LEM Lembang 78.45 279 LR LR 12 19 23.0
comp=Z,2µm,20.7s,baz=162,slow=32
GO01 Chusmiza 78.69 113 IAmb IAmb 11 50 06.5
comp=Z,107nm,1.9s
GO01 IAMs_20 IAMs_20 12 17 04.4
comp=Z,3µm,20.0s
AP01 Chacalluta 79.44 111 IAMs_20 IAMs_20 12 17 09.1
comp=Z,3µm,20.0s
MPSI Mapaga 80.14 293 P **P** **11 50 04.8 +1.8**
comp=Z,28nm,1.3s,comp=Z,636nm
SUR Sutherland 81.33 194 LR LR 12 22 16.2
comp=Z,7µm,21.5s,baz=167,slow=33
LPAZ La Paz 82.18 112 P **P** **11 50 15.4 +0.8**
LPAZ La Paz 82.18 112 *e*P **P** **11 50 15.4 +0.8**
NNA Nana 82.67 103 P **P** **11 50 17.0 +0.5**
NNA IAmb IAmb 11 50 34.7
comp=Z,64nm,1.6s
NNA Nana 82.67 103⇑ *e*P **P** **11 50 16.2 -0.3**
NNA pmax pmax
comp=Z,73nm,1.5s
NNA MLR MLR
comp=Z,2µm,16.0s
NNA Nana 82.67 103 LR LR 12 19 39.9
comp=Z,1µm,18.2s,baz=202,slow=30
DAV Davao City (W) 84.29 301 LR LR 12 28 32.2
comp=Z,463nm,18.1s,baz=136,slow=36
BOSA Boshof 84.55 198 IAMs_20 IAMs_20 12 24 37.3
comp=Z,4µm,20.0s
BOSA Boshof 84.55 198 P **P** **11 50 26.0 -0.1**
comp=Z,4.2nm,0.9s,baz=196,slow=6.8,SNR=2.5
BOSA LR LR 12 24 28.0
comp=Z,4µm,21.3s,baz=174,slow=33
comp=Z,4.2nm,0.9s
SIV San Ignacio 85.08 118 LR LR 12 22 39.6
comp=Z,1µm,20.6s,baz=220,slow=32
PTLB Pontes e Lacer 86.28 120 P **P** **11 50 34.4 -0.3**
PTLB IAmb IAmb 11 50 44.4
comp=Z,48nm,1.9s
ATAH Atahualpa 86.44 99 LR LR 12 20 20.7
comp=Z,3µm,20.4s,baz=218,slow=30
VOI Vohitsoka 86.87 219 IAMs_20 IAMs_20 12 27 26.0
comp=Z,3µm,20.0s
KIP Kipapa 87.96 16⇑ *e*P **P** **11 50 41.9 -0.6**
KIP pmax pmax
comp=Z,465nm,3.1s
LBTB Lobatse 88.05 199 P **P** **11 50 43.4 +0.1**
LBTB IAmb IAmb 11 50 47.9
comp=Z,49nm,1.6s
LBTB Lobatse 88.05 199 P **P** **11 50 43.4 +0.1**
LBTB pmax pmax
comp=Z,49nm,1.6s
LBTB Lobatse 88.05 199 LR LR 12 26 55.7
comp=Z,5µm,20.6s,baz=171,slow=33
CZSB Cruzeiro do Su 88.19 105 IAMs_20 IAMs_20 12 23 10.4
comp=Z,2µm,18.0s
MCRA Macar, Loja 88.31 97 P **P** **11 50 44.3 -0.3**
ETMB Extrema 88.83 111 P **P** **11 50 46.8 -0.2**
ETMB IAmb IAmb 11 50 55.8
comp=Z,23nm,1.1s
ETMB IAMs_20 IAMs_20 12 23 27.0
comp=Z,2µm,19.0s
BDFB Brasilia 89.85 130 P **P** **11 50 52.1 +0.2**
BDFB IAmb IAmb 11 51 01.8
comp=Z,31nm,1.5s
BDFB Brasilia 89.85 130 P **P** **11 50 52.1 +0.2**
BDFB pmax pmax
comp=Z,31nm,1.5s
BDFB MLR MLR
comp=Z,1µm,18.0s
BDFB Brasilia 89.85 130 P **P** **11 50 52.2 +0.3**
comp=Z,1.4nm,0.4s,baz=210,slow=8.9,SNR=2.1
BDFB LR LR 12 29 35.1
comp=Z,624nm,18.3s,baz=181,slow=34
comp=Z,1.4nm,0.4s
SAML Samuel 90.78 114 P **P** **11 50 55.1 -1.0**
SAML Samuel 90.78 114 P **P** **11 50 55.1 -1.0**
SAML pmax pmax
comp=Z,42nm,1.2s
TGY Tagaytay City 92.45 300 LR LR 12 34 02.5
comp=Z,353nm,18.9s,baz=111,slow=36
IMBA Imbabura, San 93.23 97 IAMs_20 IAMs_20 12 24 56.4
comp=Z,2µm,19.0s
TSUM Tsumeb 94.69 192 LR LR 12 30 03.4
comp=Z,4µm,20.7s,baz=168,slow=33
LSZ Lusaka 97.23 203 LR LR 12 32 32.7
comp=Z,5µm,19.4s,baz=176,slow=34
JCJ Chichijima 98.12 323 LR LR 12 30 28.6
comp=Z,551nm,21.0s,baz=165,slow=32
SHEL Horse Pasture 98.12 170 IAMs_20 IAMs_20 12 34 44.4
comp=Z,3µm,18.0s
ROSC El Rosal 98.96 98 IAMs_20 IAMs_20 12 28 39.1
comp=Z,2µm,19.0s
ROSC El Rosal 98.96 98 LR LR 12 28 59.6
comp=Z,2µm,19.3s,baz=208,slow=31
JACO JACO, Garabito 99.06 87 IAMs_20 IAMs_20 12 27 29.3
comp=Z,2µm,18.0s
BRU2 Volcan 99.09 89 IAMs_20 IAMs_20 12 26 27.0
comp=Z,2µm,22.0s
PEZE Perez Zeledon, 99.22 88 IAMs_20 IAMs_20 12 28 16.3
comp=Z,2µm,18.0s
ORTG Ortega, Santa 99.37 86 IAMs_20 IAMs_20 12 26 20.3
comp=Z,3µm,20.0s
JTS Las Juntas de 99.51 86 IAMs_20 IAMs_20 12 27 24.1
comp=Z,2µm,18.0s
JTS Las Juntas de 99.51 86 LR LR 12 26 36.8
comp=Z,2µm,19.7s,baz=218,slow=29
HDC Heredia 99.60 87 IAMs_20 IAMs_20 12 27 29.4
comp=Z,2µm,20.0s
ARE1 Arenal 1 99.76 86 IAMs_20 IAMs_20 12 27 24.7
comp=Z,2µm,19.0s
RGM0 Gandoca 99.84 89 IAMs_20 IAMs_20 12 30 10.9
comp=Z,2µm,21.0s
COVE Coope Vega, Sa 100.13 87 IAMs_20 IAMs_20 12 28 28.4
comp=Z,2µm,18.0s
TLIG Tlapa 100.60 71 IAMs_20 IAMs_20 12 27 29.4
comp=Z,3µm,22.0s
BCIP Isla Barro Col 100.61 91 IAMs_20 IAMs_20 12 26 31.9
comp=Z,2µm,22.0s
MSEY Mahe Island 100.67 232 IAMs_20 IAMs_20 12 33 19.9
comp=Z,2µm,20.0s
CNGN Cerro Negro 100.79 84 IAMs_20 IAMs_20 12 41 26.0
comp=Z,2µm,19.0s
QIZ Qiongzhong 101.09 292 P **Pdif** **11 51 43.5 +0.8**
QIZ PP **PP** **11 55 52.4 +0.9**
QIZ S **Sdif** **12 03 22.4 +1.1**
QIZ SS **SS** **12 10 24.0 +3.2**
QIZ LR LR
comp=Z,570nm,25.5s
QIZ LR LR
comp=Z,540nm,21.6s
QIZ LR LR
comp=Z,890nm,27.0s
MOIG Morelia 101.51 68 IAMs_20 IAMs_20 12 28 14.4
comp=Z,2µm,22.0s
UNM Universidad Na 101.97 70 IAMs_20 IAMs_20 12 28 48.6
comp=Z,2µm,21.0s
PALK Pallekele 102.27 260 IAMs_20 IAMs_20 12 28 56.8
comp=Z,2µm,20.0s
SDV Santo Domingo 104.12 100 IAMs_20 IAMs_20 12 31 58.8
comp=Z,3µm,20.0s
SRIG Santa Rosalia 104.51 55 IAMs_20 IAMs_20 12 39 11.0
comp=Z,2µm,18.0s
CMAR Chiang Mai Arr 104.87 282 PP **PKiKP** **11 56 13.7 -0.9**
comp=Z,0.6nm,0.3s,baz=228,slow=15,SNR=2.2
MNCI Minicoy 106.25 254 IAMs_20 IAMs_20 12 32 07.2
comp=Z,2µm,18.0s
HSIG 106.52 56 IAMs_20 IAMs_20 12 39 37.0
comp=Z,2µm,18.0s
SFX San Felipe 107.08 51 IAMs_20 IAMs_20 12 31 22.0
comp=Z,2µm,21.0s
VTX Valle De La Tr 107.11 51 IAMs_20 IAMs_20 12 32 54.7
comp=Z,2µm,19.0s
CCX Cicese 107.27 50 IAMs_20 IAMs_20 12 33 35.0
comp=Z,1µm,18.0s
ESJX Sierra Juarez 107.62 50 IAMs_20 IAMs_20 12 33 32.4
comp=Z,2µm,19.0s
CBX Cerro Bola 107.69 49 IAMs_20 IAMs_20 12 32 35.9
comp=Z,2µm,19.0s
HATO Hato, Curacao 107.79 100 IAMs_20 IAMs_20 12 34 37.9
comp=Z,2µm,21.0s
TKX Tecate 107.94 49 IAMs_20 IAMs_20 12 30 58.7
comp=Z,2µm,22.0s
BAR Barrett 108.02 49 IAMs_20 IAMs_20 12 36 58.9
comp=Z,2µm,18.0s
109C Camp Elliot, M 108.08 49 IAMs_20 IAMs_20 12 38 18.4
comp=Z,2µm,18.0s
RMX La Rumorosa 108.14 50 IAMs_20 IAMs_20 12 36 31.1
comp=Z,2µm,18.0s
CPBX Cerro Prieto 108.21 51 IAMs_20 IAMs_20 12 34 01.9
comp=Z,1µm,18.0s
YUH Yuha Desert 108.23 50 IAMs_20 IAMs_20 12 31 18.3
comp=Z,2µm,20.0s
UABX UABC, Campus M 108.37 50 IAMs_20 IAMs_20 12 34 04.9
comp=Z,2µm,18.0s
214A Organ Pipe Nat 108.59 53 IAMs_20 IAMs_20 12 31 55.8
comp=Z,2µm,19.0s
ELS Elsinore Mount 108.69 48 IAMs_20 IAMs_20 12 39 10.4
comp=Z,2µm,18.0s
PASC Pasadena Art C 108.94 48 IAMs_20 IAMs_20 12 34 21.1
comp=Z,2µm,19.0s
GLA Glamis 108.95 51 IAMs_20 IAMs_20 12 34 24.4
comp=Z,2µm,18.0s
PFO Pinyon Flats O 108.95 49 IAMs_20 IAMs_20 12 36 38.5
comp=Z,2µm,18.0s
PMD Palm Desert 109.01 49 IAMs_20 IAMs_20 12 38 57.0
comp=Z,2µm,18.0s
113A Mohawk Valley, 109.03 52 IAMs_20 IAMs_20 12 35 34.4
comp=Z,2µm,18.0s
KMBO Kilima Mbogo 109.21 215 IAMs_20 IAMs_20 12 39 46.8
comp=Z,2µm,20.0s
319A Douglas 109.24 56 IAMs_20 IAMs_20 12 40 54.1
comp=Z,2µm,19.0s
BCW Bitter Crk WRg 109.28 46 IAMs_20 IAMs_20 12 33 57.0
comp=Z,2µm,19.0s
CCAC Calif City Air 109.90 47 IAMs_20 IAMs_20 12 35 08.4
comp=Z,2µm,19.0s
833A Chaparral WMA, 110.03 66 IAMs_20 IAMs_20 12 33 25.9
comp=Z,2µm,21.0s
PMPB Monarch Peak 110.06 45 IAMs_20 IAMs_20 12 32 25.7
comp=Z,2µm,20.0s
ISA Isabella, Lake 110.23 47 IAMs_20 IAMs_20 12 34 28.2
comp=Z,2µm,18.0s
BBGB Big Mountain B 110.33 44 IAMs_20 IAMs_20 12 34 13.8
comp=Z,2µm,19.0s
Y14A Wickenburg 110.35 52 IAMs_20 IAMs_20 12 34 45.4
comp=Z,2µm,18.0s
SAO San Andreas Ge 110.39 44 IAMs_20 IAMs_20 12 47 30.3
comp=Z,2µm,18.0s
EPT El Paso 110.56 58 IAMs_20 IAMs_20 12 35 26.0
comp=Z,1µm,18.0s
121A Cookes Peak, D 110.81 57 IAMs_20 IAMs_20 12 41 39.6
comp=Z,2µm,19.0s
TNCH TengChong 110.94 284 PKP **PKiKP** **11 56 25.4 -0.6**
TNCH sPKP 11 56 31.1
TNCH PP **PP** **11 57 10.8 +6.4**
TNCH SKS **SKSdf** **12 03 31.6 -6.3**
TNCH SS **SS** **12 12 35.9 +0.5**
TNCH AMB AMB
comp=Z,180nm,5.2s
TNCH LR LR
comp=Z,480nm,19.9s
TNCH LR LR
comp=Z,260nm,17.7s
TNCH LR LR
comp=Z,980nm,26.4s
TJN Taejon 110.96 313 IAMs_20 IAMs_20 12 39 54.4
comp=Z,3µm,20.0s
PZH PanZhiHua 110.98 288 PKP **PKiKP** **11 56 26.5 +0.6**
W13A Hualapai Mount 111.14 51 IAMs_20 IAMs_20 12 35 58.1
comp=Z,2µm,18.0s
MCCM Marconi Confer 111.28 42 IAMs_20 IAMs_20 12 32 20.7
comp=Z,2µm,20.0s
X16A Lo Mia Camp, P 111.30 53 IAMs_20 IAMs_20 12 34 16.6
comp=Z,2µm,19.0s
V12A Nelson 111.41 50 IAMs_20 IAMs_20 12 40 31.3
comp=Z,2µm,19.0s
SOR Soroa 111.54 82 IAMs_20 IAMs_20 12 32 42.9
comp=Z,2µm,21.0s
GRAC Grapevine Rang 111.80 47 IAMs_20 IAMs_20 12 35 30.8
comp=Z,2µm,19.0s
CMB Columbia Colle 111.88 44 IAMs_20 IAMs_20 12 39 09.6
comp=Z,1µm,19.0s
MDPB Devils Postpil 111.88 45 IAMs_20 IAMs_20 12 33 27.8
comp=Z,1µm,20.0s
OMMB Old Mammoth Mi 111.89 46 IAMs_20 IAMs_20 12 32 59.0
comp=Z,2µm,20.0s
DSP Deep Springs 111.97 46 IAMs_20 IAMs_20 12 36 01.0
comp=Z,2µm,18.0s
TPNV Topopah Spring 112.10 48 IAMs_20 IAMs_20 12 41 03.6
comp=Z,2µm,18.0s
JEM Erimo 112.15 328 IAMs_20 IAMs_20 12 37 30.6
comp=Z,2µm,19.0s
HYB Hyderabad 112.30 263 *e*PKiKP **PKiKP** **11 56 29.2 +0.6**
HYB *e*PP **PP** **11 57 14.2 +0.3**
HYB *e*SKSac **SKSac** **12 03 11.8 +0.6**
HYB IVMs_BB IVMs_BB 12 35 45.8
comp=Z,507nm,24.0s
WUAZ Wupatki 112.33 52 IAMs_20 IAMs_20 12 35 49.8
comp=Z,1µm,18.0s
Y22D IRIS PASSCAL I 112.51 57 IAMs_20 IAMs_20 12 44 26.6
comp=Z,1µm,18.0s
AFDM Forest Hills D 112.56 43 IAMs_20 IAMs_20 12 39 48.7
comp=Z,2µm,19.0s
WAKR Walker 112.59 45 IAMs_20 IAMs_20 12 34 06.5
comp=Z,2µm,20.0s
LHV Little Huntoon 112.62 46 IAMs_20 IAMs_20 12 33 53.5
comp=Z,2µm,20.0s

EMB	**Emerald Bay**	**112.83**	**44**	IAMs_20	IAMs_20	12 38 21.9		
	comp=Z,2µm,20.0s							
HKT	**Hockley**	**112.84**	**68**	IAMs_20	IAMs_20	12 38 19.6		
	comp=Z,1µm,18.0s							
U15A	**North Rim**	**112.86**	**51**	IAMs_20	IAMs_20	12 37 05.9		
	comp=Z,2µm,18.0s							
PRN	**Pahroc Range**	**112.89**	**49**	IAMs_20	IAMs_20	12 41 14.6		
	comp=Z,2µm,18.0s							
RYN	**Ryan**	**112.97**	**45**	IAMs_20	IAMs_20	12 35 44.6		
	comp=Z,1µm,20.0s							
ORV	**Oroville**	**112.97**	**43**	IAMs_20	IAMs_20	12 40 40.7		
	comp=Z,1µm,18.0s							
KMPM	**Mount Pierce**	**113.06**	**40**	IAMs_20	IAMs_20	12 38 24.0		
	comp=Z,3µm,19.0s							
PNTR	**Pine Nut**	**113.08**	**44**	IAMs_20	IAMs_20	12 38 32.6		
	comp=Z,2µm,19.0s							
YERR	**Yerington**	**113.09**	**45**	IAMs_20	IAMs_20	12 34 00.8		
	comp=Z,2µm,19.0s							
LCMT	**Little Creek M**	**113.09**	**50**	IAMs_20	IAMs_20	12 37 27.0		
	comp=Z,2µm,18.0s							
MPK	**Martis Peak**	**113.15**	**44**	IAMs_20	IAMs_20	12 38 29.2		
	comp=Z,2µm,20.0s							
KNB	**Kanab**	**113.23**	**51**	IAMs_20	IAMs_20	12 34 16.7		
	comp=Z,1µm,20.0s							
JCC	**Jacoby Creek,**	**113.46**	**40**	IAMs_20	IAMs_20	12 36 01.5		
	comp=Z,3µm,19.0s							
KVN	**Kaiserville**	**113.48**	**46**	IAMs_20	IAMs_20	12 34 31.2		
	comp=Z,1µm,20.0s							
Q09A	**Carvers**	**113.56**	**46**	IAMs_20	IAMs_20	12 46 49.2		
	comp=Z,2µm,19.0s							
SZCU	**Shurtz Canyon**	**113.68**	**50**	IAMs_20	IAMs_20	12 35 25.5		
	comp=Z,1µm,20.0s							
PAHR	**Pah Rah Range**	**113.72**	**44**	IAMs_20	IAMs_20	12 43 56.4		
	comp=Z,2µm,18.0s							
KRPM	**Rodgers**	**113.78**	**40**	IAMs_20	IAMs_20	12 37 60.0		
	comp=Z,3µm,20.0s							
PKCU	**Pink Cliffs**	**113.79**	**51**	IAMs_20	IAMs_20	12 42 46.3		
	comp=Z,1µm,18.0s							
ABTX	**Abilene, Hawle**	**113.80**	**63**	IAMs_20	IAMs_20	12 37 47.8		
	comp=Z,1µm,18.0s							
MSTX	**Muleshoe**	**113.87**	**60**	IAMs_20	IAMs_20	12 36 36.7		
	comp=Z,2µm,18.0s							
LODK	**Lodwar**	**114.05**	**214**	IAMs_20	IAMs_20	12 43 46.1		
	comp=Z,2µm,18.0s							
CD2	**Chengdu**	**114.14**	**292**	PKP	**PKiKP**	**11 56 33.0**	**+1.3**	
MTPU	**Mount Pierson**	**114.37**	**51**	IAMs_20	IAMs_20	12 42 01.9		
	comp=Z,1µm,20.0s							
Q12A	**Willow Creek R**	**114.46**	**48**	IAMs_20	IAMs_20	12 44 13.1		
	comp=Z,2µm,18.0s							
SPR3	**Spring Creek 3**	**114.57**	**49**	IAMs_20	IAMs_20	12 33 39.2		
	comp=Z,2µm,22.0s							
YBH	**Yreka Blue Hor**	**114.67**	**41**	IAMs_20	IAMs_20	12 38 25.5		
	comp=Z,2µm,20.0s							
KBO	**Bosley Butte**	**114.71**	**40**	IAMs_20	IAMs_20	12 34 27.6		
	comp=Z,3µm,20.0s							
HMU	**Henry Mountain**	**114.74**	**52**	IAMs_20	IAMs_20	12 37 52.7		
	comp=Z,1µm,18.0s							
L02F	**Cave Junction**	**114.80**	**40**	IAMs_20	IAMs_20	12 38 48.0		
	comp=Z,2µm,20.0s							
TCRU	**Three Creeks R**	**114.81**	**50**	IAMs_20	IAMs_20	12 35 55.4		
	comp=Z,2µm,19.0s							
BMN	**Battle Mountai**	**115.02**	**46**	IAMs_20	IAMs_20	12 45 19.8		
	comp=Z,2µm,18.0s							
AMTX	**Amarillo**	**115.09**	**61**	IAMs_20	IAMs_20	12 45 56.9		
	comp=Z,2µm,18.0s							
L04D	**Klamath Falls**	**115.23**	**41**	IAMs_20	IAMs_20	12 34 56.4		
	comp=Z,2µm,20.0s							
HUMO	**Hull Mountain**	**115.42**	**40**	IAMs_20	IAMs_20	12 34 56.3		
	comp=Z,2µm,20.0s							
Q16A	**Castle Valley**	**115.50**	**51**	IAMs_20	IAMs_20	12 35 41.6		
	comp=Z,1µm,21.0s							
J01E	**Myrtle Point**	**115.68**	**39**	IAMs_20	IAMs_20	12 39 36.2		
	comp=Z,2µm,20.0s							
K04D	**Chiloquin, OR**	**115.76**	**41**	IAMs_20	IAMs_20	12 35 03.4		
	comp=Z,2µm,20.0s							
DBO	**Dodson Butte**	**115.82**	**40**	IAMs_20	IAMs_20	12 35 03.9		
	comp=Z,2µm,20.0s							
SRU	**San Rafael Swe**	**115.88**	**52**	IAMs_20	IAMs_20	12 43 04.8		
	comp=Z,1µm,18.0s							
ELK	**Elko**	**115.90**	**47**	IAMs_20	IAMs_20	12 38 47.1		
	comp=Z,2µm,19.0s							
WMOK	**Wichita Mounta**	**116.01**	**63**	IAMs_20	IAMs_20	12 39 39.3		
	comp=Z,1µm,18.0s							
K05A	**Summer Lake**	**116.09**	**42**	IAMs_20	IAMs_20	12 40 14.1		
	comp=Z,2µm,21.0s							
DUG	**Dugway, Tooele**	**116.14**	**49**	IAMs_20	IAMs_20	12 44 37.6		
	comp=Z,1µm,18.0s							
P17A	**Butcher Ranch,**	**116.14**	**51**	IAMs_20	IAMs_20	12 44 13.6		
	comp=Z,1µm,18.0s							
NLU	**North Lily Min**	**116.15**	**50**	IAMs_20	IAMs_20	12 38 52.0		
	comp=Z,2µm,19.0s							
I03D	**Drain, OR**	**116.33**	**40**	IAMs_20	IAMs_20	12 36 32.4		
	comp=Z,2µm,20.0s							
MPU	**Maple Canyon**	**116.35**	**50**	IAMs_20	IAMs_20	12 38 51.1		
	comp=Z,1µm,18.0s							
060A	**Indiantown**	**116.39**	**83**	IAMs_20	IAMs_20	12 35 08.5		
	comp=Z,2µm,22.0s							
WVOR	**Wild Horse Val**	**116.45**	**44**	IAMs_20	IAMs_20	12 40 26.7		
	comp=Z,2µm,21.0s							
J05D	**Fort Rock, OR**	**116.51**	**41**	IAMs_20	IAMs_20	12 34 48.3		
	comp=Z,2µm,20.0s							
I04A	**Tendick Farm,**	**116.67**	**40**	IAMs_20	IAMs_20	12 36 31.4		
	comp=Z,2µm,19.0s							
BGU	**Big Grassy Mou**	**116.74**	**49**	IAMs_20	IAMs_20	12 44 08.3		
	comp=Z,2µm,18.0s							
BUCK	**Buck Mountain**	**116.89**	**40**	IAMs_20	IAMs_20	12 40 27.3		
	comp=Z,2µm,19.0s							
CTU	**Camp Tracy**	**116.93**	**50**	IAMs_20	IAMs_20	12 41 23.4		
	comp=Z,2µm,18.0s							
YSS	**Yuzh-Sakhalins**	**116.95**	**329**	IAMs_20	IAMs_20	12 40 52.2		
	comp=Z,2µm,20.0s							
YSS	**Yuzh-Sakhalins**	**116.95**	**329**	*i* PKIKP	**PKPdf**	**11 56 35.7**	**-0.7**	
YSS				*e*		11 57 47.3		
YSS				*e*		12 03 42.0		
YSS				*e*PS	**PS**	**12 07 28.8**	**+0.2**	
YSS				*e*PPS	PPS	12 08 42.3		
PINE	**Pine Mountain**	**117.06**	**41**	IAMs_20	IAMs_20	12 35 26.9		
	comp=Z,3µm,21.0s							
W35A	**Tecumseh**	**117.08**	**64**	IAMs_20	IAMs_20	12 48 06.8		
	comp=Z,1µm,20.0s							
BSUT	**Blindstream Ca**	**117.10**	**51**	IAMs_20	IAMs_20	12 37 40.0		
	comp=Z,1µm,19.0s							
SMCO	**Snowmass**	**117.11**	**54**	IAMs_20	IAMs_20	12 44 09.3		
	comp=Z,1µm,18.0s							
SNY	**Shenyang**	**117.12**	**313**	⇑Pdif	**Pdif**	**11 52 39.0**	**-14**	
SNY				PP	**PP**	**11 57 50.6**	**+2.8**	
SNY	**Shenyang**	**117.12**	**313**	SS	SS	12 13 59.8	+3.4	
SNY				LR	LR			
	comp=N,340nm,21.1s							
SNY				LR	LR			
	comp=E,450nm,22.7s							
SNY				LR	LR			
	comp=Z,600nm,21.8s							
WLAR	**White Oak Lake**	**117.20**	**68**	IAMs_20	IAMs_20	12 51 05.0		
	comp=Z,1µm,20.0s							
H04D	**Lebanon**	**117.26**	**40**	IAMs_20	IAMs_20	12 40 47.0		
	comp=Z,2µm,19.0s							
SPUT	**South Promonto**	**117.27**	**49**	IAMs_20	IAMs_20	12 44 26.5		
	comp=Z,2µm,18.0s							
J08A	**Circle Bar Ran**	**117.35**	**44**		**PKPdf**	**11 56 37.4**	**-0.1**	
J08A				IAMs_20	IAMs_20	12 41 00.5		
	comp=Z,3µm,21.0s							
U32A	**Winter Ranch,**	**117.39**	**62**	IAMs_20	IAMs_20	12 47 33.0		
	comp=Z,2µm,18.0s							
OK029	**Liberty Lake**	**117.44**	**64**	IAMs_20	IAMs_20	12 43 12.3		
	comp=Z,1µm,18.0s							
I05D	**Terrebonne, OR**	**117.46**	**41**	IAMs_20	IAMs_20	12 36 45.4		
	comp=Z,2µm,19.0s							
RDMU	**Red Mountain**	**117.51**	**52**	IAMs_20	IAMs_20	12 41 42.0		
	comp=Z,1µm,18.0s							
Q24A	**Divide**	**117.53**	**56**	IAMs_20	IAMs_20	12 44 54.6		
	comp=Z,1µm,18.0s							
O20A	**White River Ci**	**117.55**	**53**	IAMs_20	IAMs_20	12 39 00.0		
	comp=Z,2µm,18.0s							
H04A	**Detroit Lake**	**117.55**	**40**	IAMs_20	IAMs_20	12 37 25.8		
	comp=Z,2µm,20.0s							
OK038	**West end E0370**	**117.58**	**62**	IAMs_20	IAMs_20	12 47 47.8		
	comp=Z,2µm,19.0s							
HVU	**Hansel Valley**	**117.59**	**49**	IAMs_20	IAMs_20	12 46 35.1		
	comp=Z,2µm,18.0s							
I07A	**Izee**	**117.73**	**42**	IAMs_20	IAMs_20	12 41 50.5		
	comp=Z,2µm,20.0s							
G03D	**McMinnville, O**	**117.76**	**39**	IAMs_20	IAMs_20	12 41 25.3		
	comp=Z,2µm,20.0s							
HWUT	**Hardware Ranch**	**117.81**	**50**	IAMs_20	IAMs_20	12 48 23.9		
	comp=Z,2µm,19.0s							
CROK	**Carrier**	**117.88**	**63**	IAMs_20	IAMs_20	12 47 26.8		
	comp=Z,1µm,19.0s							
OK032	**Salt Plains WL**	**118.06**	**63**	IAMs_20	IAMs_20	12 47 55.6		
	comp=Z,2µm,19.0s							
ISCO	**Idaho Springs**	**118.13**	**55**	IAMs_20	IAMs_20	12 40 40.3		
	comp=Z,2µm,19.0s							
MFID	**Camas Ranch**	**118.17**	**45**	IAMs_20	IAMs_20	12 41 57.2		
	comp=Z,1µm,20.0s							
G05A	**Wamic**	**118.30**	**41**	IAMs_20	IAMs_20	12 41 16.7		
	comp=Z,2µm,20.0s							
CN2	**Changchun**	**118.36**	**315**	PKP	**PKPdf**	**11 56 38.3**	**-1.0**	
CN2				PP	PP	11 58 05.8	+9.3	
CN2				AMB	AMB			
	comp=Z,400nm,4.0s							
CN2				LR	LR			
	comp=Z,400nm,15.0s							
CN2				LR	LR			
	comp=Z,400nm,15.0s							
CN2				LR	LR			
	comp=Z,400nm,15.0s							
G06A	**Carlson Farm,**	**118.48**	**41**	IAMs_20	IAMs_20	12 40 02.4		
	comp=Z,2µm,20.0s							
FURI	**Furi**	**118.50**	**219**	IAMs_20	IAMs_20	12 44 57.2		
	comp=Z,2µm,21.0s							
F04D	**Rainier, OR**	**118.64**	**39**	IAMs_20	IAMs_20	12 39 16.4		
	comp=Z,2µm,19.0s							
F04A	**Amboy**	**118.65**	**39**	IAMs_20	IAMs_20	12 37 48.8		
	comp=Z,2µm,20.0s							
LZH	**Lanzhou**	**118.71**	**294**	PKP	**PKiKP**	**11 56 41.3**	**+0.8**	
LZH				PP	**PP**	**11 57 58.6**	**-0.6**	
LZH				SS	SS	12 14 16.0	-1.5	
LZH				AMB	AMB			
	comp=Z,360nm,5.3s							
LZH				LR	LR			
	comp=Z,460nm,16.0s							
LZH				LR	LR			
	comp=Z,330nm,14.6s							
LZH				LR	LR			
	comp=Z,500nm,17.2s							
HLID	**Hailey**	**118.72**	**46**	IAMs_20	IAMs_20	12 39 05.8		
	comp=Z,1µm,19.0s							
T35A	**Sooner Cattle**	**118.78**	**64**	IAMs_20	IAMs_20	12 48 23.8		
	comp=Z,1µm,19.0s							
G08A	**Pilot Rock**	**118.99**	**42**	IAMs_20	IAMs_20	12 36 20.9		
	comp=Z,3µm,22.0s							
AHID	**Auburn Hatcher**	**119.01**	**49**	IAMs_20	IAMs_20	12 45 41.6		
	comp=Z,1µm,18.0s							
BMO	**Blue Mountains**	**119.06**	**44**	IAMs_20	IAMs_20	12 42 12.6		
	comp=Z,2µm,19.0s							
BRIGG	**Brigsdale**	**119.27**	**56**	IAMs_20	IAMs_20	12 41 29.4		
	comp=Z,1µm,18.0s							
F07A	**Phinny Hill Vi**	**119.28**	**41**	IAMs_20	IAMs_20	12 40 26.6		
	comp=Z,2µm,19.0s							
RWWY	**Rawlins**	**119.29**	**53**	IAMs_20	IAMs_20	12 40 59.0		
	comp=Z,2µm,19.0s							
CBKS	**Cedar Bluff**	**119.29**	**60**	IAMs_20	IAMs_20	12 39 42.2		
	comp=Z,2µm,19.0s							
R32A	**Long Quarter,**	**119.31**	**61**	IAMs_20	IAMs_20	12 49 01.8		
	comp=Z,1µm,19.0s							
BW06	**Boulder Array**	**119.50**	**51**	IAMs_20	IAMs_20	12 46 43.5		
	comp=Z,2µm,18.0s							
PDAR	**Pinedale Array**	**119.50**	**51**	PKP	**PKPdf**	**11 56 41.0**	**-0.8**	
	comp=Z,1.9nm,1.0s,baz=140,slow=3.5,SNR=9.0							
FCAR	**Ozark Folk Cen**	**119.53**	**68**	IAMs_20	IAMs_20	12 49 46.5		
	comp=Z,1µm,20.0s							
LON	**Longmire**	**119.57**	**40**	IAMs_20	IAMs_20	12 39 50.1		
	comp=Z,2µm,19.0s							
PLID	**Pearl Lake**	**119.64**	**45**	IAMs_20	IAMs_20	12 43 00.3		
	comp=Z,2µm,21.0s							
TPAW	**Teton Pass**	**119.71**	**49**	IAMs_20	IAMs_20	12 46 28.1		
	comp=Z,2µm,18.0s							
HBAR	**Harrisburg**	**119.80**	**69**	IAMs_20	IAMs_20	12 51 18.6		
	comp=Z,1µm,21.0s							
MXC	**Moxie City**	**119.81**	**41**	IAMs_20	IAMs_20	12 42 12.5		
	comp=Z,2µm,19.0s							
HAWA	**Hanford**	**119.85**	**41**	IAMs_20	IAMs_20	12 42 20.5		
	comp=Z,2µm,19.0s							
ATD	**Arta Tunnel**	**119.87**	**224**	IAMs_20	IAMs_20	12 44 03.6		
	comp=Z,2µm,20.0s							
E07A	**Sunnyside**	**119.91**	**41**	IAMs_20	IAMs_20	12 44 08.3		
	comp=Z,2µm,19.0s							
D05A	**Enumclaw**	**119.93**	**39**	IAMs_20	IAMs_20	12 40 16.6		
	comp=Z,2µm,19.0s							
LOHW	**Long Hollow**	**119.93**	**49**	IAMs_20	IAMs_20	12 44 15.9		
	comp=Z,1µm,19.0s							
MOOW	**Moose Ponds**	**120.01**	**49**	IAMs_20	IAMs_20	12 51 26.0		
	comp=Z,1µm,19.0s							
E08A	**Dider Farm, El**	**120.07**	**42**	IAMs_20	IAMs_20	12 39 23.4		
	comp=Z,2µm,20.0s							
IMW	**Indian Meadow**	**120.08**	**49**	PKPdf	**PKiKP**	**11 56 44.2**	**+1.1**	
IMW				IAMs_20	IAMs_20	12 48 11.8		
	comp=Z,2µm,18.0s							
F10A	**Beach Ranch, E**	**120.10**	**43**	IAMs_20	IAMs_20	12 40 56.3		
	comp=Z,2µm,20.0s							
HHC	**Hu-ho-hao-te**	**120.14**	**303**	*e*PKP	**PKPdf**	**11 56 41.3**	**-1.7**	
HHC				SS	SS	12 14 33.6	-2.2	
HHC				LR	LR			
	comp=Z,410nm,19.2s							
HHC				LR	LR			
	comp=Z,390nm,18.3s							
HHC				LR	LR			
	comp=Z,690nm,19.1s							
FLWY	**Flagg Ranch**	**120.33**	**49**	IAMs_20	IAMs_20	12 48 37.4		
	comp=Z,2µm,18.0s							
LTY	**Liberty**	**120.34**	**40**	IAMs_20	IAMs_20	12 39 51.4		
	comp=Z,2µm,20.0s							
E09A	**Wood Farm, Sta**	**120.34**	**42**	IAMs_20	IAMs_20	12 39 09.6		
	comp=Z,2µm,19.0s							
OGNE	**Ogallala**	**120.38**	**57**	IAMs_20	IAMs_20	12 37 56.8		
	comp=Z,1µm,21.0s							
K22A	**Casper**	**120.38**	**53**	IAMs_20	IAMs_20	12 40 25.8		
	comp=Z,1µm,19.0s							
BTO	**Baotou**	**120.46**	**302**	*e*PKP	**PKPdf**	**11 56 42.8**	**-0.8**	
BTO				LR	LR			
	comp=Z,480nm,16.8s							
BTO				LR	LR			
	comp=Z,1µm,19.0s							
BTO				LR	LR			
	comp=Z,1µm,18.2s							
D08A	**Wollman Farm,**	**120.62**	**42**	IAMs_20	IAMs_20	12 43 03.1		
	comp=Z,2µm,19.0s							
CLRS	**Cowichan Lake**	**120.89**	**37**	IAMs_20	IAMs_20	12 38 34.1		
	comp=Z,2µm,19.0s							
YNR	**Norris Junctio**	**120.90**	**49**	IAMs_20	IAMs_20	12 45 27.6		
	comp=Z,2µm,19.0s							
YNM	**Yellowstone No**	**120.90**	**49**	IAMs_20	IAMs_20	12 45 26.7		
	comp=Z,2µm,19.0s							
PGC	**Sidney**	**120.91**	**38**	IAMs_20	IAMs_20	12 37 00.4		
	comp=Z,2µm,21.0s							
GLAT	**Glass**	**120.95**	**70**	IAMs_20	IAMs_20	12 50 55.2		
	comp=Z,1µm,19.0s							
YMP	**Mirror Lake Pl**	**121.09**	**49**	IAMs_20	IAMs_20	12 45 30.5		
	comp=Z,2µm,18.0s							
PARMO	**Parma**	**121.12**	**69**	IAMs_20	IAMs_20	12 50 59.6		
	comp=Z,1µm,18.0s							
XLT	**XiLinHaoTe**	**121.34**	**308**	*e*PKP	**PKPdf**	**11 56 45.3**	**+0.1**	
XLT				PP	**PP**	**11 58 24.6**	**+7.5**	
XLT				SS	SS	12 14 51.4	+0.3	
XLT				AMB	AMB			
	comp=Z,120nm,6.0s							
XLT				LR	LR			
	comp=Z,43nm,21.3s							
XLT				LR	LR			
	comp=Z,320nm,18.3s							
XLT				LR	LR			
	comp=Z,520nm,24.2s							
BOZ	**Bozeman (W)**	**121.40**	**48**	IAMs_20	IAMs_20	12 43 56.9		
	comp=Z,2µm,19.0s							
HOLB	**Holberg**	**121.64**	**33**	IAMs_20	IAMs_20	12 46 57.7		
	comp=Z,2µm,20.0s							
KLR	**Kul'dur**	**121.64**	**322**	⇓*i* PKIKP	**PKiKP**	**11 56 45.9**	**+0.3**	
KLR				pmax	pmax			
	comp=Z,13nm,1.7s							
CCM	**Cathedral Cave**	**121.77**	**67**	IAMs_20	IAMs_20	12 52 11.7		
	comp=Z,1µm,21.0s							
T45A	**Paducah**	**121.86**	**70**	IAMs_20	IAMs_20	12 51 28.1		
	comp=Z,1µm,19.0s							
BGNE	**Belgrade**	**122.15**	**60**	IAMs_20	IAMs_20	12 42 06.9		
	comp=Z,2µm,19.0s							
P38A	**Dawn**	**122.28**	**65**	IAMs_20	IAMs_20	12 50 49.2		
	comp=Z,2µm,20.0s							
GOMU	**GeErMu**	**122.29**	**287**	PKP	**PKiKP**	**11 56 49.4**	**+1.6**	
GOMU				SS	SS	12 15 05.9	+2.1	
GOMU				LR	LR			
	comp=Z,340nm,19.9s							
GOMU				LR	LR			
	comp=Z,280nm,19.3s							
GOMU				LR	LR			
	comp=Z,410nm,18.2s							
CHGN	**Chignik**	**122.46**	**11**	IAMs_20	IAMs_20	12 39 05.8		
	comp=Z,2µm,21.0s							
RSSD	**Black Hills**	**122.51**	**54**		**PKPdf**	**11 56 47.4**	**-0.2**	
RSSD	**Black Hills**	**122.51**	**54**	IAMs_20	IAMs_20	12 49 16.3		
	comp=Z,1µm,18.0s							
RSSD	**Black Hills**	**122.51**	**54**	PKIKP	**PKPdf**	**11 56 47.4**	**-0.2**	
RSSD				MLR	MLR			
	comp=Z,2µm,18.0s							
N35A	**Tabor**	**122.58**	**62**	IAMs_20	IAMs_20	12 40 23.2		
	comp=Z,2µm,19.0s							
K30B	**Basset**	**122.75**	**58**	IAMs_20	IAMs_20	12 48 00.6		
	comp=Z,1µm,19.0s							
P40A	**Paris**	**122.75**	**66**	IAMs_20	IAMs_20	12 51 08.7		
	comp=Z,1µm,18.0s							
USIN	**University of**	**123.06**	**70**	IAMs_20	IAMs_20	12 52 22.1		
	comp=Z,1µm,20.0s							
BBB	**Bella Bella**	**123.09**	**33**	IAMs_20	IAMs_20	12 42 28.0		
	comp=Z,2µm,21.0s							
GTA	**Gaotai**	**123.14**	**293**	PKP	**PKPdf**	**11 56 48.6**	**-0.2**	
GTA				PP	**PP**	**11 58 33.1**	**+3.7**	
GTA				SS	SS	12 15 12.9	-1.3	
GTA				LR	LR			
	comp=Z,500nm,21.9s							
GTA				LR	LR			
	comp=Z,280nm,21.5s							
GTA				LR	LR			
	comp=Z,810nm,22.7s							
OLIL	**Olney**	**123.56**	**70**	IAMs_20	IAMs_20	12 52 58.3		
	comp=Z,1µm,18.0s							
HEH	**HeiHe**	**123.71**	**320**	PKP	**PKPdf**	**11 56 48.3**	**-1.1**	
HEH				PP	**PP**	**11 58 36.1**	**+3.2**	
HEH				AMB	AMB			
	comp=Z,140nm,7.5s							
HEH				LR	LR			
	comp=Z,320nm,23.0s							
HEH				LR	LR			
	comp=Z,470nm,21.9s							
HEH				LR	LR			
	comp=Z,790nm,24.0s							
OHAK	**Old Harbor**	**123.84**	**14**	IAMs_20	IAMs_20	12 51 37.3		
	comp=Z,2µm,18.0s							
EGMT	**Eagleton**	**124.15**	**48**	IAMs_20	IAMs_20	12 46 14.6		
	comp=Z,2µm,20.0s							
SUSD	**Miller**	**124.53**	**58**	IAMs_20	IAMs_20	12 41 00.7		
	comp=Z,2µm,22.0s							
CNNC	**Cliffs of the**	**124.59**	**80**	IAMs_20	IAMs_20	12 40 38.6		
	comp=Z,1µm,22.0s							
HDIL	**Hopedale**	**124.68**	**68**	IAMs_20	IAMs_20	12 52 19.9		
	comp=Z,1µm,19.0s							
ECSD	**EROS Data Cent**	**124.73**	**60**	IAMs_20	IAMs_20	12 43 54.2		
	comp=Z,2µm,18.0s							
K38A	**Parkersburg**	**125.19**	**64**	IAMs_20	IAMs_20	12 45 18.3		
	comp=Z,1µm,18.0s							
O14K	**Tigyukauivet M**	**125.19**	**9**	IAMs_20	IAMs_20	12 40 42.8		
	comp=Z,2µm,22.0s							
Q19K	**Cape Douglas,**	**125.48**	**14**	IAMs_20	IAMs_20	12 41 58.8		
	comp=Z,2µm,20.0s							
Q51A	**Peebles**	**125.67**	**73**	IAMs_20	IAMs_20	12 54 13.2		
	comp=Z,1µm,20.0s							
O16K	**Kokwok River B**	**125.75**	**11**	IAMs_20	IAMs_20	12 40 16.9		
	comp=Z,2µm,20.0s							
P18K	**Big Mountain,**	**125.79**	**13**	IAMs_20	IAMs_20	12 42 48.9		
	comp=Z,2µm,20.0s							
E28A	**Huff**	**125.79**	**55**	IAMs_20	IAMs_20	12 45 15.1		
	comp=Z,2µm,18.0s							
N15K	**Kwethluk River**	**126.18**	**9**	IAMs_20	IAMs_20	12 41 35.0		
	comp=Z,2µm,21.0s							
P51A	**Williamsport**	**126.18**	**73**	IAMs_20	IAMs_20	12 54 32.6		
	comp=Z,1µm,20.0s							
O18K	**Koktuh Hills**	**126.25**	**13**	IAMs_20	IAMs_20	12 43 13.0		
	comp=Z,2µm,20.0s							
MBO	**M'Bour**	**126.63**	**154**	IAMs_20	IAMs_20	12 47 23.0		
	comp=Z,1µm,20.0s							
M14K	**Bethel**	**126.64**	**8**	IAMs_20	IAMs_20	12 44 46.2		
	comp=Z,1µm,20.0s							
O19K	**Port Alsworth**	**126.67**	**13**	IAMs_20	IAMs_20	12 43 15.1		
	comp=Z,2µm,20.0s							
F33A	**5 Mile Ranch,**	**126.67**	**59**	IAMs_20	IAMs_20	12 47 19.5		
	comp=Z,2µm,18.0s							
N17K	**Nushagak Hills**	**126.75**	**11**	IAMs_20	IAMs_20	12 41 10.1		
	comp=Z,2µm,21.0s							
K43A	**Burlington**	**126.90**	**67**	IAMs_20	IAMs_20	12 55 19.6		
	comp=Z,1µm,18.0s							
ZEA	**Zeya**	**126.91**	**321**	*e*PKIKP	**PKiKP**	**11 56 56.5**	**+0.6**	
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.7s							
N18K	**Kilae Creek**	**127.00**	**12**	IAMs_20	IAMs_20	12 41 17.1		
	comp=Z,2µm,20.0s							
M16K	**Timber Creek**	**127.10**	**10**	IAMs_20	IAMs_20	12 41 31.5		
	comp=Z,2µm,22.0s							
L14K	**Kuka Creek**	**127.19**	**8**	IAMs_20	IAMs_20	12 48 53.6		
	comp=Z,1µm,20.0s							
MDND	**Maddock**	**127.27**	**55**	IAMs_20	IAMs_20	12 45 15.1		
	comp=Z,2µm,19.0s							
TOA0	**Torodi Ar. Sit**	**127.37

RAYN	Ar Rayn	130.34	232		IAMs_20	IAMs_20	12 53 21.2		
	comp=Z,1µm,20.0s								
RND	Reindeer	130.37	15		IAMs_20	IAMs_20	12 48 58.9		
	comp=Z,2µm,19.0s								
E43A	Lone Tree Farm	130.52	66		IAMs_20	IAMs_20	12 54 11.4		
	comp=Z,1µm,19.0s								
SEY	Seymchan	130.58	341	*d*	iPKIKP	PKiKP	11 57 03.6	+0.7	
SEY					pmax	pmax			
	comp=Z,20nm,2.5s								
ULM	Lac du Bonnet	130.59	56		IAMs_20	IAMs_20	12 46 41.1		
	comp=Z,1µm,19.0s								
ULM	Lac du Bonnet	130.59	56	⇓	iPKIKP	PKPdf	11 57 02.6	+0.1	
ULM	Lac du Bonnet	130.59	56		iPKP	PKPdf	11 57 00.7	-1.8	
	comp=Z,2.3nm,0.8s,baz=299,slow=2.1,SNR=4.5								
J20K	Nowinta River	130.60	12		IAMs_20	IAMs_20	12 49 52.3		
	comp=Z,1µm,19.0s								
ODNJ	Ogdensburg	130.93	79		IAMs_20	IAMs_20	12 58 21.2		
	comp=Z,1µm,18.0s								
H17K	Granite Mounta	130.93	9		IAMs_20	IAMs_20	12 50 50.7		
	comp=Z,2µm,19.0s								
TRNY	Table Rock, Ra	131.13	80		IAMs_20	IAMs_20	12 58 38.7		
	comp=Z,1µm,20.0s								
I20K	Naaghedeneel	131.19	12		IAMs_20	IAMs_20	12 50 36.4		
	comp=Z,2µm,19.0s								
G16K	Koyuk River	131.24	7		PKPdf	PKiKP	11 57 04.4	+0.2	
G16K					IAMs_20	IAMs_20	12 46 15.8		
	comp=Z,2µm,20.0s								
H18K	Honhosa River	131.24	10		IAMs_20	IAMs_20	12 44 42.9		
	comp=Z,2µm,22.0s								
ZAK	Zakamensk	131.28	303	*e*	PKIKP	PKPdf	11 57 04.4	+0.4	
ZAK				*e*			11 59 22.0		
ZAK					pmax	pmax			
	comp=Z,8.0nm,1.5s								
ZAK					pmax	pmax			
	comp=Z,7.0nm,1.8s								
F15K	North Star Dit	131.45	6		IAMs_20	IAMs_20	12 47 07.2		
	comp=Z,2µm,20.0s								
WRH	Wood River Hil	131.49	15		IAMs_20	IAMs_20	12 52 30.6		
	comp=Z,1µm,19.0s								
SCRK	Sand Creek	131.49	18		IAMs_20	IAMs_20	12 44 28.7		
	comp=Z,2µm,20.0s								
NEA2	Nenana	131.50	15		IAMs_20	IAMs_20	12 46 02.8		
	comp=Z,2µm,21.0s								
HDA	Harding Lake	131.55	16		IAMs_20	IAMs_20	12 51 46.4		
	comp=Z,2µm,19.0s								
WMQ	Urumqi	131.62	286	*e*	PKP	PKiKP	11 57 06.4	+0.6	
WMQ					LR	LR			
	comp=Z,500nm,24.3s								
WMQ					LR	LR			
	comp=Z,460nm,24.0s								
WMQ					LR	LR			
	comp=Z,600nm,23.8s								
H19K	Roundabout Mou	131.75	10		PKPdf	PKiKP	11 57 06.2	+1.0	
H19K					IAMs_20	IAMs_20	12 44 37.3		
	comp=Z,2µm,21.0s								
ILAR	Eielson Array	131.91	16		PKP	PKPdf	11 57 01.9	-2.7	
	comp=Z,8.6nm,0.9s,baz=233,slow=2.7,SNR=29								
G18K	Tagagawik	131.96	9		IAMs_20	IAMs_20	12 51 43.8		
	comp=Z,1µm,19.0s								
H21K	Melozitna Rive	132.18	12		IAMs_20	IAMs_20	12 51 10.7		
	comp=Z,2µm,19.0s								
DAWY	Dawson	132.20	20		PKPdf	PKPdf	11 57 05.4	+0.2	
G19K	Purcell Mounta	132.31	10		IAMs_20	IAMs_20	12 50 24.2		
	comp=Z,2µm,20.0s								
J57A	Williamstown	132.32	76		IAMs_20	IAMs_20	12 45 15.0		
	comp=Z,1µm,21.0s								
F17K	Baldwin Pennin	132.34	8		IAMs_20	IAMs_20	12 46 29.0		
	comp=Z,2µm,21.0s								
J29N	Klondike Camp	132.74	21		IAMs_20	IAMs_20	12 46 29.8		
	comp=Z,3µm,20.0s								
KSH	Kashi	132.76	273		PKP	PKiKP	11 57 08.3	0.0	
KSH					LR	LR			
	comp=Z,440nm,16.8s								
KSH					LR	LR			
	comp=Z,470nm,17.5s								
KSH					LR	LR			
	comp=Z,470nm,19.9s								
PRP	Porcupine Dome	132.79	16		PKPdf	PKiKP	11 57 08.1	+0.6	
L61B	Northampton	132.85	80		IAMs_20	IAMs_20	13 01 04.2		
	comp=Z,1µm,18.0s								
G21K	Allakaket	132.96	12		IAMs_20	IAMs_20	12 49 20.3		
	comp=Z,1µm,20.0s								
ACCN	Adirondack Com	133.23	78		IAMs_20	IAMs_20	12 47 47.2		
	comp=Z,2µm,20.0s								
F20K	Avaraart Lake	133.31	10		IAMs_20	IAMs_20	12 50 55.4		
	comp=Z,2µm,20.0s								
E18K	Tukpahlearik C	133.35	8		IAMs_20	IAMs_20	12 46 38.7		
	comp=Z,2µm,21.0s								
I28M	Miner Creek	133.44	20		IAMs_20	IAMs_20	12 46 58.1		
	comp=Z,2µm,20.0s								
G23K	Bananza Creek	133.47	14		IAMs_20	IAMs_20	12 53 58.7		
	comp=Z,2µm,19.0s								
E19K	Redstone River	133.60	10		IAMs_20	IAMs_20	12 46 07.2		
	comp=Z,2µm,22.0s								
F21K	Alatna River	133.65	12		IAMs_20	IAMs_20	12 45 26.7		
	comp=Z,2µm,22.0s								
G24K	Hadweenzic Riv	133.71	15		IAMs_20	IAMs_20	12 47 11.4		
	comp=Z,2µm,20.0s								
YAK	Yakutsk	133.76	328		IAMs_20	IAMs_20	12 48 13.7		
	comp=Z,1µm,22.0s								
YAK	Yakutsk	133.76	328	*e*	PKIKP	PKPdf	11 57 07.7	-0.4	
YAK				*e*			11 59 37.0		
YAK				*e*			12 04 18.3		
YAK				*e*	PS	PS	12 09 55.6	-0.8	
YAK				*e*	SS	SS	12 17 25.2	+0.4	
YAK					pmax	pmax			
	comp=Z,16nm,0.9s								
YAK					pmax	pmax			
	comp=N,2.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,150nm,3.9s								
RDOG	Red Dog Mine	133.87	7		IAMs_20	IAMs_20	12 48 46.2		
	comp=Z,2µm,21.0s								
C16K	Lisburne Hills	133.99	5		IAMs_20	IAMs_20	12 44 54.4		
	comp=Z,2µm,22.0s								
BILL	Bilibino	134.18	351	*e*	PKIKP	PKPdf	11 57 08.8	+0.1	
SHLS	Shalkode	134.38	279	*e*	PKP	PKPdf	11 57 09.1	-1.0	
	baz=279								
SHLS	Shalkode	134.38	279	*e*	PKIKP	PKPdf	11 57 09.1	-1.0	
C18K	Utukok River	134.54	7		PKPdf	PKPdf	11 57 09.8	+0.3	
D19K	Kuna River	134.57	9		IAMs_20	IAMs_20	12 47 11.0		
	comp=Z,2µm,22.0s								
SATY	Saty	134.73	278	*e*	PKP	PKPdf	11 57 10.9	+0.2	
	baz=278								
SATY	Saty	134.73	278	*e*	PKIKP	PKPdf	11 57 10.9	+0.2	
E21K	Killik River	134.81	11		IAMs_20	IAMs_20	12 51 57.2		
	comp=Z,1µm,20.0s								
MNTQ	Montreal, Queb	135.00	77		IAMs_20	IAMs_20	12 45 18.0		
	comp=Z,1µm,19.0s								
BTK	Batken	135.34	269		PKPdf	PKPdf	11 57 12.1	+0.2	
BTK	Batken	135.34	269		PKIKP	PKPdf	11 57 12.1	+0.2	
D22K	Ayikyak River	135.34	12		IAMs_20	IAMs_20	12 51 43.4		
	comp=Z,2µm,20.0s								
MDOK	Medeo	135.37	277	*e*	PKP	PKPdf	11 57 12.1	0.0	
	baz=277								
MDOK	Medeo	135.37	277	*e*	PKIKP	PKPdf	11 57 12.0	0.0	
YKA	Yellowknife Ar	135.53	35		PKhKP	PKPpre	11 57 03.6		
	comp=Z,1.3nm,0.8s,baz=210,slow=3.1,SNR=8.5								
YKA					PKP	PKPdf	11 57 10.2	-1.2	
	comp=Z,2.2nm,0.9s,baz=203,slow=2.2,SNR=10								
YKAW1	Yellowknife Wh	135.55	35		IAMs_20	IAMs_20	12 49 27.7		
	comp=Z,3µm,19.0s								
YKAW3	Yellowknife Wh	135.59	35		IAMs_20	IAMs_20	12 49 36.7		
	comp=Z,3µm,19.0s								
D24K	Happy Valley	135.95	13		IAMs_20	IAMs_20	12 55 14.5		
	comp=Z,2µm,18.0s								
CHKK	Chushkaly	135.97	277	*e*	PKP	PKPdf	11 57 13.7	+0.8	
	baz=277								
CHKK	Chushkaly	135.97	277	*e*	PKIKP	PKPdf	11 57 13.7	+0.8	
AAK	Ala-Archa	135.99	274			PKiKP	11 57 14.7	-0.1	
AAK	Ala-Archa	135.99	274	*d*	iPKIKP	PKiKP	11 57 16.3	+1.5	
AAK					pmax	pmax			
	comp=Z,15nm,2.5s								
G62A	West of Eustis	136.02	80		IAMs_20	IAMs_20	12 51 55.9		
	comp=Z,1µm,19.0s								
MK31	Makanchi Array	136.23	284		PKPdf	PKPdf	11 57 12.5	-0.7	
MK31	Makanchi Array	136.23	284	⇓	iPKIKP	PKPdf	11 57 14.0	+0.7	
MKAR	Makanchi Array	136.23	284		PKPpre	PKPpre	11 57 02.9		
MKAR						PKPdf	11 57 13.4	+0.1	
MKAR	Makanchi Array	136.23	284		PKIKP	PKPdf	11 57 13.4	+0.1	
MKAR	Makanchi Array	136.23	284		PKhKP	PKPpre	11 57 02.4		
	comp=Z,0.5nm,0.8s,baz=134,slow=3.5,SNR=4.6								
MKAR					PKP	PKPdf	11 57 13.6	+0.3	
	comp=Z,5.1nm,1.0s,baz=132,slow=2.1,SNR=18								
KUU	Kurty	136.27	277	*e*	PKP	PKPdf	11 57 14.2	+0.8	
	baz=277								
KUU	Kurty	136.27	277	*e*	PKIKP	PKPdf	11 57 14.2	+0.8	
TDK	Taldyqorghan	136.33	279	*e*	PKP	PKPdf	11 57 14.5	+1.0	
	baz=280								
TDK	Taldyqorghan	136.33	279	*e*	PKIKP	PKPdf	11 57 14.5	+1.0	
D25K	Kavik River	136.36	14		IAMs_20	IAMs_20	12 51 48.3		
	comp=Z,2µm,20.0s								
E29M	Blow River	136.48	19		IAMs_20	IAMs_20	12 48 24.7		
	comp=Z,2µm,20.0s								
DGZ	Jazzator, Alta	136.56	290	⇑	iPKIKP	PKPdf	11 57 14.0	0.0	
SGDS	Sogindy	136.60	275	*e*	PKP	PKPdf	11 57 14.9	+0.8	
	baz=275								
SGDS	Sogindy	136.60	275	*e*	PKIKP	PKPdf	11 57 14.9	+0.8	
B22K	Teshekpuk Lake	136.72	11		IAMs_20	IAMs_20	12 57 43.6		
	comp=Z,2µm,18.0s								
TAM	Tamanrasset	137.00	181		PKPdf	PKPdf	11 57 15.9	+0.3	
TAM					IAMs_20	IAMs_20	12 55 29.8		
	comp=Z,2µm,20.0s								
TAM	Tamanrasset	137.00	181		PKIKP	PKPdf	11 57 15.9	+0.3	
TAM					MLR	MLR			
	comp=Z,2µm,20.0s								
KKAR	Karatay Array	138.01	271		PKPpre	PKPpre	11 57 07.1		
KKAR	Karatay Array	138.01	271		PKHKP	PKPpre	11 57 07.1		
BTLS	Baital	138.15	276	*e*	PKP	PKPdf	11 57 17.5	+0.7	
	baz=276								
BTLS	Baital	138.15	276	*e*	PKIKP	PKPdf	11 57 17.5	+0.7	
GEYT	Alibeck	138.70	255		PKPpre	PKPpre	11 57 10.1		
GEYT	Alibeck	138.70	255		PKhKP	PKPpre	11 57 10.3		
	comp=Z,0.9nm,0.4s,baz=32,slow=42,SNR=1.9								
GEYT					PKP	PKPdf	11 57 18.6	+0.4	
	comp=Z,3.9nm,0.8s,baz=153,slow=0.5,SNR=7.7								
GYA0B	ALIBECK ARRAY	138.70	255		IAMs_20	IAMs_20	12 52 39.0		
	comp=Z,1µm,20.0s								
KURBB	Kurchatov Arra	140.78	284		PKhKP	PKPpre	11 57 13.8		
	comp=Z,3.0nm,0.9s,baz=142,slow=2.0,SNR=17								
KURK	Kurchatov	140.82	285			PKPpre	11 57 13.3		
KURK	Kurchatov	140.82	285	⇑	ePKIKP	PKPdf	11 57 21.8	+0.3	
KURK					MLR	MLR			
	comp=Z,496nm,20.0s								
ZALV	Zalesovo Beam	140.90	293			PKPpre	11 57 13.5		
ZALV	Zalesovo Beam	140.90	293		PKHKP	PKPpre	11 57 13.5		
ZALV	Zalesovo Beam	140.90	293		PKhKP	PKPpre	11 57 14.0		
	comp=Z,1.5nm,0.7s,baz=125,slow=2.5,SNR=7.6								
BALJ	Balqa	141.38	225		IAMs_20	IAMs_20	13 06 37.5		
	comp=Z,2µm,19.0s								
TIXI	Tiksi	142.24	335		PKPpre	PKPpre	11 57 17.7		
TIXI	Tiksi	142.24	335		PKHKP	PKPpre	11 57 17.7		
TIO	Tiouine	144.36	162		PKP	PKPab	11 57 26.5	-0.3	
CSS	Mathiatis	144.73	223		IAMs_20	IAMs_20	13 07 42.3		
	comp=Z,1µm,19.0s								
SCHQ	Schefferville	145.01	73			PKPab	11 57 27.4	-0.9	
SCHQ	Schefferville	145.01	73		PKPbc	PKPab	11 57 27.7	-0.6	
	comp=Z,46nm,0.9s,baz=228,slow=2.1,SNR=37								
GURO	Guroymak-BITLI	145.28	237		IAMs_20	IAMs_20	13 09 01.0		
	comp=Z,1µm,19.0s								
GAZ	Garziantep	145.62	230		IAMs_20	IAMs_20	13 09 43.0		
	comp=Z,2µm,19.0s								
GNI	Garni	145.74	241		PKPdf	PKPdf	11 57 29.9	-0.8	
GNI	Garni	145.74	241		IAMs_20	IAMs_20	13 15 09.2		
	comp=Z,1µm,18.0s								
GNI	Garni	145.74	241	*de*	PKIKP	PKPdf	11 57 31.5	+0.7	
GNI					pmax	pmax			
	comp=Z,126nm,2.5s								
BVAR	Borovoye Array	145.89	281		PKPbc	PKPdf	11 57 29.9	-0.5	
	comp=Z,1.1nm,0.8s,baz=143,slow=3.2,SNR=29								
BRVK	Borovoye	145.96	281		PKPdf	PKPdf	11 57 29.7	-0.7	
BRVK	Borovoye	145.96	281	*de*	PKP2	PKPdf	11 57 30.7	+0.2	
IDI	Anoyia	147.16	212		PKP	PKPbc	11 57 35.3	-0.2	
IFR	Ifrane	147.17	165		PKP	PKPbc	11 57 36.1	+0.5	
ABKAR	Akbulak array	147.32	267			PKPdf	11 57 32.8	-0.1	
GROC	Groznyy	148.01	246	*e*	PKP2	PKPbc	11 57 38.1	+0.7	
GROC				*e*			12 01 08.3		
GROC					pmax	pmax			
	comp=Z,74nm,1.3s								
ISP	Isparta	148.19	221		IAMs_20	IAMs_20	13 08 21.5		
	comp=Z,1µm,20.0s								
ONI	Oni	148.34	242		IAMs_20	IAMs_20	13 18 03.1		
	comp=Z,1µm,18.0s								
ZEI	Tsey	148.35	243	*i*	PKP2	PKPbc	11 57 38.3	-0.3	
ZEI					pmax	pmax			
	comp=Z,14nm,0.9s								
BR131	Keskin Array S	149.07	227	⇑	ePKIKP	PKPdf	11 57 36.8	+0.5	
BRTR	Keskin Array B	149.07	227		PKPdf	PKPdf	11 57 35.7	-0.6	
BRTR	Keskin Array B	149.07	227		PKIKP	PKPdf	11 57 35.7	-0.6	
BRTR	Keskin Array B	149.07	227		PKPbc	PKPbc	11 57 39.5	-1.0	
	comp=Z,12nm,0.8s,baz=150,slow=5.1,SNR=38								
ANTO	Ankara	149.45	226		IAMs_20	IAMs_20	13 13 49.3		
	comp=Z,1µm,21.0s								
KBZ	Khabaz	149.53	243	⇑	ePKIKP	PKPdf	11 57 36.5	-0.2	
KBZ	Khabaz	149.53	243		PKPbc	PKPbc	11 57 41.4	+0.2	
	comp=Z,12nm,0.9s,baz=176,slow=1.6,SNR=19								
KEST	Kesra	149.76	188		PKPbc	PKPbc	11 57 42.0	-0.2	
	comp=Z,6.2nm,0.8s,baz=266,slow=7.1,SNR=4.4								
KIV	Kislovodsk	149.81	242		PKPdf	PKPdf	11 57 37.7	+0.5	
KIV					IAMs_20	IAMs_20	13 05 20.8		
	comp=Z,1µm,21.0s								
NRIK	Noril'sk	150.41	314		PKPdf	PKPdf	11 57 37.0	-0.3	
NRIK	Noril'sk	150.41	314		PKIKP	PKPdf	11 57 37.0	-0.3	
NRIK	Noril'sk	150.41	314		PKPbc	PKPbc	11 57 40.9	-1.6	
	comp=Z,22nm,0.9s,baz=104,slow=1.0,SNR=18								
GOF	Gofitskoye	150.62	244	*ce*	PKIKP	PKiKP	11 57 45.1	+0.6	
PCVE	Castro Verde	150.85	159	*e*	PKPbc	PKPbc	11 57 45.2	+0.6	
MESJ	Messejana	151.03	159	*e*	PKPbc	PKPbc	11 57 45.7	+0.7	
PNCL	Nicolau / Gran	151.25	158	*e*	PKPbc	PKiKP	11 57 46.5	+0.5	
PBEJ	Beja	151.27	159	*e*	PKPbc	PKiKP	11 57 47.2	+1.1	
PBAR	Barrancos	151.53	161	*e*	PKPbc	PKiKP	11 57 48.7	+2.1	
CART	Cartagena	151.56	171			PKPbc	11 57 45.8	-0.5	
PMTG	Montargil	152.24	158	*e*	PKPbc	PKiKP	11 57 48.6	+0.6	
ALN	Alexandroupoli	152.25	217		IAMs_20	IAMs_20	13 07 20.1		
	comp=Z,932nm,21.0s								
TIP	Timpagrande	152.43	201		IAMs_20	IAMs_20	13 02 23.9		
	comp=Z,2µm,22.0s								
SVE	Sverdlovsk	152.56	278	*e*	PKIKP	PKPbc	11 57 47.4	-0.5	
RDO	Rodhopi	152.61	216		IAMs_20	IAMs_20	13 11 45.7		
	comp=Z,2µm,19.0s								
PMRV	Marv??o	152.71	160	*e*	LR	LR	12 49 11.1		
	comp=Z,1µm,18.0s								
PCBR	Castelo Branco	153.10	159	*e*	PKPbc	PKiKP	11 57 51.0	+1.2	
ARU	Arti	153.14	276			PKPdf	11 57 41.8	0.0	
ARU					PKPbc	PKPbc	11 57 49.3	+0.1	
ARU	Arti	153.14	276	*i*	PKIKP	PKPbc	11 57 49.6	+0.4	
ARU							12 01 32.1		
ARU					SS	SS	12 21 14.3	+5.9	
PCAS	Casmilo, Conde	153.16	157	*e*	PKPbc	PKiKP	11 57 51.6	+1.7	
CUC	Castrocucco	153.36	200		IAMs_20	IAMs_20	13 12 58.7		
	comp=Z,1µm,19.0s								
ES04	SONSECA Array	153.37	165		IAMs_20	IAMs_20	13 02 39.5		
	comp=Z,2µm,22.0s								
ESDC	Sonseca Array	153.38	165			PKPdf	11 57 42.3	-0.4	
ESDC					IAMs_20	IAMs_20	13 15 14.9		
	comp=Z,1µm,20.0s								
ESDC	Sonseca Array	153.38	165		PKP	PKPdf	11 57 42.4	-0.4	
	comp=Z,4.4nm,1.0s,baz=232,slow=1.0,SNR=12								
ESDC					PKPbc	PKiKP	11 57 50.9	+0.4	
	comp=Z,6.3nm,1.0s,baz=163,slow=1.2,SNR=5.4								
ESDC					PKPab	PKPab	11 58 00.5	-2.0	
	comp=Z,3.5nm,1.0s,baz=241,slow=0.8,SNR=4.3								
ES02	SONSECA Array	153.39	165		IAMs_20	IAMs_20	13 00 07.1		
	comp=Z,2µm,21.0s								
ES16	SONSECA Array	153.39	165		IAMs_20	IAMs_20	13 15 41.2		
	comp=Z,2µm,20.0s								
ES17	SONSECA Array	153.41	165		IAMs_20	IAMs_20	13 00 50.6		
	comp=Z,2µm,20.0s								
MTE	Manteigas	153.64	159	*e*	PKPbc	PKiKP	11 57 55.6	+4.6	
MTE	Manteigas	153.64	159	*e*	LR	LR	12 50 28.9		
	comp=Z,1µm,18.0s								
MVO	Moncorvo	154.47	159	*e*	LR	LR	12 50 26.9		
	comp=Z,1µm,18.0s								
PAOL	Paolisi	154.55	198		IAMs_20	IAMs_20	13 11 01.9		
	comp=Z,2µm,22.0s								
PGAV	Gavieira, Arco	155.06	157	*e*	LR	LR	12 50 52.4		
	comp=Z,2µm,18.0s								
INTR	Introdacqua	155.59	197		IAMs_20	IAMs_20	13 06 41.6		
	comp=Z,1µm,22.0s								
VRH	Novokhopyorsk	156.18	250	*e*	PKP2	PKPab	11 58 12.7	-1.4	
VRH					pmax	pmax			
	comp=Z,10.0nm,0.9s								
MLR	Muntele Rosu	156.57	220			PKPdf	11 57 45.5	-1.5	
MLR					PKPab	PKPab	11 58 16.3	+0.2	
MLR	Muntele Rosu	156.57	220		PKP2	PKPab	11 58 16.3	+0.2	
MLR							12 57 45.5		
VORD	Divnogorie	156.93	247	*e*	PKP2	PKPab	11 58 16.6	-0.7	
VORD					pmax	pmax			
	comp=Z,20nm,1.0s								
MURB	Monte Urbino	156.99	195		IAMs_20	IAMs_20	13 04 52.5		
	comp=Z,1µm,22.0s								
VSR	Storozhevoye	157.17	247	*e*	PKP2	PKPab	11 58 18.2	-0.2	
VSR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
VORR	Voronezh	157.52	248		PKP2	PKPab	11 58 17.1	-2.8	
VORR					pmax	pmax			
	comp=Z,23nm,1.3s								
LPSR	Galich'ya Gora	158.36	249	*e*	PKP2	PKPab	11 58 22.4	-1.0	
LPSR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
TEOL	Teolo	159.15	194		IAMs_20	IAMs_20	13 26 43.8		
	comp=Z,1µm,22.0s								
SABO	M.te Sabotino	159.54	198		IAMs_20	IAMs_20	13 07 57.1		
	comp=Z,2µm,22.0s								
OBKA	Obir	159.93	200	*e*	PKP	PKPab	11 58 32.8	+2.2	
	comp=Z,19nm,1.6s								
CIMO	Cimolais	160.01	196		IAMs_20	IAMs_20	13 11 31.4		
	comp=Z,2µm,20.0s								
AKASG	Malin Array Be	160.28	232		PKP	PKPdf	11 57 51.0	-0.2	
	comp=Z,0.4nm,0.4s,baz=88,slow=0.8,SNR=1.6								
AKASG					PKPab	PKPab	11 58 30.4	-1.5	
	comp=Z,2.3nm,0.8s,baz=162,slow=4.1,SNR=9.4								
AKBB	Malin Array Si	160.28	232		PKPab	PKPab	11 58 30.2	-1.7	
AKBB	Malin Array Si	160.28	232		PKP2	PKPab	11 58 30.2	-1.7	
KIEV	Kiev	160.28	232		PKPab	PKPab	11 58 30.6	-1.2	
KIEV	Kiev	160.28	232		PKP2	PKPab	11 58 30.6	-1.2	
ABTA	Abfaltersbach	160.43	197	*e*	PKP	PKPdf	11 57 49.4	-2.1	
	comp=Z,6.8nm,1.4s								
ARSA	Arzberg	160.50	203	*e*	PKP	PKPab	11 58 33.6	+0.7	
	comp=Z,8.5nm,1.5s								
RONA	Rosalia, Austr	160.81	205	*e*	PKP	PKPab	11 58 36.5	+2.2	
	comp=Z,13nm,1.5s								
FETA	Feichten	160.89	193	*e*	PKP	PKPdf	11 57 53.7	+1.5	
	comp=Z,13nm,1.5s								
SQTA	Sankt Quirin	161.04	194	*e*	PKP	PKPab	11 58 36.4	+0.9	
	comp=Z,9.1nm,1.1s								
LESA	Schwarzleotal	161.08	197	*e*	PKP	PKPab	11 58 38.0	+2.5	
	comp=Z,6.2nm,1.1s								
CONA	Conrad Observa	161.10	204	*e*	PKP	PKPab	11 58 37.4	+1.8	
	comp=Z,6.3nm,1.3s								
MOTA	Moosalm	161.17	194	*e*	PKP	PKPab	11 58 33.8	-2.2	
	comp=Z,17nm,1.9s								
OBN	Obninsk	161.18	251	⇓	ePKIKP	PKPdf	11 57 54.0	+2.1	
OBN				*e*			12 04 57.6		
OBN				*i*	SS	SS	12 22 32.8	-1.4	
OBN					pmax	pmax			
	comp=Z,4.0nm,0.7s								
OBN					pmax	pmax			
	comp=Z,41nm,1.7s								
MOS	Moscow	161.21	253	*e*	PKIKP	PKPdf	11 57 46.6	-5.4	
MOS				*e*			11 58 35.9		
MOA	Molln	161.28	201	*e*	PKP	PKPab	11 58 37.4	+1.1	
	comp=Z,7.5nm,1.1s								
MODS	Modra-Piesok	161.28	207	*e*	PKP2	PKPab	11 58 40.2	+3.9	
MODS	Modra-Piesok	161.28	207	*e*	PKP	PKPab	11 58 40.2	+3.9	
RETA	Reutte	161.34	193	*i*	PKP	PKPab	11 58 36.8	+0.1	
	comp=Z,8.8nm,1.7s								
LANS	Liptovska Anna	161.57	212	*e*	PKP2	PKPab	11 58 39.4	+1.8	
LANS	Liptovska Anna	161.57	212	*e*	PKP

SEW				S		Sn	12 15 26.4	-3.6	
	baz=184								
P23K	**Montague Islan**	**3.95**	**19**			Pn	12 14 46.2	-0.6	
P23K	**Montague Islan**	**3.95**	**19**	P		Pn	12 14 46.2	-0.6	
	baz=200								
P23K				S		Sn	12 15 28.9	-4.2	
	baz=200								
O20K	**Slope Mountain**	**4.04**	**341**			**Pn**	**12 14 48.7**	**+0.7**	
O20K						**Sn**	**12 15 34.5**	**-0.9**	
O20K	**Slope Mountain**	**4.04**	**341**	P		**Pn**	**12 14 48.7**	**+0.7**	
	baz=158								
O20K				S		**Sn**	**12 15 34.5**	**-0.9**	
	baz=158								
IVE	**Iliamna Volcan**	**4.06**	**338**			**Pn**	**12 14 48.5**	**+0.2**	
IVE						**Sn**	**12 15 35.8**	**0.0**	
P18K	**Big Mountain,**	**4.17**	**320**	Pn		**Pn**	**12 14 50.8**	**+0.9**	
P18K	**Big Mountain,**	**4.17**	**320**	P		**Pn**	**12 14 50.6**	**+0.7**	
	baz=136								
O22K	**Cooper Landing**	**4.20**	**2**	Pn		Pn	12 14 49.9	-0.2	
O22K				IAML			12 15 45.7		
	comp=N,91nm,0.8s								
O22K				IAML			12 15 47.1		
	comp=E,84nm,0.8s								
SLKM	**Skilak Lake**	**4.22**	**358**			Pn	12 14 49.8	-0.8	
RED	**Redoubt Volcan**	**4.38**	**342**			Pn	12 14 52.4	-0.3	
RSO	**Redoubt South**	**4.42**	**342**	Pn		Pn	12 14 52.8	-0.5	
RDT	**Redoubt**	**4.47**	**345**			Pn	12 14 53.6	-0.3	
HIN	**Hinchinbrook I**	**4.50**	**23**	Pn		Pn	12 14 52.8	-1.5	
HIN				IAML			12 15 44.8		
	comp=N,48nm,1.1s								
HIN				IAML			12 15 52.1		
	comp=E,46nm,1.4s								
O18K	**Koktuh Hills**	**4.51**	**324**	Pn		**Pn**	**12 14 55.4**	**+0.9**	
O18K				IAML			12 15 49.1		
	comp=N,19nm,1.5s								
O18K				IAML			12 16 03.1		
	comp=E,19nm,0.9s								
O18K	**Koktuh Hills**	**4.51**	**324**	P		**Pn**	**12 14 54.7**	**+0.3**	
	baz=140								
O19K	**Port Alsworth**	**4.53**	**331**	Pn		**Pn**	**12 14 54.9**	**+0.3**	
O19K				IAML			12 15 50.6		
	comp=N,45nm,0.6s								
O19K				IAML			12 15 54.0		
	comp=E,64nm,0.4s								
O19K	**Port Alsworth**	**4.53**	**331**	P		**Pn**	**12 14 54.9**	**+0.3**	
	baz=148								
DFR	**Drift River**	**4.53**	**343**			Pn	12 14 54.7	-0.1	
KAIM	**Kayak Island**	**4.69**	**37**	Pn		Pn	12 14 56.0	-0.8	
KAIM				IAML			12 15 54.6		
	comp=N,69nm,1.4s								
KAIM				IAML			12 17 12.6		
	comp=E,68nm,1.5s								
KAIM	**Kayak Island**	**4.69**	**37**	P		**Pn**	**12 14 56.5**	**-0.3**	
	baz=220								
CHGN	**Chignik**	**4.69**	**274**	Pn		Pn	12 14 56.2	-0.7	
RC01	**Rabbit Creek A**	**4.80**	**1**	Pn		Pn	12 14 57.4	-1.1	
RC01				IAML			12 15 54.5		
	comp=E,20nm,1.3s								
RC01				IAML			12 16 03.1		
	comp=N,14nm,1.0s								
RC01	**Rabbit Creek A**	**4.80**	**1**	P		Pn	12 14 58.1	-0.4	
	baz=181								
RAGM	**Ragged Mountai**	**4.96**	**32**	Pn		**Pn**	**12 15 02.2**	**+1.5**	
RAGM				IAML			12 16 14.6		
	comp=E,47nm,1.1s								
SUCK	**Suckling Hills**	**5.01**	**38**	Pn		**Pn**	**12 15 02.4**	**+1.1**	
SUCK				IAML			12 15 58.0		
	comp=E,36nm,1.2s								
N20K	**Mount Spurr**	**5.05**	**348**	P		Pn	12 15 01.5	-0.4	
	baz=165								
SPCR	**Spurr Chakacha**	**5.05**	**348**			Pn	12 15 01.5	-0.4	
HMT	**Hamilton**	**5.05**	**34**	Pn		**Pn**	**12 15 02.2**	**+0.4**	
N19K	**Bonanza Creek**	**5.10**	**334**	Pn		Pn	12 15 02.5	-0.1	
N19K	**Bonanza Creek**	**5.10**	**334**	P		Pn	12 15 02.4	-0.2	
	baz=150								
O17K	**Koliganek Bris**	**5.13**	**316**			**Pn**	**12 15 03.7**	**+0.7**	
O17K	**Koliganek Bris**	**5.13**	**316**	P		**Pn**	**12 15 03.7**	**+0.7**	
	baz=130								
KNK	**Knik Glacier**	**5.19**	**8**	Pn		Pn	12 15 02.9	-0.9	
KNK				IAML			12 16 08.9		
	comp=E,14nm,1.1s								
KNK				IAML			12 17 11.1		
	comp=N,12nm,1.4s								
KNK	**Knik Glacier**	**5.19**	**8**	P		**Pn**	**12 15 03.6**	**-0.2**	
	baz=189								
SUA	**Susitna One**	**5.19**	**356**	Pn		Pn	12 15 03.5	-0.4	
SUA				IAML			12 16 08.8		
	comp=E,9.7nm,1.4s								
SUA	**Susitna One**	**5.19**	**356**	P		Pn	12 15 03.1	-0.8	
	baz=175								
BERG	**Berg Lake**	**5.27**	**36**	Pn		**Pn**	**12 15 05.2**	**+0.3**	
BERG				IAML			12 16 05.7		
	comp=N,36nm,1.0s								
PMR	**Palmer**	**5.33**	**4**	Pn		**Pn**	**12 15 05.8**	**+0.2**	
PMR				IAML			12 16 43.0		
	comp=N,29nm,0.2s								
N18K	**Kilae Creek**	**5.37**	**327**	Pn		**Pn**	**12 15 07.2**	**+0.9**	
N18K				IAML			12 16 24.3		
	comp=E,7.6nm,1.3s								
N18K				IAML			12 16 28.1		
	comp=N,8.5nm,1.1s								
N18K	**Kilae Creek**	**5.37**	**327**	P		**Pn**	**12 15 06.4**	**+0.1**	
	baz=142								
SNH	**Sunshine Point**	**5.42**	**41**	Pn		**Pn**	**12 15 06.2**	**-0.8**	
O16K	**Kokwok River B**	**5.43**	**311**	Pn		**Pn**	**12 15 08.8**	**+1.7**	
BMRM	**Bremner River**	**5.46**	**29**			**Pn**	**12 15 07.1**	**-0.4**	
BMRM	**Bremner River**	**5.46**	**29**	P		**Pn**	**12 15 07.3**	**-0.2**	
	baz=212								
KHIT	**Khitrov Hills**	**5.46**	**38**			**Pn**	**12 15 07.3**	**-0.3**	
SML	**Sawmill**	**5.59**	**8**	Pn		**Pn**	**12 15 09.6**	**+0.3**	
SML	**Sawmill**	**5.59**	**8**	P		**Pn**	**12 15 09.3**	**0.0**	
	baz=189								
WAX	**Waxell Ridge**	**5.60**	**39**	Pn		Pn	12 15 07.7	-1.9	
KLU	**Klutina**	**5.62**	**20**			**Pn**	**12 15 09.8**	**+0.1**	
KLU	**Klutina**	**5.62**	**20**	P		**Pn**	**12 15 09.6**	**-0.1**	
	baz=203								
SVW2	**Sparrevohn**	**5.62**	**331**	Pn		**Pn**	**12 15 09.8**	**+0.1**	
CHNA	**Chernabura Isl**	**5.64**	**259**	P		Pn	12 15 09.0	-0.9	
	baz=72								
CNBA	**Chernabura Isl**	**5.64**	**259**	Pn		**Pn**	**12 15 10.3**	**+0.3**	
N17K	**Nushagak Hills**	**5.68**	**321**	Pn		Pn	12 15 09.9	-0.5	
SCM	**Sheep Creek Mo**	**5.72**	**13**	Pn		Pn	12 15 09.4	-1.6	
SKT	**Skwentna**	**5.75**	**353**	Pn		Pn	12 15 10.9	-0.5	
SKT	**Skwentna**	**5.75**	**353**	P		**Pn**	**12 15 11.6**	**+0.1**	
	baz=171								
MESA	**MESA**	**5.76**	**44**	Pn		**Pn**	**12 15 11.7**	**-0.1**	
M20K	**Styx River**	**5.83**	**345**	Pn		Pn	12 15 12.5	-0.1	
M20K	**Styx River**	**5.83**	**345**	P		Pn	12 15 12.4	-0.2	
	baz=162								
ISLE	**Juniper Island**	**5.89**	**40**	Pn		**Pn**	**12 15 14.3**	**+0.8**	
VRDI	**Verde Repeater**	**6.00**	**32**	Pn		**Pn**	**12 15 15.2**	**+0.1**	
N25K	**Chitina, Valde**	**6.01**	**25**	Pn		**Pn**	**12 15 15.8**	**+0.8**	
M18K	**Stony River**	**6.02**	**332**			Pn	12 15 15.0	-0.1	
M18K	**Stony River**	**6.02**	**332**	P		Pn	12 15 15.0	-0.1	
	baz=147								
M19K	**Big River Lodg**	**6.06**	**340**	Pn		**Pn**	**12 15 15.9**	**+0.2**	
GLB	**Gilahina Butte**	**6.07**	**29**	Pn		**Pn**	**12 15 17.2**	**+1.3**	
KIAG	**Kiagna River**	**6.11**	**38**			Pn	12 15 15.8	-0.8	
M24K	**Tolsona, Glenn**	**6.14**	**17**	Pn		**Pn**	**12 15 16.8**	**-0.1**	
TABL	**Table Mountain**	**6.24**	**45**	Pn		**Pn**	**12 15 18.2**	**-0.1**	
MCARA	**McCarthy VSAT**	**6.25**	**32**	Pn		**Pn**	**12 15 19.6**	**+1.3**	
PTPK	**Patty Peak**	**6.27**	**36**			Pn	12 15 17.9	-0.9	
PCA	**Pinnacle**	**6.40**	**49**			**Pn**	**12 15 20.6**	**+0.1**	
PINM	**Pinnacle**	**6.40**	**50**	P		**Pn**	**12 15 20.3**	**-0.2**	
	baz=237								
L19K	**White Mountain**	**6.40**	**339**	Pn		Pn	12 15 18.3	-2.1	
WAT6	**Susitna Watana**	**6.40**	**9**			**Pn**	**12 15 21.1**	**+0.5**	
WAT6	**Susitna Watana**	**6.40**	**9**	P		**Pn**	**12 15 21.0**	**+0.5**	
	baz=191								
M17K	**Holitna River**	**6.41**	**326**	Pn		**Pn**	**12 15 21.0**	**+0.5**	
BARN	**Barnard Glacie**	**6.45**	**39**	Pn		**Pn**	**12 15 21.9**	**+0.7**	
CTGM	**Chitina Glacie**	**6.50**	**40**	Pn		**Pn**	**12 15 22.4**	**+0.5**	
LOGN	**Logan Glacier**	**6.53**	**42**			**Pn**	**12 15 23.4**	**+1.1**	
N15K	**Kwethluk River**	**6.59**	**310**	Pn		**Pn**	**12 15 25.2**	**+2.2**	
HARP	**HAARP**	**6.60**	**20**			**Pn**	**12 15 23.1**	**0.0**	
HARP	**HAARP**	**6.60**	**20**	P		**Pn**	**12 15 23.1**	**0.0**	
	baz=204								
M16K	**Timber Creek**	**6.65**	**319**	Pn		**Pn**	**12 15 26.2**	**+2.4**	
L18K	**Granite Mounta**	**6.85**	**333**	Pn		Pn	12 15 24.6	-2.0	
DHY	**Denali Highway**	**6.92**	**10**	Pn		**Pn**	**12 15 28.4**	**+0.7**	
RND	**Reindeer**	**7.15**	**4**			**Pn**	**12 15 31.1**	**+0.4**	
TRF	**Thorofare Moun**	**7.17**	**359**	Pn		**Pn**	**12 15 31.2**	**+0.1**	
CAST	**Castle Rocks**	**7.22**	**352**	Pn		**Pn**	**12 15 31.8**	**+0.2**	
O29M	**Mount Kennedy**	**7.23**	**52**			**Pn**	**12 15 31.8**	**-0.1**	
O29M	**Mount Kennedy**	**7.23**	**52**	P		**Pn**	**12 15 31.3**	**-0.6**	
	baz=241								
KTH	**Kantishna Hill**	**7.29**	**357**	Pn		**Pn**	**12 15 34.4**	**+1.8**	
L16K	**Owhat River**	**7.30**	**322**			**Pn**	**12 15 34.1**	**+1.4**	
L16K	**Owhat River**	**7.30**	**322**	P		Pn	12 15 32.5	-0.2	
	baz=134								
P29M	**Windy Craggy**	**7.32**	**58**			**Pn**	**12 15 32.8**	**-0.2**	
P29M	**Windy Craggy**	**7.32**	**58**	P		**Pn**	**12 15 31.9**	**-1.1**	
	baz=248								
M27K	**Edge Creek, AK**	**7.35**	**31**			**Pn**	**12 15 33.5**	**-0.1**	
M27K	**Edge Creek, AK**	**7.35**	**31**	P		**Pn**	**12 15 33.2**	**-0.3**	
	baz=217								
MENT	**Mentasta**	**7.38**	**23**	Pn		Pn	12 15 32.5	-1.3	
S31K	**Pelican**	**7.67**	**72**	Pn		Pn	12 15 36.1	-1.7	
S31K	**Pelican**	**7.67**	**72**	P		Pn	12 15 35.7	-2.1	
	baz=263								
K17K	**Iditarod**	**7.69**	**330**	Pn		**Pn**	**12 15 38.5**	**+0.5**	
BPAW	**Bear Paw Mtn.**	**7.84**	**357**	Pn		Pn	12 15 39.6	-0.6	
HYT	**Haines Junctio**	**7.94**	**50**	Pn		**Pn**	**12 15 41.7**	**+0.1**	
M13K	**Dall Lake**	**8.14**	**306**	Pn		**Pn**	**12 15 45.9**	**+1.7**	
J20K	**Nowinta River**	**8.16**	**347**	Pn		Pn	12 15 44.5	-0.1	
HDA	**Harding Lake**	**8.27**	**9**	Pn		Pn	12 15 45.7	-0.4	
L14K	**Kuka Creek**	**8.29**	**313**	Pn		**Pn**	**12 15 49.1**	**+2.8**	
CCB	**Clear Creek Bu**	**8.44**	**6**	Pn		**Pn**	**12 15 49.0**	**+0.6**	
IL31		**8.63**	**9**	Pn		**Pn**	**12 15 51.5**	**+0.5**	
ILAR	**Eielson Array**	**8.63**	**9**	Pn		**Pn**	**12 15 52.5**	**+1.5**	
J25K	**Salcha River,**	**8.64**	**13**	Pn		**Pn**	**12 15 51.1**	**-0.1**	
MDM	**Murphy Dome**	**8.73**	**5**	Pn		**Pn**	**12 15 52.8**	**+0.5**	
J26L	**Joseph Creek**	**8.81**	**18**	Pn		**Pn**	**12 15 54.4**	**+0.8**	
I23K	**Minto, Yukon-K**	**8.88**	**2**	Pn		Pn	12 15 53.3	-1.1	
I21K	**Tanana**	**8.96**	**355**	Pn		Pn	12 15 55.3	-0.2	
N31M	**Braeburn, Yuko**	**9.00**	**49**	Pn		**Pn**	**12 15 55.9**	**-0.1**	
WHY	**Whitehorse**	**9.03**	**55**	Pn		**Pn**	**12 15 56.5**	**0.0**	
L29M	**L29M**	**9.07**	**36**	Pn		Pn	12 15 54.6	-2.5	
P32M	**Atlin**	**9.26**	**62**	Pn		**Pn**	**12 15 59.8**	**+0.2**	
DAWY	**Dawson**	**9.39**	**30**	Pn		**Pn**	**12 16 01.4**	**0.0**	
J14K	**Nanvaranak Lak**	**9.43**	**319**	Pn		Pn	12 16 01.6	-0.3	
H21K	**Melozitna Rive**	**9.49**	**353**	Pn		Pn	12 16 02.0	-0.7	
H24K	**Noodor Dome**	**9.62**	**5**	Pn		**Pn**	**12 16 06.7**	**+2.1**	
K29M	**Barlow Dome**	**9.78**	**34**	Pn		**Pn**	**12 16 07.8**	**+0.9**	
P33M	**Teslin, Yukon**	**9.85**	**59**	Pn		**Pn**	**12 16 08.9**	**+1.2**	
IMAR	**Indian Mountai**	**9.88**	**351**	Pn		**Pn**	**12 16 08.5**	**+0.4**	
M31M	**Drury Creek, Y**	**9.92**	**47**	Pn		**Pn**	**12 16 09.4**	**+0.8**	
FARO	**Faro, Yukon**	**10.37**	**48**	Pn		**Pn**	**12 16 14.8**	**0.0**	
G21K	**Allakaket**	**10.39**	**352**	Pn		Pn	12 16 14.9	0.0	
G23K	**Bananza Creek**	**10.45**	**360**	Pn		Pn	12 16 14.8	-1.0	
FYU	**Fort Yukon**	**10.55**	**10**	Pn		**Pn**	**12 16 18.6**	**+1.4**	
R33M	**Jennings River**	**10.59**	**65**	Pn		**Pn**	**12 16 18.5**	**+0.5**	
BMAR	**Burnt Mountain**	**11.45**	**11**	Pn		**Pn**	**12 16 30.1**	**+0.6**	
GNW	**Green Mountain**	**18.79**	**106**	P		**P**	**12 18 04.7**	**-0.6**	
GNW				IAmb		IAmb	12 18 23.4		
	comp=Z,8.1nm,1.4s								
A36M	**Sachs Harbour**	**18.82**	**24**	P		**P**	**12 18 06.5**	**+1.0**	
A36M				IAmb		IAmb	12 18 20.2		
	comp=Z,2.0nm,0.8s								
B08A	**Colville Reser**	**20.21**	**100**	P		**P**	**12 18 20.9**	**-0.1**	
B08A				IAmb		IAmb	12 18 23.1		
	comp=Z,3.1nm,0.6s								

*SNET **02** 12:22:37.7±2.2,15°.56N×90°.81W,h32$^{km}_{\pm}$.999km,ML3.5*
*CATAC **02** 12:22:39.7±0.2,15°.35N×90°.56W,h10km,ML4.0*
*NEIC **02** 12:22:39.2±1.7,15°.33N±0°.05×90°.49W±0°.03,h10km±.2km, ML3.9/22, Error ellipse: s-maj=10.2km s-min=3.3km az=207.0*
*GCG **02** 12:22:40.9±1.7,15°.25N×90°.45W,h12km±23km,MD3.7*
ISC 02 12:22:39.2±0.9,15°.36N±0°.03×90°.49W±0°.02,h10km±.8km, n56,σ0°90/70,Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AVCB	**Coban**	**0.14**	**37**	*i* P		**Pg**	**12 22 43.1**	**+0.5**
AVCB				*i* S		**Sg**	**12 22 46.1**	**+1.2**
AVCB				IAML			12 22 46.7	
	comp=Z,180μm,1.0s							
QUIS	**Sacapulas**	**0.58**	**263**	*i* P		**Pg**	**12 22 49.9**	**-0.7**
QUIS				*i* S		**Sg**	**12 22 57.3**	**-1.0**
QUIS				IAML			12 23 00.4	
	comp=Z,14μm,1.0s							
GUMI	**Mixco**	**0.73**	**189**	*i* P		**Pg**	**12 22 52.9**	**-0.6**
GUMI				*i* S		**Sg**	**12 23 02.4**	**-0.7**
GUMI				IAML			12 23 05.9	
	comp=Z,9μm,1.0s							
CHTG	**Tecpan**	**0.76**	**219**	*i* P		**Pg**	**12 22 53.5**	**-0.5**
CHTG				IAML			12 22 54.4	
	comp=Z,15μm,1.0s							
CHTG				*i* S		**Sg**	**12 23 03.7**	**-0.3**
GCG4	**OSOP**	**0.77**	**183**	*i* P		**Pg**	**12 22 53.5**	**-0.6**
GCG4				*i* S		**Sg**	**12 23 03.5**	**-0.7**
GCG4				IAML			12 23 04.1	
	comp=Z,5μm,1.0s							
GUNB	**GUNB**	**0.77**	**169**	*i* P		**Pg**	**12 22 54.4**	**+0.2**
GUNB				IAML			12 22 55.7	
	comp=Z,4μm,1.0s							
NBG	**Las Nubes**	**0.78**	**170**	*eP*		**Pg**	**12 22 54.4**	**+0.1**
NBG				*i* S		**Sg**	**12 23 04.3**	**-0.2**
MRL	**Marmol**	**0.83**	**109**	*eP*		**Pg**	**12 22 54.8**	**-0.4**
MRL				*i* S		**Sb**	**12 23 07.7**	**+0.6**
FUG	**Fuego 3**	**0.97**	**201**	*eP*		**Pg**	**12 22 58.1**	**+0.2**
FUG				*i* S		**Sn**	**12 23 16.9**	**+4.0**
PCG	**Pacaya**	**0.97**	**187**	*eP*		**Pb**	**12 22 58.4**	**+0.2**
HUEH	**Huehuetenango**	**0.98**	**268**	Pg		**Pg**	**12 22 57.0**	**-1.0**
HUEH				IAML			12 23 13.3	
	comp=N,6μm,0.5s							
HUEH	**Huehuetenango**	**0.98**	**268**	*i* P		**Pg**	**12 22 57.4**	**-0.7**
HUEH				*i* S		**Sg**	**12 23 10.2**	**-0.6**
HUEH				IAML			12 23 15.2	
	comp=Z,8μm,1.0s							
STG3	**Santiaguito 3,**	**1.23**	**238**	*eP*		**Pn**	**12 23 02.8**	**+0.2**
STG3				*i* S		**Sg**	**12 23 19.1**	**+0.3**
ESQI	**Esquipulas**	**1.37**	**125**	Pn		**Pn**	**12 23 04.3**	**-0.2**
ESQI				IAML			12 23 25.3	
	comp=N,1μm,0.6s							
ESQI				IAML			12 23 26.8	
	comp=E,1μm,0.8s							
ESQI	**Esquipulas**	**1.37**	**125**	*i* P		**Pn**	**12 23 04.6**	**+0.1**
ESQI				*i* S		**Sg**	**12 23 23.0**	**-0.3**
ESQI				IAML			12 23 28.6	
	comp=Z,2μm,1.0s							
RTAL	**Retalhuleu**	**1.43**	**235**	Pn		**Pb**	**12 23 06.2**	**+0.2**
RTAL				IAML			12 23 28.6	
	comp=N,1μm,0.6s							
RTAL	**Retalhuleu**	**1.43**	**235**	*i* P		**Pb**	**12 23 06.0**	**0.0**
RTAL				IAML			12 23 06.5	
	comp=Z,1μm,1.0s							
MTO3	**Montecristo**	**1.45**	**131**	Pn		**Pn**	**12 23 05.3**	**-0.4**
MTO3				IAML			12 23 28.7	
	comp=N,1μm,0.3s							
MTO3				IAML			12 23 30.1	
	comp=E,1μm,0.5s							
MTO3	**Montecristo**	**1.45**	**131**	*eP*		**Pn**	**12 23 05.6**	**-0.1**
MTO3				IAML			12 23 06.0	
	comp=Z,410nm,0.2s							
MTO3	**Montecristo**	**1.45**	**131**	*i* P		**Pn**	**12 23 05.3**	**-0.4**
MTO3				IAML			12 23 05.9	
	comp=Z,2μm,1.0s							
SULM	**Suchitepequez,**	**1.48**	**225**	*i* P		**Pg**	**12 23 08.3**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.49**	**153**	*i* P		**Pn**	**12 23 06.5**	**+0.3**
SLOZ				IAML			12 23 06.8	
	comp=Z,449nm,0.2s							
LOAL	**Lomas de Alarc**	**1.52**	**153**	*i* P		**Pn**	**12 23 07.0**	**+0.5**
LOAL				IAML			12 23 07.2	
	comp=Z,4μm,1.0s							
LOAL				*i* S		**Sg**	**12 23 28.3**	**+0.2**
NUBE	**Las Nubes**	**1.60**	**154**	*i* P		**Pn**	**12 23 08.4**	**+0.7**
NUBE				IAML			12 23 09.2	
	comp=Z,528nm,0.3s							
NUBE	**Las Nubes**	**1.60**	**154**	*i* P		**Pn**	**12 23 07.9**	**+0.1**
NUBE				IAML			12 23 08.9	
	comp=Z,1μm,1.0s							
SMCA	**Catarina**	**1.61**	**252**	*i* P		**Pb**	**12 23 08.8**	**-0.2**
SMCA				IAML			12 23 09.0	
	comp=Z,980nm,1.0s							
UNIC	**Universidad Ca**	**1.65**	**146**	*i* P		**Pn**	**12 23 08.5**	**+0.2**
UNIC				IAML			12 23 09.0	
	comp=Z,2μm,1.0s							
PETF	**Flores**	**1.66**	**21**	Pn		**Pn**	**12 23 09.0**	**+0.6**
PETF	**Flores**	**1.66**	**21**	*i* P		**Pn**	**12 23 09.2**	**+0.8**
PETF				IAML			12 23 34.8	
	comp=Z,3μm,1.0s							
RTR	**El Retiro**	**1.67**	**150**	*eP*		**Pb**	**12 23 09.7**	**-0.5**
SNJE	**San Jose**	**1.71**	**150**	*eP*		**Pb**	**12 23 10.3**	**-0.6**
SBLS	**San Blas**	**1.73**	**151**	*eP*		**Pn**	**12 23 10.4**	**+0.9**
CEVE	**Cerro Verde**	**1.74**	**151**	*eP*		**Pb**	**12 23 10.8**	**-0.6**
CEVE	**Cerro Verde**	**1.74**	**151**	*i* P		**Pb**	**12 23 10.9**	**-0.5**
CEVE				IAML			12 23 17.8	
	comp=Z,730nm,1.0s							
CCIG	**Comitan**	**1.83**	**300**	Pn		**Pn**	**12 23 11.4**	**+0.5**
CCIG				IAML			12 23 43.9	
	comp=N,1μm,0.4s							
CCIG				IAML			12 23 46.0	
	comp=E,948nm,0.5s							
IZABA	**Izabal, Puerto**	**1.88**	**78**	*i* P		**Pb**	**12 23 13.9**	**+0.3**
IZABA				IAML			12 23 52.4	
	comp=Z,9.4nm,1.0s							
LLGN	**La Laguna**	**1.91**	**128**	*i* P		**Pb**	**12 23 13.3**	**-1.0**
LLGN				IAML			12 23 40.2	
	comp=Z,780nm,1.0s							
JAYA	**Jayaque - finc**	**1.97**	**149**	*eP*		**Pb**	**12 23 14.8**	**-0.6**
JAYA	**Jayaque - finc**	**1.97**	**149**	*i* P		**Pb**	**12 23 14.7**	**-0.6**
JAYA				IAML			12 23 16.0	
	comp=Z,860nm,1.0s							
PMON	**Piamonte**	**1.99**	**145**	*i* P		**Pb**	**12 23 14.9**	**-0.8**
PMON				IAML			12 23 45.3	
	comp=Z,940nm,1.0s							
PIC2	**El Picacho**	**2.00**	**143**	*eP*		**Pb**	**12 23 15.2**	**-0.6**
PIC2				*eS*		**Sg**	**12 23 43.7**	**+0.1**
LFU	**La Fuente**	**2.08**	**140**	*eP*		**Pn**	**12 23 15.3**	**+1.0**
LOMA	**Loma Larga**	**2.13**	**143**	*i* P		**Pb**	**12 23 17.3**	**-0.7**
LOMA				IAML			12 23 20.8	
	comp=Z,370nm,1.0s							
PAVA	**Las Pavas**	**2.22**	**137**	*eP*		**Pb**	**12 23 18.6**	**-1.0**
PAVA				*eS*		**Sb**	**12 23 48.1**	**+0.9**
PAVA	**Las Pavas**	**2.22**	**137**	*i* P		**Pb**	**12 23 18.5**	**-1.1**
PAVA				IAML			12 23 20.5	
	comp=Z,1μm,1.0s							
SJTE	**Alcalda de S**	**2.25**	**140**	*i* P		**Pb**	**12 23 19.3**	**-0.8**
SJTE				IAML			12 23 24.0	
	comp=Z,140nm,1.0s							
COEG	**Centro de Oper**	**2.33**	**138**	*eP*		**Pb**	**12 23 20.4**	**-1.0**
COEG				*eS*		**Sb**	**12 23 51.8**	**+1.6**
SCLA	**Alcaldia de Sa**	**2.37**	**134**	*eS*		**Sg**	**12 23 54.2**	**-1.3**
SCLA	**Alcaldia de Sa**	**2.37**	**134**	*i* P		**Pb**	**12 23 21.1**	**-1.0**
SCLA				IAML			12 23 59.3	
	comp=Z,310nm,1.0s							
TGUH	**Tegucigalpa,Un**	**3.37**	**112**	Pn		**Pn**	**12 23 32.2**	**+0.1**
TGUH				IAML			12 24 28.2	
	comp=Z,310nm,0.6s							
TGUH				IAML			12 24 30.2	
	comp=Z,269nm,1.0s							
CRIN	**San Cristobal**	**4.26**	**128**	Pn		**Pn**	**12 23 42.5**	**-1.8**
CRIN				IAML			12 25 18.8	
	comp=N,237nm,0.3s							
MATN	**Matagalpa**	**5.04**	**118**	Pn		**Pn**	**12 23 53.9**	**-1.1**
TEIG	**Tepich**	**5.28**	**23**	Pn		**Pn**	**12 23 57.7**	**-0.5**
TEIG	**Tepich**	**5.28**	**23**	IAML			12 25 36.3	
	comp=N,115nm,0.6s							
SOR	**Soroa**	**10.23**	**43**	Pn		**Pn**	**12 25 06.3**	**+0.1**
TXAR	**Lajitas Array**	**18.47**	**321**	P		**P**	**12 26 53.1**	**-2.3**

*CATAC **02** 12:40:16.3±0.2,11°.16N×87°.86W,h15km,MB5.5,ML4.6*
*NEIC **02** 12:40:16.4±1.8,11°.21N±0°.06×87°.74W±0°.05,h10km±1km, mb4.6/147, Error ellipse: s-maj=13.3km s-min=2.9km az=214.0*
*UPA **02** 12:40:17.8±1.1,11°.63N×87°.69W,h28km±.999km,MW4.7*
*IDC **02** 12:40:19.0±3.3,11°.24N×87°.69W,h37km±27km,mb3.9/9, mbtmp4.1/12,ML3.7/3,MS4.3/3,Error ellipse: s-maj=31.9km s-min=15.9km az=47.0*
*

AESN IAML 12 42 32.4
comp=Z,6µm,1.0s
LCND La Caada 2.14 358 *e*P **Pn 12 40 51.6 +0.3**
LCND La Caada 2.14 358 *i* P **Pn 12 40 51.7 +0.5**
LCND IAML 12 41 21.2
comp=Z,5µm,1.0s
CONN Concepcion 2.19 79 *i* P **Pn 12 40 52.4 +0.4**
CONN IAML 12 41 39.6
comp=Z,8µm,1.0s
HZTE Horizontes, Gu 2.23 101 Pn **Pn 12 40 52.3 -0.2**
HZTE Horizontes, Gu 2.23 101 *i* P **Pn 12 40 52.6 0.0**
HZTE *i* S **Sn 12 41 19.4 -0.8**
HZTE IAML 12 41 27.1
comp=Z,2µm,1.0s
BLLM Bellamira 2.30 350 *e*P **Pn 12 40 53.7 +0.1**
SAJU San Juanillo, 2.34 117 *i* P **Pn 12 40 55.0 +0.9**
SAJU IAML 12 41 21.1
comp=Z,530nm,1.0s
PACA Pacayal 2.34 348 *e*P **Pn 12 40 55.3 +1.0**
PACA Pacayal 2.34 348 *i* P **Pn 12 40 55.7 +1.5**
PACA *i* S **Sn 12 41 23.0 -0.2**
PACA IAML 12 41 26.9
comp=Z,35µm,1.0s
LIMN Finca el Limon 2.37 37 *i* P **Pn 12 40 54.7 +0.2**
LIMN *i* S **Sn 12 41 24.2 +0.5**
LIMN IAML 12 41 30.8
comp=Z,2µm,1.0s
TECA Tecapa 2.41 344 *e*P **Pn 12 40 55.3 +0.1**
COEB Comit de Eme 2.42 344 *e*P **Pn 12 40 55.8 +0.5**
ORTG Ortega, Santa 2.46 109 Pn **Pn 12 40 55.0 -0.8**
ORTG Ortega, Santa 2.46 109 *i* P **Pn 12 40 55.8 +0.1**
ORTG *i* S **Sn 12 41 24.9 -0.9**
ORTG IAML 12 41 28.9
comp=Z,360nm,1.0s
BOAB BOACO BROADBAN 2.47 59 Pn **Pn 12 40 54.8 -1.0**
BOAB BOACO BROADBAN 2.47 59 *i* P **Pn 12 40 55.6 -0.2**
BOAB *i* S **Sn 12 41 26.5 +0.4**
BOAB IAML 12 41 42.6
comp=Z,660nm,1.0s
DUNO Dulce Nombre, 2.53 115 **Pn 12 40 57.8 +1.1**
DUNO Dulce Nombre, 2.53 115 *i* P **Pn 12 40 56.7 0.0**
DUNO IAML 12 41 26.9
comp=Z,1µm,1.0s
PQSS Presa 15 de Se 2.55 344 *e*P **Pn 12 40 57.4 +0.5**
PQSS *e*S **Sn 12 41 27.1 -1.0**
PQSS Presa 15 de Se 2.55 344 *i* P **Pn 12 40 57.5 +0.5**
PQSS *i* S **Sn 12 41 27.1 -1.0**
PQSS IAML 12 41 30.2
comp=Z,1µm,1.0s
MATN Matagalpa 2.56 46 **Pn 12 40 57.2 +0.1**
MATN Matagalpa 2.56 46 *i* P **Pn 12 40 57.6 +0.5**
MATN *i* S **Sn 12 41 28.0 -0.3**
MATN IAML 12 41 34.4
comp=Z,560nm,1.0s
INDI Punta indio, G 2.62 119 *i* P **Pn 12 40 56.1 -1.8**
INDI IAML 12 41 27.4
comp=Z,330nm,1.0s
UESV Universidad de 2.63 339 *i* P **Pn 12 40 58.9 +0.8**
UESV *i* S **Sn 12 41 29.4 -0.8**
UESV IAML 12 41 37.7
comp=Z,3µm,1.0s
COEG Centro de Oper 2.65 337 *e*P **Pn 12 40 59.0 +0.6**
COEG Centro de Oper 2.65 337 *i* P **Pn 12 40 59.4 +1.0**
COEG IAML 12 41 35.4
comp=Z,2µm,1.0s
SCLA Alcaldia de Sa 2.67 341 *e*P **Pn 12 40 59.5 +0.8**
SCLA *e*S **Sn 12 41 29.5 -1.7**
SCLA Alcaldia de Sa 2.67 341 *i* P **Pn 12 40 59.6 +0.8**
SCLA *i* S **Sn 12 41 30.1 -1.1**
SCLA IAML 12 41 35.9
comp=Z,2µm,1.0s
SJTE Alcalda de S 2.70 335 *i* P **Pn 12 41 00.0 +0.9**
SJTE *i* S **Sn 12 41 30.2 -1.6**
SJTE IAML 12 41 32.2
comp=Z,3µm,1.0s
ACON Acoyapa 2.72 73 Pn **Pn 12 40 57.8 -1.4**
ACON Acoyapa 2.72 73 *i* P **Pn 12 40 58.9 -0.3**
ACON IAML 12 41 41.4
comp=Z,340nm,1.0s
LALI Alcalda de L 2.74 328 *e*P **Pn 12 40 59.4 -0.1**
LALI *e*S **Sn 12 41 29.6 -3.0**
PAVA Las Pavas 2.76 337 *e*P **Pn 12 41 00.6 +0.6**
PAVA *e*S **Sn 12 41 31.9 -1.5**
PAVA Las Pavas 2.76 337 *i* P **Pn 12 41 00.7 +0.8**
PAVA IAML 12 41 37.1
comp=Z,6µm,1.0s
LOMA Loma Larga 2.80 332 *i* P **Pn 12 41 01.0 +0.5**
LOMA *i* S **Sn 12 41 32.3 -2.0**
LOMA IAML 12 41 37.3
comp=Z,4µm,1.0s
SNET Serv Nac Est T 2.86 331 Pn **Pn 12 41 02.0 +0.7**
RCPN Sur Rio San Ju 2.90 36 *i* P **Pn 12 41 02.4 +0.6**
RCPN IAML 12 41 40.7
comp=Z,6.7nm,1.0s
PIC2 El Picacho 2.92 332 *e*P **Pn 12 41 03.1 +0.7**
PIC2 *e*S **Sn 12 41 36.6 -1.0**
PIC2 IAML 12 41 46.7
comp=Z,947nm,0.3s
PMON Piamonte 2.92 330 *i* P **Pn 12 41 02.9 +0.7**
PMON IAML 12 41 38.1
comp=Z,5µm,1.0s
BOQS Boqueron 2.93 331 *e*S **Sn 12 41 36.0 -1.7**
TGUH Tegucigalpa,Un 2.93 11 Pn **Pn 12 41 02.4 +0.1**
TGUH Tegucigalpa,Un 2.93 11 *i* P **Pn 12 41 03.5 +1.2**
TGUH *i* S **Sn 12 41 38.7 +1.1**
TGUH IAML 12 41 44.0
comp=Z,2µm,1.0s
YUSH Yuscaran 2.94 19 *e*P **Pn 12 41 03.5 +1.1**
JAYA Jayaque - finc 2.94 328 *e*P **Pn 12 41 02.4 -0.1**
JAYA *e*S **Sn 12 41 35.0 -2.9**
JAYA Jayaque - finc 2.94 328 *i* P **Pn 12 41 02.7 +0.2**
JAYA *i* S **Sn 12 41 34.9 -3.1**
JAYA IAML 12 41 38.1
comp=Z,8µm,1.0s
JTS Las Juntas de 2.95 107 Pn **Pn 12 41 01.8 -0.7**
JTS Las Juntas de 2.95 107 *e*P **Pn 12 41 03.0 +0.5**
JTS *e*S **Sn 12 41 37.5 -0.5**
JTS Las Juntas de 2.95 107 Pn **Pn 12 41 02.8 +0.4**
comp=Z,13nm,0.3s,baz=304,slow=20,SNR=14
JTS Sn **Sn 12 41 36.5 -1.5**
comp=Z,37nm,0.3s,baz=272,slow=18,SNR=14
JTS LR LR 12 42 09.1
comp=Z,605nm,19.1s,baz=278,slow=39
comp=Z,24nm,0.3s
CEDA San Andres 3.04 330 *e*S **Sn 12 41 38.3 -1.9**
ARE1 Arenal 1 3.13 103 Pn **Pn 12 41 04.7 -0.2**
LAFE Finca La Fe, P 3.17 115 *i* P **Pn 12 41 04.9 -0.5**
LAFE IAML 12 41 42.2
comp=Z,4.3nm,1.0s
CEVE Cerro Verde 3.18 327 *i* P **Pn 12 41 07.0 +1.1**
CEVE *i* S **Sn 12 41 43.8 -0.2**
CEVE IAML 12 41 54.6
comp=Z,3µm,1.0s
SBLS San Blas 3.19 327 *e*P **Pn 12 41 07.0 +1.0**
SNJE San Jose 3.20 327 *e*P **Pn 12 41 06.6 +0.5**
SNJE *e*S **Sn 12 41 42.7 -1.8**
SOCE Pocosol 3.24 103 **Pn 12 41 07.3 +0.7**
SOCE Pocosol 3.24 103 *i* P **Pn 12 41 07.2 +0.7**
SOCE *i* S **Sn 12 41 46.9 +1.7**
SOCE IAML 12 41 57.6
comp=Z,520nm,1.0s
RTR El Retiro 3.25 327 *e*P **Pn 12 41 07.5 +0.8**
NUBE Las Nubes 3.33 325 *e*P **Pn 12 41 08.1 +0.3**
NUBE *e*S **Sn 12 41 44.5 -2.9**
NUBE Las Nubes 3.33 325 *i* P **Pn 12 41 08.1 +0.3**
NUBE IAML 12 41 47.7
comp=Z,2µm,1.0s
COVE Coope Vega, Sa 3.39 97 Pn **Pn 12 41 06.4 -2.1**
JACO JACO, Garabito 3.45 115 Pn **Pn 12 41 08.8 -0.5**
JACO JACO, Garabito 3.45 115 *i* P **Pn 12 41 09.8 +0.5**
JACO IAML 12 41 49.4
comp=Z,370nm,1.0s
MTO3 Montecristo 3.55 335 Pn **Pn 12 41 10.9 0.0**
MTO3 Montecristo 3.55 335 *e*P **Pn 12 41 11.9 +0.9**
MTO3 *e*S **Sn 12 41 51.6 -1.5**
MTO3 Montecristo 3.55 335 *i* P **Pn 12 41 12.0 +1.1**
MTO3 IAML 12 41 56.4
comp=Z,550nm,1.0s
ESQI Esquipulas 3.69 336 **Pn 12 41 14.3 +1.6**
RIFO Rio Frio, Sara 3.92 102 *i* P **Pn 12 41 16.4 +0.5**
RIFO IAML 12 42 21.0
comp=Z,490nm,1.0s
OCM Ochomogo 4.00 108 *i* P **Pn 12 41 18.3 +1.2**
OCM IAML 12 41 24.1
comp=Z,640nm,1.0s
LCR2 La Lucha 2 4.01 110 Pn **Pn 12 41 17.9 +0.7**
LCR2 La Lucha 2 4.01 110 *i* P **Pn 12 41 18.4 +1.1**
LCR2 IAML 12 42 08.8
comp=Z,500nm,1.0s
VIRE VIRE 4.04 107 *i* P **Pn 12 41 20.1 +2.3**
VIRE IAML 12 41 27.8
comp=Z,950nm,1.0s
RIMA Rio Macho 4.13 109 **Pn 12 41 20.5 +1.6**
RIMA Rio Macho 4.13 109 *i* P **Pn 12 41 20.3 +1.4**
RIMA IAML 12 42 12.3
comp=Z,510nm,1.0s
NBG Las Nubes 4.20 324 *e*P **Pn 12 41 23.0 +3.1**
NBG *e*S **Sn 12 42 10.2 +0.9**
CDM Cerro de Muert 4.30 111 *i* P **Pn 12 41 22.5 +1.0**
CDM IAML 12 42 15.2
comp=Z,770nm,1.0s
FUG Fuego 3 4.40 318 *e*P **Pn 12 41 22.5 -0.1**
FUG *e*S **Sn 12 42 11.9 -2.0**
PEZE Perez Zeledon, 4.45 113 **Pn 12 41 24.4 +1.3**
PEZE Perez Zeledon, 4.45 113 *i* P **Pn 12 41 24.2 +1.1**
PEZE IAML 12 42 17.7
comp=Z,610nm,1.0s
OCHAL Ojochal 4.60 116 *i* P **Pn 12 41 25.9 +0.8**
OCHAL IAML 12 42 04.4
comp=Z,3.7nm,1.0s
PLAN Los Planes de 4.77 121 *i* P **Pn 12 41 28.2 +0.7**
PLAN IAML 12 42 25.9
comp=Z,890nm,1.0s
SRBA San Rafael, Bu 4.79 113 Pn **Pn 12 41 28.3 +0.4**
SRBA San Rafael, Bu 4.79 113 *i* P **Pn 12 41 29.0 +1.1**
SRBA IAML 12 42 24.8
comp=Z,470nm,1.0s
DRK0 Durika 4.88 112 **Pn 12 41 30.5 +1.3**
STG3 Santiaguito 3, 5.08 314 *e*P **Pn 12 41 33.4 +1.5**
STG3 *e*S **Sn 12 42 27.8 -2.9**
PIRO Carate, Puerto 5.20 121 *i* P **Pn 12 41 32.1 -1.3**
PIRO IVmB_BB 12 41 42.9
comp=Z,5µm,1.0s
PIRO IAML 12 42 34.0
comp=Z,400nm,1.0s
HUEH Huehuetenango 5.47 319 Pn **Pn 12 41 40.0 +2.7**
CDITO Canoas 5.51 117 Pn **Pn 12 41 37.0 -0.8**
CDITO Canoas 5.51 117 *e*P **Pn 12 41 40.0 +2.2**
SMCA Catarina 5.54 312 *i* P **Pn 12 41 39.6 +1.6**
BRU2 Volcan 5.58 114 *e*P **Pn 12 41 40.4 +1.7**
BRU2 *e*S **Sn 12 42 43.5 +0.6**
BC3P Paso Ancho 5.64 114 *e*P **Pn 12 41 41.4 +1.8**
PTPM Petroterminale 5.69 121 *e*P **Pn 12 41 42.0 +1.8**
PTPM *e*S **Sn 12 42 46.3 +0.7**
BCO2 Palmira 5.75 114 *e*P **Pn 12 41 43.4 +2.2**
BCO2 *e*S **Sn 12 42 48.6 +1.2**
LNBQ3 Los Naranjos, 5.80 113 *e*P **Pn 12 41 42.8 +1.0**
DVD David 5.95 117 *e*P **Pn 12 41 45.9 +2.2**
CHGR2 Aguacate 6.01 111 *e*P **Pn 12 41 45.8 +1.2**
CHGR2 *e*S **Sn 12 42 52.5 -1.1**
PETF Flores 6.05 341 Pn **Pn 12 41 45.4 +0.3**
CCIG Comitan 6.59 321 Pn **Pn 12 41 54.7 +2.0**
TEIG Tepich 9.02 357 LR LR 12 46 31.1
comp=Z,4µm,18.5s,baz=358,slow=42
CMIG Matias Romero 9.03 312 Pn **Pn 12 42 26.8 +0.7**
comp=Z,3.1nm,0.3s,baz=96,slow=11,SNR=41
CMIG Sn **Sn 12 44 04.1 -3.8**
comp=Z,0.1nm,0.3s,baz=53,slow=20,SNR=0.8
comp=Z,14nm,0.5s
TLIG Tlapa 12.20 303 Pn **Pn 12 43 10.7 +1.2**
PULU Pululahua 14.43 139 Pn **Pn 12 43 39.7 -0.7**
JRQG Juriquilla Cam 15.40 310 Pn **Pn 12 43 53.8 +0.7**
MOIG Morelia 15.41 305 Pn **Pn 12 43 54.1 +0.7**
COHC Cochancay 16.00 147 Pn **Pn 12 44 01.5 +0.7**
BOSC San Juan Bosco 16.98 146 Pn **Pn 12 44 12.8 -0.7**
SDV Santo Domingo 17.08 96 Pn **Pn 12 44 14.7 -0.1**
comp=Z,0.5nm,0.3s,baz=298,slow=6.0,SNR=5.7
comp=Z,3.4nm,0.9s
ZAIG Zacatecas 18.20 311 P **Pn 12 44 30.2 +1.5**
BAUV El Baul 19.60 95 P **P 12 44 43.3 -0.9**
833A Chaparral WMA, 20.23 329 **P 12 44 51.3 +0.5**
833A IAmb IAmb 12 44 52.8
comp=Z,67nm,1.4s
833A Chaparral WMA, 20.23 329 P **P 12 44 51.8 +1.0**
baz=145,SNR=7.6
TIGA Tifton 20.56 10 P Pn 12 44 57.3 +0.8
baz=192
HNDO Hondo 21.17 331 P **P 12 45 01.4 +0.4**
MLPR Magueyes Islan 21.21 69 P **P 12 44 59.4 -2.1**
MLPR IAmb IAmb 12 45 30.4
comp=Z,42nm,1.4s
NATX Nacogdoches 21.45 344 P **P 12 45 02.7 -1.3**
NATX IAmb IAmb 12 45 23.2
comp=Z,37nm,1.2s
435B Jarrell 21.52 337 P **P 12 45 04.3 -0.5**
435B IAmb IAmb 12 45 15.2
comp=Z,17nm,1.0s
152A Waverly Hall 21.59 7 **P 12 45 06.0 +0.4**
152A IAmb IAmb 12 45 21.2
comp=Z,20nm,1.0s
DRIO Del Rio 21.74 329 P **P 12 45 06.7 -0.5**
LRAL Lakeview Retre 21.78 2 P **P 12 45 09.4 +1.8**
baz=182
JCT Junction City 22.21 332 P **P 12 45 14.2 +1.9**
baz=147
GOGA Godfrey 22.50 10 P **P 12 45 15.6 +0.2**
GOGA IAmb IAmb 12 45 21.9
comp=Z,18nm,0.9s
GOGA Godfrey 22.50 10 P **P 12 45 16.7 +1.4**
baz=191
BRDY Brady 22.54 334 P **P 12 45 14.9 -0.9**
WHTX Lake Whitney, 22.56 338 P **P 12 45 18.0 +2.1**
baz=154
Y49A Blount Mountai 22.63 3 IAmb IAmb 12 45 29.4
comp=Z,12nm,0.8s
FW14 Alvarado 22.83 339 P **P 12 45 17.7 -1.1**
Y52A Lilburn 22.86 8 P **P 12 45 20.0 +0.9**
Y52A IAmb IAmb 12 45 32.4
comp=Z,32nm,1.1s
WLAR White Oak Lake 22.94 349 P **P 12 45 20.4 +0.5**
WLAR IAmb IAmb 12 45 47.3
comp=Z,18nm,0.9s
NHSC New Hope 22.94 17 P **P 12 45 21.2 +1.3**
baz=199
HPIG 22.99 316 P **P 12 45 21.7 +1.0**
OXF Oxford 23.29 357 P **P 12 45 25.1 +1.6**
baz=176
TXAR Lajitas Array 23.36 323 P **P 12 45 24.6 +0.3**
TXAR Lajitas Array 23.36 323 P **P 12 45 24.9 +0.5**
comp=Z,3.1nm,0.7s,baz=143,slow=9.8,SNR=22
comp=Z,3.1nm,0.7s
PLPT Palo Pinto 23.61 337 P **P 12 45 26.0 -0.8**
PLPT IAmb IAmb 12 45 28.6
comp=Z,18nm,0.8s
Z35A Perchaven, San 23.70 340 P **P 12 45 25.7 -1.9**
Z35A IAmb IAmb 12 45 46.0
comp=Z,13nm,0.6s
FW03 Perrin-Whitt E 23.72 338 IAmb IAmb 12 45 29.8
comp=Z,16nm,0.7s
MIAR Mount Ida 23.86 348 P **P 12 45 29.0 -0.1**
MIAR IAmb IAmb 12 45 36.9
comp=Z,16nm,0.9s
MIAR Mount Ida 23.86 348 P **P 12 45 29.9 +0.8**
baz=166,SNR=6.6
ABTX Abilene, Hawle 23.97 335 IAmb IAmb 12 45 31.9
comp=Z,19nm,0.8s
ABTX Abilene, Hawle 23.97 335 P **P 12 45 30.8 +0.6**
baz=150,SNR=6.7
SGCY Sterling City 24.03 331 P **P 12 45 28.9 -1.9**
SGCY IAmb IAmb 12 45 31.0
comp=Z,16nm,1.2s
W50A Signal Mountai 24.04 5 P **P 12 45 30.5 -0.3**
W50A IAmb IAmb 12 45 43.6
comp=Z,8.4nm,0.6s
CZSB Cruzeiro do Su 24.05 141 P **P 12 45 31.3 +0.2**
CZSB IAmb IAmb 12 45 34.3
comp=Z,19nm,0.7s
BG3 Lake Jocassee 24.14 10 P **P 12 45 31.4 -0.4**
BG3 IAmb IAmb 12 45 38.4
comp=Z,18nm,1.2s
CPCT Cooper Cave 24.36 7 P **P 12 45 34.4 +0.6**
CPCT IAmb IAmb 12 45 47.5
comp=Z,9.0nm,0.8s
MNHN Monahans 24.38 328 IAmb IAmb 12 45 56.0
comp=Z,17nm,1.2s
KMSC Kings Mountain 24.59 13 P **P 12 45 37.1 +1.2**
baz=195
SN01 Snyder 1 24.71 333 IAmb IAmb 12 45 39.0
comp=Z,21nm,1.2s
SN05 Snyder 5 24.73 333 P **P 12 45 37.2 0.0**
SN05 IAmb IAmb 12 45 40.6
comp=Z,11nm,0.9s
APMT Aspermont 24.78 335 IAmb IAmb 12 45 39.6
comp=Z,14nm,0.8s
V53A Saluda 24.82 10 P **P 12 45 38.1 +0.1**
V53A IAmb IAmb 12 45 50.9
comp=Z,12nm,0.7s
POST Post 25.16 332 IAmb IAmb 12 45 43.1
comp=Z,21nm,1.1s
DKNS Dickens 25.41 334 IAmb IAmb 12 45 45.7
comp=Z,9.6nm,0.8s
WMOK Wichita Mounta 25.51 339 P **P 12 45 44.6 +0.4**
baz=154,SNR=6.3
FNO Franklin 25.52 342 P **P 12 45 43.1 -1.1**
TZTN Tazewell 25.57 8 P **P 12 45 45.6 +0.9**
baz=190
TUL3 Leonard 25.68 345 IAmb IAmb 12 45 47.7
comp=Z,10nm,0.8s
TUL3 Leonard 25.68 345 P **P 12 45 46.6 +0.9**
baz=162
OK052 Battle Ridge R 26.03 343 IAmb IAmb 12 45 50.6
comp=Z,19nm,1.0s
MNTX Cornudas Mount 26.09 324 P **P 12 45 51.0 +1.4**
baz=138
OK033 Mehan 26.11 343 IAmb IAmb 12 45 51.5
comp=Z,20nm,1.0s
QUOK Quay 26.17 344 P **P 12 45 48.0 -2.2**
SMWD Samnorwood 26.38 337 IAmb IAmb 12 45 55.3
comp=Z,23nm,1.1s
MSTX Muleshoe 26.50 331 P **P 12 45 53.2 -0.2**
MSTX IAmb IAmb 12 46 14.9
comp=Z,11nm,0.8s
MSTX Muleshoe 26.50 331 P **P 12 45 55.2 +1.9**
baz=145
AMTX Amarillo 26.78 334 IAmb IAmb 12 45 59.1
comp=Z,38nm,0.9s
AMTX Amarillo 26.78 334 P **P 12 45 58.0 +2.3**
baz=148
BLOK Blackwell 26.86 343 IAmb IAmb 12 46 00.6
comp=Z,27nm,1.2s
S39A Bolivar 26.87 350 IAmb IAmb 12 45 56.8
comp=Z,12nm,0.7s
CCM Cathedral Cave 26.96 354 P **P 12 46 00.4 +3.2**
baz=172
U32A Winter Ranch, 27.07 340 IAmb IAmb 12 46 02.2
comp=Z,18nm,0.8s
OK032 Salt Plains WL 27.20 342 P **P 12 46 00.9 +1.5**
OK032 IAmb IAmb 12 46 02.2
comp=Z,15nm,0.8s
KAN09 Caldwell North 27.33 343 IAmb IAmb 12 46 03.8
comp=Z,13nm,0.7s
KAN01 Argonia South 27.38 343 IAmb IAmb 12 46 04.2
comp=Z,15nm,0.8s
319A Douglas 28.26 319 IAmb IAmb 12 46 12.5
comp=Z,10nm,1.1s
P38A Dawn 28.80 351 IAmb IAmb 12 46 19.8
comp=Z,20nm,1.4s
O53A New Philadelph 29.56 10 P **P 12 46 22.4 +2.0**
baz=193
ETMB Extrema 29.93 133 P **P 12 46 23.5 -0.5**
SSPA Standing Stone 30.64 15 P **P 12 46 32.1 +2.1**
baz=199
SDCO Great Sand Dun 30.86 332 P **P 12 46 34.1 +1.7**
baz=144
214A Organ Pipe Nat 30.98 316 P **P 12 46 34.9 +1.7**
baz=126
W18A Petrified Fore 31.07 324 P **P 12 46 37.0 +2.9**
baz=135
S22A 4UR Ranch, Cre 31.49 330 P **P 12 46 39.9 +2.0**
baz=142
SAML Samuel 31.62 128 P **P 12 46 38.1 -0.9**
SAML IAmb IAmb 12 46 38.9
comp=Z,8.8nm,0.8s
X16A Lo Mia Camp, P 31.62 321 IAmb IAmb 12 46 42.3
comp=Z,4.7nm,0.8s
Q24A Divide 31.70 334 P **P 12 46 42.4 +2.6**
baz=146
JFWS Jewell Farm 31.70 357 P **P 12 46 42.0 +2.6**
baz=175
MVCO Mesa Verde 31.92 328 P **P 12 46 44.0 +2.4**
baz=139
WUAZ Wupatki 32.32 322 IAmb IAmb 12 46 49.2
comp=Z,8.2nm,1.1s
WUAZ Wupatki 32.32 322 P **P 12 46 47.4 +2.3**
baz=133,SNR=5.5
ISCO Idaho Springs 32.60 334 P **P 12 46 49.7 +2.1**
baz=146
PDMCI Parker Dam,Lak 33.27 318 P **P 12 46 56.1 +2.9**
baz=128,SNR=7.0
W13A Hualapai Mount 33.60 319 P **P 12 46 58.7 +2.3**
W13A IAmb IAmb 12 46 59.9
comp=Z,11nm,1.2s
N23A Red Feather La 33.65 335 P **P 12 46 59.4 +2.6**
baz=146
HMU Henry Mountain 33.65 326 IAmb IAmb 12 47 05.8
comp=Z,8.5nm,1.2s
IKP In-Ko-Pah, Jac 33.67 314 P **P 12 46 59.3 +2.5**
baz=123
BC3 Big Chuckawall 33.77 316 P **P 12 47 00.1 +2.4**
baz=125
PHWY Pilot Hill 33.79 336 IAmb IAmb 12 47 41.2
comp=Z,19nm,1.1s
IRM Iron Mountain 33.85 317 P **P 12 47 01.1 +2.7**
baz=126
L61B Northampton 33.86 20 P **P 12 47 00.4 +2.2**
baz=207
MONP2 Monument Peak 34.02 314 P **P 12 47 01.6 +1.6**
baz=123
O20A White River Ci 34.05 331 P **P 12 47 01.9 +1.7**
baz=142
PKCU Pink Cliffs 34.18 324 IAmb IAmb 12 47 06.4
comp=Z,17nm,1.4s
KNB Kanab 34.19 323 IAmb IAmb 12 47 05.1
comp=Z,9.7nm,1.1s
HRV Adam Dziewonsk 34.30 22 P **P 12 47 03.7 +1.7**
baz=209
BELC Belle Mtn. Jos 34.34 316 P **P 12 47 05.0 +2.3**
baz=125
TPFO Pinon Flats 34.43 315 P **P 12 47 06.2 +2.7**
baz=124
GMRC Granite Mounta 34.56 317 P **P 12 47 07.2 +2.6**
baz=126
V12A Nelson 34.61 319 P **P 12 47 06.4 +1.5**
V12A IAmb IAmb 12 47 08.3
comp=Z,9.6nm,1.1s
SZCU Shurtz Canyon 34.74 323 P **P 12 47 06.9 +0.7**
HEC Hector,Ludlow 35.04 317 P **P 12 47 11.1 +2.4**
baz=125
TUQ Turquoise Moun 35.12 318 P **P 12 47 11.9 +2.5**
baz=126
LONY Lake Ozonia 35.23 16 P **P 12 47 12.1 +2.0**
baz=203
F33A 5 Mile Ranch, 35.31 350 IAmb IAmb 12 47 21.0
comp=Z,8.7nm,0.6s
K22A Casper 35.35 336 P **P 12 47 13.6 +2.2**
baz=147
GSC Goldstone, Bar 35.63 317 P **P 12 47 15.7 +1.9**
baz=125
LBNH Lisbon 35.70 20 P **P 12 47 15.9 +1.8**
baz=207
QSM Queen of Sheba 36.06 318 IAmb IAmb 12 47 20.6
comp=Z,8.6nm,1.3s
EDW2 Edwards Air Fo 36.20 316 P **P 12 47 21.4 +2.8**
baz=123
TPNV Topopah Spring 36.25 320 IAmb IAmb 12 47 23.0
comp=Z,6.9nm,1.1s
TPNV Topopah Spring 36.25 320 P **P 12 47 22.3 +3.2**
baz=128,SNR=5.9
LRMC Laurel Mtn Rad 36.32 317 P **P 12 47 22.6 +2.9**
baz=124
FURC Furnace Creek, 36.35 319 P **P 12 47 22.8 +3.0**
baz=126
S11A Rachel 36.37 321 IAmb IAmb 12 47 24.1
comp=Z,13nm,0.9s
DUG Dugway, Tooele 36.39 327 P **P 12 47 23.1 +2.8**
baz=136
MPMC Manual Prospec 36.52 318 P **P 12 47 23.5 +2.0**
baz=125
R11B Troy Canyon, C 36.72 322 P **P 12 47 25.8 +2.6**
baz=130
BW06 Boulder Array 36.74 333 P **P 12 47 25.9 +2.6**
baz=142
PDAR Pinedale Array 36.74 333 P **P 12 47 22.7 -0.6**
comp=Z,0.5nm,0.6s,baz=133,slow=11,SNR=5.3
PDAR PcP **PcP 12 49 45.1 -0.7**
comp=Z,0.9nm,0.9s,baz=142,slow=3.4,SNR=5.0

comp=Z,0.5nm,0.6s
EYMN Ely 36.80 356 P **P** **12 47 26.6 +3.1**
baz=174
ISA Isabella, Lake 36.96 316 P **P** **12 47 27.7 +2.6**
baz=124
GRAC Grapevine Rang 36.99 319 P **P** **12 47 26.4 +1.1**
GRAC IAmb IAmb 12 47 29.1
comp=Z,21nm,1.3s
GRAC Grapevine Rang 36.99 319 P **P** **12 47 28.4 +3.1**
baz=126,SNR=6.1
AGMN Agassiz Nation 37.63 351 IAmb IAmb 12 47 42.0
comp=Z,12nm,1.4s
SNOW Snow King Moun 37.83 332 P **P** **12 47 32.0 -0.6**
SNOW IAmb IAmb 12 47 35.1
comp=Z,7.4nm,0.8s
LHV Little Huntoon 38.46 320 IAmb IAmb 12 47 41.8
comp=Z,13nm,0.9s
PTLB Pontes e Lacer 38.81 132 P **P** **12 47 40.1 -0.7**
WAKR Walker 39.20 319 P **P** **12 47 46.1 +2.0**
YERR Yerington 39.36 320 IAmb IAmb 12 47 48.8
comp=Z,16nm,1.2s
ULM Lac du Bonnet 39.53 352 IAmb IAmb 12 48 01.2
comp=Z,16nm,1.5s
ULM Lac du Bonnet 39.53 352 P **P** **12 47 44.3 -2.2**
comp=Z,3.3nm,0.4s,baz=162,slow=12,SNR=4.8
comp=Z,3.3nm,0.4s
DGMT Dagmar 39.63 343 IAmb IAmb 12 47 48.1
comp=Z,9.7nm,0.8s
DGMT Dagmar 39.63 343 P **P** **12 47 47.8 +0.4**
baz=154
PNTR Pine Nut 39.65 320 P **P** **12 47 48.7 +0.8**
PNTR IAmb IAmb 12 47 54.5
comp=Z,14nm,1.4s
MCMT McKenzie Canyo 39.84 332 P **P** **12 47 50.3 +0.9**
EMB Emerald Bay 39.90 320 IAmb IAmb 12 47 53.6
comp=Z,13nm,1.1s
MPK Martis Peak 40.04 320 P **P** **12 47 52.0 +0.8**
MPK IAmb IAmb 12 47 54.8
comp=Z,13nm,1.1s
F10A Beach Ranch, E 42.77 330 P **P** **12 48 14.0 +0.7**
L04D Klamath Falls 43.14 322 P **P** **12 48 16.5 0.0**
L04D IAmb IAmb 12 48 18.3
comp=Z,15nm,1.2s
KBO Bosley Butte 44.31 321 P **P** **12 48 27.0 +1.2**
SCHQ Schefferville 46.61 17 P **P** **12 48 42.2 -1.5**
comp=Z,4.1nm,0.5s,baz=218,slow=7.2,SNR=20
comp=Z,4.1nm,0.5s
PLCA Paso Flores 54.05 164 P **P** **12 49 39.5 -0.8**
comp=Z,3.7nm,0.9s,baz=350,slow=7.3,SNR=6.6
comp=Z,3.7nm,0.9s
YKA Yellowknife Ar 54.75 345 P **P** **12 49 44.0 -1.0**
comp=Z,1.1nm,0.9s,baz=139,slow=7.9,SNR=12
YKA PcP **PcP** **12 50 47.5 0.0**
comp=Z,0.8nm,0.7s,baz=142,slow=4.1,SNR=9.8
comp=Z,1.1nm,0.9s
U33K Whale Pass 56.91 332 P **P** **12 50 02.9 +2.4**
baz=124
DLBC Dease Lake 56.91 335 P **P** **12 50 01.7 +1.0**
baz=128
O30N Mendenhall 60.78 335 P **P** **12 50 27.9 +0.4**
baz=123
P29M Windy Craggy 60.88 334 P **P** **12 50 29.3 +1.1**
baz=121
M30M Minto, Yukon 62.05 337 P **P** **12 50 37.1 +1.0**
baz=123
M29M Somme Creek 62.63 336 P **P** **12 50 41.6 +1.5**
baz=121
L29M L29M 62.85 337 P **P** **12 50 42.5 +1.1**
baz=122
CTG Chitna Glacier 63.09 334 P **P** **12 50 44.0 +0.8**
baz=118
I30M Mount Dempster 63.38 339 P **P** **12 50 45.6 +0.6**
baz=124
G31M Satah River 63.69 341 P **P** **12 50 47.6 +0.8**
baz=127
F31M Tsiigehtchic 63.84 342 P **P** **12 50 48.5 +0.7**
baz=128
M27K Edge Creek, AK 63.97 335 P **P** **12 50 50.4 +1.4**
baz=118
EPYK Eagle Plains 64.15 340 P **P** **12 50 51.0 +1.1**
baz=125
L27K Beaver Creek, 64.28 336 P **P** **12 50 52.2 +1.3**
baz=118
INK Inuvik 64.32 343 P **P** **12 50 51.9 +1.0**
baz=129
F30M Barrier River 64.57 342 P **P** **12 50 53.4 +0.8**
baz=126
N25K Chitina, Valde 64.79 334 P **P** **12 50 55.5 +1.2**
baz=115
A36M Sachs Harbour 64.83 348 IAmb IAmb 12 50 55.3
comp=Z,5.6nm,1.1s
A36M Sachs Harbour 64.83 348 P **P** **12 50 54.1 -0.1**
baz=139
EGAK Eagle 64.86 338 P **P** **12 50 54.9 +0.3**
baz=120
EYAK Cordova Ski Ar 64.87 332 P **P** **12 50 56.2 +1.6**
baz=113
KLU Klutina 65.32 333 P **P** **12 50 59.1 +1.4**
baz=113
I27K Kandik River 65.44 338 P **P** **12 50 59.4 +1.0**
baz=119
SCRK Sand Creek 65.57 336 P **P** **12 51 00.6 +1.3**
baz=116
J26L Joseph Creek 65.64 337 P **P** **12 51 00.7 +1.0**
baz=117
E29M Blow River 65.67 342 P **P** **12 51 00.8 +1.0**
baz=124
M24K Tolsona, Glenn 65.68 334 P **P** **12 51 00.9 +0.9**
baz=114
H27K Steamboat Moun 65.72 339 P **P** **12 51 01.2 +1.1**
baz=120
PAX Paxson 65.73 335 P **P** **12 51 01.2 +0.9**
baz=114
F28M Old Crow 65.87 341 P **P** **12 51 02.1 +1.0**
baz=122
SCM Sheep Creek Mo 66.07 333 P **P** **12 51 03.3 +0.7**
baz=112
K24K Donnelly Dome 66.21 336 P **P** **12 51 04.1 +0.8**
baz=114
M23K Glacier View 66.23 333 P **P** **12 51 04.3 +0.8**
baz=112
J25K Salcha River, 66.39 337 P **P** **12 51 05.4 +0.9**
baz=115
KNK Knik Glacier 66.42 333 P **P** **12 51 05.6 +0.9**
baz=111
SEW Seward 66.42 331 P **P** **12 51 05.4 +0.8**
baz=110
D28M Stokes Point 66.45 343 P **P** **12 51 05.8 +1.1**
baz=124
SML Sawmill 66.50 333 P **P** **12 51 06.5 +1.2**
baz=111
WAT6 Susitna Watana 66.53 334 P **P** **12 51 06.5 +0.9**
baz=112
PMR Palmer 66.78 333 P **P** **12 51 08.1 +1.1**
baz=110
PRP Porcupine Dome 66.84 337 P **P** **12 51 07.9 +0.4**
baz=116
RC01 Rabbit Creek A 66.88 332 P **P** **12 51 07.8 +0.1**
RC01 IAmb IAmb 12 51 09.2
comp=Z,13nm,0.8s
RC01 Rabbit Creek A 66.88 332 P **P** **12 51 08.6 +1.0**
baz=110
HDA Harding Lake 66.92 336 P **P** **12 51 08.5 +0.6**
baz=114,SNR=5.8
ILAR Eielson Array 67.05 336 P **P** **12 51 08.1 -0.6**
ILAR Eielson Array 67.05 336 P **P** **12 51 08.6 -0.1**
comp=Z,5.5nm,1.1s,baz=124,slow=4.3,SNR=24
comp=Z,5.5nm,1.1s
F26K Sheenjek River 67.33 340 P **P** **12 51 11.3 +0.9**
baz=118
SUA Susitna One 67.47 332 P **P** **12 51 12.2 +0.7**
baz=109
MCK McKinley 67.47 335 P **P** **12 51 12.3 +0.9**
baz=111,SNR=6.8
CUT Chulitna 67.57 333 P **P** **12 51 13.1 +1.2**
baz=110
G25K Bearman Lake 67.59 339 P **P** **12 51 13.3 +1.3**
baz=115
F25K Christian Rive 67.79 339 P **P** **12 51 14.6 +1.2**
baz=116
NEA2 Nenana 67.84 336 P **P** **12 51 14.3 +0.6**
baz=112
H24K Noodor Dome 67.86 337 P **P** **12 51 15.0 +1.2**
baz=113
TRF Thorofare Moun 67.93 335 P **P** **12 51 15.1 +0.6**
TRF Thorofare Moun 67.93 335 P **P** **12 51 15.1 +0.6**
baz=110
SKT Skwentna 67.99 333 P **P** **12 51 15.2 +0.5**
baz=108,SNR=5.0
E25K Arctic Village 68.00 340 P **P** **12 51 15.6 +0.9**
baz=116
N20K Mount Spurr 68.06 332 P **P** **12 51 16.1 +0.9**
baz=107
G24K Hadweenzic Riv 68.06 338 P **P** **12 51 16.4 +1.4**
baz=114
P19K Oil Pt 68.10 330 P **P** **12 51 16.1 +0.7**
baz=106
I23K Minto, Yukon-K 68.16 336 P **P** **12 51 16.7 +1.1**
baz=112,SNR=7.3
F24K Squaw Lake 68.54 339 P **P** **12 51 19.5 +1.5**
baz=114
PPLA Purkeypile 68.57 334 P **P** **12 51 18.7 +0.3**
baz=108
MLY Manley 68.67 336 P **P** **12 51 19.0 +0.1**
MLY Manley 68.67 336 P **P** **12 51 19.7 +0.8**
baz=110,SNR=7.0
M20K Styx River 68.68 332 P **P** **12 51 19.6 +0.5**
baz=107
CAST Castle Rocks 68.69 334 P **P** **12 51 19.4 +0.4**
baz=108
D25K Kavik River 68.80 341 P **P** **12 51 20.5 +0.9**
baz=116
CHUM Lake Minchumin 68.93 335 P **P** **12 51 20.5 0.0**
baz=108
G23K Bananza Creek 69.00 338 P **P** **12 51 21.6 +0.6**
baz=112
N19K Bonanza Creek 69.01 331 P **P** **12 51 21.7 +0.5**
baz=105
Q17K Contact Creek 69.08 328 P **P** **12 51 22.2 +0.5**
baz=103
O18K Koktuh Hills 69.11 330 P **P** **12 51 22.6 +0.9**
baz=104
L20K Farewell, AK 69.19 333 P **P** **12 51 23.0 +0.9**
baz=106
I21K Tanana 69.21 336 P **P** **12 51 23.2 +1.0**
baz=109
H22K Ishtalitna Cre 69.22 337 P **P** **12 51 22.7 +0.4**
baz=110
COLD Coldfoot 69.25 338 P **P** **12 51 23.9 +1.5**
baz=112,SNR=6.6
M19K Big River Lodg 69.26 332 P **P** **12 51 23.4 +0.9**
baz=106
E23K Chandalar 69.36 339 P **P** **12 51 24.5 +1.3**
baz=112
K20K Telida 69.52 334 P **P** **12 51 24.2 0.0**
baz=108
G22K Bettles 69.62 338 P **P** **12 51 25.6 +0.9**
baz=110
N18K Kilae Creek 69.64 331 P **P** **12 51 25.3 +0.3**
baz=104
H21K Melozitna Rive 69.69 336 P **P** **12 51 25.5 +0.3**
baz=108
C24K Franklin Bluff 69.71 341 P **P** **12 51 25.6 +0.4**
baz=114
J20K Nowinta River 69.79 335 P **P** **12 51 25.8 0.0**
baz=107
M18K Stony River 69.81 332 P **P** **12 51 26.0 0.0**
baz=104
O17K Koliganek Bris 70.02 330 P **P** **12 51 28.1 +0.8**
baz=102
CHGN Chignik 70.03 326 P **P** **12 51 28.3 +0.9**
baz=100
I20K Naaghedeneel 70.10 335 P **P** **12 51 28.4 +0.7**
baz=106
E22K Anaktuvuk Pass 70.15 339 IAmb IAmb 12 51 29.7
comp=Z,5.8nm,1.1s
E22K Anaktuvuk Pass 70.15 339 P **P** **12 51 29.0 +1.0**
baz=110
G21K Allakaket 70.24 337 P **P** **12 51 29.3 +0.8**
baz=108,SNR=5.4
J19K Porman 70.36 334 P **P** **12 51 29.6 +0.3**
baz=105
F21K Alatna River 70.45 338 P **P** **12 51 31.0 +1.2**
baz=108,SNR=12
H20K Anotleneega Mo 70.47 336 P **P** **12 51 30.3 +0.3**
baz=106
M17K Holitna River 70.54 331 P **P** **12 51 31.1 +0.6**
baz=103
J18K Innoko River 70.70 334 P **P** **12 51 31.8 +0.4**
baz=104
D22K Ayikyak River 70.71 340 P **P** **12 51 32.5 +1.1**
baz=110
N16K Nishlik Lake 70.99 330 P **P** **12 51 32.8 -0.5**
baz=101
GCSA Galena City Sc 71.08 335 P **P** **12 51 32.7 -0.9**
baz=104
L17K Donlin 71.10 332 P **P** **12 51 34.1 +0.3**
baz=102
H19K Roundabout Mou 71.11 336 P **P** **12 51 34.9 +1.1**
baz=105
K17K Iditarod 71.23 333 P **P** **12 51 34.6 0.0**
baz=102
F20K Avaraart Lake 71.23 337 P **P** **12 51 34.6 +0.1**
F20K IAmb IAmb 12 51 36.5
comp=Z,5.8nm,1.1s
F20K Avaraart Lake 71.23 337 P **P** **12 51 35.6 +1.0**
baz=106
B22K Teshekpuk Lake 71.45 341 IAmb IAmb 12 51 37.3
comp=Z,12.2nm,0.8s
B22K Teshekpuk Lake 71.45 341 P **P** **12 51 36.4 +0.6**
baz=109
C21K Knifeblade Rid 71.52 340 P **P** **12 51 37.0 +0.8**
baz=108
G19K Purcell Mounta 71.52 336 P **P** **12 51 37.5 +1.2**
baz=104
L16K Owhat River 71.56 332 P **P** **12 51 37.7 +1.1**
baz=101
E20K Nigu River 71.74 339 P **P** **12 51 39.0 +1.2**
baz=106
H18K Honhosa River 71.79 335 P **P** **12 51 39.1 +1.1**
baz=103
E19K Redstone River 71.91 338 P **P** **12 51 39.0 +0.4**
baz=105
F19K Shaleruckik Mo 71.96 337 IAmb IAmb 12 51 40.4
comp=Z,7.0nm,0.9s
F19K Shaleruckik Mo 71.96 337 P **P** **12 51 39.7 +0.8**
baz=104
D20K Etivluk River 72.02 339 P **P** **12 51 40.5 +1.2**
baz=106,SNR=7.2
G18K Tagagawik 72.08 336 IAmb IAmb 12 51 41.7
comp=Z,9.4nm,1.1s
G18K Tagagawik 72.08 336 P **P** **12 51 41.2 +1.4**
baz=103
J16K Anvik River 72.37 333 P **P** **12 51 43.3 +1.8**
baz=100
H17K Granme Mounta 72.39 335 P **P** **12 51 43.0 +1.4**
baz=102
D19K Kuna River 72.49 339 P **P** **12 51 42.9 +0.7**
baz=104
L15K Ungalak Mounta 72.50 331 P **P** **12 51 43.7 +1.4**
baz=99
I17K Unalakleet 72.52 334 IAmb IAmb 12 51 44.8
comp=Z,5.8nm,0.8s
I17K Unalakleet 72.52 334 P **P** **12 51 43.9 +1.5**
baz=100
B20K Meade River 72.56 340 P **P** **12 51 42.7 +0.2**
B20K IAmb IAmb 12 51 44.3
comp=Z,7.4nm,0.9s
B20K Meade River 72.56 340 P **P** **12 51 43.7 +1.2**
baz=106
M14K Bethel 72.59 330 P **P** **12 51 43.9 +1.2**
baz=98
K15K Wolf Creek Mou 72.62 332 P **P** **12 51 44.0 +1.0**
baz=99
F18K Selawik 72.63 337 P **P** **12 51 43.9 +1.0**
baz=102
FALS False Pass 72.66 324 P **P** **12 51 43.5 +0.2**
baz=95
A21K Barrow 72.76 342 P **P** **12 51 44.4 +0.8**
baz=107
G17K Kiwalik Mounta 72.81 335 P **P** **12 51 45.2 +1.2**
baz=101
C19K Lookout Ridge 73.16 339 P **P** **12 51 47.5 +1.4**
baz=103
E18K Tukpahlearik C 73.17 337 P **P** **12 51 46.2 0.0**
baz=102
F17K Baldwin Pennin 73.22 336 P **P** **12 51 47.5 +1.1**
baz=101
H16K Elim 73.31 334 P **P** **12 51 48.1 +1.1**
baz=99
G16K Koyuk River 73.49 335 IAmb IAmb 12 51 50.1
comp=Z,6.2nm,0.9s
G16K Koyuk River 73.49 335 P **P** **12 51 49.5 +1.5**
baz=99
E17K Hotham Inlet 73.57 337 P **P** **12 51 49.5 +1.1**
baz=100,SNR=9.5
J14K Nanvaranak Lak 73.62 332 P **P** **12 51 51.1 +2.3**
baz=98
C18K Utukok River 73.63 339 P **P** **12 51 49.8 +0.9**
baz=101
A19K Wainwright 73.91 340 P **P** **12 51 51.5 +1.1**
baz=102
B18K Kokolik River 73.99 339 P **P** **12 51 52.7 +1.8**
baz=101
G15K Niukluk 74.13 335 P **P** **12 51 53.1 +1.3**
baz=98
C17K DeLong Mountai 74.32 338 P **P** **12 51 54.4 +1.5**
baz=99
F15K North Star Dit 74.48 335 P **P** **12 51 55.5 +1.7**
baz=97
ANM Nome 74.64 334 P **P** **12 51 56.5 +1.7**
baz=96
C16K Lisburne Hills 75.08 338 IAmb IAmb 12 51 59.1
comp=Z,6.8nm,1.0s
C16K Lisburne Hills 75.08 338 P **P** **12 51 58.4 +1.2**
baz=97
F14K Arctic Creek 75.14 335 P **P** **12 51 59.4 +1.7**
baz=96
TNA Tin City 75.81 335 P **P** **12 52 02.8 +1.3**
baz=94
ESDC Sonseca Array 78.27 52 P **P** **12 52 14.7 -1.3**
comp=Z,1.0nm,0.9s,baz=286,slow=6.7,SNR=2.3
comp=Z,1.0nm,0.9s
BILL Bilibino 85.58 339 P **P** **12 52 54.4 +0.6**
TORD Torodi Ar. Bea 87.05 77 P **P** **12 52 59.4 -2.6**
comp=Z,0.7nm,1.0s,baz=262,slow=2.9,SNR=2.4
comp=Z,0.7nm,1.0s
KEST Kesra 89.30 54 LR LR 13 29 16.5
comp=Z,495nm,21.2s,baz=323,slow=33
KURBB Kurchatov Arra 117.33 10 PKP **PKPdf** **12 59 00.1 -1.3**
comp=Z,0.1nm,0.5s,baz=353,slow=1.8,SNR=1.8
SONM Songino Array 119.92 349 PKP **PKPdf** **12 59 05.6 -1.0**
comp=Z,0.3nm,0.7s,baz=341,slow=3.1,SNR=2.4
ASAR Alice Springs 138.44 247 PKP **PKPdf** **12 59 41.1 -1.1**
comp=Z,1.0nm,0.8s,baz=118,slow=2.9,SNR=6.4
WRA Warramunga Arr 138.55 253 PKP **PKPdf** **12 59 41.3 -1.2**
comp=Z,1.1nm,0.7s,baz=93,slow=2.1,SNR=8.6
CMAR Chiang Mai Arr 149.82 347 PKPbc **PKPbc** **13 00 05.8 -1.0**
comp=Z,4.3nm,0.8s,baz=344,slow=3.3,SNR=23

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*NNC **02** 12:47:22.6±1.4, 51.58N×75.26E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=32.8km s-min=9.0km az=26.0, Suspected Mining explosion.*

*IDC **02** 12:47:29.4±1.0, 51.63N×75.71E, h0km, mbtmp2.5/4, ML1.8/4, Error ellipse: s-maj=28.5km s-min=8.1km az=30.0*

ISC 02 12:47:25.6±1.0, 51.60N±0.08×75.38E±0.05, h0km, n10, σ1§36/12, 4C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra** 3.4nm,0.8s	**2.21**	**115**	⇓Pg		**Pn**	**Pn**	**12 48 05.0**	**+1.4**
KURBB	20nm,0.6s			⇓Lg		Lg	Lg	12 48 35.6	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=303,slow=19,SNR=20	**2.21**	**115**	Pn		**Pb**	**Pb**	**12 48 05.1**	**-1.3**
KURBB	0.3nm,0.3s,baz=309,slow=30,SNR=13			Lg		Lg	Lg	12 48 34.6	
KURK	**Kurchatov** 1.3nm,0.5s	**2.23**	**112**	⇑Pg		**Pn**	**Pn**	**12 48 03.8**	**+0.1**
KURK	5.9nm,0.5s			⇓Lg		Lg	Lg	12 48 32.7	
BVA0	**Borovoye Array** 2.6nm,1.1s,baz=120,slow=15,SNR=5.9	**3.38**	**297**	⇑Pg		**Pn**	**Pn**	**12 48 20.4**	**+0.9**
BVA0	4.2nm,0.5s,baz=113,slow=26,SNR=7.8			⇑Lg		Lg	Lg	12 49 11.3	
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=128,slow=16,SNR=7.2	**3.38**	**297**	Pn		**Pb**	**Pb**	**12 48 25.1**	**-1.2**
BVAR	0.2nm,0.3s,baz=112,slow=28,SNR=14			Sn		**Sb**	**Sb**	**12 49 08.6**	**+0.7**
BRVK	**Borovoye** 1.9nm,0.6s	**3.45**	**297**	⇓Pg		**Pb**	**Pb**	**12 48 25.2**	**-2.3**
BRVK	6.9nm,0.7s			⇓Lg		Lg	Lg	12 49 12.0	
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=255,slow=14,SNR=4.6	**6.19**	**64**	Pn		**Pn**	**Pn**	**12 48 58.6**	**+0.4**
ZALV	0.1nm,0.3s,baz=258,slow=28,SNR=2.2			Sn		**Sn**	**Sn**	**12 50 10.5**	**+0.9**
I46RU	0.6nm,0.5s **ZALESOVO INFRA** 0.1nm,1.0s,baz=250,slow=338,SNR=1.6	**6.19**	**64**	I		I	I	13 22 10.0	
MK31	**Makanchi Array** 0.4nm,0.6s	**6.61**	**134**	⇑Sn		**Sn**	**Sn**	**12 50 20.3**	**+0.4**
MK31	1.6nm,0.7s,baz=320,slow=26,SNR=8.1			Lg		Lg	Lg	12 50 53.4	
MKAR	**Makanchi Array** baz=324,slow=14,SNR=2.9	**6.61**	**134**	Pn		**Pn**	**Pn**	**12 49 05.1**	**+1.2**
MKAR	baz=304,slow=21,SNR=3.2			Sn		**Sn**	**Sn**	**12 50 18.5**	**-1.4**
MKAR	0.2nm,0.3s,baz=326,slow=25,SNR=12 0.2nm,0.6s			Lg		Lg	Lg	12 50 54.5	

IDC 02 12:54:21.9±21.0, 23.16N×11.23W, h0km, mb3.8/4, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=553.5km s-min=48.1km az=65.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea** 0.3nm,0.3s,baz=315,slow=12,SNR=8.7	**15.80**	**127**	Pn		Pn	Pn	12 58 05.8	0.0
TORD	0.1nm,0.3s,baz=315,slow=47,SNR=1.8 1.0nm,0.3s			Sn		Sn	Sn	13 00 53.6	-8.2
HFS	**Hagfors** 1.0nm,0.4s,baz=210,slow=8.3,SNR=4.0 1.0nm,0.4s	**40.86**	**19**	P		P	P	13 02 04.5	-0.8
FINES	**FINESS Array B** 0.6nm,0.5s,baz=235,slow=6.6,SNR=6.0 0.6nm,0.5s	**45.99**	**24**	P		P	P	13 02 47.2	+0.6
KURBB	**Kurchatov Arra** 0.6nm,0.6s,baz=289,slow=6.6,SNR=6.5 0.6nm,0.6s	**72.30**	**42**	P		P	P	13 05 49.2	-0.1
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=307,slow=5.2,SNR=4.5 0.4nm,0.5s	**75.80**	**45**	P		P	P	13 06 09.8	0.0

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*IDC **02** 12:55:03.1±0.7, 65.69S×175.89W, h0km, mb4.2/7, mbtmp4.1/8, ML3.6/1, MS5.1/34, Error ellipse: s-maj=32.6km s-min=18.1km az=49.0*

*NEIC **02** 12:55:05.6, 65.66S×175.19W, h22km, Moment Tensor Solution. Duration: 38 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.16; $M_{\theta\phi}$=2.63; $M_{\phi\phi}$=-2.46; $M_{r\theta}$=-1.33; $M_{\theta\theta}$=0.24; $M_{\phi r}$=1.00; Fault plane solution: M_0=3.04000×10^{17} NP1: ϕ_s=317.11000°, δ=89.12000°, λ=32.47000°. NP2: ϕ_s=226.55000°, δ=57.53000°, λ=178.96000°. Principal axes: T 3.2243, Plg=23.0000°, Azm=187.0000°; N -0.3760, Plg=58.0000°, Azm=318.0000°; P -2.8483, Plg=22.0000°, Azm=87.0000°;*

*NEIC **02** 12:55:06.0±2.2, 65.9S±0.1×175.6W±0.3, h10km±1km, mb5.2/38, Ms_20 5.4/154, Mwb5.4/7, Mww5.6/13 Error ellipse: s-maj=20.3km s-min=16.6km az=70.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.06; $M_{\theta\theta}$=1.65; $M_{\phi\phi}$=-1.72; $M_{r\theta}$=-0.25; $M_{\theta\phi}$=-0.30; $M_{\phi r}$=-0.14; Fault plane solution: M_0=1.74000×10^{17} NP1: ϕ_s=229.91000°, δ=87.71000°, λ=170.55000°. NP2: ϕ_s=320.29000°, δ=80.56000°, λ=2.32000°. Principal axes: T 1.7158, Plg=8.0000°, Azm=185.0000°; N 0.0436, Plg=80.0000°, Azm=36.0000°; P -1.7594, Plg=5.0000°, Azm=275.0000°;*

*NEIC **02** 12:55:05.6, 65.86S×175.68W, h22km*

*NEIC **02** 12:55:05.6, 65.87S×175.68W, h10km*

*GCMT **02** 12:55:06.9±0.1, 65.78S±0.01×175.70W±0.02, h12km, MW5.5/89, Moment Tensor Solution. s64,c98; s89,c177; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.25±.03; $M_{\theta\theta}$=1.95±.03; $M_{\phi\phi}$=-1.70±.03; $M_{r\theta}$=0.61±.07; $M_{\theta\phi}$=0.27±.03; $M_{\phi r}$=0.42±.07; Best double couple: M_0=1.98000×10^{17} NP1:ϕ_s=319.00000°, δ=90.00000°, λ=21.00000°. NP2:ϕ_s=229.00000°, δ=69.00000°, λ=179.00000°. Principal axes: T 2.1430, Plg=15.0000°, Azm=186.0000°; N -0.3220, Plg=69.0000°, Azm=320.0000°; P -1.8170, Plg=14.0000°, Azm=92.0000°; nsta=1 refers to body waves,*

cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 02 12:55:05.3±0.4, 65.92S±0.07°×175.66W±0.09, h10km, n200, σ1.29/97, mb5.1/24, MS5.3/110, 2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.06**	**196**	Pn	**Pn**	**12 58 11.4**	**+0.8**
VNDA	**Vanda**	**13.45**	**201**	Pn	**Pn**	**12 58 17.1**	**+1.3**
VNDA	**Vanda**	**13.45**	**201**	Pn	**Pn**	**12 58 16.9**	**+1.2**
	0.3nm,0.3s,baz=62,slow=17,SNR=20						
VNDA				Sn	**Sn**	**13 00 41.2**	**-3.8**
	0.1nm,0.3s,baz=135,slow=20,SNR=1.3						
VNDA				LR	LR	13 02 34.3	
	comp=Z,17μm,18.9s,baz=39,slow=33						
	1.3nm,0.5s						
CTZ	**Chatham Island**	**22.24**	**358**	IAms_20	IAms_20	13 05 53.3	
	comp=Z,9μm,20.0s						
LBZ	**Lake Benmore**	**22.94**	**333**	IAms_20	IAms_20	13 06 53.7	
	comp=Z,9μm,20.0s						
RPZ	**Rata Peaks**	**23.43**	**335**	LR	LR	13 06 59.5	
	comp=Z,5μm,21.5s,baz=162,slow=31						
QSPA	**South Pole Qui**	**24.16**	**180**	P	**P**	**13 00 23.9**	**+2.4**
QSPA	**South Pole Qui**	**24.16**	**180**	P	**P**	**13 00 23.6**	**+2.1**
	comp=Z,7.9nm,0.9s,baz=54,slow=2.9,SNR=23						
QSPA				PcP	**PcP**	**13 04 01.4**	**-0.1**
	comp=Z,3.6nm,1.2s,baz=322,slow=2.1,SNR=2.1						
QSPA				LR	LR	13 09 19.8	
	comp=Z,7μm,18.0s,baz=50,slow=35						
	comp=Z,7.9nm,0.9s						
INZ	**Inchbonnie**	**24.33**	**336**	IAMs_20	IAMs_20	13 07 54.5	
	comp=Z,7μm,18.0s						
THZ	**Tophouse**	**25.05**	**339**	IAMs_20	IAMs_20	13 08 35.5	
	comp=Z,7μm,19.0s						
SNZO	**South Karori**	**25.25**	**343**	P	**P**	**13 00 31.6**	**+0.4**
QRZ	**Quartz Range**	**26.02**	**339**	IAMs_20	IAMs_20	13 08 56.2	
	comp=Z,7μm,18.0s						
BKZ	**Black Stump Fm**	**27.18**	**347**	IAMs_20	IAMs_20	13 09 30.9	
	comp=Z,6μm,18.0s						
RTZ	**Ruatahuna**	**27.68**	**348**	IAMs_20	IAMs_20	13 09 25.2	
	comp=Z,9μm,20.0s						
URZ	**Urewera**	**28.02**	**348**	LR	LR	13 10 33.7	
	comp=Z,7μm,18.4s,baz=278,slow=34						
TOZ	**Tahuroa Road**	**28.70**	**345**	IAMs_20	IAMs_20	13 10 11.1	
	comp=Z,6μm,19.0s						
BELA	**Belgrano 2**	**34.52**	**166**	P	**P**	**13 01 53.4**	**+0.4**
BELA				IAmb	IAmb	13 01 56.8	
	comp=Z,59nm,1.3s						
RAO	**Raoul Island**	**36.72**	**357**	LR	LR	13 13 38.2	
	comp=Z,2μm,21.8s,baz=159,slow=31						
MAW	**Mawson**	**40.51**	**210**	P	**P**	**13 02 44.8**	**+1.0**
MAW	**Mawson**	**40.51**	**210**	LR	LR	13 18 48.0	
	comp=Z,3μm,21.8s,baz=141,slow=35						
PMSA	**Palmer Station**	**40.60**	**142**	LR	LR	13 17 15.5	
	comp=Z,1μm,18.3s,baz=244,slow=33						
ELIB	**Princess Elisa**	**41.79**	**189**	*d*P	**P**	**13 02 54.5**	**+0.1**
ELIB				*d*PP	**PnPn**	**13 04 34.7**	**-0.9**
SNAA	**Sanae**	**42.58**	**177**	P	**P**	**13 03 01.0**	**+0.2**
SNAA				IAmb	IAmb	13 03 04.2	
	comp=Z,58nm,1.6s						
SNAA	**Sanae**	**42.58**	**177**	P	**P**	**13 03 01.9**	**+1.1**
	comp=Z,7.8nm,1.1s,baz=192,slow=7.2,SNR=7.6						
SNAA				LR	LR	13 19 56.1	
	comp=Z,3μm,20.4s,baz=194,slow=35						
	comp=Z,7.8nm,1.1s						
STKA	**Stephens Creek**	**42.64**	**302**	P	**P**	**13 03 01.9**	**+0.2**
STKA	**Stephens Creek**	**42.64**	**302**	P	**P**	**13 02 58.5**	**-3.1**
	comp=Z,2.1nm,0.8s,baz=143,slow=20,SNR=2.3						
STKA				LR	LR	13 17 10.3	
	comp=Z,822nm,20.2s,baz=153,slow=31						
	comp=Z,2.1nm,0.8s						
BBOO	**Buckleboo**	**43.80**	**295**	P	**P**	**13 03 11.7**	**+0.7**
OUENC	**Ouen Island, N**	**44.94**	**337**	P	**P**	**13 03 20.6**	**+0.5**
ONTNC	**Ouen Toro**	**45.11**	**336**	P	**P**	**13 03 22.2**	**+0.7**
DZM	**Mont Dzumac**	**45.34**	**336**	P	**P**	**13 03 24.6**	**+1.1**
DZM	**Mont Dzumac**	**45.34**	**336**	LR	LR	13 21 01.0	
	comp=Z,2μm,18.2s,baz=181,slow=34						
EIDS	**Eidsvold**	**45.66**	**316**	P	**P**	**13 03 25.2**	**-0.7**
EIDS				IAmb	IAmb	13 03 30.9	
	comp=Z,42nm,1.4s						
RAR	**Rarotonga**	**45.88**	**21**	LR	LR	13 17 35.7	
	comp=Z,3μm,20.8s,baz=196,slow=30						
GO09	**Cerro Castillo**	**49.44**	**126**	P	**P**	**13 03 56.3**	**+1.3**
H01W1	**Cape Leeuwin H**	**50.68**	**272**	T	T	13 58 57.8	
	baz=148,slow=76,SNR=73						
H01W2	**Cape Leeuwin H**	**50.69**	**271**	T	T	13 58 59.8	
	baz=148,slow=76,SNR=101						
H01W3	**Cape Leeuwin H**	**50.70**	**272**	T	T	13 58 58.9	
	baz=148,slow=76,SNR=61						
NWAO	**Narrogin (SRO)**	**51.13**	**276**	IAMs_20	IAMs_20	13 20 22.1	
	comp=Z,4μm,20.0s						
NWAO	**Narrogin (SRO)**	**51.13**	**276**	LR	LR	13 20 33.3	
	comp=Z,5μm,20.9s,baz=140,slow=30						
PPTF	**Pamatai, Papee**	**51.29**	**33**	P	**P**	**13 04 09.5**	**+0.1**
PPT	**Papeete**	**51.31**	**33**	LR	LR	13 19 57.8	
	comp=Z,1μm,21.4s,baz=30,slow=29						
CTA	**Charters Tower**	**52.06**	**313**	LR	LR	13 23 06.0	
	comp=Z,1μm,19.1s,baz=156,slow=32						
CTAO	**Charters Tower**	**52.06**	**313**	P	**P**	**13 04 14.8**	**-0.3**
ASAR	**Alice Springs**	**52.87**	**298**	P	**P**	**13 04 21.1**	**0.0**
ASAR	**Alice Springs**	**52.87**	**298**	P	**P**	**13 04 18.6**	**-2.4**
	comp=Z,1.0nm,0.8s,baz=156,slow=7.5,SNR=11						
ASAR				PcP	**PcP**	**13 05 30.7**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=155,slow=4.6,SNR=4.8						
ASAR				LR	LR	13 23 55.7	
	comp=Z,429nm,18.6s,baz=152,slow=33						
	comp=Z,1.0nm,0.8s						
AS31	**Alice Springs**	**52.87**	**298**	P	**P**	**13 04 21.5**	**+0.4**
COYC	**Coyhaique**	**54.45**	**123**	IAMs_20	IAMs_20	13 23 31.9	
	comp=Z,3μm,18.0s						
MORW	**Morawa**	**55.00**	**277**	P	**P**	**13 04 36.4**	**-0.1**
MORW				IAmb	IAmb	13 04 37.0	
	comp=Z,23nm,1.2s						
RPN	**Rapa Nui**	**55.91**	**80**	LR	LR	13 22 57.0	
	comp=Z,3μm,21.2s,baz=214,slow=30						
WR0	**Warramunga Arr**	**56.05**	**300**	P	**P**	**13 04 43.1**	**-1.0**
WB2	**Warramunga Arr**	**56.13**	**300**	P	**P**	**13 04 43.5**	**-1.2**
WB2				IAmb	IAmb	13 05 07.8	
	comp=Z,21nm,1.3s						
WRA	**Warramunga Arr**	**56.13**	**300**	P	**P**	**13 04 43.9**	**-0.9**
WRA	**Warramunga Arr**	**56.13**	**300**	P	**P**	**13 04 42.0**	**-2.7**
	comp=Z,2.5nm,0.8s,baz=162,slow=6.3,SNR=12						
WRA				LR	LR	13 26 40.4	
	comp=Z,2μm,18.8s,baz=150,slow=34						
	comp=Z,2.5nm,0.8s						
WRAB	**Tennant Creek**	**56.14**	**300**	P	**P**	**13 04 43.6**	**-1.2**
WRAB				IAmb	IAmb	13 04 48.5	
	comp=Z,28nm,1.6s						
WB0	**Warramunga Arr**	**56.27**	**300**	P	**P**	**13 04 44.2**	**-1.5**
WB0				IAmb	IAmb	13 04 51.6	
	comp=Z,25nm,1.4s						
LL02	**Futaleuf**	**56.61**	**122**	P	**P**	**13 04 48.8**	**+0.9**
LL02				IAmb	IAmb	13 04 52.5	
	comp=Z,60nm,2.0s						
LL01	**San Ignacio de**	**57.13**	**121**	P	**P**	**13 04 52.0**	**+0.4**
LL01				IAmb	IAmb	13 05 05.1	
	comp=Z,30nm,1.6s						
PLCA	**Paso Flores**	**59.23**	**121**	P	**P**	**13 05 07.0**	**+0.5**
PLCA				IAmb	IAmb	13 05 14.2	
	comp=Z,36nm,1.8s						
PLCA	**Paso Flores**	**59.23**	**121**	P	**P**	**13 05 07.1**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=258,slow=11,SNR=5.1						
PLCA				LR	LR	13 25 31.5	
	comp=Z,764nm,19.1s,baz=214,slow=31						
	comp=Z,2.4nm,0.9s						
GO06	**Curarrehue**	**59.93**	**120**	P	**P**	**13 05 11.6**	**+0.3**
PMG	**Port Moresby**	**61.93**	**317**	LR	LR	13 27 16.3	
	comp=Z,897nm,21.5s,baz=172,slow=31						
CRZF	**Crozet Islands**	**62.16**	**215**	IAMs_20	IAMs_20	13 30 01.7	
	comp=Z,3μm,21.0s						
H03S2	**Juan Fernandez**	**62.26**	**111**	T	T	14 13 50.4	
	baz=206,slow=74						
H03S1	**Juan Fernandez**	**62.26**	**111**	T	T	14 13 35.9	
	baz=206,slow=74						
H03S3	**Juan Fernandez**	**62.28**	**111**	T	T	14 13 48.6	
	baz=206,slow=74						
BO02	**Sierra Bellavi**	**64.45**	**118**	P	**P**	**13 05 41.3**	**-0.3**
TRQA	**Tornquist**	**64.55**	**127**	P	**P**	**13 05 42.9**	**+0.7**
TRQA				IAmb	IAmb	13 05 43.5	
	comp=Z,15nm,1.1s						
LMEL	**Las Melosas**	**65.50**	**118**	P	**P**	**13 05 49.2**	**+0.6**
LMEL				IAmb	IAmb	13 06 11.4	
	comp=Z,14nm,1.1s						
SOEI	**Soe**	**69.19**	**294**	IAMs_20	IAMs_20	13 36 25.7	
	comp=Z,1μm,19.0s						
LCO	**Las Campanas**	**69.68**	**116**	P	**P**	**13 06 14.8**	**-0.4**
LCO				IAmb	IAmb	13 06 27.7	
	comp=Z,24nm,1.4s						
AC04	**Llanos de Chal**	**70.27**	**115**	P	**P**	**13 06 19.0**	**+0.5**
AC02	**Maricunga**	**72.23**	**116**	P	**P**	**13 06 31.0**	**+0.1**
GO02	**Mina Guanaco**	**73.58**	**115**	P	**P**	**13 06 38.2**	**-0.6**
GO02				IAmb	IAmb	13 08 00.2	
	comp=Z,26nm,1.5s						
ITQB	**Itaqui**	**73.98**	**128**	P	**P**	**13 06 40.0**	**-0.7**
ITQB				IAmb	IAmb	13 06 55.0	
	comp=Z,41nm,1.3s						
LVC	**Limon Verde**	**76.15**	**114**	P	**P**	**13 06 53.0**	**-0.7**
LVC				IAmb	IAmb	13 07 08.7	
	comp=Z,16nm,1.0s						
LVC	**Limon Verde**	**76.15**	**114**	LR	LR	13 32 56.8	
	comp=Z,1μm,19.9s,baz=214,slow=30						
CPUP	**Villa Florida**	**76.84**	**126**	P	**P**	**13 06 57.3**	**+0.2**
CPUP				IAmb	IAmb	13 07 11.5	
	comp=Z,44nm,1.6s						
CPUP	**Villa Florida**	**76.84**	**126**	P	**P**	**13 06 57.1**	**0.0**
	comp=Z,1.9nm,0.7s,baz=168,slow=6.2,SNR=3.5						
CPUP				LR	LR	13 37 25.6	
	comp=Z,1μm,18.7s,baz=204,slow=33						
	comp=Z,1.9nm,0.7s						
LEM	**Lembang**	**78.39**	**279**	LR	LR	13 36 37.6	
	comp=Z,1μm,20.8s,baz=174,slow=32						
PB11	**IPOC Station P**	**78.46**	**112**	P	**P**	**13 07 05.9**	**-0.6**
PB11				IAmb	IAmb	13 07 20.1	
	comp=Z,45nm,1.5s						
SUR	**Sutherland**	**81.19**	**194**	LR	LR	13 39 37.6	
	comp=Z,2μm,21.3s,baz=178,slow=33						
LPAZ	**La Paz**	**82.21**	**112**	P	**P**	**13 07 26.7**	**-0.5**
NNA	**Nana**	**82.72**	**103**	LR	LR	13 34 36.3	
	comp=Z,690nm,21.9s,baz=200,slow=29						
DAV	**Davao City (W)**	**84.28**	**301**	LR	LR	13 43 58.3	
	comp=Z,239nm,21.2s,baz=132,slow=35						
BOSA	**Boshof**	**84.40**	**198**	LR	LR	13 41 49.4	
	comp=Z,1μm,21.2s,baz=190,slow=33						
SIV	**San Ignacio**	**85.09**	**119**	LR	LR	13 39 49.7	
	comp=Z,715nm,20.4s,baz=256,slow=32						
ATAH	**Atahualpa**	**86.50**	**100**	LR	LR	13 37 31.4	
	comp=Z,1μm,20.4s,baz=223,slow=29						
LBTB	**Lobatse**	**87.90**	**199**	LR	LR	13 44 07.0	
	comp=Z,1μm,20.4s,baz=174,slow=33						
ETMB	**Extrema**	**88.86**	**112**	P	**P**	**13 07 57.9**	**-1.6**
ETMB				IAmb	IAmb	13 08 13.2	
	comp=Z,13nm,1.3s						
BDFB	**Brasilia**	**89.83**	**130**	LR	LR	13 45 54.0	
	comp=Z,303nm,18.2s,baz=48,slow=34						
SAML	**Samuel**	**90.80**	**114**	P	**P**	**13 08 08.4**	**-0.3**
SAML				IAmb	IAmb	13 08 22.7	
	comp=Z,21nm,1.3s						
TSUM	**Tsumeb**	**94.54**	**193**	LR	LR	13 50 05.5	
	comp=Z,1μm,18.0s,baz=168,slow=35						
LSZ	**Lusaka**	**97.08**	**203**	IAMs_20	IAMs_20	13 49 13.4	
	comp=Z,2μm,19.0s						
LSZ	**Lusaka**	**97.08**	**203**	LR	LR	13 49 34.7	
	comp=Z,2μm,19.4s,baz=188,slow=34						
ROSC	**El Rosal**	**99.02**	**98**	LR	LR	13 46 10.4	
	comp=Z,1μm,19.4s,baz=222,slow=31						
JTS	**Las Juntas de**	**99.60**	**86**	LR	LR	13 44 30.2	
	comp=Z,867nm,18.7s,baz=166,slow=30						
HDC	**Heredia**	**99.69**	**87**	IAMs_20	IAMs_20	13 44 11.7	
	comp=Z,871nm,20.0s						
QIZ	**Qiongzhong**	**101.06**	**292**	P	**Pdif**	**13 08 55.5**	**+0.5**
QIZ				PP	**PP**	**13 13 04.5**	**+0.8**
QIZ				S	**Sdif**	**13 20 34.6**	**+1.1**
QIZ				SS	**SS**	**13 27 37.0**	**+4.2**
QIZ				LR	LR		
	comp=Z,490nm,26.0s						
QIZ				LR	LR		
	comp=Z,380nm,32.4s						
QIZ				LR	LR		
	comp=Z,550nm,27.0s						
SDV	**Santo Domingo**	**104.19**	**100**	IAMs_20	IAMs_20	13 48 59.7	
	comp=Z,1μm,20.0s						
SLVN	**Son La**	**105.44**	**287**	IAMs_20	IAMs_20	13 53 40.2	
	comp=Z,652nm,21.0s						
KIBK	**Kibwezi**	**107.70**	**216**	IAMs_20	IAMs_20	13 55 07.4	
	comp=Z,1μm,21.0s						
KMBO	**Kilima Mbogo**	**109.06**	**215**	IAMs_20	IAMs_20	13 57 59.9	
	comp=Z,709nm,19.0s						
EPT	**El Paso**	**110.70**	**58**	IAMs_20	IAMs_20	13 59 32.3	
	comp=Z,861nm,18.0s						
PZH	**PanZhiHua**	**110.94**	**288**	PKP	**PKiKP**	**13 13 39.2**	**+0.9**
Y22D	**IRIS PASSCAL I**	**112.65**	**57**	IAMs_20	IAMs_20	13 50 33.9	
	comp=Z,845nm,21.0s						
LODK	**Lodwar**	**113.89**	**214**	IAMs_20	IAMs_20	13 58 14.0	
	comp=Z,838nm,20.0s						
CD2	**Chengdu**	**114.11**	**292**	PKP	**PKiKP**	**13 13 45.0**	**+0.9**
SMRT	**St. Maarten**	**115.52**	**103**	IAMs_20	IAMs_20	13 58 36.0	
	comp=Z,729nm,18.0s						
MOD	**Modoc Plateau**	**115.64**	**43**	IAMs_20	IAMs_20	13 58 12.7	
	comp=Z,634nm,19.0s						
ELK	**Elko**	**116.05**	**47**	IAMs_20	IAMs_20	14 00 47.5	
	comp=Z,821nm,19.0s						
DUG	**Dugway, Tooele**	**116.29**	**49**	IAMs_20	IAMs_20	14 01 34.0	
	comp=Z,596nm,19.0s						
FURI	**Furi**	**118.35**	**219**	IAMs_20	IAMs_20	14 01 58.1	
	comp=Z,838nm,21.0s						
ATD	**Arta Tunnel**	**119.72**	**225**	IAMs_20	IAMs_20	14 01 04.6	
	comp=Z,822nm,21.0s						
HHC	**Hu-ho-hao-te**	**120.14**	**303**	*e*PKP	**PKPdf**	**13 13 53.6**	**-1.8**
BTO	**Baotou**	**120.45**	**302**	*e*PKP	**PKPdf**	**13 13 54.1**	**-1.9**
BTO				SS	SS	13 31 51.1	-1.1
BTO				AMB	AMB		
	comp=Z,460nm,6.8s						
BTO				LR	LR		
	comp=Z,390nm,15.7s						
BTO				LR	LR		
	comp=Z,440nm,15.9s						
BTO				LR	LR		
	comp=Z,650nm,16.7s						
O22K	**Cooper Landing**	**127.56**	**16**	IAMs_20	IAMs_20	14 07 42.5	
	comp=Z,1μm,21.0s						
HIN	**Hinchinbrook I**	**127.86**	**18**	IAMs_20	IAMs_20	14 04 00.5	
	comp=Z,1μm,18.0s						
L19K	**White Mountain**	**128.72**	**12**	IAMs_20	IAMs_20	14 01 27.0	
	comp=Z,822nm,20.0s						
GHO	**Glory Hole Cre**	**128.91**	**16**	IAMs_20	IAMs_20	14 05 52.2	
	comp=Z,934nm,20.0s						
VRDI	**Verde Repeater**	**129.06**	**19**	IAMs_20	IAMs_20	14 00 39.3	
	comp=Z,1μm,20.0s						
CTGM	**Chitina Glacie**	**129.11**	**21**	IAMs_20	IAMs_20	13 59 22.5	
	comp=Z,1μm,20.0s						
MCARA	**McCarthy VSAT**	**129.27**	**20**	IAMs_20	IAMs_20	13 59 24.8	
	comp=Z,1μm,19.0s						
N25K	**Chitina, Valde**	**129.28**	**19**	IAMs_20	IAMs_20	14 00 54.9	
	comp=Z,995nm,20.0s						
CAST	**Castle Rocks**	**130.19**	**14**	IAMs_20	IAMs_20	14 01 39.0	
	comp=Z,991nm,21.0s						
TRF	**Thorofare Moun**	**130.40**	**15**	IAMs_20	IAMs_20	14 10 16.6	
	comp=Z,1μm,18.0s						
ANM	**Nome**	**130.41**	**6**	IAMs_20	IAMs_20	14 03 14.7	
	comp=Z,681nm,20.0s						
L26K	**Log Cabin Wild**	**130.81**	**19**	IAMs_20	IAMs_20	14 04 00.4	
	comp=Z,1μm,19.0s						
BPAW	**Bear Paw Mtn.**	**130.97**	**14**	IAMs_20	IAMs_20	14 15 30.9	
	comp=Z,932nm,18.0s						
RIDG	**Independent Ri**	**131.30**	**18**	IAMs_20	IAMs_20	14 04 43.5	
	comp=Z,942nm,19.0s						
BINY	**Binghamton**	**131.42**	**78**	IAMs_20	IAMs_20	14 12 21.0	
	comp=Z,603nm,19.0s						
WMQ	**Urumqi**	**131.58**	**286**	*e*PKP	**PKiKP**	**13 14 18.4**	**+0.3**
F15K	**North Star Dit**	**131.58**	**6**	IAMs_20	IAMs_20	14 03 52.7	
	comp=Z,724nm,21.0s						
SCRK	**Sand Creek**	**131.64**	**18**	IAMs_20	IAMs_20	14 01 11.3	
	comp=Z,788nm,20.0s						
HDA	**Harding Lake**	**131.70**	**16**	PKPdf	**PKPdf**	**13 14 16.0**	**-0.6**
MLY	**Manley**	**131.90**	**14**	IAMs_20	IAMs_20	14 13 22.1	
	comp=Z,821nm,19.0s						
I21K	**Tanana**	**131.93**	**13**	IAMs_20	IAMs_20	14 00 38.8	
	comp=Z,684nm,20.0s						
K27K	**Chicken**	**131.94**	**19**	IAMs_20	IAMs_20	14 02 51.3	
	comp=Z,1μm,19.0s						
IL31		**132.06**	**16**	PKPdf	**PKiKP**	**13 14 18.1**	**-0.1**
ILAR	**Eielson Array**	**132.06**	**16**	PKPdf	**PKiKP**	**13 14 19.1**	**+0.8**
ILAR	**Eielson Array**	**132.06**	**16**	PKP	**PKPdf**	**13 14 15.2**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=238,slow=2.4,SNR=5.4						
I23K	**Minto, Yukon-K**	**132.15**	**15**	PKPdf	**PKPdf**	**13 14 17.6**	**+0.2**
J26L	**Joseph Creek**	**132.20**	**18**	IAMs_20	IAMs_20	14 02 40.1	
	comp=Z,861nm,21.0s						
G19K	**Purcell Mounta**	**132.45**	**10**	IAMs_20	IAMs_20	14 07 37.7	
	comp=Z,646nm,20.0s						
IMAR	**Indian Mountai**	**132.56**	**12**	PKPdf	**PKiKP**	**13 14 19.2**	**-0.1**
KSH	**Kashi**	**132.69**	**273**	PKP	**PKiKP**	**13 14 24.4**	**+3.8**
EGAK	**Eagle**	**132.78**	**19**	IAMs_20	IAMs_20	14 04 15.5	
	comp=Z,1μm,20.0s						
J29N	**Klondike Camp**	**132.89**	**21**	IAMs_20	IAMs_20	14 01 14.4	
	comp=Z,1μm,20.0s						
F19K	**Shaleruckik Mo**	**133.09**	**10**	IAMs_20	IAMs_20	14 08 35.5	
	comp=Z,749nm,19.0s						
F20K	**Avaraart Lake**	**133.45**	**11**	IAMs_20	IAMs_20	14 02 07.0	
	comp=Z,808nm,22.0s						
E18K	**Tukpahlearik C**	**133.49**	**8**	IAMs_20	IAMs_20	14 04 27.2	
	comp=Z,705nm,20.0s						
I28M	**Miner Creek**	**133.58**	**20**	IAMs_20	IAMs_20	14 04 01.7	
	comp=Z,901nm,19.0s						
G23K	**Bananza Creek**	**133.61**	**14**	IAMs_20	IAMs_20	13 59 10.3	
	comp=Z,686nm,20.0s						
F21K	**Alatna River**	**133.79**	**12**	IAMs_20	IAMs_20	14 16 10.2	
	comp=Z,660nm,18.0s						
G24K	**Hadweenzic Riv**	**133.86**	**15**	IAMs_20	IAMs_20	14 15 41.0	
	comp=Z,892nm,18.0s						
BILL	**Bilibino**	**134.29**	**351**	IAMs_20	IAMs_20	14 01 46.6	
	comp=Z,568nm,22.0s						
F24K	**Squaw Lake**	**134.61**	**15**	IAMs_20	IAMs_20	14 03 47.7	
	comp=Z,766nm,20.0s						
C18K	**Utukok River**	**134.68**	**7**	IAMs_20	IAMs_20	14 06 15.6	
	comp=Z,700nm,20.0s						
E22K	**Anaktuvuk Pass**	**134.83**	**12**	IAMs_20	IAMs_20	14 05 54.1	
	comp=Z,758nm,21.0s						
EPYK	**Eagle Plains**	**134.91**	**21**	IAMs_20	IAMs_20	14 05 16.8	
	comp=Z,979nm,20.0s						
E25K	**Arctic Village**	**135.44**	**16**	IAMs_20	IAMs_20	14 05 16.6	
	comp=Z,953nm,20.0s						
F28M	**Old Crow**	**135.64**	**19**	IAMs_20	IAMs_20	14 05 19.1	
	comp=Z,875nm,20.0s						
YKA	**Yellowknife Ar**	**135.69**	**36**	PKP	**PKPdf**	**13 14 21.9**	**-2.2**
	comp=Z,0.1nm,0.5s,baz=260,slow=2.3,SNR=1.3						
MKAR	**Makanchi Array**	**136.18**	**284**	PKPdf	**PKiKP**	**13 14 27.6**	**+0.3**
MKAR	**Makanchi Array**	**136.18**	**284**	PKP	**PKPdf**	**13 14 24.4**	**-1.2**
	comp=Z,2.2nm,1.1s,baz=134,slow=4.2,SNR=5.1						
D25K	**Kavik River**	**136.50**	**15**	IAMs_20	IAMs_20	14 06 40.8	
	comp=Z,2nm,20.0s						
E29M	**Blow River**	**136.63**	**19**	IAMs_20	IAMs_20	14 01 38.3	
	comp=Z,828nm,21.0s						
D27M	**Malcolm River**	**137.04**	**17**	IAMs_20	IAMs_20	14 07 30.4	
	comp=Z,722nm,21.0s						
KK31	**Karatay Array**	**137.93**	**271**	PKPdf	**PKiKP**	**13 14 30.8**	**-0.2**
KKAR	**Karatay Array**	**137.93**	**271**	PKPdf	**PKiKP**	**13 14 31.8**	**+0.8**
GHAJ	**Ghor Haditha**	**140.52**	**224**	IAMs_20	IAMs_20	14 23 25.5	
	comp=Z,725nm,18.0s						
KURBB	**Kurchatov Arra**	**140.74**	**284**	PKP	**PKPdf**	**13 14 31.6**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=136,slow=2.2,SNR=8.0						
CSS	**Mathiatis**	**144.58**	**223**	IAMs_20	IAMs_20	14 29 16.2	
	comp=Z,490nm,19.0s						
SCHQ	**Schefferville**	**145.13**	**73**	PKPbc	**PKPbc**	**13 14 40.8**	**-0.2**
	comp=Z,18nm,0.8s,baz=238,slow=2.6,SNR=13						
GURO	**Guroymak-BITLI**	**145.14**	**237**	PKPbc	**PKPdf**	**13 14 43.3**	**+1.1**
GAZ	**Gaziantep**	**145.48**	**230**		**PKiKP**	**13 14 45.4**	**-1.3**
GNI	**Garni**	**145.61**	**242**		**PKiKP**	**13 14 46.4**	**-0.6**
GNI	**Garni**	**145.61**	**242**	IAMs_20	IAMs_20	14 28 18.4	
	comp=Z,423nm,19.0s						
BVAR	**Borovoye Array**	**145.83**	**281**	PKPbc	**PKPdf**	**13 14 42.2**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=128,slow=4.0,SNR=7.4						
BRVK	**Borovoye**	**145.90**	**281**	PKPbc	**PKPab**	**13 14 44.2**	**+0.1**
AVE	**Averroes**	**146.59**	**162**	PKPdf	**PKPbc**	**13 14 46.3**	**+0.1**
KARS	**Kars**	**146.62**	**240**	PKPdf	**PKPbc**	**13 14 46.2**	**0.0**
KARP	**Karpathos**	**146.74**	**215**	IAMs_20	IAMs_20	14 23 33.3	
	comp=Z,902nm,20.0s						
ARPR	**Arapgir-MALATY**	**146.87**	**233**	IAMs_20	IAMs_20	14 27 28.8	
	comp=Z,505nm,19.0s						
AKH	**Akhalkalaki**	**147.16**	**241**	PKPbc	**PKPab**	**13 14 49.3**	**-0.2**
ELL	**Elmali**	**147.19**	**220**		pPKPab	13 14 51.6	-0.6
ABKAR	**Akbulak array**	**147.23**	**267**	PKPbc	**PKPab**	**13 14 48.8**	**-0.5**
BNN	**Bunyan**	**147.44**	**229**	PKPbc	**PKPab**	**13 14 49.6**	**-1.1**

SALP	**Salfit**	**1.47 197**	P	**Pn**	**13 36 09.0**	**-0.5**
SALP	**Salfit**	**1.47 197**	S	**Sn**	**13 36 29.5**	**0.0**
DSI	**Dead Sea**	**1.92 188**	P	**Pn**	**13 36 14.8**	**-1.0**
DSI	**Dead Sea**	**1.92 188**	S	**Sn**	**13 36 39.9**	**-0.7**
AMAZ	**Amatzia**	**2.05 199**	P	**Pn**	**13 36 16.8**	**-0.7**
AMAZ	**Amatzia**	**2.05 199**	S	**Sn**	**13 36 43.8**	**+0.1**
YTIR	**Yattir**	**2.16 193**	P	**Pn**	**13 36 18.8**	**-0.4**
YTIR	**Yattir**	**2.16 193**	S	**Sn**	**13 36 47.1**	**+0.3**
GHAJ	**Ghor Haditha**	**2.17 183**	P	**Pn**	**13 36 18.6**	**-0.5**
GHAJ	**Ghor Haditha**	**2.17 183**	S	**Sn**	**13 36 47.0**	**+0.2**
MSBI	**Mazada**	**2.17 188**	P	**Pn**	**13 36 19.9**	**+0.7**
MSBI	**Mazada**	**2.17 188**	S	**Sn**	**13 36 46.9**	**0.0**

DSN ***02*** *13:54:40.7±2.6,27°.37N×54°.48E,h10km,ML3.0/11, Error ellipse: s-maj=31.5km s-min=14.6km az=4.0*
TEH ***02*** *13:54:42.4,27°.22N×54°.55E,h8km±58km,ML3.4*
OMAN ***02*** *13:54:44.6±0.1,27°.04N×54°.43E,h10km,mb4.8/2, ml3.2/22, Error ellipse: s-maj=1.0km s-min=0.4km az=7.0*
IDC ***02*** *13:54:46.3±4.3,26°.96N×54°.42E,h66km±61km,mb3.4/11, mbtmp3.7/12,ML3.3/1, Error ellipse: s-maj=39.4km s-min=21.8km az=8.0*

ISC 02 13:54:41.6±2.8, 27°.13N±0°.03×54°.49E±0°.03, h10km±19km, n81,σ1°68/116, mb3.6/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.55**	**349**	Pg	**Pb**	**13 54 51.3**	**-2.1**
LMD1	**Lamerd**	**1.20**	**280**	Pg	**Pb**	**13 55 05.9**	**+1.4**
LMD1				Sg	**Sn**	**13 55 24.7**	**+3.8**
GENO	**Geno**	**1.52**	**79**	Pg	**Pb**	**13 55 10.5**	**+0.5**
JHRM	**Jahrom**	**1.59**	**330**	Pg	**Pb**	**13 55 11.9**	**+0.7**
SHME	**Shamm**	**1.83**	**126**	P	**Pn**	**13 55 13.9**	**+0.7**
SHME				S	**Sb**	**13 55 40.0**	**+1.9**
SHME	**Shamm**	**1.83**	**126**	P	**Pb**	**13 55 14.7**	**-0.5**
SHME				S	**Sb**	**13 55 40.0**	**+1.9**
IBND	**Bandar-abas**	**1.85**	**80**	Pg	**Pb**	**13 55 15.2**	**-0.1**
QIR1	**Qir**	**1.86**	**317**	Pn	**Pb**	**13 55 16.2**	**+0.5**
UMQ	**Umm Al-Quwin**	**1.91**	**146**	P	**Pb**	**13 55 16.6**	**0.0**
UMQ				S	**Sb**	**13 55 42.0**	**+1.4**
BANOM	**Banah**	**2.02**	**126**	P	**Pn**	**13 55 16.4**	**+0.6**
BANOM	**Banah**	**2.02**	**126**	P	**Pb**	**13 55 17.9**	**-0.5**
BANOM				S	**Sb**	**13 55 44.7**	**+1.1**
MASF	**Masafi**	**2.30**	**139**	P	**Pb**	**13 55 23.1**	**-0.3**
MASF				S	**Sb**	**13 55 51.3**	**-0.6**
MSFE	**Esma-Masafi**	**2.31**	**139**	P	**Pb**	**13 55 22.5**	**-1.0**
NAZ	**Nazwa, Dubai**	**2.38**	**154**	P	**Pb**	**13 55 23.7**	**-0.8**
NAZ	**Nazwa, Dubai**	**2.38**	**154**	P	**Pb**	**13 55 24.5**	**-0.1**
NAZ				S	**Sb**	**13 55 54.2**	**+0.1**
MDH	**Madha**	**2.44**	**138**	P	**Pn**	**13 55 23.8**	**+2.2**
MDH	**Madha**	**2.44**	**138**	P	**Pb**	**13 55 25.7**	**+0.1**
MDH				S	**Sn**	**13 55 53.3**	**+1.7**
FAQ	**Al Faqa, Dubai**	**2.57**	**157**	P	**Pb**	**13 55 27.2**	**-0.8**
FAQ				S	**Sb**	**13 55 59.6**	**-0.1**
AJN	**Ajban**	**2.60**	**170**	P	**Pb**	**13 55 27.7**	**-0.6**
AJN				S	**Sn**	**13 55 57.6**	**+2.2**
ASUD	**Al Ashush, Dub**	**2.61**	**163**	P	**Pn**	**13 55 26.2**	**+2.3**
ASUD	**Al Ashush, Dub**	**2.61**	**163**	P	**Pb**	**13 55 27.7**	**-0.8**
ASUD				S	**Sb**	**13 55 59.4**	**-1.2**
JRN	**Qarnain Island**	**2.63**	**215**	P	**Pb**	**13 55 27.8**	**-1.2**
JRN				S	**Sn**	**13 55 57.4**	**+1.1**
UOSS	**Minazif**	**2.67**	**144**	P	**Pn**	**13 55 26.2**	**+1.5**
UOSS	**Minazif**	**2.67**	**144**	P	**Pb**	**13 55 28.5**	**-1.0**
UOSS				S	**Sb**	**13 56 02.8**	**+0.5**
HATD	**Hatta, Dubai**	**2.73**	**147**	P	**Pb**	**13 55 28.9**	**-1.6**
HATD	**Hatta, Dubai**	**2.73**	**147**	P	**Pb**	**13 55 29.4**	**-1.2**
HATD				S	**Sb**	**13 56 02.6**	**-1.5**
ASHO	**Ashiyiah**	**2.81**	**150**	P	**Pn**	**13 55 29.9**	**+3.1**
ASHO	**Ashiyiah**	**2.81**	**150**	P	**Pb**	**13 55 30.4**	**-1.7**
ASHO				S	**Sb**	**13 56 04.7**	**-1.9**
DSBU	**Dashti - Bushe**	**3.12**	**294**	Pn	**Pn**	**13 55 34.1**	**+3.1**
NGRK	**Negar Kerman**	**3.19**	**38**	Pn	**Pn**	**13 55 33.2**	**+1.0**
ALNE	**Al Ain**	**3.27**	**159**	P	**Pn**	**13 55 35.9**	**+2.9**
ALNE	**Al Ain** SNR=8.8	**3.27**	**159**	P	**Pn**	**13 55 36.4**	**+3.4**
MZWR	**Madinat Zayed**	**3.40**	**190**	P	**Pn**	**13 55 37.2**	**+2.4**
MZWR				S	**Sn**	**13 56 18.6**	**+3.3**
SHMA	**Al-Shehemyia** SNR=5.2	**3.41**	**249**	P	**Pn**	**13 55 36.8**	**+1.9**
SHMA				S	**Sn**	**13 56 17.0**	**+1.6**
TVBK	**TV Kerman**	**3.47**	**35**	Pn	**Pn**	**13 55 38.3**	**+2.2**
GHWR	**Ruwais**	**3.48**	**205**	P	**Pn**	**13 55 37.4**	**+1.6**
GHWR				S	**Sn**	**13 56 17.6**	**+0.6**
SOHO	**SOHO**	**3.51**	**148**	P	**Pn**	**13 55 36.5**	**+0.2**
SOHO	**SOHO**	**3.51**	**148**	P	**Pn**	**13 55 37.6**	**+1.3**
SOHO				S	**Sn**	**13 56 21.7**	**+3.8**
KHGB	**Koh Gabri**	**3.67**	**28**	Pn	**Pn**	**13 55 40.7**	**+2.0**
SAKB	**Bahrain**	**3.73**	**253**	P	**Pn**	**13 55 40.6**	**+1.3**
SAKB				S	**Sn**	**13 56 24.9**	**+1.7**
TRNA	**Turayna** SNR=9.8	**3.80**	**232**	P	**Pn**	**13 55 41.9**	**+1.7**
TRNA				S	**Sn**	**13 56 25.4**	**+0.4**
CHMN	**Cheshme madani**	**3.82**	**44**	Pn	**Pn**	**13 55 43.1**	**+2.2**
SLWR	**Sila**	**3.96**	**220**	P	**Pn**	**13 55 44.9**	**+2.4**
SLWR				S	**Sn**	**13 56 30.1**	**+1.0**
KBAM	**BAM**	**4.03**	**59**	Pn	**Pn**	**13 55 46.0**	**+2.6**
SMRA	**Abu-Samra**	**4.07**	**235**	P	**Pn**	**13 55 46.2**	**+2.2**
SMRA				S	**Sn**	**13 56 32.4**	**+0.7**
ARQ	**Araqi**	**4.20**	**154**	P	**Pn**	**13 55 48.2**	**+2.4**
ARQ				S	**Sn**	**13 56 38.3**	**+3.3**
MZR	**Muzera**	**4.21**	**193**	P	**Pn**	**13 55 49.1**	**+3.1**
MZR				S	**Sn**	**13 56 37.9**	**+2.6**
IMEH	**Mehriz**	**4.25**	**1**	Pn	**Pn**	**13 55 48.9**	**+2.2**
UMZA	**Um Al Zommool**	**4.44**	**172**	P	**Pn**	**13 55 51.4**	**+2.3**
UMZA				S	**Sn**	**13 56 41.3**	**+0.4**
IBAF	**Bafgh**	**4.54**	**12**	Pn	**Pn**	**13 55 52.5**	**+1.8**
ISAD	**Sadrabad**	**4.82**	**352**	Pn	**Pn**	**13 55 56.3**	**+1.8**
BIDO	**Bidbid**	**4.87**	**137**	P	**Pn**	**13 55 57.2**	**+2.2**
BIDO				S	**Sn**	**13 56 54.6**	**+3.1**
BSY	**Bisya**	**5.01**	**150**	P	**Pn**	**13 55 59.3**	**+2.3**
BSY				S	**Sn**	**13 56 56.7**	**+1.7**
IRAM	**Rameshеh**	**5.01**	**339**	Pn	**Pn**	**13 55 58.9**	**+1.7**
SMDO	**Samad**	**5.18**	**141**	P	**Pn**	**13 56 01.2**	**+1.8**
SMDO				S	**Sn**	**13 57 00.1**	**+0.8**
WSAR	**Wadi Sarin** 1.1nm,0.3s,baz=331,slow=7.6,SNR=17	**5.39**	**135**	P	**Pn**	**13 56 03.6**	**+1.4**
WSAR	6.1nm,0.6s,baz=70,slow=18,SNR=5.9 3.4nm,0.4s			S	**Sn**	**13 57 03.4**	**-1.0**
WSAR	**Wadi Sarin**	**5.39**	**135**	P	**Pn**	**13 56 04.3**	**+2.1**
WSAR				S	**Sn**	**13 57 03.6**	**-0.7**
CHBR	**Chabahar**	**5.58**	**105**	Pn	**Pn**	**13 56 06.4**	**+1.6**
JMDO	**Jabal Madar**	**5.76**	**145**	P	**Pn**	**13 56 09.5**	**+2.2**
JMDO				S	**Sn**	**13 57 14.6**	**+1.0**
WBK	**Wadi Bani Khal**	**6.07**	**137**	P	**Pn**	**13 56 13.0**	**+1.5**
WBK				S	**Sn**	**13 57 23.6**	**+2.6**
ANAR	**Anarak**	**6.07**	**354**	Pn	**Pn**	**13 56 12.0**	**+0.3**
JLN	**Jalan Bani Buh**	**6.68**	**137**	P	**Pn**	**13 56 20.4**	**+0.6**
MHTO	**MHTO** SNR=9.9	**6.89**	**152**	P	**Pn**	**13 56 24.6**	**+1.8**
DOK	**Doka**	**8.48**	**182**	P	**Pn**	**13 56 44.7**	**+0.1**
RAYN	**Ar Rayn**	**8.89**	**248**	P	**Pn**	**13 56 49.4**	**-0.9**
SHAO	**Shalim** SNR=6.4	**9.13**	**173**	P	**Pn**	**13 56 53.7**	**+0.2**
SHAO				S	**Sn**	**13 58 35.7**	**-0.7**
WHFO	**Wadi Hawf** SNR=15	**9.19**	**184**	P	**Pn**	**13 56 54.4**	**0.0**
DMTO	**DMTO**	**9.38**	**177**	P	**Pn**	**13 56 57.1**	**+0.2**
RBK	**Rabkut**	**9.59**	**182**	P	**Pn**	**13 56 59.9**	**+0.1**
RBK				S	**Sn**	**13 58 47.5**	**-0.2**
ABTO	**Aybut**	**9.79**	**187**	P	**Pn**	**13 57 02.8**	**+0.1**
BRTR	**Keskin Array B** 0.8nm,0.6s,baz=135,slow=12,SNR=5.0 0.8nm,0.6s	**21.40**	**311**	P	**P**	**13 59 29.6**	**-0.2**
AAK	**Ala-Archa** 0.8nm,0.6s,baz=202,slow=9.7,SNR=5.1 0.8nm,0.6s	**22.47**	**41**	P	**P**	**13 59 41.5**	**+0.4**
AKTO	**Aktyubinsk** 0.7nm,0.4s,baz=169,slow=11,SNR=2.4 0.7nm,0.4s	**23.43**	**6**	P	**P**	**13 59 51.1**	**+0.2**
BELG	**Belogornoye** 1.8nm,0.3s,baz=181,slow=9.8,SNR=2.3 1.8nm,0.3s	**25.75**	**350**	P	**P**	**14 00 11.8**	**-0.5**
BVAR	**Borovoye Array** 0.9nm,0.4s,baz=212,slow=7.0,SNR=6.1 0.9nm,0.4s	**28.45**	**20**	P	**P**	**14 00 36.2**	**-0.4**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=228,slow=12,SNR=5.2 0.2nm,0.4s	**29.40**	**41**	P	**P**	**14 00 44.9**	**-0.2**
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=233,slow=8.6,SNR=3.9 0.2nm,0.4s	**29.76**	**32**	P	**P**	**14 00 48.3**	**+0.1**
ZALV	**Zalesovo Beam** 1.9nm,0.5s,baz=245,slow=8.9,SNR=13 1.9nm,0.5s	**34.86**	**31**	P	**P**	**14 01 32.4**	**-0.5**
FINES	**FINESS Array B** 1.3nm,0.6s,baz=145,slow=7.0,SNR=5.0 1.3nm,0.6s	**39.25**	**339**	P	**P**	**14 02 08.5**	**-1.6**
SONM	**Songino Array** 0.2nm,0.6s,baz=256,slow=5.8,SNR=2.2 0.2nm,0.6s	**45.12**	**48**	P	**P**	**14 02 57.3**	**-1.1**
ESDC	**Sonseca Array** 0.3nm,0.5s,baz=72,slow=7.7,SNR=2.0 0.3nm,0.5s	**49.59**	**300**	P	**P**	**14 03 31.1**	**-2.1**

IDC 02 13:59:15.4±4.8, 11°.12S×166°.85E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=200.3km s-min=36.2km az=137.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 1.0nm,0.9s,baz=83,slow=8.9,SNR=4.1 1.0nm,0.9s	**32.48**	**250**	P	P	14 05 48.5	+0.6
ASAR	**Alice Springs** 0.5nm,0.8s,baz=61,slow=9.6,SNR=3.2 0.5nm,0.8s	**33.73**	**244**	P	P	14 05 58.2	-0.6
ILAR	**Eielson Array** 0.3nm,0.8s,baz=234,slow=4.3,SNR=2.1 0.3nm,0.8s	**83.24**	**18**	P	P	14 11 43.6	+0.1
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=91,slow=5.7,SNR=3.6 0.2nm,0.6s	**94.31**	**317**	P	P	14 12 36.5	-0.4

IDC ***02*** *13:59:17.2±1.8,1°.05N×126°.26E,h0km,mb3.4/4, mbtmp3.5/4,Error ellipse: s-maj=170.1km s-min=22.7km az=66.0*
DJA ***02*** *13:59:21.3±1.0,1°.1N±5°×12°6E±°,h12km±10km,M3.6/6, MLv3.6/6*

ISC 02 13:59:23.4±1.1, 0°.99N±0°.07×126°.16E±0°.06, h44km, n10, σ0°85/11, mb3.5/4, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**100**	P	**Pn**	**13 59 44.3**	**+0.2**
LBMI	**Labuha**	**2.10**	**140**	P	**Pn**	**13 59 56.7**	**+0.6**
KMSI	**Cibinong**	**2.22**	**259**	P	**Pn**	**13 59 57.9**	**+0.2**
KMSI				S	**Sn**	**14 00 25.0**	**+1.0**
SGSI	**Sangihe**	**2.75**	**347**	P	**Pn**	**14 00 04.8**	**-0.3**
SANI	**Sanana**	**3.02**	**183**	P	**Pn**	**14 00 08.1**	**-0.7**
LUWI	**Luwuk**	**3.94**	**239**	P	**Pn**	**14 00 21.3**	**-0.2**
WRA	**Warramunga Arr** 0.9nm,0.5s,baz=338,slow=11,SNR=10 0.9nm,0.5s	**22.29**	**159**	P	**P**	**14 04 15.8**	**-1.5**
ASAR	**Alice Springs** 0.4nm,0.4s,baz=335,slow=8.6,SNR=19 0.4nm,0.4s	**25.64**	**163**	P	**P**	**14 04 49.6**	**+0.5**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=128,slow=7.7,SNR=2.5 0.2nm,0.3s	**59.49**	**326**	P	**P**	**14 09 21.4**	**-0.8**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=120,slow=6.6,SNR=2.1 0.3nm,0.6s	**63.74**	**328**	P	**P**	**14 09 51.5**	**+0.8**

IDC ***02*** *14:04:00.3±1.8,5°.39S×141°.37E,h0km,mb3.7/4, mbtmp3.7/6,ML3.7/2, Error ellipse: s-maj=68.6km s-min=25.3km az=102.0*

ISC 02 14:04:04.4±1.6, 5°.7S±0°.2×141°.4E±0°.5, h35km, n6, σ2°58/8, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=28,slow=13,SNR=16	**15.68**	**205**	Pn	**P**	**14 07 45.3**	**-1.3**
WRA	0.1nm,0.3s,baz=27,slow=23,SNR=2.0			Sn	**Sn**	**14 10 36.3**	**+0.6**
WRA	0.1nm,0.3s,baz=26,slow=24,SNR=2.1 1.8nm,0.9s			Lg	Lg	14 12 26.9	
ASAR	**Alice Springs** 0.2nm,0.3s,baz=26,slow=12,SNR=15	**19.21**	**201**	P	**Pn**	**14 08 30.9**	**+4.2**
ASAR	0.8nm,0.9s,baz=14,slow=27,SNR=2.8 1.7nm,0.8s			S	**S**	**14 11 57.9**	**-3.7**
MKAR	**Makanchi Array** 0.8nm,0.8s,baz=122,slow=6.4,SNR=6.8 0.8nm,0.8s	**73.78**	**322**	P	**P**	**14 15 35.4**	**+0.1**
KURBB	**Kurchatov Arra** 0.5nm,0.9s,baz=116,slow=5.3,SNR=2.2 0.5nm,0.9s	**77.71**	**325**	P	**P**	**14 15 57.5**	**-0.1**
BVAR	**Borovoye Array** 0.4nm,0.5s,baz=108,slow=4.7,SNR=2.7 0.4nm,0.5s	**83.29**	**325**	P	**P**	**14 16 27.5**	**0.0**
ILAR	**Eielson Array** 0.6nm,1.0s,baz=265,slow=4.9,SNR=4.3 0.6nm,1.0s	**87.49**	**24**	P	**P**	**14 16 47.5**	**-0.7**

VAO ***02*** *14:05:03.4±0.8,16°.47S×69°.73W,h166km,mb4.2*
NEIC ***02*** *14:05:03.8±2.2,16°.52S±0°.07×69°.79W±0°.03,h190km±9km, mb4.1/10, Error ellipse: s-maj=11.0km s-min=3.0km az=193.0*

ISC 02 14:05:04.1±0.6, 16°.55S±0°.06×69°.78W±0°.08, h200km, n60, σ1°39/63, mb4.2/4, 1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.61**	**81**	Pn	**Pn**	**14 05 39.1**	**-0.3**
PB16	**IPOC Station P**	**1.79**	**172**	Pn	**Pn**	**14 05 41.5**	**+0.3**
PB16	**IPOC Station P**	**1.79**	**172**	*eP*	**Pn**	**14 05 41.9**	**+0.7**
PB16				*i* S	**Sn**	**14 06 10.3**	**+0.2**
PB12	**IPOC Station P**	**2.12**	**194**	Pn	**Pn**	**14 05 43.1**	**-0.8**
PB12	**IPOC Station P**	**2.12**	**194**	*i* P	**Pn**	**14 05 42.8**	**-1.1**
PB12				*i* S	**Sn**	**14 06 11.6**	**-3.5**
PB12	comp=E,406nm,0.2s			IAML		14 06 13.9	
GO01	**Chusmiza**	**3.15**	**170**		**Pn**	**14 05 56.6**	**+0.6**
PB11	**IPOC Station P**	**3.19**	**178**	*eP*	**Pn**	**14 05 56.1**	**-0.1**
PB11				*i* S	**Sn**	**14 06 34.2**	**-2.9**
PB11	comp=E,628nm,0.5s			IAML		14 06 37.4	
TA01	**Diego Aracena**	**4.01**	**185**	Pn	**Pn**	**14 06 05.4**	**-0.6**
PATCX	**Punta Patache**	**4.26**	**185**		**Pn**	**14 06 07.8**	**-1.4**
LVC	**Limon Verde**	**6.08**	**172**	Pn	**Pn**	**14 06 33.4**	**+0.6**
LVC	**Limon Verde**	**6.08**	**172**	*eP*	**Pn**	**14 06 33.1**	**+0.3**
PB06	**IPOC Station P**	**6.12**	**178**		**Pn**	**14 06 32.4**	**-0.8**
ETMB	**Extrema**	**7.54**	**28**	Pn	**Pn**	**14 06 50.0**	**-1.5**
ETMB	**Extrema**	**7.54**	**28**	*eP*	**Pn**	**14 06 49.2**	**-2.3**
NNA	**Nana**	**8.21**	**303**		**Pn**	**14 06 59.4**	**-0.8**
GO02	**Mina Guanaco**	**8.57**	**179**	Pn	**Pn**	**14 07 04.9**	**-0.2**
BBSD	**Serra de San D**	**8.81**	**95**	*eP*	**Pn**	**14 07 05.8**	**-2.1**
SAML	**Samuel**	**9.93**	**41**	Pn	**Pn**	**14 07 20.7**	**-1.7**
SAML	**Samuel**	**9.93**	**41**	*eP*	**Pn**	**14 07 20.4**	**-2.0**
VILB	**Vilhena**	**9.94**	**70**	*eP*	**Pn**	**14 07 22.9**	**+0.3**
MURT	**Porto Murtinho**	**12.58**	**116**	*eP*	**Pn**	**14 07 56.2**	**-0.1**
BDQN	**Bodoquena, MS**	**12.96**	**109**	*eP*	**Pn**	**14 08 01.0**	**-0.1**
TICA	**Tres Isletas**	**13.12**	**140**	*eP*	**P**	**14 08 04.7**	**-1.5**
AQDB	**Aquidauana**	**13.92**	**108**	P	**Pn**	**14 08 13.3**	**+0.3**
AQDB	**Aquidauana**	**13.92**	**108**	*eP*	**Pn**	**14 08 13.3**	**+0.3**
ANTJ	**Antonio Joao (**	**14.09**	**115**	*eP*	**P**	**14 08 16.4**	**-0.6**
PP1B	**Ponte de Pedra**	**14.29**	**96**	*eP*	**Pn**	**14 08 18.1**	**+0.4**
RVDE	**Rio Verde (Bra**	**14.35**	**102**	*eP*	**Pn**	**14 08 18.9**	**+0.4**
CPUP	**Villa Florida**	**15.12**	**132**	*eP*	**P**	**14 08 29.8**	**+1.4**
MCRA	**Macar, Loja**	**15.69**	**319**	P	**Pn**	**14 08 35.3**	**+0.4**
BOSC	**San Juan Bosco**	**15.83**	**326**	P	**P**	**14 08 36.0**	**-0.5**
BOSC	comp=Z,2.5nm,0.5s			IAmb	IAmb	14 08 43.4	
COHC	**Cochancay**	**16.82**	**325**		**Pn**	**14 08 51.7**	**+3.4**
ITQB	**Itaqui**	**17.78**	**140**	P	**Pn**	**14 08 59.2**	**-0.3**
ITQB	**Itaqui**	**17.78**	**140**	*eP*	**Pn**	**14 08 59.5**	**-0.1**
FRBT	**Francisco Belt**	**18.17**	**124**	*eP*	**Pn**	**14 09 03.1**	**-1.2**
CRSM	**Crissiumal (Br**	**18.19**	**129**	*eP*	**Pn**	**14 09 04.2**	**-0.1**
PCMB	**Pacaembu**	**18.21**	**109**	*eP*	**P**	**14 09 03.0**	**+0.7**
ITTB	**Itaituba**	**18.35**	**50**	*eP*	**Pn**	**14 09 05.3**	**-1.1**
UNIS	**Unistalda (Bra**	**18.39**	**135**	*eP*	**Pn**	**14 09 06.6**	**-0.1**
PTGB	**Pitanga**	**18.45**	**119**	*eP*	**Pn**	**14 09 06.9**	**-0.7**
SNDB	**Serra Nova Dou**	**18.48**	**78**	*eP*	**Pn**	**14 09 06.4**	**-1.5**
ITRB	**Iturama**	**18.73**	**103**	*eP*	**Pn**	**14 09 09.8**	**-1.0**
LDASE	**Londrina, Braz**	**18.81**	**114**	*eP*	**Pn**	**14 09 10.2**	**-1.5**
RODS	**Rosario do Sul**	**19.14**	**138**	*eP*	**P**	**14 09 13.6**	**+1.3**
ITAB	**Concordia**	**19.50**	**126**	*eP*	**Pn**	**14 09 19.6**	**-0.3**
ALGR	**Alto Alegre (B**	**19.66**	**131**	*eP*	**P**	**14 09 18.3**	**+0.4**
CPSB	**Cacapava Do Su**	**20.33**	**136**	*eP*	**P**	**14 09 26.4**	**+1.4**
BDFB	**Brasilia**	**20.94**	**91**	P	**P**	**14 09 31.1**	**-0.6**
BDFB	comp=Z,9.4nm,1.4s			IAmb	IAmb	14 10 11.1	
PLTB	**Pedras Altas**	**21.11**	**139**	P	**P**	**14 09 32.3**	**-0.9**
PLTB	comp=Z,14nm,1.2s			IAmb	IAmb	14 09 53.7	
PLTB	**Pedras Altas**	**21.11**	**139**	*eP*	**P**	**14 09 33.7**	**+0.4**
CNLB	**Canela**	**21.53**	**129**	*eP*	**P**	**14 09 39.1**	**+1.4**
RCLB	**Rio Claro- Sao**	**21.76**	**109**	*eP*	**P**	**14 09 42.0**	**+1.9**
PMNB	**Patos De Minas**	**22.34**	**99**	*eP*	**P**	**14 09 46.3**	**+0.5**
TRQA	**Tornquist**	**22.50**	**164**	P	**P**	**14 09 47.1**	**+0.2**
TRQA	comp=Z,8.4nm,1.4s			IAmb	IAmb	14 09 58.7	
JANB	**Januaria**	**24.55**	**90**	*eP*	**P**	**14 10 06.7**	**+0.9**
DIAM	**Diamantina, MG**	**24.97**	**98**	*eP*	**P**	**14 10 12.7**	**+3.1**
BAUV	**El Baul**	**25.39**	**4**	P	**P**	**14 10 13.1**	**-0.2**
VAS01	**Vassouras-RJ**	**25.47**	**107**	*eP*	**P**	**14 10 17.4**	**+3.4**
QSPA	**South Pole Qui**	**73.61**	**180**	P	**P**	**14 16 18.3**	**+2.9**
QSPA	comp=Z,5.8nm,1.4s			IAmb	IAmb	14 16 51.3	
TOA0	**Torodi Ar. Sit**	**76.54**	**72**	P	**P**	**14 16 31.9**	**-0.9**
TOA0	comp=Z,6.9nm,1.5s			IAmb	IAmb	14 17 08.4	

SNET ***02*** *14:06:40.6±0.8,14°.11N×89°.68W,h7km±12km,ML2.3*
CATAC ***02*** *14:06:41.2±0.9,14°.12N×89°.73W,h5km±5km,ML2.7*

ISC 02 14:06:38.5±1.8, 14°.22N±0°.07×89°.75W±0°.07, h16km±10km, n16, σ0°39/27, 1C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLOZ	**Alcaldia de Sa**	**0.19**	**189**	*iP*	**Pb**	**14 06 44.0**	**+0.3**
SLOZ	comp=Z,809nm,0.3s			IAML		14 06 48.0	
LOAL	**Lomas de Alarc**	**0.22**	**187**	*iP*	**Pb**	**14 06 44.4**	**+0.3**
LOAL				*eS*	**Sg**	**14 06 46.9**	**-0.1**
LOAL	**Lomas de Alarc**	**0.22**	**187**	*i P*	**Pb**	**14 06 44.4**	**+0.3**
LOAL				*i S*	**Sg**	**14 06 46.9**	**-0.1**
LOAL	comp=Z,6μm,1.0s			IAML		14 06 48.2	
UNIC	**Universidad Ca**	**0.30**	**139**	*i P*	**Pb**	**14 06 45.9**	**+0.3**
UNIC				*i S*	**Sg**	**14 06 49.4**	**-0.1**
UNIC	comp=Z,850nm,1.0s			IAML		14 06 50.0	
NUBE	**Las Nubes**	**0.31**	**185**	*i P*	**Pb**	**14 06 45.9**	**+0.1**
NUBE				*eS*	**Sg**	**14 06 49.2**	**-0.6**
NUBE	comp=Z,580nm,0.2s			IAML		14 06 49.5	
NUBE	**Las Nubes**	**0.31**	**185**	*i P*	**Pb**	**14 06 45.8**	**+0.1**
NUBE				*i S*	**Sg**	**14 06 49.4**	**-0.3**
NUBE	comp=Z,2μm,1.0s			IAML		14 06 50.2	
RTR	**El Retiro**	**0.33**	**162**	*iP*	**Pb**	**14 06 46.4**	**+0.3**
SNJE	**San Jose**	**0.37**	**157**	*iP*	**Pb**	**14 06 47.1**	**+0.2**
SNJE				*eS*	**Sg**	**14 06 51.4**	**-0.1**
SBLS	**San Blas**	**0.39**	**161**	*eP*	**Pb**	**14 06 47.4**	**+0.2**
CEVE	**Cerro Verde**	**0.41**	**162**	*eP*	**Pb**	**14 06 47.8**	**+0.4**
CEVE				*eS*	**Sg**	**14 06 52.7**	**+0.2**
CEVE	comp=Z,777nm,0.2s			IAML		14 06 54.8	
CEVE	**Cerro Verde**	**0.41**	**162**	*i P*	**Pn**	**14 06 50.3**	**+0.4**
MTO3	**Montecristo**	**0.42**	**64**	*iP*	**Pn**	**14 06 50.3**	**+0.3**
MTO3				*eS*	**Sn**	**14 06 56.9**	**-0.8**
MTO3	**Montecristo**	**0.42**	**64**	*i P*	**Pn**	**14 06 50.4**	**+0.3**
MTO3	comp=Z,310nm,1.0s			IAML		14 06 50.8	
MTO3				*i S*	**Sn**	**14 06 57.1**	**-0.5**
JAYA	**Jayaque - finc**	**0.63**	**152**	*i P*	**Pb**	**14 06 51.8**	**+0.6**
JAYA				*i S*	**Sb**	**14 07 00.0**	**+0.1**
JAYA	comp=Z,620nm,1.0s			IAML		14 07 00.0	
PMON	**Piamonte**	**0.66**	**139**	*i P*	**Pn**	**14 06 52.6**	**-0.6**
PMON				*i S*	**Sb**	**14 07 01.0**	**+0.4**
PMON	comp=Z,1μm,1.0s			IAML		14 07 02.1	
LCND	**La Caada**	**2.02**	**116**	*i P*	**Pn**	**14 07 11.6**	**-0.3**

TRN ***02*** *14:12:08.7,10°.98N×62°.43W,h101km,MD3.6,North of the Paria peninsula.*
FUNV ***02*** *14:12:09.1,10°.93N×62°.35W,h86km,MW4.0*

ISC 02 14:12:06.2±1.3, 10°.91N±0°.04×62°.42W±0°.04, h122km±10km, n22, σ1°76/41, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	**Carupano**	**0.83**	**254**	*eP*	**Pn**	**14 12 27

σ0.84/21, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.94**	**40**	*eP*	**Pb**	**14 49 59.7**	**+0.5**
NUBE				*eS*	**Sb**	**14 50 12.0**	**0.0**
CEVE	**Cerro Verde**	**0.99**	**50**	*eP*	**Pb**	**14 50 00.8**	**+0.6**
CEVE				*eS*	**Sn**	**14 50 14.5**	**-1.0**
SBLS	**San Blas**	**1.00**	**49**	*eP*	**Pb**	**14 50 00.9**	**+0.5**
RTR	**El Retiro**	**1.02**	**46**	*eP*	**Pb**	**14 50 01.3**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.03**	**36**	*eP*	**Pb**	**14 50 01.0**	**+0.2**
SLOZ				*eS*	**Sn**	**14 50 15.5**	**-0.7**
SNJE	**San Jose**	**1.03**	**49**	*eP*	**Pb**	**14 50 01.2**	**+0.3**
SNJE				*eS*	**Sn**	**14 50 15.2**	**-1.2**
JAYA	**Jayaque - finc**	**1.04**	**63**	*eP*	**Pg**	**14 50 01.1**	**+0.4**
JAYA				*eS*	**Sg**	**14 50 13.9**	**-0.3**
PCG	**Pacaya**	**1.22**	**351**	*eP*	**Pg**	**14 50 04.5**	**+0.5**
FUG	**Fuego 3**	**1.33**	**341**	*eP*	**Pg**	**14 50 05.7**	**-0.4**
FUG				*eS*	**Sg**	**14 50 22.0**	**-1.4**
NBG	**Las Nubes**	**1.40**	**2**	*eP*	**Pb**	**14 50 08.3**	**+1.1**
NBG				*eS*	**Sn**	**14 50 27.4**	**+1.9**
COEG	**Centro de Oper**	**1.54**	**73**	*eP*	**Pn**	**14 50 08.4**	**-0.1**
SULM	**Suchitepequez,**	**1.59**	**315**	*eP*	**Pn**	**14 50 08.5**	**-0.5**
STG3	**Santiaguito 3,**	**1.90**	**323**	*eP*	**Pn**	**14 50 13.8**	**+0.3**
STG3				*eS*	**Sn**	**14 50 37.2**	**-0.5**

*JMA **02** 14:52:10.0±0.1, 39°.3N±0°.2×142°.1E±0°.5, h48km, MD3.8/40, MV4.1/40, E OFF IWATE PREF*
JMA Felt II J1 at E OFF IWATE PREF .
*NIED **02** 14:52:10.0, 39°.34N×142°.08E, h48km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr6.46; Mθθ0.62; Mφφ-7.07; Mrθ2.52; Mθφ-0.68; Mφr6.08; Fault plane solution: M0.48000×10¹⁴ NP1,φs17.00000°, δ67.00000°, λ,101.00000°. NP2,φs172.00000°, δ25.00000°, λ,66.00000°.*
*IDC **02** 14:52:11.7±2.0, 39°.36N×142°.30E, h74km±16km, mb3.6/15, mbtmp3.9/19, MS3.1/2 Error ellipse: s-maj=22.0km s-min=10.7km az=108.0*
*NEIC **02** 14:52:11.3±2.3, 39°.29N±0°.03×142°.1E±0°.1, h58km±9km, mb4.3/27, Error ellipse: s-maj=15.6km s-min=2.7km az=103.0*

ISC 02 14:52:09.7±1.0, 39°.34N±0°.04×142°.12E±0°.07, h47km±7km, n93, σ1°.44/88, mb4.2/30, 21D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.34**	**316**	*iP*	**Pn**	**14 52 19.0**	**0.0**
MIYJ				*S*	**Sn**	**14 52 25.2**	**-0.3**
MIYJ	**Miyakonagasawa**	**0.34**	**316**	A	A	14 52 19.0	
	comp=E,15nm,1.6s,comp=N,6.0nm,0.3s						
OFUJ	**Ofunato**	**0.43**	**234**	*iP*	**Pn**	**14 52 20.1**	**+0.1**
OFUJ				*S*	**Sn**	**14 52 27.0**	**-0.3**
OFUJ	**Ofunato**	**0.43**	**234**	A	A	14 52 20.1	
	comp=E,20nm,0.6s,comp=N,10.0nm,1.6s						
JTH	**Tanohata**	**0.64**	**342**	*iP*	**Pn**	**14 52 22.5**	**0.0**
JTH				*S*	**Sn**	**14 52 31.5**	**-0.3**
JTH	**Tanohata**	**0.64**	**342**	A	A	14 52 22.5	
	comp=E,6.0nm,1.5s,comp=N,6.0nm,0.8s						
JOM	**Ohasama**	**0.66**	**282**	*iP*	**Pn**	**14 52 22.6**	**-0.1**
JOM				*S*	**Sn**	**14 52 32.0**	**-0.2**
JOM	**Ohasama**	**0.66**	**282**	A	A	14 52 22.6	
	comp=E,15nm,0.8s,comp=N,9.0nm,0.3s						
JKMT	**Kesennumamotoy**	**0.72**	**224**	*iP*	**Pn**	**14 52 23.6**	**-0.1**
JKMT				*S*	**Sn**	**14 52 33.1**	**-0.7**
JKMT	**Kesennumamotoy**	**0.72**	**224**	A	A	14 52 23.6	
	comp=E,8.0nm,0.6s,comp=N,4.0nm,1.4s						
JMK	**Ichinoseki**	**0.80**	**242**	*iP*	**Pn**	**14 52 24.5**	**-0.1**
JMK				*S*	**Sn**	**14 52 34.8**	**-0.7**
JMK	**Ichinoseki**	**0.80**	**242**	A	A	14 52 24.5	
	comp=E,4.0nm,1.5s,comp=N,8.0nm,0.2s						
JKZ	**Kuzumaki**	**0.89**	**317**	*iP*	**Pn**	**14 52 26.3**	**+0.3**
JKZ				*S*	**Sn**	**14 52 37.9**	**+0.1**
JKZ	**Kuzumaki**	**0.89**	**317**	A	A	14 52 26.3	
	comp=E,10.0nm,0.3s,comp=N,10.0nm,0.7s						
JKEN	**Kujiedanarisaw**	**0.93**	**340**	A	A	14 52 26.6	
	comp=E,10.0nm,2.7s,comp=N,7.0nm,0.4s						
JSZI	**Iwateshizukuis**	**0.99**	**295**	A	A	14 52 27.3	
	comp=N,7.0nm,2.3s						
JIO	**Ouri**	**1.06**	**215**	*iP*	**Pn**	**14 52 28.1**	**-0.1**
JIO				*S*	**Sn**	**14 52 40.9**	**-1.0**
JANG	**Nango**	**1.14**	**336**	*iP*	**Pn**	**14 52 29.2**	**-0.1**
JANG				*S*	**Sn**	**14 52 43.0**	**-0.8**
JRG	**Rokugo**	**1.15**	**274**	*iP*	**Pn**	**14 52 29.4**	**-0.1**
JRG				*eS*	**Sn**	**14 52 44.0**	**-0.1**
JRG	**Rokugo**	**1.15**	**274**	A	A	14 52 29.4	
	comp=E,5.0nm,0.4s,comp=N,5.0nm,0.5s						
JAH	**Hinai**	**1.43**	**307**	*iP*	**Pn**	**14 52 33.3**	**+0.2**
JAH				*eS*	**Sn**	**14 52 50.7**	**-0.1**
JYK	**Kaneyama**	**1.43**	**254**	*iP*	**Pn**	**14 52 33.4**	**+0.2**
JOU	**Okura**	**1.49**	**230**	A	A	14 52 34.7	
	comp=E,4.0nm,2.7s,comp=N,3.0nm,4.8s						
JYW	**Yuwa**	**1.49**	**279**	A	A	14 52 34.6	
	comp=E,5.0nm,1.3s,comp=N,5.0nm,2.9s						
JTM	**Tenmabayashi**	**1.66**	**331**		**Pn**	**14 52 36.4**	**+0.1**
JMM	**Marumori**	**1.80**	**216**	Pn	**Pn**	**14 52 37.9**	**-0.4**
JYA	**Atsumi**	**2.02**	**249**	A	A	14 52 42.1	
	comp=E,2.0nm,0.7s,comp=N,2.0nm,4.3s						
ERM	**Erimo**	**2.79**	**16**		**Pn**	**14 52 52.2**	**+0.3**
MAJO	**Matsushiro**	**4.16**	**229**		**Pn**	**14 53 13.5**	**+2.8**
MJAR	**Matsushiro Arr**	**4.16**	**229**	P	**Pn**	**14 53 13.3**	**+2.6**
	comp=N,11nm,0.7s,baz=40,slow=11,SNR=34						
MJAR				*S*	**Sn**	**14 54 04.3**	**+6.2**
	comp=N,2.2nm,0.4s,baz=185,slow=30,SNR=1.0						
MJB9	**Matsu-Tunnel**	**4.16**	**229**		**Pn**	**14 53 14.7**	**+4.0**
ASAJ	**Asahikawa**	**4.79**	**4**	P	**Pn**	**14 53 20.9**	**+1.6**
ASAJ				*S*	**Sn**	**14 54 15.4**	**+1.9**
	comp=N,5.4nm,0.5s,baz=215,slow=16,SNR=18						
ASAJ				LR	LR	14 55 39.7	
	comp=N,8.5nm,0.5s,baz=176,slow=34,SNR=1.5						
JKA	**Kamikawa-asahi**	**4.79**	**4**		**Pn**	**14 53 20.6**	**+1.3**
USRK	**Ussuriysk Ar.**	**8.99**	**306**		**Pn**	**14 54 18.5**	**+1.6**
USRK	**Ussuriysk Ar.**	**8.99**	**306**	P	**Pn**	**14 54 20.5**	**+3.6**
	comp=N,6.9nm,0.7s,baz=113,slow=14,SNR=13						
USA0B	**Ussuriysk Arra**	**8.99**	**306**		**Pn**	**14 54 18.7**	**+1.8**
KSRS	**Korea Array**	**11.30**	**265**	P	**Pn**	**14 54 52.7**	**+4.2**
	comp=N,2.4nm,0.9s,baz=71,slow=14,SNR=4.2						
KS19	**Wonju Array Si**	**11.33**	**265**	Pn	**Pn**	**14 54 50.5**	**+1.5**
YAK	**Yakutsk**	**23.97**	**346**	P	**P**	**14 57 17.7**	**-1.6**
YAK				IAmb	IAmb	14 57 20.0	
	comp=Z,11nm,0.6s						
SONM	**Songino Array**	**27.04**	**300**	P	**P**	**14 57 47.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=111,slow=7.9,SNR=2.5						
	comp=Z,0.2nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	15 28 28.1	
	baz=318,slow=75,SNR=311						
H11N1	**WAKE ISLAND Hy**	**28.94**	**125**	T	T	15 28 28.8	
	baz=318,slow=75,SNR=213						
H11N3	**WAKE ISLAND Hy**	**28.95**	**125**	T	T	15 28 29.5	
	baz=318,slow=75,SNR=183						
H11S1	**WAKE ISLAND Hy**	**29.72**	**127**	T	T	15 29 39.4	
	baz=319,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**29.73**	**127**	T	T	15 29 40.7	
	baz=319,slow=76,SNR=83						
H11S2	**WAKE ISLAND Hy**	**29.74**	**127**	T	T	15 29 39.5	
	baz=319,slow=76,SNR=38						
ZAA0	**Zalesovo Array**	**40.81**	**310**	P	**P**	**14 59 45.7**	**-0.5**
ZAA0				IAmb	IAmb	15 00 03.9	
	comp=Z,3.3nm,0.8s						
ZALV	**Zalesovo Beam**	**40.81**	**310**	P	**P**	**14 59 46.0**	**-0.3**
ZALV	**Zalesovo Beam**	**40.81**	**310**	P	**P**	**14 59 46.1**	**-0.1**
	comp=Z,2.1nm,0.4s,baz=92,slow=8.6,SNR=10						
ZALV				PcP	**PcP**	**15 01 45.7**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=72,slow=4.7,SNR=2.2						
	comp=Z,2.1nm,0.4s						
G18K	**Tagagawik**	**42.39**	**32**	P	**P**	**15 00 00.2**	**+1.1**
G18K				IAmb	IAmb	15 00 19.7	
	comp=Z,7.2nm,1.5s						
H18K	**Honhosa River**	**42.40**	**33**	P	**P**	**15 00 00.8**	**+1.6**
H18K				IAmb	IAmb	15 00 44.6	
	comp=Z,5.0nm,1.4s						
C19K	**Lookout Ridge**	**42.65**	**27**	P	**P**	**15 00 02.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**42.65**	**253**	P	**P**	**15 00 01.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=42,slow=8.1,SNR=2.3						
	comp=Z,0.4nm,0.6s						
D19K	**Kuna River**	**43.05**	**28**	P	**P**	**15 00 04.9**	**+0.6**
D19K				IAmb	IAmb	15 00 30.1	
	comp=Z,7.3nm,1.4s						
H19K	**Roundabout Mou**	**43.25**	**32**	P	**P**	**15 00 07.0**	**+1.0**
MK31	**Makanchi Array**	**43.41**	**300**	P	**P**	**15 00 06.9**	**-0.6**
MKAR	**Makanchi Array**	**43.41**	**300**	P	**P**	**15 00 07.3**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=88,slow=9.9,SNR=5.8						
	comp=Z,0.8nm,0.5s						
B20K	**Meade River**	**43.68**	**26**	P	**P**	**15 00 10.4**	**+1.0**
IMAR	**Indian Mountai**	**44.40**	**32**	P	**P**	**15 00 15.5**	**+0.3**
B22K	**Teshekpuk Lake**	**44.99**	**26**	P	**P**	**15 00 20.9**	**+1.0**
KURBB	**Kurchatov Arra**	**45.06**	**306**	P	**P**	**15 00 20.1**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=80,slow=8.5,SNR=18						
	comp=Z,2.9nm,0.7s						
D22K	**Ayikyak River**	**45.07**	**28**	P	**P**	**15 00 22.8**	**+2.3**
D22K				IAmb	IAmb	15 00 23.2	
	comp=Z,2.6nm,0.6s						
E22K	**Anaktuvuk Pass**	**45.32**	**29**	P	**P**	**15 00 24.0**	**+1.4**
E22K				IAmb	IAmb	15 00 44.2	
	comp=Z,4.4nm,1.2s						
D24K	**Happy Valley**	**46.47**	**27**	P	**P**	**15 00 33.4**	**+1.8**
D24K				IAmb	IAmb	15 00 34.9	
	comp=Z,2.6nm,0.7s						
ILAR	**Eielson Array**	**47.26**	**33**	P	**P**	**15 00 36.2**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=261,slow=5.9,SNR=6.5						
	comp=Z,0.6nm,0.7s						
D25K	**Kavik River**	**47.35**	**27**	P	**P**	**15 00 39.7**	**+1.2**
D25K				IAmb	IAmb	15 00 41.3	
	comp=Z,2.4nm,0.9s						
SCRK	**Sand Creek**	**48.59**	**34**	P	**P**	**15 00 49.3**	**+1.0**
SCRK				IAmb	IAmb	15 01 04.7	
	comp=Z,1.8nm,0.8s						
BOOM	**Boomskoye usch**	**48.96**	**296**	P	**P**	**15 00 50.9**	**-0.6**
BVAR	**Borovoye Array**	**49.46**	**311**	P	**P**	**15 00 54.6**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=70,slow=7.4,SNR=9.3						
BVAR				PcP	**PcP**	**15 02 15.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=90,slow=4.3,SNR=3.1						
	comp=Z,1.0nm,0.4s						
E28M	**Babbage River**	**49.85**	**28**	P	**P**	**15 00 59.5**	**+1.9**
E28M				IAmb	IAmb	15 01 38.7	
	comp=Z,4.8nm,1.5s						
E29M	**Blow River**	**50.48**	**28**	P	**P**	**15 01 04.7**	**+2.3**
E29M				IAmb	IAmb	15 01 23.6	
	comp=Z,2.4nm,1.1s						
L29M	**L29M**	**51.32**	**35**	P	**P**	**15 01 10.8**	**+2.0**
I30M	**Mount Dempster**	**51.63**	**32**	P	**P**	**15 01 12.6**	**+1.4**
I30M				IAmb	IAmb	15 01 36.4	
	comp=Z,7.3nm,1.4s						
INK	**Inuvik**	**52.09**	**28**	P	**P**	**15 01 15.1**	**+0.7**
INK				IAmb	IAmb	15 01 23.2	
	comp=Z,4.3nm,1.4s						
G31M	**Satah River**	**52.11**	**30**	P	**P**	**15 01 15.9**	**+1.3**
G31M				IAmb	IAmb	15 01 16.3	
	comp=Z,8.9nm,1.5s						
ARU	**Arti**	**55.02**	**318**	P	**P**	**15 01 35.5**	**-0.5**
ARU	**Arti**	**55.02**	**318**	LR	LR	15 25 13.5	
	comp=Z,30nm,19.5s,baz=50,slow=36						
ABKAR	**Akbulak array**	**56.90**	**309**	P	**P**	**15 01 49.2**	**-0.4**
ABKAR	**Akbulak array**	**56.90**	**309**	P	**P**	**15 01 49.1**	**-0.5**
WB0	**Warramunga Arr**	**59.23**	**188**	P	**P**	**15 02 05.5**	**-0.6**
WR0	**Warramunga Arr**	**59.41**	**188**	P	**P**	**15 02 06.3**	**-1.0**
WRA	**Warramunga Arr**	**59.41**	**189**	P	**P**	**15 02 06.1**	**-1.3**
WRA	**Warramunga Arr**	**59.41**	**189**	P	**P**	**15 02 06.5**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=4.2,slow=7.0,SNR=8.7						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**62.05**	**339**	P	**P**	**15 02 24.6**	**-0.2**
	comp=Z,4.4nm,1.0s,baz=37,slow=9.1,SNR=4.3						
	comp=Z,2.4nm,1.0s						
ASAR	**Alice Springs**	**63.14**	**188**	P	**P**	**15 02 31.8**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=0.5,slow=6.5,SNR=6.9						
	comp=Z,0.6nm,1.0s						
FIA1	**FINESS Array S**	**67.04**	**332**	P	**P**	**15 02 57.0**	**-0.4**
FINES	**FINESS Array B**	**67.04**	**332**	P	**P**	**15 02 57.0**	**-0.4**
FINES	**FINESS Array B**	**67.04**	**332**	P	**P**	**15 02 57.0**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=38,slow=9.6,SNR=9.8						
	comp=Z,2.1nm,0.6s						
HFS	**Hagfors**	**72.22**	**336**	P	**P**	**15 03 28.6**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=77,slow=9.3,SNR=5.9						
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**72.28**	**337**	P	**P**	**15 03 29.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**72.28**	**337**	P	**P**	**15 03 28.8**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=51,slow=5.4,SNR=1.9						
	comp=Z,0.4nm,0.5s						
AKASG	**Malin Array Be**	**72.82**	**322**	P	**P**	**15 03 32.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=44,slow=6.4,SNR=6.0						
	comp=Z,0.8nm,0.4s						
BRTR	**Keskin Array B**	**77.74**	**312**	P	**P**	**15 04 01.1**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=0.0,slow=7.2,SNR=2.7						
	comp=Z,0.4nm,0.7s						

*IDC **02** 14:52:54.3±2.7, 56°.34N×148°.55W, h0km, mb3.4/1, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=40.2km s-min=25.5km az=1.0*
*NEIC **02** 14:52:55.1±1.3, 56°.36N±0°.08×148°.74W±0°.10, h22km±9km, ML3.8/62, ML3.5(AEIC), Error ellipse: s-maj=11.6km s-min=7.5km az=168.0*
*AEIC **02** 14:52:58.2±1.4, 56°.35N±0°.08×148°.7W±0°.1, h12km±7km, Error ellipse: s-maj=12.3km s-min=9.1km az=169.0*

ISC 02 14:52:53.8±1.1, 56°.39N±0°.08×148°.75W±0°.06, h10km, n262, σ1°.14/164, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.52**	**305**		**Pn**	**14 53 34.9**	**+0.2**
KDAK					**Sn**	**14 54 02.4**	**-2.9**
KDAK	**Kodiak Island**	**2.52**	**305**	IAML		14 54 03.4	
	248nm,0.3s						
KDAK	**Kodiak Island**	**2.52**	**305**	Pn	**Pn**	**14 53 35.0**	**+0.4**
	5.1nm,0.3s,baz=113,slow=5.3,SNR=110						
KDAK				Sn	**Sn**	**14 54 02.7**	**-2.6**
	24nm,0.3s,baz=251,slow=23,SNR=79						
	11nm,0.3s						
OHAK	**Old Harbor**	**2.63**	**290**	IAML		14 54 05.4	
	comp=N,279nm,0.3s						
OHAK	**Old Harbor**	**2.63**	**290**		**Pn**	14 53 36.2	-0.1
OHAK					**Sn**	**14 54 04.8**	**-3.5**
OHAK	**Old Harbor**	**2.63**	**290**	P	Pn	14 53 36.2	-0.1
	baz=107						
OHAK				S	**Sn**	**14 54 04.7**	**-3.5**
	baz=107						
SYI	**Shuyak Island**	**2.97**	**320**		**Pn**	**14 53 41.4**	**+0.5**
SYI					**Sn**	**14 54 14.6**	**-1.9**
Q20K	**Shuyak Island**	**2.97**	**320**	P	**Pn**	**14 53 41.4**	**+0.5**
	baz=137						
Q20K				S	**Sn**	**14 54 14.6**	**-2.0**
	baz=137						
SII	**Sitkinak Islan**	**3.02**	**275**		**Pn**	**14 53 42.3**	**+0.6**
SII					**Sn**	**14 54 14.6**	**-3.2**
SII	**Sitkinak Islan**	**3.02**	**275**	IAML		14 54 18.8	
	comp=N,213nm,1.9s						
SII				IAML		14 55 25.1	
	comp=E,162nm,3.0s						
SII	**Sitkinak Islan**	**3.02**	**275**	P	**Pn**	**14 53 42.3**	**+0.6**
	baz=92						
SII				S	**Sn**	**14 54 14.6**	**-3.2**
	baz=92						
Q23K	**Middleton Isla**	**3.30**	**22**		Pn	14 53 45.4	0.0
Q23K	**Middleton Isla**	**3.30**	**22**	IAML		14 54 13.1	
	comp=N,218nm,2.5s						
Q23K				IAML		14 55 29.3	
	comp=E,246nm,1.7s						
Q23K	**Middleton Isla**	**3.30**	**22**	P	Pn	14 53 45.4	0.0
	baz=203						
MID	**Middleton Isla**	**3.30**	**22**		Pn	14 53 45.3	-0.2
MID	**Middleton Isla**	**3.30**	**22**	IAML		14 54 41.1	
	comp=E,238nm,2.3s						
MID				IAML		14 55 11.4	
	comp=N,226nm,2.1s						
CNPM	**China Poot**	**3.41**	**338**		Pn	14 53 47.2	+0.2
CNPM					**Sn**	**14 54 25.8**	**-1.6**
BRSE	**Bradley Lake S**	**3.52**	**343**		Pn	14 53 48.4	-0.1
BRSE					**Sn**	**14 54 27.9**	**-2.3**
BRSE	**Bradley Lake S**	**3.52**	**343**	P	Pn	14 53 48.4	-0.1
	baz=161						
BRSE				S	**Sn**	**14 54 27.9**	**-2.3**
	baz=161						
BRLK	**Bradley Lake**	**3.57**	**342**		Pn	14 53 48.2	-0.9
HOM	**Homer**	**3.62**	**336**		Pn	14 53 50.1	+0.3
HOM					**Sn**	**14 54 32.0**	**-0.5**
HOM	**Homer**	**3.62**	**336**	IAML		14 54 39.5	
	comp=E,207nm,1.6s						
HOM				IAML		14 55 17.1	
	comp=N,217nm,1.3s						
HOM	**Homer**	**3.62**	**336**	P	Pn	14 53 50.1	+0.3
	baz=153						
HOM				S	**Sn**	**14 54 32.0**	**-0.5**
	baz=153						
Q19K	**Cape Douglas,**	**3.66**	**316**		**Pn**	**14 53 51.1**	**+0.7**
Q19K	**Cape Douglas,**	**3.66**	**316**	IAML		14 54 37.3	
	comp=N,240nm,0.8s						
Q19K				IAML		14 54 40.3	
	comp=E,318nm,0.8s						
Q19K	**Cape Douglas,**	**3.66**	**316**	P	**Pn**	**14 53 51.1**	**+0.7**
	baz=132						
P23K	**Montague Islan**	**3.68**	**11**		Pn	14 53 50.5	-0.2
P23K	**Montague Islan**	**3.68**	**11**	P	Pn	14 53 50.5	-0.2
	baz=191						
SEW	**Seward**	**3.74**	**355**		Pn	14 53 51.1	-0.3
SEW	**Seward**	**3.74**	**355**	P	Pn	14 53 51.1	-0.3
	baz=174						
KAHG	**Katmai Hook Gl**	**3.78**	**306**		**Pn**	**14 53 53.2**	**+1.2**
AUCH	**Augustine Cone**	**3.89**	**322**		**Pn**	**14 53 54.3**	**+0.7**
AUL	**Augustine Lava**	**3.90**	**322**		**Pn**	**14 53 54.8**	**+1.1**
P19K	**Oil Pt**	**4.04**	**326**		**Pn**	**14 53 56.5**	**+0.8**
P19K	**Oil Pt**	**4.04**	**326**	IAML		14 54 45.6	
	comp=N,140nm,0.4s						
P19K				IAML		14 54 53.5	
	comp=E,150nm,0.5s						
P19K	**Oil Pt**	**4.04**	**326**	P	**Pn**	**14 53 56.5**	**+0.8**
	baz=142						
O22K	**Cooper Landing**	**4.13**	**353**		Pn	14 53 56.4	-0.4
O22K	**Cooper Landing**	**4.13**	**353**	P	Pn	14 53 56.9	0.0
	baz=172						
HIN	**Hinchinbrook I**	**4.18**	**15**		**Pn**	**14 53 57.8**	**+0.2**
HIN	**Hinchinbrook I**	**4.18**	**15**	IAML		14 54 45.8	
	comp=E,151nm,0.4s						
SLKM	**Skilak Lake**	**4.20**	**350**		Pn	14 53 57.5	-0.3
KAIM	**Kayak Island**	**4.22**	**31**		**Pn**	**14 53 58.5**	**+0.4**
KAIM	**Kayak Island**	**4.22**	**31**	IAML		14 54 51.4	
	comp=E,239nm,0.5s						
KAIM	**Kayak Island**	**4.22**	**31**	P	**Pn**	**14 53 58.5**	**+0.4**
	baz=214						
O20K	**Slope Mountain**	**4.23**	**333**		Pn	14 53 58.4	+0.1
O20K	**Slope Mountain**	**4.23**	**333**	P	Pn	14 53 58.4	+0.1
	baz=149						
IVE	**Iliamna Volcan**	**4.28**	**330**		Pn	14 53 59.2	+0.2
CNTC	**Contact Creek**	**4.30**	**299**		**Pn**	**14 54 00.3**	**+1.0**
Q17K	**Contact Creek**	**4.30**	**299**	P	**Pn**	**14 54 00.3**	**+1.0**
	baz=113						
EYAK	**Cordova Ski Ar**	**4.45**	**19**		**Pn**	**14 54 01.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.45**	**19**	P	**Pn**	**14 54 01.6**	**+0.3**
	baz=201						
SUCK	**Suckling Hills**	**4.53**	**33**		**Pn**	**14 54 03.1**	**+0.8**
SUCK				IAML		14 54 55.1	
	comp=N,153nm,0.4s						
SUCK				IAML		14 54 55.3	
	comp=E,109nm,1.6s						
RAGM	**Ragged Mountai**	**4.54**	**26**	Pn	**Pn**	**14 54 03.0**	**+0.5**
RAGM				IAML		14 54 58.0	
	comp=E,202nm,0.5s						
RED	**Redoubt Volcan**	**4.56**	**334**		**Pn**	14 54 02.5	-0.3
CAPN	**Captain Cook N**	**4.56**	**345**	Pn	**Pn**	**14 54 03.9**	**+1.1**
P18K	**Big Mountain,**	**4.58**	**314**		Pn	14 54 02.9	-0.2
P18K	**Big Mountain,**	**4.58**	**314**	P	Pn	14 54 03.3	+0.2
	baz=128						
RSO	**Redoubt South**	**4.59**	**334**		Pn	14 54 03.5	+0.1
HMT	**Hamilton**	**4.60**	**29**		**Pn**	**14 54 04.0**	**+0.6**
RDT	**Redoubt**	**4.61**	**337**		Pn	14 54 03.1	-0.4
RDWB	**Redoubt West**	**4.63**	**334**		Pn	14 54 03.8	-0.1
DFR	**Drift River**	**4.69**	**335**		Pn	14 54 04.5	-0.1
GOAT	**Goat Mountain**	**4.70**	**25**		**Pn**	**14 54 05.2**	**+0.5**
BGLC	**Bering Glacier**	**4.72**	**35**		**Pn**	**14 54 05.4**	**+0.5**
BGLC	**Bering Glacier**	**4.72**	**35**	P	**Pn**	**14 54 05.4**	**+0.5**
	baz=219						
NCT	**North Crescent**	**4.72**	**334**		Pn	14 54 04.8	-0.2
RC01	**Rabbit Creek A**	**4.74**	**354**		**Pn**	**14 54 05.5**	**+0.3**
RC01				IAML		14 54 58.5	
	comp=N,71nm,0.4s						
RC01				IAML		14 54 58.6	
	comp=E,66nm,0.3s						
RC01	**Rabbit Creek A**	**4.74**	**354**	P	Pn	14 54 05.3	+0.1
	baz=173						
BERG	**Berg Lake**	**4.81**	**31**		**Pn**	**14 54 06.5**	**+0.4**
O19K	**Port Alsworth**	**4.81**	**325**		Pn	14 54 06.5	+0.3
O19K	**Port Alsworth**	**4.81**	**325**	P	Pn	14 54 06.5	+0.3
	baz=140						
GRIN	**Grindle Hills**	**4.83**	**34**		**Pn**	**14 54 07.0**	**+0.4**
O18K	**Koktuh Hills**	**4.88**	**318**		Pn	14 54 07.4	+0.3
O18K				IAML		14 55 17.2	
	comp=N,34nm,2.8s						
O18K	**Koktuh Hills**	**4.88**	**318**	P	Pn	14 54 07.3	+0.2
	baz=133						
SNH	**Sunshine Point**

PINM	**Pinnacle**	5.82	47	P		Pn	14 54 20.7 +0.6
	baz=234						
M24K	**Tolsona, Glenn**	5.88	12			Pn	14 54 21.9 +0.9
M24K	**Tolsona, Glenn**	5.88	12	P		Pn	14 54 21.9 +0.9
	baz=194						
SVW2	**Sparrevohn**	5.91	326			Pn	14 54 21.1 -0.2
O16K	**Kokwok River B**	5.92	307			Pn	14 54 21.7 +0.4
O16K	**Kokwok River B**	5.92	307	P		Pn	14 54 21.7 +0.4
	baz=119						
M20K	**Styx River**	5.95	340			Pn	14 54 21.9 0.0
M20K	**Styx River**	5.95	340	P		Pn	14 54 21.9 0.0
	baz=156						
PNL	**Peninsula**	5.95	53			Pn	14 54 22.6 +0.7
PNL	**Peninsula**	5.95	53	P		Pn	14 54 22.6 +0.7
	baz=240						
BARN	**Barnard Glacie**	5.96	35			Pn	14 54 22.5 +0.4
CTG	**Chitna Glacier**	5.99	37	P		Pn	14 54 22.8 +0.3
	baz=223						
CTGM	**Chitina Glacie**	5.99	37			Pn	14 54 22.8 +0.2
BCPM	**Bancas Point**	6.00	50	Pn		Pn	14 54 22.7 +0.3
LOGN	**Logan Glacier**	6.01	39			Pn	14 54 23.0 +0.2
N17K	**Nushagak Hills**	6.06	317			Pn	14 54 23.6 +0.2
N17K	**Nushagak Hills**	6.06	317	P		Pn	14 54 23.6 +0.2
	baz=130						
WAT6	**Susitna Watana**	6.23	4			Pn	14 54 26.0 +0.2
WAT6	**Susitna Watana**	6.23	4	P		Pn	14 54 26.0 +0.2
	baz=185						
M19K	**Big River Lodg**	6.24	335			Pn	14 54 25.4 -0.4
M19K	**Big River Lodg**	6.24	335	P		Pn	14 54 25.4 -0.4
	baz=150						
M18K	**Stony River**	6.29	327			Pn	14 54 26.1 -0.3
M18K	**Stony River**	6.29	327	P		Pn	14 54 26.1 -0.3
	baz=141						
CHNA	**Chernabura Isl**	6.34	260	P		Pn	14 54 27.7 +0.5
	baz=72						
CNBA	**Chernabura Isl**	6.34	260			Pn	14 54 27.6 +0.4
WAT1	**Susitna Watana**	6.46	1			Pn	14 54 29.7 +0.8
WAT1	**Susitna Watana**	6.46	1	P		Pn	14 54 29.7 +0.8
	baz=181						
WAT7	**Susitna Watana**	6.46	360			Pn	14 54 29.9 +0.9
O15K	**Ungalikthiuk R**	6.55	300			Pn	14 54 31.3 +1.2
O15K	**Ungalikthiuk R**	6.55	300	P		Pn	14 54 31.3 +1.2
	baz=111						
L19K	**White Mountain**	6.59	334			Pn	14 54 30.4 -0.3
L19K	**White Mountain**	6.59	334	P		Pn	14 54 30.4 -0.3
	baz=149						
O29M	**Mount Kennedy**	6.63	50			Pn	14 54 32.2 +0.9
O29M	**Mount Kennedy**	6.63	50	P		Pn	14 54 32.2 +0.9
	baz=238						
L20K	**Farewell, AK**	6.64	339			Pn	14 54 30.9 -0.4
L20K	**Farewell, AK**	6.64	339	P		Pn	14 54 30.9 -0.4
	baz=154						
P29M	**Windy Craggy**	6.69	56			Pn	14 54 32.2 +0.3
P29M	**Windy Craggy**	6.69	56	P		Pn	14 54 32.3 +0.3
	baz=245						
SDPT	**Sand Point**	6.69	266	Pn		Pn	14 54 33.0 +1.1
M26K	**Nabesna, AK**	6.70	24	Pn		Pn	14 54 33.7 +1.5
DHY	**Denali Highway**	6.74	5			Pn	14 54 33.4 +0.6
DHY	**Denali Highway**	6.74	5	P		Pn	14 54 33.4 +0.6
	baz=186						
M17K	**Holitna River**	6.74	322			Pn	14 54 32.5 -0.2
M17K	**Holitna River**	6.74	322	P		Pn	14 54 33.0 +0.3
	baz=134						
PAX	**Paxson**	6.80	13			Pn	14 54 34.2 +0.6
PAX	**Paxson**	6.80	13	P		Pn	14 54 34.2 +0.6
	baz=195						
M27K	**Edge Creek, AK**	6.93	28	Pn		Pn	14 54 35.6 +0.2
S31K	**Pelican**	6.98	72			Pn	14 54 34.1 -1.9
S31K	**Pelican**	6.98	72	P		Pn	14 54 34.1 -1.9
	baz=262						
RND	**Reindeer**	7.04	360			Pn	14 54 37.6 +0.8
M16K	**Timber Creek**	7.06	315			Pn	14 54 37.5 +0.5
M16K	**Timber Creek**	7.06	315	P		Pn	14 54 37.5 +0.5
	baz=127						
N15K	**Kwethluk River**	7.08	307	Pn		Pn	14 54 39.1 +1.8
L18K	**Granite Mounta**	7.11	328	Pn		Pn	14 54 36.3 -1.5
TRF	**Thorofare Moun**	7.12	354			Pn	14 54 39.1 +1.1
TRF	**Thorofare Moun**	7.12	354	P		Pn	14 54 39.1 +1.1
	baz=173						
CAST	**Castle Rocks**	7.24	348			Pn	14 54 39.8 +0.2
CAST	**Castle Rocks**	7.24	348	P		Pn	14 54 39.8 +0.2
	baz=165						
KTH	**Kantishna Hill**	7.26	352			Pn	14 54 40.9 +1.0
PLBC	**Pleasant Camp**	7.27	60			Pn	14 54 40.1 +0.2
PLBC	**Pleasant Camp**	7.27	60	P		Pn	14 54 40.1 +0.2
	baz=250						
O14K	**Tigyukauivet M**	7.27	298	Pn		Pn	14 54 40.8 +0.9
R31K	**City Hall, Gus**	7.31	69			Pn	14 54 40.4 0.0
R31K	**City Hall, Gus**	7.31	69	P		Pn	14 54 40.4 0.0
	baz=259						
HYT	**Haines Junctio**	7.36	48			Pn	14 54 40.9 -0.4
HYT	**Haines Junctio**	7.36	48	P		Pn	14 54 40.9 -0.4
	baz=237						
MCK	**McKinley**	7.36	359			Pn	14 54 42.0 +0.8
MCK	**McKinley**	7.36	359	P		Pn	14 54 42.0 +0.8
	baz=179						
PS1A	**Pavlof South-1**	7.37	268			Pn	14 54 41.9 +0.6
PVV	**Pavlof Volcano**	7.41	268			Pn	14 54 42.4 +0.6
SIT	**Sitka**	7.42	79	Pn		Pn	14 54 39.3 -2.6
K20K	**Telida**	7.48	341	Pn		Pn	14 54 42.6 -0.2
PN7A	**Pavlof North-7**	7.51	268			Pn	14 54 44.5 +1.2
TTA	**Tatalina**	7.51	334	Pn		Pn	14 54 42.9 -0.5
L16K	**Owhat River**	7.68	318			Pn	14 54 45.1 -0.4
BPAW	**Bear Paw Mtn.**	7.81	353	Pn		Pn	14 54 47.4 0.0
BWN	**Browne**	7.81	358			Pn	14 54 47.6 +0.2
S32K	**Killisnoo**	7.83	76	Pn		Pn	14 54 46.8 -0.7
R32K	**Eaglecrest**	7.93	70	Pn		Pn	14 54 48.1 -0.8
O30N	**Mendenhall**	7.93	51			Pn	14 54 49.8 +0.8
O30N	**Mendenhall**	7.93	51	P		Pn	14 54 49.8 +0.8
	baz=242						
SCRK	**Sand Creek**	7.97	15	Pn		Pn	14 54 50.4 +0.8
K17K	**Iditarod**	7.98	327			Pn	14 54 49.5 -0.1
M29M	**Somme Creek**	8.01	37			Pn	14 54 51.4 +1.2
HDA	**Harding Lake**	8.09	6			Pn	14 54 53.8 +2.6
J20K	**Nowinta River**	8.25	343	Pn		Pn	14 54 53.2 -0.2
CCB	**Clear Creek Bu**	8.29	3			Pn	14 54 55.5 +1.6
K27K	**Chicken**	8.34	21	Pn		Pn	14 54 55.4 +0.8
J19K	**Poorman**	8.35	339	Pn		Pn	14 54 54.4 -0.4
J25K	**Salcha River,**	8.41	10	Pn		Pn	14 54 55.4 -0.2
WHY	**Whitehorse**	8.41	54			Pn	14 54 57.5 +1.8
N31M	**Braeburn, Yuko**	8.42	47			Pn	14 54 57.0 +1.3
N31M	**Braeburn, Yuko**	8.42	47	P		Pn	14 54 57.0 +1.3
	baz=238						
IL31		8.46	5			Pn	14 54 57.5 +1.4
ILAR	**Eielson Array**	8.46	5	Pn		Pn	14 54 56.6 +0.5
	comp=N,0.4nm,0.3s,baz=190,slow=13,SNR=21						
ILAR				Sn		Sn	14 56 26.8 -4.7
	comp=N,0.7nm,0.3s,baz=210,slow=16,SNR=10						
	comp=N,1.0nm,0.4s						
J26L	**Joseph Creek**	8.52	15			Pn	14 54 57.4 +0.2
L29M	**L29M**	8.60	34			Pn	14 54 59.4 +1.2
MDM	**Murphy Dome**	8.60	1			Pn	14 54 59.0 +0.9
P32M	**Atlin**	8.60	62			Pn	14 54 58.9 +0.6
P32M	**Atlin**	8.60	62	P		Pn	14 54 58.8 +0.6
	baz=254						
ISLZ	**Isanotski Laza**	8.65	265			Pn	14 54 59.4 +0.5
M30M	**Minto, Yukon**	8.67	39	Pn		Pn	14 55 00.0 +0.8
U33K	**Whale Pass**	8.71	85	Pn		Pn	14 54 57.9 -1.7
L14K	**Kuka Creek**	8.75	310	Pn		Pn	14 55 01.2 +1.0
I21K	**Tanana**	8.96	351	Pn		Pn	14 55 03.7 +0.7
DAWY	**Dawson**	8.98	27	Pn		Pn	14 55 04.4 +1.0
J16K	**Anvik River**	9.12	324	Pn		Pn	14 55 04.9 -0.3
P33M	**Teslin, Yukon**	9.21	59			Pn	14 55 06.7 +0.1
P33M	**Teslin, Yukon**	9.21	59	P		Pn	14 55 06.7 +0.1
	baz=252						
K29M	**Barlow Dome**	9.32	32	Pn		Pn	14 55 09.1 +0.9
M31M	**Drury Creek, Y**	9.36	46	Pn		Pn	14 55 10.3 +1.8
N32M	**Quiet Lake**	9.42	53	Pn		Pn	14 55 09.3 -0.1
H24K	**Noodor Dome**	9.49	2	Pn		Pn	14 55 12.5 +2.2
H21K	**Melozitna Rive**	9.50	350	Pn		Pn	14 55 10.5 0.0
FARO	**Faro, Yukon**	9.79	47	Pn		Pn	14 55 15.6 +1.1
R33M	**Jennings River**	9.93	65	Pn		Pn	14 55 17.2 +0.8
R33M	**Jennings River**	9.93	65	P		Pn	14 55 16.8 +0.4
	baz=260						
H18K	**Honhosa River**	9.95	336	Pn		Pn	14 55 15.6 -1.0
I28M	**Miner Creek**	10.03	22	Pn		Pn	14 55 18.5 +0.7
DLBC	**Dease Lake**	10.30	71	Pn		Pn	14 55 21.9 +0.4
	comp=N,0.9nm,0.3s,baz=265,slow=8,2,SNR=24						
DLBC				Sn		Sn	14 57 12.1 -4.8
	comp=N,0.1nm,0.3s,baz=157,slow=19,SNR=1.6						
	comp=N,2.1nm,0.3s						
FYU	**Fort Yukon**	10.34	8	Pn		Pn	14 55 22.7 +0.8
G23K	**Bananza Creek**	10.37	357	Pn		Pn	14 55 23.3 +0.9
I30M	**Mount Dempster**	10.70	29	Pn		Pn	14 55 27.2 +0.3
BMAR	**Burnt Mountain**	11.24	8	Pn		Pn	14 55 35.1 +0.7
E19K	**Redstone River**	11.78	344	Pn		Pn	14 55 42.4 +0.7
E25K	**Arctic Village**	11.86	6	Pn		Pn	14 55 44.6 +1.8
D25K	**Kavik River**	13.02	4	Pn		Pn	14 55 59.4 +0.7
YKA	**Yellowknife Ar**	18.23	56	P		Pn	14 57 06.9 +0.3
	comp=N,0.1nm,0.3s,baz=264,slow=13,SNR=3.7						
	comp=N,0.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	49.20	240	T		T	15 54 37.7
	baz=28						
H11N3	**WAKE ISLAND Hy**	49.20	240	T		T	15 54 36.8
	baz=28,slow=74						
H11N1	**WAKE ISLAND Hy**	49.22	240	T		T	15 54 49.1
	baz=28,slow=74						
H11S1	**WAKE ISLAND Hy**	50.34	240	T		T	15 56 08.8
	baz=40,slow=76						
H11S2	**WAKE ISLAND Hy**	50.35	240	T		T	15 56 12.8
	baz=40,slow=76						
H11S3	**WAKE ISLAND Hy**	50.36	240	T		T	15 56 11.5
	baz=40,slow=76						
SONM	**Songino Array**	58.80	310	P		P	15 02 55.3 +3.4
	comp=N,0.3nm,0.8s,baz=35,slow=5.3,SNR=2.1						
	comp=N,0.3nm,0.8s						

IDC ***02*** *15:11:28.4±1.2,8.˙01S×126.˙87E,h0km,mb4.1/6, mbtmp4.2/8,ML4.5/2, Error ellipse: s-maj=133.6km s-min=23.4km az=68.0*

DJA ***02*** *15:11:41.4±0.3,8˙3S±3˙×12˚8E±˚,h171km±13km, M4.2/13, mb3.9/7,mB4.9/1,MLv4.3/13,Mw(mB)4.2/1*

ISC 02 15:11:41.5±0.8, 7˚84S±0.˙06×128˚49E±0.˙06, h150km, n18, σ2s18/21, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.79	93	P		Pn		15 12 27.9	+1.7
SAUI				S		Sn		15 12 59.9	-0.8
BNDI	**Bandanaira**	3.58	23	P		Pn		15 12 34.6	-1.7
SOEI	**Soe**	4.59	245	P		Pn		15 12 50.6	+1.0
SOEI				S		Sn		15 13 41.1	-1.6
NLAI	**Namlea**	4.77	343	P		Pn		15 12 48.8	-3.1
FAKI	**Fak Fak**	6.15	38	P		Pn		15 13 08.0	-2.3
	17nm,0.9s,0.1nm								
MMRI	**Maumere**	6.24	262	P		Pn		15 13 11.5	+0.1
	58nm,1.2s,0.2nm								
EDFI	**Ende, Flores**	6.79	262	P		Pn		15 13 19.8	+0.9
	22nm,1.6s,0.1nm								
SWI	**Sorong**	7.46	22	P		Pn		15 13 26.8	-0.9
	12nm,0.9s,0.1nm								
PLAI	**Plampang**	10.65	264	P		Pn		15 14 09.0	-1.1
	31nm,1.5s								
TWSI	**Taliwang, Sumb**	11.52	265	P		Pn		15 14 19.4	-2.2
WRA	**Warramunga Arr**	13.30	155	Pn		Pn		15 14 45.8	+1.1
	3.2nm,0.3s,baz=321,slow=14,SNR=92								
WRA				Sn		Sn		15 17 07.0	-5.0
	3.8nm,0.3s,baz=332,slow=22,SNR=16								
	3.6nm,0.3s								
ASAR	**Alice Springs**	16.58	162	Pn		Pn		15 15 29.0	+3.6
	0.7nm,0.3s,baz=342,slow=11,SNR=68								
ASAR				Sn		S		15 18 28.4	-1.3
	0.8nm,0.3s,baz=330,slow=22,SNR=8.0								
	7.5nm,0.7s								
SONM	**Songino Array**	58.77	343	P		P		15 21 26.3	+2.4
	0.7nm,0.5s,baz=175,slow=7.9,SNR=5.4								
	0.7nm,0.5s								
MKAR	**Makanchi Array**	68.11	328	P		P		15 22 26.8	+1.5
	0.9nm,0.5s,baz=121,slow=8.0,SNR=27								
	0.9nm,0.5s								
ZALV	**Zalesovo Beam**	71.68	335	P		P		15 22 47.5	+0.7
	1.0nm,0.4s,baz=141,slow=5.5,SNR=5.1								
	1.0nm,0.4s								
KURBB	**Kurchatov Arra**	72.45	329	P		P		15 22 52.8	+1.3
	1.7nm,0.6s,baz=134,slow=5.1,SNR=13								
	1.7nm,0.6s								
BVAR	**Borovoye Array**	77.98	328	P		P		15 23 24.1	+1.1
	1.0nm,0.6s,baz=112,slow=6.5,SNR=6.8								
	1.0nm,0.6s								
QSPA	**South Pole Qui**	82.15	180	P		P		15 23 49.9	+4.5
	1.2nm,0.9s,baz=0.0,slow=4.0,SNR=1.9								
	1.2nm,0.9s								

NAO ***02*** *15:44:47.3±1.1,73˚.04N×5˚.06E,ML3.9*

MOS ***02*** *15:44:49.7±1.4,72˚.90N×5˚.45E,h10km,mb4.4/14, Error ellipse: s-maj=23.4km s-min=5.8km az=97.5*

IDC ***02*** *15:44:49.5±0.6,72˚.80N×5˚.09E,h0km,mb3.8/22, mbtmp3.9/28,ML3.3/5,MS3.7/63,Error ellipse: s-maj=15.7km s-min=11.0km az=51.0*

NEIC ***02*** *15:44:51.4±2.9,73˚.03N±0˚.09×5˚.5E±0˚.4,h10km±1km, mb4.4/22,Error ellipse: s-maj=19.7km s-min=13.3km az=241.0*

FCIAR ***02*** *15:44:52.0,72˚.88N×5˚.68E,h10km,station SPA0 has station magnitude of 3.83*

BER ***02*** *15:44:52.9±2.2,73˚.01N×5˚.57E,h10km,mb(Pn)4.4, ML3.9(NAO),Confirmed Earthquake*

KOLA ***02*** *15:45:03.8,72˚.62N×8˚.57E,h0km,ML2.7,Error ellipse: s-maj=25.5km s-min=17.7km az=120.0,Norwegian sea*

ISC 02 15:44:51.3±0.5, 72˚93N±0˚.04×5˚57E±0˚.06, h11km, n215, σ1s88/197, mb4.2/42, MS3.7/58, 9C-4D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	4.79	253	LR		LR		15 47 30.4	
	comp=Z,544nm,19.7s,baz=344,slow=35								
HSPB	**Hornsund (broa**	4.84	28	Pn		Pn		15 46 01.8	-2.1
HSPB	**Hornsund (broa**	4.84	28	*eP*		Pn		15 46 02.1	-1.7
TRO	**Tromso**	5.42	121	*eP*		Pn		15 46 12.0	+0.1
LOF	**Lofoten**	5.50	147	Pn		Pn		15 46 13.7	+0.6
JETT	**Jettan, Norway**	5.85	118	Pn		Pn		15 46 17.9	0.0
JETT				Sn		Sn		15 47 23.9	-0.9
JETT	**Jettan, Norway**	5.85	118	Pn		Pn		15 46 17.9	0.0
JETT				Sn		Sn		15 47 23.9	-0.9
SPB2	**Spitsbergen Ar**	5.91	22			Pn		15 46 17.1	-1.6
SPA0	**Spitsbergen Ar**	5.91	22	Pn		Pn		15 46 17.0	-1.6
	baz=214,slow=16								
SPA0	**Spitsbergen Ar**	5.91	22	Pn		Pn		15 46 17.0	-1.6
	baz=214,slow=16								
SPA0	**Spitsbergen Ar**	5.91	22	*eP*		Pn		15 46 17.7	-0.9
SPA0				*eS*		Sn		15 47 21.2	-5.1
SPITS	**Spitsbergen Ar**	5.91	22	P		Pn		15 46 17.0	-1.6
SPITS								15 47 24.0	
SPITS	**Spitsbergen Ar**	5.91	22	Pn		Pn		15 46 18.2	-0.5
	baz=207,slow=18								
SPITS				Sn		Sn		15 47 24.0	-2.3
	baz=199,slow=26								
	6.4nm,0.4s								
STEI	**Steigen**	5.97	142	*eP*		Pn		15 46 19.1	-0.3
STEI				*e*				15 47 22.1	
STEI				IAML				15 47 30.0	
	comp=Z,7.5nm,0.6s								
HAMF	**Hammerfest**	6.11	103	Pn		Pn		15 46 20.3	-1.1
HAMF	**Hammerfest**	6.11	103	*eP*		Pn		15 46 20.5	-0.9
HAMF				IAML				15 46 20.6	
	comp=Z,11nm,0.3s								
KBS	**Kingsbay**	6.22	11	Pn		Pn		15 46 20.6	-2.3
KBS	**Kingsbay**	6.22	11	Pn		Pn		15 46 20.3	-2.6
KBS	**Kingsbay**	6.22	11	*eP*		Pn		15 46 22.6	-0.2
KBS	**Kingsbay**	6.22	11	*eP*		Pn		15 46 21.8	-1.1
KBS	**Kingsbay**	6.22	11	*eP*		Pn		15 46 19.7	-3.2
HOPEN	**Hopen**	6.24	46	Pn		Pn		15 46 21.7	-1.4
HOPEN				Sn		Sn		15 47 31.7	-2.6
HOPEN	**Hopen**	6.24	46	*eP*		Pn		15 46 21.8	-1.2
HOPEN				IAML				15 46 29.5	
	comp=Z,12nm,0.5s								
HOPEN	**Hopen**	6.24	46	*eP*		Pn		15 46 21.9	-1.2
HOPEN				*eS*		Sn		15 47 29.6	-4.7
FAUS	**Fauske**	6.47	145	P		Pn		15 46 26.5	+0.2
FAUS				S		Sn		15 47 33.7	-6.3
FAUS	**Fauske**	6.47	145	*eP*		Pn		15 46 26.4	+0.2
KTK1	**Kautokeino**	6.96	116	*eP*		Pn		15 46 33.5	+0.5
KONS	**Konsvik**	6.96	154	*eP*		Pn		15 46 32.3	-0.7
KONS				*e*				15 47 43.3	
KONS				IAML				15 47 49.7	
	comp=Z,9.5nm,0.2s								
SALU	**Saltoluokta**	7.08	135	*eP*		Pn		15 46 34.9	+0.2
STOK	**Stokkvaagen**	7.11	155	*eP*		Pn		15 46 35.0	0.0
ARA0	**ARCESS Array S**	7.25	108	Pn		Pn		15 46 36.5	-0.6
	baz=318,slow=12								
ARA0				Sn		Sn		15 47 54.6	-4.6
	baz=310,slow=22								
ARA0	**ARCESS Array S**	7.25	108	Pn		Pn		15 46 36.5	-0.6
	baz=318,slow=12								
ARA0				IAML				15 46 51.2	
	comp=Z,6.4nm,0.6s								
ARA0				Sn		Sn		15 47 54.6	-4.6
	baz=310,slow=22								
ARCES	**ARCESS Array B**	7.25	108	Pn		Pn		15 46 37.5	+0.5
ARCES	**ARCESS Array B**	7.25	108	P		Pn		15 46 36.7	-0.3
ARCES				S		Sn		15 47 44.5	-15
ARCES	**ARCESS Array B**	7.25	108	Pn		Pn		15 46 36.7	-0.3
	comp=Z,0.5nm,0.3s,baz=324,slow=11,SNR=59								
ARCES				Sn		Sn		15 47 55.1	-4.1
	comp=Z,0.8nm,0.3s,baz=318,slow=21,SNR=2.7								
	comp=Z,3.7nm,0.6s								
MOR8	**Moi Rana**	7.45	151	*eP*		Pn		15 46 38.5	-1.3
HEF	**Hetta**	7.50	118	Pn		Pn		15 46 40.0	-0.4
HEF				Sn		Sn		15 48 00.6	-4.6
HEF	**Hetta**	7.50	118	*eP*		Pn		15 46 40.4	0.0
KEV	**Kevo**	7.55	104	Pn		Pn		15 46 39.7	-1.3
KEV	**Kevo**	7.55	104	Pn		Pn		15 46 39.7	-1.3
KEV	**Kevo**	7.55	104	*eP*		Pn		15 46 39.5	-1.6
KEV	**Kevo**	7.55	104	P		Pn		15 46 39.7	-1.3
VADS	**Vadso**	8.03	99	P		Pn		15 46 46.7	-0.9
VADS				S		Sn		15 48 03.8	-14
VADS	**Vadso**	8.03	99	*eP*		Pn		15 46 47.0	-0.6
NSS	**Namsos**	8.74	162	*eP*		Pn		15 46 57.7	+0.2
PRVG	**Vayda Guba**	9.05	98	P		Pn		15 47 01.2	-0.4
TERR	**Teriberka**	10.21	97	P		Pn		15 47 15.8	-1.7
APA0	**Apatity Array**	10.60	106	Pn		Pn		15 47 20.9	-2.0
	baz=308,slow=14								
APA0	**Apatity Array**	10.60	106	Pn		Pn		15 47 20.9	-2.0
	baz=308,slow=14								
AKN	**Aaknes**	10.81	176	Pn		Pn		15 47 25.0	-0.8
AKN	**Aaknes**	10.81	176	Pn		Pn		15 47 25.0	-0.8
LVZ	**Lovozero**	10.88	103			Pn		15 47 23.9	-2.9
LVZ	**Lovozero**	10.88	103	*eP*		Pn		15 47 24.8	-1.9
DOMB	**Dombas**	11.02	171	*eP*		Pn		15 47 27.4	-1.2
DOMB				IAML				15 47 29.9	
	comp=Z,4.9nm,0.3s								
NC204	**NORSAR Array S**	11.87	168	Pn		Pn		15 47 39.9	-0.4
NC303	**NORSAR Array S**	11.96	166			Pn		15 47 41.2	-0.3
ZFI2	**Zemlya Franca-**	11.99	31	*eP*		Pn		15 47 38.6	-3.1
OMEGA	**Omega**	11.99	31	*eP*		Pn		15 47 38.7	-3.1
NBO00	**NORSAR Array S**	12.12	168	Pn		Pn		15 47 42.3	-1.3
NB2	**NORSAR Subarra**	12.13	167	Pn		Pn		15 47 42.6	-1.3
	baz=347,slow=14								
NB2	**NORSAR Subarra**	12.13	167	Pn		Pn		15 47 42.6	-1.3
	baz=347,slow=14								
NB2	**NORSAR Subarra**	12.13	167	P		Pn		15 47 44.5	+0.6
NOA	**NORSAR Array B**	12.13	167	Pn		Pn		15 47 42.2	-1.7
	baz=349,slow=13,SNR=11								
NOA				LR		LR		15 52 10.4	
	comp=Z,284nm,20.2s,baz=345,slow=37								
	comp=Z,0.9nm,0.6s								
NC602	**NORSAR Array S**	12.46	166	Pn		Pn		15 47 48.1	-0.2
NRA0	**NORESS Array S**	12.46	166	Pn		Pn		15 47 47.4	-0.9
	baz=347,slow=12								
NRA0	**NORESS Array S**	12.46	166	Pn		Pn		15 47 47.4	-0.9
	baz=347,slow=12								
BORG	**Borgarnes**	12.57	243	LR		LR		15 51 28.0	
	comp=Z,200nm,19.8s,baz=10,slow=32								
HFS	**Hagfors**	13.23	162	Pn		Pn		15 47 57.7	-1.1
	baz=349,slow=14								
HFS	**Hagfors**	13.23	162	Pn		Pn		15 47 57.7	-1.1
	baz=349,slow=14								
HFS	**Hagfors**	13.23	162	Pn		Pn		15 47 57.7	-1.1
	comp=Z,0.7nm,0.3s,baz=354,slow=12,SNR=19								
HFS				LR		LR		15 52 44.3	
	comp=Z,477nm,19.6s,baz=349,slow=36								
	comp=Z,4.0nm,0.6s								
FIA0	**FINESS Array S**	13.88	135	Pn		Pn		15 48 06.1	-1.5
	baz=342,slow=14								
FIA0	**FINESS Array S**	13.88	135	Pn		Pn		15 48 06.1	-1.5
	baz=342,slow=14								
FIA1	**FINESS Array S**	13.88	135	Pn		Pn		15 48 05.3	-2.3
FINES	**FINESS Array B**	13.88	135	Pn		Pn		15 48 04.9	-2.7
FINES	**FINESS Array B**

NRIK IAmb IAmb 15 50 40.7
comp=Z,13nm,1.5s
NRIK Noril'sk 24.80 57 *eP* **P 15 50 13.2 +0.6**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
NRIK Noril'sk 24.80 57 P **P 15 50 15.2 +2.5**
comp=Z,1.0nm,0.4s,baz=318,slow=15,SNR=1.6
NRIK LR LR 16 03 06.6
comp=Z,39nm,19.1s,baz=344,slow=44
comp=Z,1.0nm,0.4s
LPSR Galich'ya Gora 24.83 127 *eP* **P 15 50 13.3 +0.2**
LPSR pmax pmax
comp=Z,30nm,0.7s
RES Resolute Bay 24.94 322 LR LR 16 00 04.7
comp=Z,340nm,19.5s,baz=34,slow=37
MODS Modra-Piesok 25.20 161 *eP* **P 15 50 17.8 +1.3**
MODS Modra-Piesok 25.20 161 *eP* **P 15 50 17.8 +1.3**
KOLS Kolonicke sedl 25.21 154 *eP* **P 15 50 18.5 +2.0**
KOLS Kolonicke sedl 25.21 154 *eP* **P 15 50 18.5 +2.0**
VORR Voronezh 25.75 127 P **P 15 50 23.7 +2.3**
VORR pmax pmax
comp=Z,6.0nm,0.5s
VSR Storozhevoye 26.17 128 *eP* **P 15 50 24.4 -0.8**
VSR pmax pmax
comp=Z,10.0nm,1.1s
DAVOX Davos/Dischmat 26.31 173 LR LR 16 00 38.8
comp=Z,175nm,20.9s,baz=10.0,slow=36
VORD Divnogorie 26.43 128 *eP* **P 15 50 26.9 -0.7**
VORD pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 26.73 99 P **P 15 50 31.8 +1.5**
ARU IAmb IAmb 15 50 50.6
comp=Z,8.7nm,0.8s
ARU Arti 26.73 99*c iP* **P 15 50 31.7 +1.5**
ARU 15 51 10.6
ARU S **S 15 55 09.3 +4.0**
ARU pmax pmax
comp=Z,6.0nm,1.1s
ARU Arti 26.73 99 P **P 15 50 31.8 +1.5**
comp=Z,1.1nm,0.4s,baz=336,slow=9.3,SNR=4.0
ARU LR LR 16 01 39.7
comp=Z,109nm,18.0s,baz=314,slow=38
comp=Z,1.1nm,0.4s
VRH Novokhopyorsk 26.79 125 *eP* **P 15 50 31.8 +1.0**
VRH pmax pmax
comp=Z,9.0nm,0.4s
BUR08 Bucovina Ar. S 26.88 150 P **P 15 50 31.2 -0.6**
BUR08 IAmb IAmb 15 50 39.9
comp=Z,6.0nm,1.1s
BURAR Bucovina Array 26.91 150 P **P 15 50 33.5 +1.4**
FRB Frobisher Bay 26.92 289 LR LR 16 00 17.9
comp=Z,106nm,18.1s,baz=4.0,slow=35
BELG Belogornoye 27.20 116*deP* **P 15 50 35.0 +0.5**
BELG pmax pmax
comp=Z,2.0nm,0.9s
BELG Belogornoye 27.20 116 P **P 15 50 35.1 +0.5**
comp=Z,5.2nm,0.6s,baz=292,slow=11,SNR=2.0
BELG LR LR 16 01 32.4
comp=Z,168nm,18.8s,baz=285,slow=37
comp=Z,5.2nm,0.6s
MLR Muntele Rosu 29.09 150 LR LR 16 02 43.9
comp=Z,486nm,18.9s,baz=356,slow=37
TIXI Tiksi 31.26 31 P **P 15 51 11.8 +1.5**
TIXI IAmb IAmb 15 51 18.7
comp=Z,3.8nm,0.8s
TIXI Tiksi 31.26 31*eP* **P 15 51 12.3 +2.0**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
TIXI Tiksi 31.26 31 LR LR 16 05 18.0
comp=Z,43nm,18.3s,baz=15,slow=39
AKTO Aktyubinsk 31.83 106 LR LR 16 04 46.3
comp=Z,247nm,19.7s,baz=346,slow=38
A36M Sachs Harbour 32.02 334 P **P 15 51 15.4 -1.6**
BVAR Borovoye Array 33.14 91 P **P 15 51 29.0 +1.9**
BVAR Borovoye Array 33.14 91 P **P 15 51 28.9 +1.9**
comp=Z,0.6nm,0.6s,baz=327,slow=7.1,SNR=4.9
BVAR PP **PnPn 15 52 33.8 -2.8**
comp=Z,1.6nm,0.8s,baz=344,slow=14,SNR=4.0
BVAR LR LR 16 07 25.6
comp=Z,70nm,18.1s,baz=353,slow=41
comp=Z,0.6nm,0.6s
ABKAR Akbulak array 33.44 105 P **P 15 51 30.4 +0.7**
ABKAR IAmb IAmb 15 51 37.6
comp=Z,7.2nm,0.8s
SOC Sochi 33.49 132 *eP* **P 15 51 29.9 -0.2**
SOC *e* 15 52 38.3
SOC *e*S **S 15 56 52.9 +1.5**
SOC *e*SS **SnSn 15 58 56.9 +3.8**
SOC MLR MLR
comp=Z,221nm,18.0s
SCHQ Schefferville 33.81 278 LR LR 16 04 01.4
comp=Z,156nm,19.0s,baz=88,slow=34
KBZ Khabaz 34.07 128 P **P 15 51 37.1 +1.9**
comp=Z,1.2nm,0.8s,baz=321,slow=8.2,SNR=3.1
KBZ LR LR 16 05 53.0
comp=Z,256nm,18.5s,baz=1.5,slow=37
comp=Z,1.2nm,0.8s
VAE Valguarnera 35.80 168 LR LR 16 08 17.2
comp=Z,101nm,18.7s,baz=146,slow=39
BR131 Keskin Array S 35.98 142 P **P 15 51 53.6 +1.7**
BR131 IAmb IAmb 15 52 01.7
comp=Z,4.3nm,1.0s
BR131 Keskin Array S 35.98 142*eP* **P 15 51 53.6 +1.7**
BRTR Keskin Array B 35.98 142 P **P 15 51 53.9 +2.0**
BRTR Keskin Array B 35.98 142 P **P 15 51 52.5 +0.6**
comp=Z,1.1nm,0.7s,baz=341,slow=7.7,SNR=6.4
BRTR LR LR 16 07 33.3
comp=Z,146nm,20.6s,baz=354,slow=38
comp=Z,1.1nm,0.7s
INK Inuvik 36.50 336 LR LR 16 08 53.4
comp=Z,85nm,18.3s,baz=354,slow=40
ZALV Zalesovo Beam 36.56 77 P **P 15 51 57.0 +0.5**
ZALV Zalesovo Beam 36.56 77 P **P 15 51 57.2 +0.7**
comp=Z,0.2nm,0.2s,baz=66,slow=31,SNR=1.8
ZALV PP **PP 15 53 22.3 +2.8**
comp=Z,0.2nm,0.3s,baz=318,slow=9.7,SNR=1.5
ZALV LR LR 16 11 12.9
comp=Z,74nm,18.3s,baz=326,slow=43
comp=Z,0.2nm,0.2s
KEST Kesra 37.32 175 LR LR 16 08 06.6
comp=Z,69nm,18.4s,baz=188,slow=38
ARPR Arapgir-MALATY 37.51 136 P **P 15 52 07.5 +2.6**
KURK Kurchatov 37.60 85 P **P 15 52 05.0 -0.4**
KURK Kurchatov 37.60 85*eP* **P 15 52 05.5 +0.1**
KURK pmax pmax
comp=Z,3.0nm,1.5s
KURBB Kurchatov Arra 37.66 85 P **P 15 52 07.7 +1.8**
comp=Z,0.3nm,0.4s,baz=335,slow=6.6,SNR=2.7
KURBB PP **PP 15 53 33.2 +1.7**
comp=Z,2.3nm,1.0s,baz=326,slow=11,SNR=4.6
comp=Z,0.3nm,0.4s
GNI Garni 37.90 128 LR LR 16 08 04.4
comp=Z,166nm,20.1s,baz=351,slow=37
BMAR Burnt Mountain 38.52 342 P **P 15 52 13.2 +0.3**
BILL Bilibino 38.71 11 *eP* **P 15 52 16.5 +2.0**
IDI Anoyia 38.97 155 LR LR 16 08 44.4
comp=Z,57nm,20.0s,baz=356,slow=37
YKA Yellowknife Ar 38.99 320 P **P 15 52 17.1 +0.2**
comp=Z,0.2nm,0.7s,baz=32,slow=9.6,SNR=2.1
YKA PcP **PcP 15 54 26.1 -0.8**
comp=Z,0.6nm,0.8s,baz=34,slow=3.5,SNR=8.8
YKA LR LR 16 08 24.9
comp=Z,211nm,18.3s,baz=38,slow=36
comp=Z,0.2nm,0.7s
F20K Avaraart Lake 39.73 349 P **P 15 52 20.3 -2.7**
F20K IAmb IAmb 15 52 36.4
comp=Z,7.5nm,1.4s
YAK Yakutsk 40.14 37 LR LR 16 09 34.0
comp=Z,76nm,21.1s,baz=302,slow=37
IL31 41.33 343 P **P 15 52 36.7 +0.5**
ILAR Eielson Array 41.33 343 P **P 15 52 36.7 +0.4**
ILAR Eielson Array 41.33 343 *eP* **P 15 52 36.7 +0.4**
ILAR Eielson Array 41.33 343 P **P 15 52 37.0 +0.7**
comp=Z,1.2nm,0.8s,baz=1.3,slow=5.2,SNR=14
ILAR PcP **PcP 15 54 33.7 -0.6**
comp=Z,0.4nm,0.7s,baz=337,slow=4.3,SNR=4.3
comp=Z,1.2nm,0.8s
KKAR Karatay Array 42.09 98 P **P 15 52 44.5 +1.7**
KKAR Karatay Array 42.09 98 P **P 15 52 44.5 +1.7**
KKAR IAmb IAmb 15 52 51.1
comp=Z,4.1nm,0.9s
KKAR Karatay Array 42.09 98 *eP* **P 15 52 44.5 +1.7**
MKAR Makanchi Array 42.20 85 P **P 15 52 45.4 +1.8**
comp=Z,0.3nm,0.7s,baz=324,slow=9.4,SNR=2.5
MKAR PP **PP 15 54 21.6 +0.5**
comp=Z,0.8nm,0.8s,baz=327,slow=8.8,SNR=5.3
MKAR LR LR 16 13 16.0
comp=Z,55nm,20.4s,baz=360,slow=40
comp=Z,0.3nm,0.7s
BPAW Bear Paw Mtn. 42.33 345 P **P 15 52 45.0 +0.5**
MMAI Mount Meron Ar 42.83 142 LR LR 16 12 43.7
comp=Z,74nm,19.6s,baz=294,slow=39
MOY Mondy 43.10 65 *eP* **P 15 52 54.2 +3.1**
MOY pmax pmax
comp=Z,23nm,2.6s
GEYT Alibeck 43.38 114 P **P 15 52 55.0 +1.7**
GEYT Alibeck 43.38 114 P **P 15 52 55.4 +2.1**
comp=Z,1.8nm,0.7s,baz=304,slow=16,SNR=5.5
GEYT PcP **PcP 15 54 40.9 -0.7**
comp=Z,2.2nm,0.9s,baz=308,slow=7.1,SNR=3.0
GEYT LR LR 16 12 28.2
comp=Z,184nm,21.6s,baz=351,slow=38
comp=Z,1.8nm,0.7s
GYA0B ALIBECK ARRAY 43.38 114 P **P 15 52 55.5 +2.2**
GYA0B IAmb IAmb 15 53 02.1
comp=Z,6.7nm,0.8s
AAK Ala-Archa 43.68 95 LR LR 16 12 45.7
comp=Z,71nm,18.2s,baz=356,slow=38
ASF Jabal al Asfar 43.92 141 LR LR 16 13 01.5
comp=Z,64nm,20.9s,baz=333,slow=38
DLBC Dease Lake 45.45 329 LR LR 16 12 38.8
comp=Z,194nm,20.9s,baz=70,slow=37
ULM Lac du Bonnet 45.98 299 LR LR 16 12 08.8
comp=Z,243nm,18.9s,baz=36,slow=36
EIL Elat 46.01 144 LR LR 16 13 10.1
comp=Z,55nm,20.6s,baz=249,slow=37
SADO Sadowa 46.38 282 LR LR 16 11 32.5
comp=Z,81nm,19.6s,baz=260,slow=35
WMQ Urumqi 46.49 81 *eP* **P 15 53 20.2 +2.2**
KSH Kashi 46.99 95 P **P 15 53 23.5 +1.4**
KSH sP pwP 15 53 29.2 +1.0
KSH pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 48.04 63 P **P 15 53 31.9 +1.7**
comp=Z,0.3nm,0.5s,baz=326,slow=7.5,SNR=1.7
comp=Z,0.3nm,0.5s
BBB Bella Bella 51.15 325 LR LR 16 16 47.0
comp=Z,159nm,18.2s,baz=356,slow=38
KLR Kul'dur 52.61 42 LR LR 16 17 47.1
comp=Z,74nm,19.9s,baz=344,slow=38
NEW Newport 52.83 315 LR LR 16 16 32.3
comp=Z,114nm,19.6s,baz=24,slow=36
BOZ Bozeman (W) 54.16 310 P **P 15 54 15.6 -0.6**
BOZ IAmb IAmb 15 54 16.3
comp=Z,2.1nm,0.7s
BOZ Bozeman (W) 54.16 310 P **P 15 54 15.6 -0.6**
BOZ pmax pmax
comp=Z,2.0nm,0.7s
IMW Indian Meadow 55.61 308 P **P 15 54 26.5 -0.3**
IMW IAmb IAmb 15 54 35.8
comp=Z,4.5nm,0.8s
HHC Hu-ho-hao-te 55.89 62 *eP* **P 15 54 28.8 +0.1**
HHC pmax pmax
comp=Z,34nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.9s
PDAR Pinedale Array 56.36 307 P **P 15 54 31.9 -0.2**
comp=Z,0.7nm,1.0s,baz=34,slow=5.6,SNR=4.2
PDAR LR LR 16 18 24.7
comp=Z,65nm,20.1s,baz=22,slow=36
comp=Z,0.7nm,1.0s
ASAJ Asahikawa 59.53 35 LR LR 16 23 04.2
comp=Z,34nm,18.5s,baz=335,slow=38
ELK Elko 59.59 311 LR LR 16 20 54.9
comp=Z,101nm,18.0s,baz=4.0,slow=36
TORD Torodi Ar. Bea 59.80 184 P **P 15 54 56.1 -0.1**
comp=Z,1.3nm,0.8s,baz=2.7,slow=7.3,SNR=7.4
TORD LR LR 16 20 58.9
comp=Z,34nm,18.9s,baz=267,slow=36
comp=Z,1.3nm,0.8s
YBH Yreka Blue Hor 60.23 317 LR LR 16 21 22.1
comp=Z,117nm,19.4s,baz=5.0,slow=36
ANMO Albuquerque 63.02 301 LR LR 16 22 50.2
comp=Z,141nm,18.4s,baz=116,slow=36
KSRS Korea Array 63.08 49 LR LR 16 26 33.7
comp=Z,29nm,18.1s,baz=310,slow=40
MJAR Matsushiro Arr 66.09 40 LR LR 16 28 35.4
comp=Z,37nm,18.4s,baz=244,slow=40
DBIC Dimbokro 66.50 191 LR LR 16 24 58.4
comp=Z,21nm,19.2s,baz=99,slow=36
PFO Pinyon Flats O 66.69 310 LR LR 16 25 01.2
comp=Z,82nm,22.0s,baz=12,slow=36
PZH PanZhiHua 66.70 76 P **P 15 55 43.5 +1.5**
PZH pmax pmax
comp=Z,10.0nm,0.4s
PZH pmax pmax
comp=Z,150nm,5.3s
SJG San Juan 67.46 258 LR LR 16 20 17.2
comp=Z,35nm,21.4s,baz=184,slow=32
TXAR Lajitas Array 67.62 297 P **P 15 55 47.8 0.0**
comp=Z,0.6nm,0.8s,baz=64,slow=4.3,SNR=4.1
TXAR LR LR 16 25 17.7
comp=Z,74nm,18.2s,baz=353,slow=36
comp=Z,0.6nm,0.8s
TEIG Tepich 71.96 280 LR LR 16 27 45.8
comp=Z,400nm,18.5s,baz=180,slow=36
CMAR Chiang Mai Arr 73.49 81 P **P 15 56 23.5 -0.1**
comp=Z,0.2nm,0.3s,baz=343,slow=4.7,SNR=1.3
CMAR LR LR 16 36 02.7
comp=Z,14nm,18.9s,baz=315,slow=42
comp=Z,0.2nm,0.3s
LPIG La Paz 74.33 301 LR LR 16 31 23.2
comp=Z,43nm,18.3s,baz=342,slow=38
MBAR Mbarara 75.09 154 LR LR 16 32 29.8
comp=Z,99nm,19.4s,baz=188,slow=38
CMIG Matias Romero 76.83 285 LR LR 16 32 36.9
comp=Z,23nm,18.4s,baz=22,slow=37
SDV Santo Domingo 77.51 259 LR LR 16 25 13.4
comp=Z,47nm,19.8s,baz=194,slow=31
ATAH Atahualpa 95.00 262 LR LR 16 38 46.1
comp=Z,21nm,20.1s,baz=22,slow=34
ASAR Alice Springs 123.32 59 PKP **PKPdf 16 03 46.4 -1.2**
comp=Z,0.7nm,0.7s,baz=354,slow=1.6,SNR=12

NEIC ***02*** *15:45:44.6±1.4,56.03N±0.08×150.0W±0.1,h27km±10km, ML3.5/36,ML3.3(AEIC), Error ellipse: s-maj=11.4km s-min=8.6km az=162.0*
AEIC ***02*** *15:45:46.3±1.5,55.9N±0.1×150.0W±0.1,h12km±7km, Error ellipse: s-maj=15.7km s-min=8.9km az=170.0*
ISC 02 15:45:42.4±1.9,56.0N±0.1×150.01W±0.06,h10km,n109,
σ1§00/109,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.17**	**304**		**Pn**	**15 46 18.9**	**+0.5**
OHAK					**Sn**	**15 46 44.2**	**-1.2**
OHAK	**Old Harbor** baz=125	**2.17**	**304**	P	**Pn**	**15 46 19.0**	**+0.5**
OHAK	baz=125			S	**Sn**	**15 46 44.2**	**-1.2**
KDAK	**Kodiak Island**	**2.25**	**322**		**Pn**	**15 46 20.6**	**+1.0**
KDAK	**Kodiak Island**	**2.25**	**322**		**Sn**	**15 46 46.8**	**-0.6**
KDAK	**Kodiak Island** baz=142	**2.25**	**322**	S	**Sn**	**15 46 46.8**	**-0.6**
SII	**Sitkinak Islan**	**2.39**	**284**		**Pn**	**15 46 20.5**	**-1.1**
SII	comp=E,145nm,2.3s			IAML		15 47 11.3	
SII	comp=N,156nm,2.4s			IAML		15 47 27.7	
SII	**Sitkinak Islan**	**2.39**	**284**		**Sn**	**15 46 50.2**	**-0.7**
SII	**Sitkinak Islan** baz=105	**2.39**	**284**	P	**Pn**	**15 46 21.7**	**+0.2**
SII	baz=105			S	**Sn**	**15 46 50.2**	**-0.7**
Q20K	**Shuyak Island** baz=153	**2.88**	**334**	P	**Pn**	**15 46 29.5**	**+1.1**
Q20K	baz=153			S	**Sn**	**15 47 03.5**	**+0.4**
SYI	**Shuyak Island**	**2.88**	**334**		**Pn**	**15 46 29.5**	**+1.1**
SYI					**Sn**	**15 47 03.5**	**+0.5**
Q19K	**Cape Douglas,**	**3.50**	**327**		**Pn**	**15 46 38.4**	**+1.5**
Q19K	**Cape Douglas,** comp=N,99nm,1.5s	**3.50**	**327**	IAML		15 47 23.8	
Q19K	comp=E,140nm,1.5s			IAML		15 48 06.7	
Q19K	**Cape Douglas,** baz=146	**3.50**	**327**	P	**Pn**	**15 46 38.3**	**+1.5**
CNPM	**China Poot**	**3.56**	**350**		**Pn**	**15 46 38.2**	**+0.6**
CNPM	**China Poot**	**3.56**	**350**		**Sn**	**15 47 18.8**	**-0.9**
CNPM	**China Poot** comp=N,46nm,3.0s	**3.56**	**350**	IAML		15 47 16.4	
BRSE	**Bradley Lake S**	**3.73**	**354**		**Pn**	**15 46 40.4**	**+0.3**
BRSE					**Sn**	**15 47 22.3**	**-1.7**
BRSE	**Bradley Lake S** baz=174	**3.73**	**354**	P	**Pn**	**15 46 40.4**	**+0.3**
BRSE	baz=174			S	**Sn**	**15 47 22.3**	**-1.7**
BRLK	**Bradley Lake**	**3.76**	**353**		**Pn**	**15 46 40.7**	**+0.3**
BRLK					**Sn**	**15 47 24.4**	**-0.4**
BRLK	**Bradley Lake** comp=N,38nm,3.3s	**3.76**	**353**	IAML		15 47 44.8	
BRLK	comp=E,48nm,3.6s			IAML		15 48 40.2	
CNTC	**Contact Creek**	**3.90**	**307**		**Pn**	**15 46 44.0**	**+1.6**
Q17K	**Contact Creek** baz=124	**3.90**	**307**	P	**Pn**	**15 46 44.0**	**+1.6**
Q23K	**Middleton Isla**	**3.92**	**28**		**Pn**	**15 46 43.1**	**+0.5**
Q23K	**Middleton Isla** baz=210	**3.92**	**28**	P	**Pn**	**15 46 43.1**	**+0.5**
MID	**Middleton Isla**	**3.92**	**29**		**Pn**	**15 46 43.2**	**+0.6**
P19K	**Oil Pt**	**4.01**	**336**		**Pn**	**15 46 45.5**	**+1.6**
P19K	**Oil Pt** comp=E,51nm,2.9s	**4.01**	**336**	IAML		15 48 48.8	
P19K	comp=N,50nm,2.3s			IAML		15 49 20.2	
P19K	**Oil Pt** baz=154	**4.01**	**336**	P	**Pn**	**15 46 45.5**	**+1.6**
P23K	**Montague Islan**	**4.20**	**18**		**Pn**	**15 46 47.1**	**+0.6**
P23K	**Montague Islan** baz=199	**4.20**	**18**	P	**Pn**	**15 46 47.1**	**+0.6**
P18K	**Big Mountain,**	**4.37**	**322**		**Pn**	**15 46 50.0**	**+1.2**
P18K	**Big Mountain,** baz=139	**4.37**	**322**	P	**Pn**	**15 46 50.0**	**+1.2**
P17K	**Kvichak River**	**4.69**	**315**		**Pn**	**15 46 54.9**	**+1.8**
P17K	**Kvichak River** baz=131	**4.69**	**315**	P	**Pn**	**15 46 54.9**	**+1.8**
O18K	**Koktuh Hills**	**4.72**	**326**		**Pn**	**15 46 54.9**	**+1.3**
O18K	**Koktuh Hills** comp=E,21nm,3.4s	**4.72**	**326**	IAML		15 47 58.6	
O18K	comp=N,23nm,1.7s			IAML		15 49 19.0	
O18K	**Koktuh Hills** baz=143	**4.72**	**326**	P	**Pn**	**15 46 54.9**	**+1.3**
HIN	**Hinchinbrook I**	**4.74**	**22**		**Pn**	**15 46 54.5**	**+0.5**
HIN	**Hinchinbrook I** comp=N,70nm,2.4s	**4.74**	**22**	IAML		15 48 31.1	
HIN	comp=E,80nm,2.6s			IAML		15 48 56.6	
O19K	**Port Alsworth**	**4.75**	**333**		**Pn**	**15 46 53.2**	**-0.8**
O19K	comp=N,23nm,0.5s			IAML		15 47 50.5	
O19K	comp=E,29nm,0.4s			IAML		15 49 34.2	
KAIM	**Kayak Island**	**4.90**	**35**		**Pn**	**15 46 56.8**	**+0.8**
KAIM	**Kayak Island** baz=218	**4.90**	**35**	P	**Pn**	**15 46 56.8**	**+0.8**
EYAK	**Cordova Ski Ar**	**5.04**	**25**		**Pn**	**15 46 58.8**	**+0.8**
EYAK	**Cordova Ski Ar** baz=207	**5.04**	**25**	P	**Pn**	**15 46 58.8**	**+0.8**
RAGM	**Ragged Mountai**	**5.19**	**31**	Pn	**Pn**	**15 47 00.5**	**+0.5**
RAGM	comp=E,70nm,3.3s			IAML		15 50 13.3	
SUCK	**Suckling Hills**	**5.22**	**37**		**Pn**	**15 47 01.3**	**+0.8**
SUCK	**Suckling Hills** comp=E,79nm,3.0s	**5.22**	**37**	IAML		15 48 35.4	
HMT	**Hamilton**	**5.27**	**33**		**Pn**	**15 47 02.0**	**+0.9**
HMT	**Hamilton** comp=E,69nm,2.5s	**5.27**	**33**	IAML		15 50 30.1	
N19K	**Bonanza Creek**	**5.33**	**336**		**Pn**	**15 47 03.3**	**+1.2**
N19K	**Bonanza Creek** baz=152	**5.33**	**336**	P	**Pn**	**15 47 03.3**	**+1.2**
GOAT	**Goat Mountain**	**5.33**	**29**		**Pn**	**15 47 03.1**	**+1.0**
BGLC	**Bering Glacier**	**5.42**	**38**		**Pn**	**15 47 04.2**	**+1.0**
BGLC	**Bering Glacier** baz=223	**5.42**	**38**	P	**Pn**	**15 47 04.2**	**+1.0**
KNK	**Knik Glacier**	**5.45**	**8**		**Pn**	**15 47 04.8**	**+1.2**
KNK	**Knik Glacier** baz=189	**5.45**	**8**	P	**Pn**	**15 47 04.8**	**+1.2**
BERG	**Berg Lake**	**5.49**	**35**		**Pn**	**15 47 04.9**	**+0.7**
N18K	**Kilae Creek**	**5.59**	**329**		**Pn**	**15 47 06.8**	**+1.3**
N18K	**Kilae Creek** baz=145	**5.59**	**329**	P	**Pn**	**15 47 06.8**	**+1.3**
O16K	**Kokwok River B**	**5.60**	**313**		**Pn**	**15 47 06.5**	**+0.9**
O16K	**Kokwok River B** baz=127	**5.60**	**313**	P	**Pn**	**15 47 06.5**	**+0.9**
SNH	**Sunshine Point**	**5.62**	**40**		**Pn**	**15 47 06.9**	**+0.8**
BMRM	**Bremner River**	**5.69**	**28**		**Pn**	**15 47 08.0**	**+1.0**
BMRM	**Bremner River** baz=211	**5.69**	**28**	P	**Pn**	**15 47 08.0**	**+1.0**
WAX	**Waxell Ridge**	**5.81**	**38**	Pn	**Pn**	**15 47 09.5**	**+0.8**
KLU	**Klutina**	**5.86**	**20**		**Pn**	**15 47 10.4**	**+1.0**
KLU	**Klutina** baz=202	**5.86**	**20**	P	**Pn**	**15 47 10.4**	**+1.0**
BARK	**Barkley Ridge**	**5.90**	**39**		**Pn**	**15 47 10.6**	**+0.7**
MESA	**MESA**	**5.95**	**42**	Pn	**Pn**	**15 47 11.2**	**+0.5**
SCM	**Sheep Creek Mo**	**5.97**	**12**	Pn	**Pn**	**15 47 12.2**	**+1.3**
ISLE	**Juniper Island**	**6.10**	**38**		**Pn**	**15 47 13.2**	**+0.6**
BAGL	**Bagley Icefiel**	**6.11**	**40**		**Pn**	**15 47 13.4**	**+0.8**
VRDI	**Verde Repeater**	**6.22**	**31**		**Pn**	**15 47 15.0**	**+0.6**
M18K	**Stony River**	**6.25**	**333**		**Pn**	**15 47 15.8**	**+1.3**
M18K	**Stony River** baz=149	**6.25**	**333**	P	**Pn**	**15 47 15.8**	**+1.3**
N25K	**Chitina, Valde**	**6.25**	**24**	Pn	**Pn**	**15 47 15.9**	**+1.3**
GLB	**Gilahina Butte**	**6.30**	**28**	Pn	**Pn**	**15 47 15.9**	**+0.6**
KIAG	**Kiagna River**	**6.33**	**36**		**Pn**	**15 47 16.4**	**+0.6**
M24K	**Tolsona, Glenn**	**6.39**	**16**	Pn	**Pn**	**15 47 14.9**	**-1.7**
TABL	**Table Mountain**	**6.43**	**43**	Pn	**Pn**	**15 47 18.1**	**+0.9**
MCARA	**McCarthy VSAT**	**6.47**	**31**		**Pn**	**15 47 18.8**	**+1.2**
MCARA	**McCarthy VSAT** baz=216	**6.47**	**31**	P	**Pn**	**15 47 18.8**	**+1.2**
PTPK	**Patty Peak**	**6.49**	**34**		**Pn**	**15 47 18.8**	**+0.7**
PCA	**Pinnacle**	**6.58**	**48**		**Pn**	**15 47 19.6**	**+0.4**
PINM	**Pinnacle** baz=235	**6.58**	**48**	P	**Pn**	**15 47 19.6**	**+0.4**
M17K	**Holitna River**	**6.62**	**327**		**Pn**	**15 47 21.1**	**+1.4**
M17K	**Holitna River** baz=142	**6.62**	**327**	P	**Pn**	**15 47 21.1**	**+1.4**
BARN	**Barnard Glacie**	**6.66**	**38**		**Pn**	**15 47 21.3**	**+0.9**
CTG	**Chitna Glacier** baz=225	**6.70**	**39**	P	**Pn**	**15 47 21.7**	**+0.7**
CTGM	**Chitina Glacie**	**6.71**	**39**		**Pn**	**15 47 21.7**	**+0.7**
PNL	**Peninsula**	**6.73**	**53**		**Pn**	**15 47 21.6**	**+0.5**
PNL	**Peninsula** baz=241	**6.73**	**53**	P	**Pn**	**15 47 21.6**	**+0.5**
LOGN	**Logan Glacier**	**6.73**	**41**		**Pn**	**15 47 21.9**	**+0.6**
BCPM	**Bancas Point**	**6.76**	**50**	Pn	**Pn**	**15 47 22.4**	**+0.7**
O29M	**Mount Kennedy**	**7.40**	**50**		**Pn**	**15 47 31.2**	**+0.8**
O29M	**Mount Kennedy** baz=239	**7.40**	**50**	P	**Pn**	**15 47 31.2**	**+0.8**
P29M	**Windy Craggy**	**7.47**	**56**		**Pn**	**15 47 31.5**	**+0.2**
P29M	**Windy Craggy** baz=245	**7.47**	**56**	P	**Pn**	**15 47 31.5**	**+0.2**
L16K	**Owhat River**	**7.50**	**323**	Pn	**Pn**	**15 47 32.3**	**+0.5**
TTA	**Tatalina**	**7.55**	**339**	Pn	**Pn**	**15 47 31.6**	**-0.9**
S31K	**Pelican**	**7.76**	**70**		**Pn**	**15 47 34.1**	**-1.2**
S31K	**Pelican** baz=260	**7.76**	**70**	P	**Pn**	**15 47 34.1**	**-1.2**
BPAW	**Bear Paw Mtn.**	**8.10**	**357**		**Pn**	**15 47 40.5**	**+0.5**
BWN	**Browne**	**8.16**	**2**	Pn	**Pn**	**15 47 39.6**	**-1.2**
S32K	**Killisnoo**	**8.60**	**74**	Pn	**Pn**	**15 47 45.3**	**-1.5**
M29M	**Somme Creek**	**8.72**	**38**	Pn	**Pn**	**15 47 47.4**	**-1.1**
J26L	**Joseph Creek**	**9.06**	**18**	Pn	**Pn**	**15 47 54.1**	**+0.9**
L29M	**L29M**	**9.29**	**35**	Pn	**Pn**	**15 47 56.3**	**0.0**
M31M	**Drury Creek, Y**	**10.11**	**46**	Pn	**Pn**	**15 48 08.4**	**+0.9**

IDC 02 16:11:13.6±1.4,6.66N×127.51E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=44.9km s-min=21.6km az=52.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)** 36nm,0.3s,baz=53,slow=10,SNR=1.6	**1.96**	**282**	Pn	Pn	16 11 47.5	-0.6
DAV	44nm,0.3s,baz=306,slow=22,SNR=13				Sn	16 12 15.6	+0.3
WRA	**Warramunga Arr** 0.5nm,0.8s,baz=347,slow=10,SNR=2.0 0.5nm,0.8s	**27.28**	**166**	P	P	16 17 00.1	+0.1
ASAR	**Alice Springs** 0.4nm,0.9s,baz=342,slow=7.1,SNR=1.9 0.4nm,0.9s	**30.78**	**168**	P	P	16 17 31.0	-0.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=114,slow=7.3,SNR=8.0 0.2nm,0.3s	**55.63**	**324**	P	P	16 20 51.4	0.0
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=124,slow=7.0,SNR=5.8 0.4nm,0.7s	**59.73**	**326**	P	P	16 21 20.1	-0.1

IDC ***02*** *16:42:14.6±2.2,48°.85N×93°.24E,h0km,mb3.9/1, mbtmp3.3/6,ML2.7/5,MS3.1/2,Error ellipse: s-maj=36.5km s-min=22.6km az=165.0*

ASRS ***02*** *16:42:16.3±0.4,49°N±2°×9°.3E±°,h5km,MLh4.2/16,Error ellipse: s-maj=4.9km s-min=3.0km az=167.4,confirmed*

ISC 02 16:42:16.3±1.0,48°.84N±0°.06×93°.39E±0°.04,h10km,n28, σ2s51/47,1C-1D,Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**3.52**	**293**	Pn	**Pn**	**16 43 10.2**	**-1.0**
CUR				Pg	**Pb**	**16 43 16.7**	**-2.1**
CUR				Sg	**Sb**	**16 44 00.7**	**-0.9**
ULGR	**Ulagan, Altay**	**3.95**	**299**	Pg	**Pb**	**16 43 27.1**	**+1.0**
ULGR				Sg	**Sb**	**16 44 15.7**	**+1.8**
DGZ	**Jazzator, Alta**	**4.00**	**285**	Pn	**Pn**	**16 43 17.1**	**-0.6**
DGZ				Pg	**Pb**	**16 43 28.7**	**+1.8**
DGZ				Sg	**Sb**	**16 44 15.7**	**+0.4**
AKAR	**Aktash**	**4.04**	**294**	Pg	**Pb**	**16 43 28.5**	**+1.0**
AKAR				Sg	**Sb**	**16 44 16.7**	**+0.2**
CHBI	**Chibit, Altay**	**4.11**	**293**	Pn	**Pn**	**16 43 18.7**	**-0.4**
CHBI				Pg	**Pb**	**16 43 30.2**	**+1.5**
CHBI				Sg	**Sb**	**16 44 18.6**	**+0.2**
DJO	**Djoy, Khakassi**	**4.18**	**342**	Pn	**Pn**	**16 43 19.7**	**-0.4**
DJO				Pg	**Pb**	**16 43 28.6**	**-1.3**
DJO				Sg	**Sb**	**16 44 18.7**	**-1.7**
CERR	**Cheremushki**	**4.21**	**343**	Pg	**Pb**	**16 43 27.9**	**-2.4**
CERR				Sg	**Sb**	**16 44 20.1**	**-1.1**
YALR	**Yailyu, Altay**	**4.72**	**311**	Pg	**Pb**	**16 43 39.3**	**+0.1**
YALR				Sg	**Sb**	**16 44 38.4**	**+2.4**
ARTR	**Artybash**	**4.91**	**309**	Pn	**Pn**	**16 43 31.2**	**+1.1**
ARTR				Pg	**Pb**	**16 43 44.4**	**+2.1**
ARTR				Sg	**Sb**	**16 44 45.9**	**+4.6**
TASR	**Tashtagol**	**5.25**	**320**	Pg	**Pb**	**16 43 47.6**	**-0.6**
TASR				Sg	**Sb**	**16 44 51.7**	**+0.4**
ELDR	**Elanda**	**5.27**	**300**	Pg	**Pb**	**16 43 49.5**	**+1.0**
ELDR				Sg	**Sb**	**16 44 57.5**	**+5.7**
LUZB	**Luzhba, Kemero**	**5.59**	**331**	Pg	**Pb**	**16 43 50.5**	**-3.4**
LUZB				Sg	**Sb**	**16 44 59.9**	**-1.0**
MOY	**Mondy**	**5.63**	**57**	Pg	**Pb**	**16 43 56.7**	**+1.9**
MOY				Sg	Sb	16 45 12.9	+11
GALT	**Gorno-Altaysk,**	**5.69**	**306**	Pg	**Pb**	**16 43 56.6**	**+1.0**
GALT				Sg	**Sb**	**16 45 07.8**	**+3.9**
UKR	**Ust'-Kan**	**5.95**	**294**	Pn	**Pn**	**16 43 44.0**	**-0.5**
UKR				Pg	**Pb**	**16 44 01.2**	**+1.0**
UKR				Sg	**Sb**	**16 45 18.0**	**+6.6**
MINR	**Mina**	**6.09**	**4**	Pg	**Pb**	**16 44 04.9**	**+2.5**
MINR				Sg	**Sb**	**16 45 22.5**	**+7.3**
ELT	**Eltsovka**	**6.32**	**317**	Pn	Pn	16 43 45.9	-3.6
ELT				Pg	**Pb**	**16 44 04.1**	**-2.2**
ELT				Sg	**Sb**	**16 45 22.9**	**+1.1**
ZAK	**Zakamensk**	**6.61**	**73**	Pg	Pb	16 44 18.7	+7.4
ZAK				Sg	**Sg**	**16 45 47.0**	**-1.3**
BJR1	**Bachatsky 1, K**	**7.08**	**322**	Sg	**Sb**	**16 45 48.2**	**+4.3**
ZALV	**Zalesovo Beam**	**7.41**	**317**	Pn	**Pn**	**16 44 04.0**	**-0.3**
	0.2nm,0.3s,baz=129,slow=17,SNR=2.4						
ZALV				Lg	Lg	16 46 02.7	
	1.3nm,0.3s,baz=131,slow=22,SNR=5.1 0.4nm,0.5s						
MK31	**Makanchi Array**	**7.75**	**259**	Pg	Pb	16 44 37.3	+6.5
	1.8nm,0.6s,baz=64,slow=16,SNR=7.5						
MK31				Lg	Lg	16 46 11.3	
	14nm,0.7s,baz=57,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**7.75**	**259**	Pn	**Pn**	**16 44 08.6**	**-0.6**
	0.2nm,0.3s,baz=64,slow=16,SNR=7.0						
MKAR				Lg	Lg	16 46 12.3	
	0.8nm,0.3s,baz=77,slow=35,SNR=3.6 0.2nm,0.3s						
MAKZ	**Makanchi**	**7.95**	**259**	⇑Pg	Pb	16 44 41.3	+7.2
	4.1nm,0.7s						
MAKZ				⇓Lg	Lg	16 46 14.8	
	24nm,0.8s						
SONM	**Songino Array**	**8.72**	**92**	Pn	**Pn**	**16 44 23.5**	**+0.9**
	0.3nm,0.3s,baz=276,slow=14,SNR=7.1						
SONM				Pg	Pg	16 44 55.1	-8.1
	0.3nm,0.3s,baz=278,slow=19,SNR=9.3						
SONM				Lg	Lg	16 46 51.9	
	0.9nm,0.3s,baz=273,slow=27,SNR=8.8 0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**9.79**	**286**	Pn	**Pn**	**16 44 33.8**	**-3.2**
	baz=96,slow=15,SNR=5.5						
KURBB				Lg	Lg	16 47 19.0	
	0.1nm,0.3s,baz=84,slow=36,SNR=4.4						
KURBB				LR	LR	16 48 45.3	
	comp=Z,48nm,19.3s,baz=171,slow=40 0.3nm,0.4s						
BVAR	**Borovoye Array**	**15.07**	**295**	Pn	**Pn**	**16 45 46.6**	**-2.6**
	baz=84,slow=13,SNR=1.3 0.4nm,0.5s						
NRIK	**Noril'sk**	**20.76**	**354**	P	**P**	**16 46 56.0**	**-0.9**
	2.4nm,0.4s,baz=160,slow=7.8,SNR=6.9 2.4nm,0.4s						
GEYT	**Alibeck**	**27.62**	**260**	LR	LR	16 59 57.3	
	comp=Z,78nm,19.1s,baz=66,slow=39						

SJA ***02*** *16:51:18.8±0.8,30°.00S×71°.79W,h13km±4km,ML4.1, MW4.0*

NEIC ***02*** *16:51:20.2±2.1,29°.96S±0°.05×71°.82W±0°.06,h10km±1km, mb4.7/6,Error ellipse: s-maj=8.8km s-min=8.1km az=257.0*

GUC ***02*** *16:51:22.8±0.7,30°.03S×71°.66W,h26km±4km,ML4.0*

ISC 02 16:51:18.8±1.4,29°.99S±0°.02×71°.85W±0°.04,h12km±9km, n85,σ2s20/123,mb4.7/4,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.54**	**82**	Pg	**Pb**	**16 51 31.1**	**+0.9**
CO05	**La Serena**	**0.54**	**82**	*e*P	**Pb**	**16 51 31.2**	**+1.0**
CO05				*i* S	**Sg**	**16 51 37.0**	**+0.4**
CO05				IAML		16 51 37.5	
	comp=E,14μm,0.4s						
CO06	**Fray Jorge**	**0.70**	**164**		**Pb**	**16 51 34.5**	**+1.5**
CO06	**Fray Jorge**	**0.70**	**164**	*e*P	**Pb**	**16 51 34.9**	**+1.9**
CO06				*i* S	**Sb**	**16 51 43.8**	**+1.2**
CO06				IAML		16 51 44.5	
	comp=N,13μm,0.2s						
GO04	**Tololo Observa**	**0.93**	**101**		**Pg**	**16 51 37.0**	**+0.2**
GO04	**Tololo Observa**	**0.93**	**101**	*e*P	**Pg**	**16 51 36.4**	**-0.4**
GO04				*e*S	**Sg**	**16 51 48.3**	**-0.7**
GO04				IAML		16 51 49.5	
	comp=Z,5μm,0.3s						
GO04	**Tololo Observa**	**0.93**	**101**	*e*P	**Pg**	**16 51 36.9**	**+0.2**
GO04				*i* S	**Sg**	**16 51 47.4**	**-1.6**
CO03	**El Pedregal**	**1.31**	**130**		**Pn**	**16 51 42.8**	**-0.2**
CO03	**El Pedregal**	**1.31**	**130**	*e*P	**Pn**	**16 51 43.1**	**+0.1**
CO03				*e*S	**Sn**	**16 52 00.6**	**+0.1**
CO03				IAML		16 52 10.1	
	comp=Z,2μm,1.1s						
CO03	**El Pedregal**	**1.31**	**130**	*e*P	**Pn**	**16 51 43.2**	**+0.1**
CO03				*i* S	**Sb**	**16 51 58.3**	**-2.0**
CO03				IAML		16 52 01.3	
	comp=E,4μm,0.3s						
LCO	**Las Campanas**	**1.40**	**46**		**Pn**	**16 51 45.5**	**+1.0**
LCO	**Las Campanas**	**1.40**	**46**	*e*P	**Pn**	**16 51 44.9**	**+0.4**
LCO				*e*S	**Sg**	**16 52 04.0**	**-0.1**
LCO				IAML		16 52 07.1	
	comp=Z,11μm,0.6s						
LCO	**Las Campanas**	**1.40**	**46**	*e*P	**Pn**	**16 51 45.4**	**+1.0**
LCO				*i* S	**Sn**	**16 52 03.5**	**+0.5**
CO02	**Combarbal**	**1.41**	**149**		**Pn**	**16 51 45.7**	**+1.2**
CO02	**Combarbal**	**1.41**	**149**	*e*P	**Pn**	**16 51 44.7**	**+0.3**
CO02				*e*S	**Sb**	**16 52 04.1**	**+0.9**
CO02				IAML		16 52 04.9	
	comp=Z,3μm,0.5s						
CO02	**Combarbal**	**1.41**	**149**	*e*P	**Pn**	**16 51 45.3**	**+0.8**
CO02				*i* S	**Sn**	**16 52 02.6**	**-0.5**
CO01	**Juntas del Tor**	**1.53**	**90**		**Pn**	**16 51 46.4**	**+0.2**
CO01	**Juntas del Tor**	**1.53**	**90**	*e*P	**Pn**	**16 51 46.6**	**+0.5**
CO01				*e*P	**Pn**	**16 51 46.7**	**+0.5**
CO01				*e*S	**Sn**	**16 52 04.8**	**-1.2**
CO01	**Juntas del Tor**	**1.53**	**90**	*e*P	**Pn**	**16 51 46.0**	**-0.1**
CO01				*i* S	**Sn**	**16 52 04.1**	**-2.0**
AC05	**El Transito**	**1.80**	**50**	Pn	**Pn**	**16 51 50.9**	**+1.1**
AC05	**El Transito**	**1.80**	**50**	*e*P	**Pb**	**16 51 51.6**	**-0.1**
AC05				*e*S	**Sb**	**16 52 14.6**	**+0.3**
AC05				IAML		16 52 17.1	
	comp=Z,1μm,0.8s						
AC05	**El Transito**	**1.80**	**50**	*e*P	**Pb**	**16 51 51.5**	**-0.3**
AC05				*i* S	**Sb**	**16 52 13.8**	**-0.5**
AC05				IAML		16 52 18.8	
	comp=E,2μm,0.8s						
AC04	**Llanos de Chal**	**1.91**	**21**	Pn	**Pn**	**16 51 52.9**	**+1.7**
AC04	**Llanos de Chal**	**1.91**	**21**	*e*P	**Pn**	**16 51 52.9**	**+1.7**
AC04				*e*S	**Sn**	**16 52 15.6**	**+0.4**
AC04				IAML		16 52 25.7	
	comp=Z,856nm,0.8s						
AC04	**Llanos de Chal**	**1.91**	**21**	*e*P	**Pn**	**16 51 52.7**	**+1.5**
AC04				*i* S	**Sb**	**16 52 19.2**	**+1.8**
DOCA	**Reserva Natura**	**2.58**	**112**	*e*P	**Pn**	**16 52 03.1**	**+2.5**
DOCA				IAML		16 52 40.9	
	comp=Z,390nm,0.9s						
VA06	**Catapilco**	**2.60**	**170**		**Pn**	**16 52 02.3**	**+1.6**
GO03	**Copiap**	**2.78**	**31**		**Pn**	**16 52 05.2**	**+1.9**
GO03	**Copiap**	**2.78**	**31**	*e*P	**Pn**	**16 52 05.1**	**+1.9**
GO03				*e*P	**Pb**	**16 52 05.3**	**-3.2**
GO03				*e*S	**Sn**	**16 52 39.1**	**+2.3**
GO03				IAML		16 52 51.7	
	comp=Z,502nm,0.8s						
GO03	**Copiap**	**2.78**	**31**	*e*P	**Pn**	**16 52 05.1**	**+1.9**
GO03				*i* S	**Sb**	**16 52 41.8**	**-0.8**
GO03				IAML		16 52 54.6	
	comp=E,736nm,0.6s						
AGUA	**GUANDACOL**	**2.97**	**81**	*e*P	**Pb**	**16 52 10.0**	**-1.7**
AGUA				*e*S	**Sg**	**16 52 55.2**	**+1.0**
AGUA				IAML		16 53 01.9	
	comp=Z,526nm,1.0s						
VA03	**San Esteban**	**2.98**	**158**		**Pn**	**16 52 08.9**	**+2.9**
VA03	**San Esteban**	**2.98**	**158**	*e*P	**Pn**	**16 52 08.4**	**+2.4**
VA03				*e*S	**Sb**	**16 52 46.6**	**-1.6**
VA03				IAML		16 52 57.2	
	comp=Z,754nm,0.6s						
VA03	**San Esteban**	**2.98**	**158**	*e*P	**Pn**	**16 52 08.9**	**+2.9**
VA03				*i* S	**Sn**	**16 52 44.3**	**+2.6**
VA03				IAML		16 52 55.5	
	comp=N,928nm,0.3s						
VA01	**Torpederas**	**3.02**	**177**	Pn	**Pn**	**16 52 09.4**	**+2.9**
RTLL	**Cerro Villicun**	**3.20**	**115**	*e*P	**Pn**	**16 52 11.9**	**+2.9**
RTLL				*e*S	**Sb**	**16 52 53.1**	**-1.5**
RTLL				*e*S	**Sg**	**16 53 02.4**	**+0.7**
PEL	**Peldehue**	**3.29**	**163**		**Pn**	**16 52 12.7**	**+2.4**
PEL	**Peldehue**	**3.29**	**163**	*e*P	**Pn**	**16 52 12.8**	**+2.6**
PEL				*i* S	**Sn**	**16 52 52.3**	**+2.8**
PEL				IAML		16 53 12.2	
	comp=E,412nm,0.6s						
MT02	**Curacav**	**3.31**	**170**		**Pn**	**16 52 12.7**	**+2.2**
MT02	**Curacav**	**3.31**	**170**	*e*P	**Pn**	**16 52 12.6**	**+2.1**
MT02				*e*P	Pb	16 52 12.7	-4.8
MT02				*e*S	**Sn**	**16 52 53.1**	**+3.3**
MT02				IAML		16 53 16.0	
	comp=Z,276nm,0.6s						
VCA	**Vinchina**	**3.42**	**69**	*e*P	**Pb**	**16 52 16.5**	**-3.0**
VCA				*e*S	**Sg**	**16 53 09.3**	**+0.5**
VCA				*e*S	**Sb**	**16 53 10.0**	**+8.8**
VCA				IAML		16 53 11.1	
	comp=Z,756nm,0.7s						
MT05	**Renca**	**3.52**	**165**	Pn	**Pn**	**16 52 16.9**	**+3.5**
MT05	**Renca**	**3.52**	**165**	*e*P	**Pn**	**16 52 17.2**	**+3.8**
MT05				*e*S	**Sn**	**16 52 59.3**	**+4.3**
MT05				IAML		16 53 14.8	
	comp=Z,445nm,0.5s						
MT16	**CCHEN**	**3.61**	**162**	Pn	**Pn**	**16 52 15.9**	**+1.4**
VA05	**Santo Domingo**	**3.66**	**177**		**Pn**	**16 52 17.0**	**+1.8**
ASAL	**Salagasta**	**3.66**	**136**	*e*P	**Pn**	**16 52 19.7**	**+4.4**
ASAL				*e*S	**Sb**	**16 53 05.1**	**-2.7**
ASAL				IAML		16 53 22.3	
	comp=Z,296nm,1.0s						
MT03	**Universidad Ad**	**3.67**	**162**		**Pn**	**16 52 18.6**	**+3.1**
MT03	**Universidad Ad**	**3.67**	**162**	*e*P	**Pn**	**16 52 15.6**	**+0.1**
MT03				*e*P	Pb	16 52 18.5	-5.2
MT03				*e*S	**Sb**	**16 53 05.1**	**-3.1**
MT03				IAML		16 53 29.2	
	comp=Z,359nm,0.8s						
MT04	**Ro Olivares**	**3.70**	**157**	*e*P	**Pn**	**16 52 20.0**	**+3.9**
MT04				*i* S	**Sn**	**16 53 01.9**	**+2.1**
MT09	**Talagante**	**3.84**	**169**		**Pn**	**16 52 20.3**	**+2.4**
MT09	**Talagante**	**3.84**	**169**	*e*P	**Pn**	**16 52 20.4**	**+2.4**
MT09				*i* S	**Sn**	**16 53 03.4**	**+0.4**
MT01	**Popeta**	**3.89**	**173**		**Pn**	**16 52 20.5**	**+2.0**
MT01	**Popeta**	**3.89**	**173**	*e*P	**Pn**	**16 52 20.4**	**+2.0**
MT01				*e*S	**Sb**	**16 53 12.6**	**-1.9**
MT01				IAML		16 53 19.0	
	comp=Z,158nm,1.0s						
AC02	**Maricunga**	**3.96**	**38**	Pn	**Pn**	**16 52 19.8**	**0.0**
AC02	**Maricunga**	**3.96**	**38**	*e*P	**Pn**	**16 52 22.4**	**+2.5**
AC02				IAML		16 54 04.0	
	comp=Z,435nm,2.0s						
MT13	**San Alfonso**	**3.97**	**161**	Pn	**Pn**	**16 52 21.6**	**+2.0**
MT13	**San Alfonso**	**3.97**	**161**	*e*P	**Pn**	**16 52 23.0**	**+3.4**
MT13				*i* S	**Sn**	**16 53 08.5**	**+2.3**
AC01	**Pan de Azucar**	**3.99**	**16**	Pn	**Pn**	**16 52 20.2**	**+0.3**
AC01	**Pan de Azucar**	**3.99**	**16**	*e*P	**Pn**	**16 52 19.6**	**-0.2**
AC01				*e*S	**Sb**	**16 53 19.6**	**+2.3**
AC01				IAML		16 53 34.8	
	comp=Z,166nm,0.7s						
LMEL	**Las Melosas**	**4.09**	**160**		**Pn**	**16 52 25.0**	**+3.6**
LMEL	**Las Melosas**	**4.09**	**160**	*e*P	**Pn**	**16 52 24.6**	**+3.3**
LMEL				*i* S	**Sn**	**16 53 11.0**	**+1.7**
BO04	**La Punta**	**4.12**	**165**	Pn	**Pn**	**16 52 24.0**	**+2.4**
ACLC	**CERRO LA CRUZ**	**4.30**	**84**	*e*P	**Pn**	**16 52 26.9**	**+2.6**
ACLC				IAML		16 53 43.1	
	comp=Z,330nm,0.5s						
BO01	**Tunca**	**4.43**	**172**	Pn	**Pn**	**16 52 26.2**	**+0.3**
BO01	**Tunca**	**4.43**	**172**	*e*P	**Pn**	**16 52 27.1**	**+1.2**
BO01				IAML		16 53 46.1	
	comp=Z,143nm,0.8s						
ACHE	**Chepes**	**4.62**	**106**	*e*P	**Pn**	**16 52 30.6**	**+1.9**
ACHE				*e*S	**Sn**	**16 53 27.6**	**+5.2**
BO02	**Sierra Bellavi**	**4.87**	**170**	Pn	**Pn**	**16 52 33.2**	**+1.2**
BO02	**Sierra Bellavi**	**4.87**	**170**	*e*P	**Pn**	**16 52 35.4**	**+3.5**
BO02				IAML		16 53 54.9	
	comp=Z,140nm,0.9s						
GO05	**Huala**	**5.00**	**181**	Pn	**Pn**	**16 52 34.0**	**+0.3**
GO02	**Mina Guanaco**	**5.22**	**23**	Pn	**Pn**	**16 52 37.9**	**+1.0**
PB14	**IPOC Station P**	**5.50**	**14**	Pn	**Pn**	**16 52 40.1**	**-0.8**
BI05	**Punta Hualpn**	**6.83**	**189**	Pn	**Pn**	**16 52 59.6**	**+0.8**
VA04	**Juan Fernndez**	**6.96**	**237**	Pn	**Pn**	**16 53 01.8**	**+1.2**
PB05	**IPOC Station P**	**7.26**	**12**	Pn	**Pn**	**16 53 02.8**	**-2.2**
PB04	**IPOC Station P**	**7.78**	**12**	Pn	**Pn**	**16 53 11.3**	**-0.8**
PB01	**IPOC Station P**	**9.17**	**14**	Pn	**Pn**	**16 53 30.3**	**-0.7**
TRQA	**Tornquist**	**11.47**	**137**		**Pn**	**16 54 03.2**	**+0.7**
ITQB	**Itaqui**	**13.23**	**92**	Pn	Pn	16 54 21.9	-4.5
LPAZ	**La Paz**	**14.06**	**15**	P	**Pn**	**16 54 43.1**	**+4.6**
GO09	**Cerro Castillo**	**21.26**	**181**	P	**P**	**16 56 02.0**	**-2.8**
GO09				IAmb	IAmb	16 56 19.2	
	comp=Z,39nm,1.1s						
MG04	**Isla Riesco**	**22.84**	**180**	P	**P**	**16 56 18.7**	**-2.9**
MG04				IAmb	IAmb	16 56 45.9	
	comp=Z,123nm,1.3s						
BOAV	**Boa Vista**	**33.98**	**21**	P	**P**	**16 58 01.6**	**-0.8**
BOAV				IAmb	IAmb	16 58 23.4	
	comp=Z,14nm,1.5s						
PMSA	**Palmer Station**	**35.14**	**174**	P	**P**	**16 58 10.2**	**-1.7**
SNAA	**Sanae**	**55.24**	**159**	P	**P**	**17 00 49.6**	**-1.8**
SNAA				IAmb	IAmb	17 01 03.3	
	comp=Z,4.0nm,0.9s						
QSPA	**South Pole Qui**	**60.23**	**180**	P	**P**	**17 01 26.2**	**-0.5**

NEIC 02 17:05:52.8±0.4,40°.451N±0°.010×104°.62W±0°.02, h6km±2km,ML2.3/32,Error ellipse: s-maj=2.3km s-min=0.8km az=125.0,Colorado

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRIGG	**Briggsdale**	**0.26**	**60**	Pg	Pg	17 05 58.4	+0.5
ISCO	**Idaho Springs**	**1.00**	**230**	Pg	Pg	17 06 11.7	-0.3
ISCO				Sg	Sg	17 06 24.6	-0.4
PHWY	**Pilot Hill**	**1.06**	**323**	Pg	Pg	17 06 12.7	-0.4
PHWY				Sg	Sg	17 06 26.5	-0.5
PHWY				IAML		17 06 27.1	
	38nm,0.2s						
N23A	**Red Feather La**	**1.10**	**294**		Pg	17 06 13.0	-0.9
N23A				Sg	Sg	17 06 27.4	-0.8
N23A				IAML		17 06 29.7	
	comp=E,88nm,0.1s						
N23A				IAML		17 06 30.2	
	comp=N,62nm,0.2s						
Q24A	**Divide**	**1.54**	**196**		Pn	17 06 20.9	-0.1
OGNE	**Ogallala**	**2.03**	**75**	Pn	Pn	17 06 28.7	+1.2
KSCO	**Kaye Shedlock'**	**2.10**	**132**	Pn	Pn	17 06 29.8	+1.2
SMCO	**Snowmass**	**2.22**	**236**	Pn	Pn	17 06 29.1	-1.3
RWWY	**Rawlins**	**2.32**	**303**	Pn	Pn	17 06 29.9	-1.8
K22A	**Casper**	**2.62**	**328**	Pn	Pn	17 06 34.2	-1.5
SDCO	**Great Sand Dun**	**2.79**	**195**	Pn	Pn	17 06 35.8	-2.3
O20A	**White River Ci**	**2.79**	**265**		Pn	17 06 36.4	-1.7
S22A	**4UR Ranch, Cre**	**3.20**	**213**		Pn	17 06 41.9	-2.0
PV15	**Paradox Valley**	**3.66**	**236**	Pn	Pn	17 06 47.8	-2.3
RSSD	**Black Hills**	**3.69**	**7**	Pn	Pn	17 06 49.2	-1.3
PV07	**Paradox Valley**	**3.71**	**238**	Pn	Pn	17 06 49.4	-1.3
PV22	**Blue Mesa, Par**	**3.75**	**241**	Pn	Pn	17 06 48.8	-2.5
PV01	**Paradox Valley**	**3.84**	**234**	Pn	Pn	17 06 49.0	-3.6
PV21	**Cone Mtn., Par**	**3.86**	**242**	Pn	Pn	17 06 49.8	-3.1
PV12	**Saucer Basin,**	**3.88**	**238**	Pn	Pn	17 06 51.3	-1.8
PV02	**Paradox Valley**	**3.90**	**236**	Pn	Pn	17 06 49.2	-4.2
PV04	**Paradox Valley**	**3.90**	**240**	Pn	Pn	17 06 50.0	-3.4
PV11	**David Mesa, Pa**	**3.94**	**238**	Pn	Pn	17 06 50.1	-3.7
PV23	**Carpenter Ridg**	**3.94**	**241**	Pn	Pn	17 06 50.1	-3.9
PV03	**Paradox Valley**	**3.94**	**238**	Pn	Pn	17 06 51.5	-2.5
PV16	**Nyswonger Mesa**	**3.96**	**239**	Pn	Pn	17 06 50.8	-3.3
PV20	**West Nyswonger**	**3.97**	**239**	Pn	Pn	17 06 51.4	-3.0
PV18	**Skein Mesa, Pa**	**3.99**	**238**	Pn	Pn	17 06 52.8	-1.7
PV14	**Lion Creek, Pa**	**3.99**	**240**	Pn	Pn	17 06 52.3	-2.4
PV19	**Morning Glory**	**4.00**	**239**	Pn	Pn	17 06 53.1	-1.6
PV17	**East Wray Mesa**	**4.00**	**239**	Pn	Pn	17 06 51.7	-3.1
K30B	**Basset**	**4.36**	**58**	Pn	Pn	17 06 57.5	-2.1
BW06	**Boulder Array**	**4.37**	**304**	Pn	Pn	17 06 57.0	-2.7
PD31	**Pinedale Array**	**4.37**	**304**	Pn	Pn	17 06 55.8	-4.0
PDAR	**Pinedale Array**	**4.37**	**304**	Pn	Pn	17 06 56.3	-3.5

DJA 02 17:07:19.6±0.3,1°S±3°×112°7E±°,h10km,M3.6/7,mb3.8/2, MLv3.6/7,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.79**	**43**	P	Pn	17 07 36.2	-0.6
LBMI				S	Sg	17 07 43.9	-1.1
SANI	**Sanana**	**1.28**	**230**	P	Pn	17 07 42.9	-0.7
SANI				S	Sb	17 07 59.5	-0.9
NLAI	**Namlea**	**2.01**	**176**	P	Pn	17 07 53.7	+0.1
NLAI				S	Sn	17 08 19.6	+0.8
TNTI	**Ternate**	**2.02**	**11**	P	Pn	17 07 54.6	+0.9
BNDI	**Bandanaira**	**4.40**	**138**	P	Pn	17 08 25.7	-0.8
MRSI	**Marisa**	**5.30**	**289**	P	Pn	17 08 38.8	-0.1
FAKI	**Fak Fak**	**5.54**	**108**	P	Pn	17 08 49.1	+6.9

SOME ***02*** *17:21:15.4,43°.25N×78°.60E,h0km*

NNC ***02*** *17:21:15.2±0.1,43°.29N×78°.60E,h0km,mb2.7,mpv2.3, Error ellipse: s-maj=1.8km s-min=0.5km az=170.0*

ISC 02 17:21:15.7±1.2,43°.27N±0°.04×78°.59E±0°.03,h7km±13km, n9,σ0s32/18,3C-1D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.15**	**227**	P	**Pg**	**17 21 18.4**	**-0.4**
	2.1nm,0.1s						
ZHN				S	**Sg**	**17 21 20.8**	**-0.2**
	39nm,0.2s						
ZHN	**Zhinishke**	**0.15**	**227**	*e*P	**Pg**	**17 21 18.7**	**-0.2**
	2.5nm,0.1s						
ZHN				*e*S	**Sg**	**17 21 21.1**	**+0.1**
	51nm,0.2s						
KPKS	**Kokpek**	**0.21**	**20**	*e*P	**Pg**	**17 21 19.9**	**+0.1**
	2.2nm,0.0s						
KPKS				*e*S	**Sg**	**17 21 23.0**	**+0.3**
	3.3nm,0.2s						
SATY	**Saty**	**0.25**	**212**	P	**Pg**	**17 21 20.7**	**+0.1**
	4.1nm,0.1s						
SATY				S	**Sg**	**17 21 24.6**	**+0.6**
	12nm,0.1s						
SATY	**Saty**	**0.25**	**212**	*e*P	**Pg**	**17 21 20.6**	**0.0**
	4.1nm,0.1s						
SATY				*e*S	**Sg**	**17 21 24.3**	**+0.3**
	12nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**111**	P	**Pg**	**17 21 22.3**	**-0.2**
	2.6nm,0.1s						
UZB				S	**Sg**	**17 21 27.0**	**+0.1**
	7.0nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**111**	*e*P	**Pg**	**17 21 22.4**	**0.0**
	2.6nm,0.1s						
UZB				*e*S	**Sg**	**17 21 27.0**	**+0.1**
	7.0nm,0.1s						
PDGK	**Podgornoye**	**0.66**	**85**	⇑P	**Pg**	**17 21 28.0**	**-0.5**
	0.8nm,1.0s						
PDGK				⇑S	**Sg**	**17 21 37.0**	**-0.1**
	1.5nm,0.9s						
KNDC	**Almaty**	**1.19**	**268**	⇓P	**Pg**	**17 21 37.9**	**-0.5**
	11nm,0.6s						
KNDC			

WRA	**Warramunga Arr**	**23.89**	**233**	P		**P**	**18 05 17.2**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=57,slow=9.4,SNR=11							
WRA				PcP		**PcP**	**18 09 00.8**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=59,slow=2.6,SNR=10							
WRA				ScP		**ScP**	**18 12 37.0**	**+4.1**
	comp=Z,0.6nm,0.8s,baz=106,slow=3.9,SNR=1.9							
	comp=Z,2.6nm,0.8s							
AS31	**Alice Springs**	**26.34**	**227**	P		**P**	**18 05 38.4**	**-1.8**
ASAR	**Alice Springs**	**26.35**	**227**	P		**P**	**18 05 38.1**	**-2.1**
ASAR	**Alice Springs**	**26.35**	**227**	P		**P**	**18 05 39.7**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=58,slow=9.1,SNR=24							
ASAR				PcP		**PcP**	**18 09 06.2**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=50,slow=2.4,SNR=8.3							
ASAR				ScP		**ScP**	**18 12 43.7**	**+3.9**
	comp=Z,0.4nm,0.7s,baz=54,slow=2.5,SNR=5.9							
	comp=Z,1.5nm,0.9s							
KNRA	**Kununurra**	**26.95**	**247**	P		**P**	**18 05 45.7**	**+0.1**
STKA	**Stephens Creek**	**28.25**	**204**	P		**P**	**18 05 56.3**	**-0.8**
STKA	**Stephens Creek**	**28.25**	**204**	LR		LR	18 17 19.4	
	comp=Z,81nm,19.4s,baz=199,slow=37							
FITZ	**Fitzroy Crossi**	**30.54**	**245**	P		**P**	**18 06 17.4**	**-0.2**
BBOO	**Buckleboo**	**31.55**	**211**	P		**P**	**18 06 26.6**	**+0.3**
DAV	**Davao City (W)**	**31.75**	**294**	LR		LR	18 17 25.4	
	comp=Z,36nm,20.9s,baz=62,slow=33							
RPZ	**Rata Peaks**	**40.08**	**161**	LR		LR	18 23 24.3	
	comp=Z,39nm,20.3s,baz=185,slow=35							
TPUB	**Ta-pu**	**44.23**	**313**	P		**P**	**18 08 12.5**	**-0.7**
SSLB	**Suanglung**	**44.29**	**314**	P		**P**	**18 08 14.0**	**+0.3**
JNU	**Nakatsue**	**45.10**	**332**	P		**P**	**18 08 19.6**	**-0.4**
JNU	**Nakatsue**	**45.10**	**332**	P		**P**	**18 08 19.3**	**-0.7**
	comp=Z,5.2nm,0.7s,baz=234,slow=5.9,SNR=1.6							
	comp=Z,5.2nm,0.7s							
RAR	**Rarotonga**	**46.65**	**113**	LR		LR	18 25 46.9	
	comp=Z,91nm,19.1s,baz=158,slow=33							
KSRS	**Korea Array**	**50.03**	**332**	P		**P**	**18 08 57.9**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=154,slow=7.1,SNR=3.3							
	comp=Z,1.9nm,0.9s							
USRK	**Ussuriysk Ar.**	**54.14**	**340**	P		**P**	**18 09 29.0**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=149,slow=4.6,SNR=4.5							
	comp=Z,0.9nm,0.7s							
KLR	**Kul'dur**	**58.68**	**343**	P		**P**	**18 10 00.2**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=175,slow=4.1,SNR=6.6							
	comp=Z,1.9nm,0.7s							
PEA0B	**Petropavlovsk-**	**59.16**	**2**	P		**P**	**18 10 04.6**	**+0.6**
PETK	**Petropavlovsk-**	**59.16**	**2**	P		**P**	**18 10 03.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=151,slow=5.8,SNR=8.0							
	comp=Z,0.8nm,0.8s							
CRAI	**Chiangrai**	**59.34**	**298**	P		**P**	**18 10 06.2**	**+0.3**
CRAI				IAmb		IAmb	18 10 37.7	
	comp=Z,7.9nm,1.4s							
CMAR	**Chiang Mai Arr**	**60.02**	**295**	P		**P**	**18 10 10.5**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=113,slow=4.8,SNR=9.8							
	comp=Z,1.3nm,0.8s							
SHEM	**Shemya Is, Ala**	**61.03**	**13**	LR		LR	18 34 16.1	
	comp=Z,45nm,19.3s,baz=342,slow=34							
SONM	**Songino Array**	**68.43**	**327**	P		**P**	**18 11 05.6**	**+0.3**
SONM	**Songino Array**	**68.43**	**327**	P		**P**	**18 11 06.2**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=122,slow=5.4,SNR=3.8							
	comp=Z,0.6nm,0.4s							
SHL	**Shillong**	**68.49**	**300**	P		**P**	**18 11 06.7**	**+0.5**
LSA	**Lhasa**	**70.44**	**304**	P		**P**	**18 11 19.3**	**+0.8**
LSA				IAmb		IAmb	18 11 20.9	
	comp=Z,6.9nm,0.8s							
TTA	**Tatalina**	**78.47**	**21**			**P**	**18 12 02.6**	**-1.3**
TTA				IAmb		IAmb	18 12 16.1	
	comp=Z,4.4nm,1.3s							
TIXI	**Tiksi**	**79.52**	**352**	P		**P**	**18 12 08.6**	**-0.8**
TIXI				IAmb		IAmb	18 12 10.4	
	comp=Z,3.5nm,1.0s							
SUA	**Susitna One**	**79.55**	**23**	P		**P**	**18 12 09.2**	**-0.7**
SUA				IAmb		IAmb	18 12 33.8	
	comp=Z,7.8nm,1.2s							
J20K	**Nowinta River**	**79.90**	**20**	P		**P**	**18 12 12.3**	**+0.8**
J20K				IAmb		IAmb	18 12 44.7	
	comp=Z,11nm,1.5s							
H19K	**Roundabout Mou**	**79.99**	**19**	P		**P**	**18 12 12.3**	**+0.3**
H19K				IAmb		IAmb	18 12 15.0	
	comp=Z,3.5nm,1.1s							
CAST	**Castle Rocks**	**80.17**	**22**	P		**P**	**18 12 13.9**	**+0.8**
CAST				IAmb		IAmb	18 12 55.9	
	comp=Z,5.0nm,1.3s							
TRF	**Thorofare Moun**	**80.85**	**22**	P		**P**	**18 12 16.5**	**-0.5**
TRF				IAmb		IAmb	18 12 22.7	
	comp=Z,7.3nm,1.3s							
E19K	**Redstone River**	**81.02**	**17**	P		**P**	**18 12 17.9**	**+0.4**
E19K				IAmb		IAmb	18 12 41.1	
	comp=Z,5.9nm,1.2s							
IMAR	**Indian Mountai**	**81.15**	**19**	P		**P**	**18 12 18.6**	**+0.4**
D19K	**Kuna River**	**81.47**	**16**	P		**P**	**18 12 20.3**	**+0.4**
D19K				IAmb		IAmb	18 12 52.5	
	comp=Z,5.0nm,1.4s							
G21K	**Allakaket**	**81.55**	**19**	P		**P**	**18 12 20.9**	**+0.5**
MK31	**Makanchi Array**	**82.51**	**319**	P		**P**	**18 12 25.6**	**-0.3**
MKAR	**Makanchi Array**	**82.51**	**319**	P		**P**	**18 12 25.2**	**-0.7**
MKAR	**Makanchi Array**	**82.51**	**319**	P		**P**	**18 12 26.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=89,slow=9.1,SNR=5.6							
	comp=Z,0.4nm,0.6s							
B20K	**Meade River**	**82.74**	**15**	P		**P**	**18 12 26.9**	**+0.5**
B20K				IAmb		IAmb	18 12 33.6	
	comp=Z,3.8nm,1.1s							
ILAR	**Eielson Array**	**82.83**	**22**	P		**P**	**18 12 26.1**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=239,slow=5.0,SNR=4.9							
ILAR				LR		LR	18 45 50.3	
	comp=Z,24nm,18.9s,baz=279,slow=33							
	comp=Z,0.4nm,0.7s							
D22K	**Ayikyak River**	**83.24**	**17**	P		**P**	**18 12 29.4**	**+0.3**
ZALV	**Zalesovo Beam**	**83.27**	**326**	P		**P**	**18 12 28.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=120,slow=5.3,SNR=2.2							
	comp=Z,0.3nm,0.4s							
J25K	**Salcha River,**	**83.31**	**22**	P		**P**	**18 12 29.7**	**0.0**
J25K				IAmb		IAmb	18 12 31.0	
	comp=Z,2.7nm,1.0s							
QSPA	**South Pole Qui**	**83.76**	**180**	P		**P**	**18 12 33.0**	**+0.9**
QSPA				IAmb		IAmb	18 12 35.8	
	comp=Z,9.3nm,1.4s							
QSPA	**South Pole Qui**	**83.76**	**180**	P		**P**	**18 12 32.3**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=238,slow=1.0,SNR=25							
	comp=Z,1.2nm,0.4s							
B22K	**Teshekpuk Lake**	**83.93**	**16**	P		**P**	**18 12 33.1**	**+0.5**
B22K				IAmb		IAmb	18 12 33.2	
	comp=Z,3.2nm,1.1s							
F24K	**Squaw Lake**	**83.94**	**19**	P		**P**	**18 12 33.0**	**+0.2**
F24K				IAmb		IAmb	18 13 10.6	
	comp=Z,2.4nm,1.2s							
BMAR	**Burnt Mountain**	**84.98**	**20**	P		**P**	**18 12 37.9**	**-0.2**
KURBB	**Kurchatov Arra**	**85.96**	**322**	P		**P**	**18 12 43.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=99,slow=5.1,SNR=6.7							
	comp=Z,0.3nm,0.4s							
G30M	**tAoh Zraii Nji**	**87.73**	**22**	P		**P**	**18 12 51.1**	**-0.4**
G30M				IAmb		IAmb	18 13 08.7	
	comp=Z,3.0nm,1.2s							
G31M	**Satah River**	**88.43**	**22**	P		**P**	**18 12 54.9**	**+0.1**
G31M				IAmb		IAmb	18 13 13.0	
	comp=Z,3.5nm,1.1s							
INK	**Inuvik**	**89.16**	**21**	LR		LR	18 48 23.5	
	comp=Z,22nm,20.6s,baz=182,slow=32							
BVAR	**Borovoye Array**	**91.39**	**323**	P		**P**	**18 13 10.3**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=108,slow=6.3,SNR=4.1							
	comp=Z,0.6nm,0.5s							
YKA	**Yellowknife Ar**	**95.87**	**28**	P		**P**	**18 13 30.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=279,slow=4.8,SNR=7.1							
	comp=Z,0.2nm,0.3s							
PDAR	**Pinedale Array**	**98.53**	**48**	P		**P**	**18 13 41.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=250,slow=3.2,SNR=2.7							
	comp=Z,0.3nm,0.6s							
BOSA	**Boshof**	**120.13**	**232**	PKP		**PKiKP**	**18 18 54.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=52,slow=3.1,SNR=3.6							
TORD	**Torodi Ar. Bea**	**152.36**	**286**	PKPbc		**PKPbc**	**18 19 59.2**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=48,slow=2.2,SNR=11							

*UPP **02** 18:00:43.7±0.1, 67.06N×20.97E, h0km, ML2.1, Suspected explosion*
*IDC **02** 18:00:44.8±1.1, 67.09N×21.12E, h0km, mbtmp2.8/3, ML1.8/3, Error ellipse: s-maj=17.4km s-min=8.6km az=106.0*
*BER **02** 18:00:45.1±2.7, 66.91N×20.99E, h0km, ML1.7, Suspected explosion*

ISC 02 18:00:43.5±0.8, 67.07N±0.03×21.06E±0.04, h0km, n18, σ0s99/25, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.20**	**287**	P	**Pg**	**18 00 47.1**	**-0.2**
DUNU				S	**Sg**	**18 00 49.7**	**-0.2**
MASU	**Masugnsbyn**	**0.54**	**42**	P	**Pb**	**18 00 54.6**	**-1.2**
PAJU	**Pajala**	**0.81**	**92**	P	**Pb**	**18 00 59.4**	**-1.0**
HARU	**Harads**	**0.91**	**182**	P	**Pg**	**18 01 00.3**	**-0.5**
KUA	**Kurravaara**	**0.94**	**343**	P	**Pg**	**18 01 00.8**	**-0.6**
RATU	**Laukkuluspa**	**0.95**	**324**	P	**Pg**	**18 01 01.0**	**-0.7**
SALU	**Saltoluokta**	**1.04**	**289**	eP	**Pg**	**18 01 02.6**	**-0.9**
SALU	**Saltoluokta**	**1.04**	**289**	P	**Pg**	**18 01 02.6**	**-0.9**
LANU	**Lannavaara**	**1.05**	**20**	P	**Pg**	**18 01 03.3**	**-0.3**
KALU	**Kalix**	**1.52**	**142**	P	**Pn**	**18 01 11.9**	**-0.1**
SJUU	**Sjulsmark**	**1.58**	**172**	P	**Pn**	**18 01 12.6**	**-0.2**
HEF	**Hetta**	**1.67**	**35**	eP	**Pb**	**18 01 14.5**	**-0.7**
HEF				eS	**Sg**	**18 01 37.0**	**-0.3**
KTK1	**Kautokeino**	**2.12**	**22**	eP	**Pb**	**18 01 22.4**	**-0.4**
KTK1				eS	**Sg**	**18 01 50.2**	**-1.3**
KTK1				IAML		18 01 56.0	
	comp=Z,8.9nm,0.1s						
FAUS	**Fauske**	**2.27**	**281**	eP	**Pn**	**18 01 23.1**	**+0.9**
JETT	**Jettan, Norway**	**2.51**	**355**	eP	**Pb**	**18 01 29.1**	**-0.3**
JETT				eS	**Sn**	**18 01 58.4**	**+1.4**
ARCES	**ARCESS Array B**	**2.98**	**32**	Pn	**Pn**	**18 01 33.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=219,slow=13,SNR=37						
ARCES				Sn	**Sn**	**18 02 09.9**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=218,slow=22,SNR=8.6						
	comp=Z,0.7nm,0.2s						
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**18 02 15.6**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=8.0						
FINES				Sn	**Sn**	**18 03 26.0**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=344,slow=23,SNR=8.0						
FINES				Lg	Lg	18 03 55.1	
	comp=Z,0.2nm,0.3s,baz=351,slow=27,SNR=2.7						
	comp=Z,1.4nm,0.7s						
NOA	**NORSAR Array B**	**7.42**	**220**	Pn	**Pn**	**18 02 32.1**	**-0.8**
	baz=164,slow=16,SNR=1.5						
NOA				Sn	**Sn**	**18 03 58.2**	**+0.4**
	baz=2.0,slow=18,SNR=3.9						
	comp=Z,0.7nm,1.0s						

*IDC **02** 18:11:40.8±5.9, 21.63N×143.20E, h333km±56km, mb3.0/11, mbtmp3.7/12, Error ellipse: s-maj=52.2km s-min=17.2km az=81.0*

ISC 02 18:11:38.5±1.7, 21.6N±0.1×143.2E±0.4, h311km, n12, σ0s30/13, mb3.2/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.48**	**345**	P	**Pn**	**18 15 02.1**	**-0.1**
	0.3nm,0.3s,baz=145,slow=4.5,SNR=1.2						
KSRS	**Korea Array**	**20.59**	**323**	P	**P**	**18 15 54.7**	**+0.1**
	1.1nm,0.6s,baz=146,slow=9.5,SNR=5.1						
	1.1nm,0.6s						
SONM	**Songino Array**	**39.41**	**320**	P	**P**	**18 18 39.3**	**+0.2**
	0.6nm,0.4s,baz=112,slow=8.5,SNR=3.2						
	0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.63**	**274**	P	**P**	**18 18 57.0**	**-0.4**
	0.1nm,0.4s,baz=73,slow=4.1,SNR=1.7						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**42.23**	**192**	P	**P**	**18 19 02.2**	**+0.1**
	0.2nm,0.5s,baz=18,slow=11,SNR=1.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**45.94**	**192**	P	**P**	**18 19 31.4**	**+0.1**
	0.2nm,0.7s,baz=9.9,slow=6.9,SNR=1.0						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**54.28**	**322**	P	**P**	**18 20 33.3**	**+0.2**
	0.6nm,0.6s,baz=98,slow=16,SNR=2.3						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**54.77**	**313**	P	**P**	**18 20 37.2**	**+0.4**
	0.3nm,0.5s,baz=91,slow=8.9,SNR=4.4						
MKAR				PcP	**PcP**	**18 21 34.9**	**-0.1**
	0.1nm,0.3s,baz=84,slow=4.1,SNR=1.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**57.60**	**317**	P	**P**	**18 20 56.6**	**+0.2**
	0.7nm,0.4s,baz=94,slow=7.4,SNR=19						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**62.74**	**320**	P	**P**	**18 21 31.5**	**+0.4**
	1.5nm,0.4s,baz=101,slow=8.3,SNR=9.4						
	1.5nm,0.4s						
ARCES	**ARCESS Array B**	**78.99**	**342**	P	**P**	**18 23 07.5**	**-0.5**
	3.0nm,1.0s,baz=66,slow=9.4,SNR=5.5						
	3.0nm,1.0s						
FINES	**FINESS Array B**	**83.25**	**334**	P	**P**	**18 23 30.1**	**-0.2**
	0.5nm,0.4s,baz=63,slow=4.9,SNR=11						
	0.5nm,0.4s						

*IDC **02** 18:28:05.2±0.9, 56.57S×141.37W, h0km, mb3.9/4, mbtmp3.9/4, MS3.9/18, Error ellipse: s-maj=46.0km s-min=28.6km az=9.0*

ISC 02 18:28:06.4±0.9, 56.5S±0.3×141.4W±0.2, h10km, n34, σ0s76/10, mb4.1/4, MS3.9/18, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**28.52**	**202**	LR	LR	18 42 23.7	
	comp=Z,360nm,20.1s,baz=84,slow=30						
RPZ	**Rata Peaks**	**32.40**	**273**	LR	LR	18 46 17.5	
	comp=Z,56nm,18.4s,baz=132,slow=34						
URZ	**Urewera**	**32.87**	**286**	LR	LR	18 45 55.6	
	comp=Z,57nm,18.1s,baz=138,slow=33						
QSPA	**South Pole Qui**	**33.62**	**180**	P	**P**	**18 34 46.6**	**-0.1**
	3.0nm,1.1s,baz=146,slow=1.6,SNR=3.9						
QSPA				LR	LR	18 46 47.8	
	comp=Z,480nm,18.6s,baz=80,slow=33						
	3.0nm,1.1s						
PMSA	**Palmer Station**	**36.45**	**135**	LR	LR	18 46 21.6	
	comp=Z,173nm,19.3s,baz=256,slow=30						
RAR	**Rarotonga**	**37.82**	**331**	LR	LR	18 47 16.3	
	comp=Z,170nm,18.8s,baz=160,slow=30						
PPT	**Papeete**	**39.39**	**348**	LR	LR	18 47 43.9	
	comp=Z,256nm,18.8s,baz=173,slow=30						
PLCA	**Paso Flores**	**47.20**	**102**	P	**P**	**18 36 39.5**	**+0.5**
	1.4nm,0.8s,baz=341,slow=10,SNR=3.0						
PLCA				LR	LR	18 51 29.2	
	comp=Z,47nm,19.2s,baz=185,slow=30						
	1.4nm,0.8s						
H03S2	**Juan Fernandez**	**47.56**	**89**	T	T	19 27 35.3	
	baz=219,slow=74,SNR=8.2						
H03S1	**Juan Fernandez**	**47.57**	**89**	T	T	19 27 36.7	
	baz=219,slow=74,SNR=7.2						
H03S3	**Juan Fernandez**	**47.58**	**89**	T	T	19 27 38.9	
	baz=219,slow=74,SNR=8.9						
H03N3	**Juan Fernandez**	**47.85**	**89**	T	T	19 28 12.4	
	baz=222,slow=72,SNR=142						
H03N2	**Juan Fernandez**	**47.86**	**89**	T	T	19 28 14.1	
	baz=222,slow=72,SNR=88						
H03N1	**Juan Fernandez**	**47.87**	**89**	T	T	19 28 12.5	
	baz=222,slow=72,SNR=196						
MAW	**Mawson**	**54.87**	**191**	LR	LR	18 58 50.4	
	comp=Z,188nm,18.1s,baz=226,slow=34						
ASAR	**Alice Springs**	**67.73**	**261**	P	**P**	**18 39 04.5**	**+0.5**
	0.9nm,0.9s,baz=144,slow=6.5,SNR=6.0						
	0.9nm,0.9s						
H01W1	**Cape Leeuwin H**	**68.88**	**239**	T	T	19 54 53.9	
	baz=144,slow=76,SNR=54						
H01W2	**Cape Leeuwin H**	**68.89**	**239**	T	T	19 54 54.2	
	baz=144,slow=76,SNR=57						
H01W3	**Cape Leeuwin H**	**68.90**	**239**	T	T	19 54 55.1	
	baz=144,slow=76,SNR=47						
WRA	**Warramunga Arr**	**70.48**	**263**	P	**P**	**18 39 21.6**	**+0.5**
	1.4nm,0.8s,baz=144,slow=5.6,SNR=7.2						
	1.4nm,0.8s						
JTS	**Las Juntas de**	**81.15**	**56**	LR	LR	19 08 25.9	
	comp=Z,29nm,20.2s,baz=49,slow=30						
CMIG	**Matias Romero**	**83.01**	**44**	LR	LR	19 09 22.5	
	comp=Z,52nm,21.0s,baz=198,slow=30						
LPIG	**La Paz**	**84.52**	**28**	LR	LR	19 09 16.7	
	comp=Z,50nm,20.0s,baz=212,slow=29						
SUR	**Sutherland**	**90.15**	**165**	LR	LR	19 16 33.6	
	comp=Z,91nm,19.9s,baz=174,slow=32						
TXAR	**Lajitas Array**	**91.32**	**32**	LR	LR	19 13 10.2	
	comp=Z,25nm,21.4s,baz=197,slow=30						
PFO	**Pinyon Flats O**	**92.26**	**21**	LR	LR	19 13 42.5	
	comp=Z,98nm,19.1s,baz=198,slow=30						
BOSA	**Boshof**	**94.43**	**168**	LR	LR	19 22 02.7	
	comp=Z,103nm,18.1s,baz=195,slow=34						
ANMO	**Albuquerque**	**95.83**	**28**	LR	LR	19 16 01.3	
	comp=Z,58nm,21.6s,baz=299,slow=30						
LBTB	**Lobatse**	**98.02**	**168**	LR	LR	19 22 43.3	
	comp=Z,75nm,19.9s,baz=180,slow=34						
ILAR	**Eielson Array**	**121.06**	**357**	PKP	**PKiKP**	**18 46 58.0**	**+0.3**
	0.9nm,0.8s,baz=218,slow=2.0,SNR=7.1						
CMAR	**Chiang Mai Arr**	**121.50**	**255**	PKP	**PKiKP**	**18 46 59.9**	**-0.1**
	0.3nm,0.4s,baz=222,slow=1.2,SNR=2.3						
ESDC	**Sonseca Array**	**147.58**	**103**	PKPbc	**PKPbc**	**18 47 49.9**	**-0.3**
	1.1nm,0.8s,baz=255,slow=2.2,SNR=5.8						
MKAR	**Makanchi Array**	**151.68**	**269**	PKP	**PKPdf**	**18 47 52.0**	**-1.7**
	0.2nm,0.5s,baz=153,slow=1.6,SNR=1.5						
MKAR				PKPbc	**PKiKP**	**18 48 00.2**	**-0.2**
	1.5nm,0.9s,baz=99,slow=3.8,SNR=9.1						
ZALV	**Zalesovo Beam**	**153.92**	**284**	PKPab	**PKPab**	**18 48 18.6**	**+0.4**
	1.0nm,0.9s,baz=129,slow=2.1,SNR=4.4						

*IDC **02** 18:30:39.3±1.3, 5.66S×154.19E, h0km, mb4.0/9, mbtmp4.1/10, ML1.7/1, MS3.4/3, Error ellipse: s-maj=36.9km s-min=24.0km az=97.0*

ISC 02 18:30:46.1±1.2, 5.9S±0.2×154.0E±0.1, h35km, n16, σ2s51/9, mb4.0/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.88**	**121**	LR	LR	18 34 20.2	
	comp=Z,596nm,20.3s,baz=300,slow=32						
PMG	**Port Moresby**	**7.63**	**242**	Pn	**Pn**	**18 32 34.8**	**-0.2**
	0.6nm,0.3s,baz=167,slow=9.2,SNR=2.0						
PMG				Sn	**Sn**	**18 33 60.0**	**-0.3**
	2.6nm,0.3s,baz=3.4,slow=20,SNR=2.5						
PMG				LR	LR	18 36 08.1	
	comp=Z,59nm,18.7s,baz=69,slow=42						
	10nm,0.7s						
DZM	**Mont Dzumac**	**20.11**	**144**	P	**P**	**18 35 15.6**	**-1.6**
	5.3nm,0.9s,baz=246,slow=19,SNR=1.8						
	5.3nm,0.9s						
WRA	**Warramunga Arr**	**23.68**	**232**	P	**P**	**18 35 55.6**	**+0.7**
	0.8nm,0.7s,baz=54,slow=9.8,SNR=4.2						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.21**	**225**	P	**P**	**18 36 18.6**	**+0.7**
	1.3nm,1.0s,baz=56,slow=9.3,SNR=13						
	1.3nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**27.25**	**27**	T	T	19 04 39.9	
	baz=207,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**27.26**	**27**	T	T	19 04 41.8	
	baz=207,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**27.27**	**27**	T	T	19 04 48.3	
	baz=207,slow=76,SNR=3.4						
CMAR	**Chiang Mai Arr**	**59.41**	**295**	P	**P**	**18 40 45.0**	**-0.8**
	2.2nm,0.8s,baz=121,slow=5.4,SNR=19						
	2.2nm,0.8s						
SONM	**Songino Array**	**67.86**	**328**	P	P	18 41 39.4	-1.7
	0.3nm,0.5s,baz=125,slow=3.9,SNR=2.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**81.91**	**319**	P	**P**	**18 43 00.9**	**-1.3**
	1.2nm,0.7s,baz=102,slow=6.2,SNR=12						
	1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**82.70**	**326**	P	P	18 43 03.9	-2.2
	0.7nm,0.5s,baz=109,slow=5.0,SNR=5.4						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**85.37**	**322**	P	**P**	**18 43 18.2**	**-1.6**
	1.8nm,0.2s,baz=108,slow=3.9,SNR=6.2						
	1.8nm,0.2s						
BVAR	**Borovoye Array**	**90.81**	**323**	P	P	18 43 44.0	-1.8
	1.6nm,0.8s,baz=108,slow=4.8,SNR=11						
	1.6nm,0.8s						
PDAR	**Pinedale Array**	**98.68**	**48**	LR	LR	19 19 15.1	
	comp=Z,40nm,21.3s,baz=208,slow=30						
TORD	**Torodi Ar. Bea**	**151.76**	**287**	PKPbc	**PKPdf**	**18 50 37.3**	**+5.4**
	20nm,0.3s,baz=115,slow=1.5,SNR=5.5						

*NEIC **02** 18:37:48.2±1.2, 56.45N±0.08×149.1W±0.1, h23km±9km, ML3.8/72, ML3.4(AEIC), Error ellipse: s-maj=11.5km s-min=7.9km az=162.0*
*AEIC **02** 18:37:51.9±1.6, 56.48N±0.08×149.1W±0.1, h11km±7km, Error ellipse: s-maj=12.0km s-min=8.3km az=168.0*

ISC 02 18:37:46.3±1.4, 56.49N±0.08×149.18W±0.06, h10km, n282, σ1s10/276, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.27**	**306**		**Sn**	**18 38 50.6**	**-1.0**
KDAK	**Kodiak Island**	**2.27**	**306**		**Pn**	**18 38 24.9**	**+1.2**
KDAK	**Kodiak Island**	**2.27**	**306**	S	**Sn**	**18 38 50.6**	**-1.0**
	baz=123						
OHAK	**Old Harbor**	**2.37**	**290**		**Pn**	**18 38 26.3**	**+1.0**
OHAK					**Sn**	**18 38 52.6**	**-1.7**
OHAK	**Old Harbor**	**2.37**	**290**	P	**Pn**	**18 38 26.2**	**+1.0**
OHAK	**Old Harbor**	**2.37**	**290**	P	**Pn**	**18 38 26.3**	**+1.0**
	baz=106						
OHAK				S	**Sn**	**18 38 52.6**	**-1.7**
	baz=106						
SYI	**Shuyak Island**	**2

Q17K	Contact Creek	4.04	299	P	Pn	18 38 49.7 +1.4
	baz=113					
SLKM	Skilak Lake	4.07	353		Pn	18 38 48.9 +0.4
IVE	Iliamna Volcan	4.08	332		Pn	18 38 49.7 +1.0
HIN	Hinchinbrook I	4.17	19		Pn	18 38 50.4 +0.6
HIN	Hinchinbrook I	4.17	19	IAML		18 39 37.1
	comp=N,98nm,0.7s					
HIN				IAML		18 39 38.1
	comp=E,100nm,0.4s					
KAIM	Kayak Island	4.27	34		Pn	18 38 51.6 +0.4
KAIM	Kayak Island	4.27	34	P	Pn	18 38 51.6 +0.4
	baz=217					
P18K	Big Mountain,	4.34	315		Pn	18 38 53.0 +0.7
P18K	Big Mountain,	4.34	315	P	Pn	18 38 53.6 +1.3
	baz=129					
RED	Redoubt Volcan	4.37	336		Pn	18 38 53.3 +0.6
RDSO	Redoubt South	4.40	336		Pn	18 38 53.8 +0.6
RSO	Redoubt South	4.41	336		Pn	18 38 54.3 +0.9
CAPN	Captain Cook N	4.42	347	Pn	Pn	18 38 54.6 +1.4
RDT	Redoubt	4.43	339		Pn	18 38 53.9 +0.4
RDWB	Redoubt West	4.45	336		Pn	18 38 54.4 +0.6
EYAK	Cordova Ski Ar	4.45	22		Pn	18 38 54.6 +0.9
EYAK	Cordova Ski Ar	4.45	22	P	Pn	18 38 54.6 +0.9
EYAK	Cordova Ski Ar	4.45	22	P	Pn	18 38 54.6 +0.9
	baz=204					
DFR	Drift River	4.51	337		Pn	18 38 55.3 +0.7
NCT	North Crescent	4.53	336		Pn	18 38 55.7 +0.8
RAGM	Ragged Mountai	4.57	29	Pn	Pn	18 38 56.4 +1.0
RAGM				IAML		18 39 51.2
	comp=E,100nm,0.6s					
SUCK	Suckling Hills	4.59	36	Pn	Pn	18 38 56.8 +1.2
SUCK				IAML		18 39 47.4
	comp=E,77nm,2.3s					
SUCK				IAML		18 39 52.0
	comp=N,92nm,2.4s					
O19K	Port Alsworth	4.60	326		Pn	18 38 56.6 +0.9
O19K	Port Alsworth	4.60	326	P	Pn	18 38 56.6 +0.9
	baz=141					
RC01	Rabbit Creek A	4.62	357		Pn	18 38 56.7 +0.6
RC01				IAML		18 39 49.0
	comp=E,63nm,0.2s					
RC01	Rabbit Creek A	4.62	357	P	Pn	18 38 56.8 +0.6
	baz=175					
HMT	Hamilton	4.64	32	Pn	Pn	18 38 57.7 +1.3
O18K	Koktuh Hills	4.64	319		Pn	18 38 57.2 +0.8
O18K				IAML		18 39 54.5
	comp=N,38nm,0.9s					
O18K	Koktuh Hills	4.64	319	P	Pn	18 38 57.6 +1.2
	baz=134					
FIS	Fire Island	4.70	354	Pn	Pn	18 38 57.0 -0.1
FIS				IAML		18 39 52.7
	comp=E,110nm,3.0s					
P17K	Kvichak River	4.73	308		Pn	18 38 59.0 +1.3
P17K	Kvichak River	4.73	308	P	Pn	18 38 59.0 +1.3
	baz=122					
BGLC	Bering Glacier	4.79	38		Pn	18 38 59.4 +1.1
BGLC	Bering Glacier	4.79	38	P	Pn	18 38 59.4 +1.1
	baz=222					
BERG	Berg Lake	4.86	34		Pn	18 39 00.0 +0.7
BERG	Berg Lake	4.86	34	IAML		18 39 54.4
	comp=N,97nm,0.2s					
KNK	Knik Glacier	4.95	4		Pn	18 39 01.3 +0.6
KNK	Knik Glacier	4.95	4	P	Pn	18 39 01.7 +1.0
	baz=184					
N20K	Mount Spurr	4.98	343	P	Pn	18 39 01.6 +0.5
	baz=160					
SPCR	Spurr Chakacha	4.98	343		Pn	18 39 01.6 +0.5
SNH	Sunshine Point	4.99	39		Pn	18 39 02.0 +0.9
SNH	Sunshine Point	4.99	39	IAML		18 39 50.5
	comp=E,58nm,3.2s					
SNH				IAML		18 40 41.8
	comp=N,69nm,2.6s					
CKL	Chakachamna La	5.00	342		Pn	18 39 02.0 +0.6
SPCP	Crater Peak Br	5.03	343		Pn	18 39 02.8 +0.9
SPCG	Spurr Capps Gl	5.04	344		Pn	18 39 02.6 +0.7
KHIT	Khitrov Hills	5.04	36		Pn	18 39 02.5 +0.6
SUA	Susitna One	5.06	351		Pn	18 39 02.5 +0.3
SUA	Susitna One	5.06	351	IAML		18 40 09.8
	comp=E,33nm,4.5s					
SUA	Susitna One	5.06	351	P	Pn	18 39 02.5 +0.3
	baz=169					
BMRM	Bremner River	5.08	26		Pn	18 39 03.0 +0.5
BMRM	Bremner River	5.08	26	P	Pn	18 39 03.7 +1.2
	baz=209					
PMR	Palmer	5.12	0		Pn	18 39 03.2 +0.3
PMR	Palmer	5.12	0	P	Pn	18 39 03.9 +1.0
PMR	Palmer	5.12	0	P	Pn	18 39 03.4 +0.5
	baz=180					
N19K	Bonanza Creek	5.15	330		Pn	18 39 04.1 +0.7
N19K	Bonanza Creek	5.15	330	P	Pn	18 39 04.1 +0.7
	baz=145					
WAX	Waxell Ridge	5.18	37	Pn	Pn	18 39 04.7 +0.9
STLK	Strandline Lak	5.21	346		Pn	18 39 05.0 +0.8
SPNN	North Nagishla	5.22	341		Pn	18 39 05.5 +1.0
KLU	Klutina	5.29	17		Pn	18 39 06.4 +1.0
KLU	Klutina	5.29	17	IAML		18 40 05.3
	comp=E,54nm,0.2s					
KLU				IAML		18 40 06.0
	comp=N,48nm,0.2s					
KLU	Klutina	5.29	17	P	Pn	18 39 06.4 +1.0
	baz=199					
GHO	Glory Hole Cre	5.30	1	Pn	Pn	18 39 05.6 +0.1
GHO				IAML		18 40 08.6
	comp=N,70nm,0.7s					
GHO				IAML		18 40 10.0
	comp=E,39nm,0.7s					
MESA	MESA	5.31	43		Pn	18 39 06.1 +0.4
MESA	MESA	5.31	43	IAML		18 40 17.5
	comp=N,57nm,1.7s					
MESA				IAML		18 42 34.8
	comp=E,58nm,3.4s					
MESA	MESA	5.31	43	P	Pn	18 39 06.1 +0.4
	baz=228					
CRQM	Cirque	5.32	34		Pn	18 39 06.3 +0.5
CRQM				IAML		18 40 05.8
	comp=N,50nm,0.7s					
CRQM				IAML		18 40 08.1
	comp=E,39nm,0.5s					
SML	Sawmill	5.35	4		Pn	18 39 07.3 +1.1
SML	Sawmill	5.35	4	IAML		18 40 11.9
	comp=E,29nm,0.8s					
SML				IAML		18 40 12.5
	comp=N,31nm,0.4s					
SML	Sawmill	5.35	4	P	Pn	18 39 07.3 +1.1
	baz=184					
M23K	Glacier View	5.37	7		Pn	18 39 06.6 +0.1
M23K	Glacier View	5.37	7	P	Pn	18 39 06.6 +0.1
	baz=188					
SCM	Sheep Creek Mo	5.45	9		Pn	18 39 08.7 +1.3
SCM	Sheep Creek Mo	5.45	9	P	Pn	18 39 08.7 +1.3
	baz=190					
ISLE	Juniper Island	5.46	38		Pn	18 39 08.5 +0.8
BAGL	Bagley Icefiel	5.47	40		Pn	18 39 08.8 +1.1
N18K	Kilae Creek	5.47	323		Pn	18 39 08.7 +0.8
N18K	Kilae Creek	5.47	323	P	Pn	18 39 08.7 +0.8
	baz=137					
VRDI	Verde Repeater	5.60	30		Pn	18 39 10.7 +0.9
SKT	Skwentna	5.64	349		Pn	18 39 10.9 +0.9
SKT	Skwentna	5.64	349	P	Pn	18 39 10.9 +0.9
	baz=166					
N25K	Chitina, Valde	5.65	23		Pn	18 39 11.0 +0.7
N25K	Chitina, Valde	5.65	23	P	Pn	18 39 11.4 +1.1
	baz=206					
O16K	Kokwok River B	5.67	307		Pn	18 39 11.5 +1.1
O16K	Kokwok River B	5.67	307	P	Pn	18 39 11.5 +1.1
	baz=119					
GLB	Gilahina Butte	5.69	27		Pn	18 39 11.3 +0.5
KIAG	Kiagna River	5.69	36		Pn	18 39 11.9 +0.9
SVW2	Sparrevohn	5.70	327	Pn	Pn	18 39 11.2 +0.4
SVW2	Sparrevohn	5.70	327	P	Pn	18 39 11.5 +0.7
M20K	Styx River	5.78	341		Pn	18 39 12.7 +0.7
M20K	Styx River	5.78	341	P	Pn	18 39 12.7 +0.7
	baz=157					
TABL	Table Mountain	5.79	43		Pn	18 39 13.2 +0.9
N17K	Nushagak Hills	5.83	317		Pn	18 39 13.8 +1.1
N17K	Nushagak Hills	5.83	317	P	Pn	18 39 13.8 +1.1
	baz=130					
M24K	Tolsona, Glenn	5.84	14		Pn	18 39 14.1 +1.2
M24K	Tolsona, Glenn	5.84	14	P	Pn	18 39 14.4 +1.5
	baz=196					
MCARA	McCarthy VSAT	5.85	30		Pn	18 39 14.1 +1.2
MCARA	McCarthy VSAT	5.85	30	P	Pn	18 39 14.4 +1.5
	baz=215					
PTPK	Patty Peak	5.86	34		Pn	18 39 14.3 +1.0
YKU2	Yakutat	5.89	55	Pn	Pn	18 39 15.3 +1.8
PCA	Pinnacle	5.93	49		Pn	18 39 15.6 +1.4
PINM	Pinnacle	5.93	49	P	Pn	18 39 15.5 +1.4
	baz=236					
CUT	Chulitna	5.96	355	Pn	Pn	18 39 15.4 +0.9
BARN	Barnard Glacie	6.02	37		Pn	18 39 16.6 +1.1
WACK	Wrangell Chich	6.05	22		Pn	18 39 17.0 +1.1
M19K	Big River Lodg	6.05	336		Pn	18 39 16.2 +0.4
M19K	Big River Lodg	6.05	336	P	Pn	18 39 16.2 +0.4
	baz=151					
CTG	Chitina Glacier	6.07	39	P	Pn	18 39 17.0 +1.0
	baz=225					
CTGM	Chitina Glacie	6.07	39		Pn	18 39 17.0 +0.9
M18K	Stony River	6.08	328		Pn	18 39 16.7 +0.6
M18K	Stony River	6.08	328	P	Pn	18 39 16.7 +0.6
	baz=142					
LOGN	Logan Glacier	6.09	41		Pn	18 39 17.2 +0.8
PNL	Peninsula	6.09	54		Pn	18 39 17.9 +1.6
PNL	Peninsula	6.09	54	P	Pn	18 39 17.8 +1.6
PNL	Peninsula	6.09	54	P	Pn	18 39 17.9 +1.6
	baz=242					
BCPM	Bancas Point	6.12	51		Pn	18 39 18.3 +1.6
CNBA	Chernabura Isl	6.13	259	Pn	Pn	18 39 18.2 +1.5
WAT6	Susitna Watana	6.16	6		Pn	18 39 18.4 +1.1
WAT6	Susitna Watana	6.16	6	P	Pn	18 39 18.4 +1.1
	baz=187					
HARP	HAARP	6.27	17		Pn	18 39 20.5 +1.8
HARP	HAARP	6.27	17	P	Pn	18 39 20.5 +1.8
	baz=200					
O15K	Ungalikthiuk R	6.29	300		Pn	18 39 21.3 +2.3
O15K	Ungalikthiuk R	6.29	300	P	Pn	18 39 21.3 +2.3
	baz=111					
WAT7	Susitna Watana	6.37	1		Pn	18 39 21.8 +1.7
WAT1	Susitna Watana	6.37	3		Pn	18 39 21.5 +1.4
WAT1	Susitna Watana	6.37	3	P	Pn	18 39 21.5 +1.4
	baz=183					
L19K	White Mountain	6.40	335		Pn	18 39 21.2 +0.6
L19K	White Mountain	6.40	335	P	Pn	18 39 21.2 +0.6
	baz=150					
SDPT	Sand Point	6.46	265	Pn	Pn	18 39 23.2 +2.0
M17K	Holitna River	6.52	322		Pn	18 39 23.4 +1.3
M17K	Holitna River	6.52	322	P	Pn	18 39 23.4 +1.3
	baz=135					
DHY	Denali Highway	6.67	7		Pn	18 39 25.4 +1.1
DHY	Denali Highway	6.67	7	P	Pn	18 39 25.1 +0.7
	baz=188					
M26K	Nabesna, AK	6.71	25		Pn	18 39 25.6 +0.8
M26K	Nabesna, AK	6.71	25	P	Pn	18 39 25.3 +0.4
	baz=210					
O29M	Mount Kennedy	6.76	51		Pn	18 39 26.7 +1.2
PAX	Paxson	6.77	15		Pn	18 39 25.6 0.0
PAX	Paxson	6.77	15	P	Pn	18 39 26.7 +1.1
	baz=197					
M16K	Timber Creek	6.82	316		Pn	18 39 27.9 +1.6
M16K	Timber Creek	6.82	316	P	Pn	18 39 27.9 +1.6
	baz=127					
N15K	Kwethluk River	6.83	307	Pn	Pn	18 39 28.9 +2.6
P29M	Windy Craggy	6.84	58		Pn	18 39 27.1 +0.6
P29M	Windy Craggy	6.84	58	P	Pn	18 39 27.2 +0.7
	baz=247					
L18K	Granite Mounta	6.91	329	Pn	Pn	18 39 28.5 +1.0
RND	Reindeer	6.94	1		Pn	18 39 29.3 +1.3
M27K	Edge Creek, AK	6.96	29	Pn	Pn	18 39 29.8 +1.4
TRF	Thorofare Moun	7.01	356	Pn	Pn	18 39 29.8 +0.8
O14K	Tigyukauivet M	7.02	298	Pn	Pn	18 39 30.2 +1.2
CAST	Castle Rocks	7.10	349	Pn	Pn	18 39 30.9 +0.8
KTH	Kantishna Hill	7.14	354	Pn	Pn	18 39 31.6 +0.8
S31K	Pelican	7.18	73		Pn	18 39 30.5 -0.7
S31K	Pelican	7.18	73	P	Pn	18 39 30.6 -0.7
	baz=263					
PN7A	Pavlof North-7	7.28	267		Pn	18 39 33.6 +1.0
K20K	Telida	7.31	342	Pn	Pn	18 39 32.9 -0.1
TTA	Tatalina	7.32	335	Pn	Pn	18 39 33.0 -0.3
L17K	Donlin	7.33	324		Pn	18 39 34.0 +0.8
L17K	Donlin	7.33	324	P	Pn	18 39 34.1 +0.8
	baz=136					
L16K	Owhat River	7.45	319	Pn	Pn	18 39 35.8 +1.0
N14K	Kuskokwak Cree	7.45	303		Pn	18 39 35.6 +0.7
N14K	Kuskokwak Cree	7.45	303	P	Pn	18 39 35.6 +0.7
	baz=112					
HYT	Haines Junctio	7.48	50	Pn	Pn	18 39 36.3 +0.9
L27K	Beaver Creek,	7.56	26	Pn	Pn	18 39 37.1 +0.6
BCAR	Beaver Creek A	7.57	26	Pn	Pn	18 39 37.4 +0.8
RIDG	Independent Ri	7.59	15		Pn	18 39 38.1 +1.3
SIT	Sitka	7.63	80	Pn	Pn	18 39 34.9 -2.6
SIT	Sitka	7.63	80	P	Pn	18 39 36.0 -1.4
BPAW	Bear Paw Mtn.	7.69	354	Pn	Pn	18 39 34.3 -3.9
K17K	Iditarod	7.77	327		Pn	18 39 39.5 +0.3
K17K	Iditarod	7.77	327	P	Pn	18 39 39.9 +0.7
	baz=139					
SKAG	Skagway	7.94	62	Pn	Pn	18 39 43.3 +1.8
J18K	Innoko River	7.95	335	Pn	Pn	18 39 42.8 +1.1
HDA	Harding Lake	8.02	7		Pn	18 39 43.2 +0.4
S32K	Killisnoo	8.04	77		Pn	18 39 42.9 0.0
S32K	Killisnoo	8.04	77	P	Pn	18 39 42.5 -0.5
	baz=269					
O30N	Mendenhall	8.06	52	Pn	Pn	18 39 44.7 +1.4
M29M	Somme Creek	8.08	38		Pn	18 39 45.0 +1.4
J20K	Nowinta River	8.10	344	Pn	Pn	18 39 44.9 +1.1
R32K	Eaglecrest	8.12	71	Pn	Pn	18 39 44.4 +0.3
J19K	Poorman	8.18	340	Pn	Pn	18 39 45.0 +0.1
JIS	Juneau Island	8.19	71	Pn	Pn	18 39 45.6 +0.6
CCB	Clear Creek Bu	8.21	4	Pn	Pn	18 39 45.6 +0.2
K27K	Chicken	8.34	22	Pn	Pn	18 39 48.2 +1.1
J25K	Salcha River,	8.36	11	Pn	Pn	18 39 47.7 +0.3
IL31		8.39	7		Pn	18 39 47.9 +0.2
ILAR	Eielson Array	8.39	7	Pn	Pn	18 39 47.3 -0.4
COLA	College	8.44	4	Pn	Pn	18 39 49.5 +1.1
COLA	College	8.44	4	P	Pn	18 39 50.8 +2.4
J26L	Joseph Creek	8.50	17		Pn	18 39 50.4 +1.0
L14K	Kuka Creek	8.51	310	Pn	Pn	18 39 50.5 +1.2
MDM	Murphy Dome	8.51	3		Pn	18 39 49.9 +0.4
N31M	Braeburn, Yuko	8.53	49	Pn	Pn	18 39 50.5 +0.7
WHY	Whitehorse	8.55	55	Pn	Pn	18 39 52.0 +1.9
K15K	Wolf Creek Mou	8.57	318	Pn	Pn	18 39 52.2 +2.0
MLY	Manley	8.61	356	Pn	Pn	18 39 51.6 +0.9
L29M	L29M	8.65	35		Pn	18 39 52.7 +1.3
I23K	Minto, Yukon-K	8.69	359	Pn	Pn	18 39 53.1 +1.2
P32M	Atlin	8.77	63	Pn	Pn	18 39 54.4 +1.4
I21K	Tanana	8.83	352	Pn	Pn	18 39 54.3 +0.6
J16K	Anvik River	8.90	325	Pn	Pn	18 39 55.4 +0.7
U33K	Whale Pass	8.94	86	Pn	Pn	18 39 53.6 -1.6
DAWY	Dawson	9.01	29	Pn	Pn	18 39 57.7 +1.4
CRAG	Craig	9.06	90	Pn	Pn	18 39 55.8 -1.1
EGAK	Eagle	9.19	22	Pn	Pn	18 40 01.1 +2.3
PRP	Porcupine Dome	9.23	10	Pn	Pn	18 40 01.0 +1.6
H21K	Melozitna Rive	9.37	351		Pn	18 40 01.2 0.0
P33M	Teslin, Yukon	9.37	60	Pn	Pn	18 40 02.1 +0.8
K29M	Barlow Dome	9.38	33	Pn	Pn	18 40 02.0 +0.7
H24K	Noodor Dome	9.40	3		Pn	18 40 03.7 +2.0
M31M	Drury Creek, Y	9.46	47	Pn	Pn	18 40 04.9 +2.4
J14K	Nanvaranak Lak	9.60	317	Pn	Pn	18 40 05.0 +0.8
H19K	Roundabout Mou	9.72	342	Pn	Pn	18 40 07.1 +1.1
H18K	Honhosa River	9.77	337	Pn	Pn	18 40 07.0 +0.4
IMAR	Indian Mountai	9.78	349	Pn	Pn	18 40 06.9 +0.2
S34M	Telegraph Cree	9.89	74	Pn	Pn	18 40 09.1 +0.8
FARO	Faro, Yukon	9.90	48	Pn	Pn	18 40 10.4 +1.9
H17K	Granite Mounta	9.96	333	Pn	Pn	18 40 10.0 +0.8
I28M	Miner Creek	10.04	23		Pn	18 40 11.1 +0.8
R33M	Jennings River	10.10	66	Pn	Pn	18 40 12.5 +1.1
J30M	Hart River	10.27	33	Pn	Pn	18 40 15.4 +1.9
G23K	Bananza Creek	10.27	358		Pn	18 40 13.3 -0.2
G21K	Allakaket	10.27	350	Pn	Pn	18 40 13.4 -0.1
G24K	Hadweenzic Riv	10.28	4		Pn	18 40 14.6 +0.9
FYU	Fort Yukon	10.29	9		Pn	18 40 13.9 +0.2
I30M	Mount Dempster	10.73	30	Pn	Pn	18 40 20.7 +0.8
F21K	Alatna River	10.96	351	Pn	Pn	18 40 22.5 -0.4
F20K	Avaraart Lake	11.03	346	Pn	Pn	18 40 23.0 -0.9
F24K	Squaw Lake	11.09	3	Pn	Pn	18 40 24.5 -0.2
BMAR	Burnt Mountain	11.19	9		Pn	18 40 25.9 -0.2
F17K	Baldwin Pennin	11.51	335	Pn	Pn	18 40 30.2 -0.1
E19K	Redstone River	11.63	344		Pn	18 40 33.7 +1.7
E25K	Arctic Village	11.79	7		Pn	18 40 36.4 +2.0
D25K	Kavik River	12.94	4	Pn	Pn	18 40 52.7 +2.7
E29M	Blow River	13.00	19	Pn	Pn	18 40 53.3 +2.5
B20K	Meade River	14.02	349	Pn	Pn	18 41 03.9 -0.7
B22K	Teshekpuk Lake	14.03	354	Pn	Pn	18 41 04.6 -0.2

DJA 02 18:38:22.0±0.6, 10°S±4°×11°8E±°, h10km, M3.9/6, mb4.5/1, MLv3.6/6, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.45	10	P	Pb	18 38 48.9	-0.2
PLAI				S	Sn	18 39 06.6	-0.7
TWSI	Taliwang, Sumb	1.63	338	P	Pb	18 38 52.2	-0.1
TWSI				S	Sn	18 39 11.9	0.0
BASI	Baing, Sumba	3.02	89	P	Pn	18 39 08.9	-1.0
SRBI	Singaraja	3.13	313	P	Pn	18 39 12.4	+0.9
SRBI				S	Sn	18 39 49.9	+0.9
JAGI	Jajag, Banyuwa	3.76	298	P	Pn	18 39 19.0	-1.1
JAGI				S	Sn	18 40 01.9	-2.6
EDFI	Ende, Flores	4.39	70	P	Pn	18 39 25.9	-2.9
GMJI	Gumukmas	4.47	296	P	Pn	18 39 29.0	-0.9
BLJI	Banyuglugur	4.60	303	P	Pn	18 39 31.6	-0.1
BKSI	Bulukumba	5.55	28	P	Pn	18 39 45.5	+0.8

TEH 02 18:41:39.3, 31°82N×56°67E, h14km±25km, ML4.1, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRDN	Zarand Kerman	0.86	188	Pg	Pg	18 41 56.0	-0.1
IBAF	Bafgh	0.97	257	Pg	Pg	18 41 57.1	-0.9
TPRV	Parvadeh(Tabas	1.20	1	Pg	Pb	18 42 02.1	+0.2
KRM1	Kerman Provinc	1.41	159	Pg	Pg	18 42 06.2	-0.3
KHGB	Koh Gabri	1.45	187	Pg	Pg	18 42 06.8	-0.4
IMEH	Mehriz	1.81	257	Pn	Pb	18 42 12.1	-0.2
TKDS	Koohdasht(Taba	1.83	12	Pn	Pb	18 42 11.8	-0.7
TVBK	TV Kerman	1.83	178	Pn	Pb	18 42 13.1	+0.3
ICHK	Chekchek	1.97	283	Pn	Pb	18 42 14.1	-0.9
ITEG	Tejag	2.06	58	Pn	Pn	18 42 15.1	+1.4
IKOO	Kooshah	2.07	73	Pn	Pb	18 42 15.5	-1.2
BSRN	Basiran	2.09	85	Pn	Pb	18 42 15.7	-1.4
CHMN	Cheshme madani	2.09	159	Pn	Pb	18 42 16.1	-1.1
TNSJ	Nastanj	2.14	359	Pn	Pn	18 42 15.8	+1.2
NGRK	Negar Kerman	2.17	179	Pn	Pn	18 42 16.8	+1.4
AFRZ	Afriz	2.54	50	Pn	Pn	18 42 21.7	+1.4
ANAR	Anarak	2.84	300	Pn	Pn	18 42 25.3	+1.0
IDAH	Dahanechah	2.86	70	Pn	Pn	18 42 26.1	+1.4
NHDN	Nehbandan	2.91	98	Pn	Pn	18 42 26.8	+1.5
KBAM	BAM	3.09	150	Pn	Pn	18 42 28.6	+0.9
IRAM	Ramesheh	3.65	271	Pn	Pn	18 42 37.9	+2.3
IZEF	Zefreh	3.83	287	Pn	Pn	18 42 40.0	+1.9
IGAR	Gharneh	3.97	280	Pn	Pn	18 42 42.4	+2.4
ZHDN	Zahedan	4.31	123	Pn	Pn	18 42 46.4	+1.8
KRSH	Karshahi	4.38	301	Pn	Pn	18 42 46.7	+1.2
IKLH	Kolahrood	4.55	290	Pn	Pn	18 42 50.3	+2.3
QAMS	Qamsar	4.84	295	Pn	Pn	18 42 53.1	+1.2
IFIR	Firoozkooh	5.02	320	Pn	Pn	18 42 56.8	+2.4
IAKL	Akhelmad	5.07	19	Pn	Pn	18 42 57.3	+2.1
JRKH	Jarkhoshk	5.09	36	Pn	Pn	18 42 57.9	+2.5
IVRN	Varamin	5.21	309	Pn	Pn	18 42 58.1	+1.2
IGLO	Ghaloghah	5.23	334	Pn	Pn	18 42 59.6	+2.4
IMYA	Miami	5.33	31	Pn	Pn	18 43 00.8	+2.2
IDMV	Damavand	5.38	315	Pn	Pn	18 43 01.6	+2.1
IKRD	Kardeh	5.47	25	Pn	Pn	18 43 03.4	+2.8
IQOM	Oom	5.57	304	Pn	Pn	18 43 03.3	+1.3
IEMG	Emamgholi	5.81	16	Pn	Pn	18 43 07.1	+1.7
MRVT	Maraveh tapeh	5.84	355	Pn	Pn	18 43 08.0	+2.4
IRAZ	Razeghan	6.66	304	Pn	Pn	18 43 18.5	+1.5

*VIE **02** 18:42:21.5±0.4, 49°.63N×18°.65E, h0km, mb2.5/1, ml2.0/4, Error ellipse: s-maj=4.1km s-min=2.6km az=150.0, Suspected Mining induced.*
*IPEC **02** 18:42:23.2±0.2, 50°.07N×18°.47E, h0km, ML2.0/4, Error ellipse: s-maj=1.9km s-min=1.0km az=163.0*
*PRU **02** 18:42:26.3, 50°.04N×18°.27E, h0km*

ISC 02 18:42:22.9±0.8, 49°.99N±0°.03×18°.39E±0°.02, h0km, n27, σ1$82/49, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.16	305	ePG	Pg	18 42 27.8	+2.0
RAC				eSG	Sg	18 42 30.9	+3.0
OKC	Ostrava-Krasne	0.22	225	ePG	Pb	18 42 29.7	+2.6
OKC				eSG	Sb	18 42 34.2	+4.2
	comp=Z,118nm,1.0s						
MORC	Moravsky Berou	0.59	249	ePg	Pb	18 42 35.9	-0.2
	baz=63						
MORC				eSg	Sb	18 42 44.2	-0.8
	37nm,0.4s,baz=63						
MAUC	Maruska	0.73	210	ePG	Pb	18 42 39.4	+1.0
MAUC				eSG	Sb	18 42 51.0	+2.0
OJC	Ojcow	0.93	75	ePg	Pg	18 42 40.1	-0.6
OJC				eSg	Sg	18 42 52.2	-0.6
KRLC	Kraliky	1.04	275	ePG	Pg	18 42 43.1	+0.3
KRLC				eSG	Sg	18 42 56.7	+0.4
	comp=Z,28nm,0.3s						
LANS	Liptovska Anna	1.10	140	ePG	Pn	18 42 45.4	-0.1
LANS				eSG	Sn	18 43 02.7	+1.3
LANS				eLG	Lg	18 43 05.2	
JAVC	Velka Javorina	1.23	203	ePg	Pn	18 42 48.3	+0.9
	baz=23						
VRAC	Vranov	1.36	240	ePg	Pb	18 42 49.7	+0.6
	baz=57						
VRAC				eSg	Sn	18 43 08.3	+0.6
	11nm,0.2s,baz=57						
VRAC	Vranov

JKG	**Kaga**	**2.45**	**140**	P	**P**	**18 43 25.5**	**+0.8**
JKG				*e*S	**S**	**18 44 15.3**	**+0.7**
JSZ	**Suzu**	**2.46**	**106**	P	**P**	**18 43 26.0**	**+1.4**
JWT	**Wachi**	**3.00**	**164**	P	**P**	**18 43 29.5**	**+0.8**
JWT				S	**S**	**18 44 21.8**	**-0.1**
JSD	**Sado**	**3.04**	**92**	P	**P**	**18 43 30.3**	**+1.4**
JYTA	**Yamagatataniai**	**3.19**	**143**	*e*P	**P**	**18 43 30.8**	**+0.6**
JYTA				S	**S**	**18 44 24.4**	**-0.2**
JHS	**Saijyo**	**3.34**	**198**	P	**P**	**18 43 31.1**	**-0.3**
MJB9	**Matsu-Tunnel**	**3.44**	**117**	P	**P**	**18 43 33.9**	**+1.7**
MJB9				S	**S**	**18 44 25.5**	**-2.8**
MAJO	**Matsushiro**	**3.44**	**117**	P	**P**	**18 43 33.0**	**+0.8**
MAJO				S	**S**	**18 44 24.9**	**-3.5**
MJAR	**Matsushiro Arr**	**3.44**	**117**	P	**P**	**18 43 33.7**	**+1.4**
	22nm,0.5s,baz=300,slow=10.0,SNR=78						
MJAR				S	**S**	**18 44 30.6**	**+2.2**
	1.4nm,0.3s,baz=294,slow=27,SNR=1.2						
JRY	**Ryogami san**	**4.19**	**120**	*e*P	**P**	**18 43 40.0**	**+1.2**
JIE	**Ise**	**4.21**	**153**	*e*P	**P**	**18 43 40.0**	**+0.9**
JTNC	**Tanabenakahech**	**4.46**	**167**	*e*P	**P**	**18 43 41.0**	**-0.4**
JMN	**Monobe**	**4.46**	**186**	P	**P**	**18 43 41.4**	**0.0**
JMN				S	**S**	**18 44 41.5**	**-3.7**
JMM	**Marumori**	**5.05**	**92**	P	**P**	**18 43 48.1**	**+1.2**
KSRS	**Korea Array**	**5.18**	**264**	P	**P**	**18 43 48.7**	**+0.5**
	1.4nm,0.5s,baz=70,slow=11,SNR=9.3						
KSAR	**Wonju Array Be**	**5.21**	**264**	P	**P**	**18 43 49.0**	**+0.4**
JMK	**Ichinoseki**	**5.40**	**80**	P	**P**	**18 43 52.0**	**+1.6**
JTU	**Tsushima**	**5.44**	**229**	P	**P**	**18 43 47.7**	**-3.2**
JTO	**Tosashimizu**	**5.47**	**194**	P	**P**	**18 43 51.2**	**-0.1**
JOSM	**Okushiri--Mats**	**5.50**	**43**	*e*P	**P**	**18 43 53.6**	**+2.3**
JTM	**Tenmabayashi**	**5.77**	**61**	P	**P**	**18 43 55.5**	**+1.3**
JNU	**Nakatsue**	**5.81**	**211**	P	**P**	**18 43 54.0**	**-0.8**
JNU	**Nakatsue**	**5.81**	**211**	P	**P**	**18 43 55.0**	**+0.2**
	7.3nm,0.7s,baz=18,slow=4.0,SNR=18						
TJN	**Taejon**	**5.90**	**254**	P	**P**	**18 43 54.7**	**-0.8**
JOT	**Ohata**	**6.03**	**56**	*e*P	**P**	**18 43 58.3**	**+1.4**
USA0B	**Ussuriysk Arra**	**6.28**	**344**	P	**P**	**18 44 00.4**	**+1.0**
USA0B				S	**S**	**18 45 20.4**	**+2.0**
USRK	**Ussuriysk Ar.**	**6.28**	**344**		**P**	**18 43 59.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**6.28**	**344**	P	**P**	**18 44 00.4**	**+1.0**
	32nm,0.5s,baz=161,slow=10,SNR=109						
BSO1	**Boso 1**	**6.36**	**122**	*e*P	**P**	**18 44 00.2**	**+0.3**
BSO1				*e*S	**S**	**18 45 18.8**	**-0.5**
MDJ	**Mudanjiang**	**7.38**	**332**		**P**	**18 44 10.9**	**-0.5**
ERM	**Erimo**	**7.72**	**58**	P	**P**	**18 44 15.7**	**+0.4**
ERM				S	**S**	**18 45 41.9**	**-5.1**
JHR	**Hokuryu**	**7.84**	**43**	*e*P	**P**	**18 44 18.9**	**+2.4**
JCH	**Churui**	**8.14**	**54**	*e*P	**P**	**18 44 20.3**	**+0.5**
JCH				*e*S	**S**	**18 45 51.4**	**-4.2**
ASAJ	**Asahikawa**	**8.56**	**44**	P	**P**	**18 44 25.8**	**+1.5**
	10nm,0.5s,baz=234,slow=11,SNR=67						
ASAJ				S	**S**	**18 46 01.8**	**-2.3**
	19nm,0.6s,baz=112,slow=33,SNR=13						
JKA	**Kamikawa-asahi**	**8.56**	**44**	P	**P**	**18 44 25.0**	**+0.7**
JKA				S	**S**	**18 46 00.7**	**-3.4**
JTKR	**Abashiri--Toko**	**9.21**	**48**	*e*P	**P**	**18 44 32.1**	**+0.7**
JTKR				S	**S**	**18 46 15.2**	**-2.1**
KLR	**Kul'dur**	**11.21**	**351**	P	**P**	**18 44 53.5**	**+0.3**
	2.2nm,0.5s,baz=173,slow=7.2,SNR=13						
ULN	**Ulaanbaatar**	**22.11**	**305**	P	**P**	**18 46 44.0**	**-0.9**
ULN				IAmb	IAmb	18 46 46.4	
	comp=Z,2.1nm,0.5s						
SONM	**Songino Array**	**22.53**	**304**	P	**P**	**18 46 48.4**	**-0.2**
SONM	**Songino Array**	**22.53**	**304**	P	**P**	**18 46 47.9**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=111,slow=9.4,SNR=9.8						
	comp=Z,1.1nm,0.4s						
CRAI	**Chiangrai**	**34.42**	**248**	P	**P**	**18 48 32.5**	**-0.3**
CRAI				IAmb	IAmb	18 48 33.6	
	comp=Z,12nm,1.3s						
CHTO	**Chiang Mai**	**36.36**	**248**	P	**P**	**18 48 48.4**	**-0.6**
CHTO				IAmb	IAmb	18 48 49.1	
	comp=Z,4.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.58**	**248**	P	**P**	**18 48 50.6**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=44,slow=7.9,SNR=12						
	comp=Z,1.4nm,0.6s						
ZAA0	**Zalesovo Array**	**37.01**	**312**	P	**P**	**18 48 52.5**	**-1.6**
ZALV	**Zalesovo Beam**	**37.01**	**312**	P	**P**	**18 48 53.1**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=103,slow=7.2,SNR=5.2						
ZALV				PcP	**PcP**	**18 51 03.9**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=116,slow=3.8,SNR=3.5						
	comp=Z,0.8nm,0.3s						
MK31	**Makanchi Array**	**38.76**	**300**	P	**P**	**18 49 07.2**	**-1.4**
MKAR	**Makanchi Array**	**38.76**	**300**	P	**P**	**18 49 07.7**	**-0.9**
MKAR	**Makanchi Array**	**38.76**	**300**	P	**P**	**18 49 07.8**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=85,slow=10,SNR=8.9						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**40.87**	**306**	P	**P**	**18 49 24.5**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=85,slow=8.4,SNR=16						
	comp=Z,1.1nm,0.4s						
FAKI	**Fak Fak**	**40.94**	**183**	P	**P**	**18 49 26.7**	**+0.2**
KULM	**Kulim**	**44.86**	**232**	P	**P**	**18 49 57.6**	**+0.1**
BVAR	**Borovoye Array**	**45.64**	**311**	P	**P**	**18 50 02.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=87,slow=6.5,SNR=13						
	comp=Z,0.6nm,0.3s						
BRVK	**Borovoye**	**45.70**	**311**	P	**P**	**18 50 02.8**	**-0.6**
L16K	**Owhat River**	**46.11**	**37**	P	**P**	**18 50 07.1**	**+0.6**
ARSB	**Arslanbob**	**46.46**	**294**	P	**P**	**18 50 10.0**	**+0.3**
KK31	**Karatay Array**	**47.69**	**297**	P	**P**	**18 50 18.1**	**-0.8**
KKAR	**Karatay Array**	**47.69**	**297**	P	**P**	**18 50 18.5**	**-0.4**
IMAR	**Indian Mountai**	**48.53**	**31**	P	**P**	**18 50 27.6**	**+2.8**
IMAR				PcP	**PcP**	**18 51 45.5**	**+2.7**
NIL	**Nilore**	**48.95**	**284**	P	**P**	**18 50 28.2**	**-0.3**
NIL				IAmb	IAmb	18 50 29.1	
	comp=Z,6.1nm,0.8s						
ARU	**Arti**	**51.76**	**317**	P	**P**	**18 50 47.7**	**-1.1**
ARU				IAmb	IAmb	18 50 48.7	
	comp=Z,2.4nm,0.6s						
COEN	**Coen**	**52.51**	**169**	P	**P**	**18 50 54.6**	**-0.1**
COEN				IAmb	IAmb	18 51 08.7	
	comp=Z,10nm,1.2s						
ABKAR	**Akbulak array**	**52.89**	**308**	P	**P**	**18 50 56.2**	**-0.8**
ABKAR				IAmb	IAmb	18 50 56.8	
	comp=Z,2.7nm,0.5s						
ABKAR	**Akbulak array**	**52.89**	**308**	P	**P**	**18 50 56.5**	**-0.5**
ABKAR				PcP	**PcP**	**18 52 01.3**	**+1.9**
WB0	**Warramunga Arr**	**57.64**	**180**	P	**P**	**18 51 31.1**	**+0.4**
WB0				IAmb	IAmb	18 51 34.7	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**57.81**	**180**	P	**P**	**18 51 32.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=354,slow=7.5,SNR=10						
	comp=Z,0.3nm,0.4s						
WR0	**Warramunga Arr**	**57.83**	**180**	P	**P**	**18 51 32.5**	**+0.5**
WR0				IAmb	IAmb	18 51 53.6	
	comp=Z,12nm,1.4s						
GEYT	**Alibeck**	**58.36**	**296**	P	**P**	**18 51 35.6**	**0.0**
GEYT				IAmb	IAmb	18 51 36.4	
	comp=Z,2.1nm,0.9s						
GEYT	**Alibeck**	**58.36**	**296**	P	**P**	**18 51 35.1**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=94,slow=6.5,SNR=3.7						
	comp=Z,1.2nm,0.5s						
ARCES	**ARCESS Array B**	**60.89**	**338**	P	**P**	**18 51 52.2**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=70,slow=10,SNR=6.7						
	comp=Z,2.4nm,1.0s						
ASAR	**Alice Springs**	**61.52**	**181**	P	**P**	**18 51 57.1**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=356,slow=4.8,SNR=2.1						
	comp=Z,0.4nm,0.9s						
TULEG	**Thule**	**64.61**	**6**	P	**P**	**18 52 16.7**	**+0.7**
FIA1	**FINESS Array S**	**65.11**	**330**	P	**P**	**18 52 19.5**	**+0.1**
FINES	**FINESS Array B**	**65.11**	**330**	P	**P**	**18 52 19.1**	**-0.4**
FINES				PcP	**PcP**	**18 52 45.8**	**-2.2**
FINES	**FINESS Array B**	**65.11**	**330**	P	**P**	**18 52 19.8**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=69,slow=6.3,SNR=18						
FINES				PcP	**PcP**	**18 52 48.1**	**0.0**
	comp=Z,1.1nm,0.7s,baz=42,slow=4.3,SNR=3.8						
	comp=Z,1.2nm,0.4s						
AKASG	**Malin Array Be**	**69.89**	**319**	P	**P**	**18 52 48.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=51,slow=6.6,SNR=2.5						
	comp=Z,0.9nm,0.5s						
HFS	**Hagfors**	**70.64**	**333**	P	**P**	**18 52 53.9**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=48,slow=4.4,SNR=5.9						
	comp=Z,1.3nm,0.6s						
NC405	**NORSAR Array S**	**70.64**	**334**	P	**P**	**18 52 54.0**	**+0.6**
NC204	**NORSAR Array S**	**70.85**	**335**	P	**P**	**18 52 54.8**	**+0.1**
NB2	**NORSAR Subarra**	**70.86**	**334**	P	**P**	**18 52 55.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**70.86**	**334**	P	**P**	**18 52 55.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=55,slow=7.3,SNR=8.4						
	comp=Z,0.8nm,0.7s						
BRTR	**Keskin Array B**	**73.84**	**308**	P	**P**	**18 53 12.0**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=54,slow=7.4,SNR=3.3						
	comp=Z,0.6nm,0.9s						
BURAR	**Bucovina Array**	**73.86**	**318**	P	**P**	**18 53 12.0**	**-0.5**
EKA	**Eskdalemuir Ar**	**80.05**	**337**	P	**P**	**18 53 47.0**	**+0.8**
	comp=Z,2.3nm,1.0s,baz=39,slow=5.9,SNR=5.5						
	comp=Z,2.3nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**81.89**	**325**	P	**P**	**18 53 56.9**	**+0.5**
FUORN				IAmb	IAmb	18 53 58.1	
	comp=Z,4.5nm,1.2s						

*NEIC **02** 18:59:29.3±1.8, 43.79°N±0.06°×105.4°W±0.1°, h0km±1km, ML3.1/85, Error ellipse: s-maj=14.1km s-min=8.9km az=74.0*
*IDC **02** 18:59:29.4±2.0, 43.46°N×105.48°W, h0km, mb3.4/1, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=47.4km s-min=9.8km az=153.0*

ISC 02 18:59:30.4±0.9, 43.76°N±0.05°×105.33°W±0.05°, h0km, n50, σ19°05/49, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**69**			**Pg**	**18 59 48.4**	**-1.2**
K22A	**Casper**	**1.42**	**219**			**Pg**	**18 59 56.4**	**-1.2**
PHWY	**Pilot Hill**	**2.46**	**182**			**Pn**	**19 00 11.7**	**-0.4**
PHWY				IAML			19 00 53.0	
	82nm,0.3s							
RWWY	**Rawlins**	**2.50**	**214**			**Pn**	**19 00 13.3**	**+0.7**
RWWY				IAML			19 00 50.5	
	80nm,0.7s							
RWWY				IAML			19 00 52.9	
	107nm,1.0s							
N23A	**Red Feather La**	**2.90**	**189**			**Pn**	**19 00 20.5**	**+2.4**
N23A				IAML			19 01 10.5	
	comp=E,68nm,1.2s							
LAO	**LASA Array**	**2.99**	**348**			**Pn**	**19 00 19.2**	**0.0**
RLMT	**Red Lodge**	**3.13**	**297**			**Pn**	**19 00 22.5**	**+1.2**
RLMT				IAML			19 01 14.3	
	comp=E,61nm,0.3s							
RLMT				IAML			19 01 20.3	
	comp=E,50nm,0.3s							
BW06	**Boulder Array**	**3.25**	**254**			**Pn**	**19 00 23.9**	**+1.1**
BW06				IAML			19 01 13.8	
	comp=E,38nm,0.3s							
PD31	**Pinedale Array**	**3.25**	**254**			**Pn**	**19 00 22.5**	**-0.4**
PDAR	**Pinedale Array**	**3.25**	**254**			**Pn**	**19 00 22.8**	**0.0**
PDAR	**Pinedale Array**	**3.25**	**254**	Pn		**Pn**	**19 00 22.4**	**-0.4**
	comp=E,4.7nm,0.3s,baz=77,slow=15,SNR=69							
PDAR				Lg		Lg	19 01 05.2	
	comp=E,9.4nm,0.3s,baz=76,slow=34,SNR=2.6							
	comp=E,2.6nm,0.3s							
YMP	**Mirror Lake Pl**	**3.60**	**287**			**Pn**	**19 00 27.2**	**-0.6**
OGNE	**Ogallala**	**3.73**	**138**			**Pn**	**19 00 29.8**	**+0.5**
LKWY	**Lake**	**3.74**	**284**			**Pn**	**19 00 29.7**	**+0.1**
LKWY				IAML			19 00 55.1	
	comp=E,34nm,0.7s							
LKWY				IAML			19 00 56.6	
	comp=E,25nm,0.9s							
LOHW	**Long Hollow**	**3.83**	**270**			**Pn**	**19 00 30.3**	**-0.6**
H17A	**Grant Village**	**3.83**	**281**			**Pn**	**19 00 29.7**	**-1.2**
H17A				IAML			19 01 36.2	
	comp=N,26nm,0.8s							
FLWY	**Flagg Ranch**	**3.90**	**277**			**Pn**	**19 00 32.9**	**+1.1**
FLWY				IAML			19 02 13.9	
	comp=N,33nm,4.5s							
FLWY				IAML			19 02 16.1	
	comp=N,21nm,4.8s							
MOOW	**Moose Ponds**	**3.93**	**272**			**Pn**	**19 00 33.7**	**+1.6**
SNOW	**Snow King Moun**	**3.95**	**267**			**Pn**	**19 00 32.8**	**+0.2**
SNOW				IAML			19 01 40.7	
	comp=N,35nm,2.8s							
SNOW				IAML			19 01 43.5	
	comp=N,32nm,0.6s							
YNR	**Norris Junctio**	**3.96**	**286**			**Pn**	**19 00 34.1**	**+1.4**
ISCO	**Idaho Springs**	**3.97**	**183**			**Pn**	**19 00 35.4**	**+2.6**
REDW	**Red Top Meadow**	**4.04**	**266**			**Pn**	**19 00 33.7**	**0.0**
IMW	**Indian Meadow**	**4.06**	**274**			**Pn**	**19 00 33.6**	**-0.6**
IMW				IAML			19 00 60.0	
	comp=N,20nm,0.4s							
IMW				IAML			19 01 46.9	
	comp=N,27nm,0.6s							
TPAW	**Teton Pass**	**4.09**	**268**			**Pn**	**19 00 33.8**	**-0.7**
TPAW				IAML			19 01 59.9	
	comp=N,28nm,1.3s							
YHH	**Holmes Hill**	**4.10**	**286**			**Pn**	**19 00 33.4**	**-1.2**
O20A	**White River Ci**	**4.23**	**212**			**Pn**	**19 00 36.5**	**+0.2**
O20A				IAML			19 01 30.5	
	comp=N,28nm,3.5s							
O20A				IAML			19 01 51.7	
	comp=E,23nm,2.5s							
K30B	**Basset**	**4.32**	**103**			**Pn**	**19 00 37.5**	**+0.1**
AHID	**Auburn Hatcher**	**4.33**	**259**			**Pn**	**19 00 38.0**	**+0.2**
AHID				IAML			19 01 51.4	
	comp=E,23nm,0.7s							
AHID				IAML			19 01 60.0	
	comp=E,18nm,0.7s							
RDMU	**Red Mountain**	**4.49**	**226**			**Pn**	**19 00 39.1**	**-0.7**
RDMU				IAML			19 01 58.3	
	comp=N,16nm,1.1s							
RDMU				IAML			19 01 58.5	
	comp=E,17nm,1.0s							
SUSD	**Miller**	**4.64**	**79**	Pn		**Pn**	**19 00 42.1**	**+0.4**
SMCO	**Snowmass**	**4.75**	**196**			**Pn**	**19 00 43.1**	**-0.5**
SMCO				IAML			19 02 12.0	
	comp=E,17nm,1.2s							
DGMT	**Dagmar**	**4.77**	**9**			**Pn**	**19 00 42.5**	**-1.1**
Q24A	**Divide**	**4.80**	**178**	Pn		**Pn**	**19 00 44.5**	**+0.2**
BOZ	**Bozeman (W)**	**4.85**	**294**			**Pn**	**19 00 46.8**	**+2.0**
BOZ				IAML			19 02 07.3	
	comp=E,13nm,0.9s							
BOZ				IAML			19 02 09.6	
	comp=E,11nm,0.7s							
HWUT	**Hardware Ranch**	**5.08**	**247**			**Pn**	**19 00 48.2**	**+0.2**
KSCO	**Kaye Shedlock'**	**5.16**	**156**			**Pn**	**19 00 49.1**	**0.0**
BSUT	**Blindstream Ca**	**5.17**	**233**			**Pn**	**19 00 47.7**	**-1.7**
BSUT				IAML			19 01 25.2	
	comp=N,11nm,4.2s							
BSUT				IAML			19 02 45.8	
	comp=E,11nm,4.6s							
TCUT	**Toone Canyon**	**5.22**	**242**			**Pn**	**19 00 50.2**	**+0.2**
EGMT	**Eagleton**	**5.26**	**326**			**Pn**	**19 00 48.9**	**-1.5**
SPUT	**South Promonto**	**5.81**	**247**			**Pn**	**19 00 56.8**	**-1.2**
P17A	**Butcher Ranch,**	**5.90**	**225**			**Pn**	**19 01 01.0**	**+1.7**
SRU	**San Rafael Swe**	**6.07**	**222**			**Pn**	**19 01 00.6**	**-1.1**
S22A	**4UR Ranch, Cre**	**6.12**	**191**			**Pn**	**19 01 02.5**	**+0.1**
ECSD	**EROS Data Cent**	**6.31**	**87**			**Pn**	**19 01 03.4**	**-1.4**
DUG	**Dugway, Tooele**	**6.62**	**240**			**Pn**	**19 01 09.1**	**0.0**
HMU	**Henry Mountain**	**7.12**	**217**			**Pn**	**19 01 15.8**	**-0.3**
I10CA	**LAC DU BONNET**	**9.04**	**41**	I	I		19 58 30.0	
	baz=219,slow=338,SNR=1.6							
ULM	**Lac du Bonnet**	**9.15**	**42**	Pn		**Pn**	**19 01 44.3**	**+0.7**
	comp=E,2.7nm,0.3s,baz=228,slow=12,SNR=28							
ULM				Lg		Lg	19 04 14.4	
	comp=E,0.3nm,0.3s,baz=139,slow=20,SNR=1.8							
	comp=E,4.4nm,0.3s							
YKA	**Yellowknife Ar**	**19.53**	**347**	P		**Pn**	**19 04 00.4**	**+0.1**
	comp=E,0.1nm,0.3s,baz=159,slow=12,SNR=2.8							
	comp=E,0.1nm,0.5s							
MKAR	**Makanchi Array**	**89.58**	**355**	P		**P**	**19 12 31.0**	**+1.3**
	comp=E,0.1nm,0.6s,baz=15,slow=6.0,SNR=1.7							
	comp=E,0.1nm,0.6s							

IDC 02 19:32:49.2±2.5, 6.20°S×129.59°E, h0km, mb3.1/1, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=161.1km s-min=33.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.42**	**162**	Pn		Pn	19 36 13.9	-0.9
	0.1nm,0.3s,baz=344,slow=14,SNR=5.3							
WRA				Sn		Sn	19 38 41.3	-14
	0.3nm,0.3s,baz=338,slow=25,SNR=2.3							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**17.86**	**167**	P		P	19 36 59.9	-0.1
	0.1nm,0.3s,baz=351,slow=8.9,SNR=1.8							
ASAR				S		Sn	19 40 05.1	-14
	0.8nm,1.0s,baz=346,slow=25,SNR=2.9							
	0.1nm,0.4s							
MKAR	**Makanchi Array**	**67.34**	**327**	P		P	19 43 46.2	0.0
	0.1nm,0.3s,baz=131,slow=6.5,SNR=1.7							
	0.1nm,0.3s							

*TAP **02** 19:42:08.4, 22.68°N×119.79°E, h41km, ML4.0, C*
*ASIES **02** 19:42:08.4, 22.68°N×119.79°E, h41km, ML4.0, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=3.01; $M_{\theta\theta}$=-1.41; $M_{\phi\phi}$=4.58; $M_{r\theta}$=4.72; $M_{r\phi}$=1.86; $M_{\theta\phi}$=4.62; Fault plane solution: $M_0$7.94635×10^{21} NP1: ϕ_s222.87000°, δ76.85000°, λ-68.95000°. NP2: ϕ_s343.47000°, δ24.66000°, λ-146.95000°. Principal axes: T Plg28.7980°, Azm296.0280°; N Plg20.4700°, Azm37.8690°; P Plg53.4670°, Azm158.1260°;*
*IDC **02** 19:42:21.5±8.9, 23.08°N×120.77°E, h153km±94km, mb2.9/8, mbtmp3.3/8 Error ellipse: s-maj=28.0km s-min=16.6km az=64.0*

ISC 02 19:42:07.5±1.2, 22.66°N±0.02°×119.81°E±0.03°, h14km±8km, n146, σ0°63/203, mb3.1/7, 6C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WSSB	**Gushan**	**0.41**	**92**	⇓P		**Pn**	**19 42 18.8**	**-0.2**
	baz=91							
WSSB				S		**Sn**	**19 42 26.6**	**0.0**
	baz=91							
KAU	**Kaohsiung**	**0.47**	**101**	P		**Pn**	**19 42 19.8**	**+0.1**
	baz=103							
KAU				*e*S		**Sn**	**19 42 28.8**	**+1.0**
	baz=103							
TAI	**Tainan**	**0.49**	**47**	P		**Pn**	**19 42 19.4**	**-0.7**
	baz=60							
TAI				*e*S		**Sn**	**19 42 27.7**	**-0.6**
	baz=60							
SNJT	**Kaohsiung City**	**0.49**	**79**	⇑P		**Pn**	**19 42 20.0**	**-0.1**
	baz=78							
SNJT				S		**Sn**	**19 42 28.5**	**0.0**
	baz=78							
TAI1	**Yung-k'ang**	**0.54**	**45**	*e*P		**Pn**	**19 42 20.7**	**-0.1**
	baz=61							
TAI1				*e*S		**Sn**	**19 42 29.5**	**-0.1**
	baz=61							
TSCK	**Chigu Township**	**0.55**	**27**	*e*P		**Pn**	**19 42 20.4**	**-0.5**
	baz=25							
TSCK				*e*S		**Sn**	**19 42 29.7**	**-0.1**
	baz=25							
TWM1	**Shoushan**	**0.58**	**74**	P		**Pn**	**19 42 21.7**	**+0.2**
	baz=76							
TWM1				S		**Sn**	**19 42 31.3**	**+0.5**
	baz=76							
TWP	**Hsiaoliuchiu**	**0.59**	**121**	P		**Pn**	**19 42 21.6**	**0.0**
	baz=122							
TWP				*e*S		**Sn**	**19 42 31.3**	**+0.3**
	baz=122							
SHHT	**Tainan City**	**0.61**	**54**	P		**Pn**	**19 42 21.9**	**+0.1**
	baz=56							
SHHT				*e*S		**Sn**	**19 42 31.6**	**+0.2**
	baz=56							
WDGT	**Dungji**	**0.61**	**347**	⇑P		**Pb**	**19 42 20.6**	**+0.6**
	baz=349							
WDGT				*i* S		**Sb**	**19 42 29.3**	**+0.8**
	baz=349							
SCLT	**Jiali**	**0.62**	**34**	P		**Pn**	**19 42 21.8**	**-0.2**
	baz=37							
SCLT				S		**Sn**	**19 42 31.7**	**0.0**
	baz=37							
SGLT	**Jiouru**	**0.63**	**84**	P		**Pn**	**19 42 22.2**	**+0.2**
	baz=86							
SGLT				*i* S		**Sn**	**19 42 31.9**	**0.0**
	baz=86							
TSPT	**Pingtung City**	**0.63**	**88**	⇑P		**Pn**	**19 42 22.1**	**+0.1**
	baz=90							
TSPT				S		**Sn**	**19 42 32.0**	**+0.1**
	baz=90							
SSHA	**Shanhua**	**0.65**	**43**	*e*P		**Pn**	**19 42 22.4**	**+0.1**
	baz=56							
SSHA				S		**Sn**	**19 42 32.7**	**+0.4**
	baz=56							
VCHM	**Qimei**	**0.65**	**327**	⇑ *i*P		**Pb**	**19 42 21.1**	**+0.5**
	baz=328							
VCHM				S		**Sb**	**19 42 30.3**	**+0.7**
	baz=328							
CHN3	**Shinhua**	**0.66**	**51**	P		**Pn**	**19 42 22.6**	**+0.2**
	baz=53							
CHN3				*e*S		**Sn**	**19 42 32.5**	**-0.1**
	baz=53							
SCST	**Cishan**	**0.67**	**70**	P		**Pn**	**19 42 22.6**	**+0.1**
	baz=72							
SCST				*e*S		**Sn**	**19 42 33.6**	**+0.8**
	baz=72							
MASBT	**Mashibuluo**	**0.76**	**93**	⇓P		**Pn**	**19 42 23.6**	**-0.2**
	baz=95							
MASBT				*e*S		**Sb**	**19 42 33.1**	**+0.5**
	baz=95							
SSD	**Sandimen**	**0.76**	**83**	⇓ *e*P		**Pg**	**19 42 22.6**	**+0.3**
	baz=85							
TSMG	**Majia**	**0.77**	**86**	*e*P		**Pn**	**19 42 24.0**	**0.0**
	baz=88							
TSMG				*e*S		**Sn**	**19 42 34.6**	**-0.8**
	baz=88							
CHN8	**Yiju**	**0.78**	**28**	P		**Pn**	**19 42 24.2**	**+0.2**
	baz=19							
CHN8				S		**Sn**	**19 42 35.3**	**-0.2**
	baz=19							
SCZT	**Fangliau**	**0.80**	**111**	*e*P		**Pb**	**19 42 24

ECL	**Taimali**	**1.05**	**93**	P	**Pb**	**19 42 27.7**	**+0.2**
	baz=94						
ECL				S	**Sb**	**19 42 41.2**	**0.0**
	baz=94						
CHN2	**Minshiung**	**1.06**	**35**	*eP*	**Pg**	**19 42 28.8**	**+0.8**
	baz=25						
WCKO	**Fanlu**	**1.06**	**43**	*eP*	**Pn**	**19 42 27.8**	**-0.2**
	baz=56						
WCKO				S	**Sn**	**19 42 42.5**	**-0.2**
	baz=56						
HEN	**Hengchun**	**1.07**	**127**	*eP*	**Pb**	**19 42 28.3**	**+0.4**
	baz=115						
HEN				*eS*	**Sb**	**19 42 42.1**	**+0.3**
	baz=115						
SNW	**Nanwan**	**1.11**	**129**	*eP*	**Pb**	**19 42 28.5**	**0.0**
	baz=117						
SNW				*eS*	**Sn**	**19 42 44.0**	**+0.2**
	baz=117						
SMST	**Manzhou Townsh**	**1.14**	**124**	*eP*	**Pn**	**19 42 28.9**	**-0.1**
	baz=124						
WTK	**Tuku**	**1.15**	**27**	*eP*	**Pn**	**19 42 29.1**	**-0.1**
	baz=19						
TWK1	**Hengchun**	**1.16**	**128**	P	**Pn**	**19 42 29.3**	**0.0**
	baz=117						
TWK1				S	**Sb**	**19 42 44.4**	**+0.1**
	baz=117						
TWKBT	**Hengchun**	**1.17**	**128**	⇓*iP*	**Pn**	**19 42 29.3**	**-0.2**
	baz=117						
TWKBT				S	**Sb**	**19 42 44.2**	**-0.3**
	baz=117						
TWG	**Pinlang**	**1.17**	**82**	P	**Pb**	**19 42 29.6**	**+0.1**
	baz=83						
TWG				*eS*	**Sb**	**19 42 44.9**	**+0.3**
	baz=83						
TWGBT	**Beinan**	**1.18**	**82**	P	**Pg**	**19 42 30.2**	**0.0**
TWGBT	**Beinan**	**1.18**	**82**	⇓P	**Pn**	**19 42 29.7**	**+0.1**
	baz=83						
TWGBT				*eS*	**Sb**	**19 42 44.9**	**+0.1**
	baz=83						
WDLH	**Douliu**	**1.22**	**33**	*eP*	**Pb**	**19 42 30.5**	**+0.1**
	baz=24						
CHN5	**Tsauling**	**1.23**	**40**	P	**Pn**	**19 42 29.9**	**-0.5**
	baz=52						
CHN5				S	**Sb**	**19 42 45.5**	**-0.8**
	baz=52						
ELDTW	**Lidau**	**1.23**	**64**	*eP*	**Pn**	**19 42 30.2**	**-0.2**
	baz=66						
ELDTW				*eS*	**Sb**	**19 42 46.3**	**-0.1**
	baz=66						
WGK	**Gukeng**	**1.23**	**34**	*eP*	**Pb**	**19 42 30.7**	**+0.2**
	baz=48						
WGK				*eS*	**Sn**	**19 42 46.1**	**-0.6**
	baz=48						
TTN	**Taitung**	**1.23**	**85**	*eP*	**Pg**	**19 42 31.6**	**+0.3**
	baz=87						
LONT	**Longtian**	**1.24**	**78**	*eP*	**Pb**	**19 42 30.7**	**0.0**
	baz=79						
LONT				*eS*	**Sb**	**19 42 45.8**	**-0.7**
	baz=79						
ALS	**Alishan**	**1.25**	**47**	*eP*	**Pn**	**19 42 30.4**	**-0.4**
	baz=49						
ALS				*eS*	**Sg**	**19 42 47.9**	**0.0**
	baz=49						
TSEB	**Hengchuen, Pin**	**1.26**	**127**	*eP*	**Pn**	**19 42 30.3**	**-0.4**
	baz=118						
TSEB				*eS*	**Sb**	**19 42 45.4**	**-1.7**
	baz=118						
WTCT	**Ta-ch'eng**	**1.27**	**20**	*eP*	**Pb**	**19 42 30.9**	**-0.4**
	baz=21						
RLNB	**Erlin**	**1.32**	**22**	*eP*	**Pn**	**19 42 31.1**	**-0.5**
	baz=23						
WRL	**Guolierlin Hig**	**1.34**	**23**	*eP*	**Pn**	**19 42 31.8**	**-0.1**
	baz=24						
WRL				*eS*	**Sn**	**19 42 49.1**	**-0.3**
	baz=24						
ECS	**Chishang**	**1.37**	**71**	*eP*	**Pb**	**19 42 33.3**	**+0.4**
	baz=62						
ECS				*eS*	**Sg**	**19 42 51.2**	**-0.4**
	baz=62						
EHD	**Haiduan**	**1.37**	**69**	*eP*	**Pn**	**19 42 32.4**	**+0.1**
	baz=70						
EHD				*eS*	**Sn**	**19 42 49.7**	**-0.5**
	baz=70						
WHYT	**Xinyi Township**	**1.41**	**43**	*eP*	**Pn**	**19 42 32.3**	**-0.5**
	baz=44						
WJS	**Zhushan**	**1.43**	**36**	*eP*	**Pn**	**19 42 32.9**	**-0.1**
	baz=47						
WJS				*eS*	**Sn**	**19 42 51.1**	**-0.5**
	baz=47						
WNT	**Mingjian**	**1.45**	**33**	*eP*	**Pn**	**19 42 33.2**	**-0.1**
	baz=35						
FULB	**Fuli**	**1.47**	**68**	*eP*	**Pb**	**19 42 34.2**	**-0.4**
	baz=69						
WNT1	**Nantou City**	**1.48**	**32**	*eP*	**Pb**	**19 42 34.8**	**0.0**
	baz=33						
CHKT	**Chengkung**	**1.50**	**73**	*eP*	**Pb**	**19 42 35.3**	**+0.3**
	baz=74						
LDUT	**Ludao**	**1.53**	**89**	*eP*	**Pn**	**19 42 34.7**	**+0.3**
	baz=90						
LDUT				*eS*	**Sn**	**19 42 53.2**	**-0.8**
	baz=90						
TWF1	**Yuli**	**1.53**	**63**	*eP*	**Pn**	**19 42 34.7**	**+0.3**
	baz=64						
TWF1				*eS*	**Sn**	**19 42 52.8**	**-1.4**
	baz=64						
SSLB	**Suanglung**	**1.54**	**43**	P	**Pn**	**19 42 34.5**	**-0.1**
SSLB	**Suanglung**	**1.54**	**43**	*eP*	**Pn**	**19 42 34.4**	**-0.2**
	baz=44						
EYUL	**Yuli**	**1.55**	**63**	*eP*	**Pn**	**19 42 35.1**	**+0.5**
	baz=64						
YULB	**Yu-li**	**1.55**	**62**	P	**Pn**	**19 42 34.9**	**+0.2**
YULB	**Yu-li**	**1.55**	**62**	P	**Pn**	**19 42 34.6**	**-0.1**
	baz=63						
YULB				S	**Sn**	**19 42 53.9**	**-0.7**
	baz=63						
CHKH	**Chenggong**	**1.55**	**70**	*eP*	**Pb**	**19 42 35.6**	**-0.4**
	baz=71						
TYC	**Yuchr**	**1.57**	**38**	*eP*	**Pn**	**19 42 35.1**	**+0.2**
	baz=39						
WCHH	**Zhanghua**	**1.57**	**26**	*eP*	**Pb**	**19 42 35.6**	**-0.8**
	baz=27						
SMLT	**Sun Moon Lake**	**1.57**	**39**	*eP*	**Pn**	**19 42 35.2**	**+0.1**
	baz=40						
WWF	**Wufeng**	**1.60**	**30**	*eP*	**Pn**	**19 42 35.8**	**+0.4**
	baz=31						
EHY	**Hungye**	**1.62**	**58**	*eP*	**Pn**	**19 42 36.2**	**+0.4**
	baz=60						
VWDT	**VWDT**	**1.64**	**48**	P	**Pn**	**19 42 36.3**	**+0.4**
	baz=49						
ECBN	**Changbin**	**1.64**	**66**	*eP*	**Pb**	**19 42 37.3**	**-0.3**
	baz=67						
TCU	**Taichung**	**1.68**	**28**	*eP*	**Pn**	**19 42 36.6**	**+0.1**
	baz=29						
HGSD	**Ruisui**	**1.70**	**60**	P	**Pb**	**19 42 37.9**	**-0.7**
	baz=61						
DPDB	**Guoxing**	**1.71**	**37**	*eP*	**Pn**	**19 42 37.2**	**+0.3**
	baz=29						
WCS	**Beigang Elemen**	**1.72**	**36**	*eP*	**Pn**	**19 42 37.5**	**+0.5**
	baz=28						
LAY	**Lan-yu**	**1.72**	**111**	*eP*	**Pn**	**19 42 37.1**	**0.0**
	baz=111						
LAY				*eS*	**Sn**	**19 42 56.7**	**-2.2**
	baz=111						
LYUB	**Lan-yu**	**1.77**	**111**	*eP*	**Pn**	**19 42 35.6**	**-2.0**
	baz=112						
LYUB				*eS*	**Sn**	**19 42 56.3**	**-3.6**
	baz=112						
WUSB	**Renai**	**1.79**	**42**	*eP*	**Pn**	**19 42 38.4**	**+0.3**
	baz=53						
WARBT	**Fenglin Townsh**	**1.79**	**54**	*eP*	**Pn**	**19 42 38.2**	**+0.1**
	baz=64						
OWD	**Renai**	**1.80**	**44**	*eP*	**Pn**	**19 42 38.2**	**-0.1**
	baz=45						
CHGB	**Renai**	**1.87**	**42**	*eP*	**Pn**	**19 42 39.8**	**+0.5**
	baz=52						
ESL	**Shilin**	**1.88**	**52**	*eP*	**Pn**	**19 42 39.6**	**+0.4**
	baz=62						
TWQ1	**Liyutan**	**1.90**	**27**	*eP*	**Pn**	**19 42 40.2**	**+0.7**
	baz=28						
WHP	**Taichung City**	**1.92**	**33**	*eP*	**Pn**	**19 42 40.3**	**+0.5**
	baz=33						
WHF	**Hehuan Shan**	**1.99**	**42**	*eP*	**Pb**	**19 42 42.4**	**-1.4**
	baz=53						
LXIB	**Xiulin Townshi**	**2.00**	**47**	*eP*	**Pn**	**19 42 41.4**	**+0.4**
	baz=48						
TDCB	**Techi**	**2.01**	**38**	*eP*	**Pn**	**19 42 41.7**	**+0.5**
	baz=27						
ETM	**Tongmen**	**2.02**	**50**	*eP*	**Pn**	**19 42 41.3**	**+0.2**
	baz=62						
TWT	**Tachien**	**2.02**	**38**	*eP*	**Pn**	**19 42 41.7**	**+0.4**
	baz=27						
FUSS	**Fushou**	**2.06**	**39**	*eP*	**Pn**	**19 42 42.6**	**+0.7**
	baz=40						
KNM	**Kinmen**	**2.16**	**324**	*eP*	**Pn**	**19 42 44.0**	**+0.9**
	baz=321						
TWD	**Chiawan**	**2.16**	**49**	*eP*	**Pn**	**19 42 43.6**	**+0.5**
	baz=61						
ETLH	**Xiulin Townshi**	**2.17**	**45**	*eP*	**Pn**	**19 42 44.6**	**+1.2**
	baz=45						
KNMB	**Chin-men Tao**	**2.22**	**324**	*eP*	**Pn**	**19 42 43.9**	**0.0**
	baz=324						
NACB	**Ninganchiao**	**2.22**	**47**	P	**Pn**	**19 42 45.0**	**+1.0**
NACB	**Ninganchiao**	**2.22**	**47**	*eP*	**Pn**	**19 42 44.4**	**+0.4**
	baz=60						
LIOB	**Emei**	**2.26**	**29**	*eP*	**Pn**	**19 42 44.9**	**+0.3**
	baz=29						
NNSB	**Datong**	**2.27**	**39**	*eP*	**Pn**	**19 42 45.4**	**+0.6**
	baz=28						
NNS	**Nan Shan**	**2.28**	**39**	*eP*	**Pn**	**19 42 45.6**	**+0.7**
	baz=28						
ZPLA	**Ao Xicun**	**2.28**	**304**	*eP*	**Pn**	**19 42 44.2**	**-0.6**
	baz=303						
NFF	**Wufeng Townshi**	**2.30**	**31**	*eP*	**Pn**	**19 42 45.2**	**+0.1**
	baz=32						
VWUC	**VWUC**	**2.34**	**352**	*eP*	**Pn**	**19 42 45.6**	**0.0**
	baz=352						
DSXP	**Dongshan**	**2.43**	**296**	*eP*	**Pn**	**19 42 46.4**	**-0.4**
	baz=295						
LATG	**Datong**	**2.44**	**40**	*eP*	**Pn**	**19 42 48.0**	**+1.0**
	baz=28						
PTMZ	**Houxiangcun**	**2.45**	**345**	*eP*	**Pn**	**19 42 47.1**	**0.0**
	baz=346						
NSK	**Sanguang**	**2.46**	**35**	*eP*	**Pn**	**19 42 47.8**	**+0.6**
	baz=26						
YHNB	**Yeheng**	**2.46**	**35**	P	**Pn**	**19 42 48.0**	**+0.7**
YHNB	**Yeheng**	**2.46**	**35**	*eP*	**Pn**	**19 42 48.0**	**+0.7**
	baz=26						
NDT	**Datong Townshi**	**2.48**	**39**	*eP*	**Pn**	**19 42 48.5**	**+1.0**
	baz=28						
ENA	**Nanau**	**2.50**	**45**	*eP*	**Pn**	**19 42 49.2**	**+1.5**
	baz=57						
EWUT	**Wuta**	**2.53**	**45**	*eP*	**Pn**	**19 42 49.5**	**+1.3**
	baz=56						
ENTT	**Nioudou**	**2.54**	**39**	*eP*	**Pn**	**19 42 49.7**	**+1.3**
	baz=28						
NWLT	**Wulai**	**2.62**	**36**	*eP*	**Pn**	**19 42 50.0**	**+0.6**
	baz=25						
FUSB	**Fushanzhiwuyua**	**2.65**	**38**	*eP*	**Pn**	**19 42 50.5**	**+0.6**
	baz=27						
TWE	**Neicheng**	**2.66**	**39**	*eP*	**Pn**	**19 42 51.5**	**+1.4**
	baz=26						
ESAO	**Su ao**	**2.67**	**44**	*eP*	**Pn**	**19 42 51.8**	**+1.8**
	baz=55						
TWC	**Suao**	**2.69**	**43**	*eP*	**Pn**	**19 42 50.3**	**-0.1**
	baz=55						
EOS4	**EOS4**	**2.72**	**57**	*eP*	**Pn**	**19 42 51.3**	**+0.8**
	baz=68						
TATO	**Taipei**	**2.77**	**33**	P	**Pn**	**19 42 51.5**	**0.0**
AXDP	**Jialang**	**2.80**	**323**	*eP*	**Pn**	**19 42 51.5**	**-0.4**
	baz=323						
CMAR	**Chiang Mai Arr**	**19.98**	**262**	P	Pn	19 46 52.3	+11
	0.5nm,0.8s,baz=64,slow=9.7,SNR=4.0						
	0.5nm,0.8s						
MJAR	**Matsushiro Arr**	**21.10**	**45**	P	P	19 46 44.3	-7.3
	0.6nm,0.7s,baz=229,slow=8.2,SNR=1.5						
	0.6nm,0.7s						
SONM	**Songino Array**	**27.32**	**340**	P	**P**	**19 47 51.5**	**-0.5**
	0.1nm,0.4s,baz=165,slow=12,SNR=1.7						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**38.59**	**318**	P	**P**	**19 49 31.3**	**+1.2**
	0.2nm,0.5s,baz=114,slow=8.9,SNR=2.8						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**40.86**	**329**	P	**P**	**19 49 49.5**	**+0.7**
	0.2nm,0.4s,baz=139,slow=8.3,SNR=1.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**42.49**	**322**	P	**P**	**19 50 02.9**	**+0.7**
	0.2nm,0.7s,baz=126,slow=3.9,SNR=2.4						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**44.65**	**160**	P	**P**	**19 50 19.4**	**-0.5**
	0.5nm,0.6s,baz=343,slow=8.8,SNR=5.7						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**48.04**	**163**	P	**P**	**19 50 46.8**	**+0.2**
	0.6nm,0.5s,baz=345,slow=7.0,SNR=19						
	0.6nm,0.5s						

IDC 02 19:49:16.1±2.4, 18°65N×119°97E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=389.6km s-min=29.6km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.87**	**159**	P	P	19 57 00.5	+0.4
	0.4nm,0.7s,baz=340,slow=8.9,SNR=4.7						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**44.21**	**162**	P	P	19 57 26.6	-0.7
	0.6nm,0.8s,baz=338,slow=12,SNR=5.5						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**44.38**	**331**	P	P	19 57 28.2	-0.1
	0.3nm,0.4s,baz=113,slow=9.6,SNR=1.8						
	0.3nm,0.4s						

DJA 02 19:51:54.1±0.2, 1°S±2°×12°1E±°, h10km, M4.0/13, mb4.2/5, mB5.5/2, MLv3.9/13, Mw(mB)4.9/2, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.76**	**339**	P	Pn	19 52 21.8	-2.8
MPSI				S	Sn	19 52 43.9	-3.2
TTSI	**Tana Toraja**	**1.87**	**203**	P	Pn	19 52 27.0	+0.8
LUWI	**Luwuk**	**2.25**	**83**	P	Pn	19 52 32.9	+1.5
LUWI				S	Sb	19 53 04.4	+1.7
MRSI	**Marisa**	**2.26**	**38**	P	Pn	19 52 31.2	-0.4
MRSI				S	Sn	19 53 00.8	+1.3
BKB	**Balikpapan**	**3.64**	**271**	P	Pn	19 52 51.8	+1.2
KMSI	**Cibinong**	**3.92**	**61**	P	Pn	19 52 54.8	+0.4
BKSI	**Bulukumba**	**4.01**	**186**	P	Pn	19 52 55.0	-0.6
SANI	**Sanana**	**5.50**	**98**	P	Pn	19 53 16.4	+0.3
	11nm,1.5s,0.1nm						
MTKI	**Muara Teweh, K**	**5.66**	**274**	P	Pn	19 53 18.0	-0.3
	25nm,0.5s,2μm0.2nm						

IDC 02 20:00:08.8±33.0, 22°52S×68°94E, h0km, mb3.7/3, mbtmp3.7/3, MS3.7/1, Error ellipse: s-maj=1142.0km s-min=41.7km az=53.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.18**	**13**	T	T	20 18 43.1	
	baz=193,slow=76,SNR=26						
H08S2	**Diego Garcia H**	**15.18**	**14**	T	T	20 18 44.8	
	baz=193,slow=76,SNR=52						
H08S3	**Diego Garcia H**	**15.20**	**14**	T	T	20 18 45.7	
	baz=193,slow=76,SNR=66						
H04N2	**CROZET ISLANDS**	**27.39**	**206**	T	T	20 35 07.8	
	baz=36,slow=75,SNR=194						
H04N1	**CROZET ISLANDS**	**27.39**	**206**	T	T	20 35 08.3	
	baz=36,slow=75,SNR=189						
H04N3	**CROZET ISLANDS**	**27.41**	**206**	T	T	20 35 07.7	
	baz=36,slow=75,SNR=208						
TSUM	**Tsumeb**	**47.92**	**264**	LR	LR	20 26 42.7	
	comp=Z,74nm,19.4s,baz=152,slow=33						
ASAR	**Alice Springs**	**59.28**	**105**	P	P	20 10 12.6	-0.1
	0.7nm,0.8s,baz=270,slow=5.9,SNR=7.8						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**70.04**	**10**	P	P	20 11 22.4	+0.1
	0.3nm,0.7s,baz=198,slow=6.2,SNR=3.1						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**77.38**	**10**	P	P	20 12 05.2	0.0
	0.6nm,0.5s,baz=209,slow=5.1,SNR=4.4						
	0.6nm,0.5s						

*NEIC **02** 20:33:58.6±2.2, 22°3S×170°1W±0°1, h543km±6km, mb4.8/47, Error ellipse: s-maj=15.2km s-min=14.3km az=134.0*
*NOU **02** 20:34:01.4, 22°36S×179°46W, h588km, mb4.9/72, South of Fiji Islands*
*IDC **02** 20:34:02.7±0.5, 22°30S×179°60W, h592km±5km, mb3.8/24, mbtmp4.7/25, Error ellipse: s-maj=11.9km s-min=10.1km az=104.0*
*BGR **02** 20:34:03.1, 22°39S×178°19W, h604km±7km*
ISC 02 20:34:01.5±0.3, 22°41S±0°05×179°50W±0°04, h589km±3km, h590km: pP-P, n430, σ1s57/496, mb4.8/63, 49C-30D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**4.21**	**9**	P	**P**	**20 35 27.7**	**0.0**
TAVE	**Taveuni**	**5.69**	**356**	P	**P**	**20 35 39.6**	**+0.1**
DGTI	**Dogotuki**	**6.12**	**353**	P	**P**	**20 35 42.6**	**-0.6**
YSA	**Yasawairara**	**6.32**	**334**	P	**P**	**20 35 44.3**	**-0.6**
RAO	**Raoul Island**	**6.96**	**169**	S	**S**	**20 37 14.9**	**-4.9**
	423nm,0.4s,baz=248,slow=22,SNR=1.5						
GLKZ	**Green Lake**	**6.97**	**169**	P	**P**	**20 35 49.9**	**-0.7**
GLKZ				S	**S**	**20 37 12.4**	**-7.6**
NIUE	**Niue**	**9.55**	**71**	P	**P**	**20 36 15.2**	**-0.4**
	baz=9.7,SNR=5.1						
NIUE				S	**S**	**20 38 08.7**	**+3.1**
	baz=9.7						
NIUE	**Niue**	**9.55**	**71**	P	**P**	**20 36 14.2**	**-1.4**
AFI	**Afiamalu**	**11.19**	**42**	P	**P**	**20 36 27.9**	**-4.3**
PINNC	**Pines Island,**	**12.07**	**267**	P	**P**	**20 36 39.2**	**-1.7**
YATNC	**Mamie plateau,**	**12.61**	**269**	P	**P**	**20 36 46.0**	**-0.4**
OUENC	**Ouen Island, N**	**12.64**	**267**	P	**P**	**20 36 44.8**	**-1.8**
OUENC	**Ouen Island, N**	**12.64**	**267**	P	**P**	**20 36 46.1**	**-0.6**
ONTNC	**Ouen Toro**	**13.00**	**268**	P	**P**	**20 36 47.5**	**-2.9**
DZM	**Mont Dzumac**	**13.02**	**269**		**P**	**20 36 47.8**	**-2.9**
DZM	**Mont Dzumac**	**13.02**	**269**	P	**P**	**20 36 49.9**	**-0.8**
DZM	**Mont Dzumac**	**13.02**	**269**	*e*Pn	**P**	**20 36 49.4**	**-1.3**
	185nm,0.8s						
DZM				*e*S	**S**	**20 39 08.8**	**-1.1**
	325nm,25.2s						
DZM	**Mont Dzumac**	**13.02**	**269**	P	**P**	**20 36 49.7**	**-1.0**
	80nm,0.7s,baz=85,slow=16,SNR=31						
NOUC	**Port Laguerre**	**13.15**	**269**	P	**P**	**20 36 51.3**	**-0.6**
OUZ	**Omahuta**	**14.12**	**204**	P	**P**	**20 37 03.0**	**+1.5**
OUZ	**Omahuta**	**14.12**	**204**	P	**P**	**20 37 02.9**	**+1.5**
WCZ	**Waipu Caves**	**14.51**	**200**	P	**P**	**20 37 08.0**	**+2.8**
KUZ	**Kuaotunu**	**14.87**	**195**	P	**P**	**20 37 09.6**	**+1.0**
KOUNC	**Koumac, New Ca**	**15.21**	**274**	P	**P**	**20 37 07.7**	**-4.3**
KOUNC	**Koumac, New Ca**	**15.21**	**274**	P	**P**	**20 37 11.9**	**-0.1**
MXZ	**Matakaoa Point**	**15.22**	**187**	P	**P**	**20 37 09.2**	**-2.6**
MXZ	**Matakaoa Point**	**15.22**	**187**	P	**P**	**20 37 12.2**	**+0.4**
MXZ	**Matakaoa Point**	**15.22**	**187**	P	**P**	**20 37 11.6**	**-0.2**
WMGZ	**Waiomatatini S**	**15.46**	**186**	P	**P**	**20 37 14.3**	**+0.2**
HAZ	**Te Kaha**	**15.47**	**188**	P	**P**	**20 37 12.9**	**-1.3**
HAZ				S	**S**	**20 39 46.4**	**-5.1**
PKGZ	**Pakihiroa**	**15.57**	**187**	P	**P**	**20 37 13.7**	**-1.4**
RUGZ	**Raukumara Rang**	**15.69**	**188**	P	**P**	**20 37 15.4**	**-0.9**
RUGZ				S	**S**	**20 39 50.3**	**-5.1**
TGRZ	**Tauranga**	**15.70**	**193**	P	**P**	**20 37 18.1**	**+1.8**
OPRZ	**Ohinepanea**	**15.75**	**192**	P	**P**	**20 37 18.0**	**+1.2**
TWGZ	**Tauwhareparae**	**15.86**	**187**	P	**P**	**20 37 17.8**	**-0.1**
TWGZ				S	**S**	**20 39 55.8**	**-2.3**
TOZ	**Tahuroa Road**	**15.87**	**195**	P	**P**	**20 37 18.9**	**+1.1**
KMRZ	**Kaimai**	**15.88**	**193**	P	**P**	**20 37 20.0**	**+2.0**
EDRZ	**Edgecumbe**	**15.97**	**191**	P	**P**	**20 37 19.2**	**+0.2**
KARZ	**Kaharoa**	**15.98**	**192**	P	**P**	**20 37 20.4**	**+1.4**
OMRZ	**Omania**	**16.04**	**192**	P	**P**	**20 37 20.5**	**+1.0**
URZ	**Urewera**	**16.06**	**190**	P	**P**	**20 37 18.9**	**-0.8**
URZ	**Urewera**	**16.06**	**190**	P	**P**	**20 37 17.1**	**-2.5**
	115nm,0.3s,baz=8.5,slow=2.9,SNR=92						
URZ				S	**S**	**20 39 55.6**	**-5.6**
	28nm,0.6s,baz=90,slow=20,SNR=3.1						
URZ	**Urewera**	**16.06**	**190**	P	**P**	**20 37 17.1**	**-2.5**
URZ				S	**S**	**20 39 58.2**	**-3.0**
MWZ	**Matawai**	**16.07**	**188**	P	**P**	**20 37 18.2**	**-1.6**
MWZ				S	**S**	**20 39 59.6**	**-1.9**
TKGZ	**Te Karaka**	**16.14**	**188**	P	**P**	**20 37 20.2**	**-0.2**
TKGZ				S	**S**	**20 40 02.9**	**+0.5**
CNGZ	**Carnagh Statio**	**16.14**	**186**	P	**P**	**20 37 19.8**	**-0.6**
TARZ	**Mount Tarawera**	**16.14**	**191**	P	**P**	**20 37 21.1**	**+0.6**
HLRZ	**Highlands Stat**	**16.19**	**192**	P	**P**	**20 37 21.6**	**+0.7**
GRRZ	**Galatos Road**	**16.33**	**192**	P	**P**	**20 37 23.2**	**+1.0**
MUGZ	**Murupara**	**16.33**	**190**	P	**P**	**20 37 21.3**	**-0.8**
MUGZ				S	**S**	**20 40 03.8**	**-1.8**
RTZ	**Ruatahuna**	**16.43**	**190**		**P**	**20 37 20.2**	**-2.9**
RTZ					**S**	**20 40 01.3**	**-6.1**
RTZ	**Ruatahuna**	**16.43**	**190**	P	**P**	**20 37 22.1**	**-1.1**
RTZ				S	**S**	**20 40 07.5**	**0.0**
PRGZ	**Paritu Road**	**16.61**	**187**	P	**P**	**20 37 23.2**	**-1.5**
PRGZ				S	**S**	**20 40 11.0**	**+0.7**
HIZ	**Hauiti**	**16.76**	**196**	P	**P**	**20 37 28.7**	**+2.6**
BKZ	**Black Stump Fm**	**17.05**	**191**		**P**	**20 37 26.0**	**-2.7**
BKZ	**Black Stump Fm**	**17.05**	**191**	P	**P**	**20 37 28.1**	**-0.6**
KHEZ	**Kahui Hut**	**17.72**	**197**	P	**P**	**20 37 35.5**	**+0.6**
BFZ	**Birch Farm**	**18.57**	**190**	P	**P**	**20 37 41.2**	**-1.3**
BFZ	**Birch Farm**	**18.57**	**190**	P	**P**	**20 37 41.4**	**-1.1**
MRZ	**Mangatainoka R**	**18.67**	**192**	P	**P**	**20 37 42.0**	**-1.4**
TCW	**Tory Channel**	**19.46**	**194**		**P**	**20 37 50.4**	**-0.2**
SNZO	**South Karori**	**19.47**	**193**	P	**P**	**20 37 49.5**	**-1.1**
SNZO	**South Karori**	**19.47**	**193**	P	**P**	**20 37 50.3**	**-0.3**
QRZ	**Quartz Range**	**19.56**	**198**	P	**P**	**20 37 51.9**	**+0.4**
PLWZ	**Palliser**	**19.61**	**192**	P	**P**	**20 37 51.1**	**-0.8**
NNZ	**Nelson**	**19.69**	**196**	P	**P**	**20 37 52.1**	**-0.6**
TUWZ	**Tuamarina**	**19.75**	**195**	P	**P**	**20 37 53.1**	**-0.1**
TUWZ					**S**	**20 41 06.6**	**+5.9**
THZ	**Tophouse**	**20.32**	**197**	P	**P**	**20 37 58.4**	**-0.1**
KHZ	**Kahutara**	**20.78**	**195**	P	**P**	**20 38 01.2**	**-1.2**
KHZ	**Kahutara**	**20.78**	**195**	P	**P**	**20 38 01.3**	**-1.2**
GVZ	**Greta Valley S**	**21.42**	**195**	P	**P**	**20 38 06.9**	**-1.3**
LTZ	**Lake Taylor**	**21.44**	**197**		**P**	**20 38 07.0**	**-1.5**
INZ	**Inchbonnie**	**21.62**	**198**	P	**P**	**20 38 09.1**	**-0.9**
OXZ	**Oxford**	**22.01**	**197**	P	**P**	**20 38 12.5**	**-1.0**
RPZ	**Rata Peaks**	**22.64**	**198**		**P**	**20 38 18.4**	**-0.8**
RPZ	**Rata Peaks**	**22.64**	**198**	P	**P**	**20 38 19.4**	**+0.3**
JCZ	**Jackson

baz=34,SNR=9.7
TOO Toolangi 33.66 235 P **P** **20 39 54.6 -0.1**
TOO IAmb IAmb 20 39 56.8
comp=Z,17nm,0.8s
TOO Toolangi 33.66 235 P **P** **20 39 56.0 +1.3**
MTSU Mount Surprise 34.16 270 P **P** **20 39 59.4 +0.3**
baz=34,SNR=20
PMG Port Moresby 34.48 287 P **P** **20 40 00.8 -1.1**
PMG Port Moresby 34.48 287 P **P** **20 40 02.0 +0.2**
PMG Port Moresby 34.48 287 P **P** **20 40 01.4 -0.5**
STKA Stephens Creek 35.72 246 P **P** **20 40 12.2 +0.2**
baz=36,SNR=48
STKA Stephens Creek 35.72 246 P **P** **20 40 12.3 +0.4**
STKA Stephens Creek 35.72 246 P **P** **20 40 12.5 +0.5**
STKA Stephens Creek 35.72 246 P **P** **20 40 12.9 +1.0**
comp=Z,15nm,0.4s,baz=93,slow=10,SNR=78
STKA PcP **PcP** **20 42 24.1 +0.8**
comp=Z,2.3nm,0.6s,baz=54,slow=8.7,SNR=1.5
comp=Z,15nm,0.4s
INKA Innaminka 36.29 253 P **P** **20 40 18.1 +1.5**
COEN Coen 36.37 277 P **P** **20 40 17.0 -0.4**
baz=36,SNR=24
COEN Coen 36.37 277 P **P** **20 40 16.5 -1.0**
COEN IAmb IAmb 20 40 18.9
comp=Z,14nm,0.7s
COEN Coen 36.37 277 P **P** **20 40 17.7 +0.2**
QIS Mount Isa 38.02 265 P **P** **20 40 30.3 -0.5**
baz=38,SNR=10
QIS Mount Isa 38.02 265 P **P** **20 40 30.4 -0.5**
HTT Hallett 38.12 244 P **P** **20 40 31.8 +0.2**
baz=38,SNR=6.5
HTT Hallett 38.12 244 P **P** **20 40 32.0 +0.4**
LCRK Leigh Creek 38.53 249 P **P** **20 40 35.3 +0.5**
TAOE Nuku Hiva Isla 40.08 77 *e*P **P** **20 40 46.8 -0.8**
comp=Z,226nm,1.0s
BBOO Buckleboo 40.47 245 P **P** **20 40 50.3 0.0**
baz=40,SNR=24
BBOO Buckleboo 40.47 245 P **P** **20 40 50.3 0.0**
BBOO IAmb IAmb 20 40 51.0
comp=Z,14nm,0.6s
BBOO Buckleboo 40.47 245 P **P** **20 40 50.4 0.0**
OOD Oodnadatta 40.77 253 P **P** **20 40 54.0 +1.3**
MULG Mulgathing 42.12 249 P **P** **20 41 03.9 +0.5**
AS01 Alice Springs 42.71 259 P **P** **20 41 08.3 +0.1**
AS31 Alice Springs 42.75 259 P **P** **20 41 08.2 -0.3**
ASAR Alice Springs 42.75 259 P **P** **20 41 08.0 -0.5**
ASAR Alice Springs 42.75 259 P **P** **20 41 08.4 0.0**
comp=Z,34nm,0.6s,baz=98,slow=7.5,SNR=427
ASAR PcP **PcP** **20 42 47.1 +0.9**
comp=Z,6.2nm,0.8s,baz=114,slow=3.5,SNR=9.0
ASAR S **S** **20 46 47.2 -3.6**
comp=Z,8.1nm,0.9s,baz=97,slow=16,SNR=25
comp=Z,34nm,0.6s
WR0 Warramunga Arr 42.80 264 P **P** **20 41 08.1 -0.8**
WR0 IAmb IAmb 20 41 09.0
comp=Z,19nm,0.9s
WB0 Warramunga Arr 42.98 265 P **P** **20 41 09.5 -0.7**
WB2 Warramunga Arr 42.98 264 P **P** **20 41 09.5 -0.7**
WRAB Tennant Creek 42.98 264 P **P** **20 41 09.2 -1.0**
WRAB IAmb IAmb 20 41 10.4
comp=Z,32nm,0.7s
WRA Warramunga Arr 42.99 264 P **P** **20 41 09.7 -0.7**
comp=Z,36nm,0.6s,baz=97,slow=8.2,SNR=435
WRA PcP **PcP** **20 42 47.8 +0.7**
comp=Z,3.0nm,0.8s,baz=99,slow=3.5,SNR=4.2
WRA ScP **ScP** **20 45 43.8 +1.1**
comp=Z,1.7nm,0.9s,baz=104,slow=3.8,SNR=5.3
WRA S **S** **20 46 48.1 -6.1**
comp=Z,7.1nm,1.1s,baz=99,slow=14,SNR=12
comp=Z,36nm,0.6s
KDU Kakadu 46.63 274 P **P** **20 41 37.6 -0.6**
baz=46,SNR=16
KDU Kakadu 46.63 274 P **P** **20 41 37.7 -0.6**
WRKA Warakurna 47.63 256 P **P** **20 41 45.6 0.0**
baz=48,SNR=211
WRKA Warakurna 47.63 256 P **P** **20 41 45.6 0.0**
MTN Manton Dam 47.82 273 P **P** **20 41 46.4 -0.7**
baz=48,SNR=12
MTN Manton Dam 47.82 273 P **P** **20 41 46.5 -0.6**
MTN IAmb IAmb 20 41 47.3
comp=Z,30nm,0.6s
MTN Manton Dam 47.82 273 P **P** **20 41 46.6 -0.6**
KNRA Kununurra 49.17 268 P **P** **20 41 57.0 -0.1**
baz=49,SNR=49
KNRA Kununurra 49.17 268 P **P** **20 41 56.4 -0.7**
KNRA Kununurra 49.17 268 P **P** **20 41 57.0 -0.1**
FAKI Fak Fak 50.61 285 P **P** **20 42 06.5 -1.1**
FAKI IAmb IAmb 20 42 08.1
comp=Z,40nm,1.2s
FAKI Fak Fak 50.61 285 P **P** **20 42 07.2 -0.5**
DRV Dumont d'Urvil 51.10 199 P **P** **20 42 11.0 +0.7**
DRV pP **pwP** **20 44 01.6 -1.5**
SWI Sorong 52.43 287 P **P** **20 42 19.6 -1.1**
comp=Z,170nm,0.8s,comp=Z,1μm
SOEI Soe 55.20 274 P **P** **20 42 40.9 +0.6**
SOEI IAmb IAmb 20 42 47.0
comp=Z,56nm,0.7s
SOEI Soe 55.20 274 P **P** **20 42 41.4 +1.1**
SBA Scott Base 55.88 183 P **P** **20 42 46.4 +2.5**
SBA Scott Base 55.88 183 P **P** **20 42 47.5 +3.7**
VNDA Vanda 55.90 185 P **P** **20 42 45.7 +1.7**
VNDA Vanda 55.90 185 P **P** **20 42 46.6 +2.7**
comp=Z,14nm,0.7s,baz=355,slow=7.6,SNR=42
comp=Z,14nm,0.7s
VNDA Vanda 55.90 185 P **P** **20 42 46.6 +2.6**
PSA00 Pilbara Seismi 55.90 258 P **P** **20 42 44.3 -0.6**
PSA00 IAmb IAmb 20 44 22.6
comp=Z,57nm,1.5s
PSA00 Pilbara Seismi 55.90 258 P **P** **20 42 44.9 0.0**
MEEK Meekatharra 55.99 252 P **P** **20 42 45.2 -0.4**
baz=56,SNR=6.8
MEEK Meekatharra 55.99 252 P **P** **20 42 45.2 -0.4**
KLBR Kellerberrin 56.00 246 P **P** **20 42 45.0 -0.5**
baz=56,SNR=7.7
KLBR Kellerberrin 56.00 246 P **P** **20 42 45.9 +0.4**
NWAO Narrogin (SRO) 56.28 245 P **P** **20 42 47.5 +0.1**
BLDU Ballidu 57.02 247 P **P** **20 42 52.3 -0.2**
baz=57,SNR=14
BLDU Ballidu 57.02 247 P **P** **20 42 51.3 -1.2**
MMRI Maumere 57.46 274 P **P** **20 42 55.4 -0.4**
MMRI IAmb IAmb 20 44 05.2
comp=Z,90nm,1.2s
MMRI Maumere 57.46 274 P **P** **20 42 55.5 -0.2**
CCD Concordia, Ant 60.28 194 ⇓P **P** **20 43 15.7 +1.7**
GIRL Giralia 60.72 256 P **P** **20 43 18.3 +1.0**
PLAI Plampang 61.52 272 P **P** **20 43 22.5 -0.2**
TOLI2 Tolitoli 62.66 284 P **P** **20 43 28.8 -1.3**
TOLI2 Tolitoli 62.66 284 P **P** **20 43 29.3 -0.8**
JAGI Jajag, Banyuwa 65.00 271 P **P** **20 43 44.0 -0.9**
JAGI IAmb IAmb 20 43 57.5
comp=Z,47nm,1.4s
JAGI Jajag, Banyuwa 65.00 271 P **P** **20 43 43.7 -1.2**
QSPA South Pole Qui 67.67 180 P **P** **20 44 02.6 +2.0**
comp=Z,66nm,0.9s,baz=22,slow=1.3,SNR=124
comp=Z,66nm,0.9s
QSPA South Pole Qui 67.67 180 ⇓P **P** **20 44 02.6 +2.0**
QSPA pP **pwP** **20 45 60.0 -1.3**
QSPA sP **sP** **20 47 02.6 +3.3**
UGM Wanagama 68.55 270 P **P** **20 44 06.5 -0.3**
UGM Wanagama 68.55 270 P **P** **20 44 06.8 0.0**
KKM Kota Kinabalu 68.92 286 P **P** **20 44 09.1 +0.1**
KKM IAmb IAmb 20 45 58.0
comp=Z,61nm,1.4s
KKM Kota Kinabalu 68.92 286 P **P** **20 44 09.3 +0.2**
MJAR Matsushiro Arr 70.94 325 P **P** **20 44 20.2 -0.3**
comp=Z,21nm,0.6s,baz=145,slow=5.8,SNR=8.1
comp=Z,2.1nm,0.6s
BBJI Bungbulang 71.37 269 P **P** **20 44 23.2 -0.3**
KSM Kuching 72.32 279 P **P** **20 44 29.5 +0.6**
KSM IAmb IAmb 20 44 58.1
comp=Z,37nm,1.1s
TWG Pinlang 73.26 304 P **P** **20 44 32.7 -1.4**
YULB Yu-li 73.40 305 P **P** **20 44 36.5 +1.6**
TPUB Ta-pu 73.86 304 P **P** **20 44 36.7 -0.8**
TPUB Ta-pu 73.86 304 P **P** **20 44 37.3 -0.2**
SSLB Suanglung 73.88 305 P **P** **20 44 36.5 -1.2**
SSLB Suanglung 73.88 305 P **P** **20 44 37.5 -0.2**
ASAJ Asahikawa 74.76 333 P **P** **20 44 43.3 +1.3**
comp=Z,3.2nm,0.5s,baz=226,slow=6.8,SNR=5.7
comp=Z,3.2nm,0.5s
KSRS Korea Array 77.41 320 P **P** **20 44 57.0 +0.2**
comp=Z,1.4nm,0.6s,baz=130,slow=5.3,SNR=3.0
comp=Z,1.4nm,0.6s
PEA0B Petropavlovsk- 77.77 346 P **P** **20 44 58.7 +0.3**
PEA0B IAmb IAmb 20 46 41.0
comp=Z,126nm,1.9s
PETK Petropavlovsk- 77.77 346 P **P** **20 44 58.8 +0.4**
comp=Z,6.6nm,0.7s,baz=117,slow=5.3,SNR=11
comp=Z,6.6nm,0.7s
BELA Belgrano 2 77.85 173 P **P** **20 44 58.7 +0.2**
MAW Mawson 79.30 200 P **P** **20 45 08.1 +1.7**
MAW Mawson 79.30 200 P **P** **20 45 08.0 +1.6**
comp=Z,17nm,0.8s,baz=114,slow=6.4,SNR=6.2
comp=Z,17nm,0.8s
USRK Ussuriysk Ar. 79.77 327 P **P** **20 45 09.3 +0.2**
comp=Z,1.9nm,0.6s,baz=108,slow=5.4,SNR=4.2
comp=Z,1.9nm,0.6s
NJ2 Nanjing 80.04 311 *e*P **P** **20 45 12.1 +1.3**
NJ2 pP **pP** **20 47 11.4 -2.2**
NJ2 sP **sP** **20 48 10.0 -3.0**
NJ2 pmax pmax
comp=Z,8.0nm,0.7s
NJ2 pmax pmax
comp=Z,320nm,4.8s
MDJ Mudanjiang 81.29 326 P **P** **20 45 18.0 +1.0**
MDJ pmax pmax
comp=Z,14nm,1.4s
MDJ pmax pmax
comp=Z,190nm,3.5s
YBH Yreka Blue Hor 82.65 39 P **P** **20 45 26.1 +2.0**
comp=Z,1.1nm,0.7s,baz=168,slow=18,SNR=3.6
comp=Z,1.1nm,0.7s
BNX BinXian 83.19 326 ⇑P **P** **20 45 27.4 +0.8**
BNX pmax pmax
comp=Z,7.0nm,1.1s
BNX pmax pmax
comp=Z,170nm,4.6s
KLR Kul'dur 83.47 330 P **P** **20 45 29.3 +1.4**
comp=Z,1.2nm,0.7s,baz=173,slow=2.6,SNR=5.2
comp=Z,1.2nm,0.7s
N15K Kwethluk River 83.80 10 IAmb IAmb 20 47 45.2
comp=Z,26nm,1.2s
GSI Gunungsitoli 83.95 274 P **P** **20 45 31.7 +0.6**
ELIB Princess Elisa 84.59 187 *d*P **P** **20 45 33.7 +0.4**
comp=Z,31nm,0.9s
SVW2 Sparrevohn 85.43 11 P **P** **20 45 37.7 +0.5**
SVW2 pP 20 47 30.6 -12
COYC Coyhaique 85.68 138 P **P** **20 45 39.6 +0.7**
COYC IAmb IAmb 20 45 42.5
comp=Z,24nm,0.7s
TROLL Troll, Antarti 85.82 181 ⇓P **P** **20 45 39.8 +0.6**
comp=Z,1μm,0.6s
SNAA Sanae 86.14 179 ⇓P **P** **20 45 40.7 +0.1**
comp=Z,139nm,0.7s
SNAA Sanae 86.14 179 P **P** **20 45 40.5 -0.1**
comp=Z,5.3nm,0.7s,baz=198,slow=7.2,SNR=12
comp=Z,5.3nm,0.7s
VNA3 Neumayer Olymp 86.33 177 ⇓P **P** **20 45 41.7 +0.2**
comp=Z,24nm,0.8s
SUA Susitna One 86.73 13 P **P** **20 45 42.6 -0.8**
SUA IAmb IAmb 20 45 44.4
comp=Z,9.0nm,0.6s
VNA2 Neumayer--Watz 86.75 177 ⇓P **P** **20 45 43.9 +0.4**
comp=Z,13nm,0.7s,baz=179,slow=4.2
LL02 Futaleuf 86.94 136 P **P** **20 45 46.6 +1.6**
LL02 IAmb IAmb 20 45 48.3
comp=Z,17nm,0.9s
VNA1 Neumayer--Stat 86.99 177 ⇓P **P** **20 45 45.8 +1.2**
comp=Z,31nm,0.9s
SCM Sheep Creek Mo 87.82 15 IAmb IAmb 20 49 07.6
comp=Z,52nm,1.6s
SEY Seymchan 87.92 348 P **P** **20 45 49.3 +0.5**
comp=Z,3.6nm,0.8s,baz=195,slow=5.6,SNR=10
comp=Z,3.6nm,0.8s
CAST Castle Rocks 88.22 12 P **P** **20 45 49.4 -0.9**
TRF Thorofare Moun 88.61 13 P **P** **20 45 51.4 -0.8**
TRF IAmb IAmb 20 45 53.2
comp=Z,9.9nm,0.7s
RND Reindeer 88.86 13 P **P** **20 45 53.1 -0.2**
RND IAmb IAmb 20 45 54.9
comp=Z,12nm,0.9s
PLCA Paso Flores 88.97 134 P **P** **20 45 56.1 +1.5**
PLCA Paso Flores 88.97 134 P **P** **20 45 57.0 +2.5**
comp=Z,3.8nm,0.8s,baz=255,slow=3.9,SNR=8.6
comp=Z,3.8nm,0.8s
TXAR Lajitas Array 89.25 58 P **P** **20 45 58.4 +2.4**
comp=Z,1.3nm,0.9s,baz=209,slow=6.2,SNR=9.8
TXAR pP **pwP** **20 48 05.7 -0.3**
comp=Z,1.0nm,0.9s,baz=204,slow=8.9,SNR=5.1
comp=Z,1.3nm,0.9s
CM31 Chiang Mai Arr 89.45 290 P **P** **20 45 57.3 +0.3**
CM31 IAmb IAmb 20 46 00.2
comp=Z,9.3nm,0.9s
CMAR Chiang Mai Arr 89.45 290 P **P** **20 45 57.3 +0.3**
CMAR Chiang Mai Arr 89.45 290 P **P** **20 45 59.1 +2.2**
comp=Z,5.6nm,0.8s,baz=136,slow=3.2,SNR=31
CMAR PP **PP** **20 49 39.0 -0.6**
comp=Z,0.8nm,0.9s,baz=130,slow=7.7,SNR=4.0
comp=Z,5.6nm,0.8s
HHC Hu-ho-hao-te 89.70 315 *e*P **P** **20 46 00.4 +2.6**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,73nm,4.7s
PZH PanZhiHua 90.38 298 P **P** **20 46 02.2 +0.9**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,120nm,5.8s
ILAR Eielson Array 90.48 13 P **P** **20 46 00.2 -0.5**
comp=Z,0.6nm,0.7s,baz=248,slow=4.2,SNR=6.0
ILAR pP **pwP** **20 48 09.3 -1.0**
comp=Z,0.5nm,0.8s,baz=236,slow=6.0,SNR=3.1
comp=Z,0.6nm,0.7s
BILL Bilibino 90.79 355 P **P** **20 46 01.1 -0.9**
PDAR Pinedale Array 91.30 44 P **P** **20 46 05.2 -0.1**
comp=Z,0.5nm,0.7s,baz=222,slow=2.0,SNR=3.6
comp=Z,0.5nm,0.7s
LZH Lanzhou 92.83 308 *e*P **P** **20 46 13.3 +0.9**
LZH pP pwP 20 48 23.8 -0.4
LZH pmax pmax
comp=Z,19nm,1.1s
YAK Yakutsk 93.36 339 P **P** **20 46 12.8 -1.2**
YAK IAmb IAmb 20 48 26.1
comp=Z,15nm,1.0s
YAK Yakutsk 93.36 339 P **P** **20 46 13.6 -0.4**
comp=Z,6.8nm,0.7s,baz=104,slow=1.1,SNR=6.6
comp=Z,6.8nm,0.7s
PETF Flores 95.97 74 pP 20 48 26.6 -7.8
SONM Songino Array 96.28 319 P **P** **20 46 27.4 -0.3**
comp=Z,0.2nm,0.4s,baz=104,slow=6.1,SNR=2.4
comp=Z,0.2nm,0.4s
YKA Yellowknife Ar 98.83 25 P Pdif 20 46 38.1 -0.4
comp=Z,0.1nm,0.5s,baz=246,slow=6.0,SNR=2.1
YKA pP pP 20 48 47.6 +0.8
comp=Z,0.1nm,0.3s,baz=248,slow=4.6,SNR=1.5
comp=Z,0.1nm,0.5s
ZALV Zelenovo Beam 111.09 321 PKiKP **PKiKP** **20 51 27.8 -0.6**
comp=Z,1.5nm,0.6s,baz=248,slow=0.1,SNR=8.8
MKAR Makanchi Array 111.48 313 PKiKP **PKiKP** **20 51 28.9 -0.5**
comp=Z,1.0nm,0.5s,baz=208,slow=1.2,SNR=19
MKAR PKKPbc **PKKPbc** **21 02 27.1 +0.4**
comp=Z,1.1nm,0.7s,baz=269,slow=4.0,SNR=9.6
KURBB Kurchatov Arra 114.49 317 PKP PKPdf 20 51 34.5 -0.6
comp=Z,1.7nm,0.6s,baz=112,slow=1.8,SNR=13
KURBB PKKPbc **PKKPbc** **21 02 16.8 0.0**
comp=Z,0.9nm,0.9s,baz=282,slow=4.1,SNR=5.8
BTK Batken 118.83 304 **PKPdf** **20 51 43.2 -0.7**
KK31 Karatay Array 119.33 308 PKPdf **PKPdf** **20 51 43.9 -0.7**
KKAR Karatay Array 119.33 308 PKPdf **PKPdf** **20 51 43.5 -1.2**
KKAR Karatay Array 119.33 308 PKPdf **PKPdf** **20 51 44.1 -0.6**
KBL Kabul 119.56 298 PKPdf **PKPdf** **20 51 45.4 -0.3**
BVAR Borovoye Array 119.62 319 PKP **PKPdf** **20 51 44.8 -0.1**
comp=Z,4.7nm,0.4s,baz=111,slow=2.1,SNR=24
SPITS Spitsbergen Ar 123.67 356 PKP **PKiKP** **20 51 52.2 -0.1**
comp=Z,11nm,0.8s,baz=145,slow=4.8,SNR=8.3
BOSA Boshof 123.94 206 PKP **PKPdf** **20 51 53.7 -0.5**
comp=Z,5.6nm,1.0s,baz=174,slow=6.4,SNR=4.1
ARU Arti 125.95 324 PKPdf **PKPdf** **20 51 57.1 +0.2**
ABKAR Akbulak array 126.49 315 PKPdf **PKPdf** **20 51 58.0 -0.1**
GEYT Alibeck 128.61 301 PKP **PKPdf** **20 52 03.0 +0.3**
comp=Z,2.7nm,0.6s,baz=111,slow=1.7,SNR=8.6
ARCES ARCESS Array B 130.53 349 PKP **PKPdf** **20 52 04.2 -1.1**
comp=Z,1.7nm,0.6s,baz=71,slow=2.0,SNR=13
ARCES SKPbc **SKPbc** **20 54 34.0 -0.7**
comp=Z,8.9nm,1.0s,baz=356,slow=8.5,SNR=5.3
LSZ Lusaka 133.75 218 **PKPdf** **20 52 13.4 +0.3**
FINES FINESS Array B 137.18 342 PKhKP PKPpre 20 52 06.5
comp=Z,1.5nm,0.7s,baz=67,slow=3.7,SNR=7.7
FINES PKP **PKPdf** **20 52 17.5 -0.4**
comp=Z,2.2nm,0.6s,baz=113,slow=3.0,SNR=9.5
FINES SKPbc **SKPbc** **20 54 56.8 +0.5**
comp=Z,3.1nm,1.0s,baz=102,slow=6.6,SNR=4.4
KMBO Kilima Mbogo 137.22 242 **PKPdf** **20 52 20.3 +0.5**
KMBO Kilima Mbogo 137.22 242 PKP **PKiKP** **20 52 21.2 -0.6**
comp=Z,2.2nm,0.7s,baz=61,slow=4.5,SNR=7.3
NB2 NORSAR Subarra 140.68 352 PKP **PKPdf** **20 52 19.2 -5.2**
comp=Z,1.3nm,0.6s,baz=16,slow=3.2
NOA NORSAR Array B 140.68 352 PKhKP PKPpre 20 52 17.9
comp=Z,0.5nm,0.5s,baz=1.5,slow=1.6,SNR=7.4
NOA PKP **PKPdf** **20 52 25.5 +1.1**
comp=Z,1.0nm,0.7s,baz=19,slow=4.1,SNR=3.7
GURO Guroymak-BITLI 141.12 304 PKPdf **PKPdf** **20 52 22.8 -3.2**
HFS Hagfors 141.18 350 PKhKP PKPpre 20 52 20.0
comp=Z,4.8nm,0.4s,baz=72,slow=4.8,SNR=61
PABE Paberze 142.62 338 PKPdf **PKPdf** **20 52 26.5 -1.4**
MBAR Mbarara 142.70 236 **PKPdf** **20 52 28.1 -1.5**
ARPR Arapgir-MALATY 143.78 306 **PKPdf** **20 52 30.6 -0.1**
AKASG Malin Array Be 143.96 329 PKPbc 20 52 29.1 -0.8
AKASG Malin Array Be 143.96 329 PKP **PKPbc** 20 52 29.6 -0.3
comp=Z,6.2nm,0.4s,baz=43,slow=4.0,SNR=49
AKASG SKPbc **SKiKP** **20 55 16.4 +1.4**
comp=Z,2.1nm,0.8s,baz=43,slow=1.5,SNR=5.0
AKBB Malin Array Si 143.96 329 PKPbc 20 52 29.3 -0.6
KIEV Kiev 143.97 329 PKPbc 20 52 29.1 -0.8
SUW Suwalki 144.09 337 *e*PKP **PKPdf** **20 52 30.5 +0.1**
SUW Suwalki 144.09 337 PKPbc 20 52 30.1 -0.1
GAZ Gaziantep 145.15 303 **PKPab** **20 52 34.9 -0.3**
SORM Soroca 146.05 326 ⇓P **PKPbc** **20 52 36.4 +0.3**
PURM Purcari 146.20 323 ⇓P **PKPbc** **20 52 37.2 +0.6**
MILM Milestii Mici 146.56 324 ⇓*i*PKP **PKPbc** **20 52 37.4 -0.2**
comp=Z,20nm,0.8s
MILM Milestii Mici 146.56 324 ⇑P **PKPbc** **20 52 37.9 +0.3**
BEL Belsk 146.70 337 *e*PKP **PKPbc** **20 52 38.8 +1.0**
EKA Eskdalemuir Ar 147.01 4 PKPbc **PKPbc** **20 52 38.5 0.0**
comp=Z,4.1nm,0.6s,baz=360,slow=2.3,SNR=24
EKA pPKPbc **pPKPbc** **20 54 51.3 -1.0**
comp=Z,1.4nm,0.7s,baz=27,slow=1.7,SNR=2.7
BR131 Keskin Array S 147.02 309 **PKPbc** **20 52 39.3 0.0**
BRTR Keskin Array B 147.02 309 PKPdf **PKPdf** **20 52 35.8 -0.4**
BRTR **PKPbc** **20 52 39.1 -0.2**
BRTR Keskin Array B 147.02 309 PKPbc **PKPbc** **20 52 39.6 +0.3**
comp=Z,4.9nm,0.6s,baz=142,slow=5.0,SNR=37
VASR Vaslui 147.28 324 ⇑P **PKiKP** **20 52 40.4 -0.7**
BALJ Balqa 147.43 295 **PKiKP** **20 52 41.2 -0.7**
MMAI Mount Meron Ar 147.48 297 PKPbc **PKiKP** **20 52 41.9 -0.2**
comp=Z,7.1nm,0.3s,baz=74,slow=7.2,SNR=72
MMAI pPKPbc **pPKPab** **20 54 56.6 +2.5**
comp=Z,2.0nm,0.5s,baz=81,slow=5.2,SNR=4.5
ANTO Ankara 147.57 310 ⇓P **PKPbc** **20 52 41.1 +0.6**
ANTO Ankara 147.57 310 **PKPbc** **20 52 40.5 -0.1**
PRAR RASCA 147.64 327 ⇑P **PKPbc** **20 52 40.5 +0.1**
BSEG Bad Segeberg 147.66 349 *e*PKPbc **PKiKP** **20 52 41.2 -0.4**
baz=19,slow=2.3
BSEG *e*PKPab **PKPab** **20 52 45.3 +0.7**
baz=12,slow=3.8
BSEG *ep*PKPbc **pPKPab** **20 54 59.1 +4.8**
KWP Kalwaria Pacla 147.68 333 *e*PKP **PKiKP** **20 52 41.4 -0.5**
KWP Kalwaria Pacla 147.68 333 **PKPbc** **20 52 41.0 +0.5**
HLG Helgoland 147.79 352 *e*PKPbc **PKiKP** **20 52 41.3 -0.6**
baz=19,slow=2.3
GHRR 147.85 324 ⇑P **PKiKP** **20 52 42.5 +0.2**
BUR08 Bucovina Ar. S 147.97 328 **PKPbc** **20 52 42.0 +0.6**
CFR Carcaliu 147.97 322 ⇑P **PKiKP** **20 52 42.0 -0.6**
TESR Tescani 147.98 325 ⇑P **PKPbc** **20 52 41.8 +0.5**
BURAR Bucovina Array 147.98 328 ⇑P **PKiKP** **20 52 43.4 +0.7**
BURAR Bucovina Array 147.98 328 PKPdf **PKPdf** **20 52 38.5 +1.1**
BURAR PKPbc **PKiKP** **20 52 42.1 -0.6**
TPGR Topolog 148.00 321 ⇑P **PKiKP** **20 52 42.2 -0.5**
PANC Panciu 148.11 324 ⇑P **PKiKP** **20 52 42.9 0.0**
TIRR Tirgusor 148.23 320 ⇑P **PKiKP** **20 52 42.7 -0.4**
RUE Ruedersdorf 148.29 344 *e*PKPbc **PKiKP** **20 52 42.9 -0.1**
baz=19,slow=2.3
VRI Vrincioaia 148.34 324 ⇑P **PKPbc** **20 52 42.8 +0.5**
HARR Harsova 148.38 321 ⇑P **PKiKP** **20 52 43.4 0.0**
OJC Ojcow 148.38 336 *e*PKP **PKiKP** **20 52 42.8 -0.5**
MFTR Murfatlar 148.38 320 ⇓P **PKiKP** **20 52 43.9 +0.5**
KOLS Kolonicke sedl 148.39 332 *e*PKP **PKiKP** **20 52 43.8 +0.4**
PLOR Plostina 148.40 324 ⇓P **PKPbc** **20 52 42.7 +0.3**
MDUB Mudurnu 148.44 312 **PKPbc** **20 52 42.6 -0.2**
MANR Mangalia 148.49 319 ⇑P **PKiKP** **20 52 43.9 +0.2**
TURR Turia 148.61 325 ⇑P **PKiKP** **20 52 44.2 +0.2**
COVR Voineasa-Covas 148.64 324 ⇓P **PKiKP** **20 52 43.2 +0.2**
OZUR 148.70 325 ⇓P **PKiKP** **20 52 43.7 -0.5**
CRVS Cervenica-Dubn 148.76 333 *e*PKP **PKiKP** **20 52 44.5 +0.3**
ARCR ARCALIA 148.77 328 ⇑P **PKiKP** **20 52 44.6 +0.4**
NIE Niedzica 148.83 335 *e*PKP **PKiKP** **20 52 44.7 +0.4**
DOPR Dopca 149.00 325 ⇓P **PKiKP** **20 52 45.0 +0.2**
MLR Muntele Rosu 149.01 324 ⇓P **PKiKP** **20 52 44.8 -0.2**
MLR Muntele Rosu 149.01 324 **PKPbc** **20 52 43.8 -0.3**
FLTG Flechtingen 149.01 347 *e*PKPbc **PKiKP** **20 52 44.3 -0.1**
baz=19,slow=2.3
FLTG *e*PKPab **PKPab** **20 52 50.5 +0.3**
baz=12,slow=3.8
KSP Ksiaz 149.06 340 *e*PKP **PKiKP** **20 52 45.0 +0.3**
NRDL Niedersach Rie 149.07 349 *e*PKPbc **PKiKP** **20 52 44.6 +0.1**
baz=19,slow=2.3
OKC Ostrava-Krasne 149.30 337⇑*e*PKP **PKiKP** **20 52 45.4 +0.2**
ASSE Asse, Remlinge 149.31 348 *e*PKPbc **PKiKP** **20 52 45.7 +0.7**
baz=19,slow=2.3
OSTC Ostas 149.33 340⇑*e*PKP **PKiKP** **20 52 45.6 +0.3**
CHVC Chvalec 149.35 340⇑*e*PKP **PKiKP** **20 52 45.6 +0.3**
LANS Liptovska Anna 149.37 335 *e*PKP **PKiKP** **20 52 46.4 +1.0**
CJR Cluj-Napoca 149.40 328 ⇑P **PKiKP** **20 52 45.8 +0.2**
MESR Meseneni 149.40 329 ⇓P **PKiKP** **20 52 45.8 +0.3**
DPC Dobruska-Polom 149.48 340⇑*e*PKP **PKiKP** **20 52 46.1 +0.5**
VOIR 149.52 325 ⇑P **PKPbc** **20 52 45.4 +0.2**
CLL Collm 149.56 344 ⇓*i*PKPbc **PKiKP** **20 52 45.6 -0.1**
comp=Z,36nm,0.8s
CLL comp=Z,8.0nm,0.7s *i* PKPab **PKPab** **20 52 52.7 +0.1**
CLL *e*(pPKPab) 20 54 59.0
CLL Collm 149.56 344 *e*PKPbc **PKiKP** **20 52 45.8 +0.2**
baz=19,slow=2.3
MORC Moravsky Berou 149.56 338 ⇓P **PKiKP** **20 52 46.3 +0.5**
MORC Moravsky Berou 149.56 338 *e*PKP **PKiKP** **20 52 45.9 +0.1**
KRLC Kraliky 149.57 339⇑*e*PKP **PKiKP** **20 52 46.2 +0.4**
KRLC *ep*PKP **pPKPab** **20 55 05.0 +3.1**
IBBN Ibbenburen 149.63 351 *e*PKPbc **PKiKP** **20 52 46.1 +0.3**
baz=19,slow=2.3
IBBN *ep*PKPbc **pPKPab** **20 55 03.7 +1.5**
CLZ Clausthal 149.64 348 *e*PKPbc **PKiKP** **20 52 46.2 +0.3**
baz=19,slow=2.3
MARR Marisel-Cluj 149.66 328 ⇑P **PKiKP** **20 52 46.3 +0.1**
BRG Berggiesshubel 149.71 343 *i* PKP **PKiKP** **20 52 46.5 +0.5**
BRG Amp 20 52 47.1
comp=Z,23nm,0.8s
BRG Berggiesshubel 149.71 343 Amp 20 55 05.4
comp=Z,8.6nm,1.1s
BRG Berggiesshubel 149.71 343 *e*PKPbc **PKiKP** **20 52 46.5 +0.5**
baz=19,slow=2.3
BRG *ep*PKPbc **pPKPab** **20 55 04.2 +1.8**
BRG Berggiesshubel 149.71 343 P **P** **20 52 54.0 -0.6**
BRG Berggiesshubel 149.71 343 Amp 20 52 54.6
comp=Z,7.0nm,0.7s
BRG Berggiesshubel 149.71 343 pPKP 20 55 04.0
DRGR 149.78 329 ⇑P **PKiKP** **20 52 46.1 -0.3**
ARR Arges 149.79 325 ⇓P **PKiKP** **20 52 47.9 +1.4**
MAUC Maruska 149.81 337⇑*e*PKP **PKiKP** **20 52 47.1 +0.8**
PVCC Panska Ves 149.85 342⇑*e*PKP **PKiKP** **20 52 46.9 +0.6**
NEUB Neuenburg 149.94 346 *e*PKPbc **PKiKP** **20 52 46.9 +0.5**
baz=19,slow=2.3
RICC Richard 149.97 343⇑*e*PKP **PKiKP** **20 52 47.2 +0.7**
GTTG Gottingen 150.00 348 *e*PKPbc **PKiKP** **20 52 47.2 +0.6**
baz=19,slow=2.3
HSKC Hora Svate Kat 150.09 343⇑*e*PKP **PKiKP** **20 52 47.0 +0.1**
HUMR Humele 150.15 323 ⇑P **PKPbc** **20 52 46.7 +0.1**
LOT Lotru 150.19 326 ⇑P **PKPbc** **20 52 47.0 +0.2**
VRAC Vranov 150.29 339 *e*PKP **PKiKP** **20 52 47.4 +0.1**
JAVC Velka Javorina 150.29 337 *e*PKP **PKiKP** **20 52 48.6 +1.2**
JAVC *e* 20 55 07.3
MOX Moxa 150.51 346 *e*PKPbc **PKiKP** **20 52 48.0 +0.3**
baz=19,slow=2.3
MOX *e*PKPab **PKPab** **20 52 57.1 +0.5**
baz=12,slow=3.8
TANN Tannenbergstha 150.52 344 *e*PKPbc **PKiKP** **20 52 48.3 +0.6**
baz=19,slow=2.3
BUG Bochum--Univer 150.55 351 *ep*PKPbc pPKPbc 20 55 04.7 +2.8
KRUC Moravsky 150.57 338 *e*PKP **PKiKP** **20 52 48.0 +0.2**
KRUC *e* 20 55 05.3
KASTN Kahler Asten 150.61 350 *e*PKPbc **PKiKP** **20 52 48.4 +0.5**
baz=19,slow=2.3
KASTN *e*PKPab **PKPab** **20 52 57.0 0.0**
baz=12,slow=3.8
KASTN *ep*PKPbc **pPKPab** **20 55 06.4 +0.3**

ELND	**Elena**	**150.62**	**320**	⇑P		**PKiKP**	**20 52 48.6**	**+0.5**
NKC	**Novy Kostel**	**150.69**	**344**⇑	*e*PKP		**PKiKP**	**20 52 48.7**	**+0.6**
UBBA	**Unterbreizbach**	**150.69**	**348**	*e*PKPbc		**PKiKP**	**20 52 48.3**	**+0.4**
	baz=19,slow=2.3							
UBBA				*e*PKPab		**PKPab**	**20 52 56.3**	**-0.9**
	baz=12,slow=3.8							
UBBA				*ep*PKPbc		**pPKPab**	**20 55 06.8**	**+0.6**
SURR	**Surduc**	**150.80**	**328**	⇑P		**PKiKP**	**20 52 48.6**	**+0.2**
MODS	**Modra-Piesok**	**150.84**	**337**	*e*PKP		**PKiKP**	**20 52 49.4**	**+0.9**
ELL	**Elmali**	**150.84**	**306**			**PKPbc**	**20 52 47.9**	**-0.8**
SRO	**Srobarova**	**150.91**	**335**	*e*PKP		**PKiKP**	**20 52 49.4**	**+0.8**
ZVC	**Zvikov**	**150.93**	**341**⇑	*e*PKP		**PKiKP**	**20 52 48.9**	**+0.3**
ZVC				*e*PKPAB		**PKPab**	**20 52 59.6**	**+1.2**
ZVC				*ep*PKP		**pPKPab**	**20 55 07.2**	**-0.1**
MANZ	**Manzenberg**	**151.00**	**344**	*e*PKPbc		**PKiKP**	**20 52 49.4**	**+0.7**
	baz=19,slow=2.3							
PLVB	**Pleven**	**151.07**	**322**	⇑P		**PKiKP**	**20 52 49.7**	**+0.7**
BZS	**Buzias**	**151.15**	**328**	⇑P		**PKiKP**	**20 52 49.3**	**+0.1**
ROTZ	**Rotzenmuhle**	**151.18**	**344**	*e*PKPbc		**PKiKP**	**20 52 49.6**	**+0.5**
	baz=19,slow=2.3							
ROTZ				*ep*PKPbc		**pPKPab**	**20 55 08.2**	**-0.2**
HERR	**Herculane**	**151.27**	**326**	⇑P		**PKiKP**	**20 52 49.5**	**0.0**
KHC	**Kasperske Hory**	**151.39**	**342**	*e*PKPDF		**PKPdf**	**20 52 42.1**	**-0.5**
KHC				⇑*e*PKP		**PKiKP**	**20 52 49.9**	**+0.3**
KHC				*e*PKPAB		**PKPab**	**20 53 00.8**	**+0.4**
KHC				*ep*PKP		**pPKPab**	**20 55 09.0**	**-0.3**
CKRC	**Cesky Krumlov**	**151.45**	**341**⇑	*e*PKP		**PKiKP**	**20 52 50.4**	**+0.7**
GRF	**Grafenberg Arr**	**151.49**	**345**	*e*PKPab		**PKPab**	**20 53 00.8**	**+0.1**
	baz=12,slow=3.8							
MEM	**Membach**	**151.53**	**353**	*d*PKPdf		**PKPdf**	**20 52 42.8**	**+0.1**
MEM				*d*PKP		**PKiKP**	**20 52 50.1**	**+0.3**
BTNL	**Ternell**	**151.53**	**352**	*d*PKiKP		**PKiKP**	**20 52 49.9**	**+0.1**
TNS	**Taunus Mts**	**151.55**	**349**	*e*PKPbc		**PKiKP**	**20 52 50.4**	**+0.5**
	baz=19,slow=2.3							
WET	**Wettzell**	**151.57**	**343**	*e*PKPab		**PKPab**	**20 53 02.0**	**+0.8**
	baz=12,slow=3.8							
WET				*ep*PKPbc		**pPKPab**	**20 55 08.2**	**-1.9**
BSTI	**Sart Tilman**	**151.60**	**353**	*d*PKiKP		**PKiKP**	**20 52 50.3**	**+0.4**
BSTI				*d*PKP		**PKPab**	**20 53 01.6**	**+0.4**
GEC2	**GERESS Array S**	**151.61**	**342**	*e*PKPbc		**PKiKP**	**20 52 50.4**	**+0.3**
	baz=19,slow=2.3							
GEC2				*ep*PKPbc		**pPKPab**	**20 55 10.0**	**-0.3**
GERES	**GERESS Array B**	**151.61**	**342**	PKPbc		**PKPbc**	**20 52 50.0**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=29,slow=3.0,SNR=14							
GERES				pPKPbc		**pPKPab**	**20 55 07.5**	**-2.8**
	comp=Z,2.9nm,0.9s,baz=19,slow=4.5,SNR=7.0							
CONA	**Conrad Observa**	**151.72**	**338**	*e*PKP		**PKiKP**	**20 52 50.5**	**+0.1**
	comp=Z,5.5nm,0.8s							
CONA				*ep*PKP		**pPKPbc**	**20 55 03.0**	**-1.7**
	comp=Z,9.4nm,1.2s							
RONA	**Rosalia, Austr**	**151.76**	**337**	*i* PKP		**PKiKP**	**20 52 51.1**	**+0.7**
	comp=Z,14nm,1.5s							
RONA				*ep*PKP		**pPKPbc**	**20 55 05.4**	**+0.7**
	comp=Z,11nm,1.2s							
BMRD	**Maredsous**	**151.96**	**354**	*d*PKP		**PKiKP**	**20 52 51.0**	**+0.4**
BLKB	**Belogradchik**	**152.00**	**324**	⇑P		**PKiKP**	**20 52 51.5**	**+0.4**
MORH	**Mrgy, Hungar**	**152.05**	**333**	⇑P		**PKiKP**	**20 52 51.4**	**+0.4**
MOA	**Molln**	**152.32**	**340**	*i* PKP		**PKPbc**	**20 52 51.0**	**-0.4**
	comp=Z,7.8nm,1.2s							
MOA				*ep*PKP		**pPKPbc**	**20 55 08.0**	**+1.8**
	comp=Z,9.4nm,1.4s							
FRGS	**Fruska Gora**	**152.35**	**330**	⇑P		**PKiKP**	**20 52 52.2**	**+0.5**
ARSA	**Arzberg**	**152.42**	**338**	*i* PKP		**PKiKP**	**20 52 51.8**	**0.0**
	comp=Z,6.1nm,1.1s							
ARSA				*ep*PKP		**pPKPbc**	**20 55 07.0**	**+0.7**
	comp=Z,11nm,1.6s							
WLF	**Walferdange**	**152.44**	**352**	*d*PKiKP		**PKiKP**	**20 52 51.7**	**0.0**
BIOA	**Bad Ischl, Aus**	**152.66**	**340**	*e*PKP		**PKPab**	**20 53 06.4**	**+0.6**
	comp=Z,6.6nm,0.9s							
BIOA				*ep*PKP		**pPKPbc**	**20 55 08.8**	**+1.9**
	comp=Z,6.1nm,1.3s							
STU	**Stuttgart**	**152.80**	**347**	*e*PKPbc		**PKiKP**	**20 52 53.5**	**+1.0**
	baz=19,slow=2.3							
FUR	**Furstenfeldbru**	**152.89**	**344**	*e*PKPab		**PKPab**	**20 53 07.5**	**+0.7**
	baz=12,slow=3.8							
SOKA	**Soboth**	**153.08**	**338**	*e*PKiKP		**PKiKP**	**20 52 55.7**	**+2.4**
	comp=Z,0.4nm,0.3s							
SOKA				*ep*PKP		**pPKPab**	**20 55 12.3**	**-4.1**
	comp=Z,2.6nm,0.8s							
LESA	**Schwarzleotal**	**153.19**	**341**	*e*PKP		**PKPab**	**20 53 09.0**	**+0.9**
	comp=Z,6.6nm,1.4s							
BFO	**Black Forest**	**153.39**	**348**	*e*PKPbc		**PKiKP**	**20 52 54.3**	**+0.6**
	baz=19,slow=2.3							
BFO				*ep*PKPbc		**pPKPab**	**20 55 12.4**	**-5.2**
WATA	**Walderalm**	**153.58**	**343**	*ep*PKP		pPKPdf	20 55 14.0	+12
	comp=Z,10.0nm,1.8s							
WTTA	**Wattenberg**	**153.63**	**343**	*e*PKP		**PKPab**	**20 53 10.5**	**+0.3**
	comp=Z,11nm,1.3s							
WTTA				*i* pPKP		**pPKPab**	**20 55 14.5**	**-4.4**
	comp=Z,5.4nm,0.9s							
UBR	**Ueberruh**	**153.63**	**345**	*e*PKPbc		**PKiKP**	**20 52 55.1**	**+0.7**
	baz=19,slow=2.3							
UBR				*e*PKPab		**PKPab**	**20 53 08.0**	**-2.0**
	baz=12,slow=3.8							
UBR				*ep*PKPbc		**pPKPbc**	**20 55 12.4**	**+3.2**
RETA	**Reutte**	**153.65**	**344**	*ep*PKP		pPKPdf	20 55 14.0	+12
	comp=Z,6.7nm,1.2s							
MOTA	**Moosalm**	**153.70**	**344**	*e*PKP		**PKPdf**	**20 52 44.9**	**-1.3**
	comp=Z,6.3nm,1.4s							
MOTA				*ep*PKP		**pPKPab**	**20 55 14.8**	**-4.2**
	comp=Z,7.1nm,1.2s							
SQTA	**Sankt Quirin**	**153.78**	**343**	*e*PKP		**PKPdf**	**20 52 44.5**	**-1.7**
	comp=Z,7.8nm,1.5s							
SQTA				*i* pPKP		**pPKPab**	**20 55 14.8**	**-4.6**
	comp=Z,7.8nm,1.2s							
ABTA	**Abfaltersbach**	**153.85**	**341**	*e*PKP		**PKPdf**	**20 52 46.0**	**-0.3**
	comp=Z,8.9nm,1.1s							
ABTA				*ep*PKP		**pPKPbc**	**20 55 13.7**	**+4.0**
	comp=Z,12nm,1.2s							
DAVA	**Damuels**	**154.06**	**345**	*ep*PKP		pPKPdf	20 55 14.2	+11
	comp=Z,9.1nm,1.1s							
FETA	**Feichten**	**154.09**	**344**	*e*PKP		**PKPdf**	**20 52 47.0**	**+0.3**
	comp=Z,5.4nm,0.9s							
FETA				*ep*PKP		**pPKPbc**	**20 55 10.0**	**-0.5**
	comp=Z,6.5nm,1.0s							
FUORN	**Ofenpass-Fuorn**	**154.59**	**344**	PKPdf		**PKPdf**	**20 52 46.6**	**-0.9**
FUORN				PKPab		**PKPab**	**20 53 14.3**	**-0.1**
ESDC	**Sonseca Array**	**162.38**	**11**	PKPab		**PKPab**	**20 53 48.5**	**+0.3**
	comp=Z,1.2nm,1.0s,baz=347,slow=4.9,SNR=3.1							
LIC	**Lamto**	**163.04**	**161**⇓	*i*PKP1		**PKPdf**	**20 52 57.8**	**-0.2**
	comp=Z,18nm,0.9s							
LIC	**Lamto**	**163.04**	**161**⇑	*i*PKP2		**PKPab**	**20 53 53.3**	**+1.7**
	comp=Z,43nm,0.7s							
KIC	**Kosan Boka**	**163.26**	**162**⇑	*i*PKP1		**PKPdf**	**20 52 58.4**	**+0.2**
	comp=Z,22nm,0.9s							
KIC	**Kosan Boka**	**163.26**	**162**⇑	*i*PKP2		**PKPab**	**20 53 54.1**	**+1.5**
	comp=Z,33nm,0.8s							
TIC	**Toumodi**	**163.44**	**160**⇑	*i*PKP1		**PKPdf**	**20 52 57.8**	**-0.6**
	comp=Z,3.3nm,0.2s							
TIC	**Toumodi**	**163.44**	**160**⇑	*i*PKP2		**PKPab**	**20 53 54.9**	**+1.5**
	comp=Z,2.9nm,0.2s							
DBIC	**Dimbokro**	**163.52**	**161**	PKP		**PKPdf**	**20 52 58.4**	**0.0**
	comp=Z,6.0nm,0.9s,baz=151,slow=1.3,SNR=5.6							
DBIC				PKPab		**PKPab**	**20 53 54.7**	**+1.0**
	comp=Z,8.8nm,0.9s,baz=197,slow=6.8,SNR=8.1							
TOA0	**Torodi Ar. Sit**	**170.72**	**187**			**PKPdf**	**20 53 01.7**	**-1.9**
TOA0				PKPab		**PKPab**	**20 54 25.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**170.72**	**187**	PKPdf		**PKPdf**	**20 53 01.7**	**-1.9**
TORD				PKPab		**PKPab**	**20 54 25.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**170.72**	**187**	PKP		**PKPdf**	**20 53 02.3**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=98,slow=4.1,SNR=13							
TORD				PKPab		**PKPab**	**20 54 26.1**	**+0.6**
	comp=Z,5.8nm,0.8s,baz=167,slow=2.6,SNR=21							
TORD				pPKPab		**pPKPab**	**20 56 38.3**	**+4.9**
	comp=Z,1.2nm,1.2s,baz=188,slow=2.7,SNR=3.7							
TORD				PP		**PP**	**20 58 15.1**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=160,slow=3.6,SNR=9.0							

*NEIC **02** 20:38:57.9±1.8, 43°.72N±0°.06×105°.28W±0°.09, h0km±1km, ML3.2/77, Error ellipse: s-maj=12.1km s-min=8.9km az=64.0*
*IDC **02** 20:39:01.2±1.9, 43°.71N×105°.58W, h0km, mb3.1/1, mbtmp3.1/4, ML3.0/3, MS3.1/5, Error ellipse: s-maj=41.4km s-min=9.3km az=149.0*

ISC 02 20:38:59.2±0.9, 43°.62N±0°.05×105°.35W±0°.05, h0km, n52, σ1$40/47, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.08**	**62**		**Pg**	**20 39 19.6**	**-0.3**
K22A	**Casper**	**1.29**	**222**		**Pg**	**20 39 23.1**	**-0.8**
K22A				IAML		20 39 52.6	
	comp=E,297nm,0.7s						
PHWY	**Pilot Hill**	**2.31**	**182**		**Pn**	**20 39 39.7**	**+0.9**
RWWY	**Rawlins**	**2.36**	**216**		**Pb**	**20 39 41.7**	**-1.0**
RWWY				IAML		20 40 21.5	
	comp=E,169nm,0.9s						
N23A	**Red Feather La**	**2.75**	**189**		**Pn**	**20 39 46.5**	**+1.7**
N23A				IAML		20 40 31.3	
	comp=E,119nm,0.5s						
BRIGG	**Briggsdale**	**3.13**	**165**	Pn	**Pn**	**20 39 49.9**	**0.0**
LAO	**LASA Array**	**3.13**	**349**	Pn	**Pn**	**20 39 48.3**	**-1.6**
LAO				IAML		20 40 51.6	
	comp=E,87nm,1.0s						
LAO				IAML		20 41 12.9	
	comp=E,81nm,2.4s						
RLMT	**Red Lodge**	**3.19**	**300**		**Pn**	**20 39 50.9**	**+0.1**
RLMT				IAML		20 41 35.3	
	comp=E,46nm,2.2s						
RLMT				IAML		20 41 49.7	
	comp=E,46nm,4.6s						
BW06	**Boulder Array**	**3.19**	**256**		**Pn**	**20 39 52.2**	**+1.5**
PD31	**Pinedale Array**	**3.19**	**256**		**Pn**	**20 39 52.5**	**+1.7**
PDAR	**Pinedale Array**	**3.19**	**256**		**Pn**	**20 39 52.6**	**+1.8**
PDAR	**Pinedale Array**	**3.19**	**256**	Pn	**Pn**	**20 39 54.3**	**+3.5**
	comp=E,1.7nm,0.3s,baz=81,slow=18,SNR=28						
PDAR				Lg	Lg	20 40 36.1	
	comp=E,6.8nm,0.3s,baz=71,slow=31,SNR=14						
	comp=E,3.2nm,0.4s						
OGNE	**Ogallala**	**3.63**	**136**	Pn	**Pn**	**20 39 58.0**	**+1.3**
YMP	**Mirror Lake PI**	**3.63**	**290**		**Pn**	**20 39 56.3**	**-0.7**
YMP				IAML		20 41 11.5	
	comp=E,68nm,1.7s						
LKWY	**Lake**	**3.76**	**286**		**Pn**	**20 39 59.5**	**+0.9**
LKWY				IAML		20 42 07.0	
	comp=E,48nm,5.0s						
LKWY				IAML		20 42 24.2	
	comp=E,40nm,5.0s						
LOHW	**Long Hollow**	**3.81**	**272**		**Pn**	**20 39 59.9**	**+0.6**
LOHW				IAML		20 41 06.9	
	comp=E,27nm,1.4s						
ISCO	**Idaho Springs**	**3.82**	**183**		**Pn**	**20 40 01.3**	**+1.8**
H17A	**Grant Village**	**3.85**	**283**		**Pn**	**20 39 59.9**	**+0.1**
H17A				IAML		20 41 10.3	
	comp=E,25nm,1.9s						
H17A				IAML		20 41 14.1	
	comp=N,25nm,1.7s						
FLWY	**Flagg Ranch**	**3.90**	**279**		**Pn**	**20 40 02.5**	**+2.0**
FLWY				IAML		20 40 32.2	
	comp=N,36nm,1.5s						
FLWY				IAML		20 41 23.3	
	comp=N,47nm,2.4s						
MOOW	**Moose Ponds**	**3.91**	**274**		**Pn**	**20 40 01.6**	**+0.9**
REDW	**Red Top Meadow**	**4.01**	**268**		**Pn**	**20 40 02.6**	**+0.6**
IMW	**Indian Meadow**	**4.06**	**276**		**Pn**	**20 40 04.8**	**+2.1**
IMW				IAML		20 40 37.4	
	comp=N,26nm,0.7s						
IMW				IAML		20 41 17.9	
	comp=N,25nm,1.7s						
TPAW	**Teton Pass**	**4.07**	**270**		**Pn**	**20 40 03.8**	**+0.8**
TPAW				IAML		20 41 25.7	
	comp=N,37nm,0.8s						
TPAW				IAML		20 41 25.8	
	comp=N,29nm,1.6s						
O20A	**White River Ci**	**4.09**	**213**		**Pn**	**20 40 05.7**	**+2.6**
YHH	**Holmes Hill**	**4.12**	**288**		**Pn**	**20 40 04.5**	**+0.9**
AHID	**Auburn Hatcher**	**4.29**	**261**		**Pn**	**20 40 05.1**	**-0.7**
AHID				IAML		20 41 26.4	
	comp=N,42nm,0.8s						
AHID				IAML		20 41 53.1	
	comp=N,30nm,1.5s						
K30B	**Basset**	**4.30**	**101**		**Pn**	**20 40 06.4**	**+0.5**
RDMU	**Red Mountain**	**4.37**	**227**		**Pn**	**20 40 05.3**	**-1.7**
RDMU				IAML		20 41 26.8	
	comp=E,33nm,1.0s						
RDMU				IAML		20 43 04.7	
	comp=N,28nm,4.6s						
SMCO	**Snowmass**	**4.60**	**196**		**Pn**	**20 40 08.3**	**-2.0**
Q24A	**Divide**	**4.65**	**178**		**Pn**	**20 40 10.0**	**-0.9**
BOZ	**Bozeman (W)**	**4.90**	**296**		**Pn**	**20 40 15.6**	**+1.4**
BOZ				IAML		20 42 40.8	
	comp=N,18nm,4.6s						
BOZ				IAML		20 43 15.4	
	comp=N,19nm,4.5s						
DGMT	**Dagmar**	**4.92**	**9**	Pn	**Pn**	**20 40 12.9**	**-1.5**
HWUT	**Hardware Ranch**	**5.00**	**248**		**Pn**	**20 40 16.8**	**+1.2**
KSCO	**Kaye Shedlock'**	**5.04**	**155**		**Pn**	**20 40 16.6**	**+0.5**
BSUT	**Blindstream Ca**	**5.07**	**234**		**Pn**	**20 40 16.9**	**+0.2**
BSUT				IAML		20 41 59.1	
	comp=N,18nm,1.8s						
BSUT				IAML		20 43 17.4	
	comp=E,20nm,4.5s						
EGMT	**Eagleton**	**5.38**	**327**		**Pn**	**20 40 20.4**	**-0.3**
SPUT	**South Promonto**	**5.73**	**249**		**Pn**	**20 40 23.9**	**-1.8**
HVU	**Hansel Valley**	**5.77**	**254**		**Pn**	**20 40 24.6**	**-1.6**
P17A	**Butcher Ranch,**	**5.78**	**226**	Pn	**Pn**	**20 40 23.3**	**-3.1**
SRU	**San Rafael Swe**	**5.95**	**223**		**Pn**	**20 40 29.2**	**+0.5**
S22A	**4UR Ranch, Cre**	**5.97**	**191**		**Pn**	**20 40 29.2**	**+0.1**
TMUT	**Trail Mountain**	**6.16**	**228**		**Pn**	**20 40 31.8**	**+0.2**
HLID	**Hailey**	**6.58**	**273**		**Pn**	**20 40 38.6**	**+1.3**
HMU	**Henry Mountain**	**6.99**	**218**	Pn	**Pn**	**20 40 43.4**	**+0.4**
ELK	**Elko**	**7.88**	**252**	LR	LR	20 44 15.9	
	comp=E,142nm,18.3s,baz=70,slow=41						
I10CA	**LAC DU BONNET**	**9.17**	**41**	I	I	21 28 40.0	
	baz=223,slow=329,SNR=1.6						
ULM	**Lac du Bonnet**	**9.27**	**41**	Pn	**Pn**	**20 41 14.2**	**+0.1**
	comp=E,0.5nm,0.3s,baz=237,slow=10,SNR=4.8						
ULM				Lg	Lg	20 43 48.6	
	comp=E,0.2nm,0.3s,baz=225,slow=1.4,SNR=2.1						
ULM				LR	LR	20 44 30.3	
	comp=E,48nm,21.3s,baz=212,slow=35						
	comp=E,1.3nm,0.3s						
YBH	**Yreka Blue Hor**	**12.91**	**268**	LR	LR	20 47 11.2	
	comp=E,66nm,18.4s,baz=50,slow=38						
SADO	**Sadowa**	**18.81**	**77**	LR	LR	20 50 37.7	
	comp=E,60nm,19.0s,baz=130,slow=37						
YKA	**Yellowknife Ar**	**19.67**	**347**	P	**P**	**20 43 30.4**	**+0.9**
	baz=150,slow=11,SNR=1.8						
	comp=E,0.1nm,0.4s						
ILAR	**Eielson Array**	**31.34**	**327**	P	**P**	**20 45 21.9**	**+0.9**
	comp=E,0.2nm,0.6s,baz=129,slow=9.1,SNR=2.5						
	comp=E,0.2nm,0.6s						
SFJD	**Kangerlussuaq**	**37.17**	**32**	LR	LR	21 00 07.4	
	comp=E,47nm,19.8s,baz=164,slow=34						

*SJA **02** 20:39:50.1±0.5, 24°.12S×66°.88W, h222km±4km, ML3.4, MW3.5*
*GUC **02** 20:39:52.9±0.5, 24°.11S×67°.30W, h244km±11km, ML3.7*

ISC 02 20:39:50.4±2.3, 24°.12S±0°.04×66°.93W±0°.06, h217km±21km, n26, σ1$19/44, 5C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.43**	**115**	*e*P	**Pn**	**20 40 25.3**	**+0.1**
SLA				*e*P		20 40 25.5	
SLA				*e*S	**S**	**20 40 51.9**	**-0.4**
FSA	**Cafayete**	**2.17**	**157**	*e*P	**Pn**	**20 40 32.2**	**+0.2**
YJA	**Yavi**	**2.33**	**34**	*e*P	**Pn**	**20 40 34.8**	**+0.8**
GO02	**Mina Guanaco**	**2.64**	**246**	*e*P	**Pn**	**20 40 38.2**	**+1.1**
GO02				*e*S	**S**	**20 41 12.8**	**-0.7**
GO02	**Mina Guanaco**	**2.64**	**246**⇑	*e*P	**Pn**	**20 40 38.4**	**+1.2**
GO02				*e*S	**S**	**20 41 13.6**	**+0.1**
GO02				IAML		20 41 14.8	
	comp=E,463nm,0.2s						
PB06	**IPOC Station P**	**2.81**	**299**	*e*P	**Pn**	**20 40 40.1**	**+1.2**
PB06				*e*S	**S**	**20 41 16.7**	**+0.1**
PB06				IAML		20 41 18.8	
	comp=Z,114nm,0.2s						
PB06	**IPOC Station P**	**2.81**	**299**⇑	*i*P	**Pn**	**20 40 40.3**	**+1.3**
PB06				*i* S	**S**	**20 41 15.8**	**-0.7**
PB06				IAML		20 41 18.6	
	comp=E,176nm,0.2s						
AHML	**Horco Molle**	**3.02**	**152**	*e*P	**Pn**	**20 40 41.8**	**+0.6**
PB09	**IPOC Station P**	**3.14**	**317**	*e*P	**Pn**	**20 40 44.4**	**+1.6**
PB09				*e*S	**S**	**20 41 24.3**	**+0.7**
PB09				IAML		20 41 32.5	
	comp=Z,43nm,0.6s						
PB09	**IPOC Station P**	**3.14**	**317**⇑	*e*P	**Pn**	**20 40 44.5**	**+1.7**
PB09				*i* S	**S**	**20 41 24.1**	**+0.5**
PB14	**IPOC Station P**	**3.21**	**260**	*e*P	**Pn**	**20 40 44.6**	**+0.9**
PB14				*e*S	**S**	**20 41 25.3**	**+0.1**
PB14				IAML		20 41 27.3	
	comp=Z,64nm,0.4s						
PB14	**IPOC Station P**	**3.21**	**260**	*e*P	**Pn**	**20 40 44.5**	**+0.9**
PB14				*e*S	**S**	**20 41 23.4**	**-1.8**
PB14				IAML		20 41 25.8	
	comp=E,56nm,0.4s						
PB05	**IPOC Station P**	**3.26**	**292**	*e*P	**Pn**	**20 40 45.0**	**+0.9**
PB05				IAML		20 41 32.7	
	comp=Z,33nm,0.3s						
PB05	**IPOC Station P**	**3.26**	**292**	*e*P	**Pn**	**20 40 45.2**	**+1.1**
PB05				IAML		20 41 31.7	
	comp=N,42nm,0.3s						
PB05				IAML		20 41 35.4	
	comp=E,45nm,0.4s						
PB10	**IPOC Station P**	**3.38**	**279**	*e*P	**Pn**	**20 40 46.2**	**+0.9**
PB10				IAML		20 41 32.0	
	comp=Z,44nm,0.7s						
PB10	**IPOC Station P**	**3.38**	**279**	*e*P	**Pn**	**20 40 46.5**	**+1.2**
PB04	**IPOC Station P**	**3.45**	**300**	*e*P	**Pn**	**20 40 47.5**	**+1.1**
PB04				*e*S	**S**	**20 41 29.7**	**-0.4**
PB04				IAML		20 41 33.3	
	comp=Z,88nm,0.4s						
PB04	**IPOC Station P**	**3.45**	**300**	*e*P	**Pn**	**20 40 47.3**	**+0.9**
PB04				*i* S	**S**	**20 41 28.3**	**-1.8**
PB07	**IPOC Station P**	**3.62**	**310**	*e*P	**Pn**	**20 40 49.1**	**+0.7**
PB07				*e*S	**S**	**20 41 31.8**	**-1.9**
PB07				IAML		20 41 37.5	
	comp=Z,81nm,0.5s						
PB07	**IPOC Station P**	**3.62**	**310**⇑	*i*P	**Pn**	**20 40 49.3**	**+0.9**
PB07				*i* S	**S**	**20 41 31.4**	**-2.3**
PB01	**IPOC Station P**	**3.87**	**322**	*e*P	**Pn**	**20 40 51.9**	**+0.6**
PB01				*e*S	**S**	**20 41 39.7**	**+0.7**
PB01				IAML		20 41 42.6	
	comp=Z,40nm,0.2s						
PB01	**IPOC Station P**	**3.87**	**322**	*e*P	**Pn**	**20 40 51.9**	**+0.6**
PB01				*e*S	**S**	**20 41 37.1**	**-1.9**
AC01	**Pan de Azucar**	**3.90**	**238**	*e*P	**Pn**	**20 40 51.7**	**+0.2**
AC01				*i* S	**S**	**20 41 37.2**	**-2.2**
PB02	**IPOC Station P**	**3.91**	**315**⇑	*e*P	**Pn**	**20 40 52.3**	**+0.5**
HMBC	**Humberstone**	**4.70**	**324**	*e*P	**Pn**	**20 41 01.3**	**-0.4**
HMBC				*e*S	**S**	**20 41 55.0**	**-2.7**
ACLC	**CERRO LA CRUZ**	**5.29**	**180**	*e*P	**Pn**	**20 41 09.6**	**+0.6**
ACLC				*e*S	**S**	**20 42 11.3**	**+0.2**

*UPA **02** 20:40:27.2±1.1, 8°.39N×77°.16W, h22km±10km, MW3.9, Fault plane solution: NP1:φs18.00000°, δ33.00000°, λ-68.00000°.*
*RSNC **02** 20:40:28.4±1.8, 8°.44N×77°.20W, h47km±10km, ML3.3, Mw3.7*

ISC 02 20:40:28.1±1.0, 8°.42N±0°.03×77°.18W±0°.02, h45km±11km, n44, σ1$43/72, 11C-1D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPC	**Capurgana**	**0.28**	**322**⇓	*i*P	**Pn**	**20 40 36.1**	**-0.5**
CAPC				*e*S	**Sn**	**20 40 43.0**	**+0.4**
CAPC				*i*		20 40 43.9	
	comp=Z,6μm,0.2s						
APAC	**Apartado, Choc**	**0.78**	**131**⇑	*i*P	**Pn**	**20 40 43.0**	**+0.2**
APAC				*e*S	**Sn**	**20 40 55.2**	**+1.7**
APAC				*i*		20 40 56.5	
	comp=Z,953nm,0.3s						
UPD2	**Meteti**	**0.84**	**279**⇑	*i*P	**Pn**	**20 40 42.7**	**-0.9**
UPD2	**Meteti**	**0.84**	**279**⇑	*i*P	**Pn**	**20 40 42.7**	**-0.9**
UPD2				*e*S	**Sn**	**20 40 54.1**	**-0.6**
UPD2				*i*		20 40 55.2	
	comp=Z,708nm,0.4s						
TOTI	**Torti**	**1.23**	**295**⇑	*i*P	**Pn**	**20 40 48.1**	**-0.8**
TOTI				*e*S	**Sn**	**20 41 04.0**	**-0.4**
PTAC	**Punta Ardita,**	**1.41**	**206**⇑	*i*P	**Pn**	**20 40 50.1**	**-1.3**
PTAC				*e*S	**Sn**	**20 41 07.6**	**-1.1**
PTAC	**Punta Ardita,**	**1.41**	**206**	*e*P	**Pn**	**20 40 50.1**	**-1.3**
PTAC				*e*S	**Sn**	**20 41 07.2**	**-1.5**
PTAC				*i*		20 41 13.6	
	comp=Z,285nm,0.6s						
DBBC	**Dabeiba**	**1.69**	**145**	*e*P	**Pn**	**20 40 54.7**	**-0.5**
DBBC				*e*S	**Sn**	**20 41 16.3**	**+0.5**
DBBC				*i*		20 41 21.4	
	comp=Z,244nm,0.3

ISC 02 20:40:42.9±1.0, 36°64N±0°02×25°91E±0°02, h14km±9km, n44, σ0°62/59, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR8	**Santorini-Mono**	**0.42**	**236**	P	**Pg**	**20 40 51.6**	**+0.3**
THR8	**Santorini-Mono**	**0.42**	**236**	P	**Pg**	**20 40 51.6**	**+0.3**
CMBO	**Columbo, Santo**	**0.44**	**247**	P	**Pb**	**20 40 52.9**	**+0.4**
CMBO				S	**Sb**	**20 40 59.8**	**+0.8**
	1μm,0.2s						
CMBO	**Columbo, Santo**	**0.44**	**247**	P	**Pg**	**20 40 51.5**	**-0.2**
CMBO				S	**Sb**	**20 40 58.8**	**-0.2**
CMBO				AML	AML	20 41 00.3	
	comp=N,4088μm,0.4s						
CMBO				AML	AML	20 41 03.3	
	comp=E,2404μm,0.2s						
THR3	**Thira Island,**	**0.47**	**241**	P	**Pg**	**20 40 52.8**	**+0.5**
SNT5	**Nea Kammeni, S**	**0.48**	**240**	P	**Pg**	**20 40 52.9**	**+0.5**
SNT5				S	**Sb**	**20 41 00.7**	**+0.6**
SNT5				AML	AML	20 41 03.8	
	comp=E,2527μm,0.2s						
SNT5				AML	AML	20 41 05.0	
	comp=N,1722μm,0.2s						
THR6	**Thira Island,**	**0.50**	**236**	P	**Pb**	**20 40 53.4**	**-0.1**
THR5	**Thira Island,**	**0.51**	**244**	P	**Pg**	**20 40 52.7**	**-0.2**
APE	**Apeiranthos**	**0.53**	**324**	Pg	**Pg**	**20 40 53.0**	**-0.2**
APE				Sg	**Sb**	**20 41 02.2**	**+0.8**
APE	**Apeiranthos**	**0.53**	**324**	P	**Pg**	**20 40 52.5**	**-0.7**
APE				S	**Sg**	**20 40 59.5**	**-0.8**
	comp=N,2μm,0.3s						
APE	**Apeiranthos**	**0.53**	**324**	P	**Pg**	**20 40 53.0**	**-0.2**
APE				S	**Sb**	**20 41 01.8**	**+0.4**
APE				AML	AML	20 41 03.5	
	comp=N,3895μm,0.4s						
APE				AML	AML	20 41 03.8	
	comp=E,4804μm,0.2s						
THR9	**Santorini-Faro**	**0.53**	**238**	P	**Pg**	**20 40 53.8**	**+0.5**
THR9	**Santorini-Faro**	**0.53**	**238**	P	**Pg**	**20 40 53.6**	**+0.3**
NISR	**Nisiros**	**0.98**	**91**	P	**Pb**	**20 41 01.3**	**-0.3**
NISR	**Nisiros**	**0.98**	**91**	P	**Pb**	**20 41 01.7**	**+0.1**
NISR				S	**Sg**	**20 41 15.2**	**+0.6**
TNSA	**Tinos**	**1.08**	**326**	P	**Pb**	**20 41 03.2**	**-0.1**
TNSA				AML	AML	20 41 18.3	
	comp=N,844μm,0.2s						
TNSA				AML	AML	20 41 18.5	
	comp=E,735μm,0.2s						
MHLO	**Agia Marina, M**	**1.22**	**273**	P	**Pg**	**20 41 06.6**	**+0.3**
MHLO				AML	AML	20 41 24.6	
	comp=N,781μm,0.3s						
MHLO				AML	AML	20 41 25.1	
	comp=E,992μm,0.3s						
SMG	**Samos**	**1.29**	**34**	P	**Pn**	**20 41 06.0**	**-0.6**
SMG				S	**Sn**	**20 41 24.0**	**+0.3**
SMG				AML	AML	20 41 28.2	
	comp=N,310μm,0.3s						
SMG				AML	AML	20 41 29.2	
	comp=E,360μm,0.4s						
HRKL	**Herakleio**	**1.48**	**207**	Pn	**Pb**	**20 41 09.9**	**-0.3**
KARP	**Karpathos**	**1.49**	**137**	Pn	**Pn**	**20 41 09.1**	**-0.2**
KARP	**Karpathos**	**1.49**	**137**	P	**Pn**	**20 41 08.0**	**-1.3**
GCAM	**G?zelcaml?**	**1.49**	**45**	Pn	**Pn**	**20 41 09.6**	**+0.3**
GCAM				Sn	**Sg**	**20 41 31.2**	**+0.2**
GCAM	**G?zelcaml?**	**1.49**	**45**	P	**Pg**	**20 41 11.5**	**0.0**
GCAM				S	**Sb**	**20 41 29.6**	**+0.4**
ZKR	**Zakros**	**1.54**	**171**	Pn	**Pn**	**20 41 10.4**	**+0.4**
ZKR	**Zakros**	**1.54**	**171**	P	**Pn**	**20 41 09.9**	**-0.1**
ZKR				S	**Sb**	**20 41 31.8**	**+1.1**
	comp=E,62nm,0.7s						
ZKR	**Zakros**	**1.54**	**171**	P	**Pn**	**20 41 09.6**	**-0.4**
IDI	**Anoyia**	**1.59**	**212**	Pn	**Pb**	**20 41 11.5**	**-0.5**
IDI	**Anoyia**	**1.59**	**212**	P	**Pn**	**20 41 10.1**	**-0.6**
IDI				S	**Sb**	**20 41 32.1**	**+0.1**
IDI	**Anoyia**	**1.59**	**212**	P	**Pn**	**20 41 10.1**	**-0.6**
IDI				S	**Sn**	**20 41 29.6**	**-1.4**
IDI				AML	AML	20 41 39.7	
	comp=E,106μm,0.4s						
IDI				AML	AML	20 41 40.0	
	comp=N,136μm,0.4s						
ZEYE	**Izmir, Urla-Ze**	**1.66**	**16**	P	**Pb**	**20 41 12.5**	**-0.7**
ZEYE				S	**Sb**	**20 41 34.3**	**+0.3**
CHOS	**Chios island**	**1.75**	**4**	Pn	**Pn**	**20 41 13.6**	**+0.8**
CHOS	**Chios island**	**1.75**	**4**	P	**Pn**	**20 41 12.5**	**-0.3**
URLA	**Izmir**	**1.80**	**17**	Pn	**Pn**	**20 41 14.3**	**+0.8**
URLA	**Izmir**	**1.80**	**17**	P	**Pb**	**20 41 15.1**	**-0.6**
URLA				S	**Sb**	**20 41 38.9**	**+0.8**
ARG	**Arkhangelos**	**1.83**	**103**	Pn	**Pn**	**20 41 14.3**	**+0.3**
BLCB	**Balcova**	**1.96**	**27**	Pn	**Pn**	**20 41 16.4**	**+0.7**
IMMV	**Iera Moni Meta**	**1.96**	**234**	Pn	**Pb**	**20 41 17.3**	**-1.1**
RODP	**Rodopos**	**2.05**	**239**	Pn	**Pn**	**20 41 18.4**	**+1.4**
VLY	**Voula,Athens**	**2.08**	**306**	P	**Pn**	**20 41 17.9**	**+0.5**
DION	**Dionisos Attik**	**2.13**	**313**	P	**Pn**	**20 41 18.7**	**+0.6**
ATHU	**Athens Univers**	**2.15**	**309**	P	**Pn**	**20 41 18.9**	**+0.5**
PTL	**Penteli**	**2.15**	**311**	P	**Pn**	**20 41 19.4**	**+0.9**
KYMI	**Kymi, Euboea I**	**2.45**	**325**	P	**Pn**	**20 41 22.3**	**-0.2**
VIL2	**Platees**	**2.62**	**307**	P	**Pn**	**20 41 24.1**	**-0.8**

*AFAD **02**:20:41:05.6±0.0, 37°37N×26°45E, h7km, 6km, ML2.2*

ISK 02 20:41:20.7, 36°91N×27°74E, h4km, ML1.8/10, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RFTAA	**Mazikoy-Bodrum**	**0.09**	**2**	Pg	Pg	20 41 23.1	+0.5
RFTAA				Sg	Sg	20 41 24.8	+1.0
DATC	**Datca-Mugla**	**0.17**	**203**	Pg	Pg	20 41 24.8	+0.9
DATC				Sg	Sg	20 41 27.7	+1.6
DAT	**Datca**	**0.22**	**216**	Pg	Pg	20 41 25.9	+0.8
DAT				Sg	Sg	20 41 29.3	+1.3
DAT	**Datca**	**0.22**	**216**	P	Pg	20 41 25.6	+0.5
DAT				*i* AML	AML	20 41 29.0	
	comp=N,88nm,0.2s						
DAT				S	Sg	20 41 29.1	+1.1
DAT				*i* AML	AML	20 41 30.0	
	comp=E,140nm,0.2s						
BDRM	**Kayabasi**	**0.28**	**303**	P	Pg	20 41 26.8	+0.6
BDRM				S	Sg	20 41 31.1	+1.2
BDRM				*i* AML	AML	20 41 32.0	
	comp=E,174nm,0.2s						
YAZI	**Mula-Dat§a-**	**0.33**	**225**	P	Pg	20 41 27.2	+0.2
YAZI				S	Sg	20 41 32.1	+0.9
YAZI				*i* AML	AML	20 41 33.0	
	comp=E,38nm,0.4s						
YAZI				*i* AML	AML	20 41 34.0	
	comp=N,34nm,0.2s						
BODT	**Bodrum**	**0.38**	**294**	Pg	Pg	20 41 28.6	+0.6
BODT				Sg	Sb	20 41 34.9	-1.3
MLSB	**Milas**	**0.39**	**4**	Pg	Pg	20 41 28.8	+0.6
MLSB				Sg	Sg	20 41 34.7	+1.5
TURN	**Turunc**	**0.42**	**108**	Pg	Pg	20 41 29.7	+0.8
TURN	**Turunc**	**0.42**	**108**	P	Pg	20 41 28.5	-0.4
TURN				S	Sg	20 41 34.6	+0.2
YER	**Yerkesik**	**0.49**	**63**	Pg	Pg	20 41 30.9	+0.8
DALY	**Dalyan (Mula)**	**0.74**	**97**	Pg	Pb	20 41 35.6	-0.5
ARG	**Arkhangelos**	**0.76**	**156**	Pg	Pb	20 41 35.9	-0.5
FETY	**Fethiye**	**1.11**	**104**	Pn	Pn	20 41 42.8	-0.2

*IDC **02**:21:01:56.0±2.1, 43°60N×105°46W, h0km, mbtmp3.6/2, ML3.4/2, Error ellipse: s-maj=54.1km s-min=9.4km az=151.0*

*NEIC **02**:21:01:57.5±1.4, 43°60N±0°06×105°37W±0°09, h0km±1km, ML3.0/77, Error ellipse: s-maj=12.9km s-min=8.4km az=46.0*

ISC 02 21:01:57.3±1.0, 43°67N±0°05×105°27W±0°04, h0km, n30, σ0°99/24, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**63**	Pg	**Pg**	**21 02 17.5**	**-0.2**
K22A	**Casper**	**1.37**	**223**	Pg	**Pg**	**21 02 23.1**	**-0.4**
K22A				IAML		21 02 44.5	
	comp=E,315nm,0.3s						
K22A				IAML		21 02 50.8	
	comp=N,281nm,0.3s						
PHWY	**Pilot Hill**	**2.37**	**183**	Pn	**Pn**	**21 02 37.8**	**+0.1**
RWWY	**Rawlins**	**2.44**	**217**	Pn	**Pn**	**21 02 38.9**	**+0.3**
RWWY				IAML		21 03 14.7	
	comp=N,88nm,0.7s						
RWWY				IAML		21 03 14.9	
	comp=N,84nm,0.7s						
N23A	**Red Feather La**	**2.81**	**190**	Pn	**Pn**	**21 02 44.4**	**+0.6**
N23A				IAML		21 03 25.6	
	comp=N,38nm,0.6s						
N23A				IAML		21 03 27.2	
	comp=E,46nm,0.9s						
LAO	**LASA Array**	**3.10**	**348**		**Pn**	**21 02 49.0**	**+1.5**
LAO				IAML		21 04 25.8	
	comp=E,44nm,4.6s						
BRIGG	**Briggsdale**	**3.16**	**167**		**Pn**	**21 02 46.1**	**-2.4**
BRIGG				Pg	**Pb**	**21 02 55.6**	**+1.1**
RLMT	**Red Lodge**	**3.21**	**298**		**Pn**	**21 02 50.1**	**+0.8**
RLMT				IAML		21 03 44.6	
	comp=E,24nm,0.6s						
BW06	**Boulder Array**	**3.26**	**255**	Pn	**Pn**	**21 02 50.7**	**+0.9**
BW06				IAML		21 03 40.5	
	comp=E,30nm,0.7s						
PD31	**Pinedale Array**	**3.26**	**255**	Pn	**Pn**	**21 02 50.6**	**+0.7**
PDAR	**Pinedale Array**	**3.26**	**255**	Pn	**Pn**	**21 02 50.8**	**+0.9**
PDAR	**Pinedale Array**	**3.26**	**255**	Pn	**Pn**	**21 02 50.2**	**+0.3**
	comp=E,2.6nm,0.3s,baz=76,slow=16,SNR=51						
PDAR				Lg	Lg	21 03 32.0	
	comp=E,8.1nm,0.3s,baz=81,slow=30,SNR=3.7 comp=E,2.8nm,0.4s						
OGNE	**Ogallala**	**3.63**	**137**		**Pn**	**21 02 56.6**	**+1.8**
YMP	**Mirror Lake Pl**	**3.67**	**289**	Pn	**Pn**	**21 02 56.5**	**+0.8**
LKWY	**Lake**	**3.80**	**285**		**Pn**	**21 02 57.5**	**+0.1**
LKWY				IAML		21 03 32.2	
	comp=E,22nm,2.1s						
LKWY				IAML		21 04 12.6	
	comp=E,19nm,2.7s						
ISCO	**Idaho Springs**	**3.87**	**184**		**Pn**	**21 02 58.6**	**+0.2**
LOHW	**Long Hollow**	**3.87**	**271**		**Pn**	**21 02 59.1**	**+0.8**
LOHW				IAML		21 03 57.9	
	comp=E,17nm,3.8s						
H17A	**Grant Village**	**3.89**	**283**		**Pb**	**21 03 07.0**	**0.0**
H17A				IAML		21 04 03.9	
	comp=N,23nm,1.4s						
FLWY	**Flagg Ranch**	**3.95**	**278**	Pn	Pn	21 02 54.6	-4.7
FLWY				IAML		21 04 40.5	
	comp=N,24nm,4.0s						
MOOW	**Moose Ponds**	**3.97**	**273**	Pg	**Pb**	**21 03 08.0**	**-0.2**
SNOW	**Snow King Moun**	**3.99**	**269**	Pg	**Pb**	**21 03 08.4**	**-0.3**
SNOW				IAML		21 04 38.6	
	comp=N,27nm,2.1s						
REDW	**Red Top Meadow**	**4.07**	**268**		**Pb**	**21 03 09.1**	**-0.9**
IMW	**Indian Meadow**	**4.11**	**275**		**Pb**	**21 03 11.1**	**+0.4**
IMW				IAML		21 04 14.7	
	comp=N,16nm,0.8s						
IMW				IAML		21 05 07.6	
	comp=N,14nm,4.3s						
TPAW	**Teton Pass**	**4.13**	**270**	IAML		21 04 22.5	
	comp=N,17nm,4.1s						
TPAW				IAML		21 04 29.3	
	comp=N,23nm,1.8s						
O20A	**White River Ci**	**4.17**	**213**	IAML		21 04 48.7	
	comp=N,24nm,1.9s						
YHL	**Hebgen Lake**	**4.41**	**288**	IAML		21 04 27.7	
	comp=E,17nm,1.4s						
YHL				IAML		21 05 31.5	
	comp=N,16nm,3.7s						
SMCO	**Snowmass**	**4.66**	**196**	IAML		21 03 52.2	
	comp=N,16nm,4.0s						
SMCO				IAML		21 05 52.1	
	comp=N,16nm,4.0s						
BOZ	**Bozeman (W)**	**4.93**	**295**	IAML		21 04 44.3	
	comp=N,10nm,3.6s						
BOZ				IAML		21 05 14.2	
	comp=N,12nm,4.8s						
I10CA	**LAC DU BONNET**	**9.09**	**41**	I	I	21 59 40.0	
	baz=219,slow=337,SNR=1.8						
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**21 04 09.6**	**-1.5**
	comp=N,1.2nm,0.3s,baz=235,slow=11,SNR=11						
ULM				Lg	Lg	21 06 39.8	
	comp=N,0.1nm,0.3s,baz=112,slow=19,SNR=1.5 comp=N,2.3nm,0.3s						

IDC 02 21:07:23.1±1.1, 4°09N×127°53E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=73.1km s-min=22.4km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.80**	**165**	P	P	21 12 46.8	-0.2
	1.2nm,0.5s,baz=343,slow=10.0,SNR=11 1.2nm,0.5s						
ASAR	**Alice Springs**	**28.28**	**168**	P	P	21 13 18.8	+0.4
	0.2nm,0.4s,baz=346,slow=12,SNR=5.8 0.2nm,0.4s						
MKAR	**Manchi Array**	**57.72**	**325**	P	P	21 17 15.3	-0.5
	0.1nm,0.4s,baz=116,slow=8.7,SNR=2.1 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**61.87**	**327**	P	P	21 17 45.0	+0.8
	0.3nm,0.7s,baz=128,slow=6.5,SNR=4.2 0.3nm,0.7s						
ILAR	**Eielson Array**	**84.44**	**25**	P	P	21 19 56.8	-0.7
	0.2nm,0.7s,baz=266,slow=4.8,SNR=4.2 0.2nm,0.7s						

*MOS **02**:21:16:05.1±1.2, 8°30S×158°66E, h100km, mb5.1/19, Error ellipse: s-maj=10.3km s-min=7.3km az=105.5*

*NEIC **02**:21:16:06.8±1.8, 8°28S±0°08×158°73E±0°08, h99km±4km, mb5.0/264, Error ellipse: s-maj=13.3km s-min=9.3km az=46.0*

*GCMT **02**:21:16:06.8±0.3, 8°36S±0°02×158°70E±0°03, h114km±4km, MW5.0/56, Moment Tensor Solution. s25,c27; s56,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.50±.18; $M_{\theta\theta}$-0.25±.21; $M_{\phi\phi}$-2.26±.20; $M_{r\theta}$-3.01±.12; $M_{\theta\phi}$-0.31±.24; $M_{\phi r}$0.58±.14; Best double couple: M_o3.42200×10^{16} NP1:ϕs323.00000°, δ66.00000°, λ58.00000°. NP2: ϕs200.00000°, δ39.00000°, λ140.00000°. Principal axes: T 4.4990, Plg57.0000°, Azm190.0000°; N -2.1610, Plg29.0000°, Azm338.0000°; P -2.3440, Plg15.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **02**:21:16:06.7±0.3, 8°33S×158°72E, h104km, mb4.6/25, mbtmp4.9/26, MS3.5/27 Error ellipse: s-maj=12.2km s-min=5.7km az=50.0*

*BJI **02**:21:16:09.3±0.0, 7°85S×158°52E, h116km, mb4.9/64, mB5.2/29*

ISC 02 21:16:06.5±0.3, 8°31S±0°04×158°64E±0°04, h103km±2km, h103km:pP-P, n751, σ1°30/679, mb5.0/196, 15C-12D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.71**	**131**	Pn	**Pn**	**21 16 34.6**	**-1.0**
HNR				Sn	**Sn**	**21 16 57.8**	**+0.2**
HNR	**Honiara**	**1.71**	**131**	P	**Pn**	**21 16 34.4**	**-1.2**
	104μm,0.6s,baz=230,slow=3.4,SNR=217						
HNR				S	**Sn**	**21 16 56.1**	**-1.5**
	152μm,0.3s,baz=32,slow=8.8,SNR=13						
RABL	**Rabaul**	**7.62**	**302**		**Pn**	**21 17 57.4**	**+2.4**
RABL	**Rabaul**	**7.62**	**302**	P	Pn	21 18 04.7	+10
PMG	**Port Moresby**	**11.39**	**264**	Pn	**Pn**	**21 18 46.7**	**+0.5**
PMG	**Port Moresby**	**11.39**	**264**	*eP*	**Pn**	**21 18 50.2**	**+4.0**
PMG				pmax	pmax		
	comp=Z,63nm,1.4s						
KOUNC	**Koumac, New Ca**	**13.34**	**156**	Pn	**Pn**	**21 19 13.0**	**+1.2**
KOUNC	**Koumac, New Ca**	**13.34**	**156**	P	**P**	**21 19 17.1**	**-0.6**
PATS	**Pohnpei**	**15.05**	**359**	Pn	**Pn**	**21 19 32.4**	**-1.4**
NOUC	**Port Laguerre**	**15.57**	**153**	P	**P**	**21 19 45.9**	**+3.4**
DZM	**Mont Dzumac**	**15.61**	**152**		**Pn**	**21 19 41.1**	**+0.2**
DZM	**Mont Dzumac**	**15.61**	**152**	P	**Pn**	**21 19 41.4**	**+0.5**
	comp=Z,17nm,0.7s,baz=342,slow=20,SNR=9.4						
YATNC	**Mamie plateau,**	**15.81**	**151**	P	**P**	**21 19 45.8**	**+0.7**
TV1H	**Townsville Har**	**15.82**	**225**	P	**P**	**21 19 48.1**	**+2.8**
OUENC	**Ouen Island, N**	**16.10**	**152**	P	**P**	**21 19 48.9**	**+0.7**
OUENC	**Ouen Island, N**	**16.10**	**152**	P	**P**	**21 19 51.5**	**+3.2**
COEN	**Coen**	**16.17**	**248**	P	**P**	**21 19 52.3**	**+3.1**
	baz=16,SNR=18						
COEN	**Coen**	**16.17**	**248**	P	**P**	**21 19 53.0**	**+3.9**
COEN	**Coen**	**16.17**	**248**	P	**P**	**21 19 53.3**	**+4.1**
PINNC	**Pines Island,**	**16.55**	**150**	P	**P**	**21 19 56.7**	**+3.4**
CTAO	**Charters Tower**	**16.75**	**224**	P	**P**	**21 19 59.1**	**+3.6**
CTAO	**Charters Tower**	**16.75**	**224**	P	**P**	**21 19 59.2**	**+3.6**
CTAO	**Charters Tower**	**16.75**	**224**	P	**P**	**21 19 59.2**	**+3.6**
MTSU	**Mount Surprise**	**17.01**	**234**	P	**P**	**21 20 02.6**	**+4.2**
	baz=17,SNR=45						
MTSU	**Mount Surprise**	**17.01**	**234**	P	**P**	**21 20 02.7**	**+4.2**
GD1S	**Gladstone Soft**	**17.02**	**204**	P	**P**	**21 20 01.7**	**+3.2**
TARA	**Tarawa**	**17.18**	**57**	P	**P**	**21 20 02.6**	**+2.3**
TABU	**Tabubil**	**17.55**	**279**	P	**Pn**	**21 20 08.6**	**+3.7**
EIDS	**Eidsvold**	**18.43**	**202**	P	**Pn**	**21 20 17.0**	**+1.8**
	baz=19,SNR=52						
EIDS	**Eidsvold**	**18.43**	**202**	P	**Pn**	**21 20 17.1**	**+1.8**
EIDS	**Eidsvold**	**18.43**	**202**	P	**Pn**	**21 20 17.1**	**+1.8**
GENI	**Genyem**	**19.23**	**286**	P	**P**	**21 20 21.6**	**-1.3**
	comp=Z,105nm,0.9s						
YSA	**Yasawairara**	**20.27**	**116**	P	Pn	21 20 36.7	-0.2
GC1S	**Gold Coast 1 S**	**20.33**	**193**	P	Pn	21 20 37.0	-0.5
QIS	**Mount Isa**	**22.06**	**234**	P	**P**	**21 20 54.8**	**+1.6**
	baz=22,SNR=61						
QIS	**Mount Isa**	**22.06**	**234**	P	**P**	**21 20 54.6**	**+1.4**
DGTI	**Dogotuki**	**22.08**	**113**	P	**P**	**21 20 56.8**	**+3.4**
TAVE	**Taveuni**	**22.53**	**114**	P	**P**	**21 20 58.5**	**+0.4**
QLP	**Quilpie**	**22.74**	**215**	P	**P**	**21 21 01.2**	**+1.0**
	baz=23,SNR=34						
QLP	**Quilpie**	**22.74**	**215**	P	**P**	**21 21 02.2**	**+2.1**
ARMA	**Armidale**	**22.95**	**196**	P	**P**	**21 21 03.3**	**+1.0**
	baz=23,SNR=33						
ARMA	**Armidale**	**22.95**	**196**	P	**P**	**21 21 03.1**	**+0.8**
ARMA	**Armidale**	**22.95**	**196**	P	**P**	**21 21 03.6**	**+1.3**
AULRC	**Lightning Ridg**	**23.28**	**204**	P	**P**	**21 21 06.9**	**+1.7**
AUPHS	**Peel High Scho**	**23.80**	**197**	P	**P**	**21 21 11.6**	**+1.6**
AUDCS	**Dubbo College**	**25.55**	**200**	P	**P**	**21 21 27.4**	**+1.6**
INKA	**Innaminka**	**25.68**	**219**	P	**P**	**21 21 29.1**	**+2.1**
MGCD	**Mangrove Creek**	**25.74**	**195**	P	**P**	**21 21 29.0**	**+1.5**
	baz=26,SNR=6.0						
MGCD	**Mangrove Creek**	**25.74**	**195**	P	**P**	**21 21 29.8**	**+2.3**
WR0	**Warramunga Arr**	**26.04**	**241**	P	**P**	**21 21 31.2**	**+0.9**
WR0				IAmb	IAmb	21 21 32.8	
	comp=Z,47nm,0.9s						
CMSA	**Cobar Meteorol**	**26.07**	**206**	P	**P**	**21 21 31.1**	**+0.6**
	baz=26,SNR=76						
CMSA	**Cobar Meteorol**	**26.07**	**206**	P	**P**	**21 21 31.4**	**+0.9**
KDU	**Kakadu**	**26.08**	**258**	P	**P**	**21 21 32.1**	**+1.3**
	baz=26,SNR=4.1						
WB0	**Warramunga Arr**	**26.09**	**242**	P	**P**	**21 21 31.7**	**+0.8**
WB0				IAmb	IAmb	21 21 32.6	
	comp=Z,43nm,0.8s						
WRAB	**Tennant Creek**	**26.19**	**241**	P	**P**	**21 21 32.3**	**+0.5**
WRAB				IAmb	IAmb	21 21 33.4	
	comp=Z,45nm,1.0s						
WRAB	**Tennant Creek**	**26.19**	**241**	P	**P**	**21 21 32.3**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,45nm,1.0s						
WB2	**Warramunga Arr**	**26.19**	**241**	P	**P**	**21 21 32.4**	**+0.6**
WB2				IAmb	IAmb	21 21 33.6	
	comp=Z,63nm,1.1s						
WRA	**Warramunga Arr**	**26.20**	**241**	P	**P**	**21 21 31.8**	**-0.1**
WRA					**PcP**	**21 24 56.3**	**-0.1**
WRA	**Warramunga Arr**	**26.20**	**241**	P	**P**	**21 21 32.6**	**+0.7**
	comp=Z,38nm,0.8s,baz=65,slow=8.9,SNR=114						
WRA				PcP	**PcP**	**21 24 56.3**	**-0.1**
	comp=Z,5.8nm,0.8s,baz=68,slow=2.3,SNR=7.4						
WRA				S	**S**	**21 25 54.3**	**-2.4**
	comp=Z,2.2nm,0.8s,baz=70,slow=15,SNR=4.3						
WRA				PKiKP	**PKiKP**	**21 32 33.8**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=68,slow=3.8,SNR=5.3 comp=Z,38nm,0.8s						
SYDH	**Sydney Hard Ro**	**26.36**	**195**	P	**P**	**21 21 34.6**	**+1.5**
MTN	**Manton Dam**	**27.40**	**258**	P	**P**	**21 21 44.4**	**+1.8**
	baz=28,SNR=4.8						
MTN	**Manton Dam**	**27.40**	**258**	P	**P**	**21 21 43.0**	**+0.4**
MTN				IAmb	IAmb	21 22 28.4	
	comp=Z,32nm,1.0s						
YNG	**Young**	**27.53**	**199**	P	**P**	**21 21 45.0**	**+1.4**
H11S2	**WAKE ISLAND Hy**	**27.79**	**17**	T	T	21 50 26.2	
	baz=198,slow=76,SNR=1362						
H11S3	**WAKE ISLAND Hy**	**27.79**	**17**	T	T	21 50 24.2	
	baz=198,slow=76,SNR=1264						
H11S1	**WAKE ISLAND Hy**	**27.81**	**17**	T	T	21 50 25.4	
	baz=198,slow=76,SNR=291						
AUUHS	**Ulladulla High**	**27.95**	**194**	P	**P**	**21 21 48.7**	**+1.5**
AS01	**Alice Springs**	**28.14**	**234**	P	**P**	**21 21 49.8**	**+0.6**
AS31	**Alice Springs**	**28.18**	**234**	P	**P**	**21 21 49.6**	**0.0**
ASAR	**Alice Springs**	**28.18**	**234**	P	**P**	**21 21 49.5**	**-0.1**
ASAR	**Alice Springs**	**28.18**	**234**	P	**P**	**21 21 49.6**	**0.0**
	comp=Z,25nm,0.9s,baz=62,slow=9.5,SNR=216						
ASAR				PcP	**PcP**	**21 25 00.9**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=70,slow=2.5,SNR=6.3						
ASAR				S	**S**	**21 26 25.8**	**-2.1**
	comp=Z,0.9nm,0.7s,baz=54,slow=17,SNR=3.0						
ASAR				ScP	**ScP**	**21 28 33.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=59,slow=4.3,SNR=4.1						
ASAR				PKiKP	**PKiKP**	**21 32 34.6**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=90,slow=2.3,SNR=4.1						
ASAR				LR	LR	21 33 19.5	
	comp=Z,104nm,19.5s,baz=67,slow=37 comp=Z,25nm,0.9s						
CNB	**Canberra Magne**	**28.19**	**196**	P	**P**	**21 21 50.6**	**+1.0**
	baz=28,SNR=9.6						
CNB	**Canberra Magne**	**28.19**	**196**	P	**P**	**21 21 51.3**	**+1.8**
CAN	**Canberra**	**28.30**	**197**	P	**P**	**21 21 51.7**	**+1.2**
CAN	**Canberra**	**28.30**	**197**	P	**P**	**21 21 52.0**	**+1.5**
CAN	**Canberra**	**28.30**	**197**	P	**P**	**21 21 51.7**	**+1.2**
CAN				pmax	pmax		
	comp=Z,91nm,1.4s						
STKA	**Stephens Creek**	**28.31**	**212**	P	**P**	**21 21 51.3**	**+0.7**
	baz=28,SNR=106						
STKA	**Stephens Creek**	**28.31**	**212**	P	**P**	**21 21 51.2**	**+0.7**
STKA	**Stephens Creek**	**28.31**	**212**	P	**P**	**21 21 51.2**	**+0.7**
STKA	**Stephens Creek**	**28.31**	**212**	*c*	*iP*	**21 21 51.0**	**+0.5**
STKA	**Stephens Creek**	**28.31**	**212**	P	**P**	**21 21 51.2**	**+0.7**
	comp=Z,42nm,0.4s,baz=20,slow=8.2,SNR

BKZ IAmb IAmb 21 22 46.8
comp=Z,21nm,0.7s
MOO Moorlands 35.46 195 P **P** **21 22 54.8 +1.8**
baz=36,SNR=8.2
MOO Moorlands 35.46 195 P **P** **21 22 54.1 +1.1**
THZ Tophouse 35.63 162 P **P** **21 22 54.0 -0.5**
TUWZ Tuamarina 35.67 160 P **P** **21 22 54.7 -0.1**
SNZO South Karori 35.82 159 P **P** **21 22 55.9 -0.2**
BFZ Birch Farm 35.85 157 P **P** **21 22 54.9 -1.4**
TAU Tasmania Unive 35.87 194 P **P** **21 22 58.4 +1.9**
TAU Tasmania Unive 35.87 194 P **P** **21 22 58.6 +2.1**
TAU Tasmania Unive 35.87 194 P **P** **21 22 58.4 +1.9**
TAU pmax pmax
comp=Z,234nm,1.6s
TAU Tasmania Unive 35.87 194 P **P** **21 22 58.3 +1.9**
TAU pP **pP** **21 23 20.9 +1.5**
BSWZ Blackbirch Sta 35.90 160 P **P** **21 22 56.7 0.0**
BHW Baring Head 35.97 159 P **P** **21 22 56.6 -0.7**
MMRI Maumere 35.99 267 P **P** **21 22 58.6 +0.6**
INZ Inchbonnie 36.08 164 P **P** **21 22 58.5 +0.2**
PLWZ Palliser 36.25 159 P **P** **21 22 58.2 -1.5**
DAV Davao City (W) 36.33 294 LR LR 21 37 52.7
comp=Z,135nm,19.8s,baz=135,slow=36
LTZ Lake Taylor 36.37 163 P **P** **21 23 00.7 -0.1**
KHZ Kahutara 36.42 161 P **P** **21 23 00.6 -0.5**
FOZ Fox Glacier 36.43 166 P **P** **21 23 01.1 0.0**
EDFI Ende, Flores 36.53 267 P **P** **21 23 01.1 -1.5**
comp=Z,59nm,1.1s,comp=Z,668nm
GVZ Greta Valley S 36.77 162 P **P** **21 23 04.0 -0.2**
OXZ Oxford 36.80 164 P **P** **21 23 04.5 0.0**
AMCZ Amberley 36.84 163 P **P** **21 23 04.3 -0.4**
RPZ Rata Peaks 36.90 165 P **P** **21 23 05.3 0.0**
RPZ Rata Peaks 36.90 165 LR LR 21 35 42.7
comp=Z,127nm,18.5s,baz=332,slow=32
LBZ Lake Benmore 37.32 166 P **P** **21 23 08.7 -0.1**
MQZ McQueen's Vall 37.33 163 P **P** **21 23 09.0 +0.2**
WKZ Wanaka 37.48 168 P **P** **21 23 11.2 +1.1**
MRSI Marisa 37.60 282 P **P** **21 23 09.5 -2.1**
comp=Z,14nm,0.6s
DCZ Deep Cove 37.74 170 P **P** **21 23 12.0 -0.3**
MLZ Mavora Lakes 37.82 169 P **P** **21 23 12.7 -0.3**
ODZ Otahua Downs 38.05 166 P **P** **21 23 15.1 +0.2**
WHZ Wether Hill Ro 38.30 169 P **P** **21 23 17.1 +0.1**
MPSI Mapaga 39.55 281 P **P** **21 23 26.0 -1.9**
PSA00 Pilbara Seismi 39.60 246 P **P** **21 23 27.6 -0.6**
PSA00 IAmb IAmb 21 23 29.4
comp=Z,38nm,1.5s
PSA00 Pilbara Seismi 39.60 246 P **P** **21 23 27.8 -0.5**
PSA00 IAmb IAmb 21 23 29.4
comp=Z,93nm,1.6s
PLAI Plampang 40.39 266 P **P** **21 23 34.9 0.0**
PLAI Plampang 40.39 266 P **P** **21 23 33.6 -1.3**
comp=Z,60nm,0.7s
KMBL Kambalda 41.18 231 P **P** **21 23 41.9 +0.7**
baz=41,SNR=24
KMBL Kambalda 41.18 231 P **P** **21 23 42.0 +0.8**
TWSI Taliwang, Sumb 41.28 266 P **P** **21 23 39.9 -2.3**
comp=Z,34nm,1.1s
MEEK Meekatharra 42.07 239 P **P** **21 23 49.3 +0.8**
baz=42,SNR=20
MEEK Meekatharra 42.07 239 P **P** **21 23 47.8 -0.7**
RAR Rarotonga 42.08 112 P **P** **21 23 47.4 -1.1**
comp=Z,27nm,0.9s,baz=247,slow=9.1,SNR=4.3
RAR LR LR 21 37 32.3
comp=Z,194nm,19.6s,baz=287,slow=31
comp=Z,27nm,0.9s
RAR Rarotonga 42.08 112 P **P** **21 23 48.2 -0.4**
JAGI Jajag, Banyuwa 43.99 266 P **P** **21 24 02.4 -1.7**
JAGI Jajag, Banyuwa 43.99 266 P **P** **21 24 03.2 -0.9**
JAGI Jajag, Banyuwa 43.99 266 P **P** **21 24 01.2 -2.9**
comp=Z,131nm,0.8s
KLBR Kellerberrin 44.49 233 P **P** **21 24 07.7 -0.2**
baz=45,SNR=7.3
JHJ Hachijo jima 2 44.94 337 LR LR 21 43 55.1
comp=Z,52nm,18.3s,baz=136,slow=37
BLDU Ballidu 44.97 235 P **P** **21 24 12.1 +0.4**
baz=45,SNR=16
MORW Morawa 45.00 237 P **P** **21 24 12.3 +0.4**
baz=45,SNR=7.9
MORW Morawa 45.00 237 P **P** **21 24 12.3 +0.4**
MORW IAmb IAmb 21 24 13.2
comp=Z,24nm,0.8s
MORW Morawa 45.00 237 P **P** **21 24 12.2 +0.3**
NWAO Narrogin (SRO) 45.41 231 P **P** **21 24 15.4 +0.2**
NWAO IAmb IAmb 21 24 16.6
comp=Z,26nm,0.9s
NWAO Narrogin (SRO) 45.41 231 P **P** **21 24 15.4 +0.2**
NWAO pmax pmax
comp=Z,26nm,0.9s
NWAO Narrogin (SRO) 45.41 231 P **P** **21 24 15.4 +0.2**
NWAO pP **pP** **21 24 37.6 -1.7**
NWAO pwP **sP** **21 24 44.7 -6.3**
MCQ Macquarie Isla 46.06 180 P **P** **21 24 20.7 +0.9**
MCQ Macquarie Isla 46.06 180 P **P** **21 24 20.7 +0.9**
MCQ pmax pmax
comp=Z,230nm,1.4s
UGM Wanagama 47.61 267 P **P** **21 24 32.4 -0.2**
MJAR Matsushiro Arr 48.56 338 P **P** **21 24 39.1 -0.4**
comp=Z,4.0nm,0.7s,baz=169,slow=8.8,SNR=12
MJAR LR LR 21 43 52.6
comp=Z,30nm,21.9s,baz=166,slow=34
comp=Z,4.0nm,0.7s
MAJO Matsushiro 48.57 338 P **P** **21 24 39.4 -0.2**
MAJO IAmb IAmb 21 24 40.1
comp=Z,10nm,0.7s
MAJO Matsushiro 48.57 338⇑ *eP* **P** **21 24 39.5 -0.1**
MAJO pmax pmax
comp=Z,7.0nm,0.8s
MAJO Matsushiro 48.57 338 P **P** **21 24 39.4 -0.2**
MAJO pP **pP** **21 25 02.9 -0.6**
MJB9 Matsu-Tunnel 48.57 338 P **P** **21 24 40.2 +0.6**
MJB9 IAmb IAmb 21 24 41.1
comp=Z,10nm,0.7s
SSLB Suanglung 48.71 312 P **P** **21 24 42.3 +1.4**
YHNB Yeheng 48.93 313 P **P** **21 24 43.6 +1.0**
LEM Lembang 50.57 268 LR LR 21 50 55.6
comp=Z,62nm,18.3s,baz=178,slow=41
LEM Lembang 50.57 268 P **P** **21 24 52.5 -2.9**
comp=Z,46nm,0.8s
PPT Papeete 51.17 106 LR LR 21 44 50.7
comp=Z,24nm,18.6s,baz=184,slow=34
XMIS Christmas Isla 52.27 263 P **P** **21 25 08.2 +0.3**
KHU Kahuku 52.74 58 P **P** **21 25 11.3 -0.2**
KHU Kahuku 52.74 58 P **P** **21 25 11.3 -0.2**
KHU pmax pmax
comp=Z,506nm,1.7s
KSRS Korea Array 53.83 330 P **P** **21 25 19.7 +0.9**
comp=Z,3.2nm,0.9s,baz=154,slow=8.4,SNR=6.6
KSRS pP **pP** **21 25 43.0 -0.1**
comp=Z,5.6nm,0.8s,baz=144,slow=8.1,SNR=6.9
KSRS LR LR 21 46 05.8
comp=Z,23nm,20.4s,baz=140,slow=33
comp=Z,3.2nm,0.9s
ASAJ Asahikawa 54.16 346 LR LR 21 48 34.5
comp=Z,52nm,19.1s,baz=175,slow=36
LWLI Liwa 54.27 270 P **P** **21 25 21.3 -1.4**
comp=Z,234nm,0.4s,comp=Z,7μm
NJ2 Nanjing 55.25 319 *eP* **P** **21 25 30.7 +1.5**
NJ2 pP **sP** **21 26 01.5 -3.4**
NJ2 pmax pmax
comp=Z,11nm,0.6s
NJ2 pmax pmax
comp=Z,180nm,5.2s
YSS Yuzh-Sakhalins 56.81 347⇑ *eP* **P** **21 25 39.2 -0.8**
YSS pmax pmax
comp=Z,11nm,1.0s
USA0B Ussuriysk Arra 57.56 338 P **P** **21 25 44.1 -1.3**
USA0B IAmb IAmb 21 25 47.4
comp=Z,12nm,0.9s
USA0B Ussuriysk Arra 57.56 338 P **P** **21 25 44.1 -1.3**
USA0B pmax pmax
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 57.56 338 P **P** **21 25 44.1 -1.2**
USRK Ussuriysk Ar. 57.56 338 P **P** **21 25 46.7 +1.3**
comp=Z,8.9nm,0.8s,baz=125,slow=6.6,SNR=8.7
USRK pP **pP** **21 26 11.1 +1.1**
comp=Z,5.9nm,0.7s,baz=102,slow=8.3,SNR=3.6
comp=Z,8.9nm,0.8s
MDJ Mudanjiang 58.84 336 P **P** **21 25 55.0 +0.7**
MDJ pmax pmax
comp=Z,11nm,1.4s
MDJ pmax pmax
comp=Z,150nm,4.9s
DRV Dumont d'Urvil 59.65 188 P **P** **21 25 59.7 +0.1**
CN2 Changchun 59.96 333 *eP* **P** **21 26 01.8 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BNX BinXian 60.65 335⇓ P **P** **21 26 07.1 +0.4**
BNX pmax pmax
comp=Z,14nm,0.9s
BNX pmax pmax
comp=Z,130nm,3.5s
GYA Guiyang 61.12 306⇓ *i*P **P** **21 26 10.7 +0.2**
GYA pmax pmax
comp=Z,11nm,1.6s
PETK Petropavlovsk- 61.18 359 P **P** **21 26 10.3 +0.2**
comp=Z,9.1nm,0.9s,baz=153,slow=5.8,SNR=8.9
PETK pP **pP** **21 26 34.6 -0.9**
comp=Z,12nm,0.8s,baz=183,slow=10,SNR=6.4
comp=Z,9.1nm,0.9s
HNS HongShan 61.26 321⇑ P **P** **21 26 12.3 +1.3**
HNS pmax pmax
comp=Z,15nm,1.0s
GSI Gunungsitoli 61.61 276 P **P** **21 26 12.3 -1.5**
KLR Kul'dur 61.95 340⇓ *eP* **P** **21 26 16.1 +0.7**
KLR pmax pmax
comp=Z,11nm,1.3s
KLR Kul'dur 61.95 340 P **P** **21 26 16.4 +0.9**
comp=Z,5.2nm,0.9s,baz=135,slow=3.2,SNR=13
KLR pP **pwP** **21 26 42.1 -0.5**
comp=Z,6.8nm,0.8s,baz=134,slow=3.7,SNR=7.0
comp=Z,5.2nm,0.9s
BJI Beijing 62.06 324 P **P** **21 26 17.5 +1.2**
BJI pP **pwP** **21 26 46.1 +2.5**
BJI pmax pmax
comp=Z,4.0nm,1.0s
SHEM Shemya Is, Ala 62.22 11 LR LR 21 49 19.8
comp=Z,42nm,21.1s,baz=340,slow=32
XAN Xi'an 63.17 315⇑ P **P** **21 26 24.8 +0.9**
XAN pmax pmax
comp=Z,20nm,0.8s
XAN Xi'an 63.17 315 P **P** **21 26 24.8 +0.9**
ADK Adak 63.59 17 P **P** **21 26 27.3 +1.1**
KMI Kunming 63.74 303⇓ P **P** **21 26 29.1 +1.0**
KMI pmax pmax
comp=Z,11nm,1.1s
CRAI Chiangrai 63.93 297 P **P** **21 26 28.1 -1.0**
CRAI IAmb IAmb 21 27 02.2
comp=Z,32nm,1.6s
HEH HeiHe 64.33 338 *eP* P 21 26 19.4 -12
HEH pmax pmax
comp=Z,7.0nm,0.6s
CM31 Chiang Mai Arr 64.61 295 P **P** **21 26 33.2 -0.3**
CM31 IAmb IAmb 21 27 06.7
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 64.61 295 P **P** **21 26 33.4 -0.2**
CMAR pP **pwP** **21 27 00.6 -0.3**
CMAR Chiang Mai Arr 64.61 295 P **P** **21 26 33.4 -0.2**
CMAR *PP **pwP** **21 27 00.6 -0.3**
CMAR Chiang Mai Arr 64.61 295 P **P** **21 26 34.7 +1.1**
comp=Z,5.7nm,1.0s,baz=115,slow=4.6,SNR=23
CMAR pP **pwP** **21 27 01.6 +0.7**
comp=Z,6.3nm,0.7s,baz=121,slow=5.2,SNR=9.6
CMAR LR LR 21 53 17.6
comp=Z,20nm,21.6s,baz=105,slow=34
CMAR PKP2bc 21 55 17.9
comp=Z,0.4nm,0.4s,baz=270,slow=2.6,SNR=4.4
comp=Z,5.7nm,1.0s
XLT XiLinHaoTe 64.67 327 *eP* **P** **21 26 34.9 +1.3**
XLT pmax pmax
comp=Z,20nm,1.0s
XLT pmax pmax
comp=Z,120nm,3.2s
CHTO Chiang Mai 64.72 295 P **P** **21 26 33.8 -0.5**
CHTO **pwP** **21 27 01.8 +0.2**
CHTO IAmb IAmb 21 27 04.2
comp=Z,27nm,1.4s
CHTO Chiang Mai 64.72 295 P **P** **21 26 33.8 -0.5**
CHTO *PP **pwP** **21 27 01.8 +0.2**
CHTO pmax pmax
comp=Z,27nm,1.5s
PZH PanZhiHua 65.12 304 P **P** **21 26 37.9 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,4.6s
HHC Hu-ho-hao-te 65.31 322 *eP* **P** **21 26 39.4 +1.6**
HHC pmax pmax
comp=Z,21nm,0.8s
HHC pmax pmax
comp=Z,110nm,5.3s
CD2 Chengdu 65.42 309 *eP* **P** **21 26 38.0 -0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
BTO Baotou 66.11 321 *eP* **P** **21 26 44.8 +1.9**
BTO S **S** **21 35 21.9 -1.5**
BTO SS **SS** **21 39 37.8 -3.4**
BTO pmax pmax
comp=Z,12nm,0.6s
BTO pmax pmax
comp=Z,410nm,4.2s
BTO LR LR
comp=Z,170nm,4.5s
BTO LR LR
comp=Z,150nm,9.4s
BTO LR LR
comp=Z,200nm,6.1s
HIA Hailar 66.67 333 P **P** **21 26 46.9 +0.6**
HIA **pP** **21 27 12.3 +0.8**
HIA IAmb IAmb 21 27 17.3
comp=Z,37nm,1.3s
HIA Hailar 66.67 333 P **P** **21 26 46.9 +0.6**
HIA 21 27 12.3
HIA pmax pmax
comp=Z,37nm,1.3s
TNCH TengChong 67.24 301⇑ P **P** **21 26 51.4 +0.8**
TNCH PcP **pwP** **21 27 19.8 +1.7**
TNCH pP sP 21 27 25.1 -1.7
TNCH S **S** **21 35 31.4 -6.4**
TNCH pmax pmax
comp=Z,13nm,0.8s
TNCH pmax pmax
comp=Z,110nm,5.2s
ZEA Zeya 67.27 340 *eP* **P** **21 26 51.3 +1.4**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
LZH Lanzhou 67.79 314 *eP* **P** **21 26 55.9 +2.1**
LZH pP pwP 21 27 23.2 +1.9
LZH sS SKiKP 21 36 35.9 -4.9
LZH pmax pmax
comp=Z,29nm,1.2s
UNV Unalaska Valle 68.56 21 P **P** **21 26 58.8 +0.8**
baz=217
VNDA Vanda 69.20 179 P **P** **21 27 00.6 -1.1**
VNDA IAmb IAmb 21 27 02.7
comp=Z,18nm,0.8s
VNDA Vanda 69.20 179 P **P** **21 27 00.6 -1.1**
VNDA pmax pmax
comp=Z,18nm,0.8s
VNDA Vanda 69.20 179 P **P** **21 27 02.2 +0.5**
comp=Z,17nm,0.8s,baz=340,slow=6.9,SNR=37
VNDA LR LR 21 54 09.4
comp=Z,112nm,18.1s,baz=144,slow=33
comp=Z,17nm,0.8s
VNDA Vanda 69.20 179⇑ P **P** **21 27 02.0 +0.4**
SBA Scott Base 69.65 178 P **P** **21 27 04.0 -0.4**
SBA Scott Base 69.65 178 P **P** **21 27 04.0 -0.4**
SBA pmax pmax
comp=Z,432nm,2.0s
CCD Concordia, Ant 69.67 189⇑ P **P** **21 27 05.3 +0.3**
SEY Seymchan 71.19 357⇓ *eP* **P** **21 27 13.6 -0.3**
SEY pmax pmax
comp=Z,10.0nm,1.7s
SEY Seymchan 71.19 357 LR LR 21 57 04.9
comp=Z,19nm,20.1s,baz=294,slow=34
SDPT Sand Point 71.97 23 P **P** **21 27 19.6 +0.9**
baz=223
ULN Ulaanbaatar 72.06 326 P **P** **21 27 20.7 +1.0**
ULN IAmb IAmb 21 27 23.4
comp=Z,21nm,1.0s
ULN pP **pwP** **21 27 48.1 +0.5**
ULN Ulaanbaatar 72.06 326 *deP* **P** **21 27 21.1 +1.4**
ULN pmax pmax
comp=Z,22nm,1.0s
GTA Gaotai 72.17 316⇑ P **P** **21 27 22.4 +1.9**
GTA pP pwP 21 27 50.2 +1.8
GTA sP sP 21 28 07.1 +10
GTA pmax pmax
comp=Z,25nm,0.9s
SONM Songino Array 72.41 326 P **P** **21 27 22.5 +0.8**
SONM pP **pwP** **21 27 49.3 -0.3**
SONM IAmb IAmb 21 27 53.1
comp=Z,21nm,0.9s
SONM Songino Array 72.41 326 P **P** **21 27 22.5 +0.8**
SONM *PP **pwP** **21 27 49.3 -0.3**
SONM pmax pmax
comp=Z,21nm,0.9s
SONM Songino Array 72.41 326 P **P** **21 27 23.5 +1.7**
comp=Z,17nm,0.8s,baz=140,slow=5.8,SNR=98
SONM pP **pwP** **21 27 48.8 -0.8**
comp=Z,16nm,0.8s,baz=138,slow=6.0,SNR=7.5
SONM LR LR 22 00 29.8
comp=Z,27nm,18.1s,baz=208,slow=37
comp=Z,17nm,0.8s
YAK Yakutsk 73.64 346 *eP* **P** **21 27 29.1 +0.6**
YAK *e* 21 27 44.0
YAK *e**PP **sP** **21 28 04.5 -0.6**
YAK *e* 21 30 13.9
YAK *eS* **SKiKP** **21 36 47.0 -1.4**
YAK *e* 21 37 26.0
YAK pmax pmax
comp=Z,15nm,0.8s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=Z,115nm,5.3s
YAK smax smax
comp=N,92nm,3.5s
YAK smax smax
comp=E,72nm,3.3s
YAK Yakutsk 73.64 346 P **P** **21 27 28.4 0.0**
comp=E,18nm,0.6s,baz=262,slow=0.1,SNR=9.5
YAK pP **pP** **21 27 53.4 -0.8**
comp=E,21nm,0.7s,baz=58,slow=0.8,SNR=3.9
YAK LR LR 22 03 15.1
comp=E,8.3nm,18.1s,baz=110,slow=38
comp=E,18nm,0.6s
GOMU GeErMu 74.41 311 P **P** **21 27 35.6 +1.6**
GOMU pmax pmax
comp=E,4.0nm,0.8s
O14K Tigyukauivet M 74.59 20 P **P** **21 27 34.8 +0.8**
baz=221
M13K Dall Lake 74.79 18 P **P** **21 27 36.8 +1.6**
baz=219
N14K Kuskokwak Cree 74.95 19 P **P** **21 27 36.3 +0.2**
baz=221
BOD Bodaibo 75.19 337 *eP* **P** **21 27 37.7 +0.2**
BOD pmax pmax
comp=Z,12nm,1.6s
M14K Bethel 75.49 19 P **P** **21 27 40.3 +1.1**
baz=220
ZAK Zakamensk 75.53 327 *eP* **P** **21 27 40.6 +0.8**
ZAK *e* 21 28 06.3
ZAK pmax pmax
comp=Z,11nm,1.1s
ZAK pmax pmax
comp=Z,13nm,1.4s
P16K Nushagak River 75.57 22 P **P** **21 27 40.7 +1.0**
baz=224
N15K Kwethluk River 75.67 20 P **P** **21 27 40.8 +0.6**
baz=222
L14K Kuka Creek 75.72 18 P **P** **21 27 40.7 +0.2**
baz=220
Q17K Contact Creek 75.82 23 P **P** **21 27 41.3 0.0**
baz=227
M15K Kasigluk River 75.86 19 P **P** **21 27 41.8 +0.5**
baz=222
O16K Kokwok River B 75.94 21 P **P** **21 27 42.3 +0.6**
baz=224
OHAK Old Harbor 76.16 25 P **P** **21 27 43.3 +0.2**
baz=229
N16K Nishlik Lake 76.34 20 P **P** **21 27 44.8 +0.7**
baz=223
L15K Ungalak Mounta 76.35 18 P **P** **21 27 44.8 +0.8**
baz=221
BILL Bilibino 76.35 3 *eP* **P** **21 27 44.6 +0.6**
O17K Koliganek Bris 76.42 21 P **P** **21 27 45.8 +1.3**
baz=225
J14K Nanvaranak Lak 76.56 17 P **P** **21 27 46.2 +1.0**
baz=218
M16K Timber Creek 76.67 20 IAmb IAmb 21 28 24.1
comp=Z,33nm,1.2s
M16K Timber Creek 76.67 20 P **P** **21 27 46.1 +0.2**
baz=223
K15K Wolf Creek Mou 76.80 18 IAmb IAmb 21 28 24.7
comp=Z,41nm,1.4s
K15K Wolf Creek Mou 76.80 18 P **P** **21 27 47.1 +0.5**
baz=220
KDAK Kodiak Island 76.81 24 LR LR 21 56 37.9
comp=Z,22nm,22.0s,baz=228,slow=32
P18K Big Mountain, 76.84 22 P **P** **21 27 48.1 +1.1**
baz=227
N17K Nushagak Hills 76.92 21 P **P** **21 27 48.2 +0.9**
baz=225
L16K Owhat River 77.01 19 P **P** **21 27 47.7 -0.1**
baz=223
Q19K Cape Douglas, 77.14 23 P **P** **21 27 48.2 -0.4**
baz=229
O18K Koktuh Hills 77.17 22 P **P** **21 27 48.6 -0.2**
baz=227
M17K Holitna River 77.46 20 P **P** **21 27 50.5 +0.2**
baz=225
N18K Kilae Creek 77.49 21 P **P** **21 27 50.4 -0.1**
baz=226
ANM Nome 77.51 15 P **P** **21 27 50.6 +0.1**
baz=216
TNA Tin City 77.70 14 P **P** **21 27 52.7 +1.2**
baz=214
L17K Donlin 77.70 19 P **P** **21 27 52.2 +0.5**
baz=224
P19K Oil Pt 77.78 23 P **P** **21 27 52.9 +0.7**
baz=229
J16K Anvik River 77.83 18 IAmb IAmb 21 28 30.2
comp=Z,29nm,1.4s
J16K Anvik River 77.83 18 P **P** **21 27 53.0 +0.6**
baz=221
F14K Arctic Creek 78.01 14 P **P** **21 27 53.8 +0.6**
baz=215
M18K Stony River 78.08 20 P **P** **21 27 54.8 +1.0**
baz=226
K17K Iditarod 78.12 19 P **P** **21 27 54.6 +0.7**
baz=224
G15K Niukluk 78.20 15 P **P** **21 27 54.6 +0.3**
baz=218
I17K Unalakleet 78.26 17 P **P** **21 27 54.5 -0.2**
baz=221
O20K Slope Mountain 78.29 23 P **P** **21 27 55.3 +0.2**
baz=229
L18K Granite Mounta 78.29 20 P **P** **21 27 55.1 +0.2**
baz=225
F15K North Star Dit 78.61 15 P **P** **21 27 56.9 +0.3**
baz=217
BRSE Bradley Lake S 78.80 24 P **P** **21 27 57.5 -0.3**
baz=231
M19K Big River Lodg 78.86 21 P **P** **21 27 57.9 -0.1**
baz=227,SNR=5.8
L19K White Mountain 78.89 20 IAmb IAmb 21 28 32.0
comp=Z,14nm,0.8s
L19K White Mountain 78.89 20 P **P** **21 27 58.7 +0.4**
baz=227
G16K Koyuk River 78.95 16 IAmb IAmb 21 28 03.0
comp=Z,15nm,0.8s
G16K Koyuk River 78.95 16 P **P** **21 27 59.1 +0.6**
baz=219
TTA Tatalina 79.02 19 P **P** **21 27 59.4 +0.5**
baz=226
J18K Innoko River 79.17 19 P **P** **21 28 00.5 +0.8**
baz=225
N20K Mount Spurr 79.17 22 P **P** **21 28 00.5 +0.7**
baz=230
H17K Granite Mounta 79.28 17 IAmb IAmb 21 28 37.7
comp=Z,32nm,1.8s
H17K Granite Mounta 79.28 17 P **P** **21 28 00.8 +0.6**
baz=222
M20K Styx River 79.29 21 P **P** **21 28 00.7 +0.2**
baz=229
CAPN Captain Cook N 79.29 23 P **P** **21 28 00.8 +0.4**
baz=231
L20K Farewell, AK 79.42 20 P **P** **21 28 01.9 +0.7**
baz=228
G17K Kiwalik Mounta 79.50 16 P **P** **21 28 02.4 +0.9**
baz=221
SEW Seward 79.54 24 P **P** **21 28 02.5 +0.7**
baz=232
O22K Cooper Landing 79.66 23 P **P** **21 28 03.0 +0.6**
baz=232
H18K Honhosa River 79.88 17 P **P** **21 28 02.8 -0.8**
baz=223

J19K	**Poorman** baz=226	79.89	19	P	P	21 28 03.9	+0.4
SUA	**Susitna One** baz=231	79.89	22	P	P	21 28 04.4	+0.6
K20K	**Telida** baz=228	79.95	20	P	P	21 28 04.7	+0.8
RC01	**Rabbit Creek A** comp=Z,16nm,0.9s	80.03	23	IAmb	IAmb	21 28 37.0	
RC01	**Rabbit Creek A** baz=232	80.03	23	P	P	21 28 03.9	-0.5
F17K	**Baldwin Pennin** baz=220	80.05	15	P	P	21 28 05.0	+0.6
G18K	**Tagagawik** baz=223	80.34	16	P	P	21 28 05.7	-0.3
E17K	**Hotham Inlet** baz=220,SNR=20	80.40	15	P	P	21 28 06.5	+0.3
J20K	**Nowinta River** baz=227,SNR=5.5	80.48	19	P	P	21 28 07.5	+0.7
C16K	**Lisburne Hills** baz=216	80.52	13	P	P	21 28 06.9	+0.1
D17K	**Noatak River** baz=218	80.57	14	P	P	21 28 07.2	0.0
PMR	**Palmer** comp=Z,15nm,0.9s	80.57	23	IAmb	IAmb	21 28 10.3	
PMR	**Palmer** baz=232	80.57	23	P	P	21 28 08.0	+0.7
F18K	**Selawik** baz=222,SNR=9.3	80.59	16	P	P	21 28 07.4	+0.2
CAST	**Castle Rocks**	80.66	20	P	P	21 28 07.7	-0.1
CAST	comp=Z,14nm,0.8s			IAmb	IAmb	21 28 39.8	
CAST	**Castle Rocks** baz=229,SNR=6.7	80.66	20	P	P	21 28 08.4	+0.6
H19K	**Roundabout Mou** baz=225	80.71	17	P	P	21 28 08.4	+0.4
KNK	**Knik Glacier** baz=233	80.72	23	P	P	21 28 07.8	-0.3
I20K	**Naaghedeneel** baz=227	80.80	18	P	P	21 28 08.9	+0.5
CHUM	**Lake Minchumin** baz=229	80.89	20	P	P	21 28 09.3	+0.3
RDOG	**Red Dog Mine** comp=Z,12nm,0.8s	80.89	14	IAmb	IAmb	21 28 12.8	
RDOG	**Red Dog Mine** baz=218,SNR=13	80.89	14	P	P	21 28 09.4	+0.5
G19K	**Purcell Mounta** baz=224	80.96	17	P	P	21 28 10.2	+0.9
E18K	**Tukpahlearik C** baz=221	80.97	15	P	P	21 28 09.7	+0.5
SML	**Sawmill** comp=Z,26nm,1.0s	81.01	23	IAmb	IAmb	21 28 13.2	
SML	**Sawmill** baz=233,SNR=5.1	81.01	23	P	P	21 28 10.1	+0.4
KTH	**Kantishna Hill** comp=Z,22nm,1.2s	81.15	20	IAmb	IAmb	21 28 13.3	
H20K	**Anotleneega Mo** baz=226	81.15	18	P	P	21 28 11.1	+0.8
C17K	**DeLong Mountai** baz=218	81.16	13	P	P	21 28 10.8	+0.5
M23K	**Glacier View** baz=234	81.23	23	P	P	21 28 11.1	+0.3
F19K	**Shaleruckik Mo** baz=224	81.27	16	P	P	21 28 11.1	+0.2
EYAK	**Cordova Ski Ar** baz=236	81.29	24	P	P	21 28 11.4	+0.3
TRF	**Thorofare Moun** baz=231,SNR=6.7	81.30	21	P	P	21 28 11.8	+0.4
SCM	**Sheep Creek Mo** comp=Z,24nm,0.8s	81.41	23	IAmb	IAmb	21 28 15.3	
SCM	**Sheep Creek Mo** baz=234	81.41	23	P	P	21 28 11.9	+0.1
WAT1	**Susitna Watana** baz=233	81.54	22	P	P	21 28 12.1	-0.4
QSPA	**South Pole Qui**	81.68	180	P	P	21 28 13.0	-0.3
QSPA	comp=Z,15nm,0.7s			IAmb	IAmb	21 28 13.5	
WAT6	**Susitna Watana** baz=234	81.69	22	P	P	21 28 13.1	-0.3
C18K	**Utukok River** comp=Z,28nm,1.6s	81.76	14	IAmb	IAmb	21 28 53.2	
C18K	**Utukok River** baz=220	81.76	14	P	P	21 28 14.4	+0.8
KLU	**Klutina** comp=Z,20nm,1.2s	81.76	24	IAmb	IAmb	21 28 17.8	
KLU	**Klutina** baz=235	81.76	24	P	P	21 28 14.0	+0.3
IMAR	**Indian Mountai**	81.83	18	P	P	21 28 14.6	+0.7
E19K	**Redstone River** comp=Z,21nm,0.9s	81.87	16	IAmb	IAmb	21 28 18.5	
E19K	**Redstone River** baz=224	81.87	16	P	P	21 28 15.1	+1.0
H21K	**Melozitna Rive** baz=229	81.90	18	P	P	21 28 15.2	+0.9
MCK	**McKinley** baz=232,SNR=32	81.95	21	P	P	21 28 14.8	+0.2
BMRM	**Bremner River** baz=237	81.99	24	P	P	21 28 15.4	+0.5
F20K	**Avaraart Lake** baz=226	81.99	16	P	P	21 28 15.7	+1.1
M24K	**Tolsona, Glenn** baz=235	82.01	23	P	P	21 28 15.2	+0.2
DHY	**Denali Highway** baz=234	82.12	22	P	P	21 28 16.1	+0.5
MLY	**Manley** baz=230,SNR=9.1	82.15	19	P	P	21 28 16.4	+0.8
B18K	**Kokolik River** baz=219	82.17	13	P	P	21 28 16.6	+1.1
TIXI	**Tiksi**	82.19	351	P	P	21 28 15.4	-0.2
TIXI	comp=Z,32nm,1.7s			IAmb	IAmb	21 28 48.1	
TIXI	**Tiksi**	82.19	351⇑	*e*P	P	21 28 16.4	+0.8
TIXI	comp=Z,10.0nm,1.7s			pmax	pmax		
TIXI	**Tiksi** comp=Z,18nm,19.8s,baz=198,slow=36	82.19	351	LR	LR	22 04 59.6	
WMQ	**Urumqi**	82.25	316	*e*P	P	21 28 17.5	+0.8
WMQ				pP	pwP	21 28 46.3	+1.2
WMQ				sP	sP	21 29 02.9	+9.3
WMQ	comp=Z,26nm,1.5s			pmax	pmax		
G21K	**Allakaket** baz=228	82.27	17	P	P	21 28 15.8	-0.4
N25K	**Chitina, Valde** baz=236	82.35	24	P	P	21 28 17.4	+0.6
D19K	**Kuna River** baz=223	82.39	15	P	P	21 28 16.9	+0.1
NEA2	**Nenana** comp=Z,21nm,0.8s	82.44	20	IAmb	IAmb	21 28 19.6	
NEA2	**Nenana** baz=232,SNR=13	82.44	20	P	P	21 28 17.3	+0.3
C19K	**Lookout Ridge** baz=222	82.49	14	P	P	21 28 18.6	+1.3
H22K	**Ishtalitna Cre** baz=230	82.50	18	P	P	21 28 18.9	+1.5
HARP	**HAARP** baz=236	82.57	23	P	P	21 28 19.0	+1.2
GLB	**Gilahina Butte** comp=Z,12nm,0.8s	82.57	24	IAmb	IAmb	21 28 21.2	
I23K	**Minto, Yukon-K** baz=232,SNR=5.5	82.68	20	P	P	21 28 19.2	+0.9
MESA	**MESA** baz=239	82.68	26	P	P	21 28 19.2	+0.5
E20K	**Nigu River** baz=225	82.72	15	P	P	21 28 19.5	+0.9
F21K	**Alatna River** baz=228	82.75	17	P	P	21 28 19.5	+0.9
PAX	**Paxson** baz=236	82.77	22	P	P	21 28 19.7	+0.7
MCARA	**McCarthy VSAT** baz=238	82.86	24	P	P	21 28 19.9	+0.6
CCB	**Clear Creek Bu** comp=Z,11nm,0.7s	82.90	20	IAmb	IAmb	21 28 21.7	
D20K	**Etivluk River** baz=224	82.93	15	P	P	21 28 20.3	+0.7
MDM	**Murphy Dome** comp=Z,17nm,1.0s	82.95	20	IAmb	IAmb	21 28 22.6	
A19K	**Wainwright** baz=220	82.98	13	P	P	21 28 20.8	+1.1
COLA	**College**	83.02	20	P	P	21 28 22.0	+1.9
COLA	**College** baz=233	83.02	20	P	P	21 28 20.9	+0.8
COLA	**College**	83.02	20	P	P	21 28 22.0	+1.9
COLA	comp=Z,33nm,0.7s			pmax	pmax		
HDA	**Harding Lake** comp=Z,10nm,0.8s	83.06	21	IAmb	IAmb	21 28 23.6	
HDA	**Harding Lake** baz=234,SNR=9.5	83.06	21	P	P	21 28 21.3	+1.0
HYB	**Hyderabad**	83.11	289	*e*P	P	21 28 21.9	+0.3
K24K	**Donnelly Dome** baz=235,SNR=6.4	83.13	22	P	P	21 28 21.7	+0.9
G22K	**Bettles** baz=230	83.13	18	P	P	21 28 20.6	+0.1
TABL	**Table Mountain** comp=Z,19nm,0.8s	83.16	26	IAmb	IAmb	21 28 24.6	
BARN	**Barnard Glacie** comp=Z,16nm,0.8s	83.26	25	IAmb	IAmb	21 29 12.4	
ILAR	**Eielson Array**	83.30	21	P	P	21 28 21.3	-0.3
ILAR	**Eielson Array** comp=Z,6.2nm,0.7s,baz=247,slow=5.4,SNR=41	83.30	21	P	P	21 28 21.4	-0.1
ILAR	comp=Z,4.1nm,0.9s,baz=260,slow=4.1,SNR=3.9			pP	pP	21 28 47.4	-0.8
ILAR	comp=Z,29nm,20.6s,baz=240,slow=32 comp=Z,6.2nm,0.7s			LR	LR	22 00 35.1	
POKR	**Poker Flat Res** baz=234	83.31	20	P	P	21 28 20.9	-0.7
CTG	**Chitna Glacier** baz=240	83.34	25	P	P	21 28 22.8	+0.8
PINM	**Pinnacle** baz=241,SNR=5.2	83.38	26	P	P	21 28 23.4	+1.3
M26K	**Nabesna, AK** comp=Z,9.1nm,0.7s	83.41	24	IAmb	IAmb	21 28 25.8	
M26K	**Nabesna, AK** baz=238	83.41	24	P	P	21 28 22.9	+0.6
LOGN	**Logan Glacier** comp=Z,20nm,1.0s	83.42	25	IAmb	IAmb	21 28 55.4	
MENT	**Mentasta** comp=Z,14nm,0.6s	83.42	23	IAmb	IAmb	21 28 25.7	
RIDG	**Independent Ri** comp=Z,24nm,1.1s	83.44	22	IAmb	IAmb	21 28 25.7	
RIDG	**Independent Ri** baz=236,SNR=5.6	83.44	22	P	P	21 28 24.0	+1.7
G23K	**Bananza Creek** baz=231	83.45	18	P	P	21 28 24.1	+1.8
PNL	**Peninsula** baz=241	83.55	27	P	P	21 28 23.1	+0.1
H24K	**Noodor Dome** baz=233	83.59	19	P	P	21 28 24.8	+1.8
L26K	**Log Cabin Wild** comp=Z,12nm,0.9s	83.61	23	IAmb	IAmb	21 28 26.8	
L26K	**Log Cabin Wild** baz=238,SNR=7.8	83.61	23	P	P	21 28 24.9	+1.7
C21K	**Knifeblade Rid** baz=226	83.72	15	P	P	21 28 25.0	+1.4
B20K	**Meade River** baz=224	83.73	14	P	P	21 28 24.4	+0.8
J25K	**Salcha River,** comp=Z,38nm,1.4s	83.74	21	IAmb	IAmb	21 28 27.2	
J25K	**Salcha River,** baz=236,SNR=15	83.74	21	P	P	21 28 24.9	+1.1
M27K	**Edge Creek, AK** comp=Z,13nm,0.7s	83.84	24	IAmb	IAmb	21 28 28.1	
M27K	**Edge Creek, AK** baz=239	83.84	24	P	P	21 28 25.2	+0.7
SCRK	**Sand Creek** comp=Z,13nm,0.8s	83.89	22	IAmb	IAmb	21 28 28.1	
SCRK	**Sand Creek** baz=237,SNR=13	83.89	22	P	P	21 28 25.0	+0.3
D22K	**Ayikyak River** comp=Z,30nm,1.4s	84.09	16	IAmb	IAmb	21 28 59.2	
D22K	**Ayikyak River** baz=228	84.09	16	P	P	21 28 26.8	+1.3
YUK3	**Moose Creek** baz=240	84.12	25	P	P	21 28 26.6	+0.6
YUK8	**Steele Glacier** baz=241	84.17	25	P	P	21 28 26.7	+0.4
PRP	**Porcupine Dome** baz=235	84.20	20	P	P	21 28 27.0	+0.7
O29M	**Mount Kennedy** comp=Z,16nm,1.0s	84.21	26	IAmb	IAmb	21 28 48.2	
O29M	**Mount Kennedy** baz=242	84.21	26	P	P	21 28 26.2	-0.2
L27K	**Beaver Creek,** baz=239	84.22	23	P	P	21 28 26.8	+0.5
S31K	**Pelican** baz=244	84.24	29	P	P	21 28 27.0	+0.6
G24K	**Hadweenzic Riv** comp=Z,16nm,0.9s	84.24	19	IAmb	IAmb	21 28 59.5	
BVCY	**Beaver Creek** baz=240	84.27	24	P	P	21 28 28.0	+1.4
P29M	**Windy Craggy** baz=243	84.28	27	P	P	21 28 28.3	+1.6
SIT	**Sitka** baz=245	84.30	30	P	P	21 28 27.9	+1.2
J26L	**Joseph Creek** baz=237,SNR=8.7	84.33	22	P	P	21 28 28.0	+1.2
DGZ	**Jazzator, Alta**	84.38	322	*ce*P	P	21 28 27.7	+0.1
DGZ	comp=Z,16nm,0.9s			pmax	pmax		
E23K	**Chandalar** baz=231	84.42	17	P	P	21 28 28.6	+1.3
MAW	**Mawson** comp=Z,9.2nm,0.6s,baz=120,slow=8.5,SNR=3.1 comp=Z,9.2nm,0.6s	84.58	203	P	P	21 28 28.1	+0.1
F24K	**Squaw Lake** baz=233	84.61	18	P	P	21 28 29.9	+1.7
K27K	**Chicken** baz=239	84.63	22	P	P	21 28 30.1	+1.8
G25K	**Bearman Lake** baz=235	84.72	19	P	P	21 28 29.5	+0.9
A21K	**Barrow** baz=224	84.80	13	P	P	21 28 30.7	+1.7
PLBC	**Pleasant Camp** baz=244,SNR=5.1	84.83	28	P	P	21 28 30.8	+1.4
P30M	**Million Dollar** baz=244	84.85	27	P	P	21 28 30.9	+1.4
B22K	**Teshekpuk Lake** comp=Z,15nm,1.1s	84.88	15	IAmb	IAmb	21 29 02.4	
B22K	**Teshekpuk Lake** baz=227	84.88	15	P	P	21 28 31.0	+1.6
I26K	**Coal Creek Min** baz=238	84.91	21	P	P	21 28 30.9	+1.2
HYT	**Haines Junctio** comp=Z,29nm,1.0s	84.92	26	IAmb	IAmb	21 28 34.6	
HYT	**Haines Junctio** baz=243,SNR=10	84.92	26	P	P	21 28 31.1	+1.1
M29M	**Somme Creek** baz=242	85.26	25	P	P	21 28 32.9	+1.2
SKAG	**Skagway** baz=245	85.31	28	P	P	21 28 32.7	+1.0
D24K	**Happy Valley** baz=232	85.33	17	P	P	21 28 32.3	+0.7
F25K	**Christian Rive** baz=235	85.35	19	P	P	21 28 32.7	+0.8
EGAK	**Eagle** comp=Z,14nm,0.8s	85.35	22	IAmb	IAmb	21 28 35.7	
EGAK	**Eagle** baz=239,SNR=8.8	85.35	22	P	P	21 28 33.0	+1.1
N30M	**Aishikik Lake** baz=243	85.39	26	P	P	21 28 33.0	+0.7
O30N	**Mendenhall** comp=Z,23nm,0.9s	85.52	27	IAmb	IAmb	21 28 36.6	
O30N	**Mendenhall** baz=244,SNR=8.9	85.52	27	P	P	21 28 34.1	+1.2
WRAK	**Wrangell Islan** baz=248	85.55	31	P	P	21 28 33.9	+0.9
G26K	**Porcupine Rive** baz=237	85.58	19	P	P	21 28 32.5	-0.5
I27K	**Kandik River** baz=239	85.61	21	P	P	21 28 34.3	+1.1
DAWY	**Dawson** baz=241,SNR=6.1	85.67	23	P	P	21 28 35.2	+1.7
E25K	**Arctic Village** baz=235	85.67	18	P	P	21 28 35.8	+2.3
L29M	**L29M** comp=Z,38nm,1.6s	85.71	24	IAmb	IAmb	21 28 38.8	
L29M	**L29M** baz=242	85.71	24	P	P	21 28 35.0	+1.2
C24K	**Franklin Bluff** baz=232	85.71	16	P	P	21 28 35.6	+2.1
F26K	**Sheenjek River** baz=236	85.88	19	P	P	21 28 36.4	+1.9
N31M	**Braeburn, Yuko** baz=244,SNR=9.8	85.97	26	P	P	21 28 37.0	+1.9
H27K	**Steamboat Moun** baz=239	85.97	21	P	P	21 28 36.8	+1.8
WHY	**Whitehorse** comp=Z,9.4nm,0.9s	86.01	27	IAmb	IAmb	21 28 38.6	
WHY	**Whitehorse** baz=245	86.01	27	P	P	21 28 37.5	+2.1
M30M	**Minto, Yukon** baz=244,SNR=5.4	86.01	25	P	P	21 28 37.3	+2.0
P32M	**Atlin** baz=246	86.11	28	P	P	21 28 38.0	+2.2
D25K	**Kavik River**	86.13	17	P	P	21 28 37.8	+2.1
I28M	**Miner Creek** baz=234	86.14	22	P	P	21 28 37.8	+1.9
KHMM	**Horse Mountain** baz=240	86.15	48	IAmb	IAmb	21 28 43.5	
K29M	**Barlow Dome** comp=Z,16nm,0.9s	86.29	23	IAmb	IAmb	21 28 40.9	
K29M	**Barlow Dome** comp=Z,8.8nm,0.8s	86.29	23	P	P	21 28 38.6	+1.9
K29M	**Barlow Dome** baz=243,SNR=7.4	86.29	23	P	P	21 28 43.6	
J29N	**Klondike Camp** comp=Z,17nm,0.9s	86.30	23	IAmb	IAmb	21 28 43.6	
J29N	**Klondike Camp** baz=242	86.30	23	P	P	21 28 38.8	+2.1
GDXM	**Geysers** comp=Z,9.3nm,0.8s	86.35	50	IAmb	IAmb	21 28 41.0	
K02D	**Willamette Mer** comp=Z,18nm,1.2s	86.65	46	IAmb	IAmb	21 29 07.1	
S34M	**Telegraph Cree** comp=Z,17nm,1.1s	86.72	30	IAmb	IAmb	21 28 43.3	
S34M	**Telegraph Cree** baz=249	86.72	30	P	P	21 28 40.5	+1.8
P33M	**Teslin, Yukon** baz=247	86.77	28	P	P	21 28 40.8	+1.7
MK31	**Makanchi Array**	86.78	318	*ce*P	P	21 28 39.8	+0.4
MKAR	**Makanchi Array**	86.78	318	P	P	21 28 39.5	+0.2
MKAR	**Makanchi Array** comp=Z,11nm,0.7s,baz=99,slow=6.0,SNR=135	86.78	318	P	P	21 28 39.9	+0.5
MKAR	comp=Z,12nm,0.8s,baz=102,slow=5.5,SNR=9.6			pP	pP	21 29 05.8	+0.1
MKAR	comp=Z,0.6nm,0.7s,baz=288,slow=2.7,SNR=7.3 comp=Z,11nm,0.7s			PKKPbc	PKKPdf	21 46 31.9	+3.2
T35M	**Bob Quinn** baz=250	86.83	31	P	P	21 28 41.6	+2.3
M31M	**Drury Creek, Y** comp=Z,9.6nm,0.9s	86.86	26	IAmb	IAmb	21 28 42.7	
M31M	**Drury Creek, Y** baz=246,SNR=5.5	86.86	26	P	P	21 28 42.1	+2.6
N32M	**Quiet Lake** comp=Z,21nm,1.0s	87.02	27	IAmb	IAmb	21 29 08.4	
J30M	**Hart River** baz=244	87.09	23	P	P	21 28 42.8	+2.2
F28M	**Old Crow** baz=240	87.23	20	P	P	21 28 43.5	+2.4
ZAA0	**Zalesovo Array** comp=Z,8.8nm,0.8s	87.29	325	IAmb	IAmb	21 29 11.1	
ZALV	**Zalesovo Beam** comp=Z,3.1nm,0.6s,baz=111,slow=5.8,SNR=16	87.29	325	P	P	21 28 41.0	-0.7
ZALV	comp=Z,7.6nm,0.6s,baz=113,slow=5.7,SNR=14 comp=Z,3.1nm,0.6s			pP	pP	21 29 07.8	-0.2
FARO	**Faro, Yukon** baz=247	87.32	26	P	P	21 28 42.9	+1.2
R33M	**Jennings River** baz=249	87.33	29	P	P	21 28 43.5	+1.6
I30M	**Mount Dempster** comp=Z,11nm,0.9s	87.35	22	IAmb	IAmb	21 28 45.4	
I30M	**Mount Dempster** baz=244	87.35	22	P	P	21 28 43.2	+1.3
DLBC	**Dease Lake** baz=250	87.45	30	P	P	21 28 43.9	+1.5
L04D	**Klamath Falls** comp=Z,13nm,1.1s	87.51	47	IAmb	IAmb	21 29 14.1	
D27M	**Malcolm River** comp=Z,20nm,1.1s	87.70	18	IAmb	IAmb	21 29 19.2	
D27M	**Malcolm River** baz=239	87.70	18	P	P	21 28 44.4	+1.1
EPYK	**Eagle Plains** comp=Z,15nm,0.8s	87.74	21	IAmb	IAmb	21 28 47.2	
EPYK	**Eagle Plains** baz=243	87.74	21	P	P	21 28 44.3	+0.8
SNCC	**San Nicolas Is**	87.74	56	P	P	21 28 43.6	-0.6
AFDM	**Forest Hills D** comp=Z,10nm,1.0s	87.77	50	IAmb	IAmb	21 28 47.8	
SCZ2	**Santa Cruz Isl** baz=258	87.80	55	P	P	21 28 44.4	-0.1
E28M	**Babbage River** baz=241	87.83	19	P	P	21 28 44.4	+0.5
PKM	**Mcpherson Peak** baz=258	87.83	54	P	P	21 28 45.1	+0.2
G30M	**tAoh Zraii Nji** comp=Z,21nm,1.2s	88.19	21	IAmb	IAmb	21 28 49.7	
G30M	**tAoh Zraii Nji** baz=244	88.19	21	P	P	21 28 46.1	+0.4
E29M	**Blow River** baz=242	88.26	19	P	P	21 28 47.0	+1.1
MMPY	**Sheldon Lake,** baz=248	88.37	26	P	P	21 28 47.3	+0.7
D28M	**Stokes Point** baz=241	88.43	18	P	P	21 28 47.6	+1.0
J05D	**Fort Rock, OR** comp=Z,11nm,1.1s	88.52	46	IAmb	IAmb	21 29 17.1	
MPK	**Martis Peak** comp=Z,20nm,1.3s	88.56	50	IAmb	IAmb	21 28 52.1	
F30M	**Barrier River** baz=244	88.62	20	P	P	21 28 48.2	+0.6
CIS	**Catalina Islan** baz=259,SNR=9.8	88.68	56	P	P	21 28 50.2	+1.4
PINE	**Pine Mountain** comp=Z,9.9nm,0.8s	88.84	46	IAmb	IAmb	21 28 53.0	
PNTR	**Pine Nut** comp=Z,12nm,1.0s	88.84	50	IAmb	IAmb	21 28 53.4	
G31M	**Satah River** comp=Z,12nm,1.1s	88.86	21	IAmb	IAmb	21 28 51.7	
G31M	**Satah River** baz=246	88.86	21	P	P	21 28 49.9	+1.2
MDPB	**Devils Postpil** comp=Z,11nm,1.1s	88.96	52	IAmb	IAmb	21 28 54.3	
ISA	**Isabella, Lake** baz=259	89.06	54	P	P	21 28 50.9	+0.4
PAHR	**Pah Rah Range** comp=Z,11nm,1.0s	89.13	50	IAmb	IAmb	21 28 54.5	
F31M	**Tsiigehtchic** baz=246	89.26	21	P	P	21 28 52.0	+1.4
EDW2	**Edwards Air Fo** baz=259,SNR=8.3	89.30	55	P	P	21 28 52.1	+0.5
TGTN	**Hyland Airport** baz=251	89.31	27	P	P	21 28 52.1	+1.0
BFSC	**Mount Baldy Ra** baz=260	89.46	55	P	P	21 28 52.9	+0.4
CWC	**Cottonwood Cre** baz=259	89.52	53	P	P	21 28 53.3	+0.5
LHV	**Little Huntoon** comp=Z,14nm,0.9s	89.52	51	IAmb	IAmb	21 28 56.6	
RYN	**Ryan** comp=Z,12nm,1.0s	89.58	51	IAmb	IAmb	21 28 56.6	
KSH	**Kashi**	89.61	310	P	P	21 28 55.1	+2.0
KSH				pP	pwP	21 29 24.0	+2.1
KSH	comp=Z,7.0nm,0.8s			pmax	pmax		
LRMC	**Laurel Mtn Rad** baz=260,SNR=14	89.66	54	P	P	21 28 54.0	+0.6
INK	**Inuvik** comp=Z,15nm,1.4s	89.68	20	IAmb	IAmb	21 28 56.2	
INK	**Inuvik** baz=246	89.68	20	P	P	21 28 55.3	+2.8
INK	**Inuvik** comp=Z,27nm,21.8s,baz=12,slow=32	89.68	20	LR	LR	22 04 21.5	
NVAR	**Mina Array Bea** comp=Z,14nm,0.9s,baz=247,slow=6.6,SNR=41	89.71	51	P	P	21 28 55.0	+1.3
NVAR	comp=Z,3.7nm,0.8s,baz=246,slow=6.4,SNR=3.8 comp=Z,14nm,0.9s			pP	pP	21 29 21.3	+1.1
MURC	**Murrieta** baz=260	89.72	56	P	P	21 28 55.2	+1.6
DSP	**Deep Springs** comp=Z,11nm,0.9s	89.77	52	IAmb	IAmb	21 28 57.6	
NV11	**Mina Array Sit** comp=Z,18nm,0.9s	89.83	51	IAmb	IAmb	21 28 57.8	
I07A	**Izee** comp=Z,14nm,1.1s	89.92	46	IAmb	IAmb	21 28 57.8	
MPMC	**Manual Prospec** baz=260,SNR=9.0	89.92	54	P	P	21 28 55.6	+0.9
CBX	**Cerro Bola** comp=Z,21nm,1.2s	89.94	57	IAmb	IAmb	21 30 58.2	
NRN	**Naryn** comp=Z,16nm,1.3s	89.96	312	IAmb	IAmb	21 29 25.5	
KVN	**Kaiserville** comp=Z,16nm,1.0s	89.98	51	IAmb	IAmb	21 28 58.5	
BAR	**Barrett** comp=Z,11nm,1.2s	90.00	57	IAmb	IAmb	21 28 58.4	
KURK	**Kurchatov**	90.10	321	P	P	21 28 54.9	+0.1
KURK	comp=Z,20nm,1.1s			IAmb	IAmb	21 29 25.3	
KURK	**Kurchatov**	90.10	321	*de*P	P	21 28 55.0	+0.1
KURK	comp=Z,6.0nm,1.0s			pmax	pmax		
KURBB	**Kurchatov Arra**	90.14	321	P	P	21 28 54.9	-0.2

comp=Z,2.4nm,0.7s,baz=96,slow=4.8,SNR=21
KURBB pP **pwP** **21 29 23.4 -0.6**
comp=Z,7.0nm,0.9s,baz=106,slow=3.1,SNR=17
KURBB PKKPbc **PKKPdf** **21 46 23.9 +1.0**
comp=Z,0.3nm,0.7s,baz=289,slow=2.8,SNR=6.9
comp=Z,2.4nm,0.7s
GRAC Grapevine Rang **90.18 53** IAmb IAmb 21 28 59.2
comp=Z,11nm,0.7s
GRAC Grapevine Rang **90.18 53** P **P** **21 28 57.0 +1.3**
baz=260
WVOR Wild Horse Val **90.22 47** IAmb IAmb 21 28 59.5
comp=Z,10nm,1.0s
MONP2 Monument Peak **90.24 57** P **P** **21 28 57.2 +0.9**
baz=260,SNR=10.0
MZP Montezuma Peak **90.29 52** IAmb IAmb 21 28 59.5
comp=Z,5.7nm,0.7s
PFO Pinyon Flats O **90.33 56** P **P** **21 28 57.8 +1.2**
PFO IAmb IAmb 21 28 59.9
comp=Z,22nm,1.7s
PFO Pinyon Flats O **90.33 56** P **P** **21 28 57.7 +1.1**
baz=260
PFO Pinyon Flats O **90.33 56** P **P** **21 28 57.8 +1.2**
PFO pmax pmax
comp=Z,22nm,1.7s
PFO Pinyon Flats O **90.33 56** LR LR 22 01 14.1
comp=Z,58nm,21.2s,baz=243,slow=30
TPFO Pinon Flats **90.33 56** P **P** **21 28 57.5 +0.9**
baz=260
GSC Goldstone, Bar **90.33 55** IAmb IAmb 21 28 59.8
comp=Z,8.0nm,0.9s
GSC Goldstone, Bar **90.33 55** P **P** **21 28 57.9 +1.4**
baz=260,SNR=6.3
IKP In-Ko-Pah, Jac **90.46 57** P **P** **21 28 59.0 +1.9**
baz=260
FURC Furnace Creek, **90.49 53** P **P** **21 28 58.8 +1.8**
baz=260,SNR=5.6
ESJX Sierra Juarez **90.49 58** IAmb IAmb 21 29 01.6
comp=Z,9.9nm,1.2s
TKM2 Tokmak 2 **90.53 313** P pP 21 29 26.6 +2.7
SNR=8.2
G08A Pilot Knob **90.53 44** IAmb IAmb 21 29 00.9
comp=Z,12nm,1.2s
GWY Greenwater Val **90.59 54** IAmb IAmb 21 29 26.1
comp=Z,26nm,1.8s
YUH Yuha Desert **90.61 57** IAmb IAmb 21 29 01.4
comp=Z,13nm,1.3s
HEC Hector,Ludlow **90.63 55** P **P** **21 28 59.1 +1.2**
baz=260
WCT Wildcat Mounta **90.73 53** IAmb IAmb 21 29 01.9
comp=Z,10nm,1.0s
SWSC Sam W. Stewart **90.76 57** P **P** **21 28 59.2 +0.7**
baz=261
BELC Belle Mtn. Jos **90.77 56** P **P** **21 28 59.2 +0.5**
baz=260,SNR=14
SHOC Shoshone, Teco **90.86 54** P **P** **21 29 00.3 +1.5**
baz=260
BMN Battle Mountai **90.90 49** IAmb IAmb 21 29 02.9
comp=Z,14nm,0.9s
KBK Karagaybulak **90.95 313** P pP 21 29 28.9 +3.0
SNR=5.8
TPNV Topopah Spring **91.05 53** IAmb IAmb 21 29 03.5
comp=Z,17nm,1.2s
TPNV Topopah Spring **91.05 53** P **P** **21 29 00.9 +0.9**
baz=260
TUQ Turquoise Moun **91.07 55** P **P** **21 29 00.9 +0.9**
baz=261,SNR=8.7
CHMS Chumysh **91.16 313** P pP 21 29 29.4 +2.8
SNR=11
BC3 Big Chuckawall **91.16 56** P **P** **21 29 01.8 +1.4**
baz=261,SNR=6.3
NRIK Noril'sk **91.17 340** *ce*P **P** **21 28 58.1 -1.4**
NRIK pmax pmax
comp=Z,9.0nm,1.5s
NRIK Noril'sk **91.17 340** LR LR 22 09 23.6
comp=Z,31nm,21.3s,baz=74,slow=35
GMRC Granite Mounta **91.17 55** P **P** **21 29 01.6 +1.1**
baz=261,SNR=8.7
UCH Uchtor **91.19 312** P pP 21 29 30.5 +3.2
SNR=6.8
AAK Ala-Archa **91.28 313** P pP 21 29 30.4 +3.1
SNR=8.1
AAK Ala-Archa **91.28 313** P **P** **21 29 01.5 +0.7**
AAK IAmb IAmb 21 29 31.0
comp=Z,12nm,0.9s
AAK Ala-Archa **91.28 313** *de*P **P** **21 29 01.5 +0.7**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa **91.28 313** P **P** **21 29 01.4 +0.5**
comp=Z,4.8nm,0.8s,baz=144,slow=2.8,SNR=18
AAK pP **pwP** **21 29 29.2 -0.5**
comp=Z,9.8nm,0.9s,baz=127,slow=0.8,SNR=11
AAK PKPbc **PKKPdf** **21 46 22.3 +1.4**
comp=Z,0.7nm,0.6s,baz=324,slow=3.9,SNR=4.4
comp=Z,4.8nm,0.8s
USP Ospenovka **91.39 313** P pP 21 29 30.6 +2.9
SNR=9.8
IRM Iron Mountain **91.50 56** P **P** **21 29 03.0 +1.1**
baz=261,SNR=11
BMO Blue Mountains **91.61 45** IAmb IAmb 21 29 05.1
comp=Z,8.6nm,0.9s
R11B Troy Canyon, C **91.80 52** IAmb IAmb 21 29 07.0
comp=Z,7.1nm,0.9s
R11B Troy Canyon, C **91.80 52** P **P** **21 29 04.8 +1.4**
baz=261,SNR=17
EKS2 Erkin-Say **91.81 313** P pP 21 29 32.9 +3.2
SNR=8.4
ARSB Arslanbob **92.17 311** IAmb IAmb 21 29 43.3
comp=Z,7.3nm,1.3s
NEW Newport **92.32 42** IAmb IAmb 21 29 10.0
comp=Z,14nm,1.5s
NEW Newport **92.32 42** P **P** **21 29 06.9 +1.6**
baz=260
MFID Camas Ranch **92.42 47** IAmb IAmb 21 29 09.5
comp=Z,12nm,1.4s
ELK Elko **92.44 49** IAmb IAmb 21 29 09.9
comp=Z,7.9nm,0.8s
PLID Pearl Lake **92.56 45** P **P** **21 29 07.2 +0.4**
W13A Hualapai Mount **92.66 55** IAmb IAmb 21 29 36.3
comp=Z,6.0nm,0.8s
LCMT Little Creek M **93.44 53** IAmb IAmb 21 29 40.4
comp=Z,7.5nm,1.1s
HLID Hailey **93.46 47** IAmb IAmb 21 29 39.8
comp=Z,5.9nm,0.9s
HLID Hailey **93.46 47** P **P** **21 29 11.7 +0.8**
baz=262,SNR=8.6
A36M Sachs Harbour **93.59 18** P **P** **21 29 12.4 +1.8**
baz=254
BELA Belgrano 2 **93.63 177** P **P** **21 29 09.6 -1.3**
SZCU Shurtz Canyon **93.64 53** IAmb IAmb 21 29 40.9
comp=Z,8.9nm,1.0s
BGU Big Grassy Mou **94.12 49** IAmb IAmb 21 29 17.4
comp=Z,6.4nm,0.9s
U15A North Rim **94.13 54** IAmb IAmb 21 29 18.5
comp=Z,3.7nm,0.8s
DUG Dugway, Tooele **94.19 50** P **P** **21 29 14.6 +0.3**
baz=263
LPIG La Paz **94.30 66** LR LR 22 04 34.5
comp=Z,25nm,19.0s,baz=198,slow=31
KBL Kabul **94.31 304** P **P** **21 29 13.1 -2.0**
KBL IAmb IAmb 21 29 15.0
comp=Z,3.4nm,0.8s
KBL Kabul **94.31 304** P **P** **21 29 13.1 -2.0**
KBL pmax pmax
comp=Z,3.0nm,0.8s
MTPU Mount Pierson **94.41 52** P **P** **21 29 12.4 -3.2**
MTPU pP **pP** **21 29 42.0 -0.2**
MTPU IAmb IAmb 21 29 45.2
comp=Z,11nm,1.2s
HVU Hansel Valley **94.42 49** P **P** **21 29 14.9 -0.4**
HVU Hansel Valley **94.42 49** P **P** **21 29 14.9 -0.4**
HVU pmax pmax
comp=Z,14nm,0.9s
SPUT South Promonto **94.60 49** IAmb IAmb 21 29 19.6
comp=Z,8.4nm,0.9s
NLU North Lily Min **94.72 50** IAmb IAmb 21 29 20.5
comp=Z,8.0nm,1.0s
ELIB Princess Elisa **94.75 193** *d*P **P** **21 29 15.5 -0.8**
comp=Z,4.6nm,0.8s
ELIB *d*pP **sP** **21 29 51.2 -2.4**
TUC Tucson **94.87 58** P **P** **21 29 17.9 +0.4**
baz=263
CTU Camp Tracy **95.06 50** IAmb IAmb 21 29 21.6
comp=Z,8.1nm,0.8s
HWUT Hardware Ranch **95.30 49** IAmb IAmb 21 29 22.7
comp=Z,6.2nm,0.8s
BVAR Borovoye Array **95.52 323** P **P** **21 29 19.1 -0.8**
comp=Z,8.6nm,0.8s,baz=100,slow=5.2,SNR=49
BVAR pP **pP** **21 29 46.4 0.0**
comp=Z,18nm,0.8s,baz=97,slow=6.1,SNR=23
BVAR PKKPbc **PKKPbc** **21 46 10.2 -3.1**
comp=Z,0.6nm,0.7s,baz=283,slow=7.2,SNR=4.0
comp=Z,8.6nm,0.8s
BRVK Borovoye **95.58 323** P **P** **21 29 19.8 -0.4**
BRVK Borovoye **95.58 323** *ce*P **P** **21 29 19.2 -1.0**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) **95.68 45** P **P** **21 29 20.5 -0.5**
baz=264
YKA Yellowknife Ar **95.81 28** P **P** **21 29 21.4 +0.4**
comp=Z,3.2nm,0.9s,baz=258,slow=4.5,SNR=30
YKA pP **pP** **21 29 47.4 -0.3**
comp=Z,3.0nm,0.8s,baz=259,slow=4.5,SNR=7.8
YKA PKKPbc **PKKPbc** **21 46 08.3 -4.5**
comp=Z,0.3nm,0.8s,baz=74,slow=2.8,SNR=7.2
YKA LR LR 22 05 27.7
comp=Z,32nm,21.3s,baz=315,slow=31
comp=Z,3.2nm,0.9s
YHL Hebgen Lake **95.92 46** IAmb IAmb 21 29 27.6
comp=Z,4.4nm,1.0s
MOOW Moose Ponds **96.12 47** P **P** **21 29 23.1 -0.1**
YHH Holmes Hill **96.15 46** P **P** **21 29 21.8 -1.5**
H17A Grant Village **96.31 46** P **P** **21 29 23.8 -0.2**
baz=265
RDMU Red Mountain **96.70 50** P **P** **21 29 24.7 -1.1**
BW06 Boulder Array **96.90 48** P **P** **21 29 26.0 -0.7**
BW06 IAmb IAmb 21 29 29.1
comp=Z,4.1nm,0.8s
BW06 Boulder Array **96.90 48** P **P** **21 29 26.0 -0.7**
baz=265
PD31 Pinedale Array **96.90 48** P **P** **21 29 25.8 -0.9**
PD31 IAmb IAmb 21 29 29.1
comp=Z,3.7nm,0.8s
PDAR Pinedale Array **96.90 48** P **P** **21 29 25.9 -0.8**
PDAR Pinedale Array **96.90 48** P **P** **21 29 27.1 +0.3**
comp=Z,3.9nm,0.8s,baz=229,slow=2.5,SNR=27
PDAR pP **pP** **21 29 53.9 +0.6**
comp=Z,1.5nm,0.9s,baz=240,slow=2.7,SNR=2.9
comp=Z,3.9nm,0.8s
ANMO Albuquerque **98.71 56** LR LR 22 05 38.2
comp=Z,26nm,21.0s,baz=332,slow=30
SNAA Sanae **99.25 186** P **Pdif** **21 29 36.1 -0.3**
comp=Z,3.1nm,0.9s,baz=191,slow=9.1,SNR=5.6
comp=Z,3.1nm,0.9s
LAO LASA Array **99.51 44** P **Pdif** **21 29 37.8 -0.3**
baz=266
TXAR Lajitas Array **100.70 62** P **Pdif** **21 29 43.9 +0.1**
comp=Z,0.5nm,0.7s,baz=228,slow=5.1,SNR=6.2
MIAR Mount Ida **109.30 56** P **PKiKP** **21 34 24.1 -1.0**
baz=273
ARCES ARCESS Array B **111.86 344** PKiKP **PKiKP** **21 34 27.6 -1.3**
comp=Z,4.8nm,1.0s,baz=42,slow=2.0,SNR=6.7
ARCES PKKPbc **PKKPbc** **21 45 20.4 -4.4**
comp=Z,1.4nm,0.6s,baz=282,slow=2.4,SNR=6.0
HDIL Hopedale **112.10 50** P **PKiKP** **21 34 29.0 -1.2**
baz=278
KBZ Khabaz **114.23 314** PKKPbc PKKPbc 21 45 13.8 -2.2
comp=Z,1.0nm,0.9s,baz=14,slow=7.9,SNR=3.9
GLMI Grayling **114.69 44** P PKPdf 21 34 33.0 -2.1
baz=283
FINES FINESS Array B **116.58 337** PKP **PKPdf** **21 34 37.1 -1.1**
comp=Z,1.7nm,0.8s,baz=104,slow=1.7,SNR=4.8
FINES PKKPbc **PKKPbc** **21 45 05.0 -3.5**
comp=Z,1.0nm,0.8s,baz=246,slow=6.8,SNR=3.8
ACSO Alum Creek Sta **116.90 49** P **PKPdf** **21 34 38.4 -1.1**
baz=282
P52A Corning **117.67 50** P **PKPdf** **21 34 39.9 -1.1**
baz=283
SSPA Standing Stone **120.57 47** P **PKPdf** **21 34 45.3 -1.3**
baz=286
AKASG Malin Array Be **120.69 325** PKP **PKPdf** **21 34 45.5 -0.9**
comp=Z,1.1nm,0.5s,baz=50,slow=2.1,SNR=5.0
SCHQ Schertville **121.24 29** PKP **PKPdf** **21 34 46.6 -0.8**
comp=Z,2.4nm,0.9s,baz=149,slow=4.6,SNR=4.0
NC303 NORSAR Array S **121.90 342** PKPdf **PKPdf** **21 34 47.6 -0.9**
BRTR Keskin Array B **121.95 312** PKP **PKPdf** **21 34 49.1 -0.3**
comp=Z,0.8nm,0.8s,baz=22,slow=3.7,SNR=4.7
BRTR pPKP **pPKPdf** **21 35 17.0 0.0**
comp=Z,0.5nm,0.8s,baz=55,slow=5.8,SNR=2.6
BOSA Boshof **121.95 229** PKP **PKPdf** **21 34 49.2 -0.5**
comp=Z,4.5nm,0.7s,baz=117,slow=0.9,SNR=11
NCB Newcomb **122.06 43** PKPdf **PKPdf** **21 34 48.8 -0.5**
PB14 IPOC Station P **122.07 126** PKPdf **PKPdf** **21 34 49.4 -0.9**
NB2 NORSAR Subarra **122.09 342** PKPdf **PKPdf** **21 34 47.6 -1.3**
comp=Z,3.9nm,1.1s,baz=39,slow=1.9
NOA NORSAR Array B **122.09 342** PKP **PKPdf** **21 34 48.4 -0.5**
comp=Z,1.9nm,0.8s,baz=42,slow=1.9,SNR=8.1
NOA pPKP **pPKPdf** **21 35 17.8 +1.3**
comp=Z,0.5nm,0.6s,baz=39,slow=1.6,SNR=2.7
NC602 NORSAR Array S **122.23 342** PKPdf **PKPdf** **21 34 48.6 -0.5**
ODNJ Ogdensburg **122.80 46** PKPdf **PKPdf** **21 34 49.7 -1.1**
BRNJ Basking Ridge **122.96 47** PKPdf **PKPdf** **21 34 49.4 -1.7**
SUR Sutherland **122.96 223** PKPdf **PKPdf** **21 34 51.3 -0.4**
PB05 IPOC Station P **123.05 124** PKPdf **PKPdf** **21 34 50.8 -1.2**
LBTB Lobatse **123.53 233** PKPdf **PKPdf** **21 34 51.8 -1.1**
LBTB Lobatse **123.53 233** PKIKP **PKPdf** **21 34 51.8 -1.1**
PB02 IPOC Station P **124.00 123** PKPdf **PKPdf** **21 34 52.5 -1.3**
D62A Allapoint, All **124.06 38** PKPdf **PKPdf** **21 34 52.3 -0.8**
LVC Limon Verde **124.22 124** PKPdf **PKPdf** **21 34 53.5 -1.1**
LVC Limon Verde **124.22 124** PKIKP **PKPdf** **21 34 53.5 -1.1**
PB01 IPOC Station P **124.46 122** PKPdf **PKPdf** **21 34 54.1 -0.5**
BURAR Bucovina Array **124.47 323** PKPdf **PKiKP** **21 34 55.3 +1.0**
BURAR pPKPdf **pPKPdf** **21 35 25.5 +3.9**
PQI Presque Isle **124.88 38** PKPdf **PKPdf** **21 34 53.3 -1.3**
PB08 IPOC Station P **125.14 122** PKPdf **PKPdf** **21 34 55.5 -0.9**
GO01 Chusmiza **125.31 121** PKPdf **PKPdf** **21 34 56.9 +0.1**
KOLS Kolonicke sedl **125.47 326** *e*PKIKP **PKiKP** **21 34 56.5 +0.4**
KOLS Kolonicke sedl **125.47 326** *e*PKP **PKiKP** **21 34 56.5 +0.4**
PB16 IPOC Station P **125.62 120** PKPdf **PKiKP** **21 34 57.8 -0.2**
BATG Bathurst New B **125.74 36** PKPdf **PKiKP** **21 34 55.8 -0.5**
CRVS Cervenica-Dubn **125.93 326** *e*PKIKP **PKiKP** **21 34 58.3 +1.3**
CRVS Cervenica-Dubn **125.93 326** *e*PKP **PKiKP** **21 34 58.3 +1.3**
MAUC Maseka **127.59 329** *e*PKPDF **PKiKP** **21 35 00.8 +0.5**
LPAZ La Paz **127.66 118** PKPdf **PKiKP** **21 35 01.4 -0.2**
LPAZ La Paz **127.66 118** PKIKP **PKiKP** **21 35 01.4 -0.2**
KRLC Kraliky **127.68 330** *e*PKPDF **PKiKP** **21 35 00.4 -0.1**
KRLC Kraliky **127.68 330** *e*PKIKP **PKiKP** **21 35 00.4 -0.1**
CHVC Chvalec **127.71 331** *e*PKPDF **PKiKP** **21 35 01.1 +0.6**
CHVC Chvalec **127.71 331** *e*PKIKP **PKiKP** **21 35 01.1 +0.6**
DPC Dobruska-Polom **127.73 330** *e*PKPDF **PKPdf** **21 35 00.3 +0.3**
DPC Dobruska-Polom **127.73 330** *e*PKIKP **PKPdf** **21 35 00.3 +0.3**
MODS Modra-Piesok **128.49 328** *e*PKIKP **PKiKP** **21 35 02.9 +0.8**
MODS Modra-Piesok **128.49 328** *e*PKP **PKiKP** **21 35 02.9 +0.8**
CLL Collm **128.65 333** *i* PKIKP **PKiKP** **21 35 02.0 -0.3**
CLL *e* 21 35 36.0
CLL Collm **128.65 333** *i* PKPdf **PKiKP** **21 35 02.0 -0.3**
ZVC Zvikov **129.37 331** *e*PKPDF **PKiKP** **21 35 04.3 +0.5**
CKRC Cesky Krumlov **129.72 330** *e*PKPDF **PKiKP** **21 35 05.6 +1.0**
CKRC Cesky Krumlov **129.72 330** *e*PKIKP **PKiKP** **21 35 05.6 +1.0**
KHC Kasperske Hory **129.87 331** *e*PKPDF **PKiKP** **21 35 05.5 +0.6**
KHC Kasperske Hory **129.87 331** *e*PKIKP **PKiKP** **21 35 05.5 +0.6**
GERES GERESS Array B **130.01 330** PKP **PKPdf** **21 35 04.7 +0.2**
comp=Z,1.9nm,0.8s,baz=38,slow=5.0,SNR=6.8
GERES pPKP **pPKPdf** **21 35 34.3 +2.2**
comp=Z,1.0nm,0.6s,baz=90,slow=2.7,SNR=3.4
EKA Eskdalemuir Ar **130.92 346** PKP **PKPdf** **21 35 05.3 -0.5**
comp=Z,1.8nm,0.8s,baz=37,slow=4.3,SNR=4.3
CPUP Villa Florida **130.96 136** PKP **PKPdf** **21 35 06.2 -0.7**
comp=Z,1.9nm,0.7s,baz=198,slow=4.0,SNR=3.5
MEM Membach **132.11 337** *d*PKP **PKiKP** **21 35 09.6 +0.3**
BMRD Maredsous **132.84 337** *d*PKP **PKPdf** **21 35 08.0 -1.6**
BAUV El Baul **133.87 86** PKPdf **PKPdf** **21 35 12.4 -0.2**
PBRG Braganca **144.22 341** *e*PKP PKPbc 21 35 29.3 +0.1
BDFB Brasilia **144.46 132** PKIKP **PKPab** **21 35 29.8 -0.6**
BDFB Brasilia **144.46 132** PKP **PKPab** **21 35 29.7 -0.7**
comp=Z,26nm,0.8s,baz=235,slow=1.5,SNR=43
PGAV Gavieira, Arco **144.54 343** *e*PKP **PKPdf** **21 35 30.9 -0.5**
PGAV *i* LQ LQ 21 35 52.2
MVO Moncorvo **144.89 341** *e*PKP **PKPdf** **21 35 32.1 +0.1**
MVO *i* LQ LQ 21 36 02.5
POLO Lamas de Olo **144.94 342** *e*PKP **PKPdf** **21 35 32.1 0.0**
POLO *i* LQ LQ 21 36 02.3
PVRL Vila Real **145.01 342** *e*PKP **PKPdf** **21 35 32.5 +0.3**
PVRL *i* LQ LQ 21 36 02.5
ESBB Sonseca Array **145.10 336** PKPbc **PKPdf** **21 35 33.1 +0.7**
ESDC Sonseca Array **145.10 336** PKPbc **PKPdf** **21 35 32.4 0.0**
ESDC Sonseca Array **145.10 336** PKPbc **PKPdf** **21 35 32.5 +0.1**
comp=Z,11nm,0.9s,baz=18,slow=3.8,SNR=34
ESDC pPKPbc **pPKPdf** **21 36 01.1 +1.0**
comp=Z,9.3nm,0.9s,baz=14,slow=3.5,SNR=9.2
PAB San Pablo **145.36 337** PKPdf **PKPab** **21 35 33.6 +0.5**
PAB San Pablo **145.36 337** PKIKP **PKPab** **21 35 33.6 +0.5**
PTO Porto **145.40 343** *e*PKP **PKPab** **21 35 33.8 +0.8**
PVIS Viseu **145.57 342** *e*PKP **PKPab** **21 35 34.1 +0.3**
PVIS *i* LQ LQ 21 36 03.9
MTE Manteigas **145.75 341** *e*PKP **PKPbc** **21 35 34.2 +0.2**
MTE *i* LQ LQ 21 36 04.8
MTE Manteigas **145.75 341** PKPdf **PKPab** **21 35 34.8 +0.3**
PCBR Castelo Branco **146.23 341** *e*PKP **PKPab** **21 35 36.2 -0.1**
PCBR *i* LQ LQ 21 36 05.0
PMRV Marv??o **146.58 340** *e*PKP **PKPbc** **21 35 36.8 +0.3**
PMRV *i* LQ LQ 21 36 06.5
PMTG Montargil **147.18 341** *e*PKP **PKPbc** **21 35 38.1 0.0**
PMTG *i* LQ LQ 21 36 08.3
H07N1 FLORES T-PHASE **147.55 14** *e*PKP **PKiKP** **21 35 40.4 -0.9**
EVO Evora **147.59 340** *e*PKP **PKPbc** **21 35 39.8 +0.5**
EVO *i* LQ LQ 21 36 10.8
H07S1 FLORES T-PHASE **147.83 14** *e*PKP **PKPab** **21 35 43.7 +1.1**
PNCL Nicolau / Gran **148.14 341** *e*PKP **PKPbc** **21 35 40.8 0.0**
PCVE Castro Verde **148.41 340** *i* LQ LQ 21 36 14.1
SRBC Serra Branca **148.82 10** *e*PKP **PKiKP** **21 35 43.3 -0.6**
PGRA Graciosa **148.84 10** *e*PKP **PKPab** **21 35 52.2 +5.6**
ROSA Rosais **149.09 11** **PKiKP** **21 35 45.0 +0.6**
ROSA Rosais **149.09 11** *e*PKP **PKiKP** **21 35 44.5 0.0**
CALA Caldeira **149.14 11** *e*PKP **PKiKP** **21 35 45.1 +0.4**
PSBA Serra de Santa **149.20 9** *e*PKP **PKiKP** **21 35 45.0 +0.3**
PMAN Manadas **149.21 10** *e*PKP **PKiKP** **21 35 44.5 -0.2**
PAGU Agualva, Azore **149.22 9** *e*PKP **PKiKP** **21 35 45.2 +0.5**
PICO Pico **149.27 11** *e*PKP **PKiKP** **21 35 45.2 +0.3**
PCAN Candelaria **149.30 11** *e*PKP **PKiKP** **21 35 45.1 +0.2**
ADH Angra Heroismo **149.33 9** *e*PKP **PKPbc** **21 35 44.0 +0.2**
TORD Torodi Ar. Bea **156.85 284** PKP **PKPdf** **21 35 49.8 -1.1**
comp=Z,2.0nm,1.0s,baz=332,slow=1.0,SNR=4.9
TORD pPKP **pPKPdf** **21 36 18.6 0.0**
comp=Z,2.3nm,0.9s,baz=49,slow=4.8,SNR=4.7
TORD pPKPab **pPKPab** **21 36 50.1 +2.3**
comp=Z,3.1nm,0.9s,baz=65,slow=4.8,SNR=3.4
DBIC Dimbokro **163.55 265** PKPab **PKPab** **21 36 48.9 -1.5**
comp=Z,3.1nm,0.7s,baz=115,slow=3.6,SNR=4.1
DBIC pPKPab **pPKPab** **21 37 18.7 +1.7**
comp=Z,4.5nm,1.0s,baz=47,slow=4.9,SNR=2.4

UCR ***02*** *21:18:13.4±0.5, 9.40N×84.53W, h10km±3km, MW3.6*
CATAC ***02*** *21:18:14.3±0.3, 9.46N×84.51W, h7km±3km, ML2.9*
ISC 02 21:18:14.2±1.2, 9.44N±0.04×84.52W±0.02, h7km±9km, n38,
σ1s55/53, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RITA	**Parrita**	**0.20**	**66**	*e*P		**Pg**	**21 18 18.4**	**+0.1**
RITA				*e*S		**Sg**	**21 18 22.8**	**+1.7**
BITO	**Garabito Jaco**	**0.21**	**331**	*e*P		**Pg**	**21 18 19.1**	**+0.8**
JACO	**JACO, Garabito**	**0.26**	**329**	*e*P		**Pg**	**21 18 19.3**	**-0.1**
JACO				*e*S		**Sg**	**21 18 24.1**	**+1.1**
JACO	**JACO, Garabito**	**0.26**	**329**	*i* P		**Pg**	**21 18 19.5**	**+0.1**
JACO				*i* S		**Sb**	**21 18 24.7**	**-1.4**
JACO				IAML			21 18 25.0	
	comp=Z,2μm,1.0s							
LLNJ	**Naranjito**	**0.42**	**85**	*e*P		**Pg**	**21 18 22.2**	**-0.1**
TRB2	**Turrubares**	**0.48**	**8**	*e*P		**Pg**	**21 18 23.1**	**-0.4**
ACOS	**Acosta**	**0.50**	**44**	*e*P		**Pg**	**21 18 23.6**	**-0.3**
LAFE	**Finca La Fe, P**	**0.53**	**314**	*e*P		**Pg**	**21 18 24.9**	**+0.3**
LAFE	**Finca La Fe, P**	**0.53**	**314**	*i* P		**Pb**	**21 18 25.2**	**-0.7**
LAFE				*i* S		**Sb**	**21 18 34.6**	**+0.7**
LAFE				IAML			21 18 35.0	
	comp=Z,6.1nm,1.0s							
LCR2	**La Lucha 2**	**0.59**	**59**	*e*P		**Pg**	**21 18 24.8**	**-0.9**
LCR2	**La Lucha 2**	**0.59**	**59**	*i* P		**Pg**	**21 18 25.1**	**-0.6**
LCR2				*i* S		**Sg**	**21 18 33.9**	**+0.4**
LCR2				IAML			21 18 34.3	
	comp=Z,370nm,1.0s							
OCM	**Ochomogo**	**0.71**	**50**	*i* P		**Pg**	**21 18 27.0**	**-1.0**
OCM				IAML			21 18 43.6	
	comp=Z,210nm,1.0s							
RIMA	**Rio Macho**	**0.73**	**63**	*e*P		**Pg**	**21 18 27.1**	**-1.1**
RIMA	**Rio Macho**	**0.73**	**63**	*i* P		**Pg**	**21 18 27.3**	**-0.9**
RIMA				*i* S		**Sg**	**21 18 38.1**	**+0.4**
RIMA				IAML			21 18 40.2	
	comp=Z,220nm,1.0s							
CDM	**Cerro de Muert**	**0.76**	**81**	*e*P		**Pg**	**21 18 27.9**	**-1.0**
CDM	**Cerro de Muert**	**0.76**	**81**	*i* P		**Pg**	**21 18 28.0**	**-0.8**
CDM				*i* S		**Sb**	**21 18 40.6**	**-0.1**
CDM				IAML			21 18 48.9	
	comp=Z,340nm,1.0s							
BUS1	**Rivas**	**0.77**	**81**	*e*P		**Pg**	**21 18 28.1**	**-1.1**
CPMI	**Catarata Coope**	**0.85**	**9**	*e*P		**Pg**	**21 18 29.9**	**-0.7**
CPMI	**Catarata Coope**	**0.85**	**9**	*i* P		**Pg**	**21 18 30.0**	**-0.7**
CPMI				*i* S		**Sg**	**21 18 41.7**	**0.0**
CPMI				IAML			21 18 45.0	
	comp=Z,350nm,1.0s							
HAYA	**Volcan Irazu**	**0.86**	**51**	*i* P		**Pg**	**21 18 30.5**	**-0.3**
SOCE	**Pocosol**	**0.94**	**354**	*e*P		**Pg**	**21 18 31.6**	**-0.8**
SOCE	**Pocosol**	**0.94**	**354**	*i* P		**Pg**	**21 18 32.0**	**-0.4**
SOCE				IAML			21 18 32.3	
	comp=Z,620nm,1.0s							
CVTV	**Tajo**	**0.95**	**53**	*e*P		**Pg**	**21 18 31.6**	**-0.8**
VTUN	**Crater Central**	**0.95**	**52**	*i* P		**Pn**	**21 18 33.5**	**-0.9**
VTUC	**Crater, Volcan**	**0.95**	**52**	*i* P		**Pn**	**21 18 33.7**	**-0.7**
VTUC				*i* S		**Sn**	**21 18 56.3**	**+7.9**
JTS	**Las Juntas de**	**0.95**	**333**	*e*P		**Pg**	**21 18 30.9**	**-1.6**
ARE1	**Arenal 1**	**1.04**	**349**	*e*P		**Pg**	**21 18 33.5**	**-0.6**
RIFO	**Rio Frio, Sara**	**1.05**	**34**	*e*P		**Pg**	**21 18 33.5**	**-1.0**
RIFO	**Rio Frio, Sara**	**1.05**	**34**	*i* P		**Pg**	**21 18 33.4**	**-1.1**
RIFO				IAML			21 18 34.2	
	comp=Z,400nm,1.0s							
RIFO				*i* S		**Sn**	**21 18 49.2**	**-1.3**
INDI	**Punta indio, G**	**1.06**	**294**	*i* P		**Pg**	**21 18 34.3**	**-0.3**
INDI				*i* S		**Sn**	**21 18 51.5**	**+0.9**
INDI				IAML			21 18 56.2	
	comp=Z,190nm,1.0s							
PLAN	**Los Planes de**	**1.12**	**132**	*i* P		**Pn**	**21 18 36.1**	**-0.4**
PLAN				*i* S		**Sn**	**21 18 55.3**	**+3.1**
PLAN				IAML			21 19 02.8	
	comp=Z,360nm,1.0s							
SRBA	**San Rafael, Bu**	**1.16**	**100**	*i* P		**Pg**	**21 18 35.4**	**-1.2**
SRBA				*i* S		**Sn**	**21 18 53.3**	**0.0**
SRBA				IAML			21 18 56.9	
	comp=Z,110nm,1.0s							
PLVR	**Palo Verde**	**1.22**	**318**	*e*P		**Pb**	**21 18 35.8**	**-2.0**
ORTG	**Ortega, Santa**	**1.30**	**315**	*i* P		**Pn**	**21 18 37.5**	**-1.5**
ORTG				*i* S		**Sg**	**21 18 56.1**	**-0.2**
ORTG				IAML			21 18 57.5	
	comp=Z,110nm,1.0s							
SAJU	**San Juanillo,**	**1.33**	**298**	*i* P		**Pn**	**21 18 38.4**	**-0.9**
SAJU				IAML			21 19 05.1	
	comp=Z,180nm,1.0s							
POTG	**Potrero Grande**	**1.44**	**105**	*i* P		**Pn**	**21 18 40.0**	**-0.8**
POTG				IAML			21 18 43.5	
	comp=Z,250nm,1.0s							
POTG				*i* S		**Sg**	**21 19 01.2**	**+0.8**
HZTE	**Horizontes, Gu**	**1.65**	**320**	*i* P		**Pn**	**21 18 42.9**	**-0.8**
HZTE				IAML			21 18 52.9	
	comp=Z,210nm,1.0s							
PLRN	**Geotermica Pol**	**3.83**	**325**	*i* P		**Pn**	**21 19 16.4**	**+2.7**

SOME ***02*** *21:29:53.9, 41.57N×84.32E, h5km*
NNC ***02*** *21:29:55.7±6.0, 41.79N×84.26E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=40.4km s-min=19.8km az=133.0*
ISC 02 21:29:51.6±3.7, 41.5N±0.2×84.4E±0.1, h10km, n12,
σ2s21/18, 1C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.56**	**305**	Pg		**Pb**	**21 30 57.1**	**+2.4

KPKS				Lg	Lg	21 32 19.4		
	10nm,0.5s							
KPKS	**Kokpek**	**4.64**	**297**	*eP*	**Pg**	**21 31 18.1**	**-2.4**
	1.3nm,0.1s							
KPKS				*eS*	**Sg**	**21 32 20.6**	**-0.1**
	10nm,0.5s							
SATY	**Saty**	**4.69**	**292**	Pg	**Pb**	**21 31 15.2**	**+1.2**
	2.9nm,0.1s							
SATY				Lg	Lg	21 32 16.5		
SATY	**Saty**	**4.69**	**292**	*eP*	**Pg**	**21 31 19.4**	**-2.1**
	0.9nm,0.1s							
SATY				*eS*	**Sg**	**21 32 22.6**	**+0.4**
	4.9nm,0.2s							
KNOS	**Konyrlen**	**4.77**	**309**	Pg	**Pb**	**21 31 19.6**	**+4.2**
	0.9nm,0.2s							
KNOS				Lg	Lg	21 32 23.8		
	4.6nm,0.4s							
MK31	**Makanchi Array**	**5.53**	**345**	⇓Pg	**Pg**	**21 31 36.2**	**-1.3**
	2.5nm,0.9s,baz=163,slow=17,SNR=8.1							
MK31				⇓Sn	**Sn**	**21 32 16.5**	**-1.1**
	0.5nm,0.3s							
MK31				Lg	Lg	21 32 37.1		
	5.4nm,0.6s,baz=154,slow=29,SNR=11							
MAKZ	**Makanchi**	**5.61**	**343**	⇑Sn	**Sn**	**21 32 17.3**	**-2.2**
	1.0nm,0.5s							
MAKZ				⇓Lg	Lg	21 32 40.2		
	4.1nm,1.0s							

*NEIC **02** 21:40:07.1±1.7,20°.3N±0°.1×155°.9W±0°.2,h35km±2km, Error ellipse: s-maj=39.1km s-min=4.9km az=244.0*
HVO 02 21:40:08.5±1.4,20°.26N±0°.02×155°.96W±0°.04,h35km±7km, ML2.4/5,ML2.5/28(NEIC),Error ellipse: s-maj=5.8km s-min=3.3km az=82.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHA	**Mahukona**	**0.09**	**141**		Pb	21 40 14.4	-0.1
MHA					Sb	21 40 19.1	+0.6
HPAH	**Hawaii Prepara**	**0.34**	**132**		Pb	21 40 15.6	-1.4
HPAH					Sn	21 40 20.9	-1.8
HPAH				IAML		21 40 21.1	
	comp=N,573nm,0.2s						
HPAH				IAML		21 40 21.1	
	comp=E,452nm,0.2s						
HLK	**Haleakala**	**0.56**	**332**		Pn	21 40 18.9	-1.5
HLK					Sn	21 40 26.1	-2.5
HUH	**Hualalai**	**0.58**	**168**		Pn	21 40 19.2	-1.4
HUH	**Hualalai**	**0.58**	**168**	IAML		21 40 32.1	
	comp=E,166nm,0.9s						
HUH				IAML		21 40 37.0	
	comp=N,147nm,1.3s						
POHA	**Pohakuloa**	**0.64**	**141**		Sn	21 40 27.5	-2.9
KHLU	**Kahalu`u**	**0.67**	**174**		Pn	21 40 19.7	-1.9
KHLU					Sn	21 40 27.9	-2.9
KHLU	**Kahalu`u**	**0.67**	**174**	IAML		21 40 28.1	
	comp=E,80nm,0.8s						
KHLU				IAML		21 40 31.5	
	comp=N,79nm,1.0s						
ALEP	**Alea Permanent**	**0.77**	**157**		Pn	21 40 21.7	-1.6
ALEP					Sn	21 40 31.5	-2.4
HMH	**Humu`ula Sheep**	**0.79**	**145**		Pn	21 40 21.7	-1.8
HMH					Sn	21 40 31.6	-2.7
MLOA	**Mauna Loa Obse**	**0.81**	**153**	Pn	Pn	21 40 22.5	-1.2
MLOA				IAML		21 40 39.0	
	comp=E,102nm,1.3s						
MWH	**Moku'aweowe**	**0.84**	**156**		Pn	21 40 22.3	-2.1
MWH	**Moku'aweowe**	**0.84**	**156**	IAML		21 40 42.8	
	comp=E,191nm,1.4s						
MWH				IAML		21 40 45.3	
	comp=N,164nm,1.4s						
MLH	**Mauna Loa**	**0.93**	**144**		Pn	21 40 23.4	-2.0
MLH					Sn	21 40 34.4	-3.3
MLH	**Mauna Loa**	**0.93**	**144**	IAML		21 40 39.2	
	comp=E,106nm,1.4s						
MLH				IAML		21 40 43.2	
	comp=N,130nm,1.5s						
RSD	**Rainshed**	**1.02**	**141**		Pn	21 40 24.6	-1.9
RSD					Sn	21 40 36.4	-3.3
RSD	**Rainshed**	**1.02**	**141**	IAML		21 40 37.2	
	comp=N,207nm,0.9s						
RSD				IAML		21 40 39.1	
	comp=E,104nm,1.2s						
UWB	**Uwekahuna B**	**1.05**	**142**		Pn	21 40 24.6	-2.3
UWB	**Uwekahuna B**	**1.05**	**142**	IAML		21 41 07.0	
	comp=E,132nm,1.4s						
SBLHI	**Steaming Bluff**	**1.05**	**141**	Pn	Pn	21 40 26.2	-0.7
KHU	**Kahuku**	**1.06**	**162**		Pn	21 40 24.9	-2.2
KHU					Sn	21 40 37.0	-3.7
HATHI	**Halema'uma'u T**	**1.06**	**141**	Pn	Pn	21 40 25.4	-1.6
PUH	**Pauahi**	**1.13**	**141**		Pn	21 40 25.4	-2.5
PUH					Sn	21 40 38.5	-3.7
PUH	**Pauahi**	**1.13**	**141**	IAML		21 40 47.3	
	comp=E,68nm,1.2s						
HTC	**Hot Caves**	**1.15**	**152**		Pn	21 40 26.1	-2.1
KNHH	**Kane Nui o Ham**	**1.15**	**139**		Pn	21 40 26.0	-2.2
STCH	**Steam Cracks**	**1.17**	**138**		Pn	21 40 26.4	-2.2
STCH	**Steam Cracks**	**1.17**	**138**	IAML		21 40 39.4	
	comp=E,159nm,1.1s						

*IDC **02** 21:40:52.1±1.9,5°.97S×129°.42E,h0km,mb3.7/4, mbtmp3.7/6,ML3.5/2,Error ellipse: s-maj=168.0km s-min=28.1km az=70.0*
ISC 02 21:40:53.3±1.1,5°.97S±0°.09×129°.5E±0°.2,h10km,n13, σ0s.96/10,mb3.9/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.08**	**42**	P	**Pg**	**21 42 11.2**	**-0.3**
MTN	**Manton Dam**	**7.01**	**167**	P	Pn	21 42 43.6	+7.5
KDU	**Kakadu**	**7.28**	**157**	P	Pn	21 42 46.8	+7.0
KNRA	**Kununurra**	**9.67**	**184**	P	Pn	21 43 18.9	+6.3
WRA	**Warramunga Arr**	**14.66**	**162**	Pn	**Pn**	**21 44 20.5**	**-0.4**
	0.1nm,0.3s,baz=343,slow=13,SNR=2.0						
WRA				Sn	Sn	21 46 50.1	-13
	0.8nm,0.3s,baz=339,slow=22,SNR=11						
	0.4nm,0.6s						
COEN	**Coen**	**15.61**	**122**	P	**P**	**21 44 39.0**	**+1.2**
ASAR	**Alice Springs**	**18.09**	**167**	P	**P**	**21 45 05.7**	**+0.4**
	0.6nm,0.3s,baz=346,slow=10,SNR=38						
ASAR				S	Sn	21 48 14.2	-13
	0.3nm,0.5s,baz=357,slow=28,SNR=1.6						
	1.7nm,0.4s						
WRKA	**Warakurna**	**18.99**	**183**	P	**Pn**	**21 45 16.2**	**+0.3**
OOD	**Oodnadatta**	**22.48**	**166**	P	**P**	**21 45 51.5**	**-1.4**
MKAR	**Makanchi Array**	**67.11**	**327**	P	**P**	**21 51 48.2**	**+1.0**
	0.8nm,0.6s,baz=123,slow=7.8,SNR=9.7						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**70.45**	**334**	P	**P**	**21 52 07.3**	**-0.5**
	0.5nm,0.4s,baz=141,slow=6.1,SNR=3.2						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**71.39**	**329**	P	**P**	**21 52 12.8**	**-0.7**
	0.3nm,0.4s,baz=124,slow=4.8,SNR=6.6						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**76.94**	**328**	P	**P**	**21 52 46.8**	**+0.8**
	0.2nm,0.4s,baz=120,slow=6.1,SNR=2.1						
	0.2nm,0.4s						

IDC 02 21:50:01.4±2.2,7°.82S×130°.35E,h0km,mb3.3/2, mbtmp3.2/4,ML2.9/2,Error ellipse: s-maj=153.9km s-min=32.3km az=69.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.65**	**163**	Pn	Pn	21 53 02.2	-0.6
	0.1nm,0.3s,baz=345,slow=13,SNR=1.6						
WRA				Sn	Sn	21 55 15.1	-9.5
	0.1nm,0.3s,baz=346,slow=24,SNR=2.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**16.12**	**168**	Pn	Pn	21 53 50.2	+0.7
	0.1nm,0.3s,baz=349,slow=13,SNR=1.8						
ASAR				Sn	Sn	21 56 43.5	-5.6
	baz=354,slow=27,SNR=1.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**69.10**	**327**	P	P	22 01 09.2	-0.2
	0.2nm,0.5s,baz=124,slow=6.9,SNR=2.3						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**73.39**	**328**	P	P	22 01 35.4	+0.2
	0.2nm,0.7s,baz=131,slow=4.8,SNR=2.6						
	0.2nm,0.7s						

*IDC **02** 22:01:14.2±2.5,37°.72N×20°.92E,h0km,mb3.6/6, mbtmp3.6/9,ML3.0/3,MS2.8/2,Error ellipse: s-maj=43.7km s-min=24.6km az=3.0*
*ATH **02** 22:01:23.0,38°.44N×21°.44E,h9km±1km,ML3.1/23,Error ellipse: s-maj=1.5km s-min=0.6km az=217.0*
*THE **02** 22:01:23.3,38°.47N×21°.45E,h2km±2km,ML3.2/17,Error ellipse: s-maj=2.0km s-min=0.4km az=197.0*
ISC 02 22:01:22.7±0.8,38°.46N±0°.02×21°.44E±0°.01,h17km±5km, n78,σ1s16/110,mb3.6/6,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVO	**Paravola**	**0.17**	**23**	P	**Pg**	**22 01 26.4**	**-0.7**
PVO				S	**Sg**	**22 01 29.5**	**-0.5**
	65µm,0.3s						
PVO	**Paravola**	**0.17**	**23**	P	**Pg**	**22 01 26.4**	**-0.7**
PVO				S	**Sg**	**22 01 29.9**	**0.0**
AST1	**Astakos**	**0.29**	**286**	P	**Pg**	**22 01 28.5**	**-0.4**
AST1				S	**Sg**	**22 01 33.1**	**0.0**
	8µm,0.4s						
UPR	**University Cam**	**0.33**	**123**	P	**Pg**	**22 01 29.7**	**+0.1**
UPR				S	**Sb**	**22 01 35.3**	**+0.3**
EFP	**Efpalio**	**0.37**	**96**	P	**Pg**	**22 01 29.6**	**-0.7**
EFP				S	**Sg**	**22 01 35.5**	**0.0**
	9µm,0.3s						
EFP	**Efpalio**	**0.37**	**96**	P	**Pg**	**22 01 29.7**	**-0.7**
EFP				S	**Sg**	**22 01 35.4**	**0.0**
EFP				AML	AML	22 01 37.5	
	comp=E,22672µm,0.4s						
EFP				AML	AML	22 01 42.6	
	comp=N,12834µm,0.5s						
ANX	**Ano Chora**	**0.40**	**71**	P	**Pg**	**22 01 30.3**	**-0.7**
ANX				S	**Sb**	**22 01 37.3**	**0.0**
	comp=N,15µm,0.5s						
ANX	**Ano Chora**	**0.40**	**71**	P	**Pg**	**22 01 30.2**	**-0.7**
ANX				S	**Sg**	**22 01 36.3**	**-0.2**
ANX				AML	AML	22 01 39.3	
	comp=E,26406µm,0.5s						
ANX				AML	AML	22 01 39.7	
	comp=N,32796µm,0.5s						
RLS	**Riolos of Patr**	**0.41**	**177**	P	**Pg**	**22 01 30.8**	**-0.2**
RLS				S	**Sb**	**22 01 37.5**	**+0.2**
	comp=N,2µm,0.6s						
RLS	**Riolos of Patr**	**0.41**	**177**	P	**Pg**	**22 01 30.7**	**-0.2**
RLS				AML	AML	22 01 41.7	
	comp=E,3654µm,0.6s						
RLS				AML	AML	22 01 43.1	
	comp=N,3915µm,0.6s						
EVR	**Evrytania**	**0.54**	**32**	P	**Pg**	**22 01 33.6**	**+0.2**
EVR				S	**Sb**	**22 01 41.4**	**+0.1**
	comp=N,2µm,0.6s						
EVR	**Evrytania**	**0.54**	**32**	P	**Pg**	**22 01 33.7**	**+0.2**
EVR				S	**Sb**	**22 01 42.2**	**+0.9**
EVR				AML	AML	22 01 47.6	
	comp=E,3447µm,0.6s						
EVR				AML	AML	22 01 50.0	
	comp=N,4474µm,0.7s						
DRO	**Drossia**	**0.55**	**157**	P	**Pg**	**22 01 33.3**	**-0.4**
DRO				S	**Sb**	**22 01 42.2**	**+0.6**
	comp=N,3µm,0.3s						
DRO	**Drossia**	**0.55**	**157**	P	**Pg**	**22 01 33.4**	**-0.3**
DRO				S	**Sg**	**22 01 39.8**	**-1.3**
DRO				AML	AML	22 01 47.2	
	comp=E,6835µm,0.3s						
DRO				AML	AML	22 01 51.8	
	comp=N,6829µm,0.5s						
ALIK	**Aliki, Aigiali**	**0.56**	**111**	P	**Pg**	**22 01 33.2**	**-0.7**
ALIK				S	**Sb**	**22 01 42.5**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.63**	**293**	P	**Pg**	**22 01 35.1**	**-0.1**
NYDR				S	**Sb**	**22 01 45.5**	**+1.6**
	comp=N,3µm,0.6s						
NYDR	**Nydri-Lefkada**	**0.63**	**293**	P	**Pg**	**22 01 35.1**	**-0.1**
NYDR				S	**Sg**	**22 01 43.9**	**+0.2**
EVGI	**Lefkada island**	**0.64**	**285**	P	**Pg**	**22 01 35.1**	**-0.1**
EVGI				S	**Sb**	**22 01 44.7**	**+0.7**
	comp=N,3µm,0.5s						
FSK	**Fiskardo**	**0.69**	**270**	P	**Pg**	**22 01 36.0**	**-0.2**
FSK				S	**Sb**	**22 01 47.4**	**+1.9**
	comp=N,2µm,0.5s						
FSK	**Fiskardo**	**0.69**	**270**	P	**Pg**	**22 01 35.9**	**-0.3**
FSK				S	**Sb**	**22 01 45.8**	**+0.3**
FSK				AML	AML	22 01 49.6	
	comp=E,5326µm,0.5s						
FSK				AML	AML	22 01 52.9	
	comp=N,3828µm,0.6s						
LKD2	**Lefkada island**	**0.69**	**298**	P	**Pg**	**22 01 36.4**	**+0.1**
LKD2				S	**Sb**	**22 01 47.2**	**+1.5**
	comp=N,5µm,0.6s						
LKD2	**Lefkada island**	**0.69**	**298**	P	**Pg**	**22 01 36.2**	**-0.1**
LKD2				AML	AML	22 01 50.5	
	comp=N,7603µm,0.5s						
LKD2				AML	AML	22 01 51.9	
	comp=E,10815µm,0.7s						
KLV	**Kalavryta, Ach**	**0.70**	**127**	P	**Pg**	**22 01 35.6**	**-0.8**
KLV				S	**Sb**	**22 01 46.8**	**+1.0**
	comp=E,688nm,0.8s						
KLV	**Kalavryta, Ach**	**0.70**	**127**	P	**Pg**	**22 01 35.6**	**-0.8**
KLV				S	**Sg**	**22 01 45.8**	**+0.1**
KLV				AML	AML	22 01 57.7	
	comp=E,1514µm,0.7s						
KLV				AML	AML	22 01 59.1	
	comp=N,1248µm,0.7s						
TSLK	**Tsoukalades, L**	**0.71**	**301**	P	**Pg**	**22 01 36.7**	**0.0**
TSLK				S	**Sb**	**22 01 47.1**	**+0.9**
	comp=N,2µm,0.8s						
DRAG	**Dragano-Lefkad**	**0.71**	**288**	P	**Pg**	**22 01 36.5**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.71**	**288**	P	**Pg**	**22 01 36.2**	**-0.5**
VLS	**Valsamata**	**0.73**	**247**	P	**Pg**	**22 01 36.6**	**-0.3**
VLS				S	**Sb**	**22 01 48.3**	**+1.6**
	comp=N,1µm,0.4s						
VLS	**Valsamata**	**0.73**	**247**	P	**Pg**	**22 01 36.4**	**-0.5**
VLS				S	**Sg**	**22 01 46.9**	**+0.3**
VLS				AML	AML	22 01 54.6	
	comp=N,3758µm,0.5s						
VLS				AML	AML	22 01 56.4	
	comp=E,2309µm,0.6s						
MAKR	**Makrakomi, Fth**	**0.77**	**44**	P	**Pg**	**22 01 37.2**	**-0.6**
MAKR				AML	AML	22 01 54.0	
	comp=E,5363µm,0.4s						
MAKR				AML	AML	22 01 57.9	
	comp=N,3509µm,0.5s						
KEF4	**Livadi, Kephal**	**0.82**	**256**	P	**Pg**	**22 01 38.2**	**-0.5**
DLFA	**Delphi**	**0.83**	**89**	P	**Pg**	**22 01 37.9**	**-1.0**
DLFA				S	**Sg**	**22 01 48.9**	**-0.9**
LXRA	**Lixouri, Kepha**	**0.83**	**252**	P	**Pg**	**22 01 38.6**	**-0.3**
DMLN	**Damoulianata-K**	**0.87**	**255**	P	**Pg**	**22 01 38.7**	**-0.9**
DMLN				S	**Sg**	**22 01 51.0**	**0.0**
GUR	**Goura**	**0.88**	**126**	P	**Pg**	**22 01 38.7**	**-1.2**
GUR				AML	AML	22 01 55.1	
	comp=N,2985µm,0.3s						
GUR				AML	AML	22 02 02.3	
	comp=E,2632µm,0.5s						
LTHK	**Lithakia**	**0.89**	**213**	P	**Pg**	**22 01 40.1**	**+0.1**
LTHK				S	**Sg**	**22 01 51.4**	**-0.4**
LTHK				AML	AML	22 02 02.7	
	comp=E,4046µm,0.7s						
LTHK				AML	AML	22 02 04.5	
	comp=N,4070µm,0.4s						
AGG	**Agios Georgios**	**0.89**	**51**	P	**Pg**	**22 01 39.5**	**-0.6**
AGG				S	**Sb**	**22 01 51.9**	**+0.5**
	comp=N,695nm,0.4s						
AGG	**Agios Georgios**	**0.89**	**51**	P	**Pg**	**22 01 39.0**	**-1.0**
KEF3	**Kipouria, Keph**	**0.90**	**254**	P	**Pg**	**22 01 38.9**	**-1.2**
KEF3				S	**Sb**	**22 01 52.6**	**+1.1**
AXAR	**Agios Charalam**	**1.00**	**72**	P	**Pg**	**22 01 40.8**	**-1.3**
AXAR				S	**Sb**	**22 01 55.8**	**+1.3**
AXAR				AML	AML	22 02 02.5	
	comp=E,3202µm,0.7s						
AXAR				AML	AML	22 02 05.3	
	comp=N,4723µm,0.7s						
THAL	**Thalero**	**1.05**	**113**	P	**Pb**	**22 01 41.7**	**-0.8**
THAL				AML	AML	22 02 13.3	
	comp=E,4264µm,0.7s						
THAL				AML	AML	22 02 14.8	
	comp=N,2341µm,0.5s						
THL	**Klokotos Trika**	**1.19**	**22**	P	**Pb**	**22 01 44.1**	**-0.7**
THL				AML	AML	22 02 14.7	
	comp=N,552µm,0.8s						
THL				AML	AML	22 02 16.1	
	comp=E,1006µm,0.9s						
JAN	**Janina**	**1.28**	**339**	P	**Pg**	**22 01 47.1**	**-0.3**
JAN				S	**Sg**	**22 02 03.9**	**-0.2**
JAN				AML	AML	22 02 13.3	
	comp=E,1519µm,0.6s						
JAN				AML	AML	22 02 15.3	
	comp=N,1057µm,0.4s						
LOUT	**Loutraki**	**1.30**	**111**	P	**Pg**	**22 01 47.9**	**+0.2**
IGT	**Igoumenitsa**	**1.37**	**321**	P	**Pb**	**22 01 48.3**	**+0.3**
IGT	**Igoumenitsa**	**1.37**	**321**	P	**Pb**	**22 01 48.1**	**+0.2**
TYRN	**Tyrnavos**	**1.39**	**26**	P	**Pb**	**22 01 48.4**	**+0.1**
VIL2	**Platees**	**1.46**	**99**	P	**Pb**	**22 01 50.1**	**+0.7**
VIL2				S	**Sn**	**22 02 07.4**	**+0.3**
VIL2				AML	AML	22 02 17.5	
	comp=E,1662µm,0.7s						
VIL2				AML	AML	22 02 17.9	
	comp=N,978µm,0.6s						
KPRO	**Kipourio**	**1.49**	**358**	P	**Pb**	**22 01 50.1**	**+0.1**
KPRO				S	**Sg**	**22 02 11.4**	**+0.5**
	comp=N,520nm,0.8s						
KPRO	**Kipourio**	**1.49**	**358**	P	**Pn**	**22 01 49.5**	**+0.7**
KPRO				AML	AML	22 02 19.8	
	comp=N,999µm,0.6s						
KPRO				AML	AML	22 02 20.6	
	comp=E,901µm,0.6s						
PYL	**PYLOS**	**1.58**	**171**	P	**Pb**	**22 01 51.7**	**+0.1**
NEO	**Neokhori**	**1.63**	**58**	P	**Pb**	**22 01 52.3**	**0.0**
NEO				AML	AML	22 02 22.2	
	comp=N,688µm,0.6s						
NEO				AML	AML	22 02 25.7	
	comp=E,406µm,0.6s						
XOR	**Xorichti**	**1.64**	**56**	P	**Pb**	**22 01 53.3**	**+0.8**
XOR	**Xorichti**	**1.64**	**56**	P	**Pn**	**22 01 51.4**	**+0.7**
XOR				AML	AML	22 02 30.5	
	comp=E,272µm,0.9s						
XOR				AML	AML	22 02 36.0	
	comp=N,679µm,1.4s						
KRND	**KRANIDI**	**1.73**	**128**	P	**Pn**	**22 01 53.6**	**+1.6**
KRND				AML	AML	22 02 27.7	
	comp=N,892µm,0.6s						
KRND				AML	AML	22 02 29.9	
	comp=E,1010µm,0.6s						
PENT	**Pentalofos**	**1.75**	**352**	P	**Pb**	**22 01 54.2**	**-0.2**
KEK	**Kerkira**	**1.79**	**315**	P	**Pn**	**22 01 53.2**	**+0.4**
ATH	**Athens Observa**	**1.86**	**105**	P	**Pn**	**22 01 55.4**	**+1.6**
ATHU	**Athens Univers**	**1.91**	**104**	P	**Pn**	**22 01 55.9**	**+1.4**
VLY	**Voula,Athens**	**1.95**	**107**	P	**Pn**	**22 01 56.0**	**+0.9**
DION	**Dionisos Attik**	**2.00**	**100**	P	**Pn**	**22 01 56.7**	**+0.9**
DION				AML	AML	22 02 36.4	
	comp=N,786µm,0.7s						
DION				AML	AML	22 02 38.9	
	comp=E,664µm,1.1s						
KYMI	**Kymi, Euboea I**	**2.09**	**85**	P	**Pn**	**22 01 58.0**	**+1.0**
VLI	**Veliai**	**2.11**	**145**	P	**Pn**	**22 01 58.9**	**+1.7**
VLI				S	**Sb**	**22 02 26.1**	**-0.3**
	comp=E,310nm,1.0s						
VLI	**Veliai**	**2.11**	**145**	P	**Pn**	**22 01 59.2**	**+2.0**
VLI				AML	AML	22 02 40.5	
	comp=E,689µm,1.0s						
VLI				AML	AML	22 02 44.0	
	comp=N,554µm,0.9s						
OHR	**Ohrid**	**2.69**	**350**	*i* Pn	**Pg**	**22 02 13.9**	**-0.4**
VAY	**Valandovo**	**2.98**	**17**	*i* Pn	**Pb**	**22 02 13.3**	**-2.1**
KOKK	**Kokkinochori,**	**3.07**	**39**	P	**Pn**	**22 02 11.5**	**+1.0**
VAE	**Valguarnera**	**5.64**	**262**	Pn	Pn	22 02 31.4	-14
	comp=N,0.3nm,0.3s,baz=343,slow=22,SNR=2.1						
VAE				Sn	**Sn**	**22 03 42.4**	**-7.9**
	comp=N,0.4nm,0.3s,baz=39,slow=21,SNR=1.6						
	comp=N,15nm,1.0s						
MLR	**Muntele Rosu**	**7.78**	**24**	Pn	Pn	22 03 20.6	+5.4
	comp=N,0.2nm,0.3s,baz=278,slow=17,SNR=2.1						
	comp=N,2.1nm,0.6s						
BRTR	**Keskin Array B**	**9.57**	**79**	Pn	**Pn**	**22 03 43.0**	**+3.2**
	comp=N,0.1nm,0.3s,baz=261,slow=11,SNR=2.4						
	comp=N,0.3nm,0.5s						
VRAC	**Vranov**	**11.39**	**344**	LR	LR	22 10 11.5	
	comp=N,29nm,20.1s,baz=189,slow=45						
GERES	**GERESS Array B**	**11.79**	**334**	LR	LR	22 09 41.9	
	comp=N,55nm,18.1s,baz=244,slow=41						
HFS	**Hagfors,**	**22.24**	**350**	P	**P**	**22 06 19.9**	**+1.5**
	comp=N,1.5nm,0.6s,baz=146,slow=14,SNR=4.9						
	comp=N,1.5nm,0.6s						
FINES	**FINESS Array B**	**23.19**	**6**	P	**P**	**22 06 29.7**	**+1.4**
	comp=N,4.5nm,1.1s,baz=186,slow=8.4,SNR=4.2						
	comp=N,4.5nm,1.1s						
NOA	**NORSAR Array B**	**23.49**	**347**	P	**P**	**22 06 31.9**	**+0.5**
	comp=N,0.4nm,0.5s,baz=158,slow=9.3,SNR=4.0						
	comp=N,0.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**23.62**	**324**	P	**P**	**22 06 30.7**	**-2.0**
	comp=N,1.0nm,0.7s,baz=123,slow=11,SNR=2.1						
	comp=N,1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.53**	**59**	P	**P**	**22 09 34.0**	**+0.5**
	comp=N,0.2nm,0.4s,baz=275,slow=8.1,SNR=7.4						
	comp=N,0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**44.96**	**48**	P	**P**	**22 09 37.4**	**+0.7**
	comp=N,0.6nm,0.5s,baz=278,slow=8.3,SNR=4.4						
	comp=N,0.6nm,0.5s						

*IDC **02** 22:07:44.9±5.3,19°.96S×176°.14W,h180km±50km, mb3.7/10,mbtmp4.2/12,Error ellipse: s-maj=36.4km s-min=14.9km az=161.0*
*NEIC **02** 22:07:48.6±2.6,19°.8S±0°.1×175°.94W±0°.09,h198km±6km, mb4.4/20,Error ellipse: s-maj=18.8km s-min=11.2km az=162.0*
ISC 02 22:07:47.4±0.4,19°.86S±0°.09×176°.02W±0°.07,h200km, n76,σ1s39/73,mb4.1/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.80**	**83**	Pn	**Pn**	**22 09 11.5**	**-0.6**
NIUE				Sn	**Sn**	**22 10 19.0**	**0.0**
AFI	**Afiamalu**	**7.17**	**35**	Pn	**Pn**	**22 09 29.5**	**-0.6**
AFI				Sn	**Sn**	**22 10 50.3**	**-1.2**
RAR	**Rarotonga**	**15.28**	**98**		**Pn**	**22 11 13.0**	**-0.1**
PINNC	**Pines Island,**	**15.66**	**257**		**Pn**	**22 11 20.1**	**+2.3**
DZM	**Mont Dzumac**	**16.53**	**259**	Pn	**Pn**	**22 11 30.5**	**+2.2**
DZM				IAmb	IAmb	22 11 31.4	
	comp=Z,14nm,1.0s						
DZM	**Mont Dzumac**	**16.53**	**259**	P	**P**	**22 11 24.5**	**-2.8**
	comp=Z,5.2nm,0.9s,baz=102,slow=20,SNR=1.3						
KOUNC	**Koumac, New Ca**	**18.50**	**264**		**P**	**22 11 52.0**	**+3.3**
KOUNC				IAmb	IAmb	22 11 56.4	
	comp=Z,21nm,0.7s						
URZ	**Urewera**	**19.28**	**197**	P	**P**	**22 11 54.2**	**-2.8**
	comp=Z,12nm,0.8s,baz=120,slow=7.9,SNR=2.6						
URZ				S	S	22 15 12.0	-13
	comp=Z,9.7nm,0.9s,baz=100,slow=19,SNR=2.0						
RTZ	**Ruatahuna**	**19.65**	**196**	P	**P**	**22 12 00.8**	**-0.4**
INZ	**Inchbonnie**	**25.13**	**202**	P	**P**	**22 12 53.6**	**-0.4**
PPT	**Papeete**	**25.14**	**89**	P	**P**	**22 12 54.2**	**-0.2

comp=Z,0.6nm,0.5s,baz=224,slow=7.6,SNR=7.1
comp=Z,0.6nm,0.5s
U15A North Rim 82.16 47 P P 22 19 47.0 +0.6
H03N2 Juan Fernandez 84.94 124 T T 23 53 11.4
baz=248
H03N3 Juan Fernandez 84.94 124 T T 23 53 15.0
baz=248
H03N1 Juan Fernandez 84.96 124 T T 23 53 18.1
baz=248
TXAR Lajitas Array 85.14 57 P P 22 20 02.3 +0.8
comp=Z,0.7nm,0.9s,baz=203,slow=6.7,SNR=8.0
comp=Z,0.7nm,0.9s
RND Reindeer 85.68 12 P P **22 20 04.1 +0.8**
RND IAmb IAmb 22 20 05.2
comp=Z,6.9nm,0.8s
PDAR Pinedale Array 87.23 43 P P **22 20 11.3 -0.2**
comp=Z,0.2nm,0.3s,baz=252,slow=8.2,SNR=2.6
comp=Z,0.2nm,0.3s
ILAR Eielson Array 87.29 12 P P 22 20 11.2 +0.2
comp=Z,0.8nm,0.7s,baz=219,slow=5.1,SNR=10
comp=Z,0.8nm,0.7s
J26L Joseph Creek 87.74 13 P P **22 20 14.8 +1.5**
J26L IAmb IAmb 22 20 16.7
comp=Z,5.0nm,0.8s
G21K Allakaket 87.76 9 P P 22 20 13.4 +0.2
CMAR Chiang Mai Arr 91.66 289 P P 22 20 33.5 +1.0
comp=Z,0.4nm,0.2s,baz=163,slow=3.5,SNR=5.4
comp=Z,0.4nm,0.2s
SONM Songino Array 96.50 319 PKiKP **PKiKP 22 25 29.9 -0.6**
comp=Z,0.4nm,0.9s,baz=146,slow=3.1,SNR=3.5
MKAR Makanchi Array 112.11 313 PKiKP **PKiKP 22 25 57.2 -1.8**
comp=Z,0.3nm,0.5s,baz=111,slow=3.2,SNR=8.1
ARCES ARCESS Array B 128.61 350 PKP **PKPdf 22 26 29.2 -0.7**
comp=Z,2.6nm,0.9s,baz=78,slow=1.3,SNR=7.6
FINES FINESS Array B 135.66 345 PKP **PKPdf 22 26 45.3 +1.8**
comp=Z,0.9nm,0.7s,baz=104,slow=1.7,SNR=6.6
AKASG Malin Array Be 143.32 333 PKhKP PKPpre 22 26 53.6
comp=Z,3.6nm,0.4s,baz=39,slow=4.0,SNR=18
AKBB Malin Array Si 143.32 333 PKPdf PKPab 22 26 54.4 +0.3
KIEV Kiev 143.33 333 PKPdf PKPab 22 26 53.7 -0.4
EKA Eskdalemuir Ar 144.17 7 PKP **PKPab 22 26 57.0 -0.2**
comp=Z,4.8nm,1.0s,baz=333,slow=2.4,SNR=5.4
ARPR Arapgir-MALATY 144.76 310 PKPbc PKPbc 22 27 00.4 +0.1
LODK Lodwar 145.31 246 PKPdf PKPdf 22 27 01.3 -1.1
DSB Dublin 145.72 11 PKPdf PKPdf 22 27 02.4 +0.6
GAZ Gaziantep 146.37 306 PKPdf PKPdf 22 27 04.1 +0.7
BNN Bunyan 146.63 311 PKPdf PKPdf 22 27 03.6 -0.4
KWP Kalwaria Pacla 146.74 338 PKPdf PKPdf 22 27 05.7 +2.1
BUR08 Bucovina Ar. S 147.36 333 PKPbc PKPbc 22 27 08.4 +0.8
BURAR Bucovina Array 147.38 333 PKPbc PKPbc 22 27 08.3 +0.7
BR131 Keskin Array S 147.76 314 PKPbc PKPdf 22 27 07.9 +2.1
BRTR Keskin Array B 147.76 314 PKPbc PKPdf 22 27 08.5 +2.6
BRTR Keskin Array B 147.76 314 PKPbc PKPdf 22 27 08.0 +2.2
comp=Z,3.3nm,0.5s,baz=135,slow=4.5,SNR=29
CLL Collm 147.82 349 PKPbc PKPbc 22 27 09.0 +0.5
OSTC Ostas 147.87 345 *e*PKP **PKPbc 22 27 09.7 +1.0**
DPC Dobruska-Polom 148.03 345 *e*PKP **PKPbc 22 27 09.8 +0.6**
KRLC Kraliky 148.17 344 *e*PKP **PKPbc 22 27 09.8 +0.2**
ANTO Ankara 148.25 315 PKPbc PKPdf 22 27 09.4 +2.9
MAUC Maruska 148.54 343 *e*PKP **PKPbc 22 27 10.9 +0.4**
MLR Muntele Rosu 148.66 330 PKPdf PKPdf 22 27 06.7 -0.4
PRU Pruhonice 148.78 347 PKPbc PKPbc 22 27 11.2 +0.1
GOPC GO Pecny, Ondr 148.80 346 *e*PKP **PKPbc 22 27 11.8 +0.7**
MMAI Mount Meron Ar 149.09 301 PKPbc PKPbc 22 27 12.5 0.0
comp=Z,4.7nm,0.5s,baz=73,slow=6.5,SNR=29
PSZ Piszkesteto 149.18 339 PKPbc PKPbc 22 27 12.6 +0.4
ZVC Zvikov 149.37 347 *e*PKP **PKPbc 22 27 13.2 +0.6**
GHAJ Ghor Haditha 149.42 298 PKPbc PKPbc 22 27 12.8 -0.4
KHC Kasperske Hory 149.79 347 PKPbc PKPbc 22 27 13.9 +0.2
KHC Kasperske Hory 149.79 347 *e*PKP **PKPbc 22 27 13.7 +0.1**
CKRC Cesky Krumlov 149.93 346 *e*PKP **PKPbc 22 27 14.2 +0.2**
GERES GERESS Array B 150.04 347 PKPbc PKPbc 22 27 14.5 +0.1
GERES GERESS Array B 150.04 347 PKPbc PKPbc 22 27 13.2 -1.1
comp=Z,2.3nm,0.8s,baz=3.8,slow=2.9,SNR=7.8
CSS Mathiatis 150.05 306 PKPdf PKPdf 22 27 08.8 -0.7
ESDC Sonseca Array 159.10 17 PKPab PKPab 22 28 00.0 +0.5
comp=Z,0.8nm,1.0s,baz=345,slow=3.8,SNR=4.0

*NEIC **02** 22:08:44.9±1.7,34.76N±0.03×8.32E±0.10,h10km±1km, mb4.2/13, Error ellipse: s-maj=13.5km s-min=3.8km az=282.0*
*TUN **02** 22:08:46.0,34.74N×8.37E,h7km±4km, MD4.5*
*IDC **02** 22:08:46.4±2.3,34.67N×8.44E,h28km±14km, mb3.7/20, mbtmp3.8/27,ML3.9/6,MS3.0/6, Error ellipse: s-maj=17.3km s-min=13.0km az=137.0*
*CRAAG **02** 22:08:47.0,34.74N×8.27E, Mb4.2, Tunisie*
*LDG **02** 22:08:47.4±0.2,34.74N×8.27E,h10km, Ml4.0/12, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
ISC 02 22:08:44.0±0.5,34.74N±0.03×8.35E±0.03,h10km,n129, σ1§91/135,**mb4.0**/26,**MS2.9**/4,**Tunisia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BERT	**Berda**	**0.74**	**132**	*i* P		**Pn**		**22 09 00.7**	**+0.2**
BERT	**Berda**	**0.74**	**132**	*i* P		**Pn**		**22 09 00.8**	**+0.2**
CNGR	**Negrine**	**0.74**	**249**	P		**Pn**		**22 09 01.9**	**+1.3**
THTN	**Thala**	**0.86**	**18**	*i* P		**Pn**		**22 09 02.8**	**+0.5**
CBBAR	**Babar**	**1.03**	**293**	P		**Pn**		**22 09 06.6**	**+1.9**
CRHA	**Rehia**	**1.18**	**331**	P		**Pg**		**22 09 08.3**	**+1.7**
KEST	**Kesra**	**1.28**	**39**			**Pg**		**22 09 08.7**	**+0.3**
KEST					Sn		**Sg**	**22 09 29.6**	**+4.4**
KEST	**Kesra**	**1.28**	**39**	Pg		**Pg**		**22 09 09.7**	**+1.1**
	220nm,0.3s,baz=168,slow=20,SNR=1160								
KEST					Lg	Lg		22 09 29.2	
	351nm,0.3s,baz=107,slow=20,SNR=19								
KEST					LR	LR		22 09 47.2	
	comp=Z,564nm,18.8s,baz=220,slow=47								
TROT	**Trozza**	**1.31**	**51**	*i* P		**Pg**		**22 09 09.6**	**+0.5**
TROT	**Trozza**	**1.31**	**51**	*i* P		**Pg**		**22 09 09.6**	**+0.5**
TROT	**Trozza**	**1.31**	**51**	*i* P		**Pg**		**22 09 09.7**	**+0.5**
MEDT	**Meda**	**1.44**	**116**	*i* P		**Pg**		**22 09 11.6**	**0.0**
MEDT	**Meda**	**1.44**	**116**	*i* P		**Pg**		**22 09 11.7**	**0.0**
MEDT	**Meda**	**1.44**	**116**	*i* P		**Pg**		**22 09 11.7**	**0.0**
BTHT	**Jabal bu Thady**	**1.64**	**76**	*i* P		**Pb**		**22 09 14.0**	**-0.2**
SGNT	**Sidi Gnaou**	**1.66**	**130**	*i* P		**Pb**		**22 09 14.7**	**+0.1**
SGNT	**Sidi Gnaou**	**1.66**	**130**	*i* P		**Pb**		**22 09 14.6**	**+0.1**
SGNT	**Sidi Gnaou**	**1.66**	**130**	*i* P		**Pb**		**22 09 14.7**	**+0.1**
ABSA	**Djebel Ababsia**	**1.69**	**335**	P		**Pg**		**22 09 18.7**	**+2.3**
KRIT	**Krib**	**1.70**	**20**	*i* P		**Pb**		**22 09 15.2**	**-0.2**
KRIT	**Krib**	**1.70**	**20**	*i* P		**Pb**		**22 09 15.2**	**-0.2**
KRIT	**Krib**	**1.70**	**20**	*i* P		**Pb**		**22 09 15.2**	**-0.2**
GHAT	**Ghardimaou**	**1.75**	**359**	*i* P		**Pn**		**22 09 15.3**	**+0.9**
GHAT	**Ghardimaou**	**1.75**	**359**	*i* P		**Pb**		**22 09 15.7**	**-0.5**
GHAT	**Ghardimaou**	**1.75**	**359**	*i* P		**Pb**		**22 09 15.8**	**-0.5**
CBST	**Bordj Sabath**	**1.95**	**329**	P		**Pb**		**22 09 19.2**	**-0.5**
HANT	**Hania**	**1.97**	**56**	*i* P		**Pg**		**22 09 23.2**	**+1.4**
HANT	**Hania**	**1.97**	**56**	*i* P		**Pb**		**22 09 19.9**	**0.0**
HANT	**Hania**	**1.97**	**56**	*i* P		**Pb**		**22 09 20.0**	**0.0**
BLIT	**Baltah**	**2.03**	**14**	*i* P		**Pg**		**22 09 24.2**	**+1.3**
BLIT	**Baltah**	**2.03**	**14**	*i* P		**Pn**		**22 09 19.9**	**+1.7**
BLIT	**Baltah**	**2.03**	**14**	*i* P		**Pn**		**22 09 19.9**	**+1.7**
CMAH	**Djebel Manchou**	**2.03**	**338**	P		**Pn**		**22 09 19.5**	**+1.2**
CTEI	**Djebel Teioual**	**2.06**	**310**	P		**Pb**		**22 09 20.9**	**-0.8**
CASM	**Ain Smara**	**2.15**	**315**	P		**Pb**		**22 09 22.6**	**-0.4**
CJSR	**Ain Djasser**	**2.26**	**300**	P		**Pb**		**22 09 24.0**	**-1.0**
BKLT	**Bekalta**	**2.34**	**67**	*i* P		**Pg**		**22 09 29.6**	**+0.8**
TAMR	**Tamra**	**2.38**	**15**	*i* P		**Pb**		**22 09 26.2**	**-0.7**
SET	**Setif**	**2.81**	**302**	P		**Pn**		**22 09 32.0**	**+2.9**
TATN	**Tataouine**	**2.82**	**139**	*i* P		**Pn**		**22 09 25.8**	**-3.3**
VSL	**Villasalto**	**4.82**	**9**			**Pn**		**22 09 57.9**	**+1.4**
VSL					Sn	**Sn**		**22 10 51.1**	**-1.3**
CLTB	**Caltabellotta**	**4.85**	**53**	Pn		**Pn**		**22 09 58.8**	**+1.7**
RAFF	**Raffo Rosso**	**5.46**	**61**			**Pn**		**22 10 07.2**	**+1.7**
VAE	**Valguarnera**	**5.61**	**59**	Pn		**Pn**		**22 10 07.6**	**0.0**
	7.9nm,0.8s,baz=330,slow=23,SNR=1.6								
MAHO	**Mahon**	**6.09**	**329**	Pn		**Pn**		**22 10 14.9**	**+0.9**
CEL	**Celeste**	**7.01**	**58**	Pn		**Pn**		**22 10 29.0**	**+2.2**
PGF	**Pioggiola**	**7.81**	**4**	*e*P		**Pn**		**22 12 02.3**	**+4.5**
PGF				*e*Sn		**Sn**		**22 12 02.3**	**-4.0**
	42nm,1.0s								
CUC	**Castrocucco**	**7.92**	**46**	Pn		**Pn**		**22 10 39.9**	**+0.6**
CART	**Cartagena**	**8.08**	**293**	Pn		**Pn**		**22 10 42.0**	**+0.6**
CART	**Cartagena**	**8.08**	**293**	P		**Pn**		**22 10 39.4**	**-1.9**
CESX	**Cesi**	**8.52**	**22**	Pn		**Pn**		**22 10 48.4**	**+1.0**
LMR	**La Mourre**	**8.70**	**351**	*e*Pn		**Pn**		**22 10 49.8**	**0.0**
LMR				*e*Sn		**Sn**		**22 12 23.9**	**-4.0**
	22nm,0.4s								
NRCA	**Norcia**	**8.89**	**23**	Pn		**Pn**		**22 10 53.4**	**+0.8**
OSSC	**Osservatorio P**	**9.05**	**13**	Pn		**Pn**		**22 10 55.6**	**+0.9**
FDMO	**Fiordimonte**	**9.07**	**23**	Pn		**Pn**		**22 10 54.8**	**-0.1**
MURB	**Monte Urbino**	**9.11**	**20**	Pn		**Pn**		**22 10 56.9**	**+1.4**
SBF	**Sospel**	**9.14**	**356**	*e*Pn		**Pn**		**22 10 56.0**	**+0.1**
SBF				*e*Sn		**Sn**		**22 12 33.0**	**-5.8**
	48nm,0.7s								
GOG	**Mont Gurugu**	**9.33**	**276**	P		**Pn**		**22 10 58.0**	**-0.6**
SMRF	**Simiane la Rot**	**9.47**	**348**	*e*Pn		**Pn**		**22 11 01.0**	**+0.6**
MSSA	**Maissana**	**9.60**	**5**	Pn		**Pn**		**22 11 03.4**	**+1.1**
MTLF	**Montolieu**	**9.82**	**333**	*e*Pn		**Pn**		**22 11 05.9**	**+0.7**
MTLF				*e*Sn		**Sn**		**22 12 51.0**	**-4.5**
	7.7nm,0.5s								
LASF	**La Croix**	**9.95**	**341**	*e*Sn		**Sn**		**22 12 53.7**	**-5.0**
	2.2nm,0.3s								
MBDF	**Montbardon**	**10.05**	**354**	*e*Sn		**Sn**		**22 12 56.8**	**-4.5**
	22nm,0.8s								
ORIF	**Oris-en-Rattie**	**10.34**	**350**	*e*Sn		**Sn**		**22 13 03.8**	**-4.6**
	6.4nm,0.9s								
EPF	**Esparros**	**10.36**	**325**	*e*P		**Pn**		**22 11 17.0**	**+4.3**
EPF				*e*Sn		**Sn**		**22 13 03.2**	**-5.7**
	5.8nm,0.3s								
VIVF	**Saint-Julien-l**	**10.49**	**345**	*e*Pn		**Pn**		**22 11 14.4**	**0.0**
VIVF				*e*Sn		**Sn**		**22 13 06.9**	**-5.1**
	7.5nm,0.5s								
ETSF	**Etsaut**	**10.70**	**322**	*e*P		**Pn**		**22 11 21.9**	**+4.5**
TEOL	**Teolo**	**10.90**	**12**	Pn		**Pn**		**22 11 21.6**	**+1.5**
MDT	**Midelt**	**10.96**	**264**			**Pn**		**22 11 22.8**	**+1.9**
MDT	**Midelt**	**10.96**	**264**	Pn		**Pn**		**22 11 22.8**	**+1.9**
	0.5nm,0.3s,baz=86,slow=16,SNR=38								
MDT					LR	LR		22 16 18.7	
	comp=Z,34nm,18.8s,baz=120,slow=41								
	1.4nm,0.2s								
MDT	**Midelt**	**10.96**	**264**	P		**Pn**		**22 11 22.5**	**+1.6**
ESBB	**Sonseca Array**	**10.98**	**300**	Pn		**Pn**		**22 11 23.2**	**+2.0**
ESDC	**Sonseca Array**	**10.98**	**300**	Pn		**Pn**		**22 11 21.9**	**+0.7**
ESDC	**Sonseca Array**	**10.98**	**300**	Pn		**Pn**		**22 11 23.5**	**+2.3**
	0.3nm,0.3s,baz=110,slow=13,SNR=16								
ESDC					Sn	**Sn**		**22 13 26.4**	**+2.2**
	0.1nm,0.3s,baz=112,slow=26,SNR=1.8								
	1.0nm,0.4s								
MD31	**MD31**	**11.07**	**264**	P		**Pn**		**22 11 23.2**	**+0.7**
SJPF	**Ste Jean**	**11.20**	**321**	*e*P		**Pn**		22 11 29.0	+4.9
SJPF				*e*Sn		**Sn**		**22 13 24.8**	**-4.5**
	1.7nm,0.4s								
PAB	**San Pablo**	**11.21**	**299**	Pn		**Pn**		**22 11 24.4**	**0.0**
CAF	**Calviac**	**11.26**	**337**	*e*Sn		**Sn**		**22 13 26.9**	**-3.9**
LFF	**La Frestale**	**11.74**	**332**	*e*Pn		**Pn**		**22 11 32.3**	**+0.8**
DAVOX	**Davos/Dischmat**	**12.08**	**5**	Pn		**Pn**		**22 11 39.4**	**+3.1**
	0.1nm,0.3s,baz=337,slow=18,SNR=2.6								
DAVOX					LR	LR		22 16 25.4	
	comp=Z,34nm,19.0s,baz=52,slow=38								
	1.3nm,0.4s								
ZGR	**Zagora**	**12.67**	**253**	P		**Pn**		**22 11 44.4**	**0.0**
OUZM	**OUZ**	**13.27**	**257**	P		**Pn**		**22 11 55.0**	**+2.4**
MFF	**Saint Martin d**	**13.48**	**334**	*e*Pn		**Pn**		**22 11 56.3**	**+1.1**
GERES	**GERESS Array B**	**14.64**	**14**	Pn		**Pn**		**22 12 12.4**	**+1.2**
	0.2nm,0.3s,baz=201,slow=10,SNR=2.5								
	1.0nm,0.9s								
VRAC	**Vranov**	**15.78**	**20**	Pn		**P**		**22 12 28.7**	**-1.4**
	0.1nm,0.3s,baz=192,slow=13,SNR=4.5								
	3.0nm,0.8s								
ROSF	**Rostrenen**	**16.11**	**331**	*e*Pn		**Pn**		**22 12 32.2**	**+1.8**
MLR	**Muntele Rosu**	**17.18**	**46**	P		**P**		**22 12 45.1**	**-0.6**
MLR	**Muntele Rosu**	**17.18**	**46**	Pn		**P**		**22 12 46.3**	**+0.5**
	0.1nm,0.3s,baz=216,slow=8.7,SNR=4.3								
	0.9nm,0.9s								
BURAR	**Bucovina Array**	**18.02**	**39**			**P**		**22 12 56.3**	**+1.3**
BRTR	**Keskin Array B**	**20.71**	**69**			**P**		**22 13 23.9**	**-0.7**
BRTR	**Keskin Array B**	**20.71**	**69**	P		Pn		22 13 25.9	-1.1
	1.0nm,0.8s,baz=259,slow=9.4,SNR=6.7								
	1.0nm,0.8s								
AKASG	**Malin Array Be**	**22.01**	**37**	P		**P**		**22 13 36.8**	**-1.5**
	1.4nm,0.7s,baz=234,slow=9.0,SNR=5.4								
AKASG					LR	LR		22 24 10.3	
	comp=Z,43nm,19.0s,baz=61,slow=42								
	1.4nm,0.7s								
EKA	**Eskdalemuir Ar**	**22.08**	**342**	P		**P**		**22 13 38.6**	**-0.4**
	1.4nm,0.7s,baz=153,slow=11,SNR=2.8								
	1.4nm,0.7s								
TOA0	**Torodi Ar. Sit**	**22.33**	**197**	P		**P**		**22 13 42.2**	**+0.2**
TOA0					IAmb	IAmb		22 13 47.4	
	comp=Z,9.1nm,0.8s								
TORD	**Torodi Ar. Bea**	**22.33**	**197**	P		**P**		**22 13 42.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**22.33**	**197**	P		**P**		**22 13 40.2**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=10,slow=11,SNR=21								
	comp=Z,1.5nm,0.3s								
MMAI	**Mount Meron Ar**	**22.50**	**87**	P		**P**		**22 13 42.7**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=286,slow=7.3,SNR=1.8								
	comp=Z,0.3nm,0.5s								
EIL	**Elat**	**23.04**	**95**	LR		LR		22 24 39.2	
	comp=Z,41nm,18.6s,baz=275,slow=42								
PABE	**Paberze**	**23.40**	**23**	P		**P**		**22 13 53.7**	**+1.0**
PABE					IAmb	IAmb		22 13 59.2	
	comp=Z,18nm,1.1s								
HFS	**Hagfors**	**25.64**	**6**	P		**P**		**22 14 12.3**	**-1.2**
HFS	**Hagfors**	**25.64**	**6**	P		**P**		**22 14 12.3**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=188,slow=19,SNR=5.9								
	comp=Z,0.9nm,0.5s								
NBO00	**NORSAR Array S**	**26.35**	**3**	P		**P**		**22 14 19.8**	**-0.1**
NBO00					IAmb	IAmb		22 14 26.0	
	comp=Z,12nm,1.1s								
NOA	**NORSAR Array B**	**26.38**	**3**	P		**P**		**22 14 19.2**	**-1.1**
NOA	**NORSAR Array B**	**26.38**	**3**	P		**P**		**22 14 19.2**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=201,slow=9.1,SNR=1.4								
NOA					LR	LR		22 25 01.7	
	comp=Z,18nm,19.0s,baz=35,slow=37								
	comp=Z,0.3nm,0.6s								
FINES	**FINESS Array B**	**29.02**	**18**	P		**P**		**22 14 44.0**	**+0.2**
FINES	**FINESS Array B**	**29.02**	**18**	P		**P**		**22 14 44.1**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=188,slow=8.4,SNR=4.7								
	comp=Z,1.5nm,0.9s								
FIA1	**FINESS Array S**	**29.02**	**18**	P		**P**		**22 14 44.0**	**+0.2**
DBIC	**Dimbokro**	**30.48**	**207**	P		**P**		**22 14 56.3**	**-0.8**
DBIC	**Dimbokro**	**30.48**	**207**	P		**P**		**22 14 56.5**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=331,slow=11,SNR=2.1								
	comp=Z,1.9nm,0.6s								
ARCES	**ARCESS Array B**	**36.12**	**10**	P		**P**		**22 15 45.1**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=202,slow=8.8,SNR=6.4								
	comp=Z,0.6nm,0.5s								
MBAR	**Mbarara**	**40.93**	**144**	LR		LR		22 34 47.7	
	comp=Z,181nm,18.6s,baz=160,slow=38								
SPITS	**Spitsbergen Ar**	**43.68**	**2**	P		**P**		**22 16 49.6**	**+1.1**
	comp=Z,8.5nm,1.0s,baz=178,slow=9.8,SNR=1.2								
	comp=Z,8.5nm,1.0s								
KK31	**Karatay Array**	**48.09**	**60**	P		**P**		**22 17 24.4**	**+0.5**
KK31					IAmb	IAmb		22 17 28.0	
	comp=Z,3.7nm,1.4s								
KKAR	**Karatay Array**	**48.09**	**60**	P		**P**		**22 17 23.8**	**-0.1**
BTK	**Batken**	**49.02**	**64**	P		**P**		**22 17 31.2**	**+0.1**
KURBB	**Kurchatov Arra**	**52.03**	**49**	P		**P**		**22 17 53.6**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=284,slow=8.1,SNR=7.3								
	comp=Z,1.9nm,0.9s								
SCHQ	**Schefferville**	**54.23**	**316**	P		**P**		**22 18 11.1**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=49,slow=11,SNR=4.5								
	comp=Z,3.1nm,0.8s								
MAKZ	**Makanchi**	**55.13**	**53**	P		**P**		**22 18 17.2**	**+0.9**
MAKZ					IAmb	IAmb		22 18 29.4	
	comp=Z,1.4nm,0.8s								
ZAA0	**Zalesovo Array**	**55.15**	**44**	P		**P**		**22 18 16.6**	**+0.3**
ZAA0					IAmb	IAmb		22 18 28.1	
	comp=Z,1.1nm,0.6s								
ZALV	**Zalesovo Beam**	**55.15**	**44**	P		**P**		**22 18 16.5**	**+0.1**
ZALV	**Zalesovo Beam**	**55.15**	**44**	P		**P**		**22 18 16.4**	**0.0**
	comp=Z,0.5nm,0.7s,baz=292,slow=7.6,SNR=2.3								
	comp=Z,0.5nm,0.7s								
MK31	**Makanchi Array**	**55.34**	**53**			**P**		**22 18 17.4**	**-0.5**
MK31					IAmb	IAmb		22 18 19.1	
	comp=Z,1.7nm,0.9s								
MKAR	**Makanchi Array**	**55.34**	**53**	P		**P**		**22 18 17.5**	**-0.5**
MKAR	**Makanchi Array**	**55.34**	**53**	P		**P**		**22 18 17.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=286,slow=6.2,SNR=23								
	comp=Z,1.1nm,0.6s								
SONM	**Songino Array**	**70.03**	**45**	P		**P**		**22 19 55.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=285,slow=5.3,SNR=5.6								
	comp=Z,0.6nm,0.8s								
ULM	**Lac du Bonnet**	**72.24**	**319**	P		**P**		**22 20 10.4**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=77,slow=6.5,SNR=2.5								
	comp=Z,1.3nm,0.5s								
YKA	**Yellowknife Ar**	**72.88**	**336**	P		**P**		**22 20 13.4**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=46,slow=6.0,SNR=11								
	comp=Z,0.9nm,0.6s								
BDFB	**Brasilia**	**73.30**	**237**	P		**P**		**22 20 17.3**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=63,slow=11,SNR=1.7								
	comp=Z,0.9nm,0.3s								
PDAR	**Pinedale Array**	**84.26**	**319**	P		**P**		**22 21 15.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=80,slow=5.0,SNR=2.2								
	comp=Z,0.3nm,0.6s								

*SJA **02** 22:15:56.0±1.3,21.27S×68.57W,h100km, ML3.6, MW3.6*

*GUC **02** 22:15:58.1±0.7,21.26S×68.66W,h109km±5km, ML3.6*
ISC 02 22:15:59.1±1.5,21.24S±0.03×68.80W±0.06,
h111km±10km,n31,σ1§62/58,7C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.67**	**287**	*e*P		**Pn**		**22 16 16.3**	**-1.1**
PB01					IAML			22 16 32.4	
	comp=Z,684nm,0.2s								
PB01				*e*S		**Sn**		**22 16 32.5**	**+1.4**
PB01	**IPOC Station P**	**0.67**	**287**	⇑*i*P		**Pn**		**22 16 16.2**	**-1.1**
PB01				⇑*i*S		**Sn**		**22 16 31.4**	**+0.3**
PB01					IAML			22 16 32.7	
	comp=E,2μm,0.5s								
PB09	**IPOC Station P**	**0.69**	**216**	*e*P		**Pn**		**22 16 17.0**	**-0.6**
PB09				*e*S		**Sn**		**22 16 31.9**	**+0.3**
PB09					IAML			22 16 32.4	
	comp=Z,887nm,0.4s								
PB09	**IPOC Station P**	**0.69**	**216**	⇑*i*P		**Pn**		**22 16 17.0**	**-0.6**
PB09				*i* S		**Sn**		**22 16 31.6**	**0.0**
PB09					IAML			22 16 32.7	
	comp=N,1μm,0.4s								
PB02	**IPOC Station P**	**1.02**	**265**	*e*P		**Pn**		**22 16 20.2**	**-0.5**
PB02				*e*S		**Sn**		**22 16 38.4**	**+1.4**
PB02					IAML			22 16 43.9	
	comp=Z,2μm,0.2s								
PB02	**IPOC Station P**	**1.02**	**265**	⇑*i*P		**Pn**		**22 16 20.2**	**-0.5**
PB02				*i* S		**Sn**		**22 16 37.5**	**+0.6**
PB02					IAML			22 16 43.3	
	comp=E,2μm,0.3s								
PB07	**IPOC Station P**	**1.12**	**244**	*e*P		**Pn**		**22 16 21.2**	**-0.6**
PB07				*e*S		**Sn**		**22 16 40.0**	**+1.0**
PB07					IAML			22 16 45.0	
	comp=Z,759nm,0.3s								
PB07	**IPOC Station P**	**1.12**	**244**	⇓*i*P		**Pn**		**22 16 21.3**	**-0.5**
PB07				*i* S		**Sn**		**22 16 39.1**	**+0.2**
PB07					IAML			22 16 45.3	
	comp=E,1μm,0.3s								
PB08	**IPOC Station P**	**1.14**	**343**	*e*P		**Pn**		**22 16 21.8**	**-0.4**
PB08				*e*S		**Sn**		**22 16 40.2**	**+0.5**
PB08	**IPOC Station P**	**1.14**	**343**	*e*P		**Pn**		**22 16 21.9**	**-0.4**
PB08				*i* S		**Sn**		**22 16 39.6**	**-0.1**
PB08					IAML			22 16 42.3	
	comp=E,630nm,0.4s								
PATCX	**Punta Patache**	**1.33**	**288**	*e*P		**Pn**		**22 16 23.6**	**-0.4**
PATCX				*e*S		**Sn**		**22 16 45.3**	**+2.4**
PATCX					IAML			22 16 46.0	
	comp=Z,632nm,0.4s								
PATCX	**Punta Patache**	**1.33**	**288**	⇑*e*P		**Pn**		**22 16 23.4**	**-0.6**
PATCX				*i* S		**Sn**		**22 16 43.7**	**+0.8**
PATCX					IAML			22 16 48.4	
	comp=E,1μm,0.2s						

	comp=Z,30nm,0.8s								
PCDR	**Punta Cana, DR**	**0.93**	**245**				*e*P	**Pb**	**22 18 15.9**	**-0.4**
PCDR	**Punta Cana, DR**	**0.93**	**245**				*e*S	**Sb**	**22 18 27.8**	**-0.7**
PCDR	**Punta Cana, DR**	**0.93**	**245**					**Pb**	**22 18 15.9**	**-0.4**
PCDR								**Sb**	**22 18 27.8**	**-0.7**
PCDR	**Punta Cana, DR**	**0.93**	**245**			*i* P		**Pb**	**22 18 16.7**	**+0.3**
PCDR						*e*S		**Sb**	**22 18 26.3**	**-2.3**
PCDR						IAML			22 18 28.2	
	comp=Z,130nm,1.2s									
CRPR	**Cabo Rojo, PR**	**0.98**	**158**			*e*P		**Pg**	**22 18 18.9**	**+1.6**
CRPR	**Cabo Rojo, PR**	**0.98**	**158**			*e*S		**Sb**	**22 18 29.0**	**-1.0**
CRPR	**Cabo Rojo, PR**	**0.98**	**158**					**Pb**	**22 18 17.2**	**0.0**
CRPR						IAML			22 18 39.9	
	comp=E,45nm,2.2s									
CRPR	**Cabo Rojo, PR**	**0.98**	**158**					**Sb**	**22 18 29.0**	**-1.0**
CRPR	**Cabo Rojo, PR**	**0.98**	**158**			*e*Pg		**Pg**	**22 18 18.7**	**+1.3**
CRPR						*e*Sg		**Sn**	**22 18 30.9**	**-0.6**
CRPR						IAML			22 18 34.8	
	comp=Z,76nm,2.4s									
CRPR	**Cabo Rojo, PR**	**0.98**	**158**			*i* P		**Pg**	**22 18 18.6**	**+1.3**
CRPR						*e*S		**Sb**	**22 18 29.2**	**-0.8**
CRPR						IAML			22 18 34.8	
	comp=Z,76nm,2.4s									
EMPR	**Esperanza - Ma**	**1.02**	**115**		Pn			**Pn**	**22 18 20.9**	**+2.5**
MLPR	**Magueyes Islan**	**1.03**	**155**			*e*P		**Pb**	**22 18 17.4**	**-0.9**
MLPR	**Magueyes Islan**	**1.03**	**155**			*e*S		**Sb**	**22 18 30.1**	**-1.6**
MLPR	**Magueyes Islan**	**1.03**	**155**					**Pb**	**22 18 17.4**	**-0.9**
MLPR	**Magueyes Islan**	**1.03**	**155**					**Sg**	**22 18 31.8**	**-0.2**
MLPR						IAML			22 18 32.2	
	comp=E,47nm,3.0s									
MLPR	**Magueyes Islan**	**1.03**	**155**			*e*Pg		**Pb**	**22 18 17.2**	**-1.0**
MLPR						*e*Sg		**Sb**	**22 18 31.3**	**-0.4**
MLPR						IAML			22 18 45.6	
	comp=Z,42nm,2.4s									
CELP	**Cerrillos**	**1.21**	**134**			*e*P		**Pb**	**22 18 20.9**	**-0.4**
CELP	**Cerrillos**	**1.21**	**134**			*e*S		**Sb**	**22 18 35.9**	**-0.8**
CELP	**Cerrillos**	**1.21**	**134**					**Pb**	**22 18 20.9**	**-0.4**
CELP								**Sb**	**22 18 35.9**	**-0.8**
CELP	**Cerrillos**	**1.21**	**134**			IAML			22 18 38.7	
	comp=E,38nm,3.3s									
CELP						IAML			22 18 52.0	
	comp=N,29nm,3.2s									
CELP	**Cerrillos**	**1.21**	**134**			*e*Pg		**Pb**	**22 18 20.8**	**-0.4**
CELP						*e*Sg		**Sb**	**22 18 35.9**	**-0.8**
OBIP	**Obispado Ponce**	**1.21**	**136**			*e*P		**Pb**	**22 18 20.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.21**	**136**			*e*S		**Sb**	**22 18 34.3**	**-2.6**
OBIP	**Obispado Ponce**	**1.21**	**136**					**Pb**	**22 18 20.9**	**-0.3**
OBIP								**Sb**	**22 18 34.3**	**-2.6**
OBIP	**Obispado Ponce**	**1.21**	**136**			IAML			22 18 35.2	
	comp=E,30nm,3.4s									
OBIP						IAML			22 18 39.5	
	comp=N,39nm,2.1s									
MIDR	**Miches**	**1.47**	**273**			*e*Pg		**Pn**	**22 18 23.8**	**-0.8**
MIDR						*e*Sg		**Sn**	**22 18 45.9**	**+2.2**
MIDR						IAML			22 19 25.2	
	comp=Z,33nm,2.9s									
GCPR	**Guaynabo City**	**1.47**	**114**		Pn			**Pn**	**22 18 25.0**	**+0.3**
GCPR						IAML			22 19 04.6	
	comp=N,27nm,3.1s									

NEIC ***02*** *22:24:06.9±1.6, 56°.43N±0°.08×149°.33W±0°.08, h22km±10km, ML3.7/61, ML3.3(AEIC), Error ellipse: s-maj=12.3km s-min=3.2km az=153.0*

AEIC ***02*** *22:24:11±1.7, 56°.52N±0°.09×149°.3W±0°.1, h11km±7km, Error ellipse: s-maj=12.6km s-min=8.5km az=174.0*

ISC 02 22:24:05.1±1.6, 56°.49N±0°.08×149°.34W±0°.05, h10km, n203, σ1§21/202, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.19**	**308**		**Sn**	**22 25 07.0**	**-1.7**
KDAK	**Kodiak Island**	**2.19**	**308**		**Pn**	**22 24 42.4**	**+0.8**
KDAK	**Kodiak Island**	**2.19**	**308**	S	**Sn**	**22 25 07.0**	**-1.7**
	baz=124						
OHAK	**Old Harbor**	**2.29**	**290**		**Pn**	**22 24 43.2**	**+0.4**
OHAK	**Old Harbor**	**2.29**	**290**	P	**Pn**	**22 24 43.2**	**+0.4**
	baz=106						
OHAK				S	**Sn**	**22 25 08.5**	**-2.6**
	baz=106						
SII	**Sitkinak Islan**	**2.69**	**274**	S	**Sn**	**22 25 18.4**	**-2.5**
	baz=89						
SYI	**Shuyak Island**	**2.69**	**324**		**Sn**	**22 25 20.2**	**-0.6**
SYI					IAML	22 25 21.8	
	comp=E,156nm,0.6s						
SYI	**Shuyak Island**	**2.69**	**324**		**Pn**	**22 24 49.3**	**+1.0**
Q20K	**Shuyak Island**	**2.69**	**324**	P	**Pn**	**22 24 49.3**	**+1.0**
	baz=140						
R18K	**Karluk**	**3.00**	**293**		**Pn**	**22 24 53.6**	**+1.1**
R18K					**Sn**	**22 25 26.2**	**-2.2**
R18K	**Karluk**	**3.00**	**293**	IAML		22 25 27.5	
	comp=E,216nm,0.3s						
R18K				IAML		22 25 27.9	
	comp=N,225nm,0.4s						
R18K	**Karluk**	**3.00**	**293**	P	**Pn**	**22 24 53.6**	**+1.1**
	baz=108						
R18K				S	**Sn**	**22 25 26.2**	**-2.2**
	baz=108						
CNPM	**China Poot**	**3.21**	**342**		**Pn**	**22 24 56.2**	**+0.7**
CNPM					**Sn**	**22 25 32.9**	**-0.9**
BRSE	**Bradley Lake S**	**3.35**	**348**		**Pn**	**22 24 57.8**	**+0.4**
BRSE					**Sn**	**22 25 35.3**	**-1.9**
BRSE	**Bradley Lake S**	**3.35**	**348**	P	**Pn**	**22 24 57.8**	**+0.4**
	baz=166						
BRSE				S	**Sn**	**22 25 35.3**	**-1.9**
	baz=166						
Q23K	**Middleton Isla**	**3.35**	**27**		**Pn**	**22 24 57.7**	**+0.3**
Q23K	**Middleton Isla**	**3.35**	**27**	IAML		22 25 22.8	
	comp=N,160nm,1.5s						
Q23K				IAML		22 26 17.1	
	comp=E,180nm,1.4s						
Q23K	**Middleton Isla**	**3.35**	**27**	P	**Pn**	**22 24 57.7**	**+0.3**
	baz=210						
MID	**Middleton Isla**	**3.35**	**27**		**Pn**	**22 24 57.8**	**+0.3**
MID	**Middleton Isla**	**3.35**	**27**	IAML		22 25 22.9	
	comp=N,146nm,1.4s						
MID				IAML		22 26 29.7	
	comp=E,158nm,1.5s						
Q19K	**Cape Douglas,**	**3.37**	**318**		**Sn**	**22 25 36.7**	**-1.0**
Q19K				IAML		22 25 44.2	
	comp=N,175nm,0.9s						
Q19K	**Cape Douglas,**	**3.37**	**318**		**Pn**	**22 24 59.0**	**+1.4**
Q19K	**Cape Douglas,**	**3.37**	**318**	P	**Pn**	**22 24 59.0**	**+1.4**
	baz=134						
BRLK	**Bradley Lake**	**3.39**	**347**		**Pn**	**22 24 58.3**	**+0.3**
BRLK					**Sn**	**22 25 37.0**	**-1.1**
BRLK	**Bradley Lake**	**3.39**	**347**	IAML		22 25 37.6	
	comp=N,80nm,0.2s						
BRLK				IAML		22 25 38.1	
	comp=E,86nm,0.2s						
HOM	**Homer**	**3.41**	**340**		**Sn**	**22 25 37.8**	**-0.8**
HOM	**Homer**	**3.41**	**340**	S	**Sn**	**22 25 37.8**	**-0.8**
	baz=158						
KAHG	**Katmai Hook Gl**	**3.46**	**308**		**Pn**	**22 25 00.3**	**+1.4**
SEW	**Seward**	**3.63**	**359**		**Pn**	**22 25 01.2**	**0.0**
SEW	**Seward**	**3.63**	**359**	P	**Pn**	**22 25 01.2**	**0.0**
	baz=179						
P23K	**Montague Islan**	**3.67**	**15**		**Pn**	**22 25 01.9**	**+0.2**
P23K					**Sn**	**22 25 42.3**	**-2.7**
P23K	**Montague Islan**	**3.67**	**15**	P	**Pn**	**22 25 01.9**	**+0.2**
	baz=197						
P23K				S	**Sn**	**22 25 42.3**	**-2.7**
	baz=197						
KAHC	**Katmai Hardscr**	**3.74**	**308**		**Pn**	**22 25 04.6**	**+1.7**
KAHC	**Katmai Hardscr**	**3.74**	**308**	P	**Pn**	**22 25 04.6**	**+1.7**
	baz=122						
P19K	**Oil Pt**	**3.79**	**329**		**Pn**	**22 25 03.5**	**+0.1**
P19K					**Sn**	**22 25 48.7**	**+0.6**
P19K				IAML		22 25 51.1	
	comp=N,175nm,0.4s						
P19K				IAML		22 25 51.4	
	comp=E,165nm,0.5s						
P19K	**Oil Pt**	**3.79**	**329**	P	**Pn**	**22 25 04.5**	**+1.1**
	baz=145						
CNTC	**Contact Creek**	**3.97**	**299**		**Pn**	**22 25 07.5**	**+1.5**
Q17K	**Contact Creek**	**3.97**	**299**	P	**Pn**	**22 25 07.5**	**+1.5**
	baz=113						
O20K	**Slope Mountain**	**4.00**	**336**		**Pn**	**22 25 07.1**	**+0.7**
O20K	**Slope Mountain**	**4.00**	**336**	P	**Pn**	**22 25 07.1**	**+0.7**
	baz=152						
O22K	**Cooper Landing**	**4.01**	**357**		**Pn**	**22 25 07.6**	**+1.2**
O22K	**Cooper Landing**	**4.01**	**357**	P	**Pn**	**22 25 07.6**	**+1.2**
	baz=177						
IVE	**Iliamna Volcan**	**4.04**	**333**		**Pn**	**22 25 07.4**	**+0.4**
HIN	**Hinchinbrook I**	**4.19**	**20**		**Pn**	**22 25 09.7**	**+0.7**
HIN	**Hinchinbrook I**	**4.19**	**20**	IAML		22 25 57.0	
	comp=E,93nm,0.6s						
HIN				IAML		22 25 57.8	
	comp=N,110nm,0.9s						
P18K	**Big Mountain,**	**4.28**	**315**		**Pn**	**22 25 10.9**	**+0.7**
P18K	**Big Mountain,**	**4.28**	**315**	P	**Pn**	**22 25 10.9**	**+0.7**
	baz=130						
KAIM	**Kayak Island**	**4.32**	**35**		**Pn**	**22 25 11.1**	**+0.4**
KAIM	**Kayak Island**	**4.32**	**35**	IAML		22 26 03.6	
	comp=E,91nm,1.2s						
KAIM				IAML		22 26 04.6	
	comp=N,101nm,1.2s						
KAIM	**Kayak Island**	**4.32**	**35**	P	**Pn**	**22 25 11.1**	**+0.4**
	baz=219						
RSO	**Redoubt South**	**4.37**	**337**	Pn	**Pn**	**22 25 11.7**	**+0.1**
CAPN	**Captain Cook N**	**4.40**	**348**	Pn	**Pn**	**22 25 10.9**	**-0.8**
RDT	**Redoubt**	**4.40**	**340**		**Pn**	**22 25 11.9**	**0.0**
DFR	**Drift River**	**4.47**	**338**		**Pn**	**22 25 13.0**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.49**	**23**		**Pn**	**22 25 13.3**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.49**	**23**	P	**Pn**	**22 25 13.3**	**+0.4**
	baz=206						
NCT	**North Crescent**	**4.50**	**337**		**Pn**	**22 25 13.3**	**0.0**
FID	**Port Fidalgo**	**4.53**	**18**	Pn	**Pn**	**22 25 14.1**	**+0.6**
FID				IAML		22 26 02.8	
	comp=E,67nm,0.5s						
FID				IAML		22 26 04.3	
	comp=N,51nm,0.6s						
O19K	**Port Alsworth**	**4.55**	**327**		**Pn**	**22 25 14.3**	**+0.5**
O19K	**Port Alsworth**	**4.55**	**327**	P	**Pn**	**22 25 14.3**	**+0.5**
	baz=142						
O18K	**Koktuh Hills**	**4.59**	**320**		**Pn**	**22 25 15.2**	**+0.8**
O18K	**Koktuh Hills**	**4.59**	**320**	P	**Pn**	**22 25 15.2**	**+0.8**
	baz=134						
RAGM	**Ragged Mountai**	**4.61**	**30**	Pn	**Pn**	**22 25 15.9**	**+1.1**
RAGM				IAML		22 26 17.2	
	comp=E,84nm,0.6s						
RC01	**Rabbit Creek A**	**4.62**	**358**	IAML		22 26 08.2	
	comp=E,89nm,0.3s						
RC01				IAML		22 26 08.9	
	comp=N,66nm,0.6s						
RC01	**Rabbit Creek A**	**4.62**	**358**	P	**Pn**	**22 25 15.4**	**+0.6**
	baz=177						
SUCK	**Suckling Hills**	**4.64**	**37**		**Pn**	**22 25 16.3**	**+1.2**
SUCK	**Suckling Hills**	**4.64**	**37**	IAML		22 26 09.5	
	comp=N,68nm,0.4s						
SUCK				IAML		22 26 16.4	
	comp=E,56nm,1.4s						
P17K	**Kvichak River**	**4.67**	**309**		**Pn**	**22 25 16.4**	**+1.0**
P17K	**Kvichak River**	**4.67**	**309**	P	**Pn**	**22 25 16.4**	**+1.0**
	baz=122						
HMT	**Hamilton**	**4.69**	**33**		**Pn**	**22 25 17.2**	**+1.4**
FIS	**Fire Island**	**4.69**	**355**	Pn	**Pn**	**22 25 16.7**	**+0.9**
BGLC	**Bering Glacier**	**4.84**	**39**		**Pn**	**22 25 18.7**	**+0.9**
BGLC	**Bering Glacier**	**4.84**	**39**	P	**Pn**	**22 25 18.7**	**+0.9**
	baz=224						
BERG	**Berg Lake**	**4.91**	**35**		**Pn**	**22 25 19.4**	**+0.5**
BERG	**Berg Lake**	**4.91**	**35**	IAML		22 26 17.6	
	comp=N,58nm,0.4s						
BERG				IAML		22 26 17.7	
	comp=E,63nm,0.3s						
GRIN	**Grindle Hills**	**4.95**	**37**		**Pn**	**22 25 20.3**	**+1.0**
N20K	**Mount Spurr**	**4.96**	**344**	P	**Pn**	**22 25 19.4**	**-0.1**
	baz=161						
SPCR	**Spurr Chakacha**	**4.96**	**344**		**Pn**	**22 25 19.4**	**-0.1**
KNK	**Knik Glacier**	**4.96**	**5**	IAML		22 26 22.5	
	comp=E,26nm,0.7s						
KNK				IAML		22 26 24.9	
	comp=N,23nm,0.7s						
KNK	**Knik Glacier**	**4.96**	**5**	P	**Pn**	**22 25 20.4**	**+0.8**
	baz=186						
DIV	**Divide**	**5.01**	**20**		**Pn**	**22 25 21.0**	**+0.8**
SNH	**Sunshine Point**	**5.04**	**40**	IAML		22 26 18.4	
	comp=E,29nm,1.4s						
SNH				IAML		22 28 30.9	
	comp=N,31nm,1.4s						
SUA	**Susitna One**	**5.04**	**352**		**Pn**	**22 25 21.1**	**+0.3**
SUA	**Susitna One**	**5.04**	**352**	P	**Pn**	**22 25 21.1**	**+0.3**
	baz=171						
CHGN	**Chignik**	**5.05**	**272**	Pn	**Pn**	**22 25 21.9**	**+1.2**
N19K	**Bonanza Creek**	**5.10**	**330**		**Pn**	**22 25 21.9**	**+0.4**
N19K	**Bonanza Creek**	**5.10**	**330**	P	**Pn**	**22 25 21.9**	**+0.4**
	baz=146						
BMRM	**Bremner River**	**5.12**	**27**	P	**Pn**	**22 25 22.9**	**+1.1**
	baz=211						
WAX	**Waxell Ridge**	**5.23**	**38**		**Pn**	**22 25 24.1**	**+0.8**
O17K	**Koliganek Bris**	**5.27**	**312**		**Pn**	**22 25 24.4**	**+0.7**
O17K	**Koliganek Bris**	**5.27**	**312**	P	**Pn**	**22 25 24.4**	**+0.7**
	baz=125						
KLU	**Klutina**	**5.32**	**18**		**Pn**	**22 25 25.7**	**+1.2**
KLU				IAML		22 26 26.1	
	comp=E,44nm,0.4s						
KLU				IAML		22 26 26.6	
	comp=N,38nm,0.4s						
KLU	**Klutina**	**5.32**	**18**	P	**Pn**	**22 25 25.7**	**+1.2**
	baz=201						
SML	**Sawmill**	**5.36**	**5**		**Pn**	**22 25 25.9**	**+0.8**
SML	**Sawmill**	**5.36**	**5**	P	**Pn**	**22 25 25.9**	**+0.8**
	baz=186						
MESA	**MESA**	**5.37**	**43**		**Pn**	**22 25 26.0**	**+0.7**
MESA	**MESA**	**5.37**	**43**	P	**Pn**	**22 25 26.0**	**+0.7**
	baz=230						
N18K	**Kilae Creek**	**5.42**	**324**		**Pn**	**22 25 26.2**	**+0.3**
N18K	**Kilae Creek**	**5.42**	**324**	P	**Pn**	**22 25 26.2**	**+0.3**
	baz=138						
SCM	**Sheep Creek Mo**	**5.46**	**10**		**Pn**	**22 25 28.0**	**+1.5**
SCM	**Sheep Creek Mo**	**5.46**	**10**	P	**Pn**	**22 25 27.7**	**+1.3**
	baz=192						
ISLE	**Juniper Island**	**5.52**	**39**		**Pn**	**22 25 28.4**	**+1.2**
O16K	**Kokwok River B**	**5.59**	**307**		**Pn**	**22 25 29.7**	**+1.5**
O16K	**Kokwok River B**	**5.59**	**307**	P	**Pn**	**22 25 29.0**	**+0.8**
	baz=120						
SVW2	**Sparrevohn**	**5.65**	**328**	Pn	**Pn**	**22 25 29.8**	**+0.9**
VRDI	**Verde Repeater**	**5.65**	**30**		**Pn**	**22 25 30.3**	**+1.1**
N25K	**Chitina, Valde**	**5.68**	**23**		**Pn**	**22 25 30.6**	**+1.1**
N25K	**Chitina, Valde**	**5.68**	**23**	P	**Pn**	**22 25 30.6**	**+1.1**
	baz=208						
GLB	**Gilahina Butte**	**5.73**	**28**		**Pn**	**22 25 31.6**	**+1.4**
M20K	**Styx River**	**5.75**	**342**		**Pn**	**22 25 30.8**	**+0.4**
M20K	**Styx River**	**5.75**	**342**	P	**Pn**	**22 25 30.8**	**+0.4**
	baz=158						
N17K	**Nushagak Hills**	**5.77**	**318**		**Pn**	**22 25 31.2**	**+0.6**
N17K	**Nushagak Hills**	**5.77**	**318**	P	**Pn**	**22 25 31.2**	**+0.6**
	baz=131						
SAMH	**Samovar Hills**	**5.80**	**47**		**Pn**	**22 25 32.5**	**+1.3**
M24K	**Tolsona, Glenn**	**5.86**	**15**		**Pn**	**22 25 33.7**	**+1.8**
M24K	**Tolsona, Glenn**	**5.86**	**15**	P	**Pn**	**22 25 33.7**	**+1.8**
	baz=197						
MCARA	**McCarthy VSAT**	**5.89**	**31**		**Pn**	**22 25 33.2**	**+0.9**
MCARA	**McCarthy VSAT**	**5.89**	**31**	P	**Pn**	**22 25 33.2**	**+0.9**
	baz=216						
CUT	**Chulitna**	**5.95**	**356**	Pn	**Pn**	**22 25 34.6**	**+1.5**
PINM	**Pinnacle**	**6.00**	**49**	P	**Pn**	**22 25 34.9**	**+1.0**
	baz=237						
M19K	**Big River Lodg**	**6.02**	**337**	Pn	**Pn**	**22 25 34.6**	**+0.6**
M18K	**Stony River**	**6.03**	**329**		**Pn**	**22 25 34.4**	**+0.2**
M18K	**Stony River**	**6.03**	**329**	P	**Pn**	**22 25 34.4**	**+0.2**
	baz=143						
CHNA	**Chernabura Isl**	**6.04**	**258**	P	**Pn**	**22 25 34.9**	**+0.7**
	baz=211						
CNBA	**Chernabura Isl**	**6.04**	**258**		**Pn**	**22 25 34.9**	**+0.6**
BARN	**Barnard Glacie**	**6.08**	**38**		**Pn**	**22 25 36.2**	**+1.2**
WACK	**Wrangell Chich**	**6.08**	**23**		**Pn**	**22 25 36.2**	**+1.0**
CTG	**Chitna Glacier**	**6.12**	**40**	P	**Pn**	**22 25 36.7**	**+1.2**
	baz=226						
CTGM	**Chitina Glacie**	**6.12**	**40**		**Pn**	**22 25 36.8**	**+1.2**
LOGN	**Logan Glacier**	**6.15**	**42**		**Pn**	**22 25 37.1**	**+1.2**
PNL	**Peninsula**	**6.16**	**55**		**Pn**	**22 25 37.1**	**+1.1**
PNL	**Peninsula**	**6.16**	**55**	P	**Pn**	**22 25 37.1**	**+1.1**
	baz=243						
WAT6	**Susitna Watana**	**6.17**	**7**	P	**Pn**	**22 25 37.8**	**+1.6**
	baz=188						
O15K	**Ungalikthiuk R**	**6.21**	**300**		**Pn**	**22 25 38.4**	**+1.6**
O15K	**Ungalikthiuk R**	**6.21**	**300**	P	**Pn**	**22 25 38.4**	**+1.6**
	baz=111						
HARP	**HAARP**	**6.30**	**18**		**Pn**	**22 25 39.3**	**+1.4**
HARP	**HAARP**	**6.30**	**18**	P	**Pn**	**22 25 39.3**	**+1.4**
	baz=202						
N16K	**Nishlik Lake**	**6.36**	**313**		**Pn**	**22 25 40.0**	**+1.3**
N16K	**Nishlik Lake**	**6.36**	**313**	P	**Pn**	**22 25 40.0**	**+1.3**
	baz=125						
L19K	**White Mountain**	**6.37**	**336**	Pn	**Pn**	**22 25 39.3**	**+0.5**
WAT1	**Susitna Watana**	**6.37**	**3**	P	**Pn**	**22 25 40.3**	**+1.4**
	baz=184						
M17K	**Holitna River**	**6.46**	**323**		**Pn**	**22 25 40.8**	**+0.7**
M17K	**Holitna River**	**6.46**	**323**	P	**Pn**	**22 25 40.8**	**+0.7**
	baz=136						
DHY	**Denali Highway**	**6.68**	**8**		**Pn**	**22 25 44.6**	**+1.3**
DHY	**Denali Highway**	**6.68**	**8**	P	**Pn**	**22 25 44.6**	**+1.3**
	baz=189						
M26K	**Nabesna, AK**	**6.75**	**26**		**Pn**	**22 25 45.6**	**+1.5**
N15K	**Kwethluk River**	**6.76**	**308**	Pn	**Pn**	**22 25 46.5**	**+2.3**
M16K	**Timber Creek**	**6.76**	**316**		**Pn**	**22 25 44.7**	**+0.5**
M16K	**Timber Creek**	**6.76**	**316**	P	**Pn**	**22 25 44.7**	**+0.5**
	baz=128						
PAX	**Paxson**	**6.79**	**15**		**Pn**	**22 25 45.5**	**+0.8**
PAX	**Paxson**	**6.79**	**15**	P	**Pn**	**22 25 45.5**	**+0.8**
	baz=198						
P29M	**Windy Craggy**	**6.91**	**58**		**Pn**	**22 25 47.2**	**+0.9**
P29M	**Windy Craggy**	**6.91**	**58**	P	**Pn**	**22 25 47.2**	**+0.9**
	baz=248						
O14K	**Tigyukauivet M**	**6.94**	**298**	Pn	**Pn**	**22 25 47.5**	**+0.9**
RND	**Reindeer**	**6.95**	**2**		**Pn**	**22 25 48.1**	**+1.3**
TRF	**Thorofare Moun**	**7.00**	**356**	Pn	**Pn**	**22 25 48.6**	**+0.9**
M27K	**Edge Creek, AK**	**7.00**	**30**		**Pn**	**22 25 49.2**	**+1.5**
M27K	**Edge Creek, AK**	**7.00**	**30**	P	**Pn**	**22 25 49.2**	**+1.5**
	baz=216						
MENT	**Mentasta**	**7.06**	**21**	Pn	**Pn**	**22 25 50.0**	**+1.6**
CAST	**Castle Rocks**	**7.09**	**350**	Pn	**Pn**	**22 25 50.9**	**+2.2**
KTH	**Kantishna Hill**	**7.13**	**354**	Pn	**Pn**	**22 25 50.0**	**+0.6**
PN7A	**Pavlof North-7**	**7.19**	**267**		**Pn**	**22 25 51.0**	**+0.9**
S31K	**Pelican**	**7.27**	**73**		**Pn**	**22 25 50.4**	**-0.7**
S31K	**Pelican**	**7.27**	**73**	P	**Pn**	**22 25 50.2**	**-0.9**
	baz=264						
TTA	**Tatalina**	**7.29**	**335**	Pn	**Pn**	**22 25 54.9**	**+3.4**
L16K	**Owhat River**	**7.39**	**319**	Pn	**Pn**	**22 25 53.3**	**+0.5**
P30M	**Million Dollar**	**7.46**	**56**		**Pn**	**22 25 55.2**	**+1.2**
P30M	**Million Dollar**	**7.46**	**56**	P	**Pn**	**22 25 55.2**	**+1.2**
	baz=246						
HYT	**Haines Junctio**	**7.54**	**50**		**Pn**	**22 25 56.2**	**+1.1**
HYT	**Haines Junctio**	**7.54**	**50**	P	**Pn**	**22 25 56.2**	**+1.1**
	baz=240						
L27K	**Beaver Creek,**	**7.60**	**27**	Pn	**Pn**	**22 25 56.2**	**+0.5**
RIDG	**Independent Ri**	**7.61**	**15**	Pn	**Pn**	**22 25 56.2**	**+0.3**
BCAR	**Beaver Creek A**	**7.61**	**27**	Pn	**Pn**	**22 25 57.7**	**+1.7**
K17K	**Iditarod**	**7.72**	**328**		**Pn**	**22 25 57.7**	**+0.4**
K17K	**Iditarod**	**7.72**	**328**	P	**Pn**	**22 25 57.7**	**+0.4**
	baz=140						
SIT	**Sitka**	**7.72**	**80**	Pn	**Pn**	**22 25 55.8**	**-1.6**
SCRK	**Sand Creek**	**7.97**	**17**	Pn	**Pn**	**22 26 01.9**	**+1.1**
SKAG	**Skagway**	**8.02**	**62**	Pn	**Pn**	**22 26 02.6**	**+1.2**
HDA	**Harding Lake**	**8.03**	**7**	Pn	**Pn**	**22 26 03.4**	**+1.7**
S32K	**Killisnoo**	**8.12**	**77**	Pn	**Pn**	**22 26 02.8**	**-0.1**
O30N	**Mendenhall**	**8.13**	**53**	Pn	**Pn**	**22 26 04.6**	**+1.5**
M29M	**Somme Creek**	**8.13**	**38**		**Pn**	**22 26 05.2**	**+2.1**
M29M	**Somme Creek**	**8.13**	**38**	P	**Pn**	**22 26 05.3**	**+2.1**
	baz=228						
JIS	**Juneau Island**	**8.28**	**71**	Pn	**Pn**	**22 26 05.5**	**+0.5**
K27K	**Chicken**	**8.38**	**22**	Pn	**Pn**	**22 26 08.4**	**+2.0**
J25K	**Salcha River,**	**8.38**	**12**	Pn	**Pn**	**22 26 07.5**	**+1.1**
IL31		**8.40**	**7**		**Pn**	**22 26 09.4**	**+2.8**
ILAR	**Eielson Array**	**8.40**	**7**	Pn	**Pn**	**22 26 08.4**	**+1.7**
L14K	**Kuka Creek**	**8.44**	**311**	Pn	**Pn**	**22 26 08.5**	**+1.3**
N31M	**Braeburn, Yuko**	**8.60**	**49**	Pn	**Pn**	**22 26 11.7**	**+2.2**
WHY	**Whitehorse**	**8.63**	**55**	Pn	**Pn**	**22 26 11.5**	**+1.6**
I20K	**Naaghedeneel**	**8.71**	**345**	Pn	**Pn**	**22 26 10.2**	**-0.6**
L29M	**L29M**	**8.71**	**36**	Pn	**Pn**	**22 26 12.9**	**+2.0**
M30M	**Minto, Yukon**	**8.81**	**41**	Pn	**Pn**	**22 26 14.3**	**+1.9**
P32M	**Atlin**	**8.85**	**63**	Pn	**Pn**	**22 26 14.1**	**+1.2**
DAWY	**Dawson**	**9.05**	**29**	Pn	**Pn**	**22 26 17.4**	**+1.7**
PRP	**Porcupine Dome**	**9.24**	**10**	Pn	**Pn**	**22 26 20.0**	**+1.6**
I26K	**Coal Creek Min**	**9.34**	**16**	Pn	**Pn**	**22 26 19.8**	**+0.2**
H21K	**Melozitna Rive**	**9.35**	**351**	Pn	**Pn**	**22 26 20.8**	**+1.1**
K29M	**Barlow Dome**	**9.42**	**34**	Pn	**Pn**	**22 26 22.

PSA00 IAmb IAmb 22 29 42.8
comp=Z,24nm,0.7s
PSA00 Pilbara Seismi 16.34 211 P P 22 29 37.0 +0.8
QIS Mount Isa 16.66 142 P Pn 22 29 41.1 +1.2
AS31 Alice Springs 16.75 163 P P 22 29 40.5 -0.3
AS31 IAmb IAmb 22 29 56.7
comp=Z,6.7nm,0.4s
ASAR Alice Springs 16.75 163 P P 22 29 40.5 -0.3
ASAR Alice Springs 16.75 163 P P 22 29 40.2 -0.6
comp=Z,7.4nm,0.5s,baz=333,slow=10.0,SNR=72
ASAR S S 22 32 38.1 -9.3
comp=Z,3.7nm,0.6s,baz=347,slow=27,SNR=6.0
AS01 Alice Springs 16.76 163 P Pn 22 29 41.3 +0.1
WRKA Warakurna 17.37 181 P Pn 22 29 49.8 +1.3
UGM Wanagama 18.04 268 P Pn 22 29 56.6 0.0
PMG Port Moresby 18.32 97 P P 22 29 57.0 -1.0
comp=Z,5.4nm,0.3s,baz=104,slow=16,SNR=1.5
SBUM Sibu 19.25 301 P Pn 22 30 09.5 -1.2
SBUM IAmb IAmb 22 30 12.8
comp=Z,12nm,0.9s
KPJI Karang Pucung 19.63 269 P Pn 22 30 14.5 -0.7
comp=Z,24nm,0.9s
GIRL Giralia 20.46 221 P Pn 22 30 24.3 -0.7
OOD Oodnadatta 21.16 163 P P 22 30 30.8 +2.3
MEEK Meekatharra 21.25 206 P P 22 30 31.3 +1.7
CNJI Cibinong 21.41 269 P P 22 30 29.6 -1.8
comp=Z,23nm,1.3s,comp=Z,966nm
INKA Innaminka 23.06 152 P P 22 30 51.1 +3.6
MULG Mulgathing 23.13 168 P P 22 30 51.0 +2.9
QLP Quilpie 23.97 144 P P 22 30 58.6 +2.8
LCRK Leigh Creek 24.43 160 P P 22 31 03.0 +3.1
MORW Morawa 24.49 208 P P 22 31 00.8 +0.3
MORW Morawa 24.49 208 P P 22 31 03.1 +2.6
KMBL Kambalda 24.52 194 P P 22 31 03.3 +2.6
BLDU Balliduu 25.53 205 P P 22 31 12.0 +2.1
KLBR Kellerberrin 25.99 202 P P 22 31 16.7 +2.6
BBOO Buckleboo 26.01 166 P P 22 31 16.8 +2.6
MUN Mundaring 26.93 204 P P 22 31 24.9 +2.4
STKA Stephens Creek 26.99 155 P P 22 31 25.8 +2.8
STKA Stephens Creek 26.99 155 P P 22 31 24.4 +1.4
comp=Z,3.6nm,0.5s,baz=328,slow=13,SNR=9.8
comp=Z,3.6nm,0.5s
NWAO Narrogin (SRO) 27.38 201 P P 22 31 29.0 +2.5
HTT Hallett 27.40 161 P P 22 31 29.9 +3.2
CMSA Cobar Meteorol 28.62 149 P P 22 31 40.3 +2.8
ARPS Mount Arapiles 31.42 160 P P 22 32 05.8 +3.7
CM31 Chiang Mai Arr 39.15 312 P P 22 33 07.5 -0.9
CM31 IAmb IAmb 22 33 10.4
comp=Z,4.1nm,0.8s
CMAR Chiang Mai Arr 39.15 312 P P 22 33 08.1 -0.4
CMAR Chiang Mai Arr 39.15 312 P P 22 33 09.0 +0.5
comp=Z,2.6nm,0.7s,baz=144,slow=6.9,SNR=25
CMAR PcP PcP 22 35 16.8 +1.7
comp=Z,1.2nm,0.7s,baz=165,slow=2.8,SNR=6.8
comp=Z,2.6nm,0.7s
CRAI Chiangrai 39.26 315 P P 22 33 09.5 +0.2
CRAI IAmb IAmb 22 33 11.9
comp=Z,8.3nm,1.1s
OUENC Ouen Island, N 39.52 116 P P 22 33 09.4 -2.1
KMI Kunming 41.19 323 ⇑P P 22 33 26.8 +1.3
KMI pmax pmax
comp=Z,12nm,0.9s
PZH PanZhiHua 42.82 323 P P 22 33 40.3 +1.8
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,180nm,4.8s
TARA Tarawa 44.97 80 P P 22 33 54.0 -1.7
SHL Shillong 48.67 314 P P 22 34 23.8 -0.7
SHL IAmb IAmb 22 34 26.1
comp=Z,5.2nm,0.5s
LZH Lanzhou 49.33 333 eP P 22 34 30.2 +0.8
LZH pP pP 22 35 03.5 +1.2
LZH pmax pmax
comp=Z,25nm,1.0s
HHC Hu-ho-hao-te 50.71 343 eP P 22 34 42.7 +3.1
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,100nm,4.3s
USRK Ussuriysk Ar. 51.62 3 P P 22 34 45.4 -0.8
comp=Z,0.6nm,0.5s,baz=166,slow=6.9,SNR=1.9
comp=Z,0.6nm,0.5s
LSA Lhasa 51.75 318 P P 22 34 48.1 0.0
LSA IAmb IAmb 22 34 50.1
comp=Z,5.2nm,0.6s
GTA Gaotai 53.88 332 ⇑P P 22 35 03.9 +0.8
GTA pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 58.60 343 P P 22 35 36.5 +0.2
SONM Songino Array 58.60 343 P P 22 35 37.0 +0.7
comp=Z,1.9nm,0.8s,baz=158,slow=6.4,SNR=11
comp=Z,1.9nm,0.8s
WMQ Urumqi 63.20 328 eP P 22 36 06.9 -0.5
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ LR LR
comp=Z,220nm,24.2s
PETK Petropavlovsk- 65.27 19 P P 22 36 19.8 -0.8
comp=Z,1.7nm,0.6s,baz=179,slow=3.8,SNR=8.7
comp=Z,1.7nm,0.6s
KSH Kashi 67.60 318 P P 22 36 37.2 +1.3
KSH pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 68.02 328 P P 22 36 38.4 +0.1
MK31 IAmb IAmb 22 36 40.1
comp=Z,4.3nm,0.8s
MKAR Makanchi Array 68.02 328 P P 22 36 38.9 +0.6
MKAR Makanchi Array 68.02 328 P P 22 36 39.3 +1.0
comp=Z,4.3nm,0.6s,baz=126,slow=7.4,SNR=68
comp=Z,4.3nm,0.6s
MAKZ Makanchi 68.20 327 P P 22 36 38.9 -0.5
MAKZ IAmb IAmb 22 36 40.7
comp=Z,4.4nm,0.7s
NRN Naryn 68.59 320 P P 22 36 40.9 -1.4
YAK Yakutsk 69.40 0 P P 22 36 46.3 -0.1
AAK Ala-Archa 70.17 320 P P 22 36 51.4 -0.4
AAK IAmb IAmb 22 36 54.3
comp=Z,6.8nm,1.0s
KBL Kabul 70.17 311 P P 22 36 51.3 -0.7
FRU1 Bishkek 70.18 321 P P 22 36 51.4 -0.3
ARSB Arslanbob 70.48 319 P P 22 36 54.4 +0.7
ARSB IAmb IAmb 22 36 55.8
comp=Z,5.9nm,1.4s
ZAA0 Zalesovo Array 71.55 334 P P 22 36 59.3 -0.3
ZAA0 IAmb IAmb 22 37 00.7
comp=Z,3.2nm,0.7s
ZALV Zalesovo Beam 71.55 334 P P 22 36 58.8 -0.8
ZALV Zalesovo Beam 71.55 334 P P 22 36 59.4 -0.2
comp=Z,4.2nm,0.6s,baz=139,slow=5.8,SNR=20
comp=Z,4.2nm,0.6s
VNDA Vanda 72.03 173 P P 22 37 04.8 +2.6
comp=Z,2.6nm,0.8s,baz=324,slow=8.2,SNR=5.2
comp=Z,2.6nm,0.8s
KURBB Kurchatov Arra 72.35 329 P P 22 37 05.1 +0.7
comp=Z,5.4nm,0.5s,baz=128,slow=5.1,SNR=134
comp=Z,5.4nm,0.5s
KURK Kurchatov 72.36 329 P P 22 37 04.8 +0.3
KURK IAmb IAmb 22 37 08.4
comp=Z,5.7nm,0.6s
KK31 Karatay Array 72.95 319 P P 22 37 08.4 +0.1
KK31 IAmb IAmb 22 37 10.2
comp=Z,4.3nm,0.8s
KKAR Karatay Array 72.95 319 P P 22 37 08.4 +0.1
KKAR Karatay Array 72.95 319 P P 22 37 08.1 -0.1
KKAR IAmb IAmb 22 37 10.2
comp=Z,4.2nm,0.8s
BVAR Borovoye Array 77.88 328 P P 22 37 36.9 +0.7
comp=Z,1.9nm,0.5s,baz=122,slow=9.5,SNR=21
comp=Z,1.9nm,0.5s
TIXI Tiksi 79.06 0 P P 22 37 42.1 -0.1
GEYT Alibeck 79.62 311 P P 22 37 47.0 +0.9
comp=Z,0.8nm,0.6s,baz=135,slow=5.3,SNR=2.6
comp=Z,0.8nm,0.6s
NRIK Noril'sk 81.81 346 P P 22 37 58.0 +1.0
comp=Z,1.3nm,0.5s,baz=152,slow=4.3,SNR=4.2
comp=Z,1.3nm,0.5s
ABKAR Akbulak array 82.18 322 P P 22 37 59.0 -0.3
CHGN Chignik 86.90 32 P P 22 38 21.8 -1.0
ILAR Eielson Array 94.41 25 P P 22 38 56.1 -1.5
comp=Z,0.4nm,0.8s,baz=273,slow=4.7,SNR=4.7
comp=Z,0.4nm,0.8s
GERES GERESS Array B 112.05 320 PKiKP **PKiKP 22 44 13.0 +0.2**
comp=Z,0.4nm,0.6s,baz=101,slow=1.5,SNR=2.3
TORD Torodi Ar. Bea 127.68 281 PKP **PKiKP 22 44 45.2 +1.0**
comp=Z,40nm,0.7s,baz=59,slow=3.2,SNR=4.6

CPUP Villa Florida 145.78 170 PKPbc **PKiKP 22 45 19.8 -1.0**
comp=Z,5.0nm,0.8s,baz=181,slow=4.2,SNR=8.1

IDC 02 22:26:31.0±6.2, 39.46N×111.15E, h0km, mb3.4/3, mbtmp3.4/4, ML2.7/1, Error ellipse: s-maj=131.1km s-min=25.0km az=83.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.05**	**339**	Pn	Pn	22 28 43.9	+0.8
	0.1nm,0.3s,baz=149,slow=11,SNR=11						
SONM				Lg	Lg	22 31 19.0	
	0.1nm,0.3s,baz=172,slow=34,SNR=3.5						
	1.6nm,0.8s						
MKAR	**Makanchi Array**	**22.22**	**299**	P	P	22 31 29.3	+0.3
	1.1nm,0.8s,baz=99,slow=12,SNR=11						
	1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**23.45**	**210**	P	P	22 31 42.1	+0.1
	1.0nm,0.8s,baz=12,slow=9.3,SNR=7.5						
	1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**25.41**	**307**	P	P	22 31 59.3	-0.7
	0.7nm,1.0s,baz=96,slow=8.5,SNR=4.0						
	0.7nm,1.0s						

*IDC **02** 22:48:09.3±1.2, 22.73S×171.29E, h0km, mb4.2/6, mbtmp4.2/7, ML4.1/1, MS3.6/10, Error ellipse: s-maj=61.3km s-min=23.9km az=162.0*
*NEIC **02** 22:48:13.1±1.6, 22.9S±0.2×171.08E±0.10, h10km±1km, mb4.7/22, Error ellipse: s-maj=26.9km s-min=15.4km az=2.0*
ISC 02 22:48:14.8±0.6, 22.8S±0.2×171.14E±0.07, h31km, n89, σ0s74/85, mb4.5/15, MS3.6/7, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**3.42**	**272**		**Pn**	**22 49 05.2**	**-0.7**
PINNC				Sn	**Sn**	**22 49 45.3**	**-0.1**
OUENC	**Ouen Island, N**	**3.99**	**274**		**Pn**	**22 49 13.4**	**-0.4**
OUENC				Sn	**Sn**	**22 49 59.3**	**-0.2**
ONTNC	**Ouen Toro**	**4.36**	**275**		**Pn**	**22 49 18.5**	**-0.4**
DZM	**Mont Dzumac**	**4.40**	**278**		**Pn**	**22 49 19.6**	**+0.1**
DZM	**Mont Dzumac**	**4.40**	**278**	Pn	**Pn**	**22 49 19.8**	**+0.2**
	9.5nm,0.3s,baz=95,slow=18,SNR=574						
DZM				Sn	**Sn**	**22 50 08.2**	**-1.7**
	4.1nm,0.3s,baz=89,slow=23,SNR=1.6						
DZM				LR	LR	22 50 54.9	
	comp=Z,544nm,21.5s,baz=96,slow=36						
	27nm,0.2s						
KOUNC	**Koumac, New Ca**	**6.75**	**288**		**Pn**	**22 49 53.0**	**+1.3**
URZ	**Urewera**	**16.27**	**163**	LR	LR	22 56 47.7	
	comp=Z,222nm,20.4s,baz=124,slow=32						
HNR	**Honiara**	**17.06**	**310**	LR	LR	22 57 24.9	
	comp=Z,977nm,18.4s,baz=132,slow=32						
RPZ	**Rata Peaks**	**20.89**	**180**	LR	LR	22 59 55.7	
	comp=Z,152nm,19.4s,baz=10,slow=34						
PMG	**Port Moresby**	**26.54**	**296**	LR	LR	23 03 28.0	
	comp=Z,157nm,18.5s,baz=152,slow=34						
RAR	**Rarotonga**	**27.00**	**92**	LR	LR	23 02 04.0	
	comp=Z,61nm,21.7s,baz=308,slow=31						
COEN	**Coen**	**27.91**	**283**	P	**P**	**22 54 03.5**	**+1.1**
COEN				IAmb	IAmb	22 54 05.0	
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	**34.17**	**261**	P	**P**	**22 54 56.7**	**-0.8**
ASAR	**Alice Springs**	**34.17**	**261**	P	**P**	**22 54 57.3**	**-0.2**
ASAR	**Alice Springs**	**34.17**	**261**	P	**P**	**22 54 57.6**	**+0.1**
	comp=Z,5.8nm,1.0s,baz=88,slow=9.7,SNR=31						
	comp=Z,5.8nm,1.0s						
WB2	**Warramunga Arr**	**34.33**	**268**	P	**P**	**22 54 58.4**	**-0.4**
WB2				IAmb	IAmb	22 55 12.3	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**34.34**	**268**	P	**P**	**22 54 57.8**	**-1.1**
WRA	**Warramunga Arr**	**34.34**	**268**	P	**P**	**22 54 58.1**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=96,slow=8.5,SNR=12						
	comp=Z,0.5nm,0.4s						
PPT	**Papeete**	**37.16**	**89**	LR	LR	23 06 31.0	
	comp=Z,105nm,21.1s,baz=187,slow=30						
MTN	**Manton Dam**	**39.24**	**278**	P	**P**	**22 55 40.9**	**+0.2**
MTN				IAmb	IAmb	22 55 42.2	
	comp=Z,43nm,1.4s						
KNRA	**Kununurra**	**40.53**	**272**	P	**P**	**22 55 51.7**	**+0.4**
KNRA				IAmb	IAmb	22 55 56.2	
	comp=Z,33nm,1.2s						
FAKI	**Fak Fak**	**42.53**	**292**	P	**P**	**22 56 07.7**	**-0.1**
FAKI				IAmb	IAmb	22 56 25.5	
	comp=Z,17nm,1.1s						
FITZ	**Fitzroy Crossi**	**42.77**	**268**	P	**P**	**22 56 10.7**	**+1.0**
PSA00	**Pilbara Seismi**	**47.32**	**261**	P	**P**	**22 56 46.5**	**+0.5**
PSA00	**Pilbara Seismi**	**47.32**	**261**	P	**P**	**22 56 45.9**	**0.0**
PSA00				IAmb	IAmb	22 56 58.8	
	comp=Z,7.2nm,1.4s						
NWAO	**Narrogin (SRO)**	**48.28**	**246**	P	**P**	**22 56 53.4**	**+0.2**
MJAR	**Matsushiro Arr**	**66.69**	**332**	LR	LR	23 29 11.7	
	comp=Z,19nm,18.4s,baz=169,slow=37						
QSPA	**South Pole Qui**	**67.30**	**180**	P	**P**	**22 59 07.5**	**+1.0**
AMKA	**Amchitka**	**74.17**	**5**	P	**P**	**22 59 49.8**	**+1.8**
CMAR	**Chiang Mai Arr**	**81.56**	**294**	P	**P**	**23 00 31.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**81.56**	**294**	P	**P**	**23 00 31.6**	**+1.7**
	comp=Z,3.0nm,0.5s,baz=136,slow=3.9,SNR=18						
	comp=Z,3.0nm,0.5s						
CHTO	**Chiang Mai**	**81.72**	**294**	P	**P**	**23 00 31.9**	**+1.2**
CHTO				IAmb	IAmb	23 00 33.3	
	comp=Z,7.8nm,0.9s						
DSP	**Deep Springs**	**89.53**	**49**	P	**P**	**23 01 08.8**	**-0.3**
DSP				IAmb	IAmb	23 01 16.4	
	comp=Z,3.7nm,1.2s						
NVAR	**Mina Array Bea**	**89.82**	**48**	P	**P**	**23 01 10.4**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=224,slow=7.5,SNR=8.2						
	comp=Z,1.3nm,0.8s						
NV11	**Mina Array Sit**	**89.92**	**48**	P	**P**	**23 01 11.5**	**+0.3**
TPNV	**Topopah Spring**	**90.53**	**50**	P	**P**	**23 01 14.6**	**+0.5**
TPNV				IAmb	IAmb	23 01 17.4	
	comp=Z,2.3nm,0.8s						
YAK	**Yakutsk**	**90.76**	**342**	LR	LR	23 40 42.5	
	comp=Z,20nm,18.4s,baz=332,slow=35						
SONM	**Songino Array**	**91.09**	**322**	P	**P**	**23 01 16.0**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=130,slow=6.2,SNR=8.0						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**93.07**	**17**	P	**P**	**23 01 23.3**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=241,slow=3.0,SNR=3.2						
ILAR				LR	LR	23 41 15.2	
	comp=Z,33nm,18.3s,baz=308,slow=34						
	comp=Z,0.5nm,0.8s						
HMU	**Henry Mountain**	**94.89**	**51**	P	**P**	**23 01 33.0**	**-1.3**
BVAR	**Borovoye Array**	**114.25**	**319**	PKP	PKPdf	23 06 50.0	-0.9
	comp=Z,0.5nm,0.6s,baz=5.7,slow=2.9,SNR=4.0						
ARCES	**ARCESS Array B**	**128.92**	**345**	PKP	**PKPdf**	**23 07 17.6**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=10,slow=1.0,SNR=5.8						
FINES	**FINESS Array B**	**134.51**	**337**	PKP	**PKPdf**	**23 07 28.9**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=62,slow=6.5,SNR=4.2						
AKASG	**Malin Array Be**	**139.38**	**323**	PKP	**PKPdf**	**23 07 38.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=51,slow=1.0,SNR=1.7						
MORC	**Moravsky Berou**	**145.99**	**329**	PKPdf	**PKPbc**	**23 07 51.4**	**+0.1**
MORC	**Moravsky Berou**	**145.99**	**329**	*e*PKP	**PKPdf**	**23 07 50.9**	**+0.4**
OSTC	**Ostas**	**146.06**	**331**	*e*PKP	**PKPdf**	**23 07 50.6**	**0.0**
CHVC	**Chvalec**	**146.11**	**331**	*e*PKP	**PKPbc**	**23 07 51.2**	**-0.4**
MAUC	**Maruska**	**146.13**	**328**	*e*PKP	**PKPdf**	**23 07 50.3**	**-0.5**
KRLC	**Kraliky**	**146.14**	**330**	*e*PKP	**PKPbc**	**23 07 51.5**	**-0.3**
DPC	**Dobruska-Polom**	**146.16**	**331**	*e*PKP	**PKPbc**	**23 07 51.3**	**-0.5**
KARP	**Karpathos**	**146.25**	**300**	PKPdf	**PKPbc**	**23 07 52.2**	**-0.3**
JAVC	**Velka Javorina**	**146.55**	**328**	*e*PKP	**PKPab**	**23 07 53.9**	**-0.1**
VRAC	**Vranov**	**146.76**	**329**	*e*PKP	**PKPbc**	**23 07 53.3**	**-0.3**
PVCC	**Panska Ves**	**146.80**	**332**	*e*PKP	**PKPbc**	**23 07 53.6**	**0.0**
BRG	**Berggiesshubel**	**146.81**	**333**	*i* P	**PKPbc**	**23 07 53.5**	**-0.1**
BRG				Amp		23 07 55.0	
	comp=Z,9.2nm,1.0s						
CLL	**Collm**	**146.85**	**335**	PKPdf	**PKPbc**	**23 07 52.9**	**-0.8**
CLL	**Collm**	**146.85**	**335**	↓*i* PKPbc	**PKPbc**	**23 07 53.5**	**-0.2**
	comp=Z,14nm,1.2s						
CLL				*i* PKPab	**PKPab**	**23 07 55.1**	**+0.1**
	comp=Z,10.0nm,0.8s						
CLL				*ex*	x	23 08 01.0	
KRUC	**Moravsky**	**147.03**	**329**	*e*PKP	**PKPbc**	**23 07 54.1**	**-0.2**
MODS	**Modra-Piesok**	**147.07**	**327**	*e*	**PKPab**	**23 07 55.4**	**-0.6**
GOPC	**GO Pecny, Ondr**	**147.16**	**331**	*e*PKP	**PKPbc**	**23 07 54.5**	**-0.2**
EKA	**Eskdalemuir Ar**	**147.20**	**354**	PKPbc	**PKPdf**	**23 07 52.8**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=359,slow=2.5,SNR=14						
PRU	**Pruhonice**	**147.21**	**332**	*e*PKP	**PKPbc**	**23 07 54.6**	**-0.2**
ESK	**Eskdalemuir**	**147.22**	**354**	PKPdf	**PKPbc**	**23 07 54.0**	**-0.7**
ZVC	**Zvikov**	**147.77**	**331**	*e*PKP	**PKPbc**	**23 07 56.1**	**-0.2**
NKC	**Novy Kostel**	**147.91**	**334**	*e*PKP	**PKPbc**	**23 07 56.5**	**-0.2**
RONA	**Rosalia, Austr**	**148.01**	**327**	*i* PKP	**PKPbc**	**23 07 57.0**	**-0.1**
	comp=Z,3.4nm,0.6s,SNR=5.2						

CONA Conrad Observa 148.07 328 *i* PKP **PKPbc 23 07 57.4 +0.1**
comp=Z,4.2nm,0.7s
CKRC Cesky Krumlov 148.17 330 *e*PKP **PKPbc 23 07 57.1 -0.4**
KHC Kasperske Hory 148.27 332 PKPbc **PKPbc 23 07 57.8 +0.1**
KHC Kasperske Hory 148.27 332 *e*PKP **PKPbc 23 07 57.5 -0.2**
GEC2 GERESS Array S 148.43 331 PKPbc **PKPbc 23 07 57.9 -0.3**
GERES GERESS Array B 148.43 331 PKPbc **PKPbc 23 07 58.2 0.0**
GERES GERESS Array B 148.43 331 PKPbc **PKPbc 23 07 57.1 -1.2**
comp=Z,5.3nm,0.8s,baz=35,slow=3.6,SNR=20
ARSA Arzberg 148.70 327 *e*PKiKP **PKiKP 23 08 00.3 0.0**
comp=Z,8.5nm,1.5s
MOA Molln 148.89 329 *i* PKP **PKPbc 23 07 59.0 -0.3**
comp=Z,4.7nm,0.6s,SNR=5.1
SOKA Soboth 149.33 327 *e*PKP **PKPbc 23 07 58.6 -2.0**
comp=Z,10nm,1.4s
KBA Koelnbreinsper 149.88 329 *i* PKP **PKPbc 23 08 01.3 -0.7**
comp=Z,10nm,0.7s,SNR=6.0
LESA Schwarzleotal 149.94 330 *i* PKP **PKPbc 23 08 01.1 -0.9**
comp=Z,9.9nm,0.6s
MYKA Terra Mystica 150.06 328 *i* PKP **PKPbc 23 08 01.3 -1.0**
comp=Z,6.6nm,0.7s,SNR=4.3
WATA Walderalm 150.50 331 *i* PKP **PKPbc 23 08 02.5 -0.9**
comp=Z,5.9nm,0.6s,SNR=4.3
ABTA Abfaltersbach 150.51 329 *i* PKP **PKPbc 23 08 02.2 -1.3**
comp=Z,9.5nm,0.7s,SNR=9.4
WTTA Wattenberg 150.53 331 *i* PKP **PKPbc 23 08 03.0 -0.6**
comp=Z,25nm,1.4s,SNR=8.0
MOTA Moosalm 150.71 332 *i* PKP **PKPbc 23 08 03.1 -0.9**
comp=Z,15nm,0.9s,SNR=11
RETA Reutte 150.74 332 *i* PKP **PKPbc 23 08 03.2 -0.7**
comp=Z,4.3nm,0.7s,SNR=4.1
SQTA Sankt Quirin 150.75 331 *i* PKP **PKPbc 23 08 03.5 -0.6**
comp=Z,13nm,0.6s,SNR=12
FETA Feichten 151.12 332 *i* PKP **PKPbc 23 08 04.5 -0.5**
comp=Z,7.1nm,0.7s
DAVA Damuels 151.28 333 *i* PKP **PKPbc 23 08 04.5 -0.8**
comp=Z,7.2nm,0.7s
TORD Torodi Ar. Bea 166.14 228 PKP **PKPdf 23 08 16.8 -0.8**
comp=Z,1.4nm,0.9s,baz=55,slow=0.3,SNR=6.2
TORD PKPab **PKPab 23 09 18.6 +0.4**
comp=Z,0.2nm,0.4s,baz=96,slow=4.4,SNR=4.7

*ISN **02** 23:17:58.8±0.8, 33.65N×45.66E, h9km±4km, ML2.6*
*TEH **02** 23:17:59.6, 33.63N×45.63E, h10km±95km, ML2.6*
ISC 02 23:17:59.6±1.0, 33.62N±0.04×45.64E±0.04, h13km, n10, σ0s62/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.47**	**90**	Pg	**Pb**	**23 18 09.7**	**-0.1**
IBDR	**Badra**	**0.56**	**155**	*e*Pg	**Pg**	**23 18 10.0**	**-0.7**
IBDR				*e*Sg	**Sg**	**23 18 19.0**	**+0.8**
IBDR				AML	AML	23 18 32.5	
	comp=Z,51nm,0.7s						
KGS1	**Ghasr-e-Shirin**	**0.88**	**357**	Pg	**Pb**	**23 18 16.6**	**-0.3**
IGHG	**Ghaleghazi**	**1.04**	**47**	Pg	**Pn**	**23 18 20.4**	**+0.2**
BHD	**Baghdad**	**1.11**	**252**	*e*Pg	**Pg**	**23 18 21.0**	**-0.1**
BHD				*e*Sg	**Sn**	**23 18 36.0**	**-0.1**
IDHR	**Dehrash**	**1.24**	**30**	Pg	**Pg**	**23 18 23.2**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.33**	**60**	Pg	**Pg**	**23 18 25.3**	**0.0**
ILIN	**Lien**	**1.69**	**40**	Pg	**Pg**	**23 18 31.7**	**-0.5**
IKFM	**Kafar-mosalman**	**1.84**	**92**	Pn	**Pb**	**23 18 34.5**	**-0.5**
RAFI	**Al-Rafai**	**1.94**	**168**	*e*Pn	**Pb**	**23 18 34.0**	**-0.8**
RAFI				*e*Sn	**Sb**	**23 19 00.0**	**+1.2**

*IDC **02** 23:26:59.2±7.3, 13.48S×167.03E, h200km±75km, mb3.6/6, mbtmp4.1/7, Error ellipse: s-maj=59.9km s-min=28.1km az=156.0*
*NEIC **02** 23:27:03.0±1.7, 13.7S±0.1×167.0E±0.1, h234km±11km, mb4.1/9, Error ellipse: s-maj=21.8km s-min=16.9km az=141.0*
ISC 02 23:26:58.8±0.8, 13.48S±0.08×167.1E±0.1, h200km, n22, σ1s15/24, mb4.0/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**7.51**	**200**	Pn	**Pn**	**23 28 44.3**	**-1.4**
KOUNC				Sn	**Sn**	**23 30 10.7**	**-0.1**
DZM	**Mont Dzumac**	**8.56**	**184**	Pn	**Pn**	**23 29 00.1**	**+0.6**
DZM	**Mont Dzumac**	**8.56**	**184**	P	**Pn**	**23 29 00.4**	**+0.9**
	4.6nm,0.7s,baz=39,slow=21,SNR=1.5						
DZM				S	**Sn**	**23 30 36.6**	**+0.8**
	8.5nm,0.8s,baz=99,slow=21,SNR=1.9						
OUENC	**Ouen Island, N**	**8.89**	**181**	Pn	**Pn**	**23 29 05.5**	**+1.9**
EIDS	**Eidsvold**	**19.13**	**229**	P	**P**	**23 31 08.0**	**+1.0**
NIUE	**Niue**	**22.77**	**107**	P	**P**	**23 31 44.7**	**+0.4**
COEN	**Coen**	**23.21**	**266**	P	**P**	**23 31 47.7**	**-0.6**
COEN				IAmb	IAmb	23 32 19.4	
	comp=Z,11nm,1.2s						
PLWZ	**Palliser**	**28.88**	**167**	P	**P**	**23 32 35.9**	**-3.0**
STKA	**Stephens Creek**	**29.66**	**228**	P	**P**	**23 32 47.3**	**+1.4**
STKA	**Stephens Creek**	**29.66**	**228**	P	**P**	**23 32 46.6**	**+0.7**
	comp=Z,2.9nm,0.4s,baz=40,slow=11,SNR=9.1						
	comp=Z,2.9nm,0.4s						
WR0	**Warramunga Arr**	**31.77**	**254**	P	**P**	**23 33 04.0**	**-0.6**
WR0				IAmb	IAmb	23 33 40.0	
	comp=Z,11nm,1.5s						
WB0	**Warramunga Arr**	**31.88**	**254**	P	**P**	**23 33 05.3**	**-0.3**
WB0				IAmb	IAmb	23 33 28.3	
	comp=Z,4.9nm,1.1s						
WB2	**Warramunga Arr**	**31.94**	**254**	P	**P**	**23 33 05.0**	**-1.1**
WB2				IAmb	IAmb	23 33 11.0	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**31.95**	**254**	P	**P**	**23 33 04.7**	**-1.5**
WRA	**Warramunga Arr**	**31.95**	**254**	P	**P**	**23 33 05.5**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=85,slow=8.3,SNR=11						
	comp=Z,0.9nm,0.6s						
AS31	**Alice Springs**	**32.95**	**247**	P	**P**	**23 33 14.3**	**-0.5**
AS31				IAmb	IAmb	23 33 15.6	
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**32.95**	**247**	P	**P**	**23 33 14.6**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=76,slow=9.3,SNR=61						
	comp=Z,3.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**74.26**	**294**	P	**P**	**23 38 15.8**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=138,slow=5.9,SNR=4.5						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**85.41**	**18**	P	**P**	**23 39 12.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=246,slow=5.4,SNR=4.6						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**96.17**	**317**	P	**P**	**23 40 04.3**	**+0.2**
MKAR	**Makanchi Array**	**96.17**	**317**	P	**P**	**23 40 04.7**	**+0.7**
	com

ISC 02 23:30:01.5±0.3,**41°74S**±0.06×**85°08E**±0.06,**h10**km,**n337,**
c0991/296,**mb5.0**/86,**MS4.6**/64,**15C-11D,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**7.00**	**302**	Pn	**Pn**	**23 31 44.1**	**+0.1**
PAF	**Port-aux-Franc**	**12.89**	**229**	Pn	**Pn**	**23 33 05.3**	**+0.7**
PAF	**Port-aux-Franc**	**12.89**	**229**	P	**Pn**	**23 33 05.3**	**+0.7**
H01W2	**Cape Leeuwin H**	**23.73**	**83**	T	T	23 59 42.8	
	baz=245,slow=74,SNR=69						
H01W3	**Cape Leeuwin H**	**23.73**	**83**	T	T	23 59 42.6	
	baz=245,slow=74,SNR=59						
H01W1	**Cape Leeuwin H**	**23.74**	**83**	T	T	23 59 43.3	
	baz=245,slow=74,SNR=69						
H04S1	**CROZET ISLANDS**	**24.17**	**247**	T	T	00 00 38.5	
	baz=88,slow=76,SNR=22						
H04S2	**CROZET ISLANDS**	**24.18**	**246**	T	T	00 00 37.4	
	baz=88,slow=76,SNR=32						
H04S3	**CROZET ISLANDS**	**24.19**	**247**	T	T	00 00 38.7	
	baz=88,slow=76,SNR=54						
H04N2	**CROZET ISLANDS**	**24.25**	**248**	T	T	00 00 44.6	
	baz=91,slow=75,SNR=2817						
H04N3	**CROZET ISLANDS**	**24.27**	**248**	T	T	00 00 46.2	
	baz=91,slow=75,SNR=2650						
H04N1	**CROZET ISLANDS**	**24.27**	**248**	T	T	00 00 44.4	
	baz=91,slow=75,SNR=1122						
NWAO	**Narrogin (SRO)**	**26.91**	**81**	P	**P**	**23 35 42.0**	**-0.8**
NWAO				IAmb	IAmb	23 35 44.5	
	comp=Z,70nm,1.5s						
NWAO	**Narrogin (SRO)**	**26.91**	**81**	P	**P**	**23 35 42.0**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,70nm,1.5s						
MAW	**Mawson**	**28.58**	**198**	LR	LR	23 44 57.4	
	comp=Z,927nm,20.8s,baz=35,slow=31						
KMBL	**Kambalda**	**31.12**	**83**	P	**P**	**23 36 20.8**	**+0.6**
PSA00	**Pilbara Seismi**	**35.44**	**66**	P	**P**	**23 36 57.2**	**-0.8**
H08S2	**Diego Garcia H**	**35.74**	**338**	T	T	00 14 23.7	
	baz=164,slow=76,SNR=235						
H08S1	**Diego Carcia H**	**35.74**	**338**	T	T	00 14 21.2	
	baz=164,slow=76,SNR=142						
H08S3	**Diego Garcia H**	**35.76**	**338**	T	T	00 14 25.2	
	baz=164,slow=76,SNR=1059						
DGAR	**Diego Garcia**	**35.97**	**338**⇓	*e*P	**P**	**23 37 01.2**	**-1.3**
DGAR				pmax	pmax		
	comp=Z,117nm,1.2s						
WRKA	**Warakurna**	**39.30**	**79**	P	**P**	**23 37 31.6**	**+0.9**
LEM	**Lembang**	**40.12**	**36**	LR	LR	23 51 16.5	
	comp=Z,520nm,19.5s,baz=212,slow=32						
MULG	**Mulgathing**	**40.74**	**90**	P	**P**	**23 37 43.4**	**+0.8**
BBOO	**Buckleboo**	**41.02**	**95**	P	**P**	**23 37 45.0**	**+0.1**
BBOO				IAmb	IAmb	23 37 46.6	
	comp=Z,40nm,1.2s						
BBOO	**Buckleboo**	**41.02**	**95**	P	**P**	**23 37 45.5**	**+0.6**
SISI	**Saibi**	**42.17**	**21**	P	**P**	**23 37 53.4**	**-0.9**
	comp=Z,32nm,1.1s						
ELIB	**Princess Elisa**	**42.21**	**204**	*d*P	**P**	**23 37 54.6**	**+0.3**
	comp=Z,9.3nm,1.1s						
HTT	**Hallett**	**42.87**	**97**	P	**P**	**23 38 00.9**	**+0.9**
ARPS	**Mount Arapiles**	**43.56**	**103**	P	**P**	**23 38 07.5**	**+2.0**
PLAI	**Plampang**	**43.65**	**51**	P	**P**	**23 38 08.2**	**+1.8**
PLAI	**Plampang**	**43.65**	**51**	P	**P**	**23 38 06.4**	**0.0**
	comp=Z,59nm,1.1s						
LCRK	**Leigh Creek**	**43.77**	**93**	P	**P**	**23 38 08.6**	**+1.3**
ASAR	**Alice Springs**	**44.23**	**82**	P	**P**	**23 38 10.7**	**-0.5**
	comp=Z,9.5nm,0.9s,baz=222,slow=6.8,SNR=59						
ASAR				PcP	**PcP**	**23 39 55.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=228,slow=2.9,SNR=4.4						
ASAR				LR	LR	23 54 47.3	
	comp=Z,3μm,19.4s,baz=242,slow=34						
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	**44.24**	**82**	P	**P**	**23 38 10.6**	**-0.6**
AS01	**Alice Springs**	**44.27**	**82**	P	**P**	**23 38 11.8**	**+0.4**
BKNI	**Bangkinang**	**44.29**	**23**	P	**P**	**23 38 12.6**	**+1.1**
GSI	**Gunungsitoli**	**44.32**	**18**	P	**P**	**23 38 13.1**	**+1.4**
GSI				IAmb	IAmb	23 38 23.5	
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**45.59**	**97**	P	**P**	**23 38 22.4**	**+0.6**
STKA	**Stephens Creek**	**45.59**	**97**	P	**P**	**23 38 22.9**	**+1.1**
STKA	**Stephens Creek**	**45.59**	**97**⇑	*e*P	**P**	**23 38 22.4**	**+0.6**
STKA	**Stephens Creek**	**45.59**	**97**	P	**P**	**23 38 21.6**	**-0.2**
	comp=Z,10nm,0.7s,baz=251,slow=5.5,SNR=15						
STKA				LR	LR	23 53 40.7	
	comp=Z,1μm,21.6s,baz=236,slow=31						
	comp=Z,10nm,0.7s						
RPSI	**Rantau Prapat**	**45.98**	**19**	P	**P**	**23 38 25.5**	**+0.5**
EDFI	**Ende, Flores**	**46.05**	**55**	P	**P**	**23 38 24.2**	**-1.4**
	comp=Z,33nm,1.5s						
PSI	**Prapat**	**46.08**	**19**	P	**P**	**23 38 25.5**	**-0.4**
PSI				pmax	pmax		
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**46.80**	**163**	P	**P**	**23 38 32.6**	**+1.9**
VNDA				IAmb	IAmb	23 38 48.6	
	comp=Z,19nm,1.5s						
VNDA	**Vanda**	**46.80**	**163**	P	**P**	**23 38 32.6**	**+1.9**
VNDA				pmax	pmax		
	comp=Z,19nm,1.5s						
VNDA	**Vanda**	**46.80**	**163**	LR	LR	23 56 06.4	
	comp=Z,1μm,20.7s,baz=272,slow=33						
WRA	**Warramunga Arr**	**46.81**	**78**	P	**P**	**23 38 31.1**	**-0.5**
WRA	**Warramunga Arr**	**46.81**	**78**	P	**P**	**23 38 31.1**	**-0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.4s						
WRA	**Warramunga Arr**	**46.81**	**78**	P	**P**	**23 38 31.2**	**-0.3**
	comp=Z,12nm,0.9s,baz=234,slow=8.8,SNR=41						
WRA				LR	LR	23 57 06.2	
	comp=Z,900nm,20.5s,baz=250,slow=35						
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**46.82**	**78**	P	**P**	**23 38 31.6**	**-0.1**
WRAB	**Tennant Creek**	**46.83**	**78**	P	**P**	**23 38 32.4**	**+0.7**
WRAB				IAmb	IAmb	23 38 37.5	
	comp=Z,29nm,1.1s						
WRAB	**Tennant Creek**	**46.83**	**78**	P	**P**	**23 38 32.4**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s						
WR0	**Warramunga Arr**	**46.95**	**78**	P	**P**	**23 38 32.2**	**-0.4**
WR0				IAmb	IAmb	23 38 33.8	
	comp=Z,39nm,1.3s						
WB0	**Warramunga Arr**	**46.96**	**78**	P	**P**	**23 38 32.5**	**-0.2**
WB0				IAmb	IAmb	23 38 34.6	
	comp=Z,15nm,0.9s						
LHMI	**Lhok Sumawe**	**47.98**	**16**	P	**P**	**23 38 39.0**	**-1.5**
TROLL	**Troll, Antarti**	**48.66**	**204**	⇑P	**P**	**23 38 45.7**	**+0.4**
	comp=Z,430nm,0.9s						
PALK	**Pallekele**	**48.94**	**354**	LR	LR	23 54 20.5	
	comp=Z,2μm,21.6s,baz=296,slow=30						
MTN	**Manton Dam**	**49.23**	**68**	P	**P**	**23 38 49.8**	**-0.4**
MTN	**Manton Dam**	**49.23**	**68**	P	**P**	**23 38 50.9**	**+0.6**
TTSI	**Tana Toraja**	**49.52**	**48**	P	**P**	**23 38 51.1**	**-1.4**
	comp=Z,22nm,1.1s						
BOSA	**Boshof**	**49.70**	**265**	LR	LR	23 56 16.3	
	comp=Z,1μm,18.4s,baz=141,slow=32						
KDU	**Kakadu**	**50.27**	**69**	P	**P**	**23 38 57.5**	**-0.7**
QLP	**Quilpie**	**50.30**	**92**	P	**P**	**23 38 59.6**	**+1.3**
QIS	**Mount Isa**	**50.32**	**83**	P	**P**	**23 38 59.3**	**+0.7**
SNAA	**Sanae**	**50.37**	**204**	P	**P**	**23 38 59.3**	**+0.9**
SNAA	**Sanae**	**50.37**	**204**⇑	*e*P	**P**	**23 38 58.7**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SNAA	**Sanae**	**50.37**	**204**	LR	LR	23 56 44.1	
	comp=Z,551nm,19.6s,baz=358,slow=32						
MNCI	**Minicoy**	**50.98**	**345**	P	**P**	**23 39 03.3**	**-0.1**
SUR	**Sutherland**	**51.06**	**258**	LR	LR	23 55 33.3	
	comp=Z,938nm,21.8s,baz=127,slow=30						
LBTB	**Lobatse**	**51.41**	**269**	P	**P**	**23 39 05.6**	**-1.2**
LBTB	**Lobatse**	**51.41**	**269**	P	**P**	**23 39 05.6**	**-1.2**
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LBTB	**Lobatse**	**51.41**	**269**	LR	LR	23 57 21.2	
	comp=Z,949nm,18.7s,baz=132,slow=32						
VNA2	**Neumayer--Watz**	**51.99**	**205**	⇑P	**P**	**23 39 13.0**	**+2.6**
	comp=Z,7.8nm,0.9s,baz=106,slow=8.4						
VNA3	**Neumayer Olymp**	**52.59**	**204**	⇑P	**P**	**23 39 16.4**	**+1.5**
	comp=Z,15nm,0.8s						
TOLI2	**Tolitoli**	**53.50**	**47**	P	**P**	**23 39 21.6**	**-0.7**
TOLI2				IAmb	IAmb	23 39 25.3	
	comp=Z,14nm,0.9s						
TOLI2	**Tolitoli**	**53.50**	**47**	P	**P**	**23 39 22.8**	**+0.6**
MRSI	**Marisa**	**53.61**	**48**	P	**P**	**23 39 20.8**	**-2.2**
	comp=Z,30nm,0.9s						
SANI	**Sanana**	**53.93**	**54**	P	**P**	**23 39 26.3**	**+0.9**
SANI	**Sanana**	**53.93**	**54**	P	**P**	**23 39 24.8**	**-0.6**
	comp=Z,60nm,0.9s,comp=Z,863nm						
BELA	**Belgrano 2**	**55.26**	**193**	P	**P**	**23 39 34.4**	**+0.1**
LSZ	**Lusaka**	**55.37**	**281**	P	**P**	**23 39 35.8**	**-0.3**
LSZ	**Lusaka**	**55.37**	**281**	P	**P**	**23 39 35.8**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,12nm,1.2s						
LSZ	**Lusaka**	**55.37**	**281**	LR	LR	23 59 21.8	
	comp=Z,517nm,19.7s,baz=138,slow=32						
CTAO	**Charters Tower**	**55.56**	**87**	P	**P**	**23 39 37.3**	**+0.1**
CTAO				IAmb	IAmb	23 39 40.5	
	comp=Z,23nm,1.2s						
CTAO	**Charters Tower**	**55.56**	**87**	P	**P**	**23 39 37.3**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,23nm,1.2s						
EIDS	**Eidsvold**	**56.09**	**95**	P	**P**	**23 39 41.3**	**+0.4**
EIDS				IAmb	IAmb	23 39 56.3	
	comp=Z,31nm,1.4s						
TNTI	**Ternate**	**56.99**	**53**	P	**P**	**23 39 47.8**	**+0.3**
TNTI				IAmb	IAmb	23 39 54.4	
	comp=Z,34nm,1.1s						
FAKI	**Fak Fak**	**57.20**	**61**	P	**P**	**23 39 48.6**	**-0.4**
FAKI	**Fak Fak**	**57.20**	**61**	P	**P**	**23 39 50.2**	**+1.2**
MLZ	**Mavora Lakes**	**57.70**	**124**	P	**P**	**23 39 51.2**	**-0.9**
KMBO	**Kilima Mbogo**	**58.98**	**300**⇓	*e*P	**P**	**23 40 01.6**	**-0.1**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KMBO	**Kilima Mbogo**	**58.98**	**300**	LR	LR	23 59 32.2	
	comp=Z,179nm,21.8s,baz=100,slow=30						
HYB	**Hyderabad**	**59.16**	**353**	*e*P	**P**	**23 40 03.1**	**+0.5**
RPZ	**Rata Peaks**	**60.34**	**124**	LR	LR	00 00 56.0	
	comp=Z,358nm,19.6s,baz=239,slow=31						
TSUM	**Tsumeb**	**60.82**	**270**	LR	LR	00 02 41.4	
	comp=Z,1μm,19.7s,baz=131,slow=32						
DAV	**Davao City (W)**	**61.07**	**47**	LR	LR	00 06 17.9	
	comp=Z,148nm,19.0s,baz=184,slow=36						
CMAR	**Chiang Mai Arr**	**61.25**	**15**	P	**P**	**23 40 15.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**61.25**	**15**	*c*e*P*	**P**	**23 40 17.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**61.25**	**15**	P	**P**	**23 40 16.0**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=208,slow=7.7,SNR=22						
CMAR				LR	LR	00 02 51.2	
	comp=Z,230nm,20.8s,baz=200,slow=32						
	comp=Z,2.9nm,0.7s						
DSZ	**Denniston Nort**	**61.84**	**122**	P	**P**	**23 40 21.0**	**+0.2**
GVZ	**Greta Valley S**	**61.97**	**124**	P	**P**	**23 40 22.7**	**+1.1**
PMG	**Port Moresby**	**63.03**	**78**	LR	LR	00 06 04.1	
	comp=Z,515nm,18.8s,baz=220,slow=34						
CRAI	**Chiangrai**	**63.26**	**16**	P	**P**	**23 40 29.8**	**-0.4**
CRAI				IAmb	IAmb	23 40 31.6	
	comp=Z,10nm,1.1s						
LODK	**Lodwar**	**63.66**	**302**	P	**P**	**23 40 33.1**	**0.0**
MBAR	**Mbarara**	**63.69**	**295**	P	**P**	**23 40 33.5**	**0.0**
MBAR	**Mbarara**	**63.69**	**295**⇑	*e*P	**P**	**23 40 34.7**	**+1.2**
MBAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MBAR	**Mbarara**	**63.69**	**295**	LR	LR	00 04 07.0	
	comp=Z,224nm,20.0s,baz=124,slow=32						
TCW	**Tory Channel**	**63.69**	**123**	P	**P**	**23 40 31.9**	**-1.1**
QIZ	**Qiongzhong**	**64.66**	**26**	P	**P**	**23 40 41.0**	**+1.5**
QIZ				LR	LR		
	comp=Z,350nm,11.8s						
QIZ				LR	LR		
	comp=Z,460nm,17.7s						
QIZ				LR	LR		
	comp=Z,540nm,17.6s						
TGY	**Tagaytay City**	**64.66**	**39**	LR	LR	00 08 48.3	
	comp=Z,147nm,19.0s,baz=170,slow=36						
SLVN	**Son La**	**65.13**	**19**	P	**P**	**23 40 42.2**	**-0.4**
SLVN				IAmb	IAmb	23 40 44.2	
	comp=Z,16nm,0.9s						
ATD	**Arta Tunnel**	**65.71**	**314**	LR	LR	00 04 51.0	
	comp=Z,6.7nm,18.7s,baz=141,slow=32						
TOZ	**Tahuroa Road**	**66.44**	**120**	P	**P**	**23 40 51.6**	**+0.7**
TOZ				IAmb	IAmb	23 41 15.1	
	comp=Z,16nm,1.2s						
URZ	**Urewera**	**67.16**	**121**	LR	LR	00 05 19.8	
	comp=Z,314nm,18.9s,baz=302,slow=32						
SHL	**Shillong**	**67.26**	**7**	P	**P**	**23 40 55.9**	**-0.4**
SHL				IAmb	IAmb	23 40 57.3	
	comp=Z,32nm,1.4s						
SHL	**Shillong**	**67.26**	**7**	P	**P**	**23 40 55.9**	**-0.4**
SHL				pmax	pmax		
	comp=Z,32nm,1.4s						
TNCH	**TengChong**	**67.59**	**13**	⇑P	**P**	**23 40 59.0**	**+0.6**
TNCH				pP	pwP	23 41 06.0	+1.5
TNCH				S	**S**	**23 49 54.9**	**-0.4**
TNCH				sS	sS	23 50 04.0	+5.2
TNCH				pmax	pmax		
	comp=Z,21nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,130nm,4.4s						
TNCH				LR	LR		
	comp=Z,290nm,8.4s						
TNCH				LR	LR		
	comp=Z,250nm,15.8s						
TNCH				LR	LR		
	comp=Z,280nm,18.2s						
KMI	**Kunming**	**68.51**	**17**	⇓P	**P**	**23 41 06.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI				LR	LR		
	comp=Z,410nm,17.3s						
KMI				LR	LR		
	comp=Z,250nm,11.9s						
KMI				LR	LR		
	comp=Z,540nm,22.4s						
WSAR	**Wadi Sarin**	**69.14**	**334**	P	**P**	**23 41 07.5**	**-0.5**
	comp=Z,9.7nm,0.8s,baz=191,slow=5.9,SNR=5.9						
WSAR				LR	LR	00 05 35.5	
	comp=Z,792nm,18.5s,baz=165,slow=31						
	comp=Z,9.7nm,0.8s						
ONTNC	**Ouen Toro**	**69.25**	**102**	P	**P**	**23 41 07.4**	**-1.4**
DZM	**Mont Dzumac**	**69.39**	**102**	*e*S	**S**	**23 50 14.5**	**-2.6**
	comp=Z,86nm,32.2s						
DZM				*e*SS	**SS**	**23 54 44.7**	**+0.9**
	comp=Z,98nm,28.1s						
DZM				*e*LR	LR	00 02 06.3	
	comp=Z,789nm,22.0s						
DZM	**Mont Dzumac**	**69.39**	**102**	LR	LR	00 06 28.9	
	comp=Z,562nm,20.7s,baz=235,slow=32						
PZH	**PanZhiHua**	**69.63**	**16**	P	**P**	**23 41 10.7**	**-0.3**
PZH				pP	**pwP**	**23 41 18.2**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,140nm,4.9s						
PZH				LR	LR		
	comp=Z,320nm,17.8s						
PZH				LR	LR		
	comp=Z,310nm,16.5s						
PZH				LR	LR		
	comp=Z,360nm,18.6s						
GYA	**Guiyang**	**70.74**	**20**⇓	*i*P	**P**	**23 41 19.4**	**+1.6**
GYA				pmax	pmax		
	comp=Z,22nm,1.4s						
PMSA	**Palmer Station**	**71.10**	**193**	LR	LR	00 12 08.5	
	comp=Z,650nm,19.9s,baz=145,slow=36						
LSA	**Lhasa**	**71.30**	**6**	P	**P**	**23 41 21.5**	**-0.1**
LSA				IAmb	IAmb	23 41 23.1	
	comp=Z,24nm,1.3s						
LSA	**Lhasa**	**71.30**	**6**	P	**P**	**23 41 21.5**	**-0.1**
LSA				pmax	pmax		
	comp=Z,24nm,1.3s						
HOPE	**Hope Point**	**72.09**	**212**	P	**P**	**23 41 24.9**	**-0.7**
HOPE	**Hope Point**	**72.09**	**212**	P	**P**	**23 41 24.9**	**-0.7**
HOPE				pmax	pmax		
	comp=Z,99nm,1.3s						
HNR	**Honiara**	**72.50**	**87**	LR	LR	00 10 04.5	
	comp=Z,3μm,21.7s,baz=254,slow=33						
SSLB	**Suanglung**	**73.17**	**34**	P	**P**	**23 41 32.7**	**+0.3**
SSLB				IAmb	IAmb	23 41 39.4	
	comp=Z,34nm,1.4s						
CD2	**Chengdu**	**74.32**	**17**	*e*P	**P**	**23 41 41.0**	**+2.0**
RAYN	**Ar Rayn**	**74.56**	**323**	P	**P**	**23 41 42.2**	**+1.6**
RAYN				IAmb	IAmb	23 42 02.5	
	comp=Z,16nm,1.3s						
RAYN	**Ar Rayn**	**74.56**	**323**	P	**P**	**23 41 42.2**	**+1.6**
RAYN				pmax	pmax		
	comp=Z,16nm,1.3s						
NIL	**Nilore**	**75.81**	**350**	P	**P**	**23 41 47.1**	**-0.4**
NIL				IAmb	IAmb	23 41 47.7	
	comp=Z,14nm,1.1s						
NIL	**Nilore**	**75.81**	**350**	P	**P**	**23 41 47.1**	**-0.4**
NIL				pmax	pmax		
	comp=Z,14nm,1.2s						
KBL	**Kabul**	**77.33**	**346**	P	**P**	**23 41 55.4**	**-0.9**
KBL				IAmb	IAmb	23 41 58.5	
	comp=Z,35nm,1.2s						
KBL	**Kabul**	**77.33**	**346**	P	**P**	**23 41 55.4**	**-0.9**
KBL				pmax	pmax		
	comp=Z,35nm,1.3s						
GUMO	**Guam**	**77.80**	**59**	LR	LR	00 19 53.0	
	comp=Z,40nm,18.8s,baz=216,slow=38						
XAN	**Xi'an**	**78.53**	**20**⇑	P	**P**	**23 42 03.4**	**+0.6**
XAN				pP	PcP	23 42 11.2	-0.7
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
JOW	**Kunigami**	**79.06**	**39**	LR	LR	00 13 42.9	
	comp=Z,93nm,21.1s,baz=280,slow=33						
LZH	**Lanzhou**	**79.34**	**15**	*e*P	**P**	**23 42 08.4**	**+1.1**
LZH				sP	PcP	23 42 19.0	+3.5
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				LR	LR		
	comp=Z,290nm,17.6s						
LZH				LR	LR		
	comp=Z,230nm,13.2s						
LZH				LR	LR		
	comp=Z,240nm,19.5s						
LYN	**LuoYang**	**79.98**	**23**	⇓P	**P**	**23 42 12.2**	**+1.6**
LYN				pP	pwP	23 42 17.1	+0.3
LYN				sP	PcP	23 42 19.1	+1.0
LYN				S	**S**	**23 52 14.2**	**-0.1**
LYN				sS	SKSac	23 52 24.8	-2.9
LYN				pmax	pmax		
	comp=Z,28nm,0.9s						
LYN				pmax	pmax		
	comp=Z,280nm,3.9s						
LYN				LR	LR		
	comp=Z,650nm,19.9s						
LYN				LR	LR		
	comp=Z,440nm,15.7s						
LYN				LR	LR		
	comp=Z,840nm,20.7s						
KSH	**Kashi**	**81.30**	**353**	P	**P**	**23 42 15.3**	**-2.5**
KSH				sP	PcP	23 42 23.1	-0.8
KSH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KSH				LR	LR		
	comp=Z,370nm,16.5s						
KSH				LR	LR		
	comp=Z,400nm,16.1s						
KSH				LR	LR		
	comp=Z,470nm,16.8s						
GTA	**Gaotai**	**81.88**	**11**	*e*P	**P**	**23 42 20.6**	**-0.2**
GTA				sP	pwP	23 42 30.7	+3.7
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				LR	LR		
	comp=Z,200nm,18.3s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,230nm,17.9s						
BTK	**Batken**	**82.44**	**349**	P	**P**	**23 42 23.3**	**-0.4**
BTK				IAmb	IAmb	23 42 26.4	
	comp=Z,28nm,1.4s						
BTK	**Batken**	**82.44**	**349**	P	**P**	**23 42 23.3**	**-0.4**
BTK				pmax	pmax		
	comp=Z,28nm,1.5s						
TIA	**Tai'an**	**82.94**	**26**	P	**P**	**23 42 26.4**	**+0.1**
TIA				pmax	pmax		
	comp=Z,18nm,1.0s						
GEYT	**Alibeck**	**83.02**	**339**	P	**P**	**23 42 26.4**	**-0.4**
GEYT				IAmb	IAmb	23 42 47.7	
	comp=Z,23nm,1.2s						
GEYT	**Alibeck**	**83.02**	**339**	P	**P**	**23 42 26.4**	**-0.4**
GEYT				pmax	pmax		
	comp=Z,23nm,1.3s						
GEYT	**Alibeck**	**83.02**	**339**	P	**P**	**23 42 25.7**	**-1.0**
	comp=Z,3.9nm,1.0s,baz=187,slow=2.3,SNR=13						
GEYT				LR	LR	00 14 14.1	
	comp=Z,238nm,20.4s,baz=158,slow=32						
	comp=Z,3.9nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**83.02**	**339**	P	**P**	**23 42 27.1**	**+0.3**
GYA0B				IAmb	IAmb	23 42 47.6	
	comp=Z,18nm,1.2s						
NRN	**Naryn**	**83.20**	**353**	P	**P**	**23 42 26.9**	**-1.0**
NRN	**Naryn**	**83.20**	**353**	P	**P**	**23 42 26.9**	**-1.0**
NRN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HNS	**HongShan**	**83.28**	**23**	⇑P	**P**	**23 42 28.7**	**+0.7**
HNS				S	**SKSac**	**23 52 50.8**	**+0.9**
HNS				pmax	pmax		
	comp=Z,18nm,1.0s						
HNS				LR	LR		
	comp=Z,230nm,20.7s						
HNS				LR	LR		
	comp=Z,390nm,20.7s						
HNS				LR	LR		
	comp=Z,340nm,20.7s						
ARSB	**Arslanbob**	**83.40**	**351**	P	**P**	**23 42 28.7**	**-0.1**
ARSB	**Arslanbob**	**83.40**	**351**	P	**P**	**23 42 28.7**	**-0.1**
ARSB				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AAK	**Ala-Archa**	**84.53**	**352**	P	**P**	**23 42 34.5**	**0.0**
AAK	**Ala-Archa**	**84.53**	**352**⇑	*e*P	**P**	**23 42 35.3**	**+0.8**
AAK				pmax	pmax		
	comp=Z,15nm,2.5s						
AAK	**Ala-Archa**	**84.53**	**352**	LR	LR	00 17 27.5	
	comp=Z,474nm,18.1s,baz=176,slow=34						
SATY	**Saty**	**84.63**	**355**	*e*P	**P**	**23 42 35.2**	**+0.2**
	comp=Z,12nm,1.3s,baz=355						
SATY	**Saty**	**84.63**	**355**	*e*P	**P**	**23 42 35.1**	**+0.2**
SATY				pmax	pmax		
	comp=Z,12nm,1.3s						
SHLS	**Shalkode**	**84.66**	**356**⇑	*i*P	**P**	**23 42 35.6**	**+0.4**
	baz=356						
SHLS	**Shalkode**	**84.66**	**356**	*c i*P	**P**	**23 42 35.5**	**+0.4**
FRU1	**Bishkek**	**84.69**	**352**	P	**P**	**23 42 35.6**	**+0.4**
FRU1				IAmb	IAmb	23 42 37.3	
	comp=Z,7.6nm,0.7s						
FRU1	**Bishkek**	**84.69**	**352**	P	**P**	**23 42 35.6**	**+0.4**
FRU1				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EIL	**Elat**	**84.78**	**318**	LR	LR	00 14 38.6	
	comp=Z,253nm,19.5s,baz=123,slow=32						
MDOK	**Medeo**	**84.83**	**354**	*e*P	**P**	**23 42 36.0**	**0.0**
	baz=354						
MDOK	**Medeo**	**84.83**	**354**	*e*P	**P**	**23 42 36.0**	**0.0**
CHM	**Chimkent**	**84.83**	**349**	*e*P	**P**	**23 42 36.3**	**+0.4**
	baz=349						
CHM

TDK	**Taldyqorghan**	**86.56**	**355**	*e*P		**P**	**23 42 44.1**	**-0.3**
	comp=Z,12nm,1.4s,baz=355							
TDK	**Taldyqorghan**	**86.56**	**355**	*e*P		**P**	**23 42 44.1**	**-0.3**
TDK				pmax		pmax		
	comp=Z,12nm,1.4s							
BTLS	**Baital**	**86.96**	**352**	*e*P		**P**	**23 42 46.5**	**+0.1**
	comp=Z,8.2nm,1.2s,baz=352							
BTLS	**Baital**	**86.96**	**352**	*e*P		**P**	**23 42 46.4**	**+0.1**
BTLS				pmax		pmax		
	comp=Z,8.0nm,1.2s							
MMAI	**Mount Meron Ar**	**87.29**	**320**	LR		LR	00 18 05.3	
	comp=Z,142nm,18.1s,baz=117,slow=33							
KSRS	**Korea Array**	**87.99**	**33**	P		**P**	**23 42 52.3**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=208,slow=7.5,SNR=5.8							
KSRS				LR		LR	00 18 48.7	
	comp=Z,43nm,21.7s,baz=230,slow=33							
	comp=Z,2.9nm,0.9s							
NIUE	**Niue**	**88.15**	**114**	P		**P**	**23 42 50.8**	**-2.0**
MK31	**Makanchi Array**	**88.18**	**358**	P		**P**	**23 42 51.3**	**-0.9**
MK31	**Makanchi Array**	**88.18**	**358**	P		**P**	**23 42 51.3**	**-0.9**
MK31				pmax		pmax		
	comp=Z,6.0nm,1.4s							
MKAR	**Makanchi Array**	**88.18**	**358**	P		**P**	**23 42 51.0**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=164,slow=5.9,SNR=14							
MKAR				LR		LR	00 19 49.3	
	comp=Z,648nm,20.4s,baz=200,slow=34							
	comp=Z,1.6nm,0.9s							
MAKZ	**Makanchi**	**88.21**	**358**	P		**P**	**23 42 51.5**	**-0.7**
MAKZ				IAmb		IAmb	23 43 02.5	
	comp=Z,6.2nm,0.8s							
MAKZ	**Makanchi**	**88.21**	**358**	P		**P**	**23 42 51.6**	**-0.7**
MAKZ				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ZSN	**Zaisan**	**88.81**	**360**	*e*P		**P**	**23 42 55.9**	**+0.7**
	baz=360							
ZSN	**Zaisan**	**88.81**	**360**	*e*P		**P**	**23 42 55.8**	**+0.7**
GURO	**Guroymak-BITLI**	**89.01**	**328**	P		**P**	**23 42 57.4**	**+1.0**
GNI	**Garni**	**89.35**	**330**	LR		LR	00 18 01.0	
	comp=Z,172nm,20.9s,baz=148,slow=32							
GAZ	**Gaziantep**	**89.89**	**324**	P		**P**	**23 43 01.7**	**+1.2**
AFI	**Afiamalu**	**90.39**	**109**	P		**P**	**23 43 02.4**	**-1.1**
AFI	**Afiamalu**	**90.39**	**109**	P		**P**	**23 43 02.4**	**-1.1**
AFI				pmax		pmax		
	comp=Z,95nm,1.5s							
AKH	**Akhalkalaki**	**90.92**	**330**			**P**	**23 43 06.7**	**+1.4**
AKH	**Akhalkalaki**	**90.92**	**330**	P		**P**	**23 43 06.7**	**+1.4**
AKH				pmax		pmax		
	comp=Z,27nm,1.3s							
ARPR	**Arapgir-MALATY**	**91.00**	**325**	P		**P**	**23 43 06.1**	**+0.3**
ARPR				IAmb		IAmb	23 43 18.5	
	comp=Z,17nm,1.4s							
DGZ	**Jazzator, Alta**	**91.08**	**2**⇓	*e*P		**P**	**23 43 06.7**	**+0.9**
DGZ				pmax		pmax		
	comp=Z,2.0nm,1.3s							
SONM	**Songino Array**	**91.17**	**14**	P		**P**	**23 43 06.3**	**0.0**
SONM				IAmb		IAmb	23 43 08.0	
	comp=Z,8.4nm,1.2s							
SONM	**Songino Array**	**91.17**	**14**	P		**P**	**23 43 06.3**	**0.0**
SONM				pmax		pmax		
	comp=Z,8.0nm,1.2s							
SONM	**Songino Array**	**91.17**	**14**	P		**P**	**23 43 05.4**	**-0.9**
	comp=Z,3.5nm,1.0s,baz=196,slow=5.4,SNR=18							
SONM				LR		LR	00 22 51.7	
	comp=Z,220nm,19.3s,baz=194,slow=35							
	comp=Z,3.5nm,1.0s							
ULN	**Ulaanbaatar**	**91.32**	**15**	P		**P**	**23 43 07.0**	**0.0**
ULN				IAmb		IAmb	23 43 08.6	
	comp=Z,18nm,1.4s							
ULN	**Ulaanbaatar**	**91.32**	**15**⇓	*e*P		**P**	**23 43 07.7**	**+0.7**
ULN				pmax		pmax		
	comp=Z,8.0nm,1.1s							
MJAR	**Matsushiro Arr**	**91.81**	**40**	P		**P**	**23 43 08.7**	**-0.7**
	comp=Z,3.1nm,0.9s,baz=209,slow=4.8,SNR=5.0							
MJAR				LR		LR	00 21 52.8	
	comp=Z,39nm,18.6s,baz=222,slow=34							
	comp=Z,3.1nm,0.9s							
BNN	**Bunyan**	**91.88**	**324**	P		**P**	**23 43 11.1**	**+1.3**
BRZS	**Berezniki**	**91.99**	**352**	*e*P		**P**	**23 43 10.5**	**+0.7**
	baz=352							
BRZS	**Berezniki**	**91.99**	**352**	*e*P		**P**	**23 43 10.5**	**+0.7**
KURBB	**Kurchatov Arra**	**92.16**	**356**	P		**P**	**23 43 09.4**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=190,slow=4.6,SNR=8.5							
KURBB				LR		LR	00 21 26.0	
	comp=Z,177nm,21.1s,baz=160,slow=34							
	comp=Z,1.5nm,0.8s							
KURK	**Kurchatov**	**92.25**	**356**	P		**P**	**23 43 11.3**	**+0.3**
KURK				IAmb		IAmb	23 43 13.4	
	comp=Z,9.0nm,1.4s							
KURK	**Kurchatov**	**92.25**	**356**⇓	*e*P		**P**	**23 43 12.1**	**+1.1**
KURK				pmax		pmax		
	comp=Z,6.0nm,1.7s							
NEUR	**Neytrino**	**92.81**	**330**	*e*P		**P**	**23 43 12.1**	**-2.0**
LL02	**Futaleuf**	**92.94**	**197**	P		**P**	**23 43 13.9**	**-0.9**
LL02				IAmb		IAmb	23 43 21.7	
	comp=Z,5.6nm,1.0s							
ELL	**Elmali**	**92.97**	**319**	P		**P**	**23 43 15.1**	**+0.2**
ELL	**Elmali**	**92.97**	**319**	P		**P**	**23 43 15.1**	**+0.2**
ELL				pmax		pmax		
	comp=Z,66nm,1.5s							
KBZ	**Khabaz**	**93.14**	**331**⇑	*e*P		**P**	**23 43 17.4**	**+2.1**
KBZ				pmax		pmax		
	comp=Z,4.0nm,1.2s							
KBZ	**Khabaz**	**93.14**	**331**	P		**P**	**23 43 16.1**	**+0.8**
	comp=Z,1.9nm,1.1s,baz=213,slow=8.1,SNR=3.2							
	comp=Z,1.9nm,1.1s							
ABKAR	**Akbulak array**	**93.28**	**344**	P		**P**	**23 43 15.3**	**-0.5**
RAR	**Rarotonga**	**93.34**	**122**	LR		LR	00 17 01.5	
	comp=Z,122nm,21.8s,baz=230,slow=30							
KIV	**Kislovodsk**	**93.41**	**331**	P		**P**	**23 43 16.8**	**+0.1**
BR131	**Keskin Array S**	**93.58**	**323**	P		**P**	**23 43 17.9**	**+0.2**
BR131				IAmb		IAmb	23 43 29.3	
	comp=Z,8.8nm,1.2s							
BR131	**Keskin Array S**	**93.58**	**323**	P		**P**	**23 43 17.9**	**+0.2**
BR131				pmax		pmax		
	comp=Z,9.0nm,1.3s							
BRTR	**Keskin Array B**	**93.58**	**323**	P		**P**	**23 43 18.8**	**+1.2**
BRTR	**Keskin Array B**	**93.58**	**323**	P		**P**	**23 43 16.6**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=162,slow=6.2,SNR=6.4							
BRTR				LR		LR	00 21 43.7	
	comp=Z,223nm,19.8s,baz=138,slow=33							
	comp=Z,1.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**93.78**	**284**	P		**P**	**23 43 19.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**93.78**	**284**	P		**P**	**23 43 18.4**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=102,slow=3.4,SNR=4.7							
TORD				LR		LR	00 24 27.9	
	comp=Z,306nm,18.1s,baz=138,slow=35							
	comp=Z,1.2nm,0.9s							
DBIC	**Dimbokro**	**94.34**	**275**	LR		LR	00 21 40.2	
	comp=Z,594nm,19.2s,baz=146,slow=33							
IDI	**Anoyia**	**94.42**	**315**	LR		LR	00 22 29.3	
	comp=Z,19nm,18.3s,baz=126,slow=33							
AKTO	**Aktyubinsk**	**94.80**	**343**	LR		LR	00 25 28.4	
	comp=Z,231nm,18.5s,baz=252,slow=35							
PLCA	**Paso Flores**	**94.99**	**198**	LR		LR	00 26 29.1	
	comp=Z,512nm,18.9s,baz=162,slow=36							
BVAR	**Borovoye Array**	**95.24**	**351**	P		**P**	**23 43 24.3**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=199,slow=2.6,SNR=4.4							
BVAR				LR		LR	00 23 46.0	
	comp=Z,541nm,18.9s,baz=170,slow=34							
	comp=Z,0.4nm,0.8s							
BRVK	**Borovoye**	**95.28**	**351**⇓	*e*P		**P**	**23 43 25.0**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,2.0nm,1.2s							
ZALV	**Zalesovo Beam**	**95.31**	**360**	P		**P**	**23 43 23.0**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=142,slow=3.3,SNR=2.6							
ZALV				LR		LR	00 23 33.8	
	comp=Z,355nm,21.9s,baz=200,slow=34							
	comp=Z,0.3nm,0.3s							
USRK	**Ussuriysk Ar.**	**95.34**	**32**	LR		LR	00 24 33.7	
	comp=Z,151nm,20.0s,baz=212,slow=34							
HIA	**Hailar**	**95.62**	**22**	P		**P**	**23 43 26.4**	**-0.2**
HIA				IAmb		IAmb	23 43 34.2	
	comp=Z,4.7nm,0.9s							
HIA	**Hailar**	**95.62**	**22**⇑	*e*P		**P**	**23 43 27.0**	**+0.4**
HIA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
GO06	**Curarrehue**	**96.30**	**198**	P		**P**	**23 43 28.1**	**-2.2**
GO06				IAmb		IAmb	23 43 29.4	
	comp=Z,8.0nm,1.2s							
PLTB	**Pedras Altas**	**97.55**	**215**	P		Pdif	23 43 36.3	+0.2
TBI	**Tubuai**	**97.91**	**131**	*e*SS		SS	00 01 45.1	+0.7
	comp=Z,2μm,31.2s							
TBI	**Tubuai**	**97.91**	**131**	*e*LR		LR	00 15 31.3	
	comp=Z,576nm,24.0s							
BELG	**Belogornoye**	**99.21**	**338**	LR		LR	00 26 21.7	
	comp=Z,122nm,19.7s,baz=139,slow=34							
KLR	**Kul'dur**	**99.45**	**29**	LR		LR	00 30 35.9	
	comp=Z,123nm,18.1s,baz=224,slow=37							
ASAJ	**Asahikawa**	**99.82**	**38**	LR		LR	00 30 45.8	
	comp=Z,71nm,18.7s,baz=170,slow=36							
PPT2	**Papeete2**	**102.34**	**127**	*e*SS		SS	00 02 44.4	-2.3
	comp=Z,40nm,23.8s							
PPT2	**Papeete2**	**102.34**	**127**	*e*LR		LR	00 17 22.8	
PPT2	comp=Z,324nm,27.0s			*e*LR		LR	00 17 28.8	
	comp=Z,232nm,29.8s							
MNK	**Minsk**	**107.59**	**329**	*i* P		**Pdif**	**23 44 20.6**	**+0.7**
	comp=E,1.0nm,0.9s							
MNK				*i* P		**Pdif**	**23 44 20.6**	**+0.7**
	comp=N,6.0nm,0.9s							
MNK				*i* P		**Pdif**	**23 44 20.6**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=139							
MNK				*i* PP		**PP**	**23 48 48.5**	**-0.2**
MNK				*i* PPP		PPP	23 51 04.3	
MNK				*i* SKS		**SKSdf**	**23 55 38.0**	**-1.3**
MNK				*i* S		**Sdif**	**23 56 24.4**	**+0.9**
MNK				*i* SKKS			23 57 48.2	
MNK				*i* SS		**SKKPbc**	**00 03 29.1**	**+0.2**
MNK				*i* SSS		SSS	00 07 35.9	
MNK				*i* LQ		LQ	00 28 52.8	
MNK				*i* LR		LR	00 32 03.0	
MNK				*i* LRM		MLR	00 36 10.7	
	comp=Z,169nm,19.1s							
MNK				*i* LRM		MLR	00 36 14.8	
	comp=E,70nm,19.1s							
MNK				*i* LRM		MLR	00 37 09.7	
	comp=N,92nm,19.7s							
MNK	**Minsk**	**107.59**	**329**	*i* P		**Pdif**	**23 44 20.5**	**+0.7**
MNK				*i*			23 48 48.4	
MNK				*i* PPP		PPP	23 51 04.2	
MNK				*i*			23 55 37.9	
MNK				pmax		pmax		
	comp=N,6.0nm,0.9s							
MNK				pmax		pmax		
	comp=E,1.0nm,0.9s							
MNK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MNK				MLR		MLR		
	comp=Z,169nm,19.0s							
MNK				MLR		MLR		
	comp=E,70nm,19.0s							
SEY	**Seymchan**	**117.24**	**28**⇓	*i*PKIKP		**PKiKP**	**23 48 45.9**	**0.0**
SEY				pmax		pmax		
	comp=Z,7.0nm,2.5s							
ILAR	**Eielson Array**	**142.83**	**34**	PKhKP		PKPpre	23 49 29.3	
	comp=Z,0.4nm,0.8s,baz=284,slow=3.6,SNR=3.1							
EYAK	**Cordova Ski Ar**	**144.12**	**41**	P		**PKPdf**	**23 49 36.4**	**0.0**
	baz=278							
SCRK	**Sand Creek**	**144.25**	**35**	P		**PKPdf**	**23 49 37.5**	**+0.8**
	baz=285							
D28M	**Stokes Point**	**144.27**	**25**	P		**PKPdf**	**23 49 37.9**	**+1.4**
	baz=298							
J26L	**Joseph Creek**	**144.29**	**34**	P		**PKPdf**	**23 49 37.9**	**+1.1**
	baz=286							
E28M	**Babbage River**	**144.34**	**26**	P		**PKPdf**	**23 49 38.2**	**+1.5**
	baz=296							
H27K	**Steamboat Moun**	**144.56**	**31**	P		**PKPdf**	**23 49 37.7**	**+0.5**
	baz=290							
BMRM	**Bremner River**	**144.61**	**40**	P		**PKPdf**	**23 49 37.7**	**+0.4**
	baz=280							
F28M	**Old Crow**	**144.64**	**28**	PKPdf		**PKPdf**	**23 49 36.8**	**-0.4**
F28M	**Old Crow**	**144.64**	**28**	P		**PKPdf**	**23 49 38.0**	**+0.8**
	baz=294,SNR=5.2							
I27K	**Kandik River**	**144.74**	**32**	P		**PKPdf**	**23 49 38.5**	**+1.0**
	baz=289							
L26K	**Log Cabin Wild**	**144.76**	**36**			**PKPdf**	**23 49 38.0**	**+0.5**
L26K	**Log Cabin Wild**	**144.76**	**36**	P		**PKPdf**	**23 49 39.0**	**+1.4**
	baz=284							
E29M	**Blow River**	**144.97**	**26**	P		**PKPdf**	**23 49 38.8**	**+1.0**
	baz=297							
K27K	**Chicken**	**145.04**	**34**	P		**PKPdf**	**23 49 39.6**	**+1.7**
	baz=287							
M26K	**Nabesna, AK**	**145.07**	**37**	P		**PKPdf**	**23 49 39.7**	**+1.6**
	baz=284							
EGAK	**Eagle**	**145.19**	**33**	P		**PKPdf**	**23 49 39.2**	**+1.0**
	baz=289							
MCARA	**McCarthy VSAT**	**145.28**	**39**	P		**PKPdf**	**23 49 39.5**	**+1.0**
	baz=282,SNR=8.3							
CRQE	**Cirque**	**145.37**	**40**	P		**PKPab**	**23 49 39.8**	**+0.9**
	baz=281							
L27K	**Beaver Creek,**	**145.42**	**36**			**PKPab**	**23 49 40.0**	**+1.0**
L27K	**Beaver Creek,**	**145.42**	**36**	P		**PKiKP**	**23 49 41.1**	**-1.6**
	baz=286							
BCAR	**Beaver Creek A**	**145.44**	**36**			**PKPab**	**23 49 39.1**	**+0.1**
I28M	**Miner Creek**	**145.45**	**31**			**PKPab**	**23 49 39.0**	**0.0**
I28M	**Miner Creek**	**145.45**	**31**	P		**PKPab**	**23 49 40.6**	**+1.6**
	baz=299							
M27K	**Edge Creek, AK**	**145.58**	**37**	P		**PKPab**	**23 49 41.3**	**+1.6**
	baz=285							
H29M	**Whitestone**	**145.75**	**30**	P		**PKPab**	**23 49 41.2**	**+1.2**
	baz=294							
BVCY	**Beaver Creek**	**146.03**	**37**	P		**PKPab**	**23 49 41.7**	**+0.5**
	baz=286,SNR=9.1							
F30M	**Barrier River**	**146.04**	**27**	P		**PKPab**	**23 49 41.8**	**+0.7**
	baz=299							
DRK0	**Dutka**	**146.05**	**201**	PKPdf		**PKPdf**	**23 49 41.6**	**+0.1**
GCPR	**Guanabo City**	**146.09**	**235**			**PKPdf**	**23 49 40.4**	**-0.7**
DAWY	**Dawson**	**146.15**	**34**			**PKPab**	**23 49 42.7**	**+1.0**
DAWY	**Dawson**	**146.15**	**34**	P		**PKPab**	**23 49 42.4**	**+0.7**
	baz=290							
CTG	**Chitna Glacier**	**146.17**	**39**	P		**PKPab**	**23 49 42.6**	**+0.7**
	baz=283							
CTGM	**Chitina Glacie**	**146.17**	**39**	PKPdf		**PKPab**	**23 49 42.0**	**+0.1**
G30M	**tAoh Zraii Nji**	**146.19**	**28**	PKPdf		**PKPbc**	**23 49 40.9**	**-0.1**
G30M	**tAoh Zraii Nji**	**146.19**	**28**	P		**PKPab**	**23 49 42.0**	**+0.3**
	baz=298							
A36M	**Sachs Harbour**	**146.23**	**16**	PKPdf		**PKPab**	**23 49 41.7**	**0.0**
A36M	**Sachs Harbour**	**146.23**	**16**	P		**PKPab**	**23 49 42.4**	**+0.7**
	baz=317							
PEZE	**Perez Zeledon,**	**146.28**	**200**	PKPbc		**PKPbc**	**23 49 42.9**	**+0.1**
EPYK	**Eagle Plains**	**146.29**	**29**	PKPdf		**PKPbc**	**23 49 41.5**	**+0.2**
EPYK	**Eagle Plains**	**146.29**	**29**	P		**PKPab**	**23 49 42.8**	**+0.7**
	baz=296,SNR=14							
YUK3	**Moose Creek**	**146.38**	**38**	P		**PKiKP**	**23 49 43.8**	**-1.1**
	baz=285							
INK	**Inuvik**	**146.42**	**25**			**PKPab**	**23 49 42.0**	**-0.4**
INK	**Inuvik**	**146.42**	**25**	P		**PKPab**	**23 49 43.1**	**+0.7**
	baz=302							
INK	**Inuvik**	**146.42**	**25**	PKP2		**PKPab**	**23 49 42.0**	**-0.4**
J29N	**Klondike Camp**	**146.50**	**33**	PKPbc		**PKiKP**	**23 49 44.9**	**+0.1**
J29N	**Klondike Camp**	**146.50**	**33**	P		**PKiKP**	**23 49 44.3**	**-0.6**
	baz=292							
LCR2	**La Lucha 2**	**146.71**	**200**	PKPdf		**PKPdf**	**23 49 42.4**	**-0.2**
F31M	**Tsiigehtchic**	**146.81**	**26**	PKPbc		**PKPab**	**23 49 43.5**	**-0.5**
F31M	**Tsiigehtchic**	**146.81**	**26**	P		**PKPab**	**23 49 44.2**	**+0.2**
	baz=301							
YUK8	**Steele Glacier**	**146.83**	**38**	P		**PKPab**	**23 49 44.4**	**-0.2**
	baz=285							
G31M	**Satah River**	**146.90**	**27**	PKPdf		**PKPbc**	**23 49 42.7**	**-0.3**
G31M	**Satah River**	**146.90**	**27**	P		**PKPab**	**23 49 44.7**	**+0.4**
	baz=300							
I30M	**Mount Dempster**	**146.91**	**31**	PKPdf		**PKPbc**	**23 49 43.1**	**-0.1**
I30M	**Mount Dempster**	**146.91**	**31**	P		**PKiKP**	**23 49 45.2**	**-0.6**
	baz=295,SNR=11							
RES	**Resolute Bay**	**146.96**	**360**			**PKPbc**	**23 49 43.5**	**+0.5**
RES	**Resolute Bay**	**146.96**	**360**	PKP2		**PKPbc**	**23 49 43.5**	**+0.5**
K29M	**Barlow Dome**	**147.00**	**33**	P		**PKPab**	**23 49 45.4**	**+0.3**
	baz=292							
L29M	**L29M**	**147.01**	**35**			**PKPbc**	**23 49 44.0**	**+0.5**
L29M	**L29M**	**147.01**	**35**	P		**PKiKP**	**23 49 46.1**	**+0.1**
	baz=290,SNR=10							
M29M	**Somme Creek**	**147.08**	**36**	P		**PKiKP**	**23 49 46.1**	**-0.1**
	baz=288							
J30M	**Hart River**	**147.20**	**32**			**PKPbc**	**23 49 44.8**	**+0.7**
J30M	**Hart River**	**147.20**	**32**	P		**PKiKP**	**23 49 46.3**	**-0.1**
	baz=294,SNR=9.4							
BCPM	**Bancas Point**	**147.22**	**41**	PKPdf		**PKPbc**	**23 49 43.5**	**-0.6**
BCPM				PKPab		**sPKPab**	**23 49 51.5**	**+2.4**
YUK4	**Talbot Arm**	**147.33**	**38**	P		**PKiKP**	**23 49 46.9**	**0.0**
	baz=287							
SOCE	**Pocosol**	**147.48**	**199**	PKPbc		**PKPab**	**23 49 47.7**	**-0.4**
ORTG	**Ortega, Santa**	**147.66**	**198**	PKPbc		**PKiKP**	**23 49 47.9**	**-1.0**
M30M	**Minto, Yukon**	**147.77**	**35**	PKPdf		**PKPbc**	**23 49 44.5**	**-1.1**
M30M	**Minto, Yukon**	**147.77**	**35**	P		**PKiKP**	**23 49 47.6**	**+0.1**
	baz=291							
HYT	**Haines Junctio**	**148.01**	**39**	PKPab		**PKPab**	**23 49 51.2**	**+2.1**
YKA	**Yellowknife Ar**	**156.15**	**23**	PKPab		**PKPab**	**23 50 21.5**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=324,slow=4.2,SNR=8.9							
PDAR	**Pinedale Array**	**169.10**	**80**	PKP		**PKPdf**	**23 50 09.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=250,slow=1.8,SNR=3.5							
PDAR				PKPab		**PKPab**	**23 51 19.1**	**-1.6**
	comp=Z,1.4nm,1.1s,baz=163,slow=6.6,SNR=4.9							

FUNV 02 23:43:08.7, 9.61N×61.82W, h27km, MW3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**1.75**	**307**	*e*P		Pn	23 43 36.0	-1.2
CRUV				*e*S		Sn	23 43 55.7	-3.0
PCRV	**Puerto La Cruz**	**2.83**	**282**	*e*P		Pn	23 43 51.1	-1.1
PCRV				*e*S		Sn	23 44 22.5	-3.0
CACV	**CAICARA DEL OR**	**5.09**	**247**	*e*P		Pn	23 44 15.7	-7.6
CACV				*e*S		Sn	23 45 05.0	-16
BENV	**Beln**	**5.70**	**274**	*e*P		Pn	23 44 30.1	-1.7
BENV				*e*S		Sn	23 45 29.9	-6.5
BAUV	**El Baul**	**6.17**	**264**	*e*P		Pn	23 44 35.1	-3.1
BAUV				*e*S		Sn	23 45 40.5	-7.5

IDC 02 23:53:16.9±3.9, 12.37N×144.79E, h0km, mb3.6/5, mbtmp3.5/5, Error ellipse: s-maj=168.1km s-min=25.7km az=84.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.72**	**198**	P		P	23 59 59.9	-0.2
	0.4nm,0.7s,baz=20,slow=10,SNR=1.9							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**37.37**	**197**	P		P	00 00 31.5	0.0
	0.3nm,0.6s,baz=21,slow=10,SNR=5.7							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**62.31**	**317**	P		P	00 03 41.0	-0.1
	0.1nm,0.5s,baz=91,slow=8.0,SNR=4.1							
	0.1nm,0.5s							
KURBB	**Kurchatov Arra**	**65.50**	**320**	P		P	00 04 02.1	+0.2
	0.4nm,0.4s,baz=105,slow=6.9,SNR=6.3							
	0.4nm,0.4s							
FINES	**FINESS Array B**	**92.23**	**335**	P		P	00 06 28.2	-0.3
	1.0nm,0.8s,baz=35,slow=3.4,SNR=5.2							
	1.0nm,0.8s							

SDD ***03*** *00:21:56.6±0.5, 18.16N×68.18W, h20km±228km, MD2.7, ML2.1, MW1.8*
NEIC ***03*** *00:21:56.9±1.2, 18.2N±0.2×68.2W±0.1, h79km±4km, ML2.2/10, Md2.9/4(RSPR), Error ellipse: s-maj=32.6km s-min=6.3km az=206.0*
RSPR ***03*** *00:21:57.5, 18.25N×68.15W, h81km±3km, MD2.9/4*
ISC 03 00:21:55.1±1.7, 18.2N±0.2×68.21W±0.08, h94km, n24, σ0.90/27, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.38**	**335**⇓	*e*P		**Pn**	**00 22 09.2**	**-0.3**
PCDR	**Punta Cana, DR**	**0.38**	**335**	*e*S		**Sn**	**00 22 19.3**	**-0.8**
PCDR	**Punta Cana, DR**	**0.38**	**335**			**Pn**	**00 22 09.2**	**-0.3**
PCDR						**Sn**	**00 22 19.3**	**-0.8**
PCDR	**Punta Cana, DR**	**0.38**	**335**	IAML			00 22 24.6	
	comp=E,82nm,2.4s							
CRPR	**Cabo Rojo, PR**	**1.06**	**99**⇑	*e*P		**Pn**	**00 22 16.0**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.06**	**99**	*e*S		**Sn**	**00 22 29.9**	**-1.5**
CRPR	**Cabo Rojo, PR**	**1.06**	**99**			**Pn**	**00 22 16.0**	**+0.2**
CRPR						**Sn**	**00 22 29.9**	**-1.5**
CRPR	**Cabo Rojo, PR**	**1.06**	**99**	IAML			00 22 37.5	
	comp=N,47nm,3.1s							
CRPR				IAML			00 22 56.9	
	comp=E,52nm,2.8s							
LSP	**Las Mesas**	**1.07**	**90**⇑	*e*P		**Pn**	**00 22 17.1**	**+1.1**
LSP	**Las Mesas**	**1.07**	**90**	*e*S		**Sn**	**00 22 30.9**	**-0.8**
LSP	**Las Mesas**	**1.07**	**90**			**Pn**	**00 22 17.1**	**+1.1**
LSP						**Sn**	**00 22 30.9**	**-0.8**
MLPR	**Magueyes Islan**	**1.13**	**100**	Pn		**Pn**	**00 22 17.9**	**+1.4**
MLPR				IAML			00 22 54.0	
	comp=N,39nm,2.6s							
HATOM	**Hato Mayor del**	**1.27**	**299**	*e*Pg		**Pn**	**00 22 19.1**	**+0.9**
HATOM				*e*Sg		**Sn**	**00 22 35.9**	**+0.2**
HATOM				IAML			00 22 37.7	
	comp=Z,29nm,2.8s							
AOPR	**Arecibo Observ**	**1.40**	**83**⇓	*e*P		**Pn**	**00 22 20.7**	**+0.9**
AOPR	**Arecibo Observ**	**1.40**	**83**	*e*S		**Sn**	**00 22 38.5**	**0.0**
AOPR	**Arecibo Observ**	**1.40**	**83**			**Pn**	**00 22 20.7**	**+0.9**
AOPR						**Sn**	**00 22 38.5**	**0.0**
AOPR	**Arecibo Observ**

PETF	**Flores**	**3.10**	**47**	*i* P		**Pn**	**00 28 48.6**	**-1.1**
PETF				*e*S		**Sn**	**00 29 22.1**	**-3.6**
PETF	**Flores**	**3.10**	**47**	*i* P		**Pn**	**00 28 48.5**	**-1.1**
CMIG	**Matias Romero**	**3.41**	**312**	P		**Pn**	**00 28 53.1**	**-0.7**
	comp=Z,8.0nm,0.3s,baz=138,slow=9.5,SNR=69							
CMIG				S		**Sn**	**00 29 32.4**	**-0.8**
	comp=Z,55nm,0.3s,baz=124,slow=11,SNR=13							
	comp=Z,20nm,0.3s							
CMIG	**Matias Romero**	**3.41**	**312**	*e*P		**Pn**	**00 28 53.0**	**-0.7**
CMIG				*e*S		**Sn**	**00 29 32.8**	**-0.4**
TUIG	**Tuzandepetl**	**3.83**	**327**	*e*S		**Sn**	**00 29 38.5**	**-4.9**
HUIG	**Huatulco**	**3.85**	**285**	*e*P		**Pn**	**00 28 57.9**	**-1.8**
HUIG				*i* S		**Sn**	**00 29 40.9**	**-3.0**
SCIG	**Sabancuy**	**4.26**	**14**	*e*P		**Pn**	**00 29 04.3**	**-1.0**
SCIG				*e*S		**Sn**	**00 29 49.1**	**-4.7**
NEUV	**Arroyo Zacate**	**4.48**	**311**	*e*P		**Pn**	**00 29 06.8**	**-1.5**
PMUV	**Sontecomapan**	**4.63**	**324**	*e*S		**Sn**	**00 29 56.9**	**-6.2**
VHO	**Vista Hermosa**	**4.88**	**298**	*i* P		Pn	00 29 18.7	+4.8
VHO				*e*S		**Sn**	**00 30 09.5**	**+0.4**
PEIG	**Puerto Escondi**	**4.88**	**285**	*e*P		**Pn**	**00 29 12.0**	**-1.8**
PEIG				*e*S		Sn	00 30 01.6	-7.4
YOIG	**Yosondua**	**5.50**	**292**	*e*P		**Pn**	**00 29 23.0**	**+0.6**
TOIG	**Toxpalan**	**5.67**	**306**	*e*P		**Pn**	**00 29 24.4**	**-0.2**
TOIG				*e*S		**Sn**	**00 30 25.1**	**-3.3**
TXIG	**Tlaxiaco**	**5.84**	**295**	*e*P		**Pn**	**00 29 28.0**	**+0.9**
TXIG				*e*S		**Sn**	**00 30 36.4**	**+3.4**
PNIG	**Pinotepa**	**5.89**	**286**	*e*P		**Pn**	**00 29 26.7**	**-0.8**
PNIG				*e*S		**Sn**	**00 30 27.0**	**-6.6**
TPIG	**Tehuac#an**	**6.08**	**307**	*i* S		**Sn**	**00 30 38.0**	**-0.6**
HLIG	**Huajuapan de L**	**6.13**	**300**	*e*P		**Pn**	**00 29 31.3**	**+0.3**
HLIG				*e*S		**Sn**	**00 30 34.7**	**-5.1**
JAUV	**Jalcomulco**	**6.29**	**317**	*i* P		**Pn**	**00 29 30.6**	**-2.4**
LVIG	**Laguna Verde**	**6.31**	**321**	*i* P		Pn	00 29 40.7	+7.5
LVIG				*e*S		**Sn**	**00 30 36.9**	**-7.1**
FTIG	**Fresnillo de T**	**6.44**	**299**	*e*P		**Pn**	**00 29 36.3**	**+1.2**
FTIG				*e*S		Sn	00 30 38.8	-8.5
TXAR	**Lajitas Array**	**17.90**	**326**	P		**Pn**	**00 32 06.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=9.5							
	comp=Z,0.8nm,0.8s							
NVAR	**Mina Array Bea**	**32.90**	**321**	P		**P**	**00 34 30.2**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=133,slow=8.9,SNR=11							
	comp=Z,1.1nm,0.6s							
YBH	**Yreka Blue Hor**	**37.59**	**322**	LR		LR	00 53 45.1	
	comp=Z,83nm,20.6s,baz=260,slow=41							
SCHQ	**Schefferville**	**44.56**	**21**	LR		LR	00 56 28.6	
	comp=Z,378nm,21.6s,baz=86,slow=38							
TORD	**Torodi Ar. Bea**	**90.42**	**76**	P		**P**	**00 40 59.1**	**+3.7**
	comp=Z,0.6nm,0.7s,baz=274,slow=6.5,SNR=7.0							
	comp=Z,0.6nm,0.7s							

*SJA **03** 00:29:30.6±0.6, 23°.87S×66°.78W, h237km±6km, ML3.8, MW3.6*
*GUC **03** 00:29:33.9±0.5, 23°.83S×67°.20W, h222km±9km, ML4.0*
ISC 03 00:29:33.0±1.3**, 23°.88S**±0°.04×**66°.86W**±0°.05**, h200**km**, n32, σ1§15/59, 7C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.49**	**124**	*e*P	**Pn**	**00 30 07.8**	**+1.0**
AF01	**San Pedro de A**	**1.52**	**307**	⇑*i*P	**Pn**	**00 30 09.2**	**+2.0**
YJA	**Yavi**	**2.10**	**96**	*e*P	**Pn**	**00 30 13.6**	**+0.5**
LVC	**Limon Verde**	**2.27**	**304**	*e*P	**Pn**	**00 30 16.0**	**+1.2**
LVC				*e*S	**Sn**	**00 30 49.8**	**+2.6**
FSA	**Cafayete**	**2.36**	**160**	*e*P	**Pn**	**00 30 15.9**	**+0.4**
PB06	**IPOC Station P**	**2.75**	**295**	*e*P	**Pn**	**00 30 21.0**	**+1.1**
PB06				*e*S	**Sn**	**00 30 57.1**	**+0.6**
PB06				IAML		00 30 59.0	
	comp=Z,127nm,0.2s						
PB06	**IPOC Station P**	**2.75**	**295**	⇑*i*P	**Pn**	**00 30 21.1**	**+1.1**
PB06				*e*S	**Sn**	**00 30 56.2**	**-0.3**
GO02	**Mina Guanaco**	**2.79**	**242**	⇑*i*P	**Pn**	**00 30 21.9**	**+1.4**
GO02				*e*S	**Sn**	**00 30 58.8**	**+1.2**
GO02				IAML		00 30 59.8	
	comp=N,448nm,0.3s						
PB09	**IPOC Station P**	**3.02**	**313**	*e*P	**Pn**	**00 30 24.2**	**+1.2**
PB09				*e*S	**Sn**	**00 31 03.1**	**+0.9**
PB09				IAML		00 31 05.2	
	comp=Z,114nm,0.2s						
PB09	**IPOC Station P**	**3.02**	**313**	⇑*e*P	**Pn**	**00 30 24.2**	**+1.2**
PB09				*e*S	**Sn**	**00 31 02.5**	**+0.3**
PB09				IAML		00 31 08.5	
	comp=N,110nm,0.5s						
AHML	**Horco Molle**	**3.20**	**155**	*e*P	**Pn**	**00 30 25.1**	**+0.1**
AHML				*e*S	**Sn**	**00 31 06.0**	**0.0**
PB05	**IPOC Station P**	**3.24**	**288**	*e*P	**Pn**	**00 30 26.1**	**+0.5**
PB05				*e*S	**Sn**	**00 31 08.4**	**+1.7**
PB14	**IPOC Station P**	**3.32**	**256**	*e*P	**Pn**	**00 30 27.5**	**+0.8**
PB14				*e*S	**Sn**	**00 31 09.1**	**+0.4**
PB14				IAML		00 31 09.8	
	comp=Z,89nm,0.6s						
PB04	**IPOC Station P**	**3.40**	**296**	*e*P	**Pn**	**00 30 28.2**	**+0.7**
PB04				*e*S	**Sn**	**00 31 10.0**	**-0.2**
PB04				IAML		00 31 16.0	
	comp=Z,142nm,0.1s						
PB04	**IPOC Station P**	**3.40**	**296**	⇑*i*P	**Pn**	**00 30 28.1**	**+0.6**
PB04				*e*S	**Sn**	**00 31 09.3**	**-0.9**
PB04				IAML		00 31 14.0	
	comp=N,242nm,0.7s						
PB10	**IPOC Station P**	**3.40**	**275**	*e*P	**Pn**	**00 30 28.5**	**+1.0**
PB10				*e*S	**Sn**	**00 31 10.4**	**+0.4**
PB10	**IPOC Station P**	**3.40**	**275**	⇑*i*P	**Pn**	**00 30 28.4**	**+1.0**
PB10				*e*S	**Sn**	**00 31 08.6**	**-1.5**
PB07	**IPOC Station P**	**3.52**	**307**	*e*P	**Pn**	**00 30 29.2**	**+0.2**
PB07				*e*S	**Sn**	**00 31 11.4**	**-1.6**
PB07				IAML		00 31 12.7	
	comp=Z,162nm,0.4s						
PB07	**IPOC Station P**	**3.52**	**307**	⇑*e*P	**Pn**	**00 30 29.4**	**+0.4**
PB07				*e*S	**Sn**	**00 31 11.0**	**-1.9**
AC02	**Maricunga**	**3.58**	**214**	*e*P	**Pn**	**00 30 30.9**	**+0.8**
PB01	**IPOC Station P**	**3.73**	**319**	*e*P	**Pn**	**00 30 31.6**	**+0.1**
PB01				*e*S	**Sn**	**00 31 16.7**	**-0.6**
PB01				IAML		00 31 17.6	
	comp=Z,115nm,0.2s						
PB01	**IPOC Station P**	**3.73**	**319**	*e*P	**Pn**	**00 30 31.9**	**+0.3**
PB01				*e*S	**Sn**	**00 31 15.9**	**-1.4**
PB02	**IPOC Station P**	**3.79**	**312**	*e*P	**Pn**	**00 30 32.3**	**0.0**
PB02				*e*S	**Sn**	**00 31 17.2**	**-1.6**
PB02				IAML		00 31 22.0	
	comp=Z,207nm,0.2s						
PB02	**IPOC Station P**	**3.79**	**312**	*e*P	**Pn**	**00 30 32.5**	**+0.2**
PB02				*e*S	**Sn**	**00 31 16.0**	**-2.8**
AC01	**Pan de Azucar**	**4.07**	**236**	*e*P	**Pn**	**00 30 35.4**	**-0.3**
AC01				*e*S	**Sn**	**00 31 23.5**	**-1.4**
AC01				IAML		00 31 24.4	
	comp=Z,62nm,0.6s						
AC01	**Pan de Azucar**	**4.07**	**236**	*e*P	**Pn**	**00 30 35.5**	**-0.2**
AC01				*e*S	**Sn**	**00 31 23.7**	**-1.2**
PB08	**IPOC Station P**	**4.29**	**330**	*e*P	**Pn**	**00 30 39.4**	**+0.6**
PB08				*e*S	**Sn**	**00 31 29.7**	**-0.7**
PB08				IAML		00 31 34.1	
	comp=Z,42nm,0.4s						
PB08	**IPOC Station P**	**4.29**	**330**	*e*P	**Pn**	**00 30 39.7**	**+0.9**
PB08				*e*S	**Sn**	**00 31 29.3**	**-1.1**
PATCX	**Punta Patache**	**4.31**	**314**	*e*P	**Pn**	**00 30 38.2**	**-0.5**
PATCX				*e*S	**Sn**	**00 31 30.6**	**+0.2**
TA01	**Diego Aracena**	**4.51**	**316**	*e*P	**Pn**	**00 30 41.3**	**+0.1**
TA01				*e*S	**Sn**	**00 31 31.8**	**-3.0**
TA01				IAML		00 31 33.2	
	comp=Z,40nm,0.3s						
GO01	**Chusmiza**	**4.72**	**332**	*e*P	**Pn**	**00 30 45.3**	**+0.9**
GO01				*e*S	**Sn**	**00 31 39.3**	**-1.1**
GO03	**Copiap**	**4.79**	**219**	*e*P	**Pn**	**00 30 44.1**	**-0.5**
GO03				*e*S	**Sn**	**00 31 39.7**	**-1.6**

*IDC **03** 00:42:19.9±2.8, 50°.64N×172°.71W, h0km, mb3.8/3, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=75.9km s-min=36.3km az=15.0*
*NEIC **03** 00:42:24.0±1.9, 50°.75N±0°.06×173°.40W±0°.05, h10km±2km, ML3.2/6, ML3.0(AEIC), Error ellipse: s-maj=10.0km s-min=4.5km az=200.0*
*AEIC **03** 00:42:24.1±2.5, 50°.72N±0°.06×173°.53W±0°.07, h7km±8km, Error ellipse: s-maj=9.2km s-min=5.0km az=153.0*
ISC 03 00:42:21.3±1.4**, 50°.6N**±0°.1×**173°.25W**±0°.06**, h10**km**, n17, σ1§14/19, mb3.5/3, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.69**	**340**		**Pn**	**00 42 50.4**	**-0.4**
ATKA				IAML		00 43 14.0	
	comp=E,102nm,1.1s						
ATKA	**Atka Island**	**1.69**	**340**		**Sn**	**00 43 12.5**	**+0.1**
KOFP	**Korovin Flat P**	**1.73**	**342**		**Pn**	**00 42 51.7**	**+0.3**
KOFP					**Sn**	**00 43 14.2**	**+0.6**
KOWE	**Korovin West**	**1.85**	**341**		**Pn**	**00 42 53.5**	**+0.4**
GSMY	**Great Sitkin M**	**2.26**	**310**		**Pn**	**00 42 59.4**	**+0.7**
GSMY					**Sn**	**00 43 26.9**	**+0.3**
ADK	**Adak**	**2.50**	**302**		**Pn**	**00 43 01.9**	**0.0**
ADK					**Sn**	**00 43 30.8**	**-1.6**
ADK	**Adak**	**2.50**	**302**	IAML		00 43 32.1	
	comp=E,108nm,0.9s						
ADK				IAML		00 43 32.9	
	comp=E,80nm,0.2s						
KIWB	**Kanaga Island**	**2.74**	**298**		**Pn**	**00 43 05.9**	**+0.6**
KIWB	**Kanaga Island**	**2.74**	**298**		**Sn**	**00 43 37.9**	**-0.6**
KIMD	**Kanaga Island**	**2.75**	**296**		**Pn**	**00 43 05.8**	**+0.4**
CLES	**Cleveland East**	**3.03**	**42**	Pn	**Pn**	**00 43 10.9**	**+1.7**
CLES				IAML		00 45 07.4	
	comp=E,841nm,1.0s						
TAFP	**Tanaga Falls P**	**3.23**	**295**		**Pn**	**00 43 13.4**	**+1.4**
TAFP					**Sn**	**00 43 50.5**	**-0.1**
TASE	**Tanaga Southea**	**3.24**	**294**		**Pn**	**00 43 13.8**	**+1.6**
ILAR	**Eielson Array**	**19.76**	**34**	P	**P**	**00 46 49.3**	**-1.7**
	comp=E,0.1nm,0.3s,baz=233,slow=9.0,SNR=7.8						
	comp=E,0.2nm,0.4s						
PDAR	**Pinedale Array**	**43.16**	**75**	P	P	00 50 18.4	-3.8
	comp=E,0.3nm,0.6s,baz=316,slow=3.8,SNR=2.8						
	comp=E,0.3nm,0.6s						
TXAR	**Lajitas Array**	**55.27**	**85**	P	**P**	**00 51 53.1**	**-1.6**
	comp=E,0.3nm,0.6s,baz=292,slow=4.8,SNR=3.9						
	comp=E,0.3nm,0.6s						
KURBB	**Kurchatov Array**	**62.13**	**317**	P	**P**	**00 52 43.8**	**+1.7**
	comp=E,2.0nm,0.2s,baz=45,slow=6.9,SNR=2.5						
	comp=E,2.0nm,0.2s						

IDC 03 00:51:25.1±3.6**, 6°.69S×149°.92E, h199**km±28km**, mb2.9**/4**, mbtmp3.5/5, Error ellipse: s-maj=71.0km s-min=28.7km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.84**	**225**	P	Pn	00 52 26.6	+1.7
	6.2nm,0.5s,baz=3.4,slow=19,SNR=3.0						
PMG				S	Sn	00 53 12.0	+0.1
	42nm,0.6s,baz=49,slow=21,SNR=6.6						
WRA	**Warramunga Arr**	**20.06**	**227**	P	P	00 55 41.4	-1.9
	0.6nm,0.3s,baz=48,slow=9.9,SNR=13						
WRA				S	S	00 59 08.5	-9.3
	0.4nm,0.8s,baz=57,slow=17,SNR=2.0						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**22.84**	**221**	P	P	00 56 12.2	+0.9
	1.1nm,0.5s,baz=55,slow=8.5,SNR=19						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**79.89**	**320**	P	P	01 03 13.5	+1.8
	0.1nm,0.5s,baz=108,slow=9.3,SNR=1.3						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**84.99**	**23**	P	P	01 03 36.4	-1.3
	0.3nm,0.6s,baz=241,slow=4.9,SNR=5.1						
	0.3nm,0.6s						

*MOLD **03** 01:00:26.3, 45°.60N×26°.36E, h130km, MB2.5, Mb3.1*
*BUC **03** 01:00:26.4±0.3, 45°.50N×26°.41E, h126km±2km, ml3.6/58, Error ellipse: s-maj=1.8km s-min=1.4km az=164.0*
ISC 03 01:00:25.5±1.3**, 45°.50N**±0°.03×**26°.41E**±0°.03**, h135**km±6km**, n73, σ0§79/133, 72C-58D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.11**	**226**	⇓P	**Pn**	**01 00 44.4**	**+0.5**
NEHR				⇓S	**Sn**	**01 00 57.2**	**-0.5**
BISRR	**Bisoca**	**0.22**	**78**	⇑P	**Pn**	**01 00 44.9**	**+0.8**
BISRR				⇓S	**Sn**	**01 00 58.2**	**0.0**
MLR	**Muntele Rosu**	**0.33**	**268**	⇓P	**Pn**	**01 00 45.1**	**+0.5**
MLR				⇓S	**Sn**	**01 00 58.0**	**-1.0**
COVR	**Voineasa-Covas**	**0.37**	**338**	⇑P	**Pn**	**01 00 44.7**	**+0.1**
COVR				⇑S	**Sn**	**01 00 58.0**	**-1.1**
PLOR	**Plostina**	**0.39**	**26**	⇑P	**Pn**	**01 00 44.9**	**+0.2**
PLOR				⇑S	**Sn**	**01 00 58.4**	**-0.8**
ISR	**Istrita**	**0.40**	**166**	⇓P	**Pn**	**01 00 45.1**	**+0.4**
ISR				⇓S	**Sn**	**01 00 59.5**	**+0.2**
GRER		**0.42**	**107**	⇓P	**Pn**	**01 00 46.4**	**+1.6**
GRER				⇓S	**Sn**	**01 00 59.6**	**+0.3**
VRI	**Vrincioaia**	**0.43**	**32**	⇑P	**Pn**	**01 00 45.3**	**+0.5**
VRI				⇑S	**Sn**	**01 00 58.8**	**-0.7**
ODBI	**Odobesti**	**0.53**	**60**	⇑P	**Pn**	**01 00 46.8**	**+1.3**
ODBI				⇑S	**Sn**	**01 01 00.4**	**+0.1**
TURR	**Turia**	**0.62**	**334**	⇑P	**Pn**	**01 00 46.2**	**+0.3**
TURR				⇑S	**Sn**	**01 01 00.3**	**-1.1**
PANC	**Panciu**	**0.64**	**54**	⇑P	**Pn**	**01 00 46.8**	**+0.8**
PANC				⇑S	**Sn**	**01 01 01.8**	**+0.3**
PLAR	**PLOIESTI**	**0.65**	**205**	⇑P	**Pn**	**01 00 46.2**	**+0.1**
PLAR				⇑S	**Sn**	**01 01 02.6**	**+1.0**
PGOR	**Pogoanele**	**0.72**	**145**	⇓P	**Pn**	**01 00 47.0**	**+0.4**
PGOR				⇓S	**Sn**	**01 01 03.3**	**+0.8**
OZUR		**0.73**	**324**	⇓P	**Pn**	**01 00 46.2**	**-0.6**
OZUR				⇓S	**Sn**	**01 01 01.2**	**-1.6**
BOSR	**Bodos**	**0.77**	**318**	⇑P	**Pn**	**01 00 46.3**	**-0.7**
BOSR				⇑S	**Sn**	**01 01 02.1**	**-1.3**
SULR		**0.83**	**187**	⇓P	**Pn**	**01 00 48.1**	**+0.7**
SULR				⇓S	**Sn**	**01 01 03.9**	**-0.1**
DOPR	**Dopca**	**0.85**	**303**	⇓P	**Pn**	**01 00 47.7**	**+0.1**
DOPR				⇓S	**Sn**	**01 01 03.3**	**-1.1**
TUDR		**0.89**	**84**	⇑P	**Pn**	**01 00 48.1**	**+0.2**
TUDR				⇑S	**Sn**	**01 01 04.3**	**-0.6**
GHRR		**0.90**	**51**	⇑P	**Pn**	**01 00 48.9**	**+1.0**
GHRR				⇑S	**Sn**	**01 01 05.1**	**+0.1**
IZVR	**Izvoarele**	**0.96**	**87**	⇓P	**Pn**	**01 00 48.4**	**0.0**
IZVR				⇓S	**Sn**	**01 01 04.6**	**-1.3**
VOIR		**0.96**	**267**	⇓P	**Pn**	**01 00 48.8**	**+0.2**
VOIR				⇓S	**Sn**	**01 01 04.7**	**-1.4**
SLCR	**Slobozia Conac**	**0.96**	**84**	⇑P	**Pn**	**01 00 48.7**	**+0.2**
SLCR				⇑S	**Sn**	**01 01 04.7**	**-1.2**
MTUR	**Matau**	**0.99**	**254**	⇑P	**Pn**	**01 00 49.1**	**+0.2**
SCHL	**Schela**	**1.00**	**90**	⇑P	**Pn**	**01 00 49.1**	**+0.3**
SCHL				⇑S	**Sn**	**01 01 05.7**	**-0.9**
SCHLR	**Schela**	**1.00**	**91**	⇓P	**Pn**	**01 00 49.0**	**+0.2**
SCHLR				⇓S	**Sn**	**01 01 05.3**	**-1.3**
TESR	**Tescani**	**1.02**	**9**	⇑P	**Pn**	**01 00 49.3**	**+0.2**
TESR				⇑S	**Sn**	**01 01 05.9**	**-1.2**
NEGRR	**Negrea**	**1.03**	**88**	⇓P	**Pn**	**01 00 49.6**	**+0.5**
NEGRR				⇓S	**Sn**	**01 01 06.9**	**-0.3**
INCR	**INCERC-Sediu C**	**1.08**	**189**	⇑P	**Pn**	**01 00 50.2**	**+0.6**
INCR				⇓S	**Sn**	**01 01 07.4**	**-0.5**
VARL	**Varlezi**	**1.09**	**68**	⇑P	**Pn**	**01 00 50.2**	**+0.6**
VARL				⇑S	**Sn**	**01 01 07.7**	**-0.4**
AMRR	**Amara**	**1.11**	**143**	⇓P	**Pn**	**01 00 49.7**	**-0.2**
AMRR				⇓S	**Sn**	**01 01 08.4**	**0.0**
CIOR	**Ciorogarla**	**1.12**	**200**	⇑P	**Pn**	**01 00 50.5**	**+0.5**
CIOR				⇑S	**Sn**	**01 01 08.8**	**+0.2**
SCTR	**Scanteiesti**	**1.13**	**81**	⇑P	**Pn**	**01 00 51.0**	**+1.0**
SCTR				⇑S	**Sn**	**01 01 08.7**	**0.0**
BIR	**Birlad**	**1.14**	**48**	⇑P	**Pn**	**01 00 51.0**	**+0.7**
BIR				⇑S	**Sn**	**01 01 08.8**	**-0.3**
TATR	**Tataraca**	**1.16**	**85**	⇑P	**Pn**	**01 00 51.2**	**+0.9**
TATR				⇑S	**Sn**	**01 01 09.2**	**0.0**
GISR	**Galati**	**1.16**	**92**	⇑P	**Pn**	**01 00 51.2**	**+0.9**
GISR				⇑S	**Sn**	**01 01 08.8**	**-0.5**
BUC1	**Bucharest**	**1.19**	**193**	⇑P	**Pn**	**01 00 50.6**	**-0.1**
BUC1				⇑S	**Sn**	**01 01 09.7**	**-0.1**
STFAR	**Stefanesti-Arg**	**1.21**	**238**	⇓P	**Pn**	**01 00 51.5**	**+0.6**
STFAR				⇓S	**Sn**	**01 01 10.8**	**+0.6**
VLDR	**Vladesti**	**1.22**	**73**	⇑P	**Pn**	**01 00 51.8**	**+0.8**
VLDR				⇑S	**Sn**	**01 01 10.2**	**-0.2**
ARR	**Arges**	**1.26**	**264**	⇑P	**Pn**	**01 00 52.0**	**+0.5**
ARR				⇑S	**Sn**	**01 01 11.3**	**+0.1**
CFR	**Carcaliu**	**1.26**	**104**	⇓P	**Pn**	**01 00 51.8**	**+0.4**
CFR				⇓S	**Sn**	**01 01 10.2**	**-0.9**
GIUM	**Giurgiulesti**	**1.27**	**90**	⇓P	**Pn**	**01 00 52.4**	**+1.0**
GIUM				⇓S	**Sn**	**01 01 11.2**	**0.0**
SGRR	**Singureni**	**1.32**	**194**	⇑P	**Pn**	**01 00 52.5**	**+0.5**
SGRR				⇑S	**Sn**	**01 01 11.5**	**-0.6**
HARR	**Harsova**	**1.35**	**126**	⇓P	**Pn**	**01 00 53.0**	**+0.7**
HUMR	**Humele**	**1.41**	**227**	⇓P	**Pn**	**01 00 53.3**	**+0.4**
HUMR				⇓S	**Sn**	**01 01 13.3**	**-0.5**
BIZ	**Bicaz**	**1.45**	**352**	⇓S	**Sn**	**01 01 15.4**	**+0.6**
GIRR	**Girov**	**1.45**	**3**	⇓P	**Pn**	**01 00 54.3**	**+0.8**
VASR	**Vaslui**	**1.49**	**40**	⇑P	**Pn**	**01 00 54.5**	**+0.7**
VASR				⇑S	**Sn**	**01 01 14.7**	**-0.9**
TLBR	**Topalu**	**1.51**	**129**	⇑P	**Pn**	**01 00 54.8**	**+0.8**
TLBR				⇑S	**Sn**	**01 01 14.6**	**-1.1**
TPGR	**Topolog**	**1.56**	**114**	⇓P	**Pn**	**01 00 55.1**	**+0.4**
TPGR				⇓S	**Sn**	**01 01 15.7**	**-1.3**
LEOM	**Leova**	**1.61**	**52**	⇑P	**Pn**	**01 00 55.9**	**+0.7**
LEOM				⇓S	**Sn**	**01 01 17.2**	**-0.6**
LEOM	**Leova**	**1.61**	**52**	P	**Pn**	**01 00 56.0**	**+0.9**
LEOM				⇓*i*S	**Sn**	**01 01 17.0**	**-0.8**
COPA	**Copaceanca**	**1.61**	**212**	⇑P	**Pn**	**01 00 55.6**	**+0.4**
COPA				⇑S	**Sn**	**01 01 17.2**	**-0.6**
ICOR	**Ion Corvin**	**1.71**	**144**	⇑S	**Sn**	**01 01 19.2**	**-0.5**
TLCR		**1.73**	**100**	⇑P	**Pn**	**01 00 57.2**	**+0.7**
TLCR				⇓S	**Sn**	**01 01 20.4**	**+0.3**
TIRR	**Tirgusor**	**1.77**	**126**	⇓P	**Pn**	**01 00 57.6**	**+0.7**
TIRR				⇑S	**Sn**	**01 01 19.8**	**-1.2**
LOT	**Lotru**	**1.86**	**269**	⇓P	**Pn**	**01 00 58.4**	**+0.2**
LOT				⇑S	**Sn**	**01 01 23.6**	**+0.5**
MFTR	**Murfatlar**	**1.95**	**132**	⇓P	**Pn**	**01 00 59.9**	**+0.8**
MFTR				⇓S	**Sn**	**01 01 24.1**	**-0.8**
VLAD	**Vladila**	**2.07**	**224**	⇓P	**Pn**	**01 01 00.8**	**+0.2**
MILM	**Milestii Mici**	**2.19**	**49**	⇑P	**Pn**	**01 01 02.6**	**+0.6**
MILM	**Milestii Mici**	**2.19**	**49**	⇑*i*P	**Pn**	**01 01 02.6**	**+0.6**
	2μm,0.1s						
MILM				⇑*i*S	**Sn**	**01 01 28.3**	**-1.8**
	4μm,0.1s						
KIS	**Kishinev**	**2.24**	**47**	⇑P	**Pn**	**01 01 03.4**	**+0.7**
KIS				⇓S	**Sn**	**01 01 30.2**	**-1.0**
KIS	**Kishinev**	**2.24**	**47**	⇑*i*P	**Pn**	**01 01 03.0**	**+0.3**
	2μm,0.1s						
KIS				⇑*i*S	**Sn**	**01 01 29.3**	**-2.0**
	2μm,0.2s						
BURAR	**Bucovina Array**	**2.27**	**339**	⇓P	**Pn**	**01 01 04.9**	**+1.8**
BURAR				⇓S	**Sn**	**01 01 34.3**	**+2.3**
PLVB	**Pleven**	**2.47**	**212**	⇓P	**Pn**	**01 01 06.2**	**+0.7**
GZR	**Gura Zlata**	**2.56**	**269**	⇑P	**Pn**	**01 01 07.5**	**+0.8**
GZR				⇑S	**Sn**	**01 01 38.7**	**+0.3**
PURM	**Purcari**	**2.62**	**66**	⇓P	**Pn**	**01 01 08.3**	**+0.8**
PURM				⇑S	**Sn**	**01 01 38.7**	**-1.0**
PURM	**Purcari**	**2.62**	**66**	*e*P	**Pn**	**01 01 08.2**	**+0.8**
PURM				*e*S	**Sn**	**01 01 37.8**	**-1.9**
	2μm,0.2s						
PUNG	**Punghina**	**2.76**	**245**	⇓P	**Pn**	**01 01 08.8**	**-0.3**
RMGR	**Halanga-Turnu**	**2.76**	**254**	⇓P	**Pn**	**01 01 09.2**	**0.0**
RMGR				⇑S	**Sn**	**01 01 41.6**	**-1.3**
DRGR		**2.87**	**298**	⇑P	**Pn**	**01 01 10.9**	**+0.2**
HERR	**Herculane**	**2.89**	**259**	⇑P	**Pn**	**01 01 10.6**	**-0.2**
BLKB	**Belogradchik**	**3.26**	**236**	⇑P	**Pn**	**01 01 15.3**	**-0.4**
BZS	**Buzias**	**3.37**	**274**	⇑P	**Pn**	**01 01 17.1**	**+0.1**

*SNET **03** 01:02:31.5±1.2, 13°.68N×89°.06W, h2km, ML4.4*
*IDC **03** 01:02:32.2±1.6, 13°.86N×88°.86W, h0km, mb4.0/7, mbtmp4.1/10, ML3.6/3, MS3.4/3, Error ellipse: s-maj=47.1km s-min=21.1km az=37.0*
*CATAC **03** 01:02:32.5±0.1, 13°.71N×89°.05W, h2km±1km, ML4.4*
*NEIC **03** 01:02:32.5±1.5, 13°.72N±0°.03×89°.04W±0°.04, h4km±7km, mb4.3/33, Error ellipse: s-maj=6.0km s-min=3.8km az=88.0*
*GCG **03** 01:02:34.2±1.9, 13°.82N×89°.08W, h0km±22km, MD4.1*
ISC 03 01:02:32.4±0.7**, 13°.69N**±0°.02×**89°.05W**±0°.02**, h8**km±4km**, n210**, σ0§84/239**, mb4.3**/18**, 1C, El Salvador**

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

comp=Z,36μm,1.0s
CEDA San Andres 0.35 289 *e*P **Pg 01 02 39.3 -0.1**
CEDA eS **Sg 01 02 44.5 +0.4**
CEDA San Andres 0.35 289 *i* P **Pg 01 02 39.2 -0.1**
CEDA IAML 01 02 48.7
comp=Z,140μm,1.0s
JAYA Jayaque - finc 0.39 265 *e*P **Pg 01 02 39.8 -0.3**
JAYA Jayaque - finc 0.39 265 *i* P **Pg 01 02 39.7 -0.3**
JAYA IAML 01 02 45.6
comp=Z,53μm,1.0s
LLGN La Laguna 0.48 12 *i* P **Pg 01 02 41.6 -0.2**
LLGN IAML 01 02 50.8
comp=Z,10μm,1.0s
PQSS Presa 15 de Se 0.48 98 *e*P **Pg 01 02 41.8 +0.1**
PQSS Presa 15 de Se 0.48 98 *i* P **Pg 01 02 41.8 +0.1**
PQSS IAML 01 02 46.4
comp=Z,9μm,1.0s
COEB Comit de Eme 0.54 111 *e*P **Pg 01 02 43.0 +0.1**
COEB eS **Sg 01 02 51.3 +1.3**
UNIC Universidad Ca 0.56 301 *e*P **Pg 01 02 43.0 -0.4**
UNIC Universidad Ca 0.56 301 *i* P **Pg 01 02 42.9 -0.4**
UNIC IAML 01 02 51.8
comp=Z,14μm,1.0s
TECA Tecapa 0.57 110 *e*P **Pg 01 02 43.5 0.0**
SNJE San Jose 0.57 288 *e*P **Pg 01 02 43.4 0.0**
SNJE *e*P **Pg 01 02 43.4 0.0**
CEVE Cerro Verde 0.57 284 *e*P **Pg 01 02 43.9 +0.3**
CEVE Cerro Verde 0.57 284 *i* P **Pg 01 02 43.6 0.0**
CEVE IAML 01 02 46.1
comp=Z,20μm,1.0s
SBLS San Blas 0.58 285 *e*P **Pg 01 02 43.8 +0.2**
RTR El Retiro 0.61 290 *e*P **Pg 01 02 44.4 +0.1**
NUBE Las Nubes 0.74 287 *e*P **Pg 01 02 46.4 -0.3**
NUBE Las Nubes 0.74 287 *i* P **Pg 01 02 46.2 -0.5**
NUBE IAML 01 02 53.2
comp=Z,10μm,1.0s
PACA Pacayal 0.74 107 *e*P **Pg 01 02 47.2 +0.5**
PACA Pacayal 0.74 107 *i* P **Pg 01 02 46.7 0.0**
PACA IAML 01 03 03.3
comp=Z,29μm,1.0s
MTO3 Montecristo 0.77 337 Pg 01 02 46.5 -0.6
MTO3 Sg **Sg 01 02 56.5 -0.8**
MTO3 Montecristo 0.77 337 *e*P **Pg 01 02 46.6 -0.6**
MTO3 Montecristo 0.77 337 *i* P **Pg 01 02 46.6 -0.6**
MTO3 IAML 01 02 52.2
comp=Z,3μm,1.0s
LOAL Lomas de Alarc 0.77 293 *i* P **Pg 01 02 46.9 -0.4**
LOAL IAML 01 03 00.3
comp=Z,19μm,1.0s
LCY Lacayo 0.78 110 *e*P **Pg 01 02 47.6 +0.1**
RANC El Ranchito 0.78 109 *e*P **Pg 01 02 47.7 +0.2**
SLOZ Alcaldia de Sa 0.79 295 *e*P **Pg 01 02 47.1 -0.5**
VSM San Miguel 0.80 109 *e*P **Pg 01 02 48.0 +0.1**
BLLM Bellamira 0.83 107 *e*P **Pg 01 02 48.4 0.0**
CNRM Centro Naciona 0.88 104 *i* P **Pg 01 02 49.2 -0.2**
CNRM IAML 01 03 16.2
comp=Z,22μm,1.0s
JUCU Jucuar¡n 0.89 119 *e*P **Pg 01 02 49.2 -0.4**
ESQI Esquipulas 0.91 342 Pg **Pg 01 02 49.4 -0.6**
ESQI Sg **Sg 01 03 01.9 +0.1**
ESQI Esquipulas 0.91 342 *i* P **Pg 01 02 49.4 -0.6**
ESQI IAML 01 03 10.7
comp=Z,12μm,1.0s
LCND La Caada 1.19 108 *e*P **Pg 01 02 54.7 -0.5**
LCND La Caada 1.19 108 *i* P **Pg 01 02 54.3 -1.0**
LCND *i* P **Pg 01 02 54.8 -0.5**
LCND IAML 01 02 58.3
comp=Z,3μm,1.0s
LCND IAML 01 04 09.6
comp=Z,16μm,1.0s
CNCH Conchagua 1.25 109 *i* P **Pg 01 02 55.5 -1.0**
CNCH IAML 01 02 59.7
comp=Z,11μm,1.0s
MRL Marmol 1.51 336 *e*P **Pb 01 03 00.8 -0.2**
MRL eS **Sn 01 03 21.5 +1.3**
NBG Las Nubes 1.54 306 *e*P **Pb 01 03 01.4 0.0**
NBG eS **Sn 01 03 23.5 +2.5**
GUNB GUNB 1.55 306 *i* P **Pn 01 02 59.6 -1.0**
GUNB IAML 01 03 00.9
comp=Z,5μm,1.0s
CSGN Cosiguina Volc 1.62 116 *i* P **Pn 01 03 01.4 0.0**
CSGN IAML 01 03 03.9
comp=Z,230nm,1.0s
PCG Pacaya 1.66 295 *e*P **Pn 01 03 03.2 +1.0**
PCG eS **Sg 01 03 26.8 +0.8**
TGUH Tegucigalpa,Un 1.77 78 Pn 01 03 02.7 -0.8
TGUH Tegucigalpa,Un 1.77 78 *e*P **Pn 01 03 02.9 -0.6**
TGUH eS **Sb 01 03 28.0 +0.4**
TGUH Tegucigalpa,Un 1.77 78 *i* P **Pn 01 03 03.3 -0.2**
TGUH IAML 01 03 07.1
comp=Z,5μm,1.0s
GUMI Mixco 1.78 302 *i* P **Pb 01 03 05.1 -0.4**
FUG Fuego 3 1.90 294 *e*P **Pn 01 03 06.0 +0.7**
IZABA Izabal, Puerto 2.08 12 *i* P **Pb 01 03 11.0 +0.6**
CHTG Tecpan 2.16 300 *i* P **Pg 01 03 14.9 +1.1**
YUSH Yuscaran 2.16 83 *e*P **Pn 01 03 09.0 +0.1**
CRIN San Cristobal 2.18 117 Pn **Pn 01 03 10.0 +0.8**
CRIN San Cristobal 2.18 117 *e*P **Pn 01 03 10.2 +1.0**
CRIN San Cristobal 2.18 117 *i* P **Pn 01 03 09.9 +0.8**
CRIN IAML 01 03 15.5
comp=Z,5μm,1.0s
HERN Volcan Telica 2.41 116 *i* P **Pn 01 03 13.0 +0.6**
HERN IAML 01 03 17.3
comp=Z,2μm,1.0s
PLRN Geotermica Pol 2.48 116 *i* P **Pn 01 03 15.1 +1.9**
PLRN IAML 01 03 15.8
comp=Z,600nm,1.0s
PACN Al O del Volca 2.50 118 *i* P **Pn 01 03 15.3 +1.9**
PACN IAML 01 03 17.4
comp=Z,2μm,1.0s
SULM Suchitepequez, 2.52 284 *e*P **Pb 01 03 16.5 -1.4**
SULM eS **Sb 01 03 51.1 +2.0**
ROCN Rota Cerro Neg 2.53 117 *i* P **Pn 01 03 15.3 +1.4**
ROCN IAML 01 03 16.4
comp=Z,1μm,1.0s
QUIS Sacapulas 2.54 309 *i* P **Pb 01 03 17.8 -0.6**
ILCN San Idelfonso 2.54 116 *i* P **Pn 01 03 15.9 +1.8**
ILCN IAML 01 03 21.2
comp=Z,300nm,1.0s
CNGA Al SSO del Vol 2.58 117 *i* P **Pn 01 03 15.5 +0.9**
CNGA IAML 01 03 19.5
comp=Z,570nm,1.0s
CNGN Cerro Negro 2.58 117 Pn 01 03 15.3 +0.7
CNGN Cerro Negro 2.58 117 *e*P **Pn 01 03 15.0 +0.4**
CNGN Cerro Negro 2.58 117 *i* P **Pn 01 03 15.7 +1.1**
CNGN IAML 01 03 17.1
comp=Z,1μm,1.0s
MACN El Madrono 2.62 117 *i* P **Pn 01 03 16.4 +1.3**
MACN IAML 01 03 25.8
comp=Z,440nm,1.0s
STG3 Santiaguito 3, 2.65 293 *e*P **Pb 01 03 18.5 -1.7**
STG3 eS **Sb 01 03 53.3 +0.2**
LIMN Finca el Limon 2.69 103 *i* P **Pn 01 03 16.0 -0.1**
LIMN IAML 01 03 25.9
comp=Z,950nm,1.0s
LEVN Ruinas Leon Vi 2.70 118 *i* P **Pn 01 03 17.7 +1.6**
LEVN IAML 01 03 30.4
comp=Z,990nm,1.0s
RTAL Retalhuleu 2.70 288 Pn 01 03 16.8 +0.6
RTAL Retalhuleu 2.70 288 *i* P **Pb 01 03 20.3 -0.7**
MOMN Momotombo 2.76 117 *i* P **Pn 01 03 18.1 +1.0**
MOMN IAML 01 03 19.4
comp=Z,53nm,1.0s
MOM2 El Cardon 2.79 116 *i* P **Pn 01 03 19.7 +2.2**
COPN Copaltepe 2.83 122 *i* P **Pn 01 03 18.9 +0.9**
COPN IAML 01 03 21.8
comp=Z,2μm,1.0s
HUEH Huehuetenango 2.87 305 Pn 01 03 18.8 -0.1
RCPN Sur Rio San Ju 2.88 93 *i* P **Pn 01 03 18.2 -0.6**
SAPS Ciudad Sandino 2.99 120 *i* P **Pn 01 03 21.4 +1.2**
SAPS IAML 01 03 22.0
comp=Z,1μm,1.0s
APQ2 Apoyeque 3.04 119 *i* P **Pn 01 03 22.5 +1.6**
APQ2 IAML 01 03 23.2
comp=Z,1μm,1.0s
TISN Laguna Tiscapa 3.12 119 *i* P **Pn 01 03 23.4 +1.4**
TISN IAML 01 03 24.2
comp=Z,250nm,1.0s
UNAN Cigeo UNAN 3.13 120 *i* P **Pn 01 03 23.6 +1.4**
MATN Matagalpa 3.13 104 Pn 01 03 21.8 -0.5
MATN Matagalpa 3.13 104 *i* P **Pn 01 03 22.2 -0.1**
MATN IAML 01 03 35.3
comp=Z,350nm,1.0s

SMCA Catarina 3.15 292 *i* P **Pn 01 03 25.7 +3.2**
CRUN El Crucero 3.17 122 *i* P **Pn 01 03 24.7 +1.9**
WILN Americas 2 3.18 118 *i* P **Pn 01 03 24.1 +1.3**
WILN IAML 01 03 25.3
comp=Z,750nm,1.0s
MAS3 Al N del Volca 3.26 120 *i* P **Pn 01 03 25.1 +1.2**
MAS3 IAML 01 03 25.7
comp=Z,2μm,1.0s
MASN Masaya 3.29 121 *i* P **Pn 01 03 25.7 +1.2**
MASN IAML 01 03 27.6
comp=Z,400nm,1.0s
PETF Flores 3.30 346 Pn 01 03 24.9 +0.4
PETF Flores 3.30 346 *i* P **Pg 01 03 36.2 +0.4**
BOAB BOACO BROADBAN 3.52 110 Pn **Pn 01 03 27.1 -0.4**
BOAB BOACO BROADBAN 3.52 110 *i* P **Pn 01 03 27.1 -0.4**
CCIG Comitan 3.94 311 Pn 01 03 33.0 -0.5
MORN Al O del Volca 3.94 122 *i* P **Pn 01 03 34.3 +0.9**
MORN IAML 01 03 41.7
comp=Z,500nm,1.0s
CONN Concepcion 3.95 122 *i* P **Pn 01 03 34.5 +1.0**
CONN IAML 01 04 04.8
comp=Z,2μm,1.0s
ACON Acoyapa 4.15 114 Pn 01 03 35.4 -0.7
ACON Acoyapa 4.15 114 *i* P **Pn 01 03 36.0 -0.2**
ACON IAML 01 03 45.1
comp=Z,320nm,1.0s
HZTE Horizontes, Gu 4.49 131 Pn **Pn 01 03 41.5 +0.6**
HZTE Horizontes, Gu 4.49 131 *i* P **Pn 01 03 42.2 +1.3**
ORTG Ortega, Santa 4.83 133 Pn 01 03 46.5 +0.9
ORTG Ortega, Santa 4.83 133 *i* P **Pn 01 03 47.6 +2.1**
ESPN Las Esperanzas 4.86 107 Pn 01 03 45.7 -0.3
SAJU San Juanillo, 4.86 137 *i* P **Pn 01 03 46.5 +0.5**
DUNO Dulce Nombre, 5.00 135 Pn 01 03 48.0 +0.1
INDI Punta indio, G 5.15 137 *i* P **Pn 01 03 50.5 +0.6**
JTS Las Juntas de 5.24 130 Pn **Pn 01 03 52.1 +0.9**
JTS Las Juntas de 5.24 130 Pn **Pn 01 03 51.6 +0.4**
comp=Z,4.4nm,0.3s,baz=323,slow=17,SNR=11
JTS Sn **Sn 01 04 51.1 -0.9**
comp=Z,0.4nm,0.3s,baz=322,slow=19,SNR=1.1
comp=Z,14nm,0.4s
ARE1 Arenal 1 5.32 127 Pn 01 03 53.4 +1.2
COVE Coope Vega, Sa 5.42 122 Pn 01 03 54.2 +0.6
SOCE Pocosol 5.44 127 Pn **Pn 01 03 54.8 +0.9**
JACO JACO, Garabito 5.88 132 *i* P Pn 01 03 55.4 -4.5
TEIG Tepich 6.54 6 Pn **Pn 01 04 08.8 -0.2**
CMIG Matias Romero 6.56 302 Pn **Pn 01 04 11.7 +2.3**
comp=Z,2.3nm,0.3s,baz=118,slow=11,SNR=12
CMIG LR LR 01 06 30.4
comp=Z,167nm,19.7s,baz=137,slow=36
comp=Z,20nm,0.7s
PEZE Perez Zeledon, 6.79 129 Pn 01 04 14.2 +1.7
DRK0 Durika 7.19 127 Pn 01 04 19.3 +1.1
PRVC Isla de Provid 7.48 91 *e*P **Pn 01 04 20.2 -1.8**
BRU2 Volcan 7.91 127 Pn **Pn 01 04 28.9 +0.9**
CDITO Canoas 7.91 129 Pn 01 04 28.5 +0.6
SOR Soroa 10.72 31 Pn **Pn 01 05 07.5 +1.1**
MOIG Morelia 13.06 299 Pn **Pn 01 05 39.5 +0.8**
TULM Tulcn-Chalpat 17.04 138 Pn **Pn 01 06 32.0 +0.1**
PULU Pululahua 17.13 142 Pn **Pn 01 06 33.3 +0.4**
833A Chaparral WMA, 17.45 328 Pn 01 06 35.2 -1.2
833A IAmb IAmb 01 06 41.7
comp=Z,16nm,0.8s
SLOR San Lorenzo - 17.74 143 Pn 01 06 41.4 +0.9
HNDO Hondo 18.39 331 P **Pn 01 06 46.4 -1.5**
SDV Santo Domingo 18.68 103 P **P 01 06 50.1 -1.4**
SDV IAmb IAmb 01 06 58.4
comp=Z,13nm,0.9s
SDV Santo Domingo 18.68 103 P **Pn 01 06 52.6 +0.8**
comp=Z,0.4nm,0.3s,baz=273,slow=7.1,SNR=9.5
SDV LR LR 01 14 35.5
comp=Z,103nm,21.4s,baz=292,slow=39
comp=Z,6.6nm,0.6s
COHC Cochancay 18.76 148 P **P 01 06 52.7 +0.6**
JCT Junction City 19.43 331 P 01 06 58.8 -0.7
JCT IAmb IAmb 01 07 05.7
comp=Z,8.2nm,0.8s
BRDY Brady 19.76 334 P 01 07 03.2 +0.2
WHTX Lake Whitney, 19.78 338 P **P 01 07 02.3 -0.9**
WHTX IAmb IAmb 01 07 07.6
comp=Z,16nm,1.0s
Z38A Mt. Pleasant 20.22 345 P **P 01 07 07.6 -0.4**
HPIG 20.38 313 P **P 01 07 10.2 +0.3**
TXAR Lajitas Array 20.64 321 P **P 01 07 13.0 +0.3**
TXAR Lajitas Array 20.64 321 P Pn 01 07 14.7 -0.2
comp=Z,3.1nm,0.7s,baz=145,slow=10.0,SNR=19
comp=Z,3.1nm,0.7s
TX31 Lajitas Ar. Si 20.64 321 P **P 01 07 13.2 +0.6**
FPAL Fort Paine 20.99 8 P **P 01 07 16.8 +0.4**
FPAL IAmb IAmb 01 07 37.0
comp=Z,12nm,1.2s
BAUV El Baul 21.13 101 P **P 01 07 16.9 -1.0**
BAUV IAmb IAmb 01 07 41.1
comp=Z,24nm,1.2s
MIAR Mount Ida 21.16 350 P **P 01 07 19.1 +0.9**
MIAR IAmb IAmb 01 07 21.3
comp=Z,12nm,1.1s
ALPN Alpine 21.38 323 P **P 01 07 20.9 +0.3**
LPIG La Paz 22.59 300 LR LR 01 16 49.4
comp=Z,155nm,18.5s,baz=54,slow=38
WMOK Wichita Mounta 22.73 339 P **P 01 07 33.6 -1.4**
WMOK IAmb IAmb 01 07 39.6
comp=Z,19nm,1.5s
TUL3 Leonard 22.94 346 P **P 01 07 36.7 -0.6**
TUL3 IAmb IAmb 01 07 46.3
comp=Z,15nm,1.0s
PBMO Poplar Bluff 23.03 357 P **P 01 07 37.7 -0.3**
PBMO IAmb IAmb 01 07 42.6
comp=Z,11nm,0.8s
MSTX Muleshoe 23.72 331 P **P 01 07 43.9 -1.4**
MSTX IAmb IAmb 01 07 48.8
comp=Z,16nm,1.3s
AMTX Amarillo 23.99 334 P **P 01 07 47.2 -0.6**
S39A Bolivar 24.20 352 P **P 01 07 49.5 -0.1**
S39A IAmb IAmb 01 07 55.4
comp=Z,9.9nm,1.0s
CCM Cathedral Cave 24.35 356 P **P 01 07 51.3 +0.4**
ECSD EROS Data Cent 30.64 349 P **P 01 08 47.6 +0.4**
ECSD IAmb IAmb 01 08 49.2
comp=Z,1.9nm,0.7s
Q20A White River Ci 31.27 331 P **P 01 08 53.6 +0.5**
MSU Marysvale 32.11 325 P **P 01 08 59.6 -0.9**
ETMB Extrema 32.54 135 P **P 01 09 02.8 -1.5**
ETMB IAmb IAmb 01 09 08.6
comp=Z,4.7nm,0.9s
MPU Maple Canyon 32.88 327 P **P 01 09 07.2 0.0**
MPU IAmb IAmb 01 09 09.6
comp=Z,4.3nm,0.9s
PDAR Pinedale Array 33.95 332 P **P 01 09 14.8 -1.8**
PDAR Pinedale Array 33.95 332 P **P 01 09 17.1 +0.4**
comp=Z,1.1nm,1.0s,baz=146,slow=11,SNR=5.4
comp=Z,1.1nm,1.0s
HWUT Hardware Ranch 34.01 329 P **P 01 09 17.1 -0.1**
HWUT IAmb IAmb 01 09 19.3
comp=Z,6.7nm,1.1s
SAML Samuel 34.13 130 P 01 09 17.7 -0.6
SAML IAmb IAmb 01 09 21.4
comp=Z,2.6nm,1.1s
REDW Red Top Meadow 35.01 332 P **P 01 09 25.4 -0.4**
MDND Maddock 35.17 348 P **P 01 09 26.8 -0.1**
NVAR Mina Array Bea 35.75 319 P **P 01 09 34.4 +2.1**
comp=Z,1.1nm,0.8s,baz=148,slow=7.4,SNR=5.3
comp=Z,1.1nm,0.8s
ULM Lac du Bonnet 36.88 353 P **P 01 09 40.7 -0.7**
comp=Z,3.1nm,0.8s,baz=156,slow=10,SNR=6.1
comp=Z,3.1nm,0.8s
EDM Edmonton 43.90 339 P **P 01 10 38.9 -0.7**
SCHQ Schefferville 44.57 18 P **P 01 10 44.0 -0.9**
comp=Z,2.6nm,0.7s,baz=219,slow=4.6,SNR=6.4
comp=Z,2.6nm,0.7s
YKA Yellowknife Ar 52.02 345 P **P 01 11 41.9 -0.4**
comp=Z,2.3nm,0.9s,baz=143,slow=7.5,SNR=31
comp=Z,2.3nm,0.9s
ILAR Eielson Array 64.26 336 P **P 01 13 07.7 -0.3**
comp=Z,1.6nm,1.0s,baz=112,slow=4.7,SNR=7.5
comp=Z,1.6nm,1.0s
WRA Warramunga Arr 138.09 255 PKP **PKPdf 01 21 58.2 -0.8**
comp=Z,0.8nm,0.7s,baz=86,slow=2.2,SNR=8.4
ASAR Alice Springs 138.25 250 PKP **PKPdf 01 21 57.9 -1.4**
comp=Z,0.6nm,0.8s,baz=116,slow=2.2,SNR=4.6

*IDC **03** 01:20:36.3±1.2,35.54N×106.10E, h0km, mb3.5/6, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=70.8km s-min=19.7km az=53.0*

ISC 03 01:20:37.8±0.7, 35.59N±0.07×105.47E±0.05, h10km, n12, σ2.65/19, mb3.7/5, Gansu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.41**	**291**	Pg	**Pn**	**Pn**	**01 21 02.9**	**-0.9**
LZH				Sg	**Sn**	**Sn**	**01 21 21.3**	**-1.2**
LZH				smax	smax			
	comp=N,2μm,0.9s							
LZH				smax	smax			
	comp=E,1μm,0.9s							
XAN	**Xi'an**	**3.23**	**118**	Pn	**Pn**	**Pn**	**01 21 28.6**	**0.0**
XAN				Pg	**Pg**	**Pn**	**01 21 37.7**	**-2.0**
XAN				Sn	**Sn**	**Pn**	**01 22 07.2**	**0.0**
XAN				Sg	**Sg**	**Pn**	**01 22 20.0**	**-1.6**
XAN				smax	smax			
	comp=N,340nm,0.7s							
XAN				smax	smax			
	comp=E,310nm,0.9s							
GTA	**Gaotai**	**5.90**	**312**	Pn	**Pn**	**Pn**	**01 22 06.1**	**+0.7**
GTA				Sn	**Sn**	**Pn**	**01 23 11.3**	**-1.8**
GTA				Sg	**Sg**	**Pn**	**01 23 40.5**	**-6.6**
GTA				smax	smax			
	comp=N,32nm,0.6s							
GTA				smax	smax			
	comp=E,38nm,1.0s							
BTO	**Baotou**	**6.16**	**34**	*e*Pg	**Pb**	**Pn**	**01 22 25.0**	**-0.2**
BTO				Sg	**Sb**	**Pn**	**01 23 39.5**	**+0.5**
BTO				smax	smax			
	comp=N,130nm,0.6s							
BTO				smax	smax			
	comp=E,170nm,0.7s							
GOMU	**GeErMu**	**8.67**	**277**	Pn	**Pn**	**Pn**	**01 22 42.7**	**-0.9**
GOMU				Sn	**Sn**	**Pn**	**01 24 23.6**	**+1.9**
GOMU				smax	smax			
	comp=N,20nm,0.8s							
GOMU				smax	smax			
	comp=E,12nm,0.7s							
SONM	**Songino Array**	**12.26**	**3**	Pn	**Pn**	**Pn**	**01 23 32.8**	**+0.3**
	comp=E,0.1nm,0.3s,baz=176,slow=14,SNR=2.5							
	comp=E,0.2nm,0.5s							
MKAR	**Makanchi Array**	**20.65**	**310**	P	Pn		01 25 20.6	+0.8
	comp=E,0.7nm,0.6s,baz=111,slow=12,SNR=6.4							
	comp=E,0.7nm,0.6s							
KURBB	**Kurchatov Arra**	**24.57**	**316**	P	**P**		**01 26 01.0**	**+3.3**
	comp=E,0.5nm,0.2s,baz=123,slow=9.0,SNR=4.4							
	comp=E,0.5nm,0.2s							
BVAR	**Borovoye Array**	**30.16**	**316**	P	**P**		**01 26 52.0**	**+4.1**
	comp=E,0.4nm,0.6s,baz=98,slow=6.5,SNR=2.8							
	comp=E,0.4nm,0.6s							
BRTR	**Keskin Array B**	**55.61**	**297**	P	**P**		**01 30 17.9**	**+4.0**
	comp=E,0.3nm,0.6s,baz=64,slow=6.0,SNR=2.4							
	comp=E,0.3nm,0.6s							
WRA	**Warramunga Arr**	**61.63**	**149**	P	**P**		**01 30 53.8**	**-2.0**
	comp=E,0.7nm,0.7s,baz=341,slow=7.5,SNR=4.8							
	comp=E,0.7nm,0.7s							
ASAR	**Alice Springs**	**64.79**	**151**	P	**P**		**01 31 14.9**	**-1.8**
	comp=E,0.4nm,0.7s,baz=340,slow=6.4,SNR=5.7							
	comp=E,0.4nm,0.7s							

IDC 03 01:38:23.7±8.2, 21.60S×147.92E, h0km, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=78.8km s-min=59.5km az=174.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.81**	**275**	Pn	Pn		01 41 27.5	+0.3
	0.1nm,0.3s,baz=93,slow=12,SNR=8.7							
WRA				Sn	Sn		01 43 52.7	+2.2
	baz=96,slow=26,SNR=1.0							
WRA				Lg	Lg		01 45 11.1	
	baz=102,slow=26,SNR=4.2							
	0.8nm,1.1s							
I07AU	**WARRAMUNGA INF**	**12.82**	**275**	I	I		02 53 10.0	
	0.1nm,0.9s,baz=102,slow=302,SNR=18							
ASAR	**Alice Springs**	**13.10**	**258**	Pn	Pn		01 41 30.7	-0.5
	0.1nm,0.3s,baz=91,slow=14,SNR=2.0							
ASAR				Sn	Sn		01 43 59.4	+1.6
	baz=85,slow=23,SNR=1.9							
ASAR				Lg	Lg		01 45 18.5	
	baz=84,slow=27,SNR=2.0							
	0.2nm,0.4s							

*NEIC **03** 01:41:56.5±1.6,55.78N±0.09×149.3W±0.1, h10km±7km, ML3.8/40, ML3.5(AEIC), Error ellipse: s-maj=13.2km s-min=8.2km az=169.0*
*AEIC **03** 01:42:01.4±1.2,55.92N±0.09×149.4W±0.1, h1km±7km, Error ellipse: s-maj=12.9km s-min=8.6km az=163.0*
*IDC **03** 01:42:05.2±4.3,56.15N×148.00W, h0km, mb4.0/1, mbtmp3.5/3, ML2.9/2, Error ellipse: s-maj=69.6km s-min=49.1km az=72.0*

ISC 03 01:41:57.3±1.3, 55.93N±0.09×149.38W±0.05, h10km, n160, σ1.14/167, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.52**	**302**	Pn	**Pn**	**Pn**	**01 42 39.0**	**+0.8**
OHAK				Sn	**Sn**	**Pn**	**01 43 07.3**	**-1.7**
OHAK				IAML			01 43 08.5	
	comp=N,216nm,0.2s							
OHAK	**Old Harbor**	**2.52**	**302**	P		**Pn**	**01 42 39.1**	**+0.8**
OHAK	**Old Harbor**	**2.52**	**302**	P		**Pn**	**01 42 39.0**	**+0.8**
	baz=120							
OHAK				S		**Sn**	**01 43 07.9**	**-1.1**
	baz=120							
KDAK	**Kodiak Island**	**2.56**	**318**	Pn		**Pn**	**01 42 39.9**	**+1.2**
KDAK				Sn		**Sn**	**01 43 08.6**	**-1.3**
KDAK				IAML			01 43 10.1	
	comp=N,226nm,0.3s							
SII	**Sitkinak Islan**	**2.76**	**285**	Pn		**Pn**	**01 42 41.6**	**+0.1**
SII				IAML			01 43 15.1	
	comp=E,283nm,0.6s							
SII				IAML			01 43 15.3	
	comp=N,277nm,2.8s							
SII	**Sitkinak Islan**	**2.76**	**285**			**Sn**	**01 43 14.0**	**-0.9**
SII	**Sitkinak Islan**	**2.76**	**285**	P		**Pn**	**01 42 41.8**	**+0.2**
SII	**Sitkinak Islan**	**2.76**	**285**	P		**Pn**	**01 42 42.1**	**+0.6**
	baz=102							
SII				S		**Sn**	**01 43 14.0**	**-0.9**
	baz=102							
SYI	**Shuyak Island**	**3.14**	**330**			**Pn**	**01 42 47.4**	**+0.6**
SYI				IAML			01 43 26.3	
	comp=E,97nm,0.4s							
Q20K	**Shuyak Island**	**3.15**	**330**	P		**Pn**	**01 42 48.2**	**+1.3**
	baz=147							
Q20K				S		**Sn**	**01 43 24.8**	**+0.4**
	baz=147							
R18K	**Karluk**	**3.24**	**302**			**Pn**	**01 42 49.5**	**+1.4**
R18K						**Sn**	**01 43 26.3**	**-0.4**
R18K	**Karluk**	**3.24**	**302**	IAML			01 43 28.1	
	comp=E,151nm,0.3s							
R18K				IAML			01 43 28.6	
	comp=N,154nm,0.4s							
R18K	**Karluk**	**3.24**	**302**	P		**Pn**	**01 42 49.5**	**+1.4**
	baz=119							
R18K				S		**Sn**	**01 43 26.3**	**-0.4**
	baz=119							
CNPM	**China Poot**	**3.74**	**345**	Pn		**Pn**	**01 42 55.6**	**+0.6**
Q19K	**Cape Douglas,**	**3.79**	**324**	Pn		**Pn**	**01 42 57.0**	**+1.2**
Q19K				IAML			01 43 44.7	
	comp=N,227nm,0.7s							
Q19K	**Cape Douglas,**	**3.79**	**324**	P		**Pn**	**01 42 56.4**	**+0.6**
	baz=141							
Q19K				S		**Sn**	**01 43 39.0**	**-1.3**
	baz=141							
KAHG	**Katmai Hook Gl**	**3.81**	**315**			**Pn**	**01 42 56.8**	**+0.7**
Q23K	**Middleton Isla**	**3.86**	**24**	Pn		**Pn**	**01 42 56.7**	**0.0**
Q23K				IAML			01 43 42.2	
	comp=N,100nm,0.9s							
Q23K				IAML			01 44 33.2	
	comp=E,130nm,1.3s							
Q23K	**Middleton Isla**	**3.86**	**24**	P		**Pn**	**01 42 57.5**	**+0.8**
	baz=205							
MID	**Middleton Isla**	**3.86**	**24**	Pn		**Pn**	**01 42 56.7**	**-0.1**
MID				IAML			01 43 41.3	
	comp=N,130nm,1.2s							
MID				IAML			01 44 33.2	
	comp=E,143nm,1.3s							
BRSE	**Bradley Lake S**	**3.89**	**350**			**Pn**	**01 42 57.5**	**+0.4**
BRSE	**Bradley Lake S**	**3.89**	**350**	P		**Pn**	**01 42 57.5**	**+0.4**
	baz=168							
BRSE				S		**Sn**	**01 43 41.6**	**-1.2**
	baz=168							
BRLK	**Bradley Lake**	**3.93**	**349**	Pn		**Pn**	**01 42 57.9**	**+0.2**

BRLK					Sn	01 43 42.9	-0.8
ANCK	**Angle Creek**	4.04	307		Pn	01 42 59.9	+0.6
SEW	**Seward**	4.18	359		Pn	01 43 01.4	+0.3
SEW	**Seward** baz=179	4.18	359	P	Pn	01 43 01.3	+0.2
P23K	**Montague Islan**	4.21	14		Pn	01 43 02.1	+0.6
P23K	**Montague Islan** baz=194	4.21	14	P	Pn	01 43 02.1	+0.6
CNTC	**Contact Creek**	4.25	306		Pn	01 43 03.6	+1.5
Q17K	**Contact Creek** baz=121	4.25	306	P	Pn	01 43 03.6	+1.4
P19K	**Oil Pt**	4.26	333	Pn	Pn	01 43 03.2	+0.9
P19K	comp=N,124nm,0.6s			IAML		01 43 55.5	
P19K	comp=E,148nm,0.5s			IAML		01 43 57.3	
P19K	**Oil Pt** baz=149	4.26	333	P	Pn	01 43 03.5	+1.3
O20K	**Slope Mountain**	4.50	339		Pn	01 43 07.7	+2.1
O20K	**Slope Mountain** baz=156	4.50	339	P	Pn	01 43 07.7	+2.1
IVE	**Iliamna Volcan**	4.53	336		Pn	01 43 06.6	+0.6
SLKM	**Skilak Lake**	4.61	355		Pn	01 43 07.3	+0.3
P18K	**Big Mountain,**	4.68	320	Pn	Pn	01 43 08.6	+0.6
HIN	**Hinchinbrook I**	4.73	18	Pn	Pn	01 43 09.3	+0.7
HIN	comp=N,99nm,0.3s			IAML		01 44 03.5	
HIN	comp=E,80nm,0.6s			IAML		01 44 04.9	
KAIM	**Kayak Island**	4.80	31		Pn	01 43 10.0	+0.5
KAIM	**Kayak Island** baz=215	4.80	31	P	Pn	01 43 10.8	+1.2
RED	**Redoubt Volcan**	4.84	340		Pn	01 43 10.4	+0.1
RSO	**Redoubt South**	4.88	340		Pn	01 43 11.0	+0.1
RDWB	**Redoubt West**	4.92	340		Pn	01 43 11.7	+0.3
CAPN	**Captain Cook N**	4.94	350	Pn	Pn	01 43 12.5	+1.0
CAPN	**Captain Cook N** baz=168	4.94	350	P	Pn	01 43 13.5	+2.0
EYAK	**Cordova Ski Ar**	5.01	21		Pn	01 43 13.5	+1.0
EYAK	**Cordova Ski Ar**	5.01	21	P	Pn	01 43 13.9	+1.5
EYAK	**Cordova Ski Ar** baz=203	5.01	21	P	Pn	01 43 13.2	+0.8
O18K	**Koktuh Hills**	5.01	324	Pn	Pn	01 43 13.1	+0.6
O18K	comp=N,31nm,0.6s			IAML		01 44 11.6	
O18K	**Koktuh Hills** baz=139	5.01	324	P	Pn	01 43 13.3	+0.8
SUCK	**Suckling Hills**	5.11	33	Pn	Pn	01 43 14.8	+1.0
SUCK	comp=E,80nm,2.8s			IAML		01 43 57.8	
RAGM	**Ragged Mountai**	5.11	27	Pn	Pn	01 43 14.4	+0.5
RC01	**Rabbit Creek A**	5.17	358	Pn	Pn	01 43 15.2	+0.4
RC01	comp=N,34nm,0.5s			IAML		01 44 13.9	
RC01	comp=E,55nm,0.4s			IAML		01 44 17.4	
HMT	**Hamilton**	5.18	29	Pn	Pn	01 43 15.9	+1.1
NICHA	**Nichawak Mount**	5.18	31		Pn	01 43 16.0	+1.2
GOAT	**Goat Mountain**	5.27	26		Pn	01 43 17.4	+1.4
BERG	**Berg Lake**	5.38	32	Pn	Pn	01 43 18.0	+0.4
SNH	**Sunshine Point**	5.49	36		Pn	01 43 20.3	+1.1
KNK	**Knik Glacier**	5.52	5	Pn	Pn	01 43 20.1	+0.7
KNK	**Knik Glacier** baz=185	5.52	5	P	Pn	01 43 20.5	+1.1
SPCP	**Crater Peak Br**	5.54	346		Pn	01 43 21.1	+1.2
KHIT	**Khitrov Hills**	5.56	33		Pn	01 43 21.1	+0.9
N19K	**Bonanza Creek**	5.58	333		Pn	01 43 20.7	+0.3
N19K	**Bonanza Creek** baz=149	5.58	333	P	Pn	01 43 20.4	0.0
SUA	**Susitna One**	5.59	353	Pn	Pn	01 43 21.0	+0.4
BMRM	**Bremner River**	5.63	24		Pn	01 43 22.2	+1.1
BMRM	**Bremner River** baz=208	5.63	24	P	Pn	01 43 22.6	+1.4
WAX	**Waxell Ridge**	5.69	35	Pn	Pn	01 43 22.7	+0.8
STLK	**Strandline Lak**	5.73	348		Pn	01 43 23.1	+0.7
BARK	**Barkley Ridge**	5.77	36		Pn	01 43 24.1	+1.0
MESA	**MESA**	5.80	40	Pn	Pn	01 43 23.6	+0.1
MESA	**MESA** baz=225	5.80	40	P	Pn	01 43 24.5	+1.0
CRQM	**Cirque**	5.84	32		Pn	01 43 25.1	+1.0
CRQE	**Cirque** baz=216	5.85	32	P	Pn	01 43 25.2	+1.1
KLU	**Klutina**	5.86	16		Pn	01 43 25.7	+1.5
KLU	**Klutina** baz=199	5.86	16	P	Pn	01 43 25.6	+1.4
N18K	**Kilae Creek**	5.87	327		Pn	01 43 25.0	+0.7
N18K	**Kilae Creek** baz=141	5.87	327	P	Pn	01 43 24.5	+0.3
SML	**Sawmill**	5.92	5	Pn	Pn	01 43 26.5	+1.6
SML	**Sawmill** baz=185	5.92	5	P	Pn	01 43 26.6	+1.6
CNBA	**Chernabura Isl**	5.93	263	Pn	Pn	01 43 24.4	-0.6
O16K	**Kokwok River B**	5.93	312	Pn	Pn	01 43 26.3	+1.1
BAGL	**Bagley Icefiel**	5.97	37		Pn	01 43 26.7	+1.1
ISLE	**Juniper Island**	5.97	36	Pn	Pn	01 43 26.8	+1.0
SCM	**Sheep Creek Mo**	6.01	9	Pn	Pn	01 43 27.6	+1.3
SCM	**Sheep Creek Mo** baz=191	6.01	9	P	Pn	01 43 27.7	+1.4
SVW2	**Sparrevohn**	6.11	330	P	Pn	01 43 28.1	+0.5
VRDI	**Verde Repeater**	6.14	28	Pn	Pn	01 43 28.9	+0.7
SKT	**Skwentna**	6.17	350	Pn	Pn	01 43 29.1	+0.7
N17K	**Nushagak Hills**	6.18	321	Pn	Pn	01 43 29.8	+1.2
SAMH	**Samovar Hills**	6.21	44		Pn	01 43 30.6	+1.6
N25K	**Chitina, Valde**	6.21	22		Pn	01 43 30.2	+1.3
N25K	**Chitina, Valde** baz=205	6.21	22	P	Pn	01 43 30.3	+1.3
KIAG	**Kiagna River**	6.21	33		Pn	01 43 30.1	+1.0
GLB	**Gilahina Butte**	6.24	25	Pn	Pn	01 43 30.1	+0.8
TABL	**Table Mountain**	6.27	41	Pn	Pn	01 43 30.8	+0.8
M20K	**Styx River**	6.28	344	Pn	Pn	01 43 30.2	+0.3
SDPT	**Sand Point**	6.32	269	Pn	Pn	01 43 30.7	+0.3
SDPT	**Sand Point**	6.32	269	P	Pn	01 43 31.2	+0.8
PTPK	**Patty Peak**	6.39	32		Pn	01 43 32.6	+1.0
MCARA	**McCarthy VSAT**	6.39	29	Pn	Pn	01 43 32.7	+1.3
MCARA	**McCarthy VSAT** baz=213	6.39	29	P	Pn	01 43 33.1	+1.7
PCA	**Pinnacle**	6.39	45		Pn	01 43 32.5	+1.0
PINM	**Pinnacle** baz=233	6.39	46	P	Pn	01 43 32.8	+1.3
M24K	**Tolsona, Glenn**	6.41	14	Pn	Pn	01 43 33.4	+1.6
M24K	**Tolsona, Glenn** baz=196	6.41	14	P	Pn	01 43 33.4	+1.6
O15K	**Ungalikthiuk R**	6.49	304		Pn	01 43 34.2	+1.4
O15K	**Ungalikthiuk R** baz=116	6.49	304	P	Pn	01 43 34.2	+1.4
M18K	**Stony River**	6.50	332		Pn	01 43 33.1	+0.1
M18K	**Stony River** baz=146	6.50	332	P	Pn	01 43 33.1	+0.1
PNL	**Peninsula**	6.51	51		Pn	01 43 34.4	+1.2
PNL	**Peninsula**	6.51	51	P	Pn	01 43 34.4	+1.2
PNL	**Peninsula** baz=239	6.51	51	P	Pn	01 43 34.4	+1.2
M19K	**Big River Lodg**	6.53	339	Pn	Pn	01 43 34.2	+0.9
BARN	**Barnard Glacie**	6.54	35	Pn	Pn	01 43 35.0	+1.4
BCPM	**Bancas Point**	6.56	48	Pn	Pn	01 43 34.9	+1.1
CTG	**Chitna Glacier** baz=223	6.57	37	P	Pn	01 43 35.4	+1.3
CTGM	**Chitina Glacie**	6.58	37	Pn	Pn	01 43 34.9	+0.8
LOGN	**Logan Glacier**	6.59	38	Pn	Pn	01 43 35.4	+1.1
WAT6	**Susitna Watana** baz=188	6.72	6	P	Pn	01 43 37.5	+1.4
L19K	**White Mountain**	6.87	338		Pn	01 43 38.5	+0.5
L19K	**White Mountain** baz=153	6.87	338	P	Pn	01 43 39.0	+1.0
WAT7	**Susitna Watana**	6.93	2		Pn	01 43 40.2	+1.3
N15K	**Kwethluk River**	7.09	311	Pn	Pn	01 43 43.4	+2.3
DHY	**Denali Highway**	7.24	7	Pn	Pn	01 43 44.9	+1.7
P29M	**Windy Craggy**	7.24	54		Pn	01 43 44.0	+0.9
PAX	**Paxson**	7.33	14	Pn	Pn	01 43 46.5	+2.1
S31K	**Pelican**	7.47	69	Pn	Pn	01 43 44.6	-1.5
RND	**Reindeer**	7.50	2	Pn	Pn	01 43 48.1	+1.4
CAST	**Castle Rocks**	7.63	351	Pn	Pn	01 43 50.1	+1.7
KTH	**Kantishna Hill**	7.68	355	Pn	Pn	01 43 50.2	+1.0
MCK	**McKinley**	7.83	1	Pn	Pn	01 43 52.7	+1.5
SIT	**Sitka**	7.86	76	P	Pn	01 43 49.3	-2.2
HYT	**Haines Junctio**	7.93	47	Pn	Pn	01 43 54.2	+1.6
FALS	**False Pass**	8.07	268	Pn	Pn	01 43 54.3	-0.1
BCAR	**Beaver Creek A**	8.12	25	Pn	Pn	01 43 55.6	+0.4
S32K	**Killisnoo**	8.29	73	Pn	Pn	01 43 56.5	-1.0
JIS	**Juneau Island**	8.49	68	Pn	Pn	01 44 00.2	+0.1
JIS	**Juneau Island**	8.49	68	P	Pn	01 44 00.3	+0.1
O30N	**Mendenhall**	8.50	50	Pn	Pn	01 44 02.0	+1.7
HDA	**Harding Lake**	8.59	7	Pn	Pn	01 44 03.1	+1.5
CCB	**Clear Creek Bu**	8.78	4	Pn	Pn	01 44 05.2	+1.1
IL31		8.95	7	Pn	Pn	01 44 07.4	+0.9
ILAR	**Eielson Array**	8.95	7	Pn	Pn	01 44 07.3	+0.8
ILAR	**Eielson Array**	8.95	7	Pn	Pn	01 44 09.1	+2.5
ILAR	comp=E,0.3nm,0.3s,baz=187,slow=13,SNR=12			Sn	Sn	01 45 43.9	-3.4
WHY	**Whitehorse**	8.97	52	Pn	Pn	01 44 07.7	+0.8
U33K	**Whale Pass**	9.11	82	Pn	Pn	01 44 05.9	-2.7
P32M	**Atlin**	9.13	60	Pn	Pn	01 44 09.3	+0.3
CRAG	**Craig**	9.19	86	Pn	Pn	01 44 06.6	-3.2
DAWY	**Dawson**	9.55	27	Pn	Pn	01 44 16.0	+1.2
H21K	**Melozitna Rive**	9.90	352		Pn	01 44 21.0	+1.5
M31M	**Drury Creek, Y**	9.93	45	Pn	Pn	01 44 21.6	+1.6
UNV	**Unalaska Valle**	10.09	265	Pn	Pn	01 44 20.2	-1.9
IMAR	**Indian Mountai**	10.30	350	Pn	Pn	01 44 26.0	+1.0
I30M	**Mount Dempster**	11.27	29	Pn	Pn	01 44 39.3	+1.0
BMAR	**Burnt Mountain**	11.75	9	Pn	Pn	01 44 45.9	+1.0
INK	**Inuvik**	14.39	24	Pn	Pn	01 45 22.1	+1.4
YKA	**Yellowknife Ar** baz=261,slow=11,SNR=5.7 comp=E,0.6nm,0.8s	18.78	55	P	P	01 46 16.4	0.0
A36M	**Sachs Harbour**	19.02	23	P	P	01 46 19.5	+0.6
ARCES	**ARCESS Array B** comp=E,1.1nm,0.6s,baz=348,slow=8.6,SNR=4.7 comp=E,1.1nm,0.6s	54.78	2	P	P	01 51 34.3	+7.7

*ANF **03** 01:50:52.7±0.4, 32°.99N×115°.53W, h10km, Error ellipse: s-maj=3.9km s-min=2.4km az=161.0*
*ECX **03** 01:50:53.6±0.7, 32°.89N×115°.54W, h20km±1km, MD2.3, ML2.5*
ISC 03 01:50:51.8±0.9, 32°.92N±0°.03×115°.51W±0°.03, h27km±5km, n35, σ0.69/51, 8C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DREC	**Desert Rsrch C**	0.12	154	⇑*i*	P	**Pb**	**01 50 56.8**	**0.0**
DREC				*i*	S	**Sb**	**01 51 00.3**	**0.0**
WEMD	**Westmorland, C**	0.14	334	⇓*e*	P	**Pn**	**01 50 57.4**	**-0.8**
WEMD				*i*	S	**Sb**	**01 51 01.1**	**+0.6**
COK2	**Cook Ranch 2**	0.19	251	⇑*i*	P	**Pb**	**01 50 57.7**	**+0.2**
WESC	**Westside Schoo**	0.24	230	⇓*e*	P	**Pb**	**01 50 58.4**	**+0.2**
SWSC	**Sam W. Stewart** baz=102,SNR=158	0.24	277		P	**Pb**	**01 50 58.4**	**+0.2**
SWSC					S	**Sb**	**01 51 02.0**	**-0.6**
SWSC	**Sam W. Stewart** baz=102	0.24	277	⇑*i*	P	**Pb**	**01 50 58.4**	**+0.2**
SGL	**Mount Signal**	0.32	214	⇓*i*	P	**Pb**	**01 50 59.3**	**0.0**
COA	**Coachella**	0.33	99	⇑*i*	P	**Pn**	**01 51 00.4**	**-0.4**
JARAX	**Ej. Heriberto**	0.38	189	*e*	S	**Sb**	**01 51 05.7**	**-0.1**
CRR	**Carrizo Plain**	0.39	266	⇑*i*	P	**Pb**	**01 51 00.8**	**+0.6**
YUH2	**Yuha Desert**	0.44	232	⇓*e*	P	**Pb**	**01 51 01.3**	**+0.2**
YUH2				*e*	S	**Sb**	**01 51 07.2**	**-0.1**
EMSC	**East Mesa**	0.48	111	*e*	P	**Pn**	**01 51 02.9**	**+0.1**
CPBX	**Cerro Prieto**	0.52	161	*e*	P	**Pn**	**01 51 03.2**	**-0.3**
CPBX				*e*	S	**Sb**	**01 51 10.8**	**+1.1**
CPBX				⇑*e*			01 51 14.0	
CPBX	comp=E,2μm,0.2s				IAML		01 51 14.0	
IKP	**In-Ko-Pah, Jac** baz=64,SNR=42	0.57	242		P	**Pb**	**01 51 03.8**	**+0.5**
IKP					S	**Sb**	**01 51 11.1**	**0.0**
IKP	**In-Ko-Pah, Jac**	0.57	242	*e*	P	**Pb**	**01 51 03.8**	**+0.5**
IKP				*e*	S	**Sb**	**01 51 10.8**	**-0.3**
RMX	**La Rumorosa**	0.57	237	⇓*i*	P	**Pb**	**01 51 03.7**	**+0.3**
RMX				*e*	S	**Sb**	**01 51 10.8**	**-0.4**
RMX	comp=E,430nm,0.2s				IAML		01 51 11.1	
RMX				⇓*e*			01 51 11.1	
GLA	**Glamis** baz=255,SNR=30	0.59	77		P	**Pn**	**01 51 04.5**	**+0.1**
GLA					S	**Sn**	**01 51 12.5**	**-0.7**
GLA	**Glamis** baz=255	0.59	77	⇑*i*	P	**Pn**	**01 51 04.5**	**+0.1**
GLA				*e*	S	**Sn**	**01 51 13.3**	**0.0**
PESCX	**Ej. Pescaderos**	0.67	136	*e*	P	**Pn**	**01 51 06.0**	**+0.6**
AGSX	**Ej. Aguas Cali**	0.71	155	*e*	P	**Pn**	**01 51 06.5**	**+0.5**
BC3	**Big Chuckawall** baz=184,SNR=42	0.74	4		P	**Pn**	**01 51 06.7**	**+0.1**
MONP2	**Monument Peak** baz=90,SNR=67	0.77	269		P	**Pn**	**01 51 07.1**	**+0.1**
MONP2					S	**Sn**	**01 51 17.5**	**-0.3**
MONP2	**Monument Peak** baz=90	0.77	269	⇑*e*	P	**Pn**	**01 51 07.1**	**+0.1**
MONP2				*e*	S	**Sn**	**01 51 17.7**	**-0.2**
MONP2	comp=N,111nm,0.2s				IAML		01 51 18.4	
MONP2				⇓*e*			01 51 18.4	
RHX	**Rio Hardy**	0.80	166	*e*	P	**Pn**	**01 51 07.4**	**+0.1**
ALAMX	**Rancho Alamar**	0.92	190	*e*	P	**Pb**	**01 51 09.5**	**+0.4**
ALAMX				*e*	S	**Sb**	**01 51 21.6**	**+0.6**
ALAMX	comp=N,121nm,0.2s				IAML		01 51 22.7	
ALAMX	comp=E,126nm,0.4s				IAML		01 51 24.8	
ALAMX				⇓*e*			01 51 24.8	
BAR	**Barrett**	1.01	257	*e*	P	**Pb**	**01 51 10.7**	**+0.1**
BAR				*e*	S	**Sn**	**01 51 23.6**	**+0.1**
PFO	**Pinyon Flats O** baz=132,SNR=12	1.05	311		P	**Pb**	**01 51 11.5**	**0.0**
PFO					S	**Sb**	**01 51 25.2**	**+0.2**
EML	**El Monte Cty P**	1.12	269	*e*	P	**Pb**	**01 51 12.2**	**-0.3**
BELC	**Belle Mtn. Jos** baz=160	1.16	340		P	**Pb**	**01 51 13.4**	**+0.1**
BELC					S	**Sb**	**01 51 29.2**	**+1.3**
SJX	**San Joaquin**	1.21	198	⇓*e*	P	**Pn**	**01 51 10.7**	**-2.3**
OLP	**Otay Lakes Par**	1.23	256	*e*	P	**Pb**	**01 51 14.3**	**-0.2**
IRM	**Iron Mountain** baz=194,SNR=62	1.28	14		P	**Pb**	**01 51 15.1**	**-0.1**
109C	**Camp Elliot, M** baz=89	1.34	269	Sb	Sb	**Sb**	**01 51 34.1**	**+1.1**
MURC	**Murrieta** baz=116	1.57	296	Sb	Sb	**Sb**	**01 51 42.0**	**+2.4**
GMRC	**Granite Mounta** baz=176,SNR=8.6	1.87	356	P	P	**Pb**	**01 51 23.8**	**-1.6**

*JMA **03** 01:56:03.7±0.1, 25°.1×122°.4E±0°.3, h20km, MV2.2/9, TAIWAN REGION*
*TAP **03** 01:56:04.1, 24°.58N×122°.35E, h12km±1km, ML2.7, C*
ISC 03 01:56:02.9±1.1, 24°.56N±0°.03×122°.38E±0°.03, h19km±2km, n41, σ0.69/61, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2** baz=214	0.20	224	*i*	P	**Pg**	**01 56 08.2**	**+0.4**
EOS2					S	**Sg**	**01 56 12.3**	**+1.2**
EOS3	**EOS3** baz=186	0.28	192	*i*	P	**Pb**	**01 56 10.0**	**+0.7**
EOS4	**EOS4** baz=184	0.44	188	*i*	P	**Pn**	**01 56 12.9**	**-1.0**
TWC	**Suao** baz=273	0.49	276		P	**Pg**	**01 56 12.1**	**-0.8**
TWC				*e*	S	**Sb**	**01 56 20.4**	**+0.6**
ESAO	**Su ao** baz=269	0.49	272	*e*	P	**Pg**	**01 56 12.4**	**-0.5**
ESAO				*e*	S	**Sg**	**01 56 19.8**	**+0.2**
EWUT	**Wuta** baz=255	0.56	258	*e*	P	**Pb**	**01 56 14.3**	**+0.2**
EWUT				*e*	S	**Sg**	**01 56 21.8**	**0.0**
TWB1	**Santiao Chiao** baz=322	0.57	321	*e*	P	**Pg**	**01 56 14.1**	**-0.3**
YOJ	**Yonaguni jima** baz=100	0.58	100	*e*	P	**Pn**	**01 56 16.0**	**-0.2**
YOJ				*e*	S	**Sn**	**01 56 25.8**	**+0.6**
YOJ	**Yonaguni jima**	0.58	100	*e*	P	**Pn**	**01 56 15.2**	**-1.0**
ENA	**Nanau** baz=254	0.60	257	*i*	P	**Pg**	**01 56 15.6**	**+0.7**
ENA				*e*	S	**Sg**	**01 56 22.6**	**-0.4**
NDS	**Dongshan** baz=275	0.61	277	*e*	S	**Sg**	**01 56 24.0**	**+0.6**
EAHA	**Aohua** baz=246	0.63	249	*e*	S	**Sb**	**01 56 23.0**	**-0.7**
TIPB	**Shuangxi** baz=309	0.65	309	*i*	P	**Pb**	**01 56 15.5**	**-0.2**
TWE	**Neicheng** baz=282	0.67	284	*i*	P	**Pb**	**01 56 15.6**	**-0.4**
TWE	baz=282				S	**Sg**	**01 56 25.7**	**+0.5**
SXI1	**Grass Mountain** baz=319	0.70	319	*e*	P	**Pb**	**01 56 16.8**	**+0.2**
SXI1	baz=319				S	**Sg**	**01 56 26.8**	**+0.5**
NWF	**Wu-fen Shan** baz=313	0.75	313	*e*	S	**Sg**	**01 56 28.2**	**+0.6**
WFSB	**Wu-fen Shan** baz=313	0.75	313	*e*	P	**Pn**	**01 56 18.5**	**0.0**
WFSB	baz=313				S	**Sg**	**01 56 27.6**	**+0.1**
ENTT	**Nioudou** baz=274	0.75	276	*e*	S	**Sg**	**01 56 28.3**	**+0.7**
FUSB	**Fushanzhiwuyua** baz=284	0.75	285		P	**Pb**	**01 56 17.4**	**0.0**
FUSB	baz=284				S	**Sb**	**01 56 27.5**	**+0.2**
LATG	**Datong** baz=266	0.78	268	*e*	P	**Pg**	**01 56 18.4**	**+0.1**
LATG	baz=266			*e*	S	**Sb**	**01 56 28.1**	**-0.1**
NACB	**Ninganchiao** baz=239	0.82	242	*e*	P	**Pn**	**01 56 19.3**	**-0.1**
NACB	baz=239			*e*	S	**Sb**	**01 56 28.9**	**-0.3**
NWLT	**Wulai** baz=284	0.83	285	*e*	S	**Sb**	**01 56 29.7**	**+0.1**
ETLH	**Xiulin Townshi** baz=244	0.89	247	*e*	P	**Pb**	**01 56 19.9**	**0.0**
NNSB	**Datong** baz=260	0.92	262	*e*	S	**Sg**	**01 56 33.1**	**0.0**
YHNB	**Yeheng** baz=275	0.92	277		P	**Pg**	**01 56 20.8**	**-0.2**
YHNB	baz=275			*e*	S	**Sb**	**01 56 32.7**	**+0.4**
NNS	**Nan Shan** baz=260	0.93	263	*e*	S	**Sg**	**01 56 33.3**	**-0.1**
NSK	**Sanguang** baz=275	0.94	277	*e*	P	**Pg**	**01 56 21.1**	**-0.1**
NSK	baz=275			*e*	S	**Sb**	**01 56 32.6**	**-0.2**
YM01	**YM01** baz=308	0.94	308	*e*	P	**Pb**	**01 56 20.8**	**+0.1**
YM01	baz=308			*e*	S	**Sb**	**01 56 32.7**	**-0.1**
FUSS	**Fushou** baz=251	1.08	253	*e*	P	**Pg**	**01 56 23.9**	**-0.1**
FUSS	baz=251			*e*	S	**Sg**	**01 56 39.3**	**+0.9**
TWT	**Tachien** baz=253	1.14	255	*e*	P	**Pg**	**01 56 27.0**	**+1.9**
WARBT	**Fenglin Townsh** baz=225	1.24	228	*e*	P	**Pb**	**01 56 26.0**	**+0.3**
LIOB	**Emei** baz=273	1.25	274	*e*	S	**Sg**	**01 56 44.0**	**+0.6**
NSTT	**Nanjuang** baz=272	1.26	273	*e*	P	**Pg**	**01 56 28.4**	**+1.0**
NSTT	baz=272			*e*	S	**Sg**	**01 56 43.9**	**0.0**
WUSB	**Renai** baz=242	1.29	244	*e*	S	**Sg**	**01 56 46.6**	**+1.9**
WHP	**Taichung City** baz=256	1.34	258	*e*	P	**Pg**	**01 56 30.2**	**+1.3**
VWDT	**VWDT** baz=233	1.39	235	*e*	P	**Pg**	**01 56 29.1**	**-0.8**
VWDT	baz=233			*e*	S	**Sg**	**01 56 47.1**	**-0.9**
SSLB	**Suanglung** baz=238	1.52	240	*e*	P	**Pg**	**01 56 31.4**	**-0.8**
SSLB	baz=238			*e*	S	**Sg**	**01 56 51.5**	**-0.5**
JKRS	**Kuro-shima**	1.52	102	*e*	S	**Sb**	**01 56 49.7**	**+0.3**
YULB	**Yu-li** baz=219	1.53	221	*e*	S	**Sb**	**01 56 50.4**	**+0.6**
JIJ	**Ishigaki jima**	1.62	97	P		**Pn**	**01 56 30.9**	**+0.5**
JIJ				*e*	S	**Sb**	**01 56 51.3**	**-0.9**
EDH	**Donghe** baz=211	1.86	212	*e*	S	**Sn**	**01 56 55.3**	**-1.6**

*SFS **03** 02:04:16.1, 37°.09N×4°.36W, h10km, ML1.1/4, ML1.6/4, MLv0.8/4*
MDD 03 02:04:16.5±0.8, 37°.08N×4°.34W, h11km±3km, mb_Lg1.8/3, 1C, Error ellipse: s-maj=6.8km s-min=3.6km az=153.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGOR	**Sierra Gorda,**	0.19	82		Pg	Pg	02 04 20.2	-0.5
EGOR					Sg	Sg	02 04 23.1	-0.5
EGOR	**Sierra Gorda,**	0.19	82		Pg	Pg	02 04 20.2	-0.5
EGOR					Sg	Sg	02 04 23.2	-0.4
EGOR				*i*	Vmb_Lg		02 04 25.7	
EGOR	**Sierra Gorda,**	0.19	82	⇑	Pg	Pg	02 04 20.2	-0.5
EGOR					Sg	Sg	02 04 22.9	-0.6
EGOR				*i*	Vmb_Lg		02 04 25.5	
EMAL	**Malaga-Limoner**	0.33	192		Pg	Pg	02 04 22.5	-0.6
EMAL					Sg	Sg	02 04 27.0	-0.4
ELGU	**Los Guajares,**	0.61	110		Pg	Pg	02 04 27.5	-0.9
ELGU					Sg	Sg	02 04 36.3	-0.2
ELGU	**Los Guajares,**	0.61	110		Pg	Pg	02 04 27.6	-0.8
ELGU					Sg	Sg	02 04 36.5	0.0
ELGU				*i*	Vmb_Lg		02 04 38.5	
ELGU	**Los Guajares,**	0.61	110		Pg	Pg	02 04 27.7	-0.7
ELGU					Sg	Sg	02 04 35.9	-0.6
ELGU				*i*	Vmb_Lg		02 04 37.7	
EMIJ	**Mijas**	0.62	214		Pg	Pg	02 04 28.5	-0.1
EMIJ					Sg	Sg	02 04 36.5	-0.2
EMIJ				*i*	Vmb_Lg		02 04 51.9	
EMIJ	**Mijas**	0.62	214		Pg	Pg	02 04 28.3	-0.3
EMIJ					Sg	Sg	02 04 36.1	-0.7
EQTA	**Presa de Quent**	0.73	80		Pg	Pg	02 04 29.6	-1.0
EQUE	**Quentar**	0.73	80		Sg	Sg	02 04 39.9	-0.3
EADA	**Adamuz**	1.10	350		Sg	Sb	02 04 51.5	-0.3
EADA	**Adamuz**	1.10	350		Pg	Pn	02 04 38.2	+0.4
EADA					Sg	Sn	02 04 54.1	+1.1
EADA				*i*	Vmb_Lg		02 04 55.6	
**E

	comp=N,96nm,0.5s						
RAFI				AML	AML	02 30 14.4	
	comp=E,58nm,0.3s						
IAZR	**Azarshahr**	**3.01**	**357**	Pn	**Pb**	**02 29 33.9**	**-1.6**
ISRB	**Sarab**	**3.37**	**20**	Pn	**Pb**	**02 29 38.2**	**-3.4**
ISHB	**Shabestar**	**3.64**	**353**	Pn	**Pb**	**02 29 42.6**	**-3.6**
QAMS	**Qamsar**	**4.41**	**101**	Pn	**Pn**	**02 29 51.6**	**+2.4**
JHBN	**Jahan bin**	**4.46**	**122**	Pn	**Pn**	**02 29 52.3**	**+2.5**
ZNGN	**Zangian**	**4.65**	**122**	Pn	**Pn**	**02 29 55.3**	**+2.7**

*IDC **03** 02:32:24.2±1.2,9.2°24S×25.2°88E,h0km,mb3.7/3, mbtmp4.0/8,ML4.2/3,MS3.3/2,Error ellipse: s-maj=37.3km s-min=21.0km az=96.0*

*NEIC **03** 02:32:25.2±1.9,9.2°25S±0.0°09×25.2°9E±0.0°2,h10km±2km, mb4.1/8,Error ellipse: s-maj=27.1km s-min=12.1km az=110.0*

ISC 03 02:32:24.1±0.7,9°31S±0.0°06×26°02E±0.0°07,h10km,n25, σ2§74/29,mb3.8/4,Zaire

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.30**	**161**	Pn	**Pn**	**02 34 01.4**	**+4.2**
LSZ	**Lusaka**	**6.30**	**161**	Pn	**Pn**	**02 34 01.2**	**+3.9**
	14nm,0.3s,baz=352,slow=14,SNR=70						
LSZ				Sn	**Sn**	**02 35 10.2**	**+0.8**
	8.8nm,0.3s,baz=290,slow=18,SNR=7.0						
LSZ				Lg	Lg	02 35 40.5	
	6.3nm,0.3s,baz=81,slow=23,SNR=3.0						
MBAR	**Mbarara**	**9.84**	**29**	Pn	**Pn**	**02 34 47.0**	**+1.1**
MBAR	**Mbarara**	**9.84**	**29**	Pn	**Pn**	**02 34 48.2**	**+2.3**
	1.9nm,0.3s,baz=17,slow=21,SNR=6.0						
MBAR				Sn	**Sn**	**02 36 31.5**	**-5.1**
	1.8nm,0.3s,baz=49,slow=19,SNR=1.7						
MBAR				Lg	Lg	02 37 29.2	
	3.1nm,0.3s,baz=281,slow=21,SNR=11 4.9nm,0.2s						
ZOMB	**Zomba**	**10.93**	**124**	*e*Pn	**Pn**	**02 35 02.4**	**+1.6**
ZOMB				*e*Sn	**Sn**	**02 36 59.7**	**-3.6**
ZOMB	**Zomba**	**10.93**	**124**	*e*Pn	**Pn**	**02 35 02.4**	**+1.6**
ZOMB				*e*Sn	**Sn**	**02 36 59.7**	**-3.6**
TSUM	**Tsumeb**	**12.79**	**219**	Pn	**Pn**	**02 35 25.5**	**-0.8**
TSUM	**Tsumeb**	**12.79**	**219**	Pn	**Pn**	**02 35 25.2**	**-1.1**
	1.6nm,0.3s,baz=33,slow=15,SNR=2.3						
TSUM				Sn	**Sn**	**02 37 40.3**	**-8.6**
	1.4nm,0.3s,baz=294,slow=17,SNR=4.5						
KIBK	**Kibwezi**	**13.81**	**61**	Pn	**Pn**	**02 35 39.0**	**-1.2**
KMBO	**Kilima Mbogo**	**13.82**	**55**	Pn	**Pn**	**02 35 41.2**	**+0.8**
KMBO	**Kilima Mbogo**	**13.82**	**55**	Pn	Pn	02 35 36.1	-4.3
	0.2nm,0.3s,baz=58,slow=19,SNR=2.3						
KMBO				Sn	Sn	02 38 01.8	-12
	0.2nm,0.3s,baz=24,slow=18,SNR=1.5						
KMBO				Lg	Lg	02 39 38.8	
	0.4nm,0.3s,baz=102,slow=23,SNR=7.1						
LBTB	**Lobatse**	**15.63**	**181**	Pn	**Pn**	**02 36 05.2**	**+0.5**
LBTB	**Lobatse**	**15.63**	**181**	Pn	**Pn**	**02 36 05.7**	**+1.0**
	0.5nm,0.3s,baz=344,slow=14,SNR=7.1						
LBTB				Lg	Lg	02 40 35.4	
	0.6nm,0.3s,baz=340,slow=9.9,SNR=8.5						
LBTB				LR	LR	02 41 35.6	
	comp=Z,60nm,20.0s,baz=194,slow=35 1.5nm,0.4s						
LODK	**Lodwar**	**15.70**	**37**	Pn	**Pn**	**02 36 05.8**	**+0.2**
WIN	**Windhoek**	**15.72**	**212**	Pn	**Pn**	**02 36 06.0**	**0.0**
WIN				IAmb	IAmb	02 36 25.7	
	comp=Z,23nm,1.5s						
BOSA	**Boshof**	**19.22**	**182**		**Pn**	**02 36 50.2**	**+0.6**
BOSA				IAmb	IAmb	02 36 54.4	
	comp=Z,13nm,1.4s						
BOSA	**Boshof**	**19.22**	**182**	P	**Pn**	**02 36 51.6**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=12,slow=10,SNR=15						
BOSA				LR	LR	02 43 51.8	
	comp=Z,121nm,18.0s,baz=202,slow=36 comp=Z,3.3nm,0.7s						
SOE	**Somerset East**	**23.30**	**181**	P	**P**	**02 37 32.6**	**+0.3**
SUR	**Sutherland**	**23.46**	**191**	P	**P**	**02 37 36.5**	**+2.4**
TOA0	**Torodi Ar. Sit**	**32.88**	**312**	P	**P**	**02 38 58.5**	**-0.1**
TOA0				IAmb	IAmb	02 39 05.6	
	comp=Z,2.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**32.88**	**312**	P	**P**	**02 38 58.1**	**-0.6**
TORD				IAmb	IAmb	02 39 06.1	
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**32.88**	**312**	P	**P**	**02 38 59.4**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=114,slow=9.3,SNR=5.5 comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**74.94**	**36**	P	**P**	**02 44 06.6**	**+1.1**
MKAR	**Makanchi Array**	**74.94**	**36**	P	**P**	**02 44 06.4**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=256,slow=5.2,SNR=6.0 comp=Z,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**75.00**	**32**	P	**P**	**02 44 08.1**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=243,slow=6.1,SNR=2.5 comp=Z,0.2nm,0.5s						

IDC 03 02:40:14.7±3.4,29°91S×178°31W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=281.4km s-min=51.4km az=169.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.87**	**267**	P	P	02 48 14.7	-0.3
	0.3nm,0.5s,baz=100,slow=6.5,SNR=5.4 0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.81**	**272**	P	P	02 48 22.7	+0.1
	0.7nm,0.4s,baz=110,slow=8.0,SNR=14 0.7nm,0.4s						
FINES	**FINESS Array B**	**144.59**	**340**	PKP	PKPdf	02 59 53.0	+0.4
	0.9nm,0.3s,baz=44,slow=3.7,SNR=18						
MMAI	**Mount Meron Ar**	**151.15**	**285**	PKPbc	PKPbc	03 00 10.2	0.0
	0.2nm,0.4s,baz=84,slow=5.9,SNR=5.8						
BRTR	**Keskin Array B**	**152.13**	**299**	PKPbc	PKPbc	03 00 11.2	-1.1
	0.1nm,0.4s,baz=108,slow=3.6,SNR=1.5						

*NEIC **03** 02:57:51.4±2.6,55.2°88N±0.0°09×149.2°2W±0.0°1,h10km±7km, ML3.5/36,ML3.2(AEIC),Error ellipse: s-maj=13.2km s-min=9.2km az=161.0*

*AEIC **03** 02:57:55.1±2.7,55.2°8N±0.0°1×149.2°1W±0.0°1,h5km±8km,Error ellipse: s-maj=17.7km s-min=9.8km az=176.0*

ISC 03 02:57:49.2±2.4,55°8N±0.1×149°05W±0.0°06,h10km,n98, σ1§16/107,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.77**	**304**		**Pn**	**02 58 33.6**	**+0.1**
OHAK					**Sn**	**02 59 05.1**	**-1.9**
OHAK	**Old Harbor**	**2.77**	**304**	P	**Pn**	**02 58 33.6**	**+0.1**
	baz=121						
OHAK				S	**Sn**	**02 59 05.0**	**-1.9**
	baz=121						
KDAK	**Kodiak Island**	**2.80**	**317**		**Pn**	**02 58 35.1**	**+1.0**
KDAK					**Sn**	**02 59 06.1**	**-1.8**
SII	**Sitkinak Islan**	**2.98**	**288**	Pn	**Pn**	**02 58 35.8**	**-0.8**
SII				IAML		03 00 12.5	
	comp=E,115nm,1.5s						
SII				IAML		03 00 29.3	
	comp=N,141nm,1.3s						
Q20K	**Shuyak Island**	**3.38**	**329**	P	**Pn**	**02 58 43.4**	**+1.4**
	baz=147						
Q20K				S	**Sn**	**02 59 21.6**	**-0.5**
	baz=147						
SYI	**Shuyak Island**	**3.38**	**329**		**Pn**	**02 58 43.5**	**+1.5**
SYI					**Sn**	**02 59 20.9**	**-1.2**
CNPM	**China Poot**	**3.95**	**344**		**Pn**	**02 58 51.3**	**+1.5**
CNPM				IAML		02 59 41.6	
	comp=N,27nm,1.2s						
Q19K	**Cape Douglas,**	**4.03**	**324**		**Pn**	**02 58 52.4**	**+1.5**
Q19K				IAML		03 00 09.7	
	comp=N,110nm,1.2s						
Q19K	**Cape Douglas,**	**4.03**	**324**	P	**Pn**	**02 58 52.4**	**+1.5**
	baz=140						
KAHG	**Katmai Hook Gl**	**4.05**	**315**		**Pn**	**02 58 53.3**	**+2.0**
BRSE	**Bradley Lake S**	**4.08**	**348**		**Pn**	**02 58 53.5**	**+1.8**
BRSE					**Sn**	**02 59 37.7**	**-1.8**
BRSE	**Bradley Lake S**	**4.08**	**348**	P	**Pn**	**02 58 53.5**	**+1.8**
	baz=167						
BRSE				S	**Sn**	**02 59 37.7**	**-1.8**
	baz=167						
BRLK	**Bradley Lake**	**4.12**	**347**		**Pn**	**02 58 53.6**	**+1.3**
BRLK				IAML		02 59 44.8	
	comp=E,34nm,0.4s						
BRLK				IAML		02 59 45.3	
	comp=N,29nm,1.3s						
ACHA	**Angle Creek He**	**4.22**	**308**		**Pn**	**02 58 55.1**	**+1.5**
ANCK	**Angle Creek**	**4.29**	**307**		**Pn**	**02 58 56.0**	**+1.5**
P23K	**Montague Islan**	**4.33**	**11**		**Pn**	**02 58 56.8**	**+1.8**
P23K	**Montague Islan**	**4.33**	**11**	P	**Pn**	**02 58 56.8**	**+1.8**
	baz=193						
KAHC	**Katmai Hardscr**	**4.34**	**314**		**Pn**	**02 58 56.7**	**+1.4**
KAHC	**Katmai Hardscr**	**4.34**	**314**	P	**Pn**	**02 58 56.7**	**+1.4**
	baz=130						
P19K	**Oil Pt**	**4.49**	**332**		**Pn**	**02 58 58.7**	**+1.4**
P19K					**Sn**	**02 59 48.4**	**-1.1**
P19K				IAML		02 59 56.7	
	comp=N,44nm,1.4s						
P19K				IAML		03 00 01.4	
	comp=E,50nm,1.3s						
P19K	**Oil Pt**	**4.49**	**332**	P	**Pn**	**02 58 58.8**	**+1.5**
	baz=149						
P19K				S	**Sn**	**02 59 48.5**	**-1.1**
	baz=149						
Q17K	**Contact Creek**	**4.50**	**307**	P	**Pn**	**02 58 58.8**	**+1.3**
	baz=121						
O20K	**Slope Mountain**	**4.72**	**338**		**Pn**	**02 59 01.9**	**+1.3**
O20K	**Slope Mountain**	**4.72**	**338**	P	**Pn**	**02 59 01.8**	**+1.3**
	baz=155						
O22K	**Cooper Landing**	**4.74**	**356**	Pn	**Pn**	**02 59 01.7**	**+1.1**
IVE	**Iliamna Volcan**	**4.76**	**335**		**Pn**	**02 59 02.0**	**+1.0**
SLKM	**Skilak Lake**	**4.79**	**353**		**Pn**	**02 59 02.7**	**+1.3**
HIN	**Hinchinbrook I**	**4.83**	**15**		**Pn**	**02 59 01.7**	**-0.2**
HIN				IAML		03 00 02.2	
	comp=N,54nm,0.7s						
HIN				IAML		03 01 25.0	
	comp=E,46nm,1.4s						
KAIM	**Kayak Island**	**4.84**	**29**		**Pn**	**02 59 02.0**	**-0.1**
KAIM				IAML		03 01 41.1	
	comp=N,56nm,1.5s						
KAIM	**Kayak Island**	**4.84**	**29**	P	**Pn**	**02 59 02.4**	**+0.3**
	baz=213						
P18K	**Big Mountain,**	**4.92**	**320**		**Pn**	**02 59 04.2**	**+0.9**
P18K	**Big Mountain,**	**4.92**	**320**	P	**Pn**	**02 59 03.7**	**+0.5**
	baz=135						
R16K	**Pilot Point**	**5.04**	**294**		**Pn**	**02 59 05.3**	**+0.5**
R16K				IAML		03 00 16.5	
	comp=N,53nm,1.5s						
R16K	**Pilot Point**	**5.04**	**294**	P	**Pn**	**02 59 05.1**	**+0.4**
	baz=108						
EYAK	**Cordova Ski Ar**	**5.10**	**19**		**Pn**	**02 59 05.4**	**-0.2**
EYAK	**Cordova Ski Ar**	**5.10**	**19**	P	**Pn**	**02 59 05.9**	**+0.3**
	baz=202						
RSO	**Redoubt South**	**5.10**	**339**	Pn	**Pn**	**02 59 06.4**	**+0.6**
RDT	**Redoubt**	**5.13**	**341**		**Pn**	**02 59 07.1**	**+0.9**
RDWB	**Redoubt West**	**5.14**	**339**		**Pn**	**02 59 06.8**	**+0.5**
SUCK	**Suckling Hills**	**5.15**	**31**		**Pn**	**02 59 06.5**	**+0.3**
SUCK				IAML		03 00 08.8	
	comp=N,36nm,0.6s						
SUCK				IAML		03 00 09.2	
	comp=E,38nm,1.5s						
RAGM	**Ragged Mountai**	**5.18**	**25**	Pn	**Pn**	**02 59 07.0**	**+0.3**
NICHA	**Nichawak Mount**	**5.23**	**29**		**Pn**	**02 59 07.8**	**+0.4**
HMT	**Hamilton**	**5.24**	**27**		**Pn**	**02 59 07.6**	**+0.1**
O18K	**Koktuh Hills**	**5.25**	**324**		**Pn**	**02 59 08.8**	**+1.1**
O18K				IAML		02 59 53.4	
	comp=N,11nm,1.3s						
O18K				IAML		03 00 04.0	
	comp=E,8.4nm,1.5s						
O18K	**Koktuh Hills**	**5.25**	**324**	P	**Pn**	**02 59 08.5**	**+0.7**
	baz=139						
P17K	**Kvichak River**	**5.26**	**314**		**Pn**	**02 59 09.4**	**+1.6**
P17K	**Kvichak River**	**5.26**	**314**	P	**Pn**	**02 59 09.4**	**+1.6**
	baz=128						
GOAT	**Goat Mountain**	**5.34**	**24**		**Pn**	**02 59 10.0**	**+1.1**
BERG	**Berg Lake**	**5.43**	**29**		**Pn**	**02 59 10.2**	**0.0**
BERG				IAML		03 00 15.5	
	comp=E,40nm,0.8s						
BERG				IAML		03 00 16.2	
	comp=N,39nm,0.8s						
KHIT	**Khitrov Hills**	**5.60**	**31**		**Pn**	**02 59 12.8**	**+0.3**
SUA	**Susitna One**	**5.78**	**352**	Pn	**Pn**	**02 59 16.1**	**+1.1**
MESA	**MESA**	**5.81**	**38**	Pn	**Pn**	**02 59 16.5**	**+1.0**
N19K	**Bonanza Creek**	**5.81**	**333**		**Pn**	**02 59 16.0**	**+0.5**
N19K	**Bonanza Creek**	**5.81**	**333**	P	**Pn**	**02 59 15.9**	**+0.4**
	baz=149						
P16K	**Nushagak River**	**5.84**	**308**		**Pn**	**02 59 16.6**	**+0.9**
P16K	**Nushagak River**	**5.84**	**308**	P	**Pn**	**02 59 16.6**	**+0.9**
	baz=121						
O17K	**Koliganek Bris**	**5.88**	**316**		**Pn**	**02 59 17.7**	**+1.3**
O17K	**Koliganek Bris**	**5.88**	**316**	P	**Pn**	**02 59 17.7**	**+1.3**
	baz=130						
CRQE	**Cirque**	**5.90**	**30**	P	**Pn**	**02 59 17.0**	**+0.3**
	baz=215						
STLK	**Strandline Lak**	**5.93**	**347**		**Pn**	**02 59 18.6**	**+1.6**
KLU	**Klutina**	**5.97**	**15**		**Pn**	**02 59 17.7**	**+0.2**
KLU	**Klutina**	**5.97**	**15**	P	**Pn**	**02 59 18.1**	**+0.6**
	baz=198						
BAGL	**Bagley Icefiel**	**6.00**	**35**		**Pn**	**02 59 18.4**	**+0.5**
ISLE	**Juniper Island**	**6.00**	**33**		**Pn**	**02 59 18.2**	**0.0**
N18K	**Kilae Creek**	**6.11**	**327**	Pn	**Pn**	**02 59 20.3**	**+0.8**
SCM	**Sheep Creek Mo**	**6.15**	**8**	Pn	**Pn**	**02 59 21.3**	**+1.3**
O16K	**Kokwok River B**	**6.18**	**312**	Pn	**Pn**	**02 59 21.9**	**+1.5**
KIAG	**Kiagna River**	**6.25**	**31**		**Pn**	**02 59 21.6**	**0.0**
TABL	**Table Mountain**	**6.28**	**39**		**Pn**	**02 59 22.9**	**+0.9**
GRNC	**Granite Creek**	**6.29**	**35**		**Pn**	**02 59 22.3**	**+0.2**
N25K	**Chitina, Valde**	**6.29**	**20**		**Pn**	**02 59 22.6**	**+0.5**
N25K	**Chitina, Valde**	**6.29**	**20**	P	**Pn**	**02 59 22.4**	**+0.4**
	baz=204						
GLB	**Gilahina Butte**	**6.31**	**24**	Pn	**Pn**	**02 59 22.3**	**+0.1**
PNL	**Peninsula**	**6.48**	**49**		**Pn**	**02 59 25.6**	**+1.0**
PNL	**Peninsula**	**6.48**	**49**	P	**Pn**	**02 59 25.5**	**+1.0**
	baz=237						
BARN	**Barnard Glacie**	**6.57**	**33**		**Pn**	**02 59 26.5**	**+0.5**
LOGN	**Logan Glacier**	**6.60**	**37**	Pn	**Pn**	**02 59 26.7**	**+0.3**
M18K	**Stony River**	**6.74**	**331**		**Pn**	**02 59 28.8**	**+0.8**
M18K	**Stony River**	**6.74**	**331**	P	**Pn**	**02 59 28.8**	**+0.8**
	baz=146						
O15K	**Ungalikthiuk R**	**6.74**	**305**		**Pn**	**02 59 29.1**	**+0.9**
O15K	**Ungalikthiuk R**	**6.74**	**305**	P	**Pn**	**02 59 29.1**	**+0.9**
	baz=116						
N16K	**Nishlik Lake**	**6.98**	**316**		**Pn**	**02 59 32.2**	**+0.8**
N16K	**Nishlik Lake**	**6.98**	**316**	P	**Pn**	**02 59 32.2**	**+0.8**
	baz=129						
L19K	**White Mountain**	**7.09**	**337**	Pn	**Pn**	**02 59 33.6**	**+0.6**
M17K	**Holitna River**	**7.14**	**326**	Pn	**Pn**	**02 59 35.0**	**+1.4**
O29M	**Mount Kennedy**	**7.17**	**46**		**Pn**	**02 59 36.1**	**+1.9**
O29M	**Mount Kennedy**	**7.17**	**46**	P	**Pn**	**02 59 35.7**	**+1.5**
	baz=236						
P29M	**Windy Craggy**	**7.19**	**53**		**Pn**	**02 59 36.3**	**+2.0**
P29M	**Windy Craggy**	**7.19**	**53**	P	**Pn**	**02 59 36.1**	**+1.9**
	baz=242						
N15K	**Kwethluk River**	**7.34**	**311**	Pn	**Pn**	**02 59 38.3**	**+1.9**
S31K	**Pelican**	**7.36**	**67**	Pn	**Pn**	**02 59 36.8**	**+0.3**
M16K	**Timber Creek**	**7.40**	**319**	Pn	**Pn**	**02 59 38.6**	**+1.4**
O14K	**Tigyukauivet M**	**7.45**	**303**	Pn	**Pn**	**02 59 38.8**	**+1.0**
M27K	**Edge Creek, AK**	**7.56**	**26**	Pn	**Pn**	**02 59 39.8**	**+0.2**
HYT	**Haines Junctio**	**7.91**	**45**	Pn	**Pn**	**02 59 45.8**	**+1.5**
BCAR	**Beaver Creek A**	**8.19**	**24**	Pn	**Pn**	**02 59 49.2**	**+1.1**
M13K	**Dall Lake**	**8.88**	**307**	Pn	**Pn**	**02 59 58.8**	**+1.3**
P32M	**Atlin**	**9.05**	**59**	Pn	**Pn**	**03 00 01.8**	**+1.9**

IDC 03 03:00:53.6±8.0,18°29S×172°70W,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=349.3km s-min=37.4km az=141.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.90**	**259**	P	P	03 09 48.8	-0.5
	0.1nm,0.3s,baz=97,slow=7.1,SNR=7.7 0.1nm,0.3s						
ASAR	**Alice Springs**	**49.91**	**254**	P	P	03 09 49.7	+0.3
	0.4nm,0.6s,baz=98,slow=8.4,SNR=7.2 0.4nm,0.6s						
ILAR	**Eielson Array**	**85.14**	**11**	P	P	03 13 31.1	0.0
	0.4nm,1.0s,baz=216,slow=5.6,SNR=2.8 0.4nm,1.0s						

*IDC **03** 03:12:46.0±1.3,40.2°91N×125.2°20W,h0km,mb3.9/6, mbtmp3.9/13,ML3.6/7,MS3.4/19,Error ellipse: s-maj=18.7km s-min=12.8km az=34.0*

*NEIC **03** 03:12:46.6,40.2°80N×125.2°45W,h14km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.85; Mθθ-4.22; Mϕϕ3.37; Mrθ0.46; Mθϕ0.85; Mϕr0.07; Fault plane solution: M₀3.99000×10¹⁵ NP1:ϕs321.45000°, δ84.70000°,λ-178.37000°. NP2:ϕs231.30000°, δ88.38000°,λ-5.30000°. Principal axes: T 3.4742, Plg3.0000°, Azm276.0000°; N 0.8786, Plg84.0000°, Azm34.0000°; P -4.3529, Plg5.0000°, Azm186.0000°;*

*ANF **03** 03:12:46.8±0.6,40.2°70N×125.2°46W,h10km Error ellipse: s-maj=9.3km s-min=4.0km az=65.0*

*NEIC **03** 03:12:46.6,40.2°80N×125.2°45W,h13km*

*NEIC **03** 03:12:46.6,40.2°80N×125.2°45W,h13km*

*NCEDC **03** 03:12:46.6±2.7,40.2°80N±0.0°04×125.2°45W±0.0°07,h13km±6km, Mwr4.3/5,mb4.3/29(NEIC),ML3.9/100(NEIC), Mwr4.3/57(NEIC),Error ellipse: s-maj=7.9km s-min=5.4km az=60.0*

*NEIC **03** 03:12:47.7±2.1,40.2°83N±0.0°03×125.2°31W±0.0°05,h11km±6km, Error ellipse: s-maj=6.0km s-min=4.5km az=64.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.56; Mθθ-3.47; Mϕϕ2.90; Mrθ0.33; Mθϕ1.31; Mϕr0.91; Fault plane solution: M₀3.61000×10¹⁵ NP1: ϕs324.76000°,δ75.76000°,λ168.35000°. NP2: ϕs57.67000°,δ78.71000°,λ14.53000°. Principal axes: T 3.4788, Plg18.0000°, Azm282.0000°; N 0.2547, Plg72.0000°, Azm95.0000°; P -3.7334, Plg2.0000°, Azm191.0000°;*

ISC 03 03:12:46.0±1.7,40°79N±0.0°05×125°35W±0.0°06,h9km±10km, n298,σ1§27/295,mb4.2/16,MS3.4/14,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**0.83**	**112**		**Pb**	**03 13 03.3**	**+0.6**
KCTM					**Sn**	**03 13 15.9**	**-0.5**
FER	**Ferndale**	**0.85**	**104**		**Pb**	**03 13 03.5**	**+0.5**
FER					**Sn**	**03 13 16.6**	**-0.2**
JCC	**Jacoby Creek,**	**1.00**	**88**		**Pg**	**03 13 04.8**	**-0.5**
JCC				Sg	**Sb**	**03 13 18.3**	**-0.5**
JCC				IAML		03 13 19.0	
	comp=E,3μm,0.5s						
JCC				IAML		03 13 19.1	
	comp=N,2μm,0.6s						
KMPM	**Mount Pierce**	**1.01**	**111**		**Pg**	**03 13 05.5**	**+0.1**
KMPM				Sg	**Sg**	**03 13 18.9**	**+0.4**
KRPM	**Rodgers**	**1.07**	**69**		**Pg**	**03 13 05.8**	**-0.8**
KRPM				Sg	**Sb**	**03 13 20.2**	**-0.7**
KCRM	**Chalk Rock**	**1.22**	**107**		**Pb**	**03 13 08.6**	**-0.7**
KHMM	**Horse Mountain**	**1.23**	**85**		**Pb**	**03 13 08.6**	**-1.0**
KHMM				Sn	**Sg**	**03 13 25.3**	**-0.4**
KHMM				IAML		03 13 25.8	
	comp=N,2μm,0.5s						
KHMM				IAML		03 13 47.3	
	comp=E,2μm,0.8s						
KRMB	**Red Mountain**	**1.31**	**55**		**Pn**	**03 13 09.1**	**-1.6**
KRMB				IAML		03 13 26.6	
	comp=N,2μm,0.5s						
KRMB				IAML		03 13 26.7	
	comp=E,2μm,0.5s						
KMRM	**Mail Ridge**	**1.37**	**114**	Pn	**Pn**	**03 13 11.0**	**-0.4**
KOMM	**Orleans Mounta**	**1.52**	**70**		**Pn**	**03 13 12.5**	**-1.0**
KSXB	**Camp Six Broad**	**1.52**	**46**		**Pn**	**03 13 12.1**	**-1.4**
KPPM	**Pickett Peak**	**1.58**	**106**		**Pn**	**03 13 13.9**	**-0.4**
KBSM	**Bell Springs**	**1.60**	**122**		**Pn**	**03 13 13.9**	**-0.6**
KHBM	**Hayfork Bally**	**1.62**	**94**		**Pn**	**03 13 14.1**	**-0.9**
KBO	**Bosley Butte**	**1.66**	**30**	Pn	**Pn**	**03 13 13.7**	**-1.6**
KIPM	**Iron Peak**	**1.73**	**124**		**Pn**	**03 13 15.7**	**-0.7**
KCPM	**Cahto Peak**	**1.74**	**129**	Pn	**Pn**	**03 13 15.7**	**-0.9**
KTRM	**Thompson Ridge**	**1.86**	**52**		**Pn**	**03 13 17.4**	**-0.8**
KFPM	**Farley Peak**	**1.87**	**127**		**Pn**	**03 13 17.4**	**-0.8**
KBNM	**Bluenose Ridge**	**1.87**	**118**		**Pn**	**03 13 18.2**	**-0.2**
L02F	**Cave Junction**	**1.89**	**44**		**Pn**	**03 13 17.4**	**-1.1**
L02F				IAML		03 13 42.3	
	comp=E,2μm,0.5s						
LGPM	**Granite Peak**	**1.92**	**85**		**Pn**	**03 13 18.1**	**-0.9**
LBPM	**Beegum Peak**	**1.94**	**103**		**Pn**	**03 13 18.6**	**-0.6**
GTC	**Three Chop Rid**	**1.95**	**135**		**Pn**	**03 13 18.3**	**-1.1**
M02C	**Callahan**	**1.98**	**71**		**Pn**	**03 13 18.8**	**-1.0**
N02D	**Trinity Center**	**2.01**	**84**		**Pn**	**03 13 19.4**	**-0.9**
DCMP	**DeCamp, Califo**	**2.03**	**130**		**Pn**	**03 13 19.5**	**-0.9**
O02D	**Mt. Diablo Mer**	**2.05**	**106**		**Pn**	**03 13 20.2**	**-0.5**
LBKM	**Bonanza King**	**2.06**	**81**		**Pn**	**03 13 20.0**	**-0.9**
YBH	**Yreka Blue Hor**	**2.20**	**64**		**Pn**	**03 13 22.0**	**-0.9**
YBH				IAML		03 13 51.3	
	comp=E,528nm,0.6s						
YBH				IAML		03 13 51.7	
	comp=N,691nm,0.7s						
YBH	**Yreka Blue Hor**	**2.20**	**64**	Pn	**Pn**	**03 13 22.4**	**-0.5**
	comp=N,21nm,0.3s,baz=251,slow=14,SNR=257						
YBH				Sn	**Sn**	**03 13 49.4**	**-0.9**
	comp=N,97nm,0.3s,baz=148,slow=19,SNR=20 comp=N,62nm,0.3s						
LAMM	**Antelope Mount**	**2.21**	**67**		**Pn**	**03 13 22.6**	**-0.5**
KEBM	**Edson Butte**	**2.22**	**20**		**Pn**	**03 13 21.2**	**-1.9**
GWRM	**Wonder Ranch**	**2.23**	**134**		**Pn**	**03 13 22.1**	**-1.1**
GHMM	**Hull Mountain**	**2.26**	**124**		**Pn**	**03 13 22.9**	**-0.8**
GVV	**Valley View**	**2.28**	**115**		**Pn**	**03 13 23.8**	**-0.3**
K02D	**Willamette Mer**	**2.29**	**33**	Pn	**Pn**	**03 13 23.0**	**-1.0**
K02D				IAML		03 13 51.5	
	comp=N,744nm,0.8s						
K02D				IAML		03 13 53.0	
	comp=E,1μm,0.4s						
LCSM	**College of the**	**2.32**	**73**		**Pn**	**03 13 24.3**	**-0.3**
B040	**Montague**	**2.

EMB IAML 03 14 49.9
comp=E,95nm,0.6s
EMB IAML 03 14 52.7
comp=N,141nm,0.6s
PINE Pine Mountain 4.44 46 Pn 03 13 54.2 +0.4
PINE IAML 03 14 46.7
comp=E,90nm,0.9s
PINE IAML 03 15 03.5
comp=N,101nm,0.8s
PLTX Planet X, Gerl 4.47 89 Pn 03 13 53.1 -0.9
H04A Detroit Lake 4.54 30 Pn 03 13 55.1 +0.2
I05D Terrebonne, OR 4.62 39 Pn 03 13 56.7 +0.6
I05D IAML 03 15 03.0
comp=E,141nm,1.1s
I05D IAML 03 15 03.9
comp=N,92nm,0.9s
G03D McMinnville, O 4.68 18 Pn 03 13 56.6 -0.2
G03D IAML 03 14 33.0
comp=E,79nm,0.9s
G03D IAML 03 14 35.0
comp=N,131nm,1.0s
CMB Columbia Colle 4.72 124 Pn Pn 03 13 57.9 +0.4
PNTR Pine Nut 4.73 109 Pn Pn 03 13 58.5 +0.7
PNTR IAML 03 15 05.6
comp=N,114nm,1.1s
PNTR IAML 03 15 19.1
comp=E,88nm,0.7s
YERR Yerington 5.03 109 Pn 03 14 02.4 +0.5
YERR IAML 03 15 14.9
comp=N,61nm,1.0s
YERR IAML 03 15 15.8
comp=E,108nm,1.0s
SAO San Andreas Ge 5.04 142 Pn Pn 03 14 00.0 -1.8
WAKR Walker 5.10 115 Pn 03 14 04.9 +2.0
HOOD Mount Hood Mea 5.28 30 Pn 03 14 05.5 +0.3
HOOD IAML 03 15 29.2
comp=N,71nm,1.1s
HOOD IAML 03 16 58.4
comp=E,111nm,0.1s
WVOR Wild Horse Val 5.29 70 Pn 03 14 04.8 -0.7
G05A Wamic 5.34 32 Pn Pn 03 14 07.1 +1.1
G05A IAML 03 14 49.0
comp=E,66nm,1.6s
G05A IAML 03 15 23.1
comp=N,63nm,1.8s
BBGB Big Mountain B 5.39 140 Pn 03 14 06.0 -0.7
I07A Izee 5.44 51 Pn Pn 03 14 09.1 +1.8
F04D Rainier, OR 5.56 17 Pn Pn 03 14 09.4 +0.5
F04A Amboy 5.57 22 Pn 03 14 08.5 -0.5
RADR Rader Ridge 5.75 11 Pn 03 14 11.6 +0.1
PMPB Monarch Peak 5.79 141 Pn Pn 03 14 12.2 0.0
MDPB Devils Postpil 5.80 121 Pn 03 14 13.6 +1.1
KVN Kaiserville 5.84 105 Pn Pn 03 14 12.8 -0.1
LHV Little Huntoon 5.87 113 Pn 03 14 14.5 +1.4
NVAR Mina Array Bea 5.93 111 Pn 03 14 15.0 +0.8
NVAR Mina Array Bea 5.93 111 Pn Pn 03 14 14.8 +0.5
comp=N,4.3nm,0.3s,baz=293,slow=14,SNR=117
NVAR LR LR 03 16 55.4
comp=N,396nm,19.8s,baz=298,slow=42
comp=N,15nm,0.6s
BMN Battle Mountai 6.20 91 Pn 03 14 18.6 +0.7
VOG Valley Oaks Go 6.46 132 P Pn 03 14 22.4 +1.1
baz=315,SNR=5.7
G08A Pilot Rock 6.49 44 Pn 03 14 22.9 +1.1
NLWA Neilton Lookou 6.69 9 Pn 03 14 24.1 -0.3
D05A Enumclaw 6.84 20 Pn 03 14 26.6 +0.1
TPH Tonopah 6.85 111 Pn 03 14 25.9 -0.9
MXC Moxie City 6.85 31 Pn 03 14 27.5 +0.9
SMMC Simmler 6.90 141 P Pn 03 14 27.8 +0.4
baz=324
SMMC S Sn 03 15 44.1 -2.0
baz=324
VES Vestal, Richgr 6.97 133 P Pn 03 14 29.3 +0.9
baz=317,SNR=68
VES S Sn 03 15 48.1 +0.4
baz=317
GNW Green Mountain 7.01 14 Pn Pn 03 14 28.7 -0.1
HAWA Hanford 7.01 35 Pn 03 14 29.6 +0.7
CWC Cottonwood Cre 7.16 125 P Pn 03 14 31.0 0.0
baz=309
BMO Blue Mountains 7.17 53 Pn Pn 03 14 32.5 +1.4
GRAC Grapevine Rang 7.29 119 P Pn 03 14 34.3 +1.6
baz=304
PKM Mcpherson Peak 7.34 142 P Pn 03 14 33.1 -0.5
baz=325
PKM S Sn 03 15 54.1 -2.9
baz=325
ISA Isabella, Lake 7.44 131 P Pn 03 14 36.6 +1.7
baz=315,SNR=75
ISA S Sn 03 15 59.2 -0.3
baz=315
MFID Camas Ranch 7.55 67 Pn Pn 03 14 36.4 0.0
ARVC Arvin 7.64 136 P Pn 03 14 38.8 +1.3
baz=319,SNR=31
ARVC S Sn 03 16 04.7 +0.5
baz=319
ELK Elko 7.67 87 Pn Pn 03 14 38.8 +0.6
comp=N,0.3nm,0.3s,baz=284,slow=15,SNR=14
comp=N,3.0nm,0.7s
E09A Wood Farm, Sta 7.75 40 Pn Pn 03 14 39.1 +0.2
MPMC Manual Prospec 7.77 125 P Pn 03 14 40.4 +1.0
baz=310,SNR=11
D08A Wollman Farm, 7.80 34 Pn Pn 03 14 40.1 +0.4
R11B Troy Canyon, C 7.92 105 Pn Pn 03 14 42.7 +1.1
R11B Troy Canyon, C 7.92 105 P Pn 03 14 42.8 +1.1
baz=291
PGC Sidney 7.98 9 Pn Pn 03 14 42.4 +0.3
LRMC Laurel Mtn Rad 8.03 129 P Pn 03 14 44.3 +1.3
baz=313,SNR=28
TPNV Topopah Spring 8.06 115 Pn 03 14 45.2 +1.6
TPNV Topopah Spring 8.06 115 P Pn 03 14 45.1 +1.6
baz=301
CLRS Cowichan Lake 8.08 6 Pn 03 14 43.8 +0.3
OSI Osito Audit: C 8.09 137 P Pn 03 14 45.4 +1.7
baz=321
SCZ2 Santa Cruz Isl 8.16 144 P Pn 03 14 46.1 +1.4
baz=328
SCZ2 S Sn 03 16 13.5 -3.6
baz=328
OZB Mount Ozzard 8.17 359 Pn 03 14 44.5 -0.3
EDW2 Edwards Air Fo 8.28 133 P Pn 03 14 47.9 +1.6
baz=317,SNR=32
HLID Hailey 8.58 68 Pn 03 14 51.4 +0.8
HLID Hailey 8.58 68 P Pn 03 14 53.2 +2.7
baz=255,SNR=47
C09A Chrisman Ranch 8.65 34 Pn Pn 03 14 51.3 0.0
GSC Goldstone, Bar 8.68 126 P Pn 03 14 53.8 +2.0
baz=312,SNR=23
PRN Pahroc Range 8.69 110 Pn 03 14 53.5 +1.4
PASC Pasadena Art C 8.72 137 Pn Pn 03 14 53.6 +1.3
SNCC San Nicolas Is 8.85 146 S Sn 03 16 30.3 -3.6
baz=330
BFSC Mount Baldy Ra 8.94 135 P Pn 03 14 57.0 +1.5
baz=319,SNR=13
BFSC S Sn 03 16 35.6 -0.8
baz=319
TUQ Turquoise Moun 9.15 123 P Pn 03 15 01.6 +3.3
baz=308,SNR=8.0
CBB Campbell River 9.25 360 Pn 03 14 59.7 +0.2
HEC Hector,Ludlow 9.28 127 P Pn 03 15 01.7 +1.5
baz=312,SNR=6.4
BBRC Big Bear Solar 9.34 132 P Pn 03 15 02.2 +1.3
baz=317,SNR=14
NEW Newport 9.50 35 Pn Pn 03 15 04.0 +1.0
NEW Newport 9.50 35 P Pn 03 15 04.0 +1.0
baz=222,SNR=9.3
NEW Newport 9.50 35 Pn Pn 03 15 03.6 +0.5
comp=N,0.7nm,0.3s,baz=212,slow=13,SNR=16
NEW LR LR 03 18 38.6
comp=N,102nm,18.3s,baz=232,slow=38
comp=N,4.7nm,0.6s
ELS Elsinore Mount 9.52 136 Pn 03 15 04.1 +0.8
DUG Dugway, Tooele 9.57 89 P Pn 03 15 06.5 +2.3
baz=278,SNR=18
MURC Murrieta 9.68 135 P Pn 03 15 07.0 +1.5
baz=320
GMRC Granite Mounta 9.73 125 P Pn 03 15 08.3 +2.0
baz=311
SZCU Shurtz Canyon 10.04 105 Pn 03 15 11.7 +1.1
BELC Belle Mtn. Jos 10.06 129 P Pn 03 15 12.3 +1.5
baz=315,SNR=15
PFO Pinyon Flats O 10.07 132 Pn Pn 03 15 12.1 +1.1
PFO Pinyon Flats O 10.07 132 P Pn 03 15 12.2 +1.1
baz=318,SNR=24
TPFO Pinon Flats 10.08 132 P Pn 03 15 12.3 +1.2
baz=318,SNR=18

PMD Palm Desert 10.09 132 Pn 03 15 12.1 +0.9
NLU North Lily Min 10.17 90 Pn 03 15 13.8 +1.5
MVU Marysvale 10.38 98 Pn 03 15 17.1 +1.8
HWUT Hardware Ranch 10.42 81 Pn 03 15 17.6 +1.8
IRM Iron Mountain 10.46 126 P Pn 03 15 17.5 +1.3
baz=312
BC3 Big Chuckawall 10.62 129 P Pn 03 15 19.6 +1.1
baz=315,SNR=7.1
MONP2 Monument Peak 10.64 135 P Pn 03 15 20.3 +1.5
baz=320,SNR=6.9
AHID Auburn Hatcher 10.83 75 Pn 03 15 22.6 +1.2
SWSC Sam W. Stewart 10.94 133 P Pn 03 15 23.3 +0.7
baz=318
IKP In-Ko-Pah, Jac 10.99 135 P Pn 03 15 25.7 +2.1
baz=320
PDMCI Parker Dam,Lak 11.00 122 P Pn 03 15 26.2 +2.8
baz=309
REDW Red Top Meadow 11.08 72 Pn 03 15 26.5 +1.7
U15A North Rim 11.10 109 Pn 03 15 27.0 +1.7
BOZ Bozeman (W) 11.11 60 Pn 03 15 25.7 +0.5
BOZ Bozeman (W) 11.11 60 P Pn 03 15 26.2 +1.1
baz=249,SNR=6.4
IMW Indian Meadow 11.11 69 Pn 03 15 26.6 +1.3
SNOW Snow King Moun 11.17 71 Pn 03 15 25.8 -0.3
YHL Hebgen Lake 11.17 64 Pn 03 15 27.9 +1.7
P17A Butcher Ranch, 11.26 92 Pn 03 15 29.6 +2.2
FLWY Flagg Ranch 11.32 68 Pn 03 15 29.8 +1.8
GLA Glamis 11.42 129 P Pn 03 15 30.5 +1.2
baz=316
H17A Grant Village 11.47 67 Pn 03 15 31.0 +0.8
H17A Grant Village 11.47 67 P Pn 03 15 33.0 +2.8
baz=257
BBB Bella Bella 11.56 351 LR LR 03 19 05.9
comp=N,70nm,18.7s,baz=250,slow=33
HMU Henry Mountain 11.66 99 Pn 03 15 33.9 +1.0
BW06 Boulder Array 11.96 75 P Pn 03 15 38.8 +2.0
baz=266
PD31 Pinedale Array 11.96 75 Pn 03 15 37.6 +0.8
PDAR Pinedale Array 11.96 75 Pn 03 15 38.3 +1.4
PDAR Pinedale Array 11.96 75 Pn Pn 03 15 38.5 +1.7
baz=242,slow=9.4,SNR=13
PDAR LR LR 03 20 29.6
comp=N,118nm,22.0s,baz=263,slow=39
comp=N,2.8nm,1.0s
WUAZ Wupatki 12.19 111 P Pn 03 15 41.6 +1.6
baz=300
O20A White River Ci 13.05 87 P Pn 03 15 53.0 +1.3
baz=278,SNR=6.2
EGMT Eagleton 13.28 52 Pn Pn 03 15 55.4 +0.7
EGMT Eagleton 13.28 52 P Pn 03 15 55.4 +0.7
baz=243,SNR=6.9
MVCO Mesa Verde 13.58 100 P Pn 03 16 01.4 +2.3
baz=250,SNR=6.8
SMCO Snowmass 14.18 91 Pn 03 16 06.4 -1.0
K22A Casper 14.19 76 Pn Pn 03 16 06.9 -0.3
K22A Casper 14.19 76 P Pn 03 16 07.9 +0.7
baz=269
BRLDA Berland Lookou 14.34 19 Pn 03 16 09.0 -0.2
TUC Tucson 14.43 121 Pn 03 16 10.5 0.0
TUC Tucson 14.43 121 P Pn 03 16 12.9 +2.4
baz=310
S22A 4UR Ranch, Cre 14.66 96 Pn 03 16 14.2 +0.2
S22A 4UR Ranch, Cre 14.66 96 P Pn 03 16 17.0 +3.1
baz=288,SNR=23
N23A Red Feather La 14.69 83 P Pn 03 16 15.2 +0.9
baz=276
EDM Edmonton 14.86 29 Pn 03 16 14.5 -1.8
LAO LASA Array 15.02 61 Pn 03 16 18.1 -0.3
LAO IAmb IAmb 03 16 39.1
comp=Z,9.0nm,0.9s
LAO LASA Array 15.02 61 P Pn 03 16 19.1 +0.7
baz=254
ISCO Idaho Springs 15.10 87 P Pn 03 16 20.8 +1.0
baz=280
V35K Ketchikan 15.13 346 P Pn 03 16 21.8 +2.0
baz=162
SDCO Great Sand Dun 15.67 95 Pn Pn 03 16 27.8 +0.6
SDCO Great Sand Dun 15.67 95 P Pn 03 16 29.4 +2.2
baz=287,SNR=20
BRIGG Briggsdale 15.96 84 Pn 03 16 29.5 -1.4
BRIGG IAmb IAmb 03 16 31.9
comp=Z,13nm,0.7s
ANMO Albuquerque 16.01 105 Pn 03 16 31.6 0.0
ANMO Albuquerque 16.01 105 P Pn 03 16 33.1 +1.5
baz=297
ANMO Albuquerque 16.01 105 Pn Pn 03 16 33.4 +1.8
comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=14
ANMO LR LR 03 23 11.6
comp=Z,71nm,20.7s,baz=30,slow=39
comp=Z,4.6nm,1.0s
121A Cookes Peak, D 16.30 115 Pn 03 16 35.6 +0.2
121A Cookes Peak, D 16.30 115 P Pn 03 16 37.0 +1.6
baz=305
KSCO Kaye Shedlock' 17.52 88 Pn Pn 03 16 49.7 -0.9
KSCO Kaye Shedlock' 17.52 88 P P 03 16 51.9 +0.1
baz=283,SNR=8.8
OGNE Ogallala 17.63 82 Pn Pn 03 16 51.1 -0.8
OGNE IAmb IAmb 03 17 00.6
comp=Z,30nm,1.1s
OGNE Ogallala 17.63 82 P Pn 03 16 51.6 -0.3
baz=277
DLBC Dease Lake 17.92 352 P P 03 16 57.1 +1.2
comp=Z,0.1nm,0.3s,baz=187,slow=16,SNR=2.8
comp=Z,2.3nm,0.9s
MNTX Cornudas Mount 18.45 113 P Pn 03 17 03.5 +1.5
baz=305
KOTAN Kotaneelee Air 19.38 2 P P 03 17 12.4 +0.5
baz=183
SUSD Miller 19.73 71 P P 03 17 15.5 -0.5
SUSD IAmb IAmb 03 17 36.8
comp=Z,18nm,0.9s
CBKS Cedar Bluff 19.76 87 P P 03 17 16.1 -0.2
CBKS Cedar Bluff 19.76 87 P P 03 17 16.9 +0.7
baz=284
PLBC Pleasant Camp 19.93 343 P Pn 03 17 20.6 +1.1
baz=155
P33M Teslin, Yukon 20.00 349 P Pn 03 17 21.2 +0.8
baz=163
SMWD Samnorwood 20.56 98 P P 03 17 24.4 -0.7
SMWD IAmb IAmb 03 17 28.7
comp=Z,22nm,1.1s
P30M Million Dollar 20.66 343 P P 03 17 26.0 0.0
baz=155
FFC Flin Flon 20.87 40 P P 03 17 27.3 -0.8
LPIG La Paz 20.87 138 LR LR 03 26 29.0
comp=Z,64nm,18.6s,baz=338,slow=39
N32M Quiet Lake 20.94 349 P P 03 17 29.7 +0.8
baz=164
TX31 Lajitas Ar. Si 21.05 116 P P 03 17 29.7 -0.7
TX31 IAmb IAmb 03 17 37.9
comp=Z,20nm,1.3s
TXAR Lajitas Array 21.05 116 P P 03 17 30.5 +0.1
TXAR Lajitas Array 21.05 116 P P 03 17 33.0 +2.5
comp=Z,8.7nm,1.0s,baz=299,slow=8.7,SNR=24
TXAR LR LR 03 25 39.5
comp=Z,36nm,21.1s,baz=300,slow=37
comp=Z,8.7nm,1.0s
OK035 E0210 Rd and N 21.14 92 P 03 17 30.3 -0.9
OK038 West end E0370 21.19 93 P P 03 17 30.9 -0.9
HPIG 21.34 124 P P 03 17 33.6 0.0
ECSD EROS Data Cent 21.43 73 P P 03 17 33.1 -1.2
ECSD IAmb IAmb 03 17 43.3
comp=Z,13nm,1.1s
YUK6 Outpost Mounta 21.71 343 P P 03 17 39.2 +1.9
baz=153
WMOK Wichita Mounta 21.81 98 P 03 17 36.5 -2.0
WMOK Wichita Mounta 21.81 98 P P 03 17 38.6 +0.1
baz=294
OZNA Ozona 21.90 109 P P 03 17 38.6 -0.9
OZNA IAmb IAmb 03 17 42.8
comp=Z,15nm,0.8s
FARO Faro, Yukon 22.01 350 P P 03 17 41.8 +1.4
baz=164
KSU1 Kansas State U 22.06 85 P P 03 17 39.8 -1.4
KSU1 Kansas State U 22.06 85 P P 03 17 44.3 +3.2
baz=284,SNR=8.0
M31M Drury Creek, Y 22.13 349 P P 03 17 43.9 +2.2
baz=162
WRGLY Wrigley 22.50 2 P P 03 17 44.1 -1.5
WRGLY Wrigley 22.50 2 P P 03 17 46.1 +0.5
baz=184
ULM Lac du Bonnet 22.59 55 P P 03 17 45.7 -0.9
ULM IAmb IAmb 03 17 55.5
comp=Z,14nm,0.9s
ULM Lac du Bonnet 22.59 55 P P 03 17 46.7 0.0
comp=Z,5.8nm,0.8s,baz=267,slow=10.0,SNR=9.0

ULM LR LR 03 25 38.9
comp=Z,61nm,21.6s,baz=256,slow=34
comp=Z,5.8nm,0.8s
YKA Yellowknife Ar 22.68 13 P P 03 17 46.7 -0.7
YKA Yellowknife Ar 22.68 13 P P 03 17 47.9 +0.4
comp=Z,3.9nm,0.9s,baz=199,slow=10,SNR=19
comp=Z,3.9nm,0.9s
T35A Sooner Cattle 22.74 90 P P 03 17 47.9 -0.5
JCT Junction City 23.10 108 P P 03 17 52.1 -0.1
JCT IAmb IAmb 03 17 54.9
comp=Z,14nm,1.2s
JCT Junction City 23.10 108 P P 03 17 53.8 +1.6
baz=304
TUL3 Leonard 23.63 92 P P 03 17 57.9 +0.4
baz=291
M27K Edge Creek, AK 23.78 341 P P 03 17 58.5 -0.3
baz=148
WHTX Lake Whitney, 24.03 103 P P 03 18 01.6 +0.3
baz=299
KLU Klutina 24.22 336 P P 03 18 02.1 -0.8
baz=140
KDAK Kodiak Island 24.34 323 LR LR 03 25 11.3
comp=Z,85nm,19.0s,baz=161,slow=31
BCAR Beaver Creek A 24.36 342 P P 03 18 01.9 -2.2
OHAK Old Harbor 24.37 322 P P 03 18 04.1 -0.1
baz=121
J30M Hart River 24.67 349 P P 03 18 06.0 -1.0
J30M IAmb IAmb 03 18 19.4
comp=Z,6.8nm,1.1s
J30M Hart River 24.67 349 P P 03 18 07.4 +0.4
baz=160
DAWY Dawson 24.72 345 P P 03 18 09.0 +1.6
baz=154
SCM Sheep Creek Mo 24.92 335 P P 03 18 09.1 -0.2
baz=138
KNK Knik Glacier 24.98 333 P P 03 18 09.6 -0.1
baz=135
M23K Glacier View 25.02 335 P P 03 18 07.6 -2.4
baz=137
SML Sawmill 25.23 334 P P 03 18 08.3 -3.6
baz=136
I30M Mount Dempster 25.28 349 P P 03 18 12.7 +0.2
I30M IAmb IAmb 03 18 24.9
comp=Z,6.1nm,1.1s
I30M Mount Dempster 25.28 349 P P 03 18 15.9 +3.3
baz=160
R40A Maddies Statio 25.55 85 P P 03 18 15.2 +0.1
MIAR Mount Ida 25.82 94 P P 03 18 19.3 +1.7
baz=294
SUA Susitna One 25.82 332 P P 03 18 15.7 -1.8
baz=132
DHY Denali Highway 25.86 337 P P 03 18 17.1 -0.8
baz=139
J26L Joseph Creek 26.00 342 P P 03 18 16.7 -2.4
baz=147
I28M Miner Creek 26.07 346 P P 03 18 21.5 +1.8
baz=154
JFWS Jewell Farm 26.12 74 P P 03 18 21.8 +1.5
baz=278
CCM Cathedral Cave 26.39 85 P P 03 18 22.9 +0.1
baz=287
EPYK Eagle Plains 26.42 350 P P 03 18 22.0 -0.7
baz=160
H29M Whitestone 26.52 348 P P 03 18 24.4 +0.9
H29M IAmb IAmb 03 18 33.9
comp=Z,6.9nm,0.8s
H29M Whitestone 26.52 348 P P 03 18 26.1 +2.5
baz=158
G31M Satah River 26.65 352 P P 03 18 22.2 -2.6
baz=165
L42A Oliver, Polo 26.68 76 P P 03 18 26.2 +0.9
L42A IAmb IAmb 03 18 28.0
comp=Z,14nm,0.8s
ILAR Eielson Array 27.05 340 P P 03 18 29.4 +1.1
comp=Z,0.2nm,0.6s,baz=141,slow=9.2,SNR=2.6
ILAR LR LR 03 27 23.1
comp=Z,68nm,18.5s,baz=127,slow=32
comp=Z,0.2nm,0.6s
F31M Tsiigehtchic 27.11 353 P P 03 18 28.3 -0.5
baz=166
INK Inuvik 27.93 354 P P 03 18 36.5 +0.3
INK IAmb IAmb 03 18 54.6
comp=Z,7.0nm,1.3s
INK Inuvik 27.93 354 P P 03 18 37.1 +0.9
baz=167
INK Inuvik 27.93 354 LR LR 03 29 03.2
comp=Z,64nm,18.8s,baz=170,slow=35
F28M Old Crow 28.04 348 P P 03 18 38.5 +1.3
baz=156
TEIG Tepich 37.57 112 LR LR 03 36 47.6
comp=Z,356nm,21.1s,baz=88,slow=38
LCBC Los crdobas, 53.70 112 eP P 03 22 16.9 +8.4
PTBC PUERTO BERRIO, 56.67 113 eP P 03 22 34.4 +4.5
GUY2C Guyana, Caldas 56.97 115 eP P 03 22 39.2 +6.6
SDV Santo Domingo 57.77 108 LR LR 03 48 26.9
comp=Z,27nm,20.8s,baz=285,slow=37
ROSC El Rosal 57.97 114 LR LR 03 53 17.4
comp=Z,24nm,18.3s,baz=6.0,slow=42
PCRV Puerto La Cruz 61.32 102 LR LR 03 52 01.9
comp=Z,44nm,19.6s,slow=38
H11S1 WAKE ISLAND Hy 61.59 271 T T 04 30 41.3
baz=54,slow=75,SNR=2.7
H11S2 WAKE ISLAND Hy 61.59 270 T T 04 30 40.8
baz=54,slow=75,SNR=8.7
H11S3 WAKE ISLAND Hy 61.61 271 T T 04 30 37.9
baz=54,slow=75,SNR=7.1
ARCES ARCESS Array B 67.92 11 LR LR 03 54 58.1
comp=Z,29nm,18.8s,baz=314,slow=37
JNU Nakatsue 78.33 304 LR LR 04 05 07.1
comp=Z,15nm,18.3s,baz=150,slow=40
SONM Songino Array 80.56 328 LR LR 03 59 17.1
comp=Z,37nm,18.9s,baz=121,slow=35
HHC Hu-ho-hao-te 83.71 320 eP P 03 25 13.5 -1.9
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,89nm,5.3s
BVAR Borovoye Array 85.58 351 P P 03 25 25.7 +1.2
comp=Z,1.0nm,0.8s,baz=26,slow=5.1,SNR=5.9
comp=Z,1.0nm,0.8s
KURBB Kurchatov Arra 86.60 345 P P 03 25 29.5 0.0
comp=Z,0.9nm,0.9s,baz=21,slow=5.4,SNR=4.8
comp=Z,0.9nm,0.9s
MLR Muntele Rosu 90.34 20 LR LR 04 08 22.3
comp=Z,44nm,19.4s,baz=330,slow=37
PZH PanZhiHua 100.05 318 P Pdif 03 26 30.7 -1.5
PZH pmax pmax
comp=Z,8.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.1s

NEIC ***03*** *03:13:37.4±1.2, 7.5S±0.1×156.25E±0.09, h35km±6km, mb4.7/17, Error ellipse: s-maj=16.2km s-min=11.5km az=206.0*

IDC ***03*** *03:13:40.8±3.5, 7.42S×156.09E, h63km±32km, mb4.2/14, mbtmp4.5/14, ML5.9/1, MS3.5/8, Error ellipse: s-maj=23.1km s-min=17.5km az=117.0*

ISC 03 03:13:38.3±0.5, 7.50S±0.09×156.13E±0.09, h44km, n63, σ1§18/54, mb4.6/23, MS3.5/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.24**	**117**			**Pn**	**03 14 37.6**	**-2.7**
HNR	**Honiara**	**4.24**	**117**	P		**Pn**	**03 14 44.3**	**+3.9**
	712nm,0.3s,baz=234,slow=5.7,SNR=4.7							
HNR				S		Sn	03 15 39.3	+11
	6µm,0.9s,baz=22,slow=19,SNR=1.3							
RABL	**Rabaul**	**5.13**	**310**	Pn		**Pn**	**03 14 53.6**	**+0.9**
PMG	**Port Moresby**	**9.07**	**257**	Pn		**Pn**	**03 15 46.4**	**-0.4**
PMG	**Port Moresby**	**9.07**	**257**	LR		LR	03 19 05.1	
	comp=Z,223nm,18.9s,baz=72,slow=36							
CTAO	**Charters Tower**	**15.76**	**216**	Pn		**Pn**	**03 17 17.7**	**+0.4**
WR0	**Warramunga Arr**	**24.32**	**237**	P		**P**	**03 18 52.2**	**+0.2**
WR0				IAmb		IAmb	03 18 53.8	
	comp=Z,21nm,0.8s							
WRA	**Warramunga Arr**	**24.48**	**237**	P		**P**	**03 18 53.0**	**-0.5**
WRA	**Warramunga Arr**	**24.48**	**237**	P		**P**	**03 18 54.2**	**+0.7**
	comp=Z,14nm,0.7s,baz=63,slow=9.9,SNR=77							
WRA				PcP		**PcP**	**03 22 32.4**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=62,slow=2.4,SNR=6.3							
	comp=Z,14nm,0.7s							
AS31	**Alice Springs**	**26.70**	**231**	P		**P**	**03 19 13.3**	**-0.4**
ASAR	**Alice Springs**	**26.70**	**231**	P		**P**	**03 19 13.7**	**0.0**
ASAR	**Alice Springs**	**26.70**	**231**	P		**P**	**03 19 13.6**	**-0.1**

comp=Z,2.3nm,0.7s,baz=60,slow=9.8,SNR=36
ASAR PcP **PcP** **03 22 37.3 +0.8**
comp=Z,0.6nm,0.7s,baz=58,slow=2.7,SNR=3.6
ASAR LR LR 03 29 40.1
comp=Z,123nm,18.1s,baz=114,slow=36
comp=Z,2.3nm,0.7s
STKA Stephens Creek 27.78 207 P **P** **03 19 23.1 -0.1**
STKA Stephens Creek 27.78 207 P **P** **03 19 24.3 +1.1**
comp=Z,2.3nm,0.5s,baz=40,slow=15,SNR=7.8
STKA PcP **PcP** **03 22 38.4 -0.6**
comp=Z,1.6nm,0.9s,baz=0.0,slow=5.1,SNR=2.9
STKA LR LR 03 29 04.4
comp=Z,154nm,19.1s,baz=22,slow=33
comp=Z,2.3nm,0.5s
H11S3 WAKE ISLAND Hy 27.85 22 T T 03 47 43.1
baz=202,slow=76,SNR=120
H11S2 WAKE ISLAND Hy 27.85 22 T T 03 47 44.3
baz=202,slow=76,SNR=92
H11S1 WAKE ISLAND Hy 27.87 22 T T 03 47 46.2
baz=202,slow=76,SNR=61
KNRA Kununurra 27.99 251 P **P** **03 19 25.2 0.0**
KNRA IAmb IAmb 03 19 38.2
comp=Z,44nm,1.4s
H11N1 WAKE ISLAND Hy 29.04 21 T T 03 49 16.1
baz=201,slow=76,SNR=7.7
H11N3 WAKE ISLAND Hy 29.05 21 T T 03 49 12.2
baz=201,slow=76,SNR=6.9
H11N2 WAKE ISLAND Hy 29.06 21 T T 03 49 25.3
baz=201,slow=76,SNR=5.1
FITZ Fitzroy Crossi 31.49 248 P **P** **03 19 55.6 -0.6**
FITZ IAmb IAmb 03 19 57.0
comp=Z,2.1nm,0.9s
FORT Forrest 35.01 225 P **P** **03 20 26.3 -0.5**
KSRS Korea Array 51.91 331 P **P** **03 22 42.1 -0.6**
comp=Z,2.0nm,0.6s,baz=146,slow=7.2,SNR=6.3
comp=Z,2.0nm,0.6s
ASAJ Asahikawa 52.81 348 LR LR 03 44 44.9
comp=Z,36nm,19.3s,baz=162,slow=35
PETK Petropavlovsk- 60.39 1 P **P** **03 23 44.1 +1.2**
comp=Z,2.3nm,0.7s,baz=157,slow=5.6,SNR=2.4
PETK LR LR 03 46 16.1
comp=Z,40nm,21.9s,baz=133,slow=32
comp=Z,2.3nm,0.7s
CMAR Chiang Mai Arr 62.02 295 P **P** **03 23 55.1 +0.5**
comp=Z,1.0nm,0.3s,baz=130,slow=5.6,SNR=5.5
comp=Z,1.0nm,0.3s
ULN Ulaanbaatar 70.03 327 P **P** **03 24 46.4 +0.6**
ULN IAmb IAmb 03 24 47.5
comp=Z,9.7nm,1.1s
SONM Songino Array 70.37 327 P **P** **03 24 48.4 +0.6**
SONM IAmb IAmb 03 24 49.3
comp=Z,6.9nm,0.9s
SONM Songino Array 70.37 327 P **P** **03 24 48.4 +0.6**
comp=Z,6.9nm,0.8s,baz=140,slow=6.7,SNR=42
comp=Z,6.9nm,0.8s
QSPA South Pole Qui 82.48 180 P **P** **03 25 57.4 +1.3**
QSPA IAmb IAmb 03 25 58.3
comp=Z,12nm,1.1s
ILAR Eielson Array 83.43 21 P **P** **03 25 59.4 -1.4**
comp=Z,0.3nm,0.4s,baz=243,slow=5.3,SNR=8.6
ILAR LR LR 03 57 57.8
comp=Z,23nm,19.7s,baz=266,slow=32
comp=Z,0.3nm,0.4s
MK31 Makanchi Array 84.53 318 P **P** **03 26 07.2 +0.3**
MKAR Makanchi Array 84.53 318 P **P** **03 26 06.9 +0.1**
MKAR Makanchi Array 84.53 318 P **P** **03 26 07.3 +0.5**
comp=Z,14nm,0.7s,baz=102,slow=6.0,SNR=123
comp=Z,14nm,0.7s
B22K Teshekpuk Lake 84.74 15 P **P** **03 26 07.2 -0.1**
B22K IAmb IAmb 03 26 14.7
comp=Z,5.7nm,1.5s
ZAA0 Zalesovo Array 85.23 326 P **P** **03 26 09.5 -0.6**
ZALV Zalesovo Beam 85.23 326 P **P** **03 26 09.4 -0.7**
ZALV Zalesovo Beam 85.23 326 P **P** **03 26 09.3 -0.8**
comp=Z,9.9nm,0.5s,baz=117,slow=5.5,SNR=47
comp=Z,9.9nm,0.5s
BMAR Burnt Mountain 85.65 19 P **P** **03 26 12.6 +0.6**
KSH Kashi 87.19 310 P **P** **03 26 21.2 +0.9**
KSH pmax pmax
comp=Z,3.0nm,1.2s
BBB Bella Bella 87.25 37 LR LR 04 00 13.5
comp=Z,43nm,20.6s,baz=220,slow=32
KURK Kurchatov 87.92 322 P **P** **03 26 22.9 -0.5**
KURK IAmb IAmb 03 26 23.2
comp=Z,4.4nm,0.8s
KURBB Kurchatov Arra 87.96 322 P **P** **03 26 22.9 -0.7**
comp=Z,3.2nm,0.5s,baz=99,slow=4.8,SNR=33
comp=Z,3.2nm,0.5s
INK Inuvik 89.79 20 LR LR 04 04 26.3
comp=Z,16nm,18.6s,baz=198,slow=34
BTK Batken 91.20 310 P **P** **03 26 39.0 -0.1**
BVAR Borovoye Array 93.37 323 P **P** **03 26 47.8 -1.0**
comp=Z,3.2nm,0.6s,baz=110,slow=5.6,SNR=16
comp=Z,3.2nm,0.6s
BRVK Borovoye 93.44 323 P **P** **03 26 47.8 -1.2**
BRVK IAmb IAmb 03 26 48.8
comp=Z,3.7nm,0.9s
YKA Yellowknife Ar 96.25 28 P **P** **03 27 01.1 -0.6**
comp=Z,0.4nm,0.8s,baz=263,slow=4.1,SNR=5.4
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 98.20 48 P **P** **03 27 10.3 -0.9**
comp=Z,0.2nm,0.7s,baz=318,slow=1.2,SNR=2.7
comp=Z,0.2nm,0.7s
FINES FINESS Array B 114.85 336 PKP **PKiKP** **03 32 13.3 -0.6**
comp=Z,1.9nm,1.0s,baz=141,slow=2.9,SNR=4.0
NOA NORSAR Array B 120.54 341 PKP **PKPdf** **03 32 24.8 -0.2**
comp=Z,0.3nm,0.6s,baz=48,slow=1.6,SNR=1.1
PAC1 Pacto, Paraso 124.78 95 *e*P **Pdif** **03 29 05.5 -4.6**
ESDC Sonseca Array 143.32 334 PKP PKPbc 03 33 05.8 +0.4
comp=Z,0.6nm,0.9s,baz=58,slow=2.8,SNR=4.1
PVIS Viseu 143.98 339 *e*PKPdf PKPbc 03 33 07.9 +0.6
PMRV Marv??o 144.93 338 *e*PKPdf PKPbc 03 33 10.8 +0.5
PESTR Estremoz 145.49 337 *e*PKPdf **PKPbc** **03 33 12.5 +0.4**
PMTG Montargil 145.56 338 *e*PKPdf **PKPdf** **03 33 12.2 0.0**
PBAR Barrancos 145.88 336 *e*PKPdf **PKPdf** **03 33 12.2 -0.5**
EVO Evora 145.95 337 *e*PKPdf **PKPdf** **03 33 13.3 +0.5**
PNCL Nicolau / Gran 146.51 338 *e*PKPdf **PKPbc** **03 33 15.9 +0.7**
BDFB Brasilia 146.82 134 PKPbc **PKPbc** **03 33 17.8 +0.9**
comp=Z,6.6nm,0.6s,baz=257,slow=1.0,SNR=11
TORD Torodi Ar. Bea 154.24 285 PKP **PKPdf** **03 33 24.1 -2.4**
comp=Z,0.6nm,1.0s,baz=39,slow=2.8,SNR=2.6
TORD PKPbc **PKPbc** **03 33 34.7 0.0**
comp=Z,0.9nm,0.7s,baz=44,slow=4.4,SNR=5.4

TAP ***03*** *03:18:59.7, 22°.54N × 121°.63E, h133km, ML3.7, C*
ISC 03 03:19:00.9±1.9, **22°.53N**±0°.04 × **121°.58E**±0°.05, **h127**km±9km,
n112, σ0°.**77**/195, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LDUT	**Ludao** baz=311	**0.18**	**324**	*i* P			**Pn**	**03 19 18.0**	**-0.3**
LDUT				*i* S			**Sn**	**03 19 32.4**	**+0.9**
TTN	**Taitung** baz=284	**0.46**	**300**	P			**Pn**	**03 19 19.9**	**+0.5**
TTN				S			**Sn**	**03 19 34.9**	**+1.5**
LAY	**Lan-yu** baz=187	**0.48**	**184**	*e*P			**Pn**	**03 19 19.2**	**-0.4**
LAY				*e*S			**Sn**	**03 19 33.0**	**-0.7**
EDH	**Donghe** baz=325	**0.52**	**330**	*e*P			**Pn**	**03 19 19.8**	**+0.1**
EDH				*e*S			**Sn**	**03 19 35.0**	**+1.0**
LYUB	**Lan-yu** baz=194	**0.52**	**180**	P			**Pn**	**03 19 18.9**	**-0.9**
LYUB				*e*S			**Sn**	**03 19 32.0**	**-2.0**
TWGBT	**Beinan**	**0.55**	**302**	P			**Pn**	**03 19 19.8**	**-0.1**
TWGBT	**Beinan** baz=290	**0.55**	**302**	P			**Pn**	**03 19 19.7**	**-0.3**
TWGBT				S			**Sn**	**03 19 33.5**	**-0.8**
TWG	**Pinlang** baz=290	**0.56**	**302**	P			**Pn**	**03 19 19.7**	**-0.3**
TWG				S			**Sn**	**03 19 33.3**	**-1.1**
LONT	**Longtian** baz=297	**0.57**	**312**	P			**Pn**	**03 19 20.2**	**+0.1**
LONT				S			**Sn**	**03 19 34.5**	**0.0**
ECL	**Taimali** baz=279	**0.59**	**277**	P			**Pn**	**03 19 19.6**	**-0.5**
ECL				S			**Sn**	**03 19 33.4**	**-1.3**
CHKT	**Chengkung** baz=337	**0.61**	**341**	P			**Pn**	**03 19 20.4**	**0.0**
CHKT				S			**Sn**	**03 19 35.4**	**+0.4**
TAW	**Tawu** baz=256	**0.66**	**255**	P			**Pn**	**03 19 21.0**	**+0.4**
TAW				S			**Sn**	**03 19 35.9**	**+0.3**
ECS	**Chishang** baz=325	**0.66**	**329**	P			**Pn**	**03 19 20.7**	**0.0**
ECS				S			**Sn**	**03 19 36.2**	**+0.5**
TAWH	**Dawu Township** baz=255	**0.67**	**254**	P			**Pn**	**03 19 21.1**	**+0.4**
TAWH				S			**Sn**	**03 19 36.4**	**+0.7**
CHKH	**Chenggong** baz=342	**0.69**	**345**	P			**Pn**	**03 19 21.1**	**+0.2**
CHKH				S			**Sn**	**03 19 36.5**	**+0.5**
EAST	**Anshuo** baz=256	**0.70**	**258**	*e*P			**Pn**	**03 19 21.3**	**+0.3**
EAST				S			**Sn**	**03 19 36.5**	**+0.3**
FULB	**Fuli** baz=327	**0.72**	**338**	P			**Pn**	**03 19 21.3**	**+0.1**
FULB				S			**Sn**	**03 19 37.3**	**+0.7**
SLIU	**Shizi** baz=239	**0.79**	**247**	P			**Pn**	**03 19 22.2**	**+0.5**
SLIU				S			**Sn**	**03 19 37.4**	**0.0**
ECBN	**Changbin** baz=343	**0.80**	**351**	P			**Pn**	**03 19 21.7**	**0.0**
ECBN				S			**Sn**	**03 19 38.1**	**+0.6**
ELDTW	**Lidau** baz=312	**0.84**	**322**	*e*P			**Pn**	**03 19 22.2**	**-0.1**
ELDTW				S			**Sn**	**03 19 38.2**	**-0.3**
EYUL	**Yuli** baz=334	**0.85**	**343**	*e*P			**Pn**	**03 19 21.4**	**-0.8**
EYUL				*e*S			**Sn**	**03 19 38.1**	**-0.3**
SMST	**Manzhou Townsh** baz=238	**0.85**	**234**	S			**Sn**	**03 19 39.3**	**+0.9**
TWF1	**Yuli** baz=334	**0.86**	**342**	*i* P			**Pn**	**03 19 21.8**	**-0.5**
TWF1				*e*S			**Sn**	**03 19 37.7**	**-1.0**
MASBT	**Mashibuluo** baz=268	**0.88**	**276**	P			**Pn**	**03 19 22.9**	**+0.4**
MASBT				*e*S			**Sn**	**03 19 38.2**	**-0.6**
TSMG	**Majia** baz=287	**0.89**	**282**	*e*P			**Pn**	**03 19 22.9**	**+0.4**
TSMG				S			**Sn**	**03 19 38.4**	**-0.4**
YULB	**Yu-li**	**0.90**	**343**	P			**Pn**	**03 19 22.0**	**-0.6**
YULB	**Yu-li** baz=340	**0.90**	**343**	P			**Pn**	**03 19 22.1**	**-0.6**
YULB				*e*S			**Sn**	**03 19 37.4**	**-1.8**
SCZT	**Fangliau** baz=259	**0.91**	**261**	*e*P			**Pn**	**03 19 22.7**	**+0.1**
SCZT				*e*S			**Sn**	**03 19 38.3**	**-0.8**
TWKBT	**Hengchun** baz=237	**0.92**	**231**	P			**Pn**	**03 19 23.3**	**+0.4**
TWKBT				S			**Sn**	**03 19 40.0**	**+0.6**
TWK1	**Hengchun** baz=237	**0.93**	**231**	S			**Sn**	**03 19 40.2**	**+0.7**
HEN	**Hengchun** baz=243	**0.94**	**237**	S			**Sn**	**03 19 40.1**	**+0.4**
HGSD	**Ruisui** baz=342	**0.97**	**351**	P			**Pn**	**03 19 23.3**	**0.0**
HGSD				S			**Sn**	**03 19 41.2**	**+0.9**
SLGT	**Liugui** baz=296	**0.98**	**298**	P			**Pn**	**03 19 24.2**	**+0.9**
SLGT				S			**Sn**	**03 19 40.5**	**0.0**
STYH	**Taoyuan** baz=308	**0.98**	**311**	P			**Pn**	**03 19 23.9**	**+0.5**
STYH				S			**Sn**	**03 19 40.1**	**-0.3**
STYT	**Tauyuan** baz=307	**0.99**	**310**	P			**Pn**	**03 19 23.9**	**+0.4**
STYT				S			**Sn**	**03 19 40.4**	**-0.4**
EHY	**Hungye** baz=340	**1.01**	**346**	P			**Pn**	**03 19 23.1**	**-0.5**
EHY				S			**Sn**	**03 19 39.4**	**-1.5**
SCST	**Cishan** baz=294	**1.07**	**290**	*e*P			**Pn**	**03 19 25.4**	**+1.2**
SCST				*e*S			**Sn**	**03 19 43.2**	**+1.4**
SGST	**Jiashian** baz=299	**1.08**	**301**	*e*P			**Pn**	**03 19 24.3**	**0.0**
SGST				*e*S			**Sn**	**03 19 41.5**	**-0.6**
TWM1	**Shoushan** baz=290	**1.11**	**286**	*e*P			**Pn**	**03 19 26.4**	**+1.7**
TWM1				*e*S			**Sn**	**03 19 45.5**	**+2.7**
WTP	**Ta-pu** baz=300	**1.15**	**309**	P			**Pn**	**03 19 25.2**	**+0.2**
WTP				S			**Sn**	**03 19 42.8**	**-0.6**
EGFH	**Guangfu** baz=344	**1.15**	**353**	*e*P			**Pn**	**03 19 24.6**	**-0.4**
EGFH				*e*S			**Sn**	**03 19 42.2**	**-1.1**
TPUB	**Ta-pu**	**1.17**	**311**	P			**Pn**	**03 19 25.4**	**+0.1**
TPUB	**Ta-pu** baz=309	**1.17**	**311**	P			**Pn**	**03 19 25.4**	**+0.1**
TPUB				S			**Sn**	**03 19 42.9**	**-0.9**
CHN1	**Nanshi** baz=302	**1.18**	**304**	P			**Pn**	**03 19 25.7**	**+0.4**
CHN1				S			**Sn**	**03 19 43.5**	**-0.4**
WARBT	**Fenglin Townsh** baz=347	**1.20**	**351**	P			**Pn**	**03 19 24.9**	**-0.7**
WARBT				S			**Sn**	**03 19 42.6**	**-1.8**
ALS	**Alishan** baz=313	**1.22**	**324**	P			**Pn**	**03 19 26.1**	**+0.1**
ALS				S			**Sn**	**03 19 44.7**	**-0.4**
SNST	**Tainan City** baz=303	**1.22**	**305**	P			**Pn**	**03 19 26.1**	**+0.4**
SNST				S			**Sn**	**03 19 44.0**	**-0.6**
WSSB	**Gushan** baz=274	**1.23**	**276**	P			**Pn**	**03 19 26.8**	**+1.0**
WSSB				*e*S			**Sn**	**03 19 46.0**	**+1.2**
CHN4	**Tsaushan** baz=310	**1.23**	**312**	P			**Pn**	**03 19 26.1**	**+0.3**
CHN4				S			**Sn**	**03 19 44.4**	**-0.4**
SHUL	**Shoufeng** baz=3.0	**1.26**	**359**	P			**Pn**	**03 19 26.6**	**+0.5**
SHUL				S			**Sn**	**03 19 46.7**	**+1.3**
WCKO	**Fanlu** baz=313	**1.28**	**315**	*e*P			**Pn**	**03 19 26.8**	**+0.4**
WCKO				S			**Sn**	**03 19 45.2**	**-0.7**
VWDT	**VWDT** baz=343	**1.29**	**342**	P			**Pn**	**03 19 27.4**	**+0.9**
VWDT				*e*S			**Sn**	**03 19 46.4**	**+0.5**
ESL	**Shilin** baz=349	**1.29**	**354**	P			**Pn**	**03 19 25.9**	**-0.6**
ESL				S			**Sn**	**03 19 44.8**	**-1.2**
WHYT	**Xinyi Township** baz=328	**1.35**	**330**	*e*P			**Pn**	**03 19 27.0**	**-0.1**
WHYT				*e*S			**Sn**	**03 19 46.8**	**-0.3**
SSLB	**Suanglung**	**1.38**	**335**	P			**Pn**	**03 19 27.8**	**+0.3**
SSLB	**Suanglung** baz=324	**1.38**	**335**	*e*P			**Pn**	**03 19 27.5**	**0.0**
SSLB				*e*S			**Sn**	**03 19 46.9**	**-1.0**
ETM	**Tongmen** baz=349	**1.44**	**357**	*e*P			**Pn**	**03 19 27.6**	**-0.5**
ETM				*e*S			**Sn**	**03 19 47.5**	**-1.3**
SCLT	**Jiali** baz=302	**1.44**	**297**	S			**Sn**	**03 19 49.1**	**+0.3**
ICHU	**Yijhu** baz=297	**1.46**	**305**	*e*P			**Pn**	**03 19 28.9**	**+0.5**
ICHU				*e*S			**Sn**	**03 19 49.1**	**-0.2**
OWD	**Renai** baz=344	**1.47**	**345**	*e*P			**Pn**	**03 19 29.3**	**+0.6**
OWD				*e*S			**Sn**	**03 19 50.2**	**+0.5**
SMLT	**Sun Moon Lake** baz=326	**1.49**	**335**	*e*P			**Pn**	**03 19 29.6**	**+0.8**
SMLT				*e*S			**Sn**	**03 19 50.5**	**+0.4**
WGK	**Gukeng** baz=319	**1.49**	**321**	*e*P			**Pn**	**03 19 28.8**	**+0.1**
WGK				*e*S			**Sn**	**03 19 49.7**	**-0.2**
LXIB	**Xiulin Townshi** baz=356	**1.50**	**354**	*e*P			**Pn**	**03 19 28.4**	**-0.5**
LXIB				*e*S			**Sn**	**03 19 49.6**	**-0.7**
CHN8	**Yiju** baz=301	**1.51**	**303**	*e*P			**Pn**	**03 19 28.8**	**-0.1**
CHN8				*e*S			**Sn**	**03 19 50.1**	**-0.1**
WDLH	**Douliu** baz=311	**1.51**	**320**	*e*P			**Pn**	**03 19 29.0**	**+0.2**
WDLH				*e*S			**Sn**	**03 19 50.2**	**0.0**
WJS	**Zhushan** baz=327	**1.51**	**329**	*e*S			**Sn**	**03 19 50.5**	**+0.1**
TSCK	**Chigu Township** baz=298	**1.52**	**294**	*e*P			**Pn**	**03 19 29.2**	**+0.2**
TSCK				*e*S			**Sn**	**03 19 50.2**	**-0.1**
WUSB	**Renai** baz=342	**1.52**	**344**	*e*P			**Pn**	**03 19 29.7**	**+0.5**
WUSB				*e*S			**Sn**	**03 19 50.8**	**+0.1**
TWD	**Chiawan** baz=4.0	**1.55**	**0**	*e*P			**Pn**	**03 19 29.0**	**-0.3**
CHGB	**Renai** baz=337	**1.57**	**346**	*e*P			**Pn**	**03 19 30.8**	**+0.9**
CHGB				*e*S			**Sn**	**03 19 52.7**	**+0.7**
WNT	**Mingjian** baz=327	**1.58**	**329**	*e*P			**Pn**	**03 19 30.1**	**+0.4**
WNT				*e*S			**Sn**	**03 19 51.5**	**-0.2**
WTK	**Tuku** baz=315	**1.60**	**317**	*e*S			**Sn**	**03 19 51.6**	**-0.4**
WNT1	**Nantou City** baz=321	**1.61**	**329**	*e*S			**Sn**	**03 19 52.2**	**0.0**
DPDB	**Guoxing** baz=329	**1.62**	**338**	*e*P			**Pn**	**03 19 30.9**	**+0.7**
DPDB				*e*S			**Sn**	**03 19 52.6**	**0.0**
ETL	**Fush Village** baz=7.0	**1.63**	**1**	*e*P			**Pn**	**03 19 30.1**	**-0.2**
ETL				*e*S			**Sn**	**03 19 52.7**	**-0.1**
WHF	**Hehuan Shan** baz=354	**1.64**	**350**	*e*P			**Pn**	**03 19 31.4**	**+0.6**
WHF				*e*S			**Sn**	**03 19 54.5**	**+0.8**
NACB	**Ninganchiao**	**1.64**	**0**	P			**Pn**	**03 19 30.0**	**-0.4**
NACB	**Ninganchiao** baz=348	**1.64**	**0**	*e*P			**Pn**	**03 19 30.1**	**-0.3**
NACB				*e*S			**Sn**	**03 19 52.4**	**-0.6**
WCS	**Beigang Elemen** baz=330	**1.65**	**338**	*e*P			**Pn**	**03 19 31.2**	**+0.7**
WCS				*e*S			**Sn**	**03 19 53.4**	**+0.3**
WSF	**Szhu** baz=310	**1.67**	**312**	*e*S			**Sn**	**03 19 52.8**	**-0.8**
ETLH	**Xiulin Townshi** baz=352	**1.68**	**357**	*e*P			**Pn**	**03 19 30.8**	**-0.2**
ETLH				*e*S			**Sn**	**03 19 53.1**	**-0.8**
FUSS	**Fushou** baz=353	**1.74**	**350**	*e*P			**Pn**	**03 19 32.8**	**+1.0**
TWT	**Tachien** baz=339	**1.76**	**348**	*e*P			**Pn**	**03 19 33.0**	**+1.0**
TWT				*e*S			**Sn**	**03 19 56.6**	**+0.8**
TDCB	**Techi** baz=339	**1.76**	**347**	*e*P			**Pn**	**03 19 33.1**	**+1.1**
TDCB				*e*S			**Sn**	**03 19 56.1**	**+0.3**
WRL	**Guolierlin Hig** baz=315	**1.76**	**321**	*e*S			**Sn**	**03 19 55.4**	**-0.2**
RLNB	**Erlin** baz=315	**1.77**	**321**	*e*P			**Pn**	**03 19 31.4**	**-0.5**
RLNB				*e*S			**Sn**	**03 19 54.9**	**-0.6**
WTCT	**Ta-ch'eng** baz=314	**1.79**	**318**	*e*S			**Sn**	**03 19 55.3**	**-0.8**
WCHH	**Zhanghua** baz=322	**1.81**	**329**	*e*S			**Sn**	**03 19 57.0**	**+0.4**
WHP	**Taichung City** baz=341	**1.84**	**342**	*e*P			**Pn**	**03 19 33.4**	**+0.5**
WHP				*e*S			**Sn**	**03 19 57.9**	**+0.5**
EOS3	**EOS3** baz=18	**1.88**	**21**	*e*P			**Pn**	**03 19 33.8**	**+0.7**
ENA	**Nanau** baz=9.0	**1.90**	**4**	*e*P			**Pn**	**03 19 33.6**	**+0.2**
NNS	**Nan Shan** baz=354	**1.92**	**354**	*e*S			**Sn**	**03 19 58.4**	**-0.7**
EWUT	**Wuta** baz=10.0	**1.92**	**5**	*e*P			**Pn**	**03 19 34.0**	**+0.3**
EWUT				*e*S			**Sn**	**03 19 58.6**	**-0.2**
WDGT	**Dungji** baz=285	**1.92**	**293**	*e*P			**Pn**	**03 19 33.2**	**-0.5**
EOS2	**EOS2** baz=18	**1.98**	**17**	*e*P			**Pn**	**03 19 35.3**	**+1.0**
NDT	**Datong Townshi** baz=3.0	**2.07**	**358**	*e*P			**Pn**	**03 19 36.0**	**+0.5**
NDT				*e*S			**Sn**	**03 20 02.7**	**+0.5**
TWC	**Suao** baz=6.0	**2.09**	**7**	*e*P			**Pn**	**03 19 36.2**	**+0.4**
PHUB	**P'eng-hu** baz=302	**2.10**	**298**	*e*P			**Pn**	**03 19 35.3**	**-0.6**
PHUB				*e*S			**Sn**	**03 20 00.3**	**-2.5**
VCHM	**Qimei** baz=283	**2.10**	**289**	*e*P			**Pn**	**03 19 35.5**	**-0.4**
VCHM				*e*S			**Sn**	**03 20 00.9**	**-1.9**
ENTT	**Nioudou** baz=4.0	**2.11**	**360**	*e*P			**Pn**	**03 19 36.1**	**+0.1**
ENTT				*e*S			**Sn**	**03 20 02.8**	**-0.2**
PNG	**Penghu** baz=298	**2.14**	**299**	*e*P			**Pn**	**03 19 35.9**	**-0.5**
PNG				*e*S			**Sn**	**03 20 01.3**	**-2.3**
NFF	**Wufeng Townshi** baz=338	**2.14**	**349**	*e*P			**Pn**	**03 19 38.6**	**+2.1**
NFF				*e*S			**Sn**	**03 20 03.4**	**-0.4**
YHNB	**Yeheng**	**2.14**	**355**	P			**Pn**	**03 19 37.6**	**+1.0**
YHNB	**Yeheng** baz=354	**2.14**	**355**	*e*P			**Pn**	**03 19 37.5**	**+1.0**
YHNB				*e*S			**Sn**	**03 20 03.8**	**-0.1**
NSK	**Sanguang** baz=354	**2.15**	**355**	*e*P			**Pn**	**03 19 37.6**	**+0.9**
NSK				*e*S			**Sn**	**03 20 03.7**	**-0.4**
NSTT	**Nanjuang** baz=345	**2.16**	**346**	*e*S			**Sn**	**03 20 03.0**	**-1.3**
LIOB	**Emei** baz=346	**2.17**	**346**	*e*P			**Pn**	**03 19 37.1**	**+0.2**
LIOB				*e*S			**Sn**	**03 20 03.3**	**-1.2**
FUSB	**Fushanzhiwuyua** baz=352	**2.23**	**0**	*e*P			**Pn**	**03 19 38.0**	**+0.4**
FUSB				*e*S			**Sn**	**03 20 05.3**	**-0.5**

baz=352
NWLT Wulai 2.24 358 *e*P Pn 03 19 39.5 +1.7
baz=357
NWLT *e*S Sn 03 20 06.5 +0.4
baz=357
TIPB Shuangxi 2.45 5 *e*P Pn 03 19 41.4 +1.0
baz=355
NWF Wu-fen Shan 2.54 4 *e*P Pn 03 19 41.6 0.0
baz=354
SXI1 Grass Mountain 2.57 6 *e*P Pn 03 19 42.5 +0.5
baz=5.0

*SJA **03** 03:19:06.6±0.7, 31°.44S×71°.96W, h15km±3km, ML3.5, MW3.5*
*GUC **03** 03:19:11.4±0.9, 31°.46S×71°.61W, h42km±3km, ML3.6*
ISC 03 03:19:08.0±1.6, **31°.45S**±0°.02×**71°.83W**±0°.05, **h9**km±11km,
n42, σ1°.**62**/73, **8C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.75**	**71**	*e*P	**Pb**	**03 19 23.6**	**+0.3**
CO02				*e*S	**Sb**	**03 19 33.2**	**-0.3**
CO02				IAML		03 19 37.9	
	comp=Z,3μm,0.3s						
CO02	**Combarbal**	**0.75**	**71**⇓	*e*P	**Pb**	**03 19 23.5**	**+0.3**
CO02				*e*S	**Sg**	**03 19 32.1**	**-0.1**
CO02				IAML		03 19 36.7	
	comp=N,7μm,0.2s						
CO06	**Fray Jorge**	**0.79**	**12**⇑	*e*P	**Pn**	**03 19 26.1**	**+0.8**
CO06				*e*S	**Sn**	**03 19 36.8**	**-0.3**
CO06				IAML		03 19 38.8	
	comp=E,3μm,0.2s						
CO03	**El Pedregal**	**1.15**	**58**	*e*P	**Pb**	**03 19 30.1**	**0.0**
CO03				*e*S	**Sb**	**03 19 44.7**	**-0.4**
CO03				IAML		03 19 46.6	
	comp=Z,609nm,0.3s						
CO03	**El Pedregal**	**1.15**	**58**	*e*P	**Pg**	**03 19 30.0**	**-0.1**
CO03				*e*S	**Sg**	**03 19 43.3**	**-1.7**
CO03				IAML		03 19 47.1	
	comp=E,2μm,0.4s						
VA06	**Catapilco**	**1.20**	**158**⇑	*i*P	**Pb**	**03 19 31.3**	**+0.5**
VA06				*e*S	**Sb**	**03 19 46.2**	**-0.2**
VA06				IAML		03 19 50.1	
	comp=N,2μm,0.2s						
GO04	**Tololo Observa**	**1.55**	**35**	*e*P	Pn	03 19 31.1	-4.8
GO04				*e*P	**Pb**	**03 19 36.7**	**-0.3**
GO04				*e*S	**Sb**	**03 19 56.6**	**-0.1**
GO04				IAML		03 19 59.5	
	comp=Z,1μm,0.5s						
GO04	**Tololo Observa**	**1.55**	**35**⇑	*i*P	**Pn**	**03 19 36.5**	**+0.6**
GO04				*e*S	**Sn**	**03 19 55.6**	**-0.6**
GO04				IAML		03 19 58.8	
	comp=E,3μm,0.4s						
VA01	**Torpederas**	**1.58**	**175**	*e*P	Pn	03 19 31.1	-4.9
VA01				*e*P	**Pb**	**03 19 36.8**	**-0.5**
VA01				*e*S	**Sn**	**03 19 49.9**	**-6.6**
CO05	**La Serena**	**1.61**	**19**	*e*P	**Pb**	**03 19 38.4**	**+0.6**
CO05				*e*S	**Sb**	**03 19 58.4**	**+0.2**
CO05				IAML		03 20 04.3	
	comp=E,1μm,0.5s						
ROCH	**El Roble**	**1.67**	**156**⇑	*i*P	**Pn**	**03 19 38.2**	**+0.7**
ROCH				*i*S	**Sn**	**03 19 58.8**	**-0.4**
ROCH				IAML		03 20 03.0	
	comp=N,1μm,0.4s						
ROC1	**El Roble**	**1.67**	**156**	*e*P	**Pn**	**03 19 38.3**	**+0.7**
ROC1				*e*S	**Sb**	**03 20 01.0**	**+0.8**
VA03	**San Esteban**	**1.70**	**141**	*e*P	Pn	03 19 33.1	-4.7
VA03				*e*P	**Pn**	**03 19 38.8**	**+0.9**
VA03				*e*S	**Sb**	**03 20 01.4**	**+0.5**
VA03				IAML		03 20 04.0	
	comp=Z,816nm,0.3s						
VA03	**San Esteban**	**1.70**	**141**⇑	*i*P	**Pn**	**03 19 38.7**	**+0.9**
VA03				*e*S	**Sn**	**03 19 58.9**	**-0.9**
VA03				IAML		03 20 00.9	
	comp=E,2μm,0.4s						
MT02	**Curacav**	**1.90**	**162**	*e*P	**Pn**	**03 19 40.9**	**+0.4**
MT02				*e*S	**Sb**	**03 20 08.5**	**+1.9**
MT02				*e*S	**Sg**	**03 20 08.6**	**-0.3**
MT02				IAML		03 20 09.8	
	comp=Z,284nm,0.3s						
MT02	**Curacav**	**1.90**	**162**	*e*P	**Pn**	**03 19 41.0**	**+0.4**
PEL	**Peldehue**	**1.95**	**151**	*e*P	Pn	03 19 36.6	-4.6
PEL				*e*P	**Pb**	**03 19 42.3**	**-1.3**
PEL				*e*S	**Sn**	**03 20 03.1**	**-2.7**
PEL				*e*S	**Sb**	**03 20 08.6**	**+0.6**
PEL				IAML		03 20 09.6	
	comp=Z,517nm,0.3s						
PEL	**Peldehue**	**1.95**	**151**⇑	*i*P	**Pn**	**03 19 42.1**	**+0.9**
PEL				*e*S	**Sb**	**03 20 07.8**	**-0.3**
PEL				IAML		03 20 09.5	
	comp=E,901nm,0.4s						
CO01	**Juntas del Tor**	**2.09**	**46**	*e*P	**Pn**	**03 19 44.7**	**+1.4**
CO01				*e*S	Sn	03 19 56.4	-13
CO01				IAML		03 20 14.6	
	comp=Z,202nm,0.6s						
CO01	**Juntas del Tor**	**2.09**	**46**⇑	*e*P	**Pn**	**03 19 44.8**	**+1.4**
CO01				*e*S	**Sn**	**03 20 08.8**	**-0.9**
CO01				IAML		03 20 13.0	
	comp=N,429nm,0.4s						
MT10	**Hacienda Santa**	**2.12**	**149**	*e*P	**Pn**	**03 19 44.8**	**+1.1**
MT10				*e*S	**Sn**	**03 20 11.7**	**+1.4**
MT05	**Renca**	**2.15**	**155**	*e*P	**Pn**	**03 19 45.0**	**+1.1**
MT05				*e*S	**Sb**	**03 20 13.6**	**-0.1**
MT05				IAML		03 20 20.9	
	comp=Z,250nm,0.4s						
RTLS	**Leoncito**	**2.19**	**100**	*e*P	**Pb**	**03 19 47.3**	**-0.6**
RTLS				*e*S	**Sg**	**03 20 17.3**	**-1.0**
RTLS				IAML		03 20 19.2	
	comp=Z,715nm,0.6s						
FCH	**Farellones**	**2.28**	**146**⇑	*i*P	**Pn**	**03 19 47.1**	**+1.0**
FCH				*e*S	**Sb**	**03 20 17.0**	**-0.9**
FCH				IAML		03 20 21.7	
	comp=E,223nm,0.3s						
MT03	**Universidad Ad**	**2.32**	**152**	*e*P	**Pn**	**03 19 47.6**	**+1.2**
MT03				*e*S	**Sb**	**03 20 20.7**	**+1.8**
MT03				IAML		03 20 27.4	
	comp=Z,346nm,0.3s						
DOCA	**Reserva Natura**	**2.40**	**79**	*e*P	**Pb**	**03 19 50.2**	**-1.4**
DOCA				*e*S	**Sb**	**03 20 21.6**	**+0.2**
DOCA				*e*S	**Sg**	**03 20 23.3**	**-2.0**
DOCA				IAML		03 20 23.7	
	comp=Z,302nm,0.6s						
MT15	**Las Vizcachas**	**2.42**	**153**	*e*P	**Pn**	**03 19 49.1**	**+1.4**
MT01	**Popeta**	**2.46**	**169**	*e*P	**Pn**	**03 19 48.9**	**+0.7**
MT01				*e*S	**Sn**	**03 20 21.1**	**+2.8**
MT01				IAML		03 20 38.0	
	comp=Z,119nm,0.5s						
LCO	**Las Campanas**	**2.62**	**22**	*e*P	**Pn**	**03 19 51.4**	**+0.8**
LCO				*e*S	**Sb**	**03 20 25.4**	**-2.1**
LCO				IAML		03 20 33.0	
	comp=Z,165nm,0.5s						
MT13	**San Alfonso**	**2.63**	**151**	*e*P	**Pn**	**03 19 52.1**	**+1.4**
MT13				*e*S	**Sn**	**03 20 22.1**	**-0.7**
MT13				IAML		03 20 33.1	
	comp=E,969nm,0.3s						
ASAL	**Salagasta**	**2.79**	**115**	*e*P	**Pb**	**03 19 56.3**	**-1.6**
ASAL				*e*S	**Sb**	**03 20 30.6**	**-1.5**
ASAL				IAML		03 20 39.4	
	comp=Z,80nm,0.4s						
ARCO	**CERRO ARCO**	**2.82**	**120**	*e*P	**Pn**	**03 19 55.6**	**+2.3**
ARCO				*e*S	**Sb**	**03 20 33.1**	**-0.2**
ARCO				IAML		03 20 42.3	
	comp=Z,86nm,0.6s						
RTCV	**Cerro Valdivia**	**2.83**	**99**	*e*P	**Pb**	**03 19 58.3**	**-0.4**
RTCV				*e*S	**Sg**	**03 20 43.6**	**+4.6**
RTLL	**Cerro Villicun**	**2.87**	**88**	*e*P	**Pn**	**03 19 56.4**	**+2.5**
RTLL				*e*S	**Sb**	**03 20 31.1**	**-3.4**
AC05	**El Transito**	**2.93**	**28**	*e*P	**Pn**	**03 19 56.3**	**+1.5**
AC05				*e*S	**Sn**	**03 20 29.6**	**-0.6**
AAGR	**Agrelo**	**3.02**	**124**	*e*S	**Sg**	**03 20 44.9**	**0.0**
AC04	**Llanos de Chal**	**3.30**	**12**	IAML		03 20 58.1	
	comp=Z,53nm,0.4s						
BO02	**Sierra Bellavi**	**3.45**	**166**	*e*P	**Pn**	**03 20 03.4**	**+1.5**
BO02				IAML		03 20 59.0	
	comp=Z,87nm,0.9s						
AGUA	**GUADACOL**	**3.48**	**57**	IAML		03 20 53.3	
	comp=Z,156nm,0.3s						
GO03	**Copiap**	**4.08**	**20**	IAML		03 21 18.1	
	comp=Z,54nm,0.4s						
VCA	**Vinchina**	**4.14**	**50**	*e*P	**Pn**	**03 20 15.6**	**+4.0**
AC02	**Maricunga**	**5.17**	**28**	IAML		03 21 52.8	
	comp=Z,26nm,1.1s						

*DJA **03** 03:21:47.6±0.8, 8°.S±9°×12°.1E±°, h424km±10km, M3.8/6, mb3.8/2, MLv3.8/6*
*IDC **03** 03:21:48.9±11.0, 7°.32S×121°.57E, h422km±144km, mb2.7/4, mbtmp3.6/5, Error ellipse: s-maj=177.1km s-min=33.1km az=68.0*
ISC 03 03:21:47.5±0.9, **7°.5S**±0°.1×**121°.21E**±0°.09, **h400**km, **n13**,
σ1°.**74**/**13**, **mb3.3**/3, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.30**	**159**	P	**Pn**	**03 22 41.0**	**+1.1**
BBSI	**Bau Bau**	**2.44**	**34**	P	**Pn**	**03 22 49.2**	**+2.8**
BASI	**Baing, Sumba**	**2.74**	**193**	P	**Pn**	**03 22 50.5**	**+1.9**
PLAI	**Plampang**	**3.64**	**249**	P	**Pn**	**03 22 58.7**	**+2.5**
SOEI	**Soe**	**3.74**	**126**	P	**Pn**	**03 22 58.7**	**+1.4**
TWSI	**Taliwang, Sumb**	**4.45**	**254**	P	**Pn**	**03 23 06.4**	**+2.4**
DNP	**Denpasar**	**6.05**	**259**	P	**Pn**	**03 23 20.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**7.05**	**262**	P	**Pn**	**03 23 31.8**	**0.0**
	20nm,1.3s,0.1nm						
WRA	**Warramunga Arr**	**17.72**	**135**	P	**P**	**03 25 28.6**	**-0.5**
	1.1nm,0.5s,baz=315,slow=12,SNR=32						
ASAR	**Alice Springs**	**20.14**	**144**	P	**P**	**03 25 53.5**	**+0.3**
	0.3nm,0.3s,baz=322,slow=8.6,SNR=7.9						
	0.3nm,0.3s						
STKA	**Stephens Creek**	**30.78**	**145**	P	**P**	**03 27 27.0**	**-1.0**
	0.8nm,0.3s,baz=330,slow=8.1,SNR=3.0						
	0.8nm,0.3s						
SONM	**Songino Array**	**56.66**	**348**	P	**P**	**03 30 49.5**	**-1.4**
	0.3nm,0.8s,baz=170,slow=7.8,SNR=2.1						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**64.19**	**331**	P	**P**	**03 31 40.5**	**-0.6**
	0.4nm,0.5s,baz=137,slow=7.3,SNR=6.3						
	0.4nm,0.5s						

*KNET **03** 03:44:01.0±0.4, 42°.52N×75°.30E, h18km±3km, ml3.4, Error ellipse: s-maj=3.4km s-min=2.6km az=13.0*
*KRNET **03** 03:44:01.5±0.1, 42°.54N×75°.30E, h20km, mb3.6*
*NNC **03** 03:44:02.9±0.3, 42°.62N×75°.29E, h2km±1km, mb4.1, mpv4.1, Error ellipse: s-maj=2.9km s-min=0.9km az=177.0*
*SOME **03** 03:44:02.5, 42°.57N×75°.28E, h20km*
ISC 03 03:44:02.3±1.0, **42°.54N**±0°.02×**75°.27E**±0°.01, **h6**km±8km,
n102, σ1°.**32**/**177**, **48C-41D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBK	**Karagaybulak**	**0.27**	**296**	⇑P	**Pg**	**03 44 08.0**	**+0.4**
	570nm,0.1s,SNR=739						
KBK				⇑S	**Sg**	**03 44 12.6**	**+1.5**
	8μm,0.1s						
KBK	**Karagaybulak**	**0.27**	**296**	⇑*i*P	**Pg**	**03 44 07.9**	**+0.3**
	baz=95						
KBK				⇑*i*S	**Sg**	**03 44 12.4**	**+1.2**
	baz=95						
TKM2	**Tokmak 2**	**0.45**	**32**	P	**Pg**	**03 44 10.8**	**-0.3**
	77nm,0.1s,SNR=1033						
TKM2				⇑S	**Sg**	**03 44 16.9**	**-0.2**
	2μm,0.2s						
TKM2	**Tokmak 2**	**0.45**	**32**	⇑P	**Pg**	**03 44 10.7**	**-0.3**
	22nm,0.2s						
TKM2				⇑S	**Sg**	**03 44 16.1**	**-0.9**
	1μm,0.5s						
TKM2	**Tokmak 2**	**0.45**	**32**⇑	*i*P	**Pg**	**03 44 10.4**	**-0.7**
	baz=29						
TKM2				⇑*i*S	**Sg**	**03 44 16.3**	**-0.8**
	baz=29						
BOOM	**Boomskoye usch**	**0.50**	**95**⇑	*i*P	**Pg**	**03 44 11.0**	**-1.0**
	baz=95						
BOOM				⇑*i*S	**Sg**	**03 44 17.8**	**-0.7**
	baz=95						
FRU1	**Bishkek**	**0.55**	**300**⇑	*i*P	**Pg**	**03 44 12.9**	**+0.1**
	baz=99						
FRU1				⇑*i*S	**Sg**	**03 44 21.1**	**+1.1**
	baz=99						
AAK	**Ala-Archa**	**0.58**	**280**	⇓P	**Pg**	**03 44 13.5**	**-0.1**
	149nm,0.2s,SNR=179						
AAK				⇑S	**Sg**	**03 44 21.6**	**+0.5**
	2μm,0.2s						
AAK	**Ala-Archa**	**0.58**	**280**⇑	*i*P	**Pg**	**03 44 13.4**	**-0.1**
	baz=80						
AAK				⇑*i*S	**Sg**	**03 44 21.4**	**+0.2**
	baz=80						
CHMS	**Chumysh**	**0.60**	**320**	P	**Pg**	**03 44 13.8**	**-0.1**
	77nm,0.1s,SNR=251						
CHMS				⇑S	**Sg**	**03 44 22.1**	**+0.4**
	2μm,0.2s						
CHMS	**Chumysh**	**0.60**	**320**	⇑P	**Pg**	**03 44 13.6**	**-0.2**
	39nm,0.3s						
CHMS				⇑S	**Sg**	**03 44 21.9**	**+0.3**
	273nm,0.2s						
CHMS	**Chumysh**	**0.60**	**320**⇑	*i*P	**Pg**	**03 44 13.5**	**-0.4**
	baz=19						
CHMS				⇑*i*S	**Sg**	**03 44 21.9**	**+0.3**
	baz=19						
UCH	**Uchtor**	**0.64**	**241**	⇓P	**Pg**	**03 44 14.3**	**-0.4**
	93nm,0.2s,SNR=105						
UCH				⇓S	**Sg**	**03 44 23.1**	**0.0**
	337nm,0.2s						
UCH	**Uchtor**	**0.64**	**241**⇓	*i*P	**Pg**	**03 44 14.3**	**-0.4**
	baz=42						
UCH				⇓*i*S	**Sg**	**03 44 23.2**	**+0.1**
	baz=42						
KST	**Kastek**	**0.72**	**45**	P	**Pg**	**03 44 15.4**	**-0.7**
	95nm,0.1s						
KST				S	**Sg**	**03 44 24.8**	**-0.7**
	502nm,0.2s						
KST	**Kastek**	**0.72**	**45**	*e*P	**Pg**	**03 44 15.4**	**-0.7**
	95nm,0.1s						
KST				*e*S	**Sg**	**03 44 24.8**	**-0.7**
	502nm,0.2s						
ULHL	**Ulahol**	**0.78**	**112**	⇓P	**Pg**	**03 44 16.0**	**-1.2**
	84nm,0.2s,SNR=392						
ULHL				⇑S	**Sg**	**03 44 26.2**	**-1.2**
	403nm,0.2s						
ULHL	**Ulahol**	**0.78**	**112**⇓	*i*P	**Pg**	**03 44 15.9**	**-1.4**
	baz=12						
ULHL				⇓*i*S	**Sg**	**03 44 26.2**	**-1.2**
	baz=12						
DGS	**Degeres**	**0.79**	**27**	P	**Pg**	**03 44 17.2**	**-0.4**
	109nm,0.1s						
DGS				S	**Sg**	**03 44 27.8**	**-0.1**
	376nm,0.2s						
DGS	**Degeres**	**0.79**	**27**	*e*P	**Pg**	**03 44 17.2**	**-0.4**
	109nm,0.1s						
DGS				*e*S	**Sg**	**03 44 27.8**	**-0.1**
	1μm,0.1s						
USP	**Ospenovka**	**0.92**	**322**	P	**Pg**	**03 44 19.5**	**-0.6**
	221nm,0.1s,SNR=789						
USP				⇑S	**Sg**	**03 44 32.1**	**+0.1**
	668nm,0.1s						
USP	**Ospenovka**	**0.92**	**322**⇑	*i*P	**Pg**	**03 44 19.1**	**-0.9**
	baz=21						
USP				⇑*i*S	**Sg**	**03 44 31.7**	**-0.3**
	baz=21						
ARLS	**Aral**	**0.98**	**226**⇑	*i*P	**Pg**	**03 44 20.1**	**-1.0**
	baz=27						
ARLS				⇑*i*S	**Sg**	**03 44 33.3**	**-0.5**
	baz=27						
SGDS	**Sogindy**	**1.03**	**333**	P	**Pg**	**03 44 20.4**	**-1.6**
	109nm,0.1s						
SGDS				S	**Sg**	**03 44 33.1**	**-2.3**
	429nm,0.1s						
MTBS	**Maitube**	**1.04**	**55**	P	**Pg**	**03 44 21.3**	**-1.0**
	128nm,0.1s						
MTBS				S	**Sg**	**03 44 34.6**	**-1.1**
	483nm,0.1s						
MTBS	**Maitube**	**1.04**	**55**	*e*P	**Pg**	**03 44 21.3**	**-1.0**
	128nm,0.1s						
MTBS				*e*S	**Sg**	**03 44 34.6**	**-1.1**
	483nm,0.1s						
EKS2	**Erkin-Say**	**1.11**	**277**	⇑P	**Pb**	**03 44 23.3**	**-0.7**
	68nm,0.2s,SNR=243						
EKS2				⇑S	**Sg**	**03 44 38.9**	**+0.9**
	272nm,0.2s						
EKS2	**Erkin-Say**	**1.11**	**277**⇓	*i*P	**Pb**	**03 44 22.6**	**-1.4**
	baz=77						
EKS2				⇓*i*S	**Sb**	**03 44 37.8**	**-1.0**
	baz=77						
KRBS	**Karabastau**	**1.19**	**14**	P	**Pn**	**03 44 23.4**	**-2.3**
	68nm,0.1s						
KRBS				S	**Sb**	**03 44 38.3**	**-2.9**
	3.2nm,0.1s						
KRBS	**Karabastau**	**1.19**	**14**	*e*P	**Pn**	**03 44 23.4**	**-2.3**
	68nm,0.1s						
KRBS				*e*S	**Sb**	**03 44 38.3**	**-2.9**
	259nm,0.1s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.23**	**154**⇑	*i*P	**Pb**	**03 44 24.1**	**-2.1**
	baz=56						
NRN				⇑*i*S	**Sb**	**03 44 40.5**	**-2.0**
	baz=56						
TNSS	**Tian-Shan**	**1.33**	**67**	P	**Pn**	**03 44 26.8**	**-1.1**
	27nm,0.2s						
TNSS				S	**Sb**	**03 44 44.2**	**-1.3**
	84nm,0.1s						
TNSS	**Tian-Shan**	**1.33**	**67**	*e*P	**Pn**	**03 44 26.8**	**-1.1**
	27nm,0.2s						
TNSS				*e*S	**Sb**	**03 44 44.2**	**-1.3**
	84nm,0.1s						
AAA	**Alma-Ata**	**1.38**	**60**	P	**Pn**	**03 44 28.1**	**-0.1**
	144nm,0.1s						
AAA				S	**Sn**	**03 44 46.7**	**-0.2**
	49nm,0.1s						
AAA	**Alma-Ata**	**1.38**	**60**	*e*P	**Pn**	**03 44 28.1**	**-0.1**
	67nm,0.1s						
AAA				*e*S	**Sn**	**03 44 46.7**	**-0.2**
	274nm,0.1s						
KNDC	**Almaty**	**1.42**	**61**⇑	P	**Pn**	**03 44 28.6**	**-0.1**
	27nm,0.2s						
KNDC				⇑S	**Sn**	**03 44 47.6**	**-0.2**
	120nm,0.6s						
MDOK	**Medeo**	**1.45**	**64**⇓	P	**Pn**	**03 44 28.9**	**-0.4**
	35nm,0.5s						
MDOK				Pg	**Pn**	**03 44 29.2**	**-0.1**
	21nm,0.1s						
MDOK				Lg	Lg	03 44 48.3	
	147nm,0.3s						
MDOK				⇑S	**Sn**	**03 44 48.6**	**-0.1**
	156nm,0.5s						
MDOK	**Medeo**	**1.45**	**64**	*e*P	**Pn**	**03 44 29.1**	**-0.1**
	21nm,0.1s						
MDOK				*e*S	**Sn**	**03 44 48.3**	**-0.4**
	147nm,0.3s						
KDJ	**Kajisay**	**1.47**	**105**⇓	*i*P	**Pn**	**03 44 28.3**	**-1.3**
	baz=6.0						
KDJ				⇓*i*S	**Sn**	**03 44 47.7**	**-1.6**
	baz=6.0						
KOTS	**Kotyrbulak**	**1.52**	**62**	P	**Pn**	**03 44 30.1**	**-0.1**
KOTS				S	**Sn**	**03 44 49.8**	**-0.7**
	497nm,0.2s						
KOTS	**Kotyrbulak**	**1.52**	**62**	*e*P	**Pn**	**03 44 30.1**	**-0.1**
	29nm,0.1s						
KOTS				*e*S	**Sn**	**03 44 49.8**	**-0.7**
	184nm,0.4s						
MRKS	**Merke**	**1.52**	**278**	P	**Pn**	**03 44 30.4**	**+0.2**
	124nm,0.2s						
MRKS				S	**Sb**	**03 44 50.2**	**-0.4**
	801nm,0.3s						
MRKS	**Merke**	**1.52**	**278**	*e*P	**Pn**	**03 44 30.4**	**+0.2**
	124nm,0.2s						
MRKS				*e*S	**Sb**	**03 44 50.2**	**-0.4**
	801nm,0.3s						
KTBS	**Karatobe**	**1.56**	**41**	P	**Pn**	**03 44 30.6**	**-0.2**
	58nm,0.1s						
KTBS				S	**Sn**	**03 44 50.5**	**-0.9**
	848nm,0.1s						
KTBS	**Karatobe**	**1.56**	**41**	*e*P	**Pn**	**03 44 30.6**	**-0.2**
	58nm,0.1s						
KTBS				*e*S	**Sn**	**03 44 50.5**	**-0.9**
	848nm,0.1s						
KUU	**Kurty**	**1.56**	**30**	P	**Pn**	**03 44 30.1**	**-0.6**
	54nm,0.2s						
KUU				S	**Sn**	**03 44 50.0**	**-1.3**
	630nm,0.3s						
KUU	**Kurty**	**1.56**	**30**	*e*P	**Pn**	**03 44 30.1**	**-0.6**
	50nm,0.1s						
KUU				*e*S	**Sn**	**03 44 50.0**	**-1.3**
	630nm,0.3s						
ANVS	**Anan'yevo**	**1.78**	**81**⇓	*i*P	**Pn**	**03 44 33.5**	**-0.4**
	baz=81						
ANVS				⇓*i*S	**Sn**	**03 44 56.5**	**-0.5**
	baz=81						
CHKK	**Chushkaly**	**1.82**	**43**	P	**Pb**	**03 44 35.4**	**-0.7**
	36nm,0.3s						
CHKK				S	**Sb**	**03 44 59.1**	**0.0**
	1μm,0.1s						
CHKK	**Chushkaly**	**1.82**	**43**	*e*P	**Pb**	**03 44 35.4**	**-0.7**
	36nm,0.3s						
CHKK				*e*S	**Sb**	**03 44 59.1**	**0.0**
	1μm,0.1s						
MNAS	**Manas**	**2.05**	**269**⇑	*e*P	**Pn**	**03 44 37.6**	**+0.1**
	baz=70						
MNAS				⇑*e*S	**Sn**	**03 45 03.9**	**+0.5**
	baz=70						
ARSB	**Arslanbob**	**2.10**	**235**⇑	*i*P	**Pn**	**03 44 38.1**	**0.0**
	baz=36						
ARSB				⇑*i*S	**Sn**	**03 45 04.8**	**+0.2**
	baz=36						
PRZ	**Przheval'sk**	**2.31**	**90**⇑	*i*P	**Pn**	**03 44 40.8**	**-0.4**
	baz=90						
PRZ				⇑*i*S	**Sn**	**03 45 09.1**	**-1.0**
	baz=90						
KURS	**Kuram**	**2.33**	**65**	Pg	**Pb**	**03 44 44.0**	**-0.8**
	37nm,0.6s						
KURS				Lg	Lg	03 45 13.9	
	129nm,0.3s						
KURS	**Kuram**	**2.33**	**65**	*e*P	**Pb**	**03 44 44.0**	**-0.8**
	37nm,0.6s						
KURS				*e*S	**Sb**	**03 45 13.9**	**+0.1**
	129nm,0.3s						
SATY	**Saty**	**2.37**	**76**	Pg	**Pb**	**03 44 45.0**	**-0.4**
	89nm,0.5s						
SATY				Lg	Lg	03 45 15.8	
	413nm,0.5s						
SATY	**Saty**	**2.37**	**76**	*e*P	**Pb**	**03 44 45.0**	**-0.4**
	89nm,0.5s						
SATY				*e*S	**Sb**	**03 45 15.8**	**+0.8**
	413nm,0.5s						
ZHN	**Zhinishke**	**2.41**	**74**	Pg	**Pb**	**03 44 46.6**	**+0.4**
	49nm,0.3s						
ZHN				Lg	Lg	03 45 18.0	
	200nm,0.3s						
ZHN	**Zhinishke**	**2.41**	**74**	*e*P	**Pb**	**03 44 46.6**	**+0.4**
	49nm,0.3s						
ZHN				*e*S	**Sb**	**03 45 18.0**	**+1.7**
	274nm,0.2s						
ARXS	**Arharly**	**2.50**	**47**	Pg	**Pb**	**03 44 47.0**	**-0.8**
	64nm,0.4s						
ARXS				Lg	Lg	03 45 19.2	
	470nm,0.3s						
ARXS	**Arharly**	**2.50**	**47**	*e*P	**Pb**	**03 44 47.0**	**-0.8**
	27nm,0.3s						
ARXS				*e*S	**Sb**	**03 45 19.2**	**+0.2**
	470nm,0.3s						
ARK	**Arkit**	**2.57**	**254**⇓	*i*P	**Pn**	**03 44 44.9**	**+0.3**
	baz=55						
ARK				⇓*i*S	**Sn**	**03 45 16.2**	**0.0**
	baz=55						
BTLS	**Baital**	**2.65**	**341**	Pg	**Pb**	**03 44 50.4**	**+0.1**
	58nm,0.3s						
BTLS				Lg	Lg	03 45 24.6	
	26nm,0.3s						
BTLS	**Baital**	**2.65**	**341**	*e*P	**Pb**	**03 44 50.4**	**+0.1**
	58nm,0.3s						
BTLS				*e*S	**Sb**	**03 45 24.6**	**+1.5**
	311nm,0.2s						
KPKS	**K

	47nm,0.1s								
DZA					*e*S		**Sg**	**03 45 33.6**	**-2.7**
	351nm,0.2s								
SHLS	**Shalkode**	**3.14**	**77**		Pg		**Pg**	**03 45 05.2**	**+2.6**
	20nm,0.3s								
SHLS					Lg		Lg	03 45 49.8	
	75nm,0.6s								
SHLS	**Shalkode**	**3.14**	**77**		*e*P		**Pg**	**03 45 05.2**	**+2.6**
SHLS	11nm,0.1s				*e*S		**Sg**	**03 45 49.8**	**+6.5**
	75nm,0.6s								
PDGK	**Podgornoye**	**3.20**	**74**		Pg		**Pb**	**03 45 00.8**	**+1.2**
	11nm,0.3s								
PDGK					Lg		Lg	03 45 42.4	
	73nm,0.5s								
PDGK	**Podgornoye**	**3.20**	**74**	⇓	Pg		**Pb**	**03 45 01.1**	**+1.4**
	16nm,0.6s								
PDGK				⇓	Lg		Lg	03 45 42.3	
	187nm,0.8s								
TRKS	**Terek-Say**	**3.24**	**253**	⇓	*i*P		**Pn**	**03 44 54.0**	**+0.1**
	baz=52								
TRKS				⇓	*i*S		**Sn**	**03 45 32.3**	**-0.5**
	baz=52								
TDK	**Taldyqorghan**	**3.35**	**42**		Pg		**Pb**	**03 45 02.4**	**+0.2**
	42nm,0.2s								
TDK					Lg		Lg	03 45 45.5	
	160nm,0.3s								
TDK	**Taldyqorghan**	**3.35**	**42**		*e*P		**Pb**	**03 45 02.4**	**+0.2**
	42nm,0.2s								
TDK					*e*S		**Sb**	**03 45 45.5**	**+2.3**
	156nm,0.2s								
KNOS	**Konyrlen**	**3.38**	**56**		Pg		**Pb**	**03 45 03.6**	**+0.8**
	28nm,0.3s								
KNOS					Lg		Lg	03 45 47.3	
	108nm,0.3s								
KK31	**Karatay Array**	**3.55**	**281**	⇓	Pn		**Pn**	**03 45 01.0**	**+3.0**
	0.4nm,0.3s								
KK31				⇓	Pg		**Pg**	**03 45 08.3**	**-2.0**
	8.8nm,0.5s,baz=95,slow=16,SNR=85								
KK31				⇑	Lg		Lg	03 45 55.0	
	38nm,0.6s,baz=96,slow=28,SNR=4.9								
KKAR	**Karatay Array**	**3.55**	**281**	⇓	*i*P		**Pn**	**03 44 58.3**	**+0.3**
	baz=81								
KKAR				⇓	*i*S		**Sn**	**03 45 39.7**	**-0.5**
	baz=81								
DJR	**Jarkent**	**3.75**	**60**		Pg		**Pb**	**03 45 09.8**	**+0.8**
	12nm,0.2s								
DJR					Lg		Lg	03 45 57.9	
	70nm,0.3s								
DJR	**Jarkent**	**3.75**	**60**		*e*P		**Pb**	**03 45 09.8**	**+0.8**
	6.4nm,0.2s								
DJR					*e*S		**Sb**	**03 45 57.9**	**+3.2**
	70nm,0.3s								
KTMS	**Ketmen**	**3.84**	**75**		Pg		**Pb**	**03 45 12.6**	**+2.1**
	2.8nm,0.3s								
KTMS					Lg		Lg	03 46 02.8	
	20nm,0.5s								
KTMS	**Ketmen**	**3.84**	**75**		*e*P		**Pb**	**03 45 12.6**	**+2.1**
	1.7nm,0.2s								
KTMS					*e*S		**Sg**	**03 46 02.8**	**-2.7**
	20nm,0.5s								
DRK	**Karamyk**	**4.03**	**222**	⇑	*e*P		**Pn**	**03 45 05.0**	**+0.1**
	baz=22								
DRK				⇑	*e*S		**Sn**	**03 45 51.5**	**-1.0**
	baz=22								
KAPS	**Kapalarasan**	**4.03**	**46**		Pg		**Pb**	**03 45 15.4**	**+1.6**
	10nm,0.2s								
KAPS					Lg		Lg	03 46 07.4	
	46nm,0.3s								
KAPS	**Kapalarasan**	**4.03**	**46**		*e*P		**Pb**	**03 45 15.4**	**+1.6**
	10nm,0.2s								
KAPS					*e*S		**Sb**	**03 46 07.4**	**+4.5**
	46nm,0.3s								
BTK	**Batken**	**4.17**	**235**	⇓	*i*P		**Pn**	**03 45 06.9**	**+0.3**
	baz=35								
BTK				⇓	*i*S		**Sn**	**03 45 54.7**	**-1.0**
	baz=35								
OTUK	**Ortayu**	**6.07**	**341**		Pg		Pb	03 45 54.0	+5.6
	1.7nm,0.3s								
OTUK					Lg		Lg	03 47 13.5	
	21nm,0.4s								
OTUK	**Ortayu**	**6.07**	**341**	⇓	Pn		**Pn**	**03 45 32.5**	**-0.1**
	4.2nm,0.7s								
OTUK				⇑	Lg		Lg	03 47 14.1	
	34nm,0.6s								
MAKZ	**Makanchi**	**6.41**	**46**	⇓	Pn		**Pn**	**03 45 38.6**	**+1.3**
	1.4nm,0.4s								
MAKZ				⇓	Lg		Lg	03 47 24.5	
	8.7nm,0.8s								
MK31	**Makanchi Array**	**6.57**	**47**	⇑	Pn		**Pn**	**03 45 40.5**	**+1.1**
	2.4nm,0.5s,baz=218,slow=12,SNR=48								
MK31				⇓	Sn		**Sn**	**03 46 56.8**	**+2.1**
	3.4nm,0.6s,baz=222,slow=25,SNR=5.1								
MK31				⇓	Lg		Lg	03 47 30.7	
	14nm,0.9s,baz=0.0,slow=0.1,SNR=5.0								
BRZS	**Berezniki**	**7.66**	**347**		Pg		Pg	03 46 23.7	-5.2
	3.3nm,0.3s								
BRZS					Lg		Lg	03 48 04.6	
	40nm,0.5s								
BRZS	**Berezniki**	**7.66**	**347**		*e*P		Pg	03 46 23.7	-5.2
	3.3nm,0.3s								
BRZS					*e*S		**Sg**	**03 48 04.6**	**-3.4**
	40nm,0.5s								
KURBB	**Kurchatov Arra**	**8.39**	**14**	⇓	Pn		**Pn**	**03 46 03.9**	**-0.5**
	2.3nm,0.4s								
KURBB				⇓	Lg		Lg	03 48 28.3	
	62nm,0.7s								
SEM	**Semipalatinsk**	**8.59**	**22**		Pg		Pg	03 46 40.6	-6.1
	3.0nm,0.1s								
SEM					Lg		Lg	03 48 34.0	
	12nm,0.2s								
SEM	**Semipalatinsk**	**8.59**	**22**		*e*P		Pg	03 46 40.6	-6.1
	3.0nm,0.1s								
SEM					*e*S		**Sg**	**03 48 34.0**	**-3.8**
	12nm,0.1s								
BVA0	**Borovoye Array**	**10.99**	**344**	⇓	Pn		**Pn**	**03 46 41.7**	**+1.7**
	1.7nm,0.8s,baz=174,slow=16,SNR=3.6								
BVA0				⇓	Lg		Lg	03 49 50.8	
	26nm,1.0s,baz=146,slow=30,SNR=10								
AB31	**Akbulak array**	**12.60**	**307**		Pn		**Pn**	**03 46 59.9**	**-2.2**
	0.6nm,0.5s,baz=111,slow=15,SNR=22								
AB31				⇑	Sn		**Sn**	**03 49 24.4**	**+1.7**
	0.7nm,0.6s,baz=115,slow=13,SNR=5.0								
AB31				⇓	Lg		Lg	03 50 44.1	
	3.6nm,0.9s,baz=115,slow=13,SNR=5.0								
AKTO	**Aktyubinsk**	**14.25**	**310**	⇓	Pn		**Pn**	**03 47 24.8**	**+0.3**
	2.3nm,1.0s								
AKTO				⇓	Sn		**Sn**	**03 50 03.1**	**+0.3**
	1.1nm,0.8s								

*NNC **03** 04:06:53.8±0.9,41.˚30N×73.˚21E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=7.3km s-min=4.1km az=176.0*
*SOME **03** 04:06:55.0,41.˚37N×73.˚35E,h0km*
*KRNET **03** 04:06:56.0±0.1,41.˚36N×73.˚22E,h24km,mb2.7*
*KNET **03** 04:06:57.8±0.3,41.˚45N×73.˚33E,h7km±2km,ml2.6, Error ellipse: s-maj=4.3km s-min=2.5km az=104.0*

ISC 03 04:06:55.8±1.0,41.˚36N±0.˚02×73.˚28E±0.˚02,h8km±9km, n59,σ1§19/102,33C-31D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.23**	**260**	⇑*i*P	**Pg**	**04 07 00.9**	**+0.5**
	baz=58						
ARSB				⇑*i*S	**Sg**	**04 07 04.5**	**+1.0**
	baz=58						
OHH	**Osh**	**0.92**	**204**	⇓*i*P	**Pg**	**04 07 12.9**	**-0.5**
	baz=2.0						
OHH				⇓*i*S	**Sg**	**04 07 24.9**	**-0.4**
	baz=2.0						
ARLS	**Aral**	**0.93**	**57**	⇑*i*P	**Pb**	**04 07 14.1**	**-0.1**
	baz=59						
ARLS				⇑*i*S	**Sb**	**04 07 27.0**	**+0.2**
	baz=59						
ARK	**Arkit**	**1.08**	**294**	⇑*i*P	**Pg**	**04 07 15.4**	**-1.1**
	baz=95						
ARK				⇑*i*S	**Sg**	**04 07 29.8**	**-0.7**
	baz=95						
MNAS	**Manas**	**1.26**	**333**	⇑*e*P	**Pn**	**04 07 18.9**	**-1.0**
	baz=35						
MNAS				⇑*e*S	**Sg**	**04 07 35.9**	**-0.5**
	baz=35						
UCH	**Uchtor**	**1.27**	**47**	⇑P	**Pn**	**04 07 20.6**	**+0.4**
	18nm,0.2s,SNR=18						
UCH				⇓S	**Sn**	**04 07 38.1**	**+0.5**
	39nm,0.3s						
UCH	**Uchtor**	**1.27**	**47**	⇑*i*P	**Pn**	**04 07 20.1**	**-0.1**
	baz=48						
UCH				⇑*i*S	**Sn**	**04 07 37.6**	**0.0**
	baz=48						
EKS2	**Erkin-Say**	**1.35**	**16**	⇓P	**Pb**	**04 07 21.5**	**+0.1**
	8.9nm,0.2s,SNR=32						
EKS2				⇓S	**Sn**	**04 07 40.1**	**+0.9**
	19nm,0.1s						
EKS2	**Erkin-Say**	**1.35**	**16**	⇓*i*P	**Pn**	**04 07 21.0**	**-0.1**
	baz=17						
EKS2				⇓*i*S	**Sn**	**04 07 39.3**	**+0.1**
	baz=17						
SFK	**Sufi-Kurgan**	**1.36**	**173**	⇑*e*P	**Pn**	**04 07 21.1**	**-0.1**
	baz=71						
SFK				⇑*e*S	**Sn**	**04 07 39.9**	**+0.4**
	baz=71						
MRKS	**Merke**	**1.38**	**358**	P	**Pn**	**04 07 21.7**	**+0.2**
	28nm,0.1s						
MRKS				S	**Sn**	**04 07 41.0**	**+1.0**
	92nm,0.1s						
MRKS	**Merke**	**1.38**	**358**	*e*P	**Pn**	**04 07 21.7**	**+0.2**
	28nm,0.1s						
MRKS				*e*S	**Sn**	**04 07 41.0**	**+1.0**
	92nm,0.1s						
AAK	**Ala-Archa**	**1.56**	**35**	⇑P	**Pg**	**04 07 26.1**	**+0.3**
	20nm,0.3s,SNR=21						
AAK				⇓S	**Sg**	**04 07 47.0**	**+0.9**
	80nm,0.2s						
AAK	**Ala-Archa**	**1.56**	**35**	⇑*i*P	**Pb**	**04 07 24.9**	**-0.2**
	baz=36						
AAK				⇑*i*S	**Sg**	**04 07 46.1**	**0.0**
	baz=36						
TRKS	**Terek-Say**	**1.61**	**277**	⇓*i*P	**Pn**	**04 07 24.1**	**-0.6**
	baz=74						
TRKS				⇓*i*S	**Sn**	**04 07 44.6**	**-1.2**
	baz=74						
FRU1	**Bishkek**	**1.76**	**34**	⇓*i*P	**Pb**	**04 07 28.1**	**-0.3**
	baz=35						
FRU1				⇓*i*S	**Sb**	**04 07 51.1**	**+0.4**
	baz=35						
KBK	**Karagaybulak**	**1.79**	**43**	⇑P	**Pg**	**04 07 30.1**	**-0.1**
	8.9nm,0.1s,SNR=9.3						
KBK				⇑S	**Sg**	**04 07 54.6**	**+1.1**
	126nm,0.4s						
KBK	**Karagaybulak**	**1.79**	**43**	⇓*i*P	**Pb**	**04 07 28.4**	**-0.6**
	baz=44						
KBK				⇓*i*S	**Sb**	**04 07 51.9**	**+0.2**
	baz=44						
CHMS	**Chumysh**	**1.97**	**33**	⇓P	**Pg**	**04 07 32.8**	**-0.7**
	5.8nm,0.1s,SNR=9.8						
CHMS				⇑S	**Sg**	**04 07 59.5**	**+0.4**
	35nm,0.4s						
CHMS	**Chumysh**	**1.97**	**33**	⇑Pn	**Pn**	**04 07 29.5**	**0.0**
	1.7nm,0.2s						
CHMS				⇓Lg	Lg	04 07 58.8	
	53nm,0.8s						
CHMS	**Chumysh**	**1.97**	**33**	⇑*i*P	**Pn**	**04 07 30.6**	**+1.1**
	baz=34						
CHMS				⇑*i*S	**Sb**	**04 07 55.9**	**-0.7**
	baz=34						
NRN	**Naryn**	**2.05**	**87**	⇑*i*P	**Pn**	**04 07 31.8**	**+1.0**
	baz=87						
NRN				⇑*i*S	**Sb**	**04 07 57.6**	**-1.6**
	baz=87						
DZA	**Taraz**	**2.10**	**317**	Pg	**Pb**	**04 07 34.5**	**+0.3**
	60nm,0.1s						
DZA				Lg	Lg	04 08 03.1	
	128nm,0.3s						
DZA	**Taraz**	**2.10**	**317**	*e*P	**Pb**	**04 07 34.5**	**+0.3**
	60nm,0.1s						
DZA				*e*S	**Sg**	**04 08 03.1**	**-0.4**
	128nm,0.3s						
USP	**Ospenovka**	**2.11**	**25**	⇑P	**Pb**	**04 07 35.0**	**+0.7**
	9.3nm,0.2s,SNR=23						
USP				⇑S	**Sg**	**04 08 03.5**	**0.0**
	129nm,0.5s						
USP	**Ospenovka**	**2.11**	**25**	⇓*i*P	**Pn**	**04 07 32.4**	**+1.0**
	baz=26						
USP				⇓*i*S	**Sn**	**04 07 59.1**	**+1.3**
	baz=26						
DRK	**Karamyk**	**2.19**	**211**	⇓*e*P	**Pn**	**04 07 33.3**	**+0.5**
	baz=10.0						
DRK				⇓*e*S	**Sn**	**04 08 00.7**	**+0.5**
	baz=10.0						
BTK	**Batken**	**2.28**	**236**	⇓*i*P	**Pn**	**04 07 34.2**	**+0.5**
	baz=35						
BTK				⇓*i*S	**Sn**	**04 08 02.0**	**0.0**
	baz=35						
BOOM	**Boomskoye usch**	**2.29**	**60**	⇓*e*P	**Pn**	**04 07 35.2**	**+1.3**
	baz=60						
BOOM				⇓*i*S	**Sb**	**04 08 03.7**	**-2.1**
	baz=60						
SGDS	**Sogindy**	**2.32**	**25**	Pg	**Pb**	**04 07 38.1**	**+0.2**
	2.8nm,0.2s						
SGDS				Lg	Lg	04 08 09.0	
	21nm,0.3s						
TKM2	**Tokmak 2**	**2.32**	**47**	⇑P	**Pb**	**04 07 38.3**	**+0.3**
	4.6nm,0.1s,SNR=18						
TKM2				⇑S	**Sg**	**04 08 09.9**	**-0.5**
	27nm,0.4s						
TKM2	**Tokmak 2**	**2.32**	**47**	⇓Pn	**Pn**	**04 07 33.7**	**-0.8**
	3.3nm,0.3s						
TKM2				⇑Lg	Lg	04 08 10.1	
	29nm,0.6s						
TKM2	**Tokmak 2**	**2.32**	**47**	⇓*i*P	**Pn**	**04 07 35.9**	**+1.4**
	baz=48						
TKM2				⇓*i*S	**Sn**	**04 08 04.8**	**+1.4**
	baz=48						
ULHL	**Ulahol**	**2.39**	**67**	⇓P	**Pb**	**04 07 38.9**	**-0.2**
	11nm,0.3s,SNR=24						
ULHL	**Ulahol**	**2.39**	**67**	⇑*i*P	**Pn**	**04 07 36.6**	**+1.2**
	baz=68						
ULHL				⇑*i*S	**Sb**	**04 08 06.4**	**-2.4**
	baz=68						
KST	**Kastek**	**2.61**	**49**	Pg	**Pb**	**04 07 43.4**	**+0.5**
	6.2nm,0.2s						
KST				Lg	Lg	04 08 18.3	
	26nm,0.2s						
KST	**Kastek**	**2.61**	**49**	*e*P	**Pb**	**04 07 43.4**	**+0.5**
	6.2nm,0.2s						
KST				*e*S	**Sg**	**04 08 18.3**	**-1.2**
	26nm,0.2s						
DGS	**Degeres**	**2.64**	**44**	Pg	**Pb**	**04 07 44.0**	**+0.7**
	5.9nm,0.5s						
DGS				Lg	Lg	04 08 19.3	
	25nm,0.3s						
DGS	**Degeres**	**2.64**	**44**	*e*P	**Pb**	**04 07 44.0**	**+0.7**
	5.9nm,0.5s						
DGS				*e*S	**Sg**	**04 08 19.3**	**-1.2**
	25nm,0.3s						
KK31	**Karatay Array**	**2.69**	**311**	⇓Pn	**Pn**	**04 07 39.0**	**-0.4**
	6.7nm,0.2s,baz=128,slow=13,SNR=61						
KK31				Lg	Lg	04 08 18.9	
	4.7nm,0.3s,baz=128,slow=26,SNR=8.5						
KKAR	**Karatay Array**	**2.69**	**311**	⇑*i*P	**Pn**	**04 07 40.2**	**+0.8**
	baz=12						
KKAR				⇑*i*S	**Sn**	**04 08 12.2**	**+0.1**
	baz=12						
KRBS	**Karabastau**	**2.93**	**36**	*e*P	**Pb**	**04 07 49.1**	**+0.9**
	3.7nm,0.2s						
KRBS				*e*S	**Sg**	**04 08 27.8**	**-2.0**
	11nm,0.2s						
MTBS	**Maitube**	**2.93**	**52**	Pg	**Pb**	**04 07 49.1**	**+0.8**
	2.0nm,0.1s						
MTBS				Lg	Lg	04 08 28.1	
	12nm,0.3s						
MTBS	**Maitube**	**2.93**	**52**	*e*P	**Pb**	**04 07 49.1**	**+0.8**
	2.0nm,0.1s						
MTBS				*e*S	**Sg**	**04 08 28.1**	**-1.9**
	12nm,0.3s						
KDJ	**Kajisay**	**3.02**	**74**	⇓*i*P	**Pn**	**04 07 45.7**	**+1.7**
	baz=74						
KDJ				⇓*i*S	**Sn**	**04 08 21.9**	**+1.4**
	baz=74						
TNSS	**Tian-Shan**	**3.20**	**57**	Pg	**Pb**	**04 07 53.7**	**+0.6**
	3.0nm,0.3s						
TNSS				Lg	Lg	04 08 36.1	
	3.8nm,0.3s						
TNSS	**Tian-Shan**	**3.20**	**57**	*e*P	**Pb**	**04 07 53.7**	**+0.6**
	3.0nm,0.3s						
TNSS				*e*S	**Sg**	**04 08 36.1**	**-2.4**
	3.8nm,0.3s						
KUU	**Kurty**	**3.39**	**41**	Pg	**Pb**	**04 07 57.4**	**+1.3**
	1.8nm,0.3s						
KUU				Lg	Lg	04 08 42.3	
	14nm,0.5s						
KUU	**Kurty**	**3.39**	**41**	*e*P	**Pb**	**04 07 57.4**	**+1.3**
	1.4nm,0.2s						
KUU				*e*S	**Sg**	**04 08 42.3**	**-2.3**
	14nm,0.5s						
KOTS	**Kotyrbulak**	**3.41**	**55**	Pg	**Pb**	**04 07 57.6**	**+1.2**
	3.4nm,0.4s						
KOTS				Lg	Lg	04 08 42.8	
	14nm,0.7s						
KOTS	**Kotyrbulak**	**3.41**	**55**	*e*P	**Pb**	**04 07 57.6**	**+1.2**
	3.4nm,0.4s						
KOTS				*e*S	**Sg**	**04 08 42.8**	**-2.3**
	14nm,0.7s						
KTBS	**Karatobe**	**3.44**	**46**	Pg	**Pb**	**04 07 58.4**	**+1.4**
	2.5nm,0.3s						
KTBS				Lg	Lg	04 08 44.1	
	11nm,0.6s						
KTBS	**Karatobe**	**3.44**	**46**	*e*P	**Pb**	**04 07 58.4**	**+1.4**
	1.0nm,0.1s						
KTBS				*e*S	**Sg**	**04 08 44.1**	**-2.2**
	12nm,0.2s						
CHKK	**Chushkaly**	**3.70**	**46**	Pg	**Pb**	**04 08 03.3**	**+1.9**
	1.2nm,0.1s						
CHKK				Lg	Lg	04 08 52.5	
	7.6nm,0.3s						
CHKK	**Chushkaly**	**3.70**	**46**	*e*P	**Pb**	**04 08 03.3**	**+1.9**
	1.2nm,0.1s						
CHKK				*e*S	**Sg**	**04 08 52.5**	**-2.1**
	7.6nm,0.3s						
BTLS	**Baital**	**3.72**	**8**	Pg	**Pb**	**04 08 03.8**	**+2.1**
	2.5nm,0.2s						
BTLS				Lg	Lg	04 08 53.2	
	8.2nm,0.3s						
BTLS	**Baital**	**3.72**	**8**	*e*P	**Pb**	**04 08 03.8**	**+2.1**
	2.5nm,0.2s						
BTLS				*e*S	**Sg**	**04 08 53.2**	**-2.0**
	8.2nm,0.3s						
ARXS	**Arharly**	**4.40**	**48**	Pg	**Pb**	**04 08 16.0**	**+2.7**
	2.1nm,0.3s						
ARXS				Lg	Lg	04 09 14.4	
	6.6nm,0.8s						
ARXS	**Arharly**	**4.40**	**48**	*e*P	**Pb**	**04 08 16.0**	**+2.7**
	2.1nm,0.3s						
ARXS				*e*S	**Sg**	**04 09 14.4**	**-2.5**
	6.6nm,0.8s						

*IDC **03** 04:09:47.2±24.0,23.˚03N×142.˚94E,h250km±223km, mb3.2/6,mbtmp3.8/6, Error ellipse: s-maj=180.3km s-min=25.6km az=73.0*

ISC 03 04:09:21.8±3.1,23.˚3N±0.˚3×144.˚0E±0.˚9,h35km,n6, σ0§68/6,mb3.8/6,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**38.60**	**319**	P	**P**	**04 16 42.5**	**+0.9**
	0.8nm,0.5s,baz=128,slow=7.1,SNR=5.4						
WRA	**Warramunga Arr**	**44.03**	**193**	P	**P**	**04 17 26.4**	**+0.1**
	0.8nm,0.5s						
	0.5nm,0.9s,baz=6.5,slow=7.7,SNR=2.0						
MKAR	**Makanchi Array**	**54.18**	**312**	P	**P**	**04 18 43.0**	**-0.7**
	0.5nm,0.9s,baz=8.9,SNR=8.2						
	0.2nm,0.5s,baz=90,slow=8.2,SNR=6.3						
KURBB	**Kurchatov Arra**	**56.88**	**316**	P	**P**	**04 19 02.7**	**-0.3**
	0.2nm,0.5s,baz=89,slow=8.3,SNR=11						
	1.5nm,0.7s,baz=94,slow=7.6,SNR=17						
BVAR	**Borovoye Array**	**61.95**	**319**	P	**P**	**04 19 38.1**	**+0.1**
	1.5nm,0.7s						
FINES	**FINESS Array B**	**82.05**	**335**	P	**P**	**04 21 38.0**	**-0.1**
	1.7nm,0.6s,baz=88,slow=8.3,SNR=11						
	0.4nm,0.4s,baz=72,slow=4.5,SNR=4.6						
	0.4nm,0.4s						

*IDC **03** 04:25:56.5±7.4,2.˚60S×99.˚96E,h0km,mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=414.7km s-min=67.0km az=57.0*
*DJA **03** 04:25:58.2±2.0,3.˚S±22.˚×9.˚9E±1.˚1,h33km±26km,M3.8/4, MLv3.8/4*

ISC 03 04:25:58.1±1.7,3.˚2S±0.˚1×99.˚3E±0.˚1,h35km,n14, σ0§93/10,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.88**	**59**	P	**Pn**	**04 26 13.2**	**-0.7**
SISI	**Saibi**	**1.89**	**355**	P	**Pn**	**04 26 26.9**	**-1.0**
SISI				S	**Sn**	**04 26 51.5**	**+1.0**
PDSI	**Padang**	**2.59**	**28**	P	**Pn**	**04 26 36.5**	**-1.0**
PDSI				S	**Sn**	**04 27 08.6**	**+0.8**
PBSI	**Pulau Batu**	**3.29**	**343**	S	**Sn**	**04 27 25.0**	**-0.2**
H08S2	**Diego Garcia H**	**27.00**	**260**	T	T	05 00 52.6	
	baz=80						
H08S3	**Diego Garcia H**	**27.01**	**260**	T	T	05 00 51.4	
	baz=80,SNR=9.5						
H08S1	**Diego Carcia H**	**27.02**	**260**	T	T	05 00 52.6	
	baz=80						
MKAR	**Makanchi Array**	**52.01**	**345**	P	**P**	**04 35 05.1**	**+1.1**
	0.5nm,0.7s,baz=158,slow=8.9,SNR=5.5						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**58.23**	**350**	P	**P**	**04 35 48.3**	**-0.5**
	0.5nm,0.4s,baz=180,slow=5.6,SNR=4.1						
	0.5nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.38**	**217**	T	T	05 41 51.2	
	baz=59,slow=75,SNR=6.2						
H04N1	**CROZET ISLANDS**	**59.40**	**217**	T	T	05 41 49.0	
	baz=59,slow=75,SNR=4.1						
H04N3	**CROZET ISLANDS**	**59.40**	**217**	T	T	05 41 52.2	
	baz=59,slow=75,SNR=4.5						
PDAR	**Pinedale Array**	**133.00**	**29**	PKP	**PKiKP**	**04 45 12.3**	**+0.6**
	0.2nm,0.4s,baz=350,slow=4.6,SNR=3.7						
TXAR	**Lajitas Array**	**146.11**	**38**	PKPbc	**PKPab**	**04 45 36.0**	**0.0**
	0.3nm,0.7s,baz=336,slow=2.0,SNR=3.7						

*DJA **03** 04:29:28.1±0.2,7.˚S±2.˚×13.˚0E±.˚,h166km±5km,M4.7/18, mb4.7/18,mB5.2/12,MLv4.9/13,Mw(mB)4.5/12, MwMwp4.2/1,Mwp4.7/1*
*NEIC **03** 04:29:28.9±1.6,6.˚83S±0.˚07×129.˚52E±0.˚07,h155km±7km, mb4.6/43, Error ellipse: s-maj=11.3km s-min=8.0km az=223.0*
*IDC **03** 04:29:30.2±2.7,6.˚79S×129.˚56E,h168km±24km,mb4.1/19, mbtmp4.6/20,Error ellipse: s-maj=20.2km s-min=12.7km az=76.0*

ISC 03 04:29:28.0±0.3,6.˚88S±0.˚05×129.˚54E±0.˚06,h150km,n135, σ1§32/143,mb4.5/45,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.07**	**122**	Pn	**Pn**	**04 30 05.8**	**+1.9**
SAUI				Sn	**Sn**	**04 30 32.9**	**+1.4**
SAUI	**Saumlaki**	**2.07**	**122**	P	**Pn**	**04 30 06.3**	**+2.4**
SAUI	**Saumlaki**	**2.07**	**122**	P	**Pn**	**04 30 05.8**	**+1.9**
SAUI				S	**Sn**	**04 30 32.2**	**+0.7**
BNDI	**Bandanaira**	**2.37**	**9**	P	**Pn**	**04 30 09.7**	**+2.2**
BNDI	**Bandanaira**	**2.37**	**9**	P	**Pn**	**04 30 09.4**	**+1.9**
NLAI	**Namlea**	**4.35**	**326**	P	**Pn**	**04 30 35.6**	**+2.7**
FAKI	**Fak Fak**	**4.77**	**35**	Pn	**Pn**	**04 30 37.2**	**-1.2**
FAKI	**Fak Fak**	**4.77**	**35**	P	**P

WB0	**Warramunga Arr**	**13.65**	**160**	Pn	**Pn**	**04 32 32.6**	**-3.0**
WRAB	**Tennant Creek**	**13.79**	**161**	Pn	**Pn**	**04 32 34.8**	**-2.6**
WRA	**Warramunga Arr**	**13.80**	**161**	Pn	Pn	04 32 33.7	-3.8
WRA	**Warramunga Arr**	**13.80**	**161**	P	**Pn**	**04 32 34.8**	**-2.7**
	13nm,0.4s,baz=335,slow=13,SNR=98						
WRA				S	Sn	04 34 59.4	-11
	55nm,0.7s,baz=332,slow=22,SNR=16						
COEN	**Coen**	**15.14**	**119**	Pn	**Pn**	**04 32 54.0**	**-0.3**
COEN				IAmb	IAmb	04 32 58.6	
	comp=Z,14nm,0.6s						
JAGI	**Jajag, Banyuwa**	**15.33**	**263**	Pn	**Pn**	**04 32 55.3**	**-1.3**
JAGI				IAmb	IAmb	04 32 58.3	
	comp=Z,22nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.33**	**263**	P	**Pn**	**04 32 55.7**	**-0.9**
AS31	**Alice Springs**	**17.21**	**166**	P	**P**	**04 33 19.3**	**+0.6**
AS31				IAmb	IAmb	04 33 22.6	
	comp=Z,23nm,0.6s						
ASAR	**Alice Springs**	**17.21**	**166**	P	**P**	**04 33 18.8**	**+0.1**
ASAR	**Alice Springs**	**17.21**	**166**	P	**P**	**04 33 19.2**	**+0.5**
	Z,49nm,0.5s,baz=347,slow=11,SNR=541						
ASAR				S	S	04 36 20.5	-10
	comp=Z,9.1nm,0.8s,baz=354,slow=29,SNR=5.9						
ASAR				ScP	**ScP**	**04 41 13.2**	**-2.2**
	comp=Z,3.1nm,0.6s,baz=11,slow=1.9,SNR=4.9						
PSA00	**Pilbara Seismi**	**17.35**	**212**	P	**P**	**04 33 20.4**	**+0.1**
PSA00				IAmb	IAmb	04 33 22.1	
	comp=Z,30nm,0.7s						
PSA00	**Pilbara Seismi**	**17.35**	**212**	P	**P**	**04 33 19.5**	**-0.8**
PSA00				IAmb	IAmb	04 33 22.5	
	comp=Z,10nm,0.8s						
KKM	**Kota Kinabalu**	**18.48**	**314**	P	**P**	**04 33 32.2**	**-0.6**
SBUM	**Sibu**	**19.61**	**298**	P	**P**	**04 33 46.3**	**+1.4**
SBUM				IAmb	IAmb	04 33 48.1	
	comp=Z,21nm,0.9s						
CTAO	**Charters Tower**	**20.87**	**131**	P	**P**	**04 33 59.9**	**+1.5**
LEM	**Lembang**	**21.76**	**269**	P	**P**	**04 34 09.7**	**+1.6**
	comp=Z,34nm,0.6s,baz=323,slow=20,SNR=4.6						
	comp=Z,34nm,0.6s						
TGY	**Tagaytay City**	**22.52**	**338**	P	**P**	**04 34 16.6**	**+1.1**
	comp=Z,260nm,0.4s,baz=208,slow=4.9,SNR=6.2						
FORT	**Forrest**	**25.82**	**183**	P	**P**	**04 34 28.1**	**+0.9**
MORW	**Morawa**	**25.48**	**208**	P	**P**	**04 34 42.1**	**-0.2**
BBOO	**Buckleboo**	**26.51**	**168**	P	**P**	**04 34 51.9**	**+0.4**
BBOO				IAmb	IAmb	04 34 56.4	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**27.30**	**157**	P	**P**	**04 34 58.8**	**+0.2**
STKA	**Stephens Creek**	**27.30**	**157**	P	**P**	**04 34 59.8**	**+1.1**
	comp=Z,9.4nm,0.6s,baz=339,slow=9.4,SNR=19						
	comp=Z,9.4nm,0.6s						
NWAO	**Narrogin (SRO)**	**28.33**	**202**	P	**P**	**04 35 07.8**	**0.0**
ARMA	**Armidale**	**31.28**	**141**	P	**P**	**04 35 35.2**	**+1.2**
ARMA				IAmb	IAmb	04 36 01.9	
	comp=Z,17nm,1.3s						
RPSI	**Rantau Prapat**	**32.00**	**286**	P	**P**	**04 35 39.8**	**-0.6**
RPSI				IAmb	IAmb	04 35 42.4	
	comp=Z,9.6nm,0.8s						
JOW	**Kunigami**	**33.53**	**358**	P	**P**	**04 35 53.5**	**0.0**
JOW	**Kunigami**	**33.53**	**358**	P	**P**	**04 35 53.9**	**+0.4**
	comp=Z,36nm,0.9s,baz=144,slow=3.7,SNR=2.3						
	comp=Z,36nm,0.9s						
TOO	**Toolangi**	**33.82**	**157**	P	**P**	**04 35 57.8**	**+1.8**
TOO				IAmb	IAmb	04 35 59.0	
	comp=Z,5.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.30**	**310**	P	**P**	**04 36 42.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.30**	**310**	P	**P**	**04 36 42.9**	**+0.3**
	comp=Z,5.4nm,0.5s,baz=138,slow=7.3,SNR=11						
CMAR				PcP	**PcP**	**04 38 49.6**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=155,slow=3.0,SNR=4.5						
	comp=Z,5.4nm,0.5s						
CRAI	**Chiangrai**	**39.35**	**314**	P	**P**	**04 36 42.5**	**-0.5**
CRAI				IAmb	IAmb	04 36 43.5	
	comp=Z,7.2nm,0.8s						
CHTO	**Chiang Mai**	**39.51**	**311**	P	**P**	**04 36 43.6**	**-0.8**
WHN	**Wuhan**	**39.95**	**339**	P	**P**	**04 36 48.1**	**+0.3**
NJ2	**Nanjing**	**40.03**	**346**	*e*P	**P**	**04 36 51.3**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JMN	**Monobe**	**40.59**	**6**	P	**P**	**04 36 52.7**	**-0.4**
PZH	**PanZhiHua**	**42.75**	**322**	P	**P**	**04 37 12.6**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
MJAR	**Matsushiro Arr**	**43.95**	**10**	P	**P**	**04 37 18.3**	**-1.9**
	comp=Z,3.8nm,0.7s,baz=183,slow=8.5,SNR=7.4						
	comp=Z,3.8nm,0.7s						
KSRS	**Korea Array**	**44.13**	**358**	P	**P**	**04 37 21.1**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=175,slow=8.9,SNR=6.4						
	comp=Z,1.3nm,0.5s						
LYN	**LuoYang**	**44.25**	**340**	*e*P	**P**	**04 37 24.0**	**+1.4**
LYN				pmax	pmax		
	comp=Z,12nm,0.5s						
LYN				pmax	pmax		
	comp=Z,210nm,4.5s						
HNS	**HongShan**	**46.17**	**344**	⇑P	**P**	**04 37 36.8**	**-0.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SHL	**Shillong**	**48.78**	**313**	P	**P**	**04 37 56.6**	**-1.7**
SHL				IAmb	IAmb	04 37 58.2	
	comp=Z,15nm,0.9s						
HHC	**Hu-ho-hao-te**	**50.29**	**342**	*e*P	**P**	**04 38 12.8**	**+3.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,4.7s						
USA0B	**Ussuriysk Arra**	**50.89**	**2**	P	**P**	**04 38 13.1**	**-0.5**
USA0B				IAmb	IAmb	04 38 14.0	
	comp=Z,17nm,1.5s						
USRK	**Ussuriysk Ar.**	**50.89**	**2**	P	**P**	**04 38 13.0**	**-0.6**
USRK	**Ussuriysk Ar.**	**50.89**	**2**	P	**P**	**04 38 13.4**	**-0.1**
	comp=Z,4.2nm,0.6s,baz=189,slow=8.1,SNR=10						
	comp=Z,4.2nm,0.6s						
WHZ	**Wether Hill Ro**	**51.06**	**146**	P	**P**	**04 38 15.6**	**+0.6**
MDJ	**Mudanjiang**	**51.26**	**0**	P	**P**	**04 38 18.6**	**+2.3**
MDJ				pP	pP	04 38 32.6	-17
MDJ				sP	pwP	04 38 38.9	-16
MDJ				PcP	**PcP**	**04 39 33.4**	**+4.1**
MDJ				PP	**PP**	**04 40 14.0**	**-0.9**
MDJ				ScP	ScP	04 43 24.2	+12
MDJ				PcS	**PcS**	**04 43 31.8**	**+4.7**
MDJ				S	S	04 45 34.0	+11
MDJ				ScS	ScS	04 48 08.6	+17
ASAJ	**Asahikawa**	**52.11**	**12**	P	**P**	**04 38 22.4**	**-0.3**
	comp=Z,3.9nm,0.4s,baz=185,slow=5.9,SNR=6.2						
	comp=Z,3.9nm,0.4s						
GTA	**Gaotai**	**53.64**	**332**	*e*P	**P**	**04 38 33.9**	**-0.3**
GTA				pP	pP	04 38 56.7	-11
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLR	**Kul'dur**	**55.91**	**2**	P	**P**	**04 38 49.9**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=194,slow=7.2,SNR=7.3						
	comp=Z,3.5nm,0.9s						
HEH	**HeiHe**	**56.93**	**358**	*e*P	**P**	**04 38 56.9**	**-0.4**
HEH				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	**58.01**	**342**	P	**P**	**04 39 05.4**	**+0.2**
ULN				IAmb	IAmb	04 39 06.4	
	comp=Z,6.1nm,0.8s						
SONM	**Songino Array**	**58.18**	**342**	P	**P**	**04 39 06.3**	**0.0**
SONM	**Songino Array**	**58.18**	**342**	P	**P**	**04 39 06.6**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=158,slow=6.1,SNR=19						
SONM				PcP	**sP**	**04 39 55.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=151,slow=4.9,SNR=1.6						
	comp=Z,2.5nm,0.5s						
WMQ	**Urumqi**	**63.04**	**327**	*e*P	**P**	**04 39 40.1**	**+0.8**
PETK	**Petropavlovsk-**	**64.35**	**18**	P	**P**	**04 39 48.2**	**+0.6**
	comp=Z,4.9nm,0.9s,baz=204,slow=3.2,SNR=3.1						
	comp=Z,4.9nm,0.9s						
NIL	**Nilore**	**66.79**	**311**	P	**P**	**04 40 03.3**	**-0.4**
ZSN	**Zaisan**	**66.93**	**329**	*e*P	**P**	**04 40 03.8**	**-0.5**
	baz=329						
SHLS	**Shalkode**	**67.34**	**323**	*e*P	**P**	**04 40 05.4**	**-1.7**
	baz=323						
TARG	**Taragay, Kyrgy**	**67.58**	**321**	P	**P**	**04 40 09.3**	**+0.3**
TARG				IAmb	IAmb	04 40 31.9	
	comp=Z,16nm,1.4s						
KSH	**Kashi**	**67.62**	**318**	P	**P**	**04 40 09.6**	**+0.7**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MK31	**Makanchi Array**	**67.87**	**327**	P	**P**	**04 40 09.9**	**-0.3**
MK31				IAmb	IAmb	04 40 11.4	
	comp=Z,6.2nm,0.6s						
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**04 40 09.9**	**-0.3**
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**04 40 10.0**	**-0.2**
	comp=Z,13nm,0.5s,baz=115,slow=8.4,SNR=171						
	comp=Z,13nm,0.5s						
SATY	**Saty**	**67.93**	**322**	*e*P	**P**	**04 40 10.7**	**-0.1**
	baz=322						
KPKS	**Kokpek**	**67.98**	**322**	*e*P	**P**	**04 40 10.6**	**-0.5**
	baz=322						
MAKZ	**Makanchi**	**68.05**	**327**	P	**P**	**04 40 11.3**	**0.0**
CHKK	**Chushkaly**	**69.23**	**322**	*e*P	**P**	**04 40 17.8**	**-0.8**
	baz=322						
KUU	**Kurty**	**69.64**	**322**	*e*P	**P**	**04 40 20.5**	**-0.7**
	comp=Z,7.3nm,0.4s,baz=322						
AAK	**Ala-Archa**	**70.15**	**320**	P	**P**	**04 40 24.9**	**+0.4**
AAK				IAmb	IAmb	04 40 26.4	
	comp=Z,3.5nm,0.6s						
KBL	**Kabul**	**70.33**	**310**	P	**P**	**04 40 25.9**	**0.0**
KBL				IAmb	IAmb	04 40 27.6	
	comp=Z,4.8nm,0.6s						
SGDS	**Sogindy**	**70.48**	**321**	*e*P	**P**	**04 40 26.4**	**0.0**
	baz=321						
ARSB	**Arslanbob**	**70.49**	**318**	P	**P**	**04 40 26.9**	**+0.2**
ZAA0	**Zalesovo Array**	**71.27**	**334**	P	**P**	**04 40 29.4**	**-1.5**
ZAA0				IAmb	IAmb	04 40 30.7	
	comp=Z,9.9nm,1.2s						
ZALV	**Zalesovo Beam**	**71.27**	**334**	P	**P**	**04 40 29.9**	**-0.9**
ZALV	**Zalesovo Beam**	**71.27**	**334**	P	**P**	**04 40 30.0**	**-0.8**
	comp=Z,3.2nm,0.5s,baz=117,slow=5.1,SNR=21						
	comp=Z,3.2nm,0.5s						
KURBB	**Kurchatov Arra**	**72.17**	**329**	P	**P**	**04 40 36.0**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=130,slow=4.9,SNR=70						
	comp=Z,4.2nm,0.5s						
KURK	**Kurchatov**	**72.17**	**329**		**P**	**04 40 36.0**	**-0.3**
KURK				IAmb	IAmb	04 40 37.4	
	comp=Z,7.6nm,0.8s						
KK31	**Karatay Array**	**72.94**	**319**	P	**P**	**04 40 40.6**	**-0.5**
KKAR	**Karatay Array**	**72.94**	**319**	P	**P**	**04 40 39.9**	**-1.2**
BRZS	**Berezniki**	**74.95**	**326**	*e*P	**P**	**04 40 52.1**	**-0.5**
	baz=326						
BVAR	**Borovoye Array**	**77.72**	**328**	P	**P**	**04 41 07.4**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=123,slow=5.5,SNR=19						
	comp=Z,2.0nm,0.4s						
BRVK	**Borovoye**	**77.79**	**328**	P	**P**	**04 41 07.4**	**-1.1**
TIXI	**Tiksi**	**78.37**	**360**	P	**P**	**04 41 10.4**	**-0.9**
TIXI				IAmb	IAmb	04 41 11.2	
	comp=Z,5.2nm,0.5s						
GEYT	**Alibeck**	**79.78**	**310**	P	**P**	**04 41 19.4**	**-0.4**
	comp=Z,1.8nm,0.4s,baz=97,slow=6.0,SNR=4.3						
	comp=Z,1.8nm,0.4s						
VOI	**Vohitsoka**	**80.76**	**249**	P	**P**	**04 41 25.6**	**+0.1**
NRIK	**Noril'sk**	**81.33**	**346**	P	**P**	**04 41 27.9**	**+0.6**
NRIK				IAmb	IAmb	04 41 28.9	
	comp=Z,13nm,1.4s						
NRIK	**Noril'sk**	**81.33**	**346**	P	**P**	**04 41 27.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=138,slow=3.4,SNR=5.4						
	comp=Z,3.6nm,0.7s						
ABKAR	**Akbulak array**	**82.13**	**322**	P	**P**	**04 41 30.9**	**-1.0**
QSPA	**South Pole Qui**	**83.10**	**180**	P	**P**	**04 41 36.5**	**-0.3**
ARU	**Arti**	**85.36**	**328**	P	**P**	**04 41 47.5**	**-0.7**
ARU				IAmb	IAmb	04 41 48.1	
	comp=Z,7.6nm,0.9s						
ILAR	**Eielson Array**	**93.43**	**25**	P	**P**	**04 42 24.4**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=237,slow=5.6,SNR=4.5						
	comp=Z,0.7nm,0.6s						
BRTR	**Keskin Array B**	**98.88**	**309**	P	**P**	**04 42 49.3**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=72,slow=4.7,SNR=2.8						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**101.30**	**340**	P	**Pdif**	**04 42 59.7**	**-1.7**
	comp=Z,5.2nm,1.1s,baz=38,slow=6.1,SNR=3.5						
AKASG	**Malin Array Be**	**101.82**	**320**	P	**Pdif**	**04 43 02.9**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=79,slow=2.0,SNR=4.2						
FINES	**FINESS Array B**	**102.44**	**331**	P	**Pdif**	**04 43 04.6**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=47,slow=6.1,SNR=4.0						
FINES				PKiKP	**PKiKP**	**04 47 26.7**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=14,slow=1.7,SNR=4.7						
GERES	**GERESS Array B**	**112.03**	**320**	PKiKP	**PKiKP**	**04 47 45.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=29,slow=2.2,SNR=3.3						
WTTA	**Wattenberg**	**113.80**	**319**	*i* PKP	**PKiKP**	**04 47 48.8**	**-0.4**
	comp=Z,5.4nm,1.0s						
WATA	**Walderalm**	**113.82**	**319**	*e*PKP	**PKiKP**	**04 47 48.1**	**-1.2**
	comp=Z,1.8nm,0.5s						
DAVA	**Damuels**	**114.93**	**319**	*i* PKP	**PKiKP**	**04 47 50.9**	**-0.5**
	comp=Z,1.5nm,0.3s						
PDAR	**Pinedale Array**	**117.13**	**45**	PKP	**PKPdf**	**04 47 56.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=0.0,slow=0.0,SNR=4.6						
EKA	**Eskdalemuir Ar**	**118.84**	**331**	PKP	**PKPdf**	**04 47 58.4**	**0.0**
	comp=Z,0.6nm,0.5s,baz=45,slow=3.2,SNR=6.1						
TXAR	**Lajitas Array**	**125.26**	**59**	PKP	**PKPdf**	**04 48 12.6**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=197,slow=2.7,SNR=1.8						
TORD	**Torodi Ar. Bea**	**128.33**	**281**	PKP	**PKPdf**	**04 48 17.2**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=74,slow=2.7,SNR=6.8						
CPUP	**Villa Florida**	**146.32**	**169**	PKPbc	**PKPbc**	**04 48 53.1**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=180,slow=3.0,SNR=3.1						

*SDD **03** 04:31:15.5±0.9, 17.86N×68.22W, h21km±999km, MD2.9, ML2.1, MW2.1*
*NEIC **03** 04:31:15.0±0.4, 18.0N±0.2×68.11W±0.04, h77km±13km, ML2.3/16, Md2.8/4(RSPR), Error ellipse: s-maj=24.3km s-min=4.3km az=185.0*
*RSPR **03** 04:31:16.2, 17.96N×68.11W, h73km±1km, MD2.8/4*
ISC 03 04:31:16.5±1.9, 18.1N±0.2×68.11W±0.06, h71km±17km, n21, σ1s54/28, 4C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.52**	**331**	⇑*e*P		**Pn**	**04 31 29.8**	**+0.2**
PCDR	**Punta Cana, DR**	**0.52**	**331**	*e*S		**Sn**	**04 31 40.4**	**+1.2**
PCDR	**Punta Cana, DR**	**0.52**	**331**			**Pn**	**04 31 29.3**	**-0.3**
PCDR						**Sn**	**04 31 39.7**	**+0.5**
PCDR				IAML			04 31 49.5	
	comp=E,89nm,2.0s							
CRPR	**Cabo Rojo, PR**	**0.95**	**93**	⇑*e*P		**Pn**	**04 31 33.4**	**-1.0**
CRPR	**Cabo Rojo, PR**	**0.95**	**93**	*e*S		**Sn**	**04 31 47.3**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.95**	**93**	Sn		**Sn**	**04 31 46.8**	**-1.0**
CRPR	**Cabo Rojo, PR**	**0.95**	**93**	*e*Pg		**Pn**	**04 31 34.5**	**+0.1**
CRPR				*e*Sg		**Sn**	**04 31 47.9**	**+0.1**
CRPR				IAML			04 31 58.2	
	comp=N,46nm,2.1s							
MLPR	**Magueyes Islan**	**1.02**	**95**	Pn		**Pn**	**04 31 33.8**	**-1.5**
AGPR	**Aguadilla, PR**	**1.03**	**67**	⇑*e*P		**Pn**	**04 31 35.2**	**-0.2**
AGPR	**Aguadilla, PR**	**1.03**	**67**	*e*S		**Sn**	**04 31 49.9**	**+0.3**
AGPR	**Aguadilla, PR**	**1.03**	**67**	Pn		**Pn**	**04 31 34.5**	**-0.9**
AGPR				Sn		**Sn**	**04 31 49.4**	**-0.2**
AOPR	**Arecibo Observ**	**1.32**	**77**	⇑*e*P		**Pn**	**04 31 38.7**	**-0.5**
AOPR	**Arecibo Observ**	**1.32**	**77**	*e*S		**Sn**	**04 31 55.8**	**-0.4**
AOPR	**Arecibo Observ**	**1.32**	**77**	Pn		**Pn**	**04 31 38.1**	**-1.1**
AOPR				Sn		**Sn**	**04 31 55.2**	**-1.0**
AOPR				IAML			04 31 59.3	
	comp=N,43nm,0.2s							
HATOM	**Hato Mayor del**	**1.41**	**301**	*e*Pg		**Pn**	**04 31 39.6**	**-0.7**
HATOM				*e*Sg		**Sn**	**04 31 58.3**	**0.0**
OBIP	**Obispado Ponce**	**1.43**	**90**	Pn		**Pn**	**04 31 39.3**	**-1.3**
OBIP				IAML			04 32 32.7	
	comp=N,26nm,2.9s							
CELP	**Cerrillos**	**1.46**	**89**	Pn		**Pn**	**04 31 39.8**	**-1.2**
CELP				IAML			04 32 13.6	
	comp=N,24nm,3.7s							
CELP	**Cerrillos**	**1.46**	**89**	*e*Pg		**Pn**	**04 31 42.4**	**+1.4**
CELP				*e*Sg		**Sn**	**04 32 02.6**	**+3.3**
SJG	**San Juan**	**1.87**	**88**	*e*Pg		**Pn**	**04 31 49.0**	**+2.6**
SJG				*e*Sg		**Sn**	**04 32 13.1**	**+4.1**
GCPR	**Guaynabo City**	**1.94**	**82**	Pn		**Pn**	**04 31 46.0**	**-1.5**
GCPR				IAML			04 32 32.4	
	comp=N,21nm,2.9s							
GCPR				IAML			04 32 47.2	
	comp=E,22nm,4.6s							
HUMP	**Col San Antoni**	**2.15**	**87**	Pn		**Pn**	**04 31 48.0**	**-2.3**
HUMP				IAML			04 32 18.2	
	comp=E,18nm,2.3s							
HUMP				IAML			04 32 43.1	
	comp=N,17nm,3.9s							

*TRN **03** 04:37:03.5, 10.69N×61.78W, h53km, MD3.4, West of Trinidad, Bocas.*
*FUNV **03** 04:37:04.1, 10.67N×61.67W, h35km, MW3.7*
ISC 03 04:37:01.4±1.4, 10.60N±0.04×61.73W±0.05, h76km±12km, n17, σ1s99/33, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.32**	**81**	*e*P		**Pn**	**04 37 14.3**	**+1.0**
TRN				*e*S		**Sn**	**04 37 20.9**	**-1.2**
GRFF	**Grenada Fort F**	**1.44**	**360**	*e*P		**Pn**	**04 37 26.1**	**+0.3**
GRFF				*e*S		**Sn**	**04 37 42.8**	**-1.4**
CRUV	**Carupano**	**1.49**	**273**	*e*P		**Pn**	**04 37 27.5**	**+1.1**
CRUV				*e*S		**Sn**	**04 37 45.5**	**+0.2**
GRGR	**Grenville**	**1.52**	**3**	*e*P		**Pn**	**04 37 27.1**	**+0.2**
GRGR				*e*S		**Sn**	**04 37 45.9**	**-0.2**
GRHS	**Sauteurs**	**1.62**	**3**	*e*P		**Pn**	**04 37 28.1**	**+0.1**
GRHS				*e*S		**Sn**	**04 37 46.8**	**-1.5**
GCMP	**Grenada, Carri**	**1.90**	**9**	*e*P		**Pn**	**04 37 32.5**	**+0.7**
GCMP				*e*S		**Sn**	**04 37 54.4**	**-0.5**
CUMV	**Cumana_UDO**	**2.43**	**266**	*e*P		**Pn**	**04 37 41.8**	**+2.8**
CUMV				*e*S		**Sn**	**04 38 08.7**	**+0.9**
SVB	**Belmont**	**2.69**	**10**	*e*P		**Pn**	**04 37 44.2**	**+1.6**
SVB				*e*S		**Sn**	**04 38 13.0**	**-1.2**
PCRV	**Puerto La Cruz**	**2.90**	**262**	*e*P		**Pn**	**04 37 47.6**	**+2.3**
PCRV				*e*S		**Sn**	**04 38 18.8**	**-0.3**
SLBI	**Saint Lucia, B**	**3.48**	**12**	*e*P		**Pn**	**04 37 54.5**	**+1.3**
SLBI				*e*S		**Sn**	**04 38 32.8**	**-0.5**
LUEV	**Luepa**	**4.73**	**177**	*e*P		**Pn**	**04 38 13.2**	**+2.7**
LUEV				*e*S		**Sn**	**04 39 02.5**	**-1.8**
TACV	**Tcata**	**5.24**	**265**	*e*P		**Pn**	**04 38 19.5**	**+2.2**
TACV				*e*S		**Sn**	**04 39 14.2**	**-2.1**
CACV	**CAICARA DEL OR**	**5.63**	**238**	*e*P		**Pn**	**04 38 19.1**	**-3.5**
CACV				*e*S		Sn	04 39 13.9	-12
BENV	**Beln**	**5.81**	**264**	*e*P		**Pn**	**04 38 27.4**	**+2.3**
BENV				*e*S		**Sn**	**04 39 27.7**	**-2.9**
BAUV	**El Baul**	**6.44**	**256**	*e*P		**Pn**	**04 38 35.5**	**+1.8**
BAUV				*e*S		**Sn**	**04 39 42.6**	**-3.2**
BAUV	**El Baul**	**6.44**	**256**	*e*P		**Pn**	**04 38 36.2**	**+2.6**
BAUV				*e*S		**Sn**	**04 39 44.3**	**-1.5**
TEPV	**Terepaima**	**7.38**	**266**	*e*P		**Pn**	**04 38 47.5**	**+1.0**
TEPV				*e*S		**Sn**	**04 40 04.6**	**-4.2**

*IDC **03** 04:39:01.8±3.3, 55.71N×149.88W, h0km, mb3.5/2, mbtmp3.5/6, ML3.1/4, MS2.8/4, Error ellipse: s-maj=55.6km s-min=33.0km az=163.0*
*NEIC **03** 04:39:04.6±1.5, 56.09N±0.10×149.8W±0.1, h26km±10km, ML3.7/50, ML3.4(AEIC), Error ellipse: s-maj=14.5km s-min=8.6km az=176.0*
*AEIC **03** 04:39:09.2±1.3, 56.23N±0.10×149.7W±0.1, h8km±8km, Error ellipse: s-maj=14.4km s-min=8.3km az=169.0*
ISC 03 04:39:06.0±1.4, 56.3N±0.1×149.83W±0.06, h10km, n174, σ0s89/174, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.10**	**315**	Pn		**Pn**	**04 39 40.7**	**-0.4**
KDAK	**Kodiak Island**	**2.10**	**315**	Sn		**Sn**	**04 40 06.0**	**-1.1**
KDAK	**Kodiak Island**	**2.10**	**315**	Pn		**Pn**	**04 39 41.1**	**+0.1**
	4.4nm,0.3s,baz=124,slow=5.1,SNR=77							
KDAK				Sn		**Sn**	**04 40 06.1**	**-1.0**
	7.7nm,0.3s,baz=229,slow=21,SNR=16							
KDAK				LR		LR	04 40 52.5	
	comp=Z,265nm,19.7s,baz=201,slow=43							
	11nm,0.3s							
OHAK	**Old Harbor**	**2.10**	**297**	Pn		**Pn**	**04 39 39.9**	**-1.3**
OHAK						**Sn**	**04 40 05.2**	**-2.2**
OHAK	**Old Harbor**	**2.10**	**297**	P		**Pn**	**04 39 40.5**	**-0.7**
	baz=115							
OHAK				S		**Sn**	**04 40 06.1**	**-1.2**
	baz=115							
SII	**Sitkinak Islan**	**2.43**	**277**	Pn		Pn	04 39 41.9	-3.8
SII				IAML			04 40 14.0	
	comp=E,297nm,0.7s							
SII				IAML			04 40 17.0	
	comp=N,279nm,0.8s							
SYI	**Shuyak Island**	**2.67**	**330**	Pn		**Pn**	**04 39 49.3**	**+0.3**
SYI				Sn		**Sn**	**04 40 21.6**	**+0.2**
Q20K	**Shuyak Island**	**2.67**	**330**	P		**Pn**	**04 39 49.4**	**+0.3**
	baz=148							
Q20K				S		**Sn**	**04 40 20.5**	**-1.0**
	baz=148							
CNPM	**China Poot**	**3.29**	**347**	Pn		**Pn**	**04 39 56.8**	**-0.8**
CNPM				Sn		**Sn**	**04 40 37.7**	**+0.9**
Q19K	**Cape Douglas,**	**3.32**	**323**	Pn		**Pn**	**04 39 57.8**	**-0.2**
Q19K				IAML			04 40 55.7	
	comp=N,225nm,1.4s							
Q19K	**Cape Douglas,**	**3.32**	**323**	P		**Pn**	**04 39 58.7**

SUCK Suckling Hills 4.94 38 Pn 04 40 19.4 -0.7
SUCK IAML 04 41 27.1
comp=N,77nm,3.1s
SUCK IAML 04 41 38.0
comp=E,77nm,2.3s
HMT Hamilton 4.98 34 Pn 04 40 20.0 -0.7
HMT IAML 04 42 52.8
comp=N,71nm,2.8s
NICHA Nichawak Mount 4.99 36 Pn 04 40 20.8 -0.1
GOAT Goat Mountain 5.04 30 Pn 04 40 21.3 -0.2
N19K Bonanza Creek 5.12 334 Pn Pn 04 40 22.5 -0.1
N19K IAML 04 41 39.7
comp=N,20nm,2.9s
N19K IAML 04 41 54.2
comp=E,19nm,3.1s
BGLC Bering Glacier 5.14 40 Pn 04 40 22.5 -0.4
BGLC Bering Glacier 5.14 40 P Pn 04 40 22.5 -0.4
baz=224
KNK Knik Glacier 5.15 7 Pn Pn 04 40 23.2 +0.1
KNK IAML 04 41 31.6
comp=E,25nm,2.0s
KNK IAML 04 41 43.1
comp=N,19nm,2.9s
SUA Susitna One 5.17 355 Pn Pn 04 40 22.6 -0.9
O17K Koliganek Bris 5.18 315 Pn 04 40 23.9 +0.5
O17K Koliganek Bris 5.18 315 P Pn 04 40 23.9 +0.5
baz=129
BERG Berg Lake 5.20 36 Pn 04 40 22.6 -1.2
BERG IAML 04 41 30.6
comp=N,50nm,1.2s
PMR Palmer 5.29 4 Pn Pn 04 40 25.0 0.0
SNH Sunshine Point 5.34 41 Pn Pn 04 40 24.5 -1.2
KHIT Khitrov Hills 5.39 37 Pn 04 40 25.3 -1.1
BMRM Bremner River 5.39 28 Pn Pn 04 40 25.5 -1.0
BMRM Bremner River 5.39 28 P Pn 04 40 26.3 -0.1
baz=212
N18K Kilae Creek 5.40 326 Pn Pn 04 40 26.3 -0.2
N18K Kilae Creek 5.40 326 P Pn 04 40 26.6 +0.2
baz=141
O16K Kokwok River B 5.48 310 Pn 04 40 28.1 +0.5
O16K Kokwok River B 5.48 310 P Pn 04 40 28.3 +0.7
baz=124
WAX Waxell Ridge 5.53 39 Pn Pn 04 40 27.0 -1.3
SML Sawmill 5.55 7 Pn Pn 04 40 28.9 +0.3
KLU Klutina 5.56 20 Pn Pn 04 40 29.1 +0.4
SVW2 Sparrevohn 5.64 330 Pn Pn 04 40 29.6 -0.2
CRQM Cirque 5.66 35 Pn Pn 04 40 29.0 -1.2
SCM Sheep Creek Mo 5.67 12 Pn 04 40 31.0 +0.7
MESA MESA 5.67 44 Pn Pn 04 40 28.8 -1.7
N17K Nushagak Hills 5.71 321 Pn Pn 04 40 30.9 +0.1
SKT Skwentna 5.74 352 Pn Pn 04 40 31.0 -0.1
ISLE Juniper Island 5.81 39 Pn 04 40 31.3 -1.0
M20K Styx River 5.83 344 Pn Pn 04 40 32.1 -0.3
VRDI Verde Repeater 5.93 31 Pn 04 40 33.0 -0.9
N25K Chitina, Valde 5.95 25 Pn Pn 04 40 33.6 -0.5
N25K Chitina, Valde 5.95 25 P Pn 04 40 34.2 +0.2
baz=208
GLB Gilahina Butte 6.00 29 Pn 04 40 34.3 -0.5
M18K Stony River 6.04 332 P Pn 04 40 35.0 -0.1
baz=146
KIAG Kiagna River 6.04 37 Pn 04 40 35.1 -0.3
M24K Tolsona, Glenn 6.09 16 Pn Pn 04 40 36.5 +0.5
GRNC Granite Creek 6.11 40 Pn Pn 04 40 35.6 -0.9
TABL Table Mountain 6.15 44 Pn 04 40 35.3 -1.7
MCARA McCarthy VSAT 6.18 32 Pn 04 40 35.9 -1.3
MCARA McCarthy VSAT 6.18 32 P Pn 04 40 36.9 -0.2
baz=217
PTPK Patty Peak 6.20 35 Pn 04 40 37.2 -0.4
BARN Barnard Glacie 6.37 39 Pn 04 40 39.3 -0.7
L19K White Mountain 6.41 338 Pn Pn 04 40 39.9 -0.4
CTG Chitna Glacier 6.42 40 P Pn 04 40 40.5 -0.1
baz=226
CTGM Chitina Glacie 6.42 40 Pn Pn 04 40 39.9 -0.8
M17K Holitna River 6.43 325 Pn Pn 04 40 41.0 +0.4
LOGN Logan Glacier 6.45 42 Pn 04 40 39.7 -1.4
PNL Peninsula 6.48 55 P Pn 04 40 40.7 -0.6
baz=242
HARP HAARP 6.54 19 Pn 04 40 43.3 +1.2
HARP HAARP 6.54 19 P Pn 04 40 43.3 +1.2
baz=203
N15K Kwethluk River 6.64 310 Pn Pn 04 40 44.2 +0.7
M16K Timber Creek 6.69 318 Pn Pn 04 40 44.9 +0.7
O14K Tigyukauivet M 6.78 300 Pn Pn 04 40 45.2 -0.2
DHY Denali Highway 6.88 9 Pn 04 40 48.3 +1.3
RND Reindeer 7.12 4 Pn Pn 04 40 50.1 0.0
TRF Thorofare Moun 7.15 358 Pn Pn 04 40 51.2 +0.6
CAST Castle Rocks 7.20 352 Pn Pn 04 40 51.9 +0.7
P29M Windy Craggy 7.23 58 Pn 04 40 50.1 -1.6
M27K Edge Creek, AK 7.28 31 Pn Pn 04 40 52.0 -0.4
YUK3 Moose Creek 7.29 38 P Pn 04 40 53.7 +1.2
baz=225
TTA Tatalina 7.32 337 Pn Pn 04 40 51.9 -1.0
L16K Owhat River 7.34 321 Pn Pn 04 40 52.3 -0.7
YUK6 Outpost Mounta 7.56 48 P Pn 04 40 57.3 +0.9
baz=236
S31K Pelican 7.58 72 Pn Pn 04 40 52.1 -4.2
YUK4 Talbot Arm 7.67 44 P Pn 04 41 00.4 +2.5
baz=233
K17K Iditarod 7.71 330 Pn Pn 04 40 57.3 -0.9
M14K Bethel 7.74 310 Pn Pn 04 40 58.3 -0.2
L27K Beaver Creek, 7.87 28 Pn 04 40 59.8 -0.5
BCAR Beaver Creek A 7.88 28 Pn Pn 04 41 00.1 -0.5
J20K Nowinta River 8.16 347 Pn Pn 04 41 04.2 -0.1
M13K Dall Lake 8.20 306 Pn Pn 04 41 04.9 +0.1
SCRK Sand Creek 8.21 18 Pn Pn 04 41 05.7 +0.6
HDA Harding Lake 8.23 9 Pn Pn 04 41 06.3 +1.0
L14K Kuka Creek 8.34 312 Pn Pn 04 41 08.0 +1.2
CCB Clear Creek Bu 8.41 6 Pn Pn 04 41 08.4 +0.7
M29M Somme Creek 8.43 39 Pn Pn 04 41 07.8 -0.4
K15K Wolf Creek Mou 8.45 320 Pn Pn 04 41 08.3 0.0
IL31 8.60 8 Pn 04 41 11.9 +1.7
ILAR Eielson Array 8.60 8 Pn Pn 04 41 10.4 +0.1
ILAR Eielson Array 8.60 8 Pn Pn 04 41 12.6 +2.3
comp=N,0.2nm,0.3s,baz=188,slow=14,SNR=9.3
ILAR Sn **Sn 04 42 45.6 -1.5**
comp=N,0.1nm,0.3s,baz=202,slow=14,SNR=2.7
comp=N,0.5nm,0.4s
J25K Salcha River, 8.60 13 Pn Pn 04 41 09.8 -0.6
MDM Murphy Dome 8.70 5 Pn 04 41 12.2 +0.5
J26L Joseph Creek 8.76 18 Pn 04 41 13.5 +0.9
J16K Anvik River 8.83 327 Pn Pn 04 41 12.8 -0.6
I23K Minto, Yukon-K 8.85 1 Pn Pn 04 41 13.7 -0.1
I21K Tanana 8.95 354 Pn Pn 04 41 16.4 +1.3
WHY Whitehorse 8.95 55 Pn Pn 04 41 12.7 -2.4
L29M L29M 9.00 36 Pn Pn 04 41 15.6 -0.3
M30M Minto, Yukon 9.12 41 Pn Pn 04 41 16.7 -0.8
P32M Atlin 9.16 62 Pn Pn 04 41 16.3 -1.9
U33K Whale Pass 9.31 84 Pn Pn 04 41 14.9 -5.2
DAWY Dawson 9.33 29 Pn Pn 04 41 19.9 -0.4
H21K Melozitna Rive 9.47 352 Pn Pn 04 41 20.8 -1.4
J14K Nanvaranak Lak 9.47 318 Pn Pn 04 41 22.7 +0.5
EGAK Eagle 9.48 23 Pn Pn 04 41 21.7 -0.7
H24K Noodor Dome 9.59 5 Pn Pn 04 41 25.6 +1.7
K29M Barlow Dome 9.71 34 Pn 04 41 25.7 0.0
P33M Teslin, Yukon 9.76 59 Pn Pn 04 41 23.8 -2.6
H18K Honhosa River 9.78 338 Pn Pn 04 41 25.3 -1.2
M31M Drury Creek, Y 9.84 47 Pn Pn 04 41 25.9 -1.5
IMAR Indian Mountai 9.87 351 Pn Pn 04 41 27.4 -0.3
FARO Faro, Yukon 10.28 48 Pn Pn 04 41 33.5 +0.1
G21K Allakaket 10.37 352 Pn Pn 04 41 34.3 -0.3
R33M Jennings River 10.50 65 Pn Pn 04 41 35.1 -1.4
FYU Fort Yukon 10.50 10 Pn Pn 04 41 37.2 +0.8
J30M Hart River 10.60 33 Pn Pn 04 41 38.4 +0.5
DLBC Dease Lake 10.89 71 Pn Pn 04 41 35.9 -5.9
G16K Koyuk River 10.93 331 Pn Pn 04 41 41.6 -0.6
F21K Alatna River 11.07 353 Pn Pn 04 41 43.6 -0.5
BMAR Burnt Mountain 11.41 10 Pn Pn 04 41 48.7 -0.1
E19K Redstone River 11.69 346 Pn Pn 04 41 51.4 -1.2
E25K Arctic Village 12.00 8 Pn Pn 04 41 58.0 +1.1
BBB Bella Bella 13.34 99 LR LR 04 45 32.3
comp=N,31nm,21.8s,baz=321,slow=29
INK Inuvik 14.13 25 Pn 04 42 24.9 -1.0
INK Inuvik 14.13 25 Pn Pn 04 42 32.0 +6.2
comp=N,0.1nm,0.3s,baz=216,slow=12,SNR=6.9
INK LR LR 04 48 32.4
comp=N,32nm,20.4s,baz=7.0,slow=39
comp=N,2.4nm,0.9s
YKA Yellowknife Ar 18.77 56 P P 04 43 25.8 +1.0
baz=264,slow=11,SNR=7.3
comp=N,1.1nm,1.1s
YBH Yreka Blue Hor 22.80 118 LR LR 04 50 38.8
comp=N,43nm,20.1s,baz=342,slow=31
SONM Songino Array 58.38 310 P P 04 49 01.6 +0.4
comp=N,0.4nm,0.4s,baz=42,slow=8.0,SNR=2.9
comp=N,0.4nm,0.4s
MKAR Makanchi Array 68.38 324 P P 04 50 07.6 +0.3
comp=N,0.3nm,0.6s,baz=38,slow=7.3,SNR=2.3
comp=N,0.3nm,0.6s

IDC ***03*** *04:40:59.2±3.5, 10.°76S×165.°05E, h94km±29km, mb3.4/5, mbtmp3.9/6, MS3.5/1, Error ellipse: s-maj=32.2km s-min=23.3km az=47.0*
NOU ***03*** *04:41:12.7, 11.°45S×166.°74E, h183km, mb4.6/10, Santa Cruz Islands*
ISC 03 04:40:59.8±1.1, 10.°8S±0.°1×165.°0E±0.°1, h100km, n13, σ1§69/14, mb3.5/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.18**	**285**	P	**Pn**	**04 42 14.2**	**-0.9**
	5μm,0.5s,baz=192,slow=0.9,SNR=9.2						
HNR				S	**Sn**	**04 43 14.1**	**+0.4**
	4μm,0.3s,baz=302,slow=18,SNR=9.8						
DZM	**Mont Dzumac**	**11.25**	**173**	P	**Pn**	**04 43 39.3**	**+1.7**
DZM	**Mont Dzumac**	**11.25**	**173**	P	**Pn**	**04 43 38.6**	**+0.9**
	19nm,0.4s,baz=323,slow=9.8,SNR=35						
DZM				S	**Sn**	**04 45 38.6**	**-2.8**
	4.6nm,0.5s,baz=143,slow=20,SNR=1.9						
NOUC	**Port Laguerre**	**11.26**	**174**	P	**Pn**	**04 43 40.5**	**+2.8**
YATNC	**Mamie plateau,**	**11.30**	**171**	P	**Pn**	**04 43 38.6**	**+0.4**
ONTNC	**Ouen Toro**	**11.48**	**173**	P	**Pn**	**04 43 43.5**	**+2.8**
OUENC	**Ouen Island, N**	**11.64**	**172**	P	**Pn**	**04 43 43.5**	**+0.7**
WRA	**Warramunga Arr**	**30.88**	**249**	P	**P**	**04 47 06.5**	**-0.6**
	0.4nm,0.7s,baz=77,slow=8.8,SNR=1.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**32.25**	**243**	P	**P**	**04 47 19.8**	**+0.7**
	0.5nm,0.5s,baz=62,slow=10,SNR=7.9						
	0.5nm,0.5s						
RAR	**Rarotonga**	**35.30**	**111**	LR	LR	04 58 41.7	
	comp=Z,72nm,21.4s,baz=181,slow=30						
SONM	**Songino Array**	**78.08**	**324**	P	**P**	**04 52 48.3**	**+0.5**
	0.5nm,0.6s,baz=111,slow=7.9,SNR=4.2						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**83.55**	**19**	P	**P**	**04 53 15.4**	**-1.0**
	0.4nm,0.8s,baz=230,slow=6.2,SNR=5.0						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**92.89**	**317**	P	**P**	**04 54 02.0**	**+0.4**
	0.5nm,0.8s,baz=97,slow=6.2,SNR=4.7						
	0.5nm,0.8s						

IDC ***03*** *04:44:39.4±1.0, 5.°99S×119.°87E, h0km, mb3.9/10, mbtmp3.9/11, ML4.3/1, MS3.2/2, Error ellipse: s-maj=119.3km s-min=16.5km az=55.0*
NEIC ***03*** *04:44:40.7±1.9, 6.°31S±0.°07×119.°60E±0.°07, h10km±1km, mb4.3/15, Error ellipse: s-maj=13.9km s-min=10.8km az=223.0*
DJA ***03*** *04:44:41.8±0.2, 6°S±2°×12°0E±°, h10km, M4.7/18, mB5.5/3, mb4.8/10, MLv4.6/18, Mw(mB)5.0/3*
ISC 03 04:44:40.3±0.5, 6.°23S±0.°05×119.°67E±0.°06, h10km, n60, σ1§49/56, mb4.1/15, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKSI	**Bulukumba**	**1.00**	**27**	P	**Pg**	**04 44 58.8**	**-0.8**
BBSI	**Bau Bau**	**2.98**	**76**	P	**Pn**	**04 45 29.4**	**+1.8**
TTSI	**Tana Toraja**	**3.16**	**3**	P	**Pn**	**04 45 31.8**	**+1.6**
PLAI	**Plampang**	**3.19**	**216**	P	**Pn**	**04 45 33.2**	**+2.6**
EDFI	**Ende, Flores**	**3.21**	**142**	P	**Pn**	**04 45 31.8**	**+0.9**
MMRI	**Maumere**	**3.49**	**133**	Pn	**Pn**	**04 45 33.7**	**-1.0**
MMRI	**Maumere**	**3.49**	**133**	P	**Pn**	**04 45 35.5**	**+0.8**
TWSI	**Taliwang, Sumb**	**3.73**	**228**	P	**Pn**	**04 45 39.9**	**+2.0**
BASI	**Baing, Sumba**	**4.07**	**167**	P	**Pn**	**04 45 44.2**	**+1.6**
SRBI	**Singaraja**	**4.79**	**247**	P	**Pn**	**04 45 53.9**	**+1.3**
BKB	**Balikpapan**	**5.66**	**331**	Pn	**Pn**	**04 46 07.0**	**+2.5**
BKB	**Balikpapan**	**5.66**	**331**	P	**Pn**	**04 46 07.0**	**+2.5**
	146nm,0.7s,2μm0.7nm						
SOEI	**Soe**	**5.74**	**128**	Pn	**Pn**	**04 46 09.9**	**+4.1**
SOEI	**Soe**	**5.74**	**128**	P	**Pn**	**04 46 09.5**	**+3.7**
	110nm,0.7s,0.4nm						
JAGI	**Jajag, Banyuwa**	**5.91**	**248**	Pn	**Pn**	**04 46 08.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**5.91**	**248**	P	**Pn**	**04 46 09.3**	**+1.3**
	67nm,0.7s,0.4nm						
LUWI	**Luwuk**	**6.01**	**31**	Pn	**Pn**	**04 46 11.3**	**+2.0**
LUWI	**Luwuk**	**6.01**	**31**	P	**Pn**	**04 46 10.7**	**+1.4**
	104nm,0.6s,0.5nm						
MRSI	**Marisa**	**7.03**	**19**	P	**Pn**	**04 46 26.2**	**+2.8**
	61nm,0.8s,0.2nm						
TOLI2	**Tolitoli**	**7.37**	**9**	Pn	**Pn**	**04 46 30.1**	**+2.0**
SANI	**Sanana**	**7.54**	**57**	P	**Pn**	**04 46 29.8**	**-0.6**
	64nm,0.8s,0.2nm						
NLAI	**Namlea**	**7.97**	**68**	P	**Pn**	**04 46 38.3**	**+2.0**
	21nm,0.7s,5μm0.2nm						
SMRI	**Semarang**	**9.21**	**264**	Pn	Pn	04 46 51.3	-2.0
UGM	**Wanagama**	**9.23**	**259**	Pn	**Pn**	**04 46 52.3**	**-1.4**
LBMI	**Labuha**	**9.58**	**55**	P	**Pn**	**04 46 59.0**	**+0.6**
	54nm,0.7s,2μm						
KNRA	**Kununurra**	**12.95**	**137**	Pn	**Pn**	**04 47 43.0**	**-1.5**
MTN	**Manton Dam**	**13.07**	**121**	Pn	**Pn**	**04 47 45.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**13.16**	**154**	Pn	**Pn**	**04 47 47.6**	**+0.2**
PSA00	**Pilbara Seismi**	**15.26**	**179**	Pn	**Pn**	**04 48 14.2**	**-1.7**
PSA00				IAmb	IAmb	04 48 56.4	
	comp=Z,24nm,1.3s						
GIRL	**Giralia**	**17.14**	**197**		**Pn**	**04 48 40.9**	**+0.8**
WB0	**Warramunga Arr**	**19.64**	**135**	P	**P**	**04 49 09.6**	**+0.2**
WB0				IAmb	IAmb	04 49 13.6	
	comp=Z,14nm,1.1s						
BKNI	**Bangkinang**	**19.70**	**289**	P	**P**	**04 49 08.2**	**-1.8**
WRA	**Warramunga Arr**	**19.72**	**135**	P	**P**	**04 49 09.7**	**-0.5**
WRA	**Warramunga Arr**	**19.72**	**135**	P	**P**	**04 49 11.1**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=318,slow=12,SNR=28						
	comp=Z,5.7nm,0.9s						
WRAB	**Tennant Creek**	**19.72**	**135**	P	**P**	**04 49 10.0**	**-0.3**
WRAB				IAmb	IAmb	04 49 45.5	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**19.73**	**135**	P	**P**	**04 49 10.9**	**+0.6**
WB2				IAmb	IAmb	04 49 22.4	
	comp=Z,8.1nm,0.6s						
WR0	**Warramunga Arr**	**19.88**	**135**	P	**P**	**04 49 12.2**	**+0.3**
WR0				IAmb	IAmb	04 49 15.8	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**22.09**	**143**	P	**P**	**04 49 36.9**	**+1.0**
ASAR	**Alice Springs**	**22.09**	**143**	P	**P**	**04 49 36.4**	**+0.6**
ASAR	**Alice Springs**	**22.09**	**143**	P	**P**	**04 49 37.2**	**+1.4**
	comp=Z,7.4nm,0.9s,baz=321,slow=10,SNR=38						
	comp=Z,7.4nm,0.9s						
COEN	**Coen**	**24.36**	**110**	P	**P**	**04 49 57.7**	**-1.1**
COEN				IAmb	IAmb	04 50 08.2	
	comp=Z,15nm,1.4s						
CMAR	**Chiang Mai Arr**	**31.93**	**321**	P	**P**	**04 51 07.3**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=141,slow=7.5,SNR=5.0						
CMAR				LR	LR	05 04 16.1	
	comp=Z,26nm,21.1s,baz=145,slow=37						
	comp=Z,1.4nm,0.3s						
STKA	**Stephens Creek**	**32.73**	**144**	P	**P**	**04 51 13.9**	**+0.6**
STKA	**Stephens Creek**	**32.73**	**144**	P	**P**	**04 51 14.7**	**+1.4**
	comp=Z,4.6nm,0.5s,baz=313,slow=9.4,SNR=4.8						
	comp=Z,4.6nm,0.5s						
LYN	**LuoYang**	**41.12**	**351**	eP	P	04 52 31.4	+6.8
LYN				pmax	pmax		
	comp=Z,13nm,0.5s						
LYN				pmax	pmax		
	comp=Z,200nm,5.8s						
PALK	**Pallekele**	**41.13**	**288**	LR	LR	05 09 12.9	
	comp=Z,48nm,18.6s,baz=223,slow=36						
SONM	**Songino Array**	**55.09**	**349**	P	**P**	**04 54 11.3**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=160,slow=4.6,SNR=1.9						
	comp=Z,0.4nm,0.6s						
HEH	**HeiHe**	**56.65**	**6**	eP	**P**	**04 54 24.3**	**+0.7**
KSH	**Kashi**	**60.81**	**322**	P	P	04 55 00.4	+7.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**62.32**	**332**	P	**P**	**04 55 02.7**	**-0.2**
MK31				IAmb	IAmb	04 55 09.0	
	comp=Z,2.7nm,1.4s						
MKAR	**Makanchi Array**	**62.32**	**332**	P	**P**	**04 55 03.0**	**+0.1**
MKAR	**Makanchi Array**	**62.32**	**332**	P	**P**	**04 55 03.4**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=146,slow=7.5,SNR=6.2						
	comp=Z,0.7nm,0.6s						
AAK	**Ala-Archa**	**63.61**	**324**	P	**P**	**04 55 12.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=61,slow=10,SNR=1.6						
	comp=Z,0.5nm,0.4s						
KKAR	**Karatay Array**	**66.25**	**323**	P	**P**	**04 55 28.5**	**-0.2**
ZALV	**Zalesovo Beam**	**66.71**	**338**	P	**P**	**04 55 31.9**	**+0.5**
ZALV	**Zalesovo Beam**	**66.71**	**338**	P	**P**	**04 55 32.0**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=161,slow=9.2,SNR=2.4						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**66.81**	**333**	P	**P**	**04 55 31.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=145,slow=6.1,SNR=2.1						
	comp=Z,0.2nm,0.3s						
BVAR	**Borovoye Array**	**72.19**	**331**	P	**P**	**04 56 05.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=131,slow=5.9,SNR=1.5						
	comp=Z,0.2nm,0.3s						
ABKAR	**Akbulak array**	**75.70**	**324**	P	**P**	**04 56 25.6**	**-0.3**
ABKAR				IAmb	IAmb	04 56 33.7	
	comp=Z,2.6nm,0.9s						
AKTO	**Aktyubinsk**	**77.35**	**325**	P	**P**	**04 56 33.8**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=53,slow=5.1,SNR=4.5						
	comp=Z,1.3nm,0.8s						

SOME ***03*** *04:45:00.6, 39.°35N×72.°68E, h0km*
KRNET 03 04:45:00.4±0.1, 41.°09N×69.°19E, mb2.7, 10C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**1.54**	**73**	⇑*iP*	Pn	04 45 29.4	+0.2
	baz=75						
TRKS				⇑*iS*	Sn	04 45 50.8	+0.8
	baz=75						
BTK	**Batken**	**1.62**	**129**	⇑*iP*	Pb	04 45 30.8	-0.3
	baz=29						
BTK				⇑*iS*	Sg	04 45 53.0	+0.7
	baz=29						
ARK	**Arkit**	**2.20**	**70**	⇑*iP*	Pb	04 45 40.5	-0.7
	baz=70						
ARK				⇑*iS*	Sb	04 46 09.8	+0.7
	baz=70						
KKAR	**Karatay Array**	**2.24**	**26**	⇑*iP*	Pb	04 45 41.2	-0.5
	baz=26						
KKAR				⇑*iS*	Sb	04 46 10.2	+0.2
	baz=26						
MNAS	**Manas**	**2.85**	**60**	⇑*eP*	Pn	04 45 49.4	+2.2
	baz=60						
MNAS				⇑*eS*	Sb	04 46 25.3	-2.3
	baz=60						
MRKS	**Merke**	**3.44**	**60**	*eP*	Pg	04 46 04.5	-1.8
	2.5nm,0.2s						
MRKS				*eS*	Sg	04 46 50.5	-0.3
	7.5nm,0.5s						
DGS	**Degeres**	**5.34**	**64**	*eP*	Pn	04 46 26.7	+5.2
	1.7nm,0.5s						
DGS				*eS*	Sn	04 47 28.6	+4.8
	1.6nm,0.3s						
KRBS	**Karabastau**	**5.46**	**59**	*eP*	Pb	04 46 31.9	-4.8
	0.3nm,0.1s						
KRBS				*eS*	Sb	04 47 37.6	-5.2
	1.1nm,0.3s						
KOTS	**Kotyrbulak**	**6.27**	**67**	*eP*	Pn	04 46 35.7	+1.5
	4.1nm,0.5s						
KOTS				*eS*	Sn	04 47 44.1	-2.5
	6.1nm,0.4s						

AEIC ***03*** *04:52:42.7±1.8, 56.°0N±0.°1×149.°7W±0.°1, h12km±8km, Error ellipse: s-maj=17.6km s-min=8.7km az=185.0*
NEIC 03 04:52:40.9±1.4, 56.°2N±0.°1×149.°8W±0.°1, h21km±11km, ML3.1/26, ML2.9(AEIC), Error ellipse: s-maj=16.7km s-min=9.4km az=177.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.19**	**299**		Pn	04 53 14.4	-1.5
OHAK					Sn	04 53 41.0	-1.3
KDAK	**Kodiak Island**	**2.20**	**317**	Pn	Pn	04 53 15.7	-0.4
KDAK				Sn	Sn	04 53 41.5	-1.1
SYI	**Shuyak Island**	**2.79**	**330**	Pn	Pn	04 53 23.9	-0.3
SYI				Sn	Sn	04 53 57.0	-0.2
SYI				IAML		04 54 06.8	
	comp=E,31nm,1.2s						
SYI				IAML		04 55 13.0	
	comp=N,25nm,1.1s						
CNPM	**China Poot**	**3.41**	**347**	Pn	Pn	04 53 31.7	-1.1
CNPM				Sn	Sn	04 54 13.8	+1.3
CNPM				IAML		04 54 14.5	
	comp=N,18nm,1.5s						
Q19K	**Cape Douglas,**	**3.43**	**324**	Pn	Pn	04 53 33.3	+0.3
BRSE	**Bradley Lake S**	**3.57**	**352**		Pn	04 53 35.0	-0.1
BRSE					Sn	04 54 16.2	-0.3
BRLK	**Bradley Lake**	**3.61**	**351**	Pn	Pn	04 53 35.1	-0.4
BRLK				IAML		04 55 50.1	
	comp=E,14nm,1.3s						
ANCK	**Angle Creek**	**3.70**	**305**		Pn	04 53 37.8	+1.1
CNTC	**Contact Creek**	**3.91**	**304**		Pn	04 53 40.3	+0.7
O20K	**Slope Mountain**	**4.16**	**340**		Pn	04 53 44.4	+1.3
SLKM	**Skilak Lake**	**4.31**	**357**		Pn	04 53 45.1	0.0
HIN	**Hinchinbrook I**	**4.53**	**21**	Pn	Pn	04 53 46.9	-1.3
HIN				IAML		04 55 13.2	
	comp=E,40nm,1.5s						
HIN				IAML		04 56 05.2	
	comp=N,33nm,1.4s						
RSO	**Redoubt South**	**4.54**	**341**	Pn	Pn	04 53 49.7	+1.2
O18K	**Koktuh Hills**	**4.66**	**324**	Pn	Pn	04 53 49.6	-0.2
O18K				IAML		04 56 45.5	
	comp=E,6.3nm,1.4s						
KAIM	**Kayak Island**	**4.68**	**35**	Pn	Pn	04 53 49.4	-0.7
EYAK	**Cordova Ski Ar**	**4.83**	**24**	Pn	Pn	04 53 52.0	-0.3
RC01	**Rabbit Creek A**	**4.89**	**0**	Pn	Pn	04 53 53.0	0.0
RC01				IAML		04 56 14.9	
	comp=N,10nm,1.0s						
RC01				IAML		04 56 15.0	
	comp=E,11nm,0.6s						
RAGM	**Ragged Mountai**	**4.97**	**31**	Pn	Pn	04 53 54.2	0.0
SUCK	**Suckling Hills**	**5.00**	**37**	Pn	Pn	04 53 54.6	+0.1
SUCK				IAML		04 54 49.6	
	comp=E,23nm,1.5s						
SUCK				IAML		04 54 57.3	
	comp=N,32nm,1.3s						
BERG	**Berg Lake**	**5.27**	**35**	Pn	Pn	04 53 58.1	-0.2
BERG				IAML		04 55 33.5	
	comp=N,26nm,1.2s						
N18K	**Kilae Creek**	**5.51**	**327**	Pn	Pn	04 54 01.5	-0.1
O16K	**Kokwok River B**	**5.58**	**311**	Pn	Pn	04 54 03.4	+0.8
WAX	**Waxell Ridge**	**5.59**	**38**	Pn	Pn	04 54 03.2	+0.4
SML	**Sawmill**	**5.66**	**7**	Pn	Pn	04 54 03.9	+0.2
CRQM	**Cirque**	**5.73**	**35**	Pn	Pn	04 54 04.1	-0.6
SVW2	**Sparrevohn**	**5.76**	**331**	Pn	Pn	04 54 05.7	+0.7
ISLE	**Juniper Island**	**5.88**	**39**	Pn	Pn	04 54 07.0	+0.2
N25K	**Chitina, Valde**	**6.03**	**24**	Pn	Pn	04 54 09.7	+0.9
GLB	**Gilahina Butte**	**6.08**	**28**	Pn	Pn	04 54 10.4	+0.9
TABL	**Table Mountain**	**6.21**	**43**	Pn	Pn	04 54 10.7	-0.7
MCARA	**McCarthy VSAT**	**6.25**	**

RIFO	**Rio Frio, Sara**	**0.85**	**255**	*i* P		**Pg**	**05 07 55.7**	**-0.1**
RIFO				IAML			05 08 10.4	
	comp=Z,8μm,1.0s							
TURIB	**Turrialba**	**0.87**	**223**	*e*P		**Pg**	**05 07 56.0**	**-0.1**
VINA	**Juan Vinas**	**0.92**	**225**	*e*P		**Pg**	**05 07 56.8**	**-0.2**
RAFA	**San Farael, Vo**	**0.92**	**231**	*e*P		**Pg**	**05 07 57.0**	**-0.1**
SARA	**Sarapiqu**	**0.92**	**264**	*e*P		**Pg**	**05 07 57.0**	**-0.1**
SARA				*e*S		**Sg**	**05 08 09.1**	**-0.1**
ICR3	**Volcano Irazu**	**0.93**	**232**	*e*P		**Pg**	**05 07 57.1**	**-0.1**
BRIBI	**Bribri**	**0.95**	**166**	*e*P		**Pn**	**05 07 58.3**	**-0.1**
PCAYA	**Pacayas**	**0.95**	**229**	*e*P		**Pg**	**05 07 57.5**	**-0.1**
VIRE	**VIRE**	**0.98**	**234**	*i* P		**Pg**	**05 07 58.0**	**-0.3**
VIRE				IAML			05 08 15.5	
	comp=Z,14μm,1.0s							
REPA	**Paraso**	**1.05**	**227**	*e*P		**Pn**	**05 07 59.9**	**0.0**
RGM0	**Gandoca**	**1.06**	**154**	*i* P		**Sb**	**05 08 13.1**	**-0.3**
CORON	**Coronado**	**1.07**	**238**	*e*P		**Pb**	**05 07 59.6**	**-0.2**
OCM	**Ochomogo**	**1.08**	**233**	*e*P		**Pb**	**05 07 59.6**	**-0.4**
OCM	**Ochomogo**	**1.08**	**233**	*i* P		**Pb**	**05 07 59.6**	**-0.4**
OCM				IAML			05 08 16.3	
	comp=Z,2μm,1.0s							
TRIO	**Tres Rios**	**1.10**	**235**	*e*P		**Pb**	**05 07 59.9**	**-0.3**
LUPE	**Guadalupe**	**1.12**	**238**	*e*P		**Pb**	**05 08 00.3**	**-0.4**
SJS3	**Mercedes San J**	**1.13**	**238**	*e*P		**Pb**	**05 08 00.5**	**-0.3**
SJS	**Escuela Geolog**	**1.13**	**238**	*e*P		**Pb**	**05 08 00.3**	**-0.5**
HDC3	**Heredia 3**	**1.15**	**242**	*e*P		**Pb**	**05 08 00.8**	**-0.3**
HDC3	**Heredia 3**	**1.15**	**242**	*i* P		**Pb**	**05 08 00.7**	**-0.3**
HDC3				IAML			05 08 16.0	
	comp=Z,9μm,1.0s							
LUJA	**Lujan**	**1.15**	**238**	*e*P		**Pg**	**05 08 01.7**	**+0.3**
MEXI	**Barrio Mexico**	**1.15**	**239**	*e*P		**Pb**	**05 08 00.8**	**-0.4**
ITAL	**Pital**	**1.17**	**265**	*e*P		**Pb**	**05 08 01.0**	**-0.4**
VPS6	**Volcano Poas**	**1.18**	**253**	*e*P		**Pb**	**05 08 01.4**	**-0.4**
BUS1	**Rivas**	**1.18**	**213**	*e*P		**Pb**	**05 08 00.8**	**-1.1**
CDM	**Cerro de Muert**	**1.19**	**214**	*e*P		**Pb**	**05 08 00.9**	**-1.1**
CDM	**Cerro de Muert**	**1.19**	**214**	*i* P		**Pg**	**05 08 02.4**	**+0.1**
CDM				IAML			05 08 17.2	
	comp=Z,5μm,1.0s							
LCR2	**La Lucha 2**	**1.21**	**229**	*e*P		**Pn**	**05 08 01.3**	**-0.8**
LCR2	**La Lucha 2**	**1.21**	**229**	*i* P		**Pg**	**05 08 02.7**	**+0.2**
LCR2				IAML			05 08 17.6	
	comp=Z,11μm,1.0s							
BELE	**Belen**	**1.22**	**242**	*e*P		**Pg**	**05 08 02.8**	**0.0**
SANTA	**Santa Ana**	**1.24**	**241**	*e*P		**Pn**	**05 08 02.0**	**-0.6**
CNI2	**El Empalme, Bo**	**1.27**	**151**	*e*P		**Pn**	**05 08 02.4**	**-0.4**
CNI2				*e*S		**Sn**	**05 08 19.9**	**+0.1**
RAZU	**San Marcos de**	**1.28**	**226**	*e*P		**Pn**	**05 08 02.4**	**-0.7**
DRK0	**Durika**	**1.28**	**187**	*e*P		**Pn**	**05 08 02.2**	**-1.0**
PEZE	**Perez Zeledon,**	**1.29**	**207**	*e*P		**Pn**	**05 08 02.4**	**-0.9**
PEZE	**Perez Zeledon,**	**1.29**	**207**	*i* P		**Pb**	**05 08 03.6**	**0.0**
PEZE				IAML			05 08 20.4	
	comp=Z,3μm,1.0s							
TCS1	**Tacares**	**1.29**	**247**	*e*P		**Pn**	**05 08 03.4**	**+0.2**
TCS1	**Tacares**	**1.29**	**247**	*i* P		**Pn**	**05 08 03.5**	**+0.2**
TCS1				IAML			05 08 27.5	
	comp=Z,42μm,1.0s							
ACOS	**Acosta**	**1.30**	**235**	*e*P		**Pn**	**05 08 03.0**	**-0.3**
CPMI	**Catarata Coope**	**1.30**	**258**	*e*P		**Pn**	**05 08 03.2**	**-0.2**
CPMI	**Catarata Coope**	**1.30**	**258**	*i* P		**Pn**	**05 08 03.2**	**-0.2**
CPMI				IAML			05 08 20.9	
	comp=Z,5μm,1.0s							
COVE	**Coope Vega, Sa**	**1.30**	**278**	*e*P		**Pn**	**05 08 02.7**	**-0.6**
COVE	**Coope Vega, Sa**	**1.30**	**278**	*i* P		**Pn**	**05 08 02.8**	**-0.5**
COVE				IAML			05 08 28.2	
	comp=Z,3μm,1.0s							
SARCI	**Sarchi**	**1.32**	**250**	*e*P		**Pb**	**05 08 03.9**	**-0.2**
BURE	**Buenos Aires**	**1.39**	**190**	*e*P		**Pn**	**05 08 04.1**	**-0.4**
EDBA	**Buenos Aires**	**1.39**	**188**	*e*P		**Pn**	**05 08 04.0**	**-0.5**
SRA1	**San Ramn**	**1.45**	**252**	*e*P		**Pn**	**05 08 05.1**	**-0.2**
LLNJ	**Naranjito**	**1.46**	**223**	*e*P		**Pn**	**05 08 05.7**	**+0.3**
TRB2	**Turrubares**	**1.48**	**245**	*e*P		**Pn**	**05 08 05.8**	**0.0**
POTG	**Potrero Grande**	**1.48**	**181**	*e*P		**Pn**	**05 08 05.0**	**-0.8**
POTG	**Potrero Grande**	**1.48**	**181**	*i* P		**Pn**	**05 08 06.0**	**+0.1**
POTG				*i* S		**Sb**	**05 08 26.4**	**+0.7**
POTG				IAML			05 08 26.7	
	comp=Z,5μm,1.0s							
SOCE	**Pocosol**	**1.52**	**264**	*e*P		**Pn**	**05 08 06.5**	**+0.3**
SOCE	**Pocosol**	**1.52**	**264**	*i* P		**Pb**	**05 08 06.8**	**-0.5**
SOCE				IAML			05 08 28.4	
	comp=Z,6μm,1.0s							
OCHAL	**Ojochal**	**1.54**	**201**	*i* P		**Pb**	**05 08 07.3**	**-0.5**
OCHAL				IAML			05 08 28.0	
	comp=Z,68nm,1.0s							
BLUN	**Bluefields**	**1.60**	**335**	*i* P		**Pn**	**05 08 06.4**	**-1.0**
BLUN				IAML			05 08 24.6	
	comp=Z,3μm,1.0s							
ARE1	**Arenal 1**	**1.61**	**267**	*e*P		**Pn**	**05 08 07.5**	**0.0**
EDPN	**Palmar Norte**	**1.62**	**193**	*e*P		**Pb**	**05 08 08.6**	**-0.5**
BITO	**Garabito Jaco**	**1.77**	**239**	*e*P		**Pb**	**05 08 11.1**	**-0.6**
JACO	**JACO, Garabito**	**1.78**	**241**	*e*P		**Pn**	**05 08 10.8**	**+0.9**
JACO	**JACO, Garabito**	**1.78**	**241**	*i* P		**Pn**	**05 08 10.3**	**+0.4**
JACO				IAML			05 08 34.8	
	comp=Z,2μm,1.0s							
BC3P	**Paso Ancho**	**1.78**	**165**	*e*P		**Pn**	**05 08 10.5**	**+0.4**
BRU2	**Volcan**	**1.79**	**167**	*e*P		**Pn**	**05 08 09.7**	**-0.3**
BRU2				*e*S		**Sn**	**05 08 32.4**	**-0.4**
BRU2	**Volcan**	**1.79**	**167**	*e*P		**Pn**	**05 08 09.6**	**-0.5**
BRU2	**Volcan**	**1.79**	**167**	*i* P		**Pn**	**05 08 09.6**	**-0.5**
BRU2				IAML			05 08 34.4	
	comp=Z,2μm,1.0s							
JTS	**Las Juntas de**	**1.85**	**262**	*e*P		**Pn**	**05 08 10.8**	**-0.1**
BCO2	**Palmira**	**1.90**	**163**	*e*P		**Pn**	**05 08 11.5**	**-0.2**
BCO2				*e*S		**Sb**	**05 08 37.0**	**-0.7**
LAFE	**Finca La Fe, P**	**1.94**	**248**	*e*P		**Pb**	**05 08 14.0**	**-0.6**
LAFE	**Finca La Fe, P**	**1.94**	**248**	*i* P		**Pb**	**05 08 13.5**	**-1.1**
LAFE				IAML			05 08 43.7	
	comp=Z,6.8nm,1.0s							
PLAN	**Los Planes de**	**1.95**	**197**	*i* P		**Pn**	**05 08 13.0**	**+0.7**
PLAN				IAML			05 08 43.0	
	comp=Z,3μm,1.0s							
CDITO	**Canoas**	**1.97**	**174**	*e*P		**Pn**	**05 08 11.9**	**-0.6**
CDITO	**Canoas**	**1.97**	**174**	*e*P		**Pn**	**05 08 13.0**	**+0.5**
CDITO	**Canoas**	**1.97**	**174**	*i* P		**Pn**	**05 08 13.0**	**+0.5**
CDITO				IAML			05 08 49.2	
	comp=Z,2μm,1.0s							
JIME	**Puerto Jimenez**	**2.01**	**187**	*e*P		**Pn**	**05 08 13.7**	**+0.7**
ESPN	**Las Esperanzas**	**2.02**	**324**	*e*P		**Pn**	**05 08 11.9**	**-1.3**
ESPN	**Las Esperanzas**	**2.02**	**324**	*i* P		**Pn**	**05 08 12.5**	**-0.7**
ESPN				IAML			05 08 37.5	
	comp=Z,2μm,1.0s							
DVD	**David**	**2.19**	**163**	*e*P		**Pn**	**05 08 16.1**	**+0.7**
DVD				*e*S		**Sn**	**05 08 43.3**	**+0.8**
PLVR	**Palo Verde**	**2.24**	**265**	*e*P		**Pn**	**05 08 16.7**	**+0.4**
ORTG	**Ortega, Santa**	**2.34**	**266**	*i* P		**Pn**	**05 08 17.7**	**0.0**
ORTG				IAML			05 08 50.6	
	comp=Z,180nm,1.0s							
DUNO	**Dulce Nombre,**	**2.41**	**259**	*i* P		**Pb**	**05 08 21.0**	**-1.7**
DUNO				IAML			05 08 53.7	
	comp=Z,990nm,1.0s							
INDI	**Punta indio, G**	**2.47**	**254**	*e*P		**Pn**	**05 08 20.5**	**+1.1**
ACON	**Acoyapa**	**2.49**	**305**	*e*P		**Pn**	**05 08 18.6**	**-1.0**
ACON	**Acoyapa**	**2.49**	**305**	*i* P		**Pn**	**05 08 21.1**	**+1.5**
ACON				IAML			05 08 58.5	
	comp=Z,470nm,1.0s							
SAJU	**San Juanillo,**	**2.63**	**260**	*i* P		**Pn**	**05 08 22.3**	**+0.8**
SAJU				IAML			05 09 14.0	
	comp=Z,280nm,1.0s							
CONN	**Concepcion**	**2.69**	**292**	*i* P		**Pg**	**05 08 34.7**	**+3.9**
BOAB	**BOACO BROADBAN**	**3.16**	**307**	*i* P		**Pn**	**05 08 27.8**	**-1.0**
BOAB				IAML			05 09 32.3	
	comp=Z,310nm,1.0s							
BCIP	**Isla Barro Col**	**3.48**	**113**	*e*P		**Pn**	**05 08 35.1**	**+1.8**
BCIP	**Isla Barro Col**	**3.48**	**113**	*e*P		**Pn**	**05 08 31.6**	**-1.7**
CHIT3	**Chitre**	**3.68**	**134**	*e*P		**Pn**	**05 08 36.5**	**+0.4**
CHIT3				*e*S		**Sn**	**05 09 19.3**	**-0.1**
LIMN	**Finca el Limon**	**4.07**	**308**	*i* P		**Pn**	**05 08 40.8**	**-0.7**
LIMN				IAML			05 09 45.8	
	comp=Z,190nm,1.0s							
RCPN	**Sur Rio San Ju**	**4.17**	**315**	*i* P		**Pn**	**05 08 41.6**	**-1.3**
RCPN				IAML			05 08 41.9	
	comp=Z,0.4nm,1.0s							

CATAC 03 05:09:28.7±1.0, 12°23N×86°78W, h2km±4km, ML2.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.18**	**105**	*i* P	Pg	05 09 32.6	+0.3
COPN				IAML		05 09 51.5	
	comp=Z,140nm,1.0s						
MACN	**El Madrono**	**0.26**	**22**	*i* P	Pg	05 09 33.7	0.0
MACN				IAML		05 09 44.5	
	comp=Z,40nm,1.0s						
TELN	**Telica**	**0.38**	**352**	*i* P	Pg	05 09 36.1	+0.1
TELN				*i* S	Sg	05 09 41.3	+0.3
TELN				IAML		05 09 45.1	
	comp=Z,220nm,1.0s						
HERN	**Volcan Telica**	**0.38**	**352**	*i* P	Pg	05 09 36.5	+0.4
HERN				*i* S	Sg	05 09 41.2	+0.1
HERN				IAML		05 09 46.1	
	comp=Z,850nm,1.0s						
LIMN	**Finca el Limon**	**0.92**	**26**	*i* P	Pg	05 09 46.5	+0.1
LIMN				*i* S	Sg	05 09 58.9	+0.5

*IDC **03** 05:18:48.2±0.6, 27°69N×140°19E, h481km±12km, mb3.4/10, mbtmp4.2/10, Error ellipse: s-maj=39.6km s-min=19.5km az=68.0*
ISC 03 05:18:48.2±0.9, 27.7N±0.2×140.1E±0.2, h479km, n11, σ0.876/13, mb3.8/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.95**	**107**	P	**P**	**05 19 51.2**	**+0.1**
	123nm,0.3s,baz=5.4,slow=13,SNR=34						
JCJ				S	**S**	**05 20 42.0**	**-0.2**
	218nm,0.4s,baz=279,slow=22,SNR=12						
SONM	**Songino Array**	**33.01**	**317**	P	**P**	**05 24 42.7**	**+0.1**
	0.5nm,0.6s,baz=123,slow=8.1,SNR=4.0						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**47.66**	**187**	P	**P**	**05 26 40.4**	**+0.2**
	0.1nm,0.4s,baz=5.5,slow=7.6,SNR=5.9						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**47.83**	**319**	P	**P**	**05 26 40.9**	**-0.2**
	1.1nm,0.3s,baz=90,slow=7.6,SNR=5.5						
	1.1nm,0.3s						
MKAR	**Makanchi Array**	**48.67**	**309**	P	**P**	**05 26 47.6**	**+0.1**
	0.8nm,0.4s,baz=88,slow=11,SNR=20						
MKAR				ScP	**ScP**	**05 31 10.9**	**-1.8**
	0.1nm,0.5s,baz=64,slow=5.0,SNR=1.6						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**51.30**	**314**	P	**P**	**05 27 07.0**	**+0.2**
	5.9nm,0.5s,baz=92,slow=7.9,SNR=74						
	5.9nm,0.5s						
BVAR	**Borovoye Array**	**56.36**	**317**	P	**P**	**05 27 43.2**	**+0.5**
	8.8nm,0.4s,baz=88,slow=7.0,SNR=56						
	8.8nm,0.4s						
ARCES	**ARCESS Array B**	**72.38**	**340**	P	**P**	**05 29 25.4**	**+1.0**
	5.3nm,1.1s,baz=73,slow=9.0,SNR=7.4						
	5.3nm,1.1s						
FINES	**FINESS Array B**	**76.60**	**333**	P	**P**	**05 29 48.3**	**0.0**
	1.8nm,0.3s,baz=63,slow=4.8,SNR=38						
	1.8nm,0.3s						
HFS	**Hagfors**	**82.15**	**336**	P	**P**	**05 30 16.9**	**-0.9**
	2.3nm,0.8s,baz=90,slow=4.4,SNR=6.3						
	2.3nm,0.8s						
NOA	**NORSAR Array B**	**82.38**	**338**	P	**P**	**05 30 18.5**	**-0.4**
	0.8nm,0.7s,baz=45,slow=4.9,SNR=2.5						
	0.8nm,0.7s						

IDC 03 05:21:60.0±7.4, 27°61S×22°89E, h0km, mbtmp2.2/1, ML1.9/1, Error ellipse: s-maj=51.4km s-min=44.3km az=25.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.30**	**116**	I	I	05 40 00.0	
	0.1nm,1.6s,baz=295,slow=314,SNR=3.5						
BOSA	**Boshof**	**2.32**	**116**	Pn	Pn	05 22 40.1	+0.6
	0.2nm,0.3s,baz=290,slow=15,SNR=2.3						
BOSA				Lg	Lg	05 23 13.0	
	1.6nm,0.3s,baz=213,slow=19,SNR=17						
	3.0nm,0.9s						
I35NA	**TSUMEB INFRASO**	**9.70**	**329**	I	I	06 18 50.0	
	baz=152,slow=328,SNR=3.0						

*IDC **03** 05:32:58.5±2.9, 30°60N×57°39E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=70.8km s-min=28.2km az=158.0*
*TEH **03** 05:32:59.9, 30°78N×57°39E, h8km±58km, ML3.8*
ISC 03 05:33:01.6±0.8, 30.75N±0.05×57.35E±0.05, h15km, n22, σ0.888/22, mb3.8/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.25**	**195**	Pg	**Pg**	**05 33 06.5**	**-0.8**
ZRDN	**Zarand Kerman**	**0.73**	**288**	Pg	**Pg**	**05 33 15.0**	**-0.9**
KHGB	**Koh Gabri**	**0.84**	**244**	Pg	**Pg**	**05 33 16.6**	**-1.3**
CHMN	**Cheshme madani**	**0.90**	**169**	Pg	**Pg**	**05 33 17.7**	**-1.5**
TVBK	**TV Kerman**	**0.91**	**214**	Pg	**Pg**	**05 33 19.2**	**-0.1**
NGRK	**Negar Kerman**	**1.22**	**206**	Pg	**Pb**	**05 33 24.6**	**0.0**
IBAF	**Bafgh**	**1.74**	**299**	Pg	**Pn**	**05 33 32.7**	**+1.2**
KBAM	**BAM**	**1.87**	**149**	Pn	**Pn**	**05 33 34.2**	**+1.0**
BSRN	**Basiran**	**1.95**	**51**	Pn	**Pn**	**05 33 34.4**	**+0.1**
IKOO	**Kooshah**	**2.19**	**40**	Pn	**Pn**	**05 33 38.5**	**+0.7**
TPRV	**Parvadeh(Tabas**	**2.34**	**346**	Pn	**Pn**	**05 33 40.3**	**+0.6**
ITEG	**Tejag**	**2.45**	**29**	Pn	**Pn**	**05 33 41.3**	**0.0**
TKDS	**Koohdasht(Taba**	**2.86**	**356**	Pn	**Pn**	**05 33 47.6**	**+0.7**
AFRZ	**Afriz**	**3.02**	**28**	Pn	**Pn**	**05 33 49.9**	**+0.8**
TNSJ	**Nastanj**	**3.27**	**349**	Pn	**Pn**	**05 33 53.1**	**+0.7**
ZHDN	**Zahedan**	**3.29**	**113**	Pn	**Pn**	**05 33 54.2**	**+1.4**
SHRT	**Shahrakht**	**3.82**	**40**	Pn	**Pn**	**05 34 00.8**	**+0.8**
BRTR	**Keskin Array B**	**21.29**	**301**	P	**P**	**05 37 47.3**	**-0.4**
	3.0nm,0.3s,baz=126,slow=11,SNR=2.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**25.05**	**43**	P	**P**	**05 38 24.4**	**-0.8**
	0.3nm,0.6s,baz=224,slow=8.4,SNR=2.7						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**30.48**	**33**	P	**P**	**05 39 14.3**	**+0.7**
	0.8nm,0.3s,baz=246,slow=9.2,SNR=5.4						
	0.8nm,0.3s						
FINES	**FINESS Array B**	**36.90**	**335**	P	**P**	**05 40 10.0**	**+0.6**
	1.5nm,0.8s,baz=138,slow=8.5,SNR=1.7						
	1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**53.97**	**264**	P	**P**	**05 42 24.8**	**-0.5**
	0.7nm,0.7s,baz=56,slow=6.7,SNR=4.0						
	0.7nm,0.7s						

*SNET **03** 05:34:50.9±1.2, 13°79N×91°14W, h41km±209km, ML3.5*
*CATAC **03** 05:34:51.0±1.8, 13°81N×91°12W, h29km±20km, ML4.0*
*IDC **03** 05:34:52.7±2.8, 14°54N×90°60W, h51km±33km, mb3.4/3, mbtmp3.6/6, ML3.6/3, Error ellipse: s-maj=71.8km s-min=19.4km az=2.0*
*GCG **03** 05:34:54.3±0.5, 14°13N×91°13W, h57km±5km, MD4.0*
ISC 03 05:34:52.0±1.1, 13°87N±0°04, 91°11W±0°04, h62km±9km, n65, σ0.999/76, mb3.8/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.62**	**315**	*e*P	**Pn**	**05 35 05.8**	**+0.4**
SULM				*e*S	**Sn**	**05 35 14.2**	**-1.1**
FUG	**Fuego 3**	**0.63**	**24**	*e*P	**Pn**	**05 35 05.7**	**-0.1**
FUG				*e*S	**Sn**	**05 35 14.8**	**-1.0**
PCG	**Pacaya**	**0.71**	**43**	*e*P	**Pn**	**05 35 06.7**	**-0.1**
PCG				*e*S	**Sn**	**05 35 18.2**	**+0.6**
RTAL	**Retalhuleu**	**0.87**	**319**	*i* P	**Pn**	**05 35 07.6**	**-0.8**
RTAL				IAML		05 35 24.1	
	comp=Z,3μm,1.0s						
GUMI	**Mixco**	**0.90**	**32**	*i* P	**Pn**	**05 35 08.9**	**-0.1**
GUMI				IAML		05 35 26.0	
	comp=Z,18μm,1.0s						
GCG4	**OSOP**	**0.91**	**38**	*i* P	**Pn**	**05 35 08.6**	**-0.5**
GCG4				IAML		05 35 24.3	
	comp=Z,6μm,1.0s						
STG3	**Santiaguito 3,**	**0.95**	**332**	*e*P	**Pn**	**05 35 09.3**	**-0.4**
NBG	**Las Nubes**	**1.03**	**46**	*e*P	**Pn**	**05 35 11.5**	**+0.8**
NBG				*e*S	**Sn**	**05 35 25.3**	**+0.6**
GUNB	**GUNB**	**1.04**	**46**	*i* P	**Pn**	**05 35 10.2**	**-0.7**
GUNB				IAML		05 35 25.8	
	comp=Z,4μm,1.0s						
SMSP	**San Marcos**	**1.28**	**329**	*i* P	**Pn**	**05 35 13.6**	**-0.4**
SMSP				IAML		05 35 31.6	
	comp=Z,8μm,1.0s						
NUBE	**Las Nubes**	**1.29**	**88**	*e*P	**Pn**	**05 35 13.2**	**-0.8**
NUBE				*e*S	**Sn**	**05 35 29.5**	**-1.1**
NUBE				IAML		05 35 31.0	
	comp=Z,739nm,0.2s						
NUBE	**Las Nubes**	**1.29**	**88**	*i* P	**Pn**	**05 35 13.0**	**-1.1**
NUBE				IAML		05 35 30.9	
	comp=Z,2μm,1.0s						
LOAL	**Lomas de Alarc**	**1.30**	**84**	*i* P	**Pn**	**05 35 13.5**	**-0.5**
LOAL				IAML		05 35 32.4	
	comp=Z,4μm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.30**	**83**	*e*P	**Pn**	**05 35 13.5**	**-0.5**
SLOZ				*e*S	**Sn**	**05 35 30.8**	**+0.2**
SMCA	**Catarina**	**1.36**	**317**	*i* P	**Pn**	**05 35 13.9**	**-0.9**
SMCA				IAML		05 35 37.1	
	comp=Z,1μm,1.0s						
QUIS	**Sacapulas**	**1.42**	**1**	*i* P	**Pn**	**05 35 15.4**	**-0.3**
QUIS				IAML		05 35 39.5	
	comp=Z,2μm,1.0s						
RTR	**El Retiro**	**1.42**	**89**	*e*P	**Pn**	**05 35 15.6**	**-0.2**
CEVE	**Cerro Verde**	**1.44**	**91**	*i* P	**Pn**	**05 35 15.8**	**-0.4**
CEVE				IAML		05 35 38.3	
	comp=Z,3μm,1.0s						
SBLS	**San Blas**	**1.44**	**91**	*e*P	**Pn**	**05 35 15.6**	**-0.6**
SNJE	**San Jose**	**1.46**	**90**	*e*P	**Pn**	**05 35 15.9**	**-0.5**
HUEH	**Huehuetenango**	**1.49**	**345**	*i* P	**Pn**	**05 35 17.5**	**+0.7**
HUEH				IAML		05 35 43.2	
	comp=Z,2μm,1.0s						
UNIC	**Universidad Ca**	**1.52**	**86**	*i* P	**Pn**	**05 35 16.3**	**-0.7**
UNIC				IAML		05 35 16.8	
	comp=Z,460nm,1.0s						
JAYA	**Jayaque - finc**	**1.63**	**97**	*e*P	**Pn**	**05 35 17.5**	**-1.1**
JAYA				*e*S	**Sn**	**05 35 38.3**	**-0.3**
JAYA				IAML		05 35 38.8	
	comp=Z,3μm,0.2s						
JAYA	**Jayaque - finc**	**1.63**	**97**	*i* P	**Pn**	**05 35 17.9**	**-0.7**
JAYA				IAML		05 35 38.8	
	comp=Z,6μm,1.0s						
CEDA	**San Andres**	**1.67**	**92**	*e*P	**Pn**	**05 35 17.6**	**-1.4**
CEDA				*e*S	**Sn**	**05 35 39.9**	**+0.4**
CEDA	**San Andres**	**1.67**	**92**	*i* P	**Pn**	**05 35 18.5**	**-0.5**
CEDA				IAML		05 36 00.9	
	comp=Z,2μm,1.0s						
PMON	**Piamonte**	**1.75**	**95**	*i* P	**Pn**	**05 35 19.6**	**-0.6**
PMON				IAML		05 35 52.4	
	comp=Z,2μm,1.0s						
MTO3	**Montecristo**	**1.78**	**72**	*e*P	**Pn**	**05 35 19.6**	**-1.1**
MTO3				*e*S	**Sn**	**05 35 44.5**	**+2.1**
MTO3				IAML		05 35 47.2	
	comp=Z,71nm,0.2s						
MTO3	**Montecristo**	**1.78**	**72**	*i* P	**Pn**	**05 35 19.6**	**-1.1**
MTO3				IAML		05 35 45.7	
	comp=Z,360nm,1.0s						
LALI	**Alcalda de L**	**1.78**	**102**	*e*P	**Pn**	**05 35 19.7**	**-0.7**
LALI				*e*S	**Sn**	**05 35 41.3**	**-0.7**
UEES	**Universidad Ev**	**1.82**	**94**	*e*P	**Pn**	**05 35 20.8**	**-0.3**
UEES	**Universidad Ev**	**1.82**	**94**	*i* P	**Pn**	**05 35 20.9**	**-0.3**
UEES				IAML		05 35 52.9	
	comp=Z,1μm,1.0s						
SNET	**Serv Nac Est T**	**1.83**	**95**	*i* P	**Pn**	**05 35 20.8**	**-0.5**
SNET				IAML		05 35 49.1	
	comp=Z,2μm,1.0s						
ESQI	**Esquipulas**	**1.85**	**68**	*i* P	**Pn**	**05 35 20.8**	**-0.7**
ESQI				IAML		05 35 52.7	
	comp=Z,670nm,1.0s						
PANCS	**Alcalda de**	**1.89**	**97**	*i* P	**Pn**	**05 35 21.4**	**-0.7**
PANCS				IAML		05 35 52.4	
	comp=Z,3μm,1.0s						
LOMA	**Loma Larga**	**1.90**	**96**	*e*P	**Pn**	**05 35 21.9**	**-0.3**
LOMA				*e*S	**Sn**	**05 35 45.0**	**-0.1**
LOMA	**Loma Larga**	**1.90**	**96**	*i* P	**Pn**	**05 35 21.9**	**-0.3**
LOMA				IAML		05 35 48.0	
	comp=Z,1μm,1.0s						
SJTE	**Alcalda de S**	**2.06**	**97**	*i* P	**Pn**	**05 35 23.7**	**-0.6**
SJTE				IAML		05 35 56.7	
	comp=Z,580nm,1.0s						
PAVA	**Las Pavas**	**2.12**	**94**	*i* P	**Pn**	**05 35 24.6**	**-0.5**
PAVA				IAML		05 35 43.5	
	comp=Z,660nm,1.0s						
LLGN	**La Laguna**	**2.12**	**82**	*i* P	**Pn**	**05 35 24.1**	**-1.1**
LLGN				IAML		05 37 32.4	
	comp=Z,550nm,1.0s						
COEG	**Centro de Oper**	**2.18**	**96**	*e*P	**Pn**	**05 35 25.7**	**-0.3**
COEG	**Centro de Oper**	**2.18**	**96**	*i* P	**Pn**	**05 35 25.6**	**-0.3**
COEG				IAML		05 36 04.9	
	comp=Z,510nm,1.0s						
UESV	**Universidad de**	**2.27**	**96**	*i* P	**Pn**	**

PKA					*e*S	Sn	05 46 33.1	+1.1	
PKA					IAML		05 46 38.2		
	comp=Z,776nm,0.4s								
KOMG	**Komaggas**	**2.78**	**247**	⇓	*i*P	Pn	05 46 12.4	+1.2	
KOMG					*e*S	Sn	05 46 46.0	+0.9	
KOMG					IAML		05 46 55.9		
	comp=Z,436nm,0.4s								
CVNA	**Calvinia**	**2.79**	**192**	⇓	*i*P	Pn	05 46 12.6	+1.1	
CVNA					*e*S	Sn	05 46 45.6	0.0	
CVNA					IAML		05 46 54.8		
	comp=Z,726nm,0.3s								
SUR	**Sutherland**	**3.64**	**175**		*e*P	Pn	05 46 24.7	+1.4	
BRAK	**Brakfontein**	**3.70**	**145**	⇑	*i*P	Pn	05 46 24.1	+0.1	
BRAK					*e*S	Sn	05 47 08.4	+0.2	
BRAK					IAML		05 47 25.8		
	comp=Z,406nm,0.3s								
GRAN	**Grantham**	**3.85**	**157**	⇓	*i*P	Pn	05 46 26.5	+0.4	
GRAN					*e*S	Sn	05 47 11.8	0.0	
GRAN					IAML		05 47 28.1		
	comp=Z,308nm,0.4s								
MERW	**Merweville**	**4.03**	**167**	⇓	*i*P	Pn	05 46 29.1	+0.5	
MERW					*e*S	Sn	05 47 15.2	-1.0	
MERW					IAML		05 47 32.3		
	comp=Z,475nm,0.6s								
BFON	**Badsfontein, M**	**4.15**	**138**	⇑	*i*P	Pn	05 46 30.4	+0.2	
BFON					*e*S	Sn	05 47 18.9	-0.4	
BFON					IAML		05 47 37.0		
	comp=Z,422nm,0.4s								
BOSA	**Boshof**	**4.25**	**89**	⇓	*i*P	Pn	05 46 32.8	+1.2	
BOSA					*e*S	Sn	05 47 21.3	-0.3	
BOSA					IAML		05 47 39.0		
	comp=Z,235nm,0.3s								
PRTV	**Porterville,We**	**4.46**	**195**	⇓	*i*P	Pn	05 46 36.0	+1.6	
PRTV					*e*S	Sn	05 47 25.2	-1.6	
PRTV					IAML		05 47 49.1		
	comp=Z,222nm,0.5s								
ROOI	**Rooidraai Farm**	**4.61**	**145**	⇑	*i*P	Pn	05 46 36.6	+0.1	
ROOI					*e*S	Sn	05 47 30.0	-0.5	
ROOI					IAML		05 47 49.5		
	comp=Z,210nm,0.6s								
SWZ	**Schweizer**	**4.61**	**71**		*e*P	Pn	05 46 37.9	+1.3	
SWZ					*e*S	Sn	05 47 30.0	-0.6	
SWZ					IAML		05 47 57.1		
	comp=Z,128nm,0.5s								
CER	**Ceres**	**4.71**	**192**		*e*P	Pn	05 46 39.0	+1.2	
CER					*e*S	Sn	05 47 31.5	-1.3	
CER					IAML		05 47 56.3		
	comp=Z,213nm,0.5s								
GRAF	**Camdeboo Natio**	**4.97**	**136**	⇑	*i*P	Pn	05 46 41.5	0.0	
GRAF					*e*S	Sn	05 47 38.9	-0.5	
GRAF					IAML		05 48 11.0		
	comp=Z,223nm,0.7s								
LBTB	**Lobatse**	**5.93**	**52**	⇓	*i*P	Pn	05 46 55.5	+0.8	
LBTB					*e*S	Sn	05 47 59.6	-3.4	
LBTB					IAML		05 48 32.6		
	comp=Z,117nm,0.5s								
SOE	**Somerset East**	**5.93**	**133**		*e*P	Pn	05 46 55.3	+0.6	
SOE					*e*S	Sn	05 48 01.6	-1.5	
SOE					IAML		05 48 36.0		
	comp=Z,125nm,0.4s								
ROSN	**Rosenhof**	**6.39**	**148**		*e*P	Pn	05 47 00.9	-0.1	
ROSN					*e*S	Sn	05 48 11.9	-2.4	
ROSN					IAML		05 48 53.9		
	comp=Z,115nm,0.5s								
PRYS	**Parys**	**6.40**	**75**	⇓	*i*P	Pn	05 47 02.1	+0.9	
PRYS					*e*S	Sn	05 48 12.4	-2.4	
PRYS					IAML		05 48 52.3		
	comp=Z,124nm,0.6s								
KSR	**Koster**	**6.44**	**65**		*e*P	Pn	05 47 02.3	+0.5	
KSR					*e*S	Sn	05 48 13.8	-1.9	
KSR					IAML		05 48 54.4		
	comp=Z,343nm,0.5s								
SNKL	**Senekal, Frees**	**6.48**	**88**	⇓	*i*P	Pn	05 47 03.8	+1.4	
SNKL					*e*S	Sn	05 48 14.9	-1.9	
SNKL					IAML		05 48 54.1		
	comp=Z,222nm,0.5s								
BUFB	**Buffelsbos**	**6.53**	**147**		*e*P	Pn	05 47 02.6	-0.2	
BUFB					*e*S	Sn	05 48 14.7	-3.0	
BUFB					IAML		05 48 54.8		
	comp=Z,16nm,0.1s								
WDLM	**Western Deep L**	**6.62**	**71**		*e*P	Pn	05 47 06.3	+2.0	
WDLM					*e*S	Sn	05 48 17.8	-2.6	
WDLM					IAML		05 48 53.3		
	comp=Z,225nm,0.3s								
GRHM	**Grahamstown, E**	**6.82**	**133**	⇑	*i*P	Pn	05 47 08.0	+1.1	
GRHM					*e*S	Sn	05 48 22.9	-2.0	
GRHM					IAML		05 49 10.9		
	comp=Z,71nm,0.9s								
KSTD	**Kokstad**	**7.95**	**106**		*e*P	Pn	05 47 23.4	+0.9	
KSTD					*e*S	Sn	05 48 49.7	-3.3	
KSTD					IAML		05 49 31.9		
	comp=Z,24nm,0.4s								
LEPH	**Lephalale, Lim**	**8.21**	**55**	⇓	*i*P	Pn	05 47 27.6	+1.6	
LEPH					*e*S	Sn	05 48 55.4	-3.9	
LEPH					IAML		05 49 43.6		
	comp=Z,53nm,0.6s								
NWCL	**Newcastle**	**8.41**	**85**		*e*P	Pn	05 47 29.3	+0.6	
NWCL					*e*S	Sn	05 48 60.0	-4.3	
NWCL					IAML		05 49 55.8		
	comp=Z,75nm,0.5s								
CRLN	**Carolina, Mapu**	**8.96**	**74**		*e*P	Pn	05 47 37.2	+0.8	
CRLN					*e*S	Sn	05 49 13.9	-4.0	
CRLN					IAML		05 50 18.1		
	comp=Z,19nm,0.4s								
PILG	**Pilgrimsrest,**	**9.94**	**70**		*e*P	Pn	05 47 50.9	+1.1	
PILG					*e*S	Sn	05 49 36.3	-5.6	
PILG					IAML		05 50 48.9		
	comp=Z,51nm,0.6s								
MUSN	**Musina, Limpop**	**10.67**	**55**		*e*P	Pn	05 47 59.9	+0.2	
MUSN					*e*S	Sn	05 49 53.8	-5.8	
MUSN					IAML		05 51 05.8		
	comp=Z,20nm,0.5s								
MOPA	**Mopani**	**11.14**	**65**	⇓	*i*P	Pn	05 48 06.2	0.0	
MOPA					*e*S	Sn	05 50 04.4	-6.8	
MOPA					IAML		05 51 21.2		
	comp=Z,41nm,0.5s								
KRI	**Karoi**	**14.56**	**37**		*e*P	Pn	05 48 55.2	+2.1	

SKHL ***03*** *06:13:54.8±0.2, 43.°50N×145.°10E, h106km±4km, mb4.0/3, msha5.0/3*
JMA ***03*** *06:13:54.0±0.2, 43.°5N±0.°6×145.°0E±0.°8, h108km±1km, MV2.6/36, NEMURO REGION*

ISC 03 06:13:54.3±1.8, 43.°52N±0.°06×145.°04E±0.°04, h106km±11km, n17, σ0.°42/32, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
JNK	**Nakash**	**0.24**	**285**	*e*P		**Pn**	**06 14 09.3**		**-0.1**
JNK				*e*S		**Sn**	**06 14 20.8**		**+0.1**
JNSB	**Nemuroshibetsu**	**0.25**	**355**	*e*P		**Pn**	**06 14 09.6**		**+0.2**
JNSB				*e*S		**Sn**	**06 14 21.4**		**+0.6**
JRA	**Rausu**	**0.42**	**9**	*e*P		**Pn**	**06 14 10.1**		**-0.1**
JRA				*e*S		**Sn**	**06 14 22.3**		**+0.2**
JKHN	**Kushirohamanak**	**0.45**	**168**	*e*P		**Pn**	**06 14 10.6**		**+0.2**
JKHN				*e*S		**Sn**	**06 14 22.8**		**+0.3**
AKK	**Akkeshi**	**0.53**	**196**	*e*P		**Pn**	**06 14 10.9**		**0.0**
AKK				AMB		AMB	06 14 11.2		
	40nm,0.2s								
AKK				*e*S		**Sn**	**06 14 22.9**		**-0.5**
AKK				A		A	06 14 23.9		
	280nm,0.4s								
AKK				A		A	06 14 23.9		
	800nm,0.4s								
NMR	**Nemuro--Hokkai**	**0.53**	**107**	*e*P		**Pn**	**06 14 10.9**		**0.0**
NMR				*e*S		**Sn**	**06 14 23.0**		**-0.4**
NEM2	**Nemuro 2**	**0.54**	**107**	P		**Pn**	**06 14 10.9**		**-0.1**
NEM2				*e*S		**Sn**	**06 14 22.9**		**-0.6**
JAK	**Akkeshi**	**0.58**	**205**	P		**Pn**	**06 14 11.5**		**+0.2**
JAK				*e*S		**Sn**	**06 14 24.1**		**+0.1**
YUK	**Yuzh-Kuril'sk**	**0.79**	**49**	*e*P		**Pn**	**06 14 13.4**		**+0.4**
YUK				AMB		AMB	06 14 14.9		
	90nm,0.5s								
YUK				*e*S		**Sn**	**06 14 27.5**		**+0.3**
YUK				A		A	06 14 32.3		
	160nm,0.4s								
YUK				A		A	06 14 32.3		
	160nm,0.4s								
JTKR	**Abashiri--Toko**	**0.93**	**299**	P		**Pn**	**06 14 14.3**		**-0.2**
JTKR				*e*S		**Sn**	**06 14 28.8**		**-0.9**
JAR	**Ashorobuto**	**0.95**	**257**	*e*P		**Pn**	**06 14 15.0**		**+0.4**
JAR				*e*S		**Sn**	**06 14 30.4**		**+0.3**
JOB	**Onbets**	**1.07**	**235**	P		**Pn**	**06 14 16.3**		**+0.4**
JOB				*e*S		**Sn**	**06 14 32.4**		**+0.1**
JMP	**Maruseppu**	**1.31**	**292**	*e*P		**Pn**	**06 14 18.4**		**-0.3**
JMP				*e*S		**Sn**	**06 14 36.2**		**-0.8**
SHO	**Shikotan**	**1.35**	**74**	*e*P		**Pn**	**06 14 19.0**		**0.0**
SHO				*e*S		**Sn**	**06 14 37.1**		**-0.7**
SHO				A		A	06 14 37.5		
	230nm,0.3s								
SHO				A		A	06 14 37.5		
	240nm,0.3s								
JCH	**Churui**	**1.53**	**234**	*e*P		**Pn**	**06 14 21.2**		**0.0**
JCH				*e*S		**Sn**	**06 14 41.0**		**-0.6**
ASAJ	**Asahikawa**	**1.86**	**289**	*e*P		**Pn**	**06 14 26.0**		**+0.7**
KUR	**Kuril'sk**	**2.65**	**49**	*e*P		**Pn**	**06 14 35.9**		**+0.4**
KUR				AMB		AMB	06 14 38.8		
	40nm,0.6s								

IDC ***03*** *06:14:14.0±2.5, 3.°84S×128.°56E, h0km, mb3.6/3, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=256.7km s-min=26.2km az=68.0*
DJA ***03*** *06:14:16.3±1.6, 3.°5S±5.°×12.°9E±.°, h18km±16km, M3.5/8, MLv3.5/8*

ISC 03 06:14:17.3±1.3, 2.°74S±0.°08×128.°96E±0.°06, h10km, n10, σ3.°04/8, mb3.9/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
NLAI	**Namlea**	**1.92**	**255**	P		**Pn**	**06 14 48.2**		**-1.9**
BNDI	**Bandanaira**	**2.00**	**152**	P		**Pn**	**06 14 48.8**		**-2.5**
LBMI	**Labuha**	**2.55**	**325**	P		**Pn**	**06 14 55.4**		**-3.4**
SWI	**Sorong**	**2.96**	**51**	P		**Pn**	**06 15 02.4**		**-2.0**
SANI	**Sanana**	**3.05**	**283**	P		**Pn**	**06 15 04.0**		**-1.6**
FAKI	**Fak Fak**	**3.29**	**93**	P		**Pn**	**06 15 07.4**		**-1.6**
WRA	**Warramunga Arr**	**17.89**	**163**	Pn		Pn	06 18 11.5		-15
	0.1nm,0.3s,baz=342,slow=13,SNR=2.5 0.5nm,0.7s								
ASAR	**Alice Springs**	**21.34**	**167**	P		P	06 18 53.2		-12
	1.0nm,0.6s,baz=348,slow=11,SNR=9.9 1.0nm,0.6s								
MKAR	**Makanchi Array**	**64.12**	**326**	P		**P**	**06 24 55.2**		**+3.3**
	0.6nm,0.7s,baz=131,slow=8.4,SNR=4.5 0.6nm,0.7s								
KURBB	**Kurchatov Arra**	**68.37**	**328**	P		**P**	**06 25 21.3**		**+2.3**
	0.5nm,0.4s,baz=131,slow=5.5,SNR=7.3 0.5nm,0.4s								

DNK ***03*** *06:27:00.4±2.1, 83.°57N×4.°73W, h6km±50km, ML2.4*
IDC ***03*** *06:27:05.1±0.6, 83.°05N×6.°46W, h0km, mb3.8/20, mbtmp3.9/22, ML3.7/2, MS3.5/52, Error ellipse: s-maj=17.6km s-min=11.8km az=34.0*
NEIC ***03*** *06:27:05.7±1.2, 82.°8N±0.°1×7.°4W±0.°6, h10km±1km, mb4.2/27, Error ellipse: s-maj=21.3km s-min=10.4km az=204.0*
BER ***03*** *06:27:08.5±6.2, 82.°67N×7.°73W, h10km, mb(Pn)4.4, ML3.4(NAO), Confirmed Earthquake*
KOLA ***03*** *06:27:10.0, 83.°24N×2.°76W, h0km, ML2.1, Error ellipse: s-maj=187.0km s-min=43.8km az=40.0, Arctic Ocean, Gakkel ridge*
FCIAR ***03*** *06:27:13.0, 82.°95N×2.°16W, h10km, station ZFI2 has station magnitude of 3.80 station OMEGA has station magnitude of 3.80 station PRGR has station magnitude of 4.50 station KLMR has station magnitude of 4.48*

ISC 03 06:27:06.7±0.5, 83.°07N±0.°05×4.°64W±0.°06, h10km, n130, σ2.°48/101, mb4.1/39, MS3.5/50, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KBS	**Kingsbay**	**4.88**	**140**	Pn		**Pn**	**06 28 19.5**		**-0.4**
KBS				Sn		**Sn**	**06 29 09.9**		**-6.5**
KBS	**Kingsbay**	**4.88**	**140**			**Pn**	**06 28 19.3**		**-0.7**
KBS	**Kingsbay**	**4.88**	**140**	P		**Pn**	**06 28 19.4**		**-0.6**
KBS				S		**Sn**	**06 29 10.4**		**-6.1**
KBS	**Kingsbay**	**4.88**	**140**	*e*P		**Pn**	**06 28 19.6**		**-0.4**
KBS				*e*S		**Sn**	**06 29 10.8**		**-5.7**
KBS				IAML			06 29 22.1		
	comp=Z,21nm,0.4s								
KBS	**Kingsbay**	**4.88**	**140**	*i* P		**Pn**	**06 28 18.8**		**-1.1**
KBS	**Kingsbay**	**4.88**	**140**	*e*P		**Pn**	**06 28 19.4**		**-0.6**
KBS				*e*S		**Sn**	**06 29 10.7**		**-5.7**
BRBB	**Barentsburg B**	**5.83**	**139**	Pn		**Pn**	**06 28 33.6**		**+0.6**
BRBB				Sn		**Sn**	**06 29 37.4**		**-2.4**
BRBB	**Barentsburg B**	**5.83**	**139**	P		**Pn**	**06 28 33.8**		**+0.3**
BRBB				S		**Sn**	**06 29 34.9**		**-4.8**
BRBB	**Barentsburg B**	**5.83**	**139**	*e*P		**Pn**	**06 28 33.6**		**+0.6**
BRBA	**Barentsburg A**	**5.86**	**139**	Pn		**Pn**	**06 28 35.6**		**+2.1**
BRBA	**Barentsburg A**	**5.86**	**139**	*e*P		**Pn**	**06 28 34.3**		**+0.8**
SPA0	**Spitsbergen Ar**	**5.94**	**134**	Pn		**Pn**	**06 28 33.9**		**-0.5**
	baz=0.4,slow=12								
SPA0				Sn		**Sn**	**06 29 39.5**		**-2.9**
	baz=360,slow=18								
SPA0	**Spitsbergen Ar**	**5.94**	**134**	Pn		**Pn**	**06 28 33.9**		**-0.5**
	baz=0.4,slow=12								
SPA0				Sn		**Sn**	**06 29 36.7**		**-5.6**
	baz=360,slow=18								
SPA0	**Spitsbergen Ar**	**5.94**	**134**	*e*P		**Pn**	**06 28 34.0**		**-0.5**
SPA0				*e*S		**Sn**	**06 29 36.9**		**-5.4**
SPITS	**Spitsbergen Ar**	**5.94**	**134**	P		**Pn**	**06 28 34.0**		**-0.4**
SPITS				S		**Sn**	**06 29 39.7**		**-2.7**
SPITS	**Spitsbergen Ar**	**5.94**	**134**	Pn		**Pn**	**06 28 33.9**		**-0.5**
	baz=5.2,slow=10.0								
SPITS				Sn		**Sn**	**06 29 37.0**		**-5.4**
	baz=321,slow=32 comp=Z,7.3nm,0.4s								
SPB2	**Spitsbergen Ar**	**5.94**	**134**			**Pn**	**06 28 33.8**		**-0.6**
HSPB	**Hornsund (broa**	**6.96**	**140**	Pn		**Pn**	**06 28 49.0**		**+0.6**
HSPB	**Hornsund (broa**	**6.96**	**140**	P		**Pn**	**06 28 48.9**		**+0.4**
HSPB				S		**Sn**	**06 30 10.0**		**+2.5**
HSPB	**Hornsund (broa**	**6.96**	**140**	*e*P		**Pn**	**06 28 49.3**		**+0.8**
ZFI2	**Zemlya Franca-**	**7.42**	**80**	*e*P		**Pn**	**06 28 54.2**		**-0.6**
ZFI2				*e*S		**Sn**	**06 30 11.4**		**-7.4**
	comp=Z,24nm,0.6s								
OMEGA	**Omega**	**7.45**	**80**	*e*P		**Pn**	**06 28 54.4**		**-0.7**
OMEGA				*e*S		**Sn**	**06 30 11.7**		**-7.7**
	comp=Z,28nm,0.3s								
HOPEN	**Hopen**	**8.26**	**126**	Pn		**Pn**	**06 29 07.2**		**+1.0**
HOPEN				Sn		**Sn**	**06 30 35.2**		**-4.2**
HOPEN	**Hopen**	**8.26**	**126**	*e*P		**Pn**	**06 29 07.3**		**+1.0**
HOPEN				*e*S		**Sn**	**06 30 33.6**		**-5.8**
HOPEN	**Hopen**	**8.26**	**126**	*e*P		**Pn**	**06 29 06.4**		**+0.2**
HOPEN				*e*S		Sn	06 30 31.9		-7.5
NEEM	**North Greenlan**	**9.30**	**259**	*i* P		Pn	06 29 14.4		-6.3
NEEM				*e*S		Sn	06 30 48.1		-17
NEEM				IAML			06 31 03.3		
	comp=Z,10nm,0.3s								
NEEM	**North Greenlan**	**9.30**	**259**	*i* P		Pn	06 29 14.7		-6.0
NEEM				*e*S		Sn	06 30 51.2		-14
NEEM				IAML			06 31 03.3		
	comp=Z,10nm,0.3s								
TULEG	**Thule**	**12.21**	**275**	Pn		Pn	06 29 53.5		-6.8
SUMG	**Summit**	**12.35**	**232**	Pn		Pn	06 29 55.8		-6.7
SUMG	**Summit**	**12.35**	**232**	*e*P		Pn	06 29 54.7		-7.8
SUMG				*i*			06 32 05.2		
SUMG				IAML			06 32 17.6		
	comp=Z,4.7nm,0.4s								
SUMG	**Summit**	**12.35**	**232**	*e*P		Pn	06 29 54.7		-7.8
SUMG				*i* S		Sn	06 32 06.6		-13
SUMG				IAML			06 32 17.6		
	comp=Z,4.7nm,0.4s								
UPNV	**Upernavik**	**14.05**	**254**	*i* P		Pn	06 30 16.6		-8.8
ARA0	**ARCESS Array S**	**14.96**	**137**	Pn		**Pn**	**06 30 39.8**		**+2.0**
	baz=352,slow=10								
ARA0				Sn		Sn	06 33 15.8		-7.4
	baz=359,slow=22								
ARA0	**ARCESS Array S**	**14.96**	**137**	Pn		**Pn**	**06 30 39.8**		**+2.0**
	baz=352,slow=10								
ARA0				Sn		Sn	06 33 15.8		-7.4
	baz=359,slow=22								
ARCES	**ARCESS Array B**	**14.96**	**137**	Pn		**Pn**	**06 30 36.2**		**-1.6**
ARCES	**ARCESS Array B**	**14.96**	**137**	Pn		**Pn**	**06 30 38.5**		**+0.7**
	comp=Z,0.1nm,0.3s,baz=348,slow=11,SNR=6.4								
ARCES				LR		LR	06 36 23.7		
	comp=Z,196nm,18.3s,baz=4.5,slow=37 comp=Z,3.7nm,0.7s								
ICESG	**Greenland Ices**	**15.82**	**229**	*i* P		Pn	06 30 40.8		-8.6
RES	**Resolute Bay**	**16.91**	**294**	LR		LR	06 37 31.8		
	comp=Z,238nm,20.7s,baz=13,slow=38								
SFJD	**Kangerlussuaq**	**18.94**	**241**	P		P	06 31 19.7		-7.5
SFJD	**Kangerlussuaq**	**18.94**	**241**	P		P	06 31 19.9		-7.4
	comp=Z,5.2nm,0.6s,baz=4.9,slow=17,SNR=1.8								
SFJD				LR		LR	06 38 41.2		
	comp=Z,258nm,19.1s,baz=8.5,slow=37								
NRIK	**Noril'sk**	**22.13**	**70**	P		**P**	**06 32 04.8**		**+3.0**
NRIK				IAmb		IAmb	06 32 12.3		
	comp=Z,11nm,1.0s								
NRIK	**Noril'sk**	**22.13**	**70**	P		**P**	**06 32 03.8**		**+2.0**
	comp=Z,6.0nm,1.0s,baz=37,slow=2.1,SNR=6.4								
NRIK				LR		LR	06 40 57.9		
	comp=Z,128nm,21.9s,baz=23,slow=37 comp=Z,6.0nm,1.0s								
A36M	**Sachs Harbour**	**22.46**	**316**	P		**P**	**06 32 04.5**		**-0.8**
A36M				IAmb		IAmb	06 32 19.9		
	comp=Z,5.8nm,0.8s								
NOA	**NORSAR Array B**	**22.49**	**160**	P		**P**	**06 32 05.4**		**-0.4**
	comp=Z,1.0nm,0.9s,baz=353,slow=9.4,SNR=7.9 comp=Z,1.0nm,0.9s								
FINES	**FINESS Array B**	**22.98**	**141**	P		**P**	**06 32 12.2**		**+1.4**
	comp=Z,2.2nm,0.8s,baz=354,slow=13,SNR=2.6								
FINES				LR		LR	06 41 03.5		
	comp=Z,100nm,19.7s,baz=18,slow=36 comp=Z,2.2nm,0.8s								
HFS	**Hagfors**	**23.51**	**157**	P		**P**	**06 32 16.7**		**+0.5**
	comp=Z,3.4nm,0.9s,baz=23,slow=7.8,SNR=2.6 comp=Z,3.4nm,0.9s								
TIXI	**Tiksi**	**23.79**	**35**	P		**P**	**06 32 20.9**		**+2.1**
TIXI				IAmb		IAmb	06 32 23.3		
	comp=Z,3.8nm,0.8s								
TIXI	**Tiksi**	**23.79**	**35**	LR		LR	06 40 28.5		
	comp=Z,46nm,20.5s,baz=325,slow=34								
PRGR	**Permogore**	**24.61**	**118**	P		**P**	**06 32 26.2**		**-0.3**
	comp=Z,4.2nm,0.3s								
KLMR	**Klimovskoe**	**24.75**	**125**	*e*P		**P**	**06 32 26.2**		**-1.5**
	comp=Z,12nm,1.1s								
INK	**Inuvik**	**26.73**	**320**	P		**P**	**06 32 45.5**		**-0.1**
INK	**Inuvik**	**26.73**	**320**	LR		LR	06 45 08.5		
	comp=Z,40nm,19.8s,baz=170,slow=41								
B21K	**Ikpikpuk River**	**26.76**	**337**	P		**P**	**06 32 46.3**		**+0.5**
B21K				IAmb		IAmb	06 33 05.3		
	comp=Z,4.0nm,1.1s								
E29M	**Blow River**	**26.98**	**324**	P		**P**	**06 32 48.5**		**+0.6**
E29M				IAmb		IAmb	06 32 59.7		
	comp=Z,11nm,1.4s								
F28M	**Old Crow**	**27.89**	**325**	P		**P**	**06 32 56.6**		**+0.6**
C18K	**Utukok River**	**28.01**	**342**	P		**P**	**06 32 57.2**		**0.0**
C18K				IAmb		IAmb	06 33 13.7		
	comp=Z,6.3nm,1.2s								
D19K	**Kuna River**	**28.04**	**339**	P		**P**	**06 32 57.6**		**+0.2**
D19K				IAmb		IAmb	06 33 29.6		
	comp=Z,4.7nm,1.2s								
BMAR	**Burnt Mountain**	**28.38**	**328**	P		**P**	**06 32 60.0**		**-0.5**
C16K	**Lisburne Hills**	**28.53**	**345**	P		**P**	**06 33 02.4**		**+0.7**
C16K				IAmb		IAmb	06 33 23.6		
	comp=Z,4.7nm,1.1s								
E19K	**Redstone River**	**29.04**	**339**	P		**P**	**06 33 06.5**		**+0.2**
E19K				IAmb		IAmb	06 33 17.0		
	comp=Z,4.8nm,1.2s								
E18K	**Tukpahlearik C**	**29.21**	**341**	P		**P**	**06 33 07.7**		**-0.1**
I30M	**Mount Dempster**	**29.99**	**321**	P		**P**	**06 33 13.4**		**-1.4**
F17K	**Baldwin Pennin**	**30.22**	**342**	P		**P**	**06 33 17.3**		**+0.6**
F17K				IAmb		IAmb	06 33 18.5		
	comp=Z,3.6nm,0.9s								
J30M	**Hart River**	**30.63**	**321**	P		**P**	**06 33 19.7**		**-0.8**
YKA	**Yellowknife Ar**	**30.70**	**301**	P		**P**	**06 33 19.0**		**-1.9**
	comp=Z,0.5nm,0.9s,baz=31,slow=11,SNR=8.5								
YKA				PcP		**PcP**	**06 36 18.4**		**+0.2**
	comp=Z,0.3nm,0.7s,baz=6.8,slow=2.3,SNR=5.2								
YKA				LR		LR	06 46 20.6		
	comp=Z,82nm,18.2s,baz=268,slow=38 comp=Z,0.5nm,0.9s								
F15K	**North Star Dit**	**31.07**	**344**	P		**P**	**06 33 24.7**		**+0.4**
F15K				IAmb		IAmb	06 33 26.1		
	comp=Z,3.9nm,1.0s								
ARU	**Arti**	**31.16**	**107**	LR		LR	06 48 54.9		
	comp=Z,159nm,18.0s,baz=344,slow=42								
ILAR	**Eielson Array**	**31.16**	**330**	P		**P**	**06 33 24.7**		**-0.4**
	comp=Z,0.6nm,0.9s,baz=6.5,slow=8.3,SNR=6.7								
ILAR				PcP		**PcP**	**06 36 19.1**		**-0.4**
	comp=Z,0.5nm,0.9s,baz=350,slow=4.3,SNR=4.5 comp=Z,0.6nm,0.9s								
SCHQ	**Schefferville**	**32.61**	**252**	LR		LR	06 46 41.8		
	comp=Z,126nm,18.6s,baz=44,slow=36								
YAK	**Yakutsk**	**33.34**	**38**	LR		LR	06 47 15.8		
	comp=Z,48nm,18.8s,baz=310,slow=36								
AKASG	**Malin Array Be**	**33.88**	**141**	P		**P**	**06 33 49.5**		**+0.6**
	comp=Z,0.6nm,0.5s,baz=347,slow=8.7,SNR=1.9								
AKASG				LR		LR	06 47 02.7		
	comp=Z,98nm,21.1s,baz=12,slow=35 comp=Z,0.6nm,0.5s								
BELG	**Belogorsk**	**33.91**	**120**	LR		LR	06 48 09.5		
	comp=Z,98nm,20.8s,baz=329,slow=37								
SML	**Sawmill**	**34.20**	**330**	P		**P**	**06 33 50.8**		**-0.9**
VRAC	**Vranov**	**34.46**	**155**	LR		LR	06

PDAR	**Pinedale Array**	**49.57**	**291**	P	**P**	**06 35 55.2**	**-2.3**
	comp=Z,0.9nm,0.9s,baz=20,slow=4.7,SNR=4.7						
PDAR				LR	LR	06 57 54.1	
	comp=Z,83nm,19.5s,baz=1.5,slow=38						
	comp=Z,0.9nm,0.9s						
KSH	**Kashi**	**49.88**	**94**	P	P	06 36 07.7	+7.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YBH	**Yreka Blue Hor**	**52.01**	**303**	LR	LR	07 00 59.9	
	comp=Z,28nm,18.3s,baz=7.0,slow=39						
ASAJ	**Asahikawa**	**52.04**	**30**	LR	LR	06 58 07.7	
	comp=Z,46nm,18.9s,baz=281,slow=36						
ELK	**Elko**	**52.20**	**296**	LR	LR	06 58 50.4	
	comp=Z,169nm,20.2s,baz=46,slow=37						
HHC	**Hu-ho-hao-te**	**52.69**	**59**	*eP*	**P**	**06 36 23.4**	**+2.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,5.0s						
SMCO	**Snowmass**	**52.82**	**288**	P	**P**	**06 36 19.4**	**-2.8**
SMCO				IAmb	IAmb	06 36 28.1	
	comp=Z,3.7nm,0.9s						
NVAR	**Mina Array Bea**	**54.82**	**298**	P	**P**	**06 36 36.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=337,slow=2.1,SNR=3.3						
NVAR				LR	LR	06 59 39.6	
	comp=Z,65nm,21.2s,baz=9.0,slow=36						
	comp=Z,0.1nm,0.3s						
EIL	**Elat**	**55.23**	**138**	LR	LR	07 02 29.8	
	comp=Z,32nm,18.3s,baz=245,slow=38						
ANMO	**Albuquerque**	**56.94**	**286**	LR	LR	07 01 41.3	
	comp=Z,209nm,20.0s,baz=112,slow=37						
V12A	**Nelson**	**57.12**	**295**	P	**P**	**06 36 52.2**	**-0.8**
V12A				IAmb	IAmb	06 36 54.6	
	comp=Z,2.4nm,0.8s						
KSRS	**Korea Array**	**57.61**	**44**	LR	LR	07 01 21.8	
	comp=Z,12nm,18.0s,baz=115,slow=36						
VHRN	**Van Horn**	**60.87**	**284**	P	**P**	**06 37 16.3**	**-2.7**
TXAR	**Lajitas Array**	**62.15**	**283**	P	**P**	**06 37 26.1**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=36,slow=3.2,SNR=4.7						
TXAR				LR	LR	07 05 30.1	
	comp=Z,47nm,19.0s,baz=2.0,slow=37						
	comp=Z,0.5nm,0.9s						
PZH	**PanZhiHua**	**65.80**	**70**	P	**P**	**06 37 54.1**	**+2.4**
PZH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
LPIG	**La Paz**	**68.09**	**288**	LR	LR	07 08 39.8	
	comp=Z,62nm,19.9s,baz=350,slow=37						
SJG	**San Juan**	**68.79**	**244**	LR	LR	07 07 20.4	
	comp=Z,19nm,19.9s,baz=172,slow=35						
TEIG	**Tepich**	**69.28**	**266**	LR	LR	07 09 53.6	
	comp=Z,441nm,18.7s,baz=202,slow=37						
TORD	**Torodi Ar. Bea**	**70.01**	**173**	P	**P**	**06 38 17.5**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=3.2,slow=7.8,SNR=4.7						
	comp=Z,0.9nm,0.9s						
CMIG	**Matias Romero**	**73.18**	**272**	LR	LR	07 13 13.2	
	comp=Z,13nm,21.0s,baz=7.0,slow=38						
CMAR	**Chiang Mai Arr**	**73.42**	**74**	P	**P**	**06 38 38.9**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=346,slow=7.5,SNR=8.7						
CMAR				LR	LR	07 14 04.7	
	comp=Z,34nm,20.3s,baz=335,slow=38						
	comp=Z,1.8nm,0.3s						
SDV	**Santo Domingo**	**78.40**	**247**	LR	LR	07 14 14.3	
	comp=Z,21nm,18.6s,baz=116,slow=36						
JTS	**Las Juntas de**	**78.68**	**262**	LR	LR	07 14 40.8	
	comp=Z,51nm,18.9s,baz=304,slow=36						
MDP	**Montagnes des**	**80.30**	**229**	LR	LR	07 11 54.9	
	comp=Z,34nm,18.9s,baz=277,slow=34						
PALK	**Pallekele**	**82.26**	**94**	LR	LR	07 20 13.9	
	comp=Z,67nm,18.5s,baz=63,slow=39						
NNA	**Nana**	**99.70**	**251**	LR	LR	07 30 14.1	
	comp=Z,16nm,18.1s,baz=8.0,slow=38						
ASAR	**Alice Springs**	**118.66**	**44**	PKP	**PKPdf**	**06 45 53.1**	**-1.0**
	comp=Z,0.6nm,1.0s,baz=349,slow=1.9,SNR=2.9						

*SOME **03** 06:37:06.3,43.32N×82.62E,h25km*
*NNC **03** 06:37:07.8±0.8,43.46N×82.46E,h0km,mb3.7,mpv3.5,*
Error ellipse: s-maj=6.4km s-min=3.2km az=144.0

ISC 03 06:37:05.4±2.2,43.36N±0.07×82.48E±0.07,h5km±14km, n48,σ1°62/69,6C,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.55**	**274**	P	**Pg**	**06 37 36.9**	**+1.8**
	16nm,0.1s						
KTMS				S	**Sg**	**06 37 58.9**	**+3.6**
	143nm,0.2s						
KTMS	**Ketmen**	**1.55**	**274**	*eP*	**Pg**	**06 37 36.9**	**+1.8**
	16nm,0.1s						
KTMS				*eS*	**Sg**	**06 37 58.9**	**+3.6**
	143nm,0.2s						
DJR	**Jarkent**	**2.17**	**297**	Pg	**Pg**	**06 37 46.9**	**-0.2**
	5.7nm,0.1s						
DJR				Lg	Lg	06 38 16.1	
	53nm,0.3s						
DJR	**Jarkent**	**2.17**	**297**	*eP*	**Pg**	**06 37 46.9**	**-0.2**
	5.7nm,0.1s						
DJR				*eS*	**Sg**	**06 38 16.1**	**+0.9**
	53nm,0.3s						
PDGK	**Podgornoye**	**2.18**	**270**	Pg	**Pg**	**06 37 47.4**	**+0.2**
	7.3nm,0.1s						
PDGK				Lg	Lg	06 38 17.2	
	57nm,0.4s						
PDGK	**Podgornoye**	**2.18**	**270**	⇑Pn	**Pb**	**06 37 46.0**	**+0.7**
	6.5nm,0.5s						
PDGK				⇑Lg	Lg	06 38 17.3	
	121nm,0.7s						
SHLS	**Shalkode**	**2.21**	**266**	Pg	**Pn**	**06 37 42.9**	**0.0**
	42nm,0.2s						
SHLS				Lg	Lg	06 38 09.2	
	162nm,0.2s						
SHLS	**Shalkode**	**2.21**	**266**	*eP*	**Pn**	**06 37 42.9**	**0.0**
	42nm,0.2s						
SHLS				*eS*	**Sn**	**06 38 09.2**	**-1.4**
	162nm,0.2s						
UZB	**Uzynbulak**	**2.54**	**266**	*eP*	**Pg**	**06 37 53.6**	**-0.3**
	6.9nm,0.1s						
UZB				*eS*	**Sg**	**06 38 27.7**	**+0.9**
	58nm,0.2s						
KNOS	**Konyrlen**	**2.59**	**294**	Pg	**Pb**	**06 37 53.6**	**+1.3**
	8.3nm,0.2s						
KNOS				Lg	Lg	06 38 27.7	
	19nm,0.1s						
KPKS	**Kokpek**	**2.77**	**273**	Pg	**Pg**	**06 37 57.9**	**-0.5**
	5.8nm,0.1s						
KPKS				Lg	Lg	06 38 35.0	
	98nm,0.2s						
KPKS	**Kokpek**	**2.77**	**273**	*eP*	**Pg**	**06 37 57.9**	**-0.5**
	5.8nm,0.1s						
KPKS				*eS*	**Sg**	**06 38 35.0**	**+0.8**
	98nm,0.2s						
KAPS	**Kapalarasan**	**2.95**	**312**	Pg	**Pg**	**06 38 00.7**	**-1.2**
	2.4nm,0.1s						
KAPS				Lg	Lg	06 38 40.0	
	18nm,0.2s						
KAPS	**Kapalarasan**	**2.95**	**312**	*eP*	**Pg**	**06 38 00.7**	**-1.2**
	2.4nm,0.1s						
KAPS				*eS*	**Sg**	**06 38 40.0**	**-0.1**
	18nm,0.2s						
ZHN	**Zhinishke**	**2.96**	**268**	Pg	**Pg**	**06 38 01.5**	**-0.5**
	4.7nm,0.2s						
ZHN				Lg	Lg	06 38 41.2	
	76nm,0.2s						
ZHN	**Zhinishke**	**2.96**	**268**	*eP*	**Pg**	**06 38 01.6**	**-0.5**
	4.7nm,0.2s						
ZHN				*eS*	**Sg**	**06 38 41.2**	**+0.8**
	76nm,0.2s						
BLB	**Baldybastay**	**2.99**	**286**	Pg	**Pg**	**06 38 01.3**	**-1.4**
	6.4nm,0.1s						
BLB				Lg	Lg	06 38 41.1	
	15nm,0.3s						
SATY	**Saty**	**2.99**	**266**	Pg	**Pg**	**06 38 01.3**	**-1.4**
	4.4nm,0.1s						
SATY				Lg	Lg	06 38 41.0	
	31nm,0.2s						
SATY	**Saty**	**2.99**	**266**	*eP*	**Pg**	**06 38 01.3**	**-1.4**
	4.4nm,0.1s						
SATY				*eS*	**Sg**	**06 38 41.0**	**-0.6**
	31nm,0.2s						
KURS	**Kuram**	**3.14**	**274**	Pg	**Pg**	**06 38 04.3**	**-1.3**
	2.6nm,0.2s						
KURS				Lg	Lg	06 38 46.0	
	9.7nm,0.5s						
KURS	**Kuram**	**3.14**	**274**	*eP*	**Pg**	**06 38 04.3**	**-1.3**
	2.6nm,0.2s						
KURS				*eS*	**Sg**	**06 38 46.0**	**-0.3**
	9.7nm,0.5s						
MK31	**Makanchi Array**	**3.43**	**358**	⇑Pg	**Pg**	**06 38 09.3**	**-1.8**
	1.2nm,0.3s,baz=172,slow=17,SNR=56						
MK31				Lg	Lg	06 38 53.6	
	1.7nm,0.3s,baz=215,slow=34,SNR=4.3						
MAKZ	**Makanchi**	**3.46**	**354**	⇑Pg	**Pg**	**06 38 10.0**	**-1.7**
	3.4nm,0.8s						
MAKZ				⇑Lg	Lg	06 38 55.6	
	2.9nm,0.5s						
ARXS	**Arharly**	**3.48**	**286**	Pg	**Pg**	**06 38 10.6**	**-1.3**
	2.3nm,0.2s						
ARXS				Lg	Lg	06 38 57.0	
	18nm,0.2s						
ARXS	**Arharly**	**3.48**	**286**	*eP*	**Pg**	**06 38 10.6**	**-1.3**
	2.3nm,0.2s						
ARXS				*eS*	**Sg**	**06 38 57.0**	**+0.1**
	18nm,0.2s						
KOTS	**Kotyrbulak**	**3.92**	**270**	Pg	**Pg**	**06 38 18.8**	**-1.7**
	4.4nm,0.4s						
KOTS				Lg	Lg	06 39 11.1	
	35nm,0.5s						
KOTS	**Kotyrbulak**	**3.92**	**270**	*eP*	**Pg**	**06 38 18.8**	**-1.7**
	4.4nm,0.4s						
KOTS				*eS*	**Sg**	**06 39 11.1**	**-0.2**
	35nm,0.5s						
MDOK	**Medeo**	**3.97**	**269**	Pg	**Pg**	**06 38 19.7**	**-1.8**
	7.8nm,0.6s						
MDOK				Lg	Lg	06 39 12.4	
	11nm,0.3s						
MDOK				Lg	Lg	06 39 16.1	
	11nm,0.5s						
MDOK	**Medeo**	**3.97**	**269**	*eP*	**Pg**	**06 38 19.7**	**-1.8**
	7.8nm,0.6s						
MDOK				*eS*	**Sg**	**06 39 12.4**	**-0.5**
	11nm,0.3s						
CHKK	**Chushkaly**	**4.02**	**279**	Pg	**Pg**	**06 38 20.4**	**-1.9**
	1.7nm,0.1s						
CHKK				Lg	Lg	06 39 13.9	
	21nm,0.1s						
CHKK	**Chushkaly**	**4.02**	**279**	*eP*	**Pg**	**06 38 20.4**	**-1.9**
	1.7nm,0.1s						
CHKK				*eS*	**Sg**	**06 39 13.9**	**-0.4**
	21nm,0.1s						
TNSS	**Tian-Shan**	**4.06**	**267**	Pg	**Pg**	**06 38 21.9**	**-1.3**
	4.1nm,0.4s						
TNSS				Lg	Lg	06 39 16.2	
	8.0nm,0.3s						
TNSS	**Tian-Shan**	**4.06**	**267**	*eP*	**Pg**	**06 38 21.9**	**-1.3**
	4.1nm,0.4s						
TNSS				*eS*	**Sg**	**06 39 16.2**	**+0.5**
	8.0nm,0.3s						
KTBS	**Karatobe**	**4.23**	**277**	Pg	**Pg**	**06 38 24.5**	**-1.9**
	1.4nm,0.3s						
KTBS				Lg	Lg	06 39 20.8	
	19nm,0.3s						
KTBS	**Karatobe**	**4.23**	**277**	*eP*	**Pg**	**06 38 24.4**	**-1.9**
	1.4nm,0.3s						
KTBS				*eS*	**Sg**	**06 39 20.8**	**-0.4**
	19nm,0.3s						
ZSN	**Zaisan**	**4.42**	**22**	Pg	**Pb**	**06 38 24.0**	**+0.6**
	5.5nm,0.3s						
ZSN				Lg	Lg	06 39 19.9	
	4.3nm,0.4s						
ZSN	**Zaisan**	**4.42**	**22**	*eP*	**Pb**	**06 38 24.0**	**+0.6**
	5.5nm,0.3s						
ZSN				*eS*	**Sb**	**06 39 19.9**	**+2.9**
	4.3nm,0.4s						
MTBS	**Maitube**	**4.43**	**269**	Pg	**Pg**	**06 38 28.0**	**-2.2**
	2.9nm,0.2s						
MTBS				Lg	Lg	06 39 26.7	
	18nm,0.3s						
MTBS	**Maitube**	**4.43**	**269**	*eP*	**Pg**	**06 38 28.0**	**-2.2**
	2.9nm,0.2s						
MTBS				*eS*	**Sg**	**06 39 26.7**	**-0.8**
	18nm,0.3s						
KUU	**Kurty**	**4.49**	**279**	Pg	**Pg**	**06 38 28.9**	**-2.5**
	2.4nm,0.5s						
KUU				Lg	Lg	06 39 28.2	
	9.0nm,0.3s						
KUU	**Kurty**	**4.49**	**279**	*eP*	**Pg**	**06 38 28.9**	**-2.5**
	2.4nm,0.5s						
KUU				*eS*	**Sg**	**06 39 28.2**	**-1.3**
	9.0nm,0.3s						
KST	**Kastek**	**4.78**	**268**	Pg	**Pg**	**06 38 34.7**	**-2.1**
	3.1nm,0.7s						
KST				Lg	Lg	06 39 38.4	
	16nm,0.5s						
KST	**Kastek**	**4.78**	**268**	*eP*	**Pg**	**06 38 34.7**	**-2.1**
	3.1nm,0.7s						
KST				*eS*	**Sg**	**06 39 38.4**	**-0.3**
	16nm,0.5s						
DGS	**Degeres**	**4.90**	**271**	Pg	**Pg**	**06 38 36.1**	**-3.1**
	2.2nm,0.4s						
DGS				Lg	Lg	06 39 40.7	
	12nm,0.4s						
DGS	**Degeres**	**4.90**	**271**	*eP*	**Pg**	**06 38 36.1**	**-3.1**
	2.2nm,0.4s						
DGS				*eS*	**Sg**	**06 39 40.7**	**-1.9**
	12nm,0.4s						
KRBS	**Karabastau**	**4.96**	**276**	Pg	**Pg**	**06 38 37.9**	**-2.4**
	0.7nm,0.2s						
KRBS				Lg	Lg	06 39 43.9	
	4.8nm,0.2s						
KRBS	**Karabastau**	**4.96**	**276**	*eP*	**Pg**	**06 38 37.9**	**-2.4**
	0.7nm,0.2s						
KRBS				*eS*	**Sg**	**06 39 43.9**	**-0.7**
	4.8nm,0.2s						
TKM2	**Tokmak 2**	**5.06**	**267**	⇑Lg	Lg	06 39 47.9	
	5.3nm,0.5s						

*BER **03** 06:57:02.1±0.8,83.17N×3.46W,h10km,mb(Pn)3.5,*
Confirmed Earthquake
*FCIAR **03** 06:57:04.0,82.99N×3.89W,h10km,station OMEGA has*
station magnitude of 3.20 station ZFI2 has station
magnitude of 3.40

ISC 03 06:57:07.0±4.4,82.9N±0.1×0.3E±0.2,h10km,n8,σ0°82/13, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.37**	**149**	*eP*	**Pn**	**06 58 12.8**	**-0.4**
KBS				IAML		06 58 15.3	
	comp=Z,4.0nm,0.3s						
KBS	**Kingsbay**	**4.37**	**149**	*eP*	**Pn**	**06 58 12.1**	**-1.1**
KBS				*eS*	**Sn**	**06 59 03.8**	**-0.2**
BRBB	**Barentsburg B**	**5.30**	**147**	*eP*	**Pn**	**06 58 26.3**	**+0.3**
BRBA	**Barentsburg A**	**5.34**	**147**	*eP*	**Pn**	**06 58 26.8**	**+0.3**
SPA0	**Spitsbergen Ar**	**5.38**	**142**	*eP*	**Pn**	**06 58 27.1**	**-0.1**
SPA0				*eS*	**Sn**	**06 59 30.2**	**+1.2**
SPA0				IAML		06 59 35.7	
	comp=Z,4.1nm,0.8s						
SPA0	**Spitsbergen Ar**	**5.38**	**142**	*eP*	**Pn**	**06 58 26.8**	**-0.4**
SPA0				*eS*	**Sn**	**06 59 29.5**	**+0.5**
ZFI2	**Zemlya Franca-**	**6.85**	**83**	P	**Pn**	**06 58 48.3**	**+1.0**
ZFI2				*eS*	**Sn**	**07 00 03.9**	**-1.3**
	comp=Z,11nm,7.3s						
OMEGA	**Omega**	**6.88**	**83**	P	**Pn**	**06 58 48.1**	**+0.5**
OMEGA				*eS*	**Sn**	**07 00 05.1**	**-0.7**
	comp=Z,6.3nm,2.9s						

*NEIC **03** 07:12:24.1±1.0,56.3N±0.1×149.6W±0.1,h21km±10km,*
ML3.6/44,ML3.5(AEIC),Error ellipse: s-maj=15.1km
s-min=7.8km az=165.0
*AEIC **03** 07:12:25.5±1.1,56.2N±0.1×149.6W±0.1,h4km±8km,Error*
ellipse: s-maj=16.9km s-min=9.3km az=169.0

ISC 03 07:12:21.6±1.8,56.25N±0.09×149.59W±0.05,h10km, n131,σ1°10/133,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.25**	**314**		**Pn**	**07 13 00.0**	**+1.2**
KDAK					**Sn**	**07 13 26.4**	**-0.2**
OHAK	**Old Harbor**	**2.26**	**297**		**Pn**	**07 12 59.5**	**+0.5**
OHAK					**Sn**	**07 13 25.9**	**-1.1**
OHAK	**Old Harbor**	**2.26**	**297**	P	**Pn**	**07 12 59.5**	**+0.5**
	baz=115						
OHAK				S	**Sn**	**07 13 25.9**	**-1.1**
	baz=115						
SII	**Sitkinak Islan**	**2.57**	**279**	IAML		07 13 34.0	
	comp=E,246nm,0.6s						
SII				IAML		07 13 34.4	
	comp=N,212nm,0.6s						
SII	**Sitkinak Islan**	**2.57**	**279**		**Pn**	**07 13 03.5**	**+0.2**
SII					**Sn**	**07 13 33.0**	**-1.8**
	baz=96						
Q20K	**Shuyak Island**	**2.81**	**329**	P	**Pn**	**07 13 08.0**	**+1.3**
	baz=146						
Q20K				S	**Sn**	**07 13 40.8**	**+0.3**
	baz=146						
SYI	**Shuyak Island**	**2.81**	**329**		**Pn**	**07 13 08.0**	**+1.4**
SYI					**Sn**	**07 13 40.8**	**+0.3**
CNPM	**China Poot**	**3.41**	**346**		**Pn**	**07 13 15.7**	**+0.9**
CNPM					**Sn**	**07 13 54.2**	**-1.0**
CNPM	**China Poot**	**3.41**	**346**	IAML		07 13 57.5	
	comp=N,91nm,0.4s						
CNPM				IAML		07 13 59.2	
	comp=E,64nm,0.9s						
Q19K	**Cape Douglas,**	**3.46**	**323**		**Pn**	**07 13 15.3**	**-0.3**
Q19K	**Cape Douglas,**	**3.46**	**323**	IAML		07 14 03.1	
	comp=N,136nm,0.9s						
Q19K				IAML		07 14 41.5	
	comp=E,216nm,1.4s						
Q19K	**Cape Douglas,**	**3.46**	**323**	P	**Pn**	**07 13 15.3**	**-0.3**
	baz=140						
BRSE	**Bradley Lake S**	**3.56**	**351**		**Pn**	**07 13 17.5**	**+0.6**
BRSE					**Sn**	**07 13 57.5**	**-1.5**
BRSE	**Bradley Lake S**	**3.56**	**351**	P	**Pn**	**07 13 17.5**	**+0.6**
	baz=170						
BRSE				S	**Sn**	**07 13 57.5**	**-1.5**
	baz=170						
BRLK	**Bradley Lake**	**3.59**	**349**		**Pn**	**07 13 17.7**	**+0.3**
BRLK	**Bradley Lake**	**3.59**	**349**	IAML		07 14 01.5	
	comp=E,57nm,0.6s						
Q23K	**Middleton Isla**	**3.63**	**27**		**Pn**	**07 13 18.1**	**+0.3**
Q23K	**Middleton Isla**	**3.63**	**27**	IAML		07 14 37.5	
	comp=N,178nm,1.2s						
Q23K				IAML		07 15 19.3	
	comp=E,193nm,1.2s						
Q23K	**Middleton Isla**	**3.63**	**27**	P	**Pn**	**07 13 18.3**	**+0.5**
	baz=210						
MID	**Middleton Isla**	**3.63**	**27**		**Pn**	**07 13 18.1**	**+0.3**
MID	**Middleton Isla**	**3.63**	**27**	IAML		07 14 02.1	
	comp=E,200nm,1.3s						
MID				IAML		07 14 37.5	
	comp=N,149nm,1.1s						
MID	**Middleton Isla**	**3.63**	**27**	P	**Pn**	**07 13 18.2**	**+0.4**
ANCK	**Angle Creek**	**3.76**	**304**		**Pn**	**07 13 20.8**	**+1.1**
SEW	**Seward**	**3.87**	**1**		**Pn**	**07 13 21.3**	**+0.2**
SEW					**Sn**	**07 14 04.7**	**-1.9**
SEW	**Seward**	**3.87**	**1**	P	**Pn**	**07 13 21.3**	**+0.2**
	baz=181						
SEW				S	**Sn**	**07 14 04.7**	**-1.9**
	baz=181						
P19K	**Oil Pt**	**3.93**	**332**		**Pn**	**07 13 22.9**	**+0.9**
P19K	**Oil Pt**	**3.93**	**332**	IAML		07 14 13.8	
	comp=N,93nm,0.6s						
P19K				IAML		07 14 14.3	
	comp=E,87nm,0.4s						
P19K	**Oil Pt**	**3.93**	**332**	P	**Pn**	**07 13 22.9**	**+0.9**
	baz=149						
P23K	**Montague Islan**	**3.94**	**16**		**Pn**	**07 13 22.6**	**+0.6**
P23K					**Sn**	**07 14 06.6**	**-1.6**
P23K	**Montague Islan**	**3.94**	**16**	P	**Pn**	**07 13 22.6**	**+0.6**
	baz=198						
P23K				S	**Sn**	**07 14 06.6**	**-1.6**
	baz=198						
SLKM	**Skilak Lake**	**4.29**	**356**		**Pn**	**07 13 27.2**	**+0.3**
HIN	**Hinchinbrook I**	**4.47**	**20**		**Pn**	**07 13 30.1**	**+0.7**
RSO	**Redoubt South**	**4.54**	**340**	Pn	**Pn**	**07 13 30.8**	**+0.2**
KAIM	**Kayak Island**	**4.60**	**34**		**Pn**	**07 13 31.9**	**+0.8**
KAIM	**Kayak Island**	**4.60**	**34**	P	**Pn**	**07 13 31.9**	**+0.8**
	baz=218						
O18K	**Koktuh Hills**	**4.69**	**323**		**Pn**	**07 13 33.4**	**+0.9**
O18K	**Koktuh Hills**	**4.69**	**323**	P	**Pn**	**07 13 33.3**	**+0.9**
	baz=138						
EYAK	**Cordova Ski Ar**	**4.76**	**23**		**Pn**	**07 13 34.1**	**+0.8**
EYAK	**Cordova Ski Ar**	**4.76**	**23**	P	**Pn**	**07 13 34.3**	**+0.9**
EYAK	**Cordova Ski Ar**	**4.76**	**23**	P	**Pn**	**07 13 34.2**	**+0.8**
	baz=206						
FID	**Port Fidalgo**	**4.80**	**19**		**Pn**	**07 13 34.1**	**+0.2**
RC01	**Rabbit Creek A**	**4.86**	**359**		**Pn**	**07 13 35.3**	**+0.6**
RC01	**Rabbit Creek A**	**4.86**	**359**	IAML		07 14 31.4	
	comp=N,46nm,0.3s						
RC01				IAML		07 14 34.7	
	comp=E,50nm,0.5s						
RC01	**Rabbit Creek A**	**4.86**	**359**	P	**Pn**	**07 13 35.3**	**+0.6**
	baz=179						
RAGM	**Ragged Mountai**	**4.89**	**30**	Pn	**Pn**	**07 13 35.5**	**+0.3**
SUCK	**Suckling Hills**	**4.92**	**36**		**Pn**	**07 13 36.4**	**+0.9**
SUCK	**Suckling Hills**	**4.92**	**36**	IAML		07 14 33.7	
	comp=E,64nm,0.5s						
HMT	**Hamilton**	**4.97**	**32**		**Pn**	**07 13 37.3**	**+1.0**
GOAT	**Goat Mountain**	**5.04**	**28**		**Pn**	**07 13 38.4**	**+1.1**
BERG	**Berg Lake**	**5.19**	**34**		**Pn**	**07 13 39.9**	**+0.7**
KNK	**Knik Glacier**	**5.22**	**6**	Pn	**Pn**	**07 13 40.2**	**+0.6**
KNK				IAML		07 14 48.8	
KNK	comp=E,28nm,0.9s			IAML		07 14 49.1	
	comp=N,27nm,0.5s						
GRIN	**Grindle Hills**	**5.22**	**37**		**Pn**	**07 13 40.8**	**+1.0**
N19K	**Bonanza Creek**	**5.25**	**333**		**Pn**	**07 13 40.3**	**+0.2**
N19K	**Bonanza Creek**	**5.25**	**333**	P	**Pn**	**07 13 40.3**	**+0.2**
	baz=149						
SUA	**Susitna One**	**5.27**	**354**		**Pn**	**07 13 40.7**	**+0.3**
SUA	**Susitna One**	**5.27**	**354**	IAML		07 14 43.0	
	comp=N,19nm,0.5s						
SUA				IAML		07 14 43.1	
	comp=E,16nm,1.5s						
SUA	**Susitna One**	**5.27**	**354**	P	**Pn**	**07 13 40.7**	**+0.3**
	baz=173						
SNH	**Sunshine Point**	**5.32**	**39**		**Pn**	**07 13 41.6**	**+0.6**
SNH	**Sunshine Point**	**5.32**	**39**	IAML		07 14 41.7	
	comp=N,51nm,0.7s						
SNH				IAML		07 14 43.6	
	comp=E,47nm,0.9s						
PMR	**Palmer**	**5.37**	**2**	P	**Pn**	**07 13 43.7**	**+2.0**
KHIT	**Khitrov Hills**	**5.37**	**36**		**Pn**	**07 13 42.5**	**+0.7**
BMRM	**Bremner River**	**5.40**	**27**		**Pn**	**07 13 43.1**	**+0.9**
BMRM	**Bremner River**	**5.40**	**27**	P	**Pn**	**07 13 43.1**	**+0.9**
	baz=211						
WAX	**Waxell Ridge**	**5.51**	**37**		**Pn**	**07 13 44.4**	**+0.7**
N18K	**Kilae Creek**	**5.54**	**326**	Pn	**Pn**	**07 13 44.5**	**+0.4**
KLU	**Klutina**	**5.59**	**18**		**Pn**	**07 13 46.0**	**+1.2**
KLU	**Klutina**	**5.59**	**18**	P	**Pn**	**07 13 46.0**	**+1.2**
	baz=201						
BARK	**Barkley Ridge**	**5.60**	**39**		**Pn**	**07 13 45.7**	**+0.7**
SML	**Sawmill**	**5.62**	**6**		**Pn**	**07 13 46.6**	**+1.5**
SML	**Sawmill**	**5.62**	**6**	P	**Pn**	**07 13 46.6**	**+1.5**
	baz=187						
MESA	**MESA**	**5.64**	**43**		**Pn**	**07 13 46.2**	**+0.6**
MESA	**MESA**	**5.64**	**43**	P	**Pn**	**07 13 46.2**	**+0.6**
	baz=229						
CRQM	**Cirque**	**5.64**	**34**		**Pn**	**07 13 46.6**

CTGM	**Chitina Glacie**	**6.40**	**39**		**Pn**	07 13 56.7	+0.7
PNL	**Peninsula**	**6.42**	**53**		**Pn**	07 13 56.8	+0.7
PNL	**Peninsula**	**6.42**	**53**	P	**Pn**	07 13 57.2	+1.1
PNL	**Peninsula** baz=242	**6.42**	**53**	P	**Pn**	07 13 56.8	+0.7
LOGN	**Logan Glacier**	**6.42**	**41**		**Pn**	07 13 56.9	+0.6
WAT6	**Susitna Watana**	**6.42**	**8**		**Pn**	07 13 57.6	+1.3
WAT6	**Susitna Watana** baz=189	**6.42**	**8**	P	**Pn**	07 13 57.6	+1.3
BCPM	**Bancas Point**	**6.45**	**51**		**Pn**	07 13 57.7	+1.1
L19K	**White Mountain**	**6.54**	**338**	Pn	**Pn**	07 13 58.3	+0.5
M17K	**Holitna River**	**6.58**	**325**	Pn	**Pn**	07 13 59.3	+1.0
N15K	**Kwethluk River**	**6.80**	**310**	Pn	**Pn**	07 14 03.5	+2.2
O29M	**Mount Kennedy**	**7.09**	**50**		**Pn**	07 14 06.5	+1.2
O29M	**Mount Kennedy** baz=239	**7.09**	**50**	P	**Pn**	07 14 06.6	+1.2
P29M	**Windy Craggy**	**7.16**	**57**		**Pn**	07 14 06.2	-0.1
P29M	**Windy Craggy** baz=246	**7.16**	**57**	P	**Pn**	07 14 06.2	-0.1
RND	**Reindeer**	**7.19**	**3**		**Pn**	07 14 08.2	+1.4
M27K	**Edge Creek, AK**	**7.29**	**30**		**Pn**	07 14 09.8	+1.7
M27K	**Edge Creek, AK** baz=216	**7.29**	**30**	P	**Pn**	07 14 09.8	+1.7
CAST	**Castle Rocks**	**7.30**	**351**	Pn	**Pn**	07 14 09.9	+1.7
YUK6	**Outpost Mounta**	**7.52**	**47**		**Pn**	07 14 13.2	+1.9
YUK6	**Outpost Mounta** baz=236	**7.52**	**47**	P	**Pn**	07 14 13.2	+1.9
YUK4	**Talbot Arm** baz=232	**7.64**	**43**	P	**Pn**	07 14 16.0	+3.0
P30M	**Million Dollar**	**7.72**	**55**		**Pn**	07 14 15.0	+1.0
P30M	**Million Dollar** baz=245	**7.72**	**55**	P	**Pn**	07 14 15.0	+1.0
PLBC	**Pleasant Camp**	**7.75**	**60**		**Pn**	07 14 15.1	+0.7
PLBC	**Pleasant Camp** baz=251	**7.75**	**60**	P	**Pn**	07 14 15.1	+0.7
YUK5	**Granite Creek**	**7.82**	**46**		**Pn**	07 14 17.5	+2.0
J25K	**Salcha River,**	**8.65**	**12**	Pn	**Pn**	07 14 27.7	+1.0
ILAR	**Eielson Array**	**8.66**	**8**	Pn	**Pn**	07 14 27.7	+0.9
N31M	**Braeburn, Yuko**	**8.87**	**48**	Pn	**Pn**	07 14 30.9	+1.2

*VIE **03** 07:21:21.9±0.7,51.41N×15.58E,h0km,mb2.5/2,ml2.3/6, Error ellipse: s-maj=4.4km s-min=2.9km az=166.0, Suspected Mining induced.*
*PRU **03** 07:21:23.8,51.50N×16.05E,h0km*

ISC 03 07:21:22.1±1.2,51.48N±0.05×16.03E±0.03,h0km,n27, σ1s12/52,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**166**	*e*Pg	**Pb**	**07 21 36.0**	**-0.4**
KSP				*e*Sg	**Sb**	**07 21 45.6**	**-0.5**
CHVC	**Chvalec**	**0.89**	**179**	*e*PG	**Pb**	**07 21 40.8**	**+0.4**
CHVC				*e*SG	**Sb**	**07 21 53.8**	**+0.9**
OSTC	**Ostas**	**0.93**	**173**	*e*PG	**Pb**	**07 21 41.3**	**+0.2**
OSTC	comp=Z,24nm,0.3s			*e*SG	**Sb**	**07 21 54.7**	**+0.7**
UPC	**Upice**	**0.97**	**181**	*e*PG	**Pb**	**07 21 42.1**	**+0.3**
DPC	**Dobruska-Polom**	**1.15**	**171**	*e*PG	**Pb**	**07 21 44.6**	**-0.2**
DPC	comp=Z,13nm,0.6s			*e*SG	**Sb**	**07 22 00.4**	**+0.2**
PVCC	**Panska Ves**	**1.33**	**225**	*e*PG	**Pn**	**07 21 48.5**	**+0.6**
PVCC	comp=Z,70nm,0.5s			*e*SG	**Sn**	**07 22 07.7**	**+1.5**
BRG	**Berggiesshubel**	**1.45**	**246**	Pg	**Pb**	**07 21 50.5**	**+0.6**
BRG				Sg	**Sn**	**07 22 10.6**	**+1.4**
BRG	comp=Z,61nm,0.4s			Amp		07 22 12.2	
KRLC	**Kraliky**	**1.48**	**161**	*e*PG	**Pn**	**07 21 50.1**	**0.0**
KRLC	comp=Z,20nm,0.8s			*e*SG	**Sn**	**07 22 10.6**	**+0.4**
GOPC	**GO Pecny, Ondr**	**1.76**	**207**	*e*PG	**Pb**	**07 21 55.4**	**+0.2**
PRU	**Pruhonice**	**1.77**	**213**	*e*PG	**Pg**	**07 21 56.0**	**+0.1**
PRU	comp=Z,12nm,0.6s			*e*SG	**Sg**	**07 22 20.4**	**+1.6**
HSKC	**Hora Svate Kat**	**1.86**	**243**	*e*PG	**Pb**	**07 21 57.3**	**+0.4**
HSKC	comp=Z,28nm,0.5s			*e*SG	**Sg**	**07 22 22.5**	**+0.7**
CLL	**Collm**	**1.91**	**266**	*e*Pn	**Pn**	**07 21 55.0**	**-0.8**
CLL				*i* Pg	**Pb**	**07 21 57.7**	**0.0**
CLL				*i* x	x	07 22 01.4	
CLL	comp=Z,12nm,0.3s			*e*Sg	**Sg**	**07 22 23.0**	**-0.3**
MORC	**Moravsky Berou**	**1.96**	**150**	*e*PN	**Pn**	**07 21 56.2**	**-0.4**
MORC				*e*SG	**Sb**	**07 22 23.8**	**+0.3**
VRAC	**Vranov**	**2.20**	**170**	*e*PN	**Pn**	**07 22 00.4**	**+0.5**
VRAC				*e*SG	**Sg**	**07 22 32.7**	**-0.1**
KRUC	**Moravsky**	**2.43**	**174**	*e*PN	**Pn**	**07 22 03.7**	**+0.7**
KRUC				*e*SG	**Sg**	**07 22 40.0**	**-0.1**
NKC	**Novy Kostel**	**2.59**	**243**	*e*PN	**Pn**	**07 22 05.7**	**+0.4**
NKC				*e*PG	**Pg**	**07 22 11.6**	**-0.1**
NKC	comp=Z,19nm,0.4s			*e*SG	**Sg**	**07 22 46.0**	**+0.7**
OJC	**Ojcow**	**2.70**	**116**	*e*Pg	**Pg**	**07 22 14.0**	**+0.3**
OJC				*e*Sg	**Sg**	**07 22 48.9**	**+0.2**
KHC	**Kasperske Hory**	**2.83**	**215**	*e*PN	**Pn**	**07 22 08.8**	**+0.2**
KHC				*e*PG	**Pg**	**07 22 15.2**	**-1.1**
KHC				*e*SN	**Sn**	**07 22 43.6**	**+0.2**
KHC				*e*SG	**Sg**	**07 22 53.5**	**+0.6**
CKRC	**Cesky Krumlov**	**2.88**	**203**	*e*PN	**Pn**	**07 22 10.4**	**+1.1**
CKRC				*e*PG	**Pg**	**07 22 16.3**	**-1.0**
CKRC	comp=Z,7.9nm,0.8s			*e*SG	**Sg**	**07 22 56.5**	**+1.8**
LANS	**Liptovska Anna**	**3.21**	**135**	*e*SG	**Sg**	**07 23 04.9**	**-0.1**
MODS	**Modra-Piesok**	**3.21**	**165**	*e*SG	**Sg**	**07 23 07.8**	**+2.6**
CONA	**Conrad Observa** comp=Z,0.8nm,0.4s	**3.56**	**182**	*i* Pn	**Pn**	**07 22 17.6**	**-1.0**
CONA	comp=Z,7.9nm,0.5s			*e*Sg	**Sg**	**07 23 17.7**	**+1.4**
RONA	**Rosalia, Austr** comp=Z,1.1nm,0.3s	**3.79**	**177**	*e*Sn	**Sn**	**07 23 06.9**	**0.0**
MOA	**Molln** comp=Z,1.6nm,0.3s	**3.81**	**198**	*i* Pn	**Pn**	**07 22 20.9**	**-1.2**
MOA	comp=Z,1.9nm,0.5s			*i* Sn	**Sn**	**07 23 04.5**	**-3.0**
BIOA	**Bad Ischl, Aus** comp=Z,2.1nm,0.4s	**4.10**	**203**	*i* Pn	**Pn**	**07 22 24.5**	**-1.5**
BIOA	comp=Z,3.4nm,0.5s			*e*Sn	**Sn**	**07 23 11.4**	**-3.3**
ARSA	**Arzberg** comp=Z,3.2nm,0.5s	**4.25**	**185**	*e*Sg	**Sg**	**07 23 39.5**	**+1.1**
LESA	**Schwarzleotal** comp=Z,1.1nm,0.4s	**4.61**	**210**	*e*Sg	**Sg**	**07 23 47.5**	**-2.7**

BER 03 07:34:18.1±0.5,83.01N×4.76W,h10km,mb(Pn)3.6, Confirmed Earthquake,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.84**	**139**	*e*P	Pn	07 35 28.6	-2.2
BRBB	**Barentsburg B**	**5.79**	**138**	*e*P	Pn	07 35 42.0	-1.9
SPA0	**Spitsbergen Ar**	**5.90**	**134**	*e*P	Pn	07 35 43.0	-2.3
SPA0				*e*S	Sn	07 36 46.0	-6.8
SPA0	comp=Z,4.0nm,0.9s			IAML		07 37 00.7	

*NEIC **03** 08:02:13.1±1.3,56.66N±0.09×147.856W±0.010, h19km±7km,ML3.5/74,ML3.2(AEIC),Error ellipse: s-maj=12.8km s-min=0.5km az=183.0*
*AEIC **03** 08:02:17.4±1.5,56.74N±0.07×147.8W±0.1,h12km±7km, Error ellipse: s-maj=10.3km s-min=8.0km az=163.0*

ISC 03 08:02:11.3±1.8,56.71N±0.10×147.90W±0.05,h10km, n179,σ1s60/182,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.76**	**295**	Pn	**Pn**	**08 02 56.8**	**+1.3**
KDAK	**Kodiak Island**	**2.76**	**295**		**Sn**	**08 03 27.3**	**-1.5**
MID	**Middleton Isla**	**2.85**	**16**	Pn	**Pn**	**08 02 57.1**	**+0.4**
MID	comp=E,182nm,1.1s			IAML		08 03 45.1	
MID	comp=N,207nm,1.4s			IAML		08 03 59.4	
MID	**Middleton Isla**	**2.85**	**16**	P	**Pn**	**08 02 57.3**	**+0.6**
Q23K	**Middleton Isla**	**2.85**	**16**	Pn	**Pn**	**08 02 56.9**	**+0.2**
Q23K	comp=E,172nm,1.1s			IAML		08 03 45.2	
Q23K	comp=N,194nm,1.4s			IAML		08 03 59.5	
Q23K	**Middleton Isla**	**2.85**	**16**		**Sn**	**08 03 28.4**	**-2.6**
Q23K	**Middleton Isla** baz=197	**2.85**	**16**	P	**Pn**	**08 02 57.3**	**+0.6**
Q23K				S	**Sn**	**08 03 29.3**	**-1.7**
OHAK	**Old Harbor**	**2.99**	**282**	Pn	**Pn**	**08 02 58.1**	**-0.5**
OHAK	**Old Harbor**	**2.99**	**282**		**Sn**	**08 03 32.8**	**-1.7**
OHAK	**Old Harbor**	**2.99**	**282**	P	**Pn**	**08 02 59.7**	**+1.0**
OHAK	**Old Harbor** baz=97	**2.99**	**282**	P	**Pn**	**08 02 59.6**	**+1.0**
OHAK	baz=97			S	**Sn**	**08 03 32.8**	**-1.7**
SYI	**Shuyak Island**	**3.07**	**310**	Pn	**Pn**	**08 03 00.9**	**+1.1**
SYI	comp=N,154nm,0.5s			IAML		08 03 37.7	
SYI	comp=E,97nm,0.5s			IAML		08 03 38.8	
SYI	**Shuyak Island**	**3.07**	**310**		**Sn**	**08 03 35.8**	**-0.7**
Q20K	**Shuyak Island** baz=126	**3.07**	**310**	P	**Pn**	**08 03 01.2**	**+1.4**
Q20K	baz=126			S	**Sn**	**08 03 35.8**	**-0.7**
P23K	**Montague Islan**	**3.31**	**4**		**Pn**	**08 03 04.0**	**+1.0**
P23K	**Montague Islan** baz=185	**3.31**	**4**	P	**Pn**	**08 03 04.0**	**+1.0**
CNPM	**China Poot**	**3.33**	**329**		**Pn**	**08 03 04.8**	**+1.4**
CNPM	**China Poot**	**3.33**	**329**		**Sn**	**08 03 41.3**	**-1.7**
CNPM	**China Poot** comp=N,50nm,0.4s	**3.33**	**329**	IAML		08 03 44.1	
CNPM	comp=E,58nm,0.4s			IAML		08 03 49.4	
BRSE	**Bradley Lake S**	**3.39**	**335**		**Pn**	**08 03 05.2**	**+1.0**
BRSE					**Sn**	**08 03 42.5**	**-2.0**
BRSE	**Bradley Lake S** baz=152	**3.39**	**335**	P	**Pn**	**08 03 05.2**	**+1.0**
BRSE	baz=152			S	**Sn**	**08 03 42.5**	**-2.0**
BRLK	**Bradley Lake**	**3.44**	**334**	Pn	**Pn**	**08 03 06.1**	**+1.1**
BRLK	comp=N,56nm,1.1s			IAML		08 03 46.3	
KAIM	comp=E,99nm,1.3s			IAML		08 03 54.5	
KAIM	**Kayak Island** baz=211	**3.71**	**28**	P	**Pn**	**08 03 09.7**	**+1.0**
HIN	**Hinchinbrook I**	**3.77**	**11**		**Pn**	**08 03 10.4**	**+1.0**
HIN	comp=N,94nm,0.9s			IAML		08 03 53.7	
HIN	comp=E,97nm,0.8s			IAML		08 03 59.2	
HIN	**Hinchinbrook I**	**3.77**	**11**		**Sn**	**08 03 52.3**	**-1.5**
O22K	**Cooper Landing**	**3.90**	**347**		**Pn**	**08 03 12.2**	**+1.1**
O22K	**Cooper Landing** baz=165	**3.90**	**347**	P	**Pn**	**08 03 12.0**	**+0.9**
SLKM	**Skilak Lake**	**4.00**	**343**		**Pn**	**08 03 13.5**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.01**	**15**		**Pn**	**08 03 13.8**	**+1.2**
EYAK	**Cordova Ski Ar**	**4.01**	**15**	P	**Pn**	**08 03 14.0**	**+1.3**
EYAK	**Cordova Ski Ar** baz=197	**4.01**	**15**	P	**Pn**	**08 03 13.8**	**+1.2**
SUCK	**Suckling Hills**	**4.01**	**31**		**Pn**	**08 03 14.0**	**+1.3**
SUCK	comp=N,72nm,1.1s			IAML		08 04 00.4	
SUCK	comp=E,49nm,1.4s			IAML		08 04 01.3	
RAGM	**Ragged Mountai**	**4.06**	**23**		**Pn**	**08 03 14.8**	**+1.4**
RAGM	comp=E,106nm,0.4s			IAML		08 04 02.1	
RAGM	comp=N,233nm,0.5s			IAML		08 04 03.1	
P19K	**Oil Pt**	**4.08**	**319**		**Pn**	**08 03 16.7**	**+3.0**
P19K	**Oil Pt** baz=134	**4.08**	**319**	P	**Pn**	**08 03 15.8**	**+2.1**
NICHA	**Nichawak Mount**	**4.09**	**29**		**Pn**	**08 03 15.2**	**+1.4**
HMT	**Hamilton**	**4.11**	**26**		**Pn**	**08 03 15.2**	**+1.1**
HMT	comp=E,189nm,0.5s			IAML		08 04 03.2	
HMT	comp=N,167nm,0.5s			IAML		08 04 04.1	
BGLC	**Bering Glacier**	**4.19**	**33**		**Pn**	**08 03 16.9**	**+1.7**
BGLC	**Bering Glacier** baz=217	**4.19**	**33**	P	**Pn**	**08 03 16.9**	**+1.7**
O20K	**Slope Mountain**	**4.19**	**326**		**Pn**	**08 03 16.9**	**+1.7**
O20K	**Slope Mountain** baz=141	**4.19**	**326**	P	**Pn**	**08 03 16.9**	**+1.7**
GOAT	**Goat Mountain**	**4.22**	**22**		**Pn**	**08 03 16.8**	**+1.2**
BERG	**Berg Lake**	**4.30**	**29**		**Pn**	**08 03 17.7**	**+1.1**
GRIN	**Grindle Hills**	**4.31**	**32**		**Pn**	**08 03 18.2**	**+1.3**
SNH	**Sunshine Point**	**4.38**	**35**	Pn	**Pn**	**08 03 18.6**	**+0.8**
SNH	comp=N,32nm,1.4s			IAML		08 04 08.8	
SNH	comp=E,32nm,1.5s			IAML		08 04 13.6	
CAPN	**Captain Cook N**	**4.41**	**339**	Pn	**Pn**	**08 03 20.3**	**+2.2**
KHIT	**Khitrov Hills**	**4.46**	**31**		**Pn**	**08 03 19.9**	**+0.9**
RC01	**Rabbit Creek A**	**4.49**	**349**		**Pn**	**08 03 20.7**	**+1.3**
RC01	comp=N,36nm,0.9s			IAML		08 04 11.8	
RC01	comp=E,45nm,0.6s			IAML		08 04 14.6	
RC01	**Rabbit Creek A** baz=167	**4.49**	**349**	P	**Pn**	**08 03 20.8**	**+1.5**
RED	**Redoubt Volcan**	**4.51**	**328**		**Pn**	**08 03 20.7**	**+1.1**
RDT	**Redoubt**	**4.53**	**331**		**Pn**	**08 03 20.9**	**+0.9**
RSO	**Redoubt South**	**4.54**	**328**		**Pn**	**08 03 21.2**	**+1.1**
CNTC	**Contact Creek**	**4.58**	**293**		**Pn**	**08 03 22.9**	**+2.3**
Q17K	**Contact Creek** baz=106	**4.58**	**293**	P	**Pn**	**08 03 22.9**	**+2.3**
RDWB	**Redoubt West**	**4.58**	**328**		**Pn**	**08 03 21.8**	**+1.1**
WAX	**Waxell Ridge**	**4.59**	**33**		**Pn**	**08 03 21.6**	**+0.9**
BMRM	**Bremner River**	**4.60**	**20**		**Pn**	**08 03 21.8**	**+1.0**
BMRM	**Bremner River** baz=203	**4.60**	**20**	P	**Pn**	**08 03 21.8**	**+1.0**
BARK	**Barkley Ridge**	**4.66**	**35**		**Pn**	**08 03 22.9**	**+1.2**
MESA	**MESA**	**4.68**	**39**	Pn	**Pn**	**08 03 22.7**	**+0.7**
MESA	comp=N,34nm,1.0s			IAML		08 04 19.6	
MESA	comp=E,28nm,1.4s			IAML		08 04 45.6	
MESA	**MESA** baz=224	**4.68**	**39**	P	**Pn**	**08 03 23.2**	**+1.2**
KNK	**Knik Glacier**	**4.72**	**357**		**Pn**	**08 03 24.3**	**+1.8**
KNK	**Knik Glacier** baz=176	**4.72**	**357**	P	**Pn**	**08 03 24.1**	**+1.6**
P18K	**Big Mountain,**	**4.73**	**308**		**Pn**	**08 03 23.8**	**+1.2**
P18K	**Big Mountain,** baz=121	**4.73**	**308**	P	**Pn**	**08 03 23.8**	**+1.2**
CRQM	**Cirque**	**4.76**	**29**		**Pn**	**08 03 24.3**	**+1.2**
CRQM	**Cirque** comp=E,32nm,1.0s	**4.76**	**29**	IAML		08 04 16.4	
CRQM	comp=N,32nm,1.3s			IAML		08 04 23.2	
CRQE	**Cirque** baz=214	**4.76**	**30**	P	**Pn**	**08 03 24.3**	**+1.1**
O19K	**Port Alsworth**	**4.85**	**319**		**Pn**	**08 03 26.5**	**+2.3**
O19K	**Port Alsworth** baz=133	**4.85**	**319**	P	**Pn**	**08 03 26.0**	**+1.8**
BAGL	**Bagley Icefiel**	**4.86**	**36**		**Pn**	**08 03 25.6**	**+1.3**
ISLE	**Juniper Island**	**4.86**	**34**		**Pn**	**08 03 25.4**	**+0.8**
ISLE	comp=E,28nm,1.3s			IAML		08 04 21.6	
ISLE	comp=N,28nm,1.2s			IAML		08 04 34.9	
KLU	**Klutina**	**4.90**	**11**		**Pn**	**08 03 26.3**	**+1.2**
KLU	comp=E,24nm,0.4s			IAML		08 04 21.1	
KLU	comp=N,30nm,0.4s			IAML		08 04 24.3	
KLU	**Klutina** baz=193	**4.90**	**11**	P	**Pn**	**08 03 26.5**	**+1.5**
PMR	**Palmer**	**4.94**	**353**		**Pn**	**08 03 27.1**	**+1.7**
PMR	comp=N,19nm,0.4s			IAML		08 04 21.9	
PMR	**Palmer**	**4.94**	**353**	P	**Pn**	**08 03 27.6**	**+2.2**
O18K	**Koktuh Hills**	**4.98**	**312**	Pn	**Pn**	**08 03 26.4**	**+0.4**
O18K	comp=N,19nm,1.2s			IAML		08 04 27.1	
O18K	**Koktuh Hills** baz=126	**4.98**	**312**	P	**Pn**	**08 03 27.3**	**+1.3**
SUA	**Susitna One**	**4.99**	**344**		**Pn**	**08 03 27.3**	**+1.1**
SUA	**Susitna One** baz=162	**4.99**	**344**	P	**Pn**	**08 03 27.2**	**+1.0**
N20K	**Mount Spurr** baz=152	**5.02**	**335**	P	**Pn**	**08 03 28.1**	**+1.4**
SPCR	**Spurr Chakacha**	**5.02**	**335**		**Pn**	**08 03 28.1**	**+1.4**
SAMH	**Samovar Hills**	**5.08**	**45**		**Pn**	**08 03 29.4**	**+2.0**
VRDI	**Verde Repeater**	**5.08**	**25**	Pn	**Pn**	**08 03 28.4**	**+0.9**
KIAG	**Kiagna River**	**5.11**	**32**		**Pn**	**08 03 29.0**	**+1.0**
SML	**Sawmill**	**5.12**	**358**		**Pn**	**08 03 29.8**	**+1.9**
SML	comp=N,25nm,1.2s			IAML		08 04 34.3	
SML	comp=E,24nm,0.9s			IAML		08 04 36.5	
SML	**Sawmill** baz=177	**5.12**	**358**	P	**Pn**	**08 03 29.9**	**+1.9**
SCM	**Sheep Creek Mo**	**5.15**	**3**		**Pn**	**08 03 30.5**	**+2.1**
SCM	comp=N,24nm,0.8s			IAML		08 04 30.4	
SCM	comp=E,24nm,0.6s			IAML		08 04 32.0	
SCM	**Sheep Creek Mo** baz=183	**5.15**	**3**	P	**Pn**	**08 03 30.4**	**+2.0**
TABL	**Table Mountain**	**5.15**	**41**		**Pn**	**08 03 29.6**	**+1.1**
TABL	comp=E,25nm,0.6s			IAML		08 04 27.1	
TABL	comp=N,23nm,1.5s			IAML		08 04 37.4	
GLB	**Gilahina Butte**	**5.19**	**22**		**Pn**	**08 03 29.8**	**+0.8**
GLB	comp=E,16nm,0.5s			IAML		08 04 28.3	
N25K	**Chitina, Valde**	**5.20**	**18**		**Pn**	**08 03 30.3**	**+1.3**
N25K	comp=N,24nm,0.7s			IAML		08 04 29.5	
N25K	comp=E,23nm,1.0s			IAML		08 04 30.0	
N25K	**Chitina, Valde** baz=200	**5.20**	**18**	P	**Pn**	**08 03 30.5**	**+1.4**
STLK	**Strandline Lak**	**5.21**	**339**		**Pn**	**08 03 30.7**	**+1.5**
PCA	**Pinnacle**	**5.26**	**47**		**Pn**	**08 03 31.5**	**+1.6**
PINM	**Pinnacle** baz=233	**5.26**	**47**	P	**Pn**	**08 03 31.5**	**+1.5**
SPNN	**North Nagishla**	**5.28**	**334**		**Pn**	**08 03 32.4**	**+2.0**
PTPK	**Patty Peak**	**5.30**	**30**		**Pn**	**08 03 31.7**	**+1.1**
MCARA	**McCarthy VSAT**	**5.32**	**26**		**Pn**	**08 03 32.1**	**+1.4**
MCARA	comp=N,22nm,1.1s			IAML		08 04 47.2	
MCARA	comp=E,18nm,1.4s			IAML		08 04 58.5	
MCARA	**McCarthy VSAT** baz=210	**5.32**	**26**	P	**Pn**	**08 03 32.0**	**+1.3**
N19K	**Bonanza Creek**	**5.35**	**323**		**Pn**	**08 03 32.5**	**+1.3**
N19K	**Bonanza Creek** baz=137	**5.35**	**323**	P	**Pn**	**08 03 32.5**	**+1.3**
PNL	**Peninsula**	**5.39**	**53**		**Pn**	**08 03 33.1**	**+1.4**
PNL	**Peninsula**	**5.39**	**53**	P	**Pn**	**08 03 33.2**	**+1.6**
PNL	**Peninsula** baz=240	**5.39**	**53**	P	**Pn**	**08 03 33.1**	**+1.4**
BARN	**Barnard Glacie**	**5.43**	**34**		**Pn**	**08 03 33.5**	**+1.2**
BCPM	**Bancas Point**	**5.43**	**50**		**Pn**	**08 03 33.8**	**+1.5**
CTG	**Chitna Glacier** baz=221	**5.46**	**36**	P	**Pn**	**08 03 34.0**	**+1.2**
CTGM	**Chitina Glacie**	**5.46**	**36**		**Pn**	**08 03 33.5**	**+0.7**
LOGN	**Logan Glacier**	**5.47**	**38**		**Pn**	**08 03 33.9**	**+1.1**
M24K	**Tolsona, Glenn**	**5.48**	**9**		**Pn**	**08 03 35.4**	**+2.4**
M24K	**Tolsona, Glenn** baz=190	**5.48**	**9**	P	**Pn**	**08 03 35.2**	**+2.2**
SKT	**Skwentna**	**5.60**	**342**	Pn	**Pn**	**08 03 36.1**	**+1.6**
SKT	**Skwentna** baz=159	**5.60**	**342**	P	**Pn**	**08 03 35.7**	**+1.2**
WAT6	**Susitna Watana**	**5.89**	**1**		**Pn**	**08 03 40.3**	**+1.7**
WAT6	**Susitna Watana** baz=181	**5.89**	**1**	P	**Pn**	**08 03 40.3**	**+1.7**
SVW2	**Sparrevohn**	**5.93**	**321**	Pn	**Pn**	**08 03 40.4**	**+1.4**
SVW2	**Sparrevohn**	**5.93**	**321**	P	**Pn**	**08 03 40.6**	**+1.6**
O29M	**Mount Kennedy**	**6.07**	**50**		**Pn**	**08 03 42.6**	**+1.6**
O29M	**Mount Kennedy** baz=238	**6.07**	**50**	P	**Pn**	**08 03 42.6**	**+1.6**
WAT1	**Susitna Watana**	**6.15**	**357**		**Pn**	**08 03 44.1**	**+2.0**
WAT1	**Susitna Watana** baz=176	**6.15**	**357**	P	**Pn**	**08 03 44.1**	**+2.0**
WAT7	**Susitna Watana**	**6.16**	**356**		**Pn**	**08 03 44.2**	**+1.9**
N17K	**Nushagak Hills**	**6.17**	**312**		**Pn**	**08 03 43.9**	**+1.5**
N17K	**Nushagak Hills** baz=124	**6.17**	**312**	P	**Pn**	**08 03 43.8**	**+1.5**
YUK2	**White River**	**6.25**	**32**		**Pn**	**08 03 45.7**	**+2.2**
M18K	**Stony River**	**6.29**	**323**		**Pn**	**08 03 45.2**	**+1.2**
M18K	**Stony River** baz=136	**6.29**	**323**	P	**Pn**	**08 03 45.2**	**+1.2**
YUK7	**Dusty Glacier**	**6.38**	**49**		**Pn**	**08 03 47.4**	**+2.0**
DHY	**Denali Highway**	**6.39**	**2**		**Pn**	**08 03 47.7**	**+2.2**
DHY	**Denali Highway** baz=182	**6.39**	**2**	P	**Pn**	**08 03 47.9**	**+2.4**
PAX	**Paxson**	**6.40**	**10**		**Pn**	**08 03 47.5**	**+2.0**
PAX	**Paxson** baz=192	**6.40**	**10**	P	**Pn**	**08 03 47.5**	**+2.0**
M27K	**Edge Creek, AK**	**6.44**	**26**		**Pn**	**08 03 47.6**	**+1.5**
M27K	**Edge Creek, AK** baz=211	**6.44**	**26**	P	**Pn**	**08 03 47.6**	**+1.5**
S31K	**Pelican**	**6.44**	**74**		**Pn**	**08 03 46.0**	**0.0**
RND	**Reindeer**	**6.73**	**356**		**Pn**	**08 03 52.2**	**+2.0**
L26K	**Log Cabin Wild**	**6.74**	**18**		**Pn**	**08 03 52.3**	**+2.2**
M17K	**Holitna River**	**6.80**	**318**		**Pn**	**08 03 52.9**	**+1.9**
M17K	**Holitna River** baz=129	**6.80**	**318**	P	**Pn**	**08 03 52.9**	**+1.9**
O15K	**Ungalikthiuk R**	**6.81**	**296**		**Pn**	**08 03 53.6**	**+2.5**
O15K	**Ungalikthiuk R** baz=106	**6.81**	**296**	P	**Pn**	**08 03 53.6**	**+2.5**
N16K	**Nishlik Lake**	**6.81**	**308**		**Pn**	**08 03 53.2**	**+2.0**
N16K	**Nishlik Lake** baz=119	**6.81**	**308**	P	**Pn**	**08 03 53.2**	**+2.0**
YUK5	**Granite Creek**	**6.83**	**45**		**Pn**	**08 03 54.1**	**+2.6**
TRF	**Thorofare Moun**	**6.87**	**351**		**Pn**	**08 03 54.1**	**+2.1**
TRF	**Thorofare Moun** baz=169	**6.87**	**351**	P	**Pn**	**08 03 54.2**	**+2.2**
SIT	**Sitka**	**6.90**	**82**	Pn	**Pn**	**08 03 50.4**	**-2.0**
SIT	**Sitka**	**6.90**	**82**	P	**Pn**	**08 03 51.1**	**-1.3**
KTH	**Kantishna Hill**	**7.03**	**349**		**Pn**	**08 03 56.6**	**+2.4**
CAST	**Castle Rocks**	**7.04**	**344**	Pn	**Pn**	**08 03 56.4**	**+2.0**
CAST	**Castle Rocks** baz=161	**7.04**	**344**	P	**Pn**	**08 03 56.8**	**+2.4**
S32K	**Killisnoo**	**7.30**	**78**	Pn	**Pn**	**08 03 57.4**	**-0.4**
O30N	**Mendenhall**	**7.37**	**52**	Pn	**Pn**	**08 03 59.1**	**+0.3**
JIS	**Juneau Island**	**7.45**	**72**	Pn	**Pn**	**08 03 58.8**	**-1.1**
JIS	**Juneau Island**	**7.45**	**72**	P	**Pn**	**08 04 00.2**	**+0.3**
M29M	**Somme Creek**	**7.48**	**36**		**Pn**	**08 04 02.5**	**+2.1**
M29M	**Somme Creek** baz=224	**7.48**	**36**	P	**Pn**	**08 04 02.5**	**+2.1**
SCRK	**Sand Creek**	**7.54**	**13**	Pn	**Pn**	**08 04 03.1**	**+1.9**
HDA	**Harding Lake**	**7.74**	**3**		**Pn**	**08 04 06.1**	**+2.3**
L16K	**Owhat River**	**7.76**	**315**	Pn	**Pn**	**08 04 05.1**	**+0.9**
CCB	**Clear Creek Bu**	**7.96**	**0**	P

0.7nm,0.8s,baz=210,slow=7.5,SNR=3.7
0.7nm,0.8s
ASAR Alice Springs 65.63 114 P P 08 42 30.7 -0.1
0.4nm,0.8s,baz=291,slow=6.5,SNR=2.7
0.4nm,0.8s
WRA Warramunga Arr 65.69 110 P P 08 42 31.4 +0.2
0.2nm,0.5s,baz=280,slow=6.3,SNR=2.2
0.2nm,0.5s

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*CATAC **03** 08:35:45.5±0.7,9.°53N×83.°13W, h5km, ML2.6*
*UPA **03** 08:35:45.6±1.3,9.°46N×83.°05W, h10km±43km, ML3.1*
ISC 03 08:35:44.4±1.2,**9.°53N**±0.°08×**83.°07W**±0.°03,**h10**km±12km,
n14,σ**32/26,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
POTG	**Potrero Grande**	**0.47**	**185**	*i* P		**Pb**	**08 35 54.9**	**+0.1**
POTG				*i* S		**Sb**	**08 36 01.5**	**-0.4**
POTG				IAML			08 36 04.3	
	comp=Z,580nm,1.0s							
CNI2	**El Empalme, Bo**	**0.60**	**100**	*e*P		**Pg**	**08 35 55.9**	**-0.2**
CNI2				*e*S		**Sg**	**08 36 04.3**	**+0.2**
PEZE	**Perez Zeledon,**	**0.61**	**257**	*i* P		**Pg**	**08 35 56.6**	**+0.3**
PEZE				*i* S		**Sg**	**08 36 04.6**	**+0.3**
PEZE				IAML			08 36 05.6	
	comp=Z,270nm,1.0s							
CDM	**Cerro de Muert**	**0.68**	**272**	*i* P		**Pg**	**08 35 58.0**	**+0.4**
CDM				*i* S		**Sg**	**08 36 06.7**	**+0.1**
CDM				IAML			08 36 08.3	
	comp=Z,280nm,1.0s							
OCHAL	**Ojochal**	**0.71**	**233**	*i* P		**Pb**	**08 35 58.6**	**-0.2**
OCHAL				IAML			08 35 59.4	
	comp=Z,14nm,1.0s							
OCHAL				*i* S		**Sb**	**08 36 08.0**	**-0.6**
MLIR3	**Monte Lirio, C**	**0.77**	**161**	*e*P		**Pn**	**08 36 01.7**	**+0.3**
RIMA	**Rio Macho**	**0.81**	**287**	*i* P		**Pg**	**08 35 59.9**	**-0.2**
RIMA				*i* S		**Sg**	**08 36 10.5**	**-0.3**
RIMA				IAML			08 36 12.0	
	comp=Z,84nm,1.0s							
BRU2	**Volcan**	**0.82**	**152**	*e*P		**Pb**	**08 36 00.5**	**-0.3**
BRU2				*e*S		**Sb**	**08 36 12.1**	**+0.1**
LCR2	**La Lucha 2**	**0.94**	**283**	*i* P		**Pg**	**08 36 02.1**	**-0.5**
LCR2				*i* SA			08 36 14.7	
LCR2				IAML			08 36 16.1	
	comp=Z,100nm,1.0s							
LNBQ3	**Los Naranjos,**	**0.96**	**139**	*e*P		**Pg**	**08 36 02.6**	**-0.3**
LNBQ3				*e*S		**Sb**	**08 36 16.3**	**+0.2**
BCO2	**Palmira**	**0.97**	**146**	*e*P		**Pb**	**08 36 03.3**	**0.0**
BCO2				AMP			08 36 05.2	
	comp=Z,651nm,0.1s							
BCO2				*e*S		**Sb**	**08 36 16.1**	**-0.2**
CDITO	**Canoas**	**0.97**	**168**	*i* P		**Pn**	**08 36 04.5**	**+0.5**
CDITO				*i* S		**Sn**	**08 36 18.2**	**+0.4**
CDITO				IAML			08 36 43.6	
	comp=Z,250nm,1.0s							
PLAN	**Los Planes de**	**1.04**	**215**	*i* P		**Pn**	**08 36 05.1**	**+0.1**
PLAN				*i* S		**Sn**	**08 36 19.2**	**-0.4**
PLAN				IAML			08 36 22.0	
	comp=Z,340nm,1.0s							
JACO	**JACO, Garabito**	**1.57**	**275**	*i* P		**Pb**	**08 36 13.7**	**+0.2**
JACO				IAML			08 36 26.9	
	comp=Z,43nm,1.0s							
JACO				*i* S		**Sg**	**08 36 34.8**	**-0.1**

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*IDC **03** 08:36:55.7±5.9,34.°39N×25.°24E, h0km, mb3.8/4, mbtmp3.8/6, ML3.6/2, MS3.2/1, Error ellipse: s-maj=102.5km s-min=40.0km az=35.0*
*GII **03** 08:37:06.6±0.8,34.°766N±0.°009×26.°318E±0.°003, h60km, Mws3.2, confirmed*
*THE **03** 08:37:07.1,34.°64N×25.°90E, h19km±4km, ML2.8/2, Error ellipse: s-maj=5.2km s-min=1.7km az=19.0*
*ATH **03** 08:37:10.2,34.°96N×25.°95E, h30km±1km, ML2.7/4, Error ellipse: s-maj=5.7km s-min=1.3km az=169.0*
ISC 03 08:37:03.8±1.2,**34.°57N**±0.°06×**25.°96E**±0.°04,**h30**km±10km,
n36,σ**19/93/42,mb3.7/4,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.48**	**337**	P		**Pb**	**08 37 14.6**	**+0.7**
FRMA				S		**Sb**	**08 37 21.6**	**+0.7**
	1µm,0.5s							
FRMA	**Ierapetra Chan**	**0.48**	**337**	P		**Pb**	**08 37 14.7**	**+0.7**
FRMA				S		**Sb**	**08 37 19.7**	**-1.3**
FRMA				AML		AML	08 37 24.6	
	comp=N,7785µm,0.5s							
FRMA				AML		AML	08 37 27.5	
	comp=E,6126µm,0.8s							
ZKR	**Zakros**	**0.58**	**21**	P		**Pn**	**08 37 17.1**	**+1.1**
ZKR				S		**Sn**	**08 37 26.2**	**+1.6**
	comp=E,2µm,0.6s							
ZKR	**Zakros**	**0.58**	**21**	P		**Pn**	**08 37 17.1**	**+1.1**
ZKR				S		**Sb**	**08 37 22.1**	**-1.7**
ZKR				AML		AML	08 37 28.1	
	comp=E,4393µm,0.8s							
ZKR				AML		AML	08 37 28.2	
	comp=N,2524µm,0.5s							
KSTL	**Kastelli Herak**	**1.04**	**315**	P		**Pb**	**08 37 20.8**	**-2.4**
KSTL				S		**Sb**	**08 37 30.8**	**-5.6**
IDI	**Anoyia**	**1.14**	**310**	P		**Pb**	**08 37 26.1**	**+1.2**
IDI	**Anoyia**	**1.14**	**310**	P		**Pb**	**08 37 26.4**	**+1.5**
IDI				S		**Sb**	**08 37 38.8**	**-0.6**
IDI				AML		AML	08 37 44.6	
	comp=N,524µm,0.6s							
IDI				AML		AML	08 37 52.1	
	comp=E,402µm,0.6s							
KARP	**Karpathos**	**1.39**	**45**	P		**Pb**	**08 37 30.4**	**+1.3**
KARP	**Karpathos**	**1.39**	**45**	P		**Pb**	**08 37 30.2**	**+1.1**
KARP				S		**Sn**	**08 37 42.9**	**-1.6**
KARP				AML		AML	08 38 00.3	
	comp=E,926µm,0.7s							
KARP				AML		AML	08 38 03.0	
	comp=N,997µm,0.8s							
GVD	**Gavdhos**	**1.57**	**280**	P		**Pb**	**08 37 35.6**	**+3.4**
IMMV	**Iera Moni Meta**	**1.85**	**299**	P		**Pb**	**08 37 37.3**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.89**	**346**	P		**Pn**	**08 37 34.8**	**+0.8**
THR3	**Thira Island,**	**1.89**	**346**	P		**Pn**	**08 37 35.0**	**+1.0**
THR3	**Thira Island,**	**1.89**	**346**	P		**Pn**	**08 37 34.9**	**+0.9**
ARG	**Arkhangelos**	**2.42**	**46**	P		**Pn**	**08 37 44.1**	**+2.9**
ARG	**Arkhangelos**	**2.42**	**46**	P		**Pn**	**08 37 43.8**	**+2.6**
APE	**Apeiranthos**	**2.52**	**352**	P		**Pn**	**08 37 43.0**	**+0.3**
APE	**Apeiranthos**	**2.52**	**352**	P		**Pn**	**08 37 43.0**	**+0.3**
CSS	**Mathiatis**	**6.08**	**84**	P		**Pn**	**08 38 30.6**	**-1.0**
KZIT	**Kziot**	**7.99**	**115**	S		**Sn**	**08 40 25.2**	**-1.9**
KZIT	**Kziot**	**7.99**	**115**	P		**Pn**	**08 38 58.6**	**+0.8**
DSI	**Dead Sea**	**8.45**	**108**	S		**Sn**	**08 40 36.4**	**-2.0**
DSI	**Dead Sea**	**8.45**	**108**	P		**Pn**	**08 39 04.1**	**0.0**
KRMI	**Paran Flat**	**8.64**	**118**	P		**Pn**	**08 39 09.1**	**+2.4**
KRMI	**Paran Flat**	**8.64**	**118**	S		**Sn**	**08 40 40.7**	**-2.5**
PRNI	**Paran**	**8.72**	**116**	S		**Sn**	**08 40 43.2**	**-1.9**
PRNI	**Paran**	**8.72**	**116**	P		**Pn**	**08 39 09.6**	**+1.8**
EIL	**Elat**	**9.05**	**120**	S		**Sn**	**08 40 51.2**	**-2.0**
EIL	**Elat**	**9.05**	**120**	P		**Pn**	**08 39 14.4**	**+2.0**
MLR	**Muntele Rosu**	**10.91**	**360**	Pn		**Pn**	**08 39 37.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=164,slow=18,SNR=2.0							
	comp=N,1.7nm,0.6s							
KBZ	**Khabaz**	**15.98**	**50**	Pn		**P**	**08 40 52.0**	**+2.5**
	comp=N,0.1nm,0.3s,baz=242,slow=13,SNR=3.9							
	comp=N,1.2nm,0.7s							
GEYT	**Alibeck**	**26.08**	**73**	LR		LR	08 56 59.0	
	comp=N,47nm,19.9s,baz=167,slow=45							
FINES	**FINESS Array B**	**26.89**	**0**	P		**P**	**08 42 39.2**	**-2.5**
	comp=N,2.1nm,0.9s,baz=188,slow=8.4,SNR=5.0							
	comp=N,2.1nm,0.9s							
ARCES	**ARCESS Array B**	**35.02**	**360**	P		**P**	**08 43 51.3**	**-2.0**
	comp=N,2.3nm,0.9s,baz=172,slow=7.3,SNR=8.6							
	comp=N,2.3nm,0.9s							
KURBB	**Kurchatov Arra**	**40.98**	**50**	P		**P**	**08 44 44.4**	**+0.6**
	comp=N,0.9nm,1.1s,baz=275,slow=9.1,SNR=4.2							
	comp=N,0.9nm,1.1s							
MKAR	**Makanchi Array**	**43.55**	**56**	P		**P**	**08 45 06.2**	**+1.4**
	comp=N,0.7nm,0.6s,baz=271,slow=7.8,SNR=11							
	comp=N,0.7nm,0.6s							

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*SOME **03** 08:44:18.5,38.°67N×76.°57E, h0km*
*NNC **03** 08:44:21.0±1.0,38.°70N×76.°53E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=6.5km s-min=6.3km az=97.0*
ISC 03 08:44:25.0±3.2,**38.°9N**±0.°1×**76.°48E**±0.°07,**h10**km,**n40,**
σ**29/39/54,2C-5D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**4.08**	**351**	⇓P	g	**Pb**	**08 45 38.0**	**+1.0**
TKM2				⇑L	g	Lg	08 46 37.5	
	8.1nm,0.5s							
TNSS	**Tian-Shan**	**4.16**	**5**	Pg		**Pb**	**08 45 40.8**	**+2.4**
	4.6nm,0.6s							
TNSS				L	g	Lg	08 46 40.1	
	5.8nm,0.5s							
TNSS	**Tian-Shan**	**4.16**	**5**	*e*P		**Pb**	**08 45 40.9**	**+2.4**
	4.6nm,0.6s							
TNSS				*e*S		**Sg**	**08 46 40.1**	**+1.6**
	5.8nm,0.5s							
KST	**Kastek**	**4.17**	**355**	Pg		**Pb**	**08 45 39.9**	**+1.5**
	4.3nm,0.4s							
KST				L	g	Lg	08 46 38.4	
	14nm,0.3s							
KST	**Kastek**	**4.17**	**355**	*e*P		**Pb**	**08 45 39.9**	**+1.5**
	4.3nm,0.4s							
KST				*e*S		**Sg**	**08 46 38.4**	**-0.3**
	14nm,0.3s							
MTBS	**Maitube**	**4.23**	**359**	Pg		**Pb**	**08 45 41.7**	**+2.2**
	5.2nm,0.3s							
MTBS				L	g	Lg	08 46 41.5	
	7.6nm,0.2s							
MTBS	**Maitube**	**4.23**	**359**	*e*P		**Pb**	**08 45 41.7**	**+2.2**
	1.1nm,0.1s							
MTBS				*e*S		**Sg**	**08 46 41.5**	**+0.6**
	7.6nm,0.2s							
MDOK	**Medeo**	**4.29**	**6**	Pg		**Pb**	**08 45 42.2**	**+1.7**
	19nm,1.3s							
MDOK				P	g	**Pg**	**08 45 43.8**	**-3.3**
	11nm,0.6s							
MDOK				L	g	Lg	08 46 44.7	
	14nm,0.7s							
MDOK				L	g	Lg	08 46 45.2	
	15nm,0.3s							
MDOK	**Medeo**	**4.29**	**6**	*e*P		**Pg**	**08 45 43.8**	**-3.3**
	11nm,0.6s							
MDOK				*e*S		**Sg**	**08 46 45.1**	**+2.5**
	15nm,0.3s							
CHMS	**Chumysh**	**4.31**	**343**	⇓L	g	Lg	08 46 43.4	
	3.8nm,0.5s							
KOTS	**Kotyrbulak**	**4.36**	**6**	Pg		**Pb**	**08 45 44.1**	**+2.3**
	7.8nm,0.6s							
KOTS				L	g	Lg	08 46 45.6	
	20nm,0.6s							
KOTS	**Kotyrbulak**	**4.36**	**6**	*e*P		**Pb**	**08 45 44.1**	**+2.3**
	7.8nm,0.6s							
KOTS				*e*S		**Sg**	**08 46 45.5**	**+0.5**
	20nm,0.6s							
DGS	**Degeres**	**4.38**	**353**	Pg		**Pb**	**08 45 43.9**	**+1.9**
	4.2nm,0.3s							
DGS				L	g	Lg	08 46 45.4	
	11nm,0.4s							
DGS	**Degeres**	**4.38**	**353**	*e*P		**Pb**	**08 45 43.9**	**+1.9**
	4.2nm,0.2s							
DGS				*e*S		**Sg**	**08 46 45.4**	**-0.1**
	9.3nm,0.4s							
SATY	**Saty**	**4.41**	**19**	Pg		**Pb**	**08 45 44.7**	**+2.1**
	8.5nm,0.6s							
SATY				L	g	Lg	08 46 46.8	
	16nm,0.3s							
SATY	**Saty**	**4.41**	**19**	*e*P		**Pb**	**08 45 44.7**	**+2.1**
	2.3nm,0.1s							
SATY				*e*S		**Sg**	**08 46 46.8**	**+0.3**
	16nm,0.2s							
MRKS	**Merke**	**4.57**	**328**	Pg		**Pg**	**08 45 49.2**	**-3.3**
	2.7nm,0.4s							
MRKS				L	g	Lg	08 46 54.3	
	7.2nm,0.4s							
MRKS	**Merke**	**4.57**	**328**	*e*P		**Pg**	**08 45 49.2**	**-3.3**
	2.7nm,0.4s							
MRKS				*e*S		**Sg**	**08 46 54.3**	**+2.5**
	9.8nm,0.3s							
KURS	**Kuram**	**4.76**	**15**	Pg		**Pb**	**08 45 51.6**	**+3.0**
	4.5nm,0.5s							
KURS				L	g	Lg	08 46 58.3	
	9.0nm,0.6s							
KURS	**Kuram**	**4.76**	**15**	*e*P		**Pb**	**08 45 51.6**	**+3.0**
	3.1nm,0.2s							
KURS				*e*S		**Sg**	**08 46 58.3**	**+0.4**
	9.0nm,0.6s							
KTBS	**Karatobe**	**4.82**	**2**	Pg		**Pb**	**08 45 52.4**	**+2.9**
	2.6nm,0.5s							
KTBS				L	g	Lg	08 46 59.8	
	12nm,0.3s							
KTBS	**Karatobe**	**4.82**	**2**	*e*P		**Pb**	**08 45 52.4**	**+2.9**
	2.6nm,0.5s							
KTBS				*e*S		**Sg**	**08 46 59.8**	**+0.2**
	12nm,0.3s							
KRBS	**Karabastau**	**4.84**	**353**	Pg		**Pb**	**08 45 52.9**	**+3.1**
	2.6nm,0.3s							
KRBS				L	g	Lg	08 47 00.8	
	8.4nm,0.6s							
KRBS	**Karabastau**	**4.84**	**353**	*e*P		**Pb**	**08 45 52.9**	**+3.1**
	2.6nm,0.3s							
KRBS				*e*S		**Sg**	**08 47 00.8**	**+0.5**
	8.4nm,0.6s							
KPKS	**Kokpek**	**4.86**	**19**	Pg		**Pb**	**08 45 52.6**	**+2.3**
	4.0nm,0.3s							
KPKS				L	g	Lg	08 47 00.2	
	13nm,0.3s							
KPKS	**Kokpek**	**4.86**	**19**	*e*P		**Pb**	**08 45 52.6**	**+2.3**
	0.9nm,0.0s							
KPKS				*e*S		**Sg**	**08 47 00.2**	**-0.8**
	13nm,0.3s							
CHKK	**Chushkaly**	**4.97**	**4**	Pg		**Pb**	**08 45 54.3**	**+2.2**
	1.9nm,0.2s							
CHKK				L	g	Lg	08 47 03.2	
	8.7nm,0.3s							
CHKK	**Chushkaly**	**4.97**	**4**	*e*P		**Pb**	**08 45 54.3**	**+2.2**
	1.9nm,0.2s							
CHKK				*e*S		**Sg**	**08 47 03.2**	**-1.4**
	8.7nm,0.3s							
PDGK	**Podgornoye**	**4.98**	**26**	Pg		**Pb**	**08 45 54.6**	**+2.3**
	2.5nm,0.4s							
PDGK				L	g	Lg	08 47 03.5	
	4.2nm,0.4s							
PDGK	**Podgornoye**	**4.98**	**26**	⇓Pg		**Pb**	**08 45 54.1**	**+1.9**
	5.0nm,0.7s							
PDGK				⇓L	g	Lg	08 47 07.0	
	7.8nm,0.7s							
KUU	**Kurty**	**5.00**	**359**	Pg		**Pb**	**08 45 55.9**	**+3.5**
	2.4nm,0.1s							
KUU				L	g	Lg	08 47 06.1	
	8.4nm,0.4s							
KUU	**Kurty**	**5.00**	**359**	*e*P		**Pb**	**08 45 56.0**	**+3.5**
	1.4nm,0.1s							
KUU				⇑*i*S		**Sg**	**08 47 06.1**	**+0.7**
	8.3nm,0.3s							
ARXS	**Arharly**	**5.41**	**10**	Pg		**Pb**	**08 46 03.4**	**+3.8**
	4.0nm,0.5s							
ARXS				L	g	Lg	08 47 18.8	
	6.2nm,0.6s							
ARXS	**Arharly**	**5.41**	**10**	*e*P		**Pb**	**08 46 03.4**	**+3.8**
	4.0nm,0.5s							
ARXS				*e*S		**Sg**	**08 47 18.8**	**+0.2**
	4.9nm,0.3s							
BLB	**Baldybastay**	**5.41**	**15**	Pg		**Pb**	**08 46 02.6**	**+3.0**
	2.4nm,0.1s							
BLB				L	g	Lg	08 47 17.5	
	5.7nm,0.3s							
DJR	**Jarkent**	**5.97**	**23**	Pg		**Pb**	**08 46 12.4**	**+3.2**
	0.8nm,0.1s							
DJR				L	g	Lg	08 47 34.3	
	3.5nm,0.3s							
DJR	**Jarkent**	**5.97**	**23**	*e*P		**Pb**	**08 46 12.4**	**+3.2**
	0.8nm,0.1s							
DJR				*e*S		**Sg**	**08 47 34.3**	**-2.3**
	2.7nm,0.3s							
KK31	**Karatay Array**	**6.17**	**315**	⇓Lg		Lg	08 47 38.9	
	1.2nm,0.5s,baz=336,slow=39,SNR=4.4							
BTLS	**Baital**	**6.41**	**344**	Pg		Pg	08 46 21.7	-5.9
	2.0nm,0.7s							
BTLS				L	g	Lg	08 47 50.4	
	2.2nm,0.2s							
BTLS	**Baital**	**6.41**	**344**	*e*P		Pg	08 46 21.7	-5.9
	1.1nm,0.3s							
BTLS				*e*S		**Sg**	**08 47 50.2**	**-0.3**
	1.6nm,0.2s							

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*NOU **03** 08:46:04.4,37.°93S×175.°38E, h194km, MLv4.3/6, North Island, New Zealand*
*WEL **03** 08:46:12.4,38.°3S±9.°×17.°6E±1.°2, h165km±15km, M2.6/32, ML2.5/8, MLv2.6/32, Error ellipse: s-maj=0.0km s-min=0.0km az=92.6*

ISC 03 08:46:10.8±1.6,**38.°44S**±0.°05×**175.°73E**±0.°05,**h150**km,**n91,**
σ**25/42/91,North Island**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ALRZ	**Allen Road**	**0.50**	**104**	P		**Pn**	**08 46 35.1**	**+3.0**
KATZ	**Kakaramea**	**0.53**	**183**	P		**Pn**	**08 46 36.7**	**+4.2**
TWVZ	**Taurewa**	**0.67**	**200**	P		**Pn**	**08 46 37.3**	**+4.1**
MRHZ	**Matea Rd**	**0.67**	**126**	P		**Pn**	**08 46 35.9**	**+2.8**
WTVZ	**West Tongariro**	**0.68**	**189**	P		**Pn**	**08 46 37.4**	**+4.1**
LIRZ	**Lichensteins R**	**0.68**	**50**	P		**Pn**	**08 46 33.9**	**+0.7**
HIZ	**Hauiti**	**0.69**	**264**	P		**Pn**	**08 46 37.5**	**+4.3**
ETVZ	**East Tongariro**	**0.69**	**181**	P		**Pn**	**08 46 37.4**	**+4.0**
NNVZ	**North Ngauruho**	**0.69**	**187**	P		**Pn**	**08 46 37.7**	**+4.2**
OTVZ	**Oturere**	**0.72**	**184**	P		**Pn**	**08 46 37.5**	**+3.9**
TOZ	**Tahuroa Road**	**0.73**	**346**	P		**Pn**	**08 46 36.3**	**+2.7**
NGZ	**Ngauruhoe**	**0.74**	**188**	P		**Pn**	**08 46 37.9**	**+4.1**
SNVZ	**South Ngauruho**	**0.74**	**185**	P		**Pn**	**08 46 38.0**	**+4.2**
COVZ	**Chateau Observ**	**0.77**	**191**	P		**Pn**	**08 46 37.5**	**+3.6**
MUGZ	**Murupara**	**0.82**	**93**	P		**Pn**	**08 46 35.8**	**+1.7**
FWVZ	**Far West T-bar**	**0.82**	**189**	P		**Pn**	**08 46 38.3**	**+3.9**
TUVZ	**Tukino**	**0.82**	**184**	P		**Pn**	**08 46 38.3**	**+3.9**
MAVZ	**Matarangi**	**0.83**	**189**	P		**Pn**	**08 46 38.6**	**+4.0**
TRVZ	**Turoa**	**0.86**	**189**	P		**Pn**	**08 46 38.7**	**+4.0**
WNVZ	**Wahianoa**	**0.89**	**186**	P		**Pn**	**08 46 38.7**	**+3.8**
BKZ	**Black Stump Fm**	**0.94**	**141**	P		**Pn**	**08 46 37.8**	**+2.7**
BKZ	**Black Stump Fm**	**0.94**	**141**	P		**Pn**	**08 46 37.9**	**+2.7**
MTVZ	**Mangateitei**	**0.96**	**192**	P		**Pn**	**08 46 38.8**	**+3.5**
MOVZ	**Moawhango**	**0.96**	**179**	P		**Pn**	**08 46 38.6**	**+3.3**
MTHZ	**Maungataniwha**	**0.96**	**115**	P		**Pn**	**08 46 37.4**	**+2.1**
RTZ	**Ruatahuna**	**1.00**	**100**	P		**Pn**	**08 46 36.9**	**+1.2**
NMHZ	**Naumai**	**1.07**	**128**	P		**Pn**	**08 46 39.4**	**+3.1**
BHHZ	**Black Hill Sta**	**1.08**	**166**	P		**Pn**	**08 46 39.3**	**+3.0**
URZ	**Urewera**	**1.10**	**81**	P		**Pn**	**08 46 36.9**	**+0.4**
URZ	**Urewera**	**1.10**	**81**	P		**Pn**	**08 46 36.9**	**+0.4**
KWHZ	**Kaweka Forest**	**1.12**	**151**	P		**Pn**	**08 46 39.7**	**+3.1**
RAHZ	**Arahi**	**1.16**	**114**	P		**Pn**	**08 46 39.2**	**+2.2**
MCHZ	**McNeill Hill**	**1.25**	**143**	P		**Pn**	**08 46 41.0**	**+3.1**
ARHZ	**Aropaoanui**	**1.28**	**130**	P		**Pn**	**08 46 40.7**	**+2.6**
KRHZ	**Kereru**	**1.30**	**158**	P		**Pn**	**08 46 41.2**	**+2.8**
SNGZ	**Shannon Statio**	**1.31**	**105**	P		**Pn**	**08 46 39.8**	**+1.4**
MKAZ	**Moumakai**	**1.41**	**341**	P		**Pn**	**08 46 40.8**	**+1.3**
MWZ	**Matawai**	**1.42**	**86**	P		**Pn**	**08 46 39.7**	**+0.2**
WAZ	**Wanganui**	**1.43**	**204**	P		**Pn**	**08 46 43.1**	**+3.5**
PNHZ	**Pukenui**	**1.51**	**166**	P		**Pn**	**08 46 43.0**	**+2.5**
RUGZ	**Raukumara Rang**	**1.61**	**73**	P		**Pn**	**08 46 40.4**	**-1.3**
RIGZ	**Rimuhau**	**1.62**	**100**	P		**Pn**	**08 46 42.3**	**+0.7**
KAHZ	**Kahuranaki**	**1.62**	**147**	P		**Pn**	**08 46 44.0**	**+2.4**
TSZ	**Takapari Road**	**1.62**	**174**	P		**Pn**	**08 46 44.2**	**+2.5**
AWAZ	**Awhitu Peninsu**	**1.62**	**328**	P		**Pn**	**08 46 43.2**	**+1.5**
TKGZ	**Te Karaka**	**1.67**	**90**	P		**Pn**	**08 46 43.1**	**+1.0**
WPHZ	**Waipukurau**	**1.71**	**161**	P		**Pn**	**08 46 44.8**	**+2.2**
WIAZ	**Waiheke Island**	**1.71**	**344**	P		**Pn**	**08 46 43.4**	**+0.7**
HAZ	**Te Kaha**	**1.76**	**68**	P		**Pn**	**08 46 41.6**	**-1.6**
OHWZ	**Ohakea**	**1.79**	**190**	P		**Pn**	**08 46 46.5**	**+3.1**
PXZ	**Pawanui**	**1.81**	**151**	P		**Pn**	**08 46 45.5**	**+1.8**
DVHZ	**Dannevirke**	**1.88**	**170**	P		**Pn**	**08 46 46.3**	**+1.7**
POWZ	**Post Office Ro**	**1.94**	**179**	P		**Pn**	**08 46 47.1**	**+1.8**
CNGZ	**Carnagh Statio**	**1.95**	**92**	P		**Pn**	**08 46 45.6**	**+0.3**
PRHZ	**Porangahau**	**1.95**	**159**	P		**Pn**	**08 46 47.0**	**+1.6**
ANWZ	**Angora Road**	**2.09**	**164**	P		**Pn**	**08 46 48.5**	**+1.6**
PRWZ	**Pori Road**	**2.12**	**175**	P		**Pn**	**08 46 49.0**	**+1.7**
MRZ	**Mangatainoka R**	**2.22**	**183**	P		**Pn**	**08 46 49.8**	**+1.3**
BFZ	**Birch Farm**	**2.27**	**170**	P		**Pn**	**08 46 50.2**	**+1.1**
TIWZ	**Tintock**	**2.33**	**177**	P		**Pn**	**08 46 51.2**	**+1.3**
OGWZ	**Otaki Gorge**	**2.41**	**190**	P		**Pn**	**08 46 52.2**	**+1.5**
HOWZ	**Holdsworth Sta**	**2.46**	**184**	P		**Pn**	**08 46 52.2**	**+0.8**
KIW	**Kapiti Island**	**2.50**	**194**	P		**Pn**	**08 46 52.8**	**+1.0**
TMWZ	**Te Maipa**	**2.66**	**177**	P		**Pn**	**08 46 54.6**	**+0.7**
CAW	**Cannon Point**	**2.71**	**191**	P		**Pn**	**08 46 55.2**	**+0.7**
MTW	**Mount Morrison**	**2.72**	**184**	P		**Pn**	**08 46 54.7**	**+0.2**
DUVZ	**D'Urville Isla**	**2.74**	**210**	P		**Pn**	**08 46 55.7**	**+0.9**
WEL	**Wellington**	**2.93**	**194**	P		**Pn**	**08 46 57.9**	**+0.7**
PAWZ	**Paruwai Farm**	**2.94**	**184**	P		**Pn**	**08 46 57.5**	**+0.1**
TRWZ	**Traveller**	**2.95**	**181**	P		**Pn**	**08 46 57.5**	**0.0**
TCW	**Tory Channel**	**2.98**	**202**	P		**Pn**	**08 46 58.5**	**+0.6**
PLWZ	**Palliser**	**3.14**	**186**	P		**Pn**	**08 46 59.6**	**-0.4**
NNZ	**Nelson**	**3.31**	**212**	P		**Pn**	**08 47 02.3**	**+0.3**
QRZ	**Quartz Range**	**3.43**	**225**	P		**Pn**	**08 47 01.4**	**-2.2**
QRZ	**Quartz Range**	**3.43**	**225**	P		**Pn**	**08 47 03.2**	**-0.4**
BSWZ	**Blackbirch Sta**	**3.56**	**203**	P		**Pn**	**08 47 05.5**	**+0.1**
MRNZ	**Matariki Terra**	**3.73**	**217**	P		**Pn**	**08 47 07.4**	**-0.1**
THZ	**Tophouse**	**3.96**	**212**	P		**Pn**	**08 47 10.3**	**-0.2**
KHZ	**Kahutara**	**4.30**	**202**	P		**Pn**	**08 47 14.7**

baz=3.0
OHH ⇓*i*S **Sb** 09 03 34.7 +0.7
baz=3.0
BTK **Batken** 1.57 288 ⇑*i*P **Pn** 09 03 30.9 -0.1
baz=90
BTK ⇑*i*S **Sn** 09 03 52.4 +1.0
baz=90
ARSB **Arslanbob** 1.75 6 ⇑*i*P **Pb** 09 03 35.4 +0.1
baz=6.0
ARSB ⇑*i*S **Sg** 09 04 00.0 +0.8
baz=6.0
ARK **Arkit** 2.29 345 ⇓*i*P **Pn** 09 03 43.2 +2.2
baz=46
ARK ⇓*i*S **Sb** 09 04 13.5 +0.5
baz=46
TRKS **Terek-Say** 2.30 328 ⇑*i*P **Pn** 09 03 42.3 +1.1
baz=29
TRKS ⇑*i*S **Sn** 09 04 11.8 +2.1
baz=29
ARLS **Aral** 2.56 27 ⇓*i*P **Pb** 09 03 47.2 -2.1
baz=27
ARLS ⇓*i*S **Sb** 09 04 20.3 -0.6
baz=27
MNAS **Manas** 2.91 356 ⇓*e*P **Pn** 09 03 52.1 +2.6
baz=57
MNAS ⇓*e*S **Sb** 09 04 28.2 -2.5
baz=57
UCH **Uchtor** 2.96 26 P **Pb** 09 03 53.6 -2.5
SNR=12
UCH **Uchtor** 2.96 26 ⇑*i*P **Pn** 09 03 52.8 +2.3
baz=26
UCH ⇑*i*S **Sb** 09 04 30.1 -2.3
baz=26
NRN **Naryn** 3.08 52 ⇓*i*P **Pn** 09 03 54.1 +2.0
baz=52
NRN ⇓*i*S **Sb** 09 04 32.3 -3.7
baz=52
EKS2 **Erkin-Say** 3.17 14 P **Pb** 09 03 57.6 -1.9
SNR=21
EKS2 **Erkin-Say** 3.17 14 ⇓*i*P **Pn** 09 03 55.6 +2.5
baz=14
EKS2 ⇓*i*S **Sb** 09 04 34.9 -3.3
baz=14
MRKS **Merke** 3.18 6 Pg **Pb** 09 04 00.3 +0.7
55nm,0.3s
MRKS Lg Lg 09 04 44.0
134nm,0.2s
MRKS **Merke** 3.18 6 *e*P **Pb** 09 04 00.3 +0.7
55nm,0.3s
MRKS *e*S **Sg** 09 04 44.0 -1.1
135nm,0.2s
AAK **Ala-Archa** 3.32 23 P **Pb** 09 03 59.3 -2.8
SNR=11
AAK **Ala-Archa** 3.32 23 Pn **Pb** 09 03 59.2 -2.8
6.3nm,0.3s,baz=172,slow=5.7,SNR=30
AAK Sn **Sb** 09 04 41.8 -0.8
3.5nm,0.3s,baz=322,slow=22,SNR=15
35nm,0.5s
AAK **Ala-Archa** 3.32 23 ⇑*i*P **Pn** 09 03 57.9 +2.7
baz=23
AAK ⇑*i*S **Sb** 09 04 38.7 -3.9
baz=23
DZA **Taraz** 3.47 342 Pg **Pb** 09 04 04.9 +0.2
192nm,0.1s
DZA Lg Lg 09 04 51.6
151nm,0.2s
DZA **Taraz** 3.47 342 *e*P **Pb** 09 04 04.9 +0.2
192nm,0.1s
DZA *e*S **Sg** 09 04 51.6 -3.0
151nm,0.2s
KBK **Karagaybulak** 3.48 28 P **Pb** 09 04 02.1 -2.8
SNR=7.3
KBK **Karagaybulak** 3.48 28 ⇑*i*P **Pn** 09 04 00.3 +2.8
baz=28
KBK ⇑*i*S **Sn** 09 04 42.8 +3.9
baz=28
FRU1 **Bishkek** 3.52 23 ⇑*i*P **Pn** 09 04 00.6 +2.8
baz=23
FRU1 ⇑*i*S **Sn** 09 04 43.5 +4.0
baz=23
CHMS **Chumysh** 3.73 23 P **Pn** 09 04 04.5 +3.8
SNR=8.1
CHMS **Chumysh** 3.73 23 ⇓Pn **Pn** 09 04 03.6 +2.9
16nm,0.7s
CHMS ⇑Sn **Sn** 09 04 47.7 +3.1
24nm,0.7s
CHMS **Chumysh** 3.73 23 ⇓*i*P **Pn** 09 04 03.3 +2.6
baz=23
CHMS ⇓*i*S **Sn** 09 04 48.3 +3.7
baz=23
ULHL **Ulahol** 3.75 44 ⇓*i*P **Pn** 09 04 03.4 +2.3
baz=43
ULHL ⇓*i*S **Sn** 09 04 48.9 +3.5
baz=43
BOOM **Boomskoye usch** 3.77 39 ⇓*i*P **Pn** 09 04 04.2 +2.8
baz=38
BOOM ⇓*i*S **Sn** 09 04 49.8 +3.9
baz=38
KK31 **Karatay Array** 3.90 335 Pn **Pn** 09 04 05.6 +2.6
5.4nm,0.3s,baz=156,slow=12,SNR=80
KK31 ⇓Sn **Sn** 09 04 53.7 +4.8
15nm,0.3s,baz=138,slow=22,SNR=4.3
KKAR **Karatay Array** 3.90 335 ⇓*i*P **Pn** 09 04 05.6 +2.5
baz=36
KKAR ⇓*i*S **Sn** 09 04 51.8 +2.9
baz=36
USP **Ospenovka** 3.90 19 ⇓*i*P **Pn** 09 04 05.9 +2.8
baz=19
USP ⇓*i*S **Sn** 09 04 52.4 +3.4
baz=19
TKM2 **Tokmak 2** 3.96 32 ⇓Pn **Pn** 09 04 07.7 +3.7
14nm,0.8s
TKM2 ⇓Lg Lg 09 05 09.0
23nm,0.8s
TKM2 **Tokmak 2** 3.96 32 ⇓*i*P **Pn** 09 04 06.7 +2.6
baz=32
TKM2 ⇓*i*S **Sn** 09 04 54.2 +3.5
baz=32
KDJ **Kajisay** 4.21 51 ⇑*i*P **Pn** 09 04 10.2 +2.8
baz=51
KDJ ⇑*i*S **Sn** 09 05 00.1 +3.4
baz=51
KST **Kastek** 4.21 34 Pg **Pb** 09 04 18.3 +1.0
7.1nm,0.3s
KST Lg Lg 09 05 15.0
37nm,0.5s
KST **Kastek** 4.21 34 *e*P **Pb** 09 04 18.3 +1.0
7.1nm,0.3s
KST *e*S **Sg** 09 05 15.0 -3.3
23nm,0.3s
DGS **Degeres** 4.30 31 Pg **Pb** 09 04 20.5 +1.7
15nm,0.6s
DGS Lg Lg 09 05 18.9
33nm,0.5s
DGS **Degeres** 4.30 31 *e*P **Pb** 09 04 20.5 +1.7
15nm,0.6s
DGS *e*S **Sg** 09 05 18.9 -2.2
33nm,0.5s
MTBS **Maitube** 4.49 37 Pg **Pb** 09 04 23.4 +1.4
8.1nm,0.5s
MTBS Lg Lg 09 05 23.8
20nm,0.3s
MTBS **Maitube** 4.49 37 *e*P **Pb** 09 04 23.4 +1.4
5.9nm,0.2s
MTBS *e*S **Sg** 09 05 23.8 -3.5
20nm,0.3s
KRBS **Karabastau** 4.65 27 Pg **Pb** 09 04 27.1 +2.4
5.4nm,0.3s
KRBS Lg Lg 09 05 30.2
23nm,0.3s
KRBS **Karabastau** 4.65 27 *e*P **Pb** 09 04 27.1 +2.4
4.4nm,0.3s
KRBS *e*S **Sg** 09 05 30.2 -2.2
23nm,0.3s
TNSS **Tian-Shan** 4.67 41 Pg **Pb** 09 04 26.8 +1.5
9.4nm,0.4s
TNSS Lg Lg 09 05 29.6
7.3nm,0.3s
TNSS **Tian-Shan** 4.67 41 *e*P **Pb** 09 04 26.8 +1.5
5.4nm,0.2s
TNSS *e*S **Sg** 09 05 29.6 -3.5
13nm,0.3s
MDOK **Medeo** 4.81 41 Pn Pb 09 04 22.0 -5.6
13nm,1.0s
MDOK Pg Pg 09 04 29.4 -5.9
8.7nm,0.5s
MDOK Lg Lg 09 05 34.0
27nm,0.8s
MDOK Lg Lg 09 05 36.5
28nm,0.7s
MDOK **Medeo** 4.81 41 *e*P **Pb** 09 04 29.4 +1.8
8.7nm,0.5s
MDOK *e*S **Sg** 09 05 34.0 -3.6
27nm,0.8s
KOTS **Kotyrbulak** 4.90 41 Pg **Pb** 09 04 32.2 +3.2
8.8nm,0.6s
KOTS Lg Lg 09 05 38.4
63nm,0.5s
KOTS **Kotyrbulak** 4.90 41 *e*P **Pb** 09 04 32.2 +3.2
8.8nm,0.6s
KOTS *e*S **Sg** 09 05 38.4 -1.9
63nm,0.5s
KTBS **Karatobe** 5.06 34 Pg **Pb** 09 04 34.2 +2.5
7.6nm,0.6s
KTBS Lg Lg 09 05 42.2
17nm,0.3s
KTBS **Karatobe** 5.06 34 *e*P **Pb** 09 04 34.2 +2.5
7.6nm,0.6s
KTBS *e*S **Sg** 09 05 42.2 -3.4
17nm,0.3s
KUU **Kurty** 5.07 31 Pg **Pb** 09 04 34.1 +2.3
6.4nm,0.2s
KUU Lg Lg 09 05 42.0
17nm,0.3s
KUU **Kurty** 5.07 31 *e*P **Pb** 09 04 34.1 +2.3
6.4nm,0.2s
KUU *e*S **Sg** 09 05 42.0 -3.8
17nm,0.3s
BTLS **Baital** 5.54 10 Pg **Pg** 09 04 44.9 -4.1
5.5nm,0.3s
BTLS Lg Lg 09 06 00.3
7.8nm,0.4s
BTLS **Baital** 5.54 10 *e*P **Pg** 09 04 44.9 -4.1
5.5nm,0.3s
BTLS *e*S **Sg** 09 06 00.3 -0.4
7.8nm,0.3s
KURS **Kuram** 5.63 44 Pg **Pb** 09 04 44.5 +3.1
4.4nm,0.3s
KURS Lg Lg 09 05 59.8
8.9nm,0.7s
KURS **Kuram** 5.63 44 *e*P **Pb** 09 04 44.5 +3.1
2.8nm,0.2s
KURS *e*S **Sg** 09 05 59.8 -3.9
8.9nm,0.7s
KPKS **Kokpek** 5.90 47 Pg **Pb** 09 04 48.9 +2.9
7.4nm,0.1s
KPKS Lg Lg 09 06 07.3
12nm,0.6s
KPKS **Kokpek** 5.90 47 *e*P **Pb** 09 04 48.9 +2.9
7.4nm,0.1s
KPKS *e*S **Sg** 09 06 07.3 -5.1
7.7nm,0.3s
UZB **Uzynbulak** 5.90 51 Pg **Pb** 09 04 49.1 +2.9
7.7nm,0.3s
UZB Lg Lg 09 06 07.7
7.2nm,0.4s
UZB **Uzynbulak** 5.90 51 *e*P **Pb** 09 04 49.1 +2.9
6.8nm,0.2s
UZB *e*S **Sg** 09 06 07.7 -4.9
7.1nm,0.3s
ARXS **Arharly** 5.97 38 Pg **Pb** 09 04 51.6 +4.3
11nm,0.3s
ARXS Lg Lg 09 06 11.6
14nm,0.5s
ARXS **Arharly** 5.97 38 *e*P **Pb** 09 04 51.6 +4.3
7.2nm,0.3s
ARXS *e*S **Sg** 09 06 11.6 -3.2
14nm,0.5s
BLB **Baldybastay** 6.21 42 Pg **Pb** 09 04 55.6 +4.3
11nm,0.1s
BLB Lg Lg 09 06 18.9
10nm,0.5s
PDGK **Podgornoye** 6.29 51 Pg **Pb** 09 04 56.6 +3.9
2.0nm,0.4s
PDGK Lg Lg 09 06 20.5
3.7nm,0.7s
PDGK **Podgornoye** 6.29 51 ⇓Pn Pn 09 04 41.0 +5.1
1.4nm,0.3s
PDGK ⇓Lg Lg 09 06 24.4
16nm,1.1s
KNOS **Konyrlen** 6.75 43 Pg Pb 09 05 05.8 +5.2
3.2nm,0.1s
KNOS Lg Lg 09 06 36.4
4.0nm,0.7s
DJR **Jarkent** 7.07 46 Pg Pb 09 05 11.1 +5.2
1.6nm,0.1s
DJR Lg Lg 09 06 45.2
6.6nm,0.6s
DJR **Jarkent** 7.07 46 *e*P Pb 09 05 11.1 +5.2
1.0nm,0.1s
DJR *e*S **Sg** 09 06 45.2 -4.6
3.9nm,0.3s
OTUK **Ortayu** 8.66 358 Pg Pg 09 05 41.5 -7.3
1.0nm,0.4s
OTUK Lg Lg 09 07 37.7
3.0nm,0.8s
OTUK **Ortayu** 8.66 358 ⇓Pn **Pn** 09 05 13.1 +4.7
1.7nm,0.7s
OTUK ⇓Lg Lg 09 07 40.2
5.9nm,0.7s
MK31 **Makanchi Array** 10.01 41 ⇓Lg Lg 09 08 20.8
0.6nm,0.6s,baz=11,slow=8.6,SNR=6.9
MKAR **Makanchi Array** 10.01 41 Pn **Pn** 09 05 29.0 +2.1
baz=233,slow=16,SNR=1.7
0.3nm,0.8s
AB31 **Akbulak array** 13.30 321 ⇑Pn **Pn** 09 06 15.6 +3.8
1.3nm,0.7s,baz=125,slow=12,SNR=22
BVAR **Borovoye Array** 13.54 354 Pn **Pn** 09 06 14.2 -0.9
baz=180,slow=9.8,SNR=3.3
0.5nm,0.4s
AKTO **Aktyubinsk** 15.02 321 ⇑Pn **Pn** 09 06 37.6 +2.4
1.1nm,0.6s
AKTO **Aktyubinsk** 15.02 321 Pn **Pn** 09 06 37.1 +1.9
0.1nm,0.3s,baz=104,slow=8.3,SNR=1.9
AKTO LR LR 09 12 44.0
comp=Z,36nm,18.8s,baz=224,slow=38
0.9nm,0.6s
ZALV **Zalesovo Beam** 16.54 26 Pn **P** 09 06 57.1 -0.3
0.2nm,0.3s,baz=216,slow=11,SNR=4.5
0.5nm,0.3s
WSAR **Wadi Sarin** 20.23 220 LR LR 09 16 34.4
comp=Z,40nm,18.5s,baz=50,slow=41
FINES **FINESS Array B** 35.77 323 P **P** 09 10 02.4 +0.5
2.1nm,0.9s,baz=101,slow=9.9,SNR=4.8
2.1nm,0.9s
ARCES **ARCESS Array B** 38.87 336 P **P** 09 10 28.8 +0.7
2.5nm,0.9s,baz=112,slow=9.8,SNR=1.9
2.5nm,0.9s
HFS **Hagfors** 41.56 320 P **P** 09 10 49.9 -0.6
4.0nm,0.9s,baz=78,slow=9.4,SNR=5.1
4.0nm,0.9s
TORD **Torodi Ar. Bea** 67.19 268 P **P** 09 13 55.9 -1.7
0.5nm,0.4s,baz=55,slow=5.7,SNR=8.4
0.5nm,0.4s
ILAR **Eielson Array** 71.43 17 P **P** 09 14 21.0 -2.1
0.2nm,0.8s,baz=304,slow=6.4,SNR=4.1
0.2nm,0.8s

SCB 03 09:03:19.1±1.0, 18°72'S×63°88'W, h36km±4km, ML3.4/1, MW3.6, Error ellipse: s-maj=4.1km s-min=2.8km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOTI	**Planta Incahua**	**1.12**	**169**	Pg		Pn	Pn	09 03 40.9	+2.6
AOEA	**Aiquile**	**1.39**	**293**	Pg		Pn	Pn	09 03 46.3	+4.0
AOEA				Sg		Sn	Sn	09 04 05.9	+6.3
AOEA				IAML				09 04 11.4	
	557nm,0.5s								
SOET	**ToroToro**	**1.93**	**288**	Pg		Pn	Pn	09 03 54.7	+5.0
MOCB	**Mochara**	**3.01**	**213**	Pn		Pn	Pn	09 04 09.6	+4.9
BBSD	**Serra de San D**	**3.47**	**64**	Pn		Pn	Pn	09 04 15.6	+5.1
SIV	**San Ignacio**	**3.82**	**45**	Pn		Pn	Pn	09 04 20.2	+4.8
BBOE	**La Paz, Chanca**	**4.35**	**295**	Pn		Pn	Pn	09 04 28.0	+4.8
LPAZ	**La Paz**	**4.72**	**300**	Pn		Pn	Pn	09 04 33.3	+4.9
BBOD	**La Paz, Gloria**	**4.95**	**294**	Pn		Pn	Pn	09 04 36.8	+5.3

*AEIC **03** 09:11:19.3±1.3, 56°3'N±0°.1×148°.78W±0°.09, h10km±7km, Error ellipse: s-maj=17.1km s-min=7.2km az=186.0*
NEIC 03 09:11:17.1±0.9, 56°.35N±0°.09×148°.9W±0°.1, h21km±10km, ML3.6/36, ML3.3(AEIC), Error ellipse: s-maj=13.8km s-min=8.1km az=157.0, Gulf of Alaska

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

KDAK	**Kodiak Island**	**2.49**	**307**			Pn		09 11 56.7	+0.3
KDAK						Sn		09 12 24.9	-1.1
OHAK	**Old Harbor**	**2.59**	**292**			Pn		09 11 57.6	0.0
OHAK						Sn		09 12 27.0	-1.5
SYI	**Shuyak Island**	**2.96**	**321**			Pn		09 12 02.8	0.0
SYI						Sn		09 12 38.0	+0.4
SYI				IAML				09 13 38.6	
	comp=E,51nm,1.5s								
CNPM	**China Poot**	**3.43**	**339**			Pn		09 12 09.3	0.0
CNPM						Sn		09 12 49.3	0.0
BRSE	**Bradley Lake S**	**3.55**	**344**			Pn		09 12 10.9	0.0
BRSE						Sn		09 12 50.8	-1.3
BRLK	**Bradley Lake**	**3.59**	**343**			Pn		09 12 11.4	-0.1
P23K	**Montague Islan**	**3.74**	**11**			Pn		09 12 13.0	-0.5
P23K						Sn		09 12 54.1	-2.7
SLKM	**Skilak Lake**	**4.23**	**351**			Pn		09 12 20.2	-0.1
HIN	**Hinchinbrook I**	**4.25**	**16**			Pn		09 12 20.3	-0.2
HIN				IAML				09 14 49.0	
	comp=N,64nm,1.6s								
HIN				IAML				09 15 04.4	
	comp=E,77nm,1.8s								
IVE	**Iliamna Volcan**	**4.29**	**331**			Pn		09 12 20.9	-0.2
KAIM	**Kayak Island**	**4.29**	**31**			Pn		09 12 20.9	-0.2
EYAK	**Cordova Ski Ar**	**4.52**	**20**			Pn		09 12 24.5	+0.3
P18K	**Big Mountain,**	**4.57**	**315**	Pn		Pn		09 12 24.8	-0.1
P18K				IAML				09 14 53.2	
	comp=E,23nm,0.5s								
P18K				IAML				09 14 53.4	
	comp=N,25nm,0.8s								
SUCK	**Suckling Hills**	**4.60**	**34**			Pn		09 12 25.6	+0.3
SUCK				IAML				09 13 02.7	
	comp=N,54nm,1.9s								
SUCK				IAML				09 14 55.5	
	comp=E,67nm,0.5s								
RSO	**Redoubt South**	**4.61**	**335**	Pn		Pn		09 12 25.5	-0.1
RAGM	**Ragged Mountai**	**4.61**	**27**	Pn		Pn		09 12 25.4	-0.2
RAGM				IAML				09 15 22.8	
	comp=E,82nm,1.1s								
HMT	**Hamilton**	**4.68**	**29**			Pn		09 12 26.4	0.0
HMT				IAML				09 14 59.8	
	comp=N,68nm,0.5s								
GOAT	**Goat Mountain**	**4.77**	**25**			Pn		09 12 28.0	+0.3
RC01	**Rabbit Creek A**	**4.78**	**355**	Pn		Pn		09 12 29.0	+1.2
RC01				IAML				09 15 15.8	
	comp=E,17nm,0.5s								
RC01				IAML				09 15 32.9	
	comp=N,22nm,0.6s								
O18K	**Koktuh Hills**	**4.87**	**319**			Pn		09 12 28.6	-0.4
O18K				IAML				09 15 43.4	
	comp=E,60nm,0.5s								
BERG	**Berg Lake**	**4.88**	**32**			Pn		09 12 28.5	-0.6
BERG				IAML				09 15 08.8	
	comp=E,72nm,0.6s								
SNH	**Sunshine Point**	**4.99**	**37**	Pn		Pn		09 12 30.5	-0.2
SNH				IAML				09 15 15.0	
	comp=E,42nm,1.6s								
SNH				IAML				09 15 22.8	
	comp=N,44nm,1.9s								
KHIT	**Khitrov Hills**	**5.06**	**33**			Pn		09 12 31.4	-0.3
BMRM	**Bremner River**	**5.14**	**24**			Pn		09 12 32.8	0.0
WAX	**Waxell Ridge**	**5.19**	**35**	Pn		Pn		09 12 33.7	+0.2
CRQM	**Cirque**	**5.34**	**32**	Pn		Pn		09 12 35.4	-0.3
CRQM				IAML				09 16 10.4	
	comp=E,53nm,0.6s								
KLU	**Klutina**	**5.38**	**15**	Pn		Pn		09 12 36.3	+0.2
KLU				IAML				09 16 07.2	
	comp=E,48nm,0.4s								
KLU				IAML				09 16 07.7	
	comp=N,52nm,0.4s								
ISLE	**Juniper Island**	**5.47**	**36**	Pn		Pn		09 12 36.9	-0.5
VRDI	**Verde Repeater**	**5.64**	**28**	Pn		Pn		09 12 39.4	-0.4
N25K	**Chitina, Valde**	**5.71**	**21**	Pn		Pn		09 12 41.1	+0.4
GLB	**Gilahina Butte**	**5.74**	**25**	Pn		Pn		09 12 41.0	0.0
TABL	**Table Mountain**	**5.77**	**41**	Pn		Pn		09 12 41.1	-0.4
BARN	**Barnard Glacie**	**6.03**	**35**	Pn		Pn		09 12 45.0	-0.1
CTGM	**Chitina Glacie**	**6.07**	**37**	Pn		Pn		09 12 45.5	-0.1
BCPM	**Bancas Point**	**6.08**	**50**	Pn		Pn		09 12 45.9	+0.3
LOGN	**Logan Glacier**	**6.08**	**39**	Pn		Pn		09 12 46.3	+0.4
O29M	**Mount Kennedy**	**6.71**	**50**	Pn		Pn		09 12 54.8	+0.4
P29M	**Windy Craggy**	**6.77**	**56**	Pn		Pn		09 12 55.0	-0.1
M16K	**Timber Creek**	**7.04**	**316**	Pn		Pn		09 12 57.2	-1.7
N15K	**Kwethluk River**	**7.05**	**308**	Pn		Pn		09 12 59.7	+0.8
S31K	**Pelican**	**7.06**	**72**	Pn		Pn		09 12 57.7	-1.3

*IDC **03** 09:12:48.9±1.2, 22°.81N×145°.49E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=47.0km s-min=21.7km az=80.0*
ISC 03 09:12:50.6±1.2, 22°.7N±0°.2×145°.7E±0°.3, h10km, n7, σ2s25/7, mb3.9/7, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.20**	**318**	P		**P**		**09 17 40.0**	**+3.7**
	0.9nm,0.8s,baz=153,slow=9.0,SNR=5.0								
SONM	**Songino Array**	**40.07**	**319**	P		**P**		**09 20 24.7**	**-1.5**
	0.7nm,0.8s,baz=132,slow=8.4,SNR=4.6								
	0.7nm,0.8s								
WRA	**Warramunga Arr**	**43.81**	**195**	P		**P**		**09 20 57.3**	**+0.5**
	1.4nm,0.6s,baz=17,slow=8.7,SNR=10.0								
	1.4nm,0.6s								
ASAR	**Alice Springs**	**47.49**	**195**	P		**P**		**09 21 26.1**	**+0.1**
	0.7nm,0.6s,baz=19,slow=7.7,SNR=13								
	0.7nm,0.6s								
KURBB	**Kurchatov Arra**	**58.37**	**316**	P		**P**		**09 22 44.5**	**-1.5**
	0.7nm,0.5s,baz=91,slow=7.2,SNR=11								
	0.7nm,0.5s								
BVAR	**Borovoye Array**	**63.41**	**319**	P		**P**		**09 23 18.9**	**-1.4**
	2.0nm,0.7s,baz=88,slow=8.0,SNR=11								
	2.0nm,0.7s								
NVAR	**Mina Array Bea**	**80.71**	**52**	P		**P**		**09 25 05.0**	**+0.5**
	0.2nm,0.6s,baz=268,slow=7.2,SNR=2.0								
	0.2nm,0.6s								

*IDC **03** 09:13:36.5±1.0, 55°.97N×149°.88W, h0km, mb3.7/11, mbtmp3.7/15, ML3.3/4, MS3.1/12, Error ellipse: s-maj=25.6km s-min=15.5km az=33.0*
*NEIC **03** 09:13:37.1±1.1, 55°.99N±0°.08×149°.8W±0°.1, h18km±6km, mb4.2/5, ML4.0/42, ML3.8(AEIC), Error ellipse: s-maj=12.2km s-min=8.7km az=180.0*
*AEIC **03** 09:13:40.5±1.1, 55°.97N±0°.08×149°.75W±0°.08, h12km±6km, Error ellipse: s-maj=12.2km s-min=6.5km az=178.0*
ISC 03 09:13:37.3±0.7, 56°.10N±0°.07×149°.76W±0°.05, h10km, n272, σ0s94/268, mb4.0/11, MS3.1/9, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.25**	**302**	Pn		**Pn**		**09 14 13.4**	**-1.1**
OHAK						**Sn**		**09 14 39.6**	**-2.7**
OHAK	**Old Harbor**	**2.25**	**302**	P		**Pn**		**09 14 13.4**	**-1.1**
OHAK	**Old Harbor**	**2.25**	**302**	P		**Pn**		**09 14 13.3**	**-1.1**
	baz=120								
OHAK				S		**Sn**		**09 14 39.3**	**-3.0**
	baz=120								
KDAK	**Kodiak Island**	**2.29**	**319**	Pn		**Pn**		**09 14 14.9**	**-0.2**
KDAK						**Sn**		**09 14 41.1**	**-2.2**
KDAK	**Kodiak Island**	**2.29**	**319**	Pn		**Pn**		**09 14 14.7**	**-0.4**
	16nm,0.3s,baz=161,slow=4.8,SNR=96								
KDAK						**Sn**		**09 14 40.8**	**-2.5**
	53nm,0.3s,baz=20,slow=22,SNR=6.2								
KDAK				LR		LR		09 15 26.8	
	comp=Z,326nm,19.0s,baz=177,slow=47								
	44nm,0.3s								
SII	**Sitkinak Islan**	**2.51**	**282**	Pn		**Pn**		**09 14 16.5**	**-1.6**
SII				IAML				09 14 53.9	
	comp=E,459nm,0.7s								
SII				IAML				09 14 56.7	
	comp=N,350nm,0.6s								
SII	**Sitkinak Islan**	**2.51**	**282**	P		**Pn**		**09 14 16.6**	**-1.5**
SII	**Sitkinak Islan**	**2.51**	**282**	S		**Sn**		**09 14 46.0**	**-2.7**
	baz=101								
Q20K	**Shuyak Island**	**2.89**	**332**	P		**Pn**		**09 14 23.4**	**0.0**
	baz=150								
Q20K				S		**Sn**		**09 14 57.3**	**-0.9**
	baz=150								
SYI	**Shuyak Island**	**2.89**	**332**			**Pn**		**09 14 23.6**	**+0.2**
CNPM	**China Poot**	**3.53**	**348**			**Pn**		**09 14 32.0**	**-0.1**
CNPM				IAML				09 15 16.6	
	comp=N,136nm,0.5s								
Q19K	**Cape Douglas,**	**3.53**	**325**			**Pn**		**09 14 32.7**	**+0.5**
Q19K	**Cape Douglas,**	**3.53**	**325**	P		**Pn**		**09 14 32.9**	**+0.7**
	baz=143								
KAHG	**Katmai Hook Gl**	**3.54**	**315**			**Pn**		**09 14 32.8**	**+0.5**

KCE Katmai Mt Cerb 3.65 308 Pn 09 14 34.7 +0.8
BRSE Bradley Lake S 3.69 352 Pn 09 14 33.6 -0.8
BRSE Sn 09 15 16.1 -1.8
BRSE Bradley Lake S 3.69 352 P Pn 09 14 33.6 -0.8
baz=172
BRSE S Sn 09 15 16.1 -1.8
baz=172
ACHA Angle Creek He 3.70 307 Pn 09 14 34.5 0.0
HOM Homer 3.71 345 Pn Pn 09 14 34.3 -0.3
HOM IAML 09 15 20.1
comp=N,296nm,0.4s
HOM IAML 09 15 31.7
comp=E,310nm,1.2s
HOM Homer 3.71 345 P Pn 09 14 34.6 0.0
baz=164
BRLK Bradley Lake 3.73 351 Pn 09 14 34.0 -0.9
BRLK IAML 09 15 21.0
comp=E,166nm,0.6s
ANCK Angle Creek 3.77 306 Pn 09 14 35.6 +0.2
KVTA Katmai Vly 10 3.78 310 Pn 09 14 36.1 +0.6
Q23K Middleton Isla 3.81 27 Pn Pn 09 14 35.0 -0.9
Q23K IAML 09 16 36.2
comp=E,344nm,1.9s
Q23K IAML 09 17 11.3
comp=N,218nm,1.6s
Q23K Middleton Isla 3.81 27 P Pn 09 14 35.4 -0.5
baz=210
MID Middleton Isla 3.81 27 Pn Pn 09 14 35.0 -0.9
MID IAML 09 16 07.1
comp=N,294nm,1.7s
MID IAML 09 16 36.2
comp=E,360nm,1.8s
MID Middleton Isla 3.81 27 P Pn 09 14 35.4 -0.5
KAHC Katmai Hardscr 3.82 314 Pn 09 14 36.9 +0.7
KAHC Katmai Hardscr 3.82 314 P Pn 09 14 36.9 +0.7
baz=131
CNTC Contact Creek 3.98 306 Pn 09 14 38.3 -0.1
Q17K Contact Creek 3.98 306 P Pn 09 14 38.3 -0.1
baz=122
P19K Oil Pt 4.02 334 Pn Pn 09 14 39.5 +0.6
P19K Oil Pt 4.02 334 P Pn 09 14 39.2 +0.3
baz=152
SEW Seward 4.02 2 Pn 09 14 38.3 -0.6
SEW Seward 4.02 2 P Pn 09 14 38.0 -0.8
baz=182
P23K Montague Islan 4.11 17 Pn 09 14 39.7 -0.4
P23K Montague Islan 4.11 17 P Pn 09 14 39.7 -0.4
baz=198
O20K Slope Mountain 4.27 340 Pn 09 14 42.3 -0.2
O20K Slope Mountain 4.27 340 P Pn 09 14 42.3 -0.2
baz=158
IVE Iliamna Volcan 4.29 338 Pn 09 14 42.2 -0.5
P18K Big Mountain, 4.41 321 Pn Pn 09 14 44.0 -0.3
P18K Big Mountain, 4.41 321 P Pn 09 14 44.0 -0.3
baz=137
SLKM Skilak Lake 4.43 357 Pn 09 14 43.5 -1.0
RED Redoubt Volcan 4.62 341 Pn 09 14 45.9 -1.3
HIN Hinchinbrook I 4.64 20 Pn Pn 09 14 47.3 -0.1
HIN IAML 09 15 41.0
comp=E,149nm,0.8s
HIN IAML 09 15 42.0
comp=N,140nm,1.0s
RSO Redoubt South 4.65 341 Pn 09 14 47.5 -0.2
P17K Kvichak River 4.74 314 Pn 09 14 49.0 +0.3
P17K Kvichak River 4.74 314 P Pn 09 14 49.1 +0.3
baz=129
O18K Koktuh Hills 4.75 325 Pn 09 14 48.8 -0.2
O18K IAML 09 15 45.3
comp=N,126nm,0.8s
O18K IAML 09 15 57.9
comp=E,85nm,0.7s
O18K Koktuh Hills 4.75 325 P Pn 09 14 48.4 -0.6
baz=141
O19K Port Alsworth 4.76 331 Pn Pn 09 14 49.0 0.0
O19K Port Alsworth 4.76 331 P Pn 09 14 48.8 -0.2
baz=148
KAIM Kayak Island 4.77 34 Pn Pn 09 14 49.2 0.0
KAIM IAML 09 15 50.7
comp=E,206nm,1.6s
KAIM Kayak Island 4.77 34 P Pn 09 14 49.1 -0.1
baz=218
EYAK Cordova Ski Ar 4.94 24 Pn 09 14 51.5 +0.1
EYAK Cordova Ski Ar 4.94 24 P Pn 09 14 51.5 +0.1
comp=E,70nm,0.5s
EYAK Cordova Ski Ar 4.94 24 P Pn 09 14 51.3 -0.2
baz=207
FID Port Fidalgo 4.97 19 Pn 09 14 51.6 -0.4
FID IAML 09 15 46.2
comp=E,118nm,0.6s
FID IAML 09 15 49.8
comp=N,75nm,0.4s
RC01 Rabbit Creek A 5.01 0 Pn Pn 09 14 52.2 -0.2
RC01 IAML 09 15 51.0
comp=E,86nm,0.3s
RC01 IAML 09 15 54.0
comp=N,86nm,0.4s
RC01 Rabbit Creek A 5.01 0 P Pn 09 14 51.8 -0.6
baz=180
RAGM Ragged Mountai 5.07 30 Pn 09 14 53.7 +0.4
RAGM IAML 09 15 56.6
comp=E,156nm,0.7s
SUCK Suckling Hills 5.09 36 Pn 09 14 53.9 +0.3
SUCK IAML 09 15 56.0
comp=N,101nm,1.6s
SUCK IAML 09 16 02.5
comp=E,101nm,1.3s
HMT Hamilton 5.15 32 Pn 09 14 54.7 +0.3
NICHA Nichawak Mount 5.16 34 Pn 09 14 54.5 0.0
GOAT Goat Mountain 5.22 28 Pn 09 14 55.4 0.0
N20K Mount Spurr 5.27 347 P Pn 09 14 55.5 -0.6
baz=165
SPCR Spurr Chakacha 5.27 347 Pn 09 14 55.5 -0.6
BGLC Bering Glacier 5.29 38 Pn 09 14 56.6 +0.3
BGLC Bering Glacier 5.29 38 P Pn 09 14 56.6 +0.3
baz=223
P16K Nushagak River 5.32 307 Pn 09 14 56.6 -0.1
P16K Nushagak River 5.32 307 P Pn 09 14 56.6 -0.1
baz=121
SPCP Crater Peak Br 5.33 347 Pn 09 14 57.1 +0.1
N19K Bonanza Creek 5.34 334 Pn 09 14 56.4 -0.7
N19K Bonanza Creek 5.34 334 P Pn 09 14 56.4 -0.7
baz=151
BERG Berg Lake 5.36 34 Pn 09 14 57.3 0.0
O17K Koliganek Bris 5.37 316 Pn 09 14 57.2 -0.2
O17K Koliganek Bris 5.37 316 P Pn 09 14 57.2 -0.2
baz=131
KNK Knik Glacier 5.37 7 Pn 09 14 57.4 -0.1
KNK Knik Glacier 5.37 7 P Pn 09 14 57.2 -0.2
baz=188
GRIN Grindle Hills 5.40 36 Pn 09 14 58.1 +0.2
DIV Divide 5.46 21 Pn 09 14 58.8 +0.1
S14K Fog Glacier 5.47 276 P Pn 09 14 58.5 -0.4
baz=89
VNFG Fog Glacier, M 5.47 276 Pn 09 14 58.5 -0.4
SNH Sunshine Point 5.49 39 Pn 09 14 59.5 +0.3
PMR Palmer 5.52 3 P Pn 09 14 59.4 0.0
PMR Palmer 5.52 3 P Pn 09 14 59.9 +0.5
baz=184
STLK Strandline Lak 5.52 350 Pn 09 14 59.2 -0.4
KHIT Khitrov Hills 5.55 36 Pn 09 14 59.8 -0.2
BMRM Bremner River 5.58 27 Pn 09 15 00.6 +0.2
BMRM Bremner River 5.58 27 P Pn 09 14 60.0 -0.3
baz=211
N18K Kilae Creek 5.61 327 Pn 09 15 00.5 -0.3
N18K Kilae Creek 5.61 327 P Pn 09 15 00.2 -0.6
baz=143
O16K Kokwok River B 5.66 312 Pn 09 15 01.3 -0.1
O16K Kokwok River B 5.66 312 P Pn 09 15 01.5 +0.1
baz=125
WAX Waxell Ridge 5.68 37 Pn 09 15 01.6 -0.2
KLU Klutina 5.76 19 Pn Pn 09 15 03.3 +0.4
KLU Klutina 5.76 19 P Pn 09 15 03.2 +0.3
baz=202
BARK Barkley Ridge 5.77 39 Pn 09 15 03.0 0.0
SML Sawmill 5.77 7 Pn Pn 09 15 03.6 +0.6
SML Sawmill 5.77 7 P Pn 09 15 03.2 +0.2
baz=188
M23K Glacier View 5.81 10 Pn 09 15 04.0 +0.5
M23K Glacier View 5.81 10 P Pn 09 15 03.9 +0.5
baz=191
MESA MESA 5.82 42 Pn Pn 09 15 03.7 0.0
MESA MESA 5.82 42 P Pn 09 15 03.5 -0.2
baz=228
CRQM Cirque 5.82 34 Pn 09 15 03.8 0.0
SVW2 Sparrevohn 5.86 331 Pn Pn 09 15 03.8 -0.4
SVW2 Sparrevohn 5.86 331 P Pn 09 15 03.8 -0.4
SCM Sheep Creek Mo 5.89 11 Pn 09 15 05.0 +0.4
SCM Sheep Creek Mo 5.89 11 P Pn 09 15 05.0 +0.4
baz=193
N17K Nushagak Hills 5.92 322 Pn 09 15 04.6 -0.3
N17K Nushagak Hills 5.92 322 P Pn 09 15 04.7 -0.3
baz=136
ISLE Juniper Island 5.97 38 Pn 09 15 06.0 +0.2
SKT Skwentna 5.97 352 Pn Pn 09 15 06.0 +0.3
SKT Skwentna 5.97 352 P Pn 09 15 05.8 +0.1
baz=170
BAGL Bagley Icefiel 5.98 39 Pn 09 15 05.7 0.0
M20K Styx River 6.06 345 Pn 09 15 06.6 -0.3
M20K Styx River 6.06 345 P Pn 09 15 07.1 +0.2
baz=162
SDPT Sand Point 6.10 267 Pn Pn 09 15 05.8 -1.6
SDPT Sand Point 6.10 267 P Pn 09 15 06.2 -1.2
SDPT Sand Point 6.10 267 P Pn 09 15 05.8 -1.6
baz=79
VRDI Verde Repeater 6.11 30 Pn Pn 09 15 07.8 +0.1
N25K Chitina, Valde 6.14 24 Pn 09 15 08.5 +0.4
N25K Chitina, Valde 6.14 24 P Pn 09 15 08.2 +0.2
baz=208
GLB Gilahina Butte 6.19 28 Pn Pn 09 15 08.7 0.0
KIAG Kiagna River 6.20 36 Pn 09 15 08.5 -0.4
O15K Ungalikthiuk R 6.22 304 Pn 09 15 09.0 -0.1
O15K Ungalikthiuk R 6.22 304 P Pn 09 15 09.0 -0.1
baz=116
SAMH Samovar Hills 6.24 46 Pn 09 15 09.9 +0.5
M18K Stony River 6.26 332 Pn 09 15 08.9 -0.6
M18K Stony River 6.26 332 P Pn 09 15 08.9 -0.6
baz=148
TABL Table Mountain 6.29 43 Pn 09 15 10.5 +0.3
M19K Big River Lodg 6.29 340 Pn Pn 09 15 09.7 -0.4
M24K Tolsona, Glenn 6.30 16 Pn Pn 09 15 11.3 +1.0
M24K Tolsona, Glenn 6.30 16 P Pn 09 15 10.7 +0.5
baz=198
MCARA McCarthy VSAT 6.35 31 Pn Pn 09 15 11.3 +0.5
MCARA McCarthy VSAT 6.35 31 P Pn 09 15 11.4 +0.5
baz=216
PTPK Patty Peak 6.37 34 Pn 09 15 11.5 +0.3
PCA Pinnacle 6.44 48 Pn 09 15 12.3 +0.2
PINM Pinnacle 6.44 48 P Pn 09 15 12.3 +0.2
baz=235
N16K Nishlik Lake 6.46 316 Pn 09 15 12.6 +0.2
N16K Nishlik Lake 6.46 316 P Pn 09 15 12.6 +0.2
baz=129
BARN Barnard Glacie 6.53 37 Pn 09 15 13.9 +0.4
CTG Chitna Glacier 6.57 39 P Pn 09 15 14.0 -0.1
baz=225
CTGM Chitina Glacie 6.58 39 Pn 09 15 14.3 +0.2
PNL Peninsula 6.58 53 Pn 09 15 13.9 -0.2
PNL Peninsula 6.58 53 P Pn 09 15 14.4 +0.3
PNL Peninsula 6.58 53 P Pn 09 15 13.9 -0.2
baz=241
WAT6 Susitna Watana 6.58 8 Pn 09 15 14.7 +0.4
WAT6 Susitna Watana 6.58 8 P Pn 09 15 14.7 +0.4
baz=190
LOGN Logan Glacier 6.60 40 Pn 09 15 14.4 0.0
BCPM Bancas Point 6.62 50 Pn 09 15 15.2 +0.7
L19K White Mountain 6.64 339 Pn 09 15 14.1 -0.7
M17K Holitna River 6.65 326 Pn 09 15 15.0 +0.1
M17K Holitna River 6.65 326 P Pn 09 15 15.1 +0.1
baz=140
HARP HAARP 6.74 19 Pn 09 15 17.3 +1.0
HARP HAARP 6.74 19 P Pn 09 15 17.3 +1.0
baz=202
WAT7 Susitna Watana 6.77 4 Pn 09 15 17.3 +0.6
N15K Kwethluk River 6.82 311 P Pn 09 15 18.0 +0.7
baz=123
M16K Timber Creek 6.89 320 Pn 09 15 18.5 +0.3
M16K Timber Creek 6.89 320 P Pn 09 15 18.6 +0.3
baz=132
O14K Tigyukauivet M 6.93 302 Pn 09 15 19.1 +0.3
O14K Tigyukauivet M 6.93 302 P Pn 09 15 19.1 +0.3
baz=113
PN7A Pavlof North-7 6.94 270 Pn 09 15 17.9 -1.1
DHY Denali Highway 7.10 9 Pn 09 15 22.3 +1.0
DHY Denali Highway 7.10 9 P Pn 09 15 22.2 +0.9
baz=191
PAX Paxson 7.23 16 Pn 09 15 23.4 +0.4
PAX Paxson 7.23 16 P Pn 09 15 23.6 +0.6
baz=199
O29M Mount Kennedy 7.25 50 Pn 09 15 24.1 +0.7
O29M Mount Kennedy 7.25 50 P Pn 09 15 23.7 +0.3
baz=239
P29M Windy Craggy 7.32 56 Pn 09 15 23.8 -0.5
P29M Windy Craggy 7.32 56 P Pn 09 15 23.9 -0.3
baz=246
RND Reindeer 7.35 3 Pn Pn 09 15 25.2 +0.6
YUK8 Steele Glacier 7.35 41 Pn 09 15 26.0 +1.1
YUK8 Steele Glacier 7.35 41 P Pn 09 15 26.0 +1.1
baz=225
M15K Kasigluk River 7.36 313 Pn 09 15 25.2 +0.5
M15K Kasigluk River 7.36 313 P Pn 09 15 25.2 +0.5
baz=124
TRF Thorofare Moun 7.38 358 Pn 09 15 24.7 -0.4
TRF Thorofare Moun 7.38 358 P Pn 09 15 25.9 +0.8
baz=178
N14K Kuskokwak Cree 7.40 306 Pn 09 15 25.6 +0.4
N14K Kuskokwak Cree 7.40 306 P Pn 09 15 25.6 +0.4
baz=117
CAST Castle Rocks 7.44 352 Pn Pn 09 15 25.7 -0.1
CAST Castle Rocks 7.44 352 P Pn 09 15 27.0 +1.2
baz=170
M27K Edge Creek, AK 7.46 30 Pn 09 15 26.1 -0.2
M27K Edge Creek, AK 7.46 30 P Pn 09 15 26.7 +0.5
baz=216
L17K Donlin 7.47 328 Pn 09 15 26.6 +0.3
L17K Donlin 7.47 328 P Pn 09 15 26.5 +0.3
baz=141
KTH Kantishna Hill 7.50 356 Pn Pn 09 15 26.6 -0.1
L16K Owhat River 7.54 322 Pn Pn 09 15 27.1 0.0
L16K Owhat River 7.54 322 P Pn 09 15 27.0 -0.1
baz=134
TTA Tatalina 7.55 338 Pn Pn 09 15 26.7 -0.7
TTA Tatalina 7.55 338 P Pn 09 15 27.9 +0.5
S31K Pelican 7.62 70 Pn Pn 09 15 25.4 -2.8
S31K Pelican 7.62 70 P Pn 09 15 25.6 -2.6
baz=261
MCK McKinley 7.67 3 Pn 09 15 30.2 +1.2
MCK McKinley 7.67 3 P Pn 09 15 30.1 +1.1
baz=183
YUK6 Outpost Mounta 7.69 46 Pn 09 15 30.4 +1.0
YUK6 Outpost Mounta 7.69 46 P Pn 09 15 30.4 +1.0
baz=235
YUK4 Talbot Arm 7.81 43 P Pn 09 15 33.7 +2.6
baz=232
FALS False Pass 7.86 267 Pn Pn 09 15 30.1 -1.4
PLBC Pleasant Camp 7.91 59 Pn 09 15 32.8 +0.6
PLBC Pleasant Camp 7.91 59 P Pn 09 15 32.8 +0.6
baz=250
M14K Bethel 7.92 311 Pn Pn 09 15 33.5 +1.2
M14K Bethel 7.92 311 P Pn 09 15 33.4 +1.2
baz=121
HYT Haines Junctio 7.98 49 Pn Pn 09 15 34.0 +0.7
YUK5 Granite Creek 8.00 46 Pn 09 15 34.8 +1.3
SIT Sitka 8.03 77 Pn Pn 09 15 30.8 -3.0
RIDG Independent Ri 8.05 16 Pn Pn 09 15 34.1 -0.1
ISLZ Isanotski Laza 8.06 266 Pn 09 15 32.8 -1.6
BCAR Beaver Creek A 8.07 27 Pn Pn 09 15 35.2 +0.8
J18K Innoko River 8.17 338 Pn Pn 09 15 35.8 -0.1
SCRK Sand Creek 8.41 18 Pn Pn 09 15 40.4 +1.2
SKAG Skagway 8.41 60 Pn Pn 09 15 38.4 -0.7
BESE Bessie Mountai 8.44 67 Pn Pn 09 15 38.7 -0.9
S32K Killisnoo 8.45 74 Pn Pn 09 15 37.6 -2.0
HDA Harding Lake 8.45 8 Pn Pn 09 15 39.8 +0.2
R32K Eaglecrest 8.56 69 Pn Pn 09 15 41.0 -0.1
JIS Juneau Island 8.63 69 P Pn 09 15 42.7 +0.6
K15K Wolf Creek Mou 8.65 321 Pn 09 15 42.6 +0.2
J25K Salcha River, 8.81 12 Pn 09 15 44.7 0.0
IL31 8.82 8 Pn Pn 09 15 45.2 +0.6
ILAR Eielson Array 8.82 8 Pn Pn 09 15 45.5 +0.8
comp=E,0.5nm,0.3s,baz=189,slow=14,SNR=38
ILAR Sn Sn 09 17 19.2 -4.7
comp=E,0.5nm,0.3s,baz=193,slow=19,SNR=2.9
comp=E,1.5nm,0.5s
COLA College 8.86 5 Pn Pn 09 15 45.4 +0.2
COLA College 8.86 5 P Pn 09 15 46.4 +1.3
MDM Murphy Dome 8.92 4 Pn 09 15 46.2 0.0
WHY Whitehorse 9.05 54 Pn 09 15 48.0 +0.1
I23K Minto, Yukon-K 9.08 1 Pn 09 15 48.6 +0.3
P32M Atlin 9.24 61 Pn Pn 09 15 50.3 -0.2
M30M Minto, Yukon 9.26 40 Pn Pn 09 15 50.8 0.0
DAWY Dawson 9.51 29 Pn Pn 09 15 54.5 +0.3
P33M Teslin, Yukon 9.85 58 Pn Pn 09 15 58.5 -0.3
H18K Honhosa River 10.01 339 Pn Pn 09 16 00.1 -0.9
J29N Klondike Camp 10.13 30 Pn Pn 09 16 02.5 -0.2
FARO Faro, Yukon 10.41 47 Pn Pn 09 16 07.0 +0.5
FYU Fort Yukon 10.72 10 Pn 09 16 10.1 -0.6
DLBC Dease Lake 10.93 69 LR LR 09 19 31.6
comp=E,66nm,19.8s,baz=260,slow=32
COLD Coldfoot 11.17 359 Pn Pn 09 16 16.9 +0.1
ANM Nome 11.45 324 Pn Pn 09 16 19.1 -1.6
BMAR Burnt Mountain 11.63 10 Pn Pn 09 16 23.1 0.0
F15K North Star Dit 12.02 329 Pn Pn 09 16 28.3 -0.1
E22K Anaktuvuk Pass 12.12 356 Pn Pn 09 16 29.0 -0.8
BBB Bella Bella 13.26 98 LR LR 09 20 38.0
comp=E,72nm,20.4s,baz=322,slow=32
F31M Tsiigehtchic 13.61 27 Pn Pn 09 16 50.6 +0.5
HOLB Holberg 13.99 104 Pn Pn 09 16 52.9 -2.6
INK Inuvik 14.32 25 Pn Pn 09 17 00.2 +0.4
INK Inuvik 14.32 25 Pn Pn 09 17 01.2 +1.4
comp=E,0.1nm,0.3s,baz=215,slow=15,SNR=8.4
comp=E,3.5nm,1.0s
B22K Teshekpuk Lake 14.39 355 Pn Pn 09 16 59.8 -0.9
NLWA Neilton Lookou 18.15 108 Pn 09 17 46.4 -2.9
NLWA IAmb IAmb 09 18 01.6
comp=Z,19nm,1.1s
WISH Wishkah 18.38 108 P Pn 09 17 49.1 -2.9
WISH IAmb IAmb 09 17 52.9
comp=Z,18nm,1.0s
YKA Yellowknife Ar 18.86 56 P Pn 09 17 59.3 +1.5
baz=267,slow=10.0,SNR=6.5
comp=Z,0.5nm,0.8s
A36M Sachs Harbour 18.95 23 P Pn 09 17 57.5 -1.3
A36M IAmb IAmb 09 18 11.3
comp=Z,14nm,0.8s
NEW Newport 21.33 98 P P 09 18 25.5 +1.3
comp=Z,1.2nm,0.7s,baz=305,slow=16,SNR=3.0
NEW LR LR 09 24 45.2
comp=Z,68nm,22.0s,baz=285,slow=31
comp=Z,1.2nm,0.7s
K02D Willamette Mer 21.47 118 P P 09 18 23.8 -2.1
YBH Yreka Blue Hor 22.66 118 LR LR 09 25 02.2
comp=Z,63nm,21.5s,baz=332,slow=30
ELK Elko 27.22 110 LR LR 09 28 07.9
comp=Z,47nm,19.0s,baz=244,slow=32
NVAR Mina Array Bea 27.36 117 P P 09 19 23.7 +1.0
comp=Z,0.4nm,0.7s,baz=306,slow=7.7,SNR=3.9
NVAR LR LR 09 28 28.8
comp=Z,55nm,19.1s,baz=316,slow=32
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 28.89 100 P P 09 19 36.6 +0.3
comp=Z,0.2nm,0.7s,baz=302,slow=2.0,SNR=2.6
comp=Z,0.2nm,0.7s
PETK Petropavlovsk- 29.97 287 LR LR 09 32 57.1
comp=Z,23nm,18.3s,baz=58,slow=39
ANMO Albuquerque 36.17 107 LR LR 09 33 16.3
comp=Z,23nm,19.8s,baz=115,slow=33
TXAR Lajitas Array 42.01 110 P P 09 21 30.1 +1.3
comp=Z,0.2nm,0.8s,baz=322,slow=10,SNR=2.5
TXAR LR LR 09 36 56.6
comp=Z,25nm,18.6s,baz=340,slow=33
comp=Z,0.2nm,0.8s
KLR Kul'dur 45.67 296 P P 09 21 58.6 +0.8
comp=Z,1.6nm,0.6s,baz=27,slow=8.5,SNR=5.6
KLR LR LR 09 43 27.3
comp=Z,22nm,18.1s,baz=118,slow=39
comp=Z,1.6nm,0.6s
H11N2 WAKE ISLAND Hy 48.56 240 T T 10 14 36.7
baz=31,slow=76,SNR=20
H11N3 WAKE ISLAND Hy 48.56 240 T T 10 14 37.0
baz=31,slow=76,SNR=18
H11N1 WAKE ISLAND Hy 48.58 240 T T 10 14 38.0
baz=31,slow=76,SNR=14
H11S1 WAKE ISLAND Hy 49.70 239 T T 10 15 58.6
baz=30,slow=76,SNR=16
H11S2 WAKE ISLAND Hy 49.71 239 T T 10 15 59.5
baz=30,slow=76,SNR=15
H11S3 WAKE ISLAND Hy 49.72 239 T T 10 16 02.7
baz=30,slow=76,SNR=14
SONM Songino Array 58.55 310 P P 09 23 35.6 +1.8
comp=Z,1.0nm,0.8s,baz=47,slow=7.8,SNR=7.5
SONM LR LR 09 51 28.8
comp=Z,26nm,19.0s,baz=180,slow=39
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 61.57 327 P P 09 23 54.8 +0.6
comp=Z,0.7nm,0.6s,baz=43,slow=8.2,SNR=4.0
comp=Z,0.7nm,0.6s
FINES FINESS Array B 62.75 2 P P 09 24 04.8 +2.8
comp=Z,1.7nm,0.8s,baz=24,slow=11,SNR=3.4
comp=Z,1.7nm,0.8s
BVAR Borovoye Array 66.34 335 P P 09 24 26.2 +0.7
comp=Z,1.1nm,0.7s,baz=46,slow=8.3,SNR=5.1
comp=Z,1.1nm,0.7s
KURBB Kurchatov Arra 66.36 329 P P 09 24 26.7 +1.0
comp=Z,0.8nm,0.2s,baz=14,slow=4.2,SNR=1.5
comp=Z,0.8nm,0.2s
MKAR Makanchi Array 68.59 324 P P 09 24 40.2 +0.3
comp=Z,0.4nm,0.7s,baz=34,slow=5.0,SNR=3.8
comp=Z,0.4nm,0.7s

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*IDC **03** 09:25:03.3±2.6, 56°.06N×149°.34W, h0km, mb3.3/1, mbtmp3.4/6, ML3.3/5, MS3.2/1, Error ellipse: s-maj=38.1km s-min=23.8km az=52.0*
*NEIC **03** 09:25:05.8±1.1, 56°.16N±0°.09×149°.57W±0°.09, h22km±10km, ML3.6/46, ML3.4(AEIC), Error ellipse: s-maj=13.6km s-min=7.3km az=176.0*
*AEIC **03** 09:25:08.6±1.4, 56°.15N±0°.09×149°.5W±0°.1, h11km±7km, Error ellipse: s-maj=13.4km s-min=9.2km az=163.0*

ISC 03 09:25:03.8±1.1, 56°.20N±0°.08×149°.57W±0°.06, h10km, n177, σ1$10/184, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.29	315	Pn	Pn	09 25 42.2	+0.6
	8.7nm,0.3s,baz=143,slow=8.0,SNR=175						
KDAK				Sn	Sn	09 26 08.6	-1.2
	9.4nm,0.3s,baz=317,slow=22,SNR=22						
	22nm,0.3s						
OHAK	Old Harbor	2.29	298		Pn	09 25 41.8	+0.2
OHAK				IAML		09 26 08.8	
	comp=N,161nm,0.6s						
OHAK	Old Harbor	2.29	298	P	Pn	09 25 41.7	+0.2
	baz=116						
OHAK				S	Sn	09 26 07.8	-2.0
	baz=116						
SII	Sitkinak Islan	2.59	280	P	Pn	09 25 46.7	+1.0
	baz=97						
SII				S	Sn	09 26 15.2	-2.1
	baz=97						
Q20K	Shuyak Island	2.86	329	P	Pn	09 25 50.4	+1.0
	baz=146						
Q20K				S	Sn	09 26 24.1	+0.2
	baz=146						
SYI	Shuyak Island	2.86	329		Pn	09 25 50.3	+0.9
CNPM	China Poot	3.46	346		Pn	09 25 58.1	+0.5
CNPM				IAML		09 26 40.1	
	comp=N,57nm,0.5s						
CNPM				IAML		09 26 40.7	
	comp=E,72nm,0.6s						
Q19K	Cape Douglas,	3.51	323		Pn	09 25 59.6	+1.2
Q19K				IAML		09 26 48.3	
	comp=N,177nm,0.8s						
Q19K	Cape Douglas,	3.51	323	P	Pn	09 25 59.8	+1.4
	baz=140						
KAHG	Katmai Hook Gl	3.55	313		Pn	09 26 00.8	+1.9
KAHG					Sn	09 26 40.6	-0.2
BRSE	Bradley Lake S	3.61	351		Pn	09 25 59.8	+0.1
BRSE					Sn	09 26 41.5	-0.8
BRSE	Bradley Lake S	3.61	351	P	Pn	09 25 59.8	+0.1
	baz=169						
BRSE				S	Sn	09 26 41.5	-0.8
	baz=169						
BRLK	Bradley Lake	3.65	349		Pn	09 26 00.3	+0.1
BRLK				IAML		09 26 45.6	
	comp=E,60nm,0.3s						
Q23K	Middleton Isla	3.67	27		Pn	09 26 00.9	+0.4
Q23K	Middleton Isla	3.67	27	P	Pn	09 26 00.9	+0.4
	baz=209						
MID	Middleton Isla	3.67	27	Pn	Pn	09 26 00.8	+0.3
ACHA	Angle Creek He	3.73	305		Pn	09 26 02.8	+1.4
ACHA					Sn	09 26 44.3	-0.9
KAHC	Katmai Hardscr	3.83	312		Pn	09 26 04.5	+1.7
KAHC	Katmai Hardscr	3.83	312	P	Pn	09 26 04.5	+1.7
	baz=128						
SEW	Seward	3.92	1		Pn	09 26 03.9	0.0
SEW	Seward	3.92	1	P	Pn	09 26 03.7	-0.2

	baz=180						
P19K	**Oil Pt**	**3.98**	**332**			**Pn**	**09 26 05.8 +1.0**
P19K				IAML			09 26 55.9
	comp=E,127nm,0.5s						
P19K				IAML			09 26 56.4
	comp=N,125nm,0.4s						
P19K	**Oil Pt**	**3.98**	**332**	P		**Pn**	**09 26 05.6 +0.8**
	baz=149						
P23K	**Montague Islan**	**3.98**	**16**			**Pn**	**09 26 05.0 +0.2**
P23K	**Montague Islan**	**3.98**	**16**	P		**Pn**	**09 26 05.0 +0.2**
	baz=197						
CNTC	**Contact Creek**	**4.01**	**304**			**Pn**	**09 26 06.5 +1.2**
Q17K	**Contact Creek**	**4.01**	**304**	P		**Pn**	**09 26 06.5 +1.2**
	baz=119						
O20K	**Slope Mountain**	**4.22**	**339**			**Pn**	**09 26 08.8 +0.7**
O20K	**Slope Mountain**	**4.22**	**339**	P		**Pn**	**09 26 08.8 +0.7**
	baz=156						
IVE	**Iliamna Volcan**	**4.24**	**336**			**Pn**	**09 26 08.9 +0.4**
SLKM	**Skilak Lake**	**4.34**	**356**			**Pn**	**09 26 09.7 -0.1**
P18K	**Big Mountain,**	**4.41**	**319**			**Pn**	**09 26 11.3 +0.7**
P18K	**Big Mountain,**	**4.41**	**319**	P		**Pn**	**09 26 11.2 +0.5**
	baz=134						
HIN	**Hinchinbrook I**	**4.51**	**20**			**Pn**	**09 26 12.8 +0.7**
HIN				IAML			09 27 02.4
	comp=E,81nm,1.1s						
HIN				IAML			09 27 03.1
	comp=N,76nm,0.7s						
KAIM	**Kayak Island**	**4.63**	**34**			**Pn**	**09 26 14.6 +0.8**
KAIM				IAML			09 29 07.4
	comp=E,100nm,1.9s						
KAIM	**Kayak Island**	**4.63**	**34**	P		**Pn**	**09 26 14.5 +0.8**
	baz=218						
O19K	**Port Alsworth**	**4.73**	**330**			**Pn**	**09 26 15.4 +0.4**
O19K				IAML			09 27 13.7
	comp=E,91nm,0.4s						
O19K	**Port Alsworth**	**4.73**	**330**	P		**Pn**	**09 26 15.3 +0.2**
	baz=146						
O18K	**Koktuh Hills**	**4.74**	**323**			**Pn**	**09 26 15.7 +0.5**
O18K				IAML			09 27 11.3
	comp=N,23nm,1.0s						
O18K	**Koktuh Hills**	**4.74**	**323**	P		**Pn**	**09 26 15.7 +0.5**
	baz=138						
P17K	**Kvichak River**	**4.75**	**312**			**Pn**	**09 26 16.6 +1.2**
P17K	**Kvichak River**	**4.75**	**312**	P		**Pn**	**09 26 16.6 +1.2**
	baz=126						
EYAK	**Cordova Ski Ar**	**4.80**	**23**			**Pn**	**09 26 17.0 +0.9**
EYAK	**Cordova Ski Ar**	**4.80**	**23**	P		**Pn**	**09 26 16.6 +0.5**
	baz=206						
RC01	**Rabbit Creek A**	**4.91**	**359**	Pn		**Pn**	**09 26 17.9 +0.4**
RC01				IAML			09 27 14.9
	comp=E,72nm,0.4s						
RC01				IAML			09 27 16.1
	comp=N,36nm,0.4s						
RAGM	**Ragged Mountai**	**4.93**	**30**			**Pn**	**09 26 18.8 +0.9**
RAGM				IAML			09 28 12.4
	comp=E,71nm,2.0s						
SUCK	**Suckling Hills**	**4.95**	**36**			**Pn**	**09 26 19.2 +1.1**
SUCK				IAML			09 27 14.9
	comp=N,61nm,1.7s						
SUCK				IAML			09 29 24.5
	comp=E,48nm,2.0s						
HMT	**Hamilton**	**5.01**	**32**			**Pn**	**09 26 20.1 +1.2**
GOAT	**Goat Mountain**	**5.08**	**28**			**Pn**	**09 26 20.9 +1.0**
BGLC	**Bering Glacier**	**5.15**	**38**			**Pn**	**09 26 22.1 +1.3**
BGLC	**Bering Glacier**	**5.15**	**38**	P		**Pn**	**09 26 22.1 +1.3**
	baz=222						
BERG	**Berg Lake**	**5.22**	**34**			**Pn**	**09 26 22.8 +1.0**
BERG				IAML			09 27 22.7
	comp=N,54nm,0.6s						
GRIN	**Grindle Hills**	**5.26**	**36**			**Pn**	**09 26 23.5 +1.1**
SPCP	**Crater Peak Br**	**5.26**	**346**			**Pn**	**09 26 23.7 +1.2**
KNK	**Knik Glacier**	**5.26**	**6**	Pn		**Pn**	**09 26 22.3 -0.1**
KNK				IAML			09 27 21.8
	comp=E,36nm,0.7s						
KNK				IAML			09 27 31.9
	comp=N,22nm,0.7s						
N19K	**Bonanza Creek**	**5.30**	**333**			**Pn**	**09 26 22.8 -0.1**
N19K	**Bonanza Creek**	**5.30**	**333**	P		**Pn**	**09 26 22.9 -0.1**
	baz=149						
SUA	**Susitna One**	**5.32**	**354**	Pn		**Pn**	**09 26 23.6 +0.4**
SUA				IAML			09 27 26.2
	comp=E,21nm,1.6s						
SUA				IAML			09 27 27.8
	comp=N,21nm,0.6s						
P16K	**Nushagak River**	**5.34**	**306**			**Pn**	**09 26 24.5 +1.0**
P16K	**Nushagak River**	**5.34**	**306**	P		**Pn**	**09 26 24.5 +1.0**
	baz=119						
SNH	**Sunshine Point**	**5.35**	**39**			**Pn**	**09 26 24.5 +0.9**
SNH				IAML			09 27 28.1
	comp=E,35nm,1.3s						
SNH				IAML			09 28 08.2
	comp=N,36nm,1.6s						
O17K	**Koliganek Bris**	**5.37**	**315**			**Pn**	**09 26 25.0 +1.1**
O17K	**Koliganek Bris**	**5.37**	**315**	P		**Pn**	**09 26 25.0 +1.1**
	baz=129						
KHIT	**Khitrov Hills**	**5.41**	**35**			**Pn**	**09 26 25.1 +0.7**
BMRM	**Bremner River**	**5.44**	**26**			**Pn**	**09 26 25.8 +0.9**
BMRM	**Bremner River**	**5.44**	**26**	P		**Pn**	**09 26 25.8 +0.9**
	baz=210						
WAX	**Waxell Ridge**	**5.54**	**37**			**Pn**	**09 26 27.0 +0.7**
N18K	**Kilae Creek**	**5.59**	**326**			**Pn**	**09 26 27.4 +0.6**
N18K	**Kilae Creek**	**5.59**	**326**	P		**Pn**	**09 26 26.7 -0.1**
	baz=141						
BARK	**Barkley Ridge**	**5.63**	**39**			**Pn**	**09 26 28.4 +0.9**
KLU	**Klutina**	**5.64**	**18**			**Pn**	**09 26 28.7 +1.1**
KLU	**Klutina**	**5.64**	**18**	P		**Pn**	**09 26 28.6 +1.1**
	baz=201						
SML	**Sawmill**	**5.66**	**6**			**Pn**	**09 26 29.0 +1.1**
SML	**Sawmill**	**5.66**	**6**	P		**Pn**	**09 26 29.0 +1.1**
	baz=187						
MESA	**MESA**	**5.67**	**42**			**Pn**	**09 26 29.0 +0.8**
MESA	**MESA**	**5.67**	**42**	P		**Pn**	**09 26 28.8 +0.6**
	baz=228						
O16K	**Kokwok River B**	**5.68**	**310**			**Pn**	**09 26 28.8 +0.7**
O16K	**Kokwok River B**	**5.68**	**310**	P		**Pn**	**09 26 28.7 +0.7**
	baz=123						
CRQM	**Cirque**	**5.68**	**34**			**Pn**	**09 26 29.2 +0.9**
CRQE	**Cirque**	**5.69**	**34**	P		**Pn**	**09 26 29.1 +0.7**
	baz=219						
M23K	**Glacier View**	**5.69**	**9**			**Pn**	**09 26 29.7 +1.4**
M23K	**Glacier View**	**5.69**	**9**	P		**Pn**	**09 26 29.7 +1.4**
	baz=190						
TGL	**Tana Glacier**	**5.78**	**35**			**Pn**	**09 26 30.4 +0.8**
ISLE	**Juniper Island**	**5.83**	**38**			**Pn**	**09 26 31.1 +0.8**
SVW2	**Sparrevohn**	**5.83**	**330**	Pn		**Pn**	**09 26 30.4 +0.2**
BAGL	**Bagley Icefiel**	**5.83**	**39**			**Pn**	**09 26 31.1 +1.0**
CNBA	**Chernabura Isl**	**5.86**	**261**	Pn		**Pn**	**09 26 30.0 -0.5**
N17K	**Nushagak Hills**	**5.91**	**320**	Pn		**Pn**	**09 26 31.4 +0.2**
VRDI	**Verde Repeater**	**5.97**	**30**			**Pn**	**09 26 33.0 +0.8**
N25K	**Chitina, Valde**	**6.00**	**23**			**Pn**	**09 26 33.6 +1.0**
N25K	**Chitina, Valde**	**6.00**	**23**	P		**Pn**	**09 26 33.7 +1.0**
	baz=207						
GLB	**Gilahina Butte**	**6.05**	**27**			**Pn**	**09 26 34.4 +1.1**
KIAG	**Kiagna River**	**6.06**	**36**			**Pn**	**09 26 34.5 +1.1**
SAMH	**Samovar Hills**	**6.10**	**46**			**Pn**	**09 26 35.5 +1.6**
GRNC	**Granite Creek**	**6.12**	**39**			**Pn**	**09 26 35.4 +1.0**
TABL	**Table Mountain**	**6.15**	**43**			**Pn**	**09 26 35.8 +1.0**
M24K	**Tolsona, Glenn**	**6.18**	**15**			**Pn**	**09 26 36.7 +1.6**
M24K	**Tolsona, Glenn**	**6.18**	**15**	P		**Pn**	**09 26 36.6 +1.6**
	baz=198						
MCARA	**McCarthy VSAT**	**6.21**	**30**			**Pn**	**09 26 36.8 +1.4**
MCARA	**McCarthy VSAT**	**6.21**	**30**	P		**Pn**	**09 26 37.0 +1.6**
	baz=216						
PTPK	**Patty Peak**	**6.22**	**34**			**Pn**	**09 26 36.6 +0.9**
YKU2	**Yakutat**	**6.24**	**54**	Pn		**Pn**	**09 26 36.9 +1.2**
O15K	**Ungalikthiuk R**	**6.26**	**303**			**Pn**	**09 26 37.3 +1.3**
O15K	**Ungalikthiuk R**	**6.26**	**303**	P		**Pn**	**09 26 37.3 +1.3**
	baz=114						
PCA	**Pinnacle**	**6.29**	**48**			**Pn**	**09 26 37.8 +1.2**
PINM	**Pinnacle**	**6.29**	**48**	P		**Pn**	**09 26 37.7 +1.2**
	baz=235						
BARN	**Barnard Glacie**	**6.39**	**37**			**Pn**	**09 26 39.3 +1.3**
WACK	**Wrangell Chich**	**6.40**	**23**			**Pn**	**09 26 39.6 +1.4**
CTG	**Chitna Glacier**	**6.43**	**39**	P		**Pn**	**09 26 39.5 +0.9**
	baz=225						
CTGM	**Chitina Glacie**	**6.43**	**39**			**Pn**	**09 26 39.5 +0.9**
PNL	**Peninsula**	**6.44**	**53**			**Pn**	**09 26 39.6 +1.1**
PNL	**Peninsula**	**6.44**	**53**	P		**Pn**	**09 26 39.6 +1.1**
	baz=241						
LOGN	**Logan Glacier**	**6.45**	**41**			**Pn**	**09 26 39.7 +0.8**
N16K	**Nishlik Lake**	**6.47**	**315**			**Pn**	**09 26 39.8 +0.9**
N16K	**Nishlik Lake**	**6.47**	**315**	P		**Pn**	**09 26 39.8 +0.9**
	baz=128						
WAT6	**Susitna Watana**	**6.47**	**8**			**Pn**	**09 26 39.9 +0.8**
WAT6	**Susitna Watana**	**6.47**	**8**	P		**Pn**	**09 26 39.9 +0.8**
	baz=189						
BCPM	**Bancas Point**	**6.47**	**50**			**Pn**	**09 26 40.3 +1.3**
HARP	**HAARP**	**6.62**	**18**			**Pn**	**09 26 42.2 +1.2**
HARP	**HAARP**	**6.62**	**18**	P		**Pn**	**09 26 42.2 +1.2**
	baz=202						
M17K	**Holitna River**	**6.63**	**325**	Pn		**Pn**	**09 26 41.7 +0.6**
N15K	**Kwethluk River**	**6.84**	**310**	Pn		**Pn**	**09 26 46.2 +2.2**
M16K	**Timber Creek**	**6.88**	**318**	Pn		**Pn**	**09 26 45.9 +1.3**
DHY	**Denali Highway**	**6.99**	**8**	Pn		**Pn**	**09 26 47.6 +1.4**
M26K	**Nabesna, AK**	**7.07**	**26**	Pn		**Pn**	**09 26 48.5 +1.3**
O29M	**Mount Kennedy**	**7.11**	**50**			**Pn**	**09 26 49.1 +1.3**
O29M	**Mount Kennedy**	**7.11**	**50**	P		**Pn**	**09 26 48.7 +0.8**
	baz=239						
P29M	**Windy Craggy**	**7.18**	**56**			**Pn**	**09 26 49.1 +0.4**
P29M	**Windy Craggy**	**7.18**	**56**	P		**Pn**	**09 26 49.1 +0.4**
	baz=246						
YUK2	**White River**	**7.19**	**35**			**Pn**	**09 26 50.7 +1.8**
M27K	**Edge Creek, AK**	**7.32**	**29**			**Pn**	**09 26 52.4 +1.7**
M27K	**Edge Creek, AK**	**7.32**	**29**	P		**Pn**	**09 26 52.6 +1.8**
	baz=216						
CAST	**Castle Rocks**	**7.36**	**351**	Pn		**Pn**	**09 26 53.0 +1.9**
YUK7	**Dusty Glacier**	**7.41**	**49**			**Pn**	**09 26 53.7 +1.6**
N14K	**Kuskokwak Cree**	**7.43**	**305**			**Pn**	**09 26 53.6 +1.6**
N14K	**Kuskokwak Cree**	**7.43**	**305**	P		**Pn**	**09 26 53.6 +1.6**
	baz=115						
S31K	**Pelican**	**7.48**	**71**	Pn		Pn	09 26 50.7 -2.1
L16K	**Owhat River**	**7.53**	**321**	Pn		**Pn**	**09 26 54.1 +0.6**
YUK6	**Outpost Mounta**	**7.54**	**46**			**Pn**	**09 26 55.7 +1.9**
YUK6	**Outpost Mounta**	**7.54**	**46**	P		**Pn**	**09 26 55.7 +1.9**
	baz=235						
P30M	**Million Dollar**	**7.74**	**54**			**Pn**	**09 26 57.9 +1.5**
P30M	**Million Dollar**	**7.74**	**54**	P		**Pn**	**09 26 57.8 +1.4**
	baz=244						
PLBC	**Pleasant Camp**	**7.77**	**60**			**Pn**	**09 26 57.6 +0.9**
PLBC	**Pleasant Camp**	**7.77**	**60**	P		**Pn**	**09 26 57.6 +0.9**
	baz=250						
HYT	**Haines Junctio**	**7.83**	**49**	Pn		**Pn**	**09 26 58.9 +1.2**
M14K	**Bethel**	**7.93**	**310**	Pn		**Pn**	**09 27 00.7 +1.7**
ISLZ	**Isanotski Laza**	**8.17**	**265**			**Pn**	**09 27 02.0 -0.4**
SKAG	**Skagway**	**8.27**	**61**			**Pn**	**09 27 04.7 +1.1**
SCRK	**Sand Creek**	**8.29**	**17**	Pn		**Pn**	**09 27 05.2 +1.2**
BESE	**Bessie Mountai**	**8.30**	**67**			**Pn**	**09 27 04.2 +0.1**
O30N	**Mendenhall**	**8.41**	**51**	Pn		**Pn**	**09 27 06.6 +1.0**
M29M	**Somme Creek**	**8.45**	**38**			**Pn**	**09 27 08.0 +1.9**
JIS	**Juneau Island**	**8.50**	**70**	Pn		**Pn**	**09 27 06.5 -0.2**
J25K	**Salcha River,**	**8.69**	**12**	Pn		**Pn**	**09 27 10.2 +0.7**
K27K	**Chicken**	**8.70**	**22**	Pn		**Pn**	**09 27 10.5 +1.1**
ILAR	**Eielson Array**	**8.70**	**8**	Pn		**Pn**	**09 27 10.4 +0.8**
	comp=N,0.2nm,0.3s,baz=188,slow=13,SNR=9.0						
ILAR				Sn		**Sn**	**09 28 44.3 -3.3**
	comp=N,0.5nm,0.3s,baz=202,slow=23,SNR=11 comp=N,0.4nm,0.4s						
J26L	**Joseph Creek**	**8.84**	**17**			**Pn**	**09 27 12.7 +1.1**
N31M	**Braeburn, Yuko**	**8.89**	**48**			**Pn**	**09 27 11.5 -0.6**
WHY	**Whitehorse**	**8.90**	**54**			**Pn**	**09 27 13.6 +1.2**
I23K	**Minto, Yukon-K**	**8.98**	**1**	Pn		**Pn**	**09 27 14.4 +1.0**
L29M	**L29M**	**9.02**	**35**			**Pn**	**09 27 15.6 +1.6**
P32M	**Atlin**	**9.10**	**62**	Pn		**Pn**	**09 27 15.3 +0.3**
H21K	**Melozitna Rive**	**9.62**	**352**	Pn		**Pn**	**09 27 22.4 +0.3**
P33M	**Teslin, Yukon**	**9.71**	**59**			**Pn**	**09 27 24.1 +0.7**
K29M	**Barlow Dome**	**9.74**	**33**			**Pn**	**09 27 25.9 +2.1**
M31M	**Drury Creek, Y**	**9.82**	**46**			**Pn**	**09 27 27.1 +2.1**
H18K	**Honhosa River**	**9.95**	**338**	Pn		**Pn**	**09 27 28.0 +1.3**
UNV	**Unalaska Valle**	**10.01**	**263**	Pn		**Pn**	**09 27 26.5 -0.8**
FARO	**Faro, Yukon**	**10.26**	**47**	Pn		**Pn**	**09 27 32.9 +2.0**
R33M	**Jennings River**	**10.43**	**64**	Pn		**Pn**	**09 27 34.0 +0.8**
DLBC	**Dease Lake**	**10.80**	**70**	Pn		**Pn**	**09 27 38.7 +0.4**
	comp=N,0.5nm,0.3s,baz=240,slow=6.0,SNR=11 comp=N,1.2nm,0.3s						
E19K	**Redstone River**	**11.85**	**346**	Pn		**Pn**	**09 27 51.9 -0.7**
INK	**Inuvik**	**14.19**	**25**			**Pn**	**09 28 26.1 +1.7**
INK	**Inuvik**	**14.19**	**25**	Pn		**Pn**	**09 28 24.9 +0.4**
	comp=N,0.1nm,0.3s,baz=209,slow=16,SNR=6.0 comp=N,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**18.72**	**56**	P		**P**	**09 29 22.1 0.0**
	baz=264,slow=9.8,SNR=5.0 comp=N,0.3nm,0.7s						
SHEM	**Shemya Is, Ala**	**21.24**	**276**	LR		LR	09 36 54.5
	comp=N,78nm,21.6s,baz=327,slow=33						
NVAR	**Mina Array Bea**	**27.32**	**117**	P		**P**	**09 30 48.3 -0.4**
	comp=N,0.2nm,0.6s,baz=330,slow=8.4,SNR=2.8 comp=N,0.2nm,0.6s						

*IDC **03** 09:36:35.2±1.9,0°.14S×124°.56E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=251.7km s-min=25.8km az=63.0*
*DJA **03** 09:36:38.5±0.3,1°S±4°×12°4E±°,h10km,M4.0/10,mb4.4/1, MLv3.9/10*

ISC 03 09:36:38.5±1.0,0°.49S±0°.08×124°.47E±0°.06,h10km,n11, σ1♀13/12,mb3.2/3,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.16**	**335**	P	**Pb**	**09 36 59.7**	**-1.1**
LUWI	**Luwuk**	**1.79**	**252**	P	**Pn**	**09 37 10.3**	**+0.9**
SANI	**Sanana**	**2.17**	**136**	P	**Pn**	**09 37 14.6**	**-0.1**
SANI				S	**Sn**	**09 37 40.0**	**-1.7**
MRSI	**Marisa**	**2.71**	**291**	P	**Pn**	**09 37 22.2**	**+0.1**
LBMI	**Labuha**	**3.03**	**93**	P	**Pn**	**09 37 27.3**	**+0.7**
LBMI				S	**Sn**	**09 38 03.8**	**+0.7**
NLAI	**Namlea**	**3.79**	**136**	P	**Pn**	**09 37 37.5**	**+0.5**
MPSI	**Mapaga**	**4.64**	**280**	P	**Pn**	**09 37 49.4**	**+0.6**
TTSI	**Tana Toraja**	**5.30**	**241**	P	**Pn**	**09 37 57.9**	**+0.1**
WRA	**Warramunga Arr**	**21.61**	**154**	P	**P**	**09 41 28.3**	**-0.7**
	1.0nm,0.9s,baz=330,slow=11,SNR=2.7 1.0nm,0.9s						
ASAR	**Alice Springs**	**24.79**	**159**	P	**P**	**09 42 03.0**	**+2.2**
	0.6nm,0.9s,baz=343,slow=11,SNR=4.4 0.6nm,0.9s						
MKAR	**Makanchi Array**	**59.80**	**328**	P	P	09 46 40.6	-3.5
	0.3nm,0.4s,baz=121,slow=8.4,SNR=9.6 0.3nm,0.4s						

KRSC 03 09:49:40.5±0.8,54°.98N×163°.63E,h48km±27km,MI3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.36**	**80**	*eP*	Pn	09 50 06.0	+2.9
BKI				*eS*	Sn	09 50 21.9	+1.9
KBG	**Krutoberegovo**	**1.38**	**338**	*eS*	Sn	09 50 21.2	+0.8
TUMD	**Tumrok D**	**1.87**	**278**	*eP*	Pn	09 50 12.5	+2.4
TUMD				*eS*	Sn	09 50 34.1	+1.6
ZLN	**Zelenaya**	**1.92**	**304**	*eP*	Pn	09 50 14.4	+3.6
BZGR	**Bezymyannyi-Gr**	**1.93**	**301**	*eS*	Sn	09 50 37.7	+3.7
BZP	**Bezymyannyi-Pe**	**2.00**	**299**	*eP*	Pn	09 50 14.1	+2.2
CIRR	**Tsirk**	**2.00**	**306**	*eP*	Pn	09 50 14.8	+2.9
SMKR	**Semkarok**	**2.02**	**324**	*eP*	Pn	09 50 13.9	+1.8
TUMR	**Tumrok**	**2.02**	**280**	*eP*	Pn	09 50 15.1	+2.9
BZMR	**Bezymyannaya**	**2.03**	**299**	*eP*	Pn	09 50 15.3	+2.9
BZWR	**Bezymyannyi-We**	**2.04**	**300**	*eP*	Pn	09 50 15.3	+2.7
KMNR	**Kamenistaya**	**2.09**	**293**	*eP*	Pn	09 50 15.9	+2.8
KMNR				*eS*	Sn	09 50 41.5	+3.6
BDR	**Baidarnaya**	**2.10**	**320**	*eP*	Pn	09 50 15.3	+2.0
BDR				*eS*	Sn	09 50 40.2	+2.0
KIRR	**Kirishev**	**2.11**	**299**	*eP*	Pn	09 50 16.6	+3.1
KRSR	**Krestovskiy**	**2.14**	**307**	*eP*	Pn	09 50 15.7	+1.9
KLY	**Klyuchi**	**2.15**	**310**	*eP*	Pn	09 50 14.6	+0.7
KLY				*eS*	Sn	09 50 40.2	+0.9
KPT	**Kopyto**	**2.18**	**298**	*eP*	Pn	09 50 17.2	+2.9
SRDR	**Sredinnyy**	**2.59**	**303**	*eP*	Pn	09 50 22.6	+2.6
SPN	**Mys Shipunski**	**2.84**	**230**	*eP*	Pn	09 50 26.0	+2.6
ESO	**Esso**	**2.96**	**291**	*eP*	Pn	09 50 27.6	+2.6
SMAR	**Somma**	**3.32**	**241**	*eP*	Pn	09 50 33.7	+3.5
UGLR	**Uglovaya**	**3.34**	**240**	*eP*	Pn	09 50 33.9	+3.6
KRX	**Arik**	**3.35**	**243**	*eP*	Pn	09 50 34.2	+3.8
AVH	**Avacha**	**3.35**	**241**	*eP*	Pn	09 50 34.5	+4.1
KOK	**Koryaka**	**3.39**	**242**	*eP*	Pn	09 50 34.7	+3.7
DALK	**Dalny**	**3.48**	**238**	*eP*	Pn	09 50 35.2	+3.2
DALK				*eS*	Sn	09 51 13.1	+1.1
PET	**Petropavlovsk**	**3.53**	**238**	*eP*	Pn	09 50 36.4	+3.6
KRMR	**Karymshinskiy**	**3.90**	**239**	*eP*	Pn	09 50 41.6	+3.7
MTVR	**Mutnovka**	**4.09**	**235**	*eP*	Pn	09 50 44.5	+3.9
GRL	**Gorelyy**	**4.10**	**236**	*eP*	Pn	09 50 44.7	+4.0
ASAK	**Asacha**	**4.29**	**235**	*eP*	Pn	09 50 47.7	+4.4

*IDC **03** 09:50:38.6±21.0,52°.66N×179°.11W,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=431.5km s-min=326.4km az=98.0*

*AEIC **03** 09:50:48.7±1.1,51°.86N±0°.04×176°.93W±0°.02,h10km±3km, ML3.4,Error ellipse: s-maj=5.9km s-min=1.3km az=171.0*
*NEIC **03** 09:50:49.1±0.6,51°.86N±0°.06×176°.91W±0°.03,h14km±4km, Error ellipse: s-maj=9.6km s-min=0.8km az=164.0*

ISC 03 09:50:49.0±0.9,51°.87N±0°.10×176°.93W±0°.03,h12km±7km, n22,σ0♀54/27,mb3.4/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIRH	**Kanaga Island**	**0.11**	**285**		**Pb**	**09 50 52.7**	**-0.3**
KIWB	**Kanaga Island**	**0.14**	**262**		**Pb**	**09 50 53.1**	**-0.4**
ADK	**Adak**	**0.15**	**85**		**Pg**	**09 50 52.3**	**-0.2**
ADK					**Sg**	**09 50 55.1**	**+0.1**
KICM	**Kanaga Island**	**0.17**	**286**		**Pb**	**09 50 53.7**	**-0.5**
KIMD	**Kanaga Island**	**0.22**	**240**		**Pb**	**09 50 54.2**	**-0.7**
KIMD					**Sg**	**09 50 57.5**	**+0.7**
ETKA	**Kagalaska Isla**	**0.33**	**92**		**Pg**	**09 50 55.4**	**-0.1**
GSCK	**Great Sitkin C**	**0.49**	**73**		**Pg**	**09 50 58.8**	**+0.1**
GSMY	**Great Sitkin M**	**0.57**	**72**		**Pg**	**09 50 59.8**	**-0.2**
GSTR	**Great Sitkin T**	**0.58**	**67**	Pg	**Pg**	**09 51 00.1**	**-0.2**
TAFL	**Tanaga Flats**	**0.61**	**260**		**Pb**	**09 51 01.4**	**-0.3**
TAFL					**Sb**	**09 51 09.4**	**-0.8**
TAFP	**Tanaga Falls P**	**0.65**	**273**		**Pb**	**09 51 01.9**	**-0.5**
TAFP					**Sb**	**09 51 11.0**	**-0.5**
TASE	**Tanaga Southea**	**0.69**	**267**		**Pb**	**09 51 02.4**	**-0.5**
GAEA	**Gareloi East**	**1.13**	**266**		**Pg**	**09 51 10.4**	**-0.4**
GAEA					**Sn**	**09 51 26.0**	**-0.2**
ATKA	**Atka Island**	**1.72**	**78**		**Pn**	**09 51 18.7**	**0.0**
KOKL	**Mount Kliuchef**	**1.74**	**74**		**Pn**	**09 51 18.9**	**-0.3**
KOFP	**Korovin Flat P**	**1.79**	**76**		**Pn**	**09 51 20.3**	**+0.5**
CEAP	**Semis' Anvil P**	**2.17**	**275**		**Pn**	**09 51 25.7**	**+0.8**
CESW	**Semis' Southwe**	**2.17**	**272**		**Pn**	**09 51 25.8**	**+0.8**
AMKA	**Amchitka**	**2.40**	**260**		**Pn**	**09 51 28.4**	**+0.4**
NVAR	**Mina Array Bea**	**42.34**	**85**	P	**P**	**09 58 44.2**	**+1.3**
	0.4nm,0.7s,baz=288,slow=8.6,SNR=4.0 0.4nm,0.7s						
PDAR	**Pinedale Array**	**45.05**	**74**	P	**P**	**09 59 04.5**	**-0.3**
	0.3nm,0.6s,baz=334,slow=3.3,SNR=3.9 0.3nm,0.6s						
TXAR	**Lajitas Array**	**57.43**	**83**	P	**P**	**10 00 37.6**	**0.0**
	0.4nm,0.6s,baz=302,slow=6.1,SNR=8.1 0.4nm,0.6s						

*IDC **03** 09:55:39.0±1.2,26°.27N×129°.47E,h0km,mb3.7/4, mbtmp3.7/5,ML3.3/1,Error ellipse: s-maj=32.6km s-min=18.3km az=75.0*
*JMA **03** 09:55:39.5±0.1,26°.3N±0°.7×129°.6E±0°.5,h44km,MV3.4/19, NEAR MINAMI-DAITOJIMA IS*

ISC 03 09:55:39.0±0.8,26°.31N±0°.04×129°.60E±0°.03,h15km,n21, σ2♀15/35,mb3.7/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.25**	**305**	*i* P	**Pb**	**09 56 01.3**	**-1.0**
JYRO				S	**Sb**	**09 56 17.1**	**-1.1**
JOW	**Kunigami**	**1.29**	**294**	*i* P	**Pb**	**09 56 02.2**	**-0.8**
JOW				S	**Sb**	**09 56 17.6**	**-2.0**
JOW	**Kunigami**	**1.29**	**294**	Pn	**Pb**	**09 56 02.2**	**-0.8**
	82nm,0.3s,baz=115,slow=23,SNR=180						
JOW				Sn	**Sb**	**09 56 16.9**	**-2.7**
	169nm,0.3s,baz=112,slow=26,SNR=32						
JOKE	**Okinoerabujima**	**1.39**	**319**	P	**Pn**	**09 56 03.4**	**-0.5**
JOKE				*eS*	**Sn**	**09 56 21.0**	**-1.0**
JNTH	**Nagotoyohara**	**1.43**	**279**	P	**Pn**	**09 56 03.8**	**-1.5**
JNTH				*eS*	**Sn**	**09 56 20.4**	**-2.5**
JMZ	**Minamidaito 2**	**1.54**	**108**	*i* P	**Pn**	**09 56 04.7**	**-1.2**
JMZ				S	**Sn**	**09 56 21.9**	**-3.7**
JKDJ	**Kitadaitoujima**	**1.57**	**103**	P	**Pn**	**09 56 05.5**	**-0.8

O20K	Slope Mountain	4.33	331			Pn	10 14 50.8 +0.5
O20K	Slope Mountain baz=147	4.33	331		P	Pn	10 14 50.8 +0.5
IVE	Iliamna Volcan	4.39	328			Pn	10 14 51.6 +0.4
EYAK	Cordova Ski Ar	4.41	17			Pn	10 14 51.8 +0.5
EYAK	Cordova Ski Ar baz=200	4.41	17		P	Pn	10 14 52.0 +0.7
SUCK	Suckling Hills	4.44	32			Pn	10 14 52.6 +0.9
SUCK	comp=N,62nm,1.4s				IAML		10 15 47.8
SUCK	comp=E,53nm,1.7s				IAML		10 17 28.3
RAGM	Ragged Mountai	4.47	24			Pn	10 14 52.5 +0.3
CNTC	Contact Creek	4.47	298			Pn	10 14 54.1 +1.8
Q17K	Contact Creek baz=112	4.47	298		P	Pn	10 14 54.1 +1.8
NICHA	Nichawak Mount	4.52	29			Pn	10 14 53.9 +1.0
HMT	Hamilton	4.53	27			Pn	10 14 53.7 +0.7
HMT	comp=N,86nm,0.7s				IAML		10 15 55.0
RED	Redoubt Volcan	4.66	332			Pn	10 14 55.0 +0.2
RSO	Redoubt South	4.69	333		Pn	Pn	10 14 55.8 +0.5
BERG	Berg Lake	4.72	30			Pn	10 14 56.0 +0.4
BERG	comp=N,61nm,0.6s				IAML		10 16 00.3
RDWB	Redoubt West	4.73	332			Pn	10 14 56.4 +0.4
RC01	Rabbit Creek A	4.78	352			Pn	10 14 57.5 +1.1
RC01	comp=N,33nm,0.6s				IAML		10 15 51.9
RC01	comp=E,38nm,0.6s				IAML		10 15 52.9
RC01	Rabbit Creek A baz=171	4.78	352	P		Pn	10 14 57.2 +0.8
SNH	Sunshine Point	4.81	35			Pn	10 14 57.5 +0.6
SNH	comp=E,37nm,1.6s				IAML		10 16 05.9
SNH	comp=N,45nm,1.9s				IAML		10 18 02.0
KHIT	Khitrov Hills	4.89	31			Pn	10 14 58.4 +0.3
O19K	Port Alsworth	4.94	323			Pn	10 14 59.3 +0.7
BMRM	Bremner River	5.01	22			Pn	10 15 00.2 +0.6
BMRM	Bremner River baz=205	5.01	22	P		Pn	10 15 00.4 +0.8
O18K	Koktuh Hills	5.01	317	Pn		Pn	10 15 00.4 +0.7
WAX	Waxell Ridge	5.02	33			Pn	10 15 00.3 +0.6
WAX	comp=E,55nm,0.4s				IAML		10 15 55.5
WAX	comp=N,61nm,0.5s				IAML		10 15 57.0
KNK	Knik Glacier	5.05	360			Pn	10 15 01.2 +1.1
KNK	comp=N,22nm,1.2s				IAML		10 16 05.5
KNK	comp=E,21nm,0.6s				IAML		10 16 08.9
KNK	Knik Glacier baz=180	5.05	360	P		Pn	10 15 00.9 +0.8
BARK	Barkley Ridge	5.09	35			Pn	10 15 01.5 +0.7
MESA	MESA	5.11	39			Pn	10 15 01.9 +0.8
MESA	comp=N,43nm,1.2s				IAML		10 18 23.0
MESA	MESA baz=224	5.11	39	P		Pn	10 15 02.0 +0.9
CRQM	Cirque	5.18	30	Pn		Pn	10 15 02.5 +0.4
CRQM	comp=E,26nm,1.2s				IAML		10 16 03.2
CRQM	comp=N,28nm,1.9s				IAML		10 16 15.2
N20K	Mount Spurr baz=156	5.22	339	P		Pn	10 15 03.6 +1.0
SPCR	Spurr Chakacha	5.22	339			Pn	10 15 03.6 +1.0
PMR	Palmer	5.24	356	Pn		Pn	10 15 03.6 +0.9
PMR	comp=E,21nm,0.9s				IAML		10 16 00.9
PMR	comp=N,23nm,0.9s				IAML		10 16 04.4
SUA	Susitna One	5.24	348	Pn		Pn	10 15 03.4 +0.5
SUA	comp=E,20nm,1.6s				IAML		10 16 08.2
KLU	Klutina	5.29	13			Pn	10 15 04.2 +0.8
KLU	comp=N,35nm,0.7s				IAML		10 16 03.7
KLU	comp=E,42nm,0.9s				IAML		10 16 04.9
KLU	Klutina baz=195	5.29	13	P		Pn	10 15 04.6 +1.1
BAGL	Bagley Icefiel	5.29	36			Pn	10 15 03.9 +0.5
ISLE	Juniper Island	5.29	34			Pn	10 15 04.2 +0.6
ISLE	comp=E,30nm,2.0s				IAML		10 16 12.8
ISLE	comp=N,30nm,1.5s				IAML		10 17 02.8
STLK	Strandline Lak	5.43	342			Pn	10 15 06.4 +1.0
M23K	Glacier View	5.44	3			Pn	10 15 07.5 +2.0
M23K	Glacier View baz=184	5.44	3	P		Pn	10 15 07.5 +2.0
SML	Sawmill	5.45	0	Pn		Pn	10 15 06.1 +0.5
N19K	Bonanza Creek	5.46	327	Pn		Pn	10 15 06.6 +0.7
VRDI	Verde Repeater	5.50	26	Pn		Pn	10 15 06.5 +0.1
SAMH	Samovar Hills	5.51	44			Pn	10 15 07.9 +1.4
KIAG	Kiagna River	5.54	32			Pn	10 15 07.4 +0.3
TABL	Table Mountain	5.58	40			Pn	10 15 08.4 +0.8
N25K	Chitina, Valde	5.60	19			Pn	10 15 08.3 +0.5
N25K	Chitina, Valde baz=202	5.60	19	P		Pn	10 15 08.7 +0.9
GLB	Gilahina Butte	5.61	23			Pn	10 15 07.7 -0.1
PCA	Pinnacle	5.69	46			Pn	10 15 09.8 +0.8
PINM	Pinnacle baz=233	5.69	46	P		Pn	10 15 10.0 +1.0
PTPK	Patty Peak	5.72	30			Pn	10 15 10.2 +0.6
O17K	Koliganek Bris	5.73	310			Pn	10 15 10.3 +0.9
O17K	Koliganek Bris baz=123	5.73	310	P		Pn	10 15 10.3 +0.9
MCARA	McCarthy VSAT	5.74	27			Pn	10 15 11.2 +1.6
MCARA	McCarthy VSAT baz=211	5.74	27	P		Pn	10 15 10.9 +1.3
PNL	Peninsula	5.81	52			Pn	10 15 11.5 +0.9
PNL	Peninsula baz=239	5.81	52	P		Pn	10 15 11.5 +0.9
N18K	Kilae Creek	5.83	321			Pn	10 15 11.4 +0.6
N18K	Kilae Creek baz=184	5.83	321	P		Pn	10 15 11.4 +0.6
M24K	Tolsona, Glenn	5.86	10			Pn	10 15 13.7 +2.5
M24K	Tolsona, Glenn baz=192	5.86	10	P		Pn	10 15 13.2 +1.9
BARN	Barnard Glacie	5.86	34			Pn	10 15 12.2 +0.8
BCPM	Bancas Point	5.86	49			Pn	10 15 12.2 +0.9
CTGM	Chitina Glacie	5.89	36	Pn		Pn	10 15 12.3 +0.5
LOGN	Logan Glacier	5.90	38			Pn	10 15 12.5 +0.6
O16K	Kokwok River B	6.08	306	Pn		Pn	10 15 15.0 +0.8
N17K	Nushagak Hills	6.21	316	Pn		Pn	10 15 17.0 +1.0
O29M	Mount Kennedy	6.50	49			Pn	10 15 21.3 +1.2
O29M	Mount Kennedy baz=237	6.50	49	P		Pn	10 15 21.5 +1.4
P29M	Windy Craggy	6.54	56			Pn	10 15 21.1 +0.5
P29M	Windy Craggy baz=245	6.54	56	P		Pn	10 15 21.2 +0.7
L19K	White Mountain	6.69	333	Pn		Pn	10 15 22.2 -0.5
S31K	Pelican	6.81	71	Pn		Pn	10 15 23.4 -0.8
M17K	Holitna River	6.87	321	Pn		Pn	10 15 26.1 +1.0
YUK6	Outpost Mounta baz=233	6.95	45	P		Pn	10 15 28.4 +2.0
YUK4	Talbot Arm baz=230	7.09	41	P		Pn	10 15 31.7 +3.4
PLBC	Pleasant Camp	7.11	59			Pn	10 15 29.8 +1.4
PLBC	Pleasant Camp baz=249	7.11	59	P		Pn	10 15 29.8 +1.4
M16K	Timber Creek	7.20	315	Pn		Pn	10 15 31.1 +1.5
HYT	Haines Junctio	7.23	47			Pn	10 15 29.1 -1.0
L18K	Granite Mounta	7.23	328	Pn		Pn	10 15 30.1 +0.2
O14K	Tigyukauivet M	7.45	298	Pn		Pn	10 15 34.3 +1.3
RIDG	Independent Ri	7.59	12	Pn		Pn	10 15 36.2 +1.1
TTA	Tatalina	7.61	333	Pn		Pn	10 15 35.8 +0.5
O30N	Mendenhall	7.79	51	Pn		Pn	10 15 37.7 0.0
L16K	Owhat River	7.81	318	Pn		Pn	10 15 37.3 -0.7
M29M	Somme Creek	7.91	36			Pn	10 15 40.2 +0.8
K17K	Iditarod	8.10	326	Pn		Pn	10 15 42.5 +0.6
WHY	Whitehorse	8.27	53	Pn		Pn	10 15 45.1 +0.7
K27K	Chicken	8.29	20	Pn		Pn	10 15 45.2 +0.7
M14K	Bethel	8.33	307	Pn		Pn	10 15 46.3 +1.3
J25K	Salcha River,	8.39	9	Pn		Pn	10 15 46.8 +0.7
P32M	Atlin	8.44	62	Pn		Pn	10 15 47.0 +0.3
L29M	L29M	8.50	33			Pn	10 15 48.6 +1.1
M30M	Minto, Yukon	8.56	39	Pn		Pn	10 15 49.5 +1.1
MDM	Murphy Dome	8.61	0	Pn		Pn	10 15 50.3 +1.3
I23K	Minto, Yukon-K	8.81	357	Pn		Pn	10 15 52.6 +1.0
DAWY	Dawson	8.91	26	Pn		Pn	10 15 53.4 +0.4
Q32M	Nakina River	9.02	67	Pn		Pn	10 15 54.9 +0.1
P33M	Teslin, Yukon	9.05	58	Pn		Pn	10 15 55.4 +0.3
M31M	Drury Creek, Y	9.23	45	Pn		Pn	10 15 59.6 +2.1
J16K	Anvik River	9.24	324	Pn		Pn	10 15 57.2 -0.3
R33M	Jennings River	9.76	65	Pn		Pn	10 16 04.7 -0.1
IMAR	Indian Mountai	9.97	347	Pn		Pn	10 16 08.1 +0.5
I28M	Miner Creek	9.98	21	Pn		Pn	10 16 08.1 +0.3
H18K	Honhosa River	10.04	335	Pn		Pn	10 16 08.7 +0.2
G21K	Allakaket	10.46	349	Pn		Pn	10 16 14.6 +0.4
YKA	Yellowknife Ar	18.08	56			Pn	10 17 55.5 +0.1
A36M	Sachs Harbour	18.40	23	P		P	10 17 59.6 +0.5
D05A	Enumclaw	18.65	108	P		P	10 18 02.5 +0.4
D05A	comp=Z,6.8nm,1.0s				IAmb	IAmb	10 18 28.6
F04A	Amboy	19.24	112	P		P	10 18 07.3 -1.3
H04A	Detroit Lake	20.22	114	P		P	10 18 18.5 -0.9
H04A	comp=Z,2.5nm,0.9s				IAmb	IAmb	10 18 47.6

ISC 03 10:17:57.8±2.3, 56.4N±0.1×148.36W±0.06, h10km, n29, σ1§37/34, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor baz=105	2.83	289	P	Pn	10 18 43.1	+0.1
OHAK				S	Sn	10 19 14.4	-2.7
Q20K	Shuyak Island baz=134	3.10	317	P	Pn	10 18 47.7	+1.0
Q20K				S	Sn	10 19 23.1	-0.8
Q23K	Middleton Isla baz=200	3.22	19	P	Pn	10 18 47.9	-0.4
BRSE	Bradley Lake S baz=158	3.58	340	P	Pn	10 18 53.7	+0.4
BRSE				S	Sn	10 19 34.4	-1.3
P23K	Montague Islan baz=188	3.64	8	P	Pn	10 18 54.4	+0.2
P23K				S	Sn	10 19 34.8	-2.4
SEW	Seward baz=171	3.76	352	P	Pn	10 18 56.3	+0.6
Q19K	Cape Douglas, baz=130	3.81	314	P	Pn	10 18 57.9	+1.5
KAIM	Kayak Island baz=212	4.11	29	P	Pn	10 19 01.0	+0.5
P19K	Oil Pt baz=140	4.16	324	P	Pn	10 19 03.1	+1.8
O20K	Slope Mountain baz=147	4.32	330	P	Pn	10 19 04.7	+1.1
EYAK	Cordova Ski Ar baz=199	4.38	17	P	Pn	10 19 05.2	+0.9
Q17K	Contact Creek baz=112	4.49	298	P	Pn	10 19 08.0	+2.2
BGLC	Bering Glacier baz=218	4.59	34	P	Pn	10 19 08.6	+1.4
RC01	Rabbit Creek A baz=171	4.76	352	P	Pn	10 19 10.5	+1.0
BMRM	Bremner River baz=205	4.98	22	P	Pn	10 19 13.6	+1.0
BMRM				S	Sn	10 20 08.7	-1.6
O18K	Koktuh Hills baz=131	5.01	317	P	Pn	10 19 14.0	+0.9
KNK	Knik Glacier baz=179	5.03	359	P	Pn	10 19 14.3	+1.1
MESA	MESA baz=224	5.08	39	P	Pn	10 19 14.9	+0.8
CRQE	Cirque baz=214	5.16	30	P	Pn	10 19 15.4	+0.3
PMR	Palmer baz=175	5.22	356	P	Pn	10 19 17.1	+1.2
KLU	Klutina baz=195	5.26	13	P	Pn	10 19 17.5	+1.0
SML	Sawmill baz=180	5.42	0	P	Pn	10 19 20.2	+1.6
N25K	Chitina, Valde baz=202	5.57	19	P	Pn	10 19 22.1	+1.3
SKT	Skwentna baz=162	5.83	345	S	Sn	10 20 30.9	-0.1
CTG	Chitna Glacier baz=222	5.86	36	P	Pn	10 19 25.5	+0.8
O29M	Mount Kennedy baz=237	6.47	49	P	Pn	10 19 34.5	+1.4
P29M	Windy Craggy baz=245	6.51	56	P	Pn	10 19 34.4	+0.9
DHY	Denali Highway baz=185	6.72	4	P	Pn	10 19 38.5	+2.0
YUK6	Outpost Mounta baz=233	6.92	45	P	Pn	10 19 41.7	+2.3

*IDC **03** 10:19:59.8±2.1, 1.01N×125.43E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=193.6km s-min=27.8km az=64.0*
*DJA **03** 10:20:05.1±1.4, 1.6N±6×12.6E±, h12km±13km, M3.6/6, mb3.5/1, MLv3.6/6*
ISC 03 10:20:05.7±1.2, 1.24N±0.08×126.17E±0.07, h35km, n8, σ2§06/8, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	111	P	Pn	10 20 28.7	+1.6
KMSI	Cibinong	2.29	253	P	Pn	10 20 42.6	+1.6
LBMI	Labuha	2.29	145	P	Pn	10 20 42.8	+1.8
SGSI	Sangihe	2.51	345	P	Pn	10 20 46.1	+2.1
LUWI	Luwuk	4.09	236	P	Pn	10 21 07.4	+1.6
WRA	Warramunga Arr 0.6nm,0.4s,baz=336,slow=11,SNR=11 0.6nm,0.4s	22.53	160	P	P	10 25 01.4	-1.3
ASAR	Alice Springs 0.3nm,0.4s,baz=346,slow=11,SNR=9.2 0.3nm,0.4s	25.88	164	P	P	10 25 34.1	-0.3
MKAR	Makanchi Array 0.1nm,0.4s,baz=115,slow=8.7,SNR=1.9 0.1nm,0.4s	59.29	326	P	P	10 30 01.9	-2.1

*IDC **03** 10:36:25.6±3.1, 5.44S×153.73E, h53km±25km, mb3.9/12, mbtmp4.2/14, ML3.0/2, MS3.5/25, Error ellipse: s-maj=23.7km s-min=18.1km az=86.0*
*NEIC **03** 10:36:27.9±1.0, 5.5S±0.1×153.75E±0.09, h63km±10km, mb4.4/23, Error ellipse: s-maj=20.0km s-min=6.3km az=215.0*
ISC 03 10:36:25.9±0.6, 5.50S±0.08×153.76E±0.09, h50km, n64, σ1§14/46, mb4.2/21, MS3.5/23, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.05	309		Pn	10 36 59.8	+1.8
PMG	Port Moresby	7.61	239	Pn	Pn	10 38 16.0	+1.8
PMG	Port Moresby 2.4nm,0.3s,baz=80,slow=3.1,SNR=6.2	7.61	239	P	Pn	10 38 15.1	+0.9
PMG	36nm,0.7s,baz=54,slow=19,SNR=3.1			S	Sn	10 39 38.6	-0.5
PMG	comp=Z,265nm,20.6s,baz=54,slow=38 24nm,0.9s			LR	LR	10 41 12.5	
CTA	Charters Tower 0.2nm,0.3s,baz=8.1,slow=7.1,SNR=2.7	16.23	206	P	Pn	10 40 10.2	-0.4
CTA	comp=Z,179nm,22.0s,baz=78,slow=33 2.8nm,0.6s			LR	LR	10 45 22.9	
EIDS	Eidsvold	19.92	187	P	P	10 40 52.9	-0.7
EIDS	comp=Z,14nm,1.0s			IAmb	IAmb	10 40 58.4	
DZM	Mont Dzumac	20.54	145	P	P	10 41 01.6	+1.2
DZM	comp=Z,24nm,0.8s			IAmb	IAmb	10 41 02.8	
DZM	Mont Dzumac comp=Z,18nm,0.6s,baz=309,slow=9.0,SNR=15	20.54	145	P	P	10 41 01.7	+1.2
DZM	comp=Z,155nm,18.4s,baz=262,slow=32 comp=Z,18nm,0.6s			LR	LR	10 47 14.1	
GUMO	Guam	20.92	335	LR	LR	10 49 49.8	
OUENC	comp=Z,44nm,18.1s,baz=147,slow=39 Ouen Island, N	21.04	144	P	P	10 41 04.8	-0.9
OUENC	comp=Z,36nm,1.1s			IAmb	IAmb	10 41 20.2	
MTN	Manton Dam comp=Z,9.8nm,0.9s	23.48	250	P	P	10 41 32.1	+0.8
MTN				IAmb	IAmb	10 41 34.4	
WR0	Warramunga Arr comp=Z,5.8nm,0.8s	23.57	231	P	P	10 41 32.4	+0.2
WR0				IAmb	IAmb	10 41 33.5	
WB0	Warramunga Arr comp=Z,8.2nm,0.8s	23.58	231	P	P	10 41 32.3	0.0
WB0				IAmb	IAmb	10 41 33.0	
WRAB	Tennant Creek comp=Z,8.2nm,0.9s	23.71	231	P	P	10 41 33.3	-0.2
WRAB				IAmb	IAmb	10 41 34.1	
WB2	Warramunga Arr comp=Z,7.3nm,0.9s	23.71	231	P	P	10 41 33.8	+0.3
WB2				IAmb	IAmb	10 41 34.2	
WRA	Warramunga Arr	23.72	231	P	P	10 41 33.6	0.0
WRA	Warramunga Arr comp=Z,5.6nm,0.8s,baz=54,slow=9.5,SNR=21	23.72	231	P	P	10 41 33.5	0.0
WRA				PcP	PcP	10 45 16.1	-0.7
WRA	comp=Z,0.7nm,0.6s,baz=56,slow=2.3,SNR=5.6			ScP	ScP	10 48 50.3	-0.8
	comp=Z,0.5nm,0.7s,baz=52,slow=2.0,SNR=5.1 comp=Z,5.6nm,0.8s						
ARMA	Armidale	24.87	184	P	P	10 41 45.6	+1.6
ARMA	comp=Z,14nm,0.8s			IAmb	IAmb	10 41 46.2	
AS31	Alice Springs	26.30	225	P	P	10 41 56.3	-0.7
ASAR	Alice Springs	26.30	225	P	P	10 41 57.0	-0.1
ASAR	Alice Springs comp=Z,3.5nm,0.9s,baz=58,slow=9.1,SNR=34	26.30	225	P	P	10 41 56.7	-0.4
ASAR				PcP	PcP	10 45 22.0	-0.5
ASAR	comp=Z,0.9nm,0.6s,baz=64,slow=2.5,SNR=8.9			LR	LR	10 52 34.3	
LHI	comp=Z,93nm,18.3s,baz=60,slow=37 comp=Z,3.5nm,0.9s Lord Howe Isla	26.36	170	P	P	10 41 57.7	+0.3
KNRA	Kununurra	26.53	246	P	P	10 41 59.4	+0.2
KNRA	comp=Z,13nm,0.7s			IAmb	IAmb	10 42 21.1	
H11S3	WAKE ISLAND Hy baz=208,slow=76,SNR=13	27.04	28	T	T	11 10 18.6	
H11S2	WAKE ISLAND Hy baz=208,slow=76,SNR=8.3	27.05	28	T	T	11 10 17.4	
H11S1	WAKE ISLAND Hy baz=208,slow=76,SNR=5.7	27.06	28	T	T	11 10 20.4	
STKA	Stephens Creek	28.60	202	P	P	10 42 17.4	-0.2
STKA	Stephens Creek comp=Z,4.5nm,0.8s,baz=359,slow=10,SNR=6.2	28.60	202	P	P	10 42 15.8	-1.7
STKA				LR	LR	10 53 25.6	
CAN	comp=Z,76nm,21.0s,baz=26,slow=36 comp=Z,4.5nm,0.8s Canberra	30.00	188	P	P	10 42 30.4	+0.5
CAN	comp=Z,8.9nm,1.1s			IAmb	IAmb	10 42 52.7	
FITZ	Fitzroy Crossi	30.18	243	P	P	10 42 30.9	-0.8
DAV	Davao City (W) comp=Z,17nm,20.9s,baz=114,slow=32	30.77	294	LR	LR	10 52 40.1	
KAPI	Kappang	33.86	269	P	P	10 43 04.1	0.0
FORT	Forrest	34.87	221	P	P	10 43 12.4	-0.1
TOZ	Tahuroa Road	37.71	151	P	P	10 43 37.8	+1.1
TOZ	comp=Z,11nm,0.8s			IAmb	IAmb	10 43 38.5	
RTZ	Ruatahuna	39.12	151	P	P	10 43 49.1	+0.5
JOW	Kunigami comp=Z,55nm,18.2s,baz=319,slow=35	40.52	324	LR	LR	10 59 57.5	
RPZ	Rata Peaks comp=Z,69nm,19.1s,baz=320,slow=37	41.00	161	LR	LR	11 01 39.3	
MJAR	Matsushiro Arr comp=Z,20nm,20.5s,baz=186,slow=34	44.28	342	LR	LR	11 01 09.2	
LEM	Lembang comp=Z,44nm,18.6s,baz=222,slow=49	45.88	266	LR	LR	11 07 23.7	
RAR	Rarotonga comp=Z,39nm,18.1s,baz=145,slow=36	47.63	114	LR	LR	11 04 59.2	
KSRS	Korea Array comp=Z,9.8nm,21.0s,baz=215,slow=32	49.05	333	LR	LR	11 02 36.7	
ASAJ	Asahikawa comp=Z,29nm,21.7s,baz=334,slow=32	50.41	350	LR	LR	11 03 40.4	
KLR	Kul'dur comp=Z,17nm,20.3s,baz=164,slow=35	57.79	343	LR	LR	11 10 18.9	
CMAR	Chiang Mai Arr comp=Z,2.1nm,0.4s,baz=119,slow=5.1,SNR=17 comp=Z,2.1nm,0.4s	59.04	295	P	P	10 46 21.9	+0.7
SONM	Songino Array comp=Z,0.7nm,0.6s,baz=120,slow=8.5,SNR=4.0 comp=Z,0.7nm,0.6s	67.42	328	P	P	10 47 15.6	-0.8
VNDA	Vanda comp=Z,7.5nm,1.1s	72.10	178	P	P	10 47 44.8	+0.3
VNDA				IAmb	IAmb	10 48 10.9	
VNDA	Vanda comp=Z,3.9nm,1.0s,baz=334,slow=5.4,SNR=2.2 comp=Z,3.9nm,1.0s	72.10	178	P	P	10 47 44.8	+0.3
KDAK	Kodiak Island comp=Z,68nm,22.0s,baz=165,slow=31	76.38	26	LR	LR	11 15 22.5	
MK31	Makanchi Array	81.48	319	P	P	10 48 36.9	-1.1
MKAR	Makanchi Array	81.48	319	P	P	10 48 38.1	+0.1
MKAR	Makanchi Array comp=Z,0.8nm,0.7s,baz=94,slow=4.2,SNR=7.3 comp=Z,0.8nm,0.7s	81.48	319	P	P	10 48 37.0	-1.0
ZALV	Zalesovo Beam comp=Z,0.9nm,0.5s,baz=97,slow=4.8,SNR=2.6 comp=Z,0.9nm,0.5s	82.26	326	P	P	10 48 40.3	-1.6
ILAR	Eielson Array comp=Z,0.6nm,0.9s,baz=259,slow=5.2,SNR=5.4	82.45	22	P	P	10 48 41.8	-0.9
ILAR	comp=Z,41nm,21.0s,baz=195,slow=31 comp=Z,0.6nm,0.9s			LR	LR	11 18 31.9	
QSPA	South Pole Qui	84.46	180	P	P	10 48 53.3	+0.2
KURBB	Kurchatov Arra comp=Z,1.2nm,0.9s,baz=109,slow=3.7,SNR=6.9 comp=Z,1.2nm,0.9s	84.94	322	P	P	10 48 53.9	-1.7
MAW	Mawson comp=Z,100nm,18.2s,baz=238,slow=35	85.29	203	LR	LR	11 26 10.9	
BBB	Bella Bella comp=Z,28nm,21.7s,baz=208,slow=31	87.08	37	LR	LR	11 21 31.1	
INK	Inuvik comp=Z,33nm,20.4s,baz=176,slow=32	88.77	21	LR	LR	11 23 06.8	
YBH	Yreka Blue Hor comp=Z,59nm,20.4s,baz=244,slow=31	88.81	48	LR	LR	11 22 25.6	
BVAR	Borovoye Array comp=Z,1.4nm,0.5s,baz=100,slow=6.2,SNR=7.0 comp=Z,1.4nm,0.5s	90.37	323	P	P	10 49 19.6	-2.2
NVAR	Mina Array Bea comp=Z,21nm,18.3s,baz=287,slow=33	91.77	52	LR	LR	11 26 49.6	
NEW	Newport comp=Z,29nm,18.2s,baz=214,slow=33	93.48	42	LR	LR	11 27 42.4	
ELK	Elko comp=Z,30nm,21.6s,baz=240,slow=31	94.31	50	LR	LR	11 24 40.3	
PDAR	Pinedale Array comp=Z,34nm,19.8s,baz=284,slow=32	98.61	48	LR	LR	11 28 33.4	
TORD	Torodi Ar. Bea comp=Z,1.5nm,0.7s,baz=49,slow=3.4,SNR=9.3	151.43	287	PKPbc	PKPdf	10 56 13.6	+4.4

*SOME **03** 10:45:21.3, 38.68N×76.68E, h0km*
*NNC **03** 10:45:21.2±1.5, 38.61N×76.51E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=10.6km s-min=8.3km az=148.0*
ISC 03 10:45:19.7±2.5, 38.6N±0.1×76.72E±0.06, h10km, n40, σ1§58/58, 4C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2 11nm,0.7s	4.36	349	⇑Pg	Pb	10 46 39.2	+2.6
TKM2	16nm,0.5s			⇓Lg	Lg	10 47 41.9	
TNSS	Tian-Shan 7.7nm,0.3s	4.40	2	eP	Pg	10 46 43.2	-0.8
TNSS	11nm,0.3s			eS	Sg	10 47 42.2	+1.2
MTBS	Maitube 6.2nm,0.3s	4.49	357	Pg	Pg	10 46 44.8	-0.9
MTBS	15nm,0.2s			Lg	Lg	10 47 44.9	
MTBS	Maitube 5.8nm,0.2s	4.49	357	eP	Pg	10 46 44.8	-0.9
MTBS	15nm,0.2s			eS	Sg	10 47 44.9	+1.0
MDOK	Medeo 10nm,0.8s	4.53	3	Pg	Pg	10 46 44.5	-1.9
MDOK	8.1nm,0.3s			Pg	Pg	10 46 45.2	-1.2
MDOK	22nm,0.6s			Lg	Lg	10 47 45.5	
MDOK	28nm,0.6s			⇓Lg	Lg	10 47 49.3	
MDOK	Medeo 6.4nm,0.3s	4.53	3	eP	Pg	10 46 45.2	-1.2
MDOK	22nm,0.6s			eS	Sg	10 47 45.5	+0.5
SATY	Saty	4.60	16	Pg	Pg	10 46 46.7	-1.0

	13nm,0.3s								
SATY					Lg	Lg	10 47 48.3		
	38nm,0.4s								
SATY	**Saty**	**4.60**	**16**	*e*P	**Pg**	**10 46 46.7**	**-1.0**		
	7.3nm,0.3s								
SATY				*e*S	**Sg**	**10 47 48.3**	**+1.0**		
	38nm,0.4s								
KOTS	**Kotyrbulak**	**4.60**	**4**	*e*P	**Pg**	**10 46 47.3**	**-0.5**		
KOTS				*e*S	**Sg**	**10 47 49.2**	**+1.8**		
	65nm,0.4s								
CHMS	**Chumysh**	**4.60**	**342**	⇓Pg	**Pb**	**10 46 42.2**	**+1.6**		
	3.5nm,0.5s								
CHMS				⇑Lg	Lg	10 47 47.0			
	9.5nm,0.5s								
DGS	**Degeres**	**4.65**	**351**	Pg	**Pg**	**10 46 47.2**	**-1.7**		
	12nm,0.5s								
DGS				Lg	Lg	10 47 49.1			
	16nm,0.3s								
DGS	**Degeres**	**4.65**	**351**	*e*P	**Pg**	**10 46 47.2**	**-1.7**		
	12nm,0.5s								
DGS				*e*S	**Sg**	**10 47 49.0**	**-0.1**		
	15nm,0.3s								
UZB	**Uzynbulak**	**4.83**	**20**	Pg	**Pg**	**10 46 50.8**	**-1.4**		
	8.9nm,0.3s								
UZB				Lg	Lg	10 47 55.2			
	12nm,0.4s								
UZB	**Uzynbulak**	**4.83**	**20**	*e*P	**Pg**	**10 46 50.8**	**-1.4**		
	8.9nm,0.3s								
UZB				*e*S	**Sg**	**10 47 55.2**	**+0.5**		
	6.3nm,0.3s								
MRKS	**Merke**	**4.88**	**328**	Pg	**Pg**	**10 46 52.1**	**-1.2**		
	100nm,0.2s								
MRKS				Lg	Lg	10 47 57.3			
	19nm,0.6s								
KURS	**Kuram**	**4.97**	**12**	Pg	**Pg**	**10 46 53.3**	**-1.5**		
	8.8nm,0.4s								
KURS				Lg	Lg	10 47 59.5			
	11nm,0.5s								
KURS	**Kuram**	**4.97**	**12**	*e*P	**Pg**	**10 46 53.3**	**-1.5**		
	8.8nm,0.4s								
KURS				*e*S	**Sg**	**10 47 59.5**	**+0.3**		
	10nm,0.3s								
KPKS	**Kokpek**	**5.05**	**16**	Pg	**Pg**	**10 46 54.3**	**-2.1**		
	8.8nm,0.3s								
KPKS				Lg	Lg	10 48 01.3			
	25nm,0.3s								
KPKS	**Kokpek**	**5.05**	**16**	*e*P	**Pg**	**10 46 54.3**	**-2.1**		
	5.4nm,0.3s								
KPKS				*e*S	**Sg**	**10 48 01.3**	**-0.4**		
	25nm,0.3s								
SGDS	**Sogindy**	**5.06**	**342**	Pg	**Pg**	**10 46 54.9**	**-1.7**		
	4.2nm,0.4s								
SGDS				Lg	Lg	10 48 02.2			
	17nm,0.5s								
KTBS	**Karatobe**	**5.07**	**360**	Pg	**Pg**	**10 46 54.7**	**-2.1**		
	4.2nm,0.5s								
KTBS				Lg	Lg	10 48 02.0			
	9.2nm,0.3s								
KTBS	**Karatobe**	**5.07**	**360**	*e*P	**Pg**	**10 46 54.7**	**-2.1**		
	4.3nm,0.2s								
KTBS				*e*S	**Sg**	**10 48 02.0**	**-0.4**		
	15nm,0.3s								
KRBS	**Karabastau**	**5.11**	**351**	Pg	**Pg**	**10 46 55.1**	**-2.6**		
	5.6nm,0.5s								
KRBS				Lg	Lg	10 48 02.8			
	17nm,0.4s								
KRBS	**Karabastau**	**5.11**	**351**	*e*P	**Pg**	**10 46 55.1**	**-2.6**		
	5.1nm,0.3s								
KRBS				*e*S	**Sg**	**10 48 02.8**	**-1.0**		
	17nm,0.3s								
PDGK	**Podgornoye**	**5.13**	**23**	Pg	**Pg**	**10 46 56.5**	**-1.5**		
	4.8nm,0.3s								
PDGK				Lg	Lg	10 48 04.8			
	5.4nm,0.4s								
PDGK	**Podgornoye**	**5.13**	**23**	⇑Pg	**Pg**	**10 46 56.8**	**-1.2**		
	7.1nm,0.6s								
PDGK				⇓Lg	Lg	10 48 09.9			
	21nm,0.7s								
CHKK	**Chushkaly**	**5.21**	**2**	Pg	**Pg**	**10 46 57.8**	**-1.8**		
	4.8nm,0.3s								
CHKK				Lg	Lg	10 48 07.0			
	18nm,0.3s								
CHKK	**Chushkaly**	**5.21**	**2**	*e*P	**Pg**	**10 46 57.8**	**-1.8**		
	4.1nm,0.3s								
CHKK				*e*S	**Sg**	**10 48 07.0**	**0.0**		
	18nm,0.2s								
KUU	**Kurty**	**5.26**	**357**	Pg	**Pg**	**10 46 58.8**	**-1.5**		
	3.8nm,0.2s								
KUU				Lg	Lg	10 48 08.9			
	7.9nm,0.4s								
KUU	**Kurty**	**5.26**	**357**	*e*P	**Pg**	**10 46 58.8**	**-1.5**		
	3.8nm,0.2s								
KUU				*e*S	**Sg**	**10 48 08.9**	**+0.5**		
	13nm,0.1s								
KTMS	**Ketmen**	**5.53**	**29**	Pg	**Pg**	**10 47 04.4**	**-1.2**		
	2.2nm,0.3s								
KTMS				Lg	Lg	10 48 18.7			
	4.8nm,0.3s								
BLB	**Baldybastay**	**5.61**	**13**	Pg	**Pg**	**10 47 05.6**	**-1.6**		
	9.7nm,0.2s								
BLB				Lg	Lg	10 48 20.6			
	9.4nm,0.3s								
ARXS	**Arharly**	**5.63**	**8**	Pg	**Pg**	**10 47 05.5**	**-2.0**		
	5.4nm,0.6s								
ARXS				Lg	Lg	10 48 20.6			
	15nm,0.4s								
ARXS	**Arharly**	**5.63**	**8**	*e*P	**Pg**	**10 47 05.5**	**-2.0**		
	5.4nm,0.6s								
ARXS				*e*S	**Sg**	**10 48 20.6**	**+0.2**		
	13nm,0.3s								
KNOS	**Konyrlen**	**6.01**	**17**	Pg	**Pg**	**10 47 12.8**	**-1.9**		
	5.8nm,0.3s								
KNOS				Lg	Lg	10 48 33.0			
	4.8nm,0.5s								
KK31	**Karatay Array**	**6.48**	**315**	⇑Pn	**Pn**	**10 46 54.4**	**-0.7**		
	0.2nm,0.4s,baz=142,slow=14,SNR=2.6								
KK31				⇓Pg	**Pb**	**10 47 14.9**	**+2.3**		
	0.3nm,0.3s,baz=131,slow=13,SNR=6.7								
KK31				⇓Lg	Lg	10 48 43.5			
	1.4nm,0.5s,baz=131,slow=29,SNR=3.5								
BTLS	**Baital**	**6.70**	**344**	Pg	**Pg**	**10 47 25.7**	**-2.3**		
	1.6nm,0.3s								
BTLS				Lg	Lg	10 48 55.3			
	5.5nm,0.4s								
BTLS	**Baital**	**6.70**	**344**	*e*P	**Pg**	**10 47 25.7**	**-2.3**		
	1.6nm,0.3s								
BTLS				*e*S	**Sg**	**10 48 55.3**	**+0.6**		
	5.7nm,0.3s								
KAPS	**Kapalarasan**	**6.92**	**16**	Pg	**Pg**	**10 47 29.9**	**-2.3**		
	2.5nm,0.2s								
KAPS				Lg	Lg	10 49 02.5			
	5.1nm,0.3s								
KAPS	**Kapalarasan**	**6.92**	**16**	*e*P	**Pg**	**10 47 29.9**	**-2.3**		
	2.5nm,0.2s								
KAPS				*e*S	**Sg**	**10 49 02.5**	**+0.6**		
	5.1nm,0.3s								

*IDC **03** 10:49:36.2±23.0,22°.25S×179°.40W,h369km±224km, mb3.7/3,mbtmp4.5/4,Error ellipse: s-maj=166.6km s-min=40.2km az=21.0*
*NEIC **03** 10:49:50.4±1.0,23°.0S±0°.1×179°.2W±0°.1,h563km±12km, mb4.2/26,Error ellipse: s-maj=25.1km s-min=6.7km az=139.0*

ISC 03 10:49:50.7±0.8,23°.1S±0°.1×179°.4W±0°.1,h550km,n40, σ1ᵗ29/39,mb4.2/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.30**	**168**	P	**P**	**10 51 32.6**	**+0.6**
NIUE	**Niue**	**9.67**	**68**	P	**P**	**10 52 02.9**	**-2.4**
TOZ	**Tahuroa Road**	**15.27**	**196**	P	**P**	**10 53 03.5**	**+0.7**
URZ	**Urewera**	**15.45**	**190**	P	**P**	**10 53 03.2**	**-1.3**
	3.6nm,0.3s,baz=17,slow=3.4,SNR=14						
SNZO	**South Karori**	**18.86**	**194**	P	**P**	**10 53 34.8**	**-1.4**
QRZ	**Quartz Range**	**18.98**	**199**	P	**P**	**10 53 37.9**	**+0.5**
TUWZ	**Tuamarina**	**19.16**	**195**	P	**P**	**10 53 39.1**	**+0.2**
LHI	**Lord Howe Isla**	**20.91**	**242**	P	**P**	**10 53 55.1**	**+0.2**
ARMA	**Armidale**	**26.86**	**248**	P	**P**	**10 54 48.6**	**+0.6**
ARMA				IAmb	IAmb	10 54 54.9	
	comp=Z,7.1nm,1.1s						
EIDS	**Eidsvold**	**27.02**	**259**	P	**P**	**10 54 49.5**	**+0.2**
EIDS				IAmb	IAmb	10 55 04.0	
	comp=Z,14nm,1.1s						
CAN	**Canberra**	**30.06**	**239**	P	**P**	**10 55 16.2**	**+0.5**
CAN				IAmb	IAmb	10 55 29.3	
	comp=Z,8.2nm,1.1s						

CTAO	**Charters Tower**	**32.06**	**269**	P	**P**	**10 55 33.3**	**+0.3**
TOO	**Toolangi**	**33.39**	**236**	P	**P**	**10 55 44.4**	**+0.4**
TOO				IAmb	IAmb	10 56 02.2	
	comp=Z,7.0nm,1.1s						
STKA	**Stephens Creek**	**35.57**	**247**	P	**P**	**10 56 02.3**	**+0.1**
STKA	**Stephens Creek**	**35.57**	**247**	P	**P**	**10 56 02.4**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=87,slow=9.2,SNR=7.3						
	comp=Z,2.6nm,0.6s						
COEN	**Coen**	**36.56**	**278**	P	**P**	**10 56 10.2**	**-0.4**
COEN				IAmb	IAmb	10 56 23.3	
	comp=Z,5.3nm,1.1s						
BBOO	**Buckleboo**	**40.30**	**246**	P	**P**	**10 56 40.5**	**-0.3**
BBOO				IAmb	IAmb	10 57 03.5	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**42.74**	**260**	P	**P**	**10 56 59.5**	**-0.7**
ASAR	**Alice Springs**	**42.74**	**260**	P	**P**	**10 56 58.8**	**-1.4**
ASAR	**Alice Springs**	**42.74**	**260**	P	**P**	**10 56 59.8**	**-0.5**
	comp=Z,4.0nm,0.6s,baz=92,slow=7.5,SNR=78						
	comp=Z,4.0nm,0.6s						
WR0	**Warramunga Arr**	**42.85**	**265**	P	**P**	**10 56 59.9**	**-1.2**
WR0				IAmb	IAmb	10 57 00.8	
	comp=Z,4.1nm,0.9s						
WB2	**Warramunga Arr**	**43.03**	**265**	P	**P**	**10 57 01.8**	**-0.7**
WB2				IAmb	IAmb	10 57 02.3	
	comp=Z,5.7nm,0.8s						
WB0	**Warramunga Arr**	**43.03**	**265**	P	**P**	**10 57 01.5**	**-1.0**
WB0				IAmb	IAmb	10 57 02.2	
	comp=Z,7.6nm,0.7s						
WRAB	**Tennant Creek**	**43.03**	**265**	P	**P**	**10 57 01.6**	**-0.9**
WRAB				IAmb	IAmb	10 57 02.3	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**43.04**	**265**	P	**P**	**10 57 01.6**	**-1.0**
WRA	**Warramunga Arr**	**43.04**	**265**	P	**P**	**10 57 01.6**	**-1.0**
	comp=Z,4.0nm,0.4s,baz=102,slow=8.0,SNR=162						
	comp=Z,4.0nm,0.4s						
FORT	**Forrest**	**47.14**	**249**	P	**P**	**10 57 33.3**	**-0.5**
MTN	**Manton Dam**	**47.97**	**273**	P	**P**	**10 57 39.6**	**-0.6**
MTN				IAmb	IAmb	10 57 47.1	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**49.27**	**269**	P	**P**	**10 57 49.8**	**-0.1**
KNRA				IAmb	IAmb	10 58 18.4	
	comp=Z,13nm,1.1s						
FAKI	**Fak Fak**	**50.90**	**286**	P	**P**	**10 58 00.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**51.47**	**265**	P	**P**	**10 58 05.4**	**-0.4**
VNDA	**Vanda**	**55.26**	**185**	P	**P**	**10 58 31.9**	**+0.2**
PSA00	**Pilbara Seismi**	**55.88**	**259**	P	**P**	**10 58 35.5**	**-1.5**
PSA00				IAmb	IAmb	10 58 46.7	
	comp=Z,7.4nm,1.1s						
NWAO	**Narrogin (SRO)**	**56.11**	**245**	P	**P**	**10 58 37.7**	**-0.6**
NWAO				IAmb	IAmb	10 58 56.9	
	comp=Z,11nm,1.0s						
MORW	**Morawa**	**57.70**	**249**	P	**P**	**10 58 48.3**	**-1.1**
BVAR	**Borovoye Array**	**120.19**	**319**	PKP	**PKiKP**	**11 07 41.1**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=108,slow=2.3,SNR=2.7						
FINES	**FINESS Array B**	**137.83**	**342**	PKP	**PKiKP**	**11 08 19.2**	**+4.8**
	comp=Z,0.3nm,0.3s,baz=96,slow=1.4,SNR=4.1						
HFS	**Hagfors**	**141.83**	**349**	PKhKP	PKPpre	11 08 18.4	
	comp=Z,1.7nm,0.3s,baz=67,slow=3.9,SNR=19						
AKASG	**Malin Array Be**	**144.57**	**328**	PKP	**PKPab**	**11 08 26.9**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=44,slow=3.7,SNR=7.8						
MMAI	**Mount Meron Ar**	**147.87**	**296**	PKPbc	**PKiKP**	**11 08 37.9**	**+1.9**
	comp=Z,1.2nm,0.4s,baz=76,slow=3.8,SNR=5.1						

WEL 03 11:02:04.5±0.9,38°S±7°×18°0E±°,h33km,M3.2/14, ML3.5/20,MLv3.2/14,Error ellipse: s-maj=0.0km s-min=0.0km az=16.4,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.06**	**267**	P	Pn	11 02 22.9	-0.1
WMGZ				S	Sb	11 02 37.8	-0.1
MXZ	**Matakaoa Point**	**1.16**	**280**	P	Pn	11 02 24.5	+0.1
MXZ				S	Sb	11 02 40.2	-0.7
PUZ	**Puketiti**	**1.22**	**255**	P	Pn	11 02 25.1	-0.2
PUZ				S	Sn	11 02 41.2	+0.5
PKGZ	**Pakihiroa**	**1.33**	**264**	P	Pn	11 02 26.9	0.0
PKGZ				S	Sn	11 02 43.5	+0.1
CNGZ	**Carnagh Statio**	**1.41**	**239**	P	Pn	11 02 28.3	+0.4
TWGZ	**Tauwhareparae**	**1.46**	**253**	P	Pn	11 02 28.6	0.0
TWGZ				S	Sb	11 02 47.9	-1.4
HAZ	**Te Kaha**	**1.56**	**270**	P	Pn	11 02 30.1	+0.2
HAZ				S	Sn	11 02 49.3	+0.3
TKGZ	**Te Karaka**	**1.64**	**245**	P	Pn	11 02 31.0	-0.1
TKGZ				S	Sn	11 02 51.7	+0.6
RUGZ	**Raukumara Rang**	**1.65**	**262**	P	Pn	11 02 31.3	0.0
RIGZ	**Rimuhau**	**1.82**	**238**	P	Pn	11 02 33.7	+0.1
RIGZ				S	Sn	11 02 56.1	+0.5
MWZ	**Matawai**	**1.84**	**251**	P	Pn	11 02 33.5	-0.4
MWZ				S	Sn	11 02 55.7	-0.4
PRGZ	**Paritu Road**	**1.87**	**231**	P	Pn	11 02 33.9	-0.3
MHGZ	**Mahia Peninsul**	**2.00**	**226**	P	Pn	11 02 35.5	-0.5
MHGZ				S	Sn	11 03 01.4	+1.4
KNZ	**Kokohu**	**2.06**	**232**	P	Pn	11 02 36.2	-0.6
URZ	**Urewera**	**2.14**	**256**	P	Pn	11 02 38.4	+0.5
URZ				S	Sn	11 03 04.3	+1.0
SNGZ	**Shannon Statio**	**2.15**	**241**	P	Pn	11 02 38.0	-0.2
SNGZ				S	Sn	11 03 04.1	+0.4
RTZ	**Ruatahuna**	**2.34**	**248**	P	Pn	11 02 41.5	+0.7
WHHZ	**Waihua**	**2.37**	**236**	P	Pn	11 02 41.0	-0.1
RAHZ	**Arahi**	**2.39**	**240**	P	Pn	11 02 41.5	+0.1
MUGZ	**Murupara**	**2.45**	**252**	P	Pn	11 02 42.6	+0.3
MTHZ	**Maungataniwha**	**2.53**	**244**	P	Pn	11 02 43.4	0.0
TARZ	**Mount Tarawera**	**2.60**	**259**	P	Pn	11 02 44.5	+0.1
RRRZ	**Republican Roa**	**2.62**	**256**	P	Pn	11 02 45.0	+0.4
ARHZ	**Aropaoanui**	**2.63**	**234**	P	Pn	11 02 44.8	+0.1
NMHZ	**Naumai**	**2.67**	**239**	P	Pn	11 02 45.3	0.0
ALRZ	**Allen Road**	**2.80**	**252**	P	Pn	11 02 47.1	+0.1
BKZ	**Black Stump Fm**	**2.91**	**240**	P	Pn	11 02 48.6	0.0
MCHZ	**McNeill Hill**	**2.92**	**234**	P	Pn	11 02 48.3	-0.3
KAHZ	**Kahuranaki**	**3.02**	**227**	P	Pn	11 02 49.1	-1.0
KWHZ	**Kaweka Forest**	**3.09**	**237**	P	Pn	11 02 50.4	-0.6
PXZ	**Pawanui**	**3.19**	**224**	P	Pn	11 02 50.3	-2.1
KRHZ	**Kereru**	**3.24**	**234**	P	Pn	11 02 52.1	-1.0
BHHZ	**Black Hill Sta**	**3.36**	**238**	P	Pn	11 02 54.3	-0.5
TMVZ	**Te Maari**	**3.45**	**246**	P	Pn	11 02 56.4	+0.3
WPHZ	**Waipukurau**	**3.45**	**227**	P	Pn	11 02 54.3	-1.7
NTVZ	**North Tongarir**	**3.46**	**246**	P	Pn	11 02 56.0	-0.3
PRHZ	**Porangahau**	**3.48**	**223**	P	Pn	11 02 54.5	-1.9
OTVZ	**Oturere**	**3.50**	**245**	P	Pn	11 02 56.3	-0.4
PNHZ	**Pukenui**	**3.50**	**231**	P	Pn	11 02 55.5	-1.2
NNVZ	**North Ngauruho**	**3.52**	**246**	P	Pn	11 02 58.5	+1.4
SNVZ	**South Ngauruho**	**3.52**	**245**	P	Pn	11 02 56.7	-0.4
MOVZ	**Moawhango**	**3.53**	**241**	P	Pn	11 02 57.5	+0.4
TUVZ	**Tukino**	**3.54**	**244**	P	Pn	11 02 58.4	+1.0
WNVZ	**Whakaroa**	**3.61**	**243**	P	Pn	11 02 57.7	-0.5
TRVZ	**Turoa**	**3.63**	**244**	P	Pn	11 02 58.7	+0.1
ANWZ	**Angora Road**	**3.71**	**222**	P	Pn	11 02 57.5	-1.9
TSZ	**Takapari Road**	**3.74**	**231**	P	Pn	11 02 58.1	-1.9
DVHZ	**Dannevirke**	**3.77**	**227**	P	Pn	11 02 58.3	-2.0
HIZ	**Hauiti**	**3.93**	**258**	P	Pn	11 03 02.8	+0.2
BFZ	**Birch Farm**	**3.98**	**222**	P	Pn	11 02 59.9	-3.4
PRWZ	**Pori Road**	**4.05**	**225**	P	Pn	11 03 02.0	-2.1
POWZ	**Post Office Ro**	**4.06**	**229**	P	Pn	11 03 03.3	-1.1
TIWZ	**Tintock**	**4.25**	**224**	P	Pn	11 03 04.4	-2.5
MRZ	**Mangatainoka R**	**4.34**	**227**	P	Pn	11 03 05.6	-2.6
TMWZ	**Te Maipa**	**4.48**	**221**	P	Pn	11 03 07.0	-3.1
HOWZ	**Holdsworth Sta**	**4.53**	**225**	P	Pn	11 03 07.9	-2.9
OGWZ	**Otaki Gorge**	**4.68**	**228**	P	Pn	11 03 10.4	-2.4
CAW	**Cannon Point**	**4.93**	**226**	P	Pn	11 03 13.3	-3.0
CTZ	**Chatham Island**	**6.57**	**156**	P	Pn	11 03 39.0	+0.2
CTZ				S	Sn	11 04 45.6	-6.9

*UPP **03** 11:20:27.1±2.7,67°.49N×31°.55E,h0km,ML1.8*
*KOLA **03** 11:20:33.4,67°.51N×30°.52E,h0km,ML2.0,Error ellipse: s-maj=8.9km s-min=3.2km az=10.0,Kovdor City, Mines*

HEL 03 11:20:33.1±0.2,67°.58N×30°.31E,h0km,ML1.7, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.32**	**303**	PG	Pg	11 20 38.9	-0.2
VRF				SG	Sg	11 20 42.5	-0.8
APA0	**Apatity Array**	**1.03**	**87**	P	Pg	11 20 50.2	-2.6
APA0				S	Sg	11 21 02.6	-3.6
RAJF	**Raja-Jooseppi**	**1.17**	**321**	PG	Pg	11 20 54.4	-1.2
RAJF				SB	Sg	11 21 11.3	+0.5
APA	**Apatity**	**1.19**	**89**	P	Pg	11 20 53.4	-2.5
APA				S	Sg	11 21 07.5	-3.8

OLKF	**Oulanka, Finla**	**1.31**	**196**	PG	Pg	11 20 56.6	-1.6
OLKF				MSG		11 21 12.8	
	comp=Z,13nm,0.2s						
OLKF				SG	Sg	11 21 14.0	-1.2
SGF	**Sodankyl**	**1.46**	**266**	PN	Pn	11 21 00.0	-0.7
SGF				SN	Sb	11 21 20.2	0.0
KU6	**Riekki**	**1.57**	**186**	PG	Pn	11 21 00.9	-1.2
	baz=9.0						
KU6				MSG		11 21 20.0	
	comp=Z,3.2nm,0.2s						
KU6				SN	Sn	11 21 21.1	-2.0
LVZ	**Lovozero**	**1.69**	**77**	P	Pn	11 21 02.3	-1.5
LVZ				S	Sn	11 21 23.4	-2.7
LVZ	**Lovozero**	**1.69**	**77**	SN	Sn	11 21 24.0	-2.1
MSF	**Maaselka**	**1.75**	**197**	PG	Pn	11 21 04.7	+0.1
MSF				SG	Sn	11 21 27.1	-0.4
RNF	**Rovaniemi**	**1.94**	**242**	PG	Pn	11 21 07.8	+0.5
	baz=62						
RNF				SG	Sg	11 21 34.9	-0.4
KMNF	**Kaamanen**	**2.00**	**324**	PG	Pn	11 21 08.8	+0.7
KMNF				SG	Sb	11 21 34.8	-0.9
RANF	**Ranua**	**2.10**	**223**	PG	Pn	11 21 10.5	+1.1
RANF				SG	Sb	11 21 37.4	-1.1
TERR	**Teriberka**	**2.41**	**45**	P	Pn	11 21 13.0	-0.8
TERR				S	Sn	11 21 44.5	+0.6
KLF	**Kolari**	**2.47**	**265**	PN	Pn	11 21 14.7	+0.1
KLF				MSG		11 21 46.2	
	comp=Z,3.3nm,0.2s						
KLF				SG	Sb	11 21 49.6	+0.3
KEV	**Kevo**	**2.50**	**333**	*e*P	Pn	11 21 15.6	+0.7
KEV	**Kevo**	**2.50**	**333**	PB	Pn	11 21 15.5	+0.5
KEV				MSG		11 21 47.0	
	comp=Z,3.1nm,0.2s						
KEV				SG	Sb	11 21 48.9	-1.1
VADS	**Vadso**	**2.58**	**353**	P	Pn	11 21 16.6	+0.5
VADS				S	Sn	11 21 49.5	+1.5
HEF	**Hetta**	**2.64**	**291**	*e*P	Pb	11 21 19.4	-1.8
HEF	**Hetta**	**2.64**	**291**	PN	Pn	11 21 17.2	+0.4
	baz=108						
HEF				MSG		11 21 50.8	
	comp=Z,2.5nm,0.2s						
HEF				SB	Sb	11 21 53.4	-0.7
ARA0	**ARCESS Array S**	**2.64**	**320**	PB	Pn	11 21 17.6	+0.7
	baz=135						
ARA0				SG	Sb	11 21 54.1	-0.1
ARCES	**ARCESS Array B**	**2.64**	**320**	P	Pn	11 21 17.6	+0.7
ARCES				S	Sn	11 21 50.9	+1.3
TOF	**Tornio**	**2.80**	**240**	PN	Pn	11 21 18.6	-0.4
TOF				MSG		11 21 55.5	
	comp=Z,1.9nm,0.2s						
TOF				SG	Sb	11 21 59.7	+0.9
PAJU	**Pajala**	**2.84**	**262**	P	Pn	11 21 19.6	-0.1
PAJU				S	Sb	11 22 00.5	+0.5
PAJU	**Pajala**	**2.84**	**262**	PN	Pn	11 21 19.7	0.0
PAJU				SG	Sb	11 22 00.0	0.0
KTK1	**Kautokeino**	**3.00**	**302**	PB	Pn	11 21 23.0	+1.2
OUL	**Oulu**	**3.07**	**217**	PG	Pb	11 21 29.4	+1.0
	baz=34						
LANU	**Lannavaara**	**3.19**	**282**	P	Pn	11 21 24.9	+0.4
LANU	**Lannavaara**	**3.19**	**282**	PN	Pn	11 21 24.1	-0.3
MASU	**Masugnsbyn**	**3.19**	**272**	P	Pn	11 21 24.8	+0.3
KALU	**Kalix**	**3.25**	**241**	P	Pn	11 21 24.6	-0.6
KALU				S	Sb	11 22 08.2	-3.5
KALU	**Kalix**	**3.25**	**241**	PN	Pn	11 21 25.1	-0.2
	baz=50						
RMF	**Romuvaara**	**3.38**	**183**	PN	Pn	11 21 26.4	-0.6
OBF4	**Vikkela, Lumij**	**3.48**	**220**	PN	Pn	11 21 28.7	+0.2
	baz=33						
KUA	**Kurravaara**	**3.81**	**280**	P	Pn	11 21 33.6	+0.7
HARU	**Harads**	**3.94**	**253**	P	Pn	11 21 34.0	-0.8
SJUU	**Sjulsmark**	**4.05**	**243**	P	Pn	11 21 35.6	-0.6
RATU	**Laukkuluspa**	**4.09**	**278**	P	Pn	11 21 37.1	+0.3
FAUS	**Fauske**	**5.77**	**275**	S	Sn	11 23 05.8	-0.9

HEL 03 11:21:16.2±0.4,67°.63N×30°.53E,h0km,ML1.8, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.37**	**289**	PG	Pg	11 21 22.8	-0.4
	baz=103						
VRF				SG	Sg	11 21 27.4	-0.5
OLKF	**Oulanka, Finla**	**1.39**	**199**	MSG		11 21 58.2	
	comp=Z,12nm,0.2s						
OLKF				SN	Sn	11 22 01.8	-0.1
SGF	**Sodankyl**	**1.55**	**265**	PN	Pn	11 21 44.7	-0.2
SGF				SG	Sn	11 22 03.7	-2.1
KU6	**Riekki**	**1.64**	**189**	MSG		11 22 05.2	
	comp=Z,4.2nm,0.2s						
KU6				SG	Sn	11 22 07.0	-0.9
MSF	**Maaselka**	**1.83**	**199**	SG	Sn	11 22 11.3	-1.3
KMNF	**Kaamanen**	**2.01**	**321**	SG	Sb	11 22 18.8	-0.2
RNF	**Rovaniemi**	**2.04**

JMA ***03*** *12:04:44.8±0.2,43˚.4N±0˚.9×14˚.7E±˚, h49km, MV3.6/32, E OFF HOKKAIDO*

SKHL ***03*** *12:04:45.0±0.1,43˚.50N×147˚.50E, h53km±2km, mb4.5/3*

ISC 03 12:04:43.6±2.3, 43˚.5N±0˚.1×147˚.5E±0˚.1, h51km±28km**, n17, σ0s82/31, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.64**	**311**	*eP*		**Pn**	**12 04 57.0**	**+0.4**
SHO					AMB	AMB	12 04 57.8	
	360nm,0.3s							
SHO				*eS*		**Sn**	**12 05 06.1**	**+0.2**
SHO				A		A	12 05 07.5	
	940nm,0.2s							
SHO				A		A	12 05 07.5	
	840nm,0.2s							
NEM2	**Nemuro 2**	**1.27**	**267**	P		**Pn**	**12 05 05.3**	**+0.3**
NEM2				*eS*		**Sn**	**12 05 20.4**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.29**	**267**	*eP*		**Pn**	**12 05 05.3**	**+0.1**
NMR				*eS*		**Sn**	**12 05 20.4**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**1.32**	**297**	*eP*		**Pn**	**12 05 05.6**	**0.0**
YUK				AMB		AMB	12 05 05.9	
	130nm,0.3s							
YUK				*eS*		**Sn**	**12 05 21.1**	**-0.9**
YUK				A		A	12 05 23.2	
	330nm,0.3s							
YUK				A		A	12 05 23.2	
	310nm,0.3s							
JKHN	**Kushirohamanak**	**1.74**	**259**	*eP*		**Pn**	**12 05 12.2**	**+0.9**
JKHN				*eS*		**Sn**	**12 05 32.1**	**-0.3**
JRA	**Rausu**	**1.79**	**287**	*eP*		**Pn**	**12 05 12.5**	**+0.6**
JRA				*eS*		**Sn**	**12 05 33.3**	**-0.1**
KUR	**Kuril'sk**	**1.80**	**9**	*eP*		**Pn**	**12 05 12.5**	**+0.3**
KUR				AMB		AMB	12 05 14.2	
	70nm,0.2s							
KUR				*i* S		**Sn**	**12 05 33.0**	**-0.9**
KUR				A		A	12 05 36.7	
	200nm,0.3s							
KUR				A		A	12 05 36.7	
	160nm,0.3s							
JNSB	**Nemuroshibetsu**	**1.83**	**281**	*eP*		**Pn**	**12 05 13.2**	**+0.6**
JNSB				*eS*		**Sn**	**12 05 34.6**	**-0.1**
AKK	**Akkeshi**	**1.98**	**258**	*eP*		**Pn**	**12 05 15.1**	**+0.4**
AKK				*eS*		**Sn**	**12 05 37.6**	**-0.7**
JNK	**Nakash**	**2.02**	**275**	P		**Pn**	**12 05 15.4**	**+0.2**
JNK				*eS*		**Sn**	**12 05 38.3**	**-1.0**
JAK	**Akkeshi**	**2.09**	**258**	*eP*		**Pn**	**12 05 16.6**	**+0.5**
JAK				*eS*		**Sn**	**12 05 39.7**	**-1.3**
JTKR	**Abashiri--Toko**	**2.65**	**283**	*eP*		**Pn**	**12 05 24.8**	**+1.1**
JAR	**Ashorobuto**	**2.72**	**268**	*eP*		**Pn**	**12 05 25.8**	**+1.1**
JAR				*eS*		**Sn**	**12 05 56.2**	**-0.2**
JOB	**Onbets**	**2.73**	**260**	*eP*		**Pn**	**12 05 25.5**	**+0.6**
JOB				*eS*		**Sn**	**12 05 55.9**	**-0.7**
JMP	**Maruseppu**	**3.04**	**282**	*eP*		**Pn**	**12 05 30.5**	**+1.2**
JCH	**Churui**	**3.14**	**256**	*eP*		**Pn**	**12 05 31.9**	**+1.4**
JCH				*eS*		**Sn**	**12 06 05.6**	**-1.1**
JNBK	**Urakawa-nobuka**	**3.67**	**253**	*eS*		**Sn**	**12 06 18.4**	**-1.5**

GII ***03*** *12:33:23.9±0.3,33˚.531N±0˚.002×35˚.730E±0˚.001, h0km, Md1.3/1, confirmed*

GRAL ***03*** *12:33:25.9±0.3,33˚.46N×35˚.68E, h6km±2km, MD2.9*

ISC 03 12:33:25.9±1.1, 33˚.49N±0˚.02×35˚.69E±0˚.04, h0km, n20, σ0s78/23, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.12**	**89**	*eP*		**Pg**	**12 33 28.5**	**+0.3**
RCY				*eS*		**Sg**	**12 33 30.7**	**+0.9**
SHBL	**Chebaa**	**0.15**	**163**	*eP*		**Pg**	**12 33 28.6**	**-0.3**
DQRL	**Deir Qamar**	**0.23**	**335**	*eP*		**Pg**	**12 33 30.7**	**+0.3**
DQRL				*eS*		**Sg**	**12 33 34.3**	**+0.9**
NATI	**Neve Ativ**	**0.23**	**171**	P		**Pg**	**12 33 30.0**	**-0.3**
NATI	**Neve Ativ**	**0.23**	**171**	S		**Sg**	**12 33 35.1**	**+1.7**
GEM	**Giv'at Ha'Em**	**0.28**	**185**	P		**Pg**	**12 33 31.2**	**-0.1**
GEM	**Giv'at Ha'Em**	**0.28**	**185**	S		**Sg**	**12 33 36.6**	**+1.6**
BHL	**Bhannes**	**0.41**	**356**	*eP*		**Pg**	**12 33 34.0**	**+0.2**
BHL				*eS*		**Sg**	**12 33 40.0**	**+0.9**
KSHT	**Keshet**	**0.52**	**169**	S		**Sb**	**12 33 45.1**	**-1.0**
KSHT	**Keshet**	**0.52**	**169**	P		**Pg**	**12 33 36.1**	**+0.3**
MMC7	**Mount Meron ar**	**0.53**	**208**	P		**Pg**	**12 33 36.0**	**-0.1**
MMA0B	**Mount Meron ar**	**0.54**	**207**	P		**Pg**	**12 33 36.0**	**-0.1**
MMA0B	**Mount Meron ar**	**0.54**	**207**	S		**Sb**	**12 33 45.8**	**-0.7**
HNTI	**Hanita**	**0.60**	**227**	P		**Pg**	**12 33 37.3**	**0.0**
HNTI	**Hanita**	**0.60**	**227**	S		**Sb**	**12 33 48.1**	**-0.1**
HWQ	**Hawqa**	**0.81**	**15**	*eP*		**Pg**	**12 33 41.2**	**-0.3**
OFRI	**`Ofer**	**1.05**	**214**	P		**Pg**	**12 33 45.8**	**-0.3**
OFRI	**`Ofer**	**1.05**	**214**	S		**Sn**	**12 34 02.6**	**-0.8**
BEIL	**Beino**	**1.12**	**21**	*eP*		**Pg**	**12 33 46.3**	**-1.2**
HMDT	**Nahal Hemdat**	**1.25**	**186**	P		**Pg**	**12 33 49.1**	**-0.7**

IDC ***03*** *12:53:07.6±0.5,43˚.37N×16˚.84E, h0km, mb4.3/23, mbtmp4.3/37, ML4.4/11, MS3.6/31, Error ellipse: s-maj=10.4km s-min=8.0km az=55.0*

MOS ***03*** *12:53:07.8±0.9,43˚.34N×16˚.84E, h13km, mb4.7/25, Error ellipse: s-maj=4.2km s-min=2.9km az=83.6*

BGR ***03*** *12:53:09.0±0.4,42˚.99N×16˚.98E, h15km, ML4.9/29, Error ellipse: s-maj=6.7km s-min=5.6km az=162.0*

LDG ***03*** *12:53:09.3±0.1,43˚.34N×16˚.86E, h14km, Ml4.5/28, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*

NEIC ***03*** *12:53:09.6±2.5,43˚.37N±0˚.05×16˚.86E±0˚.04, h10km±1km, mb4.6/60, Error ellipse: s-maj=9.0km s-min=5.0km az=189.0*

PDG ***03*** *12:53:09.5±0.7,43˚.37N×16˚.84E, h11km±1km, MD4.6/8, ML4.5/11, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*

MED_RC ***03*** *12:53:10.0±0.4,43˚.34N×16˚.86E, h24km, MW4.3/15, Moment Tensor Solution. Mantle waves: s15,c18; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr1.51±.58; Mθθ-2.52±.26; Mφφ1.01±.42; Mrθ2.23±.16; Mθφ0.72±.18; Mrφ-1.08±.28; Best double couple: M☐3.28000×10^15 NP1☐s118.00000°, δ72.00000°, λ107.00000°. NP2☐s253.00000°, δ25.00000°, λ48.00000°. Principal axes: T 2.8000, Plg60.0000°, Azm52.0000°; N 0.9600, Plg16.0000°, Azm292.0000°; P -3.7700, Plg25.0000°, Azm194.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

BEO ***03*** *12:53:11.2±0.3,43˚.39N×16˚.94E, h5km±2km, ML4.5/5*

ROM ***03*** *12:53:11.7,43˚.32N×16˚.85E, h20km, mb4.8/25, Mwp4.4/2, Error ellipse: s-maj=1.1km s-min=0.0km az=76.0*

RHSSO ***03*** *12:53:11.1±0.3,43˚.39N×16˚.94E, h5km±1km, ML4.6/19*

PRU ***03*** *12:53:13.1,43˚.45N×16˚.94E, h10km, M4.6*

THE ***03*** *12:53:14.3,42˚.91N×16˚.75E, h19km±52km, ML4.4/5, Error ellipse: s-maj=62.9km s-min=3.9km az=309.0*

NAO ***03*** *12:53:17.0,43˚.34N×16˚.86E, h15km, mb4.0*

ISC 03 12:53:09.5±0.6, 43˚.34N±0˚.02×16˚.76E±0˚.02, h19km±2km**, n718, σ2s07/895, mb4.5/65, MS3.7/22, 83C-66D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAKA	**Makarska**	**0.20**	**105**	*i* Pg		**Pb**	**12 53 13.9**	**+0.1**
MAKA				Sg		**Sb**	**12 53 16.7**	**0.0**
RICI	**Ricice**	**0.31**	**60**	*eP*		**Pg**	**12 53 14.9**	**-1.4**
RICI				Sg		**Sg**	**12 53 18.7**	**-2.3**
LSTV	**Lastovo**	**0.58**	**170**	*i* Pg		**Pg**	**12 53 21.5**	**+0.5**
LSTV				Sg		**Sn**	**12 53 32.1**	**+0.4**
KIJV	**Kijevo**	**0.71**	**339**	*eP*		**Pb**	**12 53 23.1**	**-0.3**
KIJV				Sg		**Sg**	**12 53 33.2**	**+0.2**
STON	**Ston**	**0.83**	**124**	*eP*		**Pb**	**12 53 24.4**	**-0.9**
STON				*eSg*		**Sg**	**12 53 36.7**	**0.0**
STON	**Ston**	**0.83**	**124**	*eP*		**Pb**	**12 53 24.7**	**-0.7**
STON				Sg		**Sg**	**12 53 36.7**	**0.0**
STON	**Ston**	**0.83**	**124**	*i* Pg		**Pb**	**12 53 24.1**	**-1.2**
STON				*eSg*		**Sb**	**12 53 36.0**	**-0.1**
ZIRJ	**Zirje**	**0.87**	**292**	*ePn*		**Pn**	**12 53 27.6**	**+0.8**
MORI	**Morici**	**0.93**	**305**	*ePn*		**Pg**	**12 53 27.8**	**+0.2**
MGRS	**Mrkonjic Grad**	**1.10**	**12**	*i* Pg		**Pb**	**12 53 29.5**	**-0.5**
MGRS				*eSg*		**Sb**	**12 53 44.1**	**+0.1**
A050A	**Klekovaca**	**1.16**	**352**	*eP*		**Pg**	**12 53 30.5**	**-0.3**
A050A				*eSg*		**Sg**	**12 53 46.9**	**-0.1**
DBRK	**Dubrovnik**	**1.22**	**123**	*eP*		**Pg**	**12 53 31.5**	**0.0**
DBRK				Sg		**Sg**	**12 53 48.9**	**-0.1**
TREB	**Trebinje**	**1.32**	**117**	*eP*		**Pg**	**12 53 33.1**	**+0.1**
TREB				*eSg*		**Sb**	**12 53 50.6**	**+0.3**
BRY	**Bratogost**	**1.38**	**108**	P		**Pn**	**12 53 33.2**	**-0.6**
BRY				S		**Sg**	**12 53 53.0**	**-1.0**
BRY	**Bratogost**	**1.38**	**108**	*i* Pg		**Pn**	**12 53 34.0**	**+0.2**
BRY				*i* Sg		**Sg**	**12 53 54.4**	**+0.4**
BRY	**Bratogost**	**1.38**	**108**	*i* Pg		**Pn**	**12 53 34.0**	**+0.2**
BRY				*eSg*		**Sb**	**12 53 51.9**	**0.0**
UDBI	**Udbina**	**1.39**	**329**	*ePn*		**Pg**	**12 53 35.8**	**-0.5**
DUGI	**Dugi Otok**	**1.40**	**298**	*ePn*		**Pg**	**12 53 36.5**	**+0.1**
BLY	**Banja Luka**	**1.44**	**12**	*ePg*		**Pb**	**12 53 36.0**	**+0.2**
BLY				*eSg*		**Sg**	**12 53 55.3**	**-0.8**
BLY	**Banja Luka**	**1.44**	**12**	*i* P		**Pb**	**12 53 35.4**	**-0.4**
BLY	**Banja Luka**	**1.44**	**12**	*i* Pg		**Pb**	**12 53 35.4**	**-0.4**
BLY				*eSg*		**Sg**	**12 53 55.0**	**-1.1**
HCY	**Herceg Novi**	**1.56**	**124**	P		**Pn**	**12 53 36.4**	**+0.2**
HCY				S		**Sb**	**12 53 58.0**	**+1.0**
HCY	**Herceg Novi**	**1.56**	**124**	*i* Pg		**Pb**	**12 53 37.2**	**-0.5**
HCY				*i* Sg		**Sg**	**12 53 59.1**	**-0.6**
HCY	**Herceg Novi**	**1.56**	**124**	*i* Pg		**Pb**	**12 53 37.4**	**-0.3**
HCY				*eSg*		**Sb**	**12 53 58.0**	**+1.0**
VIRC	**Vir**	**1.56**	**308**	*ePn*		**Pg**	**12 53 39.8**	**+0.3**
UPM	**Unac-Piva**	**1.57**	**94**	*i* P		**Pb**	**12 53 37.5**	**-0.6**
UPM				*i* Sg		**Sg**	**12 53 59.9**	**-0.4**
UPM	**Unac-Piva**	**1.57**	**94**	*ePg*		**Pb**	**12 53 37.6**	**-0.6**
UPM				*eSg*		**Sb**	**12 53 58.0**	**+0.3**
PRIJ	**Prijedor**	**1.64**	**359**	*i* Pn		**Pg**	**12 53 40.0**	**-1.0**
PRIJ				*eSn*		**Sg**	**12 54 01.3**	**-1.0**
A051A	**Mrakovica**	**1.68**	**4**	*i* Pn		**Pb**	**12 53 40.2**	**+0.4**
A051A				*eSn*		**Sg**	**12 54 02.2**	**-1.4**
DOB	**Doboj**	**1.70**	**34**	*i* Pn		**Pn**	**12 53 38.6**	**+0.5**
DOB				*eSn*		**Sb**	**12 54 00.1**	**-1.0**
NKME	**Niksic**	**1.71**	**109**	*i* Pn		**Pb**	**12 53 39.6**	**-0.7**
NKME				*i* Sn		**Sg**	**12 54 03.6**	**-0.9**
PLIT	**Plitvice**	**1.74**	**332**	*ePn*		**Pg**	**12 53 42.5**	**-0.5**
SGRT	**San Giovanni R**	**1.75**	**206**	Pn		**Pb**	**12 53 40.2**	**-0.9**
HAPS	**Han Pijesak,Bl**	**1.76**	**64**	*ePg*		**Pb**	**12 53 40.4**	**-0.8**
HAPS				*eSg*		**Sb**	**12 54 03.8**	**+0.9**
HAPS	**Han Pijesak,Bl**	**1.76**	**64**	*i* Pn		**Pb**	**12 53 40.2**	**-1.0**
HAPS				*eSn*		**Sb**	**12 54 01.8**	**-1.1**
CEME	**Cevo**	**1.77**	**116**	*i* Pn		**Pb**	**12 53 40.5**	**-0.9**
CEME				*i* Sn		**Sb**	**12 54 04.8**	**+1.5**
NVLJ	**Novalja**	**1.83**	**313**	*ePn*		**Pb**	**12 53 43.4**	**+1.0**
A052A	**Srbac**	**1.84**	**17**	*ePn*		**Pb**	**12 53 41.6**	**-1.0**
A052A				*eSn*		**Sb**	**12 54 04.5**	**-0.8**
BUM	**Brajici-Budva**	**1.88**	**123**	*i* Pn		**Pb**	**12 53 42.5**	**-0.8**
BUM				*i* Sn		**Sb**	**12 54 07.9**	**+1.4**
PLE	**Pljevlja**	**1.92**	**89**	*ePn*		**Pb**	**12 53 42.6**	**-1.4**
PLE				*i* Sn		**Sb**	**12 54 07.9**	**+0.3**
RUDO	**Rudo**	**1.92**	**81**	*ePn*		**Pn**	**12 53 41.9**	**+0.7**
RUDO				*eSn*		**Sn**	**12 54 05.3**	**+0.4**
BBLS	**Lazići**	**1.99**	**74**	*ePn*		**Pb**	**12 53 44.3**	**-0.9**
BBLS				*eSn*		**Sb**	**12 54 09.0**	**-0.7**
BBLS	**Lazići**	**1.99**	**74**	*i* Pn		**Pb**	**12 53 44.1**	**-1.1**
BBLS				*eSn*		**Sn**	**12 54 07.9**	**+1.1**
RABC	**Rab**	**2.01**	**315**	*ePn*		**Pb**	**12 53 45.7**	**+0.4**
DRME	**Dracevica, Mon**	**2.12**	**122**	*ePn*		**Pb**	**12 53 46.2**	**-1.2**
DRME				*eSn*		**Sb**	**12 54 13.8**	**+0.4**
DRME	**Dracevica, Mon**	**2.12**	**122**	*i* Pn		**Pb**	**12 53 45.8**	**-1.6**
DRME				*i* Sn		**Sb**	**12 54 13.5**	**+0.1**
DRME	**Dracevica, Mon**	**2.12**	**122**	*ePn*		**Pb**	**12 53 46.2**	**-1.2**
DRME				*eSn*		**Sb**	**12 54 12.0**	**-1.4**
MOSL	**Moslavina**	**2.27**	**360**	*i* Pn		**Pn**	**12 53 48.0**	**+1.9**
ULC	**Ulcinj**	**2.29**	**126**	*i* Pn		**Pn**	**12 53 47.9**	**+1.6**
ULC				*i* Sn		**Sb**	**12 54 18.2**	**0.0**
BLJ	**Bijeljina**	**2.31**	**51**	*ePn*		**Pn**	**12 53 47.0**	**+0.4**
BLJ				*eSn*		**Sn**	**12 54 14.1**	**-0.4**
MRVN	**Minervino Murg**	**2.31**	**191**	P		**Pn**	**12 53 47.5**	**+0.9**
TEKS	**Tekeris**	**2.34**	**58**	*ePn*		**Pn**	**12 53 47.5**	**+0.5**
TEKS				*eSn*		**Sn**	**12 54 14.5**	**-0.7**
TEKS	**Tekeris**	**2.34**	**58**	*ePn*		**Pn**	**12 53 47.5**	**+0.5**
TEKS				*eSn*		**Sn**	**12 54 14.9**	**-0.3**
IVA	**Berane**	**2.34**	**100**	*ePn*		**Pn**	**12 53 48.6**	**+1.5**
IVA				*i* Sn		**Sb**	**12 54 18.2**	**-1.5**
SJES	**Sjenica**	**2.35**	**91**	*ePn*		**Pb**	**12 53 49.7**	**-1.6**
SJES	**Sjenica**	**2.35**	**91**	*ePn*		**Pb**	**12 53 49.2**	**-2.1**
SJES				*eSn*		**Sn**	**12 54 16.7**	**+1.1**
BOJS	**Bojanci**	**2.42**	**334**	*i* Pn		**Pb**	**12 53 51.7**	**-0.6**
BOJS				*i* Sn		**Sb**	**12 54 22.8**	**+0.9**
BOJS				IAML			12 54 34.9	
	comp=Z,1μm,0.3s							
BOJS	**Bojanci**	**2.42**	**334**	*ePn*		**Pb**	**12 53 51.8**	**-0.6**
BOJS				*eSn*		**Sb**	**12 54 22.7**	**+0.9**
BOJS	**Bojanci**	**2.42**	**334**	*i* Pn		**Pb**	**12 53 51.8**	**-0.6**
BOJS				*eSn*		**Sb**	**12 54 22.8**	**-0.1**
OZLJ	**Ozalj**	**2.46**	**338**	*ePn*		**Pb**	**12 53 52.0**	**-1.0**
DIVS	**Divibare**	**2.46**	**71**	*ePn*		**Pn**	**12 53 49.9**	**+1.2**
PVY	**Plav**	**2.46**	**106**	*i* Pn		**Pn**	**12 53 50.3**	**+1.5**
PVY				*i* Sn		**Sb**	**12 54 21.2**	**-2.1**
IVAS	**Ivanjica**	**2.48**	**83**	*ePn*		**Pn**	**12 53 50.5**	**+1.5**
IVAS				*eSn*		**Sn**	**12 54 20.4**	**+1.6**
INTR	**Introdacqua**	**2.49**	**239**	Pn		**Pb**	**12 53 51.9**	**-1.7**
GUMA	**Gualdo di Mace**	**2.52**	**265**			**Pb**	**12 53 53.3**	**-0.8**
SMRN	**Sveta Marina**	**2.53**	**313**	*ePn*		**Pb**	**12 53 52.4**	**-1.8**
ZAG	**Zagreb**	**2.55**	**348**	*ePn*		**Pb**	**12 53 52.7**	**-1.9**
RIY	**Rijeka**	**2.57**	**321**	*ePn*		**Pb**	**12 53 53.7**	**-1.3**
RIY				*eSn*		**Sb**	**12 54 28.0**	**+1.8**
RIY	**Rijeka**	**2.57**	**321**	*ePn*		**Pb**	**12 53 53.5**	**-1.5**
PTJ	**Puntijarka**	**2.63**	**348**	*i* Pn		**Pn**	**12 53 53.3**	**+2.3**
PUK	**Puka**	**2.65**	**118**	Pn		**Pn**	**12 53 53.4**	**+2.1**
CRES	**Cresnjev**	**2.66**	**340**	*i* Pn		**Pn**	**12 53 54.7**	**-1.7**
CRES				*eSn*		**Sb**	**12 54 27.0**	**-0.9**
BRIJ	**Brijuni**	**2.67**	**307**	*ePn*		**Pb**	**12 54 6.6**	**-2.1**
MATE	**Matera**	**2.69**	**181**	P		**Pn**	**12 53 53.4**	**+1.7**
MATE	**Matera**	**2.69**	**181**	P		**Pn**	**12 53 52.6**	**+0.9**
FDMO	**Fiordimonte**	**2.70**	**265**			**Pb**	**12 53 55.4**	**-1.8**
NRCA	**Norcia**	**2.72**	**261**			**Pb**	**12 53 55.2**	**-2.3**
TRUS	**Trudelj**	**2.79**	**70**	*ePn*		**Pn**	**12 53 54.3**	**+1.2**
TRUS				*eSn*		**Sn**	**12 54 26.8**	**+0.6**
KALN	**Kalnik**	**2.80**	**356**	*i* Pn		**Pn**	**12 53 55.3**	**+2.0**
PAOL	**Paolisi**	**2.82**	**216**			**Pn**	**12 53 56.5**	**+2.8**
FRGS	**Fruska Gora**	**2.85**	**49**	P		**Pn**	**12 53 54.4**	**+0.4**
FRGS	**Fruska Gora**	**2.85**	**49**	*ePn*		**Pn**	**12 53 54.3**	**+0.3**
FRGS	**Fruska Gora**	**2.85**	**49**	*eSn*		**Sn**	**12 54 27.9**	**+0.1**
LOBO	**Lobor**	**2.86**	**350**	*ePn*		**Pn**	**12 53 56.6**	**+2.5**
KOVH	**Kovagotottos**	**2.91**	**19**	P		**Pn**	**12 53 55.4**	**+0.6**
CEY	**Cerknica**	**2.92**	**326**	*ePn*		**Pb**	**12 53 58.6**	**-2.4**
CEY				*eSn*		**Sb**	**12 54 35.9**	**-0.5**
CEY	**Cerknica**	**2.92**	**326**	*i* Pn		**Pb**	**12 53 58.5**	**-2.4**
CEY				*eSn*		**Sb**	**12 54 34.7**	**-1.7**
GRUS	**Gruza**	**2.93**	**78**	*ePn*		**Pn**	**12 53 55.4**	**+1.4**
SKDS	**Skadanscina**	**2.96**	**319**	*i* Pn		**Pn**	**12 53 58.2**	**+2.7**
SKDS				*i*			12 54 03.3	
SKDS				*i* Sn		**Sn**	**12 54 33.2**	**+2.8**
SKDS				IAML			12 54 50.5	
	comp=Z,2μm,0.6s							
TIR	**Tirane**	**3.04**	**130**	P		**Pn**	**12 53 58.4**	**+1.8**
TIR				S		**Sn**	**12 54 35.1**	**+2.5**
TIR	**Tirane**	**3.04**	**130**	Pn		**Pn**	**12 53 58.1**	**+1.5**
TIR	**Tirane**	**3.04**	**130**	P		**Pn**	**12 53 58.2**	**+1.6**
TIR	**Tirane**	**3.04**	**130**	*ePn*		**Pn**	**12 53 58.4**	**+1.8**
TIR				*eSn*		**Sn**	**12 54 33.7**	**+1.2**
TIR	**Tirane**	**3.04**	**130**	P		**Pn**	**12 53 58.3**	**+1.7**
TIR	**Tirane**	**3.04**	**130**	P		**Pn**	**12 53 58.1**	**+1.5**
BEO	**Beograd**	**3.05**	**60**	P		**Pn**	**12 53 55.5**	**-1.2**
MURB	**Monte Urbino**	**3.09**	**270**			**Pb**	**12 54 01.2**	**-2.7**
BEHE	**Becsehely**	**3.13**	**0**	*ePn*		**Pn**	**12 54 00.5**	**+0.7**
BEHE				*eSn*		**Sn**	**12 54 37.8**	**+3.1**
LJU	**Ljubljana**	**3.14**	**330**	*ePn*		**Pb**	**12 54 01.5**	**-3.2**
CESX	**Cesi**	**3.15**	**258**	Pn		**Pb**	**12 54 01.7**	**-3.2**
MORH	**Mrgy, Hungar**	**3.17**	**24**	P		**Pn**	**12 53 59.3**	**+0.9**
MORH	**Mrgy, Hungar**	**3.17**	**24**	*ePn*		**Pn**	**12 53 59.3**	**+0.9**
MORH	**Mrgy, Hungar**	**3.17**	**24**	*eSn*		**Sn**	**12 54 36.9**	**+1.2**
PHP	**Peshkopia**	**3.19**	**120**	P		**Pn**	**12 54 01.2**	**+2.6**
PHP	**Peshkopia**	**3.19**	**120**	P		**Pn**	**12 54 01.2**	**+2.6**
SELS	**Selova**	**3.19**	**91**	*ePn*		**Pn**	**12 54 00.1**	**+1.5**
SELS				*eSn*		**Sn**	**12 54 37.3**	**+1.2**
CUC	**Castrocucco**	**3.42**	**192**			**Pn**	**12 54 04.2**	**+2.4**
CUC	**Castrocucco**	**3.42**	**192**	P		**Pn**	**12 54 04.1**	**+2.3**
MGAB	**Montegabbione**	**3.43**	**264**	P		**Pb**	**12 54 06.0**	**-3.7**
SUBS	**Subotica**	**3.46**	**36**	*ePn*		**Pn**	**12 54 03.3**	**+1.0**
SABO	**M.te Sabotino**	**3.47**	**321**			**Pn**	**12 54 05.4**	**+2.9**
SCTE	**Santa Cesarea**	**3.50**	**158**			**Pn**	**12 54 03.1**	**+0.1**
OBKA	**Obir**	**3.54**	**334**	*i* Pn		**Pn**	**12 54 07.2**	**+3.7**
OBKA	comp=Z,28nm,0.2s,SNR=19			*i* Sn		**Sb**	**12 54 50.5**	**-3.6**
	comp=Z,494nm,0.5s							
OBKA	**Obir**	**3.54**	**334**	*ePn*		**Pn**	**12 54 07.2**	**+3.7**
OBKA				*eSn*		**Sn**	**12 54 49.4**	**+4.5**
OBKA	**Obir**	**3.54**	**334**	*i* Pn		**Pn**	**12 54 06.9**	**+3.4**
OBKA				*eSn*		**Sn**	**12 54 48.5**	**+3.6**
SOKA	**Soboth**	**3.56**	**340**	*i* Pn		**Pn**	**12 54 06.7**	**+2.9**
SOKA	comp=Z,127nm,0.2s,SNR=40			*i* Sn		**Sn**	**12 54 47.7**	**+2.3**
	comp=Z,451nm,0.4s							
BOVS	**Bovan**	**3.61**	**84**	*i* P		**Pn**	**12 54 05.4**	**+0.9**
BOVS				*i* S		**Sn**	**12 54 47.5**	**+0.9**
BOVS	**Bovan**	**3.61**	**84**	*ePn*		**Pn**	**12 54 05.2**	**+0.8**
BOVS				*eSn*		**Sn**	**12 54 46.3**	**-0.3**
KUBS	**Kucevo**	**3.71**	**72**	*ePn*		**Pn**	**12 54 06.3**	**+0.5**
SKO	**Skopje**	**3.71**	**110**	*ePn*		**Pn**	**12 54 08.5**	**+2.6**
SKO	**Skopje**	**3.71**	**110**	*i* Pn		**Pn**	**12 54 08.4**	**+2.6**
SKO				*i* Sn		**Sg**	**12 55 06.4**	**-2.2**
OHR	**Ohrid**	**3.73**	**125**	*ePn*		**Pn**	**12 54 09.5**	**+2.3**
OHR				*eSn*		**Sn**	**12 54 49.8**	**+0.1**
OHR	**Ohrid**	**3.73**	**125**	*i* Pn		**Pn**	**12 54 09.3**	**+3.1**
OHR				*i* Sn		**Sg**	**12 55 08.3**	**-1.1**
BANR	**Banloc**	**3.75**	**55**	*i* P		**Pn**	**12 54 06.8**	**+0.5**
BANR	**Banloc**	**3.75**	**55**	*ePn*		**Pn**	**12 54 06.8**	**+0.5**
PRED	**Cave del Predi**	**3.84**	**325**			**Pn**	**12 54 11.0**	**+3.2**
MDVR	**Moldovita**	**3.85**	**66**	P		**Pn**	**12 54 08.8**	**+1.0**
MDVR	**Moldovita**	**3.85**	**66**	*ePn*		**Pn**	**12 54 08.6**	**+0.8**
MDVR				*eSn*		**Sn**	**12 54 51.3**	**-1.2**
MYKA	**Terra Mystica**	**3.96**	**327**	*i* Pn		**Pn**	**12 54 12.3**	**+2.9**
MYKA	comp=Z,0.4nm,0.1s,SNR=15			*i* Sn		**Sn**	**12 54 55.0**	**-0.4**
	comp=Z,103nm,0.4s							
PRVS	**Prvonek**	**3.99**	**100**	*ePn*		**Pn**	**12 54 11.4**	**+1.7**
ZAGS	**Zajecar**	**4.01**	**81**	*ePn*		**Pn**	**12 54 10.9**	**+1.1**
ZAGS				*eSn*		**Sn**	**12 54 55.3**	**-1.0**
ARSA	**Arzberg**	**4.01**	**348**	*i* Pn		**Pn**	**12 54 12.9**	**+3.0**
ARSA	comp=Z,2μm,0.3s,SNR=631			*i* Sn		**Sn**	**12 54 57.9**	**+1.5**
	comp=Z,238nm,0.3s							
ARSA	**Arzberg**	**4.01**	**348**	*ePn*		**Pn**	**12 54 12.9**	**+3.0**
ARSA				*eSn*		**Sn**	**12 54 58.0**	**+1.6**
ARSA	**Arzberg**	**4.01**	**348**	P		**Pn**	**12 54 12.5**	**+2.6**
ARSA	**Arzberg**	**4.01**	**348**	*ePn*		**Pn**	**12 54 13.0**	**+3.0**
ARSA				*eSn*		**Sn**	**12 54 57.9**	**+1.5**
ARSA	**Arzberg**	**4.01**	**348**	*i* Pn		**Pn**	**12 54 12.9**	**+3.0**
ARSA				*eSn*		**Sn**	**12 54 58.2**	**+1.8**
**OSSC

MODS *e* 12 55 21.6
MODS Modra-Piesok 5.05 4 *e*PN **Pn** **12 54 25.9 +1.7**
MODS *e*SN **Sn** **12 55 21.6 -0.4**
DEV Deva 5.07 58 ⇑P **Pn** **12 54 25.2 +0.7**
DEV Deva 5.07 58 P **Pn** **12 54 25.1 +0.7**
PSZ Piszkesteto 5.08 25 ⇓P **Pn** **12 54 25.9 +1.2**
PSZ Piszkesteto 5.08 25 Pn **Pn** **12 54 25.5 +0.8**
PSZ Piszkesteto 5.08 25 ⇑P **Pn** **12 54 25.2 +0.6**
MPEP Malo Peshtene 5.09 87 *i* P **Pn** **12 54 27.1 +2.3**
CEL Celeste 5.12 188 **Pn** **12 54 26.0 +0.8**
CEL Celeste 5.12 188 ⇑P **Pn** **12 54 26.0 +0.8**
BORR Bors 5.17 42 ⇑P **Pn** **12 54 26.4 +0.6**
SMOL Smolenice 5.20 5 *e*P **Pn** **12 54 28.3 +2.1**
SMOL *e* 12 55 25.3
MSSA Maissana 5.33 283 Pn **Pn** **12 54 31.0 +2.9**
WTTA Wattenberg 5.33 319 *i* Pn **Pn** **12 54 31.6 +3.3**
comp=Z,83nm,0.4s,SNR=32
WTTA *i* Sn **Sn** **12 55 31.5 +2.2**
comp=Z,277nm,0.4s
WTTA Wattenberg 5.33 319 *e*Pn **Pn** **12 54 31.5 +3.2**
WTTA *e*Sn **Sn** **12 55 31.5 +2.2**
TSLK Tsoukalades, L 5.38 146 P **Pn** **12 54 29.7 +0.9**
TSLK S **Sn** **12 55 28.6 -1.7**
comp=Z,748nm,0.6s
WATA Walderalm 5.41 319 *i* Pn **Pn** **12 54 33.0 +3.7**
comp=Z,42nm,0.2s,SNR=30
WATA *i* Sn **Sn** **12 55 35.3 +4.1**
comp=Z,43nm,0.2s
LTVH Ltavrtes, Hu 5.43 40 ⇓P **Pn** **12 54 31.3 +1.9**
LTVH Ltavrtes, Hu 5.43 40 ⇑P **Pn** **12 54 30.4 +1.1**
LOT Lotru 5.45 65 ⇓P **Pn** **12 54 31.8 +2.0**
DRGR 5.45 49 ⇓P **Pn** **12 54 30.5 +0.7**
DRGR 5.45 49 *e*Pn **Pn** **12 54 30.3 +0.6**
DRGR 5.45 49 P **Pn** **12 54 30.4 +0.7**
THL Klokotos Trika 5.46 132 P **Pn** **12 54 31.1 +1.3**
DRAG Dragano-Lefkad 5.47 147 P **Pn** **12 54 30.6 +0.6**
DRAG S **Sn** **12 55 27.7 -4.8**
comp=Z,70nm,0.6s
MMB Musomishta 5.47 107 *i* P **Pn** **12 54 33.1 +3.0**
TYRN Tyrnavos 5.48 130 P **Pn** **12 54 30.9 +0.8**
TYRN S **Sn** **12 55 31.8 -0.8**
comp=Z,300nm,0.6s
NYDR Nydri-Lefkada 5.50 146 P **Pn** **12 54 30.6 +0.3**
NYDR S **Sn** **12 55 29.5 -3.5**
comp=Z,515nm,0.4s
PGB Panagyurishte 5.51 96 *i* P **Pn** **12 54 34.3 +3.8**
SQTA Sankt Quirin 5.51 317 *i* Pn **Pn** **12 54 34.6 +3.9**
comp=Z,40nm,0.2s,SNR=31
SQTA *i* Sn **Sn** **12 55 37.7 +4.1**
comp=Z,113nm,0.3s
SRS Serrai 5.54 111 P **Pn** **12 54 32.9 +2.0**
SRS Serrai 5.54 111 *e*Pn **Pn** **12 54 32.9 +2.0**
SRS *e*Sn **Sn** **12 55 33.4 -0.7**
JAVC Velka Javorina 5.56 6 *e*PN **Pn** **12 54 33.7 +2.5**
JAVC *e*SN **Sn** **12 55 36.8 +2.2**
JAVC Velka Javorina 5.56 6 *e*Pn **Pn** **12 54 33.0 +1.7**
JAVC *e*Sn **Sn** **12 55 38.2 +3.6**
EVGI Lefkada island 5.56 147 P **Pn** **12 54 31.6 +0.4**
MARR Marisel-Cluj 5.61 51 ⇑P **Pn** **12 54 34.1 +2.1**
NVR Nevrokopi 5.63 108 P **Pn** **12 54 35.4 +3.2**
FETA Feichten 5.63 313 *e*Pn **Pn** **12 54 35.5 +3.2**
comp=Z,8.2nm,0.3s,SNR=14
FETA *i* Sn **Sn** **12 55 40.9 +4.3**
comp=Z,47nm,0.4s
MOTA Moosalm 5.65 317 *e*Pn **Pn** **12 54 36.3 +3.7**
comp=Z,45nm,0.4s,SNR=37
MOTA *i* Sn **Sn** **12 55 41.0 +4.0**
comp=Z,67nm,0.3s
FUORN Ofenpass-Fuorn 5.66 308 **Pn** **12 54 36.7 +4.0**
FSK Fiskardo 5.66 148 P **Pn** **12 54 32.7 +0.1**
KRUC Moravsky 5.73 358 *e*PN **Pn** **12 54 35.5 +2.0**
KRUC *e*SN **Sn** **12 55 38.0 -0.8**
KRUC Moravsky 5.73 358 *e*Pn **Pn** **12 54 34.8 +1.2**
KRUC *e*Sn **Sn** **12 55 38.1 -0.6**
PLVB Pleven 5.73 87 ⇑P **Pn** **12 54 35.3 +1.7**
CKRC Cesky Krumlov 5.74 344 *e*PN **Pn** **12 54 36.8 +3.1**
CKRC *e*SN **Sn** **12 55 39.7 +0.6**
CKRC AMS AMS 12 56 50.0
comp=Z,2µm,9.2s
CKRC Cesky Krumlov 5.74 344 *e*P **Pn** **12 54 36.8 +3.1**
CKRC *e* 12 55 39.7
CKRC MLR MLR
comp=Z,2µm,9.2s
CKRC Cesky Krumlov 5.74 344 *e*Pn **Pn** **12 54 36.5 +2.8**
CKRC *e*Sn **Sn** **12 55 40.0 +1.0**
PART Garmisch-Parte 5.75 318 *e*Pn **Pn** **12 54 37.6 +3.7**
PART *e*Sn **Sn** **12 55 43.2 +3.9**
KECS Kecovo 5.76 26 *e*P **Pn** **12 54 35.7 +1.7**
KECS *e* 12 55 40.1
KECS Kecovo 5.76 26 *e*PN **Pn** **12 54 35.7 +1.7**
KECS *e*SN **Sn** **12 55 40.1 +0.5**
DMLN Damoulianata-K 5.79 150 P **Pn** **12 54 34.4 +0.1**
KEF3 Kipouria, Keph 5.81 151 P **Pn** **12 54 34.7 +0.1**
EVR Evrytania 5.83 138 P **Pn** **12 54 38.0 +2.9**
GEC2 GERESS Array S 5.90 340 Pn **Pn** **12 54 38.8 +2.8**
GEC2 GERESS Array S 5.90 340 *e*Pn **Pn** **12 54 37.9 +1.9**
GEC2 *e*Sn **Sn** **12 55 44.7 +1.6**
GERES GERESS Array B 5.90 340 Pn **Pn** **12 54 38.9 +2.9**
comp=Z,23nm,0.3s,baz=156,slow=14,SNR=264
GERES Sn **Sn** **12 55 45.0 +1.8**
comp=Z,95nm,0.3s,baz=146,slow=24,SNR=16
GERES LR LR 12 57 29.2
comp=Z,571nm,19.4s,baz=148,slow=44
comp=Z,34nm,0.3s
CJR Cluj-Napoca 5.91 53 ⇑P **Pn** **12 54 36.7 +0.7**
CJR Cluj-Napoca 5.91 53 P **Pn** **12 54 36.6 +0.7**
RETA Reutte 5.92 317 *i* Pn **Pn** **12 54 39.6 +3.4**
comp=Z,4.2nm,0.1s,SNR=9.0
RETA *i* Sn **Sn** **12 55 47.3 +3.9**
comp=Z,126nm,0.3s
VLS Valsamata 5.92 149 P **Pn** **12 54 36.4 +0.2**
PVO Paravola 5.94 141 P **Pn** **12 54 37.5 +1.1**
DAVOX Davos/Dischmat 5.96 308 Pn **Pn** **12 54 40.3 +3.4**
comp=Z,12nm,0.3s,baz=122,slow=23,SNR=84
DAVOX Sn **Sn** **12 55 46.4 +1.5**
comp=Z,16nm,0.3s,baz=178,slow=23,SNR=4.6
PSDA Pessada-Kefalo 5.97 150 P **Pn** **12 54 37.1 +0.2**
VRAC Vranov 5.97 359 ⇑P **Pn** **12 54 38.9 +2.0**
VRAC Vranov 5.97 359 *e*PN **Pn** **12 54 38.9 +2.0**
VRAC *e*SN **Sn** **12 55 43.4 -1.3**
VRAC Vranov 5.97 359 Pn **Pn** **12 54 39.0 +2.1**
comp=Z,13nm,0.3s,baz=187,slow=12,SNR=94
VRAC Sn **Sn** **12 55 42.9 -1.8**
comp=Z,17nm,0.3s,baz=260,slow=20,SNR=7.3
comp=Z,32nm,0.3s
VRAC Vranov 5.97 359 *e*Pn **Pn** **12 54 38.7 +1.8**
VRAC *e*Sn **Sn** **12 55 43.8 -1.0**
ARR Arges 6.00 68 ⇓P **Pn** **12 54 39.7 +2.4**
AGG Agios Georgios 6.02 134 **Pn** **12 54 38.6 +1.0**
AGG Agios Georgios 6.02 134 ⇑P **Pn** **12 54 38.6 +1.0**
AGG Agios Georgios 6.02 134 P **Pn** **12 54 38.6 +1.0**
TREC Trest 6.02 352 *e*PN **Pn** **12 54 41.0 +3.4**
TREC *e*SN **Sn** **12 55 46.9 +0.9**
TREC Trest 6.02 352 *e*P **Pn** **12 54 41.0 +3.4**
TREC *e* 12 55 46.9
TREC Trest 6.02 352 *e*Pn **Pn** **12 54 40.9 +3.3**
HUMR Humele 6.05 76 ⇓P **Pn** **12 54 39.7 +1.7**
MAUC Maruska 6.07 7 *e*PN **Pn** **12 54 40.4 +2.1**
OBER Oberstdorf 6.11 314 *e*Pn **Pn** **12 54 42.3 +3.5**
LANS Liptovska Anna 6.11 17 *e*P **Pn** **12 54 41.2 +2.4**
LANS *e* 12 55 49.5
LANS Liptovska Anna 6.11 17 *e*PN **Pn** **12 54 41.2 +2.4**
LANS *e*SN **Sn** **12 55 49.5 +1.4**
MDB Medias 6.11 60 ⇑P **Pn** **12 54 40.9 +2.2**
MDB Medias 6.11 60 P **Pn** **12 54 40.9 +2.2**
VAE Valguarnera 6.12 198 Pn **Pn** **12 54 42.1 +3.1**
comp=Z,12nm,0.8s,baz=11,slow=5.2,SNR=1.8
RZN Rozhen 6.12 103 *i* P **Pn** **12 54 42.3 +3.2**
TUE Stuetta 6.12 303 **Pn** **12 54 42.9 +3.7**
TUE Stuetta 6.12 303 ⇑P **Pn** **12 54 42.8 +3.7**
ANX Ano Chora 6.14 139 P **Pn** **12 54 41.1 +1.8**
PVL Pavlikeni 6.15 89 *i* P **Pn** **12 54 41.5 +2.2**
FUR Furstenfeldbru 6.16 323 *e*Pn **Pn** **12 54 42.4 +2.8**
KHC Kasperske Hory 6.20 340 **Pn** **12 54 42.6 +2.6**
KHC Kasperske Hory 6.20 340 ⇑P **Pn** **12 54 43.1 +3.1**
KHC Kasperske Hory 6.20 340 *e*PN **Pn** **12 54 43.1 +3.1**
KHC *e*SN **Sn** **12 55 50.9 +0.5**
KHC AMS AMS 12 57 00.0
comp=Z,2µm,7.9s
KHC Kasperske Hory 6.20 340 *ce*P **Pn** **12 54 41.4 +1.4**
KHC pmax pmax
comp=Z,145nm,0.6s
KHC Kasperske Hory 6.20 340 *e*Pn **Pn** **12 54 43.2 +3.2**
KHC *e*Sn **Sn** **12 55 51.2 +0.8**
DAVA Damuels 6.25 312 *i* Pn **Pn** **12 54 44.8 +3.9**
comp=Z,4.5nm,0.2s,SNR=12
DAVA *i* Sn **Sn** **12 55 54.6 +2.8**
comp=Z,169nm,0.4s
DAVA Damuels 6.25 312 ⇑P **Pn** **12 54 44.7 +3.9**
DAVA Damuels 6.25 312 *e*Pn **Pn** **12 54 44.6 +3.8**
MTUR Matau 6.25 70 ⇑P **Pn** **12 54 42.4 +1.5**
MTUR Matau 6.25 70 P **Pn** **12 54 42.3 +1.5**
EFP Efpalio 6.27 140 P **Pn** **12 54 41.9 +1.0**
VOIR 6.30 68 ⇓P **Pn** **12 54 43.9 +2.4**
VOIR 6.30 68 P **Pn** **12 54 43.8 +2.4**
ZVC Zvikov 6.36 345 *e*PN **Pn** **12 54 45.2 +3.1**
ZVC *e*SN **Sn** **12 55 54.0 -0.1**
ZVC AMS AMS 12 57 10.0
comp=Z,2µm,11.1s
RAFF Raffo Rosso 6.38 197 Pn **Pn** **12 54 45.8 +3.4**
UBR Ueberruh 6.38 315 *e*Pn **Pn** **12 54 45.3 +2.8**
PLONS Plons/SG 6.40 308 *e*Pn **Pn** **12 54 46.8 +4.0**
PLONS *e*Sn **Sn** **12 55 56.8 +1.5**
WET Wettzell 6.40 337 *e*Pn **Pn** **12 54 45.1 +2.4**
CRVS Cervenica-Dubn 6.45 29 *e*P **Pn** **12 54 45.4 +1.9**
CRVS *e* 12 55 56.9
CRVS Cervenica-Dubn 6.45 29 *e*PN **Pn** **12 54 45.4 +1.9**
CRVS *e*SN **Sn** **12 55 56.9 +0.3**
MORC Moravsky Berou 6.46 5 ⇑P **Pn** **12 54 45.7 +2.0**
MORC Moravsky Berou 6.46 5 **Pn** **12 54 45.8 +2.2**
MORC Moravsky Berou 6.46 5 *e*PN **Pn** **12 54 45.4 +1.7**
MORC *e*SN **Sn** **12 55 57.7 +0.8**
MORC Moravsky Berou 6.46 5 ⇑P **Pn** **12 54 45.4 +1.7**
MORC Moravsky Berou 6.46 5 P **Pn** **12 54 45.6 +2.0**
MORC Moravsky Berou 6.46 5 *e*Pn **Pn** **12 54 45.6 +2.0**
MORC *e*Sn **Sn** **12 55 57.7 +0.8**
ARCR ARCALIA 6.54 52 ⇓P **Pn** **12 54 45.5 +0.9**
NIE Niedzica 6.55 21 *e*P **Pn** **12 54 47.5 +2.7**
OKC Ostrava-Krasne 6.57 8 *e*PN **Pn** **12 54 47.3 +2.2**
OKC Ostrava-Krasne 6.57 8 *e*P **Pn** **12 54 47.3 +2.2**
OKC Ostrava-Krasne 6.57 8 *e*Pn **Pn** **12 54 47.0 +2.0**
OKC *e*Sn **Sn** **12 56 01.2 +1.8**
MONC Moncucco Torin 6.58 288 ⇑P **Pn** **12 54 48.9 +3.7**
ELND Elena 6.68 90 ⇑P **Pn** **12 54 48.6 +2.0**
DOPR Dopca 6.69 64 ⇑P **Pn** **12 54 48.7 +2.0**
SAOF Saorge 6.71 279 P **Pn** **12 54 50.1 +3.1**
GOPC GO Pecny, Ondr 6.72 349 *e*PN **Pn** **12 54 50.1 +3.0**
GOPC *e*SN **Sn** **12 56 03.0 -0.1**
GOPC GO Pecny, Ondr 6.72 349 *e*P **Pn** **12 54 50.1 +3.0**
GOPC *e* 12 56 03.0
SZH Strazhitsa 6.73 87 *i* P **Pn** **12 54 49.2 +2.0**
SGRR Singureni 6.73 79 ⇓P **Pn** **12 54 49.0 +1.8**
KRLC Kraliky 6.74 0 *e*PN **Pn** **12 54 49.9 +2.5**
KRLC *e*SN **Sn** **12 56 02.9 -0.8**
KRLC Kraliky 6.74 0 *e*P **Pn** **12 54 49.9 +2.5**
KRLC *e* 12 56 02.9
VSL Villasalto 6.75 238 Pn **Pn** **12 54 50.2 +2.7**
VSL Villasalto 6.75 238 ⇓P **Pn** **12 54 50.7 +3.2**
KOLS Kolonicke sedl 6.78 32 *e*P **Pn** **12 54 49.6 +1.6**
KOLS Kolonicke sedl 6.78 32 *e*PN **Pn** **12 54 49.6 +1.6**
KOLS *e*PG **Pg** **12 55 22.8 +3.6**
SBF Sospel 6.79 278 *e*P **Pn** **12 54 51.1 +2.9**
SBF *e*Sn **Sn** **12 56 03.5 -1.5**
comp=Z,152nm,0.5s
SBF Sospel 6.79 278 P **Pn** **12 54 51.1 +2.9**
PRU Pruhonice 6.82 348 *e*PN **Pn** **12 54 51.5 +3.0**
PRU *e*SN **Sn** **12 56 05.3 -0.4**
PRU AMS AMS 12 57 30.0
comp=Z,2µm,8.5s
PRU Pruhonice 6.82 348 *e*P **Pn** **12 54 51.5 +3.0**
PRU *e* 12 56 05.3
PRU MLR MLR
comp=Z,2µm,8.5s
PRU Pruhonice 6.82 348 *e*Pn **Pn** **12 54 51.2 +2.6**
PRU *e*Sn **Sn** **12 56 05.3 -0.4**
WILA Wila 6.87 309 *e*Pn **Pn** **12 54 52.2 +3.0**
NORI Noerdlinger Ri 6.87 324 *e*Pn **Pn** **12 54 50.9 +1.8**
NORI *e*Sn **Sn** **12 56 04.3 -2.5**
RDO Rodhopi 6.87 106 **Pn** **12 54 50.9 +1.7**
RDO Rodhopi 6.87 106 ⇓P **Pn** **12 54 51.8 +2.6**
MLR Muntele Rosu 6.92 69 ⇑P **Pn** **12 54 52.5 +2.5**
MLR Muntele Rosu 6.92 69 Pn **Pn** **12 54 51.9 +1.9**
MLR Muntele Rosu 6.92 69 P **Pn** **12 54 51.9 +1.9**
MLR Muntele Rosu 6.92 69 Pn **Pn** **12 54 52.8 +2.8**
comp=Z,5.2nm,0.3s,baz=261,slow=5.6,SNR=34
MLR LR LR 12 58 16.7
comp=Z,720nm,21.9s,baz=260,slow=45
comp=Z,21nm,0.4s
PRA Prague 6.92 347 *e*PN **Pn** **12 54 53.1 +3.2**
PRA AMS AMS 12 57 30.0
comp=Z,2µm,8.1s
PRA Prague 6.92 347 *e*P **Pn** **12 54 53.1 +3.2**
PRA MLR MLR
comp=Z,2µm,8.1s
WALHA Wallhausen, DE 6.94 312 *e*Pn **Pn** **12 54 53.0 +2.8**
SULR 6.98 76 ⇓P **Pn** **12 54 52.8 +2.2**
DPC Dobruska-Polom 7.02 358 *e*PN **Pn** **12 54 53.8 +2.5**
DPC Dobruska-Polom 7.02 358 *e*P **Pn** **12 54 53.8 +2.5**
DPC Dobruska-Polom 7.02 358 *e*Pn **Pn** **12 54 53.9 +2.5**
DPC *e*Sn **Sn** **12 56 09.4 -1.2**
TURR Turia 7.13 64 ⇓P **Pn** **12 54 55.2 +2.4**
NEHR Nehoiu 7.14 70 ⇓P **Pn** **12 54 55.1 +2.1**
ROTZ Rotzenmuhle 7.15 336 *e*Pn **Pn** **12 54 54.7 +1.6**
ROTZ *e*Sn **Sn** **12 56 14.6 +0.8**
EMING Emmingen-Lipti 7.18 312 *e*Pn **Pn** **12 54 55.9 +2.4**
EMING *e*Sn **Sn** **12 56 12.4 -2.1**
OJC Ojcow 7.19 16 *e*P **Pn** **12 54 55.9 +2.3**
OJC Ojcow 7.19 16 Pn **Pn** **12 54 55.2 +1.6**
OJC Ojcow 7.19 16 ⇓P **Pn** **12 54 55.6 +2.0**
OJC Ojcow 7.19 16 P **Pn** **12 54 55.2 +1.6**
COVR Voineasa-Covas 7.19 66 ⇑P **Pn** **12 54 56.4 +2.7**
CHVC Chvalec 7.27 356 *e*PN **Pn** **12 54 56.9 +2.2**
CHVC *e*PN **Pn** **12 54 56.9 +2.2**
CHVC Chvalec 7.27 356 *e*P **Pn** **12 54 56.9 +2.2**
MSS Messtetten 7.29 314 *e*P **Pn** **12 54 57.1 +2.1**
SLE Schleitheim 7.30 310 *e*Pn **Pn** **12 54 57.5 +2.4**
SLE *e*Sn **Sn** **12 56 14.3 -3.1**
BURAR Bucovina Array 7.32 51 ⇑P **Pn** **12 54 57.8 +2.3**
BURAR Bucovina Array 7.32 51 **Pn** **12 54 57.1 +1.6**
BURAR Bucovina Array 7.32 51 P **Pn** **12 54 57.8 +2.3**
BUR08 Bucovina Ar. S 7.33 51 **Pn** **12 54 57.6 +2.0**
MBDF Montbardon 7.33 284 *e*P **Pn** **12 54 58.0 +2.3**
MBDF *e*Sn **Sn** **12 56 16.1 -2.3**
comp=Z,87nm,0.5s
MBDF Montbardon 7.33 284 P **Pn** **12 54 57.3 +1.6**
PVCC Panska Ves 7.35 349 *e*PN **Pn** **12 54 58.7 +3.0**
PVCC Panska Ves 7.35 349 *e*P **Pn** **12 54 58.7 +3.0**
PVCC Panska Ves 7.35 349 *e*Pn **Pn** **12 54 59.0 +3.3**
SENIN Lac Senin/Sane 7.37 297 **Pn** **12 54 59.0 +2.8**
MANZ Manzenberg 7.38 336 *e*Pn **Pn** **12 54 57.9 +1.7**
SULZ Cheisacher 7.38 308 *e*Pn **Pn** **12 54 59.4 +3.1**
METMA Mettma DE 7.40 309 *e*Pn **Pn** **12 54 59.0 +2.5**
METMA *e*Sn **Sn** **12 56 16.7 -3.3**
GRA1 Grafenberg Arr 7.41 331 Pn **Pn** **12 54 58.6 +2.0**
GRF Grafenberg Arr 7.41 331 P **Pn** **12 54 58.6 +2.0**
GRFO Grafenberg 7.41 331 Pn **Pn** **12 54 58.8 +2.2**
GRFO Grafenberg 7.41 331 P **Pn** **12 54 58.8 +2.2**
GRFO Grafenberg 7.41 331 *e*Pn **Pn** **12 54 58.4 +1.8**
RICC Richard 7.43 347 *e*PN **Pn** **12 54 59.2 +2.3**
BNI Bardonecchia 7.45 287 Pn **Pn** **12 54 59.3 +2.1**
BNI Bardonecchia 7.45 287 ⇓P **Pn** **12 54 59.2 +2.0**
BNI Bardonecchia 7.45 287 P **Pn** **12 54 59.3 +2.1**
LMR La Mourre 7.47 273 *e*P **Pn** **12 55 00.7 +3.2**
LMR *e*Sn **Sn** **12 56 20.8 -0.9**
comp=Z,28nm,0.4s
LMR La Mourre 7.47 273 P **Pn** **12 55 00.3 +2.8**
LPG La Plagne 7.48 290 *e*P **Pn** **12 55 01.7 +3.8**
LPG *e*Sn **Sn** **12 56 20.9 -1.4**
comp=Z,111nm,0.5s
LPG La Plagne 7.48 290 P **Pn** **12 55 00.8 +2.9**
PLOR Plostina 7.49 67 ⇑P **Pn** **12 54 59.8 +1.9**
PLOR Plostina 7.49 67 P **Pn** **12 54 59.7 +1.9**
LPL La Plagne 7.50 290 *e*P **Pn** **12 55 00.4 +2.4**
LPL *e*Sn **Sn** **12 56 21.2 -1.5**
comp=Z,115nm,0.4s
LPL La Plagne 7.50 290 P **Pn** **12 54 55.8 -2.2**
NKC Novy Kostel 7.50 338 *e*PN **Pn** **12 55 00.0 +2.1**
NKC Novy Kostel 7.50 338 *e*P **Pn** **12 55 00.0 +2.1**
NKC Novy Kostel 7.50 338 *e*Pn **Pn** **12 54 59.8 +1.9**
KSP Ksiaz 7.51 358 *e*P **Pn** **12 55 00.8 +2.8**
KSP Ksiaz 7.51 358 ⇑P **Pn** **12 55 00.2 +2.2**
BALST Balsthal 7.53 305 *e*Pn **Pn** **12 55 00.6 +2.3**
BERGE Lenzkirch (DE) 7.53 310 *e*Pn **Pn** **12 55 00.5 +2.1**
BERGE *e*Sn **Sn** **12 56 19.6 -3.6**
VRI Vrincioaia 7.55 67 ⇑P **Pn** **12 54 59.9 +1.3**
VRI Vrincioaia 7.55 67 P **Pn** **12 54 59.8 +1.3**
STU Stuttgart 7.56 319 **Pn** **12 54 59.9 +1.2**
STU Stuttgart 7.56 319 ⇑P **Pn** **12 55 00.8 +2.1**
STU Stuttgart 7.56 319 P **Pn** **12 54 59.9 +1.2**
HSKC Hora Svate Kat 7.62 344 *e*PN **Pn** **12 55 01.2 +1.7**
TANN Tannenbergstha 7.67 339 *e*Pn **Pn** **12 55 02.1 +2.0**
NEF NEVSHA 7.67 87 *i* P **Pn** **12 55 02.7 +2.5**
BFO Black Forest 7.72 313 Pn **Pn** **12 55 02.7 +1.8**
BFO Black Forest 7.72 313 ⇑P **Pn** **12 55 02.5 +1.7**
BFO Black Forest 7.72 313 P **Pn** **12 55 02.7 +1.8**
BFO Black Forest 7.72 313 *e*Pn **Pn** **12 55 02.6 +1.8**
BRG Berggiesshubel 7.78 347 *i* P **Pn** **12 55 03.6 +2.0**
BRG Amp 12 55 05.0
comp=Z,26nm,0.3s
BRG r 12 55 13.5
BRG r 12 56 27.9
BRG r 12 56 53.5
BRG Amp 12 56 58.3
comp=Z,123nm,0.6s
BRG Amp 12 58 15.0
comp=Z,2.0nm,7.7s
BRG Amp 12 58 17.0
comp=E,0.4nm,11.0s
BRG Amp 12 58 18.0
comp=N,1.3nm,8.8s
BRG Berggiesshubel 7.78 347 *e*Pn **Pn** **12 55 03.9 +2.3**
BRG *e*Sn **Sn** **12 56 27.9 -1.3**
PLN Plauen 7.81 338 *e*Pn **Pn** **12 55 04.1 +2.0**
ORIF Oris-en-Rattie 7.99 285 *e*P **Pn** **12 55 07.5 +2.9**
ORIF *e*Sn **Sn** **12 56 30.7 -3.7**
comp=N,59nm,0.5s
ORIF Oris-en-Rattie 7.99 285 P **Pn** **12 55 06.1 +1.5**
MOX Moxa 8.11 336 *e*Pn **Pn** **12 55 07.8 +1.7**
MOX *e*Sn **Sn** **12 56 37.3 +0.1**
MOF Molkenrain 8.12 307 P **Pn** **12 55 09.7 +3.3**
SMRF Simiane la Rot 8.14 278 *e*P **Pn** **12 55 10.1 +3.5**
HARR Harsova 8.17 77 ⇓P **Pn** **12 55 08.5 +1.6**
HARR Harsova 8.17 77 P **Pn** **12 55 08.5 +1.6**
LVV L'vov 8.19 35 *e*P **Pn** **12 55 11.1 +3.8**
LVV *e*S **Sn** **12 56 43.1 +3.9**
LVV pmax pmax
comp=Z,200nm,1.4s
LVV MLR MLR
comp=E,500nm,10.0s
LVV MLR MLR
comp=N,800nm,11.0s
LVV MLR MLR
comp=Z,900nm,11.0s
CABF La Chapelle 8.24 297 *e*Pn **Pn** **12 55 10.5 +2.4**
CABF *e*Sn **Sn** **12 56 38.2 -2.5**
comp=Z,64nm,0.6s
HINF Hinteralfeld 8.26 306 *e*Pn **Pn** **12 55 09.5 +1.2**
HINF Hinteralfeld 8.26 306 *e*P Pn 12 55 14.7 +6.4
HINF *e*Sn **Sn** **12 56 38.7 -2.5**
comp=Z,58nm,0.4s
MILB Miltenberg 8.28 324 *e*Pn **Pn** **12 55 09.9 +1.4**
MILB *e*Sn **Sn** **12 56 37.6 -3.9**
ECH Echery 8.29 309 **Pn** **12 55 10.5 +1.8**
ECH Echery 8.29 309 P **Pn** **12 55 10.5 +1.8**
ECH Echery 8.29 309 *e*Pn **Pn** **12 55 10.8 +2.1**
ECH *e*Sn **Sn** **12 56 37.2 -4.6**
CDF Champ du Feu 8.34 311 *e*Pn **Pn** **12 55 11.5 +2.1**
CLL Collm 8.37 344 Pn **Pn** **12 55 11.4 +1.8**
CLL Collm 8.37 344 *e*P **Pn** **12 55 12.0 +2.3**
CLL Collm 8.37 344 *e*Pn **Pn** **12 55 12.0 +2.3**
CLL *e*Sn **Sn** **12 56 40.0 -3.6**
CLL *e*Sb Sb 12 57 12.0 -0.9
CLL *e*Sg 12 57 34.0
CLL Collm 8.37 344 *e*Pn **Pn** **12 55 11.5 +1.8**
CFR Carcaliu 8.37 73 ⇑P **Pn** **12 55 11.2 +1.4**
CFR Carcaliu 8.37 73 P **Pn** **12 55 11.1 +1.4**
TPGR Topolog 8.53 76 ⇓P **Pn** **12 55 13.6 +1.6**
NEUB Neuenburg 8.57 338 *e*Pn **Pn** **12 55 16.2 +3.8**
HAU Haudompre 8.65 306 *e*Pn **Pn** **12 55 15.5 +1.8**
HAU Haudompre 8.65 306 *e*P Pn 12 55 19.9 +6.2
HAU *e*Sn **Sn** **12 56 48.3 -2.4**
comp=Z,59nm,0.4s
BODE Bodenheim 8.78 321 *e*Sn **Sn** **12 56 51.5 -2.1**
VIVF Saint-Julien-l 8.83 284 *e*Pn **Pn** **12 55 17.6 +1.5**
VIVF *e*Sn **Sn** **12 56 52.9 -2.2**
comp=Z,17nm,0.4s
TLCR 8.85 74 ⇑P **Pn** **12 55 17.8 +1.4**
TLCR 8.85 74 P **Pn** **12 55 17.7 +1.4**
TNS Taunus Mts 8.94 323 *e*Sn **Sn** **12 56 55.9 -1.8**
SSB Saint Sauveur 8.97 287 Pn **Pn** **12 55 19.6 +1.6**
SSB Saint Sauveur 8.97 287 ⇑P **Pn** **12 55 19.6 +1.6**
SSB Saint Sauveur 8.97 287 P **Pn** **12 55 19.6 +1.6**
ABH Alteburg 9.11 319 *e*Sn **Sn** **12 56 58.4 -3.4**
APE Apeiranthos 9.18 130 *i* P **Pn** **12 55 19.0 -1.9**
MILM Milestii Mici 9.24 63 ⇓*i*P **Pn** **12 55 24.0 +2.3**
comp=Z,140nm,1.3s
KIS Ishinev 9.27 63 *e*P **Pn** **12 55 24.0 +1.9**
comp=Z,60nm,1.1s
KIS *e*Lq LQ 12 58 28.0
KIS *e*LRq 13 00 58.0
KIS LRM MLR 13 01 10.0
comp=Z,130nm,16.5s
PAGF Fort de Pagny 9.29 308 *e*Pn **Pn** **12 55 23.6 +1.3**
PAGF Fort de Pagny 9.29 308 *e*P Pn 12 55 29.2 +6.9
LASF Ste Croix 9.38 279 *e*Pn **Pn** **12 55 21.9 -1.7**
KEST Kesra 9.51 219 Pn **Pn** **12 55 29.8 +4.3**
comp=Z,1.2nm,0.3s,baz=283,slow=2.3,SNR=10
KEST LR LR 12 59 51.4
comp=Z,426nm,18.6s,baz=334,slow=42
SFTF Sexfontaines 9.52 305 *e*Pn **Pn** **12 55 27.4 +1.8**
baz=128
SFTF *e*Sn **Sn** **12 57 08.4 -3.6**
comp=Z,8.3nm,0.2s
MEZF Maizieres J'vi 9.65 306 *e*Sn **Sn** **12 57 11.3 -3.8**
comp=Z,18nm,0.5s
SAVF Savonnieres en 9.66 307 *e*Pn **Pn** **12 55 28.4 +0.9**
SAVF Savonnieres en 9.66 307 *e*P Pn 12 55 34.0 +6.5
SAVF *e*Sn **Sn** **12 57 12.8 -2.6**
comp=Z,76nm,1.3s
WLF Walferdange 9.66 315 *d*P **Pn** **12 55 31.2 +3.8**
KASTN Kahler Asten 9.69 327 *e*Pn **Pn** **12 55 31.1 +3.2**
KASTN *e*Sn **Sn** **12 57 13.1 -3.0**
SMF Signal de Mont 9.73 294 *e*Pn **Pn** **12 55 30.0 +1.6**
SMF *e*Sn **Sn** **12 57 13.9 -3.2**
comp=Z,33nm,0.3s
AHRW Bad Neuenahr-A 9.78 321 *e*Pn **Pn** **12 55 32.1 +3.1**
AHRW *e*Sn **Sn** **12 57 16.7 -1.5**
LOR Lormes 9.90 298 *e*Pn **Pn** **12 55 31.9 +1.2**
baz=112
LOR *e*Sn **Sn** **12 57 17.4 -3.9**
comp=Z,74nm,0.4s
SSF Saint Saulge 10.07 296 *e*Pn **Pn** **12 55 34.3 +1.3**
SSF *e*Sn **Sn** **12 57 22.1 -3.3**
comp=Z,25nm,0.5s
AVF Avril sur Loir 10.09 295 *e*Pn **Pn** **12 55 35.0 +1.7**
AVF *e*Sn **Sn** **12 57 22.2 -3.8**
comp=Z,27nm,0.6s
BHOU Houvegnez 10.17 317 *d*P **Pn** **12 55 37.4 +3.0**
IDI Anoyia 10.21 139 LR LR 13 00 30.2
comp=Z,152nm,18.9s,baz=320,slow=43
BTNL Ternell 10.26 319 *d*P **Pn** **12 55 39.1 +3.5**
MEM Membach 10.33 318 *d*P **Pn** **12 55 39.4 +2.9**
MEM *dx* x 12 56 20.2
BUG Bochum--Univer 10.34 325 *e*Pn **Pn** **12 55 40.1 +3.5**
BUG *e*Sn **Sn** **12 57 29.9 -2.1**
BGF Bois d'Agland 10.37 293 *e*Pn **Pn** **12 55 38.7 +1.5**
BGF *e*Sn **Sn** **12 57 31.3 -1.6**
comp=Z,60nm,0.5s
RCHB Rochefort 10.44 315 *d*P **Pn** **12 55 41.5 +3.4**
RCHB *d*PP **PbPb** **12 56 15.3 +3.1**
BSTI Sart Tilman 10.53 317 *d*P **Pn** **12 55 42.8 +3.5**
BCLA Clavier 10.56 316 *d*P **Pn** **12 55 42.4 +2.7**
BCLA *d*PP **PbPb** **12 56 19.4 +5.2**
BCLA *d*S **Sn** **12 57 36.5 -0.9**
MTLF Montolieu 10.60 275 *e*Pn **Pn** **12 55 43.8 +3.5**
BEBN Eben Emael 10.61 319 *d*P **Pn** **12 55 43.6 +3.2**
**GIVF Givet 10.62 314

TCF eSn Sn 12 57 38.2 -4.0
comp=Z,21nm,0.4s
BMRD Maredsous 10.76 314 dP Pn 12 55 47.9 +5.4
BAIF Baives 10.92 312 eP **Pn** **12 55 48.1 +3.4**
RJF Les Rejaudoux 11.10 285 ePn **Pn** **12 55 47.4 +0.3**
RJF Les Rejaudoux 11.10 285 eP Pn 12 55 54.5 +7.4
RJF eSn **Sn** **12 57 47.6 -3.1**
comp=Z,15nm,0.6s
CLF Chambon-Foret 11.17 300 Pn **Pn** **12 55 50.8 +2.8**
KIEV Kiev 11.23 45 P **Pn** **12 55 51.5 +2.6**
KIEV Kiev 11.23 45 ⇓P **Pn** **12 55 52.0 +3.1**
KIEV Kiev 11.23 45 P **Pn** **12 55 51.5 +2.6**
AKASG Malin Array Be 11.24 45 Pn **Pn** **12 55 49.8 +0.8**
AKASG Malin Array Be 11.24 45 P **Pn** **12 55 49.8 +0.8**
AKASG Malin Array Be 11.24 45 Pn **Pn** **12 55 51.8 +2.8**
comp=Z,1.5nm,0.3s,baz=234,slow=13,SNR=19
AKASG Sn **Sn** **12 57 49.7 -4.4**
baz=238,slow=25
AKASG LR LR 13 00 35.6
comp=Z,349nm,21.1s,baz=234,slow=40
AKBB Malin Array Si 11.24 45 Pn **Pn** **12 55 51.5 +2.5**
AKBB Malin Array Si 11.24 45 ceP **Pn** **12 55 47.8 -1.3**
SUW Suwalki 11.49 19 eP **Pn** **12 55 55.0 +2.7**
SUW Suwalki 11.49 19 **Pn** **12 55 54.9 +2.5**
SUW Suwalki 11.49 19 P **Pn** **12 55 54.9 +2.5**
SUW Suwalki 11.49 19 eP **Pn** **12 55 55.1 +2.7**
LFF La Frestale 11.62 283 ePn **Pn** **12 55 55.7 +1.4**
LFF La Frestale 11.62 283 eP Pn 12 56 02.0 +7.7
BSD Bornholm Skovb 11.85 355 i P **Pn** **12 55 59.6 +2.3**
BSD IAmb IAmb 12 56 03.4
comp=Z,17nm,0.8s
MFF Saint Martin d 12.41 291 ePn **Pn** **12 56 06.6 +1.6**
MFF Saint Martin d 12.41 291 eP **P** **12 56 12.4 -4.5**
MFF eSn **Sn** **12 58 17.2 -5.5**
comp=Z,8.6nm,0.5s
LUNU Lund 12.49 351 i P **Pn** **12 56 08.9 +2.8**
ETSF Etsaut 12.67 274 ePn **Pn** **12 56 09.3 +0.7**
ETSF Etsaut 12.67 274 eP **P** **12 56 16.4 -3.5**
LDF La Druitiere 12.86 300 eP **P** **12 56 17.5 -4.4**
LDF eSn **Sn** **12 58 30.7 -3.0**
comp=Z,3.1nm,0.4s
BJUU Bjuv 12.97 351 i P **Pn** **12 56 14.8 +2.2**
PABE Paberze 13.04 18 Pn **Pn** **12 56 16.1 +2.6**
PABE Paberze 13.04 18 eP **Pn** **12 56 16.2 +2.6**
FLN La Foliniere 13.14 300 ePn **Pn** **12 56 16.0 +1.1**
FLN La Foliniere 13.14 300 eP **P** **12 56 21.7 -3.3**
FLN eSn **Sn** **12 58 34.0 -6.5**
comp=Z,7.1nm,0.5s
BR131 Keskin Array S 13.15 100 i P **Pn** **12 56 12.5 -2.8**
BRTR Keskin Array B 13.15 100 Pn **Pn** **12 56 17.4 +2.0**
comp=Z,1.4nm,0.8s,baz=289,slow=11,SNR=7.1
GRR Gorron 13.27 298 ePn **Pn** **12 56 18.4 +1.7**
GRR eSn **Sn** **12 58 36.8 -6.8**
comp=Z,4.7nm,0.4s
DEL Delary 13.28 353 eP **Pn** **12 56 13.7 -3.1**
NACGM Naroch 13.29 26 eP **Pn** **12 56 18.7 +1.8**
comp=E,925nm,0.9s
MNK Minsk 13.33 29 i P **Pn** **12 56 17.5 -0.1**
comp=E,4.0nm,0.8s
MNK i P **Pn** **12 56 17.5 -0.1**
comp=N,19nm,0.8s
MNK i P **Pn** **12 56 17.5 -0.1**
comp=Z,23nm,0.8s,baz=218
MNK i PP **PnPn** **12 56 25.2 -0.1**
MNK i S **Sn** **12 58 47.5 +2.4**
MNK i SS **SnSn** **12 58 59.8 +2.5**
MNK i LR LR 13 00 51.8
MNK i LRM MLR 13 02 06.9
comp=E,173nm,14.2s
MNK i LRM MLR 13 02 06.9
comp=N,483nm,14.2s
MNK i LRM MLR 13 02 06.9
comp=Z,712nm,14.2s
MNK Minsk 13.33 29 i P **Pn** **12 56 17.4 -0.1**
MNK i S **Sn** **12 58 47.5 +2.4**
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK pmax pmax
comp=Z,23nm,0.9s
MNK pmax pmax
comp=N,19nm,0.8s
MNK MLR MLR
comp=N,483nm,14.0s
MNK MLR MLR
comp=E,173nm,14.0s
MNK MLR MLR
comp=Z,712nm,14.0s
VSVD Vaisvydziai 13.47 18 eP **Pn** **12 56 21.6 +2.1**
IIGN Ignalina 13.49 24 eP **Pn** **12 56 23.0 +3.2**
ISAL Salakas 13.66 23 eP **Pn** **12 56 25.4 +3.4**
QUIF Quistinic 14.66 295 eP **P** **12 56 39.4 -2.5**
SLIT Slitere, Latvi 14.73 12 eP **Pn** **12 56 37.7 +1.1**
ESDC Sonseca Array 15.94 264 Pn **P** **12 56 57.4 +1.1**
comp=Z,0.1nm,0.3s,baz=73,slow=12,SNR=8.7
MTSE Matsula 16.01 13 eP **P** **12 56 55.1 -1.7**
VSU Vasula 16.37 19 ⇑P **P** **12 57 01.5 +0.8**
VSU Vasula 16.37 19 ceP **Pn** **12 56 57.3 -0.7**
VSU pmax pmax
comp=Z,39nm,0.8s
VSU Vasula 16.37 19 eP **P** **12 57 00.0 -0.7**
SOC Sochi 16.67 81 eP **Pn** **12 56 58.4 -3.5**
SOC eSS **S** **13 00 16.3 -1.2**
SOC MLR MLR
comp=Z,83nm,19.0s
ARPR Arapgir-MALATY 16.77 97 P **P** **12 57 07.5 +1.9**
KONO Kongsberg 16.91 347 P **P** **12 57 06.2 -0.6**
KONO Kongsberg 16.91 347 P **P** **12 57 06.2 -0.6**
KONO pmax pmax
comp=Z,21nm,1.1s
HFS Hagfors 16.92 355 Pn **Pn** **12 57 05.3 +0.3**
comp=Z,0.8nm,0.3s,baz=163,slow=11,SNR=25
HFS LR LR 13 04 35.1
comp=Z,169nm,19.5s,baz=180,slow=41
comp=Z,6.8nm,0.7s
VORD Divnogorie 17.07 56 eP **Pn** **12 57 05.4 -1.6**
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 17.08 55 eP **Pn** **12 57 05.1 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 17.25 53 P **Pn** **12 57 07.2 -2.0**
VORR pmax pmax
comp=Z,40nm,1.3s
OBN Obninsk 17.43 41 eP **Pn** **12 57 09.6 -1.7**
OBN pmax pmax
comp=Z,85nm,1.7s
OBN MLR MLR
comp=Z,355nm,17.0s
OBN Obninsk 17.43 41 P **Pn** **12 57 11.6 +0.3**
comp=Z,11nm,0.3s,baz=98,slow=21,SNR=6.3
OBN LR LR 13 04 09.4
comp=Z,113nm,18.5s,baz=210,slow=38
comp=Z,37nm,0.4s
LPSR Galich'ya Gora 17.44 50 eP **Pn** **12 57 09.6 -1.9**
LPSR pmax pmax
comp=Z,30nm,0.9s
MEF Metsahovi 17.53 13 eP **P** **12 57 13.6 0.0**
EKA Eskdalemuir Ar 17.60 320 P **P** **12 57 15.8 +1.3**
baz=114,slow=10
comp=Z,0.9nm,0.5s
ESK Eskdalemuir 17.61 320 P **P** **12 57 14.7 +0.1**
ESK Eskdalemuir 17.61 320 P **P** **12 57 14.7 +0.1**
ESK pmax pmax
comp=Z,16nm,1.0s
NC602 NORSAR Array S 17.71 352 P **P** **12 57 15.4 -0.2**
MMAI Mount Meron Ar 17.88 119 P **P** **12 57 18.4 +0.6**
comp=Z,0.9nm,0.3s,baz=319,slow=10.0,SNR=6.8
comp=Z,2.0nm,0.4s
NAO01 NORSAR Array S 17.89 351 P **P** **12 57 17.7 +0.2**
NAO01 IAmb IAmb 12 57 28.0
comp=Z,21nm,0.8s
RAF Rauma 17.97 8 eP **P** **12 57 19.6 +1.2**
NB2 NORSAR Subarra 18.04 351 P **P** **12 57 19.4 +0.1**
comp=Z,7.4nm,0.8s,baz=167,slow=11
NOA NORSAR Array B 18.04 351 P **Pn** **12 57 17.8 -1.1**
comp=Z,3.3nm,0.9s,baz=18,slow=17,SNR=6.0
NOA LR LR 13 05 46.7
comp=Z,83nm,18.1s,baz=175,slow=42
NC405 NORSAR Array S 18.06 352 P **P** **12 57 19.4 -0.1**
NBO00 NORSAR Array S 18.08 351 P **P** **12 57 20.1 +0.4**
NBO00 IAmb IAmb 12 57 29.2
comp=Z,22nm,0.8s
NC303 NORSAR Array S 18.20 352 P **Pn** **12 57 20.4 -0.5**
MOS Moscow 18.27 40 eP **Pn** **12 57 20.3 -1.5**
MOS e 13 00 52.6
MOS pmax pmax
comp=Z,72nm,1.1s
MOS MLR MLR
comp=Z,400nm,16.0s
NC204 NORSAR Array S 18.32 351 P **P** **12 57 23.4 +1.0**
NC204 IAmb IAmb 12 57 31.3
comp=Z,18nm,0.8s
VRH Novokhopyorsk 18.61 56 eP **P** **12 57 22.9 -2.7**
VRH pmax pmax
comp=Z,20nm,1.0s
KBZ Khabaz 18.94 80 ceP **P** **12 57 28.6 -0.6**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 18.94 80 P **Pn** **12 57 30.1 +0.3**
comp=Z,0.3nm,0.3s,baz=313,slow=10.0,SNR=14
comp=Z,5.4nm,0.8s
FINES FINESS Array B 18.97 14 P **P** **12 57 29.1 -0.3**
FINES FINESS Array B 18.97 14 P **P** **12 57 29.7 +0.3**
comp=Z,0.7nm,0.3s,baz=185,slow=11,SNR=26
FINES LR LR 13 04 56.9
comp=Z,102nm,20.9s,baz=192,slow=38
comp=Z,6.4nm,0.6s
FIA1 FINESS Array S 18.97 14 P **P** **12 57 29.1 -0.3**
FIA1 IAmb IAmb 12 57 38.4
comp=Z,69nm,1.0s
ONI Oni 19.53 83 P **P** **12 57 36.3 +0.5**
ONI Oni 19.53 83 P **P** **12 57 36.3 +0.5**
ONI pmax pmax
comp=Z,9.0nm,0.9s
GURO Guroymak-BITLI 19.65 95 P **Pn** **12 57 38.1 -0.6**
GURO IAmb IAmb 12 57 41.1
comp=Z,42nm,0.8s
MDT Midelt 19.78 245 P **Pn** **12 57 41.8 +1.6**
comp=Z,0.2nm,0.3s,baz=78,slow=11,SNR=6.7
MDT LR LR 13 04 48.4
comp=Z,90nm,20.0s,baz=82,slow=35
comp=Z,7.2nm,0.9s
ZEI Tsey 19.81 82 eP **Pn** **12 57 40.6 -0.1**
ZEI pmax pmax
comp=Z,5.0nm,0.7s
EIL Elat 19.94 127 P **Pn** **12 57 41.5 -0.6**
comp=Z,0.5nm,0.3s,baz=331,slow=15,SNR=4.7
EIL LR LR 13 06 53.4
comp=Z,43nm,18.1s,baz=280,slow=42
comp=Z,2.4nm,0.5s
GNI Garni 21.08 89 P **P** **12 57 53.4 +0.6**
GNI IAmb IAmb 12 57 59.5
comp=Z,48nm,1.2s
GNI Garni 21.08 89 i P **P** **12 57 53.6 +0.8**
GNI pmax pmax
comp=Z,45nm,1.3s
GNI Garni 21.08 89 P **P** **12 57 54.4 +1.6**
comp=Z,27nm,1.0s,baz=175,slow=2.1,SNR=11
comp=Z,27nm,1.0s
KLMR Klimovskoe 22.23 30 eP **P** **12 58 01.3 -3.4**
KLMR pmax pmax
comp=Z,38nm,0.9s
KLMR MLR MLR
comp=Z,475nm,11.0s
BELG Belogornoye 22.45 55 i P **P** **12 58 06.0 -1.2**
BELG pmax pmax
comp=Z,6.0nm,1.1s
KIRV Kirov 25.27 41 ceP **P** **12 58 33.1 -1.2**
KIRV Kirov 25.27 41 LR LR 13 09 04.7
comp=Z,242nm,18.1s,baz=265,slow=38
ARCES ARCESS Array B 26.65 7 P **P** **12 58 46.4 -0.3**
comp=Z,10nm,0.5s,baz=183,slow=8.4,SNR=132
ARCES LR LR 13 10 52.3
comp=Z,195nm,19.2s,baz=182,slow=40
comp=Z,10nm,0.5s
KEV Kevo 27.00 8 P **P** **12 58 49.6 -0.2**
KEV Kevo 27.00 8 P **P** **12 58 49.6 -0.2**
KEV pmax pmax
comp=Z,50nm,1.5s
AKTO Aktyubinsk 28.78 61 LR LR 13 12 06.3
comp=Z,71nm,20.0s,baz=340,slow=40
ARU Arti 29.45 49 ci P **P** **12 59 10.6 -1.2**
ARU 13 00 02.8
ARU S **S** **13 04 06.7 +1.8**
ARU SS **SnSn** **13 05 34.7 +2.6**
ARU pmax pmax
comp=Z,14nm,1.1s
ARU MLR MLR
comp=Z,176nm,14.0s
ARU Arti 29.45 49 LR LR 13 11 31.2
comp=Z,177nm,19.3s,baz=254,slow=38
ABKAR Akbulak array 30.09 63 P **P** **12 59 16.0 -1.6**
BORG Borgarnes 30.22 328 LR LR 13 12 00.3
comp=Z,114nm,18.4s,baz=125,slow=38
JMIC Jan Mayen 30.42 344 LR LR 13 12 45.8
comp=Z,28nm,18.1s,baz=158,slow=39
GEYT Alibeck 31.61 86 P **P** **12 59 30.8 -0.3**
GEYT IAmb IAmb 12 59 32.7
comp=Z,12nm,0.8s
GEYT Alibeck 31.61 86 P **P** **12 59 30.8 -0.3**
GEYT pmax pmax
comp=Z,12nm,0.8s
GEYT Alibeck 31.61 86 P **P** **12 59 31.8 +0.7**
comp=Z,8.3nm,0.7s,baz=293,slow=7.7,SNR=17
GEYT LR LR 13 15 24.5
comp=Z,39nm,18.3s,baz=293,slow=42
comp=Z,8.3nm,0.7s
GYA0B ALIBECK ARRAY 31.61 86 P **P** **12 59 30.6 -0.5**
GYA0B IAmb IAmb 12 59 32.7
comp=Z,10nm,0.8s
TOA0 Torodi Ar. Sit 32.77 208 P **P** **12 59 42.4 +1.0**
TORD Torodi Ar. Bea 32.77 208 P **P** **12 59 42.9 +1.5**
comp=Z,1.0nm,0.5s,baz=19,slow=9.5,SNR=6.7
TORD LR LR 13 14 53.4
comp=Z,110nm,18.6s,baz=324,slow=40
comp=Z,1.0nm,0.5s
SPB2 Spitsbergen Ar 34.95 360 P **P** **13 00 00.2 +0.5**
SPITS Spitsbergen Ar 34.95 360 P **P** **13 00 00.2 +0.4**
SPITS pmax pmax
comp=Z,37nm,1.2s
SPITS Spitsbergen Ar 34.95 360 P **P** **13 00 00.7 +0.9**
comp=Z,1.6nm,0.4s,baz=158,slow=12,SNR=21
comp=Z,1.6nm,0.4s
BRVK Borovoye 36.19 55 P **P** **13 00 10.0 -0.7**
BRVK IAmb IAmb 13 00 11.4
comp=Z,6.5nm,0.8s
BRVK Borovoye 36.19 55 ⇓P **P** **13 00 10.9 +0.2**
BRVK Borovoye 36.19 55 ceP **P** **13 00 10.2 -0.5**
BRVK pmax pmax
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 36.26 55 P **P** **13 00 11.2 0.0**
comp=Z,3.1nm,0.7s,baz=272,slow=7.3,SNR=18
BVAR LR LR 13 15 27.5
comp=Z,61nm,18.5s,baz=279,slow=37
comp=Z,3.1nm,0.7s
KK31 Karatay Array 38.59 71 P **P** **13 00 31.1 -0.1**
KK31 Karatay Array 38.59 71 P **P** **13 00 31.1 -0.1**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 38.59 71 P **P** **13 00 31.1 -0.1**
KKAR Karatay Array 38.59 71 P **P** **13 00 30.2 -1.0**
KKAR IAmb IAmb 13 00 38.8
comp=Z,3.2nm,0.7s
KKAR Karatay Array 38.59 71 P **P** **13 00 30.2 -1.0**
KKAR pmax pmax
comp=Z,3.0nm,0.7s
SUMG Summit 38.97 337 P **P** **13 00 35.1 +0.8**
SUMG IAmb IAmb 13 00 46.8
comp=Z,14nm,1.4s
SUMG Summit 38.97 337 P **P** **13 00 35.2 +0.8**
SUMG pmax pmax
comp=Z,14nm,1.4s
SUMG Summit 38.97 337 i P **P** **13 00 34.0 -0.4**
BBTS Babate 40.34 235 LR LR 13 17 54.9
comp=Z,89nm,19.3s,baz=334,slow=37
DY2G Dye2 40.60 327 ⇑P **P** **13 00 49.5 +1.6**
ARSB Arslanbob 40.94 73 P **P** **13 00 50.6 -0.3**
ARSB Arslanbob 40.94 73 P **P** **13 00 50.6 -0.3**
ARSB pmax pmax
comp=Z,3.0nm,1.2s
DBIC Dimbokro 41.18 214 P **P** **13 00 54.0 +1.2**
DBIC IAmb IAmb 13 00 58.8
comp=Z,6.0nm,0.9s
DBIC Dimbokro 41.18 214 P **P** **13 00 54.0 +1.2**
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC Dimbokro 41.18 214 P **P** **13 00 54.8 +1.9**
comp=Z,2.9nm,0.6s,baz=16,slow=8.0,SNR=5.3
comp=Z,2.9nm,0.6s
AAK Ala-Archa 41.50 70 i P **P** **13 00 54.7 -0.8**
AAK pmax pmax
comp=Z,5.0nm,1.2s
AAK Ala-Archa 41.50 70 LR LR 13 22 42.5
comp=Z,100nm,18.0s,baz=314,slow=43
KURBB Kurchatov Arra 41.67 58 P **P** **13 00 55.5 -1.1**
comp=Z,0.8nm,0.4s,baz=286,slow=9.4,SNR=12
KURBB PP **PnPn** **13 02 35.6 -2.0**
comp=Z,1.2nm,0.8s,baz=288,slow=11,SNR=4.9
comp=Z,0.8nm,0.4s
KURK Kurchatov 41.70 57 ceP **P** **13 00 54.5 -2.3**
KURK pmax pmax
comp=Z,4.0nm,1.3s
BOOM Boomskoye usch 42.55 70 P **P** **13 01 04.4 +0.3**
BOOM Boomskoye usch 42.55 70 P **P** **13 01 04.4 +0.3**
BOOM pmax pmax
comp=Z,58nm,1.3s
NRIK Noril'sk 43.57 29 P **P** **13 01 11.9 +0.1**
NRIK IAmb IAmb 13 01 13.6
comp=Z,9.7nm,1.1s
NRIK Noril'sk 43.57 29 ceP **P** **13 01 11.7 -0.1**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
NRIK Noril'sk 43.57 29 P **P** **13 01 11.6 -0.2**
comp=Z,4.2nm,0.6s,baz=248,slow=6.2,SNR=6.4
NRIK LR LR 13 22 17.4
comp=Z,79nm,18.2s,baz=257,slow=40
comp=Z,4.2nm,0.6s
KSH Kashi 43.76 74 P **P** **13 01 14.2 +0.4**
KSH pP sP 13 01 20.8 -1.2
KSH sP pP 13 01 26.8 +7.1
KSH pmax pmax
comp=Z,9.0nm,0.8s
TARG Taragay, Kyrgy 44.12 70 P **P** **13 01 17.3 +0.2**
TARG IAmb IAmb 13 01 31.8
comp=Z,4.3nm,0.8s
TARG Taragay, Kyrgy 44.12 70 P **P** **13 01 17.3 +0.2**
TARG pmax pmax
comp=Z,4.0nm,0.8s
NIL Nilore 44.51 83 P **P** **13 01 19.9 +0.1**
NIL Nilore 44.51 83 P **P** **13 01 19.9 +0.1**
NIL pmax pmax
comp=Z,25nm,1.2s
ZAA0 Zalesovo Array 44.54 51 P **P** **13 01 19.2 -0.5**
ZAA0 IAmb IAmb 13 01 20.1
comp=Z,7.1nm,1.1s
ZALV Zalesovo Beam 44.54 51 P **P** **13 01 19.2 -0.6**
comp=Z,3.1nm,0.7s,baz=278,slow=8.8,SNR=20
ZALV LR LR 13 21 36.9
comp=Z,159nm,18.9s,baz=285,slow=38
comp=Z,3.1nm,0.7s
MK31 Makanchi Array 45.21 62 P **P** **13 01 24.2 -1.0**
MK31 Makanchi Array 45.21 62 ceP **P** **13 01 22.4 -2.8**
MKAR Makanchi Array 45.21 62 P **P** **13 01 24.2 -1.0**
MKAR Makanchi Array 45.21 62 P **P** **13 01 24.2 -1.0**
MKAR Makanchi Array 45.21 62 P **P** **13 01 24.5 -0.7**
comp=Z,1.5nm,0.6s,baz=283,slow=6.4,SNR=16
MKAR PcP **PcP** **13 03 05.8 +0.8**
comp=Z,1.6nm,0.7s,baz=288,slow=4.5,SNR=5.8
MKAR LR LR 13 24 20.1
comp=Z,44nm,18.1s,baz=0.5,slow=42
comp=Z,1.5nm,0.6s
DGZ Jazzator, Alta 47.40 56 i P **P** **13 01 41.1 -1.4**
DGZ pmax pmax
comp=Z,3.0nm,0.6s
FRB Frobisher Bay 50.28 325 LR LR 13 24 27.3
comp=Z,98nm,18.4s,baz=337,slow=37
SCHQ Schefferville 52.78 314 P **P** **13 02 23.7 +0.6**
comp=Z,2.6nm,0.6s,baz=54,slow=7.5,SNR=8.2
comp=Z,2.6nm,0.6s
TIXI Tiksi 55.83 21 ceP **P** **13 02 45.7 +0.7**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
TIXI Tiksi 55.83 21 LR LR 13 29 17.3
comp=Z,79nm,20.3s,baz=10,slow=39
SONM Songino Array 59.44 51 P **P** **13 03 11.1 +0.1**
comp=Z,5.3nm,0.8s,baz=291,slow=8.7,SNR=35
SONM LR LR 13 30 52.1
comp=Z,109nm,19.4s,baz=356,slow=38
comp=Z,5.3nm,0.8s
ULN Ulaanbaatar 59.80 51 i P **P** **13 03 12.2 -1.2**
ULN pmax pmax
comp=Z,2.0nm,0.7s
YAK Yakutsk 62.02 29 ceP **P** **13 03 27.0 -1.1**
YAK pmax pmax
comp=Z,3.0nm,0.5s
YAK Yakutsk 62.02 29 LR LR 13 33 28.4
comp=Z,76nm,19.2s,baz=303,slow=39
HHC Hu-ho-hao-te 66.47 56 eP **P** **13 03 58.1 +0.3**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,100nm,4.5s
E29M Blow River 66.99 350 P **P** **13 04 01.1 +0.6**
E29M IAmb IAmb 13 04 09.3
comp=Z,5.5nm,0.7s
F31M Tsiigehtchic 67.30 348 P **P** **13 04 03.0 +0.6**
YKA Yellowknife Ar 67.55 338 i P **P** **13 04 04.6 +0.5**
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 67.55 338 P **P** **13 04 04.7 +0.6**
comp=Z,1.7nm,0.8s,baz=36,slow=5.9,SNR=25
comp=Z,1.7nm,0.8s
F28M Old Crow 67.97 351 P **P** **13 04 07.1 +0.4**
F28M IAmb IAmb 13 04 20.1
comp=Z,2.2nm,0.8s
M52A Chesterland 68.01 307 P **P** **13 04 08.6 +1.2**
E25K Arctic Village 68.07 353 P **P** **13 04 08.6 +1.3**
E43A Lone Tree Farm 68.08 314 P **P** **13 04 09.0 +1.3**
RCBR Riachuelo 68.20 238 LR LR 13 34 30.3
comp=Z,413nm,18.2s,baz=192,slow=36
SEY Seymchan 68.31 20 ceP **P** **13 04 07.9 -1.0**
SEY pmax pmax
comp=Z,9.0nm,2.5s
C18K Utukok River 68.33 359 P **P** **13 04 10.4 +1.4**
C18K IAmb IAmb 13 04 17.2
comp=Z,3.8nm,0.8s
BMAR Burnt Mountain 68.65 352 P **P** **13 04 12.3 +1.2**
C16K Lisburne Hills 68.70 1 P **P** **13 04 11.5 +0.3**
C16K IAmb IAmb 13 04 20.8
comp=Z,4.5nm,1.0s
PZH PanZhiHua 68.86 73 P **P** **13 04 14.4 +1.3**
PZH pmax pmax
comp=Z,6.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.7s
HEH HeiHe 68.95 40 eP **P** **13 04 13.4 +0.3**
HEH pmax pmax
comp=Z,12nm,0.8s
HEH pmax pmax
comp=Z,240nm,4.7s
ULM Lac du Bonnet 69.87 321 P **P** **13 04 19.2 +0.4**
comp=Z,2.0nm,0.6s,baz=62,slow=6.0,SNR=5.1
comp=Z,2.0nm,0.6s
G21K Allakaket 70.22 356 P **P** **13 04 21.6 +0.9**
G21K IAmb IAmb 13 04 22.5
comp=Z,3.2nm,0.8s
H21K Melozitna Rive 71.04 355 P **P** **13 04 27.4 +1.7**
H21K IAmb IAmb 13 04 28.8
comp=Z,11nm,1.3s
DAWY Dawson 71.29 349 P **P** **13 04 28.1 +0.8**
DAWY IAmb IAmb 13 04 29.0
comp=Z,4.3nm,0.8s
ILAR Eielson Array 71.47 353 P **P** **13 04 29.4 +1.1**
comp=Z,0.8nm,0.6s,baz=6.3,slow=5.6,SNR=18
comp=Z,0.8nm,0.6s
KLR Kul'dur 71.68 39 i P **P** **13 04 27.4 -2.4**
KLR pmax pmax
comp=Z,3.0nm,0.9s
CHTO Chiang Mai 71.75 81 P **P** **13 04 30.0 -0.7**
CHTO IAmb IAmb 13 04 30.9
comp=Z,6.4nm,0.7s
CHTO Chiang Mai 71.75 81 P **P** **13 04 30.0 -0.7**
CHTO pmax pmax
comp=Z,6.0nm,0.7s
CMAR Chiang Mai Arr 71.98 81 P **P** **13 04 32.0 -0.1**
CMAR Chiang Mai Arr 71.98 81 P **P** **13 04 31.9 -0.1**
comp=Z,4.9nm,0.7s,baz=304,slow=7.3,SNR=37
comp=Z,4.9nm,0.7s
BOSA Boshof 72.02 172 P **P** **13 04 33.0 +1.0**
comp=Z,3.8nm,1.0s,baz=0.0,slow=13,SNR=2.1
comp=Z,3.8nm,1.0s
DHY Denali Highway 73.18 353 P **P** **13 04 39.8 +1.1**
DHY IAmb IAmb 13 04 40.7
comp=Z,13nm,1.1s
T47A Sharon Grove 74.35 306 P **P** **13 04 47.0 +1.1**
CCM Cathedral Cave 76.01 309 P **P** **13 04 55.9 +0.5**
CCM Cathedral Cave 76.01 309 P **P** **13 04 55.9 +0.5**
CCM pmax pmax

comp=Z,7.0nm,0.6s
S39A Bolivar 77.43 310 P P 13 05 04.2 +0.7
S39A IAmb IAmb 13 05 05.6
comp=Z,5.4nm,0.8s
KSRS Korea Array 78.20 49 P P 13 05 07.5 -0.1
comp=Z,1.9nm,0.7s,baz=316,slow=5.5,SNR=7.9
comp=Z,1.9nm,0.7s
YSS Yuzh-Sakhalins 78.20 34 *ce*P **P 13 05 06.9 -0.6**
YSS pmax pmax
comp=Z,16nm,1.3s
ASAJ Asahikawa 80.40 36 LR LR 13 43 33.2
comp=Z,68nm,18.1s,baz=236,slow=38
K22A Casper 80.43 321 P P **13 05 19.8 -0.2**
K22A IAmb IAmb 13 05 21.9
comp=Z,7.1nm,0.8s
PD31 Pinedale Array 81.69 323 P P **13 05 27.8 +1.0**
PD31 IAmb IAmb 13 05 28.9
comp=Z,4.1nm,1.1s
PDAR Pinedale Array 81.69 323 P P **13 05 28.1 +1.3**
PDAR Pinedale Array 81.69 323 P P **13 05 28.3 +1.5**
comp=Z,1.7nm,0.6s,baz=53,slow=5.6,SNR=20
comp=Z,1.7nm,0.6s
BW06 Boulder Array 81.69 323 P P **13 05 28.1 +1.3**
BW06 IAmb IAmb 13 05 28.9
comp=Z,4.7nm,1.1s
BMO Blue Mountains 83.12 329 P P **13 05 33.7 -0.4**
BMO IAmb IAmb 13 05 36.2
comp=Z,5.9nm,0.9s
BMO Blue Mountains 83.12 329 P P **13 05 33.7 -0.4**
BMO pmax pmax
comp=Z,6.0nm,1.0s
RDMU Red Mountain 83.47 322 P P **13 05 36.8 +0.7**
MJAR Matsushiro Arr 84.33 44 P P **13 05 40.3 0.0**
comp=Z,3.4nm,0.8s,baz=332,slow=3.4,SNR=6.8
MJAR LR LR 13 46 01.1
comp=Z,77nm,18.2s,baz=307,slow=38
comp=Z,3.4nm,0.8s
S22A 4UR Ranch, Cre 84.44 318 P P **13 05 42.9 +1.7**
S22A IAmb IAmb 13 05 44.1
comp=Z,3.4nm,0.7s
BRDY Brady 85.30 309 P P **13 05 46.0 +0.7**
NVAR Mina Array Bea 88.99 326 P P **13 06 05.0 +1.7**
comp=Z,1.2nm,0.8s,baz=44,slow=3.5,SNR=9.6
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 89.39 311 P P **13 06 06.4 +1.2**
TXAR Lajitas Array 89.39 311 P P **13 06 06.4 +1.2**
TXAR Lajitas Array 89.39 311 P P **13 06 07.4 +2.2**
comp=Z,2.1nm,0.9s,baz=59,slow=2.7,SNR=19
comp=Z,2.1nm,0.9s
WRA Warramunga Arr 123.34 87 PKP **PKPdf 13 12 04.7 -0.7**
comp=Z,0.7nm,0.9s,baz=314,slow=1.7,SNR=2.5
ASAR Alice Springs 125.32 90 PKIKP **PKPdf 13 12 09.0 -0.2**
ASAR Alice Springs 125.32 90 PKP **PKPdf 13 12 08.9 -0.2**
comp=Z,0.9nm,0.8s,baz=351,slow=1.6,SNR=7.2

ISK 03 12:53:17.2, 38.13N×32.69E, h0km, ML1.4/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADK	**Ladik-KONYA**	**0.27**	**285**	Pg	Pg	12 53 22.7	+0.3
LADK				Sg	Sg	12 53 27.9	+2.1
KONT	**Konya--Tatoy**	**0.32**	**235**	Pg	Pg	12 53 23.9	+0.5
KONT				Sg	Sb	12 53 29.7	-1.9
CHBY	**Cihanbeyli**	**0.48**	**19**	Pg	Pg	12 53 27.4	+1.1
CHBY				Sg	Sb	12 53 34.5	-1.7
HDMB	**Hadim**	**1.18**	**188**	Pn	Pg	12 53 39.7	0.0
HDMB				Sn	Sb	12 53 56.1	-0.3
YAYX	**Yaylak**	**1.19**	**47**	Pn	Pg	12 53 39.9	-0.1
YAYX				Sn	Sb	12 53 56.3	-0.4

*IDC **03** 13:06:01.9±0.5, 56.16S×25.57W, h0km, mb4.7/12, mbtmp4.7/13, ML4.3/1, MS4.6/38, Error ellipse: s-maj=18.9km s-min=16.8km az=46.0*
*BJI **03** 13:06:02.0±0.0, 55.83S×25.19W, h10km, mB5.9/2, Ms5.4/3, Ms7 5.0/6*
*NEIC **03** 13:06:03.4±2.0, 56.3S±0.1×25.6W±0.2, h10km±1km, mb5.2/72, Error ellipse: s-maj=21.2km s-min=16.7km az=206.0*
*GCMT **03** 13:06:10.4±0.2, 56.26S±0.02×25.31W±0.02, h17km, MW5.1/105, Moment Tensor Solution. s63,c88; s105,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.05±.17; $M_{\theta\theta}$-0.67±.13; $M_{\phi\phi}$-3.38±.12; $M_{r\theta}$-0.83±.36; $M_{\theta\phi}$2.90±.09; $M_{\phi r}$2.70±.30; Best double couple: M_o5.45000×10^{16} NP1:ϕ_s338.00000°, δ61.00000°, λ102.00000°. NP2:ϕ_s135.00000°, δ31.00000°, λ70.00000°. Principal axes: T 4.9300, Plg72.0000°, Azm274.0000°; N 1.0440, Plg10.0000°, Azm152.0000°; P -5.9710, Plg15.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 13:06:03.3±0.3, 56.26S±0.08×25.58W±0.07, h10km, n214, σ1.8 15/187, mb5.1/46, MS4.7/39, 2C-6D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.54**	**283**	Pn	**Pn**	**13 07 40.2**	**+0.8**
VNA1	**Neumayer--Stat**	**16.27**	**159**	⇓P	**P**	**13 09 53.8**	**-0.8**
comp=Z,49nm,0.7s							
VNA3	**Neumayer Olymp**	**16.50**	**162**	⇓P	**P**	**13 09 56.3**	**-0.9**
comp=Z,30nm,0.7s							
VNA2	**Neumayer--Watz**	**16.66**	**159**	⇓P	**P**	**13 09 58.3**	**-0.7**
comp=Z,15nm,0.5s,baz=335,slow=16							
SNAA	**Sanae**	**18.19**	**157**		**P**	**13 10 16.8**	**+1.0**
SNAA	**Sanae**	**18.19**	**157**	⇓P	**P**	**13 10 17.0**	**+1.1**
comp=Z,376nm,0.7s							
SNAA	**Sanae**	**18.19**	**157**	P	**P**	**13 10 16.4**	**+0.6**
comp=Z,1.0nm,0.3s,baz=322,slow=12,SNR=15							
SNAA				LR	LR	13 17 51.2	
comp=Z,1μm,18.1s,baz=319,slow=39							
comp=Z,16nm,0.9s							
EFI	**East Falkland**	**19.54**	**270**		**P**	**13 10 30.0**	**-0.7**
TROLL	**Troll, Antarti**	**19.66**	**154**	⇓P	**Pn**	**13 10 36.3**	**+2.8**
comp=Z,700nm,0.8s							
PMSA	**Palmer Station**	**20.45**	**230**	P	Pn	13 10 41.8	-0.7
comp=Z,49nm,1.0s,baz=107,slow=9.7,SNR=3.8							
PMSA				LR	LR	13 18 00.9	
comp=Z,2μm,18.6s,baz=71,slow=35							
comp=Z,49nm,1.0s							
BELA	**Belgrano 2**	**21.94**	**185**	P	**P**	**13 10 56.3**	**-0.2**
BELA				IAmb	IAmb	13 11 02.9	
comp=Z,82nm,0.8s							
TRQA	**Tornquist**	**30.23**	**292**	P	**P**	**13 12 13.6**	**-0.4**
TRQA				IAmb	IAmb	13 12 20.4	
comp=Z,30nm,1.2s							
COYC	**Coyhaique**	**30.63**	**270**	P	**P**	**13 12 15.1**	**-2.3**
COYC				IAmb	IAmb	13 12 17.6	
comp=Z,34nm,1.1s							
PLTB	**Pedras Altas**	**31.32**	**310**	P	**P**	**13 12 23.7**	**+0.1**
PLTB				IAmb	IAmb	13 12 28.8	
comp=Z,33nm,1.1s							
PLTB	**Pedras Altas**	**31.32**	**310**	*eP*	**P**	**13 12 24.4**	**+0.9**
AY01	**Puyuhuapi**	**31.66**	**272**	P	**P**	**13 12 24.6**	**-1.8**
AY01				IAmb	IAmb	13 12 25.9	
comp=Z,28nm,0.9s							
LL02	**Futaleuf**	**32.00**	**274**	P	**P**	**13 12 27.7**	**-1.7**
CPSB	**Cacapava Do Su**	**32.42**	**311**	*eP*	**P**	**13 12 34.4**	**+1.2**
PLCA	**Paso Flores**	**32.92**	**279**	P	**P**	**13 12 36.5**	**-1.1**
PLCA	**Paso Flores**	**32.92**	**279**	P	**P**	**13 12 35.9**	**-1.8**
comp=Z,8.7nm,1.0s,baz=143,slow=10,SNR=14							
PLCA				LR	LR	13 26 36.4	
comp=Z,976nm,18.1s,baz=148,slow=38							
comp=Z,8.7nm,1.0s							
ALGR	**Alto Alegre (B**	**33.66**	**313**	*eP*	**P**	**13 12 45.5**	**+1.3**
QSPA	**South Pole Qui**	**33.99**	**180**	P	**P**	**13 12 46.4**	**-0.4**
LR05	**Currie**	**34.07**	**278**	P	**P**	**13 12 45.0**	**-2.6**
LR05				IAmb	IAmb	13 12 46.8	
comp=Z,18nm,1.1s							
GO06	**Curarrehue**	**34.23**	**279**	P	**P**	**13 12 46.6**	**-2.4**
ITQB	**Itaqui**	**34.43**	**307**	P	**P**	**13 12 50.5**	**-0.2**
ITQB				IAmb	IAmb	13 12 55.4	
comp=Z,48nm,1.2s							
ITQB	**Itaqui**	**34.43**	**307**	*eP*	**P**	**13 12 51.3**	**+0.6**
ITAB	**Concordia**	**34.70**	**316**	P	**P**	**13 12 54.0**	**+0.9**
ITAB				IAmb	IAmb	13 13 31.0	
comp=Z,72nm,1.7s							
ITAB	**Concordia**	**34.70**	**316**	*eP*	**P**	**13 12 54.5**	**+1.4**
LR04	**Corral**	**35.10**	**277**	P	**P**	**13 12 54.2**	**-2.2**
LR04				IAmb	IAmb	13 13 00.8	
comp=Z,92nm,1.4s							

CRSM Crissiumal (Br 35.23 313 *eP* **P 13 12 58.6 +0.9**
FRBT Francisco Belt 36.19 315 *eP* **P 13 13 06.9 +1.0**
SPB Sao Paulo 36.35 325 *eP* **P 13 13 09.5 +2.2**
PTGB Pitanga 36.94 318 *eP* **P 13 13 13.3 +0.9**
BO02 Sierra Bellavi 37.35 286 *eP* **P 13 13 14.8 -1.0**
CPUP Villa Florida 37.63 309 P **P 13 13 18.1 -0.1**
CPUP Villa Florida 37.63 309 P **P 13 13 18.1 -0.1**
comp=Z,17nm,0.9s,baz=156,slow=8.1,SNR=31
CPUP LR LR 13 28 43.3
comp=Z,753nm,20.9s,baz=158,slow=36
comp=Z,17nm,0.9s
CPUP Villa Florida 37.63 309 *eP* **P 13 13 18.6 +0.4**
LMEL Las Melosas 37.76 287 P **P 13 13 18.7 -0.7**
LDASE Londrina, Braz 37.80 320 *eP* **P 13 13 21.3 +1.6**
BO04 La Punta 37.87 287 P **P 13 13 19.5 -0.7**
BO04 IAmb IAmb 13 13 23.5
comp=Z,39nm,1.4s
BSCB Bom Sucesso 38.00 330 *eP* **P 13 13 25.2 +3.8**
VACA Villa Angela C 38.02 304 *eP* **P 13 13 22.5 +1.1**
MT09 Talagante 38.23 287 P **P 13 13 21.7 -1.7**
MT01 Popeta 38.31 286 P **P 13 13 22.1 -1.8**
PEL Peldehue 38.56 288 P **P 13 13 25.1 -0.9**
PEL IAmb IAmb 13 13 30.2
comp=Z,34nm,0.7s
VA05 Santo Domingo 38.66 286 P **P 13 13 25.0 -1.7**
VA05 IAmb IAmb 13 13 26.1
comp=Z,50nm,0.9s
MT02 Curacav 38.71 287 P **P 13 13 25.7 -1.5**
MT02 IAmb IAmb 13 13 26.7
comp=Z,26nm,0.7s
VA03 San Esteban 38.78 288 P **P 13 13 27.2 -0.7**
VA03 IAmb IAmb 13 13 31.7
comp=Z,36nm,1.0s
TICA Tres Isletas 38.94 305 *eP* **P 13 13 29.1 -0.1**
SJMB Sao Joao De Ma 39.29 336 *eP* **P 13 13 34.6 +2.4**
VA06 Catapilco 39.33 287 P **P 13 13 31.2 -1.2**
VA06 IAmb IAmb 13 13 32.8
comp=Z,49nm,1.1s
ESFA Espinillo Form 39.34 309 *eP* **P 13 13 33.8 +1.3**
MAW Mawson 39.44 143 P **P 13 13 34.0 +1.1**
comp=Z,16nm,1.0s,baz=248,slow=2.8,SNR=5.3
MAW LR LR 13 29 02.8
comp=Z,689nm,18.2s,baz=254,slow=35
comp=Z,16nm,1.0s
PCMB Pacaembu 39.49 321 *eP* **P 13 13 34.6 +0.8**
SUR Sutherland 39.83 73 LR LR 13 27 10.6
comp=Z,2μm,18.2s,baz=206,slow=32
CO02 Combarbal 40.23 289 P **P 13 13 39.4 -0.7**
CO02 IAmb IAmb 13 13 44.0
comp=Z,25nm,0.6s
DIAM Diamantina, MG 40.28 333 *eP* **P 13 13 43.9 +3.4**
CO03 El Pedregal 40.36 290 P **P 13 13 39.7 -1.4**
CO01 Juntas del Tor 40.73 291 P **P 13 13 43.4 -0.9**
CO01 IAmb IAmb 13 13 45.8
comp=Z,27nm,0.7s
PMNB Patos De Minas 40.80 329 *eP* **P 13 13 46.3 +1.5**
ANTJ Antonio Joao (40.92 314 *eP* **P 13 13 46.2 +0.4**
ITRB Iturama 40.94 323 *eP* **P 13 13 46.3 +0.5**
CO06 Fray Jorge 40.98 289 P **P 13 13 44.5 -1.7**
CO05 La Serena 41.37 290 P **P 13 13 47.4 -1.9**
CO05 IAmb IAmb 13 13 49.1
comp=Z,52nm,0.9s
RPRD Ribas do Rio P 41.41 318 *eP* **P 13 13 50.7 +1.0**
AC05 El Transito 41.74 292 P **P 13 13 52.4 -0.1**
AC05 IAmb IAmb 13 13 53.9
comp=Z,103nm,1.1s
LCO Las Campanas 41.82 291 P **P 13 13 52.6 -0.7**
LCO IAmb IAmb 13 13 53.5
comp=Z,45nm,0.9s
IPMB Ipameri, GO 41.85 327 *eP* **P 13 13 54.5 +1.1**
MURT Porto Murtinho 41.88 312 *eP* **P 13 13 52.9 -0.6**
AQDB Aquidauana 42.17 316 P **P 13 13 54.6 -1.3**
AQDB Aquidauana 42.17 316 *eP* **P 13 13 56.2 +0.2**
BDQN Bodoquena, MS 42.61 314 *eP* **P 13 13 59.2 -0.4**
AC04 Llanos de Chal 42.66 292 P **P 13 13 59.6 -0.2**
GO03 Copiap 42.72 293 P **P 13 13 58.9 -1.5**
GO03 IAmb IAmb 13 14 00.7
comp=Z,52nm,0.8s
AC02 Maricunga 42.78 295 P **P 13 14 01.3 -0.1**
RVDE Rio Verde (Bra 43.20 317 *eP* **P 13 14 05.5 +1.2**
BDFB Brasilia 44.01 328 P **P 13 14 09.1 -1.9**
comp=Z,5.8nm,1.1s,baz=122,slow=13,SNR=2.2
BDFB LR LR 13 33 06.8
comp=Z,1μm,18.0s,baz=147,slow=37
comp=Z,5.8nm,1.1s
AC01 Pan de Azucar 44.09 294 P **P 13 14 10.6 -0.9**
AC01 IAmb IAmb 13 14 15.2
comp=Z,78nm,1.6s
GO02 Mina Guanaco 44.39 296 P **P 13 14 14.2 0.0**
PP1B Ponte de Pedra 44.48 318 *eP* **P 13 14 15.6 +1.0**
BOSA Boshof 45.16 74 P **P 13 14 18.5 -1.6**
comp=Z,7.0nm,0.9s,baz=196,slow=5.1,SNR=4.7
BOSA LR LR 13 30 26.0
comp=Z,2μm,18.4s,baz=212,slow=32
comp=Z,7.0nm,0.9s
AF01 San Pedro de A 45.54 299 P **P 13 14 25.0 +1.7**
BBRB Robore, Bolivi 45.81 312 *eP* **P 13 14 24.9 -0.3**
PB15 IPOC Station P 45.96 297 P **P 13 14 26.5 -0.1**
PB15 IAmb IAmb 13 14 32.2
comp=Z,46nm,0.9s
LVC Limon Verde 46.19 299 P **P 13 14 29.2 +0.7**
LVC Limon Verde 46.19 299 LR LR 13 38 16.3
comp=Z,212nm,18.0s,baz=158,slow=42
PB10 IPOC Station P 46.25 296 P **P 13 14 27.3 -1.3**
PB10 IAmb IAmb 13 14 29.1
comp=Z,26nm,0.8s
SALV Santo Antonio 46.34 318 *eP* **P 13 14 30.6 +1.3**
VNDA Vanda 46.40 182 P **P 13 14 29.1 0.0**
VNDA IAmb IAmb 13 14 49.5
comp=Z,24nm,1.2s
VNDA Vanda 46.40 182 P **P 13 14 29.2 0.0**
comp=Z,5.2nm,0.6s,baz=186,slow=7.9,SNR=14
VNDA LR LR 13 35 06.4
comp=Z,365nm,18.1s,baz=156,slow=38
comp=Z,5.2nm,0.6s
PB06 IPOC Station P 46.43 298 P **P 13 14 30.2 0.0**
PB06 IAmb IAmb 13 14 31.6
comp=Z,42nm,0.9s
PB05 IPOC Station P 46.62 297 P **P 13 14 30.5 -1.2**
PB04 IPOC Station P 47.03 297 P **P 13 14 32.9 -2.0**
PB09 IPOC Station P 47.04 299 P **P 13 14 34.0 -1.0**
BBSD Serra de San D 47.12 312 *eP* **P 13 14 35.2 -0.2**
PB07 IPOC Station P 47.41 298 P **P 13 14 37.7 -0.3**
PB02 IPOC Station P 47.76 298 P **P 13 14 41.1 +0.5**
PB01 IPOC Station P 47.80 299 P **P 13 14 40.8 0.0**
PTLB Pontes e Lacer 48.08 314 P **P 13 14 43.0 +0.1**
PTLB IAmb IAmb 13 14 44.4
comp=Z,44nm,1.1s
PTLB Pontes e Lacer 48.08 314 *eP* **P 13 14 43.2 +0.3**
LBTB Lobatse 48.21 71 LR LR 13 32 25.7
comp=Z,1μm,18.1s,baz=221,slow=33
PATCX Punta Patache 48.31 298 P **P 13 14 44.6 -0.2**
SIV San Ignacio 48.38 312 LR LR 13 34 20.7
comp=Z,601nm,21.4s,baz=142,slow=35
PB08 IPOC Station P 48.40 300 P **P 13 14 45.3 -0.5**
SNDB Serra Nova Dou 48.47 325 *eP* **P 13 14 46.7 +0.8**
TA01 Diego Aracena 48.54 299 P **P 13 14 46.5 0.0**
TA01 IAmb IAmb 13 14 48.1
comp=Z,46nm,1.1s
GO01 Chusmiza 48.83 300 P **P 13 14 49.6 +0.4**
PB11 IPOC Station P 48.97 300 P **P 13 14 50.0 +0.1**
TSUM Tsumeb 49.01 59 P **P 13 14 49.1 -1.2**
TSUM Tsumeb 49.01 59 LR LR 13 32 13.2
comp=Z,688nm,18.8s,baz=155,slow=32
PB16 IPOC Station P 50.12 301 P **P 13 14 59.0 -0.2**
PB12 IPOC Station P 50.27 300 P **P 13 15 00.4 +0.6**
LPAZ La Paz 51.24 304 P **P 13 15 08.1 +0.4**
NPGB Novo Progresso 54.42 323 *eP* **P 13 15 31.3 +0.7**
SAML Samuel 55.60 313 P **P 13 15 38.4 -0.6**
SAML IAmb IAmb 13 15 40.3
comp=Z,25nm,1.1s
SAML Samuel 55.60 313 *eP* **P 13 15 39.2 +0.2**
ETMB Extrema 56.09 309 P **P 13 15 42.2 -0.4**
ETMB IAmb IAmb 13 15 43.9
comp=Z,32nm,1.1s
ETMB Extrema 56.09 309 *eP* **P 13 15 42.5 -0.1**
ITTB Itaituba 57.05 323 *eP* **P 13 15 49.6 +0.2**
LSZ Lusaka 57.62 67 P **P 13 15 52.3 -1.2**
comp=Z,1.7nm,0.2s,baz=205,slow=7.5,SNR=3.5
LSZ LR LR 13 38 35.9
comp=Z,1μm,18.0s,baz=220,slow=34
comp=Z,1.7nm,0.2s
MALB Monte Alegre 58.94 326 *eP* **P 13 16 04.1 +1.4**
NNA Nana 59.14 297 P **P 13 16 04.7 +0.6**

MCPB Macapa, AP 59.69 329 *eP* **P 13 16 09.5 +1.7**
MACA Manacapuru-AM 59.91 318 P **P 13 16 08.6 -0.8**
MACA IAmb IAmb 13 16 09.7
comp=Z,22nm,0.8s
MACA Manacapuru-AM 59.91 318 *eP* **P 13 16 09.2 -0.1**
CZSB Cruzeiro do Su 60.85 304 *eP* **P 13 16 15.8 0.0**
TEFE Tefe 61.12 314 *eP* **P 13 16 17.4 -0.1**
RPN Rapa Nui 64.50 259 LR LR 13 40 53.8
comp=Z,236nm,18.6s,baz=103,slow=32
LIC Lamto 64.53 23↑ *i*PKP1 **P 13 16 40.2 0.0**
comp=Z,16nm,0.6s
KIC Kosan Boka 64.72 23↑ *i*PKP1 **P 13 16 41.3 -0.2**
comp=Z,8.9nm,0.6s
TIC Toumodi 64.94 23↓ *i*PKP1 **P 13 16 40.6 -2.3**
comp=Z,3.5nm,0.3s
DBIC Dimbokro 65.00 23 P **P 13 16 43.5 +0.2**
DBIC IAmb IAmb 13 16 57.2
comp=Z,19nm,1.4s
DBIC Dimbokro 65.00 23 P **P 13 16 42.8 -0.5**
comp=Z,4.5nm,0.6s,baz=179,slow=6.4,SNR=9.5
DBIC LR LR 13 39 32.8
comp=Z,843nm,18.6s,baz=201,slow=31
comp=Z,4.5nm,0.6s
MDP Montagnes des 65.06 330 LR LR 13 45 27.5
comp=Z,571nm,18.1s,baz=108,slow=36
MCRA Macar, Loja 67.24 298 P **P 13 16 58.2 +0.3**
MCRA Macar, Loja 67.24 298 *eP* **P 13 16 56.8 -1.1**
BOSC San Juan Bosco 67.59 300 P **P 13 17 01.1 +0.9**
BOSC IAmb IAmb 13 17 05.1
comp=Z,16nm,1.5s
COHC Cochancay 68.55 300 P **P 13 17 06.7 +0.7**
COHC Cochancay 68.55 300 *eP* **P 13 17 06.5 +0.5**
PIAT Ana Tenorio 69.36 302 *eP* **P 13 17 12.4 +0.9**
OTAV Otavalo 70.53 302 *eP* **P 13 17 21.1 +2.4**
BBTS Babate 71.06 9 LR LR 13 44 17.1
comp=Z,391nm,18.2s,baz=196,slow=32
MBAR Mbarara 71.45 61 LR LR 13 46 08.7
comp=Z,377nm,18.0s,baz=190,slow=34
POPC Popayan, Colom 71.73 305 *eP* **P 13 17 26.0 +0.2**
PRAC Prado 71.96 307 *eP* **P 13 17 24.1 -2.9**
ORTC Ortega, Tolima 72.29 307 *eP* **P 13 17 29.9 +1.0**
JAMC Jamundi, Valle 72.32 305 *eP* **P 13 17 28.9 -0.4**
ROSC El Rosal 72.71 308 P **P 13 17 31.7 -0.2**
comp=Z,7.8nm,0.3s,baz=158,slow=14,SNR=4.4
ROSC LR LR 13 51 19.5
comp=Z,396nm,19.5s,baz=204,slow=37
comp=Z,7.8nm,0.3s
TOA0 Torodi Ar. Sit 72.81 28 P **P 13 17 31.8 0.0**
TOA0 IAmb IAmb 13 17 32.4
comp=Z,11nm,0.7s
TORD Torodi Ar. Bea 72.81 28 P **P 13 17 31.8 -0.1**
TORD Torodi Ar. Bea 72.81 28 P **P 13 17 31.9 +0.1**
comp=Z,7.1nm,0.5s,baz=195,slow=5.5,SNR=56
TORD LR LR 13 44 54.1
comp=Z,356nm,18.2s,baz=150,slow=32
comp=Z,7.1nm,0.5s
YOTC Yotoco, Valle 72.85 306 *eP* **P 13 17 32.8 +0.5**
GUY2C Guyana, Caldas 73.52 308 *eP* **P 13 17 35.8 -0.9**
PLMC San Jos del P 73.64 307 *eP* **P 13 17 36.7 -0.2**
PCRV Puerto La Cruz 73.69 320 LR LR 13 50 01.6
comp=Z,470nm,20.5s,slow=36
KMBO Kilima Mbogo 74.28 68 LR LR 13 48 55.7
comp=Z,650nm,18.7s,baz=96,slow=35
PTBC PUERTO BERRIO, 74.29 309 *eP* **P 13 17 38.7 -2.0**
SDV Santo Domingo 74.80 314 LR LR 13 54 56.5
comp=Z,663nm,18.3s,baz=124,slow=39
SDV Santo Domingo 74.80 314 *eP* **P 13 17 44.3 +0.5**
SDV Santo Domingo 74.80 314 *eP* **P 13 17 44.5 +0.7**
DBBC Dabeiba 75.48 308 *eP* **P 13 17 46.5 -1.2**
UREC San Jos de Ur 75.84 309 *eP* **P 13 17 49.4 -0.2**
SJCC San Jacinto, C 77.61 310 *eP* **P 13 18 00.1 +0.5**
RPZ Rata Peaks 79.41 192 LR LR 13 52 17.2
comp=Z,238nm,18.1s,baz=152,slow=35
SJG San Juan 81.56 321 LR LR 13 55 23.0
comp=Z,235nm,20.4s,baz=194,slow=36
JTS Las Juntas de 82.39 301 LR LR 13 59 39.0
comp=Z,110nm,18.4s,baz=131,slow=39
URZ Urewera 83.89 198 LR LR 13 52 07.8
comp=Z,148nm,20.4s,baz=302,slow=33
ATD Arta Tunnel 87.92 66 LR LR 13 57 08.2
comp=Z,43nm,18.5s,baz=151,slow=35
MDT Midelt 90.50 18 LR LR 13 55 48.3
comp=Z,778nm,19.1s,baz=210,slow=33
STKA Stephens Creek 91.53 169 LR LR 13 59 59.1
comp=Z,688nm,18.2s,baz=199,slow=35
TEIG Tepich 92.57 303 LR LR 14 04 10.6
comp=Z,1μm,20.1s,baz=220,slow=38
PPT2 Papeete2 92.77 232 *eS* S 13 30 38.7 +17
comp=Z,142nm,29.8s
PPT2 Papeete2 92.77 232 *eLR* LR 13 49 04.4
comp=Z,357nm,31.8s
PPT2 *eLR* LR 13 49 18.7
comp=Z,641nm,29.2s
PPT Papeete 92.79 232 LR LR 13 53 35.9
comp=Z,247nm,18.5s,baz=159,slow=31
RAR Rarotonga 93.69 222 LR LR 13 55 52.3
comp=Z,99nm,18.3s,baz=176,slow=32
KEST Kesra 96.33 28 LR LR 13 59 18.3
comp=Z,278nm,18.9s,baz=235,slow=33
ESDC Sonseca Array 97.31 17 LR LR 14 00 01.9
comp=Z,231nm,18.5s,baz=170,slow=33
ASAR Alice Springs 98.51 161 P **P 13 19 41.9 -0.1**
comp=Z,1.4nm,0.8s,baz=192,slow=3.7,SNR=9.9
ASAR LR LR 14 03 49.5
comp=Z,138nm,18.1s,baz=183,slow=35
comp=Z,1.4nm,0.8s
EIL Elat 99.78 50 LR LR 14 03 42.1
comp=Z,354nm,18.1s,baz=224,slow=35
CLL Collm 111.85 25 *e*PS PS 13 34 57.0 +4.2
CLL *e*SS SS 13 41 00.0 +2.5
PDAR Pinedale Array 121.22 301 PKP **PKiKP 13 24 56.5 +0.6**
comp=Z,0.3nm,0.5s,baz=128,slow=3.5,SNR=4.4
NVAR Mina Array Bea 122.31 292 PKP **PKiKP 13 24 59.3 +1.1**
comp=Z,0.7nm,0.7s,baz=150,slow=1.3,SNR=4.8
CMAR Chiang Mai Arr 124.15 109 PKP **PKiKP 13 25 02.2 +0.1**
comp=Z,1.0nm,0.6s,baz=238,slow=3.9,SNR=6.0
FINES FINESS Array B 124.16 27 PKP **PKPdf 13 25 00.4 -0.1**
comp=Z,1.7nm,0.9s,baz=23,slow=4.5,SNR=1.9
KSH Kashi 127.76 73 PKP **PKPdf 13 25 08.2 -0.1**
PZH PanZhiHua 132.18 106 PKP **PKPdf 13 25 17.7 +0.6**
BVAR Borovoye Array 134.14 57 PKP **PKPdf 13 25 20.4 +0.6**
comp=Z,1.4nm,0.6s,baz=286,slow=1.1,SNR=6.2
MKAR Makanchi Array 136.10 71 PKP **PKPdf 13 25 24.7 +1.0**
comp=Z,0.6nm,0.8s,baz=260,slow=3.6,SNR=5.2
KURBB Kurchatov Arra 136.58 64 PKhKP PKPpre 13 25 19.3
comp=Z,0.2nm,0.5s,baz=248,slow=4.9,SNR=1.8
KURBB PKP **PKPdf 13 25 24.6 +0.2**
comp=Z,0.9nm,0.7s,baz=236,slow=2.6,SNR=7.7
CD2 Chengdu 136.74 104 PKP **PKPdf 13 25 26.0 +0.6**
YKA Yellowknife Ar 136.93 317 PKhKP PKPpre 13 25 16.7
comp=Z,0.2nm,0.8s,baz=114,slow=2.2,SNR=3.9
YKA PKP **PKPdf 13 25 23.5 -1.1**
comp=Z,1.3nm,0.9s,baz=122,slow=2.4,SNR=13
YKA PP **PP 13 28 05.6 -3.6**
comp=Z,2.1nm,1.1s,baz=118,slow=7.4,SNR=12
WMQ Urumqi 137.07 77 *e*PKP **PKiKP 13 25 29.6 +2.1**
ZALV Zalesovo Beam 141.66 63 PKhKP PKPpre 13 25 25.6
comp=Z,0.4nm,0.6s,baz=214,slow=1.0,SNR=2.3
ZALV PKP **PKPdf 13 25 34.2 +0.7**
comp=Z,0.5nm,0.5s,baz=289,slow=3.8,SNR=3.9
N32M Quiet Lake 143.81 308 PKPbc 13 25 35.8 +0.8
FARO Faro, Yukon 144.38 310 PKPdf PKPbc 13 25 37.0 +0.3
A36M Sachs Harbour 144.87 328 PKPdf **PKPdf 13 25 38.9 +0.3**
N31M Braeburn, Yuko 145.14 308 PKPbc **PKiKP 13 25 43.5 +0.1**
NJ2 Nanjing 145.46 119 *e*PKPbc **PKPab 13 25 41.7 +0.5**
NJ2 sPKP 13 25 46.2
HYT Haines Junctio 145.64 306 PKPdf **PKPab 13 25 41.8 +0.6**
M30M Minto, Yukon 146.00 309 PKPdf **PKPab 13 25 42.4 0.0**
F31M Tsiigehtchic 146.38 319 PKPdf **PKPbc 13 25 42.9 +0.2**
BTO Baotou 147.30 100 *e*PKPbc **PKPdf 13 25 42.3 -1.7**
BTO PKPab **pPKPab 13 25 49.4 -0.2**
BTO LR LR
comp=Z,380nm,9.4s
BTO LR LR
comp=Z,310nm,12.4s
BTO LR LR
comp=Z,380nm,11.6s
DAWY Dawson 147.60 311 PKPbc 13 25 46.6 +0.3
HHC Hu-ho-hao-te 148.32 101 *e*PKPbc **PKPdf 13 25 42.4 -3.2**
HHC LR LR
comp=Z,150nm,12.2s
HHC LR LR
comp=Z,220nm,13.8s
HHC LR LR
comp=Z,170nm,13.0s
BCAR Beaver Creek A 148.32 309 PKPbc **PKPbc 13 25 48.5 +0.2**

NRIK	**Noril'sk**	**148.61**	**39**	PKP		**PKPdf**	**13 25 45.4**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=169,slow=5.2,SNR=2.0							
NRIK				PKPbc		**PKPbc**	**13 25 49.0**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=247,slow=1.4,SNR=4.3							
SONM	**Songino Array**	**149.84**	**86**	PKPbc		**PKPbc**	**13 25 53.0**	**+0.3**
SONM	**Songino Array**	**149.84**	**86**	PKPbc		**PKPbc**	**13 25 52.3**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=225,slow=3.2,SNR=17							
BJI	**Beijing**	**150.25**	**107**	PKPbc		**PKPbc**	**13 25 52.2**	**-1.5**
ILAR	**Eielson Array**	**150.93**	**311**	PKP		**PKPdf**	**13 25 50.1**	**+1.2**
	comp=Z,13nm,1.0s,baz=241,slow=1.2,SNR=9.5							
ILAR				PKPbc		**PKPbc**	**13 25 54.6**	**+0.1**
	comp=Z,22nm,1.0s,baz=163,slow=1.5,SNR=51							
KDAK	**Kodiak Island**	**151.72**	**295**	PKPbc		**PKiKP**	**13 25 57.7**	**+0.7**
	comp=Z,14nm,0.7s,baz=180,slow=3.0,SNR=9.6							
TRF	**Thorofare Moun**	**152.14**	**308**	PKPbc		**PKiKP**	**13 25 58.2**	**+0.3**
B22K	**Teshekpuk Lake**	**153.73**	**323**			**PKiKP**	**13 26 01.2**	**+0.4**
MDJ	**Mudanjiang**	**160.48**	**116**	PKP		**PKPdf**	**13 26 02.6**	**+0.4**
MDJ				AMB		AMB		
	comp=Z,430nm,6.1s							

*JMA **03** 13:13:05.1±0.1,31°N±1°×14°1E±°, h48km, MV4.0/33, NEAR TORISHIMA IS*
*IDC **03** 13:13:06.5±4.3,30.29N×140.48E, h54km±40km, mb3.3/3, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=224.4km s-min=29.7km az=82.0*
ISC 03 13:13:04.4±1.3,30.56N±0.08×141.5E±0.2, h35km, n17, σ2s46/17, mb3.4/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.90**	**332**	P			**Pn**	**13 13 48.4**	**+0.3**
JHJ2					*e*	S	**Sn**	**13 14 19.1**	**-2.6**
JHJ	**Hachijo jima 2**	**2.92**	**331**	P			**Pn**	**13 13 48.5**	**+0.1**
	25nm,0.3s,baz=89,slow=22,SNR=5.9								
JHJ				S			**Sn**	**13 14 18.9**	**-3.3**
	143nm,0.5s,baz=56,slow=23,SNR=5.4 62nm,0.3s								
CBIJ	**Chichi jima**	**3.51**	**169**	P			**Pn**	**13 13 59.5**	**+3.0**
CBIJ					*e*	S	**Sn**	**13 14 34.2**	**-2.7**
JCJ	**Chichijima**	**3.51**	**169**	S			Sn	13 14 29.3	-7.6
	94nm,0.3s,baz=295,slow=23,SNR=7.7								
BSO1	**Boso 1**	**4.10**	**355**	P			**Pn**	**13 14 05.8**	**+1.6**
BSO3	**Boso 3**	**4.30**	**350**	P			**Pn**	**13 14 09.0**	**+1.8**
JOD2	**Odawara 2**	**5.09**	**338**	P			**Pn**	**13 14 19.8**	**+1.5**
JOD2					*e*	S	**Sn**	**13 15 14.4**	**-1.5**
JHJ	**Hanno**	**5.58**	**342**	P			**Pn**	**13 14 27.4**	**+2.4**
JKN2	**Miekihoku**	**5.71**	**311**		*e*	P	**Pn**	**13 14 29.7**	**+3.0**
JRY	**Ryogami san**	**5.84**	**339**	P			**Pn**	**13 14 31.2**	**+2.6**
JHO	**Hitachi**	**6.08**	**353**	P			**Pn**	**13 14 34.2**	**+2.5**
JAG	**Ashikaga**	**6.08**	**345**	P			**Pn**	**13 14 33.8**	**+2.0**
MJAR	**Matsushiro Arr**	**6.55**	**336**	P			**Pn**	**13 14 41.0**	**+2.8**
	0.4nm,0.3s,baz=164,slow=13,SNR=29 10nm,0.6s								
KLR	**Kul'dur**	**20.04**	**341**	P			Pn	13 17 38.5	+2.2
	0.8nm,0.4s,baz=165,slow=12,SNR=4.2								
WRA	**Warramunga Arr**	**50.68**	**189**	P			P	13 21 57.4	-3.1
	0.2nm,0.5s,baz=5.4,slow=7.8,SNR=1.8 0.2nm,0.5s								
ASAR	**Alice Springs**	**54.40**	**189**	P			P	13 22 25.3	-2.8
	0.2nm,0.7s,baz=3.2,slow=4.4,SNR=4.4 0.2nm,0.7s								
FINES	**FINESS Array B**	**74.57**	**333**	P			**P**	**13 24 38.5**	**-1.0**
	2.1nm,1.0s,baz=91,slow=6.0,SNR=4.0 2.1nm,1.0s								

*NEIC **03** 13:37:00.7±2.3, 7°.56S±0°.07×127°.75E±0°.06, h154km±6km, mb5.1/48, Error ellipse: s-maj=10.5km s-min=9.0km az=190.0*
*IDC **03** 13:37:01.3±2.8, 7°.48S×127°.78E, h157km±25km, mb4.0/14, mbtmp4.5/14, Error ellipse: s-maj=24.1km s-min=10.1km az=70.0*
*DJA **03** 13:37:01.2±0.2, 8°S±2°×12°8E±°, h146km±3km, M4.7/31, mB5.1/17, mb4.9/31, MLv5.1/18, Mw(mB)4.5/17*
ISC 03 13:37:00.0±0.5, 7°.62S±0°.04×127°.73E±0°.04, h149km±4km, h149km:pP-P, n211, σ1s72/226, mb4.8/46, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.56**	**96**	Pn			**Pn**	**13 37 55.3**	**+0.8**
SAUI	**Saumlaki**	**3.56**	**96**	P			**Pn**	**13 37 55.1**	**+0.6**
SAUI	**Saumlaki**	**3.56**	**96**	P			**Pn**	**13 37 55.7**	**+1.2**
SAUI				S			**Sn**	**13 38 35.6**	**-1.1**
BNDI	**Bandanaira**	**3.76**	**35**	P			**Pn**	**13 37 58.8**	**+1.6**
SOEI	**Soe**	**4.03**	**238**	Pn			**Pn**	**13 38 01.8**	**+1.1**
SOEI	**Soe**	**4.03**	**238**	P			**Pn**	**13 38 03.0**	**+2.3**
SOEI	**Soe**	**4.03**	**238**	P			**Pn**	**13 38 02.6**	**+1.9**
SOEI				S			**Sn**	**13 38 46.7**	**-1.2**
NLAI	**Namlea**	**4.40**	**352**	P			**Pn**	**13 38 09.4**	**+3.9**
MMRI	**Maumere**	**5.53**	**259**	Pn			**Pn**	**13 38 22.4**	**+1.9**
MMRI	**Maumere**	**5.53**	**259**	P			**Pn**	**13 38 23.4**	**+2.9**
MMRI	**Maumere**	**5.53**	**259**	P			**Pn**	**13 38 22.8**	**+2.3**
	138nm,0.9s,2μm1.1nm								
SANI	**Sanana**	**5.80**	**343**	P			**Pn**	**13 38 27.2**	**+3.1**
SANI	**Sanana**	**5.80**	**343**	P			**Pn**	**13 38 26.9**	**+2.8**
	118nm,0.7s,2μm0.3nm								
EDFI	**Ende, Flores**	**6.08**	**259**	P			**Pn**	**13 38 30.6**	**+2.6**
	55nm,0.6s,695nm0.3nm								
MTN	**Manton Dam**	**6.18**	**147**	P			**Pn**	**13 38 28.4**	**-0.7**
	baz=6.1,SNR=464								
MTN	**Manton Dam**	**6.18**	**147**	Pn			**Pn**	**13 38 28.5**	**-0.6**
MTN	**Manton Dam**	**6.18**	**147**	P			**Pn**	**13 38 29.7**	**+0.6**
FAKI	**Fak Fak**	**6.49**	**44**	Pn			**Pn**	**13 38 32.1**	**-1.1**
FAKI	**Fak Fak**	**6.49**	**44**	P			**Pn**	**13 38 32.5**	**-0.8**
	68nm,0.6s,1μm0.8nm								
KDU	**Kakadu**	**6.87**	**138**	P			**Pn**	**13 38 37.7**	**-0.7**
	baz=6.8,SNR=1000								
KDU	**Kakadu**	**6.87**	**138**	P			**Pn**	**13 38 38.0**	**-0.3**
LBMI	**Labuha**	**6.94**	**358**	P			**Pn**	**13 38 42.9**	**+3.6**
	167nm,0.8s,2μm0.6nm								
KMPI	**Kaimana, Papua**	**7.13**	**57**	P			**Pn**	**13 38 42.0**	**+0.2**
	176nm,0.6s,3μm1.2nm								
BASI	**Baing, Sumba**	**7.52**	**249**	P			**Pn**	**13 38 48.8**	**+1.7**
	145nm,0.5s,2.2nm								
SWI	**Sorong**	**7.58**	**28**	P			**Pn**	**13 38 48.6**	**+0.7**
	141nm,0.8s,2μm0.5nm								
KNRA	**Kununurra**	**8.07**	**173**	P			**Pn**	**13 38 53.5**	**-0.9**
	baz=8.0,SNR=1000								
KNRA	**Kununurra**	**8.07**	**173**	Pn			**Pn**	**13 38 53.5**	**-0.9**
KNRA	**Kununurra**	**8.07**	**173**	P			**Pn**	**13 38 53.8**	**-0.6**
LUWI	**Luwuk**	**8.19**	**323**				**Pn**	**13 38 58.2**	**+2.1**
LUWI	**Luwuk**	**8.19**	**323**	P			**Pn**	**13 39 00.3**	**+4.2**
LUWI	**Luwuk**	**8.19**	**323**	P			**Pn**	**13 38 59.9**	**+3.8**
	51nm,1.3s,1μm								
TNTI	**Ternate**	**8.34**	**358**	P			**Pn**	**13 39 01.9**	**+3.8**
	48nm,1.4s								
TNTI	**Ternate**	**8.34**	**358**	P			**Pn**	**13 39 01.6**	**+3.5**
	47nm,1.4s,0.2nm								
KMSI	**Cibinong**	**8.96**	**335**	P			**Pn**	**13 39 03.9**	**-2.4**
	158nm,1.0s,2μm								
MRSI	**Marisa**	**9.90**	**324**	P			**Pn**	**13 39 21.2**	**+2.4**
	24nm,0.9s,616nm								
PLAI	**Plampang**	**9.92**	**262**	P			**Pn**	**13 39 19.2**	**+0.1**
	33nm,0.6s,1μm								
FITZ	**Fitzroy Crossi**	**10.61**	**191**	P			**Pn**	**13 39 25.7**	**-2.5**
	baz=11								
FITZ	**Fitzroy Crossi**	**10.61**	**191**	Pn			**Pn**	**13 39 25.6**	**-2.6**
TWSI	**Taliwang, Sumb**	**10.79**	**263**	P			**Pn**	**13 39 30.2**	**-0.4**
	22nm,1.2s								
TOLI2	**Tolitoli**	**11.10**	**321**				**Pn**	**13 39 36.4**	**+1.7**
TOLI2	**Tolitoli**	**11.10**	**321**	P			**P**	**13 39 39.4**	**-3.7**
WB0	**Warramunga Arr**	**13.70**	**153**				**Pn**	**13 40 05.0**	**-3.2**
WRAB	**Tennant Creek**	**13.82**	**153**				**Pn**	**13 40 06.8**	**-3.0**
WRA	**Warramunga Arr**	**13.82**	**153**	P			**Pn**	**13 40 06.8**	**-3.1**
	35nm,0.3s,baz=337,slow=10.0,SNR=230								
WRA				S			Sn	13 42 32.2	-11
	90nm,0.6s,baz=328,slow=24,SNR=14								
WB2	**Warramunga Arr**	**13.83**	**153**				**Pn**	**13 40 06.9**	**-3.0**
WC3	**Warramunga Arr**	**13.85**	**153**	P			**Pn**	**13 40 06.8**	**-3.4**
	baz=14								
WR0	**Warramunga Arr**	**13.93**	**152**				**Pn**	**13 40 08.5**	**-2.7**
PSA00	**Pilbara Seismi**	**15.82**	**208**	P			**Pn**	**13 40 34.5**	**-0.2**
PSA00	**Pilbara Seismi**	**15.82**	**208**	P			**P**	**13 40 35.5**	**0.0**
PSA00	**Pilbara Seismi**	**15.82**	**208**	P			**P**	**13 40 35.2**	**-0.3**
COEN	**Coen**	**16.42**	**114**	P			**Pn**	**13 40 42.0**	**-0.1**
	baz=16,SNR=43								
COEN	**Coen**	**16.42**	**114**	P			**Pn**	**13 40 42.1**	**-0.1**
COEN	**Coen**	**16.42**	**114**	P			**P**	**13 40 43.3**	**+1.1**
AS31	**Alice Springs**	**17.02**	**160**	P			**P**	**13 40 48.4**	**-0.3**
ASPA	**Alice Springs**	**17.02**	**160**	P			**Pn**	**13 40 49.6**	**+0.2**
	baz=17								
ASAR	**Alice Springs**	**17.02**	**160**	P			**P**	**13 40 48.7**	**0.0**
ASAR	**Alice Springs**	**17.02**	**160**	P			**Pn**	**13 40 50.8**	**+1.4**
	113nm,0.6s,baz=338,slow=11,SNR=1280								
ASAR						S	**S**	**13 43 50.1**	**-8.6**
	17nm,0.4s,baz=324,slow=15,SNR=8.3								
AS01	**Alice Springs**	**17.04**	**160**	P			**Pn**	**13 40 51.2**	**+1.7**
UGM	**Wanagama**	**17.05**	**268**	P			**P**	**13 40 46.6**	**-2.5**
QIS	**Mount Isa**	**17.25**	**139**	P			**Pn**	**13 40 52.7**	**+0.6**
	baz=17,SNR=60								
QIS	**Mount Isa**	**17.25**	**139**	P			**Pn**	**13 40 52.9**	**+0.8**
WRKA	**Warakurna**	**17.33**	**178**	P			**Pn**	**13 40 52.8**	**-0.2**
	baz=17,SNR=268								
WRKA	**Warakurna**	**17.33**	**178**	P			**Pn**	**13 40 54.4**	**+1.4**
SBUM	**Sibu**	**18.43**	**302**	P			**P**	**13 41 02.0**	**-2.2**
MTSU	**Mount Surprise**	**19.23**	**125**	P			**Pn**	**13 41 14.6**	**-1.0**
	baz=19,SNR=185								
MTSU	**Mount Surprise**	**19.23**	**125**	P			**Pn**	**13 41 14.6**	**-1.0**
PMG	**Port Moresby**	**19.30**	**97**	P			**P**	**13 41 12.8**	**-0.9**
PMG	**Port Moresby**	**19.30**	**97**	P			**Pn**	**13 41 15.6**	**-0.7**
PMG	**Port Moresby**	**19.30**	**97**	P			**Pn**	**13 41 16.0**	**-0.3**
PMG	**Port Moresby**	**19.30**	**97**	P			**Pn**	**13 41 16.7**	**+0.4**
	72nm,0.7s,baz=268,slow=5.0,SNR=27								
PMG				S			**S**	**13 44 45.0**	**+0.7**
	5.9nm,0.7s,baz=163,slow=20,SNR=1.9								
KSM	**Kuching**	**19.59**	**297**	P			**Pn**	**13 41 18.7**	**-0.9**
GIRL	**Giralia**	**19.79**	**220**	P			**Pn**	**13 41 21.7**	**-0.3**
	baz=20,SNR=6.4								
GIRL	**Giralia**	**19.79**	**220**	P			**P**	**13 41 19.9**	**+1.0**
MEEK	**Meekatharra**	**20.80**	**204**	P			**P**	**13 41 30.4**	**+0.6**
	baz=21,SNR=24								
MEEK	**Meekatharra**	**20.80**	**204**	P			**P**	**13 41 31.8**	**+2.0**
OOD	**Oodnadatta**	**21.43**	**160**	P			**P**	**13 41 37.3**	**+0.8**
CTA	**Charters Tower**	**21.81**	**127**	P			**P**	**13 41 41.9**	**+1.3**
	22nm,0.8s,baz=305,slow=11,SNR=41 22nm,0.8s								
CTAO	**Charters Tower**	**21.81**	**127**	P			**P**	**13 41 41.6**	**+1.1**
CTAO						IAmb	IAmb	13 41 43.9	
	comp=Z,32nm,0.9s								
CTAO	**Charters Tower**	**21.81**	**127**	P			**P**	**13 41 42.1**	**+1.5**
TV1H	**Townsville Har**	**21.83**	**124**	P			**P**	**13 41 41.9**	**+1.2**
AUAYR	**Ayr State High**	**22.49**	**124**	P			**P**	**13 41 49.1**	**+1.8**
FORT	**Forrest**	**23.04**	**179**	P			**P**	**13 41 53.3**	**+1.1**
	baz=23,SNR=40								
FORT	**Forrest**	**23.04**	**179**	P			**P**	**13 41 52.4**	**+0.1**
FORT						IAmb	IAmb	13 41 54.9	
	comp=Z,84nm,0.6s								
FORT	**Forrest**	**23.04**	**179**	P			**P**	**13 41 53.6**	**+1.3**
MULG	**Mulgathing**	**23.31**	**166**	P			**P**	**13 41 56.3**	**+1.5**
INKA	**Innaminka**	**23.50**	**150**	P			**P**	**13 41 58.3**	**+1.8**
MORW	**Morawa**	**24.01**	**206**	P			**P**	**13 42 03.0**	**+1.8**
	baz=24,SNR=4.6								
MORW	**Morawa**	**24.01**	**206**	P			**P**	**13 42 02.6**	**+1.4**
MORW						IAmb	IAmb	13 42 04.5	
	comp=Z,40nm,0.8s								
MORW	**Morawa**	**24.01**	**206**	P			**P**	**13 42 03.2**	**+2.0**
KMBL	**Kambalda**	**24.25**	**192**	P			**P**	**13 42 04.0**	**+0.7**
	baz=24,SNR=8.4								
KMBL	**Kambalda**	**24.25**	**192**	P			**P**	**13 42 04.3**	**+1.0**
QLP	**Quilpie**	**24.53**	**142**	P			**P**	**13 42 06.6**	**+0.7**
	baz=24,SNR=8.0								
QLP	**Quilpie**	**24.53**	**142**	P			**P**	**13 42 07.2**	**+1.3**
LCRK	**Leigh Creek**	**24.75**	**158**	P			**P**	**13 42 09.2**	**+1.4**
BLDU	**Ballidu**	**25.10**	**203**	P			**P**	**13 42 12.0**	**+1.0**
	baz=25,SNR=12								
KLBR	**Kellerberrin**	**25.60**	**200**	P			**P**	**13 42 16.3**	**+0.8**
	baz=26,SNR=14								
KLBR	**Kellerberrin**	**25.60**	**200**	P			**P**	**13 42 16.7**	**+1.1**
BBOO	**Buckleboo**	**26.23**	**164**	P			**P**	**13 42 22.4**	**+1.1**
	baz=26,SNR=96								
BBOO	**Buckleboo**	**26.23**	**164**	P			**P**	**13 42 22.2**	**+1.1**
BBOO						IAmb	IAmb	13 42 23.1	
	comp=Z,62nm,0.7s								
BBOO	**Buckleboo**	**26.23**	**164**	P			**P**	**13 42 22.3**	**+1.1**
MUN	**Mundaring**	**26.51**	**202**	P			**P**	**13 42 24.8**	**+1.2**
	baz=26,SNR=4.5								
WHYH	**Whyalla**	**26.89**	**161**	P			**P**	**13 42 28.2**	**+1.2**
NWAO	**Narrogin (SRO)**	**27.00**	**200**	P			**P**	**13 42 28.1**	**0.0**
NWAO						IAmb	IAmb	13 42 34.8	
	comp=Z,135nm,2.0s								
DLV	**T Lat**	**27.27**	**315**	P			**P**	**13 42 30.4**	**-0.6**
STKA	**Stephens Creek**	**27.38**	**154**	P			**P**	**13 42 32.4**	**+0.9**
	baz=27,SNR=32								
STKA	**Stephens Creek**	**27.38**	**154**	P			**P**	**13 42 31.0**	**-0.4**
STKA	**Stephens Creek**	**27.38**	**154**	P			**P**	**13 42 32.4**	**+0.9**
STKA	**Stephens Creek**	**27.38**	**154**	P			**P**	**13 42 32.5**	**+1.0**
	comp=Z,19nm,0.6s,baz=331,slow=9.1,SNR=33								
	comp=Z,19nm,0.6s								
HTT	**Hallett**	**27.70**	**160**	P			**P**	**13 42 35.6**	**+1.3**
	baz=28,SNR=12								
HTT	**Hallett**	**27.70**	**160**	P			**P**	**13 42 35.8**	**+1.4**
CMSA	**Cobar Meteorol**	**29.11**	**147**	P			**P**	**13 42 48.2**	**+1.4**
	baz=29,SNR=73								
CMSA	**Cobar Meteorol**	**29.11**	**147**	P			**P**	**13 42 48.3**	**+1.4**
IPM	**Ipoh**	**29.23**	**293**	P			**P**	**13 42 47.8**	**-0.4**
IPM						IAmb	IAmb	13 43 08.4	
	comp=Z,34nm,1.4s								
KULM	**Kulim**	**29.91**	**295**	P			**P**	**13 42 53.1**	**-0.9**
KULM						IAmb	IAmb	13 43 00.8	
	comp=Z,53nm,1.7s								
AUDCS	**Dubbo College**	**31.27**	**144**	P			**P**	**13 43 07.5**	**+1.6**
TPUB	**Ta-pu**	**31.50**	**347**	P			**P**	**13 43 06.6**	**-1.5**
ARPS	**Mount Arapiles**	**31.74**	**158**	P			**P**	**13 43 11.9**	**+2.0**
	baz=32,SNR=112								
ARPS	**Mount Arapiles**	**31.74**	**158**	P			**P**	**13 43 12.0**	**+2.0**
ARMA	**Armidale**	**31.87**	**138**	P			**P**	**13 43 10.2**	**-1.1**
ARMA						IAmb	IAmb	13 43 22.3	
	comp=Z,34nm,1.4s								
SSLB	**Suanglung**	**31.91**	**348**	P			**P**	**13 43 08.8**	**-2.8**
YNG	**Young**	**32.68**	**147**	P			**P**	**13 43 20.3**	**+2.1**
YHNB	**Yeheng**	**32.69**	**349**	P			**P**	**13 43 17.1**	**-1.3**
BRAT	**Ballarat**	**33.23**	**156**	P			**P**	**13 43 25.6**	**+2.7**
CAN	**Canberra**	**33.78**	**148**	P			**P**	**13 43 29.6**	**+1.8**
CAN						IAmb	IAmb	13 43 30.9	
	comp=Z,14nm,0.7s								
CAN	**Canberra**	**33.78**	**148**	P			**P**	**13 43 30.2**	**+2.5**
TOO	**Toolangi**	**33.89**	**154**	P			**P**	**13 43 29.8**	**+1.1**
	baz=34,SNR=9.3								
TOO	**Toolangi**	**33.89**	**154**	P			**P**	**13 43 31.4**	**+2.7**
TOO						IAmb	IAmb	13 43 32.5	
	comp=Z,22nm,1.2s								
TOO	**Toolangi**	**33.89**	**154**	P			**P**	**13 43 31.8**	**+3.1**
CNB	**Canberra Magne**	**33.97**	**147**	P			**P**	**13 43 30.1**	**+0.6**
	baz=34,SNR=5.7								
JCJ	**Chichijima**	**37.24**	**22**	P			**P**	**13 43 54.0**	**-3.4**
KOUNC	**Koumac, New Ca**	**37.61**	**114**	P			**P**	**13 43 59.5**	**-1.1**
KOUNC						IAmb	IAmb	13 44 38.2	
	comp=Z,63nm,1.4s								
CMAR	**Chiang Mai Arr**	**38.45**	**313**	P			**P**	**13 44 08.0**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=140,slow=6.7,SNR=17								
CMAR						PcP	**PcP**	**13 46 18.6**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=163,slow=2.9,SNR=6.3								
CMAR						ScP	**S**	**13 49 50.5**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=154,slow=3.2,SNR=8.4								
	comp=Z,2.1nm,0.7s								
CHTO	**Chiang Mai**	**38.67**	**313**	P			**P**	**13 44 10.0**	**+0.5**
NOUC	**Port Laguerre**	**39.83**	**115**	P			**P**	**13 44 20.1**	**+1.0**
DZM	**Mont Dzumac**	**39.94**	**115**	P			**P**	**13 44 21.1**	**+0.9**
DZM						IAmb	IAmb	13 45 45.5	
	comp=Z,87nm,1.7s								
DZM	**Mont Dzumac**	**39.94**	**115**	P			**P**	**13 44 20.7**	**+0.5**
NJ2	**Nanjing**	**40.35**	**348**		*e*	P	**P**	**13 44 25.6**	**+2.5**
NJ2						pP	**pP**	**13 44 55.4**	**+0.9**
NJ2						sP	**sP**	**13 45 11.0**	**+0.1**
OUENC	**Ouen Island, N**	**40.39**	**116**	P			**P**	**13 44 24.3**	**+0.6**
OUENC						IAmb	IAmb	13 44 47.2	
	comp=Z,46nm,1.2s								
JNU	**Nakatsue**	**40.62**	**4**	P			**P**	**13 44 24.4**	**-1.1**
JNU						IAmb	IAmb	13 44 32.7	
	comp=Z,92nm,1.5s								
PINNC	**Pines Island,**	**40.98**	**116**	P			**P**	**13 44 28.1**	**-0.4**
PINNC						IAmb	IAmb	13 45 07.3	
	comp=Z,114nm,1.2s								
PZH	**PanZhiHua**	**42.27**	**324**	P			**P**	**13 44 40.6**	**+1.5**
PZH						pmax	pmax		
	comp=Z,10.0nm,0.7s								
PZH						pmax	pmax		
	comp=Z,100nm,4.8s								
TNCH	**TengChong**	**43.16**	**320**	P			**P**	**13 44 47.9**	**+1.6**
TNCH						pmax	pmax		
	comp=Z,18nm,0.6s								
TNCH						pmax	pmax		
	comp=Z,49nm,2.3s								
CD2	**Chengdu**	**44.67**	**330**		*e*	P	**P**	**13 44 59.0**	**+0.8**
CD2						pmax	pmax		
	comp=Z,10.0nm,0.5s								
KSRS	**Korea Array**	**44.84**	**0**	P			**P**	**13 44 59.5**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=176,slow=9.4,SNR=16								
	comp=Z,3.4nm,0.7s								
MJAR	**Matsushiro Arr**	**45.02**	**12**	P			**P**	**13 44 58.0**	**-2.8**
	comp=Z,0.6nm,0.4s,baz=189,slow=8.3,SNR=4.8								
	comp=Z,0.6nm,0.4s								
MJB9	**Matsu-Tunnel**	**45.02**	**12**	P			**P**	**13 44 58.0**	**-2.8**
MJB9						IAmb	IAmb	13 45 37.5	
	comp=Z,78nm,1.9s								
LZH	**Lanzhou**	**48.93**	**334**		*e*	P	**P**	**13 45 31.8**	**+0.4**
LZH						pP	pP	13 45 53.1	-11
LZH						pmax	pmax		
	comp=Z,14nm,1.0s								
HHC	**Hu-ho-hao-te**	**50.47**	**344**		*e*	P	**P**	**13 45 46.8**	**+4.0**
HHC						pmax	pmax		
	comp=Z,11nm,0.6s								
HHC						pmax	pmax		
	comp=Z,140nm,4.5s								
BTO	**Baotou**	**50.69**	**343**		*e*	P	**P**	**13 45 48.3**	**+3.9**
BTO						pP	**pwP**	**13 46 23.6**	**+0.6**
BTO						sP	sP	13 46 42.1	+9.1
BTO						PP	**PP**	**13 47 41.7**	**-0.4**
BTO						S	**S**	**13 52 54.6**	**+6.4**
BTO	**Baotou**	**50.69**	**343**			SS	SS	13 56 12.8	-12
BTO						pmax	pmax		
	comp=Z,11nm,0.8s								
BTO						pmax	pmax		
	comp=Z,310nm,4.1s								
BTO						LR	LR		
	comp=N,300nm,3.9s								
BTO						LR	LR		
	comp=E,340nm,4.2s								
BTO						LR	LR		
	comp=Z,220nm,4.9s								
LSA	**Lhasa**	**51.12**	**318**	P			**P**	**13 45 47.4**	**-1.0**
LSA	**Lhasa**	**51.12**	**318**	P			**P**	**13 45 49.3**	**+1.0**
FOZ	**Fox Glacier**	**51.28**	**141**	P			**P**	**13 45 48.3**	**-0.5**
QRZ	**Quartz Range**	**51.72**	**137**	P			**P**	**13 45 53.5**	**+1.4**
USRK	**Ussuriysk Ar.**	**51.72**	**4**	P			**P**	**13 45 52.0**	**0.0**
	comp=Z,1.6nm,0.4s,baz=196,slow=6.9,SNR=9.8								
	comp=Z,1.6nm,0.4s								
MDJ	**Mudanjiang**	**52.02**	**2**	P			**P**	**13 45 58.8**	**+4.6**
MDJ						pmax	pmax		
	comp=Z,23nm,2.0s								
MDJ						pmax	pmax		
	comp=Z,380nm,6.2s								
RPZ	**Rata Peaks**	**52.15**	**141**	P			**P**	**13 45 56.3**	**+1.0**
RPZ						IAmb	IAmb	13 46 01.5	
	comp=Z,66nm,1.4s								
THZ	**Tophouse**	**52.40**	**138**	P			**P**	**13 45 57.6**	**+0.4**
NNZ	**Nelson**	**52.47**	**137**	P			**P**	**13 45 58.5**	**+0.9**
TUWZ	**Tuamarina**	**52.94**	**137**	P			**P**	**13 46 01.4**	**+0.3**
KHZ	**Kahutara**	**53.12**	**138**	P			**P**	**13 46 02.7**	**+0.4**
KHZ						IAmb	IAmb	13 46 59.2	
	comp=Z,91nm,1.6s								
GTA	**Gaotai**	**53.47**	**333**		*e*	P	**P**	**13 46 04.8**	**-0.3**
GTA						sP	pP	13 46 15.1	-23
GTA						pmax	pmax		
	comp=Z,5.0nm,0.6s								
MRZ	**Mangatainoka R**	**53.73**	**136**	P			**P**	**13 46 07.3**	**+0.4**

	0.1nm,0.3s,baz=98,slow=8.6,SNR=5.0								
WRA					PcP		**PcP**	**14 10 01.9**	**+0.3**
	0.1nm,0.3s,baz=93,slow=3.6,SNR=1.5								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**44.87**	**255**	P			**P**	**14 08 33.9**	**+0.3**
	0.4nm,0.4s,baz=87,slow=8.1,SNR=16								
ASAR					PcP		**PcP**	**14 10 01.4**	**-0.6**
	0.2nm,0.5s,baz=106,slow=3.7,SNR=4.4								
	0.4nm,0.4s								
NVAR	**Mina Array Bea**	**79.53**	**44**	P			**P**	**14 12 17.8**	**+0.9**
	0.2nm,0.4s,baz=215,slow=4.1,SNR=4.0								
	0.2nm,0.4s								
TXAR	**Lajitas Array**	**86.02**	**58**	P			**P**	**14 12 49.7**	**+0.3**
	0.3nm,0.6s,baz=217,slow=7.9,SNR=4.5								
	0.3nm,0.6s								
ILAR	**Eielson Array**	**86.15**	**13**	P			**P**	**14 12 48.8**	**-0.2**
	0.4nm,0.8s,baz=224,slow=5.0,SNR=6.6								
	0.4nm,0.8s								
EKA	**Eskdalemuir Ar**	**142.76**	**5**	PKP			**PKPdf**	**14 19 34.5**	**-2.1**
	0.3nm,0.4s,baz=336,slow=3.1,SNR=3.5								

*IDC **03** 14:05:29.2±4.7,21°.60N×143°.12E,h309km±46km, mb3.2/13,mbtmp3.9/14,Error ellipse: s-maj=21.5km s-min=12.0km az=85.0*
*NEIC **03** 14:05:29.7±2.9,21°.48N±0°.07×143°.1E±0°.1,h330km±9km, mb4.0/36,Error ellipse: s-maj=18.5km s-min=9.5km az=82.0*
ISC 03 14:05:27.7±0.5,21°.45N±0°.07×143°.1E±0°.1,h311km,n62,
σ1≧18/63,mb3.9/28,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.69**	**352**	Pn	**Pn**	**14 06 53.9**	**+0.2**
GUMO	**Guam**	**7.99**	**168**	Pn	**Pn**	**14 07 21.3**	**-0.1**
JHJ2	**Mitsune**	**11.99**	**347**	Pn	**Pn**	**14 08 08.9**	**-0.9**
JMN	**Monobe**	**14.71**	**328**	P	**Pn**	**14 08 41.0**	**-1.4**
MJAR	**Matsushiro Arr**	**15.64**	**345**	P	**Pn**	**14 08 51.2**	**-2.0**
	1.8nm,0.3s,baz=161,slow=7.6,SNR=5.9						
MAJO	**Matsushiro**	**15.64**	**345**	P	**Pn**	**14 08 51.3**	**-1.9**
MAJO				IAmb	IAmb	14 09 04.3	
	comp=Z,19nm,1.4s						
MJB9	**Matsu-Tunnel**	**15.65**	**345**	P	**Pn**	**14 08 52.2**	**-1.1**
MJB9				IAmb	IAmb	14 09 05.3	
	comp=Z,20nm,1.4s						
JMM	**Marumori**	**16.49**	**353**	P	**Pn**	**14 09 02.2**	**-0.8**
KSRS	**Korea Array**	**20.68**	**324**	P	**P**	**14 09 45.5**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=145,slow=9.3,SNR=10						
	comp=Z,1.5nm,0.6s						
MTN	**Manton Dam**	**36.05**	**200**	P	**P**	**14 12 00.7**	**+0.2**
SONM	**Songino Array**	**39.50**	**321**	P	**P**	**14 12 29.5**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=132,slow=8.0,SNR=2.8						
	comp=Z,0.3nm,0.4s						
AMKA	**Amchitka**	**41.02**	**34**	P	**P**	**14 12 39.5**	**-1.6**
CMAR	**Chiang Mai Arr**	**41.53**	**274**	P	**P**	**14 12 47.5**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=88,slow=7.3,SNR=4.3						
	comp=Z,0.5nm,0.6s						
WB0	**Warramunga Arr**	**41.84**	**192**	P	**P**	**14 12 49.4**	**+1.3**
WR0	**Warramunga Arr**	**42.00**	**192**	P	**P**	**14 12 50.5**	**+1.1**
WRAB	**Tennant Creek**	**42.01**	**192**	P	**P**	**14 12 48.2**	**-1.3**
WRAB				IAmb	IAmb	14 12 52.5	
	comp=Z,6.6nm,0.8s						
WB2	**Warramunga Arr**	**42.02**	**192**	P	**P**	**14 12 50.3**	**+0.8**
WRA	**Warramunga Arr**	**42.02**	**192**	P	**P**	**14 12 50.6**	**+1.0**
WRA	**Warramunga Arr**	**42.02**	**192**	P	**P**	**14 12 52.1**	**+2.5**
	comp=Z,1.3nm,0.5s,baz=14,slow=8.2,SNR=18						
	comp=Z,1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.87**	**205**	P	**P**	**14 12 55.5**	**-0.9**
UGM	**Wanagama**	**43.30**	**231**	P	**P**	**14 12 58.1**	**-1.9**
KULM	**Kulim**	**44.15**	**255**	P	**P**	**14 13 05.3**	**-1.4**
AS31	**Alice Springs**	**45.73**	**192**	P	**P**	**14 13 19.3**	**+0.5**
ASAR	**Alice Springs**	**45.73**	**192**	P	**P**	**14 13 19.7**	**+0.8**
ASAR	**Alice Springs**	**45.73**	**192**	P	**P**	**14 13 21.1**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=16,slow=12,SNR=11						
	comp=Z,0.6nm,0.7s						
EIDS	**Eidsvold**	**47.17**	**170**	P	**P**	**14 13 29.2**	**-0.7**
EIDS				IAmb	IAmb	14 14 03.1	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**48.42**	**209**	P	**P**	**14 13 38.3**	**-1.1**
GSI	**Gunungsitoli**	**48.66**	**252**	P	**P**	**14 13 41.0**	**-0.5**
GSI				IAmb	IAmb	14 14 09.8	
	comp=Z,22nm,1.5s						
ARMA	**Armidale**	**52.21**	**171**	P	**P**	**14 14 08.8**	**+1.1**
STKA	**Stephens Creek**	**53.04**	**182**	P	**P**	**14 14 14.3**	**+0.8**
ZALV	**Zalesovo Beam**	**54.37**	**322**	PcP	**PcP**	**14 15 22.2**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=122,slow=3.9,SNR=3.6						
MKAR	**Makanchi Array**	**54.83**	**313**	P	**P**	**14 14 27.5**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=90,slow=8.3,SNR=2.3						
MKAR				PcP	**PcP**	**14 15 24.7**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=81,slow=3.7,SNR=4.6						
	comp=Z,0.2nm,0.6s						
O16K	**Kokwok River B**	**56.05**	**32**	P	**P**	**14 14 34.5**	**-0.2**
O16K				IAmb	IAmb	14 15 01.6	
	comp=Z,17nm,1.2s						
MHA	**Mahukona**	**56.68**	**79**	P	**P**	**14 14 38.4**	**-1.4**
KURBB	**Kurchatov Arra**	**57.67**	**317**	P	**P**	**14 14 46.7**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=94,slow=7.8,SNR=5.3						
	comp=Z,0.6nm,0.3s						
C18K	**Utukok River**	**57.96**	**21**	P	**P**	**14 14 47.4**	**-0.5**
C18K				IAmb	IAmb	14 14 53.9	
	comp=Z,5.9nm,1.5s						
C19K	**Lookout Ridge**	**58.68**	**21**	P	**P**	**14 14 52.5**	**-0.4**
E19K	**Redstone River**	**58.88**	**23**	P	**P**	**14 14 55.4**	**+1.2**
E19K				IAmb	IAmb	14 15 07.7	
	comp=Z,5.7nm,1.5s						
J20K	**Nowinta River**	**59.09**	**27**	P	**P**	**14 14 55.6**	**-0.1**
J20K				IAmb	IAmb	14 15 12.9	
	comp=Z,7.3nm,1.4s						
IMAR	**Indian Mountai**	**59.74**	**25**	P	**P**	**14 15 00.5**	**+0.4**
CAST	**Castle Rocks**	**59.79**	**28**	P	**P**	**14 15 01.7**	**+1.2**
CAST				IAmb	IAmb	14 15 18.0	
	comp=Z,4.6nm,1.2s						
B20K	**Meade River**	**59.81**	**20**	P	**P**	**14 15 02.1**	**+1.7**
B20K				IAmb	IAmb	14 15 43.6	
	comp=Z,7.4nm,1.5s						
SUA	**Susitna One**	**60.01**	**30**	P	**P**	**14 15 03.2**	**+1.1**
SUA				IAmb	IAmb	14 15 14.2	
	comp=Z,6.0nm,1.1s						
O22K	**Cooper Landing**	**60.34**	**32**	P	**P**	**14 15 05.1**	**+1.0**
RC01	**Rabbit Creek A**	**60.43**	**31**	P	**P**	**14 15 04.3**	**-0.5**
RC01				IAmb	IAmb	14 15 14.5	
	comp=Z,7.3nm,1.0s						
B21K	**Ikpikpuk River**	**60.51**	**21**	P	**P**	**14 15 04.9**	**-0.3**
D22K	**Ayikyak River**	**60.94**	**22**	P	**P**	**14 15 09.4**	**+1.3**
D22K				IAmb	IAmb	14 15 11.0	
	comp=Z,3.8nm,1.1s						
KNK	**Knik Glacier**	**61.09**	**31**	P	**P**	**14 15 10.2**	**+1.0**
B22K	**Teshekpuk Lake**	**61.12**	**20**	P	**P**	**14 15 10.1**	**+0.8**
B22K				IAmb	IAmb	14 15 42.1	
	comp=Z,3.0nm,1.2s						
I23K	**Minto, Yukon-K**	**61.32**	**26**	P	**P**	**14 15 07.4**	**-3.3**
I23K				IAmb	IAmb	14 15 12.7	
	comp=Z,6.6nm,1.5s						
H24K	**Noodor Dome**	**62.05**	**26**	P	**P**	**14 15 15.2**	**-0.4**
H24K				IAmb	IAmb	14 15 34.9	
	comp=Z,4.1nm,1.4s						
ILAR	**Eielson Array**	**62.29**	**27**	P	**P**	**14 15 16.8**	**-0.3**
ILAR	**Eielson Array**	**62.29**	**27**	P	**P**	**14 15 17.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=260,slow=5.6,SNR=9.1						
	comp=Z,0.5nm,0.6s						
KLU	**Klutina**	**62.31**	**31**	P	**P**	**14 15 16.9**	**-0.5**
BVAR	**Borovoye Array**	**62.83**	**320**	P	**P**	**14 15 22.0**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=97,slow=7.7,SNR=17						
	comp=Z,1.3nm,0.3s						
BMAR	**Burnt Mountain**	**63.60**	**24**	P	**P**	**14 15 27.1**	**+1.4**
ABKAR	**Akbulak array**	**69.69**	**316**	P	**P**	**14 16 03.1**	**-1.1**
ABKAR				IAmb	IAmb	14 16 05.5	
	comp=Z,1.2nm,0.7s						
YKA	**Yellowknife Ar**	**76.70**	**28**	P	**P**	**14 16 45.8**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=293,slow=5.5,SNR=13						
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**79.14**	**341**	P	**P**	**14 16 58.7**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=75,slow=9.2,SNR=7.6						
	comp=Z,1.4nm,0.7s						
NVAR	**Mina Array Bea**	**83.34**	**51**	P	**P**	**14 17 22.3**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=284,slow=5.3,SNR=6.8						
	comp=Z,0.7nm,0.7s						
FINES	**FINESS Array B**	**83.38**	**334**	P	**P**	**14 17 20.2**	**0.0**
	comp=Z,1.7nm,0.6s,baz=59,slow=5.5,SNR=14						
	comp=Z,1.7nm,0.6s						
PLCA	**Paso Flores**	**145.63**	**132**	PKPbc	**PKiKP**	**14 24 32.7**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=239,slow=2.9,SNR=11						

*KOLA **03** 14:13:46.3,82°.96N×6°.74W,h0km,ML2.6,Arctic Ocean,Gakkel ridge*
*FCIAR **03** 14:13:47.0,83°.09N×4°.83W,h10km,station ZFI2 has station magnitude of 3.50*
*BER **03** 14:13:49.9±1.9,82°.65N×5°.93W,h10km,mb(Pn)4.0, Confirmed Earthquake*
ISC 03 14:13:51.0±4.1,82°.9N±0°.1×0°.2W±0°.2,h10km,n15,
σ0≧83/24,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.45**	**149**	P	**Pn**	**14 14 57.6**	**-0.8**
KBS				S	**Sn**	**14 15 51.3**	**+1.1**
KBS	**Kingsbay**	**4.45**	**149**	*eP*	**Pn**	**14 14 57.8**	**-0.6**
KBS				IAML		14 14 58.0	
	comp=Z,16nm,0.3s						
KBS				*eS*	**Sn**	**14 15 48.8**	**-1.4**
KBS	**Kingsbay**	**4.45**	**149**	*eP*	**Pn**	**14 14 57.5**	**-1.0**
KBS				*eS*	**Sn**	**14 15 49.9**	**-0.3**
BRBB	**Barentsburg B**	**5.39**	**147**	P	**Pn**	**14 15 11.0**	**-0.3**
BRBB				S	**Sn**	**14 16 15.2**	**+1.9**
BRBB	**Barentsburg B**	**5.39**	**147**	*eP*	**Pn**	**14 15 11.1**	**-0.3**
BRBA	**Barentsburg A**	**5.43**	**147**	*eP*	**Pn**	**14 15 13.3**	**+1.5**
SPA0	**Spitsbergen Ar**	**5.47**	**142**	*eP*	**Pn**	**14 15 12.0**	**-0.4**
SPA0				*eS*	**Sn**	**14 16 15.7**	**+0.4**
SPA0	**Spitsbergen Ar**	**5.47**	**142**	*eP*	**Pn**	**14 15 11.7**	**-0.7**
SPA0				*eS*	**Sn**	**14 16 15.0**	**-0.2**
SPITS	**Spitsbergen Ar**	**5.47**	**142**	P	**Pn**	**14 15 12.0**	**-0.4**
HSPB	**Hornsund (broa**	**6.53**	**147**	P	**Pn**	**14 15 27.3**	**+0.4**
HSPB	**Hornsund (broa**	**6.53**	**147**	*eP*	**Pn**	**14 15 27.0**	**+0.1**
HSPB				IAML		14 15 28.9	
	comp=Z,15nm,0.3s						
ZFI2	**Zemlya Franca-**	**6.90**	**83**	*eP*	**Pn**	**14 15 32.3**	**+0.3**
ZFI2				*eS*	**Sn**	**14 16 49.9**	**-0.4**
	comp=Z,14nm,2.8s						
OMEGA	**Omega**	**6.92**	**83**	P	**Pn**	**14 15 32.4**	**+0.1**
OMEGA				S	**Sn**	**14 16 50.6**	**-0.3**
HOPEN	**Hopen**	**7.75**	**132**	*eP*	**Pn**	**14 15 44.6**	**+1.0**
HOPEN				IAML		14 15 46.6	
	comp=Z,5.3nm,0.6s						
HOPEN	**Hopen**	**7.75**	**132**	*eP*	**Pn**	**14 15 44.0**	**+0.4**
HOPEN				*eS*	**Sn**	**14 17 10.4**	**-0.8**

*IDC **03** 14:20:40.6±1.7,6°.13S×129°.77E,h0km,mb4.0/4, mbtmp3.8/6,ML3.6/2,Error ellipse: s-maj=138.0km s-min=27.6km az=71.0*
*DJA **03** 14:20:53.4±0.7,6°.5S±4°×13°.0E±°,h248km±16km,M4.2/9, mb3.7/6,mB5.0/2,MLv4.5/9,Mw(mB)4.4/2*
ISC 03 14:20:54.8±0.8,6°.46S±0°.08×130°.3E±0°.1,h150km,n19,
σ1≧64/19,mb3.8/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.78**	**148**	P	Pn	14 21 33.7	+6.2
FAKI	**Fak Fak**	**4.00**	**28**	P	**Pn**	**14 21 54.2**	**-0.9**
KMPI	**Kaimana, Papua**	**4.36**	**50**	P	**Pn**	**14 22 00.0**	**+0.3**
SWI	**Seorong**	**5.64**	**9**	P	**Pn**	**14 22 15.8**	**-0.9**
	13nm,0.4s,2µm0.5nm						
MTN	**Manton Dam**	**6.39**	**173**	P	**Pn**	**14 22 28.3**	**+1.6**
KDU	**Kakadu**	**6.53**	**161**	P	**Pn**	**14 22 29.6**	**+1.0**
SOEI	**Soe**	**6.85**	**241**	P	**Pn**	**14 22 34.1**	**+1.1**
	18nm,1.7s,0.2nm						
EDFI	**Ende, Flores**	**8.87**	**255**	P	**Pn**	**14 22 59.4**	**-0.6**
KNRA	**Kununurra**	**9.29**	**189**	P	**Pn**	**14 23 06.0**	**+0.6**
PLAI	**Plampang**	**12.67**	**259**	P	**Pn**	**14 23 49.6**	**-0.3**
WRA	**Warramunga Arr**	**13.95**	**164**	Pn	**Pn**	**14 24 06.0**	**-0.2**
	0.3nm,0.3s,baz=345,slow=13,SNR=13						
WRA				Sn	Sn	14 26 29.6	-11
	0.3nm,0.3s,baz=336,slow=23,SNR=2.9						
	0.3nm,0.3s						
QIS	**Mount Isa**	**16.64**	**148**	P	**Pn**	**14 24 39.7**	**+0.2**
ASAR	**Alice Springs**	**17.45**	**169**	P	**Pn**	**14 24 51.2**	**+2.1**
	0.3nm,0.3s,baz=345,slow=11,SNR=42						
ASAR				S	**S**	**14 27 57.2**	**-4.9**
	0.6nm,0.7s,baz=356,slow=25,SNR=4.9						
	1.1nm,0.6s						
AS01	**Alice Springs**	**17.45**	**169**	P	**Pn**	**14 24 51.3**	**+2.1**
WRKA	**Warakurna**	**18.57**	**186**	P	**Pn**	**14 25 03.3**	**+0.8**
SONM	**Songino Array**	**58.05**	**341**	P	**P**	**14 30 32.7**	**+0.5**
	0.3nm,0.5s,baz=153,slow=6.2,SNR=2.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**14 31 38.3**	**+0.7**
	0.8nm,0.3s,baz=116,slow=7.9,SNR=20						
	0.8nm,0.3s						
ZALV	**Zalesovo Beam**	**71.26**	**334**	P	**P**	**14 31 56.7**	**-0.9**
	0.6nm,0.6s,baz=123,slow=5.3,SNR=2.5						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**72.23**	**328**	P	**P**	**14 32 04.2**	**+0.7**
	1.0nm,0.2s,baz=127,slow=4.7,SNR=2.0						
	1.0nm,0.2s						

*AEIC **03** 14:24:35.8±1.9,55°.7N±0°.1×149°.7W±0°.1,h10km±8km, Error ellipse: s-maj=17.7km s-min=4.3km az=209.0*
NEIC 03 14:24:33.1±1.9,55°.9N±0°.1×149°.6W±0°.1,h10km±8km, ML3.6/28,ML3.3(AEIC),Error ellipse: s-maj=16.0km s-min=9.7km az=184.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.46**	**306**		Pn	14 25 12.6	-0.5
OHAK	**Old Harbor**	**2.46**	**306**		Sn	14 25 40.7	-2.5
OHAK	**Old Harbor**	**2.46**	**306**	IAML		14 25 36.0	
	comp=E,60nm,3.7s						
KDAK	**Kodiak Island**	**2.54**	**321**		Pn	14 25 14.3	+0.1
KDAK					Sn	14 25 43.2	-1.9
SYI	**Shuyak Island**	**3.15**	**333**		Pn	14 25 23.8	+1.1
SYI					Sn	14 25 59.6	-0.7
CNPM	**China Poot**	**3.79**	**347**		Pn	14 25 31.2	-0.2
CNPM				IAML		14 26 56.1	
	comp=E,52nm,3.0s						
CNPM	**China Poot**	**3.79**	**347**	IAML		14 26 10.2	
	comp=N,55nm,3.3s						
CNPM	**China Poot**	**3.79**	**347**		Sn	14 26 14.9	-1.2
BRSE	**Bradley Lake S**	**3.95**	**352**		Pn	14 25 33.1	-0.6
BRLK	**Bradley Lake**	**3.98**	**351**		Pn	14 25 33.9	-0.3
BRLK					Sn	14 26 18.9	-2.0
BRLK	**Bradley Lake**	**3.98**	**351**	IAML		14 27 21.3	
	comp=E,40nm,2.9s						
Q23K	**Middleton Isla**	**4.00**	**25**	Pn	Pn	14 25 34.3	+0.1
MID	**Middleton Isla**	**4.00**	**25**	Pn	Pn	14 25 34.1	-0.1
SEW	**Seward**	**4.27**	**1**	Pn	Pn	14 25 37.7	-0.3
P23K	**Montague Islan**	**4.32**	**15**		Pn	14 25 38.9	+0.2
IVE	**Iliamna Volcan**	**4.56**	**338**		Pn	14 25 41.9	-0.2
O22K	**Cooper Landing**	**4.65**	**359**	Pn	Pn	14 25 41.8	-1.3
O22K				IAML		14 27 48.8	
	comp=N,58nm,1.9s						
O22K				IAML		14 28 15.2	
	comp=E,60nm,1.6s						
SLKM	**Skilak Lake**	**4.68**	**356**		Pn	14 25 43.7	-0.1
HIN	**Hinchinbrook I**	**4.85**	**19**		Pn	14 25 46.0	0.0
HIN	**Hinchinbrook I**	**4.85**	**19**	IAML		14 28 15.7	
	comp=E,83nm,2.3s						
HIN				IAML		14 28 47.1	
	comp=N,71nm,2.6s						
RSO	**Redoubt South**	**4.92**	**342**	Pn	Pn	14 25 47.4	+0.3
KAIM	**Kayak Island**	**4.94**	**32**		Pn	14 25 47.8	+0.6
O18K	**Koktuh Hills**	**5.01**	**326**	Pn	Pn	14 25 49.1	+0.9
O18K				IAML		14 28 23.0	
	comp=N,27nm,3.0s						
O18K				IAML		14 28 28.9	
	comp=E,32nm,3.8s						
EYAK	**Cordova Ski Ar**	**5.13**	**22**		Pn	14 25 50.3	+0.4
RAGM	**Ragged Mountai**	**5.25**	**28**	Pn	Pn	14 25 51.9	+0.4
RAGM				IAML		14 27 50.3	
	comp=N,87nm,2.6s						
RAGM				IAML		14 28 51.0	
	comp=E,76nm,2.7s						
SUCK	**Suckling Hills**	**5.25**	**34**		Pn	14 25 51.8	+0.3
SUCK	**Suckling Hills**	**5.25**	**34**	IAML		14 28 38.1	
	comp=E,66nm,2.3s						
RC01	**Rabbit Creek A**	**5.26**	**359**		Pn	14 25 51.4	-0.2
RC01	**Rabbit Creek A**	**5.26**	**359**	IAML		14 26 43.9	
	comp=N,18nm,3.2s						
RC01				IAML		14 28 11.5	
	comp=E,21nm,3.1s						
NICHA	**Nichawak Mount**	**5.32**	**32**		Pn	14 25 53.1	+0.6
GOAT	**Goat Mountain**	**5.40**	**27**		Pn	14 25 54.4	+0.8
BGLC	**Bering Glacier**	**5.45**	**36**		Pn	14 25 54.9	+0.8
BERG	**Berg Lake**	**5.53**	**32**	Pn	Pn	14 25 55.7	+0.4
SNH	**Sunshine Point**	**5.64**	**37**	Pn	Pn	14 25 57.4	+0.5
KHIT	**Khitrov Hills**	**5.71**	**34**		Pn	14 25 57.9	+0.1
PMR	**Palmer**	**5.77**	**2**	Pn	Pn	14 25 58.2	-0.3
BMRM	**Bremner River**	**5.77**	**25**		Pn	14 25 59.2	+0.5
WAX	**Waxell Ridge**	**5.84**	**35**	Pn	Pn	14 25 58.8	-0.8
N18K	**Kilae Creek**	**5.87**	**328**	Pn	Pn	14 25 58.8	-1.1
MESA	**MESA**	**5.95**	**40**		Pn	14 26 02.2	+0.9
GHO	**Glory Hole Cre**	**5.95**	**3**		Pn	14 26 01.9	+0.7
KLU	**Klutina**	**5.98**	**17**		Pn	14 26 02.3	+0.7
CRQM	**Cirque**	**5.99**	**32**	Pn	Pn	14 26 02.1	+0.4
SML	**Sawmill**	**6.01**	**6**	Pn	Pn	14 26 01.9	-0.1
TGL	**Tana Glacier**	**6.08**	**33**		Pn	14 26 03.3	+0.4
SCM	**Sheep Creek Mo**	**6.12**	**10**	Pn	Pn	14 26 02.5	-0.9
ISLE	**Juniper Island**	**6.12**	**36**		Pn	14 26 04.2	+0.7
VRDI	**Verde Repeater**	**6.28**	**28**	Pn	Pn	14 26 06.4	+0.6
N25K	**Chitina, Valde**	**6.33**	**22**		Pn	14 26 07.0	+0.6
KIAG	**Kiagna River**	**6.36**	**34**		Pn	14 26 07.2	+0.4
GLB	**Gilahina Butte**	**6.37**	**26**	Pn	Pn	14 26 06.5	-0.4
GRNC	**Granite Creek**	**6.41**	**37**	Pn	Pn	14 26 06.6	-1.0
TABL	**Table Mountain**	**6.42**	**41**	Pn	Pn	14 26 08.6	+0.9
M24K	**Tolsona, Glenn**	**6.52**	**14**	Pn	Pn	14 26 10.1	+1.1
MCARA	**McCarthy VSAT**	**6.53**	**29**		Pn	14 26 10.1	+1.1
PCA	**Pinnacle**	**6.55**	**46**		Pn	14 26 10.0	+0.6
PNL	**Peninsula**	**6.67**	**51**		Pn	14 26 11.6	+0.6
BARN	**Barnard Glacie**	**6.68**	**35**	Pn	Pn	14 26 11.7	+0.3
CTGM	**Chitina Glacie**	**6.72**	**37**	Pn	Pn	14 26 12.3	+0.5
LOGN	**Logan Glacier**	**6.74**	**39**		Pn	14 26 12.7	+0.7
WAT6	**Susitna Watana**	**6.82**	**7**		Pn	14 26 14.0	+0.8
L19K	**White Mountain**	**6.90**	**339**	Pn	Pn	14 26 13.4	-0.7
M17K	**Holitna River**	**6.90**	**327**	Pn	Pn	14 26 15.0	+0.9
N15K	**Kwethluk River**	**7.05**	**312**	Pn	Pn	14 26 18.0	+1.8
DHY	**Denali Highway**	**7.34**	**8**	Pn	Pn	14 26 22.3	+2.1
O29M	**Mount Kennedy**	**7.36**	**48**	Pn	Pn	14 26 19.1	-1.3
P29M	**Windy Craggy**	**7.39**	**54**	Pn	Pn	14 26 19.6	-1.3
RND	**Reindeer**	**7.59**	**3**	Pn	Pn	14 26 23.9	+0.3
S31K	**Pelican**	**7.62**	**68**	Pn	Pn	14 26 22.8	-1.2
M27K	**Edge Creek, AK**	**7.64**	**28**	Pn	Pn	14 26 23.7	-0.7
CAST	**Castle Rocks**	**7.70**	**352**	Pn	Pn	14 26 23.8	-1.3
KTH	**Kantishna Hill**	**7.76**	**356**	Pn	Pn	14 26 23.9	-2.0
L16K	**Owhat River**	**7.79**	**323**	Pn	Pn	14 26 26.6	+0.3
SIT	**Sitka**	**8.01**	**75**	Pn	Pn	14 26 29.2	0.0
M29M	**Somme Creek**	**8.74**	**36**	Pn	Pn	14 26 40.2	+0.8
N31M	**Braeburn, Yuko**	**9.14**	**46**	Pn	Pn	14 26 43.6	-1.3
J26L	**Joseph Creek**	**9.18**	**17**	Pn	Pn	14 26 45.0	-0.4
L29M	**L29M**	**9.32**	**34**	Pn	Pn	14 26 47.0	-0.3
EGAK	**Eagle**	**9.88**	**22**	Pn	Pn	14 26 55.1	+0.2
H21K	**Melozitna Rive**	**9.96**	**352**	Pn	Pn	14 26 56.2	+0.1
K29M	**Barlow Dome**	**10.04**	**32**	Pn	Pn	14 26 56.3	-1.0

*NEIC **03** 14:31:38.0±1.8,56°.45N±0°.09×149°.49W±0°.03,h22km±9km, ML3.7/50,ML3.3(AEIC),Error ellipse: s-maj=14.0km s-min=1.5km az=187.0*
*AEIC **03** 14:31:40.3±1.9,56°.45N±0°.1×149°.5W±0°.1,h1km±8km, Error ellipse: s-maj=14.5km s-min=8.0km az=162.0*
ISC 03 14:31:35.2±1.9,56°.4N±0°.1×149°.52W±0°.06,h10km,n105,
σ1≧21/107,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.18**	**311**		**Pn**	**14 32 12.4**	**+0.9**
KDAK					**Sn**	**14 32 38.0**	**-0.5**
OHAK	**Old Harbor**	**2.23**	**294**		**Pn**	**14 32 13.4**	**+1.2**
OHAK					**Sn**	**14 32 38.7**	**-1.1**
OHAK	**Old Harbor**	**2.23**	**294**	P	**Pn**	**14 32 13.4**	**+1.2**
	baz=109						
OHAK				S	**Sn**	**14 32 38.7**	**-1.1**
	baz=109						
SII	**Sitkinak Islan**	**2.59**	**276**	Pn	**Pn**	**14 32 17.5**	**+0.3**
SII				IAML		14 33 04.2	
	comp=N,171nm,1.0s						
SYI	**Shuyak Island**	**2.71**	**326**		**Pn**	**14 32 19.8**	**+1.0**
SYI					**Sn**	**14 32 49.7**	**-2.0**
Q20K	**Shuyak Island**	**2.72**	**326**	P	**Pn**	**14 32 19.8

	comp=N,41nm,0.5s						
KNK				IAML		14 33 30.6	
	comp=E,55nm,0.5s						
N19K	**Bonanza Creek**	**5.14**	**332**		**Pn**	**14 32 54.3**	**+2.0**
N19K				IAML		14 33 40.6	
	comp=E,31nm,0.9s						
SNH	**Sunshine Point**	**5.19**	**40**	Pn	**Pn**	**14 32 53.6**	**+0.8**
SNH				IAML		14 34 04.8	
	comp=E,25nm,0.9s						
SNH				IAML		14 34 19.6	
	comp=N,31nm,1.2s						
WAX	**Waxell Ridge**	**5.37**	**38**	Pn	**Pn**	**14 32 55.7**	**+0.3**
WAX				IAML		14 33 58.1	
	comp=E,51nm,0.5s						
N18K	**Kilae Creek**	**5.45**	**325**	Pn	**Pn**	**14 32 56.8**	**+0.4**
KLU	**Klutina**	**5.45**	**18**	Pn	**Pn**	**14 32 57.4**	**+0.9**
KLU				IAML		14 33 59.9	
	comp=N,25nm,0.6s						
KLU				IAML		14 34 00.3	
	comp=E,31nm,0.6s						
M23K	**Glacier View**	**5.50**	**9**		**Pn**	**14 32 58.3**	**+1.2**
M23K	**Glacier View** baz=190	**5.50**	**9**	P	**Pn**	**14 32 58.3**	**+1.2**
CRQM	**Cirque**	**5.51**	**35**		**Pn**	**14 32 57.7**	**+0.3**
O16K	**Kokwok River B**	**5.58**	**309**	Pn	**Pn**	**14 32 59.5**	**+1.4**
TGL	**Tana Glacier**	**5.61**	**36**		**Pn**	**14 32 58.9**	**+0.3**
ISLE	**Juniper Island**	**5.66**	**39**		**Pn**	**14 32 59.8**	**+0.4**
BAGL	**Bagley Icefiel**	**5.67**	**40**		**Pn**	**14 32 59.8**	**+0.4**
N17K	**Nushagak Hills**	**5.78**	**319**	Pn	**Pn**	**14 33 01.2**	**+0.3**
VRDI	**Verde Repeater**	**5.79**	**30**	Pn	**Pn**	**14 33 01.8**	**+0.5**
N25K	**Chitina, Valde**	**5.82**	**24**	Pn	**Pn**	**14 33 03.0**	**+1.4**
N25K	**Chitina, Valde** baz=208	**5.82**	**24**	P	**Pn**	**14 33 02.2**	**+0.6**
GLB	**Gilahina Butte**	**5.87**	**28**	Pn	**Pn**	**14 33 03.3**	**+1.1**
KIAG	**Kiagna River**	**5.89**	**36**		**Pn**	**14 33 03.4**	**+0.9**
TABL	**Table Mountain**	**5.99**	**44**		**Pn**	**14 33 03.6**	**-0.4**
MCARA	**McCarthy VSAT**	**6.04**	**31**		**Pn**	**14 33 05.7**	**+1.3**
MCARA	**McCarthy VSAT** baz=217	**6.04**	**31**	P	**Pn**	**14 33 05.7**	**+1.3**
PTPK	**Patty Peak**	**6.05**	**34**		**Pn**	**14 33 05.0**	**+0.2**
M19K	**Big River Lodg**	**6.07**	**338**	Pn	**Pn**	**14 33 07.2**	**+2.2**
PCA	**Pinnacle**	**6.14**	**49**		**Pn**	**14 33 06.7**	**+0.7**
PINM	**Pinnacle** baz=237	**6.14**	**49**	P	**Pn**	**14 33 06.7**	**+0.7**
BARN	**Barnard Glacie**	**6.22**	**38**		**Pn**	**14 33 08.1**	**+0.9**
CTGM	**Chitina Glacie**	**6.27**	**40**	Pn	**Pn**	**14 33 07.8**	**0.0**
LOGN	**Logan Glacier**	**6.29**	**41**		**Pn**	**14 33 09.2**	**+1.1**
HARP	**HAARP**	**6.43**	**18**		**Pn**	**14 33 11.4**	**+1.5**
HARP	**HAARP** baz=202	**6.43**	**18**	P	**Pn**	**14 33 11.4**	**+1.5**
N15K	**Kwethluk River**	**6.74**	**309**	Pn	**Pn**	**14 33 16.9**	**+2.8**
M26K	**Nabesna, AK**	**6.89**	**26**	Pn	**Pn**	**14 33 18.5**	**+2.4**
O29M	**Mount Kennedy**	**6.97**	**51**		**Pn**	**14 33 18.4**	**+1.0**
P29M	**Windy Craggy**	**7.05**	**58**		**Pn**	**14 33 18.7**	**+0.3**
M27K	**Edge Creek, AK**	**7.14**	**30**	Pn	**Pn**	**14 33 21.8**	**+2.0**
YUK6	**Outpost Mounta** baz=237	**7.39**	**47**	P	**Pn**	**14 33 24.8**	**+1.6**
S31K	**Pelican**	**7.39**	**72**		**Pn**	**14 33 22.3**	**-0.7**
L16K	**Owhat River**	**7.40**	**320**	Pn	**Pn**	**14 33 24.3**	**+1.2**
YUK4	**Talbot Arm** baz=233	**7.51**	**44**	P	**Pn**	**14 33 28.9**	**+4.1**
PLBC	**Pleasant Camp** baz=252	**7.65**	**61**	P	**Pn**	**14 33 27.6**	**+1.1**
SCRK	**Sand Creek**	**8.10**	**18**	Pn	**Pn**	**14 33 32.4**	**-0.4**
S32K	**Killisnoo**	**8.25**	**76**	Pn	**Pn**	**14 33 34.3**	**-0.5**
O30N	**Mendenhall**	**8.27**	**52**	Pn	**Pn**	**14 33 36.4**	**+1.2**
M29M	**Somme Creek**	**8.28**	**38**	Pn	**Pn**	**14 33 37.1**	**+1.8**
R32K	**Eaglecrest**	**8.34**	**71**	Pn	**Pn**	**14 33 36.8**	**+0.8**
N31M	**Braeburn, Yuko**	**8.74**	**49**	Pn	**Pn**	**14 33 43.5**	**+1.9**
WHY	**Whitehorse**	**8.77**	**55**	Pn	**Pn**	**14 33 43.5**	**+1.5**
I23K	**Minto, Yukon-K**	**8.79**	**0**	Pn	**Pn**	**14 33 41.2**	**-0.9**
L29M	**L29M**	**8.85**	**36**	Pn	**Pn**	**14 33 44.7**	**+1.7**
M30M	**Minto, Yukon**	**8.96**	**41**	Pn	**Pn**	**14 33 45.9**	**+1.3**
P32M	**Atlin**	**8.98**	**63**	Pn	**Pn**	**14 33 44.6**	**-0.3**
P33M	**Teslin, Yukon**	**9.58**	**60**	Pn	**Pn**	**14 33 54.1**	**+0.9**
Q32M	**Nakina River**	**9.59**	**67**	Pn	**Pn**	**14 33 55.0**	**+1.6**
R33M	**Jennings River**	**10.32**	**65**	Pn	**Pn**	**14 34 02.5**	**-0.8**
DLBC	**Dease Lake**	**10.71**	**71**	Pn	**Pn**	**14 34 10.0**	**+1.5**

*SCB **03** 14:41:09.0±1.4,20°.82S×67°.29W,h188km±13km,ML3.6/3, MW3.1,Error ellipse: s-maj=4.8km s-min=3.6km az=0.0*
*GUC **03** 14:41:10.0±0.8,20°.84S×67°.43W,h206km±5km,ML3.5*
ISC 03 14:41:07.9±2.0,**20°.83S**±0°.04×**67°.32W**±0°.05,
h202km±16km,**n40,**σ1°.**18/60,1C,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.63**	**105**	Pg	**Pn**	**14 41 43.9**	**+0.4**
MOCB				Sg	**Sn**	**14 42 09.6**	**-1.4**
MOCB				IAML		14 42 10.5	
	393nm,0.4s						
PB08	**IPOC Station P**	**1.85**	**291**	*e*P	**Pn**	**14 41 46.5**	**+1.0**
PB08				*e*S	**Sn**	**14 42 14.8**	**+0.2**
PB08				IAML		14 42 18.3	
	comp=E,92nm,0.1s						
PB08	**IPOC Station P**	**1.85**	**291**	Pg	**Pn**	**14 41 46.7**	**+1.2**
PB09	**IPOC Station P**	**2.03**	**241**	*e*P	**Pn**	**14 41 48.6**	**+1.5**
PB09				*e*S	**Sn**	**14 42 17.5**	**-0.1**
PB09				IAML		14 42 22.6	
	comp=E,62nm,0.2s						
PB09	**IPOC Station P**	**2.03**	**241**	Pg	**Pn**	**14 41 48.7**	**+1.6**
PB01	**IPOC Station P**	**2.04**	**264**	*e*P	**Pn**	**14 41 47.3**	**+0.3**
PB01				*e*S	**Sn**	**14 42 16.5**	**-0.9**
PB01				IAML		14 42 19.1	
	comp=N,112nm,0.2s						
PB01	**IPOC Station P**	**2.04**	**264**	Pg	**Pn**	**14 41 47.8**	**+0.8**
GO01	**Chusmiza**	**2.10**	**303**	*e*P	**Pn**	**14 41 48.9**	**+0.7**
GO01				*e*S	**Sn**	**14 42 19.5**	**+0.1**
GO01				IAML		14 42 28.2	
	comp=N,192nm,0.1s						
GO01	**Chusmiza**	**2.10**	**303**	Pg	**Pn**	**14 41 49.1**	**+0.9**
LVC	**Limon Verde**	**2.31**	**219**	*e*P	**Pn**	**14 41 51.2**	**+1.0**
LVC				*e*S	**Sn**	**14 42 23.5**	**+0.3**
LVC				IAML		14 42 25.4	
	comp=N,144nm,0.2s						
LVC	**Limon Verde**	**2.31**	**219**	Pg	**Pn**	**14 41 50.9**	**+0.7**
SOEO	**Opoqueri**	**2.31**	**347**	Pg	**Pn**	**14 41 52.0**	**+1.5**
PB11	**IPOC Station P**	**2.43**	**295**	*e*P	**Pn**	**14 41 51.7**	**+0.3**
PB11				*e*S	**Sn**	**14 42 24.4**	**-0.8**
PB11				IAML		14 42 27.5	
	comp=N,218nm,0.2s						
PB11	**IPOC Station P**	**2.43**	**295**	Pg	**Pn**	**14 41 51.9**	**+0.5**
PB02	**IPOC Station P**	**2.45**	**258**	*e*P	**Pn**	**14 41 52.5**	**+0.9**
PB02				*e*S	**Sn**	**14 42 24.3**	**-1.2**
PB02				IAML		14 42 25.4	
	comp=N,351nm,0.3s						
PB02	**IPOC Station P**	**2.45**	**258**	Pg	**Pn**	**14 41 52.9**	**+1.4**
PB02				Sg	**Sn**	**14 42 25.2**	**-0.3**
PB02				IAML		14 42 25.6	
	comp=N,284nm,0.3s						
HMBC	**Humberstone**	**2.47**	**282**	*e*P	**Pn**	**14 41 51.9**	**+0.2**
HMBC				*e*S	**Sn**	**14 42 24.3**	**-1.5**
HMBC				IAML		14 42 28.1	
	comp=N,164nm,0.6s						
HMBC	**Humberstone**	**2.47**	**282**	Pg	**Pn**	**14 41 51.9**	**+0.2**
HMBC				Sg	**Sn**	**14 42 25.3**	**-0.5**
HMBC				IAML		14 42 27.7	
	comp=N,112nm,0.5s						
PB07	**IPOC Station P**	**2.55**	**249**	*i* P	**Pn**	**14 41 53.2**	**+0.5**
PB07				*i* S	**Sn**	**14 42 26.5**	**-1.2**
PB07				IAML		14 42 27.4	
	comp=N,209nm,0.3s						
PB07	**IPOC Station P**	**2.55**	**249**	Pg	**Pn**	**14 41 53.4**	**+0.7**
PATCX	**Punta Patache**	**2.65**	**270**	*e*P	**Pn**	**14 41 54.4**	**+0.8**
PATCX				*e*S	**Sn**	**14 42 28.1**	**-1.3**
PATCX				IAML		14 42 30.3	
	comp=N,102nm,0.2s						
TA01	**Diego Aracena**	**2.69**	**275**	*e*P	**Pn**	**14 41 54.1**	**0.0**
TA01				*e*S	**Sn**	**14 42 28.1**	**-1.9**
TA01				IAML		14 42 29.5	
	comp=E,114nm,0.3s						
TA02	**Huaiquique**	**2.69**	**281**	*e*S	**Sn**	**14 42 27.9**	**-2.1**
PB06	**IPOC Station P**	**2.81**	**228**	*e*P	**Pn**	**14 41 56.4**	**+0.8**
PB06				*e*S	**Sn**	**14 42 32.3**	**-0.5**
PB06				IAML		14 42 34.3	
	comp=E,123nm,0.1s						
PB06	**IPOC Station P**	**2.81**	**228**	Pg	**Pn**	**14 41 56.9**	**+1.3**
PB04	**IPOC Station P**	**3.03**	**240**	*e*P	**Pn**	**14 41 58.9**	**+0.8**
PB04				*e*S	**Sn**	**14 42 35.6**	**-1.8**
PB04				IAML		14 42 40.8	
	comp=E,107nm,0.2s						
PB04	**IPOC Station P**	**3.03**	**240**	Pg	**Pn**	**14 41 59.7**	**+1.5**
SOET	**ToroToro**	**3.05**	**28**	Pg	**Pn**	**14 41 58.5**	**-0.2**
PB15	**IPOC Station P**	**3.10**	**220**	*i* P	**Pn**	**14 42 00.2**	**+1.2**
PB15				*e*S	**Sn**	**14 42 38.3**	**-0.8**
PB15	**IPOC Station P**	**3.10**	**220**	Pg	**Pn**	**14 42 00.8**	**+1.8**
PB16	**IPOC Station P**	**3.22**	**320**	*e*P	**Pn**	**14 42 02.2**	**+1.3**
PB16				*e*S	**Sn**	**14 42 43.5**	**+1.2**
PB16	**IPOC Station P**	**3.22**	**320**	Pg	**Pn**	**14 42 02.5**	**+1.6**
AOEA	**Aiquile**	**3.29**	**37**	Pg	**Pn**	**14 42 01.3**	**-0.1**
PB05	**IPOC Station P**	**3.35**	**232**	*e*P	**Pn**	**14 42 02.7**	**+0.7**
PB05				*e*S	**Sn**	**14 42 42.4**	**-1.9**
PB05	**IPOC Station P**	**3.35**	**232**	Pg	**Pn**	**14 42 02.6**	**+0.7**
PB12	**IPOC Station P**	**3.59**	**307**	*e*P	**Pn**	**14 42 04.1**	**-0.7**
PB12				*e*S	**Sn**	**14 42 46.5**	**-2.9**
SOEJ	**Jacaque**	**3.92**	**348**	Pg	**Pn**	**14 42 11.0**	**+1.6**
BBOE	**La Paz, Chanca**	**4.04**	**351**	Pg	**Pn**	**14 42 12.6**	**+1.7**
BBOD	**La Paz, Gloria**	**4.34**	**344**	Pg	**Pn**	**14 42 15.8**	**+1.2**
LPAZ	**La Paz**	**4.58**	**350**	Pg	**Pn**	**14 42 18.6**	**+0.9**

*IDC **03** 14:49:07.8±1.9,7°.41S×129°.35E,h0km,mb3.8/1, mbtmp3.6/3,ML3.7/2,Error ellipse: s-maj=105.4km s-min=31.1km az=67.0*
ISC 03 14:49:09.7±1.7,**7°.6S**±0°.3×**129°.1E**±0°.6,**h10**km,**n10,**
σ2**5°.04/6,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.23**	**100**	P	**Pn**	14 49 36.9	-10
MTN	**Mantun Dam**	**5.60**	**159**	P	Pb	14 50 41.0	-6.5
KDU	**Kakadu**	**6.07**	**147**	P	**Pn**	**14 50 39.1**	**-0.4**
KNRA	**Kununurra**	**8.05**	**182**	P	Pb	14 51 24.2	-5.1
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=338,slow=13,SNR=22	**13.30**	**158**	Pn	**Pn**	**14 52 17.1**	**-1.6**
WRA	baz=345,slow=23,SNR=1.2 1.2nm,0.6s			Sn	Sn	14 54 36.9	-10
ASAR	**Alice Springs** 0.3nm,0.3s,baz=353,slow=8.4,SNR=28 0.5nm,0.6s	**16.64**	**164**	Pn	**P**	**14 53 05.7**	**0.0**
AS01	**Alice Springs**	**16.66**	**164**	P	**P**	**14 53 06.3**	**+0.5**
WRKA	**Warakurna**	**17.37**	**182**	P	P	14 53 23.1	+9.4
OOD	**Oodnadatta**	**21.05**	**164**	P	**P**	**14 53 57.0**	**+3.1**
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=114,slow=7.5,SNR=11 0.8nm,0.7s	**68.22**	**327**	P	**P**	**15 00 10.3**	**-0.2**

*IDC **03** 14:54:03.0±2.5,2°.07N×96°.20E,h0km,mb3.7/6, mbtmp3.6/7,Error ellipse: s-maj=101.1km s-min=22.7km az=58.0*
*DJA **03** 14:54:06.7±0.6,2°.N±3°.×9°.6E±°,h12km±5km,M3.8/6, mb4.0/2,MLv3.7/6*
ISC 03 14:54:07.4±1.1,**2°.12N**±0°.06×**96°.3E**±0°.1,**h28**km,**n24,**
σ0**8°.81/16,mb3.7/6,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.29**	**9**	P	**Pb**	**14 54 13.9**	**-0.7**
SNSI				S	**Sb**	**14 54 17.7**	**-1.7**
GSI	**Gunungsitoli**	**1.53**	**122**	P	**Pn**	**14 54 33.3**	**+0.4**
GSI				S	**Sn**	**14 54 52.7**	**+0.9**
KCSI	**Kotacane, Aceh**	**2.04**	**47**	P	**Pn**	**14 54 40.1**	**+0.2**
KCSI				S	**Sn**	**14 55 04.7**	**+0.2**
PBSI	**Pulau Batu**	**2.94**	**137**	P	**Pn**	**14 54 52.0**	**-0.4**
PBSI				S	**Sn**	**14 55 27.6**	**+0.8**
LHMI	**Lhok Sumawe**	**3.16**	**12**	P	**Pn**	**14 54 57.0**	**+1.7**
CMAR	**Chiang Mai Arr** 0.8nm,0.7s,baz=199,slow=12,SNR=7.8	**16.44**	**9**	Pn	**Pn**	**14 57 56.5**	**+0.2**
H08S2	**Diego Garcia H** baz=68,slow=76,SNR=44	**25.64**	**248**	T	T	15 26 10.2	
H08S3	**Diego Garcia H** baz=68,slow=76,SNR=53	**25.64**	**248**	T	T	15 26 05.3	
H08S1	**Diego Carcia H** baz=68,slow=76,SNR=41	**25.66**	**248**	T	T	15 26 06.8	
H01W3	**Cape Leeuwin H** baz=333,slow=76,SNR=7.3	**40.44**	**157**	T	T	15 44 46.8	
H01W2	**Cape Leeuwin H** baz=333,slow=76,SNR=7.8	**40.45**	**157**	T	T	15 44 49.1	
H01W1	**Cape Leeuwin H** baz=333,slow=76,SNR=6.8	**40.46**	**157**	T	T	15 44 46.0	
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=301,slow=9.4,SNR=1.7 0.4nm,1.0s	**43.30**	**122**	P	**P**	**15 02 07.6**	**+0.4**
ASAR	**Alice Springs** 0.3nm,0.9s,baz=298,slow=8.0,SNR=2.0 0.3nm,0.9s	**44.68**	**127**	P	**P**	**15 02 17.9**	**-0.3**
MKAR	**Makanchi Array** 1.3nm,0.7s,baz=161,slow=7.7,SNR=16 1.3nm,0.7s	**46.14**	**347**	P	**P**	**15 02 29.7**	**+0.3**
SONM	**Songino Array** 0.4nm,0.6s,baz=188,slow=7.7,SNR=2.3 0.4nm,0.6s	**46.37**	**9**	P	**P**	**15 02 31.1**	**-0.2**
ZALV	**Zalesovo Beam** 2.3nm,0.5s,baz=177,slow=6.6,SNR=16 2.3nm,0.5s	**52.51**	**351**	P	**P**	**15 03 18.1**	**+0.2**
BVAR	**Borovoye Array** 0.7nm,0.6s,baz=143,slow=8.0,SNR=5.4 0.7nm,0.6s	**55.09**	**341**	P	**P**	**15 03 36.6**	**-0.2**
H04N2	**CROZET ISLANDS** baz=52,slow=75,SNR=211	**62.02**	**213**	T	T	16 11 39.9	
H04N1	**CROZET ISLANDS** baz=52,slow=75,SNR=203	**62.03**	**213**	T	T	16 11 40.5	
H04N3	**CROZET ISLANDS** baz=52,slow=75,SNR=179	**62.04**	**213**	T	T	16 11 39.1	
H04S1	**CROZET ISLANDS** baz=52,slow=75,SNR=15	**62.38**	**213**	T	T	16 12 02.8	
H04S3	**CROZET ISLANDS** baz=52,slow=75,SNR=18	**62.39**	**213**	T	T	16 12 04.1	
H04S2	**CROZET ISLANDS** baz=52,slow=75,SNR=12	**62.39**	**213**	T	T	16 12 03.9	

*IDC **03** 14:59:55.9±1.5,26°.35N×129°.46E,h0km,mb3.5/3, mbtmp3.6/4,ML3.3/1,Error ellipse: s-maj=39.8km s-min=18.3km az=50.0*
*JMA **03** 14:59:57.8±0.1,26°.3N±0°.7×129°.6E±0°.5,h44km,MV3.2/17, NEAR MINAMI-DAITOJIMA IS*
ISC 03 14:59:56.1±0.8,**26°.44N**±0°.05×**129°.66E**±0°.03,**h15**km,**n19,**
σ1°**.33/33,mb3.5/3,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.22**	**298**	P	**Pg**	**15 00 19.6**	**-0.1**
JYRO				*e*S	**Sg**	**15 00 35.0**	**-0.6**
JOW	**Kunigami**	**1.30**	**288**	P	**Pb**	**15 00 20.5**	**+0.4**
JOW				S	**Sb**	**15 00 36.3**	**-0.3**
JOW	**Kunigami** 62nm,0.3s,baz=130,slow=14,SNR=32	**1.30**	**288**	Pn	**Pb**	**15 00 20.6**	**+0.4**
JOW	153nm,0.3s,baz=131,slow=20,SNR=30			Sn	**Sb**	**15 00 35.5**	**-1.1**
JOKE	**Okinoerabujima**	**1.33**	**314**	*e*P	**Pg**	**15 00 21.9**	**+0.2**
JOKE				*e*S	**Sg**	**15 00 38.5**	**-0.6**
JNTH	**Nagotoyohara**	**1.47**	**273**	P	**Pn**	**15 00 22.2**	**+0.2**
JNTH				*e*S	**Sn**	**15 00 39.2**	**-1.7**
JTK	**Tokunoshima**	**1.48**	**335**	P	**Pg**	**15 00 24.4**	**-0.1**
JMZ	**Minamidaito 2**	**1.54**	**113**	P	**Pn**	**15 00 23.1**	**+0.1**
JMZ				S	**Sn**	**15 00 40.3**	**-2.4**
JKDJ	**Kitadaitoujima**	**1.55**	**108**	*e*P	**Pn**	**15 00 23.7**	**+0.5**
JKDJ				S	**Sn**	**15 00 42.0**	**-1.1**
JIH	**Iheya**	**1.62**	**292**	P	**Pb**	**15 00 25.4**	**-0.3**
JIH				S	**Sn**	**15 00 44.4**	**-0.3**
JJT3	**Tamagusuku3**	**1.71**	**260**	P	**Pn**	**15 00 25.7**	**+0.4**
JJT3				*e*S	**Sn**	**15 00 45.9**	**-1.0**
JAMN	**Amaminishikomi**	**1.84**	**347**	*e*P	**Pb**	**15 00 29.4**	**-0.1**
JAMN				*e*S	**Sg**	**15 00 53.0**	**-2.4**
JZK	**Kikaishima**	**1.88**	**8**	*e*P	**Pg**	**15 00 31.4**	**-0.8**
JZK				*e*S	**Sg**	**15 00 55.5**	**-1.3**
JAM	**Amami Oshima**	**1.96**	**359**	P	**Pb**	**15 00 31.1**	**-0.4**
JAGN	**Aguni-jima**	**2.17**	**274**	P	**Pn**	**15 00 32.9**	**+1.2**
JAGN				S	**Sn**	**15 00 57.4**	**-0.8**
JKE	**Kume jima 2**	**2.58**	**268**	P	**Pn**	**15 00 37.3**	**0.0**
JKE				*e*S	**Sn**	**15 01 05.4**	**-2.9**
JNU	**Nakatsue** 0.5nm,0.3s,baz=306,slow=5.3,SNR=5.2	**6.74**	**9**	Pn	**Pn**	**15 01 38.1**	**+3.6**
JNU	baz=200,slow=16,SNR=1.8 18nm,1.1s			Sn	**Sn**	**15 02 49.5**	**-1.5**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=102,slow=6.6,SNR=3.7 0.3nm,0.7s	**42.35**	**311**	P	**P**	**15 07 50.1**	**+0.6**
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=354,slow=8.6,SNR=5.4 0.7nm,0.6s	**46.33**	**174**	P	**P**	**15 08 22.7**	**+1.1**
ASAR	**Alice Springs**	**49.99**	**175**	P	**P**	**15 08 51.6**	**+1.8**
	0.4nm,0.8s,baz=7.9,slow=13,SNR=9.3 0.4nm,0.8s						

TAP 03 15:01:26.2,23°.58N×120°.72E,h14km,ML1.4,2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	**Tsauling** baz=298	**0.05**	**298**	⇓*i* P	Pg	15 01 29.3	+0.3
ALS	**Alishan** baz=129	**0.10**	**130**	⇓*i* P	Pg	15 01 30.4	+0.7
ALS	baz=129			*i* S	Sg	15 01 33.2	+1.2
WHYT	**Xinyi Township** baz=51	**0.17**	**45**	*i* P	Pb	15 01 30.9	-0.2
WCKO	**Fanlu** baz=212	**0.17**	**219**	P	Pb	15 01 30.9	-0.3
WCKO	baz=212			*i* S	Sb	15 01 34.6	+0.1
WGK	**Gukeng** baz=308	**0.18**	**307**	*i* P	Pb	15 01 31.4	0.0
WGK	baz=308			*i* S	Sb	15 01 35.2	+0.4
WDLH	**Douliu** baz=303	**0.20**	**304**	*e*P	Pb	15 01 31.9	+0.2
WJS	**Zhushan** baz=1.0	**0.25**	**1**	*e*P	Pb	15 01 32.7	+0.3
CHN4	**Tsaushan** baz=208	**0.25**	**208**	*i* P	Pb	15 01 32.4	-0.1
TPUB	**Ta-pu** baz=193	**0.29**	**197**	P	Pb	15 01 32.8	-0.3
TPUB	baz=193			*e*S	Sb	15 01 38.1	+0.3
SSLB	**Suanglung** baz=45	**0.30**	**45**	P	Pg	15 01 32.8	+0.3
SSLB	baz=45			S	Sb	15 01 38.2	0.0
WNT	**Mingjian** baz=354	**0.30**	**353**	*e*P	Pg	15 01 32.6	0.0
WNT	baz=354			S	Sb	15 01 38.7	+0.4
WTP	**Ta-pu** baz=196	**0.34**	**197**	*i* P	Pg	15 01 33.6	+0.3
WTP	baz=196			S	Sb	15 01 39.6	+0.2
SMLT	**Sun Moon Lake** baz=29	**0.35**	**28**	P	Pb	15 01 34.1	-0.1
TYC	**Yuchr** baz=21	**0.35**	**21**	*i* P	Pb	15 01 34.2	0.0
TYC	baz=21			*i* S	Sb	15 01 40.4	+0.8
STYH	**Taoyuan** baz=166	**0.41**	**173**	*e*P	Pb	15 01 34.9	-0.3
SNST	**Tainan City** baz=211	**0.41**	**210**	*e*P	Pg	15 01 34.8	+0.4
VWDT	**VWDT** baz=65	**0.42**	**65**	*e*P	Pb	15 01 35.9	+0.5
CHN1	**Nanshi** baz=205	**0.43**	**205**	P	Pb	15 01 35.2	-0.4
ELDTW	**Lidau** baz=145	**0.47**	**145**	*e*P	Pg	15 01 35.5	-0.1
SGST	**Jiashian** baz=194	**0.51**	**195**	P	Pg	15 01 36.0	-0.3
WCS	**Beigang Elemen** baz=19	**0.51**	**20**	*e*P	Pb	15 01 36.8	-0.1
WCS	baz=19			*e*S	Sb	15 01 44.4	+0.1
WUSB	**Renai** baz=40	**0.55**	**41**	*e*P	Pg	15 01 37.3	+0.2
EHY	**Hungye** baz=97	**0.55**	**97**	*e*P	Pb	15 01 38.0	+0.3
EHY	baz=97			*e*S	Sb	15 01 46.3	+0.8
YULB	**Yu-li** baz=109	**0.56**	**109**	*e*P	Pb	15 01 37.5	-0.2
TWF1	**Yuli** baz=121	**0.57**	**113**	P	Pb	15 01 38.1	+0.1
TWF1	baz=121			*e*S	Sb	15 01 46.6	+0.6
EHD	**Haiduan** baz=134	**0.61**	**134**	*e*P	Pb	15 01 39.2	+0.5

WBNET 03 15:13:38.3,50°.27N×12°.44E,h9km,MI0.1,12C-8D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**257**	⇓P	Pg	15 13 40.0	+0.1
LBCW				S	Sg	15 13 41.2	+0.1
LBCW	**Luby**	**0.02**	**257**	⇓P	Pg	15 13 40.1	+0.1
LBCW				S	Sg	15 13 41.3	+0.2
NKC	**Novy Kostel**	**0.04**	**175**	⇑P	Pg	15 13 40.2	+0.1
NKC				S	Sg	15 13 41.4	+0.1
NKC	**Novy Kostel**	**0.04**	**175**	⇑P	Pg	15 13 40.2	+0.2
NKC				S	Sg	15 13 41.4	+0.2
STCW	**Studenec**	**0.05**	**102**	⇑P	Pg	15 13 40.2	0.0
STCW				S	Sg	15 13 41.4	-0.2
STCW	**Studenec**	**0.05**	**102**	⇑P	Pg	15 13 40.2	0.0
STCW				S	Sg	15 13 41.4	-0.1
POCW	**Potky**	**0.05**	**348**	⇑P	Pg	15 13 40.3	0.0
POCW				S	Sg	15 13 41.7	0.0
POCW	**Potky**	**0.05**	**348**	⇑P	Pg	15 13 40.4	+0.1
POCW				S	Sg	15 13 41.7	+0.1
VAC	**Vackov**	**0.06**	**230**	⇑P	Pg	15 13 40.3	0.0
VAC				S	Sg	15 13 41.5	-0.1
VAC	**Vackov**	**0.06**	**230**	⇑P	Pg	15 13 40.4	+0.1
VAC				S	Sg	15 13 41.5	-0.1
KVC	**Kvetna**	**0.08**	**144**	⇓P	Pg	15 13 40.5	0.0
KVC				S	Sg	15 13 42.0	-0.1
KRCW	**Kraslice**	**0.08**	**42**	⇑P	Pg	15 13 40.6	0.0
KRCW				S	Sg	15 13 42.1	-0.1
KRCW	**Kraslice**	**0.08**	**42**	⇑P	Pg	15 13 40.7	0.0
KRCW				S	Sg	15 13 42.2	0.0
SKC	**Skalna**	**0.11**	**208**	S	Sg	15 13 42.9	+0.1
KOCW	**Kopaniny**	**0.13**	**268**	⇓P	Pg	15 13 41.3	0.0
KOCW				S	Sg	15 13 43.3	-0.1
KOCW	**Kopaniny**	**0.13**	**268**	⇓P	Pg	15 13 41.4	0.0
KOCW				S	Sg	15 13 43.4	0.0
**T

*BJI **03** 15:29:09.7±0.0,20°.15N×99°.56E,h28km,mb4.2/27, mB4.8/12,ML4.5/5,Ms4.3/23,Ms7.4,1/23*
*IDC **03** 15:29:09.7±0.6,20°.62N×99°.52E,h0km,mb4.0/15, mbtmp4.0/16,ML4.6/1,MS3.6/23,Error ellipse: s-maj=20.2km s-min=10.8km az=82.0*
*NEIC **03** 15:29:10.6±2.2,20°.60N±0°.06×99°.53E±0°.05,h10km±1km, mb4.6/23,Error ellipse: s-maj=9.5km s-min=8.6km az=187.0*

ISC 03 15:29:10.8±0.4,**20°.50N**±0°.03×**99°.53E**±0°.04,**h10**km,**n91,** σ1§**66**/70,**mb4.5**/27,**MS3.6**/25,**1C-1D,Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRAI	**Chiangrai**	**0.84**	**109**	Pg		**Pg**	**15 29 27.8**	**+0.8**
CHTO	**Chiang Mai**	**1.77**	**198**			**Pn**	**15 29 42.7**	**+1.3**
CM31	**Chiang Mai Arr**	**2.10**	**195**			**Pn**	**15 29 47.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**2.10**	**195**	Pn		**Pn**	**15 29 46.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**2.10**	**195**	Pn		**Pn**	**15 29 47.5**	**+1.4**
	47nm,0.3s,baz=7.6,slow=13,SNR=759							
CMAR				Pg		**Pb**	**15 29 50.9**	**+1.8**
	425nm,0.3s,baz=7.4,slow=15,SNR=184							
CMAR				Lg		Lg	15 30 20.4	
	403nm,0.3s,baz=357,slow=18,SNR=3.0							
	291nm,0.5s							
MND	**Mandalay**	**3.52**	**296**	Pn		**Pn**	**15 30 03.9**	**-1.7**
SLVN	**Son La**	**4.18**	**78**	Pn		**Pn**	**15 30 14.1**	**-0.6**
TNCH	**TengChong**	**4.60**	**349**	Pn		**Pn**	**15 30 22.3**	**+1.7**
TNCH				Pg		Pb	15 30 37.2	+5.5
TNCH				Sn		**Sn**	**15 31 17.6**	**+3.4**
TNCH				smax		smax		
	comp=N,3μm,1.4s							
TNCH				smax		smax		
	comp=E,5μm,1.1s							
TNCH				LR		LR		
	comp=Z,3μm,5.7s							
KMI	**Kunming**	**5.47**	**32** ⇓	Pg		Pb	15 30 53.2	+6.6
KMI				Sg		**Sg**	**15 32 06.0**	**-0.6**
KMI				smax		smax		
	comp=N,330nm,1.3s							
KMI				smax		smax		
	comp=E,230nm,1.5s							
KMI				LR		LR		
	comp=N,3μm,6.6s							
KMI				LR		LR		
	comp=E,1μm,7.0s							
KMI				LR		LR		
	comp=Z,2μm,6.5s							
PZH	**PanZhiHua**	**6.31**	**18**	Pn		Pn	15 30 49.0	+5.0
PZH				Pg		Pb	15 31 07.1	+6.3
PZH				Sn		**Sn**	**15 31 59.5**	**+3.2**
PZH				smax		smax		
	comp=N,170nm,1.2s							
PZH				smax		smax		
	comp=E,330nm,1.5s							
SAIH	**SAIHA**	**6.40**	**289**	*e*P		**Pn**	**15 30 45.8**	**+0.5**
SAIH				*e*S		Sn	15 31 46.8	-12
SAIH				IAML			15 33 05.6	
	comp=E,147nm,0.7s							
IMP	**Imphal**	**6.72**	**311**	*e*P		**Pn**	**15 30 50.2**	**+0.7**
IMP				*ex*		x	15 32 05.5	
IMP				IAML			15 32 53.4	
	comp=E,133nm,1.3s							
IMP				IAML			15 33 10.1	
	comp=E,143nm,2.2s							
KOHI	**KOHIMA**	**7.20**	**317**	*e*P		**Pn**	**15 30 59.1**	**+2.8**
KOHI				*e*S		**Sn**	**15 32 16.7**	**-1.5**
MOKO	**MOKOCHONG**	**7.40**	**322**	*e*P		**Pn**	**15 31 00.0**	**+1.0**
MOKO				*ex*		x	15 32 33.2	
MOKO				IAML			15 33 17.4	
	comp=E,148nm,1.6s							
MOKO				IAML			15 33 20.3	
	comp=N,170nm,1.1s							
UBPT	**Khong Chiam**	**7.68**	**132**	Pn		**Pn**	**15 31 03.8**	**+1.1**
SHL	**Shillong**	**8.66**	**307**	Pn		Pn	15 31 13.8	-2.5
SHL	**Shillong**	**8.66**	**307**	*e*P		**Pn**	**15 31 15.6**	**-0.7**
QIZ	**Qiongzhong**	**9.82**	**97**	P		**Pn**	**15 31 32.6**	**+0.4**
QIZ				S		**Sn**	**15 33 21.0**	**-1.6**
QIZ				LR		LR		
	comp=N,690nm,9.3s							
QIZ				LR		LR		
	comp=N,680nm,8.4s							
QIZ				LR		LR		
	comp=N,510nm,9.3s							
LSA	**Lhasa**	**11.89**	**322**	Pn		**Pn**	**15 31 59.8**	**-1.0**
XAN	**Xi'an**	**15.85**	**30** ⇑	P		**Pn**	**15 32 54.2**	**+0.1**
XAN				pP		P	15 32 58.9	+1.0
XAN				pmax		pmax		
	comp=N,13nm,0.8s							
LZH	**Lanzhou**	**15.98**	**13**	*e*P		**Pn**	**15 32 59.5**	**+3.6**
LZH				pmax		pmax		
	comp=N,27nm,1.1s							
LZH				LR		LR		
	comp=N,490nm,7.4s							
LZH				LR		LR		
	comp=N,470nm,7.7s							
LZH				LR		LR		
	comp=N,450nm,9.4s							
GOMU	**GeErMu**	**16.18**	**346**	P		**Pn**	**15 32 58.1**	**-0.5**
GOMU				pmax		pmax		
	comp=N,6.0nm,1.3s							
GOMU				LR		LR		
	comp=N,390nm,15.0s							
GOMU				LR		LR		
	comp=N,260nm,14.9s							
GOMU				LR		LR		
	comp=N,550nm,14.6s							
KCSI	**Kotacane, Aceh**	**16.96**	**186**	P		**Pn**	**15 33 11.0**	**+2.7**
	comp=N,30nm,1.1s							
LYN	**LuoYang**	**18.07**	**37**	*e*P		**Pn**	**15 33 25.3**	**+3.3**
LYN				pmax		pmax		
	comp=N,23nm,0.5s							
LYN				pmax		pmax		
	comp=N,230nm,4.5s							
LYN				LR		LR		
	comp=N,2μm,14.6s							
LYN				LR		LR		
	comp=N,2μm,14.1s							
LYN				LR		LR		
	comp=N,1μm,9.4s							
SBSI	**Sibolga**	**18.84**	**182**	P		**P**	**15 33 33.5**	**+2.5**
	comp=N,36nm,0.5s							
GTA	**Gaotai**	**18.85**	**1**	*e*P		**Pn**	**15 33 35.4**	**+3.8**
GTA				pP		sP	15 33 39.6	+4.0
GTA				pmax		pmax		
	comp=N,5.0nm,1.3s							
GSI	**Gunungsitoli**	**19.17**	**186**			**P**	**15 33 33.3**	**-1.3**
GSI				IAmb		IAmb	15 33 46.6	
	comp=Z,11nm,0.6s							
GSI	**Gunungsitoli**	**19.17**	**186**	P		**Pn**	**15 33 38.3**	**+2.8**
	comp=Z,17nm,0.7s,comp=Z,2μm							
YULB	**Yu-li**	**20.40**	**78**	P		P	15 33 42.6	-5.3
YULB				IAmb		IAmb	15 34 00.8	
	comp=Z,31nm,1.2s							
YOJ	**Yonaguni jima**	**22.05**	**75**	P		**P**	**15 34 02.0**	**-3.8**
PALK	**Pallekele**	**22.48**	**237**	LR		LR	15 43 48.8	
	comp=Z,103nm,18.1s,baz=156,slow=39							
HHC	**Hu-ho-hao-te**	**22.73**	**24**	*e*P		**P**	**15 34 14.4**	**+1.4**
HHC				S		**S**	**15 38 20.1**	**-1.6**
HHC				pmax		pmax		
	comp=Z,14nm,0.6s							
HHC				pmax		pmax		
	comp=Z,200nm,4.5s							
HHC				LR		LR		
	comp=Z,270nm,13.3s							
HHC				LR		LR		
	comp=Z,340nm,12.6s							
HHC				LR		LR		
	comp=Z,280nm,12.5s							
BJT	**Baijiatuan**	**24.11**	**33**	P		**P**	**15 34 24.1**	**-2.6**
BJT				IAmb		IAmb	15 34 32.1	
	comp=Z,25nm,1.4s							
WMQ	**Urumqi**	**25.27**	**340**	*e*P		**P**	**15 34 38.3**	**+1.1**
NIL	**Nilore**	**26.72**	**305**	P		**P**	**15 34 48.4**	**-2.1**
BKB	**Balikpapan**	**27.52**	**140**	P		**P**	**15 34 54.5**	**-3.2**
SONM	**Songino Array**	**27.83**	**10**	P		**P**	**15 34 58.2**	**-2.2**
SONM	**Songino Array**	**27.83**	**10**	P		**P**	**15 35 00.3**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=179,slow=8.1,SNR=3.6							
SONM				LR		LR	15 47 24.7	
	comp=Z,66nm,21.8s,baz=170,slow=40							
	comp=Z,1.1nm,0.8s							
LEM	**Lembang**	**28.30**	**163**	LR		LR	15 48 12.3	
	comp=Z,42nm,19.7s,baz=250,slow=40							
TOLI2	**Tolitoli**	**28.33**	**130**	P		**P**	**15 35 04.3**	**-0.7**
TOLI2				IAmb		IAmb	15 35 08.0	
	comp=Z,12nm,1.0s							
MK31	**Makanchi Array**	**29.76**	**336**	P		**P**	**15 35 16.9**	**-0.5**
MKAR	**Makanchi Array**	**29.76**	**336**	P		**P**	**15 35 17.1**	**-0.3**
MKAR	**Makanchi Array**	**29.76**	**336**	P		**P**	**15 35 17.9**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=145,slow=9.1,SNR=22							
	comp=Z,1.3nm,0.5s							
KSRS	**Korea Array**	**29.88**	**49**	LR		LR	15 49 03.0	
	comp=Z,188nm,18.4s,baz=230,slow=40							
AAK	**Ala-Archa**	**30.49**	**322**	LR		LR	15 49 30.0	
	comp=Z,94nm,18.1s,baz=172,slow=40							
JNU	**Nakatsue**	**30.55**	**59**	LR		LR	15 47 24.8	
	comp=Z,84nm,21.1s,baz=242,slow=36							
KURBB	**Kurchatov Arra**	**34.32**	**336**	P		P	15 35 55.0	-2.4
	comp=Z,1.3nm,0.7s,baz=205,slow=11,SNR=21							
KURBB				LR		LR	15 49 41.6	
	comp=Z,103nm,19.8s,baz=175,slow=36							
	comp=Z,1.3nm,0.7s							
KURK	**Kurchatov**	**34.37**	**336**	P		**P**	**15 35 56.1**	**-1.6**
KURK				IAmb		IAmb	15 35 58.5	
	comp=Z,4.0nm,1.0s							
ZAA0	**Zalesovo Array**	**35.24**	**345**	P		**P**	**15 36 04.3**	**-0.9**
ZAA0				IAmb		IAmb	15 36 09.9	
	comp=Z,12nm,1.1s							
ZALV	**Zalesovo Beam**	**35.24**	**345**	P		**P**	**15 36 04.6**	**-0.6**
ZALV	**Zalesovo Beam**	**35.24**	**345**	P		**P**	**15 36 05.7**	**+0.4**
	comp=Z,3.6nm,0.5s,baz=151,slow=9.7,SNR=17							
	comp=Z,3.6nm,0.5s							
USRK	**Ussuriysk Ar.**	**35.83**	**41**	LR		LR	15 51 07.4	
	comp=Z,102nm,21.9s,baz=233,slow=37							
MJAR	**Matsushiro Arr**	**37.28**	**56**	P		**P**	**15 36 23.4**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=265,slow=8.9,SNR=4.5							
	comp=Z,1.8nm,0.8s							
WSAR	**Wadi Sarin**	**37.96**	**282**	LR		LR	15 54 22.5	
	comp=Z,26nm,18.5s,baz=78,slow=40							
KLR	**Kul'dur**	**38.48**	**34**	LR		LR	15 54 24.8	
	comp=Z,108nm,19.1s,baz=224,slow=40							
SOEI	**Soe**	**38.68**	**139**	P		**P**	**15 36 35.4**	**+0.3**
SOEI				IAmb		IAmb	15 36 40.1	
	comp=Z,31nm,0.8s							
BVAR	**Borovoye Array**	**39.46**	**332**	P		**P**	**15 36 41.4**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=144,slow=13,SNR=7.3							
	comp=Z,1.6nm,0.5s							
BRVK	**Borovoye**	**39.53**	**332**	P		P	15 36 38.7	-3.0
GEYT	**Alibeck**	**39.73**	**305**	P		P	15 36 41.4	-2.2
GEYT	**Alibeck**	**39.73**	**305**	P		**P**	**15 36 44.4**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=122,slow=14,SNR=4.0							
	comp=Z,3.2nm,0.7s							
GYA0B	**ALIBECK ARRAY**	**39.73**	**305**	P		P	15 36 41.1	-2.5
GYA0B				IAmb		IAmb	15 37 04.1	
	comp=Z,8.5nm,0.6s							
ABKAR	**Akbulak array**	**42.58**	**322**	P		**P**	**15 37 05.6**	**-1.2**
GUMO	**Guam**	**43.78**	**92**	LR		LR	15 53 25.2	
	comp=Z,38nm,20.6s,baz=298,slow=33							
AKTO	**Aktyubinsk**	**44.23**	**323**	LR		LR	15 56 37.4	
	comp=Z,93nm,18.0s,baz=6.5,slow=37							
YAK	**Yakutsk**	**46.44**	**19**	LR		LR	15 58 41.8	
	comp=Z,116nm,21.4s,baz=266,slow=38							
ARU	**Arti**	**46.94**	**330**	P		**P**	**15 37 40.5**	**-1.0**
ARU				IAmb		IAmb	15 37 42.5	
	comp=Z,6.4nm,1.0s							
ARU	**Arti**	**46.94**	**330**	LR		LR	15 59 21.6	
	comp=Z,74nm,18.3s,baz=109,slow=39							
WRA	**Warramunga Arr**	**52.70**	**138**	P		**P**	**15 38 27.0**	**+1.2**
	comp=Z,4.6nm,0.8s,baz=325,slow=7.9,SNR=20							
	comp=Z,4.6nm,0.8s							
WB2	**Warramunga Arr**	**52.71**	**138**	P		**P**	**15 38 27.2**	**+1.4**
WB2				IAmb		IAmb	15 38 31.2	
	comp=Z,6.4nm,0.8s							
WR0	**Warramunga Arr**	**52.84**	**137**	P		**P**	**15 38 27.1**	**+0.3**
WR0				IAmb		IAmb	15 38 32.2	
	comp=Z,7.5nm,0.8s							
TIXI	**Tiksi**	**53.91**	**11**	P		**P**	**15 38 32.8**	**-1.2**
TIXI				IAmb		IAmb	15 38 37.2	
	comp=Z,5.5nm,0.8s							
TIXI	**Tiksi**	**53.91**	**11**	LR		LR	16 04 34.8	
	comp=Z,53nm,21.6s,baz=210,slow=40							
AS31	**Alice Springs**	**55.22**	**141**	P		**P**	**15 38 44.9**	**+0.7**
ASAR	**Alice Springs**	**55.22**	**141**	P		**P**	**15 38 45.4**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=321,slow=6.8,SNR=25							
	comp=Z,4.1nm,0.8s							
SEY	**Seymchan**	**55.35**	**26**	LR		LR	16 02 25.5	
	comp=Z,67nm,19.5s,baz=86,slow=36							
MMAI	**Mount Meron Ar**	**57.82**	**297**	LR		LR	16 08 30.5	
	comp=Z,51nm,19.3s,baz=88,slow=41							
FORT	**Forrest**	**57.89**	**151**	P		**P**	**15 39 03.5**	**+0.5**
EIL	**Elat**	**58.55**	**293**	LR		LR	16 09 03.6	
	comp=Z,48nm,19.8s,baz=64,slow=41							
BRTR	**Keskin Array B**	**58.87**	**305**	P		**P**	**15 39 09.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.3,SNR=3.7							
	comp=Z,0.3nm,0.6s							
AKASG	**Malin Array Be**	**61.99**	**317**	P		**P**	**15 39 29.9**	**-1.1**
	comp=Z,0.2nm,0.2s,baz=77,slow=6.2,SNR=2.4							
	comp=Z,0.2nm,0.2s							
MLR	**Muntele Rosu**	**64.29**	**312**	LR		LR	16 13 12.4	
	comp=Z,38nm,19.4s,baz=255,slow=41							
FINES	**FINESS Array B**	**64.30**	**329**	P		**P**	**15 39 45.5**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=122,slow=5.1,SNR=1.6							
	comp=Z,1.1nm,0.8s							
LODK	**Lodwar**	**64.63**	**264**	P		**P**	**15 39 48.6**	**-0.7**
LODK				IAmb		IAmb	15 39 54.7	
	comp=Z,3.8nm,1.0s							
BURAR	**Tiucovina Array**	**64.67**	**314**	P		**P**	**15 39 47.8**	**-1.2**
KEV	**Kevo**	**64.89**	**338**	P		**P**	**15 39 48.7**	**-1.1**
STKA	**Stephens Creek**	**65.85**	**141**	P		**P**	**15 39 57.4**	**+0.8**
	comp=Z,3.9nm,0.9s,baz=330,slow=3.0,SNR=4.2							
STKA				LR		LR	16 14 18.1	
	comp=Z,81nm,18.2s,baz=12,slow=41							
	comp=Z,3.9nm,0.9s							
IDI	**Anoyia**	**66.21**	**300**	LR		LR	16 13 23.3	
	comp=Z,23nm,18.3s,baz=313,slow=40							
HNR	**Honiara**	**66.43**	**111**	LR		LR	16 09 27.3	
	comp=Z,60nm,18.3s,baz=315,slow=36							
GERES	**GERESS Array B**	**72.15**	**316**	P		**P**	**15 40 36.4**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=101,slow=5.1,SNR=2.6							
GERES				LR		LR	16 17 09.1	
	comp=Z,102nm,18.5s,baz=92,slow=40							
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**81.15**	**23**	P		**P**	**15 41 26.1**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=274,slow=4.8,SNR=5.3							
	comp=Z,0.5nm,0.8s							
SFJD	**Kangerlussuaq**	**89.97**	**349**	LR		LR	16 25 31.2	
	comp=Z,65nm,19.7s,baz=332,slow=38							

*SOME **03** 15:32:34.3,38°.38N×72°.43E,h5km*
*NNC **03** 15:32:41.5±2.7,37°.70N×71°.72E,h144km±43km,mb3.2, mpv3.9,Error ellipse: s-maj=26.5km s-min=17.7km az=20.0*

ISC 03 15:32:32.0±1.0,**37°.04N**±0°.06×**71°.5E**±0°.1,**h150**km,**n21,** σ3§**18**/31,**4C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHM	**Chimkent**	**5.46**	**345**	*e*P		Pn	15 33 57.3	+5.8
	42nm,0.1s							
CHM				*e*S		**Sn**	**15 34 57.1**	**+3.5**
	95nm,0.3s							
UCH	**Uchtor**	**5.68**	**23**	P		**Pn**	**15 33 55.6**	**+0.7**
	SNR=6.2							
THN	**Thein Dam**	**5.78**	**142**	*e*P		**Pn**	**15 33 59.9**	**+4.2**
THN				*e*S		**Sn**	**15 35 01.4**	**+0.3**
THN				IAML			15 35 06.8	
	comp=N,89nm,0.2s							
DZA	**Taraz**	**5.84**	**359**	*e*P		**Pn**	**15 33 57.8**	**+1.3**
	comp=N,64nm,0.1s							
DZA				*e*S		**Sn**	**15 34 57.9**	**-4.8**
	comp=N,61nm,0.3s							
MRKS	**Merke**	**5.85**	**13**	*e*P		**Pn**	**15 33 56.8**	**0.0**
	comp=N,15nm,0.3s							
MRKS				*e*S		**Sn**	**15 34 56.1**	**-6.9**
	comp=N,41nm,0.3s							
EKS2	**Erkin-Say**	**5.88**	**17**	P		**Pn**	**15 33 58.3**	**+1.1**
	SNR=15							
AAK	**Ala-Archa**	**6.05**	**22**	P		**Pn**	**15 34 00.5**	**+1.1**
	SNR=14							
KK31	**Karatay Array**	**6.10**	**353** ⇑	P		**Pn**	**15 34 01.5**	**+1.6**
	comp=N,1.4nm,0.2s,baz=142,slow=14,SNR=8.4							
KK31				S		**Sn**	**15 35 03.9**	**-4.9**
	comp=N,6.0nm,0.3s,baz=173,slow=17,SNR=12							
DHRM	**DHARAMSHALA**	**6.22**	**139**	*e*P		**Pn**	**15 34 05.6**	**+3.7**
DHRM				*e*S		**Sn**	**15 35 10.8**	**-1.4**
DHRM				IAML			15 35 16.6	
	comp=N,130nm,0.2s							
DHRM				IAML			15 35 16.8	
	comp=E,157nm,0.2s							
CHMS	**Chumysh**	**6.46**	**22**	P		**Pn**	**15 34 06.2**	**+1.4**
	SNR=6.2							
CHMS	**Chumysh**	**6.46**	**22** ⇑	P		**Pn**	**15 34 05.0**	**+0.3**
	comp=E,9.7nm,0.6s							
CHMS				⇑S		**Sn**	**15 35 10.9**	**-6.5**
	comp=E,10.0nm,0.7s							
TKM2	**Tokmak 2**	**6.67**	**27**	P		**Pn**	**15 34 08.7**	**+0.9**
	SNR=8.9							
TKM2	**Tokmak 2**	**6.67**	**27** ⇓	P		**Pn**	**15 34 08.0**	**+0.2**
	comp=E,13nm,0.5s							
BHK	**Bhakra**	**6.95**	**142**	*e*P		**Pn**	**15 34 11.4**	**0.0**
BHK				*e*S		**Sn**	**15 35 29.0**	**-0.3**
BHK				IAML			15 35 30.7	
	comp=N,54nm,0.3s							
DGS	**Degeres**	**7.01**	**27**	*e*P		**Pn**	**15 34 16.4**	**+4.2**
	comp=N,4.3nm,0.4s							
DGS				*e*S		**Sn**	**15 35 30.2**	**-0.6**
	comp=N,5.1nm,0.7s							
KRBS	**Karabastau**	**7.38**	**24**	*e*P		Pn	15 34 24.9	+7.8
	comp=N,1.7nm,1.6s							
KRBS				*e*S		**Sn**	**15 35 44.3**	**+4.8**
	comp=N,2.4nm,0.3s							
SMLA	**Simla**	**7.56**	**140**	*e*P		**Pn**	**15 34 22.1**	**+2.6**
SMLA				*e*S		**Sn**	**15 35 39.9**	**-3.9**
SMLA				IAML			15 35 48.7	
	comp=E,53nm,0.2s							
SMLA				IAML			15 35 54.8	
	comp=E,50nm,0.3s							
KHET	**Khetri**	**9.66**	**157**	*e*S		**Sn**	**15 36 31.2**	**-3.4**
KHET				*ex*		**Pn**	**15 34 46.2**	**-1.3**
KUDL	**Kundal**	**9.83**	**153**	*e*S		**Sn**	**15 36 35.2**	**-3.5**
KURK	**Kurchatov**	**14.60**	**18** ⇑	P		**P**	**15 35 53.5**	**0.0**
	comp=E,5.9nm,1.3s							
AB31	**Akbulak array**	**14.80**	**329**	P		**P**	**15 35 56.6**	**+0.9**
	comp=E,1.0nm,0.7s,baz=165,slow=9.3,SNR=11							

IDC 03 15:49:04.4±2.4,**6.70S**×**129°.17E,h0**km,**mb3.2**/1, **mbtmp3.2**/3,**ML3.1**/2,**MS3.1**/1,**Error ellipse: s-maj=153.4km s-min=33.2km az=68.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.09**	**160**	Pn		Pn	15 52 26.1	+0.7
	0.1nm,0.3s,baz=342,slow=13,SNR=6.2							
WRA				Sn		Sn	15 54 46.6	-16
	0.4nm,0.3s,baz=331,slow=23,SNR=8.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**17.47**	**165**	P		Pn	15 53 09.2	-0.5
	0.1nm,0.3s,baz=340,slow=12,SNR=12							
ASAR				S		Sn	15 56 07.2	-18
	0.2nm,0.4s,baz=342,slow=26,SNR=2.0							
	0.4nm,0.6s							
PMG	**Port Moresby**	**18.01**	**100**	LR		LR	16 01 56.2	
	comp=Z,55nm,18.8s,baz=292,slow=43							
MKAR	**Makanchi Array**	**67.53**	**327**	P		P	16 00 02.6	0.0
	0.1nm,0.6s,baz=114,slow=7.1,SNR=2.1							
	0.1nm,0.6s							

*TEH **03** 15:57:15.7,33°.66N×45°.58E,h8km±43km,ML2.7*
*ISN **03** 15:57:16.7±0.7,33°.59N×45°.56E,h9km±3km,ML2.7*

ISC 03 15:57:16.6±1.1,**33°.61N**±0°.04×**45°.58E**±0°.04,**h13**km,**n9,** σ0§**68**/13,**Iran-Iraq boundary region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.52**	**88**	Pg		**Pg**	**15 57 26.5**	**-0.4**
IBDR	**Badra**	**0.58**	**150**	*e*Pg		**Pg**	**15 57 28.0**	**0.0**
IBDR				*e*Sg		**Sg**	**15 57 36.0**	**+0.4**
BHD	**Baghdad**	**1.06**	**252**	*e*Pg		**Pg**	**15 57 37.0**	**-0.1**
BHD				*e*Sg		**Sg**	**15 57 51.0**	**+0.1**
IGHG	**Ghaleghazi**	**1.09**	**49**	Pg		**Pb**	**15 57 36.8**	**-0.7**
IDHR	**Dehrash**	**1.27**	**31**	Pg		**Pb**	**15 57 40.5**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.38**	**61**	Pg		**Pg**	**15 57 43.0**	**-0.2**
KCHF				Sg		**Sg**	**15 58 02.3**	**+1.1**
ILIN	**Lien**	**1.73**	**41**	Pg		**Pb**	**15 57 48.3**	**-0.2**
IKFM	**Kafar-mosalman**	**1.89**	**92**	Pn		**Pg**	**15 57 52.3**	**-0.7**
RAFI	**Al-Rafai**	**1.94**	**166**	*e*Pn		**Pb**	**15 57 51.0**	**-0.8**
RAFI				*e*Sn		**Sb**	**15 58 17.0**	**+1.2**

IDC 03 16:07:34.2±7.1,**19°.46S**×**176°.25W,h0**km,**mb3.6**/3, **mbtmp3.6**/3,**Error ellipse: s-maj=309.6km s-min=36.9km az=143.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**46.36**	**256**	P		P	16 16 02.8	+0.2
	0.6nm,0.5s,baz=92,slow=8.6,SNR=27							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**46.38**	**261**	P		P	16 16 02.2	-0.6
	0.2nm,0.3s,baz=97,slow=6.6,SNR=9.1							
	0.2nm,0.3s							
ILAR	**Eielson Array**	**86.95**	**12**	P		P	16 20 20.8	0.0
	0.1nm,0.4s,baz=218,slow=5.5,SNR=7.4							
	0.1nm,0.4s							

*NEIC **03** 16:30:17.2±1.6,56°.27N±0°.10×149°.41W±0°.09, h23km±10km,ML3.8/46,ML3.5(AEIC),Error ellipse: s-maj=13.9km s-min=7.1km az=177.0*
*AEIC **03** 16:30:19.1±1.4,56°.24N±0°.09×149°.4W±0°.1,h3km±8km, Error ellipse: s-maj=13.2km s-min=8.2km az=162.0*

ISC 03 16:30:15.1±2.0,**56°.3N**±0°.1×**149°.39W**±0°.06,**h10**km,**n157,** σ1§**16**/159,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.30**	**312**			**Pn**	**16 30 54.0**	**+1.0**
KDAK						**Sn**	**16 31 19.8**	**-1.4**
OHAK	**Old Harbor**	**2.34**	**295**			**Pn**	**16 30 53.6**	**+0.1**
OHAK						**Sn**	**16 31 20.3**	**-2.0**
OHAK	**Old Harbor**	**2.34**	**295**	P		**Pn**	**16 30 53.6**	**+0.1**
	baz=113							
OHAK				S		**Sn**	**

HIN	Hinchinbrook I	4.39	19	IAML			16 33 50.8	
	comp=E,124nm,1.1s							
HIN				IAML			16 33 51.6	
	comp=N,120nm,1.5s							
P18K	Big Mountain,	4.40	317			Pn	16 31 22.0	0.0
P18K	Big Mountain,	4.40	317	P		Pn	16 31 22.0	0.0
	baz=133							
KAIM	Kayak Island	4.50	34			Pn	16 31 22.8	-0.4
KAIM	Kayak Island	4.50	34	P		Pn	16 31 22.8	-0.4
	baz=217							
RED	Redoubt Volcan	4.50	338			Pn	16 31 23.4	0.0
RSO	Redoubt South	4.54	338	Pn		Pn	16 31 24.8	+0.8
RDT	Redoubt	4.58	341			Pn	16 31 24.3	0.0
RDWB	Redoubt West	4.58	338			Pn	16 31 24.0	-0.5
EYAK	Cordova Ski Ar	4.68	23	P		Pn	16 31 26.6	+0.9
	baz=205							
O19K	Port Alsworth	4.70	328			Pn	16 31 26.6	+0.6
O19K	Port Alsworth	4.70	328	IAML			16 33 53.8	
	comp=N,114nm,0.5s							
O19K				IAML			16 34 07.3	
	comp=E,122nm,0.6s							
O19K	Port Alsworth	4.70	328	P		Pn	16 31 26.6	+0.6
	baz=144							
O18K	Koktuh Hills	4.72	322			Pn	16 31 27.0	+0.7
O18K	Koktuh Hills	4.72	322	P		Pn	16 31 27.0	+0.7
	baz=137							
RAGM	Ragged Mountai	4.80	29	Pn		Pn	16 31 27.9	+0.5
RC01	Rabbit Creek A	4.82	358	IAML			16 33 57.1	
	comp=E,44nm,0.4s							
RC01				IAML			16 34 04.5	
	comp=N,47nm,0.9s							
RC01	Rabbit Creek A	4.82	358	P		Pn	16 31 28.3	+0.7
	baz=177							
SUCK	Suckling Hills	4.82	36	Pn		Pn	16 31 28.8	+1.1
SUCK				IAML			16 33 53.8	
	comp=E,142nm,2.1s							
SUCK				IAML			16 34 10.2	
	comp=N,129nm,2.1s							
HMT	Hamilton	4.88	32			Pn	16 31 29.3	+0.8
GOAT	Goat Mountain	4.95	28			Pn	16 31 30.7	+1.2
BGLC	Bering Glacier	5.02	38			Pn	16 31 31.9	+1.6
BGLC	Bering Glacier	5.02	38	P		Pn	16 31 31.9	+1.6
	baz=222							
BERG	Berg Lake	5.09	34	IAML			16 33 59.3	
	comp=N,118nm,0.8s							
KNK	Knik Glacier	5.16	5			Pn	16 31 33.3	+0.9
KNK	Knik Glacier	5.16	5	IAML			16 34 20.8	
	comp=E,41nm,1.2s							
KNK				IAML			16 34 32.5	
	comp=N,36nm,1.3s							
KNK	Knik Glacier	5.16	5	P		Pn	16 31 33.3	+0.9
	baz=185							
SUA	Susitna One	5.24	353			Pn	16 31 34.2	+0.7
SUA	Susitna One	5.24	353	IAML			16 34 08.0	
	comp=N,39nm,4.0s							
SUA				IAML			16 34 35.6	
	comp=E,46nm,3.5s							
SUA	Susitna One	5.24	353	P		Pn	16 31 34.2	+0.7
	baz=172							
N19K	Bonanza Creek	5.26	332			Pn	16 31 34.4	+0.6
N19K	Bonanza Creek	5.26	332	IAML			16 34 29.8	
	comp=E,23nm,2.0s							
N19K				IAML			16 34 46.5	
	comp=N,26nm,2.7s							
N19K	Bonanza Creek	5.26	332	P		Pn	16 31 34.4	+0.6
	baz=147							
KHIT	Khitrov Hills	5.27	35			Pn	16 31 34.5	+0.6
BMRM	Bremner River	5.31	26			Pn	16 31 35.4	+1.0
BMRM	Bremner River	5.31	26	P		Pn	16 31 35.4	+1.0
	baz=210							
PMR	Palmer	5.32	1	Pn		Pn	16 31 34.9	+0.4
WAX	Waxell Ridge	5.41	37	Pn		Pn	16 31 35.9	+0.1
BARK	Barkley Ridge	5.50	39			Pn	16 31 37.7	+0.7
GHO	Glory Hole Cre	5.50	2			Pn	16 31 38.4	+1.3
KLU	Klutina	5.52	18			Pn	16 31 38.2	+0.9
KLU	Klutina	5.52	18	P		Pn	16 31 38.2	+0.9
	baz=200							
MESA	MESA	5.54	42	Pn		Pn	16 31 36.9	-0.8
SML	Sawmill	5.56	5			Pn	16 31 39.3	+1.4
SML	Sawmill	5.56	5	P		Pn	16 31 39.3	+1.4
	baz=186							
N18K	Kilae Creek	5.56	325	Pn		Pn	16 31 38.9	+1.0
TGL	Tana Glacier	5.64	35			Pn	16 31 39.9	+0.8
SCM	Sheep Creek Mo	5.66	10	Pn		Pn	16 31 41.1	+1.8
ISLE	Juniper Island	5.69	38			Pn	16 31 40.5	+0.8
BAGL	Bagley Icefiel	5.70	39			Pn	16 31 40.6	+1.0
SVW2	Sparrevohn	5.80	329	Pn		Pn	16 31 42.4	+1.4
SKT	Skwentna	5.81	350	Pn		Pn	16 31 42.6	+1.4
VRDI	Verde Repeater	5.83	30			Pn	16 31 42.7	+1.0
N25K	Chitina, Valde	5.88	23			Pn	16 31 43.4	+1.1
N25K	Chitina, Valde	5.88	23	P		Pn	16 31 43.4	+1.1
	baz=206							
N17K	Nushagak Hills	5.90	319	Pn		Pn	16 31 41.2	-1.2
GLB	Gilahina Butte	5.92	27			Pn	16 31 44.1	+1.3
M20K	Styx River	5.93	343	Pn		Pn	16 31 43.2	+0.3
TABL	Table Mountain	6.01	43	Pn		Pn	16 31 45.0	+0.8
M24K	Tolsona, Glenn	6.06	14			Pn	16 31 45.1	+0.4
MCARA	McCarthy VSAT	6.08	30			Pn	16 31 46.4	+1.4
MCARA	McCarthy VSAT	6.08	30	P		Pn	16 31 46.4	+1.4
	baz=215							
PTPK	Patty Peak	6.09	33			Pn	16 31 46.7	+1.4
PCA	Pinnacle	6.15	48			Pn	16 31 46.9	+0.9
PINM	Pinnacle	6.16	48	P		Pn	16 31 46.9	+0.9
	baz=235							
M19K	Big River Lodg	6.19	338	Pn		Pn	16 31 47.2	+0.7
BARN	Barnard Glacie	6.25	37			Pn	16 31 48.5	+1.0
CTG	Chitna Glacier	6.29	39	P		Pn	16 31 48.8	+0.8
	baz=225							
CTGM	Chitina Glacie	6.30	39			Pn	16 31 48.8	+0.8
PNL	Peninsula	6.30	53			Pn	16 31 48.8	+0.8
PNL	Peninsula	6.30	53	P		Pn	16 31 48.8	+0.8
	baz=241							
LOGN	Logan Glacier	6.32	41			Pn	16 31 48.9	+0.6
SDPT	Sand Point	6.32	266	Pn		Pn	16 31 50.0	+1.8
WAT6	Susitna Watana	6.37	7			Pn	16 31 50.1	+1.1
WAT6	Susitna Watana	6.37	7	P		Pn	16 31 50.1	+1.1
	baz=188							
HARP	HAARP	6.50	18			Pn	16 31 52.1	+1.4
HARP	HAARP	6.50	18	P		Pn	16 31 52.1	+1.4
	baz=201							
L19K	White Mountain	6.54	337	Pn		Pn	16 31 51.4	+0.2
M17K	Holitna River	6.61	324	Pn		Pn	16 31 53.4	+1.2
N15K	Kwethluk River	6.85	309	Pn		Pn	16 31 56.9	+1.3
M16K	Timber Creek	6.88	318	Pn		Pn	16 31 57.5	+1.6
DHY	Denali Highway	6.88	8			Pn	16 31 58.0	+1.9
DHY	Denali Highway	6.88	8	P		Pn	16 31 58.0	+1.9
	baz=189							
O29M	Mount Kennedy	6.97	50			Pn	16 31 58.7	+1.4
L18K	Granite Mounta	7.02	331	Pn		Pn	16 31 56.1	-1.7
P29M	Windy Craggy	7.04	57			Pn	16 31 58.8	+0.6
P29M	Windy Craggy	7.04	57	P		Pn	16 31 58.8	+0.6
	baz=246							
RND	Reindeer	7.14	2			Pn	16 32 01.3	+1.8
M27K	Edge Creek, AK	7.19	29	Pn		Pn	16 32 02.8	+2.4
TRF	Thorofare Moun	7.20	357	Pn		Pn	16 32 01.9	+1.5
CAST	Castle Rocks	7.28	350	Pn		Pn	16 32 03.2	+1.9
KTH	Kantishna Hill	7.33	355	Pn		Pn	16 32 03.3	+1.2
S31K	Pelican	7.36	71	Pn		Pn	16 32 01.4	-1.0
L26K	Log Cabin Wild	7.41	22	Pn		Pn	16 32 02.5	-0.7
TTA	Tatalina	7.45	336	Pn		Pn	16 32 03.9	+0.1
K20K	Telida	7.47	344	Pn		Pn	16 32 05.3	+1.4
L16K	Owhat River	7.52	320	Pn		Pn	16 32 05.8	+1.1
K17K	Iditarod	7.87	329	Pn		Pn	16 32 09.6	+0.1
M14K	Bethel	7.95	309	Pn		Pn	16 32 10.3	-0.2
S32K	Killisnoo	8.20	76	Pn		Pn	16 32 12.8	-1.2
J20K	Nowinta River	8.25	345	Pn		Pn	16 32 17.5	+2.8
R32K	Eaglecrest	8.30	70	Pn		Pn	16 32 18.1	+2.7
M29M	Somme Creek	8.31	38	Pn		Pn	16 32 16.9	+1.3
CCB	Clear Creek Bu	8.42	5	Pn		Pn	16 32 18.4	+1.4
J25K	Salcha River,	8.58	12	Pn		Pn	16 32 20.5	+1.2
IL31		8.60	7	Pn		Pn	16 32 20.9	+1.5
MDM	Murphy Dome	8.72	3	Pn		Pn	16 32 22.2	+1.2
J26L	Joseph Creek	8.72	17	Pn		Pn	16 32 21.1	-0.1
N31M	Braeburn, Yuko	8.75	48	Pn		Pn	16 32 23.0	+1.4
L29M	L29M	8.89	35	Pn		Pn	16 32 25.6	+2.1
P32M	Atlin	8.97	62	Pn		Pn	16 32 25.0	+0.5
DAWY	Dawson	9.24	28	Pn		Pn	16 32 29.0	+0.7
PRP	Porcupine Dome	9.45	10	Pn		Pn	16 32 32.1	+1.0
I17K	Unalakleet	9.46	328	Pn		Pn	16 32 32.6	+1.3
H21K	Melozitna Rive	9.54	351	Pn		Pn	16 32 33.5	+1.1
Q32M	Nakina River	9.56	67	Pn		Pn	16 32 32.8	-0.1
P33M	Teslin, Yukon	9.57	59	Pn		Pn	16 32 33.5	+0.6
K29M	Barlow Dome	9.61	33	Pn		Pn	16 32 34.4	+1.1
H24K	Noodor Dome	9.61	4	Pn		Pn	16 32 33.1	-0.2
M31M	Drury Creek, Y	9.69	46	Pn		Pn	16 32 36.6	+2.2
H18K	Honhosa River	9.90	337	Pn		Pn	16 32 37.3	0.0
IMAR	Indian Mountai	9.95	350	Pn		Pn	16 32 39.2	+1.3
R33M	Jennings River	10.30	65	Pn		Pn	16 32 42.8	0.0
G21K	Allakaket	10.44	351	Pn		Pn	16 32 45.7	+1.0
G23K	Bananza Creek	10.46	359	Pn		Pn	16 32 45.4	+0.5
G24K	Hadweenzic Riv	10.49	4	Pn		Pn	16 32 46.9	+1.6
FYU	Fort Yukon	10.50	9	Pn		Pn	16 32 46.0	+0.6
F20K	Avaraart Lake	11.20	347	Pn		Pn	16 32 55.4	+0.5

*IDC **03** 16:31:46.3±1.4,56˚.16N×149˚.31W,h0km,mb3.7/5, mbtmp3.6/10,ML3.3/5,Error ellipse: s-maj=27.6km s-min=21.2km az=25.0*

*NEIC **03** 16:31:46.6±1.9,56˚.2N±0˚.1×149˚.40W±0˚.06,h22km±10km, ML3.7/38,ML3.4(AEIC),Error ellipse: s-maj=15.4km s-min=4.3km az=171.0*

*AEIC **03** 16:31:49.3±2.1,56˚.2N±0˚.1×149˚.4W±0˚.1,h5km±8km,Error ellipse: s-maj=17.1km s-min=9.9km az=186.0*

ISC 03 16:31:48.1±1.1,56˚.37N±0˚.08×149˚.45W±0˚.05,h10km,n88, σ1§31/74,mb3.7/5,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.22	311		Pn	16 32 24.2	-0.8
KDAK					Sn	16 32 50.9	-1.6
KDAK	Kodiak Island	2.22	311	Pn	Pn	16 32 23.6	-1.4
	3.0nm,0.3s,baz=157,slow=7.7,SNR=1.9						
KDAK				Sn	Sn	16 32 50.0	-2.4
	15nm,0.3s,baz=58,slow=23,SNR=11 15nm,0.4s						
OHAK	Old Harbor	2.28	294		Pn	16 32 23.9	-1.8
OHAK	Old Harbor	2.28	294	P	Pn	16 32 23.9	-1.8
	baz=114						
OHAK				S	Sn	16 32 50.7	-3.1
	baz=114						
SII	Sitkinak Islan	2.63	276	Pn	Pn	16 32 25.4	-5.2
SII				IAML		16 33 05.5	
	comp=N,303nm,1.1s						
SII				IAML		16 33 16.0	
	comp=E,211nm,0.8s						
Q20K	Shuyak Island	2.75	326	P	Pn	16 32 31.7	-0.6
	baz=145						
Q20K				S	Sn	16 33 04.6	-1.0
	baz=145						
SYI	Shuyak Island	2.75	326		Pn	16 32 31.6	-0.6
SYI					Sn	16 33 04.6	-0.9
CNPM	China Poot	3.31	344		Pn	16 32 38.8	-1.2
CNPM					Sn	16 33 18.6	-0.7
CNPM	China Poot	3.31	344	IAML		16 33 22.6	
	comp=N,66nm,1.1s						
CNPM				IAML		16 33 25.7	
	comp=E,102nm,1.0s						
Q19K	Cape Douglas,	3.42	321		Pn	16 32 41.4	0.0
Q19K	Cape Douglas,	3.42	321	IAML		16 33 36.5	
	comp=N,404nm,0.9s						
Q19K				IAML		16 33 36.5	
	comp=E,800nm,0.9s						
Q19K	Cape Douglas,	3.42	321	P	Pn	16 32 41.4	0.0
	baz=138						
BRSE	Bradley Lake S	3.46	349		Pn	16 32 40.6	-1.3
BRSE					Sn	16 33 20.8	-2.1
BRSE	Bradley Lake S	3.46	349	P	Pn	16 32 40.6	-1.3
	baz=168						
BRSE				S	Sn	16 33 20.8	-2.1
	baz=168						
Q23K	Middleton Isla	3.49	27		Pn	16 32 40.7	-1.6
Q23K	Middleton Isla	3.49	27	IAML		16 33 16.9	
	comp=E,191nm,1.1s						
Q23K				IAML		16 34 43.2	
	comp=N,168nm,1.1s						
Q23K	Middleton Isla	3.49	27	P	Pn	16 32 40.7	-1.6
	baz=208						
BRLK	Bradley Lake	3.49	348		Pn	16 32 40.9	-1.6
BRLK	Bradley Lake	3.49	348	IAML		16 33 29.5	
	comp=E,69nm,0.8s						
BRLK				IAML		16 33 35.0	
	comp=N,76nm,1.1s						
MID	Middleton Isla	3.49	27	Pn	Pn	16 32 40.9	-1.5
MID				IAML		16 33 56.7	
	comp=N,152nm,1.2s						
MID				IAML		16 34 16.7	
	comp=E,195nm,1.1s						
HOM	Homer	3.50	341		Pn	16 32 42.2	-0.3
HOM	Homer	3.50	341	P	Pn	16 32 42.2	-0.3
	baz=160						
SEW	Seward	3.75	0		Pn	16 32 44.4	-1.5
SEW	Seward	3.75	0	P	Pn	16 32 44.4	-1.5
	baz=180						
P23K	Montague Islan	3.80	16		Pn	16 32 45.1	-1.5
P23K	Montague Islan	3.80	16	P	Pn	16 32 45.1	-1.5
	baz=196						
P19K	Oil Pt	3.86	330		Pn	16 32 47.4	-0.1
P19K	Oil Pt	3.86	330	IAML		16 33 45.2	
	comp=E,130nm,0.7s						
P19K				IAML		16 33 45.9	
	comp=N,156nm,0.8s						
P19K	Oil Pt	3.86	330	P	Pn	16 32 47.4	-0.1
	baz=148						
CNTC	Contact Creek	3.97	301		Pn	16 32 48.4	-0.7
Q17K	Contact Creek	3.97	301	P	Pn	16 32 48.4	-0.7
	baz=117						
O20K	Slope Mountain	4.09	337		Pn	16 32 49.9	-0.8
O20K	Slope Mountain	4.09	337	P	Pn	16 32 49.9	-0.8
	baz=155						
IVE	Iliamna Volcan	4.12	334		Pn	16 32 50.4	-0.8
SLKM	Skilak Lake	4.17	355		Pn	16 32 50.6	-1.2
P18K	Big Mountain,	4.33	317		Pn	16 32 53.0	-0.9
P18K	Big Mountain,	4.33	317	P	Pn	16 32 53.0	-0.9
	baz=133						
HIN	Hinchinbrook I	4.33	20		Pn	16 32 52.4	-1.6
HIN	Hinchinbrook I	4.33	20	IAML		16 33 57.3	
	comp=N,100nm,1.0s						
KAIM	Kayak Island	4.46	35		Pn	16 32 54.4	-1.3
KAIM	Kayak Island	4.46	35	IAML		16 33 47.0	
	comp=N,168nm,0.9s						
KAIM				IAML		16 33 50.2	
	comp=E,110nm,1.0s						
KAIM	Kayak Island	4.46	35	P	Pn	16 32 54.4	-1.3
	baz=218						
EYAK	Cordova Ski Ar	4.62	23		Pn	16 32 56.8	-1.1
EYAK	Cordova Ski Ar	4.62	23	P	Pn	16 32 56.8	-1.1
	baz=205						
O18K	Koktuh Hills	4.64	321	Pn	Pn	16 32 58.1	-0.1
O18K				IAML		16 34 00.3	
	comp=N,74nm,0.8s						
O18K				IAML		16 34 19.2	
	comp=E,50nm,0.9s						
SUCK	Suckling Hills	4.78	37	Pn	Pn	16 32 58.1	-2.0
HMT	Hamilton	4.83	32		Pn	16 32 59.6	-1.2
NICHA	Nichawak Mount	4.84	34		Pn	16 32 59.9	-1.0
GOAT	Goat Mountain	4.90	28		Pn	16 33 00.7	-1.1
SUA	Susitna One	5.16	353	Pn	Pn	16 33 05.8	+0.4
SUA				IAML		16 34 18.9	
	comp=N,22nm,0.8s						
SUA				IAML		16 34 28.1	
	comp=E,26nm,0.9s						
PMR	Palmer	5.25	2	Pn	Pn	16 33 05.9	-0.6
PMR				IAML		16 34 10.8	
	comp=N,24nm,0.8s						
PMR				IAML		16 34 10.8	
	comp=E,29nm,0.9s						
GHO	Glory Hole Cre	5.43	3	Pn	Pn	16 33 06.9	-2.2
N18K	Kilae Creek	5.49	325	Pn	Pn	16 33 09.9	+0.1
SML	Sawmill	5.49	6	Pn	Pn	16 33 07.7	-2.3
O16K	Kokwok River B	5.62	309	Pn	Pn	16 33 12.2	+0.6
TABL	Table Mountain	5.98	43	Pn	Pn	16 33 14.5	-2.3
L19K	White Mountain	6.46	337	Pn	Pn	16 33 22.6	-0.5
M17K	Holitna River	6.53	324	Pn	Pn	16 33 24.3	+0.3
M16K	Timber Creek	6.80	317	Pn	Pn	16 33 27.8	-0.1
L18K	Granite Mounta	6.94	331	Pn	Pn	16 33 27.4	-2.4
O14K	Tigyukauivet M	6.94	300	Pn	Pn	16 33 28.2	-1.6
P29M	Windy Craggy	7.03	57	Pn	Pn	16 33 28.0	-3.1
S31K	Pelican	7.37	72	Pn	Pn	16 33 32.0	-3.5
L16K	Owhat River	7.44	320	Pn	Pn	16 33 37.1	+0.5
L27K	Beaver Creek,	7.74	27	Pn	Pn	16 33 40.7	-0.1
K17K	Iditarod	7.79	328	Pn	Pn	16 33 39.2	-2.1
BWN	Browne	7.83	360	Pn	Pn	16 33 40.6	-1.3
HDA	Harding Lake	8.17	8	Pn	Pn	16 33 47.2	+0.7
S32K	Killisnoo	8.22	76	Pn	Pn	16 33 43.7	-3.5
R32K	Eaglecrest	8.31	70	Pn	Pn	16 33 46.2	-2.3
JIS	Juneau Island	8.38	71	Pn	Pn	16 33 47.2	-2.2
IL31		8.53	7	Pn	Pn	16 33 52.9	+1.5
ILAR	Eielson Array	8.53	7	Pn	Pn	16 33 52.0	+0.5
	comp=E,0.5nm,0.3s,baz=208,slow=13,SNR=7.1						
ILAR				Sn	Sn	16 35 26.0	-1.7
	comp=E,0.3nm,0.3s,baz=186,slow=21,SNR=5.9 comp=E,1.0nm,0.4s						
COLA	College	8.57	5		Pn	16 33 53.8	+1.7
DLBC	Dease Lake	10.68	71	Pn	Pn	16 34 19.0	-2.1
	comp=E,0.4nm,0.3s,baz=269,slow=4.4,SNR=7.4 comp=E,3.3nm,0.8s						
INK	Inuvik	14.01	25	Pn	Pn	16 35 08.4	+2.1
	baz=209,slow=10,SNR=2.2 comp=E,1.0nm,0.7s						
YKA	Yellowknife Ar	18.57	56	P	P	16 36 05.0	+0.1
	comp=E,0.1nm,0.3s,baz=264,slow=9.0,SNR=6.7 comp=E,1.0nm,0.9s						
NVAR	Mina Array Bea	27.34	118	P	P	16 37 32.3	-1.0
	comp=E,0.5nm,0.7s,baz=294,slow=8.7,SNR=4.2 comp=E,0.5nm,0.7s						
H11N2	WAKE ISLAND Hy	48.84	240	T	T	17 33 10.1	
	baz=30,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	48.85	240	T	T	17 33 08.4	
	baz=30,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	48.86	240	T	T	17 33 09.2	
	baz=30,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	49.98	239	T	T	17 34 36.8	
	baz=30,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	50.00	239	T	T	17 34 35.7	
	baz=30,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	50.00	239	T	T	17 34 35.1	
	baz=30,slow=76,SNR=17						
SONM	Songino Array	58.51	310	P	P	16 41 46.8	+2.5
	comp=E,0.6nm,0.8s,baz=46,slow=6.5,SNR=2.9 comp=E,0.6nm,0.8s						
FINES	FINESS Array B	62.48	2	P	P	16 42 11.8	+0.8
	comp=E,1.7nm,0.7s,baz=2.5,slow=9.7,SNR=7.9 comp=E,1.7nm,0.7s						
KURBB	Kurchatov Arra	66.22	329	P	P	16 42 36.6	+0.9
	comp=E,0.2nm,0.3s,baz=31,slow=6.7,SNR=1.6 comp=E,0.2nm,0.3s						
MKAR	Makanchi Array	68.47	325	P	P	16 42 50.8	+0.8
	comp=E,0.3nm,0.4s,baz=24,slow=5.4,SNR=10 comp=E,0.3nm,0.4s						

*NEIC **03** 16:35:24.1±1.9,56˚.17N±0˚.08×149˚.33W±0˚.09,h8km±5km, mb4.6/21,ML4.3/56,Mwr4.6/11,ML4.1(AEIC),Error ellipse: s-maj=11.1km s-min=7.3km az=176.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.37; Mθθ=6.94; Mφφ=8.31; Mrθ=1.08; Mrφ=1.33; Mθφ=3.01; Fault plane solution: M₀8.46000×10¹⁵ NP1:φs230.81000°, δ69.13000°,λ1.27000°. NP2:φs140.36000°,δ88.81000°, λ159.13000°. Principal axes: T 9.2298, Plg15.0000°, Azm94.0000°; N -1.8494, Plg69.0000°, Azm317.0000°; P -7.3804, Plg14.0000°, Azm188.0000°;*

*IDC **03** 16:35:26.1±0.8,56˚.41N×149˚.39W,h0km,mb4.1/23, mbtmp4.1/27,ML3.7/4,MS3.9/71 Error ellipse: s-maj=22.9km s-min=11.1km az=25.0*

*NEIC **03** 16:35:26.2,56˚.19N×149˚.33W,h24km*

*AEIC **03** 16:35:28.2±2.0,56˚.28N±0˚.08×149˚.29W±0˚.10,h1km±4km, Error ellipse: s-maj=11.2km s-min=7.7km az=182.0*

*GCMT **03** 16:35:28.1±0.4,56˚.27N±0˚.02×149˚.25W±0˚.04,h21km±1km, MW4.8/97,Moment Tensor Solution. s9,c10; s97,c129; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.04±.10; Mθθ-1.86±.09; Mφφ 1.89±.10; Mrθ 0.74±.18; Mφθ 0.54±.09; Mrφ-0.54±.17; Best double couple: M₀2.15000×10¹⁶ NP1:φs324.00000°,δ85.00000°,λ-156.00000°. NP2: φs232.00000°,δ66.00000°,λ-6.00000°. Principal axes: T 2.0630, Plg13.0000°, Azm95.0000°; N 0.1680, Plg66.0000°, Azm336.0000°; P -2.2380, Plg21.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 16:35:27.0±0.5,56˚.36N±0˚.06×149˚.37W±0˚.04,h10km, n360,σ1§22/273,mb4.3/37,MS3.9/65,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.26	310	Pn	Pn	16 36 03.5	-0.9
KDAK	Kodiak Island	2.26	310		Sn	16 36 30.1	-2.3
KDAK	Kodiak Island	2.26	310	Pn	Pn	16 36 03.1	-1.3
	16nm,0.3s,baz=139,slow=6.7,SNR=19						
KDAK				Sn	Sn	16 36 30.0	-2.3
	69nm,0.3s,baz=320,slow=19,SNR=17						
KDAK				LR	LR	16 36 53.4	
	comp=Z,699nm,19.8s,baz=157,slow=39 37nm,0.3s						
OHAK	Old Harbor	2.32	293	Pn	Pn	16 36 02.9	-2.3
OHAK	Old Harbor	2.32	293		Sn	16 36 30.4	-3.4
OHAK	Old Harbor	2.32	293	P	Pn	16 36 03.7	-1.5
OHAK	Old Harbor	2.32	293	P	Pn	16 36 02.9	-2.3
	baz=112						
OHAK				S	Sn	16 36 30.4	-3.4
	baz=112						
SII	Sitkinak Islan	2.68	276	Pn	Pn	16 36 05.2	-5.0
SII				IAML		16 36 55.7	
	comp=N,687nm,1.0s						
SII	Sitkinak Islan	2.68	276	P	Pn	16 36 09.2	-1.0
SYI	Shuyak Island	2.78	325		Pn	16 36 10.7	-0.9
SYI	Shuyak Island	2.78	325		Sn	16 36 43.8	-1.4
Q20K	Shuyak Island	2.79	325	P	Pn	16 36 10.2	-1.4
	baz=143						
Q20K				S	Sn	16 36 43.8	-1.5
	baz=143						
CNPM	China Poot	3.33	343	Pn	Pn	16 36 17.6	-1.5
CNPM	China Poot	3.33	343		Sn	16 36 57.4	-1.3
Q19K	Cape Douglas,	3.45	320	Pn	Pn	16 36 20.5	-0.3
Q19K	Cape Douglas,	3.45	320		Sn	16 37 02

CNTC Sn 16 37 13.7 -2.0
Q17K Contact Creek 4.02 301 P Pn 16 36 28.4 -0.2
baz=116
Q17K S Sn 16 37 13.7 -2.1
baz=116
O20K Slope Mountain 4.11 337 Pn 16 36 29.0 -0.9
O20K Slope Mountain 4.11 337 P Pn 16 36 29.0 -0.9
baz=154
O22K Cooper Landing 4.14 358 Pn 16 36 30.0 -0.2
O22K Cooper Landing 4.14 358 P Pn 16 36 28.9 -1.3
baz=177
IVE Iliamna Volcan 4.14 334 Pn 16 36 28.7 -1.7
SLKM Skilak Lake 4.18 354 Pn 16 36 29.4 -1.5
HIN Hinchinbrook I 4.32 19 Pn Pn 16 36 31.7 -1.0
HIN IAML 16 37 22.8
comp=N,345nm,0.5s
HIN IAML 16 37 28.6
comp=E,347nm,0.7s
P18K Big Mountain, 4.36 317 Pn Pn 16 36 32.4 -0.9
P18K Big Mountain, 4.36 317 P Pn 16 36 32.4 -0.9
baz=132
KAIM Kayak Island 4.43 34 Pn Pn 16 36 33.0 -1.3
KAIM IAML 16 37 26.4
comp=E,531nm,1.4s
KAIM Kayak Island 4.43 34 P Pn 16 36 33.2 -1.1
baz=217
RSO Redoubt South 4.48 338 Pn Pn 16 36 34.2 -0.9
RDT Redoubt 4.52 341 Pn 16 36 33.9 -1.6
CAPN Captain Cook N 4.52 349 Pn Pn 16 36 35.3 -0.1
RDWB Redoubt West 4.52 338 Pn 16 36 34.2 -1.5
Q16K King Salmon 4.56 304 Pn 16 36 35.5 -0.5
Q16K King Salmon 4.56 304 P Pn 16 36 35.5 -0.5
baz=118
DFR Drift River 4.59 339 Pn 16 36 35.6 -0.9
EYAK Cordova Ski Ar 4.61 23 Pn Pn 16 36 35.2 -1.5
EYAK Cordova Ski Ar 4.61 23 P Pn 16 36 36.2 -0.5
EYAK Cordova Ski Ar 4.61 23 P Pn 16 36 35.5 -1.1
baz=205
NCT North Crescent 4.61 338 Pn 16 36 35.5 -1.2
O19K Port Alsworth 4.65 328 Pn 16 36 36.3 -0.9
O19K IAML 16 37 34.9
comp=N,432nm,0.5s
O19K Port Alsworth 4.65 328 P Pn 16 36 35.9 -1.3
baz=144
R16K Pilot Point 4.65 288 Pn 16 36 36.5 -0.7
R16K Pilot Point 4.65 288 IAML 16 38 28.0
comp=N,355nm,3.6s
R16K IAML 16 39 07.5
comp=E,300nm,3.1s
R16K Pilot Point 4.65 288 P Pn 16 36 36.5 -0.7
baz=102
FID Port Fidalgo 4.66 18 Pn 16 36 35.8 -1.5
FID Port Fidalgo 4.66 18 IAML 16 37 33.4
comp=N,142nm,0.6s
FID IAML 16 37 34.5
comp=E,208nm,0.7s
O18K Koktuh Hills 4.68 321 Pn 16 36 37.6 0.0
O18K IAML 16 37 34.5
comp=E,136nm,0.8s
O18K IAML 16 37 38.9
comp=N,146nm,0.8s
O18K Koktuh Hills 4.68 321 P Pn 16 36 36.5 -1.1
baz=136
P17K Kvichak River 4.73 310 Pn 16 36 38.0 -0.4
P17K Kvichak River 4.73 310 P Pn 16 36 38.0 -0.4
baz=124
RAGM Ragged Mountai 4.73 30 Pn 16 36 36.7 -1.7
RC01 Rabbit Creek A 4.75 358 Pn Pn 16 36 37.5 -1.1
RC01 IAML 16 37 36.5
comp=N,185nm,0.5s
RC01 IAML 16 37 48.2
comp=E,176nm,0.7s
RC01 Rabbit Creek A 4.75 358 P Pn 16 36 37.2 -1.4
baz=177
HMT Hamilton 4.81 32 Pn 16 36 38.6 -0.8
NICHA Nichawak Mount 4.82 34 Pn 16 36 38.5 -1.0
GOAT Goat Mountain 4.88 28 Pn 16 36 39.3 -1.2
ANPB Aniakchak Plen 4.95 279 Pn 16 36 40.3 -1.1
BGLC Bering Glacier 4.95 38 Pn 16 36 39.9 -1.4
BGLC Bering Glacier 4.95 38 P Pn 16 36 39.9 -1.4
baz=222
BERG Berg Lake 5.02 34 Pn 16 36 41.6 -0.8
CHGN Chignik 5.04 273 Pn Pn 16 36 41.5 -1.0
CHGN IAML 16 39 40.2
comp=E,208nm,0.1s
CHGN IAML 16 39 44.9
comp=N,232nm,0.1s
GRIN Grindle Hills 5.06 37 Pn 16 36 41.7 -1.2
SPCR Spurr Chakacha 5.08 344 Pn 16 36 41.5 -1.7
KNK Knik Glacier 5.09 5 Pn 16 36 43.9 +0.6
KNK IAML 16 37 48.8
comp=E,163nm,0.9s
KNK IAML 16 37 49.0
comp=N,96nm,0.8s
KNK Knik Glacier 5.09 5 P Pn 16 36 42.7 -0.6
baz=185
SPCN Chakachatna No 5.09 344 Pn 16 36 42.7 -0.7
SPCP Crater Peak Br 5.13 345 Pn 16 36 43.4 -0.6
SPCG Spurr Capps Gl 5.13 346 Pn 16 36 42.9 -1.1
DIV Divide 5.14 20 Pn Pn 16 36 43.5 -0.5
SNH Sunshine Point 5.15 39 Pn 16 36 43.1 -1.1
SNH IAML 16 37 55.2
comp=E,229nm,1.5s
SNH IAML 16 38 05.5
comp=N,184nm,1.1s
SUA Susitna One 5.17 353 Pn 16 36 43.8 -0.7
SUA IAML 16 37 53.5
comp=N,85nm,0.9s
SUA Susitna One 5.17 353 P Pn 16 36 43.4 -1.0
baz=171
N19K Bonanza Creek 5.21 331 Pn 16 36 43.5 -1.5
N19K Bonanza Creek 5.21 331 P Pn 16 36 43.5 -1.5
baz=147
KHIT Khitrov Hills 5.21 36 Pn 16 36 43.5 -1.5
BMRM Bremner River 5.25 26 Pn Pn 16 36 44.8 -0.7
BMRM Bremner River 5.25 26 P Pn 16 36 44.3 -1.2
baz=210
PMR Palmer 5.25 1 Pn Pn 16 36 44.6 -0.8
PMR Palmer 5.25 1 P Pn 16 36 45.9 +0.5
PMR Palmer 5.25 1 P Pn 16 36 44.6 -0.8
baz=181
SPNN North Nagishla 5.31 342 Pn 16 36 45.3 -1.2
O17K Koliganek Bris 5.34 313 Pn 16 36 46.2 -0.5
O17K Koliganek Bris 5.34 313 P Pn 16 36 46.2 -0.5
baz=127
P16K Nushagak River 5.34 304 Pn 16 36 46.1 -0.6
P16K Nushagak River 5.34 304 P Pn 16 36 46.1 -0.6
baz=117
WAX Waxell Ridge 5.34 37 Pn 16 36 46.1 -0.7
BARK Barkley Ridge 5.43 39 Pn 16 36 47.0 -1.0
GHO Glory Hole Cre 5.43 2 Pn 16 36 47.6 -0.5
KLU Klutina 5.45 18 Pn Pn 16 36 47.8 -0.4
KLU Klutina 5.45 18 P Pn 16 36 47.4 -0.8
baz=200
SML Sawmill 5.49 5 Pn Pn 16 36 48.3 -0.5
SML Sawmill 5.49 5 P Pn 16 36 48.3 -0.5
baz=186
M23K Glacier View 5.51 8 Pn 16 36 48.7 -0.4
M23K Glacier View 5.51 8 P Pn 16 36 48.7 -0.4
baz=189
N18K Kilae Creek 5.52 324 Pn 16 36 47.8 -1.3
SCM Sheep Creek Mo 5.59 10 Pn 16 36 50.3 +0.1
SCM Sheep Creek Mo 5.59 10 P Pn 16 36 49.7 -0.5
baz=191
ISLE Juniper Island 5.63 38 Pn 16 36 50.0 -0.7
BAGL Bagley Icefiel 5.63 40 Pn 16 36 49.7 -1.0
O16K Kokwok River B 5.66 309 Pn 16 36 50.9 -0.2
O16K Kokwok River B 5.66 309 P Pn 16 36 50.9 -0.2
baz=122
S14K Fog Glacier 5.67 273 P Pn 16 36 50.1 -1.3
baz=86
VNFG Fog Glacier, M 5.67 273 Pn 16 36 50.0 -1.3
SKT Skwentna 5.75 350 Pn Pn 16 36 52.5 +0.2
SKT Skwentna 5.75 350 P Pn 16 36 51.3 -0.9
baz=168
SVW2 Sparrevohn 5.75 328 Pn Pn 16 36 53.8 +1.6
VRDI Verde Repeater 5.77 30 Pn Pn 16 36 52.2 -0.6
N25K Chitina, Valde 5.81 23 Pn 16 36 52.9 -0.3
N25K Chitina, Valde 5.81 23 P Pn 16 36 52.7 -0.5
baz=206
GLB Gilahina Butte 5.85 27 Pn Pn 16 36 53.2 -0.5
N17K Nushagak Hills 5.86 319 Pn 16 36 53.1 -0.7
KIAG Kiagna River 5.86 36 Pn 16 36 53.1 -0.9
M20K Styx River 5.87 342 Pn 16 36 55.2 +1.1

SAMH Samovar Hills 5.90 47 Pn 16 36 53.2 -1.2
TABL Table Mountain 5.95 43 Pn 16 36 53.6 -1.7
M24K Tolsona, Glenn 5.99 15 Pn Pn 16 36 56.4 +0.7
CNBA Chernabura Isl 6.00 259 Pn Pn 16 36 52.5 -3.2
MCARA McCarthy VSAT 6.01 31 Pn 16 36 56.0 +0.1
PTPK Patty Peak 6.03 34 Pn 16 36 55.5 -0.8
PCA Pinnacle 6.10 48 Pn 16 36 56.1 -1.1
PINM Pinnacle 6.10 48 P Pn 16 36 56.1 -1.1
baz=235
M18K Stony River 6.13 330 Pn 16 36 55.7 -1.8
BARN Barnard Glacie 6.19 37 Pn 16 36 57.8 -0.8
WACK Wrangell Chich 6.21 23 Pn 16 36 58.6 -0.2
CTG Chitina Glacier 6.23 39 P Pn 16 36 58.3 -0.7
baz=225
CTGM Chitina Glacie 6.23 39 Pn 16 36 58.4 -0.7
PNL Peninsula 6.25 54 Pn 16 36 58.3 -0.9
PNL Peninsula 6.25 54 P Pn 16 36 58.7 -0.5
PNL Peninsula 6.25 54 P Pn 16 36 58.3 -0.9
baz=241
LOGN Logan Glacier 6.26 41 Pn 16 36 58.4 -1.0
O15K Ungalikthiuk R 6.27 301 Pn 16 36 59.0 -0.4
O15K Ungalikthiuk R 6.27 301 P Pn 16 36 59.0 -0.4
baz=113
BCPM Bancas Point 6.28 51 Pn 16 36 58.5 -1.2
WAT6 Susitna Watana 6.30 7 Pn 16 36 59.4 -0.6
WAT6 Susitna Watana 6.30 7 P Pn 16 36 59.9 0.0
baz=188
SDPT Sand Point 6.34 265 Pn Pn 16 36 57.2 -3.2
SDPT Sand Point 6.34 265 P Pn 16 36 58.7 -1.7
N16K Nishlik Lake 6.43 314 Pn 16 37 01.3 -0.4
L19K White Mountain 6.48 337 Pn 16 37 02.0 -0.3
WAT7 Susitna Watana 6.50 2 Pn 16 37 02.1 -0.6
M17K Holitna River 6.56 324 Pn 16 37 02.6 -0.8
DHY Denali Highway 6.81 8 Pn 16 37 08.3 +1.3
DHY Denali Highway 6.81 8 P Pn 16 37 07.8 +0.8
baz=189
N15K Kwethluk River 6.82 308 Pn 16 37 07.3 +0.3
N15K Kwethluk River 6.82 308 P Pn 16 37 07.3 +0.3
baz=120
M16K Timber Creek 6.84 317 Pn 16 37 07.0 -0.3
M16K Timber Creek 6.84 317 P Pn 16 37 07.0 -0.3
baz=129
M26K Nabesna, AK 6.88 26 Pn 16 37 07.3 -0.5
M26K Nabesna, AK 6.88 26 P Pn 16 37 07.3 -0.5
baz=210
PAX Paxson 6.92 15 Pn 16 37 08.3 -0.1
PAX Paxson 6.92 15 P Pn 16 37 08.3 -0.1
baz=198
O29M Mount Kennedy 6.92 51 Pn 16 37 08.8 +0.3
L18K Granite Mounta 6.97 331 Pn Pn 16 37 09.3 +0.3
O14K Tigyukauivet M 6.99 299 Pn Pn 16 37 09.3 0.0
O14K Tigyukauivet M 6.99 299 P Pn 16 37 09.2 0.0
baz=110
P29M Windy Craggy 7.00 57 Pn 16 37 07.7 -1.7
P29M Windy Craggy 7.00 57 P Pn 16 37 07.7 -1.7
baz=246
PS1A Pavlof South-1 7.02 267 Pn 16 37 08.6 -1.3
RND Reindeer 7.07 2 Pn Pn 16 37 10.3 -0.3
TRF Thorofare Moun 7.13 357 Pn 16 37 11.2 -0.2
TRF Thorofare Moun 7.13 357 P Pn 16 37 11.1 -0.3
baz=176
PN7A Pavlof North-7 7.16 268 Pn 16 37 10.2 -1.6
MENT Mentasta 7.19 21 P Pn 16 37 11.1 -1.0
KTH Kantishna Hill 7.26 354 Pn Pn 16 37 13.4 +0.3
S31K Pelican 7.32 72 Pn Pn 16 37 09.8 -4.0
S31K Pelican 7.32 72 P Pn 16 37 10.2 -3.6
baz=262
L26K Log Cabin Wild 7.34 22 Pn 16 37 15.6 +1.4
M15K Kasigluk River 7.34 311 Pn 16 37 13.1 -1.1
TTA Tatalina 7.40 336 P Pn 16 37 13.6 -1.4
K20K Telida 7.41 343 Pn 16 37 14.1 -1.0
N14K Kuskokwak Cree 7.43 304 Pn 16 37 14.8 -0.5
L16K Owhat River 7.47 320 Pn Pn 16 37 15.2 -0.7
L16K Owhat River 7.47 320 P Pn 16 37 15.1 -0.9
baz=132
HYT Haines Junctio 7.64 49 Pn Pn 16 37 18.4 0.0
BCAR Beaver Creek A 7.74 27 Pn Pn 16 37 19.9 +0.2
RIDG Independent Ri 7.74 15 Pn Pn 16 37 20.5 +0.8
SIT Sitka 7.76 79 Pn Pn 16 37 15.0 -4.9
BPAW Bear Paw Mtn. 7.81 355 Pn Pn 16 37 20.8 +0.2
K17K Iditarod 7.82 328 Pn 16 37 19.0 -1.7
M14K Bethel 7.92 309 Pn Pn 16 37 22.4 +0.4
SKAG Skagway 8.09 62 Pn Pn 16 37 23.7 -0.7
SKAG Skagway 8.09 62 P Pn 16 37 23.6 -0.8
FALS False Pass 8.10 265 Pn 16 37 22.7 -1.8
FALS False Pass 8.10 265 P Pn 16 37 22.9 -1.6
FALS False Pass 8.10 265 P Pn 16 37 22.9 -1.6
baz=74
BESE Bessie Mountai 8.13 68 Pn 16 37 22.6 -2.5
HDA Harding Lake 8.16 7 Pn 16 37 25.2 -0.2
S32K Killisnoo 8.17 76 Pn Pn 16 37 22.1 -3.4
S32K Killisnoo 8.17 76 P Pn 16 37 22.1 -3.4
baz=268
JIS Juneau Island 8.34 70 Pn Pn 16 37 25.7 -2.0
JIS Juneau Island 8.34 70 P Pn 16 37 26.6 -1.1
BRPK Brown Peak 8.34 264 Pn 16 37 25.5 -2.3
CCB Clear Creek Bu 8.35 5 Pn Pn 16 37 26.9 -1.1
IL31 8.53 7 Pn Pn 16 37 30.8 +0.5
ILAR Eielson Array 8.53 7 Pn Pn 16 37 30.3 -0.1
comp=N,1.4nm,0.3s,baz=188,slow=13,SNR=14
ILAR Sn Sn 16 39 02.2 -4.3
comp=N,1.1nm,0.3s,baz=315,slow=4.2,SNR=5.4
ILAR LR LR 16 40 59.9
comp=N,1µm,20.0s,baz=158,slow=39
COLA College 8.57 4 Pn Pn 16 37 30.5 -0.5
COLA College 8.57 4 P Pn 16 37 30.7 -0.3
MDM Murphy Dome 8.65 3 Pn 16 37 31.6 -0.4
N31M Braeburn, Yuko 8.70 48 Pn Pn 16 37 32.2 -0.6
WHY Whitehorse 8.72 54 Pn 16 37 31.5 -1.6
I23K Minto, Yukon-K 8.82 0 Pn Pn 16 37 33.8 -0.5
POKR Poker Plat Res 8.84 5 Pn Pn 16 37 33.0 -1.6
M30M Minto, Yukon 8.92 41 Pn Pn 16 37 36.1 +0.3
P32M Atlin 8.92 62 Pn 16 37 34.1 -1.8
P32M Atlin 8.92 62 P Pn 16 37 34.0 -1.8
baz=255
I21K Tanana 8.94 353 Pn Pn 16 37 35.1 -0.9
U33K Whale Pass 9.05 85 Pn Pn 16 37 33.0 -4.6
CRAG Craig 9.17 89 P Pn 16 37 36.4 -2.8
DAWY Dawson 9.17 29 Pn 16 37 39.7 +0.4
AKUT Akutan 9.63 263 Pn Pn 16 37 42.7 -2.8
M31M Drury Creek, Y 9.63 46 Pn Pn 16 37 44.9 -0.6
J29N Klondike Camp 9.80 30 Pn Pn 16 37 48.5 +0.7
IMAR Indian Mountai 9.88 350 Pn Pn 16 37 49.3 +0.3
FARO Faro, Yukon 10.07 48 Pn Pn 16 37 51.8 +0.3
UNV Unalaska Valle 10.14 263 P Pn 16 37 49.8 -2.6
G21K Allakaket 10.38 351 Pn 16 37 56.4 +0.6
J30M Hart River 10.43 33 Pn 16 37 57.3 +0.7
T35M Bob Quinn 10.54 79 Pn Pn 16 37 56.5 -1.4
DLBC Dease Lake 10.64 71 Pn Pn 16 37 58.0 -1.4
DLBC Dease Lake 10.64 71 Pn Pn 16 37 58.9 -0.5
comp=N,0.9nm,0.3s,baz=255,slow=5.9,SNR=10
DLBC LR LR 16 41 22.8
comp=N,1µm,21.4s,baz=275,slow=34
comp=N,2.6nm,0.3s
BMAR Burnt Mountain 11.33 9 Pn Pn 16 38 08.4 -0.3
ANM Nome 11.37 323 Pn Pn 16 38 10.1 +0.8
E25K Arctic Village 11.93 7 Pn Pn 16 38 16.6 -0.3
F28M Old Crow 12.12 18 Pn Pn 16 38 21.0 +1.5
BBB Bella Bella 13.09 100 LR LR 16 42 22.9
comp=N,1µm,19.3s,baz=280,slow=32
INK Inuvik 13.99 25 Pn Pn 16 38 45.4 +0.4
INK Inuvik 13.99 25 Pn Pn 16 38 46.9 +1.9
comp=N,0.3nm,0.3s,baz=209,slow=13,SNR=10.0
INK LR LR 16 44 10.5
comp=N,341nm,22.0s,baz=184,slow=38
comp=N,6.7nm,0.9s
ADK Adak 16.57 266 Pn Pn 16 39 16.5 -2.6
KIWB Kanaga Island 16.84 266 Pn Pn 16 39 20.3 -2.3
BRLDA Berland Lookou 18.29 84 P Pn 16 39 38.6 -2.0
YKA Yellowknife Ar 18.54 56 P P 16 39 42.4 -1.0
YKA Yellowknife Ar 18.54 56 P P 16 39 43.9 +0.6
comp=N,0.1nm,0.3s,baz=266,slow=10,SNR=8.6
YKA LR LR 16 46 38.6
comp=N,355nm,19.3s,baz=274,slow=36
comp=N,1.4nm,0.9s
A36M Sachs Harbour 18.63 23 P 16 39 43.8 -0.5
A36M IAmb IAmb 16 39 49.4
comp=Z,35nm,0.8s
E07A Sunnyside 20.69 106 P P 16 40 02.2 -4.8
NEW Newport 21.15 99 P P 16 40 13.7 +1.7
comp=Z,3.3nm,0.8s,baz=38,slow=3.9,SNR=5.5
NEW LR LR 16 47 06.6
comp=Z,476nm,21.8s,baz=288,slow=33

comp=Z,3.3nm,0.8s
E08A Dider Farm, El 21.16 105 P P 16 40 08.9 -3.1
DBO Dodson Butte 21.30 117 P P 16 40 10.9 -2.7
SHEM Shemya Is, Ala 21.33 276 LR LR 16 49 12.7
comp=Z,256nm,18.6s,baz=346,slow=39
HUMO Hull Mountain 21.82 118 P P 16 40 17.7 -1.4
HUMO IAmb IAmb 16 40 22.3
comp=Z,15nm,0.8s
J05D Fort Rock, OR 22.18 114 P P 16 40 21.9 -1.4
J05D IAmb IAmb 16 40 26.1
comp=Z,23nm,1.0s
YBH Yreka Blue Hor 22.59 119 P P 16 40 29.5 +1.9
comp=Z,3.2nm,0.8s,baz=22,slow=6.7,SNR=6.7
YBH LR LR 16 47 00.1
comp=Z,491nm,19.5s,baz=306,slow=31
comp=Z,3.2nm,0.8s
K05A Summer Lake 22.76 115 P P 16 40 25.9 -3.6
K05A IAmb IAmb 16 40 39.6
comp=Z,53nm,1.5s
ELK Elko 27.10 111 LR LR 16 50 16.7
comp=Z,236nm,18.0s,baz=292,slow=33
NVAR Mina Array Bea 27.29 118 P P 16 41 13.6 +1.8
comp=Z,2.5nm,0.8s,baz=303,slow=9.2,SNR=17
NVAR LR LR 16 50 16.4
comp=Z,409nm,18.1s,baz=308,slow=32
comp=Z,2.5nm,0.8s
RES Resolute Bay 27.52 28 LR LR 16 52 43.2
comp=Z,33nm,18.4s,baz=209,slow=38
PDAR Pinedale Array 28.73 101 P P 16 41 23.4 -1.1
comp=Z,0.7nm,0.8s,baz=330,slow=5.1,SNR=5.7
PDAR LR LR 16 51 55.9
comp=Z,119nm,18.1s,baz=319,slow=34
comp=Z,0.7nm,0.8s
SEY Seymchan 29.22 307 LR LR 16 53 55.1
comp=Z,376nm,18.6s,baz=57,slow=38
PETK Petropavlovsk- 30.11 286 P P 16 41 35.9 -0.5
comp=Z,4.6nm,1.0s,baz=69,slow=13,SNR=14
PETK LR LR 16 55 08.4
comp=Z,114nm,18.2s,baz=89,slow=39
comp=Z,4.6nm,1.0s
ULM Lac du Bonnet 31.84 78 P P 16 41 53.1 +1.5
comp=Z,3.1nm,0.9s,baz=295,slow=7.8,SNR=5.1
ULM LR LR 16 54 28.0
comp=Z,596nm,18.7s,baz=293,slow=36
comp=Z,3.1nm,0.9s
EYMN Ely 35.51 79 P P 16 42 21.4 -2.2
EYMN IAmb IAmb 16 42 26.6
comp=Z,8.0nm,0.9s
TIXI Tiksi 35.58 327 LR LR 16 59 29.9
comp=Z,79nm,18.4s,baz=139,slow=41
ANMO Albuquerque 36.04 108 LR LR 16 57 29.3
comp=Z,110nm,19.5s,baz=41,slow=37
NEEM North Greenlan 37.52 21 *i* P P 16 42 41.4 +0.6
NEEM IAmb IAmb 16 42 51.2
comp=Z,14nm,1.2s
FRB Frobisher Bay 38.41 45 LR LR 16 57 45.2
comp=Z,107nm,18.9s,baz=205,slow=35
YAK Yakutsk 39.29 313 LR LR 17 02 02.4
comp=Z,144nm,18.2s,baz=77,slow=41
TXAR Lajitas Array 41.90 111 P P 16 43 17.8 +0.2
comp=Z,1.4nm,0.9s,baz=316,slow=6.9,SNR=11
comp=Z,1.4nm,0.9s
SUMG Summit 42.92 24 *i* P P 16 43 26.4 +0.7
SUMG IAmb IAmb 16 43 28.7
comp=Z,7.8nm,0.9s
LPIG La Paz 42.92 122 LR LR 16 59 44.6
comp=Z,96nm,18.4s,baz=330,slow=34
SFJD Kangerlussuaq 43.06 35 LR LR 17 01 07.4
comp=Z,144nm,19.4s,baz=310,slow=36
ASAJ Asahikawa 43.42 284 LR LR 17 03 20.4
comp=Z,119nm,18.2s,baz=220,slow=39
SCHQ Schefferville 43.99 56 LR LR 17 01 51.1
comp=Z,168nm,18.0s,baz=269,slow=36
SADO Sadowa 44.17 74 LR LR 17 01 41.5
comp=Z,181nm,18.2s,baz=21,slow=36
ICESG Greenland Ices 44.93 29 *i* P P 16 43 43.0 +1.2
SPITS Spitsbergen Ar 45.43 4 LR LR 17 02 00.3
comp=Z,110nm,21.5s,baz=315,slow=35
KLR Kul'dur 45.75 296 LR LR 17 05 30.7
comp=Z,208nm,18.1s,baz=65,slow=40
NRIK Noril'sk 48.02 336 P P 16 44 06.5 +1.0
comp=Z,2.4nm,0.4s,baz=64,slow=6.1,SNR=3.9
NRIK LR LR 17 06 08.3
comp=Z,108nm,19.3s,baz=48,slow=38
comp=Z,2.4nm,0.4s
H11N2 WAKE ISLAND Hy 48.88 240 T T 17 36 54.5
baz=30,slow=76,SNR=57
H11N3 WAKE ISLAND Hy 48.88 240 T T 17 36 51.6
baz=30,slow=76,SNR=48
H11N1 WAKE ISLAND Hy 48.90 240 T T 17 36 53.2
baz=30,slow=76,SNR=54
USRK Ussuriysk Ar. 49.00 291 LR LR 17 04 58.4
comp=Z,228nm,21.7s,baz=41,slow=36
JMIC Jan Mayen 49.95 16 LR LR 17 08 16.6
comp=Z,46nm,18.7s,baz=265,slow=40
H11S1 WAKE ISLAND Hy 50.02 239 T T 17 38 17.4
baz=30,slow=76,SNR=62
H11S2 WAKE ISLAND Hy 50.03 239 T T 17 38 15.9
baz=30,slow=76,SNR=68
H11S3 WAKE ISLAND Hy 50.04 239 T T 17 38 18.3
baz=30,slow=76,SNR=71
BORG Borgarnes 52.89 25 LR LR 17 06 41.0
comp=Z,205nm,18.1s,baz=332,slow=36
ARCES ARCESS Array B 54.35 2 P P 16 44 51.3 -1.8
ARCES ARCESS Array B 54.35 2 P P 16 44 52.5 -0.6
comp=Z,4.4nm,0.9s,baz=359,slow=6.2,SNR=5.7
ARCES LR LR 17 10 04.4
comp=Z,46nm,18.3s,baz=344,slow=38
comp=Z,4.4nm,0.9s
KSRS Korea Array 55.99 288 P P 16 45 05.8 +0.4
comp=Z,1.2nm,0.7s,baz=41,slow=8.1,SNR=2.1
KSRS LR LR 17 07 38.7
comp=Z,69nm,21.9s,baz=40,slow=34
comp=Z,1.2nm,0.7s
JCJ Chichijima 56.04 269 LR LR 17 07 10.4
comp=Z,40nm,21.8s,baz=123,slow=34
CMIG Matias Romero 56.50 111 LR LR 17 09 19.4
comp=Z,90nm,18.7s,baz=9.5,slow=36
TEIG Tepich 57.44 103 LR LR 17 11 24.5
comp=Z,690nm,21.0s,baz=6.5,slow=38
JNU Nakatsue 57.66 282 LR LR 17 09 02.7
comp=Z,64nm,21.8s,baz=54,slow=35
SONM Songino Array 58.55 310 P P 16 45 22.0 -1.5
SONM IAmb IAmb 16 45 51.9
comp=Z,4.4nm,1.2s
SONM Songino Array 58.55 310 P P 16 45 24.6 +1.1
comp=Z,2.3nm,0.9s,baz=47,slow=6.0,SNR=14
SONM LR LR 17 09 58.2
comp=Z,126nm,19.8s,baz=7.5,slow=35
comp=Z,2.3nm,0.9s
ZAA0 Zalesovo Array 61.47 327 P P 16 45 41.2 -2.0
ZAA0 IAmb IAmb 16 45 45.9
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 61.47 327 P P 16 45 42.0 -1.2
ZALV Zalesovo Beam 61.47 327 P P 16 45 44.9 +1.7
comp=Z,1.9nm,0.6s,baz=40,slow=7.6,SNR=10
ZALV LR LR 17 16 25.7
comp=Z,86nm,18.7s,baz=30,slow=40
comp=Z,1.9nm,0.6s
MTO3 Montecristo 61.65 108 P P 16 45 41.0 -4.1
NOA NORSAR Array B 61.95 11 P P 16 45 46.0 -0.4
comp=Z,1.3nm,0.7s,baz=348,slow=6.7,SNR=4.6
NOA LR LR 17 13 12.3
comp=Z,31nm,21.7s,baz=355,slow=37
comp=Z,1.3nm,0.7s
FIA1 FINESS Array S 62.48 2 P P 16 45 49.3 -0.6
FINES FINESS Array B 62.48 2 P P 16 45 49.5 -0.4
FINES FINESS Array B 62.48 2 P P 16 45 50.1 +0.2
comp=Z,3.4nm,0.7s,baz=358,slow=7.8,SNR=15
comp=Z,3.4nm,0.7s
HFS Hagfors 63.08 9 P P 16 45 54.2 +0.3
comp=Z,2.6nm,0.9s,baz=338,slow=9.9,SNR=4.0
HFS LR LR 17 16 05.5
comp=Z,42nm,18.1s,baz=342,slow=39
comp=Z,2.6nm,0.9s
KIRV Kirov 64.42 349 LR LR 17 16 20.7
comp=Z,88nm,19.1s,baz=4.4,slow=38
ARU Arti 65.31 343 P P 16 46 08.4 -0.3
ARU IAmb IAmb 16 46 11.0
comp=Z,2.9nm,0.7s
ARU Arti 65.31 343 LR LR 17 15 36.7
comp=Z,105nm,21.4s,baz=5.0,slow=37
EKA Eskdalemuir Ar 65.32 20 P P 16 46 08.1 -0.6
comp=Z,1.4nm,0.8s,baz=323,slow=4.6,SNR=3.0
comp=Z,1.4nm,0.8s
BVAR Borovoye Array 66.19 335 P P 16 46 15.4 +1.0
comp=Z,0.9nm,0.7s
BVAR LR LR 17 18 24.2

comp=Z,136nm,19.9s,baz=24,slow=39
comp=Z,0.9nm,0.7s
KURBB Kurchatov Arra 66.25 329 P **P** **16 46 15.3 +0.6**
comp=Z,0.7nm,0.6s,baz=30,slow=6.6,SNR=5.9
KURBB LR LR 17 18 11.6
comp=Z,118nm,19.6s,baz=165,slow=39
comp=Z,0.7nm,0.6s
JTS Las Juntas de 67.42 106 LR LR 17 17 58.9
comp=Z,72nm,18.9s,baz=312,slow=38
PABE Paberze 68.36 4 P P 16 46 26.1 -1.9
MK31 Makanchi Array 68.50 325 P P 16 46 27.2 -1.9
MKAR Makanchi Array 68.50 325 P P 16 46 26.1 -3.1
MKAR Makanchi Array 68.50 325 P **P** **16 46 29.0 -0.1**
comp=Z,0.9nm,0.5s,baz=37,slow=5.9,SNR=17
MKAR LR LR 17 18 14.4
comp=Z,97nm,19.1s,baz=36,slow=38
comp=Z,0.9nm,0.5s
MAKZ Makanchi 68.59 325 P **P** **16 46 30.7 +1.0**
MAKZ IAmb IAmb 16 46 32.1
comp=Z,2.2nm,0.8s
BELG Belogornoye 70.71 349 LR LR 17 19 18.6
comp=Z,114nm,19.7s,baz=359,slow=37
AKTO Aktyubinsk 71.17 342 LR LR 17 21 47.4
comp=Z,65nm,18.2s,baz=51,slow=39
SJG San Juan 71.39 85 LR LR 17 18 18.1
comp=Z,47nm,20.4s,baz=141,slow=36
CLL Collm 71.71 12 eP **P** **16 46 50.0 +1.3**
AKASG Malin Array Be 73.30 1 P **P** **16 46 58.4 +0.3**
comp=Z,2.6nm,0.6s,baz=0.8,slow=5.9,SNR=12
AKASG LR LR 17 19 02.1
comp=Z,42nm,21.6s,baz=20,slow=36
comp=Z,2.6nm,0.6s
AKBB Malin Array Si 73.30 1 P P 16 46 56.2 -1.9
AKBB IAmb IAmb 16 47 00.5
comp=Z,5.4nm,0.8s
KIEV Kiev 73.31 1 P P 16 46 56.2 -2.0
KIEV IAmb IAmb 16 47 00.4
comp=Z,4.9nm,0.8s
PPT Papeete 73.64 180 LR LR 17 11 42.8
comp=Z,214nm,19.1s,baz=346,slow=30
VRAC Vranov 74.05 10 LR LR 17 21 53.3
comp=Z,21nm,18.5s,baz=342,slow=38
GERES GERESS Array B 74.22 12 P **P** **16 47 04.2 +0.5**
comp=Z,0.9nm,0.5s,baz=360,slow=6.0,SNR=5.2
GERES LR LR 17 23 10.2
comp=Z,46nm,18.0s,baz=311,slow=39
comp=Z,0.9nm,0.5s
AAK Ala-Archa 74.66 328 LR LR 17 23 35.1
comp=Z,102nm,18.7s,baz=24,slow=39
CONA Conrad Observa 75.35 10 *e*pP **P** **16 47 12.4 +2.1**
comp=Z,1.2nm,0.6s
MOTA Moosalm 75.38 14 *e*pP **P** **16 47 13.6 +3.0**
comp=Z,0.2nm,0.3s
DAVOX Davos/Dischmat 75.77 15 LR LR 17 24 56.1
comp=Z,41nm,18.1s,baz=352,slow=39
SDV Santo Domingo 76.41 94 LR LR 17 23 08.6
comp=Z,52nm,19.0s,baz=258,slow=38
KSH Kashi 77.06 326 P **P** **16 47 23.9 +3.7**
KSH pmax pmax
comp=Z,2.0nm,1.1s
ROSC El Rosal 77.72 100 LR LR 17 23 09.2
comp=Z,70nm,21.9s,baz=144,slow=37
MLR Muntele Rosu 78.44 3 LR LR 17 23 21.8
comp=Z,40nm,18.2s,baz=43,slow=37
PCRV Puerto La Cruz 78.69 89 LR LR 17 23 31.5
comp=Z,85nm,19.0s,slow=37
KBZ Khabaz 79.75 351 LR LR 17 25 30.1
comp=Z,71nm,20.6s,baz=13,slow=38
DAV Davao City (W) 81.42 270 LR LR 17 18 08.8
comp=Z,38nm,21.4s,baz=348,slow=32
GNI Garni 83.12 349 LR LR 17 29 09.2
comp=Z,54nm,19.1s,baz=26,slow=39
GEYT Alibeck 83.22 338 LR LR 17 30 46.1
comp=Z,51nm,18.6s,baz=1.5,slow=40
BRTR Keskin Array B 84.25 358 P **P** **16 48 00.1 +1.4**
comp=Z,0.6nm,0.7s,baz=29,slow=6.8,SNR=2.6
comp=Z,0.6nm,0.7s
VAE Valguarnera 85.51 13 LR LR 17 30 15.6
comp=Z,23nm,18.2s,baz=332,slow=38
ATAH Atahualpa 85.55 110 LR LR 17 26 21.7
comp=Z,50nm,18.6s,baz=5.6,slow=36
CMAR Chiang Mai Arr 86.20 298 P **P** **16 48 08.2 -0.4**
comp=Z,0.7nm,0.6s,baz=12,slow=5.0,SNR=7.0
CMAR LR LR 17 30 46.4
comp=Z,56nm,18.7s,baz=15,slow=38
comp=Z,0.7nm,0.6s
MDT Midelt 86.25 29 LR LR 17 26 53.0
comp=Z,49nm,19.0s,baz=348,slow=36
KEST Kesra 86.50 17 LR LR 17 29 07.8
comp=Z,46nm,19.7s,baz=326,slow=37
MMAI Mount Meron Ar 90.89 356 LR LR 17 36 03.2
comp=Z,30nm,18.9s,baz=330,slow=40
EIL Elat 94.23 356 LR LR 17 38 34.6
comp=Z,27nm,18.2s,baz=340,slow=40
BOSA Boshof 152.01 10 PKPbc **PKPbc** **16 55 22.9 +0.8**
comp=Z,2.0nm,0.7s,baz=344,slow=2.7,SNR=6.1

*AEIC **03** 16:43:43.2±2.8,56°22N±0°09×149°3W±0°1,h12km±7km, Error ellipse: s-maj=13.5km s-min=9.1km az=173.0*
NEIC 03 16:43:36.9±1.7,**56°02N**±0°09×**149°2W**±0°1,**h24**km±9km, **mb4.2**/3,**ML3.5**/32,**ML3.1**(AEIC), **Error ellipse: s-maj=13.7km s-min=9.6km az=178.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.55**	**300**		Pn	16 44 16.9	+0.1
KDAK	**Kodiak Island**	**2.56**	**315**		Pn	16 44 16.7	-0.1
KDAK					Sn	16 44 43.7	-3.4
SII	**Sitkinak Islan**	**2.82**	**283**	Pn	Pn	16 44 19.2	-1.2
SII				IAML		16 44 51.1	
	comp=N,111nm,1.1s						
SII				IAML		16 46 05.2	
	comp=E,154nm,1.2s						
SYI	**Shuyak Island**	**3.12**	**328**		Pn	16 44 25.5	+1.1
SYI	**Shuyak Island**	**3.12**	**328**		Sn	16 44 58.7	-2.2
SYI	**Shuyak Island**	**3.12**	**328**	IAML		16 44 55.4	
	comp=N,26nm,1.0s						
CNPM	**China Poot**	**3.68**	**344**		Pn	16 44 32.3	+0.1
CNPM					Sn	16 45 10.8	-4.0
Q23K	**Middleton Isla**	**3.75**	**23**		Pn	16 44 33.0	-0.1
Q23K	**Middleton Isla**	**3.75**	**23**	IAML		16 45 27.3	
	comp=N,140nm,1.1s						
MID	**Middleton Isla**	**3.75**	**23**	Pn	Pn	16 44 33.7	+0.6
Q19K	**Cape Douglas,**	**3.77**	**322**	Pn	Pn	16 44 31.9	-1.6
Q19K				IAML		16 46 29.7	
	comp=N,109nm,1.1s						
BRSE	**Bradley Lake S**	**3.82**	**348**		Pn	16 44 33.9	-0.2
BRLK	**Bradley Lake**	**3.86**	**347**		Pn	16 44 34.7	0.0
HOM	**Homer**	**3.87**	**341**	Pn	Pn	16 44 35.3	+0.5
SEW	**Seward**	**4.10**	**358**		Pn	16 44 37.8	-0.1
P23K	**Montague Islan**	**4.10**	**13**		Pn	16 44 38.7	+0.7
O22K	**Cooper Landing**	**4.48**	**357**		Pn	16 44 43.7	+0.5
O22K	**Cooper Landing**	**4.48**	**357**	IAML		16 45 59.7	
	comp=E,32nm,1.1s						
O22K				IAML		16 46 14.9	
	comp=N,43nm,1.1s						
IVE	**Iliamna Volcan**	**4.49**	**335**		Pn	16 44 43.5	0.0
SLKM	**Skilak Lake**	**4.53**	**354**		Pn	16 44 44.0	0.0
HIN	**Hinchinbrook I**	**4.62**	**17**		Pn	16 44 45.8	+0.7
HIN					Sn	16 45 32.9	-5.1
HIN	**Hinchinbrook I**	**4.62**	**17**	IAML		16 45 56.9	
	comp=N,44nm,1.2s						
HIN				IAML		16 46 24.2	
	comp=E,32nm,1.1s						
EYAK	**Cordova Ski Ar**	**4.89**	**20**		Pn	16 44 49.9	+1.1
EYAK					Sn	16 45 40.9	-3.8
FID	**Port Fidalgo**	**4.96**	**16**		Pn	16 44 50.4	+0.6
SUCK	**Suckling Hills**	**4.98**	**33**		Pn	16 44 52.1	+2.0
SUCK	**Suckling Hills**	**4.98**	**33**	IAML		16 47 54.3	
	comp=N,23nm,1.2s						
SUCK				IAML		16 48 11.4	
	comp=E,24nm,1.1s						
RAGM	**Ragged Mountai**	**4.99**	**27**	Pn	Pn	16 44 50.2	-0.1
RAGM				IAML		16 46 29.7	
	comp=N,54nm,1.2s						
RAGM				IAML		16 47 15.5	
	comp=E,27nm,1.2s						
HMT	**Hamilton**	**5.06**	**29**		Pn	16 44 52.9	+1.7
HMT	**Hamilton**	**5.06**	**29**	IAML		16 45 46.0	
	comp=E,31nm,1.1s						
HMT				IAML		16 45 56.7	
	comp=N,25nm,0.9s						
NICHA	**Nichawak Mount**	**5.06**	**31**		Pn	16 44 53.2	+2.0
GOAT	**Goat Mountain**	**5.15**	**25**		Pn	16 44 54.1	+1.7
CHGN	**Chignik**	**5.15**	**277**	Pn	Pn	16 44 52.7	+0.3
BERG	**Berg Lake**	**5.26**	**31**		Pn	16 44 55.8	+1.8
BERG	**Berg Lake**	**5.26**	**31**	IAML		16 45 45.4	
	comp=N,20nm,1.2s						
BERG				IAML		16 46 04.6	
	comp=E,29nm,1.2s						
BMRM	**Bremner River**	**5.52**	**24**		Pn	16 44 59.0	+1.5
MESA	**MESA**	**5.67**	**40**	Pn	Pn	16 44 57.9	-1.8
KLU	**Klutina**	**5.75**	**16**		Pn	16 45 02.0	+1.3
GHO	**Glory Hole Cre**	**5.77**	**1**		Pn	16 45 02.1	+1.1
SML	**Sawmill**	**5.82**	**4**	Pn	Pn	16 45 02.1	+0.5
N18K	**Kilae Creek**	**5.84**	**326**	Pn	Pn	16 45 02.7	+0.7
BAGL	**Bagley Icefiel**	**5.85**	**37**		Pn	16 45 04.3	+2.4
ISLE	**Juniper Island**	**5.85**	**35**		Pn	16 45 04.2	+2.1
SCM	**Sheep Creek Mo**	**5.91**	**9**	Pn	Pn	16 45 04.6	+1.7
VRDI	**Verde Repeater**	**6.02**	**28**	Pn	Pn	16 45 04.8	+0.2
KIAG	**Kiagna River**	**6.09**	**33**		Pn	16 45 07.2	+1.8
N25K	**Chitina, Valde**	**6.09**	**21**		Pn	16 45 07.1	+1.7
GLB	**Gilahina Butte**	**6.12**	**25**		Pn	16 45 07.6	+1.9
L19K	**White Mountain**	**6.83**	**337**	Pn	Pn	16 45 16.1	+0.7
M17K	**Holitna River**	**6.88**	**325**	Pn	Pn	16 45 14.7	-1.5
O29M	**Mount Kennedy**	**7.07**	**48**	Pn	Pn	16 45 18.9	0.0
RND	**Reindeer**	**7.41**	**1**	Pn	Pn	16 45 23.0	-0.5
K20K	**Telida**	**7.76**	**344**	Pn	Pn	16 45 26.1	-2.0
L16K	**Owhat River**	**7.79**	**321**	Pn	Pn	16 45 26.4	-2.2
I23K	**Minto, Yukon-K**	**9.16**	**360**	Pn	Pn	16 45 46.9	-0.4
EGAK	**Eagle**	**9.63**	**21**	Pn	Pn	16 45 50.6	-3.2
IMAR	**Indian Mountai**	**10.23**	**349**	Pn	Pn	16 46 02.4	+0.4
BMAR	**Burnt Mountain**	**11.65**	**9**	Pn	Pn	16 46 19.2	-2.2
CLRS	**Cowichan Lake**	**16.84**	**105**	Pn	Pn	16 47 30.7	-0.2
CLRS				IAmb	IAmb	16 47 58.8	
	comp=Z,36nm,1.5s						
NLWA	**Neilton Lookou**	**17.84**	**108**	Pn	Pn	16 47 39.1	-4.2
NLWA				IAmb	IAmb	16 48 11.1	
	comp=Z,31nm,1.5s						
A36M	**Sachs Harbour**	**18.91**	**23**	P	P	16 47 55.1	-0.2
A36M				IAmb	IAmb	16 47 57.0	
	comp=Z,9.5nm,0.9s						

*AEIC **03** 16:48:37.0±2.4,56°2N±0°1×149°35W±0°10,h7km±8km, Error ellipse: s-maj=15.5km s-min=7.3km az=169.0*
NEIC 03 16:48:34.8±2.4,**56°26N**±0°09×**149°4W**±0°1,**h23**km±9km, **mb3.9**/2,**ML3.2**/48,**ML3.1**(AEIC), **Error ellipse: s-maj=13.1km s-min=8.4km az=164.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.31**	**313**		Pn	16 49 11.6	+0.2
KDAK					Sn	16 49 38.2	-0.9
OHAK	**Old Harbor**	**2.35**	**296**		Pn	16 49 11.5	-0.4
OHAK					Sn	16 49 38.9	-1.1
SYI	**Shuyak Island**	**2.85**	**327**		Pn	16 49 19.2	+0.4
SYI	**Shuyak Island**	**2.85**	**327**		Sn	16 49 52.4	-0.1
SYI	**Shuyak Island**	**2.85**	**327**	IAML		16 49 48.7	
	comp=E,22nm,1.0s						
CNPM	**China Poot**	**3.42**	**344**		Pn	16 49 26.2	-0.4
CNPM					Sn	16 50 06.0	-0.4
CNPM	**China Poot**	**3.42**	**344**	IAML		16 50 10.1	
	comp=N,27nm,1.2s						
CNPM				IAML		16 50 34.9	
	comp=E,20nm,1.2s						
Q19K	**Cape Douglas,**	**3.52**	**321**		Pn	16 49 28.8	+0.8
BRSE	**Bradley Lake S**	**3.56**	**349**		Pn	16 49 28.3	-0.3
BRSE					Sn	16 50 08.3	-1.7
Q23K	**Middleton Isla**	**3.57**	**26**		Pn	16 49 28.6	0.0
BRLK	**Bradley Lake**	**3.60**	**348**		Pn	16 49 28.6	-0.5
BRLK	**Bradley Lake**	**3.60**	**348**	IAML		16 50 14.2	
	comp=N,21nm,1.0s						
BRLK				IAML		16 50 14.9	
	comp=E,21nm,1.1s						
HOM	**Homer**	**3.61**	**342**	Pn	Pn	16 49 26.7	-2.5
P23K	**Montague Islan**	**3.89**	**15**		Pn	16 49 32.9	-0.2
P19K	**Oil Pt**	**3.96**	**331**		Pn	16 49 34.2	0.0
P19K	**Oil Pt**	**3.96**	**331**	IAML		16 50 24.0	
	comp=N,48nm,1.0s						
P19K				IAML		16 50 25.5	
	comp=E,50nm,0.8s						
CNTC	**Contact Creek**	**4.05**	**302**		Pn	16 49 35.9	+0.5
IVE	**Iliamna Volcan**	**4.22**	**335**		Pn	16 49 37.6	-0.2
O22K	**Cooper Landing**	**4.24**	**358**		Pn	16 49 37.9	+0.1
O22K	**Cooper Landing**	**4.24**	**358**	IAML		16 50 32.7	
	comp=N,60nm,0.7s						
SLKM	**Skilak Lake**	**4.28**	**355**		Pn	16 49 38.2	-0.3
HIN	**Hinchinbrook I**	**4.42**	**19**		Pn	16 49 40.3	-0.1
HIN	**Hinchinbrook I**	**4.42**	**19**	IAML		16 50 30.6	
	comp=E,36nm,1.0s						
HIN				IAML		16 50 31.3	
	comp=N,41nm,1.0s						
KAIM	**Kayak Island**	**4.53**	**34**		Pn	16 49 41.3	-0.5
KAIM	**Kayak Island**	**4.53**	**34**	IAML		16 50 37.1	
	comp=E,45nm,1.0s						
KAIM				IAML		16 50 39.6	
	comp=N,45nm,1.1s						
RED	**Redoubt Volcan**	**4.53**	**338**		Pn	16 49 41.8	-0.1
RSO	**Redoubt South**	**4.57**	**339**		Pn	16 49 42.8	+0.2
EYAK	**Cordova Ski Ar**	**4.71**	**23**		Pn	16 49 44.4	+0.1
O19K	**Port Alsworth**	**4.72**	**329**		Pn	16 49 44.4	-0.1
O19K	**Port Alsworth**	**4.72**	**329**	IAML		16 50 46.8	
	comp=N,38nm,0.5s						
O18K	**Koktuh Hills**	**4.74**	**322**		Pn	16 49 44.8	0.0
O18K	**Koktuh Hills**	**4.74**	**322**	IAML		16 50 48.9	
	comp=E,8.8nm,1.0s						
RAGM	**Ragged Mountai**	**4.83**	**29**	Pn	Pn	16 49 47.0	+1.0
RAGM				IAML		16 50 59.3	
	comp=E,39nm,1.2s						
SUCK	**Suckling Hills**	**4.84**	**36**		Pn	16 49 46.1	-0.1
SUCK	**Suckling Hills**	**4.84**	**36**	IAML		16 50 41.1	
	comp=N,27nm,0.8s						
SUCK				IAML		16 52 39.1	
	comp=E,29nm,1.0s						
RC01	**Rabbit Creek A**	**4.84**	**358**		Pn	16 49 46.0	-0.2
RC01	**Rabbit Creek A**	**4.84**	**358**	IAML		16 50 41.9	
	comp=E,15nm,0.4s						
RC01				IAML		16 50 44.6	
	comp=N,15nm,0.7s						
HMT	**Hamilton**	**4.90**	**31**		Pn	16 49 47.3	+0.3
NICHA	**Nichawak Mount**	**4.91**	**34**		Pn	16 49 47.5	+0.3
GOAT	**Goat Mountain**	**4.98**	**28**		Pn	16 49 48.5	+0.4
BERG	**Berg Lake**	**5.12**	**34**	Pn	Pn	16 49 50.5	+0.6
BERG				IAML		16 50 54.8	
	comp=E,31nm,0.8s						
KNK	**Knik Glacier**	**5.19**	**5**		Pn	16 49 51.5	+0.5
KNK	**Knik Glacier**	**5.19**	**5**	IAML		16 50 52.7	
	comp=N,7.5nm,1.0s						
KNK				IAML		16 51 00.1	
	comp=E,9.2nm,0.9s						
SNH	**Sunshine Point**	**5.24**	**39**	Pn	Pn	16 49 53.6	+1.9
SNH				IAML		16 50 50.0	
	comp=N,26nm,1.1s						
SNH				IAML		16 50 59.5	
	comp=E,23nm,1.0s						
SUA	**Susitna One**	**5.26**	**353**	Pn	Pn	16 49 53.9	+1.9
SUA				IAML		16 51 28.7	
	comp=N,5.4nm,1.2s						
N19K	**Bonanza Creek**	**5.28**	**332**	Pn	Pn	16 49 51.7	-0.6
PMR	**Palmer**	**5.35**	**1**	Pn	Pn	16 49 48.5	-4.6
WAX	**Waxell Ridge**	**5.43**	**37**	Pn	Pn	16 49 51.7	-2.6
GHO	**Glory Hole Cre**	**5.53**	**2**	Pn	Pn	16 49 56.4	+0.7
KLU	**Klutina**	**5.55**	**18**	Pn	Pn	16 49 55.8	-0.1
MESA	**MESA**	**5.56**	**42**	Pn	Pn	16 49 53.9	-2.3
N18K	**Kilae Creek**	**5.58**	**325**	Pn	Pn	16 49 56.0	-0.4
SML	**Sawmill**	**5.59**	**5**	Pn	Pn	16 49 56.8	+0.3
SCM	**Sheep Creek Mo**	**5.69**	**10**	Pn	Pn	16 49 59.4	+1.5
O16K	**Kokwok River B**	**5.71**	**309**	Pn	Pn	16 49 58.9	+0.9
ISLE	**Juniper Island**	**5.72**	**38**	Pn	Pn	16 50 00.1	+1.8
SKT	**Skwentna**	**5.84**	**350**	Pn	Pn	16 49 60.0	+0.1
VRDI	**Verde Repeater**	**5.86**	**29**	Pn	Pn	16 50 01.1	+0.8
N25K	**Chitina, Valde**	**5.91**	**23**	Pn	Pn	16 50 02.0	+1.1
GLB	**Gilahina Butte**	**5.95**	**27**	Pn	Pn	16 50 02.5	+1.1
M20K	**Styx River**	**5.96**	**343**	Pn	Pn	16 49 59.0	-2.5
TABL	**Table Mountain**	**6.04**	**43**	Pn	Pn	16 50 02.1	-0.7
M24K	**Tolsona, Glenn**	**6.09**	**14**	Pn	Pn	16 50 04.2	+0.9
MCARA	**McCarthy VSAT**	**6.11**	**30**	Pn	Pn	16 50 04.8	+1.2
BARN	**Barnard Glacie**	**6.28**	**37**	Pn	Pn	16 50 04.0	-2.0
CTGM	**Chitina Glacie**	**6.32**	**38**	Pn	Pn	16 50 06.1	-0.5
LOGN	**Logan Glacier**	**6.34**	**40**	Pn	Pn	16 50 07.8	+0.8
L19K	**White Mountain**	**6.56**	**337**	Pn	Pn	16 50 09.2	-0.6
M17K	**Holitna River**	**6.63**	**324**	Pn	Pn	16 50 09.9	-0.8
N15K	**Kwethluk River**	**6.87**	**309**	Pn	Pn	16 50 14.0	0.0
DHY	**Denali Highway**	**6.91**	**8**	Pn	Pn	16 50 14.5	-0.2
O29M	**Mount Kennedy**	**7.00**	**50**	Pn	Pn	16 50 16.7	+0.8
P29M	**Windy Craggy**	**7.07**	**57**	Pn	Pn	16 50 16.7	0.0
RND	**Reindeer**	**7.17**	**2**	Pn	Pn	16 50 19.1	+0.9
M27K	**Edge Creek, AK**	**7.22**	**29**	Pn	Pn	16 50 18.9	0.0
TRF	**Thorofare Moun**	**7.22**	**357**	Pn	Pn	16 50 17.6	-1.4
CAST	**Castle Rocks**	**7.30**	**350**	Pn	Pn	16 50 21.0	+1.0
S31K	**Pelican**	**7.37**	**71**	Pn	Pn	16 50 19.4	-1.4
L16K	**Owhat River**	**7.54**	**321**	Pn	Pn	16 50 23.8	+0.7
K17K	**Iditarod**	**7.89**	**329**	Pn	Pn	16 50 27.9	-0.1
S32K	**Killisnoo**	**8.21**	**75**	Pn	Pn	16 50 31.1	-1.3
J20K	**Nowinta River**	**8.28**	**345**	Pn	Pn	16 50 33.0	-0.3
O30N	**Mendenhall**	**8.30**	**52**	Pn	Pn	16 50 31.8	-1.8
M29M	**Somme Creek**	**8.34**	**38**	Pn	Pn	16 50 35.7	+1.5
CCB	**Clear Creek Bu**	**8.45**	**5**	Pn	Pn	16 50 35.5	-0.1
MDM	**Murphy Dome**	**8.74**	**3**	Pn	Pn	16 50 39.4	-0.3
J26L	**Joseph Creek**	**8.75**	**17**	Pn	Pn	16 50 40.5	+0.7
WHY	**Whitehorse**	**8.79**	**54**	Pn	Pn	16 50 39.7	-0.7
P32M	**Atlin**	**8.98**	**62**	Pn	Pn	16 50 43.5	+0.5
H21K	**Melozitna Rive**	**9.57**	**351**	Pn	Pn	16 50 50.8	-0.1
P33M	**Teslin, Yukon**	**9.59**	**59**	Pn	Pn	16 50 49.0	-2.4
H24K	**Noodor Dome**	**9.64**	**4**	Pn	Pn	16 50 54.0	+2.1
IMAR	**Indian Mountai**	**9.97**	**350**	Pn	Pn	16 50 56.8	+0.3
FARO	**Faro, Yukon**	**10.15**	**47**	Pn	Pn	16 51 00.7	+1.7
G23K	**Bananza Creek**	**10.49**	**359**	Pn	Pn	16 51 01.0	-2.6
G24K	**Hadweenzic Riv**	**10.52**	**4**	Pn	Pn	16 51 04.8	+0.9
FYU	**Fort Yukon**	**10.53**	**9**	Pn	Pn	16 51 01.2	-2.8
BMAR	**Burnt Mountain**	**11.43**	**9**	Pn	Pn	16 51 15.6	-0.9
C36M	**Paulatuk**	**17.29**	**31**	Pn	Pn	16 52 32.3	-2.0
C36M				IAmb	IAmb	16 52 38.8	
	comp=Z,6.2nm,1.1s						
A36M	**Sachs Harbour**	**18.73**	**23**	P	P	16 52 47.7	-3.7
A36M				IAmb	IAmb	16 52 59.9	
	comp=Z,12nm,1.1s						

*IDC **03** 16:56:09.1±3.2,56°03N×149°46W,h0km,mb3.1/1, mbtmp2.9/4, ML2.7/3,MS2.9/1, Error ellipse: s-maj=48.1km s-min=37.7km az=161.0*
*NEIC **03** 16:56:12.0±1.8,56°32N±0°09×149°50W±0°10, h20km±10km,ML3.5/44,ML3.2(AEIC), Error ellipse: s-maj=13.9km s-min=7.5km az=168.0*
*AEIC **03** 16:56:14.2±2.4,56°19N±0°10×149°4W±0°1,h11km±8km, Error ellipse: s-maj=14.0km s-min=9.8km az=175.0*
ISC 03 16:56:11.4±1.5,**56°4N**±0°1×**149°46W**±0°06,**h10**km,**n98**, **σ0°95/88, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.21**	**311**		Pn	**16 56 48.1**	**0.0**
KDAK					Sn	**16 57 14.5**	**-0.9**
KDAK	**Kodiak Island**	**2.21**	**311**	Pn	Pn	**16 56 48.0**	**-0.1**
	1.3nm,0.3s,baz=122,slow=6.9,SNR=26						
KDAK				Sn	Sn	**16 57 13.6**	**-1.8**
	4.4nm,0.3s,baz=204,slow=20,SNR=2.5						
	7.3nm,0.8s						
OHAK	**Old Harbor**	**2.27**	**293**		Pn	**16 56 48.4**	**-0.5**
OHAK					Sn	**16 57 15.0**	**-1.9**
SYI	**Shuyak Island**	**2.74**	**326**		Pn	**16 56 54.9**	**-0.4**
SYI					Sn	**16 57 28.7**	**+0.2**
SYI	**Shuyak Island**	**2.74**	**326**	IAML		16 58 01.1	
	comp=E,70nm,0.4s						
CNPM	**China Poot**	**3.29**	**344**		Pn	**16 57 02.9**	**-0.1**
CNPM					Sn	**16 57 43.1**	**+0.9**
CNPM	**China Poot**	**3.29**	**344**	IAML		16 58 22.1	
	comp=E,42nm,1.1s						
Q19K	**Cape Douglas,**	**3.41**	**320**		Pn	**16 57 05.0**	**+0.5**
BRSE	**Bradley Lake S**	**3.44**	**349**		Pn	**16 57 04.8**	**-0.2**
BRLK	**Bradley Lake**	**3.48**	**348**	Pn	Pn	**16 57 04.2**	**-1.4**
BRLK				IAML		16 58 25.3	
	comp=E,41nm,0.8s						
Q23K	**Middleton Isla**	**3.48**	**27**	Pn	Pn	**16 57 04.9**	**-0.6**
Q23K				IAML		16 57 51.6	
	comp=E,168nm,1.1s						
Q23K				IAML		16 58 04.9	
	comp=N,184nm,0.9s						
MID	**Middleton Isla**	**3.48**	**27**	Pn	Pn	**16 57 05.0**	**-0.5**
MID				IAML		16 58 44.6	
	comp=E,176nm,1.1s						
ANCK	**Angle Creek**	**3.75**	**302**		Pn	**16 57 10.3**	**+1.1**
P23K	**Montague Islan**	**3.79**	**16**		Pn	**16 57 09.6**	**-0.2**
P19K	**Oil Pt**	**3.85**	**330**		Pn	**16 57 10.6**	**0.0**
P19K	**Oil Pt**	**3.85**	**330**	IAML		16 58 31.3	
	comp=E,112nm,0.5s						
P19K				IAML		16 58 32.0	
	comp=N,86nm,0.5s						
CNTC	**Contact Creek**	**3.96**	**301**		Pn	**16 57 12.9**	**+0.6**
IVE	**Iliamna Volcan**	**4.11**	**334**		Pn	**16 57 14.7**	**+0.5**
O22K	**Cooper Landing**	**4.12**	**358**		Pn	**16 57 14.5**	**+0.3**
P18K	**Big Mountain,**	**4.31**	**317**	Pn	Pn	**16 57 17.3**	**+0.3**
HIN	**Hinchinbrook I**	**4.32**	**20**		Pn	**16 57 16.7**	**-0.3**
HIN	**Hinchinbrook I**	**4.32**	**20**	IAML		16 58 37.0	
	comp=E,53nm,0.9s						
HIN				IAML		16 58 37.6	
	comp=N,57nm,0.5s						
RSO	**Redoubt South**	**4.45**	**338**	Pn	Pn	**16 57 18.7**	**-0.3**
KAIM	**Kayak Island**	**4.45**	**35**		Pn	**16 57 18.3**	**-0.5**
KAIM					Sn	**16 58 07.5**	**-3.1**
KAIM	**Kayak Island**	**4.45**	**35**	IAML		16 58 18.0	
	comp=N,82nm,1.2s						
KAIM				IAML		16 58 40.2	
	comp=E,66nm,1.1s						
O19K	**Port Alsworth**	**4.61**	**328**		Pn	**16 57 21.0**	**0.0**
O19K	**Port Alsworth**	**4.61**	**328**	IAML		16 58 45.7	
	comp=N,75nm,0.5s						
EYAK	**Cordova Ski Ar**	**4.61**	**23**		Pn	**16 57 20.9**	**-0.1**
O18K	**Koktuh Hills**	**4.63**	**321**		Pn	**16 57 21.5**	**+0.2**
O18K	**Koktuh Hills**	**4.63**	**321**	IAML		16 58 49.7	
	comp=E,16nm,0.7s						
O18K				IAML		16

ILAR	**Eielson Array**	**8.51**	**7**	Pn	**Pn**	**16 58 15.8**	**+1.2**
	comp=E,0.1nm,0.3s,baz=191,slow=13,SNR=5.9						
ILAR				Sn	**Sn**	**16 59 50.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=177,slow=20,SNR=2.8						
ILAR				LR	LR	17 01 46.0	
	comp=E,76nm,19.7s,baz=102,slow=38 comp=N,0.2nm,0.3s						
J26L	**Joseph Creek**	**8.65**	**17**	Pn	**Pn**	**16 58 16.5**	**0.0**
N31M	**Braeburn, Yuko**	**8.72**	**48**	Pn	**Pn**	**16 58 17.8**	**+0.3**
WHY	**Whitehorse**	**8.74**	**55**	Pn	**Pn**	**16 58 18.1**	**+0.3**
I23K	**Minto, Yukon-K**	**8.80**	**0**	Pn	**Pn**	**16 58 20.4**	**+2.0**
L29M	**L29M**	**8.83**	**36**	Pn	**Pn**	**16 58 20.2**	**+1.2**
P32M	**Atlin**	**8.96**	**62**	Pn	**Pn**	**16 58 19.7**	**-1.0**
H21K	**Melozitna Rive**	**9.45**	**352**	Pn	**Pn**	**16 58 28.1**	**+0.7**
H24K	**Noodor Dome**	**9.52**	**4**	Pn	**Pn**	**16 58 27.9**	**-0.5**
K29M	**Barlow Dome**	**9.55**	**34**	Pn	**Pn**	**16 58 28.9**	**0.0**
Q32M	**Nakina River**	**9.56**	**67**	Pn	**Pn**	**16 58 28.7**	**-0.4**
M31M	**Drury Creek, Y**	**9.65**	**47**	Pn	**Pn**	**16 58 31.3**	**+1.1**
IMAR	**Indian Mountai**	**9.85**	**350**	Pn	**Pn**	**16 58 33.3**	**+0.4**
R33M	**Jennings River**	**10.29**	**65**	Pn	Pn	16 58 36.7	-2.4
G23K	**Bananza Creek**	**10.37**	**359**	Pn	**Pn**	**16 58 38.8**	**-1.2**
G24K	**Hadweenzic Riv**	**10.40**	**4**	Pn	**Pn**	**16 58 40.0**	**-0.4**
DLBC	**Dease Lake**	**10.68**	**71**	Pn	**Pn**	**16 58 42.3**	**-2.0**
RUBB	**Prince Rupert**	**11.12**	**93**	Pn	Pn	**16 58 49.2**	**-1.0**
YKA	**Yellowknife Ar**	**18.57**	**56**	P	**P**	**17 00 28.8**	**+0.8**
	baz=264,slow=12,SNR=3.8 comp=E,0.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**48.85**	**240**	T	T	17 57 30.8	
	baz=30,slow=76,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**48.85**	**240**	T	T	17 57 30.6	
	baz=30,slow=76,SNR=6.8						
H11N1	**WAKE ISLAND Hy**	**48.87**	**240**	T	T	17 57 34.4	
	baz=30,slow=76,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**49.99**	**239**	T	T	17 58 58.5	
	baz=30,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**50.00**	**239**	T	T	17 58 59.7	
	baz=30,slow=76,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	**50.01**	**239**	T	T	17 59 00.4	
	baz=30,slow=76,SNR=9.2						
MKAR	**Makanchi Array**	**68.46**	**325**	P	**P**	**17 07 14.4**	**+1.2**
	comp=E,0.1nm,0.5s,baz=32,slow=6.0,SNR=4.7 comp=E,0.1nm,0.5s						

IDC ***03*** *17:26:31.9±1.4,56˚.16N×149˚.27W,h0km,mb3.6/6, mbtmp3.6/11,ML3.3/5,MS3.4/19,Error ellipse: s-maj=27.9km s-min=21.5km az=23.0*

NEIC ***03*** *17:26:32.0±2.1,56˚.17N±0˚.08×149˚.3W±0˚.1,h24km±8km, mb3.9/1,ML3.9/52,ML3.5(AEIC),Error ellipse: s-maj=11.9km s-min=8.2km az=172.0*

AEIC ***03*** *17:26:37.4±2.1,56˚.32N±0˚.08×149˚.25W±0˚.05,h10km±6km, Error ellipse: s-maj=12.1km s-min=3.8km az=174.0*

ISC 03 17:26:32.8±0.8,56˚.34N±0˚.08×149˚.36W±0˚.06,h10km, n261,σ1§14/211,mb3.9/7,MS3.3/15,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.28**	**311**	Pn	**Pn**	**17 27 10.0**	**-0.5**
KDAK	**Kodiak Island**	**2.28**	**311**	Pn	**Pn**	**17 27 10.2**	**-0.3**
	3.9nm,0.3s,baz=123,slow=5.6,SNR=40						
KDAK				Sn	**Sn**	**17 27 37.3**	**-1.2**
	8.0nm,0.3s,baz=12,slow=22,SNR=14 9.5nm,0.2s						
OHAK	**Old Harbor**	**2.33**	**294**	Pn	**Pn**	**17 27 09.9**	**-1.3**
OHAK	**Old Harbor**	**2.33**	**294**		**Sn**	**17 27 37.8**	**-2.1**
OHAK	**Old Harbor**	**2.33**	**294**	P	**Pn**	**17 27 10.5**	**-0.7**
	baz=110						
OHAK				S	**Sn**	**17 27 37.8**	**-2.1**
	baz=110						
SII	**Sitkinak Islan**	**2.69**	**277**	Pn	**Pn**	**17 27 14.5**	**-1.6**
SII				IAML		17 27 48.0	
	comp=E,320nm,1.6s						
SII				IAML		17 27 54.7	
	comp=N,314nm,1.2s						
SYI	**Shuyak Island**	**2.80**	**326**	Pn	**Pn**	**17 27 18.0**	**+0.3**
SYI	**Shuyak Island**	**2.80**	**326**		**Sn**	**17 27 51.2**	**-0.2**
Q20K	**Shuyak Island**	**2.80**	**326**	P	**Pn**	**17 27 17.5**	**-0.1**
	baz=142						
Q20K				S	**Sn**	**17 27 51.2**	**-0.2**
	baz=142						
CNPM	**China Poot**	**3.35**	**343**		**Pn**	**17 27 24.8**	**-0.3**
CNPM	**China Poot**	**3.35**	**343**		**Sn**	**17 28 04.0**	**-0.9**
CNPM	**China Poot**	**3.35**	**343**	IAML		17 28 05.1	
	comp=N,98nm,0.5s						
CNPM				IAML		17 28 19.0	
	comp=E,85nm,0.9s						
Q19K	**Cape Douglas,**	**3.47**	**320**	Pn	**Pn**	**17 27 28.1**	**+1.3**
Q19K				IAML		17 28 32.6	
	comp=N,326nm,0.9s						
Q19K	**Cape Douglas,**	**3.47**	**320**	P	**Pn**	**17 27 28.1**	**+1.3**
	baz=136						
BRSE	**Bradley Lake S**	**3.49**	**348**		**Pn**	**17 27 26.8**	**-0.4**
BRSE					**Sn**	**17 28 07.4**	**-1.1**
BRSE	**Bradley Lake S**	**3.49**	**348**	P	**Pn**	**17 27 26.8**	**-0.4**
	baz=166						
BRSE				S	**Sn**	**17 28 07.4**	**-1.1**
	baz=166						
Q23K	**Middleton Isla**	**3.49**	**26**	Pn	Pn	17 27 21.5	-5.6
Q23K				IAML		17 29 33.6	
	comp=N,303nm,1.8s						
Q23K	**Middleton Isla**	**3.49**	**26**	P	**Pn**	**17 27 26.8**	**-0.3**
	baz=208						
MID	**Middleton Isla**	**3.49**	**26**	Pn	Pn	17 27 21.4	-5.7
MID				IAML		17 28 06.5	
	comp=E,339nm,1.6s						
MID				IAML		17 29 19.5	
	comp=N,288nm,1.8s						
BRLK	**Bradley Lake**	**3.53**	**347**		**Pn**	**17 27 27.5**	**-0.2**
BRLK	**Bradley Lake**	**3.53**	**347**		**Sn**	**17 28 06.7**	**-2.8**
BRLK	**Bradley Lake**	**3.53**	**347**	IAML		17 28 07.6	
	comp=N,77nm,0.4s						
BRLK				IAML		17 28 15.5	
	comp=E,57nm,0.7s						
KAHG	**Katmai Hook Gl**	**3.54**	**310**		**Pn**	**17 27 29.3**	**+1.5**
SEW	**Seward**	**3.78**	**359**		**Pn**	**17 27 30.4**	**-0.5**
SEW	**Seward**	**3.78**	**359**	P	**Pn**	**17 27 30.5**	**-0.5**
	baz=178						
P23K	**Montague Islan**	**3.81**	**15**		**Pn**	**17 27 30.5**	**-1.0**
P23K	**Montague Islan**	**3.81**	**15**	P	**Pn**	**17 27 30.5**	**-1.0**
	baz=196						
ANCK	**Angle Creek**	**3.81**	**302**		**Pn**	**17 27 33.6**	**+1.9**
KAHC	**Katmai Hardscr**	**3.83**	**310**		**Pn**	**17 27 33.6**	**+1.7**
KAHC	**Katmai Hardscr**	**3.83**	**310**	P	**Pn**	**17 27 33.6**	**+1.7**
	baz=124						
P19K	**Oil Pt**	**3.91**	**330**	Pn	**Pn**	**17 27 33.2**	**+0.4**
P19K				IAML		17 28 25.1	
	comp=E,125nm,0.8s						
P19K				IAML		17 28 25.5	
	comp=N,138nm,0.6s						
P19K	**Oil Pt**	**3.91**	**330**	P	**Pn**	**17 27 33.7**	**+0.8**
	baz=146						
CNTC	**Contact Creek**	**4.03**	**301**		**Pn**	**17 27 36.0**	**+1.4**
Q17K	**Contact Creek**	**4.03**	**301**	P	**Pn**	**17 27 36.0**	**+1.4**
	baz=116						
Q22K	**Cooper Landing**	**4.16**	**358**	Pn	**Pn**	**17 27 35.3**	**-0.9**
IVE	**Iliamna Volcan**	**4.16**	**334**		**Pn**	**17 27 37.3**	**+0.8**
SLKM	**Skilak Lake**	**4.21**	**354**		**Pn**	**17 27 36.9**	**-0.1**
HIN	**Hinchinbrook I**	**4.34**	**19**	Pn	**Pn**	**17 27 38.5**	**-0.3**
HIN				IAML		17 28 31.6	
	comp=E,120nm,1.3s						
HIN				IAML		17 28 36.6	
	comp=N,149nm,0.9s						
P18K	**Big Mountain,**	**4.38**	**317**	Pn	**Pn**	**17 27 39.5**	**+0.2**
P18K				IAML		17 30 11.9	
	comp=E,48nm,3.7s						
P18K	**Big Mountain,**	**4.38**	**317**	P	**Pn**	**17 27 40.1**	**+0.8**
	baz=131						
KAIM	**Kayak Island**	**4.45**	**34**	Pn	**Pn**	**17 27 40.2**	**-0.1**
KAIM	**Kayak Island**	**4.45**	**34**	P	**Pn**	**17 27 40.3**	**+0.1**
	baz=217						
RSO	**Redoubt South**	**4.50**	**338**		**Pn**	**17 27 41.3**	**+0.1**
RDT	**Redoubt**	**4.54**	**341**		**Pn**	**17 27 41.5**	**0.0**
RDWB	**Redoubt West**	**4.54**	**338**		**Pn**	**17 27 42.0**	**+0.3**
DFR	**Drift River**	**4.61**	**339**		**Pn**	**17 27 44.8**	**+2.2**
EYAK	**Cordova Ski Ar**	**4.63**	**23**		**Pn**	**17 27 42.9**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.63**	**23**	P	**Pn**	**17 27 42.9**	**+0.2**
	baz=205						
NCT	**North Crescent**	**4.63**	**338**		**Pn**	**17 27 43.8**	**+0.9**
O19K	**Port Alsworth**	**4.67**	**328**	Pn	**Pn**	**17 27 43.4**	**+0.2**
O19K				IAML		17 28 54.8	
	comp=N,107nm,0.5s						
O19K	**Port Alsworth**	**4.67**	**328**	P	**Pn**	**17 27 43.6**	**+0.4**
	baz=143						
O18K	**Koktuh Hills**	**4.69**	**321**		**Pn**	**17 27 43.9**	**+0.3**
O18K				IAML		17 28 44.2	
	comp=N,44nm,0.8s						
O18K	**Koktuh Hills**	**4.69**	**321**	P	**Pn**	**17 27 44.1**	**+0.5**
	baz=136						
RAGM	**Ragged Mountai**	**4.75**	**29**		**Pn**	**17 27 44.3**	**-0.1**
SUCK	**Suckling Hills**	**4.77**	**36**	Pn	**Pn**	**17 27 44.3**	**-0.3**
SUCK				IAML		17 28 40.5	
	comp=E,99nm,1.7s						
SUCK				IAML		17 28 45.6	
	comp=N,125nm,1.8s						
RC01	**Rabbit Creek A**	**4.77**	**358**	Pn	**Pn**	**17 27 44.6**	**-0.1**
RC01				IAML		17 28 26.8	
	comp=N,83nm,0.4s						
RC01				IAML		17 28 27.4	
	comp=E,83nm,0.3s						
RC01	**Rabbit Creek A**	**4.77**	**358**	P	**Pn**	**17 27 44.5**	**-0.2**
	baz=177						
HMT	**Hamilton**	**4.83**	**32**		**Pn**	**17 27 45.2**	**-0.2**
NICHA	**Nichawak Mount**	**4.83**	**34**		**Pn**	**17 27 45.6**	**0.0**
BERG	**Berg Lake**	**5.04**	**34**		**Pn**	**17 27 47.0**	**-1.4**
BERG				IAML		17 28 57.1	
	comp=N,97nm,1.4s						
BERG				IAML		17 28 57.4	
	comp=E,112nm,1.5s						
CHGN	**Chignik**	**5.04**	**273**	Pn	**Pn**	**17 27 48.0**	**-0.4**
GRIN	**Grindle Hills**	**5.08**	**36**		**Pn**	**17 27 49.4**	**+0.5**
N20K	**Mount Spurr**	**5.09**	**344**	P	**Pn**	**17 27 49.5**	**+0.3**
	baz=161						
SPCR	**Spurr Chakacha**	**5.09**	**344**		**Pn**	**17 27 49.5**	**+0.3**
KNK	**Knik Glacier**	**5.11**	**5**		**Pn**	**17 27 49.0**	**-0.4**
KNK				IAML		17 28 47.3	
	comp=N,43nm,0.4s						
KNK				IAML		17 28 56.8	
	comp=E,42nm,0.7s						
KNK	**Knik Glacier**	**5.11**	**5**	P	**Pn**	**17 27 49.8**	**+0.4**
	baz=185						
SNH	**Sunshine Point**	**5.17**	**39**	Pn	**Pn**	**17 27 49.6**	**-0.5**
SNH				IAML		17 29 40.9	
	comp=N,87nm,3.2s						
SNH				IAML		17 29 55.4	
	comp=E,75nm,3.1s						
SUA	**Susitna One**	**5.19**	**353**	Pn	**Pn**	**17 27 49.1**	**-1.4**
SUA				IAML		17 29 10.7	
	comp=E,54nm,3.8s						
SUA				IAML		17 29 18.9	
	comp=N,42nm,3.3s						
KHIT	**Khitrov Hills**	**5.22**	**35**		**Pn**	**17 27 50.9**	**-0.1**
N19K	**Bonanza Creek**	**5.22**	**331**	Pn	Pn	17 27 48.6	-2.4
N19K				IAML		17 28 59.3	
	comp=N,28nm,4.0s						
PMR	**Palmer**	**5.27**	**1**		**Pn**	**17 27 50.7**	**-0.8**
STLK	**Strandline Lak**	**5.33**	**347**		**Pn**	**17 27 52.7**	**+0.3**
SPNN	**North Nagishla**	**5.33**	**342**		**Pn**	**17 27 52.9**	**+0.4**
O17K	**Koliganek Bris**	**5.36**	**313**		**Pn**	**17 27 53.7**	**+1.0**
O17K	**Koliganek Bris**	**5.36**	**313**	P	**Pn**	**17 27 53.7**	**+1.0**
	baz=126						
WAX	**Waxell Ridge**	**5.36**	**37**		**Pn**	**17 27 52.5**	**-0.3**
BARK	**Barkley Ridge**	**5.45**	**39**		**Pn**	**17 27 54.0**	**-0.1**
GHO	**Glory Hole Cre**	**5.45**	**2**		**Pn**	**17 27 54.6**	**+0.5**
KLU	**Klutina**	**5.47**	**18**	Pn	**Pn**	**17 27 54.0**	**-0.3**
KLU	**Klutina**	**5.47**	**18**	P	**Pn**	**17 27 54.7**	**+0.4**
	baz=200						
MESA	**MESA**	**5.49**	**42**	Pn	**Pn**	**17 27 53.5**	**-1.2**
SML	**Sawmill**	**5.51**	**5**	Pn	**Pn**	**17 27 53.7**	**-1.2**
SML	**Sawmill**	**5.51**	**5**	P	**Pn**	**17 27 55.8**	**+0.9**
	baz=185						
N18K	**Kilae Creek**	**5.54**	**325**	Pn	**Pn**	**17 27 53.4**	**-1.8**
SCM	**Sheep Creek Mo**	**5.61**	**10**		**Pn**	**17 27 55.9**	**-0.3**
ISLE	**Juniper Island**	**5.64**	**38**		**Pn**	**17 27 55.9**	**-0.9**
BAGL	**Bagley Icefiel**	**5.65**	**40**		**Pn**	**17 27 56.6**	**-0.1**
S14K	**Fog Glacier**	**5.67**	**274**	P	**Pn**	**17 27 59.1**	**+1.9**
	baz=85						
VNFG	**Fog Glacier, M**	**5.67**	**274**		**Pn**	**17 27 56.6**	**-0.6**
O16K	**Kokwok River B**	**5.68**	**309**		**Pn**	**17 27 56.5**	**-0.6**
SVW2	**Sparrevohn**	**5.76**	**328**	Pn	Pn	17 27 56.4	-1.9
SKT	**Skwentna**	**5.77**	**350**		**Pn**	**17 27 58.2**	**-0.2**
VRDI	**Verde Repeater**	**5.78**	**30**	Pn	**Pn**	**17 27 57.7**	**-1.1**
N25K	**Chitina, Valde**	**5.83**	**23**		**Pn**	**17 27 57.5**	**-1.7**
N25K	**Chitina, Valde**	**5.83**	**23**	P	**Pn**	**17 27 59.7**	**+0.5**
	baz=206						
GLB	**Gilahina Butte**	**5.87**	**27**		**Pn**	**17 27 59.3**	**-0.5**
KIAG	**Kiagna River**	**5.87**	**36**		**Pn**	**17 28 00.2**	**+0.2**
N17K	**Nushagak Hills**	**5.87**	**319**	Pn	**Pn**	**17 27 59.5**	**-0.3**
N17K	**Nushagak Hills**	**5.87**	**319**	P	**Pn**	**17 27 59.9**	**+0.1**
	baz=132						
M20K	**Styx River**	**5.89**	**342**	Pn	**Pn**	**17 27 59.2**	**-0.9**
SAMH	**Samovar Hills**	**5.91**	**46**		**Pn**	**17 28 01.1**	**+0.7**
TABL	**Table Mountain**	**5.96**	**43**		**Pn**	**17 28 00.4**	**-0.9**
CNBA	**Chernabura Isl**	**6.00**	**260**	Pn	**Pn**	**17 27 59.0**	**-2.6**
M24K	**Tolsona, Glenn**	**6.01**	**14**		**Pn**	**17 28 01.1**	**-0.7**
M24K	**Tolsona, Glenn**	**6.01**	**14**	P	**Pn**	**17 28 03.2**	**+1.4**
	baz=197						
MCARA	**McCarthy VSAT**	**6.03**	**30**		Pn	17 27 59.6	-2.4
MCARA	**McCarthy VSAT**	**6.03**	**30**	P	**Pn**	**17 28 03.4**	**+1.4**
	baz=215						
PTPK	**Patty Peak**	**6.04**	**34**		**Pn**	**17 28 02.7**	**+0.4**
YKU2	**Yakutat**	**6.06**	**54**	Pn	Pn	17 27 59.2	-3.2
CUT	**Chulitna**	**6.10**	**356**		**Pn**	**17 28 01.9**	**-1.1**
PCA	**Pinnacle**	**6.11**	**48**	Pn	**Pn**	**17 28 01.2**	**-1.9**
PINM	**Pinnacle**	**6.11**	**48**	P	**Pn**	**17 28 03.4**	**+0.2**
	baz=235						
M19K	**Big River Lodg**	**6.15**	**337**	Pn	Pn	17 28 00.0	-3.6
BARN	**Barnard Glacie**	**6.20**	**37**		**Pn**	**17 28 04.0**	**-0.5**
CTGM	**Chitina Glacie**	**6.25**	**39**	Pn	**Pn**	**17 28 03.8**	**-1.3**
PNL	**Peninsula**	**6.26**	**54**		**Pn**	**17 28 05.5**	**+0.4**
PNL	**Peninsula**	**6.26**	**54**	P	**Pn**	**17 28 05.5**	**+0.4**
	baz=242						
LOGN	**Logan Glacier**	**6.27**	**41**	Pn	**Pn**	**17 28 04.0**	**-1.3**
O15K	**Ungalikthiuk R**	**6.28**	**301**		**Pn**	**17 28 06.8**	**+1.4**
O15K	**Ungalikthiuk R**	**6.28**	**301**	P	**Pn**	**17 28 06.8**	**+1.4**
	baz=112						
BCPM	**Bancas Point**	**6.29**	**51**	Pn	**Pn**	**17 28 03.4**	**-2.2**
SDPT	**Sand Point**	**6.34**	**266**	Pn	**Pn**	**17 28 03.8**	**-2.4**
HARP	**HAARP**	**6.45**	**18**		**Pn**	**17 28 08.9**	**+1.3**
HARP	**HAARP**	**6.45**	**18**	P	**Pn**	**17 28 08.9**	**+1.3**
	baz=201						
N16K	**Nishlik Lake**	**6.45**	**314**		**Pn**	**17 28 09.4**	**+1.6**
N16K	**Nishlik Lake**	**6.45**	**314**	P	**Pn**	**17 28 09.4**	**+1.6**
	baz=126						
L19K	**White Mountain**	**6.50**	**337**	Pn	Pn	17 28 03.9	-4.5
WAT7	**Susitna Watana**	**6.52**	**2**		**Pn**	**17 28 10.0**	**+1.2**
WAT1	**Susitna Watana**	**6.52**	**3**		**Pn**	**17 28 10.1**	**+1.3**
WAT1	**Susitna Watana**	**6.52**	**3**	P	**Pn**	**17 28 10.1**	**+1.3**
	baz=183						
M17K	**Holitna River**	**6.58**	**324**		Pn	17 28 06.0	-3.5
PPLA	**Purkeypile**	**6.73**	**349**	Pn	**Pn**	**17 28 11.1**	**-0.6**
DHY	**Denali Highway**	**6.83**	**8**		**Pn**	**17 28 12.8**	**-0.3**
N15K	**Kwethluk River**	**6.84**	**309**	Pn	**Pn**	**17 28 12.5**	**-0.6**
M16K	**Timber Creek**	**6.86**	**317**	Pn	**Pn**	**17 28 12.9**	**-0.4**
M26K	**Nabesna, AK**	**6.89**	**25**	Pn	**Pn**	**17 28 12.5**	**-1.3**
O29M	**Mount Kennedy**	**6.93**	**51**		**Pn**	**17 28 13.4**	**-1.1**
PAX	**Paxson**	**6.94**	**15**	Pn	**Pn**	**17 28 14.1**	**-0.4**
L18K	**Granite Mounta**	**6.99**	**331**	Pn	Pn	17 28 09.7	-5.3
O14K	**Tigyukauivet M**	**7.00**	**300**	Pn	**Pn**	**17 28 13.8**	**-1.4**
P29M	**Windy Craggy**	**7.00**	**57**		**Pn**	**17 28 14.4**	**-0.9**
RND	**Reindeer**	**7.09**	**2**	Pn	**Pn**	**17 28 16.9**	**+0.3**
M27K	**Edge Creek, AK**	**7.14**	**29**	Pn	**Pn**	**17 28 16.0**	**-1.4**
TRF	**Thorofare Moun**	**7.15**	**357**		**Pn**	**17 28 17.5**	**0.0**
CAST	**Castle Rocks**	**7.23**	**350**	Pn	**Pn**	**17 28 19.2**	**+0.7**
KTH	**Kantishna Hill**	**7.28**	**354**		**Pn**	**17 28 17.8**	**-1.4**
S31K	**Pelican**	**7.33**	**72**	Pn	**Pn**	**17 28 17.4**	**-2.3**
L26K	**Log Cabin Wild**	**7.36**	**22**		**Pn**	**17 28 19.2**	**-1.0**
TTA	**Tatalina**	**7.42**	**336**	Pn	Pn	17 28 15.5	-5.5
MCK	**McKinley**	**7.42**	**1**	Pn	**Pn**	**17 28 21.1**	**+0.1**
K20K	**Telida**	**7.43**	**343**	Pn	Pn	17 28 18.0	-3.1
L16K	**Owhat River**	**7.49**	**320**	Pn	**Pn**	**17 28 21.8**	**-0.2**
HYT	**Haines Junctio**	**7.65**	**49**	Pn	**Pn**	**17 28 23.4**	**-0.9**
L27K	**Beaver Creek,**	**7.74**	**26**	Pn	**Pn**	**17 28 25.8**	**+0.4**
BCAR	**Beaver Creek A**	**7.75**	**26**	Pn	**Pn**	**17 28 25.5**	**-0.1**
SIT	**Sitka**	**7.76**	**79**	Pn	Pn	17 28 21.1	-4.6
K17K	**Iditarod**	**7.84**	**328**	Pn	Pn	17 28 20.7	-6.0
M14K	**Bethel**	**7.93**	**309**	Pn	**Pn**	**17 28 27.2**	**-0.8**
J18K	**Innoko River**	**8.04**	**336**	Pn	Pn	17 28 23.2	-6.4
SKAG	**Skagway**	**8.10**	**61**	Pn	Pn	17 28 26.4	-4.0
BESE	**Bessie Mountai**	**8.14**	**68**	Pn	Pn	17 28 27.4	-3.6
S32K	**Killisnoo**	**8.17**	**76**	Pn	Pn	17 28 23.5	-7.9
J20K	**Nowinta River**	**8.21**	**345**		Pn	17 28 29.2	-2.7
O30N	**Mendenhall**	**8.23**	**52**	Pn	**Pn**	**17 28 31.7**	**-0.6**
M29M	**Somme Creek**	**8.26**	**38**		**Pn**	**17 28 31.7**	**-1.0**
J19K	**Poorman**	**8.28**	**341**	Pn	Pn	17 28 25.9	-7.0
JIS	**Juneau Island**	**8.34**	**70**	Pn	Pn	17 28 30.3	-3.3
CCB	**Clear Creek Bu**	**8.37**	**5**	Pn	Pn	17 28 31.6	-2.5
M13K	**Dall Lake**	**8.40**	**305**	Pn	**Pn**	**17 28 33.6**	**-0.9**
K27K	**Chicken**	**8.52**	**22**	Pn	**Pn**	**17 28 34.8**	**-1.2**
L14K	**Kuka Creek**	**8.53**	**311**	Pn	**Pn**	**17 28 36.0**	**-0.2**
J25K	**Salcha River,**	**8.53**	**12**	Pn	**Pn**	**17 28 35.1**	**-1.2**
IL31		**8.55**	**7**		**Pn**	**17 28 36.1**	**-0.3**
ILAR	**Eielson Array**	**8.55**	**7**	Pn	**Pn**	**17 28 36.2**	**-0.3**
ILAR	**Eielson Array**	**8.55**	**7**	Pn	**Pn**	**17 28 37.8**	**+1.3**
	comp=N,0.3nm,0.3s,baz=189,slow=13,SNR=15						
ILAR				Sn	**Sn**	**17 30 10.6**	**-2.2**
	comp=N,0.2nm,0.3s,baz=188,slow=21,SNR=4.9						
ILAR				LR	LR	17 32 06.3	
	comp=N,185nm,19.6s,baz=124,slow=38 comp=N,0.9nm,0.5s						
IL03	**Eielson Array**	**8.55**	**7**	Pn	**Pn**	**17 28 36.5**	**0.0**
K15K	**Wolf Creek Mou**	**8.61**	**319**	Pn	**Pn**	**17 28 36.9**	**-0.5**
MDM	**Murphy Dome**	**8.67**	**3**		**Pn**	**17 28 37.9**	**-0.3**
J26L	**Joseph Creek**	**8.67**	**17**		**Pn**	**17 28 37.6**	**-0.7**
N31M	**Braeburn, Yuko**	**8.71**	**48**	Pn	**Pn**	**17 28 38.5**	**-0.2**
WHY	**Whitehorse**	**8.72**	**54**		**Pn**	**17 28 38.7**	**-0.3**
L29M	**L29M**	**8.84**	**35**		**Pn**	**17 28 39.6**	**-0.9**
I23K	**Minto, Yukon-K**	**8.84**	**0**		**Pn**	**17 28 40.1**	**-0.4**
P32M	**Atlin**	**8.93**	**62**	Pn	**Pn**	**17 28 40.4**	**-1.4**
M30M	**Minto, Yukon**	**8.94**	**40**	Pn	**Pn**	**17 28 41.1**	**-0.7**
I21K	**Tanana**	**8.96**	**353**	Pn	**Pn**	**17 28 42.3**	**+0.2**
J16K	**Anvik River**	**8.96**	**326**	Pn	**Pn**	**17 28 41.5**	**-0.7**
DAWY	**Dawson**	**9.19**	**28**	Pn	**Pn**	**17 28 44.3**	**-1.0**
EGAK	**Eagle**	**9.37**	**22**	Pn	**Pn**	**17 28 46.9**	**-0.9**
PRP	**Porcupine Dome**	**9.39**	**10**		**Pn**	**17 28 47.6**	**-0.6**
H21K	**Melozitna Rive**	**9.50**	**351**		**Pn**	**17 28 48.6**	**-0.9**
P33M	**Teslin, Yukon**	**9.53**	**59**		**Pn**	**17 28 49.1**	**-0.9**
K29M	**Barlow Dome**	**9.55**	**33**	Pn	**Pn**	**17 28 50.4**	**+0.1**
H24K	**Noodor Dome**	**9.56**	**4**		**Pn**	**17 28 50.8**	**+0.5**
AKUT	**Akutan**	**9.63**	**264**	Pn	**Pn**	**17 28 50.4**	**-0.9**
J14K	**Nanvaranak Lak**	**9.64**	**318**	Pn	**Pn**	**17 28 49.6**	**-1.7**
M31M	**Drury Creek, Y**	**9.64**	**46**	Pn	**Pn**	**17 28 51.3**	**-0.2**
N32M	**Quiet Lake**	**9.73**	**54**	Pn	**Pn**	**17 28 50.1**	**-2.6**
H19K	**Roundabout Mou**	**9.83**	**342**	Pn	**Pn**	**17 28 52.6**	**-1.4**
H18K	**Honhosa River**	**9.87**	**337**	Pn	Pn	17 28 51.5	-3.0
IMAR	**Indian Mountai**	**9.90**	**350**	Pn	**Pn**	**17 28 54.0**	**-1.0**
H17K	**Granite Mounta**	**10.04**	**333**	Pn	**Pn**	**17 28 56.1**	**-0.9**
FARO	**Faro, Yukon**	**10.08**	**48**	Pn	Pn	17 28 54.4	-3.1
UNV	**Unalaska Valle**	**10.14**	**263**	Pn	**Pn**	**17 28 55.7**	**-2.6**
I28M	**Miner Creek**	**10.21**	**23**	Pn	**Pn**	**17 28 57.3**	**-2.0**
R33M	**Jennings River**	**10.26**	**65**	Pn	**Pn**	**17 28 58.5**	**-1.5**
G21K	**Allakaket**	**10.40**	**351**	Pn	Pn	17 28 59.2	-2.6
G23K	**Bananza Creek**	**10.41**	**359**		**Pn**	**17 29 00.7**	**-1.4**
G24K	**Hadweenzic Riv**	**10.44**	**4**		**Pn**	**17 29 02.4**	**0.0**
J30M	**Hart River**	**10.45**	**32**	Pn	**Pn**	**17 29 00.9**	**-1.7**
FYU	**Fort Yukon**	**10.45**	**9**	Pn	**Pn**	**17 29 01.7**	**-0.7**
G19K	**Purcell Mounta**	**10.51**	**343**	Pn

	0.1nm,0.3s							
PDAR	**Pinedale Array**	**86.35**	**42**	P	**P**	**17 50 32.0**	**+0.3**
	0.2nm,0.4s,baz=176,slow=2.4,SNR=2.8							
	0.2nm,0.4s							
AKASG	**Malin Array Be**	**144.75**	**334**	PKPbc	**PKPdf**	**17 57 25.0**	**-0.9**
	1.0nm,0.5s,baz=45,slow=3.6,SNR=4.6							

JMA 03 17:44:07.2±0.2, 24°3.N±0.5×123°9.E±0.3, h12km±2km, MV0.5/5, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**271**	P	Pg	17 44 10.5	0.0
IRIF				eS	Sg	17 44 13.2	+0.3
JKRS	**Kuro-shima**	**0.15**	**128**	P	Pg	17 44 10.7	-0.1
JKRS				S	Sg	17 44 13.5	+0.1
JIJ	**Ishigaki jima**	**0.25**	**83**	P	Pg	17 44 12.2	-0.1
JIJ				S	Sg	17 44 15.9	0.0
HATJ	**Hateruma jima**	**0.28**	**193**	S	Sg	17 44 17.2	+0.3

TAP 03 17:44:26.7, 24°42N×122°31E, h76km, ML2.1, 3C-12D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.07**	**270**	*i* S	Sn	17 44 45.7	+0.4
	baz=270						
EOS3	**EOS3**	**0.13**	**177**	*i* S	Sn	17 44 46.0	+0.5
	baz=216						
EOS4	**EOS4**	**0.30**	**179**	P	Pn	17 44 37.5	-0.6
	baz=186						
EOS4				S	Sn	17 44 46.5	+0.1
	baz=186						
ESAO	**Su ao**	**0.45**	**290**	*e*S	Sn	17 44 48.0	-1.2
	baz=290						
TWC	**Suao**	**0.46**	**294**	P	Pn	17 44 39.3	-0.4
	baz=298						
TWC				*e*S	Sn	17 44 47.7	-1.6
	baz=298						
EWUT	**Wuta**	**0.49**	**273**	⇓P	Pn	17 44 40.3	+0.3
	baz=273						
EWUT				*e*S	Sn	17 44 48.5	-1.2
	baz=273						
ENA	**Nanau**	**0.52**	**271**	⇓P	Pn	17 44 41.1	+0.8
	baz=271						
ENA				*e*S	Sn	17 44 49.4	-0.9
	baz=271						
EAHA	**Aohua**	**0.53**	**260**	*e*S	Sn	17 44 50.1	-0.3
	baz=263						
NDS	**Dongshan**	**0.58**	**292**	⇑*e*P	Pn	17 44 41.0	+0.2
	baz=296						
NDS				S	Sn	17 44 51.5	+0.2
	baz=296						
TWB1	**Santiao Chiao**	**0.66**	**333**	*e*P	Pn	17 44 42.7	+1.1
	baz=326						
TWB1				*e*S	Sn	17 44 53.2	+0.6
	baz=326						
TWE	**Neicheng**	**0.66**	**297**	⇓P	Pn	17 44 41.8	+0.1
	baz=300						
TWE				*i* S	Sn	17 44 52.8	+0.1
	baz=300						
ETL	**Fush Village**	**0.68**	**248**	*e*P	Pn	17 44 41.9	0.0
	baz=242						
ETL				*e*S	Sn	17 44 52.5	-0.6
	baz=242						
NACB	**Ninganchiao**	**0.70**	**250**	*e*P	Pn	17 44 42.9	+0.8
	baz=244						
NACB				*i* S	Sn	17 44 52.9	-0.5
	baz=244						
TIPB	**Shuangxi**	**0.71**	**321**	⇓*e*P	Pn	17 44 42.0	-0.2
	baz=323						
TIPB				*e*S	Sn	17 44 51.7	-1.9
	baz=323						
ENTT	**Nioudou**	**0.71**	**288**	⇓*i*P	Pn	17 44 42.9	+0.7
	baz=282						
ENTT				S	Sn	17 44 53.6	-0.1
	baz=282						
LATG	**Datong**	**0.72**	**279**	⇓*i*P	Pn	17 44 43.1	+0.6
	baz=273						
LATG				*e*S	Sn	17 44 53.7	-0.4
	baz=273						
FUSB	**Fushanzhiwuyua**	**0.74**	**297**	⇓P	Pn	17 44 43.0	+0.4
	baz=302						
FUSB				S	Sn	17 44 54.2	-0.1
	baz=302						
NDT	**Datong Townshi**	**0.75**	**284**	⇓*i*P	Pn	17 44 43.4	+0.8
	baz=278						
NDT				S	Sn	17 44 54.3	-0.1
	baz=278						
HWA	**Hwalien**	**0.78**	**236**	*e*P	Pn	17 44 43.4	+0.4
	baz=235						
ETLH	**Xiulin Townshi**	**0.79**	**255**	P	Pn	17 44 43.3	+0.1
	baz=254						
ETLH				*e*S	Sn	17 44 54.5	-0.8
	baz=254						
NWLT	**Wulai**	**0.82**	**296**	P	Pn	17 44 44.8	+1.3
	baz=299						
NWLT				*i* S	Sn	17 44 56.3	+0.5
	baz=299						
NNSB	**Datong**	**0.85**	**271**	P	Pn	17 44 44.9	+1.0
	baz=266						
NNSB				S	Sn	17 44 56.3	-0.3
	baz=266						
NNS	**Nan Shan**	**0.85**	**272**	*e*P	Pn	17 44 45.4	+1.5
	baz=266						
NNS				S	Sn	17 44 56.8	+0.1
	baz=266						
ETM	**Tongmen**	**0.87**	**239**	P	Pn	17 44 44.1	+0.1
	baz=233						
ETM				*e*S	Sn	17 44 56.3	-0.6
	baz=233						
YHNB	**Yeheng**	**0.89**	**287**	⇓P	Pn	17 44 45.2	+0.9
	baz=286						
YHNB				S	Sn	17 44 57.0	-0.3
	baz=286						
NSK	**Sanguang**	**0.91**	**287**	⇑P	Pn	17 44 45.2	+0.8
	baz=286						
NSK				S	Sn	17 44 57.5	-0.2
	baz=286						
LXIB	**Xiulin Townshi**	**0.91**	**244**	*e*P	Pn	17 44 44.9	+0.2
	baz=244						
LXIB				S	Sn	17 44 57.4	-0.5
	baz=244						
FUSS	**Fushou**	**0.99**	**260**	⇓P	Pn	17 44 46.8	+1.2
	baz=260						
FUSS				S	Sn	17 44 59.3	-0.4
	baz=260						
ESL	**Shilin**	**1.00**	**233**	*e*P	Pn	17 44 45.9	+0.3
	baz=227						
ESL				*e*S	Sn	17 44 59.5	-0.2
	baz=227						
WARBT	**Fenglin Townsh**	**1.10**	**231**	*e*P	Pn	17 44 46.8	+0.1
	baz=230						
WARBT				*e*S	Sn	17 45 00.8	-0.9
	baz=230						
CHGB	**Renai**	**1.10**	**251**	*e*P	Pn	17 44 48.1	+1.2
	baz=245						
CHGB				*i* S	Sn	17 45 02.2	+0.1
	baz=245						
EGFH	**Guangfu**	**1.10**	**227**	P	Pn	17 44 47.2	+0.4
	baz=222						
EGFH				S	Sn	17 45 01.9	+0.1
	baz=222						
NFF	**Wufeng Townshi**	**1.11**	**281**	⇓*i*P	Pn	17 44 48.3	+1.4
	baz=290						
NFF				S	Sn	17 45 02.5	+0.5
	baz=290						
OWD	**Renai**	**1.14**	**246**	*e*P	Pn	17 44 48.5	+1.1
	baz=241						
OWD				S	Sn	17 45 02.2	-0.6
	baz=241						
WUSB	**Renai**	**1.17**	**249**	⇑P	Pn	17 44 49.2	+1.4
	baz=244						
WUSB				S	Sn	17 45 03.5	0.0
	baz=244						
LIOB	**Emei**	**1.20**	**281**	⇓*i*P	Pn	17 44 49.5	+1.5
	baz=281						
LIOB				S	Sn	17 45 05.5	+1.4
	baz=281						
HGSD	**Ruisui**	**1.23**	**222**	*e*P	Pn	17 44 51.0	+2.6
	baz=215						
WHP	**Taichung City**	**1.25**	**264**	*e*P	Pn	17 44 51.7	+2.9
	baz=261						
WHP				*e*S	Sn	17 45 07.3	+1.9
	baz=261						
VWDT	**VWDT**	**1.26**	**238**	*e*P	Pn	17 44 50.1	+1.4
	baz=233						
VWDT				*e*S	Sn	17 45 05.8	+0.5
	baz=233						
EHY	**Hungye**	**1.28**	**225**	*e*P	Pn	17 44 49.4	+0.3
	baz=225						
EHY				*e*S	Sn	17 45 05.6	-0.3
	baz=225						
WCS	**Beigang Elemen**	**1.33**	**255**	P	Pn	17 44 51.0	+1.3
	baz=252						
WCS				*e*S	Sn	17 45 09.5	+2.6
	baz=252						
YULB	**Yu-li**	**1.38**	**222**	*e*P	Pn	17 44 50.8	+0.4
	baz=231						
SSLB	**Suanglung**	**1.39**	**243**	*e*P	Pn	17 44 53.0	+2.4
	baz=240						
SSLB				*e*S	Sn	17 45 09.9	+1.5
	baz=240						
TYC	**Yuchr**	**1.42**	**249**	*e*P	Pn	17 44 53.0	+2.1
	baz=244						
TYC				*e*S	Sn	17 45 11.8	+2.7
	baz=244						
WHYT	**Xinyi Township**	**1.52**	**242**	*e*P	Pn	17 44 54.3	+2.1
	baz=240						
WHYT				*e*S	Sn	17 45 13.0	+1.7
	baz=240						
EHD	**Haiduan**	**1.62**	**219**	*e*P	Pn	17 44 54.0	+0.5
	baz=219						
ALS	**Alishan**	**1.65**	**237**	*e*P	Pn	17 44 56.5	+2.4
	baz=230						
ALS				*e*S	Sn	17 45 17.6	+2.8
	baz=230						
CHN4	**Tsaushan**	**1.90**	**236**	*e*P	Pn	17 45 00.2	+3.0
	baz=236						
CHN4				*e*S	Sn	17 45 24.1	+3.7
	baz=236						
TPUB	**Ta-pu**	**1.90**	**234**	*e*P	Pn	17 45 00.1	+2.8
	baz=228						
TPUB				*e*S	Sn	17 45 23.8	+3.4
	baz=228						

*IDC **03** 17:53:36.8±1.8, 55°.66N×149°.89W, h0km, mb3.5/3, mbtmp3.6/7, ML3.2/4, MS3.3/18, Error ellipse: s-maj=36.0km s-min=26.0km az=30.0*

*NEIC **03** 17:53:40.0±1.3, 55°.94N±0°.05×150°.09W±0°.09, h22km±7km, mb4.2/3, ML4.0/46, ML3.7(AEIC), Error ellipse: s-maj=8.1km s-min=6.1km az=224.0*

*AEIC **03** 17:53:42.9±1.4, 55°.90N±0°.08×150°.06W±0°.09, h10km±6km, Error ellipse: s-maj=11.5km s-min=7.5km az=173.0*

ISC 03 17:53:39.4±0.9, 56°.05N±0°.07×150°.00W±0°.05, h10km, n274, σ1s02/273, mb3.7/6, MS3.2/13, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.16**	**304**		**Pn**	**17 54 14.4**	**-0.9**
OHAK				Sn	**Sn**	**17 54 39.2**	**-3.0**
OHAK	**Old Harbor**	**2.16**	**304**	P	**Pn**	**17 54 14.5**	**-0.9**
	baz=125						
OHAK				S	**Sn**	**17 54 39.7**	**-2.5**
	baz=125						
KDAK	**Kodiak Island**	**2.24**	**322**	Pn	**Pn**	**17 54 16.2**	**-0.3**
KDAK				Sn	**Sn**	**17 54 42.6**	**-1.5**
KDAK	**Kodiak Island**	**2.24**	**322**	Pn	**Pn**	**17 54 16.4**	**0.0**
	6.4nm,0.3s,baz=155,slow=5.9,SNR=67						
KDAK				Sn	**Sn**	**17 54 43.2**	**-1.0**
	11nm,0.3s,baz=274,slow=17,SNR=12						
KDAK				LR	LR	17 55 27.9	
	comp=Z,754nm,20.8s,baz=200,slow=43						
	26nm,0.3s						
SII	**Sitkinak Islan**	**2.39**	**284**		Pn	17 54 15.9	-2.6
SII				Sn	**Sn**	**17 54 43.7**	**-4.1**
SII				IAML		17 54 52.2	
	comp=E,388nm,0.5s						
SII				IAML		17 54 57.0	
	comp=N,440nm,0.8s						
Q20K	**Shuyak Island**	**2.88**	**334**	P	**Pn**	**17 54 25.5**	**+0.4**
	baz=154						
Q20K				S	**Sn**	**17 54 59.4**	**-0.4**
	baz=154						
SYI	**Shuyak Island**	**2.88**	**334**	Pn	**Pn**	**17 54 25.4**	**+0.2**
SYI				Sn	**Sn**	**17 55 00.1**	**+0.3**
R18K	**Karluk**	**2.88**	**304**		**Pn**	**17 54 25.0**	**-0.2**
R18K					**Sn**	**17 54 57.9**	**-2.0**
R18K	**Karluk**	**2.88**	**304**	IAML		17 55 02.2	
	comp=N,237nm,0.7s						
R18K	**Karluk**	**2.88**	**304**	P	**Pn**	**17 54 25.0**	**-0.2**
	baz=123						
R18K				S	**Sn**	**17 54 57.9**	**-2.0**
	baz=123						
Q19K	**Cape Douglas,**	**3.49**	**327**	Pn	**Pn**	**17 54 33.7**	**0.0**
Q19K				Sn	**Sn**	**17 55 15.2**	**+0.2**
Q19K	**Cape Douglas,**	**3.49**	**327**	P	**Pn**	**17 54 35.0**	**+1.3**
	baz=146						
CNPM	**China Poot**	**3.55**	**350**	Pn	**Pn**	**17 54 34.8**	**+0.4**
CNPM				Sn	**Sn**	**17 55 14.6**	**-1.8**
CNPM				IAML		17 55 18.6	
	comp=E,140nm,0.7s						
KCE	**Katmai Mt Cerb**	**3.58**	**310**		**Pn**	**17 54 36.1**	**+1.3**
ACHA	**Angle Creek He**	**3.62**	**309**		**Pn**	**17 54 35.8**	**+0.3**
ANCK	**Angle Creek**	**3.69**	**308**		**Pn**	**17 54 36.8**	**+0.4**
KVTA	**Katmai Vly 10**	**3.71**	**311**		**Pn**	**17 54 36.9**	**+0.2**
BRSE	**Bradley Lake S**	**3.72**	**354**		**Pn**	**17 54 36.7**	**-0.2**
BRSE	**Bradley Lake S**	**3.72**	**354**	P	**Pn**	**17 54 36.7**	**-0.2**
	baz=174						
HOM	**Homer**	**3.72**	**347**	Pn	**Pn**	**17 54 36.0**	**-0.8**
HOM				Sn	**Sn**	**17 55 20.8**	**+0.1**
HOM				IAML		17 55 24.8	
	comp=N,364nm,0.8s						
HOM				IAML		17 55 31.9	
	comp=E,341nm,0.9s						
BRLK	**Bradley Lake**	**3.75**	**353**	Pn	**Pn**	**17 54 37.1**	**-0.2**
BRLK				Sn	**Sn**	**17 55 21.2**	**-0.4**
BRLK				IAML		17 55 24.3	
	comp=E,125nm,0.7s						
KAHC	**Katmai Hardscr**	**3.76**	**316**		**Pn**	**17 54 38.3**	**+0.8**
KAHC	**Katmai Hardscr**	**3.76**	**316**	P	**Pn**	**17 54 38.3**	**+0.8**
	baz=134						
CNTC	**Contact Creek**	**3.90**	**307**		**Pn**	**17 54 38.9**	**-0.4**
Q17K	**Contact Creek**	**3.90**	**307**	P	**Pn**	**17 54 38.9**	**-0.4**
	baz=124						
Q23K	**Middleton Isla**	**3.91**	**28**	Pn	**Pn**	**17 54 39.8**	**+0.4**
Q23K				IAML		17 57 07.5	
	comp=N,288nm,2.6s						
Q23K	**Middleton Isla**	**3.91**	**28**	P	**Pn**	**17 54 39.8**	**+0.4**
	baz=211						
MID	**Middleton Isla**	**3.92**	**29**	Pn	**Pn**	**17 54 39.7**	**+0.3**
MID				IAML		17 57 07.4	
	comp=N,267nm,2.6s						
MID	**Middleton Isla**	**3.92**	**29**	P	**Pn**	**17 54 40.3**	**+0.9**
P19K	**Oil Pt**	**4.00**	**336**		**Pn**	**17 54 41.4**	**+0.6**
P19K				Sn	**Sn**	**17 55 29.0**	**+1.3**
P19K				IAML		17 55 32.5	
	comp=N,244nm,0.6s						
P19K				IAML		17 55 38.3	
	comp=E,220nm,0.6s						
P19K	**Oil Pt**	**4.00**	**336**	P	**Pn**	**17 54 41.4**	**+0.6**
	baz=154						
P23K	**Montague Islan**	**4.19**	**18**		**Pn**	**17 54 43.6**	**+0.3**
P23K	**Montague Islan**	**4.19**	**18**	P	**Pn**	**17 54 43.6**	**+0.3**
	baz=200						
O20K	**Slope Mountain**	**4.28**	**342**		**Pn**	**17 54 44.7**	**+0.2**
O20K	**Slope Mountain**	**4.28**	**342**	P	**Pn**	**17 54 44.7**	**+0.2**
	baz=161						
P18K	**Big Mountain,**	**4.37**	**322**	Pn	**Pn**	**17 54 45.8**	**+0.1**
P18K				Sn	**Sn**	**17 55 34.0**	**-2.6**
P18K	**Big Mountain,**	**4.37**	**322**	P	**Pn**	**17 54 45.7**	**0.0**
	baz=139						
O22K	**Cooper Landing**	**4.45**	**2**		**Pn**	**17 54 46.9**	**+0.2**
O22K				Sn	**Sn**	**17 55 37.1**	**-1.4**
O22K				IAML		17 55 47.2	
	comp=E,252nm,1.1s						
RSO	**Redoubt South**	**4.66**	**343**		**Pn**	**17 54 49.1**	**-0.7**
P17K	**Kvichak River**	**4.68**	**315**		**Pn**	**17 54 49.9**	**0.0**
P17K	**Kvichak River**	**4.68**	**315**	P	**Pn**	**17 54 49.9**	**0.0**
	baz=131						
RDWB	**Redoubt West**	**4.70**	**343**		**Pn**	**17 54 50.3**	**0.0**
O18K	**Koktuh Hills**	**4.71**	**326**	Pn	**Pn**	**17 54 50.6**	**+0.2**
O18K				Sn	**Sn**	**17 55 43.4**	**-1.8**
O18K				IAML		17 55 47.6	
	comp=E,51nm,1.6s						
O18K				IAML		17 55 53.6	
	comp=N,66nm,1.4s						
O18K	**Koktuh Hills**	**4.71**	**326**	P	**Pn**	**17 54 50.3**	**-0.2**
	baz=143						
HIN	**Hinchinbrook I**	**4.74**	**22**	Pn	**Pn**	**17 54 50.8**	**+0.1**
HIN				Sn	**Sn**	**17 55 43.5**	**-2.2**
HIN				IAML		17 55 45.9	
	comp=E,139nm,1.0s						
HIN				IAML		17 55 46.6	
	comp=N,119nm,1.1s						
O19K	**Port Alsworth**	**4.74**	**333**		**Pn**	**17 54 51.4**	**+0.6**
O19K				Sn	**Sn**	**17 55 44.3**	**-1.5**
O19K				IAML		17 55 46.4	
	comp=E,162nm,0.5s						
O19K				IAML		17 55 54.2	
	comp=N,153nm,0.4s						
CAPN	**Captain Cook N**	**4.77**	**353**	Pn	**Pn**	**17 54 53.1**	**+1.9**
CAPN				Sn	**Sn**	**17 55 47.0**	**+0.5**
KAIM	**Kayak Island**	**4.89**	**35**	Pn	**Pn**	**17 54 52.9**	**0.0**
KAIM				Sn	**Sn**	**17 55 46.7**	**-2.7**
KAIM	**Kayak Island**	**4.89**	**35**	P	**Pn**	**17 54 53.5**	**+0.7**
	baz=219						
EYAK	**Cordova Ski Ar**	**5.04**	**25**		**Pn**	**17 54 55.6**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.04**	**25**	P	**Pn**	**17 54 55.9**	**+1.1**
EYAK	**Cordova Ski Ar**	**5.04**	**25**	P	**Pn**	**17 54 55.6**	**+0.7**
	baz=208						
RC01	**Rabbit Creek A**	**5.06**	**1**		**Pn**	**17 54 55.2**	**+0.1**
RC01				IAML		17 55 58.1	
	comp=N,48nm,0.5s						
RC01				IAML		17 55 58.9	
	comp=E,47nm,0.3s						
RC01	**Rabbit Creek A**	**5.06**	**1**	P	**Pn**	**17 54 55.8**	**+0.7**
	baz=182						
RAGM	**Ragged Mountai**	**5.18**	**31**		**Pn**	**17 54 56.2**	**-0.6**
RAGM				IAML		17 56 07.1	
	comp=E,100nm,1.7s						
SUCK	**Suckling Hills**	**5.21**	**37**	Pn	**Pn**	**17 54 57.0**	**-0.3**
SUCK				IAML		17 56 29.1	
	comp=N,90nm,3.7s						
SUCK				IAML		17 56 33.7	
	comp=E,101nm,3.1s						
P16K	**Nushagak River**	**5.24**	**308**		**Pn**	**17 54 57.4**	**-0.2**
P16K	**Nushagak River**	**5.24**	**308**	P	**Pn**	**17 54 57.4**	**-0.2**
	baz=123						
HMT	**Hamilton**	**5.26**	**33**		**Pn**	**17 54 58.2**	**+0.2**
HMT				IAML		17 56 01.4	
	comp=N,118nm,0.8s						
NICHA	**Nichawak Mount**	**5.28**	**35**		**Pn**	**17 54 59.1**	**+1.0**
O17K	**Koliganek Bris**	**5.31**	**318**		**Pn**	**17 54 58.9**	**+0.3**
O17K	**Koliganek Bris**	**5.31**	**318**	P	**Pn**	**17 54 58.9**	**+0.3**
	baz=133						
N19K	**Bonanza Creek**	**5.32**	**336**	Pn	**Pn**	**17 54 58.4**	**-0.6**
N19K	**Bonanza Creek**	**5.32**	**336**	P	**Pn**	**17 54 59.2**	**+0.3**
	baz=153						
GOAT	**Goat Mountain**	**5.33**	**29**		**Pn**	**17 54 59.9**	**+1.0**
BGLC	**Bering Glacier**	**5.42**	**38**		**Pn**	**17 55 01.0**	**+1.0**
BGLC	**Bering Glacier**	**5.42**	**38**	P	**Pn**	**17 55 01.0**	**+1.0**
	baz=223						
KNK	**Knik Glacier**	**5.44**	**8**		**Pn**	**17 55 00.6**	**+0.2**
SUA	**Susitna One**	**5.44**	**356**		**Pn**	**17 54 59.8**	**-0.7**
SUA	**Susitna One**	**5.44**	**356**	P	**Pn**	**17 55 01.3**	**+0.7**
	baz=176						
BERG	**Berg Lake**	**5.48**	**35**		**Pn**	**17 55 01.4**	**+0.4**
GRIN	**Grindle Hills**	**5.52**	**37**		**Pn**	**17 55 02.3**	**+0.8**
STLK	**Strandline Lak**	**5.55**	**351**		**Pn**	**17 55 02.4**	**+0.4**
PMR	**Palmer**	**5.58**	**4**	Pn	**Pn**	**17 55 02.1**	**-0.2**
PMR	**Palmer**	**5.58**	**4**	P	**Pn**	**17 55 04.4**	**+2.1**
N18K	**Kilae Creek**	**5.58**	**329**	Pn	**Pn**	**17 55 01.4**	**-1.0**
N18K	**Kilae Creek**	**5.58**	**329**	P	**Pn**	**17 55 02.4**	**+0.1**
	baz=145						
O16K	**Kokwok River B**	**5.59**	**313**		**Pn**	**17 55 01.7**	**-0.8**
SNH	**Sunshine Point**	**5.62**	**40**	Pn	**Pn**	**17 55 03.5**	**+0.6**
KHIT	**Khitrov Hills**	**5.67**	**36**		**Pn**	**17 55 04.2**	**+0.6**
BMRM	**Bremner River**	**5.68**	**28**		**Pn**	**17 55 04.5**	**+0.7**
BMRM	**Bremner River**	**5.68**	**28**	P	**Pn**	**17 55 04.5**	**+0.7**
	baz=212						
GHO	**Glory Hole Cre**	**5.77**	**5**	Pn	**Pn**	**17 55 05.9**	**+0.9**
WAX	**Waxell Ridge**	**5.80**	**38**		**Pn**	**17 55 06.2**	**+0.7**
SML	**Sawmill**	**5.84**	**8**	Pn	**Pn**	**17 55 07.2**	**+1.3**
KLU	**Klutina**	**5.86**	**20**	Pn	**Pn**	**17 55 07.0**	**+0.8**
KLU	**Klutina**	**5.86**	**20**	P	**Pn**	**17 55 07.3**	**+1.1**
	baz=203						
N17K	**Nushagak Hills**	**5.87**	**323**		**Pn**	**17 55 05.8**	**-0.5**
N17K	**Nushagak Hills**	**5.87**	**323**	P	**Pn**	**17 55 06.6**	**+0.3**
	baz=138						
M23K	**Glacier View**	**5.88**	**11**		**Pn**	**17 55 07.6**	**+1.2**
M23K	**Glacier View**	**5.88**	**11**	P	**Pn**	**17 55 07.6**	**+1.2**
	baz=193						
BARK	**Barkley Ridge**	**5.90**	**39**		**Pn**	**17 55 07.5**	**+0.7**
CRQM	**Cirque**	**5.94**	**35**		**Pn**	**17 55 07.9**	**+0.5**
MESA	**MESA**	**5.94**	**43**	Pn	**Pn**	**17 55 08.0**	**+0.5**
MESA	**MESA**	**5.94**	**43**	P	**Pn**	**17 55 07.9**	**+0.4**
	baz=229						
CRQE	**Cirque**	**5.95**	**35**	P	**Pn**	**17 55 08.1**	**+0.6**
	baz=220						
SCM	**Sheep Creek Mo**	**5.96**	**12**	Pn	**Pn**	**17 55 08.8**	**+1.1**
SDPT	**Sand Point**	**5.96**	**268**	Pn	**Pn**	**17 55 05.6**	**-2.0**
SKT	**Skwentna**	**6.00**	**353**	Pn	**Pn**	**17 55 08.7**	**+0.6**
SKT	**Skwentna**	**6.00**	**353**	P	**Pn**	**17 55 08.8**	**+0.7**
	baz=172						
M20K	**Styx River**	**6.07**	**346**	Pn	**Pn**	**17 55 08.3**	**-0.8**
ISLE	**Juniper Island**	**6.09**	**38**		**Pn**	**17 55 10.0**	**+0.5**
BAGL	**Bagley Icefiel**	**6.10**	**40**		**Pn**	**17 55 10.2**	**+0.8**
O15K	**Ungalikthiuk R**	**6.14**	**305**		**Pn**	**17 55 10.2**	**+0.2**
O15K	**Ungalikthiuk R**	**6.14**	**305**	P	**Pn**	**17 55 10.2**	**+0.2**
	baz=118						
VRDI	**Verde Repeater**	**6.21**	**31**		**Pn**	**17 55 12.0**	**+0.8**
N25K	**Chitina, Valde**	**6.24**	**24**		**Pn**	**17 55 12.4**	**+1.0**
N25K	**Chitina, Valde**	**6.24**	**24**	P	**Pn**	**17 55 12.5**	**+1.0**
	baz=209						
M18K	**Stony River**	**6.24**	**333**		**Pn**	**17 55 11.7**	**+0.3**
M18K	**Stony River**	**6.24**	**333**	P	**Pn**	**17 55 11.7**	**+0.3**
	baz=149						
GLB	**Gilahina Butte**	**6.29**	**28**	Pn	**Pn**	**17 55 13.0**	**+0.9**
M19K	**Big River Lodg**	**6.29**	**341**	Pn	**Pn**	**17 55 12.2**	**+0.1**
KIAG	**Kiagna River**	**6.32**	**36**		**Pn**	**17 55 13.2**	**+0.6**
SAMH	**Samovar Hills**	**6.37**	**46**		**Pn**	**17 55 14.5**	**+1.2**
CUT	**Chulitna**	**6.38**	**359**	Pn	**Pn**	**17 55 13.7**	**+0.5**
M24K	**Tolsona, Glenn**	**6.39**	**16**	Pn	**Pn**	**17 55 14.2**	**+0.8**
N16K	**Nishlik Lake**	**6.41**	**317**		**Pn**	**17 55 14.3**	**+0.6**
N16K	**Nishlik Lake**	**6.41**	**317**	P	**Pn**	**17 55 14.3**	**+0.6**
	baz=131						
TABL	**Table Mountain**	**6.42**	**43**		**Pn**	**17 55 14.4**	**+0.3**
MCARA	**McCarthy VSAT**	**6.46**	**31**		**Pn**	**17 55 14.9**	**+0.4**
MCARA	**McCarthy VSAT**	**6.46**	**31**	P	**Pn**	**17 55 15.3**	**+0.9**
	baz=217						
PTPK	**Patty Peak**	**6.48**	**34**		**Pn**	**17 55 15.7**	**+0.9**
PCA	**Pinnacle**	**6.57**	**48**		**Pn**	**17 55 16.6**	**+0.6**
PINM	**Pinnacle**	**6.57**	**48**	P	**Pn**	**17 55 16.6**	**+0.6**
	baz=235						
M17K	**Holitna River**	**6.61**	**327**		**Pn**	**17 55 16.1**	**-0.3**
M17K	**Holitna River**	**6.61**	**327**	P	**Pn**	**17 55 16.9**	**+0.4**
	baz=142						
WACK	**Wrangell Chich**	**6.63**	**24**		**Pn**	**17 55 18.3**	**+1.3**
L19K	**White Mountain**	**6.

O29M	**Mount Kennedy** baz=239	**7.39**	**50**	P		**Pn**	**17 55 28.6 +1.4**
RND	**Reindeer**	**7.40**	**4**	Pn		**Pn**	**17 55 28.2 +0.8**
TRF	**Thorofare Moun**	**7.43**	**359**			**Pn**	**17 55 28.9 +1.1**
L17K	**Donlin**	**7.44**	**328**			**Pn**	**17 55 28.9 +1.1**
L17K	**Donlin** baz=142	**7.44**	**328**	P		**Pn**	**17 55 28.9 +1.1**
P29M	**Windy Craggy**	**7.46**	**56**			**Pn**	**17 55 28.6 +0.4**
P29M	**Windy Craggy** baz=246	**7.46**	**56**	P		**Pn**	**17 55 28.6 +0.4**
CAST	**Castle Rocks**	**7.47**	**353**	Pn		**Pn**	**17 55 28.4 +0.2**
L16K	**Owhat River**	**7.50**	**323**			**Pn**	**17 55 29.4 +0.8**
KTH	**Kantishna Hill**	**7.54**	**357**			**Pn**	**17 55 30.2 +0.9**
TTA	**Tatalina**	**7.54**	**339**			**Pn**	**17 55 29.4 +0.1**
M27K	**Edge Creek, AK**	**7.57**	**30**	Pn		**Pn**	**17 55 31.3 +1.5**
M27K	**Edge Creek, AK** baz=217	**7.57**	**30**	P		**Pn**	**17 55 31.3 +1.5**
MENT	**Mentasta**	**7.61**	**22**			**Pn**	**17 55 31.9 +1.7**
K20K	**Telida**	**7.61**	**346**	Pn		**Pn**	**17 55 30.3 +0.1**
S31K	**Pelican**	**7.76**	**70**	Pn		**Pn**	**17 55 31.1 -1.0**
L26K	**Log Cabin Wild**	**7.77**	**23**			**Pn**	**17 55 32.9 +0.5**
YUK6	**Outpost Mounta**	**7.82**	**46**			**Pn**	**17 55 34.9 +1.6**
YUK6	**Outpost Mounta** baz=236	**7.82**	**46**	P		**Pn**	**17 55 34.9 +1.6**
M14K	**Bethel**	**7.85**	**312**	Pn		**Pn**	**17 55 32.8 -0.6**
K17K	**Iditarod**	**7.91**	**331**	Pn		**Pn**	**17 55 33.6 -0.7**
YUK4	**Talbot Arm** baz=232	**7.94**	**43**	P		**Pn**	**17 55 37.6 +2.7**
P30M	**Million Dollar**	**8.02**	**54**			**Pn**	**17 55 37.2 +1.3**
P30M	**Million Dollar** baz=244	**8.02**	**54**	P		**Pn**	**17 55 37.2 +1.3**
PLBC	**Pleasant Camp**	**8.05**	**59**			**Pn**	**17 55 37.2 +1.0**
PLBC	**Pleasant Camp** baz=250	**8.05**	**59**	P		**Pn**	**17 55 37.2 +1.0**
HYT	**Haines Junctio**	**8.11**	**49**	Pn		**Pn**	**17 55 38.1 +1.0**
BWN	**Browne**	**8.15**	**2**	Pn		**Pn**	**17 55 38.2 +0.6**
L27K	**Beaver Creek,**	**8.16**	**27**	Pn		**Pn**	**17 55 38.7 +1.0**
J18K	**Innoko River**	**8.17**	**338**	Pn		**Pn**	**17 55 37.9 +0.1**
BCAR	**Beaver Creek A**	**8.17**	**27**	Pn		**Pn**	**17 55 39.1 +1.1**
M13K	**Dall Lake**	**8.29**	**307**			**Pn**	**17 55 39.8 +0.5**
M13K	**Dall Lake** baz=117	**8.29**	**307**	P		**Pn**	**17 55 40.1 +0.7**
J20K	**Nowinta River**	**8.41**	**348**	Pn		**Pn**	**17 55 41.8 +0.7**
J19K	**Poorman**	**8.45**	**343**	Pn		**Pn**	**17 55 40.5 -1.2**
L14K	**Kuka Creek**	**8.46**	**314**	Pn		**Pn**	**17 55 41.5 -0.3**
SCRK	**Sand Creek**	**8.50**	**18**	Pn		**Pn**	**17 55 42.7 +0.3**
HDA	**Harding Lake**	**8.52**	**9**	Pn		**Pn**	**17 55 42.9 +0.2**
SKAG	**Skagway**	**8.55**	**60**	Pn		**Pn**	**17 55 43.3 +0.3**
K15K	**Wolf Creek Mou**	**8.61**	**321**	Pn		**Pn**	**17 55 43.2 -0.6**
CCB	**Clear Creek Bu**	**8.69**	**6**	Pn		**Pn**	**17 55 45.5 +0.5**
O30N	**Mendenhall**	**8.69**	**51**	Pn		**Pn**	**17 55 46.1 +1.0**
M29M	**Somme Creek**	**8.71**	**38**			**Pn**	**17 55 46.3 +1.0**
JIS	**Juneau Island**	**8.78**	**69**	Pn		**Pn**	**17 55 46.2 +0.1**
IL31		**8.88**	**9**	Pn		**Pn**	**17 55 49.1 +1.6**
ILAR	**Eielson Array**	**8.88**	**9**	Pn		**Pn**	**17 55 49.0 +1.4**
ILAR	**Eielson Array** comp=N,0.2nm,0.3s,baz=187,slow=13,SNR=9.1	**8.88**	**9**	Pn		**Pn**	**17 55 49.6 +2.0**
ILAR	comp=N,0.5nm,0.3s,baz=197,slow=23,SNR=7.5				Sn	**Sn**	**17 57 25.2 -2.4**
ILAR	comp=N,89nm,18.8s,baz=239,slow=39 comp=N,0.8nm,0.6s				LR	LR	17 59 36.6
J25K	**Salcha River,**	**8.89**	**13**	Pn		**Pn**	**17 55 48.8 +1.0**
COLA	**College**	**8.92**	**6**	P		**Pn**	**17 55 49.9 +1.9**
MDM	**Murphy Dome**	**8.98**	**5**	Pn		**Pn**	**17 55 49.9 +0.9**
J16K	**Anvik River**	**9.01**	**328**	Pn		**Pn**	**17 55 49.0 -0.3**
J26L	**Joseph Creek**	**9.05**	**18**			**Pn**	**17 55 50.7 +0.7**
I23K	**Minto, Yukon-K**	**9.13**	**2**	Pn		**Pn**	**17 55 52.8 +1.8**
N31M	**Braeburn, Yuko**	**9.17**	**48**	Pn		**Pn**	**17 55 52.5 +1.0**
WHY	**Whitehorse**	**9.19**	**54**	Pn		**Pn**	**17 55 52.6 +0.7**
L29M	**L29M**	**9.28**	**35**			**Pn**	**17 55 53.9 +0.8**
L29M	**L29M** baz=225	**9.28**	**35**	P		**Pn**	**17 55 54.5 +1.5**
P32M	**Atlin**	**9.38**	**61**	Pn		**Pn**	**17 55 54.5 +0.1**
M30M	**Minto, Yukon**	**9.39**	**40**	Pn		**Pn**	**17 55 55.2 +0.7**
U33K	**Whale Pass**	**9.44**	**83**	Pn		**Pn**	**17 55 54.2 -1.1**
DAWY	**Dawson**	**9.62**	**29**	Pn		**Pn**	**17 55 58.5 +0.8**
J14K	**Nanvaranak Lak**	**9.62**	**320**	Pn		**Pn**	**17 55 58.1 +0.4**
H21K	**Melozitna Rive**	**9.73**	**353**	Pn		**Pn**	**17 55 59.2 0.0**
PRP	**Porcupine Dome**	**9.74**	**11**	Pn		**Pn**	**17 56 00.3 +0.8**
PRP						**Sn**	**17 57 47.1 -1.9**
WRAK	**Wrangell Islan**	**9.84**	**81**	Pn		**Pn**	**17 56 00.0 -0.7**
H24K	**Noodor Dome**	**9.87**	**5**	Pn		**Pn**	**17 56 01.4 +0.2**
P33M	**Teslin, Yukon**	**9.99**	**58**	Pn		**Pn**	**17 56 02.7 -0.2**
K29M	**Barlow Dome**	**9.99**	**34**	Pn		**Pn**	**17 56 03.8 +0.9**
H18K	**Honhosa River**	**10.00**	**339**	Pn		**Pn**	**17 56 02.1 -0.8**
M31M	**Drury Creek, Y**	**10.10**	**46**	Pn		**Pn**	**17 56 05.8 +1.5**
IMAR	**Indian Mountai**	**10.13**	**351**	Pn		**Pn**	**17 56 05.9 +1.3**
H17K	**Granite Mounta**	**10.15**	**335**	Pn		**Pn**	**17 56 05.0 +0.1**
N32M	**Quiet Lake**	**10.19**	**53**	Pn		**Pn**	**17 56 05.8 +0.3**
FARO	**Faro, Yukon**	**10.54**	**47**	Pn		**Pn**	**17 56 11.5 +1.2**
I28M	**Miner Creek**	**10.62**	**23**	Pn		**Pn**	**17 56 11.7 +0.2**
G21K	**Allakaket**	**10.63**	**352**	Pn		**Pn**	**17 56 13.0 +1.4**
G19K	**Purcell Mounta**	**10.68**	**344**	Pn		**Pn**	**17 56 12.6 +0.4**
G23K	**Bananza Creek**	**10.70**	**360**	Pn		**Pn**	**17 56 12.9 +0.5**
R33M	**Jennings River**	**10.71**	**64**	Pn		**Pn**	**17 56 13.1 +0.4**
G18K	**Tagagawik**	**10.72**	**341**	Pn		**Pn**	**17 56 12.0 -0.7**
G24K	**Hadweenzic Riv**	**10.76**	**5**			**Pn**	**17 56 13.8 +0.6**
FYU	**Fort Yukon**	**10.79**	**10**	Pn		**Pn**	**17 56 14.7 +1.0**
J30M	**Hart River**	**10.88**	**33**	Pn		**Pn**	**17 56 16.6 +1.5**
DLBC	**Dease Lake** comp=N,170nm,19.1s,baz=290,slow=34	**11.08**	**69**	LR		LR	17 59 50.4
I30M	**Mount Dempster**	**11.34**	**30**	Pn		**Pn**	**17 56 22.2 +0.9**
F20K	**Avaraart Lake**	**11.36**	**349**	Pn		**Pn**	**17 56 20.5 -1.0**
ANM	**Nome**	**11.41**	**325**	Pn		**Pn**	**17 56 21.5 -0.6**
F24K	**Squaw Lake**	**11.55**	**4**	Pn		Pn	17 56 22.5 -1.7
F15K	**North Star Dit**	**11.99**	**330**	Pn		**Pn**	**17 56 31.2 +1.1**
E25K	**Arctic Village**	**12.29**	**8**	Pn		**Pn**	**17 56 32.6 -1.6**
F31M	**Tsiigehtchic**	**13.71**	**27**	Pn		**Pn**	**17 56 54.8 +1.3**
C16K	**Lisburne Hills**	**14.14**	**336**	Pn		**Pn**	**17 57 01.5 +2.2**
INK	**Inuvik**	**14.43**	**25**	Pn		**Pn**	**17 57 05.5 +2.3**
INK	**Inuvik** comp=N,0.1nm,0.3s,baz=213,slow=12,SNR=8.6	**14.43**	**25**	Pn		**Pn**	**17 57 05.5 +2.2**
INK	comp=N,132nm,19.1s,baz=190,slow=38 comp=N,3.6nm,1.0s				LR	LR	18 02 57.1
YKA	**Yellowknife Ar**	**19.00**	**56**	P		**P**	**17 57 59.8 -1.0**
YKA	**Yellowknife Ar** comp=N,0.1nm,0.3s,baz=264,slow=10,SNR=17	**19.00**	**56**	P		**P**	**17 58 01.8 +1.0**
YKA	comp=N,96nm,21.3s,baz=22,slow=36 comp=N,1.8nm,0.9s				LR	LR	18 05 06.4
A36M	**Sachs Harbour**	**19.05**	**24**	P		**P**	**17 57 59.3 -2.0**
A36M	comp=Z,12nm,0.9s				IAmb	IAmb	17 58 05.3
KEBM	**Edson Butte**	**21.11**	**118**	P		**P**	**17 58 23.1 -0.8**
KEBM	comp=Z,40nm,1.3s				IAmb	IAmb	17 59 02.5
NEW	**Newport** comp=Z,48nm,21.6s,baz=284,slow=32	**21.46**	**97**	LR		LR	18 04 51.5
HUMO	**Hull Mountain**	**21.99**	**116**	P		**P**	**17 58 32.3 -1.1**
HUMO	comp=Z,3.3nm,1.1s				IAmb	IAmb	17 58 50.9
YBH	**Yreka Blue Hor** comp=Z,45nm,18.3s,baz=317,slow=32	**22.76**	**117**	LR		LR	18 05 27.8
ELK	**Elko** comp=Z,35nm,19.3s,baz=262,slow=32	**27.33**	**109**	LR		LR	18 08 14.2
NVAR	**Mina Array Bea** comp=Z,103nm,18.8s,baz=300,slow=32	**27.46**	**117**	LR		LR	18 08 25.2
PDAR	**Pinedale Array** comp=Z,0.2nm,0.5s,baz=320,slow=4.9,SNR=2.3	**29.02**	**100**	P		**P**	**17 59 40.2 +0.7**
PETK	**Petropavlovsk-** comp=Z,50nm,19.8s,baz=77,slow=36	**29.86**	**287**	LR		LR	18 11 41.8
FRB	**Frobisher Bay** comp=Z,138nm,18.1s,baz=210,slow=36	**38.88**	**44**	LR		LR	18 17 03.4
YAK	**Yakutsk** comp=Z,32nm,18.4s,baz=112,slow=40	**39.24**	**313**	LR		LR	18 20 00.8
TXAR	**Lajitas Array** comp=Z,0.6nm,1.0s,baz=324,slow=4.5,SNR=3.3 comp=Z,0.6nm,1.0s	**42.12**	**110**	P		P	18 01 28.9 -2.7
LPIG	**La Paz** comp=Z,24nm,18.2s,baz=304,slow=33	**43.06**	**121**	LR		LR	18 17 19.7
H11N2	**WAKE ISLAND Hy** baz=31,slow=76,SNR=12	**48.42**	**239**	T		T	18 54 19.8
H11N3	**WAKE ISLAND Hy** baz=31,slow=76,SNR=12	**48.42**	**239**	T		T	18 54 20.3
H11N1	**WAKE ISLAND Hy** baz=31,slow=76,SNR=13	**48.44**	**239**	T		T	18 54 22.5
H11S1	**WAKE ISLAND Hy** baz=30,slow=76,SNR=18	**49.56**	**239**	T		T	18 55 47.8
H11S2	**WAKE ISLAND Hy** baz=30,slow=76,SNR=16	**49.57**	**239**	T		T	18 55 50.7
H11S3	**WAKE ISLAND Hy** baz=30,slow=76,SNR=20	**49.58**	**239**	T		T	18 55 50.9
SONM	**Songino Array** comp=Z,0.6nm,0.8s,baz=45,slow=8.4,SNR=3.4	**58.48**	**310**	P		**P**	**18 03 37.5 +2.1**
SONM	comp=Z,38nm,18.9s,baz=351,slow=36 comp=Z,0.6nm,0.8s				LR	LR	18 28 22.9
ZALV	**Zalesovo Beam** comp=Z,31nm,18.3s,baz=52,slow=40	**61.53**	**327**	LR		LR	18 34 41.1
NOA	**NORSAR Array B** comp=Z,11nm,18.0s,baz=270,slow=40	**62.31**	**10**	LR		LR	18 34 58.1
BVAR	**Borovoye Array** comp=Z,35nm,18.1s,baz=23,slow=39	**66.32**	**335**	LR		LR	18 37 28.1
KURBB	**Kurchatov Arra** comp=Z,29nm,19.1s,baz=163,slow=41	**66.33**	**329**	LR		LR	18 39 35.3
MKAR	**Makanchi Array** comp=Z,0.5nm,0.9s,baz=46,slow=6.2,SNR=3.6 comp=Z,0.5nm,0.9s	**68.55**	**324**	P		**P**	**18 04 42.2 +0.4**

*IDC **03** 18:12:07.8±2.2, 1°.59N×126°.57E, h0km, mb3.0/3, mbtmp3.0/3, Error ellipse: s-maj=193.9km s-min=25.5km az=66.0*
*DJA **03** 18:12:11.8±2.0, 1°N±13°×12°6E±°, h21km±23km, M3.1/5, MLv3.1/5*
ISC 03 18:12:12.9±1.3, 1°.2N±0°.1×126°.36E±0°.08, h35km±n6, σ2s15/8, mb3.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.09**	**112**	P	**Pn**	**18 12 31.6**	**-0.1**
TNTI				S	**Sn**	**18 12 45.4**	**-0.2**
LBMI	**Labuha**	**2.14**	**148**	P	**Pn**	**18 12 44.6**	**-1.6**
LBMI				S	**Sn**	**18 13 10.2**	**-1.3**
KMSI	**Cibinong**	**2.45**	**256**	P	**Pn**	**18 12 50.0**	**-0.4**
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=339,slow=11,SNR=5.9 0.4nm,0.7s	**22.41**	**160**	P	**P**	**18 17 10.7**	**+2.1**
ASAR	**Alice Springs** 0.1nm,0.4s,baz=346,slow=12,SNR=4.4 0.1nm,0.4s	**25.77**	**164**	P	**P**	**18 17 44.1**	**+3.5**
MKAR	**Makanchi Array** 0.1nm,0.6s,baz=126,slow=7.3,SNR=3.1 0.1nm,0.6s	**59.44**	**326**	P	**P**	**18 22 10.8**	**-1.3**

*NEIC **03** 18:24:58.1±1.6, 36°.348N×0°.010×98°.10W±0°.01, h5km±1km, Error ellipse: s-maj=2.8km s-min=2.1km az=31.0*
TUL 03 18:24:58.9±1.2, 36°.342N±0°.010×98°.07W±0°.01, h7km±3km, ML2.5, mb_Lg2.3/6(NEIC), ML2.5/44(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=118.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.18**	**23**	Pg	Pg	18 25 02.8	+0.3
CROK				Sg	Sg	18 25 05.5	+0.5
CROK	comp=E,1μm,0.3s			IAML		18 25 05.9	
OK032	**Salt Plains WL**	**0.47**	**346**	Pg	Pg	18 25 08.1	0.0
OK032				Sg	Sg	18 25 14.8	+0.5
OK032	comp=E,380nm,0.1s			IAML		18 25 19.2	
OK032	comp=E,402nm,0.2s			IAML		18 25 20.4	
GC02	**Grant County #**	**0.54**	**18**	Pg	Pg	18 25 09.3	0.0
GC02				Sg	Sg	18 25 16.6	+0.3
OK038	**West end E0370**	**0.56**	**284**	Pg	Pg	18 25 09.6	-0.1
OK038	comp=E,381nm,0.3s			IAML		18 25 24.4	
OK038	comp=E,382nm,0.2s			IAML		18 25 26.3	
KAN14	**Manchester OK**	**0.62**	**8**	Pg	Pg	18 25 10.0	-0.9
KAN14				Sg	Sg	18 25 19.3	+0.3
KAN14	comp=N,226nm,0.1s			IAML		18 25 25.1	
KAN14	comp=E,228nm,0.1s			IAML		18 25 27.4	
OK035	**E0210 Rd and N**	**0.63**	**306**	Pg	Pg	18 25 09.2	-1.9
OK035	comp=E,245nm,0.2s			IAML		18 25 23.4	
OK029	**Liberty Lake**	**0.74**	**137**	Pg	Pg	18 25 12.4	-0.7
OK029				Sg	Sg	18 25 22.9	+0.1
OK029	comp=E,270nm,0.3s			IAML		18 25 25.5	
OK029	comp=E,181nm,0.4s			IAML		18 25 25.5	
KAN17	**Caldwell West**	**0.74**	**19**	Pg	Pg	18 25 11.5	-1.7
KAN17				Sg	Sg	18 25 22.7	-0.2
KAN17	comp=E,238nm,0.3s			IAML		18 25 28.1	
U32A	**Winter Ranch,**	**0.75**	**273**	Pg		18 25 11.2	-2.2
U32A				Sg	Sg	18 25 21.9	-1.3
U32A	comp=E,156nm,0.1s			IAML		18 25 24.8	
KAN10	**Anthony SW Sta**	**0.78**	**359**	Pg	Pg	18 25 11.3	-2.6
KAN10				Sg	Sg	18 25 24.1	0.0
KAN10	comp=E,200nm,0.1s			IAML		18 25 26.6	
KAN05	**Bluff City Nor**	**0.78**	**12**	Pg	Pg	18 25 11.9	-2.0
KAN05				Sg	Sg	18 25 23.9	-0.2
KAN05	comp=E,188nm,0.2s			IAML		18 25 33.9	
BLOK	**Blackwell**	**0.81**	**59**		Pg	18 25 13.2	-1.2
KAN13	**South Haven SW**	**0.82**	**35**	Pg	Pg	18 25 13.0	-1.7
KAN13				Sg	Sg	18 25 25.3	-0.1
CSTR	**Hydro, Custer**	**0.86**	**216**	Pg	Pg	18 25 14.8	-0.5
KAN09	**Caldwell North**	**0.87**	**25**	Pg	Pg	18 25 14.2	-1.5
KAN08	**Anthony NE Sta**	**0.89**	**5**	Pg	Pg	18 25 14.3	-1.7
OK048	**Pawnee Station**	**0.91**	**85**		Pg	18 25 15.4	-1.1
KAN12	**Harper NE Stat**	**0.95**	**3**	Pg	Pg	18 25 16.8	-0.5
OK033	**Mehan**	**0.96**	**108**	Pg	Pg	18 25 16.8	-0.6
OK033	comp=E,133nm,0.3s			IAML		18 25 35.0	
OK033	comp=E,116nm,0.3s			IAML		18 25 35.0	
KS21	**Milan North St**	**1.00**	**19**	Pg	Pg	18 25 16.6	-1.5
OK051	**E0350 and S346**	**1.01**	**80**	Pg	Pg	18 25 17.1	-1.1
OK052	**Battle Ridge R**	**1.08**	**108**	Pg	Pg	18 25 18.9	-0.8
OK052	comp=E,145nm,0.2s			IAML		18 25 36.1	
QUOK	**Quay**	**1.11**	**98**	Pg	Pg	18 25 19.4	-0.9
QUOK	comp=E,111nm,0.2s			IAML		18 25 39.4	
FNO	**Franklin**	**1.21**	**153**		Pb	18 25 21.2	-0.9
FNO	comp=E,125nm,0.1s			IAML		18 25 38.8	
FNO	comp=N,102nm,0.2s			IAML		18 25 42.7	
DEOK	**Depew**	**1.37**	**111**		Pn	18 25 23.7	-0.7
T35A	**Sooner Cattle**	**1.38**	**65**		Pn	18 25 23.4	-1.1
W35A	**Tecumseh**	**1.54**	**140**		Pn	18 25 25.8	-0.9
WMOK	**Wichita Mounta**	**1.70**	**200**		Pn	18 25 27.6	-1.5
X34A	**Smith Ranch, M**	**1.75**	**174**	Pn	Pn	18 25 28.2	-1.4
X34A	comp=Z,16nm,1.1s			IAmb_Lg		18 25 57.2	
TUL3	**Leonard**	**1.90**	**102**		Pn	18 25 30.5	-1.1
R32A	**Long Quarter,**	**2.14**	**346**	Pn	Pn	18 25 32.9	-2.2
SMWD	**Samnorwood**	**2.16**	**236**	Pn	Pn	18 25 33.9	-1.4
SMWD	comp=Z,9.5nm,0.7s			IAmb_Lg		18 26 08.2	
LOOK	**Love County** comp=Z,15nm,1.2s	**2.46**	**162**	IAmb_Lg		18 26 20.5	
WTFS	**Witchita Falls**	**2.59**	**187**	Pn	Pn	18 25 40.1	-1.1
CBKS	**Cedar Bluff**	**2.80**	**332**	Pn	Pn	18 25 41.5	-2.6
U38A	**Gravette**	**2.98**	**87**		Pn	18 25 45.3	-1.2
KSU1	**Kansas State U**	**2.99**	**22**	Pn	Pn	18 25 44.8	-1.9
AMTX	**Amarillo**	**3.28**	**245**	Pn	Pn	18 25 47.9	-2.9
FW03	**Perrin-Whitt E**	**3.29**	**180**	Pn	Pn	18 25 48.5	-2.4
HHAR	**Hobbs**	**3.34**	**90**		Pn	18 25 48.7	-2.8
S39A	**Bolivar**	**4.03**	**69**	Pn	Pn	18 26 01.5	+0.5
MIAR	**Mount Ida**	**4.08**	**115**	Pn	Pn	18 26 01.2	-0.5
POST	**Post**	**4.32**	**222**	Pn	Pn	18 26 02.0	-3.0
X40A	**Basin Creek Fa**	**4.66**	**112**	Pn	Pn	18 26 06.6	-3.1
MGMO	**Mountain Grove**	**4.73**	**78**	Pn	Pn	18 26 06.9	-3.7
WHAR	**Wooly Hollow**	**4.81**	**101**	Pn	Pn	18 26 08.6	-3.1
FCAR	**Ozark Folk Cen**	**4.83**	**94**	Pn	Pn	18 26 08.1	-3.9
P38A	**Dawn**	**4.86**	**46**	Pn	Pn	18 26 08.9	-3.4
R40A	**Maddies Statio**	**5.02**	**65**	Pn	Pn	18 26 11.7	-2.8
CCM	**Cathedral Cave**	**5.71**	**71**	Pn	Pn	18 26 22.1	-2.0
CCM	comp=Z,4.3nm,0.7s			IAmb_Lg		18 28 13.8	
P40A	**Paris**	**5.72**	**54**	Pn	Pn	18 26 23.0	-1.3

*TEH **03** 18:27:07.8, 33°.69N×45°.66E, h8km±222km, ML2.5*

*ISN **03** 18:27:08.5±0.5, 33°.71N×45°.67E, h25km, ML2.0*
ISC 03 18:27:08.9±1.8, 33°.72N±0°.06×45°.7E±0°.1, h13km, n7, σ0s58/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.42**	**102**	Pg	**Pg**	**18 27 16.8**	**-0.5**
ILBA				Sg	**Sb**	**18 27 24.0**	**-0.5**
IBDR	**Badra** baz=340	**0.63**	**163**	*e*Pg	**Pg**	**18 27 20.5**	**-0.6**
IBDR				*e*Sg	**Sg**	**18 27 30.0**	**+0.5**
IBDR	comp=E,87nm,0.5s			AML	AML	18 27 34.8	
IBDR	comp=N,65nm,0.6s			AML	AML	18 27 38.0	
IGHG	**Ghaleghazi**	**0.94**	**49**	Pg	**Pb**	**18 27 27.3**	**+0.1**
IDHR	**Dehrash**	**1.13**	**29**	Pg	**Pn**	**18 27 30.8**	**+0.2**
KCHF	**Cheshme Sefid,**	**1.23**	**63**	Pg	**Pn**	**18 27 31.9**	**-0.1**
ILIN	**Lien**	**1.58**	**40**	Pg	**Pb**	**18 27 38.5**	**+0.3**
IKFM	**Kafar-mosalman**	**1.79**	**96**	Pn	**Pb**	**18 27 42.3**	**+0.8**

*DJA **03** 18:28:42.3±2.0, 8°N±14°×12°7E±°, h22km±30km, M5.0/11, mB5.3/8, mb5.0/11, MLv5.4/3, Mw(mB)4.7/8*
*IDC **03** 18:28:58.0±1.7, 7°.22N×126°.65E, h75km±15km, mb4.1/24, mbtmp4.3/24, MS3.3/14, Error ellipse: s-maj=20.0km s-min=11.3km az=74.0*
*NEIC **03** 18:28:58.8±1.7, 7°.18N±0°.08×126°.63E±0°.04, h79km±6km, mb4.7/126, Error ellipse: s-maj=12.4km s-min=4.9km az=188.0*
ISC 03 18:28:58.3±0.6, 7°.19N±0°.05×126°.68E±0°.06, h79km±6km, n243, σ1s21/240, mb4.6/85, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)** 3μm,0.3s,baz=80,slow=2.3,SNR=90	**1.09**	**264**	P	**Pn**	**18 29 18.0**	**-0.4**
DAV	3μm,0.4s,baz=80,slow=19,SNR=3.7			S	**Sn**	**18 29 37.0**	**+3.4**
SGSI	**Sangihe**	**3.66**	**198**	P	**Pn**	**18 29 53.7**	**+1.0**
TNTI	**Ternate**	**6.41**	**174**	Pn	**Pn**	**18 30 29.8**	**-0.4**
TNTI	**Ternate**	**6.41**	**174**	P	**Pn**	**18 30 30.9**	**+0.7**
TNTI	**Ternate** 60nm,0.8s,833nm0.3nm	**6.41**	**174**	P	**Pn**	**18 30 31.2**	**+1.0**
KMSI	**Cibinong** 199nm,0.7s,3μm	**7.10**	**202**	P	**Pn**	**18 30 40.5**	**+0.9**
LBMI	**Labuha** 80nm,0.8s,3μm	**7.82**	**174**	P	**Pn**	**18 30 51.1**	**+1.7**
MRSI	**Marisa** 129nm,0.6s,1μm	**8.17**	**216**	P	**Pn**	**18 30 54.9**	**+0.7**
MYLDM	**Lahad Datu**	**8.37**	**257**	Pn	**Pn**	**18 30 56.6**	**-0.4**
TOLI2	**Tolitoli**	**8.42**	**224**	Pn	**Pn**	**18 30 55.3**	**-2.4**
TGY	**Tagaytay City** comp=Z,206nm,21.4s,baz=112,slow=38	**8.89**	**321**	LR	LR	18 34 38.0	
LUWI	**Luwuk**	**9.05**	**206**	Pn	**Pn**	**18 31 07.3**	**+0.9**
SANI	**Sanana**	**9.20**	**184**	P	**Pn**	**18 31 06.2**	**-2.1**
SANI	**Sanana** 32nm,0.5s,807nm	**9.20**	**184**	P	**Pn**	**18 31 09.9**	**+1.6**
SWI	**Serong** 24nm,0.4s,777nm	**9.21**	**150**	P	**Pn**	**18 31 05.5**	**-3.0**
MPSI	**Mapaga** 13nm,0.9s	**9.59**	**225**	P	**Pn**	**18 31 12.8**	**-0.8**
FAKI	**Fak Fak**	**11.48**	**151**	Pn	**Pn**	**18 31 37.7**	**-1.7**
TTSI	**Tana Toraja**	**12.25**	**214**	P	**Pn**	**18 31 51.2**	**+1.3**
BKB	**Balikpapan**	**12.87**	**230**	Pn	**Pn**	**18 31 55.0**	**-3.3**
KAPI	**Kappang**	**13.95**	**210**	Pn	**Pn**	**18 32 11.4**	**-1.1**
SBUM	**Sibu**	**15.15**	**253**	P	**P**	**18 32 31.0**	**-0.3**
SBUM	comp=Z,26nm,0.7s			IAmb	IAmb	18 32 36.4	
MMRI	**Maumere**	**16.33**	**196**		**Pn**	**18 32 43.3**	**+0.5**
MMRI	comp=Z,46nm,1.0s			IAmb	IAmb	18 33 15.1	
SOEI	**Soe**	**17.00**	**188**	Pn	**Pn**	**18 32 45.2**	**-6.1**
SOEI	comp=Z,55nm,1.2s			IAmb	IAmb	18 33 14.2	
TPUB	**Ta-pu**	**17.04**	**341**	Pn	**Pn**	**18 32 47.1**	**-4.6**
TPUB	comp=Z,129nm,1.5s			IAmb	IAmb	18 33 02.0	
GUMO	**Guam** comp=Z,54nm,21.0s,baz=202,slow=32	**18.98**	**69**	LR	LR	18 39 05.5	
TABU	**Tabubil**	**19.07**	**130**	P	**Pn**	**18 33 18.0**	**+1.6**
JAGI	**Jajag, Banyuwa**	**19.94**	**219**	P	**P**	**18 33 23.2**	**-1.0**
JAGI	comp=Z,69nm,1.4s			IAmb	IAmb	18 33 54.2	
MTN	**Manton Dam** baz=20,SNR=4.6	**20.39**	**167**	P	**P**	**18 33 29.5**	**+0.6**
MTN	comp=Z,29nm,1.1s			IAmb	IAmb	18 33 33.5	
KDU	**Kakadu** baz=21,SNR=6.1	**20.57**	**164**	P	**P**	**18 33 30.8**	**-0.1**
KDU	**Kakadu**	**20.57**	**164**	P	**P**	**18 33 31.1**	**+0.3**
UBPT	**Khong Chiam**	**22.28**	**293**	P	**P**	**18 33 49.5**	**+0.2**
KNRA	**Kununurra** baz=23,SNR=9.6	**22.81**	**175**	P	**P**	**18 33 54.8**	**0.0**
KNRA	**Kununurra**	**22.81**	**175**	P	**P**	**18 33 54.2**	**-0.6**
KNRA	comp=Z,35nm,0.8s			IAmb	IAmb	18 33 58.4	
KNRA	**Kununurra**	**22.81**	**175

MJAR LR LR 18 46 40.3
comp=Z,36nm,21.1s,baz=197,slow=34
comp=Z,5.0nm,0.7s
MAJO Matsushiro 31.06 18 P **P** **18 35 07.7 -1.2**
MAJO IAmb IAmb 18 35 08.8
comp=Z,8.7nm,0.8s
MJB9 Matsu-Tunnel 31.06 18 P **P** **18 35 07.5 -1.4**
MJB9 IAmb IAmb 18 35 08.8
comp=Z,8.5nm,0.8s
AS31 Alice Springs 31.47 167 P **P** **18 35 11.8 -0.8**
AS31 IAmb IAmb 18 35 15.7
comp=Z,5.0nm,0.3s
ASAR Alice Springs 31.47 167 P **P** **18 35 11.9 -0.7**
ASAR Alice Springs 31.47 167 P **P** **18 35 12.3 -0.3**
comp=Z,2.0nm,0.3s,baz=338,slow=6.8,SNR=102
ASAR PcP **PcP** **18 38 05.2 +0.9**
comp=Z,2.4nm,0.4s,baz=350,slow=2.3,SNR=11
comp=Z,2.0nm,0.3s
WRKA Warakurna 32.07 177 P **P** **18 35 18.0 +0.2**
baz=32,SNR=7.4
TNCH TengChong 32.23 307 ⇑P **P** **18 35 21.3 +1.8**
TNCH pP pP 18 35 38.3 -0.2
TNCH pmax pmax
comp=Z,10.0nm,2.9s
TNCH pmax pmax
comp=Z,110nm,3.7s
JMM Marumori 33.12 21 P **P** **18 35 26.1 -0.8**
CTAO Charters Tower 33.25 145 P **P** **18 35 28.1 -0.2**
MEEK Meekatharra 34.52 193 P **P** **18 35 39.6 +0.4**
baz=35,SNR=9.2
JTM Tenmabayashi 35.84 19 P **P** **18 35 50.6 +0.2**
OOD Oodnadatta 35.85 166 P **P** **18 35 50.8 +0.2**
HHC Hu-ho-hao-te 36.13 340 *e*P **P** **18 35 55.2 +2.2**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.7s
HNR Honiara 37.03 116 P **P** **18 35 59.6 -1.3**
USA0B Ussuriysk Arra 37.16 6 P **P** **18 36 01.2 -0.3**
USA0B IAmb IAmb 18 36 31.2
comp=Z,18nm,0.9s
USRK Ussuriysk Ar. 37.16 6 P **P** **18 36 01.6 0.0**
USRK Ussuriysk Ar. 37.16 6 P **P** **18 36 02.1 +0.6**
comp=Z,3.2nm,0.4s,baz=184,slow=8.9,SNR=15
comp=Z,3.2nm,0.4s
INKA Innaminka 37.29 159 P **P** **18 36 03.3 +0.5**
MDJ Mudanjiang 37.37 3 P **P** **18 36 05.8 +2.5**
MDJ pmax pmax
comp=Z,13nm,1.4s
MDJ pmax pmax
comp=Z,160nm,3.7s
MORW Morawa 37.47 195 P **P** **18 36 05.2 +0.9**
baz=38,SNR=5.2
MORW Morawa 37.47 195 P **P** **18 36 04.0 -0.3**
MORW IAmb IAmb 18 36 42.3
comp=Z,18nm,1.2s
ERM Erimo 37.64 20 P **P** **18 36 05.4 -0.2**
QLP Quilpie 37.64 154 P **P** **18 36 05.5 -0.3**
baz=38,SNR=7.6
QLP Quilpie 37.64 154 P **P** **18 36 05.5 -0.3**
FORT Forrest 37.77 178 P **P** **18 36 07.5 +0.7**
baz=38,SNR=22
FORT Forrest 37.77 178 P **P** **18 36 07.4 +0.6**
SHL Shillong 37.88 303 P **P** **18 36 07.8 -0.3**
SHL IAmb IAmb 18 36 27.3
comp=Z,6.1nm,0.8s
KMBL Kambalda 38.61 187 P **P** **18 36 14.8 +0.9**
baz=39,SNR=12
KMBL Kambalda 38.61 187 P **P** **18 36 14.8 +0.9**
BLDU Ballidu 38.78 194 P **P** **18 36 17.0 +1.7**
baz=39,SNR=8.4
LCRK Leigh Creek 39.02 164 P **P** **18 36 17.9 +0.5**
ASAJ Asahikawa 39.33 18 LR LR 18 54 41.1
comp=Z,29nm,18.7s,baz=284,slow=39
JKA Kamikawa-asahi 39.33 18 P **P** **18 36 20.9 +1.1**
KLBR Kellerberrin 39.49 192 P **P** **18 36 22.2 +1.0**
baz=40,SNR=14
EIDS Eidsvold 40.14 145 P **P** **18 36 26.1 -0.6**
EIDS IAmb IAmb 18 36 46.6
comp=Z,18nm,1.1s
MUN Mundaring 40.21 194 P **P** **18 36 28.2 +1.1**
baz=40,SNR=4.9
H11S3 WAKE ISLAND Hy 40.50 70 T T 19 20 00.8
baz=247,slow=74,SNR=55
H11S1 WAKE ISLAND Hy 40.52 70 T T 19 19 59.1
baz=247,slow=74,SNR=34
H11S2 WAKE ISLAND Hy 40.52 70 T T 19 20 00.3
baz=247,slow=74,SNR=27
BBOO Buckleboo 40.77 168 P **P** **18 36 32.3 +0.6**
baz=41,SNR=44
BBOO Buckleboo 40.77 168 P **P** **18 36 32.4 +0.6**
BBOO Buckleboo 40.77 168 P **P** **18 36 32.3 +0.6**
NWAO Narrogin (SRO) 40.89 192 P **P** **18 36 33.8 +1.0**
NWAO IAmb IAmb 18 37 07.5
comp=Z,29nm,1.2s
H11N1 WAKE ISLAND Hy 40.93 68 T T 19 20 41.5
baz=265,slow=74,SNR=58
H11N2 WAKE ISLAND Hy 40.94 68 T T 19 20 43.2
baz=265,slow=74,SNR=62
H11N3 WAKE ISLAND Hy 40.95 68 T T 19 20 41.5
baz=265,slow=74,SNR=51
WHYH Whyalla 41.32 166 P **P** **18 36 36.8 +0.5**
STKA Stephens Creek 41.38 161 P **P** **18 36 37.2 +0.4**
baz=42,SNR=41
STKA Stephens Creek 41.38 161 P **P** **18 36 37.1 +0.4**
STKA Stephens Creek 41.38 161 P **P** **18 36 37.2 +0.4**
STKA Stephens Creek 41.38 161 P **P** **18 36 37.1 +0.4**
comp=Z,12nm,0.4s,baz=343,slow=7.8,SNR=44
comp=Z,12nm,0.4s
HTT Hallett 42.03 165 P **P** **18 36 43.0 +0.8**
baz=42,SNR=3.6
CMSA Cobar Meteorol 42.58 156 P **P** **18 36 47.0 +0.3**
baz=43,SNR=17
SONM Songino Array 44.03 340 P **P** **18 36 58.4 +0.1**
SONM Songino Array 44.03 340 P **P** **18 36 57.4 -0.9**
comp=Z,0.6nm,0.5s,baz=150,slow=9.6,SNR=3.7
comp=Z,0.6nm,0.5s
ARMA Armidale 44.40 149 P **P** **18 37 01.3 -0.1**
baz=44,SNR=4.8
ARMA Armidale 44.40 149 P **P** **18 37 02.1 +0.7**
ARMA IAmb IAmb 18 37 13.7
comp=Z,18nm,1.1s
ARPS Mount Arapiles 45.98 163 P **P** **18 37 14.5 +0.8**
baz=46,SNR=34
YNG Young 46.10 155 P **P** **18 37 15.7 +1.0**
baz=46
CAN Canberra 47.23 155 P **P** **18 37 25.1 +1.6**
CAN IAmb IAmb 18 37 25.9
comp=Z,14nm,0.9s
CNB Canberra Magne 47.38 155 P **P** **18 37 26.2 +1.5**
baz=48,SNR=8.1
TOO Toolangi 47.87 160 P **P** **18 37 30.0 +1.6**
baz=48,SNR=9.1
TOO Toolangi 47.87 160 P **P** **18 37 29.7 +1.2**
TOO IAmb IAmb 18 37 30.5
comp=Z,6.9nm,0.6s
DZM Mont Dzumac 48.62 128 P **P** **18 37 35.4 +0.8**
DZM Mont Dzumac 48.62 128 LR LR 18 55 31.5
comp=Z,31nm,21.7s,baz=16,slow=33
MILA Mila 48.78 156 P **P** **18 37 36.4 +0.8**
baz=49,SNR=5.3
WMQ Urumqi 49.90 323 *e*P **P** **18 37 45.9 +1.9**
PEA0B Petropavlovsk- 52.28 23 P **P** **18 38 03.0 +1.4**
PETK Petropavlovsk- 52.28 23 P **P** **18 38 02.2 +0.7**
PETK Petropavlovsk- 52.28 23 P **P** **18 38 02.6 +1.1**
comp=Z,11nm,0.5s,baz=205,slow=4.1,SNR=62
comp=Z,11nm,0.5s
PET Petropavlovsk 52.59 24 P **P** **18 38 04.8 +0.9**
MK31 Makanchi Array 54.72 324 P **P** **18 38 19.5 -0.2**
MK31 IAmb IAmb 18 38 20.5
comp=Z,3.4nm,0.8s
MK31 PcP **PcP** **18 39 19.7 -1.7**
MKAR Makanchi Array 54.72 324 P **P** **18 38 19.4 -0.3**
MKAR PcP **PcP** **18 39 20.7 -0.7**
MKAR Makanchi Array 54.72 324 P **P** **18 38 19.6 0.0**
comp=Z,3.8nm,0.5s,baz=116,slow=6.8,SNR=85
MKAR PcP **PcP** **18 39 21.3 -0.1**
comp=Z,0.8nm,0.6s,baz=110,slow=5.7,SNR=4.2
MKAR LR LR 19 03 51.9
comp=Z,33nm,18.4s,baz=68,slow=38
comp=Z,3.8nm,0.5s
YAK Yakutsk 54.78 2 P **P** **18 38 18.9 -0.7**
YAK IAmb IAmb 18 38 20.0
comp=Z,6.9nm,0.8s
YAK Yakutsk 54.78 2 LR LR 18 59 59.4
comp=Z,11nm,20.2s,baz=226,slow=34

MAKZ Makanchi 54.91 324 P **P** **18 38 20.7 -0.3**
MAKZ IAmb IAmb 18 38 21.8
comp=Z,3.8nm,0.9s
MAKZ PcP **PcP** **18 39 20.3 -1.8**
KSH Kashi 55.60 313 P **P** **18 38 28.2 +2.0**
KSH pP pP 18 38 45.7 -0.8
KSH S **S** **18 46 11.9 +5.5**
KSH pmax pmax
comp=Z,5.0nm,1.5s
NRN Naryn 56.31 316 P **P** **18 38 31.1 -0.4**
NRN IAmb IAmb 18 38 47.6
comp=Z,9.0nm,1.4s
ZAA0 Zalesovo Array 57.51 332 P **P** **18 38 37.8 -1.5**
ZALV Zalesovo Beam 57.51 332 P **P** **18 38 38.0 -1.3**
ZALV Zalesovo Beam 57.51 332 P **P** **18 38 38.2 -1.1**
comp=Z,1.0nm,0.4s,baz=122,slow=6.0,SNR=7.9
ZALV LR LR 19 07 58.4
comp=Z,29nm,18.4s,baz=82,slow=41
comp=Z,1.0nm,0.4s
AAK Ala-Archa 57.80 316 P **P** **18 38 41.7 -0.1**
AAK Ala-Archa 57.80 316 LR LR 19 05 10.3
comp=Z,66nm,20.4s,baz=80,slow=38
ARSB Arslanbob 58.38 315 P **P** **18 38 44.4 -1.4**
ARSB PcP **PcP** **18 39 36.7 +0.7**
KURK Kurchatov 58.83 326 P **P** **18 38 47.6 -1.0**
KURK IAmb IAmb 18 38 49.9
comp=Z,4.5nm,0.7s
KURBB Kurchatov Arra 58.83 326 P **P** **18 38 48.2 -0.4**
comp=Z,2.9nm,0.6s,baz=122,slow=7.5,SNR=45
comp=Z,2.9nm,0.6s
KBL Kabul 59.43 306 P **P** **18 38 52.8 -0.5**
KBL IAmb IAmb 18 38 54.0
comp=Z,3.8nm,0.7s
BTK Batken 59.53 313 P **P** **18 38 52.6 -1.1**
BTK IAmb IAmb 18 38 54.8
comp=Z,3.4nm,0.7s
KK31 Karatay Array 60.71 316 P **P** **18 39 00.6 -1.0**
KK31 IAmb IAmb 18 39 02.4
comp=Z,3.5nm,0.8s
KKAR Karatay Array 60.71 316 P **P** **18 39 01.0 -0.7**
KKAR Karatay Array 60.71 316 P **P** **18 39 01.1 -0.5**
KKAR IAmb IAmb 18 39 02.4
comp=Z,3.5nm,0.8s
TIXI Tiksi 64.41 1 P **P** **18 39 24.0 -1.7**
WHZ Wether Hill Ro 64.41 149 P **P** **18 39 26.6 +0.5**
NNZ Nelson 64.42 143 P **P** **18 39 25.8 -0.5**
BVAR Borovoye Array 64.42 326 P **P** **18 39 25.8 -0.4**
comp=Z,1.8nm,0.5s,baz=123,slow=7.9,SNR=17
BVAR LR LR 19 12 31.8
comp=Z,36nm,18.2s,baz=106,slow=41
comp=Z,1.8nm,0.5s
THZ Tophouse 64.47 143 P **P** **18 39 26.7 +0.1**
THZ IAmb IAmb 18 39 47.3
comp=Z,16nm,1.3s
BRVK Borovoye 64.50 326 P **P** **18 39 26.0 -0.7**
LBZ Lake Benmore 64.57 147 P **P** **18 39 29.0 +1.7**
RPZ Rata Peaks 64.62 146 P **P** **18 39 28.1 +0.5**
TCW Tory Channel 64.96 142 P **P** **18 39 29.6 -0.2**
BKZ Black Stump Fm 65.19 139 P **P** **18 39 31.1 -0.4**
RTZ Ruatahuna 65.22 138 P **P** **18 39 30.5 -1.1**
KHZ Kahutara 65.24 143 P **P** **18 39 30.8 -0.8**
NRIK Noril'sk 67.08 346 P **P** **18 39 41.9 -1.0**
comp=Z,0.5nm,0.3s,baz=80,slow=11,SNR=1.6
NRIK LR LR 19 11 54.3
comp=Z,51nm,18.6s,baz=200,slow=38
comp=Z,0.5nm,0.3s
GEYT Alibeck 68.72 308 P **P** **18 39 53.8 -0.1**
GEYT IAmb IAmb 18 39 56.1
comp=Z,4.9nm,0.9s
GEYT Alibeck 68.72 308 P **P** **18 39 55.0 +1.0**
comp=Z,2.7nm,0.7s,baz=123,slow=5.5,SNR=6.9
comp=Z,2.7nm,0.7s
ABKAR Akbulak array 69.47 320 P **P** **18 39 57.8 -0.5**
ABKAR Akbulak array 69.47 320 P **P** **18 39 57.8 -0.5**
ARU Arti 72.01 327 P **P** **18 40 12.8 -0.7**
ARU IAmb IAmb 18 40 13.8
comp=Z,5.7nm,0.5s
M13K Dall Lake 73.95 29 P **P** **18 40 26.2 +1.4**
L14K Kuka Creek 74.49 28 P **P** **18 40 29.3 +1.3**
L14K IAmb IAmb 18 40 31.0
comp=Z,11nm,0.9s
M14K Bethel 74.69 29 P **P** **18 40 30.8 +1.6**
O14K Tigyukauivet M 74.71 30 P **P** **18 40 30.2 +0.9**
K15K Wolf Creek Mou 75.24 27 P **P** **18 40 33.5 +1.1**
K15K IAmb IAmb 18 40 58.6
comp=Z,20nm,1.4s
N15K Kwethluk River 75.48 30 P **P** **18 40 34.2 +0.5**
N15K IAmb IAmb 18 41 05.3
comp=Z,20nm,1.1s
CHGN Chignik 75.69 34 P **P** **18 40 34.6 -0.4**
J16K Anvik River 75.87 26 P **P** **18 40 37.4 +1.4**
J16K IAmb IAmb 18 40 43.2
comp=Z,11nm,1.4s
L16K Owhat River 76.07 28 P **P** **18 40 37.7 +0.7**
L16K IAmb IAmb 18 40 41.6
comp=Z,12nm,1.2s
M16K Timber Creek 76.19 29 P **P** **18 40 38.8 +1.0**
M16K IAmb IAmb 18 41 03.0
comp=Z,26nm,1.3s
E18K Tukpahlearik C 76.80 22 P **P** **18 40 41.7 +0.6**
C18K Utukok River 76.87 21 P **P** **18 40 42.0 +0.4**
C19K Lookout Ridge 77.54 21 P **P** **18 40 46.9 +1.5**
C19K IAmb IAmb 18 40 47.8
comp=Z,16nm,1.4s
D19K Kuna River 77.94 21 P **P** **18 40 48.0 +0.5**
D19K IAmb IAmb 18 41 02.5
comp=Z,9.9nm,1.5s
N19K Bonanza Creek 78.32 29 P **P** **18 40 51.1 +1.2**
N19K IAmb IAmb 18 41 06.5
comp=Z,22nm,1.4s
KDAK Kodiak Island 79.02 33 P **P** **18 40 53.7 +0.1**
RAYN Ar Rayn 79.10 293 P **P** **18 40 54.9 +0.1**
RAYN IAmb IAmb 18 40 55.9
comp=Z,5.9nm,0.5s
IMAR Indian Mountai 79.23 24 P **P** **18 40 55.2 +0.6**
B21K Ikpikpuk River 79.37 20 P **P** **18 40 56.1 +0.8**
CAST Castle Rocks 79.69 27 P **P** **18 40 58.1 +0.9**
B22K Teshekpuk Lake 79.88 20 P **P** **18 40 58.7 +0.7**
SUA Susitna One 80.18 29 P **P** **18 40 59.9 -0.1**
SUA IAmb IAmb 18 41 02.1
comp=Z,9.4nm,0.9s
AKH Akhalkalaki 80.18 311 P **P** **18 41 01.1 +0.6**
MLY Manley 80.39 25 P **P** **18 41 01.6 +0.6**
MLY IAmb IAmb 18 41 02.7
comp=Z,5.0nm,0.8s
KBZ Khabaz 80.58 313 P **P** **18 41 03.1 +0.8**
comp=Z,1.1nm,0.8s,baz=121,slow=5.9,SNR=2.7
comp=Z,1.1nm,0.8s
RC01 Rabbit Creek A 80.65 29 P **P** **18 41 02.4 0.0**
RC01 IAmb IAmb 18 41 06.1
comp=Z,24nm,1.5s
PMR Palmer 80.96 29 P **P** **18 41 02.8 -1.1**
PMR IAmb IAmb 18 41 24.5
comp=Z,14nm,1.2s
I23K Minto, Yukon-K 80.98 25 P **P** **18 41 04.9 +0.9**
I23K IAmb IAmb 18 41 07.7
comp=Z,3.8nm,0.7s
RND Reindeer 81.14 27 P **P** **18 41 05.0 0.0**
RND IAmb IAmb 18 41 07.6
comp=Z,12nm,1.3s
KNK Knik Glacier 81.28 29 P **P** **18 41 06.2 +0.5**
KNK IAmb IAmb 18 41 07.3
comp=Z,10nm,1.0s
D24K Happy Valley 81.37 21 P **P** **18 41 07.4 +1.4**
D24K IAmb IAmb 18 41 18.3
comp=Z,8.8nm,1.4s
GURO Guroymak-BITLI 81.39 308 P **P** **18 41 07.9 +0.9**
GURO IAmb IAmb 18 41 09.2
comp=Z,5.6nm,0.8s
H24K Noodor Dome 81.62 25 P **P** **18 41 08.7 +1.1**
IL31 82.03 26 P **P** **18 41 09.4 -0.1**
IL31 IAmb IAmb 18 41 10.5
comp=Z,8.9nm,1.3s
ILAR Eielson Array 82.03 26 P **P** **18 41 08.9 -0.6**
ILAR Eielson Array 82.03 26 P **P** **18 41 09.2 -0.4**
comp=Z,1.1nm,0.5s,baz=244,slow=4.9,SNR=36
comp=Z,1.1nm,0.5s
J25K Salcha River, 82.68 26 P **P** **18 41 12.6 -0.5**
BMAR Burnt Mountain 82.93 23 P **P** **18 41 13.9 -0.4**
J26L Joseph Creek 83.47 26 P **P** **18 41 17.5 +0.4**
BERG Berg Lake 83.62 30 P **P** **18 41 17.5 -0.5**
WAX Waxell Ridge 84.04 30 P **P** **18 41 21.2 +1.0**
ISLE Juniper Island 84.28 30 P **P** **18 41 22.7 +1.2**
BCAR Beaver Creek A 84.35 27 P **P** **18 41 22.8 +1.1**
F28M Old Crow 84.73 23 P **P** **18 41 24.4 +1.0**
F28M IAmb IAmb 18 41 25.6
comp=Z,8.9nm,0.8s
CTGM Chitina Glacie 84.74 29 P **P** **18 41 25.1 +1.3**
E28M Babbage River 84.75 22 P **P** **18 41 24.7 +1.2**
E28M IAmb IAmb 18 41 25.8
comp=Z,5.8nm,1.1s
I28M Miner Creek 84.93 25 P **P** **18 41 25.9 +1.4**
I28M IAmb IAmb 18 41 27.2
comp=Z,11nm,0.8s
DAWY Dawson 85.31 26 P **P** **18 41 27.6 +1.1**
M29M Somme Creek 85.93 28 P **P** **18 41 31.7 +2.0**
VNDA Vanda 86.84 173 P **P** **18 41 34.1 +0.5**
VNDA IAmb IAmb 18 41 35.3
comp=Z,17nm,1.4s
INK Inuvik 86.99 22 P **P** **18 41 34.4 -0.1**
F31M Tsiigehtchic 87.08 22 P **P** **18 41 34.3 -0.6**
MMAI Mount Meron Ar 87.20 303 P **P** **18 41 37.2 +0.8**
comp=Z,1.7nm,0.5s,baz=80,slow=6.9,SNR=7.1
comp=Z,1.7nm,0.5s
ARCES ARCESS Array B 87.21 340 P **P** **18 41 34.6 -1.0**
ARCES IAmb IAmb 18 42 04.4
comp=Z,14nm,1.2s
ARCES ARCESS Array B 87.21 340 P **P** **18 41 34.9 -0.7**
comp=Z,4.3nm,1.0s,baz=85,slow=5.8,SNR=7.1
comp=Z,4.3nm,1.0s
BR131 Keskin Array S 87.79 310 P **P** **18 41 38.8 -0.4**
BRTR Keskin Array B 87.79 310 P **P** **18 41 38.2 -1.0**
BRTR Keskin Array B 87.79 310 P **P** **18 41 38.4 -0.8**
comp=Z,1.1nm,0.7s,baz=140,slow=4.8,SNR=9.5
comp=Z,1.1nm,0.7s
FARO Faro, Yukon 88.32 27 P **P** **18 41 41.4 +0.3**
FARO IAmb IAmb 18 41 43.1
comp=Z,4.7nm,0.9s
CSS Mathiatis 88.66 305 P **P** **18 41 42.9 -0.4**
CSS IAmb IAmb 18 41 44.4
comp=Z,5.8nm,0.7s
FIA1 FINESS Array S 88.78 332 P **P** **18 41 41.9 -1.3**
FINES FINESS Array B 88.78 332 P **P** **18 41 42.1 -1.0**
comp=Z,1.1nm,0.4s,baz=80,slow=5.2,SNR=13
comp=Z,1.1nm,0.4s
AKASG Malin Array Be 89.19 321 P **P** **18 41 44.7 -0.6**
comp=Z,1.0nm,0.5s,baz=63,slow=4.9,SNR=4.0
comp=Z,1.0nm,0.5s
KIEV Kiev 89.20 321 P **P** **18 41 44.7 -0.7**
KIEV IAmb IAmb 18 41 48.1
comp=Z,4.2nm,1.1s
HFS Hagfors 94.95 332 P **P** **18 42 10.3 -1.5**
comp=Z,3.2nm,0.9s,baz=91,slow=5.8,SNR=2.6
comp=Z,3.2nm,0.9s
NOA NORSAR Array B 95.68 334 LR LR 19 32 54.3
comp=Z,30nm,18.1s,baz=255,slow=40
YKA Yellowknife Ar 96.39 24 P **P** **18 42 18.5 +0.2**
comp=Z,0.5nm,0.8s,baz=296,slow=4.3,SNR=6.4
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 119.50 51 PKP **PKiKP** **18 47 40.8 +1.0**
comp=Z,0.6nm,0.5s,baz=331,slow=1.2,SNR=14
TORD Torodi Ar. Bea 121.74 290 PKP **PKPdf** **18 47 44.4 +0.1**
comp=Z,1.0nm,0.7s,baz=60,slow=2.1,SNR=5.8
PLCA Paso Flores 143.22 158 PKP PKPbc 18 48 21.9 +0.9
comp=Z,1.5nm,0.8s,baz=205,slow=2.9,SNR=2.3

ISC 03 18:45:07.2±2.8, 56.0°N±0.2°×150.12°W±0.06°, h10km, n24, σ0.85/28, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor** baz=125	**2.12**	**306**	P	**Pn**		**18 45 42.8**	**+0.1**
OHAK				S	**Sn**		**18 46 07.8**	**-1.3**
R18K	**Karluk** baz=123	**2.84**	**305**	P	**Pn**		**18 45 53.4**	**+0.8**
R18K				S	**Sn**		**18 46 25.7**	**-1.1**
Q20K	**Shuyak Island** baz=154	**2.87**	**335**	P	**Pn**		**18 45 53.7**	**+0.7**
Q20K				S	**Sn**		**18 46 27.1**	**-0.4**
Q19K	**Cape Douglas,** baz=146	**3.48**	**328**	P	**Pn**		**18 46 02.9**	**+1.5**
BRSE	**Bradley Lake S** baz=175	**3.74**	**355**	P	**Pn**		**18 46 04.7**	**-0.3**
Q17K	**Contact Creek** baz=124	**3.86**	**308**	P	**Pn**		**18 46 07.4**	**+0.7**
P19K	**Oil Pt** baz=154	**4.00**	**337**	P	**Pn**		**18 46 09.9**	**+1.4**
P19K				S	**Sn**		**18 46 55.1**	**-0.4**
P23K	**Montague Islan** baz=200	**4.24**	**19**	P	**Pn**		**18 46 11.6**	**-0.1**
O20K	**Slope Mountain** baz=161	**4.28**	**343**	P	**Pn**		**18 46 14.8**	**+2.3**
P17K	**Kvichak River** baz=131	**4.65**	**316**	P	**Pn**		**18 46 17.8**	**+0.3**
O18K	**Koktuh Hills** baz=143	**4.70**	**327**	P	**Pn**		**18 46 19.0**	**+0.8**
KAIM	**Kayak Island** baz=220	**4.95**	**35**	P	**Pn**		**18 46 21.8**	**+0.2**
EYAK	**Cordova Ski Ar** baz=208	**5.09**	**25**	P	**Pn**		**18 46 23.5**	**+0.1**
N19K	**Bonanza Creek** baz=153	**5.32**	**336**	P	**Pn**		**18 46 26.5**	**-0.3**
N18K	**Kilae Creek** baz=145	**5.57**	**329**	P	**Pn**		**18 46 29.9**	**-0.2**
BMRM	**Bremner River** baz=212	**5.73**	**28**	P	**Pn**		**18 46 32.6**	**+0.2**
KLU	**Klutina** baz=203	**5.90**	**20**	P	**Pn**		**18 46 35.0**	**+0.3**
MESA	**MESA** baz=229	**6.00**	**43**	P	**Pn**		**18 46 36.8**	**+0.5**
CRQE	**Cirque** baz=220	**6.01**	**35**	P	**Pn**		**18 46 36.4**	**+0.2**
O15K	**Ungalikthiuk R** baz=118	**6.10**	**305**	P	**Pn**		**18 46 37.9**	**+0.6**
M18K	**Stony River** baz=149	**6.23**	**334**	P	**Pn**		**18 46 39.5**	**+0.3**
N25K	**Chitina, Valde** baz=209	**6.29**	**25**	P	**Pn**		**18 46 40.7**	**+0.7**
MCARA	**McCarthy VSAT** baz=217	**6.52**	**32**	P	**Pn**		**18 46 43.8**	**+0.7**
M16K	**Timber Creek** baz=134	**6.82**	**321**	P	**Pn**		**18 46 47.9**	**+0.7**

*SSNC **03** 19:01:15.7±1.3, 18°.08N×76°.62W, h20km±15km, MD2.1, ML4.8, MW2.5*
*JSN **03** 19:01:16.3±0.3, 18°.13N×76°.66W, h9km±9km, MD2.4*
ISC 03 19:01:11.7±1.2, 18°.27N±0°.07×76°.54W±0°.07, h10km±12km, n8, σ0.53/16, 1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.27**	**224**	*i* P		**Pb**	**19 01 18.9**	**+0.2**
STH	**Stony Hill**	**0.32**	**234**	*i* P		**Pb**	**19 01 19.6**	**0.0**
STH				*i* S		**Sg**	**19 01 22.3**	**-0.2**
STH	**Stony Hill**	**0.32**	**234**	*e*P		**Pb**	**19 01 19.6**	**0.0**
STH				*e*S		**Sg**	**19 01 22.4**	**-0.2**
STH				IAML			19 01 22.6	
	comp=N,247μm,0.1s							
STH				IAML			19 01 22.7	
	comp=E,123μm,0.1s							
HOJ	**Hope**	**0.33**	**218**	*i* P		**Pb**	**19 01 19.7**	**0.0**
HOJ				*i* S		**Sg**	**19 01 22.2**	**-0.6**
MTDJ	**Mount Denham**	**0.95**	**268**↓	*e*P		**Pb**	**19 01 30.6**	**+0.3**
MTDJ				*e*S		**Sg**	**19 01 41.9**	**-0.6**
RCC	**Rio Carpintero**	**1.89**	**25**	*e*P		**Pg**	**19 01 48.5**	**+0.4**
RCC				*e*S		**Sn**	**19 02 08.4**	**+0.4**
RCC				*e*Sg		**Sg**	**19 02 11.7**	**-1.0**
GTBY	**Guantanamo Bay**	**2.13**	**39**	*e*P		**Pg**	**19 01 53.1**	**+0.5**
GTBY				*e*S		**Sb**	**19 02 17.1**	**+0.2**
GTMO	**Guantanamo**	**2.23**	**36**	*e*P		**Pb**	**19 01 52.4**	**+0.2**
GTMO				*e*S		**Sn**	**19 02 15.5**	**-0.9**

ZUR 03 19:08:01.5, 46°.19N×7°.49E, h2km±1km, MLh0.1/7, 3C-1D, Error ellipse: s-maj=3070.0km s-min=958.3km az=228.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SHER	**Hrmence, R**	**0.07**	**264**	⇓Pg		Pg	19 08 03.2	+0.3
SHER						Sg	19 08 04.3	+0.4
SAYF2	**Ayent-Fortunoz**	**0.11**	**331**	⇑Pg		Pg	19 08 03.8	+0.2
DIX	**Grande Dixence**	**0.13**	**208**	⇑Pg		Pg	19 08 04.4	+0.3
DIX						Sg	19 08 06.1	+0.4
LKBD2	**Leukerbad 2**	**0.21**	**30**	Sg		Sg	19 08 08.6	+0.2

SENIN Lac Senin/Sane 0.22 322 ⇑Pg Pg 19 08 06.6 +0.8

*GEN **03** 19:08:14.0,44.˝87N×7.˝02E,h8km,MlI0.7*
*STR **03** 19:08:14.5±0.3,45.˚N±˚,h5km,MLv1.3/10,Error ellipse: s-maj=0.0km s-min=0.0km az=59.1,preliminary*
*LDG **03** 19:08:14.4±0.1,44.˝88N×7.˝01E,h8km,Md1.7/3,Ml1.8/2, Error ellipse: s-maj=1.3km s-min=1.0km az=81.0*
ROM 03 19:08:13.7±0.2,**44.˝868N**±0.˝010×**7.˝02E**±0.˝01,**h11**km±1km, **ML1.1**/6,**Error ellipse: s-maj=1.0km s-min=0.5km az=207.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RRL	**Rocca Remolon**	**0.17**	**288**	P	Pg	19 08 18.2	+0.6
RRL				S	Sg	19 08 20.8	+0.5
RRL				AML	AML		
	comp=E,75μm,0.3s						
RRL				AML	AML		
	comp=N,76μm,0.2s						
RRL				AML	AML		
	comp=E,75μm,1.7s						
RRL	**Rocca Remolon**	**0.17**	**288**	Pg	Pb	19 08 18.3	-0.7
RRL	**Rocca Remolon**	**0.17**	**288**	Sg	Sg	19 08 20.7	+0.4
RRL	**Rocca Remolon**	**0.17**	**288**	P	Pb	19 08 18.4	-0.6
RRL				S	Sg	19 08 20.6	+0.3
BHB	**Bricherasio**	**0.18**	**99**	P	Pb	19 08 18.4	-0.5
BHB				S	Sg	19 08 20.9	+0.7
BHB				AML	AML		
	comp=E,54μm,1.6s						
BHB				AML	AML		
	comp=N,64μm,0.1s						
BHB				AML	AML		
	comp=E,54μm,0.4s						
BHB	**Bricherasio**	**0.18**	**99**	Sg	Sg	19 08 21.2	+0.9
BHB	**Bricherasio**	**0.18**	**99**	Pg	Pb	19 08 18.5	-0.5
BHB	**Bricherasio**	**0.18**	**99**	P	Pb	19 08 18.5	-0.5
BHB				S	Sg	19 08 20.9	+0.7
MBDF	**Montbardon**	**0.23**	**231**	*e*Pg	Pg	19 08 19.1	+0.7
MBDF				*e*Sg	Sg	19 08 22.2	+0.5
BNI	**Bardonecchia**	**0.30**	**307**	P	Pb	19 08 20.7	-0.5
BNI				S	Sg	19 08 24.6	+0.6
BNI	**Bardonecchia**	**0.30**	**307**	P	Pb	19 08 20.7	-0.5
BNI				S	Sg	19 08 24.4	+0.4
RSP	**Reno Superiore**	**0.33**	**32**	P	Pb	19 08 21.2	-0.4
RSP				S	Sg	19 08 25.6	+0.7
RSP	**Reno Superiore**	**0.33**	**32**	Sg	Sg	19 08 25.6	+0.8
RSP	**Reno Superiore**	**0.33**	**32**	Pg	Pb	19 08 21.3	-0.4
RSP	**Reno Superiore**	**0.33**	**32**	P	Pb	19 08 21.2	-0.5
RSP				S	Sg	19 08 25.6	+0.8
PZZ	**Stroppo**	**0.37**	**169**	P	Pb	19 08 21.8	-0.5
PZZ				S	Sg	19 08 26.6	+0.6
PZZ				AML	AML		
	comp=E,100μm,0.1s						
PZZ				AML	AML		
	comp=N,69μm,1.1s						
PZZ				AML	AML		
	comp=N,69μm,0.9s						
PZZ	**Stroppo**	**0.37**	**169**	Sg	Sg	19 08 26.7	+0.8
PZZ	**Stroppo**	**0.37**	**169**	Pg	Pb	19 08 21.8	-0.5
PZZ	**Stroppo**	**0.37**	**169**	P	Pb	19 08 21.8	-0.5
PZZ				S	Sg	19 08 26.4	+0.5
SURF	**Saint Ours**	**0.41**	**201**	Pg	Pb	19 08 22.7	-0.4
SURF				Sg	Sb	19 08 28.9	-0.6
SURF	**Saint Ours**	**0.41**	**201**	P	Pb	19 08 22.9	-0.2
SURF				S	Sb	19 08 29.1	-0.4
CREF	**Crivoux**	**0.42**	**222**	Pg	Pb	19 08 23.3	0.0
CREF				Sg	Sb	19 08 28.9	-0.9
JAUF	**Jausiers**	**0.48**	**204**	Pg	Pb	19 08 23.9	-0.3
JAUF				Sg	Sb	19 08 30.6	-0.7
OGAG	**Argentiere**	**0.54**	**220**	Pg	Pg	19 08 21.8	-2.3
OGAG				Sg	Sg	19 08 26.1	-5.1
OGAG	**Argentiere**	**0.54**	**220**	P	Pg	19 08 21.7	-2.4
OGAG				S	Sg	19 08 26.4	-4.8
LSD	**Lago del Serru**	**0.60**	**8**	P	Pb	19 08 25.8	-0.5
LSD				S	Sg	19 08 33.5	+0.2
LSD	**Lago del Serru**	**0.60**	**8**	Pg	Pb	19 08 25.9	-0.4
LSD	**Lago del Serru**	**0.60**	**8**	Sg	Sg	19 08 33.3	+0.1
LSD	**Lago del Serru**	**0.60**	**8**	P	Pb	19 08 26.2	-0.1
LSD				S	Sg	19 08 33.5	+0.2
LPG	**La Plagne**	**0.66**	**343**	*e*Pg	Pg	19 08 26.5	0.0
LPG				*e*Sg	Sg	19 08 34.9	-0.3
	comp=N,2.4nm,0.2s						
STV	**Sant Anna di V**	**0.66**	**160**	Pg	Pb	19 08 27.1	-0.2
STV	**Sant Anna di V**	**0.66**	**160**	Sg	Sg	19 08 35.2	0.0
STV	**Sant Anna di V**	**0.66**	**160**	P	Pb	19 08 27.4	+0.2
STV				S	Sg	19 08 35.5	+0.4
LPL	**La Plagne**	**0.68**	**343**	*e*Pg	Pg	19 08 26.8	-0.1
LPL				*e*Sg	Sg	19 08 35.5	-0.3
	comp=N,2.5nm,0.2s						
ISO	**Isola**	**0.69**	**178**	Pg	Pb	19 08 28.1	+0.5
ISO				Sg	Sb	19 08 36.8	-0.3
ISO	**Isola**	**0.69**	**178**	P	Pn	19 08 28.7	-0.6
ISO				S	Sb	19 08 37.4	+0.3
ENR	**Entracque**	**0.70**	**156**	Sg	Sg	19 08 36.5	+0.1
ENR	**Entracque**	**0.70**	**156**	Pg	Pb	19 08 27.7	-0.3
ENR	**Entracque**	**0.70**	**156**	S	Sg	19 08 36.1	-0.4
ENAUX	**Enaux**	**0.78**	**193**	Pg	Pb	19 08 29.9	+0.6
ENAUX				Sg	Sb	19 08 39.6	-0.3
ORIF	**Oris-en-Rattie**	**0.81**	**274**	*e*Pg	Pb	19 08 30.0	+0.2
ORIF				*e*Sg	Sg	19 08 40.0	+0.1
	comp=N,4.7nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.81**	**274**	Pg	Pb	19 08 30.0	+0.2
SPIF	**crte de Spivo**	**0.83**	**169**	Pg	Pb	19 08 30.2	+0.1
SPIF				Sg	Sb	19 08 41.1	-0.2
GBOS	**Grotte di Boss**	**0.86**	**137**	Pg	Pb	19 08 30.9	+0.3
GBOS	**Grotte di Boss**	**0.86**	**137**	Sg	Sg	19 08 41.2	-0.2
SBF	**Sospel**	**1.05**	**163**	*e*Sg	Sn	19 08 48.4	-0.6
	comp=N,3.2nm,0.4s						
RORO	**Rocca Rossa**	**1.06**	**135**	Pg	Pn	19 08 34.6	+0.1
LMR	**La Mourre**	**1.58**	**194**	*e*Pg	Pg	19 08 44.1	+0.2
LMR				*e*Sg	Sg	19 09 05.1	+0.8
	comp=N,1.7nm,0.3s						

*IDC **03** 19:14:27.5±3.5,36.˚92N×31.˚25E,h128km±26km,mb3.0/2, mbtmp3.3/4,MS2.4/1,Error ellipse: s-maj=44.9km s-min=13.0km az=81.0*
*AFAD **03** 19:14:27.0±0.0,37.˚03N×31.˚09E,h102km±10km,ML2.8*
*GII **03** 19:14:28.7±0.7,36.˚79N±0.˚01×31.˚581E±0.˚003,h1km, Mws2.9,confirmed*
*ISK **03** 19:14:28.0,37.˚02N×31.˚13E,h116km,ML2.9/28*
*NIC **03** 19:14:31.0,36.˚91N×31.˚46E,h74km±29km,Ml2.9/9*
ISC 03 19:14:26.7±1.0,**36.˚98N**±0.˚03×**31.˚15E**±0.˚03,**h122**km±6km, **n110**,σ1$**74**/133,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVG	**Manavgat-Antal**	**0.28**	**131**	Pg	**Pn**	**19 14 44.8**	**+1.0**
MNVG				Sg	**Sn**	**19 14 57.6**	**+1.0**
KEPZ	**Antalya-Kepez**	**0.38**	**102**	P	**Pn**	**19 14 44.3**	**+0.1**
ANTB	**Antalya**	**0.40**	**259**	Pg	**Pn**	**19 14 45.3**	**+1.0**
ANTB				Sg	**Sn**	**19 14 58.2**	**+0.7**
BUCA	**Burdur, Bucak-**	**0.58**	**307**	P	**Pn**	**19 14 46.3**	**+0.8**
KEMT	**Kemer-ANTALYA**	**0.60**	**232**	Pg	**Pn**	**19 14 46.5**	**+1.0**
KORT	**Korkueli**	**0.64**	**272**	Pg	**Pn**	**19 14 47.3**	**+1.4**
KORT	**Korkueli**	**0.64**	**272**	P	**Pn**	**19 14 46.0**	**+0.1**
BCK	**Bucak**	**0.66**	**317**	Pg	**Pn**	**19 14 46.6**	**+0.6**
BCK				Sg	**Sn**	**19 15 00.3**	**-0.2**
SEDI	**Konya, Seydise**	**0.68**	**46**	P	**Pn**	**19 14 46.6**	**+0.4**
SEDI				S	**Sn**	**19 14 59.8**	**-1.2**
SEDI				*i* AML	AML	19 15 01.0	
	comp=N,259nm,0.4s						
SEDI				*i* AML	AML	19 15 02.0	
	comp=E,198nm,0.4s						
SEYD	**Seydisehir-KON**	**0.70**	**52**	Pg	**Pn**	**19 14 47.3**	**+1.0**
AKUM	**Antalya-Kumluc**	**0.92**	**225**	P	**Pn**	**19 14 49.1**	**+1.0**
ISP	**Isparta**	**0.98**	**330**	Pg	**Pn**	**19 14 49.7**	**+0.9**
ISP	**Isparta**	**0.98**	**330**	P	**Pn**	**19 14 49.9**	**+1.1**
ELL	**Elmali**	**1.02**	**257**	Pg	**Pn**	**19 14 51.3**	**+2.1**
HDMB	**Hadim**	**1.07**	**90**	Pn	**Pn**	**19 14 51.6**	**+1.5**
BRDR	**BURDUR-Merkez**	**1.12**	**310**	P	**Pn**	**19 14 50.5**	**+0.3**
BRDR				S	**Sn**	**19 15 04.5**	**-3.5**
DOGA	**KONYA_Doganhis**	**1.20**	**20**	P	**Pn**	**19 14 50.8**	**-0.3**
DOGA				S	**Sn**	**19 15 05.6**	**-3.9**
DOGA				*i* AML	AML	19 15 10.0	
	comp=N,222nm,0.5s						
GAZI	**Gazipasa**	**1.20**	**128**	Pn	**Pn**	**19 14 52.9**	**+2.0**
GAZI	**Gazipasa**	**1.20**	**128**	P	**Pn**	**19 14 52.8**	**+1.8**
GAZI				S	**Sn**	**19 15 08.1**	**-1.1**
GAZI				*i* AML	AML	19 15 12.0	
	comp=N,221nm,0.5s						
KMER	**Konya-Meram**	**1.25**	**51**	P	**Pn**	**19 14 52.2**	**+0.6**
KMER				S	**Sn**	**19 15 09.3**	**-1.2**
KMER				*i* AML	AML	19 15 14.0	
	comp=N,116nm,0.6s						
KNIK	**Mula-Seydike**	**1.27**	**264**	P	**Pn**	**19 14 51.3**	**-0.4**
KNIK				S	**Sn**	**19 15 10.4**	**-0.4**
BASM	**Basmaki-Afyon**	**1.28**	**317**	Pn	**Pn**	**19 14 53.0**	**+1.1**
YVAC	**Isparta, Yalva**	**1.29**	**3**	P	**Pn**	**19 14 52.5**	**+0.4**
KONT	**Konya--Tatoy**	**1.36**	**45**	Pn	**Pn**	**19 14 54.0**	**+1.3**
KONT	**Konya--Tatoy**	**1.36**	**45**	P	**Pn**	**19 14 53.9**	**+1.1**
AFYN	**Afyon-Dinar-K**	**1.39**	**339**	P	**Pn**	**19 14 53.3**	**+0.2**
AKAS	**Kas**	**1.45**	**239**	Pn	**Pn**	**19 14 55.1**	**+1.3**
AKAS	**Kas**	**1.45**	**239**	P	**Pn**	**19 14 53.6**	**-0.2**
INCE	**Denizli-Bozkur**	**1.45**	**301**	P	**Pn**	**19 14 54.7**	**+1.0**
KKBE	**Karaman, Kazim**	**1.45**	**80**	P	**Pn**	**19 14 54.7**	**+0.9**
KKBE				S	**Sn**	**19 15 13.2**	**-1.2**
KKBE				*i* AML	AML	19 15 16.0	
	comp=E,90nm,0.3s						
CAEL	**Denizli, Camel**	**1.47**	**276**	P	**Pn**	**19 14 55.8**	**+1.8**
CAEL				S	**Sn**	**19 15 15.7**	**+1.0**
CAME	**Cameli-Denizli**	**1.48**	**269**	Pn	**Pn**	**19 14 55.8**	**+1.7**
KZIL	**AFYON_Kizioren**	**1.50**	**328**	P	**Pn**	**19 14 52.8**	**-1.7**
KZIL				S	**Sn**	**19 15 14.3**	**-1.2**
APMY	**Acipayam-Deniz**	**1.55**	**289**	Pn	**Pn**	**19 14 56.4**	**+1.5**
LADK	**Ladik-KONYA**	**1.56**	**38**	Pn	**Pn**	**19 14 56.2**	**+1.2**
IZZE	**Mula-Seydike**	**1.64**	**251**	P	**Pn**	**19 14 57.1**	**+1.3**
IZZE				S	**Sn**	**19 15 16.3**	**-1.7**
IZZE				*i* AML	AML	19 15 21.0	
	comp=N,120nm,0.3s						
SHUT	**Suhut-Afyon**	**1.64**	**343**	Pn	**Pn**	**19 14 57.1**	**+1.1**
UCKU	**Afyonkarahisar**	**1.67**	**8**	P	**Pn**	**19 14 56.7**	**+0.3**
FETY	**Fethiye**	**1.69**	**259**	Pn	**Pn**	**19 14 57.9**	**+1.4**
FETY	**Fethiye**	**1.69**	**259**	P	**Pn**	**19 14 56.8**	**+0.3**
KDHN	**Kadinhani**	**1.72**	**26**	P	**Pn**	**19 14 57.5**	**+0.6**
DNZT	**Denizli-Tavas-**	**1.72**	**281**	P	**Pn**	**19 14 59.5**	**+2.6**
KURO	**Afyon-Bolvadin**	**1.76**	**355**	P	**Pn**	**19 14 58.1**	**+0.7**
DNIZ	**Denizli-Tavas-**	**1.80**	**292**	P	**Pn**	**19 14 57.7**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.85**	**286**	P	**Pn**	**19 14 58.0**	**-0.5**
PASA	**Karahalli, USA**	**1.90**	**317**	P	**Pn**	**19 14 60.0**	**+0.9**
PASA				S	**Sn**	**19 15 21.1**	**-2.7**
TEVE	**Tevekalti-Mers**	**1.92**	**106**	Pn	**Pn**	**19 15 01.4**	**+2.0**
KIZT	**Kizilcal**	**1.98**	**17**	Pn	**Pn**	**19 15 01.0**	**+0.8**
DALY	**Dalyan (Mula)**	**2.00**	**266**	Pn	**Pn**	**19 15 02.2**	**+1.9**
OREN	**Orenkoy-Mersin**	**2.01**	**112**	Pn	**Pn**	**19 15 02.5**	**+2.1**
GULN	**MERSIN_Gulnar**	**2.09**	**112**	P	**Pn**	**19 15 03.7**	**+2.4**
GULN				S	**Sn**	**19 15 24.9**	**-2.8**
GULN				*i* AML	AML	19 15 31.0	
	comp=N,39nm,0.4s						
AKK1	**Akkuyu-Mersin**	**2.10**	**113**	Pn	**Pn**	**19 15 04.1**	**+2.6**
AKKU	**Akkuyu-Mersin**	**2.10**	**112**	Pn	**Pn**	**19 15 03.6**	**+2.1**
AKK2	**Akkuyu-Mersin**	**2.11**	**113**	Pn	**Pn**	**19 15 03.7**	**+2.1**
CBEY	**Konya-Cihanbey**	**2.14**	**37**	P	**Pn**	**19 15 03.1**	**+1.0**
ALFC	**Alefka**	**2.17**	**147**	P	**Pn**	**19 15 02.0**	**-0.4**
ALFC				S	**Sn**	**19 15 27.3**	**-2.4**
ALFC				AML	AML	19 15 31.4	
	0.3nm,0.2s						
ALFC				AML	AML	19 15 32.4	
	0.3nm,0.2s						
IKL	**Isikli**	**2.17**	**109**	Pn	**Pn**	**19 15 04.7**	**+2.3**
AKMS	**Akamas**	**2.18**	**153**	P	**Pn**	**19 15 03.5**	**+0.9**
AKMS				S	**Sn**	**19 15 28.4**	**-1.6**
AKMS				AML	AML	19 15 32.4	
	0.4nm,0.3s						
AKMS				AML	AML	19 15 33.3	
	0.2nm,0.2s						
TISA	**Tisan-Mersin**	**2.20**	**111**	Pn	**Pn**	**19 15 04.9**	**+2.2**
KARG	**Kargicak-Mersi**	**2.20**	**110**	Pn	**Pn**	**19 15 05.2**	**+2.4**
YESY	**Yesilyurt**	**2.22**	**68**	Pn	**Pn**	**19 15 04.9**	**+1.8**
AKDN	**Akdeniz- Kıbrı**	**2.23**	**138**	Pn	**Pn**	**19 15 04.8**	**+1.6**
SILI	**Silifke-Mersin**	**2.31**	**104**	Pn	**Pn**	**19 15 06.6**	**+2.4**
SLFK	**Silifke-Mersin**	**2.33**	**104**	Pn	**Pn**	**19 15 06.6**	**+2.3**
LEF	**Lefka**	**2.33**	**142**	P	**Pn**	**19 15 04.6**	**+0.2**
KERG	**Konya-Eregli**	**2.42**	**79**	P	**Pn**	**19 15 06.8**	**+1.1**
KIZK	**Mersin**	**2.46**	**101**	Pn	**Pn**	**19 15 08.3**	**+2.3**
KIZK	**Mersin**	**2.46**	**101**	P	**Pn**	**19 15 07.8**	**+1.8**
TROD	**Troodos**	**2.46**	**145**	P	**Pn**	**19 15 07.0**	**+0.7**
TROD				S	**Sn**	**19 15 35.3**	**-1.3**
TROD				AML	AML	19 15 40.7	
	0.1nm,0.3s						
TROD				AML	AML	19 15 44.6	
	0.1nm,0.5s						
NATA	**Nata**	**2.48**	**152**	P	**Pn**	**19 15 07.5**	**+1.1**
NATA				S	**Sn**	**19 15 34.3**	**-2.5**
NATA				AML	AML	19 15 41.6	
	0.4nm,0.2s						
NATA				AML	AML	19 15 44.4	
	0.3nm,0.3s						
ATHAL	**Athalassa**	**2.59**	**135**	S	**Sn**	**19 15 38.9**	**-0.2**
ATHAL				AML	AML	19 15 46.2	
	0.2nm,0.5s						
ATHAL				AML	AML	19 15 46.9	
	0.2nm,0.3s						
CSS	**Mathiatis**	**2.68**	**138**	S	**Sn**	**19 15 39.3**	**-2.1**
CSS				AML	AML	19 15 47.1	
	0.1nm,0.3s						
CSS				AML	AML	19 15 50.4	
	0.1nm,0.4s						
CSS	**Mathiatis**	**2.68**	**138**	P	**Pn**	**19 15 07.8**	**-1.1**
ASGA	**Asgata**	**2.78**	**141**	P	**Pn**	**19 15 11.5**	**+1.4**
ASGA				S	**Sn**	**19 15 42.0**	**-1.6**
ASGA				AML	AML	19 15 48.2	
	0.1nm,0.3s						
ASGA				AML	AML	19 15 53.0	
	0.1nm,0.3s						
MVOU	**Mavrovouni**	**2.81**	**133**	P	**Pn**	**19 15 10.6**	**0.0**
MVOU				S	**Sn**	**19 15 42.6**	**-1.7**
MVOU				AML	AML	19 15 45.1	
	0.1nm,0.2s						
MVOU				AML	AML	19 15 45.9	
	0.1nm,0.2s						
PARAL	**Paralimni**	**3.07**	**129**	AML	AML	19 15 55.9	
	0.1nm,0.5s						
PARAL				AML	AML	19 15 58.1	
	0.1nm,0.5s						
BRTR	**Keskin Array B**	**3.37**	**35**	P	**Pn**	**19 15 19.3**	**+1.3**
	7.5nm,0.6s,baz=210,slow=14,SNR=55						
BRTR				S	**Sn**	**19 15 59.1**	**+1.4**
	0.6nm,0.3s,baz=209,slow=23,SNR=4.3						
HNTI	**Hanita**	**5.10**	**138**	P	**Pn**	**19 15 41.3**	**+0.2**
HNTI				S	**Sn**	**19 16 31.5**	**-7.4**
HNTI	**Hanita**	**5.10**	**138**	S	**Sn**	**19 16 38.1**	**-0.8**
HNTI	**Hanita**	**5.10**	**138**	P	**Pn**	**19 15 41.8**	**+0.8**
MMC7	**Mount Meron ar**	**5.27**	**137**	P	**Pn**	**19 15 43.6**	**+0.2**
MMC7	**Mount Meron ar**	**5.27**	**137**	S	**Sn**	**19 16 41.6**	**-1.4**
GEM	**Giv'at Ha'Em**	**5.28**	**134**	P	**Pn**	**19 15 44.5**	**+1.1**
GEM				S	**Sn**	**19 16 33.5**	**-1.0**
GEM	**Giv'at Ha'Em**	**5.28**	**134**	S	**Sn**	**19 16 41.1**	**-2.0**
GEM	**Giv'at Ha'Em**	**5.28**	**134**	P	**Pn**	**19 15 44.2**	**+0.8**
MMA0	**Mount Meron ar**	**5.28**	**137**	P	**Pn**	**19 15 44.4**	**+0.9**
MMA0	**Mount Meron ar**	**5.28**	**137**	S	**Sn**	**19 16 41.6**	**-1.6**
MMAI	**Mount Meron Ar**	**5.28**	**137**	P	**Pn**	**19 15 44.1**	**+0.7**
	1.2nm,0.3s,baz=316,slow=13,SNR=17						
MMAI				S	**Sn**	**19 16 41.6**	**-1.6**
	2.9nm,0.3s,baz=313,slow=26,SNR=21						
MMAI				LR	LR	19 18 13.5	
	comp=Z,40nm,20.6s,baz=85,slow=44						
MMB1	**Mount Meron ar**	**5.28**	**137**	P	**Pn**	**19 15 44.5**	**+1.0**
MMB1				S	**Sn**	**19 16 36.5**	**-6.8**
NATI	**Neve Ativ**	**5.28**	**133**	P	**Pn**	**19 15 44.6**	**+1.1**
OFRI	**`Ofer**	**5.37**	**143**	P	**Pn**	**19 15 44.9**	**+0.1**
KSHT	**Keshet**	**5.53**	**135**	S	**Sn**	**19 16 48.4**	**-0.9**
KSHT	**Keshet**	**5.53**	**135**	P	**Pn**	**19 15 48.1**	**+1.2**
SALP	**Salfit**	**5.93**	**145**	P	**Pn**	**19 15 53.2**	**+1.0**
SALP	**Salfit**	**5.93**	**145**	P	**Pn**	**19 15 52.1**	**-0.1**
SALP	**Salfit**	**5.93**	**145**	S	**Sn**	**19 16 57.9**	**-1.0**
HMDT	**Nahal Hemdat**	**5.94**	**141**	P	**Pn**	**19 15 53.3**	**+1.0**
HMDT	**Nahal Hemdat**	**5.94**	**141**	S	**Sn**	**19 16 59.4**	**+0.3**
DSI	**Dead Sea**	**6.43**	**146**	P	**Pn**	**19 15 59.7**	**+0.7**
DSI	**Dead Sea**	**6.43**	**146**	S	**Sn**	**19 17 09.9**	**-1.2**
KZIT	**Kziot**	**6.63**	**155**	P	**Pn**	**19 16 03.1**	**+1.4**
MSBI	**Mazada**	**6.64**	**147**	P	**Pn**	**19 16 02.9**	**+1.0**
MSBI	**Mazada**	**6.64**	**147**	S	**Sn**	**19 17 15.4**	**-0.7**
GHAJ	**Ghor Haditha**	**6.74**	**146**	P	**Pn**	**19 16 04.6**	**+1.4**
GHAJ	**Ghor Haditha**	**6.74**	**146**	S	**Sn**	**19 17 20.2**	**+1.6**
KARJ	**KARJ**	**6.94**	**146**	P	**Pn**	**19 15 56.0**	**-10**
PRNI	**Paran**	**7.35**	**153**	P	**Pn**	**19 16 15.1**	**+3.6**
HRFI	**Mount Harif**	**7.65**	**154**	P	**Pn**	**19 16 19.3**	**+3.8**
FINES	**FINESS Array B**	**24.69**	**354**	P	**P**	**19 19 36.1**	**0.0**
	0.8nm,0.6s,baz=165,slow=13,SNR=1.2						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**38.70**	**59**	P	**P**	**19 21 39.0**	**+0.3**
	0.2nm,0.5s,baz=268,slow=7.8,SNR=3.6						
	0.2nm,0.5s						

IDC 03 19:21:20.5±5.5,**4.˝78S**×**133.˝02E,h0**km,**mb3.1**/1, **mbtmp3.0**/3,**ML2.7**/2,**Error ellipse: s-maj=328.4km s-min=34.5km az=76.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.12**	**175**	Pn	Pn	19 24 55.1	-0.5
	baz=356,slow=13,SNR=1.4						
WRA				Sn	Sn	19 27 35.9	-8.1
	0.1nm,0.3s,baz=355,slow=24,SNR=2.1						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**18.79**	**177**	P	P	19 25 41.9	+0.2
	baz=355,slow=14,SNR=1.4						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**68.08**	**325**	P	P	19 32 22.2	0.0
	0.1nm,0.6s,baz=123,slow=8.3,SNR=1.5						
	0.1nm,0.6s						

*BJI **03** 19:30:56.9±0.0,24.˚17N×121.˚79E,h12km,mb4.3/49, mB4.8/26,ML4.4/10,Ms4.4/41,Ms7 4.2/40*
*NEIC **03** 19:30:56.9±1.3,24.˚16N±0.˚05×121.˚72E±0.˚04,h11km±4km, mb4.8/71,Error ellipse: s-maj=8.1km s-min=5.1km az=164.0*
*TAP **03** 19:30:57.1,24.˚18N×121.˚70E,h10km,ML4.8,C*
*ASIES **03** 19:30:57.1,24.˚18N×121.˚70E,h10km,ML4.8,Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}1.85; $M_{\theta\theta}$-3.02; $M_{\phi\phi}$1.17; $M_{r\theta}$2.15; $M_{r\phi}$-1.51; $M_{\theta r}$-1.56; Fault plane solution: M_o4.03541×10^{22} NP1: ϕ_s106.96000°,δ71.69000°,λ129.54000°. NP2: ϕ_s217.79000°,δ42.93000°,λ27.47000°. Principal axes: T Plg47.722O°, Azm58.9460°; N Plg37.1790°, Azm272.4130°; P Plg17.1920°, Azm168.8410°;*
*JMA **03** 19:30:57.3±0.1,24.˚1N±0.˚3×121.˚7E±0.˚6,h12km,MD4.6/19, MV4.7/19,TAIWAN REGION*
*NIED **03** 19:30:57.3,24.˚14N×121.˚68E,h12km,MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.13; $M_{\theta\theta}$-3.82; $M_{\phi\phi}$1.69; $M_{r\theta}$3.39; $M_{\theta\phi}$-2.57; $M_{\theta r}$-0.53; Fault plane solution: M_o5.29000×10^{15} NP1: ϕ_s101.00000°,δ75.00000°,λ128.00000°. NP2: ϕ_s209.00000°,δ40.00000°,λ24.00000°.*
*IDC **03** 19:31:02.0±2.9,24.˚29N×121.˚91E,h50km±27km,mb4.0/30, mbtmp4.3/33,ML3.8/3,MS3.6/30 Error ellipse: s-maj=15.4km s-min=12.2km az=68.0*
ISC 03 19:30:57.7±0.5,**24.˚17N**±0.˚01×**121.˚72E**±0.˚01,**h16**km±3km, **n342**,σ1$**50**/420,**mb4.6**/69,**MS3.7**/29,**25C-23D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**261**	⇑*i*P	**Pg**	**19 30 59.9**	**-1.2**
	baz=252						
ETL				*i* S	**Sg**	**19 31 01.6**	**-1.8**
	baz=252						
NACB	**Ninganchiao**	**0.12**	**270**		**Pg**	**19 30 59.9**	**-1.4**
NACB				Sg	**Sg**	**19 31 01.8**	**-1.9**
NACB	**Ninganchiao**	**0.12**	**270**	P	**Pg**	**19 31 00.2**	**-1.1**
NACB	**Ninganchiao**	**0.12**	**270**	⇑*i*P	**Pg**	**19 31 00.1**	**-1.2**
	baz=265						
NACB				*i* S	**Sg**	**19 31 01.9**	**-1.9**
	baz=265						
EHP	**Heping Village**	**0.14**	**8**	⇓*i*P	**Pg**	**19 31 00.6**	**-1.0**
	baz=18						
EHP				S	**Sg**	**19 31 03.0**	**-1.2**
	baz=18						
TWD	**Chiawan**	**0.15**	**231**	⇑*i*P	**Pg**	**19 31 00.6**	**-1.1**
	baz=222						
TWD				*i* S	**Sg**	**19 31 02.8**	**-1.6**
	baz=222						
EAHA	**Aohua**	**0.16**	**6**	⇓*i*P	**Pg**	**19 31 00.8**	**-1.0**
	baz=20						
EAHA				*i* S	**Sg**	**19 31 03.3**	**-1.3**
	baz=20						
ETLH	**Xiulin Townshi**	**0.22**	**279**	⇑*i*P	**Pg**	**19 31 01.9**	**-0.9**
	baz=277						
ETLH				S	**Sg**	**19 31 04.9**	**-1.4**
	baz=277						
HWA	**Hwalien**	**0.22**	**208**	⇑*i*P	**Pg**	**19 31 02.4**	**-0.4**
	baz=205						
ENA	**Nanau**	**0.25**	**4**	⇓*i*P	**Pg**	**19 31 02.6**	**-0.8**

baz=54
OWD Renai 0.54 246⇑*i*P Pg 19 31 07.8 -0.7
baz=245
OWD S Sg 19 31 15.4 -0.5
baz=245
WARBT Fenglin Townsh 0.55 214⇑*i*P Pg 19 31 07.5 -1.0
baz=220
WARBT S Sb 19 31 17.8 +1.3
baz=220
EOS4 EOS4 0.55 95 *e*P Pn 19 31 10.2 -0.3
baz=94
TWE Neicheng 0.55 355⇓*i*P Pg 19 31 08.2 -0.4
baz=357
TWE *i* S Sg 19 31 15.4 -0.5
baz=357
EOS3 EOS3 0.56 78 *e*P Pn 19 31 10.3 -0.5
baz=64
EGFH Guangfu 0.57 208⇑P Pg 19 31 08.3 -0.6
baz=215
EGFH *e*S Sb 19 31 18.3 +1.2
baz=215
WUSB Renai 0.58 252 *e*P Pg 19 31 08.7 -0.5
baz=243
WUSB *e*S Sg 19 31 15.8 -1.2
baz=243
YHNB Yeheng 0.59 328 Pg Pg 19 31 08.9 -0.4
YHNB Sg Sg 19 31 16.5 -0.7
YHNB Yeheng 0.59 328 P Pb 19 31 09.1 -0.5
YHNB Yeheng 0.59 328⇓P Pg 19 31 09.0 -0.4
baz=328
YHNB *e*S Sg 19 31 16.7 -0.5
baz=328
ILA Ilan 0.59 2⇓P Pb 19 31 09.2 -0.5
baz=4.0
FUSB Fushanzhiwuyua 0.60 348⇓P Pb 19 31 09.2 -0.5
baz=349
FUSB *e*S Sg 19 31 16.4 -1.1
baz=349
NSK Sanguang 0.60 327⇓*i*P Pg 19 31 09.1 -0.5
baz=328
NSK *i* S Sg 19 31 16.8 -0.8
baz=328
NWLT Wulai 0.63 342 P Pg 19 31 09.8 -0.4
baz=343
NWLT *e*S Sg 19 31 17.6 -1.0
baz=343
VWDT VWDT 0.68 232⇑P Pg 19 31 10.2 -0.7
baz=222
VWDT *e*S Sg 19 31 19.5 -0.4
baz=222
NTC Toucheng 0.69 8 *e*P Pg 19 31 10.6 -0.5
baz=9.0
NFF Wufeng Townshi 0.71 310 *e*P Pg 19 31 11.1 -0.6
baz=310
NFF *e*S Sg 19 31 20.4 -0.8
baz=310
WHP Taichung City 0.71 279 P Pb 19 31 11.5 -0.3
baz=278
WHP S Sg 19 31 20.8 -0.4
baz=278
HGSD Ruisui 0.73 202 P Pb 19 31 12.3 +0.2
baz=215
HGSD S Sn 19 31 26.2 +2.1
baz=215
WCS Beigang Elemen 0.75 261 *e*P Pg 19 31 11.9 -0.4
baz=252
WCS S Sg 19 31 21.1 -1.2
baz=252
EHY Hungye 0.76 209⇑*i*P Pg 19 31 11.1 -1.4
baz=214
EHY *e*S Sb 19 31 23.1 +0.6
baz=214
LIOB Emei 0.80 306 *e*P Pb 19 31 13.2 0.0
baz=306
LIOB S Sb 19 31 23.3 -0.4
baz=306
NSTT Nanjuang 0.80 305⇓*i*P Pb 19 31 13.0 -0.2
baz=305
NSTT S Sg 19 31 23.2 -0.6
baz=305
SSLB Suanglung 0.80 241 Pg Pg 19 31 12.3 -1.0
SSLB Sg Sg 19 31 21.3 -2.5
SSLB Suanglung 0.80 241 P Pg 19 31 12.6 -0.7
SSLB Suanglung 0.80 241 *e*P Pg 19 31 12.4 -0.8
baz=250
SSLB S Sg 19 31 21.6 -2.2
baz=250
TIPB Shuangxi 0.80 7⇓*i*P Pg 19 31 12.7 -0.6
baz=358
TIPB *e*S Sg 19 31 22.6 -1.3
baz=358
SMLT Sun Moon Lake 0.80 249⇑*i*P Pg 19 31 12.7 -0.7
baz=238
SMLT S Sg 19 31 23.0 -1.0
baz=238
NHDH Xindian Distri 0.81 347 P Pb 19 31 13.0 -0.3
baz=348
TATO Taipei 0.83 345 Pb 19 31 13.3 -0.3
TATO Taipei 0.83 345 P Pb 19 31 13.6 -0.1
TYC Yuchr 0.83 251⇑*i*P Pg 19 31 13.1 -0.8
baz=250
TWB1 Santiao Chiao 0.87 16⇓*i*P Pg 19 31 13.8 -0.7
baz=10.0
TWB1 S Sg 19 31 24.4 -1.6
baz=10.0
YULB Yu-li 0.87 207 Pg 19 31 13.0 -1.6
YULB Yu-li 0.87 207 P Pg 19 31 13.7 -0.9
YULB Yu-li 0.87 207 *e*P Pg 19 31 12.9 -1.7
baz=217
YULB *e*S Sb 19 31 26.4 +0.6
baz=217
NHY Taipei 0.87 351 *e*P Pb 19 31 14.6 +0.1
baz=352
TWQ1 Liyutan 0.88 282 *e*P Pn 19 31 15.2 -0.3
baz=281
ECBN Changbin 0.89 196 *e*P Pg 19 31 14.7 -0.3
baz=184
NWF Wu-fen Shan 0.90 4⇓*i*P Pg 19 31 14.7 -0.5
baz=355
NWF *e*S Sg 19 31 25.8 -1.1
baz=355
WFSB Wu-fen Shan 0.90 4 *e*P Pn 19 31 15.1 -0.5
baz=355
WFSB S Sg 19 31 25.1 -1.8
baz=355
EYUL Yuli 0.90 204 *e*P Pb 19 31 14.4 -0.5
baz=216
TWF1 Yuli 0.91 205 P Pb 19 31 13.4 -1.6
baz=217
NSY Sanyi 0.91 286 *e*P Pn 19 31 16.0 +0.2
baz=285
SBCB Hsinchu 0.91 313 *e*P Pn 19 31 16.0 +0.2
baz=313
NMLH Miaoli 0.92 293 *e*P Pn 19 31 16.2 +0.2
baz=293
WHYT Xinyi Township 0.93 239 *e*P Pb 19 31 14.6 -0.8
baz=238
HSN Hsinchu 0.93 313 *e*P Pn 19 31 15.8 -0.2
baz=315
HSN *e*S Sn 19 31 30.4 +1.4
baz=315
SXI1 Grass Mountain 0.93 9 *e*P Pg 19 31 15.3 -0.4
baz=15
SXI1 *e*S Sg 19 31 27.3 -0.6
baz=15
NCUH Zhongli 0.93 328 *e*P Pn 19 31 15.9 -0.1
baz=329
TWS1 Kuangyinshan 0.96 343 P Pn 19 31 16.5 0.0
baz=352
TWS1 *e*S Sn 19 31 30.2 +0.3
baz=352
WJS Zhushan 0.97 249 *e*P Pn 19 31 16.7 +0.1
baz=240
TNOU National Taiwa 0.97 3 *e*P Pn 19 31 16.3 -0.4
baz=3.0
TNOU *e*S Sn 19 31 30.4 +0.2
baz=3.0
WNT Mingjian 0.99 253 P Pn 19 31 17.5 +0.6
baz=247
WNT S Sn 19 31 31.7 +1.1
baz=247
WDJ Dajia District 1.00 280 P Pn 19 31 18.3 +1.2
baz=280
NTST Danshui 1.02 346 *e*P Pn 19 31 17.5 +0.3
baz=347
CHKH Chenggong 1.02 197 *e*P Pb 19 31 16.7 -0.3
baz=187
ANP Anpu 1.02 350 *e*P Pn 19 31 17.4 -0.1
baz=351
FULB Fuli 1.05 202 *e*P Pb 19 31 16.8 -0.7
baz=215
WCHH Zhanghua 1.07 265 *e*P Pg 19 31 19.1 +0.8
baz=265
ALS Alishan 1.07 232⇑*i*P Pb 19 31 17.6 -0.4
baz=216
TWY Chenhua 1.10 354⇑*i*P Pg 19 31 19.2 +0.1
baz=340
CHN5 Tsauling 1.11 239⇑*i*P Pg 19 31 19.2 0.0
baz=239
CHN5 S Sn 19 31 34.5 +0.8
baz=239
CHKT Chengkung 1.12 197 P Pb 19 31 17.5 -1.1
baz=190
CHKT S Sn 19 31 34.8 +1.1
baz=190
EHD Haiduan 1.12 205 *e*P Pb 19 31 17.6 -1.1
baz=215
JYNG Yonagunijimaku 1.15 76 P Pg 19 31 19.5 -0.4
JYNG Yonagunijimaku 1.15 76 A A 19 31 19.5
comp=E,14nm,0.7s,comp=N,17nm,3.2s
WGK Gukeng 1.17 246 P Pg 19 31 19.7 -0.5
baz=245
WGK *e*S Sg 19 31 36.2 +0.7
baz=245
ECS Chishang 1.17 203 *e*P Pn 19 31 18.5 -0.9
baz=215
ELDTW Lidau 1.17 213 P Pn 19 31 18.0 -1.5
baz=214
WDLH Douliu 1.19 246 *e*P Pg 19 31 20.8 +0.2
baz=246
YOJ Yonaguni jima 1.21 76 Pn Pb 19 31 20.2 0.0
YOJ Yonaguni jima 1.21 76 P Pg 19 31 20.5 -0.6
YOJ Yonaguni jima 1.21 76 *e*P Pn 19 31 19.9 0.0
baz=68
YOJ *e*S Sg 19 31 37.3 +0.4
baz=68
YOJ Yonaguni jima 1.21 76 P Pb 19 31 20.4 +0.1
YOJ *e*S Sg 19 31 37.6 +0.7
YOJ Yonaguni jima 1.21 76 A A 19 31 20.4
comp=E,15nm,1.0s,comp=N,14nm,1.8s
WCKO Fanlu 1.26 235 P Pg 19 31 21.7 -0.3
baz=235
WCKO *e*S Sg 19 31 41.4 +3.0
baz=235
WRL Guolierlin Hig 1.26 258 *e*P Pg 19 31 21.6 -0.4
baz=258
WRL *e*S Sg 19 31 40.0 +1.7
baz=258
WTK Tuku 1.31 249 P Pg 19 31 22.2 -0.8
baz=248
CHN4 Tsaushan 1.32 232 P Pg 19 31 22.5 -0.6
baz=232
STYH Taoyuan 1.32 221 *e*P Pb 19 31 21.6 -0.4
baz=221
TPUB Ta-pu 1.32 229 Pg 19 31 22.4 -0.8
TPUB Ta-pu 1.32 229 P Pg 19 31 22.6 -0.6
TPUB Ta-pu 1.32 229 P Pg 19 31 22.6 -0.6
baz=215
WTCT Ta-ch'eng 1.35 257 *e*P Pb 19 31 22.6 0.0
baz=257
WTCT *e*S Sg 19 31 43.2 +1.8
baz=257
CHY Chiayi 1.36 241 *e*P Pg 19 31 24.0 0.0
baz=240
WTP Ta-pu 1.37 228 P Pb 19 31 23.3 +0.3
baz=216
WTP *e*S Sg 19 31 44.4 +2.4
baz=216
LONT Longtian 1.37 203 *e*P Pn 19 31 20.8 -1.4
baz=206
TWK Hsinying 1.45 232 P Pg 19 31 24.8 -0.7
baz=233
TWK S Sg 19 31 46.2 +1.8
baz=233
SNST Tainan City 1.47 230 *e*P Pg 19 31 25.3 -0.7
baz=230
CHN1 Nanshi 1.47 228 P Pg 19 31 25.1 -0.9
baz=229
WSF Szhu 1.47 249 *e*P Pb 19 31 25.0 +0.4
baz=260
WSF *e*S Sg 19 31 45.1 -0.1
baz=260
TWG Pinlang 1.47 204 Pn 19 31 21.6 -2.0
TWG Pinlang 1.47 204 P Pn 19 31 21.8 -1.8
baz=190
TWGBT Beinan 1.47 204 P Pn 19 31 23.4 -0.1
TWGBT Beinan 1.47 204 *e*P Pn 19 31 21.8 -1.7
baz=190
PCYT Pengchaiyu 1.48 12 *e*P Pb 19 31 24.2 -0.7
baz=12
SGST Jiashian 1.51 224 P Pb 19 31 24.8 -0.5
baz=224
TTN Tatung 1.51 201 *e*P Pn 19 31 22.9 -1.1
baz=204
LDUT Ludao 1.51 189 *e*P Pn 19 31 22.4 -1.7
baz=193
WSL Shuilin Townsh 1.51 245 *e*P Pg 19 31 25.8 -1.0
baz=245
SLGT Liugui 1.53 220 P Pb 19 31 25.8 +0.1
baz=221
ICHU Yijhu 1.55 239 *e*P Pg 19 31 26.7 -0.8
baz=240
CHN8 Yiju 1.61 240 *e*P Pb 19 31 26.7 -0.3
baz=240
CHN8 *e*S Sg 19 31 49.3 -0.4
baz=240
CHN3 Shinhua 1.66 229 P Pg 19 31 29.1 -0.5
baz=233
CHN3 *e*S Sg 19 31 53.8 +2.7
baz=233
SSHA Shanhua 1.67 232 *e*P Pn 19 31 25.4 -0.9
baz=233
SHHT Tainan City 1.70 228 *e*P Pg 19 31 29.5 -1.0
baz=230
SCST Cishan 1.71 222 *e*P Pn 19 31 29.2 +0.6
baz=223
SCLT Jiali 1.72 235 *e*P Pb 19 31 28.0 -0.8
baz=236
ECL Taimali 1.72 204 *e*P Pn 19 31 25.4 -1.5
baz=193
TSMG Majia 1.76 214 *e*P Pb 19 31 29.4 -0.3
baz=207
TWM1 Shoushan 1.80 222 *e*P Pg 19 31 31.1 -1.1
baz=223
TSCK Chigu Township 1.81 236 *e*P Pb 19 31 29.7 -0.8
baz=221
SGLT Jiouru 1.83 218 *e*P Pb 19 31 31.1 +0.3
baz=220
IRIF Iriomote-Funau 1.84 85 P Pn 19 31 28.9 +0.3
IRIF *e*S Sb 19 31 53.2 -0.6
IRIF Iriomote-Funau 1.84 85 A A 19 31 28.9
comp=E,8.0nm,2.3s,comp=N,17nm,2.3s
MASBT Mashibuluo 1.85 213 *e*P Pn 19 31 28.8 +0.1
baz=215
SNJT Kaohsiung City 1.90 222 *e*P Pb 19 31 31.2 -0.8
baz=224
HATJ Hateruma jima 1.91 93 P Pn 19 31 30.3 +0.7
HATJ *e*S Sb 19 31 55.0 -0.7
HATJ Hateruma jima 1.91 93 A A 19 31 30.3
comp=E,14nm,2.5s,comp=N,17nm,3.0s
EAST Anshuo 1.95 204 *e*P Pn 19 31 29.0 -1.2
baz=196
TAWH Dawu Township 1.98 203 *e*P Pn 19 31 29.7 -0.8
baz=195
SCZT Fangliau 2.06 210 *e*P Pn 19 31 32.3 +0.7
baz=211
PNG Penghu 2.07 254 *e*P Pn 19 31 32.6 +0.8
baz=254
PNG *e*S Sb 19 31 59.3 -1.1
baz=254
PHUB P'eng-hu 2.07 252 *e*P Pn 19 31 32.7 +0.9
baz=253
JKRS Kuro-shima 2.09 88 P Pn 19 31 32.9 +0.9
JKRS S Sb 19 32 00.2 -0.8
JKRS Kuro-shima 2.09 88 A A 19 31 32.9
comp=E,19nm,4.3s,comp=N,22nm,5.3s
WDGT Dungji 2.10 245 *e*P Pn 19 31 33.1 +1.0
baz=246
SLIU Shizi 2.12 204 *e*P Pn 19 31 33.0 +0.4
baz=196
LAY Lan-yu 2.13 184 *e*P Pn 19 31 30.4 -2.3
baz=190
LYUB Lan-yu 2.17 183 *e*P Pn 19 31 30.8 -2.3
baz=189
JIJ Ishigaki jima 2.22 85 P Pn 19 31 33.9 +0.1
JIJ *e*S Sn 19 32 01.2 +0.4
VWUC VWUC 2.22 292 *e*P Pn 19 31 33.8 0.0
baz=292
HEN Hengchun 2.34 203 *e*P Pn 19 31 37.1 +1.6
baz=197
TWK1 Hengchun 2.37 201 *e*P Pn 19 31 35.8 -0.1
baz=193
JISG Ishigakijimahi 2.40 80 P Pn 19 31 36.2 0.0
JISG *e*S Sn 19 32 05.8 +0.5
JISG Ishigakijimahi 2.40 80 A A 19 31 36.2
comp=E,4.0nm,1.0s,comp=N,5.0nm,0.6s
PTMZ Houxiangcun 2.52 291 *e*P Pn 19 31 37.6 -0.3
baz=290
MATB Ma-tsu 2.54 321 *e*P Pn 19 31 37.5 -0.8
baz=320
JTJ Tarama 2.76 80 *e*P Pn 19 31 41.7 +0.5
JTJ *e*S Sn 19 32 16.0 +1.8
QZH Quanzhou 2.95 286 Pn Pn 19 31 43.7 -0.2
QZH Sn Sn 19 32 18.2 -0.7
QZH smax smax
comp=N,1μm,0.6s
QZH smax smax
comp=N,770nm,0.6s
QZH LR LR
comp=N,6μm,10.5s
QZH LR LR
comp=N,3μm,8.7s
QZH LR LR
comp=N,3μm,13.1s
LYJJ Jianjiangzhen 2.96 324 *e*P Pn 19 31 43.2 -0.7
baz=323
KNM Kinmen 3.01 275 *e*P Pn 19 31 46.3 +1.6
baz=274
KNMB Chin-men Tao 3.05 276 Pn Pn 19 31 45.3 0.0
KNMB Chin-men Tao 3.05 276 *e*P Pn 19 31 45.0 -0.3
baz=275
XPSS Dashiqiu 3.07 334 *e*P Pn 19 31 45.2 -0.3
baz=333
MHZQ Yeshan 3.10 309 *e*P Pn 19 31 45.3 -0.6
baz=308
JIRB Irabujima 3.21 78 *e*P Pn 19 31 48.5 +1.0
JIRB *e*S Sn 19 32 26.8 +1.4
JIKM Ikemajima 3.30 76 *e*P Pn 19 31 51.3 +2.6
JIKM *e*S Sn 19 32 29.6 +2.1
JMJ2 Miyako jima3 3.33 80 P Pn 19 31 50.3 +1.2
JMJ2 S Sn 19 32 30.1 +1.7
JOGS Gusukube 3.41 79 P Pn 19 31 50.8 +0.7
JOGS *e*S Sn 19 32 32.7 +2.4
AXDP Jialang 3.49 283 *e*P Pn 19 31 51.4 +0.1
baz=282
ZPLA Ao Xicun 3.64 267 *e*P Pn 19 31 53.5 +0.2
baz=265
DSXP Dongshan 3.96 264 *e*P Pn 19 31 58.0 +0.3
baz=262
SXFK Yanhouchang 4.30 302 *e*P Pn 19 32 02.3 -0.2
baz=301
JOW Kunigami 6.49 65 P Pn 19 32 30.4 -2.1
comp=N,7.5nm,0.3s,baz=182,slow=13,SNR=6.5
comp=N,16nm,0.3s
SSE Sheshan 6.91 356 Pn Pn 19 32 37.9 -0.4
SSE Sn Sn 19 33 58.2 +1.6
SSE smax smax
comp=N,68nm,1.0s
SSE smax smax
comp=N,80nm,1.0s
SSE LR LR
comp=N,500nm,13.6s
SSE LR LR
comp=N,680nm,13.7s
HKPS Hong Kong Po S 7.22 256 Pn Pn 19 32 41.6 -1.0
NJ2 Nanjing 8.25 343 *e*P Pn 19 32 57.4 +0.8
NJ2 S Sn 19 34 30.5 +1.1
NJ2 smax smax
comp=N,230nm,0.9s
NJ2 smax smax
comp=N,180nm,1.1s
NJ2 LR LR
comp=N,1μm,10.4s
NJ2 LR LR
comp=N,800nm,7.1s
NJ2 LR LR
comp=N,1μm,10.4s
CNSH ChangSha 8.85 299 *e*P Pn 19 32 59.4 -5.5
CNSH S Sn 19 34 38.7 -5.5
CNSH smax smax
comp=N,380nm,0.9s
CNSH smax smax
comp=E,400nm,1.0s
WHN Wuhan 9.12 316 P Pn 19 33 08.4 -0.2
WHN S Sn 19 34 47.7 -3.2
WHN LR LR
comp=E,5μm,10.0s
TGY Tagaytay City 10.05 184 LR LR 19 37 08.5
comp=E,186nm,21.8s,baz=160,slow=36
JNU Nakatsue 12.00 40 Pn Pn 19 33 48.8 +0.7
JNU Nakatsue 12.00 40 P Pn 19 33 50.9 +2.8
comp=E,19nm,1.0s,baz=243,slow=6.8,SNR=2.2
JNU LR LR 19 39 46.9
comp=E,229nm,18.1s,baz=218,slow=44
QIZ Qiongzhong 12.17 247 P Pn 19 33 51.3 +0.8
QIZ S Sn 19 36 08.0 +2.0
QIZ LR LR
comp=E,710nm,10.1s
QIZ LR LR
comp=E,460nm,11.4s
QIZ LR LR
comp=E,450nm,15.5s
TJN Taejon 13.10 20 Pn Pn 19 34 03.8 +0.7
GYA Guiyang 13.81 283⇑*i*P Pn 19 34 16.4 +3.5
GYA S Sn 19 36 54.4 +8.4
GYA pmax pmax
comp=E,6.0nm,0.8s
GYA pmax pmax
comp=E,200nm,5.1s
GYA LR LR
comp=E,1μm,14.2s
KSAR Wonju Array Be 14.24 20 Pn Pn 19 34 19.1 +0.5
KSRS Korea Array 14.26 20 P Pn 19 34 20.5 +1.5
comp=E,0.9nm,0.3s,baz=205,slow=14,SNR=16
KSRS LR LR 19 40 31.0
comp=E,149nm,18.5s,baz=200,slow=40
comp=E,2.5nm,0.5s
KS19 Wonju Array Si 14.29 20 Pn 19 34 19.3 -0.1
HNS HongShan 14.49 337⇓P P 19 34 26.1 -2.6
HNS LR LR
comp=E,810nm,11.9s
HNS LR LR
comp=E,470nm,11.4s
HNS LR LR
comp=E,860nm,11.9s
XAN Xi'an 14.88 314⇑P Pn 19 34 28.7 +1.2
XAN pP P 19 34 37.9 +4.8
XAN S Sn 19 37 17.7 +5.7
XAN pmax pmax
comp=E,8.0nm,1.4s
XAN pmax pmax
comp=E,150nm,3.7s
XAN LR LR
comp=E,1μm,4.1s
XAN LR LR
comp=E,1μm,5.2s
XAN LR LR
comp=E,2μm,9.6s
BJT Baijiatuau 16.48 345 Pn Pn 19 34 48.6 +0.5
DAV Davao City (W) 17.41 167 LR LR 19 41 00.6
comp=E,97nm,21.8s,baz=28,slow=34
PZH PanZhiHua 18.21 282 P P 19 35 10.6 +0.5
PZH pmax pmax
comp=E,10.0nm,1.2s
PZH pmax pmax
comp=E,130nm,5.5s
HHC Hu-ho-hao-te 18.68 335 *e*P Pn 19 35 17.6 +2.0
HHC pmax pmax
comp=E,13nm,0.8s
HHC pmax pmax
comp=E,170nm,4.7s
HHC LR LR
comp=E,390nm,12.6s
HHC LR LR
comp=E,250nm,13.0s
HHC LR LR
comp=E,470nm,13.1s
MJAR Matsushiro Arr 18.79 45 P P 19 35 14.4 -2.0
baz=222,slow=9.8,SNR=5.9
MJAR LR LR 19 42 53.9
comp=E,122nm,21.0s,baz=228,slow=38
comp=E,1.6nm,0.8s

BTO Baotou 19.10 332 *e*P **Pn** **19 35 24.3 +3.6**
BTO pP **sP** **19 35 28.2 +1.9**
BTO sP **pP** **19 35 31.2 +6.3**
BTO SS **SnSn** **19 39 19.8 +11**
BTO pmax pmax
comp=E,7.0nm,0.6s
BTO pmax pmax
comp=E,600nm,5.0s
BTO LR LR
comp=E,2µm,11.6s
BTO LR LR
comp=E,650nm,8.9s
BTO LR LR
comp=E,2µm,10.3s
LZH Lanzhou 19.46 312 *e*P **Pn** **19 35 28.2 +3.1**
LZH sP sP 19 35 37.9 +6.9
LZH pmax pmax
comp=E,19nm,1.1s
LZH LR LR
comp=E,350nm,11.7s
LZH LR LR
comp=E,600nm,10.0s
LZH LR LR
comp=E,840nm,11.2s
CN2 Changchun 19.82 8 *e*P **Pn** **19 35 30.7 +1.6**
CN2 *e*S **S** **19 39 08.6 -1.5**
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,100nm,3.0s
CN2 LR LR
comp=E,700nm,10.0s
CN2 LR LR
comp=E,500nm,10.0s
CN2 LR LR
comp=E,800nm,10.0s
CRAI Chiangrai 20.15 263 P **P** **19 35 29.8 -1.6**
XLT XiLinHaoTe 20.21 348 *e*P Pn 19 35 37.6 +3.7
XLT pmax pmax
comp=E,16nm,1.0s
XLT pmax pmax
comp=E,77nm,4.5s
XLT LR LR
comp=E,31nm,11.0s
XLT LR LR
comp=E,250nm,6.2s
XLT LR LR
comp=E,410nm,13.0s
TNCH TengChong 21.11 277 P **P** **19 35 44.3 +2.4**
TNCH pP sP 19 35 47.7 -1.6
TNCH sP pP 19 35 50.5 +3.6
TNCH PP **PnPn** **19 36 04.0 +2.9**
TNCH S **S** **19 39 28.1 -8.4**
TNCH pmax pmax
comp=E,11nm,2.5s
TNCH pmax pmax
comp=E,140nm,3.5s
TNCH LR LR
comp=E,230nm,6.2s
TNCH LR LR
comp=E,660nm,9.8s
TNCH LR LR
comp=E,600nm,9.0s
JMM Marumori 21.24 46 P **P** **19 35 40.4 -2.6**
JMM IAmb IAmb 19 36 17.5
comp=Z,76nm,1.5s
MDJ Mudanjiang 21.38 16 P **P** **19 35 46.5 +2.1**
MDJ pmax pmax
comp=Z,13nm,1.7s
MDJ pmax pmax
comp=Z,340nm,5.8s
MDJ Mudanjiang 21.38 16 P **P** **19 35 43.8 -0.6**
USA0B Ussuriysk Arra 21.67 20 P **P** **19 35 46.2 -1.4**
USA0B IAmb IAmb 19 36 17.2
comp=Z,72nm,1.8s
USRK Ussuriysk Ar. 21.67 20 P **P** **19 35 46.8 -0.7**
USRK Ussuriysk Ar. 21.67 20 P **P** **19 35 47.9 +0.4**
comp=Z,5.2nm,0.6s,baz=211,slow=9.4,SNR=10.0
USRK LR LR 19 44 51.6
comp=Z,142nm,18.1s,baz=185,slow=39
comp=Z,5.2nm,0.6s
CM31 Chiang Mai Arr 21.96 259 P **P** **19 35 49.1 -1.7**
CMAR Chiang Mai Arr 21.96 259 P **P** **19 35 54.7 +3.8**
comp=Z,3.6nm,1.0s,baz=59,slow=8.6,SNR=12
CMAR LR LR 19 44 55.4
comp=Z,77nm,18.3s,baz=70,slow=38
comp=Z,3.6nm,1.0s
BNX BinXian 22.00 11 ⇓P **P** **19 35 54.1 +3.0**
BNX pmax pmax
comp=Z,10.0nm,0.9s
BNX pmax pmax
comp=Z,350nm,4.6s
TOLI2 Tolitoli 22.94 182 P **P** **19 35 59.5 -1.9**
GTA Gaotai 23.94 315 *e*P **P** **19 36 12.2 +1.0**
GTA sP sP 19 36 21.6 +3.7
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA LR LR
comp=Z,280nm,8.4s
GTA LR LR
comp=Z,370nm,10.8s
GTA LR LR
comp=Z,490nm,12.7s
GUMO Guam 24.26 112 LR LR 19 44 03.9
comp=Z,54nm,20.8s,baz=312,slow=32
GOMU GeErMu 26.07 304 P **P** **19 36 36.2 +5.2**
GOMU S **S** **19 41 07.7 +5.8**
GOMU pmax pmax
comp=Z,5.0nm,1.1s
ASAJ Asahikawa 26.22 36 LR LR 19 47 27.6
comp=Z,224nm,18.1s,baz=189,slow=38
KLR Kul'dur 26.22 15 P **P** **19 36 31.4 -0.3**
comp=Z,4.4nm,0.5s,baz=192,slow=7.5,SNR=23
KLR PcP **PcP** **19 39 58.6 +0.5**
comp=Z,1.6nm,0.6s,baz=161,slow=2.1,SNR=5.4
KLR LR LR 19 47 47.0
comp=Z,123nm,19.8s,baz=198,slow=38
comp=Z,4.4nm,0.5s
ULN Ulaanbaatar 26.36 337 P **P** **19 36 32.5 -0.6**
HEH HeiHe 26.41 8 *e*P **P** **19 36 33.4 0.0**
HEH pmax pmax
comp=Z,7.0nm,1.2s
HEH pmax pmax
comp=Z,200nm,5.1s
HEH LR LR
comp=Z,440nm,13.4s
HEH LR LR
comp=Z,250nm,15.2s
HEH LR LR
comp=Z,360nm,15.5s
SONM Songino Array 26.57 337 P **P** **19 36 34.5 -0.5**
SONM Songino Array 26.57 337 P **P** **19 36 35.2 +0.2**
comp=Z,4.6nm,0.8s,baz=156,slow=8.8,SNR=28
SONM LR LR 19 48 15.3
comp=Z,218nm,19.4s,baz=171,slow=39
comp=Z,4.6nm,0.8s
SHL Shillong 27.08 279 P **P** **19 36 40.0 +0.1**
SHL IAmb IAmb 19 36 50.0
comp=Z,11nm,0.8s
LSA Lhasa 27.76 288 P **P** **19 36 46.0 -0.3**
LSA IAmb IAmb 19 36 56.8
comp=Z,8.7nm,0.6s
GSI Gunungsitoli 32.60 229 P **P** **19 37 28.0 -0.7**
GSI IAmb IAmb 19 37 45.3
comp=Z,20nm,1.6s
WMQ Urumqi 34.02 314 *e*P **P** **19 37 43.1 +2.2**
WMQ LR LR
comp=Z,400nm,12.3s
YAK Yakutsk 38.23 6 P **P** **19 38 14.7 -1.8**
YAK Yakutsk 38.23 6 P **P** **19 38 15.4 -1.1**
comp=Z,5.1nm,0.5s,baz=345,slow=0.8,SNR=4.2
YAK LR LR 19 54 59.4
comp=Z,89nm,20.1s,baz=136,slow=38
comp=Z,5.1nm,0.5s
MK31 Makanchi Array 38.69 316 P **P** **19 38 20.0 -0.7**
MKAR Makanchi Array 38.69 316 P **P** **19 38 20.4 -0.3**
MKAR Makanchi Array 38.69 316 P **P** **19 38 21.1 +0.4**
comp=Z,3.8nm,0.7s,baz=109,slow=9.7,SNR=46
MKAR PcP **PcP** **19 40 30.5 -2.0**
comp=Z,0.4nm,0.6s,baz=90,slow=5.8,SNR=1.5
comp=Z,3.8nm,0.7s
PEA0B Petropavlovsk- 39.60 34 P **P** **19 38 27.7 -0.5**
PEA0B IAmb IAmb 19 39 11.5
comp=Z,44nm,1.2s
PETK Petropavlovsk- 39.60 34 LR LR 19 55 55.2
comp=Z,112nm,18.1s,baz=232,slow=38
KNRA Kununurra 40.20 169 P **P** **19 38 33.0 -0.5**

ZAA0 Zalesovo Array 40.52 327 P **P** **19 38 34.5 -1.3**
ZALV Zalesovo Beam 40.52 327 P **P** **19 38 34.3 -1.5**
ZALV Zalesovo Beam 40.52 327 P **P** **19 38 35.4 -0.4**
comp=Z,5.8nm,0.6s,baz=113,slow=8.3,SNR=16
ZALV LR LR 19 56 07.7
comp=Z,67nm,18.3s,baz=102,slow=37
comp=Z,5.8nm,0.6s
KSH Kashi 41.32 303 P **P** **19 38 46.9 +4.1**
KSH pP sP 19 38 50.6 +1.0
KSH pmax pmax
comp=Z,4.0nm,1.5s
KURK Kurchatov 42.41 320 P **P** **19 38 50.8 -0.6**
KURBB Kurchatov Arra 42.43 320 P **P** **19 38 52.0 +0.4**
comp=Z,2.7nm,0.2s,baz=109,slow=8.4,SNR=9.0
comp=Z,2.7nm,0.2s
AAK Ala-Archa 42.90 307 P **P** **19 38 55.0 -0.7**
AAK Ala-Archa 42.90 307 LR LR 19 56 59.5
comp=Z,82nm,20.5s,baz=94,slow=36
COEN Coen 43.31 149 P **P** **19 38 58.7 -0.3**
COEN IAmb IAmb 19 39 15.3
comp=Z,8.8nm,0.9s
SEY Seymchan 43.82 20 P **P** **19 39 02.1 -0.5**
comp=Z,0.7nm,0.3s,baz=68,slow=22,SNR=5.7
SEY PcP **PcP** **19 40 48.5 -0.4**
comp=Z,3.8nm,0.8s,baz=212,slow=4.0,SNR=8.7
comp=Z,0.7nm,0.3s
WB0 Warramunga Arr 45.39 163 P **P** **19 39 15.1 -0.5**
WB0 IAmb IAmb 19 39 50.1
comp=Z,18nm,1.4s
PSA00 Pilbara Seismi 45.51 182 P **P** **19 39 15.2 -1.2**
PSA00 IAmb IAmb 19 39 53.3
comp=Z,15nm,1.2s
WRA Warramunga Arr 45.54 163 P **P** **19 39 16.3 -0.5**
WRA Warramunga Arr 45.54 163 P **P** **19 39 16.5 -0.3**
comp=Z,2.1nm,0.6s,baz=345,slow=8.7,SNR=16
comp=Z,2.1nm,0.6s
KK31 Karatay Array 45.87 307 P **P** **19 39 18.4 -0.9**
KKAR Karatay Array 45.87 307 P **P** **19 39 19.2 0.0**
KBL Kabul 46.61 295 P **P** **19 39 24.8 -0.7**
KBL IAmb IAmb 19 39 34.8
comp=Z,9.1nm,1.1s
TIXI Tiksi 47.68 3 P **P** **19 39 30.7 -2.2**
TIXI IAmb IAmb 19 39 32.4
comp=Z,15nm,1.0s
TIXI Tiksi 47.68 3 P **P** **19 39 31.5 -1.4**
comp=Z,9.2nm,0.8s,baz=178,slow=4.4,SNR=25
TIXI LR LR 20 01 27.6
comp=Z,138nm,19.8s,baz=198,slow=38
comp=Z,9.2nm,0.8s
BVAR Borovoye Array 47.99 321 P **P** **19 39 35.8 +0.1**
comp=Z,1.8nm,0.5s,baz=107,slow=8.3,SNR=13
BVAR LR LR 20 02 25.7
comp=Z,28nm,18.2s,baz=64,slow=39
comp=Z,1.8nm,0.5s
BRVK Borovoye 48.06 321 P **P** **19 39 35.8 -0.4**
BRVK IAmb IAmb 19 39 43.0
comp=Z,6.9nm,1.1s
AS31 Alice Springs 49.00 165 P **P** **19 39 42.4 -1.3**
ASAR Alice Springs 49.00 165 P **P** **19 39 42.8 -1.0**
ASAR Alice Springs 49.00 165 P **P** **19 39 44.5 +0.7**
comp=Z,1.4nm,0.8s,baz=339,slow=7.4,SNR=21
comp=Z,1.4nm,0.8s
NRIK Noril'sk 49.54 345 P **P** **19 39 46.0 -1.3**
NRIK IAmb IAmb 19 39 47.8
comp=Z,15nm,1.6s
NRIK Noril'sk 49.54 345 P **P** **19 39 46.8 -0.5**
comp=Z,2.0nm,0.4s,baz=127,slow=6.5,SNR=4.9
NRIK LR LR 20 02 21.4
comp=Z,103nm,18.1s,baz=122,slow=38
comp=Z,2.0nm,0.4s
CTA Charters Tower 50.07 149 LR LR 20 01 38.2
comp=Z,45nm,18.1s,baz=6.5,slow=37
CTAO Charters Tower 50.07 149 P **P** **19 39 51.2 -0.7**
ABKAR Akbulak array 53.80 314 P **P** **19 40 19.5 +0.1**
ABKAR IAmb IAmb 19 40 24.2
comp=Z,4.5nm,0.7s
ABKAR Akbulak array 53.80 314 P **P** **19 40 19.6 +0.1**
AKTO Aktyubinsk 55.12 316 P **P** **19 40 29.9 +0.8**
comp=Z,1.4nm,0.6s,baz=88,slow=14,SNR=4.0
comp=Z,1.4nm,0.6s
GEYT Alibeck 55.23 300 P **P** **19 40 29.9 -0.2**
GEYT IAmb IAmb 19 40 39.5
comp=Z,6.3nm,0.9s
GEYT Alibeck 55.23 300 P **P** **19 40 31.4 +1.3**
comp=Z,2.4nm,0.7s,baz=87,slow=6.2,SNR=6.6
comp=Z,2.4nm,0.7s
ARU Arti 55.41 323 P **P** **19 40 30.2 -0.8**
ARU IAmb IAmb 19 40 47.6
comp=Z,4.6nm,0.8s
ARU Arti 55.41 323 P **P** **19 40 31.1 0.0**
comp=Z,2.4nm,0.5s,baz=74,slow=4.5,SNR=7.4
ARU LR LR 20 07 16.2
comp=Z,55nm,19.9s,baz=79,slow=39
comp=Z,2.4nm,0.5s
STKA Stephens Creek 58.89 160 P **P** **19 40 56.0 +0.2**
STKA Stephens Creek 58.89 160 P **P** **19 40 56.5 +0.7**
comp=Z,1.7nm,0.6s,baz=341,slow=7.9,SNR=6.2
comp=Z,1.7nm,0.6s
ANM Nome 61.10 28 P **P** **19 41 10.7 -0.1**
ANM IAmb IAmb 19 41 16.3
comp=Z,7.5nm,1.1s
F15K North Star Dit 61.50 27 P **P** **19 41 12.9 -0.5**
BELG Belogornoye 61.63 318 P **P** **19 41 13.9 -0.6**
comp=Z,6.3nm,0.7s,baz=311,slow=3.4,SNR=6.4
comp=Z,6.3nm,0.7s
L14K Kuka Creek 62.21 32 P **P** **19 41 17.7 -0.5**
F17K Baldwin Pennin 62.92 26 P **P** **19 41 22.7 -0.1**
F17K IAmb IAmb 19 41 27.7
comp=Z,3.4nm,0.9s
DZM Mont Dzumac 63.27 133 *e*LR LR 20 00 07.2
comp=Z,70nm,26.1s
DZM Mont Dzumac 63.27 133 LR LR 20 04 24.4
comp=Z,39nm,21.1s,baz=356,slow=32
G18K Tagagawik 63.97 27 P **P** **19 41 29.0 -0.8**
G18K IAmb IAmb 19 41 40.3
comp=Z,20nm,1.8s
B20K Meade River 64.48 22 P **P** **19 41 32.9 -0.2**
B20K IAmb IAmb 19 41 34.3
comp=Z,6.9nm,1.1s
TTA Tatalina 65.27 30 P **P** **19 41 38.0 -0.5**
TTA IAmb IAmb 19 42 11.4
comp=Z,17nm,1.5s
TOO Toolangi 65.36 159 P **P** **19 41 39.0 -0.2**
TOO IAmb IAmb 19 41 43.7
comp=Z,13nm,1.2s
ONI Oni 65.69 307 P **P** **19 41 41.7 +0.2**
ONI IAmb IAmb 19 41 46.2
comp=Z,4.1nm,0.9s
KBZ Khabaz 65.87 309 P **P** **19 41 43.8 +1.2**
comp=Z,1.8nm,0.7s,baz=90,slow=5.5,SNR=7.4
KBZ LR LR 20 15 12.6
comp=Z,62nm,18.0s,baz=58,slow=40
comp=Z,1.8nm,0.7s
AKH Akhalkalaki 65.89 306 P **P** **19 41 43.6 +0.6**
IMAR Indian Mountai 65.97 26 P **P** **19 41 42.7 -0.1**
KIV Kislovodsk 65.97 309 P **P** **19 41 43.4 0.0**
CAST Castle Rocks 66.99 29 P **P** **19 41 49.7 +0.2**
CAST IAmb IAmb 19 41 50.6
comp=Z,8.4nm,1.0s
PPLA Purkeypile 67.01 30 P **P** **19 41 49.6 -0.1**
SKT Skwentna 67.45 31 P **P** **19 41 51.4 -1.0**
KTH Kantishna Hill 67.48 29 P **P** **19 41 52.4 -0.3**
KTH IAmb IAmb 19 41 52.8
comp=Z,18nm,1.6s
MCK McKinley 68.33 29 P **P** **19 41 57.1 -0.8**
MCK IAmb IAmb 19 41 58.7
comp=Z,10nm,1.2s
MDM Murphy Dome 68.40 27 P **P** **19 41 58.1 -0.2**
RND Reindeer 68.42 29 P **P** **19 41 57.6 -1.0**
RAYN Ar Rayn 68.82 287 P **P** **19 42 01.5 -0.2**
RAYN IAmb IAmb 19 42 26.3
comp=Z,7.3nm,1.3s
ILAR Eielson Array 69.00 27 P **P** **19 42 00.8 -1.2**
ILAR Eielson Array 69.00 27 P **P** **19 42 00.3 -1.7**
comp=Z,0.6nm,0.5s,baz=255,slow=5.9,SNR=12
ILAR LR LR 20 18 01.3
comp=Z,28nm,18.7s,baz=278,slow=41
comp=Z,0.6nm,0.5s
BMAR Burnt Mountain 69.33 24 P **P** **19 42 04.4 +0.3**
SPITS Spitsbergen Ar 69.60 348 P **P** **19 42 03.8 -1.8**
comp=Z,4.3nm,0.7s,baz=339,slow=3.6,SNR=4.0
SPITS LR LR 20 16 30.5
comp=Z,62nm,20.0s,baz=34,slow=39
comp=Z,4.3nm,0.7s
ARCES ARCESS Array B 69.73 338 P **P** **19 42 05.5 -1.0**
comp=Z,2.1nm,0.8s,baz=46,slow=5.2,SNR=4.5
comp=Z,2.1nm,0.8s

SCRK Sand Creek 70.41 28 P **P** **19 42 10.4 -0.5**
SCRK IAmb IAmb 19 42 12.4
comp=Z,7.0nm,1.1s
BCAR Beaver Creek A 71.61 28 P **P** **19 42 17.6 -0.5**
FINES FINESS Array B 71.70 330 P **P** **19 42 17.1 -1.5**
FINES FINESS Array B 71.70 330 P **P** **19 42 17.2 -1.3**
comp=Z,1.8nm,0.6s,baz=25,slow=5.0,SNR=11
FINES LR LR 20 15 50.7
comp=Z,93nm,19.4s,baz=30,slow=38
comp=Z,1.8nm,0.6s
DAWY Dawson 72.32 27 P **P** **19 42 21.9 -0.5**
DAWY IAmb IAmb 19 42 22.8
comp=Z,13nm,1.2s
INK Inuvik 73.05 22 P **P** **19 42 25.4 -1.0**
INK IAmb IAmb 19 42 28.2
comp=Z,9.0nm,1.1s
AKASG Malin Array Be 73.20 318 P **P** **19 42 27.2 -0.6**
comp=Z,1.6nm,0.7s,baz=58,slow=6.3,SNR=4.9
comp=Z,1.6nm,0.7s
BR131 Keskin Array S 73.57 307 P **P** **19 42 30.1 -0.2**
BR131 IAmb IAmb 19 42 56.9
comp=Z,13nm,1.6s
BRTR Keskin Array B 73.57 307 P **P** **19 42 30.1 -0.2**
BRTR Keskin Array B 73.57 307 P **P** **19 42 30.9 +0.6**
comp=Z,0.9nm,0.6s,baz=100,slow=3.4,SNR=9.7
comp=Z,0.9nm,0.6s
HYT Haines Junctio 74.26 30 P **P** **19 42 33.9 0.0**
HYT IAmb IAmb 19 42 57.5
comp=Z,16nm,1.5s
CSS Mathiatis 75.32 302 P **P** **19 42 40.2 -0.3**
CSS IAmb IAmb 19 42 52.7
comp=Z,5.0nm,0.9s
FARO Faro, Yukon 75.55 28 P **P** **19 42 41.0 -0.2**
FARO IAmb IAmb 19 42 43.7
comp=Z,7.5nm,0.9s
SUW Suwalki 75.60 323 P **P** **19 42 40.7 -0.9**
EIL Elat 75.80 296 LR LR 20 21 42.7
comp=Z,44nm,18.1s,baz=236,slow=40
BURAR Bucovina Array 76.71 316 P **P** **19 42 47.2 -1.0**
ELL Elmali 77.33 305 P **P** **19 42 51.7 -0.3**
HFS Hagfors 77.81 331 P **P** **19 42 54.7 +0.7**
comp=Z,2.1nm,0.8s,baz=96,slow=8.8,SNR=1.8
HFS LR LR 20 20 26.4
comp=Z,155nm,18.6s,baz=63,slow=38
comp=Z,2.1nm,0.8s
NB2 NORSAR Subarra 78.46 332 P **P** **19 42 56.2 -1.5**
comp=Z,0.9nm,0.7s,baz=60,slow=5.9
NOA NORSAR Array B 78.46 332 P **P** **19 42 56.2 -1.5**
comp=Z,1.2nm,0.7s,baz=62,slow=5.5,SNR=4.2
NOA LR LR 20 20 55.7
comp=Z,93nm,18.0s,baz=260,slow=38
comp=Z,1.2nm,0.7s
OJC Ojcow 79.00 320 P **P** **19 43 00.5 -0.3**
OJC IAmb IAmb 19 43 08.1
comp=Z,4.8nm,0.9s
YKA Yellowknife Ar 82.79 23 P **P** **19 43 20.0 -0.7**
comp=Z,3.9nm,0.7s,baz=312,slow=5.0,SNR=72
comp=Z,3.9nm,0.7s
BORG Borgarnes 86.86 345 LR LR 20 25 43.1
comp=Z,41nm,18.2s,baz=78,slow=38
RAR Rarotonga 88.66 114 LR LR 20 19 08.6
comp=Z,32nm,21.3s,baz=284,slow=33
MXC Moxie City 90.05 38 P **P** **19 43 57.2 +0.4**
L04D Klamath Falls 91.41 42 P **P** **19 44 03.4 0.0**
FFC Flin Flon 92.94 24 P **P** **19 44 08.8 -1.2**
FFC IAmb IAmb 19 44 10.8
comp=Z,4.2nm,0.8s
HLID Hailey 95.18 37 P **P** **19 44 20.5 -0.3**
HLID IAmb IAmb 19 44 23.6
comp=Z,5.5nm,1.4s
PPT2 Papeete2 95.89 107 *e*LR LR 20 15 28.1
comp=Z,38nm,21.8s
NVAR Mina Array Bea 96.11 43 P **P** **19 44 24.9 -0.2**
comp=Z,0.6nm,0.7s,baz=305,slow=6.5,SNR=3.9
comp=Z,0.6nm,0.7s
TBI Tubuai 98.23 112 *e*LR LR 20 16 19.7
comp=Z,903nm,39.2s

TAP ***03*** *19:31:52.8,24.˚18N×121.˚70E,h10km,ML4.3,C*
JMA ***03*** *19:31:53.3±0.2,24.˚2N±0.˚4×121.˚7E±0.˚7,h4km±2km,*
MV3.9/10,TAIWAN REGION
ISC 03 19:31:53.5±0.8,24.˚18N±0.˚02×121.˚71E±0.˚02,h11km±4km,
n64,σ0977/100,5C-10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**255**	⇑*i*P	**Pg**	**19 31 55.5**	**-0.5**
	baz=251						
ETL				*i* S	**Sg**	**19 31 57.2**	**-0.6**
	baz=251						
NACB	**Ninganchiao**	**0.10**	**267**	⇑*i*P	**Pg**	**19 31 55.7**	**-0.5**
	baz=265						
NACB				*i* S	**Sg**	**19 31 57.5**	**-0.8**
	baz=265						
EHP	**Heping Village**	**0.13**	**14**	⇓P	**Pg**	**19 31 56.3**	**-0.5**
	baz=20						
EHP				S	**Sg**	**19 31 58.6**	**-0.5**
	baz=20						
TWD	**Chiawan**	**0.14**	**226**	⇑*i*P	**Pg**	**19 31 56.2**	**-0.6**
	baz=221						
TWD				*i* S	**Sg**	**19 31 58.5**	**-0.7**
	baz=221						
EAHA	**Aohua**	**0.15**	**11**	P	**Pg**	**19 31 56.5**	**-0.5**
	baz=21						
EAHA				*e*S	**Sg**	**19 31 58.9**	**-0.5**
	baz=21						
ETLH	**Xiulin Townshi**	**0.21**	**278**	⇑*i*P	**Pg**	**19 31 57.6**	**-0.4**
	baz=277						
ETLH				S	**Sg**	**19 32 00.4**	**-0.6**
	baz=277						
HWA	**Hwalien**	**0.22**	**205**	P	**Pg**	**19 31 58.0**	**-0.1**
	baz=201						
ENA	**Nanau**	**0.25**	**7**	⇓*i*P	**Pg**	**19 31 58.3**	**-0.4**
	baz=10.0						
ENA				*i* S	**Sg**	**19 32 01.8**	**-0.4**
	baz=10.0						
EWUT	**Wuta**	**0.27**	**14**	⇓P	**Pg**	**19 31 58.6**	**-0.5**
	baz=15						
EWUT				S	**Sg**	**19 32 02.4**	**-0.5**
	baz=15						
ETM	**Tongmen**	**0.29**	**223**	⇑P	**Pg**	**19 31 58.7**	**-0.7**
	baz=212						
ETM				*e*S	**Sg**	**19 32 02.4**	**-1.0**
	baz=212						
LXIB	**Xiulin Townshi**	**0.31**	**240**	P	**Pg**	**19 31 59.1**	**-0.8**
	baz=239						
LXIB				S	**Sg**	**19 32 03.6**	**-0.5**
	baz=239						
NNSB	**Datong**	**0.39**	**310**	⇓P	**Pg**	**19 32 00.7**	**-0.6**
	baz=310						
NNSB				S	**Sg**	**19 32 06.0**	**-0.4**
	baz=310						
LATG	**Datong**	**0.39**	**335**	P	**Pg**	**19 32 00.9**	**-0.5**
	baz=336						
NNS	**Nan Shan**	**0.40**	**311**	⇓*i*P	**Pg**	**19 32 01.1**	**-0.4**
	baz=311						
NNS				*i* S	**Sg**	**19 32 06.5**	**-0.3**
	baz=311						
WHF	**Hehuan Shan**	**0.41**	**265**	P	**Pg**	**19 32 01.3**	**-0.4**
	baz=265						
WHF				S	**Sg**	**19 32 06.7**	**-0.4**
	baz=265						
SHUL	**Shoufeng**	**0.41**	**199**	*e*P	**Pg**	**19 32 01.7**	**0.0**
	baz=205						
SHUL				*e*S	**Sb**	**19 32 10.4**	**+1.3**
	baz=205						
ESAO	**Su ao**	**0.41**	**18**	P	**Pg**	**19 32 01.1**	**-0.6**
	baz=18						
ESAO				S	**Sg**	**19 32 06.6**	**-0.6**
	baz=18						
FUSS	**Fushou**	**0.43**	**279**	P	**Pg**	**19 32 01.9**	**-0.1**
	baz=279						
FUSS				S	**Sg**	**19 32 07.6**	**-0.2**
	baz=279						
ESL	**Shilin**	**0.44**	**215**	P	**Pg**	**19 32 01.0**	**-1.2**
	baz=213						
TWC	**Suao**	**0.45**	**17**	P	**Pg**	**19 32 01.7**	**-0.6**
	baz=12						
TWC				S	**Sg**	**19 32 07.0**	**-1.3**
	baz=12						
NDS	**Dongshan**	**0.45**	**1**	⇓*i*P	**Pg**	**19 32 02.2**	**-0.3**
	baz=1.0						
NDS				S	**Sg**	**19 32 08.3**	**-0.2**
	baz=1.0						
NDT	**Datong Townshi**	**0.46**	**337**	⇓*i*P	**Pg**	**19 32 02.5**	**0.0**
	baz=337						

NDT				S		Sg	19 32 08.7	+0.1	
	baz=337								
ENTT	**Nioudou**	**0.48**	**344**	⇓*i*P		Pg	19 32 02.7	-0.2	
	baz=345								
ENTT				S		Sg	19 32 09.5	+0.3	
	baz=345								
TWT	**Tachien**	**0.49**	**279**	P		Pg	19 32 03.2	+0.1	
	baz=278								
TWT				S		Sg	19 32 09.8	+0.1	
	baz=278								
TEGC	**Jichi Village**	**0.49**	**198**	P		Pb	19 32 03.8	-0.4	
	baz=188								
TEGC				*e*S		Sn	19 32 13.9	+4.2	
	baz=188								
CHGB	**Renai**	**0.50**	**256**	*e*P		Pg	19 32 03.0	-0.4	
	baz=248								
CHGB				*e*S		Sg	19 32 09.7	-0.4	
	baz=248								
TDCB	**Techi**	**0.51**	**278**	P		Pg	19 32 03.5	0.0	
	baz=278								
TDCB				S		Sg	19 32 09.7	-0.5	
	baz=278								
OWD	**Renai**	**0.53**	**245**	P		Pg	19 32 03.2	-0.8	
	baz=245								
TWE	**Neicheng**	**0.54**	**356**	⇓*i*P		Pg	19 32 03.9	-0.2	
	baz=358								
TWE				S		Sg	19 32 11.2	-0.1	
	baz=358								
WARBT	**Fenglin Townsh**	**0.55**	**213**	P		Pg	19 32 02.9	-1.3	
	baz=217								
EGFH	**Guangfu**	**0.57**	**207**	*e*P		Pg	19 32 03.8	-0.8	
	baz=211								
WUSB	**Renai**	**0.57**	**251**	*e*P		Pg	19 32 04.4	-0.3	
	baz=243								
WUSB				*e*S		Sg	19 32 11.3	-0.9	
	baz=243								
YHNB	**Yeheng**	**0.57**	**328**	P		Pg	19 32 04.2	-0.6	
	baz=328								
YHNB				S		Sg	19 32 11.8	-0.5	
	baz=328								
ILA	**Ilan**	**0.58**	**4**	*e*P		Pg	19 32 04.8	-0.1	
	baz=5.0								
FUSB	**Fushanzhiwuyua**	**0.59**	**349**	P		Pg	19 32 04.6	-0.4	
	baz=349								
FUSB				S		Sg	19 32 12.2	-0.6	
	baz=349								
NSK	**Sanguang**	**0.59**	**327**	P		Pg	19 32 04.8	-0.2	
	baz=328								
NWLT	**Wulai**	**0.62**	**343**	⇓P		Pg	19 32 05.5	-0.2	
	baz=343								
NWLT				*e*S		Sg	19 32 13.4	-0.5	
	baz=343								
VWDT	**VWDT**	**0.67**	**231**	*e*P		Pg	19 32 06.0	-0.5	
	baz=237								
NFF	**Wufeng Townshi**	**0.70**	**310**	*e*P		Pg	19 32 07.0	-0.2	
	baz=304								
WHP	**Taichung City**	**0.70**	**278**	*e*P		Pb	19 32 07.4	-0.4	
	baz=278								
WHP				S		Sb	19 32 16.9	-0.6	
	baz=278								
HGSD	**Ruisui**	**0.73**	**201**	*e*P		Pb	19 32 08.8	+0.5	
	baz=207								
WCS	**Beigang Elemen**	**0.74**	**261**	*e*P		Pg	19 32 07.6	-0.1	
	baz=252								
WCS				*e*S		Sg	19 32 17.1	-0.3	
	baz=252								
EHY	**Hungye**	**0.76**	**208**	P		Pg	19 32 07.1	-1.0	
	baz=207								
LIOB	**Emei**	**0.78**	**307**	P		Pb	19 32 09.1	-0.1	
	baz=307								
NSTT	**Nanjuang**	**0.79**	**305**	*e*P		Pb	19 32 09.2	0.0	
	baz=305								
NSTT				*e*S		Sb	19 32 19.6	-0.3	
	baz=305								
SSLB	**Suanglung**	**0.79**	**241**	*e*P		Pg	19 32 07.9	-1.0	
	baz=240								
SSLB				*e*S		Sg	19 32 17.5	-1.7	
	baz=240								
SMLT	**Sun Moon Lake**	**0.79**	**248**	*e*P		Pb	19 32 09.0	-0.5	
	baz=238								
SMLT				*e*S		Sg	19 32 18.5	-0.8	
	baz=238								
TIPB	**Shuangxi**	**0.80**	**8**	*e*P		Pg	19 32 08.6	-0.4	
YULB	**Yu-li**	**0.87**	**206**	*e*P		Pg	19 32 10.2	0.0	
	baz=205								
NWF	**Wu-fen Shan**	**0.89**	**4**	*e*P		Pb	19 32 10.6	-0.5	
	baz=5.0								
WFSB	**Wu-fen Shan**	**0.89**	**4**	*e*P		Pb	19 32 10.6	-0.5	
	baz=5.0								
TWF1	**Yuli**	**0.91**	**205**	*e*P		Pg	19 32 10.2	-0.8	
	baz=216								
WHYT	**Xinyi Township**	**0.92**	**239**	*e*P		Pn	19 32 12.0	-0.4	
	baz=238								
TWS1	**Kuangyinshan**	**0.95**	**344**	*e*P		Pn	19 32 12.6	-0.3	
	baz=345								
TNOU	**National Taiwa**	**0.97**	**4**	P		Pb	19 32 11.9	-0.4	
	baz=4.0								
WNT	**Mingjian**	**0.98**	**252**	*e*P		Pn	19 32 13.2	0.0	
	baz=247								
WNT				*e*S		Sn	19 32 27.6	+0.5	
	baz=247								
CHN5	**Tsauling**	**1.11**	**239**	*e*P		Pn	19 32 15.4	+0.3	
	baz=233								
CHKT	**Chengkung**	**1.12**	**196**	*e*P		Pg	19 32 14.1	-1.0	
	baz=183								
JYNG	**Yonaguni jima**	**1.16**	**76**	*e*S		Sb	19 32 31.1	+0.4	
ELDTW	**Lidau**	**1.17**	**213**	*e*P		Pg	19 32 15.4	-0.7	
	baz=212								
YOJ	**Yonaguni jima**	**1.22**	**76**	P		Pb	19 32 16.2	-0.4	
YOJ				*e*S		Sb	19 32 32.7	+0.3	
IRIF	**Iriomote-Funau**	**1.85**	**85**	*e*S		Sn	19 32 49.7	+1.1	
JKRS	**Kuro-shima**	**2.10**	**88**	*e*S		Sb	19 32 56.6	-1.2	
JIKM	**Ikemajima**	**3.31**	**76**	S		Sn	19 33 26.8	+2.2	

*IDC **03** 19:54:56.2±1.2,26°.28N×129°.44E,h0km,mb3.7/5, mbtmp3.7/6,ML3.3/1,MS3.1/2,Error ellipse: s-maj=30.7km s-min=15.5km az=60.0*
*JMA **03** 19:54:57.7±0.1,26°.3N±0°.7×129°.6E±0°.5,h45km,MV3.4/17, NEAR MINAMI-DAITOJIMA IS*
ISC 03 19:54:55.0±1.6,26°.34N±0°.04×129°.62E±0°.03,h2km±10km, n23,σ1°78/36,mb3.7/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.25**	**303**	P	**Pg**	**19 55 19.6**	**+0.6**
JYRO				*e*S	**Sg**	**19 55 34.1**	**-1.1**
JOW	**Kunigami**	**1.30**	**292**	P	**Pg**	**19 55 20.4**	**+0.4**
JOW				*e*S	**Sg**	**19 55 35.4**	**-1.5**
JOW	**Kunigami**	**1.30**	**292**	Pn	**Pg**	**19 55 20.4**	**+0.4**
	82nm,0.3s,baz=116,slow=22,SNR=83						
JOW				Sn	**Sg**	**19 55 36.3**	**-0.6**
	154nm,0.3s,baz=90,slow=20,SNR=8.8						
JOKE	**Okinoerabujima**	**1.38**	**317**	P	**Pn**	**19 55 21.6**	**+0.3**
JOKE				*e*S	**Sg**	**19 55 38.2**	**-1.3**
JNTH	**Nagotoyohara**	**1.45**	**277**	P	**Pn**	**19 55 22.0**	**-0.2**
JNTH				*e*S	**Sb**	**19 55 39.0**	**-2.5**
JMZ	**Minamidaito 2**	**1.53**	**109**	P	**Pn**	**19 55 22.9**	**-0.4**
JMZ				*e*S	**Sn**	**19 55 40.1**	**-3.7**
JKDJ	**Kitadaitoujima**	**1.56**	**104**	P	**Pn**	**19 55 23.6**	**-0.1**
JKDJ				S	**Sn**	**19 55 42.1**	**-2.3**
JTK	**Tokunoshima**	**1.56**	**338**	P	**Pn**	**19 55 23.7**	**-0.1**
JTK				*e*S	**Sn**	**19 55 42.5**	**-2.1**
JIH	**Iheya**	**1.63**	**295**	P	**Pn**	**19 55 25.3**	**+0.5**
JIH				*e*S	**Sn**	**19 55 44.4**	**-2.0**
JJT3	**Tamagusuku3**	**1.66**	**264**	P	**Pn**	**19 55 25.7**	**+0.6**
JJT3				S	**Sn**	**19 55 46.1**	**-1.0**
JAMN	**Amaminishikomi**	**1.94**	**348**	P	**Pn**	**19 55 29.4**	**+0.5**
JAMN				*e*S	**Sn**	**19 55 52.9**	**-0.9**
JZK	**Kikaishima**	**1.99**	**9**	P	**Pn**	**19 55 29.8**	**+0.1**
JZK				*e*S	**Sn**	**19 55 55.4**	**+0.2**
JAM	**Amami Oshima**	**2.06**	**360**	P	**Pn**	**19 55 30.8**	**+0.1**
JAGN	**Aguni-jima**	**2.15**	**277**	P	**Pn**	**19 55 32.4**	**+0.5**
JAGN				*e*S	**Sn**	**19 55 57.3**	**-1.7**
JKE	**Kume jima 2**	**2.55**	**270**	P	**Pn**	**19 55 37.2**	**-0.1**
JKE				S	**Sn**	**19 56 06.1**	**-2.8**
JNU	**Nakatsue**	**6.84**	**9**	Pn	**Pn**	**19 56 38.4**	**+1.9**
	0.6nm,0.3s,baz=184,slow=13,SNR=8.6						
JNU				Sn	**Sn**	**19 57 49.3**	**-5.7**
	baz=236,slow=18 3.8nm,0.4s						
GUMO	**Guam**	**19.11**	**129**	LR	LR	20 05 34.6	
	comp=Z,19nm,20.4s,baz=190,slow=33						
SONM	**Songino Array**	**28.15**	**326**	P	**P**	**20 00 51.6**	**+2.8**
	0.5nm,0.8s,baz=131,slow=9.2,SNR=3.6 0.5nm,0.8s						
MKAR	**Makanchi Array**	**42.40**	**311**	P	**P**	**20 02 50.6**	**-0.3**
	0.3nm,0.7s,baz=93,slow=10.0,SNR=4.2 0.3nm,0.7s						
WRA	**Warramunga Arr**	**46.23**	**174**	P	**P**	**20 03 22.6**	**+0.8**
	1.0nm,0.5s,baz=354,slow=8.6,SNR=9.4 1.0nm,0.5s						
ASAR	**Alice Springs**	**49.89**	**175**	P	**P**	**20 03 51.5**	**+1.4**
	0.8nm,0.8s,baz=6.2,slow=13,SNR=12 0.8nm,0.8s						
BVAR	**Borovoye Array**	**51.02**	**318**	LR	LR	20 26 34.9	
	comp=Z,52nm,20.0s,baz=96,slow=37						
STKA	**Stephens Creek**	**59.01**	**168**	P	**P**	**20 04 57.0**	**+0.8**
	1.6nm,0.8s,baz=333,slow=6.8,SNR=3.1 1.6nm,0.8s						

IDC 03 20:08:24.6±4.7,49°.66S×122°.45E,h0km,mb3.7/2, mbtmp3.7/2,MS3.5/5,Error ellipse: s-maj=263.9km s-min=70.6km az=102.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.97**	**334**	T	T	20 30 01.3	
	baz=158,slow=79,SNR=7.5						
H01W2	**Cape Leeuwin H**	**15.97**	**334**	T	T	20 30 01.0	
	baz=158,slow=79,SNR=9.9						
H01W3	**Cape Leeuwin H**	**15.98**	**334**	T	T	20 30 01.3	
	baz=158,slow=79,SNR=9.0						
ASAR	**Alice Springs**	**27.46**	**23**	P	P	20 14 12.3	0.0
	1.1nm,0.6s,baz=193,slow=9.0,SNR=25						
ASAR				LR	LR	20 23 52.5	
	comp=Z,56nm,18.9s,baz=142,slow=34 1.1nm,0.6s						
WRA	**Warramunga Arr**	**31.14**	**22**	P	P	20 14 45.0	0.0
	0.3nm,0.5s,baz=194,slow=8.6,SNR=4.9 0.3nm,0.5s						
VNDA	**Vanda**	**31.67**	**165**	LR	LR	20 26 04.0	
	comp=Z,91nm,19.0s,baz=204,slow=34						
MAW	**Mawson**	**34.09**	**216**	LR	LR	20 26 17.8	
	comp=Z,100nm,19.4s,baz=180,slow=32						
CTA	**Charters Tower**	**35.09**	**41**	LR	LR	20 28 40.4	
	comp=Z,47nm,18.0s,baz=78,slow=35						
JHJ	**Hachijo jima 2**	**83.85**	**15**	LR	LR	20 57 35.7	
	comp=Z,58nm,19.5s,baz=79,slow=35						
YKA	**Yellowknife Ar**	**146.86**	**45**	PKPbc	PKPbc	20 28 06.7	-0.8
	0.1nm,0.3s,baz=275,slow=3.4,SNR=5.4						

*IDC **03** 20:15:08.9±3.1,55°.53N×150°.53W,h0km,mb3.3/2, mbtmp3.3/6,ML3.3/4,MS2.8/1,Error ellipse: s-maj=55.3km s-min=33.8km az=159.0*
*NEIC **03** 20:15:14.6±0.9,56°.1N±0°.1×150°.3W±0°.1,h27km±15km, ML3.4/28,ML3.1(AEIC),Error ellipse: s-maj=16.8km s-min=9.4km az=179.0*
*AEIC **03** 20:15:14.3±4.4,55°.9N±0°.1×150°.0W±0°.1,h9km±8km,Error ellipse: s-maj=16.0km s-min=9.8km az=180.0*
ISC 03 20:15:16.6±1.4,56°.2N±0°.1×150°.28W±0°.06,h35km,n115, σ0°83/118,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.06**	**323**		**Pn**	**20 15 47.6**	**-1.1**
KDAK					**Sn**	**20 16 13.7**	**+0.6**
KDAK	**Kodiak Island**	**2.06**	**323**	Pn	**Pn**	**20 15 47.6**	**-1.1**
	12nm,0.3s,baz=134,slow=3.8,SNR=155						
KDAK				LR	LR	20 16 57.0	
	comp=Z,176nm,18.8s,baz=115,slow=43 27nm,0.3s						
R18K	**Karluk**	**2.69**	**303**		**Pn**	**20 15 55.9**	**-1.4**
R18K					**Sn**	**20 16 28.2**	**-0.4**
R18K				IAML		20 16 32.3	
	comp=N,100nm,0.5s						
R18K				IAML		20 16 48.2	
	comp=E,94nm,1.1s						
R18K	**Karluk**	**2.69**	**303**	P	**Pn**	**20 15 55.9**	**-1.4**
	baz=122						
R18K				S	**Sn**	**20 16 29.8**	**+1.2**
	baz=122						
Q20K	**Shuyak Island**	**2.71**	**336**	P	**Pn**	**20 15 57.1**	**-0.4**
	baz=154						
Q20K				S	**Sn**	**20 16 30.2**	**+1.1**
	baz=154						
SYI	**Shuyak Island**	**2.71**	**336**		**Pn**	**20 15 57.2**	**-0.3**
SYI					**Sn**	**20 16 29.9**	**+0.8**
Q19K	**Cape Douglas,**	**3.32**	**328**		**Pn**	**20 16 05.8**	**-0.1**
Q19K	**Cape Douglas,**	**3.32**	**328**	P	**Pn**	**20 16 05.6**	**-0.3**
	baz=146						
CNPM	**China Poot**	**3.42**	**352**		**Sn**	**20 16 46.8**	**+0.3**
CNPM	**China Poot**	**3.42**	**352**		**Pn**	**20 16 06.6**	**-0.7**
CNPM				IAML		20 16 53.0	
	comp=N,47nm,1.2s						
CNPM				IAML		20 16 55.2	
	comp=E,41nm,0.6s						
ACHA	**Angle Creek He**	**3.43**	**309**		**Pn**	**20 16 06.8**	**-0.8**
ANCK	**Angle Creek**	**3.50**	**308**		**Pn**	**20 16 07.8**	**-0.6**
ANCK					**Sn**	**20 16 48.1**	**-0.5**
KAHC	**Katmai Hardscr**	**3.58**	**316**		**Pn**	**20 16 09.0**	**-0.6**
KAHC	**Katmai Hardscr**	**3.58**	**316**	P	**Pn**	**20 16 09.0**	**-0.6**
	baz=133						
BRSE	**Bradley Lake S**	**3.60**	**356**		**Pn**	**20 16 08.9**	**-1.0**
BRSE					**Sn**	**20 16 51.0**	**-0.1**
BRSE	**Bradley Lake S**	**3.60**	**356**	P	**Pn**	**20 16 08.9**	**-1.0**
	baz=174						
BRSE				S	**Sn**	**20 16 51.0**	**-0.1**
	baz=174						
BRLK	**Bradley Lake**	**3.63**	**355**		**Pn**	**20 16 09.1**	**-1.1**
BRLK				IAML		20 16 54.6	
	comp=E,43nm,0.7s						
BRLK				IAML		20 17 01.4	
	comp=N,40nm,1.1s						
CNTC	**Contact Creek**	**3.71**	**307**		**Pn**	**20 16 10.2**	**-1.1**
Q17K	**Contact Creek**	**3.71**	**307**	P	**Pn**	**20 16 10.2**	**-1.2**
	baz=124						
P19K	**Oil Pt**	**3.84**	**337**	Pn	**Pn**	**20 16 13.5**	**+0.4**
P19K				IAML		20 17 02.1	
	comp=N,118nm,0.6s						
P19K				IAML		20 17 02.5	
	comp=E,124nm,0.6s						
Q23K	**Middleton Isla**	**3.90**	**31**		**Pn**	**20 16 13.2**	**-0.6**
Q23K	**Middleton Isla**	**3.90**	**31**	P	**Pn**	**20 16 12.1**	**-1.7**
	baz=211						
O20K	**Slope Mountain**	**4.13**	**343**		**Pn**	**20 16 16.7**	**-0.4**
O20K	**Slope Mountain**	**4.13**	**343**	P	**Pn**	**20 16 16.7**	**-0.4**
	baz=160						
IVE	**Iliamna Volcan**	**4.13**	**341**		**Pn**	**20 16 16.6**	**-0.6**
P23K	**Montague Islan**	**4.14**	**20**		**Pn**	**20 16 15.9**	**-1.3**
P23K	**Montague Islan**	**4.14**	**20**	P	**Pn**	**20 16 15.9**	**-1.3**
	baz=200						
P18K	**Big Mountain,**	**4.19**	**323**		**Pn**	**20 16 17.1**	**-0.8**
P18K	**Big Mountain,**	**4.19**	**323**	P	**Pn**	**20 16 17.1**	**-0.8**
	baz=139						
P17K	**Kvichak River**	**4.50**	**315**		**Pn**	**20 16 21.4**	**-0.6**
P17K	**Kvichak River**	**4.50**	**315**	P	**Pn**	**20 16 21.4**	**-0.6**
	baz=131						
O18K	**Koktuh Hills**	**4.54**	**327**		**Pn**	**20 16 21.8**	**-0.9**
O18K				IAML		20 17 17.9	
	comp=E,20nm,1.4s						
O18K				IAML		20 17 41.2	
	comp=N,25nm,1.4s						
O18K	**Koktuh Hills**	**4.54**	**327**	P	**Pn**	**20 16 21.5**	**-1.2**
	baz=143						
HIN	**Hinchinbrook I**	**4.69**	**24**		**Pn**	**20 16 24.7**	**-0.2**
HIN				IAML		20 17 02.6	
	comp=N,52nm,1.4s						
HIN				IAML		20 17 21.6	
	comp=E,65nm,1.5s						
KAIM	**Kayak Island**	**4.89**	**37**	Pn	**Pn**	**20 16 27.5**	**0.0**
P16K	**Nushagak River**	**5.05**	**308**		**Pn**	**20 16 28.5**	**-1.1**
P16K	**Nushagak River**	**5.05**	**308**	P	**Pn**	**20 16 28.5**	**-1.1**
	baz=122						
O17K	**Koliganek Bris**	**5.13**	**318**		**Pn**	**20 16 30.1**	**-0.7**
O17K	**Koliganek Bris**	**5.13**	**318**	P	**Pn**	**20 16 30.1**	**-0.7**
	baz=133						
N19K	**Bonanza Creek**	**5.16**	**336**		**Pn**	**20 16 30.3**	**-1.0**
N19K				IAML		20 17 46.4	
	comp=N,11nm,1.5s						
N19K	**Bonanza Creek**	**5.16**	**336**	P	**Pn**	**20 16 30.4**	**-1.0**
	baz=152						
RAGM	**Ragged Mountai**	**5.17**	**33**		**Pn**	**20 16 31.7**	**+0.3**
RAGM				IAML		20 17 32.7	
	comp=E,36nm,1.2s						
SUA	**Susitna One**	**5.33**	**358**		**Pn**	**20 16 32.4**	**-1.2**
SUA	**Susitna One**	**5.33**	**358**	P	**Pn**	**20 16 32.5**	**-1.1**
	baz=176						
KNK	**Knik Glacier**	**5.35**	**9**	Pn	**Pn**	**20 16 33.7**	**-0.2**
N18K	**Kilae Creek**	**5.41**	**329**		**Pn**	**20 16 33.9**	**-0.7**
N18K	**Kilae Creek**	**5.41**	**329**	P	**Pn**	**20 16 33.8**	**-0.9**
	baz=144						
O16K	**Kokwok River B**	**5.41**	**313**		**Pn**	**20 16 33.7**	**-0.9**
O16K	**Kokwok River B**	**5.41**	**313**	P	**Pn**	**20 16 33.7**	**-0.9**
	baz=127						
STLK	**Strandline Lak**	**5.42**	**352**		**Pn**	**20 16 34.2**	**-0.6**
BERG	**Berg Lake**	**5.48**	**37**	Pn	**Pn**	**20 16 35.6**	**0.0**
SNH	**Sunshine Point**	**5.63**	**41**	Pn	**Pn**	**20 16 37.8**	**0.0**
GHO	**Glory Hole Cre**	**5.67**	**7**	Pn	**Pn**	**20 16 38.7**	**+0.4**
N17K	**Nushagak Hills**	**5.69**	**323**	Pn	**Pn**	**20 16 37.8**	**-0.7**
KLU	**Klutina**	**5.81**	**21**		**Pn**	**20 16 40.4**	**+0.3**
SKT	**Skwentna**	**5.88**	**354**	Pn	**Pn**	**20 16 40.5**	**-0.5**
M20K	**Styx River**	**5.93**	**347**	Pn	**Pn**	**20 16 41.4**	**-0.4**
CRQM	**Cirque**	**5.94**	**36**		**Pn**	**20 16 42.2**	**+0.1**
MESA	**MESA**	**5.97**	**44**	Pn	**Pn**	**20 16 42.2**	**-0.3**
ISLE	**Juniper Island**	**6.10**	**40**		**Pn**	**20 16 44.1**	**-0.1**
M19K	**Big River Lodg**	**6.14**	**341**	Pn	**Pn**	**20 16 43.6**	**-1.1**
VRDI	**Verde Repeater**	**6.20**	**32**	Pn	**Pn**	**20 16 45.6**	**0.0**
GLB	**Gilahina Butte**	**6.27**	**30**	Pn	**Pn**	**20 16 46.9**	**+0.4**
GRNC	**Granite Creek**	**6.40**	**41**		**Pn**	**20 16 48.4**	**0.0**
M17K	**Holitna River**	**6.44**	**328**		**Pn**	**20 16 48.5**	**-0.2**
TABL	**Table Mountain**	**6.45**	**44**		**Pn**	**20 16 49.1**	**+0.1**
MCARA	**McCarthy VSAT**	**6.45**	**33**		**Pn**	**20 16 49.4**	**+0.5**
L19K	**White Mountain**	**6.48**	**341**	Pn	**Pn**	**20 16 48.2**	**-1.2**
N15K	**Kwethluk River**	**6.56**	**312**		**Pn**	**20 16 50.4**	**-0.1**
O14K	**Tigyukauivet M**	**6.65**	**302**	Pn	**Pn**	**20 16 50.6**	**-1.1**
M16K	**Timber Creek**	**6.66**	**321**		**Pn**	**20 16 51.5**	**-0.2**
BARN	**Barnard Glacie**	**6.66**	**39**		**Pn**	**20 16 52.1**	**+0.2**
LOGN	**Logan Glacier**	**6.74**	**42**		**Pn**	**20 16 53.0**	**0.0**
BCPM	**Bancas Point**	**6.81**	**52**	Pn	**Pn**	**20 16 53.6**	**-0.1**
L18K	**Granite Mounta**	**6.91**	**334**	Pn	**Pn**	**20 16 54.9**	**-0.3**
DHY	**Denali Highway**	**7.09**	**11**	Pn	**Pn**	**20 16 58.0**	**+0.2**
RND	**Reindeer**	**7.31**	**5**	Pn	**Pn**	**20 17 01.7**	**+1.0**
TRF	**Thorofare Moun**	**7.32**	**360**	Pn	**Pn**	**20 17 01.2**	**+0.3**
L16K	**Owhat River**	**7.32**	**323**	Pn	**Pn**	**20 17 00.4**	**-0.4**
CAST	**Castle Rocks**	**7.34**	**354**	Pn	**Pn**	**20 17 02.4**	**+1.3**
KTH	**Kantishna Hill**	**7.43**	**358**	Pn	**Pn**	**20 17 03.1**	**+0.8**
O29M	**Mount Kennedy**	**7.44**	**51**		**Pn**	**20 17 03.0**	**+0.4**
P29M	**Windy Craggy**	**7.53**	**57**		**Pn**	**20 17 03.4**	**-0.3**
M27K	**Edge Creek, AK**	**7.56**	**31**	Pn	**Pn**	**20 17 04.9**	**+0.7**
S31K	**Pelican**	**7.87**	**71**	Pn	**Pn**	**20 17 06.0**	**-2.3**
M13K	**Dall Lake**	**8.10**	**307**	Pn	**Pn**	**20 17 09.4**	**-2.0**
BCAR	**Beaver Creek A**	**8.15**	**28**	Pn	**Pn**	**20 17 12.0**	**-0.2**
L14K	**Kuka Creek**	**8.28**	**314**	Pn	**Pn**	**20 17 13.0**	**-0.9**
CCB	**Clear Creek Bu**	**8.60**	**7**	Pn	**Pn**	**20 17 18.4**	**0.0**
M29M	**Somme Creek**	**8.72**	**39**	Pn	**Pn**	**20 17 21.2**	**+1.1**
O30N	**Mendenhall**	**8.75**	**52**	Pn	**Pn**	**20 17 20.4**	**0.0**
ILAR	**Eielson Array**	**8.80**	**10**	Pn	**Pn**	**20 17 21.7**	**+0.6**
ILAR	**Eielson Array**	**8.80**	**10**	Pn	**Pn**	**20 17 22.7**	**+1.6**
	comp=E,0.2nm,0.3s,baz=196,slow=13,SNR=7.8						
ILAR				Sn	**Sn**	**20 18 56.6**	**-2.3**
	comp=E,0.2nm,0.3s,baz=200,slow=15,SNR=1.8 comp=E,0.3nm,0.3s						
J25K	**Salcha River,**	**8.82**	**14**	Pn	**Pn**	**20 17 21.0**	**-0.4**
J16K	**Anvik River**	**8.84**	**328**	Pn	**Pn**	**20 17 20.9**	**-0.7**
JIS	**Juneau Island**	**8.88**	**70**	Pn	**Pn**	**20 17 21.8**	**-0.4**
WHY	**Whitehorse**	**9.24**	**54**	Pn	**Pn**	**20 17 27.7**	**-0.2**
L29M	**L29M**	**9.28**	**36**	Pn	**Pn**	**20 17 27.6**	**-0.1**
P32M	**Atlin**	**9.46**	**62**	Pn	**Pn**	**20 17 29.2**	**-1.1**
H18K	**Honhosa River**	**9.85**	**340**	Pn	**Pn**	**20 17 35.5**	**+0.1**
K29M	**Barlow Dome**	**9.99**	**34**	Pn	**Pn**	**20 17 37.9**	**+0.5**
P33M	**Teslin, Yukon**	**10.06**	**59**	Pn	**Pn**	**20 17 37.2**	**-1.2**
G24K	**Hadweenzic Riv**	**10.66**	**6**	Pn	**Pn**	**20 17 47.0**	**+0.4**
G16K	**Koyuk River**	**10.96**	**333**	Pn	**Pn**	**20 17 50.1**	**-0.4**
F15K	**North Star Dit**	**11.82**	**330**	Pn	**Pn**	**20 18 01.1**	**-1.2**
INK	**Inuvik**	**14.39**	**26**	Pn	**P**	**20 18 43.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=209,slow=13,SNR=3.3 comp=E,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**19.07**	**56**	P	**Pn**	**20 19 37.3**	**+0.8**
	comp=E,0.1nm,0.3s,baz=266,slow=9.9,SNR=7.6 comp=E,0.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**48.34**	**239**	T	T	21 15 43.1	
	baz=30,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**48.35**	**239**	T	T	21 15 44.1	
	baz=30,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**48.36**	**239**	T	T	21 15 45.4	
	baz=30,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**49.48**	**238**	T	T	21 17 12.4	
	baz=30,slow=76,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**49.50**	**238**	T	T	21 17 13.3	
	baz=30,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**49.50**	**238**	T	T	21 17 13.0	
	baz=30,slow=76,SNR=13						
SONM	**Songino Array**	**58.29**	**310**	P	**P**	**20 25 08.5**	**+1.0**
	comp=E,0.2nm,0.5s,baz=57,slow=5.3,SNR=2.5 comp=E,0.2nm,0.5s						
MKAR	**Makanchi Array**	**68.37**	**324**	P	**P**	**20 26 13.7**	**-0.4**
	comp=E,0.2nm,0.5s,baz=39,slow=6.2,SNR=5.5 comp=E,0.2nm,0.5s						

*ANF **03** 20:18:30.8±0.4,32°.96N×115°.54W,h10km,Error ellipse: s-maj=3.8km s-min=2.8km az=156.0*
*ECX **03** 20

	comp=N,123nm,0.2s						
BAR	**Barrett**	**1.00 257**	*e*P		**Pn**	**20 18 49.4**	**+0.4**
BAR			*e*S		**Sb**	**20 19 02.5**	**+0.6**
BAR			⇓*e*			20 19 03.6	
BAR			IAML			20 19 03.6	
	comp=E,173nm,0.2s						
TPFO	**Pinon Flats**	**1.05 312**	P		**Pn**	**20 18 49.9**	**+0.1**
	baz=131						
TPFO			S		**Sb**	**20 19 03.9**	**+0.6**
	baz=131						
PFO	**Pinyon Flats O**	**1.05 312**	P		**Pn**	**20 18 50.0**	**+0.1**
	baz=131,SNR=31						
PFO			S		**Sb**	**20 19 04.2**	**+0.7**
	baz=131						
SJX	**San Joaquin**	**1.21 198**	*e*P		**Pn**	**20 18 49.5**	**-2.3**
SJX			*e*S		**Sn**	**20 19 02.8**	**-4.6**
IRM	**Iron Mountain**	**1.28 14**	Pb		**Pb**	**20 18 54.2**	**+0.2**
	baz=194,SNR=40						
109C	**Camp Elliot, M**	**1.34 269**	P		**Pn**	**20 18 54.0**	**+0.4**
	baz=88						
MURC	**Murrieta**	**1.57 296**	Sb		**Sb**	**20 19 19.0**	**+0.9**
	baz=115						
214A	**Organ Pipe Nat**	**2.48 112**	P		**Pn**	**20 19 09.8**	**+0.5**
	baz=294						
CIS	**Catalina Islan**	**2.48 282**	Sb		**Sb**	**20 19 46.4**	**+2.0**
	baz=100						

*ANF **03** 20:29:40.5±0.3, 32°.93N×115°.53W, h10km, Error ellipse: s-maj=3.9km s-min=1.8km az=166.0*
*ECX **03** 20:29:41.5±0.6, 32°.95N×115°.52W, h20km±2km, MD2.3, ML2.5*
ISC 03 20:29:40.7±1.0, 32°.92N±0°.03×115°.51W±0°.02, h19km±2km, n29, σ0s74/44, 5C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.13**	**333**	⇑*i*P	**Pg**	**20 29 44.7**	**-0.1**
WEMD				*i* S	**Sg**	**20 29 48.0**	**+0.4**
COK2	**Cook Ranch 2**	**0.20**	**249**	⇓*i*P	**Pg**	**20 29 46.0**	**+0.3**
SWSC	**Sam W. Stewart**	**0.24**	**276**	P	**Pb**	**20 29 46.3**	**+0.1**
	baz=95,SNR=172						
SWSC				S	**Sb**	**20 29 49.6**	**-0.3**
	baz=95						
SWSC	**Sam W. Stewart**	**0.24**	**276**	⇓*e*P	**Pb**	**20 29 46.3**	**+0.1**
WESC	**Westside Schoo**	**0.24**	**229**	⇓*i*P	**Pg**	**20 29 46.8**	**+0.4**
SGL	**Mount Signal**	**0.33**	**214**	⇑*i*P	**Pg**	**20 29 47.8**	**+0.1**
COA	**Coachella**	**0.33**	**100**	⇑*i*P	**Pb**	**20 29 48.4**	**+0.4**
CRR	**Carrizo Plain**	**0.39**	**265**	⇓*i*P	**Pg**	**20 29 49.0**	**+0.2**
CRR				*i* S	**Sg**	**20 29 54.6**	**+0.3**
YUH2	**Yuha Desert**	**0.44**	**232**	⇓*i*P	**Pg**	**20 29 49.8**	**0.0**
YUH2				*e*S	**Sb**	**20 29 56.4**	**+0.3**
EMSC	**East Mesa**	**0.48**	**112**	*e*P	**Pb**	**20 29 51.0**	**+0.5**
CPBX	**Cerro Prieto**	**0.53**	**161**	*e*P	**Pb**	**20 29 52.1**	**+0.8**
CPBX				*e*S	**Sb**	**20 29 59.9**	**+1.4**
IKP	**In-Ko-Pah, Jac**	**0.57**	**242**	P	**Pb**	**20 29 52.3**	**+0.2**
	baz=61,SNR=122						
IKP				S	**Sb**	**20 30 00.1**	**+0.3**
	baz=61						
IKP	**In-Ko-Pah, Jac**	**0.57**	**242**	*e*P	**Pb**	**20 29 52.2**	**+0.2**
IKP				*e*S	**Sg**	**20 30 00.3**	**+0.4**
RMX	**La Rumorosa**	**0.57**	**237**	⇓*i*P	**Pb**	**20 29 52.2**	**+0.1**
RMX				⇓*e*		20 30 01.6	
RMX				IAML		20 30 01.6	
	comp=N,154nm,0.1s						
GLA	**Glamis**	**0.59**	**77**	P	**Pb**	**20 29 52.4**	**+0.1**
	baz=258,SNR=31						
GLA				S	**Sb**	**20 30 00.3**	**0.0**
	baz=258						
GLA	**Glamis**	**0.59**	**77**	⇑*i*P	**Pb**	**20 29 52.4**	**+0.1**
GLA				*e*S	**Sb**	**20 30 00.2**	**0.0**
BC3	**Big Chuckawall**	**0.73**	**4**	P	**Pb**	**20 29 55.1**	**+0.2**
	baz=184,SNR=29						
BC3				S	**Sb**	**20 30 05.1**	**+0.4**
	baz=184						
MONP2	**Monument Peak**	**0.77**	**268**	P	**Pb**	**20 29 55.4**	**-0.1**
	baz=87,SNR=65						
MONP2				S	**Sb**	**20 30 05.9**	**+0.2**
	baz=87						
MONP2	**Monument Peak**	**0.77**	**268**	⇓*e*P	**Pb**	**20 29 55.5**	**0.0**
MONP2				*e*S	**Sb**	**20 30 05.9**	**+0.2**
MONP2				IAML		20 30 06.2	
	comp=N,219nm,0.4s						
MONP2				⇓*e*		20 30 06.5	
MONP2				IAML		20 30 06.5	
	comp=E,188nm,0.3s						
RHX	**Rio Hardy**	**0.81**	**166**	*e*P	**Pb**	**20 29 56.2**	**+0.1**
ALAMX	**Rancho Alamar**	**0.93**	**190**	⇓*e*P	**Pb**	**20 29 58.2**	**+0.1**
ALAMX				*e*		20 30 11.8	
ALAMX				IAML		20 30 11.8	
	comp=E,162nm,0.3s						
ALAMX				⇑*e*		20 30 12.3	
ALAMX				IAML		20 30 12.3	
	comp=N,122nm,0.4s						
BAR	**Barrett**	**1.01**	**257**	*e*P	**Pb**	**20 29 59.1**	**-0.4**
BAR				*e*S	**Sb**	**20 30 12.4**	**0.0**
PFO	**Pinyon Flats O**	**1.05**	**311**	P	**Pb**	**20 29 59.7**	**-0.7**
	baz=131,SNR=33						
PFO				S	**Sb**	**20 30 14.4**	**+0.5**
	baz=131						
SJX	**San Joaquin**	**1.21**	**198**	*e*P	**Pn**	**20 29 59.2**	**-3.4**
OLP	**Otay Lakes Par**	**1.24**	**256**	*e*P	**Pn**	**20 30 02.8**	**-0.2**
IRM	**Iron Mountain**	**1.27**	**14**	Sg	**Sg**	**20 30 22.5**	**+0.5**
	baz=194						
109C	**Camp Elliot, M**	**1.34**	**269**	Pg	**Pb**	**20 30 06.0**	**+0.8**
	baz=88						
109C				S	**Sn**	**20 30 22.3**	**+0.6**
	baz=88						
MURC	**Murrieta**	**1.57**	**296**	S	**Sn**	**20 30 28.2**	**+0.8**
	baz=115						
CIS	**Catalina Islan**	**2.48**	**282**	Sb	**Sb**	**20 30 56.7**	**+1.8**
	baz=100						

*IDC **03** 20:33:58.3±2.1, 9°.36S×125°.49E, h0km, mb3.3/1, mbtmp3.8/3, ML3.9/2, Error ellipse: s-maj=155.7km s-min=33.7km az=58.0*
*DJA **03** 20:34:08.4±1.1, 9°.5±6°×12°.5E±1°, h11km±7km, M3.1/6, MLv3.1/6*
ISC 03 20:34:04.1±1.1, 9°.7S±0°.1×125°.24E±0°.08, h35km, n14, σ2s49/16, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.96**	**267**	P	**Pn**	**20 34 22.6**	**+1.4**
SOEI	**Soe**	**0.96**	**267**	Pg	**Pn**	**20 34 22.4**	**+1.2**
SOEI				Sg	**Sn**	**20 34 32.8**	**-1.0**
MMRI	**Maumere**	**3.15**	**290**	P	**Pn**	**20 34 50.2**	**-1.0**
EDFI	**Ende, Flores**	**3.63**	**285**	P	**Pn**	**20 34 58.6**	**+0.6**
MTN	**Manton Dam**	**6.56**	**119**	P	**Pn**	**20 35 41.8**	**+3.6**
KNRA	**Kununurra**	**6.86**	**150**	P	**Pn**	**20 35 45.3**	**+3.1**
PLAI	**Plampang**	**7.42**	**276**	P	**Pn**	**20 35 51.7**	**+1.7**
KDU	**Kakadu**	**7.69**	**113**	P	**Pn**	**20 35 56.9**	**+3.3**
WRA	**Warramunga Arr**	**13.44**	**140**	Pn	**Pn**	**20 37 12.0**	**-0.4**
	0.7nm,0.3s,baz=317,slow=13,SNR=33						
WRA				Sn	**Sn**	**20 39 35.2**	**-5.6**
	0.1nm,0.3s,baz=311,slow=20,SNR=1.4 4.7nm,0.6s						
WRKA	**Warakurna**	**15.52**	**170**	P	**Pn**	**20 37 41.0**	**+0.5**
ASAR	**Alice Springs**	**16.16**	**150**	Pn	**Pn**	**20 37 49.4**	**+0.7**
	0.4nm,0.3s,baz=320,slow=11,SNR=23 1.1nm,0.5s						
AS01	**Alice Springs**	**16.18**	**150**	P	**Pn**	**20 37 49.9**	**+0.9**
QIS	**Mount Isa**	**17.55**	**130**	P	**P**	**20 38 08.8**	**+1.8**
MKAR	**Makanchi Array**	**68.03**	**330**	P	**P**	**20 44 58.5**	**-1.5**
	0.2nm,0.7s,baz=126,slow=8.1,SNR=3.0 0.2nm,0.7s						

IDC 03 20:35:51.2±44.0, 16°.06S×173°.86W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=843.3km s-min=166.4km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.33**	**240**	P	P	20 43 55.7	+0.5
	1.8nm,0.5s,baz=99,slow=11,SNR=8.7 1.8nm,0.5s						
WRA	**Warramunga Arr**	**49.26**	**257**	P	P	20 44 41.5	-0.6
	1.1nm,0.5s,baz=96,slow=7.1,SNR=17 1.1nm,0.5s						
ASAR	**Alice Springs**	**49.49**	**252**	P	P	20 44 43.5	-0.3
	8.7nm,0.6s,baz=88,slow=8.4,SNR=140 8.7nm,0.6s						

IDC 03 20:46:03.0±2.7, 6°.84N×125°.11E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=244.2km s-min=29.5km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.12**	**161**	P	P	20 51 57.0	0.0
	0.1nm,0.3s,baz=342,slow=9.0,SNR=5.0 0.1nm,0.3s						
ASAR	**Alice Springs**	**31.52**	**164**	P	P	20 52 26.9	-0.1
	0.3nm,0.5s,baz=341,slow=7.1,SNR=7.6 0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.10**	**325**	P	P	20 55 29.7	0.0
	0.2nm,0.7s,baz=140,slow=5.9,SNR=1.9 0.2nm,0.7s						

*DJA **03** 20:49:18.7±0.3, 7°.5±2°×10°.6E±°, h10km, M4.5/12, MLv4.5/12*
*NEIC **03** 20:49:20.1±1.8, 7°.12S±0°.07×105°.76E±0°.08, h50km±11km, mb4.1/9, Error ellipse: s-maj=11.9km s-min=9.6km az=55.0*
*IDC **03** 20:49:28.3±2.8, 6°.24S×106°.75E, h105km±12km, mb3.5/5, mbtmp3.8/5, MS2.8/1, Error ellipse: s-maj=115.4km s-min=18.9km az=50.0*
ISC 03 20:49:18.5±1.2, 7°.13S±0°.05×105°.86E±0°.04, h31km±10km, n44, σ1s47/50, mb3.9/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.70**	**80**	P	**Pn**	**20 49 32.6**	**+0.2**
SKJI				S	**Sb**	**20 49 40.9**	**-0.8**
SBJI	**Serang**	**1.04**	**15**	P	**Pn**	**20 49 39.2**	**+2.2**
DBJI	**Dramaga**	**1.05**	**57**	P	**Pb**	**20 49 38.1**	**-0.1**
DBJI				S	**Sb**	**20 49 50.3**	**-1.4**
CBJI	**Citeko**	**1.21**	**54**	P	**Pb**	**20 49 39.6**	**-1.2**
CBJI				S	**Sb**	**20 49 56.2**	**+0.1**
TNG	**Tangerang**	**1.23**	**39**	P	**Pb**	**20 49 41.4**	**+0.2**
CNJI	**Cibinong**	**1.27**	**98**	P	**Pn**	**20 49 40.3**	**+0.1**
LEM	**Lembang**	**1.77**	**80**	P	**Pb**	**20 49 49.6**	**-0.9**
	850nm,0.4s,baz=356,slow=1.1,SNR=175						
LEM				S	**Sn**	**20 50 06.3**	**-2.4**
	548nm,0.4s,baz=229,slow=20,SNR=5.6						
LEM				LR	LR	20 50 15.8	
	comp=Z,76nm,21.8s,baz=212,slow=45						
BBJI	**Bungbulang**	**1.81**	**101**	P	**Pn**	**20 49 48.3**	**+0.7**
KASI	**Kota Agung**	**2.09**	**320**	P	**Pb**	**20 49 56.3**	**+0.4**
JCJI	**Jatiwangi**	**2.48**	**75**	P	**Pn**	**20 49 59.0**	**+2.2**
CMJI	**Cimerak**	**2.65**	**104**	P	**Pn**	**20 49 59.8**	**+0.7**
LWLI	**Liwa**	**2.76**	**319**	P	**Pb**	**20 50 06.1**	**-1.2**
LWLI				S	**Sb**	**20 50 41.2**	**+0.5**
KPJI	**Karang Pucung**	**3.05**	**94**	P	**Pn**	**20 50 08.2**	**+3.5**
KPJI				S	**Sn**	**20 50 42.9**	**+2.7**
XMI	**Christmas Isla**	**3.30**	**183**	P	**Pn**	**20 50 09.4**	**+1.2**
XMIS	**Christmas Isla**	**3.34**	**184**		**Pn**	**20 50 09.4**	**+0.7**
XMIS				Sn	**Sn**	**20 50 47.5**	**+0.2**
XMIS	**Christmas Isla**	**3.34**	**184**	P	**Pn**	**20 50 09.4**	**+0.7**
UGM	**Wanagama**	**4.69**	**100**	Pn	**Pn**	**20 50 28.1**	**+0.8**
UGM	**Wanagama**	**4.69**	**100**	P	**Pn**	**20 50 28.6**	**+1.3**
JAGI	**Jajag, Banyuwa**	**8.32**	**100**	Pn	**Pn**	**20 51 20.0**	**+2.8**
JAGI	**Jajag, Banyuwa**	**8.32**	**100**	P	**Pn**	**20 51 20.6**	**+3.4**
GSI	**Gunungsitoli**	**11.77**	**315**	Pn	**Pn**	**20 52 04.3**	**-0.2**
PLAI	**Plampang**	**11.92**	**99**	P	**Pn**	**20 52 09.1**	**+2.6**
GIRL	**Giralia**	**17.41**	**153**	P	**Pn**	**20 53 19.8**	**+0.6**
GIRL	**Giralia**	**17.41**	**153**	P	**Pn**	**20 53 19.9**	**+0.6**
KNRA	**Kununurra**	**23.98**	**113**	P	**P**	**20 54 28.4**	**-2.2**
KNRA				IAmb	IAmb	20 54 50.9	
	comp=Z,36nm,1.2s						
CMAR	**Chiang Mai Arr**	**26.32**	**345**	LR	LR	21 06 16.3	
	comp=Z,19nm,18.7s,baz=135,slow=39						
WB0	**Warramunga Arr**	**30.40**	**117**		**P**	**20 55 27.8**	**-0.4**
WB0				IAmb	IAmb	20 55 34.5	
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**30.41**	**118**	P	**P**	**20 55 27.8**	**-0.6**
WRA	**Warramunga Arr**	**30.41**	**118**	P	**P**	**20 55 28.5**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=293,slow=11,SNR=34 comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**31.54**	**125**	P	**P**	**20 55 38.1**	**-0.2**
ASAR	**Alice Springs**	**31.54**	**125**	P	**P**	**20 55 38.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=301,slow=8.0,SNR=25 comp=Z,0.3nm,0.3s						
AS31	**Alice Springs**	**31.54**	**125**	P	**P**	**20 55 38.3**	**0.0**
OOD	**Oodnadatta**	**34.93**	**130**	P	**P**	**20 56 08.3**	**+0.5**
QIS	**Mount Isa**	**35.28**	**116**	P	**P**	**20 56 11.5**	**+0.5**
STKA	**Stephens Creek**	**41.40**	**131**	P	**P**	**20 57 03.2**	**+0.9**
STKA				IAmb	IAmb	20 57 15.9	
	comp=Z,2.0nm,1.3s						
STKA	**Stephens Creek**	**41.40**	**131**	P	**P**	**20 57 03.5**	**+1.3**
STKA	**Stephens Creek**	**41.40**	**131**	P	**P**	**20 57 03.6**	**+1.3**
	comp=Z,2.1nm,0.4s,baz=313,slow=7.8,SNR=24 comp=Z,2.1nm,0.4s						
MANU	**Manus Island**	**41.66**	**85**	P	**P**	**20 57 05.2**	**+0.5**
MK31	**Makanchi Array**	**57.63**	**341**	P	**P**	**20 59 04.3**	**-1.5**
MK31				IAmb	IAmb	20 59 25.9	
	comp=Z,1.2nm,1.2s						
MKAR	**Makanchi Array**	**57.63**	**341**	P	**P**	**20 59 03.6**	**-2.2**
MKAR	**Makanchi Array**	**57.63**	**341**	P	**P**	**20 59 03.5**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.9,SNR=4.9 comp=Z,0.4nm,0.6s						
BVAR	**Borovoye Array**	**67.05**	**338**	P	**P**	**21 00 07.4**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=154,slow=5.8,SNR=2.3 comp=Z,0.3nm,0.5s						
ABKAR	**Akbulak array**	**68.95**	**330**	P	**P**	**21 00 20.0**	**-0.7**
ABKAR				IAmb	IAmb	21 00 23.4	
	comp=Z,1.5nm,0.9s						
ABKAR	**Akbulak array**	**68.95**	**330**	P	**P**	**21 00 20.0**	**-0.7**

*MDD **03** 21:15:07.2±0.4, 36°.34N×3°.31W, h10km, mb_Lg2.3/16, Error ellipse: s-maj=3.5km s-min=2.8km az=2.0*
*SFS **03** 21:15:08.0, 36°.35N×3°.36W, h7km, ML2.2/10, ML2.5/8, MLv2.0/10*
*CNRM **03** 21:15:08.9, 36°.32N×3°.28W, h76km, ML2.1*
ISC 03 21:15:06.4±1.1, 36°.36N±0°.02×3°.29W±0°.02, h12km±9km, n43, σ0s91/68, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.47**	**154**	Pg	**Pb**	**21 15 17.6**	**+0.9**
EALB				Sg	**Sb**	**21 15 23.9**	**+0.3**
EALB	**Alboran**	**0.47**	**154**	Pg	**Pb**	**21 15 17.4**	**+0.7**
EALB				Sg	**Sg**	**21 15 21.4**	**-0.6**
EALB				*i* Vmb_Lg		21 15 24.2	
ELQU	**Los Guajares,**	**0.57**	**332**	Pg	**Pb**	**21 15 19.1**	**+0.7**
ELQU				Sg	**Sb**	**21 15 26.3**	**-0.3**
ELQU	**Los Guajares,**	**0.57**	**332**	Pg	**Pb**	**21 15 19.1**	**+0.7**
ELQU				Sg	**Sb**	**21 15 27.2**	**+0.6**
ELQU				*i* Vmb_Lg		21 15 29.4	
EBER	**Berja**	**0.62**	**31**	Pg	**Pb**	**21 15 20.2**	**+0.8**
EBER				Sg	**Sb**	**21 15 28.6**	**+0.4**
EBER	**Berja**	**0.62**	**31**	Pg	**Pb**	**21 15 19.6**	**+0.1**
EBER				Sg	**Sb**	**21 15 28.7**	**+0.4**
EBER				*i* Vmb_Lg		21 15 31.6	
EQUE	**Quentar**	**0.85**	**352**	Pg	**Pn**	**21 15 23.9**	**-0.5**
EQUE				Sg	**Sb**	**21 15 34.9**	**+0.3**
EQUE				*i* Vmb_Lg		21 15 37.1	
EQTA	**Presa de Quent**	**0.85**	**352**	Pg	**Pn**	**21 15 24.3**	**-0.1**
EQTA				Sg	**Sb**	**21 15 35.3**	**+0.6**
EGOR	**Sierra Gorda,**	**0.99**	**319**	Pg	**Pg**	**21 15 25.1**	**-0.5**
EGOR	**Sierra Gorda,**	**0.99**	**319**	Pg	**Pg**	**21 15 25.3**	**-0.3**
EGOR				Sg	**Sb**	**21 15 38.7**	**-0.2**
EGOR				*i* Vmb_Lg		21 15 49.9	
EMAL	**Malaga-Limoner**	**1.00**	**294**	Pg	**Pg**	**21 15 25.4**	**-0.3**
EMAL				Sg	**Sg**	**21 15 37.1**	**-1.6**
ENIJ	**Nijar**	**1.06**	**55**	Pn	**Pb**	**21 15 26.6**	**-0.2**
ENIJ	**Nijar**	**1.06**	**55**	Pg	**Pb**	**21 15 26.8**	**0.0**
ENIJ				Sg	**Sg**	**21 15 39.7**	**-1.0**
ENIJ				*i* Vmb_Lg		21 15 41.6	
GOG	**Mont Gurugu**	**1.17**	**168**	P	**Pg**	**21 15 29.3**	**+0.5**
GOG	**Mont Gurugu**	**1.17**	**168**	S	**Sn**	**21 15 44.9**	**+0.4**
EMIJ	**Mijas**	**1.21**	**280**	Pn	**Pb**	**21 15 28.6**	**-0.8**
EMIJ	**Mijas**	**1.21**	**280**	Pg	**Pb**	**21 15 29.0**	**-0.4**
EMIJ				Sg	**Sb**	**21 15 44.3**	**-0.7**
EMIJ				*i* Vmb_Lg		21 15 47.5	
PALE	**Palemas**	**1.26**	**205**	P	**Pb**	**21 15 30.4**	**+0.3**
PALE	**Palemas**	**1.26**	**205**	S	**Sg**	**21 15 47.5**	**+0.4**
EQES	**Quesada**	**1.45**	**7**	Pg	**Pg**	**21 15 34.9**	**+0.7**
EQES				Sg	**Sg**	**21 15 53.2**	**+0.1**
EQES				*i* Vmb_Lg		21 15 56.6	
SMIR	**Smir Dam**	**1.83**	**249**	P	**Pn**	**21 15 38.1**	**+0.4**
SMIR	**Smir Dam**	**1.83**	**249**	S	**Sn**	**21 16 01.4**	**+0.6**
AKLM	**AKL**	**1.91**	**194**	P	**Pn**	**21 15 38.2**	**-0.7**
AKLM	**AKL**	**1.91**	**194**	S	**Sn**	**21 16 00.8**	**-2.2**
EADA	**Adamuz**	**2.07**	**331**	Pn	**Pb**	**21 15 43.0**	**-1.0**
EADA				Sn	**Sn**	**21 16 07.2**	**+0.3**
EADA	**Adamuz**	**2.07**	**331**	Pn	**Pn**	**21 15 40.6**	**-0.6**
EADA				Pg	**Pb**	**21 15 43.8**	**-0.3**
EADA				Sn	**Sn**	**21 16 05.6**	**-1.3**
EADA				Sg	**Sg**	**21 16 13.2**	**+0.1**
EADA				*i* Vmb_Lg		21 16 17.1	
CHEFC	**Chefchaouen**	**2.09**	**234**	P	**Pn**	**21 15 42.2**	**+0.8**
CHEFC	**Chefchaouen**	**2.09**	**234**	S	**Sn**	**21 16 07.3**	**0.0**
JBK	**JBK**	**2.11**	**164**	P	**Pn**	**21 15 41.5**	**-0.3**
JBK	**JBK**	**2.11**	**164**	S	**Sn**	**21 16 07.7**	**-0.4**
EMUR	**La Murta**	**2.21**	**47**	Pn	**Pn**	**21 15 42.5**	**-0.4**
EMUR				Sn	**Sn**	**21 16 08.7**	**-1.5**
EMUR				*i* Vmb_Lg		21 16 11.0	
ECAB	**El Cabril**	**2.41**	**316**	Pn	**Pn**	**21 15 46.7**	**+0.9**
ECAB	**El Cabril**	**2.41**	**316**	Pn	**Pn**	**21 15 46.3**	**+0.5**
ECAB				Pg	**Pb**	**21 15 50.4**	**+0.6**
ECAB				Sn	**Sn**	**21 16 13.7**	**-1.5**
ECAB				Sg	**Sg**	**21 16 23.3**	**-0.5**
ECAB				*i* Vmb_Lg		21 16 29.2	
ETOB	**Tobarra**	**2.67**	**31**	Pn	**Pn**	**21 15 50.2**	**+0.9**
ETOB	**Tobarra**	**2.67**	**31**	Pn	**Pn**	**21 15 50.4**	**+1.1**
ETOB				Sn	**Sn**	**21 16 19.9**	**-1.7**
ETOB				*i* Vmb_Lg		21 16 38.4	
PAB	**San Pablo**	**3.29**	**346**	Pn	**Pn**	**21 15 58.9**	**+1.1**
PAB				Sn	**Sn**	**21 16 35.0**	**-1.9**
PAB				Sg	**Sg**	**21 16 53.4**	**+1.4**
PAB				*i* Vmb_Lg		21 16 59.8	
PBAR	**Barrancos**	**3.49**	**302**	*e*P	**Pn**	**21 16 03.1**	**+2.5**
PBAR				*e*S	**Sn**	**21 16 43.3**	**+1.4**
MD31	**MD31**	**3.69**	**200**	P	**Pn**	**21 16 03.6**	**+0.1**
MD31	**MD31**	**3.69**	**200**	S	**Sn**	**21 16 45.7**	**-1.3**
PVAQ	**Vaqueiros**	**3.70**	**288**	*e*S	**Sn**	**21 16 46.4**	**-0.6**
MDT	**Midelt**	**3.71**	**197**	P	**Pn**	**21 16 04.0**	**+0.3**
MDT	**Midelt**	**3.71**	**197**	S	**Sn**	**21 16 45.8**	**-1.5**
PBDV	**Barranco-do-Ve**	**3.83**	**285**	*e*S	**Sn**	**21 16 51.2**	**+1.0**

IDC 03 21:34:43.4±2.2, 6°.67S×129°.65E, h0km, mb3.3/1, mbtmp3.3/3, ML3.4/2, MS2.7/1, Error ellipse: s-maj=123.7km s-min=32.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.96**	**161**	Pn	Pn	21 38 02.4	-0.2
	0.3nm,0.3s,baz=340,slow=12,SNR=11						
WRA				Sn	Sn	21 40 24.6	-14
	0.1nm,0.3s,baz=330,slow=23,SNR=2.3 0.4nm,0.4s						
ASAR	**Alice Springs**	**17.39**	**167**	P	Pn	21 38 47.8	+0.2
	0.1nm,0.3s,baz=343,slow=9.4,SNR=5.5 0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.25**	**310**	LR	LR	21 59 03.8	
	comp=Z,10nm,19.5s,baz=290,slow=37						
MKAR	**Makanchi Array**	**67.76**	**327**	P	P	21 45 43.0	0.0
	0.1nm,0.5s,baz=133,slow=5.9,SNR=4.5 0.1nm,0.5s						

WBNET 03 21:35:07.8, 50°.27N×12°.44E, h8km, Ml0.1, 5C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**262**	⇓P	Pg	21 35 09.6	+0.2
LBCW				S	Sg	21 35 10.7	+0.2
NKC	**Novy Kostel**	**0.04**	**172**	⇓P	Pg	21 35 09.6	+0.2
NKC				S	Sg	21 35 10.8	+0.1
STCW	**Studenec**	**0.05**	**100**	⇑P	Pg	21 35 09.7	+0.1
STCW				S	Sg	21 35 10.9	-0.1
POCW	**Potky**	**0.05**	**351**	⇓P	Pg	21 35 09.9	+0.1
POCW				S	Sg	21 35 11.2	+0.1
VAC	**Vackov**	**0.05**	**231**	⇓P	Pg	21 35 09.8	+0.1
VAC				S	Sg	21 35 11.0	0.0
KVC	**Kvetna**	**0.08**	**142**	⇑P	Pg	21 35 10.1	+0.1
KVC				S	Sg	21 35 11.5	0.0
KRCW	**Kraslice**	**0.09**	**42**	⇑P	Pg	21 35 10.1	0.0
KRCW				S	Sg	21 35 11.6	-0.1
SKC	**Skalna**	**0.11**	**207**	⇑P	Pg	21 35 10.5	+0.1
SKC				S	Sg	21 35 12.3	+0.1
KOCW	**Kopaniny**	**0.13**	**269**	⇓P	Pg	21 35 10.9	+0.1
KOCW				S	Sg	21 35 12.8	0.0
TRCW	**Trojmez**	**0.19**	**281**	⇓P	Pg	21 35 11.9	+0.1
TRCW				S	Sg	21 35 14.5	0.0
ZHC	**Zelena Hora**	**0.21**	**203**	⇑P	Pg	21 35 12.3	+0.1
ZHC				S	Sg	21 35 15.2	+0.1
LACW	**Lazy**	**0.25**	**151**	S	Sg	21 35 16.4	+0.3

*PRU **03** 21:35:24.2, 50°.28N×12°.45E, h10km, West Bohemia*
WBNET 03 21:35:25.2, 50°.27N×12°.44E, h8km, Ml0.0, 5C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**265**	⇓P	Pg	21 35 27.0	+0.2
LBCW				S	Sg	21 35 28.1	+0.2
NKC	**Novy Kostel**	**0.03**	**172**	*e*SG	Sg	21 35 28.3	+0.2
	comp=Z,4.0nm,0.1s						
NKC	**Novy Kostel**	**0.03**	**172**	⇓P	Pg	21 35 27.1	+0.2
NKC				S	Sg	21 35 28.1	+0.1
**STC

Error ellipse: s-maj=11.7km s-min=8.4km az=174.0
ISC 03 21:42:10.8±1.6,**56°00'N**±0'.1×**149°37'W**±0'.06,**h10**km,**n191,**
σ**0990**/194,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.19**	**304**		**Pn**	**21 42 47.3**	**+0.2**
OHAK					**Sn**	**21 43 12.3**	**-1.9**
OHAK	**Old Harbor**	**2.19**	**304**	P	**Pn**	**21 42 47.3**	**+0.2**
OHAK	**Old Harbor**	**2.19**	**304**	P	**Pn**	**21 42 47.3**	**+0.2**
	baz=123						
OHAK				S	**Sn**	**21 43 12.4**	**-1.8**
	baz=123						
KDAK	**Kodiak Island**	**2.26**	**322**		**Sn**	**21 43 15.0**	**-1.1**
KDAK	**Kodiak Island**	**2.26**	**322**	Pn	**Pn**	**21 42 48.6**	**+0.4**
SII	**Sitkinak Islan**	**2.41**	**284**	S	**Sn**	**21 43 17.7**	**-2.0**
	baz=102						
SYI	**Shuyak Island**	**2.89**	**334**		**Pn**	**21 42 57.3**	**+0.4**
SYI					**Sn**	**21 43 31.1**	**-0.6**
SYI				IAML		21 43 32.7	
	comp=E,137nm,0.3s						
Q20K	**Shuyak Island**	**2.90**	**334**	P	**Pn**	**21 42 57.2**	**+0.3**
	baz=152						
Q20K				S	**Sn**	**21 43 31.6**	**-0.1**
	baz=152						
R18K	**Karluk**	**2.90**	**304**		**Pn**	**21 42 57.2**	**+0.3**
R18K				IAML		21 43 42.8	
	comp=E,155nm,0.4s						
R18K				IAML		21 43 43.4	
	comp=N,144nm,0.4s						
R18K	**Karluk**	**2.90**	**304**	P	**Pn**	**21 42 57.4**	**+0.4**
	baz=121						
KAHG	**Katmai Hook Gl**	**3.50**	**317**		**Pn**	**21 43 07.0**	**+1.8**
Q19K	**Cape Douglas,**	**3.51**	**327**	Pn	**Pn**	**21 43 06.6**	**+1.3**
Q19K	**Cape Douglas,**	**3.51**	**327**	P	**Pn**	**21 43 06.6**	**+1.3**
	baz=144						
CNPM	**China Poot**	**3.56**	**350**		**Pn**	**21 43 05.9**	**-0.1**
CNPM				IAML		21 43 59.1	
	comp=N,94nm,1.3s						
ACHA	**Angle Creek He**	**3.64**	**309**		**Pn**	**21 43 08.1**	**+0.9**
KVTA	**Katmai Vly 10**	**3.73**	**311**		**Pn**	**21 43 09.9**	**+1.6**
BRSE	**Bradley Lake S**	**3.74**	**354**		**Pn**	**21 43 08.2**	**-0.2**
BRSE					**Sn**	**21 43 50.5**	**-2.0**
BRSE	**Bradley Lake S**	**3.74**	**354**	P	**Pn**	**21 43 08.2**	**-0.2**
	baz=173						
BRSE				S	**Sn**	**21 43 50.5**	**-2.0**
	baz=173						
BRLK	**Bradley Lake**	**3.77**	**353**		**Pn**	**21 43 08.8**	**-0.1**
BRLK				IAML		21 43 55.4	
	comp=N,85nm,1.4s						
KAHC	**Katmai Hardscr**	**3.78**	**316**		**Pn**	**21 43 10.7**	**+1.6**
KAHC	**Katmai Hardscr**	**3.78**	**316**	P	**Pn**	**21 43 10.7**	**+1.6**
	baz=132						
Q23K	**Middleton Isla**	**3.91**	**28**		**Pn**	**21 43 10.3**	**-0.5**
Q23K				IAML		21 44 48.0	
	comp=N,180nm,1.5s						
Q23K				IAML		21 45 16.1	
	comp=E,198nm,1.5s						
Q23K	**Middleton Isla**	**3.91**	**28**	P	**Pn**	**21 43 10.5**	**-0.4**
	baz=210						
MID	**Middleton Isla**	**3.92**	**28**	Pn	**Pn**	**21 43 10.3**	**-0.5**
MID				IAML		21 43 45.9	
	comp=N,191nm,1.5s						
MID	**Middleton Isla**	**3.92**	**28**	P	**Pn**	**21 43 10.5**	**-0.3**
CNTC	**Contact Creek**	**3.92**	**307**		**Pn**	**21 43 11.8**	**+0.8**
Q17K	**Contact Creek**	**3.92**	**307**	P	**Pn**	**21 43 11.8**	**+0.8**
	baz=123						
P19K	**Oil Pt**	**4.02**	**336**		**Pn**	**21 43 13.3**	**+1.0**
P19K	**Oil Pt**	**4.02**	**336**	P	**Pn**	**21 43 13.4**	**+1.0**
	baz=153						
SEW	**Seward**	**4.09**	**4**		**Pn**	**21 43 12.6**	**-0.6**
SEW	**Seward**	**4.09**	**4**	P	**Pn**	**21 43 12.8**	**-0.4**
	baz=184						
P23K	**Montague Islan**	**4.20**	**18**		**Pn**	**21 43 14.4**	**-0.3**
P23K	**Montague Islan**	**4.20**	**18**	P	**Pn**	**21 43 14.4**	**-0.3**
	baz=199						
O20K	**Slope Mountain**	**4.29**	**342**		**Pn**	**21 43 16.8**	**+0.7**
O20K	**Slope Mountain**	**4.29**	**342**	P	**Pn**	**21 43 16.8**	**+0.7**
	baz=160						
IVE	**Iliamna Volcan**	**4.31**	**339**		**Pn**	**21 43 16.8**	**+0.4**
P18K	**Big Mountain,**	**4.39**	**322**		**Pn**	**21 43 17.8**	**+0.4**
P18K	**Big Mountain,**	**4.39**	**322**	P	**Pn**	**21 43 18.0**	**+0.5**
	baz=138						
SLKM	**Skilak Lake**	**4.48**	**358**		**Pn**	**21 43 18.9**	**+0.2**
O18K	**Koktuh Hills**	**4.74**	**326**		**Pn**	**21 43 22.7**	**+0.5**
O18K				IAML		21 44 19.4	
	comp=N,60nm,0.8s						
O18K				IAML		21 44 32.3	
	comp=E,41nm,0.7s						
O18K	**Koktuh Hills**	**4.74**	**326**	P	**Pn**	**21 43 22.6**	**+0.5**
	baz=142						
HIN	**Hinchinbrook I**	**4.74**	**21**		**Pn**	**21 43 22.3**	**+0.1**
HIN				IAML		21 44 26.7	
	comp=N,94nm,1.2s						
KAIM	**Kayak Island**	**4.89**	**35**		**Pn**	**21 43 24.2**	**0.0**
KAIM				IAML		21 44 36.3	
	comp=N,77nm,1.4s						
KAIM	**Kayak Island**	**4.89**	**35**	P	**Pn**	**21 43 24.2**	**0.0**
	baz=219						
EYAK	**Cordova Ski Ar**	**5.04**	**24**		**Pn**	**21 43 26.3**	**0.0**
EYAK	**Cordova Ski Ar**	**5.04**	**24**	P	**Pn**	**21 43 26.9**	**+0.6**
EYAK	**Cordova Ski Ar**	**5.04**	**24**	P	**Pn**	**21 43 26.5**	**+0.3**
	baz=207						
RC01	**Rabbit Creek A**	**5.07**	**1**		**Pn**	**21 43 26.4**	**-0.2**
RC01				IAML		21 44 24.4	
	comp=E,44nm,0.3s						
RC01				IAML		21 44 27.6	
	comp=N,44nm,0.4s						
RC01	**Rabbit Creek A**	**5.07**	**1**	P	**Pn**	**21 43 26.9**	**+0.2**
	baz=181						
FID	**Port Fidalgo**	**5.07**	**20**		**Pn**	**21 43 26.4**	**-0.3**
FID				IAML		21 44 23.1	
	comp=E,47nm,0.6s						
FID				IAML		21 44 32.0	
	comp=N,48nm,0.9s						
RAGM	**Ragged Mountai**	**5.18**	**30**		**Pn**	**21 43 28.4**	**+0.2**
RAGM				IAML		21 44 47.0	
	comp=E,79nm,1.0s						
SUCK	**Suckling Hills**	**5.21**	**37**		**Pn**	**21 43 28.8**	**+0.2**
SUCK				IAML		21 44 27.4	
	comp=N,51nm,1.1s						
SUCK				IAML		21 44 46.6	
	comp=E,67nm,1.5s						
HMT	**Hamilton**	**5.26**	**33**		**Pn**	**21 43 29.7**	**+0.4**
P16K	**Nushagak River**	**5.26**	**308**		**Pn**	**21 43 30.3**	**+0.9**
P16K	**Nushagak River**	**5.26**	**308**	P	**Pn**	**21 43 30.3**	**+0.9**
	baz=122						
NICHA	**Nichawak Mount**	**5.27**	**35**		**Pn**	**21 43 29.9**	**+0.4**
GOAT	**Goat Mountain**	**5.33**	**29**		**Pn**	**21 43 30.6**	**+0.3**
O17K	**Koliganek Bris**	**5.33**	**318**		**Pn**	**21 43 31.3**	**+1.0**
O17K	**Koliganek Bris**	**5.33**	**318**	P	**Pn**	**21 43 31.3**	**+1.0**
	baz=132						
N19K	**Bonanza Creek**	**5.34**	**336**		**Pn**	**21 43 30.6**	**0.0**
N19K				IAML		21 44 50.1	
	comp=E,27nm,1.3s						
N19K	**Bonanza Creek**	**5.34**	**336**	P	**Pn**	**21 43 31.0**	**+0.4**
	baz=152						
BGLC	**Bering Glacier**	**5.41**	**38**		**Pn**	**21 43 31.9**	**+0.5**
BGLC	**Bering Glacier**	**5.41**	**38**	P	**Pn**	**21 43 31.9**	**+0.5**
	baz=223						
KNK	**Knik Glacier**	**5.45**	**8**		**Pn**	**21 43 31.6**	**-0.4**
KNK	**Knik Glacier**	**5.45**	**8**	P	**Pn**	**21 43 32.1**	**+0.1**
	baz=188						
SUA	**Susitna One**	**5.46**	**356**	Pn	**Pn**	**21 43 32.0**	**-0.1**
BERG	**Berg Lake**	**5.48**	**35**		**Pn**	**21 43 32.0**	**-0.3**
GRIN	**Grindle Hills**	**5.52**	**37**		**Pn**	**21 43 33.4**	**+0.4**
DIV	**Divide**	**5.56**	**22**		**Pn**	**21 43 34.0**	**+0.5**
STLK	**Strandline Lak**	**5.56**	**351**		**Pn**	**21 43 33.8**	**+0.3**
PMR	**Palmer**	**5.59**	**4**	Pn	**Pn**	**21 43 34.6**	**+0.8**
PMR	**Palmer**	**5.59**	**4**	P	**Pn**	**21 43 35.6**	**+1.8**
N18K	**Kilae Creek**	**5.60**	**329**		**Pn**	**21 43 34.1**	**+0.1**
N18K	**Kilae Creek**	**5.60**	**329**	P	**Pn**	**21 43 34.4**	**+0.4**
	baz=144						
SNH	**Sunshine Point**	**5.61**	**39**		**Pn**	**21 43 34.4**	**+0.1**
O16K	**Kokwok River B**	**5.62**	**313**		**Pn**	**21 43 35.3**	**+1.1**
O16K	**Kokwok River B**	**5.62**	**313**	P	**Pn**	**21 43 35.0**	**+0.7**
	baz=126						
KHIT	**Khitrov Hills**	**5.66**	**36**		**Pn**	**21 43 34.8**	**-0.2**
BMRM	**Bremner River**	**5.69**	**27**		**Pn**	**21 43 35.6**	**+0.4**
BMRM	**Bremner River**	**5.69**	**27**	P	**Pn**	**21 43 35.4**	**+0.1**
	baz=211						
SML	**Sawmill**	**5.85**	**8**	P	**Pn**	**21 43 38.1**	**+0.6**
	baz=189						
KLU	**Klutina**	**5.86**	**19**	P	**Pn**	**21 43 37.9**	**+0.3**
	baz=202						
BARK	**Barkley Ridge**	**5.89**	**39**		**Pn**	**21 43 38.2**	**+0.1**
N17K	**Nushagak Hills**	**5.89**	**323**		**Pn**	**21 43 38.4**	**+0.4**
N17K	**Nushagak Hills**	**5.89**	**323**	P	**Pn**	**21 43 38.8**	**+0.8**
	baz=137						
MESA	**MESA**	**5.94**	**42**		**Pn**	**21 43 38.6**	**-0.2**
MESA	**MESA**	**5.94**	**42**	P	**Pn**	**21 43 39.1**	**+0.2**
	baz=228						
SCM	**Sheep Creek Mo**	**5.97**	**12**	Pn	**Pn**	**21 43 40.0**	**+0.8**
SKT	**Skwentna**	**6.01**	**353**	Pn	**Pn**	**21 43 40.4**	**+0.7**
TGL	**Tana Glacier**	**6.04**	**35**		**Pn**	**21 43 40.1**	**+0.1**
M20K	**Styx River**	**6.08**	**346**	Pn	**Pn**	**21 43 41.6**	**+0.9**
ISLE	**Juniper Island**	**6.09**	**38**		**Pn**	**21 43 40.9**	**+0.1**
BAGL	**Bagley Icefiel**	**6.10**	**40**		**Pn**	**21 43 40.9**	**+0.1**
O15K	**Ungalikthiuk R**	**6.16**	**305**		**Pn**	**21 43 42.6**	**+0.9**
O15K	**Ungalikthiuk R**	**6.16**	**305**	P	**Pn**	**21 43 42.6**	**+0.9**
	baz=117						
N25K	**Chitina, Valde**	**6.24**	**24**	P	**Pn**	**21 43 43.4**	**+0.5**
	baz=208						
M18K	**Stony River**	**6.26**	**333**		**Pn**	**21 43 43.1**	**+0.1**
M18K	**Stony River**	**6.26**	**333**	P	**Pn**	**21 43 43.1**	**+0.1**
	baz=148						
M19K	**Big River Lodg**	**6.31**	**341**	Pn	**Pn**	**21 43 44.0**	**+0.2**
KIAG	**Kiagna River**	**6.31**	**36**		**Pn**	**21 43 44.0**	**0.0**
SAMH	**Samovar Hills**	**6.37**	**46**		**Pn**	**21 43 45.4**	**+0.8**
M24K	**Tolsona, Glenn**	**6.39**	**16**	Pn	**Pn**	**21 43 45.8**	**+0.9**
M24K	**Tolsona, Glenn**	**6.39**	**16**	P	**Pn**	**21 43 46.1**	**+1.2**
	baz=199						
TABL	**Table Mountain**	**6.41**	**43**	Pn	**Pn**	**21 43 45.7**	**+0.4**
N16K	**Nishlik Lake**	**6.43**	**317**		**Pn**	**21 43 46.5**	**+1.2**
N16K	**Nishlik Lake**	**6.43**	**317**	P	**Pn**	**21 43 46.6**	**+1.2**
	baz=130						
MCARA	**McCarthy VSAT**	**6.46**	**31**	Pn	**Pn**	**21 43 46.1**	**+0.2**
MCARA	**McCarthy VSAT**	**6.46**	**31**	P	**Pn**	**21 43 46.5**	**+0.7**
	baz=216						
PTPK	**Patty Peak**	**6.48**	**34**		**Pn**	**21 43 46.8**	**+0.5**
YKU2	**Yakutat**	**6.51**	**53**	Pn	**Pn**	**21 43 47.1**	**+0.6**
PCA	**Pinnacle**	**6.56**	**48**		**Pn**	**21 43 47.7**	**+0.5**
PINM	**Pinnacle**	**6.56**	**48**	P	**Pn**	**21 43 47.9**	**+0.6**
	baz=235						
M17K	**Holitna River**	**6.63**	**327**		**Pn**	**21 43 49.0**	**+0.8**
M17K	**Holitna River**	**6.63**	**327**	P	**Pn**	**21 43 49.2**	**+1.0**
	baz=141						
L19K	**White Mountain**	**6.65**	**340**		**Pn**	**21 43 48.6**	**+0.1**
WAT6	**Susitna Watana**	**6.66**	**9**		**Pn**	**21 43 49.4**	**+0.7**
WAT6	**Susitna Watana**	**6.66**	**9**	P	**Pn**	**21 43 49.4**	**+0.7**
	baz=190						
CTG	**Chitna Glacier**	**6.69**	**39**	P	**Pn**	**21 43 49.5**	**+0.3**
	baz=226						
PNL	**Peninsula**	**6.71**	**53**		**Pn**	**21 43 49.5**	**+0.3**
PNL	**Peninsula**	**6.71**	**53**	P	**Pn**	**21 43 49.4**	**+0.1**
PNL	**Peninsula**	**6.71**	**53**	P	**Pn**	**21 43 49.5**	**+0.3**
	baz=241						
BCPM	**Bancas Point**	**6.75**	**50**	Pn	**Pn**	**21 43 50.2**	**+0.5**
N15K	**Kwethluk River**	**6.78**	**312**		**Pn**	**21 43 52.0**	**+1.9**
N15K	**Kwethluk River**	**6.78**	**312**	P	**Pn**	**21 43 51.8**	**+1.7**
	baz=124						
HARP	**HAARP**	**6.84**	**19**		**Pn**	**21 43 52.3**	**+1.3**
HARP	**HAARP**	**6.84**	**19**	P	**Pn**	**21 43 52.3**	**+1.3**
	baz=203						
M16K	**Timber Creek**	**6.86**	**320**		**Pn**	**21 43 52.0**	**+0.7**
M16K	**Timber Creek**	**6.86**	**320**	P	**Pn**	**21 43 52.4**	**+1.1**
	baz=133						
O14K	**Tigyukauivet M**	**6.87**	**303**	Pn	**Pn**	**21 43 52.4**	**+1.1**
L18K	**Granite Mounta**	**7.09**	**334**	Pn	**Pn**	**21 43 55.9**	**+1.4**
DHY	**Denali Highway**	**7.18**	**9**	P	**Pn**	**21 43 56.9**	**+1.1**
	baz=191						
M15K	**Kasigluk River**	**7.32**	**314**		**Pn**	**21 43 58.8**	**+1.3**
M15K	**Kasigluk River**	**7.32**	**314**	P	**Pn**	**21 43 58.8**	**+1.3**
	baz=125						
PAX	**Paxson**	**7.32**	**16**	P	**Pn**	**21 43 58.4**	**+0.8**
	baz=200						
N14K	**Kuskokwak Cree**	**7.34**	**307**		**Pn**	**21 43 59.4**	**+1.5**
N14K	**Kuskokwak Cree**	**7.34**	**307**	P	**Pn**	**21 43 59.4**	**+1.5**
	baz=117						
O29M	**Mount Kennedy**	**7.38**	**50**		**Pn**	**21 43 59.3**	**+0.7**
O29M	**Mount Kennedy**	**7.38**	**50**	P	**Pn**	**21 43 59.3**	**+0.7**
	baz=239						
TRF	**Thorofare Moun**	**7.44**	**359**	Pn	**Pn**	**21 43 59.6**	**+0.3**
P29M	**Windy Craggy**	**7.45**	**56**		**Pn**	**21 43 59.3**	**-0.2**
P29M	**Windy Craggy**	**7.45**	**56**	P	**Pn**	**21 43 59.5**	**+0.1**
	baz=246						
L16K	**Owhat River**	**7.52**	**323**		**Pn**	**21 44 01.0**	**+0.7**
TTA	**Tatalina**	**7.56**	**339**	P	**Pn**	**21 44 01.6**	**+0.6**
S31K	**Pelican**	**7.74**	**70**	Pn	**Pn**	**21 44 01.4**	**-1.9**
YUK6	**Outpost Mounta**	**7.81**	**46**	P	**Pn**	**21 44 06.2**	**+1.6**
	baz=236						
BVCY	**Beaver Creek**	**7.91**	**32**	P	**Pn**	**21 44 07.8**	**+2.1**
	baz=220						
YUK4	**Talbot Arm**	**7.93**	**43**	P	**Pn**	**21 44 09.3**	**+3.1**
	baz=232						
PLBC	**Pleasant Camp**	**8.04**	**59**	P	**Pn**	**21 44 08.7**	**+1.3**
	baz=250						
HYT	**Haines Junctio**	**8.10**	**49**	Pn	**Pn**	**21 44 09.1**	**+0.7**
SIT	**Sitka**	**8.16**	**77**	Pn	**Pn**	21 44 06.1	-2.9
BCAR	**Beaver Creek A**	**8.17**	**27**	Pn	**Pn**	**21 44 10.6**	**+1.2**
M13K	**Dall Lake**	**8.31**	**307**	Pn	**Pn**	**21 44 12.3**	**+1.2**
L14K	**Kuka Creek**	**8.48**	**314**		**Pn**	**21 44 15.0**	**+1.5**
HDA	**Harding Lake**	**8.53**	**9**	Pn	**Pn**	**21 44 15.9**	**+1.7**
S32K	**Killisnoo**	**8.58**	**74**	Pn	**Pn**	**21 44 14.3**	**-0.5**
K15K	**Wolf Creek Mou**	**8.63**	**321**	Pn	**Pn**	**21 44 16.6**	**+1.1**
O30N	**Mendenhall**	**8.69**	**51**	Pn	**Pn**	**21 44 16.5**	**+0.2**
M29M	**Somme Creek**	**8.71**	**38**		**Pn**	**21 44 18.0**	**+1.3**
JIS	**Juneau Island**	**8.76**	**69**	Pn	**Pn**	**21 44 17.8**	**+0.6**
JIS	**Juneau Island**	**8.76**	**69**	P	**Pn**	**21 44 17.4**	**+0.1**
ILAR	**Eielson Array**	**8.89**	**9**	Pn	**Pn**	**21 44 19.9**	**+0.8**
COLA	**College**	**8.93**	**6**	P	**Pn**	**21 44 21.8**	**+2.3**
J16K	**Anvik River**	**9.03**	**328**	Pn	**Pn**	**21 44 22.2**	**+1.2**
J26L	**Joseph Creek**	**9.06**	**18**		**Pn**	**21 44 22.0**	**+0.5**
WHY	**Whitehorse**	**9.18**	**53**	Pn	**Pn**	**21 44 23.7**	**+0.6**
AKUT	**Akutan**	**9.26**	**265**	P	Pn	21 44 18.6	-5.6
L29M	**L29M**	**9.28**	**35**	Pn	**Pn**	**21 44 25.2**	**+0.8**
P32M	**Atlin**	**9.37**	**61**		**Pn**	**21 44 25.5**	**-0.2**
P32M	**Atlin**	**9.37**	**61**	P	**Pn**	**21 44 25.8**	**0.0**
	baz=254						
U33K	**Whale Pass**	**9.42**	**83**	Pn	Pn	21 44 24.1	-2.3
H21K	**Melozitna Rive**	**9.75**	**353**	Pn	**Pn**	**21 44 31.4**	**+0.5**
PRP	**Porcupine Dome**	**9.75**	**11**	Pn	**Pn**	**21 44 31.8**	**+0.8**
P33M	**Teslin, Yukon**	**9.98**	**58**		**Pn**	**21 44 33.8**	**-0.3**
IMAR	**Indian Mountai**	**10.14**	**351**	Pn	**Pn**	**21 44 36.7**	**+0.4**
N32M	**Quiet Lake**	**10.18**	**53**	Pn	**Pn**	**21 44 36.9**	**+0.1**
FARO	**Faro, Yukon**	**10.53**	**47**	Pn	**Pn**	**21 44 42.9**	**+1.3**
R33M	**Jennings River**	**10.69**	**64**	Pn	**Pn**	**21 44 43.3**	**-0.7**
G23K	**Bananza Creek**	**10.71**	**360**	Pn	**Pn**	**21 44 44.7**	**+0.7**
G24K	**Hadweenzic Riv**	**10.77**	**5**	Pn	**Pn**	**21 44 45.5**	**+0.7**
ANM	**Nome**	**11.43**	**325**	Pn	**Pn**	**21 44 55.2**	**+1.4**
BMAR	**Burnt Mountain**	**11.71**	**10**	Pn	**Pn**	**21 44 58.0**	**+0.3**
F17K	**Baldwin Pennin**	**11.74**	**337**	Pn	**Pn**	**21 44 59.0**	**+1.0**
E19K	**Redstone River**	**11.95**	**346**	Pn	**Pn**	**21 45 02.4**	**+1.5**
F15K	**North Star Dit**	**12.01**	**330**	Pn	**Pn**	**21 45 01.8**	**+0.1**
G31M	**Satah River**	**13.19**	**28**	Pn	**Pn**	**21 45 18.2**	**+0.5**
B20K	**Meade River**	**14.38**	**350**	Pn	**Pn**	**21 45 35.4**	**+1.4**
INK	**Inuvik**	**14.43**	**25**	Pn	**Pn**	**21 45 35.6**	**+0.9**
B22K	**Teshekpuk Lake**	**14.44**	**355**	Pn	**Pn**	**21 45 36.4**	**+1.6**
C36M	**Paulatuk**	**17.65**	**31**		**Pn**	**21 46 16.8**	**+0.5**
C36M				IAmb	IAmb	21 46 20.5	
	comp=Z,3.7nm,0.8s						
YKA	**Yellowknife Ar**	**18.99**	**56**	P	**P**	**21 46 31.7**	**-0.4**
A36M	**Sachs Harbour**	**19.06**	**23**	P	**P**	**21 46 33.3**	**+0.6**
A36M				IAmb	IAmb	21 46 36.3	
	comp=Z,11nm,0.9s						

*PRU **03** 21:42:16.3,50°.27N×12°.44E,h10km,West Bohemia*
WBNET 03 21:42:17.3,50°.27N×12°.44E,h8km,MI0.3,6C-5D,
Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**268**	⇓P	Pg	21 42 19.1	+0.2
NKC	**Novy Kostel**	**0.03**	**172**	*e*SG	Sg	21 42 20.4	+0.3
	comp=Z,4.0nm,0.1s						
NKC	**Novy Kostel**	**0.03**	**172**	⇑P	Pg	21 42 19.1	+0.2
NKC				S	Sg	21 42 20.2	+0.1
STCW	**Studenec**	**0.05**	**98**	⇑P	Pg	21 42 19.2	+0.1
STCW				S	Sg	21 42 20.4	-0.1
VAC	**Vackov**	**0.05**	**233**	*e*SG	Sg	21 42 20.4	-0.1
VAC	**Vackov**	**0.05**	**233**	⇓P	Pg	21 42 19.3	+0.1
VAC				S	Sg	21 42 20.5	0.0
POCW	**Potky**	**0.06**	**351**	⇑P	Pg	21 42 19.4	+0.1
POCW				S	Sg	21 42 20.7	+0.1
KVC	**Kvetna**	**0.08**	**142**	⇓P	Pg	21 42 19.5	+0.1
KVC				S	Sg	21 42 20.9	-0.1
KRCW	**Kraslice**	**0.09**	**41**	⇑P	Pg	21 42 19.7	0.0
SKC	**Skalna**	**0.11**	**208**	⇑P	Pg	21 42 20.0	+0.1
SKC				S	Sg	21 42 21.8	+0.1
KOCW	**Kopaniny**	**0.13**	**270**	⇓P	Pg	21 42 20.4	+0.1
KOCW				S	Sg	21 42 22.3	0.0
TRCW	**Trojmez**	**0.19**	**281**	⇓P	Pg	21 42 21.4	+0.1
TRCW				S	Sg	21 42 24.1	0.0
ZHC	**Zelena Hora**	**0.21**	**204**	⇑P	Pg	21 42 21.8	+0.1
ZHC				S	Sg	21 42 24.7	+0.1
LACW	**Lazy**	**0.25**	**151**	S	Sg	21 42 25.9	+0.3

*PRU **03** 21:42:23.5,50°.27N×12°.45E,h10km,West Bohemia*
WBNET 03 21:42:18.6,50°.26N×12°.45E,h9km,MI0.1,1C-2D,
Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**274**	⇑P	Pg	21 42 20.2	-0.1
LBCW				S	Sg	21 42 21.6	+0.1
NKC	**Novy Kostel**	**0.03**	**183**	S	Sg	21 42 21.7	+0.2
STCW	**Studenec**	**0.04**	**96**	S	Sg	21 42 21.7	0.0
VAC	**Vackov**	**0.06**	**238**	S	Sg	21 42 21.8	-0.1
POCW	**Potky**	**0.06**	**345**	S	Sg	21 42 22.1	0.0
KVC	**Kvetna**	**0.07**	**144**	S	Sg	21 42 22.2	0.0
KRCW	**Kraslice**	**0.09**	**37**	⇓P	Pg	21 42 21.0	+0.1
SKC	**Skalna**	**0.11**	**211**	S	Sg	21 42 23.1	+0.1
KOCW	**Kopaniny**	**0.14**	**271**	⇓P	Pg	21 42 21.7	+0.1

WBNET 03 21:42:24.6,50°.27N×12°.44E,h8km,MI0.1,5C-6D,
Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**265**	⇓P	Pg	21 42 26.4	+0.2
LBCW				S	Sg	21 42 27.5	+0.2
NKC	**Novy Kostel**	**0.03**	**172**	⇓P	Pg	21 42 26.4	+0.2
NKC				S	Sg	21 42 27.5	+0.1
STCW	**Studenec**	**0.05**	**99**	⇑P	Pg	21 42 26.5	0.0
STCW				S	Sg	21 42 27.7	-0.1
VAC	**Vackov**	**0.05**	**232**	⇓P	Pg	21 42 26.5	+0.1
VAC				S	Sg	21 42 27.8	0.0
POCW	**Potky**	**0.05**	**351**	⇑P	Pg	21 42 26.7	+0.1
POCW				S	Sg	21 42 28.0	+0.1
KVC	**Kvetna**	**0.08**	**142**	⇓P	Pg	21 42 26.8	+0.1
KVC				S	Sg	21 42 28.2	-0.1
KRCW	**Kraslice**	**0.09**	**42**	⇑P	Pg	21 42 26.9	0.0
KRCW				S	Sg	21 42 28.5	-0.1
SKC	**Skalna**	**0.11**	**208**	⇑P	Pg	21 42 27.3	+0.1
SKC				S	Sg	21 42 29.1	+0.1
KOCW	**Kopaniny**	**0.13**	**269**	⇓P	Pg	21 42 27.7	+0.1
KOCW				S	Sg	21 42 29.6	0.0
TRCW	**Trojmez**	**0.19**	**281**	⇓P	Pg	21 42 28.7	+0.1
TRCW				S	Sg	21 42 31.3	0.0
ZHC	**Zelena Hora**	**0.21**	**203**	⇑P	Pg	21 42 29.1	+0.1
ZHC				S	Sg	21 42 32.0	+0.1
LACW	**Lazy**	**0.25**	**151**	S	Sg	21 42 33.2	+0.3

*PRU **03** 21:42:44.0,50°.27N×12°.45E,h10km,West Bohemia*
WBNET 03 21:42:45.1,50°.27N×12°.44E,h8km,MI0.4,8C-13D,
Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.02**	**269**	⇓P	Pg	21 42 46.9	+0.2
LBCW				S	Sg	21 42 48.0	+0.2
LBCW	**Luby**	**0.02**	**269**	⇓P	Pg	21 42 46.8	+0.2
LBCW				S	Sg	21 42 48.0	+0.2
NKC	**Novy Kostel**	**0.03**	**176**	*e*SG	Sg	21 42 48.0	+0.1
	comp=Z,9.7nm,0.1s						
NKC	**Novy Kostel**	**0.03**	**176**	S	Sg	21 42 48.0	+0.1
NKC	**Novy Kostel**	**0.03**	**176**	⇓P	Pg	21 42 46.8	0.0
NKC				S	Sg	21 42 48.0	+0.1
STCW	**Studenec**	**0.05**	**98**	⇑P	Pg	21 42 47.0	+0.1
STCW				S	Sg	21 42

*SOME **03** 21:46:31.8, 44°.62N×81°.32E, h20km*
*NNC **03** 21:46:31.9±0.4, 44°.63N×81°.28E, h0km, mb4.0, mpv4.3, Error ellipse: s-maj=4.3km s-min=2.0km az=122.0*
ISC 03 21:46:30.9±1.4, 44°.57N±0°.03×81°.48E±0°.03, h3km±11km, n56, σ1°.70/93, 13C-13D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.23**	**259**	P	**Pn**	**21 46 53.6**	**-1.5**
	70nm,0.1s						
DJR				S	**Sb**	**21 47 09.2**	**-2.1**
	491nm,0.2s						
DJR	**Jarkent**	**1.23**	**259**	*e*P	**Pn**	**21 46 53.6**	**-1.5**
	70nm,0.1s						
DJR				*e*S	**Sb**	**21 47 09.2**	**-2.1**
	491nm,0.2s						
KTMS	**Ketmen**	**1.39**	**216**	P	**Pg**	**21 46 57.2**	**-0.3**
	149nm,0.1s						
KTMS				S	**Sg**	**21 47 15.5**	**0.0**
	376nm,0.2s						
KTMS	**Ketmen**	**1.39**	**216**	*e*P	**Pg**	**21 46 57.2**	**-0.3**
	149nm,0.1s						
KTMS				*e*S	**Sg**	**21 47 15.5**	**0.0**
	376nm,0.2s						
KNOS	**Konyrlen**	**1.66**	**264**	P	**Pb**	**21 47 01.2**	**-1.0**
	378nm,0.1s						
KNOS				S	**Sn**	**21 47 22.5**	**-0.5**
	850nm,0.1s						
KAPS	**Kapalarasan**	**1.67**	**296**	P	**Pn**	**21 47 00.6**	**-0.5**
	272nm,0.1s						
KAPS				S	**Sn**	**21 47 21.5**	**-1.6**
	348nm,0.2s						
KAPS	**Kapalarasan**	**1.67**	**296**	*e*P	**Pn**	**21 47 00.6**	**-0.5**
	272nm,0.1s						
KAPS				*e*S	**Sn**	**21 47 21.5**	**-1.6**
	348nm,0.2s						
PDGK	**Podgornoye**	**1.90**	**230**	P	**Pb**	**21 47 05.4**	**-0.9**
	106nm,0.1s						
PDGK				S	**Sb**	**21 47 29.6**	**-0.9**
	306nm,0.3s						
PDGK	**Podgornoye**	**1.90**	**230**	⇑Pn	**Pb**	**21 47 04.9**	**-1.4**
	105nm,0.5s						
PDGK				⇓Sn	**Sg**	**21 47 30.6**	**-1.3**
	508nm,0.6s						
SHLS	**Shalkode**	**2.03**	**227**	P	**Pn**	**21 47 04.9**	**-1.3**
	561nm,0.1s						
SHLS				S	**Sn**	**21 47 28.6**	**-3.5**
	601nm,0.1s						
SHLS	**Shalkode**	**2.03**	**227**	*e*P	**Pn**	**21 47 04.9**	**-1.3**
	561nm,0.1s						
SHLS				*e*S	**Sn**	**21 47 28.6**	**-3.5**
	601nm,0.1s						
BLB	**Baldybastay**	**2.21**	**259**	Pg	**Pb**	**21 47 10.3**	**-1.2**
	288nm,0.1s						
BLB				Lg	Lg	21 47 38.1	
	838nm,0.2s						
TDK	**Taldyqorghan**	**2.23**	**282**	Pg	**Pb**	**21 47 10.3**	**-1.6**
	640nm,0.3s						
TDK				Lg	Lg	21 47 38.0	
	20nm,0.5s						
TDK	**Taldyqorghan**	**2.23**	**282**	*e*P	**Pb**	**21 47 10.3**	**-1.6**
	640nm,0.3s						
TDK				*e*S	**Sb**	**21 47 38.0**	**-2.0**
	20nm,0.5s						
MAKZ	**Makanchi**	**2.27**	**9**	⇓Pn	**Pb**	**21 47 10.2**	**-2.2**
	37nm,0.5s						
MAKZ				⇓Sn	**Sb**	**21 47 39.6**	**-1.3**
	119nm,0.3s						
UZB	**Uzynbulak**	**2.28**	**232**	Pg	**Pb**	**21 47 11.4**	**-1.4**
	64nm,0.1s						
UZB				Lg	Lg	21 47 39.8	
	369nm,0.2s						
UZB	**Uzynbulak**	**2.28**	**232**	*e*P	**Pb**	**21 47 11.4**	**-1.4**
	64nm,0.1s						
UZB				*e*S	**Sb**	**21 47 39.8**	**-1.6**
	369nm,0.2s						
MK31	**Makanchi Array**	**2.29**	**14**	⇑Pn	**Pb**	**21 47 10.6**	**-2.4**
	34nm,0.3s,baz=201,slow=14,SNR=2406						
MK31				⇓Sn	**Sb**	**21 47 40.0**	**-1.8**
	27nm,0.2s,baz=200,slow=25,SNR=12						
KPKS	**Kokpek**	**2.30**	**242**	Pg	**Pb**	**21 47 12.1**	**-1.0**
	152nm,0.1s						
KPKS				Lg	Lg	21 47 41.0	
	2μm,0.2s						
KPKS	**Kokpek**	**2.30**	**242**	*e*P	**Pb**	**21 47 12.1**	**-1.0**
	152nm,0.1s						
KPKS				*e*S	**Sb**	**21 47 41.0**	**-0.9**
	2μm,0.2s						
ZHN	**Zhinishke**	**2.61**	**239**	Pg	**Pb**	**21 47 17.7**	**-0.7**
	41nm,0.1s						
ZHN				Lg	Lg	21 47 51.0	
	957nm,0.1s						
ZHN	**Zhinishke**	**2.61**	**239**	*e*P	**Pb**	**21 47 17.7**	**-0.7**
	41nm,0.1s						
ZHN				*e*S	**Sb**	**21 47 51.0**	**+0.1**
	957nm,0.1s						
KURS	**Kuram**	**2.62**	**247**	*e*P	**Pb**	**21 47 17.8**	**-0.8**
	8.1nm,0.1s						
KURS				*e*S	**Sb**	**21 47 50.7**	**-0.4**
	248nm,0.2s						
ARXS	**Arharly**	**2.64**	**264**	Pg	**Pb**	**21 47 17.7**	**-1.3**
	84nm,0.2s						
ARXS				Lg	Lg	21 47 50.7	
	575nm,0.2s						
ARXS	**Arharly**	**2.64**	**264**	*e*P	**Pb**	**21 47 17.7**	**-1.3**
	84nm,0.2s						
ARXS				*e*S	**Sb**	**21 47 50.7**	**-1.1**
	575nm,0.2s						
SATY	**Saty**	**2.69**	**237**	Pg	**Pb**	**21 47 18.6**	**-1.2**
	76nm,0.1s						
SATY				Lg	Lg	21 47 52.2	
	2μm,0.2s						
SATY	**Saty**	**2.69**	**237**	*e*P	**Pb**	**21 47 18.6**	**-1.2**
	76nm,0.1s						
SATY				*e*S	**Sb**	**21 47 52.2**	**-1.0**
	2μm,0.2s						
CHKK	**Chushkaly**	**3.31**	**259**	Pg	**Pb**	**21 47 29.2**	**-1.0**
	18nm,0.2s						
CHKK				Lg	Lg	21 48 10.5	
	518nm,0.2s						
CHKK	**Chushkaly**	**3.31**	**259**	*e*P	**Pb**	**21 47 29.2**	**-1.0**
	18nm,0.2s						
CHKK				*e*S	**Sb**	**21 48 10.5**	**-0.4**
	518nm,0.2s						
KOTS	**Kotyrbulak**	**3.43**	**249**	*e*P	**Pb**	**21 47 31.8**	**-0.6**
	13nm,0.2s						
KOTS				*e*S	**Sb**	**21 48 14.8**	**+0.3**
	344nm,0.3s						
MDOK	**Medeo**	**3.50**	**248**	⇓Pn	**Pn**	**21 47 26.1**	**-0.3**
	32nm,0.4s						
MDOK				⇑Lg	Lg	21 48 18.9	
	142nm,0.6s						
MDOK	**Medeo**	**3.50**	**248**	*e*P	**Pb**	**21 47 32.7**	**-0.9**
	7.7nm,0.1s						
MDOK				*e*S	**Sb**	**21 48 16.4**	**-0.2**
	100nm,0.2s						
KNDC	**Almaty**	**3.53**	**249**	⇑Pn	**Pn**	**21 47 27.9**	**+1.2**
	20nm,0.3s						
KNDC				⇑Lg	Lg	21 48 19.3	
	124nm,0.4s						
KTBS	**Karatobe**	**3.56**	**258**	Pg	**Pb**	**21 47 34.0**	**-0.6**
	18nm,0.1s						
KTBS				Lg	Lg	21 48 18.6	
	14nm,0.3s						
KTBS	**Karatobe**	**3.56**	**258**	*e*P	**Pb**	**21 47 34.0**	**-0.6**
	18nm,0.1s						
KTBS				*e*S	**Sb**	**21 48 18.6**	**+0.5**
	14nm,0.3s						
AAA	**Alma-Ata**	**3.57**	**249**	*e*P	**Pb**	**21 47 34.4**	**-0.3**
	17nm,0.1s						
AAA				*e*S	**Sb**	**21 48 19.3**	**+0.8**
	211nm,0.2s						
TNSS	**Tian-Shan**	**3.62**	**247**	Pg	**Pb**	**21 47 35.5**	**-0.3**
	7.0nm,0.1s						
TNSS				Lg	Lg	21 48 21.2	
	30nm,0.2s						
TNSS	**Tian-Shan**	**3.62**	**247**	*e*P	**Pb**	**21 47 35.5**	**-0.3**
	7.0nm,0.1s						
TNSS				*e*S	**Sb**	**21 48 21.2**	**+0.9**
	30nm,0.2s						
ZSN	**Zaisan**	**3.72**	**38**	*e*P	**Pb**	**21 47 37.7**	**+0.4**
	12nm,0.2s						
ZSN				*e*S	**Sb**	**21 48 25.2**	**+2.3**
	53nm,0.3s						
KUU	**Kurty**	**3.76**	**261**	Pg	**Pb**	**21 47 36.8**	**-1.1**
	6.3nm,0.1s						
KUU				Lg	Lg	21 48 23.5	
	182nm,0.3s						
KUU	**Kurty**	**3.76**	**261**	*e*P	**Pb**	**21 47 36.8**	**-1.1**
	6.3nm,0.1s						
KUU				*e*S	**Sb**	**21 48 23.5**	**-0.3**
	182nm,0.3s						
MTBS	**Maitube**	**3.93**	**250**	*e*P	**Pb**	**21 47 40.1**	**-0.7**
	25nm,0.2s						
MTBS				*e*S	**Sb**	**21 48 29.3**	**+0.5**
	143nm,0.2s						
KRBS	**Karabastau**	**4.27**	**260**	Pg	**Pb**	**21 47 46.5**	**-0.1**
	15nm,0.2s						
KRBS				Lg	Lg	21 48 40.2	
	41nm,0.2s						
KRBS	**Karabastau**	**4.27**	**260**	*e*P	**Pb**	**21 47 46.5**	**-0.1**
	15nm,0.2s						
KRBS				*e*S	**Sb**	**21 48 40.2**	**+1.6**
	41nm,0.2s						
KST	**Kastek**	**4.28**	**251**	*e*P	**Pb**	**21 47 46.4**	**-0.4**
	7.9nm,0.2s						
KST				*e*S	**Sb**	**21 48 39.7**	**+0.9**
	82nm,0.2s						
WMQ	**Urumqi**	**4.53**	**97**	*e*Pn	**Pb**	**21 47 48.0**	**-3.1**
WMQ				Sn	**Sb**	**21 48 43.9**	**-2.2**
WMQ				smax	smax		
	comp=N,75nm,0.7s						
WMQ				smax	smax		
	comp=E,84nm,0.7s						
TKM2	**Tokmak 2**	**4.57**	**251**	⇑Pn	**Pn**	**21 47 40.5**	**-0.6**
	comp=E,2.7nm,0.7s						
TKM2				⇓Pg	**Pb**	**21 47 53.6**	**+1.7**
	comp=E,7.9nm,0.5s						
TKM2				⇓Lg	Lg	21 48 51.8	
	comp=E,56nm,0.7s						
CHMS	**Chumysh**	**5.12**	**254**	⇑Pn	**Pn**	**21 47 48.6**	**+0.1**
	comp=E,1.8nm,0.4s						
CHMS				⇓Pg	**Pb**	**21 48 03.5**	**+2.4**
	comp=E,7.7nm,0.6s						
CHMS				⇓Lg	Lg	21 49 10.7	
	comp=E,38nm,0.6s						
BTLS	**Baital**	**5.31**	**278**	*e*P	**Pb**	**21 48 05.4**	**+1.0**
	comp=E,3.8nm,0.2s						
BTLS				*e*S	**Sb**	**21 49 12.6**	**+4.1**
	comp=E,15nm,0.3s						
KURK	**Kurchatov**	**6.45**	**344**	⇓Pn	**Pn**	**21 48 06.2**	**-0.4**
	comp=E,3.0nm,0.5s						
KURK				⇑Sn	**Sn**	**21 49 18.8**	**-1.8**
	comp=E,7.9nm,0.5s						
KURK				⇑Lg	Lg	21 49 51.8	
	comp=E,80nm,0.9s						
OTUK	**Ortayu**	**7.31**	**303**	⇓Pn	**Pn**	**21 48 17.0**	**-1.5**
	comp=E,1.4nm,0.3s						
OTUK				⇓Lg	Lg	21 50 16.5	
	comp=E,19nm,0.7s						
KK31	**Karatay Array**	**8.06**	**263**	Pn	**Pn**	**21 48 28.6**	**-0.4**
	comp=E,0.5nm,0.5s,baz=73,slow=13,SNR=5.3						
KK31				⇓Pg	**Pb**	**21 48 55.4**	**+4.1**
	comp=E,0.6nm,0.4s,baz=74,slow=16,SNR=3.9						
KK31				⇑Lg	Lg	21 50 42.3	
	comp=E,7.2nm,0.5s,baz=74,slow=29,SNR=8.6						
ZAA0	**Zalesovo Array**	**9.64**	**12**	⇑Pn	**Pn**	**21 48 52.8**	**+2.4**
	comp=E,0.7nm,1.2s						
ZAA0				⇑Lg	Lg	21 51 34.3	
	comp=E,1.9nm,0.8s						
BVA0	**Borovoye Array**	**11.17**	**323**	⇑Lg	Lg	21 52 22.6	
	comp=E,7.4nm,0.7s,baz=145,slow=28,SNR=6.8						
HHC	**Hu-ho-hao-te**	**22.35**	**89**	*e*P	**P**	**21 51 31.3**	**+1.2**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
TNCH	**TengChong**	**23.91**	**139**	P	**P**	**21 51 46.5**	**+0.4**
TNCH				PP	**PnPn**	**21 52 22.1**	**+8.1**
TNCH				pmax	pmax		
	comp=Z,6.0nm,2.3s						
TNCH				pmax	pmax		
	comp=Z,77nm,4.8s						

*GCG **03** 22:01:37.5±0.6, 13°.02N×91°.50W, h73km±65km, MD3.5*
*CATAC **03** 22:01:48.7±0.5, 14°.05N×91°.25W, h80km±8km, ML3.7*
*SNET **03** 22:01:49.0±0.8, 14°.27N×91°.06W, h98km±12km, ML3.5*
ISC 03 22:01:49.1±1.8, 14°.03N±0°.10×91°.23W±0°.06, h78km±16km, n38, σ0°.78/52, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.42**	**310**	*e*P	**Pn**	**22 01 59.6**	**-2.4**
FUG	**Fuego 3**	**0.56**	**42**	*e*P	**Pn**	**22 02 03.9**	**+0.4**
RTAL	**Retalhuleu**	**0.66**	**318**	*i* P	**Pn**	**22 02 04.7**	**+0.4**
RTAL				*i* S	**Sn**	**22 02 17.0**	**+1.5**
RTAL				IAML		22 02 17.7	
	comp=Z,2μm,1.0s						
PCG	**Pacaya**	**0.70**	**59**	*e*P	**Pn**	**22 02 05.5**	**+0.5**
STG3	**Santiaguito 3,**	**0.75**	**334**	*e*P	**Pn**	**22 02 05.9**	**+0.5**
CHTG	**Tecpan**	**0.77**	**18**	*i* P	**Pn**	**22 02 05.0**	**-0.7**
CHTG				IAML		22 02 25.7	
	comp=Z,4μm,1.0s						
NBG	**Las Nubes**	**1.02**	**57**	*e*P	**Pn**	**22 02 09.0**	**+0.4**
GUNB	**GUNB**	**1.03**	**57**	*i* P	**Pn**	**22 02 07.9**	**-0.8**
GUNB				*i* S	**Sn**	**22 02 22.4**	**-0.9**
GUNB				IAML		22 02 25.8	
	comp=Z,770nm,1.0s						
SMSP	**San Marcos**	**1.08**	**331**	*i* P	**Pn**	**22 02 09.0**	**-0.3**
SMSP				*i* S	**Sn**	**22 02 24.5**	**+0.2**
SMSP				IAML		22 02 30.5	
	comp=Z,2μm,1.0s						
SMCA	**Catarina**	**1.16**	**315**	*i* P	**Pn**	**22 02 10.3**	**+0.3**
SMCA				*i* S	**Sn**	**22 02 25.7**	**0.0**
SMCA				IAML		22 02 27.9	
	comp=Z,1μm,1.0s						
QUIS	**Sacapulas**	**1.26**	**6**	*i* P	**Pn**	**22 02 10.7**	**-0.7**
QUIS				IAML		22 02 10.9	
	comp=Z,2μm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.41**	**90**	*e*P	**Pn**	**22 02 12.3**	**-0.9**
SLOZ				*e*S	**Sn**	**22 02 31.3**	**-0.1**
LOAL	**Lomas de Alarc**	**1.41**	**91**	*i* P	**Pn**	**22 02 12.7**	**-0.5**
LOAL				IAML		22 02 13.3	
	comp=Z,2μm,1.0s						
NUBE	**Las Nubes**	**1.42**	**95**	*e*P	**Pn**	**22 02 12.8**	**-0.6**
NUBE				*e*S	**Sn**	**22 02 31.1**	**-0.6**
NUBE	**Las Nubes**	**1.42**	**95**	*i* P	**Pn**	**22 02 12.8**	**-0.6**
NUBE				IAML		22 02 13.3	
	comp=Z,880nm,1.0s						
NUBE				*i* S	**Sn**	**22 02 33.3**	**+1.5**
CEVE	**Cerro Verde**	**1.58**	**97**	*e*P	**Pn**	**22 02 15.4**	**-0.2**
CEVE				*e*S	**Sn**	**22 02 36.9**	**+1.3**
CEVE	**Cerro Verde**	**1.58**	**97**	*i* P	**Pn**	**22 02 15.4**	**-0.2**
CEVE				*i* S	**Sn**	**22 02 37.6**	**+2.0**
CEVE				IAML		22 02 40.1	
	comp=Z,930nm,1.0s						
SNJE	**San Jose**	**1.59**	**96**	*e*P	**Pn**	**22 02 15.2**	**-0.5**
JAYA	**Jayaque - finc**	**1.77**	**102**	*e*P	**Pn**	**22 02 17.5**	**-0.6**
JAYA				*e*S	**Sn**	**22 02 39.7**	**-0.4**
JAYA				IAML		22 02 44.3	
	comp=Z,440nm,0.2s						
JAYA	**Jayaque - finc**	**1.77**	**102**	*i* P	**Pn**	**22 02 17.8**	**-0.3**
JAYA				*i* S	**Sn**	**22 02 39.7**	**-0.4**
JAYA				IAML		22 02 45.9	
	comp=Z,1μm,1.0s						
PMON	**Piamonte**	**1.89**	**99**	*i* P	**Pn**	**22 02 19.1**	**-0.5**
PMON				IAML		22 02 21.6	
	comp=Z,610nm,1.0s						
PMON				*i* S	**Sn**	**22 02 44.3**	**+1.5**
LALI	**Alcalda de L**	**1.94**	**106**	*e*P	**Pn**	**22 02 20.0**	**-0.1**
PIC2	**El Picacho**	**1.94**	**98**	*e*P	**Pn**	**22 02 19.8**	**-0.6**
LOMA	**Loma Larga**	**2.04**	**101**	*e*P	**Pn**	**22 02 21.9**	**+0.3**
LOMA				*e*S	**Sn**	**22 02 46.1**	**-0.3**
LOMA	**Loma Larga**	**2.04**	**101**	*i* P	**Pn**	**22 02 21.2**	**-0.4**
LOMA				IAML		22 02 24.2	
	comp=Z,390nm,1.0s						
LOMA				*i* S	**Sn**	**22 02 47.0**	**+0.6**
SJTE	**Alcalda de S**	**2.20**	**101**	*e*P	**Pn**	**22 02 23.6**	**-0.1**
SJTE	**Alcalda de S**	**2.20**	**101**	*i* P	**Pn**	**22 02 23.7**	**-0.1**
SJTE				IAML		22 02 26.8	
	comp=Z,220nm,1.0s						
PAVA	**Las Pavas**	**2.25**	**98**	*e*P	**Pn**	**22 02 23.9**	**-0.6**
PAVA	**Las Pavas**	**2.25**	**98**	*i* P	**Pn**	**22 02 24.2**	**-0.2**
PAVA				IAML		22 02 24.4	
	comp=Z,880nm,1.0s						
COEG	**Centro de Oper**	**2.32**	**100**	*e*P	**Pn**	**22 02 24.9**	**-0.5**
COEG	**Centro de Oper**	**2.32**	**100**	*i* P	**Pn**	**22 02 25.4**	**+0.1**
COEG				IAML		22 02 27.5	
	comp=Z,210nm,1.0s						
TECO	**Alcaldia de Te**	**2.43**	**101**	*e*P	**Pn**	**22 02 26.4**	**-0.4**
TECO	**Alcaldia de Te**	**2.43**	**101**	*i* P	**Pn**	**22 02 26.6**	**-0.2**
TECO				IAML		22 04 06.2	
	comp=Z,180nm,1.0s						
SCLA	**Alcaldia de Sa**	**2.46**	**97**	*e*P	**Pn**	**22 02 26.7**	**-0.4**
PQSS	**Presa 15 de Se**	**2.63**	**99**	*e*P	**Pn**	**22 02 28.9**	**-0.5**
PQSS	**Presa 15 de Se**	**2.63**	**99**	*i* P	**Pn**	**22 02 29.4**	**0.0**
PQSS				IAML		22 02 29.4	
	comp=Z,66nm,1.0s						
CNCH	**Conchagua**	**3.39**	**102**	*i* P	**Pn**	**22 02 40.1**	**+0.3**
CNCH				IAML		22 03 32.8	
	comp=Z,150nm,1.0s						
YUSH	**Yuscaran**	**4.26**	**91**	*e*P	**Pn**	**22 02 50.5**	**-1.2**

*ANF **03** 22:16:53.7±0.2, 68°.09N×136°.26W, h10km, Error ellipse: s-maj=3.0km s-min=1.7km az=35.0*
*IDC **03** 22:16:53.1±1.6, 68°.20N×136°.33W, h0km, mb3.9/1, mbtmp3.3/3, ML3.0/2, Error ellipse: s-maj=22.8km s-min=10.8km az=166.0*
*PGC **03** 22:16:54.5±0.5, 68°.09N×136°.35W, h5km, ML2.4, ML2.8/7, 108km Wnw of Fort McPherson, Nt Northern Yukon Territory, Canada*
ISC 03 22:16:52.9±1.1, 68°.10N±0°.02×136°.27W±0°.02, h4km±9km, n70, σ0°.82/106, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
F30M	**Barrier River**	**0.53**	**160**	P	**Pb**	**22 17 03.9**	**-0.8**
	baz=340						
F30M				S	**Sb**	**22 17 11.6**	**-1.0**
	baz=340						
F30M	**Barrier River**	**0.53**	**160**	P	**Pb**	**22 17 03.9**	**-0.8**
F30M				S	**Sb**	**22 17 11.4**	**-1.1**
E29M	**Blow River**	**0.67**	**296**	P	**Pg**	**22 17 06.1**	**+0.3**
	baz=113,SNR=805						
E29M				S	**Sg**	**22 17 15.2**	**+0.8**
	baz=113						
E29M	**Blow River**	**0.67**	**296**	P	**Pg**	**22 17 06.1**	**+0.3**
E29M				S	**Sg**	**22 17 15.3**	**+0.8**
INK	**Inuvik**	**1.04**	**77**	P	**Pb**	**22 17 13.1**	**-0.3**
	baz=261,SNR=211						
INK				S	**Sb**	**22 17 27.2**	**-0.2**
	baz=261						
INK	**Inuvik**	**1.04**	**77**	Pg	**Pn**	**22 17 13.7**	**-0.5**
	5.2nm,0.3s,baz=261,slow=20,SNR=116						
INK				Lg	Lg	22 17 26.4	
	23nm,0.3s,baz=335,slow=18,SNR=27						
INK	**Inuvik**	**1.04**	**77**	P	**Pb**	**22 17 13.3**	**-0.2**
INK				S	**Sb**	**22 17 27.2**	**-0.2**
G30M	**tAoh Zraii Nji**	**1.13**	**179**	P	**Pg**	**22 17 14.0**	**-0.5**
	baz=359						
G30M				S	**Sb**	**22 17 29.9**	**0.0**
	baz=359						
G30M	**tAoh Zraii Nji**	**1.13**	**179**	P	**Pg**	**22 17 14.0**	**-0.5**
G30M				S	**Sg**	**22 17 29.1**	**+0.1**
F31M	**Tsiigehtchic**	**1.17**	**124**	Pg	**Pn**	**22 17 15.9**	**0.0**
	baz=307						
F31M				S	**Sb**	**22 17 31.4**	**+0.3**
	baz=307						
F31M	**Tsiigehtchic**	**1.17**	**124**	P	**Pn**	**22 17 16.3**	**+0.4**
F31M				S	**Sb**	**22 17 31.3**	**+0.3**
E28M	**Babbage River**	**1.31**	**294**	P	**Pg**	**22 17 16.9**	**-1.1**
	baz=110						
E28M				S	**Sg**	**22 17 34.8**	**-0.2**
	baz=110						
E28M	**Babbage River**	**1.31**	**294**	P	**Pg**	**22 17 17.4**	**-0.6**
G31M	**Satah River**	**1.41**	**146**	Pb	**Pb**	**22 17 19.4**	**-0.3**
	baz=328						
G31M				S	**Sn**	**22 17 38.5**	**+0.2**
	baz=328						
G31M	**Satah River**	**1.41**	**146**	Pn	**Pb**	**22 17 19.5**	**-0.3**
G31M				Sg	**Sb**	**22 17 38.1**	**+0.1**
F28M	**Old Crow**	**1.45**	**252**	Pb	**Pn**	**22 17 19.6**	**-0.3**
	baz=68,SNR=459						
F28M				S	**Sg**	**22 17 38.3**	**-1.1**
	baz=68						
F28M	**Old Crow**	**1.45**	**252**	Pn	**Pn**	**22 17 19.6**	**-0.3**
F28M				Sg	**Sg**	**22 17 38.1**	**-1.3**
D28M	**Stokes Point**	**1.53**	**325**	Pg	**Pg**	**22 17 22.2**	**+0.1**
	baz=142						
D28M				S	**Sg**	**22 17 43.0**	**+1.1**
	baz=142						
D28M	**Stokes Point**	**1.53**	**325**	Pn	**Pg**	**22 17 22.4**	**+0.3**
D28M				Sg	**Sg**	**22 17 42.9**	**+1.1**
EPYK	**Eagle Plains**	**1.75**	**186**	Pb	**Pb**	**22 17 25.2**	**-0.3**
	baz=5.3,SNR=8.5						
EPYK				Sb	**Sg**	**22 17 49.0**	**0.0**
	baz=5.3						
EPYK	**Eagle Plains**	**1.75**	**186**	Pn	**Pb**	**22 17 24.8**	**-0.7**
EPYK				Sg	**Sg**	**22 17 48.6**	**-0.4**
H29M	**Whitestone**	**2.06**	**204**	Pb	**Pb**	**22 17 29.9**	**-0.9**
	baz=22						
H29M				Sb	**Sb**	**22 17 57.5**	**+0.8**
	baz=22						
H29M	**Whitestone**	**2.06**	**204**	Pn	**Pn**	**22 17 29.1**	**+0.9**
D27M	**Malcolm River**	**2.06**	**306**	Pb	**Pb**	**22 17 29.8**	**-1.0**
	baz=121						
D27M				S	**Sn**	**22 17 55.7**	**+1.2**
	baz=121						
D27M	**Malcolm River**	**2.06**	**306**	Pn	**Pb**	**22 17 29.7**	**-1.2**
H27K	**Steamboat Moun**	**2.78**	**230**	P	**Pn**	**22 17 39.1**	**+0.9**
	baz=45						
H27K				S	**Sn**	**22 18 12.7**	**+0.6**
	baz=45						
H27K	**Steamboat Moun**	**2.78**	**230**	Pn	**Pn**	**22 17 39.2**	**+1.1**
I30M	**Mount Dempster**	**2.89**	**181**	P	**Pn**	**22 17 40.4**	**+0.7**
	baz=0.7,SNR=25						
I30M				S	**Sn**	**22 18 15.4**	**+0.4**
	baz=0.7						
I30M	**Mount Dempster**	**2.89**	**181**	Pn	**Pn**	**22 17 40.9**	**+1.1**
F26K	**Sheenjek River**	**3.01**	**266**	P	**Pn**	**22 17 41.0**	**-0.2**
	baz=78						
F26K				S	**Sn**	**22 18 17.1**	**-0.6**
	baz=78						
I28M	**Miner Creek**	**3.04**	**210**	P	**Pn**	**22 17 42.7**	**+1.0**
	baz=27						
I28M				S	**Sn**	**22 18 19.0**	**+0.5**
	baz=27						
I28M	**Miner Creek**	**3.04**	**210**	Pn	**Pn**	**22 17 42.9**	**+1.2**
I27K	**Kandik River**	**3.28**	**223**	P	**Pn**	**22 17 45.4**	**+0.4**
	baz=37						
I27K				Sb	**Sb**	**22 18 33.5**	**+1.7**
	baz=37						
I27K	**Kandik River**	**3.28**	**223**	Pn	**Pn**	**22 17 45.3**	**+0.3**
E25K	**Arctic Village**	**3.48**	**275**	P	**Pn**	**22 17 47.5**	**-0.2**
	baz=86,SNR=9.6						
E25K				S	**Sn**	**22 18 28.4**	**-1.0**
	baz=86						
J30M	**Hart River**	**3.54**	**180**	P	**Pn**	**22 17 49.2**	**+0.5**
	baz=0.3						
J30M				S	**Sn**	**22 18 31.8**	**+0.8**
	baz=0.3						
J30M	**Hart River**	**3.54**	**180**	Pn	**Pn**	**22 17 49.6**	**+1.0**
F25K	**Christian Rive**	**3.59**	**266**	P	**Pn**	**22 17 49.1**	**-0.1**

baz=260,SNR=9.2
C36M S Sn 22 18 55.5 -1.7
baz=260
C36M Paulatuk 4.62 69 Pn Pn 22 18 03.6 +0.4
C36M Sn Sn 22 18 54.9 -2.2
J26L Joseph Creek 4.66 223 S Sn 22 18 58.3 -0.2
baz=36
D24K Happy Valley 4.71 289 P Pn 22 18 05.4 +0.9
baz=97
K27K Chicken 4.72 213 P Pn 22 18 05.0 +0.3
baz=27
K27K Chicken 4.72 213 Pn Pn 22 18 03.6 -1.1
C24K Franklin Bluff 4.77 296 P Pn 22 18 06.5 +1.1
baz=104
E23K Chandalar 5.00 276 P Pn 22 18 09.1 +0.5
baz=83
L29M L29M 5.08 190 Pn Pn 22 18 09.2 -0.5
COLD Coldfoot 5.39 267 P Pn 22 18 13.8 0.0
baz=74
COLD Coldfoot 5.39 267 Pn Pn 22 18 14.1 +0.3
ILAR Eielson Array 5.41 237 Pn Pn 22 18 14.6 +0.4
0.2nm,0.3s,baz=42,slow=13,SNR=17
ILAR Lg Lg 22 19 44.2
0.2nm,0.3s,baz=41,slow=33,SNR=4.5
0.6nm,0.4s
A36M Sachs Harbour 5.42 39 P Pn 22 18 13.7 -0.5
baz=230,SNR=7.8
A36M Sachs Harbour 5.42 39 Pn Pn 22 18 13.9 -0.3
M30M Minto, Yukon 5.55 183 P Pn 22 18 16.3 +0.1
baz=2.0,SNR=24
M30M Minto, Yukon 5.55 183 Pn Pn 22 18 16.7 +0.5
M29M Somme Creek 5.76 190 Pn Pn 22 18 19.9 +0.8
MMPY Sheldon Lake, 5.89 157 Pn Pn 22 18 22.0 +1.2
M27K Edge Creek, AK 6.23 205 Pn Pn 22 18 25.6 0.0
YUK5 Granite Creek 7.03 186 Pn Pn 22 18 39.3 +2.7
YKA Yellowknife Ar 10.62 112 Pn Pn 22 19 25.5 0.0
0.2nm,0.3s,baz=310,slow=13,SNR=8.3
YKA Sn Sn 22 21 15.3 -9.3
0.2nm,0.3s,baz=311,slow=22,SNR=4.9
YKA Lg Lg 22 22 29.4
baz=312,slow=26
0.3nm,0.5s
FINES FINESS Array B 50.12 11 P P 22 25 48.6 +0.2
1.6nm,1.0s,baz=353,slow=8.4,SNR=1.3
1.6nm,1.0s

*ISK **03** 22:40:24.7, 38.85N×26.44E, h10km, ML3.7/26*
*AFAD **03** 22:40:25.0±0.0, 38.84N×26.46E, h7km±2km, MW3.6*
*IDC **03** 22:40:25.1±1.2, 38.90N×26.60E, h0km, mb3.4/5, mbtmp3.4/8, ML3.6/3, MS2.9/4, Error ellipse: s-maj=22.4km s-min=18.8km az=6.0*
*ATH **03** 22:40:25.4, 38.84N×26.50E, h9km±1km, ML3.5/6, Error ellipse: s-maj=2.2km s-min=0.8km az=107.0*
*THE **03** 22:40:26.0, 38.87N×26.49E, h7km±1km, ML3.8/5, Error ellipse: s-maj=2.0km s-min=0.9km az=46.0*

ISC 03 22:40:25.7±0.9, 38.85N±0.02×26.49E±0.02, h10km±6km, n130, σ0.82/161, mb3.3/5, 14C-13D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARB	**zmir-Karabur**	**0.19**	**198**	P	**Pg**	**22 40 29.4**	**-0.3**
KARB				S	**Sg**	**22 40 32.3**	**-0.1**
KARB				*i* AML	AML	22 40 33.0	
	comp=N,2μm,0.3s						
FOCM	**Foa**	**0.23**	**124**	Pg	**Pg**	**22 40 30.7**	**+0.3**
FOCM				Sg	**Sg**	**22 40 34.9**	**+1.3**
EAG3	**Mitilini, Lesv**	**0.25**	**15**	P	**Pg**	**22 40 30.6**	**-0.2**
EAG3				S	**Sg**	**22 40 33.7**	**-0.5**
LESV	**Lesvos island,**	**0.27**	**13**	P	**Pg**	**22 40 30.9**	**-0.2**
LESV				S	**Sg**	**22 40 34.5**	**-0.3**
	129μm,0.6s						
CAND	**Candarli**	**0.27**	**66**	Pg	**Pg**	**22 40 31.2**	**0.0**
CAND				Sg	**Sb**	**22 40 36.0**	**-1.4**
RFT7	**Candarli**	**0.36**	**72**	Pg	**Pb**	**22 40 32.9**	**-1.3**
RFT7				Sg	**Sb**	**22 40 38.8**	**-1.1**
IZMD	**zmir-Dikili-**	**0.37**	**68**	P	**Pg**	**22 40 32.6**	**-0.5**
IZMD				P	**Pb**	**22 40 33.0**	**-1.5**
DKL	**Dikili**	**0.40**	**55**	Pg	**Pg**	**22 40 33.5**	**0.0**
DKL				Sg	**Sb**	**22 40 40.0**	**-1.0**
EAG2	**Marmaro, Chios**	**0.42**	**225**	P	**Pg**	**22 40 33.8**	**-0.2**
EAG2				S	**Sg**	**22 40 39.3**	**-0.2**
PRK	**Paraskevi**	**0.43**	**337**	P	**Pg**	**22 40 33.8**	**-0.4**
PRK				S	**Sg**	**22 40 40.1**	**+0.2**
	14μm,0.4s						
PRK	**Paraskevi**	**0.43**	**337**	P	**Pg**	**22 40 33.8**	**-0.4**
PRK				S	**Sb**	**22 40 40.5**	**-1.6**
PRK				AML	AML	22 40 45.0	
	comp=E,29254μm,0.4s						
PRK				AML	AML	22 40 45.6	
	comp=N,20974μm,0.3s						
ZEDA	**zmir-Bergama**	**0.48**	**75**	P	**Pb**	**22 40 35.2**	**-1.1**
ZEDA				S	**Sb**	**22 40 42.1**	**-1.2**
ZEDA				*i* AML	AML	22 40 43.0	
	comp=N,5μm,0.3s						
AYVA	**Ayvalik**	**0.49**	**19**	P	**Pg**	**22 40 34.6**	**-0.6**
URLA	**Izmir**	**0.49**	**170**	Pg	**Pg**	**22 40 34.9**	**-0.4**
URLA				Sg	**Sb**	**22 40 42.6**	**-1.2**
URLA	**Izmir**	**0.49**	**170**	P	**Pg**	**22 40 34.8**	**-0.5**
URLA				S	**Sg**	**22 40 42.2**	**+0.4**
URLA				*i* AML	AML	22 40 48.0	
	comp=N,7μm,0.7s						
CESE	**eme**	**0.53**	**196**	Pg	**Pg**	**22 40 35.5**	**-0.6**
CESE				Sg	**Sg**	**22 40 43.2**	**+0.1**
CHOS	**Chios island**	**0.57**	**217**	Pg	**Pg**	**22 40 36.2**	**-0.5**
CHOS	**Chios island**	**0.57**	**217**	P	**Pg**	**22 40 36.4**	**-0.3**
CHOS	**Chios island**	**0.57**	**217**	P	**Pg**	**22 40 36.4**	**-0.3**
CHOS				S	**Sg**	**22 40 44.4**	**+0.2**
CHOS				AML	AML	22 40 50.1	
	comp=N,12743μm,0.3s						
CHOS				AML	AML	22 40 50.9	
	comp=E,18354μm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.60**	**179**	P	**Pg**	**22 40 37.0**	**-0.4**
SIGR	**SIGRI**	**0.61**	**307**	P	**Pn**	**22 40 40.0**	**-0.5**
SIGR				S	**Sb**	**22 40 48.0**	**+0.8**
	comp=E,4μm,0.5s						
BLCB	**Balcova**	**0.63**	**136**	Pg	**Pg**	**22 40 37.9**	**0.0**
BLCB	**Balcova**	**0.63**	**136**	P	**Pg**	**22 40 37.8**	**-0.1**
BLCB				S	**Sb**	**22 40 49.1**	**+1.3**
GPNR	**Gulpinar-Canak**	**0.67**	**336**	Pg	**Pg**	**22 40 37.9**	**-0.7**
KOCA	**Canakkale, Ayv**	**0.71**	**338**	P	**Pb**	**22 40 39.3**	**-0.9**
PSRA	**Psara**	**0.78**	**248**	P	**Pb**	**22 40 40.7**	**-0.7**
PSRA				S	**Sg**	**22 40 51.0**	**+0.1**
PSRA				AML	AML	22 40 53.9	
	comp=E,16525μm,0.3s						
PSRA				AML	AML	22 40 56.4	
	comp=N,10455μm,0.2s						
BUHA	**Balikesir, Bur**	**0.80**	**35**	P	**Pg**	**22 40 40.4**	**-0.8**
BUHA				S	**Sb**	**22 40 52.2**	**-0.4**
BUHA				*i* AML	AML	22 40 55.0	
	comp=N,4μm,0.4s						
GMLD	**Gumuldur**	**0.84**	**156**	Pg	**Pg**	**22 40 41.5**	**-0.3**
DGB	**zmir**	**0.85**	**158**	P	**Pg**	**22 40 41.3**	**-0.8**
DGB				S	**Sg**	**22 40 51.8**	**-1.3**
DGB				*i* AML	AML	22 40 56.0	
	comp=N,825nm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**3**	P	**Pg**	**22 40 42.3**	**-0.6**
BAYC				S	**Sb**	**22 40 55.5**	**0.0**
BAYC				*i* AML	AML	22 40 57.0	
	comp=N,3μm,0.2s						
AKHS	**Akhisar**	**1.04**	**88**	P	**Pb**	**22 40 45.3**	**-0.4**
AKS	**Akhisar**	**1.04**	**88**	Pg	**Pn**	**22 40 45.9**	**-0.5**
BOZC	**Bozcaada**	**1.05**	**342**	P	**Pb**	**22 40 45.8**	**-0.2**
BOZC				S	**Sb**	**22 40 59.3**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.10**	**61**	P	**Pb**	**22 40 46.4**	**-0.4**
STEP				S	**Sn**	**22 41 01.8**	**-0.7**
STEP				*i* AML	AML	22 41 05.0	
	comp=N,2μm,0.5s						
GOMA	**Golmarmara-Man**	**1.13**	**97**	Pn	**Pn**	**22 40 47.6**	**0.0**
CNKL	**anakkale-Mer**	**1.22**	**356**	P	**Pn**	**22 40 48.5**	**-0.4**
CNKL				Pg	**Pg**	**22 40 48.8**	**-0.3**
ECEA	**Canakkale, Ece**	**1.22**	**349**	P	**Pn**	**22 40 48.6**	**-0.2**
ECEA				S	**Sg**	**22 41 04.2**	**-0.8**
CANM	**Can-anakkale**	**1.25**	**20**	Pn	**Pb**	**22 40 48.0**	**-1.3**
COMU	**Canakkale**	**1.25**	**360**	Pn	**Pn**	**22 40 48.8**	**-0.5**
BALY	**Balya**	**1.25**	**44**	P	**Pn**	**22 40 49.0**	**-0.4**
GCAM	**G?zelcaml?**	**1.29**	**153**	Pn	**Pb**	**22 40 49.7**	**-0.3**
BALB	**Balikesir**	**1.34**	**53**	Pn	**Pb**	**22 40 50.4**	**-0.6**
IZMR	**zmir-demi**	**1.35**	**121**	P	**Pg**	**22 40 51.1**	**-0.5**
EFSA	**Agios Efstrati**	**1.35**	**301**	P	**Pn**	**22 40 49.9**	**-0.8**
EFSA				S	**Sb**	**22 41 07.6**	**-1.0**
GADA	**Gvkgeada**	**1.42**	**342**	Pn	**Pn**	**22 40 50.7**	**-0.9**
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**22 40 51.5**	**-0.6**
LIA				S	**Sn**	**22 41 10.7**	**-0.6**
	comp=N,4μm,0.4s						
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**22 40 51.2**	**-0.9**
LIA				S	**Sn**	**22 41 10.3**	**-1.0**
LIA				AML	AML	22 41 14.3	
	comp=N,4010μm,0.3s						
LIA				AML	AML	22 41 14.9	
	comp=E,10027μm,0.4s						
DDIM	**Aydin, Didim**	**1.51**	**156**	P	**Pg**	**22 40 53.8**	**-0.8**
GONE	**Gonen-Balikesi**	**1.52**	**37**	Pn	**Pn**	**22 40 52.8**	**-0.2**
LPK	**Lapseki**	**1.54**	**8**	Pn	**Pn**	**22 40 52.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.55**	**360**	Pn	**Pn**	**22 40 53.0**	**-0.4**
KRBG	**Karabiga-Canak**	**1.67**	**22**	Pn	**Pn**	**22 40 54.7**	**-0.3**
TNSA	**Tinos**	**1.67**	**219**	P	**Pn**	**22 40 53.6**	**-1.4**
KULA	**Kula-Manisa**	**1.73**	**100**	Pn	**Pn**	**22 40 56.3**	**+0.3**
KULA	**Kula-Manisa**	**1.73**	**100**	P	**Pn**	**22 40 56.1**	**+0.1**
SMTH	**Samothraki Isl**	**1.78**	**336**	P	**Pn**	**22 40 55.8**	**-0.8**
SMTH	**Samothraki Isl**	**1.78**	**336**	P	**Pn**	**22 40 55.9**	**-0.8**
SMTH				S	**Sn**	**22 41 18.0**	**-1.4**
SMTH				AML	AML	22 41 24.1	
	comp=N,1090μm,0.3s						
SMTH				AML	AML	22 41 25.3	
	comp=E,885μm,0.3s						
DST	**Dursunbey**	**1.82**	**65**	Pn	**Pb**	**22 40 57.8**	**-1.4**
MLSB	**Milas**	**1.85**	**146**	Pn	**Pn**	**22 40 57.8**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.88**	**264**	P	**Pn**	**22 40 56.5**	**-1.4**
KYMI	**Kymi, Euboea I**	**1.88**	**264**	P	**Pn**	**22 40 56.7**	**-1.2**
BODT	**Bodrum**	**1.90**	**160**	Pn	**Pn**	**22 40 57.7**	**-0.5**
ENEZ	**Enez**	**1.91**	**352**	P	**Pn**	**22 40 58.2**	**-0.1**
ENEZ				S	**Sn**	**22 41 22.3**	**-0.1**
	comp=E,2μm,0.4s						
APE	**Apeiranthos**	**1.93**	**203**	⇑P	**Pn**	**22 40 57.3**	**-1.3**
APE	**Apeiranthos**	**1.93**	**203**	P	**Pn**	**22 40 56.9**	**-1.7**
APE	**Apeiranthos**	**1.93**	**203**	P	**Pn**	**22 40 57.2**	**-1.5**
APE				S	**Sn**	**22 41 22.2**	**-0.8**
APE				AML	AML	22 41 32.9	
	comp=N,756μm,0.3s						
APE				AML	AML	22 41 39.0	
	comp=E,672μm,0.6s						
SIMA	**Simav-Kutahya**	**1.96**	**82**	Pn	**Pn**	**22 40 59.4**	**+0.3**
YER	**Yerkesik**	**2.22**	**140**	P	**Pn**	**22 41 02.7**	**0.0**
RDO	**Rodhopi**	**2.41**	**343**	P	**Pn**	**22 41 05.1**	**-0.1**
RDO	**Rodhopi**	**2.41**	**343**	P	**Pn**	**22 41 05.0**	**-0.3**
PAIG	**Paliouri**	**2.43**	**297**	P	**Pn**	**22 41 04.5**	**-1.0**
OUR	**Ouranopolis**	**2.44**	**308**	P	**Pn**	**22 41 05.1**	**-0.5**
KAVA	**Kavala**	**2.63**	**325**	P	**Pn**	**22 41 07.6**	**-0.6**
KOKK	**Kokkinochori,**	**2.75**	**317**	P	**Pn**	**22 41 09.1**	**-0.8**
KDZ	**Kurdzhali**	**2.92**	**343**	P	**Pn**	**22 41 12.0**	**-0.2**
SOH	**Sokhos**	**3.12**	**310**	P	**Pn**	**22 41 14.7**	**-0.3**
HORT	**Hortiatis**	**3.14**	**305**	P	**Pn**	**22 41 15.2**	**-0.2**
RZN	**Rozhen**	**3.14**	**335**	P	**Pn**	**22 41 15.4**	**-0.1**
SRS	**Serrai**	**3.18**	**317**	P	**Pn**	**22 41 15.4**	**-0.4**
NVR	**Nevrokopi**	**3.21**	**322**	P	**Pn**	**22 41 16.9**	**+0.6**
NVR	**Nevrokopi**	**3.21**	**322**	P	**Pn**	**22 41 17.0**	**+0.7**
DIM	**Dimitrovgrad**	**3.27**	**348**	P	**Pn**	**22 41 16.9**	**-0.2**
MMB	**Musomishta**	**3.42**	**323**	P	**Pn**	**22 41 19.3**	**+0.2**
PLD	**Plovdiv**	**3.56**	**339**	P	**Pn**	**22 41 21.1**	**+0.1**
KNT	**Kendrikon**	**3.60**	**311**	P	**Pn**	**22 41 21.8**	**+0.2**
IDI	**Anoyia**	**3.77**	**200**	LR	LR	22 43 06.9	
	comp=E,70nm,19.7s,baz=336,slow=42						
VAY	**Valandovo**	**3.89**	**311**	*i* Pn	**Pn**	**22 41 26.4**	**+0.8**
KKB	**Krupnik**	**3.94**	**320**	P	**Pn**	**22 41 26.8**	**+0.5**
PEHC	**Pehcevo**	**4.01**	**318**	*i* Pn	**Pn**	**22 41 27.2**	**-0.2**
PGB	**Panagyurishte**	**4.07**	**335**	P	**Pn**	**22 41 28.3**	**+0.3**
ELND	**Elena**	**4.11**	**354**	⇑P	**Pn**	**22 41 28.4**	**-0.1**
NEF	**NEVSHA**	**4.46**	**7**	P	**Pn**	**22 41 33.7**	**+0.4**
LOZB	**Loznitsa**	**4.52**	**1**	⇓P	**Pn**	**22 41 34.5**	**+0.3**
PLVB	**Pleven**	**4.75**	**343**	⇑P	**Pn**	**22 41 37.7**	**+0.3**
MPEP	**Malo Peshtene**	**4.96**	**336**	P	**Pn**	**22 41 40.2**	**-0.1**
VALD	**Valchedram**	**5.36**	**336**	P	**Pn**	**22 41 46.7**	**+1.0**
ICOR	**Ion Corvin**	**5.36**	**10**	⇓P	**Pn**	**22 41 46.2**	**+0.4**
VLAD	**Vladila**	**5.38**	**344**	⇓P	**Pn**	**22 41 45.8**	**-0.2**
BLKB	**Belogradchik**	**5.57**	**330**	⇑P	**Pn**	**22 41 49.0**	**+0.3**
BRTR	**Keskin Array B**	**5.62**	**79**	Pn	**Pn**	**22 41 50.8**	**+1.3**
	comp=E,0.4nm,0.3s,baz=251,slow=14,SNR=17						
BRTR				Sn	**Sn**	**22 42 53.2**	**-1.0**
	comp=E,0.2nm,0.3s,baz=254,slow=18,SNR=1.9						
BRTR				LR	LR	22 44 07.0	
	comp=E,74nm,19.1s,baz=314,slow=40						
	comp=E,1.3nm,0.5s						
SULR		**5.83**	**358**	⇑P	**Pn**	**22 41 52.4**	**+0.2**
BOVS	**Bovan**	**5.99**	**325**	⇓P	**Pn**	**22 41 54.5**	**+0.1**
CFR	**Carcaliu**	**6.45**	**10**	⇓P	**Pn**	**22 42 00.9**	**+0.2**
MLR	**Muntele Rosu**	**6.65**	**357**	⇓P	**Pn**	**22 42 04.8**	**+1.1**
MLR	**Muntele Rosu**	**6.65**	**357**	Pn	**Pn**	**22 42 04.5**	**+0.9**
	comp=E,1.0nm,0.3s,baz=232,slow=6.0,SNR=10						
	comp=E,8.4nm,0.5s						
ARR	**Arges**	**6.66**	**349**	⇓P	**Pn**	**22 42 04.6**	**+0.8**
VOIR		**6.67**	**351**	⇓P	**Pn**	**22 42 04.2**	**+0.3**
HERR	**Herculane**	**6.75**	**335**	⇑P	**Pn**	**22 42 04.3**	**-0.6**
LOT	**Lotru**	**6.90**	**344**	⇑P	**Pn**	**22 42 06.6**	**-0.4**
MDR	**Moldova**	**6.92**	**331**	⇑P	**Pn**	**22 42 07.1**	**0.0**
COVR	**Voineasa-Covas**	**7.00**	**358**	⇑P	**Pn**	**22 42 09.3**	**+1.0**
PLOR	**Plostina**	**7.00**	**1**	⇑P	**Pn**	**22 42 09.8**	**+1.5**
VRI	**Vrincioaia**	**7.02**	**1**	⇑P	**Pn**	**22 42 10.0**	**+1.4**
GZR	**Gura Zlata**	**7.10**	**338**	⇑P	**Pn**	**22 42 09.1**	**-0.6**
DOPR	**Dopca**	**7.16**	**354**	⇑P	**Pn**	**22 42 11.3**	**+0.7**
TURR	**Turia**	**7.21**	**357**	⇓P	**Pn**	**22 42 12.7**	**+1.5**
OZUR		**7.26**	**356**	⇑P	**Pn**	**22 42 13.3**	**+1.4**
SURR	**Surduc**	**7.62**	**336**	⇓P	**Pn**	**22 42 16.6**	**-0.2**
TESR	**Tescani**	**7.66**	**1**	⇓P	**Pn**	**22 42 18.1**	**+0.7**
BZS	**Buzias**	**7.67**	**333**	⇓P	**Pn**	**22 42 17.2**	**-0.2**
MMAI	**Mount Meron Ar**	**9.28**	**126**	Pn	**Pn**	**22 42 39.0**	**-0.6**
	comp=E,1.0nm,0.3s,baz=301,slow=12,SNR=9.9						
MMAI				Sn	**Sn**	**22 44 21.2**	**-2.9**
	comp=E,0.5nm,0.3s,baz=300,slow=26,SNR=1.8						
	comp=E,0.6nm,0.3s						
MORH	**Mrgy, Hungar**	**9.36**	**324**	⇓P	**Pn**	**22 42 40.8**	**+0.2**
AKASG	**Malin Array Be**	**12.01**	**8**	LR	LR	22 47 37.6	
	comp=E,88nm,18.2s,baz=261,slow=36						
CLL	**Collm**	**15.65**	**327**	*e*PP	**P**	**22 44 13.0**	**+2.6**
OBN	**Obninsk**	**17.64**	**19**	LR	LR	22 51 23.9	
	comp=E,80nm,18.3s,baz=270,slow=38						
ESDC	**Sonseca Array**	**23.54**	**282**	P	**P**	**22 45 37.6**	**+1.5**
	comp=E,1.1nm,1.0s,baz=66,slow=11,SNR=5.5						
	comp=E,1.1nm,1.0s						
NOA	**NORSAR Array B**	**24.17**	**342**	P	**P**	**22 45 43.0**	**+1.0**
	comp=E,0.6nm,0.8s,baz=146,slow=9.6,SNR=3.3						
	comp=E,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**33.72**	**227**	P	**P**	**22 47 09.6**	**+2.2**
	comp=E,0.4nm,0.8s,baz=50,slow=9.1,SNR=2.3						
	comp=E,0.4nm,0.8s						
MKAR	**Makanchi Array**	**40.94**	**60**	P	**P**	**22 48 08.6**	**+0.3**
	comp=E,0.5nm,0.8s,baz=272,slow=8.2,SNR=7.5						
	comp=E,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**74.27**	**342**	P	**P**	**22 52 02.4**	**-0.3**
	comp=E,0.2nm,0.6s,baz=32,slow=5.9,SNR=3.3						
	comp=E,0.2nm,0.6s						

*IDC **03** 22:50:38.1±11.0, 0.94N×98.93E, h60km±104km, mb3.7/10, mbtmp4.0/11, ML4.7/1, Error ellipse: s-maj=54.9km s-min=19.6km az=56.0*
*NEIC **03** 22:50:44.3±1.0, 1.09N±0.08×99.00E±0.03, h107km±9km, mb4.3/20, Error ellipse: s-maj=12.2km s-min=2.9km az=193.0*
*DJA **03** 22:50:44.1±0.2, 1°N±2°×9°9E±°, h88km±3km, M4.2/13, mb4.6/5, mB5.5/2, MLv4.0/13, Mw(mB)5.0/2*

ISC 03 22:50:44.0±0.7, 1.15N±0.04×98.97E±0.04, h107km±6km, n64, σ1.27/69, mb4.2/24, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBSI	**Sibolga**	**0.40**	**348**	P	**Pn**	**22 51 00.6**	**+0.6**
SBSI				S	**Sn**	**22 51 11.3**	**-0.7**
PBSI	**Pulau Batu**	**1.39**	**210**	P	**Pn**	**22 51 10.1**	**+0.7**
PBSI				S	**Sn**	**22 51 29.6**	**+1.1**
GSI	**Gunungsitoli**	**1.41**	**276**	Pn	**Pn**	**22 51 10.5**	**+0.9**
GSI				Sn	**Sn**	**22 51 29.6**	**+0.6**
GSI	**Gunungsitoli**	**1.41**	**276**	P	**Pn**	**22 51 10.5**	**+0.9**
GSI				S	**Sn**	**22 51 26.6**	**-2.3**
RPSI	**Rantau Prapat**	**1.53**	**358**		**Pn**	**22 51 11.4**	**+0.3**
BKNI	**Bangkinang**	**2.22**	**112**		**Pn**	**22 51 19.6**	**-0.2**
BKNI				Sn	**Sn**	**22 51 46.2**	**-1.0**
BKNI	**Bangkinang**	**2.22**	**112**	P	**Pn**	**22 51 19.6**	**-0.2**
SISI	**Saibi**	**2.47**	**177**	P	**Pn**	**22 51 22.4**	**-0.6**
PDSI	**Padang**	**2.54**	**144**	P	**Pn**	**22 51 24.9**	**+1.0**
KCSI	**Kotacane, Aceh**	**2.64**	**333**	P	**Pn**	**22 51 25.3**	**0.0**
KCSI				S	**Sn**	**22 51 53.6**	**-3.3**
SNSI	**Sinabang, Aceh**	**2.92**	**295**	P	**Pn**	**22 51 29.2**	**+0.2**
SNSI				S	**Sn**	**22 52 01.6**	**-2.0**
IPM	**Ipoh**	**3.89**	**32**		**Pn**	**22 51 43.3**	**+1.4**
MLSI	**Meulaboh, Aceh**	**4.02**	**320**	P	**Pn**	**22 51 42.7**	**-0.9**
MLSI				S	**Sn**	**22 52 27.6**	**-2.2**
PPSI	**Pulau Pagai**	**4.03**	**165**	P	**Pn**	**22 51 41.7**	**-2.0**
KULM	**Kulim**	**4.44**	**22**		**Pn**	**22 51 49.7**	**+0.5**
LHMI	**Lhok Sumawe**	**4.53**	**333**	Pn	**Pn**	**22 51 51.5**	**+1.1**
LHMI	**Lhok Sumawe**	**4.53**	**333**	P	**Pn**	**22 51 49.6**	**-0.8**
LHMI				S	**Sn**	**22 52 39.7**	**-2.3**
CM31	**Chiang Mai Arr**	**17.20**	**360**	P	**P**	**22 54 37.7**	**0.0**
CM31				IAmb	IAmb	22 54 40.3	
	comp=Z,15nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.20**	**360**	P	**P**	**22 54 37.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**17.20**	**360**	P	**P**	**22 54 37.7**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=190,slow=11,SNR=38						
	comp=Z,7.3nm,0.8s						
CRAI	**Chiangrai**	**19.01**	**4**		**P**	**22 54 57.8**	**+0.3**
SAIH	**SAIHA**	**21.99**	**345**	*e*P	**P**	**22 55 29.9**	**+0.2**
SAIH				IAmb	IAmb	22 55 34.9	
	comp=Z,12nm,0.9s						
IMP	**Imphal**	**24.04**	**349**	*e*P	**P**	**22 55 48.3**	**-1.0**
IMP				IAmb	IAmb	22 55 50.2	
	comp=Z,7.2nm,0.5s						
KOHI	**KOHIMA**	**24.87**	**350**	*e*P	**P**	**22 55 56.3**	**-0.7**
KOHI				IAmb	IAmb	22 55 59.1	
	comp=Z,11nm,0.6s						
SHL	**Shillong**	**25.22**	**345**	P	**P**	**22 55 59.8**	**-0.4**
SHL	**Shillong**	**25.22**	**345**	*e*P	**P**	**22 56 00.2**	**0.0**
PZH	**PanZhiHua**	**25.34**	**6**	P	**P**	**22 56 04.4**	**+3.2**
PZH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
MOKO	**MOKOCHONG**	**25.39**	**351**	*e*P	**P**	**22 56 01.9**	**+0.3**
H08S2	**Diego Garcia H**	**27.82**	**251**	T	T	23 24 05.9	
	baz=72,slow=74,SNR=5.0						
H08S3	**Diego Garcia H**	**27.82**	**251**	T	T	23 24 03.0	
	baz=72,slow=74,SNR=13						
H08S1	**Diego Carcia H**	**27.84**	**251**	T	T	23 24 07.6	
	baz=72						
LSA	**Lhasa**	**29.35**	**346**	P	**P**	**22 56 37.8**	**+0.4**
LSA				IAmb	IAmb	22 56 40.0	
	comp=Z,4.5nm,0.4s						
WB0	**Warramunga Arr**	**40.48**	**123**	P	**P**	**22 58 10.3**	**-2.3**
WB0				IAmb	IAmb	22 58 26.4	
	comp=Z,6.9nm,1.2s						
WRA	**Warramunga Arr**	**40.52**	**123**	P	**P**	**22 58 11.1**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=303,slow=9.0,SNR=1.4						
	comp=Z,0.3nm,0.5s						
HHC	**Hu-ho-hao-te**	**41.13**	**15**	*e*P	**P**	**22 58 19.7**	**+2.0**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
BJT	**Baijiatuao**	**41.73**	**20**	P	**P**	**22 58 23.1**	**+0.7**
ASAR	**Alice Springs**	**41.96**	**128**	P	**P**	**22 58 22.5**	**-2.3**
	comp=Z,0.4nm,1.0s,baz=295,slow=7.7,SNR=2.6						
	comp=Z,0.4nm,1.0s						
KSH	**Kashi**	**43.57**	**334**	P	**P**	**22 58 37.2**	**-0.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KSRS	**Korea Array**	**44.90**	**33**	P	**P**	**22 58 47.2**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=228,slow=7.3,SNR=4.4						
	comp=Z,0.9nm,0.5s						
NRN	**Naryn**	**45.14**	**336**	P	**P**	**22 58 50.9**	**+0.6**
ARSB	**Arslanbob**	**46.37**	**333**	P	**P**	**22 59 00.3**	**+0.6**
SONM	**Songino Array**	**46.94**	**7**	P	**P**	**22 59 05.2**	**+1.1**
SONM				IAmb	IAmb	22 59 06.2	
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**46.94**	**7**	P	**P**	**22 59 04.9**	**+0.9**
	comp=Z,3.2nm,0.4s,baz=189,slow=10,SNR=43						
	comp=Z,3.2nm,0.4s						
ULN	**Ulaanbaatar**	**47.05**	**7**	P	**P**	**22 59 05.2**	**+0.3**
ULN				IAmb	IAmb	22 59 06.8	
	comp=Z,3.5nm,0.7s						
MKAR	**Makanchi Array**	**47.74**	**345**	P	**P**	**22 59 10.7**	**+0.6**
MKAR	**Makanchi Array**	**47.74**	**345**	P	**P**	**22 59 10.8**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=159,slow=8.4,SNR=64						
	comp=Z,2.4nm,0.4s

KUA	**Kurravaara**	**0.18**	**0**	P	**Pg**	**23 06 24.3**	**-0.3**
KUA				S	**Sg**	**23 06 26.0**	**-0.9**
RATU	**Laukkuluspa**	**0.29**	**280**	P	**Pg**	**23 06 26.5**	**-0.2**
LANU	**Lannavaara**	**0.68**	**66**	P	**Pg**	**23 06 35.0**	**+0.6**
LANU	**Lannavaara**	**0.68**	**66**	PB	**Pb**	**23 06 36.6**	**+0.5**
LANU				SG	**Sg**	**23 06 44.5**	**+1.3**
SALU	**Saltoluokta**	**0.81**	**241**	P	**Pg**	**23 06 36.9**	**+0.2**
KIF	**Kilpisjarvi**	**1.24**	**8**	MSG		23 07 00.3	
	comp=Z,3.5nm,0.2s						
KIF				SN	**Sn**	**23 07 05.7**	**+2.4**
PAJU	**Pajala**	**1.31**	**124**	P	**Pn**	**23 06 47.1**	**+0.2**
PAJU	**Pajala**	**1.31**	**124**	PG	**Pn**	**23 06 46.9**	**+0.1**
PAJU				SG	**Sn**	**23 07 05.4**	**+0.3**
HEF	**Hetta**	**1.40**	**62**	*eP*	**Pg**	**23 06 48.1**	**0.0**
HEF	**Hetta**	**1.40**	**62**	PG	**Pn**	**23 06 47.6**	**-0.4**
HEF				MSG		23 07 05.5	
	comp=Z,1.7nm,0.2s						
HEF				SG	**Sg**	**23 07 06.1**	**0.0**
KLF	**Kolari**	**1.50**	**110**	PG	**Pg**	**23 06 50.2**	**+0.3**
KLF				MSG		23 07 09.1	
	comp=Z,1.8nm,0.2s						
KLF				SN	**Sn**	**23 07 11.2**	**+1.7**
KTK1	**Kautokeino**	**1.64**	**40**	*eP*	**Pn**	**23 06 51.5**	**+0.2**
KTK1	**Kautokeino**	**1.64**	**40**	PG	**Pb**	**23 06 51.9**	**-0.5**
KTK1				SG	**Sn**	**23 07 13.2**	**+0.1**
TRO	**Tromso**	**1.93**	**345**	PG	**Pn**	**23 06 55.8**	**+0.5**
TRO				SG	**Sn**	**23 07 20.4**	**+0.2**
KALU	**Kalix**	**2.27**	**147**	PG	**Pb**	**23 07 02.9**	**-0.1**
	baz=325						
KALU				SG	**Sg**	**23 07 33.4**	**-0.6**
TOF	**Tornio**	**2.32**	**135**	PG	**Pb**	**23 07 03.6**	**-0.2**
TOF				MSG		23 07 32.7	
	comp=Z,1.4nm,0.2s						
TOF				SG	**Sg**	**23 07 35.6**	**-0.1**
SGF	**Sodankyl**	**2.40**	**95**	PG	**Pb**	**23 07 05.0**	**-0.1**
SGF				SG	**Sb**	**23 07 35.0**	**-0.2**
RNF	**Rovaniemi**	**2.50**	**115**	PB	**Pb**	**23 07 06.6**	**-0.4**
RNF				SG	**Sg**	**23 07 41.0**	**-0.7**
ARA0	**ARCESS Array S**	**2.59**	**45**	SB	**Sb**	**23 07 38.8**	**-2.0**
KMNF	**Kaamanen**	**2.82**	**58**	PB	**Pb**	**23 07 11.3**	**-1.0**
KMNF				SB	**Sn**	**23 07 44.0**	**+1.9**
RAJF	**Raja-Jooseppi**	**3.07**	**73**	PG	**Pb**	**23 07 16.9**	**+0.3**
RAJF				SB	**Sb**	**23 07 54.7**	**+0.2**
RANF	**Ranua**	**3.10**	**122**	SG	**Sg**	**23 07 59.0**	**-1.7**
KEV	**Kevo**	**3.14**	**48**	PB	**Pb**	**23 07 15.7**	**-2.1**
KEV				SN	**Sn**	**23 07 51.8**	**+1.9**
OLKF	**Oulanka, Finla**	**3.84**	**108**	PG	**Pg**	**23 07 32.8**	**-2.0**
OLKF				SG	**Sb**	**23 08 20.2**	**+3.5**
KU6	**Riekki**	**4.16**	**111**	PG	**Pg**	**23 07 38.6**	**-2.2**
KU6				SG	**Sg**	**23 08 33.8**	**-0.8**

IDC ***03*** *23:23:46.0±0.6, 1°25'S×99°77'E, h0km, mb4.5/23, mbtmp4.5/24, ML4.9/1, MS3.5/24, Error ellipse: s-maj=26.1km s-min=12.9km az=50.0*

NEIC ***03*** *23:23:52.8±0.8, 1°32'S±0°08'×99°70'E±0°05, h49km±8km, mb4.7/43, Error ellipse: s-maj=13.2km s-min=4.5km az=204.0*

DJA ***03*** *23:23:53.1±0.2, 1°S±2'×10°0E±°, h40km±3km, M5.0/19, mB5.8/6, mb4.8/19, MLv4.8/19, Mw(mB)5.3/6*

ISC 03 23:23:52.6±0.9,**1°21S**±0°04×**99°71E**±0°03,**h45**km±8km, **n177,**σ1**§21**/154,**mb4.7**/62,**MS3.5**/22,**2C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.63**	**260**	P	**Pn**	**23 24 05.8**	**+0.6**
SISI				S	**Sn**	**23 24 13.3**	**-1.0**
PDSI	**Padang**	**0.81**	**68**	P	**Pn**	**23 24 08.3**	**+0.6**
PDSI				S	**Sn**	**23 24 17.9**	**-0.7**
PPSI	**Pulau Pagai**	**1.57**	**169**	P	**Pn**	**23 24 19.2**	**+1.2**
PPSI				S	**Sn**	**23 24 36.8**	**-0.3**
PBSI	**Pulau Batu**	**1.84**	**309**	P	**Pn**	**23 24 22.5**	**+0.8**
PBSI				S	**Sn**	**23 24 44.5**	**+0.8**
KRJI	**Kerinci**	**1.96**	**116**	P	**Pn**	**23 24 25.9**	**+2.5**
KRJI				S	**Sn**	**23 24 47.4**	**+0.6**
BKNI	**Bangkinang**	**2.03**	**41**		**Pn**	**23 24 25.9**	**+1.6**
BKNI				Sn	**Sn**	**23 24 44.5**	**-3.9**
BKNI	**Bangkinang**	**2.03**	**41**	P	**Pn**	**23 24 26.4**	**+2.1**
BKNI	**Bangkinang**	**2.03**	**41**	P	**Pn**	**23 24 26.0**	**+1.7**
GSI	**Gunungsitoli**	**3.29**	**320**	Pn	**Pn**	**23 24 43.0**	**+1.4**
GSI	**Gunungsitoli**	**3.29**	**320**	P	**Pn**	**23 24 43.1**	**+1.4**
RPSI	**Rantau Prapat**	**3.96**	**349**		**Pn**	**23 24 52.1**	**+1.3**
DSRI	**Dabo**	**4.92**	**82**	P	**Pn**	**23 25 04.6**	**+0.5**
SNSI	**Sinabang, Aceh**	**4.94**	**317**	P	**Pn**	**23 25 05.0**	**+0.7**
KCSI	**Kotacane, Aceh**	**5.09**	**338**	P	**Pn**	**23 25 08.7**	**+2.3**
	80nm,1.1s,1µm0.8nm						
MYKOM	**Kota Tinggi**	**5.10**	**54**	Pn	**Pn**	**23 25 07.9**	**+1.4**
TPRI	**Tanjung Pinang**	**5.26**	**66**	P	**Pn**	**23 25 09.6**	**+0.9**
	218nm,0.6s,1.0nm						
LWLI	**Liwa**	**5.76**	**131**	P	**Pn**	**23 25 17.9**	**+2.3**
	281nm,0.7s,5µm1.8nm						
LWLI				S	**Sn**	**23 26 21.8**	**+1.3**
	281nm,0.7s,5µm1.8nm						
IPM	**Ipoh**	**5.81**	**13**		**Pn**	**23 25 17.9**	**+1.6**
IPM	**Ipoh**	**5.81**	**13**	P	**Pn**	**23 25 19.6**	**+3.4**
MLSI	**Meulaboh, Aceh**	**6.37**	**329**	P	**Pn**	**23 25 25.4**	**+1.5**
	45nm,0.6s,0.3nm						
KASI	**Kota Agung**	**6.42**	**132**	P	**Pn**	**23 25 25.4**	**+0.8**
	61nm,0.7s,863nm0.4nm						
KASI				S	**Sn**	**23 26 35.8**	**-0.8**
	61nm,0.7s,863nm0.4nm						
KULM	**Kulim**	**6.53**	**8**	Pn	**Pn**	**23 25 27.9**	**+1.8**
LHMI	**Lhok Sumawe**	**6.97**	**337**	Pn	**Pn**	**23 25 33.6**	**+1.4**
LHMI	**Lhok Sumawe**	**6.97**	**337**	P	**Pn**	**23 25 34.0**	**+1.8**
	85nm,1.1s,0.5nm						
LEM	**Lembang**	**9.66**	**125**	LR	LR	23 30 05.0	
	comp=Z,177nm,22.0s,baz=248,slow=40						
BBJI	**Bungbulang**	**10.06**	**128**	P	**Pn**	**23 26 14.0**	**-0.6**
UGM	**Wanagama**	**12.66**	**122**	Pn	**Pn**	**23 26 48.9**	**-1.3**
UGM	**Wanagama**	**12.66**	**122**	P	**Pn**	**23 26 49.6**	**-0.6**
UBPT	**Khong Chiam**	**17.35**	**19**		**Pn**	**23 27 51.6**	**+0.1**
UBPT				IAmb	IAmb	23 28 08.3	
	comp=Z,57nm,1.4s						
PLAI	**Plampang**	**19.51**	**113**	P	**P**	**23 28 16.7**	**+0.4**
CM31	**Chiang Mai Arr**	**19.56**	**358**	P	**P**	**23 28 15.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**19.56**	**358**	P	**P**	**23 28 16.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**19.56**	**358**	P	**P**	**23 28 17.0**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=186,slow=10,SNR=24						
CMAR				PcP	**PcP**	**23 32 37.5**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=213,slow=3.1,SNR=5.8						
CMAR				LR	LR	23 36 24.6	
	comp=Z,106nm,18.1s,baz=185,slow=39						
	comp=Z,5.9nm,0.5s						
MYLDM	**Lahad Datu**	**19.82**	**71**	P	**Pn**	**23 28 21.2**	**-0.2**
MYLDM				IAmb	IAmb	23 28 44.4	
	comp=Z,45nm,1.2s						
CHTO	**Chiang Mai**	**19.92**	**358**	P	**P**	**23 28 21.3**	**+0.7**
MPSI	**Mapaga**	**20.25**	**86**	P	Pn	23 28 26.3	-0.2
	comp=Z,21nm,0.8s						
PALK	**Pallekele**	**20.75**	**294**	LR	LR	23 35 33.7	
	comp=Z,60nm,20.5s,baz=217,slow=34						
TOLI2	**Tolitoli**	**21.20**	**84**	P	**P**	**23 28 34.4**	**-0.1**
TOLI2				IAmb	IAmb	23 28 35.9	
	comp=Z,23nm,0.9s						
TOLI2	**Tolitoli**	**21.20**	**84**	P	**P**	**23 28 35.1**	**+0.6**
CRAI	**Chiangrai**	**21.32**	**2**	P	**P**	**23 28 35.9**	**+0.1**
MRSI	**Marisa**	**22.29**	**86**	P	**P**	**23 28 48.1**	**+1.8**
	comp=Z,25nm,0.7s						
LUWI	**Luwuk**	**23.06**	**90**	P	**P**	**23 28 53.7**	**-0.6**
LUWI				IAmb	IAmb	23 28 55.7	
	comp=Z,39nm,0.7s						
TGY	**Tagaytay City**	**25.96**	**53**	LR	LR	23 38 55.5	
	comp=Z,56nm,21.5s,baz=304,slow=35						
TNCH	**TengChong**	**26.11**	**358**	P	**P**	**23 29 25.3**	**+2.7**
TNCH				sP	sP	23 29 43.7	+4.2
TNCH				pmax	pmax		
	comp=Z,13nm,0.7s						
TNCH				pmax	pmax		
	comp=Z,62nm,3.1s						
DAV	**Davao City (W)**	**27.09**	**72**	LR	LR	23 40 49.1	
	comp=Z,54nm,18.3s,baz=298,slow=38						
PZH	**PanZhiHua**	**27.62**	**4**	P	**P**	**23 29 39.7**	**+3.6**
PZH				pmax	pmax		
	comp=Z,60nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.4s						
SHL	**Shillong**	**27.68**	**345**	P	**P**	**23 29 36.6**	**0.0**
SHL				IAmb	IAmb	23 29 38.5	
	comp=Z,12nm,0.7s						
H08S2	**Diego Garcia H**	**27.86**	**256**	T	T	23 57 41.4	
	baz=78,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**27.87**	**256**	T	T	23 57 41.9	
	baz=78,slow=76,SNR=54						
H08S1	**Diego Garcia H**	**27.88**	**256**	T	T	23 57 42.8	
	baz=78,slow=76,SNR=7.3						
KNMB	**Chin-men Tao**	**31.30**	**34**	P	**P**	**23 30 09.1**	**+0.5**
LSA	**Lhasa**	**31.81**	**346**	P	**P**	**23 30 13.4**	**-0.1**
LSA				IAmb	IAmb	23 30 34.6	
	comp=Z,6.5nm,0.8s						
KNRA	**Kununurra**	**32.06**	**118**	P	**P**	**23 30 12.2**	**-3.1**
FAKI	**Fak Fak**	**32.56**	**94**	P	**P**	**23 30 18.1**	**-1.7**
FAKI	**Fak Fak**	**32.56**	**94**	P	**P**	**23 30 19.5**	**-0.4**
H01W3	**Cape Leeuwin H**	**36.10**	**160**	T	T	00 08 48.3	
	baz=335,slow=76,SNR=5.7						
H01W2	**Cape Leeuwin H**	**36.11**	**160**	T	T	00 08 49.0	
	baz=335,slow=76,SNR=5.9						
H01W1	**Cape Leeuwin H**	**36.12**	**160**	T	T	00 08 48.7	
	baz=335,slow=76,SNR=5.8						
WRKA	**Warakurna**	**36.37**	**133**	P	**P**	**23 30 53.7**	**+1.0**
LYN	**LuoYang**	**37.54**	**17**	⇑P	**P**	**23 31 02.8**	**+0.4**
LYN				pmax	pmax		
	comp=Z,31nm,0.7s						
LYN				pmax	pmax		
	comp=Z,230nm,4.6s						
NJ2	**Nanjing**	**37.73**	**27**	*eP*	**P**	**23 31 05.5**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
WB0	**Warramunga Arr**	**38.62**	**121**	P	**P**	**23 31 10.0**	**-1.7**
WB0				IAmb	IAmb	23 31 11.0	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**38.64**	**121**	P	**P**	**23 31 10.3**	**-1.7**
WRA	**Warramunga Arr**	**38.64**	**121**	P	**P**	**23 31 10.4**	**-1.5**
	comp=Z,9.2nm,0.7s,baz=311,slow=9.0,SNR=180						
WRA				PcP	**PcP**	**23 33 23.8**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=315,slow=2.6,SNR=5.4						
	comp=Z,9.2nm,0.7s						
AS31	**Alice Springs**	**39.95**	**127**	P	**P**	**23 31 21.4**	**-1.5**
ASAR	**Alice Springs**	**39.95**	**127**	P	**P**	**23 31 21.0**	**-1.9**
ASAR	**Alice Springs**	**39.95**	**127**	P	**P**	**23 31 21.9**	**-0.9**
	comp=Z,10nm,0.8s,baz=213,slow=29,SNR=4.1						
ASAR				PcP	**PcP**	**23 33 28.4**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=308,slow=2.9,SNR=9.3						
ASAR				LR	LR	23 50 38.3	
	comp=Z,35nm,18.6s,baz=332,slow=40						
	comp=Z,10nm,0.8s						
AS01	**Alice Springs**	**39.99**	**127**	P	**P**	**23 31 22.6**	**-0.6**
HNS	**HongShan**	**40.85**	**18**	⇓P	**P**	**23 31 30.0**	**-0.1**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	**Nilore**	**42.69**	**327**	P	**P**	**23 31 45.0**	**-0.2**
NIL				IAmb	IAmb	23 31 46.3	
	comp=Z,14nm,0.7s						
HHC	**Hu-ho-hao-te**	**43.23**	**13**	*eP*	**P**	**23 31 53.4**	**+3.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,83nm,5.3s						
OOD	**Oodnadatta**	**43.41**	**131**	P	**P**	**23 31 51.1**	**+0.1**
QIS	**Mount Isa**	**43.44**	**119**	P	**P**	**23 31 50.1**	**-1.4**
MULG	**Mulgathing**	**43.57**	**135**	P	**P**	**23 31 52.8**	**+0.5**
BJI	**Beijing**	**43.73**	**18**	P	**P**	**23 31 53.4**	**0.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
JNU	**Nakatsue**	**45.05**	**38**	P	**P**	**23 32 03.8**	**-0.4**
JNU				IAmb	IAmb	23 32 30.8	
	comp=Z,29nm,1.2s						
JNU	**Nakatsue**	**45.05**	**38**	P	**P**	**23 32 04.0**	**-0.2**
JNU	**Nakatsue**	**45.05**	**38**	LR	LR	23 50 57.6	
	comp=Z,33nm,19.1s,baz=182,slow=36						
KSH	**Kashi**	**46.00**	**334**	P	**P**	**23 32 15.3**	**+3.6**
KSH				pP	pwP	23 32 29.2	+3.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	**Urumqi**	**46.11**	**348**	*eP*	**P**	**23 32 13.7**	**+1.3**
WMQ				pP	pwP	23 32 27.9	+1.4
WMQ				pmax	pmax		
	comp=Z,45nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
BBOO	**Buckleboo**	**46.41**	**136**	P	**P**	**23 32 15.6**	**+0.7**
KSRS	**Korea Array**	**46.50**	**31**	P	**P**	**23 32 15.2**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=225,slow=8.7,SNR=7.2						
KSRS				LR	LR	23 52 01.2	
	comp=Z,22nm,20.7s,baz=225,slow=36						
	comp=Z,2.9nm,0.7s						
LCRK	**Leigh Creek**	**46.67**	**132**	P	**P**	**23 32 18.5**	**+1.6**
GUMO	**Guam**	**47.11**	**70**	LR	LR	23 55 47.7	
	comp=Z,17nm,18.9s,baz=96,slow=41						
XLT	**XiLinHaoTe**	**47.24**	**16**	*eP*	**P**	**23 32 21.1**	**-0.2**
XLT				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,100nm,4.2s						
NRN	**Naryn**	**47.59**	**336**	P	**P**	**23 32 25.1**	**+0.8**
NRN				IAmb	IAmb	23 32 25.8	
	comp=Z,4.6nm,0.8s						
SHLS	**Shalkode**	**47.77**	**340**	*eP*	**P**	**23 32 24.5**	**-1.0**
	baz=340						
PMG	**Port Moresby**	**47.89**	**102**	LR	LR	23 56 46.2	
	comp=Z,71nm,18.4s,baz=326,slow=41						
SATY	**Saty**	**48.06**	**339**	*eP*	**P**	**23 32 27.9**	**+0.3**
	comp=Z,6.0nm,1.1s,baz=339						
KPKS	**Kokpek**	**48.31**	**340**	*eP*	**P**	**23 32 29.3**	**-0.3**
	baz=339						
MDOK	**Medeo**	**48.65**	**338**	*eP*	**P**	**23 32 32.1**	**-0.2**
	baz=338						
HTT	**Hallett**	**48.75**	**135**	P	**P**	**23 32 34.0**	**+0.9**
ARSB	**Arslanbob**	**48.80**	**333**	P	**P**	**23 32 33.8**	**+0.3**
BTK	**Batken**	**48.83**	**330**	P	**P**	**23 32 34.0**	**+0.4**
BTK				IAmb	IAmb	23 33 12.4	
	comp=Z,5.6nm,1.1s						
CTA	**Charters Tower**	**49.19**	**116**	P	**P**	**23 32 35.7**	**-1.0**
	comp=Z,3.1nm,0.3s,baz=233,slow=8.7,SNR=2.9						
CTA				LR	LR	23 56 58.0	
	comp=Z,61nm,18.2s,baz=283,slow=40						
	comp=Z,3.1nm,0.3s						
SONM	**Songino Array**	**49.20**	**6**	P	**P**	**23 32 36.6**	**+0.3**
SONM				IAmb	IAmb	23 32 37.4	
	comp=Z,7.5nm,0.8s						
SONM	**Songino Array**	**49.20**	**6**	P	**P**	**23 32 36.7**	**+0.3**
	comp=Z,7.3nm,0.7s,baz=186,slow=9.3,SNR=60						
SONM				PcP	**PcP**	**23 33 59.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=197,slow=3.7,SNR=3.7						
	comp=Z,7.3nm,0.7s						
AAK	**Ala-Archa**	**49.21**	**335**	P	**P**	**23 32 37.9**	**+1.3**
AAK				IAmb	IAmb	23 33 10.9	
	comp=Z,9.2nm,1.4s						
CHKK	**Chushkaly**	**49.26**	**338**	*eP*	**P**	**23 32 36.6**	**-0.2**
	baz=338						
KUU	**Kurty**	**49.54**	**338**	*eP*	**P**	**23 32 38.9**	**0.0**
	comp=Z,11nm,0.9s,baz=338						
STKA	**Stephens Creek**	**49.89**	**132**	P	**P**	**23 32 41.4**	**-0.4**
	comp=Z,6.9nm,0.7s,baz=314,slow=7.0,SNR=12						
STKA				LR	LR	23 53 42.6	
	comp=Z,50nm,21.7s,baz=24,slow=36						
	comp=Z,6.9nm,0.7s						
ZSN	**Zaisan**	**50.17**	**347**	*eP*	**P**	**23 32 43.8**	**+0.1**
	comp=Z,11nm,1.2s,baz=347						
MK31	**Makanchi Array**	**50.20**	**344**	P	**P**	**23 32 44.6**	**+0.7**
MK31				IAmb	IAmb	23 32 45.3	
	comp=Z,6.3nm,0.8s						
MKAR	**Makanchi Array**	**50.20**	**344**	P	**P**	**23 32 44.6**	**+0.7**
MKAR	**Makanchi Array**	**50.20**	**344**	P	**P**	**23 32 44.4**	**+0.5**
	comp=Z,7.8nm,0.3s,baz=154,slow=8.8,SNR=569						
	comp=Z,7.8nm,0.3s						
KKAR	**Karatay Array**	**51.33**	**333**	P	**P**	**23 32 51.9**	**-0.6**
BTLS	**Baital**	**51.39**	**337**	*eP*	**P**	**23 32 52.5**	**-0.3**
	baz=337						
MJAR	**Matsushiro Arr**	**51.85**	**40**	P	**P**	**23 32 55.0**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=227,slow=8.0,SNR=2.5						
	comp=Z,1.4nm,0.7s						
BNX	**BinXian**	**52.78**	**24**	⇑P	**P**	**23 33 02.7**	**-0.4**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,510nm,4.6s						
MDJ	**Mudanjiang**	**52.82**	**27**	P	**P**	**23 33 05.5**	**+2.1**
MDJ				pmax	pmax		
	comp=Z,18nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,420nm,8.2s						
CMSA	**Cobar Meteorol**	**52.83**	**130**	P	**P**	**23 33 04.9**	**+1.1**
USA0B	**Ussuriysk Arra**	**53.60**	**29**	P	**P**	**23 33 09.0**	**-0.3**
USA0B				IAmb	IAmb	23 33 10.2	
	comp=Z,10nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.60**	**29**	P	**P**	**23 33 09.2**	**0.0**
USRK	**Ussuriysk Ar.**	**53.60**	**29**	P	**P**	**23 33 08.9**	**-0.3**
	comp=Z,10nm,0.8s,baz=223,slow=6.9,SNR=14						
	comp=Z,10nm,0.8s						
SEM	**Semipalatinsk**	**54.05**	**345**	*eP*	**P**	**23 33 12.0**	**-0.7**
	baz=345						
GEYT	**Alibeck**	**54.66**	**320**		**P**	**23 33 16.9**	**-0.3**
GEYT	**Alibeck**	**54.66**	**320**	P	**P**	**23 33 17.4**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=117,slow=16,SNR=6.4						
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**54.72**	**344**	P	**P**	**23 33 17.8**	**+0.6**
	comp=Z,3.7nm,0.5s,baz=162,slow=7.3,SNR=64						
	comp=Z,3.7nm,0.5s						
KURK	**Kurchatov**	**54.78**	**344**	P	**P**	**23 33 18.1**	**+0.5**
KURK				IAmb	IAmb	23 33 19.1	
	comp=Z,8.4nm,0.7s						
EIDS	**Eidsvold**	**55.00**	**120**	P	**P**	**23 33 18.4**	**-1.4**
ZAA0	**Zalesovo Array**	**56.35**	**349**	P	**P**	**23 33 29.0**	**+0.2**
ZALV	**Zalesovo Beam**	**56.35**	**349**	P	**P**	**23 33 28.9**	**0.0**
ZALV	**Zalesovo Beam**	**56.35**	**349**	P	**P**	**23 33 29.0**	**+0.1**
	comp=Z,22nm,0.4s,baz=179,slow=6.1,SNR=151						
	comp=Z,22nm,0.4s						
KLR	**Kul'dur**	**57.34**	**24**	LR	LR	00 00 36.0	
	comp=Z,69nm,18.3s,baz=200,slow=38						
BVAR	**Borovoye Array**	**59.35**	**340**	P	**P**	**23 33 49.9**	**-0.1**
	comp=Z,6.0nm,0.6s,baz=138,slow=9.2,SNR=26						
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**59.41**	**340**	P	**P**	**23 33 50.3**	**-0.1**
BRVK				IAmb	IAmb	23 33 51.0	
	comp=Z,5.0nm,0.8s						
ABKAR	**Akbulak array**	**60.82**	**331**	P	**P**	**23 33 59.8**	**-0.2**
ABKAR	**Akbulak array**	**60.82**	**331**	P	**P**	**23 33 59.7**	**-0.4**
ABKAR				IAmb	IAmb	23 34 00.7	
	comp=Z,6.3nm,0.8s						
H04N2	**CROZET ISLANDS**	**61.26**	**216**	T	T	00 39 48.0	
	baz=58,slow=75,SNR=550						
H04N1	**CROZET ISLANDS**	**61.27**	**216**	T	T	00 39 48.4	
	baz=58,slow=75,SNR=502						
H04N3	**CROZET ISLANDS**	**61.27**	**216**	T	T	00 39 47.1	
	baz=58,slow=75,SNR=433						
H04S1	**CROZET ISLANDS**	**61.55**	**215**	T	T	00 40 07.4	
	baz=57,slow=75,SNR=36						
H04S3	**CROZET ISLANDS**	**61.57**	**215**	T	T	00 40 07.1	
	baz=57,slow=75,SNR=51						
H04S2	**CROZET ISLANDS**	**61.57**	**215**	T	T	00 40 08.3	
	baz=57,slow=75,SNR=42						
KMBO	**Kilima Mbogo**	**62.44**	**269**	LR	LR	23 58 48.8	
	comp=Z,28nm,18.5s,baz=90,slow=34						
ARU	**Arti**	**66.38**	**336**	P	**P**	**23 34 36.1**	**-0.5**
YAK	**Yakutsk**	**67.06**	**15**	P	**P**	**23 34 39.7**	**-1.2**
YAK				IAmb	IAmb	23 34 40.5	
	comp=Z,13nm,0.7s						
YAK	**Yakutsk**	**67.06**	**15**	LR	LR	00 07 02.8	
	comp=Z,47nm,18.8s,baz=220,slow=39						
KBZ	**Khabaz**	**67.53**	**319**	P	**P**	**23 34 44.8**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=138,slow=4.3,SNR=11						
	comp=Z,3.8nm,0.8s						
DZM	**Mont Dzumac**	**68.03**	**113**	*eL*	LR	23 55 25.4	
	comp=Z,52nm,25.3s						
EIL	**Elat**	**68.86**	**302**	LR	LR	00 06 56.8	
	comp=Z,30nm,18.1s,baz=124,slow=38						
MBAR	**Mbarara**	**68.96**	**270**	LR	LR	00 04 22.5	
	comp=Z,39nm,18.5s,baz=81,slow=35						
MMAI	**Mount Meron Ar**	**69.34**	**306**	P	**P**	**23 34 56.9**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=116,slow=6.6,SNR=5.4						
MMAI				LR	LR	00 07 51.1	
	comp=Z,12nm,18.4s,baz=78,slow=38						
	comp=Z,1.7nm,0.8s						
NRIK	**Noril'sk**	**70.90**	**355**	P	**P**	**23 35 03.8**	**-0.8**
NRIK				IAmb	IAmb	23 35 04.8	
	comp=Z,6.2nm,1.1s						
NRIK	**Noril'sk**	**70.90**	**355**	P	**P**	**23 35 03.7**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=160,slow=4.6,SNR=10						
	comp=Z,2.5nm,0.6s						
MAW	**Mawson**	**70.97**	**194**	LR	LR	00 01 58.1	
	comp=Z,87nm,19.2s,baz=174,slow=32						
LSZ	**Lusaka**	**71.86**	**254**	LR	LR	00 02 18.6	
	comp=Z,44nm,18.1s,baz=140,slow=32						
BRTR	**Keskin Array B**	**72.58**	**312**	P	**P**	**23 35 14.7**	**-0.8**
BRTR	**Keskin Array B**	**72.58**	**312**	P	**P**	**23 35 14.6**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=118,slow=7.0,SNR=6.1						
	comp=Z,0.9nm,0.7s						
LBTB	**Lobatse**	**75.10**	**245**	LR	LR	00 04 33.3	
	comp=Z,44nm,18.4s,baz=161,slow=33						
TIXI	**Tiksi**	**75.13**	**9**	P	**P**	**23 35 28.4**	**-1.1**
TIXI	**Tiksi**	**75.13**	**9**	LR	LR	00 11 51.9	
	comp=

SYI Sn 23 39 52.9 -0.5
Q20K Shuyak Island 2.98 318 P Pn 23 39 18.3 +0.6
baz=136
Q20K S Sn 23 39 52.5 -0.9
baz=136
Q23K Middleton Isla 3.19 21 Pn Pn 23 39 21.1 +0.5
Q23K IAML 23 41 14.6
comp=N,212nm,1.4s
Q23K Middleton Isla 3.19 21 P Pn 23 39 21.5 +0.9
baz=203
MID Middleton Isla 3.19 21 Pn Pn 23 39 21.2 +0.6
MID IAML 23 40 13.3
comp=E,200nm,1.4s
MID IAML 23 41 07.9
comp=N,210nm,1.4s
MID Middleton Isla 3.19 21 P Pn 23 39 21.6 +1.0
CNPM China Poot 3.37 336 Pn Pn 23 39 23.9 +0.6
BRSE Bradley Lake S 3.47 341 Pn Pn 23 39 25.0 +0.4
BRSE Bradley Lake S 3.47 341 P Pn 23 39 25.0 +0.4
baz=160
BRSE S Sn 23 40 04.5 -1.3
baz=160
BRLK Bradley Lake 3.52 340 Pn 23 39 25.4 +0.1
BRLK IAML 23 40 11.0
comp=N,56nm,1.2s
P23K Montague Islan 3.58 9 Pn 23 39 26.8 +0.7
P23K Montague Islan 3.58 9 P Pn 23 39 26.8 +0.7
baz=191
P23K S Sn 23 40 06.4 -2.1
baz=191
HOM Homer 3.59 334 Pn 23 39 26.9 +0.8
HOM Homer 3.59 334 P Pn 23 39 27.5 +1.4
baz=152
SEW Seward 3.67 353 Pn 23 39 27.8 +0.5
SEW Seward 3.67 353 P Pn 23 39 28.1 +0.8
baz=173
Q19K Cape Douglas, 3.67 314 Pn Pn 23 39 28.9 +1.5
Q19K IAML 23 40 21.9
comp=N,159nm,1.2s
Q19K Cape Douglas, 3.67 314 P Pn 23 39 28.6 +1.2
baz=131
P19K Oil Pt 4.04 324 Pn Pn 23 39 33.0 +0.6
P19K IAML 23 40 24.7
comp=E,76nm,0.8s
P19K IAML 23 40 36.7
comp=N,79nm,1.4s
P19K Oil Pt 4.04 324 P Pn 23 39 34.0 +1.6
baz=141
ACHA Angle Creek He 4.06 298 Pn 23 39 33.9 +1.2
O22K Cooper Landing 4.06 352 Pn 23 39 33.0 +0.3
HIN Hinchinbrook I 4.08 14 Pn Pn 23 39 33.5 +0.6
HIN IAML 23 40 27.1
comp=E,106nm,0.9s
KAIM Kayak Island 4.09 31 Pn Pn 23 39 34.1 +1.0
KAIM Kayak Island 4.09 31 P Pn 23 39 34.0 +1.0
baz=214
KAHC Katmai Hardscr 4.10 305 Pn 23 39 34.6 +1.3
KAHC Katmai Hardscr 4.10 305 P Pn 23 39 34.6 +1.3
baz=120
SLKM Skilak Lake 4.14 348 Pn 23 39 34.1 +0.4
ANCK Angle Creek 4.14 298 Pn 23 39 35.6 +1.8
O20K Slope Mountain 4.20 331 Pn 23 39 35.5 +0.8
O20K Slope Mountain 4.20 331 P Pn 23 39 35.5 +0.8
baz=148
IVE Iliamna Volcan 4.26 328 Pn 23 39 35.8 +0.2
EYAK Cordova Ski Ar 4.34 19 Pn 23 39 37.5 +1.0
EYAK Cordova Ski Ar 4.34 19 P Pn 23 39 37.9 +1.4
EYAK Cordova Ski Ar 4.34 19 P Pn 23 39 37.7 +1.2
baz=201
CNTC Contact Creek 4.35 297 Pn 23 39 38.0 +1.2
Q17K Contact Creek 4.36 297 P Pn 23 39 38.0 +1.2
baz=112
SUCK Suckling Hills 4.40 33 Pn Pn 23 39 38.5 +1.2
SUCK IAML 23 40 34.4
comp=N,53nm,1.3s
SUCK IAML 23 40 49.6
comp=E,50nm,1.0s
RAGM Ragged Mountai 4.42 26 Pn 23 39 38.8 +1.2
FID Port Fidalgo 4.42 13 Pn 23 39 38.0 +0.4
FID IAML 23 40 32.9
comp=N,34nm,0.9s
FID IAML 23 40 33.2
comp=E,52nm,0.8s
NICHA Nichawak Mount 4.48 31 Pn 23 39 39.8 +1.4
HMT Hamilton 4.48 28 Pn 23 39 39.7 +1.3
RED Redoubt Volcan 4.53 332 Pn 23 39 39.2 0.0
RSO Redoubt South 4.56 333 Pn 23 39 40.0 +0.2
GOAT Goat Mountain 4.58 24 Pn 23 39 41.0 +1.2
P18K Big Mountain, 4.60 312 Pn Pn 23 39 40.5 +0.3
RDWB Redoubt West 4.61 333 Pn 23 39 40.6 +0.2
DFR Drift River 4.66 334 Pn 23 39 41.3 +0.4
RC01 Rabbit Creek A 4.67 353 Pn Pn 23 39 41.9 +0.9
RC01 IAML 23 40 36.4
comp=E,56nm,0.6s
RC01 IAML 23 40 45.0
comp=N,40nm,0.7s
BERG Berg Lake 4.68 31 Pn 23 39 42.0 +0.8
BERG IAML 23 40 41.5
comp=N,73nm,0.6s
BERG IAML 23 40 47.8
comp=E,65nm,0.6s
GRIN Grindle Hills 4.71 34 Pn 23 39 42.7 +1.2
SNH Sunshine Point 4.78 37 Pn 23 39 43.6 +1.1
SNH IAML 23 40 41.6
comp=N,45nm,1.4s
SNH IAML 23 41 14.7
comp=E,33nm,1.0s
O19K Port Alsworth 4.81 323 Pn Pn 23 39 43.2 +0.3
O19K IAML 23 40 45.9
comp=N,60nm,0.5s
KHIT Khitrov Hills 4.86 33 Pn 23 39 44.6 +1.0
O18K Koktuh Hills 4.89 317 Pn Pn 23 39 44.5 +0.5
O18K IAML 23 40 52.7
comp=N,21nm,1.5s
O18K Koktuh Hills 4.89 317 P Pn 23 39 44.7 +0.7
baz=132
BMRM Bremner River 4.95 23 Pn 23 39 46.2 +1.2
BMRM Bremner River 4.95 23 P Pn 23 39 46.3 +1.3
baz=206
KNK Knik Glacier 4.95 1 Pn Pn 23 39 45.8 +0.9
KNK IAML 23 40 47.8
comp=E,26nm,1.0s
KNK IAML 23 40 52.2
comp=N,20nm,1.2s
WAX Waxell Ridge 4.98 35 Pn Pn 23 39 46.2 +0.8
WAX IAML 23 40 46.7
comp=E,51nm,0.7s
WAX IAML 23 40 56.9
comp=N,58nm,0.7s
P17K Kvichak River 5.02 306 Pn 23 39 46.5 +0.8
P17K Kvichak River 5.02 306 P Pn 23 39 46.5 +0.8
baz=120
BARK Barkley Ridge 5.06 36 Pn 23 39 47.6 +1.1
MESA MESA 5.09 40 Pn Pn 23 39 48.3 +1.4
MESA IAML 23 41 35.5
comp=E,37nm,1.4s
MESA IAML 23 41 36.6
comp=N,46nm,0.8s
N20K Mount Spurr 5.10 340 P Pn 23 39 47.8 +0.7
baz=157
SPCR Spurr Chakacha 5.10 340 Pn 23 39 47.8 +0.7
SUA Susitna One 5.13 348 Pn Pn 23 39 48.0 +0.6
SUA Susitna One 5.13 348 P Pn 23 39 48.2 +0.8
baz=167
PMR Palmer 5.14 357 Pn 23 39 47.0 -0.4
PMR IAML 23 40 49.4
comp=E,26nm,0.9s
PMR IAML 23 40 55.9
comp=N,22nm,1.4s
PMR Palmer 5.14 357 P Pn 23 39 49.1 +1.7
KLU Klutina 5.21 14 Pn Pn 23 39 49.9 +1.3
KLU Klutina 5.21 14 P Pn 23 39 50.0 +1.5
baz=196
TGL Tana Glacier 5.23 33 Pn 23 39 49.7 +0.9
BAGL Bagley Icefiel 5.26 37 Pn 23 39 50.3 +1.2
ISLE Juniper Island 5.26 36 Pn Pn 23 39 50.2 +0.9
STLK Strandline Lak 5.31 343 Pn 23 39 50.9 +1.0
GHO Glory Hole Cre 5.32 358 Pn 23 39 51.6 +1.6
N19K Bonanza Creek 5.34 327 Pn 23 39 50.5 +0.2
N19K Bonanza Creek 5.34 327 P Pn 23 39 50.8 +0.5
baz=143
SML Sawmill 5.35 1 Pn Pn 23 39 51.7 +1.4
SML Sawmill 5.35 1 P Pn 23 39 51.8 +1.4
baz=182
SCM Sheep Creek Mo 5.41 6 Pn Pn 23 39 53.2 +1.9
baz=188
SCM Sheep Creek Mo 5.41 6 P Pn 23 39 53.3 +2.1
VRDI Verde Repeater 5.45 27 Pn Pn 23 39 52.7 +0.8
SAMH Samovar Hills 5.50 45 Pn 23 39 53.9 +1.4
KIAG Kiagna River 5.50 33 Pn 23 39 53.8 +1.1
N25K Chitina, Valde 5.53 20 Pn 23 39 54.5 +1.6
N25K Chitina, Valde 5.53 20 P Pn 23 39 54.4 +1.5
baz=203
GLB Gilahina Butte 5.55 24 Pn Pn 23 39 54.2 +1.0
TABL Table Mountain 5.56 41 Pn 23 39 54.5 +1.0
O17K Koliganek Bris 5.60 310 Pn 23 39 54.6 +0.8
O17K Koliganek Bris 5.60 310 P Pn 23 39 54.6 +0.8
baz=123
PTPK Patty Peak 5.68 31 Pn 23 39 56.5 +1.4
PCA Pinnacle 5.68 47 Pn 23 39 56.3 +1.3
PINM Pinnacle 5.69 47 P Pn 23 39 56.5 +1.4
baz=234
MCARA McCarthy VSAT 5.69 28 Pn 23 39 56.7 +1.6
MCARA McCarthy VSAT 5.69 28 P Pn 23 39 57.0 +2.0
baz=213
N18K Kilae Creek 5.70 321 Pn 23 39 55.1 -0.1
N18K Kilae Creek 5.70 321 P Pn 23 39 55.6 +0.4
baz=135
SKT Skwentna 5.73 346 Pn Pn 23 39 56.3 +0.7
SKT Skwentna 5.73 346 P Pn 23 39 57.4 +1.9
baz=164
M24K Tolsona, Glenn 5.78 11 Pn Pn 23 39 58.3 +2.0
M24K Tolsona, Glenn 5.78 11 P Pn 23 39 58.5 +2.3
baz=193
PNL Peninsula 5.82 53 Pn 23 39 58.4 +1.6
PNL Peninsula 5.82 53 P Pn 23 39 58.4 +1.6
PNL Peninsula 5.82 53 P Pn 23 39 58.4 +1.6
baz=240
BARN Barnard Glacie 5.83 35 Pn 23 39 58.5 +1.4
BCPM Bancas Point 5.86 50 Pn 23 39 58.7 +1.4
CTG Chitna Glacier 5.86 37 P Pn 23 39 58.7 +1.2
baz=223
CTGM Chitina Glacie 5.86 37 Pn Pn 23 39 58.7 +1.1
LOGN Logan Glacier 5.88 39 Pn 23 39 58.7 +0.9
O16K Kokwok River B 5.95 306 Pn 23 39 59.0 +0.4
O16K Kokwok River B 5.95 306 P Pn 23 39 59.2 +0.6
baz=118
N17K Nushagak Hills 6.08 315 Pn 23 40 01.1 +0.7
N17K Nushagak Hills 6.08 315 P Pn 23 40 00.9 +0.5
baz=129
HARP HAARP 6.19 15 Pn 23 40 03.7 +1.8
HARP HAARP 6.19 15 P Pn 23 40 03.7 +1.8
baz=198
M19K Big River Lodg 6.21 334 Pn 23 40 02.5 +0.2
M19K Big River Lodg 6.21 334 P Pn 23 40 02.4 +0.2
baz=149
M18K Stony River 6.27 326 Pn 23 40 03.3 +0.2
M18K Stony River 6.27 326 P Pn 23 40 03.3 +0.2
baz=141
WAT7 Susitna Watana 6.38 359 Pn 23 40 06.3 +1.7
O29M Mount Kennedy 6.50 50 Pn 23 40 08.0 +1.8
O29M Mount Kennedy 6.50 50 P Pn 23 40 07.9 +1.7
baz=238
P29M Windy Craggy 6.55 57 Pn 23 40 07.6 +0.7
P29M Windy Craggy 6.55 57 P Pn 23 40 08.0 +1.1
baz=246
L19K White Mountain 6.56 333 Pn Pn 23 40 07.1 0.0
DHY Denali Highway 6.65 5 Pn 23 40 10.1 +1.8
DHY Denali Highway 6.65 5 P Pn 23 40 10.0 +1.7
baz=186
M17K Holitna River 6.74 321 Pn 23 40 10.3 +0.8
M17K Holitna River 6.74 321 P Pn 23 40 10.1 +0.6
baz=134
YUK7 Dusty Glacier 6.80 49 Pn 23 40 12.0 +1.5
S31K Pelican 6.86 72 Pn Pn 23 40 09.6 -1.4
YUK6 Outpost Mounta 6.94 46 P Pn 23 40 14.9 +2.5
baz=234
RND Reindeer 6.95 359 Pn Pn 23 40 13.9 +1.5
TRF Thorofare Moun 7.05 354 Pn 23 40 15.3 +1.5
TRF Thorofare Moun 7.05 354 P Pn 23 40 15.2 +1.4
baz=172
YUK4 Talbot Arm 7.08 42 P Pn 23 40 18.4 +4.1
baz=230
L18K Granite Mounta 7.10 328 Pn Pn 23 40 14.0 -0.3
N15K Kwethluk River 7.11 306 Pn 23 40 15.5 +1.0
PLBC Pleasant Camp 7.14 60 P Pn 23 40 16.7 +1.9
baz=250
KTH Kantishna Hill 7.20 352 Pn Pn 23 40 17.4 +1.6
HYT Haines Junctio 7.22 48 Pn Pn 23 40 17.5 +1.3
SIT Sitka 7.30 80 Pn Pn 23 40 15.1 -1.9
SIT Sitka 7.30 80 P Pn 23 40 16.1 -0.9
BCAR Beaver Creek A 7.44 25 Pn Pn 23 40 19.8 +0.7
TTA Tatalina 7.49 333 Pn Pn 23 40 19.3 -0.4
TTA Tatalina 7.49 333 P Pn 23 40 20.8 +1.1
L16K Owhat River 7.69 318 Pn Pn 23 40 22.5 +0.1
S32K Killisnoo 7.71 77 Pn Pn 23 40 21.9 -0.7
BPAW Bear Paw Mtn. 7.74 352 Pn Pn 23 40 24.5 +1.3
JIS Juneau Island 7.87 71 P Pn 23 40 26.2 +1.3
M29M Somme Creek 7.88 36 Pn 23 40 27.2 +2.0
M14K Bethel 8.20 307 Pn Pn 23 40 28.8 -0.6
J20K Nowata River 8.20 343 Pn Pn 23 40 30.5 +1.0
CCB Clear Creek Bu 8.21 2 Pn Pn 23 40 31.2 +1.7
WHY Whitehorse 8.28 54 Pn 23 40 32.0 +1.4
J19K Poorman 8.31 338 Pn Pn 23 40 31.2 +0.2
IL31 8.36 5 Pn Pn 23 40 32.4 +0.8
ILAR Eielson Array 8.36 5 Pn Pn 23 40 33.2 +1.5
ILAR Eielson Array 8.36 5 Pn Pn 23 40 33.9 +2.2
comp=N,0.2nm,0.3s,baz=189,slow=13,SNR=10.0
ILAR Sn Sn 23 42 03.9 -2.2
comp=N,0.2nm,0.3s,baz=186,slow=21,SNR=9.5
comp=N,0.4nm,0.5s
J26L Joseph Creek 8.42 15 Pn 23 40 34.2 +1.7
P32M Atlin 8.47 62 Pn Pn 23 40 33.6 +0.4
FALS False Pass 8.56 265 P Pn 23 40 35.5 +1.2
comp=N,120nm,1.3s
U33K Whale Pass 8.59 86 Pn Pn 23 40 32.6 -2.2
CRAG Craig 8.71 90 Pn Pn 23 40 35.1 -1.4
P33M Teslin, Yukon 9.08 59 Pn Pn 23 40 42.6 +1.1
H24K Noodor Dome 9.40 2 Pn Pn 23 40 47.6 +1.7
H21K Melozitna Rive 9.44 349 Pn 23 40 47.1 +0.7
R33M Jennings River 9.79 65 Pn Pn 23 40 52.4 +1.0
IMAR Indian Mountai 9.86 347 Pn Pn 23 40 52.7 +0.6
DLBC Dease Lake 10.17 71 Pn Pn 23 40 57.0 +0.5
DLBC Dease Lake 10.17 71 Pn Pn 23 40 57.6 +1.1
comp=N,0.3nm,0.3s,baz=282,slow=7.6,SNR=7.7
DLBC Sn Sn 23 42 45.4 -5.2
comp=N,0.1nm,0.3s,baz=318,slow=26,SNR=1.9
comp=N,0.7nm,0.3s
F20K Avaraart Lake 11.13 345 Pn Pn 23 41 09.4 -0.1
BMAR Burnt Mountain 11.15 8 Pn Pn 23 41 09.7 -0.1
E25K Arctic Village 11.77 5 Pn Pn 23 41 19.0 +0.8
B21K Ikpikpuk River 13.46 351 Pn Pn 23 41 43.0 +1.7
INK Inuvik 13.70 24 Pn Pn 23 41 48.1 +3.6
baz=196,slow=8.9,SNR=6.3
comp=N,1.8nm,0.8s
B22K Teshekpuk Lake 14.08 353 Pn Pn 23 41 51.5 +1.8
B20K Meade River 14.10 348 Pn Pn 23 41 49.3 -0.7
YKA Yellowknife Ar 18.09 57 P P 23 42 44.4 +2.4
baz=264,slow=11,SNR=10
comp=N,1.3nm,0.9s
A36M Sachs Harbour 18.34 23 P Pn 23 42 45.6 +1.0
H11N2 WAKE ISLAND Hy 49.33 241 T T 00 40 29.6
baz=31,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 49.34 241 T T 00 40 27.8
baz=31,slow=76,SNR=13
H11N1 WAKE ISLAND Hy 49.35 241 T T 00 40 31.2
baz=31,slow=76,SNR=13
H11S1 WAKE ISLAND Hy 50.47 240 T T 00 41 54.3
baz=30,slow=76,SNR=6.2
H11S2 WAKE ISLAND Hy 50.48 240 T T 00 41 58.1
baz=30,slow=76,SNR=6.9
H11S3 WAKE ISLAND Hy 50.49 240 T T 00 41 53.7
baz=30,slow=76,SNR=7.2
SONM Songino Array 58.82 310 P P 23 48 30.6 +1.7
comp=N,0.7nm,0.8s,baz=31,slow=7.2,SNR=5.5
comp=N,0.7nm,0.8s
ZALV Zalesovo Beam 61.62 327 P P 23 48 49.5 +1.8
comp=N,0.5nm,0.6s,baz=45,slow=6.3,SNR=2.3
comp=N,0.5nm,0.6s
BVAR Borovoye Array 66.28 335 P P 23 49 20.5 +2.1
comp=N,0.3nm,0.5s,baz=28,slow=6.5,SNR=2.4
comp=N,0.3nm,0.5s
MKAR Makanchi Array 68.67 325 P P 23 49 34.4 +0.7
comp=N,0.1nm,0.6s,baz=29,slow=7.4,SNR=1.7
comp=N,0.1nm,0.6s
BRG Berggiesshubel 72.04 12 eP P 23 49 51.3 -2.9
BRG Amp 23 49 54.3
comp=Z,4.0nm,1.1s

*SJA **03** 23:49:01.2±0.7, 34°.92S×69°.33W, h201km±4km, ML4.3, MW4.3*
*NEIC **03** 23:49:03.3±1.9, 34°.86S±0°.03×69°.21W±0°.09, h170km±6km, mb4.5/47, Error ellipse: s-maj=11.0km s-min=4.7km az=90.0*
*GUC **03** 23:49:03.9±0.7, 34°.85S×69°.63W, h197km±6km, ML4.6*
*IDC **03** 23:49:03.6±0.7, 34°.88S×69°.16W, h171km±5km, mb4.2/9, mbtmp4.6/12, Error ellipse: s-maj=17.8km s-min=13.0km az=90.0*

ISC 03 23:49:03.4±0.5, **34°.82S**±0°.04×**69°.27W**±0°.04, **h176**km±4km, **n175**, σ1s**27**/218, **mb4.5**/35, **6C-12D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RFA	**San Rafael**	**0.66**	**86**	*eP*	**Pn**	**Pn**	**23 49 29.1**	**+0.6**
RFA					IAML		23 49 53.9	
	comp=Z,506nm,0.6s							
EDS3	**Malargue**	**0.95**	**187**	*eP*	**Pn**	**Pn**	**23 49 31.1**	**+0.6**
EDS3				*eS*		**Sn**	**23 49 52.2**	**+0.6**
LMEL	**Las Melosas**	**1.25**	**321**		**Pn**	**Pn**	**23 49 33.9**	**+1.0**
LMEL					Sn	**Sn**	**23 49 57.3**	**+1.7**
BO02	**Sierra Bellavi**	**1.25**	**271**		Pn	**Pn**	**23 49 33.5**	**+0.7**
BO02					Sn	**Sn**	**23 49 56.2**	**+0.8**
BO02	**Sierra Bellavi**	**1.25**	**271**	*eP*	**Pn**	**Pn**	**23 49 33.4**	**+0.6**
BO02				*eS*		**Sn**	**23 50 02.4**	**+7.0**
BO02					IAML		23 50 03.1	
	comp=Z,1μm,0.1s							
MT13	**San Alfonso**	**1.37**	**322**		Pn	**Pn**	**23 49 34.9**	**+1.0**
MT13	**San Alfonso**	**1.37**	**322**	*‖iP*		**Pn**	**23 49 34.9**	**+1.0**
MT13				*i*	S	**Sn**	**23 49 58.7**	**+1.3**
BO04	**La Punta**	**1.39**	**306**		Pn	**Pn**	**23 49 34.5**	**+0.5**
AVIZ	**Vizcacheras**	**1.48**	**25**	*eP*		**Pn**	**23 49 36.5**	**+1.5**
MT12	**Pirque**	**1.52**	**315**	*‖iP*		**Pn**	**23 49 36.1**	**+0.8**
MT12				*i*	S	**Sn**	**23 50 00.4**	**+0.5**
BO01	**Tunca**	**1.56**	**286**		Pn	**Pn**	**23 49 35.8**	**+0.2**
BO01	**Tunca**	**1.56**	**286**	*eP*		**Pn**	**23 49 35.8**	**+0.2**
BO01				*eS*		**Sn**	**23 50 01.2**	**+0.8**
BO01					IAML		23 50 02.0	
	comp=Z,843nm,0.4s							
MT04	**Ro Olivares**	**1.59**	**333**	*eP*		**Pn**	**23 49 37.1**	**+0.9**
MT15	**Las Vizcachas**	**1.60**	**320**	*‖iP*		**Pn**	**23 49 37.0**	**+1.0**
MT15				*i*	S	**Sn**	**23 50 01.8**	**+0.5**
MT15					IAML		23 50 04.5	
	comp=N,4μm,0.4s							
MT15					IAML		23 50 04.6	
MT03	**Universidad Ad**	**1.68**	**322**			**Pn**	**23 49 37.8**	**+0.9**
MT03	**Universidad Ad**	**1.68**	**322**	*eP*		**Pn**	**23 49 37.8**	**+0.9**
MT03				*eS*		**Sn**	**23 50 04.8**	**+2.0**
MT03					IAML		23 50 05.8	
	comp=Z,2μm,0.2s							
MT03	**Universidad Ad**	**1.68**	**322**	*‖iP*		**Pn**	**23 49 37.8**	**+0.9**
MT03				*i*	S	**Sn**	**23 50 03.6**	**+0.7**
MT03					IAML		23 50 08.8	
	comp=E,3μm,0.3s							
MT16	**CCHEN**	**1.74**	**323**			**Pn**	**23 49 38.2**	**+0.7**
MT09	**Talagante**	**1.77**	**306**			**Pn**	**23 49 37.8**	**-0.1**
MT09	**Talagante**	**1.77**	**306**	*‖iP*		**Pn**	**23 49 37.8**	**-0.1**
MT09				*i*	S	**Sn**	**23 50 03.5**	**-1.0**
MT09					IAML		23 50 08.1	
	comp=N,5μm,0.1s							
AAGR	**Agrelo**	**1.77**	**12**	*eP*		**Pn**	**23 49 39.2**	**+1.4**
AAGR					IAML		23 50 11.1	
	comp=Z,271nm,1.1s							
MT14	**Cerro Cal¡n**	**1.77**	**323**	*‖iP*		**Pn**	**23 49 38.9**	**+1.1**
MT14				*i*	S	**Sn**	**23 50 04.7**	**+0.2**
MT14					IAML		23 50 10.3	
	comp=E,3μm,0.3s							
MT10	**Hacienda Santa**	**1.87**	**325**	*‖iP*		**Pn**	**23 49 39.9**	**+1.0**
MT10				*i*	S	**Sn**	**23 50 07.5**	**+1.0**
MT10					IAML		23 50 18.4	
	comp=E,3μm,0.8s							
MT05	**Renca**	**1.88**	**319**			**Pn**	**23 49 39.1**	**+0.2**
MT05	**Renca**	**1.88**	**319**	*eP*		**Pn**	**23 49 39.4**	**+0.5**
MT05				*eS*		**Sn**	**23 50 07.3**	**+0.8**
MT05					IAML		23 50 11.2	
	comp=Z,1μm,0.1s							
MT01	**Popeta**	**1.90**	**300**			**Pn**	**23 49 38.4**	**-0.7**
MT01	**Popeta**	**1.90**	**300**	*eP*		**Pn**	**23 49 38.7**	**-0.4**
MT01				*eS*		**Sn**	**23 50 05.7**	**-1.1**
MT01					IAML		23 50 07.7	
	comp=Z,2μm,0.1s							
ML02	**Panimavida**	**2.00**	**241**			**Pn**	**23 49 40.4**	**+0.4**
ARCO	**CERRO ARCO**	**2.00**	**8**	*eP*		**Pn**	**23 49 41.4**	**+1.0**
ARCO				*eS*		**Sn**	**23 50 11.1**	**+2.1**
ARCO					IAML		23 50 11.8	
	comp=Z,585nm,0.5s							
PEL	**Peldehue**	**2.05**	**324**			**Pn**	**23 49 41.5**	**+0.7**
PEL	**Peldehue**	**2.05**	**324**	*eP*		**Pn**	**23 49 41.4**	**+0.5**
PEL				*eS*		**Sn**	**23 50 12.6**	**+2.8**
PEL	**Peldehue**	**2.05**	**324**	*‖iP*		**Pn**	**23 49 41.3**	**+0.5**
PEL				*i*	S	**Sn**	**23 50 09.7**	**0.0**
PEL					IAML		23 50 11.8	
	comp=N,2μm,0.2s							
GO05	**Huala**	**2.20**	**264**			**Pn**	**23 49 41.4**	**-0.9**
GO05	**Huala**	**2.20**	**264**	*eP*		**Pn**	**23 49 41.4**	**-0.9**
GO05				*eS*		**Sn**	**23 50 10.8**	**-1.8**
MT02	**Curacav**	**2.20**	**315**			**Pn**	**23 49 42.5**	**+0.1**
MT02	**Curacav**	**2.20**	**315**	*eP*		**Pn**	**23 49 42.4**	**-0.1**
MT02				*eS*		**Sn**	**23 50 11.8**	**-0.9**
MT02					IAML		23 50 14.8	
	comp=Z,952nm,0.3s							
ASAL	**Salagasta**	**2.26**	**9**	*eP*		**Pn**	**23 49 44.4**	**+1.2**
ASAL				*eS*		**Sn**	**23 50 16.4**	**+2.4**
ASAL					IAML		23 50 16.4	
	comp=Z,530nm,1.2s							
VA05	**Santo Domingo**	**2.27**	**300**			**Pn**	**23 49 42.7**	**-0.4**
VA05	**Santo Domingo**	**2.27**	**300**	*eP*		**Pn**	**23 49 42.4**	**-0.7**
VA05				*i*	S	**Sn**	**23 50 11.6**	**-2.3**
VA03	**San Esteban**	**2.32**	**332**			**Pn**	**23 49 44.9**	**+1.0**
VA03	**San Esteban**	**2.32**	**332**	*eP*		**Pn**	**23 49 44.9**	**+1.0**
VA03				*eS*		**Sn**	**23 50 17.4**	**+2.2**
VA03					IAML		23 50 19.3	
	comp=Z,3μm,0.5s							
VA03	**San Esteban**	**2.32**	**332**	*‖iP*		**Pn**	**23 49 44.9**	**+1.0**
VA03				*i*	S	**Sn**	**23 50 15.5**	**+0.3**
VA03					IAML		23 50 19.3	
	comp=N,3μm,0.1s							
ROC1	**El Roble**	**2.35**	**321**	*eP*		**Pn**	**23 49 44.3**	**0.0**
ROC1				*eS*		**Sn**	**23 50 15.7**	**-0.4**
ROCH	**El Roble**	**2.35**	**321**	*‖iP*		**Pn**	**23 49 44.3**	**0.0**
VA01	**Torpederas**	**2.67**	**312**		Pn	**Pn**	**23 49 48.1**	**+0.3**
VA01	**Torpederas**	**2.67**	**312**	*eP*		**Pn**	**23 49 48.1**	**+0.3**
VA01				*eS*		**Sn**	**23 50 21.1**	**-1.4**
VA01					IAML		23 50 23.6	
	comp=Z,890nm,0.3s							
VA01	**Torpederas**	**2.67**	**312**	*eP*		**Pn**	**23 49 48.2**	**+0.3**
VA06	**Catapilco**	**2.82**	**323**		Pn	**Pn**	**23 49 49.6**	**0.0**
VA06	**Catapilco**	**2.82**	**323**	*‖iP*		**Pn**	**23 49 49.7**	**0.0**
VA06				*i*	S	**Sn**	**23 50 22.9**	**-2.7**
RTCV	**Cerro Valdivia**	**3.02**	**12**	*eP*		**Pn**	**23 49 53.0**	**+0.9**
RTCV				*eS*		**Sn**	**23 50 30.3**	**+0.3**
RTCV					IAML		23 50 33.4	
	comp=Z,85nm,1.1s							
RTLS	**Leoncito**	**3.02**	**359**	*eP*		**Pn**	**23 49 53.6**	**+1.3**
RTLS				*eS*		**Sn**	**23 50 32.4**	**+1.9**
RTLS					IAML		23 50 35.2	
	comp=Z,1μm,1.0s							
SJA	**San Juan**	**3.34**	**10**	*eP*		**Pn**	**23 49 57.2**	**+1.1**
SJA				*eS*		**Sn**	**23 50 36.5**	**-0.7**
SJA					IAML		23 50 38.9	
	comp=Z,498nm,0.3s							
RTLL	**Cerro Villicun**	**3.55**	**11**	*eP*		**Pn**	**23 49 58.8**	**+0.1**
RTLL				*eS*		**Sn**	**23 50 41.0**	**-0.8**
RTLL					IAML		23 50 43.7	
	comp=Z,739nm,0.3s							
BI05	**Punta Hualpn**	**3.72**	**238**		Pn	**Pn**	**23 49 58.9**	**-1.9**
DOCA	**Reserva Natura**	**3.87**	**2**	*eP*		**Pn**	**23 50 03.3**	**+0.2**
DOCA				*eS*		**Sn**	**23 50 49.0**	**-0.7**
CO02	**Combarbal**	**3.89**	**338**			**Pn**	**23 50 03.3**	**+0.2**
CO02	**Combarbal**	**3.89**	**338**	*eP*		**Pn**	**23 50 03.3**	**+0.2**
CO02				*eS*		**Sn**	**23 50 47.9**	**-1.9**
CO02					IAML		23 50 48.9	
	comp=Z,2μm,0.2s							
CO03	**El Pedregal**	**4.15**	**343**		Pn	**Pn**	**23 50 07.3**	**+0.9**
CO03	**El Pedregal**	**4.15**	**343**	*eP*		**Pn**	**23 50 07.2**	**+0.7**
CO03				*eS*		**Sn**	**23 50 54.5**	**-1.2**
CO03					IAML		23 50 57.4	
	comp=Z,1μm,0.2s							
ACHE	**Chepes**	**4.26**	**32**	*eP*		**Pn**	**23 50 08.3**	**+0.5**

ACHE eS Sn 23 50 57.0 -1.2
AVFE Valle Fertil 4.42 21 eP Pn 23 50 09.6 -0.3
AVFE eS Sn 23 51 00.1 -1.9
AVFE IAML 23 51 01.7
comp=Z,351nm,0.4s
CO06 Fray Jorge 4.59 334 Pn Pn 23 50 11.9 -0.1
GO04 Tololo Observa 4.81 344 Pn 23 50 15.2 +0.1
GO04 Tololo Observa 4.81 344 eP Pn 23 50 15.3 +0.2
GO04 eS Sn 23 51 08.6 -2.7
CO01 Juntas del Tor 4.88 352 Pn 23 50 17.2 +1.2
CO01 Juntas del Tor 4.88 352 eP Pn 23 50 17.5 +1.5
CO01 eS Sn 23 51 14.9 +2.0
CO01 IAML 23 51 15.8
comp=Z,210nm,0.3s
GO06 Curarrehue 5.07 200 Pn Pn 23 50 17.7 -0.5
CO05 La Serena 5.17 341 Pn 23 50 18.8 -0.7
TCA Tanti 5.24 50 eP Pn 23 50 20.6 +0.1
TCA IAML 23 51 22.7
comp=Z,38nm,0.5s
LR03 Panguipulli 5.39 206 Pn 23 50 20.7 -1.6
LR05 Currie 5.82 201 Pn Pn 23 50 26.7 -1.1
LCO Las Campanas 5.92 348 Pn Pn 23 50 28.9 -0.8
PLCA Paso Flores 5.99 189 Pn Pn 23 50 30.1 0.0
PLCA Paso Flores 5.99 189 P Pn 23 50 30.4 +0.3
comp=Z,5.1nm,0.4s,baz=9.0,slow=11,SNR=61
AC05 El Transito 6.03 352 Pn Pn 23 50 30.9 0.0
LR04 Corral 6.04 212 Pn 23 50 28.2 -2.5
TRQA Tornquist 6.70 121 Pn 23 50 38.1 -1.4
AC04 Llanos de Chal 6.78 346 Pn Pn 23 50 39.6 -1.0
GO03 Copiap 7.25 353 Pn 23 50 45.6 -1.3
LL05 Los Muermos 7.36 206 Pn Pn 23 50 44.0 -4.1
LL01 San Ignacio de 7.94 197 Pn 23 50 53.2 -2.5
AC02 Maricunga 7.96 1 Pn 23 50 56.4 -0.4
VA04 Juan Fernndez 8.01 276 Pn 23 50 57.4 +0.7
LL06 Loncomilla 8.13 204 Pn Pn 23 50 53.9 -4.4
AC01 Pan de Azucar 8.72 352 Pn 23 51 03.9 -2.4
GO02 Mina Guanaco 9.63 358 Pn 23 51 15.9 -2.6
PB14 IPOC Station P 10.21 354 Pn 23 51 22.8 -3.3
PB05 IPOC Station P 11.96 356 Pn Pn 23 51 48.7 +0.2
LVC Limon Verde 12.17 2 Pn Pn 23 51 50.1 -1.4
LVC Limon Verde 12.17 2 P Pn 23 51 49.7 -1.8
comp=Z,3.4nm,0.3s,baz=158,slow=7.3,SNR=12
LVC S Sn 23 53 56.7 -10
comp=Z,2.3nm,0.4s,baz=220,slow=13,SNR=1.7
PB04 IPOC Station P 12.47 356 Pn Pn 23 51 52.8 -2.3
PB09 IPOC Station P 12.98 0 Pn Pn 23 52 01.0 -0.7
CPUP Villa Florida 13.31 54 Pn Pn 23 52 06.3 +0.7
CPUP Villa Florida 13.31 54 P P 23 52 07.5 -1.6
comp=Z,1.4nm,0.5s,baz=222,slow=9.9,SNR=4.9
PLTB Pedras Altas 13.45 81 Pn Pn 23 52 05.3 -2.0
PB02 IPOC Station P 13.46 357 P Pn 23 52 06.8 -0.8
PB01 IPOC Station P 13.73 359 Pn 23 52 09.2 -1.8
GO01 Chusmiza 15.10 0 Pn 23 52 26.9 -1.4
PB16 IPOC Station P 16.42 359 P P 23 52 43.2 -0.9
ITAB Concordia 16.51 67 P P 23 52 44.0 -0.4
ITAB IAmb IAmb 23 52 47.6
comp=Z,15nm,0.6s
LPAZ La Paz 18.49 3 P P 23 53 06.6 -0.2
AQDB Aquidauana 18.64 43 P P 23 53 08.6 +0.8
EFI East Falkland 18.68 158 P P 23 53 06.8 -1.1
USHA Ushuaia 20.02 179 P P 23 53 20.7 -1.6
comp=Z,27nm,0.5s,baz=154,slow=0.8,SNR=7.6
SIV San Ignacio 20.14 23 P P 23 53 24.1 +0.1
comp=Z,1.8nm,0.6s,baz=201,slow=9.8,SNR=11
SPB Sao Paulo 22.05 65 P P 23 53 42.4 -1.7
BDFB Brasilia 27.00 50 P P 23 54 28.2 -0.9
BDFB IAmb IAmb 23 54 29.6
comp=Z,7.6nm,0.6s
BDFB Brasilia 27.00 50 P P 23 54 28.4 -0.7
comp=Z,4.8nm,0.5s,baz=204,slow=8.5,SNR=13
comp=Z,4.8nm,0.5s
MCRA Macar, Loja 31.88 340 P P 23 55 12.5 +0.3
PAYG Puerto Ayora 39.24 325 P P 23 56 16.9 +2.1
SDV Santo Domingo 43.49 358 P P 23 56 48.5 -1.0
BAUV El Baul 43.54 2 P P 23 56 48.8 -0.9
BAUV IAmb IAmb 23 56 50.4
comp=Z,8.6nm,0.8s
BELA Belgrano 2 45.68 170 P P 23 57 07.0 +1.0
VNA3 Neumayer Olymp 47.73 158 ⇑P P 23 57 23.1 +1.1
comp=Z,50nm,0.6s
VNA2 Neumayer--Watz 48.37 157 ⇑P P 23 57 27.5 +0.7
comp=Z,23nm,0.6s,baz=285,slow=8.0
SNAA Sanae 49.96 158 P P 23 57 39.5 +0.5
SNAA IAmb IAmb 23 57 41.0
comp=Z,9.3nm,0.6s
SNAA Sanae 49.96 158 ⇑P P 23 57 39.9 +0.9
comp=Z,215nm,0.4s
SNAA Sanae 49.96 158 P P 23 57 39.4 +0.5
comp=Z,8.8nm,0.5s,baz=261,slow=7.1,SNR=65
comp=Z,8.8nm,0.5s
TROLL Troll, Antarti 51.67 158 ⇑P P 23 57 52.8 +1.0
comp=Z,1μm,0.7s
CELP Cerrillos 52.67 3 P P 23 57 59.5 0.0
CELP IAmb IAmb 23 58 02.3
comp=Z,14nm,0.9s
QSPA South Pole Qui 55.42 180 P P 23 58 19.8 +0.7
QSPA IAmb IAmb 23 58 26.3
comp=Z,6.9nm,1.1s
TEIG Tepich 57.65 339 P P 23 58 36.0 +0.8
GOGA Godfrey 69.17 347 P P 23 59 50.7 +0.1
SWET Sewanee 71.40 346 P P 00 00 04.5 +0.4
SWET IAmb IAmb 00 00 05.6
comp=Z,7.2nm,0.8s
TXAR Lajitas Array 71.60 329 P P 00 00 06.7 +1.2
TXAR Lajitas Array 71.60 329 P P 00 00 07.0 +1.5
comp=Z,0.9nm,0.5s,baz=156,slow=7.9,SNR=20
comp=Z,0.9nm,0.5s
TX31 Lajitas Ar. Si 71.60 329 P 00 00 06.7 +1.1
TZTN Tazewell 72.24 348 P P 00 00 09.2 +0.1
TZTN IAmb IAmb 00 00 14.8
comp=Z,15nm,1.2s
CLTN Cedars of Leba 72.33 346 P P 00 00 10.2 +0.6
CLTN IAmb IAmb 00 00 10.9
comp=Z,6.5nm,0.6s
SUR Sutherland 72.42 117 P P 00 00 11.4 +0.6
WVT Waverly 72.68 344 P P 00 00 12.2 +0.5
WVT IAmb IAmb 00 00 13.1
comp=Z,13nm,0.7s
LIC Lamto 72.89 70⇓*i*P P 00 00 13.7 +0.3
comp=Z,6.2nm,0.3s
TIC Toumodi 73.16 69⇑*i*P P 00 00 15.8 +0.8
comp=Z,3.8nm,0.2s
KIC Kosan Boka 73.19 70⇑*e*P P 00 00 15.5 +0.3
comp=Z,15nm,0.4s
DBIC Dimbokro 73.30 69 P P 00 00 16.4 +0.5
comp=Z,3.7nm,0.5s,baz=209,slow=5.1,SNR=15
DBIC pP pP 00 00 57.1 -1.4
comp=Z,2.4nm,0.6s,baz=193,slow=2.5,SNR=2.8
comp=Z,3.7nm,0.5s
LCAR Lake Charles 73.43 342 P P 00 00 16.5 +0.5
LCAR IAmb IAmb 00 00 17.5
comp=Z,9.5nm,0.7s
PBMO Poplar Bluff 73.91 342 P P 00 00 19.3 +0.5
HHAR Hobbs 74.39 339 P P 00 00 22.2 +0.5
HHAR IAmb IAmb 00 00 23.1
comp=Z,6.7nm,0.7s
WIN Windhoek 74.63 107 P P 00 00 24.4 +0.7
WIN IAmb IAmb 00 00 25.8
comp=Z,8.9nm,0.9s
FVM French Village 75.06 343 P P 00 00 25.9 +0.5
FVM IAmb IAmb 00 00 26.9
comp=Z,8.3nm,0.7s
CCM Cathedral Cave 75.33 342 P P 00 00 27.6 +0.7
CCM IAmb IAmb 00 00 28.2
comp=Z,8.9nm,0.5s
OK048 Pawnee Station 75.42 337 P P 00 00 28.3 +0.7
OK048 IAmb IAmb 00 00 29.3
comp=Z,14nm,0.7s
SOE Somerset East 75.68 120 P P 00 00 29.5 0.0
R40A Maddies Statio 75.81 342 P P 00 00 30.4 +0.7
GRHM Grahamstown, E 75.95 121 P P 00 00 31.1 +0.1
WVNY West Valley, N 77.33 353 P P 00 00 39.2 +1.0
ANMO Albuquerque 77.63 329 P P 00 00 41.5 +1.3
BOSA Boshof 77.65 116 P P 00 00 40.9 +0.2
BOSA IAmb IAmb 00 00 42.2
comp=Z,16nm,1.1s
BOSA Boshof 77.65 116 P P 00 00 40.6 0.0
comp=Z,10nm,0.5s,baz=253,slow=3.2,SNR=51
comp=Z,10nm,0.5s
X16A Lo Mia Camp, P 79.39 326 P P 00 00 51.3 +1.4
SADO Sadowa 79.73 353 P P 00 00 51.3 +0.1
SADO IAmb IAmb 00 01 07.0
comp=Z,11nm,1.2s
LBTB Lobatse 79.88 113 P P 00 00 53.0 +0.2
LBTB IAmb IAmb 00 00 53.8
comp=Z,8.2nm,0.6s
PFO Pinyon Flats O 81.18 322 P P 00 01 00.8 +1.4
PFO IAmb IAmb 00 01 02.9
comp=Z,6.4nm,0.9s
HMU Henry Mountain 81.99 328 P P 00 01 05.3 +1.6
HMU IAmb IAmb 00 01 07.8
comp=Z,4.4nm,0.7s
ECSD EROS Data Cent 82.06 340 P P 00 01 04.3 +0.6
ECSD IAmb IAmb 00 01 05.4
comp=Z,7.0nm,1.1s
TOA0 Torodi Ar. Sit 82.36 68 P P 00 01 06.2 +0.4
TOA0 IAmb IAmb 00 01 07.3
comp=Z,3.5nm,0.6s
TORD Torodi Ar. Bea 82.36 68 P P 00 01 06.3 +0.5
TORD Torodi Ar. Bea 82.36 68 P P 00 01 06.6 +0.8
comp=Z,1.6nm,0.4s,baz=262,slow=5.2,SNR=32
TORD pP pP 00 01 48.2 -1.2
comp=Z,1.0nm,0.7s,baz=298,slow=4.4,SNR=3.2
comp=Z,1.6nm,0.4s
SHPR Sheep Range 82.84 324 P P 00 01 10.0 +2.0
PDAR Pinedale Array 85.56 331 P P 00 01 22.3 +0.6
PDAR Pinedale Array 85.56 331 P P 00 01 22.7 +1.0
comp=Z,2.6nm,0.6s,baz=152,slow=5.1,SNR=23
comp=Z,2.6nm,0.6s
QRZ Quartz Range 85.69 222 P P 00 01 23.2 +0.8
QRZ IAmb IAmb 00 01 50.9
comp=Z,17nm,1.1s
NVAR Mina Array Bea 85.89 324 P P 00 01 24.9 +1.5
comp=Z,2.1nm,0.7s,baz=139,slow=5.3,SNR=5.3
comp=Z,2.1nm,0.7s
AHID Auburn Hatcher 86.17 331 P P 00 01 25.7 +1.1
AHID IAmb IAmb 00 01 26.7
comp=Z,4.6nm,0.9s
MOOW Moose Ponds 86.85 331 P P 00 01 28.7 +0.8
YHH Holmes Hill 87.76 332 P P 00 01 33.7 +1.3
ULM Lac du Bonnet 87.92 343 P P 00 01 33.0 +0.5
comp=Z,3.5nm,0.7s,baz=180,slow=3.2,SNR=8.4
comp=Z,3.5nm,0.7s
ASAR Alice Springs 117.81 204 PKP PKPdf 00 07 28.9 -0.3
comp=Z,0.2nm,0.5s,baz=159,slow=1.7,SNR=1.4
WRA Warramunga Arr 121.10 206 PKP PKPdf 00 07 35.6 0.0
comp=Z,0.5nm,0.4s,baz=161,slow=1.6,SNR=15
ARCES ARCESS Array B 123.80 25 PKP PKPdf 00 07 39.4 +0.3
comp=Z,0.5nm,0.5s,baz=234,slow=4.3,SNR=0.9
PETK Petropavlovsk- 142.38 314 PKhKP PKPpre 00 08 11.1
comp=Z,2.8nm,0.9s,baz=77,slow=8.7,SNR=5.1
BVAR Borovoye Array 146.28 45 PKPbc PKPab 00 08 24.4 +0.6
comp=Z,1.7nm,0.4s,baz=323,slow=2.0,SNR=24
BVAR pPKPbc pPKPab 00 09 08.5 -0.6
comp=Z,0.9nm,0.6s,baz=284,slow=3.0,SNR=2.9
BVAR PP PP 00 11 45.2 -1.8
comp=Z,0.8nm,1.0s,baz=287,slow=5.9,SNR=3.5
KURBB Kurchatov Arra 151.84 46 PKPbc **PKiKP** 00 08 37.9 +0.9
comp=Z,0.6nm,0.4s,baz=295,slow=2.9,SNR=14
KURBB pPKPbc **pPKPbc** 00 09 21.0 -2.0
comp=Z,0.6nm,0.8s,baz=296,slow=2.8,SNR=3.4
ZALV Zalesovo Beam 153.63 36 PKPbc **PKiKP** 00 08 41.3 +0.7
comp=Z,1.0nm,0.4s,baz=301,slow=2.2,SNR=7.5
ZALV pPKPbc **pPKPbc** 00 09 25.9 -1.0
comp=Z,0.5nm,0.5s,baz=153,slow=1.0,SNR=2.4
MKAR Makanchi Array 155.51 52 PKPab **PKPab** 00 09 01.7 -0.6
comp=Z,0.7nm,0.8s,baz=304,slow=3.3,SNR=5.8
MKAR pPKPab **pPKPab** 00 09 46.6 -0.5
comp=Z,0.1nm,0.4s,baz=90,slow=40,SNR=2.1

*INMG **04** 00:03:04.8±1.6, 42°.10N×8°.12W, h19km±3km, ML2.0, Error ellipse: s-maj=5.6km s-min=2.0km az=76.0*
*MDD **04** 00:03:04.5±0.4, 42°.11N×8°.13W, h20km, mb_Lg2.6/6, Error ellipse: s-maj=4.3km s-min=2.4km az=78.0*
ISC 04 00:03:03.4±1.0, 42°.13N±0°.02×8°.08W±0°.04, h18km±3km, n24, σ1s95/44, 1C, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGAV	**Gavieira, Arco**	**0.22**	**221**	⇑*i*Pg	**Pg**	**00 03 09.4**	**+0.7**
PGAV				*e*Sg	**Sg**	**00 03 12.7**	**+0.4**
PGAV				A	A	00 03 13.2	
	178nm,0.1s						
ELOB	**Lobios**	**0.26**	**177**	Pg	**Pb**	**00 03 10.1**	**+0.6**
ELOB				Sg	**Sb**	**00 03 13.9**	**+0.3**
ELOB				*i* Vmb_Lg		00 03 14.2	
PCAB	**Cabril**	**0.42**	**175**	*e*Pg	**Pg**	**00 03 12.6**	**+0.5**
PCAB				*e*Sg	**Sg**	**00 03 18.4**	**+0.5**
PCAB				A	A	00 03 19.1	
	203nm,0.5s						
EAGO	**Agolada(Pontev**	**0.67**	**359**	Pg	**Pb**	**00 03 17.7**	**+1.1**
EAGO				Sg	**Sb**	**00 03 27.2**	**+1.6**
POLO	**Lamas de Olo**	**0.79**	**164**	*e*P	**Pb**	**00 03 19.0**	**+0.4**
POLO				*e*S	**Sb**	**00 03 29.3**	**+0.4**
POLO				A	A	00 03 30.2	
	6.2nm,0.2s						
PVRL	**Vila Real**	**0.90**	**162**	*e*P	**Pb**	**00 03 21.1**	**+0.7**
PVRL				*e*S	**Sb**	**00 03 32.5**	**+0.5**
PVRL				A	A	00 03 33.3	
	42nm,0.1s						
ECAL	**Calabor**	**1.02**	**100**	Pg	**Pb**	**00 03 22.9**	**+0.3**
ECAL				Sg	**Sb**	**00 03 37.6**	**+2.0**
ECAL				*i* Vmb_Lg		00 03 38.7	
PBRG	**Braganca**	**1.05**	**108**	*e*P	**Pb**	**00 03 23.3**	**+0.2**
PBRG				*e*S	**Sb**	**00 03 38.1**	**+1.6**
PBRG				A	A	00 03 39.1	
	17nm,0.3s						
EMAZ	**Mazaricos**	**1.05**	**321**	Pg	**Pb**	**00 03 22.7**	**-0.4**
EMAZ				Sg	**Sb**	**00 03 37.9**	**+1.3**
EMAZ				*i* Vmb_Lg		00 03 38.6	
PTO	**Porto**	**1.06**	**202**	*e*S	**Sb**	**00 03 36.2**	**-0.6**
PTO				A	A	00 03 37.7	
	36nm,0.1s						
MVO	**Moncorvo**	**1.25**	**140**	*e*S	**Sb**	**00 03 43.1**	**+1.0**
MVO				A	A	00 03 45.0	
	9.5nm,0.2s						
EPON	**Pontenova**	**1.38**	**30**	Pn	**Pn**	**00 03 27.4**	**-0.3**
EPON				Sn	**Sn**	**00 03 43.5**	**-2.0**
EPON				Sg	**Sb**	**00 03 47.7**	**+1.7**
PVIS	**Viseu**	**1.42**	**174**	*e*S	**Sb**	**00 03 48.0**	**+0.9**
PVIS				A	A	00 03 51.8	
	17nm,0.5s						
MTE	**Manteigas**	**1.77**	**167**	*e*Pg	**Pb**	**00 03 37.4**	**+2.0**
MTE				*e*Sg	**Sb**	**00 03 58.7**	**+1.3**
MTE				A	A	00 04 00.3	
	9.7nm,0.4s						
PCAS	**Casmilo, Conde**	**2.10**	**189**	*e*Sg	**Sg**	**00 04 09.4**	**-1.6**
PCAS				A	A	00 04 15.1	
	4.1nm,0.7s						
PCBR	**Castelo Branco**	**2.33**	**169**	*e*Sg	**Sg**	**00 04 17.1**	**-1.3**
PCBR				A	A	00 04 20.4	
	3.7nm,0.4s						
EPLA	**Plasencia**	**2.56**	**143**	Pn	**Pn**	**00 03 44.7**	**+0.7**
EPLA				Sn	**Sn**	**00 04 12.9**	**-1.7**
EPLA				Sg	**Sb**	**00 04 22.8**	**+2.9**
EPLA				*i* Vmb_Lg		00 04 46.0	
PMRV	**Marv??o**	**2.75**	**169**	*e*Pg	**Pb**	**00 03 54.0**	**+2.0**
PMRV				*e*Sg	**Sg**	**00 04 29.8**	**-2.0**
PMRV				A	A	00 04 38.4	
	3.8nm,0.7s						
PMTG	**Montargil**	**3.06**	**182**	*e*Sg	**Sb**	**00 04 38.3**	**+4.0**
PMTG				A	A	00 04 45.2	
	3.6nm,0.5s						
PESTR	**Estremoz**	**3.28**	**173**	*e*Sg	**Sg**	**00 04 45.8**	**-3.0**
PESTR				A	A	00 04 50.5	
	2.3nm,0.5s						
GUD	**Guadarrama**	**3.31**	**115**	Sn	**Sn**	**00 04 30.8**	**-2.5**
GUD				Sg	**Sb**	**00 04 44.1**	**+2.6**
EBAD	**Badajoz**	**3.47**	**166**	Pn	**Pn**	**00 03 56.5**	**+0.1**
EBAD				Sn	**Sn**	**00 04 33.8**	**-3.2**
EBAD				Sg	**Sb**	**00 04 50.8**	**+4.8**
EBAD				*i* Vmb_Lg		00 05 01.1	
PAB	**San Pablo**	**3.83**	**131**	Pn	**Pn**	**00 04 02.1**	**+0.6**
PAB				*i* Vmb_Lg		00 04 18.3	
PAB				Sn	**Sn**	**00 04 44.0**	**-2.1**
PAB				Sg	**Sg**	**00 05 03.5**	**-2.9**
PBAR	**Barrancos**	**4.03**	**168**	*e*Sn	**Sn**	**00 04 47.1**	**-3.8**

*NEIC **04** 00:06:53.4±1.4, 56°.17N±0°.08×149°.4W±0°.1, h19km±6km, mb4.0/7, ML3.9/58, ML3.6(AEIC), Error ellipse: s-maj=11.9km s-min=8.2km az=177.0*
*IDC **04** 00:06:53.4±1.1, 56°.27N×149°.33W, h0km, mb3.6/9, mbtmp3.6/14, ML3.4/5, MS3.0/7, Error ellipse: s-maj=25.8km s-min=16.7km az=31.0*
*AEIC **04** 00:06:57.5±1.6, 56°.22N±0°.05×149°.3W±0°.1, h12km±6km, Error ellipse: s-maj=8.5km s-min=6.4km az=115.0*
ISC 04 00:06:53.7±0.7, 56°.32N±0°.07×149°.30W±0°.05, h10km, n252, σ1s06/253, mb3.8/13, MS3.3/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.32**	**311**	Pn	**Pn**	**00 07 31.4**	**-0.4**
KDAK	**Kodiak Island**	**2.32**	**311**		**Sn**	**00 07 57.9**	**-2.6**
KDAK	**Kodiak Island**	**2.32**	**311**	Pn	**Pn**	**00 07 31.5**	**-0.4**
	9.8nm,0.3s,baz=145,slow=5.1,SNR=88						
KDAK				Sn	**Sn**	**00 07 58.9**	**-1.5**
	23nm,0.3s,baz=44,slow=23,SNR=16						
KDAK				LR	LR	00 08 41.1	
	comp=Z,318nm,18.4s,baz=196,slow=46						
	28nm,0.4s						
OHAK	**Old Harbor**	**2.38**	**294**	Pn	**Pn**	**00 07 31.6**	**-1.0**
OHAK					**Sn**	**00 07 58.2**	**-3.5**
OHAK	**Old Harbor**	**2.38**	**294**	P	**Pn**	**00 07 31.8**	**-0.9**
	baz=113						
OHAK				S	**Sn**	**00 07 58.3**	**-3.5**
	baz=113						
SII	**Sitkinak Islan**	**2.72**	**277**	S	**Sn**	**00 08 06.3**	**-4.2**
	baz=95						
SYI	**Shuyak Island**	**2.84**	**325**	Pn	**Pn**	**00 07 38.6**	**-0.5**
SYI					**Sn**	**00 08 12.6**	**-0.7**
Q20K	**Shuyak Island**	**2.84**	**325**	P	**Pn**	**00 07 39.1**	**+0.1**
	baz=144						
Q20K				S	**Sn**	**00 08 12.7**	**-0.6**
	baz=144						
R18K	**Karluk**	**3.09**	**296**		**Pn**	**00 07 41.3**	**-1.1**
R18K				IAML		00 08 18.4	
	comp=N,218nm,0.5s						
R18K				IAML		00 08 24.1	
	comp=E,189nm,0.4s						
R18K	**Karluk**	**3.09**	**296**	P	**Pn**	**00 07 41.4**	**-1.0**
	baz=114						
CNPM	**China Poot**	**3.38**	**343**		**Pn**	**00 07 46.4**	**-0.1**
CNPM					**Sn**	**00 08 25.8**	**-0.8**
Q23K	**Middleton Isla**	**3.50**	**26**	Pn	**Pn**	**00 07 47.8**	**-0.3**
Q23K				IAML		00 08 24.8	
	comp=N,312nm,2.3s						
Q23K				IAML		00 08 30.1	
	comp=E,348nm,2.4s						
Q23K	**Middleton Isla**	**3.50**	**26**	P	**Pn**	**00 07 47.9**	**-0.1**
	baz=208						
MID	**Middleton Isla**	**3.50**	**26**	Pn	**Pn**	**00 07 47.7**	**-0.4**
MID				IAML		00 08 21.9	
	comp=E,366nm,2.5s						
MID				IAML		00 10 08.9	
	comp=N,251nm,1.6s						
MID	**Middleton Isla**	**3.50**	**26**	P	**Pn**	**00 07 47.9**	**-0.1**
Q19K	**Cape Douglas,**	**3.51**	**320**		**Pn**	**00 07 48.7**	**+0.4**
Q19K				IAML		00 08 40.7	
	comp=N,310nm,1.0s						
Q19K				IAML		00 08 55.8	
	comp=E,400nm,1.0s						
Q19K	**Cape Douglas,**	**3.51**	**320**	P	**Pn**	**00 07 48.4**	**+0.1**
	baz=138						
BRSE	**Bradley Lake S**	**3.52**	**348**		**Pn**	**00 07 48.2**	**-0.2**
BRSE	**Bradley Lake S**	**3.52**	**348**	P	**Pn**	**00 07 48.2**	**-0.2**
	baz=168						
BRSE				S	**Sn**	**00 08 27.6**	**-2.4**
	baz=168						
BRLK	**Bradley Lake**	**3.56**	**347**		**Pn**	**00 07 48.6**	**-0.3**
BRLK					**Sn**	**00 08 29.5**	**-1.5**
BRLK				IAML		00 08 35.8	
	comp=E,121nm,0.6s						
HOM	**Homer**	**3.58**	**341**	Pn	**Pn**	**00 07 49.1**	**-0.1**
HOM				IAML		00 08 42.0	
	comp=N,334nm,1.3s						
HOM				IAML		00 10 13.4	
	comp=E,306nm,2.4s						
KAHG	**Katmai Hook Gl**	**3.58**	**310**		**Pn**	**00 07 49.6**	**+0.3**
AUCH	**Augustine Cone**	**3.77**	**326**		**Pn**	**00 07 52.5**	**+0.6**
P23K	**Montague Islan**	**3.83**	**14**		**Pn**	**00 07 52.7**	**+0.1**
P23K	**Montague Islan**	**3.83**	**14**	P	**Pn**	**00 07 52.7**	**+0.1**
	baz=196						
P23K				S	**Sn**	**00 08 34.8**	**-2.7**
	baz=196						
P19K	**Oil Pt**	**3.95**	**330**	Pn	**Pn**	**00 07 54.4**	**+0.1**
P19K				IAML		00 08 45.2	
	comp=E,265nm,0.5s						
P19K				IAML		00 08 45.2	
	comp=N,193nm,0.5s						
P19K	**Oil Pt**	**3.95**	**330**	P	**Pn**	**00 07 54.3**	**+0.1**
	baz=147						
CNTC	**Contact Creek**	**4.07**	**301**		**Pn**	**00 07 56.4**	**+0.4**
Q17K	**Contact Creek**	**4.07**	**301**	P	**Pn**	**00 07 55.9**	**-0.2**
	baz=117						
O20K	**Slope Mountain**	**4.17**	**336**		**Pn**	**00 07 57.3**	**0.0**
O20K	**Slope Mountain**	**4.17**	**336**	P	**Pn**	**00 07 57.3**	**0.0**
	baz=154						
O22K	**Cooper Landing**	**4.18**	**357**		**Pn**	**00 07 57.1**	**-0.4**
IVE	**Iliamna Volcan**	**4.20**	**334**		**Pn**	**00 07 57.7**	**-0.1**
HIN	**Hinchinbrook I**	**4.35**	**19**		**Pn**	**00 07 59.9**	**+0.1**
HIN				IAML		00 08 52.6	
	comp=E,119nm,0.8s						
HIN				IAML		00 09 02.9	
	comp=N,132nm,0.7s						
P18K	**Big Mountain,**	**4.42**	**317**	Pn	**Pn**	**00 08 00.4**	**-0.4**
P18K	**Big Mountain,**	**4.42**	**317**	P	**Pn**	**00 08 00.4**	**-0.4**
	baz=133						
KAIM	**Kayak Island**	**4.45**	**34**	Pn	**Pn**	**00 08 01.4**	**+0.3**
KAIM	**Kayak Island**	**4.45**	**34**	P	**Pn**	**00 08 01.7**	**+0.5**
	baz=217						
RED	**Redoubt Volcan**	**4.50**	**337**		**Pn**	**00 08 01.2**	**-0.7**
RDSO	**Redoubt South**	**4.53**	**338**		**Pn**	**00 08 01.5**	**-0.8**
RSO	**Redoubt South**	**4.54**	**338**		**Pn**	**00 08 01.9**	**-0.6**
CAPN	**Captain Cook N**	**4.57**	**349**	Pn	**Pn**	**00 08 02.6**	**-0.2**
RDT	**Redoubt**	**4.57**	**340**		**Pn**	**00 08 02.2**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.64**	**22**		**Pn**	**00 08 04.0**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.64**	**22**	P	**Pn**	**00 08 04.2**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.64**	**22**	P	**Pn**	**00 08 04.0**	**+0.3**
	baz=205						
DFR	**Drift River**	**4.64**	**339**		**Pn**	**00 08 03.4**	**-0.5**
FID	**Port Fidalgo**	**4.69**	**17**		**Pn**	**00 08 04.1**	**-0.3**
FID				IAML		00 09 03.0	
	comp=E,86nm,0.5s						
FID				IAML		00 09 03.4	
	comp=N,70nm,1.7s						
O19K	**Port Alsworth**	**4.71**	**328**		**Pn**	**00 08 03.4**	**-1.3**
O18K	**Koktuh Hills**	**4.74**	**321**	Pn	**Pn**	**00 08 04.8**	**-0.3**
O18K				IAML		00 09 04.2	
	comp=N,52nm,2.1s						
O18K	**Koktuh Hills**	**4.74**	**321**	P	**Pn**	**00 08 04.8**	**-0.3**
	baz=137						
RAGM	**Ragged Mountai**	**4.75**	**29**		**Pn**	**00 08 05.7**	**+0.4**
SUCK	**Suckling Hills**	**4.77**	**35**		**Pn**	**00 08 05.9**	**+0.4**
SUCK				IAML		00 09 08.1	
	comp=N,141nm,1.6s						
SUCK				IAML		00 09 18.7	
	comp=E,105nm,2.2s						
P17K	**Kvichak River**	**4.79**	**310**		**Pn**	**00 08 06.2**	**+0.4**
P17K	**Kvichak River**	**4.79**	**310**	P	**Pn**	**00 08 06.2**	**+0.4**
	baz=125						
RC01	**Rabbit Creek A**	**4.79**	**357**	Pn	**Pn**	**00 08 05.7**	**-0.1**
RC01				IAML		00 09 04.2	
	comp=N,61nm,0.5s						
RC01				IAML		00 09 04.4	
	comp=E,69nm,0.4s						
RC01	**Rabbit Creek A**	**4.79**	**357**	P	**Pn**	**00 08 06.0**	**+0.1**
	baz=177						
HMT	**Hamilton**	**4.83**	**31**		**Pn**	**00 08 06.9**	**+0.5**
NICHA	**Nichawak Mount**	**4.83**	**33**		**Pn**	**00 08 07.2**	**+0.7**
GOAT	**Goat Mountain**	**4.91**	**27**		**Pn**	**00 08 07.9**	**+0.5**
BGLC	**Bering Glacier**	**4.97**	**37**		**Pn**	**00 08 09.1**	**+0.9**
BGLC	**Bering Glacier**	**4.97**	**37**	P	**Pn**	**00 08 08.7**	**+0.6**
	baz=222						
BERG	**Berg Lake**	**5.04**	**33**		**Pn**	**00 08 09.4**	**+0.2**
BERG				IAML		00 09 16.6	
	comp=E,123nm,0.5s						
GRIN	**Grindle Hills**	**5.08**	**36**		**Pn**	**00 08 10.5**	**+0.7**
CHGN	**Chignik**	**5.08**	**274**		**Pn**	**00 08 08.6**	**-1.2**
CHGN				IAML		00 08 54.2	
	comp=E,139nm,0.1s						
N20K	**Mount Spurr**	**5.13**	**344**	P	**Pn**	**00 08 10.3**	**-0.2**
	baz=162						
KNK	**Knik Glacier**	**5.

comp=E,83nm,2.6s
SNH IAML 00 09 16.9
comp=N,93nm,3.0s
DIV Divide 5.17 19 Pn 00 08 11.3 +0.3
SPCP Crater Peak Br 5.18 345 Pn 00 08 11.5 +0.2
SUA Susitna One 5.22 352 Pn 00 08 11.3 -0.5
SUA IAML 00 09 29.4
comp=N,45nm,3.1s
SUA IAML 00 11 45.0
comp=E,48nm,3.6s
SUA Susitna One 5.22 352 P Pn 00 08 11.9 +0.1
baz=172
N19K Bonanza Creek 5.26 331 Pn 00 08 12.0 -0.4
N19K Bonanza Creek 5.26 331 P Pn 00 08 12.2 -0.2
baz=148
BMRM Bremner River 5.27 26 P Pn 00 08 12.9 +0.4
baz=209
PMR Palmer 5.29 1 Pn 00 08 12.8 +0.1
PMR Palmer 5.29 1 P Pn 00 08 13.3 +0.6
PMR Palmer 5.29 1 P Pn 00 08 12.9 +0.2
baz=181
WAX Waxell Ridge 5.36 37 Pn 00 08 13.5 -0.2
STLK Strandline Lak 5.36 347 Pn 00 08 13.8 0.0
O17K Koliganek Bris 5.40 313 Pn 00 08 14.6 +0.4
O17K Koliganek Bris 5.40 313 P Pn 00 08 14.6 +0.4
baz=128
P16K Nushagak River 5.40 304 Pn 00 08 15.0 +0.9
P16K Nushagak River 5.40 304 P Pn 00 08 15.0 +0.9
baz=118
GHO Glory Hole Cre 5.48 2 Pn 00 08 15.8 +0.4
KLU Klutina 5.48 17 Pn 00 08 15.9 +0.6
KLU Klutina 5.48 17 P Pn 00 08 16.0 +0.6
baz=200
MESA MESA 5.48 42 Pn 00 08 15.6 +0.1
MESA MESA 5.48 42 P Pn 00 08 15.8 +0.3
baz=228
SML Sawmill 5.53 5 Pn Pn 00 08 16.5 +0.5
SML Sawmill 5.53 5 P Pn 00 08 16.7 +0.7
baz=186
M23K Glacier View 5.55 8 Pn 00 08 17.0 +0.7
M23K Glacier View 5.55 8 P Pn 00 08 17.0 +0.7
baz=189
N18K Kilae Creek 5.58 324 Pn 00 08 15.9 -0.7
N18K Kilae Creek 5.58 324 P Pn 00 08 16.2 -0.4
baz=140
SCM Sheep Creek Mo 5.63 10 Pn 00 08 18.1 +0.7
SCM Sheep Creek Mo 5.63 10 P Pn 00 08 18.2 +0.8
baz=191
ISLE Juniper Island 5.64 37 Pn 00 08 18.0 +0.4
BAGL Bagley Icefiel 5.65 39 Pn 00 08 17.9 +0.4
O16K Kokwok River B 5.72 309 Pn 00 08 18.9 +0.4
O16K Kokwok River B 5.72 309 P Pn 00 08 18.5 0.0
baz=122
VRDI Verde Repeater 5.79 29 Pn Pn 00 08 20.0 +0.3
SKT Skwentna 5.80 350 Pn Pn 00 08 19.8 +0.1
SKT Skwentna 5.80 350 P Pn 00 08 20.0 +0.4
baz=168
SVW2 Sparrevohn 5.80 328 Pn Pn 00 08 19.4 -0.4
N25K Chitina, Valde 5.84 23 Pn 00 08 20.7 +0.4
N25K Chitina, Valde 5.84 23 P Pn 00 08 20.8 +0.5
baz=206
GLB Gilahina Butte 5.88 27 Pn Pn 00 08 21.0 +0.3
SAMH Samovar Hills 5.91 46 Pn 00 08 22.2 +1.0
N17K Nushagak Hills 5.92 319 Pn 00 08 21.3 +0.1
N17K Nushagak Hills 5.92 319 P Pn 00 08 20.9 -0.4
baz=133
M20K Styx River 5.92 342 Pn 00 08 20.8 -0.6
M20K Styx River 5.92 342 P Pn 00 08 21.1 -0.3
baz=159
TABL Table Mountain 5.96 43 Pn 00 08 22.5 +0.4
CNBA Chernabura Isl 6.03 260 Pn Pn 00 08 20.7 -2.0
M24K Tolsona, Glenn 6.03 14 Pn 00 08 23.9 +1.1
M24K Tolsona, Glenn 6.03 14 P Pn 00 08 24.1 +1.2
baz=197
MCARA McCarthy VSAT 6.04 30 Pn 00 08 23.6 +0.8
MCARA McCarthy VSAT 6.04 30 P Pn 00 08 23.7 +0.8
baz=215
PCA Pinnacle 6.10 48 Pn 00 08 24.5 +0.7
PINM Pinnacle 6.10 48 P Pn 00 08 24.6 +0.7
baz=235
M19K Big River Lodg 6.19 337 Pn 00 08 24.4 -0.5
M19K Big River Lodg 6.19 337 P Pn 00 08 24.8 -0.2
baz=153
M18K Stony River 6.19 330 Pn 00 08 24.4 -0.6
M18K Stony River 6.19 330 P Pn 00 08 24.4 -0.6
baz=145
BARN Barnard Glacie 6.20 37 Pn 00 08 26.0 +0.7
CTG Chitna Glacier 6.24 38 P Pn 00 08 26.5 +0.6
baz=225
PNL Peninsula 6.25 53 P Pn 00 08 26.9 +1.1
PNL Peninsula 6.25 53 P Pn 00 08 26.7 +0.9
baz=241
LOGN Logan Glacier 6.26 40 Pn 00 08 26.3 +0.1
BCPM Bancas Point 6.28 51 Pn 00 08 27.1 +0.8
O15K Ungalikthiuk R 6.32 301 Pn 00 08 27.5 +0.6
O15K Ungalikthiuk R 6.32 301 P Pn 00 08 27.2 +0.4
baz=113
WAT6 Susitna Watana 6.34 7 Pn 00 08 27.6 +0.4
WAT6 Susitna Watana 6.34 7 P Pn 00 08 27.8 +0.7
baz=188
WAZA Wrangell Mount 6.35 22 Pn 00 08 28.2 +0.7
HARP HAARP 6.46 17 Pn 00 08 29.8 +1.1
HARP HAARP 6.46 17 P Pn 00 08 29.7 +1.0
baz=201
N16K Nishlik Lake 6.49 314 Pn 00 08 29.4 +0.2
N16K Nishlik Lake 6.49 314 P Pn 00 08 29.4 +0.2
baz=127
L19K White Mountain 6.54 336 Pn 00 08 29.4 -0.4
L19K White Mountain 6.54 336 P Pn 00 08 29.4 -0.4
baz=152
WAT7 Susitna Watana 6.54 2 Pn 00 08 30.9 +0.9
M17K Holitna River 6.62 324 Pn 00 08 30.6 -0.3
M17K Holitna River 6.62 324 P Pn 00 08 30.9 0.0
baz=138
DHY Denali Highway 6.85 7 Pn 00 08 35.3 +1.1
DHY Denali Highway 6.85 7 P Pn 00 08 35.5 +1.3
baz=189
N15K Kwethluk River 6.88 309 Pn 00 08 35.1 +0.6
M16K Timber Creek 6.90 317 P Pn 00 08 35.1 +0.4
baz=130
O29M Mount Kennedy 6.92 50 P Pn 00 08 35.9 +0.8
baz=239
PAX Paxson 6.95 15 Pn 00 08 36.5 +1.0
PAX Paxson 6.95 15 P Pn 00 08 36.1 +0.5
baz=198
P29M Windy Craggy 6.99 57 Pn 00 08 36.2 +0.2
P29M Windy Craggy 6.99 57 P Pn 00 08 35.8 -0.2
baz=246
L18K Granite Mounta 7.03 330 Pn 00 08 35.9 -0.5
L18K Granite Mounta 7.03 330 P Pn 00 08 36.1 -0.3
baz=145
RND Reindeer 7.12 2 Pn 00 08 38.9 +1.1
M27K Edge Creek, AK 7.15 29 P Pn 00 08 38.7 +0.4
baz=215
TRF Thorofare Moun 7.18 356 Pn 00 08 39.1 +0.4
TRF Thorofare Moun 7.18 356 P Pn 00 08 39.0 +0.3
baz=176
MENT Mentasta 7.22 21 Pn Pn 00 08 40.1 +0.9
CAST Castle Rocks 7.26 350 Pn 00 08 40.3 +0.6
CAST Castle Rocks 7.26 350 P Pn 00 08 39.8 +0.1
baz=168
S31K Pelican 7.30 72 Pn Pn 00 08 38.4 -1.8
S31K Pelican 7.30 72 P Pn 00 08 39.2 -1.0
baz=262
KTH Kantishna Hill 7.31 354 Pn Pn 00 08 41.1 +0.7
L26K Log Cabin Wild 7.37 22 Pn 00 08 42.5 +1.3
TTA Tatalina 7.45 336 Pn Pn 00 08 41.8 -0.6
TTA Tatalina 7.45 336 P Pn 00 08 42.1 -0.3
L16K Owhat River 7.53 320 Pn 00 08 43.3 -0.1
L16K Owhat River 7.53 320 P Pn 00 08 43.3 -0.1
baz=132
PLBC Pleasant Camp 7.58 60 Pn 00 08 44.6 +0.6
PLBC Pleasant Camp 7.58 60 P Pn 00 08 44.1 +0.1
baz=250
HYT Haines Junctio 7.64 49 Pn Pn 00 08 45.9 +0.8
SIT Sitka 7.73 79 Pn Pn 00 08 44.0 -2.1
SIT Sitka 7.73 79 P Pn 00 08 45.1 -1.0
baz=270
BCAR Beaver Creek A 7.76 26 Pn Pn 00 08 47.3 +0.7
BPAW Bear Paw Mtn. 7.86 355 Pn Pn 00 08 48.5 +0.6
K17K Iditarod 7.88 328 P Pn 00 08 47.8 -0.4
baz=141
J18K Innoko River 8.08 336 Pn 00 08 50.5 -0.5
J18K Innoko River 8.08 336 P Pn 00 08 50.7 -0.2
baz=150
SKAG Skagway 8.08 61 P Pn 00 08 52.1 +1.2
BESE Bessie Mountai 8.12 68 Pn 00 08 51.2 -0.3
SCRK Sand Creek 8.13 17 Pn Pn 00 08 52.6 +0.9
S32K Killisnoo 8.15 76 Pn Pn 00 08 51.1 -0.7
S32K Killisnoo 8.15 76 P Pn 00 08 50.7 -1.1
baz=267
O30N Mendenhall 8.22 52 Pn Pn 00 08 53.5 +0.6
JIS Juneau Island 8.31 70 Pn Pn 00 08 53.5 -0.6
JIS Juneau Island 8.31 70 P Pn 00 08 55.1 +1.0
CCB Clear Creek Bu 8.39 4 Pn 00 08 55.6 +0.5
IL31 8.57 7 Pn 00 08 58.7 +1.2
ILAR Eielson Array 8.57 7 Pn Pn 00 08 58.2 +0.6
ILAR Eielson Array 8.57 7 Pn Pn 00 08 57.6 0.0
comp=E,0.4nm,0.3s,baz=187,slow=13,SNR=9.9
ILAR Sn Sn 00 10 28.0 -6.2
comp=E,0.1nm,0.3s,baz=204,slow=18,SNR=1.3
ILAR LR LR 00 11 53.7
comp=E,20nm,20.5s,baz=287,slow=35
comp=E,0.9nm,0.4s
L14K Kuka Creek 8.57 312 Pn 00 08 58.4 +0.8
K15K Wolf Creek Mou 8.65 319 Pn Pn 00 08 59.3 +0.5
N31M Braeburn, Yuko 8.70 48 P Pn 00 09 01.1 +1.7
baz=239
WHY Whitehorse 8.71 54 Pn 00 09 00.5 +0.8
I23K Minto, Yukon-K 8.86 360 Pn 00 09 02.6 +0.9
P32M Atlin 8.91 62 Pn Pn 00 09 02.8 +0.4
P32M Atlin 8.91 62 P Pn 00 09 03.0 +0.6
baz=255
M30M Minto, Yukon 8.93 40 P Pn 00 09 04.8 +2.1
baz=231
U33K Whale Pass 9.02 85 Pn Pn 00 09 01.4 -2.3
CRAG Craig 9.13 89 Pn Pn 00 09 03.3 -2.0
DAWY Dawson 9.20 28 Pn Pn 00 09 06.8 +0.5
P33M Teslin, Yukon 9.52 59 Pn Pn 00 09 10.7 0.0
P33M Teslin, Yukon 9.52 59 P Pn 00 09 11.2 +0.6
baz=252
H21K Melozitna Rive 9.53 351 Pn 00 09 10.5 -0.2
H21K Melozitna Rive 9.53 351 P Pn 00 09 12.5 +1.8
baz=168
N32M Quiet Lake 9.71 53 Pn Pn 00 09 13.6 +0.2
H18K Honhosa River 9.90 337 Pn Pn 00 09 15.4 -0.4
S34M Telegraph Cree 10.01 73 Pn Pn 00 09 14.8 -2.6
R33M Jennings River 10.24 65 Pn Pn 00 09 21.1 +0.4
J30M Hart River 10.45 32 Pn 00 09 24.9 +1.5
DLBC Dease Lake 10.62 70 Pn Pn 00 09 25.9 +0.2
DLBC Dease Lake 10.62 70 Pn Pn 00 09 27.0 +1.3
comp=E,0.6nm,0.3s,baz=284,slow=7,2,SNR=13
DLBC Sn Sn 00 11 21.6 -2.9
comp=E,0.2nm,0.3s,baz=180,slow=20,SNR=1.5
comp=E,1.2nm,0.3s
BMAR Burnt Mountain 11.37 9 Pn Pn 00 09 36.8 +0.8
ANM Nome 11.43 323 Pn Pn 00 09 37.7 +0.9
F17K Baldwin Pennin 11.63 336 Pn Pn 00 09 40.6 +1.1
E19K Redstone River 11.78 345 Pn Pn 00 09 42.3 +0.8
BBB Bella Bella 13.04 100 LR LR 00 13 00.8
comp=E,29nm,19.1s,baz=255,slow=28
INK Inuvik 14.02 25 Pn Pn 00 10 12.5 +0.5
INK Inuvik 14.02 25 Pn Pn 00 10 14.4 +2.4
comp=E,0.1nm,0.3s,baz=216,slow=13,SNR=3.7
INK LR LR 00 15 13.0
comp=E,102nm,18.2s,baz=122,slow=36
comp=E,0.4nm,0.4s
B22K Teshekpuk Lake 14.20 354 Pn Pn 00 10 14.9 +0.5
C36M Paulatuk 17.22 31 Pn 00 10 54.7 +0.9
YKA Yellowknife Ar 18.53 56 P P 00 11 08.8 -1.2
YKA Yellowknife Ar 18.53 56 P Pn 00 11 11.6 +1.5
comp=E,0.1nm,0.3s,baz=266,slow=11,SNR=6.5
comp=E,0.6nm,0.9s
A36M Sachs Harbour 18.65 23 P P 00 11 11.6 +0.4
A36M IAmb IAmb 00 11 26.5
comp=Z,12nm,0.8s
DBO Dodson Butte 21.24 117 P P 00 11 37.4 -2.4
DBO IAmb IAmb 00 11 52.2
comp=Z,12nm,1.4s
K02D Willamette Mer 21.35 119 P P 00 11 38.7 -2.2
HUMO Hull Mountain 21.76 118 P P 00 11 45.4 +0.2
HUMO IAmb IAmb 00 11 49.0
comp=Z,4.7nm,0.9s
J05D Fort Rock, OR 22.13 114 P P 00 11 46.1 -3.2
J05D IAmb IAmb 00 11 52.6
comp=Z,2.8nm,0.7s
YBH Yreka Blue Hor 22.54 119 LR LR 00 18 29.8
comp=Z,53nm,20.9s,baz=22,slow=31
NVAR Mina Array Bea 27.24 118 P P 00 12 38.9 +1.0
comp=Z,0.7nm,0.8s,baz=327,slow=9.7,SNR=4.4
comp=Z,0.7nm,0.8s
RES Resolute Bay 27.54 28 LR LR 00 23 59.2
comp=Z,69nm,18.2s,baz=25,slow=37
FRB Frobisher Bay 38.41 45 LR LR 00 29 50.1
comp=Z,58nm,20.3s,baz=168,slow=36
TXAR Lajitas Array 41.85 111 P P 00 14 45.5 +1.8
comp=Z,0.4nm,0.8s,baz=322,slow=5.7,SNR=2.8
comp=Z,0.4nm,0.8s
H11N2 WAKE ISLAND Hy 48.89 240 T T 01 08 19.4
baz=31,slow=76,SNR=28
H11N3 WAKE ISLAND Hy 48.90 240 T T 01 08 23.0
baz=31,slow=76,SNR=27
H11N1 WAKE ISLAND Hy 48.91 240 T T 01 08 25.7
baz=31,slow=76,SNR=24
H11S1 WAKE ISLAND Hy 50.03 239 T T 01 09 43.6
baz=30,slow=76,SNR=26
H11S2 WAKE ISLAND Hy 50.05 239 T T 01 10 06.2
baz=30,slow=76,SNR=24
H11S3 WAKE ISLAND Hy 50.05 239 T T 01 09 49.0
baz=30,slow=76,SNR=23
SONM Songino Array 56.61 310 P P 00 16 52.3 +1.7
comp=Z,0.5nm,0.6s,baz=29,slow=7.0,SNR=4.7
comp=Z,0.5nm,0.6s
ZALV Zalesovo Beam 61.53 327 P P 00 17 11.6 +1.3
comp=Z,0.3nm,0.4s,baz=46,slow=4.2,SNR=2.8
comp=Z,0.3nm,0.4s
NOA NORSAR Array B 61.98 11 P P 00 17 13.9 +0.6
comp=Z,0.3nm,0.5s,baz=328,slow=7.9,SNR=1.2
comp=Z,0.3nm,0.5s
FINES FINESS Array B 62.52 3 P P 00 17 17.8 +0.9
comp=Z,1.1nm,0.8s,baz=355,slow=9.6,SNR=4.5
comp=Z,1.1nm,0.8s
BVAR Borovoye Array 66.25 335 P P 00 17 43.8 +2.4
comp=Z,0.2nm,0.3s,baz=12,slow=7.4,SNR=1.9
comp=Z,0.2nm,0.3s
MK31 Makanchi Array 68.56 325 P P 00 17 55.0 -1.2
MK31 IAmb IAmb 00 18 13.8
comp=Z,1.5nm,1.5s
MKAR Makanchi Array 68.56 325 P P 00 17 56.1 -0.1
MKAR Makanchi Array 68.56 325 P P 00 17 57.5 +1.3
comp=Z,0.2nm,0.4s,baz=34,slow=5.6,SNR=12
comp=Z,0.2nm,0.4s
AKASG Malin Array Be 73.34 1 P P 00 18 26.0 +1.0
comp=Z,0.2nm,0.3s,baz=358,slow=5.3,SNR=3.0
comp=Z,0.2nm,0.3s

*ISN **04** 00:32:17.0±0.9,33°.53N×45°.70E,h1km±4km,ML2.8*
*TEH **04** 00:32:18.0,33°.54N×45°.70E,h12km±37km,ML2.9*
ISC 04 00:32:18.3±1.1,33°.52N±0°.04×45°.72E±0°.04,h13km,n10,
σ0°69/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.42**	**75**	Pg	**Pg**	**00 32 26.8**	**0.0**
ILBA				Sg	**Sg**	**00 32 33.4**	**+0.9**
IBDR	**Badra**	**0.44**	**156**	*e*Pg	**Pg**	**00 32 27.0**	**-0.1**
IBDR				*e*Sg	**Sg**	**00 32 33.0**	**0.0**
IBDR				AML	AML	00 32 58.8	
	comp=N,541nm,1.1s						
IBDR				AML	AML	00 33 01.3	
	comp=E,327nm,0.7s						
KGS1	**Ghasr-e-Shirin**	**0.99**	**354**	Pg	**Pg**	**00 32 37.0**	**-0.5**
IGHG	**Ghaleghazi**	**1.08**	**41**	Pg	**Pb**	**00 32 38.5**	**-0.4**
BHD	**Baghdad**	**1.14**	**258**	*e*Pg	**Pg**	**00 32 40.0**	**-0.3**
BHD				*e*Sg	**Sn**	**00 32 57.0**	**+1.5**
BHD				AML	AML	00 33 08.5	
	comp=E,440nm,0.5s						
IDHR	**Dehrash**	**1.30**	**25**	Pg	**Pb**	**00 32 42.4**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.34**	**55**	Pg	**Pg**	**00 32 44.0**	**-0.1**
ILIN	**Lien**	**1.74**	**36**	Pg	**Pb**	**00 32 50.4**	**+0.1**
RAFI	**Al-Rafai**	**1.82**	**169**	*e*Pn	**Pb**	**00 32 51.0**	**-0.5**
RAFI				*e*Sn	**Sg**	**00 33 17.0**	**+0.1**
IBZA	**Bozab**	**2.02**	**61**	Pn	**Pb**	**00 32 53.9**	**-1.2**

*IDC **04** 01:06:12.3±7.4,20°.81N×145°.53E,h58km±65km,mb3.5/10,*
mbtmp3.8/11,ML2.9/1,Error ellipse: s-maj=44.7km
s-min=20.2km az=79.0
ISC 04 01:06:09.8±1.1,20°.8N±0°.1×145°.6E±0°.3,h35km,n14,
σ0°82/11,mb3.6/10,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**16.95**	**339**	P	**Pn**	**01 10 03.6**	**-0.6**
	baz=164,slow=11,SNR=2.0						
	2.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**20.02**	**93**	T	T	01 31 04.5	
	baz=280						
H11S1	**WAKE ISLAND Hy**	**20.04**	**93**	T	T	01 30 53.8	
	baz=280						
H11S2	**WAKE ISLAND Hy**	**20.04**	**93**	T	T	01 30 55.3	
	baz=280						
KSRS	**Korea Array**	**22.58**	**321**	P	**P**	**01 11 08.6**	**+1.4**
	1.6nm,0.7s,baz=147,slow=8.4,SNR=6.0						
	1.6nm,0.7s						
SONM	**Songino Array**	**41.45**	**320**	P	**P**	**01 13 53.5**	**+0.3**
	0.3nm,0.5s,baz=109,slow=7.8,SNR=2.6						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**41.95**	**196**	P	**P**	**01 13 57.2**	**-0.2**
	0.7nm,0.6s,baz=15,slow=8.5,SNR=2.9						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**45.63**	**195**	P	**P**	**01 14 27.3**	**+0.3**
	0.4nm,0.8s,baz=13,slow=6.2,SNR=4.7						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**56.29**	**322**	P	**P**	**01 15 46.5**	**-0.3**
	0.7nm,0.7s,baz=108,slow=13,SNR=3.8						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**56.94**	**313**	P	**P**	**01 15 52.2**	**+0.6**
	0.3nm,0.5s,baz=90,slow=7.9,SNR=6.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**59.69**	**317**	P	**P**	**01 16 09.6**	**-1.1**
	0.8nm,0.3s,baz=92,slow=7.6,SNR=6.6						
	0.8nm,0.3s						
BVAR	**Borovoye Array**	**64.79**	**320**	P	**P**	**01 16 45.0**	**+0.2**
	1.9nm,0.5s,baz=87,slow=7.7,SNR=15						
	1.9nm,0.5s						
NVAR	**Mina Array Bea**	**81.95**	**52**	P	**P**	**01 18 27.0**	**+0.5**
	0.3nm,0.6s,baz=251,slow=2.8,SNR=4.0						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**84.94**	**335**	P	**P**	**01 18 40.0**	**-1.0**
	1.5nm,0.7s,baz=67,slow=4.7,SNR=8.2						
	1.5nm,0.7s						

*NEIC **04** 01:18:08.7±1.8,51°.6N±0°.1×175°.26W±0°.07,h39km±10km,*
mb4.1/84,ML4.1(AEIC),Error ellipse: s-maj=17.5km
s-min=4.5km az=165.0
*AEIC **04** 01:18:08.2±2.1,51°.7N±0°.1×175°.24W±0°.07,h26km±6km,*
Error ellipse: s-maj=18.5km s-min=3.8km az=163.0
*IDC **04** 01:18:11.8±3.5,51°.93N×175°.35W,h74km±31km,mb3.6/17,*
mbtmp4.0/20,MS3.3/16,Error ellipse: s-maj=18.9km
s-min=11.3km az=163.0
ISC 04 01:18:08.8±0.6,51°.70N±0°.10×175°.28W±0°.04,h47km,
n162,σ1°$40/149,mb4.1/34,MS3.2/13,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSMY	**Great Sitkin M**	**0.59**	**306**		**Pn**	**01 18 21.0**	**0.0**
GSCK	**Great Sitkin C**	**0.63**	**300**		**Pn**	**01 18 21.4**	**0.0**
ATKA	**Atka Island**	**0.84**	**53**		**Pn**	**01 18 23.4**	**-0.8**
ATKA					**Sn**	**01 18 34.7**	**-0.7**
ADK	**Adak**	**0.89**	**282**		**Pn**	**01 18 24.2**	**-0.7**
ADK					**Sn**	**01 18 36.3**	**-0.4**
KOKL	**Mount Kliuchef**	**0.91**	**47**		**Pn**	**01 18 25.3**	**0.0**
KOWE	**Korovin West**	**0.92**	**43**		**Pn**	**01 18 25.6**	**+0.3**
KOFP	**Korovin Flat P**	**0.93**	**52**		**Pn**	**01 18 25.4**	**-0.1**
KOSE	**Korovin Southe**	**1.00**	**49**		**Pn**	**01 18 26.6**	**+0.2**
KOSE					**Sn**	**01 18 40.6**	**+1.3**
KIRH	**Kanaga Island**	**1.14**	**281**		**Pn**	**01 18 28.3**	**0.0**
KIWB	**Kanaga Island**	**1.17**	**278**		**Pn**	**01 18 28.3**	**-0.4**
KIWB					**Sn**	**01 18 44.2**	**+0.7**
KICM	**Kanaga Island**	**1.21**	**281**		**Pn**	**01 18 29.2**	**+0.1**
TAFP	**Tanaga Falls P**	**1.69**	**278**		**Sn**	**01 18 59.3**	**+3.1**
TASE	**Tanaga Southea**	**1.72**	**275**		**Pn**	**01 18 36.6**	**+0.4**
TANO	**Tanaga North**	**1.77**	**278**		**Pn**	**01 18 37.8**	**+0.8**
GALAA	**Gareloi Lava P**	**2.17**	**273**		**Pn**	**01 18 43.8**	**+1.4**
GANO	**Gareloi North**	**2.19**	**274**		**Pn**	**01 18 43.7**	**+1.0**
NIKH	**Nikolski High**	**4.14**	**70**		**Pn**	**01 19 10.7**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**4.73**	**66**		**Pn**	**01 19 19.1**	**+1.5**
MAPS	**Pakushin South**	**5.49**	**64**		**Pn**	**01 19 29.7**	**+1.8**
MREP	**Makushin Rep't**	**5.60**	**65**		**Pn**	**01 19 31.4**	**+2.0**
UNV	**Unalaska Valle**	**5.74**	**65**		**Pn**	**01 19 32.4**	**+1.0**
SHEM	**Shemya Is, Ala**	**6.61**	**283**	LR	LR	01 21 53.1	
	comp=Z,173nm,18.8s,baz=149,slow=34						
O14K	**Tigyukauivet M**	**10.96**	**41**	Pn	**Pn**	**01 20 45.6**	**+2.9**
M14K	**Bethel**	**11.69**	**34**	Pn	**Pn**	**01 20 57.0**	**+4.4**
N15K	**Kwethluk River**	**11.99**	**39**	Pn	**Pn**	**01 20 60.0**	**+3.2**
L16K	**Owhat River**	**13.22**	**35**	Pn	**Pn**	**01 21 14.8**	**+1.2**
N17K	**Nushagak Hills**	**13.37**	**42**	Pn	**Pn**	**01 21 17.1**	**+1.5**
O18K	**Koktuh Hills**	**13.89**	**46**	Pn	**Pn**	**01 21 25.9**	**+3.2**
ANM	**Nome**	**13.89**	**18**		**Pn**	**01 21 26.1**	**+3.4**
OHAK	**Old Harbor**	**13.90**	**58**	Pn	**Pn**	**01 21 26.8**	**+3.9**
J16K	**Anvik River**	**13.99**	**28**	Pn	**P**	**01 21 28.6**	**-2.2**
Q19K	**Cape Douglas,**	**14.24**	**51**	P	**P**	**01 21 33.9**	**+0.2**
KDAK	**Kodiak Island**	**14.41**	**56**	P	**P**	**01 21 35.0**	**-0.5**
KDAK	**Kodiak Island**	**14.41**	**56**	P	**Pn**	**01 21 29.0**	**-0.6**
	6.2nm,0.7s,baz=278,slow=23,SNR=1.0						
KDAK				S	**Sn**	**01 24 10.1**	**+2.2**
	26nm,1.1s,baz=328,slow=22,SNR=2.1						
KDAK				LR	LR	01 27 57.5	
	comp=Z,174nm,18.7s,baz=231,slow=41						
J18K	**Innoko River**	**15.35**	**33**	P	**P**	**01 21 48.5**	**+2.6**
CNPM	**China Poot**	**15.61**	**51**	Pn	**Pn**	**01 21 46.6**	**+1.2**
BRLK	**Bradley Lake**	**15.86**	**50**	Pn	**Pn**	**01 21 49.5**	**+1.0**
K20K	**Telida**	**16.21**	**36**	P	**P**	**01 21 57.1**	**+1.7**
K20K				IAmb	IAmb	01 22 12.3	
	comp=Z,18nm,1.4s						
F17K	**Baldwin Pennin**	**16.38**	**20**	P	**P**	**01 21 59.5**	**+2.3**
SKT	**Skwentna**	**16.47**	**42**		**P**	**01 21 59.1**	**+0.8**
SKT				IAmb	IAmb	01 22 08.0	
	comp=Z,22nm,1.5s						
PEA0B	**Petropavlovsk-**	**16.51**	**286**	Pn	**Pn**	**01 21 57.6**	**+0.8**
PETK	**Petropavlovsk-**	**16.51**	**286**	P	**Pn**	**01 21 58.1**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=75,slow=17,SNR=4.8						
PETK				LR	LR	01 27 42.2	
	comp=Z,88nm,19.7s,baz=93,slow=35						
SUA	**Susitna One**	**16.57**	**44**		**P**	**01 21 59.7**	**+0.1**
SUA				IAmb	IAmb	01 22 19.6	
	comp=Z,22nm,1.4s						
O22K	**Cooper Landing**	**16.65**	**48**	Pn	**Pn**	**01 21 59.0**	**+0.6**
J20K	**Nowinta River**	**16.68**	**33**		**Pn**	**01 22 00.1**	**+1.3**
H19K	**Roundabout Mou**	**16.87**	**28**	P	**P**	**01 22 04.3**	**+1.7**
RC01	**Rabbit Creek A**	**16.87**	**46**	Pn	**Pn**	**01 22 01.8**	**+0.6**
RC01				IAmb	IAmb	01 22 45.7	
	comp=Z,30nm,1.4s						
CAST	**Castle Rocks**	**16.98**	**37**	P	**P**	**01 22 05.2**	**+1.2**
G19K	**Purcell Mounta**	**17.14**	**26**	P	**P**	**01 22 07.6**	**+1.9**
KTH	**Kantishna Hill**	**17.49**	**38**	P	**P**	**01 22 11.3**	**+1.6**
KTH				IAmb	IAmb	01 22 14.4	
	comp=Z,21nm,1.0s						
GHO	**Glory Hole Cre**	**17.49**	**45**		**Pn**	**01 22 09.7**	**+0.7**
GHO				IAmb	IAmb	01 22 37.0	
	comp=Z,33nm,1.5s						
KNK	**Knik Glacier**	**17.56**	**46**	Pn	**Pn**	**01 22 09.7**	**-0.1**
TRF	**Thorofare Moun**	**17.68**	**39**	P	**Pn**	**01 22 12.3**	**+0.9**
BPAW	**Bear Paw Mtn.**	**17.76**	**36**		**P**	**01 22 14.6**	**+2.0**
BPAW				IAmb	IAmb	01 22 19.2	
	comp=Z,18nm,1.4s						
SML	**Sawmill**	**17.77**	**45**		**Pn**	**01 22 12.5**	**+0.1**
SML				IAmb	IAmb	01 22 39.7	
	comp=Z,28nm,1.5s						
IMAR	**Indian Mountai**	**17.98**	**29**		**P**	**01 22 17.4**	**+2.4**
I21K	**Tanana**	**18.03**	**33**	P	**Pn**	**01 22 17.2**	**+1.7**
I21K				IAmb	IAmb	01 22 20.7	
	comp=Z,17nm,1.1s						
HIN	**Hinchinbrook I**	**18.14**	**50**		**P**	**01 22 16.1**	**-0.7**
F20K	**Avaraart Lake**	**18.19**	**25**	P	**Pn**	**01 22 20.1**	**+2.7**
SCM	**Sheep Creek Mo**	**18.22**	**45**	P	**P**	**01 22 18.1**	**+0.4**
RND	**Reindeer**	**18.23**	**40**	P	**P**	**01 22 18.3**	**+0.5**
RND				IAmb	IAmb	01 22 22.0	
	comp=Z,8.0nm,0.7s						
MCK	**McKinley**	**18.35**	**39**	P	**P**	**01 22 19.7**	**+0.7**
BWN	**Browne**	**18.36**	**37**	P	**P**	**01 22 19.9**	**+0.7**
MLY	**Manley**	**18.37**	**34**	P	**P**	**01 22 19.9**	**+0.6**
BILL	**Bilibino**	**18.68**	**338**	P	**P**	**01 22 23.6**	**+1.1**
BILL				I

I23K	**Minto, Yukon-K**	**18.92**	**35**	P		**Pn**	**01 22 27.0 +0.8**
C19K	**Lookout Ridge**	**18.98**	**17**			**Pn**	**01 22 28.0 +0.9**
C19K				IAmb		IAmb	01 22 34.3
	comp=Z,21nm,1.4s						
CCB	**Clear Creek Bu**	**19.23**	**37**	P		**P**	**01 22 28.2 -0.4**
MDM	**Murphy Dome**	**19.23**	**36**	P		**P**	**01 22 29.1 +0.5**
MDM				IAmb		IAmb	01 22 44.7
	comp=Z,9.8nm,0.9s						
N25K	**Chitina, Valde**	**19.37**	**47**	P		**P**	**01 22 31.3 +0.9**
N25K				IAmb		IAmb	01 22 35.3
	comp=Z,18nm,1.4s						
SUCK	**Suckling Hills**	**19.39**	**52**	P		**P**	**01 22 30.0 -0.4**
HDA	**Harding Lake**	**19.44**	**38**	P		**P**	**01 22 32.0 +1.0**
HDA				IAmb		IAmb	01 22 46.3
	comp=Z,7.5nm,0.7s						
POKR	**Poker Plat Res**	**19.60**	**36**	P		**Pn**	**01 22 34.4 0.0**
IL31		**19.63**	**37**	P		**P**	**01 22 33.9 +0.9**
ILAR	**Eielson Array**	**19.63**	**37**	P		**P**	**01 22 31.4 -1.7**
	comp=Z,1.2nm,0.7s,baz=244,slow=11,SNR=66						
ILAR				S		**S**	**01 26 08.1 -3.7**
	comp=Z,0.2nm,0.8s,baz=225,slow=20,SNR=1.4						
VRDI	**Verde Repeater**	**19.80**	**49**	P		**Pn**	**01 22 36.8 -0.2**
VRDI				IAmb		IAmb	01 23 14.8
	comp=Z,14nm,1.5s						
MCARA	**McCarthy VSAT**	**20.04**	**49**	P		**P**	**01 22 35.6 -1.9**
MCARA				IAmb		IAmb	01 22 53.1
	comp=Z,19nm,1.2s						
J25K	**Salcha River,**	**20.14**	**39**	P		**P**	**01 22 38.0 -0.6**
J25K				IAmb		IAmb	01 22 55.6
	comp=Z,9.6nm,0.9s						
ISLE	**Juniper Island**	**20.19**	**51**	Pn		Pn	01 22 42.6 +1.1
B20K	**Meade River**	**20.21**	**18**	P		**P**	**01 22 40.5 +1.3**
B20K				IAmb		IAmb	01 22 43.9
	comp=Z,16nm,1.4s						
MESA	**MESA**	**20.30**	**52**	P		**P**	**01 22 41.1 +0.6**
D22K	**Ayikyak River**	**20.32**	**24**	P		Pn	01 22 42.5 -0.3
D22K				IAmb		IAmb	01 22 43.4
	comp=Z,6.8nm,0.8s						
L26K	**Log Cabin Wild**	**20.37**	**44**	P		**P**	**01 22 42.3 +1.2**
PRP	**Porcupine Dome**	**20.50**	**36**	P		**P**	**01 22 43.7 +1.2**
PRP				IAmb		IAmb	01 22 51.6
	comp=Z,11nm,1.5s						
SEY	**Seymchan**	**20.51**	**316**	P		**P**	**01 22 41.4 -1.2**
	comp=Z,1.2nm,0.7s,baz=95,slow=14,SNR=1.8						
SEY				LR		LR	01 30 38.3
	comp=Z,104nm,19.7s,baz=354,slow=37						
	comp=Z,1.2nm,0.7s						
CTGM	**Chitina Glacie**	**20.75**	**50**	P		**P**	**01 22 46.9 +1.5**
CTGM				IAmb		IAmb	01 23 27.4
	comp=Z,22nm,1.5s						
LOGN	**Logan Glacier**	**20.88**	**51**	P		**P**	**01 22 48.9 +2.1**
LOGN				IAmb		IAmb	01 23 11.6
	comp=Z,14nm,1.2s						
D24K	**Happy Valley**	**21.51**	**26**	P		**P**	**01 22 55.0 +1.7**
D24K				IAmb		IAmb	01 22 57.1
	comp=Z,10nm,0.8s						
BMAR	**Burnt Mountain**	**21.77**	**32**	P		**P**	**01 22 58.3 +2.1**
E25K	**Arctic Village**	**21.83**	**30**	P		**P**	**01 22 58.0 +1.2**
E25K				IAmb		IAmb	01 23 00.5
	comp=Z,8.4nm,1.0s						
DAWY	**Dawson**	**22.37**	**43**	P		**P**	**01 23 03.5 +0.8**
DAWY				IAmb		IAmb	01 23 08.2
	comp=Z,6.1nm,1.0s						
HYT	**Haines Junctio**	**22.57**	**51**	P		**P**	**01 23 06.0 +1.1**
HYT				IAmb		IAmb	01 23 46.6
	comp=Z,13nm,1.4s						
I28M	**Miner Creek**	**22.59**	**39**	P		**P**	**01 23 04.9 -0.1**
I28M				IAmb		IAmb	01 23 19.2
	comp=Z,10nm,1.2s						
L29M	**L29M**	**22.68**	**45**	P		**P**	**01 23 06.2 +0.3**
L29M				IAmb		IAmb	01 23 21.3
	comp=Z,10nm,1.4s						
K29M	**Barlow Dome**	**23.11**	**44**	P		**P**	**01 23 10.6 +0.2**
K29M				IAmb		IAmb	01 23 13.0
	comp=Z,16nm,1.5s						
M30M	**Minto, Yukon**	**23.17**	**47**	P		**P**	**01 23 07.6 -3.3**
F28M	**Old Crow**	**23.46**	**34**	P		**P**	**01 23 15.2 +1.6**
J30M	**Hart River**	**23.79**	**42**	P		**P**	**01 23 17.2 +0.3**
I30M	**Mount Dempster**	**23.94**	**41**	P		**P**	**01 23 17.9 -0.4**
EPYK	**Eagle Plains**	**24.14**	**38**	P		**P**	**01 23 20.5 +0.5**
EPYK				IAmb		IAmb	01 23 33.9
	comp=Z,6.2nm,1.1s						
M31M	**Drury Creek, Y**	**24.22**	**48**	P		**P**	**01 23 21.5 +0.8**
M31M				IAmb		IAmb	01 23 23.2
	comp=Z,10nm,1.4s						
P32M	**Atlin**	**24.39**	**55**	P		**P**	**01 23 19.7 -2.6**
E29M	**Blow River**	**24.46**	**33**	P		**P**	**01 23 24.2 +1.4**
E29M				IAmb		IAmb	01 23 26.1
	comp=Z,4.6nm,0.7s						
G31M	**Satah River**	**25.24**	**37**	P		**P**	**01 23 30.0 +0.1**
G31M				IAmb		IAmb	01 23 50.9
	comp=Z,5.8nm,1.2s						
F31M	**Tsiigehtchic**	**25.59**	**36**	P		**P**	**01 23 33.9 +0.9**
F31M				IAmb		IAmb	01 23 40.4
	comp=Z,5.8nm,1.4s						
DIB	**Dawson Inlet,**	**25.85**	**70**	P		**P**	**01 23 34.6 -0.9**
V35K	**Ketchikan**	**25.89**	**65**	P		**P**	**01 23 37.0 +1.1**
INK	**Inuvik**	**25.94**	**34**	P		**P**	**01 23 36.9 +0.7**
INK				IAmb		IAmb	01 23 58.4
	comp=Z,7.5nm,1.5s						
ASAJ	**Asahikawa**	**28.90**	**272**	LR		LR	01 36 48.8
	comp=Z,28nm,19.3s,baz=170,slow=39						
A36M	**Sachs Harbour**	**29.74**	**29**	P		**P**	**01 24 10.8 +0.7**
YAK	**Yakutsk**	**30.86**	**311**	LR		LR	01 36 56.0
	comp=Z,49nm,19.4s,baz=100,slow=37						
YKA	**Yellowknife Ar**	**33.41**	**47**	P		**P**	**01 24 42.0 -0.4**
	comp=Z,0.4nm,0.8s,baz=279,slow=9.2,SNR=5.1						
YKA				PcP		**PcP**	**01 27 22.7 0.0**
	comp=Z,0.2nm,0.6s,baz=290,slow=3.3,SNR=5.6						
YKA				LR		LR	01 38 46.7
	comp=Z,65nm,19.4s,baz=248,slow=37						
	comp=Z,0.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.84**	**210**	T		T	02 02 13.8
	baz=20,slow=76,SNR=115						
H11N3	**WAKE ISLAND Hy**	**34.84**	**210**	T		T	02 02 22.5
	baz=20,slow=76,SNR=115						
H11N1	**WAKE ISLAND Hy**	**34.85**	**210**	T		T	02 02 23.2
	baz=20,slow=76,SNR=90						
MJAR	**Matsushiro Ar**	**36.00**	**264**	LR		LR	01 40 01.0
	comp=Z,25nm,19.4s,baz=229,slow=36						
H11S1	**WAKE ISLAND Hy**	**36.05**	**210**	T		T	02 04 16.8
	baz=20,slow=76,SNR=217						
H11S2	**WAKE ISLAND Hy**	**36.06**	**210**	T		T	02 04 18.0
	baz=20,slow=76,SNR=96						
H11S3	**WAKE ISLAND Hy**	**36.06**	**210**	T		T	02 03 49.5
	baz=20,slow=76,SNR=62						
HAWA	**Hanford**	**36.16**	**76**	P		**P**	**01 25 06.0 -0.3**
NEW	**Newport**	**36.70**	**72**	P		**P**	**01 25 10.8 -0.1**
EDM	**Edmonton**	**36.72**	**63**	P		**P**	**01 25 12.2 +1.1**
WVOR	**Wild Horse Val**	**38.78**	**81**	P		**P**	**01 25 30.3 +1.6**
WVOR				IAmb		IAmb	01 25 33.9
	comp=Z,5.1nm,1.2s						
PLID	**Pearl Lake**	**38.95**	**76**	P		**P**	**01 25 30.6 +0.4**
BOZ	**Bozeman (W)**	**41.30**	**72**	P		**P**	**01 25 49.8 +0.3**
BOZ				IAmb		IAmb	01 25 51.5
	comp=Z,2.5nm,0.6s						
NVAR	**Mina Array Bea**	**41.33**	**86**	P		**P**	**01 25 51.7 +1.7**
	comp=Z,0.2nm,0.5s,baz=294,slow=8.8,SNR=1.9						
	comp=Z,0.2nm,0.5s						
KSRS	**Korea Array**	**41.82**	**273**	P		**P**	**01 25 54.4 +0.7**
	comp=Z,2.5nm,0.8s,baz=57,slow=7.5,SNR=4.3						
KSRS				LR		LR	01 40 58.0
	comp=Z,11nm,21.0s,baz=75,slow=33						
	comp=Z,2.5nm,0.8s						
ELK	**Elko**	**41.84**	**81**	LR		LR	01 40 34.7
	comp=Z,37nm,19.7s,baz=267,slow=32						
YHH	**Holmes Hill**	**42.20**	**73**	P		**P**	**01 25 56.2 -0.8**
RLMT	**Red Lodge**	**42.95**	**72**	P		**P**	**01 26 04.1 +1.0**
PD31	**Pinedale Array**	**44.11**	**75**	P		**P**	**01 26 13.4 +1.0**
PD31				IAmb		IAmb	01 26 15.2
	comp=Z,3.1nm,0.7s						
PDAR	**Pinedale Array**	**44.11**	**75**	P		**P**	**01 26 13.1 +0.7**
PDAR	**Pinedale Array**	**44.11**	**75**	P		**P**	**01 26 12.9 +0.4**
	comp=Z,3.4nm,0.6s,baz=308,slow=3.9,SNR=36						
PDAR				PcP		**PP**	**01 27 56.3 +0.6**
	comp=Z,0.2nm,0.4s,baz=338,slow=1.9,SNR=1.0						
	comp=Z,3.4nm,0.6s						
XLT	**XiLinHaoTe**	**45.19**	**288**	*eP*		P	01 26 30.9 +10
XLT				pmax		pmax	
	comp=Z,7.0nm,1.7s						
XLT				pmax		pmax	
	comp=Z,140nm,4.3s						
O20A	**White River Ci**	**46.47**	**77**	P		**P**	**01 26 31.6 +0.4**
MDND	**Maddock**	**46.98**	**63**	P		**P**	**01 26 34.8 0.0**
SONM	**Songino Array**	**48.45**	**298**	P		**P**	**01 26 44.5 -1.8**
	comp=Z,0.2nm,0.4s,baz=75,slow=6.1,SNR=2.6						
SONM				PcP		**PcP**	**01 28 11.0 -0.9**
	comp=Z,1.1nm,0.8s,baz=46,slow=4.2,SNR=5.7						
	comp=Z,0.2nm,0.4s						
HHC	**Hu-ho-hao-te**	**49.70**	**288**	*eP*		**P**	**01 26 58.1 +2.2**
HHC				pmax		pmax	
	comp=Z,8.0nm,0.6s						
HHC				pmax		pmax	
	comp=Z,150nm,5.9s						
SPITS	**Spitsbergen Ar**	**50.19**	**357**	P		**P**	**01 26 58.5 -0.5**
	comp=Z,9.2nm,1.0s,baz=47,slow=9.1,SNR=1.3						
	comp=Z,9.2nm,1.0s						
ZALV	**Zalesovo Beam**	**55.38**	**315**	LR		LR	01 52 47.2
	comp=Z,31nm,18.9s,baz=77,slow=38						
WMOK	**Wichita Mounta**	**55.69**	**76**	P		**P**	**01 27 40.0 -0.1**
WMOK				IAmb		IAmb	01 27 54.3
	comp=Z,2.7nm,0.9s						
TXAR	**Lajitas Array**	**56.43**	**84**	P		**P**	**01 27 45.4 -0.2**
	comp=Z,0.4nm,0.6s,baz=311,slow=5.9,SNR=7.3						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**60.47**	**315**	P		**P**	**01 28 12.1 -1.2**
	comp=Z,1.3nm,0.5s,baz=43,slow=6.6,SNR=24						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**61.53**	**310**	P		**P**	**01 28 19.2 -1.4**
	comp=Z,0.5nm,0.6s,baz=47,slow=6.0,SNR=10.0						
	comp=Z,0.5nm,0.6s						
BVAR	**Borovoye Array**	**62.03**	**321**	P		**P**	**01 28 22.1 -1.7**
	comp=Z,1.2nm,0.5s,baz=54,slow=6.4,SNR=10						
	comp=Z,1.2nm,0.5s						
KIRV	**Kirov**	**64.21**	**336**	LR		LR	01 59 27.0
	comp=Z,39nm,18.5s,baz=356,slow=39						
NOA	**NORSAR Array B**	**67.49**	**357**	LR		LR	01 58 28.5
	comp=Z,10nm,20.1s,baz=300,slow=36						
HFS	**Hagfors**	**68.28**	**355**	P		**P**	**01 29 03.1 -1.1**
	comp=Z,1.5nm,0.6s,baz=8.1,slow=3.1,SNR=6.9						
	comp=Z,1.5nm,0.6s						
AKTO	**Aktyubinsk**	**68.66**	**327**	LR		LR	02 00 42.1
	comp=Z,35nm,20.1s,baz=34,slow=37						
EKA	**Eskdalemuir Ar**	**73.13**	**5**	P		**P**	**01 29 33.0 -0.7**
	comp=Z,2.9nm,1.1s,baz=355,slow=5.3,SNR=2.0						
	comp=Z,2.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**73.15**	**278**	P		**P**	**01 29 34.9 +0.5**
	comp=Z,1.2nm,0.3s,baz=27,slow=7.1,SNR=11						
	comp=Z,1.2nm,0.3s						
AKASG	**Malin Array Be**	**75.87**	**344**	P		**P**	**01 29 48.0 -1.8**
	comp=Z,0.8nm,0.6s,baz=19,slow=6.0,SNR=2.6						
AKASG				LR		LR	02 06 11.3
	comp=Z,37nm,20.3s,baz=292,slow=38						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**83.80**	**227**	P		**P**	**01 30 31.7 -1.2**
	comp=Z,0.5nm,0.5s,baz=33,slow=6.1,SNR=4.8						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**87.25**	**225**	P		**P**	**01 30 49.8 -0.2**
	comp=Z,1.3nm,0.7s,baz=26,slow=5.4,SNR=13						
	comp=Z,1.3nm,0.7s						
IDI	**Anoyia**	**91.59**	**344**	LR		LR	02 14 49.6
	comp=Z,9.3nm,21.0s,baz=92,slow=37						
H03N2	**Juan Fernandez**	**119.14**	**108**	T		T	03 47 11.6
	baz=317,slow=77,SNR=22						
H03N1	**Juan Fernandez**	**119.15**	**108**	T		T	03 46 59.8
	baz=317,slow=77,SNR=26						
H03N3	**Juan Fernandez**	**119.15**	**108**	T		T	03 47 21.3
	baz=317,slow=77,SNR=29						
BOSA	**Boshof**	**152.29**	**318**	PKPbc		**PKPbc**	**01 37 59.0 -0.1**
	comp=Z,4.2nm,0.6s,baz=30,slow=3.2,SNR=11						

*IDC **04** 01:32:20.5±0.7,4˚.66S×144˚.83E,h82^{km}±6^{km},mb4.0/15, mbtmp4.4/17,MS3.3/3,Error ellipse: s-maj=23.1km s-min=10.2km az=75.0*

*NEIC **04** 01:32:22.6±2.1,4˚.72S±0˚.04×144˚.77E±0˚.10,h96^{km}±9^{km}, mb4.6/31,Error ellipse: s-maj=14.3km s-min=5.4km az=79.0*

*DJA **04** 01:32:23.4±0.4,5˚S±4˚×14˚5E±˚,h110^{km}±6^{km},M5.1/25, mb4.6/25,mB5.3/3,MLv5.4/3,Mw(mB)4.7/3,MwMwp6.2/1, Mwp6.2/1*

ISC 04 01:32:21.9±0.5,4˚.73S±0˚.05×144˚.77E±0˚.07,h93^{km}±4^{km}, h93^{km}:pP-P,n81,σ1°60/89,mb4.6/34,4D,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.72**	**44**			**Pn**	**Pn**	**01 33 17.1**	**-0.1**
GENI	**Genyem**	**5.06**	**295**			P	**Pn**	**01 33 36.2**	**+0.9**
PMG	**Port Moresby**	**5.22**	**153**			Pn	**Pn**	**01 33 37.8**	**+0.2**
PMG						Sn	**Sn**	**01 34 35.8**	**-0.7**
PMG	**Port Moresby**	**5.22**	**153**			P	**Pn**	**01 33 37.5**	**-0.1**
	72nm,0.4s,baz=18,slow=6.0,SNR=50								
PMG						S	**Sn**	**01 34 35.2**	**-1.3**
	134nm,0.4s,baz=334,slow=23,SNR=8.4								
MMPI	**Merauke**	**5.73**	**229**			P	Pn	01 33 53.9	+9.5
RABL	**Rabaul**	**7.39**	**86**			Pn	**Pn**	**01 34 08.9**	**+1.7**
COEN	**Coen**	**9.31**	**190**			Pn	**Pn**	**01 34 34.3**	**+1.0**
FAKI	**Fak Fak**	**12.62**	**278**			Pn	**Pn**	**01 35 17.5**	**-0.6**
FAKI	**Fak Fak**	**12.62**	**278**			P	**Pn**	**01 35 17.7**	**-0.4**
	27nm,1.3s								
SWI	**Sorong**	**14.02**	**285**			P	**Pn**	**01 35 37.4**	**+0.9**
	51nm,0.7s								
CTA	**Charters Tower**	**15.34**	**175**			P	**P**	**01 35 57.5**	**+1.5**
	6.2nm,0.6s,baz=2.0,slow=15,SNR=8.9								
CTAO	**Charters Tower**	**15.34**	**175**				**Pn**	**01 35 53.7**	**+0.3**
CTAO						IAmb	IAmb	01 36 04.1	
	comp=Z,29nm,1.4s								
MTN	**Manton Dam**	**15.70**	**238**			P	**Pn**	**01 35 58.1**	**+0.3**
MTN						IAmb	IAmb	01 36 12.4	
	comp=Z,26nm,0.8s								
NLAI	**Namlea**	**17.69**	**274**			P	**Pn**	**01 36 22.6**	**+0.2**
	comp=Z,20nm,0.6s								
WB0	**Warramunga Arr**	**18.05**	**213**			P	**P**	**01 36 25.7**	**-0.3**
WB0						IAmb	IAmb	01 36 58.1	
	comp=Z,26nm,1.2s								
WR0	**Warramunga Arr**	**18.12**	**212**				**P**	**01 36 27.0**	**+0.2**
WR0						IAmb	IAmb	01 36 36.5	
	comp=Z,25nm,0.9s								
WB2	**Warramunga Arr**	**18.21**	**213**			P	**P**	**01 36 27.8**	**0.0**
WB2						IAmb	IAmb	01 37 10.8	
	comp=Z,18nm,0.9s								
WRA	**Warramunga Arr**	**18.22**	**213**			P	**P**	**01 36 27.4**	**-0.4**
WRA							**Pn**	**01 36 27.9**	**-0.9**
WRA	**Warramunga Arr**	**18.22**	**213**			P	**P**	**01 36 28.1**	**+0.3**
	comp=Z,12nm,0.8s,baz=31,slow=11,SNR=20								
TNTI	**Ternate**	**18.22**	**287**			P	**P**	**01 36 26.1**	**-1.7**
SANI	**Sanana**	**18.93**	**277**			P	**Pn**	**01 36 38.3**	**+1.0**
KNRA	**Kununurra**	**19.13**	**234**			P	**P**	**01 36 37.4**	**-0.4**
KNRA						IAmb	IAmb	01 36 55.8	
	comp=Z,27nm,0.7s								
SOEI	**Soe**	**20.94**	**255**			P	**P**	**01 36 58.5**	**+1.0**
SOEI	**Soe**	**20.94**	**255**			P	**P**	**01 36 58.8**	**+1.3**
	comp=Z,147nm,0.9s,comp=Z,1µm								
AS31	**Alice Springs**	**21.55**	**208**			P	**P**	**01 37 04.4**	**+0.5**
ASAR	**Alice Springs**	**21.55**	**208**			P	**P**	**01 37 04.4**	**+0.5**
ASAR	**Alice Springs**	**21.55**	**208**			P	**P**	**01 37 04.0**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=40,slow=7.2,SNR=22								
ASAR						LR	LR	01 44 50.6	
	comp=Z,64nm,18.2s,baz=45,slow=35								
	comp=Z,1.9nm,0.5s								
LUWI	**Luwuk**	**22.27**	**279**			P	**P**	**01 37 11.4**	**-0.2**
LUWI						IAmb	IAmb	01 37 42.7	
	comp=Z,39nm,1.0s								
MMRI	**Maumere**	**22.71**	**259**			P	**P**	**01 37 15.9**	**-0.3**
	comp=Z,50nm,0.9s								
EDFI	**Ende, Flores**	**23.26**	**259**			P	**P**	**01 37 20.0**	**-1.7**
	comp=Z,22nm,0.7s								
BKSI	**Bulukumba**	**24.56**	**268**			P	**P**	**01 37 32.3**	**-1.0**
	comp=Z,19nm,0.8s								
BASI	**Baing, Sumba**	**24.59**	**256**			P	**P**	**01 37 33.2**	**-0.3**
	comp=Z,101nm,1.3s								
TOLI2	**Tolitoli**	**24.66**	**283**			P	**P**	**01 37 32.7**	**-1.5**
TOLI2						IAmb	IAmb	01 38 08.7	
	comp=Z,33nm,1.1s								
KAPI	**Kappang**	**24.93**	**268**			P	**P**	**01 37 34.8**	**-1.8**
KAPI						IAmb	IAmb	01 37 38.5	
	comp=Z,42nm,1.4s								
TTSI	**Tana Toraja**	**24.95**	**273**			P	P	01 37 45.8	+9.0
PLAI	**Plampang**	**27.10**	**260**			P	**P**	**01 37 53.5**	**-2.8**
DZM	**Mont Dzumac**	**27.17**	**131**			LR	LR	01 47 13.7	
	comp=Z,143nm,18.9s,baz=275,slow=33								
STKA	**Stephens Creek**	**27.17**	**186**			P	**P**	**01 37 56.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=0.6,slow=11,SNR=5.0								
	comp=Z,1.9nm,0.6s								
TWSI	**Taliwang, Sumb**	**27.97**	**260**			P	**P**	**01 38 01.1**	**-3.0**
MJAR	**Matsushiro Arr**	**41.51**	**352**			P	**P**	**01 39 58.7**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=196,slow=0.4,SNR=11								
	comp=Z,2.2nm,0.6s								
NJ2	**Nanjing**	**44.11**	**328**	*eP*		P	**P**	**01 40 22.5**	**+1.4**
NJ2				pmax		pmax			
	comp=Z,5.0nm,0.5s								
NJ2				pmax		pmax			
	comp=Z,310nm,5.2s								
KSRS	**Korea Array**	**44.80**	**341**	P		P	**P**	**01 40 26.5**	**0.0**
	comp=Z,7.4nm,0.9s,baz=159,slow=9.3,SNR=12								
KSRS				LR		LR	LR	01 56 15.7	
	comp=Z,18nm,20.6s,baz=145,slow=32								
	comp=Z,7.4nm,0.9s								
RPZ	**Rata Peaks**	**45.23**	**153**	P		P	**P**	**01 40 31.6**	**+1.7**
	comp=Z,6.7nm,0.4s,baz=160,slow=3.7,SNR=3.0								
	comp=Z,6.7nm,0.4s								
USRK	**Ussuriysk Ar.**	**50.04**	**348**	P		P	**P**	**01 41 06.8**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=159,slow=7.0,SNR=8.5								
	comp=Z,3.6nm,0.7s								
HNS	**HongShan**	**50.40**	**329**	⇓P		P	**P**	**01 41 09.3**	**-0.5**
HNS				pmax		pmax			
	comp=Z,12nm,0.7s								
CMAR	**Chiang Mai Arr**	**50.69**	**298**	P		P	**P**	**01 41 12.5**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=123,slow=6.2,SNR=13								
	comp=Z,2.9nm,0.5s								
CN2	**Changchun**	**51.35**	**342**	*eP*		P	**P**	**01 41 16.7**	**-0.2**
CN2				*eS*		S	**S**	**01 48 26.2**	**-3.0**
CN2				pmax		pmax			
	comp=Z,10.0nm,1.4s								
PZH	**PanZhiHua**	**51.93**	**309**	P		P	**P**	**01 41 23.3**	**+1.6**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,5.3s								
HHC	**Hu-ho-hao-te**	**54.60**	**329**	*eP*		P	**P**	**01 41 43.8**	**+2.8**
HHC				pmax		pmax			
	comp=Z,10.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,150nm,5.5s								
BTO	**Baotou**	**55.22**	**328**	*eP*		P	**P**	**01 41 49.5**	**+4.1**
BTO				pP		**pP**	**pP**	**01 42 11.6**	**+3.3**
BTO				sP		**sP**	**sP**	**01 42 23.3**	**+4.6**
BTO				PP		PP	PP	01 43 57.6	+7.6
BTO				S		S	S	01 49 34.7	+13
BTO	**Baotou**	**55.22**	**328**	SS		**SS**	**SS**	**01 53 13.2**	**+5.5**
BTO				pmax		pmax			
	comp=Z,4.0nm,0.6s								
BTO				pmax		pmax			
	comp=Z,390nm,5.1s								
BTO				LR		LR			
	comp=N,420nm,5.0s								
BTO				LR		LR			
	comp=E,330nm,4.4s								
BTO				LR		LR			
	comp=Z,340nm,5.4s								
PETK	**Petropavlovsk-**	**58.65**	**9**	P		P	**P**	**01 42 08.8**	**-0.5**
	comp=Z,4.6nm,0.6s,baz=161,slow=6.8,SNR=17								
	comp=Z,4.6nm,0.6s								
SONM	**Songino Array**	**62.23**	**332**	P		P	**P**	**01 42 33.9**	**0.0**
	comp=Z,1.4nm,0.7s,baz=153,slow=6.5,SNR=10								
SONM				pP		**pP**	**pP**	**01 42 54.7**	**-2.6**
	comp=Z,1.5nm,1.0s,baz=147,slow=8.5,SNR=3.7								
	comp=Z,1.4nm,0.7s								
MK31	**Makanchi Array**	**75.11**	**321**	P		P	**P**	**01 43 54.1**	**+0.2**
MKAR	**Makanchi Array**	**75.11**	**321**	P		P	**P**	**01 43 54.0**	**+0.1**
MKAR	**Makanchi Array**	**75.11**	**321**	P		P	**P**	**01 43 53.6**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=95,slow=8.7,SNR=27								
MKAR				pP		**pP**	**pP**	**01 44 15.4**	**-2.6**
	comp=Z,1.2nm,0.8s,baz=103,slow=8.8,SNR=3.3								
	comp=Z,1.6nm,0.5s								
MAKZ	**Makanchi**	**75.31**	**321**	P		P	**P**	**01 43 55.0**	**0.0**
ZAAO	**Zalesovo Array**	**76.76**	**328**	P		P	**P**	**01 44 01.5**	**-1.6**
ZALV	**Zalesovo Beam**	**76.76**	**328**	P		P	**P**	**01 44 02.5**	**-0.6**
ZALV	**Zalesovo Beam**	**76.76**	**328**	P		P	**P**	**01 44 01.9**	**-1.2**
	comp=Z,1.8nm,0.5s,baz=119,slow=6.3,SNR=8.0								
	comp=Z,1.8nm,0.5s								
KURBB	**Kurchatov Arra**	**78.89**	**324**	P		P	**P**	**01 44 14.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=105,slow=8.6,SNR=9.0								
	comp=Z,0.4nm,0.5s								
NRIK	**Noril'sk**	**83.39**	**343**	P		P	**P**	**01 44 38.1**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=108,slow=2.2,SNR=7.4								
	comp=Z,3.4nm,0.5s								
SML	**Sawmill**	**83.47**	**26**	P		P	**P**	**01 44 39.4**

JIH	**Iheya**	**1.64**	**296**	P		**Pb**	**01 40 23.1**	**-0.3**
JIH				S		**Sn**	**01 40 42.1**	**-1.4**
JJT3	**Tamagusuku3**	**1.66**	**264**	P		**Pb**	**01 40 23.6**	**-0.1**
JJT3				S		**Sb**	**01 40 43.8**	**-1.1**
JAMN	**Amaminishikomi**	**1.95**	**348**	P		**Pb**	**01 40 27.0**	**-1.6**
JAMN				*e*S		**Sn**	**01 40 49.7**	**-1.4**
JZK	**Kikaishima**	**2.00**	**9**	*e*P		**Pb**	**01 40 28.5**	**-1.0**
JZK				*e*S		**Sn**	**01 40 52.6**	**+0.1**
JAM	**Amami Oshima**	**2.08**	**360**	P		**Pn**	**01 40 28.5**	**+0.5**
JAGN	**Aguni-jima**	**2.15**	**277**	*e*P		**Pb**	**01 40 30.0**	**-2.0**
JAGN				S		**Sn**	**01 40 55.2**	**-0.8**
JKE	**Kume jima 2**	**2.54**	**271**	P		**Pn**	**01 40 35.0**	**+0.5**
JKE				S		**Sn**	**01 41 03.1**	**-2.7**
SONM	**Songino Array**	**28.16**	**326**	P		P	01 45 50.1	+4.2
	0.3nm,0.6s,baz=134,slow=8.3,SNR=2.0							
	0.3nm,0.6s							
YAK	**Yakutsk**	**35.70**	**0**	LR		LR	02 03 07.8	
	comp=Z,24nm,19.1s,baz=170,slow=39							
MKAR	**Makanchi Array**	**42.40**	**311**	P		**P**	**01 47 49.1**	**+1.0**
	0.1nm,0.4s,baz=89,slow=9.7,SNR=2.3							
	0.1nm,0.4s							
ZALV	**Zalesovo Beam**	**42.93**	**322**	P		**P**	**01 47 53.6**	**+1.4**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.0							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**45.65**	**316**	P		**P**	**01 48 14.5**	**+0.5**
	0.5nm,0.6s,baz=103,slow=9.0,SNR=4.8							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**46.22**	**174**	P		**P**	**01 48 19.8**	**+1.0**
	0.9nm,0.6s,baz=354,slow=8.6,SNR=5.7							
	0.9nm,0.6s							
ASAR	**Alice Springs**	**49.87**	**175**	P		**P**	**01 48 48.5**	**+1.5**
	0.4nm,0.7s,baz=12,slow=11,SNR=8.5							
	0.4nm,0.7s							
BVAR	**Borovoye Array**	**51.03**	**318**	P		**P**	**01 48 56.9**	**+1.4**
	0.5nm,0.6s,baz=101,slow=7.5,SNR=2.1							
	0.5nm,0.6s							

CATAC ***04*** *01:47:50.2±0.2, 10°.83N×85°.79W, h38km±3km, ML3.2*
UCR ***04*** *01:47:51.0±0.5, 10°.83N×85°.73W, h54km±3km, MW3.6*
ISC 04 01:47:49.9±1.3, 10°.82N±0°.03×85°.81W±0°.05, h63km±7km, n42, σ0°65/67, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**0.23**	**116**	*e*P		**Pn**	**01 48 00.1**	**+0.3**
HZTE				*e*S		**Sn**	**01 48 07.4**	**+0.3**
HZTE	**Horizontes, Gu**	**0.23**	**116**	*i* P		**Pn**	**01 47 59.7**	**-0.1**
HZTE				*i* S		**Sn**	**01 48 04.7**	**-2.4**
HZTE				IAML			01 48 09.6	
	comp=Z,4μm,1.0s							
LCRUZ	**La Cruz**	**0.31**	**34**	*e*P		**Pn**	**01 48 01.8**	**+1.4**
LCRUZ				*e*S		**Sn**	**01 48 09.4**	**+1.4**
ORTG	**Ortega, Santa**	**0.57**	**143**	*e*P		**Pn**	**01 48 03.2**	**+0.3**
ORTG				*e*S		**Sn**	**01 48 12.7**	**+0.3**
ORTG	**Ortega, Santa**	**0.57**	**143**	*i* P		**Pn**	**01 48 02.9**	**0.0**
ORTG				*i* S		**Sn**	**01 48 12.0**	**-0.4**
ORTG				IAML			01 48 13.4	
	comp=Z,2μm,1.0s							
BAGA	**Bagaces**	**0.61**	**118**	*e*P		**Pn**	**01 48 03.6**	**+0.3**
COLC	**Colonia**	**0.61**	**104**	*e*P		**Pn**	**01 48 03.3**	**-0.1**
CAMAV	**Centro de Prod**	**0.62**	**101**	*e*P		**Pn**	**01 48 03.4**	**0.0**
VMAR	**Armenia, Volca**	**0.69**	**90**	*e*P		**Pn**	**01 48 04.2**	**0.0**
OMEN	**Al SSO del Vol**	**0.71**	**15**	*i* P		**Pn**	**01 48 04.5**	**+0.1**
OMEN				*i* S		**Sn**	**01 48 14.9**	**-0.2**
OMEN				IAML			01 48 18.9	
	comp=Z,1μm,1.0s							
JAPN	**Al SSO del Vol**	**0.71**	**10**	*i* P		**Pn**	**01 48 04.6**	**+0.1**
JAPN				*i* S		**Sn**	**01 48 14.5**	**-0.7**
JAPN				IAML			01 48 18.2	
	comp=Z,1μm,1.0s							
MORN	**Al O del Volca**	**0.74**	**12**	*i* P		**Pn**	**01 48 05.2**	**+0.4**
MORN				IAML			01 48 18.9	
	comp=Z,4μm,1.0s							
SAJU	**San Juanillo,**	**0.75**	**172**	*i* P		**Pn**	**01 48 04.7**	**-0.2**
SAJU				*i* S		**Sn**	**01 48 15.6**	**-0.4**
SAJU				IAML			01 48 19.4	
	comp=Z,940nm,1.0s							
CONN	**Concepcion**	**0.76**	**14**	*i* P		**Pn**	**01 48 05.2**	**+0.1**
CONN				IAML			01 48 06.0	
	comp=Z,4μm,1.0s							
CONN				*i* S		**Sn**	**01 48 15.4**	**-0.8**
DUNO	**Dulce Nombre,**	**0.80**	**157**	*e*P		**Pn**	**01 48 06.3**	**+0.8**
DUNO	**Dulce Nombre,**	**0.80**	**157**	*i* P		**Pn**	**01 48 06.0**	**+0.5**
DUNO				*i* S		**Sn**	**01 48 16.8**	**-0.2**
DUNO				IAML			01 48 21.9	
	comp=Z,2μm,1.0s							
INDI	**Punta indio, G**	**0.99**	**162**	*e*P		**Pn**	**01 48 08.0**	**0.0**
INDI	**Punta indio, G**	**0.99**	**162**	*i* P		**Pn**	**01 48 07.7**	**-0.2**
INDI				*i* S		**Sn**	**01 48 20.4**	**-0.9**
INDI				IAML			01 48 27.4	
	comp=Z,560nm,1.0s							
JTS	**Las Juntas de**	**0.99**	**122**	*e*P		**Pn**	**01 48 08.0**	**+0.1**
LCHIL	**Los Chiles**	**1.10**	**78**	*e*P		**Pn**	**01 48 10.3**	**+1.0**
ARE1	**Arenal 1**	**1.13**	**108**	*e*P		**Pn**	**01 48 10.4**	**+0.7**
SOCE	**Pocosol**	**1.25**	**110**	*e*P		**Pn**	**01 48 11.5**	**+0.2**
SOCE	**Pocosol**	**1.25**	**110**	*i* P		**Pn**	**01 48 11.5**	**+0.2**
SOCE				*i* S		**Sn**	**01 48 26.6**	**-0.8**
SOCE				IAML			01 48 33.7	
	comp=Z,400nm,1.0s							
ACON	**Acoyapa**	**1.30**	**29**	*i* P		**Pn**	**01 48 12.4**	**+0.4**
ACON				IAML			01 48 12.6	
	comp=Z,660nm,1.0s							
ACON				*i* S		**Sn**	**01 48 27.6**	**-1.0**
LAFE	**Finca La Fe, P**	**1.34**	**139**	*i* P		**Pn**	**01 48 13.2**	**+0.7**
LAFE				*i* S		**Sn**	**01 48 28.7**	**-0.7**
LAFE				IAML			01 48 38.3	
	comp=Z,1.9nm,1.0s							
COVE	**Coope Vega, Sa**	**1.39**	**94**	*i* P		**Pn**	**01 48 12.7**	**-0.4**
COVE				*i* S		**Sn**	**01 48 31.3**	**+0.7**
COVE				IAML			01 48 44.8	
	comp=Z,170nm,1.0s							
SAPS	**Ciudad Sandino**	**1.46**	**337**	*i* P		**Pn**	**01 48 14.2**	**0.0**
SAPS				*i* S		**Sn**	**01 48 31.9**	**-0.5**
SAPS				IAML			01 48 39.4	
	comp=Z,330nm,1.0s							
CPMI	**Catarata Coope**	**1.50**	**111**	*e*P		**Pn**	**01 48 15.4**	**+0.5**
CPMI	**Catarata Coope**	**1.50**	**111**	*i* P		**Pn**	**01 48 14.8**	**-0.1**
CPMI				*i* S		**Sn**	**01 48 33.9**	**+0.2**
CPMI				IAML			01 48 41.9	
	comp=Z,280nm,1.0s							
COPN	**Copaltepe**	**1.56**	**331**	*i* P		**Pn**	**01 48 16.2**	**+0.8**
COPN				IAML			01 48 37.5	
	comp=Z,320nm,1.0s							
JACO	**JACO, Garabito**	**1.61**	**135**	*e*P		**Pn**	**01 48 17.9**	**+1.8**
JACO	**JACO, Garabito**	**1.61**	**135**	*i* P		**Pn**	**01 48 16.4**	**+0.2**
JACO				*i* S		**Sn**	**01 48 36.4**	**+0.4**
JACO				IAML			01 48 53.4	
	comp=Z,130nm,1.0s							
BOAB	**BOACO BROADBAN**	**1.63**	**5**	*i* P		**Pn**	**01 48 16.2**	**-0.2**
BOAB				*i* S		**Sn**	**01 48 35.7**	**-0.7**
BOAB				IAML			01 48 37.9	
	comp=Z,260nm,1.0s							
MOMN	**Momotombo**	**1.73**	**336**	*i* P		**Pn**	**01 48 17.9**	**0.0**
MOMN				*i* S		**Sn**	**01 48 39.1**	**+0.1**
MOMN				IAML			01 48 42.7	
	comp=Z,7.0nm,1.0s							
MACN	**El Madrono**	**1.84**	**333**	*i* P		**Pn**	**01 48 19.6**	**+0.3**
MACN				*i* S		**Sn**	**01 48 41.3**	**-0.4**
MACN				IAML			01 48 47.0	
	comp=Z,90nm,1.0s							
OCM	**Ochomogo**	**2.04**	**117**	*i* P		**Pn**	**01 48 22.6**	**+0.5**
OCM				*i* S		**Sn**	**01 48 46.5**	**-0.1**
OCM				IAML			01 48 52.1	
	comp=Z,150nm,1.0s							
LCR2	**La Lucha 2**	**2.07**	**121**	*i* P		**Pn**	**01 48 23.2**	**+0.6**
LCR2				*i* S		**Sn**	**01 48 47.0**	**-0.5**
LCR2				IAML			01 48 51.8	
	comp=Z,110nm,1.0s							
LIMN	**Finca el Limon**	**2.30**	**346**	*i* P		**Pn**	**01 48 26.2**	**+0.7**
LIMN				IAML			01 48 50.1	
	comp=Z,45nm,1.0s							
BLUN	**Bluefields**	**2.32**	**59**	*i* P		**Pn**	**01 48 25.3**	**-0.4**
BLUN				IAML			01 48 25.6	
	comp=Z,180nm,1.0s							
CDM	**Cerro de Muert**	**2.37**	**122**	*i* P		**Pn**	**01 48 26.6**	**-0.3**
CDM				*i* S		**Sn**	**01 48 54.5**	**-0.7**
CDM				IAML			01 49 27.1	
	comp=Z,42nm,1.0s							
RCPN	**Sur Rio San Ju**	**2.71**	**354**	*i* P		**Pn**	**01 48 31.8**	**+0.7**
RCPN				IAML			01 48 34.2	
	comp=Z,0.3nm,1.0s							
PLAN	**Los Planes de**	**2.99**	**135**	*i* P		**Pn**	**01 48 34.9**	**0.0**
PLAN				*i* S		**Sn**	**01 49 10.0**	**+0.3**
PLAN				IAML			01 49 27.5	
	comp=Z,87nm,1.0s							

IDC ***04*** *01:56:11.8±1.5, 7°.37S×127°.36E, h0km, mb4.1/4, mbtmp4.2/6, ML4.3/2, Error ellipse: s-maj=248.7km s-min=28.4km az=64.0*
ISC 04 01:56:24.5±1.9, 7°.1S±0°.4×13°0E±°, h150km, n6, σ2s15/8, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.49**	**161**	Pn		**P**	**01 59 33.9**	**-0.2**
	1.4nm,0.3s,baz=327,slow=13,SNR=48							
WRA				Sn		**Sn**	**02 01 57.2**	**-2.2**
	1.8nm,0.3s,baz=333,slow=22,SNR=9.0							
	4.8nm,0.4s							
ASAR	**Alice Springs**	**16.91**	**167**	P		**Pn**	**02 00 16.5**	**+4.0**
	0.9nm,0.3s,baz=338,slow=12,SNR=92							
ASAR				S		**S**	**02 03 19.5**	**-1.1**
	1.4nm,0.4s,baz=320,slow=18,SNR=7.3							
	3.9nm,0.6s							
MKAR	**Makanchi Array**	**68.20**	**327**	P		**P**	**02 07 08.0**	**-0.8**
	0.4nm,0.5s,baz=119,slow=7.6,SNR=9.9							
	0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**71.59**	**334**	P		**P**	**02 07 29.5**	**+0.2**
	1.5nm,0.7s,baz=139,slow=4.7,SNR=6.7							
	1.5nm,0.7s							
KURBB	**Kurchatov Arra**	**72.49**	**329**	P		**P**	**02 07 34.6**	**-0.2**
	1.2nm,0.2s,baz=131,slow=4.9,SNR=9.2							
	1.2nm,0.2s							
BVAR	**Borovoye Array**	**78.04**	**328**	P		**P**	**02 08 06.0**	**-0.4**
	0.7nm,0.5s,baz=120,slow=5.2,SNR=7.2							
	0.7nm,0.5s							

ISN ***04*** *02:02:05.7±1.1, 33°.72N×45°.69E, h12km±5km, ML2.9*
TEH ***04*** *02:02:06.2, 33°.72N×45°.69E, h11km±26km, ML2.9*
ISC 04 02:02:06.2±1.0, 33°.71N±0°.05×45°.71E±0°.04, h13km, n11, σ0s56/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.43**	**102**	Pg		**Pg**	**02 02 15.2**	**+0.5**
ILBA				Sg		**Sb**	**02 02 22.0**	**-0.1**
IBDR	**Badra**	**0.63**	**163**	*e*Pg		**Pg**	**02 02 18.0**	**-0.5**
IBDR				*e*Sg		**Sb**	**02 02 27.5**	**-0.3**
KGSH	**Ghasr-e-Shirin**	**0.80**	**353**	Pg		**Pb**	**02 02 21.8**	**0.0**
IGHG	**Ghaleghazi**	**0.94**	**49**	Pg		**Pn**	**02 02 25.1**	**-0.2**
IDHR	**Dehrash**	**1.13**	**30**	Pg		**Pb**	**02 02 27.6**	**-0.1**
BHD	**Baghdad**	**1.19**	**249**	*e*Pg		**Pg**	**02 02 29.0**	**-0.1**
BHD				*e*Sg		**Sn**	**02 02 44.3**	**-0.3**
BHD				AML	AML		02 02 51.0	
	comp=E,862nm,0.5s							
KCHF	**Cheshme Sefid,**	**1.24**	**63**	Pg		**Pg**	**02 02 30.5**	**+0.4**
IBZA	**Bozab**	**1.94**	**67**	Pn		**Pb**	**02 02 41.4**	**-0.1**
RAFI	**Al-Rafai**	**2.02**	**170**	*e*Pn		**Pn**	**02 02 41.0**	**+1.2**
RAFI				*e*Sn		**Sb**	**02 03 08.0**	**+0.4**
RAFI				AML	AML		02 03 19.1	
	comp=N,51nm,0.2s							
RAFI				AML	AML		02 03 23.0	
	comp=E,71nm,0.6s							
IDOB	**Doab**	**2.06**	**87**	Pn		**Pb**	**02 02 42.8**	**-0.8**
IALM	**Almabolaq**	**2.34**	**60**	Pn		**Pb**	**02 02 47.4**	**-0.9**

IDC ***04*** *02:04:19.2±0.8, 66°.26N×22°.07E, h0km, mbtmp3.1/5, ML2.4/4, Error ellipse: s-maj=12.9km s-min=6.8km az=110.0*
NAO ***04*** *02:04:19.2±1.1, 66°.30N×21°.97E, ML3.0*
HEL ***04*** *02:04:20.7±0.0, 66°.27N×21°.76E, h5km, ML2.5, ML3.1(UPP), Confirmed Earthquake*
UPP ***04*** *02:04:20.3±0.1, 66°.27N×21°.77E, h8km±2km, ML3.1, Confirmed Earthquake*
DNK ***04*** *02:04:20.2±0.8, 66°.27N×21°.76E, h1km±3km, ML3.1(UPP), Probable volcanic*
BER ***04*** *02:04:22.9±3.3, 66°.22N×21°.88E, h15km, ML2.4, ML3.1(UPP), Confirmed Earthquake*
ISC 04 02:04:19.3±1.0, 66°.27N±0°.01×21°.84E±0°.02, h7km±8km, n90, σ1s73/185, 3D, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HARU	**Harads**	**0.36**	**254**	⇓P		**Pg**	**02 04 26.8**	**+0.4**
HARU				S		**Sg**	**02 04 31.2**	**+0.1**
HARU	**Harads**	**0.36**	**254**	⇓P		**Pg**	**02 04 26.8**	**+0.4**
HARU				S		**Sg**	**02 04 31.2**	**+0.1**
HARU	**Harads**	**0.36**	**254**	⇓*i*P		**Pg**	**02 04 26.8**	**+0.4**
HARU				*i* S		**Sg**	**02 04 31.2**	**+0.1**
KALU	**Kalix**	**0.74**	**123**	P		**Pb**	**02 04 34.6**	**+0.1**
KALU				S		**Sb**	**02 04 44.8**	**-0.1**
KALU	**Kalix**	**0.74**	**123**	P		**Pb**	**02 04 34.6**	**+0.1**
KALU				S		**Sb**	**02 04 44.8**	**-0.1**
KALU	**Kalix**	**0.74**	**123**	P		**Pb**	**02 04 34.6**	**+0.1**
KALU				S		**Sb**	**02 04 44.8**	**-0.1**
KALU	**Kalix**	**0.74**	**123**	*e*P		**Pb**	**02 04 34.5**	**+0.1**
KALU				*e*S		**Sb**	**02 04 44.4**	**-0.4**
SJUU	**Sjulsmark**	**0.77**	**187**	P		**Pg**	**02 04 34.2**	**+0.2**
SJUU				S		**Sg**	**02 04 44.4**	**+0.4**
SJUU	**Sjulsmark**	**0.77**	**187**	P		**Pg**	**02 04 34.2**	**+0.2**
SJUU				S		**Sg**	**02 04 44.4**	**+0.4**
SJUU	**Sjulsmark**	**0.77**	**187**	P		**Pg**	**02 04 34.2**	**+0.2**
SJUU				S		**Sg**	**02 04 44.4**	**+0.4**
SJUU	**Sjulsmark**	**0.77**	**187**	*i* P		**Pg**	**02 04 34.2**	**+0.2**
SJUU				*i* S		**Sg**	**02 04 44.4**	**+0.4**
PAJU	**Pajala**	**0.92**	**33**	P		**Pb**	**02 04 37.3**	**-0.2**
PAJU				S		**Sb**	**02 04 49.6**	**-0.3**
PAJU	**Pajala**	**0.92**	**33**	P		**Pb**	**02 04 37.3**	**-0.2**
PAJU				S		**Sb**	**02 04 49.6**	**-0.3**
PAJU	**Pajala**	**0.92**	**33**	*e*P		**Pb**	**02 04 37.3**	**-0.2**
PAJU				*e*S		**Sb**	**02 04 49.5**	**-0.4**
DUNU	**Dundret**	**1.00**	**330**	P		**Pg**	**02 04 38.0**	**-0.4**
DUNU				S		**Sg**	**02 04 50.9**	**-0.3**
DUNU	**Dundret**	**1.00**	**330**	P		**Pg**	**02 04 38.0**	**-0.4**
DUNU				S		**Sg**	**02 04 50.9**	**-0.3**
DUNU	**Dundret**	**1.00**	**330**	*e*P		**Pg**	**02 04 38.0**	**-0.4**
DUNU				*e*S		**Sg**	**02 04 50.9**	**-0.3**
TOF	**Tornio**	**1.03**	**99**	*e*P		**Pb**	**02 04 39.8**	**+0.4**
TOF				*e*S		**Sb**	**02 04 53.1**	**+0.1**
TOF				MSG			02 04 54.1	
	comp=Z,54nm,0.1s							
MASU	**Masugnsbyn**	**1.20**	**3**	P		**Pg**	**02 04 42.0**	**-0.2**
MASU	**Masugnsbyn**	**1.20**	**3**	P		**Pg**	**02 04 42.0**	**-0.2**
MASU				S		**Sb**	**02 04 57.7**	**-0.3**
MASU	**Masugnsbyn**	**1.20**	**3**	P		**Pg**	**02 04 42.0**	**-0.2**
MASU				S		**Sb**	**02 04 57.7**	**-0.3**
MASU	**Masugnsbyn**	**1.20**	**3**	*e*P		**Pg**	**02 04 42.0**	**-0.2**
MASU				*e*S		**Sb**	**02 04 57.7**	**-0.3**
LILU	**Lilltraesk**	**1.28**	**221**	P		**Pg**	**02 04 43.0**	**-0.8**
LILU				S		**Sg**	**02 04 59.4**	**-1.0**
LILU	**Lilltraesk**	**1.28**	**221**	P		**Pg**	**02 04 43.0**	**-0.8**
LILU				S		**Sg**	**02 04 59.4**	**-1.0**
LILU	**Lilltraesk**	**1.28**	**221**	P		**Pg**	**02 04 43.0**	**-0.8**
LILU				S		**Sg**	**02 04 59.4**	**-1.0**
LILU	**Lilltraesk**	**1.28**	**221**	*e*P		**Pg**	**02 04 43.0**	**-0.8**
LILU				*e*S		**Sg**	**02 04 59.4**	**-1.0**
KLF	**Kolari**	**1.29**	**40**	*e*P		**Pn**	**02 04 43.9**	**+0.2**
KLF				*e*S		**Sb**	**02 05 00.8**	**+0.3**
BURU	**Burvik**	**1.70**	**187**	*e*P		**Pn**	**02 04 50.2**	**+0.9**
BURU				*e*S		**Sn**	**02 05 12.5**	**+1.2**
RNF	**Rovaniemi**	**1.71**	**77**	*e*P		**Pb**	**02 04 51.2**	**+0.2**
RNF				*e*SG		**Sg**	**02 05 14.3**	**0.0**
RNF				MSG			02 05 17.1	
	comp=Z,100nm,0.1s							
SALU	**Saltoluokta**	**1.73**	**312**	P		**Pn**	**02 04 50.7**	**+1.0**
SALU				S		**Sn**	**02 05 13.0**	**+0.9**
SALU	**Saltoluokta**	**1.73**	**312**	P		**Pn**	**02 04 50.7**	**+1.0**
SALU				S		**Sn**	**02 05 13.0**	**+0.9**
SALU	**Saltoluokta**	**1.73**	**312**	P		**Pn**	**02 04 50.7**	**+1.0**
SALU				S		**Sn**	**02 05 13.0**	**+0.9**
SALU	**Saltoluokta**	**1.73**	**312**	*e*P		**Pn**	**02 04 50.7**	**+1.0**
SALU				*e*S		**Sn**	**02 05 13.0**	**+0.9**
LANU	**Lannavaara**	**1.79**	**2**	P		**Pb**	**02 04 52.0**	**-0.4**
LANU				S		**Sg**	**02 05 15.9**	**-0.8**
LANU	**Lannavaara**	**1.79**	**2**	P		**Pb**	**02 04 52.0**	**-0.4**
LANU				S		**Sg**	**02 05 15.9**	**-0.8**
LANU	**Lannavaara**	**1.79**	**2**	P		**Pb**	**02 04 52.0**	**-0.4**
LANU				S		**Sg**	**02 05 15.9**	**-0.8**
LANU	**Lannavaara**	**1.79**	**2**	*e*P		**Pb**	**02 04 52.0**	**-0.4**
LANU				*e*S		**Sn**	**02 05 14.6**	**+1.1**
KUA	**Kurravaara**	**1.79**	**342**	P		**Pn**	**02 04 51.7**	**+1.1**
KUA				S		**Sb**	**02 05 15.5**	**+0.5**
KUA	**Kurravaara**	**1.79**	**342**	P		**Pn**	**02 04 51.7**	**+1.1**
KUA				S		**Sb**	**02 05 15.5**	**+0.5**
KUA	**Kurravaara**	**1.79**	**342**	*e*P		**Pn**	**02 04 51.7**	**+1.1**
KUA				*e*S		**Sb**	**02 05 15.5**	**+0.5**
RATU	**Laukkuluspa**	**1.79**	**332**	P		**Pn**	**02 04 51.9**	**+1.2**
RATU				S		**Sb**	**02 05 15.1**	**0.0**
RATU	**Laukkuluspa**	**1.79**	**332**	P		**Pn**	**02 04 51.9**	**+1.2**
RATU				S		**Sb**	**02 05 15.1**	**0.0**
RATU	**Laukkuluspa**	**1.79**	**332**	P		**Pn**	**02 04 51.9**	**+1.2**
RATU				S		**Sb**	**02 05 15.1**	**0.0**
RATU	**Laukkuluspa**	**1.79**	**332**	*e*P		**Pn**	**02 04 51.9**	**+1.2**
RATU				*e*S		**Sb**	**02 05 15.1**	**0.0**
OBF4	**Vikkela, Lumij**	**2.00**	**136**	*e*PB		**Pb**	**02 04 55.5**	**-0.3**
OBF4				*e*SB		**Sb**	**02 05 21.8**	**+1.0**
OBF4				MSG			02 05 24.1	
	comp=Z,29nm,0.1s							
RANF	**Ranua**	**2.03**	**95**	*e*PB		**Pb**	**02 04 56.7**	**+0.3**
RANF				*e*SG		**Sg**	**02 05 23.8**	**-0.6**
OBF0	**Syolatti, Pyha**	**2.04**	**149**	*e*P		**Pn**	**02 04 55.5**	**+1.6**
OBF0				*e*SB		**Sb**	**02 05 23.0**	**+0.8**
OBF0				*e*SG		**Sg**	**02 05 24.3**	**-0.4**
OBF0				MSG			02 05 26.8	
	comp=Z,40nm,0.1s							
OBF8	**Ulkokalla**	**2.06**	**160**	*e*P		**Pn**	**02 04 55.6**	**+1.4**
OBF8				*e*SG		**Sb**	**02 05 23.6**	**+1.0**
OBF8				MSG			02 05 27.0	
	comp=Z,47nm,0.1s							
OUL	**Oulu**	**2.06**	**123**	Pn		**Pb**	**02 04 56.4**	**-0.5**
OUL				Lg		Lg	02 05 23.4	
OUL	**Oulu**	**2.06**	**123**	Pn		**Pb**	**02 04 56.4**	**-0.5**
OUL				Sg		**Sb**	**02 05 23.4**	**+0.8**
OUL	**Oulu**	**2.06**	**123**	*e*P		**Pb**	**02 04 56.2**	**-0.6**
OUL				*e*SB		**Sg**	**02 05 23.9**	**-1.4**
SGF	**Sodankyl**	**2.20**	**55**	*e*PB		**Pb**	**02 04 59.0**	**-0.3**
SGF				*e*SG		**Sg**	**02 05 29.6**	**-0.2**
SGF				MSG			02 05 31.2	
	comp=Z,28nm,0.1s							
OUF	**Merijarvi**	**2.26**	**146**	*e*SG		**Sg**	**02 05 30.4**	**-1.4**
OUF				MSG			02 05 34.0	
	comp=Z,21nm,0.1s							
HEF	**Hetta**	**2.26**	**17**	Pn		**Pn**	**02 04 58.3**	**+1.3**
HEF				Pg		**Pb**	**02 04 59.6**	**-0.8**
HEF				Lg		Lg	02 05 28.3	
HEF	**Hetta**	**2.26**	**17**	Pn		**Pn**	**02 04 58.3**	**+1.3**
HEF				Pg		**Pb**	**02 04 59.6**	**-0.8**
HEF				Sg		**Sb**	**02 05 28.3**	**-0.3**
HEF	**Hetta**	**2.26**	**17**	*e*SB		**Sb**	**02 05 29.0**	**+0.4**
HEF				MSG			02 05 30.7	
	comp=Z,29nm,0.1s							
UMAU	**Umeaa**	**2.44**	**192**	*e*SB		**Sb**	**02 05 33.6**	**-0.1**
KIF	**Kilpisjarvi**	**2.78**	**352**	*e*SB		**Sb**	**02 05 43.5**	**+0.1**
KTK1	**Kautokeino**	**2.81**	**10**	Pn		**Pn**	**02 05 06.3**	**+1.7**
KTK1				Sn		**Sn**	**02 05 39.9**	**+1.2**
KTK1	**Kautokeino**	**2.81**	**10**	*e*P		**Pn**	**02 05 06.1**	**+1.5**
KTK1				*e*S		**Sn**	**02 05 39.5**	**+0.9**
KTK1				IAML			02 05 48.1	
	comp=Z,28nm,0.5s							
FAUS	**Fauske**	**2.82**	**296**	*e*P		**Pn**	**02 05 06.0**	**+1.3**
FAUS				*e*			02 05 45.5	
FAUS				IAML			02 05 52.5	
	comp=Z,37nm,0.6s							
MOR8	**Moi Rana**	**3.00**	**272**	*e*P		**Pn**	**02 05 06.3**	**-0.9**
MOR8				*e*S		**Sn**	**02 05 40.8**	**-2.5**
MOR8				IAML			02 05 51.2	
	comp=Z,25nm,0.3s							
STEI	**Steigen**	**3.07**	**306**	*e*P		**Pn**	**02 05 09.3**	**+1.2**
STEI				*e*S		**Sn**	**02 05 46.4**	**+1.3**
STEI				IAML			02 06 05.8	
	comp=Z,21nm,0.4s							
STEI	**Steigen**	**3.07**	**306**	*e*P		**Pn**	**02 05 09.3**	**+1.2**
STEI				*e*SG		**Sb**	**02 05 54.8**	**+3.0**
JETT	**Jettan, Norway**	**3.35**	**351**	Pn		**Pn**	**02 05 12.0**	**0.0**
JETT				Pg		**Pb**	**02 05 19.6**	**+0.7**
JETT				Sn		**Sn**	**02 05 52.6**	**+0.7**
JETT				Lg	

NOA				Sn	**Sn**	**02 07 20.6**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=38,slow=21,SNR=4.3							
NOA				Lg	Lg	02 07 57.2		
	comp=Z,0.2nm,0.3s,baz=155,slow=21,SNR=7.2							
	comp=Z,0.5nm,0.5s							
HFS	**Hagfors**	**7.17 215**		Pn	**Pn**	**02 06 03.5**	**-0.8**
	baz=28,slow=14							
HFS				Sn	**Sn**	**02 07 20.7**	**-5.2**
	baz=34,slow=28							
HFS				Lg	Lg	02 07 58.2		
	baz=32,slow=28							
HFS	**Hagfors**	**7.17 215**		Pn	**Pn**	**02 06 03.5**	**-0.8**
	baz=28,slow=14							
HFS				Sn	**Sn**	**02 07 20.7**	**-5.2**
	baz=34,slow=28							
HFS				Sg	**Sb**	**02 07 58.2**	**+8.7**
	baz=32,slow=28							
HFS	**Hagfors**	**7.17 215**		Pn	**Pn**	**02 06 03.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=26,slow=13,SNR=7.9							
HFS				Sn	**Sn**	**02 07 21.2**	**-4.7**
	comp=Z,0.6nm,0.3s,baz=32,slow=23,SNR=5.6							
HFS				Lg	Lg	02 08 04.7		
	comp=Z,2.3nm,0.3s,baz=32,slow=31,SNR=7.5							
	comp=Z,0.9nm,0.5s							
NRA0	**NORESS Array S**	**7.21 224**		Pn	**Pn**	**02 06 04.5**	**-0.3**
	baz=31,slow=14							
NRA0				Sn	**Sn**	**02 07 23.7**	**-3.1**
	baz=46,slow=22							
NRA0				Lg	Lg	02 08 02.1		
	baz=33,slow=28							
NRA0	**NORESS Array S**	**7.21 224**		Pn	**Pn**	**02 06 04.5**	**-0.3**
	baz=31,slow=14							
NRA0				Sn	**Sn**	**02 07 23.7**	**-3.1**
	baz=46,slow=22							
NRA0				Sg	**Sg**	**02 08 02.1**	**-8.2**
	baz=33,slow=28							
GERES	**GERESS Array B**	**17.98 198**		P	**Pn**	**02 08 30.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=358,slow=14,SNR=2.2							

*IDC **04** 02:23:44.6±1.2,26°.28N×129°.46E, h0km, mb3.6/5, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=28.3km s-min=16.3km az=64.0*
*JMA **04** 02:23:46.4±0.1,26°.3N±0°.7×129°.6E±0°.4, h45km, MV3.6/18, NEAR MINAMI-DAITOJIMA IS*
ISC 04 02:23:43.5±1.6, 26°.32N±0°.04×129°.62E±0°.03, h3km±11km, n22, σ1°50/35, mb3.6/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**1.26**	**304**	*i* P	**Pg**	**02 24 08.2**	**+0.5**
JYRO				*e*S	**Sb**	**02 24 23.3**	**-1.3**
JOW	**Kunigami**	**1.31**	**293**	*i* P	**Pg**	**02 24 09.1**	**+0.4**
JOW				S	**Sb**	**02 24 24.8**	**-1.2**
JOW	**Kunigami**	**1.31**	**293**	Pn	**Pg**	**02 24 09.1**	**+0.4**
	161nm,0.3s,baz=116,slow=24,SNR=200						
JOW				Sn	**Sb**	**02 24 24.5**	**-1.5**
	164nm,0.3s,baz=100,slow=25,SNR=20						
JOKE	**Okinoerabujima**	**1.40**	**318**	P	**Pg**	**02 24 10.4**	**+0.1**
JOKE				*e*S	**Sn**	**02 24 26.9**	**-2.1**
JNTH	**Nagotoyohara**	**1.45**	**278**	P	**Pg**	**02 24 10.8**	**-0.5**
JNTH				S	**Sn**	**02 24 28.2**	**-2.0**
JMZ	**Minamidaito 2**	**1.52**	**109**	P	**Pb**	**02 24 11.5**	**-1.0**
JMZ				S	**Sn**	**02 24 28.7**	**-3.4**
JKDJ	**Kitadaitoujima**	**1.55**	**103**	P	**Pb**	**02 24 12.1**	**-0.8**
JKDJ				S	**Sn**	**02 24 30.6**	**-2.2**
JTK	**Tokunoshima**	**1.58**	**338**	P	**Pb**	**02 24 12.9**	**-0.4**
JIH	**Iheya**	**1.64**	**296**	P	**Pb**	**02 24 14.0**	**-0.5**
JIH				S	**Sn**	**02 24 33.1**	**-1.9**
JJT3	**Tamagusuku3**	**1.66**	**264**	P	**Pb**	**02 24 14.3**	**-0.5**
JJT3				S	**Sb**	**02 24 34.6**	**-1.5**
JAMN	**Amaminishikomi**	**1.95**	**348**	P	**Pb**	**02 24 18.0**	**-1.8**
JAMN				*e*S	**Sn**	**02 24 40.9**	**-1.8**
JZK	**Kikaishima**	**2.01**	**9**	P	**Pb**	**02 24 19.5**	**-1.2**
JZK				S	**Sn**	**02 24 43.6**	**-0.4**
JAM	**Amami Oshima**	**2.08**	**360**	P	**Pn**	**02 24 19.4**	**+0.1**
JAGN	**Aguni-jima**	**2.15**	**278**	S	**Sn**	**02 24 46.1**	**-1.4**
JKE	**Kume jima 2**	**2.54**	**271**	P	**Pn**	**02 24 25.9**	**+0.1**
JKE				*e*S	**Sn**	**02 24 55.4**	**-1.9**
JTAJ	**Takarajima**	**2.84**	**353**	P	**Pn**	**02 24 30.3**	**+0.5**
JTAJ				S	**Sn**	**02 25 02.2**	**-2.4**
JNU	**Nakatsue**	**6.86**	**9**	Pn	**Pn**	**02 25 26.6**	**+1.5**
	0.5nm,0.3s,baz=9.2,slow=19,SNR=7.5						
	10nm,0.8s						
SONM	**Songino Array**	**28.17**	**326**	P	**P**	**02 29 38.7**	**+1.4**
	0.4nm,0.5s,baz=142,slow=7.3,SNR=2.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**42.41**	**311**	P	**P**	**02 31 39.5**	**+0.1**
	0.3nm,0.6s,baz=93,slow=9.8,SNR=4.4						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**46.22**	**174**	P	**P**	**02 32 10.8**	**+0.7**
	0.7nm,0.5s,baz=354,slow=8.6,SNR=8.0						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**49.87**	**175**	P	**P**	**02 32 39.7**	**+1.4**
	0.6nm,0.8s,baz=4.7,slow=13,SNR=11						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**51.04**	**318**	P	**P**	**02 32 48.8**	**+1.9**
	0.6nm,0.7s,baz=84,slow=9.0,SNR=1.9						
	0.6nm,0.7s						

*IDC **04** 02:25:54.3±0.9,36°.74N×139°.36E, h170km±5km, mb3.5/17, mbtmp4.0/20, Error ellipse: s-maj=20.6km s-min=16.8km az=63.0*
*JMA **04** 02:25:56.8±0.2,37°.1N±0°.7×139°.1E±1°.0, h159km±1km, MV3.3/37, MID NIIGATA PREF*
ISC 04 02:25:55.4±0.7, 37°.06N±0°.05×139°.16E±0°.07, h166km±5km, n48, σ1°37/60, mb3.7/17, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUON	**Uonuma**	**0.17**	**332**	*i* P	**Pn**	**02 26 18.3**	**+0.6**
JUON				S	**Sn**	**02 26 34.2**	**-0.5**
JKT	**Katashina**	**0.30**	**166**	*i* P	**Pn**	**02 26 18.5**	**+0.4**
JKT				*e*S	**Sn**	**02 26 35.5**	**+0.1**
JFY	**Yanaizu**	**0.56**	**51**	*i* P	**Pn**	**02 26 19.8**	**+0.9**
JIZZ	**Izumozaki**	**0.59**	**323**	*i* P	**Pn**	**02 26 20.2**	**+1.1**
JIZZ				S	**Sn**	**02 26 37.5**	**+0.3**
JAG	**Ashikaga**	**0.67**	**159**	*i* P	**Pn**	**02 26 20.4**	**+0.8**
MJAR	**Matsushiro Arr**	**0.92**	**236**	P	**Pn**	**02 26 21.5**	**+0.3**
	72nm,0.5s,baz=42,slow=7.0,SNR=169						
MJAR				S	**Sn**	**02 26 40.9**	**0.0**
	67nm,0.8s,baz=66,slow=15,SNR=15						
MAJO	**Matsushiro**	**0.92**	**236**	P	**Pn**	**02 26 22.0**	**+0.8**
MAT	**Matsushiro**	**0.92**	**236**	P	**Pn**	**02 26 22.0**	**+0.8**
MAT				S	**Sn**	**02 26 40.6**	**-0.3**
JRY	**Ryogami san**	**1.06**	**191**	*i* P	**Pn**	**02 26 23.5**	**+1.2**
JRY				*e*S	**Sn**	**02 26 43.2**	**+0.3**
JOTO	**OTAMA OYAMA**	**1.06**	**61**	P	**Pn**	**02 26 23.6**	**+1.4**
JOTO				*e*S	**Sn**	**02 26 43.7**	**+0.7**
JSD	**Sado**	**1.21**	**324**	P	**Pn**	**02 26 23.5**	**0.0**
JSD				S	**Sn**	**02 26 43.2**	**-2.1**
JAW	**Awa shima**	**1.40**	**3**	P	**Pn**	**02 26 25.8**	**+0.6**
JSZ	**Suzu**	**1.48**	**286**	P	**Pn**	**02 26 26.4**	**+0.3**
JMM	**Marumori**	**1.53**	**58**	P	**Pn**	**02 26 27.8**	**+1.3**
JYN	**Shimob**	**1.63**	**198**	*i* P	**Pn**	**02 26 28.5**	**+0.8**
JYN				S	**Sn**	**02 26 53.5**	**+0.9**
JOD2	**Odawara 2**	**1.79**	**182**	P	**Pn**	**02 26 29.9**	**+0.6**
JOD2				S	**Sn**	**02 26 55.8**	**+0.3**
JFNN	**Fujinakano**	**1.90**	**192**	*e*P	**Pn**	**02 26 31.7**	**+1.3**
JYK	**Kaneyama**	**2.09**	**27**	P	**Pn**	**02 26 33.7**	**+1.2**
JYK				S	**Sn**	**02 27 01.4**	**+0.1**
JSG	**Sagara**	**2.50**	**199**	P	**Pn**	**02 26 40.4**	**+3.0**
JHJ	**Hachijo jima 2**	**3.96**	**172**	P	**Pn**	**02 26 54.9**	**-0.8**
	215nm,0.3s,baz=88,slow=22,SNR=20						
JHJ				S	**Sn**	**02 27 43.1**	**+0.5**
	173nm,0.4s,baz=142,slow=23,SNR=7.9						
JHJ2	**Mitsune**	**3.97**	**172**	P	**Pn**	**02 26 56.5**	**+0.7**
JTM	**Tenmabayashi**	**4.01**	**21**	P	**Pn**	**02 26 57.7**	**+1.5**
ERM	**Erimo**	**5.84**	**31**	P	**Pn**	**02 27 20.2**	**+0.2**
JEM	**Erimo**	**5.84**	**31**	P	**Pn**	**02 27 20.4**	**+0.4**
ASAJ	**Asahikawa**	**7.52**	**19**	P	**Pn**	**02 27 40.1**	**-2.2**
	6.1nm,0.3s,baz=252,slow=12,SNR=16						
JNU	**Nakatsue**	**7.84**	**242**	P	**Pn**	**02 27 46.4**	**-0.3**
	9.1nm,0.8s,baz=90,slow=17,SNR=2.5						
KSRS	**Korea Array**	**8.97**	**276**	P	**Pn**	**02 28 04.7**	**+3.2**
	1.7nm,0.4s,baz=90,slow=14,SNR=6.2						
USRK	**Ussuriysk Ar.**	**8.98**	**325**	P	**Pn**	**02 28 03.3**	**+1.7**
	8.5nm,0.8s,baz=134,slow=12,SNR=5.7						
YSS	**Yuzh-Sakhalins**	**10.24**	**14**	P	**Pn**	**02 28 17.3**	**-0.9**
KLR	**Kul'dur**	**13.31**	**338**	P	**Pn**	**02 28 56.0**	**-1.8**
	1.0nm,0.4s,baz=206,slow=6.0,SNR=4.9						
SONM	**Songino Array**	**26.28**	**305**	P	**P**	**02 31 15.8**	**+0.4**
	1.4nm,0.5s,baz=108,slow=9.1,SNR=13						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**40.57**	**312**	P	**P**	**02 33 19.2**	**+0.9**
	0.9nm,0.4s,baz=88,slow=5.8,SNR=6.4						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**42.58**	**302**	P	**P**	**02 33 35.6**	**+0.8**
	0.7nm,0.6s,baz=85,slow=10.0,SNR=9.8						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**44.56**	**308**	P	**P**	**02 33 51.3**	**+0.8**
	3.2nm,0.2s,baz=85,slow=8.4,SNR=13						
	3.2nm,0.2s						
BVAR	**Borovoye Array**	**49.22**	**312**	P	**P**	**02 34 27.8**	**+1.1**
	0.6nm,0.3s,baz=95,slow=7.9,SNR=7.7						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**50.44**	**32**	P	**P**	**02 34 34.6**	**-1.0**
	0.4nm,0.9s,baz=275,slow=5.2,SNR=4.8						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**56.87**	**185**	P	**P**	**02 35 18.4**	**-4.4**
	1.1nm,1.1s,baz=1.2,slow=7.5,SNR=3.3						
	1.1nm,1.1s						
SPITS	**Spitsbergen Ar**	**60.15**	**348**	P	**P**	**02 35 44.8**	**0.0**
	15nm,1.1s,baz=54,slow=14,SNR=1.3						
	15nm,1.1s						
ASAR	**Alice Springs**	**60.60**	**186**	P	**P**	**02 35 44.4**	**-4.1**
	0.5nm,1.0s,baz=357,slow=5.2,SNR=1.6						
	0.5nm,1.0s						
ARCES	**ARCESS Array B**	**63.33**	**339**	P	**P**	**02 36 07.0**	**+0.8**
	2.2nm,0.8s,baz=52,slow=7.9,SNR=4.7						
	2.2nm,0.8s						
FINES	**FINESS Array B**	**67.94**	**332**	P	**P**	**02 36 36.8**	**+1.0**
	1.1nm,0.7s,baz=62,slow=6.5,SNR=6.5						
	1.1nm,0.7s						
AKASG	**Malin Array Be**	**73.17**	**321**	P	**P**	**02 37 08.4**	**+0.8**
	0.7nm,0.3s,baz=50,slow=6.0,SNR=6.4						
	0.7nm,0.3s						
HFS	**Hagfors**	**73.31**	**335**	P	**P**	**02 37 08.9**	**+0.6**
	3.1nm,1.0s,baz=64,slow=3.7,SNR=4.0						
	3.1nm,1.0s						
NB2	**NORSAR Subarra**	**73.46**	**336**	P	**P**	**02 37 10.9**	**+1.7**
	comp=Z,1.9nm,0.6s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**73.46**	**336**	P	**P**	**02 37 10.2**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=61,slow=8.2,SNR=6.3						
	comp=Z,1.2nm,0.6s						
NVAR	**Mina Array Bea**	**76.41**	**52**	P	**P**	**02 37 26.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=263,slow=6.3,SNR=1.9						
	comp=Z,0.1nm,0.3s						
BRTR	**Keskin Array B**	**77.47**	**310**	P	**P**	**02 37 33.9**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.3,SNR=4.1						
	comp=Z,0.3nm,0.6s						
GERES	**GERESS Array B**	**81.73**	**327**	P	**P**	**02 37 56.1**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=34,slow=7.3,SNR=4.8						
	comp=Z,0.6nm,0.5s						

*ATH **04** 02:32:57.7, 38°.83N×26°.53E, h12km±2km, ML2.7/3, Error ellipse: s-maj=3.1km s-min=0.9km az=295.0*
*AFAD **04** 02:32:57.9±0.0, 38°.85N×26°.48E, h7km±3km, ML2.5*
*THE **04** 02:32:57.8, 38°.85N×26°.48E, h4km±9km, ML2.9/2, Error ellipse: s-maj=9.6km s-min=0.6km az=318.0*
ISC 04 02:32:57.8±0.9, 38°.84N±0°.02×26°.49E±0°.02, h12km±8km, n28, σ0°44/44, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARB	**zmir-Karabur**	**0.19**	**199**	P	**Pg**	**02 33 01.4**	**-0.5**
EAG3	**Mitilini, Lesv**	**0.25**	**15**	P	**Pg**	**02 33 03.1**	**+0.1**
EAG3				S	**Sg**	**02 33 06.8**	**+0.2**
LESV	**Lesvos island,**	**0.27**	**12**	P	**Pg**	**02 33 03.4**	**0.0**
LESV				S	**Sg**	**02 33 07.4**	**+0.2**
	11μm,0.3s						
IZMD	**zmir-Dikili-**	**0.37**	**67**	P	**Pg**	**02 33 04.9**	**-0.3**
IZMD				P	**Pb**	**02 33 05.2**	**-1.2**
IZMD				S	**Sg**	**02 33 10.8**	**+0.6**
IZMD				*i* AML	AML	02 33 12.0	
	comp=E,180nm,0.3s						
EAG2	**Marmaro, Chios**	**0.42**	**225**	P	**Pg**	**02 33 06.3**	**+0.2**
EAG2				S	**Sg**	**02 33 12.1**	**+0.3**
PRK	**Paraskevi**	**0.44**	**337**	P	**Pg**	**02 33 06.4**	**-0.1**
PRK				S	**Sg**	**02 33 12.4**	**+0.1**
	860nm,0.7s						
PRK	**Paraskevi**	**0.44**	**337**	P	**Pg**	**02 33 06.4**	**-0.1**
PRK				S	**Sg**	**02 33 13.0**	**+0.7**
PRK				AML	AML	02 33 17.5	
	comp=E,1720μm,0.4s						
PRK				AML	AML	02 33 18.3	
	comp=N,1617μm,0.2s						
ZEDA	**zmir-Bergama**	**0.48**	**75**	P	**Pg**	**02 33 07.3**	**+0.1**
URLA	**Izmir**	**0.49**	**170**	P	**Pg**	**02 33 06.7**	**-0.7**
URLA				S	**Sg**	**02 33 14.0**	**+0.1**
AYVA	**Ayvalik**	**0.49**	**19**	P	**Pg**	**02 33 06.7**	**-0.8**
CHOS	**Chios island**	**0.57**	**217**	P	**Pg**	**02 33 08.9**	**0.0**
CHOS	**Chios island**	**0.57**	**217**	P	**Pg**	**02 33 08.9**	**0.0**
CHOS				S	**Sg**	**02 33 16.6**	**+0.2**
CHOS				AML	AML	02 33 21.6	
	comp=E,2729μm,0.2s						
CHOS				AML	AML	02 33 21.8	
	comp=N,1520μm,0.2s						
ZEYE	**Izmir, Urla-Ze**	**0.60**	**179**	P	**Pg**	**02 33 09.4**	**-0.1**
SIGR	**SIGRI**	**0.62**	**307**	P	**Pn**	**02 33 12.4**	**0.0**
BLCB	**Balcova**	**0.63**	**136**	P	**Pg**	**02 33 10.4**	**+0.4**
BLCB				S	**Sg**	**02 33 18.9**	**+0.6**
KOCA	**Canakkale, Ayv**	**0.71**	**338**	P	**Pg**	**02 33 11.7**	**+0.1**
PSRA	**Psara**	**0.78**	**248**	P	**Pg**	**02 33 13.1**	**+0.1**
PSRA				S	**Sb**	**02 33 24.3**	**+0.3**
PSRA				AML	AML	02 33 26.4	
	comp=N,1728μm,0.2s						
PSRA				AML	AML	02 33 26.9	
	comp=E,2271μm,0.2s						
BUHA	**Balikesir, Bur**	**0.80**	**35**	P	**Pb**	**02 33 13.8**	**+0.1**
BUHA				S	**Sb**	**02 33 24.5**	**0.0**
BUHA				*i* AML	AML	02 33 28.0	
	comp=E,281nm,0.3s						
BUHA				*i* AML	AML	02 33 30.0	
	comp=E,191nm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**3**	P	**Pb**	**02 33 15.7**	**+0.3**
BAYC				S	**Sb**	**02 33 27.3**	**-0.1**
BAYC				*i* AML	AML	02 33 29.0	
	comp=E,343nm,0.4s						
BAYC				*i* AML	AML	02 33 30.0	
	comp=E,317nm,0.2s						
AKHS	**Akhisar**	**1.03**	**88**	P	**Pn**	**02 33 18.5**	**+0.3**
BOZC	**Bozcaada**	**1.05**	**341**	P	**Pg**	**02 33 17.7**	**-0.4**
BOZC				S	**Sg**	**02 33 31.5**	**-0.3**
BOZC				*i* AML	AML	02 33 34.0	
	comp=E,489nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.10**	**60**	P	**Pg**	**02 33 18.6**	**-0.3**
CNKL	**anakkale-Mer**	**1.23**	**356**	P	**Pb**	**02 33 21.2**	**+0.3**
CNKL				P	**Pn**	**02 33 21.3**	**+0.5**
BALY	**Balya**	**1.25**	**44**	P	**Pn**	**02 33 21.2**	**-0.1**
BALY				S	**Sg**	**02 33 37.9**	**-0.3**
BALY				*i* AML	AML	02 33 42.0	
	comp=E,130nm,0.5s						
GCAM	**G?zelcami?**	**1.28**	**153**	P	**Pn**	**02 33 21.8**	**+0.2**
IZMR	**zmir-demi**	**1.35**	**121**	P	**Pg**	**02 33 24.6**	**+0.9**
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**02 33 23.9**	**-0.2**
APE	**Apeiranthos**	**1.93**	**203**	P	**Pn**	**02 33 29.5**	**-1.0**

IDC 04 02:35:19.4±4.0, 2°.39S×136°.11E, h0km, mb3.5/2, mbtmp3.6/3, ML3.7/1, MS3.5/1, Error ellipse: s-maj=173.2km s-min=20.9km az=85.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.53**	**186**	P	Pn	02 39 25.8	+0.4
	0.3nm,0.3s,baz=13,slow=13,SNR=17						
WRA				S	Sn	02 42 41.3	-0.1
	0.5nm,0.6s,baz=6.0,slow=23,SNR=2.5						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**21.26**	**186**	P	P	02 40 08.6	+1.1
	0.9nm,0.4s,baz=14,slow=10,SNR=37						
	0.9nm,0.4s						
STKA	**Stephens Creek**	**29.78**	**171**	LR	LR	02 53 24.8	
	comp=Z,74nm,18.1s,baz=24,slow=36						
MKAR	**Makanchi Array**	**67.97**	**323**	P	P	02 46 20.1	-0.3
	0.3nm,0.6s,baz=113,slow=6.7,SNR=5.1						
	0.3nm,0.6s						

KRSC 04 02:44:21.0±0.9, 53°.79N×168°.96E, h35km±20km, Ml3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.25**	**310**	*e*P	Pn	02 44 57.9	+2.3
BKI				*e*S	Sn	02 45 25.6	+3.6
TUMD	**Tumrok D**	**5.19**	**289**	*e*S	Sn	02 46 39.7	+5.1
KMNR	**Kamenistaya**	**5.42**	**295**	*e*P	Pn	02 45 44.1	+4.8
KMNR				*e*S	Sn	02 46 45.5	+5.0
SMAR	**Somma**	**6.08**	**269**	*e*P	Pn	02 45 53.1	+4.6
AVH	**Avacha**	**6.12**	**269**	*e*P	Pn	02 45 54.2	+5.3
KRX	**Arik**	**6.16**	**270**	*e*P	Pn	02 45 54.3	+4.9
KRMR	**Karymshinskiy**	**6.56**	**266**	*e*P	Pn	02 45 59.5	+4.6
ASAK	**Asacha**	**6.81**	**263**	*e*P	Pn	02 46 04.1	+5.7

*GEN **04** 03:00:08.8, 44°.88N×7°.03E, h6km, Ml0.5*
*LDG **04** 03:00:09.4±0.1, 44°.86N×7°.03E, h5km, Md1.5/2, Error ellipse: s-maj=2.4km s-min=2.3km az=170.0*
STR 04 03:00:09.6±0.4, 45°N±2°×±°, h4km, MLv1.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=107.3, preliminary, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RRL	**Rocca Remolon**	**0.17**	**286**	Pg	Pg	03 00 14.2	+1.3
RRL	**Rocca Remolon**	**0.17**	**286**	Sg	Sg	03 00 16.6	+1.5
RRL	**Rocca Remolon**	**0.17**	**286**	Pg	Pg	03 00 13.0	0.0
RRL	**Rocca Remolon**	**0.17**	**286**	Sg	Sg	03 00 15.4	+0.3
RRL	**Rocca Remolon**	**0.17**	**286**	P	Pg	03 00 13.0	+0.1
RRL				S	Sg	03 00 15.5	+0.3
BHB	**Bricherasio**	**0.18**	**100**	Pg	Pg	03 00 14.2	+1.2
BHB	**Bricherasio**	**0.18**	**100**	Pg	Pg	03 00 13.1	+0.1
BHB	**Bricherasio**	**0.18**	**100**	P	Pg	03 00 13.2	+0.1
BHB				S	Sg	03 00 14.3	-1.1
MBDF	**Montbardon**	**0.23**	**230**	*e*Pg	Pg	03 00 14.1	+0.1
MBDF				*e*Sg	Sg	03 00 18.0	+1.0
	9.7nm,0.3s						
BNI	**Bardonecchia**	**0.30**	**307**	P	Pg	03 00 15.4	0.0
BNI				S	Sg	03 00 18.8	-0.5
RSP	**Reno Superiore**	**0.33**	**33**	Pg	Pg	03 00 15.9	0.0
RSP	**Reno Superiore**	**0.33**	**33**	Sg	Sg	03 00 20.4	+0.2
RSP	**Reno Superiore**	**0.33**	**33**	P	Pg	03 00 15.8	-0.1
RSP				S	Sg	03 00 20.4	+0.2
PZZ	**Stroppo**	**0.37**	**169**	Pg	Pg	03 00 17.7	+0.9
PZZ				Sg	Sg	03 00 22.9	+1.2
PZZ	**Stroppo**	**0.37**	**169**	Pg	Pg	03 00 16.3	-0.5
PZZ	**Stroppo**	**0.37**	**169**	Sg	Sg	03 00 21.6	-0.1
PZZ	**Stroppo**	**0.37**	**169**	P	Pg	03 00 16.5	-0.3
PZZ				S	Sg	03 00 21.7	0.0
OGMO	**Fort Saint-Gob**	**0.41**	**325**	Pg	Pg	03 00 17.4	0.0
OGMO				Sg	Sg	03 00 22.7	-0.3
OGMO	**Fort Saint-Gob**	**0.41**	**325**	S	Sg	03 00 22.7	-0.1
SURF	**Saint Ours**	**0.42**	**200**	Pg	Pg	03 00 18.0	+0.3
SURF	**Saint Ours**	**0.42**	**200**	P	Pg	03 00 17.9	+0.3
CREF	**Crivoux**	**0.43**	**221**	Pg	Pg	03 00 18.0	+0.1
CREF				Sg	Sg	03 00 24.5	+1.0
JAUF	**Jausiers**	**0.48**	**203**	Pg	Pb	03 00 21.1	+0.3
JAUF	**Jausiers**	**0.48**	**203**	Pg	Pg	03 00 18.8	-0.1
JAUF				Sg	Sg	03 00 25.6	+0.5
OGAG	**Argentiere**	**0.54**	**219**	Pg	Pg	03 00 17.5	-2.4
OGAG				Sg	Sg	03 00 22.2	-4.7
OGAG	**Argentiere**	**0.54**	**219**	Pg	Pg	03 00 16.4	-3.5
OGAG	**Argentiere**	**0.54**	**219**	P	Pg	03 00 17.6	-2.3
OGAG				S	Sg	03 00 22.3	-4.6
LPG	**La Plagne**	**0.65**	**343**	*e*Pg	Pb	03 00 23.0	-0.7
LPG				*e*Sg	Sg	03 00 31.7	+1.1
	2.1nm,0.3s						
LPL	**La Plagne**	**0.67**	**343**	*e*Pg	Pb	03 00 23.3	-0.7
LPL				*e*Sg	Sb	03 00 32.6	-1.2
	1.3nm,0.2s						
ISO	**Isola**	**0.69**	**178**	Pg	Pb	03 00 24.0	-0.2
ISO				Sg	Sg	03 00 32.3	+0.6
ORIF	**Oris-en-Rattie**	**0.81**	**274**	*e*Pg	Pg	03 00 25.0	-0.1
ORIF				*e*Sg	Sg	03 00 36.5	+0.9
	2.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.81**	**274**	Pg	Pg	03 00 24.7	-0.3
CIRO	**Champorcher**	**0.82**	**28**	Pg	Pb	03 00 26.3	-0.3
CIRO				Sg	Sg	03 00 36.3	+0.1
CIRO	**Champorcher**	**0.82**	**28**	S	Sb	03 00 37.6	-0.6
SPIF	**crte de Spivo**	**0.83**	**169**	Pg	Pg	03 00 25.3	-0.3
RORO	**Rocca Rossa**	**1.07**	**135**	Sg	Sg	03 00 42.8	-1.1

*IDC **04** 03:13:38.6±2.2,60°.58N×149°.69W, h56km±36km, mb3.4/1, mbtmp3.6/6, ML3.5/5, MS2.6/1, Error ellipse: s-maj=39.3km s-min=23.5km az=130.0*
*NEIC **04** 03:13:38.7±1.6,60°.73N±0°.02×149°.94W±0°.06, h37km±5km, Error ellipse: s-maj=4.6km s-min=3.1km az=91.0*
*AEIC **04** 03:13:39.0±1.6,60°.72N±0°.02×149°.91W±0°.04, h39km±4km, ML3.4, ML3.6/180(NEIC), Error ellipse: s-maj=3.5km s-

DFR	Drift River	1.36	266			Pn		03 14 00.8	0.0
RDSO	Redoubt South	1.41	261			Pn		03 14 01.6	+0.1
RSO	Redoubt South	1.42	261	Pn		Pn		03 14 01.7	+0.1
RDJH	Redoubt Jeurge	1.42	266			Pn		03 14 01.8	+0.1
RED	Redoubt Volcan	1.43	260			Pn		03 14 01.9	+0.1
P23K	Montague Islan	1.45	118			Pn		03 14 02.0	+0.2
P23K	Montague Islan baz=301	1.45	118	P		Pn		03 14 02.0	+0.2
RDWB	Redoubt West	1.45	262			Pn		03 14 02.2	+0.1
O20K	Slope Mountain	1.48	246			Pn		03 14 03.4	+1.0
O20K	Slope Mountain baz=63	1.48	246	P		Pn		03 14 03.4	+1.0
NCT	North Crescent	1.49	266			Pn		03 14 02.6	+0.1
SKT	Skwentna	1.49	330	Pn		Pn		03 14 02.5	0.0
SKT	comp=N,1µm,0.6s			IAML				03 14 22.6	
SKT	Skwentna baz=148	1.49	330	P		Pn		03 14 02.5	0.0
SPNN	North Nagishla	1.50	297			Pn		03 14 03.0	+0.3
M23K	Glacier View	1.52	43			Pn		03 14 03.2	+0.3
M23K	Glacier View baz=225	1.52	43	P		Pn		03 14 03.2	+0.3
IVE	Iliamna Volcan	1.68	247			Pn		03 14 05.4	+0.2
SCM	Sheep Creek Mo	1.69	47	Pn		Pn		03 14 05.2	0.0
SCM	comp=E,544nm,0.4s			IAML				03 14 28.3	
SCM	comp=N,428nm,0.7s			IAML				03 14 38.1	
SCM	Sheep Creek Mo baz=229	1.69	47	P		Pn		03 14 05.6	+0.4
CUT	Chulitna	1.71	355	Pn		Pn		03 14 05.5	+0.1
CUT	Chulitna baz=174	1.71	355	P		Pn		03 14 06.3	+0.8
HIN	Hinchinbrook I	1.72	99	Pn		Pn		03 14 05.0	-0.6
HIN	comp=N,880nm,1.0s			IAML				03 14 37.2	
HIN	comp=E,625nm,1.1s			IAML				03 14 42.3	
M20K	Styx River	1.94	309	Pn		Pn		03 14 09.4	+0.7
P19K	Oil Pt	1.96	239			Pn		03 14 10.2	+1.3
P19K	comp=N,649nm,0.7s			IAML				03 14 45.3	
EYAK	Cordova Ski Ar	2.07	93			Pn		03 14 10.1	-0.2
DIV	Divide	2.08	76			Pn		03 14 10.7	+0.1
KLU	Klutina	2.10	66	Pn		Pn		03 14 11.4	+0.5
KLU	comp=N,452nm,0.5s			IAML				03 14 43.5	
WAT6	Susitna Watana	2.15	28			Pn		03 14 12.2	+0.6
WAT7	Susitna Watana	2.19	13			Pn		03 14 12.5	+0.3
AUCH	Augustine Cone	2.22	234			Pn		03 14 13.8	+1.2
WAT1	Susitna Watana	2.23	17			Pn		03 14 13.3	+0.7
O19K	Port Alsworth	2.23	259	Pn		Pn		03 14 13.1	+0.4
N19K	Bonanza Creek	2.24	275	Pn		Pn		03 14 13.4	+0.6
N19K	comp=N,273nm,0.5s			IAML				03 14 46.1	
M24K	Tolsona, Glenn	2.29	51	Pn		Pn		03 14 13.6	+0.2
M24K	comp=E,474nm,1.2s			IAML				03 15 01.9	
PPLA	Purkeypile	2.44	335			Pn		03 14 16.9	+1.2
SYI	Shuyak Island	2.45	212	Pn		Pn		03 14 16.4	+0.8
M19K	Big River Lodg	2.46	301	Pn		Pn		03 14 15.5	-0.4
GOAT	Goat Mountain	2.57	91			Pn		03 14 17.1	-0.2
Q19K	Cape Douglas,	2.59	228	Pn		Pn		03 14 17.9	+0.3
L20K	Farewell, AK	2.59	315			Pn		03 14 18.0	+0.4
RAGM	Ragged Mountai	2.62	95	Pn		Pn		03 14 16.5	-1.5
BMRM	Bremner River	2.62	82			Pn		03 14 17.9	-0.1
DHY	Denali Highway	2.67	26	Pn		Pn		03 14 19.7	+1.0
DHY	comp=N,198nm,0.5s			IAML				03 15 01.6	
DHY	comp=E,183nm,0.5s			IAML				03 15 02.1	
N25K	Chitina, Valde	2.74	68	Pn		Pn		03 14 19.9	+0.3
N25K	comp=N,268nm,0.7s			IAML				03 15 02.9	
RND	Reindeer	2.75	10			Pn		03 14 21.2	+1.4
RND	comp=E,208nm,0.6s			IAML				03 14 59.1	
RND	comp=N,230nm,0.6s			IAML				03 15 01.0	
TRF	Thorofare Moun	2.76	357			Pn		03 14 21.3	+1.3
TRF	comp=N,301nm,0.6s			IAML				03 15 06.2	
TRF	comp=E,210nm,0.8s			IAML				03 15 06.9	
O18K	Koktuh Hills	2.77	254	Pn		Pn		03 14 19.6	-0.4
O18K	comp=N,193nm,0.7s			IAML				03 15 13.8	
SVW2	Sparrevohn	2.79	280			Pn		03 14 20.1	-0.2
L19K	White Mountain	2.79	304	Pn		Pn		03 14 20.3	0.0
HMT	Hamilton	2.83	95	Pn		Pn		03 14 19.3	-1.6
HARP	HAARP	2.84	51			Pn		03 14 22.3	+1.3
KAIM	Kayak Island	2.85	104			Pn		03 14 20.2	-0.9
KAIM	Kayak Island comp=E,186nm,2.0s	2.85	104	IAML				03 15 26.5	
KAIM	comp=N,275nm,2.8s			IAML				03 15 54.1	
KTH	Kantishna Hill	2.89	351	Pn		Pn		03 14 23.6	+1.8
KTH	comp=N,280nm,0.5s			IAML				03 15 01.4	
CAST	Castle Rocks	2.90	340	Pn		Pn		03 14 23.0	+1.2
CAST	comp=E,238nm,1.0s			IAML				03 15 13.2	
CAST	comp=N,182nm,0.8s			IAML				03 15 14.9	
N18K	Kilae Creek	2.93	272	Pn		Pn		03 14 22.2	-0.1
N18K	comp=N,145nm,1.1s			IAML				03 15 11.0	
M18K	Stony River	2.97	288			Pn		03 14 22.9	+0.2
P18K	Big Mountain,	2.97	246	Pn		Pn		03 14 22.6	-0.2
WACK	Wrangell Chich	2.99	62			Pn		03 14 23.7	+0.5
WASW	Wrangell South	3.03	64			Pn		03 14 24.6	+0.8
GLB	Gilahina Butte	3.06	73	Pn		Pn		03 14 24.1	0.0
GLB	comp=E,200nm,0.7s			IAML				03 15 09.2	
GLB	comp=N,198nm,0.8s			IAML				03 15 10.3	
MCK	McKinley	3.07	8			Pn		03 14 26.2	+2.0
BERG	Berg Lake	3.09	93	Pn		Pn		03 14 23.3	-1.1
PAX	Paxson	3.10	41			Pn		03 14 25.6	+0.9
SUCK	Suckling Hills	3.12	99	Pn		Pn		03 14 24.7	-0.2
SUCK	comp=N,178nm,0.7s			IAML				03 15 17.4	
SUCK	comp=E,120nm,0.9s			IAML				03 15 18.0	
VRDI	Verde Repeater	3.20	78	Pn		Pn		03 14 25.2	-0.9
VRDI	comp=N,172nm,0.8s			IAML				03 15 16.5	
KAHG	Katmai Hook Gl	3.23	229			Pn		03 14 27.0	+0.5
KDAK	Kodiak Island	3.24	206	Pn		Pn		03 14 26.2	-0.2
KDAK	Kodiak Island comp=N,5.5nm,0.3s,baz=48,slow=13,SNR=125	3.24	206	P		Pn		03 14 26.3	-0.2
KDAK				S		Sn		03 15 01.2	-2.4
K20K	comp=N,28nm,0.3s,baz=134,slow=23,SNR=8.8 comp=N,20nm,0.3s Telida	3.30	326	Pn		Pn		03 14 27.1	-0.2
KAHC	Katmai Hardscr	3.30	233			Pn		03 14 27.9	+0.5
KHIT	Khitrov Hills	3.31	92			Pn		03 14 26.4	-1.1
MCARA	McCarthy VSAT	3.43	76	Pn		Pn		03 14 29.4	+0.4
BPAW	Bear Paw Mtn.	3.44	352	Pn		Pn		03 14 30.0	+0.8
BPAW	comp=N,90nm,0.6s			IAML				03 15 26.9	
BPAW	comp=E,100nm,1.0s			IAML				03 15 27.9	
BWN	Browne	3.48	3	Pn		Pn		03 14 30.4	+0.6
TGL	Tana Glacier	3.49	86	Pn		Pn		03 14 29.4	-0.6
TGL	comp=N,167nm,1.0s			IAML				03 15 31.6	
TGL	comp=E,169nm,0.6s			IAML				03 15 33.5	
WAX	Waxell Ridge	3.50	91	Pn		Pn		03 14 28.1	-2.0
SNH	Sunshine Point	3.55	95	Pn		Pn		03 14 32.6	+1.8
SNH	comp=E,88nm,0.9s			IAML				03 15 35.0	
SNH	comp=N,96nm,1.3s			IAML				03 15 39.2	
L18K	Granite Mounta	3.58	298	Pn		Pn		03 14 30.7	-0.4
N17K	Nushagak Hills	3.58	270	Pn		Pn		03 14 30.0	-1.1
N17K	comp=N,100nm,1.6s			IAML				03 15 28.8	
P17K	Kvichak River	3.61	248			Pn		03 14 32.4	+0.9
TTA	Tatalina	3.65	310	Pn		Pn		03 14 31.7	-0.4
K24K	Donnelly Dome	3.66	30			Pn		03 14 34.6	+2.3
PTPK	Patty Peak	3.67	79			Pn		03 14 32.9	+0.3
BARK	Barkley Ridge	3.69	92			Pn		03 14 32.1	-0.6
O17K	Koliganek Bris	3.69	258			Pn		03 14 33.8	+1.1
MENT	Mentasta	3.70	50	Pn		Pn		03 14 34.4	+1.6
MENT	comp=N,117nm,0.7s			IAML				03 15 31.3	
MENT	comp=E,124nm,0.7s			IAML				03 15 40.3	
KIAG	Kiagna River	3.71	83			Pn		03 14 33.0	-0.2
M17K	Holitna River	3.71	284	Pn		Pn		03 14 33.5	+0.5
M17K	comp=E,148nm,0.9s			IAML				03 15 35.5	
M17K	comp=N,142nm,0.7s			IAML				03 15 45.5	
M26K	Nabesna, AK	3.73	60	Pn		Pn		03 14 34.3	+1.1
KELA	Mount Kelaz	3.73	235			Pn		03 14 34.1	+0.8
ISLE	Juniper Island	3.74	88	Pn		Pn		03 14 32.9	-0.5
ISLE	comp=E,131nm,0.7s			IAML				03 15 38.0	
ANCK	Angle Creek	3.79	231			Pn		03 14 34.8	+0.7
RIDG	Independent Ri	3.86	36	Pn		Pn		03 14 34.1	-0.9
RIDG	comp=N,109nm,0.9s			IAML				03 15 38.2	
L26K	Log Cabin Wild	3.89	50	Pn		Pn		03 14 36.4	+1.0
L26K	comp=E,78nm,0.5s			IAML				03 15 44.8	
L26K	comp=N,68nm,0.9s			IAML				03 15 50.6	
CNTC	Contact Creek	3.90	234			Pn		03 14 36.6	+1.0
OHAK	Old Harbor	3.91	208	Pn		Pn		03 14 34.2	-1.3
OHAK	comp=E,68nm,3.5s			IAML				03 16 24.0	
HDA	Harding Lake	3.96	19			Pn		03 14 37.8	+1.5
HDA	comp=E,86nm,1.2s			IAML				03 15 39.5	
HDA	comp=N,89nm,0.7s			IAML				03 15 48.1	
MESA	MESA	3.99	94	Pn		Pn		03 14 37.8	+0.9
MESA	comp=N,113nm,0.4s			IAML				03 15 48.5	
MESA	comp=E,89nm,0.6s			IAML				03 15 55.7	
J20K	Nowinta River	3.99	332	Pn		Pn		03 14 36.5	-0.3
J20K	comp=N,92nm,0.9s			IAML				03 15 43.2	
J20K	comp=E,78nm,0.8s			IAML				03 15 50.1	
BARN	Barnard Glacie	4.06	81	Pn		Pn		03 14 39.0	+1.2
BARN	comp=E,79nm,0.8s			IAML				03 15 44.9	
BARN	comp=N,84nm,0.6s			IAML				03 15 45.5	
CCB	Clear Creek Bu	4.07	13	Pn		Pn		03 14 38.4	+0.6
CCB	comp=E,54nm,0.7s			IAML				03 15 48.4	
M27K	Edge Creek, AK	4.20	63	Pn		Pn		03 14 40.1	+0.4
CTGM	Chitina Glacie	4.22	83	Pn		Pn		03 14 40.5	+0.6
CTGM	comp=N,59nm,0.5s			IAML				03 15 46.1	
J18K	Innoko River	4.22	314	Pn		Pn		03 14 39.7	-0.2
O16K	Kokwok River B	4.23	258	Pn		Pn		03 14 41.1	+1.1
O16K	comp=E,74nm,1.2s			IAML				03 15 54.7	
O16K	comp=N,80nm,0.9s			IAML				03 15 56.3	
L17K	Donlin	4.27	293			Pn		03 14 40.9	+0.3
COLA	College	4.29	12	Pn		Pn		03 14 41.1	+0.3
SCRK	Sand Creek	4.29	38	Pn		Pn		03 14 40.3	-0.7
SCRK	comp=E,65nm,0.7s			IAML				03 15 51.1	
ILAR	Eielson Array	4.31	18	Pn		Pn		03 14 41.2	0.0
ILAR	Eielson Array comp=E,1.6nm,0.3s,baz=196,slow=13,SNR=87	4.31	18	P		Pn		03 14 41.9	+0.7
ILAR	comp=E,7.1nm,0.5s,baz=194,slow=14,SNR=2.5			S		Sn		03 15 30.0	-0.1
ILAR	comp=E,60nm,18.4s,baz=284,slow=35 comp=E,3.7nm,0.3s			LR		LR		03 16 13.8	
MDM	Murphy Dome	4.34	10	Pn		Pn		03 14 41.7	+0.1
MDM	comp=N,48nm,0.7s			IAML				03 15 51.9	
MDM	comp=E,49nm,1.1s			IAML				03 16 03.9	
TABL	Table Mountain	4.34	90	Pn		Pn		03 14 42.1	+0.3
TABL	comp=N,79nm,0.9s			IAML				03 15 56.4	
TABL	comp=E,71nm,1.5s			IAML				03 15 56.9	
MLY	Manley	4.36	355	Pn		Pn		03 14 43.1	+1.3
N16K	Nishlik Lake	4.37	271			Pn		03 14 43.1	+1.2
LOGN	Logan Glacier	4.38	85	Pn		Pn		03 14 43.0	+0.7
LOGN	comp=E,43nm,1.3s			IAML				03 15 55.4	
LOGN	comp=N,57nm,1.0s			IAML				03 15 55.7	
M16K	Timber Creek	4.43	278	Pn		Pn		03 14 43.7	+1.0
M16K	comp=N,41nm,1.0s			IAML				03 15 54.3	
J25K	Salcha River,	4.45	26	Pn		Pn		03 14 43.4	+0.3
J25K	comp=E,79nm,1.1s			IAML				03 15 43.2	
J25K	comp=N,56nm,0.6s			IAML				03 15 47.4	
K17K	Iditarod	4.46	300	Pn		Pn		03 14 44.1	+0.9
K17K	comp=N,41nm,1.0s			IAML				03 16 05.2	
K17K	comp=E,46nm,0.9s			IAML				03 16 08.3	
I23K	Minto, Yukon-K	4.46	3	Pn		Pn		03 14 44.2	+1.0
I23K	comp=E,66nm,1.2s			IAML				03 15 59.4	
I23K	comp=N,70nm,1.0s			IAML				03 16 01.6	
L27K	Beaver Creek,	4.50	55	Pn		Pn		03 14 44.9	+1.1
BCAR	Beaver Creek A	4.52	55	Pn		Pn		03 14 43.7	-0.4
YUK2	White River	4.52	72			Pn		03 14 44.9	+0.8
POKR	Poker Plat Res	4.57	13	Pn		Pn		03 14 45.0	+0.3
POKR	comp=E,45nm,0.9s			IAML				03 15 58.8	
I21K	Tanana	4.58	349	Pn		Pn		03 14 45.9	+1.0
I21K	comp=E,56nm,1.1s			IAML				03 16 10.3	
I21K	comp=N,59nm,0.9s			IAML				03 16 11.6	
I20K	Naaghedeneel	4.60	335	Pn		Pn		03 14 46.7	+1.5
BVCY	Beaver Creek	4.66	65			Pn		03 14 47.1	+1.1
YUK3	Moose Creek	4.70	73			Pn		03 14 47.4	+0.8
L16K	Owhat River	4.72	286	Pn		Pn		03 14 47.1	+0.3
L16K	comp=E,37nm,1.4s			IAML				03 16 09.7	
L16K	comp=N,39nm,1.1s			IAML				03 16 09.8	
J26L	Joseph Creek	4.81	35	Pn		Pn		03 14 48.4	+0.3
J26L	comp=E,37nm,0.6s			IAML				03 15 55.8	
J26L	comp=N,45nm,0.7s			IAML				03 16 03.8	
K27K	Chicken	4.95	44	Pn		Pn		03 14 51.9	+2.1
N15K	Kwethluk River	5.06	268	Pn		Pn		03 14 52.2	+0.7
N15K	comp=E,53nm,1.5s			IAML				03 16 25.4	
H21K	Melozitna Rive	5.13	347	Pn		Pn		03 14 53.0	+0.6
H21K	comp=N,25nm,0.7s			IAML				03 16 20.7	
H21K	comp=E,38nm,1.1s			IAML				03 16 26.7	
GCSA	Galena City Sc	5.16	325			Pn		03 14 53.6	+0.9
PRP	Porcupine Dome	5.22	21	Pn		Pn		03 14 54.5	+0.8
PRP	comp=E,47nm,1.0s			IAML				03 16 02.5	
PRP	comp=N,47nm,0.8s			IAML				03 16 03.1	
H24K	Noodor Dome	5.23	9	Pn		Pn		03 14 55.3	+1.5
H24K	comp=E,39nm,0.7s			IAML				03 16 18.5	
H20K	Anotleneega Mo	5.30	337			Pn		03 14 56.2	+1.5
IMAR	Indian Mountai	5.57	344	Pn		Pn		03 14 59.1	+0.7
J16K	Anvik River	5.65	302	Pn		Pn		03 14 59.5	0.0
H19K	Roundabout Mou	5.67	331	Pn		Pn		03 15 00.2	+0.5
EGAK	Eagle	5.74	41	Pn		Pn		03 15 01.5	+0.8
M29M	Somme Creek	5.75	67	Pn		Pn		03 15 00.7	-0.2
K15K	Wolf Creek Mou	5.78	291	Pn		Pn		03 15 02.1	+0.9
O14K	Tigyukauivet M	5.87	261	Pn		Pn		03 15 03.6	+1.0
H18K	Honhosa River	5.89	323	Pn		Pn		03 15 03.0	+0.2
M14K	Bethel	5.90	276	Pn		Pn		03 15 03.9	+1.0
DAWY	Dawson	5.94	51	Pn		Pn		03 15 04.0	+0.4
I17K	Unalakleet	5.95	307	Pn		Pn		03 15 03.5	0.0
G23K	Bananza Creek	6.03	360	Pn		Pn		03 15 05.3	+0.7
G21K	Allakaket	6.04	346	Pn		Pn		03 15 05.8	+0.9
HYT	Haines Junctio	6.09	83	Pn		Pn		03 15 05.1	-0.6
G24K	Hadweenzic Riv	6.11	9	Pn		Pn		03 15 06.0	+0.2
P29M	Windy Craggy	6.18	95	Pn		Pn		03 15 07.6	+0.7
L14K	Kuka Creek	6.23	281	Pn		Pn		03 15 08.4	+1.0
H17K	Granite Mounta	6.23	317	Pn		Pn		03 15 09.4	+1.9
FYU	Fort Yukon	6.24	18	Pn		Pn		03 15 08.8	+1.3
G19K	Purcell Mounta	6.33	333	Pn		Pn		03 15 09.0	+0.2
G18K	Tagagawik	6.52	327	Pn		Pn		03 15 11.1	-0.3
M30M	Minto, Yukon	6.53	68	Pn		Pn		03 15 11.4	-0.2
COLD	Coldfoot	6.55	359	Pn		Pn		03 15 13.2	+1.4
I28M	Miner Creek	6.57	39	Pn		Pn		03 15 12.5	+0.4
J29N	Klondike Camp	6.58	50	Pn		Pn		03 15 12.1	-0.3
K29M	Barlow Dome	6.59	56	Pn		Pn		03 15 12.1	-0.4
M13K	Dall Lake	6.62	273	Pn		Pn		03 15 14.1	+1.3
F21K	Alatna River	6.72	348	Pn		Pn		03 15 15.3	+1.1
J14K	Nanvaranak Lak	6.79	293	Pn		Pn		03 15 14.6	-0.4
F20K	Avaraart Lake	6.86	341	Pn		Pn		03 15 16.4	+0.4
F24K	Squaw Lake	6.90	7	Pn		Pn		03 15 18.4	+1.8
F19K	Shaleruckik Mo	7.06	334	Pn		Pn		03 15 19.8	+1.1
BMAR	Burnt Mountain	7.14	17	Pn		Pn		03 15 19.6	-0.3
G16K	Koyuk River	7.34	315	Pn		Pn		03 15 22.9	+0.3
J30M	Hart River	7.36	52	Pn		Pn		03 15 23.1	0.0
E19K	Redstone River	7.49	338	Pn		Pn		03 15 26.6	+2.0
M31M	Drury Creek, Y	7.59	72	Pn		Pn		03 15 26.5	+0.3
F17K	Baldwin Pennin	7.64	324	Pn		Pn		03 15 28.0	+1.3
I30M	Mount Dempster	7.65	48	Pn		Pn		03 15 27.5	+0.5
E25K	Arctic Village	7.68	12	Pn		Pn		03 15 27.6	+0.4
FARO	Faro, Yukon	8.08	72	Pn		Pn		03 15 33.1	+0.2
ANM	Nome	8.09	305	Pn		Pn		03 15 33.0	+0.1
P32M	Atlin	8.17	91	Pn		Pn		03 15 33.7	-0.4
EPYK	Eagle Plains	8.18	40	Pn		Pn		03 15 32.1	-2.0
E18K	Tukpahlearik C	8.19	330			Pn		03 15 36.8	+2.5
F28M	Old Crow	8.19	28	Pn		Pn		03 15 35.0	+0.6
R32K	Eaglecrest	8.21	101	Pn		Pn		03 15 31.0	-3.6
E17K	Hotham Inlet	8.26	326			Pn		03 15 36.5	+1.3
D22K	Ayikyak River	8.29	353	Pn		Pn		03 15 37.2	+1.6
F15K	North Star Dit	8.31	313	Pn		Pn		03 15 36.9	+0.9
P33M	Teslin, Yukon	8.47	86	Pn		Pn		03 15 38.3	+0.1
D19K	Kuna River	8.56	339	Pn		Pn		03 15 40.6	+1.2
G30M	tAoh Zraii Nji	8.71	38	Pn		Pn		03 15 42.4	+0.9
D25K	Kavik River	8.78	8	Pn		Pn		03 15 43.1	+0.7
E28M	Babbage River	9.08	25	Pn		Pn		03 15 46.0	-0.4
B21K	Ikpikpuk River	9.16	350	Pn		Pn		03 15 50.7	+3.2
E29M	Blow River	9.27	29	Pn		Pn		03 15 49.8	+0.8
G31M	Satah River	9.29	41	Pn		Pn		03 15 48.6	-0.7
C18K	Utukok River	9.30	334	Pn		Pn		03 15 51.8	+2.3
C19K	Lookout Ridge	9.36	338	Pn		Pn		03 15 50.3	0.0
F31M	Tsiigehtchic	9.76	39	Pn		Pn		03 15 54.6	-1.1
B22K	Teshekpuk Lake	9.78	353	Pn		Pn		03 15 56.7	+0.7
B20K	Meade River	9.80	345	Pn		Pn		03 15 56.1	-0.2
DLBC	Dease Lake comp=E,0.4nm,0.3s,baz=294,slow=20,SNR=7.0 comp=E,1.3nm,0.4s	10.34	94	P		Pn		03 16 02.0	-1.8
INK	Inuvik	10.36	36	Pn		Pn		03 16 01.7	-2.2
INK	Inuvik comp=E,0.2nm,0.3s,baz=232,slow=12,SNR=9.7 comp=E,2.8nm,1.3s	10.36	36	P		Pn		03 16 05.2	+1.4
C36M	Paulatuk	13.81	40	Pn		Pn		03 16 52.6	+1.7
A36M	Sachs Harbour	14.86	30	Pn		Pn		03 17 03.1	-2.0
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=276,slow=10,SNR=11 comp=E,0.6nm,0.8s	16.77	69	P		Pn		03 17 29.3	-0.2
SONM	Songino Array comp=E,0.7nm,0.7s,baz=46,slow=8.5,SNR=4.7 comp=E,0.7nm,0.7s	55.59	307	P		P		03 23 09.2	+0.1

NEIC ***04*** *03:16:12.7±0.7,36°.469N±0°.009×97°.74W±0°.01,h5km±5km, Error ellipse: s-maj=1.8km s-min=0.8km az=51.0*

TUL 04 03:16:12.9±0.7,36°.48N±0°.01×97°.74W±0°.01,h4km±5km, ML2.7,mb_Lg2.6/19(NEIC),ML2.8/62(NEIC),Error ellipse: s-maj=1.9km s-min=1.5km az=207.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	Carrier	0.20	278	Pg	Pg	03 16 17.3	+0.5
CROK				Sg	Sg	03 16 20.4	+1.1
CROK	comp=E,2µm,0.2s			IAML		03 16 23.2	
GC02	Grant County #	0.39	345	Pg	Pg	03 16 20.8	+0.5
GC02				Sg	Sg	03 16 26.4	+1.0
OK032	Salt Plains WL	0.50	311	Pg	Pg	03 16 22.9	+0.4
OK032				Sg	Sg	03 16 29.9	+0.9
BLOK	Blackwell	0.51	56	Pg	Pg	03 16 23.1	+0.4
BLOK				Sg	Sg	03 16 30.2	+1.0
BLOK	comp=N,935nm,0.2s			IAML		03 16 32.4	
BLOK	comp=E,787nm,0.2s			IAML		03 16 32.6	
KAN14	Manchester OK	0.51	339		Pg	03 16 23.1	+0.4
KAN14				Sg	Sg	03 16 30.2	+0.8
KAN14	comp=N,631nm,0.1s			IAML		03 16 34.7	
KAN17	Caldwell West	0.56	358	Pg	Pg	03 16 24.2	+0.5
KAN17	comp=E,423nm,0.2s			IAML		03 16 39.5	
KAN17	comp=N,563nm,0.3s			IAML		03 16 41.5	
KAN13	South Haven SW	0.57	21	Pg	Pg	03 16 24.4	+0.4
KAN13	comp=N,599nm,0.3s			IAML		03 16 39.0	
KAN05	Bluff City Nor	0.64	350		Pg	03 16 25.0	-0.2
KAN05	comp=N,411nm,0.2s			IAML		03 16 40.4	
OK048	Pawnee Station	0.64	95	Pg	Pg	03 16 25.1	-0.1
KAN09	Caldwell North	0.66	8		Pg	03 16 25.5	-0.2
KAN01	Argonia South	0.67	359		Pg	03 16 26.1	+0.2
KAN01	comp=E,320nm,0.1s			IAML		03 16 40.7	
KAN10	Anthony SW Sta	0.70	336		Pg	03 16 26.5	+0.1
KAN10	comp=E,342nm,0.1s			IAML		03 16 43.1	
OK029	Liberty Lake	0.72	161	Pg	Pg	03 16 26.3	-0.3
OK051	E0350 and S346	0.73	88	Pg	Pg	03 16 26.9	+0.1
OK051	comp=E,526nm,0.2s			IAML		03 16 44.6	
OK051	comp=E,453nm,0.1s			IAML		03 16 45.9	
KAN08	Anthony NE Sta	0.77	346	Pg	Pg	03 16 27.8	+0.1
KAN08	comp=E,286nm,0.1s			IAML		03 16 41.0	
KAN06	Argonia West S	0.77	353	Pg	Pg	03 16 28.0	+0.2
KAN06	comp=N,329nm,0.1s			IAML		03 16 43.4	
KAN06	comp=E,304nm,0.1s			IAML		03 16 45.2	
OK033	Mehan	0.78	124	Pg	Pg	03 16 27.5	-0.3
OK033	comp=E,538nm,0.3s			IAML		03 16 38.8	
OK033	comp=E,312nm,0.1s			IAML		03 16 51.5	
OK038	West end E0370	0.81	270	Pg	Pg	03 16 28

DEOK	**Depew**	**1.19**	**122**	Pg	Pg	03 16 35.1	-0.6	
FNO	**Franklin**	**1.25**	**167**		Pg	03 16 36.0	-0.8	
FNO				IAML		03 16 55.9		
	comp=E,220nm,0.1s							
FNO				IAML		03 16 57.7		
	comp=N,200nm,0.2s							
ELIS	**Ellis County**	**1.42**	**254**	Pg	Pn	03 16 39.2	-0.4	
W35A	**Tecumseh**	**1.50**	**152**		Pn	03 16 39.9	-0.7	
TUL3	**Leonard**	**1.67**	**109**		Pn	03 16 42.7	-0.3	
TUL3				IAmb_Lg		03 17 06.5		
	comp=Z,28nm,0.8s							
X34A	**Smith Ranch, M**	**1.88**	**182**	Pn	Pn	03 16 45.2	-0.6	
WMOK	**Wichita Mounta**	**1.93**	**206**		Pn	03 16 46.0	-0.7	
R32A	**Long Quarter,**	**2.09**	**339**		Pn	03 16 48.9	+0.1	
RLO	**Rose Lookout**	**2.22**	**97**		Pn	03 16 50.3	-0.2	
SMWD	**Samnorwood**	**2.45**	**237**	Pn	Pn	03 16 53.9	+0.1	
LOOK	**Love County**	**2.52**	**169**	Pn	Pn	03 16 54.3	-0.4	
X37A	**Clayton**	**2.70**	**134**	Pn	Pn	03 16 56.3	-0.8	
U38A	**Gravette**	**2.70**	**90**	Pn	Pn	03 16 57.7	+0.5	
U38A				IAmb_Lg		03 17 36.4		
	comp=Z,16nm,1.2s							
KSU1	**Kansas State U**	**2.77**	**19**	Pn	Pn	03 16 57.5	-0.6	
WTFS	**Witchita Falls**	**2.77**	**193**	Pn	Pn	03 16 57.6	-0.5	
CBKS	**Cedar Bluff**	**2.82**	**326**	Pn	Pn	03 16 58.9	+0.1	
HHAR	**Hobbs**	**3.07**	**93**	Pn	Pn	03 17 02.1	+0.3	
Z35A	**Perchaven, San**	**3.17**	**173**	Pn	Pn	03 17 02.7	-0.8	
FW06	**Azle**	**3.50**	**177**	Pn	Pn	03 17 06.8	-1.3	
AMTX	**Amarillo**	**3.58**	**245**	IAmb_Lg		03 18 08.3		
	comp=Z,15nm,0.9s							
S39A	**Bolivar**	**3.73**	**70**	Pn	Pn	03 17 11.3	-0.1	
S39A				IAmb_Lg		03 18 13.4		
	comp=Z,15nm,0.7s							
DKNS	**Dickens**	**3.83**	**224**	Pn	Pn	03 17 12.6	-0.2	
DKNS				IAmb_Lg		03 18 24.4		
	comp=Z,7.5nm,0.7s							
Z38A	**Mt. Pleasant**	**3.93**	**144**	Pn	Pn	03 17 11.7	-2.3	
RTBA	**Rita Blanca**	**4.03**	**271**	Pn	Pn	03 17 16.0	+0.5	
MGMO	**Mountain Grove**	**4.44**	**80**	Pn	Pn	03 17 20.2	-0.8	
SN01	**Snyder 1**	**4.45**	**217**	IAmb_Lg		03 18 45.2		
	comp=Z,9.2nm,0.8s							
P38A	**Dawn**	**4.57**	**45**	Pn	Pn	03 17 22.1	-0.7	
P38A				IAmb_Lg		03 18 50.5		
	comp=Z,11nm,0.8s							
WHAR	**Wooly Hollow**	**4.58**	**103**	Pn	Pn	03 17 23.2	+0.2	
WLAR	**White Oak Lake**	**4.71**	**125**	Pn	Pn	03 17 22.6	-2.0	
R40A	**Maddies Statio**	**4.72**	**66**	Pn	Pn	03 17 23.5	-1.4	
MSTX	**Muleshoe**	**4.82**	**240**	Pn	Pn	03 17 21.8	-4.6	
BGNE	**Belgrade**	**4.93**	**356**	IAmb_Lg		03 18 55.3		
	comp=Z,18nm,0.8s							
LCAR	**Lake Charles**	**5.34**	**92**	Pn	Pn	03 17 31.7	-1.6	
LCAR				IAmb_Lg		03 19 08.3		
	comp=Z,5.6nm,0.7s							
CCM	**Cathedral Cave**	**5.41**	**71**	Pn	Pn	03 17 33.4	-1.0	
P40A	**Paris**	**5.43**	**54**	Pn	Pn	03 17 33.3	-1.3	
N38A	**Joes South For**	**5.57**	**38**	Pn	Pn	03 17 35.1	-1.5	
L34A	**Svendsen Farm,**	**5.58**	**11**	IAmb_Lg		03 19 20.1		
	comp=Z,18nm,0.7s							
PBMO	**Poplar Bluff**	**5.89**	**85**	Pn	Pn	03 17 39.0	-2.0	
ECSD	**EROS Data Cent**	**7.30**	**6**	Pn	Pn	03 17 58.4	-1.9	
N23A	**Red Feather La**	**7.78**	**307**	IAmb_Lg		03 20 32.5		
	comp=Z,9.6nm,0.9s							

IDC 04 03:18:42.9±56.0, 11°76'N×122°47'E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1097.0km s-min=188.4km az=137.0, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**38.41**	**343**	P	P	03 26 06.2	-0.1
	0.5nm,0.5s,baz=161,slow=9.2,SNR=5.8 0.5nm,0.5s						
MKAR	**Makanchi Array**	**48.61**	**324**	P	P	03 27 28.5	0.0
	1.1nm,0.7s,baz=121,slow=8.0,SNR=4.0 1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**51.57**	**333**	P	P	03 27 50.4	-0.3
	0.6nm,0.3s,baz=145,slow=8.8,SNR=3.7 0.6nm,0.3s						

*IDC **04** 03:21:01.0±1.0, 39°.41N×71°.88E, h0km, mb3.8/10, mbtmp3.7/17, ML2.9/7, Error ellipse: s-maj=19.3km s-min=12.8km az=140.0*
*MOS **04** 03:21:01.6±1.2, 39°.34N×71°.52E, h14km, mb4.2/2, Error ellipse: s-maj=9.5km s-min=4.7km az=67.1*
*KRNET **04** 03:21:02.8±0.1, 39°.65N×71°.64E, h12km, mb3.4*
*NNC **04** 03:21:06.0±1.9, 39°.61N×71°.82E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=15.4km s-min=8.9km az=176.0*
*SOME **04** 03:21:06.0, 39°.73N×71°.77E, h0km*
ISC 04 03:21:03.3±1.2, 39°.53N±0°.04×71°.47E±0°.03, h9km±7km, n120, σ2s63/167, mb3.9/10, 49C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.26**	**101**	⇑*e*P	Pg	03 21 07.0	-1.6
	baz=42						
DRK				⇑*e*S	**Sg**	**03 21 09.8**	**-2.4**
	baz=42						
BTK	**Batken**	**0.73**	**317**	*i* PG	**Pg**	**03 21 17.3**	**-0.1**
BTK				*i* S	**Sb**	**03 21 28.2**	**-0.2**
BTK	**Batken**	**0.73**	**317**	⇓*i*P	**Pg**	**03 21 17.3**	**-0.1**
	baz=3.0						
BTK				⇓*i*S	**Sb**	**03 21 28.1**	**-0.3**
	baz=3.0						
OHH	**Osh**	**1.42**	**45**	*i* P*	**Pn**	**03 21 27.2**	**-2.1**
OHH				*i* S	**Sn**	**03 21 45.2**	**-2.9**
OHH	**Osh**	**1.42**	**45**	⇑*i*P	**Pn**	**03 21 26.6**	**-2.7**
	baz=45						
OHH				⇑*i*S	**Sn**	**03 21 43.6**	**-4.5**
	baz=45						
SFK	**Sufi-Kurgan**	**1.64**	**72**	⇑*i*P	**Pn**	**03 21 31.1**	**-1.4**
	baz=75						
SFK				⇑*i*S	**Sn**	**03 21 51.2**	**-2.6**
	baz=75						
TRKS	**Terek-Say**	**2.02**	**353**	*i* PN	**Pn**	**03 21 38.2**	**+0.6**
TRKS				*i* S	**Sb**	**03 22 03.9**	**-1.5**
TRKS	**Terek-Say**	**2.02**	**353**	⇑*i*P	**Pn**	**03 21 37.5**	**-0.1**
	baz=49						
TRKS				⇑*i*S	**Sn**	**03 22 02.4**	**-0.6**
	baz=49						
ARSB	**Arslanbob**	**2.13**	**32**	*i* PN	**Pn**	**03 21 39.8**	**+0.6**
ARSB				*i* S	**Sn**	**03 22 06.9**	**+1.1**
ARSB	**Arslanbob**	**2.13**	**32**	⇑*i*P	**Pn**	**03 21 39.2**	**0.0**
	baz=31						
ARSB				⇑*i*S	**Sn**	**03 22 05.8**	**0.0**
	baz=31						
ARK	**Arkit**	**2.30**	**9**	⇑*e*P	**Pn**	**03 21 42.3**	**+0.9**
	baz=6.0						
ARK				⇑*e*S	**Sn**	**03 22 10.5**	**+0.6**
	baz=6.0						
MNAS	**Manas**	**3.06**	**14**	⇑*i*P	**Pn**	**03 21 52.7**	**+0.8**
	baz=13						
MNAS				⇑*i*S	**Sn**	**03 22 28.9**	**+0.2**
	baz=13						
CHM	**Chimkent**	**3.13**	**334**	*e*P	**Pg**	**03 22 03.8**	**+0.7**
	70nm,0.2s						
CHM				*e*S	**Sg**	**03 22 45.3**	**+1.6**
	1µm,0.3s						
ARLS	**Aral**	**3.18**	**42**	*i* PN	**Pn**	**03 21 54.4**	**+0.8**
ARLS				*i* S	**Sn**	**03 22 31.9**	**+0.1**
ARLS	**Aral**	**3.18**	**42**	⇑*i*P	**Pn**	**03 21 54.0**	**+0.4**
	baz=42						
ARLS				⇑*i*S	**Sn**	**03 22 31.1**	**-0.7**
	baz=42						
DZA	**Taraz**	**3.36**	**358**	Pg	**Pb**	**03 22 04.5**	**+1.5**
	54nm,0.1s						
DZA				Lg	Lg	03 22 46.9	
	2µm,0.3s						
DZA	**Taraz**	**3.36**	**358**	*e*P	**Pb**	**03 22 05.6**	**+2.5**
	77nm,0.1s						
DZA				*e*S	**Sg**	**03 22 48.3**	**-2.9**
	2µm,0.4s						
MRKS	**Merke**	**3.48**	**22**	Pg	**Pb**	**03 22 06.1**	**+1.1**
	36nm,0.4s						
MRKS				Lg	Lg	03 22 49.9	
	204nm,0.4s						
MRKS	**Merke**	**3.48**	**22**	*e*P	**Pb**	**03 22 06.1**	**+1.1**
	36nm,0.4s						
MRKS				*e*S	**Sb**	**03 22 49.9**	**+2.6**
	204nm,0.4s						
KSH	**Kashi**	**3.48**	**89**	Pn	**Pn**	**03 21 56.5**	**-1.2**
KSH				Sn	**Sn**	**03 22 43.8**	**+4.7**
KSH				pmax	pmax		
	comp=Z,93nm,0.6s						
KSH				smax	smax		
	comp=N,270nm,0.6s						
KSH				smax	smax		
	comp=E,330nm,0.5s						
UCH	**Uchtor**	**3.55**	**40**	P	**Pn**	**03 22 00.7**	**+1.7**
	SNR=20						
UCH	**Uchtor**	**3.55**	**40**	*e*PN	**Pn**	**03 22 02.0**	**+3.1**
UCH	**Uchtor**	**3.55**	**40**	⇑*i*P	**Pn**	**03 21 59.2**	**+0.3**
	baz=39						
UCH				⇑*i*S	**Sn**	**03 22 40.2**	**-1.0**
	baz=39						
EKS2	**Erkin-Say**	**3.58**	**28**	*i* PN	**Pn**	**03 22 01.1**	**+2.0**
	SNR=8.0						
EKS2	**Erkin-Say**	**3.58**	**28**	*i* PN	**Pn**	**03 22 00.0**	**+0.9**
EKS2	**Erkin-Say**	**3.58**	**28**	⇑*i*P	**Pn**	**03 21 59.6**	**+0.5**
	baz=27						
EKS2				⇑*i*S	**Sn**	**03 22 40.8**	**-0.8**
	baz=27						
KK31	**Karatay Array**	**3.64**	**349**	Pn	**Pn**	**03 22 01.8**	**+1.9**
	comp=E,7.0nm,0.4s,baz=131,slow=10,SNR=358						
KK31				⇑Pg	**Pg**	**03 22 11.5**	**-1.6**
	comp=E,12nm,0.3s,baz=156,slow=15,SNR=10						
KK31				Lg	Lg	03 22 56.8	
	comp=E,84nm,0.8s,baz=34,slow=192,SNR=8.5						
KK31	**Karatay Array**	**3.64**	**349**	PN	**Pn**	**03 22 01.7**	**+1.9**
KK31						03 22 11.5	
KK31						03 22 56.8	
KKAR	**Karatay Array**	**3.64**	**349**	*e*PN	**Pn**	**03 22 04.4**	**+4.6**
KKAR	**Karatay Array**	**3.64**	**349**	⇑*i*P	**Pn**	**03 22 01.4**	**+1.6**
	baz=47						
KKAR				⇑*i*S	**Sn**	**03 22 44.1**	**+1.1**
	baz=47						
AAK	**Ala-Archa**	**3.85**	**35**	P	**Pn**	**03 22 05.0**	**+2.2**
	SNR=15						
AAK	**Ala-Archa**	**3.85**	**35**	*i* PN	**Pn**	**03 22 04.5**	**+1.6**
AAK	**Ala-Archa**	**3.85**	**35**	Pn	**Pn**	**03 22 04.6**	**+1.8**
	comp=E,7.5nm,0.3s,baz=170,slow=4.0,SNR=60						
AAK				Lg	Lg	03 23 00.6	
	comp=E,16nm,0.3s,baz=180,slow=20,SNR=12 comp=E,15nm,0.3s						
AAK	**Ala-Archa**	**3.85**	**35**	⇓*i*P	**Pn**	**03 22 03.3**	**+0.4**
	baz=35						
AAK				⇓*i*S	**Sn**	**03 22 47.5**	**-0.9**
	baz=35						
NRN	**Naryn**	**3.94**	**60**	*i* PN	**Pn**	**03 22 04.6**	**+0.4**
NRN				*i* S	**Sn**	**03 22 49.8**	**-0.9**
NRN	**Naryn**	**3.94**	**60**	⇑*i*P	**Pn**	**03 22 04.4**	**+0.2**
	baz=60						
NRN				⇑*i*S	**Sn**	**03 22 49.1**	**-1.6**
	baz=60						
FRU1	**Bishkek**	**4.05**	**35**	*i* PN	**Pn**	**03 22 06.4**	**+0.9**
FRU1				*i* S	**Sn**	**03 22 53.2**	**+0.1**
KBK	**Karagaybulak**	**4.08**	**39**	P	**Pn**	**03 22 08.7**	**+2.6**
	SNR=11						
KBK	**Karagaybulak**	**4.08**	**39**	*e*PN	**Pn**	**03 22 09.4**	**+3.4**
KBK	**Karagaybulak**	**4.08**	**39**	⇑*i*P	**Pn**	**03 22 06.6**	**+0.6**
	baz=39						
KBK				⇑*i*S	**Sn**	**03 22 52.9**	**-1.1**
	baz=39						
CHMS	**Chumysh**	**4.26**	**34**	P	**Pn**	**03 22 10.3**	**+2.0**
	SNR=20						
CHMS	**Chumysh**	**4.26**	**34**	*e*PN	**Pn**	**03 22 11.7**	**+3.4**
CHMS	**Chumysh**	**4.26**	**34**	⇑*i*P	**Pn**	**03 22 09.0**	**+0.7**
	baz=34						
CHMS				⇑*i*S	**Sn**	**03 22 56.8**	**-1.3**
	baz=34						
USP	**Ospenovka**	**4.37**	**30**	P	**Pn**	**03 22 11.7**	**+1.8**
	SNR=46						
USP	**Ospenovka**	**4.37**	**30**	*i* PN	**Pn**	**03 22 11.0**	**+1.1**
USP	**Ospenovka**	**4.37**	**30**	⇑*i*P	**Pn**	**03 22 10.5**	**+0.6**
	baz=30						
USP				⇑*i*S	**Sn**	**03 22 59.7**	**-1.3**
	baz=30						
BOOM	**Boomskoye usch**	**4.49**	**47**	*i* PN	**Pn**	**03 22 12.5**	**+0.9**
BOOM				*i* S	**Sn**	**03 23 03.7**	**-0.4**
BOOM	**Boomskoye usch**	**4.49**	**47**	⇑*i*P	**Pn**	**03 22 12.3**	**+0.7**
	baz=47						
BOOM				⇑*i*S	**Sn**	**03 23 02.7**	**-1.4**
	baz=47						
ULHL	**Ulahol**	**4.52**	**52**	*i* PN	**Pn**	**03 22 12.9**	**+0.8**
ULHL				*i* S	**Sn**	**03 23 04.2**	**-0.6**
ULHL	**Ulahol**	**4.52**	**52**	⇑*i*P	**Pn**	**03 22 12.6**	**+0.5**
	baz=52						
ULHL				⇑*i*S	**Sn**	**03 23 03.5**	**-1.3**
	baz=52						
SGDS	**Sogindy**	**4.58**	**30**	Pg	**Pb**	**03 22 25.7**	**+1.9**
	comp=E,11nm,0.6s						
SGDS				Lg	Lg	03 23 23.3	
	comp=E,125nm,0.6s						
TKM2	**Tokmak 2**	**4.60**	**41**	P	**Pn**	**03 22 14.8**	**+1.7**
	SNR=14						
TKM2	**Tokmak 2**	**4.60**	**41**	⇓Pn	**Pn**	**03 22 14.1**	**+1.0**
	comp=E,5.6nm,0.4s						
TKM2				⇑Pg	**Pb**	**03 22 25.4**	**+1.1**
	comp=E,15nm,0.5s						
TKM2				⇑Lg	Lg	03 23 24.0	
	comp=E,50nm,0.7s						
TKM2	**Tokmak 2**	**4.60**	**41**	*e*PN	**Pn**	**03 22 16.6**	**+3.5**
TKM2	**Tokmak 2**	**4.60**	**41**	⇑*i*P	**Pn**	**03 22 13.7**	**+0.6**
	baz=41						
TKM2				⇑*i*S	**Sn**	**03 23 05.4**	**-1.4**
	baz=41						
KST	**Kastek**	**4.88**	**42**	Pg	**Pb**	**03 22 31.5**	**+2.6**
	comp=E,14nm,0.5s						
KST				Lg	Lg	03 23 33.8	
	comp=E,67nm,0.5s						
KST	**Kastek**	**4.88**	**42**	*e*P	**Pb**	**03 22 31.5**	**+2.6**
	comp=E,14nm,0.5s						
KST				*e*S	**Sb**	**03 23 33.8**	**+6.2**
	comp=E,67nm,0.5s						
DGS	**Degeres**	**4.92**	**40**	Pg	**Pb**	**03 22 31.9**	**+2.2**
	comp=E,42nm,0.6s						
DGS				Lg	Lg	03 23 33.8	
	comp=E,62nm,0.7s						
DGS	**Degeres**	**4.92**	**40**	*e*P	**Pb**	**03 22 31.9**	**+2.2**
	comp=E,42nm,0.6s						
DGS				*e*S	**Sb**	**03 23 33.8**	**+4.9**
	comp=E,62nm,0.7s						
KDJ	**Kajisay**	**5.05**	**57**	*i* PN	**Pn**	**03 22 20.1**	**+0.8**
KDJ				*i* S	**Sn**	**03 23 17.0**	**-0.8**
MTBS	**Maitube**	**5.18**	**44**	Pg	**Pb**	**03 22 36.3**	**+2.2**
	comp=E,11nm,0.5s						
MTBS				Lg	Lg	03 23 41.2	
	comp=E,30nm,0.5s						
MTBS	**Maitube**	**5.18**	**44**	*e*P	**Pb**	**03 22 36.3**	**+2.2**
	comp=E,11nm,0.5s						
MTBS				*e*S	**Sb**	**03 23 41.2**	**+4.7**
	comp=E,30nm,0.5s						
KRBS	**Karabastau**	**5.22**	**36**	Pg	**Pb**	**03 22 37.3**	**+2.6**
	comp=E,21nm,0.5s						
KRBS				Lg	Lg	03 23 43.1	
	comp=E,50nm,0.4s						
KRBS	**Karabastau**	**5.22**	**36**	*e*P	**Pb**	**03 22 37.3**	**+2.6**
	comp=E,21nm,0.5s						
KRBS				*e*S	**Sb**	**03 23 43.1**	**+5.6**
	comp=E,50nm,0.4s						
IZV	**Izvestkoviy**	**5.22**	**46**	Pg	**Pb**	**03 22 37.6**	**+2.7**
	comp=E,16nm,0.4s						
IZV				Lg	Lg	03 23 43.5	
	comp=E,30nm,0.5s						
IZV	**Izvestkoviy**	**5.22**	**46**	*e*P	**Pb**	**03 22 37.6**	**+2.7**
	comp=E,16nm,0.4s						
IZV				*e*S	**Sb**	**03 23 43.5**	**+5.9**
	comp=E,30nm,0.5s						
TARG	**Taragay, Kyrgy**	**5.29**	**63**	⇑*i*P	**Pn**	**03 22 23.5**	**+0.6**
	baz=64						
TARG				⇑*i*S	**Sn**	**03 23 22.2**	**-2.0**
	baz=64						
TNSS	**Tian-Shan**	**5.41**	**48**	Pg	**Pb**	**03 22 39.7**	**+1.5**
	comp=E,12nm,0.6s						
TNSS				Lg	Lg	03 23 47.2	
	comp=E,12nm,0.5s						
TNSS	**Tian-Shan**	**5.41**	**48**	*e*P	**Pb**	**03 22 40.7**	**+2.5**
	comp=E,8.1nm,0.4s						
TNSS				*e*S	**Sb**	**03 23 48.4**	**+5.1**
	comp=E,12nm,0.5s						
AAA	**Alma-Ata**	**5.50**	**46**	Pg	**Pb**	**03 22 43.0**	**+3.5**
	comp=E,19nm,0.1s						
AAA				Lg	Lg	03 23 52.8	
	comp=E,82nm,0.4s						
AAA	**Alma-Ata**	**5.50**	**46**	*e*P	**Pb**	**03 22 43.0**	**+3.5**
	comp=E,19nm,0.1s						
AAA				*e*S	**Sb**	**03 23 52.8**	**+7.2**
	comp=E,82nm,0.4s						
KNDC	**Almaty**	**5.54**	**47**	⇑Pg	**Pb**	**03 22 41.1**	**+1.0**
	comp=E,50nm,0.7s						
KNDC				⇓Lg	Lg	03 23 53.7	
	comp=E,88nm,0.8s						
KNDC	**Almaty**	**5.54**	**47**	PN	**Pb**	**03 22 44.2**	**+4.1**
KNDC						03 23 53.7	
MDOK	**Medeo**	**5.55**	**47**	Pg	**Pb**	**03 22 43.7**	**+3.4**
	comp=E,18nm,0.5s						
MDOK				⇑Pg	Pg	03 22 43.9	-5.6
	comp=E,19nm,0.7s						
MDOK				⇑Lg	Lg	03 23 53.6	
	comp=E,51nm,0.9s						
MDOK				Lg	Lg	03 23 54.1	
	comp=E,24nm,0.5s						
MDOK	**Medeo**	**5.55**	**47**	*e*P	**Pb**	**03 22 43.7**	**+3.4**
	comp=E,18nm,0.5s						
MDOK				*e*S	**Sb**	**03 23 54.1**	**+7.1**
	comp=E,24nm,0.5s						
MDOK	**Medeo**	**5.55**	**47**	PN	**Pb**	**03 22 43.8**	**+3.4**
MDOK						03 23 53.5	
KOTS	**Kotyrbulak**	**5.63**	**47**	Pg	**Pb**	**03 22 45.7**	**+3.9**
	comp=E,20nm,0.6s						
KOTS				Lg	Lg	03 23 57.5	
	comp=E,64nm,0.6s						
KOTS	**Kotyrbulak**	**5.63**	**47**	*e*P	**Pb**	**03 22 45.7**	**+3.9**
	comp=E,20nm,0.6s						
KOTS				*e*S	**Sg**	**03 23 57.5**	**-6.5**
	comp=E,64nm,0.6s						
KUU	**Kurty**	**5.68**	**38**	Pg	**Pb**	**03 22 45.0**	**+2.5**
	comp=E,15nm,0.5s						
KUU				Lg	Lg	03 23 57.1	
	comp=E,41nm,0.3s						
KUU	**Kurty**	**5.68**	**38**	*e*P	**Pb**	**03 22 46.5**	**+3.9**
	comp=E,15nm,0.4s						
KUU				*e*S	**Sg**	**03 23 58.4**	**-7.2**
	comp=E,46nm,0.6s						
ANVS	**Anan'yevo**	**5.69**	**53**	*i* PN	**Pn**	**03 22 29.1**	**+0.9**
KTBS	**Karatobe**	**5.72**	**41**	Pg	**Pb**	**03 22 45.9**	**+2.7**
	comp=E,9.1nm,0.5s						
KTBS				Lg	Lg	03 23 57.9	
	comp=E,44nm,0.5s						
KTBS	**Karatobe**	**5.72**	**41**	*e*P	**Pb**	**03 22 45.9**	**+2.7**
	comp=E,9.1nm,0.5s						
KTBS				*e*S	**Sb**	**03 23 57.9**	**+6.1**
	comp=E,44nm,0.5s						
BTLS	**Baital**	**5.83**	**18**	Pg	**Pb**	**03 22 48.9**	**+3.8**
	comp=E,4.4nm,0.4s						
BTLS				Lg	Lg	03 24 03.0	
	comp=E,19nm,0.6s						
CHKK	**Chushkaly**	**5.98**	**42**	Pg	**Pb**	**03 22 51.1**	**+3.6**
	comp=E,6.8nm,0.3s						
CHKK				Lg	Lg	03 24 06.8	
	comp=E,40nm,0.8s						
ARXS	**Arharly**	**6.66**	**43**	Pg	**Pb**	**03 23 03.2**	**+3.9**
	comp=E,17nm,0.5s						
ARXS				Lg	Lg	03 24 27.5	
	comp=E,31nm,0.4s						
BLB	**Baldybastay**	**6.94**	**47**	Pg	**Pb**	**03 23 08.1**	**+4.0**
	comp=E,9.0nm,0.5s						
BLB				Lg	Lg	03 24 35.9	
	comp=E,13nm,0.5s						
PDGK	**Podgornoye**	**7.12**	**55**	⇓Pn	**Pn**	**03 22 48.0**	**+0.4**
	comp=E,5.4nm,0.7s						
PDGK				⇑Lg	Lg	03 24 45.5	
	comp=E,23nm,0.8s						
PDGK	**Podgornoye**	**7.12**	**55**	P	**Pn**	**03 22 48.8**	**+1.1**
KNOS	**Konyrlen**	**7.50**	**47**	Pg	Pb	03 23 20.2	+6.6
	comp=E,5.5nm,0.7s						
KNOS				Lg	Lg	03 24 56.6	
	comp=E,9.1nm,0.6s						
OTUK	**Ortayu**	**8.74**	**4**	⇑Pn	**Pn**	**03 23 12.6**	**+2.9**
OTUK				⇑Lg	Lg	03 25 38.4	
	comp=E,30nm,0.9s						
OTUK	**Ortayu**	**8.74**	**4**	P	**Pn**	**03 23 12.6**	**+2.9**
GEYT	**Alibeck**	**10.56**	**266**	Pn	**Pn**	**03 23 35.6**	**+0.9**
	comp=E,0.4nm,0.3s,baz=96,slow=3.0,SNR=5.3						
GEYT				Sn	**Sn**	**03 25 33.8**	**+0.7**
	comp=E,0.6nm,0.3s,baz=100,slow=16,SNR=1.9 comp=E,0.9nm,0.3s						
MK31	**Makanchi Array**	**10.72**	**44**	Pn	**Pn**	**03 23 40.8**	**+3.8**
	comp=E,1.2nm,0.6s,baz=242,slow=16,SNR=6.9						
MK31				⇑Lg	Lg	03 26 40.8	
	comp=E,3.3nm,0.8s,baz=238,slow=25,SNR=2.7						
MK31	**Makanchi Array**	**10.72**	**44**	*i* P	**Pn**	**03 23 40.8**	**+3.8**
MKAR	**Makanchi Array**	**10.72**	**44**	Pn	**Pn**	**03 23 36.0**	**-0.9**
	baz=315,slow=5.1,SNR=1.7						
MKAR				Lg	Lg	03 26 35.5	
	comp=E,0.1nm,0.3s,baz=184,slow=34,SNR=2.8 comp=E,0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**12.15**	**22**	Pn	**Pn**	**03 23 53.1**	**-3.4**
	baz=213,slow=12,SNR=1.5						
KURBB				Lg	Lg	03 27 23.7	
	comp=E,0.1nm,0.3s,baz=214,slow=32,SNR=4.8 comp=E,0.3nm,0.3s						
KURK	**Kurchatov**	**12.26**	**22**	*i* P	**Pn**	**03 23 56.1**	**-1.9**
AB31	**Akbulak array**	**12.73**	**324**	Pn	**Pn**	**03 24 02.7**	**-1.7**
	comp=E,2.1nm,0.6s,baz=129,slow=13,SNR=50						
AB31	**Akbulak array**	**12.73**	**324**	P	**Pn**	**03 24 02.7**	**-1.7**
BVAR	**Borovoye Array**	**13.52**	**357**	Pn	**Pn**	**03 24 14.7**	**-0.4**
	baz=165,slow=12,SNR=1.6						
BVAR				Lg	Lg	03 28 09.2	
	baz=159,slow=21,SNR=1.5 comp=E,0.2nm,0.3s						
BRVK	**Borovoye**	**13.56**	**357**	*i* P	**Pn**	**03 24 14.1**	**-1.5**
AKTO	**Aktyubinsk**	**14.45**	**323**	⇑Pn	**Pn**	**03 24 27.1**	**-0.7**
	comp=E,3.3nm,0.9s						
AKTO	**Aktyubinsk**	**14.45**	**323**	Pn	**Pn**	**03 24 28.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=110,slow=6.1,SNR=4.1						
AKTO				Sn	**Sn**	**03 26 59.7**	**-8.4**
	comp=E,0.4nm,0.3s,baz=162,slow=20,SNR=4.0 comp=E,1.0nm,0.5s						
DGZ	**Jazzator, Alta**	**15.22**	**43**	*i* P	**Pn**	**03 24 37.5**	**-0.9**
ZALV	**Zalesovo Beam**	**17.04**	**28**	Pn	**Pn**	**03 24 59.5**	**-2.1**
	baz=219,slow=9.9,SNR=2.1 comp=E,

THIG						Sb	03 39 04.1	-0.4
THIG		**1.11**	**32**	*e*P		**Pb**	**03 38 49.5**	**-0.6**
THIG				*e*S		**Sb**	**03 39 04.1**	**-0.4**
SMCA	**Catarina**	**1.18**	**41**	*i* P		**Pn**	**03 38 50.8**	**-0.5**
SMCA				*i* S		**Sb**	**03 39 05.3**	**-1.2**
SMCA				IAML			03 39 14.5	
	comp=Z,2µm,1.0s							
RTAL	**Retalhuleu**	**1.28**	**64**			**Pn**	**03 38 51.6**	**-0.9**
RTAL	**Retalhuleu**	**1.28**	**64**	*e*P		**Pn**	**03 38 52.1**	**-0.4**
RTAL	**Retalhuleu**	**1.28**	**64**	*i* P		**Pn**	**03 38 52.0**	**-0.6**
RTAL				*i* S		**Sb**	**03 39 07.2**	**-2.0**
RTAL				IAML			03 39 13.2	
	comp=Z,1µm,1.0s							
PATR	**El Naranjo**	**1.30**	**28**	*e*P		**Pn**	**03 38 51.8**	**-1.4**
PATR				*e*S		**Sb**	**03 39 09.7**	**-0.6**
SULM	**Suchitepequez,**	**1.32**	**75**	*e*P		**Pg**	**03 38 54.3**	**-0.2**
CHUJ	**Union Juarez**	**1.35**	**33**	*e*P		**Pn**	**03 38 52.7**	**-1.0**
CHUJ				*e*S		**Sb**	**03 39 09.7**	**-1.9**
PAVE	**Pavencul**	**1.40**	**29**	*e*P		**Pn**	**03 38 53.5**	**-0.9**
PAVE				*e*S		**Sn**	**03 39 09.0**	**-3.9**
SMSP	**San Marcos**	**1.46**	**46**	*e*P		**Pn**	**03 38 55.0**	**-0.3**
SMSP	**San Marcos**	**1.46**	**46**	*i* P		**Pn**	**03 38 54.4**	**-1.0**
SMSP				IAML			03 38 55.1	
	comp=Z,3µm,1.0s							
SMSP				*i* S		**Sn**	**03 39 13.1**	**-1.4**
STG3	**Santiaguito 3,**	**1.47**	**59**	*e*P		**Pn**	**03 38 55.4**	**0.0**
PCIG		**1.76**	**349**			**Pn**	**03 38 58.3**	**-1.0**
PCIG		**1.76**	**349**	*e*P		**Pn**	**03 38 58.3**	**-1.0**
PCIG				*e*S		**Sn**	**03 39 16.7**	**-4.7**
HUEH	**Huehuetenango**	**1.89**	**45**	Pn		**Pn**	**03 39 01.2**	**0.0**
HUEH	**Huehuetenango**	**1.89**	**45**	*e*P		**Pn**	**03 39 01.7**	**+0.4**
HUEH	**Huehuetenango**	**1.89**	**45**	*i* P		**Pn**	**03 39 02.0**	**+0.7**
HUEH				*i* S		**Sn**	**03 39 25.9**	**+0.8**
HUEH				IAML			03 39 34.8	
	comp=Z,2µm,1.0s							
FUG	**Fuego 3**	**2.03**	**76**	*e*P		**Pn**	**03 39 02.9**	**-0.2**
QUIS	**Sacapulas**	**2.17**	**52**	*i* P		**Pn**	**03 39 05.4**	**+0.3**
QUIS				IAML			03 39 08.5	
	comp=Z,2µm,1.0s							
QUIS				*i* S		**Sn**	**03 39 30.9**	**-1.0**
CCIG	**Comitan**	**2.41**	**17**	Pn		**Pn**	**03 39 09.0**	**+0.6**
CCIG	**Comitan**	**2.41**	**17**	*e*P		**Pb**	**03 39 11.1**	**-1.4**
CCIG				*e*S		**Sb**	**03 39 41.5**	**-0.7**
CCIG	**Comitan**	**2.41**	**17**	*i* P		**Pn**	**03 39 10.4**	**+2.0**
CCIG				*i* S		**Sb**	**03 39 40.1**	**-2.1**
CCIG				IAML			03 39 44.2	
	comp=Z,730nm,1.0s							
CARR	**Arriaga**	**2.48**	**336**	*e*P		**Pn**	**03 39 09.8**	**+0.7**
CARR				*i* S		**Sn**	**03 39 34.5**	**-4.7**
NBG	**Las Nubes**	**2.53**	**76**	*e*P		**Pb**	**03 39 12.6**	**-1.9**
GUNB	**GUNB**	**2.54**	**75**	*i* P		**Pn**	**03 39 10.8**	**+0.7**
GUNB				IAML			03 39 24.9	
	comp=Z,280nm,1.0s							
GUNB				*i* S		**Sn**	**03 39 40.2**	**-0.8**
TGIG		**2.81**	**355**			**Pn**	**03 39 14.9**	**+1.2**
TGIG						**Sn**	**03 39 48.6**	**+1.2**
TGIG		**2.81**	**355**	*e*P		**Pn**	**03 39 14.9**	**+1.2**
TGIG				*e*S		**Sn**	**03 39 48.6**	**+1.2**
NUBE	**Las Nubes**	**3.01**	**91**	*i* P		**Pn**	**03 39 15.9**	**-0.6**
NUBE				*i* S		**Sn**	**03 39 50.7**	**-1.8**
NUBE				IAML			03 39 59.5	
	comp=Z,370nm,1.0s							
NILT	**Santiago Nilte**	**3.08**	**327**	*e*P		**Pn**	**03 39 18.2**	**+0.8**
NILT				*i* S		**Sn**	**03 39 49.9**	**-4.2**
MTO3	**Montecristo**	**3.44**	**82**	Pn		**Pn**	**03 39 20.7**	**-1.9**
PMON	**Piamonte**	**3.47**	**94**	*i* P		**Pn**	**03 39 22.5**	**-0.4**
PMON				*i* S		**Sn**	**03 40 03.2**	**-0.7**
PMON				IAML			03 40 21.2	
	comp=Z,230nm,1.0s							
HUIG	**Huatulco**	**3.60**	**300**			**Pn**	**03 39 25.0**	**+0.5**
HUIG	**Huatulco**	**3.60**	**300**	*e*P		**Pn**	**03 39 25.0**	**+0.5**
HUIG				*e*S		**Sn**	**03 40 00.5**	**-6.4**
CMIG	**Matias Romero**	**3.66**	**328**			**Pn**	**03 39 26.0**	**+0.6**
CMIG	**Matias Romero**	**3.66**	**328**	Pn		**Pn**	**03 39 25.3**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=136,slow=10.0,SNR=17							
CMIG				Sn		**Sn**	**03 40 03.4**	**-5.0**
	comp=Z,5.2nm,0.3s,baz=99,slow=20,SNR=6.3							
CMIG				Lg		Lg	03 40 26.2	
	comp=Z,12nm,0.3s,baz=94,slow=17,SNR=4.8							
	comp=Z,18nm,0.9s							
CMIG	**Matias Romero**	**3.66**	**328**	*e*P		**Pn**	**03 39 26.0**	**+0.6**
CMIG				*e*S		**Sn**	**03 40 03.6**	**-4.9**
PETF	**Flores**	**4.13**	**44**	Pn		**Pn**	**03 39 32.2**	**+0.3**
PETF	**Flores**	**4.13**	**44**	*e*P		**Pn**	**03 39 32.3**	**+0.5**
PETF	**Flores**	**4.13**	**44**	*i* P		**Pn**	**03 39 32.3**	**+0.5**
PETF				IAML			03 40 38.8	
	comp=Z,99nm,1.0s							
PEIG	**Puerto Escondi**	**4.59**	**297**			**Pn**	**03 39 38.4**	**+0.2**
PEIG	**Puerto Escondi**	**4.59**	**297**	*e*P		**Pn**	**03 39 38.4**	**+0.2**
PEIG				*e*S		**Sn**	**03 40 23.2**	**-8.3**
NEUV	**Arroyo Zacate**	**4.67**	**323**	*e*P		**Pn**	**03 39 39.9**	**+0.6**
NEUV				*e*S		**Sn**	**03 40 30.3**	**-3.0**
YOIG	**Yosondua**	**5.34**	**303**			**Pn**	**03 39 51.6**	**+2.9**
YOIG	**Yosondua**	**5.34**	**303**	*e*P		**Pn**	**03 39 51.6**	**+2.9**
YOIG				*e*S		Sn	03 40 37.7	-13
PNIG	**Pinotepa**	**5.61**	**296**			**Pn**	**03 39 54.5**	**+2.2**
PNIG	**Pinotepa**	**5.61**	**296**	*e*S		**Pn**	**03 39 54.5**	**+2.2**
TXIG	**Tlaxiaco**	**5.74**	**305**			**Pn**	**03 39 57.8**	**+3.7**
TXIG	**Tlaxiaco**	**5.74**	**305**	*e*P		**Pn**	**03 39 57.8**	**+3.7**
TXIG				*e*S		**Sn**	**03 40 59.2**	**-0.8**
TOIG	**Toxpalan**	**5.75**	**316**			**Pn**	**03 39 58.4**	**+4.1**
TOIG	**Toxpalan**	**5.75**	**316**	*e*P		**Pn**	**03 39 58.4**	**+4.1**
TOIG				*e*S		**Sn**	**03 40 59.0**	**-1.2**
HLIG	**Huajuapan de L**	**6.10**	**310**			**Pn**	**03 40 01.5**	**+2.3**
HLIG	**Huajuapan de L**	**6.10**	**310**	*e*P		**Pn**	**03 40 01.5**	**+2.3**
HLIG				*e*S		**Sn**	**03 41 08.2**	**-0.7**
TPIG	**Tehuac#an**	**6.18**	**316**			**Sn**	**03 41 15.1**	**+4.4**
TPIG	**Tehuac#an**	**6.18**	**316**	*e*S		**Sn**	**03 41 15.1**	**+4.4**
FTIG	**Fresnillo de T**	**6.40**	**308**	*e*P		**Pn**	**03 40 00.4**	**-2.7**
FTIG				*e*S		Sn	03 41 06.7	-9.3
JAUV	**Jalcomulco**	**6.56**	**326**	*e*P		**Pn**	**03 40 03.8**	**-1.4**
JAUV				*e*S		**Sn**	**03 41 17.6**	**-2.4**
PPM	**Popocatepetl**	**7.49**	**313**	*e*P		Pn	03 40 25.0	+6.5
PPM				*e*S		**Sb**	**03 42 03.5**	**-5.1**
TEIG	**Tepich**	**7.62**	**35**	Pn		**Pn**	**03 40 19.2**	**-0.7**
TEIG	**Tepich**	**7.62**	**35**	LR		LR	03 43 37.8	
	comp=Z,2µm,20.6s,baz=12,slow=45							
SAND	**Sanderson**	**18.06**	**333**	P		**P**	**03 42 42.5**	**+2.3**
TX31	**Lajitas Ar. Si**	**18.27**	**329**	P		**P**	**03 42 44.6**	**+2.1**
TXAR	**Lajitas Array**	**18.27**	**329**	P		**P**	**03 42 45.0**	**+2.5**
TXAR	**Lajitas Array**	**18.27**	**329**	P		**P**	**03 42 43.7**	**+1.2**
	baz=150,slow=15,SNR=3.6							
	comp=Z,0.5nm,0.9s							
MNHN	**Monahans**	**19.53**	**334**	P		**Pn**	**03 42 59.4**	**+1.8**
MNHN				IAmb		IAmb	03 43 01.2	
	comp=Z,4.1nm,0.8s							
SMWD	**Samnorwood**	**22.07**	**344**	P		**P**	**03 43 25.8**	**+2.0**
SMWD				IAmb		IAmb	03 43 28.0	
	comp=Z,10nm,1.1s							
RTBA	**Rita Blanca**	**24.06**	**340**	P		**P**	**03 43 44.8**	**+0.6**
PCRV	**Puerto La Cruz**	**27.86**	**95**	LR		LR	03 57 07.5	
	comp=Z,39nm,18.2s,slow=41							
PDAR	**Pinedale Array**	**32.11**	**337**	P		**P**	**03 44 57.9**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=143,slow=8.9,SNR=2.2							
	comp=Z,0.3nm,0.8s							
NVAR	**Mina Array Bea**	**33.17**	**322**	P		**P**	**03 45 08.6**	**+3.0**
	comp=Z,0.6nm,0.7s,baz=131,slow=9.7,SNR=4.7							
	comp=Z,0.6nm,0.7s							
SCHQ	**Schefferville**	**45.55**	**21**	LR		LR	04 06 05.8	
	comp=Z,59nm,19.1s,baz=100,slow=37							
YKAB2	**New Yellowknif**	**50.81**	**347**	P		**P**	**03 47 28.6**	**-0.3**
YKA	**Yellowknife Ar**	**50.87**	**347**	P		**P**	**03 47 30.2**	**+0.9**
YKA	**Yellowknife Ar**	**50.87**	**347**	P		**P**	**03 47 29.7**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=148,slow=7.5,SNR=32							
	comp=Z,2.0nm,0.8s							
INK	**Inuvik**	**60.23**	**344**	P		**P**	**03 48 37.3**	**+0.7**
INK				IAmb		IAmb	03 48 42.6	
	comp=Z,2.5nm,1.1s							
F28M	**Old Crow**	**61.63**	**341**	P		**P**	**03 48 47.6**	**+1.5**
F28M				IAmb		IAmb	03 48 48.6	
	comp=Z,3.2nm,1.0s							
ILAR	**Eielson Array**	**62.54**	**337**	P		**P**	**03 48 52.4**	**+0.1**
	comp=Z,1.3nm,1.1s,baz=167,slow=4.4,SNR=7.0							
	comp=Z,1.3nm,1.1s							
BMAR	**Burnt Mountain**	**63.03**	**340**	P		**P**	**03 48 58.7**	**+3.1**
B22K	**Teshekpuk Lake**	**67.22**	**341**	P		**P**	**03 49 22.9**	**+0.3**
B22K				IAmb		IAmb	03 49 27.9	
	comp=Z,1.5nm,0.9s							
D19K	**Kuna River**	**68.11**	**339**	P		**P**	**03 49 31.0**	**+2.7**
D19K				IAmb		IAmb	03 49 48.1	
	comp=Z,4.1nm,1.4s							
B20K	**Meade River**	**68.28**	**341**	P		**P**	**03 49 30.7**	**+1.4**
EKA	**Eskdalemuir Ar**	**78.49**	**36**	P		**P**	**03 50 26.4**	**-3.3**

	comp=Z,1.0nm,0.6s,baz=289,slow=5.2,SNR=3.7							
	comp=Z,1.0nm,0.6s							
SPITS	**Spitsbergen Ar**	**80.29**	**11**	LR		LR	04 29 39.1	
	comp=Z,84nm,18.1s,baz=192,slow=38							

*UPP **04** 03:54:55.9±0.0, 67.82N×20.22E, h0km, ML2.6, Confirmed*
Induced event
*HEL **04** 03:54:55.7±0.2, 67.80N×20.15E, h0km, ML1.5, Explosion*
ISC 04 03:54:55.5±0.8, **67.78N**±0.02×**20.40E**±0.03, **h0**km, **n30,**
σ1s24/50, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.18**	**352**	P	**Pg**	**03 54 58.8**	**-0.2**
KUA				S	**Sg**	**03 55 00.8**	**-0.5**
RATU	**Laukkuluspa**	**0.31**	**279**	P	**Pg**	**03 55 00.6**	**-0.9**
RATU				S	**Sg**	**03 55 03.9**	**-1.6**
DUNU	**Dundret**	**0.66**	**174**	P	**Pb**	**03 55 09.3**	**-0.7**
DUNU				S	**Sb**	**03 55 19.0**	**-0.7**
LANU	**Lannavaara**	**0.66**	**65**	P	**Pb**	**03 55 09.3**	**-0.7**
LANU				S	**Sb**	**03 55 18.9**	**-0.8**
LANU	**Lannavaara**	**0.66**	**65**	PG	**Pb**	**03 55 09.1**	**-0.9**
LANU				SG	**Sb**	**03 55 19.2**	**-0.5**
MASU	**Masugnsbyn**	**0.69**	**117**	P	**Pb**	**03 55 10.5**	**+0.1**
SALU	**Saltoluokta**	**0.83**	**242**	P	**Pg**	**03 55 10.8**	**-0.6**
PAJU	**Pajala**	**1.29**	**125**	P	**Pn**	**03 55 21.1**	**+0.3**
PAJU				S	**Sn**	**03 55 39.5**	**+0.7**
PAJU	**Pajala**	**1.29**	**125**	PG	**Pn**	**03 55 20.7**	**-0.1**
PAJU				SB	**Sn**	**03 55 39.5**	**+0.7**
HEF	**Hetta**	**1.38**	**61**	*e*P	**Pb**	**03 55 22.4**	**+0.2**
HEF	**Hetta**	**1.38**	**61**	PG	**Pn**	**03 55 21.8**	**-0.2**
	baz=251						
HEF				MSG		03 55 39.2	
	comp=Z,2.7nm,0.2s						
HEF				SN	**Sn**	**03 55 42.2**	**+1.3**
KLF	**Kolari**	**1.48**	**110**	PG	**Pg**	**03 55 23.9**	**+0.1**
	baz=297						
KLF				MSG		03 55 42.9	
	comp=Z,3.0nm,0.2s						
KLF				SN	**Sn**	**03 55 45.7**	**+2.5**
KTK1	**Kautokeino**	**1.62**	**39**	*e*P	**Pb**	**03 55 25.5**	**-0.8**
KTK1	**Kautokeino**	**1.62**	**39**	PG	**Pb**	**03 55 25.8**	**-0.5**
KTK1				SN	**Sg**	**03 55 49.9**	**+2.2**
HARU	**Harads**	**1.64**	**172**	P	**Pg**	**03 55 26.4**	**-0.4**
HARU				S	**Sg**	**03 55 49.6**	**+1.6**
TRO	**Tromso**	**1.94**	**345**	PG	**Pn**	**03 55 29.7**	**0.0**
TRO				SG	**Sb**	**03 55 55.8**	**-0.6**
KALU	**Kalix**	**2.25**	**147**	PG	**Pb**	**03 55 36.2**	**-0.8**
KALU				SG	**Sg**	**03 56 06.7**	**-1.1**
TOF	**Tornio**	**2.30**	**136**	PG	**Pb**	**03 55 37.3**	**-0.5**
TOF				MSG		03 56 06.2	
	comp=Z,2.3nm,0.2s						
TOF				SG	**Sg**	**03 56 08.6**	**-0.7**
SGF	**Sodankyl**	**2.37**	**95**	PB	**Pb**	**03 55 38.3**	**-0.7**
SGF				SG	**Sg**	**03 56 12.2**	**+0.6**
RNF	**Rovaniemi**	**2.48**	**116**	PB	**Pb**	**03 55 40.2**	**-0.7**
	baz=303						
RNF				SG	**Sg**	**03 56 13.8**	**-1.4**
ARA0	**ARCESS Array S**	**2.57**	**44**	SB	**Sb**	**03 56 13.9**	**-0.6**
KMNF	**Kaamanen**	**2.80**	**57**	PN	**Pn**	**03 55 43.0**	**+1.6**
KMNF				SB	**Sb**	**03 56 20.2**	**-0.8**
RAJF	**Raja-Jooseppi**	**3.04**	**73**	PG	**Pb**	**03 55 50.5**	**0.0**
RAJF				SB	**Sb**	**03 56 29.4**	**+1.3**
RANF	**Ranua**	**3.08**	**122**	PG	**Pb**	**03 55 51.4**	**+0.4**
	baz=308						
RANF				SG	**Sg**	**03 56 32.6**	**-1.7**
KEV	**Kevo**	**3.12**	**47**	PB	**Pb**	**03 55 50.5**	**-1.3**
KEV				SN	**Sn**	**03 56 26.2**	**+2.5**
VRF	**Varrio**	**3.50**	**86**	PG	**Pg**	**03 56 00.5**	**-2.1**
OBF0	**Syolatti, Pyha**	**3.64**	**153**	PG	**Pg**	**03 56 03.2**	**-2.1**
OLKF	**Oulanka, Finla**	**3.82**	**108**	PG	**Pg**	**03 56 06.8**	**-1.8**
UMAU	**Umeaa**	**3.91**	**178**	PB	**Pn**	**03 56 00.4**	**+3.7**
	baz=359						
KU6	**Riekki**	**4.13**	**111**	SG	**Sg**	**03 57 07.2**	**-0.8**

*GII **04** 03:58:11.7±0.3, 33.885N±0.005×35.391E±0.001, h0km, confirmed*
*GRAL **04** 03:58:15.6±0.3, 33.75N×35.39E, h0km±64km, MD2.7*
ISC 04 03:58:14.8±1.9, **33.77N**±0.04×**35.37E**±0.08, **h7**km±13km,
n14,σ0s56/16, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.18**	**110**	*e*P	**Pg**	**03 58 18.4**	**0.0**
BHL	**Bhannes**	**0.28**	**60**	*e*P	**Pg**	**03 58 20.4**	**+0.2**
BHL				*e*S	**Sg**	**03 58 24.1**	**+0.2**
ZAHL	**Zahle**	**0.44**	**78**	*e*P	**Pg**	**03 58 23.2**	**-0.2**
RCY	**Rachaya**	**0.47**	**125**	*e*P	**Pg**	**03 58 23.7**	**-0.3**
RCY				*e*S	**Sg**	**03 58 29.6**	**-0.6**
NATI	**Neve Ativ**	**0.59**	**148**	P	**Pg**	**03 58 25.7**	**-0.4**
NATI	**Neve Ativ**	**0.59**	**148**	S	**Sb**	**03 58 37.4**	**+1.4**
GEM	**Giv'at Ha'Em**	**0.61**	**156**	P	**Pg**	**03 58 26.6**	**+0.1**
HNTI	**Hanita**	**0.70**	**193**	P	**Pg**	**03 58 27.9**	**-0.3**
HWQ	**Hawqa**	**0.70**	**43**	*e*P	**Pg**	**03 58 28.3**	**0.0**
MMC7	**Mount Meron ar**	**0.74**	**178**	P	**Pg**	**03 58 29.6**	**+0.5**
MMA0B	**Mount Meron ar**	**0.75**	**178**	P	**Pg**	**03 58 29.1**	**-0.1**
KSHT	**Keshet**	**0.87**	**155**	P	**Pg**	**03 58 31.5**	**+0.1**
KSHT	**Keshet**	**0.87**	**155**	S	**Sn**	**03 58 45.6**	**-0.9**
BEIL	**Beino**	**1.03**	**41**	*e*P	**Pg**	**03 58 34.2**	**-0.4**

*IDC **04** 04:00:23.7±1.3, 56.16N×148.49W, h0km, mb3.3/6,*
mbtmp3.3/11, ML3.0/5, MS3.3/10, Error ellipse:
s-maj=25.7km s-min=17.1km az=28.0
*NEIC **04** 04:00:30.6±2.0, 56.35N±0.08×148.55W±0.09, h21km±9km,*
mb4.1/1, ML4.0/62, ML3.6(AEIC), Error ellipse:
s-maj=12.7km s-min=6.9km az=164.0
*AEIC **04** 04:00:34.0±1.9, 56.41N±0.09×148.6W±0.1, h6km±7km,*
Error ellipse: s-maj=13.1km s-min=8.7km az=175.0
ISC 04 04:00:27.0±0.8, **56.35N**±0.07×**148.50W**±0.05, **h10**km,
n283,σ2s37/287, mb3.4/6, MS3.2/6, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.66**	**305**	Pn	**Pn**	**04 01 11.6**	**+1.9**
KDAK				Sn	**Sn**	**04 01 40.9**	**-1.1**
KDAK	**Kodiak Island**	**2.66**	**305**	Pn	**Pn**	**04 01 09.4**	**-0.3**
	7.6nm,0.3s,baz=166,slow=4.1,SNR=19						
KDAK				Sn	**Sn**	**04 01 39.7**	**-2.2**
	12nm,0.3s,baz=330,slow=12,SNR=19						
KDAK				LR	LR	04 02 26.2	
	comp=Z,693nm,18.4s,baz=126,slow=44						
	25nm,0.4s						
OHAK	**Old Harbor**	**2.78**	**290**	Pn	**Pn**	**04 01 12.8**	**+1.4**
OHAK				Sn	**Sn**	**04 01 43.7**	**-1.3**
OHAK	**Old Harbor**	**2.78**	**290**	P	**Pn**	**04 01 13.0**	**+1.6**
	baz=106						
OHAK				S	**Sn**	**04 01 43.3**	**-1.6**
	baz=106						
SYI	**Shuyak Island**	**3.09**	**319**	Pn	**Pn**	**04 01 17.5**	**+1.7**
SYI				Sn	**Sn**	**04 01 52.2**	**-0.5**
Q20K	**Shuyak Island**	**3.09**	**319**	P	**Pn**	**04 01 17.7**	**+1.9**
	baz=135						
Q20K				S	**Sn**	**04 01 52.2**	**-0.6**
	baz=135						
SII	**Sitkinak Islan**	**3.16**	**276**		**Sn**	**04 01 53.1**	**-1.4**
SII	**Sitkinak Islan**	**3.16**	**276**	S	**Sn**	**04 01 53.4**	**-1.2**
	baz=91						
MID	**Middleton Isla**	**3.30**	**20**	Pn	**Pn**	**04 01 20.2**	**+1.6**
MID				Sn	**Sn**	**04 01 56.9**	**-0.9**
MID				IAML		04 02 22.6	
	comp=E,332nm,2.1s						
MID				IAML		04 02 34.4	
	comp=N,384nm,1.9s						
MID	**Middleton Isla**	**3.30**	**20**	P	**Pn**	**04 01 20.6**	**+2.0**
Q23K	**Middleton Isla**	**3.30**	**19**	Pn	**Pn**	**04 01 20.4**	**+1.8**
Q23K				IAML		04 01 58.4	
	comp=E,330nm,0.8s						
Q23K				IAML		04 02 34.4	
	comp=N,422nm,1.9s						
Q23K	**Middleton Isla**	**3.30**	**19**		**Sn**	**04 01 56.6**	**-1.2**
Q23K	**Middleton Isla**	**3.30**	**19**	P	**Pn**	**04 01 20.4**	**+1.8**
	baz=202						
Q23K				S	**Sn**	**04 01 57.1**	**-0.8**
	baz=202						
CNPM	**China Poot**	**3.51**	**337**	Pn	**Pn**	**04 01 22.4**	**+0.9**
CNPM				Sn	**Sn**	**04 02 00.7**	**-2.3**
BRSE	**Bradley Lake S**	**3.61**	**342**		**Pn**	**04 01 24.3**	**+1.4**
BRSE					**Sn**	**04 02 03.4**	**-2.1**
BRSE	**Bradley Lake S**	**3.61**	**342**	P	**Pn**	**04 01 24.5**	**+1.6**
	baz=160						
BRSE				S	**Sn**	**04 02 04.3**	**-1.2**
	baz=160						
BRLK	**Bradley Lake**	**3.66**	**341**		**Pn**	**04 01 25.2**	**+1.7**
P23K	**Montague Islan**	**3.71**	**9**		**Pn**	**04 01 26.0**	**+1.7**
P23K					**Sn**	**04 02 06.0**	**-2.0**
P23K	**Montague Islan**	**3.71**	**9**	P	**Pn**	**04 01 26.0**	**+1.7**
	baz=190						
P23K				S	**Sn**	**04 02 06.0**	**-2.0**
	baz=190						
HOM	**Homer**	**3.72**	**335**	Pn	**Pn**	**04 01 27.1**	**+2.7**
HOM				IAML		04 02 20.4	
	comp=E,337nm,0.8s						
HOM	**Homer**	**3.72**	**335**	P	**Pn**	**04 01 26.4**	**+2.0**
	baz=152						
Q19K	**Cape Douglas,**	**3.79**	**315**	Pn	**Pn**	**04 01 28.6**	**+3.3**
Q19K	**Cape Douglas,**	**3.79**	**315**	P	**Pn**	**04 01 27.6**	**+2.2**
	baz=131						
SEW	**Seward**	**3.80**	**353**		**Sn**	**04 02 07.2**	**-3.1**
SEW	**Seward**	**3.80**	**353**	Pn	**Pn**	**04 01 26.9**	**+1.4**
SEW	**Seward**	**3.80**	**353**	P	**Pn**	**04 01 27.5**	**+2.0**
	baz=172						
SEW				S	**Sn**	**04 02 07.2**	**-3.1**
	baz=172						
KAHG	**Katmai Hook Gl**	**3.92**	**306**		**Pn**	**04 01 29.5**	**+2.3**
ACHA	**Angle Creek He**	**4.15**	**300**		**Pn**	**04 01 33.5**	**+3.1**
P19K	**Oil Pt**	**4.16**	**325**	Pn	**Pn**	**04 01 33.6**	**+3.0**
P19K				IAML		04 02 24.4	
	comp=N,190nm,0.5s						
P19K				IAML		04 02 26.3	
	comp=E,174nm,0.6s						
P19K	**Oil Pt**	**4.16**	**325**	P	**Pn**	**04 01 32.7**	**+2.1**
	baz=141						
KAIM	**Kayak Island**	**4.19**	**29**	Pn	**Pn**	**04 01 33.7**	**+2.8**
KAIM	**Kayak Island**	**4.19**	**29**	P	**Pn**	**04 01 33.3**	**+2.4**
	baz=213						
HIN	**Hinchinbrook I**	**4.20**	**14**	Pn	**Pn**	**04 01 32.9**	**+1.9**
HIN				Sn	**Sn**	**04 02 17.9**	**-2.1**
HIN				IAML		04 02 26.2	
	comp=E,220nm,1.0s						
O22K	**Cooper Landing**	**4.20**	**352**		**Pn**	**04 01 33.2**	**+2.2**
SLKM	**Skilak Lake**	**4.27**	**348**		**Pn**	**04 01 33.5**	**+1.5**
O20K	**Slope Mountain**	**4.33**	**332**		**Pn**	**04 01 34.5**	**+1.6**
O20K	**Slope Mountain**	**4.33**	**332**	P	**Pn**	**04 01 34.5**	**+1.6**
	baz=148						
CNTC	**Contact Creek**	**4.44**	**299**		**Pn**	**04 01 37.0**	**+2.6**
Q17K	**Contact Creek**	**4.44**	**299**	P	**Pn**	**04 01 37.0**	**+2.6**
	baz=112						
EYAK	**Cordova Ski Ar**	**4.46**	**18**	Pn	**Pn**	**04 01 36.4**	**+1.9**
EYAK	**Cordova Ski Ar**	**4.46**	**18**	P	**Pn**	**04 01 36.9**	**+2.4**
	baz=200						
SUCK	**Suckling Hills**	**4.49**	**32**	Pn	**Pn**	**04 01 37.4**	**+2.3**
SUCK				IAML		04 02 36.5	
	comp=N,130nm,1.6s						
SUCK				IAML		04 02 45.3	
	comp=E,115nm,1.8s						
RAGM	**Ragged Mountai**	**4.53**	**25**	Pn	**Pn**	**04 01 38.2**	**+2.7**
NICHA	**Nichawak Mount**	**4.58**	**30**		**Pn**	**04 01 38.6**	**+2.4**
HMT	**Hamilton**	**4.58**	**27**	Pn	**Pn**	**04 01 38.5**	**+2.2**
CAPN	**Captain Cook N**	**4.65**	**344**	Pn	**Pn**	**04 01 38.9**	**+1.7**
RED	**Redoubt Volcan**	**4.66**	**333**		**Pn**	**04 01 38.7**	**+1.2**
RDSO	**Redoubt South**	**4.69**	**333**		**Pn**	**04 01 39.0**	**+1.2**
GOAT	**Goat Mountain**	**4.69**	**23**		**Pn**	**04 01 39.9**	**+2.1**
RSO	**Redoubt South**	**4.70**	**333**	Pn	**Pn**	**04 01 39.4**	**+1.4**
RDT	**Redoubt**	**4.71**	**336**		**Pn**	**04 01 39.0**	**+1.0**
P18K	**Big Mountain,**	**4.71**	**313**	Pn	**Pn**	**04 01 39.1**	**+1.0**
P18K	**Big Mountain,**	**4.71**	**313**	P	**Pn**	**04 01 39.6**	**+1.5**
	baz=127						
BERG	**Berg Lake**	**4.78**	**30**

PCA Pinnacle 5.75 46 Pn Pn 04 01 55.0 +2.6
PINM Pinnacle 5.75 46 P Pn 04 01 55.0 +2.6
baz=233
PTPK Patty Peak 5.78 30 Pn 04 01 55.1 +2.2
MCARA McCarthy VSAT 5.79 27 Pn Pn 04 01 55.5 +2.6
MCARA McCarthy VSAT 5.79 27 P Pn 04 01 55.2 +2.4
baz=212
N18K Kilae Creek 5.82 321 Pn Pn 04 01 54.7 +1.4
N18K Kilae Creek 5.82 321 P Pn 04 01 55.2 +2.0
baz=135
SKT Skwentna 5.86 346 Pn 04 01 56.8 +3.0
PNL Peninsula 5.87 52 Pn 04 01 57.1 +3.1
PNL Peninsula 5.87 52 P Pn 04 01 57.8 +3.8
PNL Peninsula 5.87 52 P 04 01 57.1 +3.1
baz=240
M24K Tolsona, Glenn 5.90 11 Pn Pn 04 01 57.3 +2.9
BARN Barnard Glacie 5.92 34 Pn Pn 04 01 57.8 +3.0
BCPM Bancas Point 5.92 49 Pn Pn 04 01 58.3 +3.7
CTG Chitna Glacier 5.95 36 P Pn 04 01 57.7 +2.5
baz=222
CTGM Chitina Glacie 5.95 36 Pn 04 01 58.2 +3.0
LOGN Logan Glacier 5.96 38 Pn 04 01 58.3 +3.0
M20K Styx River 6.04 339 Pn Pn 04 01 57.5 +1.2
M20K Styx River 6.04 339 P Pn 04 01 58.1 +1.7
baz=155
WACK Wrangell Chich 6.05 19 Pn 04 01 58.9 +2.3
O16K Kokwok River B 6.05 307 Pn Pn 04 01 58.7 +2.3
O16K Kokwok River B 6.05 307 P Pn 04 01 58.8 +2.4
baz=118
CUT Chulitna 6.14 352 Pn Pn 04 02 00.2 +2.5
N17K Nushagak Hills 6.19 316 Pn Pn 04 02 00.2 +1.8
N17K Nushagak Hills 6.19 316 P Pn 04 02 00.2 +1.8
baz=129
WAT6 Susitna Watana 6.27 3 Pn 04 02 01.6 +2.1
WAT6 Susitna Watana 6.27 3 P Pn 04 02 01.6 +2.1
baz=184
HARP HAARP 6.31 14 Pn 04 02 01.9 +2.0
HARP HAARP 6.31 14 P Pn 04 02 01.9 +2.0
baz=197
M19K Big River Lodg 6.34 334 Pn Pn 04 02 00.9 +0.5
M19K Big River Lodg 6.34 334 P Pn 04 02 01.9 +1.5
baz=149
M18K Stony River 6.40 327 Pn 04 02 02.8 +1.7
M18K Stony River 6.40 327 P Pn 04 02 02.8 +1.7
baz=140
WAT7 Susitna Watana 6.51 359 Pn 04 02 04.9 +2.1
O29M Mount Kennedy 6.56 49 Pn Pn 04 02 06.9 +3.4
O29M Mount Kennedy 6.56 49 P Pn 04 02 05.6 +2.1
baz=237
P29M Windy Craggy 6.60 56 Pn Pn 04 02 06.8 +2.8
P29M Windy Craggy 6.60 56 P Pn 04 02 06.3 +2.3
baz=245
O15K Ungalikthiuk R 6.69 300 Pn 04 02 07.7 +2.5
O15K Ungalikthiuk R 6.69 300 P Pn 04 02 07.7 +2.5
baz=110
M26K Nabesna, AK 6.69 23 Pn Pn 04 02 08.0 +2.7
L19K White Mountain 6.70 334 Pn Pn 04 02 05.1 -0.2
L19K White Mountain 6.70 334 P Pn 04 02 06.6 +1.3
baz=148
L20K Farewell, AK 6.74 338 Pn 04 02 07.9 +2.1
L20K Farewell, AK 6.74 338 P Pn 04 02 07.9 +2.1
baz=154
DHY Denali Highway 6.78 4 Pn 04 02 10.1 +3.6
N16K Nishlik Lake 6.80 312 Pn 04 02 09.0 +2.3
N16K Nishlik Lake 6.80 312 P Pn 04 02 09.0 +2.3
baz=123
M17K Holitna River 6.86 321 Pn Pn 04 02 08.2 +0.7
M17K Holitna River 6.86 321 P Pn 04 02 09.6 +2.0
baz=134
S31K Pelican 6.87 71 Pn Pn 04 02 09.2 +1.6
S31K Pelican 6.87 71 P Pn 04 02 10.1 +2.5
baz=262
M27K Edge Creek, AK 6.91 27 Pn Pn 04 02 11.6 +3.2
MENT Mentasta 7.04 18 Pn Pn 04 02 11.9 +1.9
RND Reindeer 7.09 359 Pn Pn 04 02 13.0 +2.4
PLBC Pleasant Camp 7.18 59 Pn 04 02 14.3 +2.5
PLBC Pleasant Camp 7.18 59 P Pn 04 02 14.4 +2.5
baz=250
TRF Thorofare Moun 7.18 354 Pn Pn 04 02 14.5 +2.3
TRF Thorofare Moun 7.18 354 P Pn 04 02 14.4 +2.3
baz=173
M16K Timber Creek 7.19 315 Pn Pn 04 02 13.5 +1.5
M16K Timber Creek 7.19 315 P Pn 04 02 13.9 +1.9
baz=126
N15K Kwethluk River 7.21 307 Pn Pn 04 02 15.2 +2.8
L18K Granite Mounta 7.23 328 Pn Pn 04 02 13.8 +1.3
L18K Granite Mounta 7.23 328 P Pn 04 02 14.3 +1.8
baz=141
HYT Haines Junctio 7.29 47 Pn Pn 04 02 16.1 +2.6
SIT Sitka 7.29 79 Pn Pn 04 02 14.6 +1.3
SIT Sitka 7.29 79 P Pn 04 02 15.3 +1.9
SIT Sitka 7.29 79 P Pn 04 02 14.8 +1.5
baz=270
CAST Castle Rocks 7.32 347 Pn Pn 04 02 15.2 +1.4
KTH Kantishna Hill 7.33 351 Pn Pn 04 02 16.3 +2.3
O14K Tigyukauivet M 7.42 298 Pn Pn 04 02 18.2 +3.1
L27K Beaver Creek, 7.53 24 Pn Pn 04 02 19.3 +2.6
BCAR Beaver Creek A 7.54 24 Pn Pn 04 02 18.7 +1.8
K20K Telida 7.57 341 Pn Pn 04 02 20.3 +3.1
TTA Tatalina 7.62 333 Pn Pn 04 02 18.1 +0.2
TTA Tatalina 7.62 333 P Pn 04 02 22.0 +4.0
SKAG Skagway 7.68 61 Pn Pn 04 02 22.4 +3.7
SKAG Skagway 7.68 61 P Pn 04 02 23.2 +4.5
S32K Killisnoo 7.71 76 Pn Pn 04 02 20.8 +1.8
L16K Owhat River 7.80 318 Pn Pn 04 02 22.3 +1.9
L16K Owhat River 7.80 318 P Pn 04 02 22.1 +1.7
baz=129
R32K Eaglecrest 7.81 70 Pn Pn 04 02 22.9 +2.3
O30N Mendenhall 7.86 51 Pn 04 02 24.4 +3.2
BWN Browne 7.87 357 Pn Pn 04 02 24.3 +3.0
BPAW Bear Paw Mtn. 7.88 352 Pn Pn 04 02 24.4 +2.9
BPAW Bear Paw Mtn. 7.88 352 P Pn 04 02 23.6 +2.1
baz=170
JIS Juneau Island 7.88 70 Pn Pn 04 02 25.5 +3.9
JIS Juneau Island 7.88 70 P Pn 04 02 25.4 +3.9
M29M Somme Creek 7.97 36 Pn Pn 04 02 26.2 +3.4
SCRK Sand Creek 7.98 14 Pn Pn 04 02 25.7 +2.8
K17K Iditarod 8.09 326 Pn Pn 04 02 24.9 +0.5
HDA Harding Lake 8.13 5 Pn 04 02 28.0 +3.1
J16K Innoko River 8.24 333 Pn Pn 04 02 27.2 +0.8
M14K Bethel 8.30 308 Pn Pn 04 02 27.4 +0.1
WHY Whitehorse 8.33 53 Pn 04 02 31.5 +3.7
CCB Clear Creek Bu 8.34 2 Pn Pn 04 02 30.6 +2.9
J20K Nowinta River 8.34 343 Pn Pn 04 02 28.8 +1.1
K27K Chicken 8.34 20 Pn Pn 04 02 29.9 +2.1
N31M Braeburn, Yuko 8.35 47 Pn Pn 04 02 31.5 +3.5
J25K Salcha River, 8.44 9 Pn Pn 04 02 31.0 +1.8
J19K Poorman 8.45 338 Pn Pn 04 02 30.3 +1.0
IL31 8.49 5 Pn 04 02 32.9 +3.1
ILAR Eielson Array 8.49 5 Pn Pn 04 02 33.4 +3.5
ILAR Eielson Array 8.49 5 Pn Pn 04 02 27.8 -2.1
comp=N,0.1nm,0.3s,baz=188,slow=13,SNR=4.5
ILAR Sn Sn 04 04 02.8 -2.8
comp=N,0.6nm,0.3s,baz=192,slow=23,SNR=7.6
comp=N,0.4nm,0.7s
P32M Atlin 8.50 61 Pn 04 02 33.9 +3.8
J26L Joseph Creek 8.54 15 Pn Pn 04 02 33.3 +2.8
L29M L29M 8.56 33 Pn Pn 04 02 34.1 +3.2
COLA College 8.56 2 P Pn 04 02 34.3 +3.5
U33K Whale Pass 8.57 85 Pn Pn 04 02 32.9 +1.9
M30M Minto, Yukon 8.62 39 Pn Pn 04 02 35.1 +3.4
MDM Murphy Dome 8.64 1 Pn 04 02 34.9 +2.9
POKR Poker Flat Res 8.82 3 Pn Pn 04 02 37.0 +2.6
I23K Minto, Yukon-K 8.84 358 Pn Pn 04 02 37.1 +2.5
L14K Kuka Creek 8.89 310 Pn Pn 04 02 37.2 +1.9
K15K Wolf Creek Mou 8.93 317 Pn Pn 04 02 37.2 +1.3
DAWY Dawson 8.96 27 Pn Pn 04 02 38.9 +2.5
I21K Tanana 9.03 351 Pn Pn 04 02 39.1 +2.0
Q32M Nakina River 9.09 67 Pn Pn 04 02 41.7 +3.5
P33M Teslin, Yukon 9.12 58 Pn Pn 04 02 41.6 +3.1
P33M Teslin, Yukon 9.12 58 P Pn 04 02 41.4 +2.9
baz=252
J16K Anvik River 9.24 324 Pn Pn 04 02 41.0 +1.0
K29M Barlow Dome 9.29 32 Pn Pn 04 02 44.2 +3.3
M31M Drury Creek, Y 9.29 45 Pn 04 02 45.2 +4.3
PRP Porcupine Dome 9.31 8 Pn Pn 04 02 43.4 +2.2
N32M Quiet Lake 9.34 53 Pn Pn 04 02 44.4 +2.8
H24K Noodor Dome 9.53 2 Pn Pn 04 02 47.1 +3.0
H21K Melozitna Rive 9.57 349 Pn Pn 04 02 46.6 +2.0
S34M Telegraph Cree 9.57 73 Pn Pn 04 02 47.2 +2.6
J29N Klondike Camp 9.58 28 Pn Pn 04 02 47.6 +2.8
FARO Faro, Yukon 9.72 46 Pn 04 02 51.1 +4.4
R33M Jennings River 9.82 65 Pn Pn 04 02 51.5 +3.3

H19K Roundabout Mou 9.98 341 Pn Pn 04 02 53.1 +2.9
IMAR Indian Mountai 9.99 348 Pn 04 02 52.2 +1.8
I28M Miner Creek 10.03 21 Pn Pn 04 02 54.5 +3.5
H18K Honhosa River 10.05 335 Pn Pn 04 02 51.8 +0.6
T35M Bob Quinn 10.07 79 Pn Pn 04 02 53.4 +2.0
DLBC Dease Lake 10.19 70 Pn Pn 04 02 56.0 +2.9
DLBC Dease Lake 10.19 70 Pn Pn 04 02 53.0 -0.2
comp=N,0.3nm,0.3s,baz=217,slow=6.0,SNR=1.8
DLBC Sn Sn 04 04 43.6 -3.7
comp=N,0.2nm,0.3s,baz=221,slow=14,SNR=1.9
DLBC LR LR 04 06 02.6
comp=N,146nm,21.5s,baz=299,slow=33
comp=N,0.8nm,0.3s
J30M Hart River 10.19 31 Pn Pn 04 02 56.1 +2.9
FYU Fort Yukon 10.37 7 Pn Pn 04 02 57.2 +1.6
G24K Hadweenzic Riv 10.40 2 Pn Pn 04 02 57.7 +1.7
G23K Bananza Creek 10.43 357 Pn 04 02 59.4 +3.0
G21K Allakaket 10.48 349 Pn Pn 04 02 58.6 +1.6
G19K Purcell Mounta 10.65 341 Pn Pn 04 03 01.2 +1.8
I30M Mount Dempster 10.67 29 Pn Pn 04 03 03.1 +3.3
G18K Tagagawik 10.75 337 Pn Pn 04 03 03.2 +2.5
F21K Alatna River 11.16 350 Pn Pn 04 03 09.2 +2.8
F24K Squaw Lake 11.22 1 Pn Pn 04 03 11.1 +3.9
F20K Avaraart Lake 11.26 345 Pn Pn 04 03 09.7 +2.0
BMAR Burnt Mountain 11.27 8 Pn Pn 04 03 10.1 +2.1
ANM Nome 11.68 322 Pn Pn 04 03 13.6 +0.2
F17K Baldwin Pennin 11.79 334 Pn Pn 04 03 15.9 +0.9
E19K Redstone River 11.87 343 Pn Pn 04 03 18.6 +2.6
E25K Arctic Village 11.90 5 Pn Pn 04 03 19.4 +3.0
G30M tAoh Zraii Nji 12.13 23 Pn Pn 04 03 22.5 +3.0
F15K North Star Dit 12.18 327 Pn Pn 04 03 22.3 +2.0
E18K Tukpahlearik C 12.46 338 Pn Pn 04 03 26.0 +1.9
G31M Satah River 12.54 27 Pn Pn 04 03 27.6 +2.5
D22K Ayikyak River 12.72 353 Pn Pn 04 03 31.4 +3.7
E29M Blow River 13.02 18 Pn Pn 04 03 34.5 +2.9
D25K Kavik River 13.06 3 Pn Pn 04 03 36.0 +3.6
F31M Tsiigehtchic 13.07 26 Pn 04 03 35.5 +3.0
B21K Ikpikpuk River 13.60 351 Pn Pn 04 03 41.7 +2.1
INK Inuvik 13.81 24 Pn Pn 04 03 41.5 -0.9
baz=210,slow=8.9,SNR=1.5
INK LR LR 04 09 01.4
comp=N,116nm,18.0s,baz=2.5,slow=37
comp=N,0.4nm,0.6s
B22K Teshekpuk Lake 14.21 353 Pn Pn 04 03 50.8 +2.8
C16K Lisburne Hills 14.22 334 Pn Pn 04 03 51.1 +3.0
B20K Meade River 14.23 348 Pn Pn 04 03 48.8 +0.5
YKA Yellowknife Ar 18.14 56 P Pn 04 04 41.9 +3.2
YKA Yellowknife Ar 18.14 56 P Pn 04 04 38.3 -0.3
baz=257,slow=7.6,SNR=2.2
YKA LR LR 04 10 44.4
comp=N,92nm,18.3s,baz=178,slow=34
comp=N,2.7nm,1.2s
A36M Sachs Harbour 18.45 23 P P 04 04 43.8 +1.5
A36M IAmb IAmb 04 04 56.5
comp=Z,13nm,0.9s
YBH Yreka Blue Hor 22.17 120 LR LR 04 11 33.2
comp=Z,106nm,18.3s,baz=339,slow=30
NVAR Mina Array Bea 26.86 119 P P 04 06 04.4 -3.4
comp=Z,0.1nm,0.3s,baz=306,slow=6.6,SNR=1.3
NVAR LR LR 04 14 45.1
comp=Z,51nm,20.8s,baz=282,slow=32
comp=Z,0.1nm,0.3s
FRB Frobisher Bay 38.08 45 LR LR 04 23 30.1
comp=Z,105nm,19.2s,baz=353,slow=36
TXAR Lajitas Array 41.44 112 P P 04 08 12.5 -1.2
comp=Z,0.1nm,0.5s,baz=245,slow=15,SNR=1.5
comp=Z,0.1nm,0.5s
LPIG La Paz 42.51 123 LR LR 04 22 19.4
comp=Z,26nm,21.4s,baz=352,slow=31
SADO Sadowa 43.71 75 LR LR 04 26 59.9
comp=Z,31nm,18.0s,baz=102,slow=36
H11N2 WAKE ISLAND Hy 49.29 241 T T 05 02 48.6
baz=30,slow=76,SNR=11
H11N3 WAKE ISLAND Hy 49.30 241 T T 05 02 48.6
baz=30,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 49.31 241 T T 05 02 48.6
baz=30,slow=76,SNR=8.7
H11S1 WAKE ISLAND Hy 50.43 240 T T 05 04 15.7
baz=40,slow=74,SNR=26
H11S2 WAKE ISLAND Hy 50.45 240 T T 05 04 15.7
SNR=12
H11S3 WAKE ISLAND Hy 50.45 240 T T 05 04 27.7
baz=46,slow=74,SNR=15
CMIG Matias Romero 56.05 112 LR LR 04 32 17.8
comp=Z,18nm,18.6s,baz=12,slow=34
SONM Songino Array 58.93 311 P P 04 10 24.5 -1.6
comp=Z,0.1nm,0.4s,baz=32,slow=6.8,SNR=1.7
comp=Z,0.1nm,0.4s
ZALV Zalesovo Beam 61.74 327 P P 04 10 45.1 0.0
comp=Z,0.2nm,0.4s,baz=28,slow=6.5,SNR=1.2
comp=Z,0.2nm,0.4s
FINES FINESS Array B 62.47 3 P P 04 10 49.3 -0.5
comp=Z,3.1nm,1.1s,baz=345,slow=10,SNR=2.3
comp=Z,3.1nm,1.1s
MKAR Makanchi Array 68.79 325 P P 04 11 29.2 -1.7
comp=Z,0.3nm,0.8s,baz=57,slow=5.3,SNR=3.6
comp=Z,0.3nm,0.8s

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*IDC **04** 04:22:38.9±1.6,56°21N×149°22W,h0km,mb3.2/3, mbtmp3.3/8,ML3.2/5,MS3.1/2,Error ellipse: s-maj=28.2km s-min=22.1km az=28.0*
*NEIC **04** 04:22:40.3±1.6,56°29N±0°09×149°35W±0°10,h20km±9km, mb3.7/1,ML3.6/54,ML3.4(AEIC),Error ellipse: s-maj=13.8km s-min=7.6km az=174.0*
*AEIC **04** 04:22:43.2±1.6,56°25N±0°09×149°3W±0°1,h11km±7km, Error ellipse: s-maj=13.6km s-min=8.0km az=170.0*

ISC 04 04:22:40.3±1.1,56°38N±0°09×149°32W±0°05,h10km, n222,σ0°86/222,mb3.3/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.27	310		Sn	Sn	04 23 44.3	-1.4
KDAK	Kodiak Island	2.27	310	S	Sn	Sn	04 23 44.0	-1.7
baz=129								
KDAK	Kodiak Island	2.27	310	Pn	Pn	Pn	04 23 17.1	-0.6
3.4nm,0.3s,baz=129,slow=7.4,SNR=50								
KDAK				Sn	Sn	Sn	04 23 44.4	-1.4
7.2nm,0.3s,baz=58,slow=19,SNR=11								
9.2nm,0.3s								
OHAK	Old Harbor	2.34	293	Pn	Pn	Pn	04 23 16.9	-1.8
OHAK				Sn	Sn	Sn	04 23 43.6	-3.9
OHAK	Old Harbor	2.34	293	P	Pn	Pn	04 23 17.6	-1.1
baz=112								
OHAK				S	Sn	Sn	04 23 44.3	-3.2
baz=112								
SYI	Shuyak Island	2.78	325	Pn	Pn	Pn	04 23 24.6	-0.2
SYI				IAML			04 24 01.1	
comp=N,93nm,0.9s								
Q20K	Shuyak Island	2.78	325	P	Pn	Pn	04 23 25.0	+0.2
baz=143								
Q20K				S	Sn	Sn	04 23 57.9	-0.5
baz=143								
CNPM	China Poot	3.31	343	Pn	Pn	Pn	04 23 31.6	-0.6
CNPM				Sn	Sn	Sn	04 24 11.0	-0.6
CNPM				IAML			04 24 13.7	
comp=E,70nm,0.7s								
Q23K	Middleton Isla	3.44	26	Pn	Pn	Pn	04 23 32.8	-1.1
Q23K				Sn	Sn	Sn	04 24 12.9	-1.8
Q23K				IAML			04 24 13.9	
comp=N,202nm,0.9s								
Q23K				IAML			04 24 44.8	
comp=E,214nm,1.4s								
Q23K	Middleton Isla	3.44	26	P	Pn	Pn	04 23 33.3	-0.6
baz=207								
Q23K				S	Sn	Sn	04 24 12.3	-2.4
baz=207								
MID	Middleton Isla	3.44	26	Pn	Pn	Pn	04 23 32.8	-1.1
MID				IAML			04 24 13.9	
comp=N,200nm,1.1s								
MID				IAML			04 24 21.0	
comp=E,203nm,1.2s								
Q19K	Cape Douglas,	3.45	320	Pn	Pn	Pn	04 23 33.3	-0.8
Q19K				IAML			04 24 21.1	
comp=N,248nm,0.8s								
Q19K	Cape Douglas,	3.45	320	P	Pn	Pn	04 23 34.2	+0.1
baz=137								
BRSE	Bradley Lake S	3.45	348		Pn	Pn	04 23 33.8	-0.2
BRSE					Sn	Sn	04 24 15.0	-0.1
BRSE	Bradley Lake S	3.45	348	P	Pn	Pn	04 23 33.8	-0.2
baz=167								
BRSE				S	Sn	Sn	04 24 15.0	-0.1
baz=167								
BRLK	Bradley Lake	3.49	347	Pn	Pn	Pn	04 23 34.2	-0.5
BRLK				Sn	Sn	Sn	04 24 14.7	-1.4

HOM Homer 3.51 340 Pn Pn 04 23 34.0 -0.8
KAHG Katmai Hook Gl 3.53 309 Pn 04 23 35.1 -0.1
SEW Seward 3.73 359 Pn Pn 04 23 36.8 -1.1
SEW Seward 3.73 359 P Pn 04 23 37.3 -0.6
baz=178
P23K Montague Islan 3.77 15 Pn 04 23 38.2 -0.2
P23K Montague Islan 3.77 15 P Pn 04 23 38.2 -0.2
baz=195
P19K Oil Pt 3.88 329 Pn Pn 04 23 39.6 -0.4
P19K IAML 04 24 37.5
comp=E,134nm,0.6s
P19K IAML 04 24 37.5
comp=N,105nm,0.5s
P19K Oil Pt 3.88 329 P Pn 04 23 40.4 +0.4
baz=146
CNTC Contact Creek 4.03 301 Pn 04 23 42.0 -0.1
Q17K Contact Creek 4.03 301 P Pn 04 23 42.0 -0.1
baz=116
O20K Slope Mountain 4.10 336 Pn 04 23 43.5 +0.5
O20K Slope Mountain 4.10 336 P Pn 04 23 43.5 +0.5
baz=154
O22K Cooper Landing 4.12 357 Pn Pn 04 23 43.3 +0.2
O22K IAML 04 24 36.1
comp=E,146nm,0.5s
O22K Cooper Landing 4.12 357 P Pn 04 23 43.7 +0.5
baz=176
IVE Iliamna Volcan 4.14 333 Pn 04 23 44.0 +0.4
SLKM Skilak Lake 4.17 354 Pn 04 23 43.6 -0.3
HIN Hinchinbrook I 4.29 19 Pn Pn 04 23 45.3 -0.3
HIN IAML 04 24 40.2
comp=N,88nm,1.5s
HIN IAML 04 24 42.7
comp=E,80nm,0.9s
P18K Big Mountain, 4.37 316 Pn Pn 04 23 46.2 -0.4
P18K Big Mountain, 4.37 316 P Pn 04 23 46.6 0.0
baz=132
KAIM Kayak Island 4.40 34 Pn Pn 04 23 47.1 0.0
KAIM Kayak Island 4.40 34 P Pn 04 23 46.7 -0.3
baz=217
RED Redoubt Volcan 4.44 337 Pn 04 23 47.6 -0.1
RSO Redoubt South 4.47 338 Pn Pn 04 23 48.2 -0.1
Q16K King Salmon 4.58 303 Pn 04 23 49.6 +0.2
Q16K King Salmon 4.58 303 P Pn 04 23 49.6 +0.2
baz=118
EYAK Cordova Ski Ar 4.58 23 Pn Pn 04 23 49.4 -0.1
EYAK Cordova Ski Ar 4.58 23 P Pn 04 23 49.5 0.0
baz=205
NCT North Crescent 4.60 337 Pn 04 23 49.9 0.0
O19K Port Alsworth 4.65 327 Pn Pn 04 23 50.2 -0.2
O18K Koktuh Hills 4.68 321 Pn Pn 04 23 49.3 -1.5
O18K IAML 04 24 45.6
comp=N,28nm,1.1s
O18K IAML 04 24 54.0
comp=E,29nm,1.4s
O18K Koktuh Hills 4.68 321 P Pn 04 23 51.1 +0.2
baz=136
RAGM Ragged Mountai 4.70 29 Pn Pn 04 23 51.1 -0.1
SUCK Suckling Hills 4.72 36 Pn Pn 04 23 51.1 -0.3
SUCK IAML 04 24 49.3
comp=N,72nm,0.8s
SUCK IAML 04 25 03.3
comp=E,63nm,1.2s
RC01 Rabbit Creek A 4.73 358 Pn Pn 04 23 51.1 -0.4
RC01 IAML 04 24 47.2
comp=N,29nm,0.4s
RC01 IAML 04 24 51.9
comp=E,33nm,1.3s
RC01 Rabbit Creek A 4.73 358 P Pn 04 23 51.5 -0.1
baz=177
P17K Kvichak River 4.74 309 Pn 04 23 52.3 +0.6
P17K Kvichak River 4.74 309 P Pn 04 23 52.3 +0.6
baz=124
HMT Hamilton 4.78 32 Pn Pn 04 23 52.6 +0.4
NICHA Nichawak Mount 4.79 34 Pn 04 23 52.1 -0.2
GOAT Goat Mountain 4.85 28 Pn 04 23 53.4 +0.1
ANPB Aniakchak Plen 4.97 279 Pn 04 23 54.0 -0.9
BERG Berg Lake 4.99 34 Pn Pn 04 23 54.5 -0.7
BERG IAML 04 24 55.5
comp=N,78nm,1.5s
BERG IAML 04 25 01.1
comp=E,78nm,1.0s
GRIN Grindle Hills 5.03 36 Pn 04 23 55.5 -0.2
N20K Mount Spurr 5.06 344 P Pn 04 23 56.0 -0.2
baz=162
SPCR Spurr Chakacha 5.06 344 Pn 04 23 56.0 -0.2
KNK Knik Glacier 5.07 5 Pn Pn 04 23 55.8 -0.4
KNK IAML 04 25 09.6
comp=E,23nm,0.9s
KNK IAML 04 25 09.9
comp=N,25nm,1.5s
KNK Knik Glacier 5.07 5 P Pn 04 23 56.8 +0.6
baz=185
SPCP Crater Peak Br 5.12 344 Pn 04 23 57.5 +0.5
SNH Sunshine Point 5.12 39 Pn Pn 04 23 56.3 -0.7
SNH IAML 04 25 00.9
comp=E,46nm,1.3s
SNH IAML 04 27 08.6
comp=N,37nm,1.2s
SUA Susitna One 5.15 352 Pn Pn 04 23 56.3 -1.2
SUA IAML 04 25 00.6
comp=N,19nm,1.4s
SUA Susitna One 5.15 352 P Pn 04 23 57.6 +0.1
baz=171
KHIT Khitrov Hills 5.17 36 Pn 04 23 57.6 -0.1
N19K Bonanza Creek 5.20 331 Pn Pn 04 23 57.8 -0.3
N19K Bonanza Creek 5.20 331 P Pn 04 23 58.4 +0.3
baz=147
BMRM Bremner River 5.22 26 Pn Pn 04 23 57.8 -0.5
BMRM Bremner River 5.22 26 P Pn 04 23 58.4 +0.1
baz=209
PMR Palmer 5.23 1 Pn Pn 04 23 58.1 -0.2
PMR IAML 04 25 00.7
comp=N,15nm,1.4s
PMR IAML 04 25 09.8
comp=E,14nm,1.2s
PMR Palmer 5.23 1 P Pn 04 23 58.9 +0.5
baz=181
STLK Strandline Lak 5.30 347 Pn 04 23 59.5 +0.1
SPNN North Nagishla 5.30 342 Pn 04 23 59.9 +0.3
WAX Waxell Ridge 5.31 37 Pn Pn 04 23 59.1 -0.5
WAX IAML 04 25 03.0
comp=E,56nm,0.7s
O17K Koliganek Bris 5.35 313 Pn 04 24 00.2 +0.2
O17K Koliganek Bris 5.35 313 P Pn 04 24 00.2 +0.2
baz=127
BARK Barkley Ridge 5.40 39 Pn 04 24 00.4 -0.4
GHO Glory Hole Cre 5.41 2 Pn Pn 04 24 01.8 +0.7
KLU Klutina 5.42 18 Pn Pn 04 24 01.5 +0.4
KLU Klutina 5.42 18 P Pn 04 24 01.5 +0.4
baz=200
MESA MESA 5.44 43 Pn Pn 04 24 00.8 -0.7
SML Sawmill 5.47 5 Pn Pn 04 24 02.0 +0.2
SML Sawmill 5.47 5 P Pn 04 24 02.2 +0.5
baz=185
N18K Kilae Creek 5.51 324 Pn Pn 04 24 01.7 -0.7
N18K Kilae Creek 5.51 324 P Pn 04 24 02.7 +0.3
baz=139
SCM Sheep Creek Mo 5.56 10 Pn Pn 04 24 03.7 +0.6
ISLE Juniper Island 5.59 38 Pn Pn 04 24 03.0 -0.6
BAGL Bagley Icefiel 5.60 40 Pn 04 24 03.4 -0.1
O16K Kokwok River B 5.67 308 Pn Pn 04 24 04.9 +0.4
O16K Kokwok River B 5.67 308 P Pn 04 24 03.9 -0.6
baz=122
SKT Skwentna 5.73 349 Pn Pn 04 24 05.1 -0.3
SKT Skwentna 5.73 349 P Pn 04 24 05.8 +0.5
baz=168
VRDI Verde Repeater 5.74 30 Pn Pn 04 24 05.2 -0.4
N25K Chitina, Valde 5.78 23 Pn Pn 04 24 06.3 +0.2
N25K Chitina, Valde 5.78 23 P Pn 04 24 06.1 0.0
baz=206
KIAG Kiagna River 5.83 36 Pn 04 24 06.4 -0.3
M20K Styx River 5.86 342 Pn Pn 04 24 06.3 -0.8
M20K Styx River 5.86 342 P Pn 04 24 07.1 0.0
baz=159
N17K Nushagak Hills 5.86 318 Pn Pn 04 24 06.8 -0.3
N17K Nushagak Hills 5.86 318 P Pn 04 24 07.3 +0.2
baz=132
TABL Table Mountain 5.92 43 Pn Pn 04 24 07.9 -0.2
M24K Tolsona, Glenn 5.96 14 Pn Pn 04 24 09.4 +0.8
M24K Tolsona, Glenn 5.96 14 P Pn 04 24 09.0 +0.4
baz=196
MCARA McCarthy VSAT 5.98 30 Pn Pn 04 24 08.8 +0.1
MCARA McCarthy VSAT 5.98 30 P Pn 04 24 09.0 +0.3
baz=215
PTPK Patty Peak 5.99 34 Pn 04 24 09.1 0.0

PCA	Pinnacle	6.06	48	Pn		Pn	04 24 08.6	-1.3
PINM	Pinnacle	6.07	48	P		Pn	04 24 09.1	-0.8
	baz=235							
M19K	Big River Lodg	6.12	337	Pn		Pn	04 24 10.4	-0.3
M19K	Big River Lodg	6.12	337	P		Pn	04 24 10.7	+0.1
	baz=153							
M18K	Stony River	6.13	329			Pn	04 24 10.4	-0.4
M18K	Stony River	6.13	329	P		Pn	04 24 10.4	-0.4
	baz=144							
CTG	Chitna Glacier	6.20	39	P		Pn	04 24 11.7	-0.2
	baz=225							
CTGM	Chitina Glacie	6.20	39	Pn		Pn	04 24 11.3	-0.6
PNL	Peninsula	6.22	54			Pn	04 24 11.1	-0.9
PNL	Peninsula	6.22	54	P		Pn	04 24 11.1	-0.9
	baz=241							
LOGN	Logan Glacier	6.22	41	Pn		Pn	04 24 11.4	-0.8
O15K	Ungalikthiuk R	6.28	301			Pn	04 24 13.1	+0.2
O15K	Ungalikthiuk R	6.28	301	P		Pn	04 24 13.0	+0.2
	baz=113							
WAZA	Wrangell Mount	6.29	23			Pn	04 24 13.6	+0.3
HARP	HAARP	6.40	18			Pn	04 24 15.1	+0.6
HARP	HAARP	6.40	18	P		Pn	04 24 15.1	+0.6
	baz=200							
N16K	Nishlik Lake	6.44	314			Pn	04 24 15.3	+0.2
N16K	Nishlik Lake	6.44	314	P		Pn	04 24 15.3	+0.2
	baz=126							
L19K	White Mountain	6.47	336	Pn		Pn	04 24 14.5	-1.0
L19K	White Mountain	6.47	336	P		Pn	04 24 15.6	+0.1
	baz=152							
WAT7	Susitna Watana	6.48	2			Pn	04 24 16.3	+0.7
M17K	Holitna River	6.56	323	Pn		Pn	04 24 16.8	+0.2
M17K	Holitna River	6.56	323	P		Pn	04 24 17.2	+0.5
	baz=137							
DHY	Denali Highway	6.79	8	Pn		Pn	04 24 20.1	+0.1
DHY	Denali Highway	6.79	8	P		Pn	04 24 20.4	+0.5
	baz=189							
N15K	Kwethluk River	6.83	308	Pn		Pn	04 24 21.1	+0.7
N15K	Kwethluk River	6.83	308	P		Pn	04 24 20.6	+0.2
	baz=120							
M16K	Timber Creek	6.84	317	P		Pn	04 24 20.8	+0.3
	baz=129							
M26K	Nabesna, AK	6.84	25	Pn		Pn	04 24 20.6	-0.1
P29M	Windy Craggy	6.96	57	Pn		Pn	04 24 21.4	-0.8
P29M	Windy Craggy	6.96	57	P		Pn	04 24 21.2	-1.0
	baz=246							
L18K	Granite Mounta	6.96	330	Pn		Pn	04 24 21.8	-0.4
O14K	Tigyukauivet M	7.00	299	Pn		Pn	04 24 23.3	+0.6
M27K	Edge Creek, AK	7.09	29	Pn		Pn	04 24 25.6	+1.5
TRF	Thorofare Moun	7.11	356	Pn		Pn	04 24 24.7	+0.3
TRF	Thorofare Moun	7.11	356	P		Pn	04 24 24.8	+0.5
	baz=175							
CAST	Castle Rocks	7.20	350	P		Pn	04 24 25.9	+0.5
	baz=168							
KTH	Kantishna Hill	7.24	354	Pn		Pn	04 24 25.9	-0.2
S31K	Pelican	7.29	72	P		Pn	04 24 24.9	-1.7
	baz=262							
L26K	Log Cabin Wild	7.31	22	Pn		Pn	04 24 29.1	+2.1
M15K	Kasigluk River	7.35	311			Pn	04 24 27.6	+0.1
M15K	Kasigluk River	7.35	311	P		Pn	04 24 27.6	+0.1
	baz=122							
TTA	Tatalina	7.39	336	Pn		Pn	04 24 27.6	-0.5
K20K	Telida	7.39	343	Pn		Pn	04 24 29.4	+1.3
L16K	Owhat River	7.48	320	Pn		Pn	04 24 28.9	-0.4
HYT	Haines Junctio	7.61	49	Pn		Pn	04 24 31.8	+0.6
L27K	Beaver Creek,	7.69	26	Pn		Pn	04 24 31.6	-0.6
BCAR	Beaver Creek A	7.71	26	Pn		Pn	04 24 32.9	+0.5
BPAW	Bear Paw Mtn.	7.79	355	Pn		Pn	04 24 33.6	0.0
K17K	Iditarod	7.82	328	Pn		Pn	04 24 32.6	-1.3
BWN	Browne	7.82	360	Pn		Pn	04 24 35.1	+1.2
SCRK	Sand Creek	8.07	17	Pn		Pn	04 24 37.4	0.0
HDA	Harding Lake	8.14	7	Pn		Pn	04 24 39.7	+1.4
S32K	Killisnoo	8.14	76	Pn		Pn	04 24 35.6	-2.7
J20K	Nowinta River	8.18	345	Pn		Pn	04 24 37.3	-1.6
O30N	Mendenhall	8.19	52	Pn		Pn	04 24 39.9	+0.8
M29M	Somme Creek	8.21	38	Pn		Pn	04 24 40.5	+1.0
J19K	Poorman	8.25	340	Pn		Pn	04 24 39.0	-0.9
CCB	Clear Creek Bu	8.33	5	Pn		Pn	04 24 41.1	+0.2
K27K	Chicken	8.47	22	Pn		Pn	04 24 43.6	+0.7
J25K	Salcha River,	8.48	12	Pn		Pn	04 24 43.7	+0.6
ILAR	Eielson Array	8.50	7	Pn		Pn	04 24 43.9	+0.6
ILAR	Eielson Array	8.50	7	Pn		Pn	04 24 43.5	+0.2
	comp=E,0.4nm,0.3s,baz=187,slow=13,SNR=25							
ILAR				Sn		Sn	04 26 15.8	-3.4
	comp=E,0.2nm,0.3s,baz=211,slow=15,SNR=6.3							
ILAR				LR		LR	04 28 23.1	
	comp=E,74nm,18.8s,baz=218,slow=40							
	comp=E,0.9nm,0.3s							
L14K	Kuka Creek	8.52	311	Pn		Pn	04 24 44.9	+1.5
K15K	Wolf Creek Mou	8.60	319	Pn		Pn	04 24 46.1	+1.5
MDM	Murphy Dome	8.62	3	Pn		Pn	04 24 44.8	-0.2
J26L	Joseph Creek	8.62	17	Pn		Pn	04 24 44.7	-0.4
N31M	Braeburn, Yuko	8.66	48	Pn		Pn	04 24 45.8	+0.2
WHY	Whitehorse	8.68	54	Pn		Pn	04 24 46.7	+0.8
L29M	L29M	8.79	35	Pn		Pn	04 24 47.5	+0.3
I23K	Minto, Yukon-K	8.80	360	Pn		Pn	04 24 48.1	+0.8
P32M	Atlin	8.89	62	Pn		Pn	04 24 48.5	-0.2
I21K	Tanana	8.92	353	Pn		Pn	04 24 50.5	+1.5
J16K	Anvik River	8.94	325	Pn		Pn	04 24 48.9	-0.4
DAWY	Dawson	9.14	28	Pn		Pn	04 24 52.9	+0.8
PRP	Porcupine Dome	9.35	10	Pn		Pn	04 24 55.5	+0.5
H21K	Melozitna Rive	9.46	351	Pn		Pn	04 24 55.9	-0.5
P33M	Teslin, Yukon	9.49	59	Pn		Pn	04 24 55.7	-1.2
K29M	Barlow Dome	9.51	33	Pn		Pn	04 24 57.5	+0.4
H24K	Noodor Dome	9.52	4	Pn		Pn	04 24 58.7	+1.5
M31M	Drury Creek, Y	9.60	46	Pn		Pn	04 24 58.8	+0.5
H18K	Honhosa River	9.84	337	Pn		Pn	04 25 00.2	-1.3
IMAR	Indian Mountai	9.87	349	Pn		Pn	04 25 00.4	-1.5
S34M	Telegraph Cree	10.00	74	Pn		Pn	04 25 02.1	-1.7
R33M	Jennings River	10.22	65	Pn		Pn	04 25 05.0	-1.9
G21K	Allakaket	10.36	351	Pn		Pn	04 25 09.8	+1.1
G23K	Bananza Creek	10.37	358	Pn		Pn	04 25 09.4	+0.5
J30M	Hart River	10.40	33	Pn		Pn	04 25 10.7	+1.3
FYU	Fort Yukon	10.40	9	Pn		Pn	04 25 09.3	+0.1
DLBC	Dease Lake	10.60	71	Pn		Pn	04 25 11.0	-1.2
DLBC	Dease Lake	10.60	71	Pn		Pn	04 25 11.3	-0.9
	comp=E,0.3nm,0.3s,baz=246,slow=12,SNR=5.6							
	comp=E,1.0nm,0.5s							
F20K	Avaraart Lake	11.12	347	Pn		Pn	04 25 18.4	-0.7
BMAR	Burnt Mountain	11.31	9	Pn		Pn	04 25 21.4	-0.3
E19K	Redstone River	11.71	345	Pn		Pn	04 25 27.5	+0.4
E25K	Arctic Village	11.91	7	Pn		Pn	04 25 30.6	+0.7
G31M	Satah River	12.71	28	Pn		Pn	04 25 42.2	+1.3
F31M	Tsiigehtchic	13.24	27	Pn		Pn	04 25 49.4	+1.4
INK	Inuvik	13.96	25	Pn		Pn	04 25 55.9	-1.9
INK	Inuvik	13.96	25	Pn		Pn	04 26 00.3	+2.5
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=2.2							
	comp=E,0.8nm,0.8s							
B20K	Meade River	14.11	349	Pn		Pn	04 25 56.0	-3.8
B22K	Teshekpuk Lake	14.13	354	Pn		Pn	04 25 59.4	-0.7
YKA	Yellowknife Ar	18.50	56	P		P	04 26 56.0	-0.2
	baz=265,slow=10,SNR=2.1							
	comp=E,0.1nm,0.6s							
A36M	Sachs Harbour	18.60	23	P		P	04 26 58.5	+1.3
A36M				IAmb		IAmb	04 27 22.4	
	comp=Z,4.3nm,0.8s							
NVAR	Mina Array Bea	27.28	118	P		P	04 28 24.5	-0.4
	comp=Z,0.2nm,0.7s,baz=328,slow=7.9,SNR=1.8							
	comp=Z,0.2nm,0.7s							
LPIG	La Paz	42.91	122	LR		LR	04 45 26.0	
	comp=Z,42nm,18.5s,baz=348,slow=32							
H11N2	WAKE ISLAND Hy	48.91	240	T		T	05 24 02.9	
	baz=30,slow=76,SNR=9.9							
H11N3	WAKE ISLAND Hy	48.92	240	T		T	05 24 05.7	
	baz=30,slow=76,SNR=8.5							
H11N1	WAKE ISLAND Hy	48.93	240	T		T	05 24 04.5	
	baz=30,slow=76,SNR=8.7							
H11S1	WAKE ISLAND Hy	50.06	239	T		T	05 25 29.9	
	baz=30,slow=76,SNR=12							
H11S2	WAKE ISLAND Hy	50.07	239	T		T	05 25 36.8	
	baz=30,slow=76,SNR=13							
H11S3	WAKE ISLAND Hy	50.07	239	T		T	05 25 30.6	
	baz=30,slow=76,SNR=12							
SONM	Songino Array	58.56	310	P		P	04 32 38.6	+1.8
	comp=Z,0.4nm,0.8s,baz=33,slow=7.8,SNR=2.1							
	comp=Z,0.4nm,0.8s							
MKAR	Makanchi Array	68.50	325	P		P	04 33 43.0	+0.6
	comp=Z,0.1nm,0.5s,baz=37,slow=7.4,SNR=2.3							
	comp=Z,0.1nm,0.5s							

*GII **04** 04:24:26.7±0.4, 33.804N±0.006×35.435E±0.002, h0km, confirmed*
*GRAL **04** 04:24:29.3±0.3, 33.74N×35.42E, h0km±46km, MD2.6*

ISC 04 04:24:27.5±2.0, 33.75N±0.05×35.4E±0.1, h6km±15km, n14, σ0≧60/16, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.19	104	eP		Pg 04 24 31.6	+0.2
BHL	Bhannes	0.30	59	eP		Pg 04 24 33.7	+0.2
BHL				eS		Sg 04 24 37.1	-0.2
ZAHL	Zahle	0.46	76	eP		Pg 04 24 36.6	+0.1
ZAHL				eS		Sg 04 24 41.9	-0.7
RCY	Rachaya	0.48	122	eP		Pg 04 24 36.9	0.0
NATI	Neve Ativ	0.59	146	P		Pg 04 24 38.8	0.0
GEM	Giv'at Ha'Em	0.60	154	P		Pb 04 24 39.9	-0.5
GEM	Giv'at Ha'Em	0.60	154	S		Sb 04 24 50.3	+1.2
HWQ	Hawqa	0.72	43	eP		Pg 04 24 41.6	+0.2
MMA0B	Mount Meron ar	0.73	176	P		Pn 04 24 45.2	+0.7
MMA0B	Mount Meron ar	0.73	176	S		Sn 04 24 54.8	-1.2
KSHT	Keshet	0.86	153	P		Pb 04 24 44.7	-0.2
BEIL	Beino	1.05	41	eP		Pg 04 24 47.6	-0.1
MMLI	Mount Malkishu	1.31	177	P		Pg 04 24 52.8	+0.2
HMDT	Nahal Hemdat	1.50	174	P		Pg 04 24 56.2	-0.1

*SOME **04** 04:51:04.5, 42.40N×81.20E, h0km*
KRNET 04 04:50:53.9±0.1, 41.05N×75.26E, h19km, mb2.2, 6C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	0.67	56	↑iP		Pb 04 51 06.4	-0.7
	baz=55						
NRN				↑eS		Sb 04 51 15.4	-0.8
	baz=55						
ARLS	Aral	1.07	319	↓iP		Pb 04 51 13.7	-0.2
	baz=19						
ARLS				↓iS		Sn 04 51 28.1	-0.4
	baz=19						
UCH	Uchtor	1.30	335	↑iP		Pb 04 51 17.8	-0.2
	baz=35						
UCH				↑iS		Sg 04 51 35.5	-0.7
	baz=35						
KDJ	Kajisay	1.80	53	↑eP		Pb 04 51 26.5	+0.2
	baz=53						
KDJ				↑eS		Sg 04 51 50.7	-1.1
	baz=53						
TARG	Taragay, Kyrgy	2.03	70	↓iP		Pb 04 51 30.1	-0.3
	baz=70						
TARG				↓iS		Sb 04 51 56.6	+1.2
	baz=70						
UZB	Uzynbulak	3.49	52	eP		Pn 04 51 39.0	-8.3
	2.6nm,0.3s						
UZB				eS		Sn 04 52 03.8	-24
	2.2nm,0.1s						
KPKS	Kokpek	3.50	45	eP		Pn 04 51 44.4	-3.0
KPKS				eS		Sn 04 52 13.4	-15
SHLS	Shalkode	3.77	55	eP		Pn 04 51 28.5	-23
	3.1nm,0.3s						
SHLS				eS		Sn 04 51 45.7	-49
	5.9nm,0.2s						

*NOU **04** 04:52:15.2, 38.66S×175.76E, h182km, MLv4.3/13, North Island, New Zealand*
*WEL **04** 04:52:19.0±1.1, 39.3S±8.3×17.6E±., h141km±8km, M2.9/20, ML3.1/18, MLv2.9/20, Error ellipse: s-maj=0.0km s-min=0.0km az=126.7, confirmed*
ISC 04 04:52:13.6±1.7, 38.64S±0.05×175.73E±0.05, h184km±9km, n165, σ1≧62/173, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATZ	Wairara	0.07	174	P		Pn 04 52 39.1	+1.2
KUTZ	Kaahu Road	0.17	28	P		Pn 04 52 39.2	+1.2
RATZ	Rangitukua	0.23	171	P		Pn 04 52 39.1	+1.1
KATZ	Kakaramea	0.34	184	P		Pn 04 52 39.6	+1.2
TLZ	Tolley Road	0.34	335	P		Pn 04 52 39.6	+1.2
TLZ				S		Sn 04 52 55.6	-1.9
RITZ	Rihia Road	0.35	163	P		Pn 04 52 39.9	+1.5
WPRZ	Whakapapatarin	0.36	71	P		Pn 04 52 39.5	+1.1
HATZ	Hinemaiaia	0.38	131	P		Pn 04 52 39.4	+1.0
GRRZ	Galatos Road	0.42	47	P		Pn 04 52 39.8	+1.1
KRVZ	Karewarewa	0.46	188	P		Pn 04 52 40.1	+1.3
NTVZ	North Tongarir	0.46	185	P		Pn 04 52 40.1	+1.3
TMVZ	Te Maari	0.48	182	P		Pn 04 52 40.3	+1.4
TWVZ	Taurewa	0.49	207	P		Pn 04 52 40.3	+1.4
TWVZ				S		Sn 04 52 57.0	-1.6
WTVZ	West Tongariro	0.49	192	P		Pn 04 52 40.3	+1.3
ALRZ	Allen Road	0.49	81	P		Pn 04 52 39.8	+1.0
ALRZ				S		Sn 04 52 56.4	-1.8
ETVZ	East Tongariro	0.50	181	P		Pn 04 52 40.4	+1.4
NNVZ	North Ngauruho	0.50	190	P		Pn 04 52 40.4	+1.3
HRNZ	Handcock Road	0.50	61	P		Pn 04 52 40.0	+1.0
HSRZ	Hossack Road	0.52	52	P		Pn 04 52 40.1	+1.1
OTVZ	Oturere	0.53	185	P		Pn 04 52 40.5	+1.3
OTVZ				S		Sn 04 52 57.9	-1.1
PRRZ	Plateau Road	0.54	75	P		Pn 04 52 40.2	+1.1
PRRZ				S		Sn 04 52 57.1	-1.5
NGZ	Ngauruhoe	0.55	190	P		Pn 04 52 40.5	+1.3
SNVZ	South Ngauruho	0.55	187	P		Pn 04 52 40.6	+1.3
MRHZ	Matea Rd	0.58	110	P		Pn 04 52 40.2	+1.0
MRHZ				S		Sn 04 52 56.2	-2.8
COVZ	Chateau Observ	0.58	194	P		Pn 04 52 40.6	+1.3
UTU	Utuhina	0.59	39	P		Pn 04 52 40.6	+1.3
HLRZ	Highlands Stat	0.63	52	P		Pn 04 52 41.2	+1.7
FWVZ	Far West T-bar	0.63	192	P		Pn 04 52 41.1	+1.4
FWVZ				S		Sn 04 52 58.5	-1.5
TUVZ	Tukino	0.63	185	P		Pn 04 52 41.2	+1.6
TUVZ				S		Sn 04 52 58.3	-1.6
MAVZ	Matarangi	0.64	191	P		Pn 04 52 41.2	+1.4
NGRZ	Ngongotaha	0.65	34	P		Pn 04 52 40.8	+1.2
WHVZ	Whangaehu Hut	0.65	189	P		Pn 04 52 41.3	+1.4
TRVZ	Turoa	0.67	192	P		Pn 04 52 41.5	+1.6
TRVZ				S		Sn 04 52 58.8	-1.6
RRRZ	Republican Roa	0.69	65	P		Pn 04 52 40.8	+1.0
HIZ	Hauiti	0.69	280	P		Pn 04 52 41.4	+1.6
HIZ	Hauiti	0.69	280	P		Pn 04 52 41.3	+1.6
WNVZ	Wahianoa	0.69	188	P		Pn 04 52 41.6	+1.7
PKVZ	Pokaka	0.71	204	P		Pn 04 52 41.6	+1.7
TARZ	Mount Tarawera	0.73	57	P		Pn 04 52 41.2	+1.1
OMRZ	Omania	0.73	44	P		Pn 04 52 41.1	+1.1
KARZ	Kaharoa	0.74	34	P		Pn 04 52 41.2	+1.1
MKRZ	Makatiti	0.77	50	P		Pn 04 52 41.9	+1.6
MOVZ	Moawhango	0.77	178	P		Pn 04 52 41.7	+1.4
MTVZ	Mangateitei	0.77	195	P		Pn 04 52 42.1	+1.8
BKZ	Black Stump Fm	0.80	132	P		Pn 04 52 41.9	+1.5
BKZ	Black Stump Fm	0.80	132	P		Pn 04 52 41.8	+1.5
KMRZ	Kaimai	0.81	12	P		Pn 04 52 41.9	+1.2
LIRZ	Lichtensteins R	0.82	40	P		Pn 04 52 41.7	+1.2
MUGZ	Murupara	0.84	79	P		Pn 04 52 41.4	+0.8
BHHZ	Black Hill Sta	0.89	163	P		Pn 04 52 42.5	+1.5
VRZ	Vera Road	0.90	237	P		Pn 04 52 42.9	+1.9
MTHZ	Maungataniwha	0.90	104	P		Pn 04 52 42.4	+1.4
TOZ	Tahuroa Road	0.92	349	P		Pn 04 52 42.8	+1.6
KWHZ	Kaweka Forest	0.95	146	P		Pn 04 52 43.3	+1.9
EDRZ	Edgecumbe	0.96	57	P		Pn 04 52 42.4	+0.9
NMHZ	Naumai	0.96	119	P		Pn 04 52 43.9	+2.4
RTZ	Ruatahuna	0.98	89	P		Pn 04 52 42.9	+1.2
MARZ	Manawahe	0.99	49	P		Pn 04 52 42.9	+1.2
TGRZ	Tauranga	1.00	25	P		Pn 04 52 43.0	+1.2
OPRZ	Ohinepanea	1.03	40	P		Pn 04 52 43.0	+1.1
RAHZ	Arahi	1.10	105	P		Pn 04 52 44.5	+2.0
MCHZ	McNeill Hill	1.10	137	P		Pn 04 52 45.1	+2.6
KRHZ	Kereru	1.12	154	P		Pn 04 52 44.6	+2.0
URZ	Urewera	1.15	71	P		Pn 04 52 43.7	+0.8
URZ	Urewera	1.15	71	P		Pn 04 52 43.6	+0.8
ARHZ	Aropaoanui	1.17	123	P		Pn 04 52 45.3	+2.3
MHEZ	Mangahewa	1.18	248	P		Pn 04 52 45.7	+2.6
WAZ	Wanganui	1.25	207	P		Pn 04 52 45.8	+2.1
WHHZ	Waihua	1.26	111	P		Pn 04 52 45.8	+2.1
SNGZ	Shannon Statio	1.27	97	P		Pn 04 52 45.8	+1.9
DREZ	Durham Road	1.31	245	P		Pn 04 52 46.9	+2.8
LREZ	Lake Rotokare	1.32	231	P		Pn 04 52 47.1	+2.9
PNHZ	Pukenui	1.33	164	P		Pn 04 52 46.3	+2.0
RAGZ	Rawiri	1.33	84	P		Pn 04 52 45.9	+1.4
PREZ	Palmer Road	1.41	240	P		Pn 04 52 47.8	+2.8
NEZ	North Egmont	1.42	243	P		Pn 04 52 47.9	+2.7
TSZ	Takapari Road	1.43	173	P		Pn 04 52 47.4	+2.1
MWZ	Matawai	1.45	78	P		Pn 04 52 46.7	+1.3
KAHZ	Kahuranaki	1.46	143	P		Pn 04 52 48.0	+2.5
CKHZ	Cape Kidnapper	1.46	134	P		Pn 04 52 48.0	+2.5
PKE	Pukeiti	1.47	247	P		Pn 04 52 48.2	+2.6
KHEZ	Kahui Hut	1.48	243	P		Pn 04 52 48.7	+2.9
KHEZ	Kahui Hut	1.48	243	P		Pn 04 52 48.4	+2.6
WPHZ	Waipukurau	1.53	159	P		Pn 04 52 48.3	+2.2
KNZ	Kokohu	1.57	105	P		Pn 04 52 48.3	+1.8
NBEZ	Newall Road No	1.58	246	P		Pn 04 52 49.3	+2.8
MKAZ	Moumakai	1.59	344	P		Pn 04 52 48.8	+2.0
RIGZ	Rimuhau	1.60	93	P		Pn 04 52 48.7	+1.9
OHWZ	Ohakea	1.60	191	P		Pn 04 52 49.4	+2.7
NMEZ	Namu Road	1.63	241	P		Pn 04 52 49.8	+2.7
PXZ	Pawanui	1.65	148	P		Pn 04 52 49.5	+2.3
RUGZ	Raukumara Rang	1.68	67	P		Pn 04 52 48.2	+0.5
TKGZ	Te Karaka	1.68	84	P		Pn 04 52 49.6	+2.0
DVHZ	Dannevirke	1.69	168	P		Pn 04 52 49.6	+1.9
PRGZ	Paritu Road	1.71	100	P		Pn 04 52 49.8	+1.8
POWZ	Post Office Ro	1.75	179	P		Pn 04 52 50.2	+1.9
PRHZ	Porangahau	1.77	157	P		Pn 04 52 50.8	+2.3
MHGZ	Mahia Peninsul	1.78	107	P		Pn 04 52 50.8	+2.2
TWGZ	Tauwhareparae	1.83	76	P		Pn 04 52 51.2	+2.0
HAZ	Te Kaha	1.84	62	P		Pn 04 52 50.0	+0.7
KUZ	Kuaotunu	1.89	360	P		Pn 04 52 51.8	+2.0
KUZ	Kuaotunu	1.89	360	P		Pn 04 52 51.7	+1.9
WIAZ	Waiheke Island	1.90	346	P		Pn 04 52 52.0	+2.1
ANWZ	Angora Road	1.91	163	P		Pn 04 52 52.2	+2.3
PRWZ	Pori Road	1.92	174	P		Pn 04 52 52.2	+2.1
CNGZ	Carnagh Statio	1.95	86	P		Pn 04 52 52.6	+2.2
MRZ	Mangatainoka R	2.02	183	P		Pn 04 52 52.9	+1.8
PUZ	Puketiti	2.07	75	P		Pn 04 52 53.1	+1.4
BFZ	Birch Farm	2.08	169	P		Pn 04 52 53.7	+1.9
BFZ	Birch Farm	2.08	169	P		Pn 04 52 53.6	+1.9
TIWZ	Tintock	2.14	177	P		Pn 04 52 54.3	+1.9
OGWZ	Otaki Gorge	2.22	191	P		Pn 04 52 55.2	+1.9
HOWZ	Holdsworth Sta	2.26	184	P		Pn 04 52 55.3	+1.5
WMGZ	Waiomatatini S	2.27	70	P		Pn 04 52 55.3	+1.4
CPWZ	Castlepoint	2.30	171	P		Pn 04 52 56.5	+2.3
MXZ	Matakaoa Point	2.30	63	P		Pn 04 52 56.1	+1.9
MXZ	Matakaoa Point	2.30	63	P		Pn 04 52 56.0	+1.7
KIW	Kapiti Island	2.31	196	P		Pn 04 52 55.8	+1.5
TMWZ	Te Maipa	2.47	177	P		Pn 04 52 57.7	+1.5
CAW	Cannon Point	2.52	191	P		Pn 04 52 58.2	+1.5
MTW	Mount Morrison	2.52	184	P		Pn 04 52 58.0	+1.3
DUWZ	D'Urville Isla	2.57	212	P		Pn 04 52 58.8	+1.5
WEL	Wellington	2.74	195	P		Pn 04 53 00.6	+1.3
PAWZ	Paruwai Farm	2.75	185	P		Pn 04 53 00.6	+1.2
TRWZ	Traveller	2.76	181	P		Pn 04 53 00.8	+1.3
SNZO	South Karori	2.78	196	P		Pn 04 53 01.1	+1.4
MSWZ	Moikau Station	2.80	187	P		Pn 04 53 01.2	+1.3
TCW	Tory Channel	2.80	203	P		Pn 04 53 01.4	+1.4
BHW	Baring Head	2.84	193	P		Pn 04 53 01.7	+1.2
PLWZ	Palliser	2.95	187	P		Pn 04 53 02.8	+1.0
TUWZ	Tuamarina	3.10	206	P		Pn 04 53 04.8	+1.2
NNZ	Nelson	3.14	214	P		Pn 04 53 05.2	+1.1
TKNZ	Takaka Hill	3.20	221	P		Pn 04 53 04.8	0.0
QRZ	Quartz Range	3.29	227	P		Pn 04 53 07.0	+1.1
QRZ	Quartz Range	3.29	227	P		Pn 04 53 06.8	+0.9
CMWZ	Cape Campbell	3.32	200	P		Pn 04 53 08.2	+2.0
BSWZ	Blackbirch Sta	3.38	204	P		Pn 04 53 08.4	+1.4
MRNZ	Matariki Terra	3.58	219	P		Pn 04 53 10.3	+0.9
THZ	Tophouse	3.79	214	P		Pn 04 53 13.1	+0.9
KHZ	Kahutara	4.12	203	P		Pn 04 53 17.8	+1.5
KHZ	Kahutara	4.12	203	P		Pn 04 53 17.6	+1.3
DSZ	Denniston Nort	4.32	223	P		Pn 04 53 19.6	+0.7
GVZ	Greta Valley S	4.78	204	P		Pn 04 53 25.7	+0.9
LTZ	Lake Taylor	4.90	211	P		Pn 04 53 26.7	+0.3
AMCZ	Amberley	5.10	206	P

```
X34A                                    IAML                 05 06 21.9
      comp=N,213nm,0.8s
WMOK Wichita Mounta      0.85 220                 Pg         05 05 51.9 -0.6
WMOK                                      Sg     Sg         05 06 03.5 -0.1
CROK Carrier             1.11   6                 Pg         05 05 56.9 -0.5
OK033 Mehan              1.16  56                 Pg         05 05 58.1 -0.2
OK033                                   IAML                 05 06 19.3
      comp=N,133nm,0.2s
OK033                                   IAML                 05 06 19.4
      comp=N,142nm,0.4s
OK038 West end E0370     1.19 335                 Pg         05 05 58.6 -0.4
U32A Winter Ranch,       1.21 324                 Pg         05 05 58.8 -0.6
U32A                                    IAML                 05 06 19.6
      comp=E,168nm,0.4s
U32A                                    IAML                 05 06 19.6
      comp=N,139nm,0.5s
OK052 Battle Ridge R     1.22  61                 Pg         05 05 58.7 -0.9
OK052                                   IAML                 05 06 16.8
      comp=N,187nm,0.5s
ELIS  Ellis County       1.25 303                 Pg         05 05 59.6 -0.5
QUOK Quay                1.38  56                 Pn         05 06 01.6 -0.3
DEOK Depew               1.39  71                 Pn         05 06 01.5 -0.6
OK035 E0210 Rd and N     1.39 340                 Pn         05 06 01.8 -0.4
OK048 Pawnee Station     1.39  43                 Pn         05 06 01.9 -0.1
OK032 Salt Plains WL     1.40 357                 Pn         05 06 01.8 -0.5
GC02  Grant County #     1.47   8                 Pn         05 06 02.8 -0.3
OK051 E0350 and S346     1.52  43                 Pn         05 06 03.9 +0.1
BLOK Blackwell           1.54  28          Pg     Pn         05 06 04.2  0.0
KAN14 Manchester OK      1.56   5                 Pn         05 06 03.7 -0.7
LOOK Love County         1.60 151                 Pn         05 06 04.7 -0.2
WTFS Witchita Falls      1.65 190          Pg     Pn         05 06 05.5 -0.2
KAN17 Caldwell West      1.67  10                 Pn         05 06 05.9  0.0
KAN17                                   IAmb_Lg              05 06 32.1
      comp=Z,21nm,0.9s
KAN13 South Haven SW     1.69  18                 Pn         05 06 06.0 -0.3
KAN13                                   IAmb_Lg              05 06 30.4
      comp=Z,18nm,0.7s
KAN05 Bluff City Nor     1.72   7                 Pn         05 06 06.2 -0.4
KAN05                                   IAmb_Lg              05 06 30.5
      comp=Z,21nm,0.7s
KAN10 Anthony SW Sta     1.72   1                 Pn         05 06 07.2 +0.5
SMWD Samnorwood          1.77 261                 Pn         05 06 07.1 -0.2
KAN01 Argonia South      1.77   9                 Pn         05 06 07.6 +0.3
KAN01                                   IAmb_Lg              05 06 32.3
      comp=Z,28nm,1.0s
KAN09 Caldwell North     1.78  13                 Pn         05 06 07.7 +0.3
KAN09                                   IAmb_Lg              05 06 32.2
      comp=Z,16nm,0.9s
KAN08 Anthony NE Sta     1.83   4                 Pn         05 06 08.2 +0.1
KAN12 Harper NE Stat     1.90   3                 Pn         05 06 09.2 +0.1
TUL3  Leonard            1.96  74          Pn     Pn         05 06 10.1 +0.2
T35A  Sooner Cattle      2.00  40                 Pn         05 06 10.9 +0.5
T35A                                    IAmb_Lg              05 06 42.0
      comp=Z,19nm,1.0s
Z35A Perchaven, San      2.18 161                 Pn         05 06 13.4 +0.5
FW03 Perrin-Whitt E      2.35 179                 Pn         05 06 16.3 +1.0
FW03                                    IAmb_Lg              05 06 54.7
      comp=Z,18nm,0.8s
PLPT Palo Pinto          2.58 184   IAmb_Lg                  05 06 58.8
      comp=Z,14nm,0.7s
RLO  Rose Lookout        2.63  72   IAmb_Lg                  05 07 01.0
      comp=Z,16nm,1.1s
R32A Long Quarter,       3.06 351   IAmb_Lg                  05 07 17.1
      comp=Z,8.6nm,0.9s
FW14 Alvarado            3.09 165   IAmb_Lg                  05 07 20.7
      comp=Z,8.6nm,0.7s
U38A Gravette            3.20  70   IAmb_Lg                  05 07 24.3
      comp=Z,11nm,0.8s
Z38A Mt. Pleasant        3.36 129   IAmb_Lg                  05 07 24.6
      comp=Z,9.8nm,0.8s
SN05 Snyder 5            3.40 223   IAmb_Lg                  05 07 32.6
      comp=Z,15nm,0.8s
SN01 Snyder 1            3.42 223   IAmb_Lg                  05 07 31.2
      comp=Z,15nm,0.8s
HHAR Hobbs               3.51  74   IAmb_Lg                  05 07 33.3
      comp=Z,8.9nm,0.7s
POST Post                3.64 231   IAmb_Lg                  05 07 38.0
      comp=Z,11nm,1.0s
MIAR Mount Ida           3.82 102   IAmb_Lg                  05 07 44.1
      comp=Z,8.5nm,0.8s
KSU1 Kansas State U      3.89  18   IAmb_Lg                  05 07 44.6
      comp=Z,14nm,0.9s
BRDY Brady               4.17 190   IAmb_Lg                  05 07 53.5
      comp=Z,7.1nm,0.7s
435B Jarrell             4.62 174   IAmb_Lg                  05 08 07.9
      comp=Z,10nm,0.7s
R40A Maddies Statio      5.51  57   IAmb_Lg                  05 08 31.0
      comp=Z,7.6nm,0.9s
```

*AEIC **04** 05:17:33.3±2.2,59°.78N±0°.03×136°.50W±0°.06,h18km±6km, Error ellipse: s-maj=5.2km s-min=3.3km az=214.0*
*ANF **04** 05:17:33.5±0.2,59°.79N×136°.56W,h7km±1km,ML3.9/31, Error ellipse: s-maj=1.3km s-min=1.1km az=55.0*
*PGC **04** 05:17:34.8,59°.76N×136°.53W,h5km,ML3.5,ML3.5/30, 103km Wnw of Haines, Ak Southeastern Alaska*
*NEIC **04** 05:17:34.9±1.7,59°.76N±0°.02×136°.48W±0°.06,h10km±1km, ML3.5/87,ML3.5(OTT),ML3.3(AEIC), Error ellipse: s-maj=4.9km s-min=3.2km az=79.0*
*IDC **04** 05:17:35.3±1.1,59°.77N×136°.24W,h0km,mb3.0/2, mbtmp3.2/7,ML3.3/4,MS2.9/1,Error ellipse: s-maj=18.6km s-min=8.2km az=36.0*

ISC 04 05:17:34.0±1.0,59.79N±0°.01×136.54W±0°.01,h3km±8km, n185,σ1$38/269,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLBC	**Pleasant Camp**	**0.35**	**165**		**Pg**	**05 17 40.7**	**+0.1**
PLBC					**Sg**	**05 17 45.1**	**0.0**
PLBC	**Pleasant Camp**	**0.35**	**165**	P	**Pg**	**05 17 40.7**	**+0.1**
	baz=343,SNR=1000						
PLBC				S	**Sg**	**05 17 45.2**	**0.0**
	baz=343						
PLBC	**Pleasant Camp**	**0.35**	**165**	P	**Pg**	**05 17 40.8**	**+0.1**
PLBC				S	**Sg**	**05 17 45.1**	**0.0**
P30M	**Million Dollar**	**0.39**	**328**		**Pg**	**05 17 42.1**	**+0.6**
P30M					**Sg**	**05 17 47.6**	**+1.0**
P30M	**Million Dollar**	**0.39**	**328**	P	**Pg**	**05 17 42.0**	**+0.5**
	baz=150						
P30M				S	**Sg**	**05 17 47.5**	**+1.0**
	baz=150						
P30M	**Million Dollar**	**0.39**	**328**	P	**Pg**	**05 17 42.1**	**+0.6**
P30M				S	**Sg**	**05 17 47.6**	**+1.0**
P29M	**Windy Craggy**	**0.63**	**255**		**Pg**	**05 17 46.2**	**+0.1**
P29M				Sg	**Sg**	**05 17 54.6**	**+0.5**
P29M				IAML		05 17 55.8	
	comp=E,3μm,0.3s						
P29M				IAML		05 17 57.2	
	comp=N,3μm,0.5s						
P29M	**Windy Craggy**	**0.63**	**255**	P	**Pg**	**05 17 46.1**	**+0.1**
	baz=76						
P29M				S	**Sg**	**05 17 54.4**	**+0.3**
	baz=76						
P29M	**Windy Craggy**	**0.63**	**255**	P	**Pg**	**05 17 46.1**	**+0.1**
P29M				S	**Sg**	**05 17 54.6**	**+0.5**
SKAG	**Skagway**	**0.70**	**118**		**Pg**	**05 17 47.0**	**-0.4**
SKAG				Sg	**Sg**	**05 17 55.9**	**-0.6**
SKAG	**Skagway**	**0.70**	**118**	P	**Pg**	**05 17 47.1**	**-0.4**
	baz=297,SNR=157						
SKAG				S	**Sg**	**05 17 55.8**	**-0.7**
	baz=297						
O30N	**Mendenhall**	**1.01**	**13**	Pg	**Pg**	**05 17 53.4**	**+0.2**
O30N				IAML		05 18 07.5	
	comp=N,1μm,0.2s						
O30N				Sg	**Sg**	**05 18 07.0**	**+0.7**
O30N	**Mendenhall**	**1.01**	**13**	P	**Pg**	**05 17 53.5**	**+0.2**
	baz=193,SNR=1000						
O30N				S	**Sg**	**05 18 07.0**	**+0.7**
	baz=193						
YUK7	**Dusty Glacier**	**1.09**	**314**		**Pg**	**05 17 54.1**	**-0.8**
YUK7					**Sn**	**05 18 10.6**	**-1.4**
YUK7	**Dusty Glacier**	**1.09**	**314**	P	**Pg**	**05 17 54.2**	**-0.6**
YUK7				S	**Sb**	**05 18 10.4**	**+0.1**
HYT	**Haines Junctio**	**1.14**	**336**		**Pb**	**05 17 55.4**	**-1.0**
HYT	**Haines Junctio**	**1.14**	**336**	P	**Pb**	**05 17 54.7**	**-1.7**
	baz=156,SNR=479						
HYT				S	**Sg**	**05 18 11.2**	**+0.6**
	baz=156						
HYT	**Haines Junctio**	**1.14**	**336**	P	**Pb**	**05 17 54.7**	**-1.7**
O29M	**Mount Kennedy**	**1.14**	**298**		**Pb**	**05 17 55.1**	**-1.3**
O29M				IAML		05 18 15.4	
	comp=N,706nm,0.5s						
O29M				IAML		05 18 15.9	
	comp=E,656nm,0.3s						
O29M	**Mount Kennedy**	**1.14**	**298**	P	**Pb**	**05 17 55.1**	**-1.3**
	baz=117						
O29M				S	**Sg**	**05 18 10.2**	**-0.4**
	baz=117						
O29M	**Mount Kennedy**	**1.14**	**298**	P	**Pb**	**05 17 55.1**	**-1.3**
WHY	**Whitehorse**	**1.20**	**43**		**Pb**	**05 17 56.6**	**-0.9**
WHY				IAML		05 18 16.6	
	comp=N,1μm,0.5s						
WHY	**Whitehorse**	**1.20**	**43**	P	**Pb**	**05 17 56.5**	**-0.9**
	baz=224,SNR=1000						
WHY				S	**Sg**	**05 18 13.2**	**+0.7**
	baz=224						
WHY	**Whitehorse**	**1.20**	**43**	P	**Pb**	**05 17 56.6**	**-0.9**
R31K	**City Hall, Gus**	**1.44**	**163**		**Pn**	**05 17 60.0**	**-1.0**
R31K					**Sn**	**05 18 19.2**	**-1.2**
R31K	**City Hall, Gus**	**1.44**	**163**	P	**Pn**	**05 17 60.0**	**-1.0**
	baz=343,SNR=46						
R31K				S	**Sn**	**05 18 19.3**	**-1.1**
	baz=343						
P32M	**Atlin**	**1.45**	**97**	Pn	**Pn**	**05 18 00.6**	**-0.5**
P32M					**Sn**	**05 18 19.6**	**-1.0**
P32M				IAML		05 18 23.0	
	comp=N,676nm,0.6s						
P32M				IAML		05 18 23.1	
	comp=E,472nm,0.3s						
P32M	**Atlin**	**1.45**	**97**	P	**Pn**	**05 18 00.7**	**-0.3**
	baz=278,SNR=1000						
P32M				S	**Sb**	**05 18 20.2**	**-0.2**
	baz=278						
P32M	**Atlin**	**1.45**	**97**	Pn	**Pn**	**05 18 00.8**	**-0.3**
P32M					**Sn**	**05 18 19.6**	**-1.0**
PNL	**Peninsula**	**1.45**	**266**		**Pn**	**05 18 00.7**	**-0.4**
PNL	**Peninsula**	**1.45**	**266**	P	**Pn**	**05 18 00.5**	**-0.6**
	baz=85,SNR=305						
PNL				S	**Sb**	**05 18 20.3**	**-0.2**
	baz=85						
PNL	**Peninsula**	**1.45**	**266**	Pn	**Pn**	**05 18 00.8**	**-0.3**
YUK6	**Outpost Mounta**	**1.47**	**323**		**Pn**	**05 18 01.1**	**-0.5**
YUK6	**Outpost Mounta**	**1.47**	**323**	P	**Pn**	**05 18 00.9**	**-0.6**
	baz=142,SNR=459						
YUK6	**Outpost Mounta**	**1.47**	**323**	Pn	**Pn**	**05 18 01.0**	**-0.5**
YUK5	**Granite Creek**	**1.49**	**335**		**Pn**	**05 18 01.1**	**-0.7**
YUK5					**Sg**	**05 18 22.1**	**+0.2**
YUK5	**Granite Creek**	**1.49**	**335**	Pn	**Pn**	**05 18 01.2**	**-0.7**
BESE	**Bessie Mountai**	**1.50**	**144**		**Pn**	**05 18 00.5**	**-1.3**
BESE	**Bessie Mountai**	**1.50**	**144**	Pn	**Pn**	**05 18 00.4**	**-1.3**
BESE					**Sn**	**05 18 20.2**	**-1.5**
BCPM	**Bancas Point**	**1.57**	**277**		**Pn**	**05 18 03.0**	**+0.3**
BCPM				IAML		05 18 26.2	
	comp=E,676nm,0.3s						
BCPM				IAML		05 18 28.0	
	comp=N,770nm,0.5s						
YKU2	**Yakutat**	**1.61**	**261**	Pn	**Pn**	**05 18 02.7**	**-0.6**
N31M	**Braeburn, Yuko**	**1.74**	**12**		**Pb**	**05 18 06.0**	**-0.6**
N31M	**Braeburn, Yuko**	**1.74**	**12**	Pb	**Pb**	**05 18 06.0**	**-0.6**
	baz=193,SNR=1000						
N31M				Sg	**Sg**	**05 18 30.6**	**+0.8**
	baz=193						
N31M	**Braeburn, Yuko**	**1.74**	**12**	Pn	**Pb**	**05 18 06.1**	**-0.5**
N31M				Sg	**Sg**	**05 18 30.7**	**+0.9**
S31K	**Pelican**	**1.84**	**175**		**Pn**	**05 18 06.1**	**-0.3**
S31K	**Pelican**	**1.84**	**175**	P	**Pn**	**05 18 06.1**	**-0.3**
	baz=355,SNR=683						
S31K				S	**Sn**	**05 18 30.1**	**-0.1**
	baz=355						
R32K	**Eaglecrest**	**1.85**	**145**		**Pn**	**05 18 05.3**	**-1.2**
R32K				IAML		05 18 35.5	
	comp=E,333nm,0.2s						
R32K				IAML		05 18 35.6	
	comp=N,303nm,0.2s						
R32K	**Eaglecrest**	**1.85**	**145**	P	**Pn**	**05 18 05.3**	**-1.2**
	baz=326,SNR=56						
R32K				Sb	**Sb**	**05 18 32.0**	**+0.2**
	baz=326						
YUK4	**Talbot Arm**	**1.87**	**327**	Pg	**Pg**	**05 18 10.2**	**+0.4**
	baz=149,SNR=534						
YUK4				Sb	**Sg**	**05 18 35.1**	**+1.1**
	baz=149						
YUK4	**Talbot Arm**	**1.87**	**327**	Pn	**Pb**	**05 18 08.4**	**-0.5**
YUK4				Pg	**Pg**	**05 18 10.4**	**+0.6**
JIS	**Juneau Island**	**1.89**	**143**		**Pn**	**05 18 05.9**	**-1.1**
JIS				IAML		05 18 36.8	
	comp=N,317nm,0.6s						
JIS				IAML		05 18 40.5	
	comp=E,346nm,0.5s						
PINM	**Pinnacle**	**1.89**	**281**	Pg	**Pb**	**05 18 09.2**	**+0.1**
	baz=98,SNR=77						
PINM				Sg	**Sg**	**05 18 35.5**	**+0.9**
	baz=98						
PCA	**Pinnacle**	**1.89**	**281**		**Pn**	**05 18 07.4**	**+0.2**
PCA	**Pinnacle**	**1.89**	**281**	Pg	**Pb**	**05 18 09.3**	**+0.1**
PCA				Sg	**Sg**	**05 18 34.5**	**-0.2**
P33M	**Teslin, Yukon**	**1.92**	**76**	Pn	**Pn**	**05 18 07.3**	**-0.3**
P33M				IAML		05 18 35.6	
	comp=E,280nm,0.7s						
P33M				IAML		05 18 36.1	
	comp=N,638nm,0.2s						
P33M	**Teslin, Yukon**	**1.92**	**76**	P	**Pn**	**05 18 07.2**	**-0.4**
	baz=258,SNR=602						
P33M				S	**Sn**	**05 18 31.9**	**-0.3**
	baz=258						
P33M	**Teslin, Yukon**	**1.92**	**76**	Pn	**Pn**	**05 18 07.3**	**-0.3**
P33M				Pg	**Pb**	**05 18 10.0**	**+0.4**
P33M				Sg	**Sb**	**05 18 34.4**	**+0.5**
SAMH	**Samovar Hills**	**2.16**	**281**		**Pn**	**05 18 12.2**	**+1.3**
SAMH	**Samovar Hills**	**2.16**	**281**	Pn	**Pn**	**05 18 11.8**	**+1.0**
SAMH				Pg	**Pb**	**05 18 14.2**	**+0.5**
SAMH				Sg	**Sg**	**05 18 43.0**	**-0.3**
YUK8	**Steele Glacier**	**2.19**	**315**	Pg	**Pb**	**05 18 14.6**	**+0.3**
	baz=132,SNR=50						
YUK8				Sb	**Sb**	**05 18 43.1**	**+1.3**
	baz=132						
YUK8	**Steele Glacier**	**2.19**	**315**	Pg	**Pb**	**05 18 14.2**	**0.0**
N32M	**Quiet Lake**	**2.19**	**50**		**Pn**	**05 18 11.5**	**+0.2**
N32M	**Quiet Lake**	**2.19**	**50**	P	**Pn**	**05 18 11.5**	**+0.2**
	baz=233						
N32M				Sb	**Sb**	**05 18 42.9**	**+1.2**
	baz=233						
N32M	**Quiet Lake**	**2.19**	**50**	Pn	**Pn**	**05 18 11.6**	**+0.3**
N32M				Sg	**Sg**	**05 18 43.4**	**-0.9**
Q32M	**Nakina River**	**2.34**	**109**		**Pn**	**05 18 13.3**	**-0.2**
Q32M				IAML		05 18 50.5	
	comp=N,388nm,0.6s						
Q32M				IAML		05 18 52.5	
	comp=E,310nm,0.6s						
Q32M	**Nakina River**	**2.34**	**109**	P	**Pn**	**05 18 13.1**	**-0.4**
	baz=292						
Q32M				S	**Sn**	**05 18 42.6**	**-0.2**
	baz=292						
Q32M	**Nakina River**	**2.34**	**109**	Pn	**Pn**	**05 18 13.2**	**-0.2**
Q32M				Sg	**Sg**	**05 18 47.8**	**-1.3**
TABL	**Table Mountain**	**2.39**	**288**		**Pn**	**05 18 14.5**	**+0.3**
TABL	**Table Mountain**	**2.39**	**288**	Pn	**Pn**	**05 18 15.0**	**+0.8**
TABL				Pg	**Pb**	**05 18 16.5**	**-1.2**
TABL				Sg	**Sb**	**05 18 48.1**	**+0.4**
LOGN	**Logan Glacier**	**2.45**	**297**		**Pn**	**05 18 15.8**	**+0.9**
LOGN	**Logan Glacier**	**2.45**	**297**	Pn	**Pn**	**05 18 15.8**	**+0.9**
LOGN				Pg	**Pb**	**05 18 18.6**	**-0.1**
S32K	**Killisnoo**	**2.55**	**155**		**Pn**	**05 18 15.0**	**-1.1**
S32K				IAML		05 18 57.2	
	comp=N,130nm,0.6s						
S32K				IAML		05 18 57.3	
	comp=E,134nm,0.8s						
S32K	**Killisnoo**	**2.55**	**155**	P	**Pn**	**05 18 14.8**	**-1.3**
	baz=337						
S32K				Sb	**Sb**	**05 18 52.4**	**+0.5**
	baz=337						
M31M	**Drury Creek, Y**	**2.64**	**23**		**Pn**	**05 18 18.5**	**+1.1**
M31M				IAML		05 19 01.1	
	comp=N,265nm,0.3s						
M31M	**Drury Creek, Y**	**2.64**	**23**	P	**Pn**	**05 18 17.5**	**+0.1**
	baz=204,SNR=61						
M31M				Sb	**Sb**	**05 18 56.2**	**+1.7**
	baz=204						
M31M	**Drury Creek, Y**	**2.64**	**23**	Pn	**Pn**	**05 18 18.4**	**+1.0**
M31M				Sg	**Sg**	**05 18 56.7**	**-1.8**
CTGM	**Chitina Glacie**	**2.65**	**298**		**Pn**	**05 18 19.0**	**+1.2**
CTGM	**Chitina Glacie**	**2.65**	**298**	Pn	**Pn**	**05 18 19.0**	**+1.2**
CTG	**Chitna Glacier**	**2.66**	**298**	Pb	**Pb**	**05 18 21.0**	**-1.3**
	baz=115,SNR=29						
CTG				Sb	**Sb**	**05 18 56.4**	**+1.1**
	baz=115						
MESA	**MESA**	**2.75**	**280**		**Pn**	**05 18 20.1**	**+1.0**
MESA				IAML		05 19 01.2	
	comp=E,184nm,0.7s						
MESA	**MESA**	**2.75**	**280**	Pb	**Pb**	**05 18 22.3**	**-1.4**
	baz=96,SNR=40						
MESA				Sb	**Sb**	**05 18 58.1**	**+0.3**
	baz=96						
MESA	**MESA**	**2.75**	**280**	Pn	**Pn**	**05 18 20.3**	**+1.3**
MESA				Sg	**Sb**	**05 18 57.8**	**-0.1**
YUK3	**Moose Creek**	**2.77**	**318**	Pb	**Pb**	**05 18 23.8**	**-0.3**
	baz=135,SNR=26						
YUK3				Sg	**Sg**	**05 19 04.6**	**+1.9**
	baz=135						
YUK3	**Moose Creek**	**2.77**	**318**	Pn	**Pn**	**05 18 19.7**	**+0.3**
YUK3				Pg	**Pb**	**05 18 24.1**	**0.0**
M30M	**Minto, Yukon**	**2.80**	**358**	Pn	**Pn**	**05 18 20.2**	**+0.6**
M30M				IAML		05 19 07.6	
	comp=N,140nm,0.3s						
M30M	**Minto, Yukon**	**2.80**	**358**	P	**Pn**	**05 18 20.2**	**+0.6**
	baz=178,SNR=298						
M30M				Sb	**Sb**	**05 19 01.0**	**+1.9**
	baz=178						
M30M	**Minto, Yukon**	**2.80**	**358**	Pn	**Pn**	**05 18 20.2**	**+0.6**
M30M				Pg	**Pb**	**05 18 25.6**	**+1.1**
M30M				Sg	**Sg**	**05 19 01.9**	**-1.8**
M29M	**Somme Creek**	**2.82**	**342**		**Pn**	**05 18 21.4**	**+1.5**
M29M				IAML		05 19 09.0	
	comp=E,171nm,0.7s						
M29M				IAML		05 19 13.1	
	comp=N,185nm,0.7s						
M29M	**Somme Creek**	**2.82**	**342**	Pg	**Pg**	**05 18 27.0**	**-0.9**
	baz=160						
M29M				Sb	**Sb**	**05 19 01.9**	**+2.1**
	baz=160						
M29M	**Somme Creek**	**2.82**	**342**	Pn	**Pn**	**05 18 21.3**	**+1.4**
M29M				Pg	**Pg**	**05 18 27.0**	**-0.9**
M29M				Sg	**Sg**	**05 19 02.8**	**-1.6**
SIT	**Sitka**	**2.82**	**166**		**Pn**	**05 18 18.5**	**-1.3**
SIT				IAML		05 19 02.6	
	comp=E,241nm,0.6s						
SIT	**Sitka**	**2.82**	**166**	Pb	**Pb**	**05 18 23.8**	**-1.0**
	baz=347						
SIT				Sb	**Sb**	**05 19 00.2**	**+0.5**
	baz=347						
BARN	**Barnard Glacie**	**2.84**	**299**		**Pn**	**05 18 21.7**	**+1.4**
BAGL	**Bagley Icefiel**	**2.86**	**287**		**Pn**	**05 18 21.9**	**+1.5**
R33M	**Jennings River**	**2.86**	**96**		**Pn**	**05 18 20.3**	**-0.3**
R33M	**Jennings River**	**2.86**	**96**	P	**Pn**	**05 18 20.0**	**-0.5**
	baz=280						
R33M				S	**Sn**	**05 18 54.9**	**-0.7**
	baz=280						
R33M	**Jennings River**	**2.86**	**96**	Pn	**Pn**	**05 18 20.1**	**-0.5**
R33M				Pg	**Pb**	**05 18 26.1**	**+0.4**
R33M				Sn	**Sn**	**05 18 55.1**	**-0.5**
R33M				Sg	**Sb**	**05 19 03.0**	**+1.8**
FARO	**Faro, Yukon**	**2.90**	**31**	Pn	**Pn**	**05 18 22.6**	**+1.6**
FARO				IAML		05 19 07.9	
	comp=N,225nm,0.3s						
FARO	**Faro, Yukon**	**2.90**	**31**	P	**Pn**	**05 18 21.9**	**+0.9**
	baz=214,SNR=23						
FARO				Sb	**Sg**	**05 19 04.8**	**-2.1**
	baz=214						
FARO	**Faro, Yukon**	**2.90**	**31**	Pn	**Pn**	**05 18 22.3**	**+1.3**
FARO				Pg	**Pb**	**05 18 27.5**	**+1.2**
FARO				Sg	**Sg**	**05 19 04.8**	**-2.1**
YUK2	**White River**	**2.91**	**315**	Pn	**Pn**	**05 18 23.3**	**+2.1**
ISLE	**Juniper Island**	**3.01**	**288**		**Pn**	**05 18 23.9**	**+1.3**
ISLE				IAML		05 19 14.8	
	comp=N,81nm,1.2s						
BARK	**Barkley Ridge**	**3.04**	**284**		**Pn**	**05 18 23.8**	**+0.8**
KIAG	**Kiagna River**	**3.10**	**294**		**Pn**	**05 18 24.7**	**+0.8**
KIAG	**Kiagna River**	**3.10**	**294**	Pg	**Pb**	**05 18 29.6**	**-0.2**
SNH	**Sunshine Point**	**3.19**	**280**		**Pn**	**05 18 26.5**	**+1.5**
SNH				IAML		05 19 24.7	
	comp=N,101nm,1.1s						
SNH				IAML		05 19 30.7	
	comp=E,88nm,0.9s						
WAX	**Waxell Ridge**	**3.23**	**285**	Pn	**Pn**	**05 18 27.2**	**+1.7**
WAX				IAML		05 19 16.2	
	comp=N,168nm,0.7s						
WAX				IAML		05 19 22.6	
	comp=E,114nm,0.6s						
PTPK	**Patty Peak**	**3.25**	**298**		**Pn**	**05 18 27.2**	**+1.3**
PTPK	**Patty Peak**	**3.25**	**298**	Pg	**Pb**	**05 18 30.7**	**-1.6**
PTPK				Sg	**Sg**	**05 19 17.2**	**-1.0**
BVCY	**Beaver Creek**	**3.36**	**323**		**Pn**	**05 18 29.4**	**+2.0**
BVCY	**Beaver Creek**	**3.36**	**323**	Pb	**Pb**	**05 18 34.3**	**+0.1**
	baz=140						
BVCY	**Beaver Creek**	**3.36**	**323**	Pn	**Pn**	**05 18 30.0**	**+2.6**
BVCY				Sg	**Sg**	**05 19 23.0**	**+1.1**
S34M	**Telegraph Cree**	**3.38**	**122**	Pn	**Pn**	**05 18 27.5**	**-0.1**
S34M				IAML		05 19 30.3	
	comp=E,162nm,0.7s						
S34M	**Telegraph Cree**	**3.38**	**122**	P	**Pn**	**05 18 28.0**	**+0.4**
	baz=306,SNR=49						
S34M	**Telegraph Cree**	**3.38**	**122**	Pn	**Pn**	**05 18 27.9**	**+0.4**
L29M	**L29M**	**3.41**	**348**	P	**Pn**	**05 18 29.1**	**+1.0**
	baz=167						
L29M	**L29M**	**3.41**	**348**	Pn	**Pn**	**05 18 29.4**	**+1.3**
L29M				Pg	**Pg**	**05 18 38.8**	**-0.5**
L29M				Sg	**Sg**	**05 19 21.9**	**-1.7**
KHIT	**Khitrov Hills**	**3.42**	**284**		**Pn**	**05 18 29.0**	**+0.8**
MCARA	**McCarthy VSAT**	**3.57**	**299**	Pb	**Pb**	**05 18 35.8**	**-1.9**
	baz=114,SNR=10.0						
MCARA	**McCarthy VSAT**	**3.57**	**299**	Pn	**Pn**	**05 18 31.5**	**+1.3**
DLBC	**Dease Lake**	**3.62**	**109**	Pn	**Pn**	**05 18 30.5**	**-0.4**
DLBC				IAML		05 19 31.3	
	comp=N,120nm,0.5s						
DLBC				IAML		05 19 33.0	
	comp=E,115nm,0.9s						
DLBC	**Dease Lake**	**3.62**	**109**	P	**Pn**	**05 18 30.6**	**-0.4**
	baz=294,SNR=44						
DLBC	**Dease Lake**	**3.62**	**109**	Pn	**Pn**	**05 18 30.6**	**-0.4**
	comp=E,2.7nm,0.3s,baz=288,slow=13,SNR=36						
DLBC				Sn	**Sn**	**05 19 13.6**	**-0.7**
	comp=E,6.2nm,0.3s,baz=318,slow=15,SNR=7.1						
DLBC				Lg	Lg	05 19 25.6	
	comp=E,29nm,0.3s,baz=195,slow=13,SNR=12						
	comp=E,4.9nm,0.3s						
DLBC	**Dease Lake**	**3.62**	**109**	Pn	**Pn**	**05 18 30.4**	**-0.6**
DLBC				Sg	**Sb**	**05 19 25.6**	**+2.6**
BERG	**Berg Lake**	**3.64**	**283**		**Pn**	**05 18 32.4**	**+1.3**
BERG				IAML		05 19 27.6	
	comp=N,124nm,0.8s						
BERG				IAML		05 19 33.5	
	comp=E,98nm,0.9s						
M27K	**Edge Creek, AK**	**3.65**	**317**	Pg	**Pb**	**05 18 41.5**	**+2.4**
	baz=133						
M27K	**Edge Creek, AK**	**3.65**	**317**	Pn	**Pn**	**05 18 34.2**	**+2.8**
VRDI	**Verde Repeater**	**3.71**	**296**		**Pn**	**05 18 34.4**	**+2.1**
MAYO	**Mayo, Yukon**	**3.83**	**4**	Sg	**Sg**	**05 19 33.7**	**-3.1**
HMT	**Hamilton**	**3.91**	**281**	Pn	**Pn**	**05 18 34.5**	**-0.4**
WTLY	**Watson Lake, Y**	**3.91**	**82**		**Pn**	**05 18 35.3**	**+0.4**
WTLY	**Watson Lake, Y**	**3.91**	**82**	P	**Pn**	**05 18 35.0**	**+0.1**
	baz=268						
WTLY	**Watson Lake, Y**	**3.91**	**82**	Pn	**Pn**	**05 18 34.5**	**-0.4**
WTLY				Pg	**Pb**	**05 18 46.0**	**+2.5**

comp=E,31nm,1.7s
CRAG IAML 05 20 28.4
comp=N,30nm,1.8s
J30M Hart River 4.80 1 P **Pn 05 18 48.3 +1.1**
baz=181
J30M Hart River 4.80 1 Pn **Pn 05 18 48.4 +1.2**
J30M Sg **Sg 05 20 05.3 -2.8**
K27K Chicken 4.99 331 Pn **Pn 05 18 51.4 +1.8**
V35K Ketchikan 5.20 147 Pn **Pn 05 18 52.2 -0.3**
V35K IAML 05 20 24.0
comp=N,20nm,2.0s
V35K IAML 05 20 41.0
comp=E,24nm,1.7s
EGAK Eagle 5.45 339 Pn **Pn 05 18 55.5 -0.5**
I30M Mount Dempster 5.45 1 Pn **Pn 05 18 58.7 +2.6**
I30M Mount Dempster 5.45 1 P **Pn 05 18 57.6 +1.5**
baz=181,SNR=53
I30M Mount Dempster 5.45 1 Pn **Pn 05 18 57.9 +1.8**
J26L Joseph Creek 5.76 328 P **Pn 05 19 01.5 +1.2**
baz=142,SNR=22
I28M Miner Creek 5.89 346 Pn **Pn 05 19 03.5 +1.4**
I28M Sg **Sg 05 20 39.0 -3.9**
I27K Kandik River 6.28 340 Pn **Pn 05 19 09.6 +2.2**
I27K Sg **Sg 05 20 50.0 -5.4**
EPYK Eagle Plains 6.60 359 Pn **Pn 05 19 11.5 -0.3**
EPYK Eagle Plains 6.60 359 Sg **Sg 05 21 01.4 -4.4**
H27K Steamboat Moun 6.85 343 Pn **Pn 05 19 16.9 +1.7**
ILAR Eielson Array 6.94 320 Pn **Pn 05 19 19.0 +2.6**
comp=E,0.2nm,0.6s,baz=146,slow=12,SNR=7.4
ILAR Sn **Sn 05 20 40.5 +4.8**
comp=E,0.3nm,0.3s,baz=117,slow=16,SNR=4.2
ILAR Lg Lg 05 21 18.6
comp=E,0.6nm,0.3s,baz=126,slow=32,SNR=10
GRNB Grenville Isla 6.97 146 Pn **Pn 05 19 14.3 -2.5**
G30M tAoh Zraii Nji 7.22 1 Pn **Pn 05 19 21.2 +0.9**
G30M tAoh Zraii Nji 7.22 1 Pn **Pn 05 19 21.3 +1.1**
G31M Satah River 7.23 7 Pn **Pn 05 19 21.9 +1.6**
TRF Thorofare Moun 7.50 305 Pn **Pn 05 19 24.6 +0.3**
NBC5 NorthernBC 5 7.58 101 Pn **Pn 05 19 24.9 -0.4**
F31M Tsiigehtchic 7.78 8 Pn **Pn 05 19 28.3 +0.4**
F31M Tsiigehtchic 7.78 8 Pn **Pn 05 19 28.5 +0.6**
F30M Barrier River 7.86 2 Pn **Pn 05 19 28.6 -0.4**
F30M Sg **Sg 05 21 39.6 -6.3**
F28M Old Crow 7.99 351 Sg **Sg 05 21 44.1 -6.0**
CAST Castle Rocks 8.24 303 Pn **Pn 05 19 35.2 +0.8**
BMAR Burnt Mountain 8.45 338 Pn **Pn 05 19 37.7 +0.5**
G24K Hadweenzic Riv 8.49 329 Pn **Pn 05 19 37.7 0.0**
KDAK Kodiak Island 8.57 263 Pn **Pn 05 19 38.2 -0.5**
KDAK Kodiak Island 8.57 263 Pn **Pn 05 19 39.7 +0.9**
comp=E,0.7nm,0.3s,baz=79,slow=10,SNR=1.6
comp=E,16nm,1.0s
INK Inuvik 8.65 7 Pn **Pn 05 19 42.3 +2.6**
comp=E,0.1nm,0.3s,baz=184,slow=15,SNR=4.1
INK Sn **Sn 05 21 19.4 +1.7**
comp=E,0.1nm,0.3s,baz=170,slow=11,SNR=4.0
INK Lg Lg 05 22 09.2
comp=E,0.3nm,0.3s,baz=192,slow=19,SNR=5.6
INK LR LR 05 23 18.9
comp=E,70nm,18.5s,baz=346,slow=40
comp=E,1.0nm,0.8s
E29M Blow River 8.65 357 Pn **Pn 05 19 40.0 +0.1**
YKA Yellowknife Ar 10.92 66 Pn **Pn 05 20 08.9 -2.1**
YKA Yellowknife Ar 10.92 66 Pn **Pn 05 20 08.8 -2.2**
comp=E,0.1nm,0.3s,baz=264,slow=13,SNR=2.6
YKA Lg Lg 05 23 12.1
baz=267,slow=26
comp=E,0.1nm,0.3s
A36M Sachs Harbour 13.05 16 Pn **Pn 05 20 39.6 -0.2**
PDAR Pinedale Array 23.72 124 P **P 05 22 47.2 0.0**
comp=E,0.1nm,0.3s,baz=330,slow=10,SNR=2.3
comp=E,0.1nm,0.3s
NVAR Mina Array Bea 24.33 143 P **P 05 22 55.4 +2.5**
comp=E,0.3nm,0.6s,baz=339,slow=8.7,SNR=2.9
comp=E,0.3nm,0.6s

*IDC **04** 05:18:00.7±0.8, 59.29N×145.42E, h0km, mb3.5/13, mbtmp3.5/15, ML3.3/2, Error ellipse: s-maj=20.5km s-min=13.0km az=153.0*
*NERS **04** 05:18:00.4, 59.43N×145.23E, h0km*
ISC 04 05:18:02.0±0.6, 59.48N±0.05×145.12E±0.04, h10km, n32, σ2s04/47, mb3.6/15, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLON	**Talon**	**1.82**	**80**	*e*P	g	**Pb**		**05 18 35.1**	**-0.3**
TLON				Pgmax				05 18 40.5	
	2µm,0.4s								
TLON				*e*Sg		**Sb**		**05 18 57.9**	**-0.3**
TLON				Sgmax				05 19 03.1	
	750nm,0.2s								
TLON				Sgmax				05 19 03.1	
	7µm,0.5s								
OCHR	**Omchak**	**2.58**	**31**	*e*P		**Pn**		**05 18 42.3**	**-1.5**
OCHR				*e*				05 18 46.0	
OCHR				*e*Pg		**Pb**		**05 18 47.2**	**-1.1**
OCHR				Pgmax				05 18 48.4	
	90nm,0.3s								
OCHR				*e*Sg		**Sb**		**05 19 21.0**	**+1.0**
OCHR				Sgmax				05 19 24.7	
	410nm,0.4s								
OCHR				Sgmax				05 19 24.7	
	340nm,0.4s								
MA2	**Magadan**	**2.88**	**86**	*e*P		**Pn**		**05 18 48.4**	**+0.5**
MA2				*e*Pg		**Pb**		**05 18 52.3**	**-1.2**
MA2				Pgmax				05 18 53.5	
	80nm,0.3s								
MA2				*e*Sg		**Sb**		**05 19 28.4**	**-0.3**
MA2				Sgmax				05 19 35.4	
	590nm,0.6s								
MA2				Sgmax				05 19 35.4	
	240nm,0.5s								
MGD	**Magadan 1**	**2.90**	**76**	*e*P		**Pn**		**05 18 47.6**	**-0.5**
MGD				*e*Pg		**Pb**		**05 18 52.6**	**-1.1**
MGD				Pgmax				05 18 55.4	
	50nm,0.2s								
MGD				*e*Sg		**Sb**		**05 19 28.0**	**-1.1**
MGD				Sgmax				05 19 31.6	
	420nm,0.3s								
MGD				Sgmax				05 19 31.6	
	310nm,0.3s								
GADL	**Gadlja**	**3.16**	**84**	*e*P		**Pn**		**05 18 52.4**	**+0.6**
GADL				*e*Pg		**Pb**		**05 18 57.3**	**-0.9**
GADL				Pgmax				05 19 05.9	
	100nm,0.3s								
GADL				*e*Sg		**Sb**		**05 19 38.2**	**+1.5**
GADL				Sgmax				05 19 46.5	
	630nm,0.5s								
GADL				Sgmax				05 19 46.5	
	260nm,0.4s								
SUUS	**Susuman**	**3.62**	**23**	*e*P		**Pn**		**05 18 59.7**	**+1.5**
SUUS				Pmax				05 19 00.1	
	20nm,0.2s								
SUUS				*e*Pg		**Pg**		**05 19 09.5**	**-1.9**
SUUS				Pgmax				05 19 14.8	
	50nm,0.4s								
SUUS				*e*S		**Sn**		**05 19 42.5**	**+1.6**
SUUS				*e*Sg		**Sg**		**05 19 56.4**	**-1.8**
SUUS				Sgmax				05 20 05.0	
	90nm,0.7s								
SUUS				Sgmax				05 20 05.2	
	460nm,0.6s								
TLAR	**Talaya**	**3.98**	**62**	*e*P		**Pn**		**05 19 04.2**	**+1.1**
TLAR				*e*Pg		**Pb**		**05 19 13.7**	**+1.5**
TLAR				Pgmax				05 19 18.5	
	40nm,0.3s								
TLAR				*e*Sg		**Sb**		**05 20 04.4**	**+4.0**
TLAR				Sgmax				05 20 07.7	
	320nm,0.3s								
TLAR				Sgmax				05 20 07.7	
	330nm,0.3s								
SEY	**Seymchan**	**4.93**	**42**	*e*P		**Pn**		**05 19 17.9**	**+1.8**
SEY				Pmax				05 19 18.3	
	10.0nm,0.2s								
SEY				*e*S		**Sn**		**05 20 13.5**	**+0.4**
SEY				*e*Sg		**Sg**		**05 20 36.7**	**-3.4**
SEY				Sgmax				05 20 47.7	
	110nm,0.6s								
SEY				Sgmax				05 20 47.7	
	70nm,0.4s								
SEY	**Seymchan**	**4.93**	**42**	Pn		**Pn**		**05 19 17.4**	**+1.4**
	2.9nm,0.3s,baz=232,slow=13,SNR=52								
SEY				Sn		**Sn**		**05 20 12.3**	**-0.7**
	4.3nm,0.3s,baz=214,slow=14,SNR=4.1								
SEY				Lg		Lg		05 20 36.0	
	12nm,0.3s,baz=147,slow=21,SNR=5.7								
	8.8nm,0.3s								
EVEN	**Evensk**	**7.34**	**65**	*e*Sg		**Sg**		**05 21 52.1**	**-5.2**
EVEN				Sgmax				05 22 04.7	
	40nm,0.7s								
EVEN				Sgmax				05 22 04.7	
	30nm,0.5s								
CGD	**Chagda**	**7.50**	**271**	*e*Pg		**Sn**		**05 21 14.9**	**-1.4**
	8.0nm,1.0s								
CGD				*e*Sg		Sg		05 21 53.6	-8.9
	18nm,0.4s								
TBGR	**Tabaga**	**7.96**	**294**	*e*Pg		**Sn**		**05 21 24.5**	**-3.0**
	14nm,0.9s								
TBGR				*e*Sg		**Sg**		**05 22 12.4**	**-4.7**
	32nm,0.9s								
YAK	**Yakutsk**	**7.98**	**295**	*e*Sg		**Sg**		**05 22 14.7**	**-3.0**
	37nm,0.9s								
BLSR	**Buluus**	**8.18**	**290**	*e*Sg		Sg		05 22 15.1	-9.1
	310nm,0.3s								
PETK	**Petropavlovsk-**	**9.46**	**127**	Pn		**Pn**		**05 20 15.7**	**-2.5**
	0.5nm,0.3s,baz=345,slow=4.8,SNR=7.6								
	3.1nm,0.9s								
CLNS	**Chul'man**	**11.00**	**265**	*e*Sg				05 23 47.2	
	6.1nm,0.3s								
YKLR	**Yuktali**	**12.74**	**267**	*e*Sg				05 24 38.2	
	9.7nm,1.4s								
SONM	**Songino Array**	**25.34**	**260**	P		**P**		**05 23 32.1**	**+3.1**
	0.3nm,0.7s,baz=37,slow=11,SNR=1.5								
	0.3nm,0.7s								
ILAR	**Eielson Array**	**30.80**	**51**	P		**P**		**05 24 18.1**	**+0.7**
	1.0nm,0.7s,baz=286,slow=8.1,SNR=7.1								
	1.0nm,0.7s								
KDAK	**Kodiak Island**	**31.43**	**65**	P		**P**		**05 24 23.6**	**+0.6**
	35nm,1.2s,baz=310,slow=3.9,SNR=2.0								
ZALV	**Zalesovo Beam**	**32.53**	**287**	P		**P**		**05 24 35.8**	**+3.1**
	0.2nm,0.3s,baz=76,slow=19,SNR=1.4								
	0.2nm,0.3s								
KURBB	**Kurchatov Arra**	**37.62**	**287**	P		**P**		**05 25 17.7**	**+1.2**
	0.7nm,0.5s,baz=55,slow=8.7,SNR=9.1								
	0.7nm,0.5s								
MKAR	**Makanchi Array**	**38.28**	**279**	P		**P**		**05 25 23.1**	**+0.9**
	0.4nm,0.8s,baz=31,slow=5.9,SNR=3.1								
	0.4nm,0.8s								
SPITS	**Spitsbergen Ar**	**39.14**	**345**	P		**P**		**05 25 31.8**	**+2.7**
	23nm,1.1s,baz=131,slow=2.5,SNR=1.9								
BVAR	**Borovoye Array**	**39.95**	**295**	P		**P**		**05 25 38.0**	**+1.9**
	0.2nm,0.3s,baz=353,slow=10,SNR=1.7								
	0.2nm,0.3s								
YKA	**Yellowknife Ar**	**43.99**	**41**	P		**P**		**05 26 08.0**	**-1.0**
	0.3nm,0.6s,baz=267,slow=7.8,SNR=3.7								
	0.3nm,0.6s								
FINES	**FINESS Array B**	**50.57**	**327**	P		**P**		**05 27 02.0**	**+1.8**
	0.2nm,0.3s,baz=19,slow=9.9,SNR=5.6								
	0.2nm,0.3s								
NOA	**NORSAR Array B**	**54.62**	**335**	P		**P**		**05 27 31.5**	**+1.3**
	0.4nm,0.5s,baz=29,slow=8.1,SNR=2.6								
	0.4nm,0.5s								
PDAR	**Pinedale Array**	**61.15**	**54**	P		**P**		**05 28 16.5**	**-0.1**
	0.2nm,0.4s,baz=29,slow=3.4,SNR=3.6								
	0.2nm,0.4s								
TXAR	**Lajitas Array**	**75.05**	**57**	P		**P**		**05 29 45.1**	**+1.2**
	0.1nm,0.4s,baz=332,slow=4.8,SNR=1.5								
	0.1nm,0.4s								
WRA	**Warramunga Arr**	**79.63**	**190**	P		**P**		**05 30 07.0**	**-2.2**
	0.8nm,0.8s,baz=3.1,slow=5.7,SNR=2.1								
	0.8nm,0.8s								
ASAR	**Alice Springs**	**83.36**	**190**	P		**P**		**05 30 28.1**	**-0.9**
	0.3nm,0.6s,baz=4.4,slow=5.2,SNR=5.3								
	0.3nm,0.6s								

DJA 04 05:21:13.9±2.3, 6°S±5.5×10°4E±°, h22km±22km, M3.9/5, mb4.2/1, MLv3.7/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.18**	**50**	P		Pn		05 21 33.8	-1.3
LWLI	**Liwa**	**1.35**	**20**	P		Pn		05 21 37.8	+0.3
LWLI				S		Sb		05 21 55.7	+0.3
CMJI	**Cimerak**	**5.04**	**107**	P		Pn		05 22 29.0	+0.7

IDC 04 05:22:37.0±3.9, 16°78S×168°05E, h0km, mb3.7/3, mbtmp3.7/4, ML2.5/1, Error ellipse: s-maj=82.3km s-min=34.8km az=97.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.48**	**196**	Pn		Pn		05 24 00.9	+0.8
	0.1nm,0.3s,baz=117,slow=16,SNR=2.0								
DZM				Sn		Sn		05 25 03.4	-0.5
	0.2nm,0.3s,baz=172,slow=13,SNR=1.5								
	8.1nm,0.9s								
WRA	**Warramunga Arr**	**32.12**	**259**	P		P		05 29 07.5	+1.1
	0.6nm,0.8s,baz=84,slow=6.2,SNR=4.7								
	0.6nm,0.8s								
ASAR	**Alice Springs**	**32.71**	**252**	P		P		05 29 10.7	-0.9
	1.2nm,0.4s,baz=80,slow=8.8,SNR=37								
	1.2nm,0.4s								
SONM	**Songino Array**	**84.58**	**323**	P		P		05 35 12.3	-0.1
	0.1nm,0.3s,baz=114,slow=4.4,SNR=2.0								
	0.1nm,0.3s								

*NOU **04** 05:38:27.3, 42.40S×172.79E, h34km, MLv3.5/7, South Island, New Zealand*
*WEL **04** 05:38:27.3±0.3, 42°S±2°×173°E±°, h38km±5km, M3.0/16, ML3.2/19, MLv3.0/16, Error ellipse: s-maj=0.0km s-min=0.0km az=115.8, confirmed*
ISC 04 05:38:28.2±1.5, 42.37S±0.02×172.78E±0.03, h39km±4km, n74, σ1s32/101, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSES	**Hanmer Springs**	**0.15**	**165**	P		P		**05 38 35.7**	**-0.5**
CULC	**Culverden Airl**	**0.39**	**177**	P		Pn		**05 38 37.3**	**-0.1**
CULC				S		Sn		**05 38 45.5**	**+1.5**
SJFS	**Springs Juncti**	**0.44**	**275**	P		Pn		**05 38 37.9**	**-0.3**
MOLW	**Molesworth Sta**	**0.46**	**51**	P		Pn		**05 38 38.2**	**-0.2**
MOLW				S		Sn		**05 38 45.3**	**-0.3**
LSRC	**Lake Sumner Ro**	**0.53**	**199**	P		Pn		**05 38 39.3**	**0.0**
LSRC				S		Sn		**05 38 48.9**	**+1.8**
LTZ	**Lake Taylor**	**0.55**	**222**	P		Pn		**05 38 40.0**	**+0.3**
LTZ				S		Sn		**05 38 48.8**	**+1.0**
KHZ	**Kahutara**	**0.57**	**95**	P		Pn		**05 38 39.6**	**-0.2**
KHZ	**Kahutara**	**0.57**	**95**	P		Pn		**05 38 39.7**	**-0.1**
KHZ				S		Sn		**05 38 48.9**	**+0.9**
SCAC	**Scargill**	**0.57**	**169**	P		Pn		**05 38 39.3**	**-0.7**
SCAC				S		Sn		**05 38 49.0**	**+0.7**
WAKC	**Waikari**	**0.59**	**185**	P		Pn		**05 38 40.8**	**+0.6**
THZ	**Tophouse**	**0.62**	**9**	P		Pn		**05 38 39.6**	**-1.0**
THZ				S		Sn		**05 38 49.4**	**0.0**
GVZ	**Greta Valley S**	**0.62**	**162**	P		Pn		**05 38 41.1**	**+0.5**
GVZ				S		Sn		**05 38 50.9**	**+1.5**
MCASZ	**Murchison**	**0.66**	**330**	S		Sn		**05 38 49.8**	**-0.6**
KIKS	**Kaikoura**	**0.67**	**95**	P		Pn		**05 38 41.1**	**-0.2**
KIKS				S		Sn		**05 38 51.6**	**+1.1**
AMBC	**Amberley HDC**	**0.78**	**182**	P		Pn		**05 38 42.1**	**-0.6**
AMBC				S		Sn		**05 38 53.5**	**+0.3**
AMCZ	**Amberley**	**0.81**	**187**	P		Pn		**05 38 43.3**	**+0.2**
AMCZ				S		Sn		**05 38 55.2**	**+1.3**
DSZ	**Denniston Nort**	**0.96**	**311**	P		Pn		**05 38 44.5**	**-0.8**
DSZ				S		Sn		**05 38 56.5**	**-1.2**
MRNZ	**Matariki Terra**	**0.97**	**359**	P		Pn		**05 38 44.6**	**-0.8**
MRNZ				S		Sn		**05 38 57.7**	**-0.3**
INZ	**Inchbonnie**	**1.04**	**250**	P		Pn		**05 38 46.7**	**+0.4**
INZ				S		Sn		**05 39 00.4**	**+0.6**
BSWZ	**Blackbirch Sta**	**1.05**	**52**	P		Pn		**05 38 46.6**	**+0.2**
BSWZ				S		Sn		**05 39 01.2**	**+1.4**
OXZ	**Oxford**	**1.10**	**209**	P		Pn		**05 38 46.2**	**-0.9**
OXZ				S		Sn		**05 39 00.4**	**-0.6**
NNZ	**Nelson**	**1.24**	**21**	P		Pn		**05 38 48.5**	**-0.5**
NNZ				S		Sn		**05 39 04.4**	**-0.1**
TUWZ	**Tuamarina**	**1.28**	**43**	P		Pn		**05 38 49.3**	**-0.3**
TUWZ				S		Sn		**05 39 05.4**	**-0.2**
MQZ	**McQueen's Vall**	**1.33**	**184**	P		Pn		**05 38 48.9**	**-1.4**
MQZ				S		Sn		**05 39 05.3**	**-1.5**
TKNZ	**Takaka Hill**	**1.35**	**6**	P		Pn		**05 38 50.2**	**-0.3**
TKNZ				S		Sn		**05 39 07.2**	**0.0**
OKCZ	**Okains Bay**	**1.36**	**171**	P		Pn		**05 38 50.6**	**-0.6**
OKCZ				S		Sn		**05 39 06.5**	**-1.1**
RACZ	**Rakaia**	**1.43**	**199**	P		Pn		**05 38 50.6**	**-1.0**
RACZ				S		Sn		**05 39 08.2**	**-1.0**
MHCZ	**Mount Hutt**	**1.46**	**217**	P		Pn		**05 38 51.2**	**-0.9**
MHCZ				S		Sn		**05 39 09.1**	**-0.8**
AKCZ	**Akaroa Harbour**	**1.50**	**176**	P		Pn		**05 38 51.6**	**-1.1**
AKCZ				S		Sn		**05 39 09.6**	**-1.4**
QRZ	**Quartz Range**	**1.56**	**353**	P		Pn		**05 38 52.2**	**-1.2**
QRZ	**Quartz Range**	**1.56**	**353**	P		Pn		**05 38 52.1**	**-1.3**
TCW	**Tory Channel**	**1.61**	**44**	P		Pn		**05 38 53.3**	**-0.9**
TCW				S		Sn		**05 39 12.2**	**-1.5**
WVZ	**Waitaha Valley**	**1.66**	**244**	P		Pn		**05 38 55.2**	**+0.4**
WVZ				S		Sn		**05 39 15.0**	**+0.2**
WACZ	**Wakanui South**	**1.71**	**203**	P		Pn		**05 38 54.2**	**-1.3**
WACZ				S		Sn		**05 39 15.4**	**-0.8**
DUWZ	**D'Urville Isla**	**1.79**	**29**	P		Pn		**05 38 56.9**	**+0.3**
SNZO	**South Karori**	**1.79**	**54**	P		Pn		**05 38 55.4**	**-1.1**
RPZ	**Rata Peaks**	**1.84**	**223**	P		Pn		**05 38 56.8**	**-0.5**
RPZ	**Rata Peaks**	**1.84**	**223**	P		Pn		**05 38 56.8**	**-0.5**
ARCZ	**Arundel**	**1.96**	**216**	P		Pn		**05 38 58.0**	**-1.0**
PLWZ	**Palliser**	**2.02**	**67**	P		Pn		**05 38 57.5**	**-2.2**
CAW	**Cannon Point**	**2.13**	**54**	P		Pn		**05 38 59.6**	**-1.6**
KIW	**Kapiti Island**	**2.20**	**47**	P		Pn		**05 39 01.1**	**-1.2**
MTW	**Mount Morrison**	**2.37**	**60**	P		Pn		**05 39 02.2**	**-2.4**
OGWZ	**Otaki Gorge**	**2.38**	**50**	P		Pn		**05 39 03.0**	**-1.6**
TMZ	**Timaru**	**2.39**	**212**	P		Pn		**05 39 03.3**	**-1.5**
FOZ	**Fox Glacier**	**2.46**	**241**	P		Pn		**05 39 06.1**	**+0.3**
HOWZ	**Holdsworth Sta**	**2.53**	**55**	P		Pn		**05 39 04.6**	**-2.1**
TMWZ	**Te Maipa**	**2.65**	**63**	P		Pn		**05 39 05.9**	**-2.6**
MRZ	**Mangatainoka R**	**2.71**	**52**	P		Pn		**05 39 07.0**	**-2.2**
ODZ	**Otahua Downs**	**3.08**	**209**	P		Pn		**05 39 13.1**	**-1.3**
ODZ	**Otahua Downs**	**3.08**	**209**	P		Pn		**05 39 12.9**	**-1.5**
PREZ	**Palmer Road**	**3.21**	**20**	P		Pn		**05 39 17.8**	**+1.8**
NBEZ	**Newall Road No**	**3.21**	**15**	P		Pn		**05 39 17.1**	**+1.0**
KHEZ	**Kahui Hut**	**3.22**	**17**	P		Pn		**05 39 16.4**	**+0.1**
KHEZ	**Kahui Hut**	**3.22**	**17**	P		Pn		**05 39 17.1**	**+0.8**
NEZ	**North Egmont**	**3.26**	**18**	P		Pn		**05 39 18.3**	**+1.5**
PKE	**Pukeiti**	**3.31**	**17**	P		Pn		**05 39 18.4**	**+0.9**
JCZ	**Jackson Bay**	**3.38**	**238**	P		Pn		**05 39 18.7**	**+0.3**
VRZ	**Vera Road**	**3.58**	**26**	P		Pn		**05 39 22.6**	**+1.5**
WNVZ	**Wahianoa**	**3.72**	**36**	P		Pn		**05 39 22.6**	**-0.6**
TRVZ	**Turoa**	**3.72**	**35**	P		Pn		**05 39 26.4**	**+3.0**
NGZ	**Ngauruhoe**	**3.85**	**35**	P		Pn		**05 39 27.4**	**+2.4**
SNVZ	**South Ngauruho**	**3.85**	**35**	P		Pn		**05 39 28.7**	**+3.5**
OTVZ	**Oturere**	**3.88**	**35**	P		Pn		**05 39 27.9**	**+2.4**
NNVZ	**North Ngauruho**	**3.89**	**35**	P		Pn		**05 39 28.0**	**+2.4**
WTVZ	**West Tongariro**	**3.89**	**34**	P		Pn		**05 39 26.9**	**+1.3**
KRVZ	**Karewarewa**	**3.93**	**35**	P		Pn		**05 39 29.8**	**+3.6**
NTVZ	**North Tongarir**	**3.94**	**35**	P		Pn		**05 39 29.9**	**+3.6**
HIZ	**Hauiti**	**4.17**	**23**	P		Pn		**05 39 29.4**	**+0.1**
HIZ	**Hauiti**	**4.17**	**23**	P		Pn		**05 39 28.7**	**-0.6**
TLZ	**Tolley Road**	**4.56**	**28**	P		Pn		**05 39 35.4**	**+0.8**
TWGZ	**Tauwhareparae**	**5.78**	**45**	P		Pn		**05 39 53.3**	**+1.9**
RUGZ	**Raukumara Rang**	**5.79**	**42**	P		Pn		**05 39 51.1**	**-0.5**
PKGZ	**Pakihiroa**	**6.05**	**44**	P		Pn		**05 39 54.0**	**-1.1**

*FCIAR **04** 05:44:43.0, 83.17N×3.59W, h10km, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.50*
*BER **04** 05:44:44.4±3.0, 82.92N×5.12W, h10km, mb(Pn)4.2, ML3.2(NAO), Confirmed Earthquake*
ISC 04 05:44:46.1±4.0, 83.0N±0.1×0.8W±0.2, h10km, n17, σ1s09/26, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.51**	**147**	Pn		**Pn**		**05 45 53.5**	**-0.8**
KBS				Sn		**Sn**		**05 46 45.6**	**-1.1**
KBS	**Kingsbay**	**4.51**	**147**	*e*P		**Pn**		**05 45 53.9**	**-0.4**
KBS				IAML				05 45 54.4	
	comp=Z,22nm,0.5s								
KBS	**Kingsbay**	**4.51**	**147**	*e*P		**Pn**		**05 45 53.2**	**-1.1**
KBS				*e*S		**Sn**		**05 46 46.4**	**-0.4**
BRBB	**Barentsburg B**	**5.46**	**146**	Pn		**Pn**		**05 46 07.5**	**+0.3**
BRBB	**Barentsburg B**	**5.46**	**146**	*e*P		**Pn**		**05 46 07.6**	**+0.3**
BRBA	**Barentsburg A**	**5.49**	**146**	Pn		**Pn**		**05 46 08.0**	**+0.4**
BRBA	**Barentsburg A**	**5.49**	**146**	*e*P		**Pn**		**05 46 08.1**	**+0.4**
SPA0	**Spitsbergen Ar**	**5.54**	**141**	Pn		**Pn**		**05 46 08.4**	**+0.1**
	baz=348,slow=8.6								
SPA0				Sn		**Sn**		**05 47 13.0**	**+1.1**
	baz=323,slow=14								
SPA0	**Spitsbergen Ar**	**5.54**	**141**	Pn		**Pn**		**05 46 08.4**	**+0.1**
	baz=348,slow=8.6								
SPA0				Sn		**Sn**		**05 47 13.0**	**+1.1**
	baz=323,slow=14								
SPA0	**Spitsbergen Ar**	**5.54**	**141**	*e*P		**Pn**		**05 46 07.8**	**-0.6**
SPA0				*e*S		**Sn**		**05 47 09.8**	**-2.1**
HSPB	**Hornsund (broa**	**6.59**	**146**	Pn		**Pn**		**05 46 23.1**	**+0.4**
HSPB	**Hornsund (broa**	**6.59**	**146**	*e*P		**Pn**		**05 46 23.2**	**+0.4**
HSPB				IAML				05 46 23.8	
	comp=Z,22nm,0.3s								
ZFI2	**Zemlya Franca-**	**6.97**	**82**	*e*P		**Pn**		**05 46 29.2**	**+1.2**
ZFI2				*e*S		**Sn**		**05 47 45.3**	**-1.8**
	comp=Z,17nm,2.6s								
OMEGA	**Omega**	**7.00**	**83**	*e*P		**Pn**		**05 46 29.2**	**+0.9**
OMEGA				S		**Sn**		**05 47 46.1**	**-1.7**
	comp=Z,14nm,1.7s								
HOPEN	**Hopen**	**7.82**	**131**	Pn		**Pn**		**05 46 40.7**	**+1.0**
HOPEN				Sn		**Sn**		**05 48 10.1**	**+2.1**
HOPEN	**Hopen**	**7.82**	**131**	*e*P		**Pn**		**05 46 40.7**	**+1.0**
HOPEN				IAML				05 46 41.9	
	comp=Z,6.9nm,0.4s								
HOPEN	**Hopen**	**7.82**	**131**	*i* P		**Pn**		**05 46 40.3

GERES				LR	LR	06 55 01.2	
	comp=Z,49nm,18.4s,baz=230,slow=36 0.3nm,0.5s						
VRAC	**Vranov**	**61.37**	**20**	LR	LR	06 55 24.6	
	comp=Z,28nm,19.2s,baz=252,slow=35						
BRTR	**Keskin Array B**	**62.52**	**38**	P	**P**	**06 29 51.4**	**+0.1**
	0.4nm,0.5s,baz=202,slow=2.7,SNR=2.1 0.4nm,0.5s						
ROSC	**El Rosal**	**63.93**	**279**	LR	LR	06 56 02.5	
	comp=Z,43nm,19.9s,baz=304,slow=34						
AKASG	**Malin Array Be**	**67.50**	**27**	P	**P**	**06 30 24.2**	**+0.9**
	1.0nm,0.7s,baz=226,slow=6.6,SNR=4.1						
AKASG				LR	LR	07 03 34.6	
	comp=Z,64nm,18.0s,baz=253,slow=39 1.0nm,0.7s						
NOA	**NORSAR Array B**	**70.31**	**11**	LR	LR	07 01 03.2	
	comp=Z,19nm,18.2s,baz=330,slow=36						
FINES	**FINESS Array B**	**74.39**	**18**	P	**P**	**06 31 03.9**	**-1.0**
	2.6nm,0.9s,baz=216,slow=6.9,SNR=2.2 2.6nm,0.9s						
SADO	**Sadowa**	**79.63**	**318**	LR	LR	07 05 12.1	
	comp=Z,50nm,18.3s,baz=66,slow=34						
ARCES	**ARCESS Array B**	**80.66**	**12**	LR	LR	07 07 31.4	
	comp=Z,64nm,18.6s,baz=238,slow=36						

NEIC ***04*** *06:53:23.7±1.2, 17°.4S±0°.1×178°.5W±0°.1, h584km±13km, mb4.3/24, Error ellipse: s-maj=22.2km s-min=17.8km az=151.0*

IDC ***04*** *06:53:26.4±4.3, 17°.50S×178°.85W, h597km±54km, mb3.4/9, mbtmp4.3/10, Error ellipse: s-maj=34.2km s-min=21.3km az=158.0*

ISC 04 06:53:21.9±0.6, 17°.4S±0°.1×178°.72W±0°.09, h547km, n38, σ1§04/40, mb4.3/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**8.52**	**103**	P	**P**	**06 55 25.4**	**+0.6**
PINNC	**Pines Island,**	**14.00**	**246**	P	**P**	**06 56 22.4**	**+1.3**
DZM	**Mont Dzumac**	**14.72**	**249**	P	**P**	**06 56 30.2**	**+1.5**
	4.0nm,0.7s,baz=62,slow=21,SNR=1.9						
URZ	**Urewera**	**21.10**	**189**	P	**P**	**06 57 29.0**	**+1.0**
	4.9nm,0.6s,baz=12,slow=7.3,SNR=2.0 4.9nm,0.6s						
BSWZ	**Blackbirch Sta**	**25.06**	**193**	P	**P**	**06 58 05.9**	**+2.8**
ARMA	**Armidale**	**29.94**	**239**	P	**P**	**06 58 46.9**	**+0.7**
ARMA				IAmb	IAmb	06 58 47.0	
	comp=Z,8.1nm,0.8s						
CTAO	**Charters Tower**	**33.24**	**260**	P	**P**	**06 59 15.2**	**+0.8**
CTAO				IAmb	IAmb	06 59 15.8	
	comp=Z,7.8nm,1.0s						
CAN	**Canberra**	**33.78**	**232**	P	**P**	**06 59 18.1**	**-0.6**
CAN				IAmb	IAmb	06 59 27.7	
	comp=Z,7.9nm,1.1s						
COEN	**Coen**	**36.81**	**270**	P	**P**	**06 59 46.4**	**+2.3**
COEN				IAmb	IAmb	06 59 47.9	
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**37.26**	**230**	P	**P**	**06 59 47.5**	**0.0**
TOO				IAmb	IAmb	06 59 48.1	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.62**	**241**	P	**P**	**06 59 59.0**	**+0.3**
STKA	**Stephens Creek**	**38.62**	**241**	P	**P**	**06 59 58.8**	**+0.1**
	comp=Z,7.6nm,0.6s,baz=93,slow=11,SNR=16 comp=Z,7.6nm,0.6s						
BBOO	**Buckleboo**	**43.40**	**240**	P	**P**	**07 00 36.3**	**-0.2**
BBOO				IAmb	IAmb	07 00 36.6	
	comp=Z,8.4nm,0.5s						
WR0	**Warramunga Arr**	**44.24**	**259**	P	**P**	**07 00 43.4**	**+0.1**
WR0				IAmb	IAmb	07 00 51.0	
	comp=Z,4.0nm,1.1s						
WB0	**Warramunga Arr**	**44.40**	**259**	P	**P**	**07 00 44.3**	**-0.2**
WB0				IAmb	IAmb	07 00 47.8	
	comp=Z,4.7nm,0.5s						
WB2	**Warramunga Arr**	**44.42**	**259**	P	**P**	**07 00 44.6**	**-0.1**
WB2				IAmb	IAmb	07 00 45.2	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**44.43**	**259**	P	**P**	**07 00 44.9**	**+0.1**
WRA	**Warramunga Arr**	**44.43**	**259**	P	**P**	**07 00 44.5**	**-0.3**
	comp=Z,2.4nm,0.4s,baz=96,slow=7.0,SNR=62						
WRA				PcP	**PcP**	**07 02 15.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=99,slow=3.8,SNR=2.0 comp=Z,2.4nm,0.4s						
AS31	**Alice Springs**	**44.64**	**254**	P	**P**	**07 00 46.8**	**+0.4**
AS31				IAmb	IAmb	07 00 47.2	
	comp=Z,6.5nm,0.7s						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**07 00 46.9**	**+0.5**
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**07 00 46.6**	**+0.2**
	comp=Z,21nm,0.5s,baz=88,slow=8.4,SNR=495						
ASAR				PcP	**PcP**	**07 02 16.7**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=106,slow=3.5,SNR=3.4 comp=Z,21nm,0.5s						
FORT	**Forrest**	**49.96**	**244**	P	**P**	**07 01 24.5**	**-1.6**
KNRA	**Kununurra**	**50.24**	**264**	P	**P**	**07 01 28.4**	**0.0**
KNRA				IAmb	IAmb	07 01 29.3	
	comp=Z,8.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.82**	**260**	P	**P**	**07 01 45.9**	**-1.1**
PSA00	**Pilbara Seismi**	**57.75**	**255**	P	**P**	**07 02 20.2**	**-1.1**
PSA00				IAmb	IAmb	07 02 21.3	
	comp=Z,5.6nm,0.7s						
MORW	**Morawa**	**60.41**	**246**	P	**P**	**07 02 38.0**	**-1.0**
GIRL	**Giralia**	**62.76**	**253**	P	**P**	**07 02 53.5**	**-0.9**
JMZ	**Minamidaito 2**	**64.92**	**310**	P	**P**	**07 03 08.0**	**0.0**
CASY	**Casey**	**66.47**	**205**	P	**P**	**07 03 16.9**	**-0.1**
JGF	**Kuroka**	**67.15**	**322**	P	**P**	**07 03 20.5**	**-1.3**
UGM	**Wanagama**	**69.37**	**268**	P	**P**	**07 03 36.0**	**+0.4**
QSPA	**South Pole Qui**	**72.66**	**180**	P	**P**	**07 03 52.0**	**-2.1**
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**07 04 32.7**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=224,slow=8.7,SNR=4.8 comp=Z,0.7nm,0.8s						
MAW	**Mawson**	**84.24**	**200**	P	**P**	**07 04 54.4**	**-1.2**
	comp=Z,16nm,1.0s,baz=84,slow=9.2,SNR=2.1 comp=Z,16nm,1.0s						
ILAR	**Eielson Array**	**85.46**	**13**	P	**P**	**07 05 01.7**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=234,slow=4.7,SNR=5.3 comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**85.97**	**58**	P	**P**	**07 05 05.5**	**+0.5**
	comp=Z,1.2nm,1.0s,baz=203,slow=6.6,SNR=7.7 comp=Z,1.2nm,1.0s						
PDAR	**Pinedale Array**	**87.19**	**44**	P	**P**	**07 05 11.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=236,slow=4.1,SNR=4.6 comp=Z,0.4nm,0.6s						
TIXI	**Tiksi**	**95.59**	**345**	P	**P**	**07 05 47.6**	**-0.6**

NEIC ***04*** *06:57:37.7±2.1, 48°.64N±0°.02×123°.15W±0°.02, h19km±2km, Error ellipse: s-maj=2.8km s-min=1.4km az=153.0*

PNSN ***04*** *06:57:38.4, 48°.63N×123°.12W, h13km, MD3.1, Fault plane solution: NP1:φs140.00000°, δ70.00000°, λ-50.00000°.*

SEA ***04*** *06:57:38.4±2.1, 48°.633N±0°.010×123°.12W±0°.01, h13km±3km, ML3.1/23, ML2.8(OTT), ML3.0/50(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=190.0*

PGC ***04*** *06:57:38.4±0.2, 48°.63N×123°.13W, h12km, ML3.2, ML2.8/21, 20km east of Sidney, Bc Vancouver Island, Canada Region*

ISC 04 06:57:37.5±0.8, 48°.64N±0°.02×123°.14W±0°.01, h18km±3km, n142, σ0§96/182, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UWFH	**University of**	**0.12**	**138**		**Pg**	**06 57 40.8**	**-0.5**
UWFH					**Sg**	**06 57 43.0**	**-1.0**
SNB	**Saturna Island**	**0.14**	**351**		**Pg**	**06 57 41.9**	**+0.3**
SNB					**Sg**	**06 57 44.7**	**+0.2**
SNB	**Saturna Island**	**0.14**	**351**	P	**Pg**	**06 57 41.9**	**+0.3**
SNB				S	**Sg**	**06 57 44.7**	**+0.2**
B011	**North Saanich**	**0.21**	**274**		**Pg**	**06 57 42.7**	**+0.2**
B011					**Sg**	**06 57 46.0**	**+0.1**
B011	**North Saanich**	**0.21**	**274**	P	**Pg**	**06 57 42.7**	**+0.2**
B011				S	**Sg**	**06 57 46.0**	**+0.1**
PA01	**PA01 North**	**0.21**	**275**	P	**Pg**	**06 57 42.7**	**+0.3**
PA01				S	**Sg**	**06 57 46.1**	**+0.2**
MCW	**Mount Constitu**	**0.21**	**78**		**Pb**	**06 57 42.3**	**-0.2**
MCW	**Mount Constitu**	**0.21**	**78**	P	**Pb**	**06 57 42.3**	**-0.2**
B009	**North Saanich**	**0.21**	**273**	P	**Pg**	**06 57 42.7**	**+0.2**
B009				S	**Sg**	**06 57 46.1**	**+0.1**
B010	**North Saanich**	**0.21**	**274**	P	**Pg**	**06 57 42.7**	**+0.2**
B010				S	**Sg**	**06 57 46.1**	**+0.2**
PGC	**Sidney**	**0.21**	**274**		**Pg**	**06 57 42.7**	**+0.2**
PGC				Sg	**Sg**	**06 57 46.1**	**+0.2**
PGC				IAML		06 57 46.3	
	comp=E,4μm,0.3s						
PGC	**Sidney**	**0.21**	**274**	P	**Pg**	**06 57 42.7**	**+0.2**
PGC				S	**Sg**	**06 57 46.1**	**+0.2**
VGZ	**Gonzales**	**0.26**	**209**		**Pb**	**06 57 43.1**	**-0.3**
VGZ					**Sb**	**06 57 46.7**	**-0.7**
VGZ	**Gonzales**	**0.26**	**209**	P	**Pb**	**06 57 43.1**	**-0.3**
VGZ				S	**Sb**	**06 57 46.7**	**-0.7**
ERW	**Mount Erie**	**0.39**	**118**		**Pg**	**06 57 45.3**	**-0.2**
ERW					**Sg**	**06 57 51.1**	**+0.2**
GOBB	**Galiano Island**	**0.40**	**322**		**Pb**	**06 57 46.1**	**0.0**
GOBB					**Sb**	**06 57 52.3**	**+0.5**
GOBB	**Galiano Island**	**0.40**	**322**	P	**Pb**	**06 57 46.0**	**0.0**
GOBB				S	**Sg**	**06 57 51.5**	**+0.2**
SYMB	**Survey Mountai**	**0.45**	**260**		**Pg**	**06 57 46.4**	**-0.1**
SYMB	**Survey Mountai**	**0.45**	**260**	P	**Pg**	**06 57 46.4**	**-0.1**
SYMB				S	**Sg**	**06 57 52.5**	**-0.2**
SVOH	**Skagit Valley**	**0.48**	**136**		**Pg**	**06 57 46.9**	**-0.3**
SVOH					**Sg**	**06 57 54.0**	**+0.2**
SVOH	**Skagit Valley**	**0.48**	**136**	P	**Pg**	**06 57 46.9**	**-0.3**
SQM	**Sequim**	**0.57**	**174**		**Pb**	**06 57 48.7**	**-0.1**
SQM					**Sg**	**06 57 57.3**	**+1.0**
STW	**Striped Peak**	**0.60**	**216**		**Pb**	**06 57 49.1**	**-0.3**
STW					**Sb**	**06 57 57.5**	**0.0**
STW	**Striped Peak**	**0.60**	**216**	P	**Pb**	**06 57 49.1**	**-0.3**
B04A	**Port Angeles**	**0.63**	**203**		**Pb**	**06 57 49.4**	**-0.5**
BLN	**Blyn Mountain**	**0.64**	**170**		**Pb**	**06 57 49.6**	**-0.5**
B926	**Mesachie Lake**	**0.68**	**286**		**Pb**	**06 57 50.2**	**-0.6**
B926	**Mesachie Lake**	**0.68**	**286**	P	**Pb**	**06 57 50.2**	**-0.6**
B926				S	**Sb**	**06 57 59.4**	**-0.6**
CLRS	**Cowichan Lake**	**0.68**	**286**		**Pb**	**06 57 50.3**	**-0.5**
CLRS				Sg	**Sb**	**06 57 59.5**	**-0.4**
CLRS				IAML		06 58 00.2	
	comp=N,699nm,0.2s						
CLRS				IAML		06 58 00.3	
	comp=E,912nm,0.3s						
CLRS	**Cowichan Lake**	**0.68**	**286**	P	**Pb**	**06 57 50.3**	**-0.5**
CLRS				S	**Sb**	**06 57 59.4**	**-0.5**
HNBB	**Haney**	**0.75**	**30**		**Pb**	**06 57 51.4**	**-0.6**
HNBB	**Haney**	**0.75**	**30**	P	**Pb**	**06 57 51.4**	**-0.6**
HNBB				S	**Sb**	**06 58 01.2**	**-0.7**
SWID	**South Whidbey**	**0.79**	**142**		**Pb**	**06 57 52.8**	**+0.1**
SWID					**Sg**	**06 58 04.1**	**+0.7**
NLLB	**Nanaimo Lost L**	**0.81**	**317**		**Pb**	**06 57 52.5**	**-0.6**
NLLB	**Nanaimo Lost L**	**0.81**	**317**	P	**Pb**	**06 57 52.5**	**-0.6**
NLLB				S	**Sb**	**06 58 03.5**	**-0.3**
MBW	**Mount Baker**	**0.83**	**79**		**Pb**	**06 57 53.2**	**-0.3**
MBW	**Mount Baker**	**0.83**	**79**	P	**Pb**	**06 57 53.2**	**-0.3**
B013	**Quilcene**	**0.84**	**169**		**Pb**	**06 57 52.6**	**-0.9**
B013	**Quilcene**	**0.84**	**169**		**Pb**	**06 57 52.6**	**-0.9**
B013					**Sb**	**06 58 04.2**	**-0.1**
PTRF	**Port Renfrew**	**0.85**	**264**		**Pb**	**06 57 53.0**	**-0.7**
PTRF	**Port Renfrew**	**0.85**	**264**	P	**Pb**	**06 57 53.0**	**-0.7**
PTRF				S	**Sb**	**06 58 04.1**	**-0.7**
OBC	**Olympics--Boni**	**0.87**	**227**		**Pb**	**06 57 53.8**	**-0.2**
OBC	**Olympics--Boni**	**0.87**	**227**	P	**Pb**	**06 57 53.8**	**-0.2**
OSD	**Olympics--Snow**	**0.90**	**205**		**Pb**	**06 57 54.2**	**-0.4**
OSD	**Olympics--Snow**	**0.90**	**205**	P	**Pb**	**06 57 54.2**	**-0.4**
JCW	**Jim Creek**	**0.92**	**118**		**Pb**	**06 57 54.1**	**-0.7**
JCW	**Jim Creek**	**0.92**	**118**	P	**Pb**	**06 57 54.1**	**-0.7**
C04A	**Brinnon**	**0.93**	**173**		**Pb**	**06 57 54.0**	**-1.0**
SHUK	**Shuksan-Mt. Ba**	**0.99**	**77**		**Pb**	**06 57 55.6**	**-0.6**
OCP	**Olym-Cheeka Pk**	**1.05**	**252**		**Pb**	**06 57 56.5**	**-0.6**
OCP	**Olym-Cheeka Pk**	**1.05**	**252**	P	**Pb**	**06 57 56.4**	**-0.6**
BLH	**Bald Hill**	**1.09**	**137**		**Pn**	**06 57 57.6**	**-0.2**
GNW	**Green Mountain**	**1.09**	**169**		**Pn**	**06 57 56.6**	**-1.2**
GNW				Sg	**Sb**	**06 58 10.9**	**-0.8**
GNW	**Green Mountain**	**1.09**	**169**	P	**Pn**	**06 57 56.7**	**-1.2**
GNW				S	**Sb**	**06 58 10.7**	**-1.0**
RPW	**Rockport**	**1.09**	**99**		**Pn**	**06 57 57.4**	**-0.6**
RPW	**Rockport**	**1.09**	**99**	P	**Pn**	**06 57 57.4**	**-0.6**
GMW	**Gold Mountain**	**1.11**	**168**		**Pn**	**06 57 57.0**	**-1.1**
OLQ	**Olympics--Lake**	**1.21**	**202**		**Pb**	**06 57 59.9**	**+0.1**
SP2	**Seward Park 2**	**1.23**	**151**		**Pb**	**06 58 00.4**	**+0.2**
B927	**Port Alberni**	**1.25**	**298**		**Pn**	**06 57 59.8**	**-0.3**
B927	**Port Alberni**	**1.25**	**298**	P	**Pn**	**06 57 59.7**	**-0.3**
B927				S	**Sb**	**06 58 15.7**	**-0.5**
B928	**Bamfield**	**1.34**	**279**		**Pn**	**06 58 01.1**	**0.0**
B928	**Bamfield**	**1.34**	**279**	P	**Pn**	**06 58 00.9**	**-0.3**
B928				S	**Sn**	**06 58 17.7**	**-0.7**
BFSB	**Bamfield**	**1.34**	**279**		**Pn**	**06 58 01.4**	**+0.2**
BFSB	**Bamfield**	**1.34**	**279**	P	**Pn**	**06 58 00.9**	**-0.3**
BFSB				S	**Sn**	**06 58 17.7**	**-0.8**
NLWA	**Neilton Lookou**	**1.34**	**202**		**Pb**	**06 58 02.3**	**+0.3**
NLWA				IAML		06 58 26.0	
	comp=E,232nm,0.8s						
NLWA				IAML		06 58 26.9	
	comp=E,211nm,0.7s						
C05A	**Tolt Reservoir**	**1.35**	**134**		**Pn**	**06 58 01.4**	**0.0**
C05A	**Tolt Reservoir**	**1.35**	**134**	P	**Pn**	**06 58 01.4**	**0.0**
C05A				S	**Sn**	**06 58 18.6**	**-0.4**
HOPB	**Hope**	**1.36**	**56**		**Pn**	**06 58 01.4**	**-0.1**
HOPB	**Hope**	**1.36**	**56**	P	**Pn**	**06 58 01.3**	**-0.1**
HOPB				S	**Sn**	**06 58 18.3**	**-0.7**
RATT	**Rattlesnake La**	**1.51**	**143**		**Pn**	**06 58 03.7**	**+0.1**
WISH	**Wishkah**	**1.58**	**196**		**Pn**	**06 58 04.8**	**+0.2**
WISH	**Wishkah**	**1.58**	**196**	P	**Pb**	**06 58 05.8**	**-0.3**
OZB	**Mount Ozzard**	**1.59**	**283**		**Pb**	**06 58 05.6**	**-0.8**
OZB				IAML		06 58 29.6	
	comp=E,180nm,0.5s						
OZB	**Mount Ozzard**	**1.59**	**283**	P	**Pb**	**06 58 05.5**	**-0.8**
OZB				S	**Sb**	**06 58 26.1**	**0.0**
B012	**Ucluelet**	**1.62**	**281**		**Pb**	**06 58 06.9**	**+0.2**
B012	**Ucluelet**	**1.62**	**281**	P	**Pb**	**06 58 06.4**	**-0.3**
B012				S	**Sb**	**06 58 26.9**	**+0.1**
D05A	**Enumclaw**	**1.64**	**152**		**Pn**	**06 58 06.3**	**+0.8**
D05A				IAML		06 58 32.9	
	comp=N,217nm,0.6s						
D05A	**Enumclaw**	**1.64**	**152**	P	**Pn**	**06 58 05.9**	**+0.5**
D05A				S	**Sb**	**06 58 27.9**	**+0.4**
CPW	**Capitol Peak**	**1.66**	**180**	P	**Pn**	**06 58 06.5**	**+0.8**
B017	**Montesano**	**1.67**	**190**		**Pb**	**06 58 07.4**	**-0.2**
WRW	**Wenatchee Ridg**	**1.70**	**117**		**Pn**	**06 58 07.2**	**+0.9**
GHW	**Garrison Hill**	**1.70**	**160**		**Pn**	**06 58 06.8**	**+0.6**
B941	**Kapowsin**	**1.76**	**159**		**Pn**	**06 58 07.3**	**+0.2**
RVC	**Mount Rainier-**	**1.87**	**155**		**Pn**	**06 58 09.6**	**+1.0**
NLW	**Nelson Butte**	**1.95**	**106**		**Pn**	**06 58 11.1**	**+1.3**
OBSR	**Observation Ro**	**1.95**	**152**		**Pn**	**06 58 11.3**	**+1.3**
FMW	**Mount Fremont**	**1.97**	**149**		**Pn**	**06 58 11.2**	**+1.1**
FMW	**Mount Fremont**	**1.97**	**149**	P	**Pn**	**06 58 10.8**	**+0.7**
LCW	**Lucas Creek**	**1.99**	**171**		**Pn**	**06 58 11.7**	**+1.5**
B019	**Raymond**	**2.02**	**190**		**Pn**	**06 58 12.1**	**+1.6**
REMR	**Mount Rainier-**	**2.02**	**154**		**Pn**	**06 58 11.9**	**+1.2**
SR41	**SR410 Landslid**	**2.06**	**148**		**Pn**	**06 58 12.6**	**+1.4**
SPLB	**Strathcona Par**	**2.07**	**308**	P	**Pb**	**06 58 12.9**	**-1.6**
LON	**Longmire**	**2.09**	**154**		**Pn**	**06 58 13.2**	**+1.5**
LON	**Longmire**	**2.09**	**154**		**Pn**	**06 58 12.8**	**+1.2**
LON				IAML		06 58 44.2	
	comp=N,65nm,0.4s						
LON				IAML		06 58 44.3	
	comp=E,81nm,0.5s						
LON	**Longmire**	**2.09**	**154**	P	**Pn**	**06 58 12.6**	**+0.9**
LON				S	**Sn**	**06 58 38.7**	**+1.5**
E03A	**Lebam**	**2.11**	**188**		**Pn**	**06 58 12.8**	**+1.0**
E03A	**Lebam**	**2.11**	**188**	P	**Pn**	**06 58 12.9**	**+1.0**
LLLB	**Lillooet**	**2.14**	**22**	P	**Pn**	**06 58 13.2**	**+0.9**
LLLB				S	**Sb**	**06 58 40.6**	**-1.3**
LTY	**Liberty**	**2.16**	**129**		**Pn**	**06 58 14.1**	**+1.5**
LTY				IAML		06 58 45.2	
	comp=E,127nm,0.3s						
LTY	**Liberty**	**2.16**	**129**	P	**Pn**	**06 58 14.4**	**+1.8**
BMW	**Boistfort Moun**	**2.16**	**182**		**Pn**	**06 58 14.2**	**+1.5**
CBSW	**Chelan Butte S**	**2.23**	**111**		**Pn**	**06 58 15.2**	**+1.6**
TBM	**Table Mountain**	**2.25**	**130**		**Pb**	**06 58 16.7**	**-1.0**
RADR	**Rader Ridge**	**2.26**	**192**	Pn	**Pn**	**06 58 15.1**	**+1.2**
RADR				IAML		06 58 38.2	
	comp=E,74nm,1.8s						
RADR				IAML		06 59 05.0	
	comp=N,67nm,1.6s						
KOSW	**Kosmos**	**2.27**	**163**		**Pb**	**06 58 16.3**	**-1.6**
WTV	**Waterville**	**2.33**	**113**		**Pn**	**06 58 16.3**	**+1.4**
DHW2	**Dyer Hill 2**	**2.34**	**105**		**Pn**	**06 58 17.0**	**+1.9**
TDL	**Tradedollar La**	**2.37**	**164**		**Pn**	**06 58 17.5**	**+2.0**
ERK	**Elk Rock**	**2.39**	**167**		**Pn**	**06 58 18.0**	**+2.2**
B201	**Coldwater, Mou**	**2.41**	**165**		**Pn**	**06 58 18.2**	**+2.2**
PNT	**Penticton**	**2.42**	**72**		**Pn**	**06 58 17.5**	**+1.4**
PNT	**Penticton**	**2.42**	**72**	P	**Pn**	**06 58 17.3**	**+1.2**
PNT				S	**Sn**	**06 58 46.6**	**+1.3**
EBG	**Ellensburg**	**2.45**	**134**		**Pb**	**06 58 19.8**	**-1.6**
NAC	**Naches**	**2.46**	**140**		**Pb**	**06 58 20.0**	**-1.2**
FL2	**Flat Top 2**	**2.50**	**167**		**Pn**	**06 58 19.5**	**+2.2**
RVW	**Rose Valley**	**2.50**	**174**		**Pn**	**06 58 19.4**	**+2.1**
SHW	**Mount Saint He**	**2.52**	**166**		**Pb**	**06 58 20.4**	**-1.9**
B023	**Clatskanie**	**2.53**	**179**		**Pn**	**06 58 19.2**	**+1.6**
B203	**Quarry, Mount**	**2.53**	**167**		**Pn**	**06 58 19.9**	**+2.3**
ESD	**East Dome**	**2.53**	**164**		**Pb**	**06 58 21.3**	**-1.1**
B08A	**Colville Reser**	**2.55**	**95**		**Pn**	**06 58 17.7**	**-0.2**
B08A				IAML		06 59 05.8	
	comp=N,54nm,1.6s						
F04D	**Rainier, OR**	**2.56**	**178**		**Pn**	**06 58 17.8**	**-0.2**
F04D				IAML		06 59 04.1	
	comp=N,105nm,0.5s						
NCSB	**Newcastle Ridg**	**2.60**	**314**	P	**Pn**	**06 58 20.7**	**+2.1**
CDFW	**Cedar Flats**	**2.63**	**163**		**Pn**	**06 58 21.7**	**+2.6**
WOSB	**Woss**	**2.71**	**306**	P	**Pn**	**06 58 22.1**	**+1.9**
F04A	**Amboy**	**2.75**	**169**		**Pn**	**06 58 20.4**	**-0.2**
F04A				IAML		06 59 05.3	
	comp=N,69nm,0.9s						
E07A	**Sunnyside**	**3.04**	**132**	Pn	**Pn**	**06 58 25.5**	**+0.8**
D08A	**Wollman Farm,**	**3.25**	**118**	Pn	**Pn**	**06 58 29.1**	**+1.6**
D08A				IAML		06 59 21.4	
	comp=N,25nm,0.6s						
HAWA	**Hanford**	**3.32**	**131**	Pn	**Pn**	**06 58 30.5**	**+2.0**
HAWA				IAML		06 59 20.0	
	comp=N,33nm,0.5s						
HAWA				IAML		06 59 21.9	
	comp=N,34nm,0.7s						
C09A	**Chrisman Ranch**	**3.36**	**103**	Pn	**Pn**	**06 58 30.5**	**+1.4**
C09A	**Chrisman Ranch**	**3.36**	**103**	P	**Pn**	**06 58 30.4**	**+1.4**
G03D	**McMinnville, O**	**3.43**	**181**	Pn	**Pn**	**06 58 31.8**	**+1.9**
G03D				IAML		06 59 41.7	
	comp=N,28nm,2.3s						
G03D				IAML		06 59 45.8	
	comp=E,28nm,2.4s						
HEBO	**Mount Hebo**	**3.45**	**187**	Pn	**Pn**	**06 58 31.6**	**+1.3**
HEBO				IAML		06 59 53.7	
	comp=N,48nm,1.9s						
PHC	**Port Hardy**	**3.47**	**308**	P	**Pb**	**06 58 36.4**	**-2.0**
G06A	**Carlson Farm,**	**3.81**	**152**	Pn	**Pn**	**06 58 35.3**	**0.0**
NEW	**Newport**	**4.02**	**93**		**Pn**	**06 58 38.0**	**-0.2**
NEW				IAML		06 59 55.7	
	comp=N,15nm,3.6s						
NEW				IAML		07 00 13.5	
	comp=N,13nm,4.9s						
COR	**Corvallis**	**4.05**	**182**	Pn	**Pn**	**06 58 38.9**	**+0.3**
COR				IAML		06 59 17.3	
	comp=N,20nm,3.6s						
COR				IAML		07 00 52.8	
	comp=N,24nm,4.3s						
I04A	**Tendick Farm,**	**4.87**	**174**	Pn	**Pn**	**06 58 49.9**	**+0.1**
I04A				IAML		07 00 14.7	
	comp=N,9.9nm,4.6s						
I04A				IAML		07 00 54.4	
	comp=E,12nm,4.3s						
BSMT	**Bassoo Peak**	**5.63**	**95**	P	**Pn**	**06 59 01.8**	**+1.3**
FSJB	**Fort St James**	**5.88**	**353**	P	**Pn**	**06 59 05.8**	**+2.2**

IDC 04 07:15:27.9±7.6, 19°.26S×178°.08W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=329.2km s-min=41.6km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.71**	**261**	P	P	07 23 43.1	0.0
	0.2nm,0.3s,baz=95,slow=8.5,SNR=11 0.2nm,0.3s						
ASAR	**Alice Springs**	**44.74**	**256**	P	P	07 23 43.1	-0.3
	0.8nm,0.8s,baz=92,slow=8.1,SNR=10 0.8nm,0.8s						
ILAR	**Eielson Array**	**87.13**	**13**	P	P	07 28 15.2	0.0
	0.1nm,0.6s,baz=213,slow=5.7,SNR=1.4 0.1nm,0.6s						

SJA ***04*** *07:37:10.5±0.7, 24°.05S×66°.85W, h213km±4km, ML3.4, MW3.6*

GUC ***04*** *07:37:12.4±0.7, 24°.00S×67°.26W, h223km±11km, ML3.6*

IDC ***04*** *07:37:15.8±4.6, 23°.94S×66°.45W, h218km±46km, mb2.8/2, mbtmp3.5/5, Error ellipse: s-maj=41.7km s-min=23.3km az=138.0*

ISC 04 07:37:11.6±0.8, 24°.02S±0°.03×66°.89W±0°.04, h209km±8km, n41, σ1§76/73, 4C, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.45**	**119**	*eP*	**Pn**	**07 37 45.4**	**-0.4**
S

TA01				IAML			07 39 18.4	
	comp=Z,27nm,0.6s							
GO03	**Copiap**	**4.67**	**220**	*eP*	**Pn**		**07 38 21.1**	**-1.0**
GO03				*eS*	**S**		**07 39 14.1**	**-3.2**
GO01	**Chusmiza**	**4.83**	**333**	*eP*	**Pn**		**07 38 25.4**	**+0.8**
GO01				*eS*	**S**		**07 39 22.1**	**+0.4**
VCA	**Vinchina**	**4.85**	**194**	*eP*	**Pn**		**07 38 24.8**	**+0.4**
VCA				*eS*	**S**		**07 39 29.3**	**+7.7**
VCA				IAML			07 40 07.4	
	comp=Z,11nm,2.2s							
PB11	**IPOC Station P**	**4.95**	**328**	*eP*	**Pn**		**07 38 24.8**	**-1.1**
PB11				*eS*	**S**		**07 39 21.3**	**-2.8**
PB11				IAML			07 39 22.2	
	comp=Z,35nm,0.7s							
ACLC	**CERRO LA CRUZ**	**5.39**	**181**	*eP*	**Pn**		**07 38 30.4**	**-0.9**
ACLC				*eS*	**S**		**07 39 30.9**	**-3.2**
CPUP	**Villa Florida**	**8.96**	**107**	P	**Pn**		**07 39 15.7**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=252,slow=3.2,SNR=3.2							
PLCA	**Paso Flores**	**16.95**	**190**	P	**Pn**		**07 41 00.9**	**+4.1**
	comp=Z,1.0nm,0.7s,baz=354,slow=11,SNR=5.7							
BDFB	**Brasilia**	**19.60**	**68**	P	**P**		**07 41 24.3**	**0.0**
	comp=Z,3.7nm,0.7s,baz=242,slow=11,SNR=6.5							
TXAR	**Lajitas Array**	**63.75**	**324**	P	P		07 47 25.5	+4.1
	comp=Z,0.1nm,0.4s,baz=106,slow=5.7,SNR=1.3							
	comp=Z,0.1nm,0.4s							
TORD	**Torodi Ar. Bea**	**76.48**	**69**	P	**P**		**07 48 39.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=256,slow=4.3,SNR=4.4							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**146.47**	**40**	PKPbc	**PKiKP**		**07 56 29.8**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=294,slow=3.6,SNR=4.2							

*IDC **04** 07:37:22.6±1.8,1˚.48S×127˚.86E, h0km, mb3.6/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=155.5km s-min=22.7km az=67.0*
*DJA **04** 07:37:26.3±0.4,2˚S±4˚×12˚7E±˚, h10km, M3.9/7, mb4.0/3, MLv3.8/7*

ISC 04 07:37:27.4±1.0,1˚97S±0˚.07×126˚.77E±0˚.06, h25km, n9, σ0§75/10, mb3.8/3, Southern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**0.78**	**264**	P	**Pb**	**07 37 41.1**	**-1.3**
SANI				S	**Sb**	**07 37 52.8**	**+0.2**
NLAI	**Namlea**	**1.31**	**165**	P	**Pn**	**07 37 50.6**	**+0.5**
LBMI	**Labuha**	**1.51**	**29**	P	**Pb**	**07 37 53.9**	**-0.9**
KMSI	**Cibinong**	**3.76**	**312**	P	**Pn**	**07 38 24.4**	**+0.6**
LUWI	**Luwuk**	**4.10**	**283**	P	**Pn**	**07 38 29.3**	**+0.8**
WRA	**Warramunga Arr**	**19.34**	**158**	P	**P**	**07 41 51.1**	**-0.1**
	0.2nm,0.3s,baz=340,slow=12,SNR=8.9						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**22.65**	**163**	P	**P**	**07 42 27.1**	**+0.2**
	0.8nm,0.7s,baz=342,slow=10,SNR=12						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**62.28**	**327**	P	**P**	**07 47 47.8**	**+0.4**
	0.4nm,0.5s,baz=112,slow=7.8,SNR=9.2						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**66.56**	**329**	P	**P**	**07 48 15.4**	**+0.1**
	0.5nm,0.4s,baz=135,slow=6.4,SNR=1.7						
	0.5nm,0.4s						

IDC 04 07:56:48.2±5.2, 45˚64S×121˚.94E, h0km, mb3.3/2, mbtmp3.4/2, Error ellipse: s-maj=628.7km s-min=81.9km az=114.0, South of Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**12.26**	**328**	T	T	08 10 47.5	
	baz=154,slow=73,SNR=10						
H01W2	**Cape Leeuwin H**	**12.26**	**328**	T	T	08 10 49.0	
	baz=154,slow=73,SNR=9.6						
H01W3	**Cape Leeuwin H**	**12.27**	**328**	T	T	08 10 50.4	
	baz=154,slow=73,SNR=10						
ASAR	**Alice Springs**	**23.97**	**28**	P	P	08 02 04.5	+0.2
	0.5nm,0.8s,baz=198,slow=9.0,SNR=7.2						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**27.59**	**26**	P	P	08 02 37.0	-0.2
	0.6nm,0.9s,baz=196,slow=8.3,SNR=2.3						
	0.6nm,0.9s						
YKA	**Yellowknife Ar**	**144.16**	**41**	PKP	PKPdf	08 16 24.1	-0.6
	0.4nm,0.7s,baz=284,slow=3.5,SNR=8.1						

*IDC **04** 08:05:47.7±0.8,21˚.74N×142˚.98E, h0km, mb3.6/11, mbtmp3.6/11, MS3.3/2, Error ellipse: s-maj=31.8km s-min=18.3km az=81.0*

ISC 04 08:06:20.4±0.8,21˚.6N±0˚.1×142˚.6E±0˚.2, h300km, n18, σ1§51/11, mb3.1/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**21.90**	**231**	LR	LR	08 17 46.7	
	comp=Z,40nm,21.9s,baz=175,slow=32						
H11N1	**WAKE ISLAND Hy**	**22.79**	**90**	T	T	08 33 50.3	
	baz=276,slow=74						
H11N2	**WAKE ISLAND Hy**	**22.80**	**90**	T	T	08 34 03.4	
	baz=276,slow=74						
H11N3	**WAKE ISLAND Hy**	**22.81**	**90**	T	T	08 33 58.0	
	baz=276						
H11S3	**WAKE ISLAND Hy**	**22.82**	**94**	T	T	08 34 00.7	
	baz=282,slow=75,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**22.83**	**93**	T	T	08 33 47.9	
	baz=282,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**22.84**	**94**	T	T	08 33 52.1	
	baz=282,slow=75,SNR=7.3						
SONM	**Songino Array**	**39.07**	**321**	P	**P**	**08 13 18.5**	**-0.5**
	0.6nm,0.7s,baz=133,slow=6.1,SNR=4.2						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**42.08**	**192**	P	**P**	**08 13 42.8**	**-0.9**
	1.2nm,1.0s,baz=13,slow=7.9,SNR=4.1						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**45.79**	**191**	P	**P**	**08 14 13.0**	**0.0**
	0.6nm,0.7s,baz=15,slow=9.3,SNR=12						
	0.6nm,0.7s						
STKA	**Stephens Creek**	**53.19**	**181**	P	**P**	**08 15 08.3**	**0.0**
	0.7nm,0.7s,baz=356,slow=13,SNR=1.5						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**53.95**	**322**	P	**P**	**08 15 13.9**	**+0.3**
	0.4nm,0.3s,baz=112,slow=6.7,SNR=2.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**54.37**	**313**	P	**P**	**08 15 17.0**	**+0.3**
	0.4nm,0.6s,baz=92,slow=9.1,SNR=6.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**57.23**	**317**	P	**P**	**08 15 38.1**	**+1.4**
	1.2nm,0.8s,baz=94,slow=7.5,SNR=11						
	1.2nm,0.8s						
ILAR	**Eielson Array**	**62.36**	**27**	P	**P**	**08 16 08.7**	**-2.6**
	0.4nm,0.9s,baz=258,slow=4.5,SNR=2.6						
	0.4nm,0.9s						
BVAR	**Borovoye Array**	**62.39**	**320**	P	**P**	**08 16 12.6**	**+0.9**
	1.6nm,0.6s,baz=94,slow=8.6,SNR=11						
	1.6nm,0.6s						
YKA	**Yellowknife Ar**	**76.78**	**28**	P	**P**	**08 17 38.6**	**-0.3**
	0.2nm,0.6s,baz=290,slow=5.9,SNR=3.2						
YKA				LR	LR	08 50 26.0	
	comp=Z,31nm,19.9s,baz=303,slow=35						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**83.61**	**51**	P	**P**	**08 18 18.7**	**+2.7**
	0.3nm,0.6s,baz=260,slow=4.4,SNR=4.2						
	0.3nm,0.6s						

*NOU **04** 08:09:15.8, 30˚.74S×174˚.62W, h50km, mb5.0/12, Kermadec Islands Region*
*IDC **04** 08:10:06.8±0.5, 33˚.00S×179˚.11W, h0km, mb4.6/8, mbtmp4.6/10, ML4.8/2, MS3.5/9, Error ellipse: s-maj=20.3km s-min=20.2km az=113.0*
*NEIC **04** 08:10:14±1.4, 33˚.45S±0˚.04×179˚.2W±0˚.1, h41km±7km, mb4.7/22, Error ellipse: s-maj=13.6km s-min=4.9km az=74.0*

ISC 04 08:10:13.4±0.4, 33˚32S±0˚.06×179˚.11W±0˚.09, h48km, n120, σ2§31/110, mb4.7/19, MS3.6/8, 3C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.18**	**14**	Pn	**Pn**	**08 11 16.5**	**+1.8**
RAO	**Raoul Island**	**4.18**	**14**	Pn	Pn	08 11 08.5	-6.2
	82nm,0.3s,baz=213,slow=18,SNR=1.9						
RAO				Sn	**Sn**	**08 11 55.4**	**-6.9**
	87nm,0.3s,baz=53,slow=20,SNR=1.7						
RAO				LR	LR	08 12 38.0	
	comp=Z,352nm,19.2s,baz=116,slow=39						
	146nm,0.3s						
MXZ	**Matakaoa Point**	**4.73**	**206**		**Pn**	**08 11 20.9**	**-1.3**
MXZ	**Matakaoa Point**	**4.73**	**206**	P	**Pn**	**08 11 24.1**	**+2.0**
KUZ	**Kuaotunu**	**5.44**	**230**	P	**Pn**	**08 11 36.6**	**+4.6**
URZ	**Urewera**	**5.80**	**211**	P	**Pn**	**08 11 37.5**	**+0.6**
URZ	**Urewera**	**5.80**	**211**	Pn	**Pn**	**08 11 37.1**	**+0.2**
	19nm,0.3s,baz=11,slow=1.3,SNR=73						
URZ				Sn	**Sn**	**08 12 43.6**	**+1.5**
	21nm,0.3s,baz=64,slow=23,SNR=9.4						
	36nm,0.3s						
RTZ	**Tuatahuna**	**6.16**	**210**		**Pn**	**08 11 40.8**	**-1.1**
TOZ	**Tarua Road**	**6.22**	**223**		**Pn**	**08 11 41.7**	**-0.8**
OUZ	**Omahuta**	**6.33**	**251**	P	**Pn**	**08 11 48.5**	**+4.4**
BKZ	**Black Stump Fm**	**6.83**	**210**		**Pn**	**08 11 50.2**	**-0.8**
BKZ	**Black Stump Fm**	**6.83**	**210**	P	**Pn**	**08 11 51.4**	**+0.4**
HIZ	**Hauiti**	**7.13**	**222**		**Pn**	**08 11 55.0**	**-0.1**
HIZ	**Hauiti**	**7.13**	**222**	P	**Pn**	**08 11 59.5**	**+4.5**
WPHZ	**Waipukurau**	**7.62**	**207**	P	**Sn**	**08 13 27.0**	**+0.3**
DVHZ	**Dannevirke**	**7.93**	**207**	P	**Sn**	**08 13 30.8**	**-3.5**
ANWZ	**Angora Road**	**7.95**	**205**	P	**Sn**	**08 13 34.2**	**-0.7**
KHEZ	**Kahui Hut**	**8.14**	**221**	P	**Pn**	**08 12 12.3**	**+3.3**
POWZ	**Post Office Ro**	**8.16**	**209**	P	**Sn**	**08 13 37.8**	**-2.3**
PRWZ	**Pori Road**	**8.22**	**207**	P	**Sn**	**08 13 37.5**	**-4.1**
BFZ	**Birch Farm**	**8.23**	**205**	Pn	**Pn**	**08 12 09.3**	**-0.8**
BFZ	**Birch Farm**	**8.23**	**205**	P	**Pn**	**08 12 09.2**	**-1.0**
BFZ	**Birch Farm**	**8.23**	**205**	P	**Sn**	**08 13 37.3**	**-4.5**
TIWZ	**Tintock**	**8.45**	**207**	P	**Sn**	**08 13 41.6**	**-5.5**
CPWZ	**Castlepoint**	**8.45**	**205**	P	**Sn**	**08 13 44.1**	**-3.0**
MRZ	**Mangatainoka R**	**8.47**	**209**	Pn	**Pn**	**08 12 11.8**	**-1.6**
MRZ	**Mangatainoka R**	**8.47**	**209**	P	**Sn**	**08 13 43.5**	**-4.0**
HOWZ	**Holdsworth Sta**	**8.69**	**208**	P	**Sn**	**08 13 47.4**	**-5.7**
TMWZ	**Te Maipa**	**8.73**	**206**	P	**Sn**	**08 13 48.6**	**-5.5**
KIW	**Kapiti Island**	**8.91**	**211**	P	**Sn**	**08 13 52.8**	**-5.7**
MTW	**Mount Morrison**	**8.92**	**207**	P	**Sn**	**08 13 50.1**	**-8.7**
PLWZ	**Palliser**	**9.37**	**207**	Pn	**Pn**	**08 12 23.4**	**-2.5**
BHW	**Baring Head**	**9.38**	**209**	Pn	**Pn**	**08 12 22.7**	**-3.3**
QRZ	**Quartz Range**	**10.03**	**219**	P	**Pn**	**08 12 38.0**	**+3.2**
RPZ	**Rata Peaks**	**12.91**	**214**	P	**Pn**	**08 13 12.8**	**-1.4**
RPZ	**Rata Peaks**	**12.91**	**214**	Pn	Pn	08 13 08.9	-5.2
	1.9nm,0.3s,baz=44,slow=15,SNR=2.2						
RPZ				Sn	Sn	08 15 24.1	-12
	1.2nm,0.3s,baz=112,slow=22,SNR=8.6						
ODZ	**Otahua Downs**	**14.13**	**211**	P	**Pn**	**08 13 26.3**	**-4.4**
JCZ	**Jackson Bay**	**14.29**	**218**	P	**Pn**	**08 13 29.7**	**-3.2**
NIUE	**Niue**	**16.39**	**32**	Pn	**P**	**08 14 01.9**	**-0.5**
NIUE				IAmb	IAmb	08 14 18.0	
	comp=Z,51nm,0.9s						
DZM	**Mont Dzumac**	**16.99**	**308**	Pn	**P**	**08 14 09.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=158,slow=19,SNR=1.6						
DZM				LR	LR	08 19 10.4	
	comp=Z,360nm,19.3s,baz=204,slow=32						
RAR	**Rarotonga**	**20.96**	**60**	LR	LR	08 23 50.0	
	comp=Z,30nm,18.4s,baz=236,slow=40						
HNR	**Honiara**	**30.62**	**316**	LR	LR	08 25 52.3	
	comp=Z,991nm,20.6s,baz=278,slow=31						
STKA	**Stephens Creek**	**33.00**	**262**	LR	LR	08 28 04.2	
	comp=Z,136nm,20.2s,baz=32,slow=33						
CTA	**Charters Tower**	**33.47**	**284**	P	**P**	**08 16 48.2**	**+0.1**
	comp=Z,7.5nm,0.6s,baz=118,slow=9.8,SNR=15						
	comp=Z,7.5nm,0.6s						
CTAO	**Charters Tower**	**33.47**	**284**	P	**P**	**08 16 49.3**	**+1.2**
CTAO				IAmb	IAmb	08 16 53.5	
	comp=Z,8.8nm,0.7s						
BBOO	**Buckleboo**	**37.35**	**258**	P	**P**	**08 17 21.7**	**+0.3**
BBOO				IAmb	IAmb	08 17 38.7	
	comp=Z,9.0nm,1.1s						
PMG	**Port Moresby**	**39.12**	**300**	P	**P**	**08 17 37.9**	**+1.6**
PMG				IAmb	IAmb	08 17 38.5	
	comp=Z,16nm,0.8s						
PMG	**Port Moresby**	**39.12**	**300**	P	**P**	**08 17 35.6**	**-0.7**
	comp=Z,14nm,0.8s,baz=101,slow=5.2,SNR=3.6						
PMG				LR	LR	08 30 37.3	
	comp=Z,91nm,20.9s,baz=152,slow=32						
	comp=Z,14nm,0.8s						
COEN	**Coen**	**39.28**	**290**	P	**P**	**08 17 38.2**	**+0.5**
COEN				IAmb	IAmb	08 17 41.8	
	comp=Z,7.1nm,0.7s						
AS31	**Alice Springs**	**42.10**	**271**	P	**P**	**08 18 01.4**	**+0.4**
ASAR	**Alice Springs**	**42.10**	**271**	P	**P**	**08 18 01.4**	**+0.4**
ASAR	**Alice Springs**	**42.10**	**271**	P	**P**	**08 18 01.7**	**+0.7**
	comp=Z,5.8nm,0.4s,baz=107,slow=7.3,SNR=163						
ASAR				PcP	**PcP**	**08 19 53.1**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=108,slow=4.3,SNR=2.3						
ASAR				LR	LR	08 36 32.8	
	comp=Z,48nm,18.1s,baz=96,slow=38						
	comp=Z,5.8nm,0.4s						
WR0	**Warramunga Arr**	**43.18**	**276**	P	**P**	**08 18 10.4**	**+0.7**
WB2	**Warramunga Arr**	**43.35**	**276**	P	**P**	**08 18 11.8**	**+0.7**
WB2				IAmb	IAmb	08 18 13.0	
	comp=Z,10.0nm,0.8s						
WRA	**Warramunga Arr**	**43.36**	**276**	P	**P**	**08 18 11.0**	**-0.2**
WRA	**Warramunga Arr**	**43.36**	**276**	P	**P**	**08 18 11.5**	**+0.3**
	comp=Z,6.1nm,0.5s,baz=113,slow=8.0,SNR=58						
WRA				PcP	**PcP**	**08 19 57.8**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=120,slow=2.9,SNR=2.8						
	comp=Z,6.1nm,0.5s						
WB0	**Warramunga Arr**	**43.39**	**276**	P	**P**	**08 18 12.0**	**+0.5**
WB0				IAmb	IAmb	08 18 13.4	
	comp=Z,12nm,0.8s						
FORT	**Forrest**	**44.46**	**258**	P	**P**	**08 18 19.8**	**-0.1**
FORT				IAmb	IAmb	08 18 37.1	
	comp=Z,13nm,0.8s						
MTN	**Manton Dam**	**49.58**	**282**	P	**P**	**08 18 59.6**	**-0.4**
MTN				IAmb	IAmb	08 19 25.7	
	comp=Z,9.0nm,0.9s						
KNRA	**Kununurra**	**50.06**	**277**	P	**P**	**08 19 01.4**	**-2.2**
FITZ	**Fitzroy Crossi**	**51.48**	**273**	P	**P**	**08 19 14.6**	**+0.3**
CASY	**Casey**	**52.13**	**209**	P	**P**	**08 19 18.6**	**+0.2**
SAUI	**Saumlaki**	**52.19**	**287**	P	**P**	**08 19 18.7**	**-0.9**
MORW	**Morawa**	**54.84**	**256**	P	**P**	**08 19 38.5**	**-0.5**
MORW				IAmb	IAmb	08 19 39.3	
	comp=Z,13nm,1.1s						
QSPA	**South Pole Qui**	**56.80**	**180**	P	**P**	**08 19 54.4**	**+1.9**
RPN	**Rapa Nui**	**59.61**	**104**	LR	LR	08 43 26.2	
	comp=Z,18nm,18.1s,baz=308,slow=34						
BELA	**Belgrano 2**	**67.03**	**172**	P	**P**	**08 21 03.3**	**+2.4**
BELA				IAmb	IAmb	08 21 03.7	
	comp=Z,3.9nm,0.7s						
SMAI	**San Martin Ant**	**67.08**	**158**	P	**P**	**08 21 00.7**	**-0.6**
MAW	**Mawson**	**69.25**	**201**	P	**P**	**08 21 15.3**	**+0.4**
TROLL	**Troll, Antarti**	**74.95**	**181**	⇑P	**P**	**08 21 51.5**	**+2.3**
	comp=Z,114nm,0.5s						
SNAA	**Sanae**	**75.27**	**179**	P	**P**	**08 21 53.4**	**+2.5**
	comp=Z,2.2nm,0.4s,baz=202,slow=14,SNR=3.1						
	comp=Z,2.2nm,0.4s						
VNA3	**Neumayer Olymp**	**75.46**	**176**	⇑P	**P**	**08 21 54.1**	**+2.1**
	comp=Z,17nm,0.7s						
VNA2	**Neumayer--Watz**	**75.88**	**177**	⇑P	**P**	**08 21 56.7**	**+2.4**
	comp=Z,12nm,0.6s,baz=174,slow=4.9						
H03S2	**Juan Fernandez**	**79.64**	**124**	T	T	09 50 42.0	
	baz=235,slow=74						
H03S1	**Juan Fernandez**	**79.65**	**124**	T	T	09 50 43.3	
	baz=235,slow=74						
H03S3	**Juan Fernandez**	**79.66**	**124**	T	T	09 50 42.1	
	baz=235,slow=74						
H03N3	**Juan Fernandez**	**79.85**	**123**	T	T	09 50 50.8	
	baz=239,slow=72						
H03N2	**Juan Fernandez**	**79.85**	**123**	T	T	09 50 49.6	
	baz=239,slow=72						
H03N1	**Juan Fernandez**	**79.87**	**123**	T	T	09 50 50.0	
	baz=239,slow=72						
PLCA	**Paso Flores**	**81.21**	**133**	P	**P**	**08 22 27.8**	**+3.5**
	comp=Z,1.4nm,0.5s,baz=247,slow=4.1,SNR=17						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlovsk-**	**88.41**	**346**	P	**P**	**08 22 57.9**	**-1.9**
	comp=Z,6.4nm,0.8s,baz=128,slow=6.4,SNR=6.0						
	comp=Z,6.4nm,0.8s						
GSC	**Goldstone, Bar**	**89.78**	**46**	P	**P**	**08 23 09.3**	**+2.5**
GSC				IAmb	IAmb	08 23 10.8	
	comp=Z,3.2nm,1.1s						
NVAR	**Mina Array Bea**	**91.01**	**43**	P	**P**	**08 23 12.7**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=215,slow=7.9,SNR=6.3						
	comp=Z,0.7nm,0.8s						
KDAK	**Kodiak Island**	**93.46**	**14**	LR	LR	09 03 43.1	
	comp=Z,38nm,18.5s,baz=158,slow=34						
NEW	**Newport**	**98.28**	**37**	LR	LR	09 02 41.8	
	comp=Z,18nm,18.5s,baz=323,slow=32						
MKAR	**Makanchi Array**	**118.90**	**309**	PKP	**PKPdf**	**08 28 54.8**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=188,slow=0.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**119.56**	**317**	PKP	**PKPdf**	**08 28 56.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=129,slow=2.6,SNR=3.1						
KURBB	**Kurchatov Arra**	**122.39**	**313**	PKP	**PKPdf**	**08 29 01.6**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=114,slow=1.9,SNR=13						
BVAR	**Borovoye Array**	**127.80**	**314**	PKP	**PKPdf**	**08 29 12.2**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=135,slow=1.3,SNR=15						
SPITS	**Spitsbergen Ar**	**134.54**	**356**	PKP	**PKPdf**	**08 29 24.9**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=70,slow=7.4,SNR=8.4						
ARCES	**ARCESS Array B**	**141.22**	**346**	PKhKP	PKPpre	08 29 32.8	
	comp=Z,0.6nm,0.4s,baz=57,slow=1.2,SNR=11						
FAUS	**Fauske**	**144.87**	**350**	*eP*	**PKPdf**	**08 29 43.8**	**-0.3**
KBZ	**Khabaz**	**145.86**	**300**	PKPbc	**PKPdf**	**08 29 46.7**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=133,slow=8.1,SNR=6.3						
MOR8	**Moi Rana**	**146.13**	**350**	*eP*	**PKPbc**	**08 29 47.0**	**-0.4**
FINES	**FINESS Array B**	**147.52**	**338**	PKPbc	**PKPbc**	**08 29 50.9**	**-0.5**
	comp=Z,8.7nm,0.4s,baz=47,slow=4.5,SNR=94						
NSS	**Namsos**	**148.03**	**351**	*eP*	**PKPbc**	**08 29 52.3**	**-0.4**
MEF	**Metsahovi**	**148.99**	**337**	*eP*	**PKPbc**	**08 29 55.2**	**-0.1**
RAF	**Rauma**	**149.15**	**340**	*eP*	**PKPbc**	**08 29 55.2**	**-0.5**
VSU	**Vasula**	**149.45**	**333**	*eP*	**PKiKP**	**08 29 56.6**	**+0.1**
MTSE	**Matsula**	**150.32**	**336**	*eP*	**PKiKP**	**08 29 59.1**	**-0.3**
DOMB	**Dombas**	**150.79**	**352**	*eP*	**PKiKP**	**08 30 00.2**	**-0.1**
AKN	**Aaknes**	**150.86**	**354**	*eP*	**PKiKP**	**08 30 00.8**	**+0.3**
MMAI	**Mount Meron Ar**	**151.18**	**279**	PKPbc	**PKPbc**	**08 30 01.6**	**0.0**
	comp=Z,4.2nm,0.4s,baz=90,slow=4.3,SNR=6.1						
NB2	**NORSAR Subarra**	**151.47**	**349**	PKP	**PKPbc**	**08 30 01.5**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=16,slow=2.6						
NOA	**NORSAR Array B**	**151.47**	**349**	PKPbc	**PKPbc**	**08 30 01.1**	**-0.2**
	comp=Z,4.4nm,0.7s,baz=17,slow=4.6,SNR=23						
NC602	**NORSAR Array S**	**151.71**	**349**	*eP*	**PKPbc**	**08 30 01.9**	**+0.1**
HFS	**Hagfors**	**151.88**	**346**	PKPbc	**PKPbc**	**08 30 01.9**	**-0.3**
	comp=Z,10nm,0.7s,baz=90,slow=3.0,SNR=27						
SKAR	**Skarslia**	**152.20**	**352**	*eP*	**PKiKP**	**08 30 03.9**	**+0.6**
VSVD	**Vaisvydziai**	**152.29**	**332**	*eP*	**PKiKP**	**08 30 04.3**	**+0.8**
PABE	**Paberze**	**152.61**	**331**	*eP*	**PKiKP**	**08 30 04.9**	**+0.7**
ASK	**Askoy**	**152.68**	**355**	*eP*	**PKiKP**	**08 30 06.7**	**+2.5**
BER	**Bergen**	**152.77**	**355**	*eP*	**PKiKP**	**08 30 04.6**	**+0.3**
DBIC	**Dimbokro**	**152.95**	**167**	PKPbc	**PKiKP**	**08 30 06.2**	**0.0**
	comp=Z,2.0nm,0.5s,baz=151,slow=4.1,SNR=1.7						
AKASG	**Malin Array Be**	**152.95**	**318**	PKPbc	**PKPbc**	**08 30 04.4**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=45,slow=2.9,SNR=5.4						
BRTR	**Keskin Array B**	**153.02**	**293**	PKPbc	**PKPbc**	**08 30 04.5**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=152,slow=3.1,SNR=10						
KONO	**Kongsberg**	**153.04**	**350**	*eP*	**PKiKP**	**08 30 05.7**	**+0.7**
ODD1	**Odda**	**153.13**	**354**	*eP*	**PKiKP**	**08 30 05.9**	**+0.7**
KMY	**Karmoy**	**153.94**	**355**	*eP*	**PKiKP**	**08 30 07.6**	**+0.8**
EKA	**Eskdalemuir Ar**	**157.81**	**6**	PKPab	**PKPab**	**08 30 37.0**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=321,slow=2.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**159.91**	**182**	PKP	**PKPdf**	**08 30 08.4**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=8.0,slow=2.2,SNR=4.6						
TORD				PKPab	**PKPab**	**08 30 48.6**	**+1.7**
	comp=Z,4.0nm,0.7s,baz=160,slow=3.3,SNR=15						

*MOS **04** 08:23:45.0±1.1,51˚.22N×178˚.63E, h22km, mb4.5/33, Error ellipse: s-maj=8.9km s-min=7.5km az=83.8*
*IDC **04** 08:23:46.2±4.2,51˚.20N×178˚.72E, h20km±25km, mb4.1/28, mbtmp4.2/30, ML4.7/2, MS3.4/19, Error ellipse: s-maj=19.6km s-min=11.2km az=177.0*
*AEIC **04** 08:23:48.5±3.4,51˚.0N±0˚.1×178˚.86E±0˚.07, h19km±6km, Error ellipse: s-maj=19.9km s-min=6.5km az=181.0*
*NEIC **04** 08:23:50.5±2.0,51˚.4N±0˚.2×178˚.65E±0˚.08, h43km±11km, mb4.2/138, ML4.2(AEIC), Error ellipse: s-maj=23.8km s-min=7.4km az=181.0*

ISC 04 08:23:48.2±0.6,51˚2N±0˚.1×178˚62E±0˚.04, h33km, n252, σ1§25/223, mb4.3/97, MS3.5/17, 10C-9D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GANO	**Gareloi North**	**1.75**	**66**		**Pn**	**08 24 16.7**	**+0.5**
GAEA	**Gareloi East**	**1.76**	**68**		**Pn**	**08 24 16.7**	**+0.3**
TASE	**Tanaga Southea

comp=Z,27nm,1.5s
E19K Redstone River 20.24 27 P P 08 28 20.9 +0.7
E19K IAmb IAmb 08 28 27.0
comp=Z,9.6nm,0.7s
KTH Kantishna Hill 20.35 41 P P 08 28 22.2 +0.7
F20K Avaraart Lake 20.42 29 P P 08 28 22.7 +0.5
F20K IAmb IAmb 08 28 26.5
comp=Z,7.6nm,0.7s
IMAR Indian Mountai 20.43 33 P P 08 28 23.4 +1.0
BPAW Bear Paw Mtn. 20.54 39 P 08 28 24.4 +0.9
BPAW IAmb IAmb 08 28 24.8
comp=Z,7.5nm,0.6s
TRF Thorofare Moun 20.57 41 P 08 28 24.6 +0.6
TRF IAmb IAmb 08 28 32.1
comp=Z,15nm,1.0s
H21K Melozitna Rive 20.59 34 IAmb IAmb 08 28 28.8
comp=Z,14nm,1.1s
GHO Glory Hole Cre 20.61 46 P P 08 28 24.4 +0.1
GHO IAmb IAmb 08 29 07.5
comp=Z,12nm,1.0s
I21K Tanana 20.65 36 IAmb IAmb 08 28 30.4
comp=Z,7.3nm,0.8s
KNK Knik Glacier 20.73 48 P P 08 28 24.0 -1.6
KNK IAmb IAmb 08 28 53.2
comp=Z,21nm,1.3s
G21K Allakaket 20.81 32 IAmb IAmb 08 28 29.6
comp=Z,9.5nm,1.1s
SML Sawmill 20.89 47 P 08 28 27.5 +0.1
SML IAmb IAmb 08 29 10.5
comp=Z,21nm,1.3s
MLY Manley 21.05 37 P P 08 28 29.6 +0.6
RND Reindeer 21.15 42 P 08 28 30.1 -0.1
RND Reindeer 21.15 42 P P 08 28 30.1 -0.1
RND pmax pmax
comp=Z,6.0nm,0.8s
BWN Browne 21.18 40 P P 08 28 31.0 +0.6
F21K Alatna River 21.23 30 IAmb IAmb 08 28 33.0
comp=Z,11nm,0.9s
SCM Sheep Creek Mo 21.36 47 P P 08 28 31.1 -1.3
SCM Sheep Creek Mo 21.36 47 P P 08 28 31.1 -1.3
SCM pmax pmax
comp=Z,15nm,0.6s
I23K Minto, Yukon-K 21.62 37 P P 08 28 34.9 -0.2
I23K IAmb IAmb 08 28 49.9
comp=Z,4.8nm,0.6s
DHY Denali Highway 21.68 44 P P 08 28 35.0 -0.9
DHY IAmb IAmb 08 28 48.6
comp=Z,10.0nm,0.7s
KLU Klutina 21.93 48 P P 08 28 38.6 0.0
KLU IAmb IAmb 08 29 03.3
comp=Z,19nm,1.4s
M24K Tolsona, Glenn 21.95 46 P P 08 28 38.6 -0.2
MDM Murphy Dome 21.98 38 P 08 28 38.4 -0.7
MDM IAmb IAmb 08 28 40.4
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 22.03 39 P P 08 28 37.3 -2.2
G23K Bananza Creek 22.10 33 IAmb IAmb 08 28 42.8
comp=Z,7.8nm,0.8s
COLA College 22.10 39 P P 08 28 40.2 0.0
COLA IAmb IAmb 08 28 47.8
comp=Z,7.5nm,0.8s
COLA College 22.10 39 P P 08 28 40.2 0.0
COLA pmax pmax
comp=Z,8.0nm,0.8s
HDA Harding Lake 22.29 40 P P 08 28 41.5 -0.8
HDA IAmb IAmb 08 28 43.2
comp=Z,7.9nm,0.5s
POKR Poker Plat Res 22.36 38 P P 08 28 42.5 -0.5
POKR IAmb IAmb 08 28 43.5
comp=Z,7.6nm,0.9s
IL31 22.44 39 P P 08 28 41.2 -2.7
IL31 IAmb IAmb 08 28 56.4
comp=Z,17nm,1.5s
ILAR Eielson Array 22.44 39 P P 08 28 40.9 -3.1
comp=Z,1.1nm,0.5s,baz=246,slow=9.4,SNR=32
comp=Z,1.1nm,0.5s
H24K Noodor Dome 22.47 36 IAmb IAmb 08 28 46.4
comp=Z,12nm,1.2s
TYV Tymovskoe 22.50 283 *e*P **P 08 28 45.9 +1.3**
TYV pmax pmax
comp=Z,200nm,4.4s
TYV pmax pmax
comp=Z,7.0nm,1.4s
N25K Chitina, Valde 22.58 48 P P 08 28 44.3 -1.2
N25K IAmb IAmb 08 29 10.3
comp=Z,22nm,1.5s
GLB Gilahina Butte 22.92 49 P P 08 28 47.5 -1.5
GLB IAmb IAmb 08 29 00.6
comp=Z,23nm,1.5s
J25K Salcha River, 23.00 40 P P 08 28 47.1 -2.8
J25K IAmb IAmb 08 28 48.7
comp=Z,6.1nm,0.8s
B22K Teshekpuk Lake 23.20 24 IAmb IAmb 08 28 53.2
comp=Z,7.6nm,0.7s
F24K Squaw Lake 23.22 33 IAmb IAmb 08 28 53.9
comp=Z,10nm,0.7s
PRP Porcupine Dome 23.25 38 P 08 28 50.6 -1.8
MCARA McCarthy VSAT 23.28 49 P P 08 28 51.5 -1.1
SCRK Sand Creek 23.39 42 P 08 28 51.9 -1.9
SCRK IAmb IAmb 08 28 52.4
comp=Z,8.5nm,0.6s
L26K Log Cabin Wild 23.44 45 P P 08 28 53.6 -0.6
L26K IAmb IAmb 08 29 25.3
comp=Z,11nm,1.3s
YSS Yuzh-Sakhalins 23.72 274‖ *e*P **P 08 28 57.2 +0.2**
YSS pmax pmax
comp=Z,59nm,3.2s
FYU Fort Yukon 23.75 36 P 08 28 55.9 -1.2
FYU IAmb IAmb 08 28 58.4
comp=Z,11nm,0.8s
CTGM Chitina Glacie 24.04 50 P P 08 28 59.2 -0.8
CTGM IAmb IAmb 08 29 15.7
comp=Z,10nm,1.1s
L27K Beaver Creek, 24.12 45 IAmb IAmb 08 29 02.7
comp=Z,6.9nm,0.6s
K27K Chicken 24.22 43 IAmb IAmb 08 29 09.6
comp=Z,7nm,0.9s
E25K Arctic Village 24.28 32 P P 08 29 02.0 -0.1
E25K IAmb IAmb 08 29 03.6
comp=Z,5.7nm,0.8s
BMAR Burnt Mountain 24.33 34 P P 08 29 02.3 -0.2
ASAJ Asahikawa 25.08 268 LR LR 08 38 30.9
comp=Z,42nm,21.6s,baz=52,slow=35
DAWY Dawson 25.38 43 P 08 29 12.0 -0.1
I28M Miner Creek 25.45 40 IAmb IAmb 08 29 14.2
comp=Z,9.6nm,0.9s
M29M Somme Creek 25.56 47 P P 08 29 12.3 -1.5
M29M IAmb IAmb 08 29 30.9
comp=Z,8.8nm,1.2s
J29N Klondike Camp 25.96 43 IAmb IAmb 08 29 31.3
comp=Z,3.9nm,0.8s
F28M Old Crow 26.08 35 P P 08 29 18.3 -0.1
F28M IAmb IAmb 08 29 34.1
comp=Z,6.9nm,1.0s
EPYK Eagle Plains 26.95 39 P P 08 29 25.2 -1.0
EPYK IAmb IAmb 08 29 45.2
comp=Z,12nm,1.4s
E29M Blow River 27.03 34 IAmb IAmb 08 29 32.1
comp=Z,5.4nm,0.7s
WHY Whitehorse 27.19 51 P P 08 29 26.1 -2.4
WHY IAmb IAmb 08 30 05.4
comp=Z,6.2nm,1.2s
M31M Drury Creek, Y 27.44 48 P P 08 29 30.2 -0.4
M31M IAmb IAmb 08 30 02.1
comp=Z,9.5nm,1.4s
YAK Yakutsk 28.36 312 *d i*P **P 08 29 38.0 -0.7**
YAK pmax pmax
comp=Z,8.0nm,0.6s
YAK Yakutsk 28.36 312 LR LR 08 41 10.3
comp=Z,60nm,18.6s,baz=120,slow=37
INK Inuvik 28.58 35 P P 08 29 40.4 -0.3
INK IAmb IAmb 08 29 45.8
comp=Z,3.9nm,0.7s
INK Inuvik 28.58 35 P P 08 29 40.4 -0.3
INK pmax pmax
comp=Z,4.0nm,0.7s
KLR Kul'dur 29.68 285 *ce*P **P 08 29 50.9 +0.3**
KLR pmax pmax
comp=Z,34nm,3.0s
KLR Kul'dur 29.68 285 LR LR 08 42 26.2
comp=Z,29nm,20.3s,baz=70,slow=38
TIXI Tiksi 30.05 331 LR LR 08 41 49.4
comp=Z,71nm,19.9s,baz=204,slow=36
ZEA Zeya 30.86 295 *e*P **P 08 30 00.1 -1.0**
USA0B Ussuriysk Arra 31.71 276‖ *e*P **P 08 30 10.0 +1.4**
USRK Ussuriysk Ar. 31.71 276 P **P 08 30 08.4 -0.3**
comp=Z,1.2nm,0.6s,baz=73,slow=5.3,SNR=2.1
comp=Z,1.2nm,0.6s
A36M Sachs Harbour 32.07 29 P P 08 30 11.8 +0.3
C36M Paulatuk 32.13 34 P P 08 30 11.4 -0.5
C36M IAmb IAmb 08 30 11.7
comp=Z,3.2nm,0.7s
H11N2 WAKE ISLAND Hy 32.69 201 T T 09 05 20.6
baz=10,slow=76,SNR=24
H11N3 WAKE ISLAND Hy 32.70 201 T T 09 05 21.1
baz=10,slow=76,SNR=26
H11N1 WAKE ISLAND Hy 32.71 201 T T 09 05 31.4
baz=10,slow=76,SNR=23
H11S1 WAKE ISLAND Hy 33.91 201 T T 09 06 53.9
baz=19,slow=76,SNR=14
H11S2 WAKE ISLAND Hy 33.93 201 T T 09 06 60.0
baz=19,slow=76,SNR=8.7
H11S3 WAKE ISLAND Hy 33.93 201 T T 09 06 54.1
baz=19,slow=76,SNR=12
YKA Yellowknife Ar 36.56 46 *ce*P **P 08 30 48.5 -1.9**
YKA Yellowknife Ar 36.56 46 P P **08 30 49.4 -1.0**
comp=Z,0.8nm,0.5s,baz=284,slow=8.4,SNR=16
YKA PcP **PcP 08 33 13.1 +0.1**
comp=Z,0.6nm,0.8s,baz=293,slow=3.5,SNR=5.5
YKA ScP **ScP 08 36 57.0 +0.1**
comp=Z,0.4nm,0.7s,baz=287,slow=3.1,SNR=7.1
comp=Z,0.8nm,0.5s
BOD Bodaibo 36.81 306 *e*P **P 08 30 52.0 -0.6**
BOD pmax pmax
comp=Z,12nm,0.8s
KSRS Korea Array 38.02 269 *e*P **P 08 31 04.8 +1.8**
KSRS pmax pmax
comp=Z,3.0nm,0.7s
KSRS Korea Array 38.02 269 P **P 08 31 03.9 +0.8**
comp=Z,2.5nm,0.7s,baz=57,slow=8.7,SNR=5.3
KSRS LR LR 08 45 26.9
comp=Z,11nm,21.5s,baz=105,slow=34
comp=Z,2.5nm,0.7s
EDM Edmonton 40.33 59 P P 08 31 22.0 -0.3
EDM Edmonton 40.33 59 P P 08 31 22.0 -0.3
EDM pmax pmax
comp=Z,17nm,1.3s
NEW Newport 40.48 68 P P 08 31 23.6 +0.1
NEW IAmb IAmb 08 31 44.9
comp=Z,2.8nm,0.8s
NEW Newport 40.48 68 P P 08 31 23.6 +0.1
NEW pmax pmax
comp=Z,3.0nm,0.8s
L04D Klamath Falls 40.50 79 P P 08 31 24.9 +1.0
L04D IAmb IAmb 08 31 44.3
comp=Z,8.2nm,1.1s
J05D Fort Rock, OR 40.57 77 P P 08 31 25.0 +0.5
RES Resolute Bay 40.62 24 P P 08 31 23.0 -1.3
RES Resolute Bay 40.62 24 P P 08 31 23.0 -1.3
RES pmax pmax
comp=Z,7.0nm,0.4s
K05A Summer Lake 41.09 77 P P 08 31 30.5 +1.7
I07A Izee 41.20 75 P P 08 31 28.8 -0.8
WVOR Wild Horse Val 42.63 76 P P 08 31 42.1 +0.7
WVOR Wild Horse Val 42.63 76 P P 08 31 42.1 +0.7
WVOR pmax pmax
comp=Z,3.0nm,0.8s
PLID Pearl Lake 42.77 72 P P 08 31 41.5 -1.1
MPK Martis Peak 43.59 81 P P 08 31 50.6 +1.3
MPK IAmb IAmb 08 31 56.0
comp=Z,3.4nm,0.9s
PAHR Pah Rah Range 43.75 80 P P 08 31 51.2 +0.8
NRIK Noril'sk 43.78 329‖ *e*P **P 08 31 51.1 +1.0**
NRIK pmax pmax
comp=Z,8.0nm,1.9s
NRIK Noril'sk 43.78 329 P P 08 31 50.6 +0.5
comp=Z,1.8nm,0.4s,baz=87,slow=8.8,SNR=1.3
comp=Z,1.8nm,0.4s
LYMT Lyon Mountain 43.95 67 P P 08 31 52.2 +0.1
PNTR Pine Nut 43.98 81 P P 08 31 52.8 +0.4
PNTR IAmb IAmb 08 32 06.1
comp=Z,4.9nm,0.7s
CMB Columbia Colle 44.13 83 P P 08 31 54.6 +1.2
CMB Columbia Colle 44.13 83 P P 08 31 54.6 +1.2
CMB pmax pmax
comp=Z,3.0nm,1.5s
LRM Limekiln Ridge 44.47 69 P P 08 31 55.7 -0.5
HLID Hailey 44.56 72 P P 08 31 57.2 +0.3
BMN Battle Mountai 44.66 78 P P 08 32 00.7 +3.0
BMN IAmb IAmb 08 32 11.5
comp=Z,2.3nm,0.7s
BMN Battle Mountai 44.66 78 P P 08 32 00.7 +3.0
BMN pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 44.90 295‖ *e*P **P 08 32 00.2 +0.7**
ULN pmax pmax
comp=Z,5.0nm,0.8s
RYN Ryan 44.93 81 P P 08 32 01.1 +1.2
RYN IAmb IAmb 08 32 01.8
comp=Z,3.2nm,1.0s
KVN Kaiserville 44.94 80 P P 08 32 00.3 +0.3
KVN IAmb IAmb 08 32 27.5
comp=Z,4.2nm,1.4s
KVN Kaiserville 44.94 80 P P 08 32 00.3 +0.3
KVN pmax pmax
comp=Z,4.0nm,1.4s
BOZ Bozeman (W) 45.08 68 P P 08 32 00.8 -0.2
BOZ IAmb IAmb 08 32 04.7
comp=Z,2.5nm,0.7s
BOZ Bozeman (W) 45.08 68 P P 08 32 00.8 -0.2
BOZ pmax pmax
comp=Z,3.0nm,0.7s
NVAR Mina Array Bea 45.19 81 P P 08 32 03.4 +1.4
NVAR Mina Array Bea 45.19 81 P P 08 32 02.1 +0.1
comp=Z,1.3nm,0.7s,baz=291,slow=7.6,SNR=14
comp=Z,1.3nm,0.7s
SONM Songino Array 45.29 295 P P 08 32 03.8 +1.2
SONM IAmb IAmb 08 32 03.8
comp=Z,2.3nm,0.6s
SONM Songino Array 45.29 295 *e*P **P 08 32 03.4 +0.8**
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 45.29 295 P **P 08 32 03.0 +0.4**
comp=Z,3.0nm,0.6s,baz=60,slow=8.0,SNR=22
SONM LR LR 08 51 27.1
comp=Z,54nm,19.1s,baz=108,slow=37
comp=Z,3.0nm,0.6s
ELK Elko 45.69 76 P P 08 32 05.9 -0.1
ELK Elko 45.69 76 P P 08 32 05.9 -0.1
ELK pmax pmax
comp=Z,2.0nm,0.8s
YHH Holmes Hill 45.99 69 P P 08 32 07.8 -0.6
HHC Hu-ho-hao-te 46.19 285 *e*P **P 08 32 07.1 -2.6**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,59nm,5.6s
SPR3 Spring Creek 3 47.30 78 P P 08 32 18.4 -0.3
SPR3 IAmb IAmb 08 32 30.9
comp=Z,3.6nm,1.3s
TPNV Topopah Spring 47.38 81 P P 08 32 19.2 0.0
TPNV Topopah Spring 47.38 81 P P 08 32 19.2 0.0
TPNV pmax pmax
comp=Z,4.0nm,0.8s
HWUT Hardware Ranch 47.41 73 P P 08 32 19.2 -0.2
HWUT IAmb IAmb 08 33 03.8
comp=Z,2.3nm,0.9s
DUG Dugway, Tooele 47.50 75 P P 08 32 20.2 +0.2
DUG Dugway, Tooele 47.50 75 P P 08 32 20.2 +0.2
DUG pmax pmax
comp=Z,7.0nm,1.3s
PD31 Pinedale Array 47.92 71 IAmb IAmb 08 32 40.6
comp=Z,3.3nm,1.1s
PDAR Pinedale Array 47.92 71 P P 08 32 22.5 -0.9
comp=Z,0.7nm,0.5s,baz=299,slow=3.4,SNR=9.7
comp=Z,0.7nm,0.5s
GSC Goldstone, Bar 48.08 83 P P 08 32 25.2 +0.6
GSC IAmb IAmb 08 32 38.0
comp=Z,2.3nm,0.6s
GSC Goldstone, Bar 48.08 83 P P 08 32 25.2 +0.6
GSC pmax pmax
comp=Z,2.0nm,0.6s
MPU Maple Canyon 48.32 75 P P 08 32 25.3 -1.2
MPU IAmb IAmb 08 32 33.8
comp=Z,1.4nm,0.7s
LCMT Little Creek M 49.21 79 IAmb IAmb 08 33 01.0
comp=Z,2.8nm,1.1s
U15A North Rim 50.17 79 IAmb IAmb 08 32 52.3
comp=Z,3.0nm,0.7s
SPB1 Spitsbergen Ar 50.48 355 P P 08 32 40.2 -2.0
SPITS Spitsbergen Ar 50.48 355 P **P 08 32 40.7 -1.6**
comp=Z,1.5nm,0.4s,baz=34,slow=6.1,SNR=12
comp=Z,1.5nm,0.4s
ULM Lac du Bonnet 51.15 55 P P 08 32 45.9 -1.7
comp=Z,0.8nm,0.5s,baz=278,slow=7.1,SNR=2.1
comp=Z,0.8nm,0.5s
ZALV Zalesovo Beam 53.00 312 *e*P **P 08 33 00.6 -0.7**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 53.00 312 P P 08 33 00.4 -0.9
comp=Z,0.7nm,0.4s,baz=64,slow=7.2,SNR=6.1
comp=Z,0.7nm,0.4s
GTA Gaotai 54.14 290 *e*P **P 08 33 10.5 +0.5**
GTA pP pP 08 33 17.6 -1.7
GTA pmax pmax
comp=Z,5.0nm,1.0s
DGZ Jazzator, Alta 54.39 307⇑ *i*P **P 08 33 12.0 +0.2**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
ANMO Albuquerque 54.73 76‖ *e*P **P 08 33 13.9 -0.5**
ANMO pmax pmax
comp=Z,15nm,3.7s
ANMO Albuquerque 54.73 76 LR LR 08 56 23.6
comp=Z,25nm,18.1s,baz=31,slow=36
KURK Kurchatov 57.99 312 *d i*P **P 08 33 37.5 +0.3**
KURK pmax pmax
comp=Z,10.0nm,1.3s
ARCES ARCESS Array B 58.03 349 *e*P **P 08 33 38.4 +1.2**
ARCES pmax pmax
comp=Z,5.0nm,1.0s
ARCES ARCESS Array B 58.03 349 P P 08 33 36.7 -0.5
comp=Z,2.9nm,0.9s,baz=25,slow=7.2,SNR=6.3
ARCES LR LR 08 59 38.1
comp=Z,34nm,18.2s,baz=18,slow=37
comp=Z,2.9nm,0.9s
KURBB Kurchatov Arra 58.10 312 P P 08 33 37.9 0.0
comp=Z,4.7nm,0.6s,baz=42,slow=6.5,SNR=29
KURBB LR LR 09 00 27.0
comp=Z,76nm,18.5s,baz=174,slow=38
comp=Z,4.7nm,0.6s
MK31 Makanchi Array 58.89 307 *c i*P **P 08 33 43.0 -0.6**
MKAR Makanchi Array 58.89 307 P P 08 33 43.0 -0.6
comp=Z,2.1nm,0.6s,baz=52,slow=6.2,SNR=40
MKAR LR LR 09 00 04.8
comp=Z,47nm,19.1s,baz=68,slow=37
comp=Z,2.1nm,0.6s
BVAR Borovoye Array 60.00 319 P P 08 33 51.2 +0.1
comp=Z,9.6nm,0.6s,baz=51,slow=7.2,SNR=61
BVAR LR LR 09 00 13.0
comp=Z,99nm,19.2s,baz=36,slow=36
comp=Z,9.6nm,0.6s
BRVK Borovoye 60.02 319 *c i*P **P 08 33 51.3 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,0.7s
TXAR Lajitas Array 60.29 79 P P 08 33 53.9 +0.3
comp=Z,0.5nm,0.5s,baz=304,slow=5.5,SNR=19
comp=Z,0.5nm,0.5s
SCHQ Schefferville 61.17 37 P P 08 33 57.8 -1.3
comp=Z,1.2nm,0.5s,baz=294,slow=12,SNR=1.5
comp=Z,1.2nm,0.5s
ARU Arti 61.93 327 *c i*P **P 08 34 04.6 +0.5**
ARU 08 34 45.0
ARU 08 36 17.7
ARU S **S 08 42 28.7 +3.2**
ARU SS **SS 08 46 29.4 +2.4**
ARU pmax pmax
comp=Z,12nm,0.9s
ARU Arti 61.93 327 P P 08 34 04.4 +0.3
comp=Z,7.3nm,0.5s,baz=49,slow=3.1,SNR=6.7
comp=Z,7.3nm,0.5s
KIRV Kirov 63.06 333‖ *e*P **P 08 34 11.6 0.0**
KIRV Kirov 63.06 333 LR LR 09 06 15.5
comp=Z,80nm,18.0s,baz=321,slow=40
BORG Borgarnes 63.41 9 LR LR 09 01 07.0
comp=Z,34nm,20.9s,baz=173,slow=35
FINES FINESS Array B 65.63 346 *e*P **P 08 34 27.9 -0.5**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 65.63 346 P P 08 34 27.4 -1.0
comp=Z,0.8nm,0.4s,baz=38,slow=7.4,SNR=6.6
comp=Z,0.8nm,0.4s
AAK Ala-Archa 65.75 308 *ce*P **P 08 34 29.8 +0.1**
AAK pmax pmax
comp=Z,8.0nm,2.5s
AKTO Aktyubinsk 66.92 323 P P 08 34 37.0 +0.2
comp=Z,9.5nm,0.5s,baz=57,slow=6.7,SNR=28
AKTO LR LR 09 06 19.6
comp=Z,87nm,18.3s,baz=72,slow=38
comp=Z,9.5nm,0.5s
KSH Kashi 67.32 305 P P 08 34 44.0 +4.3
KSH pmax pmax
comp=Z,5.0nm,0.6s
NB2 NORSAR Subarra 67.71 353 P P 08 34 40.9 -0.8
comp=Z,1.7nm,0.8s,baz=10,slow=6.9
HFS Hagfors 68.41 352 P P 08 34 46.3 +0.3
comp=Z,1.0nm,0.5s,baz=38,slow=7.3,SNR=1.4
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 69.42 274 *e*P **P 08 34 51.8 -1.2**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 69.42 274 P P 08 34 53.1 +0.2
comp=Z,2.3nm,0.3s,baz=29,slow=6.9,SNR=7.1
CMAR LR LR 09 05 36.3
comp=Z,7.6nm,21.1s,baz=185,slow=36
comp=Z,2.3nm,0.3s
OBN Obninsk 69.49 338 *i* P **P 08 34 53.9 +1.1**
OBN *i* 08 34 58.7
OBN pmax pmax
comp=Z,27nm,1.8s
DZM Mont Dzumac 73.68 192 LR LR 09 01 06.5
comp=Z,43nm,19.9s,baz=302,slow=30
EKA Eskdalemuir Ar 73.88 1 P P 08 35 19.2 0.0
comp=Z,0.2nm,0.3s,baz=357,slow=5.0,SNR=3.6
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 75.25 340 *e*P **P 08 35 26.9 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 75.25 340 P P 08 35 26.5 -0.7
comp=Z,1.0nm,0.4s,baz=21,slow=6.3,SNR=5.3
comp=Z,1.0nm,0.4s
GEYT Alibeck 77.14 316 LR LR 09 11 59.5
comp=Z,58nm,19.1s,baz=16,slow=38
KBZ Khabaz 77.99 329 P P 08 35 43.3 +0.5
comp=Z,1.5nm,0.6s,baz=123,slow=6.1,SNR=5.2
comp=Z,1.5nm,0.6s
ZEI Tsey 78.50 328 *e*P **P 08 35 45.7 -0.3**
ZEI pmax pmax
comp=Z,3.0nm,0.6s
GNI Garni 80.55 326‖ *e*P **P 08 35 57.8 +0.7**
GNI pmax pmax
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 80.74 222 *e*P **P 08 35 58.1 +0.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 80.74 222 P P 08 35 57.5 -0.5
comp=Z,0.7nm,0.5s,baz=32,slow=6.0,SNR=5.3
comp=Z,0.7nm,0.5s
ASAR Alice Springs 84.24 220 P P 08 36 16.1 -0.2
comp=Z,0.8nm,0.8s,baz=25,slow=5.6,SNR=9.7
comp=Z,0.8nm,0.8s
BR131 Keskin Array S 84.46 334‖ *e*P **P 08 36 17.7 +0.2**
BRTR Keskin Array B 84.46 334 *e*P **P 08 36 18.1 +0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 84.46 334 P P 08 36 17.2 -0.3
comp=Z,1.9nm,0.7s,baz=69,slow=2.8,SNR=9.5
comp=Z,1.9nm,0.7s
H03N2 Juan Fernandez 122.65 104 T T 10 57 18.7
baz=317,slow=78,SNR=9.8
H03N1 Juan Fernandez 122.66 104 T T 10 57 20.4
baz=317,slow=78,SNR=13
H03N3 Juan Fernandez 122.67 104 T T 10 57 18.0
baz=317,slow=78,SNR=12
BOSA Boshof 149.89 308 PKPbc **PKPdf 08 43 32.3 +2.3**
comp=Z,1.0nm,0.5s,baz=36,slow=2.6,SNR=1.5

NEIC ***04*** *08:30:22.0±0.6, 19°.20N±0°.02×155°.51W±0°.02, h38km±4km, Error ellipse: s-maj=3.2km s-min=2.3km az=124.0*
HVO 04 08:30:23.6±0.7, 19°.18N±0°.02×155°.49W±0°.04, h32km±7km, ML2.4/14, ML2.6/44(NEIC), Error ellipse: s-maj=6.1km s-min=3.3km az=75.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.10**	**57**		Pn	08 30 29.0	-0.1
HPO	**Honuapo**	**0.11**	**214**		Pn	08 30 28.9	-0.2
KHU	**Kahuku**	**0.14**	**299**		Pn	08 30 29.0	-0.6
KHU				IAML		08 30 33.5	

comp=N,723nm,0.1s

HLP	**Hilina Pali**	**0.21**	**56**			Sb	08 30 34.4	-0.3
SDHHI	**Sand Hill**	**0.28**	**42**			Pb	08 30 30.1	-1.0
SDHHI						Sb	08 30 35.2	-1.0
WRMHI	**West Rim**	**0.29**	**39**			Pb	08 30 30.1	-1.1
RIM	**Rim**	**0.29**	**44**	Pg		Pb	08 30 30.3	-1.0
RIM				IAML			08 30 44.4	
	comp=E,765nm,1.2s							
KKO	**Keanakako`i**	**0.30**	**44**			Pb	08 30 30.3	-1.1
KKO				IAML			08 30 44.7	
	comp=E,557nm,1.7s							
UWE	**Uwekahuna**	**0.30**	**38**			Pb	08 30 30.4	-1.0
OBL	**Observatory Le**	**0.30**	**39**	Pg		Pb	08 30 30.3	-1.1
UWB	**Uwekahuna B**	**0.31**	**39**			Pb	08 30 30.2	-1.4
UWB				IAML			08 30 34.7	
	comp=N,396nm,1.9s							
BYL	**Byron's Ledge**	**0.32**	**43**			Pb	08 30 30.4	-1.2
BYL				IAML			08 30 38.6	
	comp=N,788nm,0.9s							
BYL				IAML			08 30 44.7	
	comp=E,473nm,1.6s							
MWH	**Moku'aweowe**	**0.32**	**341**			Pb	08 30 30.6	-1.4
MWH				IAML			08 30 36.6	
	comp=E,599nm,1.5s							
MWH				IAML			08 30 37.4	
	comp=N,418nm,0.3s							
PUH	**Pauahi**	**0.32**	**53**			Pb	08 30 30.5	-1.1
SBLHI	**Steaming Bluff**	**0.32**	**40**			Pb	08 30 30.4	-1.3
SBLHI						Sb	08 30 35.9	-1.3
SBLHI				IAML			08 30 36.3	
	comp=N,470nm,0.6s							
SBLHI				IAML			08 30 45.0	
	comp=E,533nm,1.6s							
HATHI	**Halema'uma'u T**	**0.32**	**42**			Pb	08 30 30.4	-1.3
HATHI				IAML			08 30 35.0	
	comp=N,577nm,1.7s							
HATHI				IAML			08 30 45.1	
	comp=E,771nm,1.7s							
MLH	**Mauna Loa**	**0.33**	**17**			Pb	08 30 30.7	-1.1
MLH				IAML			08 30 36.5	
	comp=N,626nm,0.6s							
MLH				IAML			08 30 41.4	
	comp=E,299nm,0.3s							
RSD	**Rainshed**	**0.34**	**35**	Pg		Pb	08 30 30.7	-1.2
KNHH	**Kane Nui o Ham**	**0.36**	**57**			Pb	08 30 31.0	-1.2
ALEP	**Alea Permanent**	**0.39**	**338**			Pn	08 30 33.7	+0.5
STCH	**Steam Cracks**	**0.40**	**59**			Pb	08 30 31.3	-1.3
STCH						Pb	08 30 31.5	-1.2
NPOC	**North of Pu'u**	**0.42**	**60**			Pb	08 30 31.6	-1.3
NPOC				IAML			08 30 37.5	
	comp=N,390nm,0.9s							
JCUZ	**Jacuzzi**	**0.42**	**61**			Pb	08 30 31.8	-1.2
JCUZ				IAML			08 30 38.5	
	comp=N,255nm,0.8s							
HMH	**Humu'ula Sheep**	**0.42**	**1**			Pb	08 30 32.0	-1.1
HMH						Sb	08 30 38.3	-1.4
HMH				IAML			08 30 38.5	
	comp=N,537nm,0.3s							
HMH				IAML			08 30 38.7	
	comp=E,339nm,0.3s							
JOKA	**Jonika Flow**	**0.52**	**61**			Pb	08 30 32.8	-1.7
KHLU	**Kahalu`u**	**0.56**	**317**			Pb	08 30 33.3	-1.9
KHLU						Sb	08 30 40.3	-2.7
KHLU				IAML			08 30 40.5	
	comp=N,463nm,0.5s							
KHLU				IAML			08 30 40.6	
	comp=E,339nm,0.1s							
HUH	**Hualalai**	**0.60**	**327**			Pb	08 30 34.2	-1.7
HUH				IAML			08 30 50.3	
	comp=N,407nm,0.3s							
HUH				IAML			08 30 57.8	
	comp=E,415nm,1.9s							
HPAH	**Hawaii Prepara**	**0.87**	**347**			Pn	08 30 37.2	-2.4
HLK	**Haleakala**	**1.72**	**336**			Pn	08 30 48.9	-2.7

*NDI **04** 08:41:55.7±3.3, 15°.70N×96°.40E, h10km, ML4.0, mb4.2(NEIC)*
*NEIC **04** 08:41:59.4±1.2, 16°.1N±0°.1×96°.37E±0°.10, h10km±2km, mb4.2/3, Error ellipse: s-maj=23.4km s-min=5.8km az=221.0*
*IDC **04** 08:42:01.1±1.2, 16°.26N×96°.40E, h0km, mb3.9/7, mbtmp3.8/8, ML4.2/1, MS3.2/7, Error ellipse: s-maj=23.8km s-min=20.1km az=67.0*

ISC 04 08:42:00.9±0.9**, 16°.20N**±0°.09×**96°.34E**±0°.09**, h10**km**, n34,** σ1**§37**/33**, mb4.0**/11**, MS3.4**/5**, Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**3.35**	**48**		**Pn**	**08 42 52.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**3.35**	**48**	Pn	**Pn**	**08 42 52.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**3.35**	**48**	Pn	**Pn**	**08 42 53.3**	**-0.1**
	7.0nm,0.3s,baz=238,slow=15,SNR=30						
CMAR				Lg	Lg	08 43 45.2	
	36nm,0.3s,baz=228,slow=30,SNR=5.4						
CMAR				LR	LR	08 44 42.8	
	comp=Z,83nm,18.6s,baz=225,slow=50 9.9nm,0.4s						
CHTO	**Chiang Mai**	**3.59**	**43**		**Pn**	**08 42 56.4**	**-0.3**
CRAI	**Chiangrai**	**5.54**	**43**	Pn	**Pn**	**08 43 22.9**	**-0.6**
MND	**Mandalay**	**5.79**	**358**	Pn	**Pn**	**08 43 26.4**	**-0.4**
SAIH	**SAIHA**	**7.01**	**334**	*eP*	**Pn**	**08 43 42.9**	**-0.9**
SAIH				*eS*	**Sn**	**08 45 04.1**	**+0.5**
AZL	**Aizawl**	**8.24**	**336**	*eP*	**Pn**	**08 44 01.9**	**+1.2**
AZL				*eS*	**Sn**	**08 45 34.8**	**+0.8**
AZL				IAML		08 45 36.3	
	comp=E,23nm,0.5s						
AZL				IAML		08 45 47.1	
	comp=E,25nm,0.5s						
KOHI	**KOHIMA**	**9.70**	**348**	*eP*	**Pn**	**08 44 20.2**	**-0.5**
KOHI				*eS*	**Sn**	**08 46 06.8**	**-2.9**
KOHI				IAML		08 46 17.8	
	comp=E,45nm,0.8s						
KOHI				IAML		08 46 19.7	
	comp=E,57nm,0.6s						
SHL	**Shillong**	**10.20**	**337**	Pn	**Pn**	**08 44 25.5**	**-2.1**
SHL	**Shillong**	**10.20**	**337**	*eP*	**Pn**	**08 44 27.6**	**-0.1**
SHL				*ex*	x	08 46 11.5	
MOKO	**MOKOCHONG**	**10.21**	**351**	*eP*	**Pn**	**08 44 29.2**	**+1.5**
MOKO				*eS*	**Sn**	**08 46 24.3**	**+1.9**
HYB	**Hyderabad**	**17.07**	**277**	*eP*	**P**	**08 46 00.4**	**-1.3**
HYB				*eS*	**S**	**08 49 19.6**	**-0.1**
PALK	**Pallekele**	**17.68**	**242**	LR	LR	08 52 30.3	
	comp=E,43nm,20.9s,baz=167,slow=35						
MYLDM	**Lahad Datu**	**24.34**	**114**	P	**P**	**08 47 16.3**	**-2.9**
MYLDM				IAmb	IAmb	08 47 26.1	
	comp=Z,17nm,0.9s						
HHC	**Hu-ho-hao-te**	**27.88**	**25**	*eP*	**P**	**08 47 50.4**	**-0.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
WMQ	**Urumqi**	**28.49**	**347**	*eP*	**P**	**08 47 58.3**	**+1.9**
AAK	**Ala-Archa**	**32.30**	**329**	P	**P**	**08 48 31.8**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=240,slow=9.6,SNR=4.5 comp=Z,1.2nm,0.5s						
SONM	**Songino Array**	**32.62**	**13**	P	**P**	**08 48 33.6**	**+0.7**
	comp=Z,0.7nm,1.1s,baz=187,slow=10,SNR=1.8 comp=Z,0.7nm,1.1s						
MK31	**Makanchi Array**	**32.66**	**342**	P	**P**	**08 48 32.7**	**-0.4**
MK31				IAmb	IAmb	08 48 37.5	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**32.66**	**342**	P	**P**	**08 48 32.9**	**-0.3**
MKAR	**Makanchi Array**	**32.66**	**342**	P	**P**	**08 48 34.4**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=161,slow=9.2,SNR=19 comp=Z,1.8nm,0.6s						
KSRS	**Korea Array**	**34.99**	**47**	LR	LR	09 03 23.9	
	comp=Z,12nm,18.1s,baz=225,slow=37						
JNU	**Nakatsue**	**35.41**	**55**	LR	LR	09 05 14.9	
	comp=Z,57nm,21.1s,baz=308,slow=39						
KURBB	**Kurchatov Arra**	**37.21**	**341**	P	**P**	**08 49 14.0**	**+1.7**
	comp=Z,1.9nm,0.6s,baz=152,slow=8.4,SNR=9.7 comp=Z,1.9nm,0.6s						
KURK	**Kurchatov**	**37.26**	**341**	P	**P**	**08 49 11.9**	**-0.9**
KURK				IAmb	IAmb	08 49 18.5	
	comp=Z,3.7nm,0.9s						
ZALV	**Zalesovo Beam**	**38.72**	**349**	P	**P**	**08 49 24.1**	**-0.9**
ZALV	**Zalesovo Beam**	**38.72**	**349**	P	**P**	**08 49 26.4**	**+1.4**
	comp=Z,2.6nm,0.7s,baz=170,slow=9.0,SNR=14 comp=Z,2.6nm,0.7s						
KLR	**Kul'dur**	**43.72**	**33**	LR	LR	09 09 40.1	
	comp=Z,53nm,18.0s,baz=212,slow=38						
ABKAR	**Akbulak array**	**44.26**	**326**	P	**P**	**08 50 10.3**	**-0.3**
GNI	**Garni**	**50.54**	**309**	LR	LR	09 17 55.6	
	comp=Z,33nm,19.3s,baz=22,slow=43						
WRA	**Warramunga Arr**	**51.81**	**133**	P	**P**	**08 51 10.4**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=320,slow=7.6,SNR=2.7 comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**54.02**	**136**	P	**P**	**08 51 28.0**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=322,slow=7.6,SNR=4.5 comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**68.25**	**339**	LR	LR	09 29 13.9	
	comp=Z,135nm,18.2s,baz=88,slow=42						

DJA 04 08:46:44.7±1.5**, 8°S**±15°×**12°3E**±°**, h233**km±20**km, M3.6/6, mb3.9/2, mB4.6/1, MLv3.5/6, Mw(mB)3.8/1, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.46**	**252**	P	Pn	08 47 21.6	+0.3
SOEI	**Soe**	**1.85**	**142**	P	Pn	08 47 24.6	+0.1
BASI	**Baing, Sumba**	**3.14**	**232**	P	Pn	08 47 37.6	-0.1
PLAI	**Plampang**	**5.29**	**264**	P	Pn	08 48 04.2	+0.6
	16nm,0.5s,0.2nm						
TWSI	**Taliwang, Sumb**	**6.17**	**265**	P	Pn	08 48 15.0	+0.4

*IDC **04** 09:06:47.5±0.7, 29°.30S×13°.61W, h0km, mb4.3/13, mbtmp4.3/13, MS4.3/49, Error ellipse: s-maj=24.4km s-min=18.0km az=142.0*
*NEIC **04** 09:06:50.7±1.4, 29°.55S±0°.08×13°.64W±0°.04, h10km±1km, mb5.0/52, Error ellipse: s-maj=14.6km s-min=4.7km az=13.0*
*GCMT **04** 09:06:53.7±0.2, 29°.27S±0°.01×13°.47W±0°.01, h17km±1km, MW5.1/129, Moment Tensor Solution. s63,c80; s129,c204; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-0.62±.12; $M_{\theta\theta}$-1.86±.12; $M_{\phi\phi}$2.48±.10; $M_{r\theta}$0.42±.28; $M_{\theta\phi}$4.26±.10; $M_{r\phi}$0.84±.27; Best double couple: $M_0$4.85700×10¹⁶ NP1:ϕ346.00000°, δ84.00000°, λ173.00000°. NP2:ϕ77.00000°, δ83.00000°, λ6.00000°. Principal axes: T 5.2410, Plg9.0000°, Azm301.0000°; N -0.7710, Plg81.0000°, Azm129.0000°; P -4.4720, Plg1.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 09:06:49.8±0.4**, 29°.35S**±0°.08×**13°.65W**±0°.07**, h10**km**, n142,** σ1**§59**/98**, mb4.8**/47**, MS4.3**/52**, 5C-2D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	**Tristan da Cun**	**7.78**	**172**	Pn	Pn	09 08 37.5	-5.5
SHEL	**Horse Pasture**	**15.18**	**30**	Pn	**Pn**	**09 10 24.7**	**+0.3**
SUR	**Sutherland**	**29.66**	**105**	P	**P**	**09 12 55.0**	**-0.9**
SUR				IAmb	IAmb	09 13 01.3	
	comp=Z,81nm,1.9s						
SUR	**Sutherland**	**29.66**	**105**	LR	LR	09 21 51.4	
	comp=Z,884nm,21.3s,baz=262,slow=30						
TSUM	**Tsumeb**	**30.13**	**78**	P	**P**	**09 12 59.1**	**-0.9**
TSUM	**Tsumeb**	**30.13**	**78**	LR	LR	09 21 14.8	
	comp=Z,202nm,20.5s,baz=160,slow=29						
RCBR	**Riachuelo**	**31.45**	**314**	LR	LR	09 22 28.1	
	comp=Z,535nm,21.3s,baz=112,slow=30						
SOE	**Somerset East**	**33.64**	**106**	P	**P**	**09 13 30.8**	**+0.1**
BOSA	**Boshof**	**33.94**	**98**	P	**P**	**09 13 33.1**	**-0.4**
BOSA				IAmb	IAmb	09 13 34.5	
	comp=Z,19nm,1.2s						
BOSA	**Boshof**	**33.94**	**98**	P	**P**	**09 13 32.2**	**-1.2**
	comp=Z,7.7nm,0.9s,baz=263,slow=8.5,SNR=14						
BOSA				LR	LR	09 24 46.0	
	comp=Z,797nm,20.1s,baz=260,slow=32 comp=Z,7.7nm,0.9s						
GRHM	**Grahamstown, E**	**34.28**	**107**	P	**P**	**09 13 35.9**	**-0.3**
BDFB	**Brasilia**	**34.41**	**286**	P	**P**	**09 13 37.5**	**-0.2**
BDFB	**Brasilia**	**34.41**	**286**	P	**P**	**09 13 37.1**	**-0.5**
	comp=Z,11nm,0.5s,baz=124,slow=7.5,SNR=25						
BDFB				LR	LR	09 24 56.6	
	comp=Z,686nm,21.5s,baz=139,slow=32 comp=Z,11nm,0.5s						
LBTB	**Lobatse**	**35.07**	**92**	P	**P**	**09 13 43.0**	**-0.2**
LBTB				IAmb	IAmb	09 13 43.5	
	comp=Z,20nm,1.1s						
LIC	**Lamto**	**36.33**	**15↑**	*eP*	**P**	**09 13 53.9**	**0.0**
	comp=Z,18nm,0.8s						
KIC	**Kosan Boka**	**36.52**	**15↑**	*iP*	**P**	**09 13 54.9**	**-0.7**
	comp=Z,9.7nm,0.7s						
TIC	**Toumodi**	**36.74**	**14↑**	*iP*	**P**	**09 13 57.5**	**+0.1**
	comp=Z,3.9nm,0.3s						
DBIC	**Dimbokro**	**36.80**	**15**	P	**P**	**09 13 58.4**	**+0.5**
DBIC				IAmb	IAmb	09 13 59.8	
	comp=Z,27nm,1.5s						
DBIC	**Dimbokro**	**36.80**	**15**	P	**P**	**09 13 57.0**	**-0.8**
	comp=Z,4.5nm,0.7s,baz=174,slow=8.6,SNR=6.7						
DBIC				LR	LR	09 25 08.5	
	comp=Z,147nm,18.0s,baz=188,slow=30 comp=Z,4.5nm,0.7s						
ITQB	**Itaqui**	**37.24**	**259**	P	**P**	**09 14 02.6**	**+1.0**
CPUP	**Villa Florida**	**38.58**	**264**	P	**P**	**09 14 13.1**	**+0.1**
CPUP	**Villa Florida**	**38.58**	**264**	P	**P**	**09 14 12.2**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=105,slow=6.6,SNR=3.8						
CPUP				LR	LR	09 27 44.8	
	comp=Z,372nm,20.8s,baz=110,slow=33 comp=Z,1.9nm,0.8s						
AQDB	**Aquidauana**	**38.98**	**273**	P	**P**	**09 14 17.0**	**+0.6**
TRQA	**Tornquist**	**40.75**	**245**	P	**P**	**09 14 30.4**	**-0.7**
LSZ	**Lusaka**	**40.94**	**79**	P	**P**	**09 14 34.7**	**+1.9**
LSZ				IAmb	IAmb	09 14 43.8	
	comp=Z,56nm,2.0s						
LSZ	**Lusaka**	**40.94**	**79**	LR	LR	09 28 19.5	
	comp=Z,284nm,21.8s,baz=260,slow=32						
VNA2	**Neumayer--Watz**	**41.77**	**177**	⇑P	**P**	**09 14 39.4**	**+0.5**
	comp=Z,13nm,0.6s,baz=348,slow=9.8						
SNAA	**Sanae**	**42.79**	**175**	P	**P**	**09 14 46.1**	**-1.2**
SNAA	**Sanae**	**42.79**	**175**	LR	LR	09 28 40.5	
	comp=Z,208nm,19.1s,baz=356,slow=31						
TROLL	**Troll, Antarti**	**43.61**	**173**	⇑P	**P**	**09 14 56.0**	**+2.0**
	comp=Z,258nm,0.8s						
BBTS	**Babate**	**43.84**	**356**	LR	LR	09 29 34.6	
	comp=Z,331nm,19.2s,baz=178,slow=31						
PTLB	**Pontes e Lacer**	**44.00**	**278**	P	**P**	**09 14 58.8**	**+1.1**
PTLB				IAmb	IAmb	09 14 59.8	
	comp=Z,19nm,1.1s						
TOA0	**Torodi Ar. Sit**	**44.77**	**21**	P	**P**	**09 15 05.0**	**+1.3**
TORD	**Torodi Ar. Bea**	**44.77**	**21**	P	**P**	**09 15 05.4**	**+1.7**
TORD	**Torodi Ar. Bea**	**44.77**	**21**	P	**P**	**09 15 02.4**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=194,slow=7.8,SNR=14						
TORD				LR	LR	09 29 56.1	
	comp=Z,595nm,20.4s,baz=168,slow=31 comp=Z,3.5nm,0.8s						
SIV	**San Ignacio**	**45.44**	**276**	LR	LR	09 32 15.0	
	comp=Z,388nm,18.6s,baz=102,slow=34						
ELIB	**Princess Elisa**	**47.10**	**165**	*dP*	**P**	**09 15 21.3**	**-0.3**
PLCA	**Paso Flores**	**47.21**	**240**	P	**P**	**09 15 23.7**	**+0.7**
PLCA	**Paso Flores**	**47.21**	**240**	P	**P**	**09 15 22.5**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=107,slow=7.2,SNR=6.7						
PLCA				LR	LR	09 31 40.9	
	comp=Z,109nm,21.1s,baz=90,slow=32 comp=Z,2.1nm,0.8s						
PMSA	**Palmer Station**	**47.23**	**207**	LR	LR	09 31 54.2	
	comp=Z,246nm,18.4s,baz=129,slow=32						
LMEL	**Las Melosas**	**47.87**	**249**	P	**P**	**09 15 27.9**	**-0.4**
LMEL				IAmb	IAmb	09 15 39.9	
	comp=Z,8.5nm,0.7s						
BO02	**Sierra Bellavi**	**48.17**	**248**	P	**P**	**09 15 30.6**	**+0.1**
LL01	**San Ignacio de**	**48.48**	**238**	P	**P**	**09 15 33.3**	**+0.7**
LL01				IAmb	IAmb	09 15 41.7	
	comp=Z,29nm,1.6s						
BO01	**Tunca**	**48.49**	**249**	P	**P**	**09 15 34.8**	**+1.9**
AY01	**Puyuhuapi**	**48.52**	**235**	P	**P**	**09 15 32.8**	**0.0**
AY01				IAmb	IAmb	09 15 42.2	
	comp=Z,10.0nm,1.1s						
CO01	**Juntas del Tor**	**48.61**	**255**	P	**P**	**09 15 34.1**	**0.0**
CO01				IAmb	IAmb	09 15 46.1	
	comp=Z,16nm,1.1s						
AC02	**Maricunga**	**48.62**	**259**	P	**P**	**09 15 33.3**	**-1.2**
AC05	**El Transito**	**49.05**	**256**	P	**P**	**09 15 38.5**	**+1.1**
AC05				IAmb	IAmb	09 15 58.4	
	comp=Z,17nm,1.3s						
GO02	**Mina Guanaco**	**49.51**	**261**	P	**P**	**09 15 41.8**	**+0.6**
GO02				IAmb	IAmb	09 15 52.0	
	comp=Z,18nm,1.1s						
BELA	**Belgrano 2**	**49.54**	**186**	P	**P**	**09 15 40.7**	**+0.5**
BELA				IAmb	IAmb	09 15 41.6	
	comp=Z,28nm,1.3s						
LVC	**Limon Verde**	**49.75**	**264**	LR	LR	09 35 29.2	
	comp=Z,214nm,18.9s,baz=132,slow=35						
PB15	**IPOC Station P**	**50.03**	**263**	P	**P**	**09 15 44.9**	**-0.2**
PB15				IAmb	IAmb	09 15 53.7	
	comp=Z,13nm,0.7s						
AC01	**Pan de Azucar**	**50.08**	**259**	P	**P**	**09 15 45.3**	**+0.2**
AC01				IAmb	IAmb	09 16 04.8	
	comp=Z,21nm,1.1s						
SAML	**Samuel**	**50.57**	**283**	P	**P**	**09 15 49.6**	**+0.8**
MDP	**Montagnes des**	**50.74**	**306**	LR	LR	09 36 17.9	
	comp=Z,595nm,18.0s,baz=127,slow=35						
PB05	**IPOC Station P**	**50.79**	**263**	P	**P**	**09 15 50.5**	**-0.2**
PB05				IAmb	IAmb	09 16 01.1	
	comp=Z,24nm,1.0s						
PB04	**IPOC Station P**	**50.92**	**264**	P	**P**	**09 15 51.4**	**-0.3**
PB04				IAmb	IAmb	09 16 14.5	
	comp=Z,24nm,1.1s						
MBAR	**Mbarara**	**51.03**	**64**	P	**P**	**09 15 54.9**	**+2.4**
MBAR	**Mbarara**	**51.03**	**64**	LR	LR	09 35 38.2	
	comp=Z,252nm,20.0s,baz=299,slow=34						
GO01	**Chusmiza**	**51.05**	**268**	P	**P**	**09 15 52.7**	**-0.4**
GO01				IAmb	IAmb	09 16 01.1	
	comp=Z,36nm,1.6s						
PB11	**IPOC Station P**	**51.42**	**267**	P	**P**	**09 15 54.2**	**-1.3**
PB11				IAmb	IAmb	09 16 11.0	
	comp=Z,16nm,0.9s						
MACA	**Manacapuru-AM**	**51.62**	**291**	P	**P**	**09 15 56.4**	**-0.4**
PB16	**IPOC Station P**	**51.84**	**269**	P	**P**	**09 15 58.8**	**-0.2**
PB16				IAmb	IAmb	09 16 08.7	
	comp=Z,27nm,1.6s						
ETMB	**Extrema**	**52.72**	**280**	P	**P**	**09 16 05.2**	**+0.2**
ETMB				IAmb	IAmb	09 16 06.2	
	comp=Z,20nm,1.5s						
KMBO	**Kilima Mbogo**	**55.94**	**69**	LR	LR	09 38 50.2	
	comp=Z,183nm,19.5s,baz=92,slow=34						
LODK	**Lodwar**	**57.13**	**64**	P	**P**	**09 16 38.3**	**+1.3**
LODK				IAmb	IAmb	09 16 48.1	
	comp=Z,16nm,1.5s						
MAW	**Mawson**	**58.10**	**154**	LR	LR	09 36 18.9	
	comp=Z,440nm,20.9s,baz=270,slow=30						
CZSB	**Cruzeiro do Su**	**59.33**	**279**	P	**P**	**09 16 51.4**	**-0.9**
QSPA	**South Pole Qui**	**60.88**	**180**	P	**P**	**09 17 02.2**	**-0.2**
NNA	**Nana**	**60.93**	**272**	LR	LR	09 42 24.4	
	comp=Z,197nm,20.3s,baz=100,slow=35						
MDT	**Midelt**	**62.41**	**9**	LR	LR	09 40 60.0	
	comp=Z,380nm,18.6s,baz=160,slow=33						
PCRV	**Puerto La Cruz**	**62.90**	**301**	LR	LR	09 42 44.0	
	comp=Z,843nm,19.7s,slow=34						
ATAH	**Atahualpa**	**64.54**	**276**	LR	LR	09 45 36.3	
	comp=Z,149nm,21.6s,baz=135,slow=36						
BOSC	**San Juan Bosco**	**66.60**	**280**	P	**P**	**09 17 40.1**	**-0.9**
SDV	**Santo Domingo**	**66.72**	**296**	P	**P**	**09 17 41.8**	**+0.2**
SDV	**Santo Domingo**	**66.72**	**296**	LR	LR	09 44 29.7	
	comp=Z,566nm,21.2s,baz=99,slow=34						
ROSC	**El Rosal**	**67.34**	**290**	LR	LR	09 46 02.6	
	comp=Z,765nm,19.9s,baz=154,slow=35						
COHC	**Cochancay**	**67.60**	**280**	P	**P**	**09 17 47.8**	**+0.8**
CHSH	**Refugio Sur-Vo**	**67.76**	**281**	P	**P**	**09 17 48.8**	**0.0**
CHSH				IAmb	IAmb	09 18 14.4	
	comp=Z,13nm,1.1s						
ATD	**Arta Tunnel**	**67.95**	**62**	LR	LR	09 45 46.5	
	comp=Z,7.4nm,19.3s,baz=179,slow=34						
TULM	**Tulcn-Chalpat**	**67.99**	**284**	P	**P**	**09 17 50.0**	**-0.1**
TULM				IAmb	IAmb	09 17 51.4	
	comp=Z,13nm,1.0s						
KEST	**Kesra**	**68.26**	**20**	P	**P**	**09 17 49.9**	**-0.9**
	comp=Z,6.1nm,1.0s,baz=177,slow=2.4,SNR=2.6						
KEST				LR	LR	09 45 16.8	
	comp=Z,448nm,20.3s,baz=174,slow=34 comp=Z,6.1nm,1.0s						
SJG	**San Juan**	**69.22**	**306**	LR	LR	09 47 46.2	
	comp=Z,238nm,19.6s,baz=134,slow=36						
ESDC	**Sonseca Array**	**69.26**	**8**	P	**P**	**09 17 55.6**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=191,slow=3.7,SNR=2.1 comp=Z,0.5nm,0.7s						
VAE	**Valguarnera**	**71.49**	**23**	LR	LR	09 48 42.3	
	comp=Z,233nm,18.1s,baz=159,slow=35						
VNDA	**Vanda**	**73.35**	**179**	P	**P**	**09 18 21.2**	**0.0**
VNDA				IAmb	IAmb	09 19 48.8	
	comp=Z,31nm,1.9s						
VNDA	**Vanda**	**73.35**	**179**	P	**P**	**09 18 21.4**	**+0.2**
	comp=Z,2.3nm,1.0s,baz=195,slow=6.5,SNR=2.7						
VNDA				LR	LR	09 46 01.0	
	comp=Z,239nm,22.0s,baz=176,slow=32 comp=Z,2.3nm,1.0s						
IDI	**Anoyia**	**73.85**	**32**	LR	LR	09 49 22.4	
	comp=Z,39nm,20.6s,baz=244,slow=35						
EIL	**Elat**	**74.79**	**43**	LR	LR	09 49 53.2	
	comp=Z,76nm,18.5s,baz=245,slow=35						
MMAI	**Mount Meron Ar**	**77.51**	**41**	LR	LR	09 49 32.3	
	comp=Z,108nm,21.5s,baz=170,slow=33						
DAVOX	**Davos/Dischmat**	**78.70**	**16**	P	**P**	**09 18 50.2**	**-2.0**
	comp=Z,1.4nm,0.6s,baz=248,slow=16,SNR=3.7						
DAVOX				LR	LR	09 50 17.6	
	comp=Z,173nm,21.9s,baz=230,slow=33 comp=Z,1.4nm,0.6s						
JTS	**Las Juntas de**	**79.11**	**288**	LR	LR	09 52 38.7	
	comp=Z,428nm,20.2s,baz=121,slow=35						
FETA	**Feichten**	**79.14**	**17**	*eP*	**P**	**09 18 57.6**	**+3.1**
	comp=Z,3.0nm,1.1s						
WTTA	**Wattenberg**	**79.59**	**17**	*eP*	**P**	**09 18 59.7**	**+2.7**
	comp=Z,3.3nm,1.0s						
WATA	**Walderalm**	**79.65**	**17**	*eP*	**P**	**09 18 58.3**	**+1.0**
	comp=Z,4.1nm,1.2s						
LESA	**Schwarzleotal**	**80.02**	**18**	P	**P**	**09 18 57.8**	**-1.4**
	comp=Z,7.6nm,1.4s						
BIOA	**Bad Ischl, Aus**	**80

YKA	**Yellowknife Ar**	**120.59**	**328**	PKP		**PKPdf**	**09 25 41.0**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=96,slow=1.8,SNR=3.2								
WRA	**Warramunga Arr**	**122.08**	**144**	PKP		**PKPdf**	**09 25 43.7**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=239,slow=1.6,SNR=1.5								
PZH	**PanZhiHua**	**123.50**	**76**	PKP		**PKPdf**	**09 25 48.3**	**+0.4**
CD2	**Chengdu**	**126.49**	**72**	PKP		**PKPdf**	**09 25 53.0**	**-0.4**
DZM	**Mont Dzumac**	**128.88**	**180**	eLR	LR		10 06 32.0	
	comp=Z,242nm,23.4s								
BTO	**Baotou**	**133.21**	**60**	*e*PKP		**PKPdf**	**09 26 03.2**	**-2.8**
BTO				PP		**PP**	**09 28 29.2**	**-4.0**
BTO				SKS		**SKSdf**	**09 33 09.2**	**-8.2**
BTO	**Baotou**	**133.21**	**60**	SS	SS		09 46 11.3	-6.0
BTO				pmax	pmax			
	comp=Z,17nm,0.5s								
BTO				LR	LR			
	comp=N,220nm,4.3s								
BTO				LR	LR			
	comp=E,380nm,9.8s								
BTO				LR	LR			
	comp=Z,530nm,14.1s								
ILAR	**Eielson Array**	**134.18**	**334**	PKP		**PKPdf**	**09 26 06.7**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=15,slow=3.7,SNR=1.7								
HHC	**Hu-ho-hao-te**	**134.40**	**60**	*e*P		**PKPdf**	**09 26 06.1**	**-2.1**
NJ2	**Nanjing**	**139.33**	**74**	*e*P		**PKPdf**	**09 26 18.3**	**+0.9**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s								
HEH	**HeiHe**	**144.08**	**43**	*e*P		**PKiKP**	**09 26 31.0**	**+2.1**
HEH				pmax	pmax			
	comp=Z,12nm,1.3s								
HEH				pmax	pmax			
	comp=Z,430nm,4.7s								
BNX	**BinXian**	**145.45**	**51**	⇓P		**PKiKP**	**09 26 34.3**	**+2.5**
BNX				pmax	pmax			
	comp=Z,15nm,1.2s								
BNX				pmax	pmax			
	comp=Z,360nm,4.3s								
KSRS	**Korea Array**	**147.09**	**66**	PKPbc		**PKPbc**	**09 26 33.4**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=276,slow=4.8,SNR=5.7								
MDJ	**Mudanjiang**	**147.23**	**52**	P		**PKiKP**	**09 26 38.8**	**+3.2**
MDJ				pmax	pmax			
	comp=Z,17nm,1.4s								
MDJ				pmax	pmax				
	comp=Z,270nm,5.0s								

*PRE **04** 09:26:04.4±0.6,22°.73S×25°.01E,h5km,ML2.5*
*BUL **04** 09:26:11.9±1.1,22°.74S×25°.55E,h10km,MD3.9*
*EAF **04** 09:26:11.1±1.2,22°.73S×25°.53E,h10km,MD3.7*

ISC 04 09:26:03.7±1.2,22°.68S±0°.05×25°.03E±0°.07,h10km,n27,
σ2s96/50,Botswana

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
LBTB	**Lobatse**	**2.38**	**167**	*i* P		**Pg**	**09 26 49.2**	**-0.2**
LBTB				*i* S		**Sb**	**09 27 15.9**	**-0.5**
LBTB	**Lobatse**	**2.38**	**167**	*e*P		**Pn**	**09 26 44.3**	**+1.3**
LBTB				*e*S		**Sn**	**09 27 13.8**	**+1.5**
LBTB				IAML			09 27 27.8	
	comp=Z,47nm,0.4s							
LBTB	**Lobatse**	**2.38**	**167**	*i* P		**Pg**	**09 26 49.2**	**-0.2**
LBTB				*i* S		**Sb**	**09 27 15.9**	**-0.5**
LEPH	**Lephalale, Lim**	**2.80**	**115**	*e*P		**Pn**	**09 26 50.8**	**+2.0**
LEPH				*e*S		**Sn**	**09 27 24.1**	**+1.4**
LEPH				IAML			09 27 39.3	
	comp=Z,75nm,0.4s							
KSR	**Koster**	**3.59**	**152**	*e*P		**Pn**	**09 27 01.4**	**+1.8**
KSR				*e*S		**Sn**	**09 27 42.8**	**+0.6**
KSR				IAML			09 28 08.7	
	comp=Z,84nm,0.4s							
BLWY	**Bulawayo**	**4.19**	**54**	*i* P		**Pn**	**09 27 11.1**	**+3.2**
BLWY				*i* S		**Sn**	**09 27 52.5**	**-4.5**
BLWY	**Bulawayo**	**4.19**	**54**	*i* P		**Pn**	**09 27 11.1**	**+3.2**
BLWY				*i* S		**Sn**	**09 27 52.5**	**-4.5**
MUSN	**Musina, Limpop**	**4.49**	**86**	*i* P		**Pn**	**09 27 13.1**	**+1.2**
MUSN				*i* S		**Sn**	**09 27 57.4**	**-6.8**
MUSN	**Musina, Limpop**	**4.49**	**86**	*e*P		**Pn**	**09 27 14.1**	**+2.2**
MUSN				*e*S		**Sn**	**09 28 04.9**	**+0.7**
MUSN				IAML			09 28 29.6	
	comp=Z,20nm,0.5s							
MUSN	**Musina, Limpop**	**4.49**	**86**	*i* P		**Pn**	**09 27 13.1**	**+1.2**
MUSN				*i* S		**Sn**	**09 27 57.4**	**-6.8**
PRYS	**Parys**	**4.73**	**154**	*e*P		**Pn**	**09 27 17.3**	**+2.0**
PRYS				*e*S		**Sn**	**09 28 09.9**	**-0.4**
PRYS				IAML			09 28 40.7	
	comp=Z,21nm,0.4s							
PILG	**Pilgrimsrest,**	**5.67**	**114**	*e*P		**Pn**	**09 27 30.6**	**+2.4**
PILG				*e*S		**Sn**	**09 28 33.1**	**-0.4**
PILG				IAML			09 29 06.2	
	comp=Z,12nm,0.4s							
BOSA	**Boshof**	**5.91**	**178**	*i* P		Pn	09 27 36.6	+5.1
BOSA				*i* S		**Sn**	**09 28 39.8**	**+0.3**
BOSA	**Boshof**	**5.91**	**178**	*e*P		**Pn**	**09 27 33.6**	**+2.0**
BOSA				*e*S		**Sn**	**09 28 37.5**	**-1.9**
BOSA				IAML			09 29 30.0	
	comp=Z,11nm,0.5s							
BOSA	**Boshof**	**5.91**	**178**	*i* P		Pn	09 27 36.6	+5.1
BOSA				*i* S		**Sn**	**09 28 39.8**	**+0.3**
MOPA	**Mopani**	**5.92**	**99**	*i* P		**Pn**	**09 27 36.1**	**+4.5**
MOPA				*i* S		**Sn**	**09 28 36.5**	**-3.2**
MOPA	**Mopani**	**5.92**	**99**	*i* P		**Pn**	**09 27 36.1**	**+4.5**
MOPA				*i* S		**Sn**	**09 28 36.5**	**-3.2**
UPI	**Upington**	**6.61**	**210**	*e*P		**Pn**	**09 27 43.1**	**+2.1**
UPI				*e*S		**Sn**	**09 28 54.0**	**-2.4**
UPI				IAML			09 29 38.5	
	comp=Z,6.1nm,0.8s							
KRI	**Karoi**	**7.25**	**37**	*i* P		**Pn**	**09 27 50.3**	**+0.4**
KRI				*i* S		Sn	09 29 01.7	-11
KRI	**Karoi**	**7.25**	**37**	*i* P		**Pn**	**09 27 50.3**	**+0.4**
KRI				*i* S		Sn	09 29 01.7	-11
BFON	**Badsfontein, M**	**9.16**	**187**	*e*P		**Pn**	**09 28 17.3**	**+1.1**
BFON				*e*S		**Sn**	**09 29 55.9**	**-3.5**
BFON				IAML			09 30 13.8	
	comp=Z,3.4nm,0.5s							
BRAK	**Brakfontein**	**9.26**	**191**	*e*P		**Pn**	**09 28 20.1**	**+2.6**
BRAK				*e*S		**Sn**	**09 29 57.6**	**-4.2**
BRAK				IAML			09 30 25.7	
	comp=Z,2.8nm,0.7s							
GRAF	**Camdeboo Natio**	**9.57**	**183**	*e*P		**Pn**	**09 28 24.0**	**+2.3**
GRAF				*e*S		**Sn**	**09 30 05.4**	**-4.1**
GRAF				IAML			09 30 28.2	
	comp=Z,2.1nm,0.5s							
FRAZ	**Fraserburg**	**9.76**	**198**	*e*P		**Pn**	**09 28 25.9**	**+1.6**
FRAZ				*e*S		**Sn**	**09 30 10.1**	**-4.0**
FRAZ				IAML			09 30 32.0	
	comp=Z,1.7nm,0.8s							
ROOI	**Rooidraai Farm**	**9.86**	**187**	*e*P		**Pn**	**09 28 27.4**	**+1.6**
ROOI				*e*S		**Sn**	**09 30 12.7**	**-4.0**
ROOI				IAML			09 30 34.8	
	comp=Z,1.8nm,0.9s							
GRAN	**Grantham**	**9.91**	**194**	*e*P		**Pn**	**09 28 28.4**	**+1.9**
GRAN				*e*S		**Sn**	**09 30 12.9**	**-4.9**
GRAN				IAML			09 30 34.7	
	comp=Z,1.8nm,0.4s							
SUR	**Sutherland**	**10.36**	**200**	*e*P		**Pn**	**09 28 34.3**	**+1.7**
SUR				*e*S		**Sn**	**09 30 24.3**	**-4.6**
SUR				IAML			09 30 50.6	
	comp=Z,0.7nm,0.8s							

*NEIC **04** 09:39:36.2±1.0,34°.68N±0°.01×97°.48W±0°.02,h5km±1km,*
Error ellipse: s-maj=3.0km s-min=2.4km az=133.0

TUL 04 09:39:36.4±1.1,34°.67N±0°.01×97°.50W±0°.03,h4km±5km,
ML3.2,mb_Lg3.0/93(NEIC),ML3.0/16(NEIC),Error
ellipse: s-maj=3.0km s-min=1.9km az=87.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
W35A	**Tecumseh**	**0.70**	**47**	Pg		Pg	09 39 50.2	+0.3
W35A				Sg		Sg	09 39 59.8	+0.8
W35A				IAML			09 40 00.5	
	comp=E,997nm,0.2s							
LOOK	**Love County**	**0.73**	**159**			Pb	09 39 51.1	-0.5
LOOK				Sg		Sb	09 40 01.4	-0.5
LOOK				IAML			09 40 11.4	
	comp=N,559nm,0.2s							
OKCSW	**OKLAHOMA CITY**	**0.73**	**4**			Pg	09 39 50.4	-0.1
OKCSW				Sg		Sg	09 40 00.6	+0.5
OKCSW				IAML			09 40 01.1	
	comp=E,684nm,0.6s							
ADOK	**Arcadia Dam**	**0.98**	**6**			Pg	09 39 55.0	-0.3
WMOK	**Wichita Mounta**	**1.06**	**274**	Pg		Pg	09 39 56.0	-0.7
OK029	**Liberty Lake**	**1.12**	**2**			Pg	09 39 57.4	-0.5
OK029				IAML			09 40 13.1	
	comp=E,482nm,0.3s							
WTFS	**Witchita Falls**	**1.21**	**222**			Pg	09 39 58.8	-0.7
WTFS				IAML			09 40 20.3	
	comp=E,280nm,0.6s							
WTFS				IAML			09 40 20.7	
	comp=E,467nm,0.8s							
Z35A	**Perchaven, San**	**1.35**	**171**	Pg		Pn	09 40 00.8	-1.2
CSTR	**Hydro, Custer**	**1.38**	**315**	Pg		Pn	09 40 02.2	-0.2
DEOK	**Depew**	**1.43**	**35**			Pn	09 40 02.2	-0.8
OK052	**Battle Ridge R**	**1.44**	**23**			Pn	09 40 02.8	-0.3
OK033	**Mehan**	**1.44**	**18**			Pn	09 40 02.5	-0.8
FW03	**Perrin-Whitt E**	**1.70**	**196**			Pn	09 40 07.3	+0.6
FW06	**Azle**	**1.70**	**182**			Pb	09 40 07.7	-0.4
OK048	**Pawnee Station**	**1.80**	**14**			Pn	09 40 08.3	+0.2
TUL3	**Leonard**	**1.86**	**48**			Pn	09 40 09.7	+0.7
CROK	**Carrier**	**1.87**	**348**			Pn	09 40 10.0	+0.8
CROK				IAmb_Lg			09 40 37.6	
	comp=Z,98nm,0.7s							
OK051	**E0350 and S346**	**1.91**	**16**	Pn		Pn	09 40 10.4	+0.8
PLPT	**Palo Pinto**	**1.98**	**200**			Pn	09 40 11.7	+1.1
OK038	**West end E0370**	**2.07**	**331**			Pn	09 40 12.0	+0.1
ELIS	**Ellis County**	**2.10**	**312**	Pn		Pn	09 40 12.7	+0.4
U32A	**Winter Ranch,**	**2.10**	**325**			Pn	09 40 13.2	+0.8
OK032	**Salt Plains WL**	**2.21**	**345**			Pn	09 40 14.1	+0.3
FW16	**Waxahatchie**	**2.24**	**167**			Pn	09 40 15.3	+1.0
FW16				IAmb_Lg			09 40 50.9	
	comp=Z,64nm,0.9s							
TREL	**Terrell**	**2.26**	**148**	IAmb_Lg			09 40 52.1	
	comp=Z,67nm,0.7s							
SMWD	**Samnorwood**	**2.30**	**282**			Pn	09 40 16.6	+1.5
FW13	**Cleburne**	**2.31**	**179**	IAmb_Lg			09 40 54.0	
	comp=Z,64nm,0.8s							
KAN13	**South Haven SW**	**2.34**	**0**			Pn	09 40 15.2	-0.3
T35A	**Sooner Cattle**	**2.38**	**19**	IAmb_Lg			09 40 55.6	
	comp=Z,96nm,1.0s							
KAN10	**Anthony SW Sta**	**2.49**	**349**	IAmb_Lg			09 41 02.4	
	comp=Z,49nm,1.1s							
Z38A	**Mt. Pleasant**	**2.52**	**123**	IAmb_Lg			09 41 02.2	
	comp=Z,40nm,0.7s							
KAN06	**Argonia West S**	**2.59**	**354**	IAmb_Lg			09 41 00.7	
	comp=Z,41nm,0.9s							
237A	**Washetta, Mont**	**3.02**	**152**	IAmb_Lg			09 41 12.6	
	comp=Z,39nm,0.9s							
MIAR	**Mount Ida**	**3.23**	**91**	IAmb_Lg			09 41 24.3	
	comp=Z,52nm,0.8s							
HHAR	**Hobbs**	**3.32**	**60**	IAmb_Lg			09 41 27.7	
	comp=Z,41nm,0.8s							
SN01	**Snyder 1**	**3.35**	**238**	IAmb_Lg			09 41 31.1	
	comp=Z,48nm,0.9s							
AMTX	**Amarillo**	**3.45**	**275**	IAmb_Lg			09 41 35.4	
	comp=Z,46nm,1.0s							
NATX	**Nacogdoches**	**3.75**	**140**	IAmb_Lg			09 41 44.4	
	comp=Z,26nm,0.8s							
WLAR	**White Oak Lake**	**3.76**	**104**	IAmb_Lg			09 41 44.0	
	comp=Z,33nm,0.8s							
R32A	**Long Quarter,**	**3.87**	**346**	IAmb_Lg			09 41 43.5	
	comp=Z,41nm,0.8s							
435B	**Jarrell**	**3.88**	**181**	IAmb_Lg			09 41 45.7	
	comp=Z,40nm,0.8s							
SGCY	**Sterling City**	**4.10**	**229**	IAmb_Lg			09 41 54.1	
	comp=Z,48nm,0.9s							
UALR	**University of**	**4.25**	**87**	IAmb_Lg			09 41 53.7	
	comp=Z,46nm,0.8s							
WHAR	**Wooly Hollow**	**4.32**	**80**	IAmb_Lg			09 42 01.2	
	comp=Z,32nm,0.8s							
MSTX	**Muleshoe**	**4.42**	**262**	IAmb_Lg			09 42 03.9	
	comp=Z,50nm,1.2s							
KSU1	**Kansas State U**	**4.48**	**9**	IAmb_Lg			09 42 08.9	
	comp=Z,41nm,0.8s							
CBKS	**Cedar Bluff**	**4.51**	**337**	IAmb_Lg			09 42 01.6	
	comp=Z,26nm,0.8s							
S39A	**Bolivar**	**4.52**	**47**	IAmb_Lg			09 41 59.6	
	comp=Z,36nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.56**	**73**	IAmb_Lg			09 42 11.3	
	comp=Z,22nm,0.7s							
OZNA	**Ozona**	**4.83**	**220**	IAmb_Lg			09 42 23.0	
	comp=Z,40nm,0.8s							
HNDO	**Hondo**	**5.35**	**197**	IAmb_Lg			09 42 40.7	
	comp=Z,30nm,0.9s							
MNHN	**Monahans**	**5.53**	**235**	IAmb_Lg			09 42 44.1	
	comp=Z,32nm,0.9s							
R40A	**Maddies Statio**	**5.55**	**48**	IAmb_Lg			09 42 38.9	
	comp=Z,21nm,0.7s							
DRIO	**Del Rio**	**5.87**	**208**	IAmb_Lg			09 42 54.8	
	comp=Z,23nm,0.8s							
P38A	**Dawn**	**5.87**	**31**	IAmb_Lg			09 42 46.1	
	comp=Z,24nm,0.7s							
KSCO	**Kaye Shedlock'**	**5.97**	**318**	IAmb_Lg			09 42 57.7	
	comp=Z,27nm,0.8s							
N33A	**J Bar K, Exete**	**6.06**	**0**	IAmb_Lg			09 42 51.5	
	comp=Z,32nm,0.8s							
PBMO	**Poplar Bluff**	**6.12**	**68**	IAmb_Lg			09 42 59.6	
	comp=Z,23nm,0.7s							
SAND	**Sanderson**	**6.12**	**221**	IAmb_Lg			09 43 07.7	
	comp=Z,20nm,0.7s							
833A	**Chaparral WMA,**	**6.53**	**195**	IAmb_Lg			09 43 09.4	
	comp=Z,20nm,0.9s							
ALPN	**Alpine**	**6.73**	**232**	IAmb_Lg			09 43 21.1	
	comp=Z,21nm,0.8s							
SLM	**Saint Louis**	**7.05**	**54**	IAmb_Lg			09 43 19.2	
	comp=Z,15nm,0.7s							
Q24A	**Divide**	**7.48**	**307**	IAmb_Lg			09 43 50.0	
	comp=Z,16nm,0.9s							
T45A	**Paducah**	**7.56**	**69**	IAmb_Lg			09 43 47.9	
	comp=Z,24nm,0.8s							
BRIGG	**Briggsdale**	**8.00**	**319**	IAmb_Lg			09 44 02.1	
	comp=Z,20nm,0.8s							
N23A	**Red Feather La**	**9.12**	**315**	IAmb_Lg			09 44 38.4	
	comp=Z,16nm,0.9s							

*SVSA **04** 09:41:21.8±1.4,37°.55N×23°.11W,h10km,ML3.8(INMG),*
Error ellipse: s-maj=7.6km s-min=6.1km az=45.0

ISC 04 09:41:07.7±0.9,38°.63N±0°.10×22°.99W±0°.04,h10km,n32,
σ1s96/43,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PNOR2	**Nordeste**	**1.88**	**246**	*e*S		**Sn**	**09 42 04.5**	**+0.9**
PNOR2				A		A	09 42 05.2	
	98nm,0.1s							
BART	**Pico Bartolome**	**1.92**	**244**	*e*P		**Pg**	**09 41 46.2**	**+1.6**
BART				*e*S		**Sn**	**09 42 05.0**	**+0.2**
BART				A		A	09 42 06.7	
	95nm,0.3s							
PGRON	**Lagoa das Cont**	**2.07**	**246**	*e*P		**Pg**	**09 41 48.8**	**+1.4**
PGRON				A		A	09 42 10.9	
	137nm,0.1s							
PCALD	**Caldeiras da R**	**2.14**	**248**	*e*P		**Pg**	**09 41 49.9**	**+1.1**
PCALD				*e*S		**Sn**	**09 42 10.3**	**+0.2**
PCALD				A		A	09 42 11.9	
	43nm,0.1s							
CMLA	**Cha da Macela**	**2.18**	**247**	*e*P		**Pg**	**09 41 50.7**	**+1.2**
CMLA				*e*S		**Sn**	**09 42 12.3**	**+1.2**
CMLA				A		A	09 42 14.7	
	184nm,0.3s							
PDA	**Ponta Delgada**	**2.29**	**248**	*e*P		**Pg**	**09 41 51.6**	**0.0**
PDA				*e*S		**Sn**	**09 42 14.6**	**+0.9**
PDA				A		A	09 42 15.9	
	162nm,0.1s							
PSET	**Sete Cidades**	**2.30**	**250**	*e*P		**Pg**	**09 41 52.7**	**+0.9**
PSET				A		A	09 42 16.7	
	60nm,0.2s							
PSMN	**Pico do Norte,**	**2.31**	**226**	*e*P		**Pn**	**09 41 46.0**	**+0.1**
PSMN				*e*S		Sn	09 42 04.5	-10
PSMN				A		A	09 42 05.8	
	136nm,0.2s							
PSMA	**Santa Maria**	**2.35**	**227**	*e*P		**Pn**	**09 41 46.6**	**+0.1**
PSMA				*e*S		Sn	09 42 05.6	-10
PSMA				A		A	09 42 06.3	
	129nm,0.2s							
PSCM	**Serra do Cume**	**3.24**	**273**	*e*P		**Pg**	**09 42 10.1**	**+0.4**
PSCM				*e*S		**Sb**	**09 42 45.3**	**+0.6**
PSCM				A		A	09 42 47.9	
	473nm,0.2s							
PAGU	**Agualva, Azore**	**3.29**	**274**	*e*P		**Pg**	**09 42 11.0**	**+0.3**
PAGU				*e*S		**Sb**	**09 42 47.9**	**+1.6**
PAGU				A		A	09 42 49.7	
	320nm,0.2s							
ADH	**Angra Heroismo**	**3.33**	**272**	*e*P		**Pg**	**09 42 10.1**	**-1.4**
ADH				*e*S		**Sb**	**09 42 46.6**	**-0.8**
ADH				A		A	09 42 49.0	
	124nm,0.3s							
PSBA	**Serra de Santa**	**3.40**	**274**	*e*P		**Pg**	**09 42 12.6**	**-0.2**
PSBA				*e*S		**Sb**	**09 42 50.6**	**+1.2**
PSBA				A		A	09 42 51.6	
	152nm,0.2s							
PMAN	**Manadas**	**4.00**	**272**	*e*P		**Pb**	**09 42 19.7**	**+1.5**
PID	**Ribeirinha**	**4.03**	**269**	*e*P		**Pb**	**09 42 19.9**	**+1.1**
PID				A		A	09 43 05.8	
	39nm,0.3s							
ROSA	**Rosais**	**4.12**	**273**	*e*P		**Pb**	**09 42 21.7**	**+1.4**
ROSA				*e*S		**Sb**	**09 43 06.4**	**-3.6**
PPNO	**Prainha do Nor**	**4.14**	**269**	*e*P		**Pb**	**09 42 21.0**	**+0.2**
PICO	**Pico**	**4.27**	**270**	*e*P		**Pb**	**09 42 23.0**	**+0.1**
PICO				*e*S		**Sb**	**09 43 09.3**	**-5.2**
PICO				A		A	09 43 10.9	
	33nm,0.3s							
PCAN	**Candelaria**	**4.32**	**270**	*e*P		**Pb**	**09 42 23.9**	**+0.2**
PCAN				*e*S		**Sb**	**09 43 10.5**	**-5.3**
PCAN				A		A	09 43 12.4	
	18nm,0.2s							
PMOZ	**Porto Moniz, M**	**7.46**	**139**	*e*P		**Pn**	**09 42 56.9**	**+0.1**
PMOZ				*e*S		Sn	09 44 06.2	-15
PMOZ				A		A	09 44 12.3	
	101nm,0.7s							
PMAR	**Madeira**	**7.69**	**138**	*e*P		**Pn**	**09 43 00.2**	**+0.3**
PMAR				*e*S		Sn	09 44 10.4	-17
PMAR				A		A	09 44 14.9	
	71nm,0.6s							
PMPST	**Porto Santo, M**	**7.73**	**134**	*e*P		**Pn**	**09 43 00.9**	**+0.5**
PMPST				*e*S		Sn	09 44 10.2	-18
PMPST				A		A	09 44 11.8	
	38nm,0.9s							
FUL	**Funchal**	**7.76**	**138**	*e*P		**Pn**	**09 43 01.1**	**+0.4**
PTEO	**Sao Teotonio**	**11.29**	**91**	*e*S		**Sn**	**09 45 50.9**	**-4.5**
PNCL	**Nicolau / Gran**	**11.36**	**88**	*e*S		**Sn**	**09 45 54.7**	**-2.4**
MESJ	**Messejana**	**11.64**	**89**	*e*S		**Sn**	**09 46 01.9**	**-2.0**
EVO	**Evora**	**11.72**	**86**	*e*S		**Sn**	**09 46 05.8**	**-0.1**
PCVE	**Castro Verde**	**11.81**	**90**	*e*S		**Sn**	**09 46 05.0**	**-3.2**
PBEJ	**Beja**	**11.89**	**88**	*e*S		**Sn**	**09 46 08.5**	**-1.6**
PCBR	**Castelo Branco**	**12.09**	**79**	*e*S		**Sn**	**09 46 15.9**	**+1.1**
MVO	**Moncorvo**	**12.51**	**73**	*e*S		**Sn**	**09 46 27.4**	**+2.0**
PBRG	**Braganca**	**12.81**	**71**	*e*S		**Sn**	**09 46 36.3**	**+3.6**

*IDC **04** 09:43:40.8±1.8,5°.69S×147°.75E,h141km±17km,mb3.6/7,*
mbtmp4.1/10,Error ellipse: s-maj=33.9km s-min=11.8km
az=110.0
*NEIC **04** 09:43:41.0±1.2,5°.6S±0°.1×147°.9E±0°.2,h140km±10km,*
mb4.5/20,Error ellipse: s-maj=30.3km s-min=16.6km
az=105.0

ISC 04 09:43:42.0±0.7,5°.69S±0°.08×147°.8E±0°.1,h150km,n45,
σ1s92/48,mb4.4/15,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PMG	**Port Moresby**	**3.74**	**190**			**Pn**	**09 44 37.9**	**-1.0**
PMG	**Port Moresby**	**3.74**	**190**	P		**Pn**	**09 44 38.4**	**-0.6**
PMG	**Port Moresby**	**3.74**	**190**	P		**Pn**	**09 44 38.4**	**-0.6**
	152nm,0.4s,baz=39,slow=5.6,SNR=95							
PMG				S		**Sn**	**09 45 20.5**	**-2.8**
	195nm,0.3s,baz=20,slow=17,SNR=18							
RABL	**Rabaul**	**4.61**	**71**	P		**Pn**	**09 44 51.2**	**+0.9**
COEN	**Coen**	**9.39**	**209**	Pn		**Pn**	**09 45 54.5**	**+0.5**
COEN	**Coen**	**9.39**	**209**	P		**Pn**	**09 45 54.6**	**+0.6**
CTA	**Charters Tower**	**14.39**	**186**	P		**Pn**	**09 46 59.5**	**+0.6**
	4.2nm,0.8s,baz=16,slow=15,SNR=1.6							
CTAO	**Charters Tower**	**14.39**	**186**	P		**Pn**	**09 46 59.1**	**+0.2**
QIS	**Mount Isa**	**16.78**	**208**	P		**Pn**	**09 47 29.8**	**+1.5**
MTN	**Manton Dam**	**17.90**	**245**	P		**P**	**09 47 41.5**	**+1.2**
MTN				IAmb		IAmb	09 48 15.7	
	comp=Z,51nm,1.4s							
WB0	**Warramunga Arr**	**19.12**	**222**	P		**P**	**09 47 54.3**	**+0.7**
WB0				IAmb		IAmb	09 47 55.5	
	comp=Z,23nm,0.8s							
WR0	**Warramunga Arr**	**19.16**	**221**	P		**P**	**09 47 54.9**	**+0.9**
WRAB	**Tennant Creek**	**19.27**	**221**	P		**P**	**09 47 55.5**	**+0.3**
WB2	**Warramunga Arr**	**19.27**	**221**	P		**P**	**09 47 56.2**	**+0.9**
WRA	**Warramunga Arr**	**19.28**	**221**	P		**P**	**09 47 55.4**	**+0.1**
WRA	**Warramunga Arr**	**19.28**	**221**	P		**P**	**09 47 56.4**	**+1.1**
	comp=Z,27nm,0.6s,baz=50,slow=11,SNR=124							
WRA				S		**S**	**09 51 24.4**	**-1.3**
	comp=Z,3.0nm,1.0s,baz=46,slow=20,SNR=5.0							
EIDS	**Eidsvold**	**19.82**	**171**	P		**P**	**09 48 01.7**	**+0.6**
EIDS				IAmb		IAmb	09 48 04.0	
	comp=Z,39nm,1.4s							
QLP	**Quilpie**	**21.05**	**189**	P		**P**	**09 48 16.1**	**+1.8**
KNRA	**Kununurra**	**21.14**	**241**	P		**P**	**09 48 14.6**	**-0.8**
KNRA				IAmb		IAmb	09 48 18.8	
	comp=Z,15nm,0.9s							
AS01	**Alice Springs**	**22.29**	**215**	P		**P**	**09 48 28.2**	**+0.9**
	comp=Z,28nm,0.7s							
AS31	**Alice Springs**	**22.32**	**215**	P		**P**	**09 48 28.5**	**+1.0**
AS31				IAmb		IAmb	09 48 29.1	
	comp=Z,7.8nm,0.5s							
ASAR	**Alice Springs**	**22.32**	**215**	P		**P**	**09 48 28.7**	**+1.1**
**AS

*IDC **04** 10:23:60.0±4.4, 41°.05N×142°.70E, h0km, mb3.8/6, mbtmp3.7/7, ML2.7/2, Error ellipse: s-maj=87.9km s-min=32.3km az=112.0*
ISC 04 10:24:01.1±2.1, **40°.92N**±0°.05×**143°.08E**±0°.08, **h24**km±14km, **n33**, σ1s**24**/33, **mb3.9**/6, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**1.10**	**3**	P	**Pn**	**10 24 21.6**	**+0.6**
JKEN	**Kujiedanarisaw**	**1.26**	**236**	P	**Pn**	**10 24 22.7**	**-0.5**
JARK	**Aomorirokkasho**	**1.30**	**274**	P	**Pn**	**10 24 24.4**	**+0.7**
JANG	**Nango**	**1.31**	**246**	P	**Pn**	**10 24 23.9**	**+0.1**
JANG				*e*S	**Sb**	**10 24 41.0**	**-0.3**
JTH	**Tanohata**	**1.35**	**224**	P	**Pn**	**10 24 24.1**	**-0.3**
JTH				S	**Sn**	**10 24 41.5**	**0.0**
JNBK	**Urakawa-nobuka**	**1.38**	**350**	P	**Pn**	**10 24 26.5**	**+1.6**
JTM	**Tenmabayashi**	**1.53**	**266**	P	**Pn**	**10 24 28.2**	**+1.3**
JTM				*e*S	**Sb**	**10 24 48.0**	**+0.3**
JOT	**Ohata**	**1.60**	**287**	P	**Pb**	**10 24 29.2**	**-0.8**
JOT				S	**Sb**	**10 24 50.1**	**+0.4**
JCH	**Churui**	**1.71**	**7**	P	**Pn**	**10 24 30.5**	**+1.2**
JCH				*e*S	**Sn**	**10 24 51.7**	**+1.3**
JKB	**Kayabe**	**1.82**	**303**	P	**Pb**	**10 24 32.8**	**-0.9**
JKB				S	**Sb**	**10 24 56.2**	**+0.2**
JAM	**Iburiatsuma**	**1.91**	**333**	P	**Pb**	**10 24 36.2**	**+1.0**
JOM	**Ohasama**	**1.99**	**224**	P	**Pn**	**10 24 34.4**	**+1.1**
JEW	**Eniwo**	**2.27**	**328**	P	**Pb**	**10 24 40.5**	**-0.9**
JAK	**Akkeshi**	**2.40**	**30**	*e*P	**Pn**	**10 24 39.1**	**+0.2**
JAK				*e*S	**Sn**	**10 25 05.6**	**-1.9**
JMK	**Ichinoseki**	**2.43**	**217**	P	**Pn**	**10 24 40.2**	**+1.0**
JAR	**Ashorobuto**	**2.43**	**12**	P	**Pn**	**10 24 39.5**	**+0.2**
JAR				*e*S	**Sn**	**10 25 07.6**	**-0.7**
ASAJ	**Asahikawa**	**3.21**	**354**	Pn	**Pn**	**10 24 51.6**	**+1.5**
	1.0nm,0.3s,baz=194,slow=17,SNR=16						
ASAJ				Sn	**Sn**	**10 25 23.0**	**-4.6**
	2.9nm,0.3s,baz=283,slow=3.2,SNR=4.9						
MJAR	**Matsushiro Arr**	**5.79**	**223**	Pn	**Pn**	**10 25 26.8**	**+1.3**
	0.1nm,0.3s,baz=30,slow=14,SNR=8.0 1.1nm,0.5s						
SONM	**Songino Array**	**26.92**	**297**	P	**P**	**10 29 40.8**	**+0.4**
	0.3nm,0.4s,baz=98,slow=11,SNR=2.5 0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**29.31**	**129**	T	T	11 00 47.7	
	baz=322,slow=74,SNR=20						
H11N1	**WAKE ISLAND Hy**	**29.32**	**129**	T	T	11 00 49.1	
	baz=322,slow=74,SNR=16						
H11N3	**WAKE ISLAND Hy**	**29.32**	**129**	T	T	11 00 46.3	
	baz=322,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	11 01 53.5	
	baz=323						
H11S3	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	11 02 17.7	
	baz=323						
H11S2	**WAKE ISLAND Hy**	**30.17**	**131**	T	T	11 01 52.5	
	baz=323						
ZALV	**Zalesovo Beam**	**40.36**	**309**	P	**P**	**10 31 36.9**	**+0.3**
	0.9nm,0.5s,baz=97,slow=7.8,SNR=4.1 0.9nm,0.5s						
MKAR	**Makanchi Array**	**43.26**	**299**	P	**P**	**10 32 00.3**	**-0.2**
	0.3nm,0.5s,baz=87,slow=8.9,SNR=6.3 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.73**	**305**	P	**P**	**10 32 12.2**	**+0.1**
	0.6nm,0.3s,baz=81,slow=8.6,SNR=4.2 0.6nm,0.3s						
BVAR	**Borovoye Array**	**48.99**	**310**	P	**P**	**10 32 44.9**	**-0.6**
	1.0nm,0.6s,baz=62,slow=8.7,SNR=5.1 1.0nm,0.6s						
FINES	**FINESS Array B**	**65.99**	**332**	P	**P**	**10 34 45.4**	**+0.4**
	2.3nm,0.9s,baz=45,slow=6.1,SNR=6.1 2.3nm,0.9s						
H03N2	**Juan Fernandez**	**145.97**	**91**	T	T	13 27 08.8	
	baz=292						
H03N3	**Juan Fernandez**	**145.98**	**91**	T	T	13 27 05.3	
	baz=292						
H03N1	**Juan Fernandez**	**145.98**	**91**	T	T	13 27 09.7	
	baz=292						

*IDC **04** 11:00:11.9±4.1, 21°.62S×168°.73E, h0km, mb3.8/2, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=187.6km s-min=34.2km az=157.0*
*NOU **04** 11:00:23.0, 21°.67S×167°.98E, h0km, MLv3.3/5, Loyalty Islands*
ISC 04 11:00:16.3±2.1, **21°.5S**±0°.4×**168°.5E**±0°.2, **h20**km, **n9**, σ0s**50**/10, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YATNC	**Mamie plateau,**	**1.64**	**248**	P	**Pn**	**11 00 43.4**	**-0.6**
OUENC	**Ouen Island, N**	**1.84**	**238**	P	**Pn**	**11 00 47.0**	**+0.2**
DZM	**Mont Dzumac**	**2.04**	**252**	P	**Pn**	**11 00 50.3**	**+0.8**
DZM	**Mont Dzumac**	**2.04**	**252**	Pn	**Pn**	**11 00 49.8**	**+0.2**
	8.9nm,0.3s,baz=106,slow=9.0,SNR=212						
DZM				Sn	**Sb**	**11 01 17.3**	**-0.3**
	50nm,0.3s,baz=146,slow=18,SNR=8.2 29nm,0.3s						
ONTNC	**Ouen Toro**	**2.11**	**246**	P	**Pn**	**11 00 50.9**	**+0.5**
NOUC	**Port Laguerre**	**2.17**	**252**	P	**Pn**	**11 00 51.8**	**+0.5**
WRA	**Warrannunga Arr**	**31.98**	**266**	P	**P**	**11 06 41.2**	**-0.2**
	0.7nm,0.8s,baz=100,slow=8.1,SNR=2.9 0.7nm,0.8s						
ASAR	**Alice Springs**	**32.01**	**259**	P	**P**	**11 06 41.7**	**+0.1**
	1.9nm,0.9s,baz=83,slow=8.8,SNR=15 1.9nm,0.9s						
GERES	**GERESS Array B**	**146.09**	**330**	PKPbc	**PKPdf**	**11 19 53.8**	**-0.2**
	2.0nm,0.8s,baz=46,slow=3.9,SNR=10						

*IDC **04** 11:00:48.0±2.7, 10°.89N×62°.25W, h0km, mb3.6/4, mbtmp3.7/6, ML3.2/2, MS3.1/1, Error ellipse: s-maj=76.3km s-min=28.6km az=153.0*
*TRN **04** 11:00:48.4, 10°.05N×61°.98W, h80km, MD3.8, Near South-west peninsula of Trinidad.*
*FUNV **04** 11:00:50.0, 10°.21N×62°.21W, h6km, MW3.8*
ISC 04 11:00:47.6±1.4, **10°.21N**±0°.04×**62°.23W**±0°.03, **h16**km±9km, **n28**, σ1s**65**/48, **mb3.5**/4, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	**Pointe-a-Pierr**	**0.77**	**82**	*e*P	**Pn**	**11 01 04.0**	**+0.1**
TPP				*e*S	**Sb**	**11 01 13.9**	**+0.9**
TRN	**Trinidad (W)**	**0.92**	**62**	*e*P	**Pg**	**11 01 04.6**	**-0.9**
TRN				*e*S	**Sb**	**11 01 18.3**	**+1.0**
CRUV	**Carupano**	**1.09**	**295**	*e*P	**Pn**	**11 01 09.3**	**+0.9**
CRUV				*e*S	**Sb**	**11 01 23.6**	**+1.4**
GRFF	**Grenada Fort F**	**1.89**	**15**	*e*P	**Pn**	**11 01 19.8**	**+0.5**
GRFF				*e*S	**Sn**	**11 01 44.1**	**+1.3**
CUMV	**Cumana_UDO**	**1.94**	**276**	*e*P	**Pg**	**11 01 24.1**	**-0.9**
CUMV				*e*S	**Sb**	**11 01 48.2**	**+1.4**
GRGR	**Grenville**	**1.99**	**16**	*e*P	**Pn**	**11 01 21.9**	**+1.2**
GRGR				*e*S	**Sn**	**11 01 46.5**	**+1.2**
GRHS	**Sauteurs**	**2.08**	**16**	*e*P	**Pn**	**11 01 22.4**	**+0.4**
GRHS				*e*S	**Sn**	**11 01 48.4**	**+0.9**
PCRV	**Puerto La Cruz**	**2.37**	**269**	*e*P	**Pn**	**11 01 28.4**	**+2.4**
PCRV				*e*S	**Sn**	**11 01 56.8**	**+2.0**
PCRV	**Puerto La Cruz**	**2.37**	**269**	Pn	**Pb**	**11 01 29.3**	**-0.8**
	8.1nm,0.3s,baz=78,slow=3.8,SNR=43						
PCRV				Sn	**Sg**	**11 02 04.6**	**+0.7**
	25nm,0.3s,baz=218,slow=18,SNR=6.7 25nm,0.2s						
GCMP	**Grenada, Carri**	**2.39**	**19**	*e*P	**Pn**	**11 01 26.7**	**+0.4**
GCMP				*e*S	**Sn**	**11 01 56.6**	**+1.4**
SVB	**Belmont**	**3.19**	**17**	*e*P	**Pn**	**11 01 38.7**	**+1.5**
SVB				*e*S	**Sn**	**11 02 14.2**	**-0.8**
SLBI	**Saint Lucia, B**	**3.98**	**18**	*e*P	**Pn**	**11 01 49.2**	**+1.2**
SLBI				*e*S	**Sn**	**11 02 32.8**	**-1.7**
LUEV	**Luepa**	**4.41**	**170**	*e*P	**Pn**	**11 01 55.5**	**+1.4**
LUEV				*e*S	**Sn**	**11 02 45.2**	**0.0**
FUNV	**FUNVISIS**	**4.51**	**274**	*e*P	**Pn**	**11 01 58.1**	**+2.5**
FUNV				*e*S	**Sn**	**11 02 47.5**	**-0.4**
TACV	**Tcata**	**4.72**	**270**	*e*P	**Pn**	**11 02 00.5**	**+2.1**
TACV				*e*S	**Sn**	**11 02 52.7**	**-0.2**
CACV	**CAICARA DEL OR**	**5.01**	**239**	*e*P	Pn	11 01 58.4	-3.8
CACV				*e*S	Sn	11 02 49.7	-10
BENV	**Beln**	**5.29**	**268**	*e*P	**Pn**	**11 02 08.6**	**+2.3**
BENV				*e*S	**Sn**	**11 03 05.6**	**-1.4**
TURV	**Turiamo**	**5.53**	**273**	*e*P	**Pn**	**11 02 11.5**	**+2.1**
TURV				*e*S	**Sn**	**11 03 11.2**	**-1.5**
BAUV	**El Baul**	**5.87**	**258**	*e*P	**Pn**	**11 02 15.3**	**+1.3**
BAUV				*e*S	**Sn**	**11 03 19.6**	**-1.5**
BAUV	**El Baul**	**5.87**	**258**	*e*P	**Pn**	**11 02 16.4**	**+2.3**
TEPV	**Terepaima**	**6.86**	**269**	*e*P	**Pn**	**11 02 29.8**	**+2.0**
TEPV				*e*S	**Sn**	**11 03 42.9**	**-2.7**
SDV	**Santo Domingo**	**8.39**	**262**	Pn	**Pn**	**11 02 50.4**	**+1.5**
	1.6nm,0.3s,baz=14,slow=12,SNR=2.3						
SDV				Sn	**Sn**	**11 04 22.3**	**-1.3**
	1.1nm,0.3s,baz=330,slow=13,SNR=1.4 5.4nm,0.4s						
SOCV	**Socops**	**8.73**	**258**	*e*P	**Pn**	**11 02 54.2**	**+0.8**
SOCV				*e*S	**Sn**	**11 04 26.8**	**-4.8**
ROSC	**El Rosal**	**13.12**	**247**	LR	LR	11 09 58.5	
	comp=Z,80nm,19.4s,baz=8.0,slow=41						
TXAR	**Lajitas Array**	**43.10**	**302**	P	**P**	**11 08 48.5**	**+1.0**
	0.6nm,0.9s,baz=121,slow=8.8,SNR=5.6						
TXAR				PcP	**PcP**	**11 10 39.1**	**+1.8**
	0.3nm,0.6s,baz=119,slow=5.2,SNR=5.9 0.6nm,0.9s						
PDAR	**Pinedale Array**	**52.38**	**317**	P	**P**	**11 09 58.2**	**-1.3**
	0.6nm,0.8s,baz=118,slow=10,SNR=4.6 0.6nm,0.8s						
ILAR	**Eielson Array**	**78.56**	**334**	P	**P**	**11 12 46.0**	**-2.2**
	0.1nm,0.6s,baz=99,slow=5.8,SNR=1.9 0.1nm,0.6s						
FINES	**FINESS Array B**	**80.30**	**29**	P	**P**	**11 12 58.0**	**+0.3**
	2.4nm,0.9s,baz=260,slow=5.5,SNR=5.5 2.4nm,0.9s						

*NNC **04** 11:08:07.8±1.8, 42°.17N×78°.65E, h0km, mb2.3, mpv2.8, Error ellipse: s-maj=12.8km s-min=5.8km az=160.0*
*SOME **04** 11:08:09.0, 42°.22N×78°.58E, h10km*
*KRNET **04** 11:08:09.9±0.1, 42°.29N×78°.44E, h18km, mb2.1*
ISC 04 11:08:08.9±1.6, **42°.23N**±0°.06×**78°.55E**±0°.04, **h5**km±10km, **n25**, σ0s**85**/44, **4C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.27**	**337**	⇑*e*P	**Pg**	**11 08 14.6**	**+0.3**
	baz=52						
PRZ				⇑*e*S	**Sg**	**11 08 17.6**	**-0.4**
	baz=52						
SATY	**Saty**	**0.83**	**353**	P	**Pb**	**11 08 26.4**	**+0.4**
	1.7nm,0.1s						
SATY				S	**Sn**	**11 08 39.1**	**-1.2**
	11nm,0.1s						
SATY	**Saty**	**0.83**	**353**	*e*P	**Pb**	**11 08 26.1**	**+0.1**
	1.2nm,0.1s						
SATY				*e*S	**Sn**	**11 08 38.2**	**-2.0**
	11nm,0.1s						
ANVS	**Anan'yevo**	**0.85**	**311**	⇓*e*P	**Pg**	**11 08 24.3**	**-1.0**
	baz=11						
ANVS				⇓*e*S	**Sg**	**11 08 35.2**	**-1.1**
	baz=11						
UZB	**Uzynbulak**	**0.98**	**21**	*e*P	**Pg**	**11 08 28.1**	**+0.4**
	2.9nm,0.4s						
UZB				*e*S	**Sb**	**11 08 41.7**	**-0.1**
	3.8nm,0.3s						
KDJ	**Kajisay**	**1.02**	**265**	⇑*i*P	**Pg**	**11 08 27.8**	**-0.7**
	baz=61						
KDJ				⇑*i*S	**Sg**	**11 08 40.4**	**-1.3**
	baz=61						
PDGK	**Podgornoye**	**1.30**	**32**	P	**Pn**	**11 08 32.6**	**-1.3**
	0.6nm,0.3s						
PDGK				S	**Sb**	**11 08 49.7**	**-1.3**
	1.9nm,0.3s						
IZV	**Izvestkoviy**	**1.64**	**300**	P	**Pb**	**11 08 39.7**	**0.0**
	2.2nm,0.1s						
IZV				S	**Sg**	**11 09 02.4**	**+0.9**
	5.6nm,0.2s						
IZV	**Izvestkoviy**	**1.64**	**300**	*e*P	**Pb**	**11 08 39.7**	**0.0**
	2.2nm,0.1s						
IZV				*e*S	**Sg**	**11 09 02.4**	**+0.9**
	5.6nm,0.2s						
ULHL	**Ulahol**	**1.71**	**271**	⇓*i*P	**Pn**	**11 08 40.1**	**+0.5**
	baz=69						
ULHL				⇓*i*S	**Sn**	**11 09 01.7**	**-0.3**
	baz=69						
KTMS	**Ketmen**	**1.80**	**47**	*e*P	**Pb**	**11 08 42.8**	**+0.4**
	0.7nm,0.1s						
KTMS				*e*S	**Sg**	**11 09 07.1**	**+0.3**
	1.7nm,0.2s						
MTBS	**Maitube**	**1.80**	**301**	*e*P	**Pb**	**11 08 43.0**	**+0.6**
	1.5nm,0.1s						
MTBS				*e*S	**Sg**	**11 09 07.6**	**+0.8**
	11nm,0.1s						
BOOM	**Boomskoye usch**	**1.95**	**279**	⇓*i*P	**Pn**	**11 08 43.7**	**+0.9**
	baz=77						
BOOM				⇓*i*S	**Sn**	**11 09 08.2**	**+0.4**
	baz=77						
CHKK	**Chushkaly**	**1.98**	**325**	Pg	**Pb**	**11 08 45.5**	**0.0**
	3.2nm,0.1s						
CHKK				Lg	Lg	11 09 12.8	
	8.9nm,0.3s						
CHKK	**Chushkaly**	**1.98**	**325**	*e*P	**Pg**	**11 08 46.7**	**-0.2**
	1.5nm,0.3s						
CHKK				*e*S	**Sg**	**11 09 13.8**	**+1.2**
	8.9nm,0.3s						
KST	**Kastek**	**2.07**	**294**	Pg	**Pb**	**11 08 47.4**	**+0.3**
	1.5nm,0.1s						
KST				Lg	Lg	11 09 15.7	
	6.4nm,0.4s						
KST	**Kastek**	**2.07**	**294**	*e*P	**Pb**	**11 08 47.4**	**+0.3**
	1.5nm,0.1s						
KST				*e*S	**Sg**	**11 09 15.1**	**-0.3**
	6.4nm,0.4s						
KNOS	**Konyrlen**	**2.18**	**12**	Pg	**Pb**	**11 08 49.6**	**+0.7**
	0.8nm,0.1s						
DGS	**Degeres**	**2.28**	**297**	Pg	**Pb**	**11 08 50.8**	**+0.2**
	0.8nm,0.3s						
DGS				Lg	Lg	11 09 21.6	
	4.3nm,0.5s						
DGS	**Degeres**	**2.28**	**297**	*e*P	**Pb**	**11 08 51.4**	**+0.8**
	0.7nm,0.4s						
DGS				*e*S	**Sg**	**11 09 21.7**	**-0.5**
	4.3nm,0.5s						
TKM2	**Tokmak 2**	**2.28**	**289**	⇓*i*P	**Pn**	**11 08 48.5**	**+1.0**
	baz=88						
TKM2				⇓*i*S	**Sn**	**11 09 16.6**	**+0.5**
	baz=88						
DJR	**Jarkent**	**2.29**	**23**	Pg	**Pn**	**11 08 48.9**	**+1.4**
	1.5nm,0.1s						
DJR				Lg	Lg	11 09 17.8	
	5.6nm,0.2s						
DJR	**Jarkent**	**2.29**	**23**	*e*P	**Pb**	**11 08 50.6**	**-0.1**
	1.3nm,0.1s						
DJR				*e*S	**Sb**	**11 09 20.4**	**+1.0**
	5.6nm,0.2s						
KRBS	**Karabastau**	**2.56**	**306**	Pg	**Pb**	**11 08 56.0**	**+0.5**
	0.6nm,0.2s						
KRBS				Lg	Lg	11 09 29.6	
	1.9nm,0.4s						
KRBS	**Karabastau**	**2.56**	**306**	*e*P	**Pb**	**11 08 56.0**	**+0.5**
	0.6nm,0.2s						
KRBS				*e*S	**Sg**	**11 09 29.6**	**-1.7**
	1.9nm,0.4s						

*NIC **04** 11:12:10.2, 35°.07N×28°.03E, h35km±30km, Ml3.3/8*
*AFAD **04** 11:12:10.5±0.0, 35°.20N×28°.37E, h24km±3km, ML2.6*
*ISK **04** 11:12:10.5, 35°.23N×27°.95E, h28km, ML2.9/21*
*ATH **04** 11:12:12.4, 35°.21N×27°.86E, h27km±2km, ML2.6/4, Error ellipse: s-maj=5.6km s-min=1.9km az=323.0*
*THE **04** 11:12:12.0, 35°.23N×27°.94E, h72km±5km, ML2.7/2, Error ellipse: s-maj=5.9km s-min=1.0km az=322.0*
*GII **04** 11:12:12.4±0.5, 34°.835N±0°.004×28°.183E±0°.001, h40km, Mws3.1, confirmed*
ISC 04 11:12:09.0±1.4, **35°.13N**±0°.04×**28°.07E**±0°.03, **h26**km±14km, **n72**, σ1s**57**/95, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.85**	**300**	Pg	**Pn**	**11 12 25.2**	**-0.1**
KARP	**Karpathos**	**0.85**	**300**	P	**Pn**	**11 12 25.9**	**+0.6**
KARP				S	**Sn**	**11 12 37.3**	**+0.4**
	482nm,0.3s						
KARP	**Karpathos**	**0.85**	**300**	P	**Pn**	**11 12 25.9**	**+0.6**
KARP				S	**Sn**	**11 12 37.5**	**+0.6**
KARP				AML	AML	11 12 38.6	
	1.0nm,0.3s						
KARP				AML	AML	11 12 42.2	
	1.0nm,0.4s						
KARP	**Karpathos**	**0.85**	**300**	P	**Pn**	**11 12 25.6**	**+0.3**
KARP				S	**Sb**	**11 12 35.0**	**-1.2**
KARP				AML	AML	11 12 39.0	
	comp=E,958μm,0.3s						
KARP				AML	AML	11 12 41.0	
	comp=N,965μm,0.4s						
ARG	**Arkhangelos**	**1.08**	**3**	Pg	**Pb**	**11 12 28.9**	**-0.2**
ARG	**Arkhangelos**	**1.08**	**3**	P	**Pb**	**11 12 29.8**	**+0.7**
ARG	**Arkhangelos**	**1.08**	**3**	P	**Pb**	**11 12 29.9**	**+0.8**
ARG				S	**Sn**	**11 12 43.6**	**+0.9**
ARG				AML	AML	11 12 46.2	
	comp=N,0.5nm,0.3s						
ARG				AML	AML	11 12 48.8	
	comp=N,0.8nm,0.3s						
ARG	**Arkhangelos**	**1.08**	**3**	P	**Pb**	**11 12 30.6**	**+1.5**
ARG				S	**Sn**	**11 12 43.5**	**+0.9**
ARG				AML	AML	11 12 46.5	
	comp=N,456μm,0.3s						
ARG				AML	AML	11 12 47.2	
	comp=E,599μm,0.2s						
ZKR	**Zakros**	**1.52**	**270**	Pn	**Pn**	**11 12 35.0**	**+0.6**
ZKR				Sn	**Sn**	**11 12 53.1**	**-0.2**
ZKR	**Zakros**	**1.52**	**270**	P	**Pn**	**11 12 35.2**	**+0.8**
ZKR				S	**Sn**	**11 12 53.2**	**-0.1**
	comp=E,202nm,0.5s						
ZKR	**Zakros**	**1.52**	**270**	P	**Pn**	**11 12 35.1**	**+0.6**
ZKR				S	**Sn**	**11 12 53.5**	**+0.2**
ZKR				AML	AML	11 12 56.5	
	comp=E,0.3nm,0.6s						
ZKR				AML	AML	11 12 59.6	
	comp=E,0.3nm,0.4s						
ZKR	**Zakros**	**1.52**	**270**	P	**Pn**	**11 12 35.3**	**+0.8**
ZKR				S	**Sn**	**11 12 51.7**	**-1.6**
ZKR				AML	AML	11 12 54.5	
	comp=E,549μm,0.3s						
ZKR				AML	AML	11 12 54.7	
	comp=N,264μm,0.3s						
KSL	**Kastellorizon**	**1.60**	**50**	S	**Sb**	**11 12 57.9**	**+0.3**
IZZE	**Mula-Seydike**	**1.61**	**36**	P	**Pn**	**11 12 36.6**	**+0.9**
IZZE				S	**Sn**	**11 12 56.3**	**+0.7**
IZZE				*i* AML	AML	11 12 59.0	
	comp=N,205nm,0.2s						
IZZE				*i* AML	AML	11 12 59.0	
	comp=N,231nm,0.4s						
DAT	**Datca**	**1.64**	**346**	Pn	**Pn**	**11 12 36.5**	**+0.2**
DAT				Sn	**Sn**	**11 12 55.5**	**-1.1**
DAT	**Datca**	**1.64**	**346**	P	**Pn**	**11 12 36.3**	**0.0**
TURN	**Turunc**	**1.65**	**5**	Pn	**Pn**	**11 12 37.1**	**+0.9**
AKAS	**Kas**	**1.67**	**48**	Pn	**Pb**	**11 12 38.5**	**-0.6**
AKAS				Sn	**Sn**	**11 12 58.8**	**+1.6**
AKAS	**Kas**	**1.67**	**48**	S	**Sn**	**11 12 57.9**	**+0.7**
FETY	**Fethiye**	**1.71**	**29**	Pn	**Pn**	**11 12 38.3**	**+1.1**
FETY				Sn	**Sn**	**11 12 59.2**	**+1.0**
DALY	**Dalyan (Mula)**	**1.75**	**16**	Pn	**Pn**	**11 12 38.4**	**+0.8**
RFTAA	**Mazikoy-Bodrum**	**1.88**	**352**	Pn	**Pn**	**11 12 40.0**	**+0.6**
YER	**Yerkesik**	**2.01**	**5**	Pn	**Pn**	**11 12 42.2**	**+1.0**
BODT	**Bodrum**	**2.02**	**343**	Pn	**Pn**	**11 12 41.9**	**+0.5**
BODT				Sn	**Sn**	**11 13 04.2**	**-1.6**
CAME	**Cameli-Denizli**	**2.07**	**29**	Pn	**Pn**	**11 12 43.6**	**+1.5**
CAME				Sn	**Sn**	**11 13 07.9**	**+0.8**
KNIK	**Mula-Seydike**	**2.10**	**35**	P	**Pn**	**11 12 43.2**	**+0.6**
KNIK				S	**Sn**	**11 13 01.2**	**-6.8**
ELL	**Elmali**	**2.20**	**42**	Pn	**Pn**	**11 12 46.2**	**+2.2**
ELL	**Elmali**	**2.20**	**42**	P	**Pn**	**11 12 46.1**	**+2.2**
AKUM	**Antalya-Kumluc**	**2.20**	**57**	P	**Pn**	**11 12 44.8**	**+1.0**
AKUM				S	**Sn**	**11 13 10.2**	**0.0**
AKUM				*i* AML	AML	11 13 15.0	
	comp=N,42nm,0.3s						
AKUM				*i* AML	AML	11 13 17.0	
	comp=N,39nm,0.3s						
GOLH	**Golhisar**	**2.42**	**30**	P	**Pn**	**11 12 49.7**	**+2.7**
GOLH				S	**Sn**	**11 13 17.5**	**+1.7**
GOLH				*i* AML	AML	11 13 20.0	
	comp=N,44nm,0.5s						
GOLH				*i* AML	AML	11 13 20.0	
	comp=N,78nm,0.9s						
SANT	**Santorini**	**2.45**	**301**	Pn	**Pn**	**11 12 46.9**	**-0.5**
SANT	**Santorini**	**2.45**	**301**	P	**Pn**	**11 12 47.3**	**0.0**
THR8	**Santorini-Mono**	**2.46**	**302**	P	**Pn**	**11 12 47.2**	**-0.2**
THR6	**Thira Island,**	**2.49**	**300**	P	**Pn**	**11 12 48.0**	**+0.2**
THR3	**Thira Island,**	**2.51**	**301**	P	**Pn**	**11 12 48.0**	**-0.2**
THR3	**Thira Island,**	**2.51**	**301**	P	**Pn**	**11 12 47.9**	**-0.2**
SNT5	**Nea Kammeni, S**	**2.52**	**301**	P	**Pn**	**11 12 48.0**	**-0.2**
APMY	**Acipayam-Deniz**	**2.54**	**23**	Pn	**Pn**	**11 12 50.1**	**+1.5**
CMBO	**Columbo, Santo**	**2.54**	**302**	P	**Pn**	**11 12 48.1**	**-0.4**
CMBO	**Columbo, Santo**	**2.54**	**302**	P	**Pn**	**11 12 48.4**	**-0.1**
IDI	**Anoyia**	**2.60**	**274**	Pn	**Pn**	**11 12 50.2**	**+0.8**
IDI	**Anoyia**	**2.60**	**274**	P	**Pn**	**11 12 50.4**	**+0.9**
IDI				S	**Sn**	**11 13 17.5**	**-2.8**
IDI				AML	AML	11 13 21.9	
	comp=E,180μm,0.2s						
IDI				AML	AML	11 13 22.0	
	comp=N,171μm,0.3s						
KORT	**Korkueli**	**2.63**	**44**	Pn	**Pn**	**11 12 52.1**	**+2.3**
KORT	**Korkueli**	**2.63**	**44**	P	**Pn**	**11 12 52.2**	**+2.3**
KORT				S	**Sb**	**11 13 24.9**	**-2.4**
KORT				*i* AML	AML	11 13 35.0	
	comp=N,20nm,0.4s						
KORT				*i* AML	AML	11 13 36.0	
	comp=N,21nm,0.6s						
APE	**Apeiranthos**	**2.82**	**314**	Pn	**Pn**	**11 12 52.1**	**-0.3**
APE	**Apeiranthos**	**2.82**	**314**	P	**Pn**	**11 12 52.1**	**-0.3**
APE	**Apeiranthos**	**2.82**	**314**	P	**Pn**	**11 12 52.2**	**-0.1**
BUCA	**Burdur, Bucak-**	**2.98**	**42**	P	**Pn**	**11 12 57.1**	**+2.5**
BUCA				S	**Sn**	**11 13 26.5**	**-2.9**
GVD	**Gavdhos**	**3.28**	**266**	Pn	**Pn**	**11 13 00.3**	**+1.6**
IMMV	**Iera Moni Meta**	**3.36**	**277**	Pn	**Pn**	**11 13 01.2**	**+1.5**
KEPZ	**Antalya-Kepez**	**3.37**	**57**	P	**Pn**	**11 13 01.2**	**+1.2**
KEPZ				S	**Sn**	**11 13 39.7**	**+0.6**
KEPZ				*i* AML	AML	11 13 42.0	
	comp=N,22nm,0.7s						
AKMS	**Akamas**	**3.50**	**91**	P	**Pn**	**11 13 02.9**	**+1.1**
AKMS				AML	AML	11

GRFF	**Grenada Fort F**	**1.38**	**24**	*eP*		**Pn**	**11 17 12.7**	**+0.1**
GRFF				*eS*		**Sn**	**11 17 29.8**	**-2.1**
GRGR	**Grenville**	**1.48**	**26**	*eP*		**Pn**	**11 17 14.7**	**+0.8**
GRGR				*eS*		**Sn**	**11 17 33.0**	**-1.1**
GRHS	**Sauteurs**	**1.57**	**25**	*eP*		**Pn**	**11 17 15.2**	**+0.3**
GCMP	**Grenada, Carri**	**1.90**	**27**	*eP*		**Pn**	**11 17 19.9**	**+0.9**
PCRV	**Puerto La Cruz**	**2.37**	**255**	*eP*		**Pn**	**11 17 27.2**	**+2.3**
PCRV				*eS*		**Sn**	**11 17 54.7**	**+0.8**
LUEV	**Luepa**	**4.98**	**170**	*eP*		**Pn**	**11 18 01.5**	**+1.5**
LUEV				*eS*		**Sn**	**11 18 54.1**	**-2.6**
CACV	**CAICARA DEL OR**	**5.26**	**233**	*eP*		**Pn**	**11 18 00.2**	**-3.4**
CACV				*eS*		Sn	11 18 53.1	-10
BENV	**Beln**	**5.26**	**262**	*eP*		**Pn**	**11 18 06.2**	**+2.5**
TURV	**Turiamo**	**5.45**	**267**	*eP*		**Pn**	**11 18 08.8**	**+2.7**
BAUV	**El Baul**	**5.94**	**253**	*eP*		**Pn**	**11 18 14.3**	**+1.6**
BAUV				*eS*		**Sn**	**11 19 17.4**	**-2.1**

*IDC **04** 11:18:47.8±1.3,26°.89S×71°.03W,h0km,mb4.4/2, mbtmp3.9/6,ML3.2/4,MS3.3/7,Error ellipse: s-maj=34.5km s-min=19.9km az=111.0*
*SJA **04** 11:18:47.7±0.6,27°.02S×71°.33W,h21km±2km,ML4.2, MW4.3*
*NEIC **04** 11:18:48.2±1.4,26°.99S±0°.02×71°.4W±0°.1,h10km±1km, mb4.4/6,Error ellipse: s-maj=17.2km s-min=3.2km az=269.0*
*GUC **04** 11:18:49.6±0.7,27°.03S×71°.26W,h34km±4km,ML4.1*
*VAO **04** 11:19:31.2±0.8,24°.98S×68°.73W,h156km,mb3.8*
ISC 04 11:18:47.1±1.8,27°.02S±0°.02×71°.33W±0°.05,h3km±12km, n90,σ1s88/117,mb4.7/4,5C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**1.09**	**37**		**Pn**	**11 19 08.7**	**-0.7**
AC01	**Pan de Azucar**	**1.09**	**37**	*eP*	**Pn**	**11 19 08.6**	**-0.7**
AC01				*eS*	**Sb**	**11 19 23.6**	**+0.3**
AC01				IAML		11 19 32.7	
	comp=Z,4μm,0.8s						
AC01	**Pan de Azucar**	**1.09**	**37**	⇑*iP*	**Pn**	**11 19 08.6**	**-0.7**
AC01				*i* S	**Sb**	**11 19 21.8**	**-1.4**
AC01				IAML		11 19 27.3	
	comp=N,4μm,0.4s						
GO03	**Copiap**	**1.13**	**121**	Pn	**Pn**	**11 19 09.4**	**-0.4**
GO03	**Copiap**	**1.13**	**121**	*eP*	**Pn**	**11 19 09.4**	**-0.4**
GO03				*eS*	**Sb**	**11 19 23.7**	**-0.7**
GO03				IAML	**Sn**	**11 19 24.5**	**-1.4**
	comp=Z,3μm,0.4s						
GO03				*eS*	**Sn**	**11 19 24.5**	**-1.4**
GO03	**Copiap**	**1.13**	**121**	⇓*iP*	**Pn**	**11 19 09.3**	**-0.6**
GO03				*i* S	**Sb**	**11 19 22.9**	**-1.5**
AC04	**Llanos de Chal**	**1.20**	**169**	Pn	**Pn**	**11 19 10.5**	**-0.3**
AC04	**Llanos de Chal**	**1.20**	**169**	*eP*	**Pn**	**11 19 10.6**	**-0.2**
AC04				*eS*	**Sg**	**11 19 27.7**	**+2.1**
AC04	**Llanos de Chal**	**1.20**	**169**	*iP*	**Pn**	**11 19 10.5**	**-0.3**
AC04				*i* S	**Sb**	**11 19 25.1**	**-1.3**
AC02	**Maricunga**	**1.97**	**85**	Pn	**Pn**	**11 19 23.7**	**+1.8**
AC02	**Maricunga**	**1.97**	**85**	*eP*	**Pn**	**11 19 18.2**	**-3.7**
AC02				*eP*	**Pb**	**11 19 22.9**	**-1.0**
AC02				*eS*	**Sb**	**11 19 49.1**	**0.0**
AC02				IAML		11 19 50.0	
	comp=Z,932nm,0.8s						
AC02	**Maricunga**	**1.97**	**85**	⇑*eP*	**Pn**	**11 19 23.7**	**+1.8**
AC02				IAML		11 19 51.0	
	comp=N,2μm,0.3s						
AC05	**El Transito**	**2.03**	**153**	Pn	**Pn**	**11 19 24.1**	**+1.7**
AC05	**El Transito**	**2.03**	**153**	*eP*	**Pn**	**11 19 24.1**	**+1.7**
AC05				*eS*	**Sb**	**11 19 52.5**	**+1.9**
AC05				IAML		11 19 57.5	
	comp=Z,1μm,0.8s						
AC05	**El Transito**	**2.03**	**153**	⇑*iP*	**Pn**	**11 19 24.1**	**+1.7**
AC05				*i* S	**Sn**	**11 19 48.5**	**+0.1**
AC05				IAML		11 19 57.2	
	comp=E,1μm,0.5s						
LCO	**Las Campanas**	**2.06**	**165**	Pn	**Pn**	**11 19 24.0**	**+1.1**
LCO	**Las Campanas**	**2.06**	**165**	*eP*	**Pn**	**11 19 23.9**	**+1.0**
LCO				*eP*	**Pn**	**11 19 24.1**	**+1.1**
LCO				*eS*	**Sn**	**11 19 49.2**	**0.0**
LCO				IAML		11 20 05.9	
	comp=Z,4μm,0.8s						
LCO	**Las Campanas**	**2.06**	**165**	⇑*iP*	**Pn**	**11 19 23.9**	**+1.1**
LCO				*i* S	**Sn**	**11 19 48.6**	**-0.6**
GO02	**Mina Guanaco**	**2.42**	**41**	Pn	**Pn**	**11 19 28.6**	**+0.6**
GO02	**Mina Guanaco**	**2.42**	**41**	*eP*	**Pn**	**11 19 28.7**	**+0.8**
GO02				*eS*	**Sn**	**11 19 59.7**	**+1.4**
GO02				*eS*	**Sb**	**11 20 00.2**	**-1.7**
GO02				IAML		11 20 13.0	
	comp=Z,2μm,0.7s						
GO02	**Mina Guanaco**	**2.42**	**41**	⇑*iP*	**Pn**	**11 19 28.5**	**+0.5**
GO02				*i* S	**Sn**	**11 19 58.7**	**+0.4**
GO02				IAML		11 20 14.6	
	comp=E,3μm,0.7s						
PB14	**IPOC Station P**	**2.53**	**19**	Pn	**Pn**	**11 19 28.4**	**-1.0**
PB14	**IPOC Station P**	**2.53**	**19**	*eP*	**Pn**	**11 19 28.7**	**-0.7**
PB14				*eS*	**Sn**	**11 19 59.7**	**-1.2**
PB14				*eS*	**Sg**	**11 20 12.1**	**+3.7**
PB14				IAML		11 20 13.8	
	comp=Z,1μm,0.5s						
PB14	**IPOC Station P**	**2.53**	**19**	IAML		11 20 12.5	
	comp=E,837nm,0.5s						
CO05	**La Serena**	**2.89**	**178**		**Pn**	**11 19 34.6**	**+0.6**
CO05	**La Serena**	**2.89**	**178**	*eP*	**Pn**	**11 19 34.7**	**+0.6**
CO05				*eS*	**Sn**	**11 20 09.0**	**-0.3**
CO05				IAML		11 20 25.6	
	comp=E,1μm,0.7s						
CO01	**Juntas del Tor**	**3.14**	**160**		**Pn**	**11 19 39.9**	**+2.2**
CO01	**Juntas del Tor**	**3.14**	**160**	*eP*	**Pn**	**11 19 40.0**	**+2.2**
CO01				*eS*	**Sn**	**11 20 09.2**	**-6.7**
CO01				*eS*	**Sn**	**11 20 14.2**	**-1.7**
CO01				IAML		11 20 28.4	
	comp=Z,341nm,0.6s						
CO01	**Juntas del Tor**	**3.14**	**160**	*iP*	**Pn**	**11 19 39.9**	**+2.2**
CO01				*i* S	**Sn**	**11 20 15.7**	**-0.1**
CO01				IAML		11 20 32.3	
	comp=N,306nm,0.6s						
GO04	**Tololo Observa**	**3.17**	**172**		**Pn**	**11 19 39.4**	**+1.2**
GO04	**Tololo Observa**	**3.17**	**172**	*eP*	**Pn**	**11 19 39.8**	**+1.6**
GO04				*eP*	Pb	11 19 40.0	-4.3
GO04				*eS*	**Sn**	**11 20 18.2**	**+1.5**
GO04				IAML		11 20 38.1	
	comp=Z,818nm,0.5s						
GO04	**Tololo Observa**	**3.17**	**172**	*eP*	**Pn**	**11 19 39.3**	**+1.1**
VCA	**Vinchina**	**3.25**	**122**	*eP*	**Pn**	**11 19 39.2**	**+0.1**
VCA				*eS*	**Sg**	**11 20 30.7**	**-0.8**
VCA				IAML		11 20 43.8	
	comp=Z,365nm,1.0s						
AGUA	**GUANDACOL**	**3.50**	**135**	*eP*	**Pn**	**11 19 42.2**	**-0.4**
AGUA				*eS*	**Sb**	**11 20 37.2**	**+4.3**
AGUA				IAML		11 20 54.0	
	comp=Z,506nm,0.8s						
PB10	**IPOC Station P**	**3.56**	**11**	*eP*	**Pn**	**11 19 41.9**	**-1.4**
PB10				*eS*	**Sb**	**11 20 38.2**	**+3.7**
CO03	**El Pedregal**	**3.84**	**172**		**Pn**	**11 19 48.4**	**+1.1**
CO03	**El Pedregal**	**3.84**	**172**	*eP*	**Pn**	**11 19 48.7**	**+1.4**
CO03				*eS*	**Sb**	**11 20 41.7**	**-1.0**
CO03				IAML		11 20 53.2	
	comp=Z,389nm,0.8s						
PB15	**IPOC Station P**	**4.15**	**24**	*eP*	**Pn**	**11 19 52.5**	**+0.8**
PB15				*eS*	**Sn**	**11 20 41.9**	**+1.0**
PB15				*eS*	**Sb**	**11 20 52.7**	**+1.0**
PB15				IAML		11 21 03.1	
	comp=Z,990nm,0.4s						
PB15	**IPOC Station P**	**4.15**	**24**	*eP*	**Pn**	**11 19 52.4**	**+0.7**
CO02	**Combarbal**	**4.18**	**176**	*eP*	**Pn**	**11 19 52.7**	**+0.8**
CO02				*eS*	**Sn**	**11 20 41.2**	**-0.1**
CO02				IAML		11 21 07.1	
	comp=Z,658nm,0.6s						
CO02	**Combarbal**	**4.18**	**176**	*eP*	**Pn**	**11 19 52.3**	**+0.4**
PB05	**IPOC Station P**	**4.28**	**14**	*eP*	**Pn**	**11 19 51.8**	**-1.5**
PB05				*eS*	**Sg**	**11 21 01.2**	**-3.3**
PB05				IAML		11 21 13.4	
	comp=Z,250nm,0.5s						
DOCA	**Reserva Natura**	**4.38**	**154**	*eP*	**Pn**	**11 19 58.9**	**+4.0**
DOCA				*eS*	**Sg**	**11 21 05.1**	**-2.7**
DOCA				IAML		11 21 07.9	
	comp=Z,288nm,1.5s						
ACLC	**CERRO LA CRUZ**	**4.54**	**123**	*eP*	**Pn**	**11 20 00.7**	**+3.8**
ACLC				*eS*	**Sb**	**11 21 00.2**	**-2.6**
ACLC				IAML		11 21 24.6	
	comp=Z,199nm,0.6s						
PB06	**IPOC Station P**	**4.58**	**21**	*eS*	**Sb**	**11 21 04.7**	**+0.7**
PB06				IAML		11 21 21.1	
	comp=Z,341nm,0.8s						
PB04	**IPOC Station P**	**4.79**	**13**	*eS*	**Sb**	**11 21 09.2**	**-0.8**
PB04				IAML		11 21 26.6	
	comp=Z,260nm,1.3s						
LVC	**Limon Verde**	**4.91**	**27**		**Pn**	**11 20 02.5**	**+0.3**
LVC	**Limon Verde**	**4.91**	**27**	Pn	**Pn**	**11 20 02.0**	**-0.2**
	comp=Z,3.5nm,0.3s,baz=179,slow=8.6,SNR=21						
LVC				Sn	**Sn**	**11 20 56.2**	**-3.5**
	comp=Z,18nm,0.3s,baz=192,slow=8.2,SNR=4.9						
LVC				Lg	Lg	11 21 14.3	
	comp=Z,44nm,0.3s,baz=355,slow=13,SNR=9.0						
LVC				LR	LR	11 21 51.5	
	comp=Z,236nm,19.1s,baz=244,slow=39 comp=Z,8.0nm,0.3s						
LVC	**Limon Verde**	**4.91**	**27**	*eP*	**Pn**	**11 20 02.5**	**+0.3**
PB01	**IPOC Station P**	**6.18**	**16**		**Pn**	**11 20 17.3**	**-2.1**
PATCX	**Punta Patache**	**6.27**	**10**		**Pn**	**11 20 18.1**	**-2.5**
MT01	**Popeta**	**6.82**	**179**		**Pn**	**11 20 28.2**	**+0.1**
PB11	**IPOC Station P**	**7.39**	**12**	Pn	**Pn**	**11 20 33.5**	**-2.6**
GO01	**Chusmiza**	**7.58**	**15**		**Pn**	**11 20 37.0**	**-2.0**
PB12	**IPOC Station P**	**8.42**	**6**		**Pn**	**11 20 47.5**	**-2.7**
H03N1	**Juan Fernandez**	**9.16**	**224**	T	T	11 30 33.9	
	baz=53,slow=71						
H03N2	**Juan Fernandez**	**9.17**	**224**	T	T	11 30 38.9	
	baz=53,slow=71						
H03N3	**Juan Fernandez**	**9.18**	**224**	T	T	11 30 34.2	
	baz=53,slow=71						
LPAZ	**La Paz**	**11.09**	**16**	Pn	**Pn**	**11 21 26.4**	**-0.8**
CPUP	**Villa Florida**	**12.54**	**90**	Pn	**Pn**	**11 21 44.9**	**-1.6**
	baz=20,slow=14,SNR=1.7						
CPUP				Lg	Lg	11 25 16.9	
	comp=Z,0.2nm,0.3s,baz=338,slow=20,SNR=1.8						
CPUP				LR	LR	11 26 33.8	
	comp=Z,90nm,21.3s,baz=234,slow=38 comp=Z,0.5nm,0.4s						
CPUP	**Villa Florida**	**12.54**	**90**	*eP*	Pn	11 21 55.0	+8.6
ITQB	**Itaqui**	**13.21**	**105**	*eP*	P	11 22 12.8	+6.9
TRQA	**Tornquist**	**13.53**	**147**	Pn	**Pn**	**11 22 01.0**	**+1.0**
MURT	**Porto Murtinho**	**13.59**	**70**	*eP*	**Pn**	**11 22 02.0**	**+1.1**
PLCA	**Paso Flores**	**13.69**	**178**	Pn	**Pn**	**11 22 03.1**	**+0.9**
	baz=197,slow=6.9,SNR=2.8						
PLCA				Lg	Lg	11 26 07.0	
	baz=68,slow=17,SNR=1.4						
PLCA				LR	LR	11 26 42.9	
	comp=Z,141nm,19.5s,baz=8.0,slow=34 comp=Z,0.9nm,0.9s						
SIV	**San Ignacio**	**14.53**	**43**	Pn	**Pn**	**11 22 10.3**	**-3.6**
	baz=256,slow=13,SNR=2.4						
SIV				LR	LR	11 28 17.9	
	comp=Z,80nm,22.0s,baz=143,slow=40 comp=Z,0.6nm,0.4s						
NNA	**Nana**	**15.83**	**340**	LR	LR	11 27 27.2	
	comp=Z,34nm,18.2s,baz=160,slow=33						
FRBT	**Francisco Belt**	**16.39**	**90**	*eP*	**P**	**11 22 46.2**	**+5.0**
PTGB	**Pitanga**	**17.49**	**87**	*eP*	**P**	**11 22 59.4**	**+5.9**
ETMB	**Extrema**	**17.78**	**17**	P	**P**	**11 22 57.2**	**+0.6**
ETMB	**Extrema**	**17.78**	**17**	*eP*	**P**	**11 22 58.9**	**+2.3**
LDASE	**Londrina, Braz**	**18.64**	**83**	*eP*	**Pn**	**11 23 07.0**	**+0.7**
PCMB	**Pacaembu**	**19.06**	**78**	*eP*	**Pn**	**11 23 11.8**	**+0.4**
SAML	**Samuel**	**19.56**	**25**	P	**P**	**11 23 15.7**	**-0.5**
SAML				IAmb	IAmb	11 23 18.5	
	comp=Z,6.8nm,0.9s						
SAML	**Samuel**	**19.56**	**25**	*eP*	**Pn**	**11 23 17.0**	**-0.4**
ITRB	**Iturama**	**20.56**	**74**	*eP*	**P**	**11 23 27.0**	**-0.2**
PARB	**Paraibuna**	**23.54**	**87**	*eP*	P	11 24 05.7	+6.9
SNDB	**Serra Nova Dou**	**24.04**	**55**	*eP*	**P**	**11 24 01.4**	**-2.3**
BDFB	**Brasilia**	**24.44**	**67**	P	**P**	**11 24 04.9**	**-2.6**
BDFB				IAmb	IAmb	11 24 48.0	
	comp=Z,5.6nm,1.2s						
BDFB	**Brasilia**	**24.44**	**67**	P	**P**	**11 24 05.3**	**-2.2**
	comp=Z,2.9nm,0.6s,baz=246,slow=14,SNR=4.3						
BDFB				LR	LR	11 35 17.4	
	comp=Z,237nm,18.2s,baz=279,slow=41 comp=Z,2.9nm,0.6s						
NPGB	**Novo Progresso**	**25.00**	**40**	*eP*	**P**	**11 24 12.8**	**+0.4**
ITTB	**Itaituba**	**27.01**	**36**	*eP*	**P**	**11 24 31.7**	**+1.2**
RPN	**Rapa Nui**	**33.76**	**261**	LR	LR	11 35 55.1	
	comp=Z,143nm,18.4s,baz=303,slow=30						
BAUV	**El Baul**	**35.89**	**6**	P	**P**	**11 25 47.7**	**-1.0**
SNAA	**Sanae**	**57.85**	**160**	P	**P**	**11 28 40.0**	**+0.3**
SNAA				IAmb	IAmb	11 28 48.2	
	comp=Z,10.0nm,1.4s						
TOA0	**Torodi Ar. Sit**	**81.28**	**70**	P	**P**	**11 31 04.8**	**-0.4**
TOA0				IAmb	IAmb	11 31 06.0	
	comp=Z,6.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.28**	**70**	P	**P**	**11 31 05.4**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=269,slow=4.3,SNR=30 comp=Z,5.2nm,0.7s						
KURBB	**Kurchatov Arra**	**147.11**	**36**	PKPbc	**PKPbc**	**11 38 31.4**	**0.0**
	comp=Z,0.9nm,0.7s,baz=310,slow=3.5,SNR=8.5						
ZALV	**Zalesovo Beam**	**147.86**	**27**	PKPbc	**PKPbc**	**11 38 31.8**	**-1.5**
	comp=Z,4.6nm,0.8s,baz=316,slow=4.1,SNR=20						
MKAR	**Makanchi Array**	**151.33**	**40**	PKPbc	**PKiKP**	**11 38 42.9**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=324,slow=2.2,SNR=27						

*NEIC **04** 11:21:22.2±1.1,36°.97N±0°.02×99°.37W±0°.04,h6km±1km, Error ellipse: s-maj=4.3km s-min=2.5km az=98.0*
TUL 04 11:21:22.4±0.8,36°.96N±0°.02×99°.36W±0°.04,h5km±2km, ML2.7,mb_Lg2.4/14(NEIC),ML2.4/12(NEIC),Error ellipse: s-maj=4.2km s-min=2.5km az=105.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.65**	**154**	Pg	Pg	11 21 34.2	-0.7
U32A				Sg	Sg	11 21 44.1	+0.7
U32A				IAML		11 21 44.9	
	comp=N,132nm,0.1s						
OK038	**West end E0370**	**0.69**	**134**	Pg	Pg	11 21 35.4	-0.3
OK038				Sg	Sg	11 21 45.1	+0.4
ELIS	**Ellis County**	**0.90**	**183**	Pg	Pg	11 21 39.3	-0.3
ELIS				Sg	Sb	11 21 52.7	-0.2
ELIS				IAML		11 21 56.6	
	comp=E,95nm,0.2s						
ELIS				IAML		11 21 58.2	
	comp=N,106nm,0.2s						
OK032	**Salt Plains WL**	**0.94**	**99**	Pg	Pg	11 21 39.6	-0.7
OK032				IAML		11 21 55.3	
	comp=N,142nm,0.2s						
OK032				IAML		11 22 06.3	
	comp=N,145nm,0.1s						
KAN10	**Anthony SW Sta**	**1.02**	**81**	IAmb_Lg		11 21 55.8	
	comp=Z,30nm,0.7s						
CROK	**Carrier**	**1.20**	**112**	Pg	Pg	11 21 44.9	-0.5
CROK				IAML		11 22 05.2	
	comp=E,101nm,0.3s						
R32A	**Long Quarter,**	**1.54**	**19**		Pn	11 21 50.2	-0.5
R32A				IAmb_Lg		11 22 11.2	
	comp=Z,19nm,1.3s						
CBKS	**Cedar Bluff**	**1.87**	**351**		Pn	11 21 55.5	+0.3
CBKS				IAmb_Lg		11 22 21.1	
	comp=Z,18nm,1.1s						
OK029	**Liberty Lake**	**1.93**	**127**	Pn	Pb	11 21 57.1	-1.0
SMWD	**Samnorwood**	**1.99**	**201**		Pn	11 21 57.8	+1.0
OK048	**Pawnee Station**	**2.02**	**105**	Pn	Pn	11 21 57.9	+0.8
WMOK	**Wichita Mounta**	**2.27**	**168**		Pn	11 22 00.7	+0.1
OK052	**Battle Ridge R**	**2.28**	**114**	Pn	Pb	11 22 02.5	-1.5
T35A	**Sooner Cattle**	**2.28**	**90**	Pn	Pb	11 22 03.3	-0.9
FNO	**Franklin**	**2.33**	**136**		Pn	11 22 01.9	+0.5
AMTX	**Amarillo**	**2.80**	**223**	IAmb_Lg		11 22 50.3	
	comp=Z,6.3nm,1.1s						
Z35A	**Perchaven, San**	**4.01**	**154**	IAmb_Lg		11 23 39.9	
	comp=Z,4.8nm,0.7s						
N23A	**Red Feather La**	**6.46**	**309**	IAmb_Lg		11 24 50.2	
	comp=Z,9.6nm,0.8s						
SPMN	**Marine on St.**	**9.62**	**29**	IAmb_Lg		11 26 27.4	
	comp=Z,5.8nm,1.2s						

*IDC **04** 11:36:06.4±4.7,16°.35N×93°.79W,h0km,mb3.3/4, mbtmp3.3/5,ML3.4/1,Error ellipse: s-maj=123.7km s-min=21.4km az=23.0*
*CATAC **04** 11:36:10.7±1.0,15°.73N×94°.95W,h26km±9km,MB5.4, ML4.6*
*MEX **04** 11:36:13.5±0.6,15°.83N×94°.94W,h35km±79km,MD4.5*
ISC 04 11:36:10.6±0.8,15°.94N±0°.03×94°.88W±0°.02,h31km±7km, n65,σ2s36/98,mb3.5/4,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.15**	**360**	Pg	**Pb**	**11 36 32.4**	**+0.5**
	54nm,0.3s,baz=190,slow=10,SNR=904						
CMIG				Lg	Lg	11 36 46.9	
	211nm,0.3s,baz=194,slow=16,SNR=18						
CMIG	**Matias Romero**	**1.15**	**360**	*eP*	**Pb**	**11 36 32.4**	**+0.5**
CMIG				*eS*	**Sb**	**11 36 47.0**	**+0.6**
HUIG	**Huatulco**	**1.20**	**262**	*eP*	**Pn**	**11 36 31.1**	**-0.1**
HUIG				*eS*	**Sn**	**11 36 44.9**	**-1.6**
PCIG		**1.61**	**98**	*eP*	**Pn**	**11 36 38.2**	**+1.4**
PCIG				*eS*	**Sn**	**11 36 57.5**	**+0.9**
TGIG		**1.88**	**63**	*eP*	**Pb**	**11 36 43.2**	**-1.1**
TGIG				*eS*	**Sb**	**11 37 04.7**	**-2.7**
NEUV	**Arroyo Zacate**	**1.98**	**333**	*eP*	**Pn**	**11 36 43.8**	**+1.8**
NEUV				*i* S	**Sn**	**11 37 07.7**	**+2.0**
VHO	**Vista Hermosa**	**2.11**	**303**	*eP*	**Pn**	**11 36 46.8**	**+2.8**
VHO				*eS*	**Sn**	**11 37 11.4**	**+2.1**
TUIG	**Tuzandepetl**	**2.13**	**12**	*eP*	**Pb**	**11 36 47.3**	**-1.2**
TUIG				*eS*	**Sn**	**11 37 08.5**	**-1.0**
PEIG	**Puerto Escondi**	**2.19**	**272**	*eP*	**Pn**	**11 36 44.9**	**0.0**
PEIG				*eS*	**Sn**	**11 37 08.0**	**-2.9**
PMUV	**Sontecomapan**	**2.61**	**355**	*eP*	**Pn**	**11 36 50.4**	**-0.3**
PMUV				*eS*	**Sn**	**11 37 21.5**	**+0.1**
CCIG	**Comitan**	**2.65**	**82**	*eP*	**Pn**	**11 36 53.5**	**+2.1**
CCIG				*eS*	**Sb**	**11 37 26.5**	**-3.3**
CCIG	**Comitan**	**2.65**	**82**	*i* P	**Pn**	**11 36 53.4**	**+2.0**
CCIG				*i* S	**Sb**	**11 37 29.5**	**-0.3**
CCIG				IAML		11 37 40.7	
	comp=Z,2μm,1.0s						
PATR	**El Naranjo**	**2.67**	**107**	*eP*	**Pn**	**11 36 53.2**	**+1.5**
PATR				*eS*	**Sn**	**11 37 22.7**	**-0.5**
PAVE	**Pavencul**	**2.70**	**105**	*eP*	**Pn**	**11 36 54.3**	**+2.2**
PAVE				*eS*	**Sn**	**11 37 24.4**	**+0.4**
THIG		**2.72**	**112**	*eP*	**Pn**	**11 36 53.6**	**+1.5**
THIG				*eS*	**Sn**	**11 37 24.3**	**+0.4**
YOIG	**Yosondua**	**2.72**	**290**	*eP*	**Pn**	**11 36 54.6**	**+2.2**
YOIG				*eS*	**Sn**	**11 37 24.9**	**+0.4**
CHUJ	**Union Juarez**	**2.79**	**107**	*eP*	**Pn**	**11 36 55.4**	**+2.0**
CHUJ				*eS*	**Sn**	**11 37 26.8**	**+0.5**
SMCA	**Catarina**	**2.91**	**111**	*i* P	**Pn**	**11 36 56.1**	**+1.3**
SMCA				*i* S	**Sn**	**11 37 28.9**	**+0.2**
SMCA				IAML		11 37 39.2	
	comp=Z,920nm,1.0s						
TOIG	**Toxpalan**	**3.00**	**316**	*eP*	**Pn**	**11 37 00.6**	**+4.4**
TOIG				*eS*	**Sn**	**11 37 30.8**	**-0.4**
TXIG	**Tlaxiaco**	**3.07**	**296**	*eP*	**Pn**	**11 37 00.1**	**+2.8**
TXIG				*eS*	**Sn**	**11 37 32.0**	**-1.0**
SMSP	**San Marcos**	**3.13**	**107**	*i* P	**Pn**	**11 37 01.6**	**+3.5**
PNIG	**Pinotepa**	**3.16**	**279**	*eP*	**Pn**	**11 36 58.9**	**+0.6**
PNIG				*eS*	**Sn**	**11 37 30.3**	**-4.6**
HUEH	**Huehuetenango**	**3.31**	**100**	*i* P	**Pn**	**11 36 59.8**	**-0.7**
HUEH				*i* S	**Sb**	**11 37 46.1**	**-2.5**
HUEH				IAML		11 38 00.9	
	comp=Z,2μm,1.0s						
RTAL	**Retalhuleu**	**3.38**	**114**	*i* P	**Pn**	**11 37 00.7**	**-0.5**
RTAL				*i* S	**Sn**	**11 37 41.7**	**+1.5**
RTAL				IAML		11 37 54.4	
	comp=Z,700nm,1.0s						
HLIG	**Huajuapan de L**	**3.38**	**304**	*eP*	**Pn**	**11 37 04.9**	**+3.4**
HLIG				*eS*	**Sn**	**11 37 38.4**	**-2.2**
TPIG	**Tehuac#an**	**3.43**	**316**	*eP*	**Pn**	**11 37 06.1**	**+4.0**
TPIG				*eS*	**Sn**	**11 37 43.7**	**+1.9**
FTIG	**Fresnillo de T**	**3.68**	**303**	*eP*	**Pn**	**11 37 09.1**	**+3.5**
FTIG				*eS*	**Sn**	**11 37 48.0**	**0.0**
QUIS	**Sacapulas**	**3.70**	**99**	*i* P	**Pn**	**11 37 08.9**	**+3.1**
QUIS				*i* S	**Sb**	**11 37 56.6**	**-3.3**
MGIG	**Malinaltepec**	**3.83**	**290**	*eP*	**Pn**	**11 37 10.1**	**+2.5**
MGIG				*eS*	**Sn**	**11 37 50.4**	**-1.3**
JAUV	**Jalcomulco**	**3.88**	**332**	*eP*	**Pn**	**11 37 08.8**	**+0.7**
JAUV				*i* S	**Sn**	**11 37 49.3**	**-3.3**
TLIG	**Tlapa**	**3.89**	**295**	*eP*	**Pn**	**11 37 11.8**	**+3.4**
TLIG				*eS*	**Sn**	**11 37 52.6**	**-0.5**
TLIG	**Tlapa**	**3.89**	**295**	*i* P	**Pn**	**11 37 11.7**	**+3.3**
TLIG				*i* S	**Sn**	**11 37 53.7**	**+0.6**
TLIG				IAML		11 38 27.2	
	comp=Z,300nm,1.0s						
LVIG	**Laguna Verde**	**4.04**	**339**	*eP*	**Pn**	**11 37 10.6**	**+0.2**
LVIG				*eS*	**Sn**	**11 37 53.9**	**-2.8**
CRIG	**Cruz Grande**	**4.16**	**282**	*eP*	**Pn**	**11 37 13.0**	**+1.0**
CRIG				*eS*	**Sn**	**11 37 54.1**	**-5.6**
AVCB	**Coban**	**4.33**	**96**	*i* S	**Sn**	**11 38 07.9**	**+3.9**
SCIG	**Sabancuy**	**4.63**	**49**	*eP*	**Sn**	**11 37 20.4**	**+1.9**
SCIG				*eS*	**Sn**	**11 38 07.4**	**-3.9**
**DAIG

NEIC ***04*** *12:08:51.9±2.6, 23.72°S±0.10°×38.00°E±0.09, h10km±1km, mb4.5/6, Error ellipse: s-maj=16.8km s-min=13.8km az=165.0*

IDC ***04*** *12:08:51.8±1.1, 23.55°S×37.98°E, h0km, mb4.0/11, mbtmp4.1/13, ML2.9/2, MS3.6/13, Error ellipse: s-maj=31.9km s-min=21.4km az=174.0*

ISC 04 12:08:53.1±0.7, 23.62°S±0.09°×37.73°E±0.07, h10km, n65, σ1♦73/57, mb4.3/17, MS3.7/8, 1C-6D, Mozambique Channel

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MOPA	**Mopani**	**5.81**	**270**	*i*	P	**Pn**	**12 10 21.5**	**+2.1**
MOPA				*i*	S	**Sn**	**12 11 28.1**	**+1.9**
MOPA	**Mopani**	**5.81**	**270**	*i*	P	**Pn**	**12 10 20.8**	**+1.4**
MOPA				*i*	S	Sn	12 11 19.3	-6.8
MOPA	**Mopani**	**5.81**	**270**	*i*	P	**Pn**	**12 10 20.8**	**+1.4**
MOPA				*i*	S	Sn	12 11 19.3	-6.8
POGA	**Pongola**	**6.59**	**234**		Pn	**Pn**	**12 10 28.3**	**-1.7**
MUSN	**Musina, Limpop**	**7.37**	**279**	*i*	P	**Pn**	**12 10 44.0**	**+3.2**
MUSN				*i*	S	**Sn**	**12 12 03.1**	**-1.6**
MUSN	**Musina, Limpop**	**7.37**	**279**	*i*	P	**Pn**	**12 10 44.7**	**+3.8**
MUSN				*i*	S	**Sn**	**12 12 02.5**	**-2.2**
MUSN	**Musina, Limpop**	**7.37**	**279**	*i*	P	**Pn**	**12 10 44.7**	**+3.8**
MUSN				*i*	S	**Sn**	**12 12 02.5**	**-2.2**
ZOMB	**Zomba**	**8.49**	**344**	*e*	PN	**Pn**	**12 10 57.0**	**+0.8**
ZOMB				*e*	SN	Sn	12 12 25.1	-7.2
ZOMB	**Zomba**	**8.49**	**344**	*e*	PN	**Pn**	**12 10 57.0**	**+0.8**
ZOMB				*e*	SN	Sn	12 12 25.1	-7.2
VOI	**Vohitsoka**	**8.53**	**80**			Pn	12 10 51.3	-5.6
FOMA	**Nahampoana Res**	**8.54**	**101**			Pn	12 10 49.6	-7.3
BLWY	**Bulawayo**	**9.15**	**290**	*i*	P	**Pn**	**12 11 08.3**	**+3.0**
BLWY				*i*	S	**Sn**	**12 12 45.0**	**-3.5**
BLWY	**Bulawayo**	**9.15**	**290**	*i*	P	**Pn**	**12 11 08.3**	**+3.0**
BLWY				*i*	S	**Sn**	**12 12 45.0**	**-3.5**
KRI	**Karoi**	**10.18**	**310**	*i*	P	**Pn**	**12 11 19.4**	**0.0**
KRI				*i*	S	Sn	12 13 05.1	-8.7
KRI	**Karoi**	**10.18**	**310**	*i*	P	Pn	12 11 14.1	-5.4
KRI				*i*	S	Sn	12 12 55.0	-19
KRI	**Karoi**	**10.18**	**310**	*i*	P	Pn	12 11 14.1	-5.4
KRI				*i*	S	Sn	12 12 55.0	-19
LBTB	**Lobatse**	**11.15**	**260**			**Pn**	**12 11 32.6**	**-0.2**
LBTB	**Lobatse**	**11.15**	**260**	*i*	P	Pn	12 11 28.3	-4.4
LBTB	**Lobatse**	**11.15**	**260**	*i*	P	**Pn**	**12 11 33.6**	**+0.8**
LBTB				⇓	*i* S	Sn	12 13 28.1	-10
LBTB	**Lobatse**	**11.15**	**260**		Pn	**Pn**	**12 11 32.8**	**0.0**
	comp=Z,2.2nm,0.3s,baz=77,slow=10,SNR=13							
LBTB					Sn	Sn	12 13 31.4	-6.2
	0.8nm,0.3s,baz=348,slow=24,SNR=3.2							
LBTB					LR	LR	12 15 57.5	
	comp=Z,104nm,20.2s,baz=85,slow=37							
LBTB	**Lobatse**	**11.15**	**260**	*i*	P	**Pn**	**12 11 33.6**	**+0.8**
LBTB				⇓	*i* S	Sn	12 13 28.1	-10
LSZ	**Lusaka**	**12.24**	**311**			**Pn**	**12 11 47.5**	**-0.2**
LSZ	**Lusaka**	**12.24**	**311**	*i*	P	**Pn**	**12 11 46.5**	**-1.1**
LSZ	**Lusaka**	**12.24**	**311**		Pn	**Pn**	**12 11 46.5**	**-1.1**
	0.6nm,0.3s,baz=152,slow=13,SNR=5.0							
LSZ					Sn	Sn	12 13 53.6	-11
	1.8nm,0.3s,baz=59,slow=16,SNR=2.7							
LSZ					LR	LR	12 16 46.8	
	comp=Z,324nm,18.2s,baz=149,slow=38							
BOSA	**Boshof**	**12.26**	**243**		Pn	**Pn**	**12 11 48.7**	**+0.8**
BOSA	**Boshof**	**12.26**	**243**	*i*	P	Pn	12 11 42.2	-5.8
BOSA	**Boshof**	**12.26**	**243**	⇓	*i* P	**Pn**	**12 11 46.6**	**-1.3**
BOSA					*i* S	Sn	12 13 50.9	-14
BOSA	**Boshof**	**12.26**	**243**		Pn	**Pn**	**12 11 46.0**	**-1.9**
	0.3nm,0.3s,baz=66,slow=15,SNR=1.9							
BOSA					Sn	Sn	12 13 56.4	-8.4
	1.1nm,0.3s,baz=50,slow=15,SNR=6.3							
BOSA					LR	LR	12 16 21.4	
	comp=Z,66nm,19.0s,baz=152,slow=36							
BOSA	**Boshof**	**12.26**	**243**	⇓	*i* P	**Pn**	**12 11 46.6**	**-1.3**
BOSA					*i* S	Sn	12 13 50.9	-14
SUR	**Sutherland**	**17.29**	**236**		P	**Pn**	**12 12 55.8**	**+0.9**
	0.4nm,0.3s,baz=98,slow=19,SNR=3.5							
SUR					S	Sn	12 15 57.0	-10
	8.9nm,1.0s,baz=144,slow=6.6,SNR=2.5							
SUR					LR	LR	12 19 45.8	
	comp=Z,119nm,18.5s,baz=128,slow=37							
	7.2nm,0.8s							
WIN	**Windhoek**	**19.01**	**269**		P	**P**	**12 13 17.0**	**+1.6**
TSUM	**Tsumeb**	**19.26**	**279**		P	**P**	**12 13 19.5**	**+1.4**
	0.2nm,0.3s,baz=98,slow=13,SNR=2.6							
TSUM					S	Sn	12 16 45.3	-10
	1.5nm,0.7s,baz=309,slow=5.6,SNR=1.2							
TSUM					LR	LR	12 20 52.2	
	comp=Z,176nm,19.0s,baz=150,slow=37							
	2.8nm,0.8s							
KMBO	**Kilima Mbogo**	**22.36**	**359**		P	**P**	**12 13 51.0**	**-0.8**
	0.5nm,0.3s,baz=185,slow=13,SNR=4.4							
KMBO					S	S	12 17 43.4	-14
	0.4nm,0.3s,baz=57,slow=22,SNR=1.4							
KMBO					LR	LR	12 22 08.8	
	comp=Z,92nm,19.6s,baz=89,slow=36							
	0.5nm,0.3s							
MBAR	**Mbarara**	**23.86**	**342**		LR	LR	12 23 44.2	
	comp=Z,233nm,18.7s,baz=88,slow=37							
H04N1	**CROZET ISLANDS**	**25.20**	**157**		T	T	12 40 12.2	
	baz=330,slow=76							
H04N2	**CROZET ISLANDS**	**25.21**	**157**		T	T	12 40 11.0	
	baz=330,slow=76							
H04N3	**CROZET ISLANDS**	**25.21**	**157**		T	T	12 40 13.8	
	baz=330,slow=76							
TOA0	**Torodi Ar. Sit**	**50.77**	**312**		P	**P**	**12 17 54.2**	**+0.5**
TOA0					IAmb	IAmb	12 17 55.9	
	comp=Z,9.0nm,1.3s							
TORD	**Torodi Ar. Bea**	**50.77**	**312**		P	**P**	**12 17 54.4**	**+0.7**
TORD					IAmb	IAmb	12 17 55.9	
	comp=Z,5.1nm,1.2s							
TORD	**Torodi Ar. Bea**	**50.77**	**312**		P	**P**	**12 17 54.8**	**+1.1**
	comp=Z,1.9nm,0.5s,baz=126,slow=6.7,SNR=24							
TORD					LR	LR	12 40 02.8	
	comp=Z,103nm,18.0s,baz=148,slow=37							
	comp=Z,1.9nm,0.5s							
KIC	**Kosan Boka**	**51.05**	**300**	⇓	*i* P	**P**	**12 17 57.5**	**+1.6**
	comp=Z,10nm,0.8s							
LIC	**Lamto**	**51.20**	**300**	⇓	*i* P	**P**	**12 17 55.1**	**-1.9**
	comp=Z,8.4nm,0.5s							
DBIC	**Dimbokro**	**51.33**	**301**		P	**P**	**12 17 59.6**	**+1.7**
	comp=Z,6.7nm,0.8s,baz=126,slow=9.3,SNR=8.8							
DBIC					LR	LR	12 38 49.0	
	comp=Z,39nm,19.1s,baz=90,slow=35							
	comp=Z,6.7nm,0.8s							
TIC	**Toumodi**	**51.45**	**300**	⇑	*e* P	**P**	**12 18 00.0**	**+1.2**
	comp=Z,13nm,0.5s							
EIL	**Elat**	**53.05**	**357**		LR	LR	12 39 40.5	
	comp=Z,25nm,18.1s,baz=246,slow=35							
BRTR	**Keskin Array B**	**63.13**	**356**		P	**P**	**12 19 20.9**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=166,slow=9.7,SNR=5.9							
	comp=Z,1.1nm,0.8s							
BELA	**Belgrano 2**	**63.38**	**193**		P	**P**	**12 19 22.1**	**0.0**
VAE	**Valguarnera**	**64.61**	**340**		LR	LR	12 52 44.5	
	comp=Z,79nm,18.5s,baz=144,slow=41							
MDT	**Midelt**	**69.14**	**323**		LR	LR	12 52 02.2	
	comp=Z,143nm,18.6s,baz=44,slow=37							
BURAR	**Bucovina Array**	**71.79**	**351**		P	**P**	**12 20 14.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**72.91**	**60**		P	**P**	**12 20 22.2**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=241,slow=7.8,SNR=5.9							
	comp=Z,0.5nm,0.7s							
KK31	**Karatay Array**	**72.93**	**25**		P	**P**	**12 20 21.7**	**-0.7**
KK31					IAmb	IAmb	12 20 23.3	
	comp=Z,5.7nm,1.2s							
KKAR	**Karatay Array**	**72.93**	**25**		P	**P**	**12 20 21.3**	**-1.2**
ESDC	**Sonseca Array**	**74.02**	**328**		P	**P**	**12 20 30.6**	**+1.6**
	comp=Z,1.1nm,0.9s,baz=133,slow=5.7,SNR=4.0							
	comp=Z,1.1nm,0.9s							
DAVOX	**Davos/Dischmat**	**74.46**	**341**		LR	LR	12 58 40.6	
	comp=Z,37nm,18.3s,baz=290,slow=40							
MKAR	**Makanchi Array**	**80.82**	**29**		P	**P**	**12 21 05.7**	**-1.2**
MKAR	**Makanchi Array**	**80.82**	**29**		P	**P**	**12 21 06.0**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=220,slow=5.5,SNR=11							
	comp=Z,1.2nm,0.8s							
BVAR	**Borovoye Array**	**81.43**	**19**		P	**P**	**12 21 09.2**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=210,slow=5.1,SNR=10							
	comp=Z,2.5nm,0.9s							
KURBB	**Kurchatov Arra**	**82.23**	**25**		P	**P**	**12 21 13.9**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=221,slow=6.2,SNR=13							
	comp=Z,1.1nm,0.5s							
ASAR	**Alice Springs**	**86.07**	**114**		P	**P**	**12 21 34.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=233,slow=4.9,SNR=4.7							
	comp=Z,0.3nm,0.8s							
ZAA0	**Zalesovo Array**	**87.26**	**26**		P	**P**	**12 21 38.2**	**-1.3**
ZAA0					IAmb	IAmb	12 21 39.6	
	comp=Z,4.0nm,0.8s							
ZALV	**Zalesovo Beam**	**87.26**	**26**		P	**P**	**12 21 38.0**	**-1.6**
ZALV	**Zalesovo Beam**	**87.26**	**26**		P	**P**	**12 21 38.9**	**-0.6**
	comp=Z,5.2nm,0.9s,baz=233,slow=5.5,SNR=16							
	comp=Z,5.2nm,0.9s							
TXAR	**Lajitas Array**	**145.09**	**288**		PKPbc	**PKPbc**	**12 28 32.4**	**+1.5**
	comp=Z,3.7nm,1.0s,baz=108,slow=4.1,SNR=22							
PDAR	**Pinedale Array**	**146.91**	**313**		PKPbc	**PKPdf**	**12 28 36.1**	**+1.8**
	comp=Z,0.5nm,0.9s,baz=101,slow=7.7,SNR=4.5							

SDD ***04*** *12:23:04.1±2.3, 18.06°N×68.96°W, h160km±12km, MD3.1, ML2.7, MW3.1*

RSPR ***04*** *12:23:06.3, 18.26°N×68.75°W, h141km±1km, MD3.2/9*

NEIC ***04*** *12:23:07.8±2.9, 17.9°N±0.3°×68.69°W±0.0°, h114km±19km, ML2.7/24, Md3.2/9(RSPR), Error ellipse: s-maj=41.5km s-min=9.0km az=192.0*

OSPL ***04*** *12:23:08.4±1.6, 18.00°N×68.64°W, h135km±18km, ML2.6*

ISC 04 12:23:06.5±1.8, 18.2°N±0.1°×68.73°W±0.05, h137km±10km, n42, σ1♦15/57, 20C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SADR	**Isla Saona**	**0.05**	**286**	⇑	*e* Pg	**Pn**	**12 23 25.2**	**+0.3**
SADR				⇑	*e* Pg		12 23 25.3	
SADR				⇑	*e* Sg	**Sn**	**12 23 39.6**	**+0.6**
SADR				⇓	*e* Sg	**Sn**	**12 23 39.6**	**+0.6**
SADR					IAML		12 23 42.0	
	comp=E,98nm,0.7s							
SADR					IAML		12 23 43.7	
	comp=N,141nm,1.8s							
PCDR	**Punta Cana, DR**	**0.47**	**44**	⇑	*e* P	**Pn**	**12 23 25.9**	**-0.3**
PCDR					*e* S	**Sn**	**12 23 41.5**	**+0.4**
PCDR	**Punta Cana, DR**	**0.47**	**44**			**Pn**	**12 23 25.4**	**-0.8**
PCDR						**Sn**	**12 23 41.8**	**+0.7**
PCDR					IAML		12 23 44.5	
	comp=N,160nm,1.9s							
PCDR					IAML		12 23 45.1	
	comp=E,98nm,2.2s							
PCDR	**Punta Cana, DR**	**0.47**	**44**	⇑	*e* Pg	**Pn**	**12 23 25.9**	**-0.3**
PCDR				⇑	*e* Sg	**Sn**	**12 23 41.5**	**+0.4**
PCDR					IAML		12 23 45.8	
	comp=E,92nm,1.9s							
PCDR					IAML		12 23 54.0	
	comp=N,150nm,2.2s							
PCDR	**Punta Cana, DR**	**0.47**	**44**	*i*	P	**Pn**	**12 23 25.9**	**-0.3**
PCDR					*e* S	**Sn**	**12 23 41.9**	**+0.7**
PCDR					IAML		12 23 48.9	
	comp=Z,45nm,0.4s							
MIDR	**Miches**	**0.86**	**339**	⇓	*e* Pg	**Pn**	**12 23 28.4**	**-0.5**
MIDR					IAML		12 23 45.6	
	comp=E,42nm,0.4s							
MIDR				⇑	*e* Sg	**Sn**	**12 23 45.7**	**-0.2**
MIDR					IAML		12 23 50.4	
	comp=N,29nm,1.4s							
HATOM	**Hato Mayor del**	**0.87**	**314**	⇑	*e* Pg	**Pn**	**12 23 28.1**	**-0.9**
HATOM				⇑	*e* Sg	**Sn**	**12 23 44.2**	**-1.8**
HATOM					IAML		12 23 47.1	
	comp=N,36nm,0.3s							
HATOM					IAML		12 23 51.3	
	comp=N,86nm,1.0s							
SMDR	**Samana, DR**	**1.19**	**338**	⇑	*e* Pg	**Pn**	**12 23 31.5**	**-0.3**
SMDR				⇓	*e* Sg	**Sn**	**12 23 49.4**	**-1.8**
SMDR					IAML		12 23 56.6	
	comp=N,72nm,0.7s							
SMDR					IAML		12 23 57.2	
	comp=E,52nm,0.9s							
CRPR	**Cabo Rojo, PR**	**1.55**	**96**	⇓	*e* P	**Pn**	**12 23 35.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.55**	**96**			**Pn**	**12 23 35.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.55**	**96**		Sn	**Sn**	**12 23 57.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.55**	**96**	⇑	*e* Pg	**Pn**	**12 23 34.8**	**-0.8**
CRPR					IAML		12 24 02.5	
	comp=N,30nm,1.8s							
CRPR					IAML		12 24 07.4	
	comp=E,12nm,0.8s							
CRPR	**Cabo Rojo, PR**	**1.55**	**96**	*i*	P	**Pn**	**12 23 35.3**	**-0.3**
CRPR					IAML		12 24 08.0	
	comp=Z,47nm,2.0s							
AGPR	**Aguadilla, PR**	**1.56**	**79**	⇑	*e* P	**Pn**	**12 23 36.4**	**+0.5**
AGPR	**Aguadilla, PR**	**1.56**	**79**		*e* S	**Sn**	**12 23 59.4**	**+1.3**
AGPR	**Aguadilla, PR**	**1.56**	**79**			**Pn**	**12 23 36.4**	**+0.5**
AGPR						**Sn**	**12 23 59.4**	**+1.3**
AGPR	**Aguadilla, PR**	**1.56**	**79**	⇑	*e* Pg	**Pn**	**12 23 36.3**	**+0.5**
AGPR				⇑	*e* Sg	**Sn**	**12 24 01.4**	**+3.3**
AGPR					IAML		12 24 02.5	
	comp=N,140nm,2.0s							
AGPR					IAML		12 24 03.5	
	comp=E,76nm,1.1s							
AGPR	**Aguadilla, PR**	**1.56**	**79**	*i*	P	**Pn**	**12 23 36.3**	**+0.5**
AGPR					IAML		12 24 00.5	
	comp=Z,94nm,1.5s							
MLPR	**Magueyes Islan**	**1.61**	**97**	⇓	*e* P	**Pn**	**12 23 34.9**	**-1.4**
MLPR	**Magueyes Islan**	**1.61**	**97**		*e* S	**Sn**	**12 23 57.7**	**-1.4**
MLPR	**Magueyes Islan**	**1.61**	**97**			**Pn**	**12 23 34.9**	**-1.4**
MLPR						**Sn**	**12 23 57.7**	**-1.4**
MLPR	**Magueyes Islan**	**1.61**	**97**	⇑	*e* Pg	**Pn**	**12 23 34.5**	**-1.9**
MLPR					IAML		12 23 59.0	
	comp=E,30nm,1.5s							
MLPR				⇑	*e* Sg	**Sn**	**12 24 00.8**	**+1.7**
MLPR					IAML		12 24 15.8	
	comp=N,27nm,2.4s							
AOPR	**Arecibo Observ**	**1.88**	**85**	⇑	*e* P	**Pn**	**12 23 39.3**	**-0.2**
AOPR	**Arecibo Observ**	**1.88**	**85**		*e* S	**Sn**	**12 24 06.4**	**+1.7**
AOPR	**Arecibo Observ**	**1.88**	**85**			**Pn**	**12 23 39.3**	**-0.2**
AOPR						**Sn**	**12 24 06.4**	**+1.7**
AOPR	**Arecibo Observ**	**1.88**	**85**	⇑	*e* Pg	**Pn**	**12 23 39.3**	**-0.2**
AOPR				⇓	*e* Sg	**Sn**	**12 24 06.5**	**+1.7**
AOPR					IAML		12 24 08.6	
	comp=E,201nm,0.2s							
AOPR					IAML		12 24 08.7	
	comp=N,170nm,0.2s							
OBIP	**Obispado Ponce**	**2.02**	**93**	⇓	*e* P	**Pn**	**12 23 40.7**	**-0.4**
OBIP	**Obispado Ponce**	**2.02**	**93**		*e* S	**Sn**	**12 24 08.7**	**+1.1**
OBIP	**Obispado Ponce**	**2.02**	**93**			**Pn**	**12 23 40.7**	**-0.4**
OBIP						**Sn**	**12 24 08.7**	**+1.1**
OBIP	**Obispado Ponce**	**2.02**	**93**		IAML		12 24 09.3	
	comp=N,27nm,2.6s							
CELP	**Cerrillos**	**2.04**	**93**	⇑	*e* P	**Pn**	**12 23 40.5**	**-0.9**
CELP	**Cerrillos**	**2.04**	**93**		*e* S	**Sn**	**12 24 07.4**	**-0.7**
CELP	**Cerrillos**	**2.04**	**93**			**Pn**	**12 23 40.5**	**-0.9**
CELP						**Sn**	**12 24 07.4**	**-0.7**
CELP	**Cerrillos**	**2.04**	**93**		IAML		12 24 13.2	
	comp=E,31nm,1.0s							
CELP	**Cerrillos**	**2.04**	**93**	⇑	*e* Pg	**Pn**	**12 23 41.2**	**-0.2**
CELP				⇓	*e* Sg	**Sn**	**12 24 09.5**	**+1.4**
CELP					IAML		12 24 14.4	
	comp=N,21nm,0.3s							
EMPR	**Esperanza - Ma**	**2.11**	**82**		Pn	**Pn**	**12 23 41.4**	**-0.7**
SJG	**San Juan**	**2.45**	**91**		Pn	**Pn**	**12 23 44.7**	**-1.7**
SJG	**San Juan**	**2.45**	**91**		IAML		12 24 29.1	
	comp=N,23nm,2.9s							
SJG					IAML		12 24 42.9	
	comp=N,23nm,3.7s							
GCPR	**Guaynabo City**	**2.51**	**87**		Pn	**Pn**	**12 23 46.1**	**-1.1**
GCPR					IAML		12 24 13.4	
	comp=N,25nm,2.5s							
GCPR					IAML		12 25 22.7	
	comp=E,22nm,3.1s							
SDDR	**Presa de Saban**	**2.56**	**289**		Pn	**Pn**	**12 23 49.4**	**+1.6**
SDDR					IAML		12 24 40.5	
	comp=E,34nm,3.1s							
SDDR					IAML		12 24 53.1	
	comp=E,32nm,3.0s							
SDDR	**Presa de Saban**	**2.56**	**289**	*i*	P	Pn	12 23 50.0	+2.2
SDDR					*e* S	**Sn**	**12 24 20.3**	**+0.7**
SDDR					IAML		12 24 35.6	
	comp=Z,11nm,3.0s							
HUMP	**Col San Antoni**	**2.73**	**90**		Pn	**Pn**	**12 23 47.9**	**-2.1**
HUMP					IAML		12 24 25.6	
	comp=E,29nm,0.2s							
HUMP					IAML		12 24 27.5	
	comp=N,33nm,0.4s							

ISK ***04*** *12:42:30.5, 41.73°N×27.76°E, h0km, ML2.4/6, Suspected Mining explosion.*

AFAD 04 12:42:30.9±0.0, 41.69°N×27.70°E, h5km±2km, ML2.2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PHSR	**Pinarhisar**	**0.14**	**246**		Pg	Pg	12 42 35.5	+1.7
PHSR					Sg	Sg	12 42 38.3	+2.6
VIZE	**Kirklareli, Vi**	**0.15**	**136**		P	Pg	12 42 34.1	+0.2
VIZE					*i* AML	AML	12 42 37.0	
	comp=N,443nm,0.2s							
VIZE						S	Sg	12 42 37.4	+1.4
ARMN	**Kirklareli, Me**	**0.27**	**311**		P	Pg	12 42 36.6	+0.5
ARMN						S	Sg	12 42 40.7	+1.0
KIRK	**Kırklareli**	**0.46**	**282**		P	Pb	12 42 40.7	-0.8
KIRK						S	Sb	12 42 47.2	-1.3
KIRK					*i* AML	AML	12 42 48.0	
	comp=N,59nm,0.1s							
CTYL	**Yalikoy Yolu**	**0.49**	**116**		Pg	Pg	12 42 40.3	0.0
CTYL					Sg	Sg	12 42 47.0	+0.3
SLVT	**Silivri**	**0.60**	**140**		Pg	Pg	12 42 42.7	+0.3
SLVT					Sg	Sb	12 42 51.6	-0.9
EDRB	**Edirne**	**0.73**	**283**		Pg	Pb	12 42 45.6	-0.5
CTKS	**Kestanelik-??a**	**0.76**	**126**		Pg	Pg	12 42 45.4	0.0
ELBA	**Catalca**	**0.77**	**134**		P	Pb	12 42 46.4	-0.4
ELBA					S	Sb	12 42 57.1	-0.5
ELBA					*i* AML	AML	12 43 01.0	
	comp=N,114nm,0.1s							
ELBA					*i* AML	AML	12 43 01.0	
	comp=E,176nm,0.2s							
UKOP	**Uzunkopru-Edir**	**0.98**	**235**		Pg	Pn	12 42 50.9	-0.3

ROM 04 12:45:14.9±0.1, 42.661°N±0.004°×13.302°E±0.007, h11km, ML2.0/30, 1D, Error ellipse: s-maj=0.6km s-min=0.2km az=273.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMA1	**SAN MARTINO**	**0.04**	**141**		P	Pg	12 45 17.5	+0.4
SMA1					S	Sg	12 45 19.0	+0.3
SMA1					AML	AML		
	comp=E,1820μm,0.1s							
SMA1					AML	AML		
	comp=N,3190μm,0.3s							
MTRA	**Matera**	**0.12**	**36**		P	Pg	12 45 18.3	+0.3
MTRA					S	Sg	12 45 20.4	+0.3
MTRA					AML	AML		
	comp=E,2060μm,1.3s							
MTRA					AML	AML		
	comp=E,1985μm,1.2s							
MTRA					AML	AML		
	comp=E,2055μm,1.3s							
MTRA					AML	AML		
	comp=N,2390μm,0.5s							
MTRA					AML	AML		
	comp=N,2325μm,0.5s							
MTRA					AML	AML		
	comp=E,2055μm,0.7s							
MTRA					AML	AML		
	comp=E,1985μm,0.8s							
T1214	**Arquata del Tr**	**0.12**	**325**		P	Pg	12 45 18.4	+0.4
T1214					S	Sg	12 45 20.9	+0.6
T1214					AML	AML		
	comp=E,659μm,1.5s							
T1214					AML	AML		
	comp=N,524μm,0.4s							
T1214					AML	AML		
	comp=E,661μm,1.5s							
T1214					AML	AML		
	comp=E,600μm,0.8s							
T1214					AML	AML		
	comp=E,600μm,1.2s							
T1214					AML	AML		
	comp=N,466μm,0.4s							
RM33	**Pellescritta (**	**0.17**	**203**		P	Pg	12 45 19.2	+0.6
RM33					S	Sg	12 45 22.2	+0.9
RM33					AML	AML		
	comp=E,324μm,0.3s							
RM33					AML	AML		
	comp=N,452μm,0.5s							
RM33					AML	AML		
	comp=E,352μm,0.3s							
RM33					AML	AML		
	comp=N,452μm,0.5s							
RM33					AML	AML		
	comp=N,414μm,0.5s							
LNSS	**Leonessa**	**0.20**	**253**		P	Pg	12 45 19.7	+0.4
LNSS					S	Sg	12 45 23.2	+1.0
LNSS					AML	AML		
	comp=E,513μm,0.3s							
LNSS					AML	AML		
	comp=N,620μm,0.2s							
LNSS					AML	AML		
	comp=E,514μm,0.3s							
LNSS					AML	AML		
	comp=N,619μm,0.2s							
NRCA	**Norcia**	**0.22**	**321**		P	Pg	12 45 19.9	+0.3
NRCA					S	Sg	12 45 23.5	+0.7
NRCA					AML	AML		
	comp=E,1070μm,0.5s							
NRCA					AML	AML		
	comp=N,799μm,0.4s							
NRCA					AML	AML		
	comp=E,1104μm,0.7s							
NRCA					AML	AML		
	comp=E,1072μm,0.5s							
NRCA					AML	AML		
	comp=N,799μm,0.4s							
NRCA					AML	AML		
	comp=N,847μm,0.4s							
TERO	**Teramo**	**0.23**	**100**		P	Pg	12 45 20.0	+0.3
TERO					S	Sg	12 45 23.6	+0.7
TERO					AML	AML		
	comp=E,224μm,0.3s							
TERO					AML	AML		
	comp=N,176μm,0.6s							
TERO					AML	AML		
	comp=E,358μm,0.4s							
TERO		

T1214 AML AML
comp=E,70450µm,0.8s
T1214 AML AML
comp=E,70450µm,0.9s
T1214 AML AML
comp=N,53500µm,0.3s
T1214 AML AML
comp=N,52850µm,0.3s
T1214 AML AML
comp=N,53450µm,0.3s
T1214 AML AML
comp=E,69000µm,0.9s
T1214 AML AML
comp=N,52800µm,0.3s
T1214 AML AML
comp=N,53450µm,1.7s
T1214 AML AML
comp=N,52800µm,1.7s
T1214 AML AML
comp=E,59986µm,0.2s
T1214 AML AML
comp=N,53469µm,0.3s
T1214 AML AML
comp=N,52820µm,0.3s
T1214 AML AML
comp=E,61566µm,0.3s
MTRA Matera 0.14 42 ⇓P Pg 12 45 37.4 -0.5
MTRA S Sg 12 45 39.6 -1.0
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
MTRA AML AML
RM33 Pellescritta (0.15 195 ⇑P Pg 12 45 38.3 +0.3
RM33 S Sg 12 45 41.2 +0.4
RM33 AML AML
comp=E,34250µm,0.5s
RM33 AML AML
comp=N,42800µm,0.3s
RM33 AML AML
comp=N,41100µm,0.3s
RM33 AML AML
comp=N,42800µm,0.4s
RM33 AML AML
comp=E,34250µm,0.5s
RM33 AML AML
comp=E,35300µm,0.5s
RM33 AML AML
comp=E,29453µm,0.3s
RM33 AML AML
comp=N,41071µm,0.3s
RM33 AML AML
comp=N,42801µm,0.3s
RM33 AML AML
comp=E,31334µm,0.3s
LNSS Leonessa 0.17 254 ⇑P Pb 12 45 38.8 0.0
LNSS S Sb 12 45 42.1 0.0
LNSS AML AML
comp=E,54100µm,0.3s
LNSS AML AML
comp=N,49000µm,0.2s
LNSS AML AML
comp=E,54076µm,0.3s
LNSS AML AML
comp=N,49025µm,0.2s
T1247 Pizzolo (AQ) 0.21 174 P Pg 12 45 39.1 +0.2
T1247 S Sb 12 45 43.0 -0.1
NRCA Norcia 0.21 328 ⇑P Pg 12 45 39.0 +0.1
NRCA S Sg 12 45 42.5 +0.2
NRCA AML AML
comp=E,95500µm,0.4s
NRCA AML AML
comp=N,68400µm,0.1s
NRCA AML AML
comp=E,95550µm,0.4s
NRCA AML AML
comp=N,71900µm,0.1s
NRCA AML AML
comp=E,95550µm,0.4s
NRCA AML AML
comp=N,68400µm,0.1s
NRCA AML AML
NRCA AML AML
comp=N,71886µm,0.1s
NRCA AML AML
comp=E,93420µm,0.2s
NRCA AML AML
comp=N,68394µm,0.1s
NRCA AML AML
comp=E,88264µm,0.2s
TERO Teramo 0.25 97 P Pg 12 45 39.1 -0.4
TERO S Sg 12 45 42.7 -0.6
TERO AML AML
comp=E,18550µm,0.3s
TERO AML AML
comp=E,18550µm,0.3s
TERO AML AML
comp=E,34400µm,0.3s
TERO AML AML
comp=N,22250µm,1.2s
TERO AML AML
comp=N,22250µm,0.8s
TERO AML AML
comp=E,34400µm,1.7s
TERO AML AML
comp=E,18550µm,1.7s
TERO AML AML
comp=N,16300µm,0.6s
TERO AML AML
comp=N,21788µm,0.3s
TERO AML AML
comp=N,15068µm,0.4s
TERO AML AML
comp=E,34398µm,0.3s
TERO AML AML
comp=E,18550µm,0.3s
MMO1 Montemonaco 0.25 10 ⇓P Pg 12 45 39.4 -0.1
MMO1 S Sg 12 45 43.4 0.0
MC2 Monte Cornacci 0.27 348 ⇓P Pg 12 45 39.9 0.0
GAVE Gavelli 0.28 278 AML AML
comp=E,41200µm,1.7s
GAVE AML AML
comp=E,39650µm,0.3s
GAVE AML AML
comp=E,41200µm,0.3s
GAVE AML AML
comp=N,41500µm,0.6s
GAVE AML AML
comp=E,39650µm,0.3s
GAVE AML AML
comp=N,12850µm,0.6s
GAVE AML AML
comp=E,39650µm,1.7s
GAVE AML AML
comp=E,41182µm,0.3s
GAVE AML AML
comp=N,11450µm,0.2s
GAVE AML AML
comp=N,37748µm,0.3s
GAVE AML AML
comp=E,39644µm,0.3s
GIGS Gran Sasso 0.30 132 ⇑P Pg 12 45 40.1 -0.3
GIGS S Sg 12 45 44.1 -0.7
GIGS AML AML
comp=N,3400µm,0.4s
GIGS AML AML
comp=E,2445µm,0.4s
GIGS AML AML
comp=N,3400µm,1.6s
GIGS AML AML
comp=E,2433µm,0.5s
GIGS AML AML
comp=N,3398µm,0.4s
FEMA Monte Fema 0.35 333 P Pg 12 45 41.4 +0.1
FEMA S Sb 12 45 47.1 0.0
FEMA AML AML
comp=E,11500µm,0.1s
FEMA AML AML
comp=N,8310µm,0.5s
FEMA AML AML
comp=N,8315µm,0.5s
FEMA AML AML
comp=E,11508µm,0.1s
FEMA AML AML
comp=N,6324µm,0.2s
MF5 Montefalcone A 0.36 23 ⇑P Pg 12 45 41.7 +0.2
MF5 S Sb 12 45 47.7 +0.2
MF5 AML AML
comp=N,33300µm,0.3s
MF5 AML AML
comp=N,33300µm,1.7s
MF5 AML AML
comp=E,28700µm,0.6s
MF5 AML AML
comp=N,33320µm,0.3s
MF5 AML AML
comp=E,27552µm,0.4s
T1221 Campello sul C 0.37 304 ⇑P Pg 12 45 41.9 +0.3
T1221 S Sb 12 45 47.9 +0.1
T1221 AML AML
comp=N,4865µm,0.7s
T1221 AML AML
comp=E,7355µm,0.5s
T1221 AML AML
comp=E,7845µm,0.5s
T1221 AML AML
comp=N,4865µm,0.7s
T1221 AML AML
comp=E,7350µm,0.5s
T1221 AML AML
comp=N,4900µm,0.2s
T1221 AML AML
comp=E,7350µm,1.5s
T1221 AML AML
comp=E,7845µm,1.5s
T1221 AML AML
comp=N,4827µm,0.2s
T1221 AML AML
comp=E,5583µm,0.2s
T1221 AML AML
comp=E,5714µm,0.2s
T1221 AML AML
comp=N,4902µm,0.2s
ARRO Arrone 0.38 259 ⇑P Pg 12 45 42.1 +0.4
ARRO S Sb 12 45 48.5 +0.6
ARRO AML AML
comp=E,6770µm,1.0s
ARRO AML AML
comp=N,7600µm,0.2s
ARRO AML AML
comp=E,6295µm,0.2s
ARRO AML AML
comp=N,7596µm,0.2s
FIAM Fiamignano 0.40 196 ⇑P Pg 12 45 42.3 +0.2
FIAM S Sb 12 45 48.7 +0.1
FIAM AML AML
comp=E,5335µm,0.7s
FIAM AML AML
comp=N,5515µm,1.4s
FIAM AML AML
comp=E,5335µm,1.3s
FIAM AML AML
comp=N,5515µm,0.6s
FIAM AML AML
comp=E,5337µm,0.7s
FIAM AML AML
comp=N,5501µm,0.4s
FDMO Fiordimonte 0.41 341 ⇑P Pg 12 45 42.1 -0.1
FDMO S Sb 12 45 48.5 -0.3
FDMO AML AML
comp=N,5490µm,0.2s
FDMO AML AML
comp=E,5430µm,0.5s
FDMO AML AML
comp=E,4442µm,0.1s
FDMO AML AML
comp=N,5495µm,0.2s
GUMA Gualdo di Mace 0.41 7 ⇑P Pg 12 45 42.6 +0.2
GUMA S Sb 12 45 49.3 +0.3
GUMA AML AML
comp=N,41850µm,0.3s
GUMA AML AML
comp=E,37300µm,0.3s
GUMA AML AML
comp=N,39500µm,0.3s
GUMA AML AML
comp=E,29000µm,0.4s
GUMA AML AML
comp=E,37300µm,1.7s
GUMA AML AML
comp=N,39519µm,0.3s
GUMA AML AML
comp=E,28980µm,0.4s
GUMA AML AML
comp=E,37307µm,0.3s
GUMA AML AML
comp=N,41859µm,0.3s
OFFI Offida 0.42 47 ⇑P Pb 12 45 43.0 0.0
OFFI AML AML
comp=E,54400µm,0.3s
OFFI AML AML
comp=N,39300µm,0.5s
OFFI AML AML
comp=E,54416µm,0.3s
OFFI AML AML
comp=N,33485µm,0.5s
CESI CESI - Serrava 0.44 323 ⇑P Pg 12 45 43.0 +0.1
CESI S Sb 12 45 49.8 0.0
CESI AML AML
comp=N,10750µm,0.3s
CESI AML AML
comp=E,8490µm,0.5s
CESI AML AML
comp=N,10758µm,0.3s
CESI AML AML
comp=E,7713µm,0.3s
CSP1 Cessapalombo 0.44 354 ⇑P Pg 12 45 42.8 -0.1
CSP1 S Sb 12 45 49.7 -0.1
CSP1 AML AML
comp=E,3830µm,1.3s
CSP1 AML AML
comp=E,3825µm,1.3s
CSP1 AML AML
comp=N,2050µm,0.9s
CSP1 AML AML
comp=E,3685µm,0.3s
CSP1 AML AML
comp=N,1401µm,0.3s
FAGN Fagnano 0.45 149 P Pg 12 45 42.8 -0.2
FAGN AML AML
comp=E,11090µm,0.4s
FAGN AML AML
comp=N,9615µm,0.4s
FAGN AML AML
comp=E,11069µm,0.4s
FAGN AML AML
comp=N,9594µm,0.4s
VCEL Villa Celiera 0.50 121 ⇑P Pg 12 45 43.8 -0.1
VCEL S Sb 12 45 52.2 +0.8
VCEL AML AML
comp=E,11700µm,0.3s
VCEL AML AML
comp=N,16550µm,0.8s
VCEL AML AML
comp=E,11700µm,1.7s
VCEL AML AML
comp=N,14558µm,0.4s
VCEL AML AML
comp=E,11713µm,0.3s
PF6 Pievefavera 0.50 354 P Pg 12 45 43.5 -0.4
PF6 S Sb 12 45 51.4 0.0
TRTR Tortoreto Alta 0.50 72 ⇑P Pb 12 45 44.7 +0.4
TRTR AML AML
comp=N,15050µm,0.5s
TRTR AML AML
comp=E,25800µm,0.4s
TRTR AML AML
comp=N,15050µm,1.5s
TRTR AML AML
comp=E,25788µm,0.4s
TRTR AML AML
comp=N,15090µm,0.5s
MNTP Montappone 0.51 17 P Pg 12 45 44.3 +0.3
MNTP S Sb 12 45 52.9 +1.2
CESX Cesi 0.51 266 ⇑P Pg 12 45 44.2 +0.1
CESX AML AML
comp=N,5705µm,1.0s
CESX AML AML
comp=N,5705µm,1.0s
CESX AML AML
comp=E,4710µm,0.2s
CESX AML AML
comp=E,4705µm,0.2s
CESX AML AML
comp=N,4992µm,0.2s
MOMA Monte Martano 0.54 287 ⇑P Pg 12 45 44.8 +0.2
MOMA S Sb 12 45 53.8 +1.3
MOMA AML AML
comp=N,12100µm,0.2s
MOMA AML AML
comp=E,11050µm,0.3s
MOMA AML AML
comp=E,11450µm,0.3s
MOMA AML AML
comp=N,13050µm,0.2s
MOMA AML AML
comp=N,12122µm,0.2s
MOMA AML AML
comp=E,11051µm,0.3s
MOMA AML AML
comp=N,13015µm,0.2s
MOMA AML AML
comp=E,11453µm,0.3s
MDAR Monte D'Aria 0.55 350 P Pg 12 45 44.7 -0.2
MDAR AML AML
comp=E,3430µm,0.3s
MDAR AML AML
comp=N,2750µm,0.6s
MDAR AML AML
comp=E,3427µm,0.3s
MDAR AML AML
comp=N,2555µm,0.1s
SEF1 Sefro 0.55 335 P Pg 12 45 44.6 -0.2
T0110 Collepietro 0.57 138 ⇑P Pg 12 45 44.9 -0.3
T0110 AML AML
comp=E,7900µm,0.7s
T0110 AML AML
comp=N,8780µm,0.4s
T0110 AML AML
comp=E,6654µm,0.4s
T0110 AML AML
comp=N,8779µm,0.4s
SSM1 San Severino M 0.58 353 P Pg 12 45 45.3 -0.1
SSM1 S Sb 12 45 54.6 +0.9
GAG1 Gagliole 0.60 346 P Pg 12 45 46.0 +0.2
GAG1 AML AML
comp=E,7410µm,1.1s
GAG1 AML AML
comp=N,6275µm,1.4s
GAG1 AML AML
comp=E,7415µm,1.2s
GAG1 AML AML
comp=N,6275µm,1.4s
GAG1 AML AML
comp=N,6275µm,0.6s
GAG1 AML AML
comp=E,7415µm,0.8s
GAG1 AML AML
comp=E,6744µm,0.5s
GAG1 AML AML
comp=N,5947µm,0.4s
PTQR Pietraquaria 0.64 171 P Pg 12 45 46.0 -0.5
PTQR AML AML
comp=E,1085µm,0.4s
PTQR AML AML
comp=N,708µm,0.3s
PTQR AML AML
comp=E,1087µm,0.4s
PTQR AML AML
comp=N,708µm,0.3s
SNTG Esanatoglia 0.65 338 ⇑P Pg 12 45 46.3 -0.4
SNTG AML AML
comp=E,1440µm,0.9s
SNTG AML AML
comp=E,1420µm,0.9s
SNTG AML AML
comp=N,1955µm,0.3s
SNTG AML AML
comp=E,1440µm,1.1s
SNTG AML AML
comp=E,1420µm,1.1s
SNTG AML AML
comp=N,1915µm,0.6s
SNTG AML AML
comp=N,1955µm,1.7s
SNTG AML AML
comp=E,1360µm,0.1s
SNTG AML AML
comp=E,1338µm,0.2s
SNTG AML AML
comp=N,1867µm,0.3s
SNTG AML AML
comp=N,1952µm,0.2s
CADA Capodarco di F 0.65 34 P Pb 12 45 47.7 +0.8
CADA AML AML
comp=N,10860µm,0.4s
CADA AML AML
comp=E,12300µm,0.5s
CADA AML AML
comp=N,10865µm,0.4s
CADA AML AML
comp=N,10862µm,0.4s
CADA AML AML
comp=E,12310µm,0.5s
EL6 Elcito 0.69 350 P Pg 12 45 47.1 -0.4
EL6 AML AML
comp=N,4775µm,0.2s
EL6 AML AML
comp=E,4275µm,0.2s
EL6 AML AML
comp=E,4275µm,1.8s
EL6 AML AML
comp=E,4273µm,0.2s
EL6 AML AML
comp=N,4777µm,0.2s
ATCC AVT- Casa Cast 0.70 319 ⇑P Pg 12 45 47.5 -0.2
ATCC AML AML
comp=N,2945µm,0.9s
ATCC AML AML
comp=E,5130µm,0.3s
ATCC AML AML
comp=N,2945µm,1.1s
ATCC AML AML
comp=N,2904µm,0.2s
ATCC AML AML
comp=E,5131µm,0.3s
CIMA Civitanova Mar 0.72 24 P Pb 12 45 48.8 +0.7
CIMA AML AML
comp=E,5570µm,0.6s
CIMA AML AML
comp=N,9600µm,0.7s
CIMA AML AML
comp=E,5575µm,0.6s
CIMA AML AML
comp=N,6010µm,0.2s
CIMA AML AML
comp=E,5573µm,0.6s
CING Cingoli 0.72 356 ⇑P Pg 12 45 47.8 -0.3
CING AML AML
comp=E,3335µm,1.5s
CING AML AML
comp=N,2965µm,0.7s
CING AML AML
comp=N,2965µm,1.3s
CING AML AML
comp=E,3335µm,0.5s
CING AML AML
comp=N,2651µm,0.1s
CING AML AML
comp=E,2506µm,0.2s
CERT Cerreto 0.73 197 P Pg 12 45 47.9 -0.4
CERT AML AML
comp=E,3635µm,0.4s
CERT AML AML
comp=N,2595µm,1.0s
CERT AML AML
comp=N,2597µm,1.0s
CERT AML AML
comp=E,3636µm,0.4s
MTCE Montecelio 0.74 212 ⇑P Pg 12 45 47.9 -0.5
MTCE AML AML
comp=E,3060µm,0.4s
MTCE AML AML
comp=N,1375µm,0.6s
MTCE AML AML
comp=N,1375µm,1.4s

MTCE					AML	AML					
	comp=E,3058µm,0.4s										
MTCE					AML	AML					
	comp=N,1375µm,0.6s										
FOSV	**Fossato di Vic**	**0.74**	**330**	⇑P		**Pg**	**12 45 48.0**	**-0.4**			
FOSV				AML	AML						
	comp=E,2010µm,1.3s										
FOSV				AML	AML						
	comp=N,2185µm,0.7s										
FOSV				AML	AML						
	comp=N,2185µm,1.3s										
FOSV				AML	AML						
	comp=E,1827µm,0.4s										
FOSV				AML	AML						
	comp=N,2051µm,0.3s										
PP3	**Marolino**	**0.77**	**19**	P		**Pb**	**12 45 49.1**	**+0.3**			
PP3				AML	AML						
	comp=E,8100µm,0.6s										
PP3				AML	AML						
	comp=N,10365µm,0.5s										
PP3				AML	AML						
	comp=E,8095µm,0.6s										
PP3				AML	AML						
	comp=E,8130µm,0.6s										
PP3				AML	AML						
	comp=N,10325µm,0.5s										
PP3				AML	AML						
	comp=N,10365µm,0.5s										
PP3				AML	AML						
	comp=E,8095µm,1.4s										
PP3				AML	AML						
	comp=E,8130µm,1.4s										
PP3				AML	AML						
	comp=N,10335µm,0.5s										
PP3				AML	AML						
	comp=N,10354µm,0.5s										
PP3				AML	AML						
	comp=E,8098µm,0.6s										
PP3				AML	AML						
	comp=E,7089µm,0.6s										
INTR	**Introdacqua**	**0.80**	**143**	P		**Pg**	**12 45 48.4**	**-1.0**			
INTR				AML	AML						
	comp=E,2µm,0.6s										
INTR				AML	AML						
	comp=E,1670µm,0.6s										
INTR				AML	AML						
	comp=E,2µm,0.6s										
INTR				AML	AML						
	comp=N,2µm,0.7s										
INTR				AML	AML						
	comp=N,3580µm,0.6s										
INTR				AML	AML						
	comp=E,1670µm,1.4s										
INTR				AML	AML						
	comp=E,2µm,1.4s										
INTR				AML	AML						
	comp=E,1669µm,0.6s										
INTR				AML	AML						
	comp=N,3580µm,0.6s										
MURB	**Monte Urbino**	**0.82**	**318**	P		**Pg**	**12 45 49.8**	**-0.1**			
MURB				AML	AML						
	comp=E,8320µm,0.3s										
MURB				AML	AML						
	comp=E,7700µm,0.3s										
MURB				AML	AML						
	comp=N,5120µm,0.3s										
MURB				AML	AML						
	comp=E,7700µm,1.7s										
MURB				AML	AML						
	comp=N,5370µm,0.3s										
MURB				AML	AML						
	comp=E,8317µm,0.3s										
MURB				AML	AML						
	comp=N,5370µm,0.3s										
MURB				AML	AML						
	comp=E,7698µm,0.3s										
MURB				AML	AML						
	comp=N,5120µm,0.3s										
VVLD	**Villa Vallelon**	**0.82**	**161**	P		**Pg**	**12 45 49.6**	**-0.4**			
VVLD				AML	AML						
	comp=E,1335µm,0.7s										
VVLD				AML	AML						
	comp=N,1655µm,0.4s										
VVLD				AML	AML						
	comp=E,1335µm,1.3s										
VVLD				AML	AML						
	comp=E,1335µm,0.7s										
VVLD				AML	AML						
	comp=N,1651µm,0.4s										
RCAV	**Rocca di Cave**	**0.84**	**197**	P		**Pb**	**12 45 50.6**	**+0.5**			
RCAV				AML	AML						
	comp=N,2385µm,0.7s										
RCAV				AML	AML						
	comp=E,3125µm,0.3s										
RCAV				AML	AML						
	comp=N,2385µm,1.3s										
RCAV				AML	AML						
	comp=N,2225µm,0.3s										
RCAV				AML	AML						
	comp=E,3124µm,0.3s										
SSFR	**Montelago di S**	**0.86**	**336**	P		**Pg**	**12 45 50.4**	**-0.3**			
SSFR				AML	AML						
	comp=E,4250µm,0.8s										
SSFR				AML	AML						
	comp=N,4245µm,0.2s										
SSFR				AML	AML						
	comp=E,4200µm,0.3s										
SSFR				AML	AML						
	comp=N,3595µm,0.2s										
SSFR				AML	AML						
	comp=N,4245µm,1.8s										
SSFR				AML	AML						
	comp=N,4248µm,0.2s										
SSFR				AML	AML						
	comp=E,4059µm,0.3s										
SSFR				AML	AML						
	comp=N,3595µm,0.2s										
SSFR				AML	AML						
	comp=E,4196µm,0.3s										
VIVA	**Pratoni del Vi**	**0.97**	**202**	AML	AML						
	comp=N,4791µm,0.5s										
VIVA				AML	AML						
	comp=E,3645µm,0.4s										
VIVA				AML	AML						
	comp=N,4790µm,0.5s										
VIVA				AML	AML						
	comp=E,3645µm,0.4s										
RIBO	**Ribolla Roccas**	**1.66**	**281**	AML	AML						
	comp=E,218µm,1.5s										
DUGI	**Dugi Otok**	**1.87**	**44**	*e*Pn		**Pn**	**12 46 06.0**	**+0.8**			
ZIRJ	**Zirje**	**2.01**	**59**	*e*Pn		**Pn**	**12 46 07.9**	**+0.8**			
VIRC	**Vir**	**2.09**	**38**	*e*Pn		**Pn**	**12 46 09.1**	**+0.8**			
MORI	**Morici**	**2.16**	**55**	*e*Pn		**Pn**	**12 46 10.2**	**+1.1**			
NVLJ	**Novalja**	**2.24**	**31**	*e*Pn		**Pn**	**12 46 10.9**	**+0.7**			
KIJV	**Kijevo**	**2.66**	**58**	*e*Pn		**Pn**	**12 46 18.1**	**+2.0**			
LSTV	**Lastovo**	**2.67**	**86**	*e*Pn		**Pn**	**12 46 17.3**	**+1.1**			
EQUI	**Equi**	**2.73**	**305**	AML	AML						
	comp=E,71µm,1.4s										
EQUI				AML	AML						
	comp=E,71µm,0.6s										
EQUI				AML	AML						
	comp=N,93µm,0.4s										
MAKA	**Makarska**	**2.83**	**76**	*i* Pn		**Pn**	**12 46 19.6**	**+1.3**			
PLMA	**Palmaria, Port**	**2.86**	**300**	AML	AML						
	comp=E,89µm,0.9s										
PLMA				AML	AML						
	comp=N,105µm,0.6s										
MORSI	**Morsiglia**	**2.89**	**277**	P		**Pn**	**12 46 21.0**	**+1.8**			
MORSI				S		**Sn**	**12 46 56.5**	**+2.8**			
RICI	**Ricice**	**2.96**	**72**	*e*Pn		**Pn**	**12 46 22.2**	**+2.0**			
A050A	**Klekovaca**	**3.00**	**51**	*e*Pn		**Pn**	**12 46 22.4**	**+1.6**			
OPPE	**Oppeano**	**3.06**	**331**	AML	AML						
	comp=N,292µm,0.3s										
OPPE				AML	AML						
	comp=E,325µm,0.6s										
TRI	**Trieste**	**3.08**	**6**	AML	AML						
	comp=N,64µm,1.5s										
TRI				AML	AML						
	comp=E,79µm,1.6s										
TRI				AML	AML						
	comp=N,64µm,0.5s										
TRI				AML	AML						
	comp=E,79µm,0.4s										
TRI				AML	AML						
	comp=E,73µm,0.5s										
TRI				AML	AML						
	comp=N,58µm,0.5s										

GBRS	**Gornja Briga**	**3.08**	**21**	*i* Pn		**Pn**	**12 46 23.0**	**+1.0**			
PGF	**Pioggiola**	**3.15**	**270**	*e*Pn		**Pn**	**12 46 21.6**	**-1.4**			
PGF	**Pioggiola**	**3.15**	**270**	*e*P		**Pn**	**12 46 25.8**	**+2.8**			
PGF				*e*Sn		**Sn**	**12 46 56.7**	**-3.6**			
	comp=N,3.9nm,0.3s										
PGF	**Pioggiola**	**3.15**	**270**	P		**Pn**	**12 46 25.3**	**+2.3**			
BOJS	**Bojanci**	**3.19**	**26**	*i* Pn		**Pn**	**12 46 25.0**	**+1.6**			
BOJS	**Bojanci**	**3.19**	**26**	AML	AML						
	comp=N,220µm,0.6s										
BOJS				AML	AML						
	comp=E,250µm,0.5s										
BOJS				AML	AML						
	comp=N,220µm,1.4s										
BOJS				AML	AML						
	comp=E,250µm,1.5s										
BOJS				AML	AML						
	comp=E,250µm,0.5s										
BOJS				AML	AML						
	comp=N,202µm,0.8s										
BOJS	**Bojanci**	**3.19**	**26**	*e*Pn		**Pn**	**12 46 24.3**	**+0.9**			
CEY	**Cerknica**	**3.20**	**15**	*e*Pn		**Pn**	**12 46 24.0**	**+0.5**			
STON	**Ston**	**3.27**	**85**	*e*Pn		**Pn**	**12 46 25.7**	**+1.2**			
STON				*e*Sn		**Sn**	**12 46 56.4**	**-6.6**			
STON	**Ston**	**3.27**	**85**	*e*Pn		**Pn**	**12 46 25.7**	**+1.2**			
STON	**Ston**	**3.27**	**85**	AML	AML						
	comp=E,82µm,0.5s										
STON				AML	AML						
	comp=N,80µm,0.6s										
STON				AML	AML						
	comp=N,62µm,0.4s										
STON				AML	AML						
	comp=E,82µm,0.5s										
STON	**Ston**	**3.27**	**85**	*e*Pn		**Pn**	**12 46 24.6**	**+0.1**			
MGRS	**Mrkonjic Grad**	**3.29**	**56**	*e*Pn		**Pn**	**12 46 27.2**	**+2.4**			
AJAC	**Base Areonaval**	**3.42**	**259**	P		**Pn**	**12 46 29.3**	**+2.8**			
GORR	**Gorreto**	**3.48**	**305**	P		**Pb**	**12 46 33.8**	**-1.4**			
LJU	**Ljubljana**	**3.51**	**14**	AML	AML						
	comp=N,872µm,0.3s										
LJU				AML	AML						
	comp=N,1026µm,0.6s										
LJU				AML	AML						
	comp=E,702µm,0.7s										
LJU				AML	AML						
	comp=E,574µm,1.1s										
BLY	**Banja Luka**	**3.53**	**52**	*e*Pn		**Pb**	**12 46 35.1**	**-0.9**			
BLY				*e*Sn		**Sn**	**12 47 12.9**	**+3.5**			
BLY	**Banja Luka**	**3.53**	**52**	*e*Pn		**Pn**	**12 46 27.5**	**-0.5**			
CRES	**Cresnjev**	**3.54**	**26**	*e*Pn		**Pn**	**12 46 29.7**	**+1.5**			
DBRK	**Dubrovnik**	**3.60**	**88**	*e*Pn		**Pn**	**12 46 30.3**	**+1.3**			
VNDS	**Vrh nad Dolski**	**3.60**	**16**	*i* Pn		**Pn**	**12 46 30.3**	**+1.2**			
TREB	**Trebinje**	**3.75**	**87**	*e*Pn		**Pn**	**12 46 32.2**	**+1.2**			
TREB				*e*Sn		Sn	12 47 04.5	-10			
TREB	**Trebinje**	**3.75**	**87**	*e*Pn		**Pn**	**12 46 32.5**	**+1.5**			
HCY	**Herceg Novi**	**3.87**	**91**	*e*Pn		**Pn**	**12 46 34.2**	**+1.5**			
HCY				*i* Sn		**Sn**	**12 47 18.9**	**+1.1**			
HCY	**Herceg Novi**	**3.87**	**91**	*e*Pn		**Pn**	**12 46 33.4**	**+0.7**			
BRY	**Bratogost**	**3.89**	**85**	⇓*i* Pn		**Pn**	**12 46 34.5**	**+1.4**			
BRY				*i* Sn		**Sn**	**12 47 19.3**	**+0.8**			
BRY	**Bratogost**	**3.89**	**85**	*e*Pn		**Pn**	**12 46 34.7**	**+1.6**			
PCP	**Piancastagn**	**3.92**	**300**	P		**Pn**	**12 46 32.4**	**-1.0**			
OBKA	**Obir**	**3.96**	**13**	*i* Pn		**Pn**	**12 46 35.7**	**+1.6**			
	comp=E,2.9nm,0.2s,SNR=7.3										
OBKA				*e*Sn		**Sn**	**12 47 22.0**	**+1.7**			
	comp=E,15nm,0.4s										
OBKA	**Obir**	**3.96**	**13**	*e*Pn		**Pn**	**12 46 35.4**	**+1.3**			
CANO	**Canova, Maglio**	**3.98**	**295**	P		**Pn**	**12 46 36.3**	**+2.0**			
MYKA	**Terra Mystica**	**3.99**	**4**	*e*Pn		**Pn**	**12 46 35.7**	**+1.3**			
	comp=E,1.7nm,0.1s,SNR=11										
MYKA				*e*Sn		**Sn**	**12 47 20.6**	**-0.2**			
	comp=E,4.2nm,0.3s										
RORO	**Rocca Rossa**	**4.06**	**293**	P		**Pn**	**12 46 37.6**	**+2.2**			
ABTA	**Abfaltersbach**	**4.13**	**353**	*e*Pn		**Pn**	**12 46 37.6**	**+1.2**			
	comp=E,1.9nm,0.2s,SNR=25										
CEME	**Cevo**	**4.17**	**90**	⇓*i* Pn		**Pn**	**12 46 38.4**	**+1.5**			
CEME				*i* Sn		**Sn**	**12 47 26.2**	**+0.8**			
BUM	**Brajici-Budva**	**4.18**	**93**	⇓*i* Pn		**Pn**	**12 46 38.5**	**+1.5**			
BUM				*i* Sn		**Sn**	**12 47 26.3**	**+0.8**			
NKME	**Niksic**	**4.19**	**87**	⇓*i* Pn		**Pn**	**12 46 38.7**	**+1.5**			
NKME				*i* Sn		**Sn**	**12 47 26.8**	**+1.0**			
SOKA	**Soboth**	**4.22**	**17**	*e*Pn		**Pn**	**12 46 38.3**	**+0.7**			
	comp=E,1.4nm,0.2s,SNR=9.5										
GBOS	**Grotte di Boss**	**4.26**	**294**	P		**Pn**	**12 46 40.6**	**+2.4**			
SAOF	**Saorge**	**4.38**	**290**	P		**Pn**	**12 46 42.1**	**+2.4**			
HAPS	**Han Pijesak,Bl**	**4.38**	**69**	*e*Pn		**Pn**	**12 46 43.0**	**+3.1**			
HAPS	**Han Pijesak,Bl**	**4.38**	**69**	*e*Pn		**Pn**	**12 46 42.4**	**+2.5**			
DRME	**Dracevica, Mon**	**4.41**	**94**	⇓*i* Pn		**Pn**	**12 46 41.7**	**+1.6**			
DRME				*i* Sn		**Sn**	**12 47 31.9**	**+0.9**			
DRME	**Dracevica, Mon**	**4.41**	**94**	*e*Pn		**Pn**	**12 46 42.2**	**+2.1**			
KBA	**Koelnbreinsper**	**4.43**	**1**	*i* Pn		**Pn**	**12 46 41.9**	**+1.3**			
	comp=E,1.2nm,0.3s,SNR=5.7										
KBA				*e*Sn		**Sn**	**12 47 32.3**	**+0.5**			
	comp=E,10.0nm,0.4s										
SBF	**Sospel**	**4.43**	**288**	*e*Pn		**Pn**	**12 46 38.3**	**-2.2**			
SBF	**Sospel**	**4.43**	**288**	*e*P		**Pn**	**12 46 42.8**	**+2.3**			
SBF				*e*Sn		**Sn**	**12 47 27.4**	**-4.3**			
	comp=E,5.5nm,0.3s										
ULC	**Ulcinj**	**4.49**	**97**	⇓*i* Pn		**Pn**	**12 46 42.7**	**+1.5**			
ULC				*i* Sn		**Sn**	**12 47 33.8**	**+0.7**			
PLE	**Pljevlja**	**4.54**	**79**	⇑*i* Pn		**Pn**	**12 46 43.7**	**+1.6**			
PLE				*i* Sn		**Sn**	**12 47 35.4**	**+0.8**			
RUDO	**Rudo**	**4.57**	**76**	*e*Pn		**Pn**	**12 46 38.4**	**-3.9**			
STV	**Sant Anna di V**	**4.61**	**292**	P		**Pn**	**12 46 45.9**	**+2.9**			
FETA	**Feichten**	**4.73**	**338**	*e*Pn		**Pn**	**12 46 47.6**	**+3.0**			
	comp=E,0.9nm,0.2s,SNR=6.8										
WTTA	**Wattenberg**	**4.75**	**346**	*e*Pn		**Pn**	**12 46 47.8**	**+2.8**			
	comp=E,1.7nm,0.2s,SNR=9.0										
WTTA				*e*Sn		**Sn**	**12 47 43.4**	**+3.5**			
	comp=E,17nm,0.5s										
CALF	**Calern**	**4.77**	**285**	P		**Pn**	**12 46 47.5**	**+2.3**			
LESA	**Schwarzleotal**	**4.79**	**355**	*i* Pn		**Pn**	**12 46 48.1**	**+2.6**			
	comp=E,1.4nm,0.2s										
LESA				*e*Sn		**Sn**	**12 47 43.6**	**+3.0**			
	comp=E,17nm,0.4s										
SQTA	**Sankt Quirin**	**4.80**	**343**	*e*Pn		**Pn**	**12 46 48.6**	**+3.1**			
	comp=E,0.8nm,0.1s,SNR=15										
WATA	**Walderalm**	**4.83**	**346**	*i* Pn		**Pn**	**12 46 49.3**	**+3.2**			
	comp=E,5.3nm,0.2s,SNR=17										
WATA				*e*Sn		**Sn**	**12 47 44.5**	**+2.7**			
	comp=E,11nm,0.4s										
ARSA	**Arzberg**	**4.87**	**18**	*e*Pn		**Pn**	**12 46 47.2**	**+0.8**			
	comp=E,4.3nm,0.4s,SNR=4.8										
ARSA				*e*Sn		**Sn**	**12 47 41.7**	**-0.8**			
	comp=E,2.4nm,0.3s										
IVA	**Berane**	**4.88**	**85**	⇓*i* Pn		**Pn**	**12 46 48.3**	**+1.6**			
IVA				*i* Sn		**Sn**	**12 47 43.5**	**+0.6**			
TRAV	**Traversella**	**4.90**	**308**	P		**Pn**	**12 46 47.9**	**+1.0**			
MOTA	**Moosalm**	**4.94**	**343**	*i* Pn		**Pn**	**12 46 51.1**	**+3.5**			
	comp=E,0.6nm,0.2s										
PVY	**Plav**	**4.94**	**88**	*e*Pn		**Pn**	**12 46 49.1**	**+1.6**			
PVY				*i* Sn		**Sn**	**12 47 44.9**	**+0.6**			
PUK	**Puka**	**4.95**	**95**	AML	AML						
	comp=E,76µm,0.5s										
PUK				AML	AML						
	comp=N,117µm,0.8s										
PUK				AML	AML						
	comp=E,82µm,1.1s										
PUK				AML	AML						
	comp=N,118µm,0.8s										
ENAUX	**Enaux**	**4.95**	**289**	P		**Pn**	**12 46 51.3**	**+3.6**			
SJES	**Sjenica**	**4.96**	**81**	*e*Pn		**Pn**	**12 46 50.1**	**+2.3**			
SJES				*e*Sn		Sn	12 47 35.7	-9.1			
SJES	**Sjenica**	**4.96**	**81**	*e*Pn		**Pn**	**12 46 49.4**	**+1.6**			
RSP	**Reno Superiore**	**5.00**	**302**	P		**Pn**	**12 46 50.2**	**+1.8**			
LMR	**La Mourre**	**5.00**	**280**	*e*P		**Pn**	**12 46 50.0**	**+1.7**			
LMR				*e*Sn		**Sn**	**12 47 40.8**	**-5.0**			
	comp=N,2.7nm,0.4s										
BIOA	**Bad Ischl, Aus**	**5.05**	**3**	*e*Pn		**Pn**	**12 46 50.1**	**+1.2**			
	comp=N,2.2nm,0.2s										
BIOA				*e*Sn		**Sn**	**12 47 47.8**	**+1.0**			
	comp=N,5.1nm,0.3s										
JAUF	**Jausiers**	**5.06**	**293**	P		**Pn**	**12 46 52.3**	**+3.1**			
DIVS	**Divibare**	**5.11**	**71**	*e*Pn		**Pn**	**12 46 51.5**	**+1.7**			
DIVS				*e*Sn		**Sn**	**12 47 41.7**	**-6.8**			
IVAS	**Ivanjica**	**5.12**	**77**	*e*Pn		**Pn**	**12 46 51.6**	**+1.6**			
IVAS				*e*Sn		**Sn**	**12 47 40.9**	**-7.9**			
TRIGF	**Trigance**	**5.13**	**285**	P		**Pn**	**12 46 53.0**	**+2.8**			
MBDF	**Montbardon**	**5.15**	**296**	*e*P		**Pn**	**12 46 52.6**	**+2.2**			
MBDF				*e*Sn		**Sn**	**12 47 44.6**	**-4.9**			
RETA	**Reutte**	**5.15**	**341**	*e*Pn		**Pn**	**12 46 53.2**	**+2.8**			
	comp=N,2.8nm,0.3s,SNR=5.7										
RETA				*e*Sn		**Sn**	**12 47 53.2**	**+3.7**			
	comp=N,3.7nm,0.3s										
CREF	**Crivoux**	**5.18**	**294**	P		Pn	12 46 57.1	+6.2			
FLAF	**Flassans-sur-I**	**5.19**	**280**	P		**Pn**	**12 46 52.5**	**+1.6**			

DAVA	**Damuels**	**5.22**	**334**	*i* Pn		**Pn**	**12 46 55.5**	**+4.0**			
	comp=N,3.7nm,0.2s										
DAVA				*e*Sn		**Sn**	**12 47 54.9**	**+3.5**			
	comp=N,6.6nm,0.4s										
LSD	**Lago del Serru**	**5.24**	**305**	P		**Pn**	**12 46 51.8**	**+0.1**			
LSD	**Lago del Serru**	**5.24**	**305**	S		**Sn**	**12 47 49.7**	**-2.1**			
MOA	**Molln**	**5.25**	**7**	*e*Pn		**Pn**	**12 46 53.0**	**+1.4**			
	comp=N,0.8nm,0.1s,SNR=9.1										
MOA				*e*Sn		**Sn**	**12 47 52.1**	**+0.4**			
	comp=N,4.8nm,0.4s										
FRGS	**Fruska Gora**	**5.35**	**60**	*e*Pn		**Pn**	**12 46 53.5**	**+0.4**			
DIX	**Grande Dixence**	**5.42**	**311**	P		**Pn**	**12 46 56.5**	**+2.2**			
TRUS	**Trudelj**	**5.43**	**71**	*e*Pn		**Pn**	**12 46 56.3**	**+2.1**			
RONA	**Rosalia, Austr**	**5.48**	**22**	*e*Pn		**Pn**	**12 46 55.6**	**+0.7**			
	comp=N,1.2nm,0.1s										
RONA				*e*Sn		**Sn**	**12 47 57.5**	**-0.1**			
	comp=N,0.8nm,0.2s										
LPG	**La Plagne**	**5.49**	**303**	*e*Sn		**Sn**	**12 47 52.5**	**-5.6**			
	comp=N,9.1nm,0.5s										
ARTF	**Artigues**	**5.54**	**282**	P		**Pn**	**12 46 57.9**	**+2.2**			
GRUS	**Gruza**	**5.58**	**75**	*e*Pn		**Pn**	**12 46 57.6**	**+1.4**			
GRUS				*e*Sn		**Sn**	**12 47 52.8**	**-7.1**			
CONA	**Conrad Observa**	**5.58**	**18**	*i* Pn		**Pn**	**12 46 57.4**	**+1.0**			
	comp=N,0.9nm,0.2s										
CONA				*e*Sn		**Sn**	**12 47 59.7**	**-0.5**			
	comp=N,3.5nm,0.5s										
RSL	**Roselend**	**5.66**	**305**	P		**Pn**	**12 47 01.8**	**+4.3**			
BSTF	**la Bastide-des**	**5.70**	**285**	P		**Pn**	**12 47 00.2**	**+2.3**			
SMRF	**Simiane la Rot**	**5.77**	**286**	*e*P		**Pn**	**12 47 02.0**	**+3.2**			
SMRF				*e*Sn		**Sn**	**12 47 59.1**	**-5.5**			
	comp=N,0.9nm,0.3s										
SELS	**Selova**	**5.79**	**82**	*e*Pn		**Pn**	**12 47 00.7**	**+1.5**			
ORIF	**Oris-en-Rattie**	**5.81**	**295**	*e*P		**Pn**	**12 47 02.7**	**+3.3**			
ORIF	**Oris-en-Rattie**	**5.81**	**295**	P		Pn	12 47 04.7	+5.2			
AIGLE	**Aigle**	**5.83**	**311**	P		**Pn**	**12 47 02.9**	**+3.2**			
SULZ	**Cheisacher**	**6.09**	**325**	P		**Pn**	**12 47 05.3**	**+2.0**			
SLE	**Schleitheim**	**6.12**	**328**	P		**Pn**	**12 47 05.3**	**+1.5**			
BALST	**Balsthal**	**6.13**	**322**	P		**Pn**	**12 47 06.0**	**+2.3**			
OGSM	**Saint Maurice**	**6.20**	**301**	P		**Pn**	**12 47 08.5**	**+3.8**			
CKRC	**Cesky Krumlov**	**6.21**	**6**	*e*PN		**Pn**	**12 47 05.0**	**+0.1**			
CKRC				*e*SN		**Sn**	**12 48 13.0**	**-2.5**			
BOVS	**Bovan**	**6.25**	**78**	*e*Pn		**Pn**	**12 47 06.7**	**+1.3**			
BARS	**Barje**	**6.30**	**86**	*e*Pn		**Pn**	**12 47 06.9**	**+0.8**			
BARS				*e*Sn		Sn	12 48 06.9	-11			
MODS	**Modra-Piesok**	**6.38**	**25**	*e*PN		**Pn**	**12 47 11.2**	**+4.0**			
BOURR	**Bourrignon**	**6.38**	**320**	P		**Pn**	**12 47 08.5**	**+1.2**			
FELD	**Feldberg im Sc**	**6.41**	**326**	P		**Pn**	**12 47 09.6**	**+1.9**			
CABF	**La Chapelle**	**6.47**	**310**	*e*P		**Pn**	**12 47 11.1**	**+2.5**			
OG35	**Corcelles**	**6.48**	**304**	P		**Pn**	**12 47 10.9**	**+2.3**			
OG35				S		**Sn**	**12 48 21.8**	**-0.3**			
KHC	**Kasperske Hory**	**6.48**	**2**	*e*PN		**Pn**	**12 47 09.2**	**+0.5**			
KHC				*e*SN		**Sn**	**12 48 20.0**	**-2.3**			
PRVS	**Prvonek**	**6.50**	**88**	*e*Pn		**Pn**	**12 47 10.7**	**+1.7**			
PRVS				*e*Sn		Sn	12 48 09.9	-13			
KIZ	**Kirchzarten**	**6.51**	**326**	P		**Pn**	**12 47 10.6**	**+1.7**			
KIZ	**Kirchzarten**	**6.51**	**326**	S		**Sn**	**12 48 21.1**	**-1.7**			
VOGT	**Vogtsburg - To**	**6.71**	**326**	P		**Pn**	**12 47 13.5**	**+1.8**			
MOF	**Molkenrain**	**6.76**	**322**	P		**Pn**	**12 47 13.8**	**+1.2**			
KRUC	**Moravsky**	**6.77**	**18**	*e*PN		**Pn**	**12 47 13.3**	**+0.7**			
WALT	**Westhalten**	**6.79**	**324**	P		**Pn**	**12 47 14.8**	**+2.0**			
ZVC	**Zvikov**	**6.82**	**5**	*e*SN		**Sn**	**12 48 29.0**	**-1.4**			
OPP	**Oppenau**	**6.84**	**330**	P		**Pn**	**12 47 15.6**	**+2.0**			
HINF	**Hinteralfeld**	**6.87**	**321**	*e*P		**Pn**	**12 47 16.4**	**+2.5**			
HINF				*e*Sn		**Sn**	**12 48 25.3**	**-6.4**			
	comp=N,3.6nm,0.3s										
ZAPS	**Zavoj**	**6.90**	**82**	*e*Pn		**Pn**	**12 47 15.3**	**+0.9**			
ECH	**Echery**	**7.03**	**324**	P		**Pn**	**12 47 17.3**	**+1.2**			
VRAC	**Vranov**	**7.05**	**18**	*e*PN		**Pn**	**12 47 17.7**	**+1.3**			
WLS	**Welschbruch**	**7.10**	**326**	P		**Pn**	**12 47 18.9**	**+1.8**			

Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.29; $M_{\theta\theta}$-1.72; $M_{\phi\phi}$1.43; $M_{r\theta}$3.57; $M_{\theta\phi}$-1.40; $M_{\phi r}$-0.14; Fault plane solution: $M_0$4.04000×10^{16} NP1: ϕ_s101.00000°,δ86.00000°,λ117.00000°. NP2: ϕ_s199.00000°,δ28.00000°,λ9.00000°.

*NEIC **04** 13:12:52.2,24.17N×121.72E,h12km*

*ASIES **04** 13:12:52.1,24.21N×121.70E,h3km,ML5.3,Mw4.9, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}0.97; $M_{\theta\theta}$-1.49; $M_{\phi\phi}$0.52; $M_{r\theta}$1.63; $M_{\theta\phi}$-1.38; $M_{\phi r}$-1.14; Fault plane solution: $M_0$2.75659×10^{23} NP1: ϕ_s102.22000°,δ74.98000°,λ131.72000°. NP2: ϕ_s208.43000°,δ43.87000°,λ21.96000°. Principal axes: T Plg43.8700°, Azm52.9690°; N Plg39.9970°, Azm269.2110°; P Plg19.0570°, Azm162.3640°;*

*JMA **04** 13:12:52.8±0.1,24.2N±0.3×121.7E±0.6,h10km±1km, MD5.4/17,MW4.9/17,TAIWAN REGION*

ISC 04 13:12:53.1±0.5,24.19N±0.01×121.75E±0.01,h14km±2km, n927,σ1$49/999,mb5.2/204,MS4.8/23,46C-47D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=257	**0.11**	**257**	⇑P			**Pg**	**13 12 55.3**	**-1.3**
ETL	baz=257			S			**Sg**	**13 12 57.1**	**-1.7**
EHP	**Heping Village** baz=9.0	**0.12**	**358**	⇓*i*P			**Pg**	**13 12 55.7**	**-1.0**
EHP	baz=9.0			S			**Sg**	**13 12 58.1**	**-0.9**
NACB	**Ninganchiao**	**0.14**	**265**	Pg			**Pg**	**13 12 55.2**	**-1.6**
NACB				Sg			**Sg**	**13 12 56.9**	**-2.3**
NACB	**Ninganchiao**	**0.14**	**265**	P			**Pg**	**13 12 55.0**	**-1.8**
NACB	**Ninganchiao** baz=260	**0.14**	**265**	⇑P			**Pg**	**13 12 55.5**	**-1.3**
NACB	baz=260			S			**Sg**	**13 12 57.6**	**-1.7**
EAHA	**Aohua** baz=4.0	**0.14**	**358**	⇓P			**Pg**	**13 12 56.0**	**-1.0**
EAHA	baz=4.0			S			**Sg**	**13 12 58.6**	**-0.8**
TWD	**Chiawan** baz=237	**0.17**	**232**	⇑*i*P			**Pg**	**13 12 56.0**	**-1.3**
TWD	baz=237			*i* S			**Sg**	**13 12 58.5**	**-1.6**
ENA	**Nanau** baz=4.0	**0.24**	**359**	⇓*i*P			**Pg**	**13 12 57.7**	**-0.7**
ENA	baz=4.0			*i* S			**Sg**	**13 13 01.4**	**-0.7**
ETLH	**Xiulin Townshi** baz=277	**0.24**	**275**	⇑P			**Pg**	**13 12 57.5**	**-1.0**
ETLH	baz=277			S			**Sg**	**13 13 00.8**	**-1.3**
HWA	**Hwalien** baz=219	**0.24**	**212**	⇑*i*P			**Pg**	**13 12 57.9**	**-0.5**
HWA	baz=219			*i* S			**Sg**	**13 13 02.4**	**+0.4**
EWUT	**Wuta** baz=9.0	**0.26**	**7**	⇓P			**Pg**	**13 12 58.1**	**-0.6**
EWUT	baz=9.0			S			**Sg**	**13 13 02.0**	**-0.6**
ETM	**Tongmen** baz=217	**0.32**	**226**	⇑P			**Pg**	**13 12 58.5**	**-1.2**
ETM	baz=217			S			**Sg**	**13 13 02.9**	**-1.4**
LXIB	**Xiulin Townshi** baz=242	**0.34**	**242**	⇑P			**Pg**	**13 12 59.0**	**-1.3**
LXIB	baz=242			S			**Sg**	**13 13 04.1**	**-1.1**
ESAO	**Su ao** baz=14	**0.40**	**13**	⇓P			**Pg**	**13 13 00.6**	**-0.6**
ESAO	baz=14			S			**Sg**	**13 13 06.2**	**-0.4**
LATG	**Datong** baz=332	**0.40**	**330**	⇓P			**Pg**	**13 13 00.7**	**-0.6**
LATG	baz=332			S			**Sg**	**13 13 07.4**	**+0.6**
NNSB	**Datong** baz=308	**0.41**	**306**	⇓P			**Pg**	**13 13 00.8**	**-0.6**
NNSB	baz=308			S			**Sg**	**13 13 06.2**	**-0.9**
NNSH	**Datong** baz=308	**0.41**	**306**	⇓P			**Pg**	**13 13 00.8**	**-0.6**
NNSH	baz=308			S			**Sg**	**13 13 06.4**	**-0.7**
NNS	**Nan Shan** baz=309	**0.42**	**307**	⇓*i*P			**Pg**	**13 13 01.0**	**-0.7**
NNS	baz=309			*i* S			**Sg**	**13 13 06.7**	**-0.8**
SHUL	**Shoufeng** baz=210	**0.43**	**203**	⇓P			**Pb**	**13 13 02.4**	**0.0**
SHUL	baz=210			S			**Sb**	**13 13 09.9**	**+1.1**
TWC	**Suao** baz=9.0	**0.43**	**13**	⇓*i*P			**Pg**	**13 13 01.3**	**-0.5**
TWC	baz=9.0			*e*S			**Sg**	**13 13 07.5**	**-0.1**
WHF	**Hehuan Shan** baz=266	**0.44**	**265**	⇑*i*P			**Pg**	**13 13 01.1**	**-1.0**
WHF	baz=266			*i* S			**Sg**	**13 13 06.9**	**-1.2**
NDS	**Dongshan** baz=358	**0.45**	**357**	⇓P			**Pg**	**13 13 01.7**	**-0.4**
NDS	baz=358			S			**Sg**	**13 13 08.2**	**+0.1**
FUSS	**Fushou** baz=279	**0.46**	**278**	P			**Pg**	**13 13 01.9**	**-0.5**
FUSS	baz=279			S			**Sg**	**13 13 07.9**	**-0.9**
NDT	**Datong Townshi** baz=335	**0.47**	**333**	⇓P			**Pg**	**13 13 02.2**	**-0.2**
NDT	baz=335			S			**Sg**	**13 13 08.9**	**+0.1**
ESL	**Shilin** baz=227	**0.47**	**218**	⇑*i*P			**Pg**	**13 13 01.2**	**-1.2**
ESL	baz=227			S			**Sg**	**13 13 07.1**	**-1.6**
ENTT	**Nioudou** baz=342	**0.48**	**340**	⇓*i*P			**Pg**	**13 13 02.4**	**-0.3**
ENTT	baz=342			*i* S			**Sg**	**13 13 09.1**	**-0.1**
EOS2	**EOS2** baz=52	**0.50**	**62**	*e*P			**Pb**	**13 13 04.1**	**+0.5**
TEGC	**Jichi Village** baz=190	**0.51**	**202**	P			**Pb**	**13 13 03.7**	**-0.1**
TEGC	baz=190			S			**Sb**	**13 13 12.7**	**+1.6**
TWT	**Tachien** baz=278	**0.52**	**278**	*i* P			**Pg**	**13 13 03.7**	**+0.1**
TWT	baz=278			S			**Sg**	**13 13 10.3**	**-0.3**
EOS4	**EOS4** baz=94	**0.53**	**97**	P			**Pn**	**13 13 05.5**	**-0.4**
EOS4	baz=94			*e*S			**Sn**	**13 13 14.7**	**+0.3**
EOS3	**EOS3** baz=63	**0.53**	**79**	*e*P			**Pb**	**13 13 04.9**	**+0.8**
CHGB	**Renai** baz=250	**0.54**	**257**	⇑P			**Pg**	**13 13 03.0**	**-0.8**
CHGB	baz=250			S			**Sg**	**13 13 10.0**	**-1.0**
TWE	**Neicheng** baz=3.0	**0.54**	**352**	⇓*i*P			**Pg**	**13 13 03.5**	**-0.3**
TWE	baz=3.0			*i* S			**Sb**	**13 13 11.5**	**-0.5**
TDCB	**Techi** baz=278	**0.54**	**277**	P			**Pg**	**13 13 03.4**	**-0.4**
TDCB	baz=278			S			**Sg**	**13 13 10.0**	**-1.1**
OWD	**Renai** baz=247	**0.57**	**246**	⇑P			**Pg**	**13 13 03.4**	**-1.0**
OWD	baz=247			*e*S			**Sg**	**13 13 12.3**	**+0.3**
WARBT	**Fenglin Townsh** baz=224	**0.57**	**215**	⇑P			**Pg**	**13 13 03.0**	**-1.3**
WARBT	baz=224			S			**Sg**	**13 13 10.1**	**-1.8**
ILA	**Ilan** baz=2.0	**0.58**	**0**	⇓*i*P			**Pg**	**13 13 04.4**	**-0.1**
ILA	baz=2.0			S			**Sb**	**13 13 14.4**	**+1.3**
YHNB	**Yeheng**	**0.59**	**325**				**Pg**	**13 13 04.0**	**-0.7**
YHNB	**Yeheng**	**0.59**	**325**	P			**Pg**	**13 13 04.6**	**-0.2**
YHNB	**Yeheng** baz=326	**0.59**	**325**	⇓P			**Pg**	**13 13 04.5**	**-0.2**
YHNB	baz=326			S			**Sg**	**13 13 12.2**	**-0.3**
FUSB	**Fushanzhiwuyua** baz=347	**0.59**	**346**	⇓P			**Pg**	**13 13 04.5**	**-0.2**
FUSB	baz=347			S			**Sg**	**13 13 12.7**	**+0.1**
EGFH	**Guangfu** baz=217	**0.59**	**210**	*e*P			**Pg**	**13 13 04.3**	**-0.5**
EGFH	baz=217			*e*S			**Sg**	**13 13 12.1**	**-0.5**
NSK	**Sanguang** baz=326	**0.60**	**324**	⇓*i*P			**Pg**	**13 13 04.7**	**-0.4**
NSK	baz=326			*i* S			**Sg**	**13 13 12.9**	**-0.2**
WUSB	**Renai** baz=244	**0.60**	**252**	⇑P			**Pg**	**13 13 04.3**	**-0.8**
WUSB	baz=244			S			**Sg**	**13 13 12.1**	**-1.0**
NTC	**Toucheng** baz=7.0	**0.67**	**7**	P			**Pg**	**13 13 06.3**	**+0.1**
NTC	baz=7.0			*e*S			**Sn**	**13 13 17.2**	**-1.2**
VWDT	**VWDT** baz=233	**0.70**	**232**	⇑P			**Pg**	**13 13 05.8**	**-1.0**
VWDT	baz=233			S			**Sg**	**13 13 16.2**	**+0.2**
NFF	**Wufeng Townshi** baz=317	**0.72**	**308**	⇓P			**Pg**	**13 13 06.9**	**-0.4**
NFF	baz=317			S			**Sb**	**13 13 17.2**	**-0.2**
WHP	**Taichung City** baz=278	**0.73**	**277**	⇓P			**Pg**	**13 13 07.2**	**-0.2**
WHP	baz=278			S			**Sg**	**13 13 16.8**	**-0.4**
WPL	**Puli Township** baz=247	**0.74**	**257**	P			**Pg**	**13 13 06.9**	**-0.7**
WPL	baz=247			S			**Sg**	**13 13 16.2**	**-1.1**
HGSD	**Ruisui** baz=218	**0.75**	**203**	⇓P			**Pg**	**13 13 07.8**	**0.0**
HGSD	baz=218			*e*S			**Sb**	**13 13 19.2**	**+1.2**
DPDB	**Guoxing** baz=249	**0.76**	**259**	⇑P			**Pg**	**13 13 07.4**	**-0.6**
DPDB	baz=249			S			**Sg**	**13 13 17.7**	**-0.4**
WCS	**Beigang Elemen** baz=253	**0.77**	**261**	P			**Pg**	**13 13 07.5**	**-0.6**
WCS	baz=253			S			**Sg**	**13 13 18.0**	**-0.3**
EHY	**Hungye** baz=218	**0.78**	**210**	⇑*i*P			**Pg**	**13 13 07.0**	**-1.3**
EHY	baz=218			*i* S			**Sb**	**13 13 19.6**	**+0.8**
TIPB	**Shuangxi** baz=356	**0.79**	**5**	⇓P			**Pg**	**13 13 08.0**	**-0.4**
TIPB	baz=356			S			**Sg**	**13 13 18.0**	**-0.8**
NHDH	**Xindian Distri** baz=346	**0.80**	**346**	P			**Pg**	**13 13 08.4**	**-0.3**
NHDH	baz=346			S			**Sb**	**13 13 19.6**	**+0.1**
LIOB	**Emei** baz=306	**0.81**	**305**	*e*P			**Pb**	**13 13 09.2**	**+0.3**
LIOB	baz=306			*e*S			**Sb**	**13 13 20.4**	**+0.7**
NSTT	**Nanjuang** baz=304	**0.81**	**303**	P			**Pg**	**13 13 08.7**	**-0.2**
NSTT	baz=304			S			**Sg**	**13 13 19.1**	**-0.5**
NJD	**Zhudong** baz=313	**0.81**	**313**	P			**Pb**	**13 13 09.4**	**+0.4**
NJD	baz=313			S			**Sb**	**13 13 20.6**	**+0.8**
TATO	**Taipei**	**0.82**	**343**		Pg		**Pg**	**13 13 08.5**	**-0.6**
TATO	**Taipei**	**0.82**	**343**		P		**Pb**	**13 13 09.2**	**0.0**
TATO	**Taipei** baz=344	**0.82**	**343**		P		**Pg**	**13 13 08.8**	**-0.3**
TATO	baz=344			S			**Sn**	**13 13 21.4**	**-0.8**
SSLB	**Suanglung**	**0.82**	**241**		Pg		**Pg**	**13 13 07.7**	**-1.5**
SSLB	**Suanglung**	**0.82**	**241**		P		**Pg**	**13 13 08.2**	**-1.0**
SSLB	**Suanglung** baz=242	**0.82**	**241**		⇑P		**Pg**	**13 13 08.0**	**-1.1**
SSLB	baz=242			*e*S			**Sg**	**13 13 19.8**	**-0.2**
SMLT	**Sun Moon Lake** baz=249	**0.83**	**249**	⇑*i*P			**Pg**	**13 13 08.4**	**-0.9**
SMLT	baz=249			*e*S			**Sg**	**13 13 19.4**	**-0.8**
TWB1	**Santiao Chiao** baz=7.0	**0.85**	**15**	⇓*i*P			**Pg**	**13 13 09.0**	**-0.6**
TWB1	baz=7.0			*e*S			**Sn**	**13 13 22.5**	**-0.4**
BACT	**New Taipei Cit** baz=342	**0.85**	**341**	P			**Pb**	**13 13 10.1**	**+0.4**
BACT	baz=342			S			**Sn**	**13 13 22.5**	**-0.5**
TYC	**Yuchr** baz=243	**0.86**	**251**	⇓*i*P			**Pb**	**13 13 09.2**	**-0.6**
TYC	baz=243			S			**Sg**	**13 13 20.5**	**-0.6**
NHY	**Taipei** baz=350	**0.86**	**349**	P			**Pg**	**13 13 10.0**	**+0.1**
NHY	baz=350			*e*S			**Sb**	**13 13 21.7**	**+0.4**
NWF	**Wu-fen Shan** baz=354	**0.88**	**2**	⇓*i*P			**Pb**	**13 13 10.1**	**-0.2**
NWF	baz=354			*e*S			**Sg**	**13 13 21.1**	**-0.8**
WFSB	**Wu-fen Shan** baz=354	**0.88**	**2**	⇓P			**Pb**	**13 13 10.1**	**-0.1**
WFSB	baz=354			S			**Sb**	**13 13 20.8**	**-1.1**
HSN1	**Hsinchu** baz=313	**0.89**	**312**	P			**Pn**	**13 13 10.8**	**-0.3**
HSN1	baz=313			*e*S			**Sn**	**13 13 23.0**	**-0.8**
YULB	**Yu-li**	**0.89**	**208**		Pg		**Pb**	**13 13 08.7**	**-1.7**
YULB	**Yu-li**	**0.89**	**208**		P		**Pb**	**13 13 09.1**	**-1.2**
YULB	**Yu-li** baz=219	**0.89**	**208**		P		**Pb**	**13 13 08.9**	**-1.4**
YULB	baz=219			*e*S			**Sb**	**13 13 20.9**	**-1.2**
TWQ1	**Liyutan** baz=281	**0.90**	**281**	*i* P			**Pn**	**13 13 11.0**	**-0.4**
TWQ1	baz=281			*i* S			**Sn**	**13 13 23.3**	**-0.9**
ECBN	**Changbin** baz=198	**0.91**	**197**	⇓P			**Pb**	**13 13 10.2**	**-0.4**
ECBN	baz=198			S			**Sn**	**13 13 24.8**	**+0.6**
NTY	**Taoyuan** baz=334	**0.91**	**333**	P			**Pn**	**13 13 11.2**	**-0.2**
NTY	baz=334			*e*S			**Sn**	**13 13 23.8**	**-0.5**
SXI1	**Grass Mountain** baz=346	**0.91**	**7**	⇓P			**Pb**	**13 13 10.6**	**-0.2**
SXI1	baz=346			S			**Sn**	**13 13 24.4**	**-0.2**
SBCB	**Hsinchu** baz=312	**0.92**	**311**	P			**Pn**	**13 13 11.3**	**-0.3**
SBCB	baz=312			S			**Sn**	**13 13 24.9**	**+0.3**
EYUL	**Yuli** baz=218	**0.92**	**205**	P			**Pb**	**13 13 10.7**	**-0.2**
EYUL	baz=218			*e*S			**Sb**	**13 13 22.6**	**-0.3**
TWF1	**Yuli** baz=219	**0.93**	**206**	*i* P			**Pb**	**13 13 09.7**	**-1.2**
TWF1	baz=219			*e*S			**Sb**	**13 13 21.9**	**-1.2**
NCUH	**Zhongli** baz=327	**0.93**	**327**	P			**Pn**	**13 13 12.1**	**+0.3**
NCUH	baz=327			S			**Sn**	**13 13 24.9**	**0.0**
NMLH	**Miaoli** baz=293	**0.94**	**292**	P			**Pn**	**13 13 11.9**	**0.0**
NMLH	baz=293			S			**Sn**	**13 13 25.4**	**+0.3**
NJN	**Zhunan** baz=303	**0.94**	**302**	P			**Pn**	**13 13 11.8**	**-0.1**
NJN	baz=303			*e*S			**Sn**	**13 13 25.2**	**+0.2**
WHYT	**Xinyi Township** baz=241	**0.95**	**239**	P			**Pb**	**13 13 10.9**	**-0.4**
TWS1	**Kuangyinshan** baz=352	**0.96**	**342**	⇓*i*P			**Pn**	**13 13 11.9**	**-0.2**
TWS1	baz=352			S			**Sn**	**13 13 25.8**	**+0.2**
TNOU	**National Taiwa** baz=1.0	**0.96**	**2**	P			**Pb**	**13 13 11.6**	**0.0**
WWF	**Wufeng** baz=258	**0.97**	**262**	P			**Pn**	**13 13 12.9**	**+0.7**
YM01	**YM01** baz=351	**0.97**	**351**	P			**Pg**	**13 13 12.1**	**+0.2**
YM01	baz=351			S			**Sn**	**13 13 26.0**	**0.0**
WJS	**Zhushan** baz=244	**1.00**	**249**	P			**Pn**	**13 13 12.9**	**+0.2**
WJS	baz=244			S			**Sn**	**13 13 26.4**	**-0.1**
NTST	**Danshui** baz=354	**1.01**	**345**	P			**Pn**	**13 13 13.0**	**+0.2**
NTST	baz=354			S			**Sn**	**13 13 27.9**	**+1.0**
WNT1	**Nantou City** baz=250	**1.01**	**254**	P			**Pn**	**13 13 13.1**	**+0.3**
WNT1	baz=250			S			**Sn**	**13 13 28.1**	**+1.2**
NWRT	**Kuosheng** baz=347	**1.02**	**356**	P			**Pb**	**13 13 12.2**	**-0.3**
NWRT	baz=347			*e*S			**Sn**	**13 13 27.4**	**+0.5**
ANP	**Anpu** baz=349	**1.02**	**348**	⇓*i*P			**Pb**	**13 13 12.4**	**-0.1**
ANP	baz=349			*e*S			**Sn**	**13 13 27.2**	**+0.1**
WNT	**Mingjian** baz=248	**1.02**	**253**	⇑*i*P			**Pn**	**13 13 12.9**	**0.0**
WNT	baz=248			*i* S			**Sn**	**13 13 27.5**	**+0.5**
WDJ	**Dajia District** baz=280	**1.02**	**279**	P			**Pn**	**13 13 13.7**	**+0.7**
WDJ	baz=280			S			**Sn**	**13 13 27.1**	**+0.1**
NHW	**Xinwu Township** baz=323	**1.03**	**322**	*i* P			**Pb**	**13 13 12.9**	**+0.1**
NHW	baz=323			S			**Sn**	**13 13 28.5**	**+1.0**
CHKH	**Chenggong** baz=189	**1.04**	**198**	P			**Pb**	**13 13 12.6**	**-0.3**
CHKH	baz=189			S			**Sn**	**13 13 28.2**	**+0.7**
FULB	**Fuli** baz=221	**1.07**	**203**	P			**Pb**	**13 13 12.9**	**-0.4**
FULB	baz=221			*e*S			**Sg**	**13 13 27.4**	**-0.2**
WYL	**Yuanlin Townsh** baz=259	**1.09**	**258**	P			**Pg**	**13 13 14.6**	**+0.5**
WYL	baz=259			S			**Sn**	**13 13 29.6**	**+0.9**
WCHH	**Zhanghua** baz=265	**1.09**	**265**	P			**Pg**	**13 13 15.1**	**+0.9**
WCHH	baz=265			S			**Sn**	**13 13 30.2**	**+1.4**
ALS	**Alishan** baz=233	**1.09**	**232**	⇑*i*P			**Pb**	**13 13 13.3**	**-0.6**
ALS	baz=233			*i* S			**Sn**	**13 13 29.6**	**+0.4**
TWY	**Chenhua** baz=354	**1.09**	**353**	*i* P			**Pg**	**13 13 14.4**	**+0.1**
TWY	baz=354			*e*S			**Sn**	**13 13 29.6**	**+0.8**
NSM	**Shimen** baz=338	**1.11**	**353**	P			**Pg**	**13 13 14.3**	**-0.2**
JYNG	**Yonagunijimaku**	**1.13**	**76**	P			**Pg**	**13 13 14.8**	**-0.1**
JYNG				*e*S			**Sn**	**13 13 31.6**	**+1.9**
JYNG	**Yonagunijimaku** comp=E,61nm,3.0s,comp=N,94nm,2.5s	**1.13**	**76**	A			A	13 13 14.8	
CHKT	**Chengkung** baz=216	**1.14**	**198**	*i* P			**Pb**	**13 13 13.2**	**-1.3**
CHKT	baz=216			*i* S			**Sn**	**13 13 31.4**	**+1.4**
CHN5	**Tsauling** baz=241	**1.14**	**239**	⇑*i*P			**Pn**	**13 13 14.9**	**+0.2**
CHN5	baz=241			*i* S			**Sn**	**13 13 31.7**	**+1.6**
EHD	**Haiduan** baz=209	**1.14**	**206**	P			**Pb**	**13 13 13.9**	**-0.8**
EHD	baz=209			*e*S			**Sb**	**13 13 28.2**	**-1.2**
YOJ	**Yonaguni jima**	**1.19**	**76**	Pn			**Pn**	**13 13 15.3**	**+0.1**
YOJ	**Yonaguni jima**	**1.19**	**76**	P			**Pg**	**13 13 15.9**	**-0.1**
YOJ	**Yonaguni jima** baz=61	**1.19**	**76**	⇑P			**Pn**	**13 13 15.4**	**+0.1**
YOJ	baz=61			S			**Sg**	**13 13 33.3**	**+1.8**
YOJ	**Yonaguni jima**	**1.19**	**76**	P			**Pn**	**13 13 15.4**	**+0.1**
YOJ	**Yonaguni jima**	**1.19**	**76**	P			**Pb**	**13 13 15.6**	**+0.2**
YOJ				S			**Sg**	**13 13 33.0**	**+1.5**
YOJ	**Yonaguni jima** comp=E,66nm,6.2s,comp=N,84nm,4.3s	**1.19**	**76**	A			A	13 13 15.6	
ECS	**Chishang** baz=220	**1.19**	**204**	P			**Pg**	**13 13 16.1**	**+0.1**
ECS	baz=220			*e*S			**Sg**	**13 13 32.0**	**+0.5**
WGK	**Gukeng** baz=247	**1.19**	**246**	⇑*i*P			**Pg**	**13 13 15.9**	**-0.2**
WGK	baz=247			*i* S			**Sg**	**13 13 32.7**	**+1.0**
ELDTW	**Lidau** baz=226	**1.20**	**214**	*i* P			**Pn**	**13 13 14.1**	**-1.4**
ELDTW	baz=226			S			**Sg**	**13 13 32.2**	**+0.3**
WDLH	**Douliu** baz=248	**1.21**	**246**	P			**Pg**	**13 13 17.1**	**+0.6**
WDLH	baz=248			S			**Sg**	**13 13 33.3**	**+1.0**
EDH	**Donghe** baz=187	**1.27**	**199**	P			**Pn**	**13 13 15.3**	**-1.2**
EDH	baz=187			S			**Sg**	**13 13 35.3**	**+1.0**
WCKO	**Fanlu** baz=236	**1.28**	**235**	P			**Pb**	**13 13 17.4**	**+0.4**
WCKO	baz=236			S			**Sg**	**13 13 35.4**	**+0.8**
WRL	**Guolierlin Hig** baz=259	**1.28**	**258**	P			**Pg**	**13 13 17.8**	**0.0**
WRL	baz=259			S			**Sg**	**13 13 34.8**	**+0.3**
RLNB	**Erlin** baz=259	**1.30**	**257**	P			**Pg**	**13 13 18.0**	**-0.2**
RLNB	baz=259			S			**Sg**	**13 13 35.3**	**+0.2**
WTK	**Tuku** baz=250	**1.34**	**249**	P			**Pg**	**13 13 18.6**	**-0.3**
WTK	baz=250			S			**Sg**	**13 13 37.1**	**+0.8**
CHN4	**Tsaushan** baz=222	**1.34**	**232**	*i* P			**Pg**	**13 13 18.6**	**-0.4**
CHN4	baz=222			*i* S			**Sg**	**13 13 37.6**	**+1.1**
STYH	**Taoyuan** baz=224	**1.35**	**222**	P			**Pb**	**13 13 17.9**	**-0.2**
STYH	baz=224			S			**Sg**	**13 13 36.5**	**0.0**
TPUB	**Ta-pu**	**1.35**	**229**				**Pn**	**13 13 17.6**	**0.0**
TPUB	**Ta-pu**	**1.35**	**229**		P		**Pg**	**13 13 18.7**	**-0.4**
TPUB	**Ta-pu** baz=220	**1.35**	**229**		P		**Pb**	**13 13 18.4**	**+0.2**
TPUB	baz=220			S			**Sg**	**13 13 37.4**	**+0.7**
CHY	**Chiayi** baz=242	**1.39**	**241**	*e*P			**Pg**	**13 13 20.3**	**+0.4**
CHY	baz=242			S			**Sg**	**13 13 39.0**	**+1.0**
LONT	**Longtian** baz=208	**1.39**	**204**	P			**Pn**	**13 13 16.6**	**-1.5**
LONT	baz=208			*e*S			**Sn**	**13 13 35.0**	**-1.2**
WMLT	**Mailiao** baz=272	**1.44**	**255**	*e*P			**Pg**	**13 13 20.9**	**0.0**
WMLT	baz=272			S			**Sg**	**13 13 40.1**	**+0.4**
PCYT	**Pengchaiyu** baz=11	**1.47**	**12**	*i* P			**Pb**	**13 13 20.1**	**-0.1**
PCYT	baz=11			S			**Sg**	**13 13 41.3**	**+0.8**
TWK	**Hsinying** baz=234	**1.47**	**232**	*i* P			**Pb**	**13 13 20.5**	**+0.2**
TWK	baz=234			*i* S			**Sg**	**13 13 41.0**	**+0.4**
TWG	**Pinlang**	**1.49**	**205**	Pn			**Pn**	**13 13 17.4**	**-2.1**
TWG	**Pinlang** baz=208	**1.49**	**205**	⇑*i*P			**Pn**	**13 13 17.5**	**-2.0**
TWG	baz=208			S			**Sb**	**13 13 39.3**	**-0.1**

TWGBT Beinan 1.49 204 P **Pb** 13 13 21.1 +0.5
TWGBT Beinan 1.49 204 P **Pn** 13 13 17.5 -2.0
baz=208
TWGBT eS **Sn** 13 13 37.3 -1.5
baz=208
SNST Tainan City 1.49 230 ⇑P **Pb** 13 13 21.2 +0.5
baz=233
SNST S **Sg** 13 13 41.3 0.0
baz=233
CHN1 Nanshi 1.50 228 *i* P **Pb** 13 13 20.9 +0.2
baz=231
CHN1 *i* S **Sg** 13 13 42.4 +1.0
baz=231
WSF Szhu 1.50 249 *i* P **Pb** 13 13 20.9 +0.2
baz=238
WSF *i* S **Sg** 13 13 41.5 +0.1
baz=238
LDUT Ludao 1.53 190 *e*P **Pn** 13 13 18.1 -1.9
baz=181
LDUT eS **Sn** 13 13 37.9 -1.7
baz=181
TTN Taitung 1.53 201 *i* P **Pn** 13 13 20.1 +0.1
baz=205
TTN eS **Sb** 13 13 40.2 -0.1
baz=205
SGST Jiashian 1.53 224 *i* P **Pn** 13 13 20.2 +0.2
baz=227
SGST *i* S **Sg** 13 13 42.0 -0.5
baz=227
WSL Shuilin Townsh 1.54 245 P **Pb** 13 13 21.8 +0.4
baz=246
WSL S **Sg** 13 13 43.2 +0.5
baz=246
SLGT Liugui 1.56 221 P **Pb** 13 13 21.3 -0.5
baz=225
SLGT S **Sg** 13 13 42.9 -0.5
baz=225
ICHU Yijhu 1.57 239 P **Pb** 13 13 22.4 +0.4
baz=242
ICHU S **Sg** 13 13 44.1 +0.2
baz=242
CHN8 Yiju 1.64 240 *i* P **Pb** 13 13 23.0 -0.1
baz=228
CHN8 *i* S **Sg** 13 13 45.4 -0.4
baz=228
CHN3 Shinhua 1.68 229 *i* P **Pb** 13 13 24.1 +0.3
baz=234
CHN3 *i* S **Sg** 13 13 46.9 -0.4
baz=234
SSHA Shanhua 1.70 232 P **Pb** 13 13 24.2 +0.2
baz=236
SSHA S **Sg** 13 13 47.3 -0.5
baz=236
SHHT Tainan City 1.73 228 P **Pb** 13 13 25.2 +0.6
baz=235
SCST Cishan 1.73 222 P **Pb** 13 13 24.6 0.0
baz=227
SCST *i* S **Sb** 13 13 47.5 +1.3
baz=227
ECL Taimali 1.74 205 P **Pn** 13 13 22.8 -0.1
baz=195
ECL eS **Sn** 13 13 44.0 -0.8
baz=195
SCLT Jiali 1.74 235 *i* P **Pb** 13 13 24.2 -0.7
baz=238
SCLT S **Sb** 13 13 47.7 +1.1
baz=238
TSMG Majia 1.79 215 P **Pn** 13 13 24.4 +0.9
baz=220
TSMG S **Sb** 13 13 48.5 +0.7
baz=220
TAI1 Yung-k'ang 1.80 231 *i* P **Pb** 13 13 25.7 -0.1
baz=236
TAI1 S **Sb** 13 13 48.9 +0.7
baz=236
IRIF Iriomote-Funau 1.82 85 P **Pn** 13 13 24.1 +0.1
IRIF S **Sb** 13 13 48.4 -0.4
IRIF Iriomote-Funau 1.82 85 A A 13 13 24.1
comp=E,44nm,4.2s,comp=N,112nm,2.7s
TWM1 Shoushan 1.82 222 *i* P **Pb** 13 13 26.4 +0.1
baz=226
TWM1 S **Sg** 13 13 52.2 +0.5
baz=226
TSCK Chigu Township 1.84 236 P **Pb** 13 13 25.8 -0.7
baz=241
TSCK S **Sb** 13 13 49.7 +0.3
baz=241
TAI Tainan 1.85 230 *e*P **Pg** 13 13 28.5 -0.1
baz=236
TAI eS **Sb** 13 13 50.9 +1.2
baz=236
SGLT Jiouru 1.85 219 *i* P **Pb** 13 13 26.9 +0.1
baz=225
SGLT S **Sg** 13 13 52.8 -0.1
baz=225
MASBT Mashibuluo 1.87 213 *e*P **Pn** 13 13 25.0 +0.3
baz=219
MASBT S **Sb** 13 13 50.7 +0.4
baz=219
HATJ Hateruma jima 1.89 93 P **Pb** 13 13 26.4 -1.0
HATJ S **Sb** 13 13 50.9 +0.1
HATJ Hateruma jima 1.89 93 A A 13 13 26.4
comp=E,102nm,2.6s,comp=N,100nm,2.5s
TSPT Pingtung City 1.89 218 P **Pb** 13 13 27.4 +0.1
baz=226
SNJT Kaohsiung City 1.93 223 *e*P **Pb** 13 13 27.8 -0.2
baz=229
SNJT eS **Sg** 13 13 54.8 -0.4
baz=229
EAST Anshuo 1.98 205 *e*P **Pn** 13 13 25.0 -1.2
baz=199
TAW Tawu 1.98 203 *i* P **Pn** 13 13 26.6 +0.4
baz=195
TAW eS **Sn** 13 13 49.9 -0.9
baz=195
TAWH Dawu Township 2.00 203 *e*P **Pn** 13 13 27.4 +1.0
baz=196
TAWH eS **Sn** 13 13 50.8 -0.5
baz=196
WSSB Gushan 2.05 222 P **Pb** 13 13 28.8 -1.4
baz=230
JKRS Kuro-shima 2.07 88 P **Pn** 13 13 28.3 +0.9
JKRS S **Sb** 13 13 54.7 -1.3
JKRS Kuro-shima 2.07 88 A A 13 13 28.3
comp=E,117nm,3.6s,comp=N,111nm,2.7s
SCZT Fangliau 2.08 210 *i* P **Pb** 13 13 29.6 -1.0
baz=215
SCZT S **Sb** 13 13 57.2 +0.9
baz=215
KAU Kaohsiung 2.08 220 *i* P **Pb** 13 13 29.9 -0.8
baz=228
PNG Penghu 2.10 253 *i* P **Pb** 13 13 29.5 -1.4
baz=255
PNG *i* S **Sb** 13 13 56.0 -0.8
baz=255
PHUB P'eng-hu 2.10 252 P **Pn** 13 13 29.0 +1.2
baz=254
PHUB S **Sb** 13 13 55.7 -1.2
baz=254
WDGT Dungji 2.12 245 *i* P **Pn** 13 13 29.4 +1.3
baz=234
WDGT *i* S **Sb** 13 13 56.4 -1.1
baz=234
LAY Lan-yu 2.14 185 *i* P **Pn** 13 13 26.5 -2.0
baz=179
LAY eS **Sn** 13 13 53.2 -1.7
baz=179
SLIU Shizi 2.15 204 P **Pn** 13 13 29.0 +0.5
baz=200
LYUB Lan-yu 2.18 184 P **Pn** 13 13 26.1 -2.8
baz=190
LYUB eS **Sn** 13 13 54.0 -1.7
baz=190
JIJ Ishigaki jima 2.20 85 P **Pn** 13 13 29.3 +0.1
JIJ eS **Sn** 13 13 56.7 +0.6
JIJ Ishigaki jima 2.20 85 A A 13 13 29.3
comp=E,17nm,2.5s,comp=N,37nm,6.5s
TWP Hsiaoliuchiu 2.23 215 *i* P **Pb** 13 13 31.9 -1.2
baz=240
VWUC VWUC 2.24 291 P **Pn** 13 13 29.9 +0.1
baz=291
VWUC S **Sn** 13 13 57.5 +0.3
baz=291
SMST Manzhou Townsh 2.31 201 P **Pn** 13 13 30.6 -0.2
baz=196
SMST eS **Sn** 13 13 59.4 +0.5
baz=196
VCHM Qimei 2.33 246 P **Pn** 13 13 32.5 +1.4
baz=235
VCHM S **Sn** 13 14 01.3 +1.7
baz=235
HEN Hengchun 2.36 203 *e*P **Pb** 13 13 33.7 -1.7
baz=194
HEN S **Sb** 13 14 04.0 -0.3
baz=194
JISG Ishigakijimahi 2.37 80 P **Pn** 13 13 32.0 +0.4
JISG Ishigakijimahi 2.37 80 A A 13 13 32.0
comp=E,14nm,3.0s,comp=N,29nm,3.4s
TWK1 Hengchun 2.39 201 *i* P **Pn** 13 13 32.1 +0.2
baz=197
TWK1 S **Sb** 13 14 03.8 -1.6
baz=197
TWKBT Hengchun 2.39 201 P **Pn** 13 13 32.0 +0.1
baz=198
TWKBT eS **Sn** 13 14 01.6 +0.6
baz=198
SNW Nanwan 2.40 203 *e*P **Pn** 13 13 33.4 +1.5
baz=200
PTMZ Houxiangcun 2.54 290 P **Pn** 13 13 33.8 0.0
baz=290
PTMZ S **Sn** 13 14 04.5 0.0
baz=290
MATB Ma-tsu 2.55 321 *e*P **Pn** 13 13 33.9 -0.1
baz=318
MATB S **Sn** 13 14 06.1 +1.3
baz=318
JTJ Tarama 2.73 80 *e*P **Pn** 13 13 37.7 +1.1
JTJ Tarama 2.73 80 A A 13 13 37.7
comp=E,39nm,2.2s,comp=N,38nm,2.2s
LYJJ Jianjiangzhen 2.96 323 *e*P **Pn** 13 13 39.9 +0.2
baz=322
QZH Quanzhou 2.97 285 ⇑*i*Pn **Pn** 13 13 39.7 -0.1
QZH Sn **Sn** 13 14 14.9 -0.3
QZH smax smax
comp=N,4μm,1.0s
QZH smax smax
comp=N,2μm,0.8s
QZH LR LR
comp=N,25μm,9.8s
KNM Kinmen 3.03 275 P **Pn** 13 13 42.6 +2.0
baz=274
XPSS Dashiqiu 3.07 333 *e*P **Pn** 13 13 40.6 -0.6
baz=333
KNMB Chin-men Tao 3.07 276 **Pn** 13 13 40.5 -0.7
KNMB Chin-men Tao 3.07 276 *e*P **Pn** 13 13 41.0 -0.3
baz=276
MHZQ Yeshan 3.11 308 *e*P **Pn** 13 13 41.2 -0.6
baz=308
JIRB Irabujima 3.19 78 *e*P **Pn** 13 13 45.1 +2.3
JIRB *e*S **Sn** 13 14 23.5 +2.9
JIRB Irabujima 3.19 78 A A 13 13 45.1
comp=E,26nm,2.6s,comp=N,37nm,4.2s
JIKM Ikemajima 3.27 76 A A 13 13 46.2
comp=E,29nm,3.2s,comp=N,35nm,5.2s
JMJ2 Miyako jima3 3.31 80 P **Pn** 13 13 46.1 +1.6
JMJ2 eS **Sn** 13 14 26.7 +3.1
JMJ2 Miyako jima3 3.31 80 A A 13 13 46.1
comp=E,53nm,4.2s,comp=N,49nm,4.1s
JOGS Gusukube 3.38 80 A A 13 13 47.8
comp=E,42nm,6.4s,comp=N,52nm,4.3s
AXDP Jialang 3.51 282 P **Pn** 13 13 47.7 +0.4
baz=282
AXDP S **Sn** 13 14 29.6 +1.0
baz=282
ZPLA Ao Xicun 3.66 267 P **Pn** 13 13 49.7 +0.4
baz=266
ZPLA S **Sn** 13 14 32.8 +0.5
baz=266
DSXP Dongshan 3.98 264 *e*P **Pn** 13 13 55.4 +1.7
baz=264
SXFK Yanhouchang 4.32 302 *e*P **Pn** 13 13 58.8 +0.4
baz=301
JKE Kume jima 2 5.04 64 A A 13 14 11.2
comp=E,3.0nm,3.7s,comp=N,3.0nm,6.4s
JAGN Aguni-jima 5.52 63 A A 13 14 17.9
comp=E,6.0nm,3.9s,comp=N,6.0nm,3.4s
JJT3 Tamagusuku3 5.81 69 A A 13 14 21.9
comp=E,13nm,5.0s,comp=N,15nm,4.4s
JOW Kunigami 6.46 65 Pn **Pn** 13 14 27.4 -0.4
JOW Kunigami 6.46 65 Pn **Pn** 13 14 27.0 -0.8
comp=N,9.2nm,0.3s,baz=136,slow=19,SNR=11
JOW Sn **Sn** 13 15 42.0 +0.6
baz=106,slow=29
SZP Santa 6.71 191 P **Pn** 13 14 33.9 +2.6
SSE Sheshan 6.90 356 Pn **Pn** 13 14 34.3 +0.5
SSE Sn **Sn** 13 15 56.4 +4.3
HKPS Hong Kong Po S 7.25 256 Pn **Pn** 13 14 37.0 -1.6
HKPS Hong Kong Po S 7.25 256 P **Pn** 13 14 40.8 +2.2
GZH Guangzhou 7.78 264 Pn **Pn** 13 14 41.5 -4.4
GZH Sn **Sn** 13 16 08.8 -5.0
GZH smax smax
comp=N,700nm,0.9s
GZH smax smax
comp=N,670nm,1.1s
NJ2 Nanjing 8.24 343 ⇓*i*P **Pn** 13 14 53.5 +1.3
NJ2 S **Sn** 13 16 30.3 +5.2
NJ2 pmax pmax
comp=N,52nm,0.7s
NJ2 smax smax
comp=N,450nm,0.9s
NJ2 smax smax
comp=N,400nm,1.0s
NJ2 LR LR
comp=N,5μm,5.4s
NJ2 LR LR
comp=N,5μm,4.7s
NJ2 LR LR
comp=N,12μm,10.9s
CNSH ChangSha 8.86 299 ⇓P **Pn** 13 14 59.9 -0.8
CNSH smax smax
comp=N,2μm,1.2s
CNSH smax smax
comp=N,1μm,0.9s
WHN Wuhan 9.12 316 ⇑P **Pn** 13 15 03.9 -0.5
WHN S **Sn** 13 16 44.1 -2.8
WHN pmax pmax
comp=N,60nm,0.6s
WHN LR LR
comp=N,37μm,10.2s
WHN LR LR
comp=N,24μm,9.1s
WHN LR LR
comp=N,46μm,9.7s
TGY Tagaytay City 10.06 184 Pn **Pn** 13 15 21.1 +3.8
comp=N,24nm,0.3s,baz=162,slow=14,SNR=1.9
TGY LR LR 13 19 26.5
comp=N,1μm,22.0s,baz=312,slow=39
JNU Nakatsue 11.98 40 P **Pn** 13 15 47.2 +3.7
JNU Nakatsue 11.98 40 Pn **Pn** 13 15 44.7 +1.2
comp=N,0.1nm,0.3s,baz=215,slow=23,SNR=2.2
JNU LR LR 13 21 18.1
comp=N,2μm,18.3s,baz=220,slow=43
QIZ Qiongzhong 12.20 247 P **Pn** 13 15 47.9 +1.4
QIZ S **Sn** 13 18 02.4 0.0
QIZ SS **SnSn** 13 18 21.0 +6.5
QIZ LR LR
comp=N,4μm,18.0s
QIZ LR LR
comp=N,2μm,18.2s
QIZ LR LR
comp=N,2μm,19.6s
ENH Enshi 12.47 302 P **Pn** 13 15 50.3 0.0
TIA Tai'an 12.63 343 P P 13 15 58.7 -5.1
TIA S Sn 13 18 29.3 +16
TIA pmax pmax
comp=Z,7.0nm,0.9s
TIA pmax pmax
comp=Z,230nm,10.2s
TIA LR LR
comp=N,3μm,11.8s
TIA LR LR
comp=E,2μm,10.4s
TIA LR LR
comp=Z,5μm,11.2s
LYN LuoYang 13.11 324 ⇑P **P** 13 16 06.8 -2.3
LYN PP PnPn 13 16 17.7 +11
LYN sS S 13 18 44.9 -4.7
LYN SS SnSn 13 18 56.6 +20
LYN pmax pmax
comp=Z,28nm,0.5s
LYN pmax pmax
comp=Z,440nm,3.9s
LYN LR LR
comp=N,23μm,8.9s
LYN LR LR
comp=E,8μm,8.7s
LYN LR LR
comp=Z,23μm,9.6s
GYA Guiyang 13.83 283 ⇓*i*P **Pn** 13 16 09.7 +0.9
GYA S **Sn** 13 18 43.8 +1.5
GYA pmax pmax
comp=Z,16nm,0.9s
GYA pmax pmax
comp=Z,120nm,3.7s
GYA LR LR
comp=Z,4μm,8.3s
GYA LR LR
comp=Z,3μm,5.9s
GYA LR LR
comp=Z,3μm,7.3s
INCN Inchon 13.90 16 P **Pn** 13 16 12.8 +3.1
KSAR Wonju Array Be 14.22 20 Pn **Pn** 13 16 13.7 -0.4
KSAR Wonju Array Be 14.22 20 P **Pn** 13 16 13.7 -0.4
KSRS Korea Array 14.24 20 Pn **Pn** 13 16 15.7 +1.3
comp=Z,0.5nm,0.3s,baz=201,slow=13,SNR=7.5
KSRS LR LR 13 22 28.0
comp=Z,2μm,18.9s,baz=205,slow=41
KS19 Wonju Array Si 14.27 20 **Pn** 13 16 15.2 +0.4
HNS HongShan 14.48 337 ⇑P **P** 13 16 22.4 -1.9
HNS pmax pmax
comp=Z,30nm,1.8s
HNS pmax pmax
comp=Z,850nm,5.9s
HNS LR LR
comp=Z,6μm,12.7s
HNS LR LR
comp=Z,4μm,11.8s
HNS LR LR
comp=Z,7μm,12.3s
DL2 Dalian 14.68 360 P **P** 13 16 24.4 -2.1
DL2 pmax pmax
comp=Z,51nm,0.8s
DL2 pmax pmax
comp=Z,630nm,5.9s
DL2 LR LR
comp=Z,5μm,14.8s
DL2 LR LR
comp=Z,7μm,13.7s
XAN Xi'an 14.89 314 ⇑P **Pn** 13 16 24.7 +1.5
XAN pP P 13 16 30.2 +1.3
XAN S **Sn** 13 19 16.1 +8.1
XAN pmax pmax
comp=Z,23nm,1.1s
XAN pmax pmax
comp=Z,410nm,6.7s
XAN LR LR
comp=Z,5μm,7.1s
XAN LR LR
comp=Z,10μm,10.3s
XAN LR LR
comp=Z,14μm,10.3s
BJT Baijiatuau 16.47 345 **Pn** 13 16 44.1 +0.4
BJT Baijiatuau 16.47 345 P **Pn** 13 16 44.1 +0.4
BJT pmax pmax
comp=Z,49nm,1.5s
BJI Beijing 16.49 345 P **P** 13 16 46.6 0.0
BJI pmax pmax
comp=Z,12nm,1.4s
BJI pmax pmax
comp=Z,380nm,10.1s
CD2 Chengdu 17.29 297 P **P** 13 16 56.4 +0.8
CD2 pP pP 13 17 01.0 +1.0
CD2 S **Sn** 13 20 10.5 +4.1
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 LR LR
comp=Z,7μm,7.2s
CD2 LR LR
comp=Z,5μm,8.4s
CD2 LR LR
comp=Z,6μm,6.1s
KMI Kunming 17.30 277 ⇓P **P** 13 16 57.0 +1.0
KMI S **Sn** 13 20 07.5 +0.4
KMI pmax pmax
comp=Z,17nm,1.4s
KMI LR LR
comp=Z,2μm,6.3s
KMI LR LR
comp=Z,7μm,9.1s
KMI LR LR
comp=Z,8μm,9.9s
DAV Davao City (W) 17.41 167 LR LR 13 23 42.4
comp=Z,995nm,19.1s,baz=346,slow=37
SNY Shenyang 17.66 5 ⇓P **P** 13 17 01.9 +2.4
SNY pmax pmax
comp=Z,24nm,1.7s
SNY pmax pmax
comp=Z,1μm,7.2s
SNY LR LR
comp=Z,2μm,9.9s
SNY LR LR
comp=Z,8μm,12.8s
JHJ Hachijo jima 2 18.14 57 LR LR 13 24 07.1
comp=Z,790nm,19.4s,baz=312,slow=38
PZH PanZhiHua 18.23 281 P **P** 13 17 08.7 +2.6
PZH S **Sn** 13 20 27.8 -1.5
PZH sS **sS** 13 20 41.1 -0.1
PZH SS **SnSn** 13 20 55.8 +13
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,300nm,4.6s
PZH LR LR
comp=Z,5μm,18.6s
PZH LR LR
comp=Z,4μm,12.6s
PZH LR LR
comp=Z,4μm,13.3s
JCJ Chichijima 18.66 77 LR LR 13 23 36.3
comp=Z,777nm,19.1s,baz=256,slow=35
HHC Hu-ho-hao-te 18.68 335 ⇑P **Pn** 13 17 12.3 +1.0
HHC sP sP 13 17 19.8 +2.7
HHC S **S** 13 20 42.2 -1.2
HHC sS sS 13 20 47.8 -2.4
HHC SS **SnSn** 13 21 05.7 +12
HHC pmax pmax
comp=Z,17nm,1.5s
HHC pmax pmax
comp=Z,1μm,5.3s
HHC LR LR
comp=Z,3μm,11.2s
HHC LR LR
comp=Z,790nm,11.2s
HHC LR LR
comp=Z,3μm,11.7s
MJAR Matsushiro Arr 18.77 45 P **P** 13 17 11.0 -0.8
comp=Z,0.1nm,0.3s,baz=233,slow=9.0,SNR=4.8
MJAR LR LR 13 25 56.5
comp=Z,1μm,18.8s,baz=231,slow=42
comp=Z,3.2nm,0.9s
BTO Baotou 19.10 332 *e*P **Pn** 13 17 20.3 +3.9
BTO pP **sP** 13 17 23.3 +1.6
BTO sP **pP** 13 17 25.5 +5.7
BTO PP **PnPn** 13 17 39.2 +10
BTO pmax pmax
comp=Z,28nm,1.4s
BTO pmax pmax
comp=Z,3μm,5.2s
BTO LR LR
comp=Z,12μm,11.7s
BTO LR LR
comp=Z,3μm,10.5s
BTO LR LR
comp=Z,17μm,10.3s
MYLDM Lahad Datu 19.15 190 **P** 13 17 15.7 -0.5
LZH Lanzhou 19.47 312 *e*P **Pn** 13 17 21.8 +0.9
LZH sP sP 13 17 34.1 +8.8
LZH sS sS 13 21 03.5 -2.7
LZH pmax pmax
comp=Z,13nm,1.4s
LZH pmax pmax
comp=Z,1μm,4.8s
LZH LR LR
comp=Z,3μm,12.0s
LZH LR LR
comp=Z,5μm,12.7s
LZH LR LR
comp=Z,7μm,13.1s
CN2 Changchun 19.80 8 *e*P **P** 13 17 23.2 +0.2
CN2 eS **S** 13 21 00.2 -5.5
CN2 pmax pmax

comp=Z,30nm,1.6s
CN2 LR LR
comp=Z,4µm,12.0s
CN2 LR LR
comp=Z,1µm,12.0s
CN2 LR LR
comp=Z,3µm,12.0s
MSHR Mys Shultsa 19.93 21⇑ *e*P **P 13 17 22.8 -1.7**
MSHR pmax pmax
comp=Z,94nm,1.2s
CRAI Chiangrai 20.17 263 P 13 17 26.6 -0.7
XLT XiLinHaoTe 20.21 348 *e*P Pn 13 17 30.0 +0.5
XLT pP sP 13 17 33.9 0.0
XLT sP pP 13 17 37.6 +5.7
XLT PP **PnPn 13 17 46.9 +2.7**
XLT S Sn 13 21 17.3 +0.5
XLT pmax pmax
comp=Z,31nm,1.5s
XLT pmax pmax
comp=Z,590nm,4.4s
XLT LR LR
comp=Z,270nm,13.7s
XLT LR LR
comp=Z,2µm,12.4s
XLT LR LR
comp=Z,3µm,16.6s
TNCH TengChong 21.13 277 P P 13 17 38.4 +0.5
TNCH PP **PnPn 13 18 03.4 +6.3**
TNCH S **S 13 21 33.9 +1.1**
TNCH sS pS 13 21 43.4 +0.6
TNCH SS **SnSn 13 21 59.1 +4.7**
TNCH pmax pmax
comp=Z,32nm,1.2s
TNCH pmax pmax
comp=Z,480nm,3.5s
TNCH LR LR
comp=Z,5µm,8.9s
TNCH LR LR
comp=Z,2µm,12.0s
TNCH LR LR
comp=Z,2µm,13.0s
MDJ Mudanjiang 21.36 16 P P 13 17 39.4 -0.6
MDJ pP pP 13 17 43.4 -0.3
MDJ pmax pmax
comp=Z,20nm,1.8s
MDJ pmax pmax
comp=Z,550nm,4.8s
MDJ LR LR
comp=Z,4µm,15.1s
MDJ LR LR
comp=Z,6µm,14.8s
MDJ LR LR
comp=Z,6µm,14.4s
MDJ Mudanjiang 21.36 16 P P 13 17 39.3 -0.7
MDJ Mudanjiang 21.36 16 P P 13 17 41.9 +1.9
NAYO Nakonayok 21.61 247 P P 13 17 44.8 +1.9
USA0B Ussuriysk Arra 21.65 20⇑ *e*P **P 13 17 44.9 +1.8**
USRK Ussuriysk Ar. 21.65 20 P P 13 17 41.5 -1.6
comp=Z,17nm,1.0s,baz=208,slow=32,SNR=1.9
USRK LR LR 13 26 58.3
comp=Z,1µm,18.1s,baz=193,slow=39
comp=Z,17nm,1.0s
CM31 Chiang Mai Arr 21.98 259 P P 13 17 46.0 -0.8
CMAR Chiang Mai Arr 21.98 259 P P 13 17 46.2 -0.6
CMAR Chiang Mai Arr 21.98 259 *i* P **P 13 17 49.0 +2.2**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 21.98 259 P P 13 17 48.7 +1.9
comp=Z,3.4nm,0.9s,baz=59,slow=8.6,SNR=19
CMAR PcP **PcP 13 21 45.2 -0.1**
comp=Z,1.7nm,0.8s,baz=48,slow=0.6,SNR=5.9
CMAR LR LR 13 26 51.3
comp=Z,493nm,21.0s,baz=75,slow=38
comp=Z,3.4nm,0.9s
BNX BinXian 21.99 11 ⇓P P 13 17 46.0 -0.6
BNX pmax pmax
comp=Z,23nm,1.6s
BNX pmax pmax
comp=Z,710nm,4.9s
TOLI2 Tolitoli 22.96 182 P P 13 17 54.9 -2.3
TOLI2 lAmb lAmb 13 18 01.5
comp=Z,112nm,1.5s
TOLI2 Tolitoli 22.96 182 P P 13 17 58.7 +1.5
SBUM Sibu 23.49 205 P P 13 18 01.0 -1.6
MRSI Marisa 23.57 180 P P 13 18 07.1 +3.8
comp=Z,57nm,1.4s,comp=Z,803nm
MND Mandalay 23.66 270 P P 13 18 06.5 +2.2
MPSI Mapaga 23.77 185 P P 13 18 08.5 +3.2
comp=Z,43nm,1.4s,comp=Z,761nm
GTA Gaotai 23.95 315 ⇑P P 13 18 07.2 +0.2
GTA sP sP 13 18 15.8 +2.7
GTA ScP **ScP 13 25 28.5 +1.2**
GTA pmax pmax
comp=Z,14nm,1.3s
GTA pmax pmax
comp=Z,530nm,6.8s
GTA LR LR
comp=Z,2µm,9.2s
GTA LR LR
comp=Z,3µm,11.2s
GTA LR LR
comp=Z,4µm,12.0s
GUMO Guam 24.25 112 LR LR 13 25 49.4
comp=Z,650nm,21.9s,baz=296,slow=32
HIA Hailar 25.08 357 P P 13 18 16.7 -0.4
HIA Hailar 25.08 357 P P 13 18 18.8 +1.7
HIA Hailar 25.08 357 P P 13 18 16.7 -0.4
HIA pmax pmax
comp=Z,52nm,1.2s
LUWI Luwuk 25.10 178 P P 13 18 15.9 -1.6
LUWI Luwuk 25.10 178 P P 13 18 19.6 +2.1
LUWI Luwuk 25.10 178 P P 13 18 18.8 +1.3
comp=Z,153nm,1.3s,comp=Z,2µm
KSM Kuching 25.15 208 P P 13 18 17.3 -0.6
KSM lAmb lAmb 13 18 22.8
comp=Z,129nm,1.1s
KSM Kuching 25.15 208 P P 13 18 18.8 +0.9
BKB Balikpapan 25.73 191 P P 13 18 20.7 -2.5
BKB Balikpapan 25.73 191 P P 13 18 24.3 +1.1
MTKI Muara Teweh, K 25.85 196 P P 13 18 24.7 +0.4
comp=Z,61nm,1.3s,comp=Z,26µm
STKI Sintang 25.96 204 P P 13 18 28.2 +2.8
comp=Z,67nm,1.3s,comp=Z,10µm
GOMU GeErMu 26.09 304 P P 13 18 27.4 +0.6
GOMU S **S 13 23 03.8 +5.8**
GOMU pmax pmax
comp=Z,12nm,1.2s
GOMU LR LR
comp=Z,4µm,16.4s
GOMU LR LR
comp=Z,1µm,15.6s
GOMU LR LR
comp=Z,2µm,19.6s
ASAJ Asahikawa 26.19 36 P P 13 18 24.8 -2.5
comp=Z,5.6nm,0.7s,baz=216,slow=6.5,SNR=5.8
ASAJ LR LR 13 29 42.8
comp=Z,2µm,18.4s,baz=272,slow=39
comp=Z,5.6nm,0.7s
KLR Kul'dur 26.20 15⇓ *e*P **P 13 18 27.0 -0.3**
KLR pmax pmax
comp=Z,37nm,1.7s
KLR Kul'dur 26.20 15 P P 13 18 26.4 -0.9
comp=Z,12nm,0.9s,baz=227,slow=7.6,SNR=19
KLR PcP **PcP 13 21 54.0 +0.1**
comp=Z,2.3nm,0.7s,baz=286,slow=3.8,SNR=3.9
KLR LR LR 13 29 43.9
comp=Z,1µm,19.4s,baz=198,slow=39
comp=Z,12nm,0.9s
ULN Ulaanbaatar 26.36 337 P P 13 18 28.4 -0.5
ULN lAmb lAmb 13 18 31.5
comp=Z,59nm,1.3s
ULN Ulaanbaatar 26.36 337 *c i*P **P 13 18 29.6 +0.7**
ULN pmax pmax
comp=Z,71nm,1.6s
HEH HeiHe 26.39 8 *e*P **P 13 18 28.5 -0.5**
HEH pP **pP 13 18 31.0 -1.9**
HEH S **S 13 23 02.0 +0.2**
HEH pmax pmax
comp=Z,42nm,1.5s
HEH pmax pmax
comp=Z,790nm,4.3s
HEH LR LR
comp=Z,3µm,13.6s
HEH LR LR
comp=Z,1µm,11.4s
HEH LR LR
comp=Z,5µm,15.1s
SANI Sanana 26.40 170 P P 13 18 31.8 +2.5
SONM Songino Array 26.57 336 P P 13 18 30.4 -0.4
SONM Songino Array 26.57 336 P P 13 18 30.4 -0.4
SONM pmax pmax
comp=Z,60nm,1.4s
SONM Songino Array 26.57 336 P P 13 18 30.6 -0.2
comp=Z,21nm,1.1s,baz=155,slow=7.3,SNR=68
SONM LR LR 13 30 03.7
comp=Z,2µm,18.3s,baz=166,slow=39
comp=Z,21nm,1.1s
TTSI Tana Toraja 27.13 184 P P 13 18 40.2 +4.3
comp=Z,25nm,1.5s
NLAI Namlea 27.75 168 P P 13 18 45.8 +4.3
YSS Yuzh-Sakhalins 28.26 31 *e*P **P 13 18 43.5 -2.2**
YSS *e*S **S 13 23 23.1 -8.1**
YSS pmax pmax
comp=Z,20nm,1.3s
YSS MLR MLR
comp=Z,2µm,13.0s
ZEA Zeya 29.80 7 *e*P **P 13 18 59.3 -0.1**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA MLR MLR
comp=E,400nm,12.0s
ZEA MLR MLR
comp=N,2µm,14.0s
ZEA MLR MLR
comp=Z,2µm,14.0s
ZAK Zakamensk 29.83 336 *e*P **P 13 18 58.8 -1.0**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
PSI Prapat 30.62 230 P P 13 19 09.7 +2.5
MOY Mondy 31.72 335 *e*P **P 13 19 16.8 +0.3**
MOY pmax pmax
comp=Z,39nm,2.2s
LEM Lembang 33.77 206 LR LR 13 32 43.5
comp=Z,203nm,20.8s,baz=22,slow=35
SOEI Soe 33.82 176 P P 13 19 37.0 +1.8
WMQ Urumqi 34.02 314 *e*P **P 13 19 37.4 +0.7**
WMQ pP pP 13 19 41.7 +0.7
WMQ LR LR
comp=Z,1µm,7.5s
WMQ LR LR
comp=Z,3µm,10.1s
WMQ LR LR
comp=Z,560nm,11.5s
BOD Bodaibo 34.06 353 *e*P **P 13 19 35.2 -1.5**
BOD pmax pmax
comp=Z,11nm,2.1s
TABU Tabubil 34.89 145 P P 13 19 46.2 +1.8
DGZ Jazzator, Alta 36.91 322⇑ *e*P **P 13 20 01.5 0.0**
DGZ pmax pmax
comp=Z,9.0nm,1.0s
ZSN Zaisan 37.34 318 *e*P **P 13 20 04.7 -0.4**
baz=318
ZSN Zaisan 37.34 318 *e*P **P 13 20 04.6 -0.4**
KDU Kakadu 38.12 163 P P 13 20 13.7 +1.9
YAK Yakutsk 38.21 6 P P 13 20 10.1 -2.1
YAK Yakutsk 38.21 6 *e*P **P 13 20 09.9 -2.2**
YAK *e* 13 21 37.3
YAK *e* 13 22 24.5
YAK *e*S **S 13 26 03.9 -1.2**
YAK *e*SS **SnSn 13 28 41.9 -7.4**
YAK pmax pmax
comp=Z,41nm,2.0s
YAK pmax pmax
comp=N,23nm,1.5s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,311nm,4.0s
YAK pmax pmax
comp=N,238nm,5.2s
YAK pmax pmax
comp=E,279nm,6.1s
YAK smax smax
comp=E,326nm,5.8s
YAK smax smax
comp=N,222nm,3.2s
YAK MLR MLR
comp=Z,1µm,23.0s
YAK MLR MLR
comp=N,682nm,19.0s
YAK MLR MLR
comp=E,846nm,22.0s
YAK Yakutsk 38.21 6 P P 13 20 10.7 -1.4
comp=E,13nm,0.7s,baz=222,slow=8.4,SNR=10
YAK PcP **PcP 13 22 25.3 -1.0**
comp=E,4.5nm,0.6s,baz=342,slow=1.8,SNR=1.3
comp=E,13nm,0.7s
MK31 Makanchi Array 38.69 316 P P 13 20 14.9 -1.6
MK31 Makanchi Array 38.69 316 *c i*P **P 13 20 16.6 +0.1**
MKAR Makanchi Array 38.69 316 P P 13 20 15.2 -1.3
MKAR Makanchi Array 38.69 316 *i* P **P 13 20 17.2 +0.7**
MKAR pmax pmax
comp=Z,10.0nm,0.8s
MKAR Makanchi Array 38.69 316 P P 13 20 16.6 +0.1
comp=Z,6.4nm,0.7s,baz=107,slow=9.5,SNR=64
MKAR PcP **PcP 13 22 29.2 +0.9**
comp=Z,1.7nm,0.8s,baz=100,slow=3.5,SNR=2.5
MKAR ScP **ScP 13 26 16.1 +0.1**
comp=Z,0.9nm,0.9s,baz=102,slow=5.2,SNR=3.6
comp=Z,6.4nm,0.7s
MAKZ Makanchi 38.90 316 P P 13 20 17.5 -0.7
MAKZ Makanchi 38.90 316 P P 13 20 17.5 -0.7
MAKZ pmax pmax
comp=Z,27nm,1.1s
SHLS Shalkode 39.46 309 *e*P **P 13 20 20.3 -2.8**
baz=309
SHLS Shalkode 39.46 309 *e*P **P 13 20 20.3 -2.8**
PDGK Podgornoye 39.48 309 P P 13 20 23.3 0.0
PEA0B Petropavlovsk- 39.58 34⇓ *i*P **P 13 20 26.4 +2.6**
PETK Petropavlovsk- 39.58 34 P P 13 20 22.7 -1.1
comp=Z,6.3nm,0.9s,baz=221,slow=11,SNR=1.5
comp=Z,6.3nm,0.9s
UZB Uzynbulak 39.77 309 *e*P **P 13 20 25.8 +0.1**
baz=309
UZB Uzynbulak 39.77 309 *e*P **P 13 20 25.7 +0.1**
KPKS Kokpek 40.09 309 *e*P **P 13 20 28.6 +0.4**
baz=309
KPKS Kokpek 40.09 309 *e*P **P 13 20 28.6 +0.4**
SATY Saty 40.18 309 *e*P **P 13 20 29.4 +0.3**
baz=309
SATY Saty 40.18 309 *e*P **P 13 20 29.4 +0.3**
ZHN Zhinishke 40.19 309 *e*P **P 13 20 28.6 -0.5**
baz=309
ZHN Zhinishke 40.19 309 *e*P **P 13 20 28.6 -0.5**
KNRA Kununurra 40.21 169 P P 13 20 28.6 -0.7
KNRA Kununurra 40.21 169 P P 13 20 32.2 +2.9
ZAA0 Zalesovo Array 40.52 327 P P 13 20 30.0 -1.5
ZALV Zalesovo Beam 40.52 327 P P 13 20 30.0 -1.6
ZALV Zalesovo Beam 40.52 327 *i* P **P 13 20 30.8 -0.8**
ZALV pmax pmax
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 40.52 327 P P 13 20 30.9 -0.6
comp=Z,17nm,0.8s,baz=113,slow=6.8,SNR=28
comp=Z,17nm,0.8s
TDK Taldyqorghan 40.68 312 *e*P **P 13 20 32.8 -0.3**
baz=312
TDK Taldyqorghan 40.68 312 *e*P **P 13 20 32.8 -0.3**
HYB Hyderabad 40.81 269 *e*P **P 13 20 33.9 -0.6**
HYB Hyderabad 40.81 269 *e*PKKPdf PKKPdf 13 44 25.2 -0.9
MDOK Medeo 41.17 309 *e*P **P 13 20 37.1 -0.2**
baz=308
MDOK Medeo 41.17 309 *e*P **P 13 20 37.1 -0.2**
KSH Kashi 41.33 303 P P 13 20 42.4 +3.8
KSH pP sP 13 20 46.3 +1.5
KSH PcP **PcP 13 22 36.5 -0.5**
KSH pmax pmax
comp=Z,11nm,1.3s
KSH LR LR
comp=Z,1µm,11.3s
KSH LR LR
comp=Z,860nm,12.7s
KSH LR LR
comp=Z,1µm,14.1s
CHKK Chushkaly 41.37 310 *e*P **P 13 20 38.8 -0.1**
baz=310
CHKK Chushkaly 41.37 310 *e*P **P 13 20 38.7 -0.1**
PMG Port Moresby 41.60 140 P P 13 20 44.5 +3.6
PMG Port Moresby 41.60 140 P P 13 20 44.4 +3.6
PMG Port Moresby 41.60 140 LR LR 13 37 29.7
comp=Z,170nm,18.2s,baz=304,slow=36
KUU Kurty 41.84 309 *e*P **P 13 20 42.4 -0.2**
baz=309
KUU Kurty 41.84 309 *e*P **P 13 20 42.4 -0.2**
H11N1 WAKE ISLAND Hy 41.98 87 T T 14 06 06.5
baz=282
H11N2 WAKE ISLAND Hy 41.98 87 T T 14 06 04.9
baz=282
H11N3 WAKE ISLAND Hy 41.99 87 T T 14 06 06.0
baz=282
H11S3 WAKE ISLAND Hy 42.11 89 T T 14 05 59.4
baz=284,slow=74,SNR=165
H11S1 WAKE ISLAND Hy 42.12 89 T T 14 06 00.1
baz=284,slow=74,SNR=68
H11S2 WAKE ISLAND Hy 42.12 89 T T 14 06 00.3
baz=284,slow=74,SNR=59
TKM2 Tokmak 2 42.17 308 P P 13 20 46.8 +1.3
KURK Kurchatov 42.42 320 P P 13 20 46.7 -0.5
KURK Kurchatov 42.42 320 *c i*P **P 13 20 46.7 -0.5**
KURK pmax pmax
comp=Z,28nm,1.7s
KURBB Kurchatov Arra 42.44 320 P P 13 20 47.2 -0.1
comp=Z,3.4nm,0.8s,baz=115,slow=7.5,SNR=27
comp=Z,3.4nm,0.8s
AAK Ala-Archa 42.91 307 P P 13 20 51.0 -0.5
AAK Ala-Archa 42.91 307⇓ *e*P **P 13 20 53.1 +1.6**
AAK pmax pmax
comp=Z,9.0nm,1.1s
COEN Coen 43.31 149 P P 13 20 54.6 -0.1
COEN lAmb lAmb 13 21 01.8
comp=Z,61nm,1.0s
COEN Coen 43.31 149 P P 13 20 55.9 +1.2
BTLS Baital 43.69 311 *e*P **P 13 20 57.8 +0.2**
baz=310
BTLS Baital 43.69 311 *e*P **P 13 20 57.8 +0.2**
SEY Seymchan 43.80 20⇑ *e*P **P 13 20 57.6 -0.6**
SEY pmax pmax
comp=Z,11nm,1.1s
SEY Seymchan 43.80 20 P P 13 20 55.9 -2.3
comp=Z,3.3nm,0.9s,baz=226,slow=1.7,SNR=7.0
SEY PcP **PcP 13 22 44.5 0.0**
comp=Z,7.6nm,0.8s,baz=222,slow=5.1,SNR=8.4
comp=Z,3.3nm,0.9s
DZA Taraz 45.25 307 *e*P **P 13 21 10.2 0.0**
baz=307
DZA Taraz 45.25 307 *e*P **P 13 21 10.1 0.0**
WB0 Warramunga Arr 45.39 163 P P 13 21 09.3 -2.1
PSA00 Pilbara Seismi 45.52 182 P P 13 21 09.0 -3.3
PSA00 Pilbara Seismi 45.52 182 lAmb lAmb 13 21 15.1
comp=Z,22nm,0.9s
PSA00 Pilbara Seismi 45.52 182 P P 13 21 13.8 +1.5
WRA Warramunga Arr 45.55 163 P P 13 21 11.5 -1.1
WRA Warramunga Arr 45.55 163 P P 13 21 11.5 -1.1
WRA pmax pmax
comp=Z,2.0nm,1.3s
WRA Warramunga Arr 45.55 163 P P 13 21 11.0 -1.6
comp=Z,11nm,0.9s,baz=345,slow=8.7,SNR=19
comp=Z,11nm,0.9s
WB2 Warramunga Arr 45.55 163 P P 13 21 10.9 -1.7
OTUK Ortayu 45.55 315 P P 13 21 12.2 -0.3
WR0 Warramunga Arr 45.62 163 P P 13 21 11.4 -1.7
BRZS Berezniki 45.78 317 *e*P **P 13 21 13.9 -0.4**
baz=317
BRZS Berezniki 45.78 317 *e*P **P 13 21 13.8 -0.4**
KK31 Karatay Array 45.88 307 P P 13 21 14.5 -0.6
KK31 Karatay Array 45.88 307 P P 13 21 14.5 -0.6
KK31 pmax pmax
comp=Z,14nm,1.5s
KKAR Karatay Array 45.88 307 P P 13 21 14.1 -1.0
KKAR Karatay Array 45.88 307 P P 13 21 13.5 -1.5
KKAR Karatay Array 45.88 307 P P 13 21 14.1 -1.0
KKAR pmax pmax
comp=Z,14nm,1.5s
CHM Chimkent 46.45 306 *e*P **P 13 21 19.3 -0.3**
baz=306
CHM Chimkent 46.45 306 *e*P **P 13 21 19.3 -0.3**
KBL Kabul 46.62 295 P P 13 21 20.6 -0.7
KBL lAmb lAmb 13 21 33.3
comp=Z,41nm,1.2s
KBL Kabul 46.62 295 P P 13 21 20.6 -0.7
KBL pmax pmax
comp=Z,41nm,1.3s
MTSU Mount Surprise 47.48 150 P P 13 21 29.6 +1.8
TIXI Tiksi 47.66 3 P P 13 21 26.6 -2.0
TIXI Tiksi 47.66 3⇑ *e*P **P 13 21 26.9 -1.7**
TIXI pmax pmax
comp=Z,63nm,1.1s
TIXI Tiksi 47.66 3 P P 13 21 26.2 -2.3
comp=Z,34nm,1.0s,baz=184,slow=4.7,SNR=63
comp=Z,34nm,1.0s
QIS Mount Isa 47.75 157 P P 13 21 32.4 +2.5
BVA0 Borovoye Array 48.00 321 *i* P **P 13 21 31.0 -0.5**
BVAR Borovoye Array 48.00 321 P P 13 21 30.9 -0.6
comp=Z,4.4nm,0.6s,baz=106,slow=8.6,SNR=25
comp=Z,4.4nm,0.6s
BRVK Borovoye 48.07 321 P P 13 21 30.8 -1.2
BRVK Borovoye 48.07 321 *c i*P **P 13 21 31.6 -0.4**
BRVK pmax pmax
comp=Z,33nm,2.5s
AS31 Alice Springs 49.01 165 P P 13 21 37.2 -2.4
ASAR Alice Springs 49.01 165 P P 13 21 36.9 -2.7
ASAR Alice Springs 49.01 165 P P 13 21 38.6 -0.9
comp=Z,5.4nm,0.9s,baz=345,slow=7.0,SNR=24
ASAR LR LR 13 43 47.9
comp=Z,127nm,20.7s,baz=6.0,slow=38
comp=Z,5.4nm,0.9s
AS01 Alice Springs 49.02 165 P P 13 21 41.8 +2.2
WRKA Warakurna 49.34 172 P P 13 21 43.7 +1.6
NRIK Noril'sk 49.53 345 P P 13 21 40.6 -2.4
NRIK Noril'sk 49.53 345 *d i*P **P 13 21 42.0 -1.0**
NRIK pmax pmax
comp=Z,30nm,1.3s
NRIK Noril'sk 49.53 345 P P 13 21 41.4 -1.6
comp=Z,9.7nm,0.9s,baz=134,slow=6.8,SNR=17
comp=Z,9.7nm,0.9s
CTA Charters Tower 50.06 149 LR LR 13 40 57.1
comp=Z,476nm,21.8s,baz=329,slow=34
CTAO Charters Tower 50.06 149 P P 13 21 50.1 +2.5
HNR Honiara 50.08 127 LR LR 13 41 12.3
comp=Z,1µm,20.1s,baz=300,slow=34
MEEK Meekatharra 50.62 184 P P 13 21 52.7 +1.0
MORW Morawa 53.23 186 P P 13 22 11.0 -0.1
MORW Morawa 53.23 186 P P 13 22 13.3 +2.2
OOD Oodnadatta 53.40 165 P P 13 22 13.4 +1.0
AB31 Akbulak array 53.81 314 *i* P **P 13 22 15.4 +0.2**
ABKAR Akbulak array 53.81 314 P P 13 22 14.6 -0.6
SVE Sverdlovsk 54.35 324 *e*P **P 13 22 19.4 +0.3**
SVE pmax pmax
comp=Z,33nm,1.5s
INKA Innaminka 54.78 159 P P 13 22 25.1 +2.6
QLP Quilpie 54.95 155 P P 13 22 26.9 +3.2
FORT Forrest 54.99 173 P P 13 22 26.7 +2.8
AKTO Aktyubinsk 55.13 316 P P 13 22 23.0 -1.9
GEYT Alibeck 55.24 300 P P 13 22 26.9 +1.0
comp=Z,6.6nm,0.8s,baz=91,slow=6.2,SNR=11
comp=Z,6.6nm,0.8s
ARU Arti 55.41 323 P P 13 22 25.2 -1.6
ARU lAmb lAmb 13 22 27.5
comp=Z,44nm,1.4s
ARU Arti 55.41 323 *c i*P **P 13 22 26.4 -0.4**
ARU 13 23 26.3
ARU 13 24 28.3
ARU S **S 13 30 12.0 +1.1**
ARU 13 32 17.8
ARU SSS SSS 13 35 59.5
ARU pmax pmax
comp=Z,38nm,1.4s
ARU MLR MLR
comp=Z,6µm,16.0s
MULG Mulgathing 55.43 167 P P 13 22 29.7 +2.6
KLBR Kellerberrin 55.59 184 P P 13 22 29.8 +1.5
LCRK Leigh Creek 56.57 163 P P 13 22 36.9 +1.6
EIDS Eidsvold 56.86 148 P P 13 22 36.0 -1.5
EIDS lAmb lAmb 13 23 52.9
comp=Z,53nm,1.4s
NWAO Narrogin (SRO) 56.96 185 P P 13 22 37.0 -1.0
NWAO lAmb lAmb 13 22 41.7
comp=Z,45nm,1.2s
NWAO Narrogin (SRO) 56.96 185 P P 13 22 39.7 +1.7
NWAO Narrogin (SRO) 56.96 185 P P 13 22 37.0 -1.0
NWAO pmax pmax
comp=Z,45nm,1.2s
SPIA Saint Paul Isl 58.13 36 P P 13 22 46.6 +0.5
baz=266
GAMB Gambell 58.23 29 P P 13 22 46.6 -0.1
baz=260

BBOO	Buckleboo	58.30	166	P		P		13 22 47.2	-0.2		
BBOO	Buckleboo	58.30	166	P		P		13 22 49.4	+1.9		
STKA	Stephens Creek	58.89	160	P		P		13 22 51.6	0.0		
STKA	Stephens Creek	58.89	160	P		P		13 22 53.7	+2.1		
STKA	Stephens Creek	58.89	160	P		P		13 22 51.6	0.0		
STKA				pmax		pmax					
	comp=Z,9.0nm,1.8s										
STKA	Stephens Creek	58.89	160	P		P		13 22 52.3	+0.7		
	comp=Z,5.7nm,0.6s,baz=335,slow=7.2,SNR=16										
	comp=Z,5.7nm,0.6s										
AULRC	Lightning Ridg	58.97	153	P		P		13 22 55.5	+3.3		
CMSA	Cobar Meteorol	59.96	156	P		P		13 23 00.8	+1.8		
TNA	Tin City	60.11	27	P		P		13 22 59.8	+0.2		
	baz=263										
UNV	Unalaska Valle	60.16	40	P		P		13 23 00.0	-0.1		
	baz=271										
M11K	Mekoryuk	60.44	33	P		P		13 23 02.6	+0.7		
	baz=267										
KIRV	Kirov	60.51	325	d	i	P		13 23 01.5	-1.0		
F14K	Arctic Creek	60.76	27	P		P		13 23 04.4	+0.3		
	baz=264										
ANM	Nome	61.08	28	P		P		13 23 04.8	-1.5		
ANM				IAmb		IAmb		13 23 08.3			
	comp=Z,49nm,1.6s										
ANM	Nome	61.08	28	P		P		13 23 06.7	+0.4		
	baz=266,SNR=8.5										
ANM	Nome	61.08	28	P		P		13 23 04.8	-1.5		
ANM				pmax		pmax					
	comp=Z,49nm,1.6s										
C16K	Lisburne Hills	61.44	24	P		P		13 23 09.1	+0.4		
	baz=264										
F15K	North Star Dit	61.48	27	IAmb		IAmb		13 23 10.7			
	comp=Z,27nm,1.2s										
F15K	North Star Dit	61.48	27	P		P		13 23 09.5	+0.5		
	baz=266										
BELG	Belogornoye	61.64	318	⇑	i	P		13 23 09.8	-0.4		
BELG				pmax		pmax					
	comp=Z,6.0nm,1.0s										
G15K	Niukluk	61.68	28	P		P		13 23 11.0	+0.6		
	baz=267										
J14K	Nanvaranak Lak	61.80	30	P		P		13 23 11.8	+0.7		
	baz=268										
M13K	Dall Lake	61.85	33	P		P		13 23 12.5	+1.0		
	baz=270										
FALS	False Pass	61.93	39	P		P		13 23 13.3	+1.1		
	baz=273										
L14K	Kuka Creek	62.18	32	IAmb		IAmb		13 23 19.4			
	comp=Z,37nm,1.1s										
L14K	Kuka Creek	62.18	32	P		P		13 23 14.4	+0.6		
	baz=270,SNR=9.5										
C17K	DeLong Mountai	62.26	24	P		P		13 23 14.6	+0.4		
	baz=266										
RDOG	Red Dog Mine	62.33	24	P		P		13 23 13.8	-0.8		
RDOG	Red Dog Mine	62.33	24	P		P		13 23 15.0	+0.3		
	baz=266										
G16K	Koyuk River	62.41	27	P		P		13 23 16.0	+0.8		
	baz=268										
H16K	Elim	62.44	28	P		P		13 23 16.1	+0.7		
	baz=268,SNR=8.7										
M14K	Bethel	62.54	33	P		P		13 23 16.7	+0.6		
	baz=271										
E17K	Hotham Inlet	62.69	25	P		P		13 23 17.2	+0.2		
	baz=268,SNR=16										
N14K	Kuskokwak Cree	62.69	33	P		P		13 23 17.3	+0.2		
	baz=271										
K15K	Wolf Creek Mou	62.73	31	IAmb		IAmb		13 23 19.4			
	comp=Z,26nm,1.2s										
K15K	Wolf Creek Mou	62.73	31	P		P		13 23 17.9	+0.5		
	baz=270										
L15K	Ungalak Mounta	62.76	31	P		P		13 23 16.8	-0.8		
	baz=271										
B18K	Kokolik River	62.82	23	P		P		13 23 18.1	+0.2		
	baz=266										
F17K	Baldwin Pennin	62.90	26	IAmb		IAmb		13 23 24.7			
	comp=Z,60nm,1.8s										
F17K	Baldwin Pennin	62.90	26	P		P		13 23 18.3	-0.1		
	baz=268										
O14K	Tigyukauivet M	62.93	34	P		P		13 23 18.2	-0.5		
	baz=272										
C18K	Utukok River	63.00	24	IAmb		IAmb		13 23 21.8			
	comp=Z,18nm,1.1s										
C18K	Utukok River	63.00	24	P		P		13 23 19.3	0.0		
	baz=267										
I17K	Unalakleet	63.10	29	IAmb		IAmb		13 23 21.9			
	comp=Z,24nm,1.2s										
I17K	Unalakleet	63.10	29	P		P		13 23 20.4	+0.5		
	baz=270,SNR=8.5										
G17K	Kiwalik Mounta	63.12	27	P		P		13 23 20.1	0.0		
	baz=270										
J16K	Anvik River	63.15	30	P		P		13 23 20.5	+0.3		
	baz=271										
M15K	Kasigluk River	63.16	33	P		P		13 23 20.0	-0.3		
	baz=272										
E18K	Tukpahlearik C	63.18	25	IAmb		IAmb		13 23 22.1			
	comp=Z,48nm,1.9s										
E18K	Tukpahlearik C	63.18	25	P		P		13 23 20.4	+0.1		
	baz=268										
DZM	Mont Dzumac	63.26	133	P		P		13 23 21.7	+0.1		
H17K	Granite Mounta	63.44	28	IAmb		IAmb		13 23 24.0			
	comp=Z,19nm,1.1s										
H17K	Granite Mounta	63.44	28	P		P		13 23 22.6	+0.5		
	baz=270										
F18K	Selawik	63.54	26	P		P		13 23 22.9	+0.2		
	baz=270,SNR=18										
C19K	Lookout Ridge	63.60	23	P		P		13 23 23.6	+0.5		
	baz=269										
O15K	Ungalikthiuk R	63.67	34	P		P		13 23 23.5	-0.2		
	baz=273										
L16K	Owhat River	63.71	31	P		P		13 23 23.7	-0.2		
	baz=272										
G18K	Tagagawik	63.95	27	IAmb		IAmb		13 23 26.9			
	comp=Z,31nm,1.4s										
G18K	Tagagawik	63.95	27	P		P		13 23 25.0	-0.4		
	baz=271										
M16K	Timber Creek	64.00	32	IAmb		IAmb		13 23 27.4			
	comp=Z,41nm,1.4s										
M16K	Timber Creek	64.00	32	P		P		13 23 25.9	+0.1		
	baz=273										
H18K	Honhosa River	64.09	28	IAmb		IAmb		13 23 27.3			
	comp=Z,50nm,1.7s										
H18K	Honhosa River	64.09	28	P		P		13 23 26.4	0.0		
	baz=272										
N16K	Nishlik Lake	64.12	33	P		P		13 23 26.7	-0.1		
	baz=274										
D19K	Kuna River	64.13	24	P		P		13 23 26.6	0.0		
	baz=270										
K17K	Iditarod	64.22	30	IAmb		IAmb		13 23 29.4			
	comp=Z,35nm,1.2s										
K17K	Iditarod	64.22	30	P		P		13 23 27.6	+0.3		
	baz=273										
L17K	Donlin	64.25	31	P		P		13 23 28.0	+0.6		
	baz=273										
F19K	Shaleruckik Mo	64.28	26	IAmb		IAmb		13 23 28.1			
	comp=Z,23nm,1.4s										
F19K	Shaleruckik Mo	64.28	26	P		P		13 23 27.7	+0.1		
	baz=271										
E19K	Redstone River	64.48	25	IAmb		IAmb		13 23 29.9			
	comp=Z,27nm,1.4s										
E19K	Redstone River	64.48	25	P		P		13 23 29.0	+0.1		
	baz=272,SNR=20										
O16K	Kokwok River B	64.52	34	P		P		13 23 29.4	+0.1		
	baz=275										
G19K	Purcell Mounta	64.58	26	P		P		13 23 29.3	-0.3		
	baz=272,SNR=9.5										
P16K	Nushagak River	64.62	34	P		P		13 23 30.4	+0.5		
	baz=275										
A21K	Barrow	64.63	21	P		P		13 23 29.7	-0.1		
	baz=270										
CHGN	Chignik	64.66	37	P		P		13 23 30.2	0.0		
	baz=276										
D20K	Etivluk River	64.67	24	P		P		13 23 30.3	+0.1		
	baz=272										
M17K	Holitna River	64.71	32	P		P		13 23 30.2	-0.2		
	baz=274										
GCSA	Galena City Sc	64.74	28	P		P		13 23 31.5	+0.9		
	baz=273,SNR=5.8										
E20K	Nigu River	64.85	24	P		P		13 23 31.2	-0.2		
	baz=272										
H19K	Roundabout Mou	64.88	27	P		P		13 23 31.8	+0.3		
	baz=273										
J18K	Innoko River	64.89	29	IAmb		IAmb		13 23 33.2			
	comp=Z,19nm,1.2s										
J18K	Innoko River	64.89	29	P		P		13 23 31.6	-0.1		
	baz=274,SNR=7.2										
N17K	Nushagak Hills	64.90	33	P		P		13 23 32.1	+0.3		
	baz=275										
L18K	Granite Mounta	65.00	31	IAmb		IAmb		13 23 44.7			
	comp=Z,36nm,1.5s										
L18K	Granite Mounta	65.00	31	P		P		13 23 32.7	+0.3		
	baz=275										
O17K	Koliganek Bris	65.01	33	P		P		13 23 32.5	0.0		
	baz=275										
F20K	Avaraart Lake	65.08	25	P		P		13 23 32.7	-0.1		
	baz=273										
GNI	Garni	65.22	305	⇓	e	P		13 23 33.4	-1.1		
GNI				pmax		pmax					
	comp=Z,31nm,1.5s										
TTA	Tatalina	65.25	30	P		P		13 23 32.8	-1.3		
TTA				IAmb		IAmb		13 23 35.6			
	comp=Z,24nm,1.3s										
TTA	Tatalina	65.25	30	P		P		13 23 35.9	+1.8		
TTA	Tatalina	65.25	30	P		P		13 23 34.3	+0.2		
	baz=275,SNR=6.5										
TTA	Tatalina	65.25	30	P		P		13 23 32.8	-1.3		
TTA				pmax		pmax					
	comp=Z,25nm,1.3s										
C21K	Knifeblade Rid	65.32	23	P		P		13 23 34.2	-0.2		
	baz=273										
J19K	Poorman	65.34	29	IAmb		IAmb		13 23 36.4			
	comp=Z,27nm,1.2s										
J19K	Poorman	65.34	29	P		P		13 23 34.6	0.0		
	baz=275										
Q16K	King Salmon	65.35	35	P		P		13 23 34.9	+0.2		
	baz=276										
B21K	Ikpikpuk River	65.35	23	P		P		13 23 34.4	-0.1		
	baz=273										
P17K	Kvichak River	65.40	34	P		P		13 23 35.2	+0.2		
	baz=276										
VRH	Novokhopyorsk	65.40	317	e		P		13 23 33.4	-1.8		
VRH				pmax		pmax					
	comp=Z,20nm,0.6s										
KLMR	Klimovskoe	65.44	328	e		P		13 23 31.3	-3.9		
KLMR				S		S		13 32 16.1	-3.0		
KLMR				pmax		pmax					
	comp=Z,68nm,1.5s										
M18K	Stony River	65.47	32	P		P		13 23 35.2	-0.2		
	baz=276										
N18K	Kilae Creek	65.52	32	P		P		13 23 35.6	-0.2		
	baz=276										
H20K	Anotleneega Mo	65.53	27	P		P		13 23 35.5	-0.3		
	baz=275,SNR=9.7										
E21K	Killik River	65.66	24	P		P		13 23 37.0	+0.4		
	baz=274										
ONI	Oni	65.70	307	P		P		13 23 36.5	-0.9		
ONI				IAmb		IAmb		13 24 05.2			
	comp=Z,27nm,1.3s										
ONI	Oni	65.70	307	P		P		13 23 36.5	-0.9		
ONI				pmax		pmax					
	comp=Z,27nm,1.3s										
B22K	Teshekpuk Lake	65.72	22	P		P		13 23 37.0	+0.1		
	baz=274										
I20K	Naaghedeneel	65.76	28	P		P		13 23 37.1	-0.1		
	baz=275,SNR=11										
Q17K	Contact Creek	65.80	35	P		P		13 23 37.4	-0.4		
	baz=277										
L19K	White Mountain	65.86	31	IAmb		IAmb		13 23 46.7			
	comp=Z,43nm,1.4s										
L19K	White Mountain	65.86	31	P		P		13 23 37.8	-0.2		
	baz=276										
KBZ	Khabaz	65.88	309	c	i	P		13 23 38.4	0.0		
KBZ				pmax		pmax					
	comp=Z,18nm,1.1s										
KBZ	Khabaz	65.88	309	P		P		13 23 38.0	-0.4		
	comp=Z,4.7nm,0.8s,baz=114,slow=8.2,SNR=7.0										
	comp=Z,4.7nm,0.8s										
F21K	Alatna River	65.94	25	P		P		13 23 38.1	-0.4		
	baz=275										
IMAR	Indian Mountai	65.95	26	P		P		13 23 37.0	-1.5		
O18K	Koktuh Hills	65.95	33	P		P		13 23 38.6	0.0		
	baz=277										
J20K	Nowinta River	65.96	28	P		P		13 23 38.6	0.0		
	baz=276										
KIV	Kislovodsk	65.98	309	P		P		13 23 37.8	-1.4		
KIV				IAmb		IAmb		13 23 41.0			
	comp=Z,22nm,1.0s										
P18K	Big Mountain,	66.00	34	P		P		13 23 39.1	+0.1		
	baz=277										
G21K	Allakaket	66.00	26	IAmb		IAmb		13 23 40.6			
	comp=Z,30nm,1.2s										
G21K	Allakaket	66.00	26	P		P		13 23 39.1	+0.3		
	baz=276										
K20K	Telida	66.09	29	IAmb		IAmb		13 23 41.7			
	comp=Z,50nm,1.5s										
K20K	Telida	66.09	29	P		P		13 23 39.6	+0.2		
	baz=276										
D22K	Ayikyak River	66.09	23	IAmb		IAmb		13 23 41.2			
	comp=Z,38nm,1.1s										
D22K	Ayikyak River	66.09	23	P		P		13 23 39.9	+0.5		
	baz=275										
M19K	Big River Lodg	66.10	31	IAmb		IAmb		13 23 41.2			
	comp=Z,35nm,1.4s										
M19K	Big River Lodg	66.10	31	P		P		13 23 39.7	+0.2		
	baz=277										
N19K	Bonanza Creek	66.19	32	P		P		13 23 40.1	-0.2		
	baz=277										
L20K	Farewell, AK	66.27	30	P		P		13 23 41.0	+0.4		
	baz=277										
O19K	Port Alsworth	66.35	33	IAmb		IAmb		13 23 42.0			
	comp=Z,56nm,1.5s										
O19K	Port Alsworth	66.35	33	P		P		13 23 41.6	+0.5		
	baz=278										
H21K	Melozitna Rive	66.37	27	IAmb		IAmb		13 23 43.2			
	comp=Z,26nm,1.1s										
H21K	Melozitna Rive	66.37	27	P		P		13 23 41.9	+0.6		
	baz=276										
E22K	Anaktuvuk Pass	66.49	24	P		P		13 23 42.0	0.0		
	baz=276										
M20K	Styx River	66.70	31	P		P		13 23 44.0	+0.5		
	baz=278										
G22K	Bettles	66.74	25	P		P		13 23 43.1	-0.4		
	baz=277										
I21K	Tanana	66.77	27	IAmb		IAmb		13 23 45.4			
	comp=Z,37nm,1.4s										
I21K	Tanana	66.77	27	P		P		13 23 44.1	+0.3		
	baz=277,SNR=11										
CHUM	Lake Minchumin	66.80	29	P		P		13 23 43.9	0.0		
	baz=278										
D23K	Nanushuk River	66.80	23	P		P		13 23 43.7	-0.2		
	baz=277										
VORR	Voronezh	66.88	318	e		P		13 23 41.5	-3.2		
VORR				pmax		pmax					
	comp=Z,50nm,0.4s										
LPSR	Galich'ya Gora	66.89	319	e		P		13 23 42.3	-2.4		
LPSR				pmax		pmax					
	comp=Z,20nm,0.8s										
H22K	Ishtalitna Cre	66.93	26	P		P		13 23 44.7	-0.1		
	baz=278										
VORD	Divnogorie	66.95	317	e		P		13 23 42.3	-2.8		
VORD				pmax		pmax					
	comp=Z,10.0nm,1.0s										
CAST	Castle Rocks	66.97	29	P		P		13 23 43.7	-1.3		
CAST				IAmb		IAmb		13 23 53.9			
	comp=Z,30nm,1.1s										
CAST	Castle Rocks	66.97	29	P		P		13 23 44.6	-0.4		
	baz=278,SNR=15										
P19K	Oil Pt	66.97	33	P		P		13 23 45.3	+0.1		
	baz=279										
VSR	Storozhevoye	66.99	317	e		P		13 23 43.4	-1.9		
VSR				pmax		pmax					
	comp=Z,10.0nm,0.6s										
PPLA	Purkeypile	66.99	30	P		P		13 23 45.0	-0.3		
	baz=278										
MOS	Moscow	67.11	322	e		P		13 23 44.3	-1.7		
MOS						e		13 24 10.3			
MOS				pmax		pmax					
	comp=Z,52nm,1.4s										
O20K	Slope Mountain	67.21	33	P		P		13 23 46.6	-0.1		
	baz=279										
COLD	Coldfoot	67.21	25	P		P		13 23 46.8	+0.3		
	baz=278,SNR=13										
N20K	Mount Spurr	67.23	32	P		P		13 23 46.8	-0.1		
	baz=279,SNR=7.1										
APA	Apatity	67.27	335	⇓	i	P		13 23 49.6	+2.7		
APA				pmax		pmax					
	comp=Z,10.0nm,1.0s										
E23K	Chandalar	67.31	24	P		P		13 23 46.9	-0.4		
	baz=278,SNR=17										
MLY	Manley	67.31	27	P		P		13 23 46.2	-1.1		
MLY				IAmb		IAmb		13 23 50.6			
	comp=Z,42nm,1.4s										
MLY	Manley	67.31	27	P		P		13 23 47.5	+0.2		
	baz=278,SNR=19										
OHAK	Old Harbor	67.33	36	P		P		13 23 47.6	+0.3		
	baz=280										
BPAW	Bear Paw Mtn.	67.35	28	P		P		13 23 45.5	-1.9		
BPAW				IAmb		IAmb		13 23 50.7			
	comp=Z,41nm,1.3s										
BPAW	Bear Paw Mtn.	67.35	28	P		P		13 23 47.3	-0.2		
	baz=279,SNR=9.9										
G23K	Bananza Creek	67.36	26	IAmb		IAmb		13 23 49.3			
	comp=Z,18nm,1.1s										
G23K	Bananza Creek	67.36	26	P		P		13 23 47.7	+0.2		
	baz=278										
C24K	Franklin Bluff	67.40	22	P		P		13 23 47.7	+0.1		
	baz=278										
SKT	Skwentna	67.43	31	P		P		13 23 47.4	-0.6		
SKT	Skwentna	67.43	31	P		P		13 23 48.0	0.0		
	baz=279										
D24K	Happy Valley	67.44	23	P		P		13 23 48.0	0.0		
	baz=279										
KTH	Kantishna Hill	67.46	29	IAmb		IAmb		13 23 51.1			
	comp=Z,54nm,1.5s										
Q20K	Shuyak Island	67.56	34	P		P		13 23 48.8	-0.1		
	baz=280										
KDAK	Kodiak Island	67.61	35	P		P		13 23 46.9	-2.2		
	comp=Z,10nm,0.6s,baz=131,slow=13,SNR=1.6										
	comp=Z,10nm,0.6s										
TRF	Thorofare Moun	67.76	29	P		P		13 23 50.2	-0.1		
	baz=280										
OBN	Obninsk	67.82	322	d	i	P		13 23 50.0	-0.5		
OBN					i			13 24 18.9			
OBN					i			13 26 16.6			
OBN				pmax		pmax					
	comp=Z,57nm,1.6s										
I23K	Minto, Yukon-K	67.87	27	P		P		13 23 50.4	-0.2		
	baz=280										
SUA	Susitna One	67.89	31	P		P		13 23 50.5	-0.6		
	baz=280										
CUT	Chulitna	67.95	30	P		P		13 23 50.9	-0.2		
	baz=280										
F24K	Squaw Lake	68.05	24	P		P		13 23 51.8	-0.1		
	baz=280										
NEA2	Nenana	68.09	28	IAmb		IAmb		13 23 55.6			
	comp=Z,39nm,1.2s										
NEA2	Nenana	68.09	28	P		P		13 23 51.9	-0.2		
	baz=280										
D25K	Kavik River	68.27	22	P		P		13 23 52.7	-0.6		
	baz=281										
MCK	McKinley	68.30	29	P		P		13 23 53.5	+0.1		
	baz=281,SNR=7.6										
G24K	Hadweenzic Riv	68.36	25	P		P		13 23 53.9	+0.2		
	baz=281										
H24K	Noodor Dome	68.36	26	IAmb		IAmb		13 24 01.0			
	comp=Z,42nm,1.3s										
H24K	Noodor Dome	68.36	26	P		P		13 23 53.8	0.0		
	baz=281										
MDM	Murphy Dome	68.38	27	P		P		13 23 52.0	-2.0		
RC01	Rabbit Creek A	68.44	31	P		P		13 23 54.3	0.0		
	baz=281										
COLA	College	68.55	27	P		P		13 23 55.0	+0.1		
	baz=281										
CCB	Clear Creek Bu	68.62	28	P		P		13 23 53.8	-1.6		
CCB				IAmb		IAmb		13 24 01.2			
	comp=Z,23nm,1.6s										
PMR	Palmer	68.62	31	P		P		13 23 53.5	-2.0		
PMR				IAmb		IAmb		13 24 05.7			
	comp=Z,40nm,1.3s										
PMR	Palmer	68.62	31	P		P		13 23 57.3	+1.8		
PMR	Palmer	68.62	31	P		P		13 23 55.6	+0.2		
	baz=281,SNR=6.3										
PMR	Palmer	68.62	31	P		P		13 23 53.5	-2.0		
PMR				pmax		pmax					
	comp=Z,40nm,1.3s										
WAT1	Susitna Watana	68.65	30	P		P		13 23 55.9	+0.2		
	baz=281										
POKR	Poker Plat Res	68.68	27	P		P		13 23 55.1	-0.7		
POKR				IAmb		IAmb		13 24 02.5			
	comp=Z,32nm,1.1s										
POKR	Poker Plat Res	68.68	27	P		P		13 23 55.8	0.0		
	baz=281,SNR=5.7										
SEW	Seward	68.77	32	P		P		13 23 55.6	-0.8		
	baz=282										
E25K	Arctic Village	68.80	24	P		P		13 23 56.3	-0.2		
	baz=282,SNR=20										
RAYN	Ar Rayn	68.84	287	P		P		13 23 55.4	-2.1		
RAYN	Ar Rayn	68.84	287	P		P		13 23 55.4	-2.1		
RAYN				pmax		pmax					
	comp=Z,13nm,1.3s										
G25K	Bearman Lake	68.88	25	P		P		13 23 57.0	+0.1		
	baz=282										
F25K	Christian Rive	68.88	24	P		P		13 23 57.0	0.0		
	baz=282,SNR=16										
SML	Sawmill	68.95	31	P		P		13 23 57.3	-0.4		
	baz=282										
IL31		68.98	27	IAmb		IAmb		13 24 31.5			
	comp=Z,23nm,1.6s										
ILAR	Eielson Array	68.98	27	P		P		13 23 55.9	-1.7		
	comp=Z,1.1nm,0.6s,baz=272,slow=5.2,SNR=15										
	comp=Z,1.1nm,0.6s										
KNK	Knik Glacier	68.98	31	P		P		13 23 57.3	-0.5		
	baz=282										
HDA	Harding Lake	69.03	28	IAmb		IAmb		13 24 00.2			
	comp=Z,21nm,1.2s										
HDA	Harding Lake	69.03	28	P		P		13 23 57.2	-0.8		
	baz=282,SNR=12										
WAT6	Susitna Watana	69.06	30	P		P		13 23 57.4	-1.0		
	baz=282										
DHY	Denali Highway	69.12	29	IAmb		IAmb		13 24 01.2			
	comp=Z,55nm,1.9s										
DHY	Denali Highway	69.12	29	P		P		13 23 57.8	-1.0		
	baz=282										
M23K	Glacier View	69.24	31	P		P		13 23 58.9	-0.5		
	baz=282										
FYU	Fort Yukon	69.26	25	IAmb		IAmb		13 24 00.8			
	comp=Z,45nm,1.4s										
PRP	Porcupine Dome	69.38	26	IAmb		IAmb		13 24 04.0			
	comp=Z,33nm,1.5s										
PRP	Porcupine Dome	69.38	26	P		P		13 23 59.9	-0.4		
	baz=283,SNR=12										
SCM	Sheep Creek Mo	69.41	30	P		P		13 24 00.4

D28M	**Stokes Point**	70.90	22	P		P		13 24 09.3	0.0
	baz=288								
L26K	**Log Cabin Wild**	70.92	29	IAmb		IAmb		13 24 13.3	
	comp=Z,26nm,1.2s								
L26K	**Log Cabin Wild**	70.92	29	P		P		13 24 09.4	-0.2
	baz=286,SNR=12								
I27K	**Kandik River**	70.93	26	P		P		13 24 09.5	-0.2
	baz=286								
F28M	**Old Crow**	71.01	24	IAmb		IAmb		13 24 11.8	
	comp=Z,43nm,1.4s								
F28M	**Old Crow**	71.01	24	P		P		13 24 10.4	+0.3
	baz=287,SNR=27								
GLB	**Gilahina Butte**	71.14	30	IAmb		IAmb		13 24 19.3	
	comp=Z,51nm,1.3s								
K27K	**Chicken**	71.19	28	P		P		13 24 11.1	-0.1
	baz=286								
M26K	**Nabesna, AK**	71.24	29	P		P		13 24 11.7	0.0
	baz=286								
KAIM	**Kayak Island**	71.27	32	P		P		13 24 11.7	0.0
	baz=286								
EGAK	**Eagle**	71.35	27	IAmb		IAmb		13 24 15.1	
	comp=Z,16nm,0.9s								
EGAK	**Eagle**	71.35	27	P		P		13 24 11.5	-0.7
	baz=287								
VRDI	**Verde Repeater**	71.36	31	IAmb		IAmb		13 24 18.8	
	comp=Z,63nm,1.5s								
E29M	**Blow River**	71.48	23	P		P		13 24 12.4	-0.6
	baz=289,SNR=9.9								
MCARA	**McCarthy VSAT**	71.52	30	IAmb		IAmb		13 24 24.4	
	comp=Z,31nm,1.0s								
MCARA	**McCarthy VSAT**	71.52	30	P		P		13 24 13.0	-0.3
	baz=286								
L27K	**Beaver Creek,**	71.57	28	IAmb		IAmb		13 24 17.1	
	comp=Z,50nm,1.2s								
L27K	**Beaver Creek,**	71.57	28	P		P		13 24 13.5	-0.1
	baz=287								
I28M	**Miner Creek**	71.64	26	IAmb		IAmb		13 24 15.2	
	comp=Z,26nm,1.3s								
I28M	**Miner Creek**	71.64	26	P		P		13 24 13.9	-0.2
	baz=288								
FINES	**FINESS Array B**	71.70	330	*i* P		P		13 24 13.8	-0.5
FINES				pmax		pmax			
	comp=Z,9.0nm,0.9s								
FINES	**FINESS Array B**	71.70	330	P		P		13 24 13.9	-0.4
	comp=Z,8.6nm,0.9s,baz=69,slow=5.9,SNR=14								
	comp=Z,8.6nm,0.9s								
M27K	**Edge Creek, AK**	71.75	29	P		P		13 24 15.1	+0.2
	baz=287								
ISLE	**Juniper Island**	72.07	31	IAmb		IAmb		13 24 23.4	
	comp=Z,52nm,1.3s								
BVCY	**Beaver Creek**	72.19	29	P		P		13 24 16.9	-0.4
	baz=288								
BARN	**Barnard Glacie**	72.25	30	IAmb		IAmb		13 24 27.5	
	comp=Z,20nm,0.8s								
VSU	**Vasula**	72.26	327	*d i* P		P		13 24 17.6	-0.1
VSU				pmax		pmax			
	comp=Z,47nm,1.3s								
DAWY	**Dawson**	72.30	27	IAmb		IAmb		13 24 21.2	
	comp=Z,24nm,1.0s								
DAWY	**Dawson**	72.30	27	P		P		13 24 17.4	-0.6
	baz=289,SNR=19								
MESA	**MESA**	72.38	31	P		P		13 24 17.9	-0.8
	baz=288								
CTG	**Chitna Glacier**	72.42	31	P		P		13 24 18.6	-0.3
	baz=288								
CTGM	**Chitina Glacie**	72.43	31	IAmb		IAmb		13 24 22.0	
	comp=Z,36nm,1.2s								
F30M	**Barrier River**	72.50	23	P		P		13 24 18.2	-0.8
	baz=291								
G30M	**tAoh Zraii Nji**	72.56	24	P		P		13 24 18.4	-1.1
	baz=291								
YUK3	**Moose Creek**	72.57	30	P		P		13 24 19.3	-0.6
	baz=288								
EPYK	**Eagle Plains**	72.59	24	IAmb		IAmb		13 24 22.4	
	comp=Z,19nm,1.0s								
EPYK	**Eagle Plains**	72.59	24	P		P		13 24 19.1	-0.5
	baz=290,SNR=13								
LOGN	**Logan Glacier**	72.62	31	IAmb		IAmb		13 24 29.0	
	comp=Z,30nm,1.0s								
J29N	**Klondike Camp**	72.66	27	IAmb		IAmb		13 24 26.4	
	comp=Z,25nm,0.7s								
J29N	**Klondike Camp**	72.66	27	P		P		13 24 19.9	-0.2
	baz=290,SNR=16								
MNK	**Minsk**	72.84	322	*i* P		P		13 24 21.1	-0.2
MNK				*i*				13 24 37.7	
MNK				*i*				13 27 04.9	
MNK				*i* PPP		PPP		13 28 43.1	
MNK				*i* S		S		13 33 48.5	+1.7
MNK				*i* SSS		SSS		13 41 40.4	
MNK				pmax		pmax			
	comp=Z,22nm,1.0s								
MNK				pmax		pmax			
	comp=E,11nm,0.9s								
INK	**Inuvik**	73.03	22	IAmb		IAmb		13 24 22.2	
	comp=Z,19nm,1.0s								
INK	**Inuvik**	73.03	22	P		P		13 24 21.7	-0.4
	baz=293,SNR=23								
INK	**Inuvik**	73.03	22	P		P		13 24 20.8	-1.3
	comp=Z,18nm,1.1s,baz=300,slow=6.8,SNR=40								
	comp=Z,18nm,1.1s								
YUK8	**Steele Glacier**	73.05	30	P		P		13 24 21.9	-0.9
	baz=289								
I30M	**Mount Dempster**	73.13	26	IAmb		IAmb		13 24 34.9	
	comp=Z,42nm,1.4s								
I30M	**Mount Dempster**	73.13	26	P		P		13 24 22.1	-0.9
	baz=291								
L29M	**L29M**	73.15	28	P		P		13 24 22.7	-0.3
	baz=290								
K29M	**Barlow Dome**	73.15	27	IAmb		IAmb		13 24 26.8	
	comp=Z,21nm,1.1s								
K29M	**Barlow Dome**	73.15	27	P		P		13 24 22.7	-0.4
	baz=290								
AKASG	**Malin Array Be**	73.21	318	P		P		13 24 22.9	-0.6
	comp=Z,3.3nm,0.7s,baz=60,slow=5.6,SNR=16								
	comp=Z,3.3nm,0.7s								
AKBB	**Malin Array Si**	73.21	318	*c i* P		P		13 24 22.3	-1.2
AKBB				pmax		pmax			
	comp=Z,25nm,1.8s								
PINM	**Pinnacle**	73.21	31	P		P		13 24 23.2	-0.3
	baz=289								
KIEV	**Kiev**	73.22	318	P		P		13 24 20.8	-2.8
KIEV	**Kiev**	73.22	318	P		P		13 24 20.8	-2.8
KIEV				pmax		pmax			
	comp=Z,12nm,1.1s								
M29M	**Somme Creek**	73.24	29	IAmb		IAmb		13 24 27.2	
	comp=Z,39nm,1.4s								
M29M	**Somme Creek**	73.24	29	P		P		13 24 23.4	-0.2
	baz=290								
F31M	**Tsiigehtchic**	73.29	23	IAmb		IAmb		13 24 26.2	
	comp=Z,26nm,0.9s								
F31M	**Tsiigehtchic**	73.29	23	P		P		13 24 23.0	-0.6
	baz=293,SNR=23								
G31M	**Satah River**	73.30	24	P		P		13 24 22.9	-0.9
	baz=292,SNR=9.3								
J30M	**Hart River**	73.38	26	P		P		13 24 24.1	-0.3
	baz=291								
YUK4	**Talbot Arm**	73.53	30	P		P		13 24 25.2	-0.4
	baz=290,SNR=9.7								
BR131	**Keskin Array S**	73.58	307	P		P		13 24 24.2	-2.0
BR131	**Keskin Array S**	73.58	307	*d i* P		P		13 24 26.4	+0.2
BRTR	**Keskin Array B**	73.58	307	P		P		13 24 24.3	-1.8
BRTR	**Keskin Array B**	73.58	307	P		P		13 24 26.4	+0.2
	comp=Z,3.6nm,0.9s,baz=103,slow=5.5,SNR=20								
	comp=Z,3.6nm,0.9s								
PNL	**Peninsula**	73.76	31	P		P		13 24 26.0	-0.7
	baz=290								
YUK6	**Outpost Mounta**	73.80	30	P		P		13 24 26.1	-1.1
	baz=290								
M30M	**Minto, Yukon**	73.91	28	IAmb		IAmb		13 24 30.9	
	comp=Z,43nm,1.2s								
M30M	**Minto, Yukon**	73.91	28	P		P		13 24 27.3	-0.2
	baz=291,SNR=20								
MAYO	**Mayo, Yukon**	73.92	27	IAmb		IAmb		13 24 47.1	
	comp=Z,35nm,1.0s								
MAYO	**Mayo, Yukon**	73.92	27	P		P		13 24 27.4	-0.1
	baz=292								
O29M	**Mount Kennedy**	73.93	31	IAmb		IAmb		13 24 34.7	
	comp=Z,37nm,1.4s								
O29M	**Mount Kennedy**	73.93	31	P		P		13 24 27.4	-0.4
	baz=290								
A36M	**Sachs Harbour**	73.97	17	P		P		13 24 26.2	-1.5
	baz=299,SNR=8.2								
HYT	**Haines Junctio**	74.24	30	IAmb		IAmb		13 24 32.9	
	comp=Z,32nm,1.2s								
HYT	**Haines Junctio**	74.24	30	P		P		13 24 29.4	-0.1
	baz=291,SNR=6.0								
P29M	**Windy Craggy**	74.56	31	P		P		13 24 31.0	-0.4
	baz=291								
PABE	**Paberze**	74.65	324	P		P		13 24 30.6	-1.2
PABE				IAmb		IAmb		13 24 32.7	
	comp=Z,64nm,1.2s								
P30M	**Million Dollar**	74.75	31	P		P		13 24 31.9	-0.5
	baz=292								
N31M	**Braeburn, Yuko**	74.77	29	P		P		13 24 32.2	-0.3
N31M				IAmb		IAmb		13 24 36.4	
	comp=Z,62nm,1.2s								
N31M	**Braeburn, Yuko**	74.77	29	P		P		13 24 32.3	-0.3
	baz=292,SNR=5.5								
O30N	**Mendenhall**	74.90	30	P		P		13 24 31.9	-1.4
O30N				IAmb		IAmb		13 24 39.4	
	comp=Z,29nm,1.2s								
O30N	**Mendenhall**	74.90	30	P		P		13 24 33.5	+0.2
	baz=292								
M31M	**Drury Creek, Y**	75.09	28	P		P		13 24 32.7	-1.7
M31M	**Drury Creek, Y**	75.09	28	P		P		13 24 34.2	-0.2
	baz=294,SNR=8.8								
PLBC	**Pleasant Camp**	75.28	31	P		P		13 24 35.5	+0.1
	baz=292								
WHY	**Whitehorse**	75.49	30	IAmb		IAmb		13 24 40.0	
	comp=Z,57nm,1.5s								
WHY	**Whitehorse**	75.49	30	P		P		13 24 36.9	+0.1
	baz=293,SNR=7.6								
FARO	**Faro, Yukon**	75.53	28	IAmb		IAmb		13 24 39.5	
	comp=Z,31nm,1.1s								
FARO	**Faro, Yukon**	75.53	28	P		P		13 24 36.9	0.0
	baz=294,SNR=16								
SUW	**Suwalki**	75.60	323	*e*P		P		13 24 37.3	-0.1
C36M	**Paulatuk**	75.63	20	IAmb		IAmb		13 24 36.8	
	comp=Z,25nm,1.1s								
C36M	**Paulatuk**	75.63	20	P		P		13 24 36.1	-1.1
	baz=301,SNR=16								
SKAG	**Skagway**	75.76	31	P		P		13 24 38.8	+0.6
	baz=293								
S31K	**Pelican**	75.92	33	P		P		13 24 40.5	+1.4
	baz=293								
R31K	**City Hall, Gus**	75.98	32	P		P		13 24 40.4	+1.0
	baz=293								
N32M	**Quiet Lake**	76.09	29	IAmb		IAmb		13 24 42.8	
	comp=Z,57nm,1.4s								
N32M	**Quiet Lake**	76.09	29	P		P		13 24 40.4	+0.2
	baz=295,SNR=9.3								
P32M	**Atlin**	76.46	30	IAmb		IAmb		13 24 43.5	
	comp=Z,30nm,1.4s								
P32M	**Atlin**	76.46	30	P		P		13 24 42.3	0.0
	baz=295								
P33M	**Teslin, Yukon**	76.61	30	IAmb		IAmb		13 24 51.3	
	comp=Z,38nm,1.4s								
P33M	**Teslin, Yukon**	76.61	30	P		P		13 24 42.8	-0.3
	baz=295,SNR=6.4								
LVV	**L'vov**	76.64	319	*e*P		P		13 24 42.7	-0.7
SIT	**Sitka**	76.73	33	P		P		13 24 44.1	+0.4
	baz=294								
S32K	**Killisnoo**	76.93	33	P		P		13 24 45.0	+0.1
	baz=294								
Q32M	**Nakina River**	77.40	31	P		P		13 24 47.8	0.0
	baz=296								
R33M	**Jennings River**	77.81	30	IAmb		IAmb		13 25 00.8	
	comp=Z,43nm,1.6s								
R33M	**Jennings River**	77.81	30	P		P		13 24 50.0	0.0
	baz=297								
HFS	**Hagfors**	77.81	331	P		P		13 24 48.5	-1.3
	comp=Z,2.5nm,0.7s,baz=62,slow=3.4,SNR=2.7								
	comp=Z,2.5nm,0.7s								
NC405	**NORSAR Array S**	78.21	332	P		P		13 24 51.0	-1.0
S34M	**Telegraph Cree**	78.41	31	P		P		13 24 53.3	+0.2
	baz=297								
WTLY	**Watson Lake, Y**	78.45	29	IAmb		IAmb		13 25 01.1	
	comp=Z,26nm,1.0s								
WTLY	**Watson Lake, Y**	78.45	29	P		P		13 24 53.6	+0.3
	baz=298,SNR=10								
NB2	**NORSAR Subarra**	78.46	332	P		P		13 24 52.2	-1.2
	comp=Z,6.9nm,1.0s,baz=60,slow=5.6								
NOA	**NORSAR Array B**	78.46	332	P		P		13 24 52.4	-1.0
	comp=Z,2.7nm,0.8s,baz=59,slow=5.7,SNR=8.3								
	comp=Z,2.7nm,0.8s								
WRAK	**Wrangell Islan**	78.49	33	P		P		13 24 53.9	+0.3
	baz=296								
CRAG	**Craig**	78.51	34	P		P		13 24 54.2	+0.4
	baz=296								
RES	**Resolute Bay**	78.58	9	P		P		13 24 52.6	-1.1
	comp=Z,3.9nm,1.0s,baz=312,slow=6.1,SNR=6.8								
	comp=Z,3.9nm,1.0s								
DLBC	**Dease Lake**	78.68	31	P		P		13 24 54.9	+0.2
	baz=298								
OJC	**Ojcow**	79.00	320	P		P		13 24 55.3	-1.3
OJC	**Ojcow**	79.00	320	P		P		13 24 55.3	-1.3
OJC				pmax		pmax			
	comp=Z,18nm,1.1s								
WRGLY	**Wrigley**	79.06	25	P		P		13 24 55.7	-0.8
WRGLY	**Wrigley**	79.06	25	P		P		13 24 57.0	+0.5
	baz=302,SNR=5.0								
T35M	**Bob Quinn**	79.26	32	P		P		13 24 58.8	+1.0
	baz=298								
LANS	**Liptovska Anna**	79.64	319	*e*P		P		13 25 01.2	+1.1
LANS	**Liptovska Anna**	79.64	319	*e*P		P		13 25 01.2	+1.1
U35K	**Hyder**	79.87	33	P		P		13 25 02.2	+1.1
	baz=298								
MORC	**Moravsky Berou**	80.51	320	*e*P		P		13 25 04.1	-0.7
JAVC	**Velka Javorina**	80.84	320	*e*P		P		13 25 07.1	+0.5
DPC	**Dobruska-Polom**	80.95	321	*e*P		P		13 25 07.3	+0.1
DPC	**Dobruska-Polom**	80.95	321	*e*P		P		13 25 07.3	+0.1
VRAC	**Vranov**	81.27	320	*e*P		P		13 25 08.4	-0.4
MODS	**Modra-Piesok**	81.29	319	*e*P		P		13 25 08.7	-0.3
MODS	**Modra-Piesok**	81.29	319	*e*P		P		13 25 08.7	-0.3
KRUC	**Moravsky**	81.50	320	*e*P		P		13 25 09.3	-0.7
BRG	**Berggiesshubel**	82.05	322	*e*P		P		13 25 20.2	+7.3
BRG				Amp				13 25 21.5	
	comp=Z,3.6nm,1.1s								
RONA	**Rosalia, Austr**	82.18	319	*e*P		P		13 25 13.7	0.0
	comp=Z,4.0nm,1.0s								
CONA	**Conrad Observa**	82.33	319	*e*P		P		13 25 14.1	-0.4
	comp=Z,10nm,1.6s								
CLL	**Collm**	82.36	323	*e*P		P		13 25 14.0	-0.5
CLL	**Collm**	82.36	323	*e*P		P		13 25 14.0	-0.5
ZVC	**Zvikov**	82.60	321	*e*P		P		13 25 16.3	+0.5
YKA	**Yellowknife Ar**	82.77	23	P		P		13 25 15.1	-1.3
	comp=Z,6.2nm,0.8s,baz=314,slow=4.9,SNR=129								
	comp=Z,6.2nm,0.8s								
CKRC	**Cesky Krumlov**	82.83	321	*e*P		P		13 25 16.8	-0.2
CKRC	**Cesky Krumlov**	82.83	321	*e*P		P		13 25 16.8	-0.2
KHC	**Kasperske Hory**	83.10	321	*e*P		P		13 25 18.6	+0.1
KHC	**Kasperske Hory**	83.10	321	⇑ *e*P		P		13 25 17.8	-0.7
KHC				pmax		pmax			
	comp=Z,23nm,1.9s								
GERES	**GERESS Array B**	83.17	321	P		P		13 25 18.4	-0.4
	comp=Z,1.7nm,0.8s,baz=76,slow=5.6,SNR=9.0								
	comp=Z,1.7nm,0.8s								
MOA	**Molln**	83.32	320	*e*P		P		13 25 18.1	-1.5
	comp=Z,12nm,1.8s								
SOKA	**Soboth**	83.42	318	*e*P		P		13 25 18.7	-1.5
	comp=Z,7.7nm,1.6s								
BIOA	**Bad Ischl, Aus**	83.76	320	*e*P		P		13 25 20.1	-1.8
	comp=Z,4.7nm,0.9s								
OBKA	**Obir**	83.79	318	*e*P		P		13 25 21.4	-0.8
	comp=Z,10nm,1.8s								
MYKA	**Terra Mystica**	84.28	319	*e*P		P		13 25 23.6	-1.1
	comp=Z,11nm,1.7s								
LESA	**Schwarzleotal**	84.46	320	*e*P		P		13 25 23.7	-1.8
	comp=Z,9.8nm,1.4s								
ABTA	**Abfaltersbach**	84.90	319	*e*P		P		13 25 26.0	-1.8
	comp=Z,7.9nm,1.4s								
WATA	**Walderalm**	85.15	320	*e*P		P		13 25 25.4	-3.7
	comp=Z,10nm,1.6s								
WTTA	**Wattenberg**	85.16	320	*e*P		P		13 25 25.7	-3.4
	comp=Z,15nm,1.9s								
KIBK	**Kibwezi**	85.20	265	P		P		13 25 28.4	-1.4
LODK	**Lodwar**	85.32	272	P		P		13 25 27.9	-2.5
MOTA	**Moosalm**	85.42	320	*e*P		P		13 25 26.1	-4.3
	comp=Z,6.8nm,1.5s								
SQTA	**Sankt Quirin**	85.43	320	*e*P		P		13 25 27.2	-3.3
	comp=Z,2.6nm,0.8s								
KMBO	**Kilima Mbogo**	85.43	267	P		P		13 25 31.4	+0.3
	comp=Z,4.7nm,0.9s,baz=48,slow=9.8,SNR=9.5								
	comp=Z,4.7nm,0.9s								
FETA	**Feichten**	85.81	320	*e*P		P		13 25 26.7	-5.7
	comp=Z,5.9nm,1.3s								
D05A	**Enumclaw**	88.72	38	IAmb		IAmb		13 26 08.2	
	comp=Z,28nm,1.0s								
LON	**Longmire**	89.08	38	IAmb		IAmb		13 26 07.9	
	comp=Z,39nm,1.8s								
F04A	**Amboy**	89.20	39	IAmb		IAmb		13 25 51.3	
	comp=Z,14nm,0.8s								
EDM	**Edmonton**	89.35	30	IAmb		IAmb		13 25 50.3	
	comp=Z,39nm,1.4s								
LTY	**Liberty**	89.41	37	IAmb		IAmb		13 26 06.2	
	comp=Z,25nm,1.4s								
COR	**Corvallis**	89.44	40	P		P		13 25 49.3	-0.4
COR	**Corvallis**	89.44	40	P		P		13 25 49.3	-0.4
COR				pmax		pmax			
	comp=Z,87nm,1.7s								
MXC	**Moxie City**	90.02	38	IAmb		IAmb		13 26 03.3	
	comp=Z,15nm,0.7s								
H04A	**Detroit Lake**	90.05	40	IAmb		IAmb		13 25 55.1	
	comp=Z,50nm,1.8s								
E07A	**Sunnyside**	90.28	37	IAmb		IAmb		13 25 57.3	
	comp=Z,15nm,0.9s								
DBO	**Dodson Butte**	90.30	42	IAmb		IAmb		13 26 13.8	
	comp=Z,27nm,1.6s								
C09A	**Chrisman Ranch**	90.39	36	IAmb		IAmb		13 25 54.8	
	comp=Z,44nm,1.8s								
I04A	**Tendick Farm,**	90.42	41	IAmb		IAmb		13 25 57.6	
	comp=Z,16nm,1.1s								
D08A	**Wollman Farm,**	90.49	37	IAmb		IAmb		13 25 57.4	
	comp=Z,14nm,0.9s								
NEW	**Newport**	90.71	35	IAmb		IAmb		13 25 58.9	
	comp=Z,17nm,1.1s								
NEW	**Newport**	90.71	35	P		P		13 25 56.1	+0.5
	baz=309								
I05D	**Terrebonne, OR**	90.74	40	IAmb		IAmb		13 26 12.7	
	comp=Z,10nm,0.9s								
YBH	**Yreka Blue Hor**	91.41	42	IAmb		IAmb		13 26 02.6	
	comp=Z,15nm,1.3s								
J05D	**Fort Rock, OR**	91.41	41	IAmb		IAmb		13 29 15.5	
	comp=Z,14nm,0.8s								
I07A	**Izee**	91.96	39	IAmb		IAmb		13 29 12.3	
	comp=Z,8.7nm,0.8s								
FRB	**Frobisher Bay**	91.99	5	P		P		13 25 58.8	-2.3
	comp=Z,6.4nm,1.1s,baz=281,slow=2.9,SNR=6.1								
	comp=Z,6.4nm,1.1s								
FCC	**Fort Churchill**	92.19	18	IAmb		IAmb		13 26 02.7	
	comp=Z,13nm,1.1s								
EGMT	**Eagleton**	94.57	32	P		P		13 26 13.1	-0.4
	baz=314								
HLID	**Hailey**	95.16	37	P		P		13 26 16.6	+0.2
	baz=310								
BOZ	**Bozeman (W)**	95.30	34	P		P		13 26 16.8	-0.2
	baz=313								
NVAR	**Mina Array Bea**	96.08	43	P		P		13 26 20.4	-0.3
	comp=Z,2.0nm,0.9s,baz=286,slow=5.0,SNR=15								
	comp=Z,2.0nm,0.9s								
MLAC	**Mammoth, Mammo**	96.23	44	P		P		13 26 21.6	+0.1
	baz=307								
H17A	**Grant Village**	96.67	35	P		P		13 26 23.2	-0.1
	baz=313								
RLMT	**Red Lodge**	96.84	34	IAmb		IAmb		13 26 43.5	
	comp=Z,15nm,1.8s								
RLMT	**Red Lodge**	96.84	34	P		P		13 26 24.0	-0.1
	baz=314								
SMMC	**Simmler**	96.84	47	P		P		13 26 25.0	+0.9
	baz=306								
LAO	**LASA Array**	97.20	31	P		Pdif		13 26 26.4	+0.8
	baz=317								
PKM	**Mcpherson Peak**	97.21	47	P		Pdif		13 26 26.4	+0.4
	baz=306								
CWC	**Cottonwood Cre**	97.42	45	P		Pdif		13 26 27.3	+0.4
	baz=307								
SBC	**Santa Barbara**	97.54	47	P		Pdif		13 26 27.8	+0.5
	baz=306								
SCZ2	**Santa Cruz Isl**	97.86	47	P		P		13 26 27.6	-1.1
	baz=306								
MPMC	**Manual Prospec**	98.04	45	P		P		13 26 29.6	0.0
	baz=308								
LRMC	**Laurel Mtn Rad**	98.26	45	P		P		13 26 30.4	-0.2
	baz=308								
PDAR	**Pinedale Array**	98.33	36	P		P		13 26 30.3	-0.5
	comp=Z,0.3nm,0.8s,baz=288,slow=1.4,SNR=3.8								
	comp=Z,0.3nm,0.8s								
EDW2	**Edwards Air Fo**	98.42	46	P		P		13 26 31.2	0.0
	baz=307								
GSC	**Goldstone, Bar**	98.94	45	P		P		13 26 32.8	-0.8
	baz=308								
BFSC	**Mount Baldy Ra**	99.03	46	P		Pdif		13 26 33.9	-0.1
	baz=307								
GMRC	**Granite Mounta**	100.00	45	P		Pdif		13 26 38.2	-0.2
	baz=309								
TPFO	**Pinon Flats**	100.21	46	P		Pdif		13 26 39.0	-0.3
	baz=308								
O20A	**White River Ci**	100.87	37	P		Pdif		13 26 42.2	0.0
	baz=315								
SWSC	**Sam W. Stewart**	101.05	46	P		Pdif		13 26 43.3	+0.5
	baz=308								
TORD	**Torodi Ar. Bea**	110.69	296	PKiKP		PKiKP		13 31 24.2	-2.1
	comp=Z,0.4nm,0.7s,baz=4.1,slow=4.4,SNR=3.0								
TXAR	**Lajitas Array**	111.18	42	PKiKP		PKiKP		13 31 25.6	-1.4
	comp=Z,0.2nm,0.7s,baz=0.0,slow=2.8,SNR=2.5								
UREC	**San Jos de Ur**	144.06	30	*e*P		PKPab		13 32 23.0	-3.6
DBBC	**Dabeiba**	144.38	32	*e*P		PKPbc		13 32 28.2	0.0
SDV	**Santo Domingo**	144.98	22	*e*P		PKPbc		13 32 30.4	+0.2
CBOC	**Ciudad Bolivar**	145.48	32	*e*P		PKPbc		13 32 31.2	-0.6
PTBC	**PUERTO BERRIO**	145.62	29	*e*P

DOPR	Dopca	0.80	301	⇑	P		Pn	13 15 27.9	+0.6
GHRR		0.88	55	⇑	P		Pn	13 15 28.7	+0.8
GHRR				⇓	S		Sn	13 15 46.8	+0.5
SULR		0.89	185	⇓	P		Pn	13 15 28.6	+0.7
SULR				⇑	S		Sn	13 15 46.7	+0.4
TUDR		0.91	87	⇓	P		Pn	13 15 28.3	+0.2
TUDR				⇓	S		Sn	13 15 46.0	-0.7
TUDR		0.91	87				Pn	13 15 28.3	+0.2
TUDR							Sn	13 15 46.0	-0.7
VOIR		0.94	263	⇑	P		Pn	13 15 28.3	-0.1
VOIR				⇑	S		Sn	13 15 45.8	-1.4
TESR	Tescani	0.97	11	⇑	P		Pn	13 15 28.8	+0.2
TESR				⇑	S		Sn	13 15 46.3	-1.3
MTUR	Matau	0.98	250	⇑	P		Pn	13 15 29.1	+0.3
MTUR	Matau	0.98	250				Pn	13 15 29.1	+0.3
IZVR	Izvoarele	0.98	91	⇑	P		Pn	13 15 28.8	+0.2
IZVR				⇑	S		Sn	13 15 46.4	-1.2
IZVR	Izvoarele	0.98	91				Pn	13 15 28.8	+0.2
IZVR							Sn	13 15 46.4	-1.2
SLCR	Slobozia Conac	0.98	88	⇑	P		Pn	13 15 28.9	+0.3
SLCR				⇑	S		Sn	13 15 47.0	-0.7
SCHL	Schela	1.03	93	⇓	P		Pn	13 15 29.3	+0.3
SCHL				⇑	S		Sn	13 15 47.7	-0.7
SCHL	Schela	1.03	93				Pn	13 15 29.3	+0.3
SCHL							Sn	13 15 47.7	-0.7
SCHLR	Schela	1.03	95	⇑	P		Pn	13 15 29.2	+0.2
SCHLR				⇑	S		Sn	13 15 47.7	-0.7
NEGRR	Negrea	1.06	91	⇑	P		Pn	13 15 30.2	+0.8
NEGRR				⇓	S		Sn	13 15 48.4	-0.4
VARL	Varlezi	1.09	71	⇑	P		Pn	13 15 30.2	+0.6
VARL				⇑	S		Sn	13 15 49.1	-0.2
VARL	Varlezi	1.09	71				Pn	13 15 30.2	+0.6
VARL							Sn	13 15 49.1	-0.2
BIR	Birlad	1.13	51	⇑	P		Pn	13 15 30.6	+0.7
BIR				⇑	S		Sn	13 15 49.4	-0.5
BIR	Birlad	1.13	51				Pn	13 15 30.6	+0.7
BIR							Sn	13 15 49.4	-0.5
INCR	INCERC-Sediu C	1.13	188	⇓	S		Sn	13 15 49.4	-0.6
INCR	INCERC-Sediu C	1.13	188				Sn	13 15 49.4	-0.6
SCTR	Scanteiesti	1.15	84	⇓	P		Pn	13 15 31.0	+0.9
SCTR				⇓	S		Sn	13 15 50.2	0.0
SCTR	Scanteiesti	1.15	84				Pn	13 15 31.0	+0.9
SCTR							Sn	13 15 50.2	0.0
CIOR	Ciorogarla	1.17	198	⇑	S		Sn	13 15 50.1	-0.4
CIOR	Ciorogarla	1.17	198				Sn	13 15 50.1	-0.4
AMRR	Amara	1.17	144	⇓	P		Pn	13 15 31.1	+0.7
AMRR				⇑	S		Sn	13 15 50.5	-0.1
TATR	Tatarca	1.18	88	⇑	P		Pn	13 15 31.1	+0.7
TATR				⇓	S		Sn	13 15 50.7	-0.1
TATR	Tatarca	1.18	88				Pn	13 15 31.1	+0.7
TATR							Sn	13 15 50.7	-0.1
GISR	Galati	1.19	95	⇓	S		Sn	13 15 51.1	+0.2
GISR	Galati	1.19	95				Sn	13 15 51.1	+0.2
STFAR	Stefanesti-Arg	1.22	235	⇑	P		Pn	13 15 31.2	+0.3
STFAR				⇓	S		Sn	13 15 52.0	+0.6
STFAR	Stefanesti-Arg	1.22	235				Pn	13 15 31.2	+0.3
STFAR							Sn	13 15 52.0	+0.6
VLDR	Vladesti	1.23	76	⇓	P		Pn	13 15 31.7	+0.8
VLDR				⇓	S		Sn	13 15 51.4	-0.2
VLDR	Vladesti	1.23	76				Pn	13 15 31.7	+0.8
VLDR							Sn	13 15 51.5	-0.2
ARR	Arges	1.24	262	⇓	P		Pn	13 15 31.8	+0.8
ARR				⇑	S		Sn	13 15 51.2	-0.6
BUC1	Bucharest	1.24	191	⇑	P		Pn	13 15 31.5	+0.6
BUC1				⇓	S		Sn	13 15 51.2	-0.5
BUC1	Bucharest	1.24	191				Pn	13 15 31.5	+0.6
BUC1							Sn	13 15 51.2	-0.5
GIUM	Giurgiulesti	1.29	93	⇓	P		Pn	13 15 32.3	+0.9
GIUM				⇓	S		Sn	13 15 52.7	+0.1
GIUM	Giurgiulesti	1.29	93				Pn	13 15 32.4	+0.9
GIUM							Sn	13 15 52.7	+0.1
GIUM	Giurgiulesti	1.29	93		P		Pn	13 15 32.3	+0.9
GIUM					S		Sn	13 15 52.6	0.0
CFR	Carcaliu	1.30	106	⇑	P		Pn	13 15 31.8	+0.3
CFR				⇑	S		Sn	13 15 52.3	-0.4
SGRR	Singureni	1.37	192	⇑	S		Sn	13 15 54.0	+0.1
HARR	Harsova	1.41	128	⇑	P		Pn	13 15 33.1	+0.5
HARR	Harsova	1.41	128				Pn	13 15 33.1	+0.5
HUMR	Humele	1.43	224	⇑	P		Pn	13 15 33.0	+0.2
HUMR				⇑	S		Sn	13 15 54.1	-1.0
VASR	Vaslui	1.47	42	⇑	P		Pn	13 15 33.8	+0.6
VASR				⇓	S		Sn	13 15 55.3	-0.4
VASR	Vaslui	1.47	42				Pn	13 15 33.8	+0.6
VASR							Sn	13 15 55.3	-0.4
TLBR	Topalu	1.56	130	⇓	P		Pn	13 15 34.8	+0.6
TLBR				⇓	S		Sn	13 15 56.6	-0.9
TLBR	Topalu	1.56	130				Pn	13 15 34.8	+0.6
TLBR							Sn	13 15 56.6	-0.9
LEOM	Leova	1.59	54	⇑	P		Pn	13 15 35.4	+0.8
LEOM				⇓	S		Sn	13 15 58.1	0.0
LEOM	Leova	1.59	54		P		Pn	13 15 35.3	+0.8
LEOM					S		Sn	13 15 57.0	-1.1
TPGR	Topolog	1.61	115	⇓	P		Pn	13 15 35.0	+0.2
TPGR				⇑	S		Sn	13 15 57.2	-1.3
TPGR	Topolog	1.61	115				Pn	13 15 35.0	+0.2
TPGR							Sn	13 15 57.2	-1.3
COPA	Copaceanca	1.65	210	⇑	S		Sn	13 15 58.1	-1.0
CVDA	Cernavoda	1.71	135	⇑	P		Pn	13 15 36.4	+0.6
CVDA				⇑	S		Sn	13 15 58.9	-1.4
CVDA	Cernavoda	1.71	135				Pn	13 15 36.4	+0.6
CVDA							Sn	13 15 58.9	-1.4
TLCR		1.76	101	⇓	P		Pn	13 15 36.8	+0.4
TLCR				⇑	S		Sn	13 16 01.3	-0.1
TLCR		1.76	101				Pn	13 15 36.8	+0.4
TLCR							Sn	13 16 01.3	-0.1
ICOR	Ion Corvin	1.77	144	⇑	P		Pn	13 15 37.3	+0.8
TIRR	Tirgusor	1.82	127	⇑	P		Pn	13 15 37.6	+0.6
TIRR				⇑	S		Sn	13 16 01.1	-1.4
TIRR	Tirgusor	1.82	127				Pn	13 15 37.0	0.0
TIRR	Tirgusor	1.82	127				Pn	13 15 37.6	+0.6
TIRR							Sn	13 16 01.1	-1.4
LOT	Lotru	1.83	267	⇑	S		Sn	13 16 02.4	-0.6
RAZG	Razgrad	2.00	177	⇓	P		Pn	13 15 39.5	+0.4
RAZG				⇑	S		Sn	13 16 04.8	-1.4
RAZG	Razgrad	2.00	177				Pn	13 15 39.5	+0.4
RAZG							Sn	13 16 04.8	-1.4
MFTR	Murfatlar	2.01	133	⇑	P		Pn	13 15 39.8	+0.6
MFTR				⇑	S		Sn	13 16 04.6	-1.8
MFTR	Murfatlar	2.01	133				Pn	13 15 39.8	+0.6
MFTR							Sn	13 16 04.6	-1.8
ZIMR		2.03	201	⇑	S		Sn	13 16 05.4	-1.5
ZIMR		2.03	201				Sn	13 16 05.4	-1.5
VLAD	Vladila	2.10	223	⇑	S		Sn	13 16 06.7	-1.5
TSCT	Constanta Port	2.15	130	⇑	P		Pn	13 15 41.2	+0.5
TSCT				⇓	S		Sn	13 16 08.5	-0.7
TSCT	Constanta Port	2.15	130				Pn	13 15 41.2	+0.5
TSCT							Sn	13 16 08.5	-0.7
MILM	Milestii Mici	2.17	50	⇑	P		Pn	13 15 41.8	+0.7
MILM				⇑	S		Sn	13 16 08.5	-1.3
MILM	Milestii Mici	2.17	50	⇑	*iP*		Pn	13 15 41.7	+0.7
	5µm,0.1s								
MILM					*i* S		Sn	13 16 08.0	-1.8
	15µm,0.1s								
EFOR	EFORIE	2.19	132	⇑	P		Pn	13 15 42.0	+0.8
LOZB	Loznitsa	2.20	176	⇓	P		Pn	13 15 41.8	+0.3
LOZB	Loznitsa	2.20	176				Pn	13 15 41.8	+0.3
BURAR	Bucovina Array	2.20	339	⇑	P		Pn	13 15 43.4	+1.9
BURAR	Bucovina Array	2.20	339				Pn	13 15 42.7	+1.2
KIS	Kishinev	2.22	49	PM				13 15 42.5	
	26nm,0.1s								
KIS	Kishinev	2.22	49	⇑	S		Sn	13 16 10.0	-0.9
KIS	Kishinev	2.22	49				Sn	13 16 10.0	-0.9
KIS	Kishinev	2.22	49	⇑	*iP*		Pn	13 15 42.6	+0.9
	1µm,0.1s								
KIS					*i* S		Sn	13 16 09.8	-1.1
	13µm,0.3s								
BUR08	Bucovina Ar. S	2.23	339				Pn	13 15 43.1	+1.1
MANR	Mangalia	2.35	137	⇑	P		Pn	13 15 43.8	+0.5
PLVB	Pleven	2.51	211	⇑	P		Pn	13 15 45.5	+0.3
PLVB	Pleven	2.51	211				Pn	13 15 45.5	+0.3
MARR	Marisel-Cluj	2.52	297	⇓	P		Pn	13 15 46.0	+0.6
MARR	Marisel-Cluj	2.52	297				Pn	13 15 46.0	+0.6
PURM	Purcari	2.62	67	⇑	S		Sn	13 16 18.9	-0.6
PURM	Purcari	2.62	67				Sn	13 16 18.9	-0.6
PURM	Purcari	2.62	67	⇓	*iP*		Pn	13 15 47.3	+0.8
	4µm,0.1s								
PURM					*i* S		Sn	13 16 17.0	-2.5
	9µm,2.0s								
ELND	Elena	2.66	188	⇓	P		Pn	13 15 47.5	+0.4
ELND	Elena	2.66	188				Pn	13 15 47.5	+0.4
SORM	Soroca	2.91	27	⇑	P		Pn	13 15 50.3	+0.2
SORM	Soroca	2.91	27				Pn	13 15 50.4	+0.2
SORM	Soroca	2.91	27	⇑	*iP*		Pn	13 15 50.3	+0.2
	4µm,0.1s								
SORM					*i* S		Sn	13 16 23.6	-2.4
	4µm,0.1s								
BZS	Buzias	3.34	273	⇑	P		Pn	13 15 55.6	+0.1
MDVR	Moldovita	3.38	258	⇓	P		Pn	13 15 57.2	+0.9
KIEV	Kiev	5.48	19		Pn		Pn	13 16 23.9	+0.4
AKASG	Malin Array Be	5.49	19		Pn		Pn	13 16 23.3	-0.3
AKBB	Malin Array Si	5.49	19		Pn		Pn	13 16 23.8	+0.2
KEST	Kesra	16.20	239				Pn	13 18 42.4	-0.4
NC602	NORSAR Array S	17.54	335		P		P	13 18 57.9	+0.4
NC602					IAmb		IAmb	13 19 24.2	
	comp=Z,14nm,1.3s								
NB201	NORSAR Array S	17.86	336				Pn	13 19 03.0	+0.5
DBIC	Dimbokro	47.24	225		P		P	13 23 21.8	+0.3
DBIC					IAmb		IAmb	13 23 29.7	
	comp=Z,8.9nm,1.4s								

ROM 04 13:16:26.0±0.1, 42°.669N±0°.002×13°.298E±0°.005, h11km, ML1.3/16, 1C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.05	144	⇑	P	Pg	13 16 28.7	+0.4
SMA1					S	Sg	13 16 30.2	+0.2
SMA1					AML	AML		
	comp=N,392µm,1.0s							
SMA1					AML	AML		
	comp=E,642µm,0.2s							
SMA1					AML	AML		
	comp=N,392µm,1.0s							
T1214	Arquata del Tr	0.11	324	⇓	P	Pg	13 16 29.6	+0.5
T1214					S	Sg	13 16 31.8	+0.5
T1214					AML	AML		
	comp=E,187µm,1.4s							
T1214					AML	AML		
	comp=N,121µm,1.2s							
MTRA	Matera	0.11	39		P	Pg	13 16 29.5	+0.4
MTRA					S	Sg	13 16 31.6	+0.4
MTRA					AML	AML		
	comp=E,558µm,0.4s							
MTRA					AML	AML		
	comp=N,407µm,1.0s							
RM33	Pellescritta (	0.17	201	⇓	P	Pg	13 16 30.4	+0.5
RM33					S	Sg	13 16 33.3	+0.7
RM33					AML	AML		
	comp=N,55µm,1.5s							
RM33					AML	AML		
	comp=E,50µm,1.5s							
RM33					AML	AML		
	comp=N,55µm,1.5s							
RM33					AML	AML		
	comp=N,55µm,0.5s							
RM33					AML	AML		
	comp=E,50µm,0.5s							
LNSS	Leonessa	0.20	251		P	Pg	13 16 30.9	+0.5
LNSS					S	Sg	13 16 34.4	+0.9
LNSS					AML	AML		
	comp=E,96µm,0.7s							
LNSS					AML	AML		
	comp=N,93µm,0.4s							
LNSS					AML	AML		
	comp=E,96µm,1.3s							
LNSS					AML	AML		
	comp=N,93µm,0.4s							
NRCA	Norcia	0.21	321		P	Pg	13 16 31.1	+0.4
NRCA					S	Sg	13 16 34.5	+0.8
NRCA					AML	AML		
	comp=E,258µm,0.1s							
NRCA					AML	AML		
	comp=N,153µm,1.3s							
MMO1	Montemonaco	0.23	5		P	Pg	13 16 31.5	+0.5
MC2	Monte Cornacci	0.26	342		P	Pg	13 16 31.9	+0.5

*DNK **04** 13:23:05.0±3.7, 83°.20N×4°.94W, h10km, Mc4.2, ML3.8*
*IDC **04** 13:23:06.6±0.4, 83°.05N×6°.89W, h0km, mb4.4/34, mbtmp4.4/36, ML4.5/2, MS5.1/4, Error ellipse: s-maj=11.0km s-min=9.4km az=37.0*
*MOS **04** 13:23:07.0±1.0, 83°.04N×7°.58W, h10km, mb5.0/34, MS5.1/9, Error ellipse: s-maj=39.8km s-min=4.7km az=92.7*
*BJI **04** 13:23:08.0±0.0, 83°.10N×5°.90W, h10km, mb4.7/43, mB5.5/26, Ms5.4/20, Ms7 5.1/21*
*NEIC **04** 13:23:08.5±2.0, 83°.04N±0°.09×6°.8W±0°.6, h10km±1km, mb5.2/221, Error ellipse: s-maj=15.2km s-min=11.1km az=24.0*
*BER **04** 13:23:09.5±4.9, 82°.82N×7°.42W, h10km, mb(Pn)5.5, Mc3.4, ML5.2(NAO), Confirmed Earthquake*
*KOLA **04** 13:23:14.2, 83°.20N×0°.12E, h0km, ML3.2, Error ellipse: s-maj=178.6km s-min=49.1km az=50.0, Arctic Ocean, Gakkel ridge*

ISC 04 13:23:08.2±0.6, 82°.99N±0°.04×7°.11W±0°.04, h7km±3km, h7km:pP-P, n610, σ2°02/609, mb4.9/133, MS5.2/19, 23C-20D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	5.03	134		Pn	Pn	13 24 21.4	-2.4
KBS					Sn	Sn	13 25 12.8	-9.2
KBS	Kingsbay	5.03	134			Pn	13 24 21.1	-2.6
KBS	Kingsbay	5.03	134		P	Pn	13 24 20.7	-3.1
KBS					S	Sn	13 25 09.7	-12
KBS	Kingsbay	5.03	134	*ep*	P	Pn	13 24 21.3	-2.4
KBS				*es*	S	Sn	13 25 12.6	-9.3
KBS					IAML		13 25 20.1	
	comp=Z,184nm,0.8s							
KBS	Kingsbay	5.03	134	*de*	P	Pn	13 24 21.2	-2.6
KBS	Kingsbay	5.03	134	*i*	P	Pn	13 24 21.3	-2.4
KBS				*es*	S	Sn	13 25 12.5	-9.5
BRBB	Barentsburg B	5.98	134		Pn	Pn	13 24 36.0	-0.8
BRBB	Barentsburg B	5.98	134		S	Sn	13 25 36.6	-8.7
BRBB	Barentsburg B	5.98	134	*ep*	P	Pn	13 24 36.1	-0.7
BRBA	Barentsburg A	6.01	134		Pn	Pn	13 24 36.8	-0.5
BRBA	Barentsburg A	6.01	134	*ep*	P	Pn	13 24 36.2	-1.0
BRBA				*es*	S	Sn	13 25 38.3	-7.8
BRBA					IAML		13 25 43.3	
	comp=Z,66nm,0.6s							
SPA0	Spitsbergen Ar	6.10	129		Pn	Pn	13 24 35.9	-2.6
	baz=352,slow=12							
SPA0					Sn	Sn	13 25 40.7	-7.7
	baz=355,slow=22							
SPA0	Spitsbergen Ar	6.10	129		Pn	Pn	13 24 35.9	-2.6
	baz=352,slow=12							
SPA0					Sn	Sn	13 25 40.7	-7.7
	baz=355,slow=22							
SPITS	Spitsbergen Ar	6.10	129		P	Pn	13 24 35.6	-2.9
SPITS					S	Sn	13 25 38.4	-10
SPITS	Spitsbergen Ar	6.10	129		P	Pn	13 24 35.6	-2.9
SPITS	Spitsbergen Ar	6.10	129		Pn	Pn	13 24 35.8	-2.8
	baz=355,slow=9.2							
SPITS					Sn	Sn	13 25 40.6	-7.8
	baz=12,slow=8.5							
	comp=Z,73nm,0.5s							
SPB2	Spitsbergen Ar	6.11	129		Pn	Pn	13 24 35.8	-2.8
HSPB	Hornsund (broa	7.10	135		Pn	Pn	13 24 51.0	-1.2
HSPB	Hornsund (broa	7.10	135		P	Pn	13 24 51.3	-0.9
HSPB					S	Sn	13 26 05.8	-7.0
HSPB	Hornsund (broa	7.10	135	*ep*	P	Pn	13 24 50.9	-1.2
HOPEN	Hopen	8.46	122		Pn	Pn	13 25 08.4	-2.4
HOPEN	Hopen	8.46	122	*ep*	P	Pn	13 25 08.9	-1.9
NEEM	North Greenlan	8.98	257	*i*	P	Pn	13 25 15.3	-2.9
NEEM					IAML		13 28 25.6	
	comp=Z,256nm,2.5s							
NEEM	North Greenlan	8.98	257	*i*	P	Pn	13 25 15.3	-2.9
NEEM					IAML		13 28 25.6	
	comp=Z,256nm,2.5s							
EUNU	Eureka	11.11	298		Pn	Pn	13 25 44.3	-2.8
TULEG	Thule	11.92	273			Pn	13 25 53.1	-5.0
TULEG	Thule	11.92	273	*i*	P	Pn	13 25 54.0	-4.1
TULEG	Thule	11.92	273	*i*	P	Pn	13 25 54.0	-4.1
SUMG	Summit	12.06	229		Pn	Pn	13 25 57.0	-3.4
SUMG	Summit	12.06	229	*i*	P	Pn	13 25 57.4	-3.0
SUMG	Summit	12.06	229		P	Pn	13 25 57.0	-3.4
SUMG	Summit	12.06	229	*i*	P	Pn	13 25 57.4	-3.0
SCO	Scoresbysund	12.94	203	*i*	P	Pn	13 26 13.4	+1.4
SCO	Scoresbysund	12.94	203	*i*	P	Pn	13 26 13.4	+1.4
UPNV	Upernavik	13.74	251	*i*	P	Pn	13 26 17.0	-5.9
UPNV	Upernavik	13.74	251	*i*	P	Pn	13 26 17.0	-5.9
HAMF	Hammerfest	13.87	135	*e*	P	Pn	13 26 22.7	-2.1
TRO	Tromso	14.47	142		P	Pn	13 26 33.7	+0.7
TRO	Tromso	14.47	142	*e*	P	Pn	13 26 34.1	+1.2
JETT	Jettan, Norway	14.66	140		P	Pn	13 26 34.3	-1.3
JETT	Jettan, Norway	14.66	140		P	Pn	13 26 34.3	-1.3
VADS	Vadso	14.90	128	*e*	P	Pn	13 26 34.4	-4.5
VADS	Vadso	14.90	128		P	Pn	13 26 35.5	-3.3
KEV	Kevo	15.03	131		P	Pn	13 26 37.7	-2.8
KEV	Kevo	15.03	131			Pn	13 26 38.4	-2.2
KEV					IAmb	IAmb	13 26 42.5	
	comp=Z,65nm,1.0s							
KEV	Kevo	15.03	131	*e*	P	Pn	13 26 38.3	-2.2
KEV	Kevo	15.03	131		P	Pn	13 26 38.4	-2.2
KEV					pmax	pmax		
	comp=Z,65nm,1.0s							
ARA0	ARCESS Array S	15.11	133		P	Pn	13 26 39.8	-1.9
	baz=356,slow=12							
ARA0	ARCESS Array S	15.11	133		P	Pn	13 26 39.8	-1.9
	baz=356,slow=12							
ARCES	ARCESS Array B	15.11	133		Pn	Pn	13 26 39.2	-2.4
ARCES	ARCESS Array B	15.11	133		P	Pn	13 26 39.2	-2.4
ARCES					pmax	pmax		
	comp=Z,41nm,1.0s							
ARCES	ARCESS Array B	15.11	133		Pn	Pn	13 26 39.6	-2.0
	comp=Z,0.8nm,0.3s,baz=347,slow=12,SNR=22							
ARCES					Sn	Sn	13 29 11.4	-17
	baz=347,slow=20							
	comp=Z,27nm,0.8s							
ARCES	ARCESS Array B	15.11	133		P	Pn	13 26 39.9	-1.7
UMMG	Uummannaq	15.26	243	*i*	P	Pn	13 26 37.3	-6.2
UMMG	Uummannaq	15.26	243	*i*	P	Pn	13 26 37.3	-6.2
KTK1	Kautokeino	15.42	137		P	Pn	13 26 45.4	-0.3
KTK1	Kautokeino	15.42	137	*ep*	P	Pn	13 26 45.6	-0.1
ICESG	Greenland Ices	15.54	226	*i*	P	Pn	13 26 42.3	-5.2
ICESG	Greenland Ices	15.54	226	*i*	P	Pn	13 26 42.3	-5.2
STEI	Steigen	15.89	148	*ep*	P	P	13 26 53.9	-1.7
HEF	Hetta	16.05	137	*ep*	P	Pn	13 26 51.7	-2.2
TERR	Teriberka	16.37	122		P	Pn	13 26 55.5	-2.4
FAUS	Fauske	16.44	149		P	P	13 27 03.6	+2.0
FAUS	Fauske	16.44	149	*ep*	P	P	13 27 00.6	-0.9
SALU	Saltoluokta	16.66	144	*ep*	P	P	13 27 05.8	+1.7
RES	Resolute Bay	16.67	292		Pn	Pn	13 26 55.8	-5.8
RES					IAmb	IAmb	13 27 01.9	
	comp=Z,34nm,0.8s							
RES	Resolute Bay	16.67	292		P	Pn	13 26 55.8	-5.8
RES					pmax	pmax		
	comp=Z,34nm,0.9s							
RES	Resolute Bay	16.67	292		Pn	Pn	13 26 56.4	-5.3
	comp=Z,3.3nm,0.3s,baz=41,slow=11,SNR=38							
SGF	Sodankyl	17.24	134		P	Pn	13 27 09.4	+0.5
LVZ	Lovozero	17.58	123		Pn	Pn	13 27 09.0	-4.2
LVZ	Lovozero	17.58	123	*de*	P	P	13 27 14.3	0.0
LVZ					pmax	pmax		
	comp=Z,88nm,1.0s							
APA0	Apatity Array	17.69	126		P	Pn	13 27 12.8	-1.8
	baz=342,slow=7.4							
APA0	Apatity Array	17.69	126		P	Pn	13 27 14.0	-0.5
APA0	Apatity Array	17.69	126		P	Pn	13 27 12.8	-1.8
	baz=342,slow=7.4							
APA	Apatity	17.77	125	⇓	*iP*	Pn	13 27 12.2	-3.3
APA					*i*		13 30 28.8	
APA					pmax	pmax		
	comp=Z,44nm,0.9s							
SFJD	Kangerlussuaq	18.63	238		P	P	13 27 20.2	-5.6
SFJD					IAmb	IAmb	13 27 35.9	
	comp=Z,191nm,1.6s							
SFJD	Kangerlussuaq	18.63	238	*i*	P	P	13 27 20.9	-4.9
SFJD	Kangerlussuaq	18.63	238		P	P	13 27 20.2	-5.6
SFJD					pmax	pmax		
	comp=Z,191nm,1.6s							
SFJD	Kangerlussuaq	18.63	238	*i*	P	P	13 27 20.9	-4.9
SFJD	Kangerlussuaq	18.63	238		P	P	13 27 21.2	-4.6
	comp=Z,54nm,0.8s,baz=16,slow=11,SNR=22							
SFJD					S	Sn	13 30 34.0	-20
	comp=Z,27nm,0.9s,baz=294,slow=21,SNR=2.3							
DY2G	Dye2	18.70	232	*i*	P	P	13 27 23.8	-3.0
DY2G	Dye2	18.70	232	*i*	P	P	13 27 23.8	-3.0
ANGG	Ammassalik, Gr	18.77	221	*i*	P	Pn	13 27 31.4	+3.6
ANGG	Ammassalik, Gr	18.77	221	*i*	P	Pn	13 27 31.4	+3.6
ISOG	Isortoq, Green	18.95	223	*i*	P	Pn	13 27 31.4	+1.5
ISOG	Isortoq, Green	18.95	223	*i*	P	Pn	13 27 31.4	+1.5
MSF	Maaselka	18.97	132		P	P	13 27 27.6	-1.9
OUL	Oulu	19.50	136		P	P	13 27 34.9	-0.4
NOD	Norderasen	20.32	151	*ep*	P	P	13 27 45.3	+1.0
AKN	Aaknes	21.20	162		P	P	13 27 54.8	+1.0
AKN	Aaknes	21.20	162		P	P	13

PUL pmax pmax
comp=Z,56nm,0.8s
A21K Barrow 25.13 337 P **P** 13 28 32.7 -0.2
baz=8.3
B22K Teshekpuk Lake 25.94 335 P **P** 13 28 40.9 +0.5
baz=8.8
D28M Stokes Point 26.00 323 P **P** 13 28 41.1 +0.1
baz=12
D27M Malcolm River 26.25 324 P **P** 13 28 43.3 0.0
baz=11
C24K Franklin Bluff 26.29 331 P **P** 13 28 43.4 -0.1
baz=9.8
B20K Meade River 26.46 337 P **P** 13 28 45.7 +0.6
baz=7.8
D25K Kavik River 26.54 329 P **P** 13 28 46.0 +0.1
baz=10
INK Inuvik 26.60 318 P **P** 13 28 45.1 -1.2
INK Inuvik 26.60 318 P **P** 13 28 46.8 +0.5
baz=13,SNR=8.8
INK Inuvik 26.60 318 P **P** 13 28 45.2 -1.2
comp=Z,4.6nm,0.7s,baz=6.7,slow=10,SNR=16
comp=Z,4.6nm,0.7s
B21K Ikpikpuk River 26.72 335 P **P** 13 28 47.5 +0.1
baz=8.3
E28M Babbage River 26.78 323 P **P** 13 28 47.7 -0.3
baz=12
D24K Happy Valley 26.86 331 P **P** 13 28 49.0 +0.3
baz=9.6
E29M Blow River 26.87 322 P **P** 13 28 48.9 +0.1
E29M Blow River 26.87 322 P **P** 13 28 48.9 +0.1
baz=12,SNR=18
D23K Nanushuk River 27.15 332 P **P** 13 28 51.2 -0.2
baz=9.1
C21K Knifeblade Rid 27.19 335 P **P** 13 28 51.5 -0.2
baz=8.1
B18K Kokolik River 27.30 341 P **P** 13 28 52.6 -0.2
baz=6.5
D22K Ayikyak River 27.35 334 P **P** 13 28 53.2 0.0
baz=8.6
F30M Barrier River 27.47 320 P **P** 13 28 53.9 -0.3
baz=12
F31M Tsiigehtchic 27.47 318 P **P** 13 28 53.9 -0.2
baz=12
C19K Lookout Ridge 27.47 339 P **P** 13 28 53.9 -0.3
baz=6.9
E25K Arctic Village 27.68 328 P **P** 13 28 54.5 -1.6
E25K Arctic Village 27.68 328 P **P** 13 28 56.4 +0.4
baz=10.0
D20K Etivluk River 27.72 337 P **P** 13 28 56.6 +0.1
baz=7.6
F28M Old Crow 27.78 323 P **P** 13 28 57.3 +0.3
baz=11
EKA Eskdalemuir Ar 27.81 175 P **P** 13 28 57.1 -0.3
comp=Z,2.9nm,0.9s,baz=11,slow=8.1,SNR=5.3
comp=Z,2.9nm,0.9s
E21K Killik River 27.86 334 P **P** 13 28 57.7 0.0
baz=8.1
E23K Chandalar 27.99 331 P **P** 13 28 58.4 -0.5
baz=9.0
C18K Utukok River 28.00 340 P **P** 13 28 58.8 -0.1
baz=6.4
D19K Kuna River 28.01 338 P **P** 13 28 58.9 -0.2
baz=7.2
G31M Satah River 28.02 318 P **P** 13 28 59.2 +0.1
baz=12
E22K Anaktuvuk Pass 28.04 333 P **P** 13 28 59.5 +0.1
baz=8.6
G30M tAoh Zraii Nji 28.12 320 P **P** 13 29 00.4 +0.3
baz=12
E20K Nigu River 28.16 336 P **P** 13 28 59.9 -0.5
baz=7.6
F25K Christian Rive 28.20 328 P **P** 13 29 00.9 +0.1
baz=9.8
C17K DeLong Mountai 28.25 342 P **P** 13 29 00.9 -0.2
baz=5.9
KIRV Kirov 28.25 113⇓ *e*P **P** 13 29 01.7 +0.5
KIRV Kirov 28.25 113 LR LR 13 43 09.1
comp=Z,6μm,18.2s,baz=353,slow=43
F24K Squaw Lake 28.42 329 P **P** 13 29 02.5 -0.3
baz=9.2
C16K Lisburne Hills 28.53 343 P **P** 13 29 03.3 -0.3
baz=5.3
RDOG Red Dog Mine 28.66 341 P **P** 13 29 04.1 -0.7
RDOG Red Dog Mine 28.66 341 P **P** 13 29 04.8 0.0
baz=5.9,SNR=7.0
EPYK Eagle Plains 28.76 320 P **P** 13 29 05.5 -0.3
baz=11
COLD Coldfoot 28.85 331 P **P** 13 29 06.2 -0.3
baz=8.7
E19K Redstone River 29.00 337 P **P** 13 29 07.4 -0.5
baz=7.1
F21K Alatna River 29.04 334 P **P** 13 29 08.6 +0.3
baz=7.9
G25K Bearman Lake 29.05 328 P **P** 13 29 08.1 -0.2
baz=9.4
E18K Tukpahlearik C 29.20 339 P **P** 13 29 09.0 -0.5
baz=6.3
G24K Hadweenzic Riv 29.21 329 P **P** 13 29 09.1 -0.6
baz=9.1
G22K Bettles 29.23 332 P **P** 13 29 09.5 -0.3
baz=8.3
H27K Steamboat Moun 29.26 324 P **P** 13 29 10.2 -0.1
baz=10
F20K Avaraart Lake 29.34 335 P **P** 13 29 10.1 -0.7
baz=7.4
G23K Bananza Creek 29.35 331 P **P** 13 29 10.9 -0.1
baz=8.6
E17K Hotham Inlet 29.59 340 P **P** 13 29 11.9 -1.1
baz=6.0
NACGM Naroch 29.65 139 *e*P **P** 13 29 14.2 +0.6
F19K Shaleruckim Mo 29.65 337 P **P** 13 29 12.6 -1.0
baz=6.9
G21K Allakaket 29.75 333 P **P** 13 29 13.8 -0.7
baz=7.8
MOS Moscow 29.79 127 *e*P **P** 13 29 18.3 +3.4
MOS *e* 13 30 11.1
MOS *e*S **S** 13 34 14.3 +3.2
MOS MLR MLR
comp=Z,5μm,16.0s
MOS MLR MLR
comp=N,4μm,15.0s
I30M Mount Dempster 29.86 319 P **P** 13 29 14.8 -0.8
baz=11
I27K Kandik River 29.89 324 P **P** 13 29 15.0 -0.8
baz=10.0
I28M Miner Creek 29.92 322 P **P** 13 29 15.5 -0.6
baz=10
F18K Selawik 29.97 338 P **P** 13 29 16.0 -0.4
baz=6.4
H24K Noodor Dome 30.09 329 P **P** 13 29 16.8 -0.8
baz=8.8
MNK Minsk 30.13 138 *i*P **P** 13 29 18.4 +0.4
comp=E,8.0nm,0.8s
MNK *i*P **P** 13 29 18.4 +0.4
comp=N,52nm,1.2s
MNK *i*P **P** 13 29 18.4 +0.4
comp=Z,12nm,1.1s,baz=352
MNK *i*PP **PnPn** 13 30 15.7 +1.0
MNK *i*S **S** 13 34 18.5 +2.0
MNK *i*SS **SnSn** 13 35 53.2 +4.4
MNK *i*LQ LQ 13 39 07.0
MNK *i*LR LR 13 41 12.3
MNK *i*LRM MLR 13 41 57.5
comp=N,3μm,24.2s
MNK *i*LRM MLR 13 42 05.1
comp=Z,4μm,19.4s
MNK *i*LRM MLR 13 43 29.0
comp=E,421nm,18.1s
MNK Minsk 30.13 138 *i*P **P** 13 29 18.3 +0.4
MNK *i* 13 30 15.7
MNK *i*S **S** 13 34 18.5 +2.0
MNK *i*SS **SnSn** 13 35 53.1 +4.4
MNK pmax pmax
comp=Z,12nm,1.1s
MNK pmax pmax
comp=E,8.0nm,0.9s
MNK pmax pmax
comp=N,52nm,1.2s
MNK MLR MLR
comp=N,3μm,24.0s
MNK MLR MLR
comp=Z,4μm,19.0s
MNK MLR MLR
comp=E,421nm,18.0s
F17K Baldwin Pennin 30.20 340 P **P** 13 29 18.6 +0.2
baz=6.0
H22K Ishtalitna Cre 30.25 332 P **P** 13 29 18.6 -0.3
baz=8.1
PRP Porcupine Dome 30.25 327 P **P** 13 29 18.9 -0.2
baz=9.2
G19K Purcell Mounta 30.31 336 P **P** 13 29 19.3 -0.1
baz=6.9
OBN Obninsk 30.31 128 *i*P **P** 13 29 20.8 +1.4
OBN *i* 13 30 16.7
OBN *i*S **S** 13 34 17.6 -1.6
OBN pmax pmax
comp=Z,37nm,1.6s
OBN MLR MLR
comp=Z,5μm,16.0s
YKA Yellowknife Ar 30.48 299 P **P** 13 29 20.4 -0.5
comp=Z,0.8nm,0.7s,baz=9.2,slow=9.2,SNR=11
comp=Z,0.8nm,0.7s
J30M Hart River 30.50 319 P **P** 13 29 21.6 +0.3
baz=11
H21K Melozitna Rive 30.56 333 P **P** 13 29 21.4 -0.3
baz=7.7
G18K Tagagawik 30.63 337 P **P** 13 29 21.8 -0.5
baz=6.5
WRGLY Wrigley 30.67 307 P **P** 13 29 22.5 -0.1
baz=12
POKR Poker Plat Res 30.77 328 P **P** 13 29 23.3 -0.3
baz=8.7
H20K Anotleneega Mo 30.84 334 P **P** 13 29 23.3 -0.9
baz=7.2
I23K Minto, Yukon-K 30.87 330 P **P** 13 29 23.5 -0.8
baz=8.3
COLA College 31.04 328 P **P** 13 29 25.3 -0.6
baz=8.5
MLY Manley 31.07 331 P **P** 13 29 25.4 -0.8
baz=8.0
F15K North Star Dit 31.07 342 IAmb IAmb 13 29 37.4
comp=Z,41nm,1.8s
F15K North Star Dit 31.07 342 P **P** 13 29 25.4 -0.8
baz=5.1
ILAR Eielson Array 31.08 328 P **P** 13 29 24.2 -2.1
comp=Z,1.5nm,0.6s,baz=12,slow=9.4,SNR=1.0
comp=Z,1.5nm,0.6s
G17K Kiwalik Mounta 31.11 339 P **P** 13 29 25.9 -0.6
baz=6.0
DAWY Dawson 31.24 321 P **P** 13 29 27.6 -0.1
baz=9.9
SVE Sverdlovsk 31.29 102 *e*P **P** 13 29 32.2 +4.1
SVE *e*S **S** 13 34 41.5 +6.9
SVE pmax pmax
comp=Z,27nm,1.8s
G16K Koyuk River 31.30 340 P **P** 13 29 27.8 -0.3
baz=5.6
K29M Barlow Dome 31.32 320 P **P** 13 29 28.0 -0.4
baz=10
TNA Tin City 31.33 345 P **P** 13 29 27.9 -0.5
baz=4.3
H18K Honhosa River 31.36 337 P **P** 13 29 28.1 -0.6
baz=6.4
F14K Arctic Creek 31.37 343 P **P** 13 29 28.2 -0.5
baz=4.7
ARU Arti 31.43 104 P **P** 13 29 29.5 +0.2
ARU Arti 31.43 104 *d*P **P** 13 29 30.9 +1.6
ARU 13 30 32.6
ARU S **S** 13 34 40.4 +3.6
ARU SS **SnSn** 13 36 31.3 +11
ARU pmax pmax
comp=Z,14nm,1.1s
K27K Chicken 31.48 323 P **P** 13 29 29.2 -0.6
baz=9.4
FCC Fort Churchill 31.75 278 P **P** 13 29 32.5 +0.4
FCC Fort Churchill 31.75 278 P **P** 13 29 32.5 +0.4
FCC pmax pmax
comp=Z,24nm,1.5s
G15K Niukluk 31.76 342 P **P** 13 29 31.6 -0.6
baz=5.1
BPAW Bear Paw Mtn. 32.01 331 P **P** 13 29 33.4 -1.1
baz=7.7
H16K Elim 32.05 340 P **P** 13 29 33.2 -1.5
baz=5.5
ANM Nome 32.24 343 P **P** 13 29 35.9 -0.6
ANM Nome 32.24 343 P **P** 13 29 35.3 -1.1
baz=4.8
ANM Nome 32.24 343 P **P** 13 29 35.9 -0.6
ANM pmax pmax
comp=Z,16nm,1.2s
SCHQ Schefferville 32.30 249 P **P** 13 29 37.1 +0.1
comp=Z,3.3nm,0.7s,baz=19,slow=5.9,SNR=8.5
comp=Z,3.3nm,0.7s
CLL Collm 32.33 156 *e*P **P** 13 29 39.0 +1.7
CLL *i* 13 29 45.0
CLL Collm 32.33 156 *e*P **P** 13 29 39.0 +1.7
CLL *i*x x 13 29 45.0
CLL *e*S **S** 13 34 48.0 -2.9
M30M Minto, Yukon 32.51 318 P **P** 13 29 38.1 -0.7
baz=10.0
FARO Faro, Yukon 32.56 315 P **P** 13 29 39.0 -0.3
baz=10
L26K Log Cabin Wild 32.57 324 P **P** 13 29 38.1 -1.2
baz=8.9
M31M Drury Creek, Y 32.68 316 P **P** 13 29 40.1 -0.2
baz=10
CAST Castle Rocks 32.75 331 P **P** 13 29 40.4 -0.5
baz=7.4
PAX Paxson 32.77 326 P **P** 13 29 40.7 -0.5
baz=8.5
M29M Somme Creek 32.78 320 P **P** 13 29 39.8 -1.5
baz=9.7
BRG Berggiesshubel 32.81 155 *e*P **P** 13 29 42.9 +1.4
BRG Amp 13 29 45.0
comp=Z,12nm,1.1s
BRG Berggiesshubel 32.81 155 P P 13 29 49.8 +8.2
BRG Amp 13 29 51.3
comp=Z,19nm,1.3s
CHVC Chvalec 33.21 153 *e*P **P** 13 29 46.6 +1.5
CHVC *ex* x 13 29 55.4
CHVC Chvalec 33.21 153 *e*P **P** 13 29 46.6 +1.5
CHVC *e* 13 29 55.4
DPC Dobruska-Polom 33.46 152 *e*P **P** 13 29 48.4 +1.1
DPC Dobruska-Polom 33.46 152 *e*P **P** 13 29 48.4 +1.1
YAK Yakutsk 33.59 36 P **P** 13 29 46.5 -1.7
YAK Yakutsk 33.59 36 *e*P **P** 13 29 46.5 -1.7
YAK *e**PP **pwP** 13 29 52.8 -0.8
YAK *e*S **S** 13 35 09.1 -1.2
YAK pmax pmax
comp=Z,22nm,0.8s
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,1.0nm,0.6s
YAK smax smax
comp=E,348nm,7.1s
YAK smax smax
comp=N,177nm,4.0s
YAK MLR MLR
comp=N,2μm,20.0s
YAK MLR MLR
comp=E,378nm,23.0s
PRU Pruhonice 33.72 155 *e*P **P** 13 29 51.3 +1.8
PRU Pruhonice 33.72 155 *e*P **P** 13 29 51.3 +1.8
KRLC Kraliky 33.76 152 *e*P **P** 13 29 50.8 +0.9
KRLC Kraliky 33.76 152 *e*P **P** 13 29 50.8 +0.9
L20K Farewell, AK 33.79 333 P **P** 13 29 49.1 -0.9
baz=6.8
OJC Ojcow 33.80 148 IAmb IAmb 13 29 59.2
comp=Z,28nm,1.3s
SEY Seymchan 33.92 17⇓ *i*P **P** 13 29 52.2 +1.1
SEY pmax pmax
comp=Z,32nm,2.3s
SEY Seymchan 33.92 17 P **P** 13 29 49.8 -1.3
comp=Z,2.1nm,0.6s,baz=324,slow=7.2,SNR=11
comp=Z,2.1nm,0.6s
J14K Nanvaranak Lak 33.99 341 P **P** 13 29 50.8 -0.8
baz=4.9
AKASG Malin Array Be 34.02 138 P **P** 13 29 50.4 -1.7
comp=Z,2.8nm,0.7s,baz=351,slow=9.2,SNR=10.0
comp=Z,2.8nm,0.7s
KIEV Kiev 34.02 138 P **P** 13 29 51.5 -0.6
KIEV Kiev 34.02 138 P **P** 13 29 51.5 -0.6
KIEV pmax pmax
comp=Z,13nm,1.0s
MORC Moravsky Berou 34.10 151 ⇑P **P** 13 29 54.4 +1.5
MORC Moravsky Berou 34.10 151 *e*P **P** 13 29 54.0 +1.1
MORC Moravsky Berou 34.10 151 ⇑P **P** 13 29 54.4 +1.5
BELG Belogornoye 34.13 117 *d*P **P** 13 29 55.9 +2.9
BELG pmax pmax
comp=Z,10.0nm,1.4s
ZVC Zvikov 34.25 155 *e*P **P** 13 29 55.6 +1.5
ZVC *ex* x 13 30 01.9
K15K Wolf Creek Mou 34.36 339 P **P** 13 29 54.0 -0.8
baz=5.3
PMR Palmer 34.39 329 P **P** 13 29 54.1 -1.0
baz=7.6
M19K Big River Lodg 34.39 333 P **P** 13 29 54.4 -0.8
baz=6.6
P33M Teslin, Yukon 34.51 314 P **P** 13 29 55.2 -1.1
baz=10.0
VRAC Vranov 34.51 152 ⇑P **P** 13 29 56.4 0.0
VRAC Vranov 34.51 152 *e*P **P** 13 29 57.8 +1.4
VRAC Vranov 34.51 152 ⇑P **P** 13 29 56.4 0.0
KNK Knik Glacier 34.52 328 P **P** 13 29 56.0 -0.3
baz=7.7
KHC Kasperske Hory 34.53 156 *e*P **P** 13 29 59.0 +2.4
KHC *e*PP **PP** 13 31 15.5 +1.0
KHC Kasperske Hory 34.53 156 ⇓ *i*P **P** 13 29 59.4 +2.8
KHC pmax pmax
comp=Z,50nm,3.2s
SUA Susitna One 34.62 330 P **P** 13 29 56.3 -1.0
baz=7.2
KRUC Moravsky 34.75 153 *e*P **P** 13 29 59.8 +1.4
GEC2 GERESS Array S 34.82 156 IAmb IAmb 13 30 09.1
comp=Z,38nm,1.5s
GERES GERESS Array B 34.82 156 P **P** 13 29 59.7 +0.5
GERES GERESS Array B 34.82 156 P **P** 13 29 59.3 +0.1
comp=Z,5.1nm,0.8s,baz=9.8,slow=8.7,SNR=24
comp=Z,5.1nm,0.8s
LANS Liptovska Anna 34.84 149 *e*P **P** 13 30 01.2 +1.9
LANS Liptovska Anna 34.84 149 *e*P **P** 13 30 01.2 +1.9
K13K Kusilvak Mount 34.85 342 P **P** 13 29 58.1 -1.0
baz=4.6
CKRC Cesky Krumlov 34.88 155 *e*P **P** 13 30 01.5 +2.0
CKRC Cesky Krumlov 34.88 155 *e*P **P** 13 30 01.5 +2.0
O29M Mount Kennedy 34.90 319 P **P** 13 29 58.6 -1.2
baz=9.1
JAVC Velka Javorina 35.02 151 *e*P **P** 13 30 02.9 +2.0
BFO Black Forest 35.10 162 P **P** 13 30 02.4 +0.9
BFO IAmb IAmb 13 30 12.5
comp=Z,23nm,1.0s
BFO Black Forest 35.10 162 P **P** 13 30 02.4 +0.9
BFO pmax pmax
comp=Z,23nm,1.0s
ECH Echery 35.17 163 P **P** 13 30 02.7 +0.6
ECH IAmb IAmb 13 30 07.8
comp=Z,36nm,1.2s
ECH Echery 35.17 163 P **P** 13 30 02.7 +0.6
ECH pmax pmax
comp=Z,36nm,1.2s
CRVS Cervenica-Dubn 35.22 147 *e*P **P** 13 30 05.6 +3.1
CRVS Cervenica-Dubn 35.22 147 *e*P **P** 13 30 05.6 +3.1
CRVS *e* 13 33 59.6
MODS Modra-Piesok 35.49 152 *e*P **P** 13 30 06.9 +2.1
MODS Modra-Piesok 35.49 152 *e*P **P** 13 30 06.9 +2.1
PNL Peninsula 35.60 320 P **P** 13 30 05.1 -0.6
baz=8.8
Q32M Nakina River 35.70 313 P **P** 13 30 06.1 -0.6
baz=9.8
MOA Molln 35.84 155 *e*pP **P** 13 30 09.2 +1.3
comp=Z,3.6nm,0.8s
CONA Conrad Observa 35.85 153 *e*pP **P** 13 30 09.8 +1.8
comp=Z,3.6nm,0.7s
P23K Montague Islan 35.86 327 P **P** 13 30 06.3 -1.5
baz=7.6
M14K Bethel 35.92 339 P **P** 13 30 07.2 -1.1
baz=5.0
DLBC Dease Lake 36.01 311 P **P** 13 30 08.2 -1.0
baz=10.0
LOR Lormes 36.01 167 *e*P **P** 13 30 09.7 +0.4
RETA Reutte 36.04 159 *e*pP **P** 13 30 12.6 +3.0
comp=Z,10nm,1.4s
O19K Port Alsworth 36.09 333 P **P** 13 30 09.2 -0.6
baz=6.4
RONA Rosalia, Austr 36.10 153 *e*pP **P** 13 30 12.0 +1.9
comp=Z,3.2nm,0.7s
BRVK Borovoye 36.15 93 P **P** 13 30 10.7 +0.2
BRVK IAmb IAmb 13 30 15.4
comp=Z,62nm,1.8s
BRVK Borovoye 36.15 93⇑ *e*P **P** 13 30 12.0 +1.6
BRVK pmax pmax
comp=Z,42nm,2.1s
MOTA Moosalm 36.20 159 *e*pP **P** 13 30 12.9 +1.9
comp=Z,13nm,1.6s
BVA0 Borovoye Array 36.20 93 *i*P **P** 13 30 11.0 +0.2
BVAR Borovoye Array 36.20 93 P **P** 13 30 11.8 +0.9
comp=Z,4.1nm,0.8s,baz=344,slow=9.2,SNR=17
comp=Z,4.1nm,0.8s
DAVA Damuels 36.20 160 *e*P **P** 13 30 10.5 -0.6
comp=Z,18nm,1.5s
SSF Saint Saulge 36.21 168 *e*P **P** 13 30 12.4 +1.4
WATA Walderalm 36.23 158 *e*pP **P** 13 30 13.3 +2.1
comp=Z,10.0nm,1.1s
WTTA Wattenberg 36.30 158 *e*pP **P** 13 30 13.9 +1.9
comp=Z,12nm,1.7s
M13K Dall Lake 36.31 340 P **P** 13 30 09.2 -2.5
baz=4.7
AVF Avril sur Loir 36.48 168 *e*P **P** 13 30 13.9 +0.7
FETA Feichten 36.50 159 *e*pP **P** 13 30 17.3 +3.7
comp=Z,13nm,1.9s
KBA Koelnbreinsper 36.57 156 *e*pP **P** 13 30 16.9 +2.6
comp=Z,4.7nm,0.9s
MFF Saint Martin d 36.59 172 *e*P **P** 13 30 15.7 +1.5
SMF Signal de Mont 36.63 167 *e*P **P** 13 30 16.4 +1.8
FFC Flin Flon 36.65 284 P **P** 13 30 15.4 +0.8
FFC Flin Flon 36.65 284 P **P** 13 30 15.4 +0.8
FFC pmax pmax
comp=Z,9.0nm,1.1s
BGF Bois d'Agland 36.70 168 *e*P **P** 13 30 16.0 +0.9
CABF La Chapelle 36.74 165 *e*P **P** 13 30 16.8 +1.2
BURAR Bucovina Array 36.77 143 ⇑P **P** 13 30 16.7 +0.8
BURAR Bucovina Array 36.77 143 ⇑P **P** 13 30 16.7 +0.8
ABTA Abfaltersbach 36.86 157 *e*pP **P** 13 30 19.3 +2.7
comp=Z,3.8nm,0.9s
TCF Toulx Ste Croi 36.95 169 *e*P **P** 13 30 18.9 +1.6
TUE Stuetta 36.99 161 P **P** 13 30 18.9 +1.0
MYKA Terra Mystica 37.03 156 *e*pP **P** 13 30 19.8 +1.8
comp=Z,14nm,1.4s
SOKA Soboth 37.05 154 *e*pP **P** 13 30 19.6 +1.4
comp=Z,8.5nm,1.3s
ZAA0 Zalesovo Array 37.06 79 P **P** 13 30 17.8 -0.3
ZAA0 IAmb IAmb 13 30 23.3
comp=Z,41nm,1.2s
ZALV Zalesovo Beam 37.06 79 P **P** 13 30 18.0 -0.1
comp=Z,7.7nm,0.7s,baz=345,slow=8.0,SNR=30
comp=Z,7.7nm,0.7s
OBKA Obir 37.20 155 *e*pP **P** 13 30 21.5 +2.1
comp=Z,9.5nm,1.0s
AKTO Aktyubinsk 37.25 107 P **P** 13 30 19.4 -0.4
CIMO Cimolais 37.29 157 IAmb IAmb 13 30 29.6
comp=Z,19nm,1.3s
DRGR 37.41 146 ⇑P **P** 13 30 23.4 +2.1
DRGR 37.41 146 ⇑P **P** 13 30 23.4 +2.1
LPL La Plagne 37.85 164 *e*P **P** 13 30 28.0 +2.8
SIRR Siria 37.86 147 ⇓P **P** 13 30 26.1 +1.0
LPG La Plagne 37.87 164 *e*P **P** 13 30 27.4 +2.0
TESR Tescani 37.97 141 ⇑P **P** 13 30 26.7 +0.8
SSB Saint Sauveur 38.02 167 *e*P **P** 13 30 27.3 +0.9
TEOL Teolo 38.20 158 IAmb IAmb 13 31 55.5
comp=Z,24nm,0.8s
SURR Surduc 38.40 147 ⇑P **P** 13 30 30.6 +1.0
DOPR Dopca 38.42 143 ⇓P **P** 13 30 31.1 +1.3
ORIF Oris-en-Rattie 38.42 165 *e*P **P** 13 30 32.0 +2.1
VIVF Saint-Julien-l 38.45 166 *e*P **P** 13 30 31.2 +1.2
BZS Buzias 38.50 147 ⇑P **P** 13 30 31.1 +0.7
BZS Buzias 38.50 147 ⇑P **P** 13 30 31.1 +0.7
AB31 Akbulak array 38.64 105 *i*P **P** 13 30 33.6 +2.1
ABKAR Akbulak array 38.64 105 P **P** 13 30 31.9 +0.4
FRGS Fruska Gora 38.84 149 ⇑P **P** 13 30 35.4 +2.1
MDVR Moldovita 39.34 147 ⇑P **P** 13 30 38.6 +1.1
EDM Edmonton 39.44 295 IAmb IAmb 13 30 49.1
comp=Z,112nm,1.7s
BRZS Berezniki 39.47 92 *e*P **P** 13 30 39.6 +1.2
comp=Z,65nm,2.4s,baz=92
BRZS *e*S **S** 13 36 42.1 +1.8
baz=92
BRZS Berezniki 39.47 92 *e*P **P** 13 30 39.6 +1.2
BRZS *e*S **S** 13 36 42.0 +1.8
BRZS pmax pmax
comp=Z,65nm,2.4s
KURK Kurchatov 39.48 86 P **P** 13 30 37.7 -0.8
KURK Kurchatov 39.48 86 P **P** 13 30 37.7 -0.8
KURK pmax pmax
comp=Z,47nm,0.9s
KURBB Kurchatov Arra 39.56 86 P **P** 13 30 39.1 0.0
comp=Z,22nm,1.0s,baz=352,slow=7.2,SNR=82
comp=Z,22nm,1.0s
BATG Bathurst New B 39.65 246 P **P** 13 30 41.0 +1.0

LMQ La Malbaie 39.87 251 P P 13 30 42.5 +0.7
ERBR Yeremizino-Bor 39.99 126 eP P 13 30 42.3 -0.5
ERBR e*PP sP 13 30 45.2 +0.8
ERBR eS S 13 36 48.0 0.0
ERBR pmax pmax
comp=Z,10.0nm,0.7s
ERBR MLR MLR
comp=N,4μm,11.0s
ERBR MLR MLR
comp=Z,3μm,15.0s
LMR La Mourre 40.02 165 eP P 13 30 45.1 +2.0
EPF Esparros 40.17 172 eP P 13 30 45.1 +0.7
ULM Lac du Bonnet 40.30 277 P P 13 30 45.8 +0.4
comp=Z,1.8nm,0.4s,baz=8.4,slow=11,SNR=5.2
comp=Z,1.8nm,0.4s
BLKB Belogradchik 40.56 146 ⇑P P 13 30 48.3 +0.7
FDMO Fiordimonte 40.59 157 IAmb IAmb 13 30 57.5
comp=Z,43nm,1.3s
ANN Anapa 40.60 130 eP P 13 30 44.8 -3.0
ANN e*PP sP 13 30 50.0 +0.5
ANN eS S 13 36 52.6 -4.5
ANN pmax pmax
comp=Z,97nm,1.0s
ANN MLR MLR
comp=Z,4μm,15.0s
ANN MLR MLR
comp=E,2μm,12.0s
NRCA Norcia 40.79 157 P P 13 30 50.7 +1.2
LABN Labinsk 41.07 126 eP P 13 30 52.1 +0.3
LABN e*PP sP 13 30 54.7 +1.3
LABN eS S 13 37 05.7 +1.4
LABN pmax pmax
comp=Z,23nm,0.7s
LABN MLR MLR
comp=E,3μm,11.0s
LABN MLR MLR
comp=N,4μm,12.0s
LABN MLR MLR
comp=Z,2μm,11.0s
PBRG Braganca 41.33 180 eP P 13 30 59.0 +5.0
DGZ Jazzator, Alta 41.55 77 d iP P 13 30 56.8 +1.0
DGZ pmax pmax
comp=Z,52nm,1.4s
POLO Lamas de Olo 41.76 181 eP P 13 30 59.0 +1.4
comp=Z,24nm,1.1s
PVRL Vila Real 41.85 181 eP P 13 31 00.5 +2.2
B35A Bob, Littlefor 41.90 275 IAmb IAmb 13 32 32.4
comp=Z,63nm,1.8s
MVO Moncorvo 41.97 180 eP P 13 31 01.8 +2.6
comp=Z,63nm,1.7s
PKME Peaks-Kenny Pk 42.00 249 P P 13 30 59.1 -0.3
baz=9.3
EYMN Ely 42.03 272 P P 13 31 00.8 +1.1
EYMN Ely 42.03 272 P P 13 30 58.7 -1.0
baz=10,SNR=7.1
KBZ Khabaz 42.20 124 d iP P 13 31 02.5 +1.6
KBZ pmax pmax
comp=Z,48nm,2.7s
KBZ Khabaz 42.20 124 P P 13 31 01.6 +0.7
comp=Z,11nm,0.9s,baz=345,slow=6.3,SNR=12
comp=Z,11nm,0.9s
AGMN Agassiz Nation 42.22 277 P P 13 31 00.6 -0.5
baz=10
PVIS Viseu 42.41 181 eP P 13 31 07.3 +4.4
MTE Manteigas 42.73 180 eP P 13 31 09.8 +4.3
UNV Unalaska Valle 43.01 342 P P 13 31 06.7 -0.7
baz=3.5
DGMT Dagmar 43.06 285 P P 13 31 07.8 -0.2
baz=10
PCAS Casmilo, Conde 43.08 182 eP P 13 31 10.7 +2.5
MDND Maddock 43.12 280 P P 13 31 07.6 -0.8
baz=10
ZEI Tsey 43.23 123 eP P 13 31 09.9 +0.3
ZEI pmax pmax
comp=Z,10.0nm,1.1s
LONY Lake Ozonia 43.25 254 IAmb IAmb 13 31 33.9
comp=Z,40nm,1.1s
LONY Lake Ozonia 43.25 254 P P 13 31 10.5 +0.9
baz=9.4
PCBR Castelo Branco 43.29 180 eP P 13 31 11.8 +1.9
comp=Z,105nm,1.7s
LBNH Lisbon 43.32 251 P P 13 31 10.7 +0.6
baz=9.2
E38A The Farm, Brul 43.36 272 IAmb IAmb 13 32 38.8
comp=Z,29nm,1.0s
ESBB Sonseca Array 43.47 176 IAmb IAmb 13 31 21.2
comp=Z,35nm,1.1s
ESDC Sonseca Array 43.47 176 P P 13 31 12.3 +0.9
ESDC Sonseca Array 43.47 176 P P 13 31 12.2 +0.7
comp=Z,8.8nm,0.9s,baz=360,slow=8.3,SNR=24
comp=Z,8.8nm,0.9s
PAB San Pablo 43.59 177 P P 13 31 11.5 -0.9
PAB San Pablo 43.59 177 P P 13 31 11.5 -0.9
PAB pmax pmax
comp=Z,32nm,1.0s
PMRV Marv??o 43.70 180 eP P 13 31 16.3 +3.1
comp=Z,56nm,1.4s
MAKZ Makanchi 43.73 83 P P 13 31 12.6 -0.8
MAKZ Makanchi 43.73 83 P P 13 31 11.8 -1.6
MK31 Makanchi Array 43.78 83 P P 13 31 14.1 +0.2
MK31 Makanchi Array 43.78 83 d iP P 13 31 13.8 -0.1
MKAR Makanchi Array 43.78 83 P P 13 31 13.9 0.0
MKAR Makanchi Array 43.78 83 P P 13 31 13.5 -0.4
comp=Z,7.7nm,0.7s,baz=352,slow=6.4,SNR=75
comp=Z,7.7nm,0.7s
PEA0B Petropavlovsk- 43.92 13 ⇑eP P 13 31 15.4 +0.5
PETK Petropavlovsk- 43.92 13 P P 13 31 14.0 -0.9
comp=Z,8.6nm,1.0s,baz=77,slow=8.1,SNR=4.4
comp=Z,8.6nm,1.0s
NIKH Nikolski High 43.97 344 P P 13 31 13.8 -1.4
baz=3.1
PMTG Montargil 44.06 181 eP P 13 31 18.0 +1.9
comp=Z,83nm,1.5s
PESTR Estremoz 44.26 181 eP P 13 31 19.3 +1.6
comp=Z,46nm,1.6s
PESTR Estremoz 44.26 181 P P 13 31 18.1 +0.3
BTLS Baital 44.50 92 eP P 13 31 20.9 +1.4
comp=Z,52nm,2.3s,baz=92
BTLS Baital 44.50 92 eP P 13 31 20.9 +1.4
BTLS pmax pmax
comp=Z,52nm,2.3s
EVO Evora 44.60 181 eP P 13 31 24.9 +4.5
NEW Newport 44.74 297 P P 13 31 23.1 +1.6
baz=9.3,SNR=7.6
SPMN Marine on St. 44.87 273 P P 13 31 23.5 +0.9
baz=9.9
PBAR Barrancos 44.95 180 eP P 13 31 25.8 +2.6
comp=Z,50nm,1.3s
PNCL Nicolau / Gran 45.02 182 eP P 13 31 28.1 +4.4
LAO LASA Array 45.05 286 P P 13 31 26.0 +2.0
baz=9.8,SNR=20
TDK Taldyqorghan 45.07 87 eP P 13 31 26.2 +2.0
baz=88
TDK Taldyqorghan 45.07 87 eP P 13 31 26.1 +2.0
PBEJ Beja 45.10 181 eP P 13 31 29.5 +5.1
HEH HeiHe 45.12 40 eP P 13 31 25.0 +0.6
HEH pmax pmax
comp=Z,16nm,1.6s
L61B Northampton 45.17 252 P P 13 31 26.3 +1.4
baz=9.0
BR131 Keskin Array S 45.29 135 ⇓eP P 13 31 28.5 +2.5
BRTR Keskin Array B 45.29 135 P P 13 31 26.3 +0.2
BRTR Keskin Array B 45.29 135 i P P 13 31 28.6 +2.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 45.29 135 P P 13 31 25.5 -0.6
comp=Z,1.8nm,0.8s,baz=353,slow=6.1,SNR=8.5
comp=Z,1.8nm,0.8s
MESJ Messejana 45.29 181 eP P 13 31 29.2 +3.3
comp=Z,62nm,1.5s
HIA Hailar 45.45 47 ⇑eP P 13 31 27.6 +0.5
HIA pmax pmax
comp=Z,18nm,1.7s
SONM Songino Array 45.55 60 P P 13 31 26.8 -1.2
comp=Z,1.1nm,0.8s,baz=335,slow=6.6,SNR=7.4
SONM LR LR 13 52 17.2
comp=Z,2μm,21.4s,baz=358,slow=38
comp=Z,1.1nm,0.8s
ULN Ulaanbaatar 45.59 59 P P 13 31 28.2 -0.2
ULN IAmb IAmb 13 32 55.0
comp=Z,41nm,1.4s
ULN Ulaanbaatar 45.59 59 ⇓eP P 13 31 28.9 +0.5
ULN pmax pmax
comp=Z,19nm,1.3s
KUU Kurty 45.91 90 eP P 13 31 32.1 +1.2
baz=90
KUU Kurty 45.91 90 eP P 13 31 32.0 +1.2
GNI Garni 45.93 123 ⇑eP P 13 31 32.9 +1.7
GNI pmax pmax
comp=Z,12nm,1.0s
KK31 Karatay Array 45.97 96 P P 13 31 31.7 +0.4
DZA Taraz 46.28 95 eP P 13 31 35.2 +1.4
baz=96
DZA Taraz 46.28 95 eP P 13 31 35.1 +1.4
ERPA Erie 46.37 259 P P 13 31 36.8 +2.5
baz=9.2
KLR Kul'dur 46.47 37 ⇑eP P 13 31 34.8 -0.3
KPKS Kokpek 46.62 88 ⇓iP P 13 31 37.9 +1.3
comp=Z,27nm,2.1s,baz=88
KPKS Kokpek 46.62 88 d iP P 13 31 37.8 +1.3
KPKS pmax pmax
comp=Z,27nm,2.1s
CHM Chimkent 46.63 97 eP P 13 31 37.9 +1.3
baz=98
CHM Chimkent 46.63 97 eP P 13 31 37.8 +1.3
AAA Alma-Ata 46.66 89 eP P 13 31 38.3 +1.6
baz=90
AAA Alma-Ata 46.66 89 eP P 13 31 38.3 +1.6
MDOK Medeo 46.72 89 i P P 13 31 38.9 +1.5
baz=90
MDOK eS S 13 38 28.9 +2.0
MDOK Medeo 46.72 89 i P P 13 31 38.8 +1.5
MDOK eS S 13 38 28.9 +2.0
BOZ Bozeman (W) 46.76 291 P P 13 31 39.6 +1.9
baz=9.3,SNR=13
ECSD EROS Data Cent 46.81 276 P P 13 31 38.0 +0.2
JFWS Jewell Farm 46.84 270 P P 13 31 41.2 +3.1
baz=9.5
ZHN Zhinishke 46.88 88 eP P 13 31 40.7 +2.1
baz=89
ZHN Zhinishke 46.88 88 eP P 13 31 40.6 +2.1
AAK Ala-Archa 46.92 92 P P 13 31 39.2 +0.2
AAK Ala-Archa 46.92 92 d iP P 13 31 39.1 +0.2
AAK pmax pmax
comp=Z,30nm,1.0s
RLMT Red Lodge 46.96 289 P P 13 31 41.5 +2.2
baz=9.3
UZB Uzynbulak 46.98 87 eP P 13 31 40.6 +1.2
baz=88
UZB Uzynbulak 46.98 87 eP P 13 31 40.5 +1.2
SATY Saty 46.99 88 eP P 13 31 41.2 +1.7
baz=89
SATY Saty 46.99 88 eP P 13 31 41.1 +1.7
SHLS Shalkode 47.02 87 eP P 13 31 41.8 +2.2
baz=87
SHLS Shalkode 47.02 87 eP P 13 31 41.8 +2.2
M53A WI Miller and 47.12 260 P P 13 31 42.5 +2.2
baz=9.2
RSSD Black Hills 47.33 283 P P 13 31 41.8 -0.3
RSSD Black Hills 47.33 283 P P 13 31 43.6 +1.5
baz=9.4
RSSD Black Hills 47.33 283 P P 13 31 41.8 -0.3
RSSD pmax pmax
comp=Z,38nm,1.0s
WMQ Urumqi 47.37 79 eP P 13 31 43.1 +0.8
WMQ pP sP 13 31 45.9 +2.0
WMQ pmax pmax
comp=Z,39nm,0.9s
WMQ pmax pmax
comp=Z,520nm,4.7s
WMQ LR LR
comp=Z,4μm,13.9s
WMQ LR LR
comp=Z,2μm,16.3s
WMQ LR LR
comp=Z,2μm,17.1s
SSPA Standing Stone 47.58 257 P P 13 31 46.1 +2.2
baz=8.9
KEST Kesra 47.71 162 P P 13 31 46.0 +1.0
comp=Z,2.2nm,0.7s,baz=12,slow=9.3,SNR=2.0
comp=Z,2.2nm,0.7s
YFT Old Faithful 47.80 290 IAmb IAmb 13 33 17.3
comp=Z,17nm,0.9s
H17A Grant Village 47.83 290 IAmb IAmb 13 33 17.7
comp=Z,15nm,0.8s
H17A Grant Village 47.83 290 P P 13 31 48.1 +2.0
comp=Z,26nm,1.3s
G08A Pilot Rock 47.88 298 IAmb IAmb 13 33 21.9
comp=Z,26nm,1.3s
O53A New Philadelph 48.36 260 P P 13 31 51.8 +1.9
baz=9.0
ACSO Alum Creek Sta 48.59 262 P P 13 31 53.6 +1.9
baz=9.0
MCWV Mont Chateau 48.78 259 P P 13 31 54.8 +1.7
baz=8.9
H04A Detroit Lake 48.83 301 P P 13 31 55.4 +1.8
H04A IAmb IAmb 13 33 27.2
comp=Z,28nm,1.5s
O48B Farmland 48.83 264 P P 13 31 55.9 +2.4
baz=9.1
HDIL Hopedale 49.04 268 P P 13 31 56.6 +1.5
baz=9.2
K22A Casper 49.07 286 P P 13 31 55.9 +0.3
baz=9.1,SNR=14
P52A Corning 49.08 261 P P 13 31 57.2 +1.7
baz=8.9
HLID Hailey 49.09 293 P P 13 31 57.2 +1.5
baz=8.8
BW06 Boulder Array 49.31 289 P P 13 31 58.4 +0.9
baz=9.0,SNR=6.0
PDAR Pinedale Array 49.31 289 P P 13 31 58.5 +1.0
comp=Z,9.4nm,1.1s,baz=20,slow=4.7,SNR=19
comp=Z,9.4nm,1.1s
P49A Miami Univ. Ec 49.49 263 P P 13 32 00.1 +1.5
baz=9.0
GEYT Alibeck 49.59 109 P P 13 32 00.8 +1.3
comp=Z,13nm,0.8s,baz=335,slow=6.4,SNR=24
comp=Z,13nm,0.8s
J05D Fort Rock, OR 50.11 300 P P 13 32 04.9 +1.5
J05D IAmb IAmb 13 33 36.9
comp=Z,36nm,1.3s
KSH Kashi 50.18 91 P P 13 32 08.2 +4.2
KSH pP pwP 13 32 10.6 +0.4
KSH sP sP 13 32 17.3 +12
KSH pmax pmax
comp=Z,9.0nm,1.0s
KSH pmax pmax
comp=Z,460nm,5.0s
KSH LR LR
comp=Z,3μm,17.2s
KSH LR LR
comp=Z,3μm,18.2s
KSH LR LR
comp=Z,3μm,21.0s
OGNE Ogallala 50.22 281 P P 13 32 05.4 +1.2
baz=9.1
J01E Myrtle Point 50.52 302 IAmb IAmb 13 33 50.7
comp=Z,40nm,1.3s
K05A Summer Lake 50.63 299 IAmb IAmb 13 33 53.1
comp=Z,56nm,1.4s
N23A Red Feather La 50.73 285 P P 13 32 09.1 +0.7
baz=8.9,SNR=8.5
MDJ Mudanjiang 50.89 39 P P 13 32 11.2 +2.0
MDJ PP PP 13 34 03.4 -1.6
MDJ pmax pmax
comp=Z,34nm,1.7s
MDJ pmax pmax
comp=Z,1μm,7.2s
MDJ LR LR
comp=Z,1μm,15.1s
MDJ LR LR
comp=Z,1μm,14.8s
MDJ LR LR
comp=Z,1μm,15.8s
MDJ Mudanjiang 50.89 39 P P 13 32 09.1 -0.1
L04D Klamath Falls 51.28 301 IAmb IAmb 13 32 22.0
comp=Z,55nm,1.7s
KSU1 Kansas State U 51.38 275 P P 13 32 14.5 +1.6
baz=8.9
USRK Ussuriysk Ar. 51.49 37 P P 13 32 12.2 -1.4
comp=Z,5.6nm,0.8s,baz=7.8,slow=12,SNR=9.3
comp=Z,5.6nm,0.8s
CCM Cathedral Cave 51.75 270 P P 13 32 16.7 +1.1
baz=8.8
O20A White River Ci 51.76 287 P P 13 32 17.1 +1.2
baz=8.7,SNR=10
ISCO Idaho Springs 51.78 284 P P 13 32 17.1 +0.9
baz=8.8
CBKS Cedar Bluff 52.04 278 P P 13 32 19.6 +1.7
baz=8.8
DUG Dugway, Tooele 52.23 291 P P 13 32 21.7 +2.3
baz=8.5
TZTN Tazewell 52.30 262 P P 13 32 22.8 +3.0
baz=8.6
Q24A Divide 52.55 283 P P 13 32 24.1 +2.1
baz=8.7,SNR=7.8
HHC Hu-ho-hao-te 53.00 56 ⇑P P 13 32 22.9 -2.1
HHC S S 13 39 53.9 -0.6
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,290nm,6.3s
HHC LR LR
comp=Z,1μm,16.3s
HHC LR LR
comp=Z,700nm,12.9s
HHC LR LR
comp=Z,2μm,16.3s
BTO Baotou 53.08 58 eP P 13 32 24.5 -1.1
BTO pP sP 13 32 28.8 +1.5
BTO S S 13 39 53.1 -2.5
BTO pmax pmax
comp=Z,11nm,0.6s
BTO LR LR
comp=Z,2μm,9.7s
BTO LR LR
comp=Z,1μm,13.9s
BTO LR LR
comp=Z,3μm,20.6s
GTA Gaotai 53.14 68 eP P 13 32 26.6 +0.5
GTA pP pwP 13 32 30.2 -2.2
GTA sP sP 13 32 35.3 +7.5
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA LR LR
comp=Z,870nm,22.7s
GTA LR LR
comp=Z,990nm,18.3s
GTA LR LR
comp=Z,2μm,22.3s
WVT Waverly 53.23 266 P P 13 32 28.3 +1.7
baz=8.6
KMSC Kings Mountain 53.41 259 P P 13 32 29.5 +1.5
baz=8.4
LCAR Lake Charles 53.70 269 IAmb IAmb 13 34 05.0
comp=Z,34nm,1.7s
SDCO Great Sand Dun 53.79 284 P P 13 32 32.9 +1.8
baz=8.6
S22A 4UR Ranch, Cre 53.95 285 P P 13 32 34.6 +2.4
baz=8.5,SNR=15
KBL Kabul 54.24 99 P P 13 32 34.6 +0.3
KBL Kabul 54.24 99 P P 13 32 34.6 +0.3
KBL pmax pmax
comp=Z,45nm,0.9s
R11B Troy Canyon, C 54.37 293 P P 13 32 36.9 +1.7
baz=8.1
TUL3 Leonard 54.42 274 P P 13 32 37.2 +1.8
baz=8.6
DEOK Depew 54.58 274 P P 13 32 36.8 +0.3
DEOK IAmb IAmb 13 34 10.8
comp=Z,27nm,1.0s
MVCO Mesa Verde 54.67 286 P P 13 32 38.8 +1.3
baz=8.4,SNR=6.7
EIL Elat 55.38 135 LR LR 13 58 05.7
comp=Z,858nm,21.1s,baz=346,slow=38
MIAR Mount Ida 55.50 271 P P 13 32 42.9 -0.3
baz=8.4
NIL Nilore 55.63 95 P P 13 32 44.2 0.0
NIL Nilore 55.63 95 P P 13 32 44.2 0.0
NIL pmax pmax
comp=Z,28nm,0.9s
GOMU GeErMu 55.74 73 P P 13 32 45.3 0.0
GOMU pmax pmax
comp=Z,8.0nm,1.0s
GOMU LR LR
comp=Z,1μm,22.6s
GOMU LR LR
comp=Z,1μm,19.8s
GOMU LR LR
comp=Z,2μm,22.7s
TPNV Topopah Spring 55.83 294 P P 13 32 46.1 +0.4
baz=8.0
CWC Cottonwood Cre 56.53 295 P P 13 32 52.3 +1.5
baz=7.8
ANMO Albuquerque 56.67 284 P P 13 32 51.2 -0.5
ANMO Albuquerque 56.67 284 P P 13 32 53.5 +1.7
baz=8.2
ANMO Albuquerque 56.67 284 P P 13 32 51.3 -0.5
ANMO pmax pmax
comp=Z,22nm,1.4s
WUAZ Wupatki 56.68 289 P P 13 32 54.0 +2.2
baz=8.1
HNS HongShan 56.73 54 ⇑P P 13 32 52.6 +0.7
HNS pmax pmax
comp=Z,12nm,1.4s
MPMC Manual Prospec 56.84 295 P P 13 32 55.8 +2.8
baz=7.8
SHOC Shoshone, Teco 56.87 294 P P 13 32 55.4 +2.5
baz=7.8
LZH Lanzhou 56.88 65 eP P 13 32 53.8 +0.6
LZH sP pwP 13 33 03.6 +4.3
LZH pmax pmax
comp=Z,8.0nm,1.4s
W18A Petrified Fore 56.88 287 P P 13 32 55.5 +2.2
baz=8.1
MSTX Muleshoe 57.19 280 P P 13 32 57.2 +1.9
baz=8.3
ISA Isabella, Lake 57.35 296 P P 13 32 58.3 +1.9
baz=7.7
LRMC Laurel Mtn Rad 57.44 295 P P 13 32 59.8 +2.6
baz=7.7
GSC Goldstone, Bar 57.52 294 P P 13 33 00.1 +2.4
baz=7.8
Y22D IRIS PASSCAL I 57.58 284 P P 13 33 00.0 +1.8
baz=8.1
Y22F Passcal Instru 57.58 284 P P 13 33 00.8 +2.6
baz=8.1
SMMC Simmler 57.86 297 P P 13 33 01.9 +1.9
baz=7.6
GMRC Granite Mounta 57.90 293 P P 13 33 02.5 +2.2
baz=7.8
HEC Hector,Ludlow 57.93 294 P P 13 33 01.7 +1.1
baz=7.8
BRAL Brewton 58.03 264 P P 13 33 01.9 +0.7
baz=8.1
EDW2 Edwards Air Fo 58.06 295 P P 13 33 03.4 +1.9
baz=7.7
PDMCI Parker Dam,Lak 58.20 291 P P 13 33 05.0 +2.7
baz=7.8
PKM Mcpherson Peak 58.26 297 P P 13 33 04.5 +1.5
baz=7.5
NATX Nacogdoches 58.38 272 P P 13 33 05.6 +2.0
baz=8.2
IRM Iron Mountain 58.46 292 P P 13 33 06.5 +2.3
baz=7.8
BFSC Mount Baldy Ra 58.66 295 P P 13 33 08.4 +2.7
baz=7.6
SBC Santa Barbara 58.69 297 P P 13 33 08.0 +2.3
baz=7.5
BELC Belle Mtn. Jos 58.71 293 P P 13 33 08.5 +2.4
baz=7.7
BC3 Big Chuckawall 58.99 293 P P 13 33 10.0 +2.0
baz=7.7
PMD Palm Desert 59.10 293 IAmb IAmb 13 34 42.3
comp=Z,32nm,2.0s
PFO Pinyon Flats O 59.15 293 P P 13 33 10.1 +1.0
baz=7.7
TPFO Pinon Flats 59.15 293 P P 13 33 11.6 +2.5
baz=7.7
121A Cookes Peak, D 59.21 285 P P 13 33 12.2 +2.6
baz=8.0
LYN LuoYang 59.32 57 eP P 13 33 10.8 +0.7
LYN pmax pmax
comp=Z,8.0nm,0.7s
MJAR Matsushiro Arr 59.54 32 P P 13 33 10.2 -1.4
comp=Z,6.4nm,1.0s,baz=338,slow=7.6,SNR=8.8
comp=Z,6.4nm,1.0s
CIS Catalina Islan 59.57 295 P P 13 33 12.8 +0.9
baz=7.5
SWSC Sam W. Stewart 59.73 293 P P 13 33 14.1 +1.2
baz=7.6
MNTX Cornudas Mount 59.74 282 P P 13 33 14.0 +0.9
baz=8.0
TUC Tucson 59.78 288 P P 13 33 13.6 +0.2
TUC Tucson 59.78 288 P P 13 33 14.8 +1.3
baz=7.8
TUC Tucson 59.78 288 P P 13 33 13.6 +0.2
TUC pmax pmax
comp=Z,15nm,0.8s

MONP2	**Monument Peak** baz=7.6	**59.85**	**293**	P		**P**		**13 33 14.4**	**+0.3**
OZNA	**Ozona**	**60.00**	**278**	P		**P**		**13 33 16.5**	**+1.6**
YUH	**Yuha Desert**	**60.04**	**293**	P		**P**		**13 33 16.4**	**+1.4**
IKP	**In-Ko-Pah, Jac** baz=7.6	**60.06**	**293**	P		**P**		**13 33 16.4**	**+1.1**
BAR	**Barrett**	**60.09**	**294**	P		**P**		**13 33 17.2**	**+1.7**
BAR	comp=Z,38nm,1.9s			IAmb		IAmb		13 35 01.7	
JCT	**Junction City** baz=8.0	**60.27**	**277**	P		**P**		**13 33 18.6**	**+1.8**
DWPF	**Disney Wildern** baz=7.7	**60.36**	**258**	P		**P**		**13 33 18.8**	**+1.5**
214A	**Organ Pipe Nat** baz=7.7	**60.37**	**290**	P		**P**		**13 33 18.6**	**+1.2**
TAM	**Tamanrasset**	**60.47**	**167**	P		**P**		**13 33 18.4**	**+0.1**
TAM	**Tamanrasset**	**60.47**	**167**	P		**P**		**13 33 18.4**	**+0.1**
TAM	comp=Z,14nm,0.8s			pmax		pmax			
VHRN	**Van Horn**	**60.60**	**282**	P		**P**		**13 33 19.0**	**-0.1**
HNDO	**Hondo** comp=Z,31nm,1.4s	**61.15**	**276**	IAmb		IAmb		13 34 58.1	
DRIO	**Del Rio** comp=Z,24nm,1.7s	**61.41**	**277**	IAmb		IAmb		13 34 58.3	
TXAR	**Lajitas Array** comp=Z,6.7nm,1.1s,baz=27,slow=3.3,SNR=19 comp=Z,6.7nm,1.1s	**61.87**	**280**	P		**P**		**13 33 27.3**	**-0.4**
CD2	**Chengdu**	**61.99**	**65**	*e*P		**P**		**13 33 27.0**	**-1.4**
833A	**Chaparral WMA,** baz=7.9	**62.35**	**276**	P		**P**		**13 33 32.5**	**+1.7**
NJ2	**Nanjing**	**62.43**	**51**	*e*P		**P**		**13 33 30.6**	**-0.7**
NJ2	comp=Z,9.0nm,0.5s			pmax		pmax			
NJ2	comp=Z,520nm,6.8s			pmax		pmax			
PZH	**PanZhiHua**	**66.12**	**68**	P		**P**		**13 33 55.2**	**-0.5**
PZH	comp=Z,10.0nm,2.0s			pmax		pmax			
PZH	comp=Z,130nm,4.7s			pmax		pmax			
GYA	**Guiyang**	**66.71**	**63**	*e*P		**P**		**13 34 02.2**	**+2.7**
GYA	comp=Z,14nm,0.8s			pmax		pmax			
GYA	comp=Z,610nm,11.7s			pmax		pmax			
TORD	**Torodi Ar. Bea**	**69.96**	**171**	P		**P**		**13 34 18.9**	**-0.9**
TORD	**Torodi Ar. Bea** comp=Z,5.4nm,0.8s,baz=359,slow=7.1,SNR=16 comp=Z,5.4nm,0.8s	**69.96**	**171**	P		**P**		**13 34 19.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**73.74**	**72**	P		**P**		**13 34 40.0**	**-2.4**
CMAR	**Chiang Mai Arr**	**73.74**	**72**	*i* P		**P**		**13 34 41.0**	**-1.4**
CMAR	comp=Z,6.0nm,0.9s			pmax		pmax			
CMAR	**Chiang Mai Arr** comp=Z,5.6nm,0.9s,baz=345,slow=7.1,SNR=20 comp=Z,5.6nm,0.9s	**73.74**	**72**	P		**P**		**13 34 40.2**	**-2.2**
DBIC	**Dimbokro**	**76.32**	**178**	P		**P**		**13 34 56.2**	**-1.1**
DBIC	comp=Z,18nm,1.2s			IAmb		IAmb		13 35 06.3	
DBIC	**Dimbokro**	**76.32**	**178**	P		**P**		**13 34 56.2**	**-1.1**
DBIC	comp=Z,19nm,1.3s			pmax		pmax			
DBIC	**Dimbokro** comp=Z,4.9nm,0.9s,baz=339,slow=7.0,SNR=4.7 comp=Z,4.9nm,0.9s	**76.32**	**178**	P		**P**		**13 34 56.5**	**-0.9**
BAUV	**El Baul**	**77.74**	**242**	P		**P**		**13 35 06.9**	**+1.6**
ROSC	**El Rosal** comp=Z,922nm,21.9s,baz=24,slow=35	**82.49**	**248**	LR		LR		14 11 47.2	
KMBO	**Kilima Mbogo**	**86.07**	**136**	*i* P		**P**		**13 35 52.5**	**+3.0**
KMBO	comp=Z,1.0nm,0.5s			pmax		pmax			
KMBO	**Kilima Mbogo** comp=Z,0.4nm,0.3s,baz=9.2,slow=3.1,SNR=4.3 comp=Z,0.4nm,0.3s	**86.07**	**136**	P		**P**		**13 35 48.8**	**-0.7**
OTAV	**Otavalo**	**87.51**	**251**	P		**P**		**13 35 57.6**	**+0.8**
OTAV	**Otavalo**	**87.51**	**251**	P		**P**		**13 35 57.6**	**+0.8**
OTAV	comp=Z,15nm,1.2s			pmax		pmax			
TAOE	**Nuku Hiva Isla** comp=Z,1µm,40.4s	**103.57**	**312**	*e*LR		LR		14 11 08.8	
PPT2	**Papeete2** comp=Z,490nm,24.5s	**113.02**	**321**	*e*SS		SS		13 58 19.0	+1.0
PPT2	**Papeete2** comp=Z,1µm,31.2s	**113.02**	**321**	*e*LR		LR		14 15 24.0	
TBI	**Tubuai** comp=Z,1µm,27.5s	**118.72**	**320**	*e*SS		SS		13 59 27.5	-4.9
TBI	**Tubuai** comp=Z,7µm,28.0s	**118.72**	**320**	*e*LR		LR		14 18 13.0	
ASAR	**Alice Springs**	**118.93**	**41**	P		**PKPdf**		**13 41 54.7**	**-1.9**
ASAR	**Alice Springs** comp=Z,0.8nm,0.9s,baz=5.8,slow=1.8,SNR=13	**118.93**	**41**	PKP		**PKPdf**		**13 41 54.9**	**-1.7**
GO06	**Curarrehue**	**126.07**	**240**	PKPdf		**PKiKP**		**13 42 10.9**	**+0.6**
PLCA	**Paso Flores**	**127.11**	**238**	PKPdf		**PKiKP**		**13 42 12.9**	**+0.6**
PLCA	**Paso Flores** comp=Z,4.4nm,0.9s,baz=347,slow=3.0,SNR=9.9	**127.11**	**238**	PKP		**PKPdf**		**13 42 11.6**	**-0.1**

*DNK **04** 13:24:30.6±3.1, 83.36N×6.03W, h10km, ML3.7*
*NEIC **04** 13:24:32.6, 82.99N×6.45W, h16km*
*BJI **04** 13:24:32.0±0.0, 83.10N×6.10W, h10km, mb5.0/46, mB5.6/22, Ms5.4/25, Ms7 5.2/25*
*IDC **04** 13:24:32.4±0.3, 83.07N×6.43W, h0km, mb4.7/37, mbtmp4.7/39, ML4.8/2, MS4.9/14, Error ellipse: s-maj=10.6km s-min=9.0km az=42.0*
*NEIC **04** 13:24:32.6±1.6, 82.99N±0.08×6.5W±0.6, h10km±1km, mb5.2/254, Ms_20 5.1/424, Mww5.5/25, Error ellipse: s-maj=14.6km s-min=10.2km az=32.0*
*NEIC **04** 13:24:32.6, 82.99N×7.27W, h16km, Moment Tensor Solution. Duration: 2s1.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.01; $M_{\theta\theta}$0.07; $M_{\phi\phi}$1.94; $M_{r\theta}$-1.40; $M_{\theta\phi}$0.46; $M_{\phi r}$-0.12; Fault plane solution: $M_0$2.41000×10^{17} NP1: ϕ_s39.24000°, δ57.42000°, λ-59.05000°. NP2:ϕ_s171.17000°, δ43.73000°, λ-128.82000°. Principal axes: T 2.1081, Plg7.0000°, Azm108.0000°; N 0.6129, Plg26.0000°, Azm201.0000°; P -2.7210, Plg63.0000°, Azm3.0000°;*
*MOS **04** 13:24:32.3±0.9, 83.02N×6.72W, h10km, mb5.3/55, MS5.0/21 Error ellipse: s-maj=37.1km s-min=4.9km az=92.8*
*BGR **04** 13:24:34.0, 83.38N×0.77E, h10km, mb4.8, Ms4.5*
*GCMT **04** 13:24:33.6±0.1, 83.10N±0.01×6.21W±0.05, h12km, MW5.5/140, Moment Tensor Solution. s117,c177; s140,c310; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.75±.03; $M_{\theta\theta}$0.06±.03; $M_{\phi\phi}$1.69±.02; $M_{r\theta}$-0.18±.07; $M_{\theta\phi}$0.74±.02; $M_{\phi r}$-0.41±.06; Best double couple: $M_0$1.91500×10^{17} NP1:ϕ_s22.00000°, δ52.00000°, λ-89.00000°. NP2:ϕ_s200.00000°, δ38.00000°, λ-91.00000°. Principal axes: T 2.0270, Plg7.0000°, Azm111.0000°; N -0.2270, Plg1.0000°, Azm201.0000°; P -1.8030, Plg83.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BER **04** 13:24:34.6±5.9, 82.76N×7.98W, h10km, mb(Pn)5.7, ML5.2(NAO), Confirmed Earthquake*

ISC 04 13:24:34.0±0.2, 82.94N±0.04×6.57W±0.03, h10km, n996, σ1s75/767, mb5.1/242, MS5.1/252, 15C-31D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**4.95**	**135**	Pn		**Pn**	**13 25 47.6**	**-0.6**
KBS				Sn		**Sn**	**13 26 38.3**	**-7.0**
KBS	**Kingsbay**	**4.95**	**135**	Pn		**Pn**	**13 25 47.3**	**-0.9**
KBS	**Kingsbay**	**4.95**	**135**	P		**Pn**	**13 25 47.5**	**-0.6**
KBS				S		**Sn**	**13 26 38.1**	**-7.2**
KBS	**Kingsbay**	**4.95**	**135**	*e*P		**Pn**	**13 25 47.7**	**-0.4**
KBS	comp=Z,377nm,0.3s			IAML			13 25 49.7	
KBS				*e*S		**Sn**	**13 26 37.9**	**-7.4**
KBS	**Kingsbay**	**4.95**	**135**	*d* iP		**Pn**	**13 25 47.3**	**-0.9**
KBS	**Kingsbay**	**4.95**	**135**	*i* P		**Pn**	**13 25 47.6**	**-0.6**
BRBB	**Barentsburg B**	**5.90**	**134**	Pn		**Pn**	**13 26 01.9**	**+0.7**
BRBB	**Barentsburg B**	**5.90**	**134**	P		**Pn**	**13 26 01.7**	**+0.5**
BRBB				S		**Sn**	**13 27 02.1**	**-6.6**
BRBB	**Barentsburg B**	**5.90**	**134**	*e*P		**Pn**	**13 26 00.8**	**-0.4**
BRBB				*e*S		**Sn**	**13 27 02.2**	**-6.6**
BRBA	**Barentsburg A**	**5.93**	**134**	Pn		**Pn**	**13 26 02.6**	**+1.0**
SPA0	**Spitsbergen Ar** baz=1.9,slow=12	**6.02**	**130**	Pn		**Pn**	**13 26 02.0**	**-0.9**
SPA0	**Spitsbergen Ar** baz=1.9,slow=12	**6.02**	**130**	Pn		**Pn**	**13 26 02.0**	**-0.9**
SPITS	**Spitsbergen Ar**	**6.02**	**130**	P		**Pn**	**13 26 02.9**	**0.0**
SPITS				S		**Sn**	**13 27 04.0**	**-7.8**
SPITS	**Spitsbergen Ar** baz=14,slow=10	**6.02**	**130**	Pn		**Pn**	**13 26 01.7**	**-1.2**
SPITS	baz=356,slow=10.0			Sn		**Sn**	**13 27 04.4**	**-7.4**
SPITS	comp=Z,24µm,20.5s,baz=324,slow=35 comp=Z,101nm,0.4s			LR		LR	13 28 06.2	
SPB2	**Spitsbergen Ar**	**6.03**	**130**	Pn		**Pn**	**13 26 02.1**	**-0.8**
HSPB	**Hornsund (broa**	**7.02**	**136**	Pn		**Pn**	**13 26 16.9**	**+0.3**
HSPB	**Hornsund (broa**	**7.02**	**136**	P		**Pn**	**13 26 17.2**	**+0.7**
HSPB				S		**Sn**	**13 27 34.1**	**-2.2**
HSPB	**Hornsund (broa**	**7.02**	**136**	*e*P		**Pn**	**13 26 16.8**	**+0.3**
HSPB	comp=Z,309nm,0.4s			IAML			13 26 19.0	
HOPEN	**Hopen**	**8.38**	**122**	Pn		**Pn**	**13 26 34.2**	**-1.0**
HOPEN				Sn		**Sn**	**13 28 01.5**	**-8.2**
HOPEN	**Hopen**	**8.38**	**122**	*e*P		**Pn**	**13 26 34.2**	**-1.0**
NEEM	**North Greenlan**	**9.04**	**257**	*e*P		Pn	13 26 37.7	-6.8
NEEM	**North Greenlan**	**9.04**	**257**	*e*P		Pn	13 26 37.7	-6.8
EUNU	**Eureka**	**11.19**	**298**	Pn		**Pn**	**13 27 13.9**	**+0.3**
TULEG	**Thule**	**11.99**	**273**	Pn		**Pn**	**13 27 20.2**	**-4.3**
TULEG	**Thule**	**11.99**	**273**	*i* P		Pn	13 27 19.0	-5.5
TULEG	comp=Z,136nm,0.9s			IAML			13 29 41.3	
TULEG	**Thule**	**11.99**	**273**	*i* P		Pn	13 27 19.0	-5.5
TULEG	comp=Z,136nm,0.9s			IAML			13 29 41.3	
SUMG	**Summit**	**12.08**	**229**	Pn		**Pn**	**13 27 24.1**	**-2.1**
SUMG	**Summit**	**12.08**	**229**	*e*P		**Pn**	**13 27 24.0**	**-2.1**
SUMG	**Summit**	**12.08**	**229**	P		**Pn**	**13 27 24.1**	**-2.1**
SUMG	**Summit**	**12.08**	**229**	*e*P		**Pn**	**13 27 24.0**	**-2.1**
JMI	**Jan Mayen**	**12.10**	**183**	Pn		Pn	13 27 30.9	+4.9
UPNV	**Upernavik**	**13.79**	**252**	*i* P		Pn	13 27 43.3	-5.7
UPNV	**Upernavik**	**13.79**	**252**	*i* P		Pn	13 27 43.3	-5.7
HAMF	**Hammerfest**	**13.80**	**135**	*e*P		**Pn**	**13 27 48.6**	**-0.6**
JETT	**Jettan, Norway**	**14.59**	**141**	P		**Pn**	**13 28 00.1**	**+0.1**
JETT	**Jettan, Norway**	**14.59**	**141**	P		**Pn**	**13 28 00.1**	**+0.1**
VADS	**Vadso**	**14.82**	**128**	S		**Pn**	**13 28 01.4**	**-1.8**
VADS	**Vadso**	**14.82**	**128**	*e*P		**Pn**	**13 28 00.7**	**-2.5**
KEV	**Kevo**	**14.96**	**132**	Pn		**Pn**	**13 28 04.3**	**-0.6**
KEV	**Kevo**	**14.96**	**132**	*e*P		**Pn**	**13 28 03.4**	**-1.6**
KEV	**Kevo**	**14.96**	**132**	P		**Pn**	**13 28 04.3**	**-0.6**
ARA0	**ARCESS Array S** baz=357,slow=11	**15.03**	**134**	P		**Pn**	**13 28 06.3**	**+0.3**
ARA0	**ARCESS Array S** baz=357,slow=11	**15.03**	**134**	P		**Pn**	**13 28 06.3**	**+0.3**
ARA0				*e*P		**Pn**	**13 28 07.0**	**+1.0**
ARCES	**ARCESS Array B**	**15.03**	**134**	Pn		**Pn**	**13 28 05.2**	**-0.9**
ARCES	comp=Z,70nm,1.1s			IAmb		IAmb	13 28 08.7	
ARCES	**ARCESS Array B**	**15.03**	**134**	S		**Pn**	**13 28 07.1**	**+1.1**
ARCES	**ARCESS Array B**	**15.03**	**134**	P		**Pn**	**13 28 05.2**	**-0.9**
ARCES	comp=Z,70nm,1.1s			pmax		pmax		
ARCES	**ARCESS Array B** comp=Z,1.7nm,0.3s,baz=355,slow=12,SNR=13	**15.03**	**134**	Pn		**Pn**	**13 28 04.2**	**-1.8**
ARCES	comp=Z,0.2nm,0.3s,baz=0.0,slow=11,SNR=1.1			Sn		Sn	13 30 35.8	-17
ARCES	comp=Z,8µm,20.1s,baz=348,slow=36 comp=Z,27nm,0.6s			LR		LR	13 33 41.0	
UMMG	**Uummannaq**	**15.30**	**244**	*i* P		**Pn**	**13 28 03.3**	**-6.2**
UMMG	**Uummannaq**	**15.30**	**244**	*i* P		**Pn**	**13 28 03.3**	**-6.2**
KTK1	**Kautokeino**	**15.35**	**137**	P		**Pn**	**13 28 10.7**	**+0.5**
KTK1	**Kautokeino**	**15.35**	**137**	P		**Pn**	**13 28 10.7**	**+0.5**
KTK1				*e*P		**Pn**	**13 28 11.0**	**+0.8**
LOF	**Lofoten**	**15.52**	**151**	*e*P		**P**	**13 28 16.1**	**-0.7**
STEI	**Steigen**	**15.82**	**149**	*e*P		**P**	**13 28 19.6**	**-0.5**
HEF	**Hetta**	**15.97**	**137**	*e*P		**P**	**13 28 19.6**	**-2.3**
SALU	**Saltoluokta**	**16.58**	**145**	*e*P		**P**	**13 28 30.5**	**+1.9**
RES	**Resolute Bay**	**16.74**	**293**	Pn		**Pn**	**13 28 22.9**	**-5.2**
RES	**Resolute Bay**	**16.74**	**293**	P		**Pn**	**13 28 22.9**	**-5.2**
RES	comp=Z,79nm,0.9s			pmax		pmax		
RES	**Resolute Bay** comp=Z,0.8nm,0.3s,baz=87,slow=3.3,SNR=8.6	**16.74**	**293**	Pn		**Pn**	**13 28 23.1**	**-5.0**
RES	comp=Z,0.8nm,0.3s,baz=107,slow=20,SNR=1.9			Sn		Sn	13 31 19.6	-14
RES	comp=Z,10µm,21.2s,baz=21,slow=37			LR		LR	13 34 58.1	
KONS	**Konsvik**	**17.11**	**153**	*e*P		**P**	**13 28 37.3**	**+2.9**
SGF	**Sodankyl**	**17.16**	**134**	P		**P**	**13 28 35.4**	**+0.4**
LVZ	**Lovozero**	**17.50**	**124**	Pn		**Pn**	**13 28 36.0**	**-1.7**
LVZ	comp=Z,260nm,1.8s			IAmb		IAmb	13 28 41.8	
LVZ	**Lovozero**	**17.50**	**124**	*e*P		**P**	**13 28 39.6**	**+0.8**
LVZ	comp=Z,73nm,1.1s			pmax		pmax		
APA0	**Apatity Array** baz=350,slow=14	**17.61**	**126**	P		**Pn**	**13 28 37.8**	**-1.2**
APA0	**Apatity Array** baz=350,slow=14	**17.61**	**126**	P		**Pn**	**13 28 37.8**	**-1.2**
APA	**Apatity**	**17.69**	**126**	*i* P		**Pn**	**13 28 36.9**	**-3.0**
APA				*i*			13 31 53.9	
APA	comp=Z,19nm,1.0s			pmax		pmax		
APA	comp=Z,9µm,15.0s			MLR		MLR		
BORG	**Borgarnes** comp=Z,2µm,21.7s,baz=344,slow=34	**18.61**	**200**	LR		LR	13 35 06.9	
SFJD	**Kangerlussuaq**	**18.67**	**239**	P		**P**	**13 28 46.6**	**-4.9**
SFJD	**Kangerlussuaq**	**18.67**	**239**	*i* P		**P**	**13 28 46.3**	**-5.2**
SFJD	**Kangerlussuaq**	**18.67**	**239**	P		**P**	**13 28 46.6**	**-4.9**
SFJD	comp=Z,71nm,0.9s			pmax		pmax		
SFJD	**Kangerlussuaq**	**18.67**	**239**	*i* P		**P**	**13 28 46.3**	**-5.2**
SFJD	**Kangerlussuaq** comp=Z,30nm,0.5s,baz=7.2,slow=13,SNR=11	**18.67**	**239**	P		**P**	**13 28 48.2**	**-3.3**
SFJD	comp=Z,35nm,0.7s,baz=99,slow=18,SNR=2.1			S		Sn	13 32 00.5	-20
SFJD	comp=Z,5µm,21.4s,baz=16,slow=37			LR		LR	13 36 10.3	
DY2G	**Dye2**	**18.73**	**233**	*i* P		**P**	**13 28 50.2**	**-2.3**
DY2G	**Dye2**	**18.73**	**233**	*i* P		**P**	**13 28 50.2**	**-2.3**
MSF	**Maaselka**	**18.89**	**132**	P		**Pn**	**13 28 53.3**	**-1.3**
OUL	**Oulu**	**19.42**	**137**	P		**Pn**	**13 29 02.7**	**+1.7**
AKN	**Aaknes**	**21.14**	**162**	P		**P**	**13 29 19.9**	**+1.4**
AKN	**Aaknes**	**21.14**	**162**	P		**P**	**13 29 19.9**	**+1.4**
NUUK	**Nuuk**	**21.52**	**238**	*i* P		**P**	**13 29 22.8**	**+0.3**
NUUK	**Nuuk**	**21.52**	**238**	*i* P		**P**	**13 29 22.8**	**+0.3**
NC303	**NORSAR Array S**	**22.28**	**157**	P		**P**	**13 29 31.4**	**+0.6**
NC303	comp=Z,88nm,1.2s			IAmb		IAmb	13 29 40.9	
A36M	**Sachs Harbour**	**22.39**	**314**	P		**P**	**13 29 31.2**	**-0.6**
A36M	comp=Z,78nm,0.9s			IAmb		IAmb	13 29 40.4	
A36M	**Sachs Harbour** baz=16,SNR=8.6	**22.39**	**314**	P		**P**	**13 29 32.1**	**+0.3**
NRIK	**Noril'sk**	**22.40**	**68**	P		**P**	**13 29 30.9**	**-1.0**
NRIK	comp=Z,5µm,22.0s			IAMs_20		IAMs_20	13 38 00.6	
NRIK	**Noril'sk**	**22.40**	**68**	*d* iP		**P**	**13 29 31.1**	**-0.8**
NRIK	comp=Z,243nm,1.4s			pmax		pmax		
NRIK	**Noril'sk** comp=Z,115nm,1.0s,baz=3.3,slow=6.7,SNR=14	**22.40**	**68**	P		**P**	**13 29 31.7**	**-0.2**
NRIK	comp=Z,5µm,21.8s,baz=356,slow=38 comp=Z,115nm,1.0s			LR		LR	13 38 34.8	
NC405	**NORSAR Array S**	**22.41**	**156**	P		**P**	**13 29 31.3**	**-0.8**
NC405	comp=Z,90nm,1.2s			IAmb		IAmb	13 29 46.4	
NB2	**NORSAR Subarra** baz=347,slow=10	**22.46**	**157**	P		**P**	**13 29 33.5**	**+0.8**
NB2	**NORSAR Subarra** comp=Z,304nm,2.0s,baz=355,slow=11	**22.46**	**157**	P		**P**	**13 29 33.0**	**+0.3**
NB2	**NORSAR Subarra** baz=347,slow=10	**22.46**	**157**	P		**P**	**13 29 33.5**	**+0.8**
NOA	**NORSAR Array B** comp=Z,22nm,1.1s,baz=353,slow=9.5,SNR=11	**22.46**	**157**	P		**P**	**13 29 33.4**	**+0.7**
NOA	comp=Z,2µm,21.9s,baz=5.0,slow=32 comp=Z,22nm,1.1s			LR		LR	13 36 37.7	
NAO01	**NORSAR Array S**	**22.64**	**158**	P		**P**	**13 29 35.1**	**+0.5**
NAO01	comp=Z,80nm,1.4s			IAmb		IAmb	13 29 43.1	
NRA0	**NORESS Array S** baz=345,slow=9.3	**22.78**	**157**	P		**P**	**13 29 36.9**	**+0.8**
NRA0	**NORESS Array S** baz=345,slow=9.3	**22.78**	**157**	P		**P**	**13 29 36.9**	**+0.8**
FIA0	**FINESS Array S** baz=353,slow=16	**23.03**	**139**	P		**P**	**13 29 39.1**	**+0.5**
FIA0	**FINESS Array S**	**23.03**	**139**	P		**P**	**13 29 39.1**	**+0.5**
	baz=353,slow=16							
FIA1	**FINESS Array S** comp=Z,5µm,21.0s	**23.03**	**139**	IAMs_20		IAMs_20	13 37 46.3	
FINES	**FINESS Array B** comp=Z,6.4nm,0.8s,baz=357,slow=14,SNR=2.6	**23.03**	**139**	P		**P**	**13 29 38.6**	**0.0**
FINES	comp=Z,1.6nm,0.7s,baz=203,slow=1.5,SNR=4.6 comp=Z,6.4nm,0.8s			PcP		**PcP**	**13 33 27.3**	**-0.1**
HFS	**Hagfors** slow=7.9	**23.49**	**154**	P		**P**	**13 29 44.5**	**+1.2**
HFS	**Hagfors** slow=7.9	**23.49**	**154**	P		**P**	**13 29 44.5**	**+1.2**
HFS	**Hagfors** comp=Z,18nm,1.0s,baz=30,slow=9.1,SNR=4.6	**23.49**	**154**	P		**P**	**13 29 43.6**	**+0.3**
HFS	comp=Z,3.1nm,0.8s,baz=205,slow=6.4,SNR=2.6 comp=Z,18nm,1.0s			PcP		**PcP**	**13 33 28.9**	**+0.5**
FRB	**Frobisher Bay** comp=Z,28nm,0.8s,baz=6.8,slow=9.1,SNR=3.6	**23.85**	**256**	P		**P**	**13 29 46.2**	**-0.5**
FRB	comp=Z,8µm,18.2s,baz=12,slow=37 comp=Z,28nm,0.8s			LR		LR	13 39 18.2	
TIXI	**Tiksi**	**24.03**	**33**	P		**P**	**13 29 47.6**	**-0.8**
TIXI	comp=Z,129nm,1.6s			IAmb		IAmb	13 29 49.8	
TIXI	**Tiksi**	**24.03**	**33**	*d* iP		**P**	**13 29 48.3**	**-0.1**
TIXI	comp=Z,81nm,1.5s			pmax		pmax		
TIXI	**Tiksi** comp=Z,23nm,0.9s,baz=23,slow=8.6,SNR=14	**24.03**	**33**	P		**P**	**13 29 47.6**	**-0.8**
TIXI	comp=Z,2µm,20.6s,baz=352,slow=34 comp=Z,23nm,0.9s			LR		LR	13 37 54.7	
C36M	**Paulatuk**	**24.84**	**311**	P		**P**	**13 29 55.5**	**-0.2**
C36M	comp=Z,116nm,1.6s			IAmb		IAmb	13 30 04.1	
C36M	comp=Z,3µm,19.0s			IAMs_20		IAMs_20	13 39 40.3	
C36M	**Paulatuk** baz=15	**24.84**	**311**	P		**P**	**13 29 56.3**	**+0.5**
PUL	**Pulkovo**	**25.05**	**134**	*e*P		**P**	**13 29 57.8**	**+0.1**
PUL	comp=Z,48nm,0.4s			pmax		pmax		
A21K	**Barrow** baz=8.3	**25.19**	**338**	P		**P**	**13 29 58.8**	**-0.1**
B22K	**Teshekpuk Lake** comp=Z,3µm,22.0s	**26.01**	**335**	IAMs_20		IAMs_20	13 38 04.9	
B22K	**Teshekpuk Lake** baz=8.8	**26.01**	**335**	P		**P**	**13 30 06.6**	**+0.2**
D28M	**Stokes Point** baz=12	**26.08**	**323**	P		**P**	**13 30 07.4**	**+0.4**
D27M	**Malcolm River** baz=11	**26.32**	**325**	P		**P**	**13 30 09.9**	**+0.5**
C24K	**Franklin Bluff** baz=9.8	**26.36**	**331**	P		**P**	**13 30 09.9**	**+0.3**
B20K	**Meade River** baz=7.7	**26.52**	**338**	P		**P**	**13 30 11.2**	**+0.1**
D25K	**Kavik River** baz=10	**26.61**	**329**	P		**P**	**13 30 12.1**	**+0.1**
INK	**Inuvik**	**26.68**	**319**	P		**P**	**13 30 12.6**	**+0.2**
INK	**Inuvik** baz=13	**26.68**	**319**	P		**P**	**13 30 13.4**	**+1.0**
INK	**Inuvik**	**26.68**	**319**	P		**P**	**13 30 12.6**	**+0.2**
INK	comp=Z,22nm,0.9s			pmax		pmax		
INK	**Inuvik** comp=Z,7.3nm,0.6s,baz=7.2,slow=10,SNR=13	**26.68**	**319**	P		**P**	**13 30 12.2**	**-0.2**
INK	comp=Z,2µm,21.4s,baz=5.5,slow=39 comp=Z,7.3nm,0.6s			LR		LR	13 41 52.0	
B21K	**Ikpikpuk River** baz=8.3	**26.79**	**336**	P		**P**	**13 30 14.2**	**+0.9**
E28M	**Babbage River** baz=12	**26.85**	**324**	P		**P**	**13 30 15.0**	**+0.9**
D24K	**Happy Valley** comp=Z,3µm,22.0s	**26.93**	**331**	IAMs_20		IAMs_20	13 38 47.3	
D24K	**Happy Valley** baz=9.5	**26.93**	**331**	P		**P**	**13 30 15.6**	**+0.9**
E29M	**Blow River** baz=12	**26.94**	**322**	P		**P**	**13 30 16.1**	**+1.3**
D23K	**Nanushuk River** baz=9.0	**27.22**	**332**	P		**P**	**13 30 18.1**	**+0.7**
C21K	**Knifeblade Rid** baz=8.1	**27.26**	**336**	P		**P**	**13 30 18.4**	**+0.8**
B18K	**Kokolik River** baz=6.4	**27.37**	**341**	P		**P**	**13 30 19.4**	**+0.8**
D22K	**Ayikyak River** comp=Z,3µm,22.0s	**27.42**	**334**	IAMs_20		IAMs_20	13 39 13.2	
D22K	**Ayikyak River** baz=8.5	**27.42**	**334**	P		**P**	**13 30 20.3**	**+1.1**
C19K	**Lookout Ridge** comp=Z,3µm,22.0s	**27.53**	**339**	IAMs_20		IAMs_20	13 38 54.1	
C19K	**Lookout Ridge** baz=6.9	**27.53**	**339**	P		**P**	**13 30 21.2**	**+1.0**
F30M	**Barrier River** baz=12	**27.54**	**320**	P		**P**	**13 30 21.6**	**+1.4**
F31M	**Tsiigehtchic**	**27.54**	**318**	P		**P**	**13 30 19.4**	**-0.8**
F31M	**Tsiigehtchic** baz=12	**27.54**	**318**	P		**P**	**13 30 21.8**	**+1.7**
E25K	**Arctic Village**	**27.75**	**328**	P		**P**	**13 30 21.3**	**-0.8**
E25K	**Arctic Village** baz=9.9	**27.75**	**328**	P		**P**	**13 30 23.9**	**+1.8**
EKA	**Eskdalemuir Ar** comp=Z,8.3nm,0.9s,baz=359,slow=10.0,SNR=7.8 comp=Z,8.3nm,0.9s	**27.76**	**176**	P		**P**	**13 30 23.7**	**+1.5**
D20K	**Etivluk River** baz=7.5	**27.79**	**337**	P		**P**	**13 30 24.1**	**+1.7**
F28M	**Old Crow** baz=11	**27.85**	**323**	P		**P**	**13 30 24.9**	**+1.9**
E21K	**Killik River** baz=8.1	**27.93**	**335**	P		**P**	**13 30 25.1**	**+1.4**
C18K	**Utukok River** comp=Z,3µm,22.0s	**28.06**	**341**	IAMs_20		IAMs_20	13 39 23.0	
C18K	**Utukok River** baz=6.4	**28.06**	**341**	P		**P**	**13 30 25.8**	**+0.9**
E23K	**Chandalar** baz=9.0	**28.06**	**331**	P		**P**	**13 30 25.7**	**+0.7**
D19K	**Kuna River** baz=7.1	**28.08**	**338**	P		**P**	**13 30 26.7**	**+1.7**
G31M	**Satah River** baz=12	**28.10**	**319**	P		**P**	**13 30 26.3**	**+1.2**
E22K	**Anaktuvuk Pass** comp=Z,2µm,22.0s	**28.11**	**333**	IAMs_20		IAMs_20

baz=7.3
NACGM **Naroch** 29.57 140 *e*P P 13 30 38.9 +0.6
comp=Z,18nm,0.8s,baz=353
E17K **Hotham Inlet** 29.65 341 P P 13 30 38.3 -0.7
baz=5.9
F19K **Shaleruckik Mo** 29.72 337 P P 13 30 39.3 -0.3
baz=6.8
G21K **Allakaket** 29.82 334 IAMs_20 IAMs_20 13 40 28.5
comp=Z,2µm,22.0s
G21K **Allakaket** 29.82 334 P P 13 30 40.8 +0.4
baz=7.7
I30M **Mount Dempster** 29.94 320 P P 13 30 42.1 +0.4
baz=11
I27K **Kandik River** 29.96 324 P P 13 30 42.0 +0.2
baz=10.0
I28M **Miner Creek** 29.99 323 P P 13 30 42.6 +0.4
baz=10
F18K **Selawik** 30.04 339 P P 13 30 42.7 +0.4
baz=6.3
MNK **Minsk** 30.06 139 *i* P P 13 30 42.8 +0.1
comp=E,11nm,0.8s
MNK *i* P P 13 30 42.8 +0.1
comp=N,34nm,1.3s
MNK *i* P P 13 30 42.8 +0.1
comp=Z,19nm,1.2s,baz=352
MNK *i* PP PP 13 31 39.8 -10
MNK *i* S S 13 35 43.1 +2.6
MNK *i* SS SnSn 13 37 16.5 +4.2
MNK *i* LQ LQ 13 40 15.3
MNK *i* LR LR 13 42 47.3
MNK **Minsk** 30.06 139 *i* P P 13 30 42.7 +0.1
MNK *i* 13 31 39.7
MNK *i* S S 13 35 43.0 +2.6
MNK *i* SS SnSn 13 37 16.4 +4.2
MNK pmax pmax
comp=N,34nm,1.3s
MNK pmax pmax
comp=Z,19nm,1.2s
MNK pmax pmax
comp=E,11nm,0.8s
H24K **Noodor Dome** 30.16 329 IAMs_20 IAMs_20 13 41 14.7
comp=Z,2µm,22.0s
H24K **Noodor Dome** 30.16 329 P P 13 30 44.6 +1.1
baz=8.8
SUW **Suwalki** 30.18 144 IAMs_20 IAMs_20 13 41 49.0
comp=Z,2µm,21.0s
OBN **Obninsk** 30.23 129 *i* P P 13 30 43.5 -0.6
OBN pmax pmax
comp=Z,37nm,1.2s
PRP **Porcupine Dome** 30.32 327 P P 13 30 45.1 0.0
baz=9.2
G19K **Purcell Mounta** 30.37 337 P P 13 30 46.2 +0.9
baz=6.8
YKA **Yellowknife Ar** 30.56 300 P P 13 30 47.2 +0.2
YKA **Yellowknife Ar** 30.56 300 P P 13 30 46.7 -0.3
comp=Z,2.2nm,0.9s,baz=11,slow=8.5,SNR=6.9
YKA PcP PcP 13 33 44.8 -0.4
comp=Z,2.4nm,0.9s,baz=356,slow=2.5,SNR=4.5
comp=Z,2.2nm,0.9s
J30M **Hart River** 30.57 319 IAMs_20 IAMs_20 13 45 10.9
comp=Z,2µm,19.0s
J30M **Hart River** 30.57 319 P P 13 30 48.7 +1.4
baz=11
H21K **Melozitna Rive** 30.63 333 IAMs_20 IAMs_20 13 41 17.1
comp=Z,2µm,21.0s
H21K **Melozitna Rive** 30.63 333 P P 13 30 48.0 +0.4
baz=7.7
G18K **Tagagawik** 30.70 338 P P 13 30 48.9 +0.6
baz=6.4
WRGLY **Wrigley** 30.75 308 P P 13 30 50.1 +1.4
baz=12
POKR **Poker Plat Res** 30.84 329 IAMs_20 IAMs_20 13 42 08.8
comp=Z,2µm,20.0s
POKR **Poker Plat Res** 30.84 329 P P 13 30 50.6 +1.1
baz=8.7
J29N **Klondike Camp** 30.85 321 IAMs_20 IAMs_20 13 43 32.0
comp=Z,832nm,20.0s
H20K **Anotleneega Mo** 30.91 335 P P 13 30 50.8 +0.7
baz=7.2
I23K **Minto, Yukon-K** 30.94 330 IAMs_20 IAMs_20 13 41 17.2
comp=Z,2µm,22.0s
I23K **Minto, Yukon-K** 30.94 330 P P 13 30 51.1 +0.8
baz=8.3
NRDL **Niedersach Rie** 30.95 160 *e*P P 13 30 51.5 +1.1
comp=Z,6.2nm,0.8s,baz=358,slow=8.9
NRDL *e*PcP PcP 13 33 47.2 +1.0
H19K **Roundabout Mou** 30.95 336 P P 13 30 51.5 +1.1
baz=6.9
IBBN **Ibbenburen** 31.04 163 *e*PcP PcP 13 33 48.2 +1.6
I21K **Tanana** 31.06 332 IAMs_20 IAMs_20 13 41 30.4
comp=Z,3µm,21.0s
I21K **Tanana** 31.06 332 P P 13 30 52.8 +1.4
baz=7.7
COLA **College** 31.11 329 P P 13 30 52.7 +0.8
baz=8.5
F15K **North Star Dit** 31.13 343 IAMs_20 IAMs_20 13 41 36.2
comp=Z,3µm,22.0s
F15K **North Star Dit** 31.13 343 P P 13 30 52.3 +0.3
baz=5.1
MLY **Manley** 31.14 331 IAMs_20 IAMs_20 13 41 34.5
comp=Z,2µm,22.0s
ILAR **Eielson Array** 31.15 328 P P 13 30 51.8 -0.4
ILAR **Eielson Array** 31.15 328 P P 13 30 52.5 +0.2
comp=Z,5.8nm,1.0s,baz=4.7,slow=7.3,SNR=4.6
comp=Z,5.8nm,1.0s
FLTG **Flechtingen** 31.16 159 *e*P P 13 30 53.8 +1.5
comp=Z,6.7nm,0.8s,baz=358,slow=8.9
FLTG *e*PcP PcP 13 33 47.6 +0.8
J25K **Salcha River,** 31.21 327 P P 13 30 54.2 +1.4
baz=9.0
SVE **Sverdlovsk** 31.21 102 *e*P P 13 30 54.6 +1.8
SVE *e*S S 13 36 05.7 +7.2
SVE pmax pmax
comp=Z,29nm,1.3s
SVE MLR MLR
comp=Z,8µm,20.0s
DAWY **Dawson** 31.32 322 P P 13 30 55.9 +2.1
baz=10.0
ARU **Arti** 31.35 104 *c* *i*P P 13 30 53.8 -0.2
ARU 13 31 53.9
ARU S S 13 36 03.7 +3.0
ARU SS SnSn 13 37 51.7 +8.1
ARU pmax pmax
comp=Z,37nm,1.5s
G16K **Koyuk River** 31.36 341 IAMs_20 IAMs_20 13 41 19.2
comp=Z,2µm,22.0s
G16K **Koyuk River** 31.36 341 P P 13 30 56.0 +2.0
baz=5.5
TNA **Tin City** 31.39 345 P P 13 30 55.9 +1.6
baz=4.3
K29M **Barlow Dome** 31.39 320 P P 13 30 56.2 +1.7
baz=10
H18K **Honhosa River** 31.42 337 P P 13 30 55.9 +1.3
baz=6.4
F14K **Arctic Creek** 31.43 344 P P 13 30 56.2 +1.6
baz=4.7
NEA2 **Nenana** 31.47 330 P P 13 30 56.4 +1.4
baz=8.2
HDA **Harding Lake** 31.52 328 P P 13 30 57.1 +1.6
baz=8.6
K27K **Chicken** 31.56 324 P P 13 30 56.9 +1.1
baz=9.4
H17K **Granite Mounta** 31.71 339 IAMs_20 IAMs_20 13 41 50.5
comp=Z,2µm,21.0s
H17K **Granite Mounta** 31.71 339 P P 13 30 57.8 +0.6
baz=6.0
SCRK **Sand Creek** 31.75 325 P P 13 30 57.7 0.0
baz=9.1
GCSA **Galena City Sc** 31.75 336 P P 13 30 58.2 +0.7
baz=6.6
G15K **Niukluk** 31.82 342 P P 13 30 58.7 +0.6
baz=5.1
GTTG **Gottingen** 31.89 160 *e*PcP PcP 13 33 50.5 +1.6
BUG **Bochum-Univer** 31.89 164 *e*P P 13 31 00.9 +2.1
comp=Z,14nm,0.9s,baz=358,slow=8.9
RIDG **Independent Ri** 32.04 326 P P 13 31 02.1 +2.0
baz=8.8
K24K **Donnelly Dome** 32.04 327 P P 13 31 02.1 +2.0
baz=8.7
BPAW **Bear Paw Mtn.** 32.08 331 IAMs_20 IAMs_20 13 42 14.3
comp=Z,3µm,22.0s
BPAW **Bear Paw Mtn.** 32.08 331 P P 13 31 00.4 0.0
baz=7.7
H16K **Elim** 32.11 340 P P 13 31 00.2 -0.4
baz=5.4
L29M **L29M** 32.17 320 P P 13 31 02.3 +1.1
baz=9.9
KASTN **Kahler Asten** 32.17 162 *e*P P 13 31 03.9 +2.6
baz=358,slow=8.9
KASTN *e*PcP PcP 13 33 51.4 +1.7
J20K **Nowinta River** 32.18 334 IAMs_20 IAMs_20 13 42 04.0
comp=Z,2µm,22.0s
J20K **Nowinta River** 32.18 334 P P 13 31 02.3 +1.0
baz=7.1
CLL **Collm** 32.26 157 *e*P P 13 31 03.0 +0.9
CLL *i* 13 31 07.1
CLL *e*S S 13 36 22.0 +7.0
CLL pmax pmax
comp=Z,111nm,1.0s
CLL **Collm** 32.26 157 *e*P P 13 31 03.0 +0.9
comp=Z,111nm,1.0s
CLL *i* x x 13 31 07.1
comp=Z,24nm,1.4s
CLL *e*PPP PPP 13 32 21.0
CLL *i* PPPP 13 32 28.3
CLL *e*S S 13 36 22.0 +7.0
CLL *ex* x 13 36 44.0
CLL **Collm** 32.26 157 *e*P P 13 31 03.5 +1.4
comp=Z,6.3nm,0.8s,baz=358,slow=8.9
CLL *e*PcP PcP 13 33 50.0 +0.2
ANM **Nome** 32.30 343 P P 13 31 01.8 -0.5
ANM IAMs_20 IAMs_20 13 42 22.1
comp=Z,3µm,21.0s
ANM **Nome** 32.30 343 P P 13 31 02.6 +0.2
baz=4.7
ANM **Nome** 32.30 343 P P 13 31 01.8 -0.5
ANM pmax pmax
comp=Z,19nm,1.1s
ANM MLR MLR
comp=Z,3µm,21.0s
NEUB **Neuenburg** 32.30 158 *e*P P 13 31 04.4 +2.0
comp=Z,17nm,0.9s,baz=358,slow=8.9
NEUB *e*PcP PcP 13 33 51.8 +1.8
SCHQ **Schefferville** 32.34 250 P P 13 31 04.2 +1.4
comp=Z,8.3nm,0.9s,baz=21,slow=9.8,SNR=6.1
comp=Z,8.3nm,0.9s
J19K **Poorman** 32.44 335 IAMs_20 IAMs_20 13 42 01.9
comp=Z,2µm,22.0s
J19K **Poorman** 32.44 335 P P 13 31 04.9 +1.3
baz=6.7
L27K **Beaver Creek,** 32.50 323 P P 13 31 05.5 +1.4
baz=9.2
M30M **Minto, Yukon** 32.59 319 P P 13 31 06.4 +1.4
baz=10.0
KTH **Kantishna Hill** 32.62 331 IAMs_20 IAMs_20 13 42 18.6
comp=Z,2µm,22.0s
FARO **Faro, Yukon** 32.64 316 P P 13 31 06.9 +1.5
baz=10
L26K **Log Cabin Wild** 32.64 325 P P 13 31 06.8 +1.4
baz=8.9
TRF **Thorofare Moun** 32.68 330 IAMs_20 IAMs_20 13 42 33.3
comp=Z,2µm,22.0s
TRF **Thorofare Moun** 32.68 330 P P 13 31 07.3 +1.5
baz=7.7
BRG **Berggiesshubel** 32.74 156 *e*P P 13 31 07.5 +1.2
BRG Amp 13 31 09.4
comp=Z,16nm,0.9s
BRG **Berggiesshubel** 32.74 156 *e*P P 13 31 07.4 +1.1
comp=Z,11nm,0.9s,baz=358,slow=8.9
BRG *e*PcP PcP 13 33 52.2 +1.0
M31M **Drury Creek, Y** 32.76 317 IAMs_20 IAMs_20 13 44 49.6
comp=Z,2µm,21.0s
M31M **Drury Creek, Y** 32.76 317 P P 13 31 08.2 +1.8
baz=10
AHRW **Bad Neuenahr-A** 32.78 164 *e*P P 13 31 09.2 +2.5
comp=Z,29nm,0.9s,baz=358,slow=8.9
I17K **Inlakleet** 32.79 339 P P 13 31 07.2 +0.6
baz=5.7
CAST **Castle Rocks** 32.82 332 IAMs_20 IAMs_20 13 42 34.9
comp=Z,2µm,21.0s
CAST **Castle Rocks** 32.82 332 P P 13 31 07.2 +0.3
baz=7.3
PAX **Paxson** 32.85 326 P P 13 31 07.5 +0.3
baz=8.5
M29M **Somme Creek** 32.85 320 P P 13 31 07.3 0.0
baz=9.7
MOX **Moxa** 32.86 159 *e*P P 13 31 08.8 +1.4
comp=Z,12nm,0.8s,baz=358,slow=8.9
MOX *e*L L 13 45 02.7
comp=Z,964nm,19.3s
DHY **Denali Highway** 32.87 328 P P 13 31 06.8 -0.7
DHY **Denali Highway** 32.87 328 P P 13 31 07.0 -0.5
baz=8.2
HSKC **Hora Svate Kat** 32.98 156 *e*P P 13 31 08.3 -0.2
HSKC AMS AMS 13 54 10.0
comp=Z,2µm,16.1s
K20K **Telida** 32.99 334 IAMs_20 IAMs_20 13 44 12.5
comp=Z,2µm,18.0s
K20K **Telida** 32.99 334 P P 13 31 09.6 +1.1
baz=6.9
J18K **Innoko River** 33.02 336 P P 13 31 09.1 +0.4
baz=6.4
BVCY **Beaver Creek** 33.06 322 P P 13 31 10.5 +1.4
baz=9.2
RICC **Richard** 33.08 156 *e*P P 13 31 10.7 +1.4
RICC AMS AMS 13 54 10.0
comp=Z,1µm,14.9s
TANN **Tannenbergstha** 33.13 158 *e*P P 13 31 11.9 +2.1
comp=Z,12nm,0.9s,baz=358,slow=8.9
TANN *e*PcP PcP 13 33 52.8 +0.4
CHVC **Chvalec** 33.14 153 *e*P P 13 31 11.3 +1.5
CHVC *e*PCP PcP 13 33 54.0 +1.6
CHVC **Chvalec** 33.14 153 *e*P P 13 31 11.3 +1.5
CHVC *e* 13 33 54.0
TNS **Taunus Mts** 33.15 162 *e*P P 13 31 12.5 +2.5
comp=Z,10nm,1.0s,baz=358,slow=8.9
OSTC **Ostas** 33.18 153 *e*PCP PcP 13 33 53.8 +1.3
OSTC AMS AMS 13 53 40.0
comp=Z,2µm,14.7s
WAT1 **Susitna Watana** 33.19 329 P P 13 31 10.8 +0.6
baz=7.9
M27K **Edge Creek, AK** 33.20 323 P P 13 31 10.9 +0.6
baz=9.1
UPC **Upice** 33.22 153 *e*PCP PcP 13 33 54.0 +1.4
UPC AMS AMS 13 53 30.0
comp=Z,2µm,17.9s
GAMB **Gambell** 33.29 348 P P 13 31 11.1 +0.2
baz=3.3
NKC **Novy Kostel** 33.31 158 *e*P P 13 31 13.2 +1.9
NKC AMS AMS 13 54 40.0
comp=Z,1µm,15.8s
NKC **Novy Kostel** 33.31 158 *e*P P 13 31 13.2 +1.9
NKC MLR MLR
comp=Z,1µm,15.8s
PPLA **Purkeypile** 33.34 332 P P 13 31 13.1 +1.5
baz=7.2
WAT6 **Susitna Watana** 33.38 328 P P 13 31 12.2 +0.1
baz=8.0
DPC **Dobruska-Polom** 33.39 153 *e*PCP PcP 13 33 54.7 +1.6
J16K **Anvik River** 33.39 339 IAmb IAmb 13 31 19.5
comp=Z,32nm,1.3s
J16K **Anvik River** 33.39 339 P P 13 31 12.1 +0.2
baz=5.6
TTA **Tatalina** 33.52 335 P P 13 31 12.9 -0.2
baz=6.5
MANZ **Manzenberg** 33.54 158 *e*PcP PcP 13 33 55.4 +1.9
PRA **Prague** 33.57 155 AMS AMS 13 54 30.0
comp=Z,2µm,18.1s
N31M **Braeburn, Yuko** 33.58 318 IAMs_20 IAMs_20 13 45 34.3
comp=Z,2µm,21.0s
N31M **Braeburn, Yuko** 33.58 318 P P 13 31 14.7 +1.1
baz=9.9
YAK **Yakutsk** 33.59 36 P P 13 31 11.3 -2.3
YAK **Yakutsk** 33.59 36 *e*P P 13 31 12.2 -1.4
YAK *e**PP pwP 13 31 18.6 -2.2
YAK *e* 13 32 24.5
YAK *e* 13 33 52.7
YAK *e*S S 13 36 35.8 +0.4
YAK *e*SS SnSn 13 38 39.1 +1.3
YAK pmax pmax
comp=Z,124nm,1.2s
YAK pmax pmax
comp=N,97nm,1.9s
YAK pmax pmax
comp=E,24nm,1.8s
YAK pmax pmax
comp=Z,283nm,5.3s
YAK pmax pmax
comp=N,499nm,6.5s
YAK pmax pmax
comp=E,295nm,8.4s
YAK smax smax
comp=E,268nm,4.3s
YAK smax smax
comp=N,246nm,4.5s
YAK MLR MLR
comp=Z,3µm,24.0s
YAK MLR MLR
comp=N,1µm,17.0s
YAK MLR MLR
comp=E,378nm,23.0s
WLF **Walferdange** 33.63 165 *e*PcP PcP 13 33 54.8 +1.0
PRU **Pruhonice** 33.66 155 *e*P P 13 31 16.2 +1.9
PRU *e*PCP PcP 13 33 54.7 +0.9
PRU AMS AMS 13 54 20.0
comp=E,2µm,16.9s
PRU **Pruhonice** 33.66 155 *e*P P 13 31 16.2 +1.9
PRU *e* 13 33 54.7
PRU MLR MLR
comp=Z,2µm,16.9s
N32M **Quiet Lake** 33.68 315 P P 13 31 16.3 +1.8
baz=10
FLDN **Fort Liard** 33.69 307 P P 13 31 16.1 +1.7
baz=11
KRLC **Kraliky** 33.69 153 *e*P P 13 31 15.5 +0.8
KRLC *e*PCP PcP 13 33 55.1 +1.1
KRLC AMS AMS 13 53 50.0
comp=Z,1µm,17.6s
KRLC **Kraliky** 33.69 153 *e*P P 13 31 15.5 +0.8
KRLC *e* 13 33 55.1
KRLC MLR MLR
comp=Z,1µm,17.6s
CUT **Chulitna** 33.72 330 IAMs_20 IAMs_20 13 43 26.7
comp=Z,2µm,22.0s
CUT **Chulitna** 33.72 330 P P 13 31 16.4 +1.7
baz=7.5
GOPC **GO Pecny, Ondr** 33.74 155 *e*P P 13 31 16.8 +1.7
GOPC *e*PCP PcP 13 33 55.4 +1.3
GOPC AMS AMS 13 54 30.0
comp=Z,2µm,16.1s
GOPC **GO Pecny, Ondr** 33.74 155 *e*P P 13 31 16.8 +1.7
GOPC *e* 13 33 55.4
GOPC MLR MLR
comp=Z,2µm,16.1s
M24K **Tolsona, Glenn** 33.75 327 P P 13 31 16.0 +0.9
baz=8.2
ROTZ **Rotzenmuhle** 33.76 158 *e*P P 13 31 17.1 +1.9
comp=Z,2.6nm,0.8s,baz=358,slow=8.9
GRF **Grafenberg Arr** 33.79 159 *e*P P 13 31 18.1 +2.6
comp=Z,8.3nm,0.9s,baz=358,slow=8.9
GRF *e*L L 13 45 23.4
comp=Z,895nm,19.0s
K17K **Iditarod** 33.85 337 P P 13 31 16.3 +0.4
baz=6.0
L20K **Farewell, AK** 33.86 333 P P 13 31 17.2 +1.2
baz=6.8
AKASG **Malin Array Be** 33.94 138 P P 13 31 16.6 -0.1
comp=Z,5.5nm,0.8s,baz=344,slow=8.8,SNR=5.2
AKASG PcP PcP 13 33 54.6 0.0
comp=Z,6.7nm,0.8s,baz=348,slow=2.9,SNR=15
comp=Z,5.5nm,0.8s
AKBB **Malin Array Si** 33.94 138 *d* *i*P P 13 31 18.7 +2.0
AKBB pmax pmax
comp=Z,45nm,1.8s
SEY **Seymchan** 33.94 17↑ *e*P P 13 31 16.7 +0.1
SEY pmax pmax
comp=Z,28nm,1.5s
SEY **Seymchan** 33.94 17 P P 13 31 15.9 -0.7
comp=Z,4.9nm,0.8s,baz=353,slow=6.4,SNR=7.3
comp=Z,4.9nm,0.8s
KIEV **Kiev** 33.95 138 IAMs_20 IAMs_20 13 44 29.3
comp=Z,5µm,20.0s
YUK4 **Talbot Arm** 33.95 320 P P 13 31 17.0 0.0
baz=9.4
MORC **Moravsky Berou** 34.03 152 P P 13 31 17.1 -0.5
MORC **Moravsky Berou** 34.03 152 *e*P P 13 31 18.8 +1.2
MORC *e*PCP PcP 13 33 56.2 +1.2
MORC **Moravsky Berou** 34.03 152 P P 13 31 17.1 -0.5
MORC pmax pmax
comp=Z,12nm,0.9s
J14K **Nanvaranak Lak** 34.05 341 IAMs_20 IAMs_20 13 43 16.3
comp=Z,2µm,22.0s
J14K **Nanvaranak Lak** 34.05 341 P P 13 31 17.5 -0.1
baz=4.9
BELG **Belogornoye** 34.05 117 *de*P P 13 31 17.7 0.0
BELG pmax pmax
comp=Z,16nm,1.1s
SCM **Sheep Creek Mo** 34.10 328 P P 13 31 17.3 -0.8
baz=7.9
YUK8 **Steele Glacier** 34.10 321 P P 13 31 16.6 -1.8
baz=9.2
N25K **Chitina, Valde** 34.14 325 P P 13 31 18.4 -0.1
baz=8.4
M23K **Glacier View** 34.17 328 P P 13 31 18.6 -0.1
baz=7.9
ZVC **Zvikov** 34.19 156 *e*P P 13 31 20.9 +2.0
ZVC *e*PCP PcP 13 33 56.9 +1.6
ZVC AMS AMS 13 54 50.0
comp=Z,2µm,17.4s
SML **Sawmill** 34.19 328 P P 13 31 19.8 +0.9
baz=7.8
L19K **White Mountain** 34.21 334 P P 13 31 19.5 +0.5
baz=6.6
SKT **Skwentna** 34.22 331 IAMs_20 IAMs_20 13 43 19.0
comp=Z,2µm,22.0s
MCARA **McCarthy VSAT** 34.25 324 P P 13 31 19.8 +0.5
baz=8.6
L18K **Granite Mounta** 34.27 336 P P 13 31 20.2 +0.7
baz=6.2
O30N **Mendenhall** 34.31 318 P P 13 31 21.1 +1.1
baz=9.7
YUK6 **Outpost Mounta** 34.33 320 P P 13 31 22.5 +2.1
baz=9.3
HYT **Haines Junctio** 34.38 319 P P 13 31 20.6 0.0
HYT **Haines Junctio** 34.38 319 P P 13 31 21.5 +0.9
baz=9.4
TREC **Trest** 34.40 154 AMS AMS 13 54 30.0
comp=Z,2µm,19.0s
M20K **Styx River** 34.41 332 IAMs_20 IAMs_20 13 43 25.0
comp=Z,2µm,22.0s
M20K **Styx River** 34.41 332 P P 13 31 21.0 +0.1
baz=6.8
LVV **L'vov** 34.42 144 *e*P P 13 31 21.5 +0.6
LVV MLR MLR
comp=E,2µm,17.0s
LVV MLR MLR
comp=N,700nm,15.0s
LVV MLR MLR
comp=Z,700nm,15.0s
WET **Wettzell** 34.42 157 *e*P P 13 31 22.9 +2.0
comp=Z,3.7nm,0.8s,baz=358,slow=8.9
WET *e*PcP PcP 13 33 57.1 +1.1
K15K **Wolf Creek Mou** 34.42 340 P P 13 31 22.0 +1.2
baz=5.2
L17K **Donlin** 34.43 337 P P 13 31 22.1 +1.2
baz=5.9
VRAC **Vranov** 34.45 153 *e*P P 13 31 22.7 +1.5
VRAC *e*PCP PcP 13 33 57.4 +1.3
M19K **Big River Lodg** 34.46 334 IAMs_20 IAMs_20 13 43 26.3
comp=Z,2µm,22.0s
M19K **Big River Lodg** 34.46 334 P P 13 31 21.4 +0.2
baz=6.6
MAUC **Maruska** 34.46 151 *e*P P 13 31 23.1 +1.8
MAUC *e*PCP PcP 13 33 57.7 +1.5
KHC **Kasperske Hory** 34.46 156 *e*P P 13 31 23.2 +1.8
KHC *e*PCP PcP 13 33 57.2 +1.0
KHC AMS AMS 13 55 20.0
comp=Z,2µm,16.5s
KHC **Kasperske Hory** 34.46 156 ‖ *e*P P 13 31 21.6 +0.2
KHC pmax pmax
comp=Z,44nm,1.8s
KWP **Kalwaria Pacla** 34.51 146 IAMs_20 IAMs_20 13 44 42.5
comp=Z,2µm,22.0s
P33M **Teslin, Yukon** 34.59 315 IAMs_20 IAMs_20 13 45 56.0
comp=Z,2µm,21.0s
P33M **Teslin, Yukon** 34.59 315 P P 13 31 23.5 +1.1
baz=10.0
KNK **Knik Glacier** 34.59 328 IAMs_20 IAMs_20 13 43 22.9
comp=Z,2µm,22.0s
KNK **Knik Glacier** 34.59 328 P P 13 31 22.9 +0.6
baz=7.7
STU **Stuttgart** 34.63 162 *e*P P 13 31 24.9 +2.2
comp=Z,40nm,0.8s,baz=358,slow=8.9
KRUC **Moravsky** 34.68 153 *e*P P 13 31 24.5 +1.3
KRUC *e*PCP PcP 13 33 57.7 +0.9
SUA **Susitna One** 34.69 330 IAMs_20 IAMs_20 13 44 10.3
comp=Z,2µm,21.0s
SUA **Susitna One** 34.69 330 P P 13 31 24.4 +1.1
baz=7.2
GEC2 **GERESS Array S** 34.76 156 P P 13 31 24.3 +0.4

GEC2 **GERESS Array S** 34.76 156 *e*P P 13 31 26.1 +2.2
comp=Z,13nm,0.9s,baz=358,slow=8.9
GEC2 *e*PcP PcP 13 33 58.6 +1.5
GERES GERESS Array B 34.76 156 P P 13 31 23.9 -0.1
GERES GERESS Array B 34.76 156 P P 13 31 25.9 +1.9
comp=Z,12nm,0.9s,baz=10,slow=8.1,SNR=16
GERES PcP PcP 13 33 57.9 +0.8
comp=Z,5.2nm,0.9s,baz=19,slow=4.5,SNR=7.3
comp=Z,12nm,0.9s
LANS Liptovska Anna 34.77 150 *e*P P 13 31 25.8 +1.8
LANS *e* 13 33 59.2
LANS Liptovska Anna 34.77 150 *e*P P 13 31 25.8 +1.8
LANS *e* 13 33 59.2
CKRC Cesky Krumlov 34.81 156 *e*P P 13 31 25.9 +1.6
CKRC *e*PCP PcP 13 33 58.3 +1.1
CKRC AMS AMS 13 55 10.0
comp=Z,2µm,13.0s
CKRC Cesky Krumlov 34.81 156 *e*P P 13 31 25.9 +1.6
CKRC *e* 13 33 58.3
CKRC MLR MLR
comp=Z,2µm,13.0s
K13K Kusilvak Mount 34.91 342 P P 13 31 26.2 +1.2
baz=4.6
L16K Owhat River 34.91 338 IAMs_20 IAMs_20 13 43 51.2
comp=Z,2µm,20.0s
JAVC Velka Javorina 34.95 152 *e*P P 13 31 28.1 +2.5
JAVC *e*PCP PcP 13 33 59.9 +2.3
BFO Black Forest 35.04 163 P P 13 31 27.8 +1.5
BFO IAmb IAmb 13 31 41.2
comp=Z,51nm,1.4s
BFO Black Forest 35.04 163 P P 13 31 27.8 +1.5
BFO pmax pmax
comp=Z,51nm,1.4s
BFO Black Forest 35.04 163 *e*P P 13 31 28.1 +1.8
comp=Z,12nm,0.9s,baz=358,slow=8.9
BFO *e*PcP PcP 13 33 58.7 +0.9
ECH Echery 35.11 164 P P 13 31 28.1 +1.2
ECH IAmb IAmb 13 31 41.7
comp=Z,80nm,1.5s
ECH Echery 35.11 164 P P 13 31 28.1 +1.2
ECH pmax pmax
comp=Z,80nm,1.5s
ECH MLR MLR
comp=Z,1µm,20.0s
M17K Holitna River 35.12 336 P P 13 31 26.7 -0.1
baz=5.9
CLF Chambon-Foret 35.16 170 P P 13 31 27.4 +0.1
BERG Berg Lake 35.28 324 IAMs_20 IAMs_20 13 44 40.1
comp=Z,2µm,22.0s
P32M Atlin 35.28 315 IAMs_20 IAMs_20 13 47 02.3
comp=Z,2µm,18.0s
P32M Atlin 35.28 315 P P 13 31 29.3 +1.0
baz=9.7
FUR Furstenfeldbru 35.32 159 *e*PcP PcP 13 34 00.4 +1.8
RAGM Ragged Mountai 35.35 325 IAMs_20 IAMs_20 13 47 16.1
comp=Z,2µm,19.0s
MESA MESA 35.36 323 IAMs_20 IAMs_20 13 48 13.4
comp=Z,2µm,18.0s
HMT Hamilton 35.38 325 IAMs_20 IAMs_20 13 44 18.7
comp=Z,2µm,22.0s
MODS Modra-Piesok 35.42 152 *e*P P 13 31 31.5 +1.9
MODS *e* 13 34 00.9
MODS Modra-Piesok 35.42 152 *e*P P 13 31 31.5 +1.9
MODS *e* 13 34 00.9
N19K Bonanza Creek 35.55 333 IAMs_20 IAMs_20 13 44 00.2
comp=Z,2µm,20.0s
M16K Timber Creek 35.57 337 IAMs_20 IAMs_20 13 44 12.7
comp=Z,2µm,22.0s
M16K Timber Creek 35.57 337 P P 13 31 31.3 +0.5
baz=5.6
ZST Bratislava 35.58 153 *e*P P 13 31 33.2 +2.2
ZST Bratislava 35.58 153 *e*P P 13 31 33.2 +2.2
UBR Ueberruh 35.75 161 *e*P P 13 31 35.4 +2.9
comp=Z,4.8nm,0.8s,baz=358,slow=8.9
UBR *e*PcP PcP 13 34 01.1 +1.1
N18K Kilae Creek 35.76 335 IAMs_20 IAMs_20 13 44 05.7
comp=Z,2µm,22.0s
Q32M Nakina River 35.77 314 IAMs_20 IAMs_20 13 47 28.4
comp=Z,2µm,20.0s
Q32M Nakina River 35.77 314 P P 13 31 33.3 +0.6
baz=9.8
MOA Molln 35.78 156 *e*pP P 13 31 34.3 +1.7
comp=Z,9.9nm,0.9s
MOA *e*PcP PcP 13 34 01.1 +1.1
comp=Z,8.9nm,0.8s,SNR=7.1
CONA Conrad Observa 35.78 154 *e*pP P 13 31 34.5 +1.7
comp=Z,8.6nm,0.9s,SNR=9.4
CONA *e*PcP PcP 13 34 01.5 +1.4
comp=Z,10nm,0.9s
RJOB Jochberg 35.82 158 *e*P P 13 31 35.2 +2.2
comp=Z,12nm,0.8s,baz=358,slow=8.9
RJOB *e*PcP PcP 13 34 01.6 +1.4
P23K Montague Islan 35.93 327 P P 13 31 35.4 +1.6
baz=7.6
RETA Reutte 35.98 160 *e*pP P 13 31 35.9 +1.4
comp=Z,8.9nm,0.8s
RETA *e*PcP PcP 13 34 01.6 +0.9
comp=Z,11nm,1.0s
M14K Bethel 35.98 340 P P 13 31 34.0 -0.2
baz=5.0
N17K Nushagak Hills 35.98 336 P P 13 31 34.4 +0.2
baz=5.9
M15K Kasigluk River 35.98 339 P P 13 31 34.4 +0.2
baz=5.2
PSZ Piszkesteto 36.03 149 IAMs_20 IAMs_20 13 45 11.7
comp=Z,2µm,22.0s
RONA Rosalia, Austr 36.03 153 *e*pP P 13 31 36.6 +1.8
comp=Z,17nm,1.0s
RONA *e*PcP PcP 13 34 02.1 +1.3
comp=Z,9.9nm,0.8s,SNR=6.9
BRVK Borovoye 36.08 94 P P 13 31 34.7 -0.5
BRVK IAmb IAmb 13 31 49.1
comp=Z,58nm,1.4s
BRVK Borovoye 36.08 94*c* *i*P P 13 31 34.7 -0.5
BRVK pmax pmax
comp=Z,65nm,1.7s
LESA Schwarzleotal 36.12 158 *e*PcP PcP 13 34 01.8 +0.7
comp=Z,7.9nm,1.2s
BVAR Borovoye Array 36.13 94 P P 13 31 36.0 +0.4
comp=Z,13nm,0.9s,baz=329,slow=6.9,SNR=12
BVAR PcP PcP 13 34 01.4 +0.5
comp=Z,6.5nm,0.7s,baz=346,slow=3.4,SNR=8.1
comp=Z,13nm,0.9s
MOTA Moosalm 36.13 160 *e*pP P 13 31 37.6 +1.8
comp=Z,7.6nm,0.9s
MOTA *e*PcP PcP 13 34 02.1 +0.8
comp=Z,12nm,0.9s,SNR=10.0
DAVA Damuels 36.14 161 *e*pP P 13 31 37.6 +1.7
comp=Z,12nm,1.3s
DAVA *e*PcP PcP 13 34 02.0 +0.7
comp=Z,14nm,1.0s
O19K Port Alsworth 36.16 333 IAMs_20 IAMs_20 13 44 32.2
comp=Z,2µm,21.0s
WATA Walderalm 36.16 159 *e*pP P 13 31 39.0 +2.9
comp=Z,5.8nm,0.8s
WATA *e*PcP PcP 13 34 02.1 +0.7
comp=Z,12nm,1.1s,SNR=4.4
WTTA Wattenberg 36.24 159 *e*pP P 13 31 38.8 +2.0
comp=Z,14nm,1.4s
WTTA *e*PcP PcP 13 34 02.5 +0.9
comp=Z,11nm,0.9s,SNR=7.0
SQTA Sankt Quirin 36.26 159 *e*PcP PcP 13 34 02.5 +0.9
comp=Z,9.0nm,1.0s
M13K Dall Lake 36.38 341 P P 13 31 37.6 0.0
baz=4.7
BRLK Bradley Lake 36.39 330 P P 13 31 36.8 -1.0
BRLK IAMs_20 IAMs_20 13 45 05.7
comp=Z,2µm,21.0s
ARSA Arzberg 36.44 154 *e*PcP PcP 13 34 02.6 +0.6
comp=Z,8.2nm,1.1s
FETA Feichten 36.44 160 *e*PcP PcP 13 34 03.1 +0.9
comp=Z,7.9nm,1.0s,SNR=6.1
N15K Kwethluk River 36.48 338 IAMs_20 IAMs_20 13 44 49.6
comp=Z,2µm,20.0s
KBA Koelnbreinsper 36.50 157 *e*pP P 13 31 41.4 +2.3
comp=Z,5.4nm,0.9s,SNR=5.9
O18K Koktuh Hills 36.55 334 IAMs_20 IAMs_20 13 45 57.5
comp=Z,2µm,19.0s
JIS Juneau Island 36.64 316 IAMs_20 IAMs_20 13 47 53.2
comp=Z,9µm,18.0s
CNPM China Poot 36.65 330 IAMs_20 IAMs_20 13 44 51.1
comp=Z,2µm,19.0s
BUR08 Bucovina Ar. S 36.66 143 P P 13 31 39.3 -1.1
BURAR Bucovina Array 36.70 143 P P 13 31 38.5 -2.1
S34M Telegraph Cree 36.71 313 IAMs_20 IAMs_20 13 48 10.1
comp=Z,3µm,19.0s
ABTA Abfaltersbach 36.79 158 *i* PcP PcP 13 34 03.6 +0.4
comp=Z,18nm,0.9s,SNR=17
DRLN Deer Lake 36.80 238 P P 13 31 41.6 +0.3
MYKA Terra Mystica 36.96 157 *e*pP P 13 31 45.2 +2.3
comp=Z,9.3nm,0.9s,SNR=6.6
MYKA *i* PcP PcP 13 34 03.7 0.0
comp=Z,8.2nm,1.0s
SENIN Lac Senin/Sane 36.97 164 IAMs_20 IAMs_20 13 47 06.7
comp=Z,7µm,18.0s
SOKA Soloth 36.98 155 *e*pP P 13 31 44.9 +1.8
comp=Z,8.1nm,1.0s,SNR=7.2
SOKA *i* PcP PcP 13 34 04.0 +0.2
comp=Z,12nm,0.8s,SNR=13
ZAA0 Zalesovo Array 37.00 79 P P 13 31 42.5 -0.5
ZAA0 IAmb IAmb 13 31 45.0
comp=Z,31nm,0.8s
ZALV Zalesovo Beam 37.00 79 P P 13 31 42.7 -0.3
ZALV Zalesovo Beam 37.00 79 P P 13 31 42.7 -0.3
ZALV Zalesovo Beam 37.00 79 P P 13 31 43.5 +0.5
comp=Z,34nm,0.8s,baz=344,slow=7.9,SNR=33
ZALV PcP PcP 13 34 03.3 -0.3
comp=Z,4.5nm,0.7s,baz=263,slow=3.3,SNR=5.9
ZALV LR LR 13 50 10.3
comp=Z,4µm,18.3s,baz=340,slow=42
comp=Z,34nm,0.8s
S31K Pelican 37.11 317 IAMs_20 IAMs_20 13 47 44.6
comp=Z,2µm,19.0s
OBKA Obir 37.13 156 *e*pP P 13 31 46.2 +1.9
comp=Z,28nm,0.9s,SNR=15
OBKA *e*PcP PcP 13 34 04.1 0.0
comp=Z,5.9nm,0.8s,SNR=4.1
CIMO Cimolais 37.22 158 P P 13 31 45.5 +0.5
CIMO IAmb IAmb 13 31 58.0
comp=Z,8.7nm,0.7s
Q19K Cape Douglas, 37.38 332 IAMs_20 IAMs_20 13 45 32.6
comp=Z,2µm,19.0s
O14K Tigyukauivet M 37.45 339 IAMs_20 IAMs_20 13 46 27.2
comp=Z,1µm,18.0s
CTI Castel Tesino 37.45 159 P P 13 31 47.0 0.0
CTI Castel Tesino 37.45 159 P P 13 31 47.0 0.0
CTI pmax pmax
comp=Z,31nm,1.1s
S32K Killisnoo 37.45 316 IAMs_20 IAMs_20 13 48 17.8
comp=Z,2µm,19.0s
T35M Bob Quinn 37.55 312 IAMs_20 IAMs_20 13 48 30.3
comp=Z,2µm,19.0s
SABO M.te Sabotino 37.61 157 P P 13 31 49.2 +1.0
SABO IAmb IAmb 13 31 52.5
comp=Z,20nm,0.9s
TEOL Teolo 38.14 159 P P 13 31 51.9 -0.8
TEOL IAmb IAmb 13 32 05.5
comp=Z,35nm,0.7s
BNI Bardonecchia 38.25 165 IAMs_20 IAMs_20 13 47 52.8
comp=Z,2µm,20.0s
WRAK Wrangell Islan 38.29 313 IAMs_20 IAMs_20 13 49 41.1
comp=Z,2µm,22.0s
ORIF Oris-en-Rattie 38.36 166 P P 13 31 57.2 +2.5
KDAK Kodiak Island 38.46 331 P P 13 31 54.3 -1.0
KDAK Kodiak Island 38.46 331 P P 13 31 54.3 -1.0
KDAK pmax pmax
comp=Z,145nm,1.4s
ABKAR Akbulak array 38.56 105 P P 13 31 55.5 -0.7
U35K Hyder 38.58 311 IAMs_20 IAMs_20 13 48 29.7
comp=Z,2µm,20.0s
MLR Muntele Rosu 38.86 143 IAMs_20 IAMs_20 13 48 24.5
comp=Z,2µm,18.0s
V35K Ketchikan 39.31 312 IAMs_20 IAMs_20 13 49 41.9
comp=Z,3µm,19.0s
BRZS Berezniki 39.40 92 ⫰ *i*P P 13 32 04.1 +0.9
comp=Z,36nm,1.4s,baz=93
BRZS *e*S S 13 38 06.5 +2.2
baz=93
BRZS Berezniki 39.40 92*d* *i*P P 13 32 04.1 +0.9
BRZS *e*S S 13 38 06.5 +2.2
BRZS pmax pmax
comp=Z,36nm,1.4s
KURK Kurchatov 39.41 86 P P 13 32 03.1 -0.2
KURK IAmb IAmb 13 32 05.8
comp=Z,47nm,0.8s
KURK Kurchatov 39.41 86*de*P P 13 32 03.4 +0.1
KURK pmax pmax
comp=Z,50nm,0.8s
KURBB Kurchatov Arra 39.49 86 P P 13 32 04.9 +0.9
comp=Z,42nm,0.8s,baz=357,slow=7.2,SNR=62
KURBB PP PnPn 13 33 36.7 -0.5
comp=Z,15nm,1.2s,baz=349,slow=11,SNR=4.9
KURBB PcP PcP 13 34 11.2 -0.1
comp=Z,5.4nm,0.8s,baz=338,slow=3.6,SNR=7.4
comp=Z,42nm,0.8s
EDM Edmonton 39.52 295 P P 13 32 03.6 -0.6
EDM IAmb IAmb 13 32 13.2
comp=Z,140nm,1.7s
EDM Edmonton 39.52 295 P P 13 32 03.6 -0.6
EDM pmax pmax
comp=Z,140nm,1.7s
BATG Bathurst New B 39.69 247 P P 13 32 06.1 +0.4
SEM Semipalatinsk 39.92 85 *e*P P 13 32 08.1 +0.2
comp=Z,42nm,0.9s,baz=85
SEM LR LR 13 49 48.8
comp=Z,1µm,15.7s,baz=85
SEM Semipalatinsk 39.92 85 *e*P P 13 32 08.0 +0.2
SEM pmax pmax
comp=Z,42nm,0.9s
SEM MLR MLR
comp=Z,1µm,16.0s
LMQ La Malbaie 39.92 251 P P 13 32 06.3 -1.3
OSSC Osservatorio P 39.95 160 P P 13 32 07.8 -0.1
OSSC IAmb IAmb 13 32 21.6
comp=Z,48nm,1.1s
SIM Simferopol' 40.07 134 *e*P P 13 32 09.0 +0.2
SIM *e*S S 13 38 14.0 -0.4
TIRR Tirgusor 40.08 140 IAMs_20 IAMs_20 13 48 30.7
comp=Z,5µm,20.0s
D62A Allapoint, All 40.23 250 P P 13 32 10.0 -0.2
ULM Lac du Bonnet 40.38 278 P P 13 32 11.2 -0.1
ULM Lac du Bonnet 40.38 278 P P 13 32 11.2 -0.1
ULM pmax pmax
comp=Z,21nm,1.0s
ULM Lac du Bonnet 40.38 278 P P 13 32 11.9 +0.5
comp=Z,8.4nm,0.7s,baz=17,slow=7.9,SNR=7.7
comp=Z,8.4nm,0.7s
PQI Presque Isle 40.51 249 IAMs_20 IAMs_20 13 48 06.2
comp=Z,5µm,22.0s
E62A Clayton Lake 40.74 250 IAmb IAmb 13 32 18.2
comp=Z,34nm,1.1s
GOF Gofitskoye 40.82 124*ce*P P 13 32 16.4 +1.4
PBRG Braganca 41.28 180 *e*P P 13 32 21.1 +2.1
comp=Z,94nm,1.8s
DGZ Jazzator, Alta 41.49 78*d* *i*P P 13 32 21.6 +0.9
DGZ pmax pmax
comp=Z,68nm,1.7s
ZEA Zeya 41.64 40 *e*P P 13 32 21.6 -0.1
ZEA pmax pmax
comp=Z,20nm,1.0s
POLO Lamas de Olo 41.72 181 *e*P P 13 32 24.8 +2.2
comp=Z,34nm,1.3s
PVRL Vila Real 41.81 181 *e*P P 13 32 25.9 +2.6
comp=Z,96nm,1.5s
MVO Moncorvo 41.92 181 *e*P P 13 32 26.4 +2.2
comp=Z,82nm,1.9s
PTO Porto 41.95 182 *e*P P 13 32 27.1 +2.7
comp=Z,114nm,1.7s
PKME Peaks-Kenny Pk 42.05 250 IAMs_20 IAMs_20 13 49 14.8
comp=Z,5µm,21.0s
PKME Peaks-Kenny Pk 42.05 250 P P 13 32 26.3 +1.2
baz=9.4
EYMN Ely 42.10 273 P P 13 32 25.1 -0.5
EYMN Ely 42.10 273 IAMs_20 IAMs_20 13 48 40.8
comp=Z,6µm,18.0s
EYMN Ely 42.10 273 P P 13 32 26.6 +1.1
baz=10,SNR=13
KBZ Khabaz 42.12 125*d* *i*P P 13 32 26.9 +1.2
KBZ pmax pmax
comp=Z,33nm,1.0s
KBZ Khabaz 42.12 125 P P 13 32 27.6 +1.9
comp=Z,25nm,0.9s,baz=308,slow=4.2,SNR=13
comp=Z,25nm,0.9s
AGMN Agassiz Nation 42.29 277 IAMs_20 IAMs_20 13 48 44.7
comp=Z,4µm,18.0s
AGMN Agassiz Nation 42.29 277 P P 13 32 28.5 +1.4
baz=10
PVIS Viseu 42.37 181 *e*P P 13 32 30.6 +2.7
EMMW East Machias 42.39 248 IAMs_20 IAMs_20 13 49 01.8
comp=Z,5µm,21.0s
TIR Tirane 42.57 150 IAMs_20 IAMs_20 13 52 28.9
comp=Z,2µm,18.0s
MTE Manteigas 42.69 181 *e*P P 13 32 33.4 +2.9
comp=Z,64nm,1.1s
E46A Sault Ste Mari 42.77 265 P P 13 32 30.4 -0.6
E46A IAmb IAmb 13 32 41.4
comp=Z,112nm,1.6s
WVL Waterville 42.78 250 IAMs_20 IAMs_20 13 49 37.2
comp=Z,5µm,21.0s
PCAS Casmilo, Conde 43.04 182 *e*P P 13 32 35.7 +2.5
comp=Z,100nm,1.5s
SRS Serrai 43.04 146 P P 13 32 34.3 +1.0
DGMT Dagmar 43.13 285 IAMs_20 IAMs_20 13 49 15.8
comp=Z,5µm,21.0s
DGMT Dagmar 43.13 285 P P 13 32 34.4 +0.4
baz=10
ZEI Tsey 43.15 124 *e*P P 13 32 35.0 +0.6
ZEI pmax pmax
comp=Z,16nm,1.0s
MDND Maddock 43.19 281 P P 13 32 36.0 +1.6
baz=10
FNA Florina 43.23 149 P P 13 32 33.9 -0.9
FNA Florina 43.23 149 P P 13 32 33.9 -0.9
FNA pmax pmax
comp=Z,14nm,0.9s
PCBR Castelo Branco 43.25 181 *e*P P 13 32 37.1 +2.2
comp=Z,87nm,1.2s
LONY Lake Ozonia 43.31 255 IAMs_20 IAMs_20 13 49 33.0
comp=Z,4µm,21.0s
LBNH Lisbon 43.37 252 IAMs_20 IAMs_20 13 50 24.7
comp=Z,5µm,18.0s
VT1 Waterbury 43.37 253 IAMs_20 IAMs_20 13 50 34.1
comp=Z,5µm,20.0s
ZSN Zaisan 43.39 81 ⫰ *i*P P 13 32 36.9 +0.8
baz=81
ZSN *e*S S 13 39 05.7 +2.1
baz=81
ZSN Zaisan 43.39 81*d* *i*P P 13 32 36.8 +0.8
ZSN *e*S S 13 39 05.6 +2.1
ESBB Sonseca Array 43.42 177 P P 13 32 36.8 +0.4
ESDC Sonseca Array 43.42 177 IAmb IAmb 13 32 51.7
comp=Z,56nm,1.8s
ESDC Sonseca Array 43.42 177 P P 13 32 37.9 +1.5
comp=Z,24nm,0.9s,baz=360,slow=8.2,SNR=22
comp=Z,24nm,0.9s
PAB San Pablo 43.55 178 P P 13 32 38.3 +0.9
PAB IAmb IAmb 13 32 40.1
comp=Z,32nm,1.0s
PAB San Pablo 43.55 178 P P 13 32 38.3 +0.9
PAB pmax pmax
comp=Z,32nm,1.0s
COWI Conover 43.63 270 IAMs_20 IAMs_20 13 50 47.2
comp=Z,6µm,19.0s
PMRV Marv??o 43.66 181 *e*P P 13 32 40.3 +2.0
comp=Z,63nm,1.2s
MAKZ Makanchi 43.67 84 P P 13 32 38.4 +0.1
MAKZ IAMs_20 IAMs_20 13 52 36.4
comp=Z,3µm,21.0s
MAKZ Makanchi 43.67 84 P P 13 32 38.4 +0.1
MAKZ pmax pmax
comp=Z,98nm,0.9s
MAKZ MLR MLR
comp=Z,3µm,21.0s
CUC Castrocucco 43.69 155 IAMs_20 IAMs_20 13 53 05.5
comp=Z,959nm,18.0s
MK31 Makanchi Array 43.72 84 P P 13 32 39.0 +0.3
MK31 IAmb IAmb 13 32 40.3
comp=Z,30nm,0.8s
MK31 Makanchi Array 43.72 84*d* *i*P P 13 32 39.0 +0.3
MKAR Makanchi Array 43.72 84 P P 13 32 38.9 +0.2
MKAR Makanchi Array 43.72 84 P P 13 32 38.9 +0.2
MKAR Makanchi Array 43.72 84 P P 13 32 39.4 +0.7
comp=Z,28nm,0.8s,baz=353,slow=7.6,SNR=42
MKAR PcP PcP 13 34 24.6 -0.7
comp=Z,4.2nm,0.8s,baz=346,slow=4.8,SNR=3.6
comp=Z,28nm,0.8s
HNH Hanover 43.94 252 IAMs_20 IAMs_20 13 50 51.7
comp=Z,5µm,18.0s
PETK Petropavlovsk- 43.95 14 P P 13 32 39.2 -1.2
PETK Petropavlovsk- 43.95 14 P P 13 32 39.2 -1.2
PETK Petropavlovsk- 43.95 14 P P 13 32 38.9 -1.6
comp=Z,7.1nm,1.0s,baz=46,slow=8.2,SNR=11
comp=Z,7.1nm,1.0s
PMTG Montargil 44.02 182 *e*P P 13 32 42.9 +1.8
comp=Z,84nm,1.8s
PESTR Estremoz 44.22 181 *e*P P 13 32 44.8 +2.0
comp=Z,63nm,1.6s
PESTR Estremoz 44.22 181 P P 13 32 42.5 -0.3
PESTR IAmb IAmb 13 32 45.8
comp=Z,30nm,0.9s
EGMT Eagleton 44.23 290 P P 13 32 43.1 +0.3
EGMT IAmb IAmb 13 32 51.2
comp=Z,80nm,1.6s
EGMT IAMs_20 IAMs_20 13 51 04.6
comp=Z,7µm,19.0s
EGMT Eagleton 44.23 290 P P 13 32 44.4 +1.6
baz=9.8,SNR=7.7
GLMI Grayling 44.33 265 IAMs_20 IAMs_20 13 50 12.8
comp=Z,3µm,20.0s
BTLS Baital 44.43 92 ⫰ *i*P P 13 32 45.2 +0.9
comp=Z,23nm,1.3s,baz=92
BTLS Baital 44.43 92*d* *i*P P 13 32 45.2 +0.9
BTLS pmax pmax
comp=Z,23nm,1.3s
ZKTA Zakatala 44.57 121 P P 13 32 46.8 +1.2
F33A 5 Mile Ranch, 44.77 277 IAmb IAmb 13 32 54.2
comp=Z,69nm,1.6s
NEW Newport 44.82 297 P P 13 32 47.6 +0.1
NEW IAmb IAmb 13 32 50.8
comp=Z,22nm,0.9s
NEW Newport 44.82 297 IAMs_20 IAMs_20 13 51 28.1
comp=Z,3µm,20.0s
NEW Newport 44.82 297 P P 13 32 49.8 +2.2
baz=9.4,SNR=11
NEW Newport 44.82 297 P P 13 32 47.6 +0.1
NEW pmax pmax
comp=Z,22nm,0.9s
NEW MLR MLR
comp=Z,2µm,20.0s
PBAR Barrancos 44.91 181 *e*P P 13 32 50.3 +2.0
comp=Z,49nm,1.8s
SPMN Marine on St. 44.94 273 P P 13 32 50.2 +1.8
baz=10.0
PNCL Nicolau / Gran 44.98 182 *e*P P 13 32 51.0 +2.2
comp=Z,73nm,1.5s
ANTO Ankara 44.99 136 IAMs_20 IAMs_20 13 52 37.8
comp=Z,2µm,20.0s
TDK Taldyqorghan 45.01 88 *e*P P 13 32 50.4 +1.3
comp=Z,38nm,0.9s,baz=88
TDK LR LR 13 52 36.1
comp=Z,2µm,17.2s,baz=88
TDK Taldyqorghan 45.01 88 *e*P P 13 32 50.3 +1.3
TDK pmax pmax
comp=Z,38nm,0.9s
TDK MLR MLR
comp=Z,2µm,17.0s
HRV Adam Dziewonsk 45.03 251 IAMs_20 IAMs_20 13 50 29.8
comp=Z,3µm,19.0s
SEKA Sheki 45.06 121 P P 13 32 50.8 +1.3
PBEJ Beja 45.06 181 *e*P P 13 32 52.4 +2.9
comp=Z,62nm,1.7s
TRY Troy 45.06 254 IAMs_20 IAMs_20 13 51 34.5
comp=Z,4µm,20.0s
HEH HeiHe 45.11 41 *e*P P 13 32 48.6 -1.1
HEH pmax pmax
comp=Z,18nm,1.4s
LAO LASA Array 45.13 287 P P 13 32 50.6 +0.6
LAO IAmb IAmb 13 32 54.5
comp=Z,73nm,0.8s
LAO IAMs_20 IAMs_20 13 51 54.5
comp=Z,3µm,20.0s
LAO LASA Array 45.13 287 P P 13 32 52.1 +2.1
baz=9.8,SNR=29
BCX Boston College 45.16 251 IAMs_20 IAMs_20 13 51 21.1
comp=Z,5µm,19.0s
BR131 Keskin Array S 45.21 135*c* *i*P P 13 32 52.3 +1.5
BRTR Keskin Array B 45.21 135 P P 13 32 49.8 -1.0
BRTR Keskin Array B 45.21 135 P P 13 32 49.8 -1.0
BRTR Keskin Array B 45.21 135 P P 13 32 52.3 +1.5
comp=Z,5.8nm,0.9s,baz=347,slow=5.1,SNR=9.8
BRTR PcP PcP 13 34 31.1 +0.3
comp=Z,2.2nm,0.8s,baz=196,slow=0.7,SNR=4.8
BRTR LR LR 13 52 16.4
comp=Z,2µm,22.0s,baz=360,slow=37
comp=Z,5.8nm,0.9s
L61B Northampton 45.22 252 IAMs_20 IAMs_20 13 51 39.7
comp=Z,4µm,19.0s
MESJ Messejana 45.25 182 *e*P P 13 32 53.3 +2.4
comp=Z,70nm,1.6s
MESJ Messejana 45.25 182 *e*P P 13 32 52.7 +1.8
MESJ IAmb IAmb 13 32 55.4

comp=Z,35nm,1.0s
MESJ Messejana 45.25 182 *e*P P **13 32 52.7 +1.8**
QUA2 Belchertown 45.35 252 IAMs_20 IAMs_20 13 51 43.2
comp=Z,4µm,18.0s
C09A Chrisman Ranch 45.41 298 IAmb IAmb 13 33 01.1
comp=Z,64nm,1.8s
HIA Hailar 45.43 48↓ *e*P P **13 32 51.8 -0.5**
HIA pmax pmax
comp=Z,24nm,1.4s
PCVE Castro Verde 45.45 182 *e*P P **13 32 54.3 +1.7**
comp=Z,53nm,1.6s
MNGR Mingechevir, A 45.48 121 P P **13 32 54.8 +2.1**
SONM Songino Array 45.51 60 P P **13 32 52.0 -1.1**
SONM Songino Array 45.51 60 P P **13 32 52.0 -1.1**
SONM pmax pmax
comp=Z,25nm,1.4s
SONM Songino Array 45.51 60 P P **13 32 52.4 -0.7**
PcP **PcP**
SONM **13 34 31.0 -0.6**
comp=Z,4.2nm,1.0s,baz=314,slow=2.4,SNR=4.1
SONM PP **PP 13 34 43.0 +3.8**
comp=Z,5.8nm,1.2s,baz=350,slow=7.3,SNR=3.7
comp=Z,5.8nm,1.0s
GANJ Ganja 45.52 122 P P **13 32 54.9 +1.8**
CART Cartagena 45.53 174 IAMs_20 IAMs_20 13 49 35.6
comp=Z,1µm,22.0s
ULN Ulaanbaatar 45.55 60 IAMs_20 IAMs_20 13 52 49.6
comp=Z,2µm,18.0s
ULN Ulaanbaatar 45.55 60*d* iP P **13 32 53.7 +0.3**
ULN pmax pmax
comp=Z,30nm,1.5s
MORF Marmelete 45.78 182 *e*P P **13 32 57.3 +2.1**
comp=Z,99nm,1.6s
MORF Marmelete 45.78 182 *e*P P **13 32 57.0 +1.7**
MORF IAmb IAmb 13 32 58.9
comp=Z,39nm,1.0s
MORF Marmelete 45.78 182 *e*P P **13 32 57.0 +1.7**
KUU Kurty 45.84 90↓ *i*P P **13 32 56.0 +0.3**
baz=90
KUU Kurty 45.84 90*d* iP P **13 32 55.9 +0.3**
GNI Garni 45.85 124 IAMs_20 IAMs_20 13 53 34.1
comp=Z,1µm,19.0s
M65A Busby, Falmout 45.86 250 IAMs_20 IAMs_20 13 52 32.7
comp=Z,4µm,20.0s
BINY Binghamton 45.86 256 IAMs_20 IAMs_20 13 51 34.6
comp=Z,3µm,19.0s
BINY Binghamton 45.86 256 P P **13 32 56.7 +0.9**
baz=9.2
KKAR Karatay Array 45.90 96 P P **13 32 56.4 +0.3**
KKAR Karatay Array 45.90 96 IAmb IAmb 13 33 11.0
comp=Z,87nm,1.6s
KKAR Karatay Array 45.90 96 P P **13 32 56.4 +0.3**
CHKK Chushkaly 45.96 90 *e*P P **13 32 57.4 +0.8**
baz=90
CHKK Chushkaly 45.96 90 *e*P P **13 32 57.3 +0.8**
CLTB Caltabellotta 45.97 158 IAMs_20 IAMs_20 13 52 43.9
comp=Z,3µm,20.0s
GNW Green Mountain 46.12 303 P P **13 32 58.5 +0.7**
GNW IAmb IAmb 13 33 07.0
comp=Z,40nm,1.2s
I37A Lemond, Waseca 46.21 274 IAmb IAmb 13 33 02.5
comp=Z,61nm,1.2s
DZA Taraz 46.21 95 *e*P P **13 32 59.6 +1.0**
baz=96
DZA Taraz 46.21 95 *e*P P **13 32 59.5 +1.0**
BPMT Black Pine Rid 46.22 294 P P **13 32 58.8 -0.1**
USP Ospenovka 46.23 92 P P **13 33 00.5 +1.7**
SNR=9.1
ARPR Arapgir-MALATY 46.26 131 IAmb IAmb 13 33 03.3
comp=Z,35nm,0.9s
ARPR IAMs_20 IAMs_20 13 52 52.2
comp=Z,2µm,19.0s
YLE Yale 46.37 252 IAMs_20 IAMs_20 13 52 52.0
comp=Z,4µm,18.0s
ABA Alger-Bouzarea 46.39 169 P P 13 33 10.6 +11
NLWA Neilton Lookou 46.40 304 IAMs_20 IAMs_20 13 53 27.8
comp=Z,2µm,18.0s
ERPA Erie 46.42 260 IAMs_20 IAMs_20 13 51 12.5
comp=Z,3µm,19.0s
KLR Kul'dur 46.46 37*de*P P **13 32 59.1 -1.3**
KLR pmax pmax
comp=Z,29nm,1.5s
SUSD Miller 46.47 279 P P **13 33 02.0 +1.5**
baz=9.7
CHMS Chumysh 46.53 92 P P **13 33 03.1 +2.0**
SNR=24
AKED El Kharrouba 46.55 169 P P 13 33 14.8 +14
KPKS Kokpek 46.55 88↓ *i*P P **13 33 02.1 +0.8**
baz=88
KPKS Kokpek 46.55 88*d* iP P **13 33 02.1 +0.8**
WSPT Westport, CT 46.56 253 IAMs_20 IAMs_20 13 52 29.1
comp=Z,5µm,19.0s
CHM Chimkent 46.56 97 *e*P P **13 33 02.7 +1.3**
comp=Z,21nm,1.1s,baz=98
CHM LR LR 13 52 03.9
comp=Z,1µm,16.4s,baz=98
CHM Chimkent 46.56 97 *e*P P **13 33 02.6 +1.3**
CHM pmax pmax
comp=Z,21nm,1.1s
CHM MLR MLR
comp=Z,1µm,16.0s
AAA Alma-Ata 46.59 90 *e*P P **13 33 02.8 +1.2**
comp=Z,22nm,0.8s,baz=90
AAA Alma-Ata 46.59 90 *e*P P **13 33 02.7 +1.2**
AAA pmax pmax
comp=Z,22nm,0.8s
ABKD Sidi Amar 46.64 170 P P **13 33 04.0 +2.1**
MDOK Medeo 46.65 90 *i* P P **13 33 03.3 +1.1**
baz=90
MDOK LR LR 13 52 52.2
comp=Z,1µm,14.8s,baz=90
MDOK Medeo 46.65 90 *i* P P **13 33 03.2 +1.1**
MDOK MLR MLR
comp=Z,1µm,15.0s
AAM Ann Arbor 46.69 264 IAMs_20 IAMs_20 13 51 38.4
comp=Z,2µm,20.0s
TKM2 Tokmak 2 46.71 91 P P **13 33 04.8 +2.2**
SNR=13
EKS2 Erkin-Say 46.74 93 P P **13 33 04.8 +1.9**
SNR=9.9
PAL Palisades 46.79 253 P P **13 33 04.3 +1.2**
baz=8.9
ZHN Zhinishke 46.82 88 *e*P P **13 33 04.6 +1.1**
baz=89
ZHN Zhinishke 46.82 88 *e*P P **13 33 04.5 +1.1**
LON Longmire 46.82 301 IAmb IAmb 13 33 12.2
comp=Z,62nm,1.6s
BOZ Bozeman (W) 46.84 292 P P **13 33 04.0 +0.4**
BOZ IAmb IAmb 13 33 08.1
comp=Z,27nm,0.9s
BOZ IAMs_20 IAMs_20 13 52 35.6
comp=Z,5µm,21.0s
BOZ Bozeman (W) 46.84 292 P P **13 33 04.8 +1.2**
baz=9.3,SNR=19
BOZ Bozeman (W) 46.84 292 P P **13 33 04.0 +0.4**
BOZ pmax pmax
comp=Z,27nm,1.0s
BOZ MLR MLR
comp=Z,5µm,21.0s
ISP Isparta 46.84 139 IAMs_20 IAMs_20 13 52 16.0
comp=Z,3µm,22.0s
AAK Ala-Archa 46.85 92 P P **13 33 05.9 +2.1**
SNR=19
AAK Ala-Archa 46.85 92 P P **13 33 04.7 +0.9**
AAK Ala-Archa 46.85 92*d* iP P **13 33 05.0 +1.2**
AAK pmax pmax
comp=Z,51nm,0.9s
ECSD EROS Data Cent 46.88 277 P P **13 33 04.3 +0.5**
ECSD IAmb IAmb 13 33 06.0
comp=Z,20nm,0.9s
ECSD IAMs_20 IAMs_20 13 51 25.1
comp=Z,3µm,18.0s
KBK Karagaybulak 46.89 92 P P **13 33 06.4 +2.3**
SNR=5.4
NAX Nakhchivan 46.89 123 P P **13 33 05.4 +1.4**
JFWS Jewell Farm 46.90 270 P P **13 33 05.7 +1.8**
baz=9.6
ALLY Alegheny Colle 46.91 260 IAmb IAmb 13 33 07.3
comp=Z,46nm,1.1s
UZB Uzynbulak 46.91 88 *e*P P **13 33 05.0 +0.8**
comp=Z,29nm,1.6s,baz=88
UZB Uzynbulak 46.91 88 *e*P P **13 33 04.9 +0.8**
UZB pmax pmax
comp=Z,29nm,1.6s
SATY Saty 46.92 88 *e*P P **13 33 05.3 +1.0**
baz=89
SATY Saty 46.92 88 *e*P P **13 33 05.2 +1.0**

HAWA Hanford 46.93 299 IAMs_20 IAMs_20 13 53 14.9
comp=Z,3µm,19.0s
SHLS Shalkode 46.95 87 *e*P P **13 33 06.2 +1.7**
baz=87
SHLS Shalkode 46.95 87 *e*P P **13 33 06.2 +1.7**
EMHD Djebel Mahouad 46.99 169 P P **13 33 07.3 +2.5**
RLMT Red Lodge 47.03 289 IAMs_20 IAMs_20 13 52 34.8
comp=Z,5µm,19.0s
RLMT Red Lodge 47.03 289 P P **13 33 06.7 +1.5**
baz=9.4
EDDR Deurdeur 47.17 170 P P **13 33 08.8 +2.6**
BOOM Boomskoye usch 47.18 91 P P **13 33 07.4 +1.1**
BOOM Boomskoye usch 47.18 91 P P **13 33 07.4 +1.1**
M53A WI Miller and 47.18 260 IAMs_20 IAMs_20 13 52 31.3
comp=Z,3µm,19.0s
M53A WI Miller and 47.18 260 P P **13 33 08.1 +2.0**
baz=9.2
UCH Uchtor 47.26 92 P P **13 33 10.0 +2.8**
SNR=15
WMQ Urumqi 47.31 79 *e*P P **13 33 08.6 +1.4**
WMQ S S **13 40 00.9 +0.6**
WMQ pmax pmax
comp=Z,55nm,0.9s
WMQ LR LR
comp=Z,4µm,15.7s
WMQ LR LR
comp=Z,2µm,15.7s
WMQ LR LR
comp=Z,2µm,18.5s
L44A Lake County Fo 47.34 268 IAMs_20 IAMs_20 13 52 52.4
comp=Z,5µm,19.0s
RSSD Black Hills 47.40 284 P P **13 33 10.1 +2.0**
baz=9.5
YNR Norris Junctio 47.60 291 IAmb IAmb 13 33 21.1
comp=Z,13nm,1.0s
SSPA Standing Stone 47.63 257 IAMs_20 IAMs_20 13 53 00.4
comp=Z,5µm,18.0s
KEST Kesra 47.65 162 P P **13 33 10.9 +1.0**
comp=Z,2.5nm,0.5s,baz=334,slow=15,SNR=2.5
comp=Z,2.5nm,0.5s
LKRN Lenkeran, Azer 47.70 120 P P **13 33 11.6 +1.5**
HQIL Hanson Quary C 47.70 268 IAMs_20 IAMs_20 13 53 08.1
comp=Z,5µm,18.0s
PLID Pearl Lake 47.84 296 IAMs_20 IAMs_20 13 53 08.9
comp=Z,4µm,21.0s
SANT Santorini 47.89 145 IAMs_20 IAMs_20 13 54 08.7
comp=Z,1µm,20.0s
N51A Ashland 47.90 262 IAmb IAmb 13 33 15.1
comp=Z,21nm,0.9s
H17A Grant Village 47.90 290 P P **13 33 13.9 +1.9**
baz=9.2,SNR=11
GAZ Gaziantep 48.06 132 IAmb IAmb 13 33 16.2
comp=Z,17nm,0.9s
BMO Blue Mountains 48.21 297 IAMs_20 IAMs_20 13 53 20.8
comp=Z,3µm,22.0s
NRN Naryn 48.23 91 IAmb IAmb 13 33 21.9
comp=Z,22nm,1.1s
SCIA State Center 48.26 273 P P **13 33 16.0 +1.5**
baz=9.4
K30B Basset 48.29 279 IAmb IAmb 13 33 17.8
comp=Z,41nm,0.9s
O54A Avella 48.38 260 IAmb IAmb 13 33 18.1
comp=Z,19nm,1.0s
O53A New Philadelph 48.42 261 IAmb IAmb 13 33 19.1
comp=Z,30nm,1.1s
O53A IAMs_20 IAMs_20 13 53 19.1
comp=Z,4µm,20.0s
O53A New Philadelph 48.42 261 P P **13 33 17.7 +2.0**
baz=9.1
MOOW Moose Ponds 48.56 290 IAmb IAmb 13 33 30.0
comp=Z,35nm,1.2s
MOOW IAMs_20 IAMs_20 13 53 46.2
comp=Z,8µm,20.0s
ACSO Alum Creek Sta 48.65 262 IAmb IAmb 13 33 20.9
comp=Z,21nm,1.0s
ACSO IAMs_20 IAMs_20 13 53 27.3
comp=Z,2µm,18.0s
ACSO Alum Creek Sta 48.65 262 P P **13 33 18.5 +1.0**
baz=9.1
LOHW Long Hollow 48.68 290 IAmb IAmb 13 33 25.4
comp=Z,32nm,1.3s
MCWV Mont Chateau 48.83 259 IAMs_20 IAMs_20 13 53 55.2
comp=Z,4µm,18.0s
MCWV Mont Chateau 48.83 259 P P **13 33 20.3 +1.4**
baz=9.2
KARP Karpathos 48.84 143 IAMs_20 IAMs_20 13 53 08.6
comp=Z,2µm,22.0s
SNOW Snow King Moun 48.84 290 IAmb IAmb 13 33 32.3
comp=Z,29nm,1.1s
SNOW IAMs_20 IAMs_20 13 53 55.7
comp=Z,8µm,20.0s
O48B Farmland 48.89 265 IAMs_20 IAMs_20 13 54 44.6
comp=Z,2µm,18.0s
O48B Farmland 48.89 265 P P **13 33 20.7 +1.3**
baz=9.2
BTK Batken 48.94 97 IAmb IAmb 13 33 23.1
comp=Z,70nm,0.9s
REDW Red Top Meadow 48.95 290 IAmb IAmb 13 33 27.4
comp=Z,316nm,1.2s
REDW IAMs_20 IAMs_20 13 53 35.6
comp=Z,87µm,21.0s
HDIL Hopedale 49.11 269 IAMs_20 IAMs_20 13 53 58.2
comp=Z,5µm,20.0s
HDIL Hopedale 49.11 269 P P **13 33 21.9 +0.9**
baz=9.2
COR Corvallis 49.12 302 IAMs_20 IAMs_20 13 55 13.7
comp=Z,3µm,21.0s
H04D Lebanon 49.12 302 IAmb IAmb 13 33 24.6
comp=Z,19nm,0.8s
P52A Corning 49.14 261 IAMs_20 IAMs_20 13 53 42.2
comp=Z,3µm,19.0s
K22A Casper 49.15 286 IAmb IAmb 13 33 27.5
comp=Z,111nm,1.6s
K22A Casper 49.15 286 P P **13 33 21.8 +0.3**
baz=9.2,SNR=12
HLID Hailey 49.16 294 IAMs_20 IAMs_20 13 54 12.1
comp=Z,5µm,21.0s
HLID Hailey 49.16 294 P P **13 33 22.6 +0.9**
baz=8.9,SNR=7.7
BW06 Boulder Array 49.39 289 IAmb IAmb 13 33 29.3
comp=Z,38nm,1.4s
BW06 IAMs_20 IAMs_20 13 55 25.2
comp=Z,4µm,18.0s
BW06 Boulder Array 49.39 289 P P **13 33 24.8 +1.3**
baz=9.0,SNR=11
PD31 Pinedale Array 49.39 289 IAmb IAmb 13 33 29.3
comp=Z,35nm,1.4s
PDAR Pinedale Array 49.39 289 P P **13 33 23.2 -0.2**
comp=Z,6.2nm,0.9s,baz=38,slow=3.5,SNR=11
PDAR PP **PP 13 35 18.2 +1.1**
comp=Z,1.9nm,0.9s,baz=19,slow=5.7,SNR=3.0
comp=Z,6.2nm,0.9s
YSS Yuzh-Sakhalins 49.45 27 IAMs_20 IAMs_20 13 52 39.4
comp=Z,2µm,21.0s
YSS Yuzh-Sakhalins 49.45 27↓ *e*P P **13 33 23.0 -0.5**
YSS pmax pmax
comp=Z,66nm,1.7s
MFID Camas Ranch 49.47 295 IAmb IAmb 13 33 28.9
comp=Z,32nm,1.5s
MFID IAMs_20 IAMs_20 13 53 49.1
comp=Z,5µm,22.0s
GEYT Alibeck 49.52 110 IAmb IAmb 13 33 27.2
comp=Z,44nm,0.9s
GEYT Alibeck 49.52 110 P P **13 33 25.6 +1.4**
comp=Z,34nm,0.8s,baz=320,slow=6.6,SNR=23
comp=Z,34nm,0.8s
GYA0B ALIBECK ARRAY 49.52 110 IAmb IAmb 13 33 27.2
comp=Z,36nm,0.9s
P49A Miami Univ. Ec 49.55 264 IAMs_20 IAMs_20 13 53 59.1
comp=Z,2µm,19.0s
P49A Miami Univ. Ec 49.55 264 P P **13 33 25.4 +0.9**
baz=9.1
AHID Auburn Hatcher 49.57 291 IAmb IAmb 13 33 30.9
comp=Z,21nm,0.9s
Q54A Coxs Mills 49.62 260 IAmb IAmb 13 34 04.6
comp=Z,46nm,1.6s
Q52A Bidwell 49.81 261 IAmb IAmb 13 33 32.6
comp=Z,35nm,1.3s
CSS Mathiatis 49.91 136 P P **13 33 27.4 +0.2**
CSS IAMs_20 IAMs_20 13 54 25.9
comp=Z,1µm,22.0s
CBN Corbin Frederi 49.97 256 IAMs_20 IAMs_20 13 54 24.3
comp=Z,2µm,20.0s
KSH Kashi 50.11 92 P P 13 33 33.2 +4.4
KSH pP pwP 13 33 36.0 -0.1
KSH sP sP 13 33 40.7 +9.3
KSH PP PP 13 35 31.8 +8.2
KSH pmax pmax
comp=Z,26nm,1.0s
KSH LR LR
comp=Z,3µm,19.2s
KSH LR LR
comp=Z,2µm,18.9s
KSH LR LR
comp=Z,4µm,21.3s
RWWY Rawlins 50.18 287 IAMs_20 IAMs_20 13 54 51.1
comp=Z,4µm,18.0s
SSFO Shawnee State 50.19 262 IAmb IAmb 13 33 39.1
comp=Z,99µm,1.1s
MDT Midelt 50.26 178 LR LR 13 53 27.3
comp=Z,180nm,20.0s,baz=348,slow=34
OGNE Ogallala 50.29 281 IAMs_20 IAMs_20 13 53 37.2
comp=Z,4µm,18.0s
OGNE Ogallala 50.29 281 P P **13 33 31.0 +0.9**
baz=9.1
PHWY Pilot Hill 50.35 285 IAMs_20 IAMs_20 13 54 44.7
comp=Z,6µm,20.0s
XLT XiLinHaoTe 50.40 52 *e*P P 13 33 25.7 -5.2
XLT pP pP 13 33 30.3 -2.5
XLT sP pwP 13 33 35.0 -3.2
XLT pmax pmax
comp=Z,9.0nm,1.2s
XLT pmax pmax
comp=Z,710nm,10.0s
XLT LR LR
comp=N,46nm,15.3s
XLT LR LR
comp=E,1µm,14.7s
XLT LR LR
comp=Z,750nm,16.2s
P38A Dawn 50.55 273 IAmb IAmb 13 33 40.7
comp=Z,45nm,1.4s
HVU Hansel Valley 50.74 292 IAmb IAmb 13 33 39.7
comp=Z,22nm,1.2s
WVOR Wild Horse Val 50.75 298 IAMs_20 IAMs_20 13 54 19.9
comp=Z,3µm,21.0s
OLIL Olney 50.76 267 IAmb IAmb 13 33 45.8
comp=Z,27nm,1.1s
HWUT Hardware Ranch 50.77 291 IAmb IAmb 13 33 39.9
comp=Z,42nm,1.1s
N23A Red Feather La 50.81 285 IAmb IAmb 13 33 41.4
comp=Z,155nm,1.8s
N23A Red Feather La 50.81 285 P P **13 33 35.6 +1.3**
baz=9.0
MDJ Mudanjiang 50.88 40 P P **13 33 32.5 -1.9**
MDJ ScP **ScP 13 38 42.0 -4.5**
MDJ PcS **PcS 13 38 43.8 -4.3**
MDJ S **S 13 40 55.5 +5.2**
MDJ ScS **ScS 13 43 21.8 -2.7**
MDJ pmax pmax
comp=Z,37nm,1.1s
MDJ pmax pmax
comp=Z,660nm,7.2s
MDJ LR LR
comp=Z,1µm,17.5s
MDJ LR LR
comp=Z,740nm,15.8s
MDJ LR LR
comp=Z,1µm,15.1s
MDJ Mudanjiang 50.88 40 IAmb IAmb 13 33 34.6
comp=Z,47nm,1.2s
K02D Willamette Mer 51.03 302 IAmb IAmb 13 33 39.5
comp=Z,16nm,1.0s
WCI Wyandotte Cave 51.03 265 IAMs_20 IAMs_20 13 54 20.3
comp=Z,2µm,19.0s
HUMO Hull Mountain 51.04 302 IAMs_20 IAMs_20 13 54 56.5
comp=Z,2µm,21.0s
T59A Double "B" Far 51.21 256 IAmb IAmb 13 33 51.5
comp=Z,53nm,1.4s
BLA Blacksburg 51.32 259 IAmb IAmb 13 33 41.4
comp=Z,22nm,0.9s
BLA IAMs_20 IAMs_20 13 55 32.9
comp=Z,4µm,18.0s
BLA Blacksburg 51.32 259 P P **13 33 39.5 +1.7**
baz=8.7
CN2 Changchun 51.35 44 *e*P P 13 33 31.3 -6.7
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=N,650nm,13.0s
CN2 LR LR
comp=E,570nm,13.0s
KSU1 Kansas State U 51.45 276 IAMs_20 IAMs_20 13 56 37.9
comp=Z,2µm,19.0s
KSU1 Kansas State U 51.45 276 P P **13 33 39.9 +1.1**
baz=9.0
USRK Ussuriysk Ar. 51.48 37 P P **13 33 36.9 -2.0**
comp=Z,8.5nm,0.8s,baz=340,slow=6.9,SNR=9.7
USRK PcP **PcP 13 34 51.5 -1.4**
comp=Z,1.8nm,0.6s,baz=61,slow=3.2,SNR=4.4
comp=Z,8.5nm,0.8s
RDMU Red Mountain 51.56 289 IAmb IAmb 13 33 45.9
comp=Z,36nm,1.0s
BGU Big Grassy Mou 51.61 292 IAmb IAmb 13 33 46.9
comp=Z,26nm,1.3s
CTU Camp Tracy 51.69 291 IAmb IAmb 13 33 48.5
comp=Z,25nm,1.4s
R40A Maddies Statio 51.71 271 IAmb IAmb 13 33 51.9
comp=Z,49nm,1.6s
BSUT Blindstream Ca 51.73 290 IAmb IAmb 13 33 48.3
comp=Z,67nm,1.2s
CCM Cathedral Cave 51.81 270 P P **13 33 42.7 +1.3**
baz=8.9
O20A White River Ci 51.83 287 IAmb IAmb 13 33 49.2
comp=Z,238nm,1.7s
O20A White River Ci 51.83 287 P P **13 33 43.5 +1.6**
baz=8.8,SNR=10.0
ISCO Idaho Springs 51.85 285 IAmb IAmb 13 33 48.5
comp=Z,16nm,1.2s
ISCO IAMs_20 IAMs_20 13 55 43.4
comp=Z,6µm,19.0s
ISCO Idaho Springs 51.85 285 P P **13 33 42.7 +0.6**
baz=8.8
YBH Yreka Blue Hor 51.88 301 IAMs_20 IAMs_20 13 55 23.8
comp=Z,2µm,19.0s
MMAI Mount Meron Ar 52.02 135 P P **13 33 42.5 -0.7**
comp=Z,1.0nm,0.3s,baz=335,slow=9.5,SNR=8.5
MMAI LR LR 13 56 58.6
comp=Z,606nm,22.0s,baz=291,slow=37
comp=Z,1.0nm,0.3s
ELK Elko 52.04 294 IAmb IAmb 13 33 50.2
comp=Z,2nm,1.3s
ELK IAMs_20 IAMs_20 13 56 05.2
comp=Z,5µm,20.0s
CBKS Cedar Bluff 52.11 279 IAMs_20 IAMs_20 13 55 16.5
comp=Z,2µm,19.0s
KRMB Red Mountain 52.21 302 IAmb IAmb 13 34 03.8
comp=Z,83nm,1.8s
KSCO Kaye Shedlock' 52.27 282 P P **13 33 45.9 +0.9**
baz=8.8
DUG Dugway, Tooele 52.31 292 IAMs_20 IAMs_20 13 55 54.3
comp=Z,3µm,21.0s
DUG Dugway, Tooele 52.31 292 P P **13 33 46.0 +0.7**
baz=8.5
MPU Maple Canyon 52.35 290 IAmb IAmb 13 33 53.9
comp=Z,59nm,2.0s
TZTN Tazewell 52.36 262 IAMs_20 IAMs_20 13 55 35.4
comp=Z,2µm,18.0s
S39A Bolivar 52.43 272 IAmb IAmb 13 33 55.2
comp=Z,21nm,1.1s
NLU North Lily Min 52.46 291 IAmb IAmb 13 33 52.9
comp=Z,19nm,1.2s
P18A Preston Nutter 52.57 289 IAmb IAmb 13 33 59.0
comp=Z,13nm,0.9s
Q24A Divide 52.62 284 IAmb IAmb 13 33 54.0
comp=Z,35nm,1.2s
Q24A Divide 52.62 284 P P **13 33 48.6 +0.7**
baz=8.8,SNR=10
SMCO Snowmass 52.63 286 IAmb IAmb 13 33 55.5
comp=Z,89nm,1.4s
SMCO IAMs_20 IAMs_20 13 56 28.9
comp=Z,5µm,18.0s
P17A Butcher Ranch, 52.78 290 IAmb IAmb 13 33 56.0
comp=Z,24nm,1.1s
JCC Jacoby Creek, 52.92 302 IAMs_20 IAMs_20 13 57 58.4
comp=Z,3µm,18.0s
CNNC Cliffs of the 52.96 256 IAMs_20 IAMs_20 13 55 07.4
comp=Z,3µm,21.0s
HHC Hu-ho-hao-te 52.96 57 *e*P P **13 33 48.3 -1.8**
HHC sP pwP 13 33 55.8 -1.6
HHC S **S 13 41 17.1 -2.0**
HHC sS sS 13 41 23.0 +0.7
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,260nm,5.0s

HHC LR LR
comp=Z,2µm,16.5s
HHC LR LR
comp=Z,630nm,16.5s
HHC LR LR
comp=Z,3µm,18.1s
TMUT Trail Mountain 53.01 290 IAmb IAmb 13 33 57.4
comp=Z,39nm,1.1s
GTA Gaotai 53.10 68 ⇑P **P** **13 33 51.1 -0.1**
GTA pP pwP 13 33 54.6 -3.9
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA LR LR
comp=Z,920nm,16.7s
GTA LR LR
comp=Z,800nm,18.7s
GTA LR LR
comp=Z,1µm,17.5s
SNY Shenyang 53.15 46 ⇓P **P** **13 33 49.5 -1.8**
SNY pmax pmax
comp=Z,19nm,0.8s
WVT Waverly 53.29 266 IAMs_20 IAMs_20 13 55 16.0
comp=Z,2µm,21.0s
WVT Waverly 53.29 266 P **P** **13 33 53.8 +1.3**
baz=8.7
Q16A Castle Valley 53.38 290 IAmb IAmb 13 34 00.2
comp=Z,72nm,1.2s
KMSC Kings Mountain 53.47 260 P **P** **13 33 55.0 +1.3**
baz=8.4
T35A Sooner Cattle 53.59 275 IAmb IAmb 13 34 03.4
comp=Z,38nm,1.1s
Q12A Willow Creek R 53.68 293 IAmb IAmb 13 34 02.1
comp=Z,22nm,1.0s
U38A Gravette 53.80 273 IAmb IAmb 13 34 04.3
comp=Z,19nm,1.1s
SDCO Great Sand Dun 53.87 284 IAmb IAmb 13 34 05.9
comp=Z,60m,1.8s
SDCO Great Sand Dun 53.87 284 P **P** **13 33 58.0 +1.0**
baz=8.6,SNR=8.7
ORV Oroville 53.91 300 IAMs_20 IAMs_20 13 58 40.4
comp=Z,3µm,18.0s
OK032 Salt Plains WL 53.91 277 IAmb IAmb 13 34 00.6
comp=Z,25nm,0.6s
OK032 IAMs_20 IAMs_20 13 58 02.1
comp=Z,2µm,19.0s
S22A 4UR Ranch, Cre 54.02 285 IAmb IAmb 13 34 05.9
comp=Z,61nm,1.5s
S22A 4UR Ranch, Cre 54.02 285 P **P** **13 33 60.0 +1.8**
baz=8.6,SNR=10
KVN Kaiserville 54.03 296 IAmb IAmb 13 34 04.7
comp=Z,16nm,1.0s
OK051 E0350 and S346 54.03 275 IAmb IAmb 13 34 10.8
comp=Z,28nm,1.0s
OK051 IAMs_20 IAMs_20 13 55 49.4
comp=Z,3µm,18.0s
OK048 Pawnee Station 54.13 276 IAmb IAmb 13 34 07.0
comp=Z,49nm,1.3s
OK048 IAMs_20 IAMs_20 13 55 54.1
comp=Z,3µm,19.0s
PNTR Pine Nut 54.16 298 IAmb IAmb 13 34 08.6
comp=Z,15nm,0.8s
KBL Kabul 54.17 99 P **P** **13 33 58.4 -0.7**
KBL Kabul 54.17 99 P **P** **13 33 58.4 -0.7**
KBL pmax pmax
comp=Z,45nm,0.9s
YERR Yerington 54.22 298 IAmb IAmb 13 34 06.2
comp=Z,40nm,1.7s
BJI Beijing 54.23 53 P **P** **13 33 59.6 +0.4**
BJI S S 13 41 43.4 +7.4
BJI pmax pmax
comp=Z,6.0nm,1.1s
BJI LR LR
comp=Z,290nm,19.2s
BJI LR LR
comp=Z,440nm,17.4s
BJI LR LR
comp=Z,390nm,21.4s
BJT Baijiatuan 54.25 53 P **P** **13 33 58.8 -0.6**
BJT IAmb IAmb 13 34 11.0
comp=Z,22nm,1.3s
BJT Baijiatuan 54.25 53 P **P** **13 33 58.8 -0.6**
BJT pmax pmax
comp=Z,22nm,1.3s
BJT MLR MLR
comp=Z,16µm,22.0s
BBSR BB Station 54.27 242 IAMs_20 IAMs_20 13 54 57.4
comp=Z,2µm,20.0s
OK038 West end E0370 54.30 277 IAMs_20 IAMs_20 13 55 57.3
comp=Z,3µm,20.0s
QUOK Quay 54.35 275 IAmb IAmb 13 34 09.3
comp=Z,47nm,1.2s
ERM Erimo 54.40 28 P **P** **13 33 58.5 -1.9**
ERM Erimo 54.40 28 P **P** **13 33 58.5 -1.9**
ERM pmax pmax
comp=Z,210nm,1.6s
R11B Troy Canyon, C 54.45 294 IAMs_20 IAMs_20 13 57 31.9
comp=Z,5µm,20.0s
R11B Troy Canyon, C 54.45 294 P **P** **13 34 02.3 +1.2**
baz=8.2,SNR=7.6
TUL3 Leonard 54.49 274 IAmb IAmb 13 34 10.1
comp=Z,22nm,1.1s
TUL3 Leonard 54.49 274 P **P** **13 34 03.1 +1.9**
baz=8.6
OK033 Mehan 54.50 275 IAmb IAmb 13 34 10.5
comp=Z,71nm,1.3s
OK033 IAMs_20 IAMs_20 13 56 05.8
comp=Z,4µm,21.0s
OK052 Battle Ridge R 54.53 275 IAmb IAmb 13 34 10.7
comp=Z,89nm,1.6s
OK052 IAMs_20 IAMs_20 13 56 07.7
comp=Z,3µm,20.0s
HOPS Hopland Field 54.63 301 IAMs_20 IAMs_20 13 57 04.5
comp=Z,2µm,20.0s
NVAR Mina Array Bea 54.67 297 P **P** **13 34 03.2 +0.4**
comp=Z,2.5nm,0.8s,baz=11,slow=5.1,SNR=5.7
NVAR PP **PP** **13 36 05.2 +0.4**
comp=Z,1.7nm,0.9s,baz=12,slow=5.0,SNR=4.0
comp=Z,2.5nm,0.8s
MVCO Mesa Verde 54.75 287 IAmb IAmb 13 34 18.5
comp=Z,132nm,1.7s
MVCO IAMs_20 IAMs_20 13 57 52.4
comp=Z,4µm,18.0s
MVCO Mesa Verde 54.75 287 P **P** **13 34 04.5 +1.1**
baz=8.4
ELIS Ellis County 54.78 278 IAmb IAmb 13 34 12.1
comp=Z,105nm,1.7s
OK029 Liberty Lake 54.81 276 IAMs_20 IAMs_20 13 56 14.0
comp=Z,2µm,20.0s
RTBA Rita Blanca 54.82 281 IAmb IAmb 13 34 11.9
comp=Z,47nm,1.4s
SZCU Shurtz Canyon 54.91 291 IAmb IAmb 13 34 11.9
comp=Z,19nm,1.2s
OXF Oxford 55.08 268 IAMs_20 IAMs_20 13 57 31.4
comp=Z,3µm,20.0s
OXF Oxford 55.08 268 P **P** **13 34 06.0 +0.6**
baz=8.5
CMB Columbia Colle 55.29 299 IAMs_20 IAMs_20 13 59 01.1
comp=Z,2µm,20.0s
MZP Montezuma Peak 55.29 296 IAmb IAmb 13 34 15.0
comp=Z,30nm,1.8s
NHSC New Hope 55.34 258 IAMs_20 IAMs_20 13 57 36.4
comp=Z,4µm,18.0s
W35A Tecumseh 55.37 275 IAmb IAmb 13 34 16.8
comp=Z,36nm,1.2s
GOGA Godfrey 55.44 262 IAMs_20 IAMs_20 13 56 47.0
comp=Z,2µm,21.0s
GOGA Godfrey 55.44 262 P **P** **13 34 08.9 +0.8**
baz=8.3
KNB Kanab 55.45 291 IAmb IAmb 13 34 15.2
comp=Z,20nm,1.1s
MCCM Marconi Confer 55.45 301 IAMs_20 IAMs_20 13 59 45.2
comp=Z,2µm,18.0s
LCMT Little Creek M 55.50 291 IAmb IAmb 13 34 16.3
comp=Z,23nm,1.1s
MLAC Mammoth, Mammo 55.52 297 P **P** **13 34 10.5 +1.6**
baz=7.9
NIL Nilore 55.56 95 P **P** **13 34 08.5 -0.5**
NIL IAmb IAmb 13 34 10.6
comp=Z,28nm,0.9s
NIL Nilore 55.56 95 P **P** **13 34 08.5 -0.5**
NIL pmax pmax
comp=Z,28nm,0.9s
MIAR Mount Ida 55.56 272 IAmb IAmb 13 34 20.8
comp=Z,60nm,1.7s
MIAR IAMs_20 IAMs_20 13 56 52.1
comp=Z,3µm,19.0s
MIAR Mount Ida 55.56 272 P **P** **13 34 09.5 +0.5**
baz=8.5

TPNV Topopah Spring 55.91 294 P **P** **13 34 11.3 -0.3**
baz=8.0
U15A North Rim 55.97 290 IAmb IAmb 13 34 15.3
comp=Z,15nm,0.9s
WMOK Wichita Mounta 56.02 277 IAmb IAmb 13 34 21.0
comp=Z,25nm,1.4s
WMOK Wichita Mounta 56.02 277 IAMs_20 IAMs_20 13 57 02.9
comp=Z,2µm,20.0s
WMOK Wichita Mounta 56.02 277 P **P** **13 34 12.2 -0.1**
baz=8.5
AMTX Amarillo 56.23 280 IAmb IAmb 13 35 47.5
comp=Z,51nm,2.0s
AMTX IAMs_20 IAMs_20 13 57 13.4
comp=Z,3µm,18.0s
AMTX Amarillo 56.23 280 P **P** **13 34 13.9 +0.1**
baz=8.4
LRAL Lakeview Retre 56.24 265 IAMs_20 IAMs_20 13 57 33.1
comp=Z,2µm,19.0s
LRAL Lakeview Retre 56.24 265 P **P** **13 34 14.6 +0.7**
baz=8.3
WLAR White Oak Lake 56.35 271 IAmb IAmb 13 34 29.1
comp=Z,42nm,1.1s
FURC Furnace Creek, 56.45 295 P **P** **13 34 16.0 +0.8**
baz=7.9
CWC Cottonwood Cre 56.61 296 P **P** **13 34 18.2 +1.5**
baz=7.8
SAO San Andreas Ge 56.66 299 IAMs_20 IAMs_20 13 59 18.3
comp=Z,4µm,19.0s
HNS HongShan 56.70 55 ⇑P **P** **13 34 17.3 +0.3**
HNS *e*S **S** **13 42 11.6 +2.5**
HNS pmax pmax
comp=Z,22nm,1.0s
HNS LR LR
comp=Z,1µm,20.6s
HNS LR LR
comp=Z,570nm,21.6s
ANMO Albuquerque 56.74 285 P **P** **13 34 17.4 -0.2**
ANMO IAmb IAmb 13 34 25.6
comp=Z,22nm,1.4s
ANMO Albuquerque 56.74 285 P **P** **13 34 18.6 +0.9**
baz=8.3
ANMO Albuquerque 56.74 285 ⇓*e*P **P** **13 34 18.5 +0.9**
ANMO pmax pmax
comp=Z,22nm,1.4s
WUAZ Wupatki 56.76 289 IAmb IAmb 13 34 21.6
comp=Z,21nm,0.8s
WUAZ IAMs_20 IAMs_20 13 58 33.2
comp=Z,5µm,21.0s
WUAZ Wupatki 56.76 289 P **P** **13 34 19.2 +1.5**
baz=8.1,SNR=7.8
LZH Lanzhou 56.84 65 *e*P **P** **13 34 18.8 +0.5**
LZH pP pwP 13 34 25.4 -0.2
LZH pmax pmax
comp=Z,13nm,1.4s
LZH LR LR
comp=Z,3µm,15.1s
LZH LR LR
comp=Z,880nm,17.3s
LZH LR LR
comp=Z,3µm,20.5s
MPMC Manual Prospec 56.92 295 P **P** **13 34 20.2 +1.3**
baz=7.8,SNR=12
WTFS Witchita Falls 56.94 277 IAmb IAmb 13 34 28.7
comp=Z,50nm,1.4s
SHOC Shoshone, Teco 56.94 294 P **P** **13 34 21.1 +2.3**
baz=7.9
V12A Nelson 56.95 293 IAmb IAmb 13 34 22.9
comp=Z,23nm,1.1s
W18A Petrified Fore 56.96 288 IAmb IAmb 13 34 22.6
comp=Z,23nm,0.8s
W18A Petrified Fore 56.96 288 P **P** **13 34 20.0 +0.8**
baz=8.2,SNR=8.5
MSTX Muleshoe 57.26 281 IAmb IAmb 13 34 28.7
comp=Z,9.1nm,0.9s
MSTX Muleshoe 57.26 281 P **P** **13 34 22.2 +0.9**
baz=8.3
VES Vestal, Richgr 57.32 297 P **P** **13 34 22.0 +0.6**
baz=7.7
ISA Isabella, Lake 57.42 296 IAmb IAmb 13 34 30.6
comp=Z,59nm,1.9s
ISA Isabella, Lake 57.42 296 P **P** **13 34 23.5 +1.2**
baz=7.7
LRMC Laurel Mtn Rad 57.52 296 P **P** **13 34 24.8 +1.8**
baz=7.8
APMT Aspermont 57.57 278 IAmb IAmb 13 34 32.8
comp=Z,47nm,1.3s
GSC Goldstone, Bar 57.59 295 IAmb IAmb 13 34 31.2
comp=Z,54nm,1.7s
GSC Goldstone, Bar 57.59 295 P **P** **13 34 25.5 +2.0**
baz=7.8,SNR=9.9
Y22D IRIS PASSCAL I 57.66 285 P **P** **13 34 25.4 +1.3**
baz=8.2
Y22F Passcal Instru 57.66 285 P **P** **13 34 26.0 +2.0**
baz=8.2
PLPT Palo Pinto 57.86 276 IAmb IAmb 13 34 36.8
comp=Z,41nm,1.6s
KSRS Korea Array 57.86 42 P **P** **13 34 23.6 -1.6**
comp=Z,2.9nm,0.9s,baz=341,slow=7.1,SNR=5.3
comp=Z,2.9nm,0.9s
GMRC Granite Mounta 57.98 293 P **P** **13 34 27.9 +1.6**
baz=7.8,SNR=8.6
POST Post 58.00 279 IAmb IAmb 13 34 35.9
comp=Z,149nm,1.9s
HEC Hector,Ludlow 58.01 294 P **P** **13 34 28.0 +1.6**
baz=7.8
RRX Edison Barstow 58.04 295 P **P** **13 34 26.5 -0.1**
baz=7.8
BRAL Brewton 58.09 265 IAMs_20 IAMs_20 13 58 33.1
comp=Z,3µm,18.0s
TIA Tai'an 58.12 52 P **P** **13 34 26.2 -0.9**
TIA pmax pmax
comp=Z,12nm,1.0s
EDW2 Edwards Air Fo 58.14 296 P **P** **13 34 28.9 +1.6**
baz=7.7
PDMCI Parker Dam,Lak 58.28 292 P **P** **13 34 29.8 +1.6**
baz=7.9,SNR=11
237A Washetta, Mont 58.35 274 IAmb IAmb 13 34 39.0
comp=Z,63nm,1.4s
Y14A Wickenburg 58.51 291 IAmb IAmb 13 34 34.0
comp=Z,9.5nm,0.8s
IRM Iron Mountain 58.54 293 P **P** **13 34 32.0 +1.9**
baz=7.8,SNR=9.8
WHTX Lake Whitney, 58.56 275 P **P** **13 34 31.3 +1.0**
baz=8.2
BBRC Big Bear Solar 58.63 295 P **P** **13 34 31.7 +0.7**
baz=7.7
BFSC Mount Baldy Ra 58.74 295 P **P** **13 34 32.4 +0.8**
baz=7.7
BELC Belle Mtn. Jos 58.79 294 P **P** **13 34 32.9 +0.9**
baz=7.8,SNR=8.4
PASC Pasadena Art C 58.87 296 IAMs_20 IAMs_20 14 00 03.8
comp=Z,4µm,21.0s
BLYC Blythe 58.87 292 IAmb IAmb 13 34 35.9
comp=Z,14nm,0.8s
BC3 Big Chuckawall 59.07 293 P **P** **13 34 35.1 +1.2**
baz=7.8
SGCY Sterling City 59.09 279 IAmb IAmb 13 34 40.1
comp=Z,28nm,1.1s
SCZ2 Santa Cruz Isl 59.20 297 P **P** **13 34 35.6 +0.9**
baz=7.5
PFO Pinyon Flats O 59.23 294 P **P** **13 34 34.0 -1.0**
PFO IAmb IAmb 13 34 42.9
comp=Z,34nm,2.0s
PFO Pinyon Flats O 59.23 294 P **P** **13 34 35.5 +0.5**
baz=7.7
PFO Pinyon Flats O 59.23 294 P **P** **13 34 34.0 -1.0**
PFO pmax pmax
comp=Z,34nm,2.0s
TPFO Pinon Flats 59.23 294 P **P** **13 34 35.6 +0.5**
baz=7.7
121A Cookes Peak, D 59.28 285 IAmb IAmb 13 35 09.3
comp=Z,31nm,1.9s
121A Cookes Peak, D 59.28 285 P **P** **13 34 36.1 +0.6**
baz=8.0
LYN LuoYang 59.29 57 ⇑P **P** **13 34 35.3 0.0**
LYN pmax pmax
comp=Z,23nm,0.8s
BRDY Brady 59.45 277 IAmb IAmb 13 34 46.6
comp=Z,38nm,1.4s
MAJO Matsushiro 59.54 33 P **P** **13 34 35.3 -1.7**
MAJO Matsushiro 59.54 33 ⇑*i*P **P** **13 34 35.4 -1.6**
MJAR Matsushiro Arr 59.54 33 P **P** **13 34 35.7 -1.3**
comp=Z,18nm,1.1s,baz=352,slow=7.2,SNR=12
comp=Z,18nm,1.1s
GLA Glamis 59.59 292 P **P** **13 34 38.4 +1.0**
baz=7.7
CIS Catalina Islan 59.65 296 P **P** **13 34 38.1 +0.3**
baz=7.5

113A Mohawk Valley, 59.75 291 IAmb IAmb 13 34 46.7
comp=Z,39nm,2.0s
435B Jarrell 59.77 275 IAMs_20 IAMs_20 13 59 32.4
comp=Z,3µm,20.0s
435B Jarrell 59.77 275 P **P** **13 34 39.5 +0.9**
baz=8.1
SWSC Sam W. Stewart 59.81 293 P **P** **13 34 38.5 -0.3**
baz=7.7
MNTX Cornudas Mount 59.82 283 IAMs_20 IAMs_20 14 01 12.4
comp=Z,3µm,18.0s
MNTX Cornudas Mount 59.82 283 P **P** **13 34 39.4 +0.4**
baz=8.0
MNHN Monahans 59.85 280 IAmb IAmb 13 34 48.5
comp=Z,20nm,1.1s
TUC Tucson 59.86 288 P **P** **13 34 39.8 +0.5**
TUC IAmb IAmb 13 34 43.3
comp=Z,15nm,0.8s
TUC Tucson 59.86 288 IAMs_20 IAMs_20 14 00 58.3
comp=Z,3µm,18.0s
TUC Tucson 59.86 288 P **P** **13 34 40.4 +1.1**
baz=7.9
TUC Tucson 59.86 288 P **P** **13 34 39.8 +0.5**
TUC pmax pmax
comp=Z,15nm,0.8s
TUC MLR MLR
comp=Z,2µm,18.0s
MONP2 Monument Peak 59.93 294 P **P** **13 34 41.4 +1.5**
baz=7.6
109C Camp Elliot, M 60.01 295 IAMs_20 IAMs_20 14 01 09.2
comp=Z,3µm,20.0s
OZNA Ozona 60.07 279 P **P** **13 34 40.5 -0.3**
OZNA IAmb IAmb 13 34 46.9
comp=Z,16nm,0.9s
YUH Yuha Desert 60.12 293 P **P** **13 34 39.1 -1.9**
YUH IAmb IAmb 13 34 49.6
comp=Z,31nm,1.7s
IKP In-Ko-Pah, Jac 60.14 294 P **P** **13 34 42.5 +1.3**
baz=7.6
JCT Junction City 60.34 277 P **P** **13 34 42.9 +0.3**
JCT IAMs_20 IAMs_20 14 01 54.4
comp=Z,2µm,19.0s
JCT Junction City 60.34 277 P **P** **13 34 44.6 +2.0**
baz=8.1
JCT Junction City 60.34 277 P **P** **13 34 42.9 +0.3**
JCT pmax pmax
comp=Z,56nm,1.4s
JCT MLR MLR
comp=Z,2µm,19.0s
TAM Tamanrasset 60.41 167 P **P** **13 34 44.0 +0.7**
TAM IAmb IAmb 13 34 46.0
comp=Z,14nm,0.8s
TAM Tamanrasset 60.41 167 P **P** **13 34 44.0 +0.7**
TAM pmax pmax
comp=Z,14nm,0.8s
TAM MLR MLR
comp=Z,300nm,21.0s
DWPF Disney Wildern 60.42 259 IAMs_20 IAMs_20 13 59 44.0
comp=Z,3µm,19.0s
DWPF Disney Wildern 60.42 259 P **P** **13 34 45.1 +2.0**
baz=7.8
214A Organ Pipe Nat 60.44 290 P **P** **13 34 44.2 +1.0**
baz=7.8,SNR=7.6
CBX Cerro Bola 60.53 294 IAmb IAmb 13 34 47.4
comp=Z,12nm,0.9s
319A Douglas 60.60 287 IAmb IAmb 13 34 48.2
comp=Z,24nm,0.9s
VHRN Van Horn 60.67 282 P **P** **13 34 44.8 -0.2**
ALPN Alpine 60.91 281 IAmb IAmb 13 34 58.6
comp=Z,13nm,1.1s
LSA Lhasa 61.66 78 IAmb IAmb 13 34 53.6
comp=Z,16nm,1.0s
TX31 Lajitas Ar. Si 61.95 281 IAmb IAmb 13 35 04.8
comp=Z,8.8nm,1.0s
TXAR Lajitas Array 61.95 281 P **P** **13 34 53.7 +0.1**
comp=Z,5.9nm,1.0s,baz=2.4,slow=2.7,SNR=12
comp=Z,5.9nm,1.0s
RAYN Ar Rayn 62.38 125 P **P** **13 34 56.8 +0.3**
RAYN IAmb IAmb 13 35 00.7
comp=Z,15nm,1.4s
RAYN Ar Rayn 62.38 125 P **P** **13 34 56.8 +0.3**
RAYN pmax pmax
comp=Z,15nm,1.4s
NJ2 Nanjing 62.41 51 *e*P **P** **13 34 54.1 -2.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,540nm,4.3s
833A Chaparral WMA, 62.42 277 P **P** **13 34 58.4 +1.8**
baz=7.9
KVTX Kingsville 63.00 275 IAMs_20 IAMs_20 14 03 06.9
comp=Z,2µm,19.0s
HSIG 63.13 288 IAmb IAmb 13 35 09.3
comp=Z,14nm,1.0s
WHN Wuhan 63.45 56 P **P** **13 35 02.5 -0.9**
PZH PanZhiHua 66.07 69 P **P** **13 35 19.8 -0.9**
PZH pmax pmax
comp=Z,10.0nm,1.5s
PZH pmax pmax
comp=Z,110nm,4.4s
GYA Guiyang 66.67 64 ⇑*i*P **P** **13 35 24.6 0.0**
GYA pmax pmax
comp=Z,21nm,0.9s
GYA pmax pmax
comp=Z,970nm,6.0s
TNCH TengChong 67.15 72 P **P** **13 35 27.0 -0.7**
TNCH pP sP 13 35 30.2 -0.1
TNCH pmax pmax
comp=Z,280nm,4.9s
GTBY Guantanamo Bay 67.74 251 IAMs_20 IAMs_20 14 03 15.2
comp=Z,2µm,21.0s
SDDR Presa de Saban 68.23 247 IAMs_20 IAMs_20 14 03 08.3
comp=Z,2µm,21.0s
SMRT St. Maarten 68.25 239 IAMs_20 IAMs_20 14 03 31.9
comp=Z,2µm,21.0s
SLBS Sierra La Lagu 68.27 286 P **P** **13 35 34.8 +0.1**
SJG San Juan 68.52 242 IAMs_20 IAMs_20 14 05 01.1
comp=Z,966nm,20.0s
SABA Saba 68.69 239 IAMs_20 IAMs_20 14 03 44.6
comp=Z,2µm,21.0s
SEUS St. Eustatius 68.79 239 IAMs_20 IAMs_20 14 03 38.3
comp=Z,2µm,21.0s
TEIG Tepich 69.03 264 IAMs_20 IAMs_20 14 07 37.0
comp=Z,2µm,19.0s
TEIG Tepich 69.03 264 LR LR 14 07 38.8
comp=Z,18µm,18.8s,baz=167,slow=37
MTDJ Mount Denham 69.71 253 IAMs_20 IAMs_20 14 04 33.1
comp=Z,1µm,20.0s
TOA0 Torodi Ar. Sit 69.91 171 P **P** **13 35 44.1 -0.7**
TOA0 IAmb IAmb 13 35 46.2
comp=Z,25nm,1.1s
TORD Torodi Ar. Bea 69.91 171 P **P** **13 35 44.8 0.0**
TORD IAmb IAmb 13 35 46.3
comp=Z,17nm,1.1s
TORD Torodi Ar. Bea 69.91 171 P **P** **13 35 44.5 -0.3**
comp=Z,15nm,1.0s,baz=3.5,slow=6.7,SNR=18
comp=Z,15nm,1.0s
UNM Universidad Na 71.27 275 IAMs_20 IAMs_20 14 10 34.8
comp=Z,2µm,21.0s
CM31 Chiang Mai Arr 73.69 72 IAmb IAmb 13 36 07.3
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 73.69 72 P **P** **13 36 05.6 -1.9**
CMAR Chiang Mai Arr 73.69 72 P **P** **13 36 05.6 -1.9**
CMAR Chiang Mai Arr 73.69 72 P **P** **13 36 06.3 -1.2**
comp=Z,12nm,0.7s,baz=345,slow=7.2,SNR=24
comp=Z,12nm,0.7s
GRGR Grenville 73.95 237 IAMs_20 IAMs_20 14 06 58.0
comp=Z,1µm,21.0s
ATD Arta Tunnel 73.98 129 IAMs_20 IAMs_20 14 08 43.4
comp=Z,1µm,19.0s
HATO Hato, Curacao 74.69 244 IAMs_20 IAMs_20 14 08 15.4
comp=Z,908nm,20.0s
TGUH Tegucigalpa,Un 75.00 263 IAMs_20 IAMs_20 14 08 41.0
comp=Z,1µm,20.0s
SNET Serv Nac Est T 75.60 264 IAMs_20 IAMs_20 14 13 28.0
comp=Z,1µm,19.0s
FURI Furi 76.20 134 IAMs_20 IAMs_20 14 09 13.4
comp=Z,902nm,19.0s
DBIC Dimbokro 76.28 178 P **P** **13 36 22.1 -0.3**
comp=Z,4.8nm,0.9s,baz=45,slow=4.1,SNR=3.7
comp=Z,4.8nm,0.9s
TIC Toumodi 76.30 178 ⇓*i*PKP1 **P** **13 36 24.5 +1.9**
comp=Z,5.8nm,0.3s
KIC Kosan Boka 76.58 178 ⇑*i*PKP1 **P** **13 36 24.9 +0.7**
comp=Z,39nm,0.8s
LIC Lamto 76.72 178 ⇑*i*PKP1 **P** **13 36 25.6 +0.7**
comp=Z,62nm,0.9s
SDV Santo Domingo 78.13 245 IAMs_20 IAMs_20 14 16 34.6

comp=Z,1µm,18.0s
HDC Heredia 78.61 259 IAMs_20 IAMs_20 14 10 03.9
comp=Z,1µm,21.0s
BCIP Isla Barro Col 78.92 254 IAMs_20 IAMs_20 14 09 41.2
comp=Z,840nm,22.0s
LODK Lodwar 81.33 138 IAMs_20 IAMs_20 14 20 04.4
comp=Z,848nm,19.0s
MBAR Mbarara 84.95 143 eP **P 13 37 10.7 +1.6**
MBAR pmax pmax
comp=Z,17nm,1.2s
KMBO Kilima Mbogo 86.00 136 P **P 13 37 15.1 +0.7**
comp=Z,1.9nm,0.8s,baz=26,slow=4.5,SNR=5.0
comp=Z,1.9nm,0.8s
KIBK Kibwezi 87.27 135 IAMs_20 IAMs_20 14 20 51.1
comp=Z,1µm,19.0s
OTAV Otavalo 87.56 252 P **P 13 37 22.1 -0.1**
OTAV IAmb IAmb 13 37 36.1
comp=Z,15nm,1.2s
OTAV Otavalo 87.56 252 IAMs_20 IAMs_20 14 17 08.4
comp=Z,2µm,18.0s
OTAV Otavalo 87.56 252 P **P 13 37 22.2 -0.1**
OTAV pmax pmax
comp=Z,15nm,1.2s
OTAV MLR MLR
comp=Z,2µm,18.0s
RCBR Riachuelo 89.59 209 IAMs_20 IAMs_20 14 16 56.9
comp=Z,813nm,20.0s
SAML Samuel 94.94 236 IAMs_20 IAMs_20 14 19 35.3
comp=Z,990nm,20.0s
LSZ Lusaka 99.31 146 IAMs_20 IAMs_20 14 28 53.1
comp=Z,690nm,20.0s
TSUM Tsumeb 102.58 157 IAMs_20 IAMs_20 14 26 00.9
comp=Z,918nm,19.0s
WIN Windhoek 105.90 157 IAMs_20 IAMs_20 14 26 57.9
comp=Z,784nm,22.0s
WRA Warramunga Arr 115.26 41 PKP **PKPdf 13 43 12.7 -2.1**
comp=Z,1.4nm,0.7s,baz=342,slow=2.3,SNR=10
ASAR Alice Springs 118.92 42 PKP **PKPdf 13 43 19.9 -2.0**
comp=Z,1.7nm,0.8s,baz=7.6,slow=1.6,SNR=14
ASAR PKKPbc **PKKPab 13 53 36.6 -1.8**
comp=Z,0.3nm,0.8s,baz=156,slow=3.2,SNR=4.4
PLCA Paso Flores 127.14 239 PKP **PKiKP 13 43 37.9 +0.2**
comp=Z,3.1nm,0.8s,baz=323,slow=2.2,SNR=6.6
SNAA Sanae 154.46 177 PKPbc **PKiKP 13 44 31.6 -0.8**
comp=Z,2.1nm,0.7s,baz=252,slow=3.2,SNR=2.0

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*NEIC **04** 13:26:46.7±1.0, 61°.21N±0°.02×150°.35W±0°.05, h67km±5km, Error ellipse: s-maj=4.0km s-min=2.8km az=126.0*
AEIC 04 13:26:47.5±0.9, 61°.20N±0°.03×150°.33W±0°.05, h59km±5km, ML3.0, ML3.1/176(NEIC), **Error ellipse: s-maj=4.1km s-min=3.8km az=187.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIS	**Fire Island**	**0.07**	**133**		Pn	13 26 56.9	+0.5
RC01	**Rabbit Creek A**	**0.31**	**110**		Pn	13 26 57.1	-0.4
RC01	**Rabbit Creek A**	**0.31**	**110**		Sn	13 27 05.3	+0.5
SUA	**Susitna One**	**0.34**	**324**		Pn	13 26 57.1	-0.8
SUA					Sn	13 27 05.3	-0.3
SUA	**Susitna One**	**0.34**	**324**	IAML		13 27 05.9	
comp=E,781nm,0.6s							
SUA				IAML		13 27 07.1	
comp=N,512nm,0.6s							
CAPN	**Captain Cook N**	**0.59**	**223**		Pn	13 27 01.3	+1.0
SLKM	**Skilak Lake**	**0.69**	**175**		Pn	13 27 01.2	-0.4
SLKM					Sn	13 27 12.3	+0.3
PMR	**Palmer**	**0.70**	**55**		Pn	13 27 01.0	-0.7
PMR	**Palmer**	**0.70**	**55**	IAML		13 27 12.1	
comp=N,706nm,0.5s							
PMR				IAML		13 27 14.0	
comp=E,913nm,0.4s							
O22K	**Cooper Landing**	**0.78**	**157**		Pn	13 27 02.2	-0.4
STLK	**Strandline Lak**	**0.79**	**293**		Pn	13 27 02.1	-0.7
STLK					Sn	13 27 13.5	-0.5
SPCG	**Spurr Capps Gl**	**0.82**	**277**		Pn	13 27 02.6	-0.8
SPCG					Sn	13 27 14.7	-0.3
SPCP	**Crater Peak Br**	**0.88**	**275**		Pn	13 27 03.5	-0.6
GHO	**Glory Hole Cre**	**0.89**	**49**		Pn	13 27 03.1	-1.0
GHO				IAML		13 27 17.2	
comp=N,824nm,0.3s							
GHO				IAML		13 27 17.4	
comp=E,831nm,0.4s							
GHO	**Glory Hole Cre**	**0.89**	**49**		Sn	13 27 16.1	-0.3
SPCN	**Chakachatna No**	**0.90**	**273**		Pn	13 27 03.6	-0.6
SPCR	**Spurr Chakacha**	**0.91**	**271**		Pn	13 27 03.5	-0.9
SPCR					Sn	13 27 16.3	-0.6
KNK	**Knik Glacier**	**0.93**	**76**		Pn	13 27 03.8	-0.8
KNK				IAML		13 27 20.1	
comp=E,714nm,0.4s							
KNK	**Knik Glacier**	**0.93**	**76**		Sn	13 27 17.6	+0.4
SKT	**Skwentna**	**0.97**	**324**	Pn	Pn	13 27 03.8	-1.4
SML	**Sawmill**	**1.14**	**57**	Pn	Pn	13 27 06.4	-1.0
SML				IAML		13 27 22.8	
comp=N,513nm,0.8s							
SML				IAML		13 27 22.9	
comp=E,371nm,0.4s							
SML	**Sawmill**	**1.14**	**57**		Sn	13 27 21.7	-0.5
SPNN	**North Nagishla**	**1.16**	**280**		Pn	13 27 07.0	-0.6
SEW	**Seward**	**1.18**	**158**		Pn	13 27 07.0	-0.8
RDT	**Redoubt**	**1.19**	**239**		Pn	13 27 07.3	-0.7
CUT	**Chulitna**	**1.21**	**1**		Pn	13 27 07.1	-1.2
DFR	**Drift River**	**1.30**	**243**		Pn	13 27 09.0	-0.6
DFR	**Drift River**	**1.30**	**243**		Pn	13 27 08.9	-0.7
RDJH	**Redoubt Jeurge**	**1.35**	**244**		Pn	13 27 09.7	-0.5
M23K	**Glacier View**	**1.39**	**63**		Pn	13 27 10.6	0.0
RDSO	**Redoubt South**	**1.40**	**239**		Pn	13 27 10.2	-0.6
RSO	**Redoubt South**	**1.40**	**239**		Pn	13 27 10.2	-0.7
RDWB	**Redoubt West**	**1.42**	**241**		Pn	13 27 10.6	-0.6
NCT	**North Crescent**	**1.42**	**245**		Pn	13 27 10.7	-0.5
RED	**Redoubt Volcan**	**1.43**	**238**		Pn	13 27 10.8	-0.5
BRLK	**Bradley Lake**	**1.46**	**191**		Pn	13 27 11.1	-0.6
BRLK				IAML		13 27 31.1	
comp=N,257nm,0.4s							
BRLK				IAML		13 27 31.2	
comp=E,272nm,0.4s							
BRSE	**Bradley Lake S**	**1.47**	**188**		Pn	13 27 11.0	-0.8
M20K	**Styx River**	**1.51**	**298**		Pn	13 27 11.6	-0.7
M20K				IAML		13 27 31.4	
comp=N,226nm,0.6s							
M20K				IAML		13 27 31.5	
comp=E,255nm,0.6s							
SCM	**Sheep Creek Mo**	**1.58**	**65**		Pn	13 27 12.4	-0.8
SCM				IAML		13 27 39.5	
comp=N,216nm,0.8s							
SCM				IAML		13 27 40.1	
comp=E,275nm,0.7s							
O20K	**Slope Mountain**	**1.59**	**226**		Pn	13 27 13.5	+0.1
HOM	**Homer**	**1.67**	**203**		Pn	13 27 14.3	-0.2
CNPM	**China Poot**	**1.73**	**195**	Pn	Pn	13 27 14.7	-0.7
CNPM				IAML		13 27 36.8	
comp=E,265nm,0.5s							
CNPM	**China Poot**	**1.73**	**195**		Sn	13 27 35.6	-0.7
IVE	**Iliamna Volcan**	**1.77**	**229**		Pn	13 27 15.6	-0.3
WAT7	**Susitna Watana**	**1.79**	**22**		Pn	13 27 15.5	-0.6
WAT1	**Susitna Watana**	**1.84**	**26**		Pn	13 27 16.0	-0.8
WAT6	**Susitna Watana**	**1.85**	**40**		Pn	13 27 16.4	-0.7
P23K	**Montague Islan**	**1.88**	**128**		Pn	13 27 15.7	-1.5
P23K					Sn	13 27 38.9	-1.0
PPLA	**Purkeypile**	**1.92**	**334**		Pn	13 27 16.8	-1.1
HIN	**Hinchinbrook I**	**2.04**	**111**		Pn	13 27 18.2	-1.3
HIN				IAML		13 27 44.8	
comp=E,216nm,0.6s							
HIN				IAML		13 27 47.2	
comp=N,154nm,0.8s							
N19K	**Bonanza Creek**	**2.06**	**261**		Pn	13 27 18.9	-0.9
M19K	**Big River Lodg**	**2.07**	**292**		Pn	13 27 19.0	-0.8
M19K	**Big River Lodg**	**2.07**	**292**	IAML		13 27 49.1	
comp=N,99nm,0.6s							
P19K	**Oil Pt**	**2.11**	**224**		Pn	13 27 19.5	-1.0
P19K	**Oil Pt**	**2.11**	**224**	IAML		13 27 48.3	
comp=E,224nm,0.3s							
L20K	**Farewell, AK**	**2.12**	**309**		Pn	13 27 19.6	-1.0
KLU	**Klutina**	**2.15**	**80**	Pn	Pn	13 27 19.7	-1.2
KLU				IAML		13 27 46.7	
comp=E,80nm,0.5s							
KLU				IAML		13 27 55.7	
comp=N,178nm,0.5s							
M24K	**Tolsona, Glenn**	**2.18**	**63**	Pn	Pn	13 27 21.2	-0.2
M24K				IAML		13 27 49.8	
comp=E,194nm,0.4s							
O19K	**Port Alsworth**	**2.20**	**245**		Pn	13 27 20.9	-0.7
DIV	**Divide**	**2.21**	**90**		Pn	13 27 20.8	-1.0
TRF	**Thorofare Moun**	**2.26**	**0**	Pn	Pn	13 27 21.1	-1.5
TRF					IAML	13 27 54.5	
comp=E,112nm,0.5s							
TRF					IAML	13 28 11.1	
comp=N,134nm,0.7s							
RND	**Reindeer**	**2.32**	**17**		Pn	13 27 22.8	-0.6
RND	**Reindeer**	**2.32**	**17**	IAML		13 28 03.1	
comp=E,74nm,0.7s							
RND				IAML		13 28 03.8	
comp=N,98nm,0.9s							
EYAK	**Cordova Ski Ar**	**2.33**	**104**		Pn	13 27 21.8	-1.6
DHY	**Denali Highway**	**2.34**	**35**		Pn	13 27 22.7	-1.0
L19K	**White Mountain**	**2.37**	**297**		Pn	13 27 23.2	-0.7
L19K				IAML		13 27 51.5	
comp=N,82nm,0.6s							
L19K				IAML		13 27 52.1	
comp=E,111nm,0.5s							
CAST	**Castle Rocks**	**2.38**	**341**	Pn	Pn	13 27 23.4	-0.7
CAST				IAML		13 27 52.0	
comp=E,100nm,0.6s							
KTH	**Kantishna Hill**	**2.38**	**354**	Pn	Pn	13 27 23.4	-0.7
SVW2	**Sparrevohn**	**2.55**	**270**		Pn	13 27 25.2	-1.2
MCK	**McKinley**	**2.63**	**14**		Pn	13 27 27.5	+0.1
Q23K	**Middleton Isla**	**2.66**	**130**	Pn	Pn	13 27 26.6	-1.2
M18K	**Stony River**	**2.66**	**279**		Pn	13 27 27.2	-0.7
MID	**Middleton Isla**	**2.66**	**130**	Pn	Pn	13 27 26.7	-1.2
N18K	**Kilae Creek**	**2.76**	**262**		Pn	13 27 28.2	-1.1
O18K	**Koktuh Hills**	**2.76**	**243**		Pn	13 27 28.3	-1.0
K20K	**Telida**	**2.79**	**323**		Pn	13 27 28.5	-1.1
K20K				IAML		13 28 06.6	
comp=N,84nm,0.6s							
K20K				IAML		13 28 18.7	
comp=E,60nm,0.6s							
N25K	**Chitina, Valde**	**2.79**	**79**		Pn	13 27 28.5	-1.3
N25K				IAML		13 28 13.2	
comp=N,78nm,0.6s							
BMRM	**Bremner River**	**2.79**	**92**		Pn	13 27 28.0	-1.7
SYI	**Shuyak Island**	**2.79**	**203**	Pn	Pn	13 27 29.2	-0.5
SYI				IAML		13 28 02.3	
comp=E,74nm,1.4s							
SYI				IAML		13 28 03.0	
comp=N,67nm,1.0s							
GOAT	**Goat Mountain**	**2.81**	**100**		Pn	13 27 28.4	-1.6
Q19K	**Cape Douglas,**	**2.82**	**218**	Pn	Pn	13 27 29.5	-0.5
CHUM	**Lake Minchumin**	**2.85**	**342**		Pn	13 27 29.7	-0.7
RAGM	**Ragged Mountai**	**2.89**	**104**		Pn	13 27 29.0	-2.1
PAX	**Paxson**	**2.90**	**50**		Pn	13 27 31.4	+0.2
BPAW	**Bear Paw Mtn.**	**2.93**	**354**	Pn	Pn	13 27 30.4	-1.1
BPAW				IAML		13 28 04.0	
comp=E,52nm,0.2s							
BPAW				IAML		13 28 04.0	
comp=N,55nm,0.6s							
BWN	**Browne**	**3.01**	**7**		Pn	13 27 33.0	+0.3
BWN				IAML		13 28 22.6	
comp=N,88nm,0.8s							
P18K	**Big Mountain,**	**3.04**	**236**		Pn	13 27 31.7	-1.3
HMT	**Hamilton**	**3.10**	**103**		Pn	13 27 31.8	-2.2
GLB	**Gilahina Butte**	**3.15**	**83**	Pn	Pn	13 27 33.5	-1.2
GLB				IAML		13 28 21.0	
comp=E,34nm,1.5s							
GLB				IAML		13 28 35.6	
comp=N,48nm,0.8s							
TTA	**Tatalina**	**3.19**	**306**	Pn	Pn	13 27 34.1	-1.1
TTA				IAML		13 28 25.5	
comp=N,37nm,0.9s							
TTA				IAML		13 28 28.9	
comp=E,34nm,0.7s							
L18K	**Granite Mounta**	**3.20**	**292**		Pn	13 27 34.4	-0.8
L18K	**Granite Mounta**	**3.20**	**292**	IAML		13 28 31.6	
comp=E,32nm,1.3s							
L18K				IAML		13 28 32.4	
comp=N,47nm,1.0s							
VRDI	**Verde Repeater**	**3.33**	**86**		Pn	13 27 35.7	-1.5
BERG	**Berg Lake**	**3.35**	**101**	Pn	Pn	13 27 35.1	-2.1
K24K	**Donnelly Dome**	**3.36**	**37**		Pn	13 27 39.1	+1.6
N17K	**Nushagak Hills**	**3.42**	**262**		Pn	13 27 37.3	-1.0
N17K	**Nushagak Hills**	**3.42**	**262**	IAML		13 28 16.6	
comp=E,28nm,0.4s							
M17K	**Holitna River**	**3.43**	**277**		Pn	13 27 37.8	-0.7
NEA2	**Nenana**	**3.46**	**9**	Pn	Pn	13 27 38.9	+0.1
J20K	**Nowinta River**	**3.47**	**331**		Pn	13 27 39.	-1.1
MCARA	**McCarthy VSAT**	**3.53**	**84**	Pn	Pn	13 27 39.3	-0.5
MCARA				IAML		13 28 37.1	
comp=N,62nm,0.9s							
KHIT	**Khitrov Hills**	**3.55**	**99**		Pn	13 27 38.5	-1.6
HDA	**Harding Lake**	**3.58**	**24**		Pn	13 27 40.2	-0.3
HDA				IAML		13 28 30.1	
comp=E,29nm,0.4s							
HDA				IAML		13 28 40.9	
comp=N,37nm,0.8s							
KDAK	**Kodiak Island**	**3.61**	**200**	Pn	Pn	13 27 40.2	-0.7
KDAK				IAML		13 28 19.6	
comp=N,38nm,0.6s							
KDAK				IAML		13 28 35.6	
comp=N,39nm,1.3s							
O17K	**Koliganek Bris**	**3.64**	**250**		Pn	13 27 40.5	-0.7
P17K	**Kvichak River**	**3.65**	**239**		Pn	13 27 40.9	-0.5
CCB	**Clear Creek Bu**	**3.65**	**17**		Pn	13 27 40.8	-0.6
CCB	**Clear Creek Bu**	**3.65**	**17**	IAML		13 28 43.7	
comp=E,23nm,0.7s							
M26K	**Nabesna, AK**	**3.69**	**68**	Pn	Pn	13 27 41.0	-1.0
J19K	**Poorman**	**3.72**	**321**		Pn	13 27 41.7	-0.7
J19K	**Poorman**	**3.72**	**321**	IAML		13 28 41.5	
comp=N,36nm,0.6s							
J19K				IAML		13 28 43.6	
comp=E,34nm,0.7s							
J18K	**Innoko River**	**3.75**	**310**		Pn	13 27 42.0	-0.7
J18K	**Innoko River**	**3.75**	**310**	IAML		13 28 44.8	
comp=N,22nm,0.6s							
SNH	**Sunshine Point**	**3.82**	**102**	Pn	Pn	13 27 43.7	-0.1
SNH				IAML		13 28 49.1	
comp=E,25nm,0.9s							
SNH				IAML		13 29 25.2	
comp=N,36nm,1.5s							
MLY	**Manley**	**3.85**	**357**	Pn	Pn	13 27 43.3	-1.0
COLA	**College**	**3.86**	**16**	Pn	Pn	13 27 43.6	-0.6
KIAG	**Kiagna River**	**3.88**	**91**		Pn	13 27 43.5	-1.3
MDM	**Murphy Dome**	**3.90**	**13**		Pn	13 27 44.2	-0.6
L17K	**Donlin**	**3.91**	**287**		Pn	13 27 44.0	-0.9
IL31		**3.92**	**22**	Pn	Pn	13 27 44.5	-0.5
ILAR	**Eielson Array**	**3.92**	**22**	Pn	Pn	13 27 45.0	-0.1
BARK	**Barkley Ridge**	**3.92**	**98**		Pn	13 27 43.7	-1.5
ISLE	**Juniper Island**	**3.95**	**95**	Pn	Pn	13 27 44.3	-1.3
ISLE				IAML		13 28 49.6	
comp=E,37nm,0.7s							
ISLE				IAML		13 29 03.6	
comp=N,43nm,1.0s							
I23K	**Minto, Yukon-K**	**3.99**	**6**		Pn	13 27 45.1	-1.0
I23K	**Minto, Yukon-K**	**3.99**	**6**	IAML		13 28 55.0	
comp=N,25nm,0.7s							
I23K				IAML		13 29 04.3	
comp=E,20nm,1.3s							
SCRK	**Sand Creek**	**4.05**	**44**		Pn	13 27 45.9	-1.0
K17K	**Iditarod**	**4.06**	**296**		Pn	13 27 46.0	-1.0
K17K	**Iditarod**	**4.06**	**296**	IAML		13 28 59.1	
comp=E,26nm,1.2s							
K17K				IAML		13 29 07.2	
comp=N,30nm,1.2s							
CNTC	**Contact Creek**	**4.07**	**226**		Pn	13 27 46.6	-0.6
I21K	**Tanana**	**4.07**	**350**		Pn	13 27 46.8	-0.3
I21K				IAML		13 29 05.6	
comp=N,24nm,0.8s							
I21K				IAML		13 29 11.1	
comp=E,25nm,0.8s							
I20K	**Naaghedeneel**	**4.08**	**334**	Pn	Pn	13 27 46.6	-0.6
J25K	**Salcha River,**	**4.11**	**31**		Pn	13 27 48.0	+0.2
J25K	**Salcha River,**	**4.11**	**31**	IAML		13 29 08.4	
comp=E,16nm,1.1s							
POKR	**Poker Plat Res**	**4.15**	**17**		Pn	13 27 47.9	-0.3
POKR				IAML		13 28 37.7	
comp=N,16nm,1.1s							
O16K	**Kokwok River B**	**4.17**	**251**		Pn	13 27 47.6	-0.9
O16K	**Kokwok River B**	**4.17**	**251**	IAML		13 29 04.4	
comp=E,16nm,1.3s							
O16K				IAML		13 29 19.1	
comp=N,17nm,1.1s							
M27K	**Edge Creek, AK**	**4.18**	**70**	Pn	Pn	13 27 48.5	-0.3
M16K	**Timber Creek**	**4.19**	**271**		Pn	13 27 48.0	-0.8
M16K	**Timber Creek**	**4.19**	**271**	IAML		13 29 03.9	
comp=N,19nm,1.3s							
N16K	**Nishlik Lake**	**4.19**	**264**		Pn	13 27 48.0	-0.8
BARN	**Barnard Glacie**	**4.21**	**88**		Pn	13 27 48.2	-1.0
BARN	**Barnard Glacie**	**4.21**	**88**	IAML		13 28 36.7	
comp=N,17nm,0.6s							
BARN				IAML		13 28 38.9	
comp=E,19nm,0.7s							
OHAK	**Old Harbor**	**4.26**	**202**	Pn	Pn	13 27 49.1	-0.7
OHAK				IAML		13 28 33.8	
comp=N,20nm,0.9s							
OHAK				IAML		13 28 36.3	
comp=E,31nm,1.5s							
CTGM	**Chitina Glacie**	**4.38**	**89**		Pn	13 27 50.6	-0.9
CTGM	**Chitina Glacie**	**4.38**	**89**	IAML		13 28 41.4	
comp=N,15nm,1.1s							
L27K	**Beaver Creek,**	**4.41**	**61**	Pn	Pn	13 27 51.3	-0.6
BCAR	**Beaver Creek A**	**4.43**	**61**	Pn	Pn	13 27 51.4	-0.7
J26L	**Joseph Creek**	**4.54**	**40**		Pn	13 27 53.1	-0.6
J26L	**Joseph Creek**	**4.54**	**40**	IAML		13 28 57.8	
comp=N,17nm,0.7s							
J26L				IAML		13 29 14.3	
comp=E,13nm,0.7s							
LOGN	**Logan Glacier**	**4.56**	**91**	Pn	Pn	13 27 53.4	-0.5
LOGN				IAML		13 28 44.5	
comp=N,17nm,1.2s							
LOGN				IAML		13 28 45.3	
comp=E,19nm,1.0s							
TABL	**Table Mountain**	**4.56**	**96**	Pn	Pn	13 27 52.9	-1.2
TABL				IAML		13 29 02.5	
comp=E,15nm,1.0s							
TABL				IAML		13 29 09.8	
comp=N,18nm,1.4s							
H21K	**Melozitna River**	**4.61**	**347**		Pn	13 27 53.8	-0.8
K27K	**Chicken**	**4.75**	**50**	Pn	Pn	13 27 56.2	-0.3
H20K	**Anotleneega Mo**	**4.77**	**337**		Pn	13 27 56.0	-0.8
H24K	**Noodor Dome**	**4.79**	**12**		Pn	13 27 56.9	-0.1
PRP	**Porcupine Dome**	**4.85**	**24**	Pn	Pn	13 27 58.1	+0.3
PRP				IAML		13 28 57.2	
comp=N,12nm,0.8s							
N15K	**Kwethluk River**	**4.91**	**262**	Pn	Pn	13 27 58.4	-0.2
N15K				IAML		13 29 29.0	
comp=N,15nm,0.7s							
N15K				IAML		13 29 50.4	
comp=E,16nm,1.2s							
IMAR	**Indian Mountai**	**5.04**	**344**	Pn	Pn	13 27 59.7	-0.7
H19K	**Roundabout Mou**	**5.14**	**330**		Pn	13 28 00.9	-0.8
H19K				IAML		13 29 21.1	
comp=N,13nm,0.8s							
H19K				IAML		13 29 34.9	
comp=E,11nm,1.1s							
J16K	**Anvik River**	**5.24**	**298**	Pn	Pn	13 28 02.1	-1.0
J16K				IAML		13 29 33.8	
comp=N,13nm,1.4s							
H18K	**Honhosa River**	**5.38**	**321**		Pn	13 28 04.2	-0.9
H18K				IAML		13 29 32.1	
comp=E,7.7nm,1.1s							
H18K				IAML		13 29 36.3	
comp=N,9.5nm,1.0s							
K15K	**Wolf Creek Mou**	**5.43**	**287**		Pn	13 28 05.1	-0.7
I17K	**Unalakleet**	**5.50**	**304**		Pn	13 28 06.0	-0.7
G21K	**Allakaket**	**5.52**	**347**		Pn	13 28 06.3	-0.7
G23K	**Bananza Creek**	**5.54**	**1**		Pn	13 28 06.9	-0.4
G24K	**Hadweenzic Riv**	**5.67**	**12**		Pn	13 28 08.7	-0.3
M14K	**Bethel**	**5.68**	**271**	Pn	Pn	13 28 08.6	-0.5
H17K	**Granite Mounta**	**5.75**	**315**	Pn	Pn	13 28 09.8	-0.3
M29M	**Somme Creek**	**5.76**	**72**	Pn	Pn	13 28 10.2	-0.2
O14K	**Tigyukauivet M**	**5.79**	**255**	Pn	Pn	13 28 10.5	-0.1
G19K	**Purcell Mounta**	**5.80**	**332**		Pn	13 28 09.4	-1.5
DAWY	**Dawson**	**5.81**	**56**	Pn	Pn	13 28 10.5	-0.5
O29M	**Mount Kennedy**	**5.83**	**94**	Pn	Pn	13 28 10.6	-0.8
FYU	**Fort Yukon**	**5.84**	**20**	Pn	Pn	13 28 11.2	-0.1
L14K	**Kuka Creek**	**5.96**	**277**		Pn	13 28 12.8	-0.2
G18K	**Tagagawik**	**6.00**	**325**		Pn	13 28 12.8	-0.8
F21K	**Alatna River**	**6.20**	**349**	Pn	Pn	13 28 15.6	-0.8
HYT	**Haines Junctio**	**6.25**	**88**	Pn	Pn	13 28 16.6	-0.5
F20K	**Avaraart Lake**	**6.33**	**340**		Pn	13 28 17.4	-0.6
I28M	**Miner Creek**	**6.33**	**43**	Pn	Pn	13 28 17.7	-0.5
M13K	**Dall Lake**	**6.42**	**269**	Pn	Pn	13 28 19.4	+0.1
J14K	**Nanvaranak Lak**	**6.42**	**290**	Pn	Pn	13 28 19.0	-0.3
P29M	**Windy Craggy**	**6.43**	**99**	Pn	Pn	13 28 19.2	-0.3
F24K	**Squaw Lake**	**6.44**	**8**	Pn	Pn	13 28 19.4	-0.2
F25K	**Christian Rive**	**6.74**	**16**		Pn	13 28 23.1	-0.5
BMAR	**Burnt Mountain**	**6.74**	**19**	Pn	Pn	13 28 23.4	-0.3
G16K	**Koyuk River**	**6.86**	**313**	Pn	Pn	13 28 25.3	+0.1
E19K	**Redstone River**	**6.96**	**338**	Pn	Pn	13 28 26.0	-0.6
E22K	**Anaktuvuk Pass**	**7.00**	**355**	Pn	Pn	13 28 26.9	-0.2
F17K	**Baldwin Pennin**	**7.14**	**322**		Pn	13 28 28.9	-0.1
E25K	**Arctic Village**	**7.25**	**14**		Pn	13 28 30.3	-0.3
WHY	**Whitehorse**	**7.55**	**87**	Pn	Pn	13 28 33.4	-1.4
ANM	**Nome**	**7.65**	**303**		Pn	13 28 35.4	-0.7
E18K	**Tukpahlearik C**	**7.67**	**329**	Pn	Pn	13 28 36.8	+0.5
E17K	**Hotham Inlet**	**7.74**	**325**		Pn	13 28 36.2	-1.1
D22K	**Ayikyak River**	**7.78**	**354**	Pn	Pn	13 28 37.8	-0.1
F15K	**North Star Dit**	**7.84**	**311**	Pn	Pn	13 28 38.8	+0.1
F28M	**Old Crow**	**7.86**	**31**	Pn	Pn	13 28 38.6	-0.4
D25K	**Kavik River**	**8.33**	**10**	Pn	Pn	13 28 45.5	+0.1
C18K	**Utukok River**	**8.77**	**333**	Pn	Pn	13 28 50.9	-0.5
C19K	**Lookout Ridge**	**8.83**	**338**	Pn	Pn	13 28 52.0	-0.3

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*NEIC **04** 13:27:41.8±0.9, 40°.00N±0°.05×117°.17W±0°.06, h5km±6km, Error ellipse: s-maj=6.9km s-min=6.5km az=167.0*
*NEIC **04** 13:27:46, 40°.00N×117°.20W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.04; $M_{\theta\theta}$=0.19; $M_{\phi\phi}$=0.85; $M_{r\theta}$=-0.22; $M_{\theta\phi}$=0.37; $M_{\phi r}$=-0.61; Fault plane solution: M_0=1.22000×10^{14} NP1:ϕ_s=22.00000°, δ=61.00000°, λ=-92.00000°. NP2:ϕ_s=206.00000°, δ=29.00000°, λ=-86.00000°. Principal axes: T 1.2024, Plg=16.0000°, Azm=113.0000°; N 0.0258, Plg=2.0000°, Azm=23.0000°; P -1.2282, Plg=74.0000°, Azm=286.0000°;*
REN 04 13:27:44.3±0.7, 40°.00N±0°.02×117°.20W±0°.04, h9km±8km, Mwr3.3, ML3.2/115(NEIC) **Error ellipse: s-maj=4.2km s-min=2.9km az=99.0, Nevada**

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

	comp=N,297nm,0.8s						
PNTR			IAML		13 28 53.7		
	comp=E,246nm,0.7s						
Q12A	**Willow Creek R**	**2.07 117**		Pn	13 28 18.4	-1.0	
Q12A	**Willow Creek R**	**2.07 117**	IAML		13 28 51.4		
	comp=N,275nm,0.4s						
R11B	**Troy Canyon, C**	**2.07 142**		Pn	13 28 18.0	-1.4	
R11B			IAML		13 28 50.3		
	comp=E,155nm,0.2s						
R11B			IAML		13 28 51.1		
	comp=N,184nm,0.2s						
PEAR	**Peavine Mounta**	**2.17 260**		Pn	13 28 19.7	-1.0	
WAKR	**Walker**	**2.29 230**		Pn	13 28 21.6	-0.8	
WAKR	**Walker**	**2.29 230**	IAML		13 28 59.4		
	comp=E,193nm,0.4s						
WAKR			IAML		13 28 59.5		
	comp=N,125nm,0.6s						
MPK	**Martis Peak**	**2.30 253**	Pn	Pn	13 28 22.1	-0.4	
MPK			IAML		13 29 00.9		
	comp=N,165nm,0.4s						
MPK			IAML		13 29 02.4		
	comp=E,178nm,0.8s						
MZP	**Montezuma Peak**	**2.30 184**		Pn	13 28 21.8	-0.8	
MZP			IAML		13 28 56.7		
	comp=E,109nm,0.9s						
MZP			IAML		13 28 59.2		
	comp=N,93nm,0.4s						
LOY	**Loyalton**	**2.37 263**		Pn	13 28 22.6	-0.8	
BEKR	**Beckworth**	**2.43 268**		Pn	13 28 23.6	-0.8	
SPR3	**Spring Creek 3**	**2.44 113**	Pn	Pn	13 28 23.5	-1.0	
SPR3			IAML		13 29 03.9		
	comp=E,128nm,0.6s						
SPR3			IAML		13 29 04.1		
	comp=N,103nm,0.4s						
EMB	**Emerald Bay**	**2.47 246**		Pn	13 28 24.2	-0.8	
EMB			IAML		13 29 07.2		
	comp=N,85nm,0.6s						
EMB			IAML		13 29 07.7		
	comp=E,77nm,0.8s						
DONR	**Donner Summit**	**2.50 256**		Pn	13 28 24.6	-0.6	
BENR	**Benton**	**2.52 206**		Pn	13 28 25.3	-0.4	
S11A	**Rachel**	**2.61 154**		Pn	13 28 26.2	-0.6	
WVOR	**Wild Horse Val**	**2.66 336**		Pn	13 28 27.2	-0.2	
WVOR			IAML		13 29 13.0		
	comp=E,64nm,1.0s						
MLAC	**Mammoth, Mammo**	**2.69 209**		Pn	13 28 27.6	-0.4	
DSP	**Deep Springs**	**2.70 193**	Pn	Pn	13 28 27.5	-0.3	
GMN	**Gold Mountain**	**2.70 181**	Pn	Pn	13 28 27.4	-0.7	
GMN			IAML		13 29 12.5		
	comp=N,114nm,0.6s						
GMN			IAML		13 29 16.5		
	comp=E,96nm,0.5s						
MDYM	**Dry Creek**	**2.74 212**		Pn	13 28 28.3	-0.4	
MDPB	**Devils Postpil**	**2.79 212**		Pn	13 28 28.9	-0.4	
GRAC	**Grapevine Rang**	**3.01 183**	Pn	Pn	13 28 31.9	-0.2	
PRN	**Pahroc Range**	**3.09 146**		Pn	13 28 32.5	-0.9	
AFDM	**Forest Hills D**	**3.10 251**		Pn	13 28 32.6	-0.9	
TPNV	**Topopah Spring**	**3.14 166**		Pn	13 28 33.5	-0.6	
CMB	**Columbia Colle**	**3.17 233**	Pn	Pn	13 28 33.6	-0.7	
CMB			IAML		13 29 26.8		
	comp=N,51nm,0.5s						
CPY	**CP-1**	**3.19 163**		Pn	13 28 34.4	-0.4	
WCT	**Wildcat Mounta**	**3.24 172**		Pn	13 28 35.0	-0.3	
WCT	**Wildcat Mounta**	**3.24 172**	IAML		13 29 26.7		
	comp=N,74nm,0.6s						
BGU	**Big Grassy Mou**	**3.31 73**		Pn	13 28 35.6	-0.8	
BGU			IAML		13 29 27.7		
	comp=N,45nm,0.5s						
BGU			IAML		13 29 29.7		
	comp=E,60nm,0.6s						
ORV	**Oroville**	**3.34 264**	Pn	Pn	13 28 35.9	-0.8	
NSP	**Numbskull Pass**	**3.36 166**		Pn	13 28 36.9	-0.1	
DUG	**Dugway, Tooele**	**3.37 85**		Pn	13 28 37.1	0.0	
DUG			IAML		13 29 35.0		
	comp=E,54nm,1.1s						
DUG			IAML		13 29 35.9		
	comp=E,56nm,0.5s						
MCY	**Mercury**	**3.48 163**		Pn	13 28 39.5	+0.9	
J08A	**Circle Bar Ran**	**3.48 345**	Pn	Pn	13 28 37.9	-0.9	
MFID	**Camas Ranch**	**3.56 16**		Pn	13 28 39.0	-0.8	
MFID			IAML		13 29 40.0		
	comp=E,52nm,0.6s						
MFID			IAML		13 29 42.2		
	comp=E,50nm,0.8s						
AMDNV	**Amargosa**	**3.62 168**		Pn	13 28 41.2	+0.7	
HVU	**Hansel Valley**	**3.79 61**		Pn	13 28 41.7	-1.4	
HVU			IAML		13 29 43.7		
	comp=E,57nm,0.5s						
GWY	**Greenwater Val**	**3.83 174**	Pn	Pn	13 28 42.0	-1.6	
SPUT	**South Promonto**	**3.84 69**	Pn	Pn	13 28 41.9	-1.8	
SPUT			IAML		13 29 45.4		
	comp=E,51nm,0.5s						
SPUT			IAML		13 29 47.6		
	comp=N,49nm,0.7s						
SHPR	**Sheep Range**	**3.84 155**		Pn	13 28 42.4	-1.4	
TCRU	**Three Creeks R**	**3.94 109**		Pn	13 28 44.7	-0.4	
TCRU			IAML		13 29 54.8		
	comp=N,30nm,1.0s						
TCRU			IAML		13 29 57.9		
	comp=E,32nm,0.9s						
HLID	**Hailey**	**4.12 29**		Pn	13 28 47.3	-0.3	
HLID			IAML		13 29 58.2		
	comp=E,22nm,0.5s						
HLID			IAML		13 29 59.8		
	comp=E,19nm,0.8s						
MVU	**Marysvale**	**4.15 110**	Pn	Pn	13 28 46.5	-1.6	
WTNK	**Soaring Height**	**4.18 155**	Pn	Pn	13 28 48.2	0.0	
CTU	**Camp Tracy**	**4.22 79**	Pn	Pn	13 28 47.9	-1.0	
MPU	**Maple Canyon**	**4.27 88**	Pn	Pn	13 28 48.2	-1.5	
LCMT	**Little Creek M**	**4.31 133**	Pn	Pn	13 28 48.9	-1.2	
LCMT			IAML		13 30 01.9		
	comp=E,18nm,0.4s						
LCMT			IAML		13 30 05.8		
	comp=N,15nm,0.7s						
MTPU	**Mount Pierson**	**4.37 115**		Pn	13 28 50.6	-0.5	
I07A	**Izee**	**4.42 338**		Pn	13 28 51.4	-0.2	
YBH	**Yreka Blue Hor**	**4.52 294**	Pn	Pn	13 28 52.9	0.0	
KNB	**Kanab**	**4.55 130**	Pn	Pn	13 28 52.3	-1.2	
KNB			IAML		13 30 11.0		
	comp=E,18nm,0.6s						
KNB			IAML		13 30 14.6		
	comp=N,15nm,1.5s						
PKCU	**Pink Cliffs**	**4.60 122**	Pn	Pn	13 28 53.8	-0.4	
PKCU			IAML		13 30 15.6		
	comp=N,29nm,0.5s						
SAO	**San Andreas Ge**	**4.65 227**	Pn	Pn	13 28 54.6	-0.1	
V12A	**Nelson**	**4.66 156**		Pn	13 28 54.6	-0.2	
V12A			IAML		13 30 11.1		
	comp=N,23nm,0.9s						
V12A			IAML		13 30 12.1		
	comp=E,24nm,0.8s						
Q16A	**Castle Valley**	**4.79 101**	Pn	Pn	13 28 56.8	+0.1	
Q16A			IAML		13 29 32.4		
	comp=N,10nm,5.0s						
BMO	**Blue Mountains**	**4.85 359**	Pn	Pn	13 28 57.2	-0.2	
BMO			IAML		13 30 34.4		
	comp=N,10nm,4.3s						
P17A	**Butcher Ranch,**	**5.01 94**	Pn	Pn	13 28 59.8	0.0	
SRU	**San Rafael Swe**	**5.24 98**		Pn	13 29 02.5	-0.4	
RDMU	**Red Mountain**	**5.86 82**	Pn	Pn	13 29 10.3	-1.2	

WEL 04 13:32:47.8±0.9, 34°S±7'×17°9E±1'4, h305km±14km, M3.8/10, mB4.2/3, ML4.1/12, MLv3.8/10, Mw(mB)3.3/3, Error ellipse: s-maj=0.0km s-min=0.0km az=97.7, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**3.99**	**195**	P	Pn	13 33 54.5	+0.4
HAZ				S	S	13 34 47.9	+0.7
PKGZ	**Pakihiroa**	**4.07**	**191**	P	Pn	13 33 56.2	+1.3
PKGZ				S	S	13 34 47.9	-1.0
RUGZ	**Raukumara Rang**	**4.21**	**195**	P	Pn	13 33 56.6	-0.1
RUGZ				S	S	13 34 50.7	-1.2
PUZ	**Puketiti**	**4.22**	**189**	P	Pn	13 33 57.0	+0.4
PUZ				S	S	13 34 50.2	-1.6
MKAZ	**Moumakai**	**4.51**	**224**	P	Pn	13 34 02.5	+2.6
MWZ	**Matawai**	**4.60**	**195**	P	Pn	13 34 01.2	+0.3
MWZ				S	S	13 35 00.1	+0.5
HBAZ	**Herne Bay Bore**	**4.61**	**229**	P	Pn	13 33 57.3	-3.6
URZ	**Urewera**	**4.63**	**199**	P	Pn	13 34 01.2	0.0
URZ				S	S	13 35 00.6	+0.4
OUZ	**Omahuta**	**4.70**	**252**	P	Pn	13 34 01.9	-0.2
RAGZ	**Rawiri**	**4.78**	**196**	P	Pn	13 34 03.5	+0.5
RAGZ				S	S	13 35 04.3	+0.9
MUGZ	**Murupara**	**4.94**	**201**	P	Pn	13 34 05.4	+0.7
MUGZ				S	S	13 35 07.7	+1.2
RTZ	**Ruatahuna**	**5.00**	**199**	P	Pn	13 34 05.6	+0.1
SNGZ	**Shannon Statio**	**5.07**	**195**	P	Pn	13 34 06.8	+0.5
SNGZ				S	S	13 35 10.6	+1.2
MTHZ	**Maungataniwha**	**5.26**	**199**	P	Pn	13 34 04.1	-4.4
MTHZ				S	S	13 35 15.4	+1.9
TLZ	**Tolley Road**	**5.27**	**212**	P	Pn	13 34 12.0	+3.5
ARHZ	**Aropaoanui**	**5.61**	**197**	P	Pn	13 34 12.6	+0.1
ARHZ				S	S	13 35 21.7	+0.9
MCHZ	**McNeill Hill**	**5.86**	**198**	P	Pn	13 34 15.5	+0.1
MCHZ				S	S	13 35 27.1	+1.0
KWHZ	**Kaweka Forest**	**5.91**	**200**	P	Pn	13 34 16.1	-0.1
KWHZ				S	S	13 35 28.6	+1.2
BHHZ	**Black Hill Sta**	**6.08**	**202**	P	Pn	13 34 17.8	-0.4
BHHZ				S	S	13 35 30.9	-0.2
KRHZ	**Kereru**	**6.13**	**200**	P	Pn	13 34 18.2	-0.6
KRHZ				S	S	13 35 31.5	-0.6
KAHZ	**Kahuranaki**	**6.14**	**196**	P	Pn	13 34 19.3	+0.4
KAHZ				S	S	13 35 35.5	+3.1
PXZ	**Pawanui**	**6.37**	**195**	P	Pn	13 34 20.9	-0.6
PXZ				S	S	13 35 37.1	-0.2
PNHZ	**Pukenui**	**6.43**	**200**	P	Pn	13 34 21.5	-0.8
PNHZ				S	S	13 35 37.2	-1.4
PRHZ	**Porangahau**	**6.65**	**196**	P	Pn	13 34 24.9	-0.1
PRHZ				S	S	13 35 44.3	+0.9
BFZ	**Birch Farm**	**7.14**	**198**	P	Pn	13 34 30.5	-0.3
BFZ				S	S	13 35 53.5	-0.7

*IDC **04** 13:33:04.8±1.2, 23°.90N×121°.77E, h0km, mb3.6/11, mbtmp3.6/12, ML3.9/1, Error ellipse: s-maj=26.7km s-min=24.6km az=15.0*

*NEIC **04** 13:33:09.0±1.4, 24°.12N±0°.02×121°.72E±0°.05, h10km±5km, mb4.3/22, Error ellipse: s-maj=6.8km s-min=1.9km az=105.0*

*ASIES **04** 13:33:09.5, 24°.20N×121°.68E, h5km, ML4.3, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr4.58; Mθθ-4.84; Mϕϕ0.26; Mrθ5.18; Mθϕ-3.23; Mϕr-2.15; Fault plane solution: M₀8.00851×10²¹ NP1:ϕ₁94.92000°, δ69.81000°, λ119.82000°. NP2:ϕ₂215.97000°, δ35.48000°, λ36.48000°. Principal axes: T Plg55.0670°, Azm42.7980°; N Plg27.8200°, Azm263.7300°; P Plg19.3780°, Azm163.0340°;*

*JMA **04** 13:33:09.8±0.1, 24°.2N±0°.3×121°.7E±0°.6, h10km, MV4.0/18, TAIWAN REGION*

*TAP **04** 13:33:09.5, 24°.18N×121°.70E, h10km, ML4.3, B*

ISC 04 13:33:09.8±0.6, 24°.16N±0°.01×121°.72E±0°.01, h14km±3km, n231, s096/386, mb4.2/23, 18C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=252	**0.09**	**270**	⇑P	**Pg**	**13 33 12.1**	**-0.6**
ETL				S	**Sg**	**13 33 13.8**	**-0.9**
baz=252							
NACB	**Ninganchiao**	**0.11**	**277**	Pg	**Pg**	**13 33 12.2**	**-0.8**
NACB	**Ninganchiao**	**0.11**	**277**	P	**Pg**	**13 33 12.3**	**-0.7**
NACB	**Ninganchiao** baz=266	**0.11**	**277**	⇑P	**Pg**	**13 33 12.4**	**-0.7**
NACB				S	**Sg**	**13 33 14.2**	**-1.0**
baz=266							
TWD	**Chiawan** baz=221	**0.14**	**235**	⇑*i*P	**Pg**	**13 33 12.8**	**-0.5**
TWD				*i* S	**Sg**	**13 33 15.3**	**-0.4**
baz=221							
EHP	**Heping Village** baz=19	**0.15**	**8**	⇓P	**Pg**	**13 33 13.0**	**-0.6**
EHP				S	**Sg**	**13 33 15.4**	**-0.8**
baz=19							
EAHA	**Aohua** baz=21	**0.17**	**7**	⇓P	**Pg**	**13 33 13.2**	**-0.6**
EAHA				S	**Sg**	**13 33 15.8**	**-0.8**
baz=21							
HWA	**Hwalien** baz=202	**0.21**	**210**	⇑*i*P	**Pg**	**13 33 14.7**	**+0.3**
ETLH	**Xiulin Townshi** baz=278	**0.22**	**282**	P	**Pg**	**13 33 14.2**	**-0.5**
ETLH				S	**Sg**	**13 33 17.4**	**-0.6**
baz=278							
ENA	**Nanau** baz=10.0	**0.27**	**5**	⇓*i*P	**Pg**	**13 33 14.9**	**-0.5**
ENA				*i* S	**Sg**	**13 33 18.4**	**-0.9**
baz=10.0							
ETM	**Tongmen** baz=212	**0.28**	**227**	⇑P	**Pg**	**13 33 15.3**	**-0.4**
ETM				*e*S	**Sb**	**13 33 21.0**	**-0.3**
baz=212							
EWUT	**Wuta** baz=15	**0.29**	**11**	⇓P	**Pg**	**13 33 15.4**	**-0.5**
EWUT				S	**Sg**	**13 33 19.3**	**-0.6**
baz=15							
LXIB	**Xiulin Townshi** baz=239	**0.31**	**244**	⇑P	**Pg**	**13 33 15.7**	**-0.6**
LXIB				S	**Sg**	**13 33 20.4**	**-0.2**
baz=239							
SHUL	**Shoufeng** baz=204	**0.40**	**201**	⇑P	**Pb**	**13 33 18.4**	**-0.2**
SHUL				S	**Sb**	**13 33 24.1**	**-0.4**
baz=204							
NNSB	**Datong** baz=310	**0.41**	**311**	⇓P	**Pg**	**13 33 17.5**	**-0.4**
NNSB				S	**Sg**	**13 33 22.6**	**-0.9**
baz=310							
NNSH	**Datong** baz=310	**0.41**	**311**	⇓P	**Pg**	**13 33 17.5**	**-0.4**
NNSH				S	**Sg**	**13 33 22.8**	**-0.7**
baz=310							
LATG	**Datong** baz=336	**0.41**	**335**	⇓P	**Pg**	**13 33 17.6**	**-0.5**
LATG				*e*S	**Sb**	**13 33 24.4**	**-0.8**
baz=336							
WHF	**Hehuan Shan** baz=265	**0.41**	**268**	*i* P	**Pg**	**13 33 17.8**	**-0.4**
WHF				*i* S	**Sg**	**13 33 23.3**	**-0.6**
baz=265							
NNS	**Nan Shan** baz=311	**0.42**	**312**	⇓*i*P	**Pg**	**13 33 17.8**	**-0.5**
NNS				*i* S	**Sg**	**13 33 23.2**	**-0.7**
baz=311							
ESAO	**Su ao** baz=18	**0.43**	**15**	⇓P	**Pg**	**13 33 17.8**	**-0.5**
ESAO				S	**Sg**	**13 33 23.1**	**-1.1**
baz=18							
ESL	**Shilin** baz=213	**0.43**	**217**	*i* P	**Pg**	**13 33 17.9**	**-0.4**
ESL				S	**Sb**	**13 33 26.0**	**+0.4**
baz=213							
FUSS	**Fushou** baz=279	**0.44**	**282**	P	**Pg**	**13 33 18.6**	**-0.1**
FUSS				S	**Sg**	**13 33 24.1**	**-0.5**
baz=279							
TWC	**Suao** baz=12	**0.46**	**15**	⇓*i*P	**Pg**	**13 33 18.6**	**-0.4**
TWC				*i* S	**Sg**	**13 33 23.9**	**-1.4**
baz=12							
NDS	**Dongshan** baz=1.0	**0.47**	**360**	⇓P	**Pg**	**13 33 18.9**	**-0.3**
NDS				S	**Sg**	**13 33 24.9**	**-0.6**
baz=1.0							
TEGC	**Jichi Village** baz=188	**0.48**	**200**	P	**Pb**	**13 33 20.4**	**+0.4**
TEGC				*e*S	**Sn**	**13 33 28.9**	**-1.5**
baz=188							
NDT	**Datong Townshi** baz=338	**0.48**	**337**	⇓P	**Pg**	**13 33 19.1**	**-0.2**
NDT				S	**Sg**	**13 33 25.4**	**-0.3**
baz=338							
ENTT	**Nioudou** baz=345	**0.50**	**344**	⇓*i*P	**Pg**	**13 33 19.3**	**-0.3**
ENTT				*i* S	**Sg**	**13 33 25.9**	**-0.4**
baz=345							
TWT	**Tachien** baz=278	**0.50**	**281**	⇑*i*P	**Pg**	**13 33 20.0**	**+0.2**
TWT				*i* S	**Sg**	**13 33 26.4**	**-0.1**
baz=278							
CHGB	**Renai** baz=248	**0.51**	**259**	⇑P	**Pg**	**13 33 19.7**	**-0.2**
CHGB				S	**Sg**	**13 33 26.5**	**-0.1**
baz=248							
TDCB	**Techi** baz=278	**0.52**	**280**	⇑P	**Pg**	**13 33 20.0**	**0.0**
TDCB				S	**Sg**	**13 33 26.4**	**-0.6**
baz=278							
WARBT	**Fenglin Townsh** baz=220	**0.53**	**215**	P	**Pg**	**13 33 19.8**	**-0.5**
WARBT				S	**Sb**	**13 33 28.7**	**+0.2**
baz=220							
EOS2	**EOS2** baz=54	**0.54**	**61**	*e*P	**Pb**	**13 33 21.4**	**+0.4**
OWD	**Renai** baz=245	**0.54**	**248**	P	**Pg**	**13 33 20.1**	**-0.3**
OWD				*e*S	**Sb**	**13 33 28.7**	**0.0**
baz=245							
EOS4	**EOS4** baz=95	**0.55**	**94**	P	**Pn**	**13 33 22.5**	**-0.4**
EOS4				S	**Sn**	**13 33 32.4**	**+0.7**
baz=95							
EGFH	**Guangfu** baz=214	**0.56**	**209**	P	**Pg**	**13 33 20.4**	**-0.3**
EGFH				*e*S	**Sb**	**13 33 30.2**	**+1.0**
baz=214							
TWE	**Neicheng** baz=6.0	**0.56**	**355**	⇓*i*P	**Pg**	**13 33 20.6**	**-0.3**
TWE				*i* S	**Sg**	**13 33 27.9**	**-0.4**
baz=6.0							
EOS3	**EOS3** baz=64	**0.56**	**77**	*e*P	**Pn**	**13 33 22.7**	**-0.6**
WUSB	**Renai** baz=243	**0.57**	**253**	⇑P	**Pg**	**13 33 20.9**	**-0.2**
WUSB				S	**Sg**	**13 33 28.1**	**-0.6**
baz=243							
YHNB	**Yeheng**	**0.60**	**329**	Pg	**Pg**	**13 33 21.0**	**-0.5**
YHNB	**Yeheng**	**0.60**	**329**	P	**Pg**	**13 33 21.3**	**-0.2**
YHNB	**Yeheng** baz=328	**0.60**	**329**	⇓P	**Pg**	**13 33 21.2**	**-0.2**
YHNB				S	**Sg**	**13 33 28.8**	**-0.7**
baz=328							
ILA	**Ilan** baz=357	**0.60**	**3**	*i* P	**Pg**	**13 33 21.6**	**0.0**
ILA				*e*S	**Sb**	**13 33 30.6**	**0.0**
baz=357							
FUSB	**Fushanzhiwuyua** baz=350	**0.61**	**349**	⇓P	**Pg**	**13 33 21.4**	**-0.3**
FUSB				S	**Sg**	**13 33 29.3**	**-0.6**
baz=350							
NSK	**Sanguang** baz=328	**0.61**	**328**	⇓*i*P	**Pg**	**13 33 21.3**	**-0.4**
NSK				*i* S	**Sg**	**13 33 29.1**	**-0.7**
baz=328							
VWDT	**VWDT** baz=221	**0.66**	**233**	⇑P	**Pg**	**13 33 22.4**	**-0.3**
VWDT				*e*S	**Sb**	**13 33 33.2**	**+0.9**
baz=221							
NTC	**Toucheng** baz=9.0	**0.70**	**8**	P	**Pg**	**13 33 23.3**	**-0.1**
NTC				S	**Sn**	**13 33 35.1**	**-0.9**
baz=9.0							
WPL	**Puli Township** baz=248	**0.71**	**258**	P	**Pg**	**13 33 23.5**	**-0.1**
WPL				S	**Sg**	**13 33 32.7**	**-0.2**
baz=248							
WHP	**Taichung City** baz=278	**0.71**	**280**	P	**Pb**	**13 33 23.9**	**-0.2**
WHP				S	**Sg**	**13 33 33.1**	**0.0**
baz=278							
HGSD	**Ruisui** baz=215	**0.72**	**202**	P	**Pb**	**13 33 24.3**	**+0.2**
HGSD				*e*S	**Sn**	**13 33 35.8**	**-0.6**
baz=215							
NFF	**Wufeng Townshi** baz=310	**0.72**	**311**	P	**Pg**	**13 33 23.7**	**-0.2**
NFF				S	**Sg**	**13 33 33.0**	**-0.4**
baz=310							
DPDB	**Guoxing** baz=250	**0.73**	**260**	P	**Pg**	**13 33 24.0**	**0.0**
DPDB				S	**Sg**	**13 33 33.3**	**-0.4**
baz=250							
WCS	**Beigang Elemen** baz=252	**0.74**	**262**	P	**Pg**	**13 33 24.1**	**-0.2**
WCS				S	**Sg**	**13 33 34.1**	**+0.1**
baz=252							
EHY	**Hungye** baz=213	**0.74**	**209**	*i* P	**Pg**	**13 33 23.4**	**-0.8**
EHY				*e*S	**Sg**	**13 33 34.2**	**+0.1**
baz=213							
SSLB	**Suanglung**	**0.79**	**242**	Pg	**Pg**	**13 33 24.6**	**-0.5**
SSLB	**Suanglung**	**0.79**	**242**	P	**Pg**	**13 33 24.8**	**-0.3**
SSLB	**Suanglung** baz=240	**0.79**	**242**	⇑P	**Pg**	**13 33 24.7**	**-0.5**
SSLB				S	**Sg**	**13 33 35.4**	**-0.1**
baz=240							
SMLT	**Sun Moon Lake** baz=238	**0.80**	**250**	⇑*i*P	**Pg**	**13 33 25.0**	**-0.3**
SMLT				*i* S	**Sg**	**13 33 35.9**	**+0.1**
baz=238							
LIOB	**Emei** baz=307	**0.80**	**307**	P	**Pg**	**13 33 25.4**	**0.0**
LIOB				S	**Sg**	**13 33 35.8**	**-0.1**
baz=307							
NSTT	**Nanjuang** baz=305	**0.81**	**306**	⇓*i*P	**Pg**	**13 33 25.3**	**-0.1**
NSTT				*i* S	**Sg**	**13 33 35.6**	**-0.4**
baz=305							
NJD	**Zhudong** baz=321	**0.81**	**315**	P	**Pb**	**13 33 26.1**	**+0.4**
NJD				S	**Sb**	**13 33 37.0**	**+0.4**
baz=321							
TIPB	**Shuangxi** baz=358	**0.81**	**7**	⇓P	**Pg**	**13 33 25.2**	**-0.4**
TIPB				*e*S	**Sg**	**13 33 35.0**	**-1.3**
baz=358							
NHDH	**Xindian Distri** baz=348	**0.82**	**348**	P	**Pg**	**13 33 25.3**	**-0.4**
NHDH				S	**Sg**	**13 33 36.4**	**0.0**
baz=348							
TYC	**Yuchr** baz=241	**0.83**	**252**	*i* P	**Pg**	**13 33 25.4**	**-0.4**
TYC				S	**Sb**	**13 33 36.9**	**-0.1**
baz=241							
TATO	**Taipei**	**0.84**	**346**	Pg	**Pg**	**13 33 25.5**	**-0.6**
TATO	**Taipei**	**0.84**	**346**	P	**Pg**	**13 33 25.9**	**-0.2**
TATO	**Taipei** baz=346	**0.84**	**346**	⇓P	**Pg**	**13 33 25.7**	**-0.4**
TATO				S	**Sg**	**13 33 36.3**	**-0.8**
baz=346							
YULB	**Yu-li**	**0.85**	**207**	Pg	**Pg**	**13 33 24.3**	**-2.0**
YULB	**Yu-li**	**0.85**	**207**	P	**Pg**	**13 33 25.9**	**-0.5**
YULB	**Yu-li** baz=216	**0.85**	**207**	P	**Pg**	**13 33 25.8**	**-0.6**
YULB				*e*S	**Sb**	**13 33 37.9**	**+0.1**
baz=216							
BACT	**New Taipei Cit** baz=343	**0.87**	**343**	P	**Pb**	**13 33 26.7**	**0.0**
BACT				S	**Sb**	**13 33 38.9**	**+0.6**
baz=343							
ECBN	**Changbin** baz=188	**0.87**	**196**	P	**Pb**	**13 33 27.1**	**+0.3**
ECBN				*e*S	**Sn**	**13 33 40.3**	**0.0**
baz=188							
TWB1	**Santiao Chiao** baz=11	**0.88**	**16**	⇓*i*P	**Pg**	**13 33 26.2**	**-0.6**
TWB1				S	**Sg**	**13 33 38.3**	**-0.1**
baz=11							
NHY	**Taipei** baz=351	**0.89**	**351**	*e*P	**Pb**	**13 33 26.9**	**-0.1**
NHY				*e*S	**Sb**	**13 33 39.6**	**+0.9**
baz=351							
EYUL	**Yuli** baz=213	**0.89**	**204**	P	**Pg**	**13 33 26.7**	**-0.3**
EYUL				*e*S	**Sn**	**13 33 40.8**	**+0.2**
baz=213							
HSN1	**Hsinchu** baz=314	**0.89**	**314**	P	**Pn**	**13 33 27.6**	**-0.3**
HSN1				*e*S	**Sn**	**13 33 39.7**	**-0.9**
baz=314							
TWF1	**Yuli** baz=214	**0.89**	**206**	*i* P	**Pg**	**13 33 26.1**	**-0.9**
TWF1				*e*S	**Sg**	**13 33 38.1**	**-0.6**
baz=214							
TAP	**Taipei** baz=348	**0.90**	**348**	*i* P	**Pb**	**13 33 27.0**	**-0.2**
TAP				*i* S	**Sg**	**13 33 38.8**	**-0.1**
baz=348							
NWF	**Wu-fen Shan** baz=356	**0.91**	**4**	⇑*i*P	**Pb**	**13 33 27.4**	**-0.1**
NWF				*e*S	**Sb**	**13 33 40.3**	**+0.8**
baz=356							
WFSB	**Wu-fen Shan** baz=356	**0.91**	**4**	⇑P	**Pg**	**13 33 27.4**	**0.0**

WFSB					*e*S		**Sn**	**13 33 40.3 -0.8**	**STYH**	**Taoyuan**	**1.31 221**		P		**Pb**	**13 33 34.1 -0.1**	**TWK1**	**Hengchun**	**2.36 201**	*i* P		**Pn**	**13 33 50.1 +1.9**
	baz=356									baz=221								baz=195					
WHYT	**Xinyi Township**	**0.92 240**		P			**Pb**	**13 33 27.2 -0.3**	STYH				S		**Sg**	**13 33 53.2 +1.2**	TWK1				S		**Sb**	**13 34 19.6 -1.5**
	baz=245									baz=221								baz=195					
WHYT					*e*S		**Sg**	**13 33 38.9 -0.7**	**TPUB**	**Ta-pu**	**1.31 230**				**Pb**	**13 33 34.2 -0.1**	**TWKBT**	**Hengchun**	**2.36 201**		P		**Pn**	**13 33 50.0 +1.8**
	baz=245								**TPUB**	**Ta-pu**	**1.31 230**		P		**Pg**	**13 33 35.1 0.0**		baz=194					
SBCB	**Hsinchu**	**0.92 314**	⇓	P			**Pn**	**13 33 28.0 -0.4**	**TPUB**	**Ta-pu**	**1.31 230**	⇓	P		**Pg**	**13 33 34.8 -0.3**	**JISG**	**Ishigakijimahi**	**2.40 79**		P		**Pn**	**13 33 48.8 +0.1**
	baz=313									baz=217							JISG				*e*S		**Sn**	**13 34 18.6 +0.6**
SBCB					S		**Sn**	**13 33 41.5 +0.2**	TPUB				S		**Sg**	**13 33 53.3 +1.1**	**PTMZ**	**Houxiangcun**	**2.52 291**		P		**Pn**	**13 33 50.1 -0.2**
	baz=313									baz=217								baz=290					
NTY	**Taoyuan**	**0.92 336**		P			**Pn**	**13 33 28.0 -0.4**	**CHY**	**Chiayi**	**1.36 241**		P		**Pg**	**13 33 36.2 +0.3**	**MATB**	**Ma-tsu**	**2.55 321**	*e*P			**Pn**	**13 33 50.4 -0.4**
	baz=336									baz=240								baz=318					
NTY					*e*S		**Sg**	**13 33 40.4 +0.7**	CHY				S		**Sg**	**13 33 54.5 +1.0**	MATB				*e*S		**Sn**	**13 34 22.1 +0.4**
	baz=336									baz=240								baz=318					
NMLH	**Miaoli**	**0.93 294**		P			**Pn**	**13 33 28.6 +0.1**	**LONT**	**Longtian**	**1.36 204**		P		**Pn**	**13 33 33.7 -0.7**	**JTJ**	**Tarama**	**2.76 79**		S		**Sb**	**13 34 30.1 -2.7**
	baz=293									baz=203							**LYJJ**	**Jianjiangzhen**	**2.97 324**	*e*P			**Pn**	**13 33 55.8 -0.7**
NMLH					S		**Sg**	**13 33 40.4 +0.5**	**WTP**	**Ta-pu**	**1.36 228**	*i* P			**Pb**	**13 33 35.5 +0.4**		baz=323					
	baz=293									baz=215							**KNM**	**Kinmen**	**3.01 276**	*e*P			**Pn**	**13 33 59.5 +2.4**
NJN	**Zhunan**	**0.93 304**		P			**Pn**	**13 33 28.5 0.0**	WTP			*i* S			**Sg**	**13 33 54.2 +0.6**		baz=274					
	baz=303									baz=215							**KNMB**	**Chin-men Tao**	**3.05 276**	Pn			**Pn**	**13 33 57.3 -0.4**
NJN					*e*S		**Sn**	**13 33 41.8 +0.1**	**TWK**	**Hsinying**	**1.44 232**	⇓ *i* P			**Pg**	**13 33 37.0 -0.4**	**KNMB**	**Chin-men Tao**	**3.05 276**	*e*P			**Pn**	**13 33 57.6 -0.1**
	baz=303									baz=232								baz=275					
HSN	**Hsinchu**	**0.94 313**	*i* P				**Pn**	**13 33 28.2 -0.3**	TWK			*i* S			**Sg**	**13 33 57.5 +1.5**	KNMB				S		**Sn**	**13 34 34.9 +0.9**
	baz=316									baz=232								baz=275					
HSN			*i* S				**Sg**	**13 33 40.5 +0.4**	**SNST**	**Tainan City**	**1.46 230**	P			**Pg**	**13 33 37.6 -0.3**	**XPSS**	**Dashiqiu**	**3.08 334**	*e*P			**Pn**	**13 33 57.3 -0.8**
	baz=316									baz=231								baz=331					
WWF	**Wufeng**	**0.94 263**		P			**Pn**	**13 33 29.2 +0.6**	SNST				S		**Sg**	**13 33 58.2 +1.4**	XPSS				*e*S		**Sn**	**13 34 36.2 +1.4**
	baz=257									baz=231								baz=331					
WWF					S		**Sn**	**13 33 41.9 0.0**	**TWG**	**Pinlang**	**1.46 204**				**Pn**	**13 33 33.8 -2.0**	**MHZQ**	**Yeshan**	**3.11 309**	*e*P			**Pn**	**13 33 57.9 -0.6**
	baz=257								**TWG**	**Pinlang**	**1.46 204**	*e*P			**Pn**	**13 33 33.7 -2.0**		baz=308					
NCUH	**Zhongli**	**0.94 329**		P			**Pn**	**13 33 28.3 -0.3**		baz=204							**JIRB**	**Irabujima**	**3.22 77**	*e*P			**Pn**	**13 34 01.4 +1.5**
	baz=329								TWG				S		**Sg**	**13 33 57.2 +0.4**	JIRB				*e*S		**Sn**	**13 34 40.4 +2.3**
NCUH					S		**Sn**	**13 33 41.8 -0.1**		baz=204							**JIKM**	**Ikemajima**	**3.30 76**	*e*S			**Sn**	**13 34 42.3 +2.1**
	baz=329								**TWGBT**	**Beinan**	**1.46 204**	P			**Pn**	**13 33 34.2 -1.6**	**JMJ**	**Miyako jima 2**	**3.32 78**	P			**Pn**	**13 34 02.9 +1.5**
SXI1	**Grass Mountain**	**0.94 9**	⇓	P			**Pb**	**13 33 27.8 -0.2**	**TWGBT**	**Beinan**	**1.46 204**	*e*P			**Pn**	**13 33 33.5 -2.2**	**JMJ2**	**Miyako jima3**	**3.34 79**	P			**Pn**	**13 34 03.2 +1.6**
	baz=349									baz=204							JMJ2				*e*S		**Sn**	**13 34 44.7 +3.5**
SXI1					S		**Sg**	**13 33 41.1 +0.8**	TWGBT				*e*S		**Sg**	**13 33 57.3 +0.5**	**JOW**	**Kunigami**	**6.49 64**	Pn			**Pn**	**13 34 44.6 -0.5**
	baz=349									baz=204							**JOW**	**Kunigami**	**6.49 64**	P			**Pn**	**13 34 44.5 -0.5**
TCU	**Taichung**	**0.95 270**		P			**Pn**	**13 33 29.4 +0.6**	**CHN1**	**Nanshi**	**1.46 229**	*i* P			**Pg**	**13 33 37.4 -0.5**	**JOW**	**Kunigami**	**6.49 64**	Pn			**Pn**	**13 34 43.9 -1.1**
	baz=268									baz=229								5.6nm,0.3s,baz=177,slow=10,SNR=7.8						
TCU					S		**Sn**	**13 33 43.2 +1.0**	CHN1				*i* S		**Sg**	**13 33 58.0 +1.1**		10nm,0.3s						
	baz=268									baz=229							**KSRS**	**Korea Array**	**14.28 20**	Pn			**Pn**	**13 36 33.9 +2.3**
WJS	**Zhushan**	**0.97 250**		P			**Pn**	**13 33 28.8 -0.2**	**WSF**	**Szhu**	**1.46 250**	P			**Pb**	**13 33 37.1 +0.3**		0.1nm,0.3s,baz=207,slow=14,SNR=1.8						
	baz=243									baz=237							**BTO**	**Baotou**	**19.11 332**	*e*P			**Pn**	**13 37 34.5 +1.2**
WJS					S		**Sn**	**13 33 42.3 -0.3**	WSF				S		**Sg**	**13 33 57.3 +0.3**	BTO				pP		**sP**	**13 37 37.6 -0.3**
	baz=243									baz=237							BTO				sP		**pP**	**13 37 41.5 +5.4**
TWS1	**Kuangyinshan**	**0.98 344**	⇓	*i* P			**Pn**	**13 33 28.9 -0.3**	**SGST**	**Jiashian**	**1.49 224**	*i* P			**Pb**	**13 33 37.0 -0.3**	BTO				PP		**PnPn**	**13 37 51.9 +5.9**
	baz=352									baz=211							BTO				S		**S**	**13 41 13.7 +4.7**
TWS1				*i* S			**Sn**	**13 33 42.2 -0.6**	SGST			*i* S			**Sg**	**13 33 58.7 +0.8**	BTO				pmax	pmax		
	baz=352									baz=211								comp=Z,13nm,0.6s						
WNT1	**Nantou City**	**0.98 255**		P			**Pn**	**13 33 29.9 +0.7**	**TTN**	**Taitung**	**1.49 201**	*e*P			**Pb**	**13 33 36.9 -0.4**	BTO				pmax	pmax		
	baz=249									baz=202								comp=Z,890nm,6.5s						
WNT1					S		**Sn**	**13 33 44.3 +1.4**	TTN				*e*S		**Sg**	**13 33 58.9 +1.0**	BTO				LR	LR		
	baz=249									baz=202								comp=N,1μm,9.5s						
WNT	**Mingjian**	**0.99 254**	*i* P				**Pn**	**13 33 29.8 +0.5**	**LDUT**	**Ludao**	**1.50 189**	*e*P			**Pb**	**13 33 37.0 -0.4**	BTO				LR	LR		
	baz=247									baz=180								comp=E,2μm,14.9s						
WNT			*i* S				**Sn**	**13 33 43.2 +0.2**	LDUT				S		**Sn**	**13 33 54.7 -1.0**	BTO				LR	LR		
	baz=247									baz=180								comp=Z,870nm,9.8s						
TNOU	**National Taiwa**	**0.99 3**		P			**Pg**	**13 33 28.8 0.0**	**PCYT**	**Pengchaiyu**	**1.50 12**	*i* P			**Pn**	**13 33 36.9 +0.5**	**USRK**	**Ussuriysk Ar.**	**21.69 20**		P		**P**	**13 38 00.1 -0.1**
	baz=4.0									baz=13								comp=Z,0.8nm,0.6s,baz=195,slow=10,SNR=1.7						
YM01	**YM01**	**0.99 352**		P			**Pg**	**13 33 28.9 -0.1**	**WSL**	**Shuilin Townsh**	**1.50 245**	P			**Pg**	**13 33 38.2 -0.5**		comp=Z,0.8nm,0.6s						
	baz=337									baz=245							**CMAR**	**Chiang Mai Arr**	**21.95 259**		P		**P**	**13 38 01.6 -1.7**
YM01					*e*S		**Sn**	**13 33 43.1 -0.1**	WSL				S		**Sg**	**13 33 59.1 +0.9**		comp=Z,0.4nm,0.3s,baz=64,slow=8.1,SNR=1.6						
	baz=337									baz=245								comp=Z,0.4nm,0.3s						
WDJ	**Dajia District**	**1.00 281**		P			**Pn**	**13 33 30.6 +1.2**	**SLGT**	**Liugui**	**1.52 220**	P			**Pb**	**13 33 37.9 0.0**	**SONM**	**Songino Array**	**26.58 337**		P		**P**	**13 38 47.8 +0.2**
	baz=280									baz=221								comp=Z,0.9nm,0.8s,baz=149,slow=12,SNR=5.7						
WDJ					S		**Sn**	**13 33 44.5 +1.1**	SLGT				S		**Sg**	**13 33 59.4 +0.6**		comp=Z,0.9nm,0.8s						
	baz=280									baz=221							**MK31**	**Makanchi Array**	**38.70 316**		P		**P**	**13 40 33.1 -0.2**
CHKH	**Chenggong**	**1.01 197**		P			**Pb**	**13 33 29.0 0.0**	**ICHU**	**Yijhu**	**1.54 239**	P			**Pg**	**13 33 39.0 -0.4**	**MKAR**	**Makanchi Array**	**38.70 316**		P		**P**	**13 40 33.1 -0.2**
	baz=213									baz=224								comp=Z,0.6nm,0.6s,baz=96,slow=11,SNR=7.4						
CHKH					S		**Sn**	**13 33 45.1 +1.6**	ICHU				S		**Sg**	**13 34 00.4 +1.0**		comp=Z,0.6nm,0.6s						
	baz=213									baz=224							**MAKZ**	**Makanchi**	**38.90 316**		P		**P**	**13 40 33.8 -1.2**
NTST	**Danshui**	**1.03 346**		P			**Pn**	**13 33 29.9 0.0**	**CHN8**	**Yiju**	**1.60 240**	*i* P			**Pb**	**13 33 39.5 +0.4**	**ZALV**	**Zalesovo Beam**	**40.53 327**		P		**P**	**13 40 47.1 -1.3**
	baz=355									baz=225								comp=Z,1.0nm,0.6s,baz=121,slow=8.0,SNR=5.6						
NTST					*e*S		**Sn**	**13 33 43.7 -0.4**	CHN8			*i* S			**Sg**	**13 34 01.6 +0.2**		comp=Z,1.0nm,0.6s						
	baz=355									baz=225							**KURBB**	**Kurchatov Arra**	**42.44 320**		P		**P**	**13 41 02.1 -2.0**
FULB	**Fuli**	**1.03 202**		P			**Pb**	**13 33 29.4 -0.1**	**CHN3**	**Shinhua**	**1.64 229**	*i* P			**Pg**	**13 33 41.8 +0.4**		comp=Z,0.5nm,1.1s,baz=112,slow=9.5,SNR=2.3						
	baz=216									baz=233								comp=Z,0.5nm,1.1s						
FULB					*e*S		**Sn**	**13 33 44.1 -0.1**	CHN3				S		**Sg**	**13 34 02.8 +0.1**	**WB0**	**Warramunga Arr**	**45.37 163**		P		**P**	**13 41 28.2 +0.2**
	baz=216									baz=233							**WRA**	**Warramunga Arr**	**45.53 163**		P		P	13 41 23.9 -5.3
ANP	**Anpu**	**1.04 350**	*i* P				**Pb**	**13 33 29.7 0.0**	**SSHA**	**Shanhua**	**1.66 232**	P			**Pb**	**13 33 40.8 +0.6**		comp=Z,0.4nm,0.8s,baz=345,slow=8.5,SNR=1.9						
	baz=360									baz=234								comp=Z,0.4nm,0.8s						
ANP					*e*S		**Sg**	**13 33 43.6 +0.2**	SSHA				*e*S		**Sg**	**13 34 03.2 0.0**	**WB2**	**Warramunga Arr**	**45.53 163**		P		**P**	**13 41 28.7 -0.5**
	baz=360									baz=234							WB2				IAmb		IAmb	13 41 46.2
NWRT	**Kuosheng**	**1.04 357**		P			**Pb**	**13 33 29.6 0.0**	**SHHT**	**Tainan City**	**1.69 228**	P			**Pg**	**13 33 42.0 -0.3**		comp=Z,4.7nm,1.1s						
	baz=358									baz=232							**WR0**	**Warramunga Arr**	**45.60 163**		P		**P**	**13 41 29.2 -0.5**
NHW	**Xinwu Township**	**1.04 324**		P			**Pb**	**13 33 29.1 -0.5**	SHHT				*e*S		**Sg**	**13 34 03.8 -0.4**	**BVAR**	**Borovoye Array**	**48.00 321**		P		**P**	**13 41 46.4 -1.9**
	baz=324									baz=232								comp=Z,0.5nm,0.5s,baz=116,slow=9.8,SNR=3.4						
NHW					*e*S		**Sn**	**13 33 45.5 +1.1**	**SCST**	**Cishan**	**1.69 222**	P			**Pb**	**13 33 41.3 +0.5**		comp=Z,0.5nm,0.5s						
	baz=324									baz=224							**AS31**	**Alice Springs**	**48.99 165**		P		**P**	**13 41 54.8 -1.4**
ALS	**Alishan**	**1.06 232**	⇑ *i* P				**Pb**	**13 33 30.0 -0.1**	SCST				S		**Sg**	**13 34 05.3 +1.0**	**ABKAR**	**Akbulak array**	**53.81 314**		P		**P**	**13 42 31.4 -0.7**
	baz=231									baz=224							ABKAR				IAmb		IAmb	13 42 34.5
ALS					S		**Sn**	**13 33 45.9 +0.7**	**ECL**	**Taimali**	**1.71 204**	P			**Pn**	**13 33 38.3 -0.9**		comp=Z,3.9nm,1.2s						
	baz=231								ECL				*e*S		**Sn**	**13 34 00.9 0.0**	**STKA**	**Stephens Creek**	**58.87 160**		P		**P**	**13 43 06.8 -1.5**
WYL	**Yuanlin Townsh**	**1.06 259**		P			**Pn**	**13 33 31.2 +1.0**		baz=193							**F17K**	**Baldwin Pennin**	**62.93 26**		P		**P**	**13 43 35.0 -0.5**
	baz=258								**SCLT**	**Jiali**	**1.71 235**	*i* P			**Pb**	**13 33 40.2 -0.7**	F17K				IAmb		IAmb	13 44 18.5
WYL					S		**Sn**	**13 33 46.5 +1.7**		baz=237								comp=Z,1.6nm,0.9s						
	baz=258								SCLT				*i* S		**Sg**	**13 34 04.5 -0.2**	**D19K**	**Kuna River**	**64.16 24**		P		**P**	**13 43 43.8 +0.1**
WCHH	**Zhanghua**	**1.06 266**		P			**Pg**	**13 33 31.4 +1.1**		baz=237							D19K				IAmb		IAmb	13 43 43.9
WCHH					S		**Sn**	**13 33 45.6 +0.7**	**TSMG**	**Majia**	**1.75 214**	P			**Pb**	**13 33 41.5 -0.2**		comp=Z,2.9nm,1.0s						
	baz=265									baz=218							**E19K**	**Redstone River**	**64.51 25**		P		**P**	**13 43 46.3 +0.4**
CHKT	**Chengkung**	**1.10 197**	*i* P				**Pb**	**13 33 30.4 -0.3**	TSMG				S		**Sb**	**13 34 04.6 +1.0**	E19K				IAmb		IAmb	13 43 57.6
	baz=211									baz=218								comp=Z,2.9nm,1.2s						
CHKT			*i* S				**Sn**	**13 33 47.7 +1.8**	**TWM1**	**Shoushan**	**1.78 222**	*i* P			**Pg**	**13 33 43.5 -0.6**	**TTA**	**Tatalina**	**65.28 30**		P		**P**	**13 43 51.3 +0.1**
	baz=211								TWM1				*e*S		**Sg**	**13 34 07.7 +0.5**	TTA				IAmb		IAmb	13 44 14.8
CHN5	**Tsauling**	**1.10 240**	⇑ *i* P				**Pg**	**13 33 31.5 +0.4**		baz=224								comp=Z,5.6nm,1.4s						
	baz=239								**TSCK**	**Chigu Township**	**1.80 236**	P			**Pb**	**13 33 41.7 -0.9**	**D22K**	**Ayikyak River**	**66.13 23**		P		**P**	**13 43 56.0 -0.4**
CHN5				*i* S			**Sn**	**13 33 47.2 +1.1**		baz=239							**H21K**	**Melozitna Rive**	**66.41 27**		P		**P**	**13 43 58.4 +0.2**
	baz=239								TSCK				S		**Sg**	**13 34 07.5 -0.3**	H21K				IAmb		IAmb	13 44 12.2
EHD	**Haiduan**	**1.11 205**		P			**Pb**	**13 33 30.0 -0.8**		baz=239								comp=Z,2.0nm,1.1s						
	baz=204								**SGLT**	**Jiouru**	**1.82 219**	*e*P			**Pb**	**13 33 42.7 -0.2**	**F24K**	**Squaw Lake**	**68.08 24**		P		**P**	**13 44 09.3 +0.5**
EHD					*e*S		**Sb**	**13 33 45.3 +0.1**		baz=222							F24K				IAmb		IAmb	13 44 21.7
	baz=204								SGLT				*e*S		**Sg**	**13 34 08.8 +0.4**		comp=Z,3.8nm,1.5s						
TWY	**Chenhua**	**1.12 355**	*i* P				**Pg**	**13 33 31.2 -0.1**		baz=222							**MDM**	**Murphy Dome**	**68.41 27**		P		**P**	**13 44 10.1 -0.8**
	baz=355								**MASBT**	**Mashibuluo**	**1.83 213**	*e*P			**Pn**	**13 33 41.1 +0.2**	**ILAR**	**Eielson Array**	**69.01 27**		P		**P**	**13 44 13.1 -1.6**
TWY					*e*S		**Sn**	**13 33 46.2 -0.1**		baz=217								comp=Z,0.4nm,0.9s,baz=310,slow=4.6,SNR=2.0						
	baz=355								MASBT				S		**Sg**	**13 34 07.8 -1.0**		comp=Z,0.4nm,0.9s						
NSM	**Shimen**	**1.13 354**	*e*P				**Pg**	**13 33 31.7 +0.2**		baz=217							**BMAR**	**Burnt Mountain**	**69.35 24**		P		**P**	**13 44 17.0 +0.3**
	baz=344								**IRIF**	**Iriomote-Funau**	**1.84 84**	P			**Pn**	**13 33 41.3 +0.2**	**SCM**	**Sheep Creek Mo**	**69.45 30**		P		**P**	**13 44 17.1 -0.4**
NSM					*e*S		**Sn**	**13 33 46.6 0.0**	IRIF				S		**Sn**	**13 34 05.1 +0.9**	**E28M**	**Babbage River**	**70.88 23**		P		**P**	**13 44 25.5 -0.6**
	baz=344								**SNJT**	**Kaohsiung City**	**1.89 222**	P			**Pg**	**13 33 45.1 -1.0**	**FINES**	**FINESS Array B**	**71.71 330**		P		**P**	**13 44 29.0 -2.2**
ECS	**Chishang**	**1.15 203**		P			**Pb**	**13 33 31.4 -0.2**		baz=224								comp=Z,1.8nm,0.8s,baz=50,slow=7.4,SNR=3.5						
	baz=216								**HATJ**	**Hateruma jima**	**1.91 93**	*e*P			**Pn**	**13 33 42.8 +0.8**		comp=Z,1.8nm,0.8s						
ECS					*e*S		**Sn**	**13 33 47.9 +0.7**	HATJ				S		**Sb**	**13 34 07.7 -0.4**	**INK**	**Inuvik**	**73.06 22**		P		**P**	**13 44 37.9 -1.2**
	baz=216								**EAST**	**Anshuo**	**1.94 205**	*i* P			**Pn**	**13 33 42.6 +0.1**	INK				IAmb		IAmb	13 44 55.6
JYNG	**Yonagunijimaku**	**1.16 75**		P			**Pb**	**13 33 31.9 +0.3**		baz=196								comp=Z,3.5nm,1.3s						
JYNG					*e*S		**Sg**	**13 33 48.7 +1.5**	**TAWH**	**Dawu Township**	**1.97 203**	*e*P			**Pb**	**13 33 44.6 -0.8**	**I30M**	**Mount Dempster**	**73.16 26**		P		**P**	**13 44 38.8 -1.2**
WGK	**Gukeng**	**1.16 246**	*i* P				**Pg**	**13 33 32.4 +0.3**		baz=195							I30M				IAmb		IAmb	13 44 40.0
	baz=245								**WSSB**	**Gushan**	**2.02 222**	P			**Pb**	**13 33 45.9 -0.4**		comp=Z,5.7nm,1.4s						
WGK					S		**Sn**	**13 33 47.9 +0.6**		baz=224							**G31M**	**Satah River**	**73.33 24**		P		**P**	**13 44 39.2 -1.5**
	baz=245								**SCZT**	**Fangliau**	**2.05 210**	P			**Pb**	**13 33 46.0 -0.7**	G31M				IAmb		IAmb	13 45 15.2
ELDTW	**Lidau**	**1.16 214**	*i* P				**Pb**	**13 33 30.6 -1.1**		baz=215								comp=Z,3.3nm,1.3s						
	baz=213								SCZT				*e*S		**Sb**	**13 34 12.8 +0.7**	**C36M**	**Paulatuk**	**75.66 20**		P		**P**	**13 44 52.5 -1.7**
ELDTW					*e*S		**Sb**	**13 33 46.5 -0.3**		baz=215							C36M				IAmb		IAmb	13 45 19.5
	baz=213								**PNG**	**Penghu**	**2.07 254**	*i* P			**Pn**	**13 33 45.1 +1.0**		comp=Z,2.2nm,1.1s						
WDLH	**Douliu**	**1.18 247**		P			**Pg**	**13 33 32.9 +0.4**		baz=254							**YKA**	**Yellowknife Ar**	**82.80 23**		P		**P**	**13 45 31.7 -1.6**
	baz=246								PNG				*i* S		**Sb**	**13 34 11.9 -0.8**		comp=Z,0.6nm,0.7s,baz=312,slow=5.1,SNR=2.5						
WDLH					S		**Sg**	**13 33 50.4 +2.6**		baz=254								comp=Z,0.6nm,0.7s						
	baz=246								**PHUB**	**P'eng-hu**	**2.07 252**	P			**Pn**	**13 33 45.2 +1.1**								
YOJ	**Yonaguni jima**	**1.22 75**					**Pn**	**13 33 32.3 -0.1**		baz=253														
YOJ	**Yonaguni jima**	**1.22 75**		P			**Pb**	**13 33 32.9 +0.3**	PHUB				S		**Sb**	**13 34 11.3 -1.4**								
YOJ	**Yonaguni jima**	**1.22 75**		P			**Pn**	**13 33 32.6 +0.2**		baz=253														
	baz=92								**WDGT**	**Dungji**	**2.09 245**	*i* P			**Pn**	**13 33 44.9 +0.5**								
YOJ					S		**Sg**	**13 33 50.7 +1.6**		baz=232														
	baz=92								WDGT				*i* S		**Sb**	**13 34 13.4 +0.1**								
YOJ	**Yonaguni jima**	**1.22 75**		P			**Pn**	**13 33 32.7 +0.2**		baz=232														
YOJ					S		**Sg**	**13 33 50.2 +1.1**	**JKRS**	**Kuro-shima**	**2.09 87**	P			**Pn**	**13 33 45.2 +0.7**								
EDH	**Donghe**	**1.24 198**		P			**Pn**	**13 33 32.3 -0.5**	JKRS				S		**Sb**	**13 34 13.3 -0.2**								
	baz=201								**SLIU**	**Shizi**	**2.11 204**	P			**Pn**	**13 33 45.6 +0.9**								
EDH					*e*S		**Sg**	**13 33 49.7 -0.2**		baz=197														
	baz=201								**LAY**	**Lan-yu**	**2.12 184**	P			**Pn**	**13 33 43.9 -0.9**								
WCKO	**Fanlu**	**1.25 235**		P			**Pg**	**13 33 33.9 +0.1**		baz=190														
	baz=235								**LYUB**	**Lan-yu**	**2.15 183**	*e*P			**Pn**	**13 33 42.5 -2.7**								
WCKO					S		**Sg**	**13 33 52.2 +2.2**		baz=189														
	baz=235								**JIJ**	**Ishigaki jima**	**2.22 84**	P			**Pn**	**13 33 46.2 -0.1**								
WRL	**Guolierlin Hig**	**1.25 258**		P			**Pg**	**13 33 33.9 0.0**	JIJ				S		**Sn**	**13 34 13.8 +0.2**								
	baz=258								**VWUC**	**VWUC**	**2.23 292**	P			**Pn**	**13 33 46.3 0.0**								
WRL					S		**Sg**	**13 33 51.3 +1.1**		baz=291														
	baz=258								VWUC				*e*S		**Sn**	**13 34 13.2 -0.4**								
WTK	**Tuku**	**1.30 249**		P			**Pg**	**13 33 34.7 -0.2**		baz=291														
	baz=236								**VCHM**	**Qimei**	**2.30 246**	P			**Pn**	**13 33 48.2 +0.8**								
WTK					S		**Sg**	**13 33 53.1 +1.3**		baz=234														
	baz=236								VCHM				S		**Sb**	**13 34 17.8 -1.7**								
CHN4	**Tsaushan**	**1.31 232**	*i* P				**Pg**	**13 33 35.2 +0.3**		baz=234														
	baz=219								**HEN**	**Hengchun**	**2.33 203**	*e*P			**Pb**	**13 33 49.6 -1.9**								
CHN4				*i* S			**Sg**	**13 33 53.8 +1.8**		baz=197														
	baz=219																							

*DNK **04** 13:35:03.9±4.4, 83°.08N×7°.87W, h34km±100km, ML3.0*
*NEIC **04** 13:35:05.5±2.4, 82°.9N±0°.1×7°.9W±0°.5, h10km±5km, mb4.4/32, Error ellipse: s-maj=17.3km s-min=3.2km az=206.0*
*IDC **04** 13:35:05.2±0.6, 83°.03N×6°.83W, h0km, mb3.9/21, mbtmp3.9/23, ML3.9/2, MS4.0/2, Error ellipse: s-maj=16.6km s-min=11.6km az=24.0*
*KOLA **04** 13:35:10.2, 82°.63N×7°.48W, h0km, ML2.0, Arctic Ocean,Knipovich ridge, north*
*BER **04** 13:35:11.8±2.1, 82°.84N×5°.10W, h10km, mb(Pn)4.6, ML4.0(NAO), Confirmed Earthquake*
*FCIAR **04** 13:35:11.0, 83°.04N×3°.71W, h10km, station ZFI2 has station magnitude of 4.00 station OMEGA has station magnitude of 3.70 station KLMR has station magnitude of 4.83 station PRGR has station magnitude of 4.78*

ISC 04 13:35:06.2±0.4, 82.80N±0.07×7.27W±0.06, h10km, n100, σ2=42/98, mb4.3/39, 1D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.91**	**132**	Pn	**Pn**	**13 36 20.3**	**+0.4**
KBS				Sn	**Sn**	**13 37 12.3**	**-4.4**
KBS	**Kingsbay**	**4.91**	**132**		**Pn**	**13 36 20.1**	**+0.2**
KBS	**Kingsbay**	**4.91**	**132**	P	**Pn**	**13 36 20.1**	**+0.

KBS S Sn 13 37 12.3 -4.4
KBS Kingsbay 4.91 132 *e*P Pn 13 36 20.4 +0.5
KBS IAML 13 36 21.3
comp=Z,41nm,0.7s
KBS *e*S Sn 13 37 12.2 -4.4
KBS Kingsbay 4.91 132 *i* P Pn 13 36 19.2 -0.7
KBS *i* S Sn 13 37 11.1 -5.5
KBS Kingsbay 4.91 132 *e*P Pn 13 36 20.1 +0.2
KBS *e*S Sn 13 37 11.7 -4.9
BRBB Barentsburg B 5.86 132 Pn Pn 13 36 33.8 +0.9
BRBB Sn Sn 13 37 35.0 -5.1
BRBB Barentsburg B 5.86 132 S Sn 13 37 34.8 -5.2
BRBB Barentsburg B 5.86 132 *e*P Pn 13 36 33.6 +0.7
BRBB *e*S Sn 13 37 35.3 -4.8
BRBA Barentsburg A 5.89 132 Pn Pn 13 36 35.5 +2.2
BRBA Barentsburg A 5.89 132 *e*P Pn 13 36 34.9 +1.5
BRBA IAML 13 36 37.6
comp=Z,102nm,0.5s
BRBA *e*S Sn 13 37 36.7 -4.1
SPA0 Spitsbergen Ar 6.00 128 Pn Pn 13 36 34.9 +0.1
SPA0 Sn Sn 13 37 38.6 -4.8
SPA0 Spitsbergen Ar 6.00 128 Pn Pn 13 36 34.9 +0.1
SPA0 Sn Sn 13 37 38.6 -4.8
SPA0 Spitsbergen Ar 6.00 128 *i* P Pn 13 36 34.5 -0.3
SPA0 *e*S Sn 13 37 38.8 -4.6
SPITS Spitsbergen Ar 6.00 128 P Pn 13 36 34.7 -0.1
SPITS S Sn 13 37 39.0 -4.4
SPITS Spitsbergen Ar 6.00 128 Pn Pn 13 36 34.8 -0.1
baz=1.6,slow=9.2
SPITS Sn Sn 13 37 38.6 -4.8
baz=12,slow=8.8
comp=Z,6.1nm,0.2s
SPB2 Spitsbergen Ar 6.00 128 Pn Pn 13 36 34.4 -0.4
HSPB Hornsund (broa 6.98 134 Pn Pn 13 36 50.0 +1.8
HSPB Hornsund (broa 6.98 134 *e*P Pn 13 36 50.5 +2.3
ZFI2 Zemlya Franca- 7.79 76 *e*P Pn 13 36 55.0 -4.4
ZFI2 *e*S Sn 13 38 14.1 -13
comp=Z,39nm,3.7s
OMEGA Omega 7.82 76 P Pn 13 36 55.9 -3.9
OMEGA *e*S Sn 13 38 14.5 -14
comp=Z,23nm,3.3s
HOPEN Hopen 8.38 121 Pn Pn 13 37 07.1 -0.3
HOPEN Sn Sn 13 38 35.7 -6.1
HOPEN Hopen 8.38 121 *e*P Pn 13 37 07.6 +0.2
HOPEN IAML 13 37 09.6
comp=Z,21nm,0.5s
HOPEN Hopen 8.38 121 *e*P Pn 13 37 06.6 -0.8
HOPEN *e*S Sn 13 38 34.5 -7.3
NEEM North Greenlan 8.92 258 *e*P Pn 13 37 08.8 -6.3
NEEM IAML 13 39 08.5
comp=Z,40nm,0.8s
EUNU Eureka 11.18 298 Pn Pn 13 37 43.3 -2.4
SUMG Summit 11.92 229 Pn Pn 13 37 52.1 -4.1
SUMG Summit 11.92 229 *e*P Pn 13 37 50.6 -5.6
SUMG IAML 13 40 14.4
comp=Z,22nm,0.9s
UPNV Upernavik 13.66 252 *i* P Pn 13 38 11.9 -7.6
UPNV IAML 13 40 47.5
comp=Z,20nm,0.6s
HAMF Hammerfest 13.76 134 Pn Pn 13 38 21.9 +1.0
VADS Vadso 14.80 127 *e*P Pn 13 38 22.2 -13
KEV Kevo 14.92 130 *e* Pn 13 38 39.1 +2.3
ARA0 ARCESS Array S 14.99 133 P Pn 13 38 39.3 +1.5
baz=355,slow=10
ARA0 ARCESS Array S 14.99 133 P Pn 13 38 39.3 +1.5
baz=355,slow=10
ARCES ARCESS Array B 14.99 133 Pn Pn 13 38 38.5 +0.8
ARCES ARCESS Array B 14.99 133 Pn Pn 13 38 38.0 +0.2
comp=Z,0.2nm,0.3s,baz=8.5,slow=2.5,SNR=13
ARCES Sn Sn 13 41 11.9 -12
comp=Z,0.1nm,0.3s,baz=348,slow=22,SNR=1.3
comp=Z,3.1nm,0.6s
UMMG Uummannaq 15.16 244 *i* P Pn 13 38 35.3 -4.6
KTK1 Kautokeino 15.30 136 *e* Pn 13 38 46.2 +4.4
ICESG Greenland Ices 15.39 226 *i* P Pn 13 38 41.5 -1.9
SALU Saltoluokta 16.52 144 *e*P Pn 13 39 00.1 +2.6
RES Resolute Bay 16.72 293 Pn Pn 13 38 58.8 -1.2
RES Resolute Bay 16.72 293 Pn Pn 13 38 55.5 -4.5
comp=Z,0.3nm,0.3s,baz=38,slow=12,SNR=6.4
RES LR LR 13 45 16.3
comp=Z,577nm,21.1s,baz=24,slow=37
APA0 Apatity Array 17.60 125 P Pn 13 39 11.3 +0.3
baz=348,slow=22
APA0 Apatity Array 17.60 125 P Pn 13 39 11.3 +0.3
baz=348,slow=22
SFJD Kangerlussuaq 18.51 238 P P 13 39 19.3 -2.9
SFJD Kangerlussuaq 18.51 238 *i* P P 13 39 18.4 -3.8
SFJD Kangerlussuaq 18.51 238 P P 13 39 19.0 -3.1
comp=Z,7.4nm,0.6s,baz=23,slow=9.6,SNR=5.6
SFJD S Sn 13 42 31.7 -17
comp=Z,7.1nm,0.9s,baz=175,slow=22,SNR=1.8
SFJD LR LR 13 46 57.1
comp=Z,507nm,21.5s,baz=359,slow=38
NOA NORSAR Array B 22.36 156 P P 13 40 05.3 +1.4
comp=Z,2.8nm,1.1s,baz=352,slow=9.9,SNR=6.9
comp=Z,2.8nm,1.1s
A36M Sachs Harbour 22.43 314 P P 13 40 03.3 -1.2
A36M IAmb IAmb 13 40 23.1
comp=Z,12nm,1.1s
NRIK Noril'sk 22.53 67 P P 13 40 03.7 -2.0
NRIK Noril'sk 22.53 67 P P 13 40 03.6 -2.0
comp=Z,13nm,1.0s,baz=7.4,slow=6.9,SNR=13
comp=Z,13nm,1.0s
HFS Hagfors 23.39 153 P P 13 40 16.7 +2.1
HFS Hagfors 23.39 153 P P 13 40 16.7 +2.1
HFS Hagfors 23.39 153 P P 13 40 17.0 +2.4
comp=Z,1.1nm,0.6s,baz=27,slow=17,SNR=1.3
comp=Z,1.1nm,0.6s
FRB Frobisher Bay 23.73 256 P P 13 40 19.3 +1.5
comp=Z,4.6nm,1.1s,baz=18,slow=14,SNR=3.8
comp=Z,4.6nm,1.1s
TIXI Tiksi 24.20 32 P P 13 40 21.5 -0.8
PRGR Permogore 24.78 115 P P 13 40 27.8 +0.2
comp=Z,1.1nm,0.5s
KLMR Klimovskoe 24.86 122 *e*P P 13 40 26.9 -1.5
comp=Z,28nm,1.2s
D24K Happy Valley 27.02 331 P P 13 40 46.8 -0.9
RDOG Red Dog Mine 28.83 341 P P 13 41 02.0 -2.0
RDOG IAmb IAmb 13 41 10.8
comp=Z,6.4nm,0.7s
YKA Yellowknife Ar 30.56 299 P P 13 41 19.2 0.0
comp=Z,0.8nm,0.9s,baz=13,slow=9.7,SNR=3.4
comp=Z,0.8nm,0.9s
ILAR Eielson Array 31.23 328 P P 13 41 24.7 -0.5
comp=Z,0.7nm,0.9s,baz=14,slow=7.7,SNR=7.2
comp=Z,0.7nm,0.9s
CLL Collm 32.16 156 *e*P P 13 41 35.0 +1.5
CLL *e*(PP) 13 42 46.0
AKASG Malin Array Be 33.89 137 P P 13 41 50.3 +1.7
comp=Z,1.2nm,0.7s,baz=348,slow=8.7,SNR=3.2
comp=Z,1.2nm,0.7s
GERES GERESS Array B 34.66 155 P P 13 41 58.2 +2.9
comp=Z,0.9nm,0.7s,baz=12,slow=7.4,SNR=5.6
comp=Z,0.9nm,0.7s
BVAR Borovoye Array 36.21 93 P P 13 42 09.4 +0.8
comp=Z,0.8nm,0.8s,baz=342,slow=6.8,SNR=4.6
comp=Z,0.8nm,0.8s
ZAA0 Zalesovo Array 37.12 78 P P 13 42 16.8 +0.6
ZAA0 IAmb IAmb 13 42 17.6
comp=Z,6.9nm,1.1s
ZALV Zalesovo Beam 37.12 78 P P 13 42 16.4 +0.2
ZALV Zalesovo Beam 37.12 78 P P 13 42 16.0 -0.2
comp=Z,2.6nm,0.8s,baz=352,slow=9.0,SNR=11
comp=Z,2.6nm,0.8s
KURK Kurchatov 39.51 85 P P 13 42 36.1 -0.3
KURBB Kurchatov Arra 39.59 85 P P 13 42 37.1 0.0
comp=Z,3.7nm,1.0s,baz=354,slow=7.4,SNR=20
comp=Z,3.7nm,1.0s
KBZ Khabaz 42.10 124 P P 13 43 00.1 +2.3
comp=Z,4.4nm,0.9s,baz=333,slow=3.2,SNR=6.6
comp=Z,4.4nm,0.9s
ESDC Sonseca Array 43.28 176 P P 13 43 10.0 +2.5
comp=Z,0.9nm,0.6s,baz=360,slow=7.9,SNR=11
comp=Z,0.9nm,0.6s
MAKZ Makanchi 43.77 83 P P 13 43 10.5 -0.9
MAKZ IAmb IAmb 13 43 19.6
comp=Z,8.3nm,1.2s
MK31 Makanchi Array 43.83 83 P P 13 43 11.1 -0.7
MKAR Makanchi Array 43.83 83 P P 13 43 11.3 -0.5
comp=Z,1.1nm,0.9s,baz=357,slow=6.9,SNR=6.8
MKAR PcP PP 13 44 57.6 +4.1
comp=Z,0.4nm,0.8s,baz=37,slow=3.6,SNR=2.8
comp=Z,1.1nm,0.9s
SONM Songino Array 45.66 60 P P 13 43 26.1 -0.5
comp=Z,1.0nm,1.0s,baz=336,slow=6.5,SNR=4.6
comp=Z,1.0nm,1.0s
KK31 Karatay Array 45.97 95 P P 13 43 28.0 -0.9
KK31 IAmb IAmb 13 43 31.5
comp=Z,4.1nm,1.0s
KKAR Karatay Array 45.97 95 IAmb IAmb 13 43 31.4
comp=Z,4.1nm,1.0s
BOZ Bozeman (W) 46.81 291 P P 13 43 35.7 0.0
BOZ IAmb IAmb 13 44 06.6
comp=Z,4.1nm,1.2s
AAK Ala-Archa 46.93 92 P P 13 43 37.0 +0.3
PD31 Pinedale Array 49.36 289 IAmb IAmb 13 43 60.0
comp=Z,6.5nm,1.5s
PDAR Pinedale Array 49.36 289 P P 13 43 56.0 +0.6
comp=Z,1.4nm,1.0s,baz=1.9,slow=4.5,SNR=7.7
comp=Z,1.4nm,1.0s
GEYT Alibeck 49.55 109 P P 13 43 58.1 +1.4
comp=Z,3.4nm,0.9s,baz=340,slow=11,SNR=7.3
comp=Z,3.4nm,0.9s
HWUT Hardware Ranch 50.74 290 P P 13 44 05.7 -0.2
HWUT IAmb IAmb 13 44 14.5
comp=Z,6.7nm,1.4s
O20A White River Ci 51.79 287 IAmb IAmb 13 44 16.4
comp=Z,7.9nm,1.0s
SMCO Snowmass 52.58 285 IAmb IAmb 13 44 33.7
comp=Z,9.2nm,1.3s
HHC Hu-ho-hao-te 53.12 56 ⇓P P 13 44 23.8 +0.3
HHC pmax pmax
comp=Z,7.0nm,0.5s
S22A 4UR Ranch, Cre 53.98 285 IAmb IAmb 13 44 40.9
comp=Z,7.7nm,1.4s
KVN Kaiserville 54.02 296 P P 13 44 28.6 -1.6
NVAR Mina Array Bea 54.66 296 P P 13 44 35.5 +0.6
comp=Z,0.5nm,0.9s,baz=352,slow=4.6,SNR=5.0
comp=Z,0.5nm,0.9s
LCMT Little Creek M 55.47 291 IAmb IAmb 13 44 42.9
comp=Z,5.3nm,1.3s
V12A Nelson 56.93 292 IAmb IAmb 13 45 05.7
comp=Z,4.6nm,1.1s
TUC Tucson 59.82 288 P P 13 45 11.5 +0.2
TUC IAmb IAmb 13 45 13.8
comp=Z,3.8nm,1.1s
VHRN Van Horn 60.62 282 P P 13 45 17.2 +0.3
TXAR Lajitas Array 61.89 280 P P 13 45 25.5 +0.1
comp=Z,1.2nm,1.0s,baz=15,slow=5.2,SNR=7.2
comp=Z,1.2nm,1.0s
PZH PanZhiHua 66.20 68 P P 13 45 54.8 +1.0
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.7s
TORD Torodi Ar. Bea 69.78 171 P P 13 46 17.9 +1.7
comp=Z,0.6nm,0.5s,baz=356,slow=6.8,SNR=11
comp=Z,0.6nm,0.5s
CMAR Chiang Mai Arr 73.82 72 P P 13 46 39.7 -0.8
comp=Z,0.6nm,0.4s,baz=356,slow=7.5,SNR=5.7
comp=Z,0.6nm,0.4s
ASAR Alice Springs 119.09 41 PKP PKPdf 13 53 53.0 -1.5
comp=Z,0.2nm,0.6s,baz=8.4,slow=1.8,SNR=5.1

IDC 04 13:38:32.6±1.4, 19°63′N×122°20′E, h0km, mb3.3/3, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=75.8km s-min=25.5km az=73.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.45**	**15**	P	Pn	13 42 49.0	-0.7
	0.1nm,0.3s,baz=198,slow=11,SNR=2.0						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**41.09**	**162**	P	P	13 46 17.9	-0.5
	0.4nm,0.5s,baz=342,slow=8.9,SNR=5.2						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**42.32**	**319**	P	P	13 46 28.2	0.0
	0.2nm,0.7s,baz=99,slow=8.4,SNR=2.0						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**44.52**	**165**	P	P	13 46 46.5	+0.2
	0.2nm,0.3s,baz=342,slow=6.8,SNR=7.5						
	0.2nm,0.3s						

*NEIC **04** 13:49:58.6±1.1, 6°.8S±0°.1×155°.48E±0°.08, h35km±1km, mb4.5/53, Error ellipse: s-maj=17.9km s-min=13.3km az=190.0*
*IDC **04** 13:50:01.5±2.7, 6°.97S×155°.50E, h74km±24km, mb3.8/15, mbtmp4.1/16, MS3.9/2, Error ellipse: s-maj=19.4km s-min=16.1km az=123.0*

ISC 04 13:49:59.4±0.4, 6°.83S±0°.07×155°.46E±0°.06, h50km, n97, σ1s02/93, mb4.4/41, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.20**	**308**	Pn	Pn	13 51 06.4	+5.4
I40PG	**Keravat**	**4.25**	**306**	I	I	14 17 19.2	
	baz=128,slow=294,SNR=1.1						
HNR	**Honiara**	**5.14**	**120**	Pn	**Pn**	**13 51 14.1**	**+0.2**
HNR	**Honiara**	**5.14**	**120**	P	**Pn**	**13 51 14.4**	**+0.5**
	1μm,0.5s,baz=175,slow=13,SNR=1.4						
HNR				S	**Sn**	**13 52 16.4**	**+4.4**
	3μm,0.8s,baz=131,slow=12,SNR=2.0						
HNR				LR	LR	13 53 16.8	
	comp=Z,5μm,19.4s,baz=286,slow=39						
PMG	**Port Moresby**	**8.60**	**252**		**Pn**	**13 52 02.0**	**+0.6**
PMG	**Port Moresby**	**8.60**	**252**	P	**Pn**	**13 52 03.5**	**+2.1**
	25nm,0.5s,baz=72,slow=9.5,SNR=18						
PMG				S	**Sn**	**13 53 40.2**	**+3.1**
	21nm,0.7s,baz=18,slow=15,SNR=4.6						
PMG				LR	LR	13 55 29.7	
	comp=Z,158nm,18.3s,baz=66,slow=38						
COEN	**Coen**	**14.00**	**239**	Pn	**Pn**	**13 53 14.9**	**-0.2**
CTAO	**Charters Tower**	**15.92**	**213**	P	**P**	**13 53 43.9**	**+0.8**
CTAO				IAmb	IAmb	13 53 56.1	
	comp=Z,48nm,1.4s						
DZM	**Mont Dzumac**	**18.49**	**146**	P	**Pn**	**13 54 12.5**	**+0.3**
WR0	**Warramunga Arr**	**24.13**	**235**	P	**P**	**13 55 10.3**	**-0.5**
WR0				IAmb	IAmb	13 55 20.2	
	comp=Z,14nm,1.2s						
WB0	**Warramunga Arr**	**24.16**	**236**		**P**	**13 55 10.5**	**-0.6**
WB0				IAmb	IAmb	13 55 48.4	
	comp=Z,18nm,1.5s						
WB2	**Warramunga Arr**	**24.28**	**235**		**P**	**13 55 12.0**	**-0.2**
WB2				IAmb	IAmb	13 55 27.2	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**24.29**	**235**	P	**P**	**13 55 11.7**	**-0.7**
WRA	**Warramunga Arr**	**24.29**	**235**	P	**P**	**13 55 11.7**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=59,slow=9.3,SNR=38						
WRA				PcP	**PcP**	**13 58 51.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=67,slow=2.7,SNR=6.6						
	comp=Z,2.1nm,0.5s						
MTN	**Manton Dam**	**24.69**	**254**	P	**P**	**13 55 16.6**	**+0.6**
AS31	**Alice Springs**	**26.62**	**229**	P	**P**	**13 55 32.2**	**-1.3**
ASAR	**Alice Springs**	**26.62**	**229**	P	**P**	**13 55 31.9**	**-1.6**
ASAR	**Alice Springs**	**26.62**	**229**	P	**P**	**13 55 32.0**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=62,slow=8.9,SNR=32						
ASAR				PcP	**PcP**	**13 58 56.2**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=75,slow=2.1,SNR=4.1						
	comp=Z,0.7nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**27.50**	**24**	T	T	14 24 02.4	
	baz=203,slow=76,SNR=93						
H11S2	**WAKE ISLAND Hy**	**27.50**	**24**	T	T	14 24 02.2	
	baz=203,slow=76,SNR=113						
H11S1	**WAKE ISLAND Hy**	**27.51**	**24**	T	T	14 24 03.7	
	baz=203,slow=76,SNR=72						
STKA	**Stephens Creek**	**28.08**	**206**	P	**P**	**13 55 46.4**	**0.0**
STKA	**Stephens Creek**	**28.08**	**206**	P	**P**	**13 55 45.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=354,slow=16,SNR=2.9						
	comp=Z,0.9nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**28.68**	**23**	T	T	14 25 33.1	
	baz=204,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.69**	**23**	T	T	14 25 30.3	
	baz=204,slow=74						
H11N2	**WAKE ISLAND Hy**	**28.70**	**23**	T	T	14 25 31.4	
	baz=204						
FITZ	**Fitzroy Crossi**	**31.14**	**246**	P	**P**	**13 56 13.2**	**-0.4**
AFI	**Afiamalu**	**32.96**	**105**	P	**P**	**13 56 29.6**	**-0.2**
FORT	**Forrest**	**35.02**	**224**	P	**P**	**13 56 46.5**	**-1.0**
THZ	**Tophouse**	**38.08**	**159**	P	**P**	**13 57 12.1**	**-1.4**
TCW	**Tory Channel**	**38.12**	**157**	P	**P**	**13 57 13.1**	**-0.6**
MJAR	**Matsushiro Arr**	**46.08**	**341**	PcP	**PcP**	**13 59 54.2**	**0.0**
	comp=Z,1.8nm,0.8s,baz=148,slow=1.7,SNR=2.7						
JTM	**Tenmabayashi**	**49.20**	**346**	P	**P**	**13 58 41.7**	**-0.9**
KSRS	**Korea Array**	**51.01**	**332**	P	**P**	**13 58 56.9**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=151,slow=8.4,SNR=4.4						
	comp=Z,0.6nm,0.4s						
ASAJ	**Asahikawa**	**52.03**	**348**	P	**P**	**13 59 05.2**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=132,slow=26,SNR=1.2						
	comp=Z,2.9nm,0.7s						
ENH	**Enshi**	**57.47**	**312**	P	**P**	**13 59 42.9**	**-0.7**
PETK	**Petropavlovsk-**	**59.74**	**2**	P	**P**	**13 59 59.7**	**+0.7**
PETK	**Petropavlovsk-**	**59.74**	**2**	P	**P**	**14 00 00.4**	**+1.4**
	comp=Z,3.8nm,0.8s,baz=140,slow=7.9,SNR=10						
	comp=Z,3.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.13**	**295**	P	**P**	**14 00 10.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**61.13**	**295**	P	**P**	**14 00 10.2**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=123,slow=5.4,SNR=29						
	comp=Z,4.0nm,0.7s						
CHTO	**Chiang Mai**	**61.24**	**296**	P	**P**	**14 00 10.7**	**+0.8**
CHTO				IAmb	IAmb	14 00 20.6	
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**69.45**	**327**	P	**P**	**14 01 02.7**	**+0.2**
SONM	**Songino Array**	**69.45**	**327**	P	**P**	**14 01 02.8**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=136,slow=5.8,SNR=8.2						
	comp=Z,1.1nm,0.5s						
SHL	**Shillong**	**69.61**	**300**	P	**P**	**14 01 04.0**	**-0.1**
YAK	**Yakutsk**	**71.50**	**348**	P	**P**	**14 01 16.4**	**+1.9**
YAK	**Yakutsk**	**71.50**	**348**	P	**P**	**14 01 14.8**	**+0.3**
	comp=Z,7.5nm,0.3s,baz=133,slow=1.8,SNR=3.3						
	comp=Z,7.5nm,0.3s						
K15K	**Wolf Creek Mou**	**76.41**	**19**	P	**P**	**14 01 44.1**	**+0.7**
ANM	**Nome**	**76.94**	**16**	P	**P**	**14 01 47.3**	**+1.0**
ANM				IAmb	IAmb	14 01 48.2	
	comp=Z,6.7nm,1.3s						
G16K	**Koyuk River**	**78.42**	**17**	P	**P**	**14 01 55.3**	**+0.8**
G16K				IAmb	IAmb	14 02 38.2	
	comp=Z,7.0nm,1.5s						
TTA	**Tatalina**	**78.71**	**20**	P	**P**	**14 01 56.8**	**+0.5**
TTA				IAmb	IAmb	14 02 11.0	
	comp=Z,5.3nm,1.2s						
H18K	**Honhosa River**	**79.43**	**18**	P	**P**	**14 02 00.3**	**+0.2**
F17K	**Baldwin Pennin**	**79.50**	**16**	P	**P**	**14 02 01.9**	**+1.6**
F17K				IAmb	IAmb	14 02 04.0	
	comp=Z,5.1nm,1.1s						
G18K	**Tagagawik**	**79.86**	**17**	P	**P**	**14 02 02.9**	**+0.5**
G18K				IAmb	IAmb	14 02 04.4	
	comp=Z,6.6nm,1.5s						
H19K	**Roundabout Mou**	**80.28**	**18**	P	**P**	**14 02 05.4**	**+0.8**
H19K				IAmb	IAmb	14 02 08.4	
	comp=Z,7.9nm,1.2s						
G19K	**Purcell Mounta**	**80.50**	**18**	P	**P**	**14 02 06.3**	**+0.5**
C18K	**Utukok River**	**81.11**	**15**	P	**P**	**14 02 09.4**	**+0.3**
C18K				IAmb	IAmb	14 02 22.2	
	comp=Z,5.5nm,1.1s						
F20K	**Avaraart Lake**	**81.50**	**17**	P	**P**	**14 02 11.8**	**+0.7**
D19K	**Kuna River**	**81.81**	**16**	P	**P**	**14 02 13.3**	**+0.6**
D19K				IAmb	IAmb	14 02 14.5	
	comp=Z,4.1nm,0.8s						
G21K	**Allakaket**	**81.84**	**18**	P	**P**	**14 02 13.7**	**+0.8**
G21K				IAmb	IAmb	14 02 46.3	
	comp=Z,5.1nm,1.4s						
C19K	**Lookout Ridge**	**81.85**	**15**	P	**P**	**14 02 13.7**	**+0.8**
C19K				IAmb	IAmb	14 02 15.6	
	comp=Z,5.8nm,0.8s						
WAX	**Waxell Ridge**	**82.48**	**26**	P	**P**	**14 02 17.3**	**+0.8**
ILAR	**Eielson Array**	**83.06**	**21**	P	**P**	**14 02 18.1**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=248,slow=5.3,SNR=13						
	comp=Z,0.6nm,0.6s						
G23K	**Bananza Creek**	**83.06**	**19**	P	**P**	**14 02 19.9**	**+0.6**
B20K	**Meade River**	**83.09**	**15**	P	**P**	**14 02 19.8**	**+0.5**
QSPA	**South Pole Qui**	**83.14**	**180**	P	**P**	**14 02 18.9**	**-1.0**
QSPA				IAmb	IAmb	14 02 41.0	
	comp=Z,5.2nm,1.2s						
J25K	**Salcha River,**	**83.53**	**22**	P	**P**	**14 02 21.8**	**0.0**
J25K				IAmb	IAmb	14 02 26.8	
	comp=Z,2.2nm,0.6s						
D22K	**Ayikyak River**	**83.56**	**17**	P	**P**	**14 02 22.8**	**+1.0**
MK31	**Makanchi Array**	**83.59**	**319**	P	**P**	**14 02 22.0**	**-0.5**
MKAR	**Makanchi Array**	**83.59**	**319**	P	**P**	**14 02 22.0**	**-0.5**
MKAR	**Makanchi Array**	**83.59**	**319**	P	**P**	**14 02 21.7**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=107,slow=5.1,SNR=11						
	comp=Z,1.1nm,0.7s						
SCRK	**Sand Creek**	**83.73**	**23**	P	**P**	**14 02 23.6**	**+0.6**
MAKZ	**Makanchi**	**83.80**	**319**	P	**P**	**14 02 23.1**	**+0.4**
BCAR	**Beaver Creek A**	**84.16**	**24**	P	**P**	**14 02 26.1**	**+1.1**
F24K	**Squaw Lake**	**84.21**	**19**	P	**P**	**14 02 26.2**	**+0.9**
F24K				IAmb	IAmb	14 02 27.4	
	comp=Z,2.7nm,1.0s						
B22K	**Teshekpuk Lake**	**84.28**	**15**	P	**P**	**14 02 25.8**	**+0.4**
B22K				IAmb	IAmb	14 02 26.3	
	comp=Z,3.3nm,0.7s						
ZALV	**Zalesovo Beam**	**84.30**	**326**	P	**P**	**14 02 24.9**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=124,slow=6.7,SNR=4.5						
	comp=Z,0.5nm,0.4s						
FYU	**Fort Yukon**	**84.58**	**20**	P	**P**	**14 02 27.8**	**+0.8**
FYU				IAmb	IAmb	14 02 33.3	
	comp=Z,4.1nm,1.3s						
BMAR	**Burnt Mountain**	**85.25**	**20**	P	**P**	**14 02 31.2**	**+0.8**
DAWY	**Dawson**	**85.56**	**24**	P	**P**	**14 02 33.0**	**+0.9**
DAWY				IAmb	IAmb	14 02 44.5	
	comp=Z,5.7nm,1.5s						
J30M	**Hart River**	**86.99**	**24**	P	**P**	**14 02 39.7**	**+0.5**
J30M				IAmb	IAmb	14 02 44.8	
	comp=Z,3.5nm,1.2s						
KURBB	**Kurchatov Arra**	**87.02**	**322**	P	**P**	**14 02 40.0**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=100,slow=5.6,SNR=2.4						
	comp=Z,0.2nm,0.4s						
I30M	**Mount Dempster**	**87.22**	**23**	P	**P**	**14 02 40.7**	**+0.4**
I30M				IAmb	IAmb	14 02 42.5	
	comp=Z,2.7nm,0.8s						
D27M	**Malcolm River**	**87.30**	**19**	P	**P**	**14 02 41.3**	**+0.8**
E28M	**Babbage River**	**87.48**	**19**	P	**P**	**14 02 42.3**	**+1.0**
E28M				IAmb	IAmb	14 02 43.0	
	comp=Z,2.4nm,0.6s						
EPYK	**Eagle Plains**	**87.54**	**22**	P	**P**	**14 02 42.4**	**+0.7**
E29M	**Blow River**	**87.93**	**20**	P	**P**	**14 02 44.0**	**+0.5**
E29M				IAmb	IAmb	14 02 44.8	
	comp=Z,1.4nm,0.6s						
G31M	**Satah River**	**88.65**	**22**	P	**P**	**14 02 47.3**	**+0.4**
G31M				IAmb	IAmb	14 03 06.2	
	comp=Z,3.1nm,1.1s						
INK	**Inuvik**	**89.41**	**21**	P	**P**	**14 02 50.4**	**+0.1**
INK				IAmb	IAmb	14 02 56.5	
	comp=Z,6.8nm,1.5s						
BVAR	**Borovoye Array**	**92.44**	**323**	P	**P**	**14 03 04.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=122,slow=2.2,SNR=2.8						
	comp=Z,0.3nm,0.5s						
YKA	**Yellowknife Ar**	**95.98**	**28**	P	**P**	**14 03 20.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=271,slow=4.7,SNR=7.4						
	comp=Z,0.3nm,0.5s						
PLCA	**Paso Flores**	**116.57**	**142**	PKP	**PKPdf**	**14 08 37.0**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=250,slow=3.5,SNR=8.4						
GERES	**GERESS Array B**	**127.15**	**329**	PKP	**PKiKP**	**14 08 58.0**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=46,slow=4.2,SNR=1.4						
EKA	**Eskdalemuir Ar**	**128.70**	**345**	PKP	**PKPdf**	**14 09 00.5**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=17,slow=2.8,SNR=6.1						
PESTR	**Estremoz**	**144.62**	**337**	PKPdf	**PKPdf**	**14 09 30.0**	**-0.9**
BBGH	**Gun Hill**	**144.98**	**77**	PKPbc	**PKPab**	**14 09 29.9**	**-1.6**
BDFB	**Brasilia**	**147.76**	**134**	PKPbc	**PKPbc**	**14 09 38.7**	**-1.2**
	comp=Z,4.5nm,0.5s,baz=10,slow=0.7,SNR=9.4						
TORD	**Torodi Ar. Bea**	**153.42**	**286**	PKPbc	**PKPbc**	**14 09 52.1**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=88,slow=2.4,SNR=6.6						

*IDC **04** 13:51:12.1±2.0, 41°.51N×144°.52E, h0km, mb3.5/7, mbtmp3.5/9, ML2.7/2, Error ellipse: s-maj=60.6km s-min=20.4km az=76.0*
*JMA **04** 13:51:18.1±0.2, 42°.N±1°×144°.2E±0°.5, h39km±1km, MV

0.1nm,0.3s,baz=51,slow=12,SNR=6.9
MJAR Sn **Sn** **13 54 13.3 -0.2**
baz=326,slow=45,SNR=1.9
0.7nm,0.5s
ZALV Zalesovo Beam 40.72 309 P **P** **13 58 54.9 0.0**
0.3nm,0.4s,baz=75,slow=6.1,SNR=3.5
0.3nm,0.4s
MKAR Makanchi Array 43.80 299 P **P** **13 59 20.1 0.0**
0.5nm,0.8s,baz=79,slow=9.5,SNR=5.1
0.5nm,0.8s
KURBB Kurchatov Arra 45.16 305 P **P** **13 59 30.2 -0.6**
0.4nm,0.5s,baz=74,slow=8.6,SNR=1.7
0.4nm,0.5s
BVAR Borovoye Array 49.32 310 P **P** **14 00 04.1 +0.7**
0.4nm,0.5s,baz=70,slow=12,SNR=3.0
0.4nm,0.5s
WRA Warramunga Arr 61.85 191 P **P** **14 01 32.7 -0.8**
0.3nm,0.7s,baz=11,slow=4.0,SNR=1.3
0.3nm,0.7s
ASAR Alice Springs 65.57 190 P **P** **14 01 57.9 -0.2**
0.3nm,0.9s,baz=29,slow=2.9,SNR=1.7
0.3nm,0.9s
FINES FINESS Array B 65.90 332 P **P** **14 01 60.0 +0.2**
2.0nm,1.0s,baz=56,slow=8.5,SNR=4.4
2.0nm,1.0s

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*IDC **04** 13:56:39.5±0.4,24.°22N×121.°81E,h0km,mb5.0/36, mbtmp5.0/42,ML4.9/5,MS6.1/76,Error ellipse: s-maj=11.8km s-min=10.2km az=62.0*

*ASIES **04** 13:56:40.6,24.°15N×121.°74E,h11km,ML5.9,Mw6.0, Moment Tensor Solution. Moment tensor: Scale 10²⁴Nm; Mrr-0.51; Mθθ-2.28; Mϕϕ2.79; Mrθ9.35; Mϕθ0.94; Mϕr4.52; Fault plane solution: M₀10.74140×10²⁴ NP1: ϕs242.14000°,δ89.73000°,λ-75.81000°. NP2: ϕs333.19000°,δ14.20000°,λ-178.92000°. Principal axes: T Plg43.0180°, Azm318.4210°; N Plg14.1970°, Azm62.0760°; P Plg43.5330°, Azm165.9840°;*

*TAP **04** 13:56:40.6,24.°15N×121.°74E,h11km,ML5.9,C*

*MOS **04** 13:56:40.3±1.3,24.°12N×121.°80E,h14km,mb5.9/73, MS6.4/63,Error ellipse: s-maj=6.1km s-min=3.6km az=116.1*

*BJI **04** 13:56:41.5±0.0,24.°20N×121.°70E,h12km,mb5.2/45, mB6.3/59,ML5.8/6,Ms6.6/66,Ms7 6.7/56*

*NIED **04** 13:56:41.2,24.°12N×121.°70E,h10km,MW6.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr-0.01; Mθθ-0.45; Mϕϕ0.46; Mrθ1.35; Mϕθ-0.05; Mϕr0.49; Fault plane solution: M₀1.48000×10¹⁸ NP1:ϕs66.00000°, δ87.00000°,λ.78.00000°. NP2:ϕs322.00000°,δ12.00000°, λ165.00000°.*

*IPGP **04** 13:56:41.0,24.°10N×121.°66E,h13km,Mw6.2,Fault plane solution: NP1:ϕs68.00000°,δ87.00000°,λ77.00000°. NP2:ϕs326.00000°,δ14.00000°,λ168.00000°.*

*NEIC **04** 13:56:42.0±1.8,24.°16N±0.°06×121.°71E±0.°05,h12km±1km, mb5.7/283,Ms_20 6.2/860,Mwb6.0/65,Mww6.1/43,Error ellipse: s-maj=10.3km s-min=6.7km az=338.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.28; Mθθ-0.68; Mϕϕ0.40; Mrθ0.79; Mϕθ-0.18; Mϕr0.46; Fault plane solution: M₀1.11000×10¹⁸ NP1: ϕs301.71000°,δ25.27000°,λ154.33000°. NP2: ϕs55.21000°,δ79.34000°,λ66.95000°. Principal axes: T 0.9401, Plg50.0000°, Azm299.0000°; N 0.2848, Plg23.0000°, Azm60.0000°; P -1.2249, Plg31.0000°, Azm164.0000°;*

*NEIC **04** 13:56:41,24.°10N×121.°66E,h16km*

*JMA **04** 13:56:41.2±0.1,24.°1N±0.°5×12.°2E±.°,h10km±1km, MD6.5/19,MW6.2/19,TAIWAN REGION*

JMA Felt II J1 at TAIWAN REGION .

*NEIC **04** 13:56:41,24.°10N×121.°66E,h16km,Moment Tensor Solution. Duration: 5±5 Moment tensor: Scale 10¹⁸Nm; Mrr0.45; Mθθ-0.78; Mϕϕ0.32; Mrθ1.59; Mϕθ-0.04; Mϕr0.58; Fault plane solution: M₀1.82000×10¹⁸ NP1:ϕs69.65000°, δ80.91000°,λ79.82000°. NP2:ϕs298.31000°,δ13.62000°, λ137.84000°. Principal axes: T 1.7001, Plg53.0000°, Azm328.0000°; N 0.2307, Plg10.0000°, Azm71.0000°; P -1.9308, Plg35.0000°, Azm168.0000°;*

*NEIC **04** 13:56:42.3,24.°15N×121.°68E,h13km*

*GCMT **04** 13:56:44.0±0.1,24.°14N×121.°70E,h15km,MW6.2/149, Moment Tensor Solution. s146,c301; s149,c427; Duration: 3±0 Moment tensor: Scale 10¹⁸Nm; Mrr0.67±.01; Mθθ-0.96±.01; Mϕϕ0.29±.01; Mrθ2.19±.03; Mϕθ-0.17±.01; Mϕr0.77±.03; Best double couple: M₀2.46700×10¹⁸ NP1:ϕs71.00000°,δ81.00000°, λ84.00000°. NP2:ϕs283.00000°,δ11.00000°,λ122.00000°. Principal axes: T 2.3350, Plg54.0000°, Azm333.0000°; N 0.2650, Plg6.0000°, Azm72.0000°; P -2.6000, Plg35.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **04** 13:56:50.8,25.°34N×120.°79E,h10km,mb5.1,Ms6.7*

ISC 04 13:56:43.0±0.3,24.°16N±0.°01×121.°72E±0.°01,h15km±1km, h15km:pP-P,n2135,σ2s05/2057,mb5.6/323,MS6.2/556, 84C-95D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
ETL	**Fush Village**	**0.09**	**270**		⇓	*i*P	**Pg**	**13 56 43.8**	**-2.3**
	baz=275								
ETL				S			**Sg**	**13 56 45.7**	**-2.5**
	baz=275								
NACB	**Ninganchiao**	**0.11**	**277**				**Pg**	**13 56 42.9**	**-3.5**
NACB	**Ninganchiao**	**0.11**	**277**		⇓	*i*P	**Pg**	**13 56 44.1**	**-2.3**
	baz=274								
NACB				S			**Sg**	**13 56 46.0**	**-2.7**
	baz=274								
TWD	**Chiawan**	**0.14**	**235**		⇓	*i*P	**Pg**	**13 56 44.5**	**-2.2**
	baz=251								
TWD				S			**Sg**	**13 56 47.2**	**-1.9**
	baz=251								
EHP	**Heping Village**	**0.15**	**8**		⇓	*i*P	**Pg**	**13 56 44.5**	**-2.4**
	baz=1.0								
EHP				*e*S			**Sg**	**13 56 47.2**	**-2.3**
	baz=1.0								
EAHA	**Aohua**	**0.17**	**7**		⇓	*i*P	**Pg**	**13 56 44.7**	**-2.4**
	baz=358								
HWA	**Hwalien**	**0.21**	**210**	*e*P			**Pg**	**13 56 46.2**	**-1.5**
	baz=228								
HWA				*e*S			**Sg**	**13 56 49.4**	**-1.5**
	baz=228								
ETLH	**Xiulin Townshi**	**0.22**	**282**		⇓	*i*P	**Pg**	**13 56 46.1**	**-1.9**
	baz=284								
ETLH				S			**Sg**	**13 56 50.1**	**-1.3**
	baz=284								
ENA	**Nanau**	**0.27**	**5**		⇓	*i*P	**Pg**	**13 56 46.5**	**-2.2**
	baz=360								
ENA				*i* S			**Sg**	**13 56 51.9**	**-0.8**
	baz=360								
ETM	**Tongmen**	**0.28**	**227**		⇓	*i*P	**Pg**	**13 56 47.0**	**-2.0**
	baz=233								
ETM				S			**Sg**	**13 56 51.2**	**-1.8**
	baz=233								
EWUT	**Wuta**	**0.29**	**11**		⇓	*i*P	**Pg**	**13 56 46.9**	**-2.2**
	baz=5.0								
EWUT				*e*S			**Sg**	**13 56 53.0**	**-0.2**
	baz=5.0								
LXIB	**Xiulin Townshi**	**0.31**	**244**		⇓	*i*P	**Pg**	**13 56 47.5**	**-2.0**
	baz=249								
LXIB				S			**Sg**	**13 56 52.8**	**-1.2**
	baz=249								
SHUL	**Shoufeng**	**0.40**	**201**	*e*P			**Pg**	**13 56 49.9**	**-1.0**
	baz=195								
SHUL				*e*S			**Sg**	**13 56 56.0**	**-0.4**
	baz=195								
NNSB	**Datong**	**0.41**	**311**		⇓	*i*P	**Pg**	**13 56 49.5**	**-1.7**
	baz=310								
NNSB				S			**Sg**	**13 56 55.0**	**-1.9**
	baz=310								
LATG	**Datong**	**0.41**	**335**		⇓	*i*P	**Pg**	**13 56 49.5**	**-1.8**
	baz=332								
LATG				S			**Sg**	**13 56 55.9**	**-1.1**
	baz=332								
WHF	**Hehuan Shan**	**0.41**	**268**		⇓	*i*P	**Pg**	**13 56 49.7**	**-1.7**
	baz=271								
WHF				*e*S			**Sg**	**13 56 55.4**	**-1.8**
	baz=271								
NNS	**Nan Shan**	**0.42**	**312**		⇓	*i*P	**Pg**	**13 56 49.7**	**-1.7**
	baz=311								
NNS				*e*S			**Sg**	**13 56 56.6**	**-0.7**
	baz=311								
ESAO	**Su ao**	**0.43**	**16**		⇓	*e*P	**Pg**	**13 56 49.4**	**-2.2**
	baz=7.0								
ESAO				*e*S			**Sg**	**13 56 56.9**	**-0.6**
	baz=7.0								
ESL	**Shilin**	**0.43**	**217**		⇓	*i*P	**Pg**	**13 56 49.6**	**-2.0**
	baz=229								
ESL				*e*S			**Sg**	**13 56 56.7**	**-0.8**
	baz=229								
FUSS	**Fushou**	**0.44**	**282**		⇓	*i*P	**Pg**	**13 56 50.5**	**-1.4**
	baz=283								
FUSS				*e*S			**Sg**	**13 56 57.8**	**-0.1**
	baz=283								
TWC	**Suao**	**0.46**	**15**		⇓	*i*P	**Pg**	**13 56 50.1**	**-2.1**
	baz=8.0								
TWC				S			**Sg**	**13 56 58.1**	**-0.4**
	baz=8.0								
NDS	**Dongshan**	**0.47**	**360**		⇓	*i*P	**Pg**	**13 56 50.5**	**-1.9**
	baz=355								
NDS				S			**Sg**	**13 56 58.1**	**-0.7**
	baz=355								
TEGC	**Jichi Village**	**0.48**	**200**	*e*P			**Pg**	**13 56 52.0**	**-0.5**
	baz=195								
TEGC				S			**Sg**	**13 56 58.5**	**-0.4**
	baz=195								
NDT	**Datong Townshi**	**0.48**	**337**		⇓	*i*P	**Pg**	**13 56 51.0**	**-1.5**
	baz=334								
NDT				*e*S			**Sg**	**13 56 58.8**	**-0.2**
	baz=334								
ENTT	**Nioudou**	**0.50**	**344**		⇓	*i*P	**Pg**	**13 56 51.2**	**-1.7**
	baz=341								
ENTT				*e*S			**Sb**	**13 56 60.0**	**-0.6**
	baz=341								
TWT	**Tachien**	**0.50**	**281**		⇓	*i*P	**Pg**	**13 56 52.0**	**-1.1**
	baz=282								
TWT				S			**Sg**	**13 56 59.7**	**-0.1**
	baz=282								
CHGB	**Renai**	**0.51**	**259**		⇓	*i*P	**Pg**	**13 56 51.6**	**-1.5**
	baz=255								
CHGB				S			**Sg**	**13 56 59.4**	**-0.5**
	baz=255								
TDCB	**Techi**	**0.52**	**280**		⇓	*i*P	**Pg**	**13 56 52.0**	**-1.3**
	baz=282								
TDCB				S			**Sg**	**13 56 59.6**	**-0.6**
	baz=282								
WARBT	**Fenglin Townsh**	**0.53**	**215**		⇓	*i*P	**Pg**	**13 56 51.5**	**-2.0**
	baz=226								
WARBT				S			**Sg**	**13 56 59.3**	**-1.3**
	baz=226								
OWD	**Renai**	**0.54**	**248**		⇓	*i*P	**Pg**	**13 56 51.9**	**-1.7**
	baz=252								
OWD				*e*S			**Sg**	**13 57 00.7**	**-0.1**
	baz=252								
EOS2	**EOS2**	**0.54**	**61**	*e*P			**Pg**	**13 56 52.8**	**-0.7**
	baz=40								
EOS4	**EOS4**	**0.55**	**94**	*e*P			**Pg**	**13 56 52.9**	**-0.7**
	baz=92								
EGFH	**Guangfu**	**0.56**	**209**	*e*P			**Pg**	**13 56 52.2**	**-1.7**
	baz=223								
EGFH				S			**Sg**	**13 57 01.3**	**-0.1**
	baz=223								
TWE	**Neicheng**	**0.56**	**355**		⇓	*i*P	**Pg**	**13 56 52.3**	**-1.7**
	baz=353								
TWE				*e*S			**Sg**	**13 56 59.7**	**-1.9**
	baz=353								
EOS3	**EOS3**	**0.56**	**77**	*e*P			**Pg**	**13 56 53.5**	**-0.5**
	baz=57								
WUSB	**Renai**	**0.57**	**253**		⇓	*i*P	**Pg**	**13 56 52.8**	**-1.5**
	baz=256								
WUSB				S			**Sb**	**13 57 02.1**	**-0.7**
	baz=256								
YHNB	**Yeheng**	**0.60**	**329**				**Pg**	**13 56 52.8**	**-1.9**
YHNB	**Yeheng**	**0.60**	**329**	P			**Pg**	**13 56 53.6**	**-1.1**
YHNB	**Yeheng**	**0.60**	**329**		⇓	P	**Pg**	**13 56 53.4**	**-1.3**
	baz=327								
YHNB				S			**Sg**	**13 57 01.1**	**-1.6**
	baz=327								
ILA	**Ilan**	**0.60**	**3**	*e*P			**Pg**	**13 56 53.3**	**-1.6**
	baz=352								
ILA				*e*S			**Sg**	**13 57 01.6**	**-1.3**
	baz=352								
FUSB	**Fushanzhiwuyua**	**0.61**	**349**	P			**Pg**	**13 56 53.3**	**-1.7**
	baz=346								
FUSB				*e*S			**Sg**	**13 57 02.5**	**-0.6**
	baz=346								
NSK	**Sanguang**	**0.61**	**328**		⇓	*i*P	**Pg**	**13 56 53.5**	**-1.5**
	baz=326								
NSK				S			**Sg**	**13 57 01.9**	**-1.2**
	baz=326								
VWDT	**VWDT**	**0.66**	**233**		⇓	P	**Pg**	**13 56 54.2**	**-1.7**
	baz=237								
VWDT				*e*S			**Sg**	**13 57 03.5**	**-1.2**
	baz=237								
NTC	**Toucheng**	**0.70**	**8**	*e*P			**Pg**	**13 56 56.0**	**-0.6**
	baz=5.0								
NTC				*e*S			**Sg**	**13 57 05.6**	**-0.3**
	baz=5.0								
WHP	**Taichung City**	**0.71**	**280**		⇑	*i*P	**Pg**	**13 56 56.0**	**-1.0**
	baz=281								
WHP				*e*S			**Sb**	**13 57 06.8**	**-0.1**
	baz=281								
HGSD	**Ruisui**	**0.72**	**202**		⇓	*i*P	**Pg**	**13 56 55.8**	**-1.2**
	baz=194								
HGSD				*e*S			**Sb**	**13 57 07.0**	**+0.2**
	baz=194								
NFF	**Wufeng Townshi**	**0.72**	**311**	*e*P			**Pg**	**13 56 55.7**	**-1.3**
	baz=304								
WCS	**Beigang Elemen**	**0.74**	**262**	*e*P			**Pg**	**13 56 56.1**	**-1.4**
	baz=257								
WCS				*e*S			**Sb**	**13 57 07.8**	**+0.2**
	baz=257								
EHY	**Hungye**	**0.74**	**209**	P			**Pg**	**13 56 55.2**	**-2.3**
	baz=214								
SSLB	**Suanglung**	**0.79**	**242**				**Pg**	**13 56 56.3**	**-2.0**
SSLB	**Suanglung**	**0.79**	**242**	P			**Pg**	**13 56 56.8**	**-1.5**
SSLB	**Suanglung**	**0.79**	**242**		⇓	*i*P	**Pg**	**13 56 56.5**	**-1.8**
	baz=255								
SSLB				S			**Sb**	**13 57 08.7**	**-0.3**
	baz=255								
SMLT	**Sun Moon Lake**	**0.80**	**250**		⇓	P	**Pg**	**13 56 56.9**	**-1.6**
	baz=253								
SMLT				*e*S			**Sb**	**13 57 08.9**	**-0.3**
	baz=253								
LIOB	**Emei**	**0.80**	**307**	*e*P			**Pg**	**13 56 57.7**	**-0.9**
	baz=307								
NSTT	**Nanjuang**	**0.81**	**306**		⇑	P	**Pg**	**13 56 57.4**	**-1.2**
	baz=306								
NSTT				*e*S			**Sg**	**13 57 08.8**	**-0.4**
	baz=306								
TIPB	**Shuangxi**	**0.81**	**7**		⇑	*i*P	**Pg**	**13 56 57.0**	**-1.8**
	baz=4.0								
TIPB				S			**Sg**	**13 57 08.4**	**-1.1**
	baz=4.0								
NHDH	**Xindian Distri**	**0.82**	**348**	*e*P			**Pg**	**13 56 57.5**	**-1.4**
	baz=345								
TYC	**Yuchr**	**0.83**	**252**		⇓	P	**Pg**	**13 56 57.3**	**-1.7**
	baz=255								
TYC				S			**Sg**	**13 57 09.7**	**-0.3**
	baz=255								
TATO	**Taipei**	**0.84**	**346**				**Pg**	**13 56 57.7**	**-1.6**
TATO	**Taipei**	**0.84**	**346**	P			**Pb**	**13 56 59.2**	**0.0**
TATO	**Taipei**	**0.84**	**346**	P			**Pb**	**13 56 59.3**	**0.0**
YULB	**Yu-li**	**0.85**	**207**				**Pg**	**13 56 57.4**	**-2.2**
YULB	**Yu-li**	**0.85**	**207**	P			**Pb**	**13 56 59.7**	**+0.2**
YULB	**Yu-li**	**0.85**	**207**		⇓	P	**Pg**	**13 56 57.1**	**-2.4**
	baz=222								
YULB				S			**Sg**	**13 57 10.5**	**-0.3**
	baz=222								
ECBN	**Changbin**	**0.87**	**196**	*e*P			**Pg**	**13 56 58.5**	**-1.4**
	baz=201								
ECBN				*e*S			**Sg**	**13 57 10.7**	**-0.7**
	baz=201								
TWB1	**Santiao Chiao**	**0.88**	**16**	*e*P			**Pb**	**13 56 57.9**	**-2.1**
	baz=6.0								
TWB1				*e*S			**Sg**	**13 57 10.2**	**-1.4**
	baz=6.0								
TWQ1	**Liyutan**	**0.88**	**282**		⇑	*e*P	**Pg**	**13 56 59.5**	**-0.6**
	baz=284								
EYUL	**Yuli**	**0.89**	**204**	*e*P			**Pb**	**13 56 58.7**	**-1.4**
	baz=226								
EYUL				*e*S			**Sb**	**13 57 11.6**	**-0.1**
	baz=226								
NHY	**Taipei**	**0.89**	**351**	*e*P			**Pb**	**13 56 58.9**	**-1.2**
	baz=348								
NHY				*e*S			**Sg**	**13 57 11.4**	**-0.4**
	baz=348								
TWF1	**Yuli**	**0.89**	**206**	P			**Pb**	**13 56 57.6**	**-2.5**
	baz=222								
TWF1				S			**Sg**	**13 57 11.3**	**-0.7**
	baz=222								
TAP	**Taipei**	**0.90**	**348**	*e*P			**Pb**	**13 56 59.2**	**-1.1**
	baz=345								
TAP				S			**Sg**	**13 57 11.8**	**-0.4**
	baz=345								
NWF	**Wu-fen Shan**	**0.91**	**4**		⇑	*e*P	**Pb**	**13 56 59.0**	**-1.5**
	baz=352								
NWF				S			**Sg**	**13 57 10.4**	**-2.2**
	baz=352								
WFSB	**Wu-fen Shan**	**0.91**	**4**		⇑	P	**Pb**	**13 56 59.1**	**-1.4**
	baz=354								
WFSB				S			**Sb**	**13 57 12.2**	**-0.2**
	baz=354								
WHYT	**Xinyi Township**	**0.92**	**240**	P			**Pb**	**13 56 59.1**	**-1.4**
	baz=250								
WHYT				*e*S			**Sb**	**13 57 12.9**	**+0.3**
	baz=250								
SBCB	**Hsinchu**	**0.92**	**314**		⇑	*i*P	**Pn**	**13 57 01.0**	**-0.3**
	baz=313								
SBCB				*e*S			**Sn**	**13 57 14.3**	**0.0**
	baz=313								
NMLH	**Miaoli**	**0.93**	**294**		⇑	*e*P	**Pn**	**13 57 01.2**	**-0.2**
	baz=295								
HSN	**Hsinchu**	**0.94**	**313**	*e*P			**Pg**	**13 57 00.8**	**-0.2**
	baz=315								
HSN				*e*S			**Sb**	**13 57 11.8**	**-1.3**
	baz=315								
NCUH	**Zhongli**	**0.94**	**329**	*e*P			**Pb**	**13 57 00.8**	**-0.2**
	baz=327								
NCU	**National Centr**	**0.94**	**329**	*e*P			**Pb**	**13 57 00.7**	**-0.3**
	baz=328								
SXI1	**Grass Mountain**	**0.94**	**9**	P			**Pb**	**13 56 59.5**	**-1.5**
	baz=12								
SXI1				*e*S			**Sb**	**13 57 13.1**	**-0.4**
	baz=12								
WJS	**Zhushan**	**0.96**	**250**		⇑	*e*P	**Pg**	**13 57 01.3**	**-0.3**
	baz=247								
TWS1	**Kuangyinshan**	**0.98**	**344**		⇓	P	**Pb**	**13 57 01.1**	**-0.5**
	baz=349								
TWS1				*e*S			**Sb**	**13 57 13.1**	**-1.3**
	baz=349								
WNT	**Mingjian**	**0.99**	**254**		⇑	P	**Pg**	**13 57 01.7**	**-0.3**
	baz=250								
TNOU	**National Taiwa**	**0.99**	**3**	P			**Pb**	**13 57 00.5**	**-1.3**
	baz=360								
TNOU				*e*S			**Sb**	**13 57 13.2**	**-1.4**
	baz=360								
YM01	**YM01**	**0.99**	**352**	*e*P			**Pb**	**13 57 01.0**	**-0.9**
	baz=334								
WDJ	**Dajia District**	**1.00**	**281**	*e*P			**Pn**	**13 57 02.5**	**0.0**
	baz=284								
CHKH	**Chenggong**	**1.01**	**197**		⇓	P	**Pb**	**13 57 00.6**	**-1.5**
	baz=201								
CHKH				*e*S			**Sb**	**13 57 15.1**	**0.0**
	baz=201								
NTST	**Danshui**	**1.03**	**346**		⇑	*e*P	**Pb**	**13 57 01.7**	**-0.8**
	baz=352								
NTST				*e*S			**Sn**	**13 57 17.9**	**+0.8**
	baz=352								
FULB	**Fuli**	**1.03**	**202**		⇓	*e*P	**Pb**	**13 57 00.8**	**-1.8**
	baz=224								
ANP	**Anpu**	**1.04**	**350**		⇑	P	**Pb**	**13 57 01.5**	**-1.2**
	baz=348								
ANP				*e*S			**Sb**	**13 57 14.7**	**-1.5**
	baz=348								
ALS	**Alishan**	**1.06**	**232**	P			**Pb**	**13 57 01.8**	**-1.3**
	baz=227								
ALS				*e*S			**Sb**	**13 57 15.2**	**-1.6**
	baz=227								
WCHH	**Zhanghua**	**1.06**	**266**	*e*P			**Pn**	**13 57 03.0**	**-0.3**
	baz=289								
CHKT	**Chengkung**	**1.10**	**197**		⇓	*e*P	**Pb**	**13 57 01.5**	**-2.3**
	baz=188								
CHN5	**Tsauling**	**1.10**	**240**	*e*P			**Pb**	**13 57 03.4**	**-0.4**
	baz=246								
EHD	**Haiduan**	**1.11**	**205**	P			**Pb**	**13 57 01.3**	**-2.6**
	baz=212								
TWY	**Chenhua**	**1.12**	**355**	*e*P			**Pg**	**13 57 04.2**	**-0.3**
	baz=352								
TWY				*e*S			**Sb**	**13 57 17.5**	**-0.9**
	baz=352								
ECS	**Chishang**	**1.15**	**203**	*e*P			**Pb**	**13 57 03.7**	**-0.9**
	baz=210								
JYNG	**Yonagunijimaku**	**1.16**	**75**	P			**Pn**	**13 57 03.8**	**-0.8**
JYNG	**Yonagunijimaku**	**1.16**	**75**	A			A	13 57 03.8	
	comp=E,1μm,8.4s,comp=N,2μm,2.6s								
WGK	**Gukeng**	**1.16**	**246**		⇓	*e*P	**Pb**	**13 57 04.3**	**-0.3**
	baz=250								
WGK				*e*S			**Sn**	**13 57 21.7**	**+1.5**
	baz=250								
ELDTW	**Lidau**	**1.16**	**214**	*e*P			**Pb**	**13 57 02.0**	**-2.8**
	baz=220								
WDLH	**Douliu**	**1.18**	**247**	*e*P			**Pn**	**13 57 04.8**	**-0.1**
	baz=251								
WDLH				*e*S			**Sg**	**13 57 21.9**	**+0.9**
	baz=251								
YOJ	**Yonaguni jima**	**1.22**	**75**	Pn			**Pb**	**13 57 05.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.22**	**75**	P			**Pb**	**13 57 05.8**	**+0.1**
YOJ	**Yonaguni jima**	**1.22**	**75**	*e*P			**Pn**	**13 57 03.4**	**-2.0**
	baz=81								
YOJ	**Yonaguni jima**	**1.22**	**75**	P			**Pb**	**13 57 05.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.22**	**75**	P			**Pn**	**13 57 04.7**	**-0.8**
YOJ				*e*S			**Sb**	**13 57 21.2**	**0.0**
YOJ	**Yonaguni jima**	**1.22**	**75**	A			A	13 57 04.7	
	comp=E,1μm,6.6s,comp=N,2μm,2.2s								
EDH	**Donghe**	**1.24**	**198**		⇓	*e*P	**Pn**	**13 57 02.0**	**-3.7**
	baz=190								
WCKO	**Fanlu**	**1.25**	**235**		⇑	*e*P	**Pb**	**13 57 06.0**	**-0.2**
	baz=241								
WRL	**Guolierlin Hig**	**1.25**	**258**		⇑	*e*P	**Pn**	**13 57 05.7**	**-0.2**
	baz=263								
CHN2	**Minshiung**	**1.30**	**241**	*e*P			**Pb**	**13 57 07.0**	**0.0**
	baz=247								
WTK	**Tuku**	**1.30**	**249**	*e*P			**Pn**	**13 57 06.3**	**-0.3**
	baz=239								
CHN4	**Tsaushan**	**1.31**	**232**	*e*P			**Pb**	**13 57 07.0**	**-0.3**
	baz=238								
STYH	**Taoyuan**	**1.31**	**221**		⇓	*e*P	**Pn**	**13 57 06.0**	**-0.8**
	baz=227								
STYH				*e*S			**Sn**	**13 57 24.2**	**+0.3**
	baz=227								
TPUB	**Ta-pu**	**1.31**	**230**	Pn			**Pn**	**13 57 06.6**	**-0.2**
TPUB	**Ta-pu**	**1.31**	**230**	P			**Pg**	**13 57 07.7**	**-0.6**
TPUB	**Ta-pu**	**1.31**	**230**		⇓	*e*P	**Pn**	**13 57 06.6**	**-0.2**
	baz=236								
CHY	**Chiayi**	**1.35**	**241**	*e*P			**Pg**	**13 57 08.5**	**-0.5**
	baz=247								
LONT	**Longtian**	**1.36**	**204**	*e*P			**Pn**	**13 57 05.2**	**-2.2**
	baz=210								
WTP	**Ta-pu**	**1.36**	**228**		⇓	P	**Pb**	**13 57 07.7**	**-0.5**
	baz=234								
TWK	**Hsinying**	**1.44**	**232**		⇓	P	**Pb**	**13 57 08.8**	**-0.6**
	baz=238								
SNST	**Tainan City**	**1.46**	**230**		⇓	*e*P	**Pb**	**13 57 09.2**	**-0.6**
	baz=236								
SNST				*e*S			**Sb**	**13 57 28.4**	**+0.3**
	baz=236								
TWG	**Pinlang**	**1.46**	**204**				**Pn**	**13 57 05.0**	**-

ICHU eS Sg 13 57 31.6 -0.9
baz=244
CHN8 Yiju 1.60 240 eP Pb 13 57 12.6 +0.4
baz=245
CHN8 eS Sg 13 57 35.6 +1.1
baz=245
CHN3 Shinhua 1.64 229 eP Pb 13 57 12.4 -0.6
baz=235
SSHA Shanhua 1.66 232 eP Pb 13 57 12.6 -0.6
baz=238
SHHT Tainan City 1.69 228 eP Pb 13 57 13.3 -0.5
baz=234
SCST Cishan 1.69 222 eP Pb 13 57 13.1 -0.7
baz=228
ECL Taimali 1.71 204 eP Pn 13 57 09.6 -2.6
baz=196
SCLT Jiali 1.71 235 eP Pn 13 57 12.4 +0.2
baz=240
SCLT eS Sb 13 57 35.5 +0.2
baz=240
SSD Sandimen 1.72 216 eP Pn 13 57 12.1 -0.4
baz=222
TSMG Majia 1.75 214 eP Pn 13 57 11.7 -1.1
baz=232
TSMG eS Sb 13 57 37.0 +0.4
baz=232
TAI1 Yung-k'ang 1.76 231 eP Pb 13 57 14.1 -0.9
baz=235
TAI1 eS Sb 13 57 37.7 +0.8
baz=235
TWM1 Shoushan 1.78 222 P Pb 13 57 15.3 -0.1
baz=227
TSCK Chigu Township 1.80 236 ⇑P Pn 13 57 13.9 +0.4
baz=241
TSCK S Sg 13 57 39.7 -1.4
baz=241
SGLT Jiouru 1.82 219 eP Pb 13 57 14.7 -1.2
baz=225
MASBT Mashibuluo 1.83 213 eP Pn 13 57 12.9 -1.0
baz=218
MASBT eS Sg 13 57 40.4 -1.6
baz=218
IRIF Iriomote-Funau 1.84 84 P Pn 13 57 13.1 -1.0
IRIF S Sb 13 57 38.4 -1.0
IRIF Iriomote-Funau 1.84 84 A A 13 57 13.1
comp=E,680nm,4.8s,comp=N,988nm,4.3s
SNJT Kaohsiung City 1.89 222⇓eP Pb 13 57 15.9 -1.2
baz=229
HATJ Hateruma jima 1.91 93 P Pn 13 57 14.9 -0.1
HATJ Hateruma jima 1.91 93 A A 13 57 14.9
comp=E,2µm,2.9s,comp=N,1µm,3.0s
EAST Anshuo 1.94 205 eP Pn 13 57 13.0 -2.5
baz=211
EAST eS Sn 13 57 38.9 -0.7
baz=211
TAW Tawu 1.95 203 eP Pn 13 57 13.4 -2.1
baz=209
TAW eS Sn 13 57 37.2 -2.5
baz=209
TAWH Dawu Township 1.96 203 eP Pn 13 57 13.5 -2.2
baz=197
WSSB Gushan 2.02 222 eP Pn 13 57 16.3 -0.2
baz=228
SCZT Fangliau 2.04 210 P Pn 13 57 16.5 -0.4
baz=200
PNG Penghu 2.07 254 eP Pn 13 57 16.4 -0.7
baz=260
PNG eS Sb 13 57 44.0 -1.6
baz=260
PHUB P'eng-hu 2.07 252 ⇑P Pn 13 57 17.0 -0.1
baz=258
PHUB eS Sn 13 57 42.2 -0.4
baz=258
WDGT Dungji 2.09 245 eP Pn 13 57 17.6 +0.2
baz=251
JKRS Kuro-shima 2.09 87 P Pn 13 57 17.2 -0.3
JKRS S Sn 13 57 44.7 +1.4
JKRS Kuro-shima 2.09 87 A A 13 57 17.2
comp=E,1µm,2.8s,comp=N,2µm,3.3s
SLIU Shizi 2.11 204 eP Pn 13 57 18.5 +0.7
baz=211
LAY Lan-yu 2.12 184 eP Pn 13 57 14.5 -3.4
baz=192
LYUB Lan-yu 2.15 183 ⇓P Pn 13 57 14.3 -4.0
baz=192
JIJ Ishigaki jima 2.22 84 P Pn 13 57 17.9 -1.4
JIJ eS Sn 13 57 47.0 +0.5
JIJ Ishigaki jima 2.22 84 A A 13 57 17.9
comp=E,290nm,10.2s,comp=N,446nm,2.9s
VWUC VWUC 2.23 292 eP Pn 13 57 18.4 -0.9
baz=293
SMST Manzhou Townsh 2.28 201 eP Pn 13 57 19.4 -0.7
baz=196
VCHM Qimei 2.30 246 eP Pn 13 57 20.4 +0.1
baz=236
HEN Hengchun 2.33 203 eP Pn 13 57 20.6 -0.1
baz=199
TWK1 Hengchun 2.36 201 eP Pn 13 57 20.0 -1.2
baz=196
TWKBT Hengchun 2.36 201 eP Pn 13 57 19.5 -1.7
baz=196
JISG Ishigakijimahi 2.40 79 P Pn 13 57 20.7 -1.1
JISG S Sn 13 57 52.4 +1.4
JISG Ishigakijimahi 2.40 79 A A 13 57 20.7
comp=E,289nm,6.5s,comp=N,423nm,2.9s
PTMZ Houxiangcun 2.52 291 eP Pn 13 57 22.4 -1.0
baz=292
MATB Ma-tsu 2.55 321 eP Pn 13 57 22.5 -1.4
baz=319
JTJ Tarama 2.76 79 P Pn 13 57 26.6 -0.1
JTJ S Sn 13 58 02.0 +2.1
JTJ Tarama 2.76 79 A A 13 57 26.6
comp=E,528nm,3.6s,comp=N,492nm,3.6s
QZH Quanzhou 2.95 286⇑/Pn Pn 13 57 27.2 -2.1
QZH Sn Sn 13 58 02.6 -1.9
QZH smax smax
comp=N,18µm,0.9s
QZH smax smax
comp=E,15µm,1.3s
QZH LR LR
comp=N,520µm,11.0s
QZH LR LR
comp=E,821µm,11.0s
QZH LR LR
comp=Z,960µm,11.7s
LYJJ Jianjiangzhen 2.97 324 eP Pn 13 57 28.1 -1.4
baz=322
KNM Kinmen 3.01 276 eP Pn 13 57 31.5 +1.4
baz=278
KNMB Chin-men Tao 3.05 276 Pn Pn 13 57 29.7 -1.0
KNMB Chin-men Tao 3.05 276 eP Pn 13 57 29.8 -1.0
baz=279
XPSS Dashiqiu 3.08 334 eP Pn 13 57 29.8 -1.4
baz=331
MHZQ Yeshan 3.11 309 eP Pn 13 57 30.5 -1.0
baz=308
JIRB Irabujima 3.22 77 P Pn 13 57 33.9 +0.9
JIRB eS Sn 13 58 13.3 +2.3
JIRB Irabujima 3.22 77 A A 13 57 33.9
comp=E,380nm,10.3s,comp=N,324nm,5.1s
JIKM Ikemajima 3.30 76 P Pn 13 57 36.8 +2.7
JIKM S Sn 13 58 15.6 +2.4
JIKM Ikemajima 3.30 76 A A 13 57 36.8
comp=E,440nm,5.8s,comp=N,418nm,4.7s
JMJ Miyako jima 2 3.32 78 P Pn 13 57 36.3 +1.9
JMJ2 Miyako jima3 3.34 79 P Pn 13 57 35.2 +0.6
JMJ2 eS Sn 13 58 17.4 +3.3
JMJ2 Miyako jima3 3.34 79 A A 13 57 35.2
comp=E,659nm,3.1s,comp=N,1µm,4.8s
JOGS Gusukube 3.41 79 eP Pn 13 57 36.9 +1.2
JOGS S Sn 13 58 19.2 +3.3
JOGS Gusukube 3.41 79 A A 13 57 36.9
comp=E,607nm,3.1s,comp=N,749nm,5.7s
AXDP Jialang 3.49 283⇑eP Pn 13 57 35.9 -0.8
baz=284
ZPLA Ao Xicun 3.63 267 eP Pn 13 57 38.2 -0.5
baz=272
DSXP Dongshan 3.95 264 eP Pn 13 57 42.4 -0.7
baz=269
SXFK Yanhouchang 4.31 302 eP Pn 13 57 47.3 -0.7
baz=301
JKE Kume jima 2 5.07 64 A A 13 57 59.8
comp=E,77nm,8.6s,comp=N,64nm,8.3s
JAGN Aguni-jima 5.55 63 A A 13 58 06.5
comp=E,142nm,10.8s,comp=N,104nm,4.9s
JJT3 Tamagusuku3 5.84 69 A A 13 58 10.5
comp=E,221nm,16.8s,comp=N,251nm,7.6s

JNTH Nagotoyohara 6.17 66 A A 13 58 15.1
comp=E,96nm,9.9s,comp=N,98nm,7.9s
JIH Iheya 6.33 62 A A 13 58 17.4
comp=E,73nm,10.5s,comp=N,78nm,9.0s
JOW Kunigami 6.50 64 Pn Pn 13 58 16.2 -1.9
JOW Kunigami 6.50 64 P Pn 13 58 19.6 +1.6
JOW Kunigami 6.50 64 A A 13 58 19.7
comp=E,138nm,9.1s,comp=N,103nm,7.8s
JOW Kunigami 6.50 64 Pn Pn 13 58 16.5 -1.5
comp=N,29nm,0.3s,baz=173,slow=12,SNR=19
JOW Sn Sn 13 59 30.5 -1.4
baz=344,slow=28
comp=N,74nm,0.3s
SZP Santa 6.68 190 P Pn 13 58 23.0 +2.4
JYRO Yoronjima 6.71 63 A A 13 58 22.8
comp=E,116nm,7.2s,comp=N,74nm,11.3s
SSE Sheshan 6.93 356 Pn Pn 13 58 22.9 -1.0
SSE Sn Sn 13 59 46.1 +3.6
SSE LR LR
comp=N,287µm,12.4s
SSE LR LR
comp=N,112µm,10.4s
SSE LR LR
comp=N,325µm,11.4s
JOKE Okinoerabujima 6.95 61 A A 13 58 26.1
comp=E,84nm,9.7s,comp=N,52nm,11.7s
HKC Hong Kong Obse 7.18 257 ⇑P Pn 13 58 29.0 +1.6
HKPS Hong Kong Po S 7.22 256 Pn 13 58 27.3 -0.6
HKPS Hong Kong Po S 7.22 256 P Pn 13 58 28.9 +0.9
JTK Tokunoshima 7.44 59 A A 13 58 33.0
comp=E,43nm,10.8s,comp=N,41nm,7.7s
GZH Guangzhou 7.75 264 Pn Pn 13 58 29.9 -5.4
GZH Sn Sn 13 59 54.2 -8.7
GZH smax smax
comp=N,4µm,1.6s
GZH smax smax
comp=N,3µm,1.3s
GZH LR LR
comp=N,196µm,11.2s
GZH LR LR
comp=N,110µm,10.7s
MCO Taipa Grande 7.78 257 P Pn 13 58 37.0 +1.3
JAMN Amaminishikomi 7.83 57 A A 13 58 38.4
comp=E,40nm,9.6s,comp=N,29nm,17.0s
JAM Amami Oshima 8.25 57 A A 13 58 44.1
comp=E,53nm,8.8s,comp=N,45nm,7.3s
NJ2 Nanjing 8.26 343 ⇓P Pn 13 58 41.0 -1.2
NJ2 sP Pn 13 58 45.7 +3.5
NJ2 S Sn 14 00 15.7 +0.4
NJ2 sS Sn 14 00 20.9 +5.6
NJ2 pmax pmax
comp=N,100nm,0.8s
NJ2 smax smax
comp=N,4µm,1.5s
NJ2 smax smax
comp=N,4µm,1.4s
NJ2 LR LR
comp=N,507µm,11.8s
NJ2 LR LR
comp=N,231µm,10.4s
NJ2 LR LR
comp=N,654µm,11.6s
JTAJ Takarajima 8.34 52 A A 13 58 45.5
comp=E,65nm,10.8s,comp=N,74nm,10.9s
JZK Kikaishima 8.49 59 A A 13 58 47.4
comp=E,155nm,12.3s,comp=N,150nm,4.6s
JMZ Minamidaito 2 8.78 77 A A 13 58 51.4
comp=E,45nm,11.1s,comp=N,73nm,7.0s
CNSH ChangSha 8.85 299 ⇑P Pn 13 58 50.0 -0.4
CNSH S Sn 14 00 30.2 +0.3
CNSH smax smax
comp=N,9µm,1.3s
CNSH smax smax
comp=E,6µm,1.4s
CNSH LR LR
comp=N,286µm,10.1s
CNSH LR LR
comp=E,364µm,9.8s
CNSH LR LR
comp=Z,466µm,10.7s
JKDJ Kitadaitoujima 8.87 76 A A 13 58 52.6
comp=E,53nm,11.8s,comp=N,66nm,7.5s
WHN Wuhan 9.13 316 ⇑P Pn 13 58 53.6 -0.5
WHN sP 13 58 58.5
WHN S Sn 14 00 37.7 +1.1
WHN pmax pmax
comp=N,250nm,0.7s
JNN Nakanoshima 9.21 50 A A 13 58 57.6
comp=E,76nm,8.8s,comp=N,47nm,9.2s
JKC Kuchinoerabu 9.81 48 A A 13 59 05.7
comp=E,51nm,10.7s,comp=N,59nm,8.1s
JYAK Yakushimahirau 9.89 50 A A 13 59 06.9
comp=E,29nm,9.0s,comp=N,21nm,10.1s
TGY Tagaytay City 10.03 184 Pn Pn 13 59 07.4 +0.7
comp=N,6.6nm,0.3s,baz=309,slow=6.3,SNR=2.5
TGY LR LR 14 03 31.7
comp=N,47µm,21.6s,baz=2.5,slow=41
comp=N,39nm,0.4s
JMTN Minamitane 10.26 51 A A 13 59 11.9
comp=E,46nm,9.4s,comp=N,44nm,5.8s
JSJ Shimokoshiki 10.30 42 A A 13 59 12.5
comp=E,42nm,11.8s,comp=N,44nm,12.0s
GULI GuiLin 10.38 279 P Pn 13 59 08.8 -2.6
GULI S Sn 14 01 10.2 +2.7
GULI LR LR
comp=N,125µm,9.8s
GULI LR LR
comp=N,352µm,10.8s
JTN Tanegashima 3 10.46 50 A A 13 59 14.7
comp=E,39nm,9.3s,comp=N,36nm,9.5s
JFU Fukue jima 2 10.48 35 A A 13 59 15.0
comp=E,54nm,11.1s,comp=N,66nm,12.6s
JSU Suzuyama 10.64 45 A A 13 59 17.2
comp=E,40nm,9.1s,comp=N,23nm,10.3s
JTSR Tashiro 2 10.73 47 A A 13 59 18.4
comp=E,21nm,10.6s,comp=N,42nm,9.9s
NGSJ Nagasakinomoza 11.04 38 A A 13 59 22.5
comp=E,35nm,17.0s,comp=N,26nm,17.0s
JHD Hondo 11.11 40 A A 13 59 23.5
comp=E,49nm,10.8s,comp=N,26nm,10.7s
JZO Okuchi 11.16 43 A A 13 59 24.1
comp=E,39nm,8.8s,comp=N,24nm,8.2s
JNAR Kushima--Naru 11.19 47 A A 13 59 24.6
comp=E,48nm,11.6s,comp=N,32nm,10.0s
JTZ Takazaki 11.31 45 A A 13 59 26.2
comp=E,19nm,9.6s,comp=N,37nm,12.2s
JNKG Nichinankitago 11.35 47 A A 13 59 26.6
comp=E,41nm,9.1s,comp=N,39nm,11.7s
JUR Ureshino 11.46 37 A A 13 59 28.3
comp=E,35nm,8.8s,comp=N,34nm,11.2s
JIU3 Izumi3 11.57 42 A A 13 59 29.7
comp=E,40nm,10.6s,comp=N,27nm,12.7s
JTA Tamana 11.70 39 A A 13 59 31.4
comp=E,32nm,10.8s,comp=N,32nm,17.0s
JTSN Tsuno 11.80 45 A A 13 59 32.8
comp=E,29nm,11.5s,comp=N,19nm,13.9s
JII Iki 11.89 34 A A 13 59 34.0
comp=E,37nm,10.5s,comp=N,47nm,11.7s
JFI Itaya 11.96 37 A A 13 59 34.9
comp=E,40nm,13.5s,comp=N,41nm,10.5s
JNU Nakatsue 12.01 40 Pn Pn 13 59 34.5 +0.8
JNU Nakatsue 12.01 40 P Pn 13 59 37.8 +4.1
JNU Nakatsue 12.01 40 A A 13 59 35.6
comp=E,40nm,9.8s,comp=N,28nm,11.8s
JNU Nakatsue 12.01 40 Pn Pn 13 59 35.3 +1.6
comp=N,0.7nm,0.3s,baz=205,slow=15,SNR=5.0
JNU Sn Sn 14 01 49.7 +2.2
baz=313,slow=11
JNU LR LR 14 04 51.7
comp=N,150µm,18.6s,baz=216,slow=41
JHHC Hyugahichiya 12.01 44 A A 13 59 35.6
comp=E,30nm,11.9s,comp=N,14nm,11.1s
JKIT Kitakata 12.02 43 A A 13 59 35.7
comp=E,25nm,9.3s,comp=N,19nm,10.8s
JTSM Tsushimamitsus 12.15 32 A A 13 59 37.5
comp=E,35nm,10.4s,comp=N,56nm,13.7s
QIZ Qiongzhong 12.17 247 P Pn 13 59 35.1 -0.7
QIZ sP P 13 59 41.3 -7.1
QIZ S Sn 14 01 52.3 +1.0
QIZ SS SnSn 14 02 03.2 -0.2
QIZ LR LR
comp=N,89µm,21.7s
QIZ LR LR
comp=N,51µm,20.2s
QIZ LR LR
comp=N,47µm,11.1s
QIZ Qiongzhong 12.17 247 P Pn 13 59 38.3 +2.5

JTU Tsushima 12.30 31 Pn Pn 13 59 38.1 +0.4
JTU Tsushima 12.30 31 P Pn 13 59 42.2 +4.5
JTU Tsushima 12.30 31 A A 13 59 39.6
comp=E,30nm,12.3s,comp=N,52nm,11.3s
JFA Akaike 12.39 38 A A 13 59 40.8
comp=E,40nm,9.7s,comp=N,23nm,9.1s
JSKE Saikikamae 12.41 44 A A 13 59 41.0
comp=E,19nm,11.0s,comp=N,15nm,13.0s
ENH Enshi 12.47 302 Pn Pn 13 59 39.8 -0.2
JBEP Benpuamama 12.48 41 A A 13 59 41.8
comp=E,41nm,11.8s,comp=N,46nm,8.5s
JUS Usuki 12.50 43 A A 13 59 42.1
comp=E,21nm,10.3s,comp=N,28nm,10.3s
TIA Tai'an 12.65 343 P Pn 13 59 43.4 +1.0
TIA pmax pmax
comp=N,6µm,9.7s
TIA LR LR
comp=N,183µm,12.4s
TIA LR LR
comp=N,62µm,10.9s
TIA LR LR
comp=N,271µm,12.3s
JKI Kunimi 12.78 40 A A 13 59 45.9
comp=E,39nm,10.8s,comp=N,27nm,16.1s
JTY Toyota 12.95 37 A A 13 59 48.2
comp=E,26nm,13.6s,comp=N,20nm,12.4s
JTO Tosashimizu 13.04 46 A A 13 59 49.3
comp=E,25nm,11.0s,comp=N,19nm,11.8s
TJN Taejon 13.11 20 Pn Pn 13 59 49.4 +0.7
TJN Taejon 13.11 20 P Pn 13 59 51.7 +3.0
TJN Taejon 13.11 20 P Pn 13 59 49.4 +0.7
LYN LuoYang 13.12 324 eP Pn 13 59 48.8 0.0
LYN pP P 13 59 51.6 -7.3
LYN PP PnPn 13 59 58.6 +1.9
LYN S Sn 14 02 25.3 +11
LYN SS SnSn 14 02 30.0 +3.1
LYN pmax pmax
comp=N,40nm,0.6s
LYN pmax pmax
comp=N,10µm,11.4s
UWA2 Uwa jima 2 13.14 44 A A 13 59 50.7
comp=E,18nm,9.9s,comp=N,15nm,14.9s
JKD Kudamatsu 13.26 40 A A 13 59 52.3
comp=E,24nm,14.0s,comp=N,17nm,14.7s
JNA Nagahama 13.28 43 A A 13 59 52.5
comp=E,27nm,11.0s,comp=N,16nm,10.6s
JHGM Hagimishima 13.39 36 A A 13 59 54.0
comp=E,33nm,10.8s,comp=N,37nm,12.0s
JKU Kubokawa 13.49 45 A A 13 59 55.3
comp=E,12nm,7.7s,comp=N,14nm,9.9s
JHIK Hikimi 13.63 38 A A 13 59 57.2
comp=E,32nm,10.7s,comp=N,22nm,11.6s
JHM Kurahashi 13.71 41 A A 13 59 58.2
comp=E,24nm,9.8s,comp=N,19nm,10.8s
JET Tanbara 13.78 43 A A 13 59 59.2
comp=E,21nm,11.5s,comp=N,12nm,10.0s
GYA Guiyang 13.81 283⇓/P Pn 13 59 59.0 +0.6
GYA S Sn 14 02 31.6 0.0
GYA pmax pmax
comp=N,160nm,1.4s
GYA pmax pmax
comp=N,4µm,11.3s
GYA LR LR
comp=N,276µm,11.2s
GYA LR LR
comp=N,333µm,11.2s
JKHR Kochiharuno 13.90 45 A A 14 00 00.6
comp=E,18nm,9.6s,comp=N,13nm,10.0s
INCN Inchon 13.93 16 P P 14 00 04.0 -4.0
INCN Inchon 13.93 16 P Pn 13 59 59.7 -0.2
JHT Toyohira 14.01 39 A A 14 00 02.1
comp=E,34nm,11.5s,comp=N,18nm,13.6s
MRT2 Murotomisaki 2 14.24 47 A A 14 00 05.2
comp=E,28nm,12.0s,comp=N,14nm,10.5s
KSRS Korea Array 14.28 20 Pn Pn 14 00 07.1 +2.5
comp=N,1.3nm,0.3s,baz=203,slow=14,SNR=49
KSRS Sn Sn 14 02 43.9 +1.2
comp=N,0.3nm,0.3s,baz=240,slow=38,SNR=2.4
KSRS LR LR 14 06 26.8
comp=N,77µm,18.2s,baz=205,slow=41
JMN Monobe 14.28 45 Pn Pn 14 00 00.1 -4.6
JMN Monobe 14.28 45 P Pn 14 00 05.4 +0.7
JMN Monobe 14.28 45 A A 14 00 05.7
comp=E,28nm,10.8s,comp=N,16nm,8.6s
KS19 Wonju Array Si 14.30 20 Pn Pn 14 00 04.7 -0.3
JGT2 ShimaneMisato 14.35 38 A A 14 00 06.5
comp=E,20nm,10.4s,comp=N,21nm,14.3s
HNS HongShan 14.50 337 ⇓P Pn 14 00 06.8 -0.8
HNS S Sn 14 02 53.3 +5.2
HNS SS S 14 03 07.5 -0.2
HNS pmax pmax
comp=N,100nm,1.5s
HNS pmax pmax
comp=N,11µm,10.8s
HNS LR LR
comp=N,370µm,13.9s
HNS LR LR
comp=N,225µm,13.7s
HNS LR LR
comp=N,414µm,14.1s
JHS Saijyo 14.65 40 A A 14 00 10.5
comp=E,28nm,10.2s,comp=N,16nm,8.8s
JMAF Mimaanabuki 14.65 45 A A 14 00 10.5
comp=E,15nm,11.5s,comp=N,15nm,9.8s
JAI Aioi 14.70 46 A A 14 00 11.1
comp=E,18nm,10.9s,comp=N,11nm,17.1s
DL2 Dalian 14.70 360 P Pn 14 00 12.8 +2.4
DL2 sP P 14 00 21.8 +5.3
DL2 S Sn 14 03 01.3 +8.2
DL2 pmax pmax
comp=N,69nm,1.3s
DL2 pmax pmax
comp=N,6µm,8.0s
DL2 LR LR
comp=N,259µm,13.7s
DL2 LR LR
comp=N,53µm,13.5s
DL2 LR LR
comp=N,317µm,14.1s
JJS Sakaide 14.72 44 A A 14 00 11.5
comp=E,24nm,10.1s,comp=N,12nm,16.1s
JISK Izumosakaura 14.85 38 A A 14 00 13.2
comp=E,23nm,9.7s,comp=N,26nm,9.5s
XAN Xi'an 14.89 314 ⇓P Pn 14 00 13.2 +0.2
XAN pP P 14 00 19.7 +1.0
XAN S Sn 14 03 04.8 +7.1
XAN pmax pmax
comp=Z,140nm,1.4s
XAN pmax pmax
comp=Z,8µm,9.0s
XAN LR LR
comp=N,157µm,7.9s
XAN LR LR
comp=E,523µm,11.0s
XAN LR LR
comp=Z,666µm,11.3s
JKR Kurayoshi 15.33 40 A A 14 00 19.3
comp=E,23nm,9.4s,comp=N,19nm,11.9s
JWM Minabe 15.33 48 A A 14 00 19.3
comp=E,14nm,9.7s,comp=N,14nm,9.2s
JWKM Wakayamakushim 15.39 50 A A 14 00 20.0
comp=E,14nm,12.4s,comp=N,11nm,11.4s
JAWN Awajishima-nag 15.41 45 A A 14 00 20.4
comp=E,16nm,15.2s,comp=N,14nm,8.8s
JTNC Tanabenakahech 15.49 48 A A 14 00 21.3
comp=E,8.0nm,8.3s,comp=N,10.0nm,9.5s
JOI OKI 15.65 37 A A 14 00 23.5
comp=E,14nm,12.1s,comp=N,20nm,14.0s
TIY Taiyuan 15.67 332 eP Pn 14 00 25.2 +1.9
TIY S S 14 03 25.1 -6.7
TIY pmax pmax
comp=N,110nm,1.6s
TIY pmax pmax
comp=N,7µm,5.0s
TIY LR LR
comp=N,150µm,12.7s
TIY LR LR
comp=N,244µm,13.8s
JKS Kasai 15.69 44 A A 14 00 24.0
comp=E,19nm,13.4s,comp=N,17nm,12.1s
JWY Kouya 15.71 47 A A 14 00 24.2
comp=E,26nm,12.3s,comp=N,16nm,10.6s
JMIK Miki 15.71 44 A A 14 00 24.2
comp=E,20nm,12.4s,comp=N,13nm,7.2s
JNTK Naratenkawa 15.94 48 A A 14 00 27.1
comp=E,23nm,11.3s,comp=N,12nm,10.1s
JKSM Kasumi 15.97 42 A A 14 00 27.6

comp=E,18nm,8.8s,comp=N,17nm,9.7s
JHE Heguri 16.03 46 A A 14 00 28.3
comp=E,11nm,11.1s,comp=N,13nm,11.1s
JKN2 Miekihoku 16.18 48 A A 14 00 30.2
comp=E,17nm,11.7s,comp=N,11nm,10.6s
JWT Wachi 16.23 44 A A 14 00 30.9
comp=E,12nm,12.1s,comp=N,8.0nm,10.3s
JKY Yasaka 16.27 46 A A 14 00 31.4
comp=E,19nm,10.3s,comp=N,14nm,8.5s
BJT Baijiatuau 16.49 345 P **P** **14 00 36.0 -0.4**
BJT Baijiatuau 16.49 345 P **P** **14 00 38.0 +1.6**
BJT Baijiatuau 16.49 345 P **P** **14 00 36.0 -0.4**
BJT pmax pmax
comp=Z,128nm,1.6s
BJI Beijing 16.51 345 Pn **P** **14 00 36.8 +0.2**
BJI S **Sn** **14 03 42.3 +5.3**
BJI pmax pmax
comp=Z,9μm,9.8s
BJI LR LR
comp=Z,99μm,13.5s
BJI LR LR
comp=Z,33μm,12.7s
BJI LR LR
comp=Z,118μm,13.6s
JIE Ise 16.56 49 A A 14 00 35.1
comp=E,24nm,12.1s,comp=N,11nm,10.3s
SLVN Son La 16.67 264 **Pn** **14 00 36.7 +0.5**
JFM Mihama 16.76 44 A A 14 00 37.6
comp=E,14nm,14.3s,comp=N,13nm,11.8s
JEG Eigenji 16.78 46 A A 14 00 37.9
comp=E,22nm,11.5s,comp=N,10.0nm,9.3s
JAA Atsumi 17.00 49 A A 14 00 40.6
comp=E,20nm,10.7s,comp=N,8.0nm,9.1s
JICN Ichinomiyachia 17.18 46 A A 14 00 42.9
comp=E,19nm,13.9s,comp=N,12nm,10.1s
CD2 Chengdu 17.28 297 P **Pn** **14 00 43.1 -0.7**
CD2 sP sP 14 00 50.7 -1.1
CD2 S **S** **14 04 01.3 -3.4**
CD2 pmax pmax
comp=N,240nm,1.2s
CD2 pmax pmax
comp=N,6μm,6.2s
CD2 LR LR
comp=N,186μm,9.8s
KMI Kunming 17.28 277 ⇑P **Pn** **14 00 41.9 -2.2**
KMI S **Sn** **14 03 58.3 +2.0**
KMI pmax pmax
comp=Z,81nm,1.6s
KMI pmax pmax
comp=Z,6μm,11.8s
KMI LR LR
comp=N,46μm,8.5s
KMI LR LR
comp=E,183μm,10.2s
KMI LR LR
comp=Z,208μm,10.6s
DAV Davao City (W) 17.39 167 P **Pn** **14 00 43.4 -1.8**
comp=Z,22nm,0.3s,baz=223,slow=20,SNR=1.3
DAV LR LR 14 07 28.5
comp=Z,50μm,19.9s,baz=348,slow=37
comp=Z,81nm,0.4s
JAO Obara 17.43 47 A A 14 00 46.1
comp=E,16nm,11.6s,comp=N,14nm,9.2s
JKG Kaga 17.45 43 A A 14 00 46.3
comp=E,15nm,11.6s,comp=N,19nm,12.6s
DLV T Lat 17.47 228 P **P** **14 00 48.5 +0.9**
HMMJ Hamamatsu 2 17.52 49 A A 14 00 47.1
comp=E,18nm,12.4s,comp=N,9.0nm,12.0s
JKKS Kakegawashinom 17.64 50 A A 14 00 48.7
comp=E,31nm,14.3s,comp=N,22nm,8.1s
UBPT Khong Chiam 17.65 243 P **P** **14 00 51.2 +1.9**
SNY Shenyang 17.69 5 ⇓P **P** **14 00 52.1 +2.5**
SNY S **S** **14 04 11.4 -1.4**
SNY pmax pmax
comp=N,150nm,1.8s
SNY pmax pmax
comp=N,16μm,9.2s
SNY LR LR
comp=N,264μm,13.1s
SNY LR LR
comp=N,62μm,11.6s
SNY LR LR
comp=N,382μm,12.0s
JSG Sagara 17.74 50 A A 14 00 49.9
comp=E,52nm,11.6s,comp=N,28nm,10.0s
JNY Yasuok 17.89 48 A A 14 00 51.8
comp=E,14nm,16.1s,comp=N,10.0nm,8.6s
JJH Hakui 18.14 42 A A 14 00 55.1
comp=E,15nm,16.6s,comp=N,26nm,12.4s
JHJ Hachijo jima 2 18.18 57 P **Pn** **14 00 52.9 -2.0**
comp=N,8.9nm,0.3s,baz=244,slow=21,SNR=1.3
JHJ S **Sn** **14 04 19.3 +1.8**
comp=N,178nm,0.7s,baz=79,slow=14,SNR=1.9
JHJ LR LR 14 07 41.6
comp=N,22μm,19.7s,baz=244,slow=37
comp=N,193nm,1.1s
JHJ2 Mitsune 18.20 57 P **P** **14 00 59.0 +3.7**
PZH PanZhiHua 18.21 282 ⇓P **P** **14 00 55.4 -0.2**
PZH pP **pP** **14 00 59.3 -0.9**
PZH PP **PnPn** **14 01 07.6 +0.9**
PZH S **Sn** **14 04 15.3 -3.3**
PZH SS **SnSn** **14 04 33.3 +1.1**
PZH pmax pmax
comp=N,370nm,1.0s
PZH pmax pmax
comp=N,7μm,8.0s
PZH LR LR
comp=N,101μm,21.1s
PZH LR LR
comp=N,117μm,14.3s
PZH LR LR
comp=N,135μm,15.7s
JTT Ttatey 18.28 44 A A 14 00 56.4
comp=E,11nm,19.5s,comp=N,19nm,10.2s
JOD2 Odawara 2 18.68 50 A A 14 01 02.1
comp=E,24nm,11.4s,comp=N,15nm,10.8s
JCJ Chichijima 18.68 77 **P** **14 01 00.2 -0.5**
JCJ IAmb IAmb 14 01 09.5
comp=Z,422nm,0.9s
JCJ Chichijima 18.68 77 P **Pn** **14 01 04.7 +3.6**
JCJ Chichijima 18.68 77 P **P** **14 00 56.2 -4.5**
comp=Z,6.1nm,0.3s,baz=293,slow=18,SNR=2.0
JCJ S **Sn** **14 04 26.0 -3.9**
comp=Z,60nm,0.6s,baz=278,slow=22,SNR=1.8
JCJ LR LR 14 05 54.9
comp=Z,5μm,21.6s,baz=246,slow=30
comp=Z,59nm,0.5s
HHC Hu-ho-hao-te 18.69 335 ⇑*i*P **Pn** **14 01 02.0 +0.8**
HHC sP sP 14 01 08.9 +2.2
HHC PP **PnPn** **14 01 16.2 +2.9**
HHC S **Sn** **14 04 30.6 +0.6**
HHC pmax pmax
comp=Z,91nm,1.3s
HHC pmax pmax
comp=Z,23μm,4.3s
HHC LR LR
comp=Z,191μm,13.9s
HHC LR LR
comp=Z,78μm,15.1s
HHC LR LR
comp=Z,229μm,14.9s
KKM Kota Kinabalu 18.77 197 P **Pn** **14 01 02.2 -0.1**
MAJO Matsushiro 18.80 45 P **P** **14 01 01.7 -0.2**
MAJO Matsushiro 18.80 45 P **Pn** **14 01 05.7 +3.2**
MAJO Matsushiro 18.80 45⇓*e*P **P** **14 01 01.5 -0.5**
MAJO pmax pmax
comp=Z,94nm,1.0s
MAJO MLR MLR
comp=Z,50μm,14.0s
MJAR Matsushiro Arr 18.80 45 P **P** **14 01 00.5 -1.5**
comp=Z,10nm,0.7s,baz=240,slow=9.6,SNR=1.8
MJAR S **Sn** **14 04 29.1 -3.6**
comp=Z,2.9nm,1.1s,baz=223,slow=49,SNR=1.0
MJAR LR LR 14 09 12.2
comp=Z,70μm,19.2s,baz=226,slow=40
JHG Hegura jima 18.83 40 A A 14 01 03.9
comp=E,22nm,10.7s,comp=N,15nm,14.2s
JSZ Suzu 18.84 42 A A 14 01 03.9
comp=E,13nm,12.7s,comp=N,22nm,12.4s
JGK Kuni 19.10 46 A A 14 01 07.0
comp=E,8.0nm,12.1s,comp=N,9.0nm,11.4s
BTO Baotou 19.11 332 *e*P **Pn** **14 01 07.2 +0.9**
BTO pP **sP** **14 01 10.9 -0.4**
BTO sP **pP** **14 01 14.0 +4.6**
BTO PP **PnPn** **14 01 24.6 +5.6**
BTO SS **SnSn** **14 05 05.7 +11**
BTO pmax pmax
comp=N,54μm,9.3s
MYLDM Lahad Datu 19.12 190 **P** **14 01 04.4 -1.1**
MYLDM IAmb IAmb 14 01 15.3
comp=Z,789nm,1.6s
JHU Hanno 19.13 48 A A 14 01 07.3
comp=E,11nm,12.5s,comp=N,8.0nm,12.7s
LZH Lanzhou 19.46 312 ⇑P **Pn** **14 01 11.5 +0.9**
LZH pP sP 14 01 15.1 -0.9
LZH sP pP 14 01 19.7 +5.8
LZH S **Sn** **14 04 43.7 -5.2**
LZH sS S 14 04 51.6 +2.5
LZH SS **SnSn** **14 05 12.2 +9.0**
LZH pmax pmax
comp=N,18μm,5.8s
LZH LR LR
comp=N,173μm,13.1s
JAG Ashikaga 19.56 47 A A 14 01 12.3
comp=E,7.0nm,7.7s,comp=N,8.0nm,9.8s
JSD Sado 19.76 42 A A 14 01 14.5
comp=E,13nm,14.0s,comp=N,13nm,12.2s
CN2 Changchun 19.83 8 *e*P **P** **14 01 13.0 -0.1**
CN2 *e*S **S** **14 04 50.7 -5.3**
CN2 pmax pmax
comp=Z,60nm,1.3s
CN2 LR LR
comp=N,152μm,13.0s
CN2 LR LR
comp=E,39μm,13.0s
CN2 LR LR
comp=Z,126μm,13.0s
MSHR Mys Shultsa 19.97 21*ce*P **Pn** **14 01 16.8 +0.5**
MSHR pmax pmax
comp=Z,552nm,1.1s
MSHR MLR MLR
comp=Z,137μm,13.0s
XLT XiLinHaoTe 20.23 348 *e*P Pn 14 01 19.1 -0.4
XLT pP sP 14 01 24.0 +0.1
XLT sP pP 14 01 26.1 +4.2
XLT S **S** **14 05 00.5 -3.6**
XLT sS Sn 14 05 08.2 +1.2
XLT SS **SnSn** **14 05 32.2 +10**
XLT pmax pmax
comp=Z,250nm,1.9s
XLT pmax pmax
comp=Z,17μm,12.0s
XLT LR LR
comp=Z,15μm,13.5s
XLT LR LR
comp=Z,96μm,13.5s
XLT LR LR
comp=Z,215μm,14.2s
JNS Sasagawa 20.28 44 A A 14 01 20.1
comp=E,12nm,10.8s,comp=N,7.0nm,11.8s
JFY Yanaizu 20.28 45 A A 14 01 20.1
comp=E,9.0nm,11.7s,comp=N,8.0nm,14.3s
TNCH TengChong 21.11 277 ⇑P **P** **14 01 29.1 +1.7**
TNCH pP sP 14 01 33.5 -0.6
TNCH sP pP 14 01 37.6 +5.6
TNCH S Sn 14 05 25.5 -3.2
TNCH sS pS 14 05 30.3 -2.0
TNCH SS **SnSn** **14 05 54.2 +11**
TNCH pmax pmax
comp=N,170nm,1.5s
TNCH pmax pmax
comp=N,11μm,7.4s
TNCH LR LR
comp=N,73μm,9.4s
TNCH LR LR
comp=N,137μm,9.3s
JMM Marumori 21.25 46 P **P** **14 01 24.2 -4.4**
JMM Marumori 21.25 46 P **P** **14 01 29.0 +0.4**
MDJ Mudanjiang 21.40 16 P **P** **14 01 30.9 +0.8**
MDJ sP sP 14 01 36.3 0.0
MDJ S **S** **14 05 22.5 -4.6**
MDJ sS sS 14 05 29.8 -3.8
MDJ pmax pmax
comp=N,6μm,11.0s
MDJ LR LR
comp=N,160μm,14.1s
MDJ LR LR
comp=N,327μm,14.8s
MDJ Mudanjiang 21.40 16 IAMs_20 IAMs_20 14 10 42.8
comp=Z,107μm,20.0s
MDJ Mudanjiang 21.40 16 P **P** **14 01 31.2 +1.1**
JOG3 Oga3 21.47 39 A A 14 01 36.6
comp=E,23nm,11.8s,comp=N,14nm,16.0s
NAYO Nakonayok 21.58 247 P **P** **14 01 34.3 +2.1**
JYK Kaneyama 21.59 43 A A 14 01 33.6
comp=E,16nm,12.2s,comp=N,9.0nm,14.1s
USRK Ussuriysk Ar. 21.69 20 P **P** **14 01 30.6 -2.6**
comp=N,61nm,1.3s,baz=207,slow=8.6,SNR=22
USRK S **S** **14 05 31.2 -1.6**
comp=N,1.8nm,0.6s,baz=145,slow=42,SNR=2.0
USRK LR LR 14 10 32.5
comp=N,61μm,18.3s,baz=194,slow=39
comp=N,61nm,1.3s
USA0B Ussuriysk Arra 21.69 20⇓*e*P **P** **14 01 34.6 +1.4**
CHTO Chiang Mai 21.84 260 IAMs_20 IAMs_20 14 11 26.9
comp=Z,31μm,19.0s
CM31 Chiang Mai Arr 21.95 259 P P 14 01 43.3 +7.1
SNR=46
CMAR Chiang Mai Arr 21.95 259 P **P** **14 01 34.2 -2.1**
CMAR Chiang Mai Arr 21.95 259 P **P** **14 01 36.1 -0.2**
comp=Z,8.1nm,0.9s,baz=322,slow=46,SNR=4.1
CMAR PcP **PcP** **14 05 35.8 +0.8**
comp=Z,2.0nm,0.4s,baz=65,slow=0.9,SNR=2.7
CMAR P3KP 14 36 08.8
comp=Z,0.4nm,0.3s,baz=336,slow=2.0,SNR=2.2
comp=Z,8.1nm,0.9s
BNX BinXian 22.02 11 ⇑P **P** **14 01 35.8 -0.9**
BNX pP **pP** **14 01 38.6 -2.4**
BNX PP **PnPn** **14 01 58.4 -0.3**
BNX S **S** **14 05 39.1 -0.1**
BNX sS **sS** **14 05 47.8 +2.0**
BNX pmax pmax
comp=Z,5μm,9.8s
BNX LR LR
comp=Z,83μm,14.1s
BNX LR LR
comp=Z,193μm,13.0s
JRG Rokugo 22.05 42 A A 14 01 38.2
comp=E,18nm,10.7s,comp=N,6.0nm,11.1s
JIW Iwasaki 22.45 39 A A 14 01 42.1
comp=E,17nm,11.6s,comp=N,9.0nm,11.0s
TOLI2 Tolitoli 22.93 182 IAmb IAmb 14 02 07.4
comp=Z,258nm,1.3s
TOLI2 Tolitoli 22.93 182 P **P** **14 01 45.4 -1.3**
JTM Tenmabayashi 23.18 40 P **P** **14 01 52.9 +3.8**
SBUM Sibu 23.45 204 P **P** **14 01 50.2 -1.8**
MRSI Marisa 23.54 179 P **P** **14 01 53.5 +0.7**
comp=Z,216nm,1.7s,comp=Z,7μmcomp=Z,25μm
KMSI Cibinong 23.55 174 P **P** **14 01 57.4 +4.5**
comp=Z,576nm,1.0s,comp=Z,9μmcomp=Z,25μm
MND Mandalay 23.64 270 P **P** **14 01 57.5 +3.7**
MPSI Mapaga 23.75 185 P **P** **14 01 54.0 -0.8**
comp=Z,136nm,1.9s,comp=Z,5μmcomp=Z,26μm
JSH Shinam 23.87 35 A A 14 01 56.1
comp=E,12nm,11.5s,comp=N,11nm,13.1s
TNTI Ternate 23.89 166 IAmb IAmb 14 02 20.5
comp=Z,448nm,1.5s
TNTI Ternate 23.89 166 P **P** **14 01 59.6 +3.4**
TNTI Ternate 23.89 166 P **P** **14 01 58.3 +2.1**
comp=Z,219nm,1.3s,comp=Z,6μmcomp=Z,15μm
GTA Gaotai 23.95 315 ⇑P **P** **14 01 56.5 -0.3**
GTA pP pP 14 02 01.2 -0.5
GTA sP sP 14 02 05.7 +2.0
GTA S **S** **14 06 05.6 -7.4**
GTA sS pS 14 06 16.7 -1.6
GTA pmax pmax
comp=Z,26nm,1.3s
GTA pmax pmax
comp=Z,7μm,8.8s
GTA LR LR
comp=N,76μm,10.8s
GTA LR LR
comp=E,186μm,11.9s
GTA LR LR
comp=Z,209μm,12.3s
GUMO Guam 24.26 112 P **P** **14 01 58.9 -0.8**
GUMO Guam 24.26 112 IAMs_20 IAMs_20 14 11 14.4
comp=Z,26μm,20.0s
GUMO Guam 24.26 112 P **P** **14 02 03.6 +3.9**
GUMO Guam 24.26 112 P **P** **14 01 58.9 -0.8**
GUMO pmax pmax
comp=Z,2μm,1.2s
GUMO MLR MLR
comp=Z,26μm,20.0s
GUMO Guam 24.26 112 P **P** **14 01 58.3 -1.4**
comp=Z,439nm,1.1s,baz=230,slow=6.1,SNR=6.9
GUMO S **S** **14 06 16.3 -1.8**
comp=Z,47nm,0.8s,baz=20,slow=18,SNR=1.5
comp=Z,439nm,1.1s
MOKO MOKOCHONG 24.68 281 *e*P **P** **14 02 08.0 +4.3**
MOKO IAmb IAmb 14 02 14.6
comp=Z,48nm,0.8s
MOKO IAMs_20 IAMs_20 14 12 52.4
comp=Z,80μm,15.5s
JORH JORHAT 24.92 282 IAMs_20 IAMs_20 14 13 03.0
comp=Z,57μm,11.8s
KOHI KOHIMA 25.07 279 *e*P **P** **14 02 07.7 +0.5**
KOHI IAmb IAmb 14 02 26.6
comp=Z,178nm,1.4s
LUWI Luwuk 25.07 178 P **P** **14 02 03.2 -3.8**
LUWI Luwuk 25.07 178 P **P** **14 02 08.3 +1.3**
LUWI Luwuk 25.07 178 P **P** **14 02 02.9 -4.1**
LUWI Luwuk 25.07 178 P **P** **14 02 06.3 -0.7**
comp=Z,405nm,1.1s,comp=Z,8μmcomp=Z,21μm
HIA Hailar 25.11 357 P **P** **14 02 05.9 -1.2**
HIA Hailar 25.11 357 P **P** **14 02 07.7 +0.6**
HIA Hailar 25.11 357 P **P** **14 02 05.9 -1.2**
HIA pmax pmax
comp=Z,452nm,1.4s
HIA MLR MLR
comp=Z,107μm,18.0s
KSM Kuching 25.11 208 P **P** **14 02 07.1 -0.3**
ERM Erimo 25.18 40 P **P** **14 02 05.4 -2.4**
ERM Erimo 25.18 40 P **P** **14 02 10.8 +3.0**
ERM Erimo 25.18 40⇓*e*P **P** **14 02 06.2 -1.6**
ERM pmax pmax
comp=Z,159nm,1.5s
ERM MLR MLR
comp=Z,54μm,16.0s
JEM Erimo 25.18 40 IAMs_20 IAMs_20 14 12 41.6
comp=Z,57μm,19.0s
JEM Erimo 25.18 40 P **P** **14 02 10.5 +2.7**
IMP Imphal 25.27 277 *e*P **P** **14 02 10.1 +1.2**
IMP IAmb IAmb 14 02 35.7
comp=Z,61nm,0.9s
IMP IAMs_20 IAMs_20 14 13 28.2
comp=Z,81μm,14.3s
LBMI Labuha 25.28 166 P **P** **14 02 10.9 +2.0**
comp=Z,446nm,1.0s,comp=Z,15μm
BKB Balikpapan 25.70 191 IAMs_20 IAMs_20 14 12 45.0
comp=Z,36μm,21.0s
BKB Balikpapan 25.70 191 P **P** **14 02 13.1 +0.4**
BKB Balikpapan 25.70 191 P **P** **14 02 17.4 +4.7**
comp=Z,415nm,1.1s,comp=Z,9μmcomp=Z,23μm
MTKI Muara Teweh, K 25.82 196 P **P** **14 02 13.7 -0.1**
comp=Z,306nm,1.2s,comp=Z,7μmcomp=Z,14μm
STKI Sintang 25.93 204 P **P** **14 02 18.1 +3.3**
comp=Z,141nm,2.2s,comp=Z,9μm
SRIT Nakonsritamara 26.20 237 P **P** **14 02 20.1 +2.8**
ASAJ Asahikawa 26.23 36 P **P** **14 02 14.2 -3.1**
ASAJ pmax pmax
comp=Z,86nm,0.9s
ASAJ MLR MLR
comp=Z,108μm,18.0s
ASAJ Asahikawa 26.23 36 P **P** **14 02 13.6 -3.7**
comp=Z,9.3nm,0.5s,baz=246,slow=10.0,SNR=31
ASAJ LR LR 14 13 24.6
comp=Z,107μm,18.2s,baz=242,slow=38
comp=Z,9.3nm,0.5s
JKA Kamikawa-asahi 26.23 36 P **P** **14 02 14.2 -3.1**
KLR Kul'dur 26.24 15⇓*e*P **P** **14 02 16.2 -1.1**
KLR pmax pmax
comp=Z,84nm,1.3s
KLR MLR MLR
comp=Z,205μm,13.0s
KLR Kul'dur 26.24 15 P **P** **14 02 15.8 -1.6**
comp=Z,49nm,0.9s,baz=203,slow=6.6,SNR=43
KLR PcP **PcP** **14 05 44.2 +0.5**
comp=Z,9.5nm,0.6s,baz=237,slow=4.1,SNR=7.4
KLR LR LR 14 13 35.0
comp=Z,80μm,19.5s,baz=198,slow=39
comp=Z,49nm,0.9s
ULN Ulaanbaatar 26.37 337 P **P** **14 02 18.1 -0.7**
ULN IAmb IAmb 14 02 35.8
comp=Z,232nm,1.1s
ULN Ulaanbaatar 26.37 337*c i*P **P** **14 02 18.1 -0.7**
ULN pmax pmax
comp=Z,263nm,1.1s
ULN MLR MLR
comp=Z,161μm,14.0s
ULN Ulaanbaatar 26.37 337 P **P** **14 02 19.9 +1.1**
ULN P **P** **14 02 19.9 +1.1**
SANI Sanana 26.38 170 P **P** **14 02 20.8 +1.9**
SANI Sanana 26.38 170 P **P** **14 02 13.1 -5.8**
SANI Sanana 26.38 170 P **P** **14 02 18.5 -0.4**
comp=Z,92nm,1.2s,comp=Z,5μmcomp=Z,18μm
SAIH SAIHA 26.42 272 *e*P **P** **14 02 19.7 +0.3**
SAIH IAmb IAmb 14 02 33.3
comp=Z,99nm,0.9s
SAIH IAMs_20 IAMs_20 14 14 34.6
comp=Z,34μm,12.7s
HEH HeiHe 26.42 8 *e*P **P** **14 02 18.6 -0.4**
HEH pP **pP** **14 02 22.6 -0.9**
HEH S **S** **14 06 53.6 +1.7**
HEH sS **sS** **14 07 03.9 +4.0**
HEH pmax pmax
comp=Z,39nm,1.1s
HEH pmax pmax
comp=Z,8μm,5.9s
HEH LR LR
comp=Z,124μm,12.9s
HEH LR LR
comp=Z,95μm,13.6s
HEH LR LR
comp=Z,210μm,15.1s
SONM Songino Array 26.58 337 P **P** **14 02 19.9 -0.6**
SONM IAmb IAmb 14 02 35.1
comp=Z,328nm,1.2s
SONM Songino Array 26.58 337 P **P** **14 02 20.0 -0.6**
SONM pmax pmax
comp=Z,328nm,1.2s
SONM Songino Array 26.58 337 P **P** **14 02 19.8 -0.8**
comp=Z,73nm,1.1s,baz=156,slow=7.5,SNR=107
SONM ScP **ScP** **14 09 26.3 +1.9**
comp=Z,3.4nm,1.1s,baz=161,slow=3.8,SNR=2.9
SONM LR LR 14 13 56.6
comp=Z,166μm,18.1s,baz=144,slow=39
comp=Z,73nm,1.1s
SHL Shillong 27.08 279 P **P** **14 02 23.5 -1.9**
SHL IAmb IAmb 14 03 04.5
comp=Z,288nm,1.2s
SHL Shillong 27.08 279 P **P** **14 02 23.5 -1.9**
SHL pmax pmax
comp=Z,288nm,1.2s
SHL Shillong 27.08 279 *e*P **P** **14 02 25.8 +0.4**
SHL IAmb IAmb 14 02 34.7
comp=Z,151nm,1.1s
SHL IAMs_20 IAMs_20 14 14 29.0
comp=Z,48μm,14.0s
SHL Shillong 27.08 279 P **P** **14 02 29.6 +4.2**
SNR=81
TTSI Tana Toraja 27.10 184 P **P** **14 02 28.6 +3.2**
comp=Z,94nm,1.0s,comp=Z,3μmcomp=Z,15μm
GUWA GUWAHATI 27.22 281 *e*P **P** **14 02 27.6 +1.1**
GUWA IAmb IAmb 14 02 33.3
comp=Z,205nm,1.0s
GUWA IAMs_20 IAMs_20 14 14 18.2
comp=Z,36μm,14.7s
KULM Kulim 27.62 231 IAMs_20 IAMs_20 14 12 21.2
comp=Z,18μm,22.0s
NLAI Namlea 27.73 168 P **P** **14 02 33.5 +2.5**
comp=Z,88nm,0.8s,comp=Z,4μm
LSA Lhasa 27.76 288 IAmb IAmb 14 02 40.9
comp=Z,102nm,0.8s
LSA Lhasa 27.76 288 P **P** **14 02 33.4 +1.6**
LSA Lhasa 27.76 288 P **P** **14 02 36.5 +4.7**
AGT Agartala 27.81 276 *e*P **P** **14 02 34.3 +2.6**
AGT IAMs_20 IAMs_20 14 16 40.7
comp=Z,67μm,17.4s
IPM Ipoh 27.93 229 P **P** **14 02 32.0 -0.9**
IPM IAmb IAmb 14 02 39.0
comp=Z,204nm,1.5s
IPM Ipoh 27.93 229 P **P** **14 02 34.3 +1.4**
YUK Yuzh-Kuril'sk 27.98 39 *e*P **P** **14 02 32.6 -0.4**
YUK *e*S **S** **14 07 17.4 +0.8**
YUK *e*SS **SnSn** **14 08 31.4 +0.2**
YUK pmax pmax
comp=Z,806nm,1.3s
YUK pmax pmax

comp=N,520nm,1.0s
YUK pmax pmax
comp=E,376nm,1.3s
YUK MLR MLR
comp=N,25µm,15.0s
YUK MLR MLR
comp=Z,29µm,15.0s
YSS Yuzh-Sakhalins 28.30 31 P **P** **14 02 35.8 -0.1**
YSS IAMs_20 IAMs_20 14 12 50.3
comp=Z,50µm,22.0s
YSS Yuzh-Sakhalins 28.30 31 P **P** **14 02 40.4 +4.6**
YSS Yuzh-Sakhalins 28.30 31 *e*P **P** **14 02 34.3 -1.5**
YSS *e* 14 05 54.6
YSS *e*S **S** **14 07 19.7 -1.8**
YSS *e* 14 08 58.3
YSS pmax pmax
comp=Z,100nm,1.2s
YSS pmax pmax
comp=Z,2µm,10.8s
YSS smax smax
comp=E,2µm,11.3s
CIT Chita 28.51 349 *e*P **P** **14 02 38.2 +0.4**
CIT *e* 14 03 35.5
CIT *e* 14 03 43.8
CIT *e* 14 07 20.2
CIT *e* 14 07 30.3
CIT *e* 14 13 23.5
CIT pmax pmax
comp=Z,422nm,2.1s
FAKI Fak Fak 28.80 158 P **P** **14 02 38.2 -2.4**
FAKI IAmb IAmb 14 03 00.9
comp=Z,277nm,1.3s
FAKI Fak Fak 28.80 158 P **P** **14 02 39.7 -0.9**
FAKI Fak Fak 28.80 158 P **P** **14 02 41.4 +0.8**
comp=Z,161nm,1.0s,comp=Z,3µmcomp=Z,13µm
GRNR Gornyy 28.90 19⇓ *i*P **P** **14 02 42.0 +0.8**
GRNR *e*S **S** **14 07 36.6 +5.5**
GRNR pmax pmax
comp=E,3.0nm,0.9s
GRNR pmax pmax
comp=N,3.0nm,1.0s
GRNR pmax pmax
comp=Z,3.0nm,1.2s
GRNR smax smax
comp=N,7.0nm,0.7s
GRNR MLR MLR
comp=E,36µm,13.0s
GRNR MLR MLR
comp=N,29µm,14.0s
GRNR MLR MLR
comp=Z,30µm,12.0s
KAPI Kappang 29.06 184 P **P** **14 02 44.0 +1.1**
KAPI Kappang 29.06 184 *d i*P **P** **14 02 40.0 -2.9**
KAPI pmax pmax
comp=Z,146nm,1.5s
KAPI Kappang 29.06 184 P P 14 02 48.0 +5.1
KAPI P P 14 02 48.0 +5.1
UGL Uglegorsk 29.57 28 *e*P P 14 02 41.2 -5.9
UGL *e* 14 03 50.0
UGL pmax pmax
comp=Z,100nm,1.1s
UGL pmax pmax
comp=Z,3µm,13.0s
UGL MLR MLR
comp=E,62µm,13.0s
UGL MLR MLR
comp=N,35µm,12.0s
UGL MLR MLR
comp=Z,61µm,13.0s
ZEA Zeya 29.83 7 *e*P **P** **14 02 48.4 -1.0**
ZEA *e* 14 07 47.3
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=N,50nm,1.1s
ZEA pmax pmax
comp=Z,80nm,1.5s
ZEA MLR MLR
comp=N,90µm,13.0s
ZEA MLR MLR
comp=Z,87µm,14.0s
ZAK Zakamensk 29.84 336 *e*P **P** **14 02 49.5 -0.1**
ZAK *e* 14 09 35.3
ZAK pmax pmax
comp=Z,64nm,1.1s
ZAK pmax pmax
comp=Z,26nm,1.5s
KUR Kuril'sk 29.85 39 P **P** **14 02 49.0 -0.6**
KUR *e*S **S** **14 07 45.6 -0.3**
KUR MLR MLR
comp=Z,54µm,18.0s
KUR MLR MLR
comp=N,36µm,19.0s
KUR MLR MLR
comp=E,44µm,19.0s
GTK Tadong 29.95 283 *e*P **P** **14 02 54.9 +4.0**
GTK IAmb IAmb 14 03 02.9
comp=Z,80nm,0.7s
LHMI Lhok Sumawe 30.36 236 IAMs_20 IAMs_20 14 15 57.9
comp=Z,15µm,20.0s
PSI Prapat 30.59 230 P **P** **14 02 58.3 +1.7**
KCSI Kotacane, Aceh 30.90 232 P P 14 03 04.1 +4.9
comp=Z,35nm,1.0s,comp=Z,1µm
BKNI Bangkinang 31.03 223 IAMs_20 IAMs_20 14 16 48.8
comp=Z,17µm,18.0s
BKNI Bangkinang 31.03 223 P **P** **14 03 02.8 +2.4**
BKNI Bangkinang 31.03 223 P **P** **14 02 57.4 -3.0**
TYV Tymovskoe 31.19 26 *e*P P 14 03 07.7 +6.3
TYV pmax pmax
comp=Z,1µm,7.0s
TYV pmax pmax
comp=Z,50nm,0.9s
TYV MLR MLR
comp=Z,60µm,13.0s
TYV MLR MLR
comp=N,39µm,13.0s
MLSI Meulaboh, Aceh 31.40 235 P **P** **14 03 06.4 +2.8**
comp=N,82nm,0.7s
PMBI Palembang 31.57 214 IAMs_20 IAMs_20 14 16 13.6
comp=Z,11µm,20.0s
MOY Mondy 31.73 335 *e*P **P** **14 03 06.5 +0.1**
MOY pmax pmax
comp=Z,186nm,3.8s
GENI Genyem 32.08 143 P **P** **14 03 12.7 +3.1**
GENI Genyem 32.08 143 P P 14 03 17.7 +8.1
comp=Z,145nm,1.8s,comp=Z,4µm
NKL Nikolayevsk 32.31 21 *e*P **P** **14 03 13.5 +2.3**
NKL *e*S **S** **14 08 24.6 +0.4**
NKL pmax pmax
comp=N,98nm,1.2s
NKL pmax pmax
comp=E,127nm,1.4s
NKL pmax pmax
comp=Z,332nm,1.4s
NKL smax smax
comp=N,371nm,7.2s
NKL smax smax
comp=E,938nm,7.2s
NKL MLR MLR
comp=E,195µm,12.0s
NKL MLR MLR
comp=N,294µm,13.0s
NKL MLR MLR
comp=Z,460µm,13.0s
PDSI Padang 32.35 223 P **P** **14 03 16.0 +4.0**
comp=Z,31nm,1.1s,comp=Z,2µmcomp=Z,5µm
GSI Gunungsitoli 32.59 229 P **P** **14 03 11.9 -2.3**
GSI Gunungsitoli 32.59 229 P **P** **14 03 15.6 +1.5**
GSI Gunungsitoli 32.59 229 P **P** **14 03 16.1 +2.0**
comp=Z,67nm,1.3s
MMRI Maumere 32.60 179 P **P** **14 03 13.4 -0.7**
MMRI Maumere 32.60 179 P **P** **14 03 14.7 +0.6**
MMRI Maumere 32.60 179 P **P** **14 03 14.9 +0.8**
comp=Z,239nm,1.3s,comp=Z,4µmcomp=Z,9µm
SRBI Singaraja 32.67 192 P P 14 03 19.6 +4.9
comp=Z,67nm,1.2s,comp=Z,3µmcomp=Z,8µm
BLJI Banyuglugur 32.69 195 P **P** **14 03 15.1 +0.2**
comp=Z,186nm,0.8s,comp=Z,3µmcomp=Z,9µm
KRJI Kerinci 32.69 220 P P 14 03 21.2 +6.2
comp=Z,359nm,1.1s,comp=Z,7µmcomp=Z,6µm
BOK Bokaro 32.69 277 *e*P **P** **14 03 17.7 +2.7**
BOK *e*P **pP** **14 03 19.1 -0.9**
BOK IAmb IAmb 14 03 25.4
comp=Z,86nm,1.2s
BOK IAMs_20 IAMs_20 14 17 35.4
comp=Z,20µm,14.7s

SNSI Sinabang, Aceh 32.70 232 P **P** **14 03 16.9 +1.8**
comp=Z,154nm,0.8s,comp=Z,3µm
EDFI Ende, Flores 32.71 180 P **P** **14 03 13.5 -1.7**
comp=Z,159nm,1.0s,comp=Z,3µmcomp=Z,9µm
NGJI Ngawi 32.90 199 P **P** **14 03 19.8 +3.1**
comp=Z,173nm,1.2s,comp=Z,5µmcomp=Z,13µm
SMRI Semarang 32.91 201 IAMs_20 IAMs_20 14 18 53.0
comp=Z,8µm,19.0s
PLAI Plampang 33.01 187 P **P** **14 03 17.7 0.0**
PLAI Plampang 33.01 187 P P 14 03 25.8 +8.1
comp=Z,79nm,0.9s,comp=Z,3µm
TWSI Taliwang, Sumb 33.04 189 P **P** **14 03 20.7 +2.8**
comp=Z,99nm,1.3s,comp=Z,3µmcomp=Z,10µm
GMJI Gumukmas 33.23 195 P P 14 03 25.9 +6.3
comp=Z,62nm,2.0s,comp=Z,3µm
DNP Denpasar 33.25 192 P P 14 03 27.0 +7.2
comp=Z,452nm,0.8s,comp=Z,19µmcomp=Z,17µm
JAGI Jajag, Banyuwa 33.26 194 IAMs_20 IAMs_20 14 16 59.4
comp=Z,15µm,22.0s
SISI Saibi 33.54 224 P **P** **14 03 24.9 +2.6**
comp=Z,110nm,1.3s,comp=Z,3µm
KPJI Karang Pucung 33.70 203 P **P** **14 03 25.9 +2.2**
comp=Z,130nm,1.7s,comp=Z,5µm
UGM Wanagama 33.70 200 IAMs_20 IAMs_20 14 19 38.8
comp=Z,10µm,21.0s
SBJI Serang 33.72 209 P P 14 03 30.4 +6.5
comp=Z,163nm,1.1s,comp=Z,7µm
LWLI Liwa 33.72 213 P **P** **14 03 25.9 +1.8**
comp=Z,400nm,0.8s,comp=Z,5µmcomp=Z,8µm
SOEI Soe 33.80 175 P **P** **14 03 21.9 -2.8**
SOEI IAmb IAmb 14 03 42.8
comp=Z,90nm,0.8s
SOEI Soe 33.80 175 P **P** **14 03 25.2 +0.5**
SOEI Soe 33.80 175 P P 14 03 19.8 -4.9
SOEI Soe 33.80 175 P **P** **14 03 27.8 +3.1**
comp=Z,138nm,0.9s,comp=Z,2µmcomp=Z,14µm
DBJI Dramaga 33.84 207 P **P** **14 03 29.5 +4.5**
comp=Z,241nm,2.0s,comp=Z,9µmcomp=Z,11µm
KASI Kota Agung 33.95 212 P **P** **14 03 28.7 +2.8**
comp=Z,133nm,1.1s,comp=Z,3µm
WMQ Urumqi 34.02 314 *e*P **P** **14 03 27.3 +0.9**
WMQ S **S** **14 08 52.3 +0.9**
WMQ PcS **PcS** **14 09 49.7 -0.5**
WMQ pmax pmax
comp=Z,55nm,1.9s
WMQ pmax pmax
comp=Z,2µm,5.3s
WMQ LR LR
comp=Z,77µm,12.3s
WMQ LR LR
comp=Z,72µm,12.3s
WMQ LR LR
comp=Z,37µm,13.1s
BOD Bodaibo 34.08 353 *e*P **P** **14 03 25.1 -1.6**
BOD pmax pmax
comp=Z,62nm,1.8s
BASI Baing, Sumba 34.19 182 P P 14 03 36.8 +8.9
comp=Z,245nm,1.7s
BBJI Bungbulang 34.30 205 P **P** **14 03 31.0 +2.0**
TABU Tabubil 34.89 144 P **P** **14 03 36.2 +2.1**
BLSP Bilaspur 36.38 275 *e*P **P** **14 03 47.5 +0.6**
BLSP IAmb IAmb 14 03 53.5
comp=Z,76nm,1.2s
LGTI Lohaghat 37.25 287 *e*P **P** **14 03 56.1 +1.9**
LGTI IAmb IAmb 14 04 02.5
comp=Z,107nm,1.3s
PTH Pithoragarh 37.27 288 *e*P **P** **14 03 55.9 +1.3**
ZSN Zaisan 37.35 318 *e*P **P** **14 03 55.4 +0.5**
baz=318
ZSN *e*S **S** **14 09 44.9 +2.7**
baz=318
ZSN Zaisan 37.35 318 *e*P **P** **14 03 55.4 +0.5**
ZSN *e*S **S** **14 09 44.8 +2.7**
SKR Severo-Kuril's 37.49 36 *e*P P 14 03 42.5 -13
SKR *e*S **S** **14 09 39.7 -4.4**
SKR pmax pmax
comp=Z,500nm,5.0s
SKR MLR MLR
comp=Z,41µm,15.0s
MTN Manton Dam 37.91 165 IAmb IAmb 14 04 25.3
comp=Z,246nm,1.4s
MTN Manton Dam 37.91 165 P **P** **14 04 00.2 +0.4**
KDU Kakadu 38.10 163 P **P** **14 04 00.5 -0.9**
YAK Yakutsk 38.24 6 P **P** **14 04 01.5 -0.6**
YAK IAmb IAmb 14 04 14.5
comp=Z,142nm,0.9s
YAK Yakutsk 38.24 6 *e*P **P** **14 03 59.8 -2.3**
YAK *e**PP **sP** **14 04 07.8 -0.8**
YAK *e* 14 05 27.4
YAK *e* 14 06 13.3
YAK *e*S **S** **14 09 55.1 -0.1**
YAK *e**SS **ScP** **14 10 04.4 +0.8**
YAK *e* 14 14 12.5
YAK pmax pmax
comp=Z,88nm,1.8s
YAK pmax pmax
comp=N,36nm,1.1s
YAK pmax pmax
comp=E,14nm,1.1s
YAK pmax pmax
comp=Z,4µm,11.8s
YAK pmax pmax
comp=E,347nm,2.8s
YAK pmax pmax
comp=N,761nm,3.0s
YAK smax smax
comp=E,2µm,13.1s
YAK smax smax
comp=N,1µm,6.5s
YAK MLR MLR
comp=Z,119µm,25.0s
YAK MLR MLR
comp=N,95µm,17.0s
YAK MLR MLR
comp=E,36µm,18.0s
YAK Yakutsk 38.24 6 P **P** **14 03 58.6 -3.6**
comp=E,34nm,0.9s,baz=342,slow=0.6,SNR=21
YAK PcP **PcP** **14 06 16.7 +0.6**
comp=E,35nm,0.8s,baz=202,slow=1.2,SNR=3.6
YAK ScP **ScP** **14 10 02.4 -1.2**
comp=E,3.0nm,0.3s,baz=192,slow=6.3,SNR=1.6
YAK ScS **ScS** **14 14 09.5 -3.3**
comp=E,3.4nm,0.3s,baz=122,slow=22,SNR=1.1
YAK LR LR 14 21 30.3
comp=E,80µm,18.4s,baz=186,slow=39
comp=E,34nm,0.9s
MK31 Makanchi Array 38.70 316 P **P** **14 04 06.0 -0.2**
MK31 IAmb IAmb 14 04 19.6
comp=Z,173nm,1.2s
MK31 Makanchi Array 38.70 316 *c i*P **P** **14 04 05.7 -0.6**
MKAR Makanchi Array 38.70 316 P **P** **14 04 03.3 -2.9**
comp=Z,14nm,0.7s,baz=102,slow=10.0,SNR=56
MKAR ScP **ScP** **14 10 06.1 +0.4**
comp=Z,2.3nm,0.8s,baz=106,slow=5.4,SNR=3.5
MKAR ScS **ScS** **14 14 12.4 -3.8**
comp=Z,0.6nm,0.9s,baz=122,slow=1.6,SNR=1.2
MKAR LR LR 14 21 21.0
comp=Z,62µm,18.5s,baz=110,slow=38
comp=Z,14nm,0.7s
MAKZ Makanchi 38.90 316 P **P** **14 04 07.2 -0.8**
MAKZ IAmb IAmb 14 04 21.5
comp=Z,284nm,1.4s
MAKZ Makanchi 38.90 316 P **P** **14 04 07.2 -0.8**
MAKZ pmax pmax
comp=Z,284nm,1.4s
MAKZ MLR MLR
comp=Z,18µm,20.0s
KLP Kalpa 38.93 291 *e*P **P** **14 04 07.4 -1.4**
PATS Pohnpei 39.07 110 IAMs_20 IAMs_20 14 17 51.0
comp=Z,22µm,21.0s
PATS Pohnpei 39.07 110 P **P** **14 04 12.9 +3.2**
DDI Dehra Dun 39.12 289 *e*P **P** **14 04 10.7 +0.6**
DDI IAmb IAmb 14 04 19.5
comp=Z,183nm,1.1s
DDI IAMs_20 IAMs_20 14 21 25.0
comp=Z,62µm,13.9s
SHLS Shalkode 39.45 309 *e*P **P** **14 04 10.7 -2.1**
comp=Z,204nm,2.2s,baz=310
SHLS Shalkode 39.45 309 *e*P **P** **14 04 10.7 -2.1**
SHLS pmax pmax
comp=Z,204nm,2.2s
PDGK Podgornoye 39.48 310 P **P** **14 04 13.0 0.0**
PETK Petropavlovsk- 39.62 34 P **P** **14 04 11.2 -2.7**
comp=Z,3.9nm,0.9s,baz=197,slow=4.6,SNR=9.7
PETK PcP **PcP** **14 06 21.2 +0.5**
comp=Z,10nm,0.9s,baz=224,slow=4.0,SNR=4.0

PETK LR LR 14 21 52.5
comp=Z,60µm,18.1s,baz=224,slow=38
comp=Z,3.9nm,0.9s
UZB Uzynbulak 39.76 309 *e*P **P** **14 04 15.6 +0.2**
comp=Z,220nm,2.3s,baz=309
UZB *e*S **S** **14 10 20.9 +1.8**
baz=309
UZB Uzynbulak 39.76 309 *e*P **P** **14 04 15.6 +0.2**
UZB *e*S **S** **14 10 20.8 +1.8**
UZB pmax pmax
comp=Z,220nm,2.3s
SMLA Simla 39.86 290 *e*P **P** **14 04 16.9 +0.8**
SMLA IAmb IAmb 14 04 36.9
comp=Z,338nm,1.4s
SMLA IAMs_20 IAMs_20 14 21 36.7
comp=Z,29µm,13.4s
NDI New Delhi 39.94 286 *e*P **P** **14 04 16.3 -0.5**
PRZ Przheval'sk 40.05 308 IAMs_20 IAMs_20 14 21 31.3
comp=Z,42µm,18.0s
PET Petropavlovsk 40.06 34 P **P** **14 04 16.8 -0.6**
PET IAMs_20 IAMs_20 14 21 46.4
comp=Z,28µm,18.0s
PET Petropavlovsk 40.06 34 P **P** **14 04 18.6 +1.1**
PET Petropavlovsk 40.06 34 *e*P **P** **14 04 16.4 -1.1**
PET *e*S **S** **14 10 20.7 -2.1**
PET pmax pmax
comp=Z,1µm,6.9s
PET pmax pmax
comp=Z,1µm,12.8s
PET pmax pmax
comp=Z,123nm,1.0s
PET smax smax
comp=E,3µm,19.0s
PET smax smax
comp=N,1µm,18.5s
PET smax smax
comp=N,1µm,14.8s
PET MLR MLR
comp=Z,53µm,17.0s
KPKS Kokpek 40.08 309 *e*P **P** **14 04 17.9 -0.1**
comp=Z,137nm,1.9s,baz=310
KPKS *e*S **S** **14 10 25.7 +1.9**
baz=310
KPKS Kokpek 40.08 309 *e*P **P** **14 04 17.9 -0.1**
KPKS *e*S **S** **14 10 25.6 +1.9**
KPKS pmax pmax
comp=Z,137nm,1.9s
SONA Sohna 40.09 286 *e*P **P** **14 04 19.2 +1.1**
SATY Saty 40.18 309 *e*P **P** **14 04 18.9 +0.1**
comp=Z,194nm,2.5s,baz=309
SATY *e*S **S** **14 10 26.4 +1.2**
baz=309
SATY Saty 40.18 309 *e*P **P** **14 04 18.9 +0.1**
SATY *e*S **S** **14 10 26.4 +1.2**
SATY pmax pmax
comp=Z,194nm,2.5s
KNRA Kununurra 40.19 169 P **P** **14 04 16.0 -2.9**
KNRA Kununurra 40.19 169 P **P** **14 04 18.2 -0.6**
ZHN Zhinishke 40.19 309 *e*P **P** **14 04 19.2 +0.3**
baz=309
ZHN Zhinishke 40.19 309 *e*P **P** **14 04 19.2 +0.3**
BHK Bhakra 40.50 291⇑ *e*P **P** **14 04 20.4 -1.1**
BHK IAmb IAmb 14 04 34.8
comp=Z,275nm,1.3s
ZAA0 Zalesovo Array 40.53 327 P **P** **14 04 19.0 -2.4**
ZALV Zalesovo Beam 40.53 327 P **P** **14 04 17.6 -3.8**
ZALV Zalesovo Beam 40.53 327 P **P** **14 04 17.6 -3.8**
ZALV Zalesovo Beam 40.53 327 P **P** **14 04 19.1 -2.2**
comp=Z,19nm,0.8s,baz=116,slow=7.3,SNR=49
ZALV ScP **ScP** **14 10 12.5 -0.1**
comp=Z,1.1nm,0.8s,baz=111,slow=6.3,SNR=1.5
ZALV S **S** **14 10 25.6 -4.3**
comp=Z,6.2nm,0.9s,baz=116,slow=5.1,SNR=4.2
ZALV ScS **ScS** **14 14 18.9 -7.7**
comp=Z,0.4nm,0.4s,baz=93,slow=26,SNR=1.1
ZALV LR LR 14 22 12.0
comp=Z,54µm,18.7s,baz=127,slow=38
comp=Z,19nm,0.8s
DHRM DHARAMSHALA 40.59 292 *e*P **P** **14 04 23.5 +1.1**
DHRM IAmb IAmb 14 04 42.3
comp=Z,394nm,1.6s
DHRM IAMs_20 IAMs_20 14 23 51.9
comp=Z,33µm,17.4s
KUDL Kundal 40.62 286 *e*P **P** **14 04 21.6 -0.9**
MDRS Chennai 40.68 262 IAmb IAmb 14 04 32.8
comp=Z,52nm,1.1s
MDRS IAMs_20 IAMs_20 14 22 33.1
comp=Z,8µm,21.2s
TDK Taldyqorghan 40.68 312 *e*P **P** **14 04 23.4 +0.5**
comp=Z,287nm,1.7s,baz=312
TDK *e*S **S** **14 10 34.4 +1.9**
baz=312
TDK LR LR 14 21 22.0
comp=Z,18µm,11.0s,baz=312
TDK Taldyqorghan 40.68 312 *e*P **P** **14 04 23.3 +0.5**
TDK *e*S **S** **14 10 34.3 +1.9**
TDK pmax pmax
comp=Z,287nm,1.7s
TDK MLR MLR
comp=Z,18µm,11.0s
HYB Hyderabad 40.78 269 *e*P **P** **14 04 23.3 -0.7**
HYB *es*P **pP** **14 04 28.2 -0.6**
HYB *e*PP **PnPn** **14 06 06.5 +4.3**
HYB *e*S **S** **14 10 34.7 +0.1**
HYB IVMs_BB IVMs_BB 14 25 19.7
comp=Z,6µm,10.9s
RABL Rabaul 40.90 129 P **P** **14 04 27.6 +2.7**
THN Thein Dam 41.08 292 *e*P **P** **14 04 26.4 +0.2**
MDOK Medeo 41.17 309 *e*P **P** **14 04 27.1 +0.1**
baz=309
MDOK *e*S **S** **14 10 42.2 +2.1**
baz=309
MDOK LR LR 14 21 40.0
comp=Z,32µm,11.2s,baz=309
MDOK Medeo 41.17 309 *e*P **P** **14 04 27.1 +0.1**
MDOK *e*S **S** **14 10 42.1 +2.1**
MDOK MLR MLR
comp=Z,32µm,11.0s
KNDC Almaty 41.24 309 P **P** **14 04 29.3 +1.8**
AAA Alma-Ata 41.28 309 *e*P **P** **14 04 28.1 +0.3**
baz=309
AAA LR LR 14 21 44.7
comp=Z,41µm,12.0s,baz=309
AAA Alma-Ata 41.28 309 *e*P **P** **14 04 28.1 +0.3**
AAA MLR MLR
comp=Z,41µm,12.0s
KSH Kashi 41.32 303 P **P** **14 04 31.2 +2.9**
KSH sP sP 14 04 37.5 +2.1
KSH PcP **PcP** **14 06 26.8 +0.1**
KSH S **S** **14 10 45.5 +3.2**
KSH ScS **ScS** **14 14 30.8 -1.5**
KSH pmax pmax
comp=Z,21nm,1.2s
KSH pmax pmax
comp=Z,3µm,10.5s
KSH LR LR
comp=Z,55µm,13.1s
KSH LR LR
comp=Z,101µm,16.5s
AKL Akola 41.34 274 *e*P **P** **14 04 29.8 +1.3**
AKL IAmb IAmb 14 04 35.8
comp=Z,114nm,1.2s
SEM Semipalatinsk 41.35 320 *e*P **P** **14 04 27.3 -1.2**
comp=Z,138nm,1.9s,baz=320
SEM *e*S **S** **14 10 43.2 +0.6**
baz=320
SEM LR LR 14 21 53.4
comp=Z,10µm,13.4s,baz=320
SEM Semipalatinsk 41.35 320 *e*P **P** **14 04 27.2 -1.2**
SEM *e*S **S** **14 10 43.1 +0.6**
SEM pmax pmax
comp=Z,138nm,1.9s
SEM MLR MLR
comp=Z,10µm,13.0s
CHKK Chushkaly 41.37 310 *e*P **P** **14 04 28.5 -0.1**
baz=310
CHKK Chushkaly 41.37 310 *e*P **P** **14 04 28.4 -0.1**
ULHL Ulahol 41.56 307 P P 14 04 38.0 +7.6
SNR=5.9
NRN Naryn 41.59 306 IAMs_20 IAMs_20 14 22 57.6
comp=Z,44µm,19.0s
PMG Port Moresby 41.60 140 P **P** **14 04 29.1 -1.5**
PMG IAmb IAmb 14 04 48.3
comp=Z,216nm,1.1s
PMG Port Moresby 41.60 140 IAMs_20 IAMs_20 14 21 23.9
comp=Z,20µm,19.0s

PMG Port Moresby 41.60 140 P **P** 14 04 32.4 +1.9
PMG Port Moresby 41.60 140 P **P** 14 04 32.5 +1.9
PMG Port Moresby 41.60 140 *ce*P **P** 14 04 29.1 -1.5
PMG pmax pmax
comp=Z,210nm,1.1s
PMG MLR MLR
comp=Z,9µm,16.0s
PMG Port Moresby 41.60 140 LR LR 14 21 35.6
comp=Z,20µm,19.1s,baz=306,slow=36
BOOM Boomskoye usch 41.83 307 IAMs_20 IAMs_20 14 24 11.3
comp=Z,26µm,18.0s
KUU Kurty 41.84 310⇑ *i*P **P** **14 04 32.4 +0.1**
comp=Z,279nm,1.8s,baz=310
KUU *e*S **S** **14 10 51.9 +2.2**
baz=310
KUU LR LR 14 21 58.7
comp=Z,27µm,11.7s,baz=310
KUU Kurty 41.84 310 *c i*P **P** **14 04 32.4 +0.1**
KUU *e*S **S** **14 10 51.8 +2.2**
KUU pmax pmax
comp=Z,279nm,1.8s
KUU MLR MLR
comp=Z,27µm,12.0s
WAKE Wake Island 41.89 88 P **P** **14 04 35.9 +2.9**
H11N1 WAKE ISLAND Hy 42.00 87 T T 14 49 55.8
baz=281
H11N2 WAKE ISLAND Hy 42.00 87 T T 14 49 50.3
baz=281,slow=74
H11N3 WAKE ISLAND Hy 42.02 87 T T 14 49 53.4
baz=281,slow=74
H11S3 WAKE ISLAND Hy 42.13 89 T T 14 49 53.0
baz=287,SNR=318
H11S1 WAKE ISLAND Hy 42.14 89 T T 14 50 03.4
baz=287,slow=74
H11S2 WAKE ISLAND Hy 42.15 89 T T 14 49 56.2
baz=287,slow=74
TKM2 Tokmak 2 42.16 308 P **P** **14 04 36.4 +1.1**
SNR=33
TKM2 Tokmak 2 42.16 308 P **P** **14 04 36.0 +0.8**
MALK Mahakanadarawa 42.33 255 P **P** **14 04 32.2 -4.4**
KURK Kurchatov 42.42 320 P **P** **14 04 34.9 -2.1**
KURK IAmb IAmb 14 04 46.0
comp=Z,155nm,1.2s
KURK Kurchatov 42.42 320 *d i*P **P** **14 04 35.2 -1.8**
KURK pmax pmax
comp=Z,161nm,1.2s
KURK MLR MLR
comp=Z,28µm,10.0s
KURK Kurchatov 42.42 320 P **P** **14 04 39.0 +2.1**
KURK P **P** **14 04 39.0 +2.1**
AJM Ajmer 42.43 283 *e*P **P** **14 04 37.7 +0.2**
KURBB Kurchatov Arra 42.44 320 P **P** **14 04 36.1 -1.0**
comp=Z,32nm,1.1s,baz=117,slow=7.4,SNR=56
KURBB ScP **ScP** **14 10 19.9 -0.4**
comp=Z,1.7nm,0.8s,baz=114,slow=3.6,SNR=2.9
KURBB S **S** **14 10 58.6 +0.3**
comp=Z,1.5nm,1.1s,baz=79,slow=5.0,SNR=1.3
KURBB ScS **ScS** **14 14 34.1 -4.2**
comp=Z,0.1nm,0.4s,baz=332,slow=30,SNR=1.6
KURBB LR LR 14 24 01.0
comp=Z,17µm,20.4s,baz=116,slow=39
comp=Z,32nm,1.1s
KBK Karagaybulak 42.58 307 P **P** **14 04 40.0 +1.4**
SNR=22
PALK Pallekele 42.70 254 LR LR 14 23 32.3
comp=Z,10µm,19.5s,baz=162,slow=38
PALK Pallekele 42.70 254 P P 14 04 45.3 +5.6
PALK P P 14 04 45.3 +5.6
CHMS Chumysh 42.79 308 P **P** **14 04 40.7 +0.6**
SNR=18
UCH Uchtor 42.83 307 P **P** **14 04 42.7 +1.8**
SNR=25
FRU1 Bishkek 42.84 308 IAMs_20 IAMs_20 14 24 53.1
comp=Z,40µm,18.0s
AAK Ala-Archa 42.91 307 P **P** **14 04 42.4 +1.1**
SNR=12
AAK Ala-Archa 42.91 307 P **P** **14 04 40.2 -1.0**
AAK IAmb IAmb 14 04 59.6
comp=Z,220nm,1.6s
AAK Ala-Archa 42.91 307 IAMs_20 IAMs_20 14 24 44.8
comp=Z,40µm,19.0s
AAK Ala-Archa 42.91 307 *i*P **P** **14 04 41.9 +0.7**
SNR=15
AAK Ala-Archa 42.91 307⇓ *e*P **P** **14 04 42.2 +0.9**
AAK pmax pmax
comp=Z,140nm,1.6s
AAK MLR MLR
comp=Z,55µm,14.0s
AAK Ala-Archa 42.91 307 LR LR 14 24 47.9
comp=Z,33µm,18.3s,baz=88,slow=39
AAK Ala-Archa 42.91 307 P **P** **14 04 45.9 +4.7**
USP Ospenovka 43.02 308 P **P** **14 04 42.7 +0.7**
SNR=14
SALM Salem 43.06 261 *e*P **P** **14 04 46.5 +3.9**
NIL Nilore 43.14 294 IAMs_20 IAMs_20 14 24 25.8
comp=Z,28µm,20.0s
NIL Nilore 43.14 294 P P 14 04 48.1 +5.0
COEN Coen 43.30 149 P **P** **14 04 42.8 -1.6**
COEN IAmb IAmb 14 05 02.1
comp=Z,236nm,1.2s
COEN Coen 43.30 149 P **P** **14 04 44.0 -0.4**
EKS2 Erkin-Say 43.43 307 P **P** **14 04 50.1 +4.7**
SNR=8.6
BTLS Baital 43.69 311 *e*P **P** **14 04 47.3 -0.1**
baz=311
BTLS *e*S **S** **14 11 18.3 +1.5**
baz=311
BTLS Baital 43.69 311 *e*P **P** **14 04 47.2 -0.1**
BTLS *e*S **S** **14 11 18.3 +1.5**
SEY Seymchan 43.84 20⇓ *i*P **P** **14 04 48.5 +0.3**
SEY pmax pmax
comp=Z,56nm,1.9s
SEY MLR MLR
comp=Z,39µm,14.0s
SEY Seymchan 43.84 20 P **P** **14 04 47.3 -0.9**
comp=Z,7.8nm,0.9s,baz=229,slow=6.8,SNR=15
SEY ScP **ScP** **14 10 24.7 -1.0**
comp=Z,4.5nm,1.0s,baz=228,slow=7.2,SNR=2.7
SEY LR LR 14 25 16.4
comp=Z,32µm,18.8s,baz=217,slow=39
comp=Z,7.8nm,0.9s
KOD Kodaikanal 44.29 260 *e*P **P** **14 04 53.9 +1.1**
POO Poona 44.77 272 *e*P **P** **14 04 56.9 +0.5**
POO IAmb IAmb 14 05 02.8
comp=Z,57nm,0.7s
KAD Karad 44.81 271 *e*P **P** **14 04 55.6 -1.0**
DZA Taraz 45.25 307 *e*P **P** **14 05 00.3 +0.4**
baz=307
DZA Taraz 45.25 307 *e*P **P** **14 05 00.3 +0.4**
BTK Batken 45.33 303 IAMs_20 IAMs_20 14 26 07.9
comp=Z,36µm,21.0s
WB0 Warramunga Arr 45.37 163 IAmb IAmb 14 05 36.2
comp=Z,141nm,1.2s
PSA00 Pilbara Seismi 45.49 182 IAmb IAmb 14 05 05.4
comp=Z,226nm,1.8s
PSA00 Pilbara Seismi 45.49 182 P **P** **14 05 01.0 -0.9**
WRA Warramunga Arr 45.53 163 P **P** **14 04 59.5 -2.7**
comp=Z,18nm,0.6s,baz=345,slow=8.6,SNR=42
WRA S **S** **14 11 35.9 -8.0**
comp=Z,0.6nm,0.8s,baz=337,slow=14,SNR=1.5
WRA LR LR 14 24 16.8
comp=Z,7µm,21.8s,baz=1.0,slow=36
comp=Z,18nm,0.6s
WB2 Warramunga Arr 45.53 163 IAmb IAmb 14 05 29.0
comp=Z,143nm,1.2s
WR0 Warramunga Arr 45.60 163 IAmb IAmb 14 05 31.4
comp=Z,91nm,0.9s
JASL Jaisalmer 45.69 285⇑ *e*P **P** **14 05 05.8 +2.3**
BRZS Berezniki 45.78 317 *e*P **P** **14 05 03.7 -0.3**
baz=317
BRZS *e*S **S** **14 11 48.1 +1.0**
baz=317
BRZS Berezniki 45.78 317 *e*P **P** **14 05 03.6 -0.3**
BRZS *e*S **S** **14 11 48.0 +1.0**
KK31 Karatay Array 45.87 307 IAmb IAmb 14 05 16.4
comp=Z,152nm,1.5s
KK31 Karatay Array 45.87 307 *i*P **P** **14 05 04.7 -0.1**
KKAR Karatay Array 45.87 307 P **P** **14 05 04.3 -0.5**
KKAR Karatay Array 45.87 307 IAmb IAmb 14 05 16.4
comp=Z,152nm,1.5s
KKAR Karatay Array 45.87 307 P **P** **14 05 04.3 -0.5**
CHM Chimkent 46.45 306 *e*P **P** **14 05 09.7 +0.4**
baz=306
CHM LR LR 14 24 43.2
baz=306
CHM Chimkent 46.45 306 *e*P **P** **14 05 09.7 +0.4**

KBU Kabul Universi 46.54 295 P **P** **14 05 11.4 +1.0**
KBL Kabul 46.61 295 P **P** **14 05 09.5 -1.5**
KBL IAmb IAmb 14 05 45.5
comp=Z,136nm,1.1s
KBL IAMs_20 IAMs_20 14 26 13.1
comp=Z,22µm,18.0s
KBL Kabul 46.61 295 P **P** **14 05 09.5 -1.5**
KBL pmax pmax
comp=Z,136nm,1.1s
KBL MLR MLR
comp=Z,22µm,18.0s
KBL Kabul 46.61 295 P **P** **14 05 14.6 +3.6**
SNR=96
KBL P **P** **14 05 14.6 +3.6**
SNR=96
GIRL Giralia 47.09 189 P **P** **14 05 16.3 +1.9**
MTSU Mount Surprise 47.47 150 P **P** **14 05 17.9 +0.5**
TIXI Tiksi 47.69 3 P **P** **14 05 15.9 -2.6**
TIXI Tiksi 47.69 3 P **P** **14 05 15.9 -2.6**
TIXI pmax pmax
comp=Z,226nm,1.3s
TIXI MLR MLR
comp=Z,75µm,21.0s
TIXI Tiksi 47.69 3 LR LR 14 27 46.6
comp=Z,60µm,20.2s,baz=196,slow=39
QIS Mount Isa 47.74 157 P **P** **14 05 20.1 +0.6**
BVA0 Borovoye Array 48.00 321 P **P** **14 05 19.5 -1.7**
BVAR Borovoye Array 48.00 321 P **P** **14 05 20.9 -0.4**
comp=Z,25nm,0.7s,baz=108,slow=9.5,SNR=46
BVAR ScP **ScP** **14 10 43.5 +0.3**
comp=Z,1.9nm,0.8s,baz=108,slow=4.7,SNR=2.2
BVAR S **S** **14 12 14.0 -4.6**
comp=Z,0.6nm,0.8s,baz=316,slow=4.1,SNR=0.9
BVAR ScS **ScS** **14 15 10.2 -3.8**
comp=Z,0.5nm,0.7s,baz=40,slow=14,SNR=1.4
BVAR LR LR 14 28 45.2
comp=Z,17µm,18.6s,baz=97,slow=40
comp=Z,25nm,0.7s
BRVK Borovoye 48.07 321 P **P** **14 05 20.4 -1.4**
BRVK Borovoye 48.07 321 *c i*P **P** **14 05 20.9 -0.9**
BRVK pmax pmax
comp=Z,187nm,1.2s
BRVK MLR MLR
comp=Z,38µm,13.0s
BRVK Borovoye 48.07 321 P **P** **14 05 22.7 +1.0**
SHEM Shemya Is, Ala 48.54 40 S **S** **14 12 24.3 -1.8**
comp=Z,40nm,0.8s,baz=263,slow=20,SNR=0.9
SHEM LR LR 14 24 38.0
comp=Z,16µm,22.0s,baz=255,slow=35
ASAR Alice Springs 48.99 165 P **P** **14 05 27.5 -1.7**
comp=Z,8.6nm,0.7s,baz=341,slow=5.7,SNR=63
ASAR ScP **ScP** **14 10 46.8 -1.0**
comp=Z,8.2nm,1.2s,baz=348,slow=3.5,SNR=4.9
ASAR S **S** **14 12 29.1 -4.1**
comp=Z,0.3nm,0.7s,baz=270,slow=38,SNR=1.6
ASAR LR LR 14 26 44.0
comp=Z,8µm,21.4s,baz=354,slow=37
comp=Z,8.6nm,0.7s
AS01 Alice Springs 49.00 165 P **P** **14 05 29.9 +0.7**
WRKA Warakurna 49.32 172 P **P** **14 05 31.4 -0.3**
NRIK Noril'sk 49.55 345 IAmb IAmb 14 05 41.6
comp=Z,90nm,1.1s
NRIK Noril'sk 49.55 345 *c i*P **P** **14 05 30.2 -2.7**
NRIK pmax pmax
comp=Z,111nm,1.1s
NRIK MLR MLR
comp=Z,56µm,13.0s
NRIK Noril'sk 49.55 345 P **P** **14 05 31.2 -1.7**
comp=Z,53nm,1.1s,baz=133,slow=7.3,SNR=35
NRIK PcP **PcP** **14 06 54.0 -0.4**
comp=Z,35nm,1.0s,baz=119,slow=3.9,SNR=3.6
NRIK ScP **ScP** **14 10 49.0 -0.5**
comp=Z,2.2nm,0.4s,baz=137,slow=5.3,SNR=1.7
NRIK LR LR 14 28 12.6
comp=Z,44µm,19.4s,baz=140,slow=38
comp=Z,53nm,1.1s
TV1H Townsville Har 49.60 148 P **P** **14 05 35.4 +1.6**
CTA Charters Tower 50.05 149 LR LR 14 24 51.8
comp=Z,26µm,21.8s,baz=330,slow=34
CTAO Charters Tower 50.05 149 P **P** **14 05 36.3 -1.0**
CTAO IAmb IAmb 14 05 48.2
comp=Z,129nm,1.2s
CTAO Charters Tower 50.05 149 IAMs_20 IAMs_20 14 24 28.1
comp=Z,26µm,22.0s
CTAO Charters Tower 50.05 149 P **P** **14 05 38.6 +1.3**
CTAO Charters Tower 50.05 149 P **P** **14 05 36.3 -1.0**
CTAO pmax pmax
comp=Z,129nm,1.2s
HNR Honiara 50.08 127 IAMs_20 IAMs_20 14 25 14.4
comp=Z,10µm,19.0s
HNR Honiara 50.08 127 LR LR 14 25 16.0
comp=Z,120µm,20.2s,baz=302,slow=34
AUAYR Ayr State High 50.17 148 P **P** **14 05 40.2 +2.1**
MEEK Meekatharra 50.59 184 P **P** **14 05 42.0 +0.7**
MORW Morawa 53.20 186 P **P** **14 06 01.7 +1.0**
OOD Oodnadatta 53.38 165 P **P** **14 06 03.9 +1.9**
AB31 Akbulak array 53.81 314 *i*P **P** **14 06 04.6 -0.4**
ABKAR Akbulak array 53.81 314 P **P** **14 06 04.3 -0.7**
ABKAR Akbulak array 53.81 314 IAmb IAmb 14 06 26.9
comp=Z,66nm,0.9s
SVE Sverdlovsk 54.35 324 *de*P **P** **14 06 07.9 -0.9**
SVE *e* 14 08 11.7
SVE *e*PPP PPP 14 09 18.5
SVE *e*S **S** **14 13 47.9 +1.6**
SVE *e* 14 15 54.1
SVE *e*SS **SKiKP** **14 17 21.7 +2.7**
SVE pmax pmax
comp=Z,166nm,1.5s
SVE pmax pmax
comp=Z,2µm,14.9s
SVE MLR MLR
comp=E,41µm,15.0s
SVE MLR MLR
comp=Z,56µm,15.0s
SVE MLR MLR
comp=N,20µm,13.0s
TARA Tarawa 54.43 107 IAMs_20 IAMs_20 14 24 22.1
comp=Z,9µm,22.0s
TARA Tarawa 54.43 107 P **P** **14 06 13.8 +3.8**
BLDU Ballidu 54.67 185 P **P** **14 06 11.9 +0.5**
INKA Innaminka 54.77 159 P **P** **14 06 15.4 +3.3**
RK1H Rockhampton Ha 54.90 147 P **P** **14 06 15.1 +1.9**
QLP Quilpie 54.94 155 P **P** **14 06 14.8 +1.4**
FORT Forrest 54.96 173 P **P** **14 06 12.0 -1.5**
FORT IAmb IAmb 14 06 50.0
comp=Z,145nm,1.1s
FORT Forrest 54.96 173 P **P** **14 06 14.6 +1.1**
AKTO Aktyubinsk 55.13 316 P **P** **14 06 14.0 -0.6**
AKTO Aktyubinsk 55.13 316 LR LR 14 31 44.1
comp=Z,22µm,20.5s,baz=98,slow=38
KMBL Kambalda 55.21 180 P **P** **14 06 16.6 +1.3**
GEYT Alibeck 55.23 300 P **P** **14 06 15.5 -0.1**
comp=Z,58nm,1.1s,baz=73,slow=5.0,SNR=49
GEYT S **S** **14 14 00.1 +1.3**
comp=Z,0.7nm,0.4s,baz=14,slow=37,SNR=1.7
GEYT LR LR 14 32 35.6
comp=Z,19µm,19.5s,baz=96,slow=39
comp=Z,58nm,1.1s
GYA0B ALIBECK ARRAY 55.23 300 IAMs_20 IAMs_20 14 32 25.1
comp=Z,19µm,18.0s
MULG Mulgathing 55.41 167 P **P** **14 06 19.1 +2.4**
ARU Arti 55.42 323 P **P** **14 06 15.5 -1.1**
ARU IAmb IAmb 14 06 25.6
comp=Z,86nm,1.1s
ARU IAMs_20 IAMs_20 14 33 04.6
comp=Z,21µm,19.0s
ARU Arti 55.42 323 *c i*P **P** **14 06 15.3 -1.3**
ARU 14 07 17.1
ARU 14 08 18.2
ARU PPP PPP 14 09 39.8
ARU S **S** **14 14 01.0 +0.4**
ARU 14 16 00.5
ARU SS **SS** **14 17 43.4 -1.6**
ARU pmax pmax
comp=Z,139nm,1.5s
ARU MLR MLR
comp=Z,18µm,20.0s
ARU Arti 55.42 323 LR LR 14 33 24.8
comp=Z,19µm,18.6s,baz=90,slow=40
KLBR Kellerberrin 55.56 184 P **P** **14 06 19.6 +1.8**
MUN Mundaring 56.07 186 P **P** **14 06 21.5 +0.1**
LCRK Leigh Creek 56.55 163 P **P** **14 06 27.3 +2.4**
RMQ Roma 56.73 151 P **P** **14 06 30.1 +3.8**
EIDS Eidsvold 56.85 148 P **P** **14 06 28.4 +1.2**
JLN Jalan Bani Buh 56.90 282 P **P** **14 06 32.4 +4.7**

NWAO Narrogin (SRO) 56.93 184 P **P** **14 06 25.3 -2.2**
NWAO IAmb IAmb 14 06 35.0
comp=Z,218nm,1.8s
NWAO Narrogin (SRO) 56.93 184 P **P** **14 06 28.6 +1.1**
NWAO Narrogin (SRO) 56.93 184 P **P** **14 06 25.3 -2.2**
NWAO pmax pmax
comp=Z,218nm,1.8s
NWAO MLR MLR
comp=Z,3µm,20.0s
NWAO Narrogin (SRO) 56.93 184 LR LR 14 32 59.8
comp=Z,2µm,20.3s,baz=360,slow=38
WBK Wadi Bani Khal 57.17 282 P P 14 06 34.5 +4.8
WBK P P 14 06 34.5 +4.8
WBK P P 14 06 34.5 +4.8
WSAR Wadi Sarin 57.32 283 P **P** **14 06 35.3 +4.6**
DGAR Diego Garcia 57.38 243 P P 14 06 38.0 +6.9
BIDO Bidbid 57.70 283 P **P** **14 06 36.8 +3.5**
SNR=10
BIDO P **P** **14 06 36.8 +3.5**
SNR=10
SMDO Samad 57.88 283 P **P** **14 06 39.2 +4.4**
SNR=10
SMDO P **P** **14 06 39.2 +4.4**
SNR=10
JMDO Jabal Madar 58.01 282 P **P** **14 06 40.2 +4.6**
JMDO P **P** **14 06 40.2 +4.6**
SPIA Saint Paul Isl 58.17 36 P **P** **14 06 35.5 -0.5**
baz=266
GAMB Gambell 58.27 29 P **P** **14 06 36.2 -0.4**
baz=260
GAMB S **S** **14 14 35.4 -2.6**
baz=260
BBOO Buckleboo 58.28 166 P **P** **14 06 39.4 +2.3**
MHTO MHTO 58.50 281 P **P** **14 06 42.6 +3.6**
MHTO P **P** **14 06 42.6 +3.6**
MHTO P **P** **14 06 42.6 +3.6**
P08K Saint George I 58.51 37 P **P** **14 06 36.7 -1.7**
baz=267
BSY Bisya 58.72 283 P **P** **14 06 44.7 +4.1**
BSY P **P** **14 06 44.7 +4.1**
NIKH Nikolski High 58.79 41 P **P** **14 06 39.3 -1.1**
baz=269
WHYH Whyalla 58.85 164 P **P** **14 06 43.2 +2.2**
STKA Stephens Creek 58.87 160 P **P** **14 06 42.1 +0.9**
STKA Stephens Creek 58.87 160 *d i*P **P** **14 06 38.7 -2.5**
STKA Stephens Creek 58.87 160 P **P** **14 06 40.0 -1.3**
comp=Z,10.0nm,0.6s,baz=341,slow=7.1,SNR=19
STKA S **S** **14 14 44.7 -1.9**
comp=Z,1.0nm,0.8s,baz=352,slow=19,SNR=1.5
STKA LR LR 14 33 02.7
comp=Z,8µm,20.6s,baz=338,slow=37
comp=Z,10.0nm,0.6s
MDH Madha 58.88 286 P **P** **14 06 46.1 +4.6**
MDH P **P** **14 06 46.1 +4.6**
SOHO SOHO 58.95 285 *i*P **P** **14 06 42.6 +0.5**
SNR=13
SOHO SOHO 58.95 285 P **P** **14 06 46.6 +4.5**
AULRC Lightning Ridg 58.96 153 P **P** **14 06 44.4 +2.5**
MASF Masafi 58.98 286 P **P** **14 06 46.4 +4.1**
MASF P **P** **14 06 46.4 +4.1**
MSFE Esma-Masafi 58.98 286 *i*P **P** **14 06 44.5 +2.1**
SNR=10
UOSS Minazif 59.04 286 P **P** **14 06 47.1 +4.3**
UOSS P **P** **14 06 47.1 +4.3**
HATD Hatta, Dubai 59.14 285 *i*P **P** **14 06 42.2 -1.1**
SNR=9.3
HATD Hatta, Dubai 59.14 285 P **P** **14 06 47.3 +3.9**
SNR=9.2
HATD P **P** **14 06 47.3 +3.9**
SNR=9.2
ARQ Araqi 59.17 284 P **P** **14 06 47.7 +4.0**
SNR=11
ARQ P **P** **14 06 47.7 +4.0**
SNR=11
ASHO Ashiyiah 59.24 285 P **P** **14 06 44.4 +0.3**
ASHO Ashiyiah 59.24 285 P **P** **14 06 48.1 +4.0**
SNR=12
ASHO P **P** **14 06 48.1 +4.0**
SNR=12
NAZ Nazwa, Dubai 59.51 286 P **P** **14 06 49.8 +3.8**
NAZ P **P** **14 06 49.8 +3.8**
HTT Hallett 59.57 163 P **P** **14 06 49.7 +3.6**
FAQ Al Faqa, Dubai 59.63 285 P **P** **14 06 51.3 +4.5**
FAQ P **P** **14 06 51.3 +4.5**
ALNE Al Ain 59.66 285 *i*P **P** **14 06 48.8 +1.7**
SNR=9.0
ALNE Al Ain 59.66 285 P **P** **14 06 49.2 +2.1**
SNR=14
ASUD Al Ashush, Dub 59.89 285 P P 14 06 53.6 +5.0
ASUD P P 14 06 53.6 +5.0
CMSA Cobar Meteorol 59.95 156 P **P** **14 06 52.1 +3.5**
TNA Tin City 60.14 27 P **P** **14 06 49.4 -0.2**
baz=263,SNR=8.3
TNA S **S** **14 15 01.7 -0.6**
baz=263
UNV Unalaska Valle 60.19 40 S **S** **14 15 03.2 0.0**
baz=271
M11K Mekoryuk 60.47 33 P **P** **14 06 51.8 -0.1**
baz=267,SNR=11
M11K S **S** **14 15 09.1 +2.6**
baz=267
KIRV Kirov 60.52 325 *c i*P **P** **14 06 50.7 -1.6**
KIRV Kirov 60.52 325 LR LR 14 34 50.2
comp=Z,32µm,20.6s,baz=95,slow=38
UMZA Um Al Zommool 60.54 283 P **P** **14 06 54.6 +1.6**
UMZA P **P** **14 06 54.6 +1.6**
KOUNC Koumac, New Ca 60.77 133 IAMs_20 IAMs_20 14 27 59.1
comp=Z,16µm,22.0s
KOUNC Koumac, New Ca 60.77 133 P **P** **14 06 56.7 +2.2**
F14K Arctic Creek 60.79 27 S **S** **14 15 09.6 -1.0**
baz=264
ANM Nome 61.12 28 P **P** **14 06 55.0 -1.3**
ANM IAmb IAmb 14 07 04.2
comp=Z,128nm,1.4s
ANM Nome 61.12 28 P **P** **14 06 55.6 -0.7**
baz=266,SNR=29
ANM S **S** **14 15 13.5 -1.3**
baz=266
ANM Nome 61.12 28 P **P** **14 06 55.0 -1.3**
ANM pmax pmax
comp=Z,128nm,1.4s
ANM MLR MLR
comp=Z,11µm,22.0s
ARMA Armidale 61.39 151 P **P** **14 07 02.2 +3.6**
C16K Lisburne Hills 61.48 24 IAMs_20 IAMs_20 14 35 39.3
comp=Z,17µm,19.0s
C16K Lisburne Hills 61.48 24 P **P** **14 06 58.5 -0.2**
baz=264
C16K S **S** **14 15 15.3 -3.8**
baz=264
F15K North Star Dit 61.51 27 IAMs_20 IAMs_20 14 35 42.2
comp=Z,14µm,20.0s
F15K North Star Dit 61.51 27 P **P** **14 06 58.9 0.0**
baz=266
F15K S **S** **14 15 18.5 -1.3**
baz=266
BELG Belogornoye 61.64 318 *i*P **P** **14 06 58.8 -1.2**
BELG pmax pmax
comp=Z,30nm,1.0s
BELG MLR MLR
comp=Z,2µm,13.0s
BELG Belogornoye 61.64 318 LR LR 14 37 22.4
comp=Z,10µm,19.6s,baz=72,slow=40
AUPHS Peel High Scho 61.64 152 P **P** **14 07 03.6 +3.4**
G15K Niukluk 61.72 28 P **P** **14 07 00.9 +0.5**
baz=267
G15K S **S** **14 15 21.6 -0.8**
baz=267
J14K Nanvaranak Lak 61.83 30 IAMs_20 IAMs_20 14 36 11.9
comp=Z,13µm,19.0s
J14K Nanvaranak Lak 61.83 30 P **P** **14 07 01.2 +0.1**
baz=268
J14K S **S** **14 15 24.7 +0.9**
baz=268
M13K Dall Lake 61.89 33 IAMs_20 IAMs_20 14 35 33.6
comp=Z,11µm,18.0s
M13K Dall Lake 61.89 33 P **P** **14 07 01.3 -0.3**
baz=270
FALS False Pass 61.97 39 P **P** **14 07 01.8 -0.3**
baz=273
JRN Qarnain Island 61.99 286 P **P** **14 07 03.5 +0.6**
JRN P **P** **14 07 03.5 +0.6**
DMTO DMTO 62.19 278 P P 14 07 09.4 +5.1
DMTO P P 14 07 09.4 +5.1
L14K Kuka Creek 62.22 32 P **P** **14 07 03.7 0.0**
baz=270

L14K S **S** **14 15 28.5 -0.3**
baz=270
C17K **DeLong Mountai** **62.30 24** P **P** **14 07 03.9 -0.4**
baz=266
C17K S **S** **14 15 28.9 -0.7**
baz=266
RDOG **Red Dog Mine** **62.37 24** IAMs_20 IAMs_20 14 38 07.3
comp=Z,18µm,18.0s
RDOG **Red Dog Mine** **62.37 24** P **P** **14 07 04.3 -0.3**
baz=266
RDOG S **S** **14 15 30.0 -0.5**
baz=266
LKRN **Lenkeran, Azer** **62.41 302** P **P** **14 07 08.4 +3.0**
G16K **Koyuk River** **62.45 27** IAMs_20 IAMs_20 14 34 19.0
comp=Z,12µm,20.0s
G16K **Koyuk River** **62.45 27** P **P** **14 07 04.5 -0.8**
baz=268
G16K S **S** **14 15 31.1 -0.4**
baz=268
H16K **Elim** **62.47 28** P **P** **14 07 05.3 -0.1**
baz=268,SNR=33
H16K S **S** **14 15 34.2 +2.3**
baz=268
M14K **Bethel** **62.57 33** IAmb IAmb 14 07 10.9
comp=Z,58nm,0.9s
M14K **Bethel** **62.57 33** P **P** **14 07 06.3 +0.2**
baz=271,SNR=12
M14K S **S** **14 15 32.6 -0.7**
baz=271
DOK **Doka** **62.65 279** P **P** **14 07 10.8 +3.4**
DOK P **P** **14 07 10.8 +3.4**
E17K **Hotham Inlet** **62.73 25** P **P** **14 07 06.6 -0.4**
baz=268,SNR=34
E17K S **S** **14 15 35.9 +0.9**
baz=268
N14K **Kuskokwak Cree** **62.73 33** P **P** **14 07 06.3 -0.8**
baz=271
N14K S **S** **14 15 35.9 +0.7**
baz=271
K15K **Wolf Creek Mou** **62.77 31** IAMs_20 IAMs_20 14 33 56.5
comp=Z,15µm,20.0s
K15K **Wolf Creek Mou** **62.77 31** P **P** **14 07 07.2 -0.2**
baz=270
K15K S **S** **14 15 35.6 -0.1**
baz=270
L15K **Ungalak Mounta** **62.79 31** P **P** **14 07 07.5 -0.1**
baz=271,SNR=8.0
L15K S **S** **14 15 38.6 +2.7**
baz=271
B18K **Kokolik River** **62.85 23** P **P** **14 07 07.7 -0.2**
baz=266
B18K S **S** **14 15 35.6 -1.0**
baz=266
F17K **Baldwin Pennin** **62.93 26** IAmb IAmb 14 07 16.2
comp=Z,88nm,1.2s
F17K IAMs_20 IAMs_20 14 36 15.7
comp=Z,10µm,18.0s
F17K **Baldwin Pennin** **62.93 26** P **P** **14 07 07.9 -0.5**
baz=268
F17K S **S** **14 15 36.7 -0.9**
baz=268
O14K **Tigyukauivet M** **62.96 34** P **P** **14 07 08.1 -0.7**
baz=272
O14K S **S** **14 15 39.2 +1.0**
baz=272
C18K **Utukok River** **63.03 24** IAmb IAmb 14 07 16.3
comp=Z,73nm,1.3s
C18K IAMs_20 IAMs_20 14 34 57.9
comp=Z,19µm,18.0s
C18K **Utukok River** **63.03 24** P **P** **14 07 07.7 -1.4**
baz=267
C18K S **S** **14 15 36.8 -2.2**
baz=267
I17K **Unalakleet** **63.14 29** IAMs_20 IAMs_20 14 37 20.0
comp=Z,15µm,19.0s
I17K **Unalakleet** **63.14 29** P **P** **14 07 09.6 -0.2**
baz=270,SNR=30
I17K S **S** **14 15 41.5 +1.3**
baz=270
G17K **Kiwalik Mounta** **63.16 27** P **P** **14 07 09.4 -0.5**
baz=270
G17K S **S** **14 15 41.1 +0.6**
baz=270
J16K **Anvik River** **63.18 30** IAMs_20 IAMs_20 14 35 51.5
comp=Z,14µm,19.0s
J16K **Anvik River** **63.18 30** P **P** **14 07 09.3 -0.9**
baz=271
J16K S **S** **14 15 42.4 +1.5**
baz=271
SEKA **Sheki** **63.19 305** P **P** **14 07 11.8 +1.1**
WHFO **Wadi Hawf** **63.19 279** P **P** **14 07 14.2 +3.1**
WHFO P **P** **14 07 14.2 +3.1**
M15K **Kasigluk River** **63.20 33** P **P** **14 07 09.0 -1.3**
baz=272
M15K S **S** **14 15 40.2 -0.9**
baz=272
E18K **Tukpahlearik C** **63.21 25** IAmb IAmb 14 07 18.1
comp=Z,72nm,1.3s
E18K IAMs_20 IAMs_20 14 38 00.3
comp=Z,12µm,18.0s
E18K **Tukpahlearik C** **63.21 25** P **P** **14 07 09.3 -1.0**
baz=269
E18K S **S** **14 15 39.7 -1.4**
baz=269
SLWR **Sila** **63.24 286** P P 14 07 16.1 +4.9
SLWR P P 14 07 16.1 +4.9
DZM **Mont Dzumac** **63.26 133** IAMs_20 IAMs_20 14 29 26.3
comp=Z,22µm,22.0s
DZM **Mont Dzumac** **63.26 133** P **P** **14 07 13.3 +2.0**
DZM **Mont Dzumac** **63.26 133** LR LR 14 30 00.2
comp=Z,19µm,22.0s,baz=318,slow=32
MNGR **Mingechevir, A** **63.35 305** P **P** **14 07 14.9 +3.3**
YNG **Young** **63.42 155** P **P** **14 07 14.2 +2.1**
H17K **Granite Mounta** **63.47 28** IAmb IAmb 14 07 19.9
comp=Z,140nm,1.4s
H17K IAMs_20 IAMs_20 14 35 56.7
comp=Z,12µm,19.0s
H17K **Granite Mounta** **63.47 28** P **P** **14 07 10.7 -1.3**
baz=270
H17K S **S** **14 15 44.3 -0.1**
baz=270
TRNA **Turayna** **63.48 287** P P 14 07 18.0 +5.2
ARPS **Mount Arapiles** **63.51 162** P **P** **14 07 15.3 +2.8**
N15K **Kwethluk River** **63.52 33** IAmb IAmb 14 07 17.3
comp=Z,81nm,0.9s
N15K IAMs_20 IAMs_20 14 36 26.5
comp=Z,12µm,18.0s
N15K **Kwethluk River** **63.52 33** P **P** **14 07 11.1 -1.4**
baz=273
N15K S **S** **14 15 44.6 -0.6**
baz=273
ZKTA **Zakatala** **63.55 306** P **P** **14 07 13.9 +0.9**
YATNC **Mamie plateau,** **63.55 133** P **P** **14 07 16.4 +3.2**
MGCD **Mangrove Creek** **63.55 153** P **P** **14 07 16.9 +4.0**
F18K **Selawik** **63.58 26** P **P** **14 07 11.9 -0.8**
baz=270,SNR=42
F18K S **S** **14 15 47.9 +2.3**
baz=270
SDPT **Sand Point** **63.62 39** P **P** **14 07 11.8 -1.4**
baz=275
C19K **Lookout Ridge** **63.63 23** IAMs_20 IAMs_20 14 37 42.2
comp=Z,23µm,20.0s
C19K **Lookout Ridge** **63.63 23** P **P** **14 07 11.9 -1.2**
baz=269
C19K S **S** **14 15 45.3 -1.1**
baz=269
O15K **Ungalikthiuk R** **63.70 34** P **P** **14 07 12.3 -1.4**
baz=273
O15K S **S** **14 15 47.0 -0.5**
baz=273
L16K **Owhat River** **63.75 31** IAmb IAmb 14 07 21.4
comp=Z,100nm,1.3s
L16K IAMs_20 IAMs_20 14 34 25.3
comp=Z,13µm,20.0s
L16K **Owhat River** **63.75 31** P **P** **14 07 12.4 -1.6**
baz=272,SNR=16
L16K S **S** **14 15 48.5 +0.5**
baz=272
OUENC **Ouen Island, N** **63.77 133** IAMs_20 IAMs_20 14 30 15.6
comp=Z,14µm,21.0s
OUENC **Ouen Island, N** **63.77 133** P **P** **14 07 16.5 +2.0**
ABTO **Aybut** **63.80 278** P **P** **14 07 14.7 -0.4**
ABTO P **P** **14 07 14.7 -0.4**
ABTO P **P** **14 07 14.7 -0.4**
SMRA **Abu-Samra** **63.81 287** P **P** **14 07 16.7 +1.7**
SNR=6.5
SYDH **Sydney Hard Ro** **63.88 153** P **P** **14 07 18.5 +3.5**

G18K **Tagagawik** **63.98 27** IAmb IAmb 14 07 22.7
comp=Z,76nm,1.2s
G18K IAMs_20 IAMs_20 14 37 28.2
comp=Z,15µm,19.0s
G18K **Tagagawik** **63.98 27** P **P** **14 07 15.1 -0.3**
baz=271
G18K S **S** **14 15 50.0 -0.8**
baz=271
M16K **Timber Creek** **64.03 32** IAmb IAmb 14 07 23.3
comp=Z,85nm,1.1s
M16K IAMs_20 IAMs_20 14 32 35.1
comp=Z,13µm,22.0s
M16K **Timber Creek** **64.03 32** P **P** **14 07 16.2 +0.3**
baz=273,SNR=14
M16K S **S** **14 15 53.8 +2.3**
baz=273
S14K **Fog Glacier** **64.06 37** P **P** **14 07 15.3 -0.9**
baz=275
H18K **Honhosa River** **64.12 28** IAmb IAmb 14 07 23.9
comp=Z,136nm,1.5s
H18K **Honhosa River** **64.12 28** P **P** **14 07 16.2 -0.2**
baz=272,SNR=23
H18K S **S** **14 15 53.8 +1.2**
baz=272
N16K **Nishlik Lake** **64.16 33** P **P** **14 07 16.3 -0.4**
baz=274
N16K S **S** **14 15 52.9 -0.3**
baz=274
D19K **Kuna River** **64.16 24** IAMs_20 IAMs_20 14 35 43.2
comp=Z,10µm,18.0s
D19K **Kuna River** **64.16 24** P **P** **14 07 15.8 -0.8**
baz=270
D19K S **S** **14 15 52.9 -0.1**
baz=270
CHNA **Chernabura Isl** **64.18 39** P **P** **14 07 15.9 -1.0**
baz=276
CHNA S **S** **14 15 54.2 +0.7**
baz=276
K17K **Iditarod** **64.25 30** IAMs_20 IAMs_20 14 35 23.8
comp=Z,12µm,19.0s
K17K **Iditarod** **64.25 30** P **P** **14 07 16.1 -1.1**
baz=273
K17K S **S** **14 15 54.1 -0.1**
baz=273
L17K **Donlin** **64.28 31** P **P** **14 07 16.0 -1.5**
baz=273,SNR=23
L17K S **S** **14 15 54.3 -0.3**
baz=273
PINNC **Pines Island,** **64.30 133** IAMs_20 IAMs_20 14 30 18.9
comp=Z,19µm,21.0s
F19K **Shaleruckik Mo** **64.32 26** IAmb IAmb 14 07 24.7
comp=Z,122nm,1.5s
F19K **Shaleruckik Mo** **64.32 26** P **P** **14 07 16.1 -1.5**
baz=271,SNR=30
F19K S **S** **14 15 55.1 +0.2**
baz=271
B20K **Meade River** **64.49 22** P **P** **14 07 16.6 -2.0**
baz=270
B20K S **S** **14 15 55.0 -1.9**
baz=270
E19K **Redstone River** **64.51 25** IAmb IAmb 14 07 58.5
comp=Z,59nm,0.9s
E19K IAMs_20 IAMs_20 14 37 27.5
comp=Z,11µm,18.0s
E19K **Redstone River** **64.51 25** P **P** **14 07 17.3 -1.6**
baz=272
E19K S **S** **14 15 55.2 -2.1**
baz=272
CAN **Canberra** **64.56 155** IAMs_20 IAMs_20 14 36 46.0
comp=Z,10µm,18.0s
CAN **Canberra** **64.56 155** P **P** **14 07 22.7 +3.1**
O16K **Kokwok River B** **64.56 34** IAmb IAmb 14 07 25.9
comp=Z,94nm,1.3s
O16K **Kokwok River B** **64.56 34** P **P** **14 07 16.9 -2.4**
baz=275
O16K S **S** **14 15 56.1 -2.0**
baz=275
G19K **Purcell Mounta** **64.62 26** IAMs_20 IAMs_20 14 37 16.3
comp=Z,11µm,18.0s
G19K **Purcell Mounta** **64.62 26** P **P** **14 07 18.2 -1.3**
baz=272
G19K S **S** **14 16 00.5 +1.9**
baz=272
P16K **Nushagak River** **64.66 34** P **P** **14 07 18.3 -1.6**
baz=275,SNR=5.3
A21K **Barrow** **64.66 21** P **P** **14 07 18.9 -0.9**
baz=270,SNR=8.4
A21K S **S** **14 15 56.1 -2.8**
baz=270
CNB **Canberra Magne** **64.69 155** P **P** **14 07 23.7 +3.2**
CHGN **Chignik** **64.69 37** P **P** **14 07 18.0 -2.1**
baz=276
CHGN S **S** **14 15 58.1 -1.6**
baz=276
D20K **Etivluk River** **64.71 24** P **P** **14 07 18.1 -2.1**
baz=272
D20K S **S** **14 16 01.1 +1.4**
baz=272
M17K **Holitna River** **64.74 32** P **P** **14 07 19.3 -1.2**
baz=274,SNR=8.8
M17K S **S** **14 16 01.9 +1.6**
baz=274
GCSA **Galena City Sc** **64.77 28** P **P** **14 07 19.7 -0.8**
baz=273,SNR=24
GCSA S **S** **14 16 01.5 +1.0**
baz=273
NAX **Nakhchivan** **64.84 303** P **P** **14 07 23.0 +1.4**
BRAT **Ballarat** **64.84 161** P **P** **14 07 23.1 +1.8**
E20K **Nigu River** **64.88 24** P **P** **14 07 20.6 -0.7**
baz=272
E20K S **S** **14 16 01.0 -0.9**
baz=272
H19K **Roundabout Mou** **64.91 27** IAMs_20 IAMs_20 14 38 15.1
comp=Z,14µm,18.0s
H19K **Roundabout Mou** **64.91 27** P **P** **14 07 20.8 -0.6**
baz=273
H19K S **S** **14 16 04.1 +2.0**
baz=273
J18K **Innoko River** **64.93 29** IAmb IAmb 14 07 29.1
comp=Z,131nm,1.5s
J18K IAMs_20 IAMs_20 14 36 55.6
comp=Z,13µm,18.0s
J18K **Innoko River** **64.93 29** P **P** **14 07 21.0 -0.6**
baz=274
J18K S **S** **14 16 02.5 0.0**
baz=274
N17K **Nushagak Hills** **64.93 33** IAMs_20 IAMs_20 14 37 48.0
comp=Z,11µm,18.0s
N17K **Nushagak Hills** **64.93 33** P **P** **14 07 20.4 -1.3**
baz=275,SNR=11
N17K S **S** **14 16 02.6 -0.1**
baz=275
R16K **Pilot Point** **65.02 36** P **P** **14 07 21.1 -1.2**
baz=276
L18K **Granite Mounta** **65.03 31** IAmb IAmb 14 07 30.4
comp=Z,139nm,1.4s
L18K IAMs_20 IAMs_20 14 35 18.4
comp=Z,14µm,19.0s
L18K **Granite Mounta** **65.03 31** P **P** **14 07 19.9 -2.4**
baz=275,SNR=24
L18K S **S** **14 16 04.4 +0.6**
baz=275
O17K **Koliganek Bris** **65.05 33** P **P** **14 07 20.3 -2.1**
baz=275,SNR=5.4
O17K S **S** **14 16 05.6 +1.6**
baz=275
F20K **Avaraaart Lake** **65.12 25** IAMs_20 IAMs_20 14 36 52.5
comp=Z,11µm,19.0s
F20K **Avaraaart Lake** **65.12 25** P **P** **14 07 21.8 -0.9**
baz=273
F20K S **S** **14 16 04.9 +0.2**
baz=273
AUUHS **Ulladulla High** **65.16 154** P **P** **14 07 25.6 +2.2**
GNI **Garni** **65.22 305** P **P** **14 07 26.4 +2.2**
GNI **Garni** **65.22 305** P **P** **14 07 24.9 +0.7**
GNI **Garni** **65.22 305** *c* P **P** **14 07 25.8 +1.6**
GNI pmax pmax
comp=Z,103nm,1.1s
GNI MLR MLR
comp=Z,15µm,15.0s
GNI **Garni** **65.22 305** LR LR 14 39 43.9
comp=Z,10µm,21.8s,baz=90,slow=40
GNI **Garni** **65.22 305** P **P** **14 07 26.5 +2.4**
GNI P **P** **14 07 26.5 +2.4**
TTA **Tatalina** **65.28 30** P **P** **14 07 22.9 -1.2**
TTA IAmb IAmb 14 07 31.6
comp=Z,126nm,1.4s
TTA IAMs_20 IAMs_20 14 37 16.8
comp=Z,13µm,18.0s
TTA **Tatalina** **65.28 30** P **P** **14 07 26.5 +2.4**
TTA **Tatalina** **65.28 30** P **P** **14 07 22.7 -1.4**
baz=275,SNR=25
TTA S **S** **14 16 07.2 +0.1**
baz=275
TTA **Tatalina** **65.28 30** P **P** **14 07 22.9 -1.2**
TTA pmax pmax
comp=Z,126nm,1.4s
TTA MLR MLR
comp=Z,13µm,18.0s
ZEI **Tsey** **65.33 308** *e* P **P** **14 07 22.4 -2.5**
ZEI pmax pmax
comp=Z,80nm,1.3s
TOO **Toolangi** **65.35 159** P **P** **14 07 23.1 -1.6**
TOO IAmb IAmb 14 07 41.0
comp=Z,50nm,1.1s
TOO **Toolangi** **65.35 159** P **P** **14 07 26.6 +1.9**
TOO **Toolangi** **65.35 159** P **P** **14 07 23.1 -1.6**
TOO pmax pmax
comp=Z,50nm,1.1s
C21K **Knifeblade Rid** **65.35 23** P **P** **14 07 23.0 -1.3**
baz=273
C21K S **S** **14 16 08.1 +0.6**
baz=273
J19K **Poorman** **65.37 29** IAmb IAmb 14 07 32.2
comp=Z,118nm,1.3s
J19K IAMs_20 IAMs_20 14 38 40.3
comp=Z,14µm,18.0s
J19K **Poorman** **65.37 29** P **P** **14 07 23.7 -0.8**
baz=275,SNR=31
J19K S **S** **14 16 07.1 -0.8**
baz=275
Q16K **King Salmon** **65.39 35** P **P** **14 07 23.0 -1.6**
baz=276,SNR=10.0
Q16K S **S** **14 16 10.1 +2.0**
baz=276
AUSMG **Snowy Mountain** **65.39 156** P **P** **14 07 27.6 +2.6**
B21K **Ikpikpuk River** **65.39 23** P **P** **14 07 23.0 -1.5**
baz=273
B21K S **S** **14 16 05.5 -2.4**
baz=273
VRH **Novokhopyorsk** **65.41 317** *e* P **P** **14 07 21.9 -3.0**
VRH *e* 14 07 25.1
VRH *e* S **S** **14 16 05.7 -3.0**
VRH pmax pmax
comp=Z,180nm,1.1s
VRH pmax pmax
comp=Z,530nm,1.9s
VRH smax smax
comp=E,6µm,13.8s
VRH MLR MLR
comp=Z,11µm,13.0s
P17K **Kvichak River** **65.44 34** P **P** **14 07 23.4 -1.6**
baz=276
P17K S **S** **14 16 09.3 +0.5**
baz=276
KLMR **Klimovskoe** **65.44 328** *e* P **P** **14 07 20.4 -4.6**
KLMR PPP PPP 14 11 19.8
KLMR S **S** **14 16 07.7 -1.2**
KLMR SS **SS** **14 20 23.0 +1.2**
KLMR pmax pmax
comp=Z,255nm,1.3s
KLMR MLR MLR
comp=Z,48µm,14.0s
M18K **Stony River** **65.51 32** P **P** **14 07 23.3 -2.1**
baz=276
M18K S **S** **14 16 10.3 +0.7**
baz=276
GOF **Gofitskoye** **65.53 310** *ce* P **P** **14 07 25.5 -0.4**
N18K **Kilae Creek** **65.56 32** IAMs_20 IAMs_20 14 38 35.4
comp=Z,13µm,19.0s
N18K **Kilae Creek** **65.56 32** P **P** **14 07 24.1 -1.7**
baz=276
N18K S **S** **14 16 11.2 +0.9**
baz=276
H20K **Anotleneega Mo** **65.56 27** P **P** **14 07 23.9 -1.9**
baz=275
H20K S **S** **14 16 10.1 -0.2**
baz=275
E21K **Killik River** **65.69 24** IAMs_20 IAMs_20 14 39 38.7
comp=Z,13µm,19.0s
E21K **Killik River** **65.69 24** P **P** **14 07 24.4 -2.1**
baz=274
E21K S **S** **14 16 08.6 -3.2**
baz=274
ONI **Oni** **65.69 307** P **P** **14 07 28.9 +1.8**
ONI **Oni** **65.69 307** IAMs_20 IAMs_20 14 40 43.8
comp=Z,14µm,20.0s
B22K **Teshekpuk Lake** **65.75 22** P **P** **14 07 25.6 -1.3**
baz=274
I20K **Naaghedeneel** **65.80 28** IAMs_20 IAMs_20 14 37 08.6
comp=Z,14µm,20.0s
I20K **Naaghedeneel** **65.80 28** P **P** **14 07 27.0 -0.2**
baz=275
I20K S **S** **14 16 15.1 +2.1**
baz=275
Q17K **Contact Creek** **65.83 35** P **P** **14 07 28.0 +0.2**
baz=277,SNR=8.6
Q17K S **S** **14 16 14.8 +0.8**
baz=277
KBZ **Khabaz** **65.88 309** *ce* P **P** **14 07 27.5 -0.6**
KBZ pmax pmax
comp=Z,76nm,1.1s
KBZ MLR MLR
comp=Z,20µm,15.0s
KBZ **Khabaz** **65.88 309** P **P** **14 07 28.0 -0.1**
comp=Z,26nm,1.0s,baz=79,slow=6.2,SNR=20
KBZ S **S** **14 16 15.0 +0.3**
comp=Z,1.4nm,0.8s,baz=94,slow=15,SNR=1.1
KBZ LR LR 14 39 47.5
comp=Z,12µm,18.4s,baz=78,slow=39
comp=Z,26nm,1.0s
L19K **White Mountain** **65.89 31** IAMs_20 IAMs_20 14 35 54.2
comp=Z,13µm,20.0s
L19K **White Mountain** **65.89 31** P **P** **14 07 28.1 +0.2**
baz=276,SNR=34
L19K S **S** **14 16 14.5 +0.1**
baz=276
LHI **Lord Howe Isla** **65.89 145** P **P** **14 07 30.3 +2.1**
AKH **Akhalkalaki** **65.90 306** P **P** **14 07 30.9 +2.4**
KVAR **Kislovodsk Arr** **65.97 309** LR LR 14 39 43.8
comp=Z,13µm,18.6s,baz=250,slow=39
F21K **Alatna River** **65.98 25** P **P** **14 07 28.8 +0.4**
baz=275
F21K S **S** **14 16 16.2 +0.9**
baz=275
KIV **Kislovodsk** **65.98 309** ⇑P **P** **14 07 29.6 +0.7**
KIV **Kislovodsk** **65.98 309** P **P** **14 07 30.7 +1.7**
KIV **Kislovodsk** **65.98 309** P **P** **14 07 27.9 -1.0**
KIV IAMs_20 IAMs_20 14 40 02.4
comp=Z,19µm,18.0s
KIV **Kislovodsk** **65.98 309** *i* P **P** **14 07 29.0 0.0**
SNR=28
KIV **Kislovodsk** **65.98 309** P **P** **14 07 29.6 +0.7**
KIV **Kislovodsk** **65.98 309** P **P** **14 07 30.6 +1.7**
KIV P **P** **14 07 30.6 +1.7**
O18K **Koktuh Hills** **65.99 33** IAMs_20 IAMs_20 14 38 29.6
comp=Z,11µm,18.0s
O18K **Koktuh Hills** **65.99 33** P **P** **14 07 30.0 +1.4**
baz=277,SNR=16
O18K S **S** **14 16 15.2 -0.5**
baz=277
J20K **Nowinta River** **66.00 28** IAMs_20 IAMs_20 14 36 34.6
comp=Z,15µm,19.0s
J20K **Nowinta River** **66.00 28** P **P** **14 07 29.0 +0.4**
baz=276
J20K S **S** **14 16 16.4 +0.8**
baz=276
G21K **Allakaket** **66.03 26** P **P** **14 07 28.7 -0.1**
baz=276
G21K S **S** **14 16 16.0 0.0**
baz=276
P18K **Big Mountain,** **66.03 34** IAmb IAmb 14 07 33.2
comp=Z,80nm,1.1s
P18K **Big Mountain,** **66.03 34** P **P** **14 07 27.8 -1.1**
baz=277,SNR=10.0
P18K S **S** **14 16 16.1 -0.2**
baz=277
K20K **Telida** **66.12 29** IAMs_20 IAMs_20 14 36 06.2
comp=Z,15µm,22.0s
K20K **Telida** **66.12 29** P **P** **14 07 29.0 -0.4**
baz=276
K20K S **S** **14 16 17.8 +0.6**
baz=276
D22K **Ayikyak River** **66.13 23** IAMs_20 IAMs_20 14 37 28.1
comp=Z,17µm,19.0s

D22K	**Ayikyak River**	**66.13**	**23**	P	**P**	**14 07 29.3**	**-0.1**
	baz=275						
D22K				S	**S**	**14 16 15.4**	**-1.6**
	baz=275						
M19K	**Big River Lodg**	**66.14**	**31**	IAMs_20	IAMs_20	14 35 51.9	
	comp=Z,10µm,20.0s						
M19K	**Big River Lodg**	**66.14**	**31**	P	**P**	**14 07 29.9**	**+0.4**
	baz=277						
M19K				S	**S**	**14 16 20.2**	**+2.8**
	baz=277						
MILA	**Mila**	**66.15**	**156**	P	**P**	**14 07 32.1**	**+2.2**
N19K	**Bonanza Creek**	**66.23**	**32**	IAMs_20	IAMs_20	14 33 54.3	
	comp=Z,12µm,22.0s						
N19K	**Bonanza Creek**	**66.23**	**32**	P	**P**	**14 07 30.0**	**-0.2**
	baz=277						
N19K				S	**S**	**14 16 17.9**	**-0.8**
	baz=277						
L20K	**Farewell, AK**	**66.31**	**30**	P	**P**	**14 07 31.0**	**+0.3**
	baz=277						
L20K				S	**S**	**14 16 20.7**	**+1.2**
	baz=277						
KARS	**Kars**	**66.36**	**305**	P	**P**	**14 07 34.9**	**+3.4**
O19K	**Port Alsworth**	**66.39**	**33**	IAMs_20	IAMs_20	14 38 25.1	
	comp=Z,10µm,19.0s						
O19K	**Port Alsworth**	**66.39**	**33**	P	**P**	**14 07 31.2**	**+0.2**
	baz=278,SNR=11						
O19K				S	**S**	**14 16 21.2**	**+0.8**
	baz=278						
H21K	**Melozitna Rive**	**66.41**	**27**	IAMs_20	IAMs_20	14 39 29.7	
	comp=Z,12µm,19.0s						
H21K	**Melozitna Rive**	**66.41**	**27**	P	**P**	**14 07 31.5**	**+0.3**
	baz=276,SNR=64						
H21K				S	**S**	**14 16 20.7**	**+0.2**
	baz=276						
E22K	**Anaktuvuk Pass**	**66.52**	**24**	P	**P**	**14 07 31.8**	**-0.1**
	baz=276						
E22K				S	**S**	**14 16 19.7**	**-2.2**
	baz=276						
VANB	**Van**	**66.57**	**303**	P	**P**	**14 07 37.1**	**+4.3**
AGRB	**Hanur-Agry**	**66.65**	**304**	P	**P**	**14 07 36.1**	**+2.6**
CUKT	**Cukurca**	**66.70**	**302**	P	**P**	**14 07 34.7**	**+1.0**
M20K	**Styx River**	**66.73**	**31**	IAMs_20	IAMs_20	14 36 31.5	
	comp=Z,15µm,20.0s						
M20K	**Styx River**	**66.73**	**31**	P	**P**	**14 07 33.2**	**-0.3**
	baz=278						
M20K				S	**S**	**14 16 24.0**	**-0.8**
	baz=278						
G22K	**Bettles**	**66.78**	**25**	P	**P**	**14 07 32.5**	**-1.0**
	baz=277						
G22K				S	**S**	**14 16 23.7**	**-1.3**
	baz=277						
I21K	**Tanana**	**66.81**	**27**	IAMs_20	IAMs_20	14 39 43.8	
	comp=Z,13µm,19.0s						
I21K	**Tanana**	**66.81**	**27**	P	**P**	**14 07 32.8**	**-0.8**
	baz=277,SNR=34						
I21K				S	**S**	**14 16 26.2**	**+0.8**
	baz=277						
CHUM	**Lake Minchumin**	**66.83**	**29**	P	**P**	**14 07 33.5**	**-0.3**
	baz=278,SNR=14						
CHUM				S	**S**	**14 16 27.5**	**+1.8**
	baz=278						
D23K	**Nanushuk River**	**66.84**	**23**	P	**P**	**14 07 33.3**	**-0.5**
	baz=277						
D23K				S	**S**	**14 16 24.6**	**-1.0**
	baz=277						
VORR	**Voronezh**	**66.88**	**318**	*e*P	**P**	**14 07 31.1**	**-3.3**
VORR				*e*		14 07 34.9	
VORR				*e*S	**S**	**14 16 18.1**	**-8.6**
VORR				pmax	pmax		
	comp=Z,100nm,1.1s						
VORR				pmax	pmax		
	comp=Z,430nm,1.5s						
VORR				smax	smax		
	comp=E,470nm,5.1s						
VORR				MLR	MLR		
	comp=Z,12µm,12.0s						
LPSR	**Galich'ya Gora**	**66.89**	**319**	*e*P	**P**	**14 07 32.4**	**-2.1**
LPSR				*e*		14 07 34.9	
LPSR				*e*S	**S**	**14 16 21.0**	**-5.8**
LPSR				pmax	pmax		
	comp=Z,180nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,500nm,2.2s						
LPSR				smax	smax		
	comp=E,3µm,11.2s						
LPSR				MLR	MLR		
	comp=Z,9µm,12.0s						
Q19K	**Cape Douglas,**	**66.91**	**34**	P	**P**	**14 07 33.8**	**-0.7**
	baz=279						
Q19K				S	**S**	**14 16 28.6**	**+1.7**
	baz=279						
SENK	**Senkaya-Erzuru**	**66.92**	**306**	P	**P**	**14 07 39.3**	**+4.2**
AKDM	**Akdamar-Van**	**66.94**	**303**	P	**P**	**14 07 37.0**	**+1.7**
VORD	**Divnogorie**	**66.96**	**317**	*e*P	**P**	**14 07 32.2**	**-2.7**
VORD				*e*		14 07 35.5	
VORD				*e*S	**S**	**14 16 23.8**	**-3.8**
VORD				pmax	pmax		
	comp=Z,120nm,1.6s						
VORD				pmax	pmax		
	comp=Z,170nm,1.4s						
VORD				smax	smax		
	comp=E,720nm,6.0s						
VORD				MLR	MLR		
	comp=Z,7µm,12.0s						
H22K	**Ishtalitna Cre**	**66.96**	**26**	P	**P**	**14 07 34.9**	**+0.1**
	baz=278						
H22K				S	**S**	**14 16 28.3**	**+1.0**
	baz=278						
SII	**Sitkinak Islan**	**66.99**	**37**	IAMs_20	IAMs_20	14 35 13.3	
	comp=Z,11µm,21.0s						
SII	**Sitkinak Islan**	**66.99**	**37**	P	**P**	**14 07 34.2**	**-0.8**
	baz=279						
VSR	**Storozhevoye**	**66.99**	**317**	*e*P	**P**	**14 07 31.9**	**-3.2**
VSR				*e*		14 07 35.6	
VSR				*e*S	**S**	**14 16 24.8**	**-3.2**
VSR				pmax	pmax		
	comp=Z,150nm,1.2s						
VSR				pmax	pmax		
	comp=Z,670nm,2.3s						
VSR				smax	smax		
	comp=E,4µm,11.8s						
VSR				MLR	MLR		
	comp=Z,12µm,13.0s						
CAST	**Castle Rocks**	**67.00**	**29**	IAMs_20	IAMs_20	14 36 43.1	
	comp=Z,13µm,19.0s						
CAST	**Castle Rocks**	**67.00**	**29**	P	**P**	**14 07 35.0**	**0.0**
	baz=278,SNR=40						
CAST				S	**S**	**14 16 26.8**	**-1.0**
	baz=278						
P19K	**Oil Pt**	**67.01**	**33**	P	**P**	**14 07 33.9**	**-1.2**
	baz=279						
P19K				S	**S**	**14 16 27.5**	**-0.5**
	baz=279						
PPLA	**Purkeypile**	**67.03**	**30**	P	**P**	**14 07 34.7**	**-0.6**
	baz=278,SNR=16						
PPLA				S	**S**	**14 16 27.6**	**-0.8**
	baz=278						
MLAZ	**Malazgirt-MUS**	**67.08**	**304**	P	**P**	**14 07 37.8**	**+1.6**
MOS	**Moscow**	**67.12**	**322**	*e*P	**P**	**14 07 35.0**	**-0.8**
MOS				*e*		14 08 00.5	
MOS				*e*		14 10 06.3	
MOS				*e*S	**S**	**14 16 28.5**	**-0.9**
MOS				pmax	pmax		
	comp=Z,154nm,1.4s						
MOS				pmax	pmax		
	comp=E,54nm,0.8s						
MOS				pmax	pmax		
	comp=Z,500nm,1.8s						
MOS				MLR	MLR		
	comp=Z,24µm,15.0s						
MOS				MLR	MLR		
	comp=E,22µm,16.0s						
ERBR	**Yeremizino-Bor**	**67.17**	**311**	*e*P	**P**	**14 07 36.4**	**0.0**
ERBR				*e**PP	**pP**	**14 07 40.1**	**-1.1**
ERBR				*e*S	**S**	**14 16 34.1**	**+3.7**
ERBR				pmax	pmax		
	comp=Z,166nm,1.4s						
ERBR				MLR	MLR		
	comp=Z,18µm,16.0s						
ERBR				MLR	MLR		
	comp=E,30µm,13.0s						
ERBR				MLR	MLR		
	comp=N,13µm,12.0s						
LABN	**Labinsk**	**67.23**	**310**	*e*P	**P**	**14 07 33.9**	**-2.9**
LABN				*e**PP	**pP**	**14 07 37.1**	**-4.4**
LABN				*e*S	**S**	**14 16 29.3**	**-1.8**
LABN				pmax	pmax		
	comp=Z,23nm,0.6s						
LABN				MLR	MLR		
	comp=E,36µm,15.0s						
LABN				MLR	MLR		
	comp=N,18µm,16.0s						
LABN				MLR	MLR		
	comp=Z,25µm,16.0s						
O20K	**Slope Mountain**	**67.24**	**33**	P	**P**	**14 07 36.4**	**-0.2**
	baz=279						
O20K				S	**S**	**14 16 29.5**	**-1.4**
	baz=279						
COLD	**Coldfoot**	**67.25**	**25**	P	**P**	**14 07 35.9**	**-0.5**
	baz=278,SNR=28						
COLD				S	**S**	**14 16 27.8**	**-2.8**
	baz=278						
BCA	**Borcka**	**67.26**	**307**	⇑P	**P**	**14 07 38.7**	**+1.6**
BCA	**Borcka**	**67.26**	**307**	P	**P**	**14 07 38.7**	**+1.6**
N20K	**Mount Spurr**	**67.27**	**32**	P	**P**	**14 07 35.6**	**-1.2**
	baz=279,SNR=28						
N20K				S	**S**	**14 16 28.6**	**-2.7**
	baz=279						
APA	**Apatity**	**67.28**	**335**	⇓*i*P	**P**	**14 07 34.0**	**-2.7**
APA				*i*		14 08 08.0	
APA				*i* PPP	PPP	14 11 46.0	
APA				*i* S	**S**	**14 16 26.0**	**-5.0**
APA				*i* PS	**PnS**	**14 16 48.0**	**-5.0**
APA				pmax	pmax		
	comp=Z,52nm,0.9s						
APA				MLR	MLR		
	comp=Z,40µm,13.0s						
E23K	**Chandalar**	**67.35**	**24**	P	**P**	**14 07 36.5**	**-0.7**
	baz=278						
E23K				S	**S**	**14 16 29.0**	**-3.0**
	baz=278						
MLY	**Manley**	**67.35**	**27**	IAmb	IAmb	14 07 42.7	
	comp=Z,59nm,0.9s						
MLY				IAMs_20	IAMs_20	14 39 49.1	
	comp=Z,13µm,18.0s						
MLY	**Manley**	**67.35**	**27**	P	**P**	**14 07 36.6**	**-0.7**
	baz=279,SNR=87						
MLY				S	**S**	**14 16 31.9**	**-0.1**
	baz=279						
OHAK	**Old Harbor**	**67.36**	**36**	P	**P**	**14 07 41.7**	**+4.3**
OHAK	**Old Harbor**	**67.36**	**36**	P	**P**	**14 07 35.9**	**-1.4**
	baz=280						
OHAK				S	**S**	**14 16 29.8**	**-2.5**
	baz=280						
BPAW	**Bear Paw Mtn.**	**67.38**	**28**	IAMs_20	IAMs_20	14 37 07.2	
	comp=Z,12µm,20.0s						
BPAW	**Bear Paw Mtn.**	**67.38**	**28**	P	**P**	**14 07 36.5**	**-0.9**
	baz=279,SNR=25						
BPAW				S	**S**	**14 16 32.7**	**+0.3**
	baz=279						
G23K	**Bananza Creek**	**67.39**	**26**	IAmb	IAmb	14 07 42.4	
	comp=Z,64nm,1.0s						
G23K				IAMs_20	IAMs_20	14 38 58.5	
	comp=Z,11µm,20.0s						
G23K	**Bananza Creek**	**67.39**	**26**	P	**P**	**14 07 36.7**	**-0.8**
	baz=278,SNR=59						
G23K				S	**S**	**14 16 31.6**	**-0.9**
	baz=278						
C24K	**Franklin Bluff**	**67.43**	**22**	P	**P**	**14 07 36.3**	**-1.3**
	baz=278						
C24K				S	**S**	**14 16 31.3**	**-1.4**
	baz=278						
SKT	**Skwentna**	**67.47**	**31**	IAMs_20	IAMs_20	14 37 26.6	
	comp=Z,14µm,21.0s						
SKT	**Skwentna**	**67.47**	**31**	P	**P**	**14 07 36.4**	**-1.6**
	baz=279,SNR=13						
SKT				S	**S**	**14 16 31.0**	**-2.5**
	baz=279						
D24K	**Happy Valley**	**67.47**	**23**	P	**P**	**14 07 36.8**	**-1.1**
	baz=279						
D24K				S	**S**	**14 16 32.1**	**-1.2**
	baz=279						
KTH	**Kantishna Hill**	**67.50**	**29**	IAMs_20	IAMs_20	14 37 40.2	
	comp=Z,12µm,19.0s						
Q20K	**Shuyak Island**	**67.60**	**34**	P	**P**	**14 07 36.9**	**-1.9**
	baz=280						
GURO	**Guroymak-BITLI**	**67.61**	**303**	IAMs_20	IAMs_20	14 41 40.8	
	comp=Z,11µm,19.0s						
KDAK	**Kodiak Island**	**67.64**	**35**	P	**P**	**14 07 38.7**	**-0.4**
KDAK	**Kodiak Island**	**67.64**	**35**	P	**P**	**14 07 38.2**	**-0.9**
	baz=280						
KDAK				S	**S**	**14 16 36.1**	**+0.5**
	baz=280						
KDAK	**Kodiak Island**	**67.64**	**35**	P	**P**	**14 07 38.7**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,155nm,1.2s						
KDAK				MLR	MLR		
	comp=Z,10µm,21.0s						
KDAK	**Kodiak Island**	**67.64**	**35**	LR	LR	14 37 38.6	
	comp=Z,9µm,21.9s,baz=290,slow=36						
TRF	**Thorofare Moun**	**67.79**	**29**	IAmb	IAmb	14 08 06.2	
	comp=Z,52nm,1.0s						
TRF				IAMs_20	IAMs_20	14 37 50.0	
	comp=Z,11µm,20.0s						
TRF	**Thorofare Moun**	**67.79**	**29**	P	**P**	**14 07 39.1**	**-1.1**
	baz=280,SNR=11						
TRF				S	**S**	**14 16 37.1**	**-0.6**
	baz=280						
HOM	**Homer**	**67.80**	**33**	P	**P**	**14 07 37.7**	**-2.4**
	baz=280						
OBN	**Obninsk**	**67.82**	**322**	⇑P	**P**	**14 07 39.6**	**-0.7**
OBN	**Obninsk**	**67.82**	**322**	*d*P	**P**	**14 07 39.1**	**-1.2**
OBN				*i*		14 07 49.2	
OBN				*i*		14 08 06.1	
OBN				*i*		14 10 08.6	
OBN				*i* S	**S**	**14 16 35.5**	**-2.3**
OBN				pmax	pmax		
	comp=Z,89nm,1.2s						
OBN				MLR	MLR		
	comp=Z,20µm,17.0s						
OBN	**Obninsk**	**67.82**	**322**	LR	LR	14 39 50.4	
	comp=Z,22µm,19.3s,baz=64,slow=38						
CAPN	**Captain Cook N**	**67.85**	**32**	IAMs_20	IAMs_20	14 36 23.7	
	comp=Z,10µm,19.0s						
I23K	**Minto, Yukon-K**	**67.91**	**27**	IAmb	IAmb	14 07 49.1	
	comp=Z,55nm,1.1s						
I23K				IAMs_20	IAMs_20	14 40 07.9	
	comp=Z,12µm,18.0s						
I23K	**Minto, Yukon-K**	**67.91**	**27**	P	**P**	**14 07 39.1**	**-1.5**
	baz=280,SNR=20						
I23K				S	**S**	**14 16 37.8**	**-0.8**
	baz=280						
VRTB	**Varto-Mus**	**67.91**	**304**	P	**P**	**14 07 43.0**	**+1.6**
SUA	**Susitna One**	**67.92**	**31**	IAMs_20	IAMs_20	14 40 14.6	
	comp=Z,9µm,18.0s						
SUA	**Susitna One**	**67.92**	**31**	P	**P**	**14 07 40.4**	**-0.6**
	baz=280,SNR=34						
SUA				S	**S**	**14 16 36.7**	**-2.4**
	baz=280						
CHOM	**Cayeli-Rize**	**67.97**	**306**	P	**P**	**14 07 42.4**	**+0.8**
CUT	**Chulitna**	**67.98**	**30**	IAMs_20	IAMs_20	14 36 54.2	
	comp=Z,13µm,21.0s						
CUT	**Chulitna**	**67.98**	**30**	P	**P**	**14 07 39.6**	**-1.5**
	baz=280,SNR=10						
CUT				S	**S**	**14 16 38.3**	**-1.3**
	baz=280						
BWN	**Browne**	**68.03**	**28**	IAMs_20	IAMs_20	14 38 19.1	
	comp=Z,11µm,20.0s						
F24K	**Squaw Lake**	**68.08**	**24**	P	**P**	**14 07 40.6**	**-1.3**
	baz=280						
F24K				S	**S**	**14 16 38.9**	**-1.9**
	baz=280						
NEA2	**Nenana**	**68.12**	**28**	IAmb	IAmb	14 07 47.1	
	comp=Z,71nm,0.9s						
NEA2				IAMs_20	IAMs_20	14 38 40.7	
	comp=Z,14µm,19.0s						
NEA2	**Nenana**	**68.12**	**28**	P	**P**	**14 07 40.7**	**-1.4**
	baz=280,SNR=16						
NEA2				S	**S**	**14 16 40.9**	**-0.4**
	baz=280						
BRLK	**Bradley Lake**	**68.16**	**33**	IAMs_20	IAMs_20	14 41 51.8	
	comp=Z,9µm,18.0s						
FIS	**Fire Island**	**68.23**	**31**	IAMs_20	IAMs_20	14 39 43.1	
	comp=Z,11µm,18.0s						
BRSE	**Bradley Lake S**	**68.24**	**33**	P	**P**	**14 07 41.4**	**-1.5**
	baz=281,SNR=6.3						
BRSE				S	**S**	**14 16 41.6**	**-1.2**
	baz=281						
HOPEN	**Hopen**	**68.25**	**345**	*e*P	**P**	**14 07 43.4**	**+0.7**
HOPEN				*e*S	**S**	**14 16 43.3**	**+1.0**
HOPEN				IVMs_BB	IVMs_BB	14 42 42.7	
	comp=Z,33µm,15.0s						
D25K	**Kavik River**	**68.31**	**22**	P	**P**	**14 07 41.9**	**-1.3**
	baz=281						
D25K				S	**S**	**14 16 40.8**	**-2.5**
	baz=281						
VADS	**Vadso**	**68.31**	**338**	*e*P	**P**	**14 07 43.1**	**+0.1**
VADS				IVmB_BB		14 07 50.1	
	comp=Z,2µm,4.6s						
VADS				*i*		14 11 59.2	
VADS				*e*S	**S**	**14 16 44.5**	**+1.3**
VADS				IVMs_BB	IVMs_BB	14 43 20.8	
	comp=Z,9µm,11.7s						
MCK	**McKinley**	**68.34**	**29**	P	**P**	**14 07 41.7**	**-1.8**
	baz=281,SNR=36						
MCK				S	**S**	**14 16 44.5**	**+0.7**
	baz=281						
SVAN	**Silvan-Diyarba**	**68.35**	**303**	P	**P**	**14 07 47.6**	**+3.6**
G24K	**Hadweenzic Riv**	**68.39**	**25**	IAMs_20	IAMs_20	14 39 49.0	
	comp=Z,11µm,20.0s						
G24K	**Hadweenzic Riv**	**68.39**	**25**	P	**P**	**14 07 42.5**	**-1.2**
	baz=281						
G24K				S	**S**	**14 16 46.0**	**+1.6**
	baz=281						
H24K	**Noodor Dome**	**68.39**	**26**	IAMs_20	IAMs_20	14 42 23.1	
	comp=Z,9µm,18.0s						
H24K	**Noodor Dome**	**68.39**	**26**	P	**P**	**14 07 43.1**	**-0.7**
	baz=281,SNR=44						
H24K				S	**S**	**14 16 47.2**	**+2.7**
	baz=281						
MDM	**Murphy Dome**	**68.41**	**27**	IAMs_20	IAMs_20	14 41 01.2	
	comp=Z,13µm,19.0s						
RND	**Reindeer**	**68.44**	**29**	IAMs_20	IAMs_20	14 38 01.0	
	comp=Z,14µm,20.0s						
RC01	**Rabbit Creek A**	**68.47**	**31**	IAmb	IAmb	14 08 17.6	
	comp=Z,57nm,1.2s						
RC01				IAMs_20	IAMs_20	14 37 28.1	
	comp=Z,11µm,21.0s						
RC01	**Rabbit Creek A**	**68.47**	**31**	P	**P**	**14 07 43.3**	**-0.9**
	baz=281,SNR=7.2						
RC01				S	**S**	**14 16 41.3**	**-4.2**
	baz=281						
BNGB	**Bingl**	**68.54**	**304**	P	**P**	**14 07 47.6**	**+2.3**
COLA	**College**	**68.59**	**27**	P	**P**	**14 07 44.0**	**-0.8**
COLA				IAmb	IAmb	14 07 50.3	
	comp=Z,31nm,0.8s						
COLA	**College**	**68.59**	**27**	IAMs_20	IAMs_20	14 39 13.8	
	comp=Z,12µm,20.0s						
COLA	**College**	**68.59**	**27**	P	**P**	**14 07 46.1**	**+1.2**
COLA	**College**	**68.59**	**27**	P	**P**	**14 07 44.3**	**-0.6**
	baz=281						
COLA				S	**S**	**14 16 46.6**	**0.0**
	baz=281						
COLA	**College**	**68.59**	**27**	P	**P**	**14 07 44.1**	**-0.8**
COLA				pmax	pmax		
	comp=Z,31nm,0.8s						
COLA				MLR	MLR		
	comp=Z,12µm,20.0s						
O22K	**Cooper Landing**	**68.59**	**32**	IAMs_20	IAMs_20	14 36 58.4	
	comp=Z,10µm,20.0s						
O22K	**Cooper Landing**	**68.59**	**32**	P	**P**	**14 07 44.4**	**-0.6**
	baz=281						
O22K				S	**S**	**14 16 48.5**	**+1.6**
	baz=281						
CCB	**Clear Creek Bu**	**68.65**	**28**	IAMs_20	IAMs_20	14 39 15.6	
	comp=Z,13µm,20.0s						
PMR	**Palmer**	**68.66**	**31**	IAmb	IAmb	14 07 52.6	
	comp=Z,86nm,1.2s						
PMR				IAMs_20	IAMs_20	14 38 14.1	
	comp=Z,11µm,20.0s						
PMR	**Palmer**	**68.66**	**31**	P	**P**	**14 07 48.8**	**+3.4**
PMR	**Palmer**	**68.66**	**31**	P	**P**	**14 07 45.0**	**-0.4**
	baz=281,SNR=10						
PMR				S	**S**	**14 16 44.8**	**-2.8**
	baz=281						
WAT1	**Susitna Watana**	**68.68**	**30**	P	**P**	**14 07 45.7**	**0.0**
	baz=281						
WAT1				S	**S**	**14 16 44.9**	**-3.1**
	baz=281						
POKR	**Poker Plat Res**	**68.71**	**27**	IAmb	IAmb	14 07 51.0	
	comp=Z,60nm,0.9s						
POKR				IAMs_20	IAMs_20	14 41 11.2	
	comp=Z,16µm,18.0s						
POKR	**Poker Plat Res**	**68.71**	**27**	P	**P**	**14 07 45.8**	**0.0**
	baz=281,SNR=24						
POKR				S	**S**	**14 16 45.7**	**-2.6**
	baz=281						
GHO	**Glory Hole Cre**	**68.72**	**31**	IAMs_20	IAMs_20	14 38 15.7	
	comp=Z,12µm,20.0s						
KTUT	**Trabzon**	**68.73**	**306**	P	**P**	**14 07 48.5**	**+2.2**
SEW	**Seward**	**68.80**	**32**	P	**P**	**14 07 45.1**	**-1.2**
	baz=282,SNR=11						
SEW				S	**S**	**14 16 46.9**	**-2.5**
	baz=282						
RAYN	**Ar Rayn**	**68.82**	**287**	P	**P**	**14 07 44.6**	**-2.6**
RAYN				IAmb	IAmb	14 08 04.3	
	comp=Z,90nm,1.2s						
RAYN	**Ar Rayn**	**68.82**	**287**	*i* P	**P**	**14 07 46.7**	**-0.5**
	SNR=8.4						
RAYN	**Ar Rayn**	**68.82**	**287**	P	**P**	**14 07 44.6**	**-2.6**
RAYN				pmax	pmax		
	comp=Z,90nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,5µm,20.0s						
RAYN	**Ar Rayn**	**68.82**	**287**	P	**P**	**14 07 50.7**	**+3.5**
E25K	**Arctic Village**	**68.83**	**24**	IAmb	IAmb	14 07 54.2	
	comp=Z,53nm,1.1s						
E25K	**Arctic Village**	**68.83**	**24**	P	**P**	**14 07 45.5**	**-0.9**
	baz=282,SNR=32						
E25K				S	**S**	**14 16 51.6**	**+2.0**
	baz=282						
G25K	**Bearman Lake**	**68.91**	**25**	P	**P**	**14 07 47.3**	**+0.4**
	baz=282						
G25K				S	**S**	**14 16 53.3**	**+2.8**
	baz=282						
F25K	**Christian Rive**	**68.91**	**24**	P	**P**	**14 07 47.6**	**+0.6**
	baz=282						
F25K				S	**S**	**14 16 51.6**	**+0.9**
	baz=282						
SML	**Sawmill**	**68.99**	**31**	IAMs_20	IAMs_20	14 38 44.8	
	comp=Z,10µm,20.0s						
SML	**Sawmill**	**68.99**	**31**	P	**P**	**14 07 46.5**	**-1.0**
	baz=282,SNR=17						
SML				S	**S**	**14 16 49.2**	**-2.5**
	baz=282						
ILAR	**Eielson Array**	**69.01**	**27**	P	**P**	**14 07 46.0**	**-1.6**
	comp=Z,5.0nm,0.6s,baz=256,slow=5.8,SNR=41						
ILAR				PKPPKP	**P'P'df**	**14 35 59.1**	**-5.6**
	comp=Z,0.2nm,0.8s,baz=46,slow=3.9,SNR=1.8						
ILAR				LR	LR	14 39 58.1	
	comp=Z,12µm,19.7s,baz=279,slow=38						
	comp=Z,5.0nm,0.6s						
KNK	**Knik Glacier**	**69.01**	**31**	IAmb	IAmb	14 07 52.1	
	comp=Z,81nm,0.9s						
KNK				IAMs_20	IAMs_20	14 38 26.4	
	comp=Z,12µm,20.0s						
KNK	**Knik Glacier**	**69.01**	**31**	P	**P**	**14 07 47.3**	**-0.4**
	baz=282,SNR=12						
KNK				S	**S**	**14 16 49.3**	**-2.6**
	baz=282						
HDA	**Harding Lake**	**69.06**	**28**	IAMs_20	IAMs_20	14 40 16.5	
	comp=Z,13µm,19.0s						
HDA	**Harding Lake**	**69.06**	**28**	P	**P**	**14 07 47.0**	**-0.9**
	baz=282,SNR=25						
HDA				S	**S**	**14 16 50.8**	**-1.6**
	baz=282						
HDA				S	**S**	**14 16 50.8**	**-1.6**
	baz=282						
MAZI	**Mazidag**	**69.10**	**303**	P	**P**	**14 07 50.2**	**+1.4**
WAT6	**Susitna Watana**	**69.10**	**30**	P	**P**	**14 07 47.9**	**-0.5**
	baz=282,SNR=19						
WAT6				S	**S**	**14 16 51.6**	**-1.6**
	baz=282						
DHY	**Denali Highway**	**69.16**	**29**	IAMs_20	IAMs_20	14 38 24.1	
	comp=Z,10µm,21.0s						
DHY	**Denali Highway**	**69.16**	**29**	P	**P**	**14 07 47.7**	**-1.0**
	baz=282,SNR=16						
DHY				S	**S**	**14 16 51.9**	**-1.9**
	baz=282						
KEV	**Kevo**	**69.18**	**338**	P	**P**	**14 07 48.2**	**-0.3**
KEV				IAmb	IAmb	14 08 00.8	
	comp=Z,76nm,1.1s						
KEV				IAMs_20	IAMs_20	14 41 27.1	
	comp=Z,12µm,18.0s						
KEV	**Kevo**	**69.18**	**338**	P	**P**	**14 07 48.2**	**-0.3**
KEV				pmax	pmax		
	comp=Z,76nm,1.1s						
KEV				MLR	MLR		
	comp=Z,12µm,18.0s						
DYBB	**Diyarbakir**	**69.21**	**303**	P	**P**	**14 07 51.3**	**+1.9**
M23K	**Glacier View**	**69.27**	**31**	P	**P**	**14 07 49.3**	**0.0**
	baz=282,SNR=15						

M23K S **S** **14 16 51.5 -3.5**
baz=282
FYU **Fort Yukon** **69.29 25** IAmb IAmb 14 08 08.3
FYU comp=Z,82nm,1.2s IAMs_20 IAMs_20 14 37 54.4
comp=Z,10µm,20.0s
PRP **Porcupine Dome** **69.41 26** IAmb IAmb 14 07 57.7
PRP comp=Z,57nm,1.3s IAMs_20 IAMs_20 14 41 16.6
comp=Z,9µm,18.0s
PRP **Porcupine Dome** **69.41 26** P **P** **14 07 49.3 -1.0**
PRP baz=283,SNR=22 S **S** **14 16 56.4 -0.4**
baz=283
DGTI **Dogotuki** **69.45 120** P **P** **14 07 53.8 +2.8**
SCM **Sheep Creek Mo** **69.45 30** P **P** **14 07 49.7 -0.8**
SCM baz=283,SNR=17 S **S** **14 16 56.1 -1.1**
baz=283
ANN **Anapa** **69.48 311** *e*P **P** **14 07 47.8 -3.0**
ANN *e**PP **pP** **14 07 51.2 -4.4**
ANN *e*S **S** **14 16 56.0 -1.9**
ANN pmax pmax
comp=Z,161nm,1.1s
ESPY **Espiye-Giresun** **69.51 307** P **P** **14 07 52.2 +1.0**
PTK **Pertek** **69.53 304** P **P** **14 07 53.4 +1.8**
SPA0 **Spitsbergen Ar** **69.61 348** *e*P **P** **14 07 51.2 +0.1**
SPA0 *e*S **S** **14 17 01.2 +2.7**
SPITS **Spitsbergen Ar** **69.61 348** P **P** **14 07 49.7 -1.4**
comp=Z,20nm,1.0s,baz=80,slow=9.4,SNR=2.5
SPITS LR LR 14 42 20.8
comp=Z,51µm,18.0s,baz=23,slow=39
comp=Z,20nm,1.0s
J25K **Salcha River,** **69.68 27** IAMs_20 IAMs_20 14 39 47.4
comp=Z,12µm,19.0s
J25K **Salcha River,** **69.68 27** P **P** **14 07 51.5 -0.4**
J25K baz=283 S **S** **14 16 56.9 -2.9**
baz=283
K24K **Donnelly Dome** **69.70 28** P **P** **14 07 51.0 -0.9**
K24K baz=283,SNR=44 S **S** **14 16 58.7 -1.2**
baz=283
ARA0 **ARCESS Array S** **69.74 338** *e*P **P** **14 07 51.3 -0.8**
ARA0 IVmBBB 14 07 57.1
comp=Z,2µm,2.6s
ARA0 *e*PP **PP** **14 10 29.1 +3.2**
ARA0 *e*S **S** **14 16 59.9 -0.4**
ARA0 IVMs_BB IVMs_BB 14 45 45.0
comp=Z,10µm,12.7s
ARCES **ARCESS Array B** **69.74 338** P **P** **14 07 51.3 -0.8**
ARCES IAmb IAmb 14 08 03.2
comp=Z,53nm,1.1s
ARCES **ARCESS Array B** **69.74 338** P **P** **14 07 51.3 -0.8**
ARCES pmax pmax
comp=Z,53nm,1.1s
ARCES **ARCESS Array B** **69.74 338** P **P** **14 07 50.6 -1.5**
comp=Z,24nm,1.2s,baz=54,slow=6.2,SNR=8.7
ARCES LR LR 14 42 03.2
comp=Z,14µm,18.4s,baz=76,slow=39
comp=Z,24nm,1.2s
P23K **Montague Islan** **69.83 32** P **P** **14 07 52.2 -0.5**
P23K baz=283 S **S** **14 17 00.7 -0.8**
baz=283
SGF **Sodankyl** **69.90 336** P **P** **14 07 53.2 +0.2**
M24K **Tolsona, Glenn** **69.92 30** IAMs_20 IAMs_20 14 38 45.3
comp=Z,10µm,18.0s
M24K **Tolsona, Glenn** **69.92 30** P **P** **14 07 52.9 -0.4**
M24K baz=284,SNR=13 S **S** **14 17 04.7 +2.1**
baz=284
ILIC **ilic-Erzincan** **70.00 305** P **P** **14 07 56.5 +2.1**
PAX **Paxson** **70.03 29** P **P** **14 07 53.9 -0.1**
PAX baz=284,SNR=12 S **S** **14 17 03.1 -0.9**
baz=284
HAMF **Hammerfest** **70.05 339** *e*P **P** **14 07 54.7 +0.8**
HAMF IVmBBB 14 08 00.7
comp=Z,2µm,4.8s
HAMF *e*S **S** **14 17 04.9 +1.1**
HAMF IVMs_BB IVMs_BB 14 45 35.9
comp=Z,14µm,14.6s
RIDG **Independent Ri** **70.11 28** IAmb IAmb 14 08 21.1
comp=Z,88nm,1.2s
RIDG IAMs_20 IAMs_20 14 40 02.3
comp=Z,13µm,20.0s
RIDG **Independent Ri** **70.11 28** P **P** **14 07 54.4 -0.1**
RIDG baz=284,SNR=13 S **S** **14 17 01.9 -3.0**
baz=284
PUL **Pulkovo** **70.14 327** ⇓*i*P **P** **14 07 55.1 +0.5**
PUL pmax pmax
comp=Z,125nm,1.1s
PUL MLR MLR
comp=Z,43µm,15.0s
KBS **Kingsbay** **70.15 349** *e*P **P** **14 07 54.9 +0.5**
KBS *e*S **S** **14 17 06.7 +1.9**
KLU **Klutina** **70.18 31** IAmb IAmb 14 08 04.6
comp=Z,84nm,1.2s
KLU IAMs_20 IAMs_20 14 38 04.3
comp=Z,10µm,20.0s
KLU **Klutina** **70.18 31** P **P** **14 07 55.0 0.0**
KLU baz=284,SNR=11 S **S** **14 17 04.6 -1.2**
baz=284
D27M **Malcolm River** **70.20 22** IAMs_20 IAMs_20 14 43 43.7
comp=Z,19µm,19.0s
D27M **Malcolm River** **70.20 22** P **P** **14 07 54.5 -0.5**
D27M baz=286 S **S** **14 17 04.7 -1.1**
baz=286
ARPR **Arapgir-MALATY** **70.27 305** P **P** **14 07 57.3 +1.2**
ARPR **Arapgir-MALATY** **70.27 305** IAMs_20 IAMs_20 14 43 00.1
comp=Z,10µm,18.0s
HARP **HAARP** **70.31 30** P **P** **14 07 54.5 -1.2**
HARP baz=284 S **S** **14 17 07.7 +0.6**
baz=284
SCRK **Sand Creek** **70.42 28** IAMs_20 IAMs_20 14 40 21.4
comp=Z,12µm,19.0s
SCRK **Sand Creek** **70.42 28** P **P** **14 07 54.9 -1.6**
SCRK baz=285,SNR=22 S **S** **14 17 07.8 -0.8**
baz=285
J26L **Joseph Creek** **70.47 27** IAmb IAmb 14 08 06.5
comp=Z,50nm,0.9s
J26L IAMs_20 IAMs_20 14 41 09.1
comp=Z,11µm,19.0s
J26L **Joseph Creek** **70.47 27** P **P** **14 07 55.4 -1.3**
J26L baz=285 S **S** **14 17 05.2 -3.9**
baz=285
Q23K **Middleton Isla** **70.48 33** P **P** **14 07 56.3 -0.4**
baz=284
EYAK **Cordova Ski Ar** **70.50 32** P **P** **14 08 00.9 +4.1**
EYAK **Cordova Ski Ar** **70.50 32** P **P** **14 07 56.1 -0.7**
EYAK baz=284 S **S** **14 17 08.9 -0.4**
baz=284
KTK1 **Kautokeino** **70.66 338** *e*P **P** **14 07 57.4 -0.3**
KTK1 IVmB_BB 14 08 04.6
comp=Z,2µm,4.6s
KTK1 *i* 14 12 19.6
KTK1 *e*S **S** **14 17 11.3 +0.3**
KTK1 *e*SKSac **SKKSac** **14 17 59.4 +0.3**
KTK1 IVMs_BB IVMs_BB 14 45 48.8
comp=Z,9µm,14.7s
RSDY **Resadiye-TOKAT** **70.67 306** P **P** **14 08 00.8 +2.5**
N25K **Chitina, Valde** **70.77 30** IAmb IAmb 14 08 12.0
comp=Z,115nm,1.4s
N25K IAMs_20 IAMs_20 14 39 13.7
comp=Z,9µm,20.0s
N25K **Chitina, Valde** **70.77 30** P **P** **14 07 58.4 -0.1**
N25K baz=285,SNR=10.0 S **S** **14 17 11.1 -1.6**
baz=285
TAU **Tasmania Unive** **70.78 160** P **P** **14 08 02.4 +3.8**
MENT **Mentasta** **70.81 29** IAmb IAmb 14 08 09.4
comp=Z,47nm,0.9s
MENT IAMs_20 IAMs_20 14 39 04.8
comp=Z,14µm,20.0s
MENT **Mentasta** **70.81 29** P **P** **14 08 02.6 +3.9**
H27K **Steamboat Moun** **70.82 25** P **P** **14 07 58.5 -0.2**
H27K baz=286 S **S** **14 17 14.3 +1.2**
baz=286

E28M **Babbage River** **70.88 23** IAMs_20 IAMs_20 14 42 43.6
comp=Z,18µm,19.0s
E28M **Babbage River** **70.88 23** P **P** **14 07 59.1 +0.1**
E28M baz=287 S **S** **14 17 14.0 +0.5**
baz=287
BMRM **Bremner River** **70.93 31** P **P** **14 07 59.2 -0.3**
BMRM baz=285,SNR=11 S **S** **14 17 12.7 -1.8**
baz=285
D28M **Stokes Point** **70.93 22** P **P** **14 07 58.7 -0.6**
D28M baz=288 S **S** **14 17 13.8 -0.3**
baz=288
L26K **Log Cabin Wild** **70.95 29** IAmb IAmb 14 08 06.2
comp=Z,160nm,1.9s
L26K IAMs_20 IAMs_20 14 40 08.5
comp=Z,18µm,20.0s
L26K **Log Cabin Wild** **70.95 29** P **P** **14 07 58.7 -0.9**
L26K baz=286,SNR=21 S **S** **14 17 13.9 -0.7**
baz=286
I27K **Kandik River** **70.96 26** P **P** **14 07 58.6 -1.0**
I27K baz=286 S **S** **14 17 16.9 +2.1**
baz=286
F28M **Old Crow** **71.05 24** IAmb IAmb 14 08 11.6
comp=Z,65nm,1.0s
F28M **Old Crow** **71.05 24** P **P** **14 07 59.4 -0.7**
F28M baz=287,SNR=49 S **S** **14 17 13.3 -2.3**
baz=287
SVSK **Karacayir** **71.05 306** P **P** **14 08 02.5 +2.0**
RAGM **Ragged Mountai** **71.05 32** IAMs_20 IAMs_20 14 43 24.4
comp=Z,13µm,19.0s
DARE **Darende-Malaty** **71.06 304** P **P** **14 08 02.8 +2.0**
K27K **Chicken** **71.22 28** IAmb IAmb 14 08 14.0
comp=Z,65nm,1.1s
K27K IAMs_20 IAMs_20 14 41 32.0
comp=Z,11µm,19.0s
K27K **Chicken** **71.22 28** P **P** **14 08 00.8 -0.3**
K27K baz=286 S **S** **14 17 14.4 -3.3**
baz=286
HMT **Hamilton** **71.26 32** IAMs_20 IAMs_20 14 41 57.0
comp=Z,11µm,19.0s
TOKT **Tokat** **71.27 306** P **P** **14 08 03.7 +1.7**
M26K **Nabesna, AK** **71.28 29** IAmb IAmb 14 08 08.1
comp=Z,76nm,0.9s
M26K IAMs_20 IAMs_20 14 39 10.5
comp=Z,12µm,20.0s
M26K **Nabesna, AK** **71.28 29** P **P** **14 08 00.9 -0.8**
M26K baz=286 S **S** **14 17 19.4 +0.9**
baz=286
KAIM **Kayak Island** **71.30 32** IAMs_20 IAMs_20 14 44 24.4
comp=Z,14µm,18.0s
KAIM **Kayak Island** **71.30 32** P **P** **14 08 01.5 -0.2**
baz=286
EGAK **Eagle** **71.39 27** IAMs_20 IAMs_20 14 43 27.8
comp=Z,12µm,18.0s
EGAK **Eagle** **71.39 27** P **P** **14 08 00.9 -1.2**
baz=287,SNR=7.9
EGAK S **S** **14 17 22.3 +2.8**
baz=287
VRDI **Verde Repeater** **71.40 31** IAmb IAmb 14 08 08.7
comp=Z,172nm,1.7s
KVT **Kavak** **71.42 307** P **P** **14 08 03.9 +1.0**
JETT **Jettan, Norway** **71.45 339** *e*P **P** **14 08 02.1 -0.4**
JETT *e*S **S** **14 17 20.2 0.0**
JETT *e*SKSac **SKSac** **14 18 04.2 -0.8**
JETT IVMs_BB IVMs_BB 14 46 32.8
comp=Z,13µm,18.6s
BERG **Berg Lake** **71.52 31** IAMs_20 IAMs_20 14 42 04.6
comp=Z,10µm,19.0s
E29M **Blow River** **71.52 23** IAMs_20 IAMs_20 14 42 35.5
comp=Z,17µm,20.0s
E29M **Blow River** **71.52 23** P **P** **14 08 02.5 -0.4**
E29M baz=289 S **S** **14 17 19.6 -1.3**
baz=289
MCARA **McCarthy VSAT** **71.55 30** IAmb IAmb 14 08 09.3
comp=Z,78nm,0.9s
MCARA IAMs_20 IAMs_20 14 45 27.5
comp=Z,9µm,20.0s
MCARA **McCarthy VSAT** **71.55 30** P **P** **14 08 02.2 -1.0**
MCARA baz=286,SNR=17 S **S** **14 17 18.2 -3.4**
baz=286
SUCK **Suckling Hills** **71.57 32** IAMs_20 IAMs_20 14 43 50.5
comp=Z,13µm,18.0s
L27K **Beaver Creek,** **71.61 28** IAmb IAmb 14 08 27.1
comp=Z,66nm,1.1s
L27K IAMs_20 IAMs_20 14 40 48.3
comp=Z,14µm,20.0s
L27K **Beaver Creek,** **71.61 28** P **P** **14 08 02.5 -1.0**
L27K baz=287 S **S** **14 17 23.1 +0.9**
baz=287
GAZ **Gaziantep** **71.66 303** P **P** **14 08 05.9 +1.5**
I28M **Miner Creek** **71.68 26** IAMs_20 IAMs_20 14 43 34.1
comp=Z,12µm,18.0s
I28M **Miner Creek** **71.68 26** P **P** **14 08 02.9 -1.1**
I28M baz=288 S **S** **14 17 23.5 +0.4**
baz=288
FINES **FINESS Array B** **71.71 330** P **P** **14 08 03.0 -1.1**
comp=Z,26nm,0.8s,baz=62,slow=3.2,SNR=28
FINES S **S** **14 17 14.5 -8.8**
comp=Z,5.2nm,1.1s,baz=188,slow=25,SNR=1.9
FINES LR LR 14 42 36.4
comp=Z,66µm,18.0s,baz=73,slow=38
comp=Z,26nm,0.8s
SIM **Simferopol'** **71.72 312** *e*P **P** **14 08 05.7 +1.2**
SIM *e*S **S** **14 17 27.7 +3.7**
SIM pmax pmax
comp=Z,160nm,1.0s
SIM smax smax
comp=E,2µm,7.4s
M27K **Edge Creek, AK** **71.79 29** IAMs_20 IAMs_20 14 39 36.0
comp=Z,15µm,20.0s
M27K **Edge Creek, AK** **71.79 29** P **P** **14 08 03.4 -1.4**
M27K baz=287 S **S** **14 17 24.8 +0.2**
baz=287
BGLC **Bering Glacier** **71.79 32** P **P** **14 08 03.7 -0.9**
baz=287
KMRS **Kahramanmaras** **71.80 304** P **P** **14 08 05.9 +0.7**
DIKM **Dikmen** **71.84 308** ⇑P **P** **14 08 05.0 -0.3**
DIKM **Dikmen** **71.84 308** P **P** **14 08 06.5 +1.2**
WAX **Waxell Ridge** **71.90 31** IAMs_20 IAMs_20 14 40 37.9
comp=Z,11µm,18.0s
TRO **Tromso** **71.91 339** *e*P **P** **14 08 05.1 -0.1**
TRO *i* 14 12 41.5
TRO *e*S **S** **14 17 24.2 -1.2**
TRO IVMs_BB IVMs_BB 14 48 12.5
comp=Z,15µm,14.2s
SNH **Sunshine Point** **71.99 32** IAMs_20 IAMs_20 14 42 40.1
comp=Z,12µm,18.0s
ISLE **Juniper Island** **72.10 31** IAmb IAmb 14 08 13.5
comp=Z,57nm,1.0s
ISLE IAMs_20 IAMs_20 14 40 16.0
comp=Z,13µm,19.0s
BNN **Bunyan** **72.20 305** P **P** **14 08 08.3 +0.6**
BVCY **Beaver Creek** **72.23 29** P **P** **14 08 06.4 -0.9**
BVCY baz=288 S **S** **14 17 29.7 +0.3**
baz=288
VSU **Vasula** **72.27 327** *de*P **P** **14 08 07.0 -0.5**
VSU pmax pmax
comp=Z,149nm,1.3s
VSU MLR MLR
comp=Z,30µm,13.0s
VSU **Vasula** **72.27 327** *e*P **P** **14 08 07.6 +0.1**
BARN **Barnard Glacie** **72.28 30** IAmb IAmb 14 08 19.5
comp=Z,49nm,0.9s
BARN IAMs_20 IAMs_20 14 38 52.0
comp=Z,10µm,21.0s
DAWY **Dawson** **72.33 27** IAmb IAmb 14 08 20.1
comp=Z,50nm,0.9s
DAWY IAMs_20 IAMs_20 14 46 10.9
comp=Z,10µm,18.0s
DAWY **Dawson** **72.33 27** P **P** **14 08 06.8 -1.1**
baz=289,SNR=35
DAWY S **S** **14 17 31.5 +0.9**
baz=289
MESA **MESA** **72.41 31** IAmb IAmb 14 08 33.6
comp=Z,66nm,1.1s
MESA IAMs_20 IAMs_20 14 37 57.3
comp=Z,15µm,22.0s
MESA **MESA** **72.41 31** P **P** **14 08 06.5 -2.1**
baz=288
MESA S **S** **14 17 30.8 -1.1**
baz=288
CTG **Chitna Glacier** **72.46 31** P **P** **14 08 06.6 -2.2**
baz=288,SNR=16
CTG S **S** **14 17 32.8 +0.6**
baz=288
CTGM **Chitina Glacie** **72.46 31** IAmb IAmb 14 08 27.1
comp=Z,142nm,1.4s
CTGM IAMs_20 IAMs_20 14 39 58.4
comp=Z,10µm,19.0s
F30M **Barrier River** **72.53 23** P **P** **14 08 07.5 -1.5**
baz=291
F30M S **S** **14 17 31.5 -1.1**
baz=291
G30M **tAoh Zraii Nji** **72.59 24** IAMs_20 IAMs_20 14 43 06.1
comp=Z,19µm,20.0s
G30M **tAoh Zraii Nji** **72.59 24** P **P** **14 08 07.7 -1.7**
baz=291
G30M S **S** **14 17 30.7 -2.8**
baz=291
YUK3 **Moose Creek** **72.61 30** P **P** **14 08 06.9 -2.9**
baz=288,SNR=13
YUK3 S **S** **14 17 34.9 +0.8**
baz=288
KOZT **Kozan** **72.62 304** P **P** **14 08 11.3 +1.2**
EPYK **Eagle Plains** **72.62 24** IAMs_20 IAMs_20 14 41 26.4
comp=Z,13µm,19.0s
EPYK **Eagle Plains** **72.62 24** P **P** **14 08 07.1 -2.5**
baz=290,SNR=22
EPYK S **S** **14 17 32.0 -1.8**
baz=290
LOGN **Logan Glacier** **72.66 31** IAMs_20 IAMs_20 14 40 04.1
comp=Z,10µm,20.0s
TAHT **Tahtakopru-Hat** **72.68 303** P **P** **14 08 11.9 +1.5**
J29N **Klondike Camp** **72.69 27** IAmb IAmb 14 08 33.5
comp=Z,60nm,0.8s
J29N IAMs_20 IAMs_20 14 43 34.7
comp=Z,12µm,18.0s
J29N **Klondike Camp** **72.69 27** P **P** **14 08 07.8 -2.2**
baz=290,SNR=39
J29N S **S** **14 17 35.4 +0.6**
baz=290
TABL **Table Mountain** **72.71 31** IAMs_20 IAMs_20 14 38 42.2
comp=Z,11µm,22.0s
CORM **Corum** **72.72 307** P **P** **14 08 12.3 +1.6**
VAF **Yiistaro** **72.73 332** P **P** **14 08 11.2 +1.0**
CEYT **Ceyhan** **72.82 303** P **P** **14 08 12.8 +1.6**
MNK **Minsk** **72.84 322** *i* P **P** **14 08 11.2 +0.2**
MNK *i* 14 08 27.2
MNK *i* PPP PPP 14 12 36.8
MNK *i* S **S** **14 17 39.0 +2.4**
MNK *i* SS **SS** **14 22 20.2 +4.1**
MNK pmax pmax
comp=N,31nm,1.0s
MNK pmax pmax
comp=E,29nm,1.2s
MNK pmax pmax
comp=Z,72nm,0.9s
MNK MLR MLR
comp=E,7µm,21.0s
MNK MLR MLR
comp=Z,22µm,20.0s
MNK MLR MLR
comp=N,4µm,15.0s
MEF **Metsahovi** **72.87 329** *e*P **P** **14 08 11.0 0.0**
KIP **Kipapa** **73.04 74** IAMs_20 IAMs_20 14 40 35.1
comp=Z,11µm,20.0s
INK **Inuvik** **73.06 22** IAMs_20 IAMs_20 14 43 38.9
comp=Z,14µm,20.0s
INK **Inuvik** **73.06 22** P **P** **14 08 10.6 -1.5**
baz=293,SNR=40
INK S **S** **14 17 36.4 -2.2**
baz=293
INK **Inuvik** **73.06 22** LR LR 14 43 50.0
comp=Z,12µm,19.8s,baz=289,slow=39
YUK8 **Steele Glacier** **73.08 30** P **P** **14 08 10.6 -2.0**
baz=289,SNR=5.4
YUK8 S **S** **14 17 41.7 +2.1**
baz=289
I30M **Mount Dempster** **73.16 26** IAmb IAmb 14 08 24.4
comp=Z,59nm,1.1s
I30M IAMs_20 IAMs_20 14 43 36.1
comp=Z,11µm,19.0s
I30M **Mount Dempster** **73.16 26** P **P** **14 08 11.8 -1.1**
baz=291,SNR=46
I30M S **SKiKP** **14 17 42.8 -1.7**
baz=291
L29M **L29M** **73.19 28** IAmb IAmb 14 08 36.7
comp=Z,59nm,1.1s
L29M IAMs_20 IAMs_20 14 41 56.8
comp=Z,11µm,19.0s
L29M **L29M** **73.19 28** P **P** **14 08 11.6 -1.4**
baz=290
L29M S **SKiKP** **14 17 44.1 -0.4**
baz=290
K29M **Barlow Dome** **73.19 27** IAMs_20 IAMs_20 14 44 33.8
comp=Z,12µm,18.0s
K29M **Barlow Dome** **73.19 27** P **P** **14 08 11.6 -1.5**
baz=290
K29M S **S** **14 17 41.8 +1.3**
baz=290
CMRD **Camardi-Nigde** **73.20 304** P **P** **14 08 13.4 -0.3**
AKASG **Malin Array Be** **73.21 318** IAmb IAmb 14 09 34.4
comp=Z,104nm,1.2s
AKASG **Malin Array Be** **73.21 318** P **P** **14 08 12.0 -1.3**
AKASG **Malin Array Be** **73.21 318** P **P** **14 08 11.9 -1.3**
comp=Z,25nm,1.1s,baz=60,slow=5.6,SNR=45
AKASG S **S** **14 17 35.0 -5.9**
comp=Z,0.2nm,0.3s,baz=206,slow=17,SNR=1.5
AKASG LR LR 14 44 05.6
comp=Z,14µm,19.2s,baz=56,slow=39
comp=Z,25nm,1.1s
AKBB **Malin Array Si** **73.21 318** *c i*P **P** **14 08 12.4 -0.9**
AKBB pmax pmax
comp=Z,155nm,1.6s
AKBB MLR MLR
comp=Z,18µm,13.0s
KIEV **Kiev** **73.22 318** ⇓P **P** **14 08 12.2 -1.1**
KIEV **Kiev** **73.22 318** IAMs_20 IAMs_20 14 43 55.3
comp=Z,18µm,20.0s
KIEV **Kiev** **73.22 318** *i* P **P** **14 08 11.6 -1.8**
SNR=13
KIEV **Kiev** **73.22 318** P **P** **14 08 12.2 -1.1**
IDID **Didziasalis** **73.22 324** *e*P **P** **14 08 13.6 +0.3**
PINM **Pinnacle** **73.25 31** P **P** **14 08 12.3 -1.1**
baz=289,SNR=12
PINM S **S** **14 17 41.6 +0.4**
baz=289
M29M **Somme Creek** **73.27 29** IAmb IAmb 14 08 20.8
comp=Z,118nm,1.6s
M29M IAMs_20 IAMs_20 14 42 10.3
comp=Z,11µm,20.0s
M29M **Somme Creek** **73.27 29** P **P** **14 08 12.4 -1.2**
baz=290
M29M S **SKiKP** **14 17 43.4 -1.3**
baz=290
KARA **Karaisali** **73.28 304** P **P** **14 08 15.4 +1.4**
F31M **Tsiigehtchic** **73.32 23** IAmb IAmb 14 08 15.9
comp=Z,51nm,0.8s
F31M **Tsiigehtchic** **73.32 23** P **P** **14 08 12.5 -1.1**
baz=293,SNR=42
F31M S **S** **14 17 39.1 -2.5**
baz=293
G31M **Satah River** **73.33 24** IAMs_20 IAMs_20 14 44 07.5
comp=Z,17µm,20.0s
G31M **Satah River** **73.33 24** P **P** **14 08 11.7 -1.9**
baz=292,SNR=24
G31M S **S** **14 17 39.7 -2.0**
baz=292
IZAR **Zarasai** **73.36 324** *e*P **P** **14 08 14.4 +0.4**
ASF **Jabal al Asfar** **73.41 298** LR LR 14 45 51.8
comp=Z,8µm,19.5s,baz=339,slow=40
J30M **Hart River** **73.41 26** IAMs_20 IAMs_20 14 44 33.7
comp=Z,12µm,19.0s
J30M **Hart River** **73.41 26** P **P** **14 08 13.9 -0.6**
baz=291
J30M S **S** **14 17 43.1 +0.1**
baz=291
ISAL **Salakas** **73.48 324** *e*P **P** **14 08 15.7 +1.0**
IIGN **Ignalina** **73.49 324** *e*P **P** **14 08 15.3 +0.4**
GULA **Gulagac** **73.56 305** P **P** **14 08 17.4 +1.6**
YUK4 **Talbot Arm** **73.57 30** P **P** **14 08 14.7 -0.8**

YUK4 S **SKiKP** **14 17 47.0 +1.7**
baz=290,SNR=7.8

KURC Kurucasile-Bar 73.58 309 P **P** **14 08 16.3 +0.7**
BR131 Keskin Array S 73.58 307 P **P** **14 08 16.6 +0.7**
BR131 Keskin Array S 73.58 307 IAmb IAmb 14 08 28.7
comp=Z,92nm,1.1s
BR131 Keskin Array S 73.58 307 *d i* P **P** **14 08 15.6 -0.3**
BR131 Keskin Array S 73.58 307 P **P** **14 08 17.0 +1.1**
SNR=35
BR131 P **P** **14 08 17.0 +1.1**
SNR=35
BRTR Keskin Array B 73.58 307 *i* P **P** **14 08 15.3 -0.6**
BRTR pmax pmax
comp=Z,41nm,1.1s
BRTR Keskin Array B 73.58 307 P **P** **14 08 15.4 -0.5**
comp=Z,41nm,1.1s,baz=113,slow=2.8,SNR=60
BRTR LR LR 14 45 09.4
comp=Z,5μm,19.1s,baz=76,slow=40
comp=Z,41nm,1.1s
BCPM Bancas Point 73.58 31 IAMs_20 IAMs_20 14 43 42.3
comp=Z,11μm,18.0s
MTSE Matsula 73.64 327 *e*P **P** **14 08 16.4 +0.7**
YAYX Yaylak 73.69 306 P **P** **14 08 17.4 +0.9**
PNL Peninsula 73.80 31 P **P** **14 08 21.0 +4.4**
PNL Peninsula 73.80 31 P **P** **14 08 16.6 -0.1**
baz=290,SNR=6.5
PNL S **S** **14 17 48.3 +1.0**
baz=290
STEI Steigen 73.81 338 *e*P **P** **14 08 17.4 +0.9**
STEI IVmBBB 14 08 23.1
comp=Z,2μm,3.6s
STEI *e*S **SKiKP** **14 17 45.6 +0.4**
STEI IVMs_BB IVMs_BB 14 48 00.9
comp=Z,18μm,13.9s
RAF Rauma 73.82 330 *e*P **P** **14 08 16.8 +0.1**
YUK6 Outpost Mounta 73.84 30 P **P** **14 08 16.7 -0.4**
baz=290,SNR=7.6
YUK6 S **S** **14 17 50.2 +2.1**
baz=290
M30M Minto, Yukon 73.95 28 IAmb IAmb 14 08 21.3
comp=Z,109nm,1.4s
M30M IAMs_20 IAMs_20 14 42 21.7
comp=Z,13μm,18.0s
M30M Minto, Yukon 73.95 28 P **P** **14 08 16.0 -1.4**
baz=291,SNR=37
M30M S **S** **14 17 53.2 +4.2**
baz=291
MAYO Mayo, Yukon 73.95 27 IAmb IAmb 14 09 08.2
comp=Z,86nm,1.1s
MAYO IAMs_20 IAMs_20 14 46 56.7
comp=Z,9μm,18.0s
MAYO Mayo, Yukon 73.95 27 P **P** **14 08 16.9 -0.5**
baz=292,SNR=12
MAYO S **S** **14 17 50.3 +1.4**
baz=292
O29M Mount Kennedy 73.96 31 IAMs_20 IAMs_20 14 40 29.3
comp=Z,13μm,20.0s
O29M Mount Kennedy 73.96 31 P **P** **14 08 15.3 -2.4**
baz=290
O29M S **S** **14 17 48.7 -0.7**
baz=290
A36M Sachs Harbour 74.00 17 IAMs_20 IAMs_20 14 44 26.4
comp=Z,13μm,20.0s
A36M Sachs Harbour 74.00 17 P **P** **14 08 15.9 -1.6**
baz=299,SNR=42
A36M S **SKiKP** **14 17 44.7 -0.7**
baz=299
FAUS Fauske 74.02 337 *e*P **P** **14 08 17.6 -0.1**
FAUS IVmBBB 14 08 24.6
comp=Z,1μm,2.4s
FAUS *e*S **S** **14 17 48.9 -0.5**
FAUS IVMs_BB IVMs_BB 14 48 21.5
comp=Z,12μm,15.2s
AFSR Afar-Bala (An 74.08 306 P **P** **14 08 21.2 +2.4**
YESY Yesilyurt 74.11 305 P **P** **14 08 20.6 +1.6**
ANTO Ankara 74.15 307 ⇑P **P** **14 08 19.1 -0.1**
ANTO Ankara 74.15 307 P **P** **14 08 20.0 +0.8**
ANTO Ankara 74.15 307 P **P** **14 08 18.4 -0.8**
ANTO IAmb IAmb 14 08 36.5
comp=Z,61nm,0.8s
ANTO Ankara 74.15 307 P **P** **14 08 18.4 -0.8**
ANTO pmax pmax
comp=Z,61nm,0.8s
ANTO Ankara 74.15 307 P **P** **14 08 20.7 +1.5**
ANTO P **P** **14 08 20.7 +1.5**
KULU Kulu 74.26 306 P **P** **14 08 20.9 +1.1**
HYT Haines Junctio 74.27 30 IAMs_20 IAMs_20 14 41 18.4
comp=Z,13μm,19.0s
HYT Haines Junctio 74.27 30 P **P** **14 08 18.1 -1.4**
baz=291,SNR=24
HYT S **S** **14 17 55.1 +2.3**
baz=291
LOF Lofoten 74.30 338 *e*P **P** **14 08 17.9 -1.5**
LOF *e*PP **PP** **14 11 05.4 +0.5**
LOF *e*S **S** **14 17 51.8 -0.8**
LOF IVmB_BB 14 45 27.2
comp=Z,13μm,13.0s
MMAI Mount Meron Ar 74.33 299 P **P** **14 08 20.3 0.0**
comp=Z,0.8nm,0.3s,baz=75,slow=7.8,SNR=10
MMAI S **S** **14 17 54.1 -0.2**
comp=Z,0.7nm,0.3s,baz=307,slow=34,SNR=1.7
MMAI LR LR 14 45 52.6
comp=Z,8μm,19.8s,baz=28,slow=40
comp=Z,0.8nm,0.3s
SILI Silifke-Mersin 74.42 303 P **P** **14 08 21.2 +0.6**
BALJ Balqa 74.44 298 IAMs_20 IAMs_20 14 46 11.8
comp=Z,8μm,21.0s
CHBY Cihanbeyli 74.49 306 P **P** **14 08 21.4 +0.2**
MMLI Mount Malkishu 74.50 299 P **P** **14 08 23.3 +2.0**
VSVD Vaisvydziai 74.51 325 *e*P **P** **14 08 21.4 +0.7**
SORM Soroca 74.56 316 ⇑P **P** **14 08 20.3 -1.0**
SORM Soroca 74.56 316 P **P** **14 08 20.2 -1.0**
P29M Windy Craggy 74.60 31 IAmb IAmb 14 08 28.6
comp=Z,126nm,1.4s
P29M IAMs_20 IAMs_20 14 44 28.4
comp=Z,12μm,19.0s
P29M Windy Craggy 74.60 31 P **P** **14 08 20.3 -1.0**
baz=291
P29M S **S** **14 17 55.8 -0.5**
baz=291
KIS Kishinev 74.63 315 *e*P **P** **14 08 24.0 +2.3**
KIS Kishinev 74.63 315 *e*PcP **PcP** **14 08 33.0 -3.0**
KIS *e*S **S** **14 17 53.0 -4.0**
KIS Kishinev 74.63 315 *e*P **P** **14 08 24.0 +2.3**
KIS *e* 14 08 33.0
KIS *e*S **S** **14 17 53.0 -4.0**
KIS *e*PS **PnS** **14 18 43.0 +11**
KIS MLR MLR
comp=E,4μm,14.5s
KIS MLR MLR
comp=N,4μm,14.0s
IKL Isikli 74.64 303 P **P** **14 08 22.0 +0.1**
PABE Paberze 74.66 324 P **P** **14 08 18.6 -3.0**
PABE Paberze 74.66 324 *e*P **P** **14 08 22.1 +0.5**
MILM Milestii Mici 74.66 315 *e*P **P** **14 08 21.0 -0.8**
MILM Milestii Mici 74.66 315 *e*PP PP 14 11 10.0 +1.6
MILM *e*S **SKiKP** **14 17 51.0 +3.9**
comp=N,10μm,14.3s
MILM Milestii Mici 74.66 315 *e*P **P** **14 08 21.0 -0.8**
MILM *e* 14 11 10.0
MILM *e*S **SKiKP** **14 17 51.0 +3.9**
MILM *e*PS **PnS** **14 18 41.0 +9.1**
MILM smax smax
comp=E,10μm,14.3s
MILM MLR MLR
comp=Z,14μm,15.0s
MILM MLR MLR
comp=E,11μm,14.5s
MILM MLR MLR
comp=N,10μm,14.5s
AKKU Akkuyu-Mersin 74.77 303 P **P** **14 08 23.7 +1.0**
P30M Million Dollar 74.78 31 P **P** **14 08 21.1 -1.3**
baz=292
P30M S **S** **14 17 57.5 -0.9**
baz=292
N31M Braeburn, Yuko 74.80 29 IAMs_20 IAMs_20 14 43 10.3
comp=Z,12μm,19.0s
N31M Braeburn, Yuko 74.80 29 P **P** **14 08 21.6 -0.8**
baz=292,SNR=16
N31M S **S** **14 18 00.5 +2.0**
baz=292
MOR8 Moi Rana 74.83 336 *e*P **P** **14 08 22.8 +0.3**
MOR8 *e*S **SKiKP** **14 17 52.2 +5.4**
MOR8 IVMs_BB IVMs_BB 14 44 52.2
comp=Z,13μm,12.6s

O30N Mendenhall 74.94 30 IAMs_20 IAMs_20 14 42 05.9
comp=Z,8μm,20.0s
O30N Mendenhall 74.94 30 P **P** **14 08 22.4 -0.8**
baz=292,SNR=14
O30N S **S** **14 18 02.4 +2.3**
baz=292
LADK Ladik-KONYA 75.00 305 P **P** **14 08 24.3 +0.1**
MDUB Mudurnu 75.12 308 P **P** **14 08 25.2 +0.4**
M31M Drury Creek, Y 75.13 28 P **P** **14 08 23.5 -0.8**
baz=294,SNR=24
M31M S **S** **14 18 02.3 +0.2**
baz=294
KIZT Kizilcal 75.14 306 P **P** **14 08 27.2 +2.2**
AFI Afiamalu 75.14 113 IAMs_20 IAMs_20 14 35 04.9
comp=Z,5μm,20.0s
AFI Afiamalu 75.14 113 P **P** **14 08 27.1 +1.9**
SVRH Sivrihisar-ESK 75.22 307 P **P** **14 08 25.5 +0.1**
TLCR 75.22 313 ⇑P **P** **14 08 25.1 0.0**
TLCR 75.22 313 P **P** **14 08 25.1 0.0**
STOK Stokkvaagen 75.28 337 *e*P **P** **14 08 24.5 -0.5**
STOK *e*S **S** **14 18 02.9 -0.6**
STOK IVMs_BB IVMs_BB 14 45 20.6
comp=Z,14μm,12.6s
ATD Arta Tunnel 75.31 276 LR LR 14 41 35.2
comp=Z,106nm,18.7s,baz=60,slow=36
PLBC Pleasant Camp 75.31 31 P **P** **14 08 24.8 -0.5**
baz=292,SNR=8.1
PLBC S **S** **14 18 05.2 +1.0**
baz=292
CSS Mathiatis 75.33 302 P **P** **14 08 26.9 +0.9**
CSS Mathiatis 75.33 302 IAmb IAmb 14 08 40.7
comp=Z,95nm,0.9s
CSS IAMs_20 IAMs_20 14 45 57.1
comp=Z,8μm,20.0s
WHY Whitehorse 75.53 30 IAmb IAmb 14 08 33.9
comp=Z,64nm,1.1s
WHY IAMs_20 IAMs_20 14 43 34.5
comp=Z,8μm,20.0s
WHY Whitehorse 75.53 30 P **P** **14 08 25.3 -1.4**
baz=293,SNR=18
WHY S **S** **14 18 08.7 +1.9**
baz=293
PBUR Paburge 75.55 325 *e*P **P** **14 08 27.4 +0.6**
FARO Faro, Yukon 75.56 28 IAmb IAmb 14 08 34.2
comp=Z,77nm,1.1s
FARO IAMs_20 IAMs_20 14 43 21.3
comp=Z,12μm,20.0s
FARO Faro, Yukon 75.56 28 P **P** **14 08 25.7 -1.1**
baz=294,SNR=30
FARO S **S** **14 18 07.7 +0.8**
baz=294
TPGR Topolog 75.60 313 ⇑P **P** **14 08 27.2 -0.2**
SUW Suwalki 75.61 323 *e*P **P** **14 08 26.1 -1.1**
SUW *e*S **S** **14 18 06.8 -0.9**
SUW *e*L L 14 44 41.6
comp=Z,31μm,17.6s
SUW Suwalki 75.61 323 *e*P **P** **14 08 27.4 +0.2**
LEF Lefka 75.62 302 P **P** **14 08 28.3 +0.7**
GULT Gulveren 75.62 308 P **P** **14 08 28.3 +0.6**
C36M Paulatuk 75.66 20 IAMs_20 IAMs_20 14 45 25.4
comp=Z,12μm,20.0s
C36M Paulatuk 75.66 20 P **P** **14 08 24.9 -2.2**
baz=301,SNR=68
C36M S **S** **14 18 03.0 -4.6**
baz=301
SRCK Saricakaya, Es 75.67 308 P **P** **14 08 24.6 -3.3**
CFR Carcaliu 75.68 313 ⇑P **P** **14 08 28.6 +0.9**
CFR Carcaliu 75.68 313 P **P** **14 08 28.6 +0.9**
GAZI Gazipasa 75.69 303 P **P** **14 08 28.0 0.0**
TIRR Tirgusor 75.74 312 ⇑P **P** **14 08 28.7 +0.6**
TIRR Tirgusor 75.74 312 P **P** **14 08 29.7 +1.6**
TIRR Tirgusor 75.74 312 P **P** **14 08 28.7 +0.6**
SKAG Skagway 75.80 31 IAMs_20 IAMs_20 14 40 52.8
comp=Z,11μm,22.0s
SKAG Skagway 75.80 31 P **P** **14 08 31.4 +3.3**
SKAG Skagway 75.80 31 P **P** **14 08 26.6 -1.6**
baz=293,SNR=10
SKAG S **S** **14 18 11.4 +1.9**
baz=293
EIL Elat 75.80 296 P **P** **14 08 30.1 +1.3**
EIL Elat 75.80 296 LR LR 14 44 15.3
comp=Z,5μm,21.6s,baz=86,slow=38
KHU Kahuku 75.91 75 IAMs_20 IAMs_20 14 39 37.2
comp=Z,8μm,20.0s
S31K Pelican 75.95 33 P **P** **14 08 28.1 -0.9**
baz=293
S31K S **S** **14 18 11.8 +0.5**
baz=293
HARR Harsova 75.98 313 ⇑P **P** **14 08 30.1 +0.6**
HARR Harsova 75.98 313 P **P** **14 08 30.1 +0.6**
SILT Sile 76.00 309 P **P** **14 08 28.0 -1.7**
R31K City Hall, Gus 76.02 32 P **P** **14 08 28.5 -0.9**
baz=293
N32M Quiet Lake 76.13 29 IAMs_20 IAMs_20 14 43 59.7
comp=Z,13μm,19.0s
N32M Quiet Lake 76.13 29 P **P** **14 08 28.8 -1.3**
baz=295
N32M S **S** **14 18 11.6 -1.7**
baz=295
HLP Hilina Pali 76.16 75 IAMs_20 IAMs_20 14 39 17.0
comp=Z,9μm,19.0s
ADVT Abdulvahap 76.18 308 P **P** **14 08 31.5 +0.8**
TESR Tescani 76.20 315 ⇑P **P** **14 08 30.4 -0.3**
PSN Preselentsi 76.20 312 P **P** **14 08 32.7 +1.9**
SHUT Suhut-Afyon 76.23 306 P **P** **14 08 31.2 0.0**
NPOC North of Pu'u 76.30 75 IAMs_20 IAMs_20 14 40 10.7
comp=Z,8μm,21.0s
VRI Vrincioaia 76.37 314 ⇑P **P** **14 08 32.1 +0.4**
VRI Vrincioaia 76.37 314 P **P** **14 08 32.6 +0.9**
VRI Vrincioaia 76.37 314 P **P** **14 08 32.1 +0.4**
PLOR Plostina 76.43 314 ⇑P **P** **14 08 32.3 +0.2**
PLOR Plostina 76.43 314 P **P** **14 08 32.2 +0.2**
ISK Istanbul-Kandi 76.45 309 P **P** **14 08 32.9 +0.7**
KAVV Kandilli-Istan 76.45 309 P **P** **14 08 32.6 +0.4**
NSS Namsos 76.50 335 *e*P **P** **14 08 31.6 -0.4**
NSS IVmBBB 14 08 38.0
comp=Z,2μm,4.6s
NSS *e*S **S** **14 18 17.8 +0.8**
NSS IVMs_BB IVMs_BB 14 45 41.8
comp=Z,17μm,13.5s
P32M Atlin 76.50 30 IAMs_20 IAMs_20 14 42 27.2
comp=Z,14μm,20.0s
P32M Atlin 76.50 30 P **P** **14 08 31.3 -0.9**
baz=295,SNR=8.7
P32M S **S** **14 18 20.0 +2.7**
baz=295
ISP Isparta 76.50 305 IAmb IAmb 14 08 46.6
comp=Z,84nm,1.0s
P33M Teslin, Yukon 76.64 30 IAMs_20 IAMs_20 14 46 17.1
comp=Z,10μm,18.0s
P33M Teslin, Yukon 76.64 30 P **P** **14 08 32.2 -0.8**
baz=295,SNR=18
P33M S **S** **14 18 20.3 +1.2**
baz=295
LVV L'vov 76.65 319 *e*P **P** **14 08 33.2 0.0**
LVV *e* 14 08 50.0
LVV *e* 14 11 29.9
LVV *e*PPP PPP 14 13 15.4
LVV *e*S **S** **14 18 18.4 -0.8**
LVV *e*PS **PnS** **14 18 52.9 -4.6**
LVV *e*SSS SSS 14 26 28.0
LVV pmax pmax
comp=Z,50nm,1.4s
R32K Eaglecrest 76.66 32 IAMs_20 IAMs_20 14 45 17.7
comp=Z,11μm,19.0s
R32K Eaglecrest 76.66 32 P **P** **14 08 31.2 -2.0**
baz=294
COVR Voineasa-Covas 76.72 314 ⇑P **P** **14 08 34.1 +0.4**
JIS Juneau Island 76.73 32 IAMs_20 IAMs_20 14 48 49.4
comp=Z,12μm,18.0s
JIS Juneau Island 76.73 32 P **P** **14 08 36.6 +3.2**
ARMT Armutlu 76.76 309 P **P** **14 08 34.8 +0.7**
SIT Sitka 76.76 33 P **P** **14 08 36.7 +3.0**
SIT Sitka 76.76 33 P **P** **14 08 31.9 -1.7**
baz=294,SNR=7.6
SIT S **S** **14 18 23.9 +3.7**
baz=294
TURR Turia 76.77 315 ⇑P **P** **14 08 34.5 +0.5**
OUZ Omahuta 76.82 139 IAMs_20 IAMs_20 14 37 46.1
comp=Z,12μm,21.0s
PRD Provadia 76.87 311 P **P** **14 08 36.2 +1.7**
OZUR 76.90 315 ⇑P **P** **14 08 34.9 +0.2**
S32K Killisnoo 76.97 33 P **P** **14 08 34.5 -0.3**
baz=294
KLNR Kaliningrad 77.00 324 ⇓ *e*P **P** **14 08 32.8 -2.2**

KLNR pmax pmax
comp=Z,249nm,1.6s
KLNR MLR MLR
comp=Z,37μm,14.0s
MLR Muntele Rosu 77.02 314 ⇑P **P** **14 08 35.4 -0.1**
MLR Muntele Rosu 77.02 314 P **P** **14 08 35.8 +0.3**
MLR Muntele Rosu 77.02 314 IAmb IAmb 14 08 54.1
comp=Z,59nm,1.1s
MLR IAMs_20 IAMs_20 14 46 15.1
comp=Z,12μm,19.0s
MLR Muntele Rosu 77.02 314 P **P** **14 08 35.4 -0.1**
MLR Muntele Rosu 77.02 314 S **S** **14 18 21.8 -1.9**
comp=Z,1.3nm,0.4s,baz=255,slow=17,SNR=1.3
MLR LR LR 14 46 25.4
comp=Z,13μm,20.3s,baz=60,slow=39
DOPR Dopca 77.21 315 ⇑P **P** **14 08 36.8 +0.3**
KCTX Karacabey (Bur 77.23 308 P **P** **14 08 36.1 -0.6**
ELL Elmali 77.33 305 P **P** **14 08 29.8 -7.7**
LOZB Loznitsa 77.35 312 ⇑P **P** **14 08 37.2 -0.1**
Q32M Nakina River 77.44 31 IAmb IAmb 14 08 55.2
comp=Z,75nm,1.2s
Q32M IAMs_20 IAMs_20 14 43 06.4
comp=Z,13μm,20.0s
Q32M Nakina River 77.44 31 P **P** **14 08 36.3 -1.4**
baz=296
Q32M S **S** **14 18 30.5 +2.6**
baz=296
KWP Kalwaria Pacla 77.52 319 *e*P **P** **14 08 37.9 -0.2**
KWP *e*S **S** **14 18 28.4 -0.3**
KWP *e*L L 14 46 36.7
comp=Z,20μm,18.3s
KWP Kalwaria Pacla 77.52 319 IAMs_20 IAMs_20 14 46 45.3
comp=Z,15μm,18.0s
KULA Kula-Manisa 77.63 307 P **P** **14 08 39.8 +0.7**
JMB Yambol 77.71 311 P **P** **14 08 40.4 +1.1**
TBLU Trondheim 77.78 334 *e*S **S** **14 18 31.3 +0.3**
TBLU IVMs_BB IVMs_BB 14 46 14.5
comp=Z,11μm,14.2s
BEL Belsk 77.78 321 *e*P **P** **14 08 39.9 +0.4**
BEL *e*S **S** **14 18 31.8 +0.4**
BEL *e*L L 14 47 48.5
comp=Z,30μm,16.3s
BMR Baia Mare 77.78 317 ⇑P **P** **14 08 39.3 -0.3**
BMR Baia Mare 77.78 317 P **P** **14 08 39.2 -0.3**
BALB Balikesir 77.80 308 P **P** **14 08 38.1 -1.7**
SZH Strazhitsa 77.81 312 P **P** **14 08 42.9 +3.1**
HFS Hagfors 77.83 331 P **P** **14 08 38.1 -1.5**
comp=Z,12nm,0.8s,baz=102,slow=3.6,SNR=12
HFS LR LR 14 46 07.3
comp=Z,57μm,19.9s,baz=62,slow=38
comp=Z,12nm,0.8s
R33M Jennings River 77.84 30 IAMs_20 IAMs_20 14 43 08.1
comp=Z,12μm,21.0s
R33M Jennings River 77.84 30 P **P** **14 08 38.9 -1.0**
baz=297,SNR=16
R33M S **S** **14 18 34.5 +2.3**
baz=297
ARR Arges 77.92 314 ⇑P **P** **14 08 41.8 +1.3**
KRBG Karabiga-Canak 77.94 309 P **P** **14 08 40.7 +0.1**
ELND Elena 78.00 312 ⇑P **P** **14 08 41.1 +0.2**
HUMR Humele 78.01 313 ⇑P **P** **14 08 41.2 +0.3**
T33K Petersburg 78.05 33 P **P** **14 08 39.5 -1.3**
baz=296
T33K S **S** **14 18 35.1 +1.0**
baz=296
NC405 NORSAR Array S 78.22 332 IAmb IAmb 14 08 53.0
comp=Z,92nm,0.9s
U33K Whale Pass 78.27 34 P **P** **14 08 41.3 -0.8**
baz=296
U33K S **S** **14 18 38.1 +1.6**
baz=296
NC303 NORSAR Array S 78.32 332 IAmb IAmb 14 08 52.0
comp=Z,110nm,1.3s
MARR Marisel-Cluj 78.40 316 ⇑P **P** **14 08 43.2 0.0**
NB201 NORSAR Array S 78.44 332 IAmb IAmb 14 08 54.0
comp=Z,82nm,0.9s
S34M Telegraph Cree 78.44 31 P **P** **14 08 41.5 -1.5**
baz=297,SNR=14
S34M S **S** **14 18 40.7 +2.4**
baz=297
LOT Lotru 78.45 315 ⇑P **P** **14 08 44.3 +0.8**
NB2 NORSAR Subarra 78.47 332 P **P** **14 08 41.7 -1.5**
comp=Z,5nm,1.1s,baz=61,slow=5.6
NB2 NORSAR Subarra 78.47 332 P **P** **14 08 41.7 -1.5**
baz=61,slow=5.6
NOA NORSAR Array B 78.47 332 P **P** **14 08 41.4 -1.8**
comp=Z,7.4nm,0.7s,baz=59,slow=5.4,SNR=22
NOA LR LR 14 46 39.6
comp=Z,35μm,20.4s,baz=60,slow=38
comp=Z,7.4nm,0.7s
NC602 NORSAR Array S 78.48 332 *e*P **P** **14 08 41.9 -1.3**
NC602 IVmB_BB 14 08 43.0
comp=Z,1μm,4.3s
NC602 *e*S **S** **14 18 37.4 -1.3**
NC602 *e*SS **SS** **14 23 44.2 +3.1**
NC602 IVMs_BB IVMs_BB 14 46 43.6
comp=Z,45μm,14.4s
WTLY Watson Lake, Y 78.48 29 IAmb IAmb 14 08 47.4
comp=Z,80nm,1.1s
WTLY IAMs_20 IAMs_20 14 44 51.9
comp=Z,8μm,21.0s
WTLY Watson Lake, Y 78.48 29 P **P** **14 08 42.5 -0.8**
baz=299,SNR=35
WTLY S **S** **14 18 38.0 -0.8**
baz=299
WRAK Wrangell Islan 78.52 33 IAMs_20 IAMs_20 14 50 02.4
comp=Z,8μm,18.0s
WRAK Wrangell Islan 78.52 33 P **P** **14 08 43.5 0.0**
baz=296
WRAK S **S** **14 18 41.8 +2.6**
baz=296
NEEM North Greenlan 78.53 358 *i* P **P** **14 08 45.5 +1.9**
NEEM IAmb IAmb 14 08 55.0
comp=Z,49nm,0.9s
CRAG Craig 78.55 34 P **P** **14 08 43.8 +0.1**
baz=296
CRAG S **S** **14 18 40.2 +0.7**
baz=296
CRVS Cervenica-Dubn 78.55 319 *e*P **P** **14 08 45.6 +1.7**
CRVS pmax pmax
comp=Z,343nm,2.1s
CRVS Cervenica-Dubn 78.55 319 *e*P **P** **14 08 45.6 +1.7**
RES Resolute Bay 78.61 9 IAMs_20 IAMs_20 14 47 33.9
comp=Z,12μm,19.0s
RES Resolute Bay 78.61 9 LR LR 14 48 03.7
comp=Z,11μm,18.6s,baz=334,slow=39
DRGR 78.61 316 ⇑P **P** **14 08 44.1 -0.2**
DRGR 78.61 316 P **P** **14 08 44.1 -0.2**
RAO Raoul Island 78.65 129 LR LR 14 37 55.6
comp=Z,4μm,21.9s,baz=325,slow=32
DLBC Dease Lake 78.72 31 IAmb IAmb 14 08 51.5
comp=Z,72nm,1.1s
DLBC IAMs_20 IAMs_20 14 43 47.0
comp=Z,13μm,21.0s
DLBC Dease Lake 78.72 31 P **P** **14 08 44.5 -0.2**
baz=298,SNR=22
DLBC S **S** **14 18 42.8 +1.3**
baz=298
DLBC Dease Lake 78.72 31 LR LR 14 43 47.0
comp=Z,11μm,21.3s,baz=312,slow=36
DEV Deva 78.84 315 ⇑P **P** **14 08 45.5 0.0**
DEV Deva 78.84 315 P **P** **14 08 45.5 0.0**
DOMB Dombas 78.86 334 *e*P **P** **14 08 45.2 -0.1**
DOMB *e*S **S** **14 18 41.7 -1.1**
DOMB IVMs_BB IVMs_BB 14 46 54.5
comp=Z,16μm,13.1s
RDO Rodhopi 78.90 310 P **P** **14 08 43.5 -2.4**
JMIC Jan Mayen 78.98 345 *e*P **P** **14 08 46.1 +0.3**
JMIC *e*S **S** **14 18 45.0 +1.3**
JMIC IVMs_BB IVMs_BB 14 47 39.3
comp=Z,13μm,13.1s
JMIC Jan Mayen 78.98 345 LR LR 14 48 08.6
comp=Z,18μm,18.0s,baz=42,slow=39
OJC Ojcow 79.00 320 *e*P **P** **14 08 45.7 -0.6**
OJC *e*S **S** **14 18 44.6 -0.1**
OJC *e*L L 14 47 31.6
comp=Z,13μm,19.6s
OJC Ojcow 79.00 320 IAmb IAmb 14 09 06.2
comp=Z,112nm,1.3s
NIE Niedzica 79.04 319 *e*P **P** **14 08 46.1 -0.5**
NIE *e*S **S** **14 18 47.0 +1.8**
NIE *e*L L 14 48 38.0
comp=Z,11μm,21.1s
PLD Plovdiv 79.07 311 P **P** **14 08 47.3 +0.5**
JMI Jan Mayen 79.07 345 *e*P **P** **14 08 48.0 +1.8**
JMI *e*S **S** **14 18 45.3 +0.6**

JMI *i* 14 25 07.1
JMI IVMs_BB IVMs_BB 14 47 32.2
comp=Z,15µm,20.3s
WRGLY Wrigley 79.09 25 P **P** **14 08 46.1 -0.4**
baz=302,SNR=17
WRGLY S **S** **14 18 41.9 -3.2**
baz=302
GZR Gura Zlata 79.12 315 ⇓P **P** **14 08 47.7 +0.6**
GZR Gura Zlata 79.12 315 P **P** **14 08 47.7 +0.6**
OSL Oslo 79.23 331 *eP* **P** **14 08 47.0 -0.3**
OSL IVmB_BB 14 08 50.9
comp=Z,1µm,3.1s
OSL *eS* **S** **14 18 45.4 -1.2**
OSL IVMs_BB IVMs_BB 14 47 06.7
comp=Z,50µm,14.7s
RZN Rozhen 79.25 311 P **P** **14 08 46.6 -1.4**
T35M Bob Quinn 79.29 32 IAMs_20 IAMs_20 14 47 15.7
comp=Z,10µm,20.0s
T35M Bob Quinn 79.29 32 P **P** **14 08 47.7 -0.1**
baz=298,SNR=5.2
T35M S **S** **14 18 51.2 +3.6**
baz=298
KECS Kecovo 79.31 318 *eP* **P** **14 08 48.8 +0.8**
KECS pmax pmax
comp=Z,22nm,1.0s
KECS Kecovo 79.31 318 *eP* **P** **14 08 48.8 +0.8**
TULEG Thule 79.32 2 IAMs_20 IAMs_20 14 48 41.5
comp=Z,12µm,19.0s
V35K Ketchikan 79.38 34 IAMs_20 IAMs_20 14 47 21.2
comp=Z,7µm,19.0s
V35K Ketchikan 79.38 34 P **P** **14 08 49.1 +0.9**
baz=297
V35K S **S** **14 18 50.0 +1.6**
baz=297
SURR Surduc 79.40 315 ⇑P **P** **14 08 48.3 -0.3**
SIRR Siria 79.49 316 ⇑P **P** **14 08 49.0 -0.1**
AKN Aaknes 79.62 334 *eP* **P** **14 08 49.3 -0.1**
AKN *eS* **S** **14 18 50.2 -0.6**
AKN *eSS* **SS** **14 24 02.1 +4.0**
AKN IVMs_BB IVMs_BB 14 47 30.5
comp=Z,10µm,12.5s
TOZ Tahuroa Road 79.64 139 IAMs_20 IAMs_20 14 39 58.6
comp=Z,9µm,21.0s
LANS Liptovska Anna 79.65 319 *eP* **P** **14 08 51.6 +1.7**
LANS pmax pmax
comp=Z,32nm,1.7s
LANS Liptovska Anna 79.65 319 *eP* **P** **14 08 51.6 +1.7**
BZS Buzias 79.78 315 ⇓P **P** **14 08 50.9 +0.2**
BZS Buzias 79.78 315 P **P** **14 08 50.8 +0.2**
KONO Kongsberg 79.87 331 *eP* **P** **14 08 50.0 -0.8**
KONO *eS* **S** **14 18 52.5 -0.9**
KONO *eSS* **SS** **14 24 10.9 +9.0**
KONO IVMs_BB IVMs_BB 14 47 27.1
comp=Z,47µm,14.9s
SKAR Skarslia 79.88 333 *eP* **P** **14 08 50.1 -0.9**
SKAR *eS* **S** **14 18 53.6 -0.2**
SKAR *eSS* **SS** **14 24 03.9 +1.7**
SKAR IVMs_BB IVMs_BB 14 47 31.5
comp=Z,24µm,14.8s
BLKB Belogradchik 79.89 313 ⇑P **P** **14 08 52.2 +0.8**
PSZ Piszkesteto 79.91 318 ⇑P **P** **14 08 51.4 0.0**
PSZ Piszkesteto 79.91 318 IAMs_20 IAMs_20 14 49 09.6
comp=Z,13µm,19.0s
PSZ Piszkesteto 79.91 318 P **P** **14 08 51.3 0.0**
U35K Hyder 79.91 33 IAMs_20 IAMs_20 14 50 18.0
comp=Z,9µm,18.0s
U35K Hyder 79.91 33 P **P** **14 08 52.1 +1.1**
baz=298
U35K S **S** **14 18 56.3 +2.3**
baz=298
VTS Vitosha 79.92 312 P **P** **14 08 49.9 -1.7**
MMB Musomishta 79.99 311 P **P** **14 08 52.2 +0.3**
RAC Raciborz 80.00 321 *eP* **P** **14 08 52.5 +0.8**
RAC Raciborz 80.00 321 *eS* **S** **14 18 56.0 +0.8**
RAC AMS AMS 14 47 51.2
comp=Z,21nm,18.2s
RAC Raciborz 80.00 321 *eP* **P** **14 08 52.5 +0.8**
RAC *eS* **S** **14 18 56.0 +0.8**
RAC MLR MLR
comp=Z,21µm,18.2s
QRZ Quartz Range 80.04 143 IAMs_20 IAMs_20 14 44 06.1
comp=Z,6µm,19.0s
MDVR Moldovita 80.06 315 ⇑P **P** **14 08 51.8 -0.4**
OKC Ostrava-Krasne 80.13 320 *eP* **P** **14 08 52.9 +0.5**
OKC *eS* **S** **14 18 55.3 -1.3**
OKC AMS AMS 14 47 10.0
comp=Z,16µm,15.0s
OKC Ostrava-Krasne 80.13 320 *eP* **P** **14 08 52.9 +0.5**
OKC *e* 14 18 55.3
OKC MLR MLR
comp=Z,16µm,15.0s
DSZ Denniston Nort 80.29 144 IAMs_20 IAMs_20 14 41 13.7
comp=Z,9µm,21.0s
JCZ Jackson Bay 80.42 148 P **P** **14 08 58.1 +4.1**
PEHC Pehcevo 80.48 311 *i* P **P** **14 08 54.7 +0.1**
HYA Hoyanger 80.50 334 *eP* **P** **14 08 53.8 -0.3**
HYA IVmBBB 14 08 58.0
comp=Z,2µm,2.8s
HYA *eS* **S** **14 19 00.2 +0.2**
HYA *eSS* **SS** **14 24 14.2 +3.0**
HYA IVMs_BB IVMs_BB 14 48 19.4
comp=Z,20µm,14.6s
MORC Moravsky Berou 80.51 320 ⇑P **P** **14 08 54.9 +0.3**
MORC Moravsky Berou 80.51 320 *eP* **P** **14 08 54.7 +0.1**
MORC Moravsky Berou 80.51 320 *eS* **S** **14 19 00.1 -0.6**
MORC Moravsky Berou 80.51 320 P **P** **14 08 54.9 +0.3**
KOTAN Kotaneelee Air 80.52 28 P **P** **14 08 55.0 +0.6**
baz=302
KOTAN S **S** **14 18 59.5 -0.8**
baz=302
MAUC Maruska 80.53 320 *eP* **P** **14 08 55.3 +0.7**
MAUC *eS* **S** **14 18 59.0 -1.9**
BOVS Bovan 80.53 314 ⇑P **P** **14 08 54.8 +0.1**
DCZ Deep Cove 80.68 149 IAMs_20 IAMs_20 14 43 51.0
comp=Z,8µm,21.0s
FLDN Fort Liard 80.70 27 IAmb IAmb 14 09 12.9
comp=Z,78nm,1.2s
FLDN Fort Liard 80.70 27 P **P** **14 08 56.6 +1.3**
baz=303,SNR=8.3
FLDN S **S** **14 19 02.3 0.0**
baz=303
KSP Ksiaz 80.75 322 *eP* **P** **14 08 55.3 -0.5**
KSP *eS* **S** **14 19 03.2 +0.1**
KSP *eL* L 14 48 04.8
comp=Z,24µm,18.8s
NNZ Nelson 80.78 143 IAMs_20 IAMs_20 14 44 27.5
comp=Z,4µm,19.0s
INZ Inchbonnie 80.79 145 IAMs_20 IAMs_20 14 40 45.9
comp=Z,6µm,19.0s
XMAS Kiritimati 80.81 92 IAMs_20 IAMs_20 14 46 42.3
comp=Z,10µm,22.0s
XMAS Kiritimati 80.81 92 P **P** **14 08 59.3 +2.6**
HORT Hortiatis 80.82 310 P **P** **14 08 54.6 -1.8**
KRLC Kraliky 80.82 321 *eP* **P** **14 08 56.3 +0.1**
KRLC *ex* x 14 09 05.8
KRLC AMS AMS 14 47 40.0
comp=Z,25µm,13.9s
KRLC Kraliky 80.82 321 *eP* **P** **14 08 56.3 +0.1**
KRLC *e* 14 09 05.8
KRLC MLR MLR
comp=Z,25µm,13.9s
JAVC Velka Javorina 80.84 320 *eP* **P** **14 08 57.7 +1.3**
JAVC Velka Javorina 80.84 320 *eS* **S** **14 19 05.1 +0.9**
VAY Valandovo 80.89 311 *i* P **P** **14 08 56.3 -0.4**
THZ Tophouse 80.89 144 IAMs_20 IAMs_20 14 40 40.6
comp=Z,6µm,22.0s
SRO Srobarova 80.91 318 *eP* **P** **14 08 57.4 +0.7**
SRO pmax pmax
comp=Z,129nm,2.5s
SRO Srobarova 80.91 318 *eP* **P** **14 08 57.4 +0.7**
OSTC Ostas 80.92 322 *eP* **P** **14 08 57.7 +1.0**
OSTC *eSKS* **S** **14 19 04.5 -0.5**
OSTC AMS AMS 14 49 30.0
comp=Z,24µm,15.3s
OSTC Ostas 80.92 322 *eP* **P** **14 08 57.7 +1.0**
OSTC *e* 14 19 04.5
OSTC MLR MLR
comp=Z,24µm,15.3s
URZ Urewera 80.94 139 LR LR 14 41 06.4
comp=Z,5µm,20.4s,baz=48,slow=33
DPC Dobruska-Polom 80.96 321 *eP* **P** **14 08 56.5 -0.4**
DPC *ex* x 14 09 07.2
DPC *eS* **S** **14 19 02.9 -2.5**
DPC AMS AMS 14 47 40.0
comp=Z,24µm,15.2s
DPC Dobruska-Polom 80.96 321 *eP* **P** **14 08 56.5 -0.4**
DPC *e* 14 09 07.2
DPC *e* 14 19 02.9
DPC MLR MLR
comp=Z,24µm,15.2s
PYZ Puysegur Point 80.99 150 IAMs_20 IAMs_20 14 45 43.3
comp=Z,6µm,18.0s
CHVC Chvalec 81.00 322 *eP* **P** **14 08 58.1 +0.9**
CHVC AMS AMS 14 49 30.0
comp=Z,24µm,15.5s
CHVC Chvalec 81.00 322 *eP* **P** **14 08 58.1 +0.9**
CHVC MLR MLR
comp=Z,24µm,15.5s
ODD1 Odda 81.00 332 *eS* **S** **14 19 07.2 +1.7**
ODD1 *eSS* **SS** **14 24 10.0 -8.9**
ODD1 IVMs_BB IVMs_BB 14 48 14.0
comp=Z,30µm,14.9s
MLZ Mavora Lakes 81.06 149 IAMs_20 IAMs_20 14 42 36.1
comp=Z,9µm,21.0s
UPC Upice 81.06 322 *eS* **S** **14 19 05.5 -0.9**
UPC AMS AMS 14 49 40.0
comp=Z,28µm,15.0s
HOMB Homborsund 81.07 331 *eP* **P** **14 08 55.6 -1.6**
HOMB *eS* **S** **14 19 05.9 -0.2**
HOMB *eSS* **SS** **14 24 23.4 +3.6**
HOMB IVMs_BB IVMs_BB 14 48 02.5
comp=Z,33µm,16.1s
RTZ Ruatahuna 81.10 139 IAMs_20 IAMs_20 14 41 02.2
comp=Z,7µm,20.0s
FRGS Fruska Gora 81.13 316 ⇑P **P** **14 08 58.6 +0.7**
SUE Sulen 81.13 334 *eP* **P** **14 08 57.3 -0.2**
SUE IVmB_BB 14 09 05.7
comp=Z,1µm,2.2s
SUE *eS* **S** **14 19 07.3 +0.7**
SUE *eSS* **SS** **14 24 25.1 +4.5**
SUE IVMs_BB IVMs_BB 14 48 41.2
comp=Z,20µm,13.4s
SMOL Smolenice 81.14 319 *eP* **P** **14 09 00.0 +2.1**
SMOL pmax pmax
comp=Z,36nm,1.5s
BKZ Black Stump Fm 81.17 140 IAMs_20 IAMs_20 14 40 42.0
comp=Z,5µm,20.0s
BKZ Black Stump Fm 81.17 140 P **P** **14 09 01.4 +3.4**
MXZ Matakaoa Point 81.22 138 IAMs_20 IAMs_20 14 39 03.6
comp=Z,12µm,22.0s
LTZ Lake Taylor 81.27 145 IAMs_20 IAMs_20 14 42 03.4
comp=Z,9µm,20.0s
VRAC Vranov 81.27 320 *eP* **P** **14 08 58.0 -0.6**
VRAC Vranov 81.27 320 *eS* **S** **14 19 10.0 +1.4**
VRAC Vranov 81.27 320 S **S** **14 19 07.9 -0.7**
comp=Z,1.1nm,0.6s,baz=32,slow=19,SNR=1.7
VRAC LR LR 14 48 53.3
comp=Z,15µm,18.5s,baz=60,slow=39
ASK Askoy 81.28 333 IVMs_BB IVMs_BB 14 48 36.6
comp=Z,21µm,15.0s
MODS Modra-Piesok 81.29 319 *eP* **P** **14 08 59.2 +0.5**
MODS pmax pmax
comp=Z,541nm,2.6s
MODS Modra-Piesok 81.29 319 *eP* **P** **14 08 59.2 +0.5**
RPZ Rata Peaks 81.30 146 IAMs_20 IAMs_20 14 42 29.4
comp=Z,7µm,21.0s
RPZ Rata Peaks 81.30 146 LR LR 14 42 41.5
comp=Z,6µm,20.2s,baz=328,slow=34
BLS5 Blasjo 81.34 332 *eP* **P** **14 08 58.9 +0.1**
BLS5 IVmB_BB 14 09 08.9
comp=Z,1µm,5.6s
BLS5 *eS* **S** **14 19 09.1 +0.1**
BLS5 IVMs_BB IVMs_BB 14 48 24.1
comp=Z,47µm,14.6s
WHZ Wether Hill Ro 81.37 149 IAMs_20 IAMs_20 14 44 03.3
comp=Z,7µm,20.0s
RUE Ruedersdorf 81.38 324 *eP* **P** **14 08 59.9 +0.9**
RUE Ruedersdorf 81.38 324 *eP* **P** **14 08 59.1 +0.1**
comp=Z,31nm,0.9s,baz=59,slow=5.2
SKO Skopje 81.39 312 *i* P **P** **14 08 59.6 +0.3**
ZST Bratislava 81.47 319 *eP* **P** **14 08 59.3 -0.3**
ZST pmax pmax
comp=Z,597nm,2.6s
ZST Bratislava 81.47 319 *eP* **P** **14 08 59.3 -0.3**
KRUC Moravsky 81.50 320 *eP* **P** **14 08 59.9 +0.1**
KRUC Moravsky 81.50 320 *eS* **S** **14 19 11.8 +0.8**
SNZO South Karori 81.57 143 IAMs_20 IAMs_20 14 44 29.6
comp=Z,6µm,20.0s
SNART Snartemo 81.61 331 *eP* **P** **14 08 58.4 -1.7**
SNART *eS* **S** **14 19 11.8 +0.1**
SNART IVMs_BB IVMs_BB 14 48 28.9
comp=Z,114µm,16.0s
MRZ Mangatainoka R 81.62 142 IAMs_20 IAMs_20 14 41 32.1
comp=Z,10µm,20.0s
IDI Anoyia 81.65 305 P **P** **14 08 57.9 -3.0**
IDI Anoyia 81.65 305 LR LR 14 51 41.1
comp=Z,3µm,19.2s,baz=72,slow=40
KHZ Kahutara 81.69 144 IAMs_20 IAMs_20 14 41 37.6
comp=Z,9µm,22.0s
BHW Baring Head 81.73 143 IAMs_20 IAMs_20 14 44 42.8
comp=Z,4µm,20.0s
GVZ Greta Valley S 81.80 145 IAMs_20 IAMs_20 14 42 18.5
comp=Z,11µm,21.0s
TREC Trest 81.92 321 *eS* **S** **14 19 15.5 +0.1**
TREC AMS AMS 14 48 40.0
comp=Z,23µm,14.8s
KMY Karmoy 81.98 332 *eP* **P** **14 09 01.8 -0.3**
KMY IVmB_BB 14 09 03.6
comp=Z,720nm,2.1s
KMY *eS* **S** **14 19 14.9 -0.5**
KMY IVMs_BB IVMs_BB 14 48 51.8
comp=Z,39µm,14.0s
BFZ Birch Farm 82.02 141 IAMs_20 IAMs_20 14 41 23.5
comp=Z,9µm,20.0s
BFZ Birch Farm 82.02 141 P **P** **14 09 05.6 +3.1**
GOPC GO Pecny, Ondr 82.04 321 *eP* **P** **14 09 03.0 +0.4**
GOPC *eS* **S** **14 19 11.3 -5.2**
GOPC AMS AMS 14 48 30.0
comp=Z,24µm,14.9s
GOPC GO Pecny, Ondr 82.04 321 *eP* **P** **14 09 03.0 +0.4**
GOPC *e* 14 19 11.3
GOPC MLR MLR
comp=Z,24µm,14.9s
BRG Berggiesshubel 82.06 322 *eP* **P** **14 09 02.0 -0.6**
BRG Amp 14 09 08.0
comp=Z,14nm,1.1s
BRG Berggiesshubel 82.06 322 SKS **S** **14 19 19.0 +2.4**
BRG Berggiesshubel 82.06 322 SS SS 14 24 25.0 -10
BRG Berggiesshubel 82.06 322 *eP* **P** **14 09 02.5 -0.2**
comp=Z,11nm,1.0s,baz=59,slow=5.2
RICC Richard 82.13 322 *eP* **P** **14 09 05.5 +2.5**
RICC AMS AMS 14 50 10.0
comp=Z,28µm,18.6s
PRU Pruhonice 82.14 321 *eP* **P** **14 09 03.2 +0.1**
PRU *eSKS* **S** **14 19 14.1 -3.4**
PRU AMS AMS 14 50 10.0
comp=Z,26µm,19.1s
PRU Pruhonice 82.14 321 *eP* **P** **14 09 03.2 +0.1**
PRU *e* 14 19 14.1
PRU MLR MLR
comp=Z,26µm,19.1s
PRA Prague 82.16 322 *eS* **S** **14 19 11.3 -6.4**
PRA AMS AMS 14 50 20.0
comp=Z,26µm,17.7s
RONA Rosalia, Austr 82.18 319 *eP* **P** **14 09 03.0 -0.5**
comp=Z,14nm,1.3s
CONA Conrad Observa 82.34 319 *eP* **P** **14 09 04.1 -0.2**
comp=Z,19nm,1.3s,SNR=13
CLL Collm 82.36 323 *i* P **P** **14 09 03.8 -0.5**
CLL *i* 14 09 10.2
CLL *eS* **S** **14 19 21.0 +1.2**
CLL pmax pmax
comp=Z,30nm,1.4s
CLL MLR MLR
comp=Z,44µm,17.8s
CLL Collm 82.36 323 *eP* **P** **14 09 03.7 -0.5**
comp=Z,14nm,0.8s,baz=59,slow=5.2
KBN Korca 82.41 311 IAmb IAmb 14 09 16.1
comp=Z,68nm,1.0s
KBN IAMs_20 IAMs_20 14 50 21.1
comp=Z,8µm,20.0s
PUK Puka 82.41 313 IAMs_20 IAMs_20 14 50 04.0
comp=Z,9µm,20.0s
BSEG Bad Segeberg 82.46 326 *eP* **P** **14 09 04.6 -0.1**
comp=Z,14nm,0.9s,baz=59,slow=5.2
BSEG *eS* **S** **14 19 13.8 -6.8**
HSKC Hora Svate Kat 82.47 322 *eP* **P** **14 09 05.5 +0.6**
HSKC *ex* x 14 09 14.2
HSKC AMS AMS 14 50 30.0
comp=Z,34µm,14.1s
SUMG Summit 82.58 354 IAMs_20 IAMs_20 14 45 55.3
comp=Z,11µm,22.0s
SUMG Summit 82.58 354 *i* P **P** **14 09 06.4 +0.9**
SUMG IAmb IAmb 14 09 27.6
comp=Z,14nm,0.8s
ZVC Zvikov 82.60 321 *eP* **P** **14 09 06.1 +0.5**
TIR Tirane 82.73 312 IAMs_20 IAMs_20 14 50 27.6
comp=Z,12µm,19.0s
YKA Yellowknife Ar 82.80 23 P **P** **14 09 04.5 -1.8**
comp=Z,24nm,1.0s,baz=315,slow=5.0,SNR=68
YKA S **S** **14 19 22.3 -1.5**
comp=Z,0.3nm,0.9s,baz=72,slow=28,SNR=3.7
YKA LR LR 14 51 38.5
comp=Z,10µm,18.2s,baz=314,slow=40
comp=Z,24nm,1.0s
FLTG Flechtingen 82.81 325 *eP* **P** **14 09 05.9 -0.6**
comp=Z,8.3nm,0.8s,baz=59,slow=5.2
CKRC Cesky Krumlov 82.83 321 *eP* **P** **14 09 07.2 +0.4**
CKRC *eS* **S** **14 19 26.0 +1.3**
CKRC AMS AMS 14 49 20.0
comp=Z,22µm,15.7s
CKRC Cesky Krumlov 82.83 321 *eP* **P** **14 09 07.2 +0.4**
CKRC *e* 14 19 26.0
CKRC MLR MLR
comp=Z,22µm,15.7s
ARSA Arzberg 82.86 319 *eP* **P** **14 09 05.4 -1.6**
comp=Z,18nm,1.5s
NEUB Neuenburg 83.08 323 *eP* **P** **14 09 07.8 -0.2**
comp=Z,25nm,1.0s,baz=59,slow=5.2
KHC Kasperske Hory 83.10 321 *eP* **P** **14 09 08.2 0.0**
KHC *ex* x 14 09 24.0
KHC AMS AMS 14 49 10.0
comp=Z,28µm,14.2s
KHC Kasperske Hory 83.10 321 *c i* P **P** **14 09 08.1 -0.1**
KHC pmax pmax
comp=Z,68nm,1.6s
KHC MLR MLR
comp=Z,46µm,14.0s
TANN Tannenbergstha 83.10 323 *eP* **P** **14 09 08.0 -0.2**
comp=Z,5.0nm,0.9s,baz=59,slow=5.2
GEC2 GERESS Array S 83.17 321 *eP* **P** **14 09 08.5 -0.2**
comp=Z,16nm,0.9s,baz=59,slow=5.2
GERES GERESS Array B 83.17 321 P **P** **14 09 07.7 -1.0**
comp=Z,7.6nm,0.8s,baz=46,slow=5.8,SNR=31
GERES S **SKSac** **14 19 29.7 -0.7**
comp=Z,0.2nm,0.3s,baz=308,slow=27,SNR=1.6
GERES LR LR 14 49 24.3
comp=Z,15µm,18.3s,baz=57,slow=38
comp=Z,7.6nm,0.8s
NKC Novy Kostel 83.20 322 *e*SKS **S** **14 19 28.7 +0.3**
NKC AMS AMS 14 49 50.0
comp=Z,31µm,14.3s
ASSE Asse, Remlinge 83.21 325 *eP* **P** **14 09 08.6 +0.1**
comp=Z,8.0nm,1.1s,baz=59,slow=5.2
PLN Plauen 83.24 323 *eP* **P** **14 09 08.6 -0.2**
baz=59,slow=5.2
UPNV Upernavik 83.30 359 *i* P **P** **14 09 08.7 -0.1**
UPNV IAmb IAmb 14 09 21.4
comp=Z,14nm,0.6s
NRDL Niedersach Rie 83.32 325 *eP* **P** **14 09 09.4 +0.4**
comp=Z,12nm,1.1s,baz=59,slow=5.2
NRDL *eS* **S** **14 19 23.8 -5.5**
MOA Molln 83.32 320 *eP* **P** **14 09 09.2 -0.2**
comp=Z,27nm,1.1s,SNR=7.5
VLO Vlora 83.36 311 IAMs_20 IAMs_20 14 50 30.4
comp=Z,8µm,20.0s
PERS Pernice 83.39 318 *eP* **P** **14 09 09.7 -0.1**
SOKA Soboth 83.42 318 *eP* **P** **14 09 09.3 -0.6**
comp=Z,17nm,1.3s,SNR=12
MOX Moxa 83.46 323 *eP* **P** **14 09 09.8 -0.1**
comp=Z,9.3nm,0.9s,baz=59,slow=5.2
MOX *eS* **S** **14 19 24.3 -6.7**
MOX *eL* L 14 50 25.3
comp=Z,38µm,18.5s
KEK Kerkira 83.48 311 IAMs_20 IAMs_20 14 51 11.7
comp=Z,8µm,19.0s
WET Wettzell 83.50 321 *eP* **P** **14 09 10.3 +0.1**
comp=Z,7.6nm,0.9s,baz=59,slow=5.2
WET *eS* **SKSac** **14 19 32.4 0.0**
MANZ Manzenberg 83.51 322 *eP* **P** **14 09 10.3 0.0**
comp=Z,2.4nm,1.0s,baz=59,slow=5.2
MANZ *eS* **SKSac** **14 19 34.1 +1.6**
CLZ Clausthal 83.52 324 *eP* **P** **14 09 10.5 +0.2**
comp=Z,31nm,1.0s,baz=59,slow=5.2
CLZ *eS* **S** **14 19 31.0 -0.5**
HLG Helgoland 83.55 327 *eS* **S** **14 19 25.0 -6.6**
ROTZ Rotzenmuhle 83.57 322 *eP* **P** **14 09 10.8 +0.2**
comp=Z,4.1nm,1.0s,baz=59,slow=5.2
ROTZ *eS* **SKSac** **14 19 32.3 -0.5**
RETH Rethem/Aller, 83.58 326 *eP* **P** **14 09 10.4 0.0**
baz=59,slow=5.2
RETH *eS* **S** **14 19 24.5 -7.4**
LEGS Legarje 83.59 318 *eP* **P** **14 09 08.3 -2.5**
BIOA Bad Ischl, Aus 83.77 320 *eP* **P** **14 09 10.7 -0.9**
comp=Z,16nm,1.4s
OBKA Obir 83.79 318 *eP* **P** **14 09 11.7 -0.2**
comp=Z,16nm,1.1s
GTTG Gottingen 83.89 324 *eP* **P** **14 09 12.2 +0.1**
comp=Z,25nm,1.1s,baz=59,slow=5.2
GTTG *eS* **SKSac** **14 19 29.9 -4.8**
GRF Grafenberg Arr 84.16 322 *eP* **P** **14 09 13.8 +0.2**
comp=Z,44nm,1.1s,baz=59,slow=5.2
GRF *eS* **SKSac** **14 19 32.4 -4.2**
GRF *eL* L 14 51 19.7
comp=Z,29µm,18.6s
RJOB Jochberg 84.24 320 *eP* **P** **14 09 14.0 -0.1**
comp=Z,39nm,1.0s,baz=59,slow=5.2
RJOB *eS* **SKSac** **14 19 32.5 -4.9**
KBA Koelnbreinsper 84.24 319 *eP* **P** **14 09 13.7 -0.6**
comp=Z,9.8nm,0.8s
UBBA Unterbreizbach 84.25 324 *eP* **P** **14 09 13.9 0.0**
comp=Z,97nm,1.8s,baz=59,slow=5.2
UBBA *eS* **SKSac** **14 19 32.6 -4.2**
MYKA Terra Mystica 84.28 319 *eP* **P** **14 09 12.5 -1.9**
comp=Z,10nm,1.4s
PRED Cave del Predi 84.42 319 IAMs_20 IAMs_20 14 50 13.0
comp=Z,14µm,20.0s
VOJS Vojsko 84.43 318 *eP* **P** **14 09 13.2 -2.0**
LESA Schwarzleotal 84.47 320 *eP* **P** **14 09 14.6 -0.7**
comp=Z,27nm,1.4s
SABO M.te Sabotino 84.63 318 IAmb IAmb 14 09 44.0
comp=Z,82nm,1.4s
SABO IAMs_20 IAMs_20 14 51 44.8
comp=Z,21µm,20.0s
IBBN Ibbenburen 84.64 326 *eP* **P** **14 09 15.7 -0.2**
comp=Z,14nm,0.9s,baz=59,slow=5.2
IBBN *eS* **SKSac** **14 19 36.0 -3.5**
KASTN Kahler Asten 84.89 325 *eP* **P** **14 09 17.5 +0.2**
comp=Z,6.9nm,1.0s,baz=59,slow=5.2
KASTN *eS* **SKSac** **14 19 39.5 -1.8**
ABTA Abfaltersbach 84.90 319 *eP* **P** **14 09 16.2 -1.3**
comp=Z,19nm,1.3s,SNR=6.4
FUR Furstenfeldbru 84.91 321 *eP* **P** **14 09 17.7 +0.3**
comp=Z,72nm,1.0s,baz=59,slow=5.2
FUR *eS* **SKSac** **14 19 38.9 -2.6**
STAL STALIGIAL 85.03 319 IAmb IAmb 14 09 37.2
comp=Z,49nm,1.1s
STAL IAMs_20 IAMs_20 14 53 26.0
comp=Z,13µm,18.0s
WATA Walderalm 85.16 320 *eP* **P** **14 09 17.7 -1.2**
comp=Z,17nm,1.2s
WTTA Wattenberg 85.16 320 *eP* **P** **14 09 17.6 -1.3**
comp=Z,26nm,1.3s,SNR=9.3
CIMO Cimolais 85.16 319 IAmb IAmb 14 09 38.8
comp=Z,24nm,1.1s
CIMO IAMs_20 IAMs_20 14 52 04.5
comp=Z,11µm,22.0s
KIBK Kibwezi 85.18 265 P **P** **14 09 20.1 +0.6**
KIBK Kibwezi 85.18 265 P **P** **14 09 22.9 +3.5**
SNR=13
LODK Lodwar 85.29 272 P **P** **14 09 23.5 +3.5**
SNR=18
BUG Bochum--Univer 85.36 325 *eP* **P** **14 09 19.3 -0.2**
comp=Z,28nm,1.1s,baz=59,slow=5.2
BUG *eS* **SKSac** **14 19 43.7 -0.5**
KMBO Kilima Mbogo 85.40 267 P **P** **14 09 20.5 -0.3**
comp=Z,23nm,1.0s,baz=49,slow=8.5,SNR=17
KMBO S **SKSac** **14 19 47.7 +1.5**
comp=Z,0.7nm,0.4s,baz=41,slow=21,SNR=1.7
comp=Z,23nm,1.0s
TNS Taunus Mts 85.40 324 *eP* **P** **14 09 19.8 -0.1**
comp=Z,5.9nm,0.8s,baz=59,slow=5.2
TNS *eS* **SKSac** **14 19 44.8 +0.2**
MOTA Moosalm 85.43 320 *eP* **P** **14 09 19.5 -0.7**
comp=Z,13nm,1.2s
SQTA Sankt Quirin 85.43 320 *eP* **P** **14 09 18.9 -1.3**

comp=Z,22nm,1.3s
RETA Reutte 85.55 321 *e*P P **14 09 19.0 -1.7**
comp=Z,14nm,1.6s
CTI Castel Tesino 85.77 319 IAMs_20 IAMs_20 14 53 19.6
comp=Z,11µm,18.0s
STU Stuttgart 85.77 322 *e*P P **14 09 21.3 -0.4**
comp=Z,38nm,1.0s,baz=59,slow=5.2
STU eS **SKSac 14 19 47.7 +0.8**
FETA Feichten 85.81 320 *e*P P **14 09 21.6 -0.6**
comp=Z,14nm,1.3s
OZB Mount Ozzard 85.82 38 IAmb IAmb 14 09 26.4
comp=Z,73nm,0.9s
TIP Timpagrande 85.83 311 IAMs_20 IAMs_20 14 52 59.5
comp=Z,8µm,20.0s
UBR Ueberruh 85.83 321 *e*P P **14 09 21.7 -0.4**
comp=Z,17nm,0.9s,baz=59,slow=5.2
UBR eS **SKSac 14 19 48.2 +0.7**
AHRW Bad Neuenahr-A 85.97 324 eS **SKSac 14 19 51.3 +3.3**
VOI Vohitsoka 86.00 244 P P **14 09 21.4 -1.9**
VOI IAmb IAmb 14 09 27.6
comp=Z,106nm,1.6s
VOI Vohitsoka 86.00 244 P P **14 09 25.0 +1.7**
VOI Vohitsoka 86.00 244 P P **14 09 25.1 +1.7**
SNR=5.8
ICESG Greenland Ices 86.04 353 ||*i*P P **14 09 24.3 +1.3**
ICESG IAmb IAmb 14 09 36.9
comp=Z,14nm,0.9s
CUC Castrocucco 86.09 312 IAMs_20 IAMs_20 14 53 46.4
comp=Z,8µm,18.0s
TEOL Teolo 86.11 318 IAmb IAmb 14 09 35.6
comp=Z,37nm,0.7s
DAVA Damuels 86.17 321 *e*P P **14 09 22.5 -1.4**
comp=Z,12nm,1.5s
FUORN Ofenpass-Fuorn 86.30 320 IAmb IAmb 14 09 53.6
comp=Z,76nm,1.4s
PAOL Paolisi 86.42 314 IAMs_20 IAMs_20 14 54 12.3
comp=Z,9µm,21.0s
DAVOX Davos/Dischmat 86.44 320 S **SKSac 14 19 46.5 -5.1**
comp=Z,0.4nm,0.3s,baz=344,slow=17,SNR=1.5
DAVOX LR LR 14 52 34.5
comp=Z,17µm,18.5s,baz=36,slow=39
BTNL Ternell 86.44 325 *d*PcP P **14 09 25.4 +0.4**
NRCA Norcia 86.48 316 IAmb IAmb 14 10 00.4
comp=Z,68nm,1.2s
MEM Membach 86.49 325 *d*PcP P **14 09 25.7 +0.5**
BFO Black Forest 86.50 322 P P **14 09 24.5 -0.8**
BFO IAmb IAmb 14 09 47.3
comp=Z,87nm,1.8s
BFO Black Forest 86.50 322 P P **14 09 24.5 -0.8**
BFO pmax pmax
comp=Z,87nm,1.8s
BFO Black Forest 86.50 322 *e*P P **14 09 25.9 +0.6**
comp=Z,8.8nm,1.0s,baz=59,slow=5.2
BFO eS **SKSac 14 19 54.8 +3.3**
BHOU Houvegnez 86.64 325 *d*P P **14 09 24.8 -1.2**
BHOU *d*x x 14 09 42.0
BSTI Sart Tilman 86.74 325 *d*PcP P **14 09 27.1 +0.7**
BSTI *d*x x 14 09 42.7
ILULI Ilulissat 86.75 357 IAMs_20 IAMs_20 14 50 34.7
comp=Z,9µm,21.0s
CEL Celeste 86.85 311 IAMs_20 IAMs_20 14 53 28.8
comp=Z,10µm,21.0s
BORG Borgarnes 86.87 345 LR LR 14 51 03.4
comp=Z,21µm,20.1s,baz=23,slow=38
WLF Walferdange 86.95 324 IAmb IAmb 14 09 45.9
comp=Z,98nm,1.4s
WLF Walferdange 86.95 324 *d*PcP P **14 09 28.5 +1.0**
WLF *d*x x 14 09 44.6
WLF Walferdange 86.95 324 P P **14 09 24.1 -3.4**
WLF Walferdange 86.95 324 *e*P P **14 09 28.7 +1.2**
comp=Z,43nm,1.1s,baz=59,slow=5.2
WLF eS **S 14 20 01.1 -4.4**
BCLA Clavier 86.97 325 *d*PcP P **14 09 28.0 +0.4**
BRLDA Berland Lookou 86.98 30 IAMs_20 IAMs_20 14 54 50.7
comp=Z,10µm,18.0s
BGES Gesves 87.10 325 *d*x P **14 09 31.4 +3.1**
RCHB Rochefort 87.16 325 *d*P P **14 09 27.1 -1.4**
RCHB *d*x x 14 09 45.0
OSSC Osservatorio P 87.31 317 IAmb IAmb 14 10 06.0
comp=Z,49nm,1.3s
BMRD Maredsous 87.32 325 *d*PcP P **14 09 29.4 +0.2**
BMRD *d*x x 14 09 45.4
GIVF Givet 87.40 325 P P **14 09 30.2 +0.5**
VLC Villacollemand 87.51 318 P P **14 09 32.0 +1.6**
DOU Dourbes 87.53 325 *d*P P **14 09 30.0 -0.3**
CASP Castiglione de 87.93 317 IAMs_20 IAMs_20 14 56 10.9
comp=Z,6µm,18.0s
MSSA Maissana 87.96 318 IAMs_20 IAMs_20 14 54 04.6
comp=Z,10µm,21.0s
EKA Eskdalemuir Ar 87.96 332 P P **14 09 30.9 -1.3**
comp=Z,1.8nm,0.7s,baz=56,slow=2.6,SNR=6.5
comp=Z,1.8nm,0.7s
GNW Green Mountain 88.08 38 IAmb IAmb 14 09 40.1
comp=Z,68nm,1.1s
VAE Valguarnera 88.26 311 S **SKSac 14 20 03.8 +1.1**
comp=Z,3.0nm,0.4s,baz=31,slow=21,SNR=1.5
RAFF Raffo Rosso 88.42 310 IAMs_20 IAMs_20 14 56 58.2
comp=Z,6µm,19.0s
RAR Rarotonga 88.66 114 LR LR 14 43 04.5
comp=Z,3µm,21.4s,baz=300,slow=31
SFJD Kangerlussuaq 88.94 357 IAMs_20 IAMs_20 14 52 08.6
comp=Z,12µm,18.0s
LPL La Plagne 88.96 320 *e*P P **14 09 38.7 +1.2**
DY2G Dye2 89.19 355 *i*P P **14 09 38.1 -0.1**
DY2G IAmb IAmb 14 09 51.8
comp=Z,18nm,0.6s
EDM Edmonton 89.39 30 IAMs_20 IAMs_20 14 53 21.3
comp=Z,9µm,18.0s
LTY Liberty 89.45 37 IAmb IAmb 14 09 53.4
comp=Z,88nm,1.2s
B08A Colville Reser 89.52 36 IAmb IAmb 14 09 45.0
comp=Z,51nm,0.9s
LOR Lormes 89.58 323 P P **14 09 41.1 +1.0**
ORIF Oris-en-Rattie 89.80 320 P P **14 09 42.4 +1.2**
SMF Signal de Mont 89.96 322 P P **14 09 40.9 -0.9**
H04A Detroit Lake 90.08 40 IAmb IAmb 14 10 01.1
comp=Z,98nm,1.1s
AVF Avril sur Loir 90.14 323 P P **14 09 41.7 -1.0**
D08A Wollman Farm, 90.53 37 IAmb IAmb 14 10 02.6
comp=Z,73nm,1.0s
VIVF Saint-Julien-l 90.53 321 P P **14 09 47.7 +3.1**
HAWA Hanford 90.59 37 IAMs_20 IAMs_20 14 58 34.8
comp=Z,6µm,18.0s
NEW Newport 90.75 35 IAMs_20 IAMs_20 14 57 29.8
comp=Z,8µm,18.0s
NEW Newport 90.75 35 P P **14 09 46.8 +1.3**
baz=309
NEW S S **14 20 39.6 -1.8**
baz=309
NEW Newport 90.75 35 LR LR 14 50 43.6
comp=Z,4µm,20.8s,baz=332,slow=36
TCF Toulx Ste Croi 91.07 323 P P **14 09 48.6 +1.5**
MBAR Mbarara 91.14 270 LR LR 14 52 50.2
comp=Z,2µm,18.7s,baz=42,slow=37
MBAR Mbarara 91.14 270 P P **14 09 50.8 +2.7**
MBAR P P **14 09 50.8 +2.7**
L04D Klamath Falls 91.42 42 P P **14 09 48.0 -0.9**
YBH Yreka Blue Hor 91.44 42 LR LR 14 46 37.1
comp=Z,3µm,22.0s,baz=322,slow=33
J05D Fort Rock, OR 91.45 41 P P **14 09 47.8 -1.2**
J05D IAmb IAmb 14 10 03.8
comp=Z,55nm,0.9s
FRB Frobisher Bay 92.02 5 LR LR 14 54 20.3
comp=Z,13µm,20.3s,baz=346,slow=38
F10A Beach Ranch, E 92.12 37 IAmb IAmb 14 13 27.4
comp=Z,45nm,0.8s
KEST Kesra 92.65 311 IAMs_20 IAMs_20 14 58 18.3
comp=Z,6µm,19.0s
KEST Kesra 92.65 311 P P **14 09 53.8 -0.9**
comp=Z,7.1nm,0.9s,baz=11,slow=8.1,SNR=4.6
KEST LR LR 14 58 39.0
comp=Z,6µm,18.4s,baz=338,slow=40
comp=Z,7.1nm,0.9s
KEST Kesra 92.65 311 P P **14 09 55.1 +0.4**
KEST P P **14 09 55.1 +0.4**
BMO Blue Mountains 92.77 38 IAmb IAmb 14 10 02.2
comp=Z,28nm,1.0s
BMO IAMs_20 IAMs_20 14 59 11.4
comp=Z,8µm,20.0s
FFC Flin Flon 92.96 24 P P **14 09 54.2 -1.3**
FFC IAmb IAmb 14 10 07.2
comp=Z,53nm,1.1s
FFC Flin Flon 92.96 24 P P **14 09 54.3 -1.3**
FFC pmax pmax
comp=Z,53nm,1.1s
J08A Circle Bar Ran 93.02 39 IAmb IAmb 14 10 13.6
comp=Z,48nm,0.9s
PLID Pearl Lake 93.34 37 IAmb IAmb 14 10 12.8
comp=Z,25nm,0.9s
ORV Oroville 93.44 44 P P **14 09 58.3 +0.2**
ORV IAmb IAmb 14 10 07.1
comp=Z,20nm,0.8s
ORV Oroville 93.44 44 P P **14 09 58.3 +0.2**
ORV pmax pmax
comp=Z,20nm,0.8s
WVOR Wild Horse Val 93.49 40 IAMs_20 IAMs_20 14 58 52.7
comp=Z,6µm,18.0s
MAHO Mahon 93.67 317 IAMs_20 IAMs_20 14 59 01.5
comp=Z,11µm,19.0s
MFID Camas Ranch 94.50 38 IAmb IAmb 14 10 15.3
comp=Z,26nm,0.9s
EGMT Eagleton 94.61 32 IAmb IAmb 14 10 20.7
comp=Z,45nm,1.1s
EGMT IAMs_20 IAMs_20 14 54 18.5
comp=Z,9µm,20.0s
EGMT Eagleton 94.61 32 P P **14 10 04.0 +0.6**
baz=314,SNR=20
EGMT S S **14 21 11.8 -4.1**
baz=314
EMB Emerald Bay 94.66 44 IAmb IAmb 14 10 11.2
comp=Z,47nm,0.9s
CMB Columbia Colle 95.03 44 IAmb IAmb 14 10 21.2
comp=Z,36nm,1.1s
HLID Hailey 95.20 37 IAmb IAmb 14 10 14.2
comp=Z,27nm,1.1s
HLID IAMs_20 IAMs_20 15 01 12.6
comp=Z,5µm,18.0s
HLID Hailey 95.20 37 P P **14 10 06.6 +0.3**
baz=310
HLID S S **14 21 19.8 -1.7**
baz=310
BOZ Bozeman (W) 95.34 34 IAMs_20 IAMs_20 14 57 10.1
comp=Z,8µm,20.0s
BOZ Bozeman (W) 95.34 34 P P **14 10 06.9 0.0**
baz=313,SNR=15
BOZ S S **14 21 18.1 -4.5**
baz=313
PPT Papeete 95.88 107 LR LR 14 45 30.1
comp=Z,4µm,21.2s,baz=276,slow=31
NVAR Mina Array Bea 96.12 43 P P **14 10 10.9 +0.2**
comp=Z,8.8nm,0.9s,baz=294,slow=3.6,SNR=61
NVAR LR LR 14 50 58.0
comp=Z,2µm,20.6s,baz=326,slow=34
comp=Z,8.8nm,0.9s
MLAC Mammoth, Mammo 96.26 44 P P **14 10 11.2 -0.1**
baz=307
MLAC S S **14 21 27.1 -4.0**
baz=307
YNM Yellowstone No 96.41 35 IAMs_20 IAMs_20 14 57 55.5
comp=Z,8µm,20.0s
YNR Yorris Junctio 96.43 35 IAMs_20 IAMs_20 14 57 56.1
comp=Z,8µm,20.0s
VOG Valley Oaks Go 96.69 45 P P **14 10 12.5 -0.4**
baz=306
H17A Grant Village 96.70 35 IAMs_20 IAMs_20 15 01 40.3
comp=Z,11µm,19.0s
H17A Grant Village 96.70 35 P P **14 10 13.0 -0.2**
baz=313
H17A S S **14 21 34.1 -0.5**
baz=313
DGMT Dagmar 96.84 29 IAMs_20 IAMs_20 14 58 39.6
comp=Z,9µm,20.0s
DGMT Dagmar 96.84 29 P P **14 10 14.1 +0.6**
baz=319
FLWY Flagg Ranch 96.85 35 IAMs_20 IAMs_20 15 02 07.3
comp=Z,6µm,19.0s
RLMT Red Lodge 96.87 34 IAMs_20 IAMs_20 14 55 35.7
comp=Z,7µm,20.0s
RLMT Red Lodge 96.87 34 P P **14 10 14.8 +0.8**
baz=314,SNR=12
SMMC Simmler 96.88 47 P P **14 10 13.8 -0.2**
baz=306
SMMC S S **14 21 33.9 -2.1**
baz=306
DSP Deep Springs 96.97 44 IAMs_20 IAMs_20 15 03 04.1
comp=Z,6µm,19.0s
TIN Tinemaha, Big 96.99 44 P P **14 10 14.4 -0.2**
baz=307
MOOW Moose Ponds 97.06 35 IAMs_20 IAMs_20 15 02 27.7
comp=Z,7µm,18.0s
TPAW Teton Pass 97.12 36 IAMs_20 IAMs_20 15 00 28.5
comp=Z,8µm,18.0s
VES Vestal, Richgr 97.17 46 P Pdif 14 10 15.3 +0.1
baz=307
LOHW Long Hollow 97.23 35 IAMs_20 IAMs_20 15 02 42.2
comp=Z,8µm,18.0s
LAO LASA Array 97.24 31 IAMs_20 IAMs_20 15 00 20.2
comp=Z,9µm,18.0s
LAO LASA Array 97.24 31 P P **14 10 15.1 -0.3**
baz=317
SNOW Snow King Moun 97.25 36 IAMs_20 IAMs_20 15 00 32.8
comp=Z,7µm,19.0s
PKM Mcpherson Peak 97.25 47 P Pdif 14 10 16.1 +0.1
baz=306,SNR=8.3
PKM S S **14 21 36.2 -3.4**
baz=306
CWC Cottonwood Cre 97.46 45 P Pdif 14 10 17.3 +0.5
baz=307
CWC S S **14 21 38.8 -2.4**
baz=307
AHID Auburn Hatcher 97.54 36 IAMs_20 IAMs_20 15 00 39.7
comp=Z,7µm,20.0s
GRAC Grapevine Rang 97.58 44 S S **14 21 38.8 -3.2**
baz=308
SBC Santa Barbara 97.58 47 P Pdif 14 10 17.7 +0.6
baz=306
SBC S S **14 21 40.0 -1.9**
baz=306
ISA Isabella, Lake 97.67 45 P Pdif 14 10 18.4 +0.7
baz=307
ISA S S **14 21 39.8 -3.1**
baz=307
BGU Big Grassy Mou 97.69 39 IAMs_20 IAMs_20 15 03 02.0
comp=Z,5µm,18.0s
ARVC Arvin 97.76 46 P Pdif 14 10 18.6 +0.7
baz=307
ARVC S S **14 21 40.8 -2.7**
baz=307
R11B Troy Canyon, C 97.84 42 P Pdif 14 10 19.8 +1.3
baz=309,SNR=13
R11B S S **14 21 42.2 -2.3**
baz=309
SCZ2 Santa Cruz Isl 97.89 47 P Pdif 14 10 19.3 +0.7
baz=306
SCZ2 S S **14 21 40.8 -3.9**
baz=306
HWUT Hardware Ranch 98.07 37 IAMs_20 IAMs_20 15 02 41.6
comp=Z,8µm,18.0s
MPMC Manual Prospec 98.07 45 P Pdif 14 10 20.5 +0.9
baz=308,SNR=9.9
MPMC S S **14 21 43.3 -3.2**
baz=308
OSI Osito Audit: C 98.14 46 P Pdif 14 10 20.3 +0.6
baz=307
OSI S S **14 21 42.5 -4.4**
baz=307
SPR3 Spring Creek 3 98.19 41 IAMs_20 IAMs_20 15 03 14.1
comp=Z,5µm,18.0s
FURC Furnace Creek, 98.22 44 P Pdif 14 10 21.6 +1.7
baz=308,SNR=8.8
LRMC Laurel Mtn Rad 98.30 45 P Pdif 14 10 20.5 0.0
baz=308,SNR=7.1
LRMC S S **14 21 44.3 -4.0**
baz=308
DUG Dugway, Tooele 98.30 39 P Pdif 14 10 21.6 +1.1
baz=311
DUG S S **14 21 44.8 -3.4**
baz=311
TPNV Topopah Spring 98.31 43 P Pdif 14 10 21.0 +0.5
baz=309,SNR=9.2
TPNV S S **14 21 46.7 -1.8**
baz=309
CART Cartagena 98.34 318 IAMs_20 IAMs_20 15 00 13.1
comp=Z,8µm,18.0s
BW06 Boulder Array 98.36 35 IAMs_20 IAMs_20 14 59 14.3
comp=Z,7µm,20.0s
BW06 Boulder Array 98.36 35 P Pdif 14 10 21.3 +0.5
baz=314
BW06 S S **14 21 43.3 -5.6**
baz=314
PDAR Pinedale Array 98.36 35 P P **14 10 20.3 -0.5**
comp=Z,0.7nm,0.5s,baz=202,slow=2.1,SNR=11
PDAR PP **PP 14 14 19.5 -0.5**
comp=Z,0.3nm,0.5s,baz=280,slow=5.4,SNR=1.6
comp=Z,0.7nm,0.5s
SNCC San Nicolas Is 98.41 48 S **S** **14 21 47.2 -1.9**
baz=306
EDW2 Edwards Air Fo 98.46 46 P Pdif 14 10 22.1 +0.9
baz=307,SNR=9.0
EDW2 S **S** **14 21 45.6 -3.9**
baz=307
ES19 SONSECA Array 98.71 321 IAMs_20 IAMs_20 14 59 50.2
comp=Z,8µm,20.0s
ES09 SONSECA Array 98.73 321 IAMs_20 IAMs_20 15 04 07.6
comp=Z,8µm,18.0s
ES08 SONSECA Array 98.73 321 IAMs_20 IAMs_20 15 03 11.7
comp=Z,8µm,20.0s
ES10 SONSECA Array 98.74 321 IAMs_20 IAMs_20 15 04 08.9
comp=Z,8µm,18.0s
ES02 SONSECA Array 98.75 321 IAMs_20 IAMs_20 15 03 12.1
comp=Z,8µm,20.0s
ES17 SONSECA Array 98.75 321 IAMs_20 IAMs_20 15 03 13.3
comp=Z,9µm,20.0s
ESBB Sonseca Array 98.76 321 IAMs_20 IAMs_20 15 03 18.5
comp=Z,8µm,19.0s
ESDC Sonseca Array 98.77 321 PP **PP** **14 14 23.4 +0.4**
comp=Z,3.1nm,1.0s,baz=52,slow=8.1,SNR=5.2
ESDC LR LR 15 00 01.4
comp=Z,6µm,18.8s,baz=38,slow=38
ES16 SONSECA Array 98.78 321 IAMs_20 IAMs_20 15 03 12.8
comp=Z,8µm,19.0s
ULM Lac du Bonnet 98.78 23 IAMs_20 IAMs_20 15 02 49.2
comp=Z,6µm,18.0s
ULM Lac du Bonnet 98.78 23 P **P** **14 10 20.5 -1.6**
comp=Z,3.5nm,0.8s,baz=333,slow=5.1,SNR=7.6
ULM LR LR 14 58 07.5
comp=Z,5µm,18.4s,baz=344,slow=37
comp=Z,3.5nm,0.8s
ES15 SONSECA Array 98.79 321 IAMs_20 IAMs_20 15 03 17.3
comp=Z,10µm,18.0s
ES14 SONSECA Array 98.80 321 IAMs_20 IAMs_20 15 03 12.4
comp=Z,8µm,19.0s
NLU North Lily Min 98.88 39 IAMs_20 IAMs_20 14 57 44.3
comp=Z,6µm,21.0s
PBRG Braganca 98.89 324 *e*PP PP 14 14 36.0 +12
FMP Fort Macarthur 98.96 47 S **S** **14 21 48.4 -5.2**
baz=307
GSC Goldstone, Bar 98.97 45 IAmb IAmb 14 10 39.4
comp=Z,18nm,1.2s
GSC Goldstone, Bar 98.97 45 P Pdif 14 10 23.7 +0.2
baz=308,SNR=6.1
GSC S **S** **14 21 50.2 -3.8**
baz=308
CIS Catalina Islan 99.06 47 P **Pdif** **14 10 24.3 +0.5**
baz=307
CIS S **S** **14 21 50.7 -4.0**
baz=307
BFSC Mount Baldy Ra 99.06 46 P **Pdif** **14 10 23.6 -0.3**
baz=307
PAB San Pablo 99.07 321 IAMs_20 IAMs_20 14 59 09.3
comp=Z,8µm,18.0s
MPU Maple Canyon 99.10 39 IAMs_20 IAMs_20 15 01 53.9
comp=Z,7µm,20.0s
RRX Edison Barstow 99.11 45 P **Pdif** **14 10 24.0 0.0**
baz=308
RRX S **S** **14 21 52.6 -2.4**
baz=308
LSZ Lusaka 99.25 257 **Pdif** **14 10 22.7 -2.3**
LSZ Lusaka 99.25 257 P **Pdif** **14 10 22.7 -2.3**
LSZ pmax pmax
comp=Z,12nm,1.2s
LSZ Lusaka 99.25 257 LR LR 14 55 36.6
comp=Z,3µm,18.7s,baz=70,slow=36
MDND Maddock 99.28 27 P **Pdif** **14 10 24.4 0.0**
baz=322
TUQ Turquoise Moun 99.46 44 P **Pdif** **14 10 26.1 +0.5**
baz=309
MVO Moncorvo 99.48 323 *e*PP **PP** **14 14 32.0 +3.6**
MVO *e*S **SKSac** **14 21 08.1 +4.2**
MVO *e*LQ LQ 14 23 21.2
MVO *e*SS SS 14 29 05.5 +19
MVO Moncorvo 99.48 323 *e*LR LR 14 50 23.4
comp=Z,14µm,16.0s
BBRC Big Bear Solar 99.53 46 P **Pdif** **14 10 26.4 +0.2**
baz=308
TCRU Three Creeks R 99.56 40 IAMs_20 IAMs_20 15 04 45.3
comp=Z,6µm,18.0s
HEC Hector,Ludlow 99.57 45 P **Pdif** **14 10 27.3 +1.2**
baz=308
PGAV Gavieira, Arco 99.59 325 *e*PP PP 14 14 40.0 +11
POLO Lamas de Olo 99.75 324 *e*PP **PP** **14 14 33.9 +3.5**
POLO *e*S **SKSac** **14 21 05.2 -0.1**
POLO *e*LQ LQ 14 23 29.2
POLO *e*SS SS 14 29 25.5 +35
POLO Lamas de Olo 99.75 324 *e*LR LR 14 49 41.8
comp=Z,6µm,18.0s
MURC Murrieta 99.76 46 P **Pdif** **14 10 28.1 +1.2**
baz=308
E28A Huff 99.82 28 IAMs_20 IAMs_20 14 58 21.3
comp=Z,11µm,21.0s
K22A Casper 100.02 34 IAMs_20 IAMs_20 14 57 44.1
comp=Z,6µm,20.0s
K22A Casper 100.02 34 P **Pdif** **14 10 29.1 +1.0**
baz=316
GMRC Granite Mounta 100.03 45 P **Pdif** **14 10 28.4 +0.2**
baz=309
P18A Preston Nutter 100.14 38 IAMs_20 IAMs_20 15 04 14.7
comp=Z,8µm,18.0s
RSSD Black Hills 100.18 32 IAMs_20 IAMs_20 15 03 45.9
comp=Z,8µm,18.0s
RSSD Black Hills 100.18 32 P **Pdif** **14 10 29.3 +0.5**
baz=318
PFO Pinyon Flats O 100.24 46 P **Pdif** **14 10 29.5 +0.3**
baz=308
TPFO Pinon Flats 100.24 46 P **Pdif** **14 10 29.8 +0.6**
baz=308
109C Camp Elliot, M 100.25 47 P **Pdif** **14 10 30.4 +1.3**
baz=308
PVIS Viseu 100.27 323 *e*PP **PP** **14 14 40.7 +6.4**
MTE Manteigas 100.30 323 *e*PP **PP** **14 14 34.1 -0.4**
MTE *e*S **SKSac** **14 21 10.7 +2.8**
MTE *e*LQ LQ 14 23 30.6
MTE *e*SS **SS** **14 28 53.3 -4.8**
MTE Manteigas 100.30 323 *e*LR LR 14 50 46.9
comp=Z,15µm,18.0s
BELC Belle Mtn. Jos 100.30 46 P **Pdif** **14 10 30.5 +1.1**
baz=308
RWWY Rawlins 100.36 35 IAMs_20 IAMs_20 14 57 46.1
comp=Z,7µm,21.0s
AGMN Agassiz Nation 100.39 24 IAMs_20 IAMs_20 15 00 43.2
comp=Z,11µm,20.0s
AGMN Agassiz Nation 100.39 24 P **Pdif** **14 10 29.8 +0.4**
baz=326
PKCU Pink Cliffs 100.41 41 IAMs_20 IAMs_20 15 00 02.9
comp=Z,5µm,20.0s
PCBR Castelo Branco 100.65 323 *e*PP **PKiKP** **14 14 49.4 -7.5**
MONP2 Monument Peak 100.70 47 P **Pdif** **14 10 33.1 +1.8**
baz=308
IRM Iron Mountain 100.75 45 P **Pdif** **14 10 32.6 +1.2**
baz=309
BC3 Big Chuckawall 100.87 46 P **Pdif** **14 10 33.2 +1.3**
baz=309
PMRV Marv??o 100.88 322 *e*PP PKiKP 14 14 49.4 -8.0
PMRV *e*S **SKSac** **14 21 09.4 -1.3**
PMRV *e*LQ LQ 14 23 46.8
PMRV *e*SS SS 14 29 20.7 +14
PMRV Marv??o 100.88 322 *e*LR LR 14 51 10.2
comp=Z,20µm,18.0s
COI Coimbra 100.90 323 *e*PP **PP** **14 14 38.8 -0.2**
O20A White River Ci 100.91 37 IAMs_20 IAMs_20 15 00 56.7
comp=Z,6µm,20.0s
O20A White River Ci 100.91 37 P **Pdif** **14 10 32.4 +0.3**
baz=315
HMU Henry Mountain 101.00 40 IAMs_20 IAMs_20 15 03 23.6
comp=Z,5µm,19.0s
IKP In-Ko-Pah, Jac 101.06 47 P **Pdif** **14 10 33.5 +0.7**
baz=308
PCAS Casmilo, Conde 101.06 323 *e*PP PP 14 14 49.6 +9.4
SWSC Sam W. Stewart 101.08 46 P **Pdif** **14 10 33.7 +1.0**
baz=308
PDMCI Parker Dam,Lak 101.31 44 P **Pdif** **14 10 34.5 +0.8**
baz=310
PESTR Estremoz 101.38 322 *e*PP **PKiKP** **14 14 51.3 -7.0**
PBAR Barrancos 101.55 321 *e*PP **PP** **14 14 42.8 -1.2**
PHWY Pilot Hill 101.55 34 IAMs_20 IAMs_20 15 02 18.5
comp=Z,5µm,19.0s
N23A Red Feather La 101.59 35 IAMs_20 IAMs_20 14 58 41.7
comp=Z,8µm,20.0s
N23A Red Feather La 101.59 35 P **Pdif** **14 10 35.6 +0.4**
baz=317
PMTG Montargil 101.60 322 *e*PP **PKiKP** **14 14 51.8 -6.8**
PSBE So Bento 101.60 323 *e*PP **PKiKP** **14 14 51.8 -6.9**

GLA	Glamis	101.65	46	P		Pdif		14 10 36.2	+0.9	
	baz=309									
EVO	Evora	101.85	322	*e*PP		PP		14 14 51.1	+4.8	
PBEJ	Beja	102.12	322	*e*PP		PP		14 14 50.2	+1.9	
WUAZ	Wupatki	102.25	42	P		Pdif		14 10 38.8	+0.7	
	baz=312									
SUSD	Miller	102.25	29	IAMs_20	IAMs_20			15 00 26.6		
	comp=Z,11µm,20.0s									
SUSD	Miller	102.25	29	P		Pdif		14 10 38.6	+0.9	
	baz=323									
PMAFR	Mafra	102.26	323	*e*PP		PKiKP		14 14 59.1	-0.7	
EYMN	Ely	102.27	22	P		Pdif		14 10 38.1	+0.3	
	baz=329									
SMCO	Snowmass	102.28	37	IAMs_20	IAMs_20			15 02 19.9		
	comp=Z,6µm,20.0s									
LIS	Lisbon	102.36	323	*e*PP		PP		14 14 50.3	+0.3	
LIS				IAMs_20	IAMs_20			15 03 44.3		
	comp=Z,23µm,21.7s									
PNCL	Nicolau / Gran	102.44	322	*e*PP		PKiKP		14 14 58.2	-2.0	
MESJ	Messejana	102.45	322	*e*PP		PP		14 14 51.2	+0.4	
MESJ				IAMs_20	IAMs_20			15 03 55.2		
	comp=Z,31µm,15.8s									
PVAQ	Vaqueiros	102.47	321	*e*S		SKSac		14 21 21.2	+2.9	
PVAQ				*e*LQ		LQ		14 24 06.0		
PVAQ				*e*SS		SS		14 29 33.3	+5.1	
PCVE	Castro Verde	102.49	321	*e*PP		PKiKP		14 14 58.7	-1.6	
113A	Mohawk Valley,	102.52	45	IAMs_20	IAMs_20			15 03 17.3		
	comp=Z,4µm,18.0s									
ISCO	Idaho Springs	102.56	35	IAMs_20	IAMs_20			14 59 19.3		
	comp=Z,9µm,22.0s									
ISCO	Idaho Springs	102.56	35	P		Pdif		14 10 40.4	+0.8	
	baz=317									
BRIGG	Briggsdale	102.66	34	IAMs_20	IAMs_20			15 04 25.2		
	comp=Z,7µm,19.0s									
PBDV	Barranco-do-Ve	102.70	321	*e*PP		PKiKP		14 15 00.1	-0.6	
MVCO	Mesa Verde	102.80	39	IAMs_20	IAMs_20			15 01 42.3		
	comp=Z,5µm,21.0s									
MVCO	Mesa Verde	102.80	39	P		Pdif		14 10 40.9	+0.3	
	baz=314									
MORF	Marmelete	103.07	321	*e*PP		PKiKP		14 15 00.6	-0.8	
MORF	Marmelete	103.07	321	*e*PP		PP		14 14 55.5	+0.1	
MORF				IAMs_20	IAMs_20			15 04 23.9		
	comp=Z,25µm,15.3s									
PFVI	Vila Bisbo	103.29	321	*e*PP		PKiKP		14 15 03.1	+1.4	
F36A	Milaca	103.31	24	IAMs_20	IAMs_20			15 04 50.2		
	comp=Z,7µm,18.0s									
S22A	4UR Ranch, Cre	103.37	38	IAMs_20	IAMs_20			15 01 40.0		
	comp=Z,6µm,21.0s									
Q24A	Divide	103.41	36	IAMs_20	IAMs_20			14 59 59.0		
	comp=Z,7µm,22.0s									
Q24A	Divide	103.41	36	P		Pdif		14 10 43.5	+0.1	
	baz=317									
W18A	Petrified Fore	103.51	41	IAMs_20	IAMs_20			15 03 22.9		
	comp=Z,6µm,19.0s									
OGNE	Ogallala	103.54	33	IAMs_20	IAMs_20			15 03 42.3		
	comp=Z,7µm,19.0s									
OGNE	Ogallala	103.54	33	P		Pdif		14 10 44.7	+1.0	
	baz=320									
214A	Organ Pipe Nat	103.66	45	IAMs_20	IAMs_20			15 04 08.5		
	comp=Z,5µm,18.0s									
214A	Organ Pipe Nat	103.66	45	P		Pdif		14 10 45.6	+1.3	
	baz=310									
D41A	Chassel	104.02	21	IAMs_20	IAMs_20			15 01 11.8		
	comp=Z,10µm,20.0s									
SDCO	Great Sand Dun	104.11	37	IAMs_20	IAMs_20			15 00 35.6		
	comp=Z,8µm,21.0s									
SPMN	Marine on St.	104.12	24	IAMs_20	IAMs_20			15 04 04.6		
	comp=Z,7µm,18.0s									
VNDA	Vanda	104.20	172	PKiKP		PKiKP		14 15 02.4	+0.3	
	comp=Z,3.3nm,1.1s,baz=304,slow=3.6,SNR=2.5									
KSCO	Kaye Shedlock'	104.70	34	IAMs_20	IAMs_20			15 05 26.9		
	comp=Z,9µm,20.0s									
TUC	Tucson	104.73	44	P		Pdif		14 10 49.6	+0.4	
	baz=312									
BGNE	Belgrade	105.02	30	IAMs_20	IAMs_20			15 05 23.0		
	comp=Z,7µm,19.0s									
AVE	Averroes	105.09	318	IAMs_20	IAMs_20			15 03 10.3		
	comp=Z,8µm,20.0s									
E43A	Lone Tree Farm	105.13	20	IAMs_20	IAMs_20			15 05 31.0		
	comp=Z,6µm,19.0s									
ANMO	Albuquerque	105.56	39	IAMs_20	IAMs_20			15 04 17.4		
	comp=Z,6µm,20.0s									
N33A	J Bar K, Exete	105.88	30	IAMs_20	IAMs_20			15 08 14.6		
	comp=Z,6µm,20.0s									
Y22D	IRIS PASSCAL I	105.91	40	IAMs_20	IAMs_20			15 05 44.4		
	comp=Z,5µm,20.0s									
VLDQ	Val d'Or	106.03	13	IAMs_20	IAMs_20			15 04 06.8		
	comp=Z,10µm,19.0s									
319A	Douglas	106.31	44	IAMs_20	IAMs_20			15 09 15.4		
	comp=Z,5µm,19.0s									
121A	Cookes Peak, D	106.45	42	IAMs_20	IAMs_20			15 09 21.1		
	comp=Z,5µm,19.0s									
G45A	Suttons Bay	106.74	20	IAMs_20	IAMs_20			15 02 15.7		
	comp=Z,9µm,20.0s									
KSU1	Kansas State U	107.57	30	IAMs_20	IAMs_20			15 09 17.6		
	comp=Z,8µm,18.0s									
N38A	Joes South Hor	107.67	27	IAMs_20	IAMs_20			15 07 38.9		
	comp=Z,9µm,20.0s									
AMTX	Amarillo	108.30	37	IAMs_20	IAMs_20			15 08 49.5		
	comp=Z,9µm,18.0s									
TRQ	Mont Tremblant	108.41	12	IAMs_20	IAMs_20			15 05 09.5		
	comp=Z,7µm,19.0s									
P38A	Dawn	108.52	28	IAMs_20	IAMs_20			15 03 43.4		
	comp=Z,7µm,20.0s									
L44A	Lake County Fo	108.54	23	IAMs_20	IAMs_20			15 00 29.4		
	comp=Z,9µm,22.0s									
L44A	Lake County Fo	108.54	23	P		PKiKP		14 15 11.6	+0.3	
	baz=332									
OK038	West end E0370	108.62	33	IAMs_20	IAMs_20			15 09 05.6		
	comp=Z,9µm,19.0s									
J47A	Sunmer	108.63	20	IAMs_20	IAMs_20			15 07 45.6		
	comp=Z,8µm,18.0s									
OK032	Salt Plains WL	108.63	33	IAMs_20	IAMs_20			15 04 49.9		
	comp=Z,7µm,20.0s									
N41A	Harden Midland	108.71	26	IAMs_20	IAMs_20			15 05 05.2		
	comp=Z,7µm,21.0s									
HQIL	Hanson Quary C	108.89	23	IAMs_20	IAMs_20			15 00 34.9		
	comp=Z,8µm,21.0s									
PQI	Presque Isle	108.96	7	IAMs_20	IAMs_20			15 10 09.5		
	comp=Z,8µm,19.0s									
OK048	Pawnee Station	109.56	32	IAMs_20	IAMs_20			15 05 40.6		
	comp=Z,8µm,20.0s									
OK029	Liberty Lake	109.80	33	IAMs_20	IAMs_20			15 06 05.9		
	comp=Z,8µm,20.0s									
OK033	Mehan	109.86	33	IAMs_20	IAMs_20			15 05 20.4		
	comp=Z,8µm,19.0s									
FRNY	Flat Rock	109.93	12	IAMs_20	IAMs_20			15 05 12.5		
	comp=Z,8µm,20.0s									
WMOK	Wichita Mounta	109.95	35	IAMs_20	IAMs_20			15 10 50.9		
	comp=Z,8µm,18.0s									
LONY	Lake Ozonia	109.95	12	IAMs_20	IAMs_20			15 06 08.1		
	comp=Z,8µm,19.0s									
N47A	Urbana	110.46	22	IAMs_20	IAMs_20			15 09 20.2		
	comp=Z,8µm,18.0s									
TUL3	Leonard	110.52	32	IAMs_20	IAMs_20			15 06 58.9		
	comp=Z,8µm,20.0s									
RLO	Rose Lookout	110.68	31	IAMs_20	IAMs_20			14 46 07.9		
	comp=Z,1µm,19.0s									
TORD	Torodi Ar. Bea	110.68	296	PKiKP		PKiKP		14 15 14.3	-1.7	
	comp=Z,1.2nm,0.8s,baz=32,slow=3.7,SNR=4.0									
TORD				PKKPbc		PKKPbc		14 26 11.9	-2.1	
	comp=Z,0.5nm,0.8s,baz=283,slow=1.8,SNR=2.4									
TORD				PKKPab		PKKPab		14 26 25.2	-0.9	
	comp=Z,2.9nm,0.8s,baz=256,slow=2.4,SNR=12									
PMAR	Madeira	111.03	323	*e*PP		PP		14 15 52.9	-1.1	
ERPA	Erie	111.07	17	IAMs_20	IAMs_20			15 06 50.0		
	comp=Z,9µm,20.0s									
PMOZ	Porto Moniz, M	111.11	324	*e*PP		PP		14 15 52.3	-2.2	
PMOZ				*e*S		SKSac		14 22 01.7	+5.0	
PMOZ				*e*LQ		LQ		14 25 27.5		
PMOZ	Porto Moniz, M	111.11	324	*e*LR		LR		14 55 38.3		
	comp=Z,10µm,20.0s									
O48B	Farmland	111.20	22	IAMs_20	IAMs_20			15 09 15.8		
	comp=Z,8µm,19.0s									
FVM	French Village	111.20	27	IAMs_20	IAMs_20			15 10 48.4		
	comp=Z,7µm,18.0s									
TXAR	Lajitas Array	111.21	42	Pdiff		Pdif		14 11 21.2	+3.1	
	comp=Z,1.1nm,1.1s,baz=274,slow=2.5,SNR=3.6									
TXAR				PKiKP		PKiKP		14 15 16.3	-0.6	
	comp=Z,1.6nm,0.8s,baz=297,slow=1.0,SNR=9.6									
M52A	Chesterland	111.22	18	IAMs_20	IAMs_20			15 07 20.1		
	comp=Z,7µm,18.0s									
ACCN	Adirondack Com	111.32	12	IAMs_20	IAMs_20			15 04 44.2		
	comp=Z,8µm,20.0s									
FW03	Perrin-Whitt E	111.64	35	IAMs_20	IAMs_20			15 11 29.7		
	comp=Z,6µm,18.0s									
BLO	Bloomington	111.68	23	IAMs_20	IAMs_20			15 08 19.8		
	comp=Z,8µm,20.0s									
TRY	Troy	111.95	12	IAMs_20	IAMs_20			15 07 07.9		
	comp=Z,9µm,20.0s									
FW06	Azle	111.96	35	IAMs_20	IAMs_20			15 08 43.1		
	comp=Z,7µm,19.0s									
BINY	Binghamton	111.98	14	IAMs_20	IAMs_20			15 08 00.8		
	comp=Z,7µm,20.0s									
BINY	Binghamton	111.98	14	P		PKiKP		14 15 17.4	-0.4	
	baz=343									
P49A	Miami Univ. Ec	111.99	22	IAMs_20	IAMs_20			15 04 03.8		
	comp=Z,9µm,21.0s									
FW07	Weatherford	112.05	35	IAMs_20	IAMs_20			15 06 46.5		
	comp=Z,8µm,20.0s									
CGM3	Cape Girardeau	112.11	27	IAMs_20	IAMs_20			15 06 30.2		
	comp=Z,8µm,20.0s									
PBMO	Poplar Bluff	112.23	27	IAMs_20	IAMs_20			15 08 15.6		
	comp=Z,7µm,19.0s									
USIN	University of	112.32	25	IAMs_20	IAMs_20			15 08 01.7		
	comp=Z,9µm,19.0s									
O52A	Adamsville	112.39	19	IAMs_20	IAMs_20			15 09 05.2		
	comp=Z,7µm,19.0s									
O53A	New Philadelph	112.45	19	IAMs_20	IAMs_20			15 09 11.8		
	comp=Z,6µm,19.0s									
HRV	Adam Dziewonsk	112.55	11	IAMs_20	IAMs_20			15 06 19.7		
	comp=Z,7µm,20.0s									
HRV	Adam Dziewonsk	112.55	11	P		PKiKP		14 15 18.2	-0.7	
	baz=347									
WCI	Wyandotte Cave	112.60	24	IAMs_20	IAMs_20			15 08 59.1		
	comp=Z,8µm,20.0s									
PARMO	Parma	112.61	27	IAMs_20	IAMs_20			15 10 07.6		
	comp=Z,8µm,18.0s									
QUA2	Belchertown	112.63	11	IAMs_20	IAMs_20			15 03 51.9		
	comp=Z,10µm,22.0s									
JCT	Junction City	112.64	38	IAMs_20	IAMs_20			15 11 30.6		
	comp=Z,7µm,19.0s									
JCT	Junction City	112.64	38	P		PKiKP		14 15 19.3	-0.1	
	baz=319									
MIAR	Mount Ida	112.69	31	IAMs_20	IAMs_20			15 06 24.0		
	comp=Z,7µm,20.0s									
WHTX	Lake Whitney,	112.78	36	IAMs_20	IAMs_20			15 07 19.8		
	comp=Z,8µm,20.0s									
HICK	Hickman	112.93	27	IAMs_20	IAMs_20			15 07 27.1		
	comp=Z,7µm,21.0s									
SSPA	Standing Stone	113.00	16	IAMs_20	IAMs_20			15 07 33.2		
	comp=Z,8µm,19.0s									
X40A	Basin Creek Fa	113.08	31	IAMs_20	IAMs_20			15 12 23.4		
	comp=Z,7µm,18.0s									
P53A	Whipple	113.10	19	IAMs_20	IAMs_20			15 04 39.0		
	comp=Z,7µm,20.0s									
HBAR	Harrisburg	113.17	28	IAMs_20	IAMs_20			15 08 48.5		
	comp=Z,5µm,19.0s									
UTMT	University of	113.25	27	IAMs_20	IAMs_20			15 10 39.4		
	comp=Z,8µm,18.0s									
Q52A	Bidwell	113.31	20	IAMs_20	IAMs_20			15 04 30.6		
	comp=Z,10µm,22.0s									
T47A	Sharon Grove	113.39	25	IAMs_20	IAMs_20			15 08 26.0		
	comp=Z,9µm,20.0s									
WSPT	Westport, CT	113.52	12	IAMs_20	IAMs_20			15 04 43.5		
	comp=Z,8µm,21.0s									
PAL	Palisades	113.56	13	IAMs_20	IAMs_20			15 08 09.7		
	comp=Z,8µm,21.0s									
WLAR	White Oak Lake	113.61	31	IAMs_20	IAMs_20			15 07 12.4		
	comp=Z,8µm,20.0s									
237A	Washetta, Mont	113.63	34	IAMs_20	IAMs_20			15 08 41.3		
	comp=Z,6µm,20.0s									
435B	Jarrell	113.64	37	IAMs_20	IAMs_20			15 14 20.0		
	comp=Z,8µm,18.0s									
N62A	Caumsett State	113.72	13	IAMs_20	IAMs_20			15 04 49.9		
	comp=Z,7µm,20.0s									
Q54A	Coxs Mills	113.73	19	IAMs_20	IAMs_20			15 04 57.7		
	comp=Z,8µm,21.0s									
CPNY	Central Park	113.76	13	IAMs_20	IAMs_20			15 08 35.9		
	comp=Z,7µm,21.0s									
MET	Memphis--Engin	113.85	28	IAMs_20	IAMs_20			15 12 54.5		
	comp=Z,7µm,18.0s									
WVT	Waverly	113.85	26	P		PKiKP		14 15 21.4	-0.2	
	baz=331									
QSPA	South Pole Qui	113.95	180	IAMs_20	IAMs_20			15 04 19.2		
	comp=Z,4µm,20.0s									
CLTN	Cedars of Leba	114.47	25	IAMs_20	IAMs_20			15 09 07.7		
	comp=Z,7µm,20.0s									
S54A	Dingess, Beckl	114.68	20	IAMs_20	IAMs_20			15 08 53.7		
	comp=Z,6µm,20.0s									
PLAL	Pickwick Lake	114.75	27	IAMs_20	IAMs_20			15 09 35.4		
	comp=Z,6µm,20.0s									
SWET	Sewanee	115.40	25	IAMs_20	IAMs_20			15 10 06.2		
	comp=Z,8µm,19.0s									
U54A	Nelsons Funny	115.69	21	IAMs_20	IAMs_20			15 07 20.5		
	comp=Z,8µm,20.0s									
KVTX	Kingsville	115.95	39	IAMs_20	IAMs_20			15 12 02.3		
	comp=Z,6µm,20.0s									
W52A	Murphy	116.25	23	IAMs_20	IAMs_20			15 10 36.8		
	comp=Z,7µm,19.0s									
V55A	Taylorsville	116.49	21	IAMs_20	IAMs_20			15 09 51.9		
	comp=Z,9µm,21.0s									
T59A	Double "B" Far	116.54	17	IAMs_20	IAMs_20			15 11 59.8		
	comp=Z,8µm,19.0s									
LRAL	Lakeview Retre	116.88	27	IAMs_20	IAMs_20			15 09 49.5		
	comp=Z,8µm,20.0s									
KMSC	Kings Mountain	117.11	21	IAMs_20	IAMs_20			15 11 14.1		
	comp=Z,8µm,19.0s									
KMSC	Kings Mountain	117.11	21	P		PKiKP		14 15 28.1	+0.2	
	baz=336									
BIRD	Birdtown, Kers	117.84	21	IAMs_20	IAMs_20			15 10 49.6		
	comp=Z,7µm,20.0s									
JSC	Jenkinsville	117.91	21	IAMs_20	IAMs_20			15 09 47.5		
	comp=Z,8µm,19.0s									
GOGA	Godfrey	117.93	24	P		PKPdf		14 15 29.2	-0.3	
	baz=334									
Y57A	Sumter	118.44	21	IAMs_20	IAMs_20			15 11 39.5		
	comp=Z,7µm,20.0s									
BRAL	Brewton	118.47	28	IAMs_20	IAMs_20			15 16 50.9		
	comp=Z,7µm,18.0s									
451A	Vernon	119.50	27	IAMs_20	IAMs_20			15 11 31.2		
	comp=Z,8µm,20.0s									
DBIC	Dimbokro	119.58	293	PKP		PKPdf		14 15 31.3	-1.8	
	comp=Z,4.3nm,0.7s,baz=40,slow=1.1,SNR=5.1									
DBIC				PKKPab		PKKPab		14 25 45.3	-1.4	
	comp=Z,6.0nm,0.9s,baz=227,slow=4.5,SNR=5.3									
MOIG	Morelia	119.62	48	IAMs_20	IAMs_20			15 18 31.2		
	comp=Z,6µm,20.0s									
KIC	Kosan Boka	119.65	293	⇑*e*PKP1		PKPdf		14 15 31.6	-1.7	
	comp=Z,5.5nm,0.5s									
TIC	Toumodi	119.73	294	⇑*i*PKP1		PKPdf		14 15 30.6	-2.8	
	comp=Z,4.4nm,0.2s									
LIC	Lamto	119.96	293	⇑*e*PKP1		PKPdf		14 15 29.8	-4.0	
	comp=Z,6.9nm,0.6s									
UNM	Universidad Na	121.21	46	IAMs_20	IAMs_20			15 13 26.2		
	comp=Z,5µm,20.0s									
TLIG	Tlapa	122.87	47	IAMs_20	IAMs_20			15 14 25.3		
	comp=Z,4µm,20.0s									
SNAA	Sanae	123.37	198	PKP		PKPdf		14 15 36.6	-2.2	
	comp=Z,1.9nm,0.8s,baz=348,slow=10.0,SNR=1.7									
BBSR	BB Station	123.45	7	IAMs_20	IAMs_20			15 14 31.2		
	comp=Z,5µm,20.0s									
BELA	Belgrano 2	125.08	186	PKPdf		PKPdf		14 15 41.6	-0.2	
TEIG	Tepich	127.09	36	IAMs_20	IAMs_20			15 18 05.1		
	comp=Z,4µm,21.0s									
CAMR	Camarioca	127.98	27	IAMs_20	IAMs_20			15 19 18.6		
	comp=Z,11µm,19.0s									
PETF	Flores	128.84	40	IAMs_20	IAMs_20			15 24 37.9		
	comp=Z,6µm,20.0s									
HUEH	Huehuetenango	129.09	43	IAMs_20	IAMs_20			15 12 06.7		
	comp=Z,4µm,20.0s									
SNET	Serv Nac Est T	131.74	42	IAMs_20	IAMs_20			15 25 59.0		
	comp=Z,3µm,20.0s									
TGUH	Tegucigalpa,Un	132.62	40	IAMs_20	IAMs_20			15 24 44.2		
	comp=Z,4µm,20.0s									
MTDJ	Mount Denham	133.88	26	IAMs_20	IAMs_20			15 19 16.7		
	comp=Z,7µm,22.0s									
ACON	Acoyapa	135.51	39	*e*P		PKPdf		14 15 54.2	-9.2	
ORTG	Ortega, Santa	136.62	41	IAMs_20	IAMs_20			15 29 32.0		
	comp=Z,4µm,21.0s									
AGPR	Aguadilla, PR	136.77	12	IAMs_20	IAMs_20			15 17 11.1		
	comp=Z,5µm,22.0s									
EMPR	Esperanza - Ma	136.87	11	IAMs_20	IAMs_20			15 21 56.8		
	comp=Z,5µm,20.0s									
AOPR	Arecibo Observ	136.95	12	IAMs_20	IAMs_20			15 21 13.0		
	comp=Z,4µm,20.0s									
COVE	Coope Vega, Sa	136.96	39	IAMs_20	IAMs_20			15 29 55.8		
	comp=Z,3µm,18.0s									
JTS	Las Juntas de	136.97	40	IAMs_20	IAMs_20			15 26 39.4		
	comp=Z,4µm,20.0s									
GCPR	Guaynabo City	137.11	11	IAMs_20	IAMs_20			15 19 15.2		
	comp=Z,4µm,22.0s									
CRPR	Cabo Rojo, PR	137.22	12	IAMs_20	IAMs_20			15 17 21.1		
	comp=Z,5µm,22.0s									
CELP	Cerrillos	137.25	12	IAMs_20	IAMs_20			15 22 07.9		
	comp=Z,8µm,20.0s									
MLPR	Magueyes Islan	137.26	12	IAMs_20	IAMs_20			15 17 37.3		
	comp=Z,6µm,22.0s									
OBIP	Obispado Ponce	137.28	12	IAMs_20	IAMs_20			15 22 09.6		
	comp=Z,5µm,20.0s									
SJG	San Juan	137.29	11	IAMs_20	IAMs_20			15 19 48.1		
	comp=Z,5µm,21.0s									
JACO	JACO, Garabito	137.65	41	IAMs_20	IAMs_20			15 20 41.3		
	comp=Z,4µm,22.0s									
HDC	Heredia	137.70	40	IAMs_20	IAMs_20			15 25 24.5		
	comp=Z,4µm,21.0s									
SMRT	St. Maarten	137.79	7	IAMs_20	IAMs_20			15 28 26.0		
	comp=Z,5µm,19.0s									
LCR2	La Lucha 2	137.97	40	IAMs_20	IAMs_20			15 28 55.7		
	comp=Z,5µm,20.0s									
SABA	Saba	138.19	7	IAMs_20	IAMs_20			15 28 38.8		
	comp=Z,3µm,20.0s									
SEUS	St. Eustatius	138.35	7	IAMs_20	IAMs_20			15 22 50.8		
	comp=Z,5µm,20.0s									
GDHS	Morne Mazeau,	139.67	5	IAMs_20	IAMs_20			15 19 16.5		
	comp=Z,5µm,21.0s									
MAGL	Barre de l'ile	140.03	4	IAMs_20	IAMs_20			15 20 55.4		
	comp=Z,5µm,22.0s									
BCIP	Isla Barro Col	140.75	35	IAMs_20	IAMs_20			15 28 12.1		
	comp=Z,3µm,20.0s									
FDF	Fort de France	141.24	4	IAMs_20	IAMs_20			15 22 28.5		
	comp=Z,5µm,20.0s									
BIM	Bigot	141.46	4	IAMs_20	IAMs_20			15 23 58.4		
	comp=Z,5µm,20.0s									
SJCC	San Jacinto, C	142.34	28	*e*P		PKPdf		14 16 12.8	-3.3	
HATO	Hato, Curacao	142.41	17	IAMs_20	IAMs_20			15 24 24.2		
	comp=Z,6µm,20.0s									
BBGH	Gun Hill	142.91	2	IAMs_20	IAMs_20			15 27 22.5		
	comp=Z,6µm,20.0s									
LL6C	La Loma 6 Bece	143.27	25	*e*P		PKPbc		14 16 14.8	+0.4	
APAC	Apartado, Choc	143.47	32	*e*P		PKPdf		14 16 16.6	-1.4	
GRGR	Grenville	143.78	6	IAMs_20	IAMs_20			15 21 40.8		
	comp=Z,6µm,21.0s									
UREC	San Jos de Ur	144.09	30	*e*P		PKPab		14 16 14.5	-2.0	
DBBC	Dabeiba	144.42	32	*e*P		PKPab		14 16 17.6	-0.2	
SDV	Santo Domingo	145.01	22			PKPab		14 16 18.0	-2.0	
SDV	Santo Domingo	145.01	22	PKP		PKPab		14 16 18.8	-1.3	
	comp=Z,232nm,0.9s,baz=342,slow=3.0,SNR=68									
SDV	Santo Domingo	145.01	22	*e*P		PKPbc		14 16 20.4	+0.3	
PCRV	Puerto La Cruz	145.31	11	PKPbc		PKPbc		14 16 18.4	-2.4	
	comp=Z,64nm,0.8s,baz=20,slow=6.0,SNR=15									
CBOC	Ciudad Bolivar	145.51	32	*e*P		PKPbc		14 16 19.7	-2.0	
PTBC	PUERTO BERRIO	145.65	29	*e*P		PKPdf		14 16 20.4	-1.4	
PAMC	Pamplona, Colo	145.68	26	*e*P		PKPbc		14 16 22.5	-0.1	
BAUV	El Baul	145.75	17	PKPdf		PKPdf		14 16 20.2	-1.7	
BARC	Barichara	146.16	27	*e*P		PKPdf	

EWUT				*e*S	Sg	13 57 52.1	+0.3		
	baz=13								
ETM	**Tongmen**	**0.28**	**223**	⇑P	Pg	13 57 48.2	0.0		
	baz=215								
ETM				S	Sg	13 57 52.8	+0.8		
	baz=215								
LXIB	**Xiulin Townshi**	**0.31**	**241**	P	Pg	13 57 48.7	+0.1		
LXIB	baz=241			*e*S	Sg	13 57 53.0	+0.3		
NNSB	**Datong**	**0.39**	**311**	*i* P	Pg	13 57 50.6	+0.4		
	baz=310								
NNSB				S	Sg	13 57 56.1	+0.7		
	baz=310								
LATG	**Datong**	**0.40**	**336**	*i* P	Pg	13 57 50.6	+0.3		
	baz=335								
LATG				S	Sb	13 57 56.7	-1.1		
	baz=335								
NNS	**Nan Shan**	**0.40**	**311**	P	Pg	13 57 50.6	+0.2		
	baz=311								
NNS				S	Sg	13 57 56.4	+0.6		
	baz=311								
WHF	**Hehuan Shan**	**0.40**	**266**	*e*P	Pg	13 57 50.6	+0.2		
	baz=266								
WHF				*e*S	Sg	13 57 56.1	+0.2		
	baz=266								
SHUL	**Shoufeng**	**0.41**	**199**	*i* P	Pb	13 57 51.3	-0.4		
	baz=205								
ESAO	**Su ao**	**0.42**	**17**	*i* P	Pg	13 57 50.9	+0.2		
	baz=16								
ESAO				S	Sg	13 57 56.8	+0.6		
	baz=16								
FUSS	**Fushou**	**0.43**	**280**	*i* P	Pb	13 57 51.7	-0.5		
	baz=280								
FUSS				S	Sg	13 57 57.4	+0.8		
	baz=280								
ESL	**Shilin**	**0.44**	**215**	P	Pg	13 57 50.7	-0.2		
	baz=216								
ESL				S	Sb	13 57 58.9	+0.1		
	baz=216								
TWC	**Suao**	**0.45**	**17**	*i* P	Pg	13 57 51.6	+0.3		
	baz=10.0								
TWC				S	Sg	13 57 56.7	-0.6		
	baz=10.0								
NDS	**Dongshan**	**0.46**	**1**	*i* P	Pg	13 57 52.0	+0.6		
	baz=360								
NDS				S	Sg	13 57 58.1	+0.7		
	baz=360								
NDT	**Datong Townshi**	**0.46**	**338**	*i* P	Pb	13 57 52.3	-0.3		
	baz=337								
NDT				S	Sb	13 57 58.9	-0.6		
	baz=337								
ENTT	**Nioudou**	**0.48**	**345**	*i* P	Pb	13 57 52.5	-0.5		
	baz=344								
ENTT				S	Sb	13 57 59.3	-0.8		
	baz=344								
TEGC	**Jichi Village**	**0.49**	**198**	*e*P	Pb	13 57 53.8	+0.8		
	baz=189								
TEGC				*e*S	Sb	13 58 02.4	+2.2		
	baz=189								
CHGB	**Renai**	**0.50**	**257**	P	Pg	13 57 52.5	+0.3		
	baz=249								
CHGB				S	Sg	13 57 59.3	+0.5		
	baz=249								
OWD	**Renai**	**0.53**	**246**	*e*P	Pb	13 57 54.4	+0.5		
	baz=247								
OWD				*e*S	Sg	13 58 00.3	+0.5		
	baz=247								
WARBT	**Fenglin Townsh**	**0.54**	**213**	*e*P	Pg	13 57 52.5	-0.4		
	baz=220								
YHNB	**Yeheng**	**0.58**	**329**	*i* P	Pb	13 57 54.3	-0.4		
	baz=328								
YHNB				S	Sb	13 58 02.5	-0.5		
	baz=328								
ILA	**Ilan**	**0.59**	**4**	P	Pb	13 57 54.5	-0.3		
	baz=3.0								
NSK	**Sanguang**	**0.59**	**328**	*i* P	Pb	13 57 54.7	-0.2		
	baz=328								
NSK				S	Sg	13 58 02.5	+0.7		
	baz=328								
FUSB	**Fushanzhiwuyua**	**0.59**	**350**	P	Pg	13 57 54.2	+0.2		
	baz=349								
FUSB				*e*S	Sg	13 58 02.4	+0.6		
	baz=349								
NTC	**Toucheng**	**0.69**	**9**	P	Pg	13 57 56.0	+0.3		
	baz=8.0								
NFF	**Wufeng Townshi**	**0.70**	**311**	*e*P	Pb	13 57 56.6	-0.2		
	baz=310								
NFF				*e*S	Sg	13 58 05.8	+0.5		
	baz=310								
NSTT	**Nanjuang**	**0.79**	**305**	*e*P	Pn	13 58 00.1	+0.5		
	baz=306								
TIPB	**Shuangxi**	**0.80**	**8**	*e*P	Pg	13 57 58.1	+0.2		
	baz=357								
NHDH	**Xindian Distri**	**0.80**	**348**	*e*P	Pg	13 57 57.7	-0.2		
	baz=347								
NHDH				*e*S	Sb	13 58 09.7	+0.4		
	baz=347								
TWB1	**Santiao Chiao**	**0.87**	**17**	*e*P	Pb	13 57 59.4	-0.2		
	baz=9.0								
TWB1				*e*S	Sg	13 58 10.4	-0.1		
	baz=9.0								
NHY	**Taipei**	**0.87**	**352**	P	Pb	13 57 60.0	+0.4		
	baz=350								
NHY				*e*S	Sb	13 58 11.1	-0.2		
	baz=350								
TAP	**Taipei**	**0.88**	**348**	*e*P	Pn	13 58 00.5	-0.4		
	baz=347								
TAP				*e*S	Sb	13 58 12.2	+0.6		
	baz=347								
NWF	**Wu-fen Shan**	**0.90**	**4**	*e*P	Pb	13 58 00.3	+0.2		
	baz=355								
NWF				*e*S	Sg	13 58 10.8	-0.6		
	baz=355								
WFSB	**Wu-fen Shan**	**0.90**	**4**	*e*P	Pb	13 58 00.1	+0.1		
	baz=3.0								
HSN	**Hsinchu**	**0.92**	**313**	P	Pn	13 58 01.9	+0.6		
	baz=315								
HSN				*e*S	Sn	13 58 15.1	+0.5		
	baz=315								
NCUH	**Zhongli**	**0.92**	**329**	*e*P	Pn	13 58 01.6	+0.2		
	baz=328								
SXI1	**Grass Mountain**	**0.93**	**10**	P	Pb	13 58 00.8	+0.1		
	baz=354								
TWS1	**Kuangyinshan**	**0.96**	**344**	P	Pn	13 58 02.0	+0.1		
	baz=351								
TWS1				*e*S	Sn	13 58 15.6	-0.1		
	baz=351								
TNOU	**National Taiwa**	**0.97**	**4**	P	Pn	13 58 01.8	-0.3		
	baz=2.0								
TNOU				*e*S	Sg	13 58 13.2	-0.7		
	baz=2.0								
YM01	**YM01**	**0.98**	**353**	*e*P	Pb	13 58 01.6	+0.1		
	baz=336								
YM01				*e*S	Sb	13 58 15.2	+0.8		
	baz=336								
NTST	**Danshui**	**1.01**	**347**	*e*P	Pn	13 58 03.0	+0.4		
	baz=354								
NTST				*e*S	Sn	13 58 17.5	+0.5		
	baz=354								
ANP	**Anpu**	**1.02**	**351**	*e*P	Pb	13 58 02.5	+0.2		
	baz=350								

TAP 04 13:59:30.4,24°20N×121°81E,h8km,ML4.2,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**329**	*i* P	Pg	13 59 34.1	+0.8
	baz=329						
EHP				*i* S	Sg	13 59 36.4	+1.2
	baz=329						
EAHA	**Aohua**	**0.14**	**333**	P	Pg	13 59 33.6	+0.1
	baz=331						
EAHA				S	Sg	13 59 36.9	+1.1
	baz=331						
ETL	**Fush Village**	**0.18**	**256**	P	Pg	13 59 34.5	+0.4
	baz=259						
ETL				S	Sg	13 59 37.4	+0.7
	baz=259						
NACB	**Ninganchiao**	**0.20**	**262**	P	Pg	13 59 34.8	+0.3
	baz=265						
NACB				S	Sg	13 59 37.6	+0.2
	baz=265						
TWD	**Chiawan**	**0.23**	**239**	*i* P	Pg	13 59 35.6	+0.5
	baz=252						
TWD				*i* S	Sg	13 59 39.0	+0.7
	baz=252						
ENA	**Nanau**	**0.23**	**344**	*i* P	Pg	13 59 35.1	0.0
	baz=341						
ENA				S	Sg	13 59 39.0	+0.6
	baz=341						
EWUT	**Wuta**	**0.24**	**353**	P	Pg	13 59 35.4	0.0
	baz=347						
EWUT				*e*S	Sg	13 59 39.8	+1.1
	baz=347						
HWA	**Hwalien**	**0.29**	**220**	*i* P	Pb	13 59 38.0	+0.1
	baz=236						
ETLH	**Xiulin Townshi**	**0.30**	**271**	P	Pg	13 59 36.9	+0.5
	baz=273						
ETLH				S	Sg	13 59 41.6	+1.1
	baz=273						
ESAO	**Su ao**	**0.37**	**4**	P	Pg	13 59 37.7	-0.1
	baz=355						
ESAO				S	Sg	13 59 43.8	+1.0
	baz=355						
ETM	**Tongmen**	**0.37**	**231**	P	Pg	13 59 38.2	+0.5
	baz=236						
ETM				S	Sg	13 59 43.8	+1.0
	baz=236						
LXIB	**Xiulin Townshi**	**0.41**	**244**	P	Pg	13 59 38.8	+0.3
	baz=249						
LXIB				S	Sg	13 59 44.6	+0.8
	baz=249						
TWC	**Suao**	**0.41**	**5**	*i* P	Pg	13 59 38.5	+0.1
	baz=354						
TWC				*i* S	Sg	13 59 44.3	+0.5
	baz=354						
LATG	**Datong**	**0.42**	**322**	P	Pg	13 59 38.9	+0.2
	baz=320						
LATG				S	Sb	13 59 45.8	-1.0
	baz=320						
NDS	**Dongshan**	**0.44**	**349**	P	Pg	13 59 39.2	+0.2
	baz=344						
NDS				S	Sb	13 59 46.2	-1.0
	baz=344						
NNSB	**Datong**	**0.45**	**300**	P	Pg	13 59 39.9	+0.6
	baz=301						
NNSB				S	Sg	13 59 45.9	+0.7
	baz=301						
NNSH	**Datong**	**0.45**	**300**	P	Pg	13 59 39.8	+0.5
	baz=301						
NNSH				S	Sg	13 59 45.4	+0.2
	baz=301						
NNS	**Nan Shan**	**0.47**	**301**	*i* P	Pg	13 59 40.0	+0.4
	baz=302						
NNS				*i* S	Sg	13 59 46.6	+0.9
	baz=302						
SHUL	**Shoufeng**	**0.47**	**209**	P	Pb	13 59 41.8	+0.8
	baz=216						
SHUL				S	Sb	13 59 49.4	+1.3
	baz=216						
NDT	**Datong Townshi**	**0.48**	**326**	P	Pg	13 59 40.1	+0.3
	baz=323						
NDT				S	Sg	13 59 47.3	+1.0
	baz=323						
ENTT	**Nioudou**	**0.49**	**333**	*i* P	Pg	13 59 40.3	+0.3
	baz=331						
ENTT				*i* S	Sb	13 59 47.7	-1.0
	baz=331						
WHF	**Hehuan Shan**	**0.50**	**264**	*i* P	Pg	13 59 41.0	+0.7
	baz=267						
WHF				*i* S	Sg	13 59 47.1	+0.2
	baz=267						
ESL	**Shilin**	**0.52**	**222**	*i* P	Pg	13 59 41.1	+0.6
	baz=235						
ESL				*i* S	Sb	13 59 48.8	-0.6
	baz=235						
FUSS	**Fushou**	**0.52**	**275**	P	Pb	13 59 41.3	-0.7
	baz=278						
FUSS				S	Sg	13 59 48.3	+0.8
	baz=278						
TWE	**Neicheng**	**0.53**	**346**	P	Pg	13 59 41.0	+0.2
	baz=342						
TWE				S	Sb	13 59 48.9	-1.0
	baz=342						
TEGC	**Jichi Village**	**0.55**	**207**	*e*P	Pn	13 59 43.4	-1.1
	baz=214						
TEGC				S	Sn	13 59 52.9	-1.0
	baz=214						
ILA	**Ilan**	**0.56**	**354**	*i* P	Pb	13 59 42.8	+0.3
	baz=342						
ILA				*i* S	Sb	13 59 50.8	+0.1
	baz=342						
TWT	**Tachien**	**0.58**	**275**	*i* P	Pb	13 59 42.8	-0.2
	baz=276						
TWT				*i* S	Sb	13 59 50.7	-0.7
	baz=276						
FUSB	**Fushanzhiwuyua**	**0.59**	**340**	P	Pg	13 59 42.3	+0.4
	baz=336						
FUSB				S	Sb	13 59 50.7	-0.9
	baz=336						
TDCB	**Techi**	**0.60**	**275**	P	Pb	13 59 42.7	-0.5
	baz=277						
TDCB				S	Sg	13 59 50.3	+0.4
	baz=277						
CHGB	**Renai**	**0.60**	**257**	P	Pg	13 59 42.6	+0.5
	baz=250						
CHGB				S	Sg	13 59 50.6	+0.6
	baz=250						
YHNB	**Yeheng**	**0.61**	**320**	P	Pg	13 59 42.6	+0.3
	baz=318						
YHNB				S	Sg	13 59 50.9	+0.6
	baz=318						
WARBT	**Fenglin Townsh**	**0.62**	**219**	P	Pb	13 59 43.2	-0.3
	baz=231						
WARBT				*e*S	Sg	13 59 51.4	+0.9
	baz=231						
NSK	**Sanguang**	**0.63**	**319**	*i* P	Pg	13 59 42.9	+0.3
	baz=318						
NSK				*i* S	Sb	13 59 51.8	-0.9
	baz=318						
OWD	**Renai**	**0.63**	**247**	P	Pb	13 59 43.4	-0.4
	baz=251						
OWD				S	Sg	13 59 51.6	+0.6
	baz=251						
EGFH	**Guangfu**	**0.64**	**214**	P	Pb	13 59 43.7	0.0
	baz=228						
EGFH				S	Sb	13 59 54.0	+1.2
	baz=228						
WUSB	**Renai**	**0.67**	**252**	P	Pb	13 59 44.2	-0.2
	baz=255						
WUSB				S	Sg	13 59 52.4	+0.3
	baz=255						
VWDT	**VWDT**	**0.76**	**234**	P	Pb	13 59 46.4	+0.5
	baz=239						
VWDT				*e*S	Sb	13 59 55.7	-0.6
	baz=239						
NFF	**Wufeng Townshi**	**0.77**	**304**	P	Pb	13 59 46.0	0.0
	baz=304						
NFF				S	Sb	13 59 56.2	-0.3
	baz=304						
TIPB	**Shuangxi**	**0.77**	**1**	P	Pb	13 59 46.3	+0.2
	baz=355						
TIPB				S	Sb	13 59 56.3	-0.3
	baz=355						
HGSD	**Ruisui**	**0.79**	**207**	P	Pn	13 59 47.5	-0.3
	baz=201						
HGSD				*e*S	Sn	13 59 59.7	-0.1
	baz=201						
WHP	**Taichung City**	**0.79**	**276**	P	Pb	13 59 46.7	+0.2
	baz=278						
WHP				S	Sb	13 59 57.0	-0.4
	baz=278						
NHDH	**Xindian Distri**	**0.80**	**341**	P	Pn	13 59 47.4	-0.6
	baz=337						
NHDH				S	Sb	13 59 58.0	+0.4
	baz=337						
TWB1	**Santiao Chiao**	**0.82**	**11**	*i* P	Pb	13 59 46.7	-0.2
	baz=5.0						
TWB1				*i* S	Sb	13 59 58.3	+0.2
	baz=5.0						
EHY	**Hungye**	**0.82**	**213**	*i* P	Pg	13 59 46.6	+0.3
	baz=230						
EHY				*i* S	Sn	13 59 59.6	-1.1
	baz=230						
WCS	**Beigang Elemen**	**0.83**	**260**	P	Pb	13 59 47.2	0.0
	baz=255						
WCS				S	Sb	13 59 58.1	-0.4
	baz=255						
NJD	**Zhudong**	**0.85**	**309**	*e*P	Pn	13 59 48.6	0.0
	baz=309						
NJD				S	Sn	14 00 00.4	-0.8
	baz=309						
NSTT	**Nanjuang**	**0.85**	**300**	*i* P	Pb	13 59 47.8	+0.3
	baz=301						
NSTT				S	Sb	13 59 59.5	+0.4
	baz=301						
NWF	**Wu-fen Shan**	**0.87**	**358**	P	Pn	13 59 49.0	+0.1
	baz=344						
NWF				*i* S	Sb	13 59 59.9	+0.3
	baz=344						
WFSB	**Wu-fen Shan**	**0.87**	**358**	P	Pn	13 59 48.6	-0.3
	baz=344						
WFSB				S	Sb	13 59 59.4	-0.1
	baz=344						
SSLB	**Suanglung**	**0.89**	**242**	P	Pb	13 59 48.0	-0.1
	baz=257						
SSLB				S	Sg	13 59 59.1	+0.1
	baz=257						
SXI1	**Grass Mountain**	**0.89**	**4**	P	Pn	13 59 49.4	0.0
	baz=4.0						
SXI1				S	Sb	14 00 00.8	+0.5
	baz=4.0						
SMLT	**Sun Moon Lake**	**0.89**	**249**	*i* P	Pb	13 59 48.6	+0.4
	baz=253						
SMLT				S	Sb	14 00 00.1	-0.2
	baz=253						
TYC	**Yuchr**	**0.92**	**251**	P	Pb	13 59 48.9	+0.3
	baz=256						
TYC				S	Sb	14 00 00.7	-0.3
	baz=256						
YULB	**Yu-li**	**0.93**	**210**	P	Pg	13 59 48.1	-0.3
	baz=229						
YULB				S	Sn	14 00 03.1	-0.3
	baz=229						
NCUH	**Zhongli**	**0.95**	**323**	P	Pn	13 59 50.3	+0.2
	baz=321						
NCUH				S	Sn	14 00 04.9	+1.0
	baz=321						
SBCB	**Hsinchu**	**0.96**	**308**	P	Pn	13 59 50.8	+0.6
	baz=307						
SBCB				*e*S	Sn	14 00 04.4	+0.5
	baz=307						
TWQ1	**Liyutan**	**0.96**	**279**	P	Pn	13 59 50.4	+0.3
	baz=281						
TWQ1				*e*S	Sb	14 00 03.0	+0.9
	baz=281						
TWS1	**Kuangyinshan**	**0.96**	**338**	*i* P	Pn	13 59 50.7	+0.5
	baz=335						
TWS1				S	Sb	14 00 03.1	+0.8
	baz=335						
YM01	**YM01**	**0.97**	**347**	P	Pn	13 59 49.9	-0.4
	baz=342						
YM01				*e*S	Sb	14 00 03.3	+0.9
	baz=342						
TWF1	**Yuli**	**0.97**	**209**	*i* P	Pg	13 59 48.3	-0.7
	baz=230						
TWF1				*e*S	Sn	14 00 03.5	-0.8
	baz=230						
HSN	**Hsinchu**	**0.97**	**308**	P	Pn	13 59 51.0	+0.6
	baz=300						
HSN				S	Sn	14 00 05.1	+0.8
	baz=300						
NMLH	**Miaoli**	**0.99**	**290**	P	Pn	13 59 51.5	+0.9
	baz=291						
NMLH				*e*S	Sn	14 00 04.7	-0.1
	baz=291						
NTST	**Danshui**	**1.01**	**341**	*e*P	Pn	13 59 51.3	+0.4
	baz=337						
NTST				*e*S	Sn	14 00 05.0	-0.4
	baz=337						
ANP	**Anpu**	**1.02**	**345**	*i* P	Pn	13 59 51.2	+0.2
	baz=341						
ANP				*e*S	Sg	14 00 03.1	-0.2
	baz=341						
WJS	**Zhushan**	**1.06**	**249**	P	Pn	13 59 52.8	+1.2
	baz=248						
WJS				S	Sn	14 00 06.7	+0.2
	baz=248						
WDJ	**Dajia District**	**1.08**	**278**	P	Pn	13 59 53.2	+1.4
	baz=281						
WDJ				*e*S	Sn	14 00 07.0	0.0
	baz=281						
WNT	**Mingjian**	**1.08**	**253**	*i* P	Pn	13 59 53.1	+1.3
	baz=252						
WNT				*i* S	Sn	14 00 08.0	+1.0
	baz=252						
WCHH	**Zhanghua**	**1.15**	**264**	P	Pn	13 59 54.4	+1.6
	baz=268						
WCHH				S	Sn	14 00 11.8	+3.0
	baz=268						

*NOU **04** 13:59:48.1,37.°76S×175.°97E,h299km,MLv3.5/10,North Island, New Zealand*
*WEL **04** 13:59:58.9,38.°3S±14.°×17.°6E±2.°1,h216km±20km,M2.6/37, ML2.5/7,MLv2.6/37,Error ellipse: s-maj=0.0km s-min=0.0km az=106.5*

ISC 04 13:59:46.9±1.7,37.°67S±0.°08×175.°95E±0.°07,h300km, n104,σ0.°91/103,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIRZ	**Lichensteins R**	**0.48**	**134**	P	Pn	14 00 21.2	-4.2
TLZ	**Tolley Road**	**0.73**	**206**	P	**Pn**	**14 00 27.8**	**+1.7**
MKAZ	**Moumakai**	**0.84**	**312**	P	**Pn**	**14 00 27.8**	**+1.2**
MUGZ	**Murupara**	**1.03**	**141**	P	**Pn**	**14 00 27.2**	**-0.1**
URZ	**Urewera**	**1.09**	**123**	P	**Pn**	**14 00 26.6**	**-1.0**
URZ	**Urewera**	**1.09**	**123**	P	**Pn**	**14 00 26.9**	**-0.6**
RATZ	**Rangitukua**	**1.20**	**186**	P	**Pn**	**14 00 29.2**	**+1.0**
HIZ	**Hauiti**	**1.20**	**225**	P	**Pn**	**14 00 30.5**	**+2.3**
HIZ	**Hauiti**	**1.20**	**225**	P	**Pn**	**14 00 30.4**	**+2.2**
MRHZ	**Matea Rd**	**1.22**	**162**	P	**Pn**	**14 00 28.8**	**+0.5**
RTZ	**Ruatahuna**	**1.25**	**139**	P	**Pn**	**14 00 28.6**	**0.0**
RITZ	**Rihia Road**	**1.30**	**183**	P	**Pn**	**14 00 30.1**	**+1.3**
MTNZ	**Maungataniwha**	**1.37**	**149**	P	**Pn**	**14 00 29.6**	**+0.4**
PUGZ	**Raukumara Rang**	**1.40**	**103**	P	**Pn**	**14 00 27.9**	**-1.6**
MWZ	**Matawai**	**1.41**	**118**	P	**Pn**	**14 00 29.2**	**-0.3**
RAGZ	**Rawiri**	**1.42**	**126**	P	**Pn**	**14 00 29.7**	**+0.1**
NTVZ	**North Tongarir**	**1.44**	**188**	P	**Pn**	**14 00 31.2**	**+1.5**
TWVZ	**Taurewa**	**1.45**	**196**	P	**Pn**	**14 00 30.9**	**+1.2**
TMVZ	**Te Maari**	**1.45**	**187**	P	**Pn**	**14 00 31.0**	**+1.2**
HAZ	**Te Kaha**	**1.46**	**94**	P	**Pn**	**14 00 28.7**	**-1.0**
WTVZ	**West Tongariro**	**1.47**	**191**	P	**Pn**	**14 00 31.0**	**+1.2**
ETVZ	**East Tongariro**	**1.47**	**187**	P	**Pn**	**14 00 31.0**	**+1.1**
NNVZ	**North Ngauruho**	**1.48**	**190**	P	**Pn**	**14 00 31.3**	**+1.3**
NGZ	**Ngauruhoe**	**1.52**	**190**	P	**Pn**	**14 00 31.4**	**+1.1**
RAHZ	**Arahi**	**1.53**	**144**	P	**Pn**	**14 00 30.9**	**+0.7**
BKZ	**Black Stump Fm**	**1.55**	**164**	P	**Pn**	**14 00 30.8**	**+0.5**
BKZ	**Black Stump Fm**	**1.55**	**164**	P	**Pn**	**14 00 30.9**	**+0.5**
COVZ	**Chateau Observ**	**1.56**	**192**	P	**Pn**	**14 00 31.4**	**+0.9**
SNGZ	**Shannon Statio**	**1.56**	**136**	P	**Pn**	**14 00 30.7**	**+0.3**
NMHZ	**Naumai**	**1.57**	**155**	P	**Pn**	**14 00 32.0**	**+1.4**
FWVZ	**Far West T-bar**	**1.61**	**191**	P	**Pn**	**14 00 32.0**	**+1.0**
WNVZ	**Wahianoa**	**1.67**	**189**	P	**Pn**	**14 00 32.3**	**+1.0**
PKVZ	**Pokaka**	**1.68**	**196**	P	**Pn**	**14 00 29.6**	**-1.6**
TWGZ	**Tauwhareparae**	**1.69**	**108**	P	**Pn**	**14 00 31.5**	**+0.2**
PKGZ	**Pakihiroa**	**1.70**	**98**	P	**Pn**	**14 00 31.2**	**-0.3**
VRZ	**Vera Road**	**1.72**	**212**	P	**Pn**	**14 00 33.8**	**+2.3**
WHHZ	**Waihua**	**1.73**	**145**	P	**Pn**	**14 00 32.4**	**+0.9**
MOVZ	**Moawhango**	**1.74**	**185**	P	**Pn**	**14 00 32.3**	**+0.6**
RIGZ	**Rimuhau**	**1.76**	**126**	P	**Pn**	**14 00 32.0**	**+0.2**
KWHZ	**Kaweka Forest**	**1.79**	**168**	P	**Pn**	**14 00 32.9**	**+0.9**
ARHZ	**Aropaoanui**	**1.79**	**153**	P	**Pn**	**14 00 32.7**	**+0.7**
BHHZ	**Black Hill Sta**	**1.81**	**177**	P	**Pn**	**14 00 32.9**	**+0.7**
MCHZ	**McNeill Hill**	**1.86**	**162**	P	**Pn**	**14 00 33.4**	**+1.0**
PUZ	**Puketiti**	**1.87**	**103**	P	**Pn**	**14 00 32.6**	**0.0**
MXZ	**Matakaoa Point**	**1.88**	**87**	P	**Pn**	**14 00 34.8**	**+2.2**
MXZ	**Matakaoa Point**	**1.88**	**87**	P	**Pn**	**14 00 32.1**	**-0.5**
CNGZ	**Carnagh Statio**	**1.96**	**115**	P	**Pn**	**14 00 33.9**	**+0.7**
WMGZ	**Waiomatatini S**	**1.96**	**95**	P	**Pn**	**14 00 32.7**	**-0.6**
KRHZ	**Kereru**	**1.99**	**171**	P	**Pn**	**14 00 34.2**	**+0.7**
WCZ	**Waipu Caves**	**2.16**	**323**	P	**Pn**	**14 00 32.6**	**-2.3**
WAZ	**Wanganui**	**2.21**	**200**	P	**Pn**	**14 00 36.6**	**+1.3**
KAHZ	**Kahuranaki**	**2.24**	**161**	P	**Pn**	**14 00 36.3**	**+0.7**
PNHZ	**Pukenui**	**2.25**	**175**	P	**Pn**	**14 00 36.1**	**+0.5**
TSZ	**Takapari Road**	**2.38**	**180**	P	**Pn**	**14 00 37.2**	**+0.4**
WPHZ	**Waipukurau**	**2.42**	**171**	P	**Pn**	**14 00 37.6**	**+0.5**
PXZ	**Pawanui**	**2.46**	**163**	P	**Pn**	**14 00 37.8**	**+0.4**
OHWZ	**Ohakea**	**2.58**	**191**	P	**Pn**	**14 00 39.7**	**+1.3**
DVHZ	**Dannevirke**	**2.63**	**176**	P	**Pn**	**14 00 39.2**	**+0.2**
PRHZ	**Porangahau**	**2.64**	**168**	P	**Pn**	**14 00 39.6**	**+0.5**
POWZ	**Post Office Ro**	**2.72**	**183**	P	**Pn**	**14 00 40.1**	**+0.3**
ANWZ	**Angora Road**	**2.81**	**172**	P	**Pn**	**14 00 41.3**	**+0.6**
PRWZ	**Pori Road**	**2.88**	**180**	P	**Pn**	**14 00 41.8**	**+0.5**
MRZ	**Mangatainoka R**	**3.00**	**185**	P	**P

TIWZ	Tintock	3.10 181	P	Pn	14 00 43.4	-0.1
OGWZ	Otaki Gorge	3.20 191	P	Pn	14 00 44.8	+0.3
HOWZ	Holdsworth Sta	3.24 186	P	Pn	14 00 43.1	-1.8
KIW	Kapiti Island	3.28 194	P	Pn	14 00 45.5	+0.1
TMWZ	Te Maipa	3.43 181	P	Pn	14 00 46.9	0.0
CAW	Cannon Point	3.50 191	P	Pn	14 00 47.5	0.0
DUWZ	D'Urville Isla	3.50 206	P	Pn	14 00 47.9	+0.3
MTW	Mount Morrison	3.50 186	P	Pn	14 00 47.3	-0.3
WEL	Wellington	3.72 194	P	Pn	14 00 50.3	+0.4
TRWZ	Traveller	3.73 183	P	Pn	14 00 50.0	0.0
SNZO	South Karori	3.76 194	P	Pn	14 00 50.8	+0.5
TCW	Tory Channel	3.76 200	P	Pn	14 00 50.7	+0.3
BHW	Baring Head	3.82 192	P	Pn	14 00 51.2	+0.3
PLWZ	Palliser	3.93 188	P	Pn	14 00 51.9	-0.3
NNZ	Nelson	4.06 209	P	Pn	14 00 53.4	-0.2
TUWZ	Tuamarina	4.06 202	P	Pn	14 00 53.7	+0.1
TKNZ	Takaka Hill	4.08 214	P	Pn	14 00 53.5	-0.3
QRZ	Quartz Range	4.12 219	P	Pn	14 00 54.0	-0.3
QRZ	Quartz Range	4.12 219	P	Pn	14 00 54.0	-0.3
BSWZ	Blackbirch Sta	4.34 201	P	Pn	14 00 57.1	+0.4
MRNZ	Matariki Terra	4.46 213	P	Pn	14 00 57.3	-0.9
THZ	Tophouse	4.71 209	P	Pn	14 01 00.9	0.0
KHZ	Kahutara	5.08 201	P	Pn	14 01 05.2	0.0
KHZ	Kahutara	5.08 201	P	Pn	14 01 05.2	0.0
DSZ	Denniston Nort	5.17 217	P	Pn	14 01 05.7	-0.6
GVZ	Greta Valley S	5.74 202	P	Pn	14 01 12.4	-0.5
LTZ	Lake Taylor	5.83 208	P	Pn	14 01 13.8	-0.2
INZ	Inchbonnie	6.11 213	P	Pn	14 01 16.8	-0.5
OXZ	Oxford	6.38 207	P	Pn	14 01 19.6	-1.0
OKCZ	Okains Bay	6.43 199	P	Pn	14 01 21.0	-0.2
MQZ	McQueen's Vall	6.52 202	P	Pn	14 01 21.0	-1.3
AKCZ	Akaroa Harbour	6.61 199	P	Pn	14 01 23.3	-0.1
RACZ	Rakaia	6.70 204	P	Pn	14 01 23.8	-0.6
WACZ	Wakanui South	6.99 205	P	Pn	14 01 27.3	-0.7
ARCZ	Arundel	7.23 208	P	Pn	14 01 30.2	-0.8
TMZ	Timaru	7.67 208	P	Pn	14 01 35.8	-0.4
ODZ	Otahua Downs	8.37 207	P	Pn	14 01 45.5	+0.7
ODZ	Otahua Downs	8.37 207	P	Pn	14 01 45.2	+0.4

*JMA **04** 13:59:55.5±0.1,24°.2N±0°.3×121°.8E±0°.5,h0km, TAIWAN REGION*

TAP 04 13:59:55.3,24°.21N×121°.78E,h9km,ML4.2,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=347	**0.10**	**343**	P	Pg	13 59 58.2	+0.3
EHP	baz=347			S	Sg	14 00 00.3	+0.7
EAHA	**Aohua** baz=345	**0.12**	**345**	P	Pg	13 59 58.4	+0.3
EAHA	baz=345			S	Sg	14 00 00.9	+0.8
ETL	**Fush Village** baz=250	**0.15**	**250**	P	Pg	13 59 58.8	+0.3
ETL	baz=250			S	Sg	14 00 01.4	+0.7
NACB	**Ninganchiao** baz=258	**0.17**	**258**	P	Pg	13 59 59.0	+0.1
NACB	baz=258			S	Sg	14 00 01.9	+0.6
TWD	**Chiawan** baz=238	**0.21**	**232**	*i* P	Pg	13 59 59.7	+0.1
TWD	baz=238			*i* S	Sg	14 00 03.1	+0.7
ENA	**Nanau** baz=354	**0.22**	**352**	⇓*i* P	Pg	13 59 60.0	+0.2
ENA	baz=354			*i* S	Sg	14 00 03.6	+0.7
EWUT	**Wuta** baz=1.0	**0.23**	**1**	P	Pg	14 00 00.3	+0.2
EWUT	baz=1.0			S	Sg	14 00 04.1	+0.8
ETLH	**Xiulin Townshi** baz=271	**0.27**	**269**	P	Pg	14 00 01.0	+0.3
ETLH	baz=271			S	Sg	14 00 05.2	+0.8
HWA	**Hwalien** baz=226	**0.28**	**214**	*i* P	Pb	14 00 02.0	-0.6
HWA	baz=226			*e*S	Sb	14 00 07.4	0.0
ETM	**Tongmen** baz=228	**0.35**	**227**	P	Pg	14 00 02.6	+0.3
ETM	baz=228			*e*S	Sb	14 00 08.5	-1.1
ESAO	**Su ao** baz=6.0	**0.37**	**10**	P	Pg	14 00 02.8	+0.1
ESAO	baz=6.0			S	Sg	14 00 08.1	+0.6
LXIB	**Xiulin Townshi** baz=242	**0.38**	**240**	P	Pg	14 00 02.6	-0.2
LXIB	baz=242			S	Sg	14 00 08.5	+0.6
LATG	**Datong** baz=326	**0.40**	**325**	P	Pg	14 00 03.5	+0.4
LATG	baz=326			S	Sg	14 00 08.9	+0.5
TWC	**Suao** baz=7.0	**0.40**	**10**	*i* P	Pg	14 00 03.5	+0.2
TWC	baz=7.0			S	Sg	14 00 09.4	+0.8
NNSB	**Datong** baz=302	**0.42**	**301**	P	Pg	14 00 04.0	+0.4
NNSB	baz=302			S	Sg	14 00 09.9	+0.8
NNSH	**Datong** baz=302	**0.42**	**301**	P	Pg	14 00 04.0	+0.4
NNSH	baz=302			S	Sg	14 00 10.0	+0.9
NDS	**Dongshan** baz=353	**0.42**	**353**	P	Pg	14 00 04.0	+0.3
NDS	baz=353			S	Sg	14 00 09.7	+0.4
NNS	**Nan Shan** baz=303	**0.43**	**302**	*i* P	Pg	14 00 04.2	+0.4
NNS	baz=303			*i* S	Sg	14 00 10.1	+0.6
NDT	**Datong Townshi** baz=329	**0.46**	**329**	P	Pg	14 00 04.8	+0.6
NDT	baz=329			S	Sb	14 00 12.0	-0.6
SHUL	**Shoufeng** baz=215	**0.46**	**205**	P	Pb	14 00 05.8	+0.1
SHUL	baz=215			*e*S	Sb	14 00 13.7	+1.1
ENTT	**Nioudou** baz=337	**0.47**	**336**	*i* P	Pg	14 00 04.9	+0.4
ENTT	baz=337			*i* S	Sg	14 00 10.8	+0.2
WHF	**Hehuan Shan** baz=263	**0.47**	**262**	*i* P	Pg	14 00 05.0	+0.4
WHF	baz=263			*i* S	Sg	14 00 11.2	+0.4
FUSS	**Fushou** baz=276	**0.49**	**275**	P	Pg	14 00 05.4	+0.5
FUSS	baz=276			S	Sg	14 00 12.3	+1.0
ESL	**Shilin** baz=227	**0.50**	**218**	*i* P	Pg	14 00 05.4	+0.3
ESL	baz=227			*e*S	Sb	14 00 13.9	0.0
TWE	**Neicheng** baz=351	**0.52**	**349**	P	Pg	14 00 05.8	+0.4
TWE	baz=351			S	Sg	14 00 13.0	+0.8
TEGC	**Jichi Village** baz=204	**0.54**	**203**	*e*P	Pb	14 00 07.9	+0.9
TEGC	baz=204			S	Sn	14 00 16.9	-1.7
TWT	**Tachien** baz=275	**0.55**	**275**	*i* P	Pg	14 00 06.6	+0.6
TWT	baz=275			S	Sb	14 00 15.3	-0.1
ILA	**Ilan** baz=351	**0.55**	**357**	*e*P	Pb	14 00 06.8	-0.5
ILA	baz=351			S	Sb	14 00 15.0	-0.3
TDCB	**Techi** baz=276	**0.56**	**274**	P	Pg	14 00 06.8	+0.5
TDCB	baz=276			S	Sg	14 00 14.3	+0.6
CHGB	**Renai** baz=248	**0.57**	**255**	P	Pg	14 00 07.0	+0.6
CHGB	baz=248			S	Sb	14 00 15.1	-0.8
FUSB	**Fushanzhiwuyua** baz=343	**0.57**	**343**	P	Pb	14 00 07.1	-0.5
FUSB	baz=343			S	Sg	14 00 14.9	+0.9
YHNB	**Yeheng** baz=322	**0.58**	**322**	P	Pb	14 00 07.3	-0.5
YHNB	baz=322			S	Sb	14 00 15.8	-0.5
NSK	**Sanguang** baz=322	**0.60**	**321**	*i* P	Pg	14 00 07.4	+0.4
NSK	baz=322			S	Sb	14 00 16.2	-0.6
OWD	**Renai** baz=246	**0.60**	**245**	P	Pg	14 00 07.6	+0.5
OWD	baz=246			S	Sb	14 00 16.1	-0.7
WARBT	**Fenglin Townsh** baz=224	**0.60**	**216**	P	Pb	14 00 08.1	0.0
WARBT	baz=224			S	Sb	14 00 17.1	+0.3
EGFH	**Guangfu** baz=219	**0.63**	**211**	P	Pb	14 00 08.2	-0.2
EGFH	baz=219			S	Sb	14 00 18.3	+0.9
WUSB	**Renai** baz=244	**0.64**	**250**	P	Pg	14 00 08.1	+0.3
WUSB	baz=244			S	Sb	14 00 17.6	-0.3
NFF	**Wufeng Townshi** baz=306	**0.73**	**305**	P	Pb	14 00 10.2	-0.1
NFF	baz=306			S	Sg	14 00 19.7	+0.7
VWDT	**VWDT** baz=233	**0.74**	**232**	*e*P	Pb	14 00 10.7	+0.4
VWDT	baz=233			*e*S	Sb	14 00 20.9	+0.4
TIPB	**Shuangxi** baz=3.0	**0.76**	**3**	P	Pb	14 00 10.6	-0.2
TIPB	baz=3.0			S	Sg	14 00 19.9	0.0
WHP	**Taichung City** baz=276	**0.76**	**275**	P	Pb	14 00 10.9	+0.1
WHP	baz=276			S	Sb	14 00 21.7	+0.4
WPL	**Puli Township** baz=247	**0.77**	**255**	P	Pb	14 00 10.8	-0.2
WPL	baz=247			S	Sg	14 00 20.9	+0.5
NHDH	**Xindian Distri** baz=343	**0.78**	**343**	P	Pb	14 00 11.2	+0.1
NHDH	baz=343			*e*S	Sb	14 00 21.8	-0.2
WCS	**Beigang Elemen** baz=251	**0.80**	**259**	P	Pb	14 00 11.2	-0.3
WCS	baz=251			S	Sb	14 00 22.4	-0.1
EHY	**Hungye** baz=223	**0.81**	**211**	*e*P	Pb	14 00 11.6	-0.1
EHY	baz=223			*e*S	Sb	14 00 23.9	+1.1
NJD	**Zhudong** baz=311	**0.82**	**310**	*e*P	Pn	14 00 12.5	-0.6
NJD	baz=311			*e*S	Sb	14 00 24.0	+1.1
TWB1	**Santiao Chiao** baz=14	**0.82**	**14**	P	Pb	14 00 12.1	+0.3
TWB1	baz=14			S	Sb	14 00 22.9	0.0
NSTT	**Nanjuang** baz=302	**0.82**	**301**	P	Pb	14 00 12.3	+0.5
NSTT	baz=302			*i* S	Sb	14 00 23.4	+0.3
BACT	**New Taipei Cit** baz=339	**0.84**	**339**	*e*P	Pn	14 00 12.9	-0.5
BACT	baz=339			*e*S	Sb	14 00 24.2	+0.6
NWF	**Wu-fen Shan** baz=351	**0.86**	**0**	*i* P	Pb	14 00 12.8	+0.3
NWF	baz=351			S	Sg	14 00 23.4	+0.3
WFSB	**Wu-fen Shan** baz=351	**0.86**	**0**	P	Pb	14 00 12.8	+0.3
WFSB	baz=351			S	Sb	14 00 24.0	0.0
SSLB	**Suanglung** baz=253	**0.86**	**241**	*e*P	Pb	14 00 12.3	-0.2
SSLB	baz=253			S	Sb	14 00 24.1	0.0
SMLT	**Sun Moon Lake** baz=249	**0.86**	**248**	P	Pb	14 00 13.0	+0.4
SMLT	baz=249			*i* S	Sb	14 00 23.9	-0.4
SXI1	**Grass Mountain** baz=13	**0.89**	**6**	*e*P	Pn	14 00 13.6	-0.5
SXI1	baz=13			*e*S	Sb	14 00 25.9	+0.9
HSN1	**Hsinchu** baz=310	**0.89**	**310**	*e*P	Pb	14 00 13.3	+0.3
HSN1	baz=310			*e*S	Sb	14 00 25.4	+0.3
TYC	**Yuchr** baz=242	**0.89**	**250**	*e*P	Pb	14 00 13.0	-0.1
TYC	baz=242			*e*S	Sg	14 00 24.5	+0.3
NTY	**Taoyuan** baz=332	**0.90**	**331**	*e*P	Pb	14 00 13.4	+0.2
NTY	baz=332			S	Sn	14 00 27.3	0.0
SBCB	**Hsinchu** baz=310	**0.92**	**309**	*e*P	Pn	14 00 14.4	-0.2
SBCB	baz=310			*e*S	Sn	14 00 27.1	-0.9
YULB	**Yu-li** baz=221	**0.92**	**208**	*e*P	Pn	14 00 14.2	-0.3
YULB	baz=221			*e*S	Sn	14 00 27.5	-0.5
TWQ1	**Liyutan** baz=280	**0.93**	**279**	*e*P	Pn	14 00 14.1	-0.5
TWQ1	baz=280			*e*S	Sb	14 00 26.2	+0.2
NCUH	**Zhongli** baz=325	**0.93**	**325**	P	Pb	14 00 13.9	+0.2
NCUH	baz=325			*e*S	Sb	14 00 26.7	+0.6
NCU	**National Centr** baz=325	**0.93**	**325**	P	Pn	14 00 14.6	0.0
NCU	baz=325			S	Sn	14 00 27.1	-1.0
TNOU	**National Taiwa** baz=360	**0.94**	**360**	P	Pb	14 00 14.0	+0.2
TNOU	baz=360			S	Sg	14 00 25.6	0.0
HSN	**Hsinchu** baz=301	**0.94**	**309**	*e*P	Pn	14 00 15.0	+0.2
HSN	baz=301			*e*S	Sn	14 00 27.8	-0.6
TWS1	**Kuangyinshan** baz=340	**0.94**	**340**	*e*P	Pb	14 00 14.2	+0.3
TWS1	baz=340			*e*S	Sb	14 00 27.1	+0.6
YM01	**YM01** baz=349	**0.95**	**349**	P	Pn	14 00 14.6	-0.4
YM01	baz=349			*e*S	Sb	14 00 26.8	0.0
NMLH	**Miaoli** baz=291	**0.95**	**290**	*e*P	Pn	14 00 15.5	+0.5
NMLH	baz=291			*e*S	Sn	14 00 28.7	0.0
TWF1	**Yuli** baz=219	**0.96**	**207**	*e*P	Pb	14 00 14.1	-0.1
TWF1	baz=219			*e*S	Sb	14 00 27.4	+0.4
NTST	**Danshui** baz=343	**0.99**	**343**	*e*P	Pn	14 00 15.9	+0.4
NTST	baz=343			*e*S	Sn	14 00 29.3	-0.4
ANP	**Anpu** baz=347	**1.00**	**347**	*e*P	Pb	14 00 15.3	+0.3
ANP	baz=347			*e*S	Sn	14 00 29.2	-0.7
TCU	**Taichung** baz=268	**1.01**	**267**	*e*P	Pn	14 00 15.8	+0.2
TCU	baz=268			*e*S	Sb	14 00 29.1	+0.8
WJS	**Zhushan** baz=243	**1.03**	**248**	*e*P	Pn	14 00 16.0	0.0
WJS	baz=243			*e*S	Sn	14 00 30.5	-0.2
WDJ	**Dajia District** baz=279	**1.04**	**278**	P	Pn	14 00 16.7	+0.5
WDJ	baz=279			S	Sb	14 00 30.1	+0.7
WNT	**Mingjian** baz=248	**1.05**	**252**	*e*P	Pn	14 00 17.2	+1.0
WNT	baz=248			S	Sn	14 00 31.6	+0.5
TWY	**Chenhua** baz=352	**1.07**	**351**	*e*P	Pn	14 00 17.4	+0.8
TWY	baz=352			*e*S	Sb	14 00 30.6	+0.4

GUC 04 14:00:05.6±0.6,24°.13S×67°.16W,h226km±12km,ML3.6, 2C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.21**	**313**	*e*P	Pn	14 00 48.4	-0.3
LVC				*e*S	S	14 01 21.0	-1.1
LVC				IAML		14 01 23.8	
	comp=Z,146nm,0.2s						
PB15	**IPOC Station P**	**2.31**	**293**⇑	*i* P	Pn	14 00 49.8	+0.3
PB15				*e*S	S	14 01 22.6	-1.1
GO02	**Mina Guanaco**	**2.44**	**245**	*e*P	Pn	14 00 51.0	+0.1
GO02				*e*S	S	14 01 25.8	-0.3
GO02				IAML		14 01 26.8	
	comp=E,138nm,0.2s						
PB06	**IPOC Station P**	**2.63**	**302**	*e*P	Pn	14 00 53.1	+0.3
PB06				*e*S	S	14 01 28.7	-0.9
PB06				IAML		14 01 30.3	
	comp=N,91nm,0.1s						
PB14	**IPOC Station P**	**3.00**	**260**⇑	*e*P	Pn	14 00 57.7	+0.7
PB09	**IPOC Station P**	**3.02**	**320**	*e*P	Pn	14 00 57.6	+0.5
PB09				*e*S	S	14 01 36.7	-0.7
PB10	**IPOC Station P**	**3.17**	**281**	*e*P	Pn	14 00 59.3	+0.6
PB10				*e*S	S	14 01 40.2	+0.1
AC02	**Maricunga**	**3.23**	**213**	*e*P	Pn	14 00 60.0	+0.2
PB04	**IPOC Station P**	**3.28**	**302**	*e*P	Pn	14 01 00.5	+0.3
PB07	**IPOC Station P**	**3.47**	**313**	*e*P	Pn	14 01 02.2	-0.2
PB07				*e*S	S	14 01 44.0	-2.8
PB01	**IPOC Station P**	**3.75**	**325**	*e*P	Pn	14 01 05.1	-0.5
PB02	**IPOC Station P**	**3.77**	**317**	*e*P	Pn	14 01 05.5	-0.3
HMBC	**Humberstone**	**4.59**	**326**	*e*P	Pn	14 01 06.4	-9.4

*TAP **04** 14:00:58.4,24°.26N×121°.81E,h11km,ML4.3,C*
*JMA **04** 14:00:58.4±0.1,24°.2N±0°.4×121°.8E±0°.5,h0km, TAIWAN REGION*

ISC 04 14:00:58.6±0.9,24°.24N±0°.01×121°.82E±0°.02,h8km±6km, n135,ₙ0°59/254,8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=313	**0.10**	**314**	⇓P	**Pg**	**14 01 01.0**	**-0.1**
EHP	baz=313			S	**Sg**	**14 01 03.1**	**+0.3**
EAHA	**Aohua** baz=319	**0.12**	**321**	⇓P	**Pg**	**14 01 01.2**	**-0.1**
EAHA	baz=319			S	**Sg**	**14 01 03.3**	**+0.1**
ETL	**Fush Village** baz=240	**0.20**	**246**	P	**Pg**	**14 01 02.5**	**-0.2**
ETL	baz=240			S	**Sg**	**14 01 05.8**	**+0.4**
ENA	**Nanau** baz=349	**0.20**	**339**	⇓*i* P	**Pg**	**14 01 02.5**	**-0.2**
ENA	baz=349			S	**Sg**	**14 01 05.5**	**0.0**
EWUT	**Wuta** baz=352	**0.21**	**350**	⇓P	**Pg**	**14 01 02.8**	**-0.1**
EWUT	baz=352			S	**Sg**	**14 01 05.6**	**-0.2**
NACB	**Ninganchiao** baz=242	**0.22**	**252**	P	**Pg**	**14 01 02.7**	**-0.3**
NACB	baz=242			*i* S	**Sg**	**14 01 06.2**	**+0.2**
TWD	**Chiawan** baz=231	**0.26**	**232**	*i* P	**Pg**	**14 01 03.5**	**-0.3**
TWD	baz=231			*i* S	**Sg**	**14 01 07.7**	**+0.4**
ETLH	**Xiulin Townshi** baz=261	**0.31**	**264**	P	**Pg**	**14 01 04.7**	**-0.1**
ETLH	baz=261			S	**Sg**	**14 01 08.9**	**0.0**
HWA	**Hwalien** baz=224	**0.33**	**217**	*i* P	**Pb**	**14 01 06.0**	**-0.7**
HWA	baz=224			S	**Sb**	**14 01 11.9**	**-0.2**
ESAO	**Su ao** baz=1.0	**0.34**	**4**	⇓P	**Pg**	**14 01 04.9**	**-0.3**
ESAO	baz=1.0			*i* S	**Sg**	**14 01 09.6**	**-0.1**
TWC	**Suao** baz=7.0	**0.37**	**4**	⇓*i* P	**Pg**	**14 01 05.6**	**-0.3**
TWC	baz=7.0			S	**Sg**	**14 01 11.7**	**+0.9**
LATG	**Datong** baz=317	**0.40**	**318**	*e*P	**Pg**	**14 01 06.3**	**-0.1**
LATG	baz=317			*e*S	**Sg**	**14 01 12.1**	**+0.4**
NDS	**Dongshan** baz=347	**0.40**	**346**	P	**Pg**	**14 01 06.4**	**-0.1**
NDS	baz=347			S	**Sg**	**14 01 11.4**	**-0.4**
ETM	**Tongmen** baz=225	**0.41**	**228**	P	**Pg**	**14 01 06.2**	**-0.4**
ETM	baz=225			S	**Sb**	**14 01 12.9**	**-1.4**
EOS2	**EOS2** baz=60	**0.42**	**65**	*e*P	**Pg**	**14 01 07.0**	**+0.2**
LXIB	**Xiulin Townshi** baz=237	**0.43**	**240**	P	**Pg**	**14 01 06.5**	**-0.5**
LXIB	baz=237			S	**Sg**	**14 01 13.5**	**+0.8**
NNSB	**Datong** baz=294	**0.44**	**295**	P	**Pg**	**14 01 07.1**	**-0.2**
NNSB	baz=294			S	**Sg**	**14 01 12.9**	**-0.1**
NNSH	**Datong** baz=294	**0.44**	**295**	P	**Pg**	**14 01 07.0**	**-0.2**
NNSH	baz=294			S	**Sg**	**14 01 12.9**	**-0.2**
NNS	**Nan Shan** baz=295	**0.45**	**296**	*i* P	**Pg**	**14 01 07.2**	**-0.3**
NNS	baz=295			*i* S	**Sg**	**14 01 13.2**	**-0.3**
NDT	**Datong Townshi** baz=322	**0.46**	**322**	⇓P	**Pg**	**14 01 07.5**	**-0.1**
NDT	baz=322			S	**Sg**	**14 01 13.9**	**+0.3**
ENTT	**Nioudou** baz=330	**0.46**	**330**	*i* P	**Pg**	**14 01 07.5**	**-0.1**
ENTT	baz=330			*i* S	**Sg**	**14 01 13.8**	**+0.1**
TWE	**Neicheng** baz=346	**0.50**	**344**	⇓*i* P	**Pg**	**14 01 08.2**	**-0.1**
TWE	baz=346			*i* S	**Sg**	**14 01 14.7**	**-0.2**
SHUL	**Shoufeng** baz=206	**0.51**	**208**	P	**Pb**	**14 01 09.6**	**-0.2**
SHUL	baz=206			*e*S	**Sb**	**14 01 17.3**	**0.0**
WHF	**Hehuan Shan** baz=257	**0.52**	**260**	*i* P	**Pg**	**14 01 08.7**	**0.0**
WHF	baz=257			*i* S	**Sg**	**14 01 15.6**	**0.0**
FUSS	**Fushou** baz=269	**0.53**	**271**	P	**Pg**	**14 01 08.8**	**0.0**
FUSS	baz=269			S	**Sg**	**14 01 15.9**	**+0.1**
ILA	**Ilan** baz=349	**0.53**	**353**	P	**Pg**	**14 01 09.0**	**+0.1**
ILA	baz=349			*e*S	**Sb**	**14 01 16.9**	**-1.0**
ESL	**Shilin** baz=225	**0.55**	**220**	P	**Pg**	**14 01 09.1**	**-0.2**
ESL	baz=225			*e*S	**Sb**	**14 01 17.6**	**-0.9**
FUSB	**Fushanzhiwuyua** baz=328	**0.56**	**338**	*e*P	**Pg**	**14 01 09.6**	**+0.1**
FUSB	baz=328			*e*S	**Sg**	**14 01 17.3**	**+0.5**
TEGC	**Jichi Village** baz=204	**0.59**	**206**	P	**Pb**	**14 01 10.7**	**-0.4**

TEGC				*e*S	**Sb**	14 01 19.1	-0.5		
	baz=204								
TWT	**Tachien**	**0.59**	**271**	*i* P	**Pb**	14 01 10.5	-0.8		
	baz=269								
TWT				*i* S	**Sb**	14 01 18.3	-1.5		
	baz=269								
YHNB	**Yeheng**	**0.59**	**317**	P	**Pg**	14 01 10.1	0.0		
	baz=316								
YHNB				*e*S	**Sb**	14 01 18.5	-1.3		
	baz=316								
TDCB	**Techi**	**0.60**	**271**	P	**Pg**	14 01 10.4	+0.1		
	baz=270								
TDCB				S	**Sg**	14 01 18.3	0.0		
	baz=270								
NSK	**Sanguang**	**0.60**	**316**	*i* P	**Pg**	14 01 10.2	-0.1		
	baz=316								
NSK				S	**Sg**	14 01 18.1	-0.2		
	baz=316								
CHGB	**Renai**	**0.62**	**253**	P	**Pg**	14 01 10.6	0.0		
	baz=244								
CHGB				S	**Sb**	14 01 19.6	-1.1		
	baz=244								
OWD	**Renai**	**0.65**	**244**	P	**Pb**	14 01 11.6	-0.7		
	baz=243								
OWD				S	**Sb**	14 01 21.0	-0.6		
	baz=243								
WARBT	**Fenglin Townsh**	**0.65**	**217**	P	**Pg**	14 01 11.3	0.0		
	baz=223								
WARBT				S	**Sb**	14 01 22.1	+0.6		
	baz=223								
EGFH	**Guangfu**	**0.67**	**212**	P	**Pg**	14 01 11.8	+0.2		
	baz=226								
EGFH				S	**Sb**	14 01 23.5	+1.5		
	baz=226								
WUSB	**Renai**	**0.69**	**249**	P	**Pb**	14 01 12.2	-0.7		
	baz=241								
WUSB				S	**Sb**	14 01 21.8	-0.8		
	baz=241								
TIPB	**Shuangxi**	**0.73**	**0**	P	**Pg**	14 01 12.4	-0.3		
	baz=1.0								
TIPB				S	**Sg**	14 01 22.6	+0.3		
	baz=1.0								
NFF	**Wufeng Townshi**	**0.75**	**302**	P	**Pb**	14 01 13.1	-0.8		
	baz=301								
NFF				S	**Sb**	14 01 23.7	-0.7		
	baz=301								
NHDH	**Xindian Distri**	**0.77**	**340**	P	**Pg**	14 01 13.3	-0.1		
	baz=331								
TWB1	**Santiao Chiao**	**0.78**	**11**	*i* P	**Pg**	14 01 13.1	-0.5		
	baz=13								
TWB1				*e*S	**Sg**	14 01 24.1	+0.2		
	baz=13								
VWDT	**VWDT**	**0.79**	**232**	P	**Pb**	14 01 14.5	-0.1		
	baz=231								
VWDT				S	**Sb**	14 01 25.5	+0.2		
	baz=231								
TATO	**Taipei**	**0.79**	**338**	P	**Pg**	14 01 13.8	-0.1		
	baz=338								
TATO				*e*S	**Sb**	14 01 24.6	-0.9		
	baz=338								
WHP	**Taichung City**	**0.80**	**273**	P	**Pb**	14 01 14.4	-0.4		
	baz=272								
WHP				S	**Sb**	14 01 24.9	-0.9		
	baz=272								
WPL	**Puli Township**	**0.82**	**254**	P	**Pb**	14 01 14.6	-0.5		
	baz=253								
WPL				S	**Sb**	14 01 26.2	-0.1		
	baz=253								
HGSD	**Ruisui**	**0.83**	**206**	P	**Pb**	14 01 14.9	-0.3		
	baz=194								
HGSD				*e*S	**Sb**	14 01 27.3	+0.8		
	baz=194								
NHY	**Taipei**	**0.83**	**344**	P	**Pb**	14 01 14.9	-0.4		
	baz=344								
NWF	**Wu-fen Shan**	**0.83**	**358**	*i* P	**Pb**	14 01 14.7	-0.6		
	baz=350								
NWF				*e*S	**Sb**	14 01 25.9	-0.7		
	baz=350								
WFSB	**Wu-fen Shan**	**0.83**	**358**	P	**Pg**	14 01 14.5	-0.1		
	baz=350								
WFSB				*e*S	**Sb**	14 01 26.3	-0.2		
	baz=350								
BACT	**New Taipei Cit**	**0.83**	**336**	*e*P	**Pb**	14 01 15.6	+0.3		
	baz=335								
BACT				*e*S	**Sb**	14 01 26.3	-0.2		
	baz=335								
NJD	**Zhudong**	**0.83**	**307**	P	**Pb**	14 01 15.6	+0.3		
	baz=314								
NJD				*e*S	**Sb**	14 01 27.3	+0.7		
	baz=314								
LIOB	**Emei**	**0.84**	**299**	P	**Pb**	14 01 15.2	-0.2		
	baz=298								
LIOB				S	**Sb**	14 01 27.1	+0.2		
	baz=298								
DPDB	**Guoxing**	**0.84**	**256**	P	**Pb**	14 01 15.0	-0.5		
	baz=255								
DPDB				S	**Sb**	14 01 28.0	+1.0		
	baz=255								
NSTT	**Nanjuang**	**0.84**	**298**	*i* P	**Pb**	14 01 14.9	-0.5		
	baz=297								
NSTT				S	**Sb**	14 01 27.3	+0.4		
	baz=297								
TAP	**Taipei**	**0.85**	**340**	P	**Pb**	14 01 15.1	-0.4		
	baz=341								
TAP				*e*S	**Sb**	14 01 26.8	-0.2		
	baz=341								
WCS	**Beigang Elemen**	**0.85**	**258**	P	**Pb**	14 01 15.3	-0.3		
	baz=257								
WCS				S	**Sb**	14 01 26.7	-0.4		
	baz=257								
SXI1	**Grass Mountain**	**0.85**	**3**	P	**Pg**	14 01 14.8	-0.3		
	baz=9.0								
SXI1				*e*S	**Sb**	14 01 27.8	+0.5		
	baz=9.0								
EHY	**Hungye**	**0.86**	**212**	*i* P	**Pg**	14 01 15.1	-0.1		
	baz=221								
EHY				*e*S	**Sb**	14 01 28.1	+0.7		
	baz=221								
NTY	**Taoyuan**	**0.89**	**328**	P	**Pn**	14 01 16.8	-0.7		
	baz=335								
NTY				*e*S	**Sb**	14 01 28.5	+0.1		
	baz=335								
HSN1	**Hsinchu**	**0.91**	**306**	P	**Pb**	14 01 16.9	+0.3		
	baz=296								
HSN1				S	**Sn**	14 01 29.6	-1.2		
	baz=296								
TNOU	**National Taiwa**	**0.91**	**357**	P	**Pb**	14 01 16.1	-0.5		
	baz=351								
TNOU				*e*S	**Sb**	14 01 28.6	-0.2		
	baz=351								
SSLB	**Suanglung**	**0.91**	**241**	P	**Pg**	14 01 15.5	-0.6		
	baz=248								
SSLB				S	**Sg**	14 01 27.8	-0.2		
	baz=248								
SMLT	**Sun Moon Lake**	**0.91**	**247**	*i* P	**Pb**	14 01 16.2	-0.5		
	baz=237								
SMLT				*i* S	**Sb**	14 01 28.8	-0.3		
	baz=237								
NCUH	**Zhongli**	**0.93**	**322**	P	**Pn**	14 01 17.4	-0.5		
	baz=321								
NCUH				*e*S	**Sb**	14 01 29.6	+0.2		
	baz=321								
YM01	**YM01**	**0.93**	**346**	P	**Pb**	14 01 16.5	-0.5		
	baz=330								
TWS1	**Kuangyinshan**	**0.93**	**337**	*i* P	**Pb**	14 01 17.1	+0.1		
	baz=337								
TWS1				*e*S	**Sb**	14 01 29.7	+0.2		
	baz=337								
SBCB	**Hsinchu**	**0.94**	**306**	P	**Pn**	14 01 17.6	-0.5		
	baz=305								
SBCB				*e*S	**Sn**	14 01 31.4	-0.3		
	baz=305								
TYC	**Yuchr**	**0.94**	**249**	*i* P	**Pb**	14 01 17.1	-0.1		
	baz=240								
TYC				S	**Sb**	14 01 29.9	+0.2		
	baz=240								
HSN	**Hsinchu**	**0.96**	**306**	*i* P	**Pb**	14 01 17.6	+0.2		
	baz=298								
HSN				S	**Sb**	14 01 30.4	+0.2		
	baz=298								
TWQ1	**Liyutan**	**0.96**	**277**	*i* P	**Pn**	14 01 18.9	+0.5		
	baz=276								
TWQ1				*e*S	**Sb**	14 01 30.9	+0.5		
	baz=276								
YULB	**Yu-li**	**0.97**	**210**	P	**Pg**	14 01 16.5	-0.8		
	baz=220								
YULB				*e*S	**Sb**	14 01 30.4	-0.2		
	baz=220								
ECBN	**Changbin**	**0.98**	**200**	P	**Pb**	14 01 18.3	+0.5		
	baz=199								
ECBN				*e*S	**Sb**	14 01 31.9	+1.0		
	baz=199								
NTST	**Danshui**	**0.98**	**340**	P	**Pb**	14 01 18.0	+0.2		
	baz=340								
NTST				*e*S	**Sb**	14 01 31.7	+0.8		
	baz=340								
ANP	**Anpu**	**0.98**	**344**	*i* P	**Pb**	14 01 17.6	-0.3		
	baz=344								
NMLH	**Miaoli**	**0.98**	**288**	P	**Pn**	14 01 18.5	-0.2		
	baz=296								
NMLH				S	**Sb**	14 01 31.6	+0.6		
	baz=296								
EYUL	**Yuli**	**1.00**	**207**	P	**Pb**	14 01 18.0	-0.2		
	baz=223								
EYUL				*e*S	**Sn**	14 01 32.6	-0.6		
	baz=223								
TWF1	**Yuli**	**1.00**	**209**	*i* P	**Pg**	14 01 16.9	-1.0		
	baz=219								
TWF1				*e*S	**Sn**	14 01 32.9	-0.4		
	baz=219								
WHYT	**Xinyi Township**	**1.04**	**239**	P	**Pn**	14 01 19.1	-0.4		
	baz=245								
WHYT				*e*S	**Sg**	14 01 31.6	-0.4		
	baz=245								
NHW	**Xinwu Township**	**1.04**	**318**	*e*P	**Pn**	14 01 19.4	-0.1		
	baz=317								
JYNG	**Yonagunijimaku**	**1.05**	**78**	*e*P	**Pn**	14 01 19.8	+0.2		
TWY	**Chenhua**	**1.05**	**349**	*i* P	**Pb**	14 01 18.7	-0.3		
	baz=342								
TWY				*e*S	**Sb**	14 01 33.4	+0.5		
	baz=342								
WDJ	**Dajia District**	**1.08**	**276**	P	**Pn**	14 01 20.8	+0.7		
	baz=276								
WDJ				S	**Sn**	14 01 35.6	+0.4		
	baz=276								
WJS	**Zhushan**	**1.08**	**248**	P	**Pn**	14 01 20.6	+0.6		
	baz=241								
WJS				S	**Sn**	14 01 35.4	+0.2		
	baz=241								
WNT	**Mingjian**	**1.10**	**251**	*i* P	**Pn**	14 01 20.7	+0.4		
	baz=245								
WNT				S	**Sn**	14 01 35.6	0.0		
	baz=245								
YOJ	**Yonaguni jima**	**1.11**	**78**	P	**Pb**	14 01 20.1	+0.1		
	baz=65								
YOJ				*e*S	**Sb**	14 01 35.0	+0.4		
	baz=65								
YOJ	**Yonaguni jima**	**1.11**	**78**	*e*P	**Pg**	14 01 20.0	+0.1		
CHKH	**Chenggong**	**1.11**	**201**	P	**Pg**	14 01 19.6	-0.4		
	baz=200								
CHKH				*e*S	**Sn**	14 01 35.7	-0.3		
	baz=200								
FULB	**Fuli**	**1.14**	**205**	P	**Pg**	14 01 20.2	-0.4		
	baz=223								
FULB				*e*S	**Sn**	14 01 36.9	+0.1		
	baz=223								
WCHH	**Zhanghua**	**1.16**	**262**	P	**Pn**	14 01 22.4	+1.3		
	baz=262								
WCHH				S	**Sn**	14 01 37.7	+0.5		
	baz=262								
ALS	**Alishan**	**1.18**	**232**	*i* P	**Pn**	14 01 21.7	+0.1		
	baz=231								
ALS				S	**Sn**	14 01 38.6	+0.6		
	baz=231								
CHKT	**Chengkung**	**1.21**	**200**	P	**Pg**	14 01 20.1	-1.8		
	baz=216								
CHKT				S	**Sb**	14 01 37.8	+0.3		
	baz=216								
EHD	**Haiduan**	**1.22**	**208**	P	**Pg**	14 01 20.4	-1.8		
	baz=208								
EHD				*e*S	**Sn**	14 01 39.1	+0.4		
	baz=208								
CHN5	**Tsauling**	**1.23**	**239**	*i* P	**Pn**	14 01 22.7	+0.6		
	baz=239								
CHN5				S	**Sn**	14 01 39.5	+0.6		
	baz=239								
WGK	**Gukeng**	**1.28**	**245**	*i* P	**Pb**	14 01 23.8	+1.0		
	baz=245								
WGK				*e*S	**Sn**	14 01 40.9	+0.9		
	baz=245								
ELDTW	**Lidau**	**1.28**	**215**	*i* P	**Pg**	14 01 21.3	-1.9		
	baz=203								
ELDTW				S	**Sn**	14 01 40.1	-0.2		
	baz=203								
WDLH	**Douliu**	**1.29**	**245**	P	**Pg**	14 01 24.0	+0.5		
	baz=245								
WDLH				S	**Sn**	14 01 41.6	+1.1		
	baz=245								
EDH	**Donghe**	**1.35**	**201**	*e*P	**Pn**	14 01 21.6	-2.1		
	baz=187								
EDH				*e*S	**Sb**	14 01 41.5	0.0		
	baz=187								
WRL	**Guolierlin Hig**	**1.36**	**256**	P	**Pg**	14 01 24.9	+0.1		
	baz=272								
WRL				S	**Sn**	14 01 42.8	+0.7		
	baz=272								
WCKO	**Fanlu**	**1.37**	**235**	P	**Pg**	14 01 25.1	+0.2		
	baz=235								
WCKO				S	**Sn**	14 01 44.0	+1.7		
	baz=235								
PCYT	**Pengchaiyu**	**1.40**	**9**	P	**Pn**	14 01 24.5	0.0		
	baz=9.0								
PCYT				*e*S	**Sg**	14 01 43.5	-0.3		
	baz=9.0								
WTK	**Tuku**	**1.42**	**248**	P	**Pg**	14 01 25.9	+0.1		
	baz=248								
WTK				S	**Sg**	14 01 44.6	+0.3		
	baz=248								
CHN4	**Tsaushan**	**1.43**	**232**	*i* P	**Pg**	14 01 26.7	+0.6		
	baz=232								
CHN4				S	**Sg**	14 01 44.3	-0.3		
	baz=232								
STYH	**Taoyuan**	**1.43**	**222**	P	**Pn**	14 01 24.9	+0.1		
	baz=222								
STYH				S	**Sg**	14 01 45.5	+0.9		
	baz=222								
TPUB	**Ta-pu**	**1.44**	**230**	P	**Pg**	14 01 26.1	-0.1		
	baz=230								
TPUB				S	**Sg**	14 01 46.0	+1.1		
	baz=230								
LONT	**Longtian**	**1.47**	**206**	*e*P	**Pn**	14 01 25.6	+0.2		
	baz=206								
LONT				*e*S	**Sg**	14 01 46.0	0.0		
	baz=206								
CHY	**Chiayi**	**1.48**	**240**	*e*P	**Pg**	14 01 27.0	+0.1		
	baz=240								
CHY				*e*S	**Sg**	14 01 46.8	+0.7		
	baz=240								
WTP	**Ta-pu**	**1.48**	**228**	*i* P	**Pg**	14 01 26.8	-0.3		
	baz=229								
WTP				S	**Sg**	14 01 47.2	+0.8		
	baz=229								
TWK	**Hsinying**	**1.56**	**232**	*i* P	**Pg**	14 01 28.4	-0.2		
	baz=233								
TWK				*e*S	**Sg**	14 01 48.8	0.0		
	baz=233								
TWG	**Pinlang**	**1.57**	**206**	P	**Pn**	14 01 25.9	-0.9		
	baz=207								
TWG				*e*S	**Sn**	14 01 47.5	+0.2		
	baz=207								
TWGBT	**Beinan**	**1.57**	**206**	*e*P	**Pn**	14 01 26.1	-0.7		
	baz=207								
TWGBT				*e*S	**Sg**	14 01 48.6	-0.6		
	baz=207								
WSF	**Szhu**	**1.58**	**248**	P	**Pb**	14 01 28.0	0.0		
	baz=236								
WSF				S	**Sg**	14 01 48.6	-0.8		
	baz=236								
SNST	**Tainan City**	**1.58**	**230**	P	**Pg**	14 01 28.5	-0.5		
	baz=231								
SNST				S	**Sg**	14 01 48.9	-0.6		
	baz=231								
CHN1	**Nanshi**	**1.58**	**229**	*i* P	**Pb**	14 01 28.3	+0.2		
	baz=230								
CHN1				*e*S	**Sg**	14 01 48.7	-0.8		
	baz=230								
SGST	**Jiashian**	**1.62**	**225**	*i* P	**Pn**	14 01 27.5	+0.1		
	baz=225								
SGST				S	**Sg**	14 01 51.3	+0.6		
	baz=225								
WSL	**Shuilin Townsh**	**1.62**	**244**	P	**Pb**	14 01 28.9	+0.1		
	baz=245								
WSL				S	**Sg**	14 01 51.3	+0.5		
	baz=245								
SLGT	**Liugui**	**1.64**	**221**	P	**Pb**	14 01 28.6	-0.5		
	baz=222								
SLGT				*e*S	**Sb**	14 01 50.2	+0.2		
	baz=222								
ICHU	**Yijhu**	**1.66**	**238**	P	**Pb**	14 01 29.2	-0.2		
	baz=240								
ICHU				S	**Sg**	14 01 52.2	+0.2		
	baz=240								
CHN8	**Yiju**	**1.72**	**239**	P	**Pn**	14 01 29.1	+0.3		
	baz=240								
CHN3	**Shinhua**	**1.77**	**229**	P	**Pg**	14 01 32.0	-0.5		
	baz=232								
CHN3				*e*S	**Sg**	14 01 54.8	-0.7		
	baz=232								
SSHA	**Shanhua**	**1.78**	**232**	P	**Pb**	14 01 31.0	-0.5		
	baz=234								
SSHA				*e*S	**Sb**	14 01 54.0	0.0		
	baz=234								
SHHT	**Tainan City**	**1.81**	**228**	P	**Pb**	14 01 31.3	-0.7		
	baz=230								
SCST	**Cishan**	**1.82**	**222**	P	**Pb**	14 01 31.6	-0.5		
	baz=224								
ECL	**Taimali**	**1.82**	**206**	P	**Pn**	14 01 30.4	+0.3		
	baz=194								
TSMG	**Majia**	**1.87**	**215**	P	**Pb**	14 01 32.5	-0.5		
	baz=218								
TSMG				S	**Sb**	14 01 56.7	+0.2		
	baz=218								
TWM1	**Shoushan**	**1.91**	**223**	P	**Pb**	14 01 34.1	+0.5		
	baz=224								
TSCK	**Chigu Township**	**1.93**	**236**	*e*P	**Pn**	14 01 32.5	+0.9		
	baz=238								
MASBT	**Mashibuluo**	**1.95**	**214**	P	**Pn**	14 01 33.2	+1.2		
	baz=217								
MASBT				*e*S	**Sb**	14 01 58.1	-0.8		
	baz=217								
EAST	**Anshuo**	**2.05**	**206**	*e*P	**Pn**	14 01 34.3	+0.9		
	baz=207								
EAST				*e*S	**Sn**	14 01 59.5	+0.3		
	baz=207								
TAWH	**Dawu Township**	**2.08**	**205**	*e*P	**Pn**	14 01 34.5	+0.7		
	baz=194								
SCZT	**Fangliau**	**2.16**	**211**	*e*P	**Pn**	14 01 36.1	+1.2		
	baz=213								
SCZT				*e*S	**Sn**	14 02 03.3	+1.4		
	baz=213								
PNG	**Penghu**	**2.18**	**253**	P	**Pb**	14 01 36.9	-1.4		
	baz=256								
PNG				S	**Sn**	14 02 02.9	+0.7		
	baz=256								
PHUB	**P'eng-hu**	**2.18**	**251**	*e*P	**Pn**	14 01 36.2	+1.0		
	baz=254								
PHUB				S	**Sn**	14 02 02.5	+0.2		
	baz=254								
SLIU	**Shizi**	**2.22**	**205**	*e*P	**Pn**	14 01 35.8	+0.1		
	baz=195								
VCHM	**Qimei**	**2.42**	**245**	*e*P	**Pn**	14 01 38.7	+0.3		
	baz=233								
VCHM				*e*S	**Sn**	14 02 09.4	+1.2		
	baz=233								

TAP 04 14:01:20.9, 24.21N × 121.78E, h11 km, ML3.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**340**	P		Pg		14 01 23.7	0.0
	baz=344								
EHP				S		Sg		14 01 26.4	+0.7
	baz=344								
EAHA	**Aohua**	**0.12**	**343**	P		Pg		14 01 24.1	+0.1
	baz=343								
EAHA				S		Sg		14 01 26.7	+0.5
	baz=343								
ETL	**Fush Village**	**0.15**	**251**	*e*P		Pg		14 01 24.7	+0.3
	baz=251								
ETL				S		Sg		14 01 27.2	+0.3
	baz=251								
NACB	**Ninganchiao**	**0.17**	**258**	*e*P		Pg		14 01 25.2	+0.5
	baz=252								
NACB				S		Sg		14 01 27.7	+0.3
	baz=252								
TWD	**Chiawan**	**0.21**	**232**	*i* P		Pg		14 01 25.6	+0.3
	baz=238								
TWD				S		Sg		14 01 29.0	+0.5
	baz=238								
ENA	**Nanau**	**0.22**	**351**	*i* P		Pg		14 01 25.6	+0.1
	baz=352								
ENA				*i* S		Sg		14 01 29.3	+0.6
	baz=352								
EWUT	**Wuta**	**0.23**	**360**	P		Pg		14 01 25.9	+0.1
	baz=359								
EWUT				S		Sg		14 01 29.4	+0.3
	baz=359								
ETLH	**Xiulin Townshi**	**0.27**	**269**	P		Pg		14 01 27.0	+0.5
	baz=270								
ETLH				S		Sg		14 01 31.1	+0.8
	baz=270								
HWA	**Hwalien**	**0.28**	**215**	*e*P		Pg		14 01 27.2	+0.5
	baz=223								
HWA				*e*S		Sb		14 01 33.4	+0.7
	baz=223								
ETM	**Tongmen**	**0.36**	**227**	*e*P		Pg		14 01 28.6	+0.5
	baz=228								
ETM				*e*S		Sg		14 01 33.7	+0.9
	baz=228								
ESAO	**Su ao**	**0.37**	**9**	P		Pg		14 01 28.5	+0.2
	baz=5.0								
ESAO				S		Sg		14 01 33.6	+0.4
	baz=5.0								
LATG	**Datong**	**0.40**	**325**	P		Pg		14 01 29.2	+0.4
	baz=325								
LATG				S		Sg		14 01 35.0	+0.8
	baz=325								
TWC	**Suao**	**0.40**	**9**	*e*P		Pg		14 01 29.4	+0.5
	baz=3.0								
TWC				S		Sg		14 01 35.1	+0.8
	baz=3.0								
NNSB	**Datong**	**0.42**	**301**	P		Pg		14 01 29.8	+0.5
	baz=302								
NNSB				S		Sg		14 01 35.8	+0.9
	baz=302								
NNSH	**Datong**	**0.42**	**301**	P		Pb		14 01 30.0	-0.4
	baz=301								
NNSH				S		Sg		14 01 35.4	+0.4
	baz=301								
NDS	**Dongshan**	**0.43**	**352**	P		Pg		14 01 29.6	+0.3
	baz=352								
NDS				S		Sg		14 01 35.4	+0.4
	baz=352								
NNS	**Nan Shan**	**0.44**	**302**	*i* P		Pg		14 01 30.0	+0.4
	baz=303								
NNS				*i* S		Sg		14 01 35.9	+0.5
	baz=303								
NDT	**Datong Townshi**	**0.46**	**328**	*e*P		Pb		14 01 30.6	-0.4
	baz=328								
NDT				S		Sb		14 01 37.5	-0.4
	baz=328								
SHUL	**Shoufeng**	**0.47**	**205**	*e*P		Pb		14 01 31.2	+0.1
	baz=195								
SHUL				*e*S		Sb		14 01 39.1	+1.1
	baz=195								
ENTT	**Nioudou**	**0.47**	**336**	*i* P		Pb		14 01 30.8	-0.5
	baz=336								
ENTT				*i* S		Sb		14 01 37.4	-0.8
	baz=336								
WHF	**Hehuan Shan**	**0.47**	**262**	*i* P		Pg		14 01 30.7	+0.4
	baz=263								
WHF				*i* S		Sg		14 01 37.4	+0.7
	baz=263								
FUSS	**Fushou**	**0.49**	**274**	P		Pb		14 01 31.4	-0.3
	baz=276								
FUSS				S		Sb		14 01 38.4	-0.6
	baz=276								
TWE	**Neicheng**	**0.52**	**349**	*i* P		Pg		14 01 31.5	+0.4
	baz=350								
TWE				*i* S		Sg		14 01 38.3	+0.4
	baz=350								
TWT	**Tachien**	**0.55**	**275**	*e*P		Pb		14 01 32.4	-0.3
	baz=275								
TWT				S		Sb		14 01 40.5	-0.3
	baz=275								
TDCB	**Techi**	**0.57**	**274**	*e*P		Pb		14 01 32.8	-0.2
	baz=275								
TDCB				S		Sg		14 01 40.2	+0.6
	baz=275								
CHGB	**Renai**	**0.57**	**255**	P		Pb		14 01 33.1	0.0
	baz=248								
CHGB				S		Sb		14 01 40.7	-0.7
	baz=248								
FUSB	**Fushanzhiwuyua**	**0.57**	**342**	*e*P		Pb		14 01 33.0	0.0

		baz=342							
FUSB					S		Sb	14 01 40.6	-0.7
		baz=342							
YHNB	**Yeheng**		**0.59**	**321**	*e*P		Pb	14 01 32.9	-0.4
YHNB		baz=322			*e*S		Sb	14 01 41.2	-0.5
NSK	**Sanguang**	baz=321	**0.60**	**320**	*e*P		Pb	14 01 33.6	+0.1
NSK					S		Sg	14 01 41.4	+0.7
		baz=321							
OWD	**Renai**	baz=246	**0.61**	**245**	*e*P		Pg	14 01 33.0	+0.3
OWD					S		Sg	14 01 41.5	+0.7
		baz=246							
WARBT	**Fenglin Townsh**	baz=225	**0.61**	**216**	*e*P		Pb	14 01 33.4	-0.2
WARBT					*e*S		Sb	14 01 41.7	-0.4
		baz=225							
WUSB	**Renai**	baz=244	**0.64**	**250**	*e*P		Pb	14 01 34.5	+0.2
WUSB					S		Sb	14 01 43.0	-0.3
		baz=244							

*TAP **04** 14:02:44.8,24.°20N×121.°72E,h8km, ML3.9,C*
*JMA **04** 14:02:45.8±0.2,24.°2N±0.°5×12.°2E±.°, h9km±1km, TAIWAN REGION*

ISC 04 14:02:45.2±0.8, 24.°20N±0.°01×121.°72E±0.°02, h8km±5km, n103, σ0°70/204, 3C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**248**	P			**Pg**	**14 02 47.6**	**+0.1**
	baz=245								
ETL				S			**Sg**	**14 02 49.3**	**+0.2**
	baz=245								
EHP	**Heping Village**	**0.12**	**9**	P			**Pg**	**14 02 47.8**	**-0.1**
	baz=12								
EHP				S			**Sg**	**14 02 50.0**	**+0.3**
	baz=12								
NACB	**Ninganchiao**	**0.12**	**260**	P			**Pg**	**14 02 47.7**	**-0.1**
	baz=249								
NACB				S			**Sg**	**14 02 49.7**	**+0.1**
	baz=249								
EAHA	**Aohua**	**0.14**	**7**	P			**Pg**	**14 02 48.0**	**-0.1**
	baz=7.0								
EAHA				S			**Sg**	**14 02 50.2**	**+0.1**
	baz=7.0								
TWD	**Chiawan**	**0.16**	**225**	⇓*i*	P		**Pg**	**14 02 48.5**	**0.0**
	baz=223								
TWD				*i*	S		**Sg**	**14 02 51.0**	**+0.1**
	baz=223								
ETLH	**Xiulin Townshi**	**0.22**	**273**	P			**Pg**	**14 02 49.6**	**0.0**
	baz=272								
ETLH				S			**Sg**	**14 02 53.2**	**+0.6**
	baz=272								
ENA	**Nanau**	**0.23**	**5**	⇓*i*	P		**Pg**	**14 02 49.8**	**-0.1**
	baz=6.0								
ENA				*i*	S		**Sg**	**14 02 53.0**	**0.0**
	baz=6.0								
HWA	**Hwalien**	**0.24**	**206**	*i*	P		**Pg**	**14 02 50.6**	**+0.6**
	baz=206								
HWA				*e*	S		**Sg**	**14 02 55.7**	**+2.4**
	baz=206								
EWUT	**Wuta**	**0.26**	**12**	P			**Pg**	**14 02 50.2**	**-0.1**
	baz=11								
EWUT				S			**Sg**	**14 02 53.8**	**+0.1**
	baz=11								
ETM	**Tongmen**	**0.31**	**222**	P			**Pg**	**14 02 51.1**	**-0.2**
	baz=214								
ETM				S			**Sg**	**14 02 55.3**	**-0.1**
	baz=214								
LXIB	**Xiulin Townshi**	**0.33**	**238**	P			**Pg**	**14 02 51.5**	**-0.2**
	baz=238								
LXIB				S			**Sg**	**14 02 56.2**	**+0.1**
	baz=238								
LATG	**Datong**	**0.38**	**333**	P			**Pg**	**14 02 53.0**	**+0.3**
	baz=332								
LATG				S			**Sg**	**14 02 57.9**	**+0.1**
	baz=332								
NNSB	**Datong**	**0.39**	**307**	P			**Pg**	**14 02 52.9**	**+0.1**
	baz=306								
NNSB				S			**Sg**	**14 02 58.2**	**+0.3**
	baz=306								
NNSH	**Datong**	**0.39**	**307**	P			**Pg**	**14 02 53.0**	**+0.2**
	baz=306								
NNSH				S			**Sg**	**14 02 58.3**	**+0.4**
	baz=306								
ESAO	**Su ao**	**0.40**	**17**	P			**Pg**	**14 02 52.8**	**-0.2**
	baz=16								
ESAO				S			**Sg**	**14 02 58.0**	**-0.1**
	baz=16								
NNS	**Nan Shan**	**0.40**	**308**	⇑*i*	P		**Pg**	**14 02 53.2**	**+0.1**
	baz=307								
NNS				*i*	S		**Sg**	**14 02 58.7**	**+0.3**
	baz=307								
WHF	**Hehuan Shan**	**0.42**	**263**	*i*	P		**Pg**	**14 02 53.7**	**+0.2**
	baz=262								
WHF				*i*	S		**Sg**	**14 02 59.2**	**+0.2**
	baz=262								
TWC	**Suao**	**0.43**	**16**	*i*	P		**Pg**	**14 02 53.4**	**-0.2**
	baz=17								
TWC				S			**Sg**	**14 03 00.4**	**+1.2**
	baz=17								
SHUL	**Shoufeng**	**0.43**	**200**	P			**Pb**	**14 02 54.3**	**-0.8**
	baz=208								
SHUL				*e*	S		**Sb**	**14 03 00.9**	**-0.8**
	baz=208								
NDS	**Dongshan**	**0.44**	**360**	P			**Pg**	**14 02 53.9**	**+0.2**
	baz=359								
NDS				S			**Sg**	**14 02 59.6**	**+0.1**
	baz=359								
FUSS	**Fushou**	**0.44**	**277**	P			**Pg**	**14 02 54.1**	**+0.3**
	baz=276								
FUSS				S			**Sb**	**14 03 00.5**	**-1.7**
	baz=276								
NDT	**Datong Townshi**	**0.45**	**335**	P			**Pg**	**14 02 54.3**	**+0.4**
	baz=334								
NDT				S			**Sg**	**14 03 00.4**	**+0.6**
	baz=334								
ENTT	**Nioudou**	**0.47**	**342**	*i*	P		**Pg**	**14 02 54.8**	**+0.5**
	baz=342								
ENTT				*i*	S		**Sg**	**14 03 00.9**	**+0.5**
	baz=342								
TWT	**Tachien**	**0.50**	**277**	*i*	P		**Pb**	**14 02 55.6**	**-0.8**
	baz=276								
TWT				*i*	S		**Sb**	**14 03 02.2**	**-1.7**
	baz=276								
TEGC	**Jichi Village**	**0.51**	**199**	P			**Pg**	**14 02 55.0**	**0.0**
	baz=187								
TEGC				*e*	S		**Sb**	**14 03 04.5**	**+0.5**
	baz=187								
TDCB	**Techi**	**0.52**	**277**	P			**Pg**	**14 02 55.6**	**+0.4**
	baz=276								
TDCB				S			**Sg**	**14 03 02.4**	**+0.3**
	baz=276								
CHGB	**Renai**	**0.52**	**255**	P			**Pg**	**14 02 55.5**	**+0.2**
	baz=246								
CHGB				S			**Sb**	**14 03 03.0**	**-1.5**
	baz=246								
TWE	**Neicheng**	**0.53**	**355**	*i*	P		**Pg**	**14 02 55.7**	**+0.3**
	baz=4.0								
TWE				*i*	S		**Sg**	**14 03 02.5**	**+0.2**
	baz=4.0								
OWD	**Renai**	**0.55**	**244**	P			**Pg**	**14 02 55.9**	**0.0**
	baz=244								
OWD				S			**Sb**	**14 03 03.7**	**-1.7**
	baz=244								
WARBT	**Fenglin Townsh**	**0.56**	**213**	P			**Pg**	**14 02 55.7**	**-0.4**
	baz=221								
WARBT				*e*	S		**Sb**	**14 03 05.0**	**-0.7**
	baz=221								
YHNB	**Yeheng**	**0.57**	**327**	⇑	P		**Pg**	**14 02 56.6**	**+0.4**
	baz=326								
YHNB				S			**Sg**	**14 03 03.8**	**+0.1**
	baz=326								
ILA	**Ilan**	**0.57**	**3**	P			**Pg**	**14 02 55.0**	**-1.2**
	baz=3.0								
ILA				*i*	S		**Sg**	**14 03 04.2**	**+0.6**
	baz=3.0								
FUSB	**Fushanzhiwuyua**	**0.57**	**348**	P			**Pg**	**14 02 56.8**	**+0.4**
	baz=347								
FUSB				S			**Sg**	**14 03 04.3**	**+0.4**
	baz=347								
NSK	**Sanguang**	**0.58**	**326**	⇑*i*	P		**Pg**	**14 02 56.9**	**+0.4**
	baz=325								
NSK				*i*	S		**Sg**	**14 03 04.5**	**+0.4**
	baz=325								
WUSB	**Renai**	**0.59**	**250**	P			**Pg**	**14 02 56.9**	**+0.3**
	baz=242								
WUSB				S			**Sg**	**14 03 04.7**	**+0.4**
	baz=242								
EGFH	**Guangfu**	**0.59**	**207**	P			**Pg**	**14 02 56.3**	**-0.3**
	baz=216								
EGFH				*e*	S		**Sb**	**14 03 05.9**	**-0.4**
	baz=216								
VWDT	**VWDT**	**0.69**	**230**	P			**Pg**	**14 02 57.9**	**-0.6**
	baz=231								
VWDT				*e*	S		**Sg**	**14 03 07.7**	**+0.3**
	baz=231								
NFF	**Wufeng Townshi**	**0.70**	**309**	P			**Pb**	**14 02 59.3**	**-0.4**
	baz=317								
NFF				S			**Sb**	**14 03 08.6**	**-1.1**
	baz=317								
WHP	**Taichung City**	**0.71**	**277**	P			**Pg**	**14 02 58.1**	**-0.8**
	baz=276								
WHP				S			**Sb**	**14 03 09.3**	**-0.6**
	baz=276								
WPL	**Puli Township**	**0.72**	**256**	P			**Pb**	**14 02 59.7**	**-0.4**
	baz=245								
WPL				S			**Sg**	**14 03 08.6**	**+0.1**
	baz=245								
DPDB	**Guoxing**	**0.74**	**258**	P			**Pb**	**14 02 59.9**	**-0.6**
	baz=247								
DPDB				S			**Sb**	**14 03 09.8**	**-1.1**
	baz=247								
HGSD	**Ruisui**	**0.75**	**201**	P			**Pb**	**14 03 00.5**	**-0.1**
	baz=217								
HGSD				*e*	S		**Sn**	**14 03 12.1**	**-1.6**
	baz=217								
WCS	**Beigang Elemen**	**0.75**	**260**	P			**Pb**	**14 02 59.8**	**-0.8**
	baz=259								
WCS				S			**Sb**	**14 03 09.8**	**-1.2**
	baz=259								
EHY	**Hungye**	**0.78**	**208**	*i*	P		**Pg**	**14 02 59.6**	**-0.6**
	baz=217								
EHY				*e*	S		**Sb**	**14 03 12.1**	**+0.4**
	baz=217								
TIPB	**Shuangxi**	**0.78**	**7**	P			**Pg**	**14 03 00.5**	**+0.2**
	baz=356								
TIPB				S			**Sg**	**14 03 10.3**	**-0.1**
	baz=356								
LIOB	**Emei**	**0.78**	**305**	P			**Pg**	**14 03 00.5**	**+0.2**
	baz=305								
LIOB				S			**Sb**	**14 03 11.3**	**-0.7**
	baz=305								
NHDH	**Xindian Distri**	**0.79**	**347**	P			**Pg**	**14 03 00.4**	**0.0**
	baz=346								
NHDH				S			**Sg**	**14 03 11.1**	**+0.5**
	baz=346								
NSTT	**Nanjuang**	**0.79**	**304**	*i*	P		**Pg**	**14 02 59.8**	**-0.5**
	baz=303								
NSTT				S			**Sb**	**14 03 12.0**	**0.0**
	baz=303								
NJD	**Zhudong**	**0.79**	**313**	P			**Pb**	**14 03 01.8**	**+0.6**
	baz=313								
NJD				S			**Sn**	**14 03 13.6**	**-1.1**
	baz=313								
TATO	**Taipei**	**0.81**	**345**	P			**Pg**	**14 03 00.9**	**+0.2**
	baz=344								
TATO				S			**Sg**	**14 03 11.6**	**+0.4**
	baz=344								
SSLB	**Suanglung**	**0.81**	**240**	P			**Pg**	**14 03 00.7**	**-0.1**
	baz=240								
SSLB				S			**Sg**	**14 03 10.8**	**-0.5**
	baz=240								
SMLT	**Sun Moon Lake**	**0.81**	**248**	*i*	P		**Pb**	**14 03 01.1**	**-0.5**
	baz=236								
SMLT				*i*	S		**Sb**	**14 03 11.8**	**-1.1**
	baz=236								
BACT	**New Taipei Cit**	**0.84**	**342**	P			**Pb**	**14 03 02.5**	**+0.5**
	baz=342								
BACT				S			**Sb**	**14 03 13.7**	**+0.2**
	baz=342								
TYC	**Yuchr**	**0.84**	**250**	*i*	P		**Pb**	**14 03 01.6**	**-0.5**
	baz=240								
TYC				S			**Sb**	**14 03 13.0**	**-0.5**
	baz=240								
TWB1	**Santiao Chiao**	**0.85**	**17**	*i*	P		**Pg**	**14 03 01.0**	**-0.5**
	baz=17								
TWB1				*e*	S		**Sb**	**14 03 13.8**	**+0.1**
	baz=17								
HSN1	**Hsinchu**	**0.86**	**312**	P			**Pn**	**14 03 03.3**	**-0.4**
	baz=312								
HSN1				*e*	S		**Sb**	**14 03 14.8**	**+0.6**
	baz=312								
NWF	**Wu-fen Shan**	**0.87**	**4**	*i*	P		**Pg**	**14 03 02.0**	**0.0**
	baz=354								
NWF				*i*	S		**Sg**	**14 03 13.6**	**+0.1**
	baz=354								
WFSB	**Wu-fen Shan**	**0.87**	**4**	P			**Pg**	**14 03 02.2**	**+0.2**
	baz=354								
WFSB				S			**Sg**	**14 03 13.4**	**0.0**
	baz=354								
TWQ1	**Liyutan**	**0.88**	**280**	*i*	P		**Pn**	**14 03 03.1**	**-0.8**
	baz=280								
TWQ1				S			**Sn**	**14 03 15.4**	**-1.5**
	baz=280								
YULB	**Yu-li**	**0.89**	**206**	P			**Pg**	**14 03 01.9**	**-0.4**
	baz=218								
YULB				*e*	S		**Sb**	**14 03 15.3**	**+0.3**
	baz=218								
NTY	**Taoyuan**	**0.89**	**334**	P			**Pn**	**14 03 03.5**	**-0.6**
	baz=334								
NTY				S			**Sb**	**14 03 15.5**	**+0.5**
	baz=334								
SBCB	**Hsinchu**	**0.90**	**312**	P			**Pn**	**14 03 03.5**	**-0.6**
	baz=311								
SBCB				*e*	S		**Sb**	**14 03 15.0**	**-0.2**
	baz=311								
SXI1	**Grass Mountain**	**0.91**	**9**	*e*	P		**Pg**	**14 03 03.1**	**+0.4**
	baz=353								
SXI1				*e*	S		**Sb**	**14 03 15.4**	**-0.2**
	baz=353								
ECBN	**Changbin**	**0.91**	**196**	*e*	P		**Pg**	**14 03 02.0**	**-0.6**
	baz=187								
ECBN				*e*	S		**Sb**	**14 03 16.1**	**+0.6**
	baz=187								
NCUH	**Zhongli**	**0.91**	**328**	P			**Pb**	**14 03 03.8**	**+0.5**
	baz=327								
NCUH				*e*	S		**Sb**	**14 03 16.2**	**+0.6**
	baz=327								
HSN	**Hsinchu**	**0.91**	**312**	*i*	P		**Pb**	**14 03 03.1**	**-0.3**
	baz=314								
HSN				S			**Sb**	**14 03 15.5**	**-0.1**
	baz=314								
NMLH	**Miaoli**	**0.91**	**292**	P			**Pn**	**14 03 04.0**	**-0.4**
	baz=292								
NMLH				*e*	S		**Sn**	**14 03 16.9**	**-0.9**
	baz=292								
EYUL	**Yuli**	**0.92**	**204**	P			**Pg**	**14 03 02.8**	**-0.1**
	baz=217								
EYUL				S			**Sb**	**14 03 16.5**	**+0.6**
	baz=217								
TWF1	**Yuli**	**0.92**	**205**	*i*	P		**Pg**	**14 03 02.5**	**-0.5**
	baz=218								
TWF1				*e*	S		**Sb**	**14 03 16.3**	**+0.3**
	baz=218								
WHYT	**Xinyi Township**	**0.94**	**238**	P			**Pb**	**14 03 03.8**	**0.0**
	baz=247								
WHYT				*e*	S		**Sb**	**14 03 16.8**	**+0.4**
	baz=247								
TWS1	**Kuangyinshan**	**0.94**	**343**	*i*	P		**Pn**	**14 03 04.8**	**0.0**
	baz=352								
TWS1				*i*	S		**Sb**	**14 03 17.4**	**+0.9**
	baz=352								
TNOU	**National Taiwa**	**0.95**	**3**	*e*	P		**Pg**	**14 03 03.6**	**+0.1**
	baz=2.0								
TNOU				*e*	S		**Sg**	**14 03 15.9**	**0.0**
	baz=2.0								
YM01	**YM01**	**0.96**	**352**	P			**Pg**	**14 03 03.8**	**+0.2**
	baz=351								
YM01				S			**Sb**	**14 03 18.0**	**+1.0**
	baz=351								
WJS	**Zhushan**	**0.98**	**248**	P			**Pn**	**14 03 05.7**	**+0.4**
	baz=242								
WJS				S			**Sn**	**14 03 18.9**	**-0.5**
	baz=242								
WNT1	**Nantou City**	**0.99**	**253**	P			**Pn**	**14 03 05.4**	**-0.1**
	baz=248								
WNT1				S			**Sn**	**14 03 20.8**	**+1.1**
	baz=248								
NTST	**Danshui**	**1.00**	**346**	P			**Pn**	**14 03 05.4**	**-0.1**
	baz=354								
NTST				S			**Sn**	**14 03 19.1**	**-0.7**
	baz=354								
WDJ	**Dajia District**	**1.00**	**279**	P			**Pn**	**14 03 06.1**	**+0.5**
	baz=279								
WDJ				S			**Sn**	**14 03 19.1**	**-0.7**
	baz=279								
WNT	**Mingjian**	**1.00**	**252**	*i*	P		**Pn**	**14 03 05.9**	**+0.4**
	baz=247								
WNT				*i*	S		**Sn**	**14 03 20.2**	**+0.3**
	baz=247								
ANP	**Anpu**	**1.00**	**350**	*i*	P		**Pb**	**14 03 05.0**	**0.0**
	baz=349								
ANP				S			**Sn**	**14 03 19.5**	**-0.7**
	baz=349								
CHKH	**Chenggong**	**1.04**	**197**	P			**Pg**	**14 03 04.8**	**-0.4**
	baz=188								
CHKH				*e*	S		**Sn**	**14 03 20.0**	**-0.9**
	baz=188								
FULB	**Fuli**	**1.07**	**202**	P			**Pn**	**14 03 06.2**	**-0.3**
	baz=219								
FULB				*e*	S		**Sn**	**14 03 21.4**	**-0.1**
	baz=219								
WCHH	**Zhanghua**	**1.07**	**264**	P			**Pn**	**14 03 07.5**	**+1.0**
	baz=264								
WCHH				S			**Sn**	**14 03 21.5**	**0.0**
	baz=264								
ALS	**Alishan**	**1.08**	**231**	*i*	P		**Pb**	**14 03 06.1**	**-0.3**
	baz=232								
TWY	**Chenhua**	**1.08**	**354**	*e*	P		**Pn**	**14 03 07.1**	**+0.4**
	baz=354								
TWY				*e*	S		**Sb**	**14 03 20.5**	**0.0**
	baz=354								
CHN5	**Tsauling**	**1.12**	**238**	*i*	P		**Pn**	**14 03 08.0**	**+0.6**
	baz=239								
CHN5				*i*	S		**Sn**	**14 03 23.7**	**+0.6**
	baz=239								
CHKT	**Chengkung**	**1.14**	**197**	P			**Pg**	**14 03 06.4**	**-0.6**
	baz=189								
CHKT				*e*	S		**Sn**	**14 03 24.5**	**+1.2**
	baz=189								
EHD	**Haiduan**	**1.14**	**204**	P			**Pg**	**14 03 06.9**	**-0.3**
	baz=217								
EHD				*e*	S		**Sn**	**14 03 22.7**	**-0.7**
	baz=217								
WGK	**Gukeng**	**1.17**	**245**	*i*	P		**Pn**	**14 03 08.1**	**+0.1**
	baz=245								
WGK				S			**Sn**	**14 03 23.7**	**-0.5**
	baz=245								
ECS	**Chishang**	**1.19**	**203**	P			**Pn**	**14 03 08.2**	**0.0**
	baz=215								
ECS				*e*	S		**Sn**	**14 03 24.5**	**0.0**
	baz=215								
ELDTW	**Lidau**	**1.19**	**213**	*i*	P		**Pg**	**14 03 06.6**	**-1.5**
	baz=224								
ELDTW				*e*	S		**Sb**	**14 03 23.5**	**-0.3**
	baz=224								
WDLH	**Douliu**	**1.19**	**245**	P			**Pn**	**14 03 09.1**	**+0.9**
	baz=245								
WDLH				*e*	S		**Sn**	**14 03 24.9**	**+0.2**
	baz=245								
YOJ	**Yonaguni jima**	**1.21**	**77**	S			**Sn**	**14 03 25.7**	**+0.7**
WRL	**Guolierlin Hig**	**1.26**	**257**	P			**Pg**	**14 03 09.6**	**+0.2**
	baz=257								
WRL				S			**Sn**	**14 03 27.5**	**+1.1**
	baz=257								
WCKO	**Fanlu**	**1.27**	**234**	P			**Pg**	**14 03 10.9**	**+1.3**
	baz=235								
WCKO				S			**Sn**	**14 03 27.3**	**+0.8**
	baz=235								
EDH	**Donghe**	**1.27**	**198**	*e*	P		**Pn**	**14 03 07.1**	**-2.3**
	baz=186								
EDH				*e*	S		**Sn**	**14 03 27.2**	**+0.6**
	baz=186								
CHN2	**Minshiung**	**1.32**	**240**	P			**Pg**	**14 03 11.7**	**+1.3**
	baz=241								
CHN2				S			**Sn**	**14 03 29.6**	**+1.9**
	baz=241								
WTK	**Tuku**	**1.32**	**248**	P			**Pg**	**14 03 11.0**	**+0.5**
	baz=234								
WTK				S			**Sn**	**14 03 29.6**	**+1.9**
	baz=234								
CHN4	**Tsaushan**	**1.33**	**231**	*i*	P		**Pg**	**14 03 11.3**	**+0.5**
	baz=219								
CHN4				S			**Sn**	**14 03 30.0**	**+1.9**
	baz=219								
STYH	**Taoyuan**	**1.34**	**221**	P			**Pb**	**14 03 10.3**	**-0.3**
	baz=222								
STYH				*e*	S		**Sn**	**14 03 29.4**	**+1.2**
	baz=222								
TPUB	**Ta-pu**	**1.34**	**229**	P			**Pg**	**14 03 11.6**	**+0.7**
	baz=218								
TPUB				S			**Sn**	**14 03 29.4**	**+1.1**
	baz=218								
STYT	**Tauyuan**	**1.35**	**221**	*i*	P		**Pg**	**14 03 10.8**	**-0.4**
	baz=222								
STYT				*e*	S		**Sg**	**14 03 29.8**	**+1.0**
	baz=222								
WTP	**Ta-pu**	**1.39**	**227**	P			**Pg**	**14 03 12.6**	**+0.8**
	baz=217								
WTP				*e*	S		**Sg**	**14 03 31.1**	**+1.3**
	baz=217								
TWK	**Hsinying**	**1.46**	**231**	P			**Pg**	**14 03 13.1**	**-0.1**
	baz=232								
TWK				S			**Sg**	**14 03 34.3**	**+2.1**
	baz=232								

*JMA **04** 14:05:09.4±0.1,24.°1N±0.°1×121.°7E±0.°3,h13km, TAIWAN REGION*

TAP 04 14:05:09.1,24.°20N×121.°73E,h10km, ML3.9,2C-7D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**249**	⇑P			Pg	14 05 12.1	+0.3
	baz=250								
ETL				S			Sg	14 05 14.2	+0.6
	baz=250								
EHP	**Heping Village**	**0.11**	**5**	P			Pg	14 05 12.2	+0.3
	baz=9.0								
EHP				S			Sg	14 05 14.4	+0.6
	baz=9.0								
NACB	**Ninganchiao**	**0.13**	**259**	P			Pg	14 05 12.2	+0.2
	baz=252								
NACB				S			Sg	14 05 14.5	+0.4
	baz=252								
EAHA	**Aohua**	**0.13**	**4**	P			Pg	14 05 12.5	+0.3
	baz=3.0								
EAHA				S			Sg	14 05 14.8	+0.6
	baz=3.0								
TWD	**Chiawan**	**0.17**	**226**	⇑*i*	P		Pg	14 05 12.9	+0.1
	baz=226								
TWD				*i*	S		Sg	14 05 15.7	+0.5
	baz=226								
ETLH	**Xiulin Townshi**	**0.23**	**273**	P			Pg	14 05 14.2	+0.4
	baz=273								
ETLH				S			Sg	14 05 17.7	+0.7
	baz=273								
ENA	**Nanau**	**0.23**	**2**	⇓*i*	P		Pg	14 05 14.1	+0.3
	baz=4.0								
ENA				*i*	S		Sg	14 05 17.7	+0.6
	baz=4.0								
HWA	**Hwalien**	**0.25**	**208**	P			Pg	14 05 15.6	+1.4
	baz=217								
HWA				*e*	S		Sg	14 05 19.5	+2.0
	baz=217								
EWUT	**Wuta**	**0.25**	**10**	P			Pg	14 05 14.5	+0.3
	baz=10.0								
EWUT				S			Sg	14 05 18.2	+0.6
	baz=10.0								
ETM	**Tongmen**	**0.32**	**223**	P			Pg	14 05 15.5	+0.1
	baz=216								
ETM				S			Sg	14 05 20.4	+0.7
	baz=216								
LXIB	**Xiulin Townshi**	**0.34**	**239**	P			Pg	14 05 15.9	0.0
	baz=240								
LXIB				S			Sg	14 05 20.8	+0.4
	baz=240								
LATG	**Datong**	**0.39**	**331**	P			Pg	14 05 17.1	+0.4
	baz=331								
LATG				S			Sg	14 05 22.9	+1.0
	baz=331								
ESAO	**Su ao**	**0.39**	**15**	P			Pg	14 05 17.0	+0.1
	baz=15								
ESAO				S			Sg	14 05 22.2	+0.2
	baz=15								
NNSB	**Datong**	**0.39**	**306**	P			Pg	14 05 17.4	+0.5
	baz=306								
NNSB				S			Sg	14 05 22.7	+0.6
	baz=306								

NNSH	Datong baz=306	0.39	306	⇓P	Pg	14 05 17.4	+0.5
NNSH	baz=306			S	Sg	14 05 22.7	+0.6
NNS	Nan Shan baz=307	0.41	307	⇓*i*P	Pg	14 05 17.6	+0.5
NNS	baz=307			*i*S	Sg	14 05 23.2	+0.7
TWC	Suao baz=9.0	0.42	15	*i*P	Pg	14 05 17.7	+0.2
TWC	baz=9.0			*i*S	Sg	14 05 23.0	-0.1
WHF	Hehuan Shan baz=263	0.43	263	*i*P	Pg	14 05 17.9	+0.3
WHF	baz=263			*i*S	Sg	14 05 23.9	+0.6
NDS	Dongshan baz=358	0.43	358	P	Pg	14 05 18.1	+0.5
NDS	baz=358			S	Sg	14 05 24.2	+0.8
SHUL	Shoufeng baz=209	0.43	201	P	Pb	14 05 19.0	+0.1
SHUL	baz=209			S	Sb	14 05 26.9	+1.4
FUSS	Fushou baz=277	0.45	277	P	Pg	14 05 18.6	+0.7
FUSS	baz=277			S	Sg	14 05 24.5	+0.7
NDT	Datong Townshi baz=333	0.45	334	⇓P	Pb	14 05 18.6	-0.6
NDT	baz=333			S	Sb	14 05 25.3	-0.7
ENTT	Nioudou baz=341	0.47	341	*i*P	Pg	14 05 18.8	+0.6
ENTT	baz=341			*i*S	Sg	14 05 25.3	+0.9
TWT	Tachien baz=276	0.51	276	*i*P	Pb	14 05 20.0	-0.3
TWT	baz=276			*i*S	Sb	14 05 27.1	-0.7
TEGC	Jichi Village baz=190	0.52	200	P	Pb	14 05 20.6	+0.3
TEGC	baz=190			*e*S	Sb	14 05 29.0	+1.2
TDCB	Techi baz=277	0.53	276	P	Pb	14 05 20.0	-0.5
TDCB	baz=277			S	Sg	14 05 26.8	+0.4
TWE	Neicheng baz=3.0	0.53	354	⇓*i*P	Pg	14 05 19.9	+0.5
TWE	baz=3.0			*i*S	Sb	14 05 27.4	-0.7
CHGB	Renai baz=248	0.53	255	P	Pg	14 05 19.9	+0.5
CHGB	baz=248			S	Sg	14 05 26.7	+0.3
OWD	Renai baz=246	0.56	245	P	Pg	14 05 20.6	+0.5
OWD	baz=246			S	Sg	14 05 28.1	+0.7
WARBT	Fenglin Townsh baz=222	0.57	213	P	Pg	14 05 20.2	0.0
WARBT	baz=222			*e*S	Sb	14 05 28.8	-0.6
YHNB	Yeheng baz=325	0.57	326	⇓P	Pb	14 05 20.9	-0.4
YHNB	baz=325			S	Sb	14 05 28.8	-0.7
FUSB	Fushanzhiwuyua baz=347	0.57	347	P	Pb	14 05 20.9	-0.5
FUSB	baz=347			S	Sb	14 05 28.8	-0.9
NSK	Sanguang baz=325	0.58	325	⇓*i*P	Pb	14 05 21.1	-0.4
NSK	baz=325			*i*S	Sb	14 05 29.4	-0.5
EGFH	Guangfu baz=216	0.59	208	P	Pg	14 05 20.8	+0.2
EGFH	baz=216			*e*S	Sb	14 05 30.4	+0.3
WUSB	Renai baz=243	0.60	250	P	Pb	14 05 21.3	-0.5
WUSB	baz=243			S	Sg	14 05 28.8	+0.2
VWDT	VWDT baz=232	0.70	231	P	Pb	14 05 23.4	+0.1
VWDT	baz=232			S	Sb	14 05 33.2	+0.2
NFF	Wufeng Townshi baz=314	0.71	308	P	Pb	14 05 23.7	+0.1
NFF	baz=314			*e*S	Sb	14 05 33.5	0.0
WHP	Taichung City baz=277	0.72	277	P	Pb	14 05 24.0	+0.2
WHP	baz=277			S	Sb	14 05 33.8	-0.1

*IDC **04** 14:05:24.0±0.9, 24.°17N×122.°05E, h0km, mb3.7/12, mbtmp3.8/13, ML3.6/1, Error ellipse: s-maj=29.5km s-min=20.4km az=62.0*

*NEIC **04** 14:05:24.5±1.9, 24.°15N±0.°01×121.°88E±0.°07, h10km±1km, mb4.7/19, Error ellipse: s-maj=10.7km s-min=2.9km az=274.0*

*TAP **04** 14:05:26.8, 24.°26N×121.°80E, h15km, ML4.7, C*

*JMA **04** 14:05:27.8±0.1, 24.°2N±0.°6×121.°7E±0.°7, h22km±1km, MV3.9/12, TAIWAN REGION*

ISC 04 14:05:25.9±0.7, **24.°23N**±0.°01×**121.°85E**±0.°02, **h14**km±4km, **n190**, σ**1.s11**/310, **mb4.4**/23, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village baz=314	0.13	311	*i*P	Pg	14 05 28.9	-0.4
EHP	baz=314			*i*S	Sg	14 05 30.6	-1.0
EAHA	Aohua baz=320	0.14	316	P	Pg	14 05 29.2	-0.3
EAHA	baz=320			*i*S	Sg	14 05 31.7	-0.3
ETL	Fush Village baz=240	0.21	251	P	Pg	14 05 31.9	+1.2
ETL	baz=240			S	Sg	14 05 35.2	+1.3
ENA	Nanau baz=342	0.22	334	*i*P	Pg	14 05 30.9	+0.2
ENA	baz=342			*i*S	Sg	14 05 34.4	+0.4
EWUT	Wuta baz=352	0.23	344	P	Pg	14 05 31.3	+0.5
EWUT	baz=352			S	Sg	14 05 34.8	+0.7
NACB	Ninganchiao	0.23	257	Pg	Pg	14 05 29.8	-1.2
NACB	Ninganchiao baz=243	0.23	257	*e*P	Pb	14 05 32.2	+0.2
NACB	baz=243			S	Sb	14 05 35.6	-0.4
TWD	Chiawan baz=232	0.27	237	*e*P	Pn	14 05 34.2	-1.3
TWD	baz=232			*i*S	Sb	14 05 36.9	-0.2
ETLH	Xiulin Townshi baz=261	0.33	266	*e*P	Pb	14 05 33.6	-0.1
ETLH	baz=261			*i*S	Sb	14 05 39.0	0.0
HWA	Hwalien baz=221	0.33	221	*e*P	Pn	14 05 35.3	-1.1
HWA	baz=221			*i*S	Sb	14 05 41.0	+2.2
ESAO	Su ao baz=1.0	0.35	360	P	Pb	14 05 33.8	-0.1
ESAO	baz=1.0			S	Sb	14 05 39.1	-0.1
TWC	Suao baz=7.0	0.38	0	*i*P	Pb	14 05 34.3	-0.1
TWC	baz=7.0			*i*S	Sb	14 05 39.9	-0.3
ETM	Tongmen baz=227	0.41	231	*e*P	Pn	14 05 37.1	-0.4
ETM	baz=227			S	Sb	14 05 41.1	-0.1
NDS	Dongshan baz=347	0.42	344	P	Pb	14 05 35.1	0.0
NDS	baz=347			S	Sg	14 05 40.2	+0.3
LATG	Datong baz=317	0.42	316	P	Pg	14 05 34.3	0.0
LATG	baz=317			S	Sg	14 05 40.1	0.0
EOS3	EOS3 baz=85	0.43	82	*e*P	Pn	14 05 37.6	0.0
LXIB	Xiulin Townshi baz=248	0.45	243	P	Pn	14 05 37.5	-0.6
LXIB	baz=248			S	Sb	14 05 42.2	0.0
NNSB	Datong baz=294	0.47	295	P	Pg	14 05 34.7	-0.5
NNSB	baz=294			*e*S	Sg	14 05 40.1	-1.4
NNSH	Datong baz=294	0.47	295	P	Pg	14 05 34.9	-0.3
NNSH	baz=294			S	Sg	14 05 40.8	-0.7
NNS	Nan Shan baz=295	0.48	296	*i*P	Pg	14 05 34.8	-0.7
NNS	baz=295			*i*S	Sg	14 05 40.8	-1.1
NDT	Datong Townshi baz=321	0.48	321	P	Pb	14 05 35.6	-0.6
NDT	baz=321			*e*S	Sg	14 05 42.4	+0.5
ENTT	Nioudou baz=330	0.48	328	*i*P	Pb	14 05 35.8	-0.4
ENTT	baz=330			*i*S	Sg	14 05 42.3	+0.4
SHUL	Shoufeng baz=200	0.51	211	*e*P	Pb	14 05 37.2	+0.6
SHUL	baz=200			*e*S	Sn	14 05 46.9	-0.5
TWE	Neicheng baz=345	0.52	342	*i*P	Pb	14 05 36.8	0.0
TWE	baz=345			*i*S	Sb	14 05 43.9	-0.3
WHF	Hehuan Shan baz=259	0.54	261	*e*P	Pb	14 05 37.5	+0.1
WHF	baz=259			*e*S	Sb	14 05 45.0	-0.2
ILA	Ilan baz=348	0.54	351	P	Pb	14 05 37.9	+0.6
ILA	baz=348			*i*S	Sb	14 05 45.7	+0.8
FUSS	Fushou baz=270	0.55	272	P	Pb	14 05 37.0	-0.5
FUSS	baz=270			S	Sb	14 05 46.0	+0.6
FUSB	Fushanzhiwuyua baz=329	0.58	336	P	Pb	14 05 37.8	-0.1
FUSB	baz=329			S	Sg	14 05 45.3	+0.3
TEGC	Jichi Village baz=197	0.59	208	*e*P	Pb	14 05 38.7	+0.7
TEGC	baz=197			*e*S	Sn	14 05 49.3	0.0
TWT	Tachien baz=270	0.61	273	*e*P	Pb	14 05 38.3	-0.2
TWT	baz=270			*e*S	Sb	14 05 47.2	+0.1
YHNB	Yeheng	0.61	316	Pg	Pg	14 05 37.7	-0.2
YHNB	Yeheng baz=316	0.61	316	P	Pb	14 05 38.4	-0.1
YHNB	baz=316			S	Sg	14 05 46.2	+0.1
NTC	Toucheng baz=1.0	0.62	359	*e*P	Pb	14 05 38.7	+0.1
NTC	baz=1.0			S	Sb	14 05 48.5	+1.3
TDCB	Techi baz=270	0.63	272	P	Pb	14 05 38.7	0.0
TDCB	baz=270			S	Sg	14 05 47.0	+0.4
NSK	Sanguang baz=316	0.63	315	*i*P	Pb	14 05 38.2	-0.5
NSK	baz=316			*i*S	Sg	14 05 46.5	-0.1
CHGB	Renai baz=247	0.64	255	*e*P	Pb	14 05 39.1	+0.1
CHGB	baz=247			S	Sb	14 05 48.1	+0.3
WARBT	Fenglin Townsh baz=222	0.66	220	*e*P	Pb	14 05 39.6	+0.4
WARBT	baz=222			*e*S	Sb	14 05 49.0	+0.7
OWD	Renai baz=244	0.67	246	P	Pb	14 05 39.2	-0.3
OWD	baz=244			S	Sb	14 05 49.1	+0.4
EGFH	Guangfu baz=227	0.68	215	P	Pb	14 05 39.4	-0.1
EGFH	baz=227			S	Sb	14 05 50.1	+1.4
WUSB	Renai baz=244	0.71	251	P	Pb	14 05 39.9	-0.2
WUSB	baz=244			S	Sb	14 05 49.7	0.0
TIPB	Shuangxi baz=360	0.74	359	P	Pn	14 05 41.5	-0.6
TIPB	baz=360			S	Sb	14 05 51.2	+0.5
NFF	Wufeng Townshi baz=309	0.78	301	P	Pb	14 05 41.3	+0.1
NFF	baz=309			S	Sg	14 05 50.8	-0.4
NHDH	Xindian Distri baz=339	0.79	338	P	Pn	14 05 42.1	-0.5
NHDH	baz=339			S	Sb	14 05 51.9	-0.1
TWB1	Santiao Chiao baz=11	0.79	9	P	Pn	14 05 42.8	+0.1
TWB1	baz=11			S	Sn	14 05 53.6	-0.7
VWDT	VWDT baz=238	0.80	234	*e*P	Pb	14 05 41.7	+0.1
VWDT	baz=238			S	Sn	14 05 53.7	+1.4
TATO	Taipei	0.81	336	Pg	Pg	14 05 40.4	-1.3
NWF	Wu-fen Shan baz=349	0.84	356	P	Pn	14 05 43.3	-0.1
NWF	baz=349			*i*S	Sb	14 05 54.4	+0.8
WFSB	Wu-fen Shan baz=349	0.84	356	P	Pn	14 05 43.3	-0.1
WFSB	baz=349			S	Sb	14 05 53.9	+0.3
NHY	Taipei baz=326	0.85	343	*e*P	Pn	14 05 43.7	+0.2
NHY	baz=326			S	Sn	14 05 56.0	+0.4
BACT	New Taipei Cit baz=334	0.85	334	*e*P	Pn	14 05 43.3	-0.2
BACT	baz=334			*e*S	Sb	14 05 55.0	+1.3
LIOB	Emei baz=298	0.86	299	*e*P	Pn	14 05 43.7	0.0
LIOB	baz=298			S	Sb	14 05 54.2	0.0
SXI1	Grass Mountain baz=6.0	0.86	2	P	Pn	14 05 43.8	+0.1
SXI1	baz=6.0			S	Sb	14 05 55.3	+1.1
EHY	Hungye baz=224	0.86	214	*e*P	Pn	14 05 43.2	-0.5
EHY	baz=224			*e*S	Sn	14 05 57.0	+0.9
TAP	Taipei baz=339	0.86	339	*i*P	Pb	14 05 43.1	+0.3
TAP	baz=339			*i*S	Sb	14 05 55.3	+1.1
NSTT	Nanjuang baz=297	0.87	298	*i*P	Pb	14 05 43.0	+0.2
NSTT	baz=297			*i*S	Sg	14 05 53.3	-0.8
WCS	Beigang Elemen baz=258	0.87	259	*e*P	Pg	14 05 42.1	-0.6
WCS	baz=258			*e*S	Sb	14 05 54.8	+0.5
TNOU	National Taiwa baz=351	0.92	356	P	Pn	14 05 44.8	+0.3
TNOU	baz=351			S	Sb	14 05 56.5	+0.7
SSLB	Suanglung baz=250	0.93	242	*e*P	Pn	14 05 45.4	+0.9
SSLB	baz=250			S	Sb	14 05 56.5	+0.5
SMLT	Sun Moon Lake baz=241	0.93	249	*e*P	Pn	14 05 45.5	+0.8
SMLT	baz=241			*i*S	Sb	14 05 57.4	+1.3
HSN1	Hsinchu baz=298	0.93	306	P	Pn	14 05 44.5	-0.1
HSN1	baz=298			*e*S	Sn	14 05 58.4	+0.6
YM01	YM01 baz=329	0.95	345	P	Pn	14 05 45.1	+0.2
YM01	baz=329			*e*S	Sn	14 05 58.9	+0.6
NCUH	Zhongli baz=320	0.95	321	P	Pn	14 05 45.7	+0.8
NCUH	baz=320			S	Sn	14 05 58.3	0.0
TWS1	Kuangyinshan baz=347	0.95	336	*i*P	Pn	14 05 45.7	+0.8
TWS1	baz=347			*i*S	Sn	14 05 59.7	+1.4
TYC	Yuchr baz=244	0.96	251	*e*P	Pn	14 05 45.7	+0.8
TYC	baz=244			S	Sb	14 05 57.4	+0.5
SBCB	Hsinchu baz=305	0.96	306	P	Pb	14 05 44.8	+0.3
SBCB	baz=305			*e*S	Sn	14 05 59.1	+0.5
YULB	Yu-li	0.97	211	Pg	Pg	14 05 41.2	-3.5
YULB	Yu-li baz=214	0.97	211	*e*P	Pg	14 05 44.2	-0.5
YULB	baz=214			*e*S	Sn	14 05 59.7	+0.9
ECBN	Changbin baz=203	0.98	202	P	Pg	14 05 43.9	-0.8
ECBN	baz=203			*e*S	Sn	14 06 01.2	+2.3
HSN	Hsinchu baz=308	0.98	306	*i*P	Pn	14 05 45.6	+0.3
HSN	baz=308			S	Sn	14 05 59.6	+0.5
TWQ1	Liyutan baz=277	0.99	277	P	Pn	14 05 45.4	0.0
TWQ1	baz=277			S	Sn	14 05 59.2	+0.1
ANP	Anpu baz=343	1.00	343	*e*P	Pn	14 05 45.9	+0.2
NTST	Danshui baz=338	1.00	339	P	Pn	14 05 46.8	+1.3
NTST	baz=338			S	Sn	14 05 59.6	+0.1
EYUL	Yuli baz=227	1.00	209	P	Pn	14 05 45.7	+0.2
EYUL	baz=227			S	Sn	14 06 01.7	+2.2
TWF1	Yuli baz=213	1.01	210	P	Pg	14 05 44.3	-1.1
TWF1	baz=213			S	Sn	14 06 01.1	+1.5
NMLH	Miaoli baz=295	1.01	288	P	Pn	14 05 47.1	+1.5
NMLH	baz=295			S	Sb	14 05 59.5	+1.2
JYNG	Yonagunijimaku	1.03	77	P	Pn	14 05 48.3	+2.3
WHYT	Xinyi Township baz=246	1.05	240	*e*P	Pn	14 05 46.5	+0.2
WHYT	baz=246			S	Sb	14 06 00.7	+1.2
TWY	Chenhua baz=332	1.07	348	P	Pn	14 05 48.1	+1.6
TWY	baz=332			*e*S	Sn	14 06 02.1	+1.0
YOJ	Yonaguni jima baz=67	1.09	77	P	Pn	14 05 48.7	+2.0
YOJ	baz=67			*e*S	Sn	14 06 06.3	+4.7
YOJ	Yonaguni jima	1.09	77	P	Pn	14 05 48.9	+2.1
YOJ				S	Sn	14 06 06.1	+4.5
WJS	Zhushan baz=245	1.10	249	P	Pn	14 05 47.9	+1.0
WJS	baz=245			S	Sn	14 06 03.3	+1.4
WDJ	Dajia District baz=277	1.11	276	P	Pn	14 05 48.3	+1.3
WDJ	baz=277			S	Sn	14 06 02.9	+0.8
CHKH	Chenggong baz=186	1.11	202	P	Pb	14 05 46.8	-0.1
CHKH	baz=186			*e*S	Sn	14 06 04.4	+2.2
WNT	Mingjian baz=249	1.12	252	*e*P	Pb	14 05 47.1	+0.1
WNT	baz=249			*i*S	Sn	14 06 05.0	+2.6
FULB	Fuli baz=224	1.14	206	*e*P	Pb	14 05 47.3	-0.1
WCHH	Zhanghua baz=278	1.19	263	P	Pg	14 05 49.4	+0.7
WCHH	baz=278			S	Sn	14 06 07.8	+3.7
ALS	Alishan baz=236	1.19	233	P	Pn	14 05 48.7	+0.3
ALS	baz=236			S	Sn	14 06 06.5	+1.9
CHKT	Chengkung baz=187	1.21	202	P	Pb	14 05 47.9	-0.7
CHKT	baz=187			*e*S	Sn	14 06 05.3	+0.8
EHD	Haiduan baz=213	1.22	209	P	Pn	14 05 48.7	0.0
EHD	baz=213			*e*S	Sn	14 06 05.4	+0.3
CHN5	Tsauling baz=243	1.24	240	P	Pg	14 05 49.8	0.0
CHN5	baz=243			*i*S	Sn	14 06 07.2	+1.7
ECS	Chishang baz=211	1.27	207	*e*P	Pg	14 05 49.8	-0.5
ECS	baz=211			*e*S	Sn	14 06 09.8	+3.7
ELDTW	Lidau baz=206	1.28	216	P	Pn	14 05 48.8	-0.8
ELDTW	baz=206			*e*S	Sn	14 06 07.7	+1.1
WGK	Gukeng baz=248	1.29	246	*i*P	Pg	14 05 51.1	+0.4
WGK	baz=248			*e*S	Sn	14 06 08.8	+2.1
WDLH	Douliu baz=249	1.31	246	P	Pg	14 05 51.4	+0.3
WDLH	baz=249			*e*S	Sg	14 06 09.5	+1.3
EDH	Donghe baz=191	1.34	202	P	Pn	14 05 49.9	-0.4
EDH	baz=191			*e*S	Sg	14 06 08.9	-0.3
WRL	Guolierlin Hig baz=259	1.38	257	P	Pg	14 05 52.3	-0.1
WRL	baz=259			S	Sg	14 06 12.0	+1.5
WCKO	Fanlu baz=239	1.38	236	P	Pg	14 05 52.4	-0.1
WCKO	baz=239			S	Sg	14 06 13.0	+2.5
PCYT	Pengchaiyu baz=5.0	1.41	8	P	Pg	14 05 53.0	-0.1
PCYT	baz=5.0			*e*S	Sg	14 06 10.9	-0.4
CHN2	Minshiung baz=245	1.43	241	*i*P	Pg	14 05 53.6	+0.2
CHN2	baz=245			S	Sg	14 06 13.4	+1.3
WTK	Tuku baz=251	1.44	248	P	Pb	14 05 52.3	-0.1
WTK	baz=251			S	Sg	14 06 15.2	+3.0
STYH	Taoyuan baz=227	1.44	223	P	Pb	14 05 52.3	-0.2
STYH	baz=227			*e*S	Sg	14 06 12.8	+0.6
CHN4	Tsaushan baz=237	1.44	233	*i*P	Pg	14 05 53.2	-0.4
CHN4	baz=237			*e*S	Sg	14 06 13.7	+1.4
TPUB	Ta-pu	1.45	231	Pn	Pn	14 05 52.0	+0.3
TPUB	Ta-pu baz=234	1.45	231	P	Pg	14 05 53.1	-0.6
TPUB	baz=234			*e*S	Sg	14 06 13.5	+1.0
LONT	Longtian	1.47	207	*e*P	Pg	14 05 53.5	-0.7

baz=209
CHY Chiayi 1.49 241 *e*P **Pg** **14 05 56.0 +1.4**
baz=245
CHY S **Sg** **14 06 14.4 +0.4**
baz=245
WTP Ta-pu 1.49 229 *e*P **Pn** **14 05 53.0 +0.6**
baz=233
WTP *e*S **Sg** **14 06 13.5 -0.5**
baz=233
TWK Hsinying 1.57 233 *i* P **Pg** **14 05 55.3 -0.7**
baz=237
TWK *e*S **Sg** **14 06 17.0 +0.6**
baz=237
TWG Pinlang 1.57 207 P **Pb** **14 05 54.8 0.0**
baz=212
TWG *e*S **Sn** **14 06 13.8 +0.2**
baz=212
TWGBT Beinan 1.57 207 *e*P **Pb** **14 05 54.5 -0.3**
baz=195
LDUT Ludao 1.59 193 *e*P **Pn** **14 05 53.5 -0.1**
baz=196
SNST Tainan City 1.59 231 *i* P **Pb** **14 05 55.4 +0.3**
baz=236
SNST S **Sg** **14 06 18.0 +0.8**
baz=236
CHN1 Nanshi 1.59 230 *i* P **Pg** **14 05 56.5 0.0**
baz=232
WSF Szhu 1.60 249 *i* P **Pg** **14 05 55.7 -0.8**
baz=252
WSF *i* S **Sg** **14 06 18.4 +1.1**
baz=252
SGST Jiashian 1.62 226 *e*P **Pn** **14 05 54.6 +0.4**
baz=215
SGST *e*S **Sg** **14 06 18.7 +0.5**
baz=215
WSL Shuilin Townsh 1.64 245 P **Pb** **14 05 55.6 -0.3**
baz=249
WSL S **Sg** **14 06 19.9 +1.2**
baz=249
SLGT Liugui 1.65 222 P **Pb** **14 05 56.0 -0.2**
baz=227
SLGT S **Sg** **14 06 19.8 +0.8**
baz=227
ICHU Yijhu 1.67 239 P **Pb** **14 05 56.1 -0.5**
baz=228
ICHU S **Sg** **14 06 21.6 +1.8**
baz=228
IRIF Iriomote-Funau 1.72 86 *e*P **Pg** **14 05 59.5 +0.5**
IRIF S **Sg** **14 06 21.8 +0.5**
CHN8 Yiju 1.74 240 *i* P **Pb** **14 05 57.0 -0.5**
baz=230
CHN8 *e*S **Sg** **14 06 22.0 +0.2**
baz=230
CHN3 Shinhua 1.78 230 *i* P **Pb** **14 05 58.7 +0.4**
baz=235
CHN3 *e*S **Sg** **14 06 22.8 -0.3**
baz=235
ECL Taimali 1.82 207 *e*P **Pn** **14 05 57.2 +0.4**
baz=200
ECL *e*S **Sn** **14 06 20.4 +0.7**
baz=200
SCST Cishan 1.82 223 P **Pb** **14 05 59.6 +0.5**
baz=228
SCST *e*S **Sg** **14 06 24.1 -0.4**
baz=228
SHHT Tainan City 1.82 229 P **Pg** **14 06 00.1 -0.8**
baz=234
SHHT *e*S **Sg** **14 06 23.5 -1.1**
baz=234
SCLT Jiali 1.84 236 *e*P **Pb** **14 05 59.4 0.0**
baz=240
SCLT *e*S **Sg** **14 06 24.4 -0.8**
baz=240
TSMG Majia 1.87 216 P **Pb** **14 05 59.4 -0.6**
baz=222
TSMG *e*S **Sg** **14 06 25.9 -0.3**
baz=222
TWM1 Shoushan 1.91 223 P **Pg** **14 06 01.8 -0.8**
baz=228
TWM1 *e*S **Sg** **14 06 28.1 +0.6**
baz=228
TSCK Chigu Township 1.94 237 P **Pb** **14 05 59.9 -1.1**
baz=239
SGLT Jiouru 1.95 220 *e*P **Pn** **14 05 59.8 +1.2**
baz=211
SGLT *e*S **Sg** **14 06 28.5 0.0**
baz=211
MASBT Mashibuluo 1.96 215 *e*P **Pb** **14 06 01.5 +0.1**
baz=220
MASBT *e*S **Sb** **14 06 26.9 +1.3**
baz=220
JKRS Kuro-shima 1.98 89 P **Pg** **14 06 02.8 -1.0**
JKRS S **Sg** **14 06 28.2 -1.3**
SNJT Kaohsiung City 2.02 224 *e*P **Pb** **14 06 02.1 -0.3**
baz=226
EAST Anshuo 2.05 207 *e*P **Pn** **14 06 00.6 +0.5**
baz=199
TAW Tawu 2.06 205 *e*P **Pn** **14 05 59.6 -0.5**
baz=197
TAWH Dawu Township 2.08 205 P **Pb** **14 06 02.2 -1.1**
baz=198
JJ Ishigaki jima 2.10 86 S **Sb** **14 06 29.6 -0.1**
WSSB Gushan 2.15 223 *e*P **Pb** **14 06 03.2 -1.4**
baz=225
SCZT Fangliau 2.16 212 *e*P **Pn** **14 06 02.8 +1.2**
baz=199
PNG Penghu 2.20 253 P **Pn** **14 06 03.4 +1.4**
baz=256
PNG S **Sn** **14 06 30.3 +1.3**
baz=256
PHUB P'eng-hu 2.20 252 P **Pn** **14 06 03.0 +0.9**
baz=256
PHUB S **Sn** **14 06 31.4 +2.3**
baz=256
SLIU Shizi 2.22 206 P **Pb** **14 06 04.5 -1.4**
baz=199
WDGT Dungji 2.22 245 P **Pn** **14 06 03.4 +1.0**
baz=248
LYUB Lan-yu 2.23 186 *e*P **Pn** **14 06 03.9 +1.5**
baz=192
JISG Ishigakijimahi 2.28 80 S **Sb** **14 06 34.7 -0.1**
HEN Hengchun 2.44 205 P **Pb** **14 06 07.7 -1.8**
baz=199
VCHM Qimei 2.44 246 *e*P **Pn** **14 06 06.2 +0.9**
baz=237
VCHM *e*S **Sn** **14 06 37.1 +2.2**
baz=237
TWKBT Hengchun 2.47 203 P **Pb** **14 06 08.0 -2.1**
baz=196
TWK1 Hengchun 2.47 203 *e*P **Pb** **14 06 09.1 -0.9**
baz=197
PTMZ Houxiangcun 2.61 289 *e*P **Pb** **14 06 10.2 -2.2**
baz=288
JOW Kunigami 6.36 65 Pn **Pn** **14 06 58.9 -0.3**
2.8nm,0.3s,baz=117,slow=23,SNR=2.0
12nm,0.4s
JSU Suzuyama 10.51 44 Pn **Pn** **14 07 54.0 -2.3**
KSRS Korea Array 14.17 20 Pn **Pn** **14 08 49.4 +3.2**
0.1nm,0.3s,baz=206,slow=13,SNR=1.6
MAJO Matsushiro 18.67 45 P **P** **14 09 40.4 -3.2**
MJB9 Matsu-Tunnel 18.67 45 P **P** **14 09 41.4 -2.2**
CRAI Chiangrai 20.27 263 P **P** **14 10 00.9 -0.3**
USRK Ussuriysk Ar. 21.58 20 P **P** **14 10 16.2 +1.0**
2.0nm,0.9s,baz=143,slow=29,SNR=1.5
2.0nm,0.9s
LUWI Luwuk 25.14 178 P **P** **14 10 48.3 -2.4**
SONM Songino Array 26.57 336 P **P** **14 11 04.8 +1.2**
1.2nm,0.6s,baz=147,slow=6.9,SNR=2.7
1.2nm,0.6s
MKAR Makanchi Array 38.73 316 P **P** **14 12 51.0 +1.4**
1.2nm,0.7s,baz=100,slow=10,SNR=4.2
1.2nm,0.7s
MAKZ Makanchi 38.93 316 P **P** **14 12 51.1 -0.3**
ZALV Zalesovo Beam 40.54 327 P **P** **14 13 04.7 +0.1**
0.8nm,0.6s,baz=111,slow=7.9,SNR=2.9
0.8nm,0.6s
KURBB Kurchatov Arra 42.47 320 P **P** **14 13 23.4 +3.0**
0.9nm,0.9s,baz=109,slow=11,SNR=1.5
0.9nm,0.9s
PALK Pallekele 42.83 254 P **P** **14 13 22.0 -1.9**
PALK IAmb IAmb 14 13 26.0
comp=Z,24nm,1.4s
WRA Warramunga Arr 45.56 163 P **P** **14 13 44.3 -1.3**
comp=Z,1.1nm,0.9s,baz=344,slow=8.7,SNR=3.5
comp=Z,1.1nm,0.9s
KKAR Karatay Array 45.92 307 P **P** **14 13 48.2 -0.1**
BVAR Borovoye Array 48.02 321 P **P** **14 14 05.1 +0.5**
comp=Z,0.7nm,0.5s,baz=87,slow=8.7,SNR=2.3
comp=Z,0.7nm,0.5s
ASAR Alice Springs 49.03 165 P **P** **14 14 12.4 -0.2**
comp=Z,0.4nm,0.7s,baz=339,slow=7.1,SNR=2.2
comp=Z,0.4nm,0.7s
ABKAR Akbulak array 53.84 314 P **P** **14 14 48.7 +0.3**
J14K Nanvaranak Lak 61.71 30 P **P** **14 15 42.6 -0.9**
J14K IAmb IAmb 14 16 03.2
comp=Z,14nm,1.5s
B20K Meade River 64.38 22 P **P** **14 16 01.4 +0.4**
B20K IAmb IAmb 14 16 09.3
comp=Z,4.8nm,1.1s
B22K Teshekpuk Lake 65.65 22 P **P** **14 16 09.6 +0.3**
B22K IAmb IAmb 14 16 20.8
comp=Z,9.4nm,1.3s
B22K Teshekpuk Lake 65.65 22 S **S** **14 16 09.6 -2.6**
baz=274
H21K Melozitna Rive 66.29 27 P **P** **14 16 14.3 +0.7**
H21K IAmb IAmb 14 16 23.0
comp=Z,8.5nm,1.5s
ILAR Eielson Array 68.90 27 P **P** **14 16 29.4 -0.6**
comp=Z,0.2nm,0.7s,baz=292,slow=7.4,SNR=1.7
comp=Z,0.2nm,0.7s
BMAR Burnt Mountain 69.24 24 P **P** **14 16 33.0 +0.9**
J25K Salcha River, 69.57 27 P **P** **14 16 33.8 -0.4**
J25K IAmb IAmb 14 17 13.7
comp=Z,5.5nm,1.1s
E28M Babbage River 70.77 23 P **P** **14 16 41.5 +0.1**
E28M IAmb IAmb 14 17 23.0
comp=Z,8.1nm,1.4s
MCARA McCarthy VSAT 71.44 30 P **P** **14 16 43.4 -2.3**
BCAR Beaver Creek A 71.51 29 P **P** **14 16 44.5 -1.6**
FIA1 FINESS Array S 71.71 330 P **P** **14 16 47.2 0.0**
FINES FINESS Array B 71.71 330 P **P** **14 16 47.0 -0.2**
FINES FINESS Array B 71.71 330 P **P** **14 16 48.1 +0.8**
comp=Z,3.2nm,1.0s,baz=64,slow=10.0,SNR=2.2
comp=Z,3.2nm,1.0s
DAWY Dawson 72.22 27 P **P** **14 16 49.7 -0.6**
DAWY IAmb IAmb 14 17 13.4
comp=Z,10nm,1.5s
INK Inuvik 72.96 22 P **P** **14 16 53.6 -1.0**
INK IAmb IAmb 14 17 15.9
comp=Z,9.6nm,1.5s
F31M Tsiigehtchic 73.21 23 P **P** **14 16 55.5 -0.6**
F31M IAmb IAmb 14 17 37.7
comp=Z,12nm,1.5s
G31M Satah River 73.22 24 P **P** **14 16 55.0 -1.1**
G31M IAmb IAmb 14 17 20.8
comp=Z,13nm,1.5s
BRTR Keskin Array B 73.63 307 P **P** **14 17 02.3 +3.0**
comp=Z,0.4nm,0.6s,baz=75,slow=6.1,SNR=2.4
comp=Z,0.4nm,0.6s
HLK Haleakala 74.69 74 P **P** **14 17 04.3 -1.7**
C36M Paulatuk 75.56 20 P **P** **14 17 08.7 -1.1**
YKA Yellowknife Ar 82.69 23 P **P** **14 17 48.5 -0.4**
comp=Z,0.6nm,0.7s,baz=313,slow=5.1,SNR=9.8
comp=Z,0.6nm,0.7s

TAP 04 14:10:38.1, 24.23N×121.79E, h13km, ML4.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**333**	P	Pg	14 10 41.3	+0.4
	baz=336						
EHP				S	Sg	14 10 43.9	+0.9
	baz=336						
EAHA	**Aohua**	**0.11**	**337**	P	Pg	14 10 41.6	+0.5
	baz=336						
EAHA				S	Sb	14 10 44.7	0.0
	baz=336						
ETL	**Fush Village**	**0.16**	**245**	P	Pb	14 10 42.7	-0.3
	baz=244						
ETL				S	Sg	14 10 45.4	+0.8
	baz=244						
NACB	**Ninganchiao**	**0.18**	**253**	P	Pg	14 10 42.6	+0.4
	baz=252						
NACB				S	Sg	14 10 45.9	+0.8
	baz=252						
ENA	**Nanau**	**0.20**	**348**	*i* P	Pg	14 10 43.0	+0.5
	baz=350						
ENA				*i* S	Sb	14 10 46.8	-0.7
	baz=350						
EWUT	**Wuta**	**0.22**	**358**	P	Pg	14 10 43.3	+0.5
	baz=358						
EWUT				S	Sb	14 10 47.1	-0.7
	baz=358						
TWD	**Chiawan**	**0.23**	**230**	*i* P	Pb	14 10 43.7	-0.4
	baz=228						
TWD				*i* S	Sb	14 10 47.2	-0.9
	baz=228						
ETLH	**Xiulin Townshi**	**0.28**	**266**	P	Pb	14 10 44.8	-0.2
	baz=265						
ETLH				S	Sb	14 10 49.1	-0.6
	baz=265						
ESAO	**Su ao**	**0.35**	**9**	P	Pb	14 10 45.8	-0.4
	baz=8.0						
ESAO				S	Sb	14 10 51.0	-0.7
	baz=8.0						
ETM	**Tongmen**	**0.37**	**226**	P	Pb	14 10 46.3	-0.3
	baz=225						
ETM				*e*S	Sb	14 10 51.8	-0.5
	baz=225						
TWC	**Suao**	**0.38**	**9**	*i* P	Pb	14 10 46.4	-0.4
	baz=9.0						
TWC				*i* S	Sg	14 10 51.8	+0.8
	baz=9.0						
LATG	**Datong**	**0.39**	**322**	P	Pb	14 10 46.6	-0.3
	baz=322						
LATG				S	Sb	14 10 52.7	-0.1
	baz=322						
LXIB	**Xiulin Townshi**	**0.40**	**239**	P	Pb	14 10 46.7	-0.4
	baz=238						
LXIB				*e*S	Sb	14 10 53.0	-0.1
	baz=238						
NDS	**Dongshan**	**0.41**	**351**	P	Pb	14 10 47.0	-0.2
	baz=351						
NDS				S	Sb	14 10 53.1	-0.2
	baz=351						
NNSB	**Datong**	**0.42**	**299**	P	Pb	14 10 47.4	0.0
	baz=298						
NNSB				S	Sb	14 10 53.3	-0.4
	baz=298						
NNSH	**Datong**	**0.42**	**299**	P	Pb	14 10 47.6	+0.2
	baz=298						
NNSH				S	Sb	14 10 53.4	-0.3
	baz=298						
NNS	**Nan Shan**	**0.43**	**299**	*i* P	Pb	14 10 47.8	+0.2
	baz=299						
NNS				*i* S	Sb	14 10 53.9	-0.3
	baz=299						
NDT	**Datong Townshi**	**0.45**	**326**	P	Pb	14 10 48.1	+0.2
	baz=326						
NDT				S	Sb	14 10 55.0	+0.5
	baz=326						
EOS2	**EOS2**	**0.45**	**65**	*e*P	Pb	14 10 47.9	+0.1
	baz=64						
EOS2				*e*S	Sb	14 10 54.7	+0.3
	baz=64						
ENTT	**Nioudou**	**0.46**	**334**	*i* P	Pb	14 10 48.2	+0.2
	baz=334						
ENTT				*i* S	Sb	14 10 54.9	+0.2
	baz=334						
EOS3	**EOS3**	**0.49**	**83**	*e*P	Pb	14 10 49.0	+0.5
	baz=83						
EOS3				*e*S	Sb	14 10 55.7	+0.3
	baz=83						
FUSS	**Fushou**	**0.49**	**272**	P	Pb	14 10 49.2	+0.4
	baz=272						
FUSS				S	Sb	14 10 56.1	0.0
	baz=272						
TWE	**Neicheng**	**0.50**	**348**	*i* P	Pb	14 10 48.8	0.0
	baz=349						
TWE				S	Sb	14 10 55.6	-0.5
	baz=349						
FUSB	**Fushanzhiwuyua**	**0.56**	**341**	P	Pb	14 10 50.0	+0.1
	baz=341						
FUSB				S	Sb	14 10 57.8	+0.1
	baz=341						
TDCB	**Techi**	**0.57**	**273**	P	Pb	14 10 50.9	+0.8
	baz=272						
TDCB				*e*S	Sb	14 10 58.5	+0.3
	baz=272						
YHNB	**Yeheng**	**0.58**	**320**	P	Pb	14 10 50.5	+0.4
	baz=319						
YHNB				S	Sb	14 10 58.7	+0.4
	baz=319						
NSK	**Sanguang**	**0.59**	**319**	*i* P	Pb	14 10 50.8	+0.4
	baz=319						
NSK				*i* S	Sb	14 10 59.0	+0.3
	baz=319						

*IDC **04** 14:10:49.8±0.6, 24.23N×121.84E, h0km, mb4.4/34, mbtmp4.4/36, ML4.3/1, Error ellipse: s-maj=14.1km s-min=13.5km az=72.0*
*NEIC **04** 14:10:51.6±1.4, 24.14N±0.03×121.76E±0.05, h10km±2km, mb4.9/72, Error ellipse: s-maj=7.0km s-min=3.0km az=110.0*
*BJI **04** 14:10:52.2±0.0, 24.22N×121.75E, h5km, mb4.6/25*
*TAP **04** 14:10:52.3, 24.20N×121.72E, h9km, ML5.0, C*
*JMA **04** 14:10:52.6±0.1, 24.2N±0.3×121.7E±0.6, h10km±1km, MD4.7/19, MV4.7/19, TAIWAN REGION*
ISC 04 14:10:52.5±0.6, 24.19N±0.01×121.74E±0.01, h15km±3km, n502, σ0.95/625, mb4.7/70, 7C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.11**	**252**	⇑P	Pg	**14 10 55.2**	**-0.9**
	baz=246						
ETL				S	Sg	**14 10 57.2**	**-1.2**
	baz=246						
EHP	**Heping Village**	**0.12**	**360**	⇓P	Pg	**14 10 55.3**	**-0.7**
	baz=12						
EHP				S	Sg	**14 10 57.6**	**-0.8**
	baz=12						
EAHA	**Aohua**	**0.13**	**359**	⇓P	Pg	**14 10 55.6**	**-0.7**
	baz=6.0						
EAHA				S	Sg	**14 10 58.0**	**-0.8**
	baz=6.0						
NACB	**Ninganchiao**	**0.14**	**261**	Pg	Pg	**14 10 55.2**	**-1.1**
NACB	**Ninganchiao**	**0.14**	**261**	⇑P	Pg	**14 10 55.4**	**-0.9**
	baz=249						
NACB				S	Sg	**14 10 57.6**	**-1.2**
	baz=249						
TWD	**Chiawan**	**0.17**	**229**	*i* P	Pg	**14 10 56.1**	**-0.8**
	baz=223						
TWD				*e*S	Sg	**14 11 00.2**	**+0.5**
	baz=223						
ENA	**Nanau**	**0.23**	**360**	*i* P	Pg	**14 10 57.2**	**-0.5**
	baz=6.0						
ENA				*i* S	Sg	**14 11 00.7**	**-0.6**
	baz=6.0						
ETLH	**Xiulin Townshi**	**0.24**	**273**	*e*P	Pg	**14 10 57.2**	**-0.6**
	baz=272						
ETLH				*e*S	Sg	**14 11 00.7**	**-0.8**
	baz=272						
HWA	**Hwalien**	**0.25**	**210**	*i* P	Pg	**14 10 58.1**	**+0.1**
	baz=206						
HWA				S	Sg	**14 11 00.8**	**-0.9**
	baz=206						
EWUT	**Wuta**	**0.25**	**8**	P	Pg	**14 10 57.6**	**-0.4**
	baz=11						
EWUT				*i* S	Sg	**14 11 01.4**	**-0.4**
	baz=11						
ETM	**Tongmen**	**0.32**	**225**	*i* P	Pg	**14 10 58.6**	**-0.6**
	baz=214						
ETM				S	Sg	**14 11 03.1**	**-0.7**
	baz=214						
LXIB	**Xiulin Townshi**	**0.35**	**240**	⇑P	Pg	**14 10 59.0**	**-0.7**
	baz=238						
LXIB				S	Sg	**14 11 04.0**	**-0.7**
	baz=238						
ESAO	**Su ao**	**0.39**	**14**	⇓P	Pg	**14 11 00.1**	**-0.4**
	baz=16						
ESAO				S	Sg	**14 11 05.5**	**-0.4**
	baz=16						
LATG	**Datong**	**0.39**	**330**	⇓P	Pg	**14 11 00.2**	**-0.3**
	baz=331						
LATG				*e*S	Sg	**14 11 05.8**	**-0.2**
	baz=331						
NNSH	**Datong**	**0.40**	**306**	⇓P	Pg	**14 11 00.5**	**-0.3**
	baz=306						
NNSH				S	Sg	**14 11 05.8**	**-0.6**
	baz=306						
NNSB	**Datong**	**0.40**	**306**	⇓P	Pg	**14 11 00.5**	**-0.2**
	baz=306						
NNSB				S	Sg	**14 11 05.7**	**-0.6**
	baz=306						
NNS	**Nan Shan**	**0.42**	**306**	⇓*i*P	Pg	**14 11 00.7**	**-0.3**
	baz=307						
NNS				*i* S	Sg	**14 11 06.0**	**-0.7**
	baz=307						
TWC	**Suao**	**0.42**	**13**	⇓*i*P	Pg	**14 11 00.8**	**-0.3**
	baz=10.0						
TWC				*e*S	Sg	**14 11 07.0**	**+0.1**
	baz=10.0						
SHUL	**Shoufeng**	**0.44**	**202**	P	Pb	**14 11 02.5**	**+0.6**
	baz=207						
SHUL				*e*S	Sb	**14 11 09.9**	**+1.7**
	baz=207						
NDS	**Dongshan**	**0.44**	**357**	⇓P	Pg	**14 11 01.2**	**-0.1**
	baz=359						
NDS				S	Sg	**14 11 07.2**	**-0.1**
	baz=359						
WHF	**Hehuan Shan**	**0.44**	**264**	*i* P	Pg	**14 11 01.2**	**-0.3**
	baz=263						
WHF				*i* S	Sg	**14 11 06.5**	**-1.0**
	baz=263						
FUSS	**Fushou**	**0.46**	**277**	⇓P	Pg	**14 11 01.6**	**-0.1**
	baz=276						
FUSS				S	Sg	**14 11 07.5**	**-0.6**
	baz=276						
NDT	**Datong Townshi**	**0.46**	**333**	⇓P	Pg	**14 11 01.7**	**0.0**
	baz=334						
NDT				S	Sg	**14 11 07.9**	**0.0**
	baz=334						
ENTT	**Nioudou**	**0.47**	**340**	⇓*i*P	Pg	**14 11 01.9**	**-0.1**
	baz=342						
ENTT				*i* S	Sg	**14 11 08.5**	**+0.1**
	baz=342						
ESL	**Shilin**	**0.47**	**217**	⇑*i*P	Pg	**14 11 01.2**	**-0.7**
	baz=224						
ESL				*e*S	Sg	**14 11 09.1**	**+0.7**
	baz=224						
EOS2	**EOS2**	**0.50**	**63**	*e*P	Pb	**14 11 03.4**	**+0.5**
	baz=55						
TEGC	**Jichi Village**	**0.52**	**201**	*e*P	Pg	**14 11 02.2**	**-0.6**
	baz=189						
TEGC				S	Sn	**14 11 12.4**	**-1.4**
	baz=189						
TWT	**Tachien**	**0.52**	**277**	*i* P	Pg	**14 11 03.1**	**+0.2**
	baz=276						
TWT				*i* S	Sg	**14 11 10.0**	**+0.1**
	baz=276						
TWE	**Neicheng**	**0.53**	**353**	⇓*i*P	Pg	**14 11 03.0**	**0.0**
	baz=4.0						
TWE				*i* S	Sg	**14 11 10.2**	**+0.1**
	baz=4.0						
EOS4	**EOS4**	**0.53**	**98**	P	Pn	**14 11 05.3**	**+0.1**
	baz=97						
EOS4				*e*S	Sn	**14 11 14.4**	**+0.7**
	baz=97						
EOS3	**EOS3**	**0.53**	**80**	*e*P	Pn	**14 11 04.9**	**-0.5**
	baz=77						
CHGB	**Renai**	**0.54**	**256**	P	Pg	**14 11 03.0**	**-0.2**
	baz=247						
CHGB				S	Sg	**14 11 09.6**	**-0.8**
	baz=247						
TDCB	**Techi**	**0.54**	**276**	⇓P	Pg	**14 11 03.1**	**0.0**
	baz=276						
TDCB				S	Sg	**14 11 09.7**	**-0.7**
	baz=276						
ILA	**Ilan**	**0.57**	**1**	⇓*i*P	Pg	**14 11 03.9**	**+0.1**
	baz=3.0						
ILA				*e*S	Sb	**14 11 11.9**	**-0.2**
	baz=3.0						
OWD	**Renai**	**0.57**	**245**	P	Pg	**14 11 03.9**	**+0.1**
	baz=245						
OWD				S	Sg	**14 11 11.8**	**+0.4**
	baz=245						
WARBT	**Fenglin Townsh**	**0.57**	**214**	P	Pg	**14 11 03.0**	**-0.9**
	baz=221						
WARBT				*e*S	Sb	**14 11 12.8**	**+0.6**
	baz=221						
YHNB	**Yeheng**	**0.58**	**325**	Pg	Pg	**14 11 03.9**	**-0.1**
YHNB	**Yeheng**	**0.58**	**325**	⇓P	Pg	**14 11 04.0**	**0.0**
	baz=325						
YHNB				S	Sg	**14 11 11.1**	**-0.7**
	baz=325						
FUSB	**Fushanzhiwuyua**	**0.58**	**346**	⇓P	Pg	**14 11 04.0**	**0.0**
	baz=347						
FUSB				S	Sg	**14 11 11.5**	**-0.3**
	baz=347						
NSK	**Sanguang**	**0.59**	**324**	⇑*i*P	Pg	**14 11 04.2**	**-0.1**
	baz=325						

NSK *i* S **Sg** **14 11 11.8 -0.4**
baz=325
EGFH **Guangfu** **0.60 209** P **Pg** **14 11 03.8 -0.4**
baz=216
EGFH *e*S **Sb** **14 11 13.2 +0.3**
baz=216
WUSB **Renai** **0.60 251** P **Pg** **14 11 04.4 -0.1**
baz=242
WUSB S **Sg** **14 11 12.2 -0.3**
baz=242
NTC **Toucheng** **0.66 7** P **Pg** **14 11 05.6 +0.1**
baz=8.0
NTC *e*S **Sg** **14 11 14.1 -0.2**
baz=8.0
VWDT **VWDT** **0.70 231** P **Pg** **14 11 05.8 -0.4**
baz=231
VWDT *e*S **Sg** **14 11 15.5 -0.1**
baz=231
NFF **Wufeng Townshi** **0.72 308** P **Pg** **14 11 06.6 0.0**
baz=314
NFF *e*S **Sg** **14 11 16.0 0.0**
baz=314
WHP **Taichung City** **0.73 277** P **Pg** **14 11 07.0 +0.1**
baz=276
WHP S **Sg** **14 11 17.0 +0.5**
baz=276
WPL **Puli Township** **0.74 256** P **Pg** **14 11 07.0 +0.1**
baz=245
WPL S **Sg** **14 11 15.7 -1.1**
baz=245
HGSD **Ruisui** **0.76 203** P **Pb** **14 11 07.7 +0.4**
baz=216
HGSD *e*S **Sn** **14 11 20.3 +0.5**
baz=216
DPDB **Guoxing** **0.76 258** P **Pg** **14 11 07.4 0.0**
baz=248
DPDB S **Sg** **14 11 16.9 -0.5**
baz=248
WCS **Beigang Elemen** **0.77 260** P **Pb** **14 11 07.5 -0.1**
baz=260
WCS *e*S **Sg** **14 11 17.5 -0.2**
baz=260
TIPB **Shuangxi** **0.78 6** ⇓P **Pg** **14 11 07.5 -0.2**
baz=357
TIPB S **Sg** **14 11 17.4 -0.6**
baz=357
EHY **Hungye** **0.79 209** *i* P **Pb** **14 11 07.0 -0.8**
baz=217
EHY *e*S **Sb** **14 11 18.8 +0.4**
baz=217
NHDH **Xindian Distri** **0.79 346** P **Pg** **14 11 08.1 +0.2**
baz=346
NHDH *e*S **Sg** **14 11 18.3 0.0**
baz=346
LIOB **Emei** **0.80 304** P **Pg** **14 11 08.8 +0.6**
baz=304
LIOB *e*S **Sb** **14 11 18.6 -0.2**
baz=304
NJD **Zhudong** **0.80 312** P **Pg** **14 11 08.9 +0.8**
baz=318
NJD S **Sn** **14 11 20.6 -0.3**
baz=318
NSTT **Nanjuang** **0.80 303** *i* P **Pb** **14 11 08.1 0.0**
baz=303
NSTT *e*S **Sb** **14 11 18.1 -0.7**
baz=303
TATO **Taipei** **0.81 344** Pg **Pb** **14 11 08.0 -0.3**
TATO **Taipei** **0.81 344** P **Pb** **14 11 08.3 0.0**
baz=344
TATO S **Sg** **14 11 19.8 +0.8**
baz=344
SSLB **Suanglung** **0.83 241** Pg **Pb** **14 11 07.8 -0.8**
SSLB **Suanglung** **0.83 241** ⇑P **Pb** **14 11 08.0 -0.6**
baz=241
SSLB *e*S **Sb** **14 11 18.2 -1.3**
baz=241
SMLT **Sun Moon Lake** **0.83 248** *i* P **Pb** **14 11 08.4 -0.3**
baz=238
SMLT *i* S **Sb** **14 11 19.0 -0.6**
baz=238
TWB1 **Santiao Chiao** **0.84 15** ⇓*i*P **Pb** **14 11 08.5 -0.3**
baz=9.0
TWB1 *i* S **Sg** **14 11 20.1 +0.1**
baz=9.0
BACT **New Taipei Cit** **0.84 341** P **Pn** **14 11 09.9 0.0**
baz=342
BACT S **Sn** **14 11 21.7 -0.2**
baz=342
NHY **Taipei** **0.86 350** P **Pn** **14 11 09.8 -0.2**
baz=350
NHY *e*S **Sn** **14 11 22.5 +0.2**
baz=350
TYC **Yuchr** **0.86 251** *i* P **Pb** **14 11 08.9 -0.2**
baz=241
TYC S **Sb** **14 11 20.4 0.0**
baz=241
TAP **Taipei** **0.87 346** *i* P **Pg** **14 11 09.7 +0.3**
baz=347
TAP *i* S **Sg** **14 11 21.5 +0.7**
baz=347
NWF **Wu-fen Shan** **0.87 2** ⇓*i*P **Pg** **14 11 09.6 +0.1**
baz=354
NWF *e*S **Sb** **14 11 20.4 -0.5**
baz=354
WFSB **Wu-fen Shan** **0.87 2** ⇓P **Pg** **14 11 09.7 +0.2**
baz=354
WFSB *e*S **Sb** **14 11 20.8 0.0**
baz=354
YULB **Yu-li** **0.90 207** Pg **Pb** **14 11 07.7 -2.1**
YULB **Yu-li** **0.90 207** P **Pb** **14 11 09.2 -0.5**
baz=218
YULB *e*S **Sb** **14 11 21.3 -0.2**
baz=218
TWQ1 **Liyutan** **0.90 280** *i* P **Pg** **14 11 10.4 +0.5**
baz=280
TWQ1 S **Sn** **14 11 23.4 +0.1**
baz=280
SXI1 **Grass Mountain** **0.90 8** ⇓P **Pb** **14 11 10.0 0.0**
baz=355
SXI1 *e*S **Sn** **14 11 23.5 -0.1**
baz=355
SBCB **Hsinchu** **0.91 311** P **Pn** **14 11 10.9 +0.2**
baz=311
SBCB *e*S **Sn** **14 11 23.4 -0.2**
baz=311
ECBN **Changbin** **0.91 197** P **Pb** **14 11 10.1 +0.1**
baz=189
ECBN S **Sn** **14 11 23.4 -0.2**
baz=189
NCUH **Zhongli** **0.92 327** P **Pn** **14 11 11.0 +0.1**
baz=327
NCUH S **Sn** **14 11 24.5 +0.6**
baz=327
EYUL **Yuli** **0.93 205** P **Pn** **14 11 11.0 0.0**
baz=217
EYUL *e*S **Sb** **14 11 22.2 -0.2**
baz=217
HSN **Hsinchu** **0.93 311** *i* P **Pn** **14 11 11.1 +0.2**
baz=314
HSN *i* S **Sn** **14 11 23.9 -0.1**
baz=314
NJN **Zhunan** **0.93 302** P **Pn** **14 11 11.4 +0.4**
baz=302
NJN *e*S **Sb** **14 11 22.7 +0.2**
baz=302
NMLH **Miaoli** **0.93 292** P **Pn** **14 11 11.5 +0.5**
baz=291
NMLH S **Sn** **14 11 24.2 +0.1**
baz=291
TWF1 **Yuli** **0.93 206** *i* P **Pb** **14 11 10.0 -0.3**
baz=216
TWF1 *e*S **Sb** **14 11 22.4 -0.1**
baz=216
TWS1 **Kuangyinshan** **0.95 342** *i* P **Pn** **14 11 11.4 +0.1**
baz=351
TWS1 *i* S **Sn** **14 11 25.0 +0.5**
baz=351
TNOU **National Taiwa** **0.95 2** ⇓P **Pg** **14 11 11.0 +0.1**
baz=2.0
TNOU *e*S **Sb** **14 11 22.9 -0.2**
baz=2.0
WHYT **Xinyi Township** **0.95 239** P **Pn** **14 11 11.8 +0.4**
baz=247
WHYT *e*S **Sb** **14 11 22.7 -0.4**
baz=247
YM01 **YM01** **0.96 351** P **Pg** **14 11 11.2 +0.1**
baz=351
YM01 *e*S **Sb** **14 11 23.6 +0.2**
baz=351
WWF **Wufeng** **0.96 261** P **Pn** **14 11 12.7 +1.2**
baz=256
WWF S **Sn** **14 11 26.6 +1.7**
baz=256
TCU **Taichung** **0.97 267** P **Pn** **14 11 12.5 +0.9**
baz=267
TCU S **Sn** **14 11 27.8 +2.7**
baz=267
WJS **Zhushan** **1.00 248** P **Pg** **14 11 12.6 +0.8**
baz=242
WJS S **Sn** **14 11 26.5 +0.8**
baz=242
NTST **Danshui** **1.00 345** P **Pg** **14 11 12.5 +0.6**
baz=354
NTST S **Sn** **14 11 27.8 +2.0**
baz=354
ANP **Anpu** **1.01 349** *i* P **Pb** **14 11 12.1 +0.3**
baz=349
ANP *e*S **Sb** **14 11 24.6 -0.2**
baz=349
WNT1 **Nantou City** **1.01 254** P **Pg** **14 11 13.2 +1.1**
baz=249
WNT1 S **Sn** **14 11 27.9 +1.9**
baz=249
WDJ **Dajia District** **1.02 279** ⇓P **Pg** **14 11 13.3 +1.1**
baz=279
WDJ *e*S **Sn** **14 11 26.4 +0.2**
baz=279
WNT **Mingjian** **1.02 252** *i* P **Pg** **14 11 13.0 +0.8**
baz=247
WNT *i* S **Sn** **14 11 27.4 +1.2**
baz=247
NHW **Xinwu Township** **1.03 322** *i* P **Pg** **14 11 12.9 +0.5**
baz=322
NHW S **Sn** **14 11 27.5 +1.0**
baz=322
CHKH **Chenggong** **1.05 198** P **Pb** **14 11 12.1 -0.2**
baz=216
CHKH S **Sn** **14 11 28.7 +1.8**
baz=216
FULB **Fuli** **1.07 203** P **Pg** **14 11 13.6 +0.4**
baz=219
FULB *e*S **Sn** **14 11 28.1 +0.5**
baz=219
TWY **Chenhua** **1.08 353** *i* P **Pg** **14 11 13.8 +0.3**
baz=338
WYL **Yuanlin Townsh** **1.09 258** P **Pg** **14 11 14.3 +0.8**
baz=258
WYL S **Sg** **14 11 30.7 +3.0**
baz=258
WCHH **Zhanghua** **1.09 264** P **Pg** **14 11 14.5 +1.0**
baz=264
ALS **Alishan** **1.09 232** *i* P **Pb** **14 11 13.3 0.0**
baz=232
ALS S **Sn** **14 11 30.1 +1.5**
baz=232
JYNG **Yonagunijimaku** **1.13 77** P **Pg** **14 11 14.3 0.0**
JYNG S **Sg** **14 11 29.7 +0.7**
JYNG **Yonagunijimaku** **1.13 77** A A 14 11 14.3
comp=E,20nm,8.3s,comp=N,31nm,4.4s
CHN5 **Tsauling** **1.14 239** *i* P **Pg** **14 11 14.8 +0.3**
baz=239
CHN5 *i* S **Sg** **14 11 31.2 +1.7**
baz=239
CHKT **Chengkung** **1.14 198** *i* P **Pn** **14 11 13.1 -0.9**
baz=215
CHKT *i* S **Sg** **14 11 31.3 +1.8**
baz=215
EHD **Haiduan** **1.15 205** P **Pb** **14 11 14.5 +0.4**
baz=207
EHD S **Sg** **14 11 31.3 +1.6**
baz=207
YOJ **Yonaguni jima** **1.19 77** Pn **Pb** **14 11 15.0 +0.2**
YOJ **Yonaguni jima** **1.19 77** P **Pg** **14 11 15.1 -0.3**
baz=64
YOJ S **Sg** **14 11 33.3 +2.3**
baz=64
YOJ **Yonaguni jima** **1.19 77** P **Pg** **14 11 15.2 -0.2**
YOJ *e*S **Sg** **14 11 32.9 +1.9**
YOJ **Yonaguni jima** **1.19 77** A A 14 11 15.2
comp=E,21nm,3.4s,comp=N,27nm,4.3s
WGK **Gukeng** **1.19 245** *i* P **Pg** **14 11 15.9 +0.4**
baz=245
WGK *i* S **Sg** **14 11 32.5 +1.4**
baz=245
ECS **Chishang** **1.19 204** P **Pg** **14 11 15.5 -0.1**
baz=218
ECS *e*S **Sg** **14 11 33.3 +2.1**
baz=218
ELDTW **Lidau** **1.20 214** *i* P **Pn** **14 11 15.1 +0.2**
baz=228
ELDTW S **Sg** **14 11 32.7 +1.3**
baz=228
WDLH **Douliu** **1.21 246** P **Pg** **14 11 16.3 +0.4**
baz=246
WDLH S **Sg** **14 11 33.2 +1.5**
baz=246
EDH **Donghe** **1.28 198** P **Pn** **14 11 15.9 +0.1**
baz=182
EDH S **Sg** **14 11 34.4 +0.4**
baz=182
WRL **Guolierlin Hig** **1.28 257** P **Pg** **14 11 17.3 +0.1**
baz=273
WRL S **Sg** **14 11 34.9 +0.9**
baz=273
WCKO **Fanlu** **1.28 234** P **Pg** **14 11 17.5 +0.2**
baz=235
WCKO S **Sg** **14 11 35.7 +1.7**
baz=235
CHN2 **Minshiung** **1.33 241** *i* P **Pg** **14 11 18.9 +0.7**
baz=241
CHN2 *i* S **Sg** **14 11 36.9 +1.3**
baz=241
WTK **Tuku** **1.34 248** P **Pg** **14 11 18.4 +0.1**
baz=236
WTK S **Sg** **14 11 36.7 +1.0**
baz=236
CHN4 **Tsaushan** **1.35 232** *i* P **Pg** **14 11 18.6 +0.1**
baz=221
CHN4 *i* S **Sg** **14 11 38.4 +2.4**
baz=221
STYH **Taoyuan** **1.35 221** P **Pb** **14 11 17.9 +0.4**
baz=223
STYH S **Sg** **14 11 36.6 +0.5**
baz=223
TPUB **Ta-pu** **1.35 229** **Pn** **14 11 15.4 -1.4**
TPUB **Ta-pu** **1.35 229** P **Pg** **14 11 18.4 -0.2**
baz=218
TPUB S **Sg** **14 11 37.8 +1.6**
baz=218
STYT **Tauyuan** **1.37 222** *i* P **Pb** **14 11 18.0 +0.2**
baz=223
STYT *i* S **Sg** **14 11 36.7 +0.1**
baz=223
CHY **Chiayi** **1.39 240** P **Pb** **14 11 18.9 +0.8**
baz=240
CHY *e*S **Sg** **14 11 38.4 +1.0**
baz=240
LONT **Longtian** **1.40 204** P **Pn** **14 11 17.1 -0.4**
baz=207
LONT *e*S **Sn** **14 11 35.9 +0.2**
baz=207
WTP **Ta-pu** **1.40 228** *i* P **Pg** **14 11 19.2 -0.3**
baz=217
WTP *i* S **Sg** **14 11 38.9 +1.2**
baz=217
WMLT **Mailiao** **1.44 255** *e*P **Pg** **14 11 20.2 -0.1**
baz=271
WMLT S **Sg** **14 11 41.1 +2.1**
baz=271
PCYT **Pengchaiyu** **1.46 12** *i* P **Pb** **14 11 19.8 +0.5**
baz=12
PCYT *e*S **Sg** **14 11 39.4 -0.2**
baz=12
TWK **Hsinying** **1.47 231** *i* P **Pg** **14 11 20.6 -0.3**
baz=233
TWK *i* S **Sg** **14 11 41.3 +1.2**
baz=233
WSF **Szhu** **1.50 249** *i* P **Pb** **14 11 20.5 +0.6**
baz=237
WSF *i* S **Sg** **14 11 41.1 +0.3**
baz=237
SNST **Tainan City** **1.50 230** P **Pg** **14 11 21.3 -0.1**
baz=232
SNST S **Sg** **14 11 41.8 +1.0**
baz=232
CHN1 **Nanshi** **1.50 228** *i* P **Pg** **14 11 21.0 -0.4**
baz=230
CHN1 *i* S **Sg** **14 11 42.1 +1.2**
baz=230
TWG **Pinlang** **1.50 204** **Pn** **14 11 16.2 -2.7**
TWG **Pinlang** **1.50 204** *i* P **Pn** **14 11 17.7 -1.1**
baz=207
TWG *e*S **Sn** **14 11 38.1 0.0**
baz=207
TWGBT **Beinan** **1.50 204** P **Pn** **14 11 17.4 -1.5**
baz=207
TWGBT *e*S **Sb** **14 11 39.8 +0.9**
baz=207
LDUT **Ludao** **1.53 189** *e*P **Pb** **14 11 20.6 -0.1**
baz=180
LDUT S **Sn** **14 11 39.1 +0.2**
baz=180
SGST **Jiashian** **1.53 224** *i* P **Pb** **14 11 21.2 +0.6**
baz=226
SGST *i* S **Sg** **14 11 42.6 +0.6**
baz=226
TTN **Taitung** **1.53 201** *e*P **Pb** **14 11 21.1 +0.5**
baz=204
TTN *e*S **Sg** **14 11 42.1 +0.1**
baz=204
WSL **Shuilin Townsh** **1.54 245** *e*P **Pb** **14 11 21.4 +0.7**
baz=245
WSL S **Sg** **14 11 42.9 +0.8**
baz=245
SLGT **Liugui** **1.56 220** *i* P **Pg** **14 11 22.3 -0.2**
baz=223
SLGT *i* S **Sg** **14 11 44.5 +1.6**
baz=223
ICHU **Yijhu** **1.58 239** P **Pb** **14 11 22.2 +0.8**
baz=225
ICHU S **Sg** **14 11 43.5 +0.1**
baz=225
CHN8 **Yiju** **1.64 239** *i* P **Pb** **14 11 22.8 +0.5**
baz=226
CHN8 *i* S **Sg** **14 11 45.0 -0.2**
baz=226
CHN3 **Shinhua** **1.68 229** *i* P **Pg** **14 11 24.4 -0.4**
baz=233
CHN3 *i* S **Sg** **14 11 47.2 +0.5**
baz=233
SSHA **Shanhua** **1.70 232** P **Pb** **14 11 24.3 +0.9**
baz=235
SSHA S **Sg** **14 11 47.3 0.0**
baz=235
SHHT **Tainan City** **1.73 228** P **Pg** **14 11 25.7 -0.1**
baz=232
SHHT *e*S **Sg** **14 11 47.7 -0.6**
baz=232
SCST **Cishan** **1.73 222** P **Pb** **14 11 25.1 +1.1**
baz=225
SCST *e*S **Sb** **14 11 46.9 +1.3**
baz=225
SCLT **Jiali** **1.74 235** *i* P **Pb** **14 11 24.3 +0.1**
baz=237
SCLT *i* S **Sg** **14 11 48.3 -0.4**
baz=237
ECL **Taimali** **1.75 205** *e*P **Pb** **14 11 23.8 -0.5**
baz=193
ECL *e*S **Sn** **14 11 44.5 +0.3**
baz=193
TSMG **Majia** **1.79 214** P **Pb** **14 11 25.0 0.0**
baz=235
TSMG S **Sg** **14 11 49.3 -0.9**
baz=235
TAI1 **Yung-k'ang** **1.80 231** *i* P **Pb** **14 11 25.0 -0.2**
baz=234
TAI1 S **Sg** **14 11 49.7 -0.8**
baz=234
IRIF **Iriomote-Funau** **1.82 85** P **Pn** **14 11 23.8 +0.5**
IRIF S **Sb** **14 11 47.9 -0.2**
IRIF **Iriomote-Funau** **1.82 85** A A 14 11 23.8
comp=E,18nm,3.8s,comp=N,21nm,3.7s
TWM1 **Shoushan** **1.82 222** *i* P **Pg** **14 11 26.9 -0.7**
baz=225
TSCK **Chigu Township** **1.84 236** P **Pb** **14 11 25.9 0.0**
baz=240
TSCK S **Sb** **14 11 50.1 +1.4**
baz=240
SGLT **Jiouru** **1.86 218** *i* P **Pg** **14 11 27.5 -0.7**
baz=223
SGLT *e*S **Sg** **14 11 51.3 -1.1**
baz=223
MASBT **Mashibuluo** **1.88 213** P **Pb** **14 11 26.0 -0.4**
baz=219
MASBT S **Sb** **14 11 51.3 +1.6**
baz=219
HATJ **Hateruma jima** **1.89 94** *e*P **Pn** **14 11 25.1 +0.9**
HATJ *e*S **Sb** **14 11 49.0 -1.1**
TSPT **Pingtung City** **1.89 217** *e*P **Pb** **14 11 27.7 +1.0**
baz=223
TSPT *e*S **Sg** **14 11 55.5 +1.9**
baz=223
SNJT **Kaohsiung City** **1.93 222** P **Pb** **14 11 27.4 +0.1**
baz=227
EAST **Anshuo** **1.98 205** *e*P **Pn** **14 11 26.3 +0.8**
baz=196
TAW **Tawu** **1.99 203** *e*P **Pn** **14 11 25.9 +0.4**
baz=194
TAW *e*S **Sn** **14 11 51.1 +1.0**
baz=194
TAWH **Dawu Township** **2.01 203** *e*P **Pn** **14 11 25.8 0.0**
baz=195
WSSB **Gushan** **2.06 222** P **Pb** **14 11 29.2 -0.4**
baz=226
JKRS **Kuro-shima** **2.07 88** P **Pn** **14 11 27.9 +1.2**
JKRS S **Sb** **14 11 54.6 -0.7**
JKRS **Kuro-shima** **2.07 88** A A 14 11 27.9
comp=E,27nm,4.8s,comp=N,35nm,6.6s
SCZT **Fangliau** **2.09 210** P **Pb** **14 11 29.5 -0.5**
baz=198
PNG **Penghu** **2.10 253** *i* P **Pn** **14 11 27.9 +0.8**
baz=254
PNG *i* S **Sb** **14 11 55.7 -0.3**
baz=254
PHUB **P'eng-hu** **2.10 252** P **Pn** **14 11 27.9 +0.9**
baz=253
PHUB S **Sb** **14 11 55.9 -0.2**
baz=253
WDGT **Dungji** **2.12 244** *i* P **Pn** **14 11 28.8 +1.4**
baz=247
WDGT *i* S **Sb** **14 11 56.6 -0.2**
baz=247
SLIU **Shizi** **2.15 204** P **Pn** **14 11 29.4 +1.5**
baz=196
SLIU *e*S **Sb** **14 11 57.9 +0.3**
baz=196
LAY **Lan-yu** **2.15 185** *e*P **Pn** **14 11 26.7 -1.2**
baz=177
LAY *e*S **Sn** **14 11 55.3 +1.0**
baz=177
LYUB **Lan-yu** **2.19 184** P **Pn** **14 11 26.9 -1.4**
baz=189
JIJ **Ishigaki jima** **2.20 85** P **Pn** **14 11 29.1 +0.6**
JIJ *e*S **Sn** **14 11 56.4 +1.0**
VWUC **VWUC** **2.23 291** P **Pn** **14 11 29.1 +0.2**
baz=290
VWUC *e*S **Sb** **14 11 58.9 -1.1**
baz=290
VCHM **Qimei** **2.33 246** P **Pn** **14 11 32.0 +1.6**
baz=234
VCHM *i* S **Sb** **14 12 01.9 -1.0**
baz=234
HEN **Hengchun** **2.37 203** *e*P **Pb** **14 11 34.0 -0.8**
baz=198
JISG **Ishigakijimahi** **2.38 80** P **Pn** **14 11 31.2 +0.4**
JISG S **Sn** **14 12 00.9 +1.2**
JTJ **Tarama** **2.73 80** P **Pn** **14 11 37.0 +1.2**
JTJ S **Sn** **14 12 11.3 +2.7**
QZH **Quanzhou** **2.96 285** ⇑*i*Pn **Pn** **14 11 39.4 +0.4**
QZH Sn **Sn** **14 12 14.2 0.0**
KNMB **Chin-men Tao** **3.07 276** Pn **Pn** **14 11 40.1 -0.3**
JIRB **Irabujima** **3.19 78** *e*P **Pn** **14 11 43.3 +1.2**
JIRB *e*S **Sn** **14 12 22.5 +2.6**
JIKM **Ikemajima** **3.27 76** *e*P **Pn** **14 11 45.4 +2.1**
JIKM *e*S **Sn** **14 12 25.6 +3.7**
JMJ2 **Miyako jima3** **3.31 80** P **Pn** **14 11 45.6 +1.8**
JMJ2 S **Sn** **14 12 26.1 +3.2**
JOGS **Gusukube** **3.39 80** P **Pn** **14 11 47.5 +2.7**
JOGS *e*S **Sn** **14 12 28.5 +3.8**
ZPLA **Ao Xicun** **3.66 267** *e*P **Pn** **14 11 49.4 +0.9**
baz=265
JOW **Kunigami** **6.46 65** Pn **Pn** **14 12 27.0 -0.1**
comp=N,16nm,0.3s,baz=189,slow=10,SNR=19

JOW Sn **Sn** 14 13 34.7 -5.8
baz=298,slow=28 comp=N,40nm,0.4s
NJ2 Nanjing 8.23 343 *e*P **Pn** 14 12 52.9 +1.5
NJ2 pmax pmax
comp=N,36nm,0.5s
JNU Nakatsue 11.97 40 Pn **Pn** 14 13 44.3 +1.7
comp=N,0.2nm,0.3s,baz=108,slow=23,SNR=1.6
QIZ Qiongzhong 12.20 247 P **Pn** 14 13 46.0 +0.2
GYA Guiyang 13.82 283 *e*P **P** 14 14 16.5 +0.1
GYA pmax pmax
comp=N,16nm,1.0s
KSRS Korea Array 14.24 20 Pn **Pn** 14 14 15.6 +2.1
comp=N,1.0nm,0.3s,baz=205,slow=13,SNR=9.3
KS19 Wonju Array Si 14.26 20 Pn **Pn** 14 14 14.7 +0.7
DL2 Dalian 14.67 360 P **Pn** 14 14 20.4 +1.0
DL2 pmax pmax
comp=N,22nm,1.1s
PZH PanZhiHua 18.22 281 P **P** 14 15 09.7 +4.4
HHC Hu-ho-hao-te 18.67 335 *e*P **Pn** 14 15 12.1 +1.7
MJAR Matsushiro Arr 18.76 45 P **P** 14 15 09.5 -1.5
comp=N,3.1nm,0.9s,baz=107,slow=36,SNR=2.2
BTO Baotou 19.09 332 *e*P **Pn** 14 15 18.2 +2.7
BTO sP **sP** 14 15 25.1 +3.9
BTO PP **PnPn** 14 15 35.9 +7.6
BTO pmax pmax
comp=N,50nm,1.3s
XLT XiLinHaoTe 20.20 348 *e*P Pn 14 15 32.7 +4.1
XLT pmax pmax
comp=N,15nm,1.0s
TNCH TengChong 21.13 277 P **P** 14 15 38.1 +1.0
MDJ Mudanjiang 21.36 16 P **P** 14 15 37.4 -1.7
MDJ sP pP 14 15 42.5 -0.6
MDJ PcP PcP 14 19 22.5 -20
MDJ S Sn 14 19 51.7 +8.3
MDJ sS pS 14 19 55.8 +11
MDJ ScP ScP 14 23 00.6 -19
MDJ Mudanjiang 21.36 16 ScS ScS 14 26 51.8 -11
MDJ pmax pmax
comp=Z,18nm,2.0s
MDJ pmax pmax
comp=Z,28µm,11.3s
MDJ LR LR
comp=N,14µm,15.1s
MDJ LR LR
comp=E,16µm,13.1s
MDJ LR LR
comp=Z,13µm,15.1s
USRK Ussuriysk Ar. 21.65 20 P **P** 14 15 42.9 +0.6
comp=Z,6.1nm,0.7s,baz=195,slow=7.3,SNR=8.8 comp=Z,6.1nm,0.7s
BNX BinXian 21.98 11 ⇓P **P** 14 15 48.2 +2.4
BNX pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 21.98 259 P **P** 14 15 47.9 +1.9
comp=Z,1.4nm,0.7s,baz=62,slow=7.9,SNR=9.8 comp=Z,1.4nm,0.7s
GTA Gaotai 23.94 315 *e*P **P** 14 16 07.8 +1.6
GTA sP sP 14 16 15.9 +3.4
GTA pmax pmax
comp=Z,8.0nm,0.7s
HIA Hailar 25.07 357 P **P** 14 16 16.7 +0.4
ASAJ Asahikawa 26.19 36 P **P** 14 16 24.2 -2.2
comp=Z,7.1nm,0.9s,baz=223,slow=13,SNR=11 comp=Z,7.1nm,0.9s
KLR Kul'dur 26.20 15 P **P** 14 16 26.2 -0.2
comp=Z,4.8nm,0.5s,baz=208,slow=8.5,SNR=27 comp=Z,4.8nm,0.5s
HEH HeiHe 26.39 8 *e*P **P** 14 16 27.9 -0.2
HEH pmax pmax
comp=Z,22nm,1.5s
SONM Songino Array 26.56 336 P **P** 14 16 30.0 +0.1
comp=Z,7.1nm,0.9s,baz=159,slow=11,SNR=20 comp=Z,7.1nm,0.9s
WMQ Urumqi 34.02 314 *e*P **P** 14 17 37.0 +1.2
YAK Yakutsk 38.20 6 P **P** 14 18 09.8 -1.5
comp=Z,8.4nm,0.6s,baz=252,slow=9.6,SNR=2.0 comp=Z,8.4nm,0.6s
MK31 Makanchi Array 38.69 316 P **P** 14 18 15.4 -0.2
MK31 IAmb IAmb 14 18 21.0
comp=Z,35nm,1.8s
MKAR Makanchi Array 38.69 316 P **P** 14 18 16.0 +0.3
comp=Z,5.7nm,0.7s,baz=104,slow=10,SNR=25 comp=Z,5.7nm,0.7s
MAKZ Makanchi 38.89 316 P **P** 14 18 17.6 +0.2
ZAA0 Zalesovo Array 40.51 327 P **P** 14 18 29.2 -1.6
ZALV Zalesovo Beam 40.51 327 P **P** 14 18 29.2 -1.5
ZALV Zalesovo Beam 40.51 327 P **P** 14 18 29.9 -0.8
comp=Z,5.5nm,0.6s,baz=109,slow=7.7,SNR=18 comp=Z,5.5nm,0.6s
NRN Naryn 41.59 306 P **P** 14 18 39.8 -0.4
KURK Kurchatov 42.41 320 P **P** 14 18 46.3 0.0
KURBB Kurchatov Arra 42.43 320 P **P** 14 18 46.3 -0.2
comp=Z,2.1nm,0.8s,baz=113,slow=8.6,SNR=13 comp=Z,2.1nm,0.8s
SEY Seymchan 43.80 20 P **P** 14 18 56.5 -0.9
comp=Z,1.5nm,0.6s,baz=213,slow=22,SNR=7.1 comp=Z,1.5nm,0.6s
PSA00 Pilbara Seismi 45.53 182 P **P** 14 19 08.3 -3.3
WRA Warramunga Arr 45.55 163 P **P** 14 19 10.3 -1.6
comp=Z,3.3nm,0.6s,baz=344,slow=8.7,SNR=24 comp=Z,3.3nm,0.6s
WR0 Warramunga Arr 45.62 163 P **P** 14 19 10.7 -1.7
KKAR Karatay Array 45.87 307 P **P** 14 19 14.0 -0.3
TIXI Tiksi 47.66 3 P **P** 14 19 26.4 -1.3
BVAR Borovoye Array 47.99 321 P **P** 14 19 30.6 0.0
comp=Z,3.3nm,0.6s,baz=100,slow=8.5,SNR=26 comp=Z,3.3nm,0.6s
BRVK Borovoye 48.06 321 P **P** 14 19 31.5 +0.3
AS31 Alice Springs 49.02 165 P **P** 14 19 37.5 -1.4
ASAR Alice Springs 49.02 165 P **P** 14 19 38.5 -0.3
comp=Z,1.5nm,0.6s,baz=340,slow=6.9,SNR=30 comp=Z,1.5nm,0.6s
NRIK Noril'sk 49.52 345 P **P** 14 19 40.9 -1.2
comp=Z,4.5nm,0.7s,baz=142,slow=6.3,SNR=6.1 comp=Z,4.5nm,0.7s
ABKAR Akbulak array 53.80 314 P **P** 14 20 14.5 +0.1
ABKAR Akbulak array 53.80 314 IAmb IAmb 14 20 18.8
comp=Z,4.2nm,0.8s
GEYT Alibeck 55.23 300 P **P** 14 20 26.5 +1.4
comp=Z,2.7nm,0.8s,baz=132,slow=2.2,SNR=4.9 comp=Z,2.7nm,0.8s
P08K Saint George I 58.47 37 P **P** 14 20 48.1 +0.5
baz=266
STKA Stephens Creek 58.90 160 P **P** 14 20 51.1 +0.3
comp=Z,0.8nm,0.5s,baz=331,slow=15,SNR=4.7 comp=Z,0.8nm,0.5s
TNA Tin City 60.10 27 P **P** 14 20 59.2 +0.4
baz=263
M11K Mekoryuk 60.43 33 P **P** 14 21 00.5 -0.6
baz=267
F14K Arctic Creek 60.75 27 P **P** 14 21 03.9 +0.6
baz=264
ANM Nome 61.08 28 P **P** 14 21 05.6 +0.1
baz=266
C16K Lisburne Hills 61.44 24 P **P** 14 21 07.6 -0.2
baz=264
F15K North Star Dit 61.47 27 P **P** 14 21 08.2 +0.1
baz=266
G15K Niukluk 61.68 28 P **P** 14 21 09.5 0.0
baz=267
J14K Nanvaranak Lak 61.79 30 P **P** 14 21 10.2 -0.1
baz=268
FALS False Pass 61.93 39 P **P** 14 21 11.2 -0.2
baz=273
L14K Kuka Creek 62.18 32 P **P** 14 21 12.8 -0.2
baz=270
C17K DeLong Mountai 62.26 24 P **P** 14 21 13.5 +0.1
baz=266
G16K Koyuk River 62.41 27 P **P** 14 21 14.0 -0.4
baz=268
H16K Elim 62.43 28 P **P** 14 21 14.1 -0.5
baz=268
M14K Bethel 62.53 33 P **P** 14 21 14.9 -0.4
baz=271
E17K Hotham Inlet 62.69 25 P **P** 14 21 16.5 +0.2
baz=268
N14K Kuskokwak Cree 62.69 33 P **P** 14 21 15.9 -0.4
baz=271
K15K Wolf Creek Mou 62.72 31 P **P** 14 21 16.6 0.0
baz=270
L15K Ungalak Mounta 62.75 31 P **P** 14 21 17.4 +0.6
baz=271
B18K Kokolik River 62.81 23 P **P** 14 21 17.3 +0.2
baz=266
F17K Baldwin Pennin 62.89 26 P **P** 14 21 17.8 +0.2
baz=268
C18K Utukok River 62.99 24 P **P** 14 21 18.2 -0.2
baz=267
I17K Unalakleet 63.10 29 P **P** 14 21 18.9 -0.2
baz=270
G17K Kiwalik Mounta 63.12 27 P **P** 14 21 19.0 -0.2
baz=269
J16K Anvik River 63.14 30 P **P** 14 21 19.7 +0.4
baz=271
E18K Tukpahlearik C 63.17 25 P **P** 14 21 19.7 +0.2
baz=268
H17K Granite Mounta 63.43 28 IAmb IAmb 14 21 23.1
comp=Z,8.9nm,1.1s
H17K Granite Mounta 63.43 28 P **P** 14 21 21.3 0.0
baz=270
N15K Kwethluk River 63.48 33 P **P** 14 21 21.7 0.0
baz=273
F18K Selawik 63.53 26 P **P** 14 21 22.0 +0.1
baz=270
C19K Lookout Ridge 63.59 23 P **P** 14 21 22.6 +0.3
baz=269
O15K Ungalikthiuk R 63.66 34 P **P** 14 21 23.1 +0.2
baz=273
L16K Owhat River 63.71 31 P **P** 14 21 23.1 0.0
baz=272
G18K Tagagawik 63.94 27 P **P** 14 21 24.5 -0.2
baz=271
M16K Timber Creek 63.99 32 P **P** 14 21 25.2 +0.2
baz=273
H18K Honhosa River 64.08 28 P **P** 14 21 25.8 +0.2
baz=272
N16K Nishlik Lake 64.12 33 P **P** 14 21 25.6 -0.3
baz=274
D19K Kuna River 64.12 24 P **P** 14 21 26.2 +0.4
baz=270
CHNA Chernabura Isl 64.14 39 P **P** 14 21 26.4 +0.3
baz=276
K17K Iditarod 64.21 30 P **P** 14 21 26.9 +0.5
baz=273
L17K Donlin 64.24 31 P **P** 14 21 26.7 0.0
baz=273
F19K Shaleruckik Mo 64.28 26 P **P** 14 21 26.6 -0.2
baz=271
B20K Meade River 64.45 22 P **P** 14 21 28.3 +0.4
baz=270
E19K Redstone River 64.47 25 IAmb IAmb 14 21 30.8
comp=Z,7.1nm,0.8s
E19K Redstone River 64.47 25 P **P** 14 21 28.4 +0.3
baz=272
O16K Kokwok River B 64.52 34 P **P** 14 21 28.1 -0.4
baz=275
G19K Purcell Mounta 64.58 26 P **P** 14 21 29.2 +0.4
baz=272
A21K Barrow 64.62 21 P **P** 14 21 29.4 +0.4
baz=270
CHGN Chignik 64.65 37 P **P** 14 21 29.2 -0.2
baz=276
D20K Etivluk River 64.67 24 P **P** 14 21 30.0 +0.6
baz=272
M17K Holitna River 64.70 32 P **P** 14 21 29.5 -0.2
baz=274
GCSA Galena City Sc 64.73 28 P **P** 14 21 29.8 +0.1
baz=273
E20K Nigu River 64.84 24 P **P** 14 21 30.6 0.0
baz=272
H19K Roundabout Mou 64.87 27 P **P** 14 21 31.0 +0.3
baz=273
J18K Innoko River 64.89 29 P **P** 14 21 30.7 -0.1
baz=274
N17K Nushagak Hills 64.89 33 P **P** 14 21 30.8 -0.2
baz=275
L18K Granite Mounta 64.99 31 P **P** 14 21 31.8 +0.3
baz=275
O17K Koliganek Bris 65.01 33 P **P** 14 21 31.3 -0.4
baz=275
F20K Avaraart Lake 65.08 25 P **P** 14 21 31.7 -0.2
baz=273
TTA Tatalina 65.24 30 P **P** 14 21 33.1 -0.2
TTA Tatalina 65.24 30 P **P** 14 21 33.3 0.0
baz=275
C21K Knifeblade Rid 65.31 23 P **P** 14 21 34.0 +0.4
baz=273
J19K Poorman 65.33 29 P **P** 14 21 33.6 -0.1
baz=275
Q16K King Salmon 65.34 35 P **P** 14 21 33.7 -0.1
baz=276
B21K Ikpikpuk River 65.35 23 P **P** 14 21 34.2 +0.5
baz=273
P17K Kvichak River 65.40 34 P **P** 14 21 34.8 +0.6
baz=276
M18K Stony River 65.46 32 P **P** 14 21 34.3 -0.3
baz=276
N18K Kilae Creek 65.52 32 P **P** 14 21 34.8 -0.2
baz=276
H20K Anotleneega Mo 65.52 27 P **P** 14 21 34.6 -0.3
baz=275
E21K Killik River 65.65 24 P **P** 14 21 35.7 -0.1
baz=274
ONI Oni 65.69 307 P **P** 14 21 37.1 +0.6
ONI IAmb IAmb 14 21 39.1
comp=Z,7.3nm,1.1s
B22K Teshekpuk Lake 65.71 22 P **P** 14 21 36.0 -0.1
baz=274
I20K Naaghedeneel 65.75 28 P **P** 14 21 36.4 0.0
baz=275
Q17K Contact Creek 65.79 35 P **P** 14 21 36.9 0.0
baz=277
L19K White Mountain 65.85 31 P **P** 14 21 37.0 -0.2
baz=276
KBZ Khabaz 65.87 309 P **P** 14 21 37.6 +0.1
comp=Z,4.3nm,0.8s,baz=99,slow=7.4,SNR=7.4 comp=Z,4.3nm,0.8s
F21K Alatna River 65.94 25 P **P** 14 21 37.6 0.0
baz=275
O18K Koktuh Hills 65.95 33 P **P** 14 21 37.6 -0.2
baz=277
J20K Nowinta River 65.96 28 P **P** 14 21 38.2 +0.4
baz=276
G21K Allakaket 65.99 26 IAmb IAmb 14 21 39.2
comp=Z,6.3nm,0.8s
G21K Allakaket 65.99 26 P **P** 14 21 38.2 +0.3
baz=275
P18K Big Mountain, 65.99 34 P **P** 14 21 38.0 -0.1
baz=277
K20K Telida 66.08 29 P **P** 14 21 38.7 +0.1
baz=276
D22K Ayikyak River 66.09 23 P **P** 14 21 38.8 +0.3
baz=275
M19K Big River Lodg 66.10 31 P **P** 14 21 39.4 +0.6
baz=277
L20K Farewell, AK 66.27 30 P **P** 14 21 40.7 +0.8
baz=277
O19K Port Alsworth 66.35 33 P **P** 14 21 40.8 +0.5
baz=278
H21K Melozitna Rive 66.37 27 P **P** 14 21 40.9 +0.5
baz=276
E22K Anaktuvuk Pass 66.48 24 P **P** 14 21 41.7 +0.6
baz=276
M20K Styx River 66.69 31 P **P** 14 21 45.2 +2.5
baz=278
G22K Bettles 66.74 25 P **P** 14 21 43.0 +0.3
baz=277
I21K Tanana 66.77 27 P **P** 14 21 43.5 +0.6
baz=277
CHUM Lake Minchumin 66.79 29 P **P** 14 21 43.7 +0.6
baz=278
D23K Nanushuk River 66.80 23 P **P** 14 21 43.9 +0.8
baz=277
Q19K Cape Douglas, 66.86 34 P **P** 14 21 44.0 +0.3
baz=279
H22K Ishtalitna Cre 66.92 26 P **P** 14 21 44.8 +0.9
baz=278
CAST Castle Rocks 66.96 29 P **P** 14 21 45.0 +0.8
baz=278
P19K Oil Pt 66.97 33 P **P** 14 21 45.1 +0.7
baz=279
PPLA Purkeypile 66.99 30 P **P** 14 21 45.1 +0.5
baz=278
COLD Coldfoot 67.20 25 P **P** 14 21 46.3 +0.6
baz=278
N20K Mount Spurr 67.23 32 P **P** 14 21 46.9 +0.8
baz=279
E23K Chandalar 67.31 24 P **P** 14 21 46.8 +0.4
baz=278
MLY Manley 67.31 27 IAmb IAmb 14 21 47.7
comp=Z,3.5nm,0.6s
MLY Manley 67.31 27 P **P** 14 21 46.9 +0.5
baz=278
OHAK Old Harbor 67.32 36 P **P** 14 21 47.0 +0.4
baz=280
BPAW Bear Paw Mtn. 67.34 28 P **P** 14 21 47.1 +0.5
baz=279
G23K Bananza Creek 67.35 26 P **P** 14 21 47.1 +0.4
baz=278
C24K Franklin Bluff 67.39 22 P **P** 14 21 47.0 +0.2
baz=278
SKT Skwentna 67.43 31 P **P** 14 21 48.3 +1.0
baz=279
D24K Happy Valley 67.43 23 P **P** 14 21 47.2 +0.1
baz=278
Q20K Shuyak Island 67.56 34 P **P** 14 21 48.7 +0.7
baz=280
KDAK Kodiak Island 67.60 35 P **P** 14 21 47.9 -0.4
comp=Z,13nm,0.8s,baz=295,slow=9.9,SNR=4.1 comp=Z,13nm,0.8s
TRF Thorofare Moun 67.75 29 P **P** 14 21 50.1 +0.7
baz=280
I23K Minto, Yukon-K 67.86 27 IAmb IAmb 14 21 53.1
comp=Z,16nm,1.6s
I23K Minto, Yukon-K 67.86 27 P **P** 14 21 50.4 +0.6
baz=280
SUA Susitna One 67.88 31 P **P** 14 21 51.0 +0.8
baz=280
CUT Chulitna 67.94 30 P **P** 14 21 50.7 +0.3
baz=280
F24K Squaw Lake 68.04 24 P **P** 14 21 51.6 +0.5
baz=280
D25K Kavik River 68.27 22 P **P** 14 21 53.0 +0.6
baz=281
MCK McKinley 68.30 29 P **P** 14 21 52.5 -0.1
baz=281
G24K Hadweenzic Riv 68.35 25 P **P** 14 21 53.3 +0.3
baz=281
H24K Noodor Dome 68.35 26 P **P** 14 21 53.3 +0.3
baz=281
RND Reindeer 68.40 29 IAmb IAmb 14 21 57.8
comp=Z,12nm,1.0s
RC01 Rabbit Creek A 68.43 31 P **P** 14 21 54.1 +0.6
baz=281
COLA College 68.55 27 P **P** 14 21 54.7 +0.5
baz=281
PMR Palmer 68.62 31 P **P** 14 21 55.3 +0.6
baz=281
WAT1 Susitna Watana 68.64 30 P **P** 14 21 55.3 +0.4
baz=281
POKR Poker Plat Res 68.67 27 P **P** 14 21 54.9 -0.1
baz=281
E25K Arctic Village 68.79 24 P **P** 14 21 55.6 -0.1
baz=282
G25K Bearman Lake 68.87 25 P **P** 14 21 56.6 +0.5
baz=282
F25K Christian Rive 68.87 24 P **P** 14 21 56.6 +0.4
baz=282
SML Sawmill 68.95 31 P **P** 14 21 57.3 +0.5
baz=282
ILAR Eielson Array 68.97 27 P **P** 14 21 55.8 -1.1
comp=Z,0.7nm,0.5s,baz=269,slow=4.9,SNR=23 comp=Z,0.7nm,0.5s
KNK Knik Glacier 68.97 31 P **P** 14 21 56.3 -0.7
baz=282
HDA Harding Lake 69.02 28 P **P** 14 21 56.6 -0.5
baz=282
WAT6 Susitna Watana 69.06 30 P **P** 14 21 57.2 -0.5
baz=282
DHY Denali Highway 69.12 29 P **P** 14 21 57.6 -0.3
baz=282
M23K Glacier View 69.23 31 P **P** 14 21 58.1 -0.4
baz=282
PRP Porcupine Dome 69.37 26 P **P** 14 21 59.0 -0.5
baz=283
SCM Sheep Creek Mo 69.41 30 P **P** 14 21 59.4 -0.2
baz=283
SPITS Spitsbergen Ar 69.58 348 P **P** 14 22 00.2 -0.2
comp=Z,24nm,1.2s,baz=66,slow=8.3,SNR=6.2 comp=Z,24nm,1.2s
J25K Salcha River, 69.64 27 P **P** 14 22 00.2 -0.8
baz=283
K24K Donnelly Dome 69.66 28 P **P** 14 22 01.1 0.0
baz=283
P23K Montague Islan 69.79 32 P **P** 14 22 01.8 -0.2
baz=283
M24K Tolsona, Glenn 69.88 30 P **P** 14 22 02.5 -0.1
baz=284
PAX Paxson 69.99 29 P **P** 14 22 03.2 0.0
baz=284
RIDG Independent Ri 70.07 28 P **P** 14 22 03.2 -0.5
baz=284
KLU Klutina 70.14 31 P **P** 14 22 03.7 -0.5
baz=284
D27M Malcolm River 70.16 22 P **P** 14 22 03.8 -0.3
baz=286
HARP HAARP 70.27 30 P **P** 14 22 04.8 -0.1
baz=284
SCRK Sand Creek 70.38 28 P **P** 14 22 04.8 -0.9
baz=285
J26L Joseph Creek 70.42 27 IAmb IAmb 14 22 05.7
comp=Z,9.9nm,1.2s
J26L Joseph Creek 70.42 27 P **P** 14 22 05.3 -0.6
baz=285
EYAK Cordova Ski Ar 70.45 32 P **P** 14 22 04.8 -1.2
baz=284
N25K Chitina, Valde 70.72 30 P **P** 14 22 07.2 -0.6
baz=285
H27K Steamboat Moun 70.78 25 P **P** 14 22 08.3 +0.3
baz=286
E28M Babbage River 70.83 23 P **P** 14 22 07.9 -0.4
baz=287
BMRM Bremner River 70.89 31 P **P** 14 22 08.4 -0.3
baz=285
D28M Stokes Point 70.89 22 P **P** 14 22 08.6 +0.1
baz=288
L26K Log Cabin Wild 70.91 29 P **P** 14 22 08.3 -0.5
baz=286
I27K Kandik River 70.92 26 P **P** 14 22 08.6 -0.3
baz=286
F28M Old Crow 71.01 24 IAmb IAmb 14 22 10.8
comp=Z,12nm,1.2s
F28M Old Crow 71.01 24 P **P** 14 22 08.9 -0.4
baz=287
GLB Gilahina Butte 71.13 30 IAmb IAmb 14 22 14.8
comp=Z,8.6nm,0.8s
K27K Chicken 71.18 28 P **P** 14 22 10.1 -0.3
baz=286
M26K Nabesna, AK 71.24 29 P **P** 14 22 11.1 +0.2
baz=286
KAIM Kayak Island 71.26 32 P **P** 14 22 11.1 +0.2
baz=286
EGAK Eagle 71.34 27 P **P** 14 22 11.2 -0.1
baz=287
E29M Blow River 71.48 23 P **P** 14 22 11.6 -0.5
baz=289
MCARA McCarthy VSAT 71.51 30 P **P** 14 22 12.4 -0.1
baz=286
L27K Beaver Creek, 71.56 28 IAmb IAmb 14 22 18.5
comp=Z,15nm,1.4s
L27K Beaver Creek, 71.56 28 P **P** 14 22 13.0 +0.3
baz=287
I28M Miner Creek 71.64 26 IAmb IAmb 14 22 24.0
comp=Z,28nm,1.9s
I28M Miner Creek 71.64 26 P **P** 14 22 13.6 +0.3
baz=288
FINES FINESS Array B 71.69 330 P **P** 14 22 13.1 -0.4
comp=Z,6.0nm,0.8s,baz=53,slow=5.1,SNR=14 comp=Z,6.0nm,0.8s
M27K Edge Creek, AK 71.75 29 P **P** 14 22 14.4 +0.4
baz=287
BGLC Bering Glacier 71.75 32 P **P** 14 22 13.8 0.0
baz=287
BVCY Beaver Creek 72.18 29 P **P** 14 22 16.6 +0.1
baz=288
DAWY Dawson 72.29 27 P **P** 14 22 16.6 -0.6
DAWY IAmb IAmb 14 22 17.7
comp=Z,9.6nm,1.2s
DAWY Dawson 72.29 27 P **P** 14 22 16.9 -0.3
baz=289,SNR=6.2
CTG Chitna Glacier 72.42 31 P **P** 14 22 17.9 -0.2
baz=288
F30M Barrier River 72.49 23 P **P** 14 22 18.0 -0.2
baz=291
G30M tAoh Zraii Nji 72.55 24 P **P** 14 22 17.8 -0.9
baz=291
YUK3 Moose Creek 72.56 30 P **P** 14 22 19.0 0.0
baz=288
EPYK Eagle Plains 72.58 24 IAmb IAmb 14 22 22.3
comp=Z,7.8nm,1.0s
EPYK Eagle Plains 72.58 24 P **P** 14 22 18.0 -0.8
baz=290,SNR=5.4
J29N Klondike Camp 72.65 27 IAmb IAmb 14 22 21.6

comp=Z,7.0nm,0.5s
J29N **Klondike Camp** 72.65 27 P P 14 22 19.9 +0.6
baz=290,SNR=7.9
INK **Inuvik** 73.02 22 IAmb IAmb 14 22 21.3
comp=Z,6.9nm,0.9s
INK **Inuvik** 73.02 22 P P 14 22 20.6 -0.8
baz=293,SNR=7.3
INK **Inuvik** 73.02 22 P P 14 22 20.2 -1.1
comp=Z,4.3nm,0.5s,baz=316,slow=5.9,SNR=18
comp=Z,4.3nm,0.5s
YUK8 **Steele Glacier** 73.04 30 P P 14 22 21.6 -0.3
baz=289
I30M **Mount Dempster** 73.12 26 P P 14 22 21.1 -1.0
baz=291
L29M **L29M** 73.14 28 P P 14 22 21.9 -0.4
baz=290
K29M **Barlow Dome** 73.15 27 P P 14 22 22.2 -0.1
baz=290
AKASG **Malin Array Be** 73.20 318 P P 14 22 22.0 -0.7
comp=Z,2.3nm,0.7s,baz=58,slow=6.1,SNR=10.0
comp=Z,2.3nm,0.7s
PINM **Pinnacle** 73.20 31 P P 14 22 22.6 -0.1
baz=289
M29M **Somme Creek** 73.23 29 P P 14 22 23.4 +0.6
baz=290
F31M **Tsiigehtchic** 73.28 23 IAmb IAmb 14 22 22.6
comp=Z,11nm,0.7s
F31M **Tsiigehtchic** 73.28 23 P P 14 22 21.9 -0.9
baz=293,SNR=9.9
G31M **Satah River** 73.29 24 IAmb IAmb 14 22 31.2
comp=Z,33nm,1.9s
G31M **Satah River** 73.29 24 P P 14 22 22.0 -0.9
baz=292
J30M **Hart River** 73.37 26 P P 14 22 23.3 -0.3
baz=291
BR131 **Keskin Array S** 73.58 307 P P 14 22 24.9 -0.5
BR131 IAmb IAmb 14 22 27.3
comp=Z,11nm,1.4s
BRTR **Keskin Array B** 73.58 307 P P 14 22 24.7 -0.7
BRTR **Keskin Array B** 73.58 307 P P 14 22 25.8 +0.4
comp=Z,3.0nm,0.8s,baz=109,slow=5.0,SNR=15
comp=Z,3.0nm,0.8s
YUK6 **Outpost Mounta** 73.80 30 P P 14 22 26.2 -0.2
baz=290
M30M **Minto, Yukon** 73.91 28 IAmb IAmb 14 22 28.6
comp=Z,9.9nm,1.2s
M30M **Minto, Yukon** 73.91 28 P P 14 22 26.6 -0.1
baz=291
A36M **Sachs Harbour** 73.96 17 IAmb IAmb 14 22 26.5
comp=Z,7.1nm,0.8s
A36M **Sachs Harbour** 73.96 17 P P 14 22 26.2 -0.6
baz=299
HYT **Haines Junctio** 74.23 30 P P 14 22 29.1 +0.3
baz=291
P29M **Windy Craggy** 74.56 31 P P 14 22 31.2 +0.6
baz=291
P30M **Million Dollar** 74.74 31 P P 14 22 31.9 +0.3
baz=292
N31M **Braeburn, Yuko** 74.76 29 P P 14 22 31.3 -0.4
baz=292
O30N **Mendenhall** 74.89 30 P P 14 22 32.2 -0.3
baz=292
M31M **Drury Creek, Y** 75.09 28 P P 14 22 33.6 +0.1
baz=293
PLBC **Pleasant Camp** 75.27 31 P P 14 22 34.8 +0.2
baz=292
WHY **Whitehorse** 75.48 30 P P 14 22 36.1 +0.1
baz=293
FARO **Faro, Yukon** 75.52 28 IAmb IAmb 14 22 38.0
comp=Z,15nm,1.4s
FARO **Faro, Yukon** 75.52 28 P P 14 22 36.3 +0.2
baz=294
MLR **Muntele Rosu** 77.01 314 P P 14 22 45.9 +0.9
comp=Z,5.0nm,0.8s,baz=338,slow=2.1,SNR=4.7
comp=Z,5.0nm,0.8s
HFS **Hagfors** 77.81 331 P P 14 22 48.2 -0.7
comp=Z,2.8nm,0.8s,baz=93,slow=8.7,SNR=2.5
comp=Z,2.8nm,0.8s
U33K **Whale Pass** 78.23 34 P P 14 22 51.5 +0.2
baz=296
S34M **Telegraph Cree** 78.40 31 P P 14 22 52.3 0.0
baz=297
NB2 **NORSAR Subarra** 78.45 332 P P 14 22 51.5 -1.0
comp=Z,2.2nm,0.7s,baz=59,slow=5.6
NOA **NORSAR Array B** 78.45 332 P P 14 22 51.6 -1.0
comp=Z,1.7nm,0.7s,baz=58,slow=5.4,SNR=6.8
comp=Z,1.7nm,0.7s
DLBC **Dease Lake** 78.68 31 P P 14 22 54.1 +0.2
baz=298
DLBC **Dease Lake** 78.68 31 P P 14 22 54.5 +0.5
comp=Z,2.7nm,0.6s,baz=173,slow=5.1,SNR=3.2
comp=Z,2.7nm,0.6s
WRGLY **Wrigley** 79.05 25 P P 14 22 55.2 -0.5
baz=302
DPC **Dobruska-Polom** 80.94 321 *e*P P 14 23 07.3 +1.0
VRAC **Vranov** 81.26 320 P P 14 23 08.0 0.0
comp=Z,1.7nm,0.6s,baz=124,slow=3.6,SNR=2.7
comp=Z,1.7nm,0.6s
MODS **Modra-Piesok** 81.28 319 *e*P P 14 23 08.2 +0.1
ZVC **Zvikov** 82.59 321 *e*P P 14 23 15.8 +0.8
YKA **Yellowknife Ar** 82.76 23 P P 14 23 14.7 -0.9
comp=Z,5.6nm,0.8s,baz=313,slow=4.9,SNR=84
comp=Z,5.6nm,0.8s
CKRC **Cesky Krumlov** 82.82 321 *e*P P 14 23 16.7 +0.5
KHC **Kasperske Hory** 83.09 321 *e*P P 14 23 17.8 +0.2
GERES **GERESS Array B** 83.16 321 P P 14 23 17.4 -0.6
comp=Z,2.2nm,1.0s,baz=79,slow=6.9,SNR=6.4
comp=Z,2.2nm,1.0s
KMBO **Kilima Mbogo** 85.43 267 P P 14 23 31.0 +0.6
comp=Z,0.8nm,0.4s,baz=35,slow=13,SNR=4.8
comp=Z,0.8nm,0.4s
EDM **Edmonton** 89.35 30 IAmb IAmb 14 23 50.5
comp=Z,6.6nm,0.8s
LTY **Liberty** 89.41 37 IAmb IAmb 14 23 49.8
comp=Z,6.3nm,0.6s
E07A **Sunnyside** 90.27 37 IAmb IAmb 14 23 55.9
comp=Z,12nm,1.1s
D08A **Wollman Farm,** 90.49 37 IAmb IAmb 14 23 56.0
comp=Z,6.7nm,0.9s
HAWA **Hanford** 90.55 37 IAmb IAmb 14 23 55.8
comp=Z,4.5nm,0.6s
NEW **Newport** 90.70 35 IAmb IAmb 14 23 57.2
comp=Z,6.9nm,1.1s
NEW **Newport** 90.70 35 P P 14 23 55.0 +0.2
baz=309
E08A **Dider Farm, El** 90.75 37 IAmb IAmb 14 23 56.4
comp=Z,4.4nm,0.8s
L04D **Klamath Falls** 91.38 42 P P 14 23 58.1 -0.1
J05D **Fort Rock, OR** 91.41 41 P P 14 23 58.5 +0.2
K05A **Summer Lake** 91.94 41 IAmb IAmb 14 24 07.7
comp=Z,11nm,1.2s
FFC **Flin Flon** 92.92 24 P P 14 24 03.5 -1.4
FFC IAmb IAmb 14 24 05.9
comp=Z,3.7nm,0.8s
ORV **Oroville** 93.40 44 P P 14 24 06.6 -0.8
EGMT **Eagleton** 94.56 32 P P 14 24 12.6 -0.1
baz=314
EMB **Emerald Bay** 94.62 44 IAmb IAmb 14 24 15.6
comp=Z,4.3nm,0.9s
PNTR **Pine Nut** 94.87 43 IAmb IAmb 14 24 17.0
comp=Z,3.5nm,0.7s
HLID **Hailey** 95.16 37 IAmb IAmb 14 24 18.8
comp=Z,4.3nm,1.1s
HLID **Hailey** 95.16 37 P P 14 24 15.8 +0.2
baz=310
NVAR **Mina Array Bea** 96.08 43 P P 14 24 20.7 +0.8
comp=Z,1.0nm,0.7s,baz=284,slow=5.1,SNR=9.0
comp=Z,1.0nm,0.7s
CWC **Cottonwood Cre** 97.42 45 P P 14 24 24.8 -1.2
baz=307
PDAR **Pinedale Array** 98.32 36 P Pdif 14 24 30.7 +0.6
comp=Z,0.4nm,0.7s,baz=356,slow=4.8,SNR=3.1
comp=Z,0.4nm,0.7s
SOCE **Pocosol** 137.06 40 **PKPdf** 14 30 14.9 -1.0
SDV **Santo Domingo** 144.97 22 **PKPab** 14 30 28.3 -1.1
BAUV **El Baul** 145.71 17 PKPdf **PKPdf** 14 30 29.9 -1.3
ROSC **El Rosal** 147.17 31 PKPbc **PKPbc** 14 30 36.3 -0.1
comp=Z,14nm,0.6s,baz=32,slow=3.5,SNR=3.9
OTAV **Otavalo** 148.80 42 **PKPbc** 14 30 39.5 -1.4
COHC **Cochancay** 150.37 46 **PKPbc** 14 30 42.8 -1.3
MCRA **Macar, Loja** 151.27 50 **PKPbc** 14 30 44.8 -1.5

IDC ***04*** *14:11:59.7±0.9,24.˚18N×121.˚86E,h0km,mb4.0/14, mbtmp4.0/15,Error ellipse: s-maj=26.2km s-min=20.7km az=72.0*
NEIC ***04*** *14:12:01.7±1.7,24.˚18N±0.˚04×121.˚82E±0.˚04,h10km±1km,*

mb4.7/18,Error ellipse: s-maj=8.1km s-min=5.6km az=151.0
TAP ***04*** *14:12:01.9,24.˚19N×121.˚77E,h10km,ML4.8,C*
JMA ***04*** *14:12:02.3±0.2,24.˚2N±0.˚4×121.˚8E±0.˚3,h1km±2km, MD4.7/10,MV4.5/10,TAIWAN REGION*
ISC 04 14:12:01.8±0.8,**24.˚19N**±0.˚01×**121.˚80E**±0.˚02,**h11**km±4km, **n168,s0ᵒ87/277,mb4.3/21,10D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**337**	P		**Pg**	**14 12 05.1**	**+0.1**
	baz=349							
EHP				S		**Sg**	**14 12 07.6**	**+0.4**
	baz=349							
EAHA	**Aohua**	**0.15**	**339**	P		**Pg**	**14 12 05.4**	**+0.2**
	baz=347							
EAHA				S		**Sg**	**14 12 08.0**	**+0.4**
	baz=347							
ETL	**Fush Village**	**0.16**	**258**	P		**Pg**	**14 12 05.4**	**-0.1**
	baz=257							
ETL				S		**Sg**	**14 12 08.0**	**0.0**
	baz=257							
NACB	**Ninganchiao**	**0.18**	**264**			**Pg**	**14 12 05.5**	**-0.4**
NACB					Sg	**Sg**	**14 12 08.6**	**-0.1**
NACB	**Ninganchiao**	**0.18**	**264**		⇓P	**Pg**	**14 12 05.5**	**-0.4**
	baz=265							
NACB				S		**Sg**	**14 12 08.5**	**-0.1**
	baz=265							
TWD	**Chiawan**	**0.21**	**239**	*i* P		**Pg**	**14 12 06.3**	**-0.1**
	baz=242							
TWD				*i* S		**Sg**	**14 12 09.6**	**+0.1**
	baz=242							
ENA	**Nanau**	**0.24**	**348**	*i* P		**Pg**	**14 12 07.0**	**+0.2**
	baz=355							
ENA				*i* S		**Sg**	**14 12 10.6**	**+0.4**
	baz=355							
EWUT	**Wuta**	**0.25**	**356**	P		**Pg**	**14 12 07.3**	**+0.3**
	baz=1.0							
EWUT				S		**Sg**	**14 12 11.3**	**+0.8**
	baz=1.0							
HWA	**Hwalien**	**0.28**	**219**	*i* P		**Pg**	**14 12 08.4**	**+0.9**
	baz=225							
HWA				*e*S		**Sg**	**14 12 12.4**	**+1.2**
	baz=225							
ETLH	**Xiulin Townshi**	**0.29**	**273**	P		**Pg**	**14 12 07.7**	**0.0**
	baz=275							
ETLH				S		**Sg**	**14 12 11.7**	**0.0**
	baz=275							
ETM	**Tongmen**	**0.36**	**231**	P		**Pg**	**14 12 08.8**	**-0.1**
	baz=230							
ETM				S		**Sg**	**14 12 14.1**	**+0.4**
	baz=230							
ESAO	**Su ao**	**0.38**	**6**	P		**Pg**	**14 12 09.7**	**+0.2**
	baz=6.0							
ESAO				S		**Sg**	**14 12 15.1**	**+0.5**
	baz=6.0							
LXIB	**Xiulin Townshi**	**0.39**	**244**	P		**Pg**	**14 12 09.2**	**-0.4**
	baz=245							
LXIB				S		**Sg**	**14 12 15.2**	**+0.3**
	baz=245							
TWC	**Suao**	**0.42**	**7**	*i* P		**Pg**	**14 12 10.4**	**+0.3**
	baz=7.0							
TWC				*i* S		**Sg**	**14 12 16.5**	**+0.9**
	baz=7.0							
LATG	**Datong**	**0.42**	**324**	P		**Pg**	**14 12 10.2**	**0.0**
	baz=327							
LATG				S		**Sg**	**14 12 16.6**	**+0.8**
	baz=327							
NNSB	**Datong**	**0.45**	**302**	⇓P		**Pg**	**14 12 10.6**	**0.0**
	baz=304							
NNSB				S		**Sg**	**14 12 16.6**	**0.0**
	baz=304							
NNSH	**Datong**	**0.45**	**302**	⇓P		**Pg**	**14 12 10.6**	**0.0**
	baz=304							
NNSH				S		**Sg**	**14 12 16.7**	**+0.1**
	baz=304							
NDS	**Dongshan**	**0.45**	**351**	⇓P		**Pg**	**14 12 11.0**	**+0.4**
	baz=353							
NDS				S		**Sg**	**14 12 17.2**	**+0.7**
	baz=353							
SHUL	**Shoufeng**	**0.46**	**208**	P		**Pb**	**14 12 12.2**	**+0.3**
	baz=195							
SHUL				*e*S		**Sg**	**14 12 17.4**	**+0.6**
	baz=195							
EOS2	**EOS2**	**0.46**	**60**	*e*P		**Pb**	**14 12 11.6**	**-0.3**
	baz=52							
NNS	**Nan Shan**	**0.46**	**303**	⇓*i*P		**Pg**	**14 12 10.8**	**0.0**
	baz=305							
NNS				*i* S		**Sg**	**14 12 17.0**	**0.0**
	baz=305							
EOS4	**EOS4**	**0.48**	**98**	*e*P		**Pn**	**14 12 14.9**	**+0.5**
	baz=95							
EOS4				*e*S		**Sb**	**14 12 23.4**	**+4.3**
	baz=95							
NDT	**Datong Townshi**	**0.48**	**328**	⇓P		**Pg**	**14 12 11.7**	**+0.4**
	baz=330							
NDT				S		**Sg**	**14 12 18.8**	**+1.1**
	baz=330							
EOS3	**EOS3**	**0.48**	**79**	*e*P		**Pn**	**14 12 14.3**	**-0.3**
	baz=75							
WHF	**Hehuan Shan**	**0.49**	**265**	*i* P		**Pg**	**14 12 11.4**	**-0.1**
	baz=266							
WHF				*i* S		**Sg**	**14 12 18.0**	**0.0**
	baz=266							
ENTT	**Nioudou**	**0.49**	**335**	⇓*i*P		**Pg**	**14 12 11.8**	**+0.3**
	baz=338							
ENTT				*i* S		**Sg**	**14 12 18.9**	**+0.9**
	baz=338							
ESL	**Shilin**	**0.50**	**222**	*i* P		**Pg**	**14 12 11.5**	**-0.1**
	baz=230							
ESL				*e*S		**Sg**	**14 12 17.4**	**-0.9**
	baz=230							
FUSS	**Fushou**	**0.51**	**276**	P		**Pg**	**14 12 11.9**	**+0.1**
	baz=278							
FUSS				S		**Sg**	**14 12 19.0**	**+0.4**
	baz=278							
TEGC	**Jichi Village**	**0.54**	**206**	P		**Pb**	**14 12 13.4**	**+0.1**
	baz=194							
TEGC				*e*S		**Sb**	**14 12 21.8**	**+0.9**
	baz=194							
TWE	**Neicheng**	**0.54**	**347**	⇓*i*P		**Pg**	**14 12 12.7**	**+0.4**
	baz=351							
TWE				*i* S		**Sg**	**14 12 20.3**	**+0.8**
	baz=351							
TWT	**Tachien**	**0.57**	**276**	*i* P		**Pg**	**14 12 13.4**	**+0.4**
	baz=277							
TWT				*i* S		**Sg**	**14 12 21.4**	**+0.8**
	baz=277							
ILA	**Ilan**	**0.57**	**356**	*i* P		**Pb**	**14 12 13.7**	**-0.2**
	baz=350							
ILA				*i* S		**Sb**	**14 12 21.9**	**-0.1**
	baz=350							
CHGB	**Renai**	**0.58**	**257**	P		**Pg**	**14 12 13.2**	**-0.1**
	baz=251							
CHGB				S		**Sg**	**14 12 21.0**	**0.0**
	baz=251							
TDCB	**Techi**	**0.59**	**276**	P		**Pg**	**14 12 13.4**	**+0.1**
	baz=278							
TDCB				S		**Sg**	**14 12 21.1**	**+0.1**
	baz=278							
FUSB	**Fushanzhiwuyua**	**0.60**	**341**	⇓P		**Pg**	**14 12 13.7**	**+0.2**
	baz=344							
FUSB				S		**Sg**	**14 12 21.4**	**+0.1**
	baz=344							
WARBT	**Fenglin Townsh**	**0.60**	**219**	P		**Pg**	**14 12 13.5**	**0.0**
	baz=226							
WARBT				*e*S		**Sg**	**14 12 21.8**	**+0.3**
	baz=226							
YHNB	**Yeheng**	**0.61**	**321**			**Pg**	**14 12 14.2**	**+0.5**
YHNB	**Yeheng**	**0.61**	**321**		⇓P	**Pg**	**14 12 14.1**	**+0.3**
	baz=323							
YHNB				S		**Sg**	**14 12 22.5**	**+0.7**
	baz=323							
OWD	**Renai**	**0.61**	**247**	P		**Pg**	**14 12 14.4**	**+0.6**
	baz=248							
OWD				S		**Sg**	**14 12 22.6**	**+0.7**
	baz=248							
EGFH	**Guangfu**	**0.62**	**213**	P		**Pg**	**14 12 14.1**	**+0.2**
	baz=220							
EGFH				*e*S		**Sg**	**14 12 22.8**	**+0.8**
	baz=220							
NSK	**Sanguang**	**0.63**	**320**	*i* P		**Pg**	**14 12 14.3**	**+0.2**
	baz=323							
NSK				*i* S		**Sg**	**14 12 22.8**	**+0.5**
	baz=323							
WUSB	**Renai**	**0.65**	**252**	P		**Pg**	**14 12 14.7**	**+0.1**
	baz=246							
WUSB				S		**Sg**	**14 12 24.1**	**+1.0**
	baz=246							
NTC	**Toucheng**	**0.66**	**3**	P		**Pb**	**14 12 15.3**	**-0.1**
	baz=4.0							
NTC				S		**Sb**	**14 12 24.4**	**-0.2**
	baz=4.0							
VWDT	**VWDT**	**0.74**	**234**	P		**Pg**	**14 12 16.6**	**+0.4**
	baz=235							
VWDT				*e*S		**Sg**	**14 12 26.0**	**+0.1**
	baz=235							
NFF	**Wufeng Townshi**	**0.76**	**305**	P		**Pg**	**14 12 16.8**	**+0.3**
	baz=307							
NFF				S		**Sg**	**14 12 27.1**	**+0.6**
	baz=307							
HGSD	**Ruisui**	**0.78**	**206**	*e*P		**Pn**	**14 12 19.2**	**+0.5**
	baz=226							
TIPB	**Shuangxi**	**0.78**	**2**	P		**Pb**	**14 12 17.4**	**-0.1**
	baz=3.0							
TIPB				S		**Sg**	**14 12 27.6**	**+0.6**
	baz=3.0							
WHP	**Taichung City**	**0.78**	**276**	P		**Pg**	**14 12 17.4**	**+0.5**
	baz=278							
WHP				S		**Sg**	**14 12 27.6**	**+0.4**
	baz=278							
NHDH	**Xindian Distri**	**0.81**	**342**	P		**Pb**	**14 12 18.0**	**+0.1**
	baz=344							
NHDH				*e*S		**Sg**	**14 12 28.0**	**0.0**
	baz=344							
EHY	**Hungye**	**0.81**	**213**	*i* P		**Pg**	**14 12 17.1**	**-0.4**
	baz=224							
EHY				*e*S		**Sg**	**14 12 28.8**	**+0.7**
	baz=224							
DPDB	**Guoxing**	**0.81**	**259**	P		**Pg**	**14 12 17.8**	**+0.3**
	baz=251							
DPDB				S		**Sg**	**14 12 28.7**	**+0.5**
	baz=251							
WCS	**Beigang Elemen**	**0.82**	**261**	P		**Pg**	**14 12 18.2**	**+0.5**
	baz=262							
WCS				S		**Sg**	**14 12 28.9**	**+0.5**
	baz=262							
TATO	**Taipei**	**0.83**	**340**			**Pb**	**14 12 18.5**	**+0.3**
TWB1	**Santiao Chiao**	**0.83**	**12**	*i* P		**Pb**	**14 12 18.5**	**+0.2**
	baz=14							
TWB1				*e*S		**Sb**	**14 12 30.4**	**+0.8**
	baz=14							
NJD	**Zhudong**	**0.84**	**310**	P		**Pb**	**14 12 19.4**	**+0.8**
	baz=312							
NJD				*e*S		**Sb**	**14 12 30.8**	**+0.9**
	baz=312							
LIOB	**Emei**	**0.84**	**303**	P		**Pb**	**14 12 19.0**	**+0.5**
	baz=304							
LIOB				S		**Sg**	**14 12 30.3**	**+1.1**
	baz=304							
NSTT	**Nanjuang**	**0.85**	**301**	*i* P		**Pb**	**14 12 19.0**	**+0.4**
	baz=303							
NSTT				*i* S		**Sg**	**14 12 30.1**	**+0.9**
	baz=303							
BACT	**New Taipei Cit**	**0.86**	**338**	P		**Pb**	**14 12 19.5**	**+0.6**
	baz=340							
BACT				S		**Sb**	**14 12 31.3**	**+0.8**
	baz=340							
NHY	**Taipei**	**0.87**	**346**	P		**Pb**	**14 12 19.6**	**+0.7**
	baz=348							
NHY				S		**Sb**	**14 12 31.9**	**+1.3**
	baz=348							
SSLB	**Suanglung**	**0.87**	**243**			**Pg**	**14 12 18.2**	**-0.4**
SSLB	**Suanglung**	**0.87**	**243**	P		**Pg**	**14 12 18.4**	**-0.2**
	baz=253							
SSLB				S		**Sg**	**14 12 30.5**	**+0.5**
	baz=253							
NWF	**Wu-fen Shan**	**0.88**	**359**	*i* P		**Pb**	**14 12 19.4**	**+0.3**
	baz=352							
NWF				*i* S		**Sg**	**14 12 30.8**	**+0.6**
	baz=352							
WFSB	**Wu-fen Shan**	**0.88**	**359**	P		**Pb**	**14 12 19.5**	**+0.4**
	baz=353							
WFSB				S		**Sb**	**14 12 30.8**	**0.0**
	baz=353							
SMLT	**Sun Moon Lake**	**0.88**	**250**	*i* P		**Pb**	**14 12 19.5**	**+0.3**
	baz=250							
SMLT				*i* S		**Sg**	**14 12 30.1**	**-0.1**
	baz=250							
TAP	**Taipei**	**0.88**	**343**	*i* P		**Pb**	**14 12 19.6**	**+0.4**
	baz=345							
TAP				S		**Sb**	**14 12 31.8**	**+0.8**
	baz=345							
SXI1	**Grass Mountain**	**0.90**	**5**	P		**Pb**	**14 12 19.8**	**+0.2**
	baz=12							
SXI1				S		**Sb**	**14 12 31.9**	**+0.2**
	baz=12							
TYC	**Yuchr**	**0.91**	**252**	*i* P		**Pg**	**14 12 19.8**	**+0.5**
	baz=244							
TYC				S		**Sg**	**14 12 31.5**	**+0.4**
	baz=244							
YULB	**Yu-li**	**0.92**	**210**	Pn		**Pb**	**14 12 20.1**	**+0.3**
YULB	**Yu-li**	**0.92**	**210**	*e*P		**Pg**	**14 12 19.7**	**+0.2**
	baz=223							
ECBN	**Changbin**	**0.93**	**200**	*e*P		**Pb**	**14 12 20.0**	**+0.1**
	baz=200							
ECBN				*e*S		**Sn**	**14 12 34.6**	**+0.5**
	baz=200							
TWQ1	**Liyutan**	**0.95**	**280**	*i* P		**Pn**	**14 12 21.7**	**+0.6**
	baz=281							
TWQ1				*i* S		**Sb**	**14 12 33.6**	**+0.7**
	baz=281							
EYUL	**Yuli**	**0.95**	**208**	P		**Pn**	**14 12 21.3**	**+0.2**
	baz=225							
EYUL				*e*S		**Sn**	**14 12 35.4**	**+0.7**
	baz=225							
SBCB	**Hsinchu**	**0.95**	**309**	P		**Pn**	**14 12 21.6**	**+0.4**
	baz=311							
SBCB				*e*S		**Sb**	**14 12 34.4**	**+1.4**
	baz=311							
NCUH	**Zhongli**	**0.95**	**324**	P		**Pb**	**14 12 21.2**	**+0.9**
	baz=326							
NCUH				*e*S		**Sb**	**14 12 34.0**	**+1.0**
	baz=326							
TWF1	**Yuli**	**0.95**	**209**	P		**Pb**	**14 12 20.6**	**+0.2**
	baz=221							
TNOU	**National Taiwa**	**0.95**	**359**	P		**Pb**	**14 12 20.9**	**+0.4**
	baz=360							
TNOU				S		**Sg**	**14 12 33.0**	**+0.3**
	baz=360							
HSN	**Hsinchu**	**0.97**	**309**	P		**Pg**	**14 12 20.8**	**+0.3**
	baz=313							
HSN				*e*S		**Sb**	**14 12 34.1**	**+0.6**
	baz=313							
TWS1	**Kuangyinshan**	**0.97**	**339**	*i* P		**Pn**	**14 12 21.9**	**+0.5**
	baz=341							
TWS1				S		**Sn**	**14 12 35.7**	**+0.6**
	baz=341							
NSY	**Sanyi**	**0.97**	**283**	*i* P		**Pn**	**14 12 21.9**	**+0.5**
	baz=285							
NSY				S		**Sb**	**14 12 35.2**	**+1.7**
	baz=285							
YM01	**YM01**	**0.97**	**348**	P		**Pb**	**14 12 21.2**	**+0.4**
	baz=349							
YM01				S		**Sn**	**14 12 35.7**	**+0.3**
	baz=349							
NMLH	**Miaoli**	**0.98**	**291**	P		**Pn**	**14 12 22.2**	**+0.6**
	baz=292							
NMLH				*e*S		**Sg**	**14 12 34.3**	**+0.8**
	baz=292							
WHYT	**Xinyi Township**	**0.99**	**240**	P		**Pb**	**14 12 21.7**	**+0.6**
	baz=243							
NTST	**Danshui**	**1.02**	**342**	P		**Pn**	**14 12 22.6**	**+0.5**
	baz=343							
NTST				*e*S		**Sn**	**14 12 36.7**	**+0.3**
	baz=343							
ANP	**Anpu**	**1.02**	**346**	*i* P		**Pb**	**14 12 21.9**	**+0.3**
	baz=348							
ANP				*e*S		**Sb**	**14 12 36.3**	**+1.2**
	baz=348							
WJS	**Zhushan**	**1.04**	**250**	P		**Pn**	**14 12 23.2**	**+0.7**
	baz=245							
WJS				*e*S		**Sn**	**14 12 37.6**	**+0.5**
	baz=245							
CHKH	**Chenggong**	**1.06**	**200**	P		**Pg**	**14 12 21.9**	**-0.4**
	baz=185							
WNT	**Mingjian**	**1.06**	**253**	*i* P		**Pn**	**14 12 23.6**	**+0.9**
	baz=250							
WNT				*i* S		**Sn**	**14 12 39.1**	**+1.6**
	baz=250							
WDJ	**Dajia District**	**1.07**	**279**	P		**Pn**	**14 12 23.9**	**+1.1**
	baz=280							
WDJ				S		**Sb**	**14 12 37.3**	**+1.0**
	baz=280							
JYNG	**Yonagunijimaku**	**1.08**	**76**	P		**Pn**	**14 12 24.1**	**+1.1**
JYNG				S		**Sn**	**14 12 41.5**	**+3.6**

JYNG	**Yonagunijimaku**	**1.08**	**76**	A		A	14 12 24.1		
	comp=E,19nm,5.3s,comp=N,40nm,4.8s								
FULB	**Fuli**	**1.09**	**205**	*e*P		**Pg**	**14 12 22.6**	**-0.2**	
	baz=222								
FULB				*e*S		**Sn**	**14 12 38.5**	**+0.2**	
	baz=222								
TWY	**Chenhua**	**1.09**	**351**	*i* P		**Pn**	**14 12 24.6**	**+1.4**	
	baz=352								
TWY				*e*S		**Sn**	**14 12 38.5**	**+0.3**	
	baz=352								
ALS	**Alishan**	**1.13**	**233**	*i* P		**Pn**	**14 12 24.4**	**+0.5**	
	baz=235								
ALS				S		**Sn**	**14 12 40.5**	**+0.9**	
	baz=235								
WCHH	**Zhanghua**	**1.14**	**265**	P		**Pn**	**14 12 25.4**	**+1.7**	
	baz=266								
WCHH				*e*S		**Sn**	**14 12 40.1**	**+0.8**	
	baz=266								
YOJ	**Yonaguni jima**	**1.14**	**76**	Pn		**Pb**	**14 12 21.8**	**-1.8**	
YOJ	**Yonaguni jima**	**1.14**	**76**	*e*P		**Pn**	**14 12 25.3**	**+1.5**	
	baz=60								
YOJ				*e*S		**Sn**	**14 12 42.2**	**+2.8**	
	baz=60								
YOJ	**Yonaguni jima**	**1.14**	**76**	P		**Pn**	**14 12 24.7**	**+0.9**	
YOJ				S		**Sn**	**14 12 41.4**	**+2.0**	
YOJ	**Yonaguni jima**	**1.14**	**76**	A		A	14 12 24.7		
	comp=E,26nm,1.6s,comp=N,26nm,4.8s								
CHKT	**Chengkung**	**1.16**	**200**	P		**Pb**	**14 12 24.1**	**+0.2**	
	baz=201								
CHKT				S		**Sn**	**14 12 41.5**	**+1.7**	
	baz=201								
EHD	**Haiduan**	**1.17**	**208**	*e*P		**Pb**	**14 12 23.8**	**-0.3**	
	baz=210								
EHD				*e*S		**Sb**	**14 12 38.6**	**-0.7**	
	baz=210								
CHN5	**Tsauling**	**1.18**	**240**	*i* P		**Pg**	**14 12 25.5**	**+0.9**	
	baz=243								
CHN5				*e*S		**Sn**	**14 12 41.8**	**+1.2**	
	baz=243								
ELDTW	**Lidau**	**1.23**	**216**	*i* P		**Pn**	**14 12 24.9**	**-0.2**	
	baz=205								
ELDTW				*e*S		**Sb**	**14 12 41.4**	**+0.4**	
	baz=205								
WGK	**Gukeng**	**1.24**	**246**	*i* P		**Pg**	**14 12 26.6**	**+1.0**	
	baz=248								
WGK				*e*S		**Sn**	**14 12 43.3**	**+1.5**	
	baz=248								
WDLH	**Douliu**	**1.26**	**247**	P		**Pg**	**14 12 27.7**	**+1.7**	
	baz=249								
WDLH				S		**Sn**	**14 12 44.0**	**+1.8**	
	baz=249								
EDH	**Donghe**	**1.30**	**201**	*e*P		**Pb**	**14 12 26.6**	**+0.3**	
	baz=202								
EDH				S		**Sg**	**14 12 45.9**	**+2.3**	
	baz=202								
WCKO	**Fanlu**	**1.32**	**236**	*e*P		**Pg**	**14 12 28.7**	**+1.4**	
	baz=239								
WCKO				S		**Sg**	**14 12 47.2**	**+2.7**	
	baz=239								
WRL	**Guolierlin Hig**	**1.33**	**258**	P		**Pg**	**14 12 27.9**	**+0.6**	
	baz=260								
WRL				S		**Sg**	**14 12 45.6**	**+0.9**	
	baz=260								
CHN2	**Minshiung**	**1.38**	**242**	P		**Pg**	**14 12 28.9**	**+0.6**	
	baz=244								
CHN2				S		**Sg**	**14 12 47.7**	**+1.6**	
	baz=244								
STYH	**Taoyuan**	**1.38**	**223**	P		**Pn**	**14 12 27.8**	**+0.7**	
	baz=226								
STYH				*e*S		**Sg**	**14 12 47.6**	**+1.3**	
	baz=226								
WTK	**Tuku**	**1.38**	**249**	P		**Pg**	**14 12 28.7**	**+0.3**	
	baz=252								
WTK				S		**Sg**	**14 12 47.0**	**+0.7**	
	baz=252								
CHN4	**Tsaushan**	**1.39**	**233**	*i* P		**Pg**	**14 12 29.3**	**+0.8**	
	baz=236								
CHN4				*e*S		**Sg**	**14 12 48.4**	**+1.9**	
	baz=236								
TPUB	**Ta-pu**	**1.39**	**231**	P		**Pg**	**14 12 29.1**	**+0.6**	
	baz=221								
TPUB				*e*S		**Sg**	**14 12 47.9**	**+1.3**	
	baz=221								
LONT	**Longtian**	**1.42**	**206**	*e*P		**Pn**	**14 12 27.7**	**+0.1**	
	baz=209								
WTP	**Ta-pu**	**1.44**	**229**	P		**Pg**	**14 12 30.2**	**+0.8**	
	baz=232								
WTP				*e*S		**Sg**	**14 12 49.1**	**+1.1**	
	baz=232								
PCYT	**Pengchaiyu**	**1.45**	**10**	P		**Pg**	**14 12 30.3**	**+0.6**	
	baz=10.0								
PCYT				*e*S		**Sg**	**14 12 49.5**	**+0.9**	
	baz=10.0								
TWK	**Hsinying**	**1.51**	**233**	*e*P		**Pg**	**14 12 31.5**	**+0.6**	
	baz=236								
TWK				S		**Sg**	**14 12 50.8**	**+0.3**	
	baz=236								
TWGBT	**Beinan**	**1.52**	**206**	*e*P		**Pn**	**14 12 29.2**	**+0.2**	
	baz=210								
TWG	**Pinlang**	**1.52**	**206**	*e*P		**Pb**	**14 12 30.7**	**+0.6**	
	baz=210								
CHN1	**Nanshi**	**1.54**	**229**	*e*P		**Pb**	**14 12 30.9**	**+0.5**	
	baz=233								
CHN1				*e*S		**Sg**	**14 12 51.4**	**+0.1**	
	baz=233								
SNST	**Tainan City**	**1.54**	**231**	P		**Pg**	**14 12 31.5**	**+0.1**	
	baz=235								
SNST				*e*S		**Sg**	**14 12 51.6**	**+0.4**	
	baz=235								
WSF	**Szhu**	**1.54**	**249**	*i* P		**Pb**	**14 12 31.4**	**+0.9**	
	baz=252								
WSF				*e*S		**Sg**	**14 12 51.6**	**+0.1**	
	baz=252								
SGST	**Jiashian**	**1.57**	**225**	P		**Pb**	**14 12 31.3**	**+0.4**	
	baz=228								
SGST				*e*S		**Sg**	**14 12 52.3**	**0.0**	
	baz=228								
WSL	**Shuilin Townsh**	**1.58**	**245**	*e*P		**Pb**	**14 12 31.7**	**+0.6**	
	baz=248								
WSL				*e*S		**Sg**	**14 12 53.0**	**+0.2**	
	baz=248								
SLGT	**Liugui**	**1.59**	**222**	P		**Pg**	**14 12 32.3**	**-0.1**	
	baz=225								
SLGT				*e*S		**Sg**	**14 12 53.1**	**0.0**	
	baz=225								
ICHU	**Yijhu**	**1.62**	**240**	P		**Pb**	**14 12 32.4**	**+0.7**	
	baz=243								
ICHU				*e*S		**Sb**	**14 12 53.4**	**+1.2**	
	baz=243								
CHN8	**Yiju**	**1.68**	**240**	P		**Pb**	**14 12 33.8**	**+1.0**	
	baz=244								
CHN8				*e*S		**Sb**	**14 12 55.3**	**+1.3**	
	baz=244								
SCST	**Cishan**	**1.77**	**223**	*e*P		**Pb**	**14 12 34.5**	**+0.3**	
	baz=227								
SCST				*e*S		**Sb**	**14 12 58.0**	**+1.5**	
	baz=227								
SCLT	**Jiali**	**1.78**	**236**	*e*P		**Pb**	**14 12 34.8**	**+0.2**	
	baz=240								
SCLT				*e*S		**Sb**	**14 12 57.4**	**+0.4**	
	baz=240								
JKRS	**Kuro-shima**	**2.02**	**88**	S		**Sg**	**14 13 09.3**	**+2.5**	
JIJ	**Ishigaki jima**	**2.15**	**85**	S		**Sg**	**14 13 10.3**	**-0.6**	
KSAR	**Wonju Array Be**	**14.20**	**20**	P		**P**	**14 15 29.1**	**-1.3**	
KSRS	**Korea Array**	**14.22**	**20**	Pn		**Pn**	**14 15 23.4**	**+0.2**	
	comp=N,1.9nm,0.7s,baz=200,slow=11,SNR=1.0								
CMAR	**Chiang Mai Arr**	**22.03**	**259**	P		**P**	**14 16 54.8**	**-1.8**	
	comp=N,0.7nm,0.8s,baz=59,slow=10,SNR=0.9								
	comp=N,0.7nm,0.8s								
KLR	**Kul'dur**	**26.19**	**15**	P		**P**	**14 17 35.1**	**-1.3**	
	comp=N,1.7nm,0.8s,baz=147,slow=2.5,SNR=1.2								
	comp=N,1.7nm,0.8s								
SONM	**Songino Array**	**26.58**	**336**	P		**P**	**14 17 40.4**	**+0.3**	
SONM	**Songino Array**	**26.58**	**336**	P		**P**	**14 17 41.1**	**+0.9**	
	comp=N,8.0nm,1.1s,baz=164,slow=10.0,SNR=2.4								
	comp=N,8.0nm,1.1s								
MKAR	**Makanchi Array**	**38.72**	**316**	P		**P**	**14 19 27.2**	**+1.2**	
	comp=N,1.9nm,0.7s,baz=104,slow=10,SNR=2.1								
	comp=N,1.9nm,0.7s								
MAKZ	**Makanchi**	**38.93**	**316**	P		**P**	**14 19 28.1**	**+0.3**	
ZALV	**Zalesovo Beam**	**40.54**	**327**	P		**P**	**14 19 40.5**	**-0.5**	
	comp=N,3.4nm,0.9s,baz=96,slow=9.0,SNR=1.9								
	comp=N,3.4nm,0.9s								
WRA	**Warramunga Arr**	**45.54**	**163**	P		**P**	**14 20 20.4**	**-1.3**	
	comp=N,0.6nm,0.6s,baz=344,slow=8.7,SNR=0.8								
	comp=N,0.6nm,0.6s								
TIXI	**Tiksi**	**47.66**	**3**	P		**P**	**14 20 36.2**	**-1.5**	
BVAR	**Borovoye Array**	**48.02**	**321**	P		**P**	**14 20 41.4**	**+0.5**	
	comp=N,1.7nm,0.6s,baz=84,slow=7.6,SNR=2.3								
	comp=N,1.7nm,0.6s								
BRVK	**Borovoye**	**48.09**	**321**	P		**P**	**14 20 42.0**	**+0.5**	
BRVK				IAmb		IAmb	14 20 59.7		
	comp=Z,3.6nm,0.8s								
ASAR	**Alice Springs**	**49.00**	**165**	P		**P**	**14 20 49.6**	**+0.8**	
	comp=Z,0.4nm,0.6s,baz=347,slow=6.2,SNR=2.2								
	comp=Z,0.4nm,0.6s								
GEYT	**Alibeck**	**55.27**	**300**	P		**P**	**14 21 37.1**	**+1.7**	
	comp=Z,2.7nm,0.8s,baz=56,slow=9.1,SNR=3.5								
	comp=Z,2.7nm,0.8s								
L14K	**Kuka Creek**	**62.15**	**32**	P		**P**	**14 22 23.0**	**+0.1**	
D19K	**Kuna River**	**64.10**	**24**	P		**P**	**14 22 36.2**	**+0.5**	
D19K				IAmb		IAmb	14 22 39.4		
	comp=Z,7.3nm,1.2s								
H19K	**Roundabout Mou**	**64.85**	**27**	P		**P**	**14 22 40.4**	**-0.2**	
TTA	**Tatalina**	**65.22**	**30**	P		**P**	**14 22 42.8**	**-0.4**	
TTA				IAmb		IAmb	14 22 47.9		
	comp=Z,6.7nm,1.3s								
J19K	**Poorman**	**65.31**	**29**	P		**P**	**14 22 43.5**	**-0.1**	
B21K	**Ikpikpuk River**	**65.33**	**23**	P		**P**	**14 22 44.0**	**+0.3**	
B21K				IAmb		IAmb	14 22 47.1		
	comp=Z,4.0nm,0.7s								
D22K	**Ayikyak River**	**66.07**	**23**	P		**P**	**14 22 49.0**	**+0.5**	
H21K	**Melozitna Rive**	**66.34**	**27**	P		**P**	**14 22 50.8**	**+0.4**	
H21K				IAmb		IAmb	14 22 57.9		
	comp=Z,11nm,1.5s								
RND	**Reindeer**	**68.37**	**29**	P		**P**	**14 23 02.3**	**-1.0**	
ILAR	**Eielson Array**	**68.95**	**27**	P		**P**	**14 23 06.3**	**-0.4**	
	comp=Z,4.0nm,0.6s,baz=267,slow=6.4,SNR=1.6								
	comp=Z,0.4nm,0.6s								
BMAR	**Burnt Mountain**	**69.29**	**24**	P		**P**	**14 23 09.3**	**+0.4**	
SCM	**Sheep Creek Mo**	**69.39**	**30**	P		**P**	**14 23 08.6**	**-1.1**	
J26L	**Joseph Creek**	**70.40**	**27**	P		**P**	**14 23 15.1**	**-0.7**	
E28M	**Babbage River**	**70.82**	**23**	P		**P**	**14 23 18.1**	**-0.1**	
FINES	**FINESS Array B**	**71.72**	**330**	P		**P**	**14 23 23.8**	**+0.1**	
	comp=Z,3.0nm,0.9s,baz=49,slow=7.9,SNR=2.2								
	comp=Z,3.0nm,0.9s								
CTGM	**Chitina Glacie**	**72.40**	**31**	P		**P**	**14 23 27.6**	**-0.5**	
G30M	**tAoh Zrail Nji**	**72.53**	**24**	P		**P**	**14 23 28.4**	**-0.2**	
G30M				IAmb		IAmb	14 23 38.8		
	comp=Z,11nm,1.4s								
L29M	**L29M**	**73.12**	**28**	P		**P**	**14 23 32.7**	**+0.5**	
L29M				IAmb		IAmb	14 23 39.5		
	comp=Z,7.4nm,1.2s								
BRTR	**Keskin Array B**	**73.62**	**307**	P		**P**	**14 23 33.7**	**-2.0**	
	comp=Z,1.6nm,0.8s,baz=78,slow=6.5,SNR=4.3								
	comp=Z,1.6nm,0.8s								
YKA	**Yellowknife Ar**	**82.74**	**23**	P		**P**	**14 24 25.3**	**-0.3**	
YKA	**Yellowknife Ar**	**82.74**	**23**	P		**P**	**14 24 23.2**	**-2.3**	
	comp=Z,1.3nm,0.8s,baz=313,slow=4.8,SNR=4.3								
	comp=Z,1.3nm,0.8s								
NVAR	**Mina Array Bea**	**96.04**	**43**	P		**P**	**14 25 30.5**	**+0.6**	
	comp=Z,0.9nm,0.9s,baz=296,slow=5.7,SNR=3.6								
	comp=Z,0.9nm,0.9s								
BAUV	**El Baul**	**145.69**	**17**	PKPdf		**PKPdf**	**14 31 39.5**	**-1.9**	

TAP 04 14:12:49.5, 24.23N×121.78E, h11km, ML4.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**335**	P	Pg	14 12 52.2	+0.1
	baz=338						
EHP				S	Sg	14 12 54.6	+0.7
	baz=338						
EAHA	**Aohua**	**0.10**	**338**	P	Pg	14 12 52.5	+0.2
	baz=338						
EAHA				S	Sg	14 12 54.8	+0.6
	baz=338						
ETL	**Fush Village**	**0.16**	**243**	P	Pg	14 12 53.3	+0.2
	baz=243						
ETL				S	Sg	14 12 56.3	+0.6
	baz=243						
NACB	**Ninganchiao**	**0.18**	**251**	P	Pg	14 12 53.4	0.0
	baz=245						
NACB				S	Sg	14 12 56.5	+0.4
	baz=245						
ENA	**Nanau**	**0.20**	**349**	*i* P	Pg	14 12 53.9	+0.1
	baz=351						
ENA				S	Sg	14 12 56.8	+0.2
	baz=351						
EWUT	**Wuta**	**0.21**	**359**	P	Pg	14 12 54.2	+0.2
	baz=359						
EWUT				S	Sg	14 12 56.9	-0.1
	baz=359						
TWD	**Chiawan**	**0.23**	**228**	*i* P	Pg	14 12 54.4	+0.1
	baz=233						
TWD				*i* S	Sg	14 12 57.8	+0.4
	baz=233						
ETLH	**Xiulin Townshi**	**0.27**	**265**	P	Pg	14 12 55.5	+0.4
	baz=265						
ETLH				S	Sg	14 12 59.5	+0.6
	baz=265						
HWA	**Hwalien**	**0.30**	**212**	P	Pb	14 12 56.7	-0.3
	baz=220						
HWA				*e*S	Sb	14 13 01.9	-0.1
	baz=220						
ESAO	**Su ao**	**0.35**	**10**	P	Pg	14 12 56.5	+0.1
	baz=5.0						
ESAO				S	Sg	14 13 01.4	+0.3
	baz=5.0						
ETM	**Tongmen**	**0.38**	**225**	P	Pg	14 12 57.1	+0.1
	baz=225						
ETM				S	Sg	14 13 02.8	+0.9
	baz=225						
LATG	**Datong**	**0.38**	**322**	P	Pg	14 12 57.3	+0.2
	baz=322						
LATG				S	Sg	14 13 02.9	+0.7
	baz=322						
TWC	**Suao**	**0.38**	**9**	*i* P	Pg	14 12 57.4	+0.3
	baz=3.0						
TWC				S	Sg	14 13 02.8	+0.6
	baz=3.0						
LXIB	**Xiulin Townshi**	**0.40**	**238**	P	Pg	14 12 58.0	+0.6
	baz=239						
LXIB				S	Sg	14 13 03.4	+0.7
	baz=239						
NDS	**Dongshan**	**0.40**	**352**	P	Pg	14 12 57.8	+0.3
	baz=351						
NDS				S	Sg	14 13 03.5	+0.6
	baz=351						
NNSB	**Datong**	**0.41**	**298**	P	Pg	14 12 58.2	+0.5
	baz=298						
NNSB				S	Sb	14 13 04.3	-1.0
	baz=298						
NNSH	**Datong**	**0.41**	**298**	P	Pg	14 12 58.2	+0.5
	baz=298						
NNSH				S	Sg	14 13 04.2	+1.0
	baz=298						
NNS	**Nan Shan**	**0.42**	**299**	*i* P	Pg	14 12 58.3	+0.3
	baz=299						
NNS				*i* S	Sb	14 13 04.7	-1.0
	baz=299						
NDT	**Datong Townshi**	**0.44**	**326**	P	Pg	14 12 58.8	+0.5
	baz=326						
NDT				S	Sb	14 13 05.5	-0.6
	baz=326						
ENTT	**Nioudou**	**0.45**	**334**	*i* P	Pg	14 12 58.9	+0.5
	baz=335						
ENTT				*i* S	Sg	14 13 05.2	+0.8
	baz=335						
WHF	**Hehuan Shan**	**0.48**	**260**	P	Pg	14 12 59.3	+0.3
	baz=260						
WHF				S	Sg	14 13 06.1	+0.7
	baz=260						
SHUL	**Shoufeng**	**0.49**	**204**	P	Pb	14 13 00.4	+0.3
	baz=194						
SHUL				S	Sb	14 13 07.7	+0.4
	baz=194						
FUSS	**Fushou**	**0.49**	**272**	P	Pg	14 12 59.7	+0.5
	baz=272						
FUSS				S	Sg	14 13 06.4	+0.7
	baz=272						
TWE	**Neicheng**	**0.50**	**348**	*i* P	Pb	14 12 59.8	-0.5
	baz=349						
TWE				S	Sg	14 13 06.3	+0.5
	baz=349						
ESL	**Shilin**	**0.53**	**217**	*i* P	Pg	14 12 59.9	+0.2
	baz=225						
ESL				*e*S	Sg	14 13 07.4	+0.7
	baz=225						
ILA	**Ilan**	**0.53**	**357**	*i* P	Pb	14 13 00.6	-0.3
	baz=352						
ILA				*e*S	Sb	14 13 08.8	+0.2
	baz=352						
FUSB	**Fushanzhiwuyua**	**0.55**	**341**	P	Pb	14 13 01.1	-0.3
	baz=341						
FUSB				S	Sb	14 13 08.6	-0.7
	baz=341						
TWT	**Tachien**	**0.55**	**272**	P	Pb	14 13 01.9	+0.5
	baz=272						
TWT				*i* S	Sb	14 13 09.0	-0.4
	baz=272						
TEGC	**Jichi Village**	**0.57**	**203**	P	Pb	14 13 01.8	+0.3
	baz=193						
TEGC				S	Sb	14 13 10.6	+1.0
	baz=193						
TDCB	**Techi**	**0.57**	**272**	P	Pb	14 13 01.3	-0.4
	baz=272						
TDCB				S	Sg	14 13 08.5	+0.3
	baz=272						
YHNB	**Yeheng**	**0.57**	**320**	P	Pb	14 13 01.2	-0.4
	baz=320						
YHNB				S	Sb	14 13 09.2	-0.6
	baz=320						
CHGB	**Renai**	**0.58**	**253**	P	Pg	14 13 01.2	+0.3
	baz=245						
CHGB				S	Sg	14 13 09.3	+0.7
	baz=245						
NSK	**Sanguang**	**0.59**	**319**	*i* P	Pb	14 13 01.4	-0.4
	baz=319						
NSK				S	Sg	14 13 09.1	+0.4
	baz=319						
OWD	**Renai**	**0.62**	**243**	P	Pg	14 13 01.8	+0.2
	baz=244						
OWD				*e*S	Sb	14 13 10.6	-0.6
	baz=244						
WARBT	**Fenglin Townsh**	**0.63**	**215**	P	Pg	14 13 01.9	+0.2
	baz=223						
WARBT				*e*S	Sb	14 13 11.5	+0.2
	baz=223						
EGFH	**Guangfu**	**0.65**	**210**	P	Pb	14 13 02.6	-0.3
	baz=217						
EGFH				*e*S	Sb	14 13 13.2	+1.2
	baz=217						
WUSB	**Renai**	**0.65**	**249**	P	Pg	14 13 02.4	+0.2
	baz=242						
WUSB				S	Sb	14 13 11.8	-0.4
	baz=242						
NFF	**Wufeng Townshi**	**0.72**	**303**	P	Pb	14 13 04.2	0.0
	baz=303						
NFF				*e*S	Sb	14 13 13.7	-0.5
	baz=303						
TIPB	**Shuangxi**	**0.74**	**3**	P	Pb	14 13 04.2	-0.3
	baz=3.0						
TIPB				*e*S	Sb	14 13 14.0	-0.5
	baz=3.0						
VWDT	**VWDT**	**0.76**	**231**	P	Pb	14 13 04.8	+0.1
	baz=231						
VWDT				S	Sb	14 13 16.1	+1.1
	baz=231						
WHP	**Taichung City**	**0.76**	**274**	P	Pb	14 13 05.4	+0.5
	baz=274						
WHP				S	Sb	14 13 15.4	0.0
	baz=274						
NWF	**Wu-fen Shan**	**0.83**	**0**	P	Pn	14 13 07.5	+0.1
	baz=352						
NWF				*e*S	Sg	14 13 16.9	+0.4
	baz=352						
WFSB	**Wu-fen Shan**	**0.83**	**0**	P	Pn	14 13 07.5	+0.2
	baz=352						
WFSB				S	Sb	14 13 17.1	-0.3
	baz=352						
EHY	**Hungye**	**0.84**	**210**	P	Pg	14 13 05.8	+0.1
	baz=219						
EHY				*e*S	Sb	14 13 17.4	0.0
	baz=219						

MOS **04** *14:13:09.8±1.1, 24.12N×121.86E, h10km, mb5.5/49, Error ellipse: s-maj=7.4km s-min=4.2km az=114.1*

IDC **04** *14:13:09.9±0.4, 24.21N×121.85E, h0km, mb4.8/37, mbtmp4.8/40, ML4.5/2, MS5.3/14, Error ellipse: s-maj=12.4km s-min=11.5km az=60.0*

BJI **04** *14:13:11.2±0.0, 24.11N×121.76E, h10km, mb4.9/64, mB6.0/10, ML5.5/9, Ms5.9/47, Ms7 5.9/45*

TAP **04** *14:13:12.4, 24.15N×121.72E, h10km, ML5.6, C*

NEIC **04** *14:13:12.1±1.1, 24.13N±0.05×121.76E±0.05, h9km±3km, mb5.5/293, Mwr5.5/19, Mww5.5/18, Error ellipse: s-maj=7.9km s-min=5.9km az=201.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.45; Mθθ-0.64; Mϕϕ 0.19; Mrθ 1.41; Mθϕ-0.56; Mϕr 1.16; Fault plane solution: M₀1.99000×10¹⁷ NP1:ϕ₁49.27000°, δ80.32000°, λ.80.77000°. NP2:ϕ₂273.28000°, δ13.34000°, λ133.23000°. Principal axes: T 1.7586, Plg54.0000°, Azm308.0000°; N 0.4050, Plg9.0000°, Azm51.0000°; P -2.1636, Plg35.0000°, Azm147.0000°;*

NEIC **04** *14:13:12.1, 23.83N×121.88E, h16km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10¹⁷Nm; Mrr0.24; Mθθ-0.44; Mϕϕ 0.21; Mrθ 1.87; Mθϕ-0.35; Mϕr 0.89; Fault plane solution: M₀2.11000×10¹⁷ NP1:ϕ₁64.24000°, δ84.36000°, λ.88.97000°. NP2:ϕ₂254.60000°, δ5.73000°, λ.100.31000°. Principal axes: T 1.9341, Plg51.0000°, Azm333.0000°; N 0.3547, Plg1.0000°, Azm64.0000°; P -2.2888, Plg39.0000°, Azm155.0000°;*

NEIC **04** *14:13:12.1, 24.13N×121.77E, h16km*

JMA **04** *14:13:12.7±0.1, 24.2N±0.2×121.7E±0.2, h0km, MD5.9/18, MW5.6/18, TAIWAN REGION*

NEIC **04** *14:13:12.1, 24.13N×121.77E, h9km*

ASIES **04** *14:13:12.4, 24.15N×121.72E, h10km, ML5.6, Mw5.5, Moment Tensor Solution. Moment tensor: Scale 10²⁴Nm; Mrr0.58; Mθθ-0.40; Mϕϕ-0.19; Mrθ 1.77; Mθϕ-0.46; Mϕr 1.04; Fault plane solution: M₀2.16499×10²⁴ NP1:ϕ₁59.24000°, δ81.00000°, λ.93.42000°. NP2:ϕ₂218.32000°, δ9.62000°, λ.69.35000°. Principal axes: T Plg53.8760°, Azm333.3430°; N Plg3.3790°, Azm238.7040°; P Plg35.9150°, Azm146.2530°;*

NIED **04** *14:13:12.7, 24.16N×121.72E, h0km, MW5.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁷Nm; Mrr0.88; Mθθ-0.73; Mϕϕ-0.15; Mrθ 3.50; Mθϕ-0.61; Mϕr 1.26; Fault plane solution: M₀3.85000×10¹⁷ NP1:ϕ₁70.00000°, δ83.00000°, λ.94.00000°. NP2:ϕ₂220.00000°, δ8.00000°, λ.60.00000°.*

GCMT **04** *14:13:13.1±0.2, 24.09N±0.01×121.76E±0.01, h12km, MW5.4/123, Moment Tensor Solution. s18, c24; s123, c207; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr0.59±.03; Mθθ-0.56±.02; Mϕϕ-0.03±.02; Mrθ 1.52±.07; Mθϕ-0.54±.02; Mϕr 0.66±.07; Best double couple: M₀1.81900×10¹⁷ NP1:ϕ₁67.00000°, δ78.00000°, λ.96.00000°. NP2:ϕ₂221.00000°, δ13.00000°, λ.65.00000°. Principal axes: T 1.6800, Plg57.0000°, Azm344.0000°; N 0.2790, Plg5.0000°, Azm246.0000°; P -1.9590, Plg33.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 14:13:13.1±0.5, 24.15N±0.01×121.76E±0.01, h16km±3km, n1061, σ1.924/1092, mb5.4/242, MS5.5/16, 50C-47D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**274**	⇓P	**Pg**	**14 13 15.1**	**-1.7**
	baz=276						
ETL				S	**Sg**	**14 13 16.2**	**-3.0**
	baz=276						
NACB	**Ninganchiao**	**0.15**	**279**	Pg	**Pg**	**14 13 15.2**	**-1.9**
NACB	**Ninganchiao**	**0.15**	**279**	⇓*i*P	**Pg**	**14 13 15.5**	**-1.7**
	baz=282						
NACB				*i* S	**Sg**	**14 13 17.2**	**-2.5**
	baz=282						
EHP	**Heping Village**	**0.16**	**354**	⇓*i*P	**Pg**	**14 13 16.3

ETLH Xiulin Townshi 0.26 283 ⇓P Pg 14 13 17.5 -1.4
baz=285
ETLH iS Sg 14 13 20.8 -2.0
baz=285
ENA Nanau 0.28 357⇓iP Pg 14 13 18.3 -0.8
baz=5.0
ENA iS Sg 14 13 21.9 -1.2
baz=5.0
EWUT Wuta 0.29 3⇓iP Pg 14 13 18.7 -0.7
baz=9.0
EWUT eS Sg 14 13 22.8 -0.9
baz=9.0
ETM Tongmen 0.30 233 ⇑P Pg 14 13 18.2 -1.3
baz=231
LXIB Xiulin Townshi 0.34 248⇑iP Pg 14 13 18.8 -1.4
baz=247
LXIB eS Sg 14 13 23.2 -1.9
baz=247
SHUL Shoufeng 0.40 207 P Pb 14 13 21.9 0.0
baz=211
SHUL eS Sb 14 13 29.3 +1.5
baz=211
ESAO Su ao 0.43 10 ⇓P Pg 14 13 21.2 -0.6
baz=14
ESAO eS Sg 14 13 26.6 -1.1
baz=14
LATG Datong 0.44 331⇓iP Pg 14 13 21.2 -0.8
baz=334
LATG iS Sg 14 13 27.3 -0.7
baz=334
NNSH Datong 0.44 309⇓iP Pg 14 13 21.0 -1.0
baz=311
NNSH S Sg 14 13 26.6 -1.5
baz=311
NNSB Datong 0.44 309⇓iP Pg 14 13 21.0 -1.0
baz=312
NNSB S Sg 14 13 26.5 -1.6
baz=312
ESL Shilin 0.45 222⇑eP Pg 14 13 20.9 -1.2
baz=230
WHF Hehuan Shan 0.45 270 P Pg 14 13 21.1 -1.2
baz=270
WHF S Sg 14 13 26.6 -2.0
baz=270
NNS Nan Shan 0.46 309⇓iP Pg 14 13 21.3 -1.0
baz=313
NNS iS Sg 14 13 27.1 -1.5
baz=313
TWC Suao 0.47 10⇓iP Pg 14 13 21.9 -0.5
baz=8.0
TWC eS Sg 14 13 28.5 -0.2
baz=8.0
FUSS Fushou 0.48 282⇓iP Pg 14 13 21.9 -0.9
baz=283
FUSS iS Sg 14 13 27.9 -1.5
baz=283
NDS Dongshan 0.48 355⇓iP Pg 14 13 22.3 -0.5
baz=359
NDS eS Sg 14 13 28.9 -0.4
baz=359
NDT Datong Townshi 0.50 334⇓iP Pg 14 13 22.7 -0.5
baz=336
NDT iS Sg 14 13 29.5 -0.5
baz=336
EOS2 EOS2 0.51 58 eP Pn 14 13 24.8 -0.8
baz=48
EOS4 EOS4 0.51 93 eP Pn 14 13 25.3 -0.1
baz=91
ENTT Nioudou 0.52 340⇓iP Pg 14 13 22.9 -0.5
baz=343
ENTT iS Sb 14 13 30.4 -0.8
baz=343
EOS3 EOS3 0.53 75 eP Pn 14 13 25.8 0.0
baz=59
CHGB Renai 0.54 261 P Pg 14 13 23.0 -0.9
baz=253
CHGB S Sg 14 13 29.5 -1.7
baz=253
TWT Tachien 0.54 281⇓iP Pg 14 13 23.4 -0.6
baz=281
TWT iS Sg 14 13 30.2 -1.0
baz=281
WARBT Fenglin Townsh 0.55 219 P Pg 14 13 22.8 -1.2
baz=224
WARBT eS Sg 14 13 31.1 -0.3
baz=224
TDCB Techi 0.56 281⇓iP Pg 14 13 23.4 -0.8
baz=282
TDCB S Sg 14 13 29.9 -1.8
baz=282
EGFH Guangfu 0.57 212 eP Pg 14 13 23.8 -0.5
baz=220
EGFH eS Sb 14 13 33.5 +1.0
baz=220
OWD Renai 0.57 250 eP Pg 14 13 23.5 -0.9
baz=251
TWE Neicheng 0.57 352⇓iP Pg 14 13 24.1 -0.4
baz=355
TWE S Sg 14 13 31.9 -0.3
baz=355
WUSB Renai 0.61 255 eP Pg 14 13 24.2 -0.9
baz=247
WUSB S Sg 14 13 31.2 -2.0
baz=247
ILA Ilan 0.61 359 P Pb 14 13 25.0 -0.5
baz=355
ILA eS Sb 14 13 33.9 0.0
baz=355
YHNB Yeheng 0.62 326 Pg Pg 14 13 24.6 -0.8
YHNB Yeheng 0.62 326⇓iP Pg 14 13 24.9 -0.5
baz=328
YHNB iS Sg 14 13 32.8 -1.0
baz=328
FUSB Fushanzhiwuyua 0.63 346⇓iP Pb 14 13 25.1 -0.6
baz=348
FUSB S Sb 14 13 33.9 -0.5
baz=348
NSK Sanguang 0.64 325⇓iP Pg 14 13 25.1 -0.6
baz=328
NSK iS Sg 14 13 33.1 -1.1
baz=328
VWDT VWDT 0.69 235 eP Pg 14 13 25.6 -1.0
baz=235
VWDT eS Sb 14 13 36.7 +0.7
baz=235
NTC Toucheng 0.70 5 eP Pb 14 13 26.6 -0.4
baz=6.0
HGSD Ruisui 0.72 205 P Pb 14 13 27.6 +0.3
baz=192
HGSD eS Sn 14 13 38.6 -0.8
baz=192
WHP Taichung City 0.75 280 P Pg 14 13 27.1 -0.7
baz=281
WHP S Sg 14 13 36.8 -1.0
baz=281
EHY Hungye 0.76 212 eP Pg 14 13 27.1 -0.7
baz=222
EHY eS Sb 14 13 39.2 +1.2
baz=222
NFF Wufeng Townshi 0.76 310 P Pg 14 13 27.3 -0.6
baz=311
NFF S Sg 14 13 37.1 -0.8
baz=311
DPDB Guoxing 0.77 262 eP Pg 14 13 27.6 -0.5
baz=254
DPDB eS Sg 14 13 36.8 -1.5
baz=254
WCS Beigang Elemen 0.78 263 P Pb 14 13 27.9 -0.4
baz=256
WCS eS Sg 14 13 36.6 -2.0
baz=256
SSLB Suanglung 0.82 244 P Pg 14 13 28.3 -0.8
SSLB Suanglung 0.82 244 ⇑P Pg 14 13 27.9 -1.2
baz=254
SSLB S Sg 14 13 37.7 -2.2
baz=254
TIPB Shuangxi 0.82 4 ⇓P Pb 14 13 28.7 -0.4
baz=356
TIPB eS Sb 14 13 40.4 +0.5
baz=356
SMLT Sun Moon Lake 0.83 252 eP Pg 14 13 28.3 -1.0
baz=252
SMLT S Sg 14 13 38.5 -1.7
baz=252
NHDH Xindian Distri 0.84 345⇓eP Pb 14 13 29.0 -0.3
baz=346
NHDH eS Sb 14 13 40.1 -0.2
baz=346
LIOB Emei 0.84 306 eP Pb 14 13 29.1 -0.3
baz=307
LIOB eS Sb 14 13 40.2 -0.2
baz=307
NSTT Nanjuang 0.84 305 eP Pg 14 13 28.8 -0.7
baz=306
NSTT S Sg 14 13 39.9 -0.7
baz=306
NJD Zhudong 0.84 314 eP Pb 14 13 29.6 +0.2
baz=320
TATO Taipei 0.86 343 ⇓P Pb 14 13 29.3 -0.4
baz=344
TATO eS Sg 14 13 40.4 -0.7
baz=344
TYC Yuchr 0.86 254 eP Pg 14 13 29.1 -0.7
baz=254
TYC iS Sg 14 13 38.7 -2.4
baz=254
YULB Yu-li 0.86 209 P Pn 14 13 30.9 +0.2
YULB Yu-li 0.86 209 eP Pg 14 13 29.3 -0.6
baz=221
YULB eS Sn 14 13 42.9 0.0
baz=221
ECBN Changbin 0.88 199 P Pg 14 13 29.4 -0.7
baz=190
ECBN eS Sn 14 13 43.6 +0.4
baz=190
TWB1 Santiao Chiao 0.88 14 P Pb 14 13 30.1 0.0
baz=8.0
TWB1 eS Sb 14 13 41.5 -0.1
baz=8.0
BACT New Taipei Cit 0.89 341 eP Pb 14 13 30.4 +0.2
baz=342
BACT eS Sb 14 13 43.0 +1.0
baz=342
EYUL Yuli 0.90 207 eP Pn 14 13 30.9 -0.2
baz=219
TWF1 Yuli 0.90 208 eP Pb 14 13 30.1 -0.2
baz=219
TWF1 eS Sb 14 13 43.0 +0.9
baz=219
NHY Taipei 0.90 349 eP Pb 14 13 30.4 0.0
baz=349
NHY eS Sn 14 13 43.3 -0.6
baz=349
TAP Taipei 0.92 345 P Pb 14 13 30.9 +0.2
baz=346
TAP S Sb 14 13 42.6 +0.1
baz=346
NWF Wu-fen Shan 0.92 1 P Pb 14 13 30.7 0.0
baz=353
NWF S Sb 14 13 43.3 +0.6
baz=353
WFSB Wu-fen Shan 0.92 1 P Pb 14 13 30.7 0.0
baz=353
WFSB S Sb 14 13 43.2 +0.5
baz=353
HSN1 Hsinchu 0.92 313 eP Pb 14 13 30.9 +0.1
baz=314
HSN1 S Sb 14 13 43.5 +0.8
baz=314
TWQ1 Liyutan 0.92 283 eP Pg 14 13 30.4 -0.6
baz=284
WHYT Xinyi Township 0.94 242 eP Pb 14 13 31.2 +0.1
baz=249
WHYT eS Sb 14 13 44.5 +1.0
baz=249
NTY Taoyuan 0.94 334 P Pn 14 13 31.6 -0.1
baz=335
NTY S Sb 14 13 44.2 +0.8
baz=335
SXI1 Grass Mountain 0.95 6 ⇓P Pb 14 13 31.3 +0.1
baz=13
SXI1 S Sb 14 13 44.1 +0.5
baz=13
SBCB Hsinchu 0.95 312 eP Pb 14 13 31.4 +0.2
baz=313
SBCB eS Sb 14 13 44.5 +0.9
baz=313
NMLH Miaoli 0.96 294 eP Pn 14 13 31.8 -0.2
baz=295
NCUH Zhongli 0.97 327 P Pn 14 13 31.9 -0.2
baz=328
NCUH eS Sn 14 13 45.3 -0.2
baz=328
HSN Hsinchu 0.97 312 eP Pn 14 13 32.0 0.0
baz=316
NCU National Centr 0.97 328 eP Pn 14 13 32.1 0.0
baz=335
NCU eS Sn 14 13 46.2 +0.6
baz=335
WWF Wufeng 0.97 264 eP Pn 14 13 32.6 +0.5
baz=260
WWF eS Sn 14 13 45.5 -0.2
baz=260
TCU Taichung 0.99 270 eP Pn 14 13 32.6 +0.3
baz=271
TCU eS Sn 14 13 46.2 +0.2
baz=271
TNOU National Taiwa 1.00 1 P Pb 14 13 32.1 +0.1
baz=1.0
TNOU eS Sn 14 13 46.7 +0.5
baz=1.0
TWS1 Kuangyinshan 1.00 342 eP Pn 14 13 32.5 0.0
baz=350
TWS1 eS Sn 14 13 46.0 -0.2
baz=350
WJS Zhushan 1.00 251 eP Pn 14 13 32.8 +0.3
baz=252
WJS eS Sb 14 13 45.5 +0.5
baz=252
YM01 YM01 1.01 350 eP Pb 14 13 32.3 +0.1
baz=350
YM01 eS Sn 14 13 46.2 -0.4
baz=350
CHKH Chenggong 1.01 199 eP Pg 14 13 31.6 -1.0
baz=191
CHKH eS Sn 14 13 47.0 +0.5
baz=191
WNT1 Nantou City 1.02 256 eP Pn 14 13 33.1 +0.4
baz=252
WNT1 eS Sb 14 13 46.1 +0.6
baz=252
WNT Mingjian 1.02 255 eP Pn 14 13 33.1 +0.3
baz=251
WNT eS Sb 14 13 46.2 +0.7
baz=251
FULB Fuli 1.04 204 eP Pn 14 13 33.3 +0.2
baz=221
WDJ Dajia District 1.04 281 P Pn 14 13 33.8 +0.8
baz=291
WDJ eS Sb 14 13 47.0 +0.8
baz=291
NTST Danshui 1.05 344 eP Pn 14 13 33.4 +0.2
baz=353
NTST eS Sn 14 13 47.8 +0.3
baz=353
ANP Anpu 1.05 348 eP Pn 14 13 33.2 -0.1
baz=349
ANP eS Sb 14 13 47.4 +0.7
baz=349
NHW Xinwu Township 1.07 323 eP Pg 14 13 33.1 -0.8
baz=323
NHW eS Sb 14 13 47.8 +0.7
baz=323
ALS Alishan 1.08 234 P Pg 14 13 33.1 -0.9
baz=226
ALS eS Sn 14 13 49.1 +0.4
baz=226
WYL Yuanlin Townsh 1.09 260 eP Pn 14 13 34.1 +0.4
baz=263
WCHH Zhanghua 1.10 267 eP Pn 14 13 34.6 +0.7
baz=268
CHKT Chengkung 1.11 199 eP Pb 14 13 33.0 -0.9
baz=192
CHKT eS Sn 14 13 50.0 +1.1
baz=192
EHD Haiduan 1.12 207 eP Pb 14 13 33.4 -0.6
baz=221
JYNG Yonagunijimaku 1.12 74 P Pn 14 13 35.1 +0.9
JYNG eS Sn 14 13 51.6 +2.2
JYNG Yonagunijimaku 1.12 74 A A 14 13 35.1
comp=E,237nm,3.4s,comp=N,323nm,4.0s
TWY Chenhua 1.13 353 P Pn 14 13 34.6 +0.3
baz=353
TWY eS Sn 14 13 49.8 +0.3
baz=353
CHN5 Tsauling 1.13 241 eP Pn 14 13 34.8 +0.4
baz=243
CHN5 S Sn 14 13 50.6 +1.0
baz=243
ECS Chishang 1.16 205 eP Pn 14 13 35.1 +0.4
baz=222
ELDTW Lidau 1.17 216 eP Pb 14 13 34.6 -0.4
baz=226
ELDTW eS Sn 14 13 51.5 +0.7
baz=226
YOJ Yonaguni jima 1.18 75 P Pg 14 13 36.0 0.0
YOJ Yonaguni jima 1.18 75 P Pg 14 13 35.7 -0.3
baz=64
YOJ eS Sn 14 13 52.2 +1.4
baz=64
YOJ Yonaguni jima 1.18 75 P Pg 14 13 35.9 -0.1
YOJ eS Sn 14 13 52.9 +2.1
YOJ Yonaguni jima 1.18 75 A A 14 13 35.9
comp=E,287nm,8.5s,comp=N,249nm,4.2s
WGK Gukeng 1.19 247 eP Pg 14 13 35.7 -0.3
baz=250
WDLH Douliu 1.21 248 eP Pg 14 13 36.1 -0.3
baz=250
WDLH eS Sn 14 13 53.0 +1.5
baz=250
EDH Donghe 1.24 200 eP Pn 14 13 34.7 -1.1
baz=188
EDH eS Sn 14 13 53.1 +0.8
baz=188
WCKO Fanlu 1.27 236 eP Pg 14 13 37.4 -0.3
baz=239
WCKO eS Sn 14 13 54.9 +1.8
baz=239
WRL Guolierlin Hig 1.29 259 eP Pg 14 13 37.1 -0.8
baz=260
WRL eS Sg 14 13 54.2 -0.5
baz=260
RLNB Erlin 1.30 259 P Pg 14 13 37.6 -0.6
baz=260
RLNB eS Sg 14 13 54.8 -0.5
baz=260
CHN2 Minshiung 1.33 243 eP Pg 14 13 38.9 +0.2
baz=245
CHN2 eS Sg 14 13 57.0 +1.0
baz=245
STYH Taoyuan 1.33 223 P Pn 14 13 37.2 +0.2
baz=226
STYH eS Sg 14 13 55.9 -0.1
baz=226
CHN4 Tsaushan 1.33 234 eP Pg 14 13 38.0 -0.7
baz=224
CHN4 eS Sg 14 13 57.2 +1.1
baz=224
TPUB Ta-pu 1.34 231 P Pg 14 13 38.7 -0.2
TPUB Ta-pu 1.34 231 P Pb 14 13 37.6 -0.2
baz=221
TPUB eS Sg 14 13 56.5 +0.2
baz=221
WTK Tuku 1.34 250 eP Pg 14 13 38.5 -0.4
baz=252
WTK eS Sg 14 13 56.2 -0.1
baz=252
STYT Tauyuan 1.34 223 P Pn 14 13 37.3 0.0
baz=226
STYT S Sg 14 13 56.1 -0.5
baz=226
LONT Longtian 1.36 205 eP Pn 14 13 36.5 -1.0
baz=209
WTP Ta-pu 1.38 230 P Pb 14 13 38.7 +0.1
baz=232
WTP S Sg 14 13 57.8 0.0
baz=232
CHY Chiayi 1.38 242 eP Pg 14 13 39.4 -0.4
baz=244
CHY eS Sg 14 13 57.7 -0.1
baz=244
WMLT Mailiao 1.45 257 eP Pb 14 13 39.7 0.0
baz=269
WMLT eS Sg 14 13 58.6 -1.2
baz=269
TWK Hsinying 1.46 233 P Pb 14 13 40.0 +0.1
baz=236
TWK S Sg 14 13 59.9 -0.3
baz=236
TWG Pinlang 1.47 206 eP Pn 14 13 37.5 -1.4
baz=193
TWGBT Beinan 1.47 205 P Pn 14 13 37.9 -1.0
TWGBT Beinan 1.47 205 eP Pn 14 13 37.9 -1.0
baz=194
SNST Tainan City 1.48 232 eP Pb 14 13 40.3 0.0
baz=235
SNST eS Sg 14 14 00.6 -0.3
baz=235
CHN1 Nanshi 1.48 230 eP Pb 14 13 39.9 -0.4
baz=234
CHN1 eS Sg 14 14 00.5 -0.4
baz=234
LDUT Ludao 1.49 190 eP Pn 14 13 37.5 -1.8
baz=195
WSF Szhu 1.50 250 ⇑P Pb 14 13 40.5 -0.1
baz=252
WSF eS Sg 14 14 01.1 -0.2
baz=252
TTN Taitung 1.50 202 eP Pb 14 13 40.1 -0.4
baz=206
PCYT Pengchaiyu 1.50 11 eP Pb 14 13 40.5 -0.1
baz=355
PCYT eS Sg 14 14 01.2 -0.3
baz=355
SGST Jiashian 1.51 226 P Pn 14 13 39.9 +0.3
baz=221
SGST S Sg 14 14 01.2 -0.7
baz=221
WSL Shuilin Townsh 1.54 246 eP Pb 14 13 41.1 -0.1
baz=248
WSL eS Sg 14 14 02.6 0.0
baz=248
SLGT Liugui 1.54 222 eP Pb 14 13 41.1 -0.2
baz=226
SLGT S Sg 14 14 01.9 -0.8
baz=226
ICHU Yijhu 1.57 240 eP Pb 14 13 41.7 0.0
baz=244
ICHU eS Sg 14 14 02.6 -1.0
baz=244
CHN8 Yiju 1.63 241 eP Pb 14 13 42.2 -0.6
baz=229
CHN8 eS Sb 14 14 03.8 +0.7
baz=229
CHN3 Shinhua 1.67 230 eP Pb 14 13 43.7 +0.3
baz=236
SSHA Shanhua 1.68 234 eP Pb 14 13 43.4 -0.4
baz=239
SSHA eS Sg 14 14 05.9 -1.5
baz=239
SCST Cishan 1.71 223 eP Pb 14 13 44.4 +0.2
baz=228
SCST eS Sg 14 14 07.3 -1.0
baz=228
ECL Taimali 1.71 206 eP Pn 14 13 42.8 +0.5
baz=196
SHHT Tainan City 1.71 229 eP Pb 14 13 44.4 +0.2
baz=235
SCLT Jiali 1.73 236 eP Pb 14 13 43.3 +0.8
baz=240
SCLT S Sg 14 14 07.8 -1.2
baz=240
SSD Sandimen 1.74 217 eP Pn 14 13 43.0 +0.4
baz=233
SSD S Sb 14 14 06.4 +0.1
baz=233
TSMG Majia 1.76 216 eP Pb 14 13 44.4 -0.7
baz=232
TSMG eS Sb 14 14 07.6 +0.6
baz=232
TAI1 Yung-k'ang 1.79 232 eP Pb 14 13 44.7 -0.7
baz=238
TAI1 eS Sg 14 14 10.5 -0.1
baz=238
TWM1 Shoushan 1.80 223 eP Pb 14 13 45.6 -0.1
baz=228
IRIF Iriomote-Funau 1.81 84 P Pb 14 13 44.9 -1.0
IRIF eS Sg 14 14 10.1 -1.3
IRIF Iriomote-Funau 1.81 84 A A 14 13 44.9
comp=E,174nm,2.8s,comp=N,398nm,4.7s
TSCK Chigu Township 1.83 237 eP Pb 14 13 45.5 -0.7
baz=243
SGLT Jiouru 1.83 220 eP Pb 14 13 46.0 -0.3
baz=224

MASBT	**Mashibuluo**	**1.85**	**214**	P	**Pb**	**14 13 45.8**	**-0.7**
	baz=217						
MASBT				S	**Sb**	**14 14 10.0**	**+0.6**
	baz=217						
TSPT	**Pingtung City**	**1.87**	**219**	*e*P	**Pb**	**14 13 47.4**	**+0.5**
	baz=207						
TSPT				*e*S	**Sg**	**14 14 12.8**	**-0.5**
	baz=207						
HATJ	**Hateruma jima**	**1.87**	**92**	*e*P	**Pb**	**14 13 46.4**	**-0.6**
HATJ				S	**Sg**	**14 14 12.8**	**-0.6**
HATJ	**Hateruma jima**	**1.87**	**92**	A	A	14 13 46.4	
	comp=E,258nm,4.7s,comp=N,335nm,6.7s						
SNJT	**Kaohsiung City**	**1.91**	**224**	P	**Pb**	**14 13 47.9**	**+0.3**
	baz=229						
EAST	**Anshuo**	**1.95**	**206**	*e*P	**Pb**	**14 13 46.9**	**-1.3**
	baz=197						
TAW	**Tawu**	**1.95**	**204**	*e*P	**Pb**	**14 13 47.9**	**-0.5**
	baz=195						
TAWH	**Dawu Township**	**1.97**	**204**	*e*P	**Pn**	**14 13 47.1**	**+1.3**
	baz=196						
WSSB	**Gushan**	**2.04**	**223**	*e*P	**Pn**	**14 13 48.1**	**+1.3**
	baz=229						
SCZT	**Fangliau**	**2.06**	**211**	*e*P	**Pb**	**14 13 49.0**	**-1.1**
	baz=199						
JKRS	**Kuro-shima**	**2.06**	**87**	P	**Pb**	**14 13 48.9**	**-1.2**
JKRS				*e*S	**Sg**	**14 14 17.2**	**-2.1**
JKRS	**Kuro-shima**	**2.06**	**87**	A	A	14 13 48.9	
	comp=E,419nm,3.8s,comp=N,427nm,3.7s						
KAU	**Kaohsiung**	**2.06**	**221**	*e*P	**Pb**	**14 13 49.4**	**-0.8**
	baz=244						
PNG	**Penghu**	**2.10**	**254**	*e*P	**Pb**	**14 13 49.2**	**-1.6**
	baz=258						
PNG				*e*S	**Sn**	**14 14 14.7**	**+1.3**
	baz=258						
PHUB	**P'eng-hu**	**2.10**	**253**	*e*P	**Pn**	**14 13 48.8**	**+1.2**
	baz=257						
PHUB				*e*S	**Sn**	**14 14 14.6**	**+1.1**
	baz=257						
LAY	**Lan-yu**	**2.11**	**185**	*e*P	**Pn**	**14 13 46.8**	**-1.0**
	baz=190						
SLIU	**Shizi**	**2.12**	**205**	*e*P	**Pb**	**14 13 49.7**	**-1.4**
	baz=197						
WDGT	**Dungji**	**2.12**	**246**	P	**Pn**	**14 13 48.8**	**+0.9**
	baz=236						
WDGT				S	**Sn**	**14 14 15.7**	**+1.8**
	baz=236						
LYUB	**Lan-yu**	**2.14**	**184**	P	**Pn**	**14 13 46.5**	**-1.8**
	baz=189						
LYUB				*e*S	**Sn**	**14 14 14.1**	**-0.4**
	baz=189						
JIJ	**Ishigaki jima**	**2.19**	**84**	P	**Pn**	**14 13 49.6**	**+0.8**
JIJ				*e*S	**Sb**	**14 14 19.3**	**+0.1**
JIJ	**Ishigaki jima**	**2.19**	**84**	A	A	14 13 49.6	
	comp=E,68nm,5.4s,comp=N,93nm,7.5s						
TWP	**Hsiaoliuchiu**	**2.21**	**216**	*e*P	**Pb**	**14 13 51.3**	**-1.4**
	baz=240						
VWUC	**VWUC**	**2.26**	**292**	*e*P	**Pn**	**14 13 50.3**	**+0.5**
	baz=291						
VWUC				*e*S	**Sn**	**14 14 16.1**	**-1.3**
	baz=291						
HEN	**Hengchun**	**2.33**	**204**	*e*P	**Pb**	**14 13 53.6**	**-1.2**
	baz=198						
VCHM	**Qimei**	**2.33**	**247**	*e*P	**Pn**	**14 13 52.2**	**+1.4**
	baz=238						
VCHM				*e*S	**Sn**	**14 14 20.7**	**+1.5**
	baz=238						
TWK1	**Hengchun**	**2.37**	**202**	*e*P	**Pn**	**14 13 53.2**	**+2.0**
	baz=194						
TWKBT	**Hengchun**	**2.37**	**202**⇓	*e*P	**Pn**	**14 13 53.1**	**+1.8**
	baz=196						
TWKBT				*e*S	**Sb**	**14 14 23.2**	**-1.2**
	baz=196						
JISG	**Ishigakijimahi**	**2.37**	**79**	P	**Pn**	**14 13 52.6**	**+1.3**
JISG	**Ishigakijimahi**	**2.37**	**79**	A	A	14 13 52.6	
	comp=E,68nm,7.1s,comp=N,107nm,4.1s						
SNW	**Nanwan**	**2.37**	**203**	*e*P	**Pb**	**14 13 53.8**	**-1.7**
	baz=198						
PTMZ	**Houxiangcun**	**2.56**	**291**	*e*P	**Pn**	**14 13 54.1**	**+0.2**
	baz=290						
PTMZ				*e*S	**Sn**	**14 14 23.2**	**-1.6**
	baz=290						
MATB	**Ma-tsu**	**2.58**	**321**	*e*P	**Pn**	**14 13 55.3**	**+1.0**
	baz=319						
MSUT	**Lienchiang**	**2.61**	**321**	*e*P	**Pn**	**14 13 55.0**	**+0.4**
	baz=320						
JTJ	**Tarama**	**2.73**	**79**	*e*P	**Pb**	**14 13 59.4**	**-2.1**
JTJ	**Tarama**	**2.73**	**79**	A	A	14 13 59.4	
	comp=E,130nm,3.1s,comp=N,146nm,5.7s						
QZH	**Quanzhou**	**2.99**	**286**⇑	*i*Pn	**Pn**	**14 14 00.3**	**+0.4**
QZH				Sn	**Sn**	**14 14 35.5**	**+0.1**
QZH				smax	smax		
	comp=N,9μm,1.2s						
QZH				smax	smax		
	comp=N,6μm,1.3s						
QZH				LR	LR		
	comp=N,162μm,8.6s						
QZH				LR	LR		
	comp=N,206μm,10.3s						
LYJJ	**Jianjiangzhen**	**3.00**	**323**	*e*P	**Pn**	**14 13 59.8**	**-0.1**
	baz=322						
KNM	**Kinmen**	**3.05**	**276**	*e*P	**Pn**	**14 14 03.6**	**+3.0**
	baz=277						
KNMB	**Chin-men Tao**	**3.09**	**276**	*e*P	**Pn**	**14 14 02.3**	**+1.1**
	baz=278						
XPSS	**Dashiqiu**	**3.11**	**333**	*e*P	**Pn**	**14 14 02.4**	**+0.9**
	baz=331						
MHZQ	**Yeshan**	**3.15**	**309**	*e*P	**Pn**	**14 14 03.1**	**+1.1**
	baz=308						
JIRB	**Irabujima**	**3.18**	**77**	*e*P	**Pn**	**14 14 04.7**	**+2.2**
JIRB	**Irabujima**	**3.18**	**77**	A	A	14 14 04.7	
	comp=E,95nm,3.9s,comp=N,160nm,5.6s						
JIKM	**Ikemajima**	**3.27**	**76**	P	**Pn**	**14 14 05.9**	**+2.2**
JIKM	**Ikemajima**	**3.27**	**76**	A	A	14 14 05.9	
	comp=E,140nm,3.6s,comp=N,116nm,7.8s						
JMJ	**Miyako jima 2**	**3.29**	**78**	P	**Pn**	**14 14 07.1**	**+3.1**
JMJ	**Miyako jima 2**	**3.29**	**78**	*e*P	**Pn**	**14 14 05.8**	**+1.8**
	baz=74						
JMJ2	**Miyako jima3**	**3.31**	**79**	P	**Pn**	**14 14 06.8**	**+2.6**
JMJ2				*e*S	**Sb**	**14 14 49.9**	**-1.5**
JMJ2	**Miyako jima3**	**3.31**	**79**	A	A	14 14 06.8	
	comp=E,192nm,3.6s,comp=N,169nm,3.8s						
JOGS	**Gusukube**	**3.38**	**79**	A	A	14 14 08.6	
	comp=E,166nm,6.7s,comp=N,231nm,4.3s						
AXDP	**Jialang**	**3.53**	**283**	*e*P	**Pn**	**14 14 08.4**	**+1.1**
	baz=283						
ZPLA	**Ao Xicun**	**3.67**	**267**	*e*P	**Pn**	**14 14 10.1**	**+0.8**
	baz=269						
DSXP	**Dongshan**	**3.99**	**265**	*e*P	**Pn**	**14 14 13.5**	**-0.1**
	baz=266						
SXFK	**Yanhouchang**	**4.35**	**302**	*e*P	**Pn**	**14 14 19.2**	**+0.6**
	baz=301						
JAGN	**Aguni-jima**	**5.52**	**63**	A	A	14 14 38.8	
	comp=E,27nm,5.1s,comp=N,36nm,5.7s						
VDOS	**Pratas Island**	**5.78**	**235**	*e*P	**Pn**	**14 14 40.8**	**+2.5**
	baz=238						
JOW	**Kunigami**	**6.46**	**64**	Pn	**Pn**	**14 14 47.4**	**-0.3**
JOW	**Kunigami**	**6.46**	**64**	P	**Pn**	**14 14 47.8**	**+0.1**
JOW	**Kunigami**	**6.46**	**64**	Pn	**Pn**	**14 14 46.5**	**-1.2**
	comp=N,12nm,0.3s,baz=211,slow=18,SNR=3.6						
JOW				Sn	**Sn**	**14 16 01.3**	**+0.2**
	baz=70,slow=28 comp=N,37nm,0.3s						
SZP	**Santa**	**6.68**	**191**	P	**Pn**	**14 14 51.4**	**+0.8**
HKPS	**Hong Kong Po S**	**7.25**	**257**	Pn	**Pn**	**14 14 58.0**	**-0.5**
HKPS	**Hong Kong Po S**	**7.25**	**257**	P	**Pn**	**14 15 00.0**	**+1.5**
NJ2	**Nanjing**	**8.28**	**343**	*e*P	**Pn**	**14 15 12.2**	**-0.3**
NJ2				S	**Sn**	**14 16 47.2**	**+1.4**
NJ2				pmax	pmax		
	comp=N,130nm,0.7s						
NJ2				smax	smax		
	comp=N,1μm,1.0s						
NJ2				smax	smax		
	comp=N,1μm,1.0s						
NJ2				LR	LR		
	comp=N,68μm,10.1s						
NJ2				LR	LR		
	comp=N,24μm,5.3s						
NJ2				LR	LR		
	comp=N,87μm,10.5s						
WHN	**Wuhan**	**9.16**	**316**	P	**Pn**	**14 15 24.5**	**-0.1**
WHN				S	**Sn**	**14 17 07.6**	**+0.2**
TGY	**Tagaytay City**	**10.03**	**185**	Pn	Pn	14 15 42.5	+5.9
	comp=N,75nm,0.3s,baz=357,slow=4.1,SNR=5.5						
TGY				LR	LR	14 20 18.2	
	comp=N,3μm,21.2s,baz=359,slow=42						
GULI	**GuiLin**	**10.42**	**279**	P	**Pn**	**14 15 42.6**	**+0.7**
GULI				LR	LR		
	comp=N,14μm,7.6s						
GULI				LR	LR		
	comp=N,75μm,10.8s						
GULI				LR	LR		
	comp=N,87μm,10.8s						
JNU	**Nakatsue**	**12.00**	**40**	P	Pn	14 16 08.8	+5.3
JNU	**Nakatsue**	**12.00**	**40**	Pn	**Pn**	**14 16 07.0**	**+3.5**
	comp=N,1.1nm,0.3s,baz=183,slow=7.5,SNR=9.6						
JNU				LR	LR	14 21 31.1	
	comp=N,17μm,18.3s,baz=226,slow=42						
QIZ	**Qiongzhong**	**12.20**	**248**	P	**Pn**	**14 16 07.1**	**+0.8**
QIZ				S	**Sn**	**14 18 26.9**	**+4.9**
QIZ				LR	LR		
	comp=N,15μm,12.6s						
QIZ				LR	LR		
	comp=N,13μm,15.1s						
QIZ				LR	LR		
	comp=N,9μm,13.9s						
QIZ	**Qiongzhong**	**12.20**	**248**	P	**Pn**	**14 16 09.2**	**+2.9**
QIZ	**Qiongzhong**	**12.20**	**248**	S	**Sn**	**14 16 06.6**	**+4.7**
JTU	**Tsushima**	**12.29**	**31**	P	**Pn**	**14 16 11.6**	**+4.1**
ENH	**Enshi**	**12.50**	**302**	P	**Pn**	**14 16 14.7**	**+4.2**
TIA	**Tai'an**	**12.67**	**343**	P	Pn	14 16 19.7	+7.0
TIA				pmax	pmax		
	comp=Z,22nm,1.3s						
TJN	**Taejon**	**13.11**	**20**	Pn	**Pn**	**14 16 18.0**	**-0.7**
TJN	**Taejon**	**13.11**	**20**	P	Pn	14 16 23.5	+4.8
TJN	**Taejon**	**13.11**	**20**	P	**Pn**	**14 16 18.0**	**-0.7**
LYN	**LuoYang**	**13.15**	**324**⇑	P	**Pn**	**14 16 20.5**	**+1.3**
LYN				sP	P	14 16 24.3	-5.0
LYN				PP	**PnPn**	**14 16 29.9**	**+2.7**
LYN				pmax	pmax		
	comp=Z,31nm,0.6s						
GYA	**Guiyang**	**13.85**	**283**⇓	*i*P	**Pn**	**14 16 30.4**	**+1.5**
GYA				S	**Sn**	**14 19 05.6**	**+3.1**
GYA				pmax	pmax		
	comp=Z,95nm,1.0s						
INCN	**Inchon**	**13.93**	**16**	P	**Pn**	**14 16 33.8**	**+3.9**
KSAR	**Wonju Array Be**	**14.25**	**20**	Pn	**Pn**	**14 16 33.6**	**-0.7**
KSAR	**Wonju Array Be**	**14.25**	**20**	P	**Pn**	**14 16 33.6**	**-0.7**
KSRS	**Korea Array**	**14.27**	**20**	Pn	**Pn**	**14 16 37.8**	**+3.2**
	comp=Z,4.0nm,0.3s,baz=200,slow=13,SNR=17						
KSRS				LR	LR	14 21 59.2	
	comp=Z,5μm,19.8s,baz=185,slow=37						
KS19	**Wonju Array Si**	**14.30**	**20**	Pn	**Pn**	**14 16 34.8**	**-0.1**
HNS	**HongShan**	**14.52**	**337**⇓	P	**Pn**	**14 16 38.1**	**+0.1**
HNS				*e*S	**Sn**	**14 19 27.1**	**+8.4**
HNS				pmax	pmax		
	comp=Z,80nm,1.3s						
HNS				LR	LR		
	comp=Z,55μm,13.3s						
HNS				LR	LR		
	comp=Z,28μm,13.5s						
HNS				LR	LR		
	comp=Z,54μm,13.7s						
DL2	**Dalian**	**14.71**	**360**	P	**Pn**	**14 16 43.0**	**+2.4**
DL2				sP	**P**	**14 16 50.7**	**+4.1**
DL2				pmax	pmax		
	comp=Z,61nm,2.3s						
DL2				LR	LR		
	comp=Z,33μm,13.7s						
DL2				LR	LR		
	comp=Z,44μm,14.1s						
XAN	**Xi'an**	**14.92**	**314**⇑	P	**Pn**	**14 16 43.1**	**-0.4**
XAN				pP	P	14 16 49.2	+0.1
XAN				pmax	pmax		
	comp=Z,68nm,1.4s						
XAN				LR	LR		
	comp=Z,12μm,11.0s						
XAN				LR	LR		
	comp=Z,11μm,11.6s						
XAN				LR	LR		
	comp=Z,12μm,12.4s						
TIY	**Taiyuan**	**15.70**	**332**	*e*P	**P**	**14 16 58.0**	**+0.3**
TIY				pmax	pmax		
	comp=Z,47nm,1.6s						
TIY				LR	LR		
	comp=Z,41μm,11.8s						
TIY				LR	LR		
	comp=Z,24μm,10.6s						
TIY				LR	LR		
	comp=Z,33μm,11.2s						
BJT	**Baijiatuao**	**16.51**	**345**	P	**P**	**14 17 07.1**	**+0.5**
BJT	**Baijiatuao**	**16.51**	**345**	P	**P**	**14 17 09.7**	**+3.1**
BJT	**Baijiatuao**	**16.51**	**345**	P	**P**	**14 17 07.1**	**+0.5**
BJT				pmax	pmax		
	comp=Z,138nm,1.9s						
BJI	**Beijing**	**16.53**	**345**	P	**P**	**14 17 07.2**	**+0.4**
BJI				pmax	pmax		
	comp=Z,20nm,1.3s						
SLVN	**Son La**	**16.71**	**264**	Pn	**Pn**	**14 17 06.2**	**-0.5**
CD2	**Chengdu**	**17.32**	**297**	P	**Pn**	**14 17 15.1**	**+0.8**
CD2				S	**Sn**	**14 20 29.0**	**+2.2**
CD2				pmax	pmax		
	comp=Z,120nm,1.0s						
KMI	**Kunming**	**17.32**	**277**⇑	P	**P**	**14 17 17.2**	**+1.3**
KMI				S	**S**	**14 20 32.8**	**-3.1**
KMI				pmax	pmax		
	comp=Z,45nm,1.6s						
DAV	**Davao City (W)**	**17.37**	**167**	LR	LR	14 23 52.9	
	comp=Z,9μm,18.6s,baz=341,slow=37						
UBPT	**Khong Chiam**	**17.68**	**243**	P	**P**	**14 17 20.8**	**+1.1**
SNY	**Shenyang**	**17.70**	**4**⇑	P	**P**	**14 17 19.5**	**-0.2**
SNY				S	**Sn**	**14 20 31.0**	**-4.7**
SNY				LR	LR		
	comp=Z,31μm,12.6s						
SNY				LR	LR		
	comp=Z,9μm,10.0s						
SNY				LR	LR		
	comp=Z,52μm,12.3s						
PZH	**PanZhiHua**	**18.25**	**282**	P	**P**	**14 17 28.8**	**+2.7**
PZH				S	**Sn**	**14 20 45.2**	**-4.3**
PZH				pmax	pmax		
	comp=Z,60nm,1.0s						
PZH				pmax	pmax		
	comp=Z,5μm,8.3s						
PZH				LR	LR		
	comp=Z,20μm,17.1s						
PZH				LR	LR		
	comp=Z,23μm,14.5s						
PZH				LR	LR		
	comp=Z,26μm,13.5s						
JCJ	**Chichijima**	**18.65**	**77**	P	**Pn**	**14 17 32.0**	**+1.3**
JCJ	**Chichijima**	**18.65**	**77**	P	**P**	**14 17 27.6**	**-2.8**
	comp=Z,6.8nm,0.3s,baz=238,slow=7.2,SNR=3.2 comp=Z,70nm,0.5s						
HHC	**Hu-ho-hao-te**	**18.72**	**335**	*e*P	**Pn**	**14 17 34.9**	**+3.4**
HHC				*e*S	**S**	**14 21 04.6**	**+0.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				LR	LR		
	comp=Z,24μm,12.2s						
HHC				LR	LR		
	comp=Z,9μm,16.7s						
HHC				LR	LR		
	comp=Z,28μm,13.3s						
KKM	**Kota Kinabalu**	**18.77**	**197**		**Pn**	**14 17 32.5**	**+0.2**
KKM				IAmb	IAmb	14 17 37.2	
	comp=Z,709nm,1.9s						
KKM	**Kota Kinabalu**	**18.77**	**197**	P	**Pn**	**14 17 33.5**	**+1.2**
MAJO	**Matsushiro**	**18.78**	**45**	P	**Pn**	**14 17 36.6**	**+4.3**
MAJO	**Matsushiro**	**18.78**	**45**⇑	*e*P	**P**	**14 17 31.5**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,136nm,2.6s						
MJAR	**Matsushiro Arr**	**18.78**	**45**	P	**P**	**14 17 29.4**	**-2.3**
	comp=Z,2.3nm,0.6s,baz=238,slow=7.2,SNR=3.8						
MJAR				LR	LR	14 25 33.4	
	comp=Z,8μm,18.1s,baz=232,slow=40						
MYLDM	**Lahad Datu**	**19.12**	**190**		**P**	**14 17 35.3**	**-0.2**
MYLDM				IAmb	IAmb	14 17 42.0	
	comp=Z,400nm,1.5s						
BTO	**Baotou**	**19.14**	**332**	*e*P	**Pn**	**14 17 37.9**	**+1.3**
BTO				sP	**sP**	**14 17 45.9**	**+3.7**
BTO				PP	**PnPn**	**14 17 53.8**	**+4.4**
BTO				S	**S**	**14 21 16.6**	**+4.3**
BTO				pmax	pmax		
	comp=Z,61nm,1.3s						
LZH	**Lanzhou**	**19.50**	**312**⇓	P	**Pn**	**14 17 44.5**	**+3.4**
LZH				sP	sP	14 17 52.7	+6.5
LZH				pmax	pmax		
	comp=Z,97nm,1.4s						
LZH				LR	LR		
	comp=Z,24μm,13.1s						
LZH				LR	LR		
	comp=Z,62μm,13.7s						
CN2	**Changchun**	**19.84**	**8**	*e*P	**Pn**	**14 17 45.2**	**+0.4**
CN2				*e*S	**S**	**14 21 22.3**	**-3.7**
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				LR	LR		
	comp=Z,11μm,11.0s						
CN2				LR	LR		
	comp=Z,9μm,11.0s						
CN2				LR	LR		
	comp=Z,13μm,12.0s						
CRAI	**Chiangrai**	**20.18**	**263**	P	**P**	**14 17 46.5**	**-0.7**
XLT	**XiLinHaoTe**	**20.25**	**348**	*e*P	Pn	14 17 49.8	+0.1
XLT				pP	sP	14 17 54.0	-0.3
XLT				pmax	pmax		
	comp=Z,55nm,1.2s						
XLT				pmax	pmax		
	comp=Z,5μm,6.0s						
XLT				LR	LR		
	comp=Z,2μm,13.6s						
XLT				LR	LR		
	comp=Z,13μm,13.2s						
XLT				LR	LR		
	comp=Z,24μm,16.2s						
TNCH	**TengChong**	**21.15**	**277**	P	**P**	**14 18 00.9**	**+3.1**
TNCH				pP	sP	14 18 04.1	-0.5
TNCH				sP	pP	14 18 07.1	+4.7
TNCH				PP	**PnPn**	**14 18 24.7**	**+7.6**
TNCH				S	**S**	**14 21 46.5**	**-6.3**
TNCH				sS	pS	14 22 01.3	-1.9
TNCH				pmax	pmax		
	comp=Z,180nm,1.6s						
TNCH				pmax	pmax		
	comp=Z,7μm,7.5s						
TNCH				LR	LR		
	comp=Z,9μm,7.3s						
TNCH				LR	LR		
	comp=Z,7μm,9.7s						
TNCH				LR	LR		
	comp=Z,7μm,11.9s						
JMM	**Marumori**	**21.23**	**45**	P	**P**	**14 17 54.7**	**-3.6**
JMM	**Marumori**	**21.23**	**45**	P	**P**	**14 17 58.7**	**+0.3**
MDJ	**Mudanjiang**	**21.39**	**15**	P	**P**	**14 18 00.4**	**+0.3**
MDJ				PP	**PnPn**	**14 18 20.4**	**+0.2**
MDJ				S	**S**	**14 21 57.8**	**+0.8**
MDJ				sS	pS	14 22 03.3	-2.4
MDJ				ScP	**ScP**	**14 25 40.4**	**+0.5**
MDJ				ScS	**ScS**	**14 29 27.5**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,30nm,1.0s						
MDJ				LR	LR		
	comp=Z,31μm,13.4s						
MDJ				LR	LR		
	comp=Z,12μm,13.7s						
MDJ				LR	LR		
	comp=Z,34μm,16.1s						
MDJ	**Mudanjiang**	**21.39**	**15**	P	**P**	**14 18 00.1**	**0.0**
MDJ	**Mudanjiang**	**21.39**	**15**	P	**P**	**14 18 01.7**	**+1.6**
NAYO	**Nakonayok**	**21.61**	**247**	P	**P**	**14 18 04.9**	**+2.3**
USA0B	**Ussuriysk Arra**	**21.68**	**20**	P	**P**	**14 18 03.2**	**+0.1**
USA0B	**Ussuriysk Arra**	**21.68**	**20**	P	**P**	**14 18 03.2**	**+0.1**
USA0B				pmax	pmax		
	comp=Z,82nm,1.2s						
USRK	**Ussuriysk Ar.**	**21.68**	**20**	P	**P**	**14 18 03.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**21.68**	**20**	P	**P**	**14 18 03.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**21.68**	**20**	P	**P**	**14 18 03.9**	**+0.8**
	comp=Z,16nm,0.7s,baz=208,slow=9.8,SNR=20						
USRK				LR	LR	14 27 03.3	
	comp=Z,7μm,20.0s,baz=196,slow=39						
CM31	**Chiang Mai Arr**	**21.99**	**259**	P	**P**	**14 18 06.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.99**	**259**	P	**P**	**14 18 06.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**21.99**	**259**	P	**P**	**14 18 06.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**21.99**	**259**	P	**P**	**14 18 08.6**	**+1.9**
	comp=Z,23nm,1.1s,baz=61,slow=7.6,SNR=30 comp=Z,23nm,1.1s						
BNX	**BinXian**	**22.02**	**11**⇓	P	**P**	**14 18 09.8**	**+3.0**
BNX				pmax	pmax		
	comp=Z,17nm,0.8s						
TOLI2	**Tolitoli**	**22.92**	**183**	P	**P**	**14 18 14.2**	**-2.4**
TOLI2				IAmb	IAmb	14 18 17.9	
	comp=Z,306nm,1.7s						
TOLI2	**Tolitoli**	**22.92**	**183**	P	**P**	**14 18 15.6**	**-1.0**
SBUM	**Sibu**	**23.46**	**205**	P	**P**	**14 18 20.5**	**-1.6**
SBUM				IAmb	IAmb	14 18 24.8	
	comp=Z,190nm,1.7s						
MRSI	**Marisa**	**23.53**	**180**	P	**P**	**14 18 23.8**	**+1.1**
	comp=Z,126nm,1.4s						
KMSI	**Cibinong**	**23.53**	**174**	P	**P**	**14 18 21.2**	**-1.6**
	comp=Z,206nm,1.1s						
MND	**Mandalay**	**23.68**	**270**	P	**P**	**14 18 27.1**	**+2.9**
MPSI	**Mapaga**	**23.74**	**185**	P	**P**	**14 18 24.1**	**-0.7**
	comp=Z,75nm,1.1s						
TNTI	**Ternate**	**23.87**	**166**	P	**P**	**14 18 23.6**	**-2.4**
TNTI				IAmb	IAmb	14 18 47.4	
	comp=Z,179nm,1.1s						
TNTI	**Ternate**	**23.87**	**166**	P	**P**	**14 18 27.1**	**+1.1**
TNTI	**Ternate**	**23.87**	**166**	P	**P**	**14 18 25.8**	**-0.2**
	comp=Z,168nm,1.6s,comp=Z,4μm						
GTA	**Gaotai**	**23.98**	**315**	*e*P	**P**	**14 18 27.6**	**+0.5**
GTA				pP	sP	14 18 32.9	-1.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				LR	LR		
	comp=Z,9μm,10.4s						
GTA				LR	LR		
	comp=Z,33μm,12.7s						
GUMO	**Guam**	**24.22**	**112**	P	**P**	**14 18 31.0**	**+1.6**
LUWI	**Luwuk**	**25.06**	**178**	P	**P**	**14 18 34.5**	**-2.4**
LUWI	**Luwuk**	**25.06**	**178**	P	**P**	**14 18 35.5**	**-1.4**
LUWI	**Luwuk**	**25.06**	**178**	P	**P**	**14 18 35.2**	**-1.7**
	comp=Z,251nm,1.0s,comp=Z,6μm						
HIA	**Hailar**	**25.12**	**357**	P	**P**	**14 18 37.1**	**-0.1**
HIA	**Hailar**	**25.12**	**357**	P	**P**	**14 18 38.3**	**+1.1**
HIA	**Hailar**	**25.12**	**357**⇓	*e*P	**P**	**14 18 37.6**	**+0.4**
HIA				pmax	pmax		
	comp=Z,53nm,1.0s						
KSM	**Kuching**	**25.12**	**208**	P	**P**	**14 18 36.8**	**-0.6**
KSM	**Kuching**	**25.12**	**208**	P	**P**	**14 18 38.3**	**+0.8**
LBMI	**Labuha**	**25.26**	**166**	P	**P**	**14 18 37.6**	**-1.1**
	comp=Z,248nm,1.7s,comp=Z,7μm						
BKB	**Balikpapan**	**25.70**	**191**	P	**P**	**14 18 42.6**	**-0.1**
MTKI	**Muara Teweh, K**	**25.82**	**196**	P	**P**	**14 18 43.1**	**-0.7**
	comp=Z,141nm,1.1s						
STKI	**Sintang**	**25.93**	**204**	P	**P**	**14 18 46.1**	**+1.2**
	comp=Z,140nm,1.7s						
ASAJ	**Asahikawa**	**26.21**	**35**	P	**P**	**14 18 45.5**	**-1.6**
	comp=Z,5.8nm,0.4s,baz=274,slow=9.8,SNR=11						
ASAJ				LR	LR	14 29 48.1	
	comp=Z,6μm,19.3s,baz=210,slow=38 comp=Z,5.8nm,0.4s						
SRIT	**Nakonsritamara**	**26.22**	**238**	P	**P**	**14 18 49.8**	**+2.3**
KLR	**Kul'dur**	**26.24**	**15**⇑	*e*P	**P**	**14 18 47.7**	**+0.4**
KLR	**Kul'dur**	**26.24**	**15**	P	**P**	**14 18 46.3**	**-1.0**
	comp=Z,17nm,0.8s,baz=208,slow=6.3,SNR=12						
KLR				LR	LR	14 29 04.7	
	comp=Z,6μm,19.6s,baz=184,slow=36 comp=Z,17nm,0.8s						
SANI	**Sanana**	**26.36**	**170**	P	**P**	**14 18 48.0**	**-0.7**
SANI	**Sanana**	**26.36**	**170**	P	**P**	**14 18 47.2**	**-1.5**
	comp=Z,47

IPM **Ipoh** 27.95 229 P **P** 14 19 03.9 +0.8
YSS **Yuzh-Sakhalins** 28.28 31 P **P** 14 19 08.6 +2.9
YSS **Yuzh-Sakhalins** 28.28 31‖ *e*P **P** 14 19 07.9 +2.2
YSS pmax pmax
comp=Z,59nm,1.7s
FAKI **Fak Fak** 28.78 158 P **P** 14 19 09.3 -1.1
FAKI IAmb IAmb 14 19 11.7
comp=Z,155nm,1.3s
FAKI **Fak Fak** 28.78 158 P **P** 14 19 10.4 0.0
FAKI **Fak Fak** 28.78 158 P **P** 14 19 08.3 -2.1
KAPI **Kappang** 29.05 184 P **P** 14 19 12.0 -0.8
KAPI **Kappang** 29.05 184 *d i* P **P** 14 19 11.5 -1.3
KAPI pmax pmax
comp=Z,64nm,1.5s
ZEA **Zeya** 29.84 7 *e*P **P** 14 19 19.2 -0.2
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,60nm,0.9s
ZEA MLR MLR
comp=E,4µm,15.0s
ZEA MLR MLR
comp=N,11µm,14.0s
ZAK **Zakamensk** 29.86 336 *e*P **P** 14 19 21.3 +1.4
ZAK pmax pmax
comp=Z,18nm,1.2s
PSI **Prapat** 30.61 230 P **P** 14 19 28.5 +1.7
PSI **Prapat** 30.61 230 P **P** 14 19 26.9 +0.1
PSI pmax pmax
comp=Z,24nm,0.9s
RPSI **Rantau Prapat** 30.68 229 P **P** 14 19 26.9 -0.5
MOY **Mondy** 31.76 335 *e*P **P** 14 19 39.0 +2.4
MOY pmax pmax
comp=Z,177nm,3.6s
GENI **Genyem** 32.05 144 P **P** 14 19 40.0 +0.7
MMRI **Maumere** 32.59 179 P **P** 14 19 43.5 -0.5
PLAI **Plampang** 33.01 187 P **P** 14 19 48.3 +0.6
SOEI **Soe** 33.79 176 IAmb IAmb 14 20 11.7
comp=Z,64nm,0.9s
SOEI **Soe** 33.79 176 P **P** 14 19 56.1 +1.5
WMQ **Urumqi** 34.06 314 *e*P **P** 14 19 58.3 +1.6
WMQ sP sP 14 20 10.2 +6.6
WMQ pmax pmax
comp=Z,82nm,2.1s
WMQ LR LR
comp=Z,7µm,10.5s
BOD **Bodaibo** 34.10 353 *e*P **P** 14 19 55.5 -1.3
BOD pmax pmax
comp=Z,25nm,2.0s
BBJI **Bungbulang** 34.30 205 P **P** 14 20 01.0 +1.9
TABU **Tabubil** 34.86 145 P **P** 14 20 05.7 +1.8
DGZ **Jazzator, Alta** 36.94 322‖ *e*P **P** 14 20 23.0 +1.5
ZSN **Zaisan** 37.38 318 *e*P **P** 14 20 25.4 +0.3
baz=318
ZSN **Zaisan** 37.38 318 *e*P **P** 14 20 25.4 +0.3
MTN **Manton Dam** 37.89 165 IAmb IAmb 14 20 29.4
comp=Z,131nm,1.4s
MTN **Manton Dam** 37.89 165 P **P** 14 20 28.4 -1.3
KDU **Kakadu** 38.08 163 P **P** 14 20 30.2 -1.0
YAK **Yakutsk** 38.25 6 P **P** 14 20 29.8 -2.4
YAK **Yakutsk** 38.25 6 *e*P **P** 14 20 30.6 -1.6
YAK *e*S **S** 14 26 25.7 +0.5
YAK pmax pmax
comp=Z,36nm,0.8s
YAK pmax pmax
comp=N,21nm,0.9s
YAK pmax pmax
comp=E,14nm,1.9s
YAK smax smax
comp=E,6µm,10.1s
YAK smax smax
comp=N,6µm,9.4s
YAK MLR MLR
comp=N,10µm,20.0s
YAK MLR MLR
comp=E,4µm,13.0s
YAK **Yakutsk** 38.25 6 P **P** 14 20 31.3 -0.9
comp=E,32nm,0.7s,baz=220,slow=1.1,SNR=12
YAK LR LR 14 36 59.5
comp=E,5µm,19.6s,baz=178,slow=37
comp=E,32nm,0.7s
MK31 **Makanchi Array** 38.73 316 P **P** 14 20 36.4 -0.1
MK31 **Makanchi Array** 38.73 316 *c i* P **P** 14 20 36.6 +0.1
MKAR **Makanchi Array** 38.73 316 P **P** 14 20 36.4 -0.1
MKAR **Makanchi Array** 38.73 316 P **P** 14 20 36.9 +0.4
comp=E,15nm,0.6s,baz=104,slow=9.3,SNR=29
MKAR PcP **PcP** 14 22 47.1 -1.0
comp=E,2.5nm,0.6s,baz=96,slow=5.8,SNR=1.9
comp=E,15nm,0.6s
MAKZ **Makanchi** 38.93 316 P **P** 14 20 38.0 -0.2
MAKZ **Makanchi** 38.93 316 P **P** 14 20 38.0 -0.2
MAKZ pmax pmax
comp=Z,65nm,1.1s
SHLS **Shalkode** 39.49 309 *e*P **P** 14 20 41.0 -2.1
baz=309
SHLS **Shalkode** 39.49 309 *e*P **P** 14 20 41.0 -2.1
PDGK **Podgornoye** 39.52 310 P **P** 14 20 43.9 +0.6
PETK **Petropavlovsk-** 39.60 34 P **P** 14 20 41.1 -2.6
comp=Z,3.8nm,0.9s,baz=244,slow=8.7,SNR=1.8
PETK PcP **PcP** 14 22 49.4 -1.2
comp=Z,3.5nm,1.0s,baz=264,slow=5.5,SNR=1.1
comp=Z,3.8nm,0.9s
UZB **Uzynbulak** 39.80 309 *e*P **P** 14 20 46.2 +0.5
baz=309
UZB **Uzynbulak** 39.80 309 *e*P **P** 14 20 46.1 +0.5
KPKS **Kokpek** 40.12 309 *e*P **P** 14 20 48.6 +0.4
baz=310
KPKS **Kokpek** 40.12 309 *e*P **P** 14 20 48.6 +0.4
KNRA **Kununurra** 40.17 170 P **P** 14 20 47.3 -1.4
KNRA IAmb IAmb 14 20 49.1
comp=Z,117nm,1.3s
KNRA **Kununurra** 40.17 170 P **P** 14 20 47.3 -1.4
ZAA0 **Zalesovo Array** 40.56 327 P **P** 14 20 48.9 -2.7
ZALV **Zalesovo Beam** 40.56 327 P **P** 14 20 49.7 -1.9
ZALV **Zalesovo Beam** 40.56 327 *i* P **P** 14 20 52.0 +0.4
ZALV pmax pmax
comp=Z,14nm,0.5s
ZALV **Zalesovo Beam** 40.56 327 P **P** 14 20 50.7 -0.9
comp=Z,12nm,0.5s,baz=116,slow=6.8,SNR=20
ZALV PcP **PcP** 14 22 52.5 -1.2
comp=Z,2.1nm,0.6s,baz=130,slow=5.3,SNR=1.2
ZALV LR LR 14 38 59.8
comp=Z,7µm,18.9s,baz=146,slow=38
comp=Z,12nm,0.5s
TDK **Taldyqorghan** 40.72 312 *e*P **P** 14 20 53.7 +0.5
baz=312
TDK **Taldyqorghan** 40.72 312 *e*P **P** 14 20 53.6 +0.5
HYB **Hyderabad** 40.82 269 *e*P **P** 14 20 54.0 -0.3
HYB *e*S **S** 14 27 05.4 +0.3
RABL **Rabaul** 40.87 130 P **P** 14 20 56.4 +1.8
MDOK **Medeo** 41.21 309 *e*P **P** 14 20 57.1 -0.2
baz=309
MDOK **Medeo** 41.21 309 *e*P **P** 14 20 57.1 -0.2
KSH **Kashi** 41.36 303 P **P** 14 21 01.1 +2.5
KSH sP sP 14 21 07.3 +1.7
KSH pmax pmax
comp=Z,10.0nm,1.2s
SEM **Semipalatinsk** 41.38 320 *e*P **P** 14 20 58.5 -0.2
baz=320
SEM **Semipalatinsk** 41.38 320 *e*P **P** 14 20 58.5 -0.2
CHKK **Chushkaly** 41.41 310 *e*P **P** 14 20 59.5 +0.6
baz=310
CHKK **Chushkaly** 41.41 310 *e*P **P** 14 20 59.4 +0.6
PMG **Port Moresby** 41.57 140 P **P** 14 20 58.6 -1.7
PMG IAmb IAmb 14 21 02.5
comp=Z,125nm,1.4s
PMG **Port Moresby** 41.57 140 P **P** 14 21 01.6 +1.3
PMG **Port Moresby** 41.57 140‖ *i* P **P** 14 21 01.3 +1.0
PMG pmax pmax
comp=Z,105nm,1.3s
NRN **Naryn** 41.63 306 IAmb IAmb 14 21 09.0
comp=Z,148nm,1.8s
KUU **Kurty** 41.87 310 *e*P **P** 14 21 03.0 +0.4
baz=310
KUU **Kurty** 41.87 310 *e*P **P** 14 21 03.0 +0.4
TKM2 **Tokmak 2** 42.20 308 P **P** 14 21 06.2 +0.7
KURK **Kurchatov** 42.45 320 P **P** 14 21 07.0 -0.2
KURK **Kurchatov** 42.45 320‖ *e*P **P** 14 21 08.6 +1.4
KURK pmax pmax
comp=Z,137nm,2.0s
KURBB **Kurchatov Arra** 42.47 320 P **P** 14 21 06.9 -0.4
comp=Z,7.4nm,0.5s,baz=114,slow=7.7,SNR=16
KURBB PcP **PcP** 14 22 58.4 -1.6
comp=Z,2.6nm,0.8s,baz=103,slow=4.5,SNR=1.7
KURBB ScP **ScP** 14 26 48.8 -1.6
comp=Z,2.2nm,0.2s,baz=101,slow=4.8,SNR=1.4
comp=Z,7.4nm,0.5s
AAK **Ala-Archa** 42.95 307 P **P** 14 21 11.9 +0.4
AAK **Ala-Archa** 42.95 307‖ *e*P **P** 14 21 12.9 +1.4
AAK pmax pmax
comp=Z,72nm,2.3s
NIL **Nilore** 43.18 294 P **P** 14 21 12.9 -0.5
NIL **Nilore** 43.18 294 P **P** 14 21 12.9 -0.5
NIL pmax pmax
comp=Z,40nm,0.9s
COEN **Coen** 43.27 149 P **P** 14 21 13.4 -0.8
COEN **Coen** 43.27 149 P **P** 14 21 14.7 +0.5
BTLS **Baital** 43.72 311 *e*P **P** 14 21 17.8 +0.2
baz=311
BTLS **Baital** 43.72 311 *e*P **P** 14 21 17.7 +0.2
SEY **Seymchan** 43.83 20‖ *e*P **P** 14 21 18.2 0.0
SEY pmax pmax
comp=Z,54nm,3.4s
SEY **Seymchan** 43.83 20 P **P** 14 21 17.4 -0.8
comp=Z,4.3nm,0.7s,baz=283,slow=1.7,SNR=7.8
SEY PcP **PcP** 14 23 04.3 0.0
comp=Z,6.2nm,0.6s,baz=250,slow=4.5,SNR=7.9
comp=Z,4.3nm,0.7s
WB0 **Warramunga Arr** 45.35 163 IAmb IAmb 14 21 31.9
comp=Z,82nm,1.4s
PSA00 **Pilbara Seismi** 45.49 182 P **P** 14 21 29.0 -2.8
PSA00 **Pilbara Seismi** 45.49 182 IAmb IAmb 14 21 35.3
comp=Z,42nm,0.8s
PSA00 **Pilbara Seismi** 45.49 182 P **P** 14 21 30.9 -0.9
WRAB **Tennant Creek** 45.50 163 P **P** 14 21 30.0 -1.9
WRAB IAmb IAmb 14 21 32.4
comp=Z,132nm,1.6s
WRAB **Tennant Creek** 45.50 163 P **P** 14 21 30.0 -1.9
WRAB pmax pmax
comp=Z,133nm,1.6s
WRA **Warramunga Arr** 45.51 163 P **P** 14 21 30.8 -1.3
comp=Z,9.8nm,0.5s,baz=342,slow=8.3,SNR=30
WRA PcP **PcP** 14 23 11.1 +0.3
comp=Z,1.4nm,0.7s,baz=333,slow=3.2,SNR=0.6
comp=Z,9.8nm,0.5s
WB2 **Warramunga Arr** 45.51 163 IAmb IAmb 14 21 38.6
comp=Z,41nm,0.9s
OTUK **Ortayu** 45.59 315 P **P** 14 21 32.6 +0.1
BRZS **Berezniki** 45.82 317 *e*P **P** 14 21 34.1 -0.1
baz=317
BRZS **Berezniki** 45.82 317 *e*P **P** 14 21 34.1 -0.1
KK31 **Karatay Array** 45.91 307 IAmb IAmb 14 21 41.8
comp=Z,82nm,1.8s
KK31 **Karatay Array** 45.91 307 *i* P **P** 14 21 35.8 +0.7
KKAR **Karatay Array** 45.91 307 P **P** 14 21 35.0 0.0
KKAR **Karatay Array** 45.91 307 IAmb IAmb 14 21 41.8
comp=Z,81nm,1.8s
KKAR **Karatay Array** 45.91 307 P **P** 14 21 35.1 0.0
KBL **Kabul** 46.65 295 P **P** 14 21 40.4 -0.9
KBL **Kabul** 46.65 295 P **P** 14 21 40.4 -0.9
KBL pmax pmax
comp=Z,153nm,1.4s
MTSU **Mount Surprise** 47.44 150 P **P** 14 21 49.1 +1.9
TIXI **Tiksi** 47.70 3 P **P** 14 21 46.4 -2.2
TIXI **Tiksi** 47.70 3‖ *e*P **P** 14 21 46.9 -1.7
TIXI pmax pmax
comp=Z,87nm,1.3s
TIXI **Tiksi** 47.70 3 LR LR 14 43 14.4
comp=Z,5µm,18.8s,baz=184,slow=38
QIS **Mount Isa** 47.72 157 P **P** 14 21 50.0 +0.7
BVA0 **Borovoye Array** 48.03 321 *i* P **P** 14 21 51.6 +0.1
BVAR **Borovoye Array** 48.03 321 P **P** 14 21 51.7 +0.2
comp=Z,16nm,0.5s,baz=107,slow=8.6,SNR=34
BVAR PcP **PcP** 14 23 17.9 -1.3
comp=Z,4.6nm,0.6s,baz=118,slow=5.2,SNR=2.1
comp=Z,16nm,0.5s
BRVK **Borovoye** 48.10 321 P **P** 14 21 51.2 -0.8
BRVK IAmb IAmb 14 21 55.0
comp=Z,60nm,1.3s
BRVK **Borovoye** 48.10 321‖ *e*P **P** 14 21 52.5 +0.5
BRVK pmax pmax
comp=Z,51nm,1.3s
ASAR **Alice Springs** 48.97 165 P **P** 14 21 58.7 -0.3
comp=Z,10nm,0.9s,baz=341,slow=6.0,SNR=22
ASAR PcP **PcP** 14 23 21.3 -1.7
comp=Z,1.9nm,0.7s,baz=347,slow=3.8,SNR=0.9
ASAR ScP **ScP** 14 27 16.3 -1.3
comp=Z,2.0nm,0.8s,baz=350,slow=4.5,SNR=3.2
comp=Z,10nm,0.9s
AS01 **Alice Springs** 48.98 165 P **P** 14 22 00.1 +1.0
WRKA **Warakurna** 49.30 172 P **P** 14 22 01.1 -0.4
NRIK **Noril'sk** 49.57 345 P **P** 14 22 02.2 -0.8
comp=Z,34nm,1.1s,baz=116,slow=5.4,SNR=18
comp=Z,34nm,1.1s
CTA **Charters Tower** 50.03 149 LR LR 14 41 18.5
comp=Z,3µm,21.1s,baz=348,slow=34
CTAO **Chars Tower** 50.03 149 P **P** 14 22 08.6 +1.5
AUAYR **Ayr State High** 50.14 148 P **P** 14 22 09.1 +1.2
MEEK **Meekatharra** 50.58 184 P **P** 14 22 10.1 -1.1
MORW **Morawa** 53.20 186 P **P** 14 22 29.8 -0.8
OOD **Oodnadatta** 53.36 165 P **P** 14 22 31.8 0.0
AB31 **Akbulak array** 53.84 314 *i* P **P** 14 22 35.6 +0.4
SVE **Sverdlovsk** 54.38 324 *e*P **P** 14 22 39.4 +0.3
SVE pmax pmax
comp=Z,45nm,1.4s
BLDU **Ballidu** 54.67 185 P **P** 14 22 41.0 -0.4
INKA **Innaminka** 54.74 159 P **P** 14 22 43.1 +1.2
RK1H **Rockhampton Ha** 54.87 147 P **P** 14 22 43.9 +0.9
QLP **Quilpie** 54.91 155 P **P** 14 22 44.0 +0.8
FORT **Forrest** 54.95 173 P **P** 14 22 43.2 -0.2
AKTO **Aktyubinsk** 55.16 316 P **P** 14 22 45.0 +0.1
KMBL **Kambalda** 55.20 180 P **P** 14 22 44.8 -0.4
GEYT **Ailbeck** 55.27 300 P **P** 14 22 46.7 +0.9
comp=Z,7.2nm,0.8s,baz=72,slow=4.8,SNR=11
comp=Z,7.2nm,0.8s
MULG **Mulgathing** 55.39 167 P **P** 14 22 46.8 +0.2
ARU **Arti** 55.45 323 P **P** 14 22 46.0 -0.7
ARU IAmb IAmb 14 23 04.9
comp=Z,44nm,1.2s
ARU **Arti** 55.45 323 *c i* P **P** 14 22 46.1 -0.7
ARU 14 24 48.7
ARU S **S** 14 30 31.6 +0.6
ARU SS **SS** 14 34 12.6 -2.8
ARU pmax pmax
comp=Z,54nm,1.4s
KLBR **Kellerberrin** 55.56 184 P **P** 14 22 47.5 -0.3
MUN **Mundaring** 56.06 186 P **P** 14 22 51.5 +0.1
LCRK **Leigh Creek** 56.53 163 P **P** 14 22 55.0 +0.2
EIDS **Eidsvold** 56.83 148 P **P** 14 22 56.2 -0.7
EIDS **Eidsvold** 56.83 148 P **P** 14 22 56.6 -0.4
NWAO **Narrogin (SRO)** 56.92 185 P **P** 14 22 56.8 -0.7
NWAO IAmb IAmb 14 23 02.0
comp=Z,84nm,1.1s
NWAO **Narrogin (SRO)** 56.92 185 P **P** 14 22 57.6 +0.1
NWAO **Narrogin (SRO)** 56.92 185 P **P** 14 22 56.8 -0.7
NWAO pmax pmax
comp=Z,84nm,1.2s
SPIA **Saint Paul Isl** 58.16 36 P **P** 14 23 06.3 +0.4
baz=266
GAMB **Gambell** 58.26 29 P **P** 14 23 07.0 +0.4
baz=260
BBOO **Buckleboo** 58.26 166 IAmb IAmb 14 23 49.0
comp=Z,44nm,1.1s
BBOO **Buckleboo** 58.26 166 P **P** 14 23 06.9 0.0
P08K **Saint George I** 58.50 37 P **P** 14 23 08.9 +0.6
baz=266
NIKH **Nikolski High** 58.77 41 P **P** 14 23 10.1 -0.2
baz=269
STKA **Stephens Creek** 58.85 160 P **P** 14 23 10.6 -0.5
STKA **Stephens Creek** 58.85 160 *d i* P **P** 14 23 10.3 -0.8
STKA **Stephens Creek** 58.85 160 P **P** 14 23 10.8 -0.2
comp=Z,15nm,0.7s,baz=334,slow=7.0,SNR=23
comp=Z,15nm,0.7s
AULRC **Lightning Ridg** 58.94 153 P **P** 14 23 12.4 +0.7
HTT **Hallett** 59.55 163 P **P** 14 23 16.7 +0.8
CMSA **Cobar Meteorol** 59.92 156 P **P** 14 23 19.6 +1.1
TNA **Tin City** 60.13 27 P **P** 14 23 20.3 +0.7
M11K **Mekoryuk** 60.46 33 P **P** 14 23 21.8 0.0
baz=267
KIRV **Kirov** 60.55 325 *c i* P **P** 14 23 21.7 -0.8
KOUNC **Koumac, New Ca** 60.73 133 P **P** 14 23 25.6 +1.4
F14K **Arctic Creek** 60.78 27 P **P** 14 23 25.2 +1.1
baz=264
ANM **Nome** 61.11 28 P **P** 14 23 26.5 +0.2
ANM IAmb IAmb 14 23 44.1
comp=Z,29nm,1.1s
ANM **Nome** 61.11 28 P **P** 14 23 26.7 +0.4
baz=266,SNR=11
ANM **Nome** 61.11 28 P **P** 14 23 26.5 +0.2
ANM pmax pmax
comp=Z,29nm,1.1s
C16K **Lisburne Hills** 61.47 24 P **P** 14 23 28.5 0.0
baz=264
F15K **North Star Dit** 61.50 27 IAmb IAmb 14 24 21.2
comp=Z,32nm,1.2s
F15K **North Star Dit** 61.50 27 P **P** 14 23 29.5 +0.7
baz=266
BELG **Belogornoye** 61.67 318 *c i* P **P** 14 23 29.4 -0.8
BELG pmax pmax
comp=Z,9.0nm,1.0s
G15K **Niukluk** 61.71 28 P **P** 14 23 30.7 +0.4
baz=267
J14K **Nanvaranak Lak** 61.82 30 IAmb IAmb 14 23 40.3
comp=Z,33nm,1.3s
J14K **Nanvaranak Lak** 61.82 30 P **P** 14 23 31.8 +0.8
baz=268
M13K **Dall Lake** 61.88 33 P **P** 14 23 32.5 +1.1
baz=270
FALS **False Pass** 61.95 39 P **P** 14 23 32.7 +0.6
baz=273
L14K **Kuka Creek** 62.21 32 P **P** 14 23 34.6 +1.0
baz=270,SNR=9.9
C17K **DeLong Mountai** 62.29 24 P **P** 14 23 34.4 +0.2
baz=266
RDOG **Red Dog Mine** 62.36 24 P **P** 14 23 35.3 +0.7
baz=266
G16K **Koyuk River** 62.44 27 P **P** 14 23 35.8 +0.7
baz=268
H16K **Elim** 62.46 28 P **P** 14 23 35.9 +0.6
baz=268,SNR=14
M14K **Bethel** 62.56 33 IAmb IAmb 14 23 42.3
comp=Z,28nm,0.8s
M14K **Bethel** 62.56 33 P **P** 14 23 35.7 -0.3
baz=271
N14K **Kuskokwak Cree** 62.71 33 P **P** 14 23 36.8 -0.2
baz=271
E17K **Hotham Inlet** 62.72 25 P **P** 14 23 37.1 +0.1
baz=268,SNR=15
K15K **Wolf Creek Mou** 62.75 31 IAmb IAmb 14 23 50.2
comp=Z,33nm,1.1s
K15K **Wolf Creek Mou** 62.75 31 P **P** 14 23 37.6 +0.2
baz=270
L15K **Ungalak Mounta** 62.78 31 P **P** 14 23 37.5 0.0
baz=271
B18K **Kokolik River** 62.85 23 P **P** 14 23 37.8 -0.1
baz=266
F17K **Baldwin Pennin** 62.92 26 IAmb IAmb 14 23 45.0
comp=Z,38nm,1.2s
F17K **Baldwin Pennin** 62.92 26 P **P** 14 23 38.8 +0.5
baz=268
C18K **Utukok River** 63.03 24 IAmb IAmb 14 23 57.1
comp=Z,93nm,1.9s
C18K **Utukok River** 63.03 24 P **P** 14 23 39.1 -0.1
baz=267
I17K **Unalakleet** 63.13 29 IAmb IAmb 14 23 57.7
comp=Z,44nm,1.2s
I17K **Unalakleet** 63.13 29 P **P** 14 23 40.1 +0.3
baz=270,SNR=10
G17K **Kiwalik Mounta** 63.15 27 P **P** 14 23 40.7 +0.7
baz=269
J16K **Anvik River** 63.17 30 IAmb IAmb 14 24 20.0
comp=Z,71nm,1.6s
J16K **Anvik River** 63.17 30 P **P** 14 23 40.5 +0.4
baz=271
M15K **Kasigluk River** 63.19 33 P **P** 14 23 40.4 +0.2
baz=272
E18K **Tukpahlearik C** 63.20 25 P **P** 14 23 41.0 +0.8
baz=268,SNR=18
DZM **Mont Dzumac** 63.23 133 LR LR 14 47 55.4
comp=Z,2µm,19.8s,baz=302,slow=33
YNG **Young** 63.40 155 P **P** 14 23 44.1 +2.2
H17K **Granite Mounta** 63.46 28 IAmb IAmb 14 24 00.4
comp=Z,24nm,0.9s
H17K **Granite Mounta** 63.46 28 P **P** 14 23 42.9 +1.0
baz=270
ARPS **Mount Arapiles** 63.48 162 P **P** 14 23 43.0 +0.6
N15K **Kwethluk River** 63.50 33 IAmb IAmb 14 23 54.8
comp=Z,33nm,0.8s
N15K **Kwethluk River** 63.50 33 P **P** 14 23 42.9 +0.5
baz=273
F18K **Selawik** 63.57 26 P **P** 14 23 43.6 +1.0
baz=266,SNR=21
C19K **Lookout Ridge** 63.63 23 P **P** 14 23 44.1 +1.1
baz=269
O15K **Ungalikthiuk R** 63.69 34 P **P** 14 23 43.1 -0.5
baz=273
L16K **Owhat River** 63.74 31 P **P** 14 23 43.8 0.0
baz=272
G18K **Tagagawik** 63.98 27 IAmb IAmb 14 24 02.6
comp=Z,37nm,1.3s
G18K **Tagagawik** 63.98 27 P **P** 14 23 45.5 +0.1
baz=271
M16K **Timber Creek** 64.02 32 P **P** 14 23 46.2 +0.4
baz=273
S14K **Fog Glacier** 64.05 37 P **P** 14 23 46.0 -0.1
baz=275
H18K **Honhosa River** 64.11 28 IAmb IAmb 14 24 03.8
comp=Z,31nm,1.1s
H18K **Honhosa River** 64.11 28 P **P** 14 23 46.4 +0.1
baz=272
N16K **Nishlik Lake** 64.14 33 P **P** 14 23 47.2 +0.6
baz=274
D19K **Kuna River** 64.16 24 P **P** 14 23 47.1 +0.5
baz=270
CHNA **Chernabura Isl** 64.16 39 P **P** 14 23 46.3 -0.4
baz=276
K17K **Iditarod** 64.24 30 IAmb IAmb 14 23 52.9
comp=Z,37nm,0.9s
K17K **Iditarod** 64.24 30 P **P** 14 23 47.3 +0.1
baz=273
L17K **Donlin** 64.27 31 P **P** 14 23 47.6 +0.2
baz=273
F19K **Shaleruckik Mo** 64.31 26 P **P** 14 23 47.8 +0.3
baz=271
B20K **Meade River** 64.49 22 P **P** 14 23 49.0 +0.4
baz=270
E19K **Redstone River** 64.51 25 IAmb IAmb 14 24 06.5
comp=Z,27nm,0.8s
E19K **Redstone River** 64.51 25 P **P** 14 23 49.2 +0.4
baz=272,SNR=21
CAN **Canberra** 64.53 156 P **P** 14 23 50.5 +1.1
O16K **Kokwok River B** 64.55 34 IAmb IAmb 14 23 54.4
comp=Z,25nm,1.0s
O16K **Kokwok River B** 64.55 34 P **P** 14 23 49.3 +0.1
baz=275
G19K **Purcell Mounta** 64.61 26 IAmb IAmb 14 24 07.5
comp=Z,35nm,1.2s
G19K **Purcell Mounta** 64.61 26 P **P** 14 23 50.1 +0.6
baz=272,SNR=9.5
P16K **Nushagak River** 64.65 34 P **P** 14 23 49.9 +0.1
baz=275
A21K **Barrow** 64.66 21 P **P** 14 23 49.9 +0.2
baz=270
CNB **Canberra Magne** 64.67 155 P **P** 14 23 51.4 +1.1
CHGN **Chignik** 64.68 37 P **P** 14 23 49.7 -0.4
baz=276
D20K **Etivluk River** 64.70 24 P **P** 14 23 49.9 -0.2
baz=272
M17K **Holitna River** 64.73 32 IAmb IAmb 14 23 56.3
comp=Z,35nm,0.9s
M17K **Holitna River** 64.73 32 P **P** 14 23 50.9 +0.5
baz=274
GCSA **Galena City Sc** 64.76 28 P **P** 14 23 51.5 +1.0
baz=273,SNR=7.9
BRAT **Ballarat** 64.82 161 P **P** 14 23 53.2 +2.1
E20K **Nigu River** 64.88 24 P **P** 14 23 52.0 +0.7
baz=272
H19K **Roundabout Mou** 64.90 27 P **P** 14 23 52.0 +0.6
baz=273
J18K **Innoko River** 64.92 29 IAmb IAmb 14 24 08.9
comp=Z,46nm,1.4s
J18K **Innoko River** 64.92 29 P **P** 14 23 52.4 +0.8
baz=274,SNR=14
N17K **Nushagak Hills** 64.92 33 IAmb IAmb 14 24 14.4
comp=Z,65nm,1.4s
N17K **Nushagak Hills** 64.92 33 P **P** 14 23 51.8 +0.2
baz=275
L18K **Granite Mounta** 65.02 31 IAmb IAmb 14 23 58.0
comp=Z,37nm,1.1s
L18K **Granite Mounta** 65.02 31 P **P** 14 23 52.8 +0.5
baz=275
O17K **Koliganek Bris** 65.04 33 P **P** 14 23 52.9 +0.5
baz=275
F20K **Avaraart Lake** 65.11 25 P **P** 14 23 53.0 +0.3
baz=273
GNI **Garni** 65.25 305 *de*P **P** 14 23 56.7 +2.3
GNI pmax pmax

comp=Z,40nm,1.2s
TTA **Tatalina** 65.28 30 P P 14 23 53.5 -0.5
TTA **Tatalina** 65.28 30 P P 14 23 54.8 +0.8
TTA **Tatalina** 65.28 30 P P 14 23 54.8 +0.8
baz=275,SNR=11
TTA **Tatalina** 65.28 30 P P 14 23 53.5 -0.5
TTA pmax pmax
comp=Z,16nm,0.8s
TOO **Toolangi** 65.33 159 P P 14 23 54.1 -0.4
TOO IAmb IAmb 14 24 01.1
comp=Z,17nm,0.8s
TOO **Toolangi** 65.33 159 P P 14 23 55.0 +0.5
TOO **Toolangi** 65.33 159 P P 14 23 54.1 -0.4
TOO pmax pmax
comp=Z,17nm,0.8s
C21K **Knifeblade Rid** 65.35 23 P P 14 23 54.7 +0.4
baz=273
J19K **Poorman** 65.36 29 IAmb IAmb 14 24 10.8
comp=Z,44nm,1.0s
J19K **Poorman** 65.36 29 P P 14 23 55.0 +0.6
baz=275
ZEI **Tsey** 65.37 308 eP P 14 23 54.4 -0.7
ZEI pmax pmax
comp=Z,51nm,1.4s
Q16K **King Salmon** 65.37 35 P P 14 23 54.4 -0.2
baz=276
B21K **Ikpikpuk River** 65.38 23 P P 14 23 54.9 +0.5
baz=273
P17K **Kvichak River** 65.43 34 P P 14 23 55.7 +0.8
baz=276
VRH **Novokhopyorsk** 65.44 317 eP P 14 23 53.6 -1.5
VRH pmax pmax
comp=Z,20nm,0.7s
KLMR **Klimovskoe** 65.47 328 eP P 14 23 53.6 -1.6
KLMR pmax pmax
comp=Z,110nm,1.4s
M18K **Stony River** 65.49 32 P P 14 23 56.0 +0.6
baz=276
N18K **Kilae Creek** 65.54 32 P P 14 23 56.0 +0.2
baz=276
H20K **Anotleneega Mo** 65.56 27 P P 14 23 55.7 0.0
baz=275,SNR=17
GOF **Gofitskoye** 65.56 310 ceP P 14 23 57.3 +1.2
E21K **Killik River** 65.69 24 P P 14 23 56.6 +0.1
baz=274
B22K **Teshekpuk Lake** 65.75 22 P P 14 23 56.8 0.0
baz=274
I20K **Naaghedeneel** 65.79 28 P P 14 23 57.9 +0.7
baz=275
Q17K **Contact Creek** 65.82 35 P P 14 23 57.4 -0.2
baz=277
L19K **White Mountain** 65.88 31 P P 14 23 58.1 +0.3
baz=276
KBZ **Khabaz** 65.91 309 ci P P 14 23 57.7 -0.6
KBZ pmax pmax
comp=Z,56nm,1.2s
KBZ **Khabaz** 65.91 309 P P 14 23 58.6 +0.3
comp=Z,5.7nm,0.8s,baz=94,slow=6.3,SNR=7.9
comp=Z,5.7nm,0.8s
F21K **Alatna River** 65.97 25 P P 14 23 58.8 +0.5
baz=275
O18K **Koktuh Hills** 65.97 33 P P 14 23 58.8 +0.3
baz=277
J20K **Nowinta River** 65.99 28 IAmb IAmb 14 24 16.6
comp=Z,52nm,1.2s
J20K **Nowinta River** 65.99 28 P P 14 23 59.0 +0.6
baz=276
KIV **Kislovodsk** 66.02 309 P P 14 23 58.6 -0.6
P18K **Big Mountain,** 66.02 34 P P 14 23 59.2 +0.4
baz=277
G21K **Allakaket** 66.03 26 IAmb IAmb 14 24 17.0
comp=Z,42nm,1.1s
G21K **Allakaket** 66.03 26 P P 14 23 59.6 +0.9
baz=275
K20K **Telida** 66.11 29 IAmb IAmb 14 24 17.4
comp=Z,56nm,1.2s
K20K **Telida** 66.11 29 P P 14 24 00.3 +1.0
baz=276
D22K **Ayikyak River** 66.12 23 P P 14 24 00.0 +0.7
baz=275
M19K **Big River Lodg** 66.13 31 P P 14 24 00.1 +0.6
baz=277
N19K **Bonanza Creek** 66.22 32 P P 14 24 00.5 +0.4
baz=277
L20K **Farewell, AK** 66.30 30 P P 14 24 01.0 +0.5
baz=277
O19K **Port Alsworth** 66.37 33 P P 14 24 01.4 +0.4
baz=278
H21K **Melozitna Rive** 66.40 27 P P 14 24 01.6 +0.4
baz=276
E22K **Anaktuvuk Pass** 66.51 24 P P 14 24 02.3 +0.4
baz=276
M20K **Styx River** 66.72 31 P P 14 24 04.2 +0.8
baz=278
G22K **Bettles** 66.77 25 P P 14 24 03.9 +0.5
baz=277
I21K **Tanana** 66.80 27 IAmb IAmb 14 24 11.3
comp=Z,66nm,1.4s
I21K **Tanana** 66.80 27 P P 14 24 04.5 +0.8
baz=277,SNR=14
CHUM **Lake Minchumin** 66.83 29 P P 14 24 04.4 +0.6
baz=278
D23K **Nanushuk River** 66.83 23 P P 14 24 04.3 +0.5
baz=277
VORR **Voronezh** 66.92 318 eP P 14 24 02.8 -1.8
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR **Galich'ya Gora** 66.92 319 eP P 14 24 03.1 -1.6
LPSR pmax pmax
comp=Z,40nm,0.8s
H22K **Ishtalitna Cre** 66.95 26 P P 14 24 05.3 +0.6
baz=278
VORD **Divnogorie** 66.99 317 eP P 14 24 02.6 -2.5
VORD pmax pmax
comp=Z,20nm,0.7s
CAST **Castle Rocks** 66.99 29 IAmb IAmb 14 24 22.6
comp=Z,59nm,1.2s
CAST **Castle Rocks** 66.99 29 P P 14 24 05.0 +0.1
baz=278,SNR=24
P19K **Oil Pt** 66.99 33 P P 14 24 05.3 +0.3
baz=279
PPLA **Purkeypile** 67.02 30 P P 14 24 05.5 +0.2
baz=278,SNR=12
VSR **Storozhevoye** 67.02 317 eP P 14 24 03.3 -2.0
VSR pmax pmax
comp=Z,50nm,1.8s
MOS **Moscow** 67.15 322 eP P 14 24 05.8 -0.2
MOS e 14 24 33.3
MOS e 14 26 34.0
MOS eS S 14 32 58.3 -1.3
MOS pmax pmax
comp=Z,89nm,1.6s
COLD **Coldfoot** 67.24 25 P P 14 24 06.6 +0.2
baz=278,SNR=14
N20K **Mount Spurr** 67.26 32 P P 14 24 06.8 0.0
baz=279,SNR=17
APA **Apatity** 67.31 335 ⇓iP P 14 24 13.9 +7.1
APA pmax pmax
comp=Z,27nm,1.1s
MLY **Manley** 67.34 27 IAmb IAmb 14 24 25.5
comp=Z,39nm,1.1s
MLY **Manley** 67.34 27 P P 14 24 07.4 +0.2
baz=278,SNR=34
E23K **Chandalar** 67.34 24 P P 14 24 07.5 +0.3
baz=278,SNR=17
OHAK **Old Harbor** 67.35 36 P P 14 24 07.5 +0.2
baz=280
BPAW **Bear Paw Mtn.** 67.37 28 IAmb IAmb 14 24 24.9
comp=Z,53nm,1.2s
BPAW **Bear Paw Mtn.** 67.37 28 P P 14 24 07.9 +0.5
baz=279,SNR=19
G23K **Bananza Creek** 67.38 26 P P 14 24 07.7 +0.3
baz=278
C24K **Franklin Bluff** 67.43 22 P P 14 24 08.1 +0.5
baz=278
SKT **Skwentna** 67.46 31 P P 14 24 07.9 0.0
baz=279
D24K **Happy Valley** 67.47 23 IAmb IAmb 14 24 14.2
comp=Z,32nm,0.8s
D24K **Happy Valley** 67.47 23 P P 14 24 08.1 +0.3
baz=278
KTH **Kantishna Hill** 67.49 29 IAmb IAmb 14 24 22.1
comp=Z,29nm,0.9s
Q20K **Shuyak Island** 67.59 34 P P 14 24 08.9 +0.1
baz=280
KDAK **Kodiak Island** 67.63 35 P P 14 24 09.1 +0.1
baz=280
KDAK **Kodiak Island** 67.63 35 P P 14 24 07.7 -1.3
comp=Z,25nm,0.5s,baz=284,slow=5.2,SNR=18
comp=Z,25nm,0.5s
TRF **Thorofare Moun** 67.78 29 IAmb IAmb 14 26 16.6
comp=Z,23nm,0.8s
TRF **Thorofare Moun** 67.78 29 P P 14 24 10.8 +0.6
baz=280
CAPN **Captain Cook N** 67.84 32 P P 14 24 11.2 +1.0
baz=280
OBN **Obninsk** 67.85 322 iP P 14 24 09.4 -1.1
OBN i 14 26 35.7
OBN pmax pmax
comp=Z,89nm,1.9s
I23K **Minto, Yukon-K** 67.90 27 IAmb IAmb 14 24 29.7
comp=Z,70nm,1.5s
I23K **Minto, Yukon-K** 67.90 27 P P 14 24 11.0 +0.5
baz=280,SNR=15
SUA **Susitna One** 67.91 31 P P 14 24 10.4 -0.5
baz=280,SNR=34
CUT **Chulitna** 67.97 30 P P 14 24 10.9 -0.1
baz=280,SNR=6.3
F24K **Squaw Lake** 68.08 24 P P 14 24 11.7 -0.1
baz=280
NEA2 **Nenana** 68.12 28 P P 14 24 11.9 -0.1
baz=280,SNR=18
BRSE **Bradley Lake S** 68.22 33 P P 14 24 12.3 -0.5
baz=281
D25K **Kavik River** 68.30 22 P P 14 24 12.9 -0.3
baz=281
MCK **McKinley** 68.33 29 P P 14 24 12.9 -0.5
baz=281,SNR=16
G24K **Hadweenzic Riv** 68.38 25 P P 14 24 13.6 0.0
baz=281
H24K **Noodor Dome** 68.38 26 IAmb IAmb 14 24 28.4
comp=Z,41nm,1.0s
H24K **Noodor Dome** 68.38 26 P P 14 24 14.1 +0.4
baz=281
RC01 **Rabbit Creek A** 68.46 31 P P 14 24 14.2 0.0
baz=281
COLA **College** 68.58 27 P P 14 24 18.0 +3.2
COLA **College** 68.58 27 P P 14 24 15.3 +0.4
baz=281
COLA **College** 68.58 27 ⇑P P 14 24 15.2 +0.4
O22K **Cooper Landing** 68.58 32 P P 14 24 14.9 -0.1
baz=281
PMR **Palmer** 68.65 31 P P 14 24 16.5 +1.2
PMR **Palmer** 68.65 31 P P 14 24 15.8 +0.4
baz=281,SNR=11
WAT1 **Susitna Watana** 68.67 30 P P 14 24 15.8 +0.2
baz=281
POKR **Poker Plat Res** 68.70 27 IAmb IAmb 14 24 22.1
comp=Z,33nm,0.9s
POKR **Poker Plat Res** 68.70 27 P P 14 24 16.2 +0.5
baz=281,SNR=12
SEW **Seward** 68.79 32 P P 14 24 16.5 +0.3
baz=282
E25K **Arctic Village** 68.83 24 P P 14 24 17.0 +0.6
baz=282,SNR=14
RAYN **Ar Rayn** 68.86 287 P P 14 24 16.8 -0.6
RAYN IAmb IAmb 14 24 36.5
comp=Z,25nm,1.0s
RAYN **Ar Rayn** 68.86 287 P P 14 24 16.8 -0.6
RAYN pmax pmax
comp=Z,25nm,1.0s
G25K **Bearman Lake** 68.91 25 P P 14 24 17.2 +0.4
baz=282
F25K **Christian Rive** 68.91 24 P P 14 24 17.7 +0.7
baz=282,SNR=40
SML **Sawmill** 68.98 31 P P 14 24 17.6 +0.1
baz=282
KNK **Knik Glacier** 69.00 31 P P 14 24 17.8 +0.2
baz=282,SNR=10
ILAR **Eielson Array** 69.00 27 P P 14 24 15.8 -1.7
comp=Z,1.9nm,0.6s,baz=279,slow=3.6,SNR=15
comp=Z,1.9nm,0.6s
HDA **Harding Lake** 69.05 28 IAmb IAmb 14 24 34.5
comp=Z,45nm,1.3s
HDA **Harding Lake** 69.05 28 P P 14 24 17.2 -0.6
baz=282,SNR=12
WAT6 **Susitna Watana** 69.09 30 P P 14 24 18.0 -0.4
baz=282,SNR=11
DHY **Denali Highway** 69.15 29 P P 14 24 18.5 -0.2
baz=282,SNR=6.2
M23K **Glacier View** 69.26 31 P P 14 24 19.2 0.0
baz=282
FYU **Fort Yukon** 69.29 25 IAmb IAmb 14 24 52.3
comp=Z,53nm,1.3s
PRP **Porcupine Dome** 69.40 26 P P 14 24 19.6 -0.6
PRP **Porcupine Dome** 69.40 26 P P 14 24 20.1 -0.1
baz=283,SNR=16
SCM **Sheep Creek Mo** 69.44 30 P P 14 24 20.2 -0.2
baz=283,SNR=18
J25K **Salcha River,** 69.67 27 P P 14 24 21.3 -0.5
baz=283
K24K **Donnelly Dome** 69.69 28 P P 14 24 21.5 -0.3
baz=283,SNR=30
ARCES **ARCESS Array B** 69.77 338 P P 14 24 19.7 -2.5
comp=Z,2.4nm,0.6s,baz=329,slow=4.5,SNR=2.2
comp=Z,2.4nm,0.6s
P23K **Montague Islan** 69.82 32 P P 14 24 22.6 0.0
baz=283
M24K **Tolsona, Glenn** 69.91 30 P P 14 24 23.2 -0.1
baz=284
PAX **Paxson** 70.02 29 P P 14 24 23.8 -0.2
baz=284,SNR=12
RIDG **Independent Ri** 70.11 28 IAmb IAmb 14 26 35.1
comp=Z,36nm,0.6s
RIDG **Independent Ri** 70.11 28 P P 14 24 24.2 -0.3
baz=284,SNR=10
KLU **Klutina** 70.17 31 P P 14 24 24.4 -0.5
baz=284
D27M **Malcolm River** 70.19 22 P P 14 24 24.9 0.0
baz=286
HARP **HAARP** 70.30 30 P P 14 24 25.8 +0.2
baz=284
SCRK **Sand Creek** 70.41 28 IAmb IAmb 14 24 42.4
comp=Z,34nm,1.2s
SCRK **Sand Creek** 70.41 28 P P 14 24 25.9 -0.5
baz=285,SNR=14
J26L **Joseph Creek** 70.46 27 IAmb IAmb 14 24 31.9
comp=Z,30nm,0.9s
J26L **Joseph Creek** 70.46 27 P P 14 24 25.6 -1.1
baz=285,SNR=24
EYAK **Cordova Ski Ar** 70.48 32 P P 14 24 29.5 +2.8
EYAK **Cordova Ski Ar** 70.48 32 P P 14 24 26.6 -0.1
baz=284
N25K **Chitina, Valde** 70.75 30 IAmb IAmb 14 24 45.9
comp=Z,52nm,1.4s
N25K **Chitina, Valde** 70.75 30 P P 14 24 28.5 0.0
baz=285,SNR=7.6
OUL **Oulu** 70.79 333 P P 14 24 30.4 +1.9
MENT **Mentasta** 70.80 29 IAmb IAmb 14 24 46.1
comp=Z,50nm,1.0s
MENT **Mentasta** 70.80 29 P P 14 24 29.0 +0.3
H27K **Steamboat Moun** 70.81 25 P P 14 24 29.2 +0.4
baz=286
E28M **Babbage River** 70.87 23 P P 14 24 28.9 -0.1
baz=287
BMRM **Bremner River** 70.92 31 P P 14 24 28.9 -0.6
baz=285
D28M **Stokes Point** 70.93 22 P P 14 24 29.5 +0.3
baz=288
L26K **Log Cabin Wild** 70.94 29 IAmb IAmb 14 24 43.6
comp=Z,42nm,1.1s
L26K **Log Cabin Wild** 70.94 29 P P 14 24 29.8 +0.3
baz=286,SNR=21
I27K **Kandik River** 70.96 26 P P 14 24 30.0 +0.4
baz=286
F28M **Old Crow** 71.04 24 IAmb IAmb 14 24 48.4
comp=Z,43nm,1.1s
F28M **Old Crow** 71.04 24 P P 14 24 30.1 +0.1
baz=287,SNR=32
GLB **Gilahina Butte** 71.16 30 IAmb IAmb 14 24 34.9
comp=Z,56nm,1.1s
K27K **Chicken** 71.21 28 P P 14 24 31.7 +0.6
baz=286
M26K **Nabesna, AK** 71.27 29 IAmb IAmb 14 24 35.6
comp=Z,38nm,0.8s
M26K **Nabesna, AK** 71.27 29 P P 14 24 32.0 +0.5
baz=286
KAIM **Kayak Island** 71.29 32 P P 14 24 31.8 +0.2
baz=286
EGAK **Eagle** 71.38 27 IAmb IAmb 14 24 39.8
comp=Z,26nm,0.8s
EGAK **Eagle** 71.38 27 P P 14 24 32.1 0.0
baz=287
VRDI **Verde Repeater** 71.39 31 IAmb IAmb 14 24 49.5
comp=Z,33nm,1.1s
BERG **Berg Lake** 71.50 31 IAmb IAmb 14 24 35.8
comp=Z,64nm,1.2s
E29M **Blow River** 71.51 23 IAmb IAmb 14 24 37.9
comp=Z,42nm,1.4s
E29M **Blow River** 71.51 23 P P 14 24 32.7 -0.2
baz=289,SNR=15
MCARA **McCarthy VSAT** 71.54 30 P P 14 24 33.1 0.0
baz=286,SNR=8.7
L27K **Beaver Creek,** 71.60 28 IAmb IAmb 14 24 40.2
comp=Z,50nm,1.1s
L27K **Beaver Creek,** 71.60 28 P P 14 24 33.3 -0.2
baz=287
I28M **Miner Creek** 71.67 26 P P 14 24 34.0 0.0
baz=288
FIA1 **FINESS Array S** 71.74 330 P P 14 24 32.8 -1.5
FINES **FINESS Array B** 71.74 330 iP P 14 24 33.7 -0.6
FINES pmax pmax
comp=Z,11nm,0.7s
FINES **FINESS Array B** 71.74 330 P P 14 24 32.6 -1.6
comp=Z,11nm,0.7s,baz=60,slow=4.7,SNR=17
comp=Z,11nm,0.7s
M27K **Edge Creek, AK** 71.78 29 P P 14 24 35.0 +0.2
baz=287
BVCY **Beaver Creek** 72.22 29 P P 14 24 37.8 +0.6
baz=288,SNR=9.6
BARN **Barnard Glacie** 72.27 30 IAmb IAmb 14 24 46.2
comp=Z,82nm,1.5s
VSU **Vasula** 72.30 327 ciP P 14 24 37.2 -0.5
VSU pmax pmax
comp=Z,53nm,1.3s
VSU **Vasula** 72.30 327 eP P 14 24 37.4 -0.3
DAWY **Dawson** 72.33 27 IAmb IAmb 14 24 42.1
comp=Z,46nm,1.2s
DAWY **Dawson** 72.33 27 P P 14 24 37.6 -0.2
baz=289,SNR=35
MESA **MESA** 72.40 31 P P 14 24 38.0 -0.5
baz=288
CTG **Chitna Glacier** 72.45 31 P P 14 24 38.1 -0.7
baz=288,SNR=14
CTGM **Chitina Glacie** 72.45 31 IAmb IAmb 14 24 43.0
comp=Z,37nm,0.6s
F30M **Barrier River** 72.52 23 P P 14 24 38.9 0.0
baz=291
G30M **tAoh Zraii Nji** 72.59 24 P P 14 24 39.0 -0.4
baz=291
YUK3 **Moose Creek** 72.59 30 P P 14 24 39.9 +0.2
baz=288,SNR=12
EPYK **Eagle Plains** 72.62 24 IAmb IAmb 14 24 43.8
comp=Z,27nm,0.6s
EPYK **Eagle Plains** 72.62 24 P P 14 24 38.8 -0.8
baz=290,SNR=24
LOGN **Logan Glacier** 72.65 31 IAmb IAmb 14 24 53.3
comp=Z,41nm,0.9s
J29N **Klondike Camp** 72.68 27 IAmb IAmb 14 24 45.5
comp=Z,48nm,0.7s
J29N **Klondike Camp** 72.68 27 P P 14 24 40.5 +0.4
baz=290,SNR=37
TABL **Table Mountain** 72.70 31 IAmb IAmb 14 24 42.7
comp=Z,48nm,1.2s
MNK **Minsk** 72.88 322 iP P 14 24 39.9 -1.3
MNK i 14 27 21.5
MNK iPPP PPP 14 29 06.0
MNK iS S 14 34 06.8 0.0
MNK iSS SS 14 38 47.4 +1.0
MNK pmax pmax
comp=E,10.0nm,1.5s
MNK pmax pmax
comp=N,21nm,1.0s
MNK pmax pmax
comp=Z,18nm,0.7s
MNK MLR MLR
comp=E,2µm,15.0s
MNK MLR MLR
comp=N,4µm,15.0s
MNK MLR MLR
comp=Z,4µm,16.0s
INK **Inuvik** 73.06 22 IAmb IAmb 14 24 58.9
comp=Z,47nm,1.1s
INK **Inuvik** 73.06 22 P P 14 24 41.4 -0.6
baz=292
INK **Inuvik** 73.06 22 P P 14 24 40.8 -1.3
comp=Z,25nm,0.8s,baz=299,slow=6.2,SNR=26
comp=Z,25nm,0.8s
YUK8 **Steele Glacier** 73.07 30 P P 14 24 43.2 +0.6
baz=289
I30M **Mount Dempster** 73.15 26 IAmb IAmb 14 24 47.5
comp=Z,22nm,0.8s
I30M **Mount Dempster** 73.15 26 P P 14 24 42.8 -0.1
baz=291
L29M **L29M** 73.18 28 P P 14 24 43.1 +0.1
baz=290
K29M **Barlow Dome** 73.18 27 P P 14 24 43.1 0.0
baz=290
PINM **Pinnacle** 73.23 31 P P 14 24 43.5 +0.2
baz=289,SNR=11
AKASG **Malin Array Be** 73.24 318 IAmb IAmb 14 24 51.8
comp=Z,66nm,1.8s
AKASG **Malin Array Be** 73.24 318 P P 14 24 42.0 -1.4
comp=Z,5.6nm,0.8s,baz=60,slow=6.1,SNR=14
comp=Z,5.6nm,0.8s
AKBB **Malin Array Si** 73.24 318 ceP P 14 24 42.7 -0.8
AKBB pmax pmax
comp=Z,31nm,1.2s
IDID **Didziasalis** 73.25 324 eP P 14 24 43.1 -0.4
KIEV **Kiev** 73.26 318 ⇑P P 14 24 39.9 -3.6
KIEV **Kiev** 73.26 318 P P 14 24 42.5 -1.0
KIEV **Kiev** 73.26 318 P P 14 24 42.5 -1.0
KIEV pmax pmax
comp=Z,27nm,1.2s
M29M **Somme Creek** 73.26 29 IAmb IAmb 14 24 48.8
comp=Z,72nm,1.4s
M29M **Somme Creek** 73.26 29 P P 14 24 43.9 +0.4
baz=290,SNR=22
F31M **Tsiigehtchic** 73.32 23 IAmb IAmb 14 24 44.8
comp=Z,38nm,0.8s
F31M **Tsiigehtchic** 73.32 23 P P 14 24 42.5 -1.0
baz=293,SNR=33
G31M **Satah River** 73.32 24 P P 14 24 42.5 -1.1
baz=292,SNR=15
J30M **Hart River** 73.41 26 P P 14 24 44.2 -0.2
baz=291
ISAL **Salakas** 73.51 324 eP P 14 24 44.7 -0.2
IIGN **Ignalina** 73.52 324 eP P 14 24 45.3 +0.2
YUK4 **Talbot Arm** 73.56 30 P P 14 24 45.4 0.0
baz=290
BR131 **Keskin Array S** 73.61 307 ⇓eP P 14 24 46.3 +0.2
BRTR **Keskin Array B** 73.61 307 iP P 14 24 47.9 +1.8
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR **Keskin Array B** 73.61 307 P P 14 24 45.9 -0.2
comp=Z,5.5nm,0.8s,baz=91,slow=4.9,SNR=14
comp=Z,5.5nm,0.8s
PNL **Peninsula** 73.78 31 P P 14 24 46.9 +0.3
baz=290
YUK6 **Outpost Mounta** 73.83 30 P P 14 24 47.1 +0.1
baz=290
M30M **Minto, Yukon** 73.94 28 IAmb IAmb 14 24 52.4
comp=Z,60nm,1.2s
M30M **Minto, Yukon** 73.94 28 P P 14 24 47.6 +0.2
baz=291,SNR=22
MAYO **Mayo, Yukon** 73.94 27 P P 14 24 47.6 +0.2
baz=292,SNR=12
O29M **Mount Kennedy** 73.95 31 P P 14 24 47.7 +0.1
baz=290
A36M **Sachs Harbour** 74.00 17 IAmb IAmb 14 25 04.2
comp=Z,38nm,1.0s
A36M **Sachs Harbour** 74.00 17 P P 14 24 46.8 -0.7
baz=299
HYT **Haines Junctio** 74.26 30 IAmb IAmb 14 24 55.5
comp=Z,55nm,1.3s
HYT **Haines Junctio** 74.26 30 P P 14 24 49.2 -0.2
baz=291,SNR=17
MMAI **Mount Meron Ar** 74.37 299 P P 14 24 50.2 -0.4
comp=Z,0.7nm,0.4s,baz=95,slow=3.2,SNR=1.5
comp=Z,0.7nm,0.4s
P29M **Windy Craggy** 74.59 31 IAmb IAmb 14 25 09.3
comp=Z,72nm,1.4s
P29M **Windy Craggy** 74.59 31 P P 14 24 51.6 +0.4
baz=291
SORM **Soroca** 74.59 316 ⇑P P 14 24 50.8 -0.6
SORM **Soroca** 74.59 316 ⇑P P 14 24 50.8 -0.6
PABE **Paberze** 74.69 324 P P 14 24 51.5 -0.2
PABE IAmb IAmb 14 25 02.0
comp=Z,56nm,0.9s
PABE **Paberze** 74.69 324 eP P 14 24 51.7 -0.1
P30M **Million Dollar** 74.77 31 P P 14 24 52.3 -0.1
baz=292

N31M	**Braeburn, Yuko**	**74.79**	**29**	IAmb	IAmb	14 25 03.8		
	comp=Z,59nm,1.1s							
N31M	**Braeburn, Yuko**	**74.79**	**29**	P	**P**	**14 24 52.7**	**+0.3**	
	baz=292,SNR=15							
O30N	**Mendenhall**	**74.92**	**30**	P	**P**	**14 24 53.8**	**+0.6**	
	baz=292,SNR=14							
M31M	**Drury Creek, Y**	**75.12**	**28**	P	**P**	**14 24 54.2**	**-0.1**	
	baz=293,SNR=15							
PLBC	**Pleasant Camp**	**75.30**	**31**	P	**P**	**14 24 54.6**	**-0.7**	
	baz=292							
CSS	**Mathiatis**	**75.36**	**302**	IAmb	IAmb	14 25 14.1		
	comp=Z,24nm,0.7s							
WHY	**Whitehorse**	**75.52**	**30**	IAmb	IAmb	14 25 19.4		
	comp=Z,47nm,1.2s							
WHY	**Whitehorse**	**75.52**	**30**	P	**P**	**14 24 56.4**	**-0.3**	
	baz=293,SNR=12							
FARO	**Faro, Yukon**	**75.55**	**28**	IAmb	IAmb	14 25 19.8		
	comp=Z,42nm,1.2s							
FARO	**Faro, Yukon**	**75.55**	**28**	P	**P**	**14 24 56.5**	**-0.2**	
	baz=294,SNR=18							
TPGR	**Topolog**	**75.63**	**313**	⇑P	**P**	**14 24 58.1**	**+0.5**	
SUW	**Suwalki**	**75.64**	**323**	*e*P	**P**	**14 24 58.2**	**+0.9**	
C36M	**Paulatuk**	**75.66**	**20**	IAmb	IAmb	14 25 13.6		
	comp=Z,97nm,1.4s							
C36M	**Paulatuk**	**75.66**	**20**	P	**P**	**14 24 56.3**	**-0.8**	
	baz=301							
CFR	**Carcaliu**	**75.71**	**313**	⇑P	**P**	**14 24 57.4**	**-0.5**	
CFR	**Carcaliu**	**75.71**	**313**	⇑P	**P**	**14 24 57.4**	**-0.5**	
SKAG	**Skagway**	**75.79**	**31**	IAmb	IAmb	14 25 10.2		
	comp=Z,52nm,1.0s							
SKAG	**Skagway**	**75.79**	**31**	P	**P**	**14 24 58.8**	**+0.7**	
SKAG	**Skagway**	**75.79**	**31**	P	**P**	**14 24 57.3**	**-0.8**	
	baz=293							
S31K	**Pelican**	**75.94**	**33**	P	**P**	**14 24 58.9**	**-0.1**	
	baz=293							
HARR	**Harsova**	**76.02**	**313**	⇑P	**P**	**14 25 00.0**	**+0.3**	
HARR	**Harsova**	**76.02**	**313**	⇑P	**P**	**14 25 00.0**	**+0.3**	
N32M	**Quiet Lake**	**76.12**	**29**	P	**P**	**14 24 59.5**	**-0.5**	
	baz=295							
TESR	**Tescani**	**76.23**	**315**	⇑P	**P**	**14 25 00.9**	**0.0**	
VRI	**Vrincioaia**	**76.41**	**314**	⇑P	**P**	**14 25 02.8**	**+0.9**	
VRI	**Vrincioaia**	**76.41**	**314**	⇑P	**P**	**14 25 02.8**	**+0.9**	
PLOR	**Plostina**	**76.46**	**314**	⇑P	**P**	**14 25 05.3**	**+3.0**	
PLOR	**Plostina**	**76.46**	**314**	⇑P	**P**	**14 25 05.3**	**+3.0**	
P32M	**Atlin**	**76.48**	**30**	P	**P**	**14 25 02.4**	**+0.3**	
	baz=295							
ISP	**Isparta**	**76.54**	**306**	IAmb	IAmb	14 25 20.6		
	comp=Z,26nm,0.9s							
P33M	**Teslin, Yukon**	**76.63**	**30**	P	**P**	**14 25 03.1**	**+0.1**	
	baz=295,SNR=12							
R32K	**Eaglecrest**	**76.65**	**32**	P	**P**	**14 25 02.8**	**-0.3**	
	baz=294							
LVV	**L'vov**	**76.68**	**319**	*e*P	**P**	**14 25 05.1**	**+1.7**	
JIS	**Juneau Island**	**76.72**	**32**	P	**P**	**14 25 06.3**	**+3.0**	
BURAR	**Bucovina Array**	**76.75**	**316**	⇑P	**P**	**14 25 03.4**	**-0.6**	
BURAR	**Bucovina Array**	**76.75**	**316**	⇑P	**P**	**14 25 03.4**	**-0.6**	
SIT	**Sitka**	**76.75**	**33**	P	**P**	**14 25 04.2**	**+0.6**	
	baz=294							
TURR	**Turia**	**76.80**	**315**	⇓P	**P**	**14 25 04.3**	**+0.1**	
OZUR		**76.94**	**315**	⇑P	**P**	**14 25 06.0**	**+1.0**	
S32K	**Killisnoo**	**76.95**	**33**	P	**P**	**14 25 05.1**	**+0.4**	
	baz=294							
MLR	**Muntele Rosu**	**77.05**	**314**	⇑P	**P**	**14 25 07.1**	**+1.4**	
MLR	**Muntele Rosu**	**77.05**	**314**	P	**P**	**14 25 04.9**	**-0.8**	
	comp=Z,4.4nm,0.7s,baz=240,slow=14,SNR=4.5							
	comp=Z,4.4nm,0.7s							
DOPR	**Dopca**	**77.24**	**315**	⇑P	**P**	**14 25 07.3**	**+0.6**	
LOZB	**Loznitsa**	**77.39**	**312**	⇑P	**P**	**14 25 07.8**	**+0.3**	
Q32M	**Nakina River**	**77.43**	**31**	IAmb	IAmb	14 25 29.9		
	comp=Z,100nm,1.6s							
Q32M	**Nakina River**	**77.43**	**31**	P	**P**	**14 25 07.6**	**-0.1**	
	baz=296							
KWP	**Kalwaria Pacla**	**77.55**	**319**	*e*P	**P**	**14 25 09.1**	**+0.9**	
VOIR		**77.66**	**314**	⇓P	**P**	**14 25 07.6**	**-1.5**	
VOIR		**77.66**	**314**	⇓P	Pn	14 25 07.6	+1.4	
R33M	**Jennings River**	**77.83**	**30**	IAmb	IAmb	14 25 21.2		
	comp=Z,69nm,1.6s							
R33M	**Jennings River**	**77.83**	**30**	P	**P**	**14 25 09.7**	**-0.1**	
	baz=297							
HFS	**Hagfors**	**77.85**	**331**	P	**P**	**14 25 08.1**	**-1.6**	
	comp=Z,4.0nm,0.7s,baz=108,slow=4.8,SNR=12							
	comp=Z,4.0nm,0.7s							
ARR	**Arges**	**77.95**	**314**	⇑P	**P**	**14 25 10.3**	**-0.4**	
T33K	**Petersburg**	**78.03**	**33**	P	**P**	**14 25 10.9**	**+0.1**	
	baz=296							
U33K	**Whale Pass**	**78.25**	**34**	P	**P**	**14 25 12.4**	**+0.4**	
	baz=296							
S34M	**Telegraph Cree**	**78.43**	**31**	P	**P**	**14 25 13.2**	**+0.2**	
	baz=297							
NB201	**NORSAR Array S**	**78.46**	**332**	IAmb	IAmb	14 25 36.7		
	comp=Z,61nm,1.4s							
WTLY	**Watson Lake, Y**	**78.47**	**29**	IAmb	IAmb	14 25 17.3		
	comp=Z,60nm,1.2s							
WTLY	**Watson Lake, Y**	**78.47**	**29**	P	**P**	**14 25 13.3**	**+0.1**	
	baz=298,SNR=26							
NB2	**NORSAR Subarra**	**78.50**	**332**	P	**P**	**14 25 12.0**	**-1.4**	
	comp=Z,75nm,2.0s,baz=61,slow=5.6							
NB2	**NORSAR Subarra**	**78.50**	**332**	P	**P**	**14 25 12.0**	**-1.4**	
	baz=61,slow=5.6							
NOA	**NORSAR Array B**	**78.50**	**332**	P	**P**	**14 25 11.8**	**-1.5**	
	comp=Z,3.2nm,0.6s,baz=63,slow=6.3,SNR=13							
	comp=Z,3.2nm,0.6s							
CRAG	**Craig**	**78.53**	**34**	P	**P**	**14 25 13.6**	**+0.1**	
	baz=296							
NEEM	**North Greenlan**	**78.54**	**358**	*i* P	**P**	**14 25 14.4**	**+0.8**	
NEEM				IAmb	IAmb	14 25 19.1		
	comp=Z,27nm,1.1s							
NC204	**NORSAR Array S**	**78.57**	**333**	IAmb	IAmb	14 25 38.5		
	comp=Z,86nm,1.9s							
CRVS	**Cervenica-Dubn**	**78.58**	**319**	*e*P	**P**	**14 25 16.0**	**+2.0**	
CRVS				pmax	pmax			
	comp=Z,54nm,1.7s							
CRVS	**Cervenica-Dubn**	**78.58**	**319**	*e*P	**P**	**14 25 16.0**	**+2.0**	
DRGR		**78.64**	**316**	⇑P	**P**	**14 25 15.2**	**+0.7**	
DRGR		**78.64**	**316**	⇑P	**P**	**14 25 15.2**	**+0.7**	
DLBC	**Dease Lake**	**78.71**	**31**	IAmb	IAmb	14 25 26.8		
	comp=Z,63nm,1.4s							
DLBC	**Dease Lake**	**78.71**	**31**	P	**P**	**14 25 14.7**	**0.0**	
	baz=298,SNR=6.9							
DLBC	**Dease Lake**	**78.71**	**31**	P	**P**	**14 25 14.6**	**0.0**	
	comp=Z,9.5nm,0.8s,baz=275,slow=4.4,SNR=13							
	comp=Z,9.5nm,0.8s							
WRGLY	**Wrigley**	**79.09**	**25**	IAmb	IAmb	14 25 20.3		
	comp=Z,62nm,1.4s							
WRGLY	**Wrigley**	**79.09**	**25**	P	**P**	**14 25 16.4**	**-0.1**	
	baz=302,SNR=9.1							
T35M	**Bob Quinn**	**79.28**	**32**	P	**P**	**14 25 18.4**	**+0.7**	
	baz=298							
MDVR	**Moldovita**	**80.09**	**315**	⇑P	**P**	**14 25 23.7**	**+1.3**	
KOTAN	**Kotaneelee Air**	**80.51**	**28**	P	**P**	**14 25 24.8**	**+0.5**	
	baz=302							
MORC	**Moravsky Berou**	**80.54**	**320**	*e*P	**P**	**14 25 26.1**	**+1.4**	
MAUC	**Maruska**	**80.56**	**320**	*e*P	**P**	**14 25 27.3**	**+2.5**	
FLDN	**Fort Liard**	**80.70**	**27**	IAmb	IAmb	14 25 42.8		
	comp=Z,48nm,1.2s							
FLDN	**Fort Liard**	**80.70**	**27**	P	**P**	**14 25 25.6**	**+0.4**	
	baz=303,SNR=5.1							
KRLC	**Kraliky**	**80.85**	**321**	*e*P	**P**	**14 25 27.8**	**+1.4**	
KRLC	**Kraliky**	**80.85**	**321**	*e*P	**P**	**14 25 27.8**	**+1.4**	
JAVC	**Velka Javorina**	**80.87**	**320**	*e*P	**P**	**14 25 28.8**	**+2.3**	
OSTC	**Ostas**	**80.96**	**322**	*e*P	**P**	**14 25 29.7**	**+2.8**	
OSTC	**Ostas**	**80.96**	**322**	*e*P	**P**	**14 25 29.7**	**+2.8**	
DPC	**Dobruska-Polom**	**80.99**	**321**	*e*P	**P**	**14 25 28.4**	**+1.3**	
DPC				*ex*		14 25 34.9		
DPC	**Dobruska-Polom**	**80.99**	**321**	*e*P	**P**	**14 25 28.4**	**+1.3**	
DPC				*e*		14 25 34.9		
RTZ	**Ruatahuna**	**81.06**	**139**	P	**P**	**14 25 26.6**	**-0.9**	
BKZ	**Black Stump Fm**	**81.13**	**140**	P	**P**	**14 25 27.0**	**-0.9**	
BKZ				IAmb	IAmb	14 25 28.7		
	comp=Z,86nm,2.0s							
VRAC	**Vranov**	**81.31**	**320**	⇓P	**P**	**14 25 29.3**	**+0.6**	
VRAC	**Vranov**	**81.31**	**320**	*e*P	**P**	**14 25 30.6**	**+1.8**	
VRAC	**Vranov**	**81.31**	**320**	P	**P**	**14 25 28.2**	**-0.5**	
	comp=Z,3.5nm,0.9s,baz=77,slow=5.2,SNR=4.9							
	comp=Z,3.5nm,0.9s							
MODS	**Modra-Piesok**	**81.32**	**319**	*e*P	**P**	**14 25 30.6**	**+1.7**	
MODS				pmax	pmax			
	comp=Z,445nm,3.4s							
MODS	**Modra-Piesok**	**81.32**	**319**	*e*P	**P**	**14 25 30.6**	**+1.7**	
RUE	**Ruedersdorf**	**81.41**	**324**	*e*P	**P**	**14 25 29.8**	**+0.7**	
KRUC	**Moravsky**	**81.53**	**320**	*e*P	**P**	**14 25 31.5**	**+1.6**	
BRG	**Berggiesshubel**	**82.09**	**322**	*e*P	**P**	**14 25 37.5**	**+4.7**	
BRG				Amp		14 25 42.7		
	comp=Z,3.9nm,0.9s							
BRG				Amp		14 50 36.0		
	comp=N,13nm,15.1s							
BRG				Amp		14 50 36.0		
	comp=E,16nm,13.1s							
BRG				Amp		14 50 39.0		
	comp=Z,31nm,14.7s							
PRU	**Pruhonice**	**82.17**	**322**	*e*P	P	14 25 38.5	+5.2	
PRU	**Pruhonice**	**82.17**	**322**	*e*P	P	14 25 38.5	+5.2	
RONA	**Rosalia, Austr**	**82.21**	**319**	pP	**P**	**14 25 34.9**	**+1.3**	
	comp=Z,8.5nm,1.6s							
RONA				PP	**PP**	**14 28 36.6**	**-5.0**	
	comp=Z,5.4nm,1.2s							
CONA	**Conrad Observa**	**82.37**	**319**	pP	**P**	**14 25 35.2**	**+0.8**	
	comp=Z,11nm,1.4s							
CONA				*e*PP	**PP**	**14 28 39.3**	**-3.6**	
	comp=Z,6.9nm,1.4s							
CLL	**Collm**	**82.40**	**323**	*e*P	**P**	**14 25 35.0**	**+0.6**	
CLL	**Collm**	**82.40**	**323**	*e*P	**P**	**14 25 35.0**	**+0.6**	
CLL				*i* x	x	14 25 42.9		
	comp=Z,18nm,1.3s							
CLL				*e*PP	**PP**	**14 28 44.0**	**+1.1**	
CLL				*e*PPP		14 31 55.0		
SUMG	**Summit**	**82.59**	**354**	*i* P	**P**	**14 25 35.2**	**-0.3**	
ZVC	**Zvikov**	**82.63**	**321**	*e*P	**P**	**14 25 36.8**	**+1.1**	
YKA	**Yellowknife Ar**	**82.80**	**23**	P	**P**	**14 25 35.5**	**-0.8**	
	comp=Z,12nm,0.7s,baz=312,slow=5.2,SNR=43							
	comp=Z,12nm,0.7s							
CKRC	**Cesky Krumlov**	**82.86**	**321**	*e*P	**P**	**14 25 37.0**	**0.0**	
CKRC				*ex*	x	14 25 45.0		
CKRC	**Cesky Krumlov**	**82.86**	**321**	*e*P	**P**	**14 25 37.0**	**0.0**	
CKRC				*e*		14 25 45.0		
ARSA	**Arzberg**	**82.89**	**319**	P	**P**	**14 25 35.9**	**-1.2**	
	comp=Z,6.2nm,1.1s							
KHC	**Kasperske Hory**	**83.13**	**321**	*e*P	**P**	**14 25 41.7**	**+3.3**	
KHC				*ex*	x	14 25 46.3		
KHC	**Kasperske Hory**	**83.13**	**321**	⇓ *e*P	**P**	**14 25 39.9**	**+1.5**	
KHC				pmax	pmax			
	comp=Z,30nm,1.3s							
GERES	**GERESS Array B**	**83.20**	**321**	P	**P**	**14 25 38.7**	**-0.1**	
	comp=Z,2.4nm,0.8s,baz=54,slow=6.8,SNR=8.0							
	comp=Z,2.4nm,0.8s							
MOA	**Molln**	**83.35**	**320**	P	**P**	**14 25 37.6**	**-1.9**	
	comp=Z,6.6nm,0.9s							
SOKA	**Soboth**	**83.45**	**318**	*e*P	**P**	**14 25 39.2**	**-0.9**	
	comp=Z,4.4nm,0.8s							
BIOA	**Bad Ischl, Aus**	**83.80**	**320**	*e*P	**P**	**14 25 40.2**	**-1.6**	
	comp=Z,19nm,1.5s							
OBKA	**Obir**	**83.83**	**318**	*e*P	**P**	**14 25 39.9**	**-2.1**	
	comp=Z,2.9nm,0.7s							
KBA	**Koelnbreinsper**	**84.27**	**319**	*e*P	**P**	**14 25 44.3**	**-0.1**	
	comp=Z,6.0nm,0.7s							
MYKA	**Terra Mystica**	**84.32**	**319**	*e*P	**P**	**14 25 42.5**	**-2.1**	
	comp=Z,15nm,0.5s							
LESA	**Schwarzleotal**	**84.50**	**320**	*e*P	**P**	**14 25 43.5**	**-2.0**	
	comp=Z,7.8nm,1.0s							
LESA				*e*PP	**PP**	**14 28 57.2**	**-3.1**	
	comp=Z,4.6nm,1.2s							
ABTA	**Abfaltersbach**	**84.93**	**319**	*e*P	**P**	**14 25 45.8**	**-1.9**	
	comp=Z,5.9nm,1.2s							
ABTA				*e*PP	**PP**	**14 29 01.2**	**-2.7**	
	comp=Z,8.9nm,1.4s							
WATA	**Walderalm**	**85.19**	**320**	*e*pP	**P**	**14 25 49.8**	**+0.8**	
	comp=Z,16nm,1.5s							
WTTA	**Wattenberg**	**85.19**	**320**	*e*P	**P**	**14 25 48.9**	**-0.2**	
	comp=Z,11nm,1.1s							
CIMO	**Cimolais**	**85.20**	**319**	IAmb	IAmb	14 26 00.0		
	comp=Z,9.3nm,1.0s							
KMBO	**Kilima Mbogo**	**85.44**	**267**	P	**P**	**14 25 51.2**	**+0.3**	
	comp=Z,12nm,1.0s,baz=51,slow=5.7,SNR=13							
	comp=Z,12nm,1.0s							
MOTA	**Mosalm**	**85.46**	**320**	*e*P	**P**	**14 25 49.4**	**-1.0**	
	comp=Z,13nm,1.2s							
MOTA				*e*PP	**PP**	**14 29 07.2**	**-1.0**	
	comp=Z,12nm,1.5s							
SQTA	**Sankt Quirin**	**85.46**	**320**	*e*P	**P**	**14 25 50.5**	**+0.2**	
	comp=Z,12nm,1.3s							
SQTA				*e*PP	**PP**	**14 29 08.0**	**-0.2**	
	comp=Z,8.2nm,1.2s							
RETA	**Reutte**	**85.59**	**321**	*e*P	**P**	**14 25 49.7**	**-1.2**	
	comp=Z,4.0nm,1.0s							
RETA				PP	**PP**	**14 29 08.4**	**-0.7**	
	comp=Z,9.4nm,1.4s							
FETA	**Feichten**	**85.85**	**320**	*e*P	**P**	**14 25 52.4**	**+0.1**	
	comp=Z,12nm,1.4s							
ICESG	**Greenland Ices**	**86.05**	**353**	*i* P	**P**	**14 25 53.3**	**+0.2**	
DAVA	**Damuels**	**86.20**	**321**	*e*P	**P**	**14 25 52.8**	**-1.3**	
	comp=Z,6.5nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**86.33**	**320**	P	**P**	**14 25 54.5**	**-0.3**	
FUORN				IAmb	IAmb	14 26 11.4		
	comp=Z,82nm,2.0s							
FDMO	**Fiordimonte**	**86.43**	**316**	IAmb	IAmb	14 26 08.3		
	comp=Z,40nm,1.2s							
NRCA	**Norcia**	**86.52**	**316**	IAmb	IAmb	14 26 11.2		
	comp=Z,31nm,1.1s							
BRLDA	**Berland Lookou**	**86.97**	**30**	IAmb	IAmb	14 26 01.6		
	comp=Z,37nm,0.9s							
EKA	**Eskdalemuir Ar**	**87.99**	**332**	P	**P**	**14 26 00.7**	**-1.6**	
	comp=Z,1.0nm,0.7s,baz=54,slow=3.1,SNR=2.8							
	comp=Z,1.0nm,0.7s							
GNW	**Green Mountain**	**88.06**	**38**	IAmb	IAmb	14 26 21.1		
	comp=Z,34nm,1.2s							
LON	**Longmire**	**89.09**	**38**	IAmb	IAmb	14 26 23.1		
	comp=Z,17nm,0.8s							
DY2G	**Dye2**	**89.20**	**355**	*i* P	**P**	**14 26 04.3**	**-3.8**	
B08A	**Colville Reser**	**89.51**	**36**	IAmb	IAmb	14 26 21.5		
	comp=Z,27nm,1.2s							
H04A	**Detroit Lake**	**90.06**	**40**	IAmb	IAmb	14 26 34.7		
	comp=Z,42nm,1.2s							
NEW	**Newport**	**90.73**	**35**	P	**P**	**14 26 16.0**	**+0.6**	
	baz=309							
E08A	**Dider Farm, El**	**90.78**	**37**	IAmb	IAmb	14 26 33.7		
	comp=Z,45nm,1.3s							
HUMO	**Hull Mountain**	**90.78**	**42**	IAmb	IAmb	14 26 26.4		
	comp=Z,50nm,1.5s							
YBH	**Yreka Blue Hor**	**91.43**	**43**	P	**P**	**14 26 18.5**	**-0.4**	
YBH				IAmb	IAmb	14 26 23.1		
	comp=Z,24nm,1.2s							
YBH	**Yreka Blue Hor**	**91.43**	**43**	P	**P**	**14 26 18.5**	**-0.4**	
YBH				pmax	pmax			
	comp=Z,24nm,1.3s							
J05D	**Fort Rock, OR**	**91.43**	**41**	P	**P**	**14 26 17.9**	**-1.1**	
G08A	**Pilot Rock**	**91.56**	**38**	IAmb	IAmb	14 26 30.8		
	comp=Z,64nm,1.8s							
F10A	**Beach Ranch, E**	**92.10**	**37**	IAmb	IAmb	14 26 45.3		
	comp=Z,36nm,1.4s							
BMO	**Blue Mountains**	**92.75**	**38**	IAmb	IAmb	14 26 42.7		
	comp=Z,35nm,1.5s							
FFC	**Flin Flon**	**92.95**	**24**	P	**P**	**14 26 25.0**	**-0.5**	
FFC	**Flin Flon**	**92.95**	**24**	P	**P**	**14 26 25.0**	**-0.5**	
FFC				pmax	pmax			
	comp=Z,75nm,1.4s							
J08A	**Circle Bar Ran**	**93.01**	**39**	IAmb	IAmb	14 26 33.6		
	comp=Z,15nm,0.8s							
ORV	**Oroville**	**93.42**	**44**	P	**P**	**14 26 27.0**	**-1.0**	
ORV	**Oroville**	**93.42**	**44**	P	**P**	**14 26 27.0**	**-1.0**	
ORV				pmax	pmax			
	comp=Z,12nm,1.1s							
MFID	**Camas Ranch**	**94.48**	**38**	IAmb	IAmb	14 26 43.2		
	comp=Z,51nm,1.7s							
MPK	**Martis Peak**	**94.50**	**43**	IAmb	IAmb	14 26 36.4		
	comp=Z,31nm,1.3s							
EGMT	**Eagleton**	**94.59**	**32**	IAmb	IAmb	14 26 49.9		
	comp=Z,18nm,1.0s							
EGMT	**Eagleton**	**94.59**	**32**	P	**P**	**14 26 33.8**	**+0.5**	
	baz=314							
EMB	**Emerald Bay**	**94.64**	**44**	IAmb	IAmb	14 26 42.5		
	comp=Z,15nm,0.8s							
YERR	**Yerington**	**95.18**	**43**	IAmb	IAmb	14 26 39.4		
	comp=Z,18nm,1.3s							
HLID	**Hailey**	**95.18**	**37**	IAmb	IAmb	14 26 46.7		
	comp=Z,19nm,1.3s							
HLID	**Hailey**	**95.18**	**37**	P	**P**	**14 26 36.7**	**+0.5**	
	baz=310							
BOZ	**Bozeman (W)**	**95.33**	**34**	IAmb	IAmb	14 26 50.3		
	comp=Z,23nm,1.6s							
BOZ	**Bozeman (W)**	**95.33**	**34**	P	**P**	**14 26 37.4**	**+0.6**	
	baz=313							
WAKR	**Walker**	**95.34**	**44**	IAmb	IAmb	14 26 45.9		
	comp=Z,30nm,1.7s							
BMN	**Battle Mountai**	**95.54**	**41**	IAmb	IAmb	14 26 49.1		
	comp=Z,31nm,1.5s							
RYN	**Ryan**	**95.84**	**43**	IAmb	IAmb	14 26 49.2		
	comp=Z,18nm,1.3s							
KVN	**Kaiserville**	**95.85**	**43**	IAmb	IAmb	14 26 54.0		
	comp=Z,19nm,1.3s							
NVAR	**Mina Array Bea**	**96.10**	**43**	P	**P**	**14 26 40.6**	**0.0**	
	comp=Z,3.3nm,1.0s,baz=289,slow=3.4,SNR=14							
	comp=Z,3.3nm,1.0s							
MLAC	**Mammoth, Mamm**	**96.24**	**44**	P	**P**	**14 26 41.2**	**-0.1**	
	baz=307							
ELK	**Elko**	**96.52**	**40**	IAmb	IAmb	14 26 59.3		
	comp=Z,21nm,1.6s							
SMMC	**Simmler**	**96.86**	**47**	P	**P**	**14 26 43.5**	**-0.3**	
	baz=306							
RLMT	**Red Lodge**	**96.86**	**34**	IAmb	IAmb	14 26 59.7		
	comp=Z,19nm,1.4s							
RLMT	**Red Lodge**	**96.86**	**34**	P	**P**	**14 26 43.3**	**-0.6**	
	baz=314							
DSP	**Deep Springs**	**96.95**	**44**	IAmb	IAmb	14 26 54.4		
	comp=Z,31nm,1.8s							
PKM	**Mcpherson Peak**	**97.23**	**47**	P	**P**	**14 26 45.2**	**-0.5**	
	baz=306							
LAO	**LASA Array**	**97.23**	**31**	P	**P**	**14 26 45.0**	**-0.4**	
	baz=317							
CWC	**Cottonwood Cre**	**97.44**	**45**	P	**P**	**14 26 45.6**	**-1.0**	
	baz=307							
ISA	**Isabella, Lake**	**97.65**	**45**	P	**P**	**14 26 46.4**	**-1.1**	
	baz=307							
ARVC	**Arvin**	**97.74**	**46**	P	**P**	**14 26 46.8**	**-1.0**	
	baz=307							
R11B	**Troy Canyon, C**	**97.83**	**42**	IAmb	IAmb	14 26 55.5		
	comp=Z,20nm,1.9s							
R11B	**Troy Canyon, C**	**97.83**	**42**	P	**P**	**14 26 47.7**	**-0.7**	
	baz=309							
HWUT	**Hardware Ranch**	**98.05**	**37**	IAmb	IAmb	14 27 12.9		
	comp=Z,14nm,1.5s							
LRMC	**Laurel Mtn Rad**	**98.28**	**45**	P	**P**	**14 26 50.4**	**0.0**	
	baz=308							
TPNV	**Topopah Spring**	**98.29**	**43**	P	**P**	**14 26 50.7**	**+0.2**	
	baz=309							
BW06	**Boulder Array**	**98.35**	**36**	P	**P**	**14 26 50.8**	**+0.1**	
	baz=314							
PDAR	**Pinedale Array**	**98.35**	**36**	P	**P**	**14 26 49.3**	**-1.4**	
	comp=Z,0.6nm,0.6s,baz=270,slow=0.3,SNR=3.3							
	comp=Z,0.6nm,0.6s							
EDW2	**Edwards Air Fo**	**98.44**	**46**	P	Pdif	14 26 51.7	+0.7	
	baz=307							
GWY	**Greenwater Val**	**98.50**	**44**	IAmb	IAmb	14 27 04.8		
	comp=Z,12nm,1.4s							
ULM	**Lac du Bonnet**	**98.77**	**23**	P	**P**	**14 26 50.0**	**-2.1**	
	comp=Z,2.4nm,0.9s,baz=338,slow=5.0,SNR=4.3							
	comp=Z,2.4nm,0.9s							
GSC	**Goldstone, Bar**	**98.95**	**45**	P	Pdif	14 26 53.9	+0.5	
	baz=308							
CIS	**Catalina Islan**	**99.04**	**47**	P	**Pdif**	**14 26 54.1**	**+0.4**	
	baz=307							
BFSC	**Mount Baldy Ra**	**99.04**	**46**	P	**Pdif**	**14 26 54.1**	**+0.2**	
	baz=307							
RRX	**Edison Barstow**	**99.09**	**45**	P	**Pdif**	**14 26 54.5**	**+0.6**	
	baz=308							
MDND	**Maddock**	**99.27**	**27**	P	**Pdif**	**14 26 55.0**	**+0.6**	
	baz=322							
TUQ	**Turquoise Moun**	**99.44**	**44**	P	**Pdif**	**14 26 56.0**	**+0.4**	
	baz=309							
BBRC	**Big Bear Solar**	**99.52**	**46**	P	**Pdif**	**14 26 56.3**	**+0.2**	
	baz=308							
HEC	**Hector,Ludlow**	**99.55**	**45**	P	**Pdif**	**14 26 56.6**	**+0.6**	
	baz=308							
K22A	**Casper**	**100.01**	**34**	P	**Pdif**	**14 26 58.3**	**+0.3**	
	baz=316							
GMRC	**Granite Mounta**	**100.01**	**45**	P	**Pdif**	**14 26 58.4**	**+0.3**	
	baz=309							
RSSD	**Black Hills**	**100.16**	**32**	P	**Pdif**	**14 26 58.9**	**+0.2**	
	baz=318							
PFO	**Pinyon Flats O**	**100.22**	**46**	P	**Pdif**	**14 26 59.4**	**+0.3**	
	baz=308							
TPFO	**Pinon Flats**	**100.22**	**46**	P	**Pdif**	**14 26 59.4**	**+0.3**	
	baz=308							
MONP2	**Monument Peak**	**100.68**	**47**	P	**Pdif**	**14 27 00.5**	**-0.7**	
	baz=308							
O20A	**White River Ci**	**100.89**	**37**	P	**Pdif**	**14 27 01.1**	**-0.9**	
	baz=315							
WUAZ	**Wupatki**	**102.23**	**42**	P	**Pdif**	**14 27 07.0**	**-1.0**	
	baz=312							
EYMN	**Ely**	**102.26**	**22**	P	**Pdif**	**14 27 07.1**	**-0.6**	
	baz=329							
TORD	**Torodi Ar, Bea**	**110.72**	**296**	PKiKP	**PKiKP**	**14 31 44.5**	**-1.6**	
	comp=Z,0.7nm,0.6s,baz=27,slow=3.3,SNR=5.1							
TXAR	**Lajitas Array**	**111.19**	**42**	PKiKP	**PKiKP**	**14 31 46.1**	**-0.7**	
	comp=Z,0.4nm,0.7s,baz=131,slow=0.0,SNR=3.5							
DBIC	**Dimbokro**	**119.62**	**293**	PKIKP	**PKPdf**	**14 32 02.0**	**-1.2**	
DBIC	**Dimbokro**	**119.62**	**293**	PKP	**PKPdf**	**14 32 02.0**	**-1.2**	
	comp=Z,1.7nm,0.5s,baz=26,slow=2.8,SNR=4.7							

baz=227

TAP 04 14:14:34.1, 24.11N×121.71E, h12km, ML4.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**302**	*e*P	**Pg**	14 14 37.1	+0.1
	baz=301						
ETL				S	Sg	14 14 38.6	-0.3
	baz=301						
TWD	**Chiawan**	**0.10**	**252**	*e*P	**Pg**	14 14 37.5	+0.4
	baz=253						
TWD				S	Sg	14 14 39.4	+0.2
	baz=253						
NACB	**Ninganchiao**	**0.12**	**301**	*e*P	**Pg**	14 14 37.0	-0.3
	baz=301						
NACB				S	Sg	14 14 39.4	-0.1
	baz=301						
ETLH	**Xiulin Townshi**	**0.23**	**295**	*e*P	**Pg**	14 14 39.6	+0.6
	baz=294						
ETLH				*e*S	Sg	14 14 43.4	+1.1
	baz=294						
ETLH	**Xiulin Townshi**	**0.23**	**295**	S	**Pg**	14 14 39.3	+0.3
	baz=287						
ETM	**Tongmen**	**0.24**	**233**	*e*P	**Pg**	14 14 39.8	+0.5
	baz=230						
ETM	**Tongmen**	**0.24**	**233**	S	**Pg**	14 14 40.0	+0.7
	baz=231						

*NNC **04** 14:16:50.7±1.8, 41.54N×78.10E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=12.4km s-min=8.5km az=1.0, Suspected Mining explosion.*

*KRNET **04** 14:16:52.5±0.1, 42.09N×78.29E, h20km, mb2.4*

ISC 04 14:16:54.1±1.5, 41.99N±0.07×78.18E±0.06, h0km, n16, σ2s36/24, 16C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.52**	**18**	⇑*e*P	**Pg**	**14 17 00.7**	**-3.4**
	baz=11						
PRZ				⇑*e*S	**Sg**	**14 17 07.0**	**-3.9**
	baz=11						
KDJ	**Kajisay**	**0.76**	**281**	⇑*i*P	**Pg**	**14 17 08.0**	**-0.6**
	baz=73						
KDJ				⇑*i*S	**Sg**	**14 17 19.1**	**+0.6**
	baz=73						
ANVS	**Anan'yevo**	**0.88**	**335**	⇑*e*P	**Pg**	**14 17 08.2**	**-2.8**
	baz=27						
ANVS				⇑*e*S	**Sg**	**14 17 19.8**	**-2.7**
	baz=27						
TNSS	**Tian-Shan**	**1.39**	**319**	P	**Pb**	**14 17 22.8**	**+1.6**
	1.6nm,0.2s						
TNSS				S	**Sn**	**14 17 46.9**	**+6.4**
	3.0nm,0.3s						
ULHL	**Ulahol**	**1.47**	**281**	⇑*i*P	**Pn**	**14 17 20.4**	**-1.6**
	baz=76						
ULHL				⇑*i*S	**Sg**	**14 17 41.0**	**-0.2**
	baz=76						
KOTS	**Kotyrbulak**	**1.48**	**328**	Pg	**Pb**	**14 17 25.3**	**+2.7**
	2.6nm,0.3s						
KOTS				Lg	Lg	14 17 51.1	
	6.2nm,0.3s						
PDGK	**Podgornoye**	**1.65**	**35**	⇓Pg	**Pg**	**14 17 28.9**	**+3.0**
	0.5nm,0.3s						
PDGK				⇓Lg	Lg	14 17 56.5	
	3.7nm,0.6s						
NRN	**Naryn**	**1.72**	**252**	⇑*e*P	**Pb**	**14 17 26.2**	**-0.6**
	baz=50						
NRN				⇑*e*S	**Sg**	**14 17 50.6**	**+1.2**
	baz=50						
BOOM	**Boomskoye usch**	**1.74**	**288**	⇑*e*P	**Pn**	**14 17 25.2**	**-0.5**
	baz=84						
BOOM				⇑*i*S	**Sn**	**14 17 48.7**	**0.0**
	baz=84						
KTBS	**Karatobe**	**2.05**	**328**	Pg	**Pg**	**14 17 34.4**	**+1.1**
	3.0nm,0.3s						
KTBS				Lg	Lg	14 18 07.1	
	3.0nm,0.3s						
CHKK	**Chushkaly**	**2.06**	**335**	Pg	**Pg**	**14 17 35.3**	**+1.7**
	2.1nm,0.4s						
CHKK				Lg	Lg	14 18 08.2	
	5.4nm,0.3s						
TKM2	**Tokmak 2**	**2.13**	**297**	⇑Pg	**Pb**	**14 17 33.0**	**-0.6**
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	14 18 04.3	
	1.9nm,0.5s						
TKM2	**Tokmak 2**	**2.13**	**297**	⇑*e*P	**Pn**	**14 17 30.1**	**-1.0**
	baz=93						
TKM2				⇑*i*S	**Sn**	**14 17 57.6**	**-0.8**
	baz=93						
DGS	**Degeres**	**2.18**	**306**	Pg	**Pb**	**14 17 34.8**	**+0.4**
	1.0nm,0.4s						
DGS				Lg	Lg	14 18 07.4	
	3.0nm,0.6s						
ARXS	**Arharly**	**2.24**	**354**	Pg	**Pg**	**14 17 38.0**	**+1.0**
	2.4nm,0.2s						
ARXS				Lg	Lg	14 18 13.5	
	5.5nm,0.5s						
KRBS	**Karabastau**	**2.51**	**314**	Pg	**Pg**	**14 17 41.1**	**-1.1**
KRBS				Lg	Lg	14 18 17.8	

*IDC **04** 14:16:52.7±0.5, 24.20N×121.82E, h0km, mb4.5/32, mbtmp4.5/34, ML3.6/2, Error ellipse: s-maj=15.0km s-min=13.9km az=84.0*

*MOS **04** 14:16:53.1±1.3, 24.15N×121.67E, h13km, mb5.1/24, Error ellipse: s-maj=10.3km s-min=6.3km az=100.1*

*BJI **04** 14:16:53.6±0.0, 24.10N×121.84E, h10km, mb4.6/27, ML4.7/2*

*NEIC **04** 14:16:54.8±1.8, 24.10N±0.02×121.75E±0.05, h7km±2km, mb5.2/95, Mww4.8/5, Error ellipse: s-maj=6.2km s-min=2.6km az=105.0*

*NEIC **04** 14:16:55, 24.10N×121.74E, h12km*

*JMA **04** 14:16:55.6±0.1, 24.1N±0.2×121.7E±0.4, h8km, MV4.8/14, TAIWAN REGION*

*TAP **04** 14:16:55.3, 24.14N×121.71E, h8km, ML5.0, C*

*NEIC **04** 14:16:55, 24.30N×122.17E, h12km, Moment Tensor Solution. Duration: 1s1 Moment tensor: Scale 10^16 Nm; Mrr1.13; Mθθ-1.35; Mφφ0.21; Mrθ1.55; Mθφ-0.54; Mφr0.26; Fault plane solution: M0 2.06000×10^16 NP1:φs79.66000°, δ70.13000°, λ96.19000°. NP2:φs241.95000°, δ20.78000°, λ73.38000°. Principal axes: T 1.8771, Plg64.0000°, Azm360.0000°; N 0.3599, Plg6.0000°, Azm258.0000°; P -2.2370, Plg25.0000°, Azm165.0000°;*

*ASIES **04** 14:16:55.2, 24.18N×121.68E, h4km, ML5.0, Mw4.7, Moment Tensor Solution. Moment tensor: Scale 10^23 Nm; Mrr0.52; Mθθ-0.52; Mφφ-0.01; Mrθ1.09; Mθφ-0.18; Mφr0.61; Fault plane solution: M0 1.36133×10^23 NP1:φs61.65000°, δ78.40000°, λ85.03000°. NP2:φs265.03000°, δ12.60000°, λ112.87000°. Principal axes: T Plg56.3260°, Azm325.3190°; N Plg4.8630°, Azm62.6560°; P Plg33.2270°, Azm155.8510°;*

ISC 04 14:16:55.2±0.6, 24.14N±0.01×121.73E±0.01, h14km±3km, n559, σ0s97/664, mb5.0/94, 12C-33D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.10**	**283**	P	**Pg**	**14 16 57.8**	**-0.5**
	baz=283						
ETL				S	**Sg**	**14 16 59.3**	**-1.1**
	baz=283						
NACB	**Ninganchiao**	**0.12**	**287**	Pg	**Pg**	**14 16 57.9**	**-0.8**
NACB	**Ninganchiao**	**0.12**	**287**	P	**Pg**	**14 16 58.3**	**-0.3**
NACB	**Ninganchiao**	**0.12**	**287**	⇓P	**Pg**	**14 16 58.1**	**-0.5**
	baz=288						
NACB				S	**Sg**	**14 16 59.8**	**-1.2**
	baz=288						
TWD	**Chiawan**	**0.13**	**244**	⇑*i*P	**Pg**	**14 16 58.2**	**-0.5**
	baz=248						
TWD				*i* S	**Sg**	**14 17 00.3**	**-0.8**
	baz=248						
EHP	**Heping Village**	**0.17**	**5**	⇓P	**Pg**	**14 16 59.4**	**0.0**
	baz=10.0						
EHP				S	**Sg**	**14 17 02.1**	**0.0**
	baz=10.0						
EAHA	**Aohua**	**0.19**	**4**	⇑P	**Pg**	**14 16 59.6**	**0.0**
	baz=5.0						
EAHA				S	**Sg**	**14 17 02.4**	**-0.2**
	baz=5.0						
HWA	**Hwalien**	**0.19**	**215**	*i* P	**Pg**	**14 16 59.9**	**+0.3**
	baz=223						
HWA				S	**Sb**	**14 17 04.3**	**+0.1**
	baz=223						
ETLH	**Xiulin Townshi**	**0.23**	**287**	⇓P	**Pg**	**14 17 00.1**	**-0.2**
	baz=288						
ETLH				S	**Sg**	**14 17 03.4**	**-0.5**
	baz=288						
ETM	**Tongmen**	**0.27**	**231**	⇑P	**Pg**	**14 17 00.7**	**-0.4**
	baz=233						
ETM				S	**Sg**	**14 17 04.5**	**-0.4**
	baz=233						
ENA	**Nanau**	**0.29**	**3**	⇓*i*P	**Pg**	**14 17 01.4**	**+0.1**
	baz=5.0						
ENA				*i* S	**Sg**	**14 17 05.6**	**+0.2**
	baz=5.0						
LXIB	**Xiulin Townshi**	**0.31**	**248**	P	**Pg**	**14 17 01.3**	**-0.4**
	baz=248						
LXIB				S	**Sg**	**14 17 05.5**	**-0.5**
	baz=248						
EWUT	**Wuta**	**0.31**	**9**	⇓P	**Pg**	**14 17 01.8**	**+0.1**
	baz=10.0						
EWUT				S	**Sg**	**14 17 06.1**	**+0.1**
	baz=10.0						
SHUL	**Shoufeng**	**0.38**	**203**	P	**Pb**	**14 17 04.0**	**+0.2**
	baz=212						
SHUL				S	**Sb**	**14 17 11.5**	**+2.0**
	baz=212						
ESL	**Shilin**	**0.42**	**220**	*i* P	**Pg**	**14 17 03.2**	**-0.4**
	baz=230						
ESL				S	**Sg**	**14 17 08.9**	**-0.4**
	baz=230						
WHF	**Hehuan Shan**	**0.42**	**271**	*i* P	**Pg**	**14 17 03.9**	**+0.1**
	baz=271						
WHF				*i* S	**Sg**	**14 17 08.8**	**-0.8**
	baz=271						
NNSB	**Datong**	**0.43**	**313**	⇓P	**Pg**	**14 17 03.9**	**+0.1**
	baz=313						
NNSB				S	**Sg**	**14 17 09.5**	**-0.1**
	baz=313						
NNSH	**Datong**	**0.43**	**313**	⇓P	**Pg**	**14 17 03.9**	**+0.1**
	baz=313						
NNSH				S	**Sg**	**14 17 09.5**	**-0.1**
	baz=313						
LATG	**Datong**	**0.44**	**335**	⇓P	**Pg**	**14 17 04.1**	**+0.1**
	baz=336						
LATG				S	**Sg**	**14 17 10.2**	**+0.3**
	baz=336						
NNS	**Nan Shan**	**0.44**	**313**	⇓*i*P	**Pg**	**14 17 04.1**	**0.0**
	baz=314						
NNS				*i* S	**Sg**	**14 17 10.1**	**+0.1**
	baz=314						
ESAO	**Su ao**	**0.45**	**14**	P	**Pg**	**14 17 04.3**	**+0.1**
	baz=14						
ESAO				S	**Sg**	**14 17 10.6**	**+0.3**
	baz=14						
FUSS	**Fushou**	**0.45**	**284**	⇓P	**Pg**	**14 17 04.5**	**+0.1**
	baz=285						
FUSS				S	**Sg**	**14 17 10.2**	**-0.3**
	baz=285						
TEGC	**Jichi Village**	**0.46**	**202**	P	**Pb**	**14 17 05.6**	**+0.4**
	baz=189						
TEGC				*e*S	**Sn**	**14 17 14.4**	**-1.1**
	baz=189						
TWC	**Suao**	**0.48**	**13**	⇓*i*P	**Pg**	**14 17 05.1**	**+0.2**
	baz=14						
TWC				S	**Sg**	**14 17 10.4**	**-0.9**
	baz=14						
NDS	**Dongshan**	**0.49**	**359**	⇓P	**Pb**	**14 17 05.4**	**-0.4**
	baz=358						
NDS				S	**Sb**	**14 17 12.4**	**-0.5**
	baz=358						
NDT	**Datong Townshi**	**0.50**	**337**	⇓P	**Pb**	**14 17 05.6**	**-0.3**
	baz=337						
NDT				S	**Sg**	**14 17 12.3**	**+0.4**
	baz=337						
CHGB	**Renai**	**0.51**	**261**	P	**Pg**	**14 17 05.5**	**+0.1**
	baz=254						
CHGB				S	**Sg**	**14 17 11.5**	**-0.8**
	baz=254						
TWT	**Tachien**	**0.52**	**283**	*i* P	**Pb**	**14 17 06.0**	**-0.2**
	baz=283						
TWT				*i* S	**Sb**	**14 17 12.9**	**-0.7**
	baz=283						
ENTT	**Nioudou**	**0.52**	**344**	⇓*i*P	**Pb**	**14 17 05.9**	**-0.3**
	baz=344						
ENTT				*i* S	**Sb**	**14 17 13.0**	**-0.7**
	baz=344						
WARBT	**Fenglin Townsh**	**0.52**	**217**	P	**Pg**	**14 17 05.1**	**-0.4**
	baz=227						
WARBT				S	**Sg**	**14 17 11.3**	**-1.1**
	baz=227						
TDCB	**Techi**	**0.53**	**283**	P	**Pb**	**14 17 06.1**	**-0.4**
	baz=283						
TDCB				S	**Sg**	**14 17 12.8**	**0.0**
	baz=283						
OWD	**Renai**	**0.54**	**250**	P	**Pg**	**14 17 05.7**	**-0.1**
	baz=251						
OWD				S	**Sg**	**14 17 12.5**	**-0.5**
	baz=251						
EOS2	**EOS2**	**0.54**	**59**	*e*P	**Pn**	**14 17 07.9**	**-0.5**
	baz=40						
EGFH	**Guangfu**	**0.54**	**210**	P	**Pg**	**14 17 05.9**	**0.0**
	baz=221						
EGFH				S	**Sb**	**14 17 15.2**	**+1.0**
	baz=221						
EOS4	**EOS4**	**0.54**	**92**	*e*P	**Pn**	**14 17 08.3**	**0.0**
	baz=86						
EOS3	**EOS3**	**0.56**	**75**	*e*P	**Pn**	**14 17 09.3**	**+0.6**
	baz=53						
WUSB	**Renai**	**0.57**	**256**	P	**Pg**	**14 17 06.7**	**+0.1**
	baz=256						
WUSB				S	**Sg**	**14 17 13.9**	**-0.3**
	baz=256						
TWE	**Neicheng**	**0.58**	**355**	⇓*i*P	**Pb**	**14 17 07.1**	**-0.2**
	baz=356						
TWE				*i* S	**Sb**	**14 17 15.5**	**0.0**
	baz=356						
YHNB	**Yeheng**	**0.62**	**329**	Pg	**Pb**	**14 17 07.6**	**-0.3**
YHNB	**Yeheng**	**0.62**	**329**	P	**Pb**	**14 17 07.9**	**-0.1**
YHNB	**Yeheng**	**0.62**	**329**	*i* P	**Pb**	**14 17 07.8**	**-0.1**
	baz=329						
YHNB				S	**Sb**	**14 17 16.2**	**-0.4**
	baz=329						
ILA	**Ilan**	**0.63**	**2**	P	**Pb**	**14 17 08.2**	**+0.2**
	baz=2.0						
ILA				*i* S	**Sb**	**14 17 17.6**	**+1.0**
	baz=2.0						
FUSB	**Fushanzhiwuyua**	**0.63**	**349**	⇓P	**Pb**	**14 17 08.1**	**-0.1**
	baz=348						
FUSB				S	**Sb**	**14 17 16.8**	**-0.2**
	baz=348						
NSK	**Sanguang**	**0.63**	**328**	*i* P	**Pb**	**14 17 07.9**	**-0.3**
	baz=328						
NSK				*i* S	**Sb**	**14 17 16.6**	**-0.4**
	baz=328						
VWDT	**VWDT**	**0.66**	**235**	P	**Pg**	**14 17 08.1**	**+0.1**
	baz=236						
VWDT				S	**Sb**	**14 17 17.8**	**+0.3**
	baz=236						
HGSD	**Ruisui**	**0.70**	**203**	P	**Pn**	**14 17 10.1**	**-0.7**
	baz=192						
HGSD				*e*S	**Sb**	**14 17 19.9**	**+1.1**
	baz=192						
NTC	**Toucheng**	**0.72**	**8**	P	**Pb**	**14 17 10.0**	**+0.3**
	baz=6.0						
NTC				S	**Sb**	**14 17 19.8**	**+0.4**
	baz=6.0						
WHP	**Taichung City**	**0.73**	**281**	P	**Pb**	**14 17 10.0**	**+0.2**
	baz=282						
WHP				S	**Sb**	**14 17 19.5**	**-0.2**
	baz=282						
EHY	**Hungye**	**0.73**	**211**	*i* P	**Pg**	**14 17 09.1**	**-0.3**
	baz=214						
DPDB	**Guoxing**	**0.74**	**262**	P	**Pb**	**14 17 10.0**	**+0.1**
	baz=255						
DPDB				S	**Sb**	**14 17 19.6**	**-0.4**
	baz=255						
NFF	**Wufeng Townshi**	**0.74**	**312**	⇓P	**Pb**	**14 17 10.0**	**0.0**
	baz=312						
NFF				S	**Sb**	**14 17 20.0**	**-0.1**
	baz=312						
WCS	**Beigang Elemen**	**0.75**	**264**	P	**Pb**	**14 17 10.3**	**+0.2**
	baz=257						
WCS				S	**Sb**	**14 17 19.9**	**-0.3**
	baz=257						
SSLB	**Suanglung**	**0.79**	**244**	Pg	**Pg**	**14 17 10.3**	**-0.3**
SSLB	**Suanglung**	**0.79**	**244**	P	**Pb**	**14 17 10.7**	**-0.1**
SSLB	**Suanglung**	**0.79**	**244**	⇑P	**Pg**	**14 17 10.3**	**-0.3**
	baz=255						
SSLB				S	**Sg**	**14 17 20.8**	**-0.1**
	baz=255						
SMLT	**Sun Moon Lake**	**0.80**	**252**	*i* P	**Pb**	**14 17 10.9**	**-0.1**
	baz=252						
SMLT				*i* S	**Sg**	**14 17 21.1**	**-0.2**
	baz=252						
LIOB	**Emei**	**0.82**	**308**	P	**Pn**	**14 17 11.9**	**-0.5**
	baz=308						
LIOB				S	**Sb**	**14 17 23.0**	**+0.6**
	baz=308						
NSTT	**Nanjuang**	**0.82**	**307**	*i* P	**Pb**	**14 17 11.7**	**+0.3**
	baz=307						
NSTT				S	**Sb**	**14 17 22.4**	**0.0**
	baz=307						
TYC	**Yuchr**	**0.83**	**254**	*i* P	**Pb**	**14 17 11.4**	**0.0**
	baz=246						
TYC				*i* S	**Sg**	**14 17 21.4**	**-0.8**
	baz=246						
TIPB	**Shuangxi**	**0.84**	**6**	⇓P	**Pb**	**14 17 11.8**	**+0.2**
	baz=356						
TIPB				S	**Sb**	**14 17 23.4**	**+0.6**
	baz=356						
YULB	**Yu-li**	**0.84**	**208**	Pg	**Pg**	**14 17 10.4**	**-1.1**
YULB	**Yu-li**	**0.84**	**208**	P	**Pg**	**14 17 11.2**	**-0.3**
YULB	**Yu-li**	**0.84**	**208**	P	**Pg**	**14 17 10.9**	**-0.6**
	baz=225						
NHDH	**Xindian Distri**	**0.84**	**347**	P	**Pb**	**14 17 12.0**	**+0.3**
	baz=346						
NHDH				S	**Sb**	**14 17 23.3**	**+0.4**
	baz=346						
ECBN	**Changbin**	**0.85**	**197**	P	**Pb**	**14 17 11.9**	**0.0**
	baz=187						
ECBN				*e*S	**Sb**	**14 17 23.9**	**+0.7**
	baz=187						
TATO	**Taipei**	**0.86**	**345**	Pg	**Pb**	**14 17 12.3**	**+0.3**
TATO	**Taipei**	**0.86**	**345**	P	**Pn**	**14 17 12.5**	**-0.5**
EYUL	**Yuli**	**0.87**	**205**	P	**Pn**	**14 17 13.2**	**+0.1**
	baz=220						
EYUL				*e*S	**Sb**	**14 17 23.9**	**+0.2**
	baz=220						
TWF1	**Yuli**	**0.88**	**207**	*i* P	**Pg**	**14 17 12.0**	**-0.2**
	baz=221						
TWF1				*e*S	**Sg**	**14 17 23.7**	**0.0**
	baz=221						
TWQ1	**Liyutan**	**0.90**	**284**	*i* P	**Pn**	**14 17 13.7**	**+0.2**
	baz=296						
TWQ1				S	**Sn**	**14 17 26.3**	**0.0**
	baz=296						
TWB1	**Santiao Chiao**	**0.90**	**15**	*i* P	**Pb**	**14 17 13.0**	**+0.3**
	baz=6.0						
TWB1				*i* S	**Sb**	**14 17 25.2**	**+0.7**
	baz=6.0						
HSN1	**Hsinchu**	**0.91**	**315**	P	**Pn**	**14 17 14.2**	**+0.5**
	baz=315						
HSN1				*e*S	**Sn**	**14 17 27.0**	**+0.4**
	baz=315						
NHY	**Taipei**	**0.91**	**351**	P	**Pn**	**14 17 13.8**	**+0.1**
	baz=350						
NHY				*e*S	**Sb**	**14 17 25.4**	**+0.5**
	baz=350						
WHYT	**Xinyi Township**	**0.91**	**241**	P	**Pb**	**14 17 13.0**	**+0.1**
	baz=251						
WHYT				*e*S	**Sb**	**14 17 25.3**	**+0.3**
	baz=251						
TAP	**Taipei**	**0.92**	**347**	*i* P	**Pn**	**14 17 13.8**	**0.0**
	baz=347						
TAP				S	**Sn**	**14 17 26.0**	**-0.9**
	baz=347						
NWF	**Wu-fen Shan**	**0.93**	**3**	*i* P	**Pn**	**14 17 13.8**	**-0.3**
	baz=360						
WFSB	**Wu-fen Shan**	**0.93**	**3**	⇓P	**Pn**	**14 17 13.8**	**-0.1**
	baz=353						
WFSB				S	**Sn**	**14 17 26.4**	**-0.7**
	baz=353						
SBCB	**Hsinchu**	**0.94**	**314**	P	**Pn**	**14 17 14.2**	**+0.1**
	baz=314						
SBCB				S	**Sn**	**14 17 27.6**	**+0.2**
	baz=314						
NMLH	**Miaoli**	**0.94**	**295**	P	**Pn**	**14 17 15.0**	**+0.9**
	baz=295						
NMLH				S	**Sn**	**14 17 27.4**	**0.0**
	baz=295						
NTY	**Taoyuan**	**0.94**	**336**	P	**Pn**	**14 17 14.7**	**+0.6**
	baz=335						
NTY				S	**Sn**	**14 17 28.1**	**+0.6**
	baz=335						
HSN	**Hsinchu**	**0.96**	**314**	*i* P	**Pn**	**14 17 14.9**	**+0.6**
	baz=316						
HSN				*i* S	**Sn**	**14 17 27.8**	**0.0**
	baz=316						
NCUH	**Zhongli**	**0.96**	**329**	P	**Pn**	**14 17 15.1**	**+0.7**
	baz=329						
NCUH				S	**Sn**	**14 17 29.1**	**+1.2**
	baz=329						
SXI1	**Grass Mountain**	**0.96**	**8**	⇓P	**Pn**	**14 17 14.3**	**-0.2**
	baz=6.0						
SXI1				*e*S	**Sn**	**14 17 29.9**	**+1.9**
	baz=6.0						
WJS	**Zhushan**	**0.97**	**251**	P	**Pn**	**14 17 15.2**	**+0.7**
	baz=252						
WJS				S	**Sn**	**14 17 28.5**	**+0.5**
	baz=252						
WNT	**Mingjian**	**0.99**	**255**	*i* P	**Pn**	**14 17 15.9**	**+1.2**
	baz=251						
WNT				*i* S	**Sn**	**14 17 29.2**	**+0.7**
	baz=251						
CHKH	**Chenggong**	**0.99**	**198**	P	**Pb**	**14 17 14.2**	**0.0**
	baz=193						
TWS1	**Kuangyinshan**	**1.00**	**344**	*i* P	**Pn**	**14 17 15.6**	**+0.6**
	baz=343						
TWS1				*i* S	**Sn**	**14 17 29.3**	**+0.5**
	baz=343						
TNOU	**National Taiwa**	**1.01**	**2**	P	**Pn**	**14 17 15.3**	**+0.3**
	baz=342						
TNOU				*e*S	**Sn**	**14 17 31.3**	**+2.3**
	baz=342						
WDJ	**Dajia District**	**1.01**	**282**	P	**Pn**	**14 17 16.3**	**+1.2**
	baz=283						
WDJ				S	**Sn**	**14 17 29.6**	**+0.5**
	baz=283						
YM01	**YM01**	**1.01**	**352**	⇓P	**Pn**	**14 17 15.3**	**+0.2**
	baz=350						
YM01				S	**Sn**	**14 17 29.5**	**+0.2**
	baz=350						
FULB	**Fuli**	**1.01**	**203**	P	**Pg**	**14 17 14.9**	**+0.1**
	baz=223						
FULB				*e*S	**Sn**	**14 17 29.3**	**+0.1**
	baz=223						
ALS	**Alishan**	**1.05**	**234**	*i* P	**Pn**	**14 17 15.7**	**-0.2**
	baz=236						
ALS				*e*S	**Sn**	**14 17 31.0**	**+0.5**
	baz=236						
NTST	**Danshui**	**1.05**	**346**	P	**Pn**	**14 17 16.4**	**+0.8**
	baz=353						
NTST				S	**Sn**	**14 17 31.2**	**+1.0**
	baz=353						
ANP	**Anpu**	**1.06**	**350**	*i* P	**Pn**	**14 17 16.1**	**+0.2**
	baz=347						
WCHH	**Zhanghua**	**1.07**	**267**	P	**Pn**	**14 17 17.2**	**+1.3**
	baz=268						
WCHH				S	**Sn**	**14 17 32.5**	**+2.0**
	baz=268						
EHD	**Haiduan**	**1.09**	**206**	P	**Pb**	**14 17 15.3**	**-0.6**
	baz=210						
EHD				*e*S	**Sb**	**14 17 30.2**	**+0.1**
	baz=210						
CHN5	**Tsauling**	**1.10**	**241**	*i* P	**Pg**	**14 17 17.3**	**+0.8**
	baz=243						
CHN5				*i* S	**Sn**	**14 17 33.6**	**+2.2**
	baz=243						
ECS	**Chishang**	**1.14**	**204**	P	**Pn**	**14 17 16.8**	**0.0**
	baz=223						
ECS				*e*S	**Sn**	**14 17 32.4**	**+0.2**
	baz=223						
TWY	**Chenhua**	**1.14**	**354**	*i* P	**Pg**	**14 17 17.8**	**+0.6**
	baz=342						
TWY				*e*S	**Sn**	**14 17 33.9**	**+1.6**
	baz=342						
ELDTW	**Lidau**	**1.15**	**215**	*i* P	**Pb**	**14 17 16.0**	**-0.9**
	baz=229						
ELDTW				*i* S	**Sn**	**14 17 33.9**	**+1.3**
	baz=229						
JYNG	**Yonagunijimaku**	**1.16**	**74**	P	**Pg**	**14 17 18.1**	**+0.6**
JYNG				S	**Sg**	**14 17 32.4**	**-0.2**
WGK	**Gukeng**	**1.16**	**247**	*i* P	**Pg**	**14 17 18.5**	**+0.9**
	baz=249						
WGK				*i* S	**Sn**	**14 17 34.0**	**+1.3**
	baz=249						

WDLH Douliu 1.18 248 P Pg 14 17 19.1 +1.2
baz=250
WDLH S Sn 14 17 35.2 +2.1
baz=250
YOJ Yonaguni jima 1.22 74 Pn Pb 14 17 18.3 +0.2
YOJ Yonaguni jima 1.22 74 P Pg 14 17 18.8 +0.1
YOJ Yonaguni jima 1.22 74 P Pg 14 17 18.8 +0.1
baz=69
YOJ eS Sg 14 17 37.0 +2.5
baz=69
YOJ Yonaguni jima 1.22 74 P Pb 14 17 18.3 +0.2
YOJ Yonaguni jima 1.22 74 P Pg 14 17 18.9 +0.3
YOJ eS Sg 14 17 35.8 +1.3
EDH Donghe 1.22 199 P Pn 14 17 16.5 -1.4
baz=188
EDH S Sg 14 17 35.6 +0.9
baz=188
WCKO Fanlu 1.24 236 P Pg 14 17 20.1 +0.9
baz=239
WCKO S Sg 14 17 37.6 +2.3
baz=239
WRL Guolierlin Hig 1.26 259 P Pg 14 17 20.0 +0.6
baz=261
WRL i S Sg 14 17 36.9 +1.1
baz=261
STYH Taoyuan 1.30 222 P Pb 14 17 19.6 +0.1
baz=226
STYH S Sg 14 17 38.7 +1.5
baz=226
CHN4 Tsaushan 1.30 233 i P Pg 14 17 20.7 +0.4
baz=224
CHN4 i S Sg 14 17 39.6 +2.4
baz=224
WTK Tuku 1.30 250 P Pg 14 17 21.1 +0.7
baz=251
WTK S Sg 14 17 39.5 +2.2
baz=251
TPUB Ta-pu 1.30 231 Pn Pg 14 17 20.1 -0.3
TPUB Ta-pu 1.30 231 P Pg 14 17 20.6 +0.2
baz=222
TPUB S Sg 14 17 39.2 +1.8
baz=222
LONT Longtian 1.34 204 P Pn 14 17 18.5 -1.1
baz=209
LONT eS Sb 14 17 36.4 -0.9
baz=209
CHY Chiayi 1.35 242 P Pg 14 17 22.6 +1.3
baz=244
CHY S Sg 14 17 40.6 +1.8
baz=244
WTP Ta-pu 1.35 229 i P Pg 14 17 21.4 +0.1
baz=233
WTP eS Sg 14 17 40.4 +1.5
baz=233
TWK Hsinying 1.43 233 i P Pg 14 17 22.7 0.0
baz=236
TWK i S Sg 14 17 42.3 +1.0
baz=236
TWG Pinlang 1.44 205 Pn Pn 14 17 19.1 -1.9
TWG Pinlang 1.44 205 eP Pn 14 17 19.3 -1.7
baz=210
TWG eS Sg 14 17 42.0 +0.3
baz=210
TWGBT Beinan 1.44 204 P Pn 14 17 19.3 -1.7
baz=210
TWGBT eS Sn 14 17 40.0 +0.2
baz=210
SNST Tainan City 1.45 231 P Pg 14 17 23.0 -0.1
baz=235
SNST S Sg 14 17 43.0 +1.0
baz=235
CHN1 Nanshi 1.45 229 i P Pg 14 17 23.0 -0.2
baz=234
CHN1 i S Sg 14 17 43.3 +1.2
baz=234
WSF Szhu 1.46 250 i P Pg 14 17 23.2 -0.2
baz=252
WSF i S Sg 14 17 43.3 +0.8
baz=252
TTN Taitung 1.48 201 eP Pb 14 17 22.2 -0.3
baz=206
TTN eS Sg 14 17 42.1 -0.7
baz=206
SGST Jiashian 1.48 225 i P Pb 14 17 22.3 -0.3
baz=229
SGST i S Sg 14 17 44.1 +1.0
baz=229
WSL Shuilin Townsh 1.50 246 P Pg 14 17 24.2 +0.1
baz=248
WSL S Sg 14 17 45.0 +1.3
baz=248
SLGT Liugui 1.51 221 P Pg 14 17 23.7 -0.5
baz=226
SLGT S Sg 14 17 46.0 +2.1
baz=226
PCYT Pengchaiyu 1.52 12 i P Pb 14 17 23.4 +0.2
baz=349
PCYT eS Sg 14 17 44.5 +0.3
baz=349
ICHU Yijhu 1.54 240 P Pg 14 17 24.3 -0.4
baz=243
ICHU S Sg 14 17 46.0 +1.2
baz=243
CHN8 Yiju 1.60 241 i P Pb 14 17 24.9 +0.3
baz=244
CHN8 i S Sg 14 17 47.4 +0.7
baz=244
CHN3 Shinhua 1.64 230 i P Pg 14 17 27.0 +0.3
baz=235
CHN3 S Sg 14 17 48.2 +0.3
baz=235
SSHA Shanhua 1.65 233 P Pg 14 17 26.5 -0.6
baz=238
SSHA S Sg 14 17 47.9 -0.6
baz=238
SCST Cishan 1.68 222 P Pg 14 17 26.8 -0.8
baz=228
SCST S Sg 14 17 50.3 +0.8
baz=228
SHHT Tainan City 1.68 229 P Pg 14 17 27.1 -0.5
baz=234
SHHT S Sg 14 17 51.1 +1.6
baz=234
ECL Taimali 1.69 205 P Pn 14 17 24.6 +0.2
baz=200
SCLT Jiali 1.70 236 i P Pb 14 17 26.4 +0.1
baz=239
SCLT i S Sg 14 17 49.3 -0.7
baz=239
TSMG Majia 1.74 215 P Pb 14 17 27.0 0.0
baz=220
TSMG S Sg 14 17 50.2 -1.0
baz=220
TAI1 Yung-k'ang 1.76 232 eP Pn 14 17 25.5 +0.2
baz=236
TAI1 eS Sg 14 17 50.5 -1.3
baz=236
TWM1 Shoushan 1.77 223 i P Pg 14 17 28.8 -0.6
baz=231
TSCK Chigu Township 1.80 237 P Pb 14 17 27.8 -0.2
baz=244
SGLT Jiouru 1.81 219 i P Pg 14 17 29.0 -0.9
baz=208
SGLT eS Sg 14 17 54.9 +1.5
baz=208
MASBT Mashibuluo 1.82 214 P Pb 14 17 28.1 -0.3
baz=219
MASBT S Sg 14 17 53.1 -0.7
baz=219
IRIF Iriomote-Funau 1.84 83 P Pn 14 17 27.6 +1.1
SNJT Kaohsiung City 1.88 223 P Pb 14 17 29.9 +0.6
baz=230
SNJT eS Sg 14 17 57.9 +2.2
baz=230
HATJ Hateruma jima 1.90 92 S Sb 14 17 52.7 -0.7
EAST Anshuo 1.92 205 eP Pn 14 17 28.2 +0.6
baz=201
TAW Tawu 1.93 203 eP Pb 14 17 29.9 -0.3
baz=196
TAW eS Sn 14 17 52.3 +0.5
baz=196
TAWH Dawu Township 1.95 203 P Pn 14 17 27.8 -0.2
baz=213
WSSB Gushan 2.01 222 P Pb 14 17 31.0 -0.6
baz=232
SCZT Fangliau 2.03 210 i P Pb 14 17 31.5 -0.5
baz=215
SCZT eS Sb 14 17 58.4 +1.3
baz=215
PNG Penghu 2.07 254 P Pb 14 17 31.6 -1.0
baz=257
PNG S Sb 14 17 57.6 -0.5
baz=257
PHUB P'eng-hu 2.07 253 P Pb 14 17 31.4 -1.2
baz=256
PHUB S Sb 14 17 57.5 -0.7
baz=256
WDGT Dungji 2.09 246 i P Pb 14 17 31.4 -1.5
baz=235
WDGT i S Sb 14 17 58.5 -0.2
baz=235
JKRS Kuro-shima 2.09 87 eP Pb 14 17 32.4 -0.5
SLIU Shizi 2.09 204 P Pb 14 17 32.1 -1.0
baz=201
JIJ Ishigaki jima 2.22 84 S Sn 14 17 59.8 +0.9
VWUC VWUC 2.24 293 P Pn 14 17 32.4 +0.4
baz=292
VWUC S Sn 14 18 00.3 +0.9
baz=292
VCHM Qimei 2.30 247 P Pn 14 17 34.6 +1.8
baz=237
VCHM S Sb 14 18 04.0 -0.9
baz=237
HEN Hengchun 2.31 203 i P Pb 14 17 35.3 -1.4
baz=198
HEN eS Sn 14 18 02.5 +1.4
baz=198
TWK1 Hengchun 2.34 201 i P Pn 14 17 34.8 +1.4
baz=198
TWKBT Hengchun 2.34 201 P Pn 14 17 33.8 +0.4
baz=197
TWKBT eS Sn 14 18 03.7 +1.7
baz=197
JISG Ishigakijimahi 2.40 79 eP Pn 14 17 35.3 +1.2
JISG S Sn 14 18 05.2 +1.8
PTMZ Houxiangcun 2.54 291 P Pn 14 17 36.4 +0.3
baz=291
MATB Ma-tsu 2.57 322 eP Pn 14 17 36.2 -0.4
baz=319
QZH Quanzhou 2.96 286 Pn Pn 14 17 44.2 +2.3
QZH Sn Sn 14 18 19.2 +1.9
QZH smax smax
comp=N,2µm,0.9s
QZH smax smax
comp=E,1µm,0.9s
LYJJ Jianjiangzhen 2.99 324 P Pn 14 17 43.3 +1.1
baz=321
LYJJ eS Sn 14 18 20.1 +2.1
baz=321
KNM Kinmen 3.02 276 i P Pn 14 17 45.6 +3.0
baz=276
KNMB Chin-men Tao 3.06 277 Pn Pn 14 17 44.2 +0.9
KNMB Chin-men Tao 3.06 277 eP Pn 14 17 43.5 +0.3
baz=277
KNMB eS Sn 14 18 22.8 +3.0
baz=277
XPSS Dashiqiu 3.11 334 eP Pn 14 17 44.5 +0.6
baz=331
MHZQ Yeshan 3.13 309 eP Pn 14 17 45.4 +1.2
baz=307
MHZQ eS Sn 14 18 24.1 +2.7
baz=307
ZPLA Ao Xicun 3.64 268 eP Pn 14 17 51.9 +0.6
baz=267
ZPLA eS Sn 14 18 36.2 +2.1
baz=267
DSXP Dongshan 3.96 265 eP Pn 14 17 56.0 +0.4
baz=264
DSXP eS Sn 14 18 43.4 +1.5
baz=264
JOW Kunigami 6.50 64 Pn Pn 14 18 30.6 +0.1
JOW Kunigami 6.50 64 P Pn 14 18 30.7 +0.2
JOW Kunigami 6.50 64 Pn Pn 14 18 30.3 -0.2
7.7nm,0.3s,baz=163,slow=15,SNR=6.2
JOW Sn Sn 14 19 44.9 +0.4
baz=269,slow=13
29nm,0.4s
NJ2 Nanjing 8.28 343 eP Pn 14 18 56.8 +1.8
NJ2 pmax pmax
comp=Z,66nm,0.5s
TGY Tagaytay City 10.01 184 Pn Pn 14 19 20.8 +2.0
24nm,0.3s,baz=86,slow=10,SNR=1.4
JNU Nakatsue 12.02 40 Pn 14 19 46.4 +0.1
JNU Nakatsue 12.02 40 Pn Pn 14 19 47.8 +1.5
0.4nm,0.3s,baz=228,slow=6.4,SNR=3.6
QIZ Qiongzhong 12.16 248 P Pn 14 19 49.8 +1.5
QIZ S Sn 14 22 07.5 +3.7
ENH Enshi 12.48 302 Pn Pn 14 19 53.8 +1.2
GYA Guiyang 13.82 283 eP Pn 14 20 12.7 +1.7
GYA pmax pmax
comp=Z,130nm,1.2s
KSRS Korea Array 14.30 20 Pn Pn 14 20 20.3 +3.0
0.5nm,0.3s,baz=204,slow=14,SNR=4.2
KS19 Wonju Array Si 14.32 20 P P 14 20 24.8 0.0
PZH PanZhiHua 18.22 282 P P 14 21 08.5 +0.3
PZH pmax pmax
comp=Z,30nm,1.5s
HHC Hu-ho-hao-te 18.71 335 eP Pn 14 21 16.4 +2.5
MJAR Matsushiro Arr 18.81 45 P P 14 21 11.2 -3.4
baz=218,slow=12,SNR=1.5
1.7nm,0.7s
CN2 Changchun 19.85 8 eP Pn 14 21 27.0 -0.4
CN2 pmax pmax
comp=Z,30nm,1.2s
XLT XiLinHaoTe 20.25 348 eP P 14 21 30.9 +0.6
XLT pmax pmax
comp=Z,22nm,1.1s
TNCH TengChong 21.12 277 P P 14 21 41.4 +1.4
TNCH pP pP 14 21 43.1 -0.8
TNCH PP PnPn 14 22 04.9 +5.8
TNCH S S 14 25 29.1 -5.8
TNCH pmax pmax
comp=Z,28nm,1.3s
MDJ Mudanjiang 21.41 16 P P 14 21 42.7 0.0
MDJ pP pP 14 21 45.8 -0.3
MDJ sP sP 14 21 48.8 +0.1
MDJ pmax pmax
comp=Z,20nm,1.5s
USA0B Ussuriysk Arra 21.70 20⇑ eP P 14 21 46.8 +1.0
USRK Ussuriysk Ar. 21.70 20 P P 14 21 47.4 +1.6
13nm,0.8s,baz=209,slow=9.6,SNR=9.8
CMAR Chiang Mai Arr 21.95 259 P P 14 21 49.2 +0.4
CMAR Chiang Mai Arr 21.95 259 P P 14 21 49.2 +0.4
CMAR Chiang Mai Arr 21.95 259 P P 14 21 49.8 +1.0
2.8nm,0.9s,baz=56,slow=6.6,SNR=4.2
2.8nm,0.9s
BNX BinXian 22.04 11 ⇓P P 14 21 51.9 +2.5
BNX pmax pmax
comp=Z,19nm,0.7s
SBUM Sibu 23.44 205 P P 14 22 03.9 -0.4
HIA Hailar 25.13 357 P P 14 22 20.6 +0.8
HIA Hailar 25.13 357⇓ iP P 14 22 20.8 +1.0
HIA pmax pmax
comp=Z,26nm,1.2s
ASAJ Asahikawa 26.24 35 P P 14 22 27.6 -2.3
comp=Z,4.6nm,0.5s,baz=167,slow=31,SNR=6.7
comp=Z,4.6nm,0.5s
KLR Kul'dur 26.25 15⇑ eP P 14 22 29.7 -0.3
KLR Kul'dur 26.25 15 P P 14 22 28.5 -1.4
comp=Z,14nm,0.9s,baz=232,slow=8.2,SNR=7.2
KLR PcP PcP 14 25 55.9 -0.3
comp=Z,1.9nm,0.8s,baz=138,slow=1.4,SNR=2.5
comp=Z,14nm,0.9s
ULN Ulaanbaatar 26.40 337⇓ eP P 14 22 32.0 +0.5
ULN pmax pmax
comp=Z,23nm,1.1s
HEH HeiHe 26.44 8 eP P 14 22 32.2 +0.6
HEH pmax pmax
comp=Z,25nm,1.2s
SONM Songino Array 26.61 337 P P 14 22 32.2 -1.1
comp=Z,8.9nm,1.0s,baz=146,slow=3.9,SNR=7.4
comp=Z,8.9nm,1.0s
YSS Yuzh-Sakhalins 28.31 31⇓ eP P 14 22 49.8 +1.4
YSS pmax pmax
comp=Z,99nm,3.1s
ZEA Zeya 29.85 7 eP P 14 23 02.2 +0.2
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,0.9s
WMQ Urumqi 34.05 314 eP P 14 23 42.0 +2.9
YAK Yakutsk 38.26 6 eP P 14 24 13.9 -0.9
YAK e 14 26 27.0
YAK eS S 14 30 09.4 +1.2
YAK e 14 34 20.8
YAK pmax pmax
comp=Z,28nm,2.2s
YAK pmax pmax
comp=N,18nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK smax smax
comp=E,9µm,15.5s
YAK smax smax
comp=N,8µm,14.8s
YAK MLR MLR
comp=Z,5µm,18.0s
YAK MLR MLR
comp=N,1µm,22.0s
YAK MLR MLR
comp=E,4µm,24.0s
YAK Yakutsk 38.26 6 P P 14 24 13.6 -1.2
comp=E,7.0nm,0.3s,baz=4.0,slow=1.0,SNR=2.7
comp=E,7.0nm,0.3s
MK31 Makanchi Array 38.72 316 ceP P 14 24 19.4 +0.5
MKAR Makanchi Array 38.72 316 P P 14 24 19.6 +0.7
comp=E,8.3nm,0.7s,baz=110,slow=9.8,SNR=7.5
MKAR PcP PcP 14 26 30.7 +0.1
comp=E,1.9nm,0.9s,baz=95,slow=6.3,SNR=2.7
comp=E,8.3nm,0.7s
ZALV Zalesovo Beam 40.55 327 P P 14 24 33.7 -0.3
comp=E,11nm,0.8s,baz=109,slow=8.6,SNR=8.5
ZALV PcP PcP 14 26 36.0 -0.2
comp=E,0.9nm,0.7s,baz=45,slow=4.8,SNR=1.4
comp=E,11nm,0.8s
PMG Port Moresby 41.58 140⇓ eP P 14 24 44.4 +1.5
PMG pmax pmax
comp=Z,24nm,1.0s
KURK Kurchatov 42.45 320⇑ eP P 14 24 48.5 -1.1
KURBB Kurchatov Arra 42.46 320 P P 14 24 49.7 -0.1
comp=Z,2.5nm,0.7s,baz=119,slow=7.5,SNR=2.1
comp=Z,2.5nm,0.7s
COEN Coen 43.27 149 P P 14 24 57.3 +0.6
COEN IAmb IAmb 14 25 03.7
comp=Z,29nm,1.0s
SEY Seymchan 43.85 20⇑ eP P 14 25 01.7 +0.9
SEY Seymchan 43.85 20 P P 14 24 59.5 -1.3
comp=Z,3.4nm,0.8s,baz=5.2,slow=24,SNR=3.5
comp=Z,3.4nm,0.8s
WRA Warramunga Arr 45.51 163 P P 14 25 12.6 -1.9
comp=Z,3.1nm,0.6s,baz=344,slow=8.9,SNR=6.2
WRA PcP PcP 14 26 54.8 +1.5
comp=Z,0.9nm,0.8s,baz=338,slow=3.7,SNR=1.4
comp=Z,3.1nm,0.6s
KBL Kabul 46.63 295 P P 14 25 24.6 +1.0
KBL IAmb IAmb 14 25 38.9
comp=Z,25nm,1.1s
KBL Kabul 46.63 295 P P 14 25 24.6 +1.0
KBL pmax pmax
comp=Z,25nm,1.2s
TIXI Tiksi 47.71 3 P P 14 25 29.8 -1.3
TIXI Tiksi 47.71 3⇓ iP P 14 25 30.0 -1.2
TIXI pmax pmax
comp=Z,60nm,1.4s
BVAR Borovoye Array 48.02 321 P P 14 25 33.6 -0.3
comp=Z,4.7nm,0.6s,baz=112,slow=8.2,SNR=5.2
BVAR PcP PcP 14 27 00.9 -0.9
comp=Z,1.5nm,0.7s,baz=96,slow=2.9,SNR=2.0
comp=Z,4.7nm,0.6s
BRVK Borovoye 48.09 321 P P 14 25 33.2 -1.3
BRVK Borovoye 48.09 321⇓ iP P 14 25 35.2 +0.8
BRVK pmax pmax
comp=Z,12nm,0.9s
ASAR Alice Springs 48.97 165 P P 14 25 41.0 -0.5
ASAR Alice Springs 48.97 165 P P 14 25 41.4 -0.1
comp=Z,3.4nm,0.8s,baz=341,slow=5.7,SNR=4.2
comp=Z,3.4nm,0.8s
NRIK Noril'sk 49.58 345⇑ iP P 14 25 45.5 -0.1
NRIK Noril'sk 49.58 345 P P 14 25 45.1 -0.5
comp=Z,11nm,1.0s,baz=121,slow=8.5,SNR=3.5
comp=Z,11nm,1.0s
ABKAR Akbulak array 53.83 314 P P 14 26 18.2 +0.6
GEYT Alibeck 55.25 300 P P 14 26 26.7 -1.5
comp=Z,5.2nm,0.9s,baz=200,slow=33,SNR=3.9
comp=Z,5.2nm,0.9s
ARU Arti 55.44 323 di P 14 26 29.2 0.0
ARU 14 28 29.9
ARU S S 14 34 16.7 +3.1
ARU SS SS 14 37 57.7 -0.3
ARU pmax pmax
comp=Z,15nm,1.1s
GAMB Gambell 58.28 29 P P 14 26 49.6 +0.3
baz=260
STKA Stephens Creek 58.85 160⇓ eP P 14 26 53.6 0.0
STKA Stephens Creek 58.85 160 P P 14 26 52.2 -1.3
comp=Z,2.3nm,0.7s,baz=342,slow=9.3,SNR=3.0
comp=Z,2.3nm,0.7s
TNA Tin City 60.16 27 P P 14 27 02.6 +0.4
baz=263
M11K Mekoryuk 60.49 33 P P 14 27 05.1 +0.6
baz=267
KIRV Kirov 60.54 325 ceP P 14 27 04.6 -0.3
F14K Arctic Creek 60.81 27 P P 14 27 07.5 +0.8
baz=264
ANM Nome 61.13 28 P P 14 27 07.5 -1.4
ANM IAmb IAmb 14 27 11.1
comp=Z,45nm,1.8s
ANM Nome 61.13 28 P P 14 27 09.4 +0.5
baz=266
ANM Nome 61.13 28 P P 14 27 07.5 -1.4
ANM pmax pmax
comp=Z,45nm,1.8s
C16K Lisburne Hills 61.49 24 P P 14 27 11.7 +0.4
baz=264
F15K North Star Dit 61.53 27 P P 14 27 12.0 +0.5
baz=266
BELG Belogornoye 61.66 318⇓ iP P 14 27 12.8 +0.2
BELG pmax pmax
comp=Z,6.0nm,0.9s
G15K Niukluk 61.73 28 P P 14 27 13.9 +0.9
baz=267
J14K Nanvaranak Lak 61.85 30 P P 14 27 14.4 +0.7
baz=268
M13K Dall Lake 61.90 33 P P 14 27 14.5 +0.4
baz=270
L14K Kuka Creek 62.23 32 P P 14 27 17.1 +0.8
baz=270
C17K DeLong Mountai 62.31 24 P P 14 27 17.4 +0.6
baz=266
RDOG Red Dog Mine 62.38 24 P P 14 27 17.5 +0.3
baz=266
G16K Koyuk River 62.46 27 P P 14 27 18.4 +0.6
baz=268
H16K Elim 62.49 28 P P 14 27 18.9 +0.9
baz=268
M14K Bethel 62.59 33 P P 14 27 19.8 +1.1
baz=271
N14K Kuskokwak Cree 62.74 33 P P 14 27 20.4 +0.6
baz=271
E17K Hotham Inlet 62.74 25 P P 14 27 20.2 +0.5
baz=268
K15K Wolf Creek Mou 62.78 31 P P 14 27 20.7 +0.7
baz=270
L15K Ungalak Mounta 62.81 31 P P 14 27 20.8 +0.6
baz=271
B18K Kokolik River 62.87 23 P P 14 27 21.1 +0.6
baz=266
F17K Baldwin Pennin 62.95 26 P P 14 27 21.9 +0.8
baz=268
O14K Tigyukauivet M 62.98 34 P P 14 27 22.0 +0.7
baz=272
C18K Utukok River 63.05 24 P P 14 27 22.6 +0.8
baz=267
I17K Unalakleet 63.15 29 P P 14 27 21.9 -0.6
I17K IAmb IAmb 14 27 24.7
comp=Z,15nm,1.1s
I17K Unalakleet 63.15 29 P P 14 27 23.4 +1.0
baz=270
G17K Kiwalik Mounta 63.17 27 P P 14 27 23.6 +1.0
baz=269
J16K Anvik River 63.20 30 P P 14 27 23.5 +0.7
baz=271
M15K Kasigluk River 63.21 33 P P 14 27 23.0 +0.1
baz=272
E18K Tukpahlearik C 63.23 25 P P 14 27 22.2 -0.7
E18K Tukpahlearik C 63.23 25 P P 14 27 23.6 +0.7
baz=268
H17K Granite Mounta 63.49 28 P P 14 27 25.6 +1.0
baz=270

N15K	**Kwethluk River** baz=273	63.53	33	P		P	14 27 25.6	+0.5
F18K	**Selawik** baz=270	63.59	26	P		P	14 27 26.0	+0.7
SDPT	**Sand Point** baz=275	63.63	39	P		P	14 27 26.0	+0.3
C19K	**Lookout Ridge** baz=269	63.65	23	P		P	14 27 26.2	+0.4
L16K	**Owhat River** baz=272	63.76	31	P		P	14 27 27.5	+0.9
G18K	**Tagagawik**	64.00	27	P		P	14 27 27.6	-0.5
G18K	**Tagagawik** baz=271	64.00	27	P		P	14 27 29.1	+1.1
M16K	**Timber Creek** baz=273	64.05	32	P		P	14 27 29.2	+0.8
S14K	**Fog Glacier** baz=275	64.08	37	P		P	14 27 28.9	+0.1
H18K	**Honhosa River** baz=272	64.14	28	P		P	14 27 29.9	+1.0
N16K	**Nishlik Lake** baz=274	64.17	33	P		P	14 27 28.4	-0.8
D19K	**Kuna River** baz=270	64.18	24	P		P	14 27 30.0	+0.8
K17K	**Iditarod** baz=273	64.27	30	P		P	14 27 30.9	+1.1
L17K	**Donlin** baz=273	64.30	31	P		P	14 27 31.2	+1.2
F19K	**Shaleruckik Mo** baz=271	64.33	26	P		P	14 27 30.9	+0.7
B20K	**Meade River** baz=270	64.51	22	P		P	14 27 32.3	+1.0
E19K	**Redstone River**	64.53	25	P		P	14 27 30.2	-1.3
E19K	**Redstone River** baz=272	64.53	25	P		P	14 27 32.3	+0.8
O16K	**Kokwok River B** baz=275	64.57	34	P		P	14 27 32.3	+0.4
G19K	**Purcell Mounta** baz=272	64.63	26	P		P	14 27 32.7	+0.5
P16K	**Nushagak River** baz=275	64.67	34	P		P	14 27 33.1	+0.6
A21K	**Barrow** baz=270	64.68	21	P		P	14 27 32.9	+0.6
CHGN	**Chignik** baz=276	64.71	37	P		P	14 27 32.9	+0.2
D20K	**Etivluk River** baz=272	64.73	24	P		P	14 27 33.7	+0.9
GCSA	**Galena City Sc** baz=273	64.79	28	P		P	14 27 33.6	+0.4
E20K	**Nigu River** baz=272	64.90	24	P		P	14 27 34.5	+0.6
H19K	**Roundabout Mou** baz=273	64.92	27	P		P	14 27 35.0	+0.9
J18K	**Innoko River** baz=274	64.94	29	P		P	14 27 34.8	+0.6
N17K	**Nushagak Hills** baz=275	64.95	33	P		P	14 27 34.8	+0.4
L18K	**Granite Mounta** baz=275	65.05	31	P		P	14 27 35.5	+0.6
F20K	**Avaraart Lake** baz=273	65.13	25	P		P	14 27 36.2	+0.8
TTA	**Tatalina** baz=275	65.30	30	P		P	14 27 37.1	+0.5
ZEI	**Tsey**	65.35	308	*e*P		P	14 27 37.3	-0.2
ZEI	comp=Z,6.0nm,0.8s			pmax		pmax		
C21K	**Knifeblade Rid** baz=273	65.37	23	P		P	14 27 37.8	+0.9
J19K	**Poorman** baz=275	65.39	29	P		P	14 27 38.0	+0.9
B21K	**Ikpikpuk River** baz=273	65.40	23	P		P	14 27 37.9	+0.8
P17K	**Kvichak River** baz=276	65.45	34	P		P	14 27 38.0	+0.4
KLMR	**Klimovskoe**	65.47	328	*e*P		P	14 27 35.3	-2.3
KLMR	comp=Z,35nm,1.3s			pmax		pmax		
M18K	**Stony River** baz=276	65.52	32	P		P	14 27 38.7	+0.7
N18K	**Kilae Creek** baz=276	65.57	32	P		P	14 27 39.9	+1.5
H20K	**Anotleneega Mo** baz=275	65.58	27	P		P	14 27 39.0	+0.6
E21K	**Killik River** baz=274	65.71	24	P		P	14 27 39.9	+0.7
B22K	**Teshekpuk Lake** baz=274	65.77	22	P		P	14 27 40.1	+0.6
I20K	**Naaghedeneel** baz=275	65.81	28	P		P	14 27 40.6	+0.8
Q17K	**Contact Creek** baz=277	65.85	35	P		P	14 27 40.8	+0.5
KBZ	**Khabaz**	65.89	309⇓	*e*P		P	14 27 38.6	-2.1
KBZ	comp=Z,10.0nm,1.3s			pmax		pmax		
KBZ	**Khabaz** comp=Z,3.5nm,0.9s,baz=105,slow=5.1,SNR=3.1 comp=Z,3.5nm,0.9s	65.89	309	P		P	14 27 40.6	-0.1
L19K	**White Mountain** baz=276	65.91	31	P		P	14 27 41.4	+0.8
F21K	**Alatna River** baz=275	65.99	25	P		P	14 27 41.6	+0.6
O18K	**Koktuh Hills** baz=277	66.00	33	P		P	14 27 42.0	+0.8
J20K	**Nowinta River** baz=276	66.01	28	P		P	14 27 42.1	+0.9
P18K	**Big Mountain,** baz=277	66.05	34	P		P	14 27 41.8	+0.3
G21K	**Allakaket** baz=275	66.05	26	P		P	14 27 41.9	+0.5
K20K	**Telida** baz=276	66.14	29	P		P	14 27 42.5	+0.5
D22K	**Ayikyak River** baz=275	66.14	23	P		P	14 27 42.7	+0.7
M19K	**Big River Lodg** baz=277	66.15	31	P		P	14 27 43.1	+1.0
N19K	**Bonanza Creek** baz=277	66.24	32	P		P	14 27 43.2	+0.4
CHIR	**Chirikof Islan** baz=278	66.32	38	P		P	14 27 43.7	+0.5
L20K	**Farewell, AK** baz=277	66.32	30	P		P	14 27 43.6	+0.4
O19K	**Port Alsworth** baz=278	66.40	33	P		P	14 27 43.9	+0.2
H21K	**Melozitna Rive** baz=276	66.42	27	P		P	14 27 44.6	+0.8
E22K	**Anaktuvuk Pass** baz=276	66.54	24	P		P	14 27 45.1	+0.6
M20K	**Styx River** baz=278	66.75	31	P		P	14 27 46.5	+0.5
G22K	**Bettles** baz=277	66.80	25	P		P	14 27 46.6	+0.5
I21K	**Tanana** comp=Z,23nm,1.3s	66.82	27	IAmb		IAmb	14 27 52.2	
I21K	**Tanana** baz=277	66.82	27	P		P	14 27 47.1	+0.8
CHUM	**Lake Minchumin** baz=278	66.85	29	P		P	14 27 47.5	+1.0
D23K	**Nanushuk River** baz=277	66.85	23	P		P	14 27 47.8	+1.3
H22K	**Ishtalitna Cre** baz=278	66.98	26	P		P	14 27 48.7	+1.4
SII	**Sitkinak Islan** baz=279	67.00	37	P		P	14 27 49.1	+1.4
CAST	**Castle Rocks** baz=278	67.02	29	P		P	14 27 48.6	+1.0
PPLA	**Purkeypile** baz=278	67.04	30	P		P	14 27 49.3	+1.4
O20K	**Slope Mountain** baz=279	67.26	33	P		P	14 27 49.8	+0.5
COLD	**Coldfoot** baz=278	67.26	25	P		P	14 27 49.5	+0.4
N20K	**Mount Spurr** baz=279,SNR=6.1	67.28	32	P		P	14 27 50.0	+0.5
APA	**Apatity**	67.31	335⇓	*i*P		P	14 27 46.0	-3.3
APA	comp=Z,12nm,1.1s			pmax		pmax		
E23K	**Chandalar** baz=278	67.36	24	P		P	14 27 50.7	+0.8
MLY	**Manley**	67.36	27	P		P	14 27 49.1	-0.7
MLY	comp=Z,16nm,1.0s			IAmb		IAmb	14 27 53.5	
MLY	**Manley** baz=278	67.36	27	P		P	14 27 50.8	+0.9
OHAK	**Old Harbor** baz=280	67.38	36	P		P	14 27 50.7	+0.7
BPAW	**Bear Paw Mtn.** comp=Z,26nm,1.3s	67.40	28	IAmb		IAmb	14 27 53.5	
BPAW	**Bear Paw Mtn.** baz=279	67.40	28	P		P	14 27 50.6	+0.5
G23K	**Bananza Creek** baz=278	67.41	25	P		P	14 27 50.3	+0.2
C24K	**Franklin Bluff** baz=278	67.45	22	P		P	14 27 50.5	+0.3
SKT	**Skwentna** baz=279	67.48	31	P		P	14 27 50.9	+0.3
D24K	**Happy Valley** baz=278	67.49	23	P		P	14 27 50.9	+0.4
KDAK	**Kodiak Island** baz=280	67.66	35	P		P	14 27 53.2	+1.5
KDAK	**Kodiak Island** comp=Z,30nm,1.1s,baz=190,slow=21,SNR=2.3 comp=Z,30nm,1.1s	67.66	35	P		P	14 27 50.2	-1.5
TRF	**Thorofare Moun** baz=280	67.81	29	P		P	14 27 54.0	+1.2
HOM	**Homer** baz=280	67.81	33	P		P	14 27 52.9	+0.3
OBN	**Obninsk**	67.84	322	*i* P		P	14 27 50.8	-2.1
OBN	comp=Z,8.0nm,0.6s			pmax		pmax		
CAPN	**Captain Cook N** baz=280	67.86	32	P		P	14 27 53.3	+0.3
I23K	**Minto, Yukon-K** baz=280	67.92	27	P		P	14 27 54.0	+0.7
SUA	**Susitna One** baz=280,SNR=6.9	67.94	31	P		P	14 27 53.7	+0.1
CUT	**Chulitna** baz=280	68.00	30	P		P	14 27 53.8	0.0
F24K	**Squaw Lake** baz=280	68.10	24	P		P	14 27 55.2	+0.8
NEA2	**Nenana** baz=280	68.14	28	P		P	14 27 55.6	+0.9
BRSE	**Bradley Lake S** baz=281	68.25	33	P		P	14 27 57.3	+1.8
D25K	**Kavik River** baz=281	68.32	22	P		P	14 27 56.1	+0.3
MCK	**McKinley** baz=281,SNR=5.6	68.36	29	P		P	14 27 56.5	+0.4
G24K	**Hadweenzic Riv** baz=281	68.41	25	P		P	14 27 57.1	+0.8
H24K	**Noodor Dome** baz=281	68.41	26	P		P	14 27 56.5	+0.2
RC01	**Rabbit Creek A** baz=281	68.48	31	P		P	14 27 57.4	+0.5
COLA	**College** baz=281	68.60	27	P		P	14 27 57.7	+0.2
WAT1	**Susitna Watana** baz=281	68.70	30	P		P	14 27 58.4	+0.1
POKR	**Poker Plat Res** baz=281	68.73	27	P		P	14 27 58.3	0.0
SEW	**Seward** baz=282	68.82	32	P		P	14 27 59.2	+0.3
E25K	**Arctic Village** baz=282	68.85	24	P		P	14 27 59.9	+0.8
G25K	**Bearman Lake** baz=282	68.93	25	P		P	14 28 00.4	+0.8
F25K	**Christian Rive** baz=282	68.93	24	P		P	14 28 00.4	+0.7
SML	**Sawmill** baz=282	69.00	31	P		P	14 28 01.3	+1.1
ILAR	**Eielson Array** comp=Z,1.2nm,0.6s,baz=270,slow=4.8,SNR=2.0 comp=Z,1.2nm,0.6s	69.03	27	P		P	14 27 58.4	-1.8
KNK	**Knik Glacier** baz=282,SNR=5.3	69.03	31	P		P	14 28 01.4	+1.1
HDA	**Harding Lake** baz=282	69.08	28	P		P	14 28 00.5	0.0
WAT6	**Susitna Watana** baz=282	69.11	30	P		P	14 28 01.6	+0.6
DHY	**Denali Highway** baz=282	69.17	29	P		P	14 28 02.2	+0.9
M23K	**Glacier View** baz=282	69.29	31	P		P	14 28 02.4	+0.5
PRP	**Porcupine Dome** baz=283	69.43	26	P		P	14 28 03.7	+0.8
SCM	**Sheep Creek Mo** baz=283,SNR=5.4	69.46	30	P		P	14 28 03.5	+0.5
SPITS	**Spitsbergen Ar** comp=Z,23nm,1.0s,baz=67,slow=3.7,SNR=2.5 comp=Z,23nm,1.0s	69.63	348	P		P	14 28 02.2	-1.6
J25K	**Salcha River,** baz=283	69.70	27	P		P	14 28 04.2	-0.3
K24K	**Donnelly Dome** baz=283	69.71	28	P		P	14 28 04.8	+0.3
ARCES	**ARCESS Array B** comp=Z,4.6nm,0.8s,baz=64,slow=6.1,SNR=3.1 comp=Z,4.6nm,0.8s	69.77	338	P		P	14 28 04.7	0.0
P23K	**Montague Islan** baz=283	69.84	32	P		P	14 28 05.3	0.0
M24K	**Tolsona, Glenn** baz=284	69.93	30	P		P	14 28 06.1	+0.2
PAX	**Paxson** baz=284	70.04	29	P		P	14 28 06.8	+0.1
RIDG	**Independent Ri** baz=284	70.13	28	P		P	14 28 07.2	+0.1
KLU	**Klutina** baz=284	70.20	31	P		P	14 28 07.8	+0.2
D27M	**Malcolm River** baz=286	70.22	22	P		P	14 28 07.9	+0.4
HARP	**HAARP** baz=284	70.32	30	P		P	14 28 08.6	+0.3
SCRK	**Sand Creek** baz=285	70.44	28	P		P	14 28 08.7	-0.4
J26L	**Joseph Creek** comp=Z,12nm,0.8s	70.48	27	IAmb		IAmb	14 28 16.5	
J26L	**Joseph Creek** baz=285	70.48	27	P		P	14 28 09.0	-0.3
EYAK	**Cordova Ski Ar** baz=284	70.51	32	P		P	14 28 09.4	0.0
N25K	**Chitina, Valde** baz=285	70.78	30	P		P	14 28 10.9	-0.2
H27K	**Steamboat Moun** baz=286	70.84	25	P		P	14 28 11.9	+0.6
E28M	**Babbage River** baz=287	70.89	23	P		P	14 28 12.0	+0.4
BMRM	**Bremner River** baz=285	70.95	31	P		P	14 28 12.4	+0.3
D28M	**Stokes Point** baz=288	70.95	22	P		P	14 28 12.4	+0.5
L26K	**Log Cabin Wild** baz=286	70.97	29	P		P	14 28 12.4	+0.2
I27K	**Kandik River** baz=286	70.98	26	P		P	14 28 12.3	+0.1
F28M	**Old Crow** comp=Z,21nm,1.1s	71.06	24	IAmb		IAmb	14 28 14.1	
F28M	**Old Crow** baz=287,SNR=8.2	71.06	24	P		P	14 28 13.1	+0.4
GLB	**Gilahina Butte** comp=Z,22nm,0.9s	71.19	30	IAmb		IAmb	14 28 18.3	
K27K	**Chicken** baz=286	71.24	28	P		P	14 28 14.2	+0.5
M26K	**Nabesna, AK** baz=286	71.29	29	P		P	14 28 14.6	+0.4
KAIM	**Kayak Island** baz=286	71.31	32	P		P	14 28 14.3	0.0
EGAK	**Eagle** baz=287	71.40	27	P		P	14 28 14.3	-0.4
E29M	**Blow River** baz=289	71.53	23	P		P	14 28 16.1	+0.7
MCARA	**McCarthy VSAT** comp=Z,25nm,0.8s	71.57	30	IAmb		IAmb	14 28 19.6	
MCARA	**McCarthy VSAT** baz=286,SNR=5.5	71.57	30	P		P	14 28 16.7	+0.9
L27K	**Beaver Creek,** comp=Z,21nm,1.1s	71.62	28	IAmb		IAmb	14 28 19.3	
L27K	**Beaver Creek,** baz=287	71.62	28	P		P	14 28 16.8	+0.6
I28M	**Miner Creek** comp=Z,17nm,1.2s	71.69	26	IAmb		IAmb	14 28 18.0	
I28M	**Miner Creek** baz=288	71.69	26	P		P	14 28 17.3	+0.7
FINES	**FINESS Array B**	71.73	330	*i* P		P	14 28 16.6	-0.2
FINES	comp=Z,5.0nm,0.8s			pmax		pmax		
FINES	**FINESS Array B** comp=Z,5.4nm,0.8s,baz=66,slow=7.2,SNR=6.5 comp=Z,5.4nm,0.8s	71.73	330	P		P	14 28 15.9	-0.9
M27K	**Edge Creek, AK** comp=Z,14nm,1.1s	71.81	29	IAmb		IAmb	14 28 20.4	
M27K	**Edge Creek, AK** baz=287	71.81	29	P		P	14 28 18.0	+0.6
BVCY	**Beaver Creek** baz=288	72.24	29	P		P	14 28 20.5	+0.6
VSU	**Vasula**	72.29	327⇓	*e*P		P	14 28 19.7	-0.5
VSU	comp=Z,18nm,0.9s			pmax		pmax		
BARN	**Barnard Glacie** comp=Z,16nm,1.0s	72.30	30	IAmb		IAmb	14 28 28.3	
DAWY	**Dawson**	72.35	27	IAmb		IAmb	14 28 21.4	
	comp=Z,18nm,1.1s							
DAWY	**Dawson** baz=289	72.35	27	P		P	14 28 20.8	+0.3
CTG	**Chitna Glacier** baz=288	72.47	31	P		P	14 28 21.5	+0.1
CTGM	**Chitina Glacie** comp=Z,34nm,1.3s	72.47	31	IAmb		IAmb	14 28 25.2	
F30M	**Barrier River** baz=291	72.55	23	P		P	14 28 21.8	+0.3
G30M	**tAoh Zraii Nji** baz=291	72.61	24	P		P	14 28 21.6	-0.5
YUK3	**Moose Creek** baz=288	72.62	30	P		P	14 28 22.4	0.0
EPYK	**Eagle Plains** comp=Z,14nm,0.8s	72.64	24	IAmb		IAmb	14 28 22.5	
EPYK	**Eagle Plains** baz=290,SNR=5.6	72.64	24	P		P	14 28 21.8	-0.4
J29N	**Klondike Camp** comp=Z,20nm,0.7s	72.71	27	IAmb		IAmb	14 28 28.3	
J29N	**Klondike Camp** baz=290,SNR=9.2	72.71	27	P		P	14 28 23.0	+0.4
INK	**Inuvik** comp=Z,12nm,0.8s	73.08	22	IAmb		IAmb	14 28 25.1	
INK	**Inuvik** baz=293,SNR=8.3	73.08	22	P		P	14 28 24.3	-0.4
INK	**Inuvik** comp=Z,10nm,0.7s,baz=297,slow=6.7,SNR=12 comp=Z,10nm,0.7s	73.08	22	P		P	14 28 24.1	-0.5
YUK8	**Steele Glacier** baz=289	73.09	30	P		P	14 28 24.3	-1.0
I30M	**Mount Dempster** baz=291	73.18	26	P		P	14 28 24.9	-0.6
L29M	**L29M** comp=Z,13nm,0.8s	73.20	28	IAmb		IAmb	14 28 28.8	
L29M	**L29M** baz=290	73.20	28	P		P	14 28 26.2	+0.6
K29M	**Barlow Dome** baz=290	73.20	27	P		P	14 28 26.1	+0.4
AKASG	**Malin Array Be** comp=Z,0.6nm,0.3s,baz=60,slow=6.2,SNR=5.3 comp=Z,0.6nm,0.3s	73.23	318	P		P	14 28 25.1	-0.9
PINM	**Pinnacle** baz=289	73.26	31	P		P	14 28 26.3	+0.3
M29M	**Somme Creek** comp=Z,13nm,0.8s	73.29	29	IAmb		IAmb	14 28 29.8	
M29M	**Somme Creek** baz=290,SNR=7.7	73.29	29	P		P	14 28 26.7	+0.5
F31M	**Tsiigehtchic** comp=Z,22nm,0.8s	73.34	23	IAmb		IAmb	14 28 26.4	
F31M	**Tsiigehtchic** baz=293,SNR=13	73.34	23	P		P	14 28 25.6	-0.6
G31M	**Satah River** baz=292	73.35	24	P		P	14 28 25.4	-0.8
J30M	**Hart River** baz=291	73.43	26	P		P	14 28 27.1	+0.1
BRTR	**Keskin Array B**	73.60	307	P		P	14 28 28.6	+0.1
BRTR	**Keskin Array B**	73.60	307	P		P	14 28 28.6	+0.1
BRTR	**Keskin Array B** comp=Z,1.7nm,0.8s,baz=104,slow=5.2,SNR=3.5 comp=Z,1.7nm,0.8s	73.60	307	P		P	14 28 28.7	+0.2
YUK6	**Outpost Mounta** baz=290	73.85	30	P		P	14 28 29.9	+0.2
M30M	**Minto, Yukon** comp=Z,14nm,0.8s	73.96	28	IAmb		IAmb	14 28 33.0	
M30M	**Minto, Yukon** baz=291,SNR=7.7	73.96	28	P		P	14 28 30.4	+0.4
MAYO	**Mayo, Yukon** comp=Z,27nm,0.9s	73.97	27	IAmb		IAmb	14 28 39.9	
MAYO	**Mayo, Yukon** baz=292	73.97	27	P		P	14 28 30.1	+0.1
O29M	**Mount Kennedy** baz=290	73.98	31	P		P	14 28 30.4	+0.1
A36M	**Sachs Harbour** baz=299,SNR=6.4	74.02	17	P		P	14 28 29.7	-0.5
HYT	**Haines Junctio** comp=Z,22nm,1.2s	74.29	30	IAmb		IAmb	14 28 35.5	
HYT	**Haines Junctio** baz=291	74.29	30	P		P	14 28 32.4	+0.3
P29M	**Windy Craggy** baz=291	74.61	31	P		P	14 28 34.3	+0.4
P30M	**Million Dollar** baz=292	74.80	31	P		P	14 28 34.9	-0.1
N31M	**Braeburn, Yuko** comp=Z,26nm,1.1s	74.81	29	IAmb		IAmb	14 28 38.4	
N31M	**Braeburn, Yuko** baz=292,SNR=5.4	74.81	29	P		P	14 28 35.2	+0.1
O30N	**Mendenhall** baz=292	74.95	30	P		P	14 28 36.0	+0.2
M31M	**Drury Creek, Y** baz=293	75.14	28	P		P	14 28 37.0	+0.1
PLBC	**Pleasant Camp** baz=292	75.33	31	P		P	14 28 38.4	+0.5
WHY	**Whitehorse** baz=293	75.54	30	P		P	14 28 39.3	0.0
FARO	**Faro, Yukon** baz=294	75.58	28	P		P	14 28 39.8	+0.3
C36M	**Paulatuk** comp=Z,11nm,0.7s	75.68	20	IAmb		IAmb	14 28 39.6	
C36M	**Paulatuk** baz=301,SNR=8.4	75.68	20	P		P	14 28 39.1	-0.7
N32M	**Quiet Lake** baz=295	76.14	29	P		P	14 28 43.3	+0.6
P32M	**Atlin** baz=295	76.51	30	P		P	14 28 45.4	+0.6
P33M	**Teslin, Yukon** baz=295	76.66	30	P		P	14 28 45.9	+0.2
S32K	**Killisnoo** baz=294	76.98	33	P		P	14 28 47.4	0.0
Q32M	**Nakina River** baz=296	77.45	31	P		P	14 28 50.6	+0.3
HFS	**Hagfors** comp=Z,3.5nm,0.8s,baz=98,slow=11,SNR=2.2 comp=Z,3.5nm,0.8s	77.85	331	P		P	14 28 51.3	-1.0
R33M	**Jennings River** baz=297	77.86	30	P		P	14 28 53.5	+1.1
S34M	**Telegraph Cree** baz=297	78.45	31	P		P	14 28 56.3	+0.6
NB2	**NORSAR Subarra** comp=Z,1.3nm,0.7s,baz=62,slow=5.6	78.50	332	P		P	14 28 54.5	-1.3
NOA	**NORSAR Array B** comp=Z,1.6nm,0.6s,baz=71,slow=8.5,SNR=4.6 comp=Z,1.6nm,0.6s	78.50	332	P		P	14 28 54.6	-1.3
WTLY	**Watson Lake, Y** comp=Z,18nm,0.9s	78.50	29	IAmb		IAmb	14 28 58.9	
WTLY	**Watson Lake, Y** baz=298	78.50	29	P		P	14 28 56.3	+0.4
WRAK	**Wrangell Islan** baz=296	78.53	33	P		P	14 28 55.8	-0.3
DLBC	**Dease Lake** baz=298	78.73	31	P		P	14 28 57.5	+0.2
DLBC	**Dease Lake** comp=Z,6.2nm,0.8s,baz=312,slow=10.0,SNR=5.5 comp=Z,6.2nm,0.8s	78.73	31	P		P	14 28 58.0	+0.7
WRGLY	**Wrigley** comp=Z,11nm,0.7s	79.11	25	IAmb		IAmb	14 28 59.9	
WRGLY	**Wrigley** baz=302	79.11	25	P		P	14 28 58.8	-0.3
T35M	**Bob Quinn** baz=298	79.31	32	P		P	14 29 00.6	+0.2
FLDN	**Fort Liard** baz=303	80.72	27	P		P	14 29 08.1	+0.2
CLL	**Collm**	82.39	323	*e*P		P	14 29 16.0	-0.9
CLL	**Collm**	82.39	323	*e*P		P	14 29 16.0	-0.9
CLL				*ex*		x	14 29 31.0	
YKA	**Yellowknife Ar** comp=Z,4.9nm,0.7s,baz=312,slow=5.1,SNR=17 comp=Z,4.9nm,0.7s	82.82	23	P		P	14 29 18.6	-0.3
GERES	**GERESS Array B** comp=Z,1.7nm,0.9s,baz=60,slow=5.9,SNR=3.2 comp=Z,1.7nm,0.9s	83.19	321	P		P	14 29 22.8	+1.5
KMBO	**Kilima Mbogo** comp=Z,2.6nm,0.8s,baz=9.5,slow=4.7,SNR=4.2 comp=Z,2.6nm,0.8s	85.41	267	P		P	14 29 34.3	+1.0
F04A	**Amboy** comp=Z,17nm,0.9s	89.25	39	IAmb		IAmb	14 29 54.0	
EDM	**Edmonton** comp=Z,26nm,1.2s	89.40	30	IAmb		IAmb	14 29 54.0	
LTY	**Liberty** comp=Z,14nm,1.3s	89.46	37	IAmb		IAmb	14 29 55.4	
MXC	**Moxie City** comp=Z,14nm,0.8s	90.07	38	IAmb		IAmb	14 29 58.2	
H04A	**Detroit Lake** comp=Z,25nm,1.4s	90.09	40	IAmb		IAmb	14 29 59.3	
I04A	**Tendick Farm,** comp=Z,35nm,1.7s	90.47	41	IAmb		IAmb	14 30 00.5	
D08A	**Wollman Farm,** comp=Z,11nm,0.9s	90.54	37	IAmb		IAmb	14 30 00.2	
HAWA	**Hanford** comp=Z,28nm,1.5s	90.61	37	IAmb		IAmb	14 30 01.3	

NEW	**Newport** baz=309	**90.76**	**35**	P	**P**	**14 29 58.5**	**+0.5**
I05D	**Terrebonne, OR** comp=Z,28nm,1.5s	**90.79**	**40**	IAmb	IAmb	14 30 07.0	
E08A	**Dider Farm, El** comp=Z,6.5nm,0.7s	**90.81**	**37**	IAmb	IAmb	14 30 00.6	
L04D	**Klamath Falls**	**91.43**	**42**		**P**	**14 30 01.7**	**+0.3**
J05D	**Fort Rock, OR**	**91.46**	**41**		**P**	**14 30 01.8**	**+0.2**
FCC	**Fort Churchill** comp=Z,13nm,1.1s	**92.24**	**18**	IAmb	IAmb	14 30 05.5	
BMO	**Blue Mountains** comp=Z,7.8nm,0.9s	**92.78**	**38**	IAmb	IAmb	14 30 09.5	
FFC	**Flin Flon**	**92.97**	**24**		**P**	**14 30 07.1**	**-1.0**
FFC	comp=Z,14nm,1.1s			IAmb	IAmb	14 30 09.4	
FFC	**Flin Flon**	**92.97**	**24**	P	**P**	**14 30 07.1**	**-1.0**
FFC	comp=Z,14nm,1.1s			pmax	pmax		
ORV	**Oroville**	**93.45**	**44**		**P**	**14 30 10.6**	**-0.1**
ORV	**Oroville**	**93.45**	**44**	P	**P**	**14 30 10.6**	**-0.1**
ORV	comp=Z,4.0nm,0.9s			pmax	pmax		
MFID	**Camas Ranch** comp=Z,7.5nm,1.1s	**94.51**	**38**	IAmb	IAmb	14 30 17.9	
EGMT	**Eagleton** baz=314	**94.62**	**32**	P	**P**	**14 30 16.2**	**+0.3**
EMB	**Emerald Bay** comp=Z,7.0nm,0.7s	**94.67**	**44**	IAmb	IAmb	14 30 23.8	
HLID	**Hailey** baz=310	**95.21**	**37**	P	**P**	**14 30 19.6**	**+0.7**
BOZ	**Bozeman (W)** baz=313	**95.35**	**34**	P	**P**	**14 30 18.6**	**-0.9**
WAKR	**Walker** comp=Z,8.6nm,1.3s	**95.37**	**44**	IAmb	IAmb	14 30 22.0	
BMN	**Battle Mountai** comp=Z,8.9nm,1.4s	**95.57**	**41**	IAmb	IAmb	14 30 23.6	
LHV	**Little Huntoon** comp=Z,11nm,1.4s	**96.11**	**43**	IAmb	IAmb	14 30 27.1	
NVAR	**Mina Array Bea** comp=Z,1.6nm,0.9s,baz=286,slow=4.9,SNR=5.1 comp=Z,1.6nm,0.9s	**96.13**	**43**	P	**P**	**14 30 23.6**	**+0.4**
DGMT	**Dagmar** baz=319	**96.86**	**29**	P	**P**	**14 30 26.2**	**+0.1**
CWC	**Cottonwood Cre** baz=307	**97.47**	**45**	P	**P**	**14 30 29.0**	**-0.3**
R11B	**Troy Canyon, C** baz=309	**97.86**	**42**	P	**P**	**14 30 30.5**	**-0.5**
SCZ2	**Santa Cruz Isl** baz=306	**97.90**	**47**	P	**P**	**14 30 30.8**	**-0.3**
PDAR	**Pinedale Array** comp=Z,0.8nm,0.9s,baz=311,slow=2.9,SNR=3.5 comp=Z,0.8nm,0.9s	**98.38**	**36**	P	Pdif	14 30 33.5	+0.2
SNCC	**San Nicolas Is** baz=306	**98.41**	**48**	P	**P**	**14 30 33.3**	**0.0**
EDW2	**Edwards Air Fo** baz=307	**98.47**	**46**	P	**P**	**14 30 33.6**	**0.0**
RSSD	**Black Hills** baz=318	**100.19**	**32**	P	**Pdif**	**14 30 40.8**	**-0.5**
N23A	**Red Feather La** baz=316	**101.61**	**35**	P	**Pdif**	**14 30 46.5**	**-1.3**
EYMN	**Ely** baz=329	**102.29**	**22**	P	**Pdif**	**14 30 48.9**	**-1.4**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.6s,baz=8.9,slow=2.3,SNR=2.4	**110.70**	**296**	PKiKP	**PKiKP**	**14 35 27.1**	**-1.5**
BAUV	**El Baul**	**145.76**	**17**	PKPdf	**PKPdf**	**14 36 33.2**	**-1.2**
ROSC	**El Rosal** comp=Z,8.5nm,0.3s,baz=309,slow=18,SNR=1.5	**147.23**	**31**	PKPbc	**PKPdf**	**14 36 38.2**	**+0.8**
MCRA	**Macar, Loja**	**151.32**	**50**		**PKPbc**	**14 36 48.5**	**-1.1**
CZSB	**Cruzeiro do Su**	**158.62**	**43**	PKPab	**PKPab**	**14 37 27.9**	**-0.6**
ETMB	**Extrema**	**163.87**	**29**	PKPab	**PKPab**	**14 37 49.0**	**-2.2**
SAML	**Samuel**	**164.18**	**18**	PKPab	**PKPab**	**14 37 49.6**	**-3.0**
SAML	**Samuel**	**164.18**	**18**	PKP2	**PKPab**	**14 37 49.6**	**-3.0**

TEH 04 14:20:59.4, 33.67N×45.71E, h11$^{km}_{\pm 22}$, ML3.5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.42**	**96**	Pg	Pg	14 21 08.0	+0.3
ILBA				Sg	Sg	14 21 14.2	+0.9
KGS1	**Ghasr-e-Shirin**	**0.84**	**353**	Pg	Pb	14 21 15.9	-0.2
IGHG	**Ghaleghazi**	**0.97**	**47**	Pg	Pg	14 21 18.3	+0.1
IDHR	**Dehrash**	**1.17**	**29**	Pg	Pb	14 21 21.8	-0.1
KCHF	**Cheshme Sefid,**	**1.26**	**61**	Pg	Pg	14 21 24.0	+0.3
KCHF				Sg	Sn	14 21 42.5	+2.1
ILIN	**Lien**	**1.62**	**40**	Pg	Pg	14 21 30.3	-0.3
IKFM	**Kafar-mosalman**	**1.79**	**94**	Pg	Pb	14 21 32.8	+0.5
IBZA	**Bozab**	**1.96**	**65**	Pn	Pb	14 21 35.0	-0.3
IDOB	**Doab**	**2.06**	**86**	Pn	Pb	14 21 36.3	-0.7
IALM	**Almabolaq**	**2.36**	**59**	Pn	Pb	14 21 40.9	-1.3
HSAM	**Samen**	**2.47**	**77**	Pn	Pn	14 21 41.5	+1.7
HAGD	**Aghdareh**	**3.07**	**67**	Pn	Pn	14 21 50.2	+2.1
IKLH	**Kolahrood**	**4.92**	**92**	Pn	Pn	14 22 16.2	+2.6
KRSH	**Karshahi**	**5.36**	**85**	Pn	Pn	14 22 22.3	+2.7

BER 04 14:22:08.0±1.2, 82.76N×3.90W, h10^{km}, mb(Pn)3.6, Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.58**	**139**	*e*P	Pn	14 23 14.6	-2.6
KBS				IAML		14 23 15.5	
	comp=Z,7.1nm,0.4s						
KBS				*e*S	Sn	14 24 05.2	-5.1
BRBB	**Barentsburg B**	**5.53**	**138**	*e*P	Pn	14 23 29.0	-1.2
SPA0	**Spitsbergen Ar**	**5.65**	**133**	*e*P	Pn	14 23 29.5	-2.3

*IDC **04** 14:22:32.6±1.0, 24.09N×121.82E, h0^{km}, mb3.6/10, mbtmp3.6/10, Error ellipse: s-maj=36.9km s-min=20.6km az=69.0*
*TAP **04** 14:22:35.3, 24.16N×121.70E, h2^{km}, ML4.0, B*
*JMA **04** 14:22:36.0±0.2, 24.1N±0.5×121.7E±0.6, h0^{km}, MV3.6/11, TAIWAN REGION*
ISC 04 14:22:35.1±0.8, 24.13N±0.01×121.80E±0.02, h9$^{km}_{\pm 5}$, n161, σ1^{s}23/304, mb3.6/10, 5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=267	**0.16**	**279**	⇓P	**Pg**	**14 22 38.1**	**-0.6**
ETL				S	**Sg**	**14 22 39.8**	**-1.3**
EHP	**Heping Village** baz=17	**0.18**	**343**	⇓P	**Pg**	**14 22 39.7**	**+0.7**
EHP				S	**Sg**	**14 22 42.9**	**+1.3**
NACB	**Ninganchiao** baz=277	**0.19**	**283**	⇓P	**Pg**	**14 22 38.4**	**-0.7**
NACB				S	**Sg**	**14 22 40.4**	**-1.4**
TWD	**Chiawan** baz=227	**0.19**	**254**	⇓*i*P	**Pg**	**14 22 38.4**	**-0.7**
TWD				*i* S	**Sg**	**14 22 40.4**	**-1.5**
EAHA	**Aohua** baz=12	**0.20**	**345**	⇓P	**Pg**	**14 22 39.9**	**+0.6**
EAHA				S	**Sg**	**14 22 43.1**	**+0.8**
HWA	**Hwalien** baz=202	**0.23**	**229**	*i* P	**Pg**	**14 22 40.6**	**+0.7**
HWA				*e*S	**Sb**	**14 22 45.5**	**+2.4**
ENA	**Nanau** baz=9.0	**0.30**	**350**	*i* P	**Pb**	**14 22 41.7**	**-0.9**
ENA				*i* S	**Sg**	**14 22 46.0**	**+0.9**
ETLH	**Xiulin Townshi** baz=282	**0.30**	**284**	P	**Pg**	**14 22 40.5**	**-0.6**
ETLH				S	**Sg**	**14 22 43.9**	**-1.3**
EWUT	**Wuta** baz=14	**0.31**	**357**	P	**Pb**	**14 22 42.2**	**-0.6**
EWUT				S	**Sg**	**14 22 46.3**	**+0.8**
ETM	**Tongmen** baz=224	**0.33**	**239**	P	**Pg**	**14 22 41.0**	**-0.6**
ETM				S	**Sg**	**14 22 45.3**	**-0.6**
LXIB	**Xiulin Townshi** baz=241	**0.37**	**253**	*e*P	**Pg**	**14 22 41.9**	**-0.5**
LXIB				S	**Sg**	**14 22 46.5**	**-0.9**
SHUL	**Shoufeng** baz=198	**0.41**	**212**	P	**Pb**	**14 22 44.5**	**+0.1**
SHUL				S	**Sb**	**14 22 52.1**	**+1.4**
ESAO	**Su ao** baz=17	**0.44**	**5**	P	**Pb**	**14 22 45.3**	**+0.2**
ESAO				S	**Sb**	**14 22 51.8**	**0.0**
ESL	**Shilin** baz=214	**0.46**	**227**	*e*P	**Pg**	**14 22 44.3**	**+0.2**
ESL				S	**Sg**	**14 22 51.1**	**+0.9**
LATG	**Datong** baz=337	**0.47**	**328**	*e*P	**Pg**	**14 22 44.9**	**+0.5**
LATG				*e*S	**Sg**	**14 22 51.0**	**+0.4**
TWC	**Suao** baz=18	**0.48**	**6**	*e*S	**Sb**	**14 22 52.8**	**0.0**
NNSB	**Datong** baz=312	**0.48**	**308**	P	**Pg**	**14 22 44.4**	**-0.1**
NNSB				S	**Sg**	**14 22 50.3**	**-0.5**
NNSH	**Datong** baz=312	**0.48**	**308**	P	**Pg**	**14 22 44.4**	**-0.1**
NNSH				S	**Sg**	**14 22 50.3**	**-0.6**
TEGC	**Jichi Village** baz=197	**0.48**	**209**	*e*P	**Pb**	**14 22 45.7**	**0.0**
TEGC				*e*S	**Sb**	**14 22 55.1**	**+2.1**
EOS2	**EOS2** baz=62	**0.49**	**54**	*e*P	**Pn**	**14 22 49.4**	**+1.2**
WHF	**Hehuan Shan** baz=267	**0.49**	**272**	P	**Pg**	**14 22 44.3**	**-0.4**
WHF				S	**Sg**	**14 22 50.1**	**-1.1**
NNS	**Nan Shan** baz=313	**0.49**	**308**	P	**Pg**	**14 22 44.7**	**-0.1**
NNS				S	**Sg**	**14 22 50.6**	**-0.7**
NDS	**Dongshan** baz=1.0	**0.51**	**351**	*e*P	**Pb**	**14 22 46.1**	**-0.1**
NDS				*e*S	**Sg**	**14 22 51.8**	**+0.2**
FUSS	**Fushou** baz=281	**0.52**	**283**	*e*P	**Pg**	**14 22 45.2**	**-0.1**
FUSS				*i* S	**Sg**	**14 22 51.2**	**-0.9**
NDT	**Datong Townshi** baz=338	**0.54**	**331**	*e*P	**Pg**	**14 22 46.1**	**+0.6**
NDT				*i* S	**Sg**	**14 22 53.5**	**+0.9**
ENTT	**Nioudou** baz=346	**0.55**	**337**	*e*P	**Pb**	**14 22 46.5**	**-0.4**
ENTT				*i* S	**Sg**	**14 22 53.9**	**+0.9**
WARBT	**Fenglin Townsh** baz=212	**0.56**	**223**	*e*P	**Pb**	**14 22 46.9**	**-0.2**
WARBT				*e*S	**Sg**	**14 22 55.0**	**+1.7**
EGFH	**Guangfu** baz=206	**0.57**	**216**	*e*P	**Pg**	**14 22 46.7**	**+0.5**
EGFH				*i* S	**Sb**	**14 22 55.6**	**+0.1**
CHGB	**Renai** baz=258	**0.57**	**263**	*e*S	**Sg**	**14 22 54.5**	**+0.6**
TWT	**Tachien** baz=280	**0.58**	**282**	*e*P	**Pg**	**14 22 46.6**	**+0.2**
TWT				S	**Sg**	**14 22 53.6**	**-0.5**
OWD	**Renai** baz=246	**0.60**	**253**	*e*P	**Pg**	**14 22 47.6**	**+0.9**
OWD				*i* S	**Sg**	**14 22 56.0**	**+1.5**
TDCB	**Techi** baz=280	**0.60**	**282**	*e*P	**Pg**	**14 22 47.1**	**+0.4**
TDCB				S	**Sg**	**14 22 53.7**	**-0.9**
TWE	**Neicheng** baz=358	**0.60**	**348**	*e*P	**Pb**	**14 22 47.7**	**0.0**
TWE				*e*S	**Sb**	**14 22 55.7**	**-0.5**
ILA	**Ilan** baz=4.0	**0.63**	**356**	P	**Pg**	**14 22 46.3**	**-1.1**
ILA				S	**Sb**	**14 22 58.1**	**+0.9**
WUSB	**Renai** baz=252	**0.64**	**257**	P	**Pg**	**14 22 48.1**	**+0.6**
WUSB				S	**Sg**	**14 22 55.8**	**-0.1**
FUSB	**Fushanzhiwuyua** baz=350	**0.65**	**343**	*e*P	**Pb**	**14 22 49.1**	**+0.4**
FUSB				*e*S	**Sb**	**14 22 57.8**	**-0.2**
YHNB	**Yeheng** baz=329	**0.66**	**324**	P	**Pb**	**14 22 48.9**	**+0.1**
YHNB				S	**Sb**	**14 22 58.2**	**0.0**
NSK	**Sanguang** baz=329	**0.67**	**324**	*e*P	**Pb**	**14 22 48.9**	**-0.1**
NSK				*e*S	**Sg**	**14 22 57.1**	**+0.1**
VWDT	**VWDT** baz=231	**0.71**	**238**	P	**Pg**	**14 22 47.6**	**-1.2**
VWDT				S	**Sg**	**14 22 59.4**	**+1.3**
HGSD	**Ruisui** baz=200	**0.72**	**208**	P	**Pb**	**14 22 50.6**	**+0.8**
HGSD				*e*S	**Sn**	**14 23 03.6**	**+0.9**
EHY	**Hungye** baz=207	**0.76**	**215**	*i* P	**Pg**	**14 22 49.3**	**-0.5**
EHY				*e*S	**Sb**	**14 23 02.4**	**+1.4**
WHP	**Taichung City** baz=279	**0.79**	**281**	P	**Pg**	**14 22 50.4**	**0.0**
WHP				S	**Sg**	**14 23 00.7**	**-0.1**
NFF	**Wufeng Townshi** baz=311	**0.80**	**309**	*e*P	**Pg**	**14 22 50.8**	**+0.3**
NFF				*e*S	**Sg**	**14 23 01.8**	**+0.9**
WCS	**Beigang Elemen** baz=261	**0.81**	**265**	P	**Pg**	**14 22 50.8**	**0.0**
WCS				S	**Sg**	**14 23 02.4**	**+1.0**
TIPB	**Shuangxi** baz=8.0	**0.84**	**2**	P	**Pb**	**14 22 52.1**	**+0.3**
TIPB				*e*S	**Sn**	**14 23 06.3**	**+0.8**
SSLB	**Suanglung** baz=241	**0.84**	**246**	P	**Pg**	**14 22 50.6**	**-0.8**
SSLB				*e*S	**Sg**	**14 23 03.3**	**+0.9**
SMLT	**Sun Moon Lake** baz=248	**0.86**	**253**	*i* P	**Pg**	**14 22 51.4**	**-0.3**
SMLT				*e*S	**Sg**	**14 23 02.5**	**-0.3**
NHDH	**Xindian Distri** baz=348	**0.86**	**343**	P	**Pb**	**14 22 52.2**	**0.0**
NHDH				S	**Sb**	**14 23 04.6**	**+0.7**
YULB	**Yu-li** baz=205	**0.87**	**212**	P	**Pg**	**14 22 52.0**	**+0.1**
YULB				S	**Sb**	**14 23 06.0**	**+1.9**
ECBN	**Changbin** baz=195	**0.87**	**201**	P	**Pg**	**14 22 52.0**	**+0.1**
ECBN				S	**Sn**	**14 23 06.8**	**+0.5**
LIOB	**Emei** baz=307	**0.88**	**306**	P	**Pg**	**14 22 52.3**	**+0.3**
LIOB				S	**Sg**	**14 23 04.2**	**+0.7**
NSTT	**Nanjuang** baz=306	**0.88**	**304**	*i* P	**Pg**	**14 22 51.8**	**-0.3**
NSTT				S	**Sg**	**14 23 04.1**	**+0.5**
TWB1	**Santiao Chiao** baz=17	**0.89**	**11**	*i* P	**Pn**	**14 22 53.8**	**+0.1**
TWB1				S	**Sn**	**14 23 05.9**	**-0.8**
TYC	**Yuchr** baz=251	**0.89**	**255**	*i* P	**Pg**	**14 22 51.8**	**-0.5**
TYC				*i* S	**Sg**	**14 23 03.8**	**0.0**
EYUL	**Yuli** baz=203	**0.90**	**209**	P	**Pb**	**14 22 53.5**	**+0.6**
EYUL				S	**Sn**	**14 23 07.1**	**+0.2**
TWF1	**Yuli** baz=204	**0.90**	**211**	P	**Pg**	**14 22 52.6**	**+0.1**
TWF1				S	**Sb**	**14 23 06.0**	**+1.0**
NWF	**Wu-fen Shan** baz=4.0	**0.94**	**359**	*i* P	**Pn**	**14 22 55.0**	**+0.6**
NWF				*i* S	**Sb**	**14 23 06.9**	**+0.9**
WFSB	**Wu-fen Shan** baz=4.0	**0.94**	**359**	P	**Pn**	**14 22 55.4**	**+1.0**
WFSB				S	**Sb**	**14 23 06.9**	**+1.0**
TAP	**Taipei** baz=349	**0.94**	**344**	P	**Pn**	**14 22 54.5**	**+0.1**
TAP				*i* S	**Sb**	**14 23 06.9**	**+0.8**
SXI1	**Grass Mountain** baz=9.0	**0.96**	**4**	P	**Pn**	**14 22 54.5**	**-0.3**
SXI1				S	**Sn**	**14 23 10.4**	**+1.8**
TWQ1	**Liyutan** baz=282	**0.96**	**283**	*i* P	**Pb**	**14 22 54.9**	**+1.0**
TWQ1				*i* S	**Sg**	**14 23 07.0**	**+0.9**
WHYT	**Xinyi Township** baz=239	**0.97**	**244**	P	**Pg**	**14 22 54.0**	**+0.3**
WHYT				S	**Sg**	**14 23 07.9**	**+1.5**
NSY	**Sanyi** baz=286	**0.99**	**287**	*i* P	**Pb**	**14 22 55.1**	**+0.7**
NSY				S	**Sb**	**14 23 09.5**	**+2.0**
SBCB	**Hsinchu** baz=313	**0.99**	**312**	P	**Pn**	**14 22 55.7**	**+0.6**
SBCB				S	**Sn**	**14 23 11.5**	**+2.2**
NCUH	**Zhongli** baz=329	**1.00**	**326**	P	**Pn**	**14 22 55.8**	**+0.5**
NCUH				S	**Sn**	**14 23 11.5**	**+2.0**
NMLH	**Miaoli** baz=294	**1.00**	**294**	P	**Pn**	**14 22 56.0**	**+0.7**
NMLH				S	**Sg**	**14 23 08.8**	**+1.3**
CHKH	**Chenggong** baz=196	**1.01**	**202**	P	**Pg**	**14 22 54.0**	**-0.5**
CHKH				S	**Sn**	**14 23 10.3**	**+0.7**
HSN	**Hsinchu** baz=316	**1.01**	**312**	*i* P	**Pb**	**14 22 55.5**	**+0.7**
HSN				*i* S	**Sn**	**14 23 11.8**	**+2.2**
TNOU	**National Taiwa** baz=3.0	**1.01**	**359**	P	**Pn**	**14 22 56.1**	**+0.7**
TNOU				*e*S	**Sb**	**14 23 08.8**	**+0.6**
TWS1	**Kuangyinshan** baz=344	**1.02**	**340**	*i* P	**Pn**	**14 22 56.4**	**+0.8**
TWS1				*i* S	**Sb**	**14 23 10.2**	**+1.7**
WJS	**Zhushan** baz=249	**1.03**	**253**	P	**Pg**	**14 22 55.3**	**+0.5**
WJS				S	**Sg**	**14 23 09.5**	**+1.3**
YM01	**YM01** baz=353	**1.03**	**348**	P	**Pn**	**14 22 56.3**	**+0.5**
YM01				S	**Sn**	**14 23 10.8**	**+0.4**
FULB	**Fuli** baz=201	**1.04**	**207**	P	**Pg**	**14 22 55.1**	**0.0**
FULB				S	**Sn**	**14 23 12.6**	**+2.1**
WNT	**Mingjian** baz=252	**1.05**	**256**	*i* P	**Pg**	**14 22 55.7**	**+0.4**
WNT				*i* S	**Sg**	**14 23 10.3**	**+1.3**
NTST	**Danshui** baz=347	**1.07**	**343**	P	**Pn**	**14 22 57.3**	**+1.0**
NTST				S	**Sn**	**14 23 13.2**	**+1.9**
WDJ	**Dajia District** baz=280	**1.08**	**282**	P	**Pn**	**14 22 57.0**	**+0.7**
WDJ				S	**Sn**	**14 23 13.3**	**+1.9**
ANP	**Anpu** baz=351	**1.08**	**346**	*i* P	**Pn**	**14 22 57.0**	**+0.5**
ANP				S	**Sn**	**14 23 15.2**	**+3.6**
ALS	**Alishan** baz=231	**1.10**	**236**	*i* P	**Pg**	**14 22 56.1**	**-0.2**
ALS				S	**Sg**	**14 23 11.0**	**+0.4**
CHKT	**Chengkung** baz=195	**1.10**	**201**	*i* P	**Pg**	**14 22 54.9**	**-1.4**
CHKT				*i* S	**Sb**	**14 23 11.9**	**+1.2**
EHD	**Haiduan** baz=204	**1.12**	**209**	P	**Pb**	**14 22 56.7**	**+0.1**
EHD				S	**Sb**	**14 23 12.6**	**+1.3**
WCHH	**Zhanghua** baz=265	**1.13**	**268**	P	**Pb**	**14 22 57.5**	**+0.6**
WCHH				S	**Sn**	**14 23 16.5**	**+3.7**
TWY	**Chenhua** baz=355	**1.15**	**351**	*i* P	**Pn**	**14 22 58.9**	**+1.5**
TWY				*e*S	**Sn**	**14 23 17.1**	**+3.9**
YOJ	**Yonaguni jima** baz=75	**1.15**	**73**	*e*P	**Pn**	**14 23 00.3**	**+2.9**
YOJ				*e*S	**Sn**	**14 23 18.1**	**+4.8**
YOJ	**Yonaguni jima**	**1.15**	**73**	P	**Pn**	**14 23 00.7**	**+3.3**
YOJ				S	**Sn**	**14 23 16.4**	**+3.1**
CHN5	**Tsauling** baz=238	**1.16**	**243**	*i* P	**Pg**	**14 22 57.6**	**+0.2**
CHN5				*i* S	**Sg**	**14 23 13.6**	**+1.2**
ELDTW	**Lidau** baz=212	**1.18**	**218**	*i* P	**Pg**	**14 22 56.8**	**-1.0**
ELDTW				S	**Sb**	**14 23 14.3**	**+1.1**
WGK	**Gukeng** baz=245	**1.22**	**249**	*i* P	**Pg**	**14 22 58.5**	**+0.1**
WGK				*e*S	**Sb**	**14 23 15.6**	**+1.5**
WDLH	**Douliu** baz=246	**1.23**	**249**	P	**Pb**	**14 22 59.3**	**+0.8**
WDLH				S	**Sg**	**14 23 15.9**	**+1.0**
EDH	**Donghe** baz=197	**1.24**	**202**	P	**Pg**	**14 22 56.3**	**-2.7**
EDH				S	**Sb**	**14 23 15.4**	**+0.7**
WCKO	**Fanlu** baz=234	**1.29**	**238**	P	**Pn**	**14 23 00.0**	**+0.7**
WCKO				S	**Sb**	**14 23 18.1**	**+1.8**
WRL	**Guolierlin Hig** baz=257	**1.32**	**260**	P	**Pn**	**14 23 00.3**	**+0.6**
WRL				S	**Sg**	**14 23 18.1**	**+0.5**
STYH	**Taoyuan** baz=220	**1.34**	**225**	P	**Pn**	**14 22 60.0**	**0.0**
STYH				S	**Sg**	**14 23 17.5**	**-0.8**
CHN4	**Tsaushan** baz=231	**1.35**	**235**	*i* P	**Pn**	**14 23 00.7**	**+0.6**
CHN4				*i* S	**Sg**	**14 23 19.2**	**+0.6**
TPUB	**Ta-pu** baz=228	**1.35**	**233**	P	**Pn**	**14 23 00.9**	**+0.7**
TPUB				S	**Sb**	**14 23 19.6**	**+1.5**
WTK	**Tuku** baz=248	**1.36**	**251**	P	**Pn**	**14 23 01.2**	**+0.9**
WTK				S	**Sg**	**14 23 19.4**	**+0.4**
LONT	**Longtian** baz=202	**1.37**	**207**	P	**Pn**	**14 22 58.7**	**-1.6**
LONT				*e*S	**Sn**	**14 23 22.9**	**+4.3**
WTP	**Ta-pu** baz=227	**1.40**	**231**	*i* P	**Pb**	**14 23 01.9**	**+0.5**
WTP				*i* S	**Sg**	**14 23 20.1**	**0.0**
CHY	**Chiayi** baz=240	**1.41**	**244**	*e*P	**Pg**	**14 23 02.6**	**+0.5**

CHY				S		Sb	14 23 20.9	+1.3			
	baz=240										
TWG	**Pinlang**	**1.47**	**207**	*i* P		Pn	14 23 01.6	-0.1			
	baz=203										
TWG				*e*S		Sg	14 23 24.5	+2.2			
	baz=203										
TWGBT	**Beinan**	**1.47**	**207**	*e*P		Pn	14 23 00.5	-1.2			
	baz=203										
TWGBT				*e*S		Sg	14 23 24.5	+2.2			
	baz=203										
TWK	**Hsinying**	**1.48**	**235**	*i* P		Pn	14 23 02.9	+0.9			
	baz=230										
TWK				*i* S		Sg	14 23 24.2	+1.6			
	baz=230										
LDUT	**Ludao**	**1.48**	**192**	*e*P		Pg	14 23 03.3	-0.3			
	baz=188										
LDUT				*e*S		Sn	14 23 20.4	-1.0			
	baz=188										
TTN	**Taitung**	**1.50**	**204**	*e*P		Pb	14 23 03.1	0.0			
	baz=199										
TTN				*e*S		Sg	14 23 24.8	+1.5			
	baz=199										
CHN1	**Nanshi**	**1.50**	**231**	*i* P		Pb	14 23 03.7	+0.6			
	baz=227										
CHN1				*i* S		Sg	14 23 23.9	+0.5			
	baz=227										
SNST	**Tainan City**	**1.50**	**233**	P		Pb	14 23 03.3	+0.2			
	baz=229										
SNST				S		Sn	14 23 23.6	+1.8			
	baz=229										
WSF	**Szhu**	**1.52**	**251**	P		Pn	14 23 03.4	+0.9			
	baz=248										
WSF				S		Sn	14 23 23.8	+1.4			
	baz=248										
SGST	**Jiashian**	**1.53**	**227**	*i* P		Pn	14 23 02.7	+0.1			
	baz=223										
SGST				*i* S		Sg	14 23 24.8	+0.5			
	baz=223										
SLGT	**Liugui**	**1.55**	**223**	P		Pb	14 23 04.2	+0.3			
	baz=219										
SLGT				S		Sg	14 23 25.5	+0.5			
	baz=219										
WSL	**Shuilin Townsh**	**1.56**	**247**	P		Pb	14 23 04.4	+0.3			
	baz=244										
WSL				S		Sn	14 23 25.3	+2.0			
	baz=244										
ICHU	**Yijhu**	**1.59**	**241**	P		Pn	14 23 04.6	+1.2			
	baz=238										
ICHU				S		Sn	14 23 25.9	+1.9			
	baz=238										
CHN8	**Yiju**	**1.65**	**242**	*i* P		Pn	14 23 05.0	+0.8			
	baz=239										
CHN8				*i* S		Sn	14 23 27.4	+1.8			
	baz=239										
CHN3	**Shinhua**	**1.68**	**232**	*e*P		Pb	14 23 07.1	+0.9			
	baz=228										
CHN3				S		Sn	14 23 28.5	+2.2			
	baz=228										
ECL	**Taimali**	**1.71**	**207**	P		Pb	14 23 06.6	-0.1			
	baz=203										
ECL				*e*S		Sn	14 23 28.3	+1.2			
	baz=203										
SCST	**Cishan**	**1.73**	**224**	P		Pb	14 23 07.4	+0.4			
	baz=221										
SCST				S		Sb	14 23 30.6	+1.9			
	baz=221										
SHHT	**Tainan City**	**1.73**	**231**	P		Pb	14 23 07.3	+0.3			
	baz=227										
SHHT				*e*S		Sg	14 23 30.9	+0.2			
	baz=227										
SCLT	**Jiali**	**1.75**	**237**	P		Pn	14 23 05.0	-0.6			
	baz=234										
SCLT				*i* S		Sn	14 23 30.1	+2.1			
	baz=234										
TSMG	**Majia**	**1.77**	**217**	P		Pn	14 23 06.7	+0.8			
	baz=213										
TSMG				S		Sb	14 23 31.4	+1.3			
	baz=213										
IRIF	**Iriomote-Funau**	**1.77**	**83**	*e*P		Pg	14 23 08.9	-0.3			
TWM1	**Shoushan**	**1.81**	**224**	*i* P		Pb	14 23 08.7	+0.2			
	baz=221										
TWM1				*e*S		Sb	14 23 32.6	+1.3			
	baz=221										
SGLT	**Jiouru**	**1.84**	**221**	*i* P		Pb	14 23 09.6	+0.6			
	baz=217										
SGLT				S		Sg	14 23 38.1	+3.6			
	baz=217										
TSCK	**Chigu Township**	**1.85**	**238**	P		Pn	14 23 07.7	+0.7			
	baz=235										
TSCK				S		Sn	14 23 32.1	+1.7			
	baz=235										
MASBT	**Mashibuluo**	**1.85**	**216**	P		Pn	14 23 08.3	+1.3			
	baz=212										
MASBT				S		Sb	14 23 33.3	+0.8			
	baz=212										
SNJT	**Kaohsiung City**	**1.92**	**225**	P		Pg	14 23 11.5	-0.5			
	baz=221										
SNJT				*e*S		Sb	14 23 35.1	+0.8			
	baz=221										
EAST	**Anshuo**	**1.95**	**207**	*i* P		Pn	14 23 08.8	+0.5			
	baz=203										
EAST				*e*S		Sn	14 23 35.0	+2.0			
	baz=203										
TAW	**Tawu**	**1.95**	**205**	*e*P		Pn	14 23 08.3	-0.1			
	baz=202										
TAW				*e*S		Sn	14 23 34.2	+1.3			
	baz=202										
TAWH	**Dawu Township**	**1.97**	**205**	P		Pb	14 23 10.4	-0.7			
	baz=202										
TAWH				S		Sb	14 23 36.7	+0.9			
	baz=202										
SCZT	**Fangliau**	**2.06**	**212**	*i* P		Pn	14 23 11.0	+1.1			
	baz=208										
SCZT				S		Sb	14 23 39.1	+0.8			
	baz=208										
SLIU	**Shizi**	**2.12**	**206**	P		Pb	14 23 12.9	-0.8			
	baz=203										
SLIU				S		Sb	14 23 40.2	+0.1			
	baz=203										
LYUB	**Lan-yu**	**2.13**	**185**	P		Pn	14 23 07.9	-2.9			
	baz=182										
LYUB				*e*S		Sn	14 23 33.5	-3.9			
	baz=182										
PHUB	**P'eng-hu**	**2.13**	**254**	P		Pn	14 23 11.2	+0.4			
	baz=251										
PHUB				S		Sn	14 23 38.2	+0.8			
	baz=251										
PNG	**Penghu**	**2.13**	**255**	*i* P		Pn	14 23 11.1	+0.3			
	baz=253										
PNG				*i* S		Sn	14 23 38.5	+1.1			
	baz=253										
WDGT	**Dungji**	**2.14**	**247**	*i* P		Pn	14 23 11.3	+0.3			
	baz=244										
WDGT				*i* S		Sn	14 23 39.6	+1.9			
	baz=244										
JIJ	**Ishigaki jima**	**2.15**	**83**	P		Pb	14 23 12.2	-2.0			
VWUC	**VWUC**	**2.30**	**292**	*e*P		Pn	14 23 12.6	-0.7			
	baz=291										
VWUC				S		Sn	14 23 41.4	-0.3			
	baz=291										
HEN	**Hengchun**	**2.33**	**205**	*i* P		Pb	14 23 16.4	-0.9			
	baz=202										
HEN				S		Sb	14 23 45.9	-0.3			
	baz=202										
JISG	**Ishigakijimahi**	**2.33**	**78**	P		Pb	14 23 15.1	-2.2			
VCHM	**Qimei**	**2.36**	**248**	P		Pn	14 23 14.2	+0.3			
	baz=245										
VCHM				S		Sn	14 23 43.8	+0.8			
	baz=245										
TWK1	**Hengchun**	**2.36**	**203**	*e*P		Pn	14 23 15.5	+1.5			
	baz=200										
TWK1				*e*S		Sn	14 23 45.6	+2.5			
	baz=200										
TWKBT	**Hengchun**	**2.36**	**203**	P		Pn	14 23 15.6	+1.6			
	baz=200										
TWKBT				*e*S		Sb	14 23 46.4	-0.7			
	baz=200										
PTMZ	**Houxiangcun**	**2.60**	**291**	*e*P		Pn	14 23 16.6	-0.7			
	baz=290										
PTMZ				*e*S		Sn	14 23 47.6	-1.4			
	baz=290										
MATB	**Ma-tsu**	**2.62**	**321**	*e*P		Pn	14 23 16.6	-1.0			
	baz=320										
MATB				*e*S		Sn	14 23 50.6	+1.2			
	baz=320										
LYJJ	**Jianjiangzhen**	**3.03**	**323**	P		Pn	14 23 22.2	-1.0			
	baz=323										
LYJJ				*e*S		Sg	14 24 13.5	+0.9			
	baz=323										
KNM	**Kinmen**	**3.08**	**276**	*i* P		Pn	14 23 25.1	+1.2			
	baz=274										
KNM				*e*S		Sb	14 24 07.1	-0.7			
	baz=274										
KNMB	**Chin-men Tao**	**3.13**	**277**	P		Pn	14 23 23.8	-0.7			
	baz=275										
XPSS	**Dashiqiu**	**3.14**	**333**	*e*P		Pn	14 23 25.1	+0.4			
	baz=333										
XPSS				*e*S		Sg	14 24 18.5	+2.4			
	baz=333										
MHZQ	**Yeshan**	**3.18**	**309**	P		Pn	14 23 23.4	-1.9			
	baz=308										
MHZQ				*e*S		Sg	14 24 17.9	+0.5			
	baz=308										
AXDP	**Jialang**	**3.57**	**283**	*e*P		Pn	14 23 30.1	-0.5			
	baz=282										
AXDP				*e*S		Sn	14 24 12.3	-0.6			
	baz=282										
ZPLA	**Ao Xicun**	**3.71**	**268**	*e*P		Pn	14 23 32.5	0.0			
	baz=266										
ZPLA				*e*S		Sn	14 24 14.9	-1.4			
	baz=266										
DSXP	**Dongshan**	**4.02**	**265**	P		Pn	14 23 36.5	-0.4			
	baz=263										
DSXP				*e*S		Sn	14 24 22.8	-1.4			
	baz=263										
SXFK	**Yanhouchang**	**4.38**	**302**	*e*P		Pn	14 23 41.9	0.0			
	baz=301										
SXFK				*e*S		Sn	14 24 32.3	-0.8			
	baz=301										
KSRS	**Korea Array**	**14.28**	**20**	Pn		P	14 26 06.2	+1.5			
	0.4nm,0.3s,baz=201,slow=12,SNR=9.6										
KLR	**Kul'dur**	**26.24**	**15**	P		P	14 28 10.4	0.0			
	0.7nm,0.6s,baz=192,slow=14,SNR=1.6										
	0.7nm,0.6s										
MKAR	**Makanchi Array**	**38.77**	**316**	P		P	14 30 00.1	+0.2			
	1.0nm,0.6s,baz=104,slow=10,SNR=6.4										
	1.0nm,0.6s										
ZALV	**Zalesovo Beam**	**40.59**	**327**	P		P	14 30 13.3	-1.6			
	0.5nm,0.4s,baz=117,slow=8.3,SNR=1.8										
	0.5nm,0.4s										
KURBB	**Kurchatov Arra**	**42.51**	**320**	P		P	14 30 29.1	-1.5			
	0.4nm,0.6s,baz=108,slow=9.0,SNR=1.8										
	0.4nm,0.6s										
WRA	**Warramunga Arr**	**45.48**	**163**	P		P	14 30 52.7	-2.1			
	0.2nm,0.7s,baz=345,slow=8.8,SNR=1.3										
	0.2nm,0.7s										
BVAR	**Borovoye Array**	**48.07**	**321**	P		P	14 31 14.1	-0.7			
	0.4nm,0.5s,baz=110,slow=6.3,SNR=2.2										
	0.4nm,0.5s										
ASAR	**Alice Springs**	**48.95**	**165**	P		P	14 31 20.9	-1.0			
	0.6nm,1.0s,baz=340,slow=6.9,SNR=5.6										
	0.6nm,1.0s										
ILAR	**Eielson Array**	**69.00**	**27**	P		P	14 33 39.3	-1.3			
	0.3nm,0.8s,baz=273,slow=5.7,SNR=2.2										
	0.3nm,0.8s										
INK	**Inuvik**	**73.06**	**22**	P		P	14 34 04.5	-0.6			
	2.3nm,1.2s,baz=318,slow=4.1,SNR=4.0										
	2.3nm,1.2s										
YKA	**Yellowknife Ar**	**82.80**	**23**	P		P	14 34 58.9	-0.5			
	0.4nm,0.7s,baz=310,slow=5.0,SNR=5.5										
	0.4nm,0.7s										

ROM *04* 14:22:56.3±0.0, 42.809N±0.002×13.095E±0.003, h11km, ML1.0/2, 2C-2D, Error ellipse: s-maj=0.2km s-min=0.1km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.10**	**120**		⇑P	Pg	14 22 59.4	+0.3
T1214					S	Sg	14 23 01.4	+0.2
MC2	**Monte Cornacci**	**0.12**	**34**		⇑P	Pg	14 22 59.9	+0.3
MC2					S	Sg	14 23 02.5	+0.7
T1221	**Campello sul C**	**0.19**	**286**		⇓P	Pg	14 23 01.1	+0.7
T1221					S	Sg	14 23 04.5	+1.2
LNSS	**Leonessa**	**0.21**	**191**		P	Pg	14 23 01.4	+0.6
LNSS					S	Sg	14 23 05.2	+1.3
LNSS	comp=E,57μm,1.0s				AML	AML		
LNSS	comp=N,78μm,0.1s				AML	AML		
CESI	**CESI - Serrava**	**0.24**	**325**		P	Pg	14 23 02.0	+0.6
CESI					S	Sg	14 23 06.0	+1.2
CSP1	**Cessapalombo**	**0.29**	**16**		P	Pg	14 23 02.7	+0.3
CSP1					S	Sb	14 23 07.6	-1.1
RM33	**Pellescritta (**	**0.31**	**164**		⇓P	Pg	14 23 03.0	+0.4
RM33					S	Sb	14 23 08.3	-0.9

*IDC **04** 14:28:25.5±1.3, 24.41N×121.90E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=59.4km s-min=27.7km az=60.0*
*TAP **04** 14:28:27.5, 24.22N×121.77E, h10km, ML4.0, C*
*JMA **04** 14:28:27.8±0.2, 24.2N±0.3×121.8E±0.3, h2km±2km, MV3.7/14, TAIWAN REGION*
ISC 04 14:28:27.5±0.8, 24.21N±0.01×121.79E±0.02, h10km±5km, n166, σ0s80/302, mb3.6/7, 11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**334**		⇓P	Pg	14 28 30.2	-0.1
EHP					S	Sg	14 28 32.5	+0.2
EAHA	**Aohua**	**0.13**	**337**		⇓P	Pg	14 28 30.5	-0.1
EAHA					S	Sg	14 28 33.0	+0.3
ETL	**Fush Village**	**0.17**	**252**		P	Pg	14 28 31.0	-0.1
ETL					S	Sg	14 28 33.6	-0.1
NACB	**Ninganchiao**	**0.19**	**259**		P	Pg	14 28 31.2	-0.3
NACB					S	Sg	14 28 34.1	-0.2
ENA	**Nanau**	**0.22**	**347**	*i*	P	Pg	14 28 32.1	-0.1
ENA				*i*	S	Sg	14 28 35.5	+0.2
TWD	**Chiawan**	**0.22**	**234**	*i*	P	Pg	14 28 31.9	-0.3
TWD				*i*	S	Sg	14 28 35.2	-0.1
EWUT	**Wuta**	**0.23**	**356**	*i*	P	Pg	14 28 32.5	+0.1
EWUT					S	Sg	14 28 36.0	+0.4
ETLH	**Xiulin Townshi**	**0.29**	**269**		P	Pg	14 28 33.1	-0.2
ETLH					S	Sg	14 28 37.5	+0.3
HWA	**Hwalien**	**0.29**	**217**	*i*	P	Pg	14 28 34.2	+0.8
ESAO	**Su ao**	**0.37**	**7**		P	Pg	14 28 34.8	0.0
ESAO					S	Sg	14 28 40.0	+0.3
ETM	**Tongmen**	**0.37**	**229**		P	Pg	14 28 34.5	-0.3
ETM					S	Sg	14 28 40.1	+0.3
LXIB	**Xiulin Townshi**	**0.40**	**242**		P	Pg	14 28 34.9	-0.5
LXIB					S	Sg	14 28 41.2	+0.5
TWC	**Suao**	**0.40**	**7**	⇓*i*	P	Pg	14 28 35.5	0.0
TWC				*i*	S	Sg	14 28 41.0	+0.3
LATG	**Datong**	**0.41**	**323**		⇓P	Pg	14 28 35.5	-0.1
LATG					S	Sg	14 28 41.5	+0.5
NDS	**Dongshan**	**0.43**	**350**		P	Pg	14 28 36.1	+0.1
NDS					S	Sg	14 28 42.0	+0.4
NNSB	**Datong**	**0.43**	**300**		⇓P	Pg	14 28 36.0	-0.1
NNSB					S	Sg	14 28 41.5	-0.3
NNSH	**Datong**	**0.43**	**300**		⇓P	Pg	14 28 36.0	-0.1
NNSH					S	Sg	14 28 41.7	-0.2
NNS	**Nan Shan**	**0.45**	**301**	*i*	P	Pg	14 28 36.3	-0.1
NNS				*i*	S	Sg	14 28 42.1	-0.1
EOS2	**EOS2**	**0.45**	**62**	*e*	P	Pb	14 28 37.6	+0.2
NDT	**Datong Townshi**	**0.47**	**327**		P	Pg	14 28 36.9	+0.2
NDT					S	Sg	14 28 43.6	+0.7
SHUL	**Shoufeng**	**0.47**	**207**		P	Pb	14 28 38.1	+0.2
SHUL					S	Sg	14 28 44.2	+1.3
ENTT	**Nioudou**	**0.47**	**334**	⇓*i*	P	Pg	14 28 36.9	+0.1
ENTT				*i*	S	Sg	14 28 43.4	+0.2
WHF	**Hehuan Shan**	**0.49**	**262**	*i*	P	Pg	14 28 37.1	0.0
WHF				*i*	S	Sg	14 28 43.5	-0.2
FUSS	**Fushou**	**0.50**	**274**		P	Pg	14 28 37.4	0.0
FUSS					S	Sg	14 28 44.0	-0.1
ESL	**Shilin**	**0.52**	**220**	*i*	P	Pg	14 28 37.4	-0.2
ESL					S	Sg	14 28 45.1	+0.7
TWE	**Neicheng**	**0.52**	**347**	⇓*i*	P	Pg	14 28 37.9	+0.2
TWE				*i*	S	Sg	14 28 44.3	-0.3
TEGC	**Jichi Village**	**0.55**	**205**		P	Pg	14 28 39.1	+0.8
TEGC				*e*	S	Sb	14 28 48.2	+1.0
ILA	**Ilan**	**0.55**	**356**		P	Pg	14 28 38.7	+0.4
ILA					S	Sg	14 28 46.2	+0.6
TWT	**Tachien**	**0.57**	**274**	⇓*i*	P	Pg	14 28 38.9	+0.3
TWT				*i*	S	Sg	14 28 46.2	+0.1
FUSB	**Fushanzhiwuyua**	**0.58**	**341**	⇓	P	Pg	14 28 39.0	+0.2
FUSB					S	Sg	14 28 46.8	+0.3
TDCB	**Techi**	**0.58**	**274**		P	Pg	14 28 39.0	+0.1
TDCB					S	Sg	14 28 46.3	-0.3
CHGB	**Renai**	**0.59**	**255**		P	Pg	14 28 39.0	0.0
CHGB					S	Sg	14 28 46.4	-0.3
YHNB	**Yeheng**	**0.59**	**320**	⇓	P	Pg	14 28 39.2	+0.1
YHNB					S	Sg	14 28 47.2	+0.2
NSK	**Sanguang**	**0.61**	**319**	*i*	P	Pg	14 28 39.5	+0.1
NSK				*i*	S	Sg	14 28 47.6	+0.1
WARBT	**Fenglin Townsh**	**0.62**	**217**		P	Pg	14 28 39.3	-0.2
WARBT					S	Sg	14 28 47.9	+0.3
OWD	**Renai**	**0.62**	**246**		P	Pg	14 28 39.6	0.0
OWD					S	Sg	14 28 47.6	-0.2
EGFH	**Guangfu**	**0.64**	**212**		P	Pg	14 28 40.0	+0.2
EGFH					S	Sb	14 28 49.9	+0.2
WUSB	**Renai**	**0.66**	**251**		P	Pg	14 28 40.3	0.0
WUSB					S	Sg	14 28 48.7	-0.2
NFF	**Wufeng Townshi**	**0.75**	**304**		P	Pg	14 28 42.1	+0.2
NFF					S	Sg	14 28 51.8	+0.1
VWDT	**VWDT**	**0.75**	**233**		P	Pg	14 28 42.5	+0.4
VWDT					S	Sg	14 28 52.0	+0.2
TIPB	**Shuangxi**	**0.76**	**2**		P	Pg	14 28 42.4	+0.2
TIPB					S	Sg	14 28 52.0	-0.1
WHP	**Taichung City**	**0.78**	**275**	*i*	P	Pg	14 28 42.9	+0.3
WHP				*i*	S	Sg	14 28 53.1	+0.4
NHDH	**Xindian Distri**	**0.79**	**342**		P	Pg	14 28 43.2	+0.5
NHDH					S	Sb	14 28 54.0	0.0
WPL	**Puli Township**	**0.79**	**256**		P	Pg	14 28 42.9	+0.1
WPL					S	Sg	14 28 52.9	-0.2
HGSD	**Ruisui**	**0.79**	**205**		P	Pb	14 28 43.6	+0.2
HGSD					S	Sb	14 28 55.5	+1.4
TATO	**Taipei**	**0.81**	**340**		P	Pg	14 28 43.2	+0.1
TATO					S	Sb	14 28 54.4	-0.3
DPDB	**Guoxing**	**0.81**	**258**		P	Pg	14 28 43.3	0.0
DPDB					S	Sg	14 28 54.3	+0.4
TWB1	**Santiao Chiao**	**0.81**	**12**	*i*	P	Pg	14 28 43.3	+0.1
TWB1				*i*	S	Sg	14 28 54.1	+0.2
WCS	**Beigang Elemen**	**0.82**	**259**		P	Pg	14 28 43.5	+0.1
WCS					S	Sg	14 28 53.8	-0.3
EHY	**Hungye**	**0.82**	**212**	*i*	P	Pg	14 28 43.3	-0.2
EHY				*e*	S	Sb	14 28 55.5	+0.5
NJD	**Zhudong**	**0.83**	**309**		P	Pb	14 28 44.5	+0.5
NJD					S	Sb	14 28 56.6	+1.4
LIOB	**Emei**	**0.83**	**302**		P	Pb	14 28 44.1	0.0
LIOB					S	Sg	14 28 54.8	+0.4
NSTT	**Nanjuang**	**0.84**	**300**	*i*	P	Pg	14 28 43.8	+0.2
NSTT				*i*	S	Sg	14 28 54.7	+0.1
BACT	**New Taipei Cit**	**0.85**	**338**	*e*	P	Pn	14 28 45.8	+0.4
BACT				*e*	S	Sb	14 28 56.9	+1.2
NHY	**Taipei**	**0.85**	**346**		P	Pb	14 28 44.7	+0.4
NHY				*e*	S	Sg	14 28 55.4	+0.4
NWF	**Wu-fen Shan**	**0.86**	**359**	*i*	P	Pg	14 28 44.5	+0.4
NWF				*i*	S	Sg	14 28 55.4	+0.1
WFSB	**Wu-fen Shan**	**0.86**	**359**		P	Pg	14 28 44.4	+0.3
WFSB					S	Sg	14 28 55.3	0.0
TAP	**Taipei**	**0.87**	**342**	*i*	P	Pb	14 28 44.8	+0.2
TAP				*i*	S	Sb	14 28 56.4	+0.2
SSLB	**Suanglung**	**0.88**	**241**		P	Pg	14 28 44.3	-0.1
SSLB					S	Sg	14 28 55.0	-0.9
SMLT	**Sun Moon Lake**	**0.88**	**248**	*i*	P	Pg	14 28 44.6	+0.1

SMLT				*i*	S	**Sg**	**14 28 55.8**	**-0.2**
	baz=239							
SXI1	**Grass Mountain**	**0.88**	**5**	P		**Pg**	**14 28 44.9**	**+0.3**
	baz=351							
HSN1	**Hsinchu**	**0.91**	**309**	P		**Pn**	**14 28 46.3**	**0.0**
	baz=310							
NTY	**Taoyuan**	**0.91**	**330**	P		**Pn**	**14 28 46.4**	**+0.1**
	baz=332							
NTY					S	**Sn**	**14 28 58.9**	**-0.5**
	baz=332							
TYC	**Yuchr**	**0.91**	**251**	*i*	P	**Pg**	**14 28 45.0**	**0.0**
	baz=242							
TYC					S	**Sg**	**14 28 56.4**	**-0.5**
	baz=242							
YULB	**Yu-li**	**0.93**	**209**	P		**Pg**	**14 28 44.7**	**-0.8**
	baz=219							
YULB					S	**Sb**	**14 28 58.5**	**+0.3**
	baz=219							
TNOU	**National Taiwa**	**0.94**	**359**	P		**Pg**	**14 28 46.0**	**+0.4**
TNOU					eS	**Sg**	**14 28 58.1**	**+0.4**
NCUH	**Zhongli**	**0.94**	**324**	P		**Pn**	**14 28 46.8**	**+0.1**
	baz=325							
NCUH					S	**Sn**	**14 29 00.2**	**0.0**
	baz=325							
SBCB	**Hsinchu**	**0.94**	**308**	P		**Pn**	**14 28 46.7**	**0.0**
	baz=309							
SBCB					eS	**Sb**	**14 28 58.2**	**-0.1**
	baz=309							
TWQ1	**Liyutan**	**0.94**	**279**	*i*	P	**Pb**	**14 28 46.5**	**+0.6**
	baz=279							
TWQ1				*i*	S	**Sb**	**14 28 58.7**	**+0.3**
	baz=279							
ECBN	**Changbin**	**0.94**	**200**	*e*	P	**Pg**	**14 28 45.8**	**+0.1**
	baz=199							
ECBN					eS	**Sb**	**14 28 59.5**	**+1.0**
	baz=199							
TWS1	**Kuangyinshan**	**0.95**	**339**	*i*	P	**Pb**	**14 28 46.6**	**+0.6**
	baz=341							
YM01	**YM01**	**0.95**	**348**	P		**Pb**	**14 28 46.4**	**+0.3**
	baz=349							
YM01					S	**Sb**	**14 28 58.9**	**+0.1**
	baz=349							
HSN	**Hsinchu**	**0.95**	**308**	*i*	P	**Pb**	**14 28 46.9**	**+0.7**
	baz=312							
HSN					S	**Sb**	**14 28 59.9**	**+1.1**
	baz=312							
EYUL	**Yuli**	**0.96**	**207**	P		**Pg**	**14 28 46.3**	**+0.3**
	baz=219							
EYUL					eS	**Sn**	**14 29 00.7**	**-0.1**
	baz=219							
NJN	**Zhunan**	**0.96**	**299**	*e*	P	**Pb**	**14 28 46.9**	**+0.6**
	baz=300							
NJN					eS	**Sn**	**14 29 00.9**	**+0.1**
	baz=300							
NSY	**Sanyi**	**0.96**	**282**	*i*	P	**Pb**	**14 28 47.0**	**+0.6**
	baz=283							
NSY					*i* S	**Sb**	**14 29 00.2**	**+1.1**
	baz=283							
TWF1	**Yuli**	**0.97**	**208**	*i*	P	**Pg**	**14 28 45.8**	**-0.4**
	baz=219							
TWF1					eS	**Sb**	**14 28 59.5**	**+0.2**
	baz=219							
NMLH	**Miaoli**	**0.97**	**290**	P		**Pn**	**14 28 48.0**	**+0.8**
	baz=290							
NMLH					eS	**Sn**	**14 29 01.4**	**+0.4**
	baz=290							
NWRT	**Kuosheng**	**0.99**	**353**	*e*	P	**Pb**	**14 28 47.1**	**+0.3**
	baz=354							
NTST	**Danshui**	**1.00**	**342**	P		**Pb**	**14 28 47.6**	**+0.7**
	baz=351							
NTST					S	**Sn**	**14 29 01.4**	**-0.3**
	baz=351							
WHYT	**Xinyi Township**	**1.00**	**239**	P		**Pg**	**14 28 47.1**	**+0.3**
	baz=247							
WHYT					eS	**Sb**	**14 29 01.0**	**+0.8**
	baz=247							
ANP	**Anpu**	**1.00**	**346**	*i*	P	**Pg**	**14 28 47.1**	**+0.3**
	baz=347							
ANP					eS	**Sb**	**14 29 01.1**	**+0.7**
	baz=347							
NHW	**Xinwu Township**	**1.04**	**320**	P		**Pb**	**14 28 48.1**	**+0.4**
	baz=321							
WJS	**Zhushan**	**1.05**	**249**	P		**Pn**	**14 28 48.9**	**+0.6**
	baz=243							
WJS					S	**Sb**	**14 29 02.6**	**+1.1**
	baz=243							
WDJ	**Dajia District**	**1.06**	**278**	P		**Pn**	**14 28 49.5**	**+1.1**
	baz=278							
WDJ					eS	**Sn**	**14 29 04.2**	**+1.0**
	baz=278							
WNT1	**Nantou City**	**1.06**	**254**	P		**Pn**	**14 28 49.9**	**+1.4**
	baz=249							
WNT1					S	**Sn**	**14 29 05.3**	**+2.1**
	baz=249							
WNT	**Mingjian**	**1.07**	**252**	*i*	P	**Pn**	**14 28 49.0**	**+0.5**
	baz=248							
WNT					S	**Sn**	**14 29 04.0**	**+0.6**
	baz=248							
TWY	**Chenhua**	**1.07**	**351**	*i*	P	**Pn**	**14 28 48.9**	**+0.3**
	baz=352							
TWY					eS	**Sn**	**14 29 03.5**	**-0.1**
	baz=352							
JYNG	**Yonagunijimaku**	**1.08**	**77**	*e*	P	**Pn**	**14 28 49.5**	**+0.9**
CHKH	**Chenggong**	**1.08**	**200**	P		**Pg**	**14 28 48.1**	**-0.2**
	baz=199							
CHKH					eS	**Sn**	**14 29 04.2**	**+0.6**
	baz=199							
FULB	**Fuli**	**1.11**	**205**	P		**Pg**	**14 28 48.3**	**-0.5**
	baz=220							
FULB					eS	**Sn**	**14 29 05.2**	**+0.8**
	baz=220							
WCHH	**Zhanghua**	**1.14**	**264**	P		**Pn**	**14 28 50.2**	**+0.8**
	baz=264							
WCHH					S	**Sn**	**14 29 06.4**	**+1.3**
	baz=264							
WYL	**Yuanlin Townsh**	**1.14**	**258**	*e*	P	**Pn**	**14 28 51.8**	**+2.3**
	baz=258							
WYL					eS	**Sn**	**14 29 07.0**	**+1.9**
	baz=258							
YOJ	**Yonaguni jima**	**1.14**	**77**	P		**Pb**	**14 28 49.0**	**-0.2**
	baz=65							
YOJ					eS	**Sn**	**14 29 06.2**	**+1.1**
	baz=65							
YOJ	**Yonaguni jima**	**1.14**	**77**	*e*	P	**Pb**	**14 28 49.9**	**+0.6**
YOJ					S	**Sn**	**14 29 07.0**	**+1.9**
ALS	**Alishan**	**1.14**	**233**	*i*	P	**Pg**	**14 28 49.7**	**+0.1**
	baz=233							
ALS					eS	**Sn**	**14 29 05.8**	**+0.2**
	baz=233							
CHKT	**Chengkung**	**1.17**	**200**	*i*	P	**Pb**	**14 28 48.3**	**-1.6**
	baz=215							
CHKT					*i* S	**Sn**	**14 29 07.7**	**+1.6**
	baz=215							
EHD	**Haiduan**	**1.19**	**207**	P		**Pb**	**14 28 49.8**	**-0.3**
	baz=208							
EHD					eS	**Sb**	**14 29 06.4**	**+0.8**
	baz=208							
CHN5	**Tsauling**	**1.19**	**239**	*i*	P	**Pn**	**14 28 51.2**	**+0.9**
	baz=240							
CHN5					*i* S	**Sn**	**14 29 07.8**	**+1.2**
	baz=240							
ECS	**Chishang**	**1.23**	**206**	P		**Pn**	**14 28 50.3**	**-0.4**
	baz=219							
ECS					eS	**Sn**	**14 29 08.5**	**+1.1**
	baz=219							
ELDTW	**Lidau**	**1.24**	**215**	*i*	P	**Pn**	**14 28 49.9**	**-1.1**
	baz=203							
ELDTW					*i* S	**Sb**	**14 29 07.5**	**+0.3**
	baz=203							
WGK	**Gukeng**	**1.24**	**245**	*i*	P	**Pg**	**14 28 52.3**	**+0.9**
	baz=246							
WGK					*i* S	**Sn**	**14 29 08.9**	**+1.2**
	baz=246							
WDLH	**Douliu**	**1.26**	**246**	P		**Pg**	**14 28 52.7**	**+0.9**
	baz=247							
WDLH					S	**Sn**	**14 29 10.0**	**+1.8**
	baz=247							
EDH	**Donghe**	**1.31**	**200**	P		**Pn**	**14 28 50.0**	**-1.9**
	baz=182							
EDH					S	**Sg**	**14 29 11.2**	**+1.4**
	baz=182							
WRL	**Guolierlin Hig**	**1.33**	**257**	P		**Pg**	**14 28 53.2**	**+0.1**
	baz=273							
WRL					S	**Sg**	**14 29 11.5**	**+1.1**
	baz=273							
WCKO	**Fanlu**	**1.33**	**235**	P		**Pg**	**14 28 53.4**	**+0.3**
	baz=236							
WCKO					S	**Sg**	**14 29 12.6**	**+2.1**
	baz=236							
RLNB	**Erlin**	**1.35**	**257**	P		**Pg**	**14 28 53.8**	**+0.4**
	baz=273							
RLNB					S	**Sg**	**14 29 12.4**	**+1.4**
	baz=273							
WTK	**Tuku**	**1.39**	**248**	P		**Pg**	**14 28 54.8**	**+0.6**
	baz=250							
WTK					S	**Sg**	**14 29 13.7**	**+1.5**
	baz=250							
CHN4	**Tsaushan**	**1.39**	**232**	*i*	P	**Pb**	**14 28 54.1**	**+0.5**
	baz=234							
CHN4					S	**Sg**	**14 29 14.8**	**+2.4**
	baz=234							
STYH	**Taoyuan**	**1.39**	**222**	P		**Pn**	**14 28 53.2**	**+0.2**
	baz=223							
STYH					S	**Sg**	**14 29 12.7**	**+0.3**
	baz=223							
TPUB	**Ta-pu**	**1.40**	**230**	P		**Pb**	**14 28 54.2**	**+0.5**
	baz=219							
TPUB					S	**Sg**	**14 29 13.5**	**+0.9**
	baz=219							
STYT	**Tauyuan**	**1.41**	**223**	*i*	P	**Pn**	**14 28 53.7**	**+0.4**
	baz=223							
STYT					S	**Sg**	**14 29 13.4**	**+0.4**
	baz=223							
LONT	**Longtian**	**1.43**	**205**	P		**Pn**	**14 28 52.3**	**-1.2**
	baz=207							
LONT					eS	**Sn**	**14 29 11.6**	**-0.9**
	baz=207							
PCYT	**Pengchaiyu**	**1.44**	**10**	*e*	P	**Pn**	**14 28 53.5**	**-0.1**
	baz=11							
CHY	**Chiayi**	**1.44**	**241**	*e*	P	**Pb**	**14 28 54.7**	**+0.2**
	baz=242							
CHY					S	**Sg**	**14 29 14.5**	**+0.5**
	baz=242							
WTP	**Ta-pu**	**1.45**	**229**	*i*	P	**Pg**	**14 28 55.3**	**0.0**
	baz=230							
WTP					S	**Sg**	**14 29 15.4**	**+1.3**
	baz=230							
TWK	**Hsinying**	**1.52**	**232**	*i*	P	**Pb**	**14 28 56.1**	**+0.3**
	baz=234							
TWK					*i* S	**Sg**	**14 29 17.4**	**+0.9**
	baz=234							
TWG	**Pinlang**	**1.53**	**206**	*i*	P	**Pn**	**14 28 54.7**	**-0.3**
	baz=207							
TWG					eS	**Sn**	**14 29 14.1**	**-0.8**
	baz=207							
TWGBT	**Beinan**	**1.53**	**205**	P		**Pn**	**14 28 53.2**	**-1.7**
	baz=207							
TWGBT					eS	**Sn**	**14 29 14.1**	**-0.9**
	baz=207							
SNST	**Tainan City**	**1.54**	**231**	P		**Pb**	**14 28 56.7**	**+0.5**
	baz=233							
SNST					S	**Sg**	**14 29 18.1**	**+0.8**
	baz=233							
CHN1	**Nanshi**	**1.55**	**229**	*i*	P	**Pb**	**14 28 56.7**	**+0.5**
	baz=231							
CHN1					S	**Sg**	**14 29 17.4**	**+0.2**
	baz=231							
WSF	**Szhu**	**1.55**	**249**	*i*	P	**Pg**	**14 28 57.0**	**-0.2**
	baz=260							
WSF					S	**Sg**	**14 29 18.1**	**+0.7**
	baz=260							
SGST	**Jiashian**	**1.58**	**225**	*i*	P	**Pn**	**14 28 56.1**	**+0.5**
	baz=226							
SGST					S	**Sg**	**14 29 18.1**	**-0.2**
	baz=226							
WSL	**Shuilin Townsh**	**1.59**	**245**	*e*	P	**Pg**	**14 28 58.1**	**0.0**
	baz=246							
WSL					S	**Sg**	**14 29 19.9**	**+1.2**
	baz=246							
SLGT	**Liugui**	**1.60**	**221**	P		**Pg**	**14 28 58.3**	**0.0**
	baz=223							
SLGT					S	**Sg**	**14 29 18.8**	**-0.4**
	baz=223							
ICHU	**Yijhu**	**1.63**	**239**	P		**Pb**	**14 28 57.5**	**0.0**
	baz=241							
ICHU					S	**Sg**	**14 29 20.2**	**+0.4**
	baz=241							
CHN8	**Yiju**	**1.69**	**240**	*i*	P	**Pb**	**14 28 59.0**	**+0.4**
	baz=226							
CHN8					S	**Sb**	**14 29 20.2**	**+0.3**
	baz=226							
CHN3	**Shinhua**	**1.73**	**230**	*e*	P	**Pb**	**14 29 00.1**	**+0.7**
	baz=233							
CHN3					eS	**Sg**	**14 29 22.8**	**-0.4**
	baz=233							
IRIF	**Iriomote-Funau**	**1.77**	**86**	*e*	P	**Pn**	**14 28 59.6**	**+1.4**
SHHT	**Tainan City**	**1.78**	**229**	P		**Pb**	**14 29 00.8**	**+0.7**
	baz=232							
SHHT					eS	**Sg**	**14 29 24.2**	**-0.5**
	baz=232							
SCST	**Cishan**	**1.78**	**222**	P		**Pg**	**14 29 01.9**	**+0.2**
	baz=225							
SCST					eS	**Sg**	**14 29 25.6**	**+0.9**
	baz=225							
ECL	**Taimali**	**1.78**	**206**	*e*	P	**Pn**	**14 28 57.7**	**-0.6**
	baz=193							
SCLT	**Jiali**	**1.79**	**235**	*e*	P	**Pb**	**14 29 00.9**	**+0.5**
	baz=238							
SCLT					S	**Sg**	**14 29 24.9**	**-0.3**
	baz=238							
TSMG	**Majia**	**1.83**	**215**	P		**Pb**	**14 29 00.6**	**-0.5**
	baz=231							
TSMG					S	**Sb**	**14 29 24.9**	**+0.8**
	baz=231							
TWM1	**Shoushan**	**1.87**	**223**	P		**Pb**	**14 29 02.9**	**+1.1**
	baz=224							
TSCK	**Chigu Township**	**1.89**	**236**	P		**Pn**	**14 29 01.2**	**+1.3**
	baz=240							
TSCK					S	**Sb**	**14 29 27.2**	**+1.5**
	baz=240							
SGLT	**Jiouru**	**1.90**	**219**	*e*	P	**Pg**	**14 29 03.8**	**-0.2**
	baz=205							
SGLT					eS	**Sg**	**14 29 28.3**	**-0.4**
	baz=205							
MASBT	**Mashibuluo**	**1.92**	**214**	*e*	P	**Pn**	**14 29 00.6**	**+0.4**
	baz=217							
SNJT	**Kaohsiung City**	**1.98**	**223**	*e*	P	**Pb**	**14 29 03.1**	**-0.5**
	baz=226							
EAST	**Anshuo**	**2.02**	**206**	*e*	P	**Pn**	**14 29 02.1**	**+0.5**
	baz=195							
JKRS	**Kuro-shima**	**2.02**	**89**	*e*	P	**Pn**	**14 29 03.2**	**+1.6**
JKRS					eS	**Sb**	**14 29 30.0**	**+0.4**
TAWH	**Dawu Township**	**2.04**	**204**	*e*	P	**Pn**	**14 29 03.1**	**+1.2**
	baz=193							
SCZT	**Fangliau**	**2.12**	**211**	*i*	P	**Pn**	**14 29 04.5**	**+1.4**
	baz=213							
SCZT					eS	**Sn**	**14 29 31.6**	**+2.1**
	baz=213							
JIJ	**Ishigaki jima**	**2.15**	**85**	P		**Pn**	**14 29 03.9**	**+0.5**
JIJ					eS	**Sn**	**14 29 30.9**	**+0.8**
PNG	**Penghu**	**2.15**	**253**	*e*	P	**Pn**	**14 29 04.7**	**+1.4**
	baz=256							
PHUB	**P'eng-hu**	**2.15**	**252**	P		**Pn**	**14 29 05.1**	**+1.7**
	baz=255							
PHUB					eS	**Sn**	**14 29 31.3**	**+1.2**
	baz=255							
WDGT	**Dungji**	**2.17**	**245**	P		**Pn**	**14 29 05.4**	**+1.7**
	baz=249							
WDGT					S	**Sb**	**14 29 32.9**	**-1.0**
	baz=249							
SLIU	**Shizi**	**2.19**	**205**	P		**Pn**	**14 29 04.9**	**+1.0**
	baz=195							
SLIU					eS	**Sb**	**14 29 33.6**	**-0.7**
	baz=195							
LYUB	**Lan-yu**	**2.21**	**185**	P		**Pn**	**14 29 02.0**	**-2.2**
	baz=187							
VWUC	**VWUC**	**2.27**	**290**	P		**Pn**	**14 29 05.2**	**+0.1**
	baz=290							
VWUC					eS	**Sb**	**14 29 35.6**	**-1.1**
	baz=290							
JISG	**Ishigakijimahi**	**2.32**	**80**	P		**Pn**	**14 29 06.5**	**+0.7**
VCHM	**Qimei**	**2.39**	**246**	*e*	P	**Pn**	**14 29 07.8**	**+1.1**
	baz=235							
VCHM					S	**Sb**	**14 29 38.7**	**-1.3**
	baz=235							
HEN	**Hengchun**	**2.40**	**204**	*e*	P	**Pn**	**14 29 08.7**	**+1.8**
	baz=197							
TWKBT	**Hengchun**	**2.43**	**202**	*e*	P	**Pn**	**14 29 07.5**	**+0.2**
	baz=206							
TWKBT					eS	**Sn**	**14 29 39.7**	**+2.5**
	baz=206							
MATB	**Ma-tsu**	**2.56**	**319**	*e*	P	**Pn**	**14 29 10.2**	**+1.2**
	baz=319							
MATB					eS	**Sn**	**14 29 41.4**	**+1.2**
	baz=319							
PTMZ	**Houxiangcun**	**2.57**	**289**	*e*	P	**Pn**	**14 29 09.9**	**+0.7**
	baz=289							
PTMZ					eS	**Sn**	**14 29 40.8**	**+0.4**
	baz=289							
JTJ	**Tarama**	**2.69**	**80**	*e*	S	**Sn**	**14 29 45.3**	**+2.0**
KSRS	**Korea Array**	**14.21**	**20**	Pn		**P**	**14 31 55.6**	**-0.6**
	0.1nm,0.3s,baz=203,slow=13,SNR=3.2							
MJAR	**Matsushiro Arr**	**18.72**	**45**	P		**Pn**	**14 32 48.5**	**+1.9**
	4.4nm,0.6s,baz=207,slow=8.7,SNR=20							
SONM	**Songino Array**	**26.56**	**336**	P		**P**	**14 34 04.4**	**-1.4**
	0.4nm,0.6s,baz=148,slow=8.5,SNR=2.4							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**38.71**	**316**	P		**P**	**14 35 51.4**	**-0.2**
	0.6nm,0.8s,baz=105,slow=9.4,SNR=5.3							
	0.6nm,0.8s							
ZALV	**Zalesovo Beam**	**40.53**	**327**	P		**P**	**14 36 05.6**	**-1.0**
	0.5nm,0.5s,baz=133,slow=6.1,SNR=2.2							
	0.5nm,0.5s							
WRA	**Warramunga Arr**	**45.56**	**163**	P		**P**	**14 36 49.0**	**+1.3**
	0.7nm,0.9s,baz=345,slow=8.9,SNR=2.4							
	0.7nm,0.9s							
BVAR	**Borovoye Array**	**48.01**	**321**	P		**P**	**14 37 05.6**	**-0.9**
	0.5nm,0.7s,baz=95,slow=6.1,SNR=2.5							
	0.5nm,0.7s							
BRTR	**Keskin Array B**	**73.61**	**307**	P		**P**	**14 39 58.8**	**-2.5**
	0.5nm,0.8s,baz=45,slow=4.5,SNR=2.1							
	0.5nm,0.8s							
YKA	**Yellowknife Ar**	**82.73**	**23**	P		**P**	**14 40 49.5**	**-1.7**
	0.4nm,0.8s,baz=315,slow=5.0,SNR=7.2							
	0.4nm,0.8s							

TAP 04 14:45:05.4, 24.22N×121.79E, h10km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
EHP	**Heping Village**	**0.10**	**335**	*e* P	Pg	14	45	08.0	0.0
	baz=338								
EAHA	**Aohua**	**0.12**	**338**	P	Pg	14	45	09.3	+1.0
	baz=338								
EAHA				S	Sg	14	45	12.0	+1.7
	baz=338								
ETL	**Fush Village**	**0.16**	**248**	P	Pg	14	45	09.8	+0.8
	baz=248								
ETL				S	Sg	14	45	13.1	+1.6
	baz=248								
NACB	**Ninganchiao**	**0.18**	**256**	P	Pg	14	45	09.8	+0.5
	baz=255								
NACB				S	Sg	14	45	13.5	+1.6
	baz=255								
ENA	**Nanau**	**0.21**	**349**	*i* P	Pg	14	45	10.8	+0.9
	baz=350								
ENA				*i* S	Sg	14	45	14.2	+1.3
	baz=350								
TWD	**Chiawan**	**0.22**	**232**	S	Sg	14	45	14.7	+1.6
	baz=230								
EWUT	**Wuta**	**0.23**	**358**	*i* P	Pg	14	45	11.1	+1.0
	baz=358								
EWUT				*i* S	Sg	14	45	14.7	+1.5
	baz=358								
ETLH	**Xiulin Townshi**	**0.28**	**268**	*e* P	Pb	14	45	11.9	-0.7
	baz=267								
ETLH				*e* S	Sb	14	45	16.9	-0.5
	baz=267								
HWA	**Hwalien**	**0.29**	**215**	*e* P	Pg	14	45	11.7	+0.4
	baz=213								
TWC	**Suao**	**0.39**	**8**	*e* P	Pb	14	45	14.0	-0.5
	baz=9.0								
LATG	**Datong**	**0.40**	**323**	P	Pb	14	45	14.4	-0.2
	baz=323								
NNSB	**Datong**	**0.42**	**300**	*e* P	Pb	14	45	14.8	-0.3
	baz=299								
NNS	**Nan Shan**	**0.44**	**300**	P	Pb	14	45	14.9	-0.5
	baz=300								
NDT	**Datong Townshi**	**0.46**	**327**	*e* P	Pb	14	45	15.8	+0.2
	baz=326								
ENTT	**Nioudou**	**0.47**	**334**	P	Pb	14	45	15.6	-0.2
	baz=335								

TAP 04 14:46:02.1, 24.22N×121.77E, h12km, ML2.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
EHP	**Heping Village**	**0.09**	**346**	*i* P	Pg	14	46	05.5	+0.6
	baz=350								
EHP				*i* S	Sg	14	46	07.9	+1.1
	baz=350								
EAHA	**Aohua**	**0.11**	**348**	*i* P	Pb	14	46	05.7	-0.5
	baz=347								
EAHA				S	Sg	14	46	08.3	+1.0
	baz=347								
ETL	**Fush Village**	**0.14**	**245**	P	Pg	14	46	06.0	+0.5
	baz=244								
NACB	**Ninganchiao**	**0.16**	**253**	*i* P	Pg	14	46	06.3	+0.4
	baz=253								
ENA	**Nanau**	**0.21**	**354**	*i* P	Pb	14	46	07.3	-0.6
	baz=355								
ENA				*i* S	Sg	14	46	10.8	+1.1
	baz=355								
TWD	**Chiawan**	**0.21**	**228**	*i* P	Pb	14	46	07.6	-0.3
	baz=226								
EWUT	**Wuta**	**0.22**	**3**	P	Pb	14	46	07.6	-0.6
	baz=3.0								
EWUT				S	Sg	14	46	11.3	+1.1
	baz=3.0								
ETLH	**Xiulin Townshi**	**0.26**	**267**	P	Pb	14	46	08.4	-0.4
	baz=266								
HWA	**Hwalien**	**0.28**	**211**	*e* P	Pb	14	46	09.5	+0.3
	baz=209								
ETM	**Tongmen**	**0.36**	**224**	P	Pg	14	46	09.7	+0.4
	baz=224								
ETM				S	Sb	14	46	15.6	-0.4
	baz=224								
ESAO	**Su ao**	**0.36**	**11**	*e* P	Pb	14	46	10.1	-0.4
	baz=11								
ESAO				*i* S	Sb	14	46	15.5	-0.6
	baz=11								
LXIB	**Xiulin Townshi**	**0.38**	**238**	*e* P	Pg	14	46	10.1	+0.3
	baz=238								
LXIB				S	Sb	14	46	15.9	-0.9
	baz=238								
LATG	**Datong**	**0.38**	**325**	P	Pb	14	46	10.7	-0.3
	baz=325								
LATG				S	Sb	14	46	16.1	-0.7
	baz=325								
TWC	**Suao**	**0.39**	**11**	P	Pb	14	46	10.6	-0.5
	baz=12								
TWC				*e* S	Sg	14	46	16.1	+0.9
	baz=12								
NDS	**Dongshan**	**0.41**	**354**	P	Pb	14	46	11.4	0.0
	baz=353								
NDS				*e* S	Sb	14	46	17.4	-0.3
	baz=353								
NDT	**Datong Townshi**	**0.44**	**329**	P	Pb	14	46	12.3	+0.3
	baz=328								
NDT				S	Sb	14	46	19.2	+0.7
	baz=328								
ENTT	**Nioudou**	**0.46**	**337**	P	Pb	14	46	12.5	+0.4
	baz=337								
ENTT				S	Sb	14	46	18.8	-0.1
	baz=337								
WHF	**Hehuan Shan**	**0.46**	**261**	P	Pg	14	46	11.9	+0.5
	baz=260								
EOS2	**EOS2**	**0.47**	**65**	*e* P	Pb	14	46	12.2	-0.1
	baz=65								
EOS2				*e* S	Sb	14	46	19.2	0.0
	baz=65								
SHUL	**Shoufeng**	**0.47**	**203**	*e* P	Pb	14	46	12.3	-0.1
	baz=203								
FUSS	**Fushou**	**0.48**	**273**	P	Pb	14	46	12.3	-0.4
	baz=273								
FUSS				S	Sb	14	46	19.4	-0.4
	baz=273								
ESL	**Shilin**	**0.51**	**217**	*e* P	Pb	14	46	12.6	-0.4
	baz=216								
ESL				*e* S	Sb	14	46	20.9	+0.6
	baz=216								
TWE	**Neicheng**	**0.51**	**350**	P	Pb	14	46	13.0	0.0
	baz=351								
TWE				S	Sb

	baz=201								
TDCB	**Techi**	**0.56**	**273**	*e*P		Pb	14 46 14.0	+0.1	
	baz=273								
TDCB				*e*S		Sb	14 46 21.8	-0.1	
	baz=273								
FUSB	**Fushanzhiwuyua**	**0.56**	**343**	*e*P		Pb	14 46 13.8	-0.2	
	baz=343								
FUSB				*e*S		Sb	14 46 22.4	+0.5	
	baz=343								
CHGB	**Renai**	**0.56**	**254**	*e*P		Pb	14 46 13.8	-0.3	
	baz=253								
CHGB				*e*S		Sb	14 46 22.1	-0.1	
	baz=253								
YHNB	**Yeheng**	**0.57**	**322**	P		Pb	14 46 14.4	+0.2	
	baz=321								
YHNB				S		Sb	14 46 22.4	+0.1	
	baz=321								
NSK	**Sanguang**	**0.58**	**321**	P		Pb	14 46 14.5	+0.1	
	baz=321								
NSK				S		Sb	14 46 23.4	+0.7	
	baz=321								
OWD	**Renai**	**0.60**	**244**	*e*P		Pb	14 46 14.7	0.0	
	baz=243								
OWD				*e*S		Sb	14 46 23.4	+0.2	
	baz=243								
WARBT	**Fenglin Townsh**	**0.61**	**215**	*e*P		Pb	14 46 14.7	0.0	
	baz=214								
WARBT				*e*S		Sn	14 46 25.0	-1.5	
	baz=214								
EGFH	**Guangfu**	**0.63**	**209**	*e*P		Pb	14 46 14.8	-0.3	
	baz=209								
WUSB	**Renai**	**0.63**	**249**	*e*P		Pb	14 46 15.5	+0.2	
	baz=248								
WUSB				*e*S		Sb	14 46 23.6	-0.5	
	baz=248								
NFF	**Wufeng Townshi**	**0.72**	**305**	*e*P		Pb	14 46 16.7	0.0	
	baz=304								
NFF				*e*S		Sb	14 46 27.4	+0.9	
	baz=304								
VWDT	**VWDT**	**0.74**	**231**	*e*P		Pb	14 46 17.1	+0.2	
	baz=230								
TIPB	**Shuangxi**	**0.75**	**4**	*e*P		Pb	14 46 17.2	0.0	
	baz=4.0								
TIPB				*e*S		Sg	14 46 26.9	+0.3	
	baz=4.0								
WHP	**Taichung City**	**0.75**	**274**	*e*P		Pb	14 46 17.7	+0.5	
	baz=274								
HGSD	**Ruisui**	**0.79**	**203**	*e*P		Pb	14 46 17.8	0.0	
	baz=203								
WCS	**Beigang Elemen**	**0.80**	**258**	*e*P		Pb	14 46 18.2	+0.2	
	baz=258								
LIOB	**Emei**	**0.80**	**302**	*e*P		Pb	14 46 18.5	+0.4	
	baz=301								
NSTT	**Nanjuang**	**0.81**	**301**	*e*P		Pn	14 46 19.3	-0.1	
	baz=300								
EHY	**Hungye**	**0.82**	**210**	*e*P		Pb	14 46 18.4	+0.1	
	baz=209								
WFSB	**Wu-fen Shan**	**0.85**	**1**	*e*P		Pb	14 46 19.2	+0.4	
SSLB	**Suanglung**	**0.86**	**240**	*e*P		Pb	14 46 19.3	+0.3	
	baz=239								
SMLT	**Sun Moon Lake**	**0.86**	**247**	*e*P		Pb	14 46 19.2	+0.1	
	baz=246								
SXI1	**Grass Mountain**	**0.88**	**7**	*e*P		Pb	14 46 19.7	+0.3	
	baz=6.0								
TYC	**Yuchr**	**0.89**	**249**	*e*P		Pb	14 46 19.6	+0.1	
	baz=248								
YULB	**Yu-li**	**0.93**	**208**	*e*P		Pb	14 46 20.5	+0.3	
	baz=207								
TWF1	**Yuli**	**0.96**	**206**	*e*P		Pb	14 46 20.9	+0.1	
	baz=205								

TAP 04 14:46:05.2,24°.22N×121°.62E,h16km±1km, ML2.2,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.06**	**207**	P	Pg	14 46 09.2	+1.0
	baz=206						
NACB				S	Sg	14 46 11.2	+1.0
	baz=206						
ETL	**Fush Village**	**0.06**	**179**	*i* P	Pg	14 46 09.1	+0.8
	baz=179						
ETL				*i* S	Sg	14 46 10.8	+0.4
	baz=179						
EHP	**Heping Village**	**0.14**	**51**	*e*S	Sb	14 46 13.0	+0.7
	baz=54						
TWD	**Chiawan**	**0.14**	**189**	P	Pb	14 46 09.5	0.0
	baz=186						
TWD				*i* S	Sg	14 46 12.0	+0.2
	baz=186						
EAHA	**Aohua**	**0.15**	**45**	*e*P	Pb	14 46 09.7	+0.1
	baz=45						
EAHA				S	Sb	14 46 13.3	+0.7
	baz=45						
ENA	**Nanau**	**0.23**	**28**	S	Sb	14 46 16.3	+1.4
	baz=29						
LXIB	**Xiulin Townshi**	**0.28**	**224**	P	Pb	14 46 12.6	+0.7
	baz=223						
LXIB				S	Sb	14 46 17.6	+1.3
	baz=223						
ETM	**Tongmen**	**0.28**	**205**	P	Pb	14 46 11.7	-0.2
	baz=204						
ETM				*e*S	Sb	14 46 16.9	+0.6
	baz=204						
NNSB	**Datong**	**0.30**	**313**	P	Pg	14 46 11.0	-0.7
	baz=300						
NNSB				S	Sb	14 46 17.3	+0.3
	baz=300						
NNSB	**Datong**	**0.30**	**313**	P	Pg	14 46 11.2	-0.5
	baz=313						
NNSB				S	Sb	14 46 17.1	+0.1
	baz=313						
NNS	**Nan Shan**	**0.31**	**314**	*i* P	Pg	14 46 11.1	-0.8
	baz=301						
NNS				*i* S	Sb	14 46 17.9	+0.4
	baz=301						
NNS	**Nan Shan**	**0.31**	**314**	*i* P	Pg	14 46 11.1	-0.8
	baz=314						
NNS				S	Sb	14 46 17.8	+0.4
	baz=314						
LATG	**Datong**	**0.32**	**344**	*e*P	Pg	14 46 12.3	+0.2
	baz=344						
WHF	**Hehuan Shan**	**0.34**	**257**	S	Sb	14 46 18.9	+0.6
	baz=255						
SHUL	**Shoufeng**	**0.44**	**187**	*e*P	Pb	14 46 14.3	-0.2
	baz=187						
SHUL				*e*S	Sb	14 46 22.4	+1.6
	baz=187						
CHGB	**Renai**	**0.44**	**248**	*e*S	Sn	14 46 23.6	-1.2
	baz=248						
ESL	**Shilin**	**0.44**	**203**	*e*P	Pb	14 46 14.4	-0.2
	baz=201						
ESL				S	Sb	14 46 21.5	+0.6
	baz=201						

KRSC 04 14:54:28.2±1.1,49°.99N×156°.92E,h24km±18km, MI3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.86**	**324**	*e*P	Pb	14 54 43.7	-0.9
SKR				*e*S	Sb	14 54 55.6	0.0
PAU	**Pauzhetka**	**1.48**	**357**	*e*P	Pb	14 54 55.6	+0.5
PAU				*e*S	Sb	14 55 15.2	+1.8
KDTR	**Khodutka, Kamc**	**1.96**	**21**	*e*P	Pn	14 55 01.1	+1.2
KDTR				*e*S	Sb	14 55 26.4	-0.8
ASAK	**Asacha**	**2.48**	**14**	*e*P	Pn	14 55 09.5	+2.4
RUS	**Russkaya**	**2.64**	**22**	*e*P	Pn	14 55 11.5	+2.2
RUS				*e*S	Sn	14 55 43.0	+2.4
GRL	**Gorelyy**	**2.67**	**15**	*e*P	Pn	14 55 12.5	+2.7
KRMR	**Karymshinskiy**	**2.94**	**14**	*e*P	Pb	14 55 16.8	-3.2
DALK	**Dalny**	**3.25**	**20**	*e*P	Pn	14 55 20.4	+2.7
DALK				*e*S	Sn	14 55 59.7	+4.0
UGLR	**Uglovaya**	**3.44**	**19**	*e*P	Pn	14 55 23.9	+3.6
AVH	**Avacha**	**3.47**	**18**	*e*P	Pn	14 55 24.7	+3.9
KOK	**Koryaka**	**3.48**	**17**	*e*P	Pb	14 55 25.2	-3.9
SMAR	**Somma**	**3.48**	**19**	*e*P	Pn	14 55 25.0	+3.9
KRX	**Arik**	**3.54**	**17**	*e*P	Pn	14 55 25.8	+3.9

*JMA **04** 14:57:37.2±0.2,24°.2N±0°.5×121°.8E±0°.7,h0km, TAIWAN REGION*
*TAP **04** 14:57:37.2,24°.21N×121°.80E,h10km,ML3.2,B*
ISC 04 14:57:37.4±0.9,24°.21N±0°.02×121°.81E±0°.03,h11km±6km, n88,σ0°.46/115,10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**328**	*i* P	Pg	14 57 40.2	-0.2
	baz=333						
EHP				*i* S	Sg	14 57 42.5	-0.1
	baz=333						
EAHA	**Aohua**	**0.14**	**332**	*i* P	Pg	14 57 40.4	-0.3
	baz=333						
EAHA				*i* S	Sg	14 57 43.0	0.0
	baz=333						
ETL	**Fush Village**	**0.18**	**255**	*i* P	Pg	14 57 41.1	-0.1
	baz=253						
ETL				S	Sg	14 57 44.1	+0.1
	baz=253						
NACB	**Ninganchiao**	**0.20**	**261**	P	Pg	14 57 41.4	-0.2
NACB	**Ninganchiao**	**0.20**	**261**	⇓*i* P	Pg	14 57 41.4	-0.2
	baz=260						
NACB				*i* S	Sg	14 57 44.6	0.0
	baz=260						
ENA	**Nanau**	**0.23**	**344**	⇓*i* P	Pg	14 57 42.1	-0.1
	baz=346						
ENA				S	Sg	14 57 45.5	0.0
	baz=346						
TWD	**Chiawan**	**0.23**	**238**	*i* P	Pg	14 57 42.1	-0.1
	baz=241						
TWD				*i* S	Sg	14 57 45.8	+0.3
	baz=241						
EWUT	**Wuta**	**0.24**	**353**	*i* P	Pg	14 57 42.4	0.0
	baz=353						
EWUT				*i* S	Sg	14 57 45.9	+0.1
	baz=353						
HWA	**Hwalien**	**0.29**	**220**	P	Pb	14 57 45.2	+0.5
	baz=231						
ETLH	**Xiulin Townshi**	**0.30**	**270**	*i* P	Pg	14 57 43.3	-0.2
	baz=270						
ETLH				S	Sg	14 57 47.7	+0.1
	baz=270						
ESAO	**Su ao**	**0.37**	**4**	P	Pg	14 57 44.6	-0.1
	baz=360						
ESAO				S	Sg	14 57 49.5	-0.2
	baz=360						
ETM	**Tongmen**	**0.38**	**231**	P	Pg	14 57 44.9	0.0
	baz=235						
TWC	**Suao**	**0.40**	**5**	*i* P	Pg	14 57 45.3	0.0
	baz=5.0						
TWC				*i* S	Sg	14 57 50.8	0.0
	baz=5.0						
LXIB	**Xiulin Townshi**	**0.41**	**243**	*i* P	Pg	14 57 45.3	-0.2
	baz=243						
LXIB				S	Sg	14 57 51.2	+0.3
	baz=243						
LATG	**Datong**	**0.42**	**322**	⇓*i* P	Pg	14 57 45.7	0.0
	baz=322						
LATG				*i* S	Sg	14 57 51.6	+0.3
	baz=322						
NDS	**Dongshan**	**0.44**	**348**	*i* P	Pg	14 57 46.1	+0.1
	baz=348						
NDS				S	Sg	14 57 52.0	+0.2
	baz=348						
NNSB	**Datong**	**0.45**	**300**	⇓*i* P	Pg	14 57 46.3	+0.1
	baz=299						
NNSB				*i* S	Sg	14 57 52.2	-0.1
	baz=299						
NNS	**Nan Shan**	**0.46**	**300**	⇓*i* P	Pg	14 57 46.5	0.0
	baz=300						
NNS				*i* S	Sg	14 57 52.7	0.0
	baz=300						
EOS4	**EOS4**	**0.47**	**100**	*e*P	Pb	14 57 48.6	+1.1
	baz=88						
SHUL	**Shoufeng**	**0.47**	**209**	P	Pb	14 57 48.4	+0.6
	baz=211						
NDT	**Datong Townshi**	**0.48**	**326**	*i* P	Pg	14 57 47.1	+0.3
	baz=326						
NDT				*i* S	Sb	14 57 54.0	-1.0
	baz=326						
ENTT	**Nioudou**	**0.49**	**333**	⇓*i* P	Pg	14 57 47.1	+0.2
	baz=334						
ENTT				*i* S	Sg	14 57 53.8	+0.4
	baz=334						
WHF	**Hehuan Shan**	**0.50**	**263**	P	Pg	14 57 47.4	+0.1
	baz=264						
WHF				*i* S	Sg	14 57 54.2	+0.1
	baz=264						
ESL	**Shilin**	**0.52**	**222**	*e*P	Pg	14 57 47.6	+0.1
	baz=231						
FUSS	**Fushou**	**0.52**	**275**	P	Pg	14 57 47.9	+0.3
	baz=277						
TWE	**Neicheng**	**0.53**	**346**	⇓*i* P	Pg	14 57 47.9	+0.2
	baz=346						
TWE				*i* S	Sg	14 57 54.2	-0.6
	baz=346						
ILA	**Ilan**	**0.56**	**354**	S	Sg	14 57 55.7	-0.1
	baz=348						
TWT	**Tachien**	**0.58**	**275**	P	Pb	14 57 49.3	-0.4
	baz=275						
TWT				S	Sb	14 57 57.3	-0.8
	baz=275						
FUSB	**Fushanzhiwuyua**	**0.59**	**340**	⇓*i* P	Pg	14 57 49.1	+0.3
	baz=339						
FUSB				*i* S	Sg	14 57 56.5	-0.1
	baz=339						
TDCB	**Techi**	**0.60**	**275**	P	Pb	14 57 49.4	-0.6
	baz=275						
TDCB				S	Sg	14 57 57.2	+0.2
	baz=275						
CHGB	**Renai**	**0.60**	**256**	P	Pg	14 57 49.3	+0.2
	baz=249						
CHGB				*e*S	Sb	14 57 58.0	-0.7
	baz=249						
YHNB	**Yeheng**	**0.61**	**319**	P	Pg	14 57 49.5	+0.3
YHNB	**Yeheng**	**0.61**	**319**	⇓*i* P	Pg	14 57 49.5	+0.3
	baz=319						
YHNB				*i* S	Sg	14 57 57.8	+0.4
	baz=319						
WARBT	**Fenglin Townsh**	**0.62**	**219**	*e*P	Pb	14 57 49.9	-0.3
	baz=228						
NSK	**Sanguang**	**0.63**	**319**	⇓*i* P	Pg	14 57 49.8	+0.2
	baz=318						
NSK				*i* S	Sg	14 57 58.2	+0.4
	baz=318						
OWD	**Renai**	**0.63**	**247**	*e*P	Pb	14 57 50.0	-0.5
	baz=248						
EGFH	**Guangfu**	**0.64**	**213**	*e*P	Pg	14 57 49.7	-0.1
	baz=224						
WUSB	**Renai**	**0.67**	**252**	*e*P	Pg	14 57 50.4	+0.1
	baz=246						
VWDT	**VWDT**	**0.76**	**234**	*e*P	Pg	14 57 52.0	-0.1
	baz=242						
NFF	**Wufeng Townshi**	**0.76**	**304**	*e*P	Pb	14 57 52.6	-0.1
	baz=312						
TIPB	**Shuangxi**	**0.76**	**1**	*e*P	Pg	14 57 52.2	+0.1
	baz=359						
TIPB				*e*S	Sg	14 58 01.5	-0.7
	baz=359						
HGSD	**Ruisui**	**0.79**	**207**	*e*P	Pb	14 57 54.0	+0.8
	baz=200						
WHP	**Taichung City**	**0.79**	**275**	*e*P	Pb	14 57 53.3	0.0
	baz=276						
NHDH	**Xindian Distri**	**0.80**	**341**	*e*P	Pg	14 57 52.6	-0.2
	baz=340						
TWB1	**Santiao Chiao**	**0.82**	**11**	*e*P	Pb	14 57 54.0	+0.4
	baz=3.0						
EHY	**Hungye**	**0.83**	**213**	*e*P	Pg	14 57 53.0	-0.4
	baz=227						
WCS	**Beigang Elemen**	**0.84**	**260**	*e*P	Pg	14 57 53.3	-0.2
	baz=262						
LIOB	**Emei**	**0.85**	**301**	*e*P	Pb	14 57 54.7	+0.5
	baz=301						
NSTT	**Nanjuang**	**0.85**	**300**	P	Pb	14 57 54.4	+0.2
	baz=300						
NSTT				S	Sb	14 58 06.0	+0.4
	baz=300						
NWF	**Wu-fen Shan**	**0.86**	**358**	*e*P	Pg	14 57 53.1	-0.9
	baz=357						
WFSB	**Wu-fen Shan**	**0.86**	**358**	*e*P	Pg	14 57 52.5	-1.5
	baz=357						
SSLB	**Suanglung**	**0.89**	**242**	*e*P	Pg	14 57 54.0	-0.4
	baz=256						
SXI1	**Grass Mountain**	**0.89**	**4**	*e*P	Pg	14 57 54.5	0.0
	baz=349						
SMLT	**Sun Moon Lake**	**0.89**	**249**	*e*P	Pg	14 57 54.6	0.0
	baz=251						
TYC	**Yuchr**	**0.92**	**251**	*e*P	Pb	14 57 55.7	+0.3
	baz=253						
YULB	**Yu-li**	**0.94**	**210**	P	Pg	14 57 55.2	-0.2
YULB	**Yu-li**	**0.94**	**210**	*e*P	Pg	14 57 55.1	-0.3
	baz=224						
NCUH	**Zhongli**	**0.95**	**323**	*e*P	Pb	14 57 56.5	+0.6
	baz=316						
SBCB	**Hsinchu**	**0.95**	**308**	*e*P	Pn	14 57 57.0	+0.3
	baz=308						
TWS1	**Kuangyinshan**	**0.96**	**338**	*e*P	Pb	14 57 56.2	+0.2
	baz=338						
EYUL	**Yuli**	**0.97**	**208**	*e*P	Pb	14 57 56.2	0.0
	baz=222						
HSN	**Hsinchu**	**0.97**	**308**	*e*P	Pn	14 57 57.2	+0.3
	baz=299						
TWF1	**Yuli**	**0.97**	**209**	*e*P	Pg	14 57 55.5	-0.5
	baz=227						
NSY	**Sanyi**	**0.98**	**283**	*e*P	Pn	14 57 57.4	+0.3
	baz=285						
NMLH	**Miaoli**	**0.99**	**290**	*e*P	Pn	14 57 57.6	+0.5
	baz=297						
NTST	**Danshui**	**1.01**	**341**	*e*P	Pn	14 57 57.7	+0.2
	baz=341						
ANP	**Anpu**	**1.01**	**345**	*e*P	Pg	14 57 56.9	0.0
	baz=345						
WHYT	**Xinyi Township**	**1.01**	**240**	*e*P	Pb	14 57 57.5	+0.6
	baz=242						
WJS	**Zhushan**	**1.06**	**249**	*e*P	Pn	14 57 58.6	+0.4
	baz=244						
WNT	**Mingjian**	**1.08**	**253**	*e*P	Pn	14 57 58.9	+0.5
	baz=246						
FULB	**Fuli**	**1.11**	**205**	*e*P	Pg	14 57 58.1	-0.5
	baz=198						
ALS	**Alishan**	**1.15**	**233**	*e*P	Pn	14 58 00.1	+0.4
	baz=243						
WCHH	**Zhanghua**	**1.15**	**264**	*e*P	Pn	14 58 00.6	+1.2
	baz=267						
EHD	**Haiduan**	**1.19**	**208**	*e*P	Pg	14 57 58.8	-1.4
	baz=213						
CHN5	**Tsauling**	**1.20**	**240**	*e*P	Pn	14 58 01.3	+1.1
	baz=243						
ELDTW	**Lidau**	**1.25**	**216**	*e*P	Pg	14 58 00.1	-1.2
	baz=205						
WCKO	**Fanlu**	**1.34**	**236**	*e*P	Pg	14 58 03.6	+0.4
	baz=239						
WTK	**Tuku**	**1.40**	**249**	*e*P	Pg	14 58 04.2	-0.1
	baz=237						
STYH	**Taoyuan**	**1.40**	**223**	*e*P	Pn	14 58 03.0	+0.1
	baz=226						
CHN4	**Tsaushan**	**1.40**	**233**	*e*P	Pg	14 58 04.0	-0.3
	baz=236						
TPUB	**Ta-pu**	**1.41**	**231**	P	Pg	14 58 04.2	-0.2
TPUB	**Ta-pu**	**1.41**	**231**	*e*P	Pb	14 58 04.0	+0.3
	baz=234						
WTP	**Ta-pu**	**1.46**	**229**	*e*P	Pg	14 58 05.2	-0.1
	baz=232						
TWK	**Hsinying**	**1.53**	**233**	*e*P	Pg	14 58 06.5	-0.2
	baz=236						
CHN1	**Nanshi**	**1.55**	**229**	*e*P	Pb	14 58 06.2	+0.1
	baz=233						
SGST	**Jiashian**	**1.59**	**225**	*e*P	Pn	14 58 06.0	+0.6
	baz=229						
JIJ	**Ishigaki jima**	**2.13**	**85**	*e*P	Pn	14 58 13.4	+0.5
JISG	**Ishigakijimahi**	**2.31**	**80**	*e*S	Sn	14 58 43.0	-0.8

*TAP **04** 15:00:40.0,24°.22N×121°.73E,h9km,ML3.5,C*
*JMA **04** 15:00:40.0±0.1,24°.2N±0°.3×121°.7E±0°.8,h14km,MV3.2/10, TAIWAN REGION*
ISC 04 15:00:40.1±0.9,24°.21N±0°.01×121°.75E±0°.02,h8km±6km, n105,σ0°.67/171,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**355**	*i* P	Pg	15 00 42.7	+0.2
	baz=13						
EHP				*i* S	Sg	15 00 44.5	+0.5
	baz=13						
EAHA	**Aohua**	**0.12**	**355**	*i* P	Pg	15 00 42.9	+0.1
	baz=6.0						
ETL	**Fush Village**	**0.13**	**245**	*i* P	Pg	15 00 42.9	0.0
	baz=236						
NACB	**Ninganchiao**	**0.15**	**255**	*i* P	Pg	15 00 43.1	-0.1
	baz=239						
NACB				S	Sg	15 00 45.3	0.0
	baz=239						
TWD	**Chiawan**	**0.19**	**227**	*i* P	Pg	15 00 43.7	-0.3
	baz=219						
ENA	**Nanau**	**0.21**	**358**	*i* P	Pg	15 00 44.5	0.0
	baz=5.0						
ENA				*i* S	Sg	15 00 47.8	+0.4
	baz=5.0						
EWUT	**Wuta**	**0.23**	**6**	*e*P	Pg	15 00 45.3	+0.5
	baz=12						
ETLH	**Xiulin Townshi**	**0.24**	**269**	P	Pg	15 00 44.8	-0.3
	baz=266						
ETLH				*e*S	Sg	15 00 48.3	-0.1
	baz=266						
HWA	**Hwalien**	**0.27**	**210**	P	Pg	15 00 46.0	+0.6
	baz=213						
ETM	**Tongmen**	**0.34**	**224**	*e*P	Pg	15 00 46.4	-0.4
	baz=221						
LXIB	**Xiulin Townshi**	**0.36**	**238**	*e*P	Pb	15 00 48.8	-0.1
	baz=236						
LXIB				*e*S	Sg	15 00 52.7	+0.6
	baz=236						
ESAO	**Su ao**	**0.37**	**13**	*e*P	Pg	15 00 47.6	+0.2
	baz=21						
LATG	**Datong**	**0.38**	**328**	*i* P	Pg	15 00 47.6	0.0
	baz=329						
LATG				S	Sg	15 00 52.6	-0.1
	baz=329						
NNSB	**Datong**	**0.40**	**303**	*i* P	Pg	15 00 47.9	-0.1
	baz=303						
NNSB				*i* S	Sg	15 00 53.1	-0.1
	baz=303						
TWC	**Suao**	**0.41**	**13**	*i* P	Pg	15 00 48.1	0.0
	baz=10.0						
TWC				*e*S	Sg	15 00 54.0	+0.6
	baz=10.0						
NNS	**Nan Shan**	**0.41**	**303**	*i* P	Pg	15 00 48.0	-0.2
	baz=304						
NNS				*i* S	Sg	15 00 53.5	-0.2
	baz=304						
NDS	**Dongshan**	**0.42**	**356**	P	Pg	15 00 48.5	+0.1
	baz=358						
NDS				S	Sg	15 00 54.3	+0.4
	baz=358						
NDT	**Datong Townshi**	**0.45**	**331**	*i* P	Pg	15 00 49.0	+0.2
	baz=332						
NDT				*i* S	Sg	15 00 55.4	+0.7
	baz=332						
WHF	**Hehuan Shan**	**0.45**	**262**	*e*P	Pg	15 00 48.6	-0.3
	baz=260						
SHUL	**Shoufeng**	**0.46**	**202**	*i* P	Pb	15 00 50.0	-0.4
	baz=206						
SHUL				S	Sb	15 00 57.2	-0.2
	baz=206						
ENTT	**Nioudou**	**0.46**	**339**	*i* P	Pg	15 00 49.2	+0.1
	baz=341						
ENTT				S	Sg	15 00 55.4	+0.3
	baz=341						
FUSS	**Fushou**	**0.46**	**274**	P	Pg	15 00 49.1	-0.1
	baz=274						
FUSS				*e*S	Sg	15 00 55.4	+0.1
	baz=274						
EOS2	**EOS2**	**0.48**	**65**	*e*P	Pb	15 00 51.0	+0.2
	baz=58						
ESL	**Shilin**	**0.49**	**216**	*e*P	Pg	15 00 48.9	-0.7
	baz=214						
TWE	**Neicheng**	**0.51**	**351**	*i* P	Pg	15 00 50.2	+0.2
	baz=355						
TWE				S	Sg	15 00 57.6	+0.9
	baz=355						
EOS4	**EOS4**	**0.53**	**100**	*e*S	Sn	15 01 02.6	0.0
	baz=99						
TWT	**Tachien**	**0.53**	**275**	*e*P	Pg	15 00 50.1	-0.2
	baz=273						
TWT				S	Sg	15 00 57.5	+0.3
	baz=273						
TEGC	**Jichi Village**	**0.54**	**201**	*e*P	Pb	15 00 52.2	+0.4
	baz=189						
TEGC				*e*S	Sb	15 01 00.5	+0.8
	baz=189						
TDCB	**Techi**	**0.54**	**274**	*e*P	Pg	15 00 50.9	+0.2
	baz=274						
TDCB				*i* S	Sg	15 00 57.4	-0.3
	baz=274						
CHGB	**Renai**	**0.55**	**254**	P	Pg	15 00 50.9	+0.2
	baz=245						
CHGB				S	Sg	15 00 58.0	0.0
	baz=245						
FUSB	**Fushanzhiwuyua**	**0.56**	**345**	P	Pg	15 00 51.4	+0.3
	baz=346						

FUSB *i* S **Sg** **15 00 58.9 +0.4**
baz=346
YHNB **Yeheng** **0.57 323** *i* P **Pg** **15 00 51.4 +0.3**
baz=324
YHNB *i* S **Sg** **15 00 59.0 +0.3**
baz=324
NSK **Sanguang** **0.58 322** *i* P **Pg** **15 00 51.5 +0.1**
baz=323
NSK S **Sg** **15 00 58.7 -0.4**
baz=323
OWD **Renai** **0.58 244** *e*P **Pg** **15 00 50.7 -0.7**
baz=242
OWD *e*S **Sg** **15 00 58.8 -0.3**
baz=242
WARBT **Fenglin Townsh** **0.59 214** *e*P **Pg** **15 00 51.0 -0.7**
baz=220
WARBT S **Sb** **15 01 01.3 -0.1**
baz=220
EGFH **Guangfu** **0.62 209** P **Pg** **15 00 51.7 -0.3**
baz=214
EGFH S **Sb** **15 01 02.0 0.0**
baz=214
WUSB **Renai** **0.62 249** P **Pg** **15 00 52.1 +0.1**
baz=240
WUSB *e*S **Sg** **15 01 01.1 +0.9**
baz=240
NFF **Wufeng Townshi** **0.71 306** P **Pg** **15 00 54.1 +0.3**
baz=306
NFF S **Sg** **15 01 03.3 +0.2**
baz=306
VWDT **VWDT** **0.72 231** *e*P **Pg** **15 00 54.1 +0.1**
baz=229
VWDT *e*S **Sb** **15 01 04.2 -0.7**
baz=229
WHP **Taichung City** **0.74 275** *e*P **Pg** **15 00 54.6 +0.3**
baz=275
WHP *i* S **Sg** **15 01 04.2 +0.3**
baz=275
TIPB **Shuangxi** **0.76 5** *e*P **Pg** **15 00 54.8 0.0**
baz=359
NHDH **Xindian Distri** **0.78 345** *i* P **Pb** **15 00 55.5 -0.4**
baz=346
NHDH *e*S **Sb** **15 01 06.0 -0.6**
baz=346
HGSD **Ruisui** **0.78 203** *e*P **Pb** **15 00 56.0 +0.1**
baz=219
WCS **Beigang Elemen** **0.78 259** P **Pg** **15 00 55.2 +0.1**
baz=258
WCS *e*S **Sg** **15 01 05.7 +0.4**
baz=258
LIOB **Emei** **0.80 303** *e*P **Pb** **15 00 56.2 -0.1**
baz=303
LIOB *i* S **Sb** **15 01 06.6 -0.6**
baz=303
NSTT **Nanjuang** **0.80 302** *e*P **Pb** **15 00 56.4 +0.1**
baz=302
NSTT *i* S **Sg** **15 01 06.2 +0.2**
baz=302
EHY **Hungye** **0.81 209** *e*P **Pg** **15 00 54.8 -0.8**
baz=208
TWB1 **Santiao Chiao** **0.82 15** *e*P **Pb** **15 00 56.2 -0.4**
baz=10.0
SSLB **Suanglung** **0.84 240** P **Pg** **15 00 55.9 -0.5**
baz=239
SSLB *e*S **Sg** **15 01 06.0 -1.3**
baz=239
SMLT **Sun Moon Lake** **0.84 247** *e*P **Pg** **15 00 56.3 -0.1**
baz=237
SMLT S **Sg** **15 01 07.7 +0.4**
baz=237
NWF **Wu-fen Shan** **0.85 2** P **Pb** **15 00 56.9 -0.4**
baz=354
NWF *e*S **Sg** **15 01 07.7 0.0**
baz=354
WFSB **Wu-fen Shan** **0.85 2** *e*P **Pb** **15 00 57.0 -0.2**
baz=356
WFSB *i* S **Sb** **15 01 08.9 0.0**
baz=356
TYC **Yuchr** **0.87 250** *e*P **Pn** **15 00 57.9 -0.8**
baz=239
TYC *e*S **Sg** **15 01 08.0 -0.2**
baz=239
SXI1 **Grass Mountain** **0.89 7** *i* P **Pb** **15 00 57.5 -0.3**
baz=355
SXI1 *e*S **Sb** **15 01 09.3 -0.5**
baz=355
TWQ1 **Liyutan** **0.90 279** *e*P **Pn** **15 00 59.8 +0.6**
baz=278
SBCB **Hsinchu** **0.91 310** *e*P **Pn** **15 00 59.2 0.0**
baz=310
NCUH **Zhongli** **0.91 326** *e*P **Pn** **15 00 58.9 -0.4**
baz=326
NCUH S **Sn** **15 01 12.9 +0.2**
baz=326
YULB **Yu-li** **0.92 207** *e*P **Pg** **15 00 57.4 -0.3**
baz=216
YULB *e*S **Sb** **15 01 11.1 +0.5**
baz=216
HSN **Hsinchu** **0.92 310** *e*S **Sn** **15 01 12.3 -0.6**
baz=313
NSY **Sanyi** **0.93 283** *e*S **Sb** **15 01 11.5 +0.6**
baz=283
NMLH **Miaoli** **0.93 290** *e*P **Pn** **15 01 00.2 +0.7**
baz=290
TWS1 **Kuangyinshan** **0.94 341** *e*P **Pn** **15 00 59.3 -0.3**
baz=342
YM01 **YM01** **0.94 350** *e*P **Pn** **15 00 59.1 -0.7**
baz=351
YM01 S **Sn** **15 01 12.7 -0.8**
baz=351
EYUL **Yuli** **0.95 205** *e*P **Pb** **15 00 59.0 +0.2**
baz=219
TWF1 **Yuli** **0.95 206** *e*P **Pb** **15 00 58.7 -0.2**
baz=216
WHYT **Xinyi Township** **0.97 238** *e*P **Pb** **15 00 59.1 -0.1**
baz=237
NTST **Danshui** **0.99 344** *e*S **Sn** **15 01 14.7 +0.2**
baz=354
ANP **Anpu** **0.99 348** *e*P **Pb** **15 00 59.7 0.0**
baz=349
WJS **Zhushan** **1.01 248** *e*P **Pn** **15 01 00.7 0.0**
baz=242
WJS S **Sn** **15 01 15.3 +0.2**
baz=242
WNT **Mingjian** **1.03 251** *e*P **Pn** **15 01 00.8 -0.1**
baz=246
WNT *e*S **Sn** **15 01 15.4 -0.1**
baz=246
CHKH **Chenggong** **1.07 198** *e*P **Pb** **15 00 59.8 -1.1**
baz=215
CHKH *e*S **Sn** **15 01 16.2 -0.2**
baz=215
FULB **Fuli** **1.09 203** *e*P **Pb** **15 01 01.1 -0.2**
baz=216
ALS **Alishan** **1.11 231** *e*P **Pb** **15 01 01.7 -0.1**
baz=230
CHN5 **Tsauling** **1.16 238** *e*P **Pg** **15 01 02.7 +0.4**
baz=238
CHN5 S **Sn** **15 01 20.3 +1.5**
baz=238
EHD **Haiduan** **1.17 205** *e*P **Pb** **15 01 01.9 -0.8**
baz=216
EHD S **Sn** **15 01 19.1 0.0**
baz=216
YOJ **Yonaguni jima** **1.18 78** *e*P **Pg** **15 01 03.3 +0.6**
YOJ *e*S **Sn** **15 01 19.6 +0.4**
WGK **Gukeng** **1.21 245** *e*P **Pg** **15 01 05.6 +2.3**
baz=244
WGK *i* S **Sn** **15 01 21.6 +1.7**
baz=244
ELDTW **Lidau** **1.22 214** *e*P **Pn** **15 01 02.5 -1.1**
baz=223
ELDTW *i* S **Sg** **15 01 19.6 +0.2**
baz=223
WRL **Guolierlin Hig** **1.29 256** *e*P **Pg** **15 01 05.6 +0.6**
baz=272
WRL *i* S **Sg** **15 01 23.6 +1.9**
baz=272
EDH **Donghe** **1.30 198** *e*P **Pn** **15 01 03.1 -1.5**
baz=214
WCKO **Fanlu** **1.30 234** *e*P **Pg** **15 01 05.6 +0.5**
baz=234
WCKO S **Sg** **15 01 23.9 +1.9**
baz=234
WTK **Tuku** **1.35 248** *e*S **Sg** **15 01 25.0 +1.4**
baz=235
CHN4 **Tsaushan** **1.36 231** *e*P **Pg** **15 01 06.3 +0.1**
baz=231
STYH **Taoyuan** **1.37 221** *e*P **Pg** **15 01 06.3 -0.1**
baz=221
STYH *e*S **Sg** **15 01 25.4 +1.3**
baz=221
TPUB **Ta-pu** **1.37 229** *e*P **Pb** **15 01 06.2 +0.2**
baz=217
TPUB *e*S **Sg** **15 01 25.1 +0.9**
baz=217
WTP **Ta-pu** **1.42 228** *e*P **Pb** **15 01 07.1 +0.2**
baz=228
WTP S **Sg** **15 01 27.1 +1.4**
baz=228
TWK **Hsinying** **1.49 231** *e*S **Sg** **15 01 30.7 +2.6**
baz=232
WSF **Szhu** **1.51 248** *e*S **Sg** **15 01 30.1 +1.3**
baz=236
SNST **Tainan City** **1.52 230** *e*P **Pb** **15 01 08.0 -0.5**
baz=230
CHN1 **Nanshi** **1.52 228** *e*P **Pb** **15 01 08.7 +0.1**
baz=229
CHN1 *e*S **Sg** **15 01 30.2 +1.3**
baz=229
SGST **Jiashian** **1.55 224** *e*P **Pb** **15 01 08.8 -0.4**
baz=225
SGST *e*S **Sg** **15 01 30.2 +0.1**
baz=225
SLGT **Liugui** **1.58 220** *e*P **Pb** **15 01 09.4 -0.3**
baz=222
SLGT *e*S **Sg** **15 01 30.9 0.0**
baz=222
ICHU **Yijhu** **1.59 238** *e*P **Pb** **15 01 09.5 -0.3**
baz=223
ICHU *e*S **Sg** **15 01 33.1 +1.8**
baz=223
CHN8 **Yiju** **1.65 239** *e*P **Pg** **15 01 11.8 0.0**
baz=224
CHN8 *i* S **Sg** **15 01 34.7 +1.4**
baz=224
SHHT **Tainan City** **1.75 228** *e*P **Pb** **15 01 12.7 +0.2**
baz=229
SCST **Cishan** **1.75 221** *e*P **Pg** **15 01 13.2 -0.5**
baz=224
SCST *e*S **Sg** **15 01 37.5 +1.0**
baz=224
ECL **Taimali** **1.77 205** *e*P **Pn** **15 01 10.2 -0.9**
baz=195
IRIF **Iriomote-Funau** **1.81 86** *e*S **Sb** **15 01 35.9 -0.5**
TSCK **Chigu Township** **1.86 236** *e*S **Sb** **15 01 38.1 +0.4**
baz=238
MASBT **Mashibuluo** **1.90 213** *e*P **Pb** **15 01 13.8 -1.2**
baz=218
MASBT *e*S **Sb** **15 01 39.8 +0.9**
baz=218
TAW **Tawu** **2.01 203** *e*S **Sn** **15 01 38.9 -0.8**
baz=194
JIJ **Ishigaki jima** **2.19 86** *e*P **Pn** **15 01 16.8 0.0**
JIJ *e*S **Sn** **15 01 43.7 -0.5**
VWUC **VWUC** **2.23 291** *e*P **Pn** **15 01 16.8 -0.6**
baz=290
VWUC S **Sn** **15 01 43.7 -1.5**
baz=290
JISG **Ishigakijimahi** **2.36 80** *e*P **Pn** **15 01 20.1 +0.8**
JISG *e*S **Sn** **15 01 48.2 -0.3**
PTMZ **Houxiangcun** **2.53 290** *e*P **Pn** **15 01 21.4 -0.1**
baz=288
PTMZ *i* S **Sn** **15 01 51.5 -1.1**
baz=288

*SJA **04** 15:06:21.6±0.8,34°.63S×70°.49W,h123km±4km,ML4.5, MW4.2*
*NEIC **04** 15:06:21.7±0.8,34°.63S±0°.04×70°.5W±0°.1,h129km±5km, mb4.6/2,Mwr4.5(GUC),Error ellipse: s-maj=12.8km s-min=5.9km az=102.0*
*IDC **04** 15:06:23.4±2.7,34°.64S×70°.53W,h116km±24km,mb3.7/6, mbtmp4.0/8,Error ellipse: s-maj=24.8km s-min=18.9km az=86.0*
*GUC **04** 15:06:23.1±0.9,34°.56S×70°.54W,h112km±3km,ML4.5*
ISC 04 15:06:22.4±0.6,34°.62S±0°.03×70°.44W±0°.04,h118km±5km, n109,σ1$29/159,mb4.0/6,16C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BO02	**Sierra Bellavi**	**0.33**	**238**	Pn		**Pn**	**15 06 39.6**	**+0.3**
BO02	**Sierra Bellavi**	**0.33**	**238**	*e*P		**Pn**	**15 06 39.0**	**-0.3**
BO02				*e*S		**Sn**	**15 06 53.7**	**+1.6**
BO02				IAML			15 06 55.9	
	comp=Z,14μm,0.2s							
BO02	**Sierra Bellavi**	**0.33**	**238**	⇓*i*P		**Pn**	**15 06 39.8**	**+0.4**
BO02				*e*S		**Sn**	**15 06 52.5**	**+0.3**
BO02				IAML			15 06 55.9	
	comp=N,19μm,0.2s							
BO01	**Tunca**	**0.58**	**293**	Pn		**Pn**	**15 06 40.8**	**+0.1**
BO01				Sn		**Sn**	**15 06 54.0**	**-0.4**
BO01	**Tunca**	**0.58**	**293**	*e*P		**Pn**	**15 06 40.7**	**+0.1**
BO01				*e*S		**Sn**	**15 06 55.0**	**+0.6**
BO01				IAML			15 06 55.7	
	comp=Z,9μm,0.2s							
BO01	**Tunca**	**0.58**	**293**	⇑*i*P		**Pn**	**15 06 41.0**	**+0.3**
BO01				*e*S		**Sn**	**15 06 54.1**	**-0.2**
BO01				IAML			15 06 55.1	
	comp=E,17μm,0.3s							
BO04	**La Punta**	**0.64**	**348**			**Pn**	**15 06 41.5**	**+0.2**
BO04				Sn		**Sn**	**15 06 55.3**	**0.0**
BO04	**La Punta**	**0.64**	**348**	*e*P		**Pn**	**15 06 41.5**	**+0.2**
BO04				*e*S		**Sn**	**15 06 55.5**	**+0.1**
BO04				IAML			15 06 56.5	
	comp=E,28μm,0.3s							
LMEL	**Las Melosas**	**0.79**	**14**			**Pn**	**15 06 43.0**	**+0.4**
LMEL	**Las Melosas**	**0.79**	**14**	*e*P		**Pn**	**15 06 43.2**	**+0.6**
LMEL				*e*S		**Sn**	**15 06 58.7**	**+0.9**
LMEL				IAML			15 06 60.0	
	comp=N,12μm,0.5s							
MT13	**San Alfonso**	**0.88**	**8**	Pn		**Pn**	**15 06 43.9**	**+0.6**
MT13				Sn		**Sn**	**15 07 00.2**	**+1.2**
MT13	**San Alfonso**	**0.88**	**8**	*e*P		**Pn**	**15 06 44.1**	**+0.8**
MT13				*e*S		**Sn**	**15 07 00.2**	**+1.2**
MT13				IAML			15 07 02.2	
	comp=E,12μm,0.4s							
MT12	**Pirque**	**0.89**	**354**	*e*P		**Pn**	**15 06 43.7**	**+0.4**
MT12				*e*S		**Sn**	**15 06 59.1**	**+0.1**
MT09	**Talagante**	**0.95**	**332**			**Pn**	**15 06 44.2**	**+0.2**
MT09	**Talagante**	**0.95**	**332**	⇑*i*P		**Pn**	**15 06 44.2**	**+0.2**
MT09				*e*S		**Sn**	**15 07 00.1**	**-0.2**
MT01	**Popeta**	**1.01**	**318**			**Pn**	**15 06 44.3**	**0.0**
MT01	**Popeta**	**1.01**	**318**	*e*P		**Pn**	**15 06 44.4**	**0.0**
MT01				*e*S		**Sn**	**15 07 01.1**	**+0.1**
MT01				IAML			15 07 03.9	
	comp=Z,4μm,0.2s							
MT01	**Popeta**	**1.01**	**318**	⇑*e*P		**Pn**	**15 06 44.4**	**0.0**
MT01				*e*S		**Sn**	**15 07 00.3**	**-0.6**
MT01				IAML			15 07 01.5	
	comp=N,9μm,0.2s							
MT15	**Las Vizcachas**	**1.02**	**357**	*i*P		**Pn**	**15 06 45.1**	**+0.6**
MT15				*e*S		**Sn**	**15 07 01.9**	**+0.7**
MT15				IAML			15 07 03.6	
	comp=E,33μm,0.3s							
MT03	**Universidad Ad**	**1.12**	**357**			**Pn**	**15 06 46.0**	**+0.3**
MT03				Sn		**Sn**	**15 07 03.6**	**+0.4**
MT03	**Universidad Ad**	**1.12**	**357**	*e*P		**Pn**	**15 06 46.2**	**+0.5**
MT03				*e*S		**Sn**	**15 07 04.5**	**+1.3**
MT03				IAML			15 07 05.4	
	comp=Z,8μm,0.2s							
MT03	**Universidad Ad**	**1.12**	**357**	⇑*i*P		**Pn**	**15 06 46.2**	**+0.5**
MT03				*e*S		**Sn**	**15 07 03.6**	**+0.4**
MT03				IAML			15 07 04.8	
	comp=E,23μm,0.2s							
MT16	**CCHEN**	**1.19**	**357**			**Pn**	**15 06 46.7**	**+0.4**
MT16	**CCHEN**	**1.19**	**357**	⇑*i*P		**Pn**	**15 06 46.9**	**+0.6**
MT16				*e*S		**Sn**	**15 07 04.9**	**+0.5**
MT16				IAML			15 07 06.1	
	comp=E,9μm,0.6s							
MT14	**Cerro Calȷn**	**1.22**	**356**	⇑*i*P		**Pn**	**15 06 47.3**	**+0.6**
MT14				*e*S		**Sn**	**15 07 05.5**	**+0.4**
MT14				IAML			15 07 06.9	
	comp=E,30μm,0.3s							
MT04	**Ro Olivares**	**1.24**	**12**	⇑*i*P		**Pn**	**15 06 47.7**	**+0.7**
MT04				*e*S		**Sn**	**15 07 06.8**	**+1.2**
MT04				IAML			15 07 09.1	
	comp=N,4μm,0.2s							
MT05	**Renca**	**1.25**	**349**			**Pn**	**15 06 47.2**	**+0.3**
MT05	**Renca**	**1.25**	**349**	*e*P		**Pn**	**15 06 47.4**	**+0.5**
MT05				*e*S		**Sn**	**15 07 05.9**	**+0.4**
MT05				IAML			15 07 07.1	
	comp=Z,10μm,0.2s							
MT05	**Renca**	**1.25**	**349**	⇑*i*P		**Pn**	**15 06 47.4**	**+0.5**
MT05				*e*S		**Sn**	**15 07 05.7**	**+0.2**
MT05				IAML			15 07 07.2	
	comp=E,25μm,0.3s							
BO03	**Pichilemu**	**1.26**	**275**	⇑*i*P		**Pn**	**15 06 47.4**	**+0.4**
BO03				*e*S		**Sn**	**15 07 05.2**	**-0.4**
GO05	**Huala**	**1.28**	**252**	Pn		**Pn**	**15 06 47.1**	**-0.1**
GO05	**Huala**	**1.28**	**252**	*e*P		**Pn**	**15 06 47.2**	**-0.1**
GO05				*e*S		**Sn**	**15 07 06.2**	**+0.1**
GO05	**Huala**	**1.28**	**252**	⇑*i*P		**Pn**	**15 06 47.2**	**-0.1**
GO05				IAML			15 07 07.8	
	comp=E,4μm,0.2s							
FCH	**Farellones**	**1.29**	**6**	⇑*i*P		**Pn**	**15 06 48.4**	**+0.6**
FCH				*e*S		**Sn**	**15 07 07.8**	**+0.9**
FCH				IAML			15 07 09.4	
	comp=E,9μm,0.3s							
MT10	**Hacienda Santa**	**1.34**	**357**	⇑*i*P		**Pn**	**15 06 48.5**	**+0.4**
MT10				*e*S		**Sn**	**15 07 08.1**	**+0.5**
MT10				IAML			15 07 10.3	
	comp=N,8μm,0.3s							
VA05	**Santo Domingo**	**1.37**	**314**			**Pn**	**15 06 48.1**	**0.0**
VA05	**Santo Domingo**	**1.37**	**314**	⇑*i*P		**Pn**	**15 06 48.4**	**+0.2**
VA05				*e*S		**Sn**	**15 07 07.1**	**-0.6**
VA05				IAML			15 07 12.0	
	comp=E,21μm,0.3s							
ML02	**Panimavida**	**1.39**	**215**			**Pn**	**15 06 48.7**	**+0.2**
ML02	**Panimavida**	**1.39**	**215**	*e*P		**Pn**	**15 06 49.5**	**+1.0**
ML02				*e*S		**Sn**	**15 07 09.3**	**+1.0**
EDS3	**Malargue**	**1.43**	**144**	*e*P		**Pn**	**15 06 49.7**	**+0.6**
EDS3				*e*S		**Sn**	**15 07 06.2**	**-3.1**
MT02	**Curacav**	**1.47**	**337**			**Pn**	**15 06 49.5**	**0.0**
MT02	**Curacav**	**1.47**	**337**	*e*P		**Pn**	**15 06 49.6**	**+0.2**
MT02				*e*S		**Sn**	**15 07 10.0**	**0.0**
MT02				IAML			15 07 15.9	
	comp=Z,3μm,0.5s							
MT02	**Curacav**	**1.47**	**337**	⇑*i*P		**Pn**	**15 06 49.7**	**+0.2**
MT02				*e*S		**Sn**	**15 07 09.3**	**-0.6**
MT02				IAML			15 07 10.1	
	comp=N,3μm,0.4s							
PEL	**Peldehue**	**1.48**	**352**			**Pn**	**15 06 49.8**	**+0.2**
PEL	**Peldehue**	**1.48**	**352**	*e*P		**Pn**	**15 06 49.9**	**+0.3**
PEL				*e*S		**Sn**	**15 07 10.5**	**+0.2**
PEL				IAML			15 07 12.2	
	comp=E,15μm,0.5s							
RFA	**San Rafael**	**1.64**	**96**	*e*P		Pn	15 06 46.2	-5.2
RFA				*e*P		**Pn**	**15 06 51.8**	**+0.4**
RFA				*e*S		**Sn**	**15 07 13.7**	**+0.2**
ROCH	**El Roble**	**1.71**	**344**	⇑*i*P		**Pn**	**15 06 52.5**	**0.0**
ROCH				*i*P		**Pn**	**15 06 52.5**	**0.0**
ROCH				*e*S		**Sn**	**15 07 14.4**	**-0.9**
ROCH				IAML			15 07 20.2	
	comp=N,9μm,0.3s							
VA03	**San Esteban**	**1.85**	**357**			**Pn**	**15 06 54.5**	**+0.5**
VA03	**San Esteban**	**1.85**	**357**	*e*P		**Pn**	**15 06 54.6**	**+0.5**
VA03				*e*S		**Sn**	**15 07 19.9**	**+1.7**
VA03				*e*S		**Sn**	**15 07 20.2**	**+2.0**
VA03				IAML			15 07 24.1	
	comp=Z,3μm,0.6s							
VA03	**San Esteban**	**1.85**	**357**	*e*P		**Pn**	**15 06 54.5**	**+0.5**
VA03				*e*S		**Sn**	**15 07 19.6**	**+1.4**
VA03				IAML			15 07 24.6	
	comp=E,6μm,0.3s							
VA01	**Torpederas**	**1.88**	**327**	Pn		**Pn**	**15 06 54.7**	**+0.4**
VA01	**Torpederas**	**1.88**	**327**	*e*P		**Pn**	**15 06 54.6**	**+0.4**
VA01				*e*S		**Sn**	**15 07 19.2**	**+0.6**
VA01				IAML			15 07 27.3	
	comp=Z,2μm,0.6s							
VA01	**Torpederas**	**1.88**	**327**	*e*P		**Pn**	**15 06 54.8**	**+0.5**
VA01				IAML			15 07 27.6	
	comp=N,3μm,0.2s							
AVIZ	**Vizcacheras**	**1.96**	**55**	*e*P		**Pn**	**15 06 57.0**	**+1.6**
AVIZ				*e*S		Sn	15 07 35.7	+15
AAGR	**Agrelo**	**2.04**	**42**	*e*P		**Pn**	**15 06 57.6**	**+1.3**
AAGR				*e*S		**Sn**	**15 07 20.2**	**-2.0**
VA06	**Catapilco**	**2.17**	**341**	Pn		**Pn**	**15 06 57.8**	**-0.1**
VA06	**Catapilco**	**2.17**	**341**	⇑*i*P		**Pn**	**15 06 58.0**	**0.0**
VA06				IAML			15 07 30.4	
	comp=E,4μm,0.5s							
ARCO	**CERRO ARCO**	**2.17**	**36**	*e*P		**Pn**	**15 06 59.5**	**+1.3**
ARCO				*e*S		**Sn**	**15 07 19.7**	**-5.7**
ASAL	**Salagasta**	**2.43**	**34**	*e*P		**Pn**	**15 07 02.9**	**+1.6**
RTLS	**Leoncito**	**2.97**	**19**	*e*P		**Pn**	**15 07 10.5**	**+1.9**
RTLS				*e*S		**Sn**	**15 07 43.2**	**-0.9**
RTLS				IAML			15 07 49.2	
	comp=Z,1μm,0.4s							
BI05	**Punta Hualpn**	**3.08**	**226**	Pn		**Pn**	**15 07 08.8**	**-0.9**
RTCV	**Cerro Valdivia**	**3.18**	**31**	*e*P		**Pn**	**15 07 11.8**	**+0.8**
RTCV				*e*S		**Sn**	**15 07 49.8**	**+1.3**
CO02	**Combarbal**	**3.44**	**352**			**Pn**	**15 07 13.2**	**-0.8**
CO02	**Combarbal**	**3.44**	**352**	*e*P		**Pn**	**15 07 13.2**	**-1.3**
CO02				*e*S		**Sn**	**15 07 54.6**	**-0.2**
CO02				IAML			15 08 16.0	
	comp=Z,769nm,0.3s							
CO02	**Combarbal**	**3.44**	**352**	*e*P		**Pn**	**15 07 14.0**	**-0.5**
CO03	**El Pedregal**	**3.77**	**357**	Pn		**Pn**	**15 07 18.8**	**-0.3**
CO03	**El Pedregal**	**3.77**	**357**	*e*P		**Pn**	**15 07 19.2**	**+0.2**
CO03				*e*S		**Sn**	**15 08 02.0**	**-0.8**
CO03				IAML			15 08 04.9	
	comp=Z,584nm,0.2s							
CO03	**El Pedregal**	**3.77**	**357**	*e*P		**Pn**	**15 07 18.9**	**-0.1**
CO06	**Fray Jorge**	**4.06**	**345**	Pn		**Pn**	**15 07 21.9**	**-0.8**
CO06	**Fray Jorge**	**4.06**	**345**	*i*P		**Pn**	**15 07 22.5**	**-0.7**
GO04	**Tololo Observa**	**4.44**	**356**			**Pn**	**15 07 27.0**	**-1.1**
CO01	**Juntas del Tor**	**4.64**	**4**			**Pn**	**15 07 29.4**	**-1.3**
GO06	**Curarrehue**	**5.02**	**189**	Pn		**Pn**	**15 07 35.1**	**-0.6**
LCO	**Las Campanas**	**5.59**	**358**	Pn		**Pn**	**15 07 41.6**	**-2.1**
LR04	**Corral**	**5.77**	**203**	Pn		**Pn**	**15 07 42.9**	**-2.7**
AC05	**El Transito**	**5.77**	**1**	Pn		**Pn**	**15 07 44.9**	**-1.0**
PLCA	**Paso Flores**	**6.10**	**181**	Pn		**Pn**	**15 07 49.5**	**-0.8**
PLCA	**Paso Flores**	**6.10**	**181**	P		**Pn**	**15 07 50.9**	**+0.7**
	comp=Z,9.4nm,0.5s,baz=356,slow=11,SNR=59							
PLCA				S		**Sn**	**15 09 00.1**	**+1.3**
	comp=Z,18nm,1.0s,baz=348,slow=18,SNR=3.5							
AC04	**Llanos de Chal**	**6.42**	**355**	Pn		**Pn**	**15 07 52.3**	**-2.2**
GO03	**Copiap**	**7.00**	**2**	Pn		**Pn**	**15 08 00.5**	**-2.1**
H03S3	**Juan Fernandez** SNR=4.6	**7.06**	**274**	T		T	15 12 41.8	
H03N2	**Juan Fernandez** SNR=11	**7.15**	**277**	T		T	15 13 07.4	
TRQA	**Tornquist**	**7.64**	**119**	Pn		**Pn**	**15 08 10.4**	**-0.5**
AC02	**Maricunga**	**7.84**	**9**	Pn		**Pn**	**15 08 11.9**	**-2.3**
AC01	**Pan de Azucar**	**8.44**	**359**	Pn		**Pn**	**15 08 17.6**	**-4.3**
GO02	**Mina Guanaco**	**9.45**	**5**	Pn		**Pn**	**15 08 31.8**	**-4.1**
PB15	**IPOC Station P**	**11.40**	**5**			**Pn**	**15 08 58.2**	**-3.7**
LVC	**Limon Verde**	**12.04**	**7**	Pn		**Pn**	**15 09 06.8**	**-3.8**
LVC	**Limon Verde**	**12.04**	**7**	P		**Pn**	**15 09 06.6**	**-3.9**
	comp=Z,2.9nm,0.4s,baz=166,slow=9.2,SNR=8.3							
LVC				S		**Sn**	**15 11 25.6**	**+2.3**
	comp=Z,3.2nm,0.7s,baz=191,slow=17,SNR=1.8							
PB07	**IPOC Station P**	**12.85**	**2**			**Pn**	**15 09 19.7**	**-1.3**
CPUP	**Villa Florida**	**13.99**	**57**	P		**P**	**15 09 37.9**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=207,slow=6.8,SNR=1.7							
GO01	**Chusmiza**	**14.93**	**5**	Pn		**Pn**	**15 09 46.6**	**-1.4**
EFI	**East Falkland**	**19.25**	**156**	Pn		**P**	**15 10 37.1**	**-0.2**
SIV	**San Ignacio**	**20.37**	**27**	P		**P**	**15 10 50.4**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=185,slow=16,SNR=2.1							
	comp=Z,1.4nm,0.8s							
TXAR	**Lajitas Array**	**70.93**	**330**	P		**P**	**15 17 28.7**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=154,slow=9.1,SNR=16							
	comp=Z,1.3nm,0.6s							
KSPA	**Keystone Colle**	**75.96**	**356**	P		**P**	**15 17 53.1**	**-2.9**
KSPA				IAmb		IAmb	15 17 53.5	
	comp=Z,8.2nm,0.7s							
BOSA	**Boshof**	**78.61**	**117**	P		**P**	**15 18 14.4**	**+2.9**
	comp=Z,1.6nm,0.4s,baz=245,slow=3.8,SNR=10							
	comp=Z,1.6nm,0.4s							
TORD	**Torodi Ar. Bea**	**83.19**	**69**	P		**P**	**15 18 36.6**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=294,slow=3.0,SNR=11							
	comp=Z,1.6nm,0.7s							
PDAR	**Pinedale Array**	**84.92**	**332**	P		**P**	**15 18 45.3**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=167,slow=4.5,SNR=7.9							
	comp=Z,0.7nm,0.7s							
NVAR	**Mina Array Bea**	**85.15**	**324**	P		**P**	**15 18 46.9**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=160,slow=5.2,SNR=8.2							
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**117.59**	**205**	PKP		**PKPdf**	**15 24 54.5**	**-0.4**
	comp=Z,0.3nm,1.0s,baz=142,slow=1.6,SNR=6.4							
WRA	**Warramunga Arr**	**120.84**	**207**	PKP		**PKPdf**	**15 25 01.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=156,slow=2.0,SNR=12							
BVAR	**Borovoye Array**	**146.82**	**44**	PKPbc		**PKPab**	**15 25 51.8**	**+0.1**
	comp=Z,2.7nm,0.4s,baz=304,slow=2.6,SNR=19							
KK31	**Karatay Array**	**148.67**	**63**			**PKiKP**	**15 25 56.3**	**-0.6**

KKAR	Karatay Array	148.67	63			PKiKP	15 25 56.3	-0.5
YAK	Yakutsk	149.75	341			PKiKP	15 25 58.5	+0.1
KURBB	Kurchatov Arra	152.39	45	PKPbc		PKiKP	15 26 05.5	+1.2
	comp=Z,2.1nm,0.5s,baz=300,slow=2.9,SNR=25							
KURBB				PKPab		PKPab	15 26 16.1	+1.4
	comp=Z,1.1nm,0.7s,baz=294,slow=4.5,SNR=8.4							
ZALV	Zalesovo Beam	154.01	34	PKP		PKPdf	15 25 57.8	-1.5
	comp=Z,0.5nm,0.6s,baz=328,slow=5.1,SNR=1.9							
ZALV				PKPbc		PKiKP	15 26 08.4	+1.0
	comp=Z,1.3nm,0.4s,baz=320,slow=3.2,SNR=8.0							
ZALV				PKPab		PKPab	15 26 22.5	+1.1
	comp=Z,0.5nm,0.4s,baz=313,slow=6.7,SNR=2.5							
MKAR	Makanchi Array	156.15	51	PKP		PKPdf	15 26 03.6	+1.1
	comp=Z,0.2nm,0.6s,baz=248,slow=2.1,SNR=2.6							
MKAR				PKPab		PKPab	15 26 30.7	-0.2
	comp=Z,0.3nm,0.4s,baz=304,slow=3.1,SNR=7.9							

DJA 04 15:06:58.9±0.5, 11°S±4°×11°2E±°, h10km, M4.0/12, mb4.1/3, MLv3.9/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PWJI	Pagerwojo	2.76	352	P			Pn	15 07 43.1	-0.1
PWJI				S			Sn	15 08 18.0	+1.4
GMJI	Gumukmas	2.77	27	P			Pn	15 07 43.8	+0.4
JAGI	Jajag, Banyuwa	2.99	40	P			Pn	15 07 46.9	+0.4
JAGI				S			Sn	15 08 23.3	+0.8
UGM	Wanagama	3.28	330	P			Pn	15 07 50.9	+0.5
BLJI	Banyuglugur	3.31	25	P			Pn	15 07 49.9	-0.9
NGJI	Ngawi	3.46	348	P			Pn	15 07 51.7	-1.1
SRBI	Singaraja	4.00	48	P			Pn	15 07 59.7	-0.6
KPJI	Karang Pucung	4.69	316	P			Pn	15 08 09.6	-0.2
CMJI	Cimerak	4.74	308	P			Pn	15 08 10.8	+0.4
BWJI	Bawean	4.91	5	P			Pn	15 08 13.2	+0.4
TWSI	Taliwang, Sumb	5.05	67	P			Pn	15 08 14.7	0.0
	19nm,1.1s,0.1nm								
PLAI	Plampang	5.83	71	P			Pn	15 08 25.8	+0.3
	24nm,1.1s,0.1nm								

TAP 04 15:10:30.5, 24°21N×121°76E, h16km, ML1.6, 1C-2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	Heping Village	0.10	350	eP			Pg	15 10 34.3	+0.4
	baz=353								
EAHA	Aohua	0.12	351	⇓iP			Pb	15 10 34.6	+0.1
EAHA	baz=350				i		Sb	15 10 37.6	+0.5
	baz=350								
ETL	Fush Village	0.14	247	iP			Pb	15 10 34.9	+0.1
ETL	baz=247				S		Sb	15 10 38.2	+0.6
	baz=247								
NACB	Ninganchiao	0.16	256	⇓iP			Pb	15 10 35.1	+0.1
NACB	baz=256				i		Sb	15 10 38.5	+0.3
	baz=256								
TWD	Chiawan	0.20	229	iP			Pb	15 10 35.8	-0.1
TWD	baz=227				S		Sb	15 10 39.0	-0.4
	baz=227								
ENA	Nanau	0.22	355	eP			Pb	15 10 36.7	+0.6
ENA	baz=357				S		Sb	15 10 39.9	0.0
	baz=357								
EWUT	Wuta	0.23	4	P			Pb	15 10 36.1	-0.3
EWUT	baz=4.0				S		Sb	15 10 40.4	0.0
	baz=4.0								
ETLH	Xiulin Townshi	0.25	269	P			Pg	15 10 36.3	+0.1
ETLH	baz=268				S		Sb	15 10 41.1	0.0
	baz=268								
HWA	Hwalien	0.27	211	eP			Pb	15 10 37.4	+0.3
HWA	baz=209				eS		Sb	15 10 42.4	+0.9
	baz=209								
LXIB	Xiulin Townshi	0.37	239	eP			Pn	15 10 40.5	-0.9
ESAO	baz=239 Su ao	0.37	12	iP			Pb	15 10 38.9	+0.1
ESAO	baz=11				S		Sb	15 10 44.7	+0.4
	baz=11								
LATG	Datong	0.39	327	P			Pb	15 10 38.9	-0.2
NNSB	baz=326 Datong	0.41	302	eP			Pb	15 10 40.0	+0.5
NDT	baz=302 Datong Townshi	0.45	330	eP			Pn	15 10 41.5	-0.9
SHUL	baz=329 Shoufeng	0.46	203	iP			Pb	15 10 40.3	0.0
SHUL	baz=203				S		Sb	15 10 47.4	+0.5
	baz=203								
ENTT	Nioudou	0.46	338	eP			Pg	15 10 39.8	0.0
ESL	baz=338 Shilin	0.50	217	eP			Pg	15 10 40.6	+0.2
ESL	baz=216				i	S	Sb	15 10 48.6	+0.6
	baz=216								
TWT	Tachien	0.54	275	eP			Pg	15 10 41.2	+0.1
TWT	baz=273				eS		Sb	15 10 49.0	-0.2
	baz=273								
FUSB	Fushanzhiwuyua	0.57	344	eP			Pb	15 10 42.8	+0.7
YHNB	baz=343 Yeheng	0.57	323	iP			Pb	15 10 42.4	+0.1
YHNB	baz=322				eS		Sb	15 10 50.7	+0.4
	baz=322								
WARBT	Fenglin Townsh	0.60	215	eP			Pg	15 10 42.4	+0.1
WUSB	baz=214 Renai	0.63	250	eP			Pg	15 10 41.1	-1.8
WUSB	baz=249				S		Sb	15 10 52.4	+0.6
	baz=249								
NFF	Wufeng Townshi	0.72	306	⇑iP			Pb	15 10 45.0	+0.2
NFF	baz=305				S		Sb	15 10 55.2	+0.7
	baz=305								
WHP	Taichung City	0.75	275	eP			Pn	15 10 46.0	-0.5
WHP	baz=275				eS		Sn	15 10 58.5	+0.9
	baz=275								
LIOB	Emei	0.80	303	iP			Pg	15 10 46.4	+0.2
LIOB	baz=302				eS		Sb	15 10 57.2	+0.4
	baz=302								

TAP 04 15:10:39.5, 24°24N×121°74E, h11km, ML1.7, 1C-4D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	Heping Village	0.07	359	eS			Sg	15 10 44.0	+0.3
	baz=5.0								
EAHA	Aohua	0.09	358	⇓P			Pg	15 10 42.9	+0.8
EAHA	baz=358				S		Sg	15 10 45.0	+1.1
	baz=358								
ETL	Fush Village	0.14	233	P			Pb	15 10 43.7	-0.4
ETL	baz=232				i	S	Sg	15 10 46.3	+1.2
	baz=232								
NACB	Ninganchiao	0.15	244	⇓P			Pb	15 10 43.8	-0.5
NACB	baz=243				i	S	Sg	15 10 46.6	+1.3
	baz=243								
ENA	Nanau	0.19	360	P			Pb	15 10 44.7	-0.3
ENA	baz=2.0				i	S	Sg	15 10 47.7	+1.3
	baz=2.0								
EWUT	Wuta	0.21	9	iP			Pb	15 10 44.7	-0.6
EWUT	baz=9.0				S		Sg	15 10 48.2	+1.2
	baz=9.0								
TWD	Chiawan	0.21	220	P			Pb	15 10 44.8	-0.5
TWD	baz=218				S		Sg	15 10 48.0	+1.1
	baz=218								
ETLH	Xiulin Townshi	0.24	262	iP			Pb	15 10 45.4	-0.6
ETLH	baz=261				S		Sg	15 10 49.5	+1.6
	baz=261								
HWA	Hwalien	0.29	206	iP			Pb	15 10 46.2	-0.5
	baz=203								
ESAO	Su ao	0.35	16	⇓iP			Pb	15 10 47.2	-0.5
ESAO	baz=15				eS		Sb	15 10 52.5	-0.7
	baz=15								
LATG	Datong	0.35	326	⇓eP			Pg	15 10 46.1	-0.5
LATG	baz=326				S		Sb	15 10 52.9	-0.6
	baz=326								
ETM	Tongmen	0.36	220	P			Pg	15 10 47.1	+0.5
ETM	baz=219				eS		Sb	15 10 52.8	-0.7
	baz=219								
LXIB	Xiulin Townshi	0.37	234	eP			Pg	15 10 46.4	-0.6
LXIB	baz=233				eS		Sb	15 10 53.4	-0.6
	baz=233								
NNSB	Datong	0.38	300	eP			Pg	15 10 46.4	-0.7
NNSB	baz=299				i	S	Sb	15 10 54.0	-0.2
	baz=299								
TWC	Suao	0.38	15	eP			Pg	15 10 47.1	+0.1
TWC	baz=16				eS		Sb	15 10 53.6	-0.5
	baz=16								
NNS	Nan Shan	0.39	301	eP			Pg	15 10 46.8	-0.5
NNS	baz=300				eS		Sb	15 10 54.3	-0.3
	baz=300								
NDS	Dongshan	0.39	357	⇑P			Pg	15 10 47.8	+0.5
NDS	baz=356				i	S	Sb	15 10 54.6	+0.1
	baz=356								
NDT	Datong Townshi	0.42	330	P			Pb	15 10 48.3	-0.6
NDT	baz=329				eS		Sb	15 10 55.7	+0.4
	baz=329								
ENTT	Nioudou	0.43	338	eP			Pg	15 10 48.2	+0.3
ENTT	baz=338				S		Sb	15 10 55.8	+0.2
	baz=338								
WHF	Hehuan Shan	0.45	258	eP			Pg	15 10 48.3	0.0
WHF	baz=257				eS		Sb	15 10 55.7	-0.7
	baz=257								
FUSS	Fushou	0.46	271	eP			Pb	15 10 49.2	-0.5
FUSS	baz=270				S		Sb	15 10 56.1	-0.5
	baz=270								
SHUL	Shoufeng	0.48	200	eP			Pg	15 10 48.7	-0.2
SHUL	baz=199				S		Sb	15 10 57.6	+0.6
	baz=199								
TWE	Neicheng	0.48	352	P			Pb	15 10 49.5	-0.5
TWE	baz=353				i	S	Sb	15 10 57.2	+0.1
	baz=353								
ESL	Shilin	0.51	214	eP			Pb	15 10 51.0	+0.6
ESL	baz=212				i	S	Sb	15 10 58.2	+0.3
	baz=212								
FUSB	Fushanzhiwuyua	0.54	345	eP			Pb	15 10 51.5	+0.5
FUSB	baz=344				i	S	Sb	15 10 59.1	+0.3
	baz=344								
YHNB	Yeheng	0.54	322	eP			Pb	15 10 51.9	+0.8
YHNB	baz=322				S		Sb	15 10 59.6	+0.7
	baz=322								
CHGB	Renai	0.55	251	iP			Pb	15 10 51.0	-0.3
CHGB	baz=250				i	S	Sb	15 10 59.6	+0.3
	baz=250								
NSK	Sanguang	0.56	321	eP			Pb	15 10 52.0	+0.6
NSK	baz=321				S		Sb	15 10 59.9	+0.5
	baz=321								
OWD	Renai	0.59	241	eP			Pn	15 10 53.1	-0.9
OWD	baz=241				eS		Sn	15 11 03.5	-0.2
	baz=241								
WARBT	Fenglin Townsh	0.61	212	eP			Pb	15 10 53.2	+0.9
WARBT	baz=212				eS		Sb	15 11 02.2	+1.3
	baz=212								
WUSB	Renai	0.62	247	eP			Pb	15 10 53.2	+0.8
NFF	baz=246 Wufeng Townshi	0.69	305	eP			Pn	15 10 54.6	-0.6
TIPB	baz=304 Shuangxi	0.73	6	eP			Pb	15 10 54.9	+0.5
NHDH	baz=5.0 Xindian Distri	0.75	345	eP			Pb	15 10 54.3	-0.2
NHDH	baz=344				eS		Sb	15 11 05.0	+0.3
	baz=344								
HGSD	Ruisui	0.80	201	eP			Pb	15 10 55.4	0.0
	baz=201								

UPA ***04*** *15:11:14.3±0.4, 5°.57N×73°.88W, h0km±33km, MW4.7*
IDC ***04*** *15:11:16.5±0.4, 6°.75N×72°.88W, h161km±4km, mb3.9/17, mbtmp4.4/23, Error ellipse: s-maj=10.1km s-min=6.5km az=122.0*
RSNC ***04*** *15:11:17.9±0.8, 6°.82N×73°.16W, h153km±3km, ML4.4, Mw4.7, Fault plane solution: NP1:φ±s58.00000°, δ77.00000°, λ-82.00000°.*
VAO ***04*** *15:11:18.2±0.4, 6°.75N×72°.90W, h163km, mb4.5*
NEIC ***04*** *15:11:18.2±1.5, 6°.72N±0°.07×72°.99W±0°.09, h170km±8km, mb4.5/227, Error ellipse: s-maj=13.4km s-min=10.4km az=106.0*

ISC 04 15:11:17.0±0.4, 6°83N±0°.03×73°03W±0°.03, h163km±4km, n542, σ1§65/502, mb4.5/120, 5C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	Barichara	0.28	212	⇓iP			Pn	15 11 38.5	-1.0
BARC					eS		Sn	15 11 54.6	-1.9
BARC					i			15 11 55.1	
	comp=Z,6μm,0.3s								
PAMC	Pamplona, Colo	0.60	33	⇓iP			Pn	15 11 41.3	+0.3
PAMC					eS		Sn	15 11 58.7	-0.6
PAMC					i			15 12 00.9	
	comp=Z,9μm,0.5s								
TAMC	Tame, Arauca	1.29	108	⇓iP			Pn	15 11 46.6	+0.9
TAMC					eS		Sn	15 12 08.2	+0.6
TAMC					i			15 12 09.9	
	comp=Z,2μm,0.5s								
OCAC	Ocana	1.43	348	eP			Pn	15 11 46.7	-0.4
OCAC					eS		Sn	15 12 08.6	-1.6
PTBC	PUERTO BERRIO,	1.44	258	eP			Pn	15 11 45.1	-1.9
PTBC					eS		Sn	15 12 06.8	-3.4
PTBC					i			15 12 14.2	
	comp=Z,4μm,0.4s								
SPBC	San Pablo de B	1.56	221	⇓iP			Pn	15 11 47.3	-1.1
SPBC					eS		Sn	15 12 09.6	-3.0
SPBC					i			15 12 12.4	
	comp=Z,5μm,0.4s								
ROSC	El Rosal	2.36	213				Pn	15 11 58.0	+0.6
ROSC	El Rosal	2.36	213	P			Pn	15 11 58.1	+0.6
	comp=Z,949nm,0.3s,baz=90,slow=9.1,SNR=262								
ROSC					S		Sn	15 12 28.7	-0.2
	comp=Z,4μm,0.6s,baz=94,slow=6.5,SNR=8.6								
ROSC	El Rosal	2.36	213	⇓iP			Pn	15 11 58.1	+0.6
ROSC					eS		Sn	15 12 28.0	-0.9
ROSC					i			15 12 34.9	
	comp=Z,3μm,0.5s								
BOG	Bogota	2.42	205	eP			Pn	15 11 58.5	+0.2
BOG					eS		Sn	15 12 29.7	-0.5
CVER	Cruz Verde, Cu	2.52	204	⇓iP			Pn	15 11 59.6	+0.1
CVER					eS		Sn	15 12 30.8	-1.6
CVER					i			15 12 36.1	
	comp=Z,2μm,0.3s								
MEDEC	Medelln, Ant	2.60	258	eP			Pn	15 11 59.8	-0.4
MEDEC					eS		Sn	15 12 31.5	-2.2
UREC	San Jos de Ur	2.64	290	eP			Pn	15 11 59.1	-1.4
UREC	San Jos de Ur	2.64	290	eP			Pn	15 11 58.4	-2.1
UREC					eS		Sn	15 12 30.2	-4.1
UREC					i			15 12 40.6	
	comp=Z,2μm,0.4s								
PTGC	Puerto Gaitan,	2.77	161	⇓iP			Pn	15 12 01.4	-0.7
PTGC					eS		Sn	15 12 34.6	-2.5
PTGC					i			15 12 37.4	
	comp=Z,2μm,0.4s								
VILC	Villavicencio,	2.78	194	⇓iP			Pn	15 12 01.4	-1.0
VILC					eS		Sn	15 12 35.8	-1.9
VILC					i			15 12 45.8	
	comp=Z,3μm,0.4s								
GUY2C	Guyana, Caldas	2.82	236	eP			Pn	15 12 03.1	-0.1
GUY2C					eS		Sn	15 12 37.0	-1.8
GUY2C					i			15 12 46.8	
	comp=Z,2μm,0.7s								
LL6C	La Loma 6 Bece	2.89	355	⇑iP			Pn	15 12 03.0	-0.6
LL6C					i			15 12 55.2	
	comp=Z,903nm,0.4s								
NIZA	Niza - Manizal	3.00	234	eP			Pn	15 12 06.8	+1.6
NIZA					eS		Sn	15 12 44.6	+2.0
CBOC	Ciudad Bolivar	3.11	252	eP			Pn	15 12 06.2	-0.3
CBOC					eS		Sn	15 12 41.4	-3.5
CBOC					i			15 12 49.4	
	comp=Z,620nm,0.3s								
SDV	Santo Domingo	3.13	49	Pn			Pn	15 12 07.7	+0.9
SDV	Santo Domingo	3.13	49	P			Pn	15 12 07.0	+0.2
	comp=Z,528nm,0.3s,baz=213,slow=4.7,SNR=377								
SDV					S		Sn	15 12 43.6	-1.8
	comp=Z,719nm,0.6s,baz=294,slow=20,SNR=29								
SDV	Santo Domingo	3.13	49	eP			Pn	15 12 07.9	+1.1
SDV					eS		Sn	15 12 44.3	-1.1
SDV	Santo Domingo	3.13	49	eP			Pn	15 12 07.9	+1.1
SDV					eS		Sn	15 12 44.9	-0.5
SDV					i			15 12 51.8	
	comp=Z,539nm,0.5s								
DBBC	Dabeiba	3.16	274	⇑iP			Pn	15 12 06.0	-1.0
DBBC					eS		Sn	15 12 42.2	-3.6
DBBC					i			15 12 44.8	
	comp=Z,938nm,0.4s								
ARGC	Ariguani, Magd	3.24	338	⇑iP			Pn	15 12 08.5	+0.6
ARGC					eS		Sn	15 12 46.6	-1.0
ARGC					i			15 12 56.2	
	comp=Z,755nm,0.2s								
ARMEC	Armenia, Quind	3.46	229	eP			Pn	15 12 12.9	+2.0
ARMEC					eS		Sn	15 12 52.4	-0.4
PRAC	Prado	3.61	211	eP			Pn	15 12 11.5	-1.2
PRAC					eS		Sn	15 12 53.9	-2.1
PRAC					i			15 12 58.2	
	comp=Z,2μm,0.5s								
ORTC	Ortega, Tolima	3.65	217	eP			Pn	15 12 12.6	-0.6
ORTC					eS		Sn	15 12 54.4	-2.5
ORTC					i			15 13 02.2	
	comp=Z,1μm,0.4s								
APAC	Apartado, Choc	3.67	287	⇑iP			Pn	15 12 12.4	-1.0
APAC					eS		Sn	15 12 53.6	-3.8
APAC					i			15 12 58.2	
	comp=Z,984nm,0.4s								
SJCC	San Jacinto, C	3.71	325	eP			Pn	15 12 12.8	-1.3
SJCC					eS		Sn	15 12 54.0	-4.4
SJCC					i			15 12 58.7	
	comp=Z,1μm,0.4s								
PLMC	San Jos del P	3.76	240	eP			Pn	15 12 14.0	-0.6
PLMC					eS		Sn	15 12 55.8	-3.7
PLMC					i			15 12 59.6	
	comp=Z,460nm,0.4s								
CRJC	Cerrejon, Guaj	4.16	2	⇑iP			Pn	15 12 18.8	-1.1
CRJC					eS		Sn	15 13 05.9	-3.0
CRJC					i			15 13 10.9	
	comp=Z,1μm,0.2s								
YOTC	Yotoco, Valle	4.35	230	⇓iP			Pn	15 12 21.2	-1.1
YOTC					eS		Sn	15 13 11.0	-2.2
SOLC	Bahia Solano	4.39	262	eP			Pn	15 12 23.3	+0.6
SOLC					eS		Sn	15 13 10.0	-4.0
SMRC	Santa Marta, M	4.46	345	eP			Pn	15 12 23.1	-0.5
SMRC					eS		Sn	15 13 11.6	-4.1
SMRC					i			15 13 17.0	
	comp=Z,497nm,0.2s								
CAPC	Capurgana	4.64	293	eP			Pn	15 12 23.4	-2.6
CAPC					eS		Sn	15 13 14.5	-5.3
CAPC					i			15 13 17.0	
	comp=Z,491nm,0.6s								
PIZC	Pizarro, Choco	4.69	247	eP			Pn	15 12 27.0	+0.4
PIZC					eS		Sn	15 13 18.3	-2.6
PIZC					i			15 13 38.5	
	comp=Z,238nm,0.5s								
PTAC	Punta Ardita,	4.75	274	eP			Pn	15 12 19.4	-8.0
PTAC	Punta Ardita,	4.75	274	eP			Pn	15 12 25.4	-2.1
PTAC					eS		Sn	15 13 18.4	-4.0
PTAC					i			15 13 28.0	
	comp=Z,185nm,0.4s								
BETC	Betania	4.77	210	eP			Pn	15 12 26.2	-1.6
BETC					eS		Sn	15 13 16.1	-7.0
BETC					i			15 13 26.9	
	comp=Z,220nm,0.5s								
URIC	Uribia, Colomb	4.95	12	eP			Pn	15 12 28.8	-1.2
URIC					eS		Sn	15 13 24.3	-2.8
URIC					i			15 13 31.5	
	comp=Z,332nm,0.9s								
JAMC	Jamundi, Valle	5.11	225	eP			Pn	15 12 31.8	-0.5
JAMC					eS		Sn	15 13 26.8	-4.4
JAMC					i			15 13 40.0	
	comp=Z,122nm,0.7s								
MALC	Bahia Malaga	5.12	237	eP			Pn	15 12 33.1	+0.8
MALC					eS		Sn	15 13 31.1	0.0
UPD2	Meteti	5.22	289	eP			Pn	15 12 30.7	-2.9
UPD2	Meteti	5.22	289	eP			Pn	15 12 31.5	-2.1
UPD2					eS		Sn	15 13 30.0	-3.6
GARC	Garzon, Huila	5.23	208	⇓iP			Pn	15 12 32.4	-1.6
GARC					eS		Sn	15 13 26.5	-7.6
GARC					i			15 13 36.0	
	comp=Z,285nm,0.3s								
BAUV	El Baul	5.37	67				Pn	15 12 33.9	-1.6
POPC	Popayan, Colom	5.60	221	⇓iP			Pn	15 12 38.5	-0.4
POPC					eS		Sn	15 13 41.0	-1.9
BBAC	Balboa, Cauca	6.36	222	eP			Pn	15 12 49.2	+0.3
BBAC					eS		Sn	15 13 57.8	-3.3
AUA1	Aruba	6.38	28	Pn			Pn	15 12 48.7	-0.2
CRUC	La Cruz	6.53	217	eP			Pn	15 12 52.6	+1.3
UPA	Univ. de Panam	6.78	289	eP			Pn	15 12 51.9	-2.4
UPA	Univ. de Panam	6.78	289	eP			Pn	15 12 51.5	-2.8
UPA					eS		Sn	15 14 03.4	-7.3
PTLC	Puerto Leguiza	6.85	195	eS			Sn	15 14 28.9	+17
GCUF	Volcan Galeras	7.04	218	eP			Pn	15 12 58.8	+0.6
GCUF					eS		Sn	15 14 17.0	-0.5
BCIP	Isla Barro Col	7.13	289	Pn			Pn	15 12 56.0	-2.9
BCIP	Isla Barro Col	7.13	289	eP			Pn	15 12 56.5	-2.3
BCIP	Isla Barro Col	7.13	289	eP			Pn	15 12 55.7	-3.1
BCIP					eS		Sn	15 14 13.5	-5.4
BCIP					i			15 14 28.9	
	comp=Z,45nm,0.5s								
AZU	Azuero	7.25	278	eP			Pn	15 12 54.1	-6.3
AZU					eS		Sn	15 14 09.7	-12
AZU	Azuero	7.25	278	eP			Pn	15 12 58.8	-1.6
AZU					eS		Sn	15 14 14.2	-7.5
AZU					i			15 14 18.2	
	comp=Z,65nm,0.6s								
CHIT3	Chitre	7.41	279	eP			Pn	15 12 56.5	-6.0
CHIT3					eS		Sn	15 14 14.4	-11
TULM	Tulcn-Chalpat	7.71	218				Pn	15 13 07.6	+0.6
TULM	Tulcn-Chalpat	7.71	218	eP			Pn	15 13 08.0	+1.0
OTAV	Otavalo	8.49	220	Pn			Pn	15 13 16.5	-0.9
OTAV	Otavalo	8.49	220	eP			Pn	15 13 18.7	+1.3
PCRV	Puerto La Cruz	8.94	68	P			Pn	15 13 22.3	-0.7
	comp=Z,10.0nm,0.4s,baz=330,slow=3.6,SNR=26								
PCRV					S		Sn	15 14 59.1	-3.5
	comp=Z,22nm,0.6s,baz=308,slow=20,SNR=1.9								
PRVC	Isla de Provid	10.46	309	eP			Pn	15 13 40.5	-2.5
PRVC					eS		Sn	15 15 31.4	-7.6
SRBA	San Rafael, Bu	10.50	284				Pn	15 13 43.5	-0.1
COHC	Cochancay	11.13	214	Pn			Pn	15 13 52.0	+0.3
LCR2	La Lucha 2	11.24	286	Pn			Pn	15 13 55.0	+1.7
BOSC	San Juan Bosco	11.32	209				Pn	15 13 54.6	+0.3
HDC	Heredia	11.40	287	eP			Pn	15 13 59.2	+3.7
MTDJ	Mount Denham	12.14	339	Pn			Pn	15 14 06.4	+1.4
MTDJ	Mount Denham	12.14	339	eP			Pn	15 14 07.9	+3.0
MTDJ					eS		Sn	15 16 10.2	-9.4
SDDR	Presa de Saban	12.20	8	Pn			Pn	15 14 06.6	+1.1
SDDR	Presa de Saban	12.20	8	eP			Pn	15 14 09.5	+4.0
SDDR					eS		Sn	15 16 15.8	-4.9
JTS	Las Juntas de	12.28	287				P	15 14 14.0	+1.8
JTS	Las Juntas de	12.28	287	P			P	15 14 14.0	+1.8
	comp=Z,53nm,0.8s,baz=71,slow=4.9,SNR=23								
ORTG	Ortega, Santa	12.78	287				P	15 14 19.6	+1.8
SJG	San Juan	13.06	30	P			Pn	15 14 14.5	-2.2
	comp=Z,7.0nm,0.4s,baz=130,slow=22,SNR=2.0								
SJG					S

CZSB Cruzeiro do Su 14.47 179 eP Pn 15 14 34.0 -0.4
ATAH Atahualpa 14.87 201 P Pn 15 14 40.4 +0.6
comp=Z,5.7nm,0.5s,baz=4.1,slow=6.7,SNR=6.2
MACA Manacapuru-AM 15.83 128 Pn 15 14 50.5 -0.6
MACA IAmb IAmb 15 14 54.9
comp=Z,25nm,0.9s
MACA Manacapuru-AM 15.83 128 eP Pn 15 14 51.3 +0.1
MTO3 Montecristo 17.71 296 IAmb IAmb 15 15 16.8
comp=Z,13nm,0.7s
ETMB Extrema 17.88 158 P P 15 15 13.4 -0.7
ETMB Extrema 17.88 158 eP P 15 15 13.9 -0.3
SAML Samuel 18.50 148 P P 15 15 19.8 -1.1
SAML IAmb IAmb 15 15 21.8
comp=Z,24nm,0.7s
SAML Samuel 18.50 148 eP P 15 15 20.6 -0.3
NNA Nana 19.08 191 P P 15 15 26.9 -0.3
comp=Z,6.3nm,0.5s,baz=358,slow=10,SNR=7.0
PETF Flores 19.26 303 IAmb IAmb 15 15 35.3
comp=Z,43nm,1.2s
TEIG Tepich 19.90 313 P P 15 15 37.4 +1.4
ITTB Itaituba 20.54 122 eP P 15 15 43.9 +0.9
MALB Monte Alegre 20.62 114 eP P 15 15 45.6 +1.8
CCIG Comitan 20.92 298 P P 15 15 48.3 +1.1
CCIG IAmb IAmb 15 15 51.1
comp=Z,17nm,0.7s
MCPB Macapa, AP 22.11 108 eP P 15 15 60.0 +0.4
NPGB Novo Progresso 22.38 128 eP P 15 16 02.1 0.0
LPAZ La Paz 23.48 168 P P 15 16 11.5 -1.3
PB16 IPOC Station P 25.25 172 P P 15 16 25.7 -3.1
SIV San Ignacio 25.58 153 P P 15 16 29.7 -1.6
comp=Z,5.0nm,0.9s,baz=322,slow=8.0,SNR=20
comp=Z,5.0nm,0.9s
PTLB Pontes e Lacer 26.07 148 P P 15 16 34.7 -0.9
PTLB Pontes e Lacer 26.07 148 eP P 15 16 34.9 -0.6
TIGA Tifton 26.40 339 P P 15 16 40.9 +2.6
baz=156
GO01 Chusmiza 26.61 172 IAmb IAmb 15 16 40.9
comp=Z,5.6nm,0.7s
PB11 IPOC Station P 26.64 173 P P 15 16 39.1 -1.7
PB11 IAmb IAmb 15 16 42.4
comp=Z,8.8nm,0.8s
BBSD Serra de San D 26.84 153 eP P 15 16 41.3 -1.2
GOGA Godfrey 28.16 341 P P 15 16 56.4 +2.3
baz=158
SALV Santo Antonio 28.37 143 eP P 15 16 56.3 +0.2
SNDB Serra Nova Dou 28.57 131 eP P 15 16 58.2 +0.3
LRAL Lakeview Retre 29.12 335 P P 15 17 04.7 +2.1
baz=151
KMSC Kings Mountain 29.19 346 P P 15 17 05.3 +2.1
baz=163
LVC Limon Verde 29.54 172 P P 15 17 05.5 -1.3
comp=Z,1.2nm,0.4s,baz=78,slow=11,SNR=2.0
comp=Z,1.2nm,0.4s
LVC Limon Verde 29.54 172 eP P 15 17 06.7 -0.1
W52A Murphy 29.86 342 IAmb IAmb 15 17 12.4
comp=Z,13nm,0.8s
VBMS Vicksburg 30.06 329 P P 15 17 13.1 +2.3
baz=144
TZTN Tazewell 31.10 343 P P 15 17 22.4 +2.4
baz=160
PLAL Pickwick Lake 31.25 336 P P 15 17 22.5 +1.1
PLAL IAmb IAmb 15 17 24.1
comp=Z,17nm,0.8s
RVDE Rio Verde (Bra 31.28 146 eP P 15 17 21.7 -0.1
OXF Oxford 31.42 333 P P 15 17 24.5 +1.7
baz=148
CBN Corbin Frederi 31.48 353 P P 15 17 25.9 +2.6
baz=172
BDQN Bodoquena, MS 31.48 150 eP P 15 17 22.4 -1.1
HBVL Hebbronville 31.59 313 P P 15 17 24.2 -0.2
NATX Nacogdoches 31.98 324 P P 15 17 29.4 +1.6
baz=136
AQDB Aquidauana 32.05 148 P P 15 17 27.7 -0.8
AQDB IAmb IAmb 15 18 04.4
comp=Z,9.2nm,0.8s
AQDB Aquidauana 32.05 148 eP P 15 17 27.4 -1.1
WVT Waverly 32.16 337 P P 15 17 30.6 +1.4
WVT Waverly 32.16 337 P P 15 17 30.7 +1.5
baz=152
833A Chaparral WMA, 32.84 314 P P 15 17 36.1 +0.8
baz=126
X40A Basin Creek Fa 33.03 329 IAmb IAmb 15 17 37.6
comp=Z,9.9nm,0.7s
435B Jarrell 33.12 319 P P 15 17 39.4 +1.6
baz=131
MCWV Mont Chateau 33.25 350 P P 15 17 39.7 +1.0
baz=168
BDFB Brasilia 33.36 132 P P 15 17 40.0 0.0
BDFB IAmb IAmb 15 17 41.0
comp=Z,7.5nm,0.6s
BDFB Brasilia 33.36 132 P P 15 17 39.8 -0.3
comp=Z,7.0nm,0.6s,baz=292,slow=12,SNR=13
comp=Z,7.0nm,0.6s
WHAR Woolly Hollow 33.40 331 IAmb IAmb 15 17 41.9
comp=Z,16nm,0.8s
MIAR Mount Ida 33.46 328 P P 15 17 41.8 +1.1
baz=141
WCI Wyandotte Cave 33.49 341 P P 15 17 42.9 +2.1
baz=156
LCAR Lake Charles 33.50 333 IAmb IAmb 15 17 43.1
comp=Z,13nm,0.6s
P52A Corning 33.67 347 P P 15 17 44.9 +2.5
baz=164
WHTX Lake Whitney, 33.84 321 P P 15 17 45.3 +1.4
baz=133,SNR=5.1
FW13 Cleburne 34.07 321 IAmb IAmb 15 17 47.7
comp=Z,14nm,0.8s
O53A New Philadelph 34.07 349 P P 15 17 47.2 +1.4
baz=165
DRIO Del Rio 34.35 314 IAmb IAmb 15 17 50.0
comp=Z,7.2nm,0.9s
BRDY Brady 34.37 318 IAmb IAmb 15 17 49.8
comp=Z,24nm,1.3s
JCT Junction City 34.41 317 P P 15 17 49.7 +0.8
baz=128
ACSO Alum Creek Sta 34.43 346 P P 15 17 51.5 +2.6
baz=162
M53A WI Miller and 35.13 350 P P 15 17 57.5 +2.6
baz=167
CCM Cathedral Cave 35.20 335 P P 15 17 56.5 +1.0
CCM Cathedral Cave 35.20 335 P P 15 17 57.5 +1.9
baz=148
BINY Binghamton 35.32 356 P P 15 17 59.0 +2.5
baz=175
PCMB Pacaembu 35.42 143 eP P 15 17 56.7 -1.0
RLO Rose Lookout 35.46 329 P P 15 17 58.0 +0.2
RLO IAmb IAmb 15 17 58.9
comp=Z,20nm,0.7s
WTFS Witchita Falls 35.67 322 IAmb IAmb 15 18 01.2
comp=Z,16nm,0.8s
TUL3 Leonard 35.67 327 P P 15 18 00.4 +0.8
baz=139
ERPA Erie 35.68 351 P P 15 18 01.4 +1.8
baz=168
SFIN Lafayette 35.70 341 P P 15 18 01.4 +1.6
baz=156,SNR=5.5
S39A Bolivar 35.82 332 IAmb IAmb 15 18 02.9
comp=Z,9.9nm,0.7s
JANB Januaria 35.83 128 eP P 15 18 00.6 -0.7
SGCY Sterling City 36.18 317 IAmb IAmb 15 18 05.6
comp=Z,9.8nm,0.6s
CPUP Villa Florida 36.32 156 ScP ScP 15 23 55.9 -1.9
comp=Z,1.9nm,0.8s,baz=342,slow=6.4,SNR=4.2
APMT Aspermont 36.41 320 P P 15 18 06.8 +0.9
APMT IAmb IAmb 15 18 07.2
comp=Z,6.2nm,0.7s
TX31 Lajitas Ar. Si 36.52 312 IAmb IAmb 15 18 08.8
comp=Z,7.5nm,0.8s
TXAR Lajitas Array 36.52 312 P P 15 18 07.8 +0.7
comp=Z,5.9nm,0.6s,baz=130,slow=9.1,SNR=14
TXAR PcP PcP 15 20 29.1 +1.8
comp=Z,1.5nm,0.6s,baz=129,slow=6.2,SNR=8.3
comp=Z,5.9nm,0.6s
WMOK Wichita Mounta 36.52 323 IAmb IAmb 15 18 07.7
comp=Z,8.7nm,0.7s
WMOK Wichita Mounta 36.52 323 P P 15 18 06.8 -0.1
baz=134,SNR=8.5
HDIL Hopedale 36.59 339 P P 15 18 07.8 +0.4
baz=152
SN01 Snyder 1 36.61 319 IAmb IAmb 15 18 09.3
comp=Z,15nm,0.7s
T35A Sooner Cattle 36.81 328 IAmb IAmb 15 18 10.3
comp=Z,15nm,0.9s
MNHN Monahans 36.97 315 IAmb IAmb 15 18 12.0
comp=Z,9.5nm,1.0s
DKNS Dickens 37.14 320 IAmb IAmb 15 18 13.9
comp=Z,10.0nm,0.7s

LBNH Lisbon 37.27 1 P P 15 18 15.3 +2.2
baz=182
LONY Lake Ozonia 37.66 358 P P 15 18 18.2 +1.9
baz=177,SNR=5.7
VHRN Van Horn 38.25 313 IAmb IAmb 15 18 23.3
comp=Z,13nm,1.1s
AMTX Amarillo 38.40 321 P P 15 18 24.0 +1.2
baz=130
KSU1 Kansas State U 38.52 330 P P 15 18 23.8 +0.2
baz=140,SNR=5.3
MNTQ Montreal, Queb 38.52 359 IAmb IAmb 15 18 26.7
comp=Z,16nm,1.0s
MSTX Muleshoe 38.53 319 IAmb IAmb 15 18 25.8
comp=Z,12nm,0.8s
MSTX Muleshoe 38.53 319 P P 15 18 24.4 +0.5
baz=128,SNR=6.9
JFWS Jewell Farm 39.01 340 P P 15 18 28.7 +1.1
baz=152
MNTX Cornudas Mount 39.03 314 P P 15 18 28.9 +0.9
baz=123,SNR=17
RTBA Rita Blanca 40.06 322 P P 15 18 37.5 +1.0
RTBA IAmb IAmb 15 18 37.9
comp=Z,10nm,0.7s
121A Cookes Peak, D 41.20 313 IAmb IAmb 15 18 49.0
comp=Z,13nm,1.1s
121A Cookes Peak, D 41.20 313 P P 15 18 47.6 +1.6
baz=121,SNR=5.9
ANMO Albuquerque 41.56 317 P P 15 18 50.1 +1.2
ANMO Albuquerque 41.56 317 P P 15 18 50.2 +1.2
baz=125
319A Douglas 41.74 311 IAmb IAmb 15 18 53.0
comp=Z,13nm,0.8s
SPMN Marine on St. 41.93 339 P P 15 18 52.3 +0.8
baz=150
ECSD EROS Data Cent 42.17 334 P P 15 18 53.2 -0.3
ECSD IAmb IAmb 15 18 54.4
comp=Z,12nm,1.1s
SDCO Great Sand Dun 42.59 321 IAmb IAmb 15 18 60.0
comp=Z,8.7nm,0.7s
SDCO Great Sand Dun 42.59 321 P P 15 18 59.0 +1.6
baz=128,SNR=19
Q24A Divide 43.14 323 P P 15 19 02.9 +1.1
baz=130
TUC Tucson 43.31 311 P P 15 19 03.5 +0.6
TUC Tucson 43.31 311 P P 15 19 04.3 +1.3
baz=118
S22A 4UR Ranch, Cre 43.43 320 IAmb IAmb 15 19 07.0
comp=Z,14nm,1.2s
S22A 4UR Ranch, Cre 43.43 320 P P 15 19 06.0 +1.8
baz=127,SNR=12
SUSD Miller 43.77 333 P P 15 19 06.7 +0.3
baz=141,SNR=9.0
X18A Snowflake 43.77 314 IAmb IAmb 15 19 09.5
comp=Z,8.2nm,0.8s
EYMN Ely 43.88 342 P P 15 19 07.8 +0.6
baz=153,SNR=21
W18A Petrified Fore 43.92 315 IAmb IAmb 15 19 10.7
comp=Z,18nm,0.8s
W18A Petrified Fore 43.92 315 P P 15 19 09.7 +1.8
baz=121,SNR=6.7
ISCO Idaho Springs 43.95 323 IAmb IAmb 15 19 10.8
comp=Z,12nm,0.9s
ISCO Idaho Springs 43.95 323 P P 15 19 09.9 +1.7
baz=130,SNR=10
MVCO Mesa Verde 44.20 318 IAmb IAmb 15 19 12.5
comp=Z,26nm,1.4s
MVCO Mesa Verde 44.20 318 P P 15 19 11.7 +1.5
baz=124,SNR=8.2
214A Organ Pipe Nat 44.69 309 P P 15 19 15.3 +1.4
baz=116,SNR=8.5
N23A Red Feather La 44.84 324 P P 15 19 17.1 +1.8
baz=130,SNR=6.4
WUAZ Wupatki 45.27 315 P P 15 19 19.5 +0.8
WUAZ IAmb IAmb 15 19 21.8
comp=Z,25nm,0.9s
WUAZ Wupatki 45.27 315 P P 15 19 20.4 +1.8
baz=120,SNR=22
AGMN Agassiz Nation 45.65 339 P P 15 19 21.9 +0.8
baz=148
Y14A Wickenburg 45.71 312 IAmb IAmb 15 19 24.1
comp=Z,13nm,0.7s
O20A White River Ci 45.74 322 P P 15 19 24.2 +1.9
baz=127,SNR=6.7
RSSD Black Hills 45.97 329 P P 15 19 24.6 +0.6
RSSD Black Hills 45.97 329 P P 15 19 25.5 +1.4
baz=135
HMU Henry Mountain 46.09 318 IAmb IAmb 15 19 28.3
comp=Z,31nm,1.1s
K22A Casper 46.31 326 P P 15 19 27.9 +1.2
baz=131
U15A North Rim 46.37 315 IAmb IAmb 15 19 30.1
comp=Z,14nm,1.0s
SRU San Rafael Swe 46.59 319 IAmb IAmb 15 19 31.1
comp=Z,11nm,0.8s
GLA Glamis 46.69 310 P P 15 19 31.0 +1.4
baz=115
P18A Preston Nutter 46.70 320 IAmb IAmb 15 19 32.3
comp=Z,19nm,1.4s
PDMCI Parker Dam,Lak 46.71 312 P P 15 19 31.1 +1.4
baz=116
MDND Maddock 46.72 336 P P 15 19 30.8 +1.3
baz=142
RDMU Red Mountain 46.82 322 IAmb IAmb 15 19 32.6
comp=Z,16nm,1.3s
KNB Kanab 47.03 316 IAmb IAmb 15 19 35.2
comp=Z,17nm,0.9s
ULM Lac du Bonnet 47.30 340 IAmb IAmb 15 19 35.0
comp=Z,29nm,1.1s
ULM Lac du Bonnet 47.30 340 P P 15 19 34.0 0.0
comp=Z,15nm,0.6s,baz=147,slow=7.2,SNR=34
comp=Z,15nm,0.6s
LCMT Little Creek M 47.33 315 IAmb IAmb 15 19 37.2
comp=Z,15nm,0.9s
PLCA Paso Flores 47.39 177 P P 15 19 32.6 -2.2
PLCA Paso Flores 47.39 177 P P 15 19 32.8 -2.1
comp=Z,1.4nm,0.7s,baz=360,slow=9.8,SNR=7.1
PLCA ScP ScP 15 24 39.5 -2.2
comp=Z,1.7nm,1.0s,baz=327,slow=1.6,SNR=3.8
comp=Z,1.4nm,0.7s
SWSC Sam W. Stewart 47.40 309 P P 15 19 36.7 +1.7
baz=114,SNR=5.5
IRM Iron Mountain 47.40 311 P P 15 19 36.5 +1.4
baz=115,SNR=8.0
BC3 Big Chuckawall 47.42 310 P P 15 19 36.3 +0.9
baz=115
SZCU Shurtz Canyon 47.51 316 IAmb IAmb 15 19 38.0
comp=Z,7.7nm,0.7s
IKP In-Ko-Pah, Jac 47.52 309 P P 15 19 37.2 +1.1
baz=113
BSUT Blidstrem Ca 47.54 321 IAmb IAmb 15 19 38.7
comp=Z,12nm,0.8s
MPU Maple Canyon 47.80 320 IAmb IAmb 15 19 40.4
comp=Z,10nm,0.8s
MONP2 Monument Peak 47.86 309 P P 15 19 40.3 +1.4
baz=113
V12A Nelson 47.87 313 IAmb IAmb 15 19 40.9
comp=Z,13nm,0.8s
BELC Belle Mtn. Jos 47.98 310 P P 15 19 41.0 +1.3
baz=114
GMRC Granite Mounta 48.05 311 P P 15 19 41.6 +1.4
baz=116
NLU North Lily Min 48.05 319 IAmb IAmb 15 19 42.5
comp=Z,8.7nm,0.9s
BW06 Boulder Array 48.12 324 P P 15 19 41.7 +1.0
baz=128,SNR=5.4
PDAR Pinedale Array 48.12 324 P P 15 19 41.3 +0.6
comp=Z,4.2nm,0.7s,baz=128,slow=9.0,SNR=30
PDAR PcP PcP 15 21 05.9 +0.2
comp=Z,0.7nm,0.6s,baz=133,slow=6.6,SNR=3.0
comp=Z,4.2nm,0.7s
SCHQ Schefferville 48.12 5 P P 15 19 41.0 +0.8
SCHQ IAmb IAmb 15 19 42.3
comp=Z,11nm,0.7s
SCHQ Schefferville 48.12 5 P P 15 19 41.0 +0.8
comp=Z,11nm,0.7s,baz=195,slow=7.6,SNR=16
comp=Z,11nm,0.7s
TPFO Pinon Flats 48.16 310 P P 15 19 42.4 +1.3
baz=114
PFO Pinyon Flats O 48.17 310 P P 15 19 42.1 +1.0
baz=114
109C Camp Elliot, M 48.38 308 P P 15 19 43.5 +0.9
baz=113
TUQ Turquoise Moun 48.52 312 P P 15 19 45.0 +1.2
baz=116
HEC Hector,Ludlow 48.57 311 P P 15 19 45.7 +1.6
baz=115,SNR=7.0
HWUT Hardware Ranch 48.65 322 IAmb IAmb 15 19 46.6
comp=Z,8.2nm,0.7s

DUG Dugway, Tooele 48.66 319 IAmb IAmb 15 19 47.2
comp=Z,7.9nm,0.8s
DUG Dugway, Tooele 48.66 319 P P 15 19 46.4 +1.5
baz=122,SNR=8.1
MURC Murrieta 48.73 309 P P 15 19 46.6 +1.3
baz=113
BBRC Big Bear Solar 48.78 310 P P 15 19 47.3 +1.3
baz=114
LAO LASA Array 48.87 330 IAmb IAmb 15 19 47.5
comp=Z,15nm,1.2s
LAO LASA Array 48.87 330 P P 15 19 47.1 +0.9
baz=134
SHOC Shoshone, Teco 48.98 313 P P 15 19 48.6 +1.4
baz=116
AHID Auburn Hatcher 49.03 323 IAmb IAmb 15 19 49.2
comp=Z,10nm,0.9s
GSC Goldstone, Bar 49.12 312 IAmb IAmb 15 19 50.5
comp=Z,9.6nm,0.8s
GSC Goldstone, Bar 49.12 312 P P 15 19 49.7 +1.4
baz=115,SNR=12
DGMT Dagmar 49.18 333 P P 15 19 50.5 +2.0
baz=137
BGU Big Grassy Mou 49.19 320 IAmb IAmb 15 19 50.7
comp=Z,16nm,0.7s
SNOW Snow King Moun 49.24 324 IAmb IAmb 15 19 51.9
comp=Z,14nm,1.1s
LOHW Long Hollow 49.24 324 IAmb IAmb 15 19 51.2
comp=Z,9.9nm,0.6s
BFSC Mount Baldy Ra 49.33 310 P P 15 19 50.5 +0.5
baz=113
TPAW Teton Pass 49.37 324 IAmb IAmb 15 19 52.2
comp=Z,13nm,1.0s
Q12A Willow Creek R 49.41 317 IAmb IAmb 15 19 53.0
comp=Z,12nm,0.9s
RLMT Red Lodge 49.42 327 P P 15 19 51.8 +1.2
baz=130
TPNV Topopah Spring 49.42 314 IAmb IAmb 15 19 53.4
comp=Z,9.0nm,0.9s
TPNV Topopah Spring 49.42 314 P P 15 19 52.8 +2.1
baz=117,SNR=13
CIS Catalina Islan 49.59 309 P P 15 19 53.6 +1.7
baz=112
R11B Troy Canyon, C 49.60 316 P P 15 19 53.4 +1.4
baz=118,SNR=12
FURC Furnace Creek, 49.66 313 P P 15 19 53.8 +1.6
baz=116
H17A Grant Village 49.70 325 P P 15 19 54.3 +1.6
baz=128
EDW2 Edwards Air Fo 49.84 311 P P 15 19 54.8 +1.1
baz=114,SNR=8.3
LRMC Laurel Mtn Rad 49.84 311 P P 15 19 55.0 +1.1
baz=114,SNR=5.6
DECC Green Verdugo 49.85 310 P P 15 19 55.2 +1.4
baz=113
MPMC Manual Prospec 49.94 312 P P 15 19 55.3 +0.6
baz=115
GRAC Grapevine Rang 50.25 313 P P 15 19 58.3 +1.5
baz=116
ISA Isabella, Lake 50.51 311 P P 15 19 60.0 +1.2
baz=114
CWC Cottonwood Cre 50.53 312 P P 15 20 00.6 +1.6
baz=115
ARVC Arvin 50.57 310 P P 15 20 01.0 +1.8
baz=113
SCZ2 Santa Cruz Isl 50.76 309 P P 15 20 02.5 +1.8
baz=112
DSP Deep Springs 50.84 313 IAmb IAmb 15 20 03.8
comp=Z,11nm,0.9s
BOZ Bozeman (W) 51.02 326 IAmb IAmb 15 20 04.5
comp=Z,6.1nm,0.8s
BOZ Bozeman (W) 51.02 326 P P 15 20 03.8 +1.3
baz=127,SNR=10
PKM Mcpherson Peak 51.22 310 P P 15 20 05.5 +1.2
baz=112
HLID Hailey 51.48 322 P P 15 20 07.2 +1.2
baz=123,SNR=12
SMMC Simmler 51.52 310 P P 15 20 07.5 +1.2
baz=112,SNR=5.2
NVAR Mina Array Bea 51.54 315 P P 15 20 07.8 +1.2
comp=Z,3.6nm,0.7s,baz=123,slow=7.3,SNR=33
NVAR PcP PcP 15 21 19.6 +1.2
comp=Z,1.3nm,0.7s,baz=137,slow=4.4,SNR=6.0
comp=Z,3.6nm,0.7s
EGMT Eagleton 51.55 329 IAmb IAmb 15 20 08.3
comp=Z,16nm,1.3s
EGMT Eagleton 51.55 329 P P 15 20 07.9 +1.6
baz=131
LHV Little Huntoon 51.60 314 IAmb IAmb 15 20 09.4
comp=Z,13nm,1.4s
MDPB Devils Postpil 51.75 313 IAmb IAmb 15 20 10.6
comp=Z,7.2nm,0.9s
MFID Camas Ranch 52.27 321 IAmb IAmb 15 20 14.5
comp=Z,10nm,0.7s
YERR Yerington 52.44 315 IAmb IAmb 15 20 16.6
comp=Z,8.4nm,0.8s
PNTR Pine Nut 52.73 315 IAmb IAmb 15 20 20.8
comp=Z,7.3nm,0.7s
EMB Emerald Bay 53.04 314 IAmb IAmb 15 20 20.1
comp=Z,6.9nm,0.9s
MPK Martis Peak 53.12 315 IAmb IAmb 15 20 22.3
comp=Z,12nm,0.9s
PLID Pearl Lake 53.26 323 IAmb IAmb 15 20 20.4
comp=Z,7.1nm,0.8s
WVOR Wild Horse Val 53.58 319 IAmb IAmb 15 20 24.7
comp=Z,14nm,1.1s
FCC Fort Churchill 54.28 347 IAmb IAmb 15 20 27.0
comp=Z,14nm,1.1s
F10A Beach Ranch, E 54.46 323 IAmb IAmb 15 20 28.9
comp=Z,7.0nm,0.7s
I07A Izee 54.91 320 IAmb IAmb 15 20 33.4
comp=Z,9.0nm,1.0s
NEW Newport 55.63 326 P P 15 20 36.5 +0.5
baz=123
J05D Fort Rock, OR 55.66 319 IAmb IAmb 15 20 38.4
comp=Z,14nm,0.9s
L04D Klamath Falls 55.92 317 IAmb IAmb 15 20 40.4
comp=Z,15nm,1.1s
YBH Yreka Blue Hor 55.99 316 IAmb IAmb 15 20 38.8
comp=Z,4.3nm,0.6s
G06A Carlson Farm, 56.17 321 IAmb IAmb 15 20 42.5
comp=Z,8.5nm,1.0s
I04A Tendick Farm, 56.66 319 IAmb IAmb 15 20 45.6
comp=Z,7.0nm,1.1s
H04A Detroit Lake 56.90 320 IAmb IAmb 15 20 49.2
comp=Z,12nm,0.8s
I03D Drain, OR 57.23 318 IAmb IAmb 15 20 49.0
comp=Z,7.9nm,0.7s
HILA High Level 61.63 336 P P 15 21 17.2 0.0
DY2G Dye2 62.34 12 *i* P P 15 21 21.8 -0.3
DY2G IAmb IAmb 15 21 23.3
comp=Z,5.0nm,0.6s
YKA Yellowknife Ar 63.28 340 P P 15 21 28.4 +0.4
comp=Z,9.3nm,0.7s,baz=131,slow=6.7,SNR=188
YKA pP pP 15 22 07.7 +0.9
comp=Z,0.9nm,0.5s,baz=129,slow=6.5,SNR=1.9
comp=Z,9.3nm,0.7s
FLDN Fort Liard 65.30 335 P P 15 21 42.6 +1.4
baz=123
KOTAN Kotaneelee Air 65.48 335 P P 15 21 43.3 +0.9
baz=122
ICESG Greenland Ices 65.92 12 *i* P P 15 21 43.5 -2.0
ICESG IAmb IAmb 15 21 47.9
comp=Z,8.3nm,1.0s
T35M Bob Quinn 66.84 330 P P 15 21 53.1 +2.0
baz=115
WRGLY Wrigley 66.93 338 P P 15 21 52.1 +0.5
WRGLY Wrigley 66.93 338 P P 15 21 52.7 +1.2
baz=124
DLBC Dease Lake 67.36 331 P P 15 21 55.1 +0.7
baz=116
WTLY Watson Lake, Y 67.54 333 P P 15 21 56.8 +1.3
baz=117,SNR=5.9
DBIC Dimbokro 67.65 86 P P 15 21 54.0 -3.0
comp=Z,2.1nm,0.6s,baz=264,slow=6.2,SNR=3.1
comp=Z,2.1nm,0.6s
S34M Telegraph Cree 67.66 331 P P 15 21 58.1 +1.8
baz=114
CRAG Craig 67.72 328 P P 15 21 57.7 +1.0
baz=112
U33K Whale Pass 67.96 328 P P 15 21 59.5 +1.4
baz=112
R33M Jennings River 68.21 332 IAmb IAmb 15 22 02.2
comp=Z,14nm,1.1s
R33M Jennings River 68.21 332 P P 15 22 01.2 +1.4
baz=115
Q32M Nakina River 68.64 331 P P 15 22 03.9 +1.3
baz=114
SUMG Summit 68.96 11 P P 15 22 05.0 +0.4

SUMG	**Summit**	**68.96**	**11**	*i* P	**P**	**15 22 04.0**	**-0.6**
SUMG				IAmb	IAmb	15 22 06.6	
	comp=Z,11nm,0.7s						
S32K	**Killisnoo**	**69.20**	**329**	P	**P**	**15 22 07.9**	**+2.1**
	baz=111						
P33M	**Teslin, Yukon**	**69.39**	**333**	P	**P**	**15 22 09.0**	**+1.9**
	baz=114						
SIT	**Sitka**	**69.44**	**329**	P	**P**	**15 22 09.2**	**+1.9**
	baz=110						
P32M	**Atlin**	**69.57**	**332**	P	**P**	**15 22 09.6**	**+1.4**
	baz=112						
N32M	**Quiet Lake**	**69.89**	**333**	P	**P**	**15 22 11.7**	**+1.6**
	baz=114						
FARO	**Faro, Yukon**	**70.44**	**334**	P	**P**	**15 22 15.3**	**+1.9**
	baz=114						
WHY	**Whitehorse**	**70.51**	**333**	P	**P**	**15 22 15.4**	**+1.5**
	baz=112						
M31M	**Drury Creek, Y**	**70.88**	**334**	IAmb	IAmb	15 22 18.1	
	comp=Z,4,3nm,0.7s						
M31M	**Drury Creek, Y**	**70.88**	**334**	P	**P**	**15 22 17.9**	**+1.8**
	baz=113						
O30N	**Mendenhall**	**71.11**	**332**	P	**P**	**15 22 19.6**	**+2.1**
	baz=111,SNR=5.4						
N31M	**Braeburn, Yuko**	**71.22**	**333**	P	**P**	**15 22 20.0**	**+1.9**
	baz=111						
P30M	**Million Dollar**	**71.29**	**332**	P	**P**	**15 22 20.3**	**+1.7**
	baz=110						
NEEM	**North Greenlan**	**71.53**	**5**	*i* P	**P**	**15 22 19.4**	**-0.7**
NEEM				IAmb	IAmb	15 22 22.1	
	comp=Z,13nm,0.8s						
MAYO	**Mayo, Yukon**	**72.05**	**335**	P	**P**	**15 22 25.0**	**+2.0**
	baz=112						
M30M	**Minto, Yukon**	**72.06**	**334**	IAmb	IAmb	15 22 25.2	
	comp=Z,12nm,0.8s						
M30M	**Minto, Yukon**	**72.06**	**334**	P	**P**	**15 22 24.5**	**+1.4**
	baz=111,SNR=7.2						
YUK6	**Outpost Mounta**	**72.21**	**332**	P	**P**	**15 22 25.8**	**+1.5**
	baz=109						
A36M	**Sachs Harbour**	**72.45**	**345**	P	**P**	**15 22 25.7**	**+0.6**
	baz=125,SNR=22						
YUK4	**Talbot Arm**	**72.47**	**333**	P	**P**	**15 22 27.4**	**+1.6**
	baz=109						
J30M	**Hart River**	**72.59**	**336**	P	**P**	**15 22 28.0**	**+1.7**
	baz=112						
G31M	**Satah River**	**72.72**	**339**	P	**P**	**15 22 28.2**	**+1.4**
	baz=114						
M29M	**Somme Creek**	**72.74**	**334**	P	**P**	**15 22 28.8**	**+1.5**
	baz=109						
F31M	**Tsiigehtchic**	**72.75**	**339**	IAmb	IAmb	15 22 28.4	
	comp=Z,8.1nm,0.7s						
F31M	**Tsiigehtchic**	**72.75**	**339**	P	**P**	**15 22 28.1**	**+1.1**
	baz=115,SNR=9.4						
K29M	**Barlow Dome**	**72.81**	**335**	P	**P**	**15 22 29.2**	**+1.5**
	baz=110						
L29M	**L29M**	**72.82**	**334**	P	**P**	**15 22 28.8**	**+1.1**
	baz=110						
I30M	**Mount Dempster**	**72.85**	**337**	P	**P**	**15 22 29.4**	**+1.6**
	baz=112						
INK	**Inuvik**	**73.05**	**340**	P	**P**	**15 22 30.0**	**+1.3**
	baz=115,SNR=6.1						
J29N	**Klondike Camp**	**73.31**	**336**	IAmb	IAmb	15 22 32.5	
	comp=Z,5.6nm,0.7s						
J29N	**Klondike Camp**	**73.31**	**336**	P	**P**	**15 22 32.1**	**+1.6**
	baz=110						
EPYK	**Eagle Plains**	**73.41**	**338**	P	**P**	**15 22 32.2**	**+1.2**
	baz=112						
YUK3	**Moose Creek**	**73.43**	**333**	P	**P**	**15 22 33.4**	**+2.0**
	baz=107,SNR=8.0						
G30M	**tAoh Zraii Nji**	**73.45**	**339**	P	**P**	**15 22 32.5**	**+1.2**
	baz=112						
F30M	**Barrier River**	**73.54**	**339**	P	**P**	**15 22 33.1**	**+1.4**
	baz=113						
CTG	**Chitna Glacier**	**73.61**	**332**	P	**P**	**15 22 34.1**	**+1.7**
	baz=106						
TORD	**Torodi Ar. Bea**	**73.65**	**78**	P	**P**	**15 22 30.9**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=286,slow=6.9,SNR=3.5						
TORD				pP	**pP**	**15 23 11.7**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=300,slow=4.8,SNR=2.3 comp=Z,0.2nm,0.3s						
DAWY	**Dawson**	**73.67**	**335**	P	**P**	**15 22 33.5**	**+0.9**
	baz=109						
MESA	**MESA**	**73.69**	**331**	P	**P**	**15 22 33.6**	**+0.6**
	baz=105						
BVCY	**Beaver Creek**	**73.80**	**333**	P	**P**	**15 22 35.2**	**+1.9**
	baz=107						
M27K	**Edge Creek, AK**	**74.23**	**333**	IAmb	IAmb	15 22 38.7	
	comp=Z,9.0nm,1.0s						
M27K	**Edge Creek, AK**	**74.23**	**333**	P	**P**	**15 22 37.7**	**+1.6**
	baz=106						
I28M	**Miner Creek**	**74.33**	**336**	P	**P**	**15 22 37.7**	**+1.3**
	baz=108						
L27K	**Beaver Creek,**	**74.41**	**334**	P	**P**	**15 22 38.9**	**+2.0**
	baz=106						
MCARA	**McCarthy VSAT**	**74.50**	**332**	P	**P**	**15 22 39.1**	**+1.7**
	baz=104						
E29M	**Blow River**	**74.57**	**340**	IAmb	IAmb	15 22 39.4	
	comp=Z,10nm,0.8s						
E29M	**Blow River**	**74.57**	**340**	P	**P**	**15 22 38.6**	**+1.0**
	baz=111,SNR=14						
EGAK	**Eagle**	**74.61**	**336**	P	**P**	**15 22 39.5**	**+1.5**
	baz=107						
M26K	**Nabesna, AK**	**74.75**	**333**	P	**P**	**15 22 40.1**	**+1.3**
	baz=105						
K27K	**Chicken**	**74.78**	**335**	P	**P**	**15 22 41.1**	**+2.2**
	baz=106						
KAIM	**Kayak Island**	**74.83**	**330**	P	**P**	**15 22 41.4**	**+2.1**
	baz=103						
F28M	**Old Crow**	**75.00**	**339**	P	**P**	**15 22 40.9**	**+0.7**
	baz=109						
I27K	**Kandik River**	**75.04**	**336**	P	**P**	**15 22 41.7**	**+1.2**
	baz=107						
L26K	**Log Cabin Wild**	**75.06**	**334**	IAmb	IAmb	15 22 43.3	
	comp=Z,6.4nm,0.7s						
L26K	**Log Cabin Wild**	**75.06**	**334**	P	**P**	**15 22 42.5**	**+1.8**
	baz=105,SNR=5.5						
BMRM	**Bremner River**	**75.15**	**331**	P	**P**	**15 22 42.9**	**+1.7**
	baz=103						
H27K	**Steamboat Moun**	**75.19**	**337**	P	**P**	**15 22 42.4**	**+1.1**
	baz=107						
D28M	**Stokes Point**	**75.19**	**340**	P	**P**	**15 22 41.8**	**+0.6**
	baz=111						
E28M	**Babbage River**	**75.21**	**340**	P	**P**	**15 22 41.8**	**+0.4**
	baz=110						
N25K	**Chitina, Valde**	**75.29**	**332**	P	**P**	**15 22 43.4**	**+1.4**
	baz=103						
J26L	**Joseph Creek**	**75.53**	**335**	P	**P**	**15 22 44.5**	**+1.1**
	baz=105						
SCRK	**Sand Creek**	**75.58**	**334**	IAmb	IAmb	15 22 46.0	
	comp=Z,7.3nm,1.0s						
SCRK	**Sand Creek**	**75.58**	**334**	P	**P**	**15 22 45.2**	**+1.5**
	baz=104,SNR=5.2						
RIDG	**Independent Ri**	**75.89**	**334**	P	**P**	**15 22 47.0**	**+1.6**
	baz=103						
D27M	**Malcolm River**	**75.91**	**340**	P	**P**	**15 22 46.3**	**+0.9**
	baz=108						
PAX	**Paxson**	**75.99**	**333**	P	**P**	**15 22 47.4**	**+1.4**
	baz=103						
M24K	**Tolsona, Glenn**	**76.13**	**332**	P	**P**	**15 22 47.7**	**+1.0**
	baz=102						
K24K	**Donnelly Dome**	**76.31**	**334**	P	**P**	**15 22 49.1**	**+1.4**
	baz=103						
P23K	**Montague Islan**	**76.31**	**330**	P	**P**	**15 22 48.7**	**+1.0**
	baz=100						
J25K	**Salcha River,**	**76.32**	**335**	P	**P**	**15 22 48.9**	**+1.1**
	baz=103						
PRP	**Porcupine Dome**	**76.59**	**336**	IAmb	IAmb	15 22 51.0	
	comp=Z,5.7nm,0.7s						
PRP	**Porcupine Dome**	**76.59**	**336**	P	**P**	**15 22 50.2**	**+0.8**
	baz=103,SNR=7.1						
SCM	**Sheep Creek Mo**	**76.61**	**332**	P	**P**	**15 22 50.4**	**+0.9**
	baz=101						
M23K	**Glacier View**	**76.79**	**332**	P	**P**	**15 22 52.0**	**+1.6**
	baz=100						
DHY	**Denali Highway**	**76.87**	**333**	P	**P**	**15 22 51.6**	**+0.6**
	baz=101						
WAT6	**Susitna Watana**	**76.94**	**333**	P	**P**	**15 22 52.1**	**+0.7**
	baz=100						
HDA	**Harding Lake**	**76.94**	**335**	IAmb	IAmb	15 22 52.7	
	comp=Z,6.3nm,0.7s						
HDA	**Harding Lake**	**76.94**	**335**	P	**P**	**15 22 52.1**	**+1.0**
	baz=102						
ILAR	**Eielson Array**	**76.99**	**335**	P	**P**	**15 22 51.9**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=115,slow=4.3,SNR=22						
ILAR				pP	**pP**	**15 23 30.7**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=107,slow=4.3,SNR=2.5						
ILAR				PP	**PP**	**15 25 48.0**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=104,slow=6.0,SNR=4.1 comp=Z,1.7nm,0.7s						
KNK	**Knik Glacier**	**77.07**	**331**	P	**P**	**15 22 53.4**	**+1.4**
	baz=100						
SML	**Sawmill**	**77.07**	**332**	P	**P**	**15 22 53.2**	**+1.2**
	baz=100						
G25K	**Bearman Lake**	**77.10**	**337**	P	**P**	**15 22 53.7**	**+1.7**
	baz=103						
F25K	**Christian Rive**	**77.12**	**338**	P	**P**	**15 22 53.8**	**+1.6**
	baz=104						
E25K	**Arctic Village**	**77.22**	**338**	P	**P**	**15 22 54.4**	**+1.7**
	baz=104						
POKR	**Poker Plat Res**	**77.29**	**335**	P	**P**	**15 22 54.7**	**+1.6**
	baz=101						
SEW	**Seward**	**77.34**	**330**	P	**P**	**15 22 54.7**	**+1.2**
	baz=98						
GHO	**Glory Hole Cre**	**77.35**	**332**	IAmb	IAmb	15 22 55.5	
	comp=Z,17nm,0.9s						
WAT1	**Susitna Watana**	**77.35**	**333**	P	**P**	**15 22 54.9**	**+1.3**
	baz=100						
COLA	**College**	**77.41**	**335**	P	**P**	**15 22 54.7**	**+0.9**
	baz=101						
PMR	**Palmer**	**77.42**	**332**	P	**P**	**15 22 55.2**	**+1.4**
	baz=99						
RND	**Reindeer**	**77.58**	**333**	IAmb	IAmb	15 22 57.2	
	comp=Z,14nm,0.7s						
H24K	**Noodor Dome**	**77.61**	**336**	P	**P**	**15 22 56.3**	**+1.3**
	baz=101						
G24K	**Hadweenzic Riv**	**77.62**	**337**	P	**P**	**15 22 56.4**	**+1.4**
	baz=102						
RC01	**Rabbit Creek A**	**77.63**	**331**	P	**P**	**15 22 55.8**	**+0.8**
	baz=98						
D25K	**Kavik River**	**77.78**	**340**	P	**P**	**15 22 56.9**	**+1.1**
	baz=103						
F24K	**Squaw Lake**	**77.94**	**338**	P	**P**	**15 22 58.4**	**+1.6**
	baz=102						
CUT	**Chulitna**	**78.07**	**332**	P	**P**	**15 22 58.5**	**+1.1**
	baz=98						
I23K	**Minto, Yukon-K**	**78.09**	**335**	P	**P**	**15 22 58.3**	**+0.7**
	baz=100						
SUA	**Susitna One**	**78.16**	**331**	P	**P**	**15 22 58.9**	**+0.7**
	baz=98						
TRF	**Thorofare Moun**	**78.23**	**333**	P	**P**	**15 22 59.1**	**+0.6**
	baz=98						
SKT	**Skwentna**	**78.60**	**332**	P	**P**	**15 23 01.2**	**+0.8**
	baz=97						
D24K	**Happy Valley**	**78.60**	**339**	P	**P**	**15 23 01.5**	**+1.2**
	baz=101						
G23K	**Bananza Creek**	**78.62**	**337**	IAmb	IAmb	15 23 02.6	
	comp=Z,5.1nm,0.8s						
G23K	**Bananza Creek**	**78.62**	**337**	P	**P**	**15 23 02.0**	**+1.6**
	baz=99						
BPAW	**Bear Paw Mtn.**	**78.63**	**334**	P	**P**	**15 23 01.6**	**+1.1**
	baz=98						
MLY	**Manley**	**78.65**	**335**	P	**P**	**15 23 02.0**	**+1.3**
	baz=98						
C24K	**Franklin Bluff**	**78.67**	**340**	P	**P**	**15 23 02.1**	**+1.5**
	baz=101						
KDAK	**Kodiak Island**	**78.68**	**328**	P	**P**	**15 23 02.3**	**+1.5**
	baz=95						
E23K	**Chandalar**	**78.69**	**338**	P	**P**	**15 23 02.2**	**+1.3**
	baz=100						
COLD	**Coldfoot**	**78.77**	**337**	P	**P**	**15 23 02.9**	**+1.6**
	baz=99						
N20K	**Mount Spurr**	**78.83**	**331**	P	**P**	**15 23 02.6**	**+0.8**
	baz=95						
PPLA	**Purkeypile**	**79.01**	**333**	P	**P**	**15 23 03.8**	**+1.0**
	baz=97						
OHAK	**Old Harbor**	**79.01**	**327**	P	**P**	**15 23 03.3**	**+0.6**
	baz=94						
CAST	**Castle Rocks**	**79.02**	**333**	IAmb	IAmb	15 23 03.9	
	comp=Z,7.0nm,0.8s						
CAST	**Castle Rocks**	**79.02**	**333**	P	**P**	**15 23 02.8**	**+0.1**
	baz=97,SNR=5.7						
H22K	**Ishlitna Cre**	**79.04**	**336**	P	**P**	**15 23 03.7**	**+1.0**
	baz=98						
CHUM	**Lake Minchumin**	**79.18**	**334**	P	**P**	**15 23 04.8**	**+1.3**
	baz=97						
I21K	**Tanana**	**79.19**	**335**	P	**P**	**15 23 04.9**	**+1.4**
	baz=97						
D23K	**Nanushuk River**	**79.23**	**339**	P	**P**	**15 23 05.2**	**+1.5**
	baz=99						
G22K	**Bettles**	**79.23**	**337**	P	**P**	**15 23 05.6**	**+1.8**
	baz=98						
M20K	**Styx River**	**79.34**	**332**	P	**P**	**15 23 05.7**	**+1.1**
	baz=96						
SII	**Sitkinak Islan**	**79.46**	**326**	P	**P**	**15 23 05.8**	**+0.7**
	baz=94						
H21K	**Melozitna Rive**	**79.59**	**335**	P	**P**	**15 23 06.7**	**+1.0**
	baz=96						
L20K	**Farewell, AK**	**79.74**	**332**	P	**P**	**15 23 07.2**	**+0.5**
	baz=95						
O19K	**Port Alsworth**	**79.77**	**330**	P	**P**	**15 23 07.3**	**+0.6**
	baz=94						
N19K	**Bonanza Creek**	**79.90**	**331**	P	**P**	**15 23 08.0**	**+0.4**
	baz=94						
K20K	**Telida**	**79.91**	**333**	P	**P**	**15 23 07.8**	**+0.3**
	baz=95						
D22K	**Ayikyak River**	**79.93**	**339**	IAmb	IAmb	15 23 09.7	
	comp=Z,6.2nm,0.9s						
D22K	**Ayikyak River**	**79.93**	**339**	P	**P**	**15 23 09.0**	**+1.5**
	baz=96						
M19K	**Big River Lodg**	**79.94**	**332**	P	**P**	**15 23 08.5**	**+0.9**
	baz=94						
G21K	**Allakaket**	**79.97**	**336**	P	**P**	**15 23 09.4**	**+1.7**
	baz=96						
J20K	**Nowinta River**	**80.01**	**334**	IAmb	IAmb	15 23 09.4	
	comp=Z,6.6nm,0.7s						
J20K	**Nowinta River**	**80.01**	**334**	P	**P**	**15 23 08.8**	**+0.8**
	baz=95						
F21K	**Alatna River**	**80.04**	**337**	P	**P**	**15 23 09.9**	**+1.8**
	baz=96						
L19K	**White Mountain**	**80.17**	**332**	P	**P**	**15 23 10.0**	**+1.1**
	baz=94						
P18K	**Big Mountain,**	**80.18**	**329**	P	**P**	**15 23 09.6**	**+0.5**
	baz=93						
O18K	**Koktuh Hills**	**80.20**	**330**	P	**P**	**15 23 09.8**	**+0.7**
	baz=93						
B22K	**Teshekpuk Lake**	**80.37**	**340**	P	**P**	**15 23 11.1**	**+1.3**
	baz=97						
H20K	**Anotleneega Mo**	**80.44**	**335**	P	**P**	**15 23 11.1**	**+0.8**
	baz=95						
Q17K	**Contact Creek**	**80.47**	**328**	P	**P**	**15 23 11.2**	**+0.5**
	baz=92						
N18K	**Kilae Creek**	**80.58**	**330**	P	**P**	**15 23 11.8**	**+0.7**
	baz=93						
M18K	**Stony River**	**80.59**	**331**	P	**P**	**15 23 11.9**	**+0.8**
	baz=93						
J19K	**Poorman**	**80.64**	**334**	P	**P**	**15 23 12.1**	**+0.7**
	baz=94						
B21K	**Ikpikpuk River**	**80.70**	**339**	P	**P**	**15 23 12.9**	**+1.4**
	baz=96						
C21K	**Knifeblade Rid**	**80.71**	**339**	P	**P**	**15 23 12.8**	**+1.1**
	baz=95						
TTA	**Tatalina**	**80.76**	**333**	P	**P**	**15 23 12.6**	**+0.5**
	baz=93						
Q16K	**King Salmon**	**80.89**	**328**	P	**P**	**15 23 13.3**	**+0.6**
	baz=92						
L18K	**Granite Mounta**	**81.03**	**332**	P	**P**	**15 23 14.3**	**+0.9**
	baz=92						
H19K	**Roundabout Mou**	**81.09**	**335**	P	**P**	**15 23 15.0**	**+1.3**
	baz=93						
J18K	**Innoko River**	**81.10**	**333**	P	**P**	**15 23 14.8**	**+1.0**
	baz=93						
O17K	**Koliganek Bris**	**81.15**	**329**	P	**P**	**15 23 14.6**	**+0.5**
	baz=92						
E20K	**Nigu River**	**81.15**	**338**	P	**P**	**15 23 15.9**	**+1.8**
	baz=94,SNR=15						
N17K	**Nushagak Hills**	**81.21**	**330**	P	**P**	**15 23 14.8**	**+0.3**
	baz=92						
GCSA	**Galena City Sc**	**81.23**	**334**	P	**P**	**15 23 15.5**	**+1.1**
	baz=93						
NOA	**NORSAR Array B**	**81.28**	**29**	P	**P**	**15 23 15.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=287,slow=6.6,SNR=2.2 comp=Z,0.5nm,0.6s						
D20K	**Etivluk River**	**81.34**	**338**	P	**P**	**15 23 16.4**	**+1.4**
	baz=94						
R16K	**Pilot Point**	**81.35**	**327**	P	**P**	**15 23 15.5**	**+0.3**
	baz=91						
M17K	**Holitna River**	**81.36**	**331**	P	**P**	**15 23 15.2**	**0.0**
	baz=92						
G19K	**Purcell Mounta**	**81.38**	**336**	P	**P**	**15 23 16.4**	**+1.1**
	baz=93,SNR=6.1						
E19K	**Redstone River**	**81.50**	**337**	P	**P**	**15 23 17.1**	**+1.2**
	baz=93,SNR=7.8						
A21K	**Barrow**	**81.51**	**341**	P	**P**	**15 23 17.4**	**+1.6**
	baz=94						
P16K	**Nushagak River**	**81.59**	**329**	P	**P**	**15 23 17.4**	**+1.0**
	baz=91						
B20K	**Meade River**	**81.61**	**340**	P	**P**	**15 23 17.7**	**+1.4**
	baz=93						
O16K	**Kokwok River B**	**81.65**	**329**	P	**P**	**15 23 18.6**	**+1.8**
	baz=91						
F19K	**Shaleruckik Mo**	**81.69**	**337**	P	**P**	**15 23 17.7**	**+0.9**
	baz=92						
L17K	**Donlin**	**81.79**	**332**	P	**P**	**15 23 18.8**	**+1.4**
	baz=91						
K17K	**Iditarod**	**81.80**	**332**	P	**P**	**15 23 18.7**	**+1.2**
	baz=91						
H18K	**Honhosa River**	**81.88**	**335**	P	**P**	**15 23 19.2**	**+1.3**
	baz=91						
D19K	**Kuna River**	**81.88**	**338**	P	**P**	**15 23 19.2**	**+1.3**
	baz=92						
G18K	**Tagagawik**	**82.02**	**336**	P	**P**	**15 23 20.0**	**+1.4**
	baz=91						
M16K	**Timber Creek**	**82.09**	**331**	P	**P**	**15 23 21.0**	**+1.9**
	baz=90						
L16K	**Owhat River**	**82.34**	**331**	P	**P**	**15 23 21.9**	**+1.6**
	baz=90						
F18K	**Selawik**	**82.43**	**336**	P	**P**	**15 23 21.9**	**+1.3**
	baz=90						
C19K	**Lookout Ridge**	**82.43**	**339**	P	**P**	**15 23 22.8**	**+2.1**
	baz=91						
H17K	**Granite Mounta**	**82.53**	**335**	P	**P**	**15 23 22.9**	**+1.6**
	baz=90						
O15K	**Ungalikthiuk R**	**82.53**	**329**	P	**P**	**15 23 22.2**	**+0.8**
	baz=89						
GERES	**GERESS Array B**	**82.75**	**42**	P	**P**	**15 23 21.4**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=258,slow=4.9,SNR=2.3 comp=Z,0.4nm,0.6s						
E18K	**Tukpahlearik C**	**82.80**	**337**	P	**P**	**15 23 23.4**	**+0.8**
	baz=90						
G17K	**Kiwalik Mounta**	**82.84**	**335**	P	**P**	**15 23 24.5**	**+1.6**
	baz=89						
J16K	**Anvik River**	**82.85**	**333**	P	**P**	**15 23 24.0**	**+1.0**
	baz=89						
I17K	**Unalakleet**	**82.88**	**334**	IAmb	IAmb	15 23 25.8	
	comp=Z,8.9nm,0.8s						
I17K	**Unalakleet**	**82.88**	**334**	P	**P**	**15 23 24.7**	**+1.6**
	baz=89,SNR=6.1						
C18K	**Utukok River**	**83.01**	**338**	P	**P**	**15 23 25.0**	**+1.2**
	baz=89						
F17K	**Baldwin Pennin**	**83.07**	**336**	P	**P**	**15 23 25.4**	**+1.5**
	baz=89						
B18K	**Kokolik River**	**83.22**	**339**	P	**P**	**15 23 26.7**	**+2.0**
	baz=89						
SPITS	**Spitsbergen Ar**	**83.23**	**12**	P	**P**	**15 23 25.6**	**+0.9**
	comp=Z,16nm,1.0s,baz=278,slow=11,SNR=1.7 comp=Z,16nm,1.0s						
E17K	**Hotham Inlet**	**83.28**	**337**	P	**P**	**15 23 26.3**	**+1.2**
	baz=88,SNR=15						
K15K	**Wolf Creek Mou**	**83.30**	**332**	P	**P**	**15 23 26.8**	**+1.5**
	baz=88						
L15K	**Ungalak Mounta**	**83.30**	**331**	P	**P**	**15 23 26.5**	**+1.2**
	baz=88						
N14K	**Kuskokwak Cree**	**83.46**	**330**	P	**P**	**15 23 27.1**	**+1.0**
	baz=88						
H16K	**Elim**	**83.53**	**334**	P	**P**	**15 23 28.5**	**+2.1**
	baz=88						
G16K	**Koyuk River**	**83.56**	**335**	P	**P**	**15 23 27.9**	**+1.4**
	baz=88						
C17K	**DeLong Mountai**	**83.75**	**338**	P	**P**	**15 23 29.0**	**+1.5**
	baz=87						
J14K	**Nanvaranak Lak**	**84.22**	**332**	P	**P**	**15 23 31.7**	**+1.8**
	baz=86						
G15K	**Niukluk**	**84.28**	**335**	P	**P**	**15 23 32.0**	**+1.8**
	baz=86						
F15K	**North Star Dit**	**84.49**	**335**	P	**P**	**15 23 32.9**	**+1.7**
	baz=86						
C16K	**Lisburne Hills**	**84.56**	**338**	P	**P**	**15 23 33.2**	**+1.7**
	baz=85						
ANM	**Nome**	**84.89**	**334**	P	**P**	**15 23 34.2**	**+0.9**
	baz=85						
F14K	**Arctic Creek**	**85.21**	**335**	P	**P**	**15 23 36.3**	**+1.5**
	baz=84						
ARCES	**ARCESS Array B**	**86.63**	**20**	P	**P**	**15 23 41.6**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=27,slow=1.4,SNR=3.9 comp=Z,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**116.64**	**14**	PKP	**PKPdf**	**15 29 40.6**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=318,slow=1.9,SNR=4.8						
KURBB	**Kurchatov Arra**	**117.72**	**20**	PKP	**PKPdf**	**15 29 43.5**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=315,slow=2.2,SNR=4.2						
MKAR	**Makanchi Array**	**122.28**	**20**	PKP	**PKPdf**	**15 29 52.2**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=299,slow=2.8,SNR=12						
SONM	**Songino Array**	**125.57**	**0**	PKP	**PKPdf**	**15 29 58.9**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=354,slow=1.1,SNR=3.3						
STKA	**Stephens Creek**	**139.22**	**228**	PKP	**PKPdf**	**15 30 24.0**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=139,slow=9.3,SNR=1.6						
ASAR	**Alice Springs**	**149.19**	**234**	PKP	**PKPdf**	**15 30 42.8**	**+0.1**
	comp=Z,4.2nm,0.6s,baz=112,slow=1.9,SNR=48						
ASAR				PKPbc	**PKPbc**	**15 30 46.2**	**-0.9**
	comp=Z,4.4nm,0.6s,baz=119,slow=3.0,SNR=38						
ASAR				pPKPbc	**pPKPdf**	**15 31 28.6**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=114,slow=3.5,SNR=1.8						
WRA	**Warramunga Arr**	**150.42**	**241**	PKP	**PKPdf**	**15 30 45.3**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=108,slow=2.6,SNR=7.8						
WRA				PKPbc	**PKPbc**	**15 30 49.7**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=108,slow=2.6,SNR=68						
WRA				pPKPbc	**pPKPdf**	**15 31 31.1**	**+2.7**
	comp=Z,2.4nm,0.7s,baz=110,slow=2.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**153.65**	**17**	PKP	**PKPdf**	**15 30 50.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=8.1,slow=1.9,SNR=1.2						
CMAR				PKPbc	**PKPbc**	**15 30 57.7**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=320,slow=3.3,SNR=8.8						

TAP 04 15:12:35.4,24.18N×121.70E,h11km,ML2.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.07**	**253**	P	Pg	15 12 38.6	+0.7
	baz=252						
ETL				S	Sg	15 12 40.5	+0.8
	baz=252						
NACB	**Ninganchiao**	**0.09**	**267**	*i* P	Pg	15 12 38.8	+0.7
	baz=266						
NACB				S	Sg	15 12 40.9	+0.9
	baz=266						
TWD	**Chiawan**	**0.13**	**223**	*e*P	Pb	15 12 39.4	-0.6
	baz=220						
TWD				*e*S	Sg	15 12 41.9	+1.0
	baz=220						
EAHA	**Aohua**	**0.15**	**15**	*e*P	Pg	15 12 39.7	+0.7
	baz=14						
EAHA				*e*S	Sg	15 12 42.7	+1.2
	baz=14						
ETLH	**Xiulin Townshi**	**0.20**	**278**	*e*P	Pb	15 12 40.9

ENTT				*e*S		Sb	15 12 52.5	-0.3
	baz=346							
CHGB	**Renai**	**0.49**	**256**	*e*P		Pb	15 12 46.5	+0.2
	baz=256							
CHGB				*e*S		Sb	15 12 53.5	0.0
	baz=256							
TWE	**Neicheng**	**0.54**	**357**	*e*P		Pb	15 12 46.9	0.0
	baz=358							
WARBT	**Fenglin Townsh**	**0.54**	**212**	*e*P		Pb	15 12 46.7	-0.2
	baz=211							
YHNB	**Yeheng**	**0.57**	**329**	P		Pb	15 12 47.9	+0.4
	baz=329							
NSK	**Sanguang**	**0.58**	**328**	*e*P		Pb	15 12 48.0	+0.3
	baz=328							

TAP 04 15:16:34.9,24.22N×121.75E,h11km,ML2.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**354**	*i* P		Pg	15 16 38.3	+0.7
	baz=358							
EHP				S		Sg	15 16 40.6	+1.0
	baz=358							
EAHA	**Aohua**	**0.11**	**354**	*i* P		Pg	15 16 38.5	+0.6
	baz=353							
EAHA				S		Sg	15 16 41.2	+1.2
	baz=353							
ETL	**Fush Village**	**0.13**	**244**	P		Pg	15 16 38.8	+0.6
	baz=243							
ETL				*e*S		Sg	15 16 41.4	+0.9
	baz=243							
NACB	**Ninganchiao**	**0.15**	**253**	P		Pg	15 16 39.0	+0.6
	baz=253							
NACB				S		Sg	15 16 41.5	+0.7
	baz=253							
TWD	**Chiawan**	**0.20**	**226**	*e*P		Pg	15 16 39.7	+0.5
	baz=224							
ENA	**Nanau**	**0.21**	**357**	*i* P		Pb	15 16 40.1	-0.6
	baz=359							
ENA				*i* S		Sg	15 16 43.7	+1.2
	baz=359							
EWUT	**Wuta**	**0.23**	**6**	*i* P		Pb	15 16 40.5	-0.6
	baz=6.0							
EWUT				*i* S		Sg	15 16 44.2	+1.3
	baz=6.0							
ETLH	**Xiulin Townshi**	**0.25**	**267**	*e*P		Pb	15 16 41.2	-0.3
	baz=267							
HWA	**Hwalien**	**0.28**	**209**	*e*P		Pb	15 16 42.3	+0.4
	baz=207							
ETM	**Tongmen**	**0.34**	**223**	*e*P		Pg	15 16 42.4	+0.5
	baz=223							
ESAO	**Su ao**	**0.37**	**13**	*e*P		Pb	15 16 42.9	-0.5
	baz=13							
ESAO				*e*S		Sb	15 16 48.3	-0.9
	baz=13							
LXIB	**Xiulin Townshi**	**0.37**	**238**	*e*P		Pg	15 16 42.7	+0.4
	baz=237							
LATG	**Datong**	**0.38**	**327**	*e*P		Pb	15 16 43.5	-0.2
	baz=326							
NNSB	**Datong**	**0.40**	**302**	P		Pb	15 16 44.0	-0.1
	baz=301							
TWC	**Suao**	**0.40**	**13**	*e*P		Pb	15 16 43.6	-0.4
	baz=14							
NNS	**Nan Shan**	**0.41**	**303**	P		Pb	15 16 44.3	0.0
	baz=302							
NDS	**Dongshan**	**0.41**	**355**	*e*P		Pb	15 16 44.5	+0.1
	baz=355							
NDT	**Datong Townshi**	**0.44**	**330**	P		Pb	15 16 45.0	+0.2
	baz=330							
NDT				*e*S		Sb	15 16 51.4	0.0
	baz=330							
WHF	**Hehuan Shan**	**0.45**	**261**	*e*P		Pb	15 16 44.6	-0.5
	baz=260							
WHF				*e*S		Sg	15 16 50.5	+0.5
	baz=260							
ENTT	**Nioudou**	**0.45**	**338**	*e*P		Pb	15 16 45.1	+0.1
	baz=338							
FUSS	**Fushou**	**0.47**	**274**	*e*P		Pb	15 16 45.3	0.0
	baz=273							
ESL	**Shilin**	**0.50**	**216**	*e*P		Pg	15 16 45.1	+0.4
	baz=215							
TWE	**Neicheng**	**0.51**	**351**	*e*P		Pb	15 16 46.0	+0.1
	baz=352							
TDCB	**Techi**	**0.54**	**274**	*e*P		Pb	15 16 46.3	-0.3
	baz=273							
TDCB				*e*S		Sg	15 16 52.9	0.0
	baz=273							
CHGB	**Renai**	**0.55**	**254**	*e*P		Pb	15 16 46.6	-0.1
	baz=253							
WUSB	**Renai**	**0.62**	**249**	*e*P		Pb	15 16 48.5	+0.6
	baz=248							
SMLT	**Sun Moon Lake**	**0.85**	**247**	*e*P		Pb	15 16 51.8	+0.1
	baz=246							
TYC	**Yuchr**	**0.88**	**249**	*e*P		Pb	15 16 52.3	+0.1
	baz=248							

IDC ***04*** *15:27:08.8±0.9,62.79N×151.88W,h0km,mb3.6/7, mbtmp3.5/12,ML3.0/5,Error ellipse: s-maj=16.6km s-min=14.1km az=134.0*

AEIC ***04*** *15:27:09.8±1.5,62.80N±0.02×151.88W±0.06,h9km±5km, ML3.7,ML3.8/202(NEIC),Error ellipse: s-maj=3.7km s-min=2.2km az=98.0*

NEIC ***04*** *15:27:10.4±1.5,62.78N±0.01×151.87W±0.05,h10km±5km, Error ellipse: s-maj=3.6km s-min=1.0km az=113.0*

ISC 04 15:27:10.2±0.8,62.78N±0.02×151.88W±0.02,h13km±6km, n370,σ0983/351,mb3.8/7,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PPLA	**Purkeypile**	**0.18**	**310**			**Pg**	**15 27 14.6**	**+0.1**
PPLA						**Sg**	**15 27 17.7**	**+0.2**
PPLA	**Purkeypile**	**0.18**	**310**	P		**Pg**	**15 27 14.6**	**+0.1**
	baz=127							
PPLA				S		**Sg**	**15 27 17.7**	**+0.2**
	baz=127							
CAST	**Castle Rocks**	**0.65**	**352**			**Pb**	**15 27 22.7**	**-0.7**
CAST						**Sg**	**15 27 30.5**	**-0.9**
CAST	**Castle Rocks**	**0.65**	**352**	IAML			15 27 31.0	
	comp=E,2μm,0.4s							
CAST				IAML			15 27 31.8	
	comp=N,2μm,0.4s							
CAST	**Castle Rocks**	**0.65**	**352**	P		**Pb**	**15 27 22.7**	**-0.7**
	baz=172							
SKT	**Skwentna**	**0.82**	**168**			**Pg**	**15 27 25.6**	**-0.4**
SKT	**Skwentna**	**0.82**	**168**			**Sg**	**15 27 36.1**	**-0.6**
SKT	**Skwentna**	**0.82**	**168**	P		**Pg**	**15 27 25.6**	**-0.4**
	baz=349							
CUT	**Chulitna**	**0.83**	**116**			**Pb**	**15 27 26.2**	**-0.3**
CUT						**Sg**	**15 27 36.8**	**-0.4**
CUT	**Chulitna**	**0.83**	**116**	IAML			15 27 37.7	
	comp=N,4μm,0.5s							
CUT				IAML			15 27 40.6	
	comp=E,4μm,0.2s							
CUT	**Chulitna**	**0.83**	**116**	P		**Pg**	**15 27 26.1**	**-0.2**
	baz=298							
KTH	**Kantishna Hill**	**0.89**	**29**	Pg		**Pg**	**15 27 26.8**	**-0.6**
KTH	**Kantishna Hill**	**0.89**	**29**			**Sg**	**15 27 38.3**	**-0.7**
L20K	**Farewell, AK**	**0.97**	**253**			**Pg**	**15 27 27.6**	**-1.3**
L20K	**Farewell, AK**	**0.97**	**253**	P		**Pg**	**15 27 28.0**	**-0.9**
	baz=70							
TRF	**Thorofare Moun**	**0.99**	**46**	Pg		**Pg**	**15 27 28.5**	**-0.7**
TRF				IAML			15 27 47.8	
	comp=E,2μm,0.8s							
TRF	**Thorofare Moun**	**0.99**	**46**			**Sb**	**15 27 42.4**	**+0.2**
TRF	**Thorofare Moun**	**0.99**	**46**	P		**Pg**	**15 27 28.7**	**-0.5**
	baz=228							
TRF				S		**Sb**	**15 27 42.4**	**+0.2**
	baz=228							
M20K	**Styx River**	**1.07**	**214**			**Pg**	**15 27 29.6**	**-1.2**
M20K	**Styx River**	**1.07**	**214**	IAML			15 27 44.4	
	comp=N,2μm,0.3s							
M20K				IAML			15 27 45.1	
	comp=E,3μm,0.6s							
M20K	**Styx River**	**1.07**	**214**	P		**Pg**	**15 27 29.8**	**-1.0**
	baz=32							
CHUM	**Lake Minchumin**	**1.13**	**350**			**Pn**	**15 27 31.7**	**0.0**
CHUM						**Sn**	**15 27 46.6**	**-0.3**
CHUM	**Lake Minchumin**	**1.13**	**350**	P		**Pn**	**15 27 31.7**	**0.0**
	baz=170							
CHUM				S		**Sn**	**15 27 46.6**	**-0.3**
	baz=170							
K20K	**Telida**	**1.15**	**301**			**Pg**	**15 27 31.7**	**-0.7**
K20K	**Telida**	**1.15**	**301**	IAML			15 27 48.6	
	comp=E,2μm,0.6s							
K20K	**Telida**	**1.15**	**301**	P		**Pg**	**15 27 31.7**	**-0.7**
	baz=119							
STLK	**Strandline Lak**	**1.28**	**179**			**Pn**	**15 27 32.9**	**-1.0**
BPAW	**Bear Paw Mtn.**	**1.39**	**16**			**Pn**	**15 27 34.8**	**-0.5**
BPAW	**Bear Paw Mtn.**	**1.39**	**16**			**Sg**	**15 27 53.9**	**-0.8**
BPAW	**Bear Paw Mtn.**	**1.39**	**16**	P		**Pn**	**15 27 35.4**	**+0.2**
	baz=198							
BPAW				S		**Sg**	**15 27 53.9**	**-0.8**
	baz=198							
WAT7	**Susitna Watana**	**1.39**	**86**			**Pn**	**15 27 35.3**	**-0.2**
WAT7						**Sn**	**15 27 54.1**	**+0.4**
SUA	**Susitna One**	**1.42**	**158**			**Pn**	**15 27 35.7**	**-0.2**
SUA	**Susitna One**	**1.42**	**158**	P		**Pn**	**15 27 36.1**	**+0.3**
	baz=339							
M19K	**Big River Lodg**	**1.47**	**234**			**Pn**	**15 27 35.9**	**-0.4**
M19K						**Sn**	**15 27 55.9**	**+0.5**
M19K	**Big River Lodg**	**1.47**	**234**	P		**Pn**	**15 27 36.6**	**+0.3**
	baz=52							
M19K				S		**Sn**	**15 27 55.9**	**+0.5**
	baz=52							
SPNN	**North Nagishla**	**1.47**	**196**			**Pn**	**15 27 36.1**	**-0.4**
SPCG	**Spurr Capps Gl**	**1.49**	**183**			**Pn**	**15 27 36.2**	**-0.6**
L19K	**White Mountain**	**1.51**	**248**			**Pn**	**15 27 36.8**	**-0.1**
L19K						**Sb**	**15 27 57.3**	**+0.3**
L19K	**White Mountain**	**1.51**	**248**	P		**Pn**	**15 27 37.0**	**+0.1**
	baz=65							
L19K				S		**Sb**	**15 27 57.3**	**+0.3**
	baz=65							
RND	**Reindeer**	**1.51**	**64**	Pn		**Pn**	**15 27 37.2**	**+0.1**
RND				IAML			15 27 59.1	
	comp=N,846nm,0.3s							
RND	**Reindeer**	**1.51**	**64**			**Sb**	**15 27 57.5**	**+0.3**
SPCP	**Crater Peak Br**	**1.52**	**185**			**Pn**	**15 27 37.0**	**-0.3**
SPCP						**Sn**	**15 27 57.7**	**+0.7**
WAT1	**Susitna Watana**	**1.53**	**87**			**Pn**	**15 27 36.9**	**-0.3**
WAT1	**Susitna Watana**	**1.53**	**87**	P		**Pn**	**15 27 37.1**	**-0.2**
	baz=270							
SPCN	**Chakachatna No**	**1.57**	**185**			**Pn**	**15 27 38.0**	**+0.3**
CKT	**Bend**	**1.59**	**186**			**Sb**	**15 27 59.7**	**+0.2**
N20K	**Mount Spurr**	**1.59**	**186**	P		**Pn**	**15 27 38.2**	**+0.1**
	baz=5.3							
SPCR	**Spurr Chakacha**	**1.59**	**186**			**Pn**	**15 27 38.1**	**0.0**
MCK	**McKinley**	**1.64**	**53**			**Pb**	**15 27 39.6**	**-0.7**
MCK	**McKinley**	**1.64**	**53**	P		**Pb**	**15 27 39.6**	**-0.7**
	baz=236							
GHO	**Glory Hole Cre**	**1.71**	**125**			**Pn**	**15 27 39.6**	**-0.1**
GHO						**Sb**	**15 28 02.8**	**-0.1**
GHO	**Glory Hole Cre**	**1.71**	**125**	IAML			15 28 05.7	
	comp=N,1μm,0.6s							
J20K	**Nowinta River**	**1.73**	**325**			**Pn**	**15 27 40.2**	**+0.2**
J20K	**Nowinta River**	**1.73**	**325**	IAML			15 28 06.4	
	comp=N,1μm,0.6s							
J20K				IAML			15 28 07.5	
	comp=E,1μm,0.6s							
J20K	**Nowinta River**	**1.73**	**325**	P		**Pn**	**15 27 40.2**	**+0.2**
	baz=143							
PMR	**Palmer**	**1.75**	**132**			**Pn**	**15 27 40.0**	**-0.2**
PMR				IAML			15 28 07.0	
	comp=E,1μm,0.8s							
PMR				IAML			15 28 11.0	
	comp=N,1μm,0.7s							
PMR	**Palmer**	**1.75**	**132**	P		**Pn**	**15 27 40.9**	**+0.7**
PMR	**Palmer**	**1.75**	**132**	P		**Pn**	**15 27 40.4**	**+0.1**
	baz=314							
BWN	**Browne**	**1.77**	**37**			**Pn**	**15 27 41.0**	**+0.5**
BWN				IAML			15 28 14.1	
	comp=E,705nm,0.7s							
BWN				IAML			15 28 15.5	
	comp=N,776nm,0.9s							
FIS	**Fire Island**	**1.82**	**154**			**Pb**	**15 27 42.9**	**-0.3**
TTA	**Tatalina**	**1.90**	**276**			**Pn**	**15 27 42.0**	**-0.4**
TTA				IAML			15 28 18.5	
	comp=N,555nm,1.0s							
TTA	**Tatalina**	**1.90**	**276**	P		**Pn**	**15 27 42.2**	**-0.2**
TTA	**Tatalina**	**1.90**	**276**	P		**Pn**	**15 27 42.0**	**-0.4**
	baz=92							
WAT6	**Susitna Watana**	**1.92**	**94**			**Pn**	**15 27 41.6**	**-1.0**
WAT6	**Susitna Watana**	**1.92**	**94**	P		**Pn**	**15 27 41.9**	**-0.8**
	baz=278							
SML	**Sawmill**	**1.92**	**119**	Pn		**Pn**	**15 27 43.0**	**+0.3**
SML	**Sawmill**	**1.92**	**119**	P		**Pn**	**15 27 43.0**	**+0.3**
	baz=302							
RC01	**Rabbit Creek A**	**1.98**	**148**	Pn		**Pn**	**15 27 44.0**	**+0.7**
RC01	**Rabbit Creek A**	**1.98**	**148**	P		**Pn**	**15 27 43.3**	**0.0**
	baz=330							
DHY	**Denali Highway**	**2.08**	**80**			**Pn**	**15 27 44.6**	**-0.3**
DHY	**Denali Highway**	**2.08**	**80**	IAML			15 28 16.6	
	comp=N,1μm,0.5s							
DHY				IAML			15 28 18.5	
	comp=E,630nm,0.6s							
DHY	**Denali Highway**	**2.08**	**80**	P		**Pn**	**15 27 44.8**	**-0.1**
	baz=264							
J19K	**Poorman**	**2.08**	**308**			**Pn**	**15 27 45.4**	**+0.6**
J19K				IAML			15 28 20.7	
	comp=N,814nm,0.8s							
J19K				IAML			15 28 21.9	
	comp=E,814nm,0.9s							
J19K	**Poorman**	**2.08**	**308**	P		**Pn**	**15 27 44.8**	**+0.1**
	baz=124							
KNK	**Knik Glacier**	**2.11**	**129**			**Pn**	**15 27 46.4**	**+1.2**
KNK	**Knik Glacier**	**2.11**	**129**	IAML			15 28 17.5	
	comp=E,1μm,0.5s							
KNK				IAML			15 28 26.4	
	comp=N,786nm,0.8s							
KNK	**Knik Glacier**	**2.11**	**129**	P		**Pn**	**15 27 46.5**	**+1.3**
	baz=312							
M23K	**Glacier View**	**2.18**	**115**			**Pn**	**15 27 46.8**	**+0.7**
M23K	**Glacier View**	**2.18**	**115**	P		**Pn**	**15 27 46.9**	**+0.8**
	baz=299							
NEA2	**Nenana**	**2.21**	**33**			**Pn**	**15 27 46.0**	**-0.6**
NEA2	**Nenana**	**2.21**	**33**	P		**Pn**	**15 27 46.2**	**-0.4**
	baz=216							
RDT	**Redoubt**	**2.23**	**187**			**Pn**	**15 27 47.2**	**+0.4**
DFR	**Drift River**	**2.23**	**190**			**Pn**	**15 27 47.8**	**+0.9**
RDJH	**Redoubt Jeurge**	**2.24**	**192**			**Pn**	**15 27 47.6**	**+0.6**
M18K	**Stony River**	**2.26**	**237**			**Pn**	**15 27 46.7**	**-0.5**
M18K	**Stony River**	**2.26**	**237**	P		**Pn**	**15 27 47.2**	**0.0**
	baz=53							
NCT	**North Crescent**	**2.28**	**193**			**Pn**	**15 27 48.0**	**+0.5**
L18K	**Granite Mounta**	**2.30**	**258**			**Pn**	**15 27 47.7**	**0.0**
L18K	**Granite Mounta**	**2.30**	**258**	IAML			15 28 28.6	
	comp=N,551nm,0.6s							
L18K	**Granite Mounta**	**2.30**	**258**	P		**Pn**	**15 27 47.8**	**+0.1**
	baz=73							
J18K	**Innoko River**	**2.30**	**290**			**Pn**	**15 27 48.0**	**+0.2**
J18K	**Innoko River**	**2.30**	**290**	P		**Pn**	**15 27 48.0**	**+0.2**
	baz=105							
MLY	**Manley**	**2.32**	**12**			**Pn**	**15 27 48.0**	**0.0**
MLY	**Manley**	**2.32**	**12**	P		**Pn**	**15 27 48.1**	**+0.1**
	baz=193							
SCM	**Sheep Creek Mo**	**2.33**	**112**			**Pn**	**15 27 48.8**	**+0.6**
SCM				IAML			15 28 27.6	
	comp=E,722nm,0.8s							
SCM				IAML			15 28 29.9	
	comp=N,878nm,0.8s							
SCM	**Sheep Creek Mo**	**2.33**	**112**	P		**Pn**	**15 27 49.5**	**+1.3**
	baz=296							
N19K	**Bonanza Creek**	**2.33**	**213**			**Pn**	**15 27 48.2**	**0.0**
N19K	**Bonanza Creek**	**2.33**	**213**	IAML			15 28 24.6	
	comp=E,721nm,0.4s							
N19K				IAML			15 28 28.4	
	comp=N,700nm,0.9s							
N19K	**Bonanza Creek**	**2.33**	**213**	P		**Pn**	**15 27 49.1**	**+0.8**
	baz=31							
I20K	**Naaghedeneel**	**2.33**	**331**			**Pn**	**15 27 48.8**	**+0.7**
I20K	**Naaghedeneel**	**2.33**	**331**	P		**Pn**	**15 27 49.1**	**+0.9**
	baz=149							
RDWB	**Redoubt West**	**2.34**	**192**			**Pn**	**15 27 49.2**	**+0.7**
RSO	**Redoubt South**	**2.36**	**191**			**Pn**	**15 27 49.1**	**+0.3**
RDSO	**Redoubt South**	**2.37**	**190**			**Pn**	**15 27 49.7**	**+0.8**
WRH	**Wood River Hil**	**2.40**	**43**	Pn		**Pn**	**15 27 49.0**	**-0.1**
RED	**Redoubt Volcan**	**2.41**	**191**			**Pn**	**15 27 50.2**	**+0.9**
I21K	**Tanana**	**2.41**	**359**			**Pn**	**15 27 49.2**	**-0.1**
I21K				IAML			15 28 27.1	
	comp=N,457nm,0.8s							
I21K				IAML			15 28 33.1	
	comp=E,329nm,0.9s							
I21K	**Tanana**	**2.41**	**359**	P		**Pn**	**15 27 49.4**	**+0.1**
	baz=179							
SLKM	**Skilak Lake**	**2.41**	**160**			**Pn**	**15 27 49.6**	**+0.2**
SVW2	**Sparrevohn**	**2.43**	**228**			**Pn**	**15 27 49.5**	**-0.1**
SVW2	**Sparrevohn**	**2.43**	**228**	P		**Pn**	**15 27 50.5**	**+0.9**
O22K	**Cooper Landing**	**2.52**	**155**			**Pn**	**15 27 51.1**	**+0.3**
O22K	**Cooper Landing**	**2.52**	**155**	P		**Pn**	**15 27 52.5**	**+1.7**
	baz=337							
CCB	**Clear Creek Bu**	**2.61**	**42**			**Pn**	**15 27 51.6**	**-0.4**
I23K	**Minto, Yukon-K**	**2.62**	**24**			**Pn**	**15 27 52.0**	**-0.2**
I23K				IAML			15 28 33.0	
	comp=N,387nm,0.6s							
I23K				IAML			15 28 33.2	
	comp=E,434nm,0.5s							
I23K	**Minto, Yukon-K**	**2.62**	**24**	P		**Pn**	**15 27 52.3**	**+0.1**
	baz=206							
MDM	**Murphy Dome**	**2.72**	**35**			**Pn**	**15 27 53.2**	**-0.3**
O20K	**Slope Mountain**	**2.73**	**188**			**Pn**	**15 27 54.8**	**+1.1**
O20K	**Slope Mountain**	**2.73**	**188**	P		**Pn**	**15 27 55.0**	**+1.3**
	baz=7.1							
M24K	**Tolsona, Glenn**	**2.74**	**102**			**Pn**	**15 27 55.1**	**+1.3**
M24K	**Tolsona, Glenn**	**2.74**	**102**	P		**Pn**	**15 27 55.1**	**+1.3**
	baz=287							
COLA	**College**	**2.76**	**39**			**Pn**	**15 27 53.3**	**-0.8**
COLA				IAML			15 28 42.3	
	comp=E,601nm,0.6s							
COLA				IAML			15 28 43.8	
	comp=E,528nm,0.5s							
COLA	**College**	**2.76**	**39**	P		**Pn**	**15 27 54.2**	**+0.2**
IVE	**Iliamna Volcan**	**2.83**	**192**			**Pn**	**15 27 55.5**	**+0.4**
N18K	**Kilae Creek**	**2.84**	**224**			**Pn**	**15 27 54.9**	**-0.4**
N18K	**Kilae Creek**	**2.84**	**224**	IAML			15 28 40.4	
	comp=N,475nm,0.3s							
N18K				IAML			15 28 42.3	
	comp=E,464nm,0.9s							
N18K	**Kilae Creek**	**2.84**	**224**	P		**Pn**	**15 27 55.7**	**+0.4**
	baz=40							
O19K	**Port Alsworth**	**2.84**	**205**	Pn		**Pn**	**15 27 55.3**	**+0.1**
O19K	**Port Alsworth**	**2.84**	**205**	P		**Pn**	**15 27 55.5**	**+0.2**
	baz=23							
H21K	**Melozitna Rive**	**2.92**	**352**			**Pn**	**15 27 56.5**	**+0.2**
H21K	**Melozitna Rive**	**2.92**	**352**	IAML			15 28 43.6	
	comp=N,231nm,0.5s							
H21K				IAML			15 28 43.7	
	comp=E,251nm,0.9s							
H21K	**Melozitna Rive**	**2.92**	**352**	P		**Pn**	**15 27 56.5**	**+0.2**
	baz=172							
SEW	**Seward**	**2.93**	**155**			**Pn**	**15 27 58.0**	**+1.7**
SEW	**Seward**	**2.93**	**155**	P		**Pn**	**15 27 58.0**	**+1.7**
	baz=338							
K24K	**Donnelly Dome**	**2.94**	**67**			**Pn**	**15 27 58.0**	**+1.4**
K24K	**Donnelly Dome**	**2.94**	**67**	P		**Pn**	**15 27 58.0**	**+1.4**
	baz=252							
PAX	**Paxson**	**2.94**	**83**			**Pn**	**15 27 56.8**	**+0.2**
PAX	**Paxson**	**2.94**	**83**	P		**Pn**	**15 27 57.1**	**+0.4**
	baz=269							
K17K	**Iditarod**	**2.96**	**272**			**Pn**	**15 27 56.9**	**+0.1**
K17K	**Iditarod**	**2.96**	**272**	IAML			15 28 46.2	
	comp=N,267nm,0.9s							
K17K				IAML			15 28 50.4	
	comp=E,291nm,0.8s							
K17K	**Iditarod**	**2.96**	**272**	P		**Pn**	**15 27 57.1**	**+0.3**
	baz=86							
M17K	**Holitna River**	**2.96**	**245**			**Pn**	**15 27 56.5**	**-0.3**
GCSA	**Galena City Sc**	**2.97**	**314**			**Pn**	**15 27 57.6**	**+0.7**
GCSA	**Galena City Sc**	**2.97**	**314**	P		**Pn**	**15 27 57.6**	**+0.7**
	baz=129							
IL31		**2.98**	**46**			**Pn**	**15 27 56.9**	**-0.2**
ILAR	**Eielson Array**	**2.98**	**46**	Pn		**Pn**	**15 27 56.9**	**-0.3**
ILAR	**Eielson Array**	**2.98**	**46**	Pn		**Pn**	**15 27 56.3**	**-0.9**
	comp=E,0.8nm,0.3s,baz=230,slow=14,SNR=23							
ILAR				Lg		Lg	15 28 41.4	
	comp=E,13nm,0.3s,baz=241,slow=29,SNR=11							
	comp=E,1.5nm,0.3s							
H20K	**Anotleneega Mo**	**3.03**	**336**			**Pn**	**15 27 58.1**	**+0.4**
H20K	**Anotleneega Mo**	**3.03**	**336**	P		**Pn**	**15 27 58.5**	**+0.8**
	baz=153							
L17K	**Donlin**	**3.05**	**261**			**Pn**	**15 27 58.0**	**-0.1**
L17K	**Donlin**	**3.05**	**261**	P		**Pn**	**15 27 58.4**	**+0.3**
	baz=75							
POKR	**Poker Plat Res**	**3.06**	**38**			**Pn**	**15 27 57.5**	**-0.7**
POKR	**Poker Plat Res**	**3.06**	**38**	P		**Pn**	**15 27 58.4**	**+0.2**
	baz=222							
BRLK	**Bradley Lake**	**3.06**	**171**			**Pn**	**15 27 59.5**	**+1.3**
BRLK	**Bradley Lake**	**3.06**	**171**	IAML			15 28 47.3	
	comp=N,255nm,0.8s							
BRLK				IAML			15 28 49.3	
	comp=E,288nm,0.8s							
KLU	**Klutina**	**3.08**	**112**	Pn		**Pn**	**15 27 59.5**	**+0.9**
KLU				IAML			15 28 48.9	
	comp=E,331nm,1.0s							
KLU				IAML			15 28 52.3	
	comp=N,291nm,0.6s							
KLU	**Klutina**	**3.08**	**112**	P		**Pn**	**15 27 59.7**	**+1.2**
	baz=298							
BRSE	**Bradley Lake S**	**3.10**	**169**			**Pn**	**15 27 59.8**	**+1.1**
BRSE	**Bradley Lake S**	**3.10**	**169**	P		**Pn**	**15 27 59.8**	**+1.1**
	baz=350							
HARP	**HAARP**	**3.13**	**94**			**Pn**	**15 28 00.5**	**+1.2**
HARP	**HAARP**	**3.13**	**94**	P		**Pn**	**15 28 00.5**	**+1.2**
	baz=280							
H22K	**Ishtalitna Cre**	**3.14**	**4**			**Pn**	**15 27 59.3**	**0.0**
P19K	**Oil Pt**	**3.21**	**192**	Pn		**Pn**	**15 27 59.7**	**-0.5**
P19K				IAML			15 28 51.2	
	comp=E,286nm,0.6s							
P19K				IAML			15 29 05.9	
	comp=N,248nm,0.7s							
FID	**Port Fidalgo**	**3.27**	**126**			**Pn**	**15 28 01.4**	**+0.2**
CNPM	**China Poot**	**3.28**	**174**			**Pn**	**15 28 02.5**	**+1.2**
CNPM	**China Poot**	**3.28**	**174**	IAML			15 28 55.3	
	comp=E,350nm,0.7s							
CNPM				IAML			15 29 02.5	
	comp=N,218nm,0.7s							
IMAR	**Indian Mountai**	**3.32**	**347**	Pn		**Pn**	**15 28 02.1**	**+0.3**
RIDG	**Independent Ri**	**3.32**	**70**	Pn		**Pn**	**15 28 01.8**	**0.0**
RIDG				IAML			15 28 59.2	
	comp=N,276nm,0.7s							
DIV	**Divide**	**3.33**	**117**			**Pn**	**15 28 02.7**	**+0.8**
O18K	**Koktuh Hills**	**3.34**	**

G21K				IAML			15 29 18.5	
	comp=E,145nm,0.8s							
BMRM	**Bremner River**	**3.89**	**115**		**Pn**		**15 28 10.3**	**+0.6**
BMRM	**Bremner River**	**3.89**	**115**	P	**Pn**		**15 28 10.6**	**+0.9**
	baz=301							
PRP	**Porcupine Dome**	**3.91**	**43**	Pn	**Pn**		**15 28 10.3**	**+0.2**
PRP	**Porcupine Dome**	**3.91**	**43**	P	**Pn**		**15 28 10.4**	**+0.4**
	baz=228							
O17K	**Koliganek Bris**	**3.93**	**222**		**Pn**		**15 28 09.8**	**-0.3**
O17K	**Koliganek Bris**	**3.93**	**222**	P	**Pn**		**15 28 10.1**	**0.0**
	baz=37							
Q19K	**Cape Douglas,**	**3.96**	**193**	Pn	**Pn**		**15 28 11.3**	**+0.7**
J16K	**Anvik River**	**4.01**	**281**	Pn	**Pn**		**15 28 11.2**	**0.0**
J16K				IAML			15 29 19.0	
	comp=E,93nm,0.7s							
J16K	**Anvik River**	**4.01**	**281**	P	**Pn**		**15 28 11.2**	**0.0**
	baz=93							
N16K	**Nishlik Lake**	**4.02**	**238**		**Pn**		**15 28 10.6**	**-0.8**
GLB	**Gilahina Butte**	**4.02**	**106**		**Pn**		**15 28 12.5**	**+1.1**
GLB				IAML			15 29 18.7	
	comp=N,171nm,1.2s							
GLB				IAML			15 29 24.4	
	comp=E,113nm,1.1s							
G23K	**Bananza Creek**	**4.03**	**11**		**Pn**		**15 28 11.6**	**0.0**
GOAT	**Goat Mountain**	**4.06**	**120**		**Pn**		**15 28 12.8**	**+0.8**
G19K	**Purcell Mounta**	**4.06**	**329**	Pn	**Pn**		**15 28 12.6**	**+0.7**
G19K				IAML			15 29 22.8	
	comp=E,129nm,0.7s							
G19K				IAML			15 29 26.9	
	comp=N,105nm,1.4s							
G19K	**Purcell Mounta**	**4.06**	**329**	P	**Pn**		**15 28 12.6**	**+0.7**
	baz=144							
J26L	**Joseph Creek**	**4.09**	**61**		**Pn**		**15 28 13.1**	**+0.7**
J26L				IAML			15 29 19.4	
	comp=N,90nm,0.6s							
J26L				IAML			15 29 23.0	
	comp=E,90nm,0.5s							
M26K	**Nabesna, AK**	**4.12**	**91**		**Pn**		**15 28 14.3**	**+1.4**
M26K				IAML			15 29 18.7	
	comp=E,167nm,0.7s							
M26K	**Nabesna, AK**	**4.12**	**91**	P	**Pn**		**15 28 14.5**	**+1.6**
	baz=279							
I17K	**Unalakleet**	**4.13**	**290**		**Pn**		**15 28 13.6**	**+0.8**
I17K	**Unalakleet**	**4.13**	**290**	P	**Pn**		**15 28 13.9**	**+1.1**
	baz=102							
H17K	**Granite Mounta**	**4.16**	**305**		**Pn**		**15 28 14.7**	**+1.4**
H17K	**Granite Mounta**	**4.16**	**305**	IAML			15 29 32.2	
	comp=E,88nm,1.1s							
H17K				IAML			15 29 33.9	
	comp=N,80nm,0.8s							
SYI	**Shuyak Island**	**4.19**	**184**		**Pn**		**15 28 15.4**	**+1.7**
SYI	**Shuyak Island**	**4.19**	**184**	IAML			15 29 23.7	
	comp=E,97nm,1.0s							
P17K	**Kvichak River**	**4.23**	**214**		**Pn**		**15 28 14.6**	**+0.4**
VRDI	**Verde Repeater**	**4.27**	**108**		**Pn**		**15 28 16.1**	**+1.1**
VRDI				IAML			15 29 25.2	
	comp=N,134nm,1.4s							
VRDI				IAML			15 29 26.8	
	comp=E,93nm,1.4s							
G18K	**Tagagawik**	**4.30**	**320**	Pn	**Pn**		**15 28 16.6**	**+1.4**
G18K	**Tagagawik**	**4.30**	**320**	P	**Pn**		**15 28 16.6**	**+1.4**
	baz=134							
G24K	**Hadweenzic Riv**	**4.37**	**24**		**Pn**		**15 28 16.1**	**0.0**
O16K	**Kokwok River B**	**4.39**	**226**		**Pn**		**15 28 15.8**	**-0.6**
HMT	**Hamilton**	**4.39**	**121**	Pn	**Pn**		**15 28 16.8**	**+0.3**
MCARA	**McCarthy VSAT**	**4.39**	**105**		**Pn**		**15 28 18.0**	**+1.5**
MCARA	**McCarthy VSAT**	**4.39**	**105**	P	**Pn**		**15 28 18.3**	**+1.8**
	baz=293							
KAHG	**Katmai Hook Gl**	**4.50**	**198**		**Pn**		**15 28 19.1**	**+1.2**
K15K	**Wolf Creek Mou**	**4.50**	**268**		**Pn**		**15 28 18.0**	**+0.1**
K15K	**Wolf Creek Mou**	**4.50**	**268**	P	**Pn**		**15 28 18.8**	**+0.8**
	baz=79							
F21K	**Alatna River**	**4.51**	**352**		**Pn**		**15 28 19.2**	**+1.0**
F21K	**Alatna River**	**4.51**	**352**	IAML			15 29 35.8	
	comp=E,62nm,1.1s							
COLD	**Coldfoot**	**4.52**	**8**		**Pn**		**15 28 19.1**	**+0.9**
COLD	**Coldfoot**	**4.52**	**8**	P	**Pn**		**15 28 19.4**	**+1.1**
	baz=190							
NICHA	**Nichawak Mount**	**4.57**	**120**		**Pn**		**15 28 19.2**	**+0.3**
BERG	**Berg Lake**	**4.58**	**118**	Pn	**Pn**		**15 28 19.7**	**+0.6**
K27K	**Chicken**	**4.58**	**70**		**Pn**		**15 28 19.8**	**+0.7**
K27K	**Chicken**	**4.58**	**70**	IAML			15 29 41.6	
	comp=E,76nm,1.1s							
K27K				IAML			15 29 42.1	
	comp=N,80nm,1.1s							
F20K	**Avaraart Lake**	**4.59**	**341**		**Pn**		**15 28 20.4**	**+1.3**
F20K	**Avaraart Lake**	**4.59**	**341**	IAML			15 29 37.4	
	comp=N,72nm,0.8s							
F20K				IAML			15 29 42.5	
	comp=E,75nm,0.9s							
KAIM	**Kayak Island**	**4.59**	**125**	Pn	**Pn**		**15 28 19.2**	**0.0**
KAIM				IAML			15 29 35.6	
	comp=N,103nm,1.1s							
KAIM				IAML			15 29 41.7	
	comp=E,126nm,1.1s							
L27K	**Beaver Creek,**	**4.60**	**82**		**Pn**		**15 28 20.4**	**+1.0**
BCAR	**Beaver Creek A**	**4.62**	**82**	Pn	**Pn**		**15 28 20.4**	**+0.7**
L15K	**Ungalak Mounta**	**4.63**	**260**		**Pn**		**15 28 19.4**	**-0.4**
M27K	**Edge Creek, AK**	**4.65**	**91**		**Pn**		**15 28 21.5**	**+1.4**
M27K				IAML			15 29 43.3	
	comp=N,117nm,1.1s							
M27K				IAML			15 29 45.6	
	comp=E,80nm,1.3s							
M15K	**Kasigluk River**	**4.68**	**247**		**Pn**		**15 28 20.6**	**+0.2**
G25K	**Bearman Lake**	**4.70**	**29**		**Pn**		**15 28 20.5**	**-0.2**
G17K	**Kiwalik Mounta**	**4.71**	**309**		**Pn**		**15 28 21.8**	**+0.9**
PTPK	**Patty Peak**	**4.72**	**106**		**Pn**		**15 28 22.6**	**+1.5**
N15K	**Kwethluk River**	**4.73**	**240**		**Pn**		**15 28 20.7**	**-0.4**
KHIT	**Khitrov Hills**	**4.74**	**116**		**Pn**		**15 28 22.1**	**+0.8**
FYU	**Fort Yukon**	**4.75**	**34**	Pn	**Pn**		**15 28 22.1**	**+0.7**
FYU				IAML			15 30 10.7	
	comp=N,64nm,1.5s							
F19K	**Shaleruckik Mo**	**4.79**	**331**		**Pn**		**15 28 22.7**	**+0.8**
F19K	**Shaleruckik Mo**	**4.79**	**331**	IAML			15 29 55.3	
	comp=N,59nm,0.9s							
P16K	**Nushagak River**	**4.80**	**221**		**Pn**		**15 28 21.8**	**-0.3**
KIAG	**Kiagna River**	**4.88**	**108**		**Pn**		**15 28 23.9**	**+0.6**
WAX	**Waxell Ridge**	**4.90**	**114**		**Pn**		**15 28 24.4**	**+0.9**
ANCK	**Angle Creek**	**4.93**	**203**		**Pn**		**15 28 25.2**	**+1.3**
CNTC	**Contact Creek**	**4.94**	**205**		**Pn**		**15 28 24.7**	**+0.6**
H16K	**Elim**	**4.97**	**297**		**Pn**		**15 28 25.1**	**+0.7**
H16K	**Elim**	**4.97**	**297**	P	**Pn**		**15 28 25.1**	**+0.7**
	baz=107							
KDAK	**Kodiak Island**	**5.03**	**184**	Pn	**Pn**		**15 28 25.9**	**+0.7**
KDAK				IAML			15 29 56.4	
	comp=N,42nm,1.1s							
KDAK				IAML			15 30 00.0	
	comp=N,54nm,1.3s							
KDAK	**Kodiak Island**	**5.03**	**184**	Pn	**Pn**		**15 28 24.3**	**-0.8**
	comp=N,0.8nm,0.3s,baz=354,slow=9.2,SNR=1.1							
KDAK				Lg	Lg		15 29 37.6	
	comp=N,1.0nm,0.3s,baz=331,slow=18,SNR=1.4							
	comp=N,4.8nm,0.8s							
ISLE	**Juniper Island**	**5.04**	**111**		**Pn**		**15 28 25.7**	**+0.2**
F24K	**Squaw Lake**	**5.05**	**18**		**Pn**		**15 28 26.2**	**+0.7**
F24K	**Squaw Lake**	**5.05**	**18**	IAML			15 29 47.1	
	comp=N,40nm,0.7s							
F24K				IAML			15 29 53.6	
	comp=E,50nm,0.9s							
BARK	**Barkley Ridge**	**5.08**	**114**		**Pn**		**15 28 27.2**	**+1.2**
F18K	**Selawik**	**5.08**	**322**		**Pn**		**15 28 27.1**	**+1.2**
F18K	**Selawik**	**5.08**	**322**	P	**Pn**		**15 28 27.1**	**+1.2**
	baz=135							
BARN	**Barnard Glacie**	**5.13**	**105**		**Pn**		**15 28 28.1**	**+1.4**
BARN	**Barnard Glacie**	**5.13**	**105**	IAML			15 29 51.3	
	comp=N,74nm,1.4s							
BARN				IAML			15 30 04.4	
	comp=E,91nm,1.1s							
M14K	**Bethel**	**5.20**	**251**		**Pn**		**15 28 28.1**	**+0.5**
M14K	**Bethel**	**5.20**	**251**	IAML			15 30 06.4	
	comp=E,70nm,1.1s							
M14K				IAML			15 30 28.8	
	comp=N,62nm,1.5s							
BAGL	**Bagley Icefiel**	**5.20**	**112**		**Pn**		**15 28 28.2**	**+0.6**
E19K	**Redstone River**	**5.21**	**337**	Pn	**Pn**		**15 28 29.0**	**+1.3**
E19K				IAML			15 29 56.6	
	comp=E,86nm,1.2s							
E19K				IAML			15 29 58.0	
	comp=N,96nm,0.8s							
E19K	**Redstone River**	**5.21**	**337**	P	**Pn**		**15 28 29.1**	**+1.3**
	baz=152							
YUK2	**White River**	**5.25**	**96**		**Pn**		**15 28 30.2**	**+1.9**
L14K	**Kuka Creek**	**5.28**	**259**		**Pn**		**15 28 29.1**	**+0.5**
L14K	**Kuka Creek**	**5.28**	**259**	IAML			15 30 08.7	
	comp=E,84nm,1.4s							

G16K	**Koyuk River**	**5.29**	**304**		**Pn**		**15 28 29.5**	**+0.8**
G16K	**Koyuk River**	**5.29**	**304**	IAML			15 30 10.3	
	comp=N,48nm,1.0s							
O15K	**Ungalikthiuk R**	**5.29**	**231**		**Pn**		**15 28 29.0**	**+0.1**
CTG	**Chitna Glacier**	**5.31**	**105**	P	**Pn**		**15 28 30.4**	**+1.2**
	baz=295							
CTGM	**Chitina Glacie**	**5.31**	**105**		**Pn**		**15 28 30.4**	**+1.2**
CTGM	**Chitina Glacie**	**5.31**	**105**	IAML			15 29 56.2	
	comp=N,83nm,1.5s							
CTGM				IAML			15 30 04.3	
	comp=E,70nm,1.3s							
J14K	**Nanvaranak Lak**	**5.37**	**275**		**Pn**		**15 28 30.1**	**+0.3**
J14K	**Nanvaranak Lak**	**5.37**	**275**	IAML			15 30 15.9	
	comp=E,37nm,0.9s							
J14K				IAML			15 30 20.7	
	comp=N,48nm,1.3s							
MESA	**MESA**	**5.42**	**114**		**Pn**		**15 28 31.4**	**+0.6**
YUK3	**Moose Creek**	**5.43**	**96**		**Pn**		**15 28 32.5**	**+1.7**
YUK3	**Moose Creek**	**5.43**	**96**	P	**Pn**		**15 28 32.5**	**+1.7**
	baz=286							
F17K	**Baldwin Pennin**	**5.45**	**316**		**Pn**		**15 28 32.4**	**+1.3**
F25K	**Christian Rive**	**5.50**	**26**		**Pn**		**15 28 32.4**	**+0.7**
F25K	**Christian Rive**	**5.50**	**26**	P	**Pn**		**15 28 32.4**	**+0.7**
	baz=212							
LOGN	**Logan Glacier**	**5.52**	**106**		**Pn**		**15 28 33.1**	**+1.0**
BMAR	**Burnt Mountain**	**5.59**	**30**	Pn	**Pn**		**15 28 33.5**	**+0.6**
OHAK	**Old Harbor**	**5.62**	**188**	Pn	**Pn**		**15 28 34.3**	**+1.0**
OHAK	**Old Harbor**	**5.62**	**188**	P	**Pn**		**15 28 34.7**	**+1.4**
TABL	**Table Mountain**	**5.63**	**110**		**Pn**		**15 28 34.4**	**+0.7**
H27K	**Steamboat Moun**	**5.65**	**48**		**Pn**		**15 28 33.9**	**+0.1**
DAWY	**Dawson**	**5.75**	**72**	Pn	**Pn**		**15 28 35.0**	**-0.2**
O14K	**Tigyukauivet M**	**5.77**	**236**		**Pn**		**15 28 34.6**	**-0.8**
E20K	**Nigu River**	**5.79**	**344**		**Pn**		**15 28 37.4**	**+1.8**
G15K	**Niukluk**	**5.81**	**298**		**Pn**		**15 28 36.8**	**+0.8**
I28M	**Miner Creek**	**5.88**	**58**		**Pn**		**15 28 36.8**	**-0.1**
E18K	**Tuhlearik C**	**5.94**	**326**	P	**Pn**		**15 28 39.2**	**+1.5**
	baz=138							
SAMH	**Samovar Hills**	**5.95**	**112**		**Pn**		**15 28 40.2**	**+2.3**
M13K	**Dall Lake**	**5.97**	**252**		**Pn**		**15 28 38.8**	**+0.7**
E25K	**Arctic Village**	**5.97**	**23**		**Pn**		**15 28 38.6**	**+0.5**
E25K	**Arctic Village**	**5.97**	**23**	P	**Pn**		**15 28 39.1**	**+0.9**
	baz=209							
E17K	**Hotham Inlet**	**6.04**	**320**		**Pn**		**15 28 40.1**	**+1.1**
E17K	**Hotham Inlet**	**6.04**	**320**	P	**Pn**		**15 28 40.1**	**+1.1**
	baz=131							
PCA	**Pinnacle**	**6.19**	**111**		**Pn**		**15 28 42.0**	**+0.8**
PINM	**Pinnacle**	**6.19**	**111**	P	**Pn**		**15 28 42.0**	**+0.7**
	baz=301							
M29M	**Somme Creek**	**6.20**	**87**		**Pn**		**15 28 42.8**	**+1.4**
M29M	**Somme Creek**	**6.20**	**87**	P	**Pn**		**15 28 42.8**	**+1.4**
	baz=279							
D23K	**Nanushuk River**	**6.23**	**4**		**Pn**		**15 28 43.5**	**+1.8**
ANM	**Nome**	**6.26**	**293**		**Pn**		**15 28 42.7**	**+0.6**
ANM	**Nome**	**6.26**	**293**	P	**Pn**		**15 28 42.7**	**+0.6**
	baz=100							
D20K	**Etivluk River**	**6.27**	**344**		**Pn**		**15 28 43.6**	**+1.4**
L29M	**L29M**	**6.28**	**81**		**Pn**		**15 28 43.7**	**+1.2**
D19K	**Kuna River**	**6.29**	**339**		**Pn**		**15 28 43.7**	**+1.1**
F15K	**North Star Dit**	**6.29**	**303**		**Pn**		**15 28 43.7**	**+1.2**
C21K	**Knifeblade Rid**	**6.51**	**351**		**Pn**		**15 28 47.5**	**+1.9**
K29M	**Barlow Dome**	**6.56**	**74**		**Pn**		**15 28 47.4**	**+1.1**
PNL	**Peninsula**	**6.78**	**112**	P	**Pn**		**15 28 50.3**	**+1.0**
YUK5	**Granite Creek**	**6.81**	**98**		**Pn**		**15 28 50.7**	**+0.8**
O29M	**Mount Kennedy**	**6.82**	**105**	Pn	**Pn**		**15 28 50.8**	**+0.8**
F14K	**Arctic Creek**	**6.87**	**300**		**Pn**		**15 28 51.2**	**+0.7**
D25K	**Kavik River**	**6.94**	**16**		**Pn**		**15 28 52.7**	**+1.2**
B21K	**Ikpikpuk River**	**6.96**	**352**		**Pn**		**15 28 52.4**	**+0.7**
F28M	**Old Crow**	**7.00**	**41**		**Pn**		**15 28 51.8**	**-0.4**
C18K	**Utukok River**	**7.03**	**331**		**Pn**		**15 28 53.1**	**+0.4**
C19K	**Lookout Ridge**	**7.08**	**337**		**Pn**		**15 28 54.4**	**+0.9**
HYT	**Haines Junctio**	**7.09**	**100**		**Pn**		**15 28 54.0**	**+0.4**
C24K	**Franklin Bluff**	**7.09**	**9**		**Pn**		**15 28 54.8**	**+1.4**
J30M	**Hart River**	**7.14**	**69**	Pn	**Pn**		**15 28 54.9**	**+0.6**
P29M	**Windy Craggy**	**7.52**	**108**		**Pn**		**15 29 00.5**	**+1.1**
B20K	**Meade River**	**7.56**	**346**		**Pn**		**15 29 00.3**	**+0.4**
VNFG	**Fog Glacier, M**	**7.59**	**214**		**Pn**		**15 29 01.8**	**+1.4**
B22K	**Teshekpuk Lake**	**7.62**	**356**		**Pn**		**15 29 01.7**	**+1.0**
B18K	**Kokolik River**	**7.73**	**333**		**Pn**		**15 29 03.0**	**+0.7**
E28M	**Babbage River**	**7.74**	**36**		**Pn**		**15 29 02.0**	**-0.4**
O30N	**Mendenhall**	**7.75**	**98**		**Pn**		**15 29 02.7**	**+0.1**
C16K	**Lisburne Hills**	**7.84**	**321**		**Pn**		**15 29 05.2**	**+1.5**
G30M	**tAoh Zraii Nji**	**7.87**	**51**	Pn	**Pn**		**15 29 04.4**	**+0.2**
E29M	**Blow River**	**8.06**	**40**		**Pn**		**15 29 07.2**	**+0.4**
E29M	**Blow River**	**8.06**	**40**	P	**Pn**		**15 29 07.2**	**+0.4**
	baz=232							
M31M	**Drury Creek, Y**	**8.12**	**86**	Pn	**Pn**		**15 29 08.2**	**+0.6**
WHY	**Whitehorse**	**8.34**	**97**	Pn	**Pn**		**15 29 10.8**	**0.0**
P32M	**Atlin**	**9.33**	**102**	Pn	**Pn**		**15 29 24.4**	**+0.2**
INK	**Inuvik**	**9.39**	**46**	Pn	**Pn**		**15 29 26.0**	**+1.1**
	baz=167,slow=29,SNR=2.7							
	comp=N,1.0nm,0.5s							
P33M	**Teslin, Yukon**	**9.46**	**97**	Pn	**Pn**		**15 29 26.2**	**+0.2**
JIS	**Juneau Island**	**9.72**	**110**	Pn	**Pn**		**15 29 30.2**	**+0.8**
JIS	**Juneau Island**	**9.72**	**110**	P	**Pn**		**15 29 30.3**	**+0.8**
Q32M	**Nakina River**	**10.28**	**103**	Pn	**Pn**		**15 29 37.7**	**+0.3**
S34M	**Telegraph Cree**	**11.35**	**106**	Pn	**Pn**		**15 29 52.9**	**+1.1**
DLBC	**Dease Lake**	**11.55**	**102**	Pn	**Pn**		**15 29 55.0**	**+0.4**
	comp=N,0.1nm,0.3s,baz=279,slow=26,SNR=1.7							
	comp=N,3.6nm,1.1s							
A36M	**Sachs Harbour**	**13.64**	**36**	Pn	**Pn**		**15 30 23.4**	**+0.5**
YKA	**Yellowknife Ar**	**16.98**	**74**	Pn	**Pn**		**15 31 05.9**	**-1.2**
	comp=N,0.1nm,0.3s,baz=285,slow=10,SNR=10							
	comp=N,0.3nm,0.7s							
PDAR	**Pinedale Array**	**31.66**	**109**	P	**P**		**15 33 34.0**	**+0.8**
	comp=N,0.3nm,0.7s,baz=302,slow=7.4,SNR=3.0							
	comp=N,0.3nm,0.7s							
NVAR	**Mina Array Bea**	**31.73**	**124**	P	**P**		**15 33 33.2**	**-0.5**
	comp=N,0.4nm,0.6s,baz=314,slow=8.7,SNR=4.1							
	comp=N,0.4nm,0.6s							
TXAR	**Lajitas Array**	**45.54**	**114**	P	**P**		**15 35 29.9**	**+0.5**
	comp=N,0.7nm,0.7s,baz=331,slow=7.5,SNR=9.6							
	comp=N,0.7nm,0.7s							
SONM	**Songino Array**	**53.61**	**305**	P	**P**		**15 36 32.1**	**+1.3**
	comp=N,1.4nm,0.9s,baz=43,slow=6.7,SNR=6.9							
	comp=N,1.4nm,0.9s							
EKA	**Eskdalemuir Ar**	**59.72**	**20**	P	**P**		**15 37 12.9**	**-1.0**
	comp=N,0.5nm,0.6s,baz=343,slow=6.4,SNR=2.2							
	comp=N,0.5nm,0.6s							
BVAR	**Borovoye Array**	**59.86**	**332**	P	**P**		**15 37 14.8**	**-0.1**
	comp=N,0.5nm,0.7s,baz=12,slow=7.6,SNR=3.6							
	comp=N,0.5nm,0.7s							
MKAR	**Makanchi Array**	**62.60**	**321**	P	**P**		**15 37 32.8**	**-0.8**
	comp=N,0.3nm,0.4s,baz=33,slow=7.1,SNR=2.6							
	comp=N,0.3nm,0.4s							

*IDC **04** 15:28:13.8±0.9,28°.39S×177°.44W,h0km,mb4.2/6, mbtmp4.2/6,MS4.2/2,Error ellipse: s-maj=32.7km s-min=16.3km az=118.0*

*NEIC **04** 15:28:22.2±0.6,28°.7S±0°.1×177°.4W±0°.2,h54km±8km, mb4.3/14,Error ellipse: s-maj=28.6km s-min=8.2km az=131.0*

ISC 04 15:28:21.0±0.7,28°.70S±0°.10×177°.4W±0°.2,h54km,n50, σ1§35/38,mb4.1/13,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.72**	**221**		**Pn**	**15 28 36.7**	**+1.4**
RAO				Sn	**Sn**	**15 28 47.3**	**+1.6**
RAO	**Raoul Island**	**0.72**	**221**	Pn	**Pn**	**15 28 35.8**	**+0.6**
	2μm,0.3s,baz=58,slow=5.4,SNR=94						
RAO				Sn	**Sn**	**15 28 48.1**	**+2.5**
	10μm,0.3s,baz=39,slow=20,SNR=40						
URZ	**Urewera**	**10.58**	**204**	Pn	Pn	15 30 43.9	-5.9
	0.2nm,0.3s,baz=321,slow=2.1,SNR=9.6						
URZ				Sn	Sn	15 32 38.2	-8.6
	2.1nm,0.3s,baz=70,slow=22,SNR=10						
RTZ	**Ruatahuna**	**10.95**	**204**		**Sn**	**15 32 52.8**	**-3.1**
TUWZ	**Tuamarina**	**14.54**	**207**	Pn	**Pn**	**15 31 40.9**	**-2.7**
CMWZ	**Cape Campbell**	**14.71**	**206**	Pn	**Pn**	**15 31 44.2**	**-1.6**
KHZ	**Kahutara**	**15.54**	**206**	Pn	**Pn**	**15 31 52.3**	**-4.2**
KHZ				IAmb	IAmb	15 32 03.6	
	comp=Z,30nm,1.0s						
CAN	**Canberra**	**29.17**	**248**	P	**P**	**15 34 18.9**	**+1.6**
CAN				IAmb	IAmb	15 34 39.7	
	comp=Z,19nm,1.5s						
STKA	**Stephens Creek**	**35.42**	**254**	P	**P**	**15 35 12.6**	**+0.7**
STKA	**Stephens Creek**	**35.42**	**254**	P	**P**	**15 35 11.6**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=81,slow=12,SNR=6.7						
	comp=Z,1.1nm,0.5s						
PMG	**Port Moresby**	**38.41**	**293**	LR	LR	15 50 02.5	
	comp=Z,256nm,18.8s,baz=329,slow=34						
BBOO	**Buckleboo**	**39.98**	**252**	P	**P**	**15 35 50.6**	**+0.2**
BBOO				IAmb	IAmb	15 35 56.8	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**43.77**	**265**	P	**P**	**15 36 21.4**	**-0.2**
ASAR	**Alice Springs**	**43.77**	**265**	P	**P**	**15 36 21.3**	**-0.2**
ASAR	**Alice Springs**	**43.77**	**265**	P	**P**	**15 36 21.1**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=99,slow=6.7,SNR=56						
ASAR				LR	LR	15 53 29.5	
	comp=Z,340nm,19.4s,baz=335,slow=35						
	comp=Z,1.9nm,0.5s						
WR0	**Warramunga Arr**	**44.42**	**270**	P	**P**	**15 36 27.0**	**+0.2**
WR0				IAmb	IAmb	15 36 31.3	
	comp=Z,4.1nm,1.1s						
WB2	**Warramunga Arr**	**44.60**	**270**	P	**P**	**15 36 28.4**	**+0.3**
WB2				IAmb	IAmb	15 36 29.0	
	comp=Z,6.5nm,1.0s						
WRA	**Warramunga Arr**	**44.61**	**270**	P	**P**	**15 36 28.6**	**+0.4**
WRA	**Warramunga Arr**	**44.61**	**270**	P	**P**	**15 36 27.8**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=109,slow=7.6,SNR=18						
	comp=Z,2.5nm,0.6s						
WB0	**Warramunga Arr**	**44.62**	**270**	P	**P**	**15 36 28.6**	**+0.2**
WB0				IAmb	IAmb	15 36 30.6	
	comp=Z,3.0nm,0.8s						
FORT	**Forrest**	**47.03**	**253**	P	**P**	**15 36 46.3**	**-0.8**
VNDA	**Vanda**	**49.84**	**186**	P	**P**	**15 37 09.7**	**+1.6**
VNDA				IAmb	IAmb	15 37 31.3	
	comp=Z,5.1nm,1.2s						
KNRA	**Kununurra**	**51.14**	**273**	P	**P**	**15 37 18.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.93**	**268**	P	**P**	**15 37 32.7**	**+0.6**
FITZ				IAmb	IAmb	15 37 48.2	
	comp=Z,2.3nm,1.2s						
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**15 38 33.0**	**+1.6**
MJAR	**Matsushiro Arr**	**77.17**	**325**	P	**P**	**15 40 07.8**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=157,slow=6.2,SNR=2.7						
	comp=Z,1.9nm,0.9s						
H03S2	**Juan Fernandez**	**80.95**	**124**	T	T	17 10 11.0	
	baz=240,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**80.96**	**124**	T	T	17 10 12.2	
	baz=240,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**80.97**	**124**	T	T	17 10 10.7	
	baz=240,slow=74,SNR=12						
H03N3	**Juan Fernandez**	**81.13**	**123**	T	T	17 10 23.0	
	baz=244,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**81.13**	**123**	T	T	17 10 23.6	
	baz=244,slow=72,SNR=14						
H03N1	**Juan Fernandez**	**81.15**	**123**	T	T	17 10 24.1	
	baz=244,slow=72,SNR=15						
PETK	**Petropavlovsk-**	**84.31**	**345**	P	**P**	**15 40 46.0**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=138,slow=5.4,SNR=4.2						
	comp=Z,2.9nm,0.9s						
NVAR	**Mina Array Bea**	**86.62**	**42**	P	**P**	**15 40 59.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=221,slow=8.4,SNR=7.2						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**117.09**	**311**	PKP	**PKPdf**	**15 46 58.6**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=78,slow=3.0,SNR=3.0						
KURBB	**Kurchatov Arra**	**120.30**	**314**	PKP	**PKPdf**	**15 47 04.9**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=107,slow=3.0,SNR=5.6						
BVAR	**Borovoye Array**	**125.56**	**317**	PKP	**PKPdf**	**15 47 15.6**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=132,slow=0.9,SNR=5.3						
H10S3	**ASCENSION HYDR**	**139.01**	**153**	T	T	18 23 09.9	
	baz=15,slow=74,SNR=6.

LATG S Sg 15 34 00.6 -1.0
baz=326
TWC Suao 0.42 8 *i* P Pg 15 33 55.5 -0.4
baz=4.0
TWC *i* S Sg 15 34 01.0 -0.6
baz=4.0
NNSB Datong 0.43 303 *i* P Pg 15 33 56.0 -0.2
baz=303
NNSB S Sg 15 34 01.8 -0.3
baz=303
NNSH Datong 0.43 303 ⇓P Pg 15 33 55.9 -0.3
baz=303
NNSH S Sg 15 34 01.7 -0.5
baz=303
NDS Dongshan 0.44 352 *i* P Pg 15 33 56.1 -0.2
baz=353
NDS S Sg 15 34 02.3 -0.1
baz=353
NNS Nan Shan 0.45 303 ⇓*i*P Pg 15 33 56.2 -0.3
baz=304
NNS *i* S Sg 15 34 02.0 -0.6
baz=304
SHUL Shoufeng 0.45 206 P Pb 15 33 57.5 +0.4
baz=195
SHUL *e*S Sb 15 34 04.1 +0.6
baz=195
EOS2 EOS2 0.47 61 *e*P Pb 15 33 58.0 +0.9
baz=45
NDT Datong Townshi 0.47 329 ⇓P Pg 15 33 56.9 -0.1
baz=330
NDT S Sg 15 34 03.4 +0.1
baz=330
WHF Hehuan Shan 0.47 264 P Pg 15 33 56.7 -0.4
baz=264
WHF *i* S Sg 15 34 03.2 -0.4
baz=264
ENTT Nioudou 0.48 336 *i* P Pg 15 33 57.0 -0.2
baz=337
ENTT *i* S Sg 15 34 03.7 0.0
baz=337
FUSS Fushou 0.49 276 P Pg 15 33 57.3 -0.1
baz=277
FUSS S Sg 15 34 04.0 -0.1
baz=277
EOS4 EOS4 0.49 98 *e*P Pn 15 33 59.4 -0.1
baz=97
EOS4 *e*S Sn 15 34 07.9 +0.3
baz=97
ESL Shilin 0.50 220 ⇑*i*P Pg 15 33 57.0 -0.4
baz=228
ESL S Sb 15 34 05.4 +0.6
baz=228
EOS3 EOS3 0.50 79 *e*P Pn 15 33 59.2 -0.5
baz=76
TEGC Jichi Village 0.53 205 *i* P Pb 15 33 59.4 +1.1
baz=192
TEGC S Sn 15 34 08.2 -0.8
baz=192
TWE Neicheng 0.53 349 *i* P Pg 15 33 57.9 -0.2
baz=351
TWE S Sg 15 34 05.3 +0.1
baz=351
TWT Tachien 0.56 276 *i* P Pb 15 33 58.8 -0.1
baz=276
TWT *i* S Sb 15 34 06.8 +0.1
baz=276
ILA Ilan 0.57 357 *i* P Pb 15 33 58.8 -0.2
baz=353
ILA *e*S Sb 15 34 07.1 +0.2
baz=353
CHGB Renai 0.57 257 ⇑P Pg 15 33 58.7 -0.1
baz=249
CHGB S Sg 15 34 06.3 -0.2
baz=249
TDCB Techi 0.57 276 *i* P Pg 15 33 58.9 +0.1
baz=276
TDCB S Sg 15 34 06.2 -0.3
baz=276
FUSB Fushanzhiwuyua 0.59 343 ⇓P Pg 15 33 59.0 -0.1
baz=343
FUSB S Sg 15 34 07.0 0.0
baz=343
WARBT Fenglin Townsh 0.60 217 *e*P Pg 15 33 58.8 -0.4
baz=225
WARBT *e*S Sg 15 34 05.8 -1.4
baz=225
YHNB Yeheng 0.60 322 Pg 15 33 59.1 -0.2
YHNB Sg Sg 15 34 06.8 -0.5
YHNB Yeheng 0.60 322 P Pb 15 33 59.4 -0.2
YHNB Yeheng 0.60 322 *i* P Pb 15 33 59.3 -0.2
baz=322
YHNB *i* S Sg 15 34 07.5 +0.1
baz=322
OWD Renai 0.60 247 P Pg 15 33 59.1 -0.3
baz=247
OWD S Sb 15 34 08.6 +0.5
baz=247
NSK Sanguang 0.61 321 *i* P Pg 15 33 59.5 -0.1
baz=322
NSK *i* S Sg 15 34 07.3 -0.5
baz=322
EGFH Guangfu 0.62 212 P Pg 15 33 59.5 -0.1
baz=228
EGFH S Sb 15 34 10.2 +1.9
baz=228
WUSB Renai 0.64 252 ⇑P Pg 15 33 59.9 -0.1
baz=245
WUSB S Sg 15 34 08.7 +0.1
baz=245
NTC Toucheng 0.66 4 P Pg 15 34 00.2 -0.2
baz=4.0
NTC S Sb 15 34 09.9 +0.5
baz=4.0
VWDT VWDT 0.73 233 P Pg 15 34 01.5 -0.2
baz=234
VWDT S Sg 15 34 10.5 -0.9
baz=234
NFF Wufeng Townshi 0.75 306 ⇓P Pg 15 34 01.9 -0.1
baz=306
NFF S Sb 15 34 11.9 -0.1
baz=306
WHP Taichung City 0.77 276 P Pb 15 34 02.6 +0.1
baz=277
WHP S Sb 15 34 13.0 +0.3
baz=277
HGSD Ruisui 0.77 205 P Pb 15 34 03.0 +0.5
baz=193
HGSD *i* S Sn 15 34 16.1 +1.1
baz=193
TIPB Shuangxi 0.77 3 ⇓P Pg 15 34 02.3 -0.3
baz=3.0
TIPB S Sg 15 34 12.1 -0.7
baz=3.0
WPL Puli Township 0.78 257 P Pb 15 34 02.7 +0.1
baz=249
WPL S Sg 15 34 12.5 -0.3
baz=249
DPDB Guoxing 0.80 259 P Pb 15 34 03.2 +0.2
baz=251
DPDB S Sg 15 34 13.5 0.0
baz=251
NHDH Xindian Distri 0.80 343 *i* P Pg 15 34 02.8 -0.2
baz=343
NHDH S Sb 15 34 13.7 +0.2
baz=343
EHY Hungye 0.81 212 *i* P Pg 15 34 02.5 -0.7
baz=221
EHY *e*S Sg 15 34 13.8 +0.1
baz=221
WCS Beigang Elemen 0.81 260 P Pb 15 34 03.4 +0.3
baz=253
WCS S Sg 15 34 13.5 -0.3
baz=253
TATO Taipei 0.82 341 Pg 15 34 02.9 -0.6
TATO Sg Sg 15 34 13.7 -0.6
TATO Taipei 0.82 341 ⇓P Pg 15 34 03.2 -0.3
baz=341
TATO S Sb 15 34 14.5 +0.3
baz=341
LIOB Emei 0.83 303 *i* P Pb 15 34 03.9 +0.4
baz=303
LIOB S Sb 15 34 15.3 +0.8
baz=303
NJD Zhudong 0.83 311 P Pn 15 34 04.3 -0.2
baz=311
NJD S Sn 15 34 16.4 0.0
baz=311
TWB1 Santiao Chiao 0.83 13 *i* P Pg 15 34 03.2 -0.4
baz=14
TWB1 S Sb 15 34 14.7 +0.3
baz=14
NSTT Nanjuang 0.83 302 *i* P Pb 15 34 03.8 +0.2
baz=302
NSTT *i* S Sb 15 34 15.1 +0.6
baz=302
BACT New Taipei Cit 0.86 339 P Pn 15 34 04.6 -0.2
baz=339
SSLB Suanglung 0.86 242 Pg 15 34 03.5 -0.6
SSLB Suanglung 0.86 242 P Pg 15 34 03.9 -0.2
SSLB Suanglung 0.86 242 ⇑P Pg 15 34 03.7 -0.4
baz=252
SSLB *e*S Sg 15 34 15.1 -0.4
baz=252
NHY Taipei 0.86 347 P Pb 15 34 04.6 +0.5
baz=347
NHY *e*S Sb 15 34 16.4 +1.1
baz=347
SMLT Sun Moon Lake 0.86 249 *i* P Pg 15 34 04.2 -0.1
baz=249
SMLT *i* S Sb 15 34 15.8 +0.3
baz=249
NWF Wu-fen Shan 0.87 360 ⇓*i*P Pb 15 34 04.5 +0.2
baz=353
NWF *i* S Sb 15 34 15.9 +0.1
baz=353
WFSB Wu-fen Shan 0.87 360 *i* P Pb 15 34 04.5 +0.3
baz=353
WFSB S Sb 15 34 16.4 +0.7
baz=353
TYC Yuchr 0.89 251 *i* P Pg 15 34 04.6 -0.2
baz=245
TYC *i* S Sg 15 34 15.7 -0.8
baz=245
SXI1 Grass Mountain 0.90 5 ⇓P Pb 15 34 04.8 +0.1
baz=353
HSN1 Hsinchu 0.91 310 ⇓P Pn 15 34 05.9 +0.3
baz=310
HSN1 S Sn 15 34 19.3 +1.0
baz=310
NTY Taoyuan 0.91 331 P Pn 15 34 05.9 +0.3
baz=339
NTY S Sn 15 34 19.3 +0.8
baz=339
YULB Yu-li 0.91 209 Pg 15 34 04.2 -0.9
YULB Yu-li 0.91 209 P Pg 15 34 05.1 -0.1
YULB Yu-li 0.91 209 P Pg 15 34 04.3 -0.9
baz=220
YULB S Sn 15 34 18.8 +0.3
baz=220
ECBN Changbin 0.93 199 P Pg 15 34 05.3 -0.1
baz=200
ECBN *e*S Sn 15 34 18.6 -0.1
baz=200
TWQ1 Liyutan 0.93 280 *i* P Pn 15 34 06.0 +0.1
baz=280
TWQ1 *e*S Sg 15 34 17.5 -0.3
baz=280
SBCB Hsinchu 0.94 309 ⇓P Pn 15 34 06.3 +0.3
baz=310
SBCB *e*S Sn 15 34 19.0 -0.1
baz=310
NCUH Zhongli 0.94 325 P Pn 15 34 06.2 +0.2
baz=325
NCUH S Sn 15 34 21.0 +1.9
baz=325
EYUL Yuli 0.94 207 P Pg 15 34 05.6 -0.2
baz=224
TWF1 Yuli 0.95 208 *i* P Pg 15 34 05.4 -0.4
baz=220
TWF1 *i* S Sn 15 34 20.3 +1.0
baz=220
TNOU National Taiwa 0.95 359 P Pb 15 34 05.9 +0.3
baz=360
TNOU S Sg 15 34 17.8 -0.6
baz=360
HSN Hsinchu 0.96 309 *i* P Pn 15 34 06.5 +0.3
baz=303
HSN *i* S Sn 15 34 19.5 0.0
baz=303
NSY Sanyi 0.96 283 *i* P Pn 15 34 06.9 +0.6
baz=284
NSY S Sn 15 34 19.4 -0.2
baz=284
TWS1 Kuangyinshan 0.96 340 *i* P Pn 15 34 06.2 -0.1
baz=341
TWS1 S Sn 15 34 19.6 0.0
baz=341
NJN Zhunan 0.96 301 P Pn 15 34 07.1 +0.9
baz=301
NJN S Sn 15 34 20.6 +1.0
baz=301
NMLH Miaoli 0.97 291 P Pn 15 34 07.5 +1.1
baz=291
NMLH S Sn 15 34 20.0 +0.3
baz=291
YM01 YM01 0.97 349 P Pb 15 34 06.1 +0.3
baz=349
YM01 S Sn 15 34 19.6 -0.2
baz=349
WHYT Xinyi Township 0.98 240 P Pg 15 34 06.6 +0.1
baz=247
WHYT *e*S Sg 15 34 18.9 -0.6
baz=247
WWF Wufeng 1.00 262 P Pn 15 34 08.2 +1.4
baz=257
NWRT Kuosheng 1.01 354 P Pn 15 34 07.6 +0.7
baz=354
NTST Danshui 1.01 343 P Pn 15 34 07.3 +0.3
baz=343
NTST S Sn 15 34 22.4 +1.6
baz=343
ANP Anpu 1.01 346 P Pg 15 34 06.9 -0.3
baz=347
WJS Zhushan 1.03 249 P Pn 15 34 08.3 +1.0
baz=245
WJS S Sn 15 34 22.8 +1.4
baz=245
WNT1 Nantou City 1.05 254 P Pn 15 34 09.1 +1.7
baz=251
WNT1 S Sn 15 34 24.3 +2.6
baz=251
NHW Xinwu Township 1.05 321 *i* P Pn 15 34 08.2 +0.7
baz=321
NHW S Sn 15 34 23.7 +1.9
baz=321
WDJ Dajia District 1.05 279 P Pn 15 34 09.2 +1.6
baz=280
WDJ S Sn 15 34 22.6 +0.7
baz=280
WNT Mingjian 1.05 253 *i* P Pn 15 34 08.8 +1.2
baz=249
WNT *i* S Sn 15 34 23.4 +1.6
baz=249
CHKH Chenggong 1.06 200 P Pb 15 34 07.5 +0.1
baz=218
CHKH S Sn 15 34 23.8 +1.8
baz=218
FULB Fuli 1.09 204 P Pb 15 34 07.8 0.0
baz=221
FULB *e*S Sn 15 34 25.3 +2.5
baz=221
TWY Chenhua 1.09 351 *i* P Pn 15 34 08.2 +0.2
baz=343
TWY *i* S Sn 15 34 23.2 +0.5
baz=343
JYNG Yonagunijimaku 1.09 76 P Pg 15 34 08.5 0.0
JYNG *e*S Sg 15 34 22.6 -0.2
JYNG Yonagunijimaku 1.09 76 A A 15 34 08.5
comp=E,22nm,4.3s,comp=N,34nm,1.9s
NSM Shimen 1.10 351 P Pg 15 34 09.4 +0.7
baz=336
WYL Yuanlin Townsh 1.12 258 *e*P Pb 15 34 07.1 -1.3
baz=260
WCHH Zhanghua 1.12 264 P Pg 15 34 10.1 +1.0
baz=265
WCHH S Sn 15 34 25.9 +2.2
baz=265
ALS Alishan 1.12 233 P Pg 15 34 09.0 -0.2
baz=234
ALS S Sn 15 34 24.9 +0.9
baz=234
YOJ Yonaguni jima 1.15 76 Pb 15 34 09.0 +0.1
YOJ Yonaguni jima 1.15 76 P Pg 15 34 09.5 -0.2
YOJ Yonaguni jima 1.15 76 P Pg 15 34 09.3 -0.4
baz=62
YOJ S Sn 15 34 26.5 +2.2
baz=62
YOJ Yonaguni jima 1.15 76 P Pg 15 34 09.4 -0.3
YOJ S Sg 15 34 24.6 -0.2
YOJ Yonaguni jima 1.15 76 A A 15 34 09.4
comp=E,22nm,1.6s,comp=N,24nm,4.5s
CHKT Chengkung 1.16 199 *i* P Pb 15 34 08.6 -0.5
baz=182
CHKT *i* S Sn 15 34 26.5 +2.1
baz=182
EHD Haiduan 1.17 207 P Pb 15 34 07.9 -1.3
baz=209
EHD *e*S Sb 15 34 24.3 +0.2
baz=209
CHN5 Tsauling 1.17 240 *i* P Pg 15 34 10.5 +0.4
baz=242
CHN5 *i* S Sn 15 34 26.5 +1.5
baz=242
ECS Chishang 1.21 205 P Pg 15 34 11.1 +0.3
baz=207
ELDTW Lidau 1.22 215 *i* P Pn 15 34 09.4 -0.6
baz=205
ELDTW S Sg 15 34 27.7 +0.6
baz=205
WGK Gukeng 1.23 246 *i* P Pg 15 34 11.4 +0.3
baz=247
WGK *i* S Sg 15 34 28.4 +1.3
baz=247
WDLH Douliu 1.25 246 P Pg 15 34 12.1 +0.7
baz=248
WDLH S Sg 15 34 29.5 +1.8
baz=248
EDH Donghe 1.29 200 P Pn 15 34 10.4 -0.4
baz=184
EDH S Sg 15 34 29.8 +0.5
baz=184
WCKO Fanlu 1.31 235 P Pg 15 34 13.2 +0.4
baz=238
WCKO S Sg 15 34 31.6 +1.6
baz=238
WRL Guolierlin Hig 1.32 257 P Pg 15 34 12.8 0.0
baz=260
WRL S Sg 15 34 30.8 +0.8
baz=260
WTK Tuku 1.37 249 P Pg 15 34 13.8 0.0
baz=251
WTK S Sg 15 34 32.4 +0.7
baz=251
STYH Taoyuan 1.38 222 P Pb 15 34 13.3 +0.5
baz=225
STYH S Sg 15 34 32.1 +0.3
baz=225
CHN4 Tsaushan 1.38 233 *i* P Pg 15 34 13.8 -0.1
baz=235
CHN4 S Sg 15 34 33.6 +1.7
baz=235
TPUB Ta-pu 1.38 230 Pn Pb 15 34 13.2 +0.3
TPUB Ta-pu 1.38 230 P Pg 15 34 13.8 -0.2
TPUB Ta-pu 1.38 230 P Pg 15 34 13.8 -0.2
baz=220
TPUB S Sg 15 34 33.4 +1.3
baz=220
LONT Longtian 1.42 205 P Pn 15 34 12.1 -0.5
baz=208
LONT S Sg 15 34 33.0 -0.1
baz=208
CHY Chiayi 1.42 241 P Pg 15 34 14.9 0.0
baz=243
CHY S Sg 15 34 34.2 +0.8
baz=243
WTP Ta-pu 1.43 229 *i* P Pb 15 34 14.2 +0.4
baz=231
WTP *i* S Sg 15 34 35.8 +2.2
baz=231
PCYT Pengchaiyu 1.45 10 *i* P Pn 15 34 13.6 +0.6
baz=9.0
PCYT S Sg 15 34 34.4 +0.1
baz=9.0
TWK Hsinying 1.50 232 *i* P Pb 15 34 15.5 +0.5
baz=235
TWK S Sg 15 34 36.3 +0.4
baz=235
TWGBT Beinan 1.52 205 P Pn 15 34 12.8 -1.1
TWGBT Beinan 1.52 205 P Pn 15 34 12.6 -1.3
baz=208
TWGBT *e*S Sn 15 34 34.0 +0.7
baz=208
TWG Pinlang 1.52 206 Pn Pn 15 34 12.4 -1.5
TWG Pinlang 1.52 206 *i* P Pn 15 34 12.8 -1.1
baz=208
TWG *e*S Sn 15 34 33.0 -0.3
baz=208
SNST Tainan City 1.53 231 *e*P Pg 15 34 17.1 +0.3
baz=233
SNST *e*S Sg 15 34 37.6 +0.9
baz=233
CHN1 Nanshi 1.53 229 *i* P Pb 15 34 15.8 +0.4
baz=232
CHN1 *i* S Sg 15 34 37.6 +0.9
baz=232
WSF Szhu 1.53 249 *e*P Pg 15 34 16.4 -0.5
baz=252
WSF *i* S Sg 15 34 37.9 +1.1
baz=252
LDUT Ludao 1.54 191 *e*P Pn 15 34 13.5 -0.7
baz=180
LDUT *e*S Sn 15 34 32.9 -1.0
baz=180
TTN Taitung 1.55 202 *e*P Pn 15 34 14.5 +0.1
baz=204
SGST Jiashian 1.56 225 *e*P Pg 15 34 17.2 -0.3
baz=228
SGST *e*S Sg 15 34 39.6 +1.8
baz=228
WSL Shuilin Townsh 1.57 245 *e*P Pb 15 34 16.8 +0.6
baz=248
WSL *e*S Sg 15 34 39.7 +1.6
baz=248
SLGT Liugui 1.59 221 P Pb 15 34 16.6 +0.2
baz=224
SLGT *i* S Sg 15 34 39.9 +1.3
baz=224
ICHU Yijhu 1.61 239 *e*P Pg 15 34 18.1 -0.3
baz=242
ICHU *i* S Sg 15 34 40.7 +1.4
baz=242
CHN8 Yiju 1.67 240 *e*S Sg 15 34 43.0 +1.8
baz=243
CHN3 Shinhua 1.71 230 *e*P Pg 15 34 20.2 -0.2
baz=232
CHN3 *e*S Sg 15 34 43.5 +0.9
baz=232
SSHA Shanhua 1.73 233 *e*S Sg 15 34 43.9 +0.8
baz=236
SCST Cishan 1.76 222 *e*P Pb 15 34 19.8 +0.5
baz=225
SCST *e*S Sg 15 34 43.9 -0.2
baz=225
SHHT Tainan City 1.76 229 *e*P Pg 15 34 21.1 -0.1
baz=231
ECL Taimali 1.76 206 P Pn 15 34 15.8 -1.5
baz=194
SCLT Jiali 1.77 235 *e*S Sg 15 34 44.7 +0.1
baz=238
IRIF Iriomote-Funau 1.78 85 P Pn 15 34 18.0 +0.4
IRIF *e*S Sb 15 34 41.6 -0.3
IRIF Iriomote-Funau 1.78 85 A A 15 34 18.0
comp=E,15nm,1.9s,comp=N,23nm,1.6s
TSMG Majia 1.81 215 *e*P Pb 15 34 20.8 +0.6
baz=218
TSMG *e*S Sg 15 34 44.9 -1.0
baz=218
TWM1 Shoushan 1.85 223 *e*P Pg 15 34 22.2 -0.7
baz=224
HATJ Hateruma jima 1.85 94 *e*P Pn 15 34 19.3 +0.8
HATJ *e*S Sb 15 34 43.3 -0.6
HATJ Hateruma jima 1.85 94 A A 15 34 19.3
comp=E,37nm,2.4s,comp=N,29nm,5.0s
TSCK Chigu Township 1.87 236 *e*P Pb 15 34 21.1 -0.2
baz=240
TSCK *i* S Sb 15 34 46.0 +1.6
baz=240
SGLT Jiouru 1.88 219 *e*P Pb 15 34 21.8 +0.4
baz=206
MASBT Mashibuluo 1.90 214 *e*P Pb 15 34 21.7 0.0
baz=216
MASBT S Sb 15 34 47.0 +1.9
baz=216
SNJT Kaohsiung City 1.96 223 *e*P Pb 15 34 22.4 -0.3

baz=226
EAST Anshuo 2.00 206 *e*P Pn 15 34 19.9 -0.7
baz=196
JKRS Kuro-shima 2.03 88 P Pn 15 34 22.1 +1.1
JKRS *e*S Sn 15 34 47.9 +1.8
JKRS Kuro-shima 2.03 88 A A 15 34 22.1
comp=E,32nm,2.8s,comp=N,30nm,2.5s
SCZT Fangliau 2.11 211 *e*P Pb 15 34 24.2 -1.0
baz=213
SCZT *e*S Sb 15 34 52.8 +1.6
baz=213
PNG Penghu 2.13 253 *e*S Sb 15 34 51.4 -0.5
baz=258
PHUB P'eng-hu 2.13 252 *e*P Pb 15 34 24.9 -0.8
baz=257
PHUB *i* S Sb 15 34 51.6 -0.3
baz=257
WDGT Dungji 2.16 245 *e*P Pb 15 34 25.3 -0.7
baz=249
LAY Lan-yu 2.16 186 *e*S Sn 15 34 49.1 -0.1
baz=176
JIJ Ishigaki jima 2.16 85 P Pn 15 34 23.2 +0.5
JIJ *e*S Sn 15 34 50.2 +1.0
JIJ Ishigaki jima 2.16 85 A A 15 34 23.2
comp=E,5.0nm,2.9s,comp=N,4.0nm,4.2s
SLIU Shizi 2.17 205 *e*P Pn 15 34 23.1 +0.2
baz=196
LYUB Lan-yu 2.19 185 *e*P Pn 15 34 24.0 +0.8
baz=176
LYUB S Sn 15 34 49.0 -1.0
baz=176
VWUC VWUC 2.27 291 *i* P Pn 15 34 24.5 +0.3
baz=291
VWUC *i* S Sn 15 34 52.9 +1.0
baz=291
JISG Ishigakijimahi 2.34 80 P Pn 15 34 25.3 +0.1
JISG *e*S Sn 15 34 54.3 +0.7
JISG Ishigakijimahi 2.34 80 A A 15 34 25.3
comp=E,5.0nm,2.9s,comp=N,6.0nm,4.8s
VCHM Qimei 2.37 246 *e*S Sb 15 34 57.6 -1.1
baz=233
MATB Ma-tsu 2.56 320 *e*P Pn 15 34 28.5 +0.2
baz=319
PTMZ Houxiangcun 2.56 290 *e*P Pn 15 34 28.6 +0.3
baz=291
JTJ Tarama 2.70 80 *e*P Pn 15 34 31.5 +1.3
JTJ *e*S Sn 15 35 04.1 +1.6
LYJJ Jianjiangzhen 2.97 322 *e*P Pn 15 34 34.7 +0.7
baz=322
QZH Quanzhou 3.00 285 ⇓ *i*Pn Pn 15 34 34.6 +0.3
QZH Sn Sn 15 35 09.4 -0.5
QZH smax smax
comp=N,640nm,1.5s
QZH smax smax
comp=N,450nm,0.8s
KNM Kinmen 3.06 275 *e*P Pn 15 34 37.9 +2.7
baz=276
XPSS Dashiqiu 3.08 332 *e*P Pn 15 34 35.9 +0.5
baz=332
KNMB Chin-men Tao 3.11 276 Pn Pn 15 34 35.8 0.0
KNMB Chin-men Tao 3.11 276 *e*P Pn 15 34 36.2 +0.4
baz=277
MHZQ Yeshan 3.13 308 *e*P Pn 15 34 37.1 +0.9
baz=308
JMJ Miyako jima 2 3.26 78 P Pn 15 34 39.8 +1.9
JMJ2 Miyako jima3 3.28 80 P Pn 15 34 40.0 +1.9
JMJ2 S Sn 15 35 19.8 +3.0
AXDP Jialang 3.54 282 *e*P Pn 15 34 42.5 +0.7
baz=285
ZPLA Ao Xicun 3.69 267 *e*P Pn 15 34 44.6 +0.7
baz=269
JKE Kume jima 2 5.00 64 *e*P Pn 15 35 03.3 +1.4
JOW Kunigami 6.43 65 Pn Pn 15 35 20.8 -0.6
JOW Kunigami 6.43 65 P Pn 15 35 20.5 -1.0
comp=N,12nm,0.3s,baz=177,slow=13,SNR=14
comp=N,22nm,0.3s
NJ2 Nanjing 8.24 342 *e*P Pn 15 35 46.2 -0.1
NJ2 S Sn 15 37 18.0 -1.1
NJ2 pmax pmax
comp=N,13nm,0.5s
NJ2 smax smax
comp=N,110nm,1.1s
NJ2 smax smax
comp=N,69nm,1.2s
NJ2 LR LR
comp=N,3μm,9.1s
NJ2 LR LR
comp=N,2μm,3.8s
NJ2 LR LR
comp=N,2μm,10.6s
WHN Wuhan 9.14 315 P Pn 15 35 54.5 -4.2
WHN S Sn 15 37 38.8 -2.5
WHN LR LR
comp=N,6μm,10.0s
WHN LR LR
comp=E,6μm,8.2s
WHN LR LR
comp=E,8μm,10.3s
GYA Guiyang 13.86 283 ⇑P Pn 15 37 05.2 +1.8
GYA pmax pmax
comp=Z,11nm,0.8s
GYA pmax pmax
comp=Z,670nm,12.0s
GYA LR LR
comp=Z,2μm,9.6s
KSRS Korea Array 14.22 20 P Pn 15 37 09.2 +1.0
comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=3.0
comp=Z,0.8nm,0.6s
HNS HongShan 14.49 337 *e*P P 15 37 21.6 +3.2
HNS *e*S S 15 40 15.3 +3.6
HNS LR LR
comp=N,1μm,13.5s
HNS LR LR
comp=E,1μm,11.8s
HNS LR LR
comp=Z,1μm,11.8s
XAN Xi'an 14.90 314 ⇑P P 15 37 21.2 -2.0
XAN pmax pmax
comp=Z,11nm,1.7s
XAN LR LR
comp=Z,970nm,15.1s
XAN LR LR
comp=Z,900nm,17.3s
XAN LR LR
comp=Z,730nm,12.5s
CD2 Chengdu 17.32 297 *e*P Pn 15 37 48.0 -0.6
PZH PanZhiHua 18.26 281 P Pn 15 37 59.7 -0.6
PZH pmax pmax
comp=Z,6.0nm,1.1s
PZH pmax pmax
comp=Z,90nm,4.3s
HHC Hu-ho-hao-te 18.68 335 *e*P P 15 38 05.1 +0.1
HHC sP sP 15 38 14.2 +2.2
HHC S Sn 15 41 34.5 +0.4
HHC sS sS 15 41 41.4 -2.5
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,350nm,6.1s
HHC LR LR
comp=Z,760nm,12.3s
HHC LR LR
comp=Z,710nm,14.7s
HHC LR LR
comp=Z,1μm,11.6s
BTO Baotou 19.11 332 *e*P Pn 15 38 15.1 +4.5
BTO pP sP 15 38 18.3 +1.7
BTO sP pP 15 38 21.7 +7.3
BTO PP PnPn 15 38 26.8 +3.5
BTO pmax pmax
comp=Z,10.0nm,0.6s
BTO pmax pmax
comp=Z,2μm,10.8s
BTO LR LR
comp=Z,3μm,10.5s
BTO LR LR
comp=Z,2μm,10.8s
BTO LR LR
comp=Z,3μm,10.2s
LZH Lanzhou 19.49 312 *e*P Pn 15 38 18.7 +3.5
LZH pmax pmax
comp=Z,11nm,1.4s
CN2 Changchun 19.79 8 *e*P Pn 15 38 18.2 -0.3
CN2 *e*S S 15 41 55.6 -3.8
CN2 LR LR
comp=Z,820nm,13.0s
CN2 LR LR
comp=Z,310nm,13.0s
XLT XiLinHaoTe 20.20 348 *e*P P 15 38 22.8 +1.2
XLT pP sP 15 38 26.7 -0.9
XLT pmax pmax
comp=Z,15nm,1.1s
XLT pmax pmax
comp=Z,710nm,11.1s
TNCH TengChong 21.16 277 P P 15 38 35.8 +3.5
TNCH pP sP 15 38 40.1 +1.3
TNCH sP pP 15 38 42.9 +6.2
TNCH PP PnPn 15 38 57.6 +6.0
TNCH S S 15 42 20.4 -7.0
TNCH SS SnSn 15 42 56.5 +7.3
TNCH pmax pmax
comp=Z,7.0nm,0.9s
TNCH LR LR
comp=Z,490nm,9.9s
TNCH LR LR
comp=Z,710nm,8.7s
TNCH LR LR
comp=Z,750nm,9.7s
MDJ Mudanjiang 21.35 15 P P 15 38 40.0 +6.2
MDJ pP sP 15 38 42.4 +2.1
MDJ pmax pmax
comp=Z,11nm,1.3s
MDJ pmax pmax
comp=Z,930nm,6.2s
MDJ LR LR
comp=Z,1μm,16.1s
MDJ LR LR
comp=Z,1μm,17.2s
MDJ LR LR
comp=Z,2μm,14.8s
USA0B Ussuriysk Arra 21.63 20 P P 15 38 36.9 0.0
USA0B IAmb IAmb 15 39 08.7
comp=Z,28nm,1.4s
USRK Ussuriysk Ar. 21.63 20 P P 15 38 36.8 -0.2
USRK Ussuriysk Ar. 21.63 20 P P 15 38 37.4 +0.5
comp=Z,2.7nm,0.9s,baz=206,slow=8.1,SNR=4.2
comp=Z,2.7nm,0.9s
CMAR Chiang Mai Arr 22.02 259 P P 15 38 41.3 0.0
CMAR Chiang Mai Arr 22.02 259 P P 15 38 43.8 +2.6
comp=Z,0.6nm,0.3s,baz=57,slow=31,SNR=5.9
comp=Z,0.6nm,0.3s
KMSI Cibinong 23.58 174 P P 15 38 51.4 -6.1
comp=Z,153nm,1.2s
MPSI Mapaga 23.79 185 P P 15 38 54.3 -5.2
comp=Z,17nm,0.7s
GOMU GeErMu 26.11 304 P P 15 39 23.5 +2.5
ULN Ulaanbaatar 26.36 337 P P 15 39 22.6 -0.4
ULN IAmb IAmb 15 39 25.3
comp=Z,19nm,1.5s
HEH HeiHe 26.38 8 *e*P P 15 39 25.0 +2.1
HEH pmax pmax
comp=Z,10.0nm,1.2s
HEH pmax pmax
comp=Z,670nm,7.2s
SONM Songino Array 26.57 336 P P 15 39 24.9 +0.1
SONM IAmb IAmb 15 39 37.9
comp=Z,15nm,1.2s
SONM Songino Array 26.57 336 P P 15 39 25.4 +0.6
comp=Z,4.4nm,0.9s,baz=154,slow=8.1,SNR=19
comp=Z,4.4nm,0.9s
TTSI Tana Toraja 27.14 184 P P 15 39 25.8 -4.2
FAKI Fak Fak 28.81 158 P P 15 39 42.6 -2.4
TNG Tangerang 33.60 208 P P 15 40 18.3 -8.8
WMQ Urumqi 34.04 314 *e*P P 15 40 34.7 +3.8
WMQ pmax pmax
comp=Z,14nm,0.9s
MK31 Makanchi Array 38.71 316 P P 15 41 10.5 -0.2
MKAR Makanchi Array 38.71 316 P P 15 41 10.4 -0.3
MKAR Makanchi Array 38.71 316 P P 15 41 11.4 +0.7
comp=Z,3.0nm,0.8s,baz=105,slow=10,SNR=23
comp=Z,3.0nm,0.8s
MAKZ Makanchi 38.92 316 P P 15 41 11.8 -0.5
ZAA0 Zalesovo Array 40.53 327 P P 15 41 24.8 -0.9
ZALV Zalesovo Beam 40.53 327 P P 15 41 24.8 -0.9
comp=Z,1.8nm,0.6s,baz=115,slow=8.4,SNR=11
comp=Z,1.8nm,0.6s
KURBB Kurchatov Arra 42.45 320 P P 15 41 41.2 -0.3
comp=Z,1.8nm,0.9s,baz=117,slow=7.7,SNR=11
comp=Z,1.8nm,0.9s
COEN Coen 43.30 149 P P 15 41 48.3 -0.4
COEN IAmb IAmb 15 42 04.0
comp=Z,26nm,1.3s
WB0 Warramunga Arr 45.39 163 P P 15 42 04.1 -1.3
WB0 IAmb IAmb 15 42 31.7
comp=Z,9.9nm,1.4s
WRA Warramunga Arr 45.55 163 P P 15 42 05.1 -1.5
comp=Z,1.7nm,1.0s,baz=346,slow=8.6,SNR=5.2
WRA PcP PcP 15 43 41.5 -3.7
comp=Z,0.5nm,0.7s,baz=348,slow=3.5,SNR=1.5
comp=Z,1.7nm,1.0s
WB2 Warramunga Arr 45.55 163 P P 15 42 04.3 -2.4
WB2 IAmb IAmb 15 42 27.5
comp=Z,6.1nm,1.1s
WR0 Warramunga Arr 45.61 163 P P 15 42 04.8 -2.3
BVAR Borovoye Array 48.01 321 P P 15 42 25.7 +0.1
comp=Z,2.0nm,0.6s,baz=99,slow=7.4,SNR=18
BVAR PcP PcP 15 43 50.9 -2.6
comp=Z,0.5nm,0.6s,baz=90,slow=4.3,SNR=1.6
comp=Z,2.0nm,0.6s
BRVK Borovoye 48.08 321 P P 15 42 25.7 -0.4
BRVK IAmb IAmb 15 42 27.6
comp=Z,4.4nm,0.9s
AS31 Alice Springs 49.01 165 P P 15 42 33.0 -0.5
ASAR Alice Springs 49.01 165 P P 15 42 33.3 -0.2
ASAR Alice Springs 49.01 165 P P 15 42 33.1 -0.4
comp=Z,0.3nm,0.4s,baz=340,slow=6.7,SNR=13
comp=Z,0.3nm,0.4s
NRIK Noril'sk 49.53 345 P P 15 42 35.9 -1.1
comp=Z,1.4nm,0.4s,baz=107,slow=6.5,SNR=4.3
comp=Z,1.4nm,0.4s
ABKAR Akbulak array 53.82 314 P P 15 43 09.3 -0.1
STKA Stephens Creek 58.89 160 P P 15 43 44.7 -0.9
comp=Z,0.7nm,0.6s,baz=336,slow=12,SNR=1.6
comp=Z,0.7nm,0.6s
J14K Nanvaranak Lak 61.77 30 P P 15 44 06.2 +1.3
J14K IAmb IAmb 15 44 18.7
comp=Z,9.8nm,1.3s
L14K Kuka Creek 62.16 32 P P 15 44 08.1 +0.5
L14K IAmb IAmb 15 44 09.3
comp=Z,11nm,1.3s
F17K Baldwin Pennin 62.87 26 P P 15 44 12.4 +0.1
F17K IAmb IAmb 15 44 25.1
comp=Z,6.9nm,1.3s
C18K Utukok River 62.98 24 P P 15 44 12.9 -0.2
N15K Kwethluk River 63.45 33 P P 15 44 16.1 -0.2
G18K Tagagawik 63.93 27 P P 15 44 19.0 -0.4
M16K Timber Creek 63.97 32 P P 15 44 19.5 -0.2
H18K Honhosa River 64.06 28 P P 15 44 20.4 +0.1
H18K IAmb IAmb 15 44 21.4
comp=Z,7.0nm,1.5s
E19K Redstone River 64.46 25 P P 15 44 22.6 -0.1
E19K IAmb IAmb 15 44 37.3
comp=Z,4.4nm,1.1s
H19K Roundabout Mou 64.85 27 P P 15 44 25.4 +0.1
H19K IAmb IAmb 15 44 27.7
comp=Z,7.4nm,1.1s
TTA Tatalina 65.22 30 P P 15 44 27.6 -0.3
TTA IAmb IAmb 15 44 28.6
comp=Z,9.4nm,1.4s
J20K Nowinta River 65.94 28 P P 15 44 32.9 +0.5
J20K IAmb IAmb 15 44 43.9
comp=Z,4.9nm,1.1s
G21K Allakaket 65.97 26 P P 15 44 32.8 +0.2
D22K Ayikyak River 66.07 23 P P 15 44 33.0 -0.2
D24K Happy Valley 67.42 23 P P 15 44 41.5 -0.3
D24K IAmb IAmb 15 44 45.5
comp=Z,7.1nm,1.1s
SUA Susitna One 67.86 31 P P 15 44 44.6 -0.3
MDM Murphy Dome 68.35 27 P P 15 44 47.7 -0.1
RND Reindeer 68.38 29 P P 15 44 47.0 -1.0
E25K Arctic Village 68.78 24 P P 15 44 50.4 0.0
ILAR Eielson Array 68.95 27 P P 15 44 48.3 -3.2
comp=Z,0.2nm,0.6s,baz=290,slow=8.5,SNR=2.3
comp=Z,0.2nm,0.6s
BMAR Burnt Mountain 69.29 24 P P 15 44 53.7 +0.1
SCM Sheep Creek Mo 69.39 30 P P 15 44 53.8 -0.6
F28M Old Crow 70.99 24 P P 15 45 03.4 -0.6
F28M IAmb IAmb 15 45 14.4
comp=Z,5.4nm,1.0s
GLB Gilahina Butte 71.11 30 P P 15 45 04.5 -0.4
K27K Chicken 71.16 28 P P 15 45 04.8 -0.3
K27K IAmb IAmb 15 45 14.2
comp=Z,7.0nm,1.2s
E29M Blow River 71.46 23 P P 15 45 06.4 -0.4
E29M IAmb IAmb 15 45 33.6
comp=Z,7.0nm,1.5s
L27K Beaver Creek, 71.55 28 P P 15 45 07.6 +0.1
L27K IAmb IAmb 15 45 08.6
comp=Z,4.7nm,1.2s
BCAR Beaver Creek A 71.56 28 P P 15 45 08.2 +0.6
I28M Miner Creek 71.62 26 P P 15 45 07.8 -0.2
FINES FINESS Array B 71.71 330 P P 15 45 07.2 -1.2
comp=Z,3.8nm,1.1s,baz=78,slow=4.7,SNR=6.8
comp=Z,3.8nm,1.1s
M27K Edge Creek, AK 71.73 29 P P 15 45 08.5 -0.3
BARN Barnard Glacie 72.22 30 P P 15 45 11.8 +0.1
BARN IAmb IAmb 15 45 43.6
comp=Z,13nm,1.2s
DAWY Dawson 72.28 27 P P 15 45 11.4 -0.4
CTGM Chitina Glacie 72.40 31 P P 15 45 12.7 -0.1
INK Inuvik 73.01 22 P P 15 45 14.9 -1.1
INK IAmb IAmb 15 45 16.6
comp=Z,9.0nm,1.4s
I30M Mount Dempster 73.10 26 P P 15 45 16.1 -0.8
I30M IAmb IAmb 15 45 20.1
comp=Z,8.1nm,1.4s
L29M L29M 73.13 28 P P 15 45 16.9 0.0
L29M IAmb IAmb 15 45 18.2
comp=Z,8.5nm,1.2s
M29M Somme Creek 73.21 29 P P 15 45 17.4 -0.1
F31M Tsiigehtchic 73.27 23 P P 15 45 16.4 -1.2
F31M IAmb IAmb 15 45 19.6
comp=Z,6.2nm,1.1s
BRTR Keskin Array B 73.61 307 P P 15 45 20.1 -0.2
comp=Z,1.1nm,0.9s,baz=86,slow=4.1,SNR=5.5
comp=Z,1.1nm,0.9s
M30M Minto, Yukon 73.89 28 P P 15 45 20.9 -0.5
M30M IAmb IAmb 15 45 32.1
comp=Z,13nm,1.3s
A36M Sachs Harbour 73.95 17 P P 15 45 20.7 -0.8
A36M IAmb IAmb 15 45 23.5
comp=Z,5.7nm,1.1s
N31M Braeburn, Yuko 74.74 29 P P 15 45 26.2 -0.2
N31M IAmb IAmb 15 45 42.4
comp=Z,14nm,1.4s
C36M Paulatuk 75.61 20 P P 15 45 29.4 -1.8
C36M IAmb IAmb 15 45 30.0
comp=Z,3.3nm,0.6s
BURAR Bucovina Array 76.73 316 P P 15 45 38.5 +0.4
NC405 NORSAR Array S 78.22 332 P P 15 45 45.4 -0.7
NOA NORSAR Array B 78.47 332 P P 15 45 46.2 -1.3
comp=Z,0.7nm,0.7s,baz=58,slow=5.3,SNR=2.5
comp=Z,0.7nm,0.7s
NC204 NORSAR Array S 78.54 333 P P 15 45 46.9 -1.0
CLL Collm 82.37 323 *e*P P 15 46 09.0 +0.4
YKA Yellowknife Ar 82.75 23 P P 15 46 09.2 -1.2
comp=Z,1.8nm,0.8s,baz=312,slow=5.2,SNR=28
comp=Z,1.8nm,0.8s
NVAR Mina Array Bea 96.05 43 P P 15 47 13.0 -1.6
comp=Z,0.1nm,0.5s,baz=294,slow=4.8,SNR=1.4
comp=Z,0.1nm,0.5s

*IDC **04** 15:34:47.2±1.9, 36°.51N×141°.14E, h0km, mb3.4/3, mbtmp3.3/4, ML2.2/1, MS3.5/2, Error ellipse: s-maj=33.0km s-min=19.6km az=26.0*
*JMA **04** 15:34:47.0±0.1, 37°.0N±0°.1×141°.2E±0.4, h20km, MV3.3/40, E OFF FUKUSHIMA PREF*
ISC 04 15:34:44.9±2.3, 36°.98N±0°.05×141°.21E±0°.08, h9km±13km, n14, σ0°83/19, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.35**	**291**	P	**Pb**	**15 34 53.7**	**+0.4**
ONAJ				S	**Sb**	**15 34 58.5**	**-0.4**
JFK	**Kawauchi**	**0.47**	**326**	P	**Pb**	**15 34 55.5**	**+0.1**
JFK				*e*S	**Sb**	**15 35 01.6**	**-0.9**
JFFD	**Fukushimafurud**	**0.53**	**283**	P	**Pb**	**15 34 56.8**	**+0.4**
JFFD				S	**Sb**	**15 35 03.5**	**-0.6**
JHO	**Hitachi**	**0.63**	**235**	P	**Pn**	**15 34 59.0**	**-0.9**
JHO				S	**Sb**	**15 35 07.5**	**+0.6**
JOTO	**OTAMA OYAMA**	**0.91**	**310**	*i* P	**Pn**	**15 35 03.5**	**-0.3**
JOTO				S	**Sb**	**15 35 15.4**	**+0.5**
JMM	**Marumori**	**0.95**	**340**	*i* P	**Pn**	**15 35 03.4**	**-0.9**
JMM				S	**Sg**	**15 35 15.4**	**0.0**
JSB	**Shiboa**	**1.03**	**270**	P	**Pn**	**15 35 06.3**	**+0.8**
JSB				S	**Sn**	**15 35 19.9**	**-0.1**
JFY	**Yanaizu**	**1.27**	**290**	P	**Pg**	**15 35 09.7**	**+0.3**
JFY				S	**Sg**	**15 35 26.0**	**+0.1**
MJAR	**Matsushiro Arr**	**2.45**	**261**	Pn	**Pb**	**15 35 27.1**	**-1.9**
	0.6nm,0.3s,baz=87,slow=14,SNR=21						
MJAR				Lg	Lg	15 36 01.7	
	1.1nm,0.3s,baz=91,slow=31,SNR=12						
	4.5nm,0.6s						
JCJ	**Chichijima**	**9.89**	**175**	LR	LR	15 41 21.1	
	comp=Z,231nm,19.2s,baz=268,slow=42						
GUMO	**Guam**	**23.52**	**171**	LR	LR	15 48 02.5	
	comp=Z,154nm,21.7s,baz=12,slow=34						
MKAR	**Makanchi Array**	**44.01**	**302**	P	P	15 42 57.4	+4.8
	0.3nm,0.6s,baz=76,slow=7.9,SNR=1.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**56.98**	**188**	P	**P**	**15 44 30.7**	**-0.1**
	0.7nm,0.9s,baz=2.2,slow=7.2,SNR=4.7						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**60.71**	**188**	P	**P**	**15 44 58.1**	**+1.4**
	0.1nm,0.6s,baz=8.2,slow=6.9,SNR=1.0						
	0.1nm,0.6s						

TAP 04 15:43:18.5, 24°.24N×121°.69E, h11km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**32**	*e*P	Pg	15 43 21.6	+0.4
	baz=37						
ETL	**Fush Village**	**0.10**	**219**	P	Pg	15 43 22.0	+0.8
	baz=218						
ETL				*i* S	Sg	15 43 24.1	+0.9
	baz=218						
EAHA	**Aohua**	**0.10**	**26**	*e*P	Pb	15 43 22.2	-0.4
	baz=26						
EAHA				S	Sg	15 43 24.3	+1.0
	baz=26						
NACB	**Ninganchiao**	**0.10**	**235**	*i* P	Pb	15 43 22.1	-0.4
	baz=234						
NACB				*i* S	Sg	15 43 24.3	+1.0
	baz=234						
TWD	**Chiawan**	**0.18**	**209**	*i* P	Pb	15 43 23.2	-0.6
	baz=206						
TWD				*i* S	Sg	15 43 25.8	+0.7
	baz=206						
ETLH	**Xiulin Townshi**	**0.19**	**262**	P	Pb	15 43 23.8	-0.3
	baz=261						
ETLH				S	Sg	15 43 26.9	+1.3
	baz=261						
ENA	**Nanau**	**0.20**	**14**	P	Pb	15 43 23.8	-0.4
	baz=16						
ENA				*i* S	Sg	15 43 27.0	+1.3
	baz=16						
EWUT	**Wuta**	**0.23**	**21**	*e*P	Pb	15 43 24.0	-0.6
	baz=21						
EWUT				S	Sg	15 43 27.6	+1.2
	baz=21						
ETM	**Tongmen**	**0.32**	**214**	*e*P	Pb	15 43 26.1	-0.2
	baz=213						
ETM				*e*S	Sg	15 43 30.1	+0.8
	baz=213						
LXIB	**Xiulin Townshi**	**0.33**	**230**	P	Pb	15 43 26.0	-0.5
	baz=229						
LXIB				S	Sg	15 43 30.7	+1.0
	baz=229						
LATG	**Datong**	**0.33**	**334**	P	Pb	15 43 26.5	-0.1
	baz=333						
LATG				S	Sb	15 43 31.6	-0.4
	baz=333						
NNSB	**Datong**	**0.34**	**305**	P	Pb	15 43 26.8	+0.1
	baz=304						
NNSB				S	Sb	15 43 31.8	-0.3
	baz=304						
NNS	**Nan Shan**	**0.35**	**305**	P	Pb	15 43 26.9	0.0
	baz=305						
NNS				S	Sb	15 43 32.4	-0.2
	baz=305						
WHF	**Hehuan Shan**	**0.40**	**257**	*i* P	Pg	15 43 27.1	+0.6
	baz=256						
WHF				*i* S	Sb	15 43 33.4	-0.7
	baz=256						

NDT	**Datong Townshi** baz=336	**0.40**	**336**	*e*P	Pg	15 43 26.9	+0.4
ENTT	**Nioudou** baz=345	**0.42**	**344**	*i* P	Pb	15 43 28.1	+0.2
ENTT				S	Sb	15 43 34.1	-0.2
SHUL	**Shoufeng** baz=194	**0.46**	**195**	*e*P	Pb	15 43 28.8	+0.2
TWE	**Neicheng** baz=359	**0.48**	**358**	P	Pb	15 43 28.6	-0.4
TWE				S	Sg	15 43 35.0	+0.6
CHGB	**Renai** baz=249	**0.50**	**250**	P	Pb	15 43 29.4	0.0
CHGB				S	Sb	15 43 36.4	-0.5
YHNB	**Yeheng** baz=326	**0.52**	**327**	P	Pb	15 43 29.6	-0.1
YHNB				*e*S	Sb	15 43 37.0	-0.3
FUSB	**Fushanzhiwuyua** baz=349	**0.53**	**350**	*e*P	Pg	15 43 29.3	+0.4
FUSB				*e*S	Sb	15 43 37.5	-0.1
NSK	**Sanguang** baz=326	**0.53**	**326**	*e*P	Pb	15 43 29.9	0.0
OWD	**Renai** baz=239	**0.55**	**239**	*e*P	Pb	15 43 30.3	+0.1
WUSB	**Renai** baz=245	**0.58**	**245**	*e*P	Pb	15 43 30.6	0.0

*SJA **04** 15:49:11.1±2.0,21.˚16S×68.˚51W,h100km,ML3.5,MW3.6*
*GUC **04** 15:49:12.6±0.6,21.˚18S×68.˚62W,h115km±4km,ML3.4*

ISC 04 15:49:12.3±1.6,21.˚18S±0.˚03×68.˚69W±0.˚08, h122km±11km,n36,σ0°96/66,6C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.76**	**280**	*e*P	**Pn**	**15 49 31.8**	**-0.6**
PB01				*e*S	**Sn**	**15 49 47.4**	**-0.2**
PB01				IAML		15 49 49.2	
	comp=Z,1μm,0.1s						
PB01	**IPOC Station P**	**0.76**	**280**	⇑*i*P	**Pn**	**15 49 31.3**	**-1.1**
PB01				*e*S	**Sn**	**15 49 46.8**	**-0.8**
PB01				IAML		15 49 49.0	
	comp=N,1μm,0.2s						
PB09	**IPOC Station P**	**0.80**	**220**	*e*P	**Pn**	**15 49 32.7**	**-0.1**
PB09				IAML		15 49 49.4	
	comp=Z,1μm,0.6s						
PB09				*e*S	**Sn**	**15 49 49.5**	**+1.1**
PB09	**IPOC Station P**	**0.80**	**220**	⇑*i*P	**Pn**	**15 49 32.7**	**-0.1**
PB09				*e*S	**Sn**	**15 49 48.7**	**+0.3**
PB09				IAML		15 49 49.3	
	comp=N,2μm,0.3s						
PB08	**IPOC Station P**	**1.12**	**337**	*e*P	**Pn**	**15 49 35.5**	**-0.7**
PB08				*e*S	**Sn**	**15 49 54.8**	**+0.6**
PB08				IAML		15 49 55.3	
	comp=Z,302nm,0.4s						
PB08	**IPOC Station P**	**1.12**	**337**	*i* P	**Pn**	**15 49 36.2**	**0.0**
PB08				*e*S	**Sn**	**15 49 54.0**	**-0.1**
PB08				IAML		15 49 54.9	
	comp=E,615nm,0.2s						
PB02	**IPOC Station P**	**1.14**	**263**	*e*P	**Pn**	**15 49 35.7**	**-0.3**
PB02				*e*S	**Sn**	**15 49 54.7**	**+0.8**
PB02				IAML		15 49 58.8	
	comp=Z,2μm,0.3s						
PB02	**IPOC Station P**	**1.14**	**263**	⇑*i*P	**Pn**	**15 49 35.7**	**-0.3**
PB02				*e*S	**Sn**	**15 49 53.7**	**-0.2**
PB07	**IPOC Station P**	**1.24**	**244**	*e*P	**Pn**	**15 49 36.8**	**-0.3**
PB07				*e*S	**Sn**	**15 49 56.5**	**+0.5**
PB07				IAML		15 49 59.4	
	comp=Z,590nm,0.4s						
PB07	**IPOC Station P**	**1.24**	**244**	⇑*i*P	**Pn**	**15 49 36.7**	**-0.5**
PB07				*e*S	**Sn**	**15 49 56.5**	**+0.5**
PB07				IAML		15 50 01.2	
	comp=E,669nm,0.5s						
PATCX	**Punta Patache**	**1.42**	**284**	*e*P	**Pn**	**15 49 38.9**	**-0.1**
PATCX				*e*S	**Sn**	**15 50 00.5**	**+1.3**
PATCX				IAML		15 50 04.1	
	comp=Z,536nm,0.4s						
PATCX	**Punta Patache**	**1.42**	**284**	*e*P	**Pn**	**15 49 38.7**	**-0.3**
PATCX				*e*S	**Sn**	**15 49 59.5**	**+0.2**
PATCX				IAML		15 50 03.7	
	comp=N,1μm,0.2s						
HMBC	**Humberstone**	**1.44**	**308**	*e*P	**Pn**	**15 49 38.9**	**-0.4**
HMBC				*e*P		15 49 38.9	
HMBC				*e*S	**Sn**	**15 50 00.3**	**+0.6**
HMBC				IAML		15 50 00.5	
	comp=Z,425nm,0.2s						
HMBC	**Humberstone**	**1.44**	**308**	*e*P	**Pn**	**15 49 38.8**	**-0.4**
HMBC				*e*S	**Sn**	**15 49 59.2**	**-0.6**
HMBC				IAML		15 50 00.9	
	comp=E,623nm,0.3s						
LVC	**Limon Verde**	**1.44**	**188**	*e*P	**Pn**	**15 49 39.1**	**-0.4**
LVC				*e*S	**Sn**	**15 50 00.8**	**+0.6**
TA01	**Diego Aracena**	**1.52**	**293**	*e*P	**Pn**	**15 49 39.9**	**-0.2**
TA01				*e*S	**Sn**	**15 50 02.1**	**+0.8**
TA01				IAML		15 50 02.6	
	comp=Z,196nm,0.1s						
TA01	**Diego Aracena**	**1.52**	**293**	⇑*i*P	**Pn**	**15 49 39.9**	**-0.2**
TA01				*e*S	**Sn**	**15 50 00.8**	**-0.5**
GO01	**Chusmiza**	**1.58**	**342**	*e*P	**Pn**	**15 49 40.8**	**-0.5**
GO01				*e*P		15 49 41.8	
GO01				*e*S	**Sn**	**15 50 05.1**	**+1.8**
GO01				IAML		15 50 08.4	
	comp=Z,179nm,0.3s						
GO01	**Chusmiza**	**1.58**	**342**	*e*P	**Pn**	**15 49 41.3**	**0.0**
GO01				*e*S	**Sn**	**15 50 02.9**	**-0.4**
TA02	**Huaiquique**	**1.63**	**304**	*e*P	**Pn**	**15 49 40.9**	**-0.4**
TA02				*e*S	**Sn**	**15 50 04.6**	**+1.2**
TA02				IAML		15 50 06.4	
	comp=Z,360nm,0.1s						
PB11	**IPOC Station P**	**1.68**	**327**	*e*P	**Pn**	**15 49 41.8**	**-0.3**
PB11				*e*S	**Sn**	**15 50 04.8**	**0.0**
PB11				IAML		15 50 08.8	
	comp=Z,333nm,0.4s						
PB11	**IPOC Station P**	**1.68**	**327**	*e*P	**Pn**	**15 49 41.9**	**-0.3**
PB11				*e*S	**Sn**	**15 50 04.2**	**-0.6**
PB11				IAML		15 50 07.3	
	comp=E,573nm,0.2s						
PB06	**IPOC Station P**	**1.73**	**208**	*e*P	**Pn**	**15 49 42.5**	**-0.2**
PB06				*e*S	**Sn**	**15 50 06.5**	**+0.6**
PB06				IAML		15 50 08.9	
	comp=Z,239nm,0.3s						
PB06	**IPOC Station P**	**1.73**	**208**	⇑*i*P	**Pn**	**15 49 42.5**	**-0.2**
PB06				*e*S	**Sn**	**15 50 06.1**	**+0.2**
PB06				IAML		15 50 11.9	
	comp=N,381nm,0.3s						
PB04	**IPOC Station P**	**1.78**	**230**	*e*P	**Pn**	**15 49 43.1**	**-0.2**
PB04				*e*S	**Sn**	**15 50 08.0**	**+1.0**
PB04				IAML		15 50 15.8	
	comp=Z,406nm,0.2s						
PB04	**IPOC Station P**	**1.78**	**230**	*e*P	**Pn**	**15 49 43.4**	**+0.1**
PB04				IAML		15 50 13.3	
	comp=E,489nm,0.2s						
PB15	**IPOC Station P**	**2.15**	**200**	*e*P	**Pn**	**15 49 47.3**	**-0.6**
PB15				*e*S	**Sn**	**15 50 15.9**	**+0.8**
PB15				IAML		15 50 25.0	
	comp=Z,789nm,0.1s						
PB15	**IPOC Station P**	**2.15**	**200**	*e*P	**Pn**	**15 49 47.8**	**0.0**
PB15				*e*S	**Sn**	**15 50 15.5**	**+0.4**
PB05	**IPOC Station P**	**2.18**	**220**	*e*P	**Pn**	**15 49 47.8**	**-0.4**
PB05				*e*S	**Sn**	**15 50 20.0**	**+4.3**
PB05				IAML		15 50 23.9	
	comp=Z,120nm,0.3s						
PB05	**IPOC Station P**	**2.18**	**220**	*e*P	**Pn**	**15 49 47.6**	**-0.6**
PB10	**IPOC Station P**	**2.90**	**216**	*e*P	**Pn**	**15 49 57.0**	**-0.3**
PB10				*e*S	**Sn**	**15 50 28.4**	**-3.5**
PB10				IAML		15 50 44.5	
	comp=Z,79nm,0.7s						
PB10	**IPOC Station P**	**2.90**	**216**	*e*P	**Pn**	**15 49 57.1**	**-0.2**
PB16	**IPOC Station P**	**2.93**	**345**	*e*P	**Pn**	**15 49 59.7**	**+1.4**
PB16				*e*S	**Sn**	**15 50 32.6**	**-1.1**
PB16	**IPOC Station P**	**2.93**	**345**	*e*P	**Pn**	**15 49 59.5**	**+1.1**
PB12	**IPOC Station P**	**2.98**	**329**	*e*P	**Pn**	**15 49 57.8**	**-0.7**
GO02	**Mina Guanaco**	**4.05**	**192**	*e*P	**Pn**	**15 50 11.7**	**-1.2**

*IDC **04** 16:04:06.5±2.1,20.˚26S×68.˚10E,h0km,mb3.7/8, mbtmp3.7/8,Error ellipse: s-maj=69.8km s-min=26.2km az=46.0*

ISC 04 16:04:08.8±2.1,20.˚3S±0.˚4×68.˚1E±0.˚3,h15km,n15, σ0°77/9,mb3.7/8,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H** baz=200	**13.27**	**19**	T	T	16 20 42.5	
H08S2	**Diego Garcia H** baz=200,slow=74,SNR=47	**13.27**	**19**	T	T	16 20 42.9	
H08S3	**Diego Garcia H** baz=200,slow=74,SNR=19	**13.29**	**19**	T	T	16 20 42.2	
H04N2	**CROZET ISLANDS** baz=32,slow=75,SNR=216	**29.07**	**204**	T	T	16 40 34.5	
H04N1	**CROZET ISLANDS** baz=32,slow=75,SNR=206	**29.07**	**204**	T	T	16 40 36.6	
H04N3	**CROZET ISLANDS** baz=32,slow=75,SNR=231	**29.08**	**204**	T	T	16 40 35.3	
CMAR	**Chiang Mai Arr** 0.4nm,0.7s,baz=233,slow=9.1,SNR=2.0 0.4nm,0.7s	**48.97**	**40**	P	**P**	**16 12 54.6**	**-0.4**
ASAR	**Alice Springs** 1.4nm,0.8s,baz=266,slow=6.1,SNR=24 1.4nm,0.8s	**60.65**	**106**	P	**P**	**16 14 19.8**	**0.0**
WRA	**Warramunga Arr** 1.9nm,1.0s,baz=258,slow=7.5,SNR=6.1 1.9nm,1.0s	**61.80**	**102**	P	**P**	**16 14 27.8**	**+0.2**
BRTR	**Keskin Array B** 0.4nm,0.8s,baz=142,slow=7.3,SNR=2.3 0.4nm,0.8s	**67.81**	**332**	P	**P**	**16 15 07.1**	**+0.7**
MKAR	**Makanchi Array** 0.5nm,0.9s,baz=196,slow=7.1,SNR=3.7 0.5nm,0.9s	**67.99**	**10**	P	**P**	**16 15 07.5**	**+0.3**
BVAR	**Borovoye Array** 0.4nm,0.7s,baz=185,slow=5.1,SNR=3.1 0.4nm,0.7s	**73.03**	**1**	P	**P**	**16 15 36.7**	**-1.1**
ZALV	**Zalesovo Beam** 1.0nm,0.6s,baz=205,slow=7.1,SNR=5.1 1.0nm,0.6s	**75.32**	**10**	P	**P**	**16 15 51.0**	**-0.2**
SONM	**Songino Array** 0.5nm,0.7s,baz=235,slow=5.1,SNR=3.0 0.5nm,0.7s	**76.02**	**25**	P	**P**	**16 15 56.4**	**+0.9**
ULM	**Lac du Bonnet** 1.7nm,0.8s,baz=41,slow=9.3,SNR=3.5	**147.51**	**341**	PKPbc	**PKPbc**	**16 23 51.4**	**-0.8**

WEL 04 16:04:55.2±0.8,36.˚5S±7.˚1×177.˚8E±1.˚1,h209km±8km,M3.6/30, ML3.9/31,MLv3.6/30,Error ellipse: s-maj=0.0km s-min=0.0km az=102.9,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.54**	**179**	P	Pn	16 05 29.9	0.0
MXZ				S	S	16 05 56.6	-0.3
HAZ	**Te Kaha**	**1.78**	**193**	P	Pn	16 05 31.7	-0.4
HAZ				S	S	16 06 00.9	+0.2
WMGZ	**Waiomatatini S**	**1.80**	**177**	P	Pn	16 05 32.9	+0.5
WMGZ				S	S	16 06 02.2	+1.1
PKGZ	**Pakihiroa**	**1.87**	**185**	P	Pn	16 05 38.7	+0.7
PKGZ				S	S	16 06 02.9	+0.5
RUGZ	**Raukumara Rang**	**2.00**	**194**	P	Pn	16 05 34.0	-0.5
RUGZ				S	S	16 06 04.6	-0.2
TWGZ	**Tauwhareparae**	**2.17**	**186**	P	Pn	16 05 36.7	+0.7
TWGZ				S	S	16 06 09.4	+1.7
MARZ	**Manawahe**	**2.35**	**213**	P	Pn	16 05 38.7	+0.7
MWZ	**Matawai**	**2.39**	**195**	P	Pn	16 05 38.2	-0.2
MWZ				S	S	16 06 12.6	+0.7
URZ	**Urewera**	**2.42**	**202**	P	Pn	16 05 38.6	-0.1
URZ				S	S	16 06 12.5	+0.1
TKGZ	**Te Karaka**	**2.44**	**188**	P	Pn	16 05 39.0	+0.2
TKGZ				S	S	16 06 13.5	+0.8
CNGZ	**Carnagh Statio**	**2.46**	**181**	P	Pn	16 05 39.7	+0.6
RAGZ	**Rawiri**	**2.56**	**195**	P	Pn	16 05 40.8	+0.4
RAGZ				S	S	16 06 16.7	+1.3
TARZ	**Mount Tarawera**	**2.63**	**212**	P	Pn	16 05 42.5	+1.3
RIGZ	**Rimuhau**	**2.71**	**189**	P	Pn	16 05 41.9	-0.1
RIGZ				S	S	16 06 19.2	+0.9
RRRZ	**Republican Roa**	**2.71**	**211**	P	Pn	16 05 43.2	+1.2
MUGZ	**Murupara**	**2.73**	**206**	P	Pn	16 05 42.0	-0.2
MUGZ				S	S	16 06 18.4	-0.2
RTZ	**Ruatahuna**	**2.79**	**202**	P	Pn	16 05 42.3	-0.6
RTZ				S	S	16 06 19.6	-0.3
TOZ	**Tahuroa Road**	**2.81**	**232**	P	Pn	16 05 43.9	+0.8
MBAZ	**Motutapu North**	**2.83**	**254**	P	Pn	16 05 43.1	-0.2
ABAZ	**Army Bay**	**2.85**	**257**	P	Pn	16 05 43.1	-0.4
SNGZ	**Shannon Statio**	**2.86**	**195**	P	Pn	16 05 43.5	-0.1
SNGZ				S	S	16 06 22.3	+1.1
PRRZ	**Plateau Road**	**2.90**	**211**	P	Pn	16 05 44.3	+0.2
PRGZ	**Paritu Road**	**2.91**	**186**	P	Pn	16 05 43.9	-0.4
PRGZ				S	S	16 06 24.0	+1.6
ALRZ	**Allen Road**	**2.97**	**211**	P	Pn	16 05 45.1	+0.1
KNZ	**Kokohu**	**3.03**	**189**	P	Pn	16 05 45.0	-0.6
KNZ				S	S	16 06 24.6	-0.2
RAHZ	**Arahi**	**3.04**	**198**	P	Pn	16 05 45.6	-0.2
RAHZ				S	S	16 06 26.9	+1.9
MTHZ	**Maungataniwha**	**3.05**	**202**	P	Pn	16 05 45.5	-0.4
MTHZ				S	S	16 06 26.2	+1.0
MHGZ	**Mahia Peninsul**	**3.14**	**185**	P	Pn	16 05 46.8	-0.1
MHGZ				S	S	16 06 28.9	+1.8
KUTZ	**Kaahu Road**	**3.15**	**218**	P	Pn	16 05 48.0	+1.0
MRHZ	**Matea Rd**	**3.18**	**207**	P	Pn	16 05 46.8	-0.6
MRHZ				S	S	16 06 28.1	+0.2
TLZ	**Tolley Road**	**3.18**	**223**	P	Pn	16 05 48.5	+1.1
NMHZ	**Naumai**	**3.29**	**201**	P	Pn	16 05 48.9	+0.2
NMHZ				S	S	16 06 32.0	+1.7
WATZ	**Wairara**	**3.37**	**216**	P	Pn	16 05 50.3	+0.7
ARHZ	**Aropaoanui**	**3.39**	**197**	P	Pn	16 05 49.5	-0.4
ARHZ				S	S	16 06 32.7	+0.2
BKZ	**Black Stump Fm**	**3.45**	**204**	P	Pn	16 05 49.9	-0.6
RITZ	**Rihia Road**	**3.53**	**213**	P	Pn	16 05 51.7	+0.2
KATZ	**Kakaramea**	**3.60**	**214**	P	Pn	16 05 52.4	0.0
KWHZ	**Kaweka Forest**	**3.70**	**203**	P	Pn	16 05 52.6	-1.0
NTVZ	**North Tongarir**	**3.71**	**213**	P	Pn	16 05 53.7	-0.1
TMVZ	**Te Maari**	**3.71**	**213**	P	Pn	16 05 53.6	-0.1
KRVZ	**Karewarewa**	**3.72**	**214**	P	Pn	16 05 54.0	+0.1
CKHZ	**Cape Kidnapper**	**3.75**	**194**	P	Pn	16 05 53.4	-0.8
KAHZ	**Kahuranaki**	**3.93**	**196**	P	Pn	16 05 55.6	-0.8
MOVZ	**Moawhango**	**3.93**	**210**	P	Pn	16 05 55.1	-1.4

*IDC **04** 16:18:35.8±3.0,23.˚54N×121.˚77E,h0km,mb3.6/6, mbtmp3.6/7,ML3.1/1,MS3.2/1,Error ellipse: s-maj=62.6km s-min=35.5km az=154.0*
*ASIES **04** 16:18:41.7,24.˚24N×121.˚76E,h6km,ML4.1,Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10^22Nm; Mrr0.20; Mθθ-0.29; Mφφ0.10; Mrθ1.47; Mθφ-0.31; Mφr0.36; Fault plane solution: M0 1.56681×10^22 NP1:φs77.14000°, δ84.39000°,λ,97.17000°. NP2:φs204.98000°,δ9.10000°, λ38.19000°. Principal axes: T Plg50.1170°, Azm355.0590°; N Plg7.1410°, Azm256.4370°; P Plg38.9810°, Azm160.6180°;*
*TAP **04** 16:18:41.6,24.˚22N×121.˚81E,h8km,ML4.2,C*
*JMA **04** 16:18:42.3±0.1,24.˚2N±0.˚4×121.˚8E±0.˚7,h14km±1km, MV3.6/14,TAIWAN REGION*

ISC 04 16:18:42.2±0.8,24.˚19N±0.˚01×121.˚80E±0.˚02,h9km±5km, n139,σ0°68/252,mb3.6/6,2C-10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=328	**0.13**	**334**	P	**Pg**	**16 18 44.5**	**-0.6**
EHP				S	**Sg**	**16 18 47.0**	**-0.1**
EAHA	**Aohua** baz=330	**0.15**	**337**	P	**Pg**	**16 18 44.9**	**-0.5**
EAHA				S	**Sg**	**16 18 47.8**	**+0.2**
ETL	**Fush Village** baz=253	**0.17**	**258**	P	**Pg**	**16 18 45.6**	**-0.2**
ETL				S	**Sg**	**16 18 48.6**	**+0.4**
NACB	**Ninganchiao**	**0.19**	**264**	P	**Pg**	**16 18 45.8**	**-0.4**
NACB	**Ninganchiao** baz=259	**0.19**	**264**	⇓P	**Pg**	**16 18 45.8**	**-0.4**
NACB				S	**Sg**	**16 18 48.9**	**0.0**
TWD	**Chiawan** baz=242	**0.22**	**239**	*i* P	**Pg**	**16 18 46.6**	**-0.1**
TWD				*i* S	**Sg**	**16 18 50.4**	**+0.6**
ENA	**Nanau** baz=344	**0.24**	**346**	⇓*i*P	**Pg**	**16 18 46.4**	**-0.7**
ENA				*i* S	**Sg**	**16 18 49.8**	**-0.6**
EWUT	**Wuta** baz=350	**0.25**	**355**	P	**Pg**	**16 18 46.7**	**-0.6**
EWUT				S	**Sg**	**16 18 50.0**	**-0.7**
HWA	**Hwalien** baz=233	**0.28**	**220**	*i* P	**Pb**	**16 18 48.8**	**-0.7**
HWA				*e*S	**Sb**	**16 18 54.0**	**-0.4**
ETLH	**Xiulin Townshi** baz=269	**0.29**	**273**	*i* P	**Pg**	**16 18 47.7**	**-0.4**
ETLH				S	**Sg**	**16 18 52.4**	**+0.3**
ETM	**Tongmen** baz=233	**0.36**	**231**	P	**Pg**	**16 18 49.3**	**-0.1**
ETM				S	**Sg**	**16 18 55.0**	**+0.8**
ESAO	**Su ao** baz=358	**0.38**	**6**	*e*P	**Pg**	**16 18 49.0**	**-0.8**
ESAO				*i* S	**Sg**	**16 18 53.9**	**-0.9**
LXIB	**Xiulin Townshi** baz=245	**0.40**	**244**	P	**Pg**	**16 18 49.7**	**-0.3**
LXIB				S	**Sb**	**16 18 56.3**	**-1.5**
TWC	**Suao** baz=3.0	**0.41**	**6**	⇓*i*P	**Pg**	**16 18 49.6**	**-0.7**
TWC				*i* S	**Sg**	**16 18 55.3**	**-0.6**
LATG	**Datong** baz=320	**0.42**	**323**	⇓P	**Pg**	**16 18 50.0**	**-0.6**
LATG				S	**Sg**	**16 18 56.0**	**-0.1**
NDS	**Dongshan** baz=346	**0.45**	**350**	P	**Pg**	**16 18 50.4**	**-0.5**
NDS				S	**Sg**	**16 18 56.3**	**-0.5**
NNSB	**Datong** baz=298	**0.45**	**301**	⇓P	**Pg**	**16 18 50.6**	**-0.4**
NNSB				S	**Sg**	**16 18 56.9**	**-0.1**
NNSH	**Datong** baz=298	**0.45**	**301**	P	**Pg**	**16 18 50.7**	**-0.3**
NNSH				S	**Sg**	**16 18 56.8**	**-0.1**
EOS2	**EOS2** baz=52	**0.45**	**60**	*e*P	**Pg**	**16 18 51.6**	**+0.6**
SHUL	**Shoufeng** baz=215	**0.46**	**209**	P	**Pb**	**16 18 52.7**	**+0.1**
SHUL				S	**Sb**	**16 19 00.7**	**+1.2**
NNS	**Nan Shan** baz=299	**0.46**	**302**	*i* P	**Pg**	**16 18 50.9**	**-0.4**
NNS				S	**Sg**	**16 18 57.2**	**-0.2**
EOS4	**EOS4** baz=91	**0.48**	**99**	*e*P	**Pb**	**16 18 52.6**	**0.0**
EOS3	**EOS3** baz=78	**0.48**	**79**	*e*P	**Pb**	**16 18 52.8**	**0.0**
NDT	**Datong Townshi** baz=324	**0.48**	**327**	⇓*i*P	**Pg**	**16 18 51.4**	**-0.3**
NDT				S	**Sg**	**16 18 57.9**	**-0.1**
ENTT	**Nioudou** baz=331	**0.49**	**334**	⇓*i*P	**Pg**	**16 18 51.4**	**-0.4**
ENTT				*i* S	**Sg**	**16 18 58.1**	**-0.2**
WHF	**Hehuan Shan** baz=264	**0.49**	**264**	*i* P	**Pg**	**16 18 52.0**	**0.0**
WHF				*i* S	**Sg**	**16 18 58.7**	**+0.2**
ESL	**Shilin** baz=231	**0.51**	**222**	*i* P	**Pg**	**16 18 52.0**	**0.0**
ESL				*e*S	**Sb**	**16 18 59.9**	**-1.0**
FUSS	**Fushou** baz=275	**0.51**	**276**	⇑P	**Pg**	**16 18 52.2**	**0.0**
FUSS				S	**Sg**	**16 18 59.7**	**+0.6**
TEGC	**Jichi Village** baz=213	**0.54**	**206**	P	**Pb**	**16 18 54.0**	**+0.1**
TEGC				*e*S	**Sb**	**16 19 02.8**	**+1.0**
TWE	**Neicheng** baz=345	**0.54**	**347**	⇓*i*P	**Pg**	**16 18 52.2**	**-0.5**
TWE				*i* S	**Sg**	**16 18 59.3**	**-0.5**
ILA	**Ilan** baz=345	**0.57**	**355**	*i* P	**Pg**	**16 18 53.1**	**-0.2**
ILA				S	**Sg**	**16 19 00.8**	**-0.1**
TWT	**Tachien** baz=274	**0.57**	**276**	*i* P	**Pg**	**16 18 53.7**	**+0.3**
TWT				*i* S	**Sb**	**16 19 01.9**	**-1.2**
CHGB	**Renai** baz=248	**0.59**	**257**	P	**Pg**	**16 18 53.7**	**0.0**
CHGB				S	**Sb**	**16 19 02.4**	**-1.1**
TDCB	**Techi** baz=274	**0.59**	**276**	P	**Pg**	**16 18 53.6**	**-0.1**
TDCB				S	**Sg**	**16 19 01.6**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=338	**0.60**	**341**	P	**Pg**	**16 18 53.4**	**-0.4**
FUSB				S	**Sg**	**16 19 01.2**	**-0.4**
WARBT	**Fenglin Townsh** baz=229	**0.61**	**219**	P	**Pg**	**16 18 54.0**	**-0.1**
WARBT				S	**Sb**	**16 19 03.7**	**-0.1**
YHNB	**Yeheng** baz=318	**0.61**	**321**	P	**Pg**	**16 18 53.8**	**-0.3**
YHNB	**Yeheng** baz=318	**0.61**	**321**	⇓P	**Pg**	**16 18 53.9**	**-0.3**
YHNB				S	**Sg**	**16 19 01.8**	**-0.4**
OWD	**Renai** baz=248	**0.62**	**248**	P	**Pg**	**16 18 54.2**	**0.0**
OWD				S	**Sb**	**16 19 03.2**	**-1.1**
EGFH	**Guangfu** baz=226	**0.63**	**213**	P	**Pb**	**16 18 54.9**	**-0.5**
EGFH				S	**Sb**	**16 19 04.8**	**+0.5**
NSK	**Sanguang** baz=318	**0.63**	**320**	⇓*i*P	**Pg**	**16 18 54.1**	**-0.3**
NSK				*i* S	**Sg**	**16 19 02.5**	**-0.2**
NTC	**Toucheng** baz=358	**0.66**	**2**	*e*P	**Pb**	**16 18 56.4**	**+0.4**
NTC				*e*S	**Sg**	**16 19 03.6**	**0.0**
WUSB	**Renai** baz=252	**0.66**	**252**	P	**Pg**	**16 18 54.8**	**-0.1**
WUSB				S	**Sb**	**16 19 04.4**	**-0.9**
VWDT	**VWDT** baz=237	**0.75**	**234**	P	**Pb**	**16 18 57.2**	**-0.2**
VWDT				S	**Sb**	**16 19 08.7**	**+0.9**
NFF	**Wufeng Townshi** baz=303	**0.76**	**305**	P	**Pg**	**16 18 57.0**	**0.0**
NFF				S	**Sg**	**16 19 07.0**	**+0.1**
TIPB	**Shuangxi** baz=357	**0.78**	**2**	P	**Pg**	**16 18 56.6**	**-0.6**
TIPB				S	**Sg**	**16 19 06.6**	**-0.7**
HGSD	**Ruisui** baz=201	**0.78**	**206**	*e*P	**Pb**	**16 18 58.3**	**+0.3**
HGSD				*e*S	**Sn**	**16 19 10.9**	**-0.5**
WHP	**Taichung City** baz=275	**0.79**	**276**	P	**Pb**	**16 18 57.7**	**-0.5**
WHP				S	**Sb**	**16 19 08.2**	**-0.9**
WPL	**Puli Township** baz=248	**0.79**	**257**	P	**Pg**	**16 18 57.6**	**+0.1**
WPL				S	**Sb**	**16 19 08.8**	**-0.3**
NHDH	**Xindian Distri** baz=339	**0.81**	**342**	P	**Pg**	**16 18 57.8**	**0.0**
NHDH				S	**Sg**	**16 19 08.0**	**-0.3**
EHY	**Hungye** baz=227	**0.81**	**213**	*i* P	**Pg**	**16 18 57.4**	**-0.5**
EHY				*e*S	**Sb**	**16 19 09.7**	**-0.1**
	baz=227						

DPDB	**Guoxing**	**0.82**	**259**	P		**Pb**	**16 18 58.1**	**-0.6**
	baz=250							
DPDB				*e*S		**Sb**	**16 19 10.2**	**+0.3**
	baz=250							
WCS	**Beigang Elemen**	**0.82**	**261**	P		**Pg**	**16 18 58.1**	**-0.1**
	baz=252							
WCS				S		**Sb**	**16 19 09.3**	**-0.8**
	baz=252							
TWB1	**Santiao Chiao**	**0.83**	**12**	P		**Pg**	**16 18 57.5**	**-0.7**
	baz=7.0							
TWB1				S		**Sg**	**16 19 08.5**	**-0.5**
	baz=7.0							
TATO	**Taipei**	**0.83**	**340**	P		**Pg**	**16 18 58.1**	**-0.1**
TATO	**Taipei**	**0.83**	**340**	P		**Pg**	**16 18 58.0**	**-0.1**
	baz=337							
TATO				S		**Sg**	**16 19 08.5**	**-0.5**
	baz=337							
NJD	**Zhudong**	**0.84**	**310**	P		**Pb**	**16 18 59.3**	**+0.2**
	baz=307							
NJD				S		**Sg**	**16 19 09.9**	**+0.4**
	baz=307							
LIOB	**Emei**	**0.85**	**302**	P		**Pb**	**16 18 58.8**	**-0.4**
	baz=300							
LIOB				S		**Sb**	**16 19 10.4**	**-0.3**
	baz=300							
NSTT	**Nanjuang**	**0.85**	**301**	*i* P		**Pg**	**16 18 58.6**	**0.0**
	baz=299							
NSTT				*i* S		**Sg**	**16 19 09.9**	**+0.2**
	baz=299							
BACT	**New Taipei Cit**	**0.86**	**338**	*e*P		**Pg**	**16 18 58.9**	**0.0**
	baz=335							
BACT				*e*S		**Sb**	**16 19 11.1**	**-0.1**
	baz=335							
NHY	**Taipei**	**0.87**	**346**	*e*P		**Pg**	**16 18 59.1**	**+0.2**
	baz=343							
NHY				*e*S		**Sg**	**16 19 10.7**	**+0.4**
	baz=343							
NWF	**Wu-fen Shan**	**0.87**	**359**	*i* P		**Pg**	**16 18 58.9**	**-0.2**
	baz=346							
NWF				*i* S		**Sg**	**16 19 09.8**	**-0.7**
	baz=346							
WFSB	**Wu-fen Shan**	**0.87**	**359**	P		**Pg**	**16 18 58.9**	**-0.2**
	baz=346							
WFSB				S		**Sg**	**16 19 09.8**	**-0.6**
	baz=346							
SSLB	**Suanglung**	**0.88**	**243**	P		**Pg**	**16 18 58.9**	**-0.2**
SSLB	**Suanglung**	**0.88**	**243**	P		**Pg**	**16 18 58.8**	**-0.2**
	baz=254							
SSLB				S		**Sb**	**16 19 10.9**	**-0.7**
	baz=254							
SMLT	**Sun Moon Lake**	**0.88**	**250**	*i* P		**Pg**	**16 18 59.2**	**0.0**
	baz=251							
SMLT				*e*S		**Sb**	**16 19 11.6**	**-0.2**
	baz=251							
TAP	**Taipei**	**0.88**	**342**	*i* P		**Pb**	**16 18 59.5**	**-0.3**
	baz=340							
TAP				*i* S		**Sg**	**16 19 10.8**	**0.0**
	baz=340							
SXI1	**Grass Mountain**	**0.90**	**4**	P		**Pg**	**16 18 59.1**	**-0.4**
	baz=6.0							
SXI1				*e*S		**Sb**	**16 19 11.9**	**-0.3**
	baz=6.0							
TYC	**Yuchr**	**0.91**	**252**	⇑*i* P		**Pg**	**16 18 59.5**	**-0.3**
	baz=245							
TYC				S		**Sb**	**16 19 13.4**	**+0.8**
	baz=245							
HSN1	**Hsinchu**	**0.92**	**309**	P		**Pb**	**16 19 00.5**	**0.0**
	baz=296							
YULB	**Yu-li**	**0.92**	**210**	P		**Pg**	**16 18 59.1**	**-0.9**
YULB	**Yu-li**	**0.92**	**210**	P		**Pg**	**16 18 59.1**	**-0.9**
	baz=226							
YULB				*e*S		**Sb**	**16 19 13.4**	**+0.5**
	baz=226							
NTY	**Taoyuan**	**0.92**	**330**	P		**Pb**	**16 19 00.7**	**+0.1**
	baz=328							
NTY				S		**Sb**	**16 19 13.7**	**+0.7**
	baz=328							
ECBN	**Changbin**	**0.93**	**200**	P		**Pb**	**16 19 00.4**	**-0.2**
	baz=207							
ECBN				*e*S		**Sn**	**16 19 15.9**	**+0.8**
	baz=207							
EYUL	**Yuli**	**0.95**	**208**	P		**Pg**	**16 19 00.5**	**0.0**
	baz=230							
EYUL				*e*S		**Sn**	**16 19 16.1**	**+0.5**
	baz=230							
TNOU	**National Taiwa**	**0.95**	**358**	*e*P		**Pg**	**16 19 00.4**	**-0.2**
	baz=348							
TNOU				*e*S		**Sg**	**16 19 12.4**	**-0.5**
	baz=348							
TWQ1	**Liyutan**	**0.95**	**279**	*i* P		**Pn**	**16 19 01.7**	**-0.2**
	baz=279							
TWQ1				S		**Sb**	**16 19 15.0**	**+1.3**
	baz=279							
SBCB	**Hsinchu**	**0.95**	**309**	P		**Pb**	**16 19 01.3**	**+0.3**
	baz=306							
SBCB				*e*S		**Sb**	**16 19 14.2**	**+0.5**
	baz=306							
NCUH	**Zhongli**	**0.95**	**324**	P		**Pb**	**16 19 01.2**	**+0.2**
	baz=321							
NCUH				S		**Sb**	**16 19 15.0**	**+1.2**
	baz=321							
TWF1	**Yuli**	**0.96**	**209**	*i* P		**Pg**	**16 18 59.6**	**-1.1**
	baz=226							
TWF1				*e*S		**Sb**	**16 19 13.7**	**-0.2**
	baz=226							
TWS1	**Kuangyinshan**	**0.97**	**339**	*i* P		**Pb**	**16 19 01.2**	**-0.1**
	baz=337							
TWS1				*e*S		**Sb**	**16 19 14.3**	**+0.1**
	baz=337							
HSN	**Hsinchu**	**0.97**	**309**	*i* P		**Pb**	**16 19 01.6**	**+0.3**
	baz=298							
HSN				*e*S		**Sb**	**16 19 14.6**	**+0.4**
	baz=298							
YM01	**YM01**	**0.97**	**347**	P		**Pg**	**16 19 00.9**	**0.0**
	baz=345							
YM01				S		**Sg**	**16 19 13.5**	**-0.1**
	baz=345							
NSY	**Sanyi**	**0.98**	**283**	*i* P		**Pb**	**16 19 01.7**	**+0.3**
	baz=282							
NSY				S		**Sb**	**16 19 15.4**	**+1.0**
	baz=282							
NMLH	**Miaoli**	**0.98**	**291**	P		**Pn**	**16 19 02.2**	**-0.1**
	baz=289							
NMLH				*e*S		**Sb**	**16 19 15.0**	**+0.4**
	baz=289							
WHYT	**Xinyi Township**	**1.00**	**240**	P		**Pb**	**16 19 01.9**	**+0.1**
	baz=250							
WHYT				*e*S		**Sg**	**16 19 13.5**	**-1.0**
	baz=250							
NWRT	**Kuosheng**	**1.01**	**353**	*e*P		**Pb**	**16 19 02.2**	**+0.2**
	baz=341							
NWRT				*e*S		**Sg**	**16 19 14.9**	**0.0**
	baz=341							
NTST	**Danshui**	**1.02**	**342**	*i* P		**Pb**	**16 19 02.1**	**0.0**
	baz=339							
NTST				*e*S		**Sg**	**16 19 15.1**	**+0.1**
	baz=339							
WWF	**Wufeng**	**1.02**	**262**	P		**Pn**	**16 19 03.2**	**+0.4**
	baz=257							
WWF				*e*S		**Sn**	**16 19 17.8**	**+0.5**
	baz=257							
ANP	**Anpu**	**1.02**	**345**	*i* P		**Pg**	**16 19 00.7**	**-1.2**
	baz=343							
ANP				S		**Sg**	**16 19 14.6**	**-0.6**
	baz=343							
TCU	**Taichung**	**1.03**	**268**	P		**Pn**	**16 19 04.1**	**+1.2**
	baz=268							
TCU				*e*S		**Sb**	**16 19 16.8**	**+0.9**
	baz=268							
WJS	**Zhushan**	**1.05**	**250**	P		**Pn**	**16 19 03.6**	**+0.4**
	baz=246							
WJS				S		**Sn**	**16 19 18.9**	**+0.9**
	baz=246							
NHW	**Xinwu Township**	**1.06**	**320**	*e*P		**Pb**	**16 19 03.0**	**+0.2**
	baz=317							
CHKH	**Chenggong**	**1.06**	**201**	P		**Pg**	**16 19 02.5**	**-0.2**
	baz=208							
CHKH				S		**Sn**	**16 19 18.6**	**+0.2**
	baz=208							
WNT1	**Nantou City**	**1.07**	**255**	P		**Pn**	**16 19 04.4**	**+1.0**
	baz=258							
WNT	**Mingjian**	**1.07**	**253**	*i* P		**Pn**	**16 19 03.8**	**+0.3**
	baz=250							
WNT				*i* S		**Sn**	**16 19 18.5**	**0.0**
	baz=250							
WDJ	**Dajia District**	**1.07**	**278**	P		**Pn**	**16 19 04.2**	**+0.7**
	baz=278							
WDJ				*e*S		**Sb**	**16 19 17.2**	**+0.1**
	baz=278							
JYNG	**Yonagunijimaku**	**1.07**	**76**	P		**Pb**	**16 19 03.6**	**+0.5**
JYNG				*e*S		**Sn**	**16 19 18.8**	**+0.2**
TWY	**Chenhua**	**1.09**	**350**	*i* P		**Pb**	**16 19 03.3**	**-0.1**
	baz=339							
TWY				*e*S		**Sg**	**16 19 17.1**	**-0.3**
	baz=339							
FULB	**Fuli**	**1.09**	**205**	P		**Pb**	**16 19 03.2**	**-0.2**
	baz=227							
FULB				*e*S		**Sn**	**16 19 20.6**	**+1.4**
	baz=227							
YOJ	**Yonaguni jima**	**1.13**	**76**	P		**Pn**	**16 19 05.1**	**+0.7**
YOJ	**Yonaguni jima**	**1.13**	**76**	P		**Pb**	**16 19 04.3**	**+0.2**
	baz=58							
YOJ				*e*S		**Sn**	**16 19 20.9**	**+0.9**
	baz=58							
YOJ	**Yonaguni jima**	**1.13**	**76**	P		**Pb**	**16 19 04.4**	**+0.3**
YOJ				*e*S		**Sb**	**16 19 19.9**	**+1.0**
ALS	**Alishan**	**1.14**	**234**	*i* P		**Pb**	**16 19 04.3**	**0.0**
	baz=236							
ALS				*i* S		**Sn**	**16 19 20.6**	**0.0**
	baz=236							
WCHH	**Zhanghua**	**1.14**	**265**	P		**Pn**	**16 19 05.4**	**+1.0**
	baz=264							
WCHH				*e*S		**Sn**	**16 19 20.6**	**+0.3**
	baz=264							
CHKT	**Chengkung**	**1.16**	**200**	*i* P		**Pg**	**16 19 04.0**	**-0.6**
	baz=224							
CHKT				S		**Sn**	**16 19 20.9**	**+0.1**
	baz=224							
EHD	**Haiduan**	**1.18**	**208**	P		**Pg**	**16 19 03.4**	**-1.4**
	baz=217							
EHD				*e*S		**Sg**	**16 19 19.3**	**-0.8**
	baz=217							
CHN5	**Tsauling**	**1.19**	**240**	*i* P		**Pn**	**16 19 05.9**	**+0.7**
	baz=244							
CHN5				*i* S		**Sn**	**16 19 23.2**	**+1.6**
	baz=244							
ECS	**Chishang**	**1.22**	**206**	P		**Pg**	**16 19 04.2**	**-1.4**
	baz=226							
ECS				*e*S		**Sn**	**16 19 23.4**	**+1.2**
	baz=226							
RLNB	**Erlin**	**1.35**	**257**	P		**Pb**	**16 19 08.4**	**+0.6**
	baz=261							
STYH	**Taoyuan**	**1.39**	**223**	P		**Pn**	**16 19 08.0**	**+0.2**
	baz=228							
STYH				S		**Sn**	**16 19 28.6**	**+2.3**
	baz=228							
WTK	**Tuku**	**1.39**	**249**	P		**Pg**	**16 19 08.6**	**-0.3**
	baz=251							
WTK				*e*S		**Sn**	**16 19 27.7**	**+1.4**
	baz=251							
CHN4	**Tsaushan**	**1.39**	**233**	*i* P		**Pg**	**16 19 08.9**	**0.0**
	baz=238							
CHN4				*e*S		**Sn**	**16 19 28.2**	**+1.7**
	baz=238							
TPUB	**Ta-pu**	**1.40**	**231**	P		**Pg**	**16 19 08.8**	**-0.2**
TPUB	**Ta-pu**	**1.40**	**231**	P		**Pb**	**16 19 08.5**	**0.0**
	baz=224							
TPUB				*e*S		**Sn**	**16 19 28.4**	**+1.8**
	baz=224							
STYT	**Tauyuan**	**1.40**	**223**	P		**Pn**	**16 19 07.7**	**-0.4**
	baz=228							
STYT				S		**Sn**	**16 19 28.6**	**+1.7**
	baz=228							
LONT	**Longtian**	**1.42**	**206**	P		**Pn**	**16 19 07.0**	**-1.4**
	baz=214							
CHY	**Chiayi**	**1.44**	**241**	*e*P		**Pg**	**16 19 10.2**	**+0.3**
	baz=246							
CHY				*e*S		**Sn**	**16 19 29.6**	**+2.0**
	baz=246							
WTP	**Ta-pu**	**1.44**	**229**	*i* P		**Pb**	**16 19 09.3**	**0.0**
	baz=235							
WTP				*e*S		**Sn**	**16 19 29.1**	**+1.4**
	baz=235							
TWK	**Hsinying**	**1.52**	**233**	*i* P		**Pg**	**16 19 11.1**	**-0.3**
	baz=238							
TWK				*e*S		**Sg**	**16 19 31.2**	**+0.1**
	baz=238							
SNST	**Tainan City**	**1.54**	**231**	P		**Pg**	**16 19 11.2**	**-0.6**
	baz=237							
SNST				*e*S		**Sg**	**16 19 31.4**	**-0.4**
	baz=237							
CHN1	**Nanshi**	**1.54**	**230**	*i* P		**Pb**	**16 19 11.1**	**+0.1**
	baz=236							
CHN1				*e*S		**Sg**	**16 19 32.5**	**+0.7**
	baz=236							
SGST	**Jiashian**	**1.57**	**226**	*i* P		**Pn**	**16 19 10.4**	**0.0**
	baz=231							
SGST				*e*S		**Sg**	**16 19 32.3**	**-0.6**
	baz=231							
WSL	**Shuilin Townsh**	**1.59**	**245**	P		**Pg**	**16 19 12.3**	**-0.4**
	baz=248							
WSL				*e*S		**Sg**	**16 19 33.0**	**-0.3**
	baz=248							
SLGT	**Liugui**	**1.60**	**222**	P		**Pb**	**16 19 11.8**	**-0.2**
	baz=228							
SLGT				*e*S		**Sg**	**16 19 34.3**	**+0.6**
	baz=228							
ICHU	**Yijhu**	**1.62**	**240**	P		**Pb**	**16 19 12.6**	**+0.2**
	baz=243							
ICHU				*e*S		**Sg**	**16 19 35.2**	**+0.7**
	baz=243							
CHN8	**Yiju**	**1.69**	**240**	*i* P		**Pb**	**16 19 13.4**	**0.0**
	baz=243							
CHN8				*e*S		**Sg**	**16 19 35.9**	**-0.6**
	baz=243							
IRIF	**Iriomote-Funau**	**1.77**	**85**	P		**Pn**	**16 19 13.9**	**+0.9**
HATJ	**Hateruma jima**	**1.83**	**94**	*e*S		**Sn**	**16 19 38.3**	**+0.9**
JKRS	**Kuro-shima**	**2.02**	**88**	*e*P		**Pn**	**16 19 17.2**	**+0.7**
JKRS				*e*S		**Sn**	**16 19 42.5**	**+0.7**
JIJ	**Ishigaki jima**	**2.14**	**85**	P		**Pn**	**16 19 18.7**	**+0.5**
JIJ				S		**Sn**	**16 19 45.1**	**+0.1**
JISG	**Ishigakijimahi**	**2.32**	**80**	P		**Pn**	**16 19 21.0**	**+0.4**
KSRS	**Korea Array**	**14.22**	**20**	Pn		**Pn**	**16 22 06.8**	**+3.0**
	0.1nm,0.3s,baz=202,slow=13,SNR=1.6							
KSRS				LR		LR	16 27 58.5	
	comp=Z,94nm,21.2s,baz=5.0,slow=38 0.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**22.03**	**259**	P		P	16 23 30.4	-7.0
	0.2nm,0.3s,baz=65,slow=7.1,SNR=1.2 0.2nm,0.3s							
SONM	**Songino Array**	**26.58**	**336**	P		**P**	**16 24 21.2**	**+0.3**
	0.5nm,0.4s,baz=144,slow=8.7,SNR=5.6 0.5nm,0.4s							
MKAR	**Makanchi Array**	**38.72**	**316**	P		**P**	**16 26 06.2**	**-0.6**
	0.8nm,0.8s,baz=104,slow=11,SNR=7.3 0.8nm,0.8s							
ZALV	**Zalesovo Beam**	**40.54**	**327**	P		**P**	**16 26 19.4**	**-2.3**
	1.1nm,0.6s,baz=108,slow=9.5,SNR=5.6 1.1nm,0.6s							
BVAR	**Borovoye Array**	**48.02**	**321**	P		**P**	**16 27 20.8**	**-0.9**
	0.4nm,0.5s,baz=103,slow=11,SNR=4.4 0.4nm,0.5s							
YKA	**Yellowknife Ar**	**82.74**	**23**	P		**P**	**16 31 04.6**	**-1.8**
	0.5nm,0.8s,baz=317,slow=4.7,SNR=10 0.5nm,0.8s							

*NEIC **04** 16:19:16.8±0.8, 37°.28N±0°.01×97°.959W±0°.009, h5km±1km, Error ellipse: s-maj=2.2km s-min=2.1km az=197.0*

NEIC 04 16:19:17.1±0.9, 37°.28N±0°.01×97°.966W±0°.009, h4km±1km, mb_Lg2.1/7, ML2.4/30, ML2.2/19, Error ellipse: s-maj=1.6km s-min=0.9km az=196.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN12	**Harper NE Stat**	**0.03**	**303**		Pg	16 19 18.2	+0.2
KAN12				Sg	Sg	16 19 19.1	+0.3
KAN08	**Anthony NE Sta**	**0.05**	**184**	Pg	Pg	16 19 18.6	+0.2
KAN08				Sg	Sg	16 19 19.7	+0.4
KAN06	**Argonia West S**	**0.09**	**111**		Pg	16 19 19.2	+0.2
KAN06				IAML		16 19 21.0	
	comp=E,3μm,0.3s						
KAN06				IAML		16 19 21.0	
	comp=N,2μm,0.2s						
KAN16	**Harper SW Stat**	**0.10**	**235**		Pg	16 19 21.1	+2.0
KAN05	**Bluff City Nor**	**0.19**	**157**	Pg	Pg	16 19 21.2	+0.4
KAN05				IAML		16 19 25.8	
	comp=N,1μm,0.2s						
KAN05				IAML		16 19 25.9	
	comp=E,959nm,0.2s						
KAN01	**Argonia South**	**0.21**	**128**		Sg	16 19 24.6	+0.7
KS21	**Milan North St**	**0.24**	**89**		Pg	16 19 22.2	+0.3
KS21					Sg	16 19 25.6	+0.6
KS21				IAML		16 19 25.7	
	comp=E,804nm,0.2s						
KS21				IAML		16 19 25.8	
	comp=E,522nm,0.2s						
KAN17	**Caldwell West**	**0.29**	**146**	Pg	Pg	16 19 22.5	-0.2
KAN17				IAML		16 19 27.3	
	comp=E,652nm,0.3s						
KAN09	**Caldwell North**	**0.31**	**117**	Pg	Pg	16 19 21.8	-1.4
KAN09				IAML		16 19 30.1	
	comp=E,520nm,0.2s						
KAN09				IAML		16 19 30.4	
	comp=N,426nm,0.6s						
KAN14	**Manchester OK**	**0.32**	**180**		Pg	16 19 23.5	+0.1
GC02	**Grant County #**	**0.44**	**169**		Pg	16 19 25.7	+0.1
KAN13	**South Haven SW**	**0.47**	**124**	Pg	Pg	16 19 25.3	-0.9
KAN13					Sg	16 19 33.0	+0.6
KAN13				IAML		16 19 38.1	
	comp=N,348nm,0.3s						
KAN13				IAML		16 19 39.9	
	comp=E,389nm,1.1s						
OK032	**Salt Plains WL**	**0.52**	**202**	Pg	Pg	16 19 26.2	-0.8
CROK	**Carrier**	**0.78**	**181**	Pg	Pg	16 19 31.9	-0.1
CROK					Sb	16 19 44.4	+0.4
CROK				IAML		16 19 46.9	
	comp=N,143nm,0.3s						
CROK				IAML		16 19 48.0	
	comp=E,145nm,0.4s						
OK038	**West end E0370**	**1.01**	**218**		Pg	16 19 34.2	-2.3
R32A	**Long Quarter,**	**1.28**	**333**		Pg	16 19 41.0	-0.7
R32A				IAML		16 20 03.0	
	comp=E,90nm,0.2s						
QUOK	**Quay**	**1.50**	**137**		Pn	16 19 41.8	-3.0
OK029	**Liberty Lake**	**1.54**	**164**		Pn	16 19 42.9	-2.4
OK029				IAmb_Lg		16 20 06.9	
	comp=Z,9.9nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.92**	**167**	IAmb_Lg		16 20 17.4	
	comp=Z,29nm,0.9s						
TUL3	**Leonard**	**2.22**	**127**	Pn	Pn	16 19 51.1	-3.6
TUL3				IAmb_Lg		16 20 30.6	
	comp=Z,10nm,0.8s						
WMOK	**Wichita Mounta**	**2.62**	**195**	IAmb_Lg		16 20 45.3	
	comp=Z,4.3nm,1.1s						

*IDC **04** 16:20:48.4±35.0, 23°.59N×120°.99E, h0km, mb3.5/3, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=644.9km s-min=73.7km az=149.0*

*ASIES **04** 16:20:49.3, 24°.21N×121°.80E, h3km, ML3.8, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.11; $M_{\theta\theta}$-1.42; $M_{\phi\phi}$0.30; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.39; $M_{\phi r}$-0.23; Fault plane solution: $M_0$1.80893×10^{21} NP1:ϕ95.70000°, δ67.58000°, λ107.79000°. NP2:ϕ235.62000°, δ28.33000°, λ53.47000°. Principal axes: T Plg63.1320°, Azm34.2630°; N Plg16.4080°, Azm268.7260°; P Plg20.6570°, Azm172.3520°;*

*TAP **04** 16:20:49.3, 24°.21N×121°.79E, h3km, ML3.8, C*

*JMA **04** 16:20:50.8±0.2, 24°.2N±0°.7×12°.2E×°, h16km±2km, MV3.1/13, TAIWAN REGION*

ISC 04 16:20:50.2±0.8, 24°.20N±0°.01×121°.80E±0°.02, h8km±6km, n141, ₙ0ᵍ93/270, mb3.4/3, 2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**334**	P	**Pg**	**16 20 52.6**	**-0.3**
	baz=337						
EHP				S	**Sg**	**16 20 54.9**	**+0.1**
	baz=337						
EAHA	**Aohua**	**0.14**	**337**	P	**Pg**	**16 20 52.9**	**-0.3**
	baz=337						
EAHA				S	**Sg**	**16 20 55.5**	**+0.2**
	baz=337						
ETL	**Fush Village**	**0.17**	**255**	P	**Pg**	**16 20 53.7**	**0.0**
	baz=252						
ETL				S	**Sg**	**16 20 56.3**	**+0.2**
	baz=252						
NACB	**Ninganchiao**	**0.19**	**262**	P	**Pg**	**16 20 53.8**	**-0.3**
	baz=259						
NACB				S	**Sg**	**16 20 57.0**	**+0.3**
	baz=259						
TWD	**Chiawan**	**0.22**	**237**	*i* P	**Pg**	**16 20 54.9**	**+0.2**
	baz=234						
TWD				*i* S	**Sg**	**16 20 56.8**	**-0.8**
	baz=234						
ENA	**Nanau**	**0.23**	**347**	⇓*i* P	**Pg**	**16 20 54.4**	**-0.5**
	baz=349						
ENA				S	**Sg**	**16 20 58.3**	**+0.2**
	baz=349						
EWUT	**Wuta**	**0.24**	**356**	⇓P	**Pg**	**16 20 54.7**	**-0.4**
	baz=356						
EWUT				S	**Sg**	**16 20 58.6**	**+0.2**
	baz=356						
HWA	**Hwalien**	**0.28**	**218**	*i* P	**Pb**	**16 20 56.8**	**-0.8**
	baz=215						
HWA				*e*S	**Sb**	**16 21 01.3**	**-1.2**
	baz=215						
ETLH	**Xiulin Townshi**	**0.29**	**271**	P	**Pg**	**16 20 55.9**	**-0.1**
	baz=269						
ETLH				S	**Sg**	**16 21 00.3**	**+0.4**
	baz=269						
ETM	**Tongmen**	**0.36**	**230**	P	**Pg**	**16 20 57.3**	**-0.1**
	baz=228						
ETM				*e*S	**Sg**	**16 21 01.3**	**-0.9**
	baz=228						
ESAO	**Su ao**	**0.38**	**6**	P	**Pg**	**16 20 57.1**	**-0.5**
	baz=7.0						
ESAO				S	**Sg**	**16 21 02.6**	**0.0**
	baz=7.0						
LXIB	**Xiulin Townshi**	**0.39**	**243**	P	**Pg**	**16 20 58.0**	**0.0**
	baz=241						
LXIB				S	**Sg**	**16 21 02.6**	**-0.6**
	baz=241						
TWC	**Suao**	**0.41**	**7**	*i* P	**Pg**	**16 20 57.7**	**-0.5**
	baz=8.0						
TWC				*i* S	**Sg**	**16 21 03.6**	**0.0**
	baz=8.0						
LATG	**Datong**	**0.41**	**323**	P	**Pg**	**16 20 58.0**	**-0.3**
	baz=323						
LATG				*e*S	**Sb**	**16 21 04.7**	**-1.7**
	baz=323						
NDS	**Dongshan**	**0.44**	**350**	P	**Pg**	**16 20 58.4**	**-0.3**
	baz=350						
NDS				*e*S	**Sg**	**16 21 04.6**	**+0.1**
	baz=350						
NNSB	**Datong**	**0.44**	**301**	P	**Pb**	**16 20 58.8**	**-1.6**
	baz=300						
NNSB				*e*S	**Sb**	**16 21 05.9**	**-1.3**
	baz=300						
NNSH	**Datong**	**0.44**	**301**	P	**Pb**	**16 20 59.0**	**-1.4**
	baz=300						
NNSH				S	**Sb**	**16 21 06.9**	**-0.3**
	baz=300						
EOS2	**EOS2**	**0.45**	**61**	P	**Pb**	**16 21 00.6**	**+0.2**
	baz=62						
EOS2				S	**Sb**	**16 21 08.4**	**+1.2**
	baz=62						
NNS	**Nan Shan**	**0.45**	**302**	*i* P	**Pg**	**16 20 58.9**	**-0.2**
	baz=301						
NNS				S	**Sb**	**16 21 05.9**	**-1.7**
	baz=301						
SHUL	**Shoufeng**	**0.47**	**208**	P	**Pb**	**16 21 00.5**	**-0.2**
	baz=206						
SHUL				S	**Sb**	**16 21 07.8**	**+0.1**
	baz=206						
NDT	**Datong Townshi**	**0.48**	**327**	P	**Pb**	**16 20 59.4**	**-1.5**
	baz=326						
NDT				*e*S	**Sb**	**16 21 06.6**	**-1.4**
	baz=326						
ENTT	**Nioudou**	**0.48**	**334**	*i* P	**Pg**	**16 20 59.5**	**-0.2**
	baz=334						
ENTT				S	**Sb**	**16 21 06.7**	**-1.7**
	baz=334						
WHF	**Hehuan Shan**	**0.49**	**263**	*i* P	**Pg**	**16 20 59.1**	**-0.7**
	baz=262						
WHF				*i* S	**Sg**	**16 21 06.5**	**+0.2**
	baz=262						
FUSS	**Fushou**	**0.51**	**275**	P	**Pb**	**16 21 00.3**	**-1.3**
	baz=274						
FUSS				S	**Sb**	**16 21 07.6**	**-1.6**
	baz=274						
ESL	**Shilin**	**0.51**	**221**	*i* P	**Pg**	**16 20 59.9**	**-0.3**
	baz=219						
ESL				*e*S	**Sb**	**16 21 08.7**	**-0.4**
	baz=219						
TWE	**Neicheng**	**0.53**	**347**	*i* P	**Pg**	**16 21 00.1**	**-0.4**

TEGC	**Jichi Village**	**0.54 206**	P	**Pb**	**16 21 01.1**	**-1.0**
	baz=204					
TEGC			S	**Sb**	**16 21 10.4**	**+0.4**
	baz=204					
ILA	**Ilan**	**0.56 355**	P	**Pb**	**16 21 01.4**	**-1.0**
	baz=356					
ILA			S	**Sb**	**16 21 09.9**	**-0.7**
	baz=356					
TWT	**Tachien**	**0.57 275**	*i* P	**Pb**	**16 21 01.9**	**-0.7**
	baz=274					
TWT			S	**Sb**	**16 21 10.3**	**-0.6**
	baz=274					
TDCB	**Techi**	**0.59 275**	P	**Pb**	**16 21 01.9**	**-0.9**
	baz=274					
TDCB			S	**Sb**	**16 21 10.0**	**-1.3**
	baz=274					
CHGB	**Renai**	**0.59 256**	P	**Pb**	**16 21 01.6**	**-1.3**
	baz=255					
CHGB			S	**Sg**	**16 21 09.4**	**0.0**
	baz=255					
FUSB	**Fushanzhiwuyua**	**0.59 341**	P	**Pg**	**16 21 01.4**	**-0.2**
	baz=341					
FUSB			*e*S	**Sb**	**16 21 10.8**	**-0.6**
	baz=341					
YHNB	**Yeheng**	**0.60 321**	P	**Pb**	**16 21 01.8**	**-1.3**
	baz=320					
YHNB			*e*S	**Sb**	**16 21 10.2**	**-1.6**
	baz=320					
WARBT	**Fenglin Townsh**	**0.61 218**	P	**Pg**	**16 21 01.7**	**-0.3**
	baz=217					
WARBT			S	**Sb**	**16 21 10.8**	**-1.2**
	baz=217					
NSK	**Sanguang**	**0.62 320**	*i* P	**Pb**	**16 21 02.1**	**-1.3**
	baz=319					
NSK			*e*S	**Sb**	**16 21 10.9**	**-1.3**
	baz=319					
OWD	**Renai**	**0.62 247**	P	**Pb**	**16 21 02.4**	**-1.0**
	baz=246					
OWD			S	**Sg**	**16 21 09.9**	**-0.5**
	baz=246					
EGFH	**Guangfu**	**0.63 213**	P	**Pb**	**16 21 02.5**	**-1.0**
	baz=212					
EGFH			S	**Sb**	**16 21 12.2**	**-0.3**
	baz=212					
WUSB	**Renai**	**0.66 252**	P	**Pb**	**16 21 03.0**	**-1.0**
	baz=250					
WUSB			*e*S	**Sg**	**16 21 11.7**	**+0.2**
	baz=250					
VWDT	**VWDT**	**0.75 234**	P	**Pb**	**16 21 05.1**	**-0.4**
	baz=232					
VWDT			S	**Sb**	**16 21 15.6**	**-0.2**
	baz=232					
NFF	**Wufeng Townshi**	**0.75 305**	P	**Pb**	**16 21 05.2**	**-0.5**
	baz=304					
NFF			S	**Sb**	**16 21 16.6**	**+0.5**
	baz=304					
TIPB	**Shuangxi**	**0.77 2**	P	**Pg**	**16 21 04.4**	**-0.6**
	baz=2.0					
TIPB			*e*S	**Sb**	**16 21 16.9**	**+0.4**
	baz=2.0					
WHP	**Taichung City**	**0.78 276**	P	**Pb**	**16 21 06.1**	**-0.1**
	baz=275					
WHP			S	**Sb**	**16 21 17.2**	**+0.2**
	baz=275					
HGSD	**Ruisui**	**0.79 206**	P	**Pb**	**16 21 06.0**	**-0.1**
	baz=205					
HGSD			*e*S	**Sb**	**16 21 18.1**	**+1.2**
	baz=205					
WPL	**Puli Township**	**0.79 256**	P	**Pb**	**16 21 06.4**	**+0.2**
	baz=256					
WPL			*e*S	**Sb**	**16 21 17.0**	**-0.1**
	baz=256					
NHDH	**Xindian Distri**	**0.80 342**	P	**Pb**	**16 21 05.5**	**-0.8**
	baz=341					
NHDH			*e*S	**Sb**	**16 21 17.4**	**+0.1**
	baz=341					
DPDB	**Guoxing**	**0.81 258**	P	**Pb**	**16 21 06.4**	**-0.2**
	baz=257					
DPDB			*e*S	**Sb**	**16 21 18.6**	**+0.8**
	baz=257					
EHY	**Hungye**	**0.82 212**	*i* P	**Pg**	**16 21 05.4**	**-0.6**
	baz=211					
EHY			S	**Sb**	**16 21 17.9**	**0.0**
	baz=211					
TATO	**Taipei**	**0.82 340**	P	**Pb**	**16 21 05.8**	**-0.9**
	baz=340					
TATO			*e*S	**Sn**	**16 21 19.1**	**-1.4**
	baz=340					
TWB1	**Santiao Chiao**	**0.82 12**	*i* P	**Pg**	**16 21 05.6**	**-0.5**
	baz=13					
TWB1			*e*S	**Sb**	**16 21 17.9**	**-0.1**
	baz=13					
WCS	**Beigang Elemen**	**0.82 260**	P	**Pb**	**16 21 06.3**	**-0.5**
	baz=259					
WCS			*e*S	**Sb**	**16 21 17.6**	**-0.4**
	baz=259					
NJD	**Zhudong**	**0.84 310**	P	**Pb**	**16 21 06.9**	**-0.1**
	baz=309					
NJD			*e*S	**Sn**	**16 21 20.2**	**-0.7**
	baz=309					
LIOB	**Emei**	**0.84 302**	P	**Pb**	**16 21 07.0**	**-0.1**
	baz=301					
LIOB			*e*S	**Sb**	**16 21 18.3**	**-0.2**
	baz=301					
NSTT	**Nanjuang**	**0.84 301**	*i* P	**Pb**	**16 21 06.7**	**-0.5**
	baz=300					
NSTT			S	**Sb**	**16 21 18.4**	**-0.2**
	baz=300					
BACT	**New Taipei Cit**	**0.86 338**	*e*P	**Pn**	**16 21 08.7**	**+0.1**
	baz=337					
BACT			*e*S	**Sn**	**16 21 24.4**	**+3.0**
	baz=337					
NHY	**Taipei**	**0.86 346**	*e*P	**Pb**	**16 21 06.9**	**-0.5**
	baz=346					
NHY			*e*S	**Sb**	**16 21 19.4**	**+0.3**
	baz=346					
NWF	**Wu-fen Shan**	**0.87 359**	*i* P	**Pb**	**16 21 06.9**	**-0.7**
	baz=359					
NWF			*e*S	**Sb**	**16 21 19.2**	**-0.1**
	baz=359					
WFSB	**Wu-fen Shan**	**0.87 359**	P	**Pb**	**16 21 07.0**	**-0.5**
	baz=359					
WFSB			*e*S	**Sb**	**16 21 19.3**	**0.0**
	baz=359					
SSLB	**Suanglung**	**0.88 242**	P	**Pg**	**16 21 06.7**	**-0.4**
	baz=241					
SSLB			*e*S	**Sb**	**16 21 19.3**	**-0.3**
	baz=241					
TAP	**Taipei**	**0.88 342**	*e*P	**Pn**	**16 21 08.4**	**-0.5**
	baz=342					
TAP			*e*S	**Sn**	**16 21 21.4**	**-0.4**
	baz=342					
SMLT	**Sun Moon Lake**	**0.88 249**	*i* P	**Pb**	**16 21 07.6**	**-0.2**
	baz=248					
SMLT			*i* S	**Sb**	**16 21 18.6**	**-1.2**
	baz=248					
SXI1	**Grass Mountain**	**0.89 5**	P	**Pb**	**16 21 07.1**	**-1.0**
	baz=4.0					
SXI1			*e*S	**Sb**	**16 21 20.4**	**+0.3**
	baz=4.0					
TYC	**Yuchr**	**0.91 251**	*i* P	**Pb**	**16 21 08.1**	**-0.2**
	baz=250					
TYC			S	**Sb**	**16 21 20.4**	**-0.1**
	baz=250					
HSN1	**Hsinchu**	**0.91 309**	*e*P	**Pn**	**16 21 09.4**	**0.0**
	baz=308					
HSN1			*e*S	**Sn**	**16 21 22.1**	**-0.7**
	baz=308					
NTY	**Taoyuan**	**0.92 330**	P	**Pn**	**16 21 08.7**	**-0.8**
	baz=330					
NTY			*e*S	**Sn**	**16 21 21.9**	**-0.9**
	baz=330					
YULB	**Yu-li**	**0.93 210**	P	**Pg**	**16 21 07.4**	**-0.6**
	baz=209					
YULB			S	**Sb**	**16 21 21.5**	**+0.4**
	baz=209					
ECBN	**Changbin**	**0.94 200**	P	**Pb**	**16 21 08.3**	**-0.5**
	baz=199					
ECBN			S	**Sb**	**16 21 22.2**	**+0.9**
	baz=199					
TNOU	**National Taiwa**	**0.94 359**	P	**Pg**	**16 21 07.2**	**-1.2**
	baz=358					
TNOU			*e*S	**Sn**	**16 21 22.7**	**-0.8**
	baz=358					
NCUH	**Zhongli**	**0.94 324**	P	**Pn**	**16 21 09.4**	**-0.5**
	baz=323					
NCUH			*e*S	**Sn**	**16 21 23.2**	**-0.3**
	baz=323					
SBCB	**Hsinchu**	**0.94 309**	P	**Pn**	**16 21 10.2**	**+0.4**
	baz=308					
SBCB			*e*S	**Sn**	**16 21 22.5**	**-1.0**
	baz=308					
TWQ1	**Liyutan**	**0.95 279**	*i* P	**Pn**	**16 21 10.7**	**+0.8**
	baz=278					
TWQ1			*e*S	**Sn**	**16 21 22.6**	**-0.9**
	baz=278					
EYUL	**Yuli**	**0.96 207**	P	**Pb**	**16 21 09.0**	**-0.1**
	baz=206					
EYUL			S	**Sn**	**16 21 24.2**	**+0.4**
	baz=206					
TWS1	**Kuangyinshan**	**0.96 339**	*i* P	**Pn**	**16 21 09.6**	**-0.5**
	baz=339					
TWS1			*e*S	**Sn**	**16 21 24.0**	**+0.1**
	baz=339					
HSN	**Hsinchu**	**0.96 309**	P	**Pn**	**16 21 09.6**	**-0.5**
	baz=311					
HSN			*e*S	**Sn**	**16 21 23.9**	**0.0**
	baz=311					
TWF1	**Yuli**	**0.96 209**	*i* P	**Pg**	**16 21 08.1**	**-0.6**
	baz=207					
TWF1			S	**Sn**	**16 21 23.3**	**-0.7**
	baz=207					
YM01	**YM01**	**0.96 348**	P	**Pb**	**16 21 09.2**	**-0.1**
	baz=347					
YM01			*e*S	**Sn**	**16 21 23.7**	**-0.3**
	baz=347					
NSY	**Sanyi**	**0.97 283**	*i* P	**Pn**	**16 21 10.3**	**+0.1**
	baz=282					
NSY			*e*S	**Sn**	**16 21 23.8**	**-0.4**
	baz=282					
NJN	**Zhunan**	**0.97 300**	*e*P	**Pn**	**16 21 11.8**	**+1.6**
	baz=299					
NJN			*e*S	**Sn**	**16 21 29.5**	**+5.4**
	baz=299					
NMLH	**Miaoli**	**0.98 290**	P	**Pn**	**16 21 11.1**	**+0.8**
	baz=289					
NMLH			S	**Sn**	**16 21 23.5**	**-0.8**
	baz=289					
WHYT	**Xinyi Township**	**1.00 240**	P	**Pn**	**16 21 09.9**	**-0.7**
	baz=239					
WHYT			S	**Sn**	**16 21 24.4**	**-0.5**
	baz=239					
NTST	**Danshui**	**1.01 342**	P	**Pn**	**16 21 10.5**	**-0.2**
	baz=341					
NTST			*e*S	**Sn**	**16 21 25.2**	**+0.1**
	baz=341					
ANP	**Anpu**	**1.01 346**	*i* P	**Pb**	**16 21 09.9**	**-0.2**
	baz=346					
WWF	**Wufeng**	**1.02 261**	P	**Pn**	**16 21 11.7**	**+0.9**
	baz=260					
WWF			S	**Sn**	**16 21 26.7**	**+1.4**
	baz=260					
WJS	**Zhushan**	**1.05 249**	P	**Pn**	**16 21 11.5**	**+0.3**
	baz=248					
WJS			S	**Sn**	**16 21 26.8**	**+0.7**
	baz=248					
NHW	**Xinwu Township**	**1.05 320**	*e*P	**Pn**	**16 21 13.5**	**+2.2**
	baz=319					
NHW			*e*S	**Sn**	**16 21 28.9**	**+2.7**
	baz=319					
WDJ	**Dajia District**	**1.07 278**	P	**Pn**	**16 21 13.1**	**+1.6**
	baz=277					
WDJ			*e*S	**Sn**	**16 21 26.3**	**-0.2**
	baz=277					
WNT	**Mingjian**	**1.07 253**	*i* P	**Pn**	**16 21 11.8**	**+0.3**
	baz=251					
WNT			*i* S	**Sn**	**16 21 27.0**	**+0.5**
	baz=251					
CHKH	**Chenggong**	**1.07 200**	P	**Pg**	**16 21 10.2**	**-0.6**
	baz=199					
CHKH			S	**Sn**	**16 21 26.6**	**0.0**
	baz=199					
JYNG	**Yonagunijimaku**	**1.08 76**	*e*P	**Pn**	**16 21 11.0**	**-0.6**
TWY	**Chenhua**	**1.08 350**	P	**Pn**	**16 21 12.4**	**+0.7**
	baz=350					
FULB	**Fuli**	**1.10 205**	P	**Pg**	**16 21 10.6**	**-0.8**
	baz=204					
FULB			S	**Sn**	**16 21 28.6**	**+1.2**
	baz=204					
YOJ	**Yonaguni jima**	**1.14 77**	*e*P	**Pg**	**16 21 10.6**	**-1.4**
	baz=76					
YOJ			*e*S	**Sn**	**16 21 30.0**	**+1.7**
	baz=76					
YOJ	**Yonaguni jima**	**1.14 77**	*e*P	**Pb**	**16 21 11.9**	**-0.3**
WYL	**Yuanlin Townsh**	**1.14 258**	P	**Pn**	**16 21 13.9**	**+1.4**
	baz=257					
WYL			*e*S	**Sn**	**16 21 29.6**	**+1.3**
	baz=257					
WCHH	**Zhanghua**	**1.14 264**	P	**Pn**	**16 21 13.6**	**+1.2**
	baz=263					
WCHH			S	**Sn**	**16 21 30.0**	**+1.8**
	baz=263					
ALS	**Alishan**	**1.14 233**	*i* P	**Pb**	**16 21 12.1**	**-0.3**
	baz=232					
ALS			S	**Sb**	**16 21 27.9**	**+0.4**
	baz=232					
CHKT	**Chengkung**	**1.17 200**	*i* P	**Pg**	**16 21 11.2**	**-1.4**
	baz=199					
CHKT			*i* S	**Sn**	**16 21 28.6**	**-0.4**
	baz=199					
EHD	**Haiduan**	**1.18 207**	P	**Pg**	**16 21 11.6**	**-1.3**
	baz=207					
EHD			S	**Sn**	**16 21 31.4**	**+2.1**
	baz=207					
CHN5	**Tsauling**	**1.19 240**	*i* P	**Pn**	**16 21 13.5**	**+0.3**
	baz=239					
CHN5			*i* S	**Sn**	**16 21 30.4**	**+0.7**
	baz=239					
ECS	**Chishang**	**1.22 206**	P	**Pg**	**16 21 12.6**	**-1.2**
	baz=205					
ECS			*e*S	**Sn**	**16 21 32.1**	**+1.7**
	baz=205					
ELDTW	**Lidau**	**1.24 216**	*i* P	**Pg**	**16 21 11.8**	**-2.1**
	baz=214					
ELDTW			*i* S	**Sb**	**16 21 30.0**	**0.0**
	baz=214					
WGK	**Gukeng**	**1.24 246**	*i* P	**Pn**	**16 21 14.7**	**+0.8**
	baz=245					
WGK			S	**Sn**	**16 21 32.2**	**+1.4**
	baz=245					
WDLH	**Douliu**	**1.26 246**	P	**Pn**	**16 21 15.2**	**+1.0**
	baz=245					
WDLH			S	**Sn**	**16 21 32.1**	**+0.8**
	baz=245					
EDH	**Donghe**	**1.30 200**	P	**Pg**	**16 21 13.1**	**-2.2**
	baz=200					
EDH			S	**Sn**	**16 21 32.5**	**+0.1**
	baz=200					
WCKO	**Fanlu**	**1.33 235**	P	**Pb**	**16 21 15.6**	**+0.1**
	baz=234					
WCKO			S	**Sn**	**16 21 35.1**	**+2.1**
	baz=234					
WRL	**Guolierlin Hig**	**1.33 257**	P	**Pb**	**16 21 16.4**	**+0.9**
	baz=256					
WRL			S	**Sn**	**16 21 34.1**	**+1.0**
	baz=256					
WTK	**Tuku**	**1.39 249**	P	**Pg**	**16 21 16.9**	**0.0**
	baz=248					
WTK			S	**Sn**	**16 21 35.4**	**+1.0**
	baz=248					
STYH	**Taoyuan**	**1.39 223**	P	**Pn**	**16 21 15.6**	**-0.4**
	baz=222					
STYH			S	**Sg**	**16 21 33.8**	**-1.1**
	baz=222					
CHN4	**Tsaushan**	**1.39 233**	*i* P	**Pg**	**16 21 16.7**	**-0.2**
	baz=232					
CHN4			*i* S	**Sn**	**16 21 35.5**	**+1.0**
	baz=232					
TPUB	**Ta-pu**	**1.40 230**	P	**Pg**	**16 21 16.2**	**-0.8**
	baz=229					
TPUB			S	**Sn**	**16 21 35.9**	**+1.1**
	baz=229					
LONT	**Longtian**	**1.43 206**	*e*P	**Pn**	**16 21 15.7**	**-0.7**
	baz=205					
LONT			*e*S	**Sn**	**16 21 35.5**	**+0.1**
	baz=205					
WTP	**Ta-pu**	**1.44 229**	*i* P	**Pg**	**16 21 17.5**	**-0.4**
	baz=228					
WTP			S	**Sn**	**16 21 36.9**	**+1.0**
	baz=228					
TWK	**Hsinying**	**1.52 232**	*i* P	**Pg**	**16 21 18.6**	**-0.8**
	baz=231					
TWK			S	**Sg**	**16 21 38.9**	**-0.2**
	baz=231					
TWG	**Pinlang**	**1.53 206**	P	**Pn**	**16 21 16.4**	**-1.5**
	baz=205					
TWG			*e*S	**Sg**	**16 21 38.9**	**-0.5**
	baz=205					
TWGBT	**Beinan**	**1.53 206**	*e*P	**Pn**	**16 21 16.9**	**-0.9**
	baz=205					
TWGBT			*e*S	**Sg**	**16 21 39.2**	**-0.2**
	baz=205					
SNST	**Tainan City**	**1.54 231**	P	**Pg**	**16 21 19.2**	**-0.6**
	baz=230					
SNST			S	**Sg**	**16 21 40.4**	**+0.6**
	baz=230					
CHN1	**Nanshi**	**1.54 229**	*i* P	**Pg**	**16 21 19.2**	**-0.6**
	baz=228					
CHN1			*i* S	**Sg**	**16 21 39.9**	**0.0**
	baz=228					
WSF	**Szhu**	**1.55 249**	*i* P	**Pg**	**16 21 18.9**	**-1.0**
	baz=248					
WSF			S	**Sg**	**16 21 40.0**	**0.0**
	baz=248					
SGST	**Jiashian**	**1.58 225**	*i* P	**Pn**	**16 21 18.4**	**-0.2**
	baz=224					
SGST			*i* S	**Sg**	**16 21 40.8**	**-0.1**
	baz=224					
WSL	**Shuilin Townsh**	**1.59 245**	*e*P	**Pg**	**16 21 19.8**	**-0.9**
	baz=244					
WSL			*e*S	**Sg**	**16 21 41.2**	**-0.1**
	baz=244					
SLGT	**Liugui**	**1.60 222**	P	**Pb**	**16 21 19.2**	**-0.8**
	baz=221					
SLGT			S	**Sg**	**16 21 41.8**	**+0.1**
	baz=221					
ICHU	**Yijhu**	**1.62 239**	P	**Pb**	**16 21 20.1**	**-0.3**
	baz=238					
ICHU			S	**Sg**	**16 21 41.5**	**-1.0**
	baz=238					
CHN8	**Yiju**	**1.69 240**	P	**Pb**	**16 21 20.6**	**-0.8**
	baz=239					
CHN8			S	**Sb**	**16 21 43.0**	**+0.1**
	baz=239					
CHN3	**Shinhua**	**1.73 230**	*e*P	**Pb**	**16 21 21.3**	**-0.9**
	baz=229					
CHN3			*e*S	**Sg**	**16 21 45.2**	**-0.5**
	baz=229					
SSHA	**Shanhua**	**1.74 233**	*e*P	**Pb**	**16 21 22.4**	**-0.1**
	baz=232					
SSHA			*e*S	**Sb**	**16 21 44.4**	**-0.2**
	baz=232					
IRIF	**Iriomote-Funau**	**1.77 85**	*e*P	**Pb**	**16 21 21.9**	**-1.0**
SCST	**Cishan**	**1.77 223**	P	**Pb**	**16 21 22.4**	**-0.6**
	baz=222					
SCST			*e*S	**Sb**	**16 21 45.0**	**-0.4**
	baz=222					
SHHT	**Tainan City**	**1.77 229**	P	**Pg**	**16 21 23.1**	**-1.1**
	baz=228					
SHHT			*e*S	**Sb**	**16 21 45.4**	**0.0**
	baz=228					
ECL	**Taimali**	**1.77 206**	*e*P	**Pb**	**16 21 22.1**	**-1.0**
	baz=205					
ECL			*e*S	**Sb**	**16 21 45.1**	**-0.4**
	baz=205					
SCLT	**Jiali**	**1.79 236**	S	**Sg**	**16 21 46.9**	**-0.9**
	baz=234					
TSMG	**Majia**	**1.83 216**	P	**Pb**	**16 21 22.9**	**-1.0**
	baz=215					
TSMG			S	**Sb**	**16 21 47.3**	**+0.3**
	baz=215					
TWM1	**Shoushan**	**1.86 223**	*e*P	**Pb**	**16 21 24.3**	**-0.3**
	baz=222					
TWM1			*e*S	**Sb**	**16 21 47.6**	**-0.5**
	baz=222					
TSCK	**Chigu Township**	**1.89 237**	P	**Pb**	**16 21 23.8**	**-1.2**
	baz=236					
TSCK			S	**Sb**	**16 21 48.2**	**-0.5**
	baz=236					
MASBT	**Mashibuluo**	**1.91 214**	P	**Pn**	**16 21 22.9**	**-0.2**
	baz=213					
MASBT			S	**Sb**	**16 21 49.8**	**+0.5**
	baz=213					
EAST	**Anshuo**	**2.01 206**	P	**Pb**	**16 21 26.7**	**-0.3**
	baz=205					
EAST			*e*S	**Sb**	**16 21 51.7**	**-0.6**
	baz=205					
JKRS	**Kuro-shima**	**2.02 89**	*e*P	**Pb**	**16 21 26.4**	**-0.8**
JIJ	**Ishigaki jima**	**2.15 85**	*e*P	**Pb**	**16 21 29.0**	**-0.4**
JIJ			*e*S	**Sb**	**16 21 56.6**	**+0.4**
JISG	**Ishigakijimahi**	**2.32 80**	*e*S	**Sb**	**16 22 01.6**	**+0.3**
KSRS	**Korea Array**	**14.21 20**	Pn	**P**	**16 24 22.5**	**+3.2**
	0.2nm,0.3s,baz=200,slow=12,SNR=7.4 2.2nm,0.7s					
MKAR	**Makanchi Array**	**38.72 316**	P	**P**	**16 28 13.7**	**-1.1**
	0.5nm,0.6s,baz=103,slow=7.3,SNR=6.5 0.5nm,0.6s					
ZALV	**Zalesovo Beam**	**40.53 327**	P	**P**	**16 28 29.0**	**-0.7**
	0.4nm,0.5s,baz=126,slow=7.3,SNR=1.7 0.4nm,0.5s					
BVAR	**Borovoye Array**	**48.02 321**	P	**P**	**16 29 29.5**	**-0.2**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.6 0.3nm,0.5s					

*IDC **04** 16:22:10.9±2.5,6°.08S×130°.02E,h0km,mb3.1/1, mbtmp3.1/3,ML3.4/2,Error ellipse: s-maj=147.0km s-min=33.0km az=70.0*
ISC 04 16:22:25.5±1.1,6°.52S±0°.09×130°.4E±0°.1,h150km,n8, σ2s49/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.03**	**28**	P	**Pn**	**16 23 25.4**	**-0.9**
MTN	**Manton Dam**	**6.33**	**173**	P	**Pn**	**16 23 58.6**	**+1.9**
KDU	**Kakadu**	**6.47**	**162**	P	**Pn**	**16 24 00.9**	**+2.4**
SOEI	**Soe**	**6.85**	**242**	P	**Pn**	**16 24 03.4**	**-0.3**
KNRA	**Kununurra**	**9.24**	**190**	P	**Pn**	**16 24 35.8**	**+0.3**
WRA	**Warramunga Arr**	**13.89**	**164**	Pn	**Pn**	**16 25 35.8**	**-0.3**
	0.2nm,0.3s,baz=347,slow=14,SNR=16						
WRA				Sn	Sn	16 28 04.7	-5.3
	0.1nm,0.3s,baz=339,slow=22,SNR=1.3 0.3nm,0.4s						
ASAR	**Alice Springs**	**17.38**	**169**	P	**Pn**	**16 26 21.6**	**+2.4**
	0.1nm,0.3s,baz=342,slow=9.5,SNR=9.2						
ASAR				S	**S**	**16 29 27.1**	**-4.6**
	0.2nm,0.9s,baz=342,slow=29,SNR=1.3 0.5nm,0.9s						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**16 33 08.8**	**0.0**
	0.1nm,0.5s,baz=120,slow=7.2,SNR=1.5 0.1nm,0.5s						

*IDC **04** 16:23:39.5±1.3,83°.08N×6°.23W,h0km,mb3.8/6, mbtmp3.8/8,ML3.4/2,Error ellipse: s-maj=31.3km s-min=25.5km az=13.0*
*NEIC **04** 16:23:43.4±2.0,82°.8N±0°.1×4°.9W±0°.7,h10km±1km, mb4.1/12,Error ellipse: s-maj=21.7km s-min=12.9km az=210.0*
*FCIAR **04** 16:23:44.0,82°.92N×4°.67W,h10km,station ZFI2 has station magnitude of 3.90 station OMEGA has station magnitude of 3.60*
*BER **04** 16:23:45.1±3.2,83°.31N×0°.81W,h15km±365km,mb(Pn)4.1, ML3.0(NAO),Confirmed Earthquake*
*KOLA **04** 16:23:49.3,83°.34N×5°.53E,h0km,ML1.8,Error ellipse: s-maj=263.3km s-min=54.2km az=60.0,Arctic Ocean*
ISC 04 16:23:41.9±0.6,82°.88N±0°.07×4°.44W±0°.07,h10km,n51, σ2s02/60,mb3.8/11,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.72**	**139**	Pn	**Pn**	**16 24 54.1**	**+1.1**
KBS				Sn	**Sn**	**16 25 45.5**	**-2.2**
KBS	**Kingsbay**	**4.72**	**139**	Pn	**Pn**	**16 24 54.4**	**+1.4**
KBS	**Kingsbay**	**4.72**	**139**	P	**Pn**	**16 24 54.1**	**+1.1**
KBS				S	**Sn**	**16 25 45.3**	**-2.5**
KBS	**Kingsbay**	**4.72**	**139**	*e*P	**Pn**	**16 24 54.4**	**+1.4**
KBS				*e*S	**Sn**	**16 25 45.3**	**-2.5**
KBS				IAML		16 25 50.2	
	comp=Z,16nm,0.4s						
KBS	**Kingsbay**	**4.72**	**139**	*e*P	**Pn**	**16 24 54.1**	**+1.1**
KBS				*e*S	**Sn**	**16 25 46.3**	**-1.4**
BRBB	**Barentsburg B**	**5.67**	**138**	Pn	**Pn**	**16 25 10.4**	**+4.3**
BRBB				Sn	**Sn**	**16 26 08.0**	**-3.1**
BRBB	**Barentsburg B**	**5.67**	**138**	P	**Pn**	**16 25 08.2**	**+2.1**
BRBB				S	**Sn**	**16 26 07.2**	**-4.0**
BRBB	**Barentsburg B**	**5.67**	**138**	*e*P	**Pn**	**16 25 08.7**	**+2.6**
BRBB				*e*S	**Sn**	**16 26 09.5**	**-1.6**
BRBA	**Barentsburg A**	**5.71**	**138**	Pn	**Pn**	**16 25 09.0**	**+2.4**
SPB5	**Spitsbergen Ar**	**5.78**	**133**	Pn	**Pn**	**16 25 09.0**	**+1.4**
SPB4	**Spitsbergen Ar**	**5.78**	**133**	Pn	**Pn**	**16 25 09.1**	**+1.5**

SPA1	**Spitsbergen Ar**	**5.78**	**133**	Pn	**Pn**	**16**	**25**	**09.0** **+1.4**
SPA3	**Spitsbergen Ar**	**5.78**	**133**	Pn	**Pn**	**16**	**25**	**09.0** **+1.4**
SPA0	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**08.9** **+1.3**
	baz=353,slow=12							
SPA0				Sn	**Sn**	**16**	**26**	**11.9** **-2.0**
	baz=337,slow=28							
SPA0	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**09.0** **+1.4**
SPA0	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**08.9** **+1.3**
	baz=353,slow=12							
SPA0				Sn	**Sn**	**16**	**26**	**11.9** **-2.0**
	baz=337,slow=28							
SPA0	**Spitsbergen Ar**	**5.79**	**133**	*e*P	**Pn**	**16**	**25**	**08.6** **+1.0**
SPA0				*e*S	**Sn**	**16**	**26**	**10.8** **-3.1**
SPITS	**Spitsbergen Ar**	**5.79**	**133**	P	**Pn**	**16**	**25**	**09.1** **+1.4**
SPITS				S	**Sn**	**16**	**26**	**10.7** **-3.3**
SPITS	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**09.2** **+1.5**
	baz=355,slow=9.2							
SPITS				Sn	**Sn**	**16**	**26**	**12.2** **-1.8**
	baz=328,slow=11							
	comp=Z,1.5nm,0.3s							
SPB3	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**09.1** **+1.4**
SPB2	**Spitsbergen Ar**	**5.79**	**133**	Pn	**Pn**	**16**	**25**	**09.3** **+1.6**
ZFI2	**Zemlya Franca-**	**7.43**	**79**	P	**Pn**	**16**	**25**	**29.0** **-1.1**
ZFI2				*e*S	Sn	16	26	46.8 -7.5
	comp=Z,35nm,2.1s							
OMEGA	**Omega**	**7.46**	**79**	*e*P	**Pn**	**16**	**25**	**29.2** **-1.3**
OMEGA				*e*S	Sn	16	26	46.2 -8.7
	comp=Z,15nm,2.8s							
SUMG	**Summit**	**12.25**	**233**	Pn	Pn	16	26	31.2 -5.2
SUMG	**Summit**	**12.25**	**233**	*i* P	Pn	16	26	27.0 -9.4
TULEG	**Thule**	**12.26**	**276**	Pn	**Pn**	**16**	**26**	**32.6** **-3.6**
ARA0	**ARCESS Array S**	**14.80**	**137**	Pn	**P**	**16**	**27**	**14.9** **-2.0**
	baz=350,slow=11							
ARA0	**ARCESS Array S**	**14.80**	**137**	Pn	**P**	**16**	**27**	**14.9** **-2.0**
	baz=350,slow=11							
ARCES	**ARCESS Array B**	**14.80**	**137**	P	**P**	**16**	**27**	**15.9** **-1.0**
ARCES	**ARCESS Array B**	**14.80**	**137**	Pn	**Pn**	**16**	**27**	**12.6** **+1.6**
	comp=Z,0.1nm,0.3s,baz=349,slow=9.4,SNR=1.3							
	comp=Z,2.1nm,0.8s							
RES	**Resolute Bay**	**17.01**	**295**	Pn	Pn	16	27	30.3 -9.1
	comp=Z,0.3nm,0.3s,baz=36,slow=14,SNR=6.9							
SFJD	**Kangerlussuaq**	**18.86**	**241**	P	**P**	**16**	**28**	**01.9** **+0.2**
SFJD				IAmb	IAmb	16	28	42.5
	comp=Z,14nm,1.2s							
NC303	**NORSAR Array S**	**22.12**	**160**	P	**P**	**16**	**28**	**37.3** **+0.2**
B21K	**Ikpikpuk River**	**26.95**	**337**	P	**P**	**16**	**29**	**24.1** **+1.3**
B21K				IAmb	IAmb	16	29	35.4
	comp=Z,5.2nm,1.2s							
D22K	**Ayikyak River**	**27.59**	**336**	P	**P**	**16**	**29**	**29.3** **+0.6**
F31M	**Tsiigehtchic**	**27.76**	**320**	P	**P**	**16**	**29**	**31.5** **+1.4**
F31M				IAmb	IAmb	16	29	35.3
	comp=Z,2.2nm,1.1s							
F24K	**Squaw Lake**	**28.67**	**331**	P	**P**	**16**	**29**	**41.5** **+3.2**
FYU	**Fort Yukon**	**29.45**	**329**	P	**P**	**16**	**29**	**47.4** **+2.2**
FYU				IAmb	IAmb	16	30	06.1
	comp=Z,4.3nm,1.1s							
DAWY	**Dawson**	**31.53**	**323**	P	**P**	**16**	**30**	**06.8** **+3.2**
DAWY				IAmb	IAmb	16	30	11.3
	comp=Z,3.3nm,1.2s							
L29M	**L29M**	**32.38**	**322**	P	**P**	**16**	**30**	**12.7** **+1.6**
O30N	**Mendenhall**	**34.53**	**320**	P	**P**	**16**	**30**	**32.2** **+2.3**
ZALV	**Zalesovo Beam**	**36.75**	**81**	P	**P**	**16**	**30**	**49.0** **+0.1**
	comp=Z,0.8nm,0.6s,baz=332,slow=8.4,SNR=4.9							
	comp=Z,0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**39.23**	**88**	P	**P**	**16**	**31**	**10.6** **+0.8**
	comp=Z,1.7nm,0.2s,baz=351,slow=7.7,SNR=5.3							
	comp=Z,1.7nm,0.2s							
ESDC	**Sonseca Array**	**43.35**	**179**	P	**P**	**16**	**31**	**44.2** **+0.4**
	comp=Z,1.9nm,1.0s,baz=360,slow=9.5,SNR=5.2							
	comp=Z,1.9nm,1.0s							
MAKZ	**Makanchi**	**43.41**	**86**	P	**P**	**16**	**31**	**46.0** **+1.8**
MAKZ				IAmb	IAmb	16	31	46.8
	comp=Z,3.2nm,0.9s							
MK31	**Makanchi Array**	**43.46**	**86**	P	**P**	**16**	**31**	**46.1** **+1.5**
MKAR	**Makanchi Array**	**43.46**	**86**	P	**P**	**16**	**31**	**46.3** **+1.7**
	comp=Z,1.0nm,0.8s,baz=356,slow=7.7,SNR=9.6							
	comp=Z,1.0nm,0.8s							
BRTR	**Keskin Array B**	**44.98**	**138**	P	**P**	**16**	**31**	**57.6** **+0.5**
PDAR	**Pinedale Array**	**49.66**	**291**	P	**P**	**16**	**32**	**30.8** **-2.7**
	comp=Z,0.3nm,0.7s,baz=26,slow=6.4,SNR=3.0							
	comp=Z,0.3nm,0.7s							
KSAR	**Wonju Array Be**	**57.74**	**44**	P	**P**	**16**	**33**	**34.9** **+2.5**
CMAR	**Chiang Mai Arr**	**73.45**	**74**	P	**P**	**16**	**35**	**13.2** **-0.9**
	comp=Z,0.4nm,0.6s,baz=355,slow=6.3,SNR=2.4							
	comp=Z,0.4nm,0.6s							

TAP ***04*** *16:26:40.9,24.21N×121.82E,h8km,ML3.8,C*
ASIES ***04*** *16:26:40.7,24.24N×121.78E,h4km,ML3.8,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.63; Mθθ-1.83; Mφφ1.20; Mrθ3.77; Mθφ-0.59; Mφr3.01; Fault plane solution: M₀5.11941×10²¹ NP1:φ₀50.00000°, δ84.95000°, λ74.36000°. NP2:φ₀302.54000°, δ16.42000°, λ161.84000°. Principal axes: T Plg47.7800°, Azm303.5220°; N Plg15.5810°, Azm51.4180°; P Plg38.0220°, Azm154.0120°;*
JMA ***04*** *16:26:41.3±0.1,24.2N±0.4×121.8E±0.7,h15km±1km, MV3.3/12,TAIWAN REGION*
IDC ***04*** *16:26:57.9±6.6,24.25N×121.98E,h174km±66km,mb3.0/7, mbtmp3.5/8,Error ellipse: s-maj=42.1km s-min=18.4km az=66.0*

ISC 04 16:26:40.6±0.9, 24.21N±0.01×121.87E±0.02, h9km±6km, n159,σ0 72/279, mb3.4/7, 2C-14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.16**	**310**	P		**Pg**		**16 26 43.9**	**0.0**
	baz=326								
EHP				S		**Sg**		**16 26 46.1**	**-0.2**
	baz=326								
EAHA	**Aohua**	**0.17**	**315**	⇓P		**Pg**		**16 26 44.2**	**0.0**
	baz=329								
EAHA				S		**Sg**		**16 26 46.6**	**-0.1**
	baz=329								
ETL	**Fush Village**	**0.23**	**258**	⇑P		**Pg**		**16 26 45.0**	**-0.3**
	baz=258								
ETL				S		**Sg**		**16 26 48.0**	**-0.5**
	baz=258								
ENA	**Nanau**	**0.25**	**331**	⇓*i*P		**Pg**		**16 26 45.8**	**+0.2**
	baz=341								
ENA				*i* S		**Sg**		**16 26 49.4**	**+0.4**
	baz=341								
EWUT	**Wuta**	**0.25**	**340**	⇓P		**Pg**		**16 26 46.0**	**+0.4**
	baz=347								
EWUT				S		**Sg**		**16 26 49.7**	**+0.6**
	baz=347								
NACB	**Ninganchiao**	**0.26**	**262**	⇓P		**Pg**		**16 26 45.2**	**-0.5**
	baz=264								
NACB				S		**Sg**		**16 26 48.2**	**-0.9**
	baz=264								
TWD	**Chiawan**	**0.28**	**243**	*i* P		**Pg**		**16 26 46.0**	**-0.2**
	baz=251								
TWD				S		**Sg**		**16 26 50.0**	**-0.1**
	baz=251								
HWA	**Hwalien**	**0.34**	**227**	*i* P		**Pb**		**16 26 48.9**	**+0.1**
	baz=237								
HWA				S		**Sg**		**16 26 52.4**	**+0.7**
	baz=237								
ETLH	**Xiulin Townshi**	**0.35**	**270**	P		**Pg**		**16 26 47.2**	**-0.4**
	baz=271								
ETLH				S		**Sg**		**16 26 52.0**	**-0.4**
	baz=271								
ESAO	**Su ao**	**0.37**	**356**	P		**Pg**		**16 26 48.3**	**+0.5**
	baz=353								
ESAO				S		**Sg**		**16 26 53.6**	**+1.0**
	baz=353								
TWC	**Suao**	**0.40**	**357**	⇓*i*P		**Pb**		**16 26 48.9**	**-0.9**
	baz=354								
TWC				*i* S		**Sb**		**16 26 55.0**	**-1.0**
	baz=354								
ETM	**Tongmen**	**0.42**	**235**	P		**Pg**		**16 26 48.7**	**-0.1**
	baz=236								
ETM				*e*S		**Sg**		**16 26 55.7**	**+1.3**
	baz=236								
NDS	**Dongshan**	**0.45**	**342**	P		**Pg**		**16 26 49.8**	**+0.5**
	baz=344								
NDS				S		**Sg**		**16 26 55.8**	**+0.6**
	baz=344								
LATG	**Datong**	**0.45**	**316**	⇓P		**Pg**		**16 26 49.4**	**-0.1**
	baz=319								
LATG				*e*S		**Sg**		**16 26 55.3**	**-0.2**
	baz=319								
LXIB	**Xiulin Townshi**	**0.46**	**246**	P		**Pg**		**16 26 49.0**	**-0.5**
	baz=248								
LXIB				S		**Sg**		**16 26 56.8**	**+1.2**
	baz=248								
NNSB	**Datong**	**0.50**	**296**	⇓P		**Pg**		**16 26 50.1**	**-0.2**
	baz=298								
NNSB				S		**Sg**		**16 26 56.4**	**-0.4**
	baz=298								
NNSH	**Datong**	**0.50**	**296**	P		**Pg**		**16 26 50.1**	**-0.1**
	baz=298								
NNSH				S		**Sg**		**16 26 56.5**	**-0.3**
	baz=298								
SHUL	**Shoufeng**	**0.51**	**214**	P		**Pb**		**16 26 51.8**	**+0.2**
	baz=217								
SHUL				S		**Sb**		**16 27 00.7**	**+1.6**
	baz=217								
NNS	**Nan Shan**	**0.51**	**297**	⇓*i*P		**Pg**		**16 26 50.3**	**-0.2**
	baz=299								
NNS				*i* S		**Sg**		**16 26 56.5**	**-0.8**
	baz=299								
NDT	**Datong Townshi**	**0.51**	**320**	⇓P		**Pg**		**16 26 50.8**	**+0.3**
	baz=323								
NDT				S		**Sg**		**16 26 57.8**	**+0.5**
	baz=323								
ENTT	**Nioudou**	**0.51**	**327**	⇓*i*P		**Pg**		**16 26 50.8**	**+0.2**
	baz=330								
ENTT				S		**Sg**		**16 26 57.8**	**+0.5**
	baz=330								
TWE	**Neicheng**	**0.54**	**340**	⇓*i*P		**Pb**		**16 26 51.6**	**-0.7**
	baz=342								
TWE				S		**Sg**		**16 26 58.9**	**+0.7**
	baz=342								
WHF	**Hehuan Shan**	**0.56**	**264**	*i* P		**Pg**		**16 26 51.2**	**-0.2**
	baz=267								
WHF				*i* S		**Sg**		**16 26 58.6**	**-0.2**
	baz=267								
ESL	**Shilin**	**0.56**	**226**	*i* P		**Pg**		**16 26 51.5**	**+0.1**
	baz=236								
ESL				*e*S		**Sg**		**16 26 59.1**	**+0.3**
	baz=236								
ILA	**Ilan**	**0.56**	**349**	*i* P		**Pb**		**16 26 52.4**	**-0.3**
	baz=342								
ILA				*i* S		**Sb**		**16 27 00.3**	**-0.5**
	baz=342								
FUSS	**Fushou**	**0.57**	**274**	P		**Pg**		**16 26 51.6**	**-0.1**
	baz=278								
FUSS				*e*S		**Sg**		**16 26 59.4**	**+0.1**
	baz=278								
TEGC	**Jichi Village**	**0.58**	**211**	P		**Pb**		**16 26 53.4**	**+0.5**
	baz=215								
TEGC				*e*S		**Sb**		**16 27 03.0**	**+1.7**
	baz=215								
FUSB	**Fushanzhiwuyua**	**0.61**	**335**	⇓P		**Pb**		**16 26 52.8**	**-0.6**
	baz=336								
FUSB				S		**Sb**		**16 27 01.2**	**-0.9**
	baz=336								
TWT	**Tachien**	**0.64**	**274**	*i* P		**Pg**		**16 26 53.5**	**+0.5**
	baz=276								
TWT				*e*S		**Sb**		**16 27 02.5**	**-0.6**
	baz=276								
YHNB	**Yeheng**	**0.64**	**316**	P		**Pg**		**16 26 53.4**	**+0.3**
YHNB	**Yeheng**	**0.64**	**316**	P		**Pg**		**16 26 53.4**	**+0.3**
	baz=317								
YHNB				S		**Sg**		**16 27 01.8**	**+0.3**
	baz=317								
TDCB	**Techi**	**0.65**	**274**	P		**Pg**		**16 26 53.2**	**0.0**
	baz=276								
TDCB				S		**Sg**		**16 27 01.4**	**-0.4**
	baz=276								
CHGB	**Renai**	**0.65**	**257**	⇓P		**Pg**		**16 26 53.0**	**-0.2**
	baz=250								
CHGB				S		**Sg**		**16 27 02.1**	**+0.3**
	baz=250								
NSK	**Sanguang**	**0.66**	**315**	⇓*i*P		**Pg**		**16 26 53.5**	**+0.2**
	baz=317								
NSK				*i* S		**Sg**		**16 27 02.0**	**0.0**
	baz=317								
WARBT	**Fenglin Townsh**	**0.66**	**222**	P		**Pg**		**16 26 53.7**	**+0.4**
	baz=231								
WARBT				S		**Sg**		**16 27 02.8**	**+0.8**
	baz=231								
EGFH	**Guangfu**	**0.67**	**217**	P		**Pb**		**16 26 54.3**	**-0.2**
	baz=235								
EGFH				*e*S		**Sb**		**16 27 04.2**	**+0.2**
	baz=235								
OWD	**Renai**	**0.68**	**248**	P		**Pg**		**16 26 53.8**	**0.0**
	baz=251								
OWD				*e*S		**Sg**		**16 27 02.2**	**-0.6**
	baz=251								
WUSB	**Renai**	**0.72**	**253**	P		**Pg**		**16 26 54.3**	**-0.2**
	baz=255								
WUSB				S		**Sg**		**16 27 04.4**	**+0.4**
	baz=255								
TIPB	**Shuangxi**	**0.76**	**357**	P		**Pb**		**16 26 55.8**	**-0.2**
	baz=355								
TIPB				S		**Sb**		**16 27 06.1**	**-0.4**
	baz=355								
TWB1	**Santiao Chiao**	**0.80**	**8**	*i* P		**Pb**		**16 26 56.8**	**0.0**
	baz=5.0								
TWB1				*e*S		**Sb**		**16 27 07.5**	**-0.2**
	baz=5.0								
NFF	**Wufeng Townshi**	**0.81**	**302**	P		**Pg**		**16 26 56.3**	**+0.2**
	baz=303								
NFF				S		**Sg**		**16 27 06.9**	**+0.2**
	baz=303								
VWDT	**VWDT**	**0.81**	**236**	P		**Pg**		**16 26 56.5**	**+0.4**
	baz=239								
VWDT				*e*S		**Sb**		**16 27 07.9**	**+0.2**
	baz=239								
NHDH	**Xindian Distri**	**0.81**	**337**	P		**Pb**		**16 26 56.9**	**0.0**
	baz=337								
NHDH				S		**Sg**		**16 27 07.3**	**+0.4**
	baz=337								
HGSD	**Ruisui**	**0.82**	**210**	⇑P		**Pb**		**16 26 57.2**	**+0.2**
	baz=202								
HGSD				*e*S		**Sb**		**16 27 08.5**	**+0.2**
	baz=202								
TATO	**Taipei**	**0.84**	**336**	P		**Pb**		**16 26 57.6**	**+0.3**
TATO	**Taipei**	**0.84**	**336**	P		**Pb**		**16 26 57.4**	**+0.1**
	baz=335								
TATO				*e*S		**Sb**		**16 27 08.8**	**+0.1**
	baz=335								
WHP	**Taichung City**	**0.85**	**275**	P		**Pg**		**16 26 57.1**	**+0.2**
	baz=278								
WHP				S		**Sg**		**16 27 08.0**	**0.0**
	baz=278								
WPL	**Puli Township**	**0.86**	**257**	P		**Pg**		**16 26 57.0**	**-0.1**
	baz=260								
WPL				S		**Sb**		**16 27 09.7**	**+0.4**
	baz=260								
EHY	**Hungye**	**0.86**	**216**	*i* P		**Pg**		**16 26 56.7**	**-0.4**
	baz=230								
EHY				*e*S		**Sb**		**16 27 09.6**	**+0.3**
	baz=230								
NWF	**Wu-fen Shan**	**0.86**	**355**	*i* P		**Pb**		**16 26 58.0**	**+0.2**
	baz=344								
NWF				S		**Sb**		**16 27 09.7**	**+0.2**
	baz=344								
WFSB	**Wu-fen Shan**	**0.86**	**355**	P		**Pn**		**16 26 58.3**	**-0.6**
	baz=344								
WFSB				S		**Sb**		**16 27 10.4**	**+1.0**
	baz=344								
NHY	**Taipei**	**0.87**	**342**	P		**Pn**		**16 26 58.6**	**-0.4**
	baz=340								
NHY				*e*S		**Sb**		**16 27 10.7**	**+1.1**
	baz=340								
BACT	**New Taipei Cit**	**0.88**	**334**	*e*P		**Pn**		**16 26 59.4**	**+0.3**
	baz=334								
DPDB	**Guoxing**	**0.88**	**259**	P		**Pg**		**16 26 57.6**	**0.0**
	baz=262								
DPDB				*e*S		**Sb**		**16 27 10.0**	**0.0**
	baz=262								
SXI1	**Grass Mountain**	**0.88**	**0**	P		**Pb**		**16 26 58.5**	**+0.4**
	baz=4.0								
SXI1				*e*S		**Sn**		**16 27 11.7**	**-0.5**
	baz=4.0								
NJD	**Zhudong**	**0.89**	**306**	P		**Pb**		**16 26 58.7**	**+0.6**
	baz=315								
WCS	**Beigang Elemen**	**0.89**	**260**	P		**Pg**		**16 26 57.6**	**-0.1**
	baz=263								
WCS				*e*S		**Sb**		**16 27 10.5**	**+0.3**
	baz=263								
LIOB	**Emei**	**0.89**	**299**	P		**Pb**		**16 26 58.4**	**+0.1**
	baz=300								
LIOB				*e*S		**Sb**		**16 27 10.1**	**-0.2**
	baz=300								
NSTT	**Nanjuang**	**0.90**	**298**	*i* P		**Pb**		**16 26 58.2**	**-0.1**
	baz=299								
NSTT				S		**Sg**		**16 27 09.9**	**+0.3**
	baz=299								
SSLB	**Suanglung**	**0.94**	**244**	P		**Pg**		**16 26 58.6**	**0.0**
	baz=298								
SSLB				*e*S		**Sg**		**16 27 10.0**	**-0.8**
	baz=298								
TNOU	**National Taiwa**	**0.94**	**355**	*e*P		**Pb**		**16 26 59.2**	**+0.1**
	baz=352								
TNOU				*e*S		**Sb**		**16 27 12.6**	**+0.9**
	baz=352								
NTY	**Taoyuan**	**0.94**	**327**	P		**Pn**		**16 26 59.6**	**-0.4**
	baz=335								
NTY				*e*S		**Sb**		**16 27 12.5**	**+0.7**
	baz=335								
SMLT	**Sun Moon Lake**	**0.94**	**250**	*i* P		**Pg**		**16 26 58.6**	**-0.1**
	baz=253								
SMLT				S		**Sg**		**16 27 10.8**	**-0.2**
	baz=253								
HSN1	**Hsinchu**	**0.96**	**306**	P		**Pn**		**16 27 00.8**	**+0.5**
	baz=307								
HSN1				*e*S		**Sb**		**16 27 12.7**	**+0.4**
	baz=307								
ECBN	**Changbin**	**0.97**	**203**	*e*P		**Pg**		**16 26 59.4**	**+0.2**
	baz=208								
ECBN				*e*S		**Sb**		**16 27 12.8**	**+0.4**
	baz=208								
YULB	**Yu-li**	**0.97**	**213**	P		**Pg**		**16 26 59.2**	**0.0**
YULB	**Yu-li**	**0.97**	**213**	P		**Pg**		**16 26 58.4**	**-0.9**
	baz=221								
YULB				*e*S		**Sn**		**16 27 14.0**	**-0.2**
	baz=221								
YM01	**YM01**	**0.97**	**344**	P		**Pn**		**16 27 00.3**	**-0.2**
	baz=342								
YM01				*e*S		**Sn**		**16 27 13.8**	**-0.6**
	baz=342								
TWS1	**Kuangyinshan**	**0.98**	**335**	*i* P		**Pn**		**16 27 00.7**	**+0.1**
	baz=334								
TWS1				*e*S		**Sn**		**16 27 13.9**	**-0.6**
	baz=334								
NCUH	**Zhongli**	**0.98**	**321**	P		**Pn**		**16 27 00.8**	**+0.2**
	baz=320								
NCUH				S		**Sb**		**16 27 13.6**	**+0.8**
	baz=320								
NCU	**National Centr**	**0.98**	**321**	P		**Pn**		**16 27 00.8**	**+0.3**
	baz=321								
NCU				*e*S		**Sn**		**16 27 15.5**	**+1.0**
	baz=321								
SBCB	**Hsinchu**	**0.99**	**306**	P		**Pn**		**16 27 01.4**	**+0.7**
	baz=306								
SBCB				*e*S		**Sb**		**16 27 14.2**	**+1.0**
	baz=306								
EYUL	**Yuli**	**1.00**	**211**	P		**Pg**		**16 26 59.7**	**0.0**
	baz=232								
EYUL				*e*S		**Sb**		**16 27 14.3**	**+1.1**
	baz=232								
TWF1	**Yuli**	**1.00**	**212**	*i* P		**Pg**		**16 26 59.1**	**-0.8**
	baz=219								
TWF1				S		**Sb**		**16 27 14.1**	**+0.7**
	baz=219								
JYNG	**Yonagunijimaku**	**1.01**	**76**	*e*S		**Sn**		**16 27 16.9**	**+1.7**
HSN	**Hsinchu**	**1.01**	**306**	P		**Pn**		**16 27 01.0**	**0.0**
	baz=298								
HSN				S		**Sb**		**16 27 14.5**	**+0.8**
	baz=298								
TWQ1	**Liyutan**	**1.01**	**278**	*i* P		**Pn**		**16 27 01.2**	**+0.2**
	baz=281								
TWQ1				*e*S		**Sb**		**16 27 14.5**	**+0.7**
	baz=281								
ANP	**Anpu**	**1.02**	**342**	*e*P		**Pn**		**16 27 01.7**	**+0.5**
	baz=340								
NTST	**Danshui**	**1.03**	**338**	P		**Pn**		**16 27 02.0**	**+0.8**
	baz=337								
NTST				S		**Sn**		**16 27 16.6**	**+0.9**
	baz=337								
NJN	**Zhunan**	**1.03**	**298**	*e*P		**Pn**		**16 27 01.4**	**+0.2**
	baz=298								
NJN				*e*S		**Sb**		**16 27 14.8**	**+0.7**
	baz=298								
NSY	**Sanyi**	**1.03**	**282**	*i* P		**Pn**		**16 27 01.9**	**+0.6**
	baz=285								
NSY				S		**Sb**		**16 27 14.7**	**+0.3**
	baz=285								
NMLH	**Miaoli**	**1.04**	**289**	P		**Pn**		**16 27 02.3**	**+1.0**
	baz=290								
NMLH				*e*S		**Sb**		**16 27 14.5**	**+0.1**
	baz=290								
WHYT	**Xinyi Township**	**1.06**	**241**	P		**Pb**		**16 27 01.5**	**+0.3**
	baz=252								
WHYT				S		**Sb**		**16 27 15.4**	**+0.3**
	baz=252								
YOJ	**Yonaguni jima**	**1.07**	**76**	P		**Pn**		**16 27 03.6**	**+1.9**
YOJ	**Yonaguni jima**	**1.07**	**76**	P		**Pn**		**16 27 03.3**	**+1.6**
	baz=55								
YOJ				*e*S		**Sn**		**16 27 17.9**	**+1.2**
	baz=55								
YOJ	**Yonaguni jima**	**1.07**	**76**	P		**Pn**		**16 27 03.4**	**+1.6**
YOJ				*e*S		**Sn**		**16 27 18.6**	**+1.9**
WWF	**Wufeng**	**1.08**	**261**	P		**Pn**		**16 27 02.6**	**+0.7**
	baz=259								
WWF				*e*S		**Sb**		**16 27 16.2**	**+0.4**
	baz=259								
TWY	**Chenhua**	**1.09**	**347**	*i* P		**Pn**		**16 27 03.0**	**+0.9**
	baz=337								
TWY				*e*S		**Sb**		**16 27 16.4**	**+0.5**
	baz=337								
NHW	**Xinwu Township**	**1.09**	**317**	*e*P		**Pn**		**16 27 02.4**	**+0.3**
	baz=316								
NHW				S		**Sb**		**16 27 16.7**	**+0.7**
	baz=316								
TCU	**Taichung**	**1.09**	**267**	P		**Pn**		**16 27 03.2**	**+1.1**
	baz=272								
CHKH	**Chenggong**	**1.10**	**203**	P		**Pg**		**16 27 01.3**	**-0.4**
	baz=209								
CHKH				*e*S		**Sn**		**16 27 18.2**	**+0.7**
	baz=209								
WJS	**Zhushan**	**1.11**	**250**	P		**Pn**		**16 27 03.0**	**+0.7**
	baz=248								
WJS				S		**Sn**		**16 27 18.5**	**+0.7**
	baz=248								
WNT1	**Nantou City**	**1.13**	**255**	P		**Pn**		**16 27 03.8**	**+1.2**
	baz=253								
WNT1				S		**Sn**		**16 27 19.6**	**+1.4**
	baz=253								
WDJ	**Dajia District**	**1.13**	**277**	P		**Pn**		**16 27 03.7**	**+1.1**
	baz=281								
WDJ				*e*S		**Sn**		**16 27 18.5**	**+0.2**
	baz=281								
WNT	**Mingjian**	**1.13**	**253**	*i* P		**Pn**		**16 27 03.2**	**+0.6**
	baz=251								
WNT				S		**Sn**		**16 27 18.6**	**+0.2**
	baz=251								
FULB	**Fuli**	**1.14**	**208**	P		**Pg**		**16 27

baz=253
EDH Donghe 1.34 203 P Pn 16 27 04.7 -0.7
baz=195
EDH *e*S **Sn 16 27 24.3 +1.0**
baz=195
WCKO Fanlu 1.39 237 P Pg 16 27 07.3 0.0
baz=244
WCKO S **Sg 16 27 26.8 +1.5**
baz=244
WRL Guolierlin Hig 1.40 258 P Pb 16 27 07.3 +0.4
baz=278
WRL S **Sg 16 27 27.2 +1.5**
baz=278
STYH Taoyuan 1.44 224 *i* P **Pn 16 27 07.3 +0.4**
baz=232
STYH *i* S **Sb 16 27 26.8 +0.7**
baz=232
CHN4 Tsaushan 1.45 234 *i* P **Pb 16 27 07.9 +0.2**
baz=241
CHN4 *i* S **Sg 16 27 28.6 +1.4**
baz=241
WTK Tuku 1.45 249 P Pg 16 27 08.4 -0.1
baz=255
WTK *e*S **Sb 16 27 27.1 +0.7**
baz=255
TPUB Ta-pu 1.45 232 P Pb 16 27 08.0 +0.2
TPUB Ta-pu 1.45 232 P Pb 16 27 07.9 0.0
baz=228
TPUB S **Sg 16 27 28.0 +0.7**
baz=228
LONT Longtian 1.46 208 P Pn 16 27 06.2 -1.0
baz=218
LONT *e*S **Sn 16 27 25.0 -1.5**
baz=218
WTP Ta-pu 1.50 230 *i* P **Pb 16 27 08.7 +0.1**
baz=238
WTP *i* S **Sg 16 27 30.1 +1.3**
baz=238
TWGBT Beinan 1.56 208 P Pn 16 27 07.5 -1.1
baz=217
TWGBT S **Sg 16 27 30.7 -0.2**
baz=217
TWG Pinlang 1.56 208 P Pn 16 27 07.9 -0.7
baz=217
TWG *e*S **Sn 16 27 27.2 -1.8**
baz=217
TWK Hsinying 1.58 234 *i* P **Pb 16 27 10.1 +0.2**
baz=242
TWK *i* S **Sg 16 27 31.9 +0.6**
baz=242
CHN1 Nanshi 1.60 231 *i* P **Pb 16 27 10.6 +0.3**
baz=239
CHN1 *i* S **Sg 16 27 32.8 +0.8**
baz=239
SNST Tainan City 1.60 232 P Pg 16 27 11.0 -0.3
baz=240
SNST *i* S **Sg 16 27 32.9 +0.8**
baz=240
WSF Szhu 1.61 250 *e*P **Pb 16 27 11.0 +0.5**
baz=255
WSF *i* S **Sg 16 27 33.0 +0.5**
baz=255
SGST Jiashian 1.63 227 *i* P **Pn 16 27 09.8 +0.4**
baz=235
SGST *i* S **Sg 16 27 33.6 +0.6**
baz=235
SLGT Liugui 1.65 223 P Pb 16 27 11.3 +0.1
baz=233
SLGT *e*S **Sg 16 27 34.0 +0.3**
baz=233
WSL Shuilin Townsh 1.65 246 P Pb 16 27 11.6 +0.4
baz=251
WSL S **Sg 16 27 34.4 +0.7**
baz=251
ICHU Yijhu 1.69 240 P Pb 16 27 11.9 +0.1
baz=247
ICHU S **Sb 16 27 33.9 +0.8**
baz=247
IRIF Iriomote-Funau 1.70 85 *e*P **Pg 16 27 13.2 0.0**
CHN8 Yiju 1.75 241 P Pb 16 27 12.8 0.0
baz=248
CHN8 S **Sb 16 27 35.7 +0.9**
baz=248
CHN3 Shinhua 1.78 231 *e*P **Pn 16 27 12.7 +1.1**
baz=242
SSHA Shanhua 1.80 234 *e*P **Pb 16 27 13.6 -0.1**
baz=242
SSHA *e*S **Sg 16 27 38.0 -0.5**
baz=242
ECL Taimali 1.81 208 P Pn 16 27 11.0 -1.0
baz=216
SCST Cishan 1.83 224 P Pb 16 27 14.1 0.0
baz=234
SCST *e*S **Sg 16 27 39.4 +0.1**
baz=234
SHHT Tainan City 1.83 230 P Pb 16 27 14.7 +0.4
baz=241
SHHT *e*S **Sb 16 27 38.4 +1.2**
baz=241
SSD Sandimen 1.85 218 P Pn 16 27 12.8 +0.4
baz=240
SSD S **Sb 16 27 37.6 -0.2**
baz=240
SCLT Jiali 1.85 237 *e*P **Pn 16 27 13.4 +0.9**
baz=244
SCLT *e*S **Sb 16 27 39.1 +1.3**
baz=244
TSMG Majia 1.87 217 P Pn 16 27 13.8 +0.9
baz=229
TSMG S **Sb 16 27 38.7 +0.2**
baz=229
TWM1 Shoushan 1.92 224 P Pb 16 27 16.0 +0.3
baz=235
TWM1 *e*S **Sb 16 27 40.5 +0.7**
baz=235
TSCK Chigu Township 1.95 237 *e*P **Pb 16 27 15.8 -0.5**
baz=246
TSCK *e*S **Sb 16 27 40.9 +0.3**
baz=246
JKRS Kuro-shima 1.95 89 *e*P **Pb 16 27 16.4 +0.1**
MASBT Mashibuluo 1.96 216 *e*P **Pn 16 27 14.2 +0.3**
baz=228
MASBT S **Sb 16 27 41.9 +1.0**
baz=228
EAST Anshuo 2.05 208 *i* P **Pn 16 27 15.9 +0.7**
baz=203
SCZT Fangliau 2.16 212 *e*P **Pb 16 27 19.0 -0.9**
baz=225
SCZT *e*S **Sb 16 27 46.7 0.0**
baz=225
PNG Penghu 2.21 254 P Pn 16 27 18.0 +0.5
baz=261
PNG S **Sn 16 27 46.7 +1.7**
baz=261
JISG Ishigakijimahi 2.26 80 *e*P **Pb 16 27 20.4 -1.1**
KSRS Korea Array 14.18 20 P P 16 30 10.0 +0.8
2.6nm,0.8s,baz=198,slow=12,SNR=5.9
SONM Songino Array 26.59 336 P P 16 32 20.5 +1.3
0.3nm,0.4s,baz=159,slow=9.3,SNR=2.3
SONM Songino Array 26.59 336
0.3nm,0.4s
MKAR Makanchi Array 38.76 316 P P 16 34 06.1 +0.8
0.8nm,0.8s,baz=106,slow=11,SNR=6.1
MKAR Makanchi Array 38.76 316
0.8nm,0.8s
ZALV Zalesovo Beam 40.57 327 P P 16 34 19.1 -1.2
0.6nm,0.7s,baz=122,slow=11,SNR=3.7
ZALV Zalesovo Beam 40.57 327
0.6nm,0.7s
WRA Warramunga Arr 45.53 163 P P 16 34 59.5 -1.2
0.4nm,0.8s,baz=344,slow=8.8,SNR=1.5
WRA Warramunga Arr 45.53 163
0.4nm,0.8s
BVAR Borovoye Array 48.05 321 P P 16 35 19.6 -0.5
0.4nm,0.7s,baz=100,slow=8.2,SNR=2.5
BVAR Borovoye Array 48.05 321
0.4nm,0.7s
ASAR Alice Springs 49.00 165 P P 16 35 27.8 0.0
0.3nm,0.8s,baz=342,slow=7.1,SNR=2.3
ASAR Alice Springs 49.00 165
0.3nm,0.8s
YKA Yellowknife Ar 82.70 23 P P 16 39 01.4 -3.0
0.3nm,0.7s,baz=310,slow=5.3,SNR=5.8
YKA Yellowknife Ar 82.70 23
0.3nm,0.7s

TAP 04 16:27:06.9,24.17N×121.71E,h8km±1km,ML2.8,D,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.08**	**264**	P	Pg	16 27 09.1	0.0
	baz=259						
ETL				S	Sg	16 27 11.1	+0.4
	baz=259						
NACB	**Ninganchiao**	**0.11**	**273**	*e*P	Pg	16 27 08.6	-0.8
	baz=270						
NACB				S	Sg	16 27 11.5	+0.3
	baz=270						
TWD	**Chiawan**	**0.14**	**231**	*i* P	Pg	16 27 10.0	+0.1
	baz=225						
TWD				S	Sg	16 27 12.5	+0.5
	baz=225						
EHP	**Heping Village**	**0.14**	**10**	*e*P	Pg	16 27 11.0	+0.9
	baz=17						
EAHA	**Aohua**	**0.16**	**8**	P	Pg	16 27 11.2	+0.8
	baz=19						
EAHA				S	Sg	16 27 13.4	+0.7
	baz=19						
ENA	**Nanau**	**0.26**	**5**	*i* P	Pg	16 27 12.6	+0.5
	baz=9.0						
ENA				*i* S	Sg	16 27 16.3	+0.7
	baz=9.0						
EWUT	**Wuta**	**0.28**	**12**	P	Pg	16 27 13.0	+0.5
	baz=13						
EWUT				S	Sg	16 27 16.8	+0.4
	baz=13						

JMA 04 16:27:18.9±0.0,24.4N±0.2×124.0E±0.1,h0km,MV1.3/5,
NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIJ	**Ishigaki jima**	**0.16**	**111**	P	Pg	16 27 22.4	+0.4
JIJ				S	Sg	16 27 24.8	+0.7
JKRS	**Kuro-shima**	**0.19**	**171**	S	Sg	16 27 22.9	+0.4
JKRS				S	Sg	16 27 25.9	+1.1
IRIF	**Iriomote-Funau**	**0.24**	**249**	P	Pg	16 27 24.1	+0.5
IRIF				*e*S	Sg	16 27 27.8	+1.2
JISG	**Ishigakijimahi**	**0.35**	**61**	P	Pg	16 27 26.1	+0.6
JISG				*e*S	Sg	16 27 31.4	+1.4

*WEL **04** 16:33:16.5±1.0,33.S±10.×18.0E±2.0,h416km±10km, M4.0/7,mB4.5/7,ML5.0/9,MLv4.3/7,Mw(mB)3.7/7,Error ellipse: s-maj=0.0km s-min=0.0km az=111.1,confirmed NOU **04** 16:33:37.6,34.35S×178.20E,h312km,MLv4.4/8,South of Kermadec Islands*

ISC 04 16:33:17.1±3.1,33.1S±0.2×179.6E±0.2,h400km,n37,
σ1.24/47,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.60**	**193**	P	**Pn**	**16 34 36.2**	**+1.3**
WMGZ	**Waiomatatini S**	**4.83**	**191**	P	**Pn**	**16 34 38.8**	**+1.6**
WMGZ				S	**S**	**16 35 42.6**	**+0.1**
HAZ	**Te Kaha**	**4.90**	**197**	P	**Pn**	**16 34 38.3**	**+0.3**
HAZ				S	**S**	**16 35 44.5**	**+0.7**
PKGZ	**Pakihiroa**	**4.96**	**194**	P	**Pn**	**16 34 39.6**	**+0.9**
PKGZ				S	**S**	**16 35 45.8**	**+0.8**
PUZ	**Puketiti**	**5.11**	**192**	S	**S**	**16 35 48.0**	**+0.3**
RUGZ	**Raukumara Rang**	**5.13**	**197**	P	**Pn**	**16 34 40.2**	**-0.3**
RUGZ				S	**S**	**16 35 46.9**	**-1.4**
WIAZ	**Waiheke Island**	**5.23**	**224**	P	**Pn**	**16 34 42.9**	**+1.5**
MBAZ	**Motutapu North**	**5.35**	**225**	P	**Pn**	**16 34 43.9**	**+1.3**
OUZ	**Omahuta**	**5.43**	**245**	P	**Pn**	**16 34 43.3**	**-0.2**
BKZ	**Black Stump Fm**	**6.58**	**202**	P	**Pn**	**16 34 55.4**	**-0.6**
TSZ	**Takapari Road**	**7.56**	**202**	P	**Pn**	**16 35 04.9**	**-2.1**
PRWZ	**Pori Road**	**8.02**	**200**	P	**P**	**16 35 12.9**	**+0.4**
PRWZ				S	**S**	**16 36 48.0**	**+1.6**
BFZ	**Birch Farm**	**8.06**	**199**	P	**Pn**	**16 35 12.0**	**-0.6**
MRZ	**Mangatainoka R**	**8.23**	**202**	P	**Pn**	**16 35 12.1**	**-2.5**
HOWZ	**Holdsworth Sta**	**8.47**	**202**	P	**Pn**	**16 35 14.5**	**-2.8**
HOWZ				S	**S**	**16 36 56.5**	**+0.5**
OGWZ	**Otaki Gorge**	**8.50**	**203**	P	**Pn**	**16 35 16.9**	**-0.8**
OGWZ				S	**S**	**16 36 56.9**	**+0.2**
TMWZ	**Te Maipa**	**8.55**	**199**	P	**P**	**16 35 18.3**	**-0.2**
KIW	**Kapiti Island**	**8.63**	**205**	P	**Pn**	**16 35 18.5**	**-0.7**
MTW	**Mount Morrison**	**8.71**	**201**	P	**P**	**16 35 20.2**	**0.0**
MTW				S	**S**	**16 37 02.6**	**+1.5**
CAW	**Cannon Point**	**8.80**	**203**	P	**Pn**	**16 35 20.5**	**-0.6**
DUWZ	**D'Urville Isla**	**8.96**	**209**	P	**Pn**	**16 35 22.6**	**-0.3**
SNZO	**South Karori**	**9.10**	**204**	P	**Pn**	**16 35 24.9**	**+0.3**
BHW	**Baring Head**	**9.13**	**203**	P	**Pn**	**16 35 24.8**	**-0.2**
PLWZ	**Palliser**	**9.16**	**201**	P	**Pn**	**16 35 25.4**	**+0.1**
TCW	**Tory Channel**	**9.17**	**206**	P	**P**	**16 35 23.7**	**-1.6**
TCW				S	**S**	**16 37 08.7**	**-1.9**
TUWZ	**Tuamarina**	**9.48**	**207**	P	**P**	**16 35 27.1**	**-1.7**
NNZ	**Nelson**	**9.53**	**210**	P	**P**	**16 35 27.9**	**-1.4**
TKNZ	**Takaka Hill**	**9.56**	**212**	P	**Pn**	**16 35 30.3**	**+0.4**
TKNZ				S	**S**	**16 37 19.4**	**+0.7**
QRZ	**Quartz Range**	**9.59**	**214**	P	**Pn**	**16 35 29.7**	**-0.5**
QRZ	**Quartz Range**	**9.59**	**214**	P	**P**	**16 35 29.4**	**-0.6**
BSWZ	**Blackbirch Sta**	**9.76**	**206**	P	**Pn**	**16 35 32.6**	**+0.5**
MRNZ	**Matariki Terra**	**9.94**	**211**	P	**P**	**16 35 33.2**	**-0.7**
THZ	**Tophouse**	**10.18**	**210**	P	**P**	**16 35 35.2**	**-1.3**
KHZ	**Kahutara**	**10.49**	**206**	P	**P**	**16 35 38.6**	**-1.3**
RPZ	**Rata Peaks**	**12.56**	**210**	P	**Pn**	**16 36 06.5**	**+1.9**
ODZ	**Otahua Downs**	**13.82**	**208**	P	**Pn**	**16 36 21.7**	**+2.5**
JCZ	**Jackson Bay**	**13.85**	**214**	P	**Pn**	**16 36 20.9**	**+1.2**

SJA 04 16:33:38.1±0.6,30.56S×72.02W,h14km±13km,ML3.4,
MW3.5,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA03	**San Esteban**	**2.53**	**151**	*e*P	Pn	16 34 07.3	-12
VA03				*e*P	Pn	16 34 07.5	-11
VA03				IAML		16 34 59.4	
	comp=Z,193nm,0.2s						
RTLS	**Leoncito**	**2.64**	**119**	*e*P	Pb	16 34 23.4	-1.9
RTLS				*e*S	Sb	16 34 57.1	-0.6
RTLS				IAML		16 35 04.3	
	comp=Z,536nm,0.6s						
AUSP	**Uspallata**	**2.80**	**127**	*e*P	Pn	16 34 07.3	-15
AUSP				*e*S	Sb	16 35 01.0	-1.2
RTLL	**Cerro Villicun**	**3.14**	**105**	*e*P	Pn	16 34 30.0	+2.8
RTLL				IAML		16 35 18.1	
	comp=Z,77nm,0.4s						
AGUA	**GUANDACOL**	**3.24**	**72**	*e*P	Pb	16 34 34.5	-1.0
AGUA				IAML		16 35 27.2	
	comp=Z,99nm,0.3s						
RTCV	**Cerro Valdivia**	**3.25**	**115**	*e*P	Pn	16 34 13.6	-15
GO03	**Copiap**	**3.34**	**28**	*e*P	Pn	16 34 33.2	+3.3
GO03				*e*P	Pb	16 34 33.4	-3.7
ASAL	**Salagasta**	**3.39**	**128**	*e*P	Pn	16 34 25.2	-5.5
ASAL				*e*S	Sb	16 35 19.3	+0.2
ASAL				IAML		16 35 28.4	
	comp=Z,41nm,1.3s						
ARCO	**CERRO ARCO**	**3.48**	**132**	*e*P	Pb	16 34 36.6	-3.0
ARCO				IAML		16 35 30.1	
	comp=Z,82nm,0.3s						
AAGR	**Agrelo**	**3.70**	**134**	*e*P	Pb	16 34 39.4	-4.0
AAGR				IAML		16 35 34.8	
	comp=Z,52nm,0.4s						
VCA	**Vinchina**	**3.78**	**62**	*e*P	Pb	16 34 41.6	-3.1
VCA				*e*S	Sg	16 35 36.2	-3.3
VCA				IAML		16 35 40.5	
	comp=Z,107nm,0.7s						
AVFE	**Valle Fertil**	**3.93**	**93**	*e*P	Pn	16 34 40.7	+2.6
AVFE				*e*S	Sb	16 35 33.2	-1.6
AVFE				IAML		16 35 40.2	
	comp=Z,45nm,0.5s						
AC02	**Maricunga**	**4.49**	**35**	*e*P	Pn	16 34 49.5	+3.3
AC02				IAML		16 36 06.2	
	comp=Z,34nm,0.5s						
ACLC	**CERRO LA CRUZ**	**4.53**	**77**	*e*P	Pn	16 34 50.2	+3.7
ACLC				*e*S	Sn	16 35 43.5	+4.4
ACLC				IAML		16 35 53.0	
	comp=Z,72nm,0.4s						
ACHE	**Chepes**	**4.64**	**99**	*e*P	Pn	16 34 50.5	+2.5
ACHE				*e*S	Sn	16 35 44.9	+3.2
CYA	**Choya**	**5.81**	**70**	*e*P	Pn	16 35 07.2	+3.3
CYA				*e*S	Sb	16 36 22.7	-6.1
CYA				IAML		16 36 34.9	
	comp=Z,10nm,0.6s						

IDC 04 16:36:12.9±2.6,6.25S×129.54E,h0km,mb3.4/1,
mbtmp3.2/3,ML3.1/2,Error ellipse: s-maj=177.7km
s-min=33.1km az=69.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.39**	**162**	P	Pn	16 39 36.3	-1.8
	0.1nm,0.3s,baz=343,slow=13,SNR=1.4						
WRA				Sn	Sn	16 42 01.6	-17
	0.1nm,0.3s,baz=340,slow=24,SNR=1.3						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**17.82**	**167**	P	P	16 40 23.4	+0.1
	0.1nm,0.3s,baz=346,slow=11,SNR=22						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**67.35**	**327**	P	P	16 47 09.9	0.0
	0.3nm,0.6s,baz=110,slow=8.1,SNR=2.4						
	0.3nm,0.6s						

IDC 04 16:36:54.8±4.9,20.38S×67.15E,h0km,mb3.6/5,
mbtmp3.6/5,Error ellipse: s-maj=143.0km
s-min=35.9km az=59.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**13.67**	**23**	T	T	16 53 43.6	
	baz=199,slow=76,SNR=15						
H08S2	**Diego Garcia H**	**13.68**	**23**	T	T	16 53 45.1	
	baz=199,slow=76,SNR=30						
H08S3	**Diego Garcia H**	**13.69**	**23**	T	T	16 53 47.2	
	baz=199,slow=76,SNR=14						
CMAR	**Chiang Mai Arr**	**49.62**	**41**	P	P	16 45 47.8	-0.4
	0.2nm,0.3s,baz=245,slow=7.9,SNR=3.0						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**61.46**	**106**	P	P	16 47 13.6	0.0
	0.9nm,0.9s,baz=270,slow=6.0,SNR=9.2						
	0.9nm,0.9s						
WRA	**Warramunga Arr**	**62.64**	**102**	P	P	16 47 21.6	0.0
	0.6nm,0.9s,baz=260,slow=6.2,SNR=2.6						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**68.25**	**11**	P	P	16 47 58.4	+1.2
	0.3nm,0.8s,baz=191,slow=6.2,SNR=3.1						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**75.58**	**11**	P	P	16 48 40.0	-1.0
	0.4nm,0.5s,baz=190,slow=5.6,SNR=1.2						
	0.4nm,0.5s						

TAP 04 16:42:09.8,24.13N×121.70E,h11km,ML1.8,4C-9D,D,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.08**	**292**	⇓*i*P	Pg	16 42 12.9	+0.7
	baz=291						
ETL				*i* S	Sg	16 42 14.9	+0.9
	baz=291						
NACB	**Ninganchiao**	**0.10**	**294**	⇓P	Pb	16 42 13.3	-0.5
	baz=294						
NACB				S	Sg	16 42 15.4	+0.8
	baz=294						
TWD	**Chiawan**	**0.11**	**242**	⇑*i*P	Pb	16 42 13.2	-0.6
	baz=240						
TWD				S	Sg	16 42 15.1	+0.5
	baz=240						
HWA	**Hwalien**	**0.18**	**210**	*i* P	Pb	16 42 14.4	-0.6
	baz=207						
HWA				*i* S	Sg	16 42 17.8	+1.5
	baz=207						
EHP	**Heping Village**	**0.18**	**12**	⇓*i*P	Pb	16 42 14.5	-0.6
	baz=14						
EHP				*i* S	Sg	16 42 18.1	+1.5
	baz=14						
EAHA	**Aohua**	**0.20**	**10**	⇓*i*P	Pb	16 42 14.9	-0.6
	baz=10.0						
EAHA				S	Sg	16 42 18.2	+1.2
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.21**	**291**	⇓P	Pb	16 42 15.2	-0.5
	baz=290						
ETLH				*e*S	Sg	16 42 18.5	+1.1
	baz=290						
ETM	**Tongmen**	**0.25**	**229**	P	Pb	16 42 15.6	-0.7
	baz=229						
ETM				*e*S	Sg	16 42 19.3	+0.9
	baz=229						
LXIB	**Xiulin Townshi**	**0.28**	**247**	*e*P	Pb	16 42 16.6	-0.4
	baz=247						
LXIB				*e*S	Sg	16 42 20.4	+0.9
	baz=247						
ENA	**Nanau**	**0.30**	**7**	⇑P	Pb	16 42 16.8	-0.3
	baz=8.0						
ENA				*e*S	Sb	16 42 21.1	-0.9
	baz=8.0						
EWUT	**Wuta**	**0.32**	**13**	*e*P	Pb	16 42 17.3	-0.3
	baz=12						
EWUT				*e*S	Sb	16 42 21.7	-1.0
	baz=12						
SHUL	**Shoufeng**	**0.36**	**200**	*e*P	Pg	16 42 17.4	+0.4
	baz=200						
SHUL				*e*S	Sb	16 42 23.7	-0.2
	baz=200						
WHF	**Hehuan Shan**	**0.40**	**272**	*i* P	Pg	16 42 18.4	+0.6
	baz=271						
WHF				*e*S	Sb	16 42 24.5	-0.8
	baz=271						
ESL	**Shilin**	**0.40**	**218**	*e*P	Pb	16 42 18.7	-0.1
	baz=216						
ESL				*e*S	Sb	16 42 24.6	-0.4
	baz=216						
NNSB	**Datong**	**0.41**	**316**	⇓P	Pb	16 42 19.3	+0.1
	baz=315						
NNSB				*e*S	Sb	16 42 25.2	-0.3
	baz=315						
NNS	**Nan Shan**	**0.43**	**316**	*i* P	Pb	16 42 19.0	-0.5
	baz=316						
NNS				*i* S	Sb	16 42 25.7	-0.2
	baz=316						
FUSS	**Fushou**	**0.43**	**286**	⇑*e*P	Pb	16 42 19.7	+0.1
	baz=285						
FUSS				S	Sb	16 42 25.9	-0.3
	baz=285						
LATG	**Datong**	**0.43**	**339**	⇑*i*P	Pb	16 42 19.1	-0.4
	baz=338						
LATG				S	Sb	16 42 25.8	-0.3
	baz=338						
CHGB	**Renai**	**0.49**	**262**	*e*P	Pb	16 42 20.6	+0.2
	baz=261						
CHGB				*i* S	Sb	16 42 27.8	+0.2
	baz=261						
TWC	**Suao**	**0.49**	**16**	P	Pb	16 42 20.1	-0.3
	baz=17						
TWC				*i* S	Sb	16 42 27.9	+0.2
	baz=17						
NDT	**Datong Townshi**	**0.50**	**340**	⇓*e*P	Pb	16 42 20.9	+0.3
	baz=340						
NDT				*e*S	Sb	16 42 28.4	+0.5
	baz=340						
NDS	**Dongshan**	**0.50**	**2**	⇓*e*P	Pg	16 42 19.9	+0.4
	baz=1.0						
NDS				*e*S	Sb	16 42 28.0	+0.1
	baz=1.0						
WARBT	**Fenglin Townsh**	**0.50**	**215**	*i* P	Pb	16 42 20.5	-0.1
	baz=214						
WARBT				*e*S	Sb	16 42 29.4	+1.4
	baz=214						
TDCB	**Techi**	**0.51**	**284**	*i* P	Pb	16 42 20.5	-0.3
	baz=283						
TDCB				*e*S	Sb	16 42 28.3	0.0
	baz=283						
ENTT	**Nioudou**	**0.52**	**346**	*e*P	Pb	16 42 21.9	+1.0
	baz=347						
ENTT				*i* S	Sb	16 42 28.7	+0.1
	baz=347						
WUSB	**Renai**	**0.55**	**256**	P	Pb	16 42 21.6	+0.1
	baz=255						
WUSB				*e*S	Sb	16 42 29.4	-0.1
	baz=255						
TWE	**Neicheng**	**0.59**	**357**	*i* P	Pb	16 42 21.9	-0.2
	baz=358						
TWE				*e*S	Sb	16 42 30.9	+0.5
	baz=358						
NSK	**Sanguang**	**0.63**	**330**	⇓P	Pb	16 42 22.8	0.0
	baz=330						
NSK				S	Sb	16 42 32.0	+0.4
	baz=330						
FUSB	**Fushanzhiwuyua**	**0.63**	**351**	*e*P	Pb	16 42 23.7	+0.8
	baz=350						
FUSB				*e*S	Sb	16 42 32.2	+0.4
	baz=350						

WHP	**Taichung City** baz=281	**0.70**	**282**	*e*S		Sn	16 42 35.4	-1.2
SSLB	**Suanglung** baz=243	**0.76**	**244**	*e*P		Pb	16 42 24.9	-0.2
SSLB	baz=243			*e*S		Sb	16 42 35.9	+0.4

JMA 04 16:42:58.2±0.1, 24°.3N±0°.4×123°.9E±0°.3, h11km±1km, MV1.1/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**275**	P	Pg	16 43 01.5	+0.1
IRIF				S	Sg	16 43 03.7	+0.1
JKRS	**Kuro-shima**	**0.15**	**125**	P	Pg	16 43 01.6	+0.1
JKRS				S	Sg	16 43 04.5	+0.5
JIJ	**Ishigaki jima**	**0.25**	**81**	P	Pg	16 43 03.1	-0.2
JIJ				S	Sg	16 43 06.8	+0.1
HATJ	**Hateruma jima**	**0.27**	**194**	P	Pg	16 43 03.7	-0.1
HATJ				S	Sg	16 43 08.1	+0.6
JISG	**Ishigakijimahi**	**0.47**	**56**	P	Pg	16 43 07.7	+0.1
JISG				*e*S	Sb	16 43 14.8	-0.8
JTJ	**Tarama**	**0.82**	**67**	P	Pg	16 43 14.0	0.0
JTJ				*e*S	Sb	16 43 25.6	+0.1

TAP 04 16:44:46.7, 24°.11N×121°.71E, h7km, ML2.4, 4C-2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=302	**0.09**	**303**	*i* P	Pg	16 44 48.9	0.0
ETL	baz=302			*i* S	Sg	16 44 50.4	-0.1
TWD	**Chiawan** baz=254	**0.11**	**255**	P	Pg	16 44 49.1	0.0
TWD	baz=254			S	Sg	16 44 51.0	+0.3
NACB	**Ninganchiao** baz=302	**0.12**	**302**	⇑*i* P	Pg	16 44 49.3	-0.1
NACB	baz=302			S	Sg	16 44 51.1	-0.1
EHP	**Heping Village** baz=10.0	**0.20**	**8**	*e*P	Pg	16 44 50.3	-0.5
EHP	baz=10.0			*e*S	Sg	16 44 54.7	+1.2
EAHA	**Aohua** baz=7.0	**0.22**	**7**	⇑P	Pg	16 44 50.8	-0.3
EAHA	baz=7.0			*e*S	Sg	16 44 54.9	+0.7
ETLH	**Xiulin Townshi** baz=295	**0.23**	**295**	*i* P	Pg	16 44 51.2	-0.1
ETLH	baz=295			*e*S	Sg	16 44 54.3	-0.1
ETM	**Tongmen** baz=234	**0.24**	**234**	*i* P	Pg	16 44 51.5	0.0
ETM	baz=234			*i* S	Sg	16 44 55.0	+0.2
LXIB	**Xiulin Townshi** baz=252	**0.28**	**252**	*i* P	Pg	16 44 52.2	-0.2
LXIB	baz=252			*i* S	Sg	16 44 56.4	+0.2
ENA	**Nanau** baz=6.0	**0.32**	**5**	⇑P	Pg	16 44 52.7	-0.3
ENA	baz=6.0			*e*S	Sg	16 44 57.4	+0.2
EWUT	**Wuta** baz=10.0	**0.34**	**11**	⇑P	Pg	16 44 53.2	-0.2
ESL	**Shilin** baz=219	**0.39**	**221**	P	Pg	16 44 54.2	0.0
NNSB	**Datong** baz=316	**0.44**	**317**	⇓*i* P	Pg	16 44 55.2	0.0
FUSS	**Fushou** baz=288	**0.45**	**288**	*i* P	Pg	16 44 55.4	-0.1
NNS	**Nan Shan** baz=317	**0.45**	**317**	*e*P	Pg	16 44 55.5	0.0
LATG	**Datong** baz=338	**0.46**	**339**	*e*P	Pg	16 44 55.7	+0.1
WARBT	**Fenglin Townsh** baz=217	**0.49**	**217**	*i* P	Pg	16 44 56.1	0.0
YHNB	**Yeheng** baz=331	**0.64**	**332**	P	Pg	16 44 59.0	0.0
FUSB	**Fushanzhiwuyua** baz=350	**0.66**	**350**	⇓P	Pg	16 44 59.4	0.0

*RSPR **04** 16:45:55.8, 19°.53N×65°.35W, h42km±33km*
*NEIC **04** 16:45:55.5±1.4, 19°.51N±0°.05×65°.35W±0°.09, h35km±2km, ML2.4/18, Md3.0/2(RSPR), Error ellipse: s-maj=15.5km s-min=3.1km az=118.0*
ISC 04 16:45:52.9±3.4, 19°.5N±0°.1×65°.4W±0°.2, h16km, n35, σ0s69/31, 4C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**1.34**	**211**	⇑*e*P	**Pb**	**16 46 17.6**	**0.0**
GCPR	**Guaynabo City**	**1.34**	**211**	*e*S	**Sn**	**16 46 34.1**	**-0.3**
GCPR	**Guaynabo City**	**1.34**	**211**		**Pb**	**16 46 17.6**	**0.0**
GCPR					**Sn**	**16 46 34.1**	**-0.3**
HUMP	**Col San Antoni**	**1.39**	**200**	⇑*e*P	**Pg**	**16 46 19.2**	**-0.5**
HUMP	**Col San Antoni**	**1.39**	**200**	*e*S	**Sb**	**16 46 36.4**	**+0.2**
HUMP	**Col San Antoni**	**1.39**	**200**		**Pg**	**16 46 19.2**	**-0.5**
HUMP					**Sb**	**16 46 36.4**	**+0.2**
HUMP	**Col San Antoni** comp=E,31nm,0.2s	**1.39**	**200**	IAML		16 46 39.1	
EMPR	**Esperanza - Ma**	**1.48**	**229**	Pn	**Pb**	**16 46 20.4**	**+0.2**
SJG	**San Juan**	**1.54**	**210**	⇓*e*P	**Pb**	**16 46 21.0**	**-0.1**
SJG	**San Juan**	**1.54**	**210**		**Pb**	**16 46 21.0**	**-0.1**
SJG	**San Juan** comp=E,24nm,1.1s	**1.54**	**210**	IAML		16 46 50.4	
IGPR	**InterUniversit**	**1.65**	**206**	Pn	**Pb**	**16 46 22.5**	**-0.5**
IGPR	comp=N,45nm,0.2s			IAML		16 46 45.0	
IGPR	comp=E,37nm,0.3s			IAML		16 46 45.2	
AOPR	**Arecibo Observ**	**1.73**	**230**	⇑*e*P	**Pb**	**16 46 23.4**	**-0.9**
AOPR	**Arecibo Observ**	**1.73**	**230**	*e*S	**Sn**	**16 46 44.7**	**+0.6**
AOPR	**Arecibo Observ**	**1.73**	**230**		**Pn**	**16 46 22.9**	**+0.5**
AOPR	**Arecibo Observ**	**1.73**	**230**		**Sn**	**16 46 44.7**	**+0.6**
AOPR	**Arecibo Observ** comp=E,96nm,0.5s	**1.73**	**230**	IAML		16 46 47.9	
AOPR	comp=N,59nm,1.1s			IAML		16 46 51.0	
OBIP	**Obispado Ponce**	**1.84**	**220**	⇓*e*P	**Pn**	**16 46 24.4**	**+0.5**
OBIP	**Obispado Ponce**	**1.84**	**220**	*e*S	**Sn**	**16 46 47.5**	**+0.6**
OBIP	**Obispado Ponce**	**1.84**	**220**		**Pn**	**16 46 24.4**	**+0.5**
OBIP					**Sn**	**16 46 47.5**	**+0.6**
OBIP	**Obispado Ponce** comp=N,24nm,2.6s	**1.84**	**220**	IAML		16 47 03.0	
OBIP	comp=E,30nm,2.5s			IAML		16 47 08.0	
LSP	**Las Mesas**	**2.08**	**232**	⇑*e*P	**Pb**	**16 46 28.8**	**-1.5**
LSP	**Las Mesas**	**2.08**	**232**		**Pb**	**16 46 28.8**	**-1.5**
MLPR	**Magueyes Islan**	**2.18**	**228**	⇓*e*P	**Pn**	**16 46 28.6**	**0.0**
MLPR	**Magueyes Islan**	**2.18**	**228**	*e*S	**Sn**	**16 46 55.1**	**-0.2**
MLPR	**Magueyes Islan**	**2.18**	**228**		**Pn**	**16 46 28.6**	**0.0**
MLPR	**Magueyes Islan**	**2.18**	**228**		**Sn**	**16 46 55.1**	**-0.2**
MLPR	**Magueyes Islan** comp=E,32nm,2.8s	**2.18**	**228**	IAML		16 46 53.7	
MLPR	**Magueyes Islan** comp=N,31nm,2.5s	**2.18**	**228**	IAML		16 47 45.9	
CRPR	**Cabo Rojo, PR**	**2.21**	**229**	⇓*e*P	**Pn**	**16 46 29.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.21**	**229**	*e*S	**Sn**	**16 46 57.1**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.21**	**229**		**Pn**	**16 46 29.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.21**	**229**		**Sn**	**16 46 57.1**	**+1.3**
CRPR	**Cabo Rojo, PR** comp=E,37nm,2.6s	**2.21**	**229**	IAML		16 46 49.6	
SDDR	**Presa de Saban**	**5.63**	**266**	Pn	**Pn**	**16 47 16.9**	**+0.8**

*JMA **04** 16:46:02.6±0.1, 24°.2N±0°.2×121°.8E±0°.3, h0km, MV3.1/11, TAIWAN REGION*
*TAP **04** 16:46:02.9, 24°.20N×121°.75E, h9km, ML3.5, C*
ISC 04 16:46:03.1±0.8, 24°.23N±0°.01×121°.77E±0°.02, h13km±5km, n126, σ0s55/219, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=359	**0.09**	**344**	*i* P	**Pg**	**16 46 05.9**	**-0.1**
EHP	baz=359			S	**Sg**	**16 46 08.2**	**+0.2**
EAHA	**Aohua** baz=355	**0.10**	**346**	*i* P	**Pg**	**16 46 06.1**	**-0.1**
EAHA	baz=355			*e*S	**Sg**	**16 46 08.8**	**+0.4**
ETL	**Fush Village** baz=250	**0.15**	**243**	*i* P	**Pg**	**16 46 06.1**	**-0.7**
NACB	**Ninganchiao** baz=259	**0.17**	**251**	P	**Pg**	**16 46 06.4**	**-0.6**
ENA	**Nanau** baz=359	**0.20**	**353**	*i* P	**Pb**	**16 46 07.8**	**-0.9**
ENA	baz=359			S	**Sg**	**16 46 11.3**	**+0.6**
TWD	**Chiawan** baz=236	**0.21**	**227**	*i* P	**Pg**	**16 46 06.9**	**-0.8**
EWUT	**Wuta** baz=6.0	**0.22**	**3**	*i* P	**Pb**	**16 46 08.1**	**-0.8**
EWUT	baz=6.0			*i* S	**Sg**	**16 46 11.7**	**+0.6**
ETLH	**Xiulin Townshi** baz=273	**0.26**	**266**	P	**Pg**	**16 46 08.4**	**-0.2**
HWA	**Hwalien** baz=220	**0.29**	**211**	*e*P	**Pg**	**16 46 09.4**	**+0.3**
HWA	baz=220			*e*S	**Sg**	**16 46 13.7**	**+0.6**
ESAO	**Su ao** baz=13	**0.35**	**11**	P	**Pb**	**16 46 11.0**	**-0.3**
ESAO	baz=13			*i* S	**Sg**	**16 46 15.4**	**+0.3**
ETM	**Tongmen** baz=231	**0.36**	**224**	*e*P	**Pg**	**16 46 09.8**	**-0.6**
LATG	**Datong** baz=328	**0.38**	**324**	*i* P	**Pb**	**16 46 11.1**	**-0.6**
LATG	baz=328			S	**Sb**	**16 46 17.2**	**-0.3**
LXIB	**Xiulin Townshi** baz=241	**0.38**	**238**	P	**Pg**	**16 46 09.9**	**-1.0**
LXIB	baz=241			S	**Sg**	**16 46 15.4**	**-0.7**
TWC	**Suao** baz=10.0	**0.39**	**11**	*i* P	**Pb**	**16 46 11.3**	**-0.5**
TWC	baz=10.0			S	**Sg**	**16 46 16.3**	**+0.2**
NNSB	**Datong** baz=304	**0.40**	**300**	*i* P	**Pg**	**16 46 11.4**	**+0.2**
NNSB	baz=304			S	**Sg**	**16 46 16.9**	**+0.2**
NNSH	**Datong** baz=304	**0.40**	**300**	P	**Pg**	**16 46 11.3**	**+0.1**
NNSH	baz=304			S	**Sg**	**16 46 16.8**	**+0.1**
NDS	**Dongshan** baz=356	**0.41**	**353**	P	**Pb**	**16 46 11.8**	**-0.4**
NDS	baz=356			S	**Sb**	**16 46 17.5**	**-0.9**
NNS	**Nan Shan** baz=305	**0.42**	**301**	*i* P	**Pg**	**16 46 11.6**	**+0.1**
NNS	baz=305			*i* S	**Sg**	**16 46 17.4**	**+0.3**
NDT	**Datong Townshi** baz=332	**0.44**	**328**	*i* P	**Pb**	**16 46 12.4**	**-0.3**
NDT	baz=332			*i* S	**Sb**	**16 46 18.7**	**-0.5**
ENTT	**Nioudou** baz=340	**0.45**	**336**	*i* P	**Pb**	**16 46 12.6**	**-0.3**
ENTT	baz=340			*i* S	**Sb**	**16 46 19.1**	**-0.4**
WHF	**Hehuan Shan** baz=263	**0.47**	**260**	*i* P	**Pg**	**16 46 12.0**	**-0.4**
WHF	baz=263			S	**Sg**	**16 46 18.1**	**-0.6**
SHUL	**Shoufeng** baz=210	**0.48**	**203**	*e*P	**Pb**	**16 46 13.1**	**-0.2**
SHUL	baz=210			*e*S	**Sg**	**16 46 19.3**	**+0.5**
FUSS	**Fushou** baz=277	**0.48**	**273**	*e*P	**Pg**	**16 46 12.6**	**0.0**
TWE	**Neicheng** baz=353	**0.50**	**350**	*i* P	**Pb**	**16 46 13.6**	**-0.2**
TWE	baz=353			*i* S	**Sb**	**16 46 20.8**	**-0.2**
ESL	**Shilin** baz=227	**0.51**	**217**	*e*P	**Pg**	**16 46 12.6**	**-0.6**
ILA	**Ilan**	**0.54**	**358**	*e*S	**Sb**	**16 46 22.1**	**+0.1**
TWT	**Tachien** baz=276	**0.54**	**273**	*e*P	**Pg**	**16 46 14.0**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=345	**0.56**	**343**	*i* P	**Pb**	**16 46 14.7**	**0.0**
FUSB	baz=345			*i* S	**Sb**	**16 46 22.4**	**-0.2**
TDCB	**Techi** baz=276	**0.56**	**273**	*i* P	**Pg**	**16 46 14.2**	**+0.1**
TDCB	baz=276			S	**Sg**	**16 46 21.9**	**+0.4**
TEGC	**Jichi Village** baz=192	**0.56**	**202**	*e*P	**Pg**	**16 46 13.3**	**-0.7**
TEGC	baz=192			*e*S	**Sg**	**16 46 21.6**	**+0.2**
CHGB	**Renai** baz=250	**0.57**	**253**	*e*P	**Pg**	**16 46 14.1**	**-0.1**
YHNB	**Yeheng** baz=324	**0.57**	**321**	*i* P	**Pb**	**16 46 14.9**	**0.0**
YHNB	baz=324			*i* S	**Sb**	**16 46 22.7**	**-0.2**
NSK	**Sanguang** baz=323	**0.58**	**320**	*i* P	**Pb**	**16 46 15.0**	**-0.2**
NSK	baz=323			S	**Sb**	**16 46 22.6**	**-0.8**
OWD	**Renai** baz=246	**0.60**	**243**	*e*P	**Pg**	**16 46 14.8**	**-0.2**
WARBT	**Fenglin Townsh** baz=223	**0.61**	**215**	P	**Pg**	**16 46 14.2**	**-0.9**
WARBT	baz=223			*e*S	**Sg**	**16 46 23.5**	**+0.3**
EGFH	**Guangfu** baz=218	**0.64**	**209**	*e*P	**Pg**	**16 46 15.8**	**+0.2**
EGFH	baz=218			*e*S	**Sg**	**16 46 24.6**	**+0.6**
WUSB	**Renai** baz=244	**0.64**	**249**	*e*P	**Pg**	**16 46 15.5**	**0.0**
WUSB	baz=244			*e*S	**Sg**	**16 46 24.1**	**+0.1**
NFF	**Wufeng Townshi** baz=307	**0.72**	**304**	P	**Pb**	**16 46 17.7**	**+0.3**
NFF	baz=307			*i* S	**Sb**	**16 46 27.3**	**+0.1**
VWDT	**VWDT** baz=232	**0.74**	**231**	P	**Pg**	**16 46 16.6**	**-0.8**
VWDT	baz=232			*e*S	**Sg**	**16 46 25.7**	**-1.5**
TIPB	**Shuangxi** baz=5.0	**0.74**	**4**	*i* P	**Pb**	**16 46 18.3**	**+0.4**
TIPB	baz=5.0			S	**Sb**	**16 46 28.0**	**0.0**
WHP	**Taichung City** baz=277	**0.75**	**274**	P	**Pb**	**16 46 18.0**	**-0.1**
WHP	baz=277			S	**Sb**	**16 46 28.0**	**-0.3**
NHDH	**Xindian Distri** baz=345	**0.77**	**343**	*e*P	**Pn**	**16 46 18.9**	**-0.7**
WPL	**Puli Township** baz=246	**0.77**	**254**	P	**Pg**	**16 46 18.1**	**+0.1**
WPL	baz=246			S	**Sg**	**16 46 28.4**	**+0.2**
TATO	**Taipei** baz=343	**0.79**	**341**	P	**Pb**	**16 46 18.9**	**+0.3**
TATO	baz=343			S	**Sb**	**16 46 29.7**	**+0.4**
DPDB	**Guoxing** baz=249	**0.79**	**256**	P	**Pg**	**16 46 18.4**	**-0.1**
DPDB	baz=249			S	**Sg**	**16 46 29.0**	**+0.2**
HGSD	**Ruisui** baz=224	**0.80**	**203**	*e*P	**Pb**	**16 46 19.4**	**+0.6**
NJD	**Zhudong** baz=312	**0.80**	**309**	P	**Pb**	**16 46 19.0**	**+0.1**
NJD	baz=312			S	**Sn**	**16 46 31.3**	**-0.6**
WCS	**Beigang Elemen** baz=261	**0.80**	**258**	*e*P	**Pg**	**16 46 18.6**	**0.0**
LIOB	**Emei** baz=304	**0.80**	**301**	*e*P	**Pn**	**16 46 19.9**	**-0.2**
TWB1	**Santiao Chiao** baz=15	**0.80**	**14**	*e*P	**Pn**	**16 46 20.1**	**0.0**
TWB1	baz=15			*e*S	**Sn**	**16 46 31.1**	**-0.8**
NSTT	**Nanjuang** baz=303	**0.81**	**300**	*e*P	**Pn**	**16 46 19.9**	**-0.3**
EHY	**Hungye** baz=211	**0.82**	**210**	*e*P	**Pg**	**16 46 18.2**	**-0.9**
NWF	**Wu-fen Shan** baz=353	**0.84**	**1**	*e*P	**Pn**	**16 46 20.3**	**-0.4**
NWF	baz=353			S	**Sb**	**16 46 31.5**	**+0.6**
WFSB	**Wu-fen Shan** baz=355	**0.84**	**1**	*e*P	**Pn**	**16 46 20.5**	**-0.1**
WFSB	baz=355			S	**Sn**	**16 46 31.6**	**-1.3**
TAP	**Taipei** baz=345	**0.84**	**344**	*e*S	**Sb**	**16 46 31.3**	**+0.5**
SMLT	**Sun Moon Lake** baz=240	**0.86**	**247**	P	**Pg**	**16 46 19.6**	**-0.3**
SMLT	baz=240			*e*S	**Sg**	**16 46 30.6**	**-0.6**
SSLB	**Suanglung** baz=251	**0.86**	**240**	*i* P	**Pg**	**16 46 19.2**	**-0.6**
SSLB	baz=251			*e*S	**Sb**	**16 46 31.6**	**+0.2**
SXI1	**Grass Mountain** baz=354	**0.87**	**7**	*e*P	**Pn**	**16 46 21.0**	**-0.1**
SXI1	baz=354			*i* S	**Sb**	**16 46 32.2**	**+0.6**
HSN1	**Hsinchu** baz=311	**0.88**	**309**	*e*P	**Pn**	**16 46 20.7**	**-0.4**
HSN1	baz=311			*e*S	**Sn**	**16 46 33.1**	**-0.6**
NTY	**Taoyuan** baz=333	**0.88**	**331**	P	**Pn**	**16 46 21.7**	**+0.6**
NTY	baz=333			*e*S	**Sn**	**16 46 33.2**	**-0.6**
TYC	**Yuchr** baz=242	**0.89**	**249**	*i* P	**Pg**	**16 46 20.1**	**-0.3**
TYC	baz=242			*e*S	**Sg**	**16 46 31.1**	**-0.9**
NCUH	**Zhongli** baz=326	**0.91**	**324**	P	**Pn**	**16 46 21.8**	**+0.2**
NCUH	baz=326			S	**Sn**	**16 46 34.2**	**-0.4**
SBCB	**Hsinchu** baz=310	**0.91**	**308**	*e*P	**Pn**	**16 46 21.5**	**-0.1**
SBCB	baz=310			*e*S	**Sn**	**16 46 34.7**	**+0.2**
TWQ1	**Liyutan** baz=280	**0.92**	**278**	*i* P	**Pn**	**16 46 21.6**	**-0.1**
TWQ1	baz=280			*e*S	**Sb**	**16 46 33.4**	**+0.5**
HSN	**Hsinchu** baz=313	**0.93**	**308**	*e*P	**Pn**	**16 46 21.9**	**+0.1**
HSN	baz=313			*e*S	**Sn**	**16 46 34.2**	**-0.7**
TWS1	**Kuangyinshan** baz=350	**0.93**	**340**	*e*P	**Pn**	**16 46 22.9**	**+1.1**
TWS1	baz=350			S	**Sn**	**16 46 34.9**	**0.0**
YM01	**YM01** baz=334	**0.93**	**349**	*e*P	**Pn**	**16 46 22.4**	**+0.4**
NJN	**Zhunan** baz=301	**0.94**	**299**	*e*P	**Pn**	**16 46 21.6**	**-0.3**
NJN	baz=301			*e*S	**Sn**	**16 46 34.7**	**-0.5**
YULB	**Yu-li** baz=219	**0.94**	**207**	*e*P	**Pg**	**16 46 20.0**	**-1.2**
YULB	baz=219			*e*S	**Sg**	**16 46 32.3**	**-1.1**
NSY	**Sanyi** baz=284	**0.94**	**282**	*e*P	**Pn**	**16 46 22.4**	**+0.5**
NMLH	**Miaoli** baz=291	**0.94**	**289**	P	**Pn**	**16 46 22.1**	**0.0**
NMLH	baz=291			*e*S	**Sn**	**16 46 35.0**	**-0.4**
EYUL	**Yuli** baz=222	**0.97**	**205**	*e*P	**Pg**	**16 46 21.5**	**-0.3**
TWF1	**Yuli** baz=220	**0.97**	**206**	*e*P	**Pg**	**16 46 21.3**	**-0.5**
ANP	**Anpu** baz=348	**0.98**	**347**	*i* P	**Pn**	**16 46 22.7**	**0.0**
ANP	baz=348			*e*S	**Sn**	**16 46 36.0**	**-0.5**
WHYT	**Xinyi Township** baz=248	**0.99**	**238**	*e*P	**Pn**	**16 46 22.5**	**-0.2**
WHYT	baz=248			*e*S	**Sg**	**16 46 34.9**	**-0.2**
WWF	**Wufeng** baz=257	**0.99**	**260**	P	**Pn**	**16 46 23.8**	**+1.1**
WWF	baz=257			S	**Sn**	**16 46 36.4**	**-0.2**
WJS	**Zhushan** baz=243	**1.03**	**247**	*e*P	**Pn**	**16 46 23.9**	**+0.6**
WJS	baz=243			*e*S	**Sn**	**16 46 38.2**	**+0.6**
WDJ	**Dajia District** baz=280	**1.03**	**277**	*e*P	**Pn**	**16 46 24.6**	**+1.3**
WNT1	**Nantou City** baz=250	**1.04**	**252**	P	**Pn**	**16 46 23.6**	**+0.2**
WNT1	baz=250			*e*S	**Sn**	**16 46 37.9**	**+0.1**
WNT	**Mingjian** baz=248	**1.05**	**251**	*i* P	**Pn**	**16 46 23.9**	**+0.4**
WNT	baz=248			*i* S	**Sn**	**16 46 38.0**	**0.0**
CHKH	**Chenggong** baz=217	**1.08**	**198**	*e*P	**Pb**	**16 46 23.9**	**+0.2**
CHKH	baz=217			S	**Sn**	**16 46 39.2**	**+0.3**
FULB	**Fuli** baz=221	**1.11**	**203**	P	**Pb**	**16 46 24.0**	**-0.2**
FULB	baz=221			*e*S	**Sn**	**16 46 39.6**	**0.0**
WCHH	**Zhanghua** baz=265	**1.11**	**263**	P	**Pg**	**16 46 24.7**	**+0.2**
WCHH	baz=265			*e*S	**Sn**	**16 46 39.8**	**+0.2**
WYL	**Yuanlin Townsh** baz=259	**1.12**	**257**	*e*P	**Pb**	**16 46 22.5**	**-1.7**
WYL	baz=259			S	**Sn**	**16 46 39.8**	**+0.1**
ALS	**Alishan** baz=233	**1.13**	**231**	*e*P	**Pb**	**16 46 24.7**	**0.0**
ALS	baz=233			S	**Sn**	**16 46 40.7**	**+0.2**
CHN5	**Tsauling** baz=241	**1.18**	**238**	P	**Pg**	**16 46 26.1**	**+0.3**
CHN5	baz=241			*e*S	**Sn**	**16 46 42.7**	**+1.4**
CHKT	**Chengkung** baz=216	**1.18**	**198**	P	**Pn**	**16 46 25.0**	**-0.3**
CHKT	baz=216			*e*S	**Sb**	**16 46 40.9**	**+0.3**
EHD	**Haiduan** baz=208	**1.19**	**206**	*e*P	**Pn**	**16 46 24.6**	**-0.8**
EHD	baz=208			*e*S	**Sb**	**16 46 40.7**	**-0.1**
WGK	**Gukeng** baz=247	**1.23**	**244**	*e*P	**Pn**	**16 46 25.4**	**-0.5**
WGK	baz=247			*e*S	**Sg**	**16 46 43.2**	**+0.5**
ECS	**Chishang** baz=219	**1.23**	**204**	P	**Pn**	**16 46 25.9**	**-0.1**
ECS	baz=219			*e*S	**Sg**	**16 46 43.3**	**+0.4**
ELDTW	**Lidau** baz=203	**1.24**	**214**	*e*P	**Pn**	**16 46 26.3**	**0.0**
ELDTW	baz=203			S	**Sg**	**16 46 43.5**	**+0.3**
WDLH	**Douliu** baz=247	**1.25**	**245**	*e*P	**Pg**	**16 46 27.6**	**+0.6**
WDLH	baz=247			*e*S	**Sg**	**16 46 44.9**	**+1.6**
WRL	**Guolierlin Hig** baz=258	**1.31**	**256**	*e*P	**Pg**	**16 46 28.4**	**0.0**
WRL	baz=258			S	**Sg**	**16 46 45.4**	**0.0**
EDH	**Donghe** baz=183	**1.32**	**199**	P	**Pn**	**16 46 26.8**	**-0.5**
EDH	baz=183			S	**Sn**	**16 46 45.3**	**+0.6**
WCKO	**Fanlu** baz=237	**1.32**	**234**	P	**Pg**	**16 46 28.7**	**+0.2**
WCKO	baz=237			S	**Sg**	**16 46 46.2**	**+0.4**
WTK	**Tuku** baz=250	**1.37**	**247**	*e*P	**Pg**	**16 46 29.4**	**0.0**
WTK	baz=250			S	**Sg**	**16 46 47.0**	**-0.3**
CHN4	**Tsaushan** baz=235	**1.38**	**231**	*i* P	**Pg**	**16 46 29.3**	**-0.4**
CHN4	baz=235			S	**Sg**	**16 46 47.3**	**-0.5**

STYH	**Taoyuan**	**1.39**	**221**	*e*P	**Pn**	**16 46 28.4**	**+0.3**
	baz=225						
TPUB	**Ta-pu**	**1.39**	**229**	P	**Pb**	**16 46 29.0**	**0.0**
TPUB	baz=220			S	**Sg**	**16 46 48.6**	**+0.7**
	baz=220						
LONT	**Longtian**	**1.44**	**204**	P	**Pn**	**16 46 27.9**	**-1.0**
LONT	baz=207			*e*S	**Sg**	**16 46 49.1**	**-0.3**
	baz=207						
WTP	**Ta-pu**	**1.44**	**227**	*e*P	**Pb**	**16 46 30.3**	**+0.5**
	baz=232						
TWK	**Hsinying**	**1.51**	**231**	*i* P	**Pb**	**16 46 31.0**	**0.0**
TWK	baz=234			S	**Sg**	**16 46 51.3**	**-0.6**
	baz=234						
WSF	**Szhu**	**1.53**	**248**	*e*S	**Sg**	**16 46 52.1**	**-0.3**
	baz=261						
SNST	**Tainan City**	**1.54**	**230**	P	**Pb**	**16 46 31.8**	**+0.4**
SNST	baz=233			S	**Sg**	**16 46 52.7**	**+0.1**
	baz=233						
CHN1	**Nanshi**	**1.54**	**228**	*i* P	**Pb**	**16 46 31.4**	**-0.1**
CHN1	baz=232			S	**Sg**	**16 46 52.3**	**-0.4**
	baz=232						
TWGBT	**Beinan**	**1.54**	**204**	*e*P	**Pn**	**16 46 30.7**	**+0.4**
TWGBT	baz=208			*e*S	**Sb**	**16 46 51.3**	**+0.4**
	baz=208						
SGST	**Jiashian**	**1.57**	**224**	*i* P	**Pn**	**16 46 31.4**	**+0.6**
SGST	baz=227			S	**Sb**	**16 46 52.5**	**+0.6**
	baz=227						
SLGT	**Liugui**	**1.60**	**220**	P	**Pb**	**16 46 31.9**	**-0.6**
SLGT	baz=224			S	**Sb**	**16 46 53.1**	**+0.5**
	baz=224						
ICHU	**Yijhu**	**1.61**	**238**	*e*P	**Pb**	**16 46 33.3**	**+0.6**
ICHU	baz=242			S	**Sg**	**16 46 54.5**	**-0.5**
	baz=242						
CHN8	**Yiju**	**1.67**	**239**	*e*P	**Pb**	**16 46 34.0**	**+0.2**
CHN8	baz=227			S	**Sb**	**16 46 55.5**	**+0.8**
	baz=227						
CHN3	**Shinhua**	**1.72**	**229**	*e*P	**Pb**	**16 46 35.1**	**+0.5**
	baz=234						
SCST	**Cishan**	**1.77**	**221**	*e*P	**Pb**	**16 46 35.4**	**-0.1**
SCST	baz=226			*e*S	**Sb**	**16 46 58.3**	**+0.7**
	baz=226						
ECL	**Taimali**	**1.79**	**205**	*e*P	**Pn**	**16 46 33.3**	**-0.3**
	baz=194						
IRIF	**Iriomote-Funau**	**1.79**	**86**	*e*S	**Sb**	**16 46 58.3**	**0.0**
TSMG	**Majia**	**1.83**	**214**	P	**Pb**	**16 46 35.7**	**-0.8**
	baz=218						
TSMG				S	**Sb**	**16 47 00.1**	**+0.8**
	baz=218						
TWM1	**Shoushan**	**1.86**	**222**	*i* P	**Pb**	**16 46 37.1**	**+0.1**
	baz=227						
TSCK	**Chigu Township**	**1.88**	**235**	*e*P	**Pb**	**16 46 36.9**	**-0.4**
	baz=241						
TSCK				S	**Sb**	**16 47 00.8**	**+0.1**
	baz=241						
MASBT	**Mashibuluo**	**1.92**	**213**	*e*P	**Pb**	**16 46 37.2**	**-0.7**
	baz=217						
MASBT				S	**Sb**	**16 47 01.6**	**-0.1**
	baz=217						
JKRS	**Kuro-shima**	**2.05**	**89**	*e*P	**Pb**	**16 46 38.9**	**-1.2**
JKRS				S	**Sb**	**16 47 05.6**	**+0.1**
SCZT	**Fangliau**	**2.13**	**210**	*e*P	**Pb**	**16 46 40.3**	**-1.1**
	baz=197						
PHUB	**P'eng-hu**	**2.13**	**251**	*e*S	**Sb**	**16 47 06.9**	**-1.1**
	baz=255						
WDGT	**Dungji**	**2.16**	**244**	*e*S	**Sn**	**16 47 06.5**	**+1.2**
	baz=249						
JIJ	**Ishigaki jima**	**2.17**	**86**	P	**Pn**	**16 46 39.6**	**+0.6**
JIJ				*e*S	**Sn**	**16 47 06.4**	**+0.7**
VWUC	**VWUC**	**2.24**	**290**	P	**Pn**	**16 46 40.0**	**+0.1**
	baz=290						
VWUC				S	**Sn**	**16 47 08.3**	**+0.8**
	baz=290						
JISG	**Ishigakijimahi**	**2.35**	**81**	*e*P	**Pn**	**16 46 42.7**	**+1.3**
JISG				*e*S	**Sn**	**16 47 11.4**	**+1.4**
PTMZ	**Houxiangcun**	**2.54**	**289**	*e*P	**Pn**	**16 46 44.5**	**+0.5**
	baz=289						
PTMZ				S	**Sn**	**16 47 15.4**	**+0.6**
	baz=289						

*IDC **04** 16:54:20.4±0.8,24˚.26N×121˚.89E, h0km, mb3.8/18, mbtmp3.8/20, ML3.4/2, MS3.9/2, Error ellipse: s-maj=19.0km s-min=17.4km az=61.0*

*NEIC **04** 16:54:22.3±1.3,24˚.17N±0˚.05×121˚.84E±0˚.04, h8km±1km, mb4.5/32, Error ellipse: s-maj=7.2km s-min=4.9km az=177.0*

*ASIES **04** 16:54:22.7,24˚.26N×121˚.80E, h4km, ML4.6, Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; Mrr=0.08; Mθθ=0.11; Mφφ0.19; Mrθ 1.71; Mθφ=0.33; Mφr 0.29; Fault plane solution: M0 1.77507×10^{22} NP1:φs82.48000°, δ89.24000°, λ,99.04000°. NP2:φs177.22000°, δ9.07000°, λ.4.80000°. Principal axes: T Plg45.0390°, Azm1.5250°; N Plg9.0380°, Azm262.3600°; P Plg43.5460°, Azm163.6640°;*

*JMA **04** 16:54:22.8±0.1,24˚.2N±0˚.4×121˚.8E±0˚.4, h0km, MD4.5/15, MV4.2/15, TAIWAN REGION*

*TAP **04** 16:54:23.1,24˚.25N×121˚.82E, h11km, ML4.6, C*

ISC 04 16:54:22.9±0.7, 24˚.24N±0˚.01×121˚.83E±0˚.02, h13km±4km, n263, σ1s13/408, mb4.2/37, 2C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**309**	*i* P			**Pg**	**16 54 25.8**	**-0.2**
EHP	baz=314			S			**Sg**	**16 54 27.8**	**-0.4**
	baz=314								
EAHA	**Aohua**	**0.12**	**316**	⇓P			**Pg**	**16 54 26.1**	**-0.1**
EAHA	baz=319			S			**Sg**	**16 54 28.2**	**-0.3**
	baz=319								
ENA	**Nanau**	**0.20**	**336**	⇓*i*P			**Pg**	**16 54 27.4**	**0.0**
ENA	baz=341			*i* S			**Sg**	**16 54 30.6**	**0.0**
	baz=341								
ETL	**Fush Village**	**0.21**	**247**	P			**Pg**	**16 54 27.3**	**-0.2**
ETL	baz=243			S			**Sg**	**16 54 30.4**	**-0.3**
	baz=243								
EWUT	**Wuta**	**0.21**	**346**	⇓P			**Pg**	**16 54 27.6**	**+0.1**
EWUT	baz=349			S			**Sg**	**16 54 30.9**	**+0.3**
	baz=349								
NACB	**Ninganchiao**	**0.23**	**253**				**Pg**	**16 54 27.3**	**-0.5**
NACB					Sg		**Sg**	**16 54 30.6**	**-0.5**
NACB	**Ninganchiao**	**0.23**	**253**	*e*P			**Pg**	**16 54 27.8**	**0.0**
NACB	baz=244			S			**Sg**	**16 54 31.0**	**-0.1**
	baz=244								
TWD	**Chiawan**	**0.27**	**234**	*e*P			**Pg**	**16 54 28.6**	**0.0**
TWD	baz=234			*i* S			**Sg**	**16 54 32.3**	**0.0**
	baz=234								
ETLH	**Xiulin Townshi**	**0.32**	**264**	*e*P			**Pg**	**16 54 29.8**	**+0.3**
ETLH	baz=262			S			**Sg**	**16 54 34.4**	**+0.4**
	baz=262								
ESAO	**Su ao**	**0.33**	**2**	*i* P			**Pg**	**16 54 29.8**	**0.0**
ESAO	baz=359			*e*S			**Sg**	**16 54 34.4**	**+0.2**
	baz=359								
HWA	**Hwalien**	**0.34**	**219**	*i* P			**Pb**	**16 54 31.0**	**+0.2**
HWA	baz=227			S			**Sb**	**16 54 35.5**	**-0.5**
	baz=227								
TWC	**Suao**	**0.37**	**2**	*i* P			**Pg**	**16 54 30.4**	**+0.1**
TWC	baz=5.0			*i* S			**Sg**	**16 54 35.3**	**0.0**
	baz=5.0								
EOS2	**EOS2**	**0.40**	**64**	*e*P			**Pb**	**16 54 32.4**	**+0.5**
	baz=57								
LATG	**Datong**	**0.41**	**316**	⇓P			**Pg**	**16 54 31.1**	**0.0**
LATG	baz=317			S			**Sg**	**16 54 36.9**	**+0.3**
	baz=317								
NDS	**Dongshan**	**0.41**	**345**	*i* P			**Pg**	**16 54 31.3**	**+0.3**
	baz=346								
NDS				*e*S			**Sg**	**16 54 37.0**	**+0.5**
	baz=346								
ETM	**Tongmen**	**0.41**	**229**	*e*P			**Pg**	**16 54 31.4**	**+0.3**
	baz=227								
ETM				*i* S			**Sb**	**16 54 37.9**	**-0.4**
	baz=227								
LXIB	**Xiulin Townshi**	**0.44**	**241**	P			**Pg**	**16 54 31.4**	**-0.3**
	baz=239								
LXIB				S			**Sg**	**16 54 38.3**	**+0.6**
	baz=239								
EOS3	**EOS3**	**0.44**	**84**	*e*P			**Pb**	**16 54 33.5**	**+0.9**
	baz=84								
NNSB	**Datong**	**0.45**	**295**	*i* P			**Pg**	**16 54 32.1**	**+0.2**
	baz=294								
NNSB				S			**Sg**	**16 54 38.1**	**+0.1**
	baz=294								
NNSH	**Datong**	**0.45**	**295**	⇓P			**Pg**	**16 54 32.0**	**+0.1**
	baz=294								
NNSH				S			**Sg**	**16 54 38.0**	**0.0**
	baz=294								
NDT	**Datong Townshi**	**0.47**	**321**	*i* P			**Pb**	**16 54 32.5**	**-0.5**
	baz=322								
NDT				S			**Sb**	**16 54 39.2**	**-0.7**
	baz=322								
NNS	**Nan Shan**	**0.47**	**295**	*i* P			**Pg**	**16 54 32.2**	**0.0**
	baz=295								
NNS				S			**Sg**	**16 54 38.7**	**+0.3**
	baz=295								
ENTT	**Nioudou**	**0.47**	**329**	*i* P			**Pb**	**16 54 32.4**	**-0.6**
	baz=330								
ENTT				*i* S			**Sg**	**16 54 38.5**	**+0.1**
	baz=330								
TWE	**Neicheng**	**0.50**	**342**	⇓*i*P			**Pb**	**16 54 33.1**	**-0.6**
	baz=345								
TWE				*i* S			**Sg**	**16 54 39.4**	**-0.1**
	baz=345								
SHUL	**Shoufeng**	**0.51**	**209**	P			**Pb**	**16 54 34.3**	**+0.5**
	baz=210								
SHUL				S			**Sb**	**16 54 43.5**	**+2.3**
	baz=210								
WHF	**Hehuan Shan**	**0.53**	**260**	*i* P			**Pg**	**16 54 33.6**	**+0.2**
	baz=258								
WHF				*i* S			**Sg**	**16 54 40.5**	**0.0**
	baz=258								
ILA	**Ilan**	**0.53**	**352**	⇓*i*P			**Pb**	**16 54 33.9**	**-0.3**
	baz=348								
ILA				*i* S			**Sb**	**16 54 41.8**	**+0.2**
	baz=348								
FUSS	**Fushou**	**0.54**	**271**	⇓P			**Pg**	**16 54 33.7**	**+0.1**
	baz=270								
FUSS				S			**Sg**	**16 54 41.0**	**+0.2**
	baz=270								
ESL	**Shilin**	**0.56**	**221**	*i* P			**Pg**	**16 54 34.1**	**+0.2**
	baz=226								
ESL				*e*S			**Sg**	**16 54 42.0**	**+0.7**
	baz=226								
FUSB	**Fushanzhiwuyua**	**0.56**	**337**	⇓P			**Pb**	**16 54 34.3**	**-0.5**
	baz=328								
FUSB				S			**Sb**	**16 54 42.0**	**-0.8**
	baz=328								
TEGC	**Jichi Village**	**0.59**	**207**	P			**Pb**	**16 54 35.6**	**+0.4**
	baz=207								
TEGC				S			**Sb**	**16 54 45.7**	**+2.2**
	baz=207								
YHNB	**Yeheng**	**0.60**	**316**				**Pb**	**16 54 34.8**	**-0.6**
YHNB						Sg	**Sg**	**16 54 42.3**	**-0.3**
YHNB	**Yeheng**	**0.60**	**316**	P			**Pb**	**16 54 34.9**	**-0.4**
YHNB	**Yeheng**	**0.60**	**316**	⇓P			**Pb**	**16 54 34.9**	**-0.4**
	baz=316								
YHNB				S			**Sb**	**16 54 43.8**	**0.0**
	baz=316								
TWT	**Tachien**	**0.60**	**271**	⇓*i*P			**Pb**	**16 54 35.2**	**-0.2**
	baz=270								
TWT				*i* S			**Sb**	**16 54 43.5**	**-0.5**
	baz=270								
NTC	**Toucheng**	**0.61**	**360**	P			**Pb**	**16 54 35.2**	**-0.3**
	baz=360								
NTC				*e*S			**Sb**	**16 54 46.2**	**+2.2**
	baz=360								
NSK	**Sanguang**	**0.61**	**315**	⇓*i*P			**Pb**	**16 54 35.1**	**-0.5**
	baz=316								
NSK				*i* S			**Sg**	**16 54 43.2**	**+0.2**
	baz=316								
TDCB	**Techi**	**0.62**	**271**	⇓P			**Pb**	**16 54 35.1**	**-0.6**
	baz=270								
TDCB				S			**Sg**	**16 54 43.3**	**+0.1**
	baz=270								
CHGB	**Renai**	**0.63**	**254**	P			**Pg**	**16 54 35.3**	**+0.1**
	baz=245								
CHGB				S			**Sg**	**16 54 42.9**	**-0.7**
	baz=245								
WARBT	**Fenglin Townsh**	**0.66**	**218**	P			**Pg**	**16 54 35.9**	**+0.1**
	baz=224								
WARBT				S			**Sb**	**16 54 46.6**	**+1.1**
	baz=224								
OWD	**Renai**	**0.67**	**245**	P			**Pg**	**16 54 35.9**	**0.0**
	baz=244								
OWD				S			**Sb**	**16 54 45.7**	**0.0**
	baz=244								
EGFH	**Guangfu**	**0.68**	**213**	P			**Pb**	**16 54 36.6**	**-0.1**
	baz=230								
EGFH				S			**Sb**	**16 54 47.2**	**+1.2**
	baz=230								
WUSB	**Renai**	**0.70**	**249**	P			**Pg**	**16 54 36.7**	**+0.1**
	baz=242								
WUSB				S			**Sb**	**16 54 46.4**	**-0.3**
	baz=242								
TIPB	**Shuangxi**	**0.73**	**359**	⇓P			**Pb**	**16 54 37.3**	**-0.3**
	baz=360								
TIPB				*e*S			**Sb**	**16 54 47.8**	**+0.3**
	baz=360								
NFF	**Wufeng Townshi**	**0.76**	**301**	⇓P			**Pb**	**16 54 38.0**	**-0.1**
	baz=301								
NFF				S			**Sg**	**16 54 47.7**	**0.0**
	baz=301								
NHDH	**Xindian Distri**	**0.77**	**339**	P			**Pb**	**16 54 38.1**	**-0.1**
	baz=339								
NHDH				S			**Sb**	**16 54 49.8**	**+1.1**
	baz=339								
TWB1	**Santiao Chiao**	**0.78**	**10**	⇓*i*P			**Pg**	**16 54 38.0**	**0.0**
	baz=10.0								
TWB1				*e*S			**Sb**	**16 54 49.5**	**+0.7**
	baz=10.0								
TATO	**Taipei**	**0.80**	**337**		Pg		**Pb**	**16 54 38.5**	**-0.2**
TATO	**Taipei**	**0.80**	**337**		P		**Pb**	**16 54 38.9**	**+0.2**
TATO	**Taipei**	**0.80**	**337**		P		**Pb**	**16 54 38.5**	**-0.2**
	baz=337								
VWDT	**VWDT**	**0.80**	**233**	P			**Pg**	**16 54 38.5**	**+0.1**
	baz=232								
VWDT				*e*S			**Sg**	**16 54 48.9**	**+0.1**
	baz=232								
WHP	**Taichung City**	**0.81**	**273**	⇑P			**Pb**	**16 54 39.2**	**+0.3**
	baz=272								
WHP				S			**Sb**	**16 54 49.7**	**-0.2**
	baz=272								
NWF	**Wu-fen Shan**	**0.83**	**357**	P			**Pb**	**16 54 39.5**	**+0.2**
	baz=349								
NWF				*e*S			**Sb**	**16 54 50.7**	**+0.3**
	baz=349								
WFSB	**Wu-fen Shan**	**0.83**	**357**	⇓P			**Pb**	**16 54 39.5**	**+0.2**
	baz=349								
WFSB				S			**Sb**	**16 54 51.7**	**+1.3**
	baz=349								
NHY	**Taipei**	**0.83**	**343**	P			**Pb**	**16 54 39.8**	**+0.6**
	baz=344								
NHY				*e*S			**Sb**	**16 54 52.0**	**+1.6**
	baz=344								
WPL	**Puli Township**	**0.83**	**254**	P			**Pb**	**16 54 39.6**	**+0.3**
	baz=254								
WPL				S			**Sg**	**16 54 49.9**	**-0.1**
	baz=254								
BACT	**New Taipei Cit**	**0.83**	**335**	P			**Pb**	**16 54 40.1**	**+0.8**
	baz=335								
HGSD	**Ruisui**	**0.83**	**207**	P			**Pb**	**16 54 39.5**	**+0.2**
	baz=198								
HGSD				*e*S			**Sn**	**16 54 52.7**	**+0.1**
	baz=198								
NJD	**Zhudong**	**0.84**	**306**	P			**Pb**	**16 54 40.2**	**+0.8**
	baz=314								
NJD				S			**Sn**	**16 54 52.7**	**-0.1**
	baz=314								
LIOB	**Emei**	**0.85**	**299**	P			**Pb**	**16 54 40.0**	**+0.5**
	baz=299								
LIOB				S			**Sb**	**16 54 51.7**	**+0.8**
	baz=299								
SXI1	**Grass Mountain**	**0.85**	**3**	⇓P			**Pb**	**16 54 39.7**	**+0.1**
	baz=7.0								
SXI1				*e*S			**Sb**	**16 54 51.7**	**+0.6**
	baz=7.0								
NSTT	**Nanjuang**	**0.85**	**297**	⇓*i*P			**Pb**	**16 54 39.9**	**+0.3**
	baz=297								
NSTT				*i* S			**Sb**	**16 54 50.8**	**-0.3**
	baz=297								
WCS	**Beigang Elemen**	**0.86**	**258**	P			**Pb**	**16 54 39.9**	**+0.1**
	baz=257								
WCS				S			**Sg**	**16 54 50.7**	**-0.2**
	baz=257								
EHY	**Hungye**	**0.87**	**213**	*i* P			**Pg**	**16 54 39.2**	**-0.5**
	baz=225								
EHY				S			**Sn**	**16 54 54.1**	**+0.7**
	baz=225								
NTY	**Taoyuan**	**0.90**	**327**	P			**Pn**	**16 54 41.6**	**+0.3**
	baz=328								
TNOU	**National Taiwa**	**0.91**	**357**	P			**Pb**	**16 54 40.7**	**+0.2**
	baz=356								
HSN1	**Hsinchu**	**0.92**	**306**	P			**Pn**	**16 54 41.9**	**+0.3**
	baz=296								
HSN1				S			**Sn**	**16 54 55.3**	**+0.7**
	baz=296								
SSLB	**Suanglung**	**0.92**	**241**		Pg		**Pg**	**16 54 39.6**	**-1.2**
SSLB	**Suanglung**	**0.92**	**241**		P		**Pg**	**16 54 40.7**	**0.0**
SSLB	**Suanglung**	**0.92**	**241**		P		**Pg**	**16 54 40.4**	**-0.3**
	baz=248								
SSLB				*e*S			**Sg**	**16 54 51.7**	**-1.1**
	baz=248								
SMLT	**Sun Moon Lake**	**0.93**	**248**	*i* P			**Pb**	**16 54 40.9**	**0.0**
	baz=246								
SMLT				*i* S			**Sb**	**16 54 53.1**	**0.0**
	baz=246								
YM01	**YM01**	**0.93**	**345**	P			**Pb**	**16 54 41.5**	**+0.5**
	baz=346								
YM01				*e*S			**Sn**	**16 54 55.2**	**+0.1**
	baz=346								
NCUH	**Zhongli**	**0.94**	**321**	P			**Pn**	**16 54 42.0**	**+0.2**
	baz=321								
NCUH				S			**Sn**	**16 54 56.1**	**+1.0**
	baz=321								
TWS1	**Kuangyinshan**	**0.94**	**336**	*i* P			**Pb**	**16 54 41.9**	**+0.9**
	baz=337								
TWS1				*e*S			**Sn**	**16 54 55.6**	**+0.5**
	baz=337								
SBCB	**Hsinchu**	**0.95**	**306**	P			**Pn**	**16 54 42.4**	**+0.4**
	baz=306								
SBCB				*e*S			**Sb**	**16 54 55.2**	**+1.4**
	baz=306								
TYC	**Yuchr**	**0.95**	**250**	*i* P			**Pb**	**16 54 42.0**	**+0.7**
	baz=240								
TYC				S			**Sb**	**16 54 54.8**	**+0.9**
	baz=240								
HSN	**Hsinchu**	**0.97**	**306**	*i* P			**Pb**	**16 54 42.3**	**+0.7**
	baz=299								
HSN				S			**Sb**	**16 54 55.4**	**+1.2**
	baz=299								
TWQ1	**Liyutan**	**0.97**	**277**	*i* P			**Pn**	**16 54 42.8**	**+0.4**
	baz=276								
TWQ1				S			**Sn**	**16 54 56.7**	**+0.6**
	baz=276								
YULB	**Yu-li**	**0.98**	**210**				**Pg**	**16 54 39.7**	**-2.1**
YULB	**Yu-li**	**0.98**	**210**		P		**Pg**	**16 54 41.5**	**-0.3**
YULB	**Yu-li**	**0.98**	**210**		P		**Pg**	**16 54 41.4**	**-0.3**
	baz=213								
YULB				*e*S			**Sb**	**16 54 55.4**	**+0.8**
	baz=213								
ECBN	**Changbin**	**0.98**	**201**	P			**Pg**	**16 54 41.6**	**-0.3**
	baz=204								
ECBN				*e*S			**Sn**	**16 54 57.5**	**+1.2**
	baz=204								
NTST	**Danshui**	**0.98**	**339**	*e*P			**Pn**	**16 54 42.9**	**+0.4**
	baz=340								
ANP	**Anpu**	**0.98**	**343**	P			**Pb**	**16 54 42.4**	**+0.5**
	baz=344								
ANP				*e*S			**Sb**	**16 54 56.5**	**+1.6**
	baz=344								
NSY	**Sanyi**	**0.99**	**280**	*i* P			**Pn**	**16 54 43.1**	**+0.5**
	baz=280								
NSY				*e*S			**Sb**	**16 54 56.4**	**+1.3**
	baz=280								
NMLH	**Miaoli**	**1.00**	**287**	P			**Pn**	**16 54 43.6**	**+0.9**
	baz=296								
NMLH				S			**Sn**	**16 54 57.9**	**+1.3**
	baz=296								
EYUL	**Yuli**	**1.01**	**208**	P			**Pg**	**16 54 42.3**	**0.0**
	baz=225								
EYUL				*e*S			**Sn**	**16 54 58.2**	**+1.3**
	baz=225								
TWF1	**Yuli**	**1.01**	**209**	*i* P			**Pg**	**16 54 41.9**	**-0.5**
	baz=211								
TWF1				S			**Sn**	**16 54 58.1**	**+1.1**
	baz=211								
JYNG	**Yonagunijimaku**	**1.03**	**78**	P			**Pb**	**16 54 43.6**	**+0.9**
JYNG				*e*S			**Sn**	**16 54 58.8**	**+1.3**
JYNG	**Yonagunijimaku**	**1.03**	**78**	A			**A**	16 54 43.6	
	comp=E,10.0nm,5.7s,comp=N,12nm,2.3s								
NHW	**Xinwu Township**	**1.05**	**317**	P			**Pb**	**16 54 43.6**	**+0.6**
	baz=317								
NHW				*e*S			**Sb**	**16 54 58.0**	**+1.4**
	baz=317								
WHYT	**Xinyi Township**	**1.05**	**239**	P			**Pb**	**16 54 43.7**	**+0.7**
	baz=246								
WHYT				S			**Sn**	**16 54 58.5**	**+0.6**
	baz=246								
TWY	**Chenhua**	**1.05**	**348**	*i* P			**Pn**	**16 54 44.0**	**+0.6**
	baz=342								
TWY				*e*S			**Sn**	**16 54 59.0**	**+1.0**
	baz=342								
WWF	**Wufeng**	**1.06**	**260**	P			**Pn**	**16 54 45.0**	**+1.6**
	baz=254								
WWF				S			**Sn**	**16 55 00.5**	**+2.4**
	baz=254								
NSM	**Shimen**	**1.07**	**348**	*e*P			**Pn**	**16 54 45.6**	**+1.9**
	baz=349								
WJS	**Zhushan**	**1.09**	**248**	P			**Pn**	**16 54 44.9**	**+0.9**
	baz=241								
WJS				S			**Sn**	**16 55 01.1**	**+2.1**
	baz=241								
WDJ	**Dajia District**	**1.09**	**276**	P			**Pn**	**16 54 45.6**	**+1.6**
	baz=276								
WDJ				S			**Sn**	**16 55 00.7**	**+1.7**
	baz=276								
YOJ	**Yonaguni jima**	**1.10**	**78**		Pn		**Pg**	**16 54 44.1**	**+0.1**
YOJ	**Yonaguni jima**	**1.10**	**78**		P		**Pn**	**16 54 44.8**	**+0.8**
YOJ	**Yonaguni jima**	**1.10**	**78**		P		**Pb**	**16 54 44.3**	**+0.5**
	baz=64								
YOJ				*e*S			**Sn**	**16 55 01.8**	**+2.7**
	baz=64								
YOJ	**Yonaguni jima**	**1.10**	**78**	P			**Pb**	**16 54 44.4**	**+0.6**
YOJ				*e*S			**Sn**	**16 55 00.1**	**+1.1**
YOJ	**Yonaguni jima**	**1.10**	**78**	A			**A**	16 54 44.4	
	comp=E,10.0nm,1.4s,comp=N,10.0nm,2.9s								
WNT1	**Nantou City**	**1.11**	**253**	P			**Pn**	**16 54 46.0**	**+1.9**
	baz=248								
WNT1				S			**Sn**	**16 55 02.4**	**+3.0**
	baz=248								
WNT	**Mingjian**	**1.11**	**251**	*i* P			**Pn**	**16 54 45.4**	**+1.1**
	baz=246								
WNT				*i* S			**Sn**	**16 55 01.6**	**+2.2**
	baz=246								
CHKH	**Chenggong**	**1.12**	**201**	P			**Pg**	**16 54 44.0**	**-0.5**
	baz=185								
CHKH				S			**Sn**	**16 55 01.8**	**+2.2**
	baz=185								
FULB	**Fuli**	**1.15**	**206**	P			**Pg**	**16 54 44.7**	**-0.4**
	baz=224								
FULB				*e*S			**Sn**	**16 55 02.1**	**+1.7**
	baz=224								
WCHH	**Zhanghua**	**1.18**	**262**	P			**Pn**	**16 54 47.0**	**+1.9**
	baz=262								
WCHH				*e*S			**Sn**	**16 55 02.5**	**+1.5**
	baz=262								
WYL	**Yuanlin Townsh**	**1.18**	**257**	P			**Pn**	**16 54 45.9**	**+0.8**
	baz=257								
WYL				S			**Sn**	**16 55 03.6**	**+2.5**
	baz=257								
ALS	**Alishan**	**1.19**	**233**	⇓*i*P			**Pb**	**16 54 45.8**

baz=211
CHN5 Tsauling 1.24 239 *i* P Pn 16 54 47.2 +1.2
baz=239
CHN5 *i* S Sn 16 55 05.1 +2.5
baz=239
ECS Chishang 1.27 206 P Pg 16 54 45.6 -1.7
baz=210
ECS *eS* Sn 16 55 06.2 +2.8
baz=210
ELDTW Lidau 1.29 216 *i* P Pg 16 54 45.5 -2.2
baz=204
ELDTW S Sn 16 55 05.0 +1.0
baz=204
WGK Gukeng 1.29 245 *i* P Pn 16 54 48.2 +1.6
baz=246
WGK *i* S Sn 16 55 06.7 +2.9
baz=246
WDLH Douliu 1.31 245 P Pb 16 54 48.4 +1.1
baz=246
WDLH S Sn 16 55 07.7 +3.4
baz=246
EDH Donghe 1.35 201 P Pn 16 54 46.4 -1.2
baz=189
EDH *eS* Sn 16 55 07.7 +2.3
baz=189
WRL Guolierlin Hig 1.37 256 P Pg 16 54 49.5 +0.2
baz=272
WRL S Sn 16 55 08.7 +2.8
baz=272
WCKO Fanlu 1.38 235 P Pg 16 54 50.0 +0.6
baz=236
WCKO S Sn 16 55 09.1 +3.0
baz=236
PCYT Pengchaiyu 1.40 9 *i* P Pb 16 54 49.3 +0.4
baz=7.0
PCYT *eS* Sb 16 55 07.4 +0.6
baz=7.0
WTK Tuku 1.43 248 P Pg 16 54 50.4 0.0
baz=249
WTK S Sn 16 55 10.8 +3.4
baz=249
CHN4 Tsaushan 1.44 232 *i* P Pg 16 54 50.6 0.0
baz=233
CHN4 *i* S Sn 16 55 11.5 +3.9
baz=233
STYH Taoyuan 1.44 223 P Pn 16 54 49.3 +0.5
baz=223
STYH S Sg 16 55 10.1 +0.7
baz=223
TPUB Ta-pu 1.45 230 Pn 16 54 49.5 +0.6
TPUB Ta-pu 1.45 230 P Pn 16 54 49.8 +0.9
TPUB Ta-pu 1.45 230 P Pb 16 54 50.2 +0.5
baz=231
TPUB S Sn 16 55 11.1 +3.4
baz=231
LONT Longtian 1.48 206 P Pn 16 54 48.3 -1.0
baz=210
LONT *eS* Sb 16 55 07.4 -1.6
baz=210
CHY Chiayi 1.49 240 P Pg 16 54 51.8 +0.3
baz=240
CHY S Sg 16 55 10.9 +0.1
baz=240
WTP Ta-pu 1.49 229⇑ *i* P Pb 16 54 50.8 +0.2
baz=230
WTP *i* S Sg 16 55 12.5 +1.5
baz=230
TWK Hsinying 1.57 232 *i* P Pb 16 54 52.4 +0.6
baz=233
TWK S Sg 16 55 13.3 -0.2
baz=233
TWG Pinlang 1.58 206 Pn 16 54 48.8 -1.8
TWG Pinlang 1.58 206 *eP* Pn 16 54 49.0 -1.7
baz=210
TWGBT Beinan 1.58 206 *eP* Pn 16 54 48.8 -1.8
baz=210
TWGBT *eS* Sb 16 55 12.9 +1.0
baz=210
SNST Tainan City 1.59 231 P Pg 16 54 52.9 -0.5
baz=232
SNST S Sg 16 55 13.9 -0.3
baz=232
CHN1 Nanshi 1.59 229 *i* P Pb 16 54 52.7 +0.4
baz=230
CHN1 *i* S Sg 16 55 15.4 +1.2
baz=230
WSF Szhu 1.59 248 *i* P Pg 16 54 52.8 -0.7
baz=249
WSF *i* S Sg 16 55 14.2 0.0
baz=249
LDUT Ludao 1.59 192 P Pn 16 54 49.3 -1.5
baz=184
LDUT S Sn 16 55 11.2 -0.2
baz=184
TTN Taitung 1.61 203 *eP* Pn 16 54 52.4 +1.3
baz=208
TTN *eS* Sg 16 55 14.4 -0.3
baz=208
SGST Jiashian 1.63 225 *i* P Pn 16 54 52.0 +0.7
baz=226
SGST *i* S Sg 16 55 15.2 0.0
baz=226
WSL Shuilin Townsh 1.63 244 P Pg 16 54 53.8 -0.6
baz=246
WSL S Sg 16 55 17.7 +2.1
baz=246
SLGT Liugui 1.65 222 P Pb 16 54 53.4 +0.2
baz=223
SLGT S Sg 16 55 16.9 +0.8
baz=223
ICHU Yijhu 1.67 239 P Pb 16 54 54.1 +0.5
baz=241
ICHU S Sg 16 55 17.1 +0.4
baz=241
CHN8 Yiju 1.73 239 *i* P Pb 16 54 54.7 +0.1
baz=225
CHN8 *i* S Sg 16 55 18.7 0.0
baz=225
IRIF Iriomote-Funau 1.73 86 P Pb 16 54 54.6 0.0
IRIF *eS* Sb 16 55 18.1 +1.8
IRIF Iriomote-Funau 1.73 86 A A 16 54 54.6
comp=E,5.0nm,6.6s,comp=N,7.0nm,1.5s
CHN3 Shinhua 1.78 230 *i* P Pg 16 54 56.4 -0.7
baz=231
SSHA Shanhua 1.79 233 P Pb 16 54 56.1 +0.4
baz=235
SSHA S Sg 16 55 19.7 -0.9
baz=235
HATJ Hateruma jima 1.81 95 *eP* Pn 16 54 54.4 +0.6
HATJ Hateruma jima 1.81 95 A A 16 54 54.4
comp=E,12nm,3.6s,comp=N,14nm,2.6s
ECL Taimali 1.82 206 P Pn 16 54 54.0 0.0
baz=209
ECL *eS* Sn 16 55 16.1 -0.9
baz=209
SCST Cishan 1.82 223 *i* P Pb 16 54 56.5 +0.3
baz=225
SCST *eS* Sg 16 55 22.6 +1.0
baz=225
SHHT Tainan City 1.82 229 P Pb 16 54 56.8 +0.6
baz=231
SHHT S Sg 16 55 20.9 -0.7
baz=231
SCLT Jiali 1.84 235 P Pb 16 54 56.3 -0.2
baz=237
SCLT S Sg 16 55 21.9 -0.2
baz=237
TSMG Majia 1.88 216 P Pb 16 54 56.8 -0.3
baz=218
TSMG S Sb 16 55 22.2 +1.7
baz=218
TWM1 Shoushan 1.92 223 *i* P Pb 16 54 58.3 +0.5
baz=224
TSCK Chigu Township 1.94 236 P Pn 16 54 57.2 +1.7
baz=239
TSCK S Sb 16 55 23.0 +0.8
baz=239
SGLT Jiouru 1.95 220 *i* P Pb 16 54 58.6 +0.3
baz=209
SGLT *eS* Sb 16 55 24.0 +1.5
baz=209
MASBT Mashibuluo 1.96 214 P Pn 16 54 57.7 +1.8
baz=217
MASBT S Sb 16 55 24.0 +1.1
baz=217
JKRS Kuro-shima 1.99 90 *eP* Pn 16 54 57.5 +1.3
JKRS Kuro-shima 1.99 90 A A 16 54 57.5
comp=E,11nm,3.5s,comp=N,13nm,2.4s

SNJT Kaohsiung City 2.02 223 P Pb 16 54 59.3 -0.2
baz=227
SNJT S Sg 16 55 26.9 -1.1
baz=227
EAST Anshuo 2.06 206 P Pn 16 54 58.3 +1.0
baz=198
EAST *eS* Sn 16 55 24.2 +1.3
baz=198
TAW Tawu 2.06 205 *eP* Pn 16 54 58.1 +0.8
baz=208
TAWH Dawu Township 2.08 205 P Pn 16 54 58.5 +0.9
baz=209
TAWH *eS* Sn 16 55 24.5 +1.1
baz=209
JIJ Ishigaki jima 2.11 86 P Pn 16 54 58.7 +0.7
JIJ S Sn 16 55 25.5 +1.4
WSSB Gushan 2.15 223 P Pn 16 54 59.7 +1.1
baz=225
SCZT Fangliau 2.17 211 *i* P Pn 16 55 00.3 +1.5
baz=213
SCZT *i* S Sb 16 55 29.7 +0.8
baz=213
KAU Kaohsiung 2.18 220 *eP* Pb 16 55 01.6 -0.6
baz=223
PNG Penghu 2.19 253 *i* P Pn 16 55 00.5 +1.4
baz=256
PNG *i* S Sn 16 55 28.7 +2.6
baz=256
PHUB P'eng-hu 2.19 251 P Pn 16 55 00.0 +0.9
baz=255
PHUB S Sn 16 55 28.4 +2.2
baz=255
WDGT Dungji 2.22 244 *i* P Pn 16 55 01.2 +1.7
baz=248
WDGT *i* S Sb 16 55 30.1 -0.2
baz=248
SLIU Shizi 2.23 205 P Pn 16 55 00.9 +1.3
baz=199
SLIU S Sb 16 55 31.0 +0.4
baz=199
LYUB Lan-yu 2.24 186 *eP* Pn 16 54 56.9 -2.9
baz=181
LYUB *eS* Sn 16 55 24.8 -2.5
baz=181
JISG Ishigakijimahi 2.28 81 P Pn 16 55 01.5 +1.1
JISG *eS* Sn 16 55 29.0 +0.6
VWUC VWUC 2.30 290 *eP* Pn 16 55 00.7 +0.2
baz=290
VWUC S Sn 16 55 29.7 +1.0
baz=290
SMST Manzhou Townsh 2.39 203 *eP* Pn 16 55 03.7 +1.9
baz=208
SMST *eS* Sn 16 55 33.4 +2.4
baz=208
VCHM Qimei 2.43 246 P Pn 16 55 04.0 +1.6
baz=232
VCHM S Sn 16 55 34.6 +2.6
baz=232
HEN Hengchun 2.44 205 *i* P Pn 16 55 04.7 +2.2
baz=195
HEN S Sn 16 55 34.6 +2.3
baz=195
TWKBT Hengchun 2.47 203 P Pn 16 55 02.8 -0.2
baz=208
TWKBT S Sn 16 55 35.8 +2.7
baz=208
TWK1 Hengchun 2.48 203 *i* P Pn 16 55 03.8 +0.8
baz=208
TWK1 S Sn 16 55 36.5 +3.4
baz=208
MATB Ma-tsu 2.56 318 *eP* Pn 16 55 03.8 -0.3
baz=317
MATB S Sn 16 55 36.0 +0.8
baz=317
PTMZ Houxiangcun 2.59 288 P Pn 16 55 05.4 +0.7
baz=289
PTMZ S Sn 16 55 36.5 +0.4
baz=289
JTJ Tarama 2.64 81 *eP* Pn 16 55 07.6 +2.3
JTJ *eS* Sn 16 55 39.1 +1.8
LYJJ Jianjiangzhen 2.97 321 *eP* Pn 16 55 10.2 +0.4
baz=320
LYJJ *eS* Sn 16 55 48.3 +3.1
baz=320
XPSS Dashiqiu 3.06 331 *eP* Pn 16 55 10.7 -0.4
baz=330
XPSS *eS* Sn 16 55 49.1 +1.5
baz=330
KNM Kinmen 3.11 274 *eP* Pn 16 55 13.7 +2.0
baz=274
MHZQ Yeshan 3.14 307 *eP* Pn 16 55 12.0 -0.2
baz=306
MHZQ *eS* Sn 16 55 52.2 +2.6
baz=306
KNMB Chin-men Tao 3.15 275 Pn Pn 16 55 12.4 +0.1
KNMB Chin-men Tao 3.15 275 *eP* Pn 16 55 12.8 +0.5
baz=276
KNMB *eS* Sn 16 55 50.1 +0.3
baz=276
JMJ Miyako jima 2 3.20 79 P Pn 16 55 15.4 +2.4
JOW Kunigami 6.36 65 Pn Pn 16 55 57.3 +0.8
JOW Kunigami 6.36 65 Pn Pn 16 55 56.2 -0.2
comp=N,1.7nm,0.3s,baz=297,slow=19,SNR=2.1
JOW Sn Sn 16 57 09.1 0.0
comp=N,1.5nm,0.3s,baz=157,slow=28,SNR=1.0
comp=N,14nm,0.4s
HKPS Hong Kong Po S 7.34 256 Pn Pn 16 56 10.0 +0.2
WHN Wuhan 9.14 315 P Pn 16 56 34.9 +0.3
WHN S Sn 16 58 14.5 -2.9
WHN LR LR
comp=N,3μm,13.1s
WHN LR LR
comp=E,2μm,10.9s
WHN LR LR
comp=Z,3μm,7.9s
TJN Taejon 13.00 20 Pn Pn 16 57 28.6 +1.2
KSRS Korea Array 14.17 20 Pn Pn 16 57 43.2 0.0
comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=4.0
KSRS LR LR 17 04 11.1
comp=Z,208nm,19.2s,baz=210,slow=42
comp=Z,0.8nm,0.4s
TNCH TengChong 21.21 277 P P 16 59 10.4 +1.7
TNCH pP sP 16 59 13.0 -0.5
TNCH sP pP 16 59 15.2 +2.9
TNCH S S 17 02 52.6 -12
TNCH sS sS 17 03 02.3 -8.3
TNCH pmax pmax
comp=Z,5.0nm,0.5s
TNCH pmax pmax
comp=Z,150nm,5.5s
TNCH LR LR
comp=N,180nm,4.7s
TNCH LR LR
comp=E,260nm,5.4s
TNCH LR LR
comp=Z,190nm,10.0s
USRK Ussuriysk Ar. 21.57 20 P P 16 59 10.5 -1.7
comp=Z,1.4nm,0.8s,baz=195,slow=15,SNR=1.9
comp=Z,1.4nm,0.8s
CMAR Chiang Mai Arr 22.07 259 P P 16 59 18.0 +0.2
comp=Z,0.8nm,0.9s,baz=71,slow=6.8,SNR=3.6
comp=Z,0.8nm,0.9s
TOLI2 Tolitoli 23.02 183 P P 16 59 26.6 -1.2
SBUM Sibu 23.57 205 P P 16 59 33.1 -0.3
GTA Gaotai 23.97 314 *eP* P 16 59 39.1 +1.8
GTA pP sP 16 59 42.9 +0.3
GTA pmax pmax
comp=Z,2.0nm,0.8s
KLR Kul'dur 26.13 15 P P 16 59 57.0 +0.3
comp=Z,2.7nm,0.9s,baz=233,slow=6.6,SNR=6.0
comp=Z,2.7nm,0.9s
SONM Songino Array 26.55 336 P P 17 00 01.9 +1.2
SONM Songino Array 26.55 336 P P 16 59 59.4 -1.2
comp=Z,1.5nm,0.7s,baz=152,slow=9.8,SNR=13
comp=Z,1.5nm,0.7s
FAKI Fak Fak 28.84 158 P P 17 00 20.8 -0.4
MK31 Makanchi Array 38.71 316 P P 17 01 47.2 +0.5
MKAR Makanchi Array 38.71 316 P P 17 01 47.3 +0.6
MKAR Makanchi Array 38.71 316 P P 17 01 47.0 +0.3
comp=Z,0.9nm,0.6s,baz=100,slow=8.2,SNR=10
MKAR PcP PcP 17 03 57.3 -1.1
comp=Z,0.8nm,1.0s,baz=96,slow=4.5,SNR=2.8
comp=Z,0.9nm,0.6s
MAKZ Makanchi 38.92 316 P P 17 01 48.9 +0.5
ZALV Zalesovo Beam 40.52 327 P P 17 01 59.7 -1.9
comp=Z,1.1nm,0.5s,baz=124,slow=7.9,SNR=7.0
comp=Z,1.1nm,0.5s

H11N1 WAKE ISLAND Hy 41.89 87 T T 17 47 26.0
baz=282
H11N2 WAKE ISLAND Hy 41.89 87 T T 17 47 31.4
baz=282,slow=74,SNR=5.4
H11N3 WAKE ISLAND Hy 41.91 87 T T 17 47 29.1
baz=282,slow=74,SNR=4.6
H11S3 WAKE ISLAND Hy 42.02 89 T T 17 47 39.5
baz=282,slow=74,SNR=9.6
H11S1 WAKE ISLAND Hy 42.03 89 T T 17 47 37.5
baz=282,slow=74,SNR=5.0
H11S2 WAKE ISLAND Hy 42.04 89 T T 17 47 35.7
baz=282
KURBB Kurchatov Arra 42.45 320 P P 17 02 16.9 -0.6
comp=Z,1.2nm,0.8s,baz=114,slow=7.8,SNR=8.0
comp=Z,1.2nm,0.8s
COEN Coen 43.31 149 P P 17 02 24.9 +0.1
COEN IAmb IAmb 17 02 59.3
comp=Z,12nm,1.1s
WB0 Warramunga Arr 45.42 163 P P 17 02 40.3 -1.3
WB0 IAmb IAmb 17 02 47.6
comp=Z,8.8nm,1.4s
WRA Warramunga Arr 45.57 163 P P 17 02 41.4 -1.5
comp=Z,0.9nm,0.9s,baz=344,slow=8.6,SNR=2.9
comp=Z,0.9nm,0.9s
WR0 Warramunga Arr 45.64 163 P P 17 02 42.0 -1.4
WR0 IAmb IAmb 17 02 43.2
comp=Z,4.3nm,1.1s
KKAR Karatay Array 45.91 307 P P 17 02 45.7 +0.3
BVAR Borovoye Array 48.01 321 P P 17 03 01.0 -0.6
comp=Z,0.9nm,0.5s,baz=109,slow=8.6,SNR=8.2
BVAR PcP PcP 17 04 27.7 -1.8
comp=Z,0.4nm,0.7s,baz=119,slow=1.8,SNR=2.3
comp=Z,0.9nm,0.5s
BRVK Borovoye 48.08 321 P P 17 03 03.2 +1.0
BRVK IAmb IAmb 17 03 07.8
comp=Z,3.6nm,1.1s
AS31 Alice Springs 49.04 165 P P 17 03 09.1 -0.7
ASAR Alice Springs 49.04 165 P P 17 03 09.4 -0.5
ASAR Alice Springs 49.04 165 P P 17 03 09.8 -0.1
comp=Z,0.4nm,0.6s,baz=342,slow=6.8,SNR=15
comp=Z,0.4nm,0.6s
ABKAR Akbulak array 53.83 314 P P 17 03 46.4 +1.0
ABKAR Akbulak array 53.83 314 P P 17 03 46.3 +0.8
ABKAR IAmb IAmb 17 03 47.3
comp=Z,4.1nm,0.9s
GEYT Alibeck 55.28 300 P P 17 03 56.9 +0.6
comp=Z,3.5nm,0.8s,baz=84,slow=13,SNR=7.8
comp=Z,3.5nm,0.8s
NWAO Narrogin (SRO) 57.02 185 P P 17 04 07.2 -1.3
E18K Tukpahlearik C 63.09 25 P P 17 04 50.5 +0.6
M16K Timber Creek 63.91 32 P P 17 04 55.3 0.0
D19K Kuna River 64.05 24 P P 17 04 55.5 -0.6
D19K IAmb IAmb 17 05 32.6
comp=Z,4.6nm,1.2s
E19K Redstone River 64.39 25 P P 17 04 58.8 +0.4
H19K Roundabout Mou 64.79 27 P P 17 05 01.3 +0.3
TTA Tatalina 65.16 30 P P 17 05 03.7 +0.1
TTA IAmb IAmb 17 05 22.2
comp=Z,5.9nm,1.4s
J19K Poorman 65.25 29 P P 17 05 04.3 +0.2
J19K IAmb IAmb 17 05 23.2
comp=Z,6.9nm,1.4s
B21K Ikpikpuk River 65.27 23 P P 17 05 04.3 +0.3
B21K IAmb IAmb 17 05 13.5
comp=Z,4.1nm,0.9s
B22K Teshekpuk Lake 65.64 22 P P 17 05 06.4 0.0
B22K IAmb IAmb 17 05 07.7
comp=Z,4.3nm,0.9s
J20K Nowinta River 65.88 29 P P 17 05 08.0 -0.1
D22K Ayikyak River 66.01 23 P P 17 05 09.2 +0.3
D22K IAmb IAmb 17 05 10.2
comp=Z,3.5nm,0.9s
H21K Melozitna Rive 66.29 27 P P 17 05 10.9 +0.2
H21K IAmb IAmb 17 05 23.6
comp=Z,3.8nm,1.2s
MLY Manley 67.23 27 P P 17 05 18.1 +1.3
MLY IAmb IAmb 17 05 19.2
comp=Z,4.1nm,1.4s
D24K Happy Valley 67.36 23 P P 17 05 17.9 +0.4
D24K IAmb IAmb 17 05 19.6
comp=Z,3.0nm,0.8s
D25K Kavik River 68.19 22 P P 17 05 22.6 -0.2
D25K IAmb IAmb 17 05 24.2
comp=Z,3.4nm,1.0s
ILAR Eielson Array 68.89 27 P P 17 05 26.0 -1.1
comp=Z,0.2nm,0.6s,baz=296,slow=7.2,SNR=2.4
comp=Z,0.2nm,0.6s
BMAR Burnt Mountain 69.23 24 P P 17 05 29.6 +0.3
M24K Tolsona, Glenn 69.79 30 P P 17 05 33.0 +0.1
FINES FINESS Array B 71.70 330 P P 17 05 44.3 0.0
FINES FINESS Array B 71.70 330 P P 17 05 44.0 -0.3
comp=Z,1.4nm,0.8s,baz=64,slow=13,SNR=6.0
comp=Z,1.4nm,0.8s
DAWY Dawson 72.22 27 P P 17 05 47.2 -0.3
DAWY IAmb IAmb 17 05 49.0
comp=Z,7.2nm,1.4s
G30M tAoh Zraii Nji 72.48 24 P P 17 05 48.5 -0.5
INK Inuvik 72.95 22 LR LR 17 40 47.1
comp=Z,159nm,19.8s,baz=182,slow=38
AKASG Malin Array Be 73.22 318 P P 17 05 52.5 -1.2
comp=Z,0.4nm,0.5s,baz=64,slow=4.3,SNR=2.5
comp=Z,0.4nm,0.5s
BRTR Keskin Array B 73.62 307 P P 17 05 56.6 +0.2
comp=Z,1.9nm,0.9s,baz=108,slow=6.7,SNR=9.8
comp=Z,1.9nm,0.9s
BURAR Bucovina Array 76.73 316 P P 17 06 14.2 0.0
NB2 NORSAR Subarra 78.45 332 P P 17 06 28.3 +4.9
comp=Z,1.1nm,0.7s,baz=58,slow=5.6
YKA Yellowknife Ar 82.69 23 P P 17 06 45.0 -1.1
comp=Z,1.0nm,0.8s,baz=312,slow=4.7,SNR=19
comp=Z,1.0nm,0.8s
GERES GERESS Array B 83.17 321 P P 17 06 49.2 +0.2
comp=Z,0.2nm,0.4s,baz=51,slow=6.4,SNR=2.5
comp=Z,0.2nm,0.4s
PDAR Pinedale Array 98.24 36 P P 17 07 59.6 -0.9
comp=Z,0.2nm,0.6s,baz=336,slow=4.0,SNR=1.3
comp=Z,0.2nm,0.6s
BAUV El Baul 145.64 17 PKPdf 17 14 00.6 -1.5

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*TAP **04** 16:58:02.5,24.°18N×121.°81E,h12km,ML3.4,C*
*JMA **04** 16:58:03.3±0.1,24.°2N±0.°4×121.°8E±0.°8,h11km±1km,*
TAIWAN REGION
ISC 04 16:58:03.0±0.9,**24.°18N**±0.°01×**121.°79E**±0.°02,**h10**km±5km,
n87,σ**0**°**72**/167,**3C-8D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**340**	P	**Pg**		**16 58 06.0**	**-0.2**
	baz=336							
EHP				S	**Sg**		**16 58 08.8**	**+0.4**
	baz=336							
EAHA	**Aohua**	**0.15**	**342** ⇓ *i*	P	**Pg**		**16 58 06.3**	**-0.2**
	baz=336							
EAHA				*eS*	**Sg**		**16 58 09.4**	**+0.5**
	baz=336							
ETL	**Fush Village**	**0.16**	**262**	P	**Pg**		**16 58 06.5**	**0.0**
	baz=264							
ETL				*eS*	**Sg**		**16 58 09.8**	**+0.8**
	baz=264							
NACB	**Ninganchiao**	**0.18**	**268** ⇑ *i*	P	**Pg**		**16 58 06.8**	**-0.1**
	baz=270							
NACB				*eS*	**Sg**		**16 58 09.9**	**+0.4**
	baz=270							
TWD	**Chiawan**	**0.21**	**241**	P	**Pg**		**16 58 07.2**	**-0.1**
	baz=251							
TWD				S	**Sg**		**16 58 11.2**	**+0.9**
	baz=251							
ENA	**Nanau**	**0.25**	**349** ⇓ *i*	P	**Pg**		**16 58 07.9**	**-0.2**
	baz=345							
ENA				*eS*	**Sg**		**16 58 11.9**	**+0.3**
	baz=345							
EWUT	**Wuta**	**0.26**	**357**	P	**Pg**		**16 58 08.3**	**-0.1**
	baz=351							
EWUT				*eS*	**Sg**		**16 58 12.5**	**+0.5**
	baz=351							
HWA	**Hwalien**	**0.27**	**220**	P	**Pb**		**16 58 09.3**	**-0.5**
	baz=236							
ETLH	**Xiulin Townshi**	**0.28**	**275**	P	**Pg**		**16 58 08.8**	**0.0**
	baz=276							
ETM	**Tongmen**	**0.35**	**232**	P	**Pg**		**16 58 09.8**	**-0.1**
	baz=236							
ETM				*eS*	**Sb**		**16 58 15.4**	**-1.5**
	baz=236							
LXIB	**Xiulin Townshi**	**0.38**	**245**	P	**Pg**		**16 58 10.3**	**-0.3**
	baz=249							
LXIB				S	**Sg**		**16 58 16.2**	**+0.6**

	baz=249								
ESAO	**Su ao**	**0.40**	**7**	P		**Pg**	**16 58 10.6**	**-0.2**
	baz=356								
ESAO				S		**Sg**	**16 58 16.5**	**+0.4**
	baz=356								
LATG	**Datong**	**0.43**	**325**	P		**Pg**	**16 58 11.3**	**-0.1**
	baz=324								
LATG				*e*S		**Sg**	**16 58 17.0**	**-0.2**
	baz=324								
TWC	**Suao**	**0.43**	**7**	⇓P		**Pg**	**16 58 11.2**	**-0.2**
	baz=357								
TWC				*e*S		**Sg**	**16 58 17.9**	**+0.8**
	baz=357								
SHUL	**Shoufeng**	**0.45**	**208**	P		**Pb**	**16 58 12.7**	**-0.2**
	baz=213								
SHUL				*e*S		**Sb**	**16 58 21.1**	**+1.5**
	baz=213								
NNSB	**Datong**	**0.45**	**303**	⇓P		**Pg**	**16 58 11.8**	**-0.1**
	baz=303								
NNSB				*e*S		**Sg**	**16 58 17.8**	**+0.1**
	baz=303								
NNSH	**Datong**	**0.45**	**303**	*e*P		**Pg**	**16 58 11.8**	**0.0**
	baz=303								
NNSH				*e*S		**Sg**	**16 58 17.9**	**+0.1**
	baz=303								
NDS	**Dongshan**	**0.46**	**351**	P		**Pg**	**16 58 11.9**	**-0.1**
	baz=347								
NDS				*e*S		**Sg**	**16 58 18.8**	**+0.8**
	baz=347								
NNS	**Nan Shan**	**0.46**	**304**	P		**Pg**	**16 58 12.0**	**-0.1**
	baz=304								
NNS				*e*S		**Sg**	**16 58 18.6**	**+0.3**
	baz=304								
EOS2	**EOS2**	**0.47**	**59**	*e*P		**Pb**	**16 58 13.8**	**+0.6**
	baz=37								
WHF	**Hehuan Shan**	**0.48**	**266**	*e*P		**Pg**	**16 58 12.6**	**0.0**
	baz=268								
WHF				*e*S		**Sg**	**16 58 19.2**	**+0.2**
	baz=268								
NDT	**Datong Townshi**	**0.49**	**329**	P		**Pg**	**16 58 12.7**	**+0.1**
	baz=327								
NDT				*e*S		**Sb**	**16 58 19.9**	**-1.1**
	baz=327								
ESL	**Shilin**	**0.49**	**222**	⇑P		**Pg**	**16 58 12.5**	**-0.1**
	baz=235								
ESL				*e*S		**Sb**	**16 58 20.6**	**-0.3**
	baz=235								
ENTT	**Nioudou**	**0.50**	**336**	P		**Pg**	**16 58 12.8**	**0.0**
	baz=334								
ENTT				S		**Sb**	**16 58 20.3**	**-1.0**
	baz=334								
FUSS	**Fushou**	**0.51**	**278**	*e*P		**Pg**	**16 58 13.1**	**+0.2**
	baz=280								
FUSS				*e*S		**Sg**	**16 58 20.1**	**+0.5**
	baz=280								
TWE	**Neicheng**	**0.55**	**348**	⇓*i*P		**Pg**	**16 58 13.7**	**0.0**
	baz=345								
TWE				*e*S		**Sg**	**16 58 21.5**	**+0.5**
	baz=345								
TWT	**Tachien**	**0.57**	**277**	*e*P		**Pb**	**16 58 14.7**	**-0.4**
	baz=278								
TWT				*e*S		**Sb**	**16 58 22.8**	**-0.5**
	baz=278								
CHGB	**Renai**	**0.58**	**258**	*e*P		**Pb**	**16 58 14.5**	**-0.8**
	baz=253								
CHGB				*e*S		**Sb**	**16 58 22.8**	**-0.9**
	baz=253								
TDCB	**Techi**	**0.58**	**277**	*e*P		**Pb**	**16 58 14.8**	**-0.6**
	baz=278								
TDCB				*e*S		**Sb**	**16 58 22.5**	**-1.3**
	baz=278								
WARBT	**Fenglin Townsh**	**0.59**	**219**	⇑P		**Pg**	**16 58 14.3**	**-0.2**
	baz=230								
WARBT				*e*S		**Sb**	**16 58 23.9**	**-0.1**
	baz=230								
FUSB	**Fushanzhiwuyua**	**0.61**	**342**	⇓P		**Pg**	**16 58 14.8**	**0.0**
	baz=330								
FUSB				*e*S		**Sb**	**16 58 23.5**	**-0.9**
	baz=330								
EGFH	**Guangfu**	**0.61**	**213**	*e*P		**Pb**	**16 58 15.0**	**-0.7**
	baz=224								
EGFH				*e*S		**Sn**	**16 58 25.6**	**-2.0**
	baz=224								
YHNB	**Yeheng**	**0.62**	**322**	⇓P		**Pg**	**16 58 15.1**	**+0.1**
	baz=321								
YHNB				*e*S		**Sb**	**16 58 24.0**	**-0.7**
	baz=321								
NSK	**Sanguang**	**0.63**	**321**	⇓P		**Pg**	**16 58 15.3**	**0.0**
	baz=320								
NSK				*e*S		**Sb**	**16 58 24.2**	**-0.9**
	baz=320								
WUSB	**Renai**	**0.65**	**253**	P		**Pb**	**16 58 15.6**	**-0.8**
	baz=256								
WUSB				*e*S		**Sb**	**16 58 24.7**	**-0.8**
	baz=256								
VWDT	**VWDT**	**0.73**	**235**	*e*P		**Pb**	**16 58 17.2**	**-0.6**
	baz=244								
VWDT				*e*S		**Sb**	**16 58 28.4**	**+0.5**
	baz=244								
NFF	**Wufeng Townshi**	**0.76**	**306**	*e*P		**Pb**	**16 58 18.2**	**-0.2**
	baz=306								
NFF				*e*S		**Sb**	**16 58 28.0**	**-0.9**
	baz=306								
HGSD	**Ruisui**	**0.76**	**206**	*e*P		**Pb**	**16 58 18.3**	**-0.1**
	baz=199								
WHP	**Taichung City**	**0.78**	**277**	*e*P		**Pb**	**16 58 18.6**	**0.0**
	baz=279								
WHP				*e*S		**Sb**	**16 58 29.5**	**+0.2**
	baz=279								
WPL	**Puli Township**	**0.78**	**258**	*e*P		**Pb**	**16 58 18.4**	**-0.3**
	baz=260								
WPL				*e*S		**Sb**	**16 58 28.7**	**-0.6**
	baz=260								
EHY	**Hungye**	**0.80**	**213**	*e*P		**Pb**	**16 58 18.6**	**-0.4**
	baz=229								
EHY				*e*S		**Sb**	**16 58 30.2**	**+0.4**
	baz=229								
DPDB	**Guoxing**	**0.81**	**260**	*e*P		**Pb**	**16 58 18.9**	**-0.2**
	baz=262								
DPDB				*e*S		**Sb**	**16 58 29.7**	**-0.4**
	baz=262								
WCS	**Beigang Elemen**	**0.81**	**261**	*e*P		**Pb**	**16 58 18.9**	**-0.4**
	baz=257								
WCS				*e*S		**Sb**	**16 58 29.6**	**-0.6**
	baz=257								
TATO	**Taipei**	**0.84**	**341**	P		**Pb**	**16 58 19.3**	**-0.4**
	baz=338								
TATO				*e*S		**Sg**	**16 58 30.1**	**0.0**
	baz=338								
TWB1	**Santiao Chiao**	**0.84**	**12**	*e*P		**Pg**	**16 58 18.8**	**-0.5**
	baz=8.0								
TWB1				*e*S		**Sg**	**16 58 30.6**	**+0.3**
	baz=8.0								
LIOB	**Emei**	**0.85**	**303**	*e*P		**Pn**	**16 58 20.2**	**-0.8**
	baz=304								
LIOB				*e*S		**Sb**	**16 58 31.0**	**-0.2**
	baz=304								
NSTT	**Nanjuang**	**0.85**	**302**	*e*P		**Pb**	**16 58 19.9**	**0.0**
	baz=302								
NSTT				*e*S		**Sb**	**16 58 31.3**	**0.0**
	baz=302								
SSLB	**Suanglung**	**0.86**	**243**	*e*P		**Pg**	**16 58 19.4**	**-0.2**
	baz=255								
SSLB				*e*S		**Sb**	**16 58 30.8**	**-0.9**
	baz=255								
SMLT	**Sun Moon Lake**	**0.87**	**250**	*e*P		**Pb**	**16 58 19.6**	**-0.6**
	baz=253								
SMLT				*e*S		**Sb**	**16 58 31.1**	**-0.8**
	baz=253								
NWF	**Wu-fen Shan**	**0.89**	**359**	*e*P		**Pb**	**16 58 20.3**	**-0.3**
	baz=349								
NWF				*e*S		**Sb**	**16 58 32.0**	**-0.4**
	baz=349								
WFSB	**Wu-fen Shan**	**0.89**	**359**	*e*P		**Pb**	**16 58 20.3**	**-0.2**
	baz=349								
WFSB				*e*S		**Sg**	**16 58 31.9**	**+0.2**
	baz=349								
TYC	**Yuchr**	**0.90**	**252**	*e*P		**Pb**	**16 58 20.2**	**-0.4**
	baz=255								
TYC				*e*S		**Sg**	**16 58 31.4**	**-0.6**
	baz=255								
YULB	**Yu-li**	**0.91**	**210**	*e*P		**Pg**	**16 58 19.9**	**-0.5**
	baz=226								
YULB				*e*S		**Sb**	**16 58 33.1**	**+0.1**
	baz=226								
SXI1	**Grass Mountain**	**0.91**	**5**	*e*P		**Pg**	**16 58 20.6**	**0.0**
	baz=1.0								
SXI1				*e*S		**Sb**	**16 58 32.9**	**-0.3**
	baz=1.0								
NTY	**Taoyuan**	**0.93**	**331**	*e*P		**Pn**	**16 58 22.1**	**0.0**
	baz=336								
NTY				*e*S		**Sn**	**16 58 34.6**	**-0.9**
	baz=336								
TWF1	**Yuli**	**0.94**	**209**	*e*P		**Pg**	**16 58 20.6**	**-0.5**
	baz=227								
TWF1				*e*S		**Sb**	**16 58 33.6**	**-0.4**
	baz=227								
SBCB	**Hsinchu**	**0.95**	**310**	*e*P		**Pn**	**16 58 22.4**	**-0.1**
	baz=310								
SBCB				*e*S		**Sn**	**16 58 37.4**	**+1.2**
	baz=310								
NSY	**Sanyi**	**0.97**	**284**	*e*P		**Pn**	**16 58 22.8**	**+0.1**
	baz=286								
NSY				*e*S		**Sn**	**16 58 36.8**	**+0.3**
	baz=286								
TWS1	**Kuangyinshan**	**0.98**	**340**	*e*P		**Pn**	**16 58 22.5**	**-0.3**
	baz=338								
TWS1				*e*S		**Sn**	**16 58 37.8**	**+1.1**
	baz=338								
NMLH	**Miaoli**	**0.98**	**291**	*e*P		**Pn**	**16 58 24.1**	**+1.2**
	baz=292								
NMLH				*e*S		**Sn**	**16 58 36.6**	**-0.1**
	baz=292								
YM01	**YM01**	**0.98**	**348**	*e*P		**Pb**	**16 58 22.3**	**+0.1**
	baz=345								
YM01				*e*S		**Sn**	**16 58 36.3**	**-0.5**
	baz=345								
WHYT	**Xinyi Township**	**0.99**	**241**	*e*P		**Pn**	**16 58 22.6**	**-0.3**
	baz=251								
WHYT				*e*S		**Sn**	**16 58 37.4**	**+0.5**
	baz=251								
WWF	**Wufeng**	**1.01**	**262**	*e*P		**Pn**	**16 58 24.0**	**+0.8**
	baz=261								
WWF				*e*S		**Sn**	**16 58 38.8**	**+1.4**
	baz=261								
WJS	**Zhushan**	**1.04**	**250**	*e*P		**Pn**	**16 58 23.8**	**+0.2**
	baz=254								
WJS				*e*S		**Sn**	**16 58 39.9**	**+1.7**
	baz=254								
WNT1	**Nantou City**	**1.05**	**255**	*e*P		**Pn**	**16 58 24.6**	**+0.8**
	baz=254								
WNT1				*e*S		**Sn**	**16 58 40.4**	**+1.9**
	baz=254								
WNT	**Mingjian**	**1.06**	**254**	*e*P		**Pn**	**16 58 24.4**	**+0.6**
	baz=253								
WNT				*e*S		**Sn**	**16 58 40.6**	**+1.9**
	baz=253								
ALS	**Alishan**	**1.12**	**234**	*e*P		**Pn**	**16 58 24.8**	**-0.2**
	baz=227								
ALS				*e*S		**Sn**	**16 58 41.2**	**+0.5**
	baz=227								
CHKT	**Chengkung**	**1.15**	**200**	*e*P		**Pb**	**16 58 23.7**	**-1.2**
	baz=204								
CHKT				*e*S		**Sg**	**16 58 39.5**	**-0.4**
	baz=204								
YOJ	**Yonaguni jima**	**1.15**	**76**	*e*P		**Pg**	**16 58 26.0**	**+1.0**
EHD	**Haiduan**	**1.16**	**208**	*e*P		**Pb**	**16 58 24.5**	**-0.6**
	baz=212								
EHD				*e*S		**Sn**	**16 58 41.1**	**-0.1**
	baz=212								
CHN5	**Tsauling**	**1.17**	**241**	*e*P		**Pg**	**16 58 26.0**	**+0.4**
	baz=245								
CHN5				*e*S		**Sn**	**16 58 43.0**	**+1.3**
	baz=245								
ELDTW	**Lidau**	**1.22**	**216**	*e*P		**Pn**	**16 58 24.8**	**-1.4**
	baz=209								
ELDTW				*e*S		**Sb**	**16 58 41.2**	**-0.8**
	baz=209								
WCKO	**Fanlu**	**1.31**	**236**	*e*P		**Pg**	**16 58 28.8**	**+0.5**
	baz=241								
WCKO				*e*S		**Sg**	**16 58 47.2**	**+1.8**
	baz=241								
WRL	**Guolierlin Hig**	**1.32**	**258**	*e*P		**Pg**	**16 58 28.0**	**-0.4**
	baz=262								
WRL				*e*S		**Sg**	**16 58 46.6**	**+1.0**
	baz=262								
RLNB	**Erlin**	**1.34**	**258**	*e*S		**Sg**	**16 58 48.2**	**+2.0**
	baz=262								
STYH	**Taoyuan**	**1.37**	**223**	*e*P		**Pn**	**16 58 27.8**	**-0.3**
	baz=217								
STYH				*e*S		**Sg**	**16 58 47.8**	**+0.6**
	baz=217								
CHN4	**Tsaushan**	**1.38**	**233**	*e*P		**Pg**	**16 58 29.7**	**+0.3**
	baz=238								
CHN4				*e*S		**Sg**	**16 58 49.0**	**+1.8**
	baz=238								
WTK	**Tuku**	**1.38**	**249**	*e*P		**Pg**	**16 58 29.3**	**-0.1**
	baz=253								
WTK				*e*S		**Sg**	**16 58 48.6**	**+1.3**
	baz=253								
TPUB	**Ta-pu**	**1.38**	**231**	*e*P		**Pg**	**16 58 28.9**	**-0.6**
	baz=225								
TPUB				*e*S		**Sg**	**16 58 49.1**	**+1.7**
	baz=225								
STYT	**Tauyuan**	**1.39**	**223**	*e*P		**Pn**	**16 58 27.9**	**-0.6**
	baz=217								
STYT				*e*S		**Sn**	**16 58 46.5**	**-0.4**
	baz=217								
WTP	**Ta-pu**	**1.43**	**229**	*e*P		**Pg**	**16 58 30.2**	**-0.2**
	baz=234								
WTP				*e*S		**Sg**	**16 58 50.0**	**+1.1**
	baz=234								
TWK	**Hsinying**	**1.50**	**233**	*e*P		**Pg**	**16 58 31.2**	**-0.7**
	baz=237								
TWK				*e*S		**Sg**	**16 58 52.2**	**+0.9**
	baz=237								
SNST	**Tainan City**	**1.52**	**231**	*e*P		**Pb**	**16 58 31.3**	**0.0**
	baz=236								
SNST				*e*S		**Sg**	**16 58 52.4**	**+0.3**
	baz=236								
WSF	**Szhu**	**1.54**	**250**	*e*S		**Sg**	**16 58 53.3**	**+0.9**
	baz=254								
SGST	**Jiashian**	**1.56**	**226**	*e*P		**Pb**	**16 58 31.3**	**-0.7**
	baz=231								
SGST				*e*S		**Sg**	**16 58 53.9**	**+0.7**
	baz=231								
SLGT	**Liugui**	**1.58**	**222**	*e*P		**Pb**	**16 58 32.2**	**-0.1**
	baz=214								
SLGT				*e*S		**Sg**	**16 58 54.3**	**+0.3**
	baz=214								
TSMG	**Majia**	**1.81**	**216**	*e*P		**Pb**	**16 58 34.8**	**-1.4**
	baz=220								
TSMG				*e*S		**Sb**	**16 58 58.7**	**-0.2**
	baz=220								

*IDC **04** 16:59:54.7±8.7, 31°.70S×179°.96E, h314km±97km, mb2.9/2, mbtmp3.7/3, Error ellipse: s-maj=101.1km s-min=47.6km az=179.0*

ISC 04 16:59:51.1±2.4, 31°.8S±0°.1×179°.4W±0°.3, h300km, n20, σ3°01/21, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.09**	**203**	P	**Pn**	**17 01 36.7**	**+3.3**
	9.0nm,1.0s,baz=356,slow=4.9,SNR=18						
URZ				S	**S**	**17 02 56.1**	**-0.2**
	9.3nm,0.3s,baz=346,slow=23,SNR=14						
RAHZ	**Arahi**	**7.70**	**201**	P	**S**	**17 03 11.5**	**+1.6**
WHHZ	**Waihua**	**7.80**	**200**	P	**S**	**17 03 14.7**	**+2.5**
ARHZ	**Aropaoanui**	**8.05**	**201**	P	**S**	**17 03 15.0**	**-2.6**
MCHZ	**McNeill Hill**	**8.30**	**202**	P	**S**	**17 03 22.2**	**-1.2**
BHHZ	**Black Hill Sta**	**8.56**	**204**	P	**S**	**17 03 29.9**	**+0.7**
KRHZ	**Kereru**	**8.59**	**203**	P	**S**	**17 03 28.9**	**-1.0**
VRZ	**Vera Road**	**8.77**	**211**	P	**S**	**17 03 40.7**	**+6.9**
PXZ	**Pawanui**	**8.80**	**199**	P	**S**	**17 03 32.6**	**-1.9**
PNHZ	**Pukenui**	**8.89**	**203**	P	**S**	**17 03 33.5**	**-3.2**
WPHZ	**Waipukurau**	**8.95**	**201**	P	**S**	**17 03 38.2**	**+0.2**
TSZ	**Takapari Road**	**9.10**	**203**	P	**S**	**17 03 38.6**	**-2.8**
DVHZ	**Dannevirke**	**9.25**	**202**	P	**S**	**17 03 42.8**	**-2.0**
ANWZ	**Angora Road**	**9.30**	**200**	P	**S**	**17 03 42.1**	**-3.8**
PRWZ	**Pori Road**	**9.54**	**202**	P	**S**	**17 03 49.8**	**-1.6**
BFZ	**Birch Farm**	**9.58**	**200**	P	**S**	**17 03 50.3**	**-1.8**
HOWZ	**Holdsworth Sta**	**10.00**	**203**	P	**S**	**17 03 56.5**	**-5.3**
ASAR	**Alice Springs**	**41.88**	**269**	P	**P**	**17 07 10.8**	**-2.0**
	0.2nm,0.4s,baz=108,slow=7.6,SNR=15 0.2nm,0.4s						
WRA	**Warramunga Arr**	**42.99**	**274**	P	**P**	**17 07 19.3**	**-2.5**
	0.4nm,0.3s,baz=112,slow=8.0,SNR=7.4 0.4nm,0.3s						
FINES	**FINESS Array B**	**145.99**	**338**	PKPbc	**PKPdf**	**17 18 55.0**	**+1.5**
	2.7nm,0.9s,baz=46,slow=4.0,SNR=3.5						

*IDC **04** 17:09:25.5±3.1, 83°.00N×7°.49W, h0km, mb3.5/3, mbtmp3.6/5, ML3.2/2, MS3.9/1, Error ellipse: s-maj=55.8km s-min=43.3km az=114.0*

*BER **04** 17:09:31.2±1.1, 83°.21N×1°.92W, h10km, mb(Pn)3.9, ML2.7(NAO), Confirmed Earthquake*

*FCIAR **04** 17:09:32.0, 82°.89N×4°.46W, h10km, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.60*

*DNK **04** 17:09:34.4±4.9, 82°.25N×7°.36W, h18km±61km, ML1.9*

ISC 04 17:09:34.8±2.7, 82.89N±0°.09×0°.0W±0°.2, h10km, n18, σ0s69/28, mb3.3/3, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.40**	**149**	Pn	**Pn**	**17 10 41.1**	**-0.5**
KBS				Sn	**Sn**	**17 11 32.4**	**-0.3**
KBS	**Kingsbay**	**4.40**	**149**	*e*P	**Pn**	**17 10 41.2**	**-0.3**
KBS				*e*S	**Sn**	**17 11 32.8**	**0.0**
KBS				IAML		17 11 36.8	
	comp=Z,8.6nm,0.3s						
KBS	**Kingsbay**	**4.40**	**149**	*i* P	**Pn**	**17 10 40.2**	**-1.3**
KBS				*i* S	**Sn**	**17 11 31.5**	**-1.3**
KBS	**Kingsbay**	**4.40**	**149**	*e*P	**Pn**	**17 10 40.9**	**-0.7**
KBS				*e*S	**Sn**	**17 11 32.5**	**-0.3**
BRBB	**Barentsburg B**	**5.34**	**147**	Pn	**Pn**	**17 10 54.1**	**-0.3**
BRBB				Sn	**Sn**	**17 11 55.4**	**-0.6**
BRBB	**Barentsburg B**	**5.34**	**147**	*e*P	**Pn**	**17 10 54.8**	**+0.4**
BRBB				*e*S	**Sn**	**17 11 55.9**	**0.0**
BRBA	**Barentsburg A**	**5.38**	**147**	Pn	**Pn**	**17 10 56.5**	**+1.6**
SPA0	**Spitsbergen Ar**	**5.42**	**142**	Pn	**Pn**	**17 10 55.3**	**-0.3**
	baz=337,slow=6.9						
SPA0				Sn	**Sn**	**17 11 58.5**	**+0.7**
	baz=341,slow=37						
SPA0	**Spitsbergen Ar**	**5.42**	**142**	Pn	**Pn**	**17 10 55.3**	**-0.3**
	baz=337,slow=6.9						
SPA0				Sn	**Sn**	**17 11 58.5**	**+0.7**
	baz=341,slow=37						
SPA0	**Spitsbergen Ar**	**5.42**	**142**	*e*P	**Pn**	**17 10 55.0**	**-0.5**
SPA0				*e*S	**Sn**	**17 11 56.8**	**-1.0**
SPITS	**Spitsbergen Ar**	**5.42**	**142**	Pn	**Pn**	**17 10 55.5**	**-0.1**
	baz=355,slow=10						
SPITS				Sn	**Sn**	**17 11 58.2**	**+0.3**
	baz=340,slow=14 comp=Z,6.8nm,0.6s						
ZFI2	**Zemlya Franca-**	**6.88**	**83**	P	**Pn**	**17 11 15.8**	**+0.2**
ZFI2				*e*S	**Sn**	**17 12 33.6**	**-0.2**
	comp=Z,17nm,3.4s						
OMEGA	**Omega**	**6.91**	**83**	P	**Pn**	**17 11 16.0**	**+0.1**
OMEGA				*e*S	**Sn**	**17 12 33.7**	**-0.7**
	comp=Z,17nm,1.3s						
ARCES	**ARCESS Array B**	**14.45**	**143**	Pn	**Pn**	**17 13 00.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=351,slow=11,SNR=1.7 comp=Z,4.3nm,1.0s						
KURBB	**Kurchatov Arra**	**38.68**	**93**	P	**P**	**17 16 58.0**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=357,slow=7.2,SNR=4.3 comp=Z,0.7nm,1.0s						
BBB	**Bella Bella**	**42.73**	**314**	LR	LR	17 36 28.1	
	comp=Z,134nm,18.6s,baz=232,slow=39						
MKAR	**Makanchi Array**	**42.91**	**90**	P	**P**	**17 17 32.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=350,slow=6.4,SNR=4.6 comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.79**	**178**	P	**P**	17 20 38.4	-6.5
	comp=Z,0.3nm,0.4s,baz=354,slow=4.5,SNR=2.7 comp=Z,0.3nm,0.4s						

IDC 04 17:10:04.7±4.3, 17°.51N×120°.21E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=431.5km s-min=29.4km az=61.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.72**	**159**	P	P	17 17 38.8	-0.3
	0.3nm,0.5s,baz=340,slow=8.9,SNR=1.6 0.3nm,0.5s						
MKAR	**Makanchi Array**	**42.74**	**322**	P	P	17 18 03.6	-0.1
	0.3nm,1.0s,baz=107,slow=8.3,SNR=1.6 0.3nm,1.0s						
ASAR	**Alice Springs**	**43.05**	**161**	P	P	17 18 06.5	0.0
	0.3nm,0.5s,baz=336,slow=6.7,SNR=12 0.3nm,0.5s						

*CATAC **04** 17:12:07.3±0.8, 8°.24N×82°.83W, h10km±2km, ML2.8*

*UPA **04** 17:12:08.2±0.8, 8°.29N×82°.83W, h19km±3km, MW3.1, Fault plane solution: NP1:φs138.00000°, δ29.00000°, λ58.00000°.*

ISC 04 17:12:07.9±1.0, 8°.30N±0°.03×82°.82W±0°.02, h14km±8km, n25, σ0s83/49, 6C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTPM	**Petroterminale**	**0.11**	**212**	⇑*i*P	**Pb**	**17 12 11.8**	**-0.1**
PTPM				*e*S	**Sb**	**17 12 15.5**	**+1.1**
CCOL	**Caracol de Cor**	**0.19**	**306**	*i* P	**Pb**	**17 12 12.9**	**-0.3**
CCOL				*i* S	**Sb**	**17 12 18.0**	**+1.3**
CCOL				IAML		17 12 23.8	
	comp=Z,4μm,1.0s						
LIMO3	**Limones**	**0.20**	**193**	⇑*i*P	**Pg**	**17 12 12.8**	**+0.4**
LIMO3				*e*S	**Sb**	**17 12 17.7**	**+0.7**
CDITO	**Canoas**	**0.28**	**349**	⇑*i*P	**Pb**	**17 12 15.1**	**+0.4**
CDITO				*e*S	**Sb**	**17 12 19.6**	**+0.2**
CDITO	**Canoas**	**0.28**	**349**	*i* P	**Pb**	**17 12 15.2**	**+0.4**
CDITO				*i* S	**Sb**	**17 12 19.6**	**+0.2**
CDITO				IAML		17 12 25.0	
	comp=Z,610nm,1.0s						
DVD	**David**	**0.39**	**69**	⇑*e*P	**Pb**	**17 12 16.7**	**0.0**
DVD				*e*S	**Sb**	**17 12 23.6**	**+1.1**
PEDE3	**Pedregal, Chir**	**0.40**	**78**	*e*P	**Pb**	**17 12 16.6**	**-0.2**
PEDE3				*e*S	**Sb**	**17 12 23.6**	**+0.6**
LOCO3	**Loma Colorada,**	**0.41**	**74**	⇓*i*P	**Pb**	**17 12 17.1**	**0.0**
LOCO3				*e*S	**Sb**	**17 12 23.8**	**+0.6**
MLIR3	**Monte Lirio, C**	**0.49**	**360**	⇑*i*P	**Pb**	**17 12 18.4**	**0.0**
MLIR3				*e*S	**Sb**	**17 12 27.3**	**+1.7**
PTAR3	**Potrerillos Ar**	**0.51**	**39**	*e*P	**Pb**	**17 12 18.8**	**+0.1**
PTAR3				*e*S	**Sb**	**17 12 27.0**	**+0.9**
BCO2	**Palmira**	**0.51**	**35**	⇓*i*P	**Pb**	**17 12 19.1**	**+0.3**
BCO2				*e*S	**Sb**	**17 12 27.7**	**+1.5**
BRU2	**Volcan**	**0.51**	**15**	⇓*i*P	**Pb**	**17 12 19.0**	**+0.2**
BRU2				*e*S	**Sb**	**17 12 28.1**	**+1.9**
BRU2	**Volcan**	**0.51**	**15**	*i* P	**Pb**	**17 12 18.9**	**+0.1**
BRU2				*i* S	**Sb**	**17 12 27.9**	**+1.7**
BRU2				IAML		17 12 30.8	
	comp=Z,550nm,1.0s						
PIRO	**Carate, Puerto**	**0.52**	**282**	*i* P	**Pb**	**17 12 18.7**	**-0.2**
PIRO				*i* S	**Sg**	**17 12 25.5**	**+0.3**
PIRO				IAML		17 12 31.4	
	comp=Z,640nm,1.0s						
GUAL3	**Gualaca, Chiri**	**0.57**	**66**	*e*P	**Pg**	**17 12 19.1**	**+0.1**
GUAL3				*e*S	**Sg**	**17 12 26.0**	**-0.6**
LNBQ3	**Los Naranjos,**	**0.62**	**37**	*i* P	**Pg**	**17 12 20.4**	**+0.4**
LNBQ3				*e*S	**Sb**	**17 12 28.9**	**-0.3**
CHGR2	**Aguacate**	**0

δ78.53000°, λ84.95000°. NP2:ϕ258.38000°, δ12.51000°, λ113.46000°. Principal axes: T Plg56.1830°, Azm317.9940°; N Plg4.9470°, Azm55.4190°; P Plg33.3540°, Azm148.6850°;
TAP ***04*** *17:27:26.7,24.21N,121.81E,h12km,ML3.8,C*
JMA ***04*** *17:27:27.2±0.1,24.2N±0.5,121.8E±0.9,h15km±1km, MV3.0/12,TAIWAN REGION*
ISC 04 17:27:27.1±0.8,24.22N±0.01×121.81E±0.02,h10km±5km, n151,σ0ϕ91/280,1C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**324**	⇓P		**Pg**		**17 27 29.9**	**+0.1**
	baz=329								
EHP				S		**Sg**		**17 27 32.1**	**+0.4**
	baz=329								
EAHA	**Aohua**	**0.12**	**329**	⇓P		**Pg**		**17 27 30.1**	**+0.1**
	baz=330								
EAHA				S		**Sg**		**17 27 33.1**	**+1.0**
	baz=330								
ETL	**Fush Village**	**0.18**	**249**	⇑P		**Pg**		**17 27 31.0**	**0.0**
	baz=253								
ETL				S		**Sg**		**17 27 34.0**	**+0.2**
	baz=253								
NACB	**Ninganchiao**	**0.20**	**256**	⇓P		**Pg**		**17 27 31.1**	**-0.2**
	baz=260								
NACB				S		**Sg**		**17 27 34.4**	**+0.1**
	baz=260								
ENA	**Nanau**	**0.21**	**343**	⇓*i*P		**Pg**		**17 27 31.6**	**+0.1**
	baz=345								
ENA				S		**Sg**		**17 27 35.4**	**+0.8**
	baz=345								
EWUT	**Wuta**	**0.22**	**353**	*i*P		**Pg**		**17 27 31.9**	**+0.2**
	baz=358								
TWD	**Chiawan**	**0.24**	**234**	P		**Pg**		**17 27 31.8**	**-0.2**
	baz=242								
TWD				*e*S		**Sg**		**17 27 35.6**	**+0.2**
	baz=242								
ETLH	**Xiulin Townshi**	**0.30**	**267**	*i*P		**Pg**		**17 27 33.0**	**-0.1**
	baz=269								
ETLH				*e*S		**Sg**		**17 27 37.7**	**+0.5**
	baz=269								
HWA	**Hwalien**	**0.31**	**217**	*e*P		**Pb**		**17 27 34.3**	**-0.3**
	baz=227								
ESAO	**Su ao**	**0.35**	**5**	*e*P		**Pg**		**17 27 34.1**	**0.0**
ESAO				*i*S		**Sg**		**17 27 39.4**	**+0.6**
TWC	**Suao**	**0.39**	**5**	*i*P		**Pg**		**17 27 34.8**	**+0.1**
	baz=5.0								
TWC				*i*S		**Sb**		**17 27 40.8**	**-1.2**
	baz=5.0								
ETM	**Tongmen**	**0.39**	**228**	*i*P		**Pg**		**17 27 34.6**	**-0.2**
	baz=235								
LATG	**Datong**	**0.40**	**320**	*i*P		**Pg**		**17 27 35.3**	**+0.2**
	baz=321								
LATG				*i*S		**Sb**		**17 27 41.6**	**-1.1**
	baz=321								
LXIB	**Xiulin Townshi**	**0.41**	**241**	*i*P		**Pg**		**17 27 35.1**	**-0.2**
	baz=244								
LXIB				*e*S		**Sg**		**17 27 41.8**	**+1.0**
	baz=244								
NDS	**Dongshan**	**0.42**	**348**	*e*P		**Pb**		**17 27 36.0**	**-0.6**
	baz=348								
NDS				*e*S		**Sb**		**17 27 42.0**	**-1.0**
	baz=348								
NNSB	**Datong**	**0.44**	**298**	*i*P		**Pg**		**17 27 36.0**	**+0.2**
	baz=299								
NNSB				*e*S		**Sg**		**17 27 42.2**	**+0.6**
	baz=299								
NNSH	**Datong**	**0.44**	**298**	*i*P		**Pg**		**17 27 35.9**	**+0.1**
	baz=299								
NNSH				S		**Sg**		**17 27 42.1**	**+0.5**
	baz=299								
NNS	**Nan Shan**	**0.45**	**298**	*i*P		**Pg**		**17 27 36.1**	**+0.1**
	baz=300								
NNS				S		**Sg**		**17 27 42.5**	**+0.4**
	baz=300								
NDT	**Datong Townshi**	**0.46**	**324**	*i*P		**Pb**		**17 27 36.7**	**-0.6**
	baz=325								
NDT				S		**Sb**		**17 27 43.3**	**-1.0**
	baz=325								
ENTT	**Nioudou**	**0.47**	**332**	*i*P		**Pg**		**17 27 36.6**	**+0.3**
	baz=332								
ENTT				*i*S		**Sb**		**17 27 43.5**	**-0.9**
	baz=332								
SHUL	**Shoufeng**	**0.49**	**207**	*e*P		**Pb**		**17 27 38.2**	**+0.5**
	baz=210								
SHUL				S		**Sb**		**17 27 45.6**	**+0.6**
	baz=210								
WHF	**Hehuan Shan**	**0.50**	**261**	*i*P		**Pg**		**17 27 36.9**	**-0.1**
	baz=263								
WHF				S		**Sg**		**17 27 43.7**	**0.0**
	baz=263								
ESL	**Shilin**	**0.53**	**220**	*e*P		**Pg**		**17 27 37.6**	**+0.1**
	baz=230								
ILA	**Ilan**	**0.54**	**354**	*e*P		**Pn**		**17 27 39.7**	**-1.1**
	baz=349								
ILA				*i*S		**Sb**		**17 27 46.5**	**0.0**
	baz=349								
FUSB	**Fushanzhiwuyua**	**0.57**	**339**	*i*P		**Pb**		**17 27 38.7**	**-0.5**
	baz=331								
FUSB				S		**Sb**		**17 27 46.6**	**-0.8**
	baz=331								
TWT	**Tachien**	**0.58**	**273**	*e*P		**Pb**		**17 27 39.0**	**-0.4**
	baz=274								
TWT				*i*S		**Sb**		**17 27 46.7**	**-1.0**
	baz=274								
YHNB	**Yeheng**	**0.59**	**318**	P		**Pb**		**17 27 39.1**	**-0.5**
YHNB	**Yeheng**	**0.59**	**318**	*i*P		**Pb**		**17 27 39.2**	**-0.5**
	baz=319								
YHNB				*i*S		**Sb**		**17 27 47.2**	**-0.9**
	baz=319								
TDCB	**Techi**	**0.59**	**273**	*e*P		**Pb**		**17 27 39.1**	**-0.6**
	baz=274								
TDCB				S		**Sb**		**17 27 47.1**	**-1.0**
	baz=274								
CHGB	**Renai**	**0.60**	**254**	*i*P		**Pg**		**17 27 39.0**	**+0.2**
	baz=249								
CHGB				*e*S		**Sg**		**17 27 47.2**	**+0.3**
	baz=249								
NSK	**Sanguang**	**0.61**	**318**	*i*P		**Pb**		**17 27 39.3**	**-0.6**
	baz=318								
NSK				*i*S		**Sb**		**17 27 47.6**	**-0.9**
	baz=318								
WARBT	**Fenglin Townsh**	**0.64**	**218**	*e*P		**Pg**		**17 27 39.6**	**+0.2**
	baz=231								
OWD	**Renai**	**0.64**	**245**	*e*P		**Pg**		**17 27 39.7**	**+0.2**
	baz=247								
EGFH	**Guangfu**	**0.65**	**212**	P		**Pg**		**17 27 39.8**	**+0.1**
	baz=230								
EGFH				S		**Sb**		**17 27 49.8**	**+0.1**
	baz=230								
WUSB	**Renai**	**0.67**	**250**	P		**Pg**		**17 27 40.4**	**+0.2**
	baz=252								
WUSB				S		**Sb**		**17 27 50.0**	**-0.4**
	baz=252								
TIPB	**Shuangxi**	**0.74**	**1**	*i*P		**Pb**		**17 27 42.0**	**-0.2**
	baz=360								
TIPB				*i*S		**Sb**		**17 27 51.5**	**-0.9**
	baz=360								
NFF	**Wufeng Townshi**	**0.75**	**303**	*i*P		**Pb**		**17 27 42.2**	**0.0**
	baz=304								
NFF				S		**Sb**		**17 27 52.5**	**0.0**
	baz=304								
VWDT	**VWDT**	**0.77**	**233**	P		**Pb**		**17 27 42.4**	**-0.1**
	baz=241								
VWDT				*e*S		**Sg**		**17 27 52.4**	**+0.4**
	baz=241								
NHDH	**Xindian Distri**	**0.78**	**341**	P		**Pn**		**17 27 43.0**	**-1.2**
	baz=334								
NHDH				*e*S		**Sb**		**17 27 53.6**	**+0.2**
	baz=334								
WHP	**Taichung City**	**0.79**	**274**	P		**Pb**		**17 27 43.0**	**0.0**
	baz=275								
WHP				*i*S		**Sb**		**17 27 53.3**	**-0.4**
	baz=275								
TWB1	**Santiao Chiao**	**0.80**	**12**	*i*P		**Pb**		**17 27 42.9**	**-0.1**
	baz=10.0								
TWB1				*e*S		**Sb**		**17 27 54.1**	**+0.3**
	baz=10.0								
TATO	**Taipei**	**0.80**	**339**	P		**Pn**		**17 27 43.4**	**-1.0**
WPL	**Puli Township**	**0.81**	**255**	P		**Pb**		**17 27 42.8**	**-0.4**
	baz=257								
WPL				S		**Sg**		**17 27 53.3**	**+0.1**
	baz=257								
HGSD	**Ruisui**	**0.81**	**206**	P		**Pb**		**17 27 43.0**	**-0.2**
	baz=199								
HGSD				*e*S		**Sg**		**17 27 53.5**	**+0.2**
	baz=199								
DPDB	**Guoxing**	**0.83**	**257**	P		**Pb**		**17 27 43.3**	**-0.3**
	baz=259								
DPDB				S		**Sb**		**17 27 54.5**	**-0.3**
	baz=259								
NJD	**Zhudong**	**0.83**	**308**	P		**Pn**		**17 27 44.6**	**-0.3**
	baz=314								
NJD				*e*S		**Sn**		**17 27 55.6**	**-1.5**
	baz=314								
LIOB	**Emei**	**0.84**	**300**	*i*P		**Pn**		**17 27 44.3**	**-0.6**
	baz=301								
LIOB				*e*S		**Sn**		**17 27 55.7**	**-1.6**
	baz=301								
WCS	**Beigang Elemen**	**0.84**	**259**	P		**Pb**		**17 27 43.4**	**-0.3**
	baz=261								
WCS				S		**Sb**		**17 27 55.0**	**0.0**
	baz=261								
BACT	**New Taipei Cit**	**0.84**	**337**	P		**Pn**		**17 27 44.7**	**-0.3**
	baz=336								
BACT				*e*S		**Sn**		**17 27 55.9**	**-1.5**
	baz=336								
NHY	**Taipei**	**0.84**	**345**	P		**Pn**		**17 27 43.8**	**-1.1**
	baz=329								
NHY				*e*S		**Sn**		**17 27 56.0**	**-1.3**
	baz=329								
NSTT	**Nanjuang**	**0.84**	**299**	*i*P		**Pn**		**17 27 44.0**	**-1.0**
	baz=300								
NSTT				*i*S		**Sb**		**17 27 55.2**	**+0.1**
	baz=300								
EHY	**Hungye**	**0.84**	**212**	*i*P		**Pg**		**17 27 42.4**	**-1.0**
	baz=226								
EHY				S		**Sn**		**17 27 57.0**	**-0.4**
	baz=226								
NWF	**Wu-fen Shan**	**0.84**	**358**	*e*P		**Pn**		**17 27 44.1**	**-1.0**
	baz=350								
NWF				*i*S		**Sb**		**17 27 55.5**	**+0.2**
	baz=350								
WFSB	**Wu-fen Shan**	**0.84**	**358**	P		**Pb**		**17 27 43.8**	**0.0**
	baz=350								
WFSB				S		**Sb**		**17 27 55.2**	**0.0**
	baz=350								
TAP	**Taipei**	**0.86**	**341**	*i*P		**Pn**		**17 27 44.6**	**-0.6**
	baz=332								
TAP				*i*S		**Sn**		**17 27 56.0**	**-1.7**
	baz=332								
SXI1	**Grass Mountain**	**0.87**	**4**	P		**Pn**		**17 27 44.4**	**-1.0**
	baz=7.0								
SXI1				S		**Sn**		**17 27 56.3**	**-1.9**
	baz=7.0								
SSLB	**Suanglung**	**0.90**	**241**	P		**Pb**		**17 27 44.3**	**-0.4**
SSLB	**Suanglung**	**0.90**	**241**	P		**Pb**		**17 27 43.9**	**-0.8**
	baz=252								
SSLB				S		**Sg**		**17 27 56.7**	**+0.7**
	baz=252								
SMLT	**Sun Moon Lake**	**0.90**	**248**	*i*P		**Pb**		**17 27 44.5**	**-0.3**
	baz=250								
SMLT				*i*S		**Sn**		**17 27 57.6**	**-1.3**
	baz=250								
NTY	**Taoyuan**	**0.90**	**329**	P		**Pn**		**17 27 46.1**	**+0.3**
	baz=329								
NTY				S		**Sn**		**17 27 58.7**	**-0.1**
	baz=329								
HSN1	**Hsinchu**	**0.91**	**308**	P		**Pn**		**17 27 46.4**	**+0.5**
	baz=308								
TNOU	**National Taiwa**	**0.92**	**358**	P		**Pn**		**17 27 45.3**	**-0.8**
	baz=352								
TNOU				S		**Sn**		**17 27 57.7**	**-1.7**
	baz=352								
TYC	**Yuchr**	**0.93**	**250**	*i*P		**Pb**		**17 27 44.9**	**-0.4**
	baz=245								
TYC				*i*S		**Sg**		**17 27 57.8**	**+0.8**
	baz=245								
NCUH	**Zhongli**	**0.93**	**323**	*i*P		**Pn**		**17 27 46.4**	**+0.2**
	baz=322								
NCUH				S		**Sn**		**17 27 58.6**	**-1.0**
	baz=322								
SBCB	**Hsinchu**	**0.94**	**307**	P		**Pn**		**17 27 46.3**	**0.0**
	baz=307								
SBCB				*e*S		**Sn**		**17 27 59.8**	**0.0**
	baz=307								
TWS1	**Kuangyinshan**	**0.94**	**338**	*i*P		**Pn**		**17 27 46.6**	**+0.2**
	baz=337								
TWS1				S		**Sn**		**17 27 59.7**	**-0.2**
	baz=337								
YM01	**YM01**	**0.94**	**347**	P		**Pn**		**17 27 46.0**	**-0.4**
	baz=329								
YM01				*e*S		**Sn**		**17 27 59.7**	**-0.3**
	baz=329								
YULB	**Yu-li**	**0.95**	**210**	P		**Pb**		**17 27 44.9**	**-0.8**
YULB	**Yu-li**	**0.95**	**210**	P		**Pb**		**17 27 44.3**	**-1.4**
	baz=212								
YULB				*e*S		**Sb**		**17 27 57.4**	**-0.9**
	baz=212								
TWQ1	**Liyutan**	**0.95**	**278**	*i*P		**Pn**		**17 27 46.5**	**0.0**
	baz=279								
TWQ1				S		**Sn**		**17 27 59.4**	**-0.7**
	baz=279								
HSN	**Hsinchu**	**0.96**	**307**	*i*P		**Pn**		**17 27 46.0**	**-0.6**
	baz=310								
HSN				S		**Sn**		**17 27 59.8**	**-0.5**
	baz=310								
ECBN	**Changbin**	**0.96**	**200**	P		**Pb**		**17 27 45.3**	**-0.5**
	baz=202								
ECBN				S		**Sn**		**17 28 00.4**	**+0.1**
	baz=202								
NJN	**Zhunan**	**0.97**	**298**	*e*P		**Pn**		**17 27 46.9**	**+0.2**
	baz=299								
NJN				*e*S		**Sn**		**17 27 59.9**	**-0.6**
	baz=299								
NSY	**Sanyi**	**0.98**	**282**	*i*P		**Pn**		**17 27 47.2**	**+0.4**
	baz=283								
NSY				*e*S		**Sn**		**17 28 00.0**	**-0.7**
	baz=283								
NMLH	**Miaoli**	**0.98**	**289**	P		**Pn**		**17 27 47.9**	**+1.1**
	baz=290								
NMLH				*e*S		**Sn**		**17 27 59.8**	**-1.0**
	baz=290								
EYUL	**Yuli**	**0.98**	**207**	P		**Pb**		**17 27 45.5**	**-0.6**
	baz=209								
EYUL				S		**Sn**		**17 28 01.2**	**+0.3**
	baz=209								
TWF1	**Yuli**	**0.99**	**209**	*i*P		**Pb**		**17 27 44.5**	**-1.7**
	baz=210								
TWF1				*e*S		**Sn**		**17 28 00.4**	**-0.6**
	baz=210								
NTST	**Danshui**	**0.99**	**341**	*i*P		**Pn**		**17 27 47.2**	**+0.2**
	baz=340								
NTST				S		**Sn**		**17 28 01.1**	**0.0**
	baz=340								
ANP	**Anpu**	**0.99**	**345**	*i*P		**Pn**		**17 27 46.7**	**-0.5**
	baz=335								
ANP				*e*S		**Sg**		**17 27 59.5**	**+0.3**
	baz=335								
WHYT	**Xinyi Township**	**1.02**	**239**	P		**Pn**		**17 27 47.2**	**-0.3**
	baz=248								
WHYT				S		**Sn**		**17 28 01.9**	**0.0**
	baz=248								
WWF	**Wufeng**	**1.03**	**260**	*e*P		**Pn**		**17 27 48.8**	**+1.2**
	baz=258								
WWF				S		**Sn**		**17 28 03.1**	**+1.0**
	baz=258								
NHW	**Xinwu Township**	**1.04**	**318**	P		**Pn**		**17 27 48.4**	**+0.7**
	baz=318								
NHW				S		**Sn**		**17 28 03.0**	**+0.6**
	baz=318								
JYNG	**Yonagunijimaku**	**1.06**	**77**	*e*P		**Pg**		**17 27 48.1**	**+0.6**
TWY	**Chenhua**	**1.06**	**350**	*i*P		**Pg**		**17 27 48.6**	**+1.1**
	baz=333								
TWY				*e*S		**Sn**		**17 28 03.6**	**+0.7**
	baz=333								
WJS	**Zhushan**	**1.07**	**248**	*i*P		**Pg**		**17 27 48.5**	**+0.9**
	baz=246								
WJS				*i*S		**Sn**		**17 28 03.7**	**+0.8**
	baz=246								
WDJ	**Dajia District**	**1.07**	**277**	P		**Pg**		**17 27 49.2**	**+1.4**
	baz=278								
WDJ				*e*S		**Sn**		**17 28 03.5**	**+0.3**
	baz=278								
WNT1	**Nantou City**	**1.08**	**253**	P		**Pg**		**17 27 49.5**	**+1.6**
	baz=253								
WNT1				S		**Sn**		**17 28 05.9**	**+2.7**
	baz=253								
WNT	**Mingjian**	**1.08**	**252**	*i*P		**Pg**		**17 27 49.0**	**+1.0**
	baz=251								
WNT				*e*S		**Sn**		**17 28 03.7**	**+0.3**
	baz=251								
CHKH	**Chenggong**	**1.10**	**200**	P		**Pb**		**17 27 48.0**	**-0.1**
	baz=183								
CHKH				S		**Sn**		**17 28 04.5**	**+0.8**
	baz=183								
YOJ	**Yonaguni jima**	**1.12**	**78**	P		**Pg**		**17 27 48.8**	**+0.2**
	baz=62								
YOJ				*e*S		**Sn**		**17 28 06.2**	**+2.0**
	baz=62								
YOJ	**Yonaguni jima**	**1.12**	**78**	*e*P		**Pg**		**17 27 48.9**	**+0.3**
YOJ				*e*S		**Sn**		**17 28 05.1**	**+0.9**
FULB	**Fuli**	**1.12**	**205**	*i*P		**Pb**		**17 27 48.0**	**-0.6**
	baz=224								
FULB				S		**Sn**		**17 28 06.1**	**+1.7**
	baz=224								
WCHH	**Zhanghua**	**1.15**	**263**	*i*P		**Pg**		**17 27 50.4**	**+1.2**
	baz=280								
WCHH				*e*S		**Sg**		**17 28 07.4**	**+3.2**
	baz=280								
WYL	**Yuanlin Townsh**	**1.15**	**257**	P		**Pg**		**17 27 49.7**	**+0.4**
	baz=260								
WYL				S		**Sg**		**17 28 06.7**	**+2.4**
	baz=260								
ALS	**Alishan**	**1.16**	**233**	*i*P		**Pn**		**17 27 49.2**	**-0.4**
	baz=222								
ALS				S		**Sn**		**17 28 06.6**	**+0.9**
	baz=222								
CHKT	**Chengkung**	**1.19**	**200**	*i*P		**Pn**		**17 27 49.2**	**-0.6**
	baz=184								
CHKT				*i*S		**Sg**		**17 28 06.4**	**+0.9**
	baz=184								
EHD	**Haiduan**	**1.21**	**207**	P		**Pn**		**17 27 48.2**	**-1.8**
	baz=209								
EHD				*e*S		**Sb**		**17 28 04.7**	**-0.9**
	baz=209								
ECS	**Chishang**	**1.25**	**206**	P		**Pn**		**17 27 49.7**	**-0.8**
	baz=208								
ECS				*e*S		**Sg**		**17 28 07.5**	**+0.3**
	baz=208								
ELDTW	**Lidau**	**1.26**	**215**	*i*P		**Pn**		**17 27 49.2**	**-1.6**
	baz=203								
ELDTW				S		**Sg**		**17 28 08.2**	**+0.5**
	baz=203								
WGK	**Gukeng**	**1.26**	**245**	*i*P		**Pg**		**17 27 52.0**	**+0.7**
	baz=248								
WGK				*e*S		**Sg**		**17 28 10.5**	**+2.8**
	baz=248								
WDLH	**Douliu**	**1.28**	**246**	*i*P		**Pg**		**17 27 51.7**	**0.0**
	baz=249								
WDLH				S		**Sg**		**17 28 11.6**	**+3.3**
	baz=249								
EDH	**Donghe**	**1.33**	**201**	*i*P		**Pn**		**17 27 49.6**	**-2.0**
	baz=187								
EDH				*e*S		**Sn**		**17 28 08.4**	**-1.0**
	baz=187								
WRL	**Guolierlin Hig**	**1.35**	**256**	P		**Pg**		**17 27 53.5**	**+0.6**
	baz=259								
WRL				S		**Sg**		**17 28 12.8**	**+2.3**
	baz=259								
WCKO	**Fanlu**	**1.35**	**235**	P		**Pg**		**17 27 52.7**	**-0.3**
	baz=238								
WCKO				S		**Sg**		**17 28 13.2**	**+2.6**
	baz=238								
CHN2	**Minshiung**	**1.40**	**241**	*i*P		**Pg**		**17 27 54.2**	**+0.2**
	baz=244								
CHN2				S		**Sg**		**17 28 14.0**	**+1.7**
	baz=244								
WTK	**Tuku**	**1.41**	**248**	*i*P		**Pb**		**17 27 53.6**	**+0.2**
	baz=251								
WTK				S		**Sg**		**17 28 12.6**	**+0.3**
	baz=251								
CHN4	**Tsaushan**	**1.41**	**232**	*i*P		**Pb**		**17 27 53.6**	**+0.1**
	baz=235								
CHN4				*i*S		**Sg**		**17 28 14.5**	**+2.0**
	baz=235								
STYH	**Taoyuan**	**1.41**	**222**	P		**Pn**		**17 27 52.4**	**-0.4**
	baz=215								
STYH				*e*S		**Sg**		**17 28 12.5**	**-0.1**
	baz=215								
TPUB	**Ta-pu**	**1.42**	**230**	P		**Pb**		**17 27 53.8**	**+0.2**
TPUB	**Ta-pu**	**1.42**	**230**	P		**Pb**		**17 27 53.3**	**-0.3**
	baz=233								
TPUB				S		**Sg**		**17 28 13.7**	**+0.9**
	baz=233								
LONT	**Longtian**	**1.45**	**206**	P		**Pn**		**17 27 52.5**	**-0.9**
	baz=208								
LONT				*e*S		**Sn**		**17 28 11.8**	**-0.7**
	baz=208								
WTP	**Ta-pu**	**1.47**	**229**	*i*P		**Pb**		**17 27 54.2**	**-0.3**
	baz=232								
WTP				S		**Sg**		**17 28 14.8**	**+0.5**
	baz=232								
TWK	**Hsinying**	**1.54**	**232**	*i*P		**Pb**		**17 27 55.3**	**-0.5**
	baz=235								
TWK				S		**Sg**		**17 28 16.3**	**-0.4**
	baz=235								
TWG	**Pinlang**	**1.55**	**206**	*e*P		**Pn**		**17 27 52.2**	**-2.5**
	baz=208								
TWG				*e*S		**Sn**		**17 28 14.7**	**-0.2**
	baz=208								
TWGBT	**Beinan**	**1.55**	**206**	P		**Pn**		**17 27 52.5**	**-2.2**
	baz=208								
TWGBT				*e*S		**Sn**		**17 28 12.8**	**-2.2**
	baz=208								
SNST	**Tainan City**	**1.56**	**231**	P		**Pb**		**17 27 55.8**	**-0.3**
	baz=234								
SNST				S		**Sg**		**17 28 17.0**	**-0.4**
	baz=234								
CHN1	**Nanshi**	**1.56**	**229**	*i*P		**Pb**		**17 27 56.5**	**+0.3**
	baz=232								
CHN1				S		**Sg**		**17 28 18.0**	**+0.6**
	baz=232								
WSF	**Szhu**	**1.57**	**248**	*i*P		**Pb**		**17 27 55.9**	**-0.2**
	baz=251								
WSF				S		**Sg**		**17 28 17.7**	**+0.2**
	baz=251								
SGST	**Jiashian**	**1.60**	**225**	*i*P		**Pn**		**17 27 55.5**	**+0.1**
	baz=211								
SGST				*i*S		**Sg**		**17 28 18.2**	**-0.3**
	baz=211								
WSL	**Shuilin Townsh**	**1.61**	**245**	P		**Pb**		**17 27 56.8**	**0.0**
	baz=247								
WSL				*e*S		**Sg**		**17 28 19.3**	**+0.5**
	baz=247								
SLGT	**Liugui**	**1.62**	**221**	P		**Pb**		**17 27 57.1**	**0.0**
	baz=225								
SLGT				S		**Sg**		**17 28 19.9**	**+0.5**
	baz=225								
ICHU	**Yijhu**	**1.64**	**239**	*i*P		**Pb**		**17 27 57.4**	**-0.1**
	baz=242								
ICHU				S		**Sg**		**17 28 20.2**	**+0.3**
	baz=242								
CHN8	**Yiju**	**1.71**	**239**	*i*P		**Pb**		**17 27 57.6**	**-0.9**
	baz=242								
CHN8				*e*S		**Sg**		**17 28 22.4**	**+0.4**
	baz=242								
CHN3	**Shinhua**	**1.75**	**230**	*e*P		**Pb**		**17 27 58.7**	**-0.6**
	baz=233								
CHN3				*e*S		**Sg**		**17 28 23.6**	**+0.2**
	baz=233								
IRIF	**Iriomote-Funau**	**1.76**	**86**	P		**Pb**		**17 27 59.4**	**+0.1**
SSHA	**Shanhua**	**1.77**	**232**	*e*P		**Pb**		**17 27 58.5**	**-1.0**
	baz=236								
SSHA				S		**Sb**		**17 28 22.3**	**+0.5**
	baz=236								
SHHT	**Tainan City**	**1.80**	**229**	P		**Pb**		**17 27 59.8**	**-0.3**
	baz=232								
SCST	**Cishan**	**1.80**	**222**	*i*P		**Pb**		**17 27 59.5**	**-0.6**
	baz=226								
SCST				*e*S		**Sg**		**17 28 23.8**	**-1.2**
	baz=226								
ECL	**Taimali**	**1.80**	**206**	P		**Pn**		**17 27 56.5**	**-1.7**
	baz=196								
SCLT	**Jiali**	**1.81**	**235**	*e*P		**Pb**		**17 27 59.4**	**-0.9**
	baz=238								
SCLT				S		**Sb**		**17 28 24.0**	**+1.0**
	baz=238								
TSMG	**Majia**	**1.85**	**216**	*i*

	baz=216							
JKRS	**Kuro-shima**	**2.01**	**89**	P		**Pb**	**17 28 03.5**	**-0.2**
JKRS				*e*S		**Sb**	**17 28 28.1**	**-0.6**
EAST	**Anshuo**	**2.04**	**206**	*i* P		**Pn**	**17 28 01.4**	**-0.1**
	baz=198							
TAWH	**Dawu Township**	**2.06**	**204**	P		**Pn**	**17 28 02.2**	**+0.5**
	baz=208							
WSSB	**Gushan**	**2.12**	**222**	*e*P		**Pb**	**17 28 04.2**	**-1.4**
	baz=225							
JIJ	**Ishigaki jima**	**2.13**	**86**	*e*P		**Pn**	**17 28 03.0**	**+0.2**
JIJ				*e*S		**Sn**	**17 28 30.0**	**+0.7**
SCZT	**Fangliau**	**2.14**	**211**	*i* P		**Pn**	**17 28 03.8**	**+0.9**
	baz=212							
SCZT				S		**Sb**	**17 28 32.2**	**-0.4**
	baz=212							
PNG	**Penghu**	**2.17**	**253**	*i* P		**Pn**	**17 28 03.5**	**+0.3**
	baz=256							
PNG				*i* S		**Sb**	**17 28 31.7**	**-1.5**
	baz=256							
PHUB	**P'eng-hu**	**2.17**	**251**	P		**Pn**	**17 28 03.1**	**-0.1**
	baz=255							
PHUB				S		**Sb**	**17 28 32.2**	**-1.1**
	baz=255							
LYUB	**Lan-yu**	**2.22**	**185**	*e*P		**Pn**	**17 28 02.8**	**-1.1**
	baz=178							
LYUB				*e*S		**Sn**	**17 28 30.1**	**-1.3**
	baz=178							
VWUC	**VWUC**	**2.28**	**290**	P		**Pn**	**17 28 04.8**	**0.0**
	baz=291							
VWUC				*e*S		**Sb**	**17 28 34.1**	**-2.5**
	baz=291							
JISG	**Ishigakijimahi**	**2.31**	**80**	P		**Pn**	**17 28 05.9**	**+0.7**
JISG				*e*S		**Sn**	**17 28 34.1**	**+0.5**
VCHM	**Qimei**	**2.40**	**246**	*e*P		**Pn**	**17 28 07.6**	**+1.2**
	baz=233							
VCHM				S		**Sb**	**17 28 37.8**	**-2.4**
	baz=233							
HEN	**Hengchun**	**2.42**	**204**	P		**Pn**	**17 28 08.1**	**+1.4**
	baz=195							
TWKBT	**Hengchun**	**2.45**	**202**	*e*P		**Pn**	**17 28 08.3**	**+1.1**
	baz=194							
MATB	**Ma-tsu**	**2.56**	**319**	P		**Pn**	**17 28 09.1**	**+0.5**
	baz=315							
MATB				*e*S		**Sn**	**17 28 40.7**	**+1.0**
	baz=315							
PTMZ	**Houxiangcun**	**2.58**	**289**	P		**Pn**	**17 28 08.7**	**-0.1**
	baz=290							
PTMZ				S		**Sn**	**17 28 40.0**	**-0.3**
	baz=290							
LYJJ	**Jianjiangzhen**	**2.97**	**322**	P		**Pn**	**17 28 14.3**	**+0.2**
	baz=320							

*ASIES **04** 17:41:01.4,24°.23N×121°.77E,h6km,ML3.5,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}6.64; $M_{\theta\theta}$-9.84; $M_{\phi\phi}$3.20; $M_{r\theta}$8.82; $M_{\theta\phi}$-4.19; $M_{\phi r}$9.93; Fault plane solution: $M_0$16.41340×10^{20} NP1: ϕ=45.41000°,δ76.16000°,λ66.69000°. NP2:ϕ_s286.37000°, δ26.91000°,λ148.09000°. Principal axes: T Plg53.1020°, Azm287.6360°; N Plg22.5940°, Azm51.2970°; P Plg27.4760°, Azm153.7940°;*

*JMA **04** 17:41:01.1±0.1,24°.2N±0°.3×121°.8E±0°.4,h0km,MV2.9/8, TAIWAN REGION*

*TAP **04** 17:41:01.1,24°.20N×121°.80E,h9km,ML3.5,D*

ISC 04 17:41:01.3±0.9,24°.21N±0°.01×121°.84E±0°.02,h8km±6km, n120,σ0§67/225,1C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**318**	*i* P	**Pg**	**17 41 04.2**	**0.0**
	baz=334						
EHP				S	**Sg**	**17 41 06.5**	**+0.3**
	baz=334						
EAHA	**Aohua**	**0.15**	**323**	⇓*i*P	**Pg**	**17 41 04.5**	**0.0**
	baz=335						
EAHA				S	**Sg**	**17 41 06.8**	**+0.2**
	baz=335						
ETL	**Fush Village**	**0.20**	**255**	P	**Pg**	**17 41 05.2**	**-0.3**
	baz=256						
ETL				*e*S	**Sg**	**17 41 08.0**	**-0.2**
	baz=256						
NACB	**Ninganchiao**	**0.22**	**260**	*i* P	**Pg**	**17 41 05.5**	**-0.3**
	baz=263						
NACB				S	**Sg**	**17 41 08.6**	**-0.3**
	baz=263						
ENA	**Nanau**	**0.23**	**338**	⇓*i*P	**Pg**	**17 41 06.1**	**+0.1**
	baz=346						
ENA				*i* S	**Sg**	**17 41 09.6**	**+0.4**
	baz=346						
EWUT	**Wuta**	**0.24**	**347**	⇓P	**Pg**	**17 41 06.4**	**+0.3**
	baz=353						
EWUT				S	**Sg**	**17 41 10.0**	**+0.7**
	baz=353						
TWD	**Chiawan**	**0.26**	**239**	⇑*i*P	**Pg**	**17 41 05.9**	**-0.5**
	baz=244						
TWD				S	**Sg**	**17 41 09.6**	**-0.2**
	baz=244						
HWA	**Hwalien**	**0.32**	**222**	*e*P	**Pb**	**17 41 08.7**	**-0.5**
	baz=233						
HWA				*e*S	**Sg**	**17 41 12.8**	**+1.1**
	baz=233						
ETLH	**Xiulin Townshi**	**0.32**	**269**	*i* P	**Pg**	**17 41 07.3**	**-0.4**
	baz=272						
ETLH				*i* S	**Sg**	**17 41 11.7**	**-0.4**
	baz=272						
ESAO	**Su ao**	**0.36**	**1**	P	**Pg**	**17 41 08.6**	**+0.2**
	baz=359						
ESAO				S	**Sb**	**17 41 14.2**	**-1.6**
	baz=359						
TWC	**Suao**	**0.40**	**2**	⇓*i*P	**Pg**	**17 41 09.3**	**+0.3**
	baz=3.0						
TWC				*i* S	**Sg**	**17 41 14.8**	**+0.5**
	baz=3.0						
ETM	**Tongmen**	**0.40**	**232**	P	**Pg**	**17 41 08.6**	**-0.5**
	baz=233						
ETM				S	**Sg**	**17 41 14.4**	**0.0**
	baz=233						
LATG	**Datong**	**0.43**	**319**	⇓P	**Pg**	**17 41 09.6**	**-0.1**
	baz=323						
LATG				S	**Sb**	**17 41 16.4**	**-1.4**
	baz=323						
LXIB	**Xiulin Townshi**	**0.43**	**244**	*i* P	**Pg**	**17 41 09.2**	**-0.5**
	baz=246						
LXIB				*e*S	**Sg**	**17 41 16.0**	**+0.6**
	baz=246						
NDS	**Dongshan**	**0.43**	**345**	⇓P	**Pg**	**17 41 10.1**	**+0.3**
	baz=348						
NDS				S	**Sg**	**17 41 16.1**	**+0.6**
	baz=348						
NNSB	**Datong**	**0.47**	**298**	⇓P	**Pg**	**17 41 10.2**	**-0.1**
	baz=302						
NNSB				*i* S	**Sg**	**17 41 16.1**	**-0.5**
	baz=302						
NNSH	**Datong**	**0.47**	**298**	P	**Pg**	**17 41 10.2**	**-0.2**
	baz=302						
NNSH				S	**Sg**	**17 41 16.2**	**-0.4**
	baz=302						
NNS	**Nan Shan**	**0.48**	**298**	*i* P	**Pg**	**17 41 10.5**	**-0.2**
	baz=303						
NNS				*i* S	**Sg**	**17 41 16.7**	**-0.3**
	baz=303						
NDT	**Datong Townshi**	**0.49**	**323**	⇓P	**Pg**	**17 41 11.0**	**+0.3**
	baz=326						
NDT				S	**Sg**	**17 41 17.7**	**+0.5**
	baz=326						
SHUL	**Shoufeng**	**0.49**	**211**	P	**Pb**	**17 41 11.9**	**-0.2**
	baz=213						
SHUL				*e*S	**Sg**	**17 41 18.6**	**+1.3**
	baz=213						
ENTT	**Nioudou**	**0.49**	**330**	*i* P	**Pg**	**17 41 11.1**	**+0.2**
	baz=333						
ENTT				S	**Sg**	**17 41 17.7**	**+0.4**
	baz=333						
WHF	**Hehuan Shan**	**0.53**	**263**	*i* P	**Pg**	**17 41 11.3**	**-0.3**
	baz=265						
WHF				*i* S	**Sg**	**17 41 17.9**	**-0.7**
	baz=265						
TWE	**Neicheng**	**0.53**	**343**	⇓*i*P	**Pg**	**17 41 11.9**	**+0.3**
	baz=346						
TWE				*i* S	**Sb**	**17 41 19.2**	**-1.4**
	baz=346						
ESL	**Shilin**	**0.54**	**223**	*i* P	**Pg**	**17 41 11.3**	**-0.5**
	baz=232						
ESL				S	**Sg**	**17 41 17.6**	**-1.3**
	baz=232						
FUSS	**Fushou**	**0.54**	**274**	P	**Pg**	**17 41 11.8**	**-0.1**
	baz=277						
FUSS				S	**Sg**	**17 41 19.0**	**0.0**
	baz=277						
ILA	**Ilan**	**0.56**	**352**	*i* P	**Pb**	**17 41 12.8**	**-0.5**
	baz=346						
ILA				*i* S	**Sb**	**17 41 21.1**	**-0.3**
	baz=346						
TEGC	**Jichi Village**	**0.57**	**209**	P	**Pb**	**17 41 13.6**	**+0.1**
	baz=211						
TEGC				*e*S	**Sb**	**17 41 22.7**	**+1.0**
	baz=211						
FUSB	**Fushanzhiwuyua**	**0.59**	**337**	⇓P	**Pg**	**17 41 13.0**	**+0.3**
	baz=339						
FUSB				S	**Sb**	**17 41 21.9**	**-0.6**
	baz=339						
TWT	**Tachien**	**0.60**	**274**	*i* P	**Pg**	**17 41 13.2**	**+0.2**
	baz=276						
TWT				*i* S	**Sg**	**17 41 21.3**	**+0.3**
	baz=276						
YHNB	**Yeheng**	**0.62**	**317**	⇓P	**Pg**	**17 41 13.5**	**+0.2**
	baz=320						
YHNB				S	**Sg**	**17 41 21.6**	**+0.2**
	baz=320						
TDCB	**Techi**	**0.62**	**274**	P	**Pg**	**17 41 13.3**	**0.0**
	baz=276						
TDCB				S	**Sg**	**17 41 20.9**	**-0.6**
	baz=276						
CHGB	**Renai**	**0.62**	**256**	P	**Pg**	**17 41 13.1**	**-0.3**
	baz=250						
CHGB				S	**Sg**	**17 41 21.9**	**+0.3**
	baz=250						
NSK	**Sanguang**	**0.64**	**317**	⇓*i*P	**Pg**	**17 41 13.7**	**+0.1**
	baz=320						
NSK				*i* S	**Sg**	**17 41 22.1**	**+0.2**
	baz=320						
WARBT	**Fenglin Townsh**	**0.64**	**220**	P	**Pg**	**17 41 13.5**	**-0.1**
	baz=229						
OWD	**Renai**	**0.66**	**247**	P	**Pg**	**17 41 13.5**	**-0.5**
	baz=248						
OWD				S	**Sg**	**17 41 23.5**	**+0.9**
	baz=248						
EGFH	**Guangfu**	**0.66**	**215**	P	**Pg**	**17 41 14.2**	**+0.3**
	baz=228						
EGFH				*e*S	**Sg**	**17 41 22.9**	**+0.3**
	baz=228						
WUSB	**Renai**	**0.69**	**252**	P	**Pg**	**17 41 14.4**	**-0.3**
	baz=253						
WUSB				S	**Sg**	**17 41 24.0**	**+0.2**
	baz=253						
TIPB	**Shuangxi**	**0.76**	**359**	P	**Pb**	**17 41 16.2**	**-0.5**
	baz=358						
TIPB				S	**Sb**	**17 41 26.7**	**-0.5**
	baz=358						
NFF	**Wufeng Townshi**	**0.78**	**303**	P	**Pb**	**17 41 16.5**	**-0.6**
	baz=305						
NFF				S	**Sg**	**17 41 26.6**	**+0.1**
	baz=305						
VWDT	**VWDT**	**0.78**	**235**	P	**Pg**	**17 41 16.7**	**+0.3**
	baz=236						
VWDT				S	**Sg**	**17 41 25.5**	**-1.1**
	baz=236						
NHDH	**Xindian Distri**	**0.80**	**339**	P	**Pb**	**17 41 17.4**	**-0.1**
	baz=340						
NHDH				*e*S	**Sg**	**17 41 27.3**	**+0.2**
	baz=340						
TWB1	**Santiao Chiao**	**0.81**	**10**	*i* P	**Pb**	**17 41 17.2**	**-0.3**
	baz=7.0						
TWB1				*e*S	**Sb**	**17 41 27.7**	**-0.9**
	baz=7.0						
HGSD	**Ruisui**	**0.81**	**208**	P	**Pg**	**17 41 17.2**	**+0.3**
	baz=199						
HGSD				*e*S	**Sg**	**17 41 28.2**	**+0.8**
	baz=199						
WHP	**Taichung City**	**0.82**	**275**	P	**Pb**	**17 41 17.3**	**-0.4**
	baz=277						
WHP				S	**Sg**	**17 41 27.7**	**0.0**
	baz=277						
EHY	**Hungye**	**0.85**	**214**	*i* P	**Pg**	**17 41 16.9**	**-0.6**
	baz=227						
EHY				S	**Sb**	**17 41 30.9**	**+1.2**
	baz=227						
NWF	**Wu-fen Shan**	**0.86**	**357**	*i* P	**Pb**	**17 41 18.4**	**0.0**
	baz=348						
NWF				*i* S	**Sb**	**17 41 29.9**	**-0.2**
	baz=348						
WFSB	**Wu-fen Shan**	**0.86**	**357**	P	**Pb**	**17 41 18.3**	**-0.1**
	baz=350						
WFSB				S	**Sb**	**17 41 29.9**	**-0.1**
	baz=350						
NHY	**Taipei**	**0.86**	**344**	*e*P	**Pb**	**17 41 18.6**	**+0.2**
	baz=344						
NHY				*e*S	**Sn**	**17 41 31.0**	**-1.4**
	baz=344						
WCS	**Beigang Elemen**	**0.86**	**260**	*e*P	**Pg**	**17 41 17.8**	**-0.1**
	baz=262						
WCS				S	**Sg**	**17 41 28.9**	**-0.1**
	baz=262						
LIOB	**Emei**	**0.86**	**300**	*i* P	**Pb**	**17 41 18.7**	**+0.2**
	baz=303						
LIOB				*i* S	**Sb**	**17 41 29.8**	**-0.4**
	baz=303						
NSTT	**Nanjuang**	**0.87**	**299**	*i* P	**Pb**	**17 41 18.3**	**-0.3**
	baz=302						
NSTT				*i* S	**Sb**	**17 41 29.8**	**-0.6**
	baz=302						
TAP	**Taipei**	**0.88**	**340**	*i* P	**Pb**	**17 41 19.0**	**+0.3**
	baz=341						
TAP				S	**Sb**	**17 41 31.3**	**+0.6**
	baz=341						
SXI1	**Grass Mountain**	**0.88**	**2**	P	**Pb**	**17 41 18.9**	**0.0**
	baz=348						
SSLB	**Suanglung**	**0.91**	**243**	P	**Pg**	**17 41 18.2**	**-0.6**
	baz=255						
SSLB				S	**Sg**	**17 41 31.0**	**+0.3**
	baz=255						
SMLT	**Sun Moon Lake**	**0.92**	**249**	*i* P	**Pg**	**17 41 18.8**	**-0.2**
	baz=251						
SMLT				S	**Sg**	**17 41 30.7**	**-0.2**
	baz=251						
TYC	**Yuchr**	**0.95**	**251**	*i* P	**Pg**	**17 41 19.4**	**-0.1**
	baz=245						
TYC				*i* S	**Sg**	**17 41 31.7**	**-0.1**
	baz=245						
YULB	**Yu-li**	**0.95**	**211**	P	**Pg**	**17 41 18.6**	**-1.0**
	baz=226						
YULB				S	**Sb**	**17 41 33.7**	**+0.8**
	baz=226						
ECBN	**Changbin**	**0.96**	**202**	*e*P	**Pg**	**17 41 20.0**	**+0.3**
	baz=205						
ECBN				*e*S	**Sn**	**17 41 34.6**	**-0.2**
	baz=205						
NCUH	**Zhongli**	**0.96**	**322**	P	**Pn**	**17 41 20.9**	**-0.1**
	baz=323						
NCUH				S	**Sn**	**17 41 34.3**	**-0.6**
	baz=323						
YM01	**YM01**	**0.96**	**345**	P	**Pn**	**17 41 20.7**	**-0.4**
	baz=346						
YM01				S	**Sn**	**17 41 34.0**	**-1.0**
	baz=346						
TWS1	**Kuangyinshan**	**0.96**	**337**	*i* P	**Pn**	**17 41 20.6**	**-0.5**
	baz=338						
TWS1				S	**Sn**	**17 41 34.6**	**-0.4**
	baz=338						
SBCB	**Hsinchu**	**0.97**	**307**	P	**Pn**	**17 41 21.0**	**-0.1**
	baz=310						
SBCB				*e*S	**Sb**	**17 41 33.5**	**+0.3**
	baz=310						
TWQ1	**Liyutan**	**0.98**	**278**	*i* P	**Pn**	**17 41 21.2**	**-0.2**
	baz=281						
TWQ1				S	**Sb**	**17 41 34.1**	**+0.5**
	baz=281						
EYUL	**Yuli**	**0.98**	**209**	*e*P	**Pg**	**17 41 19.7**	**-0.5**
	baz=229						
EYUL				*e*S	**Sg**	**17 41 33.4**	**+0.5**
	baz=229						
HSN	**Hsinchu**	**0.98**	**307**	*e*P	**Pn**	**17 41 22.0**	**+0.7**
	baz=312						
HSN				S	**Sn**	**17 41 34.8**	**-0.6**
	baz=312						
TWF1	**Yuli**	**0.99**	**210**	*i* P	**Pg**	**17 41 19.8**	**-0.5**
	baz=215						
TWF1				S	**Sb**	**17 41 34.9**	**+1.1**
	baz=215						
NSY	**Sanyi**	**1.00**	**282**	*i* P	**Pn**	**17 41 21.9**	**+0.3**
	baz=284						
NSY				S	**Sb**	**17 41 34.5**	**+0.2**
	baz=284						
NMLH	**Miaoli**	**1.01**	**289**	P	**Pn**	**17 41 22.0**	**+0.3**
	baz=292						
NMLH				*e*S	**Sb**	**17 41 34.3**	**0.0**
	baz=292						
NTST	**Danshui**	**1.01**	**340**	P	**Pn**	**17 41 21.7**	**0.0**
	baz=340						
NTST				S	**Sn**	**17 41 36.9**	**+0.8**
	baz=340						
WHYT	**Xinyi Township**	**1.04**	**240**	P	**Pb**	**17 41 21.6**	**+0.1**
	baz=251						
WHYT				S	**Sb**	**17 41 35.7**	**+0.5**
	baz=251						
TWY	**Chenhua**	**1.08**	**349**	P	**Pg**	**17 41 21.8**	**-0.2**
	baz=342						
TWY				*e*S	**Sn**	**17 41 37.8**	**-0.1**
	baz=342						
WJS	**Zhushan**	**1.09**	**249**	P	**Pn**	**17 41 22.9**	**+0.1**
	baz=246						
WJS				S	**Sb**	**17 41 37.1**	**+0.4**
	baz=246						
YOJ	**Yonaguni jima**	**1.10**	**77**	*e*P	**Pn**	**17 41 23.5**	**+0.5**
WDJ	**Dajia District**	**1.10**	**277**	P	**Pg**	**17 41 21.9**	**-0.5**
	baz=280						
WDJ				S	**Sb**	**17 41 37.4**	**+0.3**
	baz=280						
WNT	**Mingjian**	**1.10**	**253**	*i* P	**Pn**	**17 41 23.2**	**+0.2**
	baz=251						
WNT				*i* S	**Sb**	**17 41 37.2**	**0.0**
	baz=251						
FULB	**Fuli**	**1.12**	**206**	P	**Pg**	**17 41 22.5**	**-0.4**
	baz=225						
FULB				*e*S	**Sg**	**17 41 37.8**	**+0.3**
	baz=225						
ALS	**Alishan**	**1.18**	**234**	*i* P	**Pg**	**17 41 23.5**	**-0.4**
	baz=236						
ALS				S	**Sb**	**17 41 40.0**	**+0.5**
	baz=236						
WCHH	**Zhanghua**	**1.18**	**264**	P	**Pn**	**17 41 24.6**	**+0.6**
	baz=266						
WCHH				S	**Sn**	**17 41 41.8**	**+1.6**
	baz=266						
CHKT	**Chengkung**	**1.19**	**201**	*i* P	**Pb**	**17 41 23.1**	**-0.9**
	baz=222						
CHKT				S	**Sn**	**17 41 41.4**	**+0.9**
	baz=222						
EHD	**Haiduan**	**1.21**	**209**	P	**Pb**	**17 41 23.0**	**-1.3**
	baz=215						
EHD				*e*S	**Sg**	**17 41 37.6**	**-2.5**
	baz=215						
CHN5	**Tsauling**	**1.23**	**240**	*i* P	**Pn**	**17 41 25.2**	**+0.4**
	baz=245						
CHN5				S	**Sn**	**17 41 41.8**	**+0.3**
	baz=245						
ECS	**Chishang**	**1.25**	**207**	*e*P	**Pn**	**17 41 23.5**	**-1.5**
	baz=212						
ELDTW	**Lidau**	**1.27**	**217**	*i* P	**Pn**	**17 41 23.5**	**-1.8**
	baz=210						
ELDTW				*e*S	**Sb**	**17 41 40.3**	**-1.6**
	baz=210						
WGK	**Gukeng**	**1.28**	**246**	*i* P	**Pg**	**17 41 25.9**	**+0.1**
	baz=248						
WGK				S	**Sn**	**17 41 43.2**	**+0.4**
	baz=248						
WDLH	**Douliu**	**1.30**	**247**	P	**Pg**	**17 41 27.5**	**+1.3**
	baz=249						
WDLH				S	**Sn**	**17 41 43.9**	**+0.7**
	baz=249						
EDH	**Donghe**	**1.33**	**202**	*e*P	**Pn**	**17 41 24.9**	**-1.2**
	baz=190						
EDH				S	**Sg**	**17 41 44.5**	**+0.5**
	baz=190						
WCKO	**Fanlu**	**1.37**	**236**	*e*P	**Pg**	**17 41 27.8**	**+0.3**
	baz=241						
WCKO				S	**Sg**	**17 41 45.6**	**+0.4**
	baz=241						
WRL	**Guolierlin Hig**	**1.37**	**257**	P	**Pb**	**17 41 27.0**	**-0.1**
	baz=276						
WRL				S	**Sg**	**17 41 45.3**	**-0.1**
	baz=276						
CHN2	**Minshiung**	**1.42**	**242**	P	**Pg**	**17 41 29.2**	**+0.7**
	baz=244						
CHN2				*e*S	**Sb**	**17 41 46.2**	**+0.1**
	baz=244						
STYH	**Taoyuan**	**1.42**	**223**	P	**Pn**	**17 41 27.2**	**-0.2**
	baz=228						
STYH				S	**Sg**	**17 41 46.9**	**-0.1**
	baz=228						
WTK	**Tuku**	**1.42**	**249**	P	**Pb**	**17 41 28.1**	**0.0**
	baz=252						
WTK				S	**Sg**	**17 41 47.6**	**+0.5**
	baz=252						
CHN4	**Tsaushan**	**1.43**	**233**	*i* P	**Pb**	**17 41 28.2**	**+0.1**
	baz=238						
CHN4				*i* S	**Sg**	**17 41 48.5**	**+1.4**
	baz=238						
TPUB	**Ta-pu**	**1.43**	**231**	P	**Pn**	**17 41 27.9**	**+0.4**
	baz=223						
TPUB				S	**Sg**	**17 41 47.9**	**+0.6**
	baz=223						
LONT	**Longtian**	**1.45**	**207**	P	**Pn**	**17 41 26.2**	**-1.6**
	baz=214						
LONT				*e*S	**Sn**	**17 41 44.7**	**-2.4**
	baz=214						
WTP	**Ta-pu**	**1.48**	**230**	*i* P	**Pn**	**17 41 28.1**	**-0.1**
	baz=235						
WTP				S	**Sb**	**17 41 48.5**	**+0.6**
	baz=235						
TWGBT	**Beinan**	**1.55**	**207**	P	**Pn**	**17 41 27.1**	**-2.1**
	baz=214						
TWGBT				*e*S	**Sn**	**17 41 49.3**	**-0.2**
	baz=214						
TWG	**Pinlang**	**1.55**	**207**	*i* P	**Pn**	**17 41 26.9**	**-2.2**
	baz=214						
TWG				*e*S	**Sn**	**17 41 50.2**	**+0.7**
	baz=214						
TWK	**Hsinying**	**1.55**	**233**	*i* P	**Pb**	**17 41 30.1**	**-0.2**
	baz=236						
TWK				S	**Sb**	**17 41 50.4**	**+0.3**
	baz=236						
CHN1	**Nanshi**	**1.58**	**230**	*i* P	**Pn**	**17 41 29.8**	**+0.2**
	baz=234						
CHN1				S	**Sg**	**17 41 52.2**	**+0.2**
	baz=234						
SNST	**Tainan City**	**1.58**	**231**	P	**Pb**	**17 41 30.6**	**-0.1**
	baz=235						
SNST				*e*S	**Sb**	**17 41 51.5**	**+0.8**
	baz=235						
WSF	**Szhu**	**1.58**	**249**	*i* P	**Pb**	**17 41 31.1**	**+0.3**
	baz=253						
WSF				S	**Sb**	**17 41 51.5**	**+0.5**
	baz=253						
SGST	**Jiashian**	**1.61**	**226**	*i* P	**Pn**	**17 41 29.9**	**-0.1**
	baz=231						
SGST				S	**Sb**	**17 41 51.7**	**0.0**
	baz=231						
SLGT	**Liugui**	**1.63**	**222**	*e*P	**Pn**	**17 41 31.1**	**+0.8**
	baz=228						
SLGT				*e*S	**Sb**	**17 41 52.3**	**-0.1**
	baz=228						
ICHU	**Yijhu**	**1.66**	**240**	P	**Pn**	**17 41 31.5**	**+0.8**
	baz=243						
ICHU				S	**Sg**	**17 41 54.5**	**-0.2**
	baz=243						
CHN8	**Yiju**	**1.72**	**240**	*e*P	**Pn**	**17 41 32.2**	**+0.8**
	baz=244						
CHN8				*e*S	**Sg**	**17 41 56.7**	**0.0**
	baz=244						
IRIF	**Iriomote-Funau**	**1.73**	**86**	*e*P	**Pb**	**17 41 33.1**	**-0.2**
SCST	**Cishan**	**1.81**	**223**	P	**Pb**	**17 41 34.0**	**-0.5**
	baz=230						
SHHT	**Tainan City**	**1.81**	**229**	P	**Pb**	**17 41 34.3**	**-0.3**
	baz=233						
SHHT				*e*S	**Sg**	**17 41 59.9**	**+0.4**
	baz=233						
TSMG	**Majia**	**1.86**	**216**	P	**Pn**	**17 41 34.1**	**+0.8**
	baz=223						
TSMG				S	**Sb**	**17 42 00.1**	**+1.3**
	baz=223						
TWM1	**Shoushan**	**1.90**	**223**	*i* P	**Pb**	**17 41 36.1**	**0.0**
	baz=227						
TSCK	**Chigu Township**	**1.92**	**237**	P	**Pn**	**17 41 34.6**	**+0.4**
	baz=242						
MASBT	**Mashibuluo**	**1.94**	**215**	*e*P	**Pn**	**17 41 34.3**	**-0.2**
	baz=222						
MASBT				S	**Sb**	**17 42 00.6**	**-0.6**
	baz=222						
EAST	**Anshuo**	**2.04**	**207**	*i* P	**Pn**	**17 41 36.5**	**+0.7**
	baz=199						
TAWH	**Dawu Township**	**2.06**	**205**	*e*P	**Pn**	**17 41 35.9**	**-0.2**
	baz=212						

JIJ	**Ishigaki jima**	**2.11**	**85**	P	**Pn**	**17 41 38.4**	**+1.5**
SCZT	**Fangliau**	**2.15**	**212**	*i* P	**Pn**	**17 41 37.7**	**+0.4**
	baz=218						
PHUB	**P'eng-hu**	**2.19**	**252**	P	**Pn**	**17 41 37.1**	**-0.8**
PHUB	baz=257			S	**Sn**	**17 42 06.3**	**+1.2**
SLIU	**Shizi**	**2.20**	**206**	P	**Pn**	**17 41 39.1**	**+0.9**
	baz=203						
LYUB	**Lan-yu**	**2.21**	**186**	*e*P	**Pn**	**17 41 37.7**	**-0.5**
	baz=191						
VWUC	**VWUC**	**2.31**	**290**	P	**Pn**	**17 41 39.8**	**+0.2**
	baz=282						

*IDC **04** 17:47:37.6±1.5,23°.60N×121°.21E,h0km,mb3.5/4, mbtmp3.5/5,ML3.3/1,MS3.6/2,Error ellipse: s-maj=77.8km s-min=24.6km az=67.0*
*TAP **04** 17:47:38.8,24°.10N×121°.73E,h9km,ML3.7,D*
*ASIES **04** 17:47:38.8,24°.10N×121°.73E,h9km,ML3.7,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.11; $M_{\theta\theta}$-1.17; $M_{\phi\phi}$0.06; $M_{r\theta}$1.07; $M_{\theta\phi}$-0.77; $M_{\phi r}$2.00; Fault plane solution: M_o2.65492×10^{21} NP1:ϕ_s34.23000°, δ77.16000°,λ.70.45000°. NP2:ϕ_s272.18000°,δ23.25000°, λ145.73000°. Principal axes: T Plg53.7900°, Azm280.6200°; N Plg19.0390°, Azm38.7410°; P Plg29.5060°, Azm140.0030°;*
*JMA **04** 17:47:40.3±0.2,24°.1N±0°.2×122°.2E±°,h20km±1km, TAIWAN REGION*
ISC 04 17:47:38.7±1.0,**24°.09N**±0°.02×**121°.78E**±0°.03,**h7**km±7km, **n102**,σ0°**76**/131,**mb3.5**/4,**14D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ETL	**Fush Village** baz=302	**0.16**	**296**	⇓*i* P	**Pg**	**17 47 41.9**	**-0.1**
ETL	baz=302			S	**Sg**	**17 47 43.9**	**-0.3**
TWD	**Chiawan** baz=271	**0.17**	**266**	⇓*i* P	**Pg**	**17 47 42.0**	**-0.1**
TWD	baz=271			S	**Sg**	**17 47 44.1**	**-0.3**
NACB	**Ninganchiao** baz=302	**0.19**	**296**	⇓*i* P	**Pg**	**17 47 42.3**	**-0.2**
NACB	baz=302			S	**Sg**	**17 47 44.5**	**-0.6**
HWA	**Hwalien** baz=236	**0.19**	**234**	*e*P	**Pg**	**17 47 44.0**	**+1.4**
EHP	**Heping Village** baz=2.0	**0.22**	**351**	P	**Pg**	**17 47 43.8**	**+0.7**
EAHA	**Aohua** baz=359	**0.24**	**352**	*i* P	**Pg**	**17 47 44.0**	**+0.5**
EAHA	baz=359			S	**Sg**	**17 47 47.9**	**+1.2**
ETM	**Tongmen** baz=243	**0.29**	**245**	⇓*i* P	**Pg**	**17 47 44.4**	**0.0**
ETLH	**Xiulin Townshi** baz=296	**0.29**	**293**	P	**Pg**	**17 47 44.4**	**-0.1**
ENA	**Nanau** baz=1.0	**0.34**	**354**	⇓*i* P	**Pg**	**17 47 45.9**	**+0.6**
LXIB	**Xiulin Townshi** baz=257	**0.34**	**258**	⇓P	**Pg**	**17 47 45.1**	**-0.3**
EWUT	**Wuta** baz=3.0	**0.35**	**0**	⇓*i* P	**Pg**	**17 47 46.3**	**+0.6**
SHUL	**Shoufeng** baz=218	**0.36**	**213**	*e*P	**Pb**	**17 47 47.5**	**0.0**
ESL	**Shilin** baz=237	**0.42**	**229**	*i* P	**Pg**	**17 47 46.9**	**+0.1**
TEGC	**Jichi Village** baz=208	**0.44**	**210**	*e*P	**Pb**	**17 47 48.7**	**0.0**
WHF	**Hehuan Shan** baz=277	**0.47**	**277**	P	**Pg**	**17 47 47.7**	**-0.2**
ESAO	**Su ao** baz=6.0	**0.49**	**7**	*e*P	**Pb**	**17 47 49.1**	**-0.5**
NNSB	**Datong** baz=315	**0.49**	**313**	⇓*i* P	**Pg**	**17 47 48.3**	**+0.1**
NNSB	baz=315			S	**Sg**	**17 47 54.6**	**-0.2**
LATG	**Datong** baz=332	**0.50**	**333**	⇓P	**Pg**	**17 47 48.6**	**+0.2**
NNS	**Nan Shan** baz=316	**0.51**	**313**	⇓*i* P	**Pg**	**17 47 48.6**	**0.0**
NNS	baz=316			S	**Sg**	**17 47 55.1**	**-0.1**
FUSS	**Fushou** baz=289	**0.51**	**288**	*i* P	**Pg**	**17 47 48.7**	**+0.1**
FUSS	baz=289			S	**Sg**	**17 47 55.3**	**-0.1**
WARBT	**Fenglin Townsh** baz=233	**0.52**	**224**	*e*P	**Pg**	**17 47 49.2**	**+0.5**
WARBT	baz=233			*e*S	**Sg**	**17 47 56.3**	**+0.9**
TWC	**Suao** baz=2.0	**0.52**	**7**	P	**Pg**	**17 47 49.6**	**+0.8**
EGFH	**Guangfu** baz=226	**0.53**	**217**	*e*P	**Pb**	**17 47 49.9**	**-0.4**
EGFH	baz=226			*e*S	**Sb**	**17 47 58.5**	**+0.3**
NDS	**Dongshan** baz=355	**0.54**	**354**	*e*P	**Pb**	**17 47 50.0**	**-0.5**
NDS	baz=355			*e*S	**Sb**	**17 47 57.8**	**-0.9**
CHGB	**Renai** baz=261	**0.55**	**267**	P	**Pg**	**17 47 49.4**	**0.0**
NDT	**Datong Townshi** baz=336	**0.56**	**335**	P	**Pg**	**17 47 50.1**	**+0.5**
NDT	baz=336			*e*S	**Sg**	**17 47 57.6**	**+0.6**
OWD	**Renai** baz=258	**0.57**	**256**	*e*P	**Pg**	**17 47 49.6**	**-0.1**
TWT	**Tachien** baz=287	**0.57**	**287**	*e*P	**Pb**	**17 47 50.3**	**-0.9**
TWT	baz=287			*e*S	**Sg**	**17 47 57.6**	**+0.3**
ENTT	**Nioudou** baz=342	**0.58**	**341**	*i* P	**Pg**	**17 47 50.5**	**+0.6**
ENTT	baz=342			*e*S	**Sb**	**17 47 58.5**	**-1.2**
TDCB	**Techi** baz=287	**0.59**	**286**	*e*P	**Pg**	**17 47 50.4**	**+0.3**
TDCB	baz=287			*e*S	**Sg**	**17 47 57.3**	**-0.5**
WUSB	**Renai** baz=262	**0.61**	**261**	P	**Pg**	**17 47 50.4**	**-0.1**
TWE	**Neicheng** baz=352	**0.64**	**351**	⇓*i* P	**Pb**	**17 47 51.7**	**-0.5**
VWDT	**VWDT** baz=247	**0.67**	**240**	*e*P	**Pb**	**17 47 52.5**	**-0.3**
HGSD	**Ruisui** baz=198	**0.68**	**209**	*e*P	**Pn**	**17 47 53.8**	**-0.9**
YHNB	**Yeheng** baz=327	**0.68**	**328**	⇓P	**Pg**	**17 47 52.3**	**+0.4**
FUSB	**Fushanzhiwuyua** baz=336	**0.69**	**345**	⇓P	**Pg**	**17 47 52.6**	**-0.5**
NSK	**Sanguang** baz=327	**0.70**	**327**	⇓P	**Pg**	**17 47 52.5**	**+0.3**
EHY	**Hungye** baz=217	**0.72**	**216**	P	**Pg**	**17 47 52.6**	**+0.1**
WHP	**Taichung City** baz=278	**0.78**	**284**	P	**Pb**	**17 47 54.2**	**-0.5**
WCS	**Beigang Elemen** baz=269	**0.79**	**268**	*e*P	**Pb**	**17 47 54.3**	**-0.5**
NFF	**Wufeng Townshi** baz=311	**0.81**	**312**	*e*P	**Pb**	**17 47 54.7**	**-0.4**
SSLB	**Suanglung** baz=259	**0.81**	**248**	*e*P	**Pg**	**17 47 54.4**	**+0.1**
SSLB	baz=259			*e*S	**Sg**	**17 48 04.7**	**-0.2**
YULB	**Yu-li** baz=227	**0.82**	**212**	*e*P	**Pg**	**17 47 55.0**	**+0.5**
SMLT	**Sun Moon Lake** baz=257	**0.83**	**256**	P	**Pg**	**17 47 54.9**	**+0.2**
SMLT	baz=257			*e*S	**Sg**	**17 48 05.6**	**+0.1**
EYUL	**Yuli** baz=228	**0.85**	**210**	*e*P	**Pn**	**17 47 56.6**	**-0.5**
EYUL	baz=228			S	**Sb**	**17 48 07.7**	**+0.2**
TWF1	**Yuli** baz=224	**0.86**	**211**	*e*P	**Pg**	**17 47 55.0**	**-0.2**
TYC	**Yuchr** baz=259	**0.86**	**258**	P	**Pg**	**17 47 55.2**	**-0.1**
TIPB	**Shuangxi** baz=354	**0.88**	**3**	P	**Pb**	**17 47 56.6**	**+0.3**
TIPB	baz=354			*e*S	**Sb**	**17 48 08.1**	**-0.2**
LIOB	**Emei** baz=308	**0.89**	**309**	*e*P	**Pb**	**17 47 56.6**	**+0.1**
NSTT	**Nanjuang** baz=307	**0.89**	**307**	P	**Pb**	**17 47 56.4**	**-0.1**
NHDH	**Xindian Distri** baz=343	**0.90**	**345**	*e*P	**Pb**	**17 47 56.6**	**-0.1**
WHYT	**Xinyi Township** baz=247	**0.93**	**245**	*e*P	**Pb**	**17 47 57.1**	**-0.1**
TWB1	**Santiao Chiao**	**0.93**	**12**	*e*P	**Pb**	**17 47 57.7**	**+0.5**
TWQ1	**Liyutan** baz=286	**0.95**	**286**	*e*P	**Pn**	**17 47 58.3**	**-0.2**
NWF	**Wu-fen Shan** baz=352	**0.98**	**0**	P	**Pn**	**17 47 58.6**	**-0.3**
NWF	baz=352			S	**Sb**	**17 48 11.1**	**0.0**
WFSB	**Wu-fen Shan** baz=352	**0.98**	**0**	*e*P	**Pn**	**17 47 58.8**	**0.0**
WFSB	baz=352			*e*S	**Sb**	**17 48 10.9**	**-0.2**
NSY	**Sanyi** baz=289	**0.98**	**289**	*e*P	**Pn**	**17 47 58.9**	**0.0**
FULB	**Fuli** baz=198	**0.99**	**207**	*e*P	**Pn**	**17 47 58.8**	**-0.3**
WJS	**Zhushan** baz=256	**1.00**	**255**	*e*P	**Pn**	**17 47 59.0**	**-0.2**
SXI1	**Grass Mountain** baz=347	**1.00**	**5**	*e*P	**Pn**	**17 47 59.2**	**0.0**
NMLH	**Miaoli** baz=296	**1.00**	**296**	*e*P	**Pn**	**17 48 00.2**	**+1.0**
SBCB	**Hsinchu** baz=313	**1.00**	**314**	*e*P	**Pn**	**17 48 00.1**	**+0.9**
HSN	**Hsinchu** baz=315	**1.02**	**314**	*e*P	**Pn**	**17 47 60.0**	**+0.5**
WNT	**Mingjian** baz=252	**1.02**	**258**	*e*P	**Pn**	**17 47 59.4**	**-0.1**
NCUH	**Zhongli** baz=324	**1.03**	**328**	*e*P	**Pn**	**17 47 59.9**	**+0.4**
CHKT	**Chengkung** baz=196	**1.06**	**201**	*e*P	**Pg**	**17 47 59.1**	**+0.1**
TWS1	**Kuangyinshan** baz=338	**1.06**	**342**	*e*P	**Pn**	**17 48 00.5**	**+0.6**
ALS	**Alishan** baz=240	**1.06**	**237**	P	**Pb**	**17 47 59.8**	**+0.2**
YM01	**YM01** baz=346	**1.07**	**350**	*e*P	**Pn**	**17 48 00.2**	**0.0**
WDJ	**Dajia District** baz=284	**1.07**	**284**	*e*P	**Pn**	**17 48 00.9**	**+0.8**
EHD	**Haiduan** baz=224	**1.07**	**209**	*e*P	**Pb**	**17 47 59.5**	**-0.1**
WCHH	**Zhanghua** baz=271	**1.11**	**270**	*e*P	**Pn**	**17 48 01.4**	**+0.7**
CHN5	**Tsauling** baz=237	**1.12**	**244**	P	**Pn**	**17 48 01.2**	**+0.3**
CHN5	baz=237			*e*S	**Sn**	**17 48 17.3**	**+0.7**
ELDTW	**Lidau** baz=221	**1.14**	**218**	*e*P	**Pg**	**17 47 59.6**	**-1.0**
WGK	**Gukeng** baz=252	**1.18**	**250**	*e*P	**Pn**	**17 48 02.4**	**+0.7**
WGK	baz=252			*e*S	**Sn**	**17 48 18.9**	**+0.8**
WDLH	**Douliu** baz=253	**1.20**	**251**	*e*P	**Pn**	**17 48 03.0**	**+1.1**
WDLH	baz=253			*e*S	**Sn**	**17 48 19.1**	**+0.6**
WCKO	**Fanlu** baz=242	**1.26**	**239**	*e*P	**Pg**	**17 48 03.6**	**+0.8**
WCKO	baz=242			*e*S	**Sn**	**17 48 21.9**	**+2.1**
WRL	**Guolierlin Hig** baz=264	**1.29**	**262**	*e*P	**Pg**	**17 48 04.1**	**+0.5**
WRL	baz=264			*e*S	**Sn**	**17 48 22.1**	**+1.3**
STYH	**Taoyuan** baz=213	**1.30**	**225**	*e*P	**Pg**	**17 48 03.9**	**+0.3**
TPUB	**Ta-pu** baz=237	**1.31**	**233**	*e*P	**Pg**	**17 48 04.3**	**+0.4**
CHN2	**Minshiung** baz=248	**1.32**	**245**	*e*P	**Pg**	**17 48 05.2**	**+1.3**
WTK	**Tuku** baz=255	**1.33**	**253**	*e*P	**Pg**	**17 48 04.9**	**+0.6**
WTK	baz=255			*e*S	**Sn**	**17 48 23.7**	**+2.0**
WTP	**Ta-pu** baz=235	**1.36**	**232**	*e*P	**Pg**	**17 48 05.0**	**+0.2**
TWGBT	**Beinan** baz=212	**1.42**	**207**	*e*P	**Pn**	**17 48 04.8**	**-0.1**
TWK	**Hsinying** baz=237	**1.44**	**236**	*e*P	**Pg**	**17 48 06.5**	**+0.2**
TWK	baz=237			*e*S	**Sg**	**17 48 27.0**	**+2.0**
CHN1	**Nanshi** baz=235	**1.46**	**232**	*e*P	**Pg**	**17 48 07.3**	**+0.6**
CHN1	baz=235			*e*S	**Sg**	**17 48 26.5**	**+0.9**
SNST	**Tainan City** baz=236	**1.46**	**234**	*e*P	**Pb**	**17 48 05.9**	**-0.3**
SNST	baz=236			*e*S	**Sg**	**17 48 27.0**	**+1.3**
SGST	**Jiashian** baz=231	**1.49**	**228**	*e*P	**Pn**	**17 48 06.2**	**+0.3**
SGST	baz=231			*e*S	**Sg**	**17 48 28.1**	**+1.6**
SLGT	**Liugui** baz=227	**1.51**	**224**	*e*P	**Pg**	**17 48 07.6**	**0.0**
ICHU	**Yijhu** baz=245	**1.55**	**242**	*e*P	**Pb**	**17 48 07.5**	**-0.3**
ICHU	baz=245			*e*S	**Sg**	**17 48 30.2**	**+1.6**
ECL	**Taimali** baz=198	**1.67**	**207**	*e*P	**Pn**	**17 48 08.8**	**+0.4**
SHHT	**Tainan City** baz=234	**1.69**	**231**	*e*P	**Pg**	**17 48 11.1**	**0.0**
TSMG	**Majia** baz=214	**1.73**	**217**	*e*P	**Pb**	**17 48 10.5**	**-0.2**
MASBT	**Mashibuluo** baz=219	**1.81**	**216**	*e*P	**Pb**	**17 48 11.7**	**-0.5**
SCZT	**Fangliau** baz=201	**2.02**	**212**	*e*P	**Pb**	**17 48 14.7**	**-1.0**
KSRS	**Korea Array** 0.1nm,0.3s,baz=205,slow=12,SNR=2.3 1.1nm,0.6s	**14.32**	**20**	Pn	**P**	**17 51 09.7**	**+0.5**
SONM	**Songino Array** comp=Z,66nm,21.9s,baz=337,slow=38	**26.67**	**337**	LR	LR	18 04 53.3	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=108,slow=8.7,SNR=2.5 0.2nm,0.6s	**38.78**	**316**	P	**P**	**17 55 02.9**	**-1.1**
ZALV	**Zalesovo Beam** 0.5nm,0.6s,baz=116,slow=6.6,SNR=2.4 0.5nm,0.6s	**40.62**	**327**	P	**P**	**17 55 21.0**	**+2.0**
WRA	**Warramunga Arr** 0.8nm,1.0s,baz=343,slow=8.9,SNR=2.0 0.8nm,1.0s	**45.45**	**163**	P	**P**	**17 55 54.6**	**-3.9**
ASAR	**Alice Springs** 0.8nm,1.1s,baz=352,slow=5.7,SNR=2.9 0.8nm,1.1s	**48.91**	**165**	P	**P**	**17 56 24.2**	**-1.3**
AKTO	**Aktyubinsk** comp=Z,120nm,19.2s,baz=76,slow=38	**55.22**	**316**	LR	LR	18 22 30.1	

*ASIES **04** 17:47:42.2,24°.12N×121°.69E,h12km,ML3.7,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.15; $M_{\theta\theta}$-0.69; $M_{\phi\phi}$0.53; $M_{r\theta}$1.38; $M_{\theta\phi}$-0.86; $M_{\phi r}$2.19; Fault plane solution: M_o2.80188×10^{21} NP1:ϕ_s29.10000°, δ86.84000°,λ.69.67000°. NP2:ϕ_s290.63000°,δ20.56000°, λ170.97000°. Principal axes: T Plg44.5110°, Azm278.9460°; N Plg20.2940°, Azm30.2630°; P Plg38.5420°, Azm137.3960°;*
TAP 04 17:47:42.2,24°.12N×121°.69E,h12km,ML3.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ETL	**Fush Village** baz=301	**0.08**	**303**	P	Pg	17 47 45.1	+0.2
ETL	baz=301			*e*S	Sg	17 47 46.7	0.0
TWD	**Chiawan** baz=249	**0.10**	**248**	P	Pg	17 47 45.2	+0.3
TWD	baz=249			S	Sg	17 47 46.9	-0.1
NACB	**Ninganchiao** baz=302	**0.11**	**302**	S	Sg	17 47 47.4	+0.1
HWA	**Hwalien** baz=217	**0.16**	**210**	*e*P	Pb	17 47 46.6	-0.6
HWA	baz=217			*e*S	Sg	17 47 49.9	+1.3
HWA	**Hwalien** baz=236	**0.16**	**210**	*e*S	Pb	17 47 46.6	-0.6
EHP	**Heping Village** baz=12	**0.20**	**13**	*e*P	Pg	17 47 46.9	+0.3
EHP	baz=12			S	Sg	17 47 50.4	+0.9
EHP	**Heping Village** baz=2.0	**0.20**	**13**	S	Pg	17 47 46.8	+0.3
ETLH	**Xiulin Townshi** baz=294	**0.21**	**295**	*e*P	Pb	17 47 48.0	-0.2
ETLH	baz=294			*e*S	Sg	17 47 50.9	+0.9
ETLH	**Xiulin Townshi** baz=296	**0.21**	**295**	*e*S	Pb	17 47 48.2	+0.1
EAHA	**Aohua** baz=8.0	**0.21**	**11**	*e*P	Pg	17 47 47.2	+0.4
EAHA	baz=8.0			*e*S	Sg	17 47 50.4	+0.4
ETM	**Tongmen** baz=233	**0.24**	**231**	*e*P	Pg	17 47 47.3	+0.1
ETM	baz=233			*e*S	Sg	17 47 51.2	+0.6
ETM	**Tongmen** baz=243	**0.24**	**231**	S	Pg	17 47 47.6	+0.4
LXIB	**Xiulin Townshi** baz=251	**0.27**	**250**	*e*P	Pg	17 47 48.4	+0.4
ENA	**Nanau** baz=7.0	**0.31**	**8**	*e*P	Pg	17 47 48.8	+0.2
ENA	baz=7.0			S	Sg	17 47 53.5	+0.6
ENA	**Nanau** baz=1.0	**0.31**	**8**	S	Pg	17 47 48.9	+0.3
EWUT	**Wuta** baz=11	**0.34**	**13**	*e*P	Pg	17 47 49.5	+0.5
EWUT	baz=11			*e*S	Sb	17 47 54.8	-0.7
SHUL	**Shoufeng** baz=202	**0.35**	**200**	*e*S	Sb	17 47 55.9	0.0
NNS	**Nan Shan** baz=317	**0.43**	**318**	*e*S	Sb	17 47 58.2	-0.3
ENTT	**Nioudou** baz=345	**0.53**	**347**	*e*S	Sb	17 48 01.3	+0.1

*JMA **04** 17:50:08.7±0.2,24°.1N±0°.5×121°.7E±0°.5,h0km,TAIWAN REGION*
*TAP **04** 17:50:08.3,24°.13N×121°.70E,h8km,ML3.4,C*
ISC 04 17:50:07.8±0.8,**24°.12N**±0°.01×**121°.77E**±0°.02,**h9**km±5km, **n107**,σ0°**67**/179,**3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ETL	**Fush Village** baz=292	**0.14**	**285**	*i* P	**Pg**	**17 50 10.7**	**-0.3**
ETL	baz=292			*i* S	**Sg**	**17 50 12.4**	**-0.8**
TWD	**Chiawan** baz=251	**0.17**	**255**	*i* P	**Pg**	**17 50 10.9**	**-0.5**
TWD	baz=251			*i* S	**Sg**	**17 50 12.8**	**-1.1**
NACB	**Ninganchiao** baz=294	**0.17**	**287**	⇓*i* P	**Pg**	**17 50 11.1**	**-0.4**
NACB	baz=294			S	**Sg**	**17 50 12.9**	**-1.1**
EHP	**Heping Village** baz=10.0	**0.19**	**351**	P	**Pg**	**17 50 12.6**	**+0.8**
EHP	baz=10.0			S	**Sb**	**17 50 15.8**	**+1.3**
EAHA	**Aohua** baz=6.0	**0.21**	**351**	*i* P	**Pg**	**17 50 12.8**	**+0.7**
EAHA	baz=6.0			S	**Sg**	**17 50 16.0**	**+1.0**
HWA	**Hwalien** baz=219	**0.21**	**227**	P	**Pg**	**17 50 12.8**	**+0.6**
ETLH	**Xiulin Townshi** baz=291	**0.28**	**287**	P	**Pg**	**17 50 13.1**	**-0.4**
ETLH	baz=291			S	**Sg**	**17 50 16.5**	**-0.8**
ETM	**Tongmen** baz=233	**0.30**	**239**	*e*P	**Pg**	**17 50 13.3**	**-0.4**
ETM	baz=233			*e*S	**Sg**	**17 50 17.1**	**-0.8**
ENA	**Nanau** baz=6.0	**0.30**	**354**	*i* P	**Pb**	**17 50 14.6**	**-0.8**
ENA	baz=6.0			S	**Sg**	**17 50 19.0**	**+1.0**
EWUT	**Wuta** baz=10.0	**0.32**	**1**	P	**Pb**	**17 50 15.0**	**-0.7**
EWUT	baz=10.0			S	**Sb**	**17 50 19.5**	**-1.4**
LXIB	**Xiulin Townshi** baz=250	**0.34**	**253**	P	**Pg**	**17 50 13.9**	**-0.8**
LXIB	baz=250			S	**Sg**	**17 50 18.2**	**-1.0**
SHUL	**Shoufeng** baz=212	**0.39**	**210**	*e*P	**Pb**	**17 50 16.6**	**-0.1**
SHUL	baz=212			*e*S	**Sb**	**17 50 23.0**	**+0.2**
ESL	**Shilin** baz=227	**0.44**	**226**	P	**Pg**	**17 50 16.0**	**-0.4**
ESL	baz=227			*e*S	**Sg**	**17 50 22.0**	**-0.1**
ESAO	**Su ao** baz=14	**0.46**	**8**	*e*P	**Pb**	**17 50 17.9**	**0.0**
ESAO	baz=14			S	**Sb**	**17 50 23.8**	**-1.0**
TEGC	**Jichi Village** baz=188	**0.46**	**208**	*e*P	**Pb**	**17 50 17.7**	**-0.4**
TEGC	baz=188			*e*S	**Sb**	**17 50 26.2**	**+1.1**
WHF	**Hehuan Shan** baz=273	**0.47**	**273**	P	**Pg**	**17 50 16.8**	**-0.2**
WHF	baz=273			*e*S	**Sg**	**17 50 22.3**	**-0.9**
LATG	**Datong** baz=337	**0.47**	**331**	P	**Pg**	**17 50 17.2**	**+0.3**
LATG	baz=337			S	**Sg**	**17 50 23.7**	**+0.5**
NNSB	**Datong** baz=315	**0.47**	**311**	P	**Pg**	**17 50 17.0**	**+0.1**
NNSB	baz=315			S	**Sg**	**17 50 22.9**	**-0.2**
NNSH	**Datong** baz=314	**0.47**	**311**	*e*P	**Pg**	**17 50 17.1**	**+0.2**
NNSH	baz=314			*e*S	**Sg**	**17 50 23.0**	**-0.2**
NNS	**Nan Shan** baz=316	**0.48**	**311**	P	**Pg**	**17 50 17.3**	**0.0**
NNS	baz=316			S	**Sg**	**17 50 23.4**	**-0.2**
TWC	**Suao** baz=14	**0.49**	**8**	*e*P	**Pb**	**17 50 18.6**	**0.0**
TWC	baz=14			*e*S	**Sb**	**17 50 25.3**	**-0.5**
FUSS	**Fushou** baz=285	**0.50**	**285**	*e*P	**Pg**	**17 50 17.7**	**+0.1**
FUSS	baz=285			*e*S	**Sg**	**17 50 23.7**	**-0.5**
NDS	**Dongshan** baz=358	**0.51**	**354**	*e*P	**Pb**	**17 50 18.9**	**0.0**
NDS	baz=358			*e*S	**Sb**	**17 50 25.5**	**-0.9**
NDT	**Datong Townshi** baz=338	**0.53**	**334**	P	**Pg**	**17 50 18.9**	**-0.4**
NDT	baz=338			*e*S	**Sg**	**17 50 26.0**	**+0.8**
WARBT	**Fenglin Townsh** baz=228	**0.54**	**221**	*e*P	**Pg**	**17 50 18.1**	**-0.1**
WARBT	baz=228			*e*S	**Sg**	**17 50 25.9**	**+0.6**
ENTT	**Nioudou** baz=345	**0.55**	**340**	⇓*i* P	**Pb**	**17 50 19.1**	**-0.5**
ENTT	baz=345			*e*S	**Sb**	**17 50 26.8**	**-0.8**
CHGB	**Renai** baz=255	**0.55**	**264**	*e*P	**Pg**	**17 50 18.3**	**-0.3**
CHGB	baz=255			*e*S	**Sg**	**17 50 25.5**	**-0.3**
EGFH	**Guangfu** baz=222	**0.55**	**215**	*e*P	**Pg**	**17 50 18.8**	**+0.3**
EGFH	baz=222			*e*S	**Sg**	**17 50 26.7**	**+1.0**
TWT	**Tachien** baz=283	**0.56**	**284**	*e*P	**Pg**	**17 50 19.2**	**+0.5**
TWT	baz=283			*e*S	**Sg**	**17 50 26.0**	**-0.2**
OWD	**Renai** baz=253	**0.57**	**253**	*e*P	**Pg**	**17 50 18.9**	**0.0**
TDCB	**Techi** baz=284	**0.58**	**283**	*e*P	**Pg**	**17 50 19.1**	**+0.1**

TDCB				*e*S		Sg	17 50 26.0	-0.6
	baz=284							
TWE	**Neicheng**	**0.60**	**351**	P		**Pb**	**17 50 20.4**	**0.0**
	baz=356							
TWE				*e*S		**Sb**	**17 50 28.4**	**-0.7**
	baz=356							
WUSB	**Renai**	**0.61**	**258**	*e*P		**Pg**	**17 50 19.5**	**-0.2**
	baz=258							
YHNB	**Yeheng**	**0.66**	**326**	*e*P		**Pb**	**17 50 21.1**	**-0.4**
	baz=330							
YHNB				*e*S		**Sg**	**17 50 29.1**	**0.0**
	baz=330							
FUSB	**Fushanzhiwuyua**	**0.66**	**345**	P		**Pb**	**17 50 21.3**	**-0.1**
	baz=349							
FUSB				S		**Sb**	**17 50 30.1**	**-0.6**
	baz=349							
NSK	**Sanguang**	**0.67**	**326**	P		**Pg**	**17 50 21.1**	**+0.4**
	baz=329							
NSK				S		**Sg**	**17 50 29.8**	**+0.2**
	baz=329							
VWDT	**VWDT**	**0.69**	**238**	*e*P		**Pg**	**17 50 21.0**	**0.0**
	baz=236							
VWDT				*e*S		**Sg**	**17 50 30.3**	**+0.3**
	baz=236							
HGSD	**Ruisui**	**0.70**	**207**	*e*P		**Pb**	**17 50 22.9**	**+0.7**
	baz=220							
HGSD				*e*S		**Sn**	**17 50 34.0**	**-0.8**
	baz=220							
EHY	**Hungye**	**0.74**	**214**	P		**Pg**	**17 50 21.9**	**-0.1**
	baz=221							
EHY				*e*S		**Sg**	**17 50 32.5**	**+0.8**
	baz=221							
WHP	**Taichung City**	**0.77**	**282**	*e*P		**Pb**	**17 50 23.4**	**0.0**
	baz=282							
WHP				*e*S		**Sg**	**17 50 32.7**	**-0.1**
	baz=282							
NFF	**Wufeng Townshi**	**0.79**	**310**	*e*P		**Pb**	**17 50 23.4**	**-0.3**
	baz=313							
NFF				*e*S		**Sg**	**17 50 33.1**	**0.0**
	baz=313							
WCS	**Beigang Elemen**	**0.79**	**265**	*e*P		**Pg**	**17 50 23.0**	**0.0**
	baz=266							
SSLB	**Suanglung**	**0.82**	**246**	*e*P		**Pg**	**17 50 23.4**	**-0.3**
	baz=255							
SSLB				*e*S		**Sg**	**17 50 33.5**	**-0.8**
	baz=255							
SMLT	**Sun Moon Lake**	**0.83**	**254**	*e*P		**Pg**	**17 50 24.1**	**+0.2**
	baz=253							
SMLT				*e*S		**Sg**	**17 50 34.2**	**-0.6**
	baz=253							
TIPB	**Shuangxi**	**0.85**	**3**	*e*P		**Pn**	**17 50 25.4**	**-0.5**
	baz=354							
YULB	**Yu-li**	**0.85**	**211**	*e*P		**Pg**	**17 50 24.6**	**+0.4**
	baz=222							
YULB				*e*S		**Sb**	**17 50 36.1**	**-0.1**
	baz=222							
LIOB	**Emei**	**0.87**	**307**	*e*P		**Pn**	**17 50 25.5**	**-0.6**
	baz=308							
NHDH	**Xindian Distri**	**0.87**	**345**	*e*P		**Pn**	**17 50 25.4**	**-0.8**
	baz=347							
NHDH				*i* S		**Sb**	**17 50 36.5**	**-0.2**
	baz=347							
TYC	**Yuchr**	**0.87**	**256**	*e*P		**Pg**	**17 50 24.2**	**-0.2**
	baz=255							
TYC				*e*S		**Sg**	**17 50 34.8**	**-1.0**
	baz=255							
NSTT	**Nanjuang**	**0.87**	**306**	P		**Pb**	**17 50 25.1**	**+0.1**
	baz=308							
NSTT				*e*S		**Sg**	**17 50 35.7**	**-0.1**
	baz=308							
EYUL	**Yuli**	**0.88**	**208**	*e*P		**Pb**	**17 50 25.5**	**+0.4**
	baz=222							
TWF1	**Yuli**	**0.88**	**210**	*e*P		**Pb**	**17 50 25.4**	**+0.1**
	baz=223							
TWB1	**Santiao Chiao**	**0.90**	**12**	*e*P		**Pn**	**17 50 26.9**	**+0.3**
	baz=4.0							
TWQ1	**Liyutan**	**0.94**	**284**	*e*P		**Pn**	**17 50 27.5**	**+0.3**
	baz=285							
NWF	**Wu-fen Shan**	**0.94**	**0**	*e*P		**Pn**	**17 50 27.3**	**+0.1**
	baz=352							
NWF				*i* S		**Sb**	**17 50 39.0**	**0.0**
	baz=352							
WFSB	**Wu-fen Shan**	**0.94**	**0**	*e*P		**Pn**	**17 50 27.6**	**+0.4**
	baz=353							
WFSB				S		**Sb**	**17 50 39.1**	**+0.2**
	baz=353							
WHYT	**Xinyi Township**	**0.94**	**243**	*e*P		**Pb**	**17 50 26.3**	**0.0**
	baz=245							
NSY	**Sanyi**	**0.97**	**288**	*e*P		**Pn**	**17 50 27.7**	**+0.1**
	baz=289							
SXI1	**Grass Mountain**	**0.97**	**5**	*e*P		**Pn**	**17 50 28.1**	**+0.5**
	baz=351							
SBCB	**Hsinchu**	**0.98**	**313**	*e*P		**Pn**	**17 50 28.7**	**+1.0**
	baz=314							
NMLH	**Miaoli**	**0.99**	**295**	*e*P		**Pn**	**17 50 28.9**	**+1.2**
	baz=304							
CHKH	**Chenggong**	**0.99**	**201**	*e*P		**Pb**	**17 50 27.0**	**-0.1**
	baz=190							
CHKH				*e*S		**Sn**	**17 50 42.6**	**+0.7**
	baz=190							
HSN	**Hsinchu**	**1.00**	**313**	*e*P		**Pn**	**17 50 28.6**	**+0.7**
	baz=316							
NCUH	**Zhongli**	**1.00**	**328**	*e*P		**Pn**	**17 50 28.5**	**+0.6**
	baz=329							
NCUH				*e*S		**Sn**	**17 50 42.6**	**+0.5**
	baz=329							
WJS	**Zhushan**	**1.00**	**253**	*e*P		**Pn**	**17 50 28.2**	**+0.2**
	baz=246							
FULB	**Fuli**	**1.02**	**206**	*e*P		**Pb**	**17 50 27.6**	**0.0**
	baz=224							
WNT	**Mingjian**	**1.03**	**256**	*e*P		**Pn**	**17 50 28.6**	**+0.3**
	baz=250							
TWS1	**Kuangyinshan**	**1.03**	**342**	P		**Pn**	**17 50 29.4**	**+1.1**
	baz=341							
YM01	**YM01**	**1.04**	**350**	*e*P		**Pn**	**17 50 29.1**	**+0.6**
	baz=1.0							
YM01				*e*S		**Sn**	**17 50 42.5**	**-0.6**
	baz=1.0							
WDJ	**Dajia District**	**1.06**	**282**	*e*P		**Pn**	**17 50 29.6**	**+0.9**
	baz=283							
ALS	**Alishan**	**1.08**	**236**	P		**Pb**	**17 50 28.8**	**+0.1**
	baz=236							
ALS				*e*S		**Sb**	**17 50 43.0**	**0.0**
	baz=236							
ANP	**Anpu**	**1.08**	**348**	*e*P		**Pn**	**17 50 30.1**	**+0.9**
	baz=347							
CHKT	**Chengkung**	**1.09**	**200**	*e*P		**Pb**	**17 50 28.5**	**-0.2**
	baz=193							
EHD	**Haiduan**	**1.10**	**208**	*e*P		**Pg**	**17 50 29.3**	**+0.4**
	baz=225							
WCHH	**Zhanghua**	**1.11**	**268**	*e*P		**Pg**	**17 50 30.6**	**+1.5**
	baz=269							
CHN5	**Tsauling**	**1.13**	**243**	*i*P		**Pg**	**17 50 30.2**	**+0.6**
	baz=243							
CHN5				S		**Sn**	**17 50 45.8**	**+0.2**
	baz=243							
ELDTW	**Lidau**	**1.16**	**217**	P		**Pb**	**17 50 29.5**	**-0.5**
	baz=229							
ELDTW				*e*S		**Sg**	**17 50 45.5**	**+0.4**
	baz=229							
WGK	**Gukeng**	**1.19**	**249**	P		**Pg**	**17 50 31.0**	**+0.3**
	baz=249							
WGK				*e*S		**Sg**	**17 50 47.6**	**+1.5**
	baz=249							
EDH	**Donghe**	**1.22**	**201**	*e*P		**Pn**	**17 50 29.7**	**-1.3**
	baz=188							
EDH				*e*S		**Sg**	**17 50 47.6**	**+0.5**
	baz=188							
WCKO	**Fanlu**	**1.27**	**238**	*e*P		**Pg**	**17 50 32.9**	**+0.7**
	baz=233							
WCKO				*e*S		**Sg**	**17 50 50.3**	**+1.6**
	baz=233							
WRL	**Guolierlin Hig**	**1.30**	**260**	*e*P		**Pg**	**17 50 33.0**	**+0.3**
	baz=262							
STYH	**Taoyuan**	**1.32**	**224**	*e*P		**Pn**	**17 50 32.3**	**0.0**
	baz=226							
STYH				*e*S		**Sn**	**17 50 50.0**	**0.0**
	baz=226							
CHN4	**Tsaushan**	**1.33**	**235**	P		**Pg**	**17 50 33.6**	**+0.3**
	baz=225							
CHN4				S		**Sg**	**17 50 51.9**	**+1.4**
	baz=225							
TPUB	**Ta-pu**	**1.33**	**232**	*e*P		**Pg**	**17 50 33.7**	**+0.3**
	baz=222							
TPUB				*e*S		**Sg**	**17 50 50.9**	**+0.3**
	baz=222							
WTK	**Tuku**	**1.34**	**251**	*e*P		**Pb**	**17 50 33.4**	**+0.3**
	baz=252							
WTK				*e*S		**Sg**	**17 50 51.9**	**+1.0**
	baz=252							
WTP	**Ta-pu**	**1.38**	**231**	*e*P		**Pg**	**17 50 34.6**	**+0.4**
	baz=232							
WTP				*e*S		**Sg**	**17 50 52.8**	**+0.7**
	baz=232							
TWG	**Pinlang**	**1.45**	**207**	*e*P		**Pn**	**17 50 31.8**	**-2.3**
	baz=210							
TWK	**Hsinying**	**1.46**	**234**	*e*P		**Pg**	**17 50 35.8**	**+0.1**
	baz=237							
TWK				*e*S		**Sg**	**17 50 55.6**	**+1.0**
	baz=237							
LDUT	**Ludao**	**1.47**	**191**	*e*P		**Pn**	**17 50 33.1**	**-1.3**
	baz=197							
CHN1	**Nanshi**	**1.48**	**231**	*e*P		**Pg**	**17 50 36.3**	**+0.2**
	baz=234							
CHN1				*e*S		**Sg**	**17 50 55.9**	**+0.6**
	baz=234							
SNST	**Tainan City**	**1.48**	**233**	*e*P		**Pg**	**17 50 36.1**	**0.0**
	baz=235							
SNST				*e*S		**Sg**	**17 50 56.1**	**+0.8**
	baz=235							
SGST	**Jiashian**	**1.51**	**227**	*e*P		**Pn**	**17 50 34.9**	**-0.1**
	baz=229							
SGST				*e*S		**Sg**	**17 50 56.9**	**+0.7**
	baz=229							
SLGT	**Liugui**	**1.53**	**223**	*e*P		**Pg**	**17 50 36.9**	**-0.2**
	baz=226							
SLGT				*e*S		**Sg**	**17 50 57.6**	**+0.7**
	baz=226							
ICHU	**Yijhu**	**1.57**	**241**	*e*P		**Pb**	**17 50 37.0**	**+0.2**
	baz=243							
ICHU				*e*S		**Sg**	**17 50 57.8**	**-0.3**
	baz=243							
SCST	**Cishan**	**1.70**	**224**	*e*P		**Pb**	**17 50 39.3**	**+0.1**
	baz=228							
SCST				*e*S		**Sg**	**17 51 03.2**	**+0.6**
	baz=228							
SCLT	**Jiali**	**1.73**	**237**	*e*S		**Sg**	**17 51 03.1**	**-0.3**
	baz=239							
MASBT	**Mashibuluo**	**1.83**	**215**	*e*P		**Pb**	**17 50 40.7**	**-0.8**
	baz=230							
MASBT				*e*S		**Sb**	**17 51 05.3**	**+0.8**
	baz=230							
EAST	**Anshuo**	**1.93**	**206**	*e*P		**Pn**	**17 50 41.8**	**+1.1**
	baz=200							
TAWH	**Dawu Township**	**1.95**	**205**	*e*S		**Sn**	**17 51 05.5**	**-0.2**
	baz=210							
SCZT	**Fangliau**	**2.04**	**212**	*e*P		**Pb**	**17 50 43.5**	**-1.4**
	baz=202							
JKRS	**Kuro-shima**	**2.04**	**86**	P		**Pb**	**17 50 44.6**	**-0.4**
JKRS				*e*S		**Sb**	**17 51 11.5**	**+0.9**
PHUB	**P'eng-hu**	**2.11**	**254**	*e*P		**Pn**	**17 50 43.3**	**+0.1**
	baz=256							
PHUB				*e*S		**Sn**	**17 51 10.3**	**+0.8**
	baz=256							
PNG	**Penghu**	**2.11**	**255**	*e*P		**Pn**	**17 50 42.7**	**-0.4**
	baz=258							
WDGT	**Dungji**	**2.12**	**247**	*e*S		**Sg**	**17 51 15.1**	**-0.8**
	baz=247							
JIJ	**Ishigaki jima**	**2.17**	**83**	P		**Pn**	**17 50 45.3**	**+1.2**
JIJ				*e*S		**Sb**	**17 51 12.6**	**-1.7**
VWUC	**VWUC**	**2.29**	**293**	*e*P		**Pn**	**17 50 45.9**	**+0.2**
	baz=292							
VWUC				S		**Sn**	**17 51 13.7**	**-0.3**
	baz=292							
JISG	**Ishigakijimahi**	**2.36**	**78**	*e*P		**Pb**	**17 50 48.7**	**-1.7**

*IDC **04** 17:58:51.4±1.6,55.46N×149.12W,h0km,mb3.5/4, mbtmp3.4/9,ML3.2/5,MS2.7/1,Error ellipse: s-maj=33.7km s-min=22.4km az=20.0*

*NEIC **04** 17:58:54.5±2.0,55.70N±0.10×149.2W±0.1,h16km±7km, mb3.8/1,ML3.6/40,ML3.4(AEIC),Error ellipse: s-maj=13.9km s-min=8.9km az=173.0*

*AEIC **04** 17:58:57.7±1.8,55.7N±0.1×149.14W±0.06,h12km±7km, Error ellipse: s-maj=15.4km s-min=5.3km az=180.0*

ISC 04 17:58:53.8±1.0,55.77N±0.08×149.21W±0.06,h10km, n209,σ1°13/211,mb3.7/4,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**2.69**	**305**			**Pn**	**17 59 37.0**	**-0.1**
OHAK						**Sn**	**18 00 07.2**	**-2.5**
OHAK	**Old Harbor**	**2.69**	**305**	P		**Pn**	**17 59 37.0**	**-0.1**
	baz=123							
OHAK				S		**Sn**	**18 00 07.2**	**-2.5**
	baz=123							
KDAK	**Kodiak Island**	**2.74**	**319**			**Pn**	**17 59 38.1**	**+0.3**
KDAK	**Kodiak Island**	**2.74**	**319**			**Sn**	**18 00 09.5**	**-1.5**
KDAK	**Kodiak Island**	**2.74**	**319**	S		**Sn**	**18 00 09.5**	**-1.5**
	baz=137							
KDAK	**Kodiak Island**	**2.74**	**319**	Pn		**Pn**	**17 59 38.2**	**+0.3**
	3.7nm,0.3s,baz=135,slow=7.4,SNR=30							
KDAK				Sn		**Sn**	**18 00 09.6**	**-1.4**
	16nm,0.3s,baz=143,slow=19,SNR=26							
KDAK				LR		LR	18 00 57.8	
	comp=Z,107nm,18.8s,baz=261,slow=42 16nm,0.4s							
SII	**Sitkinak Islan**	**2.89**	**288**			**Pn**	**17 59 39.5**	**-0.4**
SII						**Sn**	**18 00 12.1**	**-2.7**
SII	**Sitkinak Islan**	**2.89**	**288**		IAML		18 00 16.6	
	comp=N,153nm,0.7s							
SII					IAML		18 00 18.4	
	comp=E,134nm,0.9s							
SII	**Sitkinak Islan**	**2.89**	**288**	P		**Pn**	**17 59 39.5**	**-0.4**
	baz=106							
SII				S		**Sn**	**18 00 12.5**	**-2.2**
	baz=106							
SYI	**Shuyak Island**	**3.33**	**330**			**Pn**	**17 59 46.7**	**+0.8**
SYI	**Shuyak Island**	**3.33**	**330**			**Sn**	**18 00 24.9**	**-0.7**
Q20K	**Shuyak Island**	**3.33**	**330**	P		**Pn**	**17 59 46.6**	**+0.7**
	baz=148							
Q20K				S		**Sn**	**18 00 24.9**	**-0.7**
	baz=148							
R18K	**Karluk**	**3.41**	**304**			**Pn**	**17 59 46.5**	**-0.5**
R18K					IAML		18 00 28.1	
	comp=N,82nm,0.4s							
R18K					IAML		18 00 36.4	
	comp=E,102nm,1.1s							
R18K	**Karluk**	**3.41**	**304**	P		**Pn**	**17 59 47.6**	**+0.6**
	baz=121							
CNPM	**China Poot**	**3.92**	**345**			**Pn**	**17 59 54.1**	**0.0**
CNPM						**Sn**	**18 00 38.6**	**-1.5**
CNPM	**China Poot**	**3.92**	**345**		IAML		18 00 41.6	
	comp=E,54nm,0.7s							
CNPM					IAML		18 00 44.0	
	comp=N,48nm,1.1s							
Q19K	**Cape Douglas,**	**3.98**	**325**			**Pn**	**17 59 55.8**	**+0.9**
Q19K	**Cape Douglas,**	**3.98**	**325**		IAML		18 00 53.6	
	comp=N,137nm,0.8s							
Q19K	**Cape Douglas,**	**3.98**	**325**	P		**Pn**	**17 59 55.8**	**+0.9**
	baz=142							
Q23K	**Middleton Isla**	**3.98**	**22**			**Pn**	**17 59 55.1**	**+0.3**
Q23K	**Middleton Isla**	**3.98**	**22**		IAML		18 00 45.2	
	comp=N,114nm,1.1s							
Q23K					IAML		18 02 19.6	
	comp=E,141nm,1.1s							
Q23K	**Middleton Isla**	**3.98**	**22**	P		**Pn**	**17 59 55.3**	**+0.5**
	baz=203							
MID	**Middleton Isla**	**3.98**	**22**			**Pn**	**17 59 55.2**	**+0.3**
MID	**Middleton Isla**	**3.98**	**22**		IAML		18 00 36.7	
	comp=E,82nm,1.2s							
MID					IAML		18 01 54.8	
	comp=N,132nm,1.2s							
KAHG	**Katmai Hook Gl**	**3.99**	**315**			**Pn**	**17 59 56.2**	**+1.1**
BRSE	**Bradley Lake S**	**4.07**	**349**			**Pn**	**17 59 56.2**	**+0.1**
BRSE						**Sn**	**18 00 42.2**	**-1.5**
BRSE	**Bradley Lake S**	**4.07**	**349**	P		**Pn**	**17 59 56.2**	**+0.1**
	baz=168							
BRSE				S		**Sn**	**18 00 42.3**	**-1.5**
	baz=168							
BRLK	**Bradley Lake**	**4.11**	**348**			**Pn**	**17 59 56.4**	**-0.2**
BRLK						**Sn**	**18 00 43.3**	**-1.4**
BRLK	**Bradley Lake**	**4.11**	**348**		IAML		18 00 45.6	
	comp=N,43nm,0.5s							
BRLK					IAML		18 00 46.9	
	comp=E,70nm,0.5s							
HOM	**Homer**	**4.11**	**343**	Pn		**Pn**	**17 59 55.5**	**-1.1**
PLK3	**Peulik 3**	**4.34**	**299**			**Pn**	**18 00 00.8**	**+1.0**
P23K	**Montague Islan**	**4.35**	**12**			**Pn**	**18 00 00.3**	**+0.4**
P23K	**Montague Islan**	**4.35**	**12**	P		**Pn**	**18 00 00.3**	**+0.4**
	baz=193							
SEW	**Seward**	**4.35**	**358**			**Pn**	**18 00 00.3**	**+0.4**
SEW	**Seward**	**4.35**	**358**	P		**Pn**	**18 00 00.3**	**+0.4**
	baz=178							
Q17K	**Contact Creek**	**4.42**	**307**	P		**Pn**	**18 00 02.2**	**+1.2**
	baz=122							
P19K	**Oil Pt**	**4.45**	**333**			**Pn**	**18 00 02.2**	**+0.9**
P19K	**Oil Pt**	**4.45**	**333**	P		**Pn**	**18 00 02.2**	**+0.9**
	baz=150							
PLK1	**Peulik 1**	**4.55**	**300**			**Pn**	**18 00 03.7**	**+1.1**
O20K	**Slope Mountain**	**4.69**	**339**			**Pn**	**18 00 05.8**	**+1.1**
O20K	**Slope Mountain**	**4.69**	**339**	P		**Pn**	**18 00 05.8**	**+1.1**
	baz=156							
SLKM	**Skilak Lake**	**4.79**	**354**			**Pn**	**18 00 06.2**	**+0.2**
HIN	**Hinchinbrook I**	**4.86**	**16**			**Pn**	**18 00 07.3**	**+0.4**
P18K	**Big Mountain,**	**4.87**	**321**			**Pn**	**18 00 07.2**	**+0.1**
P18K	**Big Mountain,**	**4.87**	**321**	P		**Pn**	**18 00 07.5**	**+0.5**
	baz=136							
KAIM	**Kayak Island**	**4.89**	**30**			**Pn**	**18 00 07.7**	**+0.4**
KAIM	**Kayak Island**	**4.89**	**30**		IAML		18 01 14.7	
	comp=E,38nm,0.7s							
KAIM					IAML		18 02 28.7	
	comp=N,42nm,1.1s							
KAIM	**Kayak Island**	**4.89**	**30**	P		**Pn**	**18 00 07.9**	**+0.5**
	baz=212							
RSO	**Redoubt South**	**5.07**	**340**	Pn		**Pn**	**18 00 10.4**	**+0.5**
RDT	**Redoubt**	**5.11**	**342**			**Pn**	**18 00 10.9**	**+0.5**
EYAK	**Cordova Ski Ar**	**5.13**	**19**			**Pn**	**18 00 11.3**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.13**	**19**	P		**Pn**	**18 00 11.3**	**+0.7**
	baz=202							
CHGN	**Chignik**	**5.19**	**280**			**Pn**	**18 00 11.2**	**-0.2**
CHGN	**Chignik**	**5.19**	**280**		IAML		18 01 11.4	
	comp=N,54nm,0.7s							
CHGN					IAML		18 01 11.5	
	comp=E,40nm,0.2s							
CHGN	**Chignik**	**5.19**	**280**	P		**Pn**	**18 00 11.4**	**0.0**
	baz=93							
P17K	**Kvichak River**	**5.20**	**314**			**Pn**	**18 00 12.7**	**+1.1**
P17K	**Kvichak River**	**5.20**	**314**	P		**Pn**	**18 00 12.7**	**+1.1**
	baz=129							
SUCK	**Suckling Hills**	**5.20**	**32**			**Pn**	**18 00 12.3**	**+0.7**
SUCK	**Suckling Hills**	**5.20**	**32**		IAML		18 01 20.6	
	comp=E,33nm,1.2s							
SUCK					IAML		18 01 23.1	
	comp=N,29nm,0.9s							
O18K	**Koktuh Hills**	**5.20**	**324**			**Pn**	**18 00 11.9**	**+0.3**
O18K	**Koktuh Hills**	**5.20**	**324**	P		**Pn**	**18 00 11.9**	**+0.3**
	baz=140							
RAGM	**Ragged Mountai**	**5.22**	**26**			**Pn**	**18 00 13.0**	**+1.1**
RAGM					IAML		18 01 14.6	
	comp=E,56nm,1.1s							
HMT	**Hamilton**	**5.28**	**28**			**Pn**	**18 00 13.4**	**+0.7**
RC01	**Rabbit Creek A**	**5.34**	**357**	Pn		**Pn**	**18 00 13.5**	**-0.1**
BERG	**Berg Lake**	**5.48**	**30**			**Pn**	**18 00 16.0**	**+0.5**
SNH	**Sunshine Point**	**5.57**	**35**			**Pn**	**18 00 17.2**	**+0.5**
VNHG	**Veniaminof 1**	**5.61**	**279**			**Pn**	**18 00 17.7**	**+0.5**
KHIT	**Khitrov Hills**	**5.65**	**32**			**Pn**	**18 00 18.2**	**+0.3**
KNK	**Knik Glacier**	**5.68**	**4**			**Pn**	**18 00 19.1**	**+0.9**
KNK	**Knik Glacier**	**5.68**	**4**	P		**Pn**	**18 00 19.1**	**+0.9**
	baz=184							
BMRM	**Bremner River**	**5.75**	**23**			**Pn**	**18 00 19.9**	**+0.7**
BMRM	**Bremner River**	**5.75**	**23**	P		**Pn**	**18 00 19.9**	**+0.7**
	baz=206							
P16K	**Nushagak River**	**5.76**	**308**			**Pn**	**18 00 20.4**	**+1.1**
P16K	**Nushagak River**	**5.76**	**308**	P		**Pn**	**18 00 20.4**	**+1.1**
	baz=122							
SUA	**Susitna One**	**5.77**	**353**	Pn		**Pn**	**18 00 20.1**	**+0.6**
N19K	**Bonanza Creek**	**5.77**	**333**			**Pn**	**18 00 19.4**	**-0.1**
N19K	**Bonanza Creek**	**5.77**	**333**	P		**Pn**	**18 00 19.4**	**-0.1**
	baz=149							
WAX	**Waxell Ridge**	**5.78**	**33**			**Pn**	**18 00 20.0**	**+0.4**
O17K	**Koliganek Bris**	**5.82**	**317**			**Pn**	**18 00 20.8**	**+0.7**
O17K	**Koliganek Bris**	**5.82**	**317**	P		**Pn**	**18 00 20.8**	**+0.7**
	baz=131							
S14K	**Fog Glacier**	**5.82**	**279**	P		**Pn**	**18 00 20.5**	**+0.2**
	baz=92							
VNFG	**Fog Glacier, M**	**5.82**	**279**			**Pn**	**18 00 20.5**	**+0.2**
PMR	**Palmer**	**5.84**	**0**	Pn		**Pn**	**18 00 20.6**	**+0.2**
MESA	**MESA**	**5.87**	**38**			**Pn**	**18 00 21.5**	**+0.5**
MESA	**MESA**	**5.87**	**38**	P		**Pn**	**18 00 21.5**	**+0.5**
	baz=223							
CRQM	**Cirque**	**5.94**	**30**			**Pn**	**18 00 22.5**	**+0.6**
CRQE	**Cirque**	**5.95**	**30**	P		**Pn**	**18 00 22.5**	**+0.5**
	baz=215							
KLU	**Klutina**	**5.99**	**15**			**Pn**	**18 00 23.4**	**+0.8**
KLU	**Klutina**	**5.99**	**15**	P		**Pn**	**18 00 23.3**	**+0.8**
	baz=197							
GHO	**Glory Hole Cre**	**6.03**	**1**			**Pn**	**18 00 23.9**	**+0.9**
BAGL	**Bagley Icefiel**	**6.05**	**36**			**Pn**	**18 00 23.8**	**+0.6**
ISLE	**Juniper Island**	**6.06**	**34**			**Pn**	**18 00 23.9**	**+0.4**
N18K	**Kilae Creek**	**6.06**	**327**			**Pn**	**18 00 23.8**	**+0.4**
N18K	**Kilae Creek**	**6.06**	**327**	P		**Pn**	**18 00 23.8**	**+0.4**
	baz=142							
SML	**Sawmill**	**6.08**	**4**	Pn		**Pn**	**18 00 24.5**	**+0.8**
O16K	**Kokwok River B**	**6.12**	**312**			**Pn**	**18 00 25.0**	**+0.9**
O16K	**Kokwok River B**	**6.12**	**312**	P		**Pn**	**18 00 25.0**	**+0.9**
	baz=126							
SCM	**Sheep Creek Mo**	**6.16**	**8**	Pn		**Pn**	**18 00 26.3**	**+1.5**
VRDI	**Verde Repeater**	**6.25**	**26**			**Pn**	**18 00 26.7**	**+0.5**
SAMH	**Samovar Hills**	**6.26**	**42**			**Pn**	**18 00 27.3**	**+1.0**
N25K	**Chitina, Valde**	**6.33**	**20**			**Pn**	**18 00 28.1**	**+0.9**
N25K	**Chitina, Valde**	**6.33**	**20**	P		**Pn**	**18 00 28.0**	**+0.9**
	baz=204							
TABL	**Table Mountain**	**6.34**	**39**			**Pn**	**18 00 28.0**	**+0.6**
GLB	**Gilahina Butte**	**6.35**	**24**			**Pn**	**18 00 28.1**	**+0.6**
N17K	**Nushagak Hills**	**6.37**	**322**	Pn		**Pn**	**18 00 28.0**	**+0.4**
PINM	**Pinnacle**	**6.45**	**44**	P		**Pn**	**18 00 29.6**	**+0.8**
	baz=231							
M20K	**Styx River**	**6.46**	**343**			**Pn**	**18 00 29.5**	**+0.5**
PTPK	**Patty Peak**	**6.48**	**30**			**Pn**	**18 00 30.1**	**+0.7**
MCARA	**McCarthy VSAT**	**6.49**	**27**			**Pn**	**18 00 30.1**	**+0.8**
MCARA	**McCarthy VSAT**	**6.49**	**27**	P		**Pn**	**18 00 30.1**	**+0.8**
	baz=212							
M24K	**Tolsona, Glenn**	**6.55**	**13**	Pn		**Pn**	**18 00 31.5**	**+1.4**
**PN

HYT	Haines Junctio	7.98	46	Pn		Pn	18 00 49.6	-0.2
L16K	Owhat River	7.99	322	Pn		Pn	18 00 51.3	+1.4
L27K	Beaver Creek,	8.22	24	Pn		Pn	18 00 53.9	+0.9
BCAR	Beaver Creek A	8.24	24	Pn		Pn	18 00 54.9	+1.6
BESE	Bessie Mountai	8.29	64			Pn	18 00 53.4	-0.7
RIDG	Independent Ri	8.29	14	Pn		Pn	18 00 55.5	+1.4
K17K	Iditarod	8.38	330	Pn		Pn	18 00 54.9	-0.2
BPAW	Bear Paw Mtn.	8.41	355	Pn		Pn	18 00 57.0	+1.4
O30N	Mendenhall	8.54	49	Pn		Pn	18 00 58.0	+0.7
SCRK	Sand Creek	8.64	16	Pn		Pn	18 01 00.7	+1.9
M29M	Somme Creek	8.67	35	Pn		Pn	18 01 00.8	+1.5
HDA	Harding Lake	8.74	6	Pn		Pn	18 01 01.5	+1.4
J20K	Nowinta River	8.79	346	Pn		Pn	18 01 01.7	+0.9
M13K	Dall Lake	8.81	308	Pn		Pn	18 01 02.5	+1.5
L14K	Kuka Creek	8.98	314	Pn		Pn	18 01 05.1	+1.7
WHY	Whitehorse	9.01	51	Pn		Pn	18 01 05.1	+1.2
K27K	Chicken	9.02	20	Pn		Pn	18 01 04.9	+0.9
N31M	Braeburn, Yuko	9.04	45	Pn		Pn	18 01 05.9	+1.6
J25K	Salcha River,	9.08	11	Pn		Pn	18 01 03.0	-1.8
K15K	Wolf Creek Mou	9.11	321	Pn		Pn	18 01 05.6	+0.4
IL31		9.11	6	Pn		Pn	18 01 05.8	+0.7
ILAR	Eielson Array	9.11	6	Pn		Pn	18 01 04.7	-0.4
ILAR	Eielson Array	9.11	6	Pn		Pn	18 01 07.2	+2.0
	comp=E,0.2nm,0.3s,baz=189,slow=13,SNR=9.8							
ILAR				Sn		Sn	18 02 43.2	-4.3
	comp=E,0.3nm,0.3s,baz=183,slow=21,SNR=10							
	comp=E,0.5nm,0.5s							
P32M	Atlin	9.14	59	Pn		Pn	18 01 05.8	+0.1
J26L	Joseph Creek	9.20	15	Pn		Pn	18 01 07.9	+1.4
MDM	Murphy Dome	9.24	3	Pn		Pn	18 01 08.0	+1.1
L29M	L29M	9.26	33	Pn		Pn	18 01 08.6	+1.2
M30M	Minto, Yukon	9.33	38	Pn		Pn	18 01 08.7	+0.5
J16K	Anvik River	9.49	327	Pn		Pn	18 01 11.5	+1.1
DAWY	Dawson	9.66	27	Pn		Pn	18 01 12.7	-0.1
Q32M	Nakina River	9.69	64	Pn		Pn	18 01 12.6	-0.8
P33M	Teslin, Yukon	9.77	56	Pn		Pn	18 01 13.6	-0.7
M31M	Drury Creek, Y	9.99	44	Pn		Pn	18 01 19.1	+1.8
K29M	Barlow Dome	10.00	31	Pn		Pn	18 01 19.1	+1.6
N32M	Quiet Lake	10.01	51	Pn		Pn	18 01 17.5	-0.1
H21K	Melozitna Rive	10.08	351	Pn		Pn	18 01 18.9	+0.5
H24K	Noodor Dome	10.13	3	Pn		Pn	18 01 22.3	+3.2
J29N	Klondike Camp	10.28	28	Pn		Pn	18 01 23.9	+2.7
FARO	Faro, Yukon	10.41	45	Pn		Pn	18 01 24.3	+1.2
R33M	Jennings River	10.44	62	Pn		Pn	18 01 23.2	-0.3
IMAR	Indian Mountai	10.48	350	Pn		Pn	18 01 25.2	+1.3
I28M	Miner Creek	10.71	21	Pn		Pn	18 01 28.4	+1.2
DLBC	Dease Lake	10.77	68	Pn		Pn	18 01 27.9	-0.1
	comp=E,0.2nm,0.3s,baz=281,slow=6.7,SNR=12							
	comp=E,0.8nm,0.4s							
J30M	Hart River	10.89	31	Pn		Pn	18 01 31.4	+1.8
FYU	Fort Yukon	11.00	8	Pn		Pn	18 01 32.2	+1.2
G16K	Koyuk River	11.59	332	Pn		Pn	18 01 40.6	+1.6
F20K	Avaraart Lake	11.73	347	Pn		Pn	18 01 39.4	-1.6
F17K	Baldwin Pennin	12.16	337	Pn		Pn	18 01 48.1	+1.4
G31M	Satah River	13.23	26	Pn		Pn	18 02 02.5	+1.0
INK	Inuvik	14.50	24	Pn		Pn	18 02 18.4	-0.4
INK	Inuvik	14.50	24	Pn		Pn	18 02 20.4	+1.6
	baz=226,slow=14,SNR=7.2							
	comp=E,2.7nm,1.1s							
YKA	Yellowknife Ar	18.80	55	P		P	18 03 13.1	0.0
	baz=264,slow=12,SNR=4.3							
	comp=E,0.3nm,0.7s							
A36M	Sachs Harbour	19.14	23	P		P	18 03 16.8	+0.1
A36M				IAmb		IAmb	18 03 49.2	
	comp=Z,5.7nm,1.0s							
NVAR	Mina Array Bea	26.94	117	P		P	18 04 33.3	-2.1
	comp=Z,0.1nm,0.5s,baz=307,slow=12,SNR=1.8							
	comp=Z,0.1nm,0.5s							
SONM	Songino Array	59.00	310	P		P	18 08 54.8	+1.3
	comp=Z,0.4nm,0.7s,baz=41,slow=7.8,SNR=2.9							
	comp=Z,0.4nm,0.7s							
BVAR	Borovoye Array	66.77	335	P		P	18 09 45.6	+0.7
	comp=Z,0.3nm,0.5s,baz=15,slow=6.0,SNR=2.0							
	comp=Z,0.3nm,0.5s							
MKAR	Makanchi Array	69.04	325	P		P	18 09 59.8	+0.5
	comp=Z,2.5nm,1.2s,baz=26,slow=4.7,SNR=5.7							
	comp=Z,2.5nm,1.2s							

*TAP **04** 18:01:37.1,24.˚12N×121.˚71E,h9km,ML3.3,C*
*IDC **04** 18:01:45.7±25.0,24.˚90N×120.˚60E,h0km,mb3.2/3,*
mbtmp3.3/4,ML2.8/1,Error ellipse: s-maj=437.8km
s-min=66.2km az=149.0

ISC 04 18:01:37.5±0.8,24.˚17N±0.˚02×121.˚68E±0.˚02,h12km±4km,
n95,σ1$24/163,mb3.2/3,4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	Fush Village	0.05	262	⇓*i*P		Pg		18 01 39.8	-0.1
	baz=298								
ETL				*e*S		Sg		18 01 41.4	-0.2
	baz=298								
NACB	Ninganchiao	0.08	275	⇓*i*P		Pg		18 01 40.1	0.0
	baz=299								
NACB				S		Sg		18 01 41.9	0.0
	baz=299								
TWD	Chiawan	0.12	222	⇓P		Pg		18 01 40.0	-0.5
	baz=259								
TWD				S		Sg		18 01 41.9	-0.8
	baz=259								
EHP	Heping Village	0.15	21	*e*P		Pb		18 01 41.5	-0.8
	baz=9.0								
EHP				*e*S		Sg		18 01 45.3	+1.7
	baz=9.0								
EAHA	Aohua	0.17	18	*e*P		Pb		18 01 41.8	-0.8
	baz=5.0								
EAHA				*e*S		Sg		18 01 45.2	+1.2
	baz=5.0								
ETLH	Xiulin Townshi	0.19	283	P		Pb		18 01 42.1	-0.8
	baz=294								
ETLH				S		Sg		18 01 45.5	+0.9
	baz=294								
HWA	Hwalien	0.20	200	*e*P		Pg		18 01 41.9	0.0
	baz=226								
HWA				*i* S		Sg		18 01 42.1	-2.7
	baz=226								
ETM	Tongmen	0.26	221	*e*P		Pg		18 01 42.4	-0.6
	baz=236								
ETM				*e*S		Sg		18 01 45.9	-0.7
	baz=236								
ENA	Nanau	0.27	12	⇓P		Pb		18 01 43.6	-0.6
	baz=5.0								
ENA				*e*S		Sg		18 01 48.1	+1.3
	baz=5.0								
LXIB	Xiulin Townshi	0.28	240	P		Pg		18 01 43.1	-0.3
	baz=252								
LXIB				S		Sg		18 01 47.3	-0.1
	baz=252								
EWUT	Wuta	0.29	18	*e*P		Pb		18 01 44.0	-0.7
	baz=9.0								
EWUT				*e*S		Sg		18 01 48.7	+1.2
	baz=9.0								
NNSB	Datong	0.38	314	*i* P		Pn		18 01 46.1	-2.9
	baz=315								
NNSB				S		Sb		18 01 52.0	-0.1
	baz=315								
WHF	Hehuan Shan	0.38	267	*e*P		Pb		18 01 45.5	-1.0
	baz=275								
NNS	Nan Shan	0.39	314	*i* P		Pn		18 01 46.3	-2.9
	baz=316								
NNS				S		Sb		18 01 52.5	-0.1
	baz=316								
SHUL	Shoufeng	0.39	196	*e*P		Pg		18 01 45.7	+0.4
	baz=213								
SHUL				*e*S		Sb		18 01 53.1	+0.7
	baz=213								
LATG	Datong	0.39	339	P		Pn		18 01 46.2	-2.9
	baz=336								
LATG				*e*S		Sb		18 01 52.9	+0.3
	baz=336								
FUSS	Fushou	0.41	282	*e*P		Pb		18 01 46.4	-0.5
	baz=287								
FUSS				S		Sb		18 01 52.7	-0.5
	baz=287								
ESL	Shilin	0.42	213	*e*P		Pg		18 01 45.0	-0.8
	baz=229								
ESL				*e*S		Sg		18 01 51.7	+0.3
	baz=229								
ESAO	Su ao	0.43	20	*e*P		Pb		18 01 46.6	-0.5
	baz=13								
ESAO				*e*S		Sb		18 01 53.5	-0.1
	baz=13								
NDT	Datong Townshi	0.46	341	P		Pn		18 01 47.7	-2.3
	baz=337								
NDT				*e*S		Sb		18 01 54.9	+0.5
	baz=337								
NDS	Dongshan	0.47	4	*e*P		Pn		18 01 47.6	-2.5
	baz=358								
NDS				*e*S		Sb		18 01 55.1	+0.5
	baz=358								
TWC	Suao	0.47	19	*e*P		Pb		18 01 47.3	-0.4
	baz=7.0								
TWC				*e*S		Sb		18 01 55.4	+0.8
	baz=7.0								
TWT	Tachien	0.47	281	*e*P		Pn		18 01 48.0	-2.2
	baz=285								
TWT				*e*S		Sb		18 01 55.0	+0.2
	baz=285								
CHGB	Renai	0.48	257	P		Pb		18 01 47.4	-0.6
	baz=257								
CHGB				*e*S		Sb		18 01 54.5	-0.5
	baz=257								
ENTT	Nioudou	0.48	347	P		Pn		18 01 48.1	-2.2
	baz=344								
ENTT				*e*S		Sb		18 01 55.8	+0.7
	baz=344								
TDCB	Techi	0.49	280	*e*P		Pn		18 01 48.1	-2.3
	baz=285								
TDCB				S		Sb		18 01 55.1	-0.2
	baz=285								
OWD	Renai	0.51	246	*e*P		Pb		18 01 47.5	-1.0
	baz=255								
WARBT	Fenglin Townsh	0.52	211	P		Pg		18 01 47.0	-0.7
	baz=226								
WARBT				*e*S		Sg		18 01 55.3	+0.7
	baz=226								
WUSB	Renai	0.54	252	P		Pb		18 01 48.5	-0.6
	baz=258								
WUSB				*e*S		Sb		18 01 55.9	-1.0
	baz=258								
EGFH	Guangfu	0.55	205	*e*P		Pg		18 01 47.7	-0.5
	baz=222								
EGFH				*e*S		Sb		18 01 57.2	+0.4
	baz=222								
TWE	Neicheng	0.55	359	P		Pn		18 01 49.3	-1.9
	baz=356								
TWE				*e*S		Sb		18 01 57.6	+0.5
	baz=356								
YHNB	Yeheng	0.57	331	P		Pn		18 01 50.2	-1.4
YHNB	Yeheng	0.57	331	P		Pn		18 01 50.0	-1.6
	baz=329								
NSK	Sanguang	0.59	330	P		Pn		18 01 50.1	-1.7
	baz=329								
NSK				*e*S		Sn		18 01 58.8	-2.5
	baz=329								
FUSB	Fushanzhiwuyua	0.60	352	P		Pn		18 01 50.3	-1.6
	baz=348								
FUSB				*e*S		Sn		18 01 58.8	-2.9
	baz=348								
VWDT	VWDT	0.64	230	*e*P		Pb		18 01 50.1	-0.5
	baz=237								
VWDT				*e*S		Sb		18 02 00.5	+0.9
	baz=237								
WHP	Taichung City	0.68	280	*e*P		Pn		18 01 51.9	-1.2
	baz=283								
WHP				*e*S		Sn		18 02 02.3	-1.4
	baz=283								
NFF	Wufeng Townshi	0.69	312	*e*P		Pn		18 01 52.4	-0.9
	baz=312								
HGSD	Ruisui	0.71	199	*e*P		Pg		18 01 51.9	+0.6
	baz=192								
HGSD				*e*S		Sb		18 02 03.8	+2.2
	baz=192								
WCS	Beigang Elemen	0.71	261	*e*P		Pn		18 01 51.9	-1.5
	baz=258								
WCS				*e*S		Sb		18 02 01.7	0.0
	baz=258								
EHY	Hungye	0.73	207	*e*P		Pg		18 01 50.8	-1.0
	baz=312								
SSLB	Suanglung	0.77	241	P		Pb		18 01 52.5	-0.3
SSLB	Suanglung	0.77	241	P		Pb		18 01 52.1	-0.7
	baz=256								
SSLB				*e*S		Sb		18 02 02.5	-0.7
	baz=256								
SMLT	Sun Moon Lake	0.77	249	*e*P		Pb		18 01 52.8	-0.1
	baz=254								
SMLT				*e*S		Sb		18 02 03.7	+0.3
	baz=254								
LIOB	Emei	0.77	308	*e*P		Pn		18 01 54.2	0.0
	baz=309								
LIOB				*e*S		Sn		18 02 05.0	-0.9
	baz=309								
NSTT	Nanjuang	0.77	307	*e*P		Pn		18 01 54.0	-0.3
	baz=308								
NSTT				*e*S		Sn		18 02 04.7	-1.1
	baz=308								
TYC	Yuchr	0.80	251	*e*P		Pn		18 01 53.2	-1.4
	baz=257								
NHDH	Xindian Distri	0.81	350	*e*P		Pn		18 01 54.2	-0.5
	baz=337								
NHDH				*e*S		Sn		18 02 05.9	-0.8
	baz=337								
TIPB	Shuangxi	0.81	9	*e*P		Pn		18 01 54.1	-0.7
	baz=354								
YULB	Yu-li	0.85	205	P		Pg		18 01 54.0	+0.1
YULB	Yu-li	0.85	205	*e*P		Pg		18 01 52.7	-1.2
	baz=223								
TWQ1	Liyutan	0.85	282	*e*P		Pn		18 01 56.3	+1.0
	baz=285								
NSY	Sanyi	0.88	287	*e*P		Pn		18 01 57.2	+1.5
	baz=289								
EYUL	Yuli	0.88	202	*e*P		Pg		18 01 54.4	-0.1
	baz=220								
EYUL				*e*S		Sb		18 02 07.6	+1.1
	baz=220								
TWF1	Yuli	0.88	204	*e*P		Pg		18 01 54.1	-0.4
	baz=219								
TWF1				*e*S		Sg		18 02 06.8	+0.7
	baz=219								
WHYT	Xinyi Township	0.89	238	*e*P		Pb		18 01 54.9	-0.1
	baz=244								
NWF	Wu-fen Shan	0.91	6	*e*P		Pn		18 01 56.3	+0.1
	baz=351								
NWF				*e*S		Sn		18 02 08.7	-0.6
	baz=351								
WFSB	Wu-fen Shan	0.91	6	*e*P		Pn		18 01 56.1	0.0
	baz=353								
WFSB				*e*S		Sn		18 02 08.3	-0.9
	baz=353								
NCUH	Zhongli	0.92	331	*e*P		Pn		18 01 57.6	+1.3
	baz=328								
NCUH				*e*S		Sn		18 02 12.8	+3.4
	baz=328								
WJS	Zhushan	0.94	249	*e*P		Pn		18 01 56.6	+0.1
	baz=253								
WJS				*e*S		Sn		18 02 11.6	+1.6
	baz=253								
SXI1	Grass Mountain	0.94	11	*e*P		Pn		18 01 56.5	-0.1
	baz=353								
SXI1				*e*S		Sn		18 02 13.8	+3.7
	baz=353								
WNT	Mingjian	0.96	253	*e*P		Pn		18 01 57.1	+0.3
	baz=252								
WNT				*e*S		Sn		18 02 11.5	+1.2
	baz=252								
TWS1	Kuangyinshan	0.96	346	*e*P		Pn		18 01 58.0	+1.2
	baz=343								
TWS1				*e*S		Sn		18 02 13.9	+3.4
	baz=343								
YM01	YM01	0.98	354	*e*P		Pn		18 01 57.8	+0.6
	baz=335								
YM01				*e*S		Sn		18 02 12.4	+1.4
	baz=335								
CHKH	Chenggong	1.00	195	*e*S		Sb		18 02 11.0	+1.0
	baz=191								
FULB	Fuli	1.03	200	*e*P		Pb		18 01 57.0	-0.3
	baz=221								
ALS	Alishan	1.03	231	P		Pn		18 01 57.6	-0.6
	baz=226								
ALS				*e*S		Sn		18 02 12.1	-0.6
	baz=226								
CHN5	Tsauling	1.08	239	P		Pn		18 01 58.9	+0.3
	baz=244								
CHN5				*e*S		Sn		18 02 14.8	+1.2
	baz=244								
CHKT	Chengkung	1.10	195	*e*P		Pb		18 01 57.5	-1.0
	baz=192								
CHKT				*e*S		Sb		18 02 13.1	+0.3
	baz=192								
EHD	Haiduan	1.10	203	*e*P		Pb		18 01 58.0	-0.6
	baz=219								
EHD				*e*S		Sn		18 02 14.6	+0.6
	baz=219								
WGK	Gukeng	1.13	245	*e*P		Pg		18 02 00.2	+1.0
	baz=251								
ELDTW	Lidau	1.15	212	*e*P		Pn		18 01 57.7	-1.9
	baz=229								
ELDTW				*e*S		Sb		18 02 14.7	+0.4
	baz=229								
WDLH	Douliu	1.15	246	*e*P		Pg		18 02 01.1	+1.5
	baz=252								
WRL	Guolierlin Hig	1.22	258	*e*P		Pg		18 02 01.7	+0.7
	baz=262								
WRL				*e*S		Sn		18 02 19.2	+2.3
	baz=262								
WCKO	Fanlu	1.22	234	*e*P		Pg		18 02 01.2	+0.2
	baz=240								
WCKO				*e*S		Sg		18 02 19.9	+3.0
	baz=240								
WTK	Tuku	1.28	248	*e*P		Pg		18 02 02.2	+0.1
	baz=253								
WTK				*e*S		Sg		18 02 21.7	+3.1
	baz=253								
CHN4	Tsaushan	1.29	231	*e*P		Pg		18 02 02.3	+0.1
	baz=224								
CHN4				*e*S		Sg		18 02 21.2	+2.2
	baz=224								
STYH	Taoyuan	1.29	220	*e*P		Pb		18 02 01.6	-0.2
	baz=226								
STYH				*e*S		Sn		18 02 19.1	+0.4
	baz=226								
TPUB	Ta-pu	1.29	228	P		Pg		18 02 02.5	+0.1
TPUB	Ta-pu	1.29	228	*e*P		Pg		18 02 02.3	-0.1
	baz=221								
TPUB				*e*S		Sg		18 02 19.5	+0.3
	baz=221								
WTP	Ta-pu	1.34	227	*e*P		Pg		18 02 03.2	0.0
	baz=233								
WTP				*e*S		Sg		18 02 21.5	+0.8
	baz=233								
TWK	Hsinying	1.41	231	*e*P		Pg		18 02 04.3	-0.4
	baz=236								
TWK				*e*S		Sg		18 02 23.2	+0.2
	baz=236								
WSF	Szhu	1.44	249	*e*S		Sg		18 02 26.4	+2.6
	baz=253								
SNST	Tainan City	1.44	229	*e*P		Pg		18 02 05.6	+0.5
	baz=235								
SNST				*e*S		Sg		18 02 25.5	+1.7
	baz=235								
CHN1	Nanshi	1.44	228	*e*P		Pg		18 02 04.7	-0.5
	baz=233								
CHN1				*e*S		Sg		18 02 25.1	+1.2
	baz=233								
TWGBT	Beinan	1.45	202	P		Pg		18 02 06.8	+1.4
SGST	Jiashian	1.48	223	*e*P		Pb		18 02 04.5	-0.4
	baz=229								
SGST				*e*S		Sg		18 02 25.4	+0.4
	baz=229								
SLGT	Liugui	1.50	219	*e*P		Pb		18 02 05.3	-0.2
	baz=225								
SLGT				*e*S		Sg		18 02 27.4	+1.4
	baz=225								
SCST	Cishan	1.68	221	*e*P		Pb		18 02 08.8	+0.4
	baz=226								
SCST				*e*S		Sg		18 02 31.8	+0.3
	baz=226								
TSCK	Chigu Township	1.78	236	*e*S		Sb		18 02 32.5	+0.2
	baz=241								
MASBT	Mashibuluo	1.82	212	*e*P		Pn		18 02 09.0	+0.2
	baz=218								
KSRS	Korea Array	14.28	21	Pn		P		18 05 05.3	-1.5
	baz=194,slow=10.0,SNR=4.5								
	1.4nm,0.9s								
SONM	Songino Array	26.56	337	P		P		18 07 15.6	+0.1
	0.1nm,0.4s,baz=134,slow=8.2,SNR=1.4								
	0.1nm,0.4s								
MKAR	Makanchi Array	38.67	316	P		P		18 09 01.4	+0.4
	0.5nm,1.0s,baz=96,slow=8.8,SNR=2.7								
	0.5nm,1.0s								
BVAR	Borovoye Array	47.98	321	P		P		18 10 16.1	0.0
	0.2nm,0.5s,baz=105,slow=8.4,SNR=1.7								
	0.2nm,0.5s								

IDC 04 18:01:39.5±50.0,17.˚82S×178.˚85W,h0km,mb4.1/3,
mbtmp4.1/3,Error ellipse: s-maj=915.8km
s-min=149.5km az=79.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.30	241	P		P		18 09 02.5	+0.4
	1.0nm,0.6s,baz=67,slow=5.5,SNR=5.4								
	1.0nm,0.6s								
WRA	Warramunga Arr	44.24	260	P		P		18 09 50.8	-0.2
	0.8nm,0.3s,baz=96,slow=7.6,SNR=39								
	0.8nm,0.3s								
ASAR	Alice Springs	44.41	254	P		P		18 09 52.0	-0.4
	2.0nm,0.4s,baz=88,slow=8.5,SNR=87								
	2.0nm,0.4s								

*IDC **04** 18:06:55.1±1.1,53.˚53N×164.˚23W,h0km,mb3.9/20,*
mbtmp3.9/23,ML3.5/3,MS2.8/2,Error ellipse:
s-maj=29.1km s-min=13.9km az=174.0
*NEIC **04** 18:06:56.6±3.0,53.˚26N±0.˚09×164.˚03W±0.˚08,h19km±6km,*
mb3.9/50,ML4.0/12,ML3.7(AEIC),Error ellipse:
s-maj=13.2km s-min=6.3km az=169.0
*AEIC **04** 18:06:59.7±1.6,53.˚32N±0.˚08×164.˚11W±0.˚04,h21km±6km,*
Error ellipse: s-maj=12.0km s-min=3.4km az=174.0

ISC 04 18:06:57.3±1.0,53.˚34N±0.˚08×164.˚04W±0.˚04,h20km±6km,
n243,σ1$48/242,mb4.0/19,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WESE	West Dahl East	1.18	344			Pb		18 07 19.6	+0.5
AKSA	Akutan Strait	1.27	310			Pb		18 07 20.3	-0.2
AKSA						Sn		18 07 36.2	-0.1
AKSA	Akutan Strait	1.27	310			Pn		18 07 20.0	+0.2
AKSA						Sn		18 07 36.3	-0.1
AKUT	Akutan	1.30	308	Pn		Pb		18 07 20.8	-0.3
AKUT				IAML				18 07 38.3	
	comp=E,2μm,0.4s								
AKUT	Akutan	1.30	308			Sn		18 07 36.9	-0.2
AKUT	Akutan	1.30	308	P		Pb		18 07 20.8	-0.3
AHB	Akutan Harbor	1.31	307			Pb		18 07 20.9	-0.3
BRPK	Brown Peak	1.32	7			Pb		18 07 21.4	0.0
WEBT	Westdahl Beart	1.33	342			Pb		18 07 21.6	+0.1
AKBBA	Akutan Broad B	1.36	305			Pn		18 07 20.6	-0.6
AKBBA						Sn		18 07 37.5	-1.0
SSLS	Shishaldin Sou	1.38	1			Pb		18 07 22.4	0.0
ZRO	Akutan Zero	1.38	304			Pb		18 07 21.9	-0.5
AKV	Akutan Volcano	1.39	305			Pb		18 07 22.2	-0.4
ISLZ	Isanotski Laza	1.41	8			Pn		18 07 22.4	+0.7
AKRB	Akutan Reef Bi	1.45	304			Pn		18 07 22.9	+0.6
AKRB						Sn		18 07 40.8	+0.2
SSLN	Shishaldin Nor	1.48	1			Pb		18 07 24.1	0.0
UNV	Unalaska Valle	1.56	290			Sn		18 07 43.0	-0.3
UNV	Unalaska Valle	1.56	290	P		Pn		18 07 24.0	+0.2
UNV	Unalaska Valle	1.56	290	P		Pn		18 07 23.9	+0.1
	baz=110								
UNV				S		Sn		18 07 43.0	-0.3
	baz=110					

CHNA	Chernabura Isl	3.02	58	P		Pn	18 07 44.9	+1.1
	baz=242							
CLCO	Concord Point,	3.48	263			Pn	18 07 50.6	+0.5
CLES	Cleveland East	3.57	264	Pn		Pn	18 07 51.8	+0.4
VNSW	Veniaminof 7	3.78	42			Pn	18 07 56.6	+2.2
S14K	Fog Glacier	3.93	39	P		Pn	18 07 58.8	+2.3
	baz=223							
VNFG	Fog Glacier, M	3.93	39			Pn	18 07 58.8	+2.3
VNFG	Fog Glacier, M	3.93	39	IAML			18 08 49.0	
	comp=N,257nm,2.8s							
VNHG	Veniaminof 1	4.04	42			Pn	18 08 00.3	+2.3
CHGN	Chignik	4.40	45	Pn		Pn	18 08 04.4	+1.5
CHGN				IAML			18 08 55.8	
	comp=E,125nm,0.5s							
CHGN				IAML			18 08 56.5	
	comp=N,96nm,0.4s							
CHGN	Chignik	4.40	45	P		Pn	18 08 04.7	+1.9
	baz=230							
SPIA	Saint Paul Isl	5.24	320			Pn	18 08 16.1	+1.8
CHIR	Chirikof Islan	5.49	60			Pn	18 08 19.6	+1.8
CHIR	Chirikof Islan	5.49	60	P		Pn	18 08 19.6	+1.8
	baz=246							
R16K	Pilot Point	5.61	38			Pn	18 08 21.4	+1.9
R16K	Pilot Point	5.61	38	P		Pn	18 08 21.4	+1.9
	baz=224							
O14K	Tigyukauivet M	6.13	13			Pn	18 08 28.6	+2.0
ATKA	Atka Island	6.27	264	Pn		Pn	18 08 29.0	+0.5
ATKA	Atka Island	6.27	264	P		Pn	18 08 29.6	+1.1
O15K	Ungalikthiuk R	6.31	20			Pn	18 08 30.7	+1.7
O15K	Ungalikthiuk R	6.31	20	P		Pn	18 08 30.7	+1.7
	baz=204							
SII	Sitkinak Islan	6.53	56	Pn		Pn	18 08 30.9	-1.2
P16K	Nushagak River	6.63	28			Pn	18 08 35.0	+1.6
N14K	Kuskokwak Cree	6.73	10			Pn	18 08 37.1	+2.3
Q17K	Contact Creek	6.74	40	P		Pn	18 08 37.0	+1.9
	baz=226							
CNTC	Contact Creek	6.74	40			Pn	18 08 37.0	+1.9
ANCK	Angle Creek	6.85	41			Pn	18 08 38.2	+1.7
O16K	Kokwok River B	7.08	25			Pn	18 08 41.3	+1.6
O16K	Kokwok River B	7.08	25	P		Pn	18 08 41.3	+1.6
	baz=210							
M13K	Dall Lake	7.11	3	Pn		Pn	18 08 41.8	+1.8
N15K	Kwethluk River	7.18	16			Pn	18 08 43.0	+2.0
N15K	Kwethluk River	7.18	16	P		Pn	18 08 43.0	+2.0
	baz=200							
OHAK	Old Harbor	7.27	53	Pn		Pn	18 08 41.6	-0.6
OHAK	Old Harbor	7.27	53	P		Pn	18 08 42.3	+0.1
OHAK	Old Harbor	7.27	53	P		Pn	18 08 42.1	-0.1
	baz=242							
M14K	Bethel	7.52	8	Pn		Pn	18 08 46.4	+0.8
P18K	Big Mountain,	7.79	35	Pn		Pn	18 08 52.5	+3.1
ADK	Adak	7.84	264	Pn		Pn	18 08 51.1	+1.0
ADK	Adak	7.84	264	P		Pn	18 08 51.3	+1.3
KDAK	Kodiak Island	7.87	51	Pn		Pn	18 08 51.1	+0.7
KDAK	Kodiak Island	7.87	51	Pn		Pn	18 08 50.4	0.0
	comp=N,1.4nm,0.3s,baz=200,slow=4.6,SNR=18							
KDAK				Sn		Sn	18 10 13.0	-5.8
	comp=N,1.1nm,0.3s,baz=288,slow=20,SNR=6.7							
	comp=N,6.2nm,0.5s							
L14K	Kuka Creek	8.06	5			Pn	18 08 54.8	+1.8
Q19K	Cape Douglas,	8.06	42	Pn		Pn	18 08 55.0	+1.9
Q19K	Cape Douglas,	8.06	42	P		Pn	18 08 54.7	+1.6
	baz=231							
N17K	Nushagak Hills	8.12	25	Pn		Pn	18 08 55.7	+1.8
KIWB	Kanaga Island	8.12	265			Pn	18 08 54.1	+0.1
O18K	Koktuh Hills	8.14	33			Pn	18 08 56.4	+2.2
M16K	Timber Creek	8.18	18	Pn		Pn	18 08 56.6	+1.9
M16K	Timber Creek	8.18	18	P		Pn	18 08 55.2	+0.5
	baz=202							
SYI	Shuyak Island	8.39	46	Pn		Pn	18 08 58.8	+1.2
L15K	Ungalak Mounta	8.47	8			Pn	18 08 59.7	+1.0
L15K	Ungalak Mounta	8.47	8	P		Pn	18 08 59.7	+1.0
	baz=191							
P19K	Oil Pt	8.70	39	Pn		Pn	18 09 04.0	+2.2
L16K	Owhat River	8.74	14			Pn	18 09 04.1	+1.7
M17K	Holitna River	8.83	21	Pn		Pn	18 09 06.0	+2.3
K15K	Wolf Creek Mou	9.08	7	Pn		Pn	18 09 09.7	+2.7
N19K	Bonanza Creek	9.11	31	Pn		Pn	18 09 09.2	+1.7
CNPM	China Poot	9.41	44	Pn		Pn	18 09 13.2	+1.6
RSO	Redoubt South	9.43	36	Pn		Pn	18 09 11.1	-0.9
BRLK	Bradley Lake	9.69	43	Pn		Pn	18 09 15.1	-0.4
L18K	Granite Mounta	9.72	21	Pn		Pn	18 09 17.6	+1.7
K17K	Iditarod	9.88	16	Pn		Pn	18 09 19.3	+1.3
M19K	Big River Lodg	10.01	27	Pn		Pn	18 09 21.9	+2.1
L19K	White Mountain	10.12	25	Pn		Pn	18 09 21.7	+0.4
J16K	Anvik River	10.14	9	Pn		Pn	18 09 23.5	+2.0
M20K	Styx River	10.36	30	Pn		Pn	18 09 27.3	+2.7
TTA	Tatalina	10.50	21	Pn		Pn	18 09 28.1	+1.6
O22K	Cooper Landing	10.59	42			Pn	18 09 27.8	+0.2
SUA	Susitna One	10.83	36			Pn	18 09 30.4	-0.7
J18K	Innoko River	10.85	18	Pn		Pn	18 09 32.1	+0.8
SKT	Skwentna	10.93	33	Pn		Pn	18 09 32.5	+0.1
RC01	Rabbit Creek A	10.95	39	Pn		Pn	18 09 32.9	+0.3
ANM	Nome	11.28	357	Pn		Pn	18 09 39.9	+2.7
K20K	Telida	11.31	23	Pn		Pn	18 09 39.0	+1.5
J19K	Poorman	11.54	19	Pn		Pn	18 09 41.9	+1.3
KNK	Knik Glacier	11.64	40	Pn		Pn	18 09 40.6	-1.5
GHO	Glory Hole Cre	11.69	38	Pn		Pn	18 09 40.7	-2.1
CAST	Castle Rocks	11.87	27			Pn	18 09 48.0	+2.8
HIN	Hinchinbrook I	11.89	47	Pn		Pn	18 09 45.3	-0.2
SML	Sawmill	11.93	38	Pn		Pn	18 09 44.0	-2.1
J20K	Nowinta River	12.00	21	Pn		Pn	18 09 48.0	+1.0
G16K	Koyuk River	12.12	3	Pn		Pn	18 09 50.9	+2.3
K7H	Kantishna Hill	12.30	28	Pn		Pn	18 09 47.5	-3.6
SCM	Sheep Creek Mo	12.33	40	Pn		Pn	18 09 50.1	-1.4
TRF	Thorofare Moun	12.41	30	Pn		Pn	18 09 50.0	-2.7
KLU	Klutina	12.69	43			Pn	18 09 55.6	-0.9
BPAW	Bear Paw Mtn.	12.71	27	Pn		Pn	18 09 58.3	+1.6
RND	Reindeer	12.82	32	Pn		Pn	18 09 58.1	-0.1
HMT	Hamilton	12.86	49	Pn		Pn	18 09 57.2	-1.6
M24K	Tolsona, Glenn	12.93	40			Pn	18 09 58.7	-1.0
DHY	Denali Highway	13.08	35			Pn	18 09 59.9	-2.0
BERG	Berg Lake	13.14	49	Pn		Pn	18 10 01.0	-1.5
N25K	Chitina, Valde	13.29	44	Pn		Pn	18 10 02.4	-2.3
MLY	Manley	13.52	25			Pn	18 10 06.9	-0.8
CRQM	Cirque	13.54	48	Pn		Pn	18 10 07.2	-1.0
GLB	Gilahina Butte	13.54	45	Pn		Pn	18 10 06.5	-1.6
H21K	Melozitna Rive	13.57	20	Pn		Pn	18 10 09.5	+1.0
VRDI	Verde Repeater	13.60	46	Pn		Pn	18 10 07.0	-2.0
IMAR	Indian Mountai	13.68	18	Pn		Pn	18 10 09.5	-0.4
ISLE	Juniper Island	13.84	50	Pn		Pn	18 10 09.8	-2.4
MCARA	McCarthy VSAT	13.86	46	Pn		Pn	18 10 10.2	-2.1
I23K	Minto, Yukon-K	13.97	26			Pn	18 10 12.9	-0.9
CCB	Clear Creek Bu	14.03	30	Pn		Pn	18 10 13.2	-1.5
HDA	Harding Lake	14.12	32	Pn		Pn	18 10 12.2	-3.8
G21K	Allakaket	14.20	17	Pn		Pn	18 10 19.9	+2.9
E18K	Tukpahlearik C	14.23	5	Pn		Pn	18 10 17.0	-0.3
BARN	Barnard Glacie	14.32	48	Pn		Pn	18 10 19.0	+0.1
TABL	Table Mountain	14.34	51	Pn		Pn	18 10 19.8	+0.7
F20K	Avaraart Lake	14.34	13	Pn		Pn	18 10 19.5	+0.7
M26K	Nabesna, AK	14.35	42	Pn		Pn	18 10 18.0	-1.1
RIDG	Independent Ri	14.39	36			Pn	18 10 18.5	-1.1
IL31		14.40	31	Pn		Pn	18 10 16.8	-2.8
ILAR	Eielson Array	14.40	31	Pn		Pn	18 10 15.2	-4.5
ILAR	Eielson Array	14.40	31	Pn		Pn	18 10 16.4	-3.2
	comp=N,0.1nm,0.3s,baz=228,slow=12,SNR=12							
	comp=N,0.6nm,0.6s							
CTGM	Chitina Glacie	14.43	49	Pn		Pn	18 10 18.5	-1.9
L26K	Log Cabin Wild	14.53	40	Pn		Pn	18 10 20.1	-1.4
J25K	Salcha River,	14.77	33	Pn		Pn	18 10 21.9	-2.8
M27K	Edge Creek, AK	14.78	44	Pn		Pn	18 10 23.4	-1.7
SCRK	Sand Creek	14.84	36	Pn		Pn	18 10 24.1	-1.7
H24K	Noodor Dome	14.90	26	Pn		Pn	18 10 24.6	-1.8
BCPM	Bancas Point	14.91	54	Pn		Pn	18 10 25.0	-1.6
PNL	Peninsula	14.95	55	P		Pn	18 10 28.4	+1.2
C16K	Lisburne Hills	15.00	358	Pn		Pn	18 10 26.6	-1.2
C16K				IAmb		IAmb	18 10 37.2	
	comp=Z,5.5nm,1.1s							
G23K	Bananza Creek	15.07	22			Pn	18 10 29.9	+1.1
L27K	Beaver Creek,	15.14	41	Pn		Pn	18 10 27.9	-1.9
L27K				IAmb		IAmb	18 10 39.9	
	comp=Z,5.5nm,0.7s							
BCAR	Beaver Creek A	15.16	41	Pn		Pn	18 10 29.1	-0.9
J26L	Joseph Creek	15.30	35			Pn	18 10 31.1	-0.8
J26L				IAmb		IAmb	18 10 36.8	
	comp=Z,7.5nm,1.0s							
PRP	Porcupine Dome	15.33	30			Pn	18 10 31.4	-0.9
D19K	Kuna River	15.47	8	Pn		Pn	18 10 33.3	-0.7
O29M	Mount Kennedy	15.51	53	Pn		Pn	18 10 34.7	0.0
O29M				IAmb		IAmb	18 10 42.8	
	comp=Z,6.6nm,0.7s							
K27K	Chicken	15.55	38	Pn		Pn	18 10 34.8	-0.4
K27K				IAmb		IAmb	18 10 42.8	
	comp=Z,9.7nm,1.2s							
P29M	Windy Craggy	15.76	56	Pn		Pn	18 10 38.0	+0.1
C19K	Lookout Ridge	15.96	6	Pn		Pn	18 10 40.9	+0.5
FYU	Fort Yukon	16.16	28	Pn		Pn	18 10 42.5	-0.4
FYU				IAmb		IAmb	18 10 55.0	
	comp=Z,11nm,1.5s							
F24K	Squaw Lake	16.22	23	Pn		Pn	18 10 42.8	-0.8
M29M	Somme Creek	16.26	46	Pn		Pn	18 10 44.7	+0.4
EGAK	Eagle	16.30	36	Pn		Pn	18 10 44.0	-0.7
EGAK				IAmb		IAmb	18 10 51.7	
	comp=Z,6.0nm,0.8s							
D22K	Ayikyak River	16.48	15	Pn		Pn	18 10 46.0	-0.9
DAWY	Dawson	16.59	40	Pn		Pn	18 10 46.4	-1.9
DAWY				IAmb		IAmb	18 10 53.9	
	comp=Z,6.8nm,0.6s							
L29M	L29M	16.66	44	Pn		Pn	18 10 48.4	-1.0
B21K	Ikpikpuk River	16.91	11	Pn		Pn	18 10 52.4	0.0
SKAG	Skagway	16.94	57	Pn		Pn	18 10 51.6	-1.1
SKAG				IAmb		IAmb	18 11 17.5	
	comp=Z,18nm,1.0s							
BMAR	Burnt Mountain	16.96	26	Pn		Pn	18 10 53.6	+0.5
B20K	Meade River	17.02	8	Pn		Pn	18 10 54.0	+0.2
M30M	Minto, Yukon	17.03	46	Pn		Pn	18 10 53.0	-1.0
M30M				IAmb		IAmb	18 11 00.0	
	comp=Z,4.7nm,0.8s							
I28M	Miner Creek	17.11	35			Pn	18 10 52.1	-2.9
I28M				IAmb		IAmb	18 11 02.2	
	comp=Z,5.5nm,0.7s							
N31M	Braeburn, Yuko	17.15	50	Pn		Pn	18 10 53.8	-1.6
K29M	Barlow Dome	17.22	42			Pn	18 10 56.8	+0.4
K29M				IAmb		IAmb	18 11 01.7	
	comp=Z,12nm,0.9s							
J29N	Klondike Camp	17.22	40	Pn		Pn	18 10 55.4	-0.9
J29N				IAmb		IAmb	18 11 01.1	
	comp=Z,8.7nm,0.6s							
R32K	Eaglecrest	17.23	62	Pn		Pn	18 10 55.6	-0.8
E25K	Arctic Village	17.24	24			Pn	18 10 56.0	-0.5
WHY	Whitehorse	17.37	53			Pn	18 10 58.3	0.0
WHY				IAmb		IAmb	18 11 32.7	
	comp=Z,11nm,1.2s							
D24K	Happy Valley	17.38	18	P		P	18 11 00.3	+0.8
B22K	Teshekpuk Lake	17.73	12			Pn	18 11 02.9	+0.4
P32M	Atlin	17.77	57	P		P	18 11 05.1	+1.2
P32M				IAmb		IAmb	18 11 08.3	
	comp=Z,9.7nm,1.0s							
M31M	Drury Creek, Y	17.98	49	P		P	18 11 09.2	+3.1
M31M				IAmb		IAmb	18 11 14.7	
	comp=Z,10nm,0.7s							
J30M	Hart River	18.01	40			P	18 11 07.6	+1.0
J30M				IAmb		IAmb	18 11 11.9	
	comp=Z,5.0nm,0.6s							
D25K	Kavik River	18.01	20			P	18 11 07.5	+1.1
D25K				IAmb		IAmb	18 11 08.6	
	comp=Z,4.6nm,0.8s							
I30M	Mount Dempster	18.28	39	P		Pn	18 11 09.2	-0.2
I30M				IAmb		IAmb	18 11 14.2	
	comp=Z,6.6nm,0.7s							
P33M	Teslin, Yukon	18.30	56	P		P	18 11 10.0	+0.2
P33M				IAmb		IAmb	18 11 15.0	
	comp=Z,13nm,0.8s							
N32M	Quiet Lake	18.33	52	P		Pn	18 11 11.1	+1.0
N32M				IAmb		IAmb	18 11 15.9	
	comp=Z,17nm,1.0s							
F28M	Old Crow	18.42	30			P	18 11 09.9	-1.0
Q32M	Nakina River	18.45	60	P		Pn	18 11 12.6	+0.9
Q32M				IAmb		IAmb	18 11 35.3	
	comp=Z,15nm,1.2s							
FARO	Faro, Yukon	18.45	49	P		P	18 11 11.2	-0.2
E28M	Babbage River	19.15	28	P		P	18 11 18.2	-0.8
G30M	tAoh Zraii Nji	19.21	34	P		P	18 11 18.1	-1.5
G30M				IAmb		IAmb	18 11 25.7	
	comp=Z,4.3nm,0.7s							
E29M	Blow River	19.48	29	P		P	18 11 22.3	-0.3
E29M				IAmb		IAmb	18 11 31.8	
	comp=Z,3.6nm,0.7s							
DLBC	Dease Lake	19.60	61	P		P	18 11 22.9	-1.0
	comp=Z,0.1nm,0.3s,baz=284,slow=18,SNR=1.6							
	comp=Z,2.9nm,0.8s							
G31M	Satah River	19.84	35	P		P	18 11 25.4	-1.1
G31M				IAmb		IAmb	18 11 31.4	
	comp=Z,11nm,1.2s							
F31M	Tsiigehtchic	20.27	34	P		P	18 11 30.6	-0.6
F31M				IAmb		IAmb	18 11 37.1	
	comp=Z,3.3nm,0.7s							
INK	Inuvik	20.78	32	P		P	18 11 36.0	-0.6
INK	Inuvik	20.78	32	P		P	18 11 35.3	-1.3
	comp=Z,2.6nm,0.7s,baz=242,slow=12,SNR=20							
	comp=Z,2.6nm,0.7s							
PETK	Petropavlovsk	22.73	285	P		P	18 11 56.0	-1.7
	comp=Z,0.8nm,0.4s,baz=40,slow=12,SNR=24							
	comp=Z,0.8nm,0.4s							
C36M	Paulatuk	24.32	34	P		P	18 12 14.4	+1.3
A36M	Sachs Harbour	25.05	27	P		P	18 12 20.5	+0.9
YKA	Yellowknife Ar	27.15	51	P		P	18 12 38.5	-0.2
YKA	Yellowknife Ar	27.15	51	P		P	18 12 40.6	+1.9
	comp=Z,1.3nm,0.8s,baz=273,slow=9.6,SNR=20							
	comp=Z,1.3nm,0.8s							
YKAB2	New Yellowknif	27.15	51	P		P	18 12 35.9	-2.9
NVAR	Mina Array Bea	34.50	97	P		P	18 13 46.4	+2.3
	comp=Z,1.1nm,0.3s,baz=297,slow=8.0,SNR=1.5							
	comp=Z,0.1nm,0.3s							
H11N2	WAKE ISLAND Hy	40.33	225	T		T	18 57 49.8	
	baz=26,slow=76,SNR=13							
H11N3	WAKE ISLAND Hy	40.34	225	T		T	18 57 51.0	
	baz=26,slow=76,SNR=13							
H11N1	WAKE ISLAND Hy	40.35	225	T		T	18 57 47.5	
	baz=26,slow=76,SNR=3.6							
H11S1	WAKE ISLAND Hy	41.50	224	T		T	18 59 14.7	
	baz=25,slow=76,SNR=9.4							
H11S2	WAKE ISLAND Hy	41.52	224	T		T	18 59 16.4	
	baz=25,slow=76,SNR=4.7							
H11S3	WAKE ISLAND Hy	41.52	224	T		T	18 59 14.1	
	baz=25,slow=76,SNR=2.5							
MJAR	Matsushiro Arr	42.94	271	LR		LR	18 33 55.1	
	comp=Z,22nm,19.5s,baz=36,slow=38							
ELIS	Ellis County	47.37	84	P		P	18 15 29.8	0.0
KSRS	Korea Array	48.47	280	P		P	18 15 36.8	-1.4
	comp=Z,2.7nm,0.7s,baz=51,slow=6.5,SNR=7.9							
KSRS				LR		LR	18 37 46.2	
	comp=Z,5.2nm,18.5s,baz=255,slow=38							
	comp=Z,2.7nm,0.7s							
SUMG	Summit	48.86	19	*i* P		P	18 15 42.0	+0.8
TXAR	Lajitas Array	49.54	94	P		P	18 15 48.8	+2.2
	comp=Z,0.5nm,0.6s,baz=304,slow=5.7,SNR=6.3							
	comp=Z,0.5nm,0.6s							
ICESG	Greenland Ices	51.30	22	*i* P		P	18 16 00.1	+0.4
SCHQ	Scheiferville	52.47	46	P		P	18 16 08.2	0.0
	comp=Z,1.7nm,0.7s,baz=270,slow=5.1,SNR=4.6							
	comp=Z,1.7nm,0.7s							
ULN	Ulaanbaatar	53.18	303	P		P	18 16 14.1	+0.3
SONM	Songino Array	53.53	303	P		P	18 16 16.1	-0.2
	comp=Z,1.5nm,0.9s,baz=46,slow=7.9,SNR=9.2							
	comp=Z,1.5nm,0.9s							
ARCES	ARCESS Array B	57.24	356	P		P	18 16 42.7	+0.1
	comp=Z,6.2nm,1.0s,baz=19,slow=8.8,SNR=7.7							
	comp=Z,6.2nm,1.0s							
ZALV	Zalesovo Beam	58.83	320	P		P	18 16 53.8	-0.1
	comp=Z,0.5nm,0.4s,baz=51,slow=8.8,SNR=3.0							
	comp=Z,0.5nm,0.4s							
KURBB	Kurchatov Arra	63.84	321	P		P	18 17 27.9	+0.1
	comp=Z,0.2nm,0.3s,baz=45,slow=8.0,SNR=5.8							
	comp=Z,0.2nm,0.3s							
BVAR	Borovoye Array	64.72	327	P		P	18 17 34.0	+0.4
	comp=Z,1.0nm,0.5s,baz=44,slow=6.7,SNR=7.9							
	comp=Z,1.0nm,0.5s							
FINES	FINESS Array B	65.28	355	P		P	18 17 36.6	-0.4
	comp=Z,2.1nm,0.6s,baz=14,slow=7.7,SNR=11							
	comp=Z,2.1nm,0.6s							
MKAR	Makanchi Array	65.42	316	P		P	18 17 37.8	-0.4
	comp=Z,0.6nm,0.6s,baz=47,slow=6.5,SNR=8.0							
	comp=Z,0.6nm,0.6s							
NOA	NORSAR Array B	65.91	3	P		P	18 17 41.0	-0.1
	comp=Z,0.6nm,0.6s,baz=357,slow=6.8,SNR=2.3							
	comp=Z,0.6nm,0.6s							
HFS	Hagfors	66.87	1	P		P	18 17 47.0	-0.2
	comp=Z,2.2nm,0.6s,baz=38,slow=2.8,SNR=9.5							
	comp=Z,2.2nm,0.6s							
EKA	Eskdalemuir Ar	70.55	11	P		P	18 18 11.2	+1.0
	comp=Z,1.1nm,0.7s,baz=347,slow=3.7,SNR=7.7							
	comp=Z,1.1nm,0.7s							
CLL	Collm	75.70	2	*e*P		P	18 18 40.0	-0.7
AKASG	Malin Array Be	75.73	351	P		P	18 18 40.9	-0.1
	comp=Z,1.2nm,0.6s,baz=8.3,slow=5.7,SNR=4.1							
	comp=Z,1.2nm,0.6s							
ESDC	Sonseca Array	85.77	15	P		P	18 19 33.4	-1.5
	comp=Z,0.5nm,0.7s,baz=336,slow=6.3,SNR=1.8							
	comp=Z,0.5nm,0.7s							
BRTR	Keskin Array B	86.06	346	P		P	18 19 36.2	-0.2
	comp=Z,0.8nm,0.8s,baz=36,slow=1.7,SNR=4.2							
	comp=Z,0.8nm,0.8s							

ASIES ***04*** *18:08:54.1,24.12N×121.73E,h8km,ML3.6,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-0.11; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$0.28; $M_{r\theta}$0.62; $M_{r\phi}$-0.35; $M_{\theta\phi}$1.27; Fault plane solution: $M_0$1.47544×10^{21} NP1: ϕ_s202.92000°,δ89.14000°,λ-74.23000°. NP2: ϕ_s295.97000°,δ15.79000°,λ-176.83000°. Principal axes: T Plg42.0500°, Azm277.9230°; N Plg15.7650°, Azm22.6760°; P Plg43.7140°, Azm128.3360°;*

JMA ***04*** *18:08:54.5±0.1,24.1N±0.4×121.7E±0.4,h0km, TAIWAN REGION*

TAP ***04*** *18:08:54.1,24.12N×121.73E,h8km,ML3.6,D*

ISC 04 18:08:54.3±1.0,**24.12N**±0.01×**121.77E**±0.02,**h5**km±8km, **n112**,$_{\sigma}$0°69/190,**1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.14	288	P		Pg	18 08 57.2	0.0
	baz=290							
ETL				S		Sg	18 08 58.9	-0.1
	baz=290							
TWD	Chiawan	0.16	257	*i* P		Pg	18 08 57.3	-0.2
	baz=260							
TWD				*e*S		Sg	18 08 59.3	-0.4
	baz=260							
NACB	Ninganchiao	0.17	290	P		Pg	18 08 57.5	-0.1
	baz=282							
NACB				S		Sg	18 08 59.4	-0.5
	baz=282							
EHP	Heping Village	0.19	353	*e*P		Pg	18 08 58.5	+0.4
	baz=1.0							
EHP				S		Sg	18 09 01.8	+1.0
	baz=1.0							
HWA	Hwalien	0.20	227	*e*P		Pg	18 08 59.2	+0.9
	baz=232							
HWA				*e*S		Sg	18 09 02.4	+1.4
	baz=232							
EAHA	Aohua	0.21	353	*e*P		Pg	18 08 58.9	+0.3
	baz=359							
EAHA				S		Sg	18 09 02.0	+0.6
	baz=359							
ETLH	Xiulin Townshi	0.28	289	*e*P		Pg	18 08 59.9	+0.2
	baz=286							
ETLH				S		Sg	18 09 03.0	-0.4
	baz=286							
ETM	Tongmen	0.29	239	P		Pg	18 08 59.8	-0.2
	baz=239							
ETM				S		Sg	18 09 03.3	-0.6
	baz=239							
ENA	Nanau	0.31	356	*e*P		Pg	18 09 00.5	+0.1
ENA				*e*S		Sg	18 09 05.5	+1.0
EWUT	Wuta	0.33	2	P		Pg	18 09 00.8	+0.1
	baz=5.0							
EWUT				*e*S		Sg	18 09 05.3	+0.3
	baz=5.0							
LXIB	Xiulin Townshi	0.34	254	*e*P		Pg	18 09 00.3	-0.6
	baz=253							
LXIB				*e*S		Sg	18 09 04.6	-0.8
	baz=253							
SHUL	Shoufeng	0.38	210	*e*P		Pb	18 09 03.1	-0.4
	baz=217							
SHUL				*e*S		Sb	18 09 10.2	+0.6
	baz=217							
ESL	Shilin	0.43	225	P		Pg	18 09 02.5	-0.1
	baz=235							
ESL				S		Sg	18 09 07.5	-0.7
	baz=235							
TEGC	Jichi Village	0.46	207	*e*P		Pb	18 09 04.5	-0.4
	baz=210							
WHF	Hehuan Shan	0.46	274	P		Pg	18 09 03.1	-0.2
	baz=274							
WHF				*e*S		Sg	18 09 08.5	-0.8
	baz=274							
ESAO	Su ao	0.46	9	*e*P		Pg	18 09 03.2	0.0
	baz=10.0

	baz=198							
EHY	**Hungye**	**0.73**	**214**	*eP*	**Pg**	**18 09 08.3**	**-0.1**
	baz=217							
WHP	**Taichung City**	**0.77**	**282**	*eP*	**Pg**	**18 09 09.2**	**+0.2**
	baz=284							
WHP				*eS*	**Sg**	**18 09 19.6**	**+0.5**
	baz=284							
NFF	**Wufeng Townshi**	**0.78**	**311**	*eP*	**Pg**	**18 09 09.9**	**+0.5**
	baz=312							
NFF				*eS*	**Sg**	**18 09 19.6**	**0.0**
	baz=312							
WCS	**Beigang Elemen**	**0.78**	**266**	*eP*	**Pg**	**18 09 09.4**	**+0.1**
	baz=268							
SSLB	**Suanglung**	**0.81**	**246**	P	**Pg**	**18 09 09.6**	**-0.4**
	baz=259							
SSLB				S	**Sg**	**18 09 19.6**	**-0.9**
	baz=259							
SMLT	**Sun Moon Lake**	**0.83**	**254**	P	**Pg**	**18 09 10.2**	**0.0**
	baz=255							
SMLT				S	**Sg**	**18 09 20.8**	**-0.1**
	baz=255							
YULB	**Yu-li**	**0.84**	**211**	*eP*	**Pg**	**18 09 09.9**	**-0.5**
	baz=228							
TIPB	**Shuangxi**	**0.85**	**4**	*eP*	**Pg**	**18 09 11.1**	**+0.4**
	baz=353							
TYC	**Yuchr**	**0.86**	**256**	P	**Pg**	**18 09 10.8**	**0.0**
	baz=257							
TYC				S	**Sg**	**18 09 20.7**	**-1.3**
	baz=257							
LIOB	**Emei**	**0.86**	**308**	*eP*	**Pb**	**18 09 11.6**	**-0.3**
	baz=309							
LIOB				*eS*	**Sg**	**18 09 22.8**	**+0.7**
	baz=309							
NSTT	**Nanjuang**	**0.86**	**306**	*eP*	**Pb**	**18 09 11.7**	**-0.1**
	baz=307							
NSTT				S	**Sg**	**18 09 22.6**	**+0.4**
	baz=307							
EYUL	**Yuli**	**0.87**	**208**	*eP*	**Pg**	**18 09 11.3**	**+0.3**
	baz=229							
NHDH	**Xindian Distri**	**0.87**	**345**	*eP*	**Pg**	**18 09 11.4**	**+0.4**
	baz=345							
NHDH				*eS*	**Sg**	**18 09 22.8**	**+0.4**
	baz=345							
TWF1	**Yuli**	**0.87**	**210**	*eP*	**Pg**	**18 09 11.3**	**+0.2**
	baz=225							
WHYT	**Xinyi Township**	**0.93**	**244**	*eP*	**Pg**	**18 09 12.5**	**+0.2**
	baz=254							
WHYT				*eS*	**Sg**	**18 09 24.4**	**0.0**
	baz=254							
TWQ1	**Liyutan**	**0.94**	**284**	*eP*	**Pn**	**18 09 13.9**	**-0.2**
	baz=297							
TWQ1				*eS*	**Sb**	**18 09 25.3**	**-0.4**
	baz=297							
NWF	**Wu-fen Shan**	**0.95**	**1**	*eP*	**Pb**	**18 09 13.5**	**+0.2**
	baz=352							
NWF				S	**Sb**	**18 09 25.7**	**-0.5**
	baz=352							
WFSB	**Wu-fen Shan**	**0.95**	**1**	*eP*	**Pn**	**18 09 13.7**	**-0.6**
	baz=352							
WFSB				*eS*	**Sg**	**18 09 25.2**	**+0.2**
	baz=352							
NSY	**Sanyi**	**0.96**	**288**	*eP*	**Pn**	**18 09 14.3**	**-0.3**
	baz=290							
SXI1	**Grass Mountain**	**0.98**	**6**	*eP*	**Pb**	**18 09 14.2**	**+0.4**
	baz=348							
SBCB	**Hsinchu**	**0.98**	**314**	*eP*	**Pn**	**18 09 14.3**	**-0.4**
	baz=314							
CHKH	**Chenggong**	**0.98**	**200**	*eP*	**Pg**	**18 09 13.3**	**+0.2**
	baz=196							
NMLH	**Miaoli**	**0.98**	**295**	*eP*	**Pn**	**18 09 15.5**	**+0.7**
	baz=297							
WJS	**Zhushan**	**0.99**	**253**	*eP*	**Pb**	**18 09 14.3**	**+0.3**
	baz=255							
WJS				*eS*	**Sb**	**18 09 28.0**	**+0.6**
	baz=255							
HSN	**Hsinchu**	**1.00**	**313**	*eP*	**Pn**	**18 09 14.5**	**-0.4**
	baz=316							
NCUH	**Zhongli**	**1.00**	**328**	*eP*	**Pn**	**18 09 15.1**	**+0.1**
	baz=328							
NCUH				*eS*	**Sn**	**18 09 29.2**	**-0.3**
	baz=328							
FULB	**Fuli**	**1.01**	**205**	*eP*	**Pg**	**18 09 14.2**	**+0.5**
	baz=227							
WNT	**Mingjian**	**1.02**	**257**	*eP*	**Pb**	**18 09 14.8**	**+0.3**
	baz=258							
WNT				*eS*	**Sn**	**18 09 28.8**	**-1.1**
	baz=258							
TWS1	**Kuangyinshan**	**1.03**	**342**	*eP*	**Pn**	**18 09 15.3**	**-0.1**
	baz=351							
TWS1				*eS*	**Sn**	**18 09 29.3**	**-0.9**
	baz=351							
YM01	**YM01**	**1.04**	**350**	*eP*	**Pn**	**18 09 15.2**	**-0.5**
	baz=333							
WDJ	**Dajia District**	**1.05**	**283**	*eP*	**Pn**	**18 09 16.0**	**+0.3**
	baz=294							
WDJ				*eS*	**Sn**	**18 09 31.8**	**+1.0**
	baz=294							
ALS	**Alishan**	**1.07**	**236**	P	**Pg**	**18 09 15.0**	**+0.1**
	baz=239							
ALS				S	**Sb**	**18 09 29.6**	**-0.2**
	baz=239							
CHKT	**Chengkung**	**1.08**	**200**	*eP*	**Pg**	**18 09 15.2**	**+0.2**
	baz=197							
NTST	**Danshui**	**1.08**	**345**	*eP*	**Pn**	**18 09 16.3**	**+0.1**
	baz=342							
EHD	**Haiduan**	**1.09**	**208**	*eP*	**Pg**	**18 09 15.2**	**-0.1**
	baz=213							
EHD				*eS*	**Sg**	**18 09 30.0**	**+0.6**
	baz=213							
CHN5	**Tsauling**	**1.12**	**243**	P	**Pb**	**18 09 16.5**	**+0.2**
	baz=246							
CHN5				S	**Sn**	**18 09 32.4**	**-0.3**
	baz=246							
JYNG	**Yonagunijimaku**	**1.13**	**73**	*eP*	**Pn**	**18 09 17.2**	**+0.5**
ELDTW	**Lidau**	**1.15**	**217**	*eP*	**Pg**	**18 09 16.0**	**-0.4**
	baz=207							
ELDTW				*eS*	**Sg**	**18 09 30.7**	**-0.7**
	baz=207							
WGK	**Gukeng**	**1.18**	**249**	*eP*	**Pn**	**18 09 17.8**	**+0.3**
	baz=252							
WGK				*i* S	**Sn**	**18 09 34.7**	**+0.7**
	baz=252							
WDLH	**Douliu**	**1.20**	**249**	*eP*	**Pn**	**18 09 17.8**	**0.0**
	baz=252							
WDLH				*eS*	**Sn**	**18 09 35.1**	**+0.6**
	baz=252							
WCKO	**Fanlu**	**1.26**	**238**	*eP*	**Pg**	**18 09 19.1**	**+0.5**
	baz=242							
WCKO				*eS*	**Sn**	**18 09 36.2**	**+0.3**
	baz=242							
WRL	**Guolierlin Hig**	**1.29**	**261**	*eP*	**Pb**	**18 09 19.1**	**0.0**
	baz=263							
WRL				*eS*	**Sn**	**18 09 36.9**	**+0.3**
	baz=263							
STYH	**Taoyuan**	**1.31**	**224**	*eP*	**Pn**	**18 09 19.2**	**-0.1**
	baz=229							
STYH				*eS*	**Sb**	**18 09 36.6**	**+0.2**
	baz=229							
CHN4	**Tsaushan**	**1.32**	**235**	*eP*	**Pg**	**18 09 19.9**	**+0.3**
	baz=239							
CHN4				*eS*	**Sn**	**18 09 37.9**	**+0.6**
	baz=239							
TPUB	**Ta-pu**	**1.32**	**232**	*i* P	**Pg**	**18 09 20.0**	**+0.4**
	baz=237							
TPUB				*eS*	**Sn**	**18 09 37.4**	**-0.1**
	baz=237							
WTK	**Tuku**	**1.33**	**252**	*i* P	**Pg**	**18 09 20.3**	**+0.4**
	baz=255							
WTK				*eS*	**Sg**	**18 09 38.7**	**+1.6**
	baz=255							
LONT	**Longtian**	**1.34**	**206**	*eP*	**Pn**	**18 09 17.7**	**-2.0**
	baz=215							
WTP	**Ta-pu**	**1.37**	**231**	*eP*	**Pg**	**18 09 20.8**	**+0.3**
	baz=235							
WTP				*eS*	**Sg**	**18 09 39.5**	**+1.2**
	baz=235							
TWG	**Pinlang**	**1.44**	**206**	*eP*	**Pn**	**18 09 18.4**	**-2.6**
	baz=215							
TWGBT	**Beinan**	**1.44**	**206**	*eP*	**Pn**	**18 09 18.4**	**-2.7**
	baz=215							
TWK	**Hsinying**	**1.45**	**234**	P	**Pn**	**18 09 21.5**	**+0.3**
	baz=239							
TWK				S	**Sg**	**18 09 41.8**	**+1.0**
	baz=239							
CHN1	**Nanshi**	**1.47**	**231**	P	**Pb**	**18 09 22.4**	**+0.3**
	baz=236							
CHN1				S	**Sg**	**18 09 42.7**	**+1.2**
	baz=236							
SNST	**Tainan City**	**1.47**	**233**	*eP*	**Pg**	**18 09 22.6**	**+0.2**
	baz=237							
SNST				S	**Sg**	**18 09 42.5**	**+1.0**
	baz=237							
WSF	**Szhu**	**1.49**	**252**	*eP*	**Pb**	**18 09 22.3**	**-0.2**
	baz=255							
WSF				*eS*	**Sg**	**18 09 43.1**	**+0.9**
	baz=255							
SGST	**Jiashian**	**1.50**	**227**	*eP*	**Pn**	**18 09 21.6**	**-0.3**
	baz=232							
SGST				*eS*	**Sg**	**18 09 43.3**	**+0.8**
	baz=232							
SLGT	**Liugui**	**1.52**	**223**	*eP*	**Pb**	**18 09 22.8**	**-0.2**
	baz=228							
SLGT				*eS*	**Sg**	**18 09 44.5**	**+1.3**
	baz=228							
WSL	**Shuilin Townsh**	**1.53**	**248**	*eS*	**Sg**	**18 09 45.4**	**+2.0**
	baz=251							
ICHU	**Yijhu**	**1.56**	**241**	*eP*	**Pb**	**18 09 23.5**	**-0.1**
	baz=246							
ICHU				*eS*	**Sg**	**18 09 45.5**	**+1.1**
	baz=246							
CHN8	**Yiju**	**1.62**	**242**	*eP*	**Pn**	**18 09 23.3**	**-0.2**
	baz=247							
CHN8				*eS*	**Sg**	**18 09 46.7**	**+0.3**
	baz=247							
CHN3	**Shinhua**	**1.65**	**231**	*eS*	**Sg**	**18 09 49.5**	**+2.1**
	baz=236							
SCST	**Cishan**	**1.69**	**224**	*eP*	**Pb**	**18 09 26.2**	**+0.3**
	baz=232							
SHHT	**Tainan City**	**1.70**	**230**	*eS*	**Sg**	**18 09 50.1**	**+1.2**
	baz=236							
SCLT	**Jiali**	**1.72**	**237**	*eS*	**Sg**	**18 09 49.8**	**+0.2**
	baz=242							
TSMG	**Majia**	**1.74**	**216**	*eP*	**Pb**	**18 09 26.4**	**-0.3**
	baz=235							
TSMG				*eS*	**Sb**	**18 09 49.8**	**+0.8**
	baz=235							
MASBT	**Mashibuluo**	**1.82**	**215**	*eS*	**Sb**	**18 09 52.2**	**+0.8**
	baz=220							
SCZT	**Fangliau**	**2.03**	**211**	*eP*	**Pn**	**18 09 30.5**	**+1.3**
	baz=204							
SCZT				*eS*	**Sb**	**18 09 57.5**	**+0.2**
	baz=204							
SLIU	**Shizi**	**2.09**	**205**	*eS*	**Sn**	**18 09 55.8**	**-0.7**
	baz=200							
PHUB	**P'eng-hu**	**2.10**	**254**	*eS*	**Sn**	**18 09 57.5**	**+0.9**
	baz=258							
WDGT	**Dungji**	**2.11**	**247**	P	**Pn**	**18 09 31.6**	**+1.3**
	baz=253							
JIJ	**Ishigaki jima**	**2.18**	**83**	*eP*	**Pb**	**18 09 32.9**	**-1.4**
VWUC	**VWUC**	**2.28**	**293**	*eP*	**Pn**	**18 09 32.1**	**-0.5**
	baz=293							
VWUC				*eS*	**Sn**	**18 10 00.2**	**-1.0**
	baz=293							
JISG	**Ishigakijimahi**	**2.37**	**78**	*eP*	**Pn**	**18 09 34.8**	**+1.0**
PTMZ	**Houxiangcun**	**2.58**	**291**	*eP*	**Pn**	**18 09 36.2**	**-0.5**
	baz=293							
AXDP	**Jialang**	**3.54**	**283**	*eP*	**Pn**	**18 09 49.7**	**-0.3**
	baz=285							
AXDP				*eS*	**Sn**	**18 10 29.8**	**-2.5**
	baz=285							

*JMA **04** 18:10:23.1±0.2, 24.°1N±0.°5×121.°7E±0.°8, h0km, TAIWAN REGION*

TAP 04 18:10:22.6, 24.°11N×121.°70E, h10km, ML3.1, 2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**303**	P	Pg	18 10 25.3	+0.2
	baz=302						
ETL				S	Sg	18 10 26.9	0.0
	baz=302						
TWD	**Chiawan**	**0.10**	**253**	⇓*i* P	Pg	18 10 25.5	+0.3
	baz=262						
TWD				*i* S	Sg	18 10 27.3	+0.2
	baz=262						
NACB	**Ninganchiao**	**0.12**	**302**	⇓*i* P	Pg	18 10 25.7	+0.2
	baz=302						
NACB				*i* S	Sg	18 10 27.7	+0.1
	baz=302						
HWA	**Hwalien**	**0.16**	**214**	*eP*	Pb	18 10 27.3	-0.4
	baz=222						
EAHA	**Aohua**	**0.22**	**8**	P	Pg	18 10 27.5	+0.2
	baz=5.0						
EAHA				*eS*	Sg	18 10 30.8	+0.4
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.23**	**295**	P	Pg	18 10 27.7	+0.3
	baz=295						
ETLH				S	Sg	18 10 31.0	+0.5
	baz=295						
ETM	**Tongmen**	**0.24**	**233**	P	Pg	18 10 28.0	+0.4
	baz=236						
ETM				S	Sg	18 10 31.6	+0.7
	baz=236						
LXIB	**Xiulin Townshi**	**0.28**	**252**	P	Pg	18 10 28.6	+0.3
	baz=244						
LXIB				S	Sg	18 10 32.7	+0.5
	baz=244						
ENA	**Nanau**	**0.32**	**6**	*i* P	Pg	18 10 29.4	+0.4
	baz=5.0						
ENA				*i* S	Sg	18 10 33.7	+0.4
	baz=5.0						
EWUT	**Wuta**	**0.34**	**11**	P	Pg	18 10 29.7	+0.3
	baz=9.0						
EWUT				*eS*	Sg	18 10 34.5	+0.5
	baz=9.0						
SHUL	**Shoufeng**	**0.35**	**202**	*eP*	Pb	18 10 31.2	+0.3
	baz=209						
ESL	**Shilin**	**0.39**	**220**	P	Pg	18 10 30.6	+0.4
	baz=229						
WHF	**Hehuan Shan**	**0.40**	**275**	*eP*	Pg	18 10 31.3	+0.5
	baz=275						
WHF				*eS*	Sg	18 10 36.7	+0.6
	baz=275						
NNSB	**Datong**	**0.43**	**317**	P	Pg	18 10 31.7	+0.5
	baz=316						
NNSB				S	Sg	18 10 37.7	+0.8
	baz=316						
NNSH	**Datong**	**0.43**	**317**	*eP*	Pb	18 10 31.9	-0.6
	baz=315						
NNSH				*eS*	Sg	18 10 37.8	+0.9
	baz=315						
FUSS	**Fushou**	**0.44**	**288**	*eP*	Pb	18 10 32.2	-0.5
	baz=288						
FUSS				*eS*	Sg	18 10 38.3	+1.0
	baz=288						
NNS	**Nan Shan**	**0.45**	**317**	P	Pg	18 10 32.0	+0.6
	baz=316						
NNS				S	Sg	18 10 38.0	+0.7
	baz=316						
LATG	**Datong**	**0.45**	**339**	*eP*	Pg	18 10 32.1	+0.5
	baz=336						
LATG				*eS*	Sg	18 10 38.4	+0.8
	baz=336						
ESAO	**Su ao**	**0.48**	**15**	*eP*	Pb	18 10 33.6	+0.5
	baz=6.0						
CHGB	**Renai**	**0.49**	**264**	*eP*	Pb	18 10 33.0	-0.4
	baz=257						
CHGB				*eS*	Sg	18 10 39.7	+1.0
	baz=257						
WARBT	**Fenglin Townsh**	**0.49**	**217**	P	Pg	18 10 32.4	+0.3
	baz=226						
TWT	**Tachien**	**0.50**	**287**	*eP*	Pb	18 10 33.6	0.0
	baz=285						
TWT				S	Sb	18 10 40.6	-0.5
	baz=285						
OWD	**Renai**	**0.51**	**252**	*eP*	Pb	18 10 33.3	-0.4
	baz=254						
OWD				*eS*	Sg	18 10 40.1	+0.9
	baz=254						
TWC	**Suao**	**0.51**	**15**	*eP*	Pb	18 10 33.7	-0.1
	baz=6.0						
TDCB	**Techi**	**0.52**	**286**	*eP*	Pb	18 10 33.7	-0.2
	baz=286						
TDCB				*eS*	Sg	18 10 40.6	+0.9
	baz=286						
NDT	**Datong Townshi**	**0.52**	**340**	*eP*	Pb	18 10 33.5	-0.4
	baz=337						
NDT				*eS*	Sb	18 10 40.8	-0.6
	baz=337						
NDS	**Dongshan**	**0.52**	**1**	*eP*	Pb	18 10 33.4	-0.5
	baz=358						
NDS				*eS*	Sb	18 10 40.7	-0.8
	baz=358						
ENTT	**Nioudou**	**0.54**	**347**	P	Pg	18 10 33.6	+0.4
	baz=344						
ENTT				*eS*	Sg	18 10 41.2	+0.9
	baz=344						
WUSB	**Renai**	**0.55**	**258**	*eP*	Pb	18 10 34.1	-0.3
	baz=259						
WUSB				*eS*	Sg	18 10 41.3	+0.7
	baz=259						
TWE	**Neicheng**	**0.61**	**357**	P	Pb	18 10 35.1	-0.3
	baz=356						
TWE				*eS*	Sb	18 10 43.5	-0.5
	baz=356						
VWDT	**VWDT**	**0.62**	**236**	*eP*	Pb	18 10 35.7	+0.1
	baz=237						
VWDT				*eS*	Sb	18 10 44.7	+0.2
	baz=237						
YHNB	**Yeheng**	**0.63**	**332**	*eP*	Pb	18 10 35.8	0.0
	baz=330						
YHNB				*eS*	Sb	18 10 44.1	-0.7
	baz=330						
NSK	**Sanguang**	**0.65**	**331**	P	Pb	18 10 35.9	-0.2
	baz=329						
NSK				S	Sg	18 10 44.3	+0.7
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.66**	**351**	*eP*	Pb	18 10 36.1	-0.1
	baz=348						
FUSB				*eS*	Sb	18 10 44.8	-0.7
	baz=348						
EHY	**Hungye**	**0.70**	**210**	P	Pb	18 10 36.8	-0.1
	baz=223						
WHP	**Taichung City**	**0.71**	**284**	*eP*	Pb	18 10 37.5	+0.4
	baz=284						
WHP				*eS*	Sb	18 10 47.2	+0.2
	baz=284						
SSLB	**Suanglung**	**0.76**	**245**	P	Pb	18 10 37.8	-0.1
	baz=256						
SMLT	**Sun Moon Lake**	**0.77**	**253**	*eP*	Pb	18 10 38.5	+0.3
	baz=254						
TYC	**Yuchr**	**0.80**	**255**	*eP*	Pb	18 10 38.6	0.0
	baz=257						
YULB	**Yu-li**	**0.81**	**208**	*eP*	Pb	18 10 39.2	+0.5
	baz=222						
LIOB	**Emei**	**0.82**	**310**	*eP*	Pn	18 10 39.9	-0.4
	baz=309						
NSTT	**Nanjuang**	**0.82**	**309**	*eP*	Pn	18 10 39.8	-0.5
	baz=308						
NSTT				*eS*	Sb	18 10 50.2	-0.1
	baz=308						
TWF1	**Yuli**	**0.84**	**206**	*eP*	Pn	18 10 40.1	-0.4
	baz=221						

TAP 04 18:10:32.2, 24.°10N×121.°72E, h12km, ML3.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.11**	**307**	P	Pg	18 10 35.3	+0.2
	baz=305						
ETL				S	Sg	18 10 37.1	-0.2
	baz=305						
TWD	**Chiawan**	**0.11**	**262**	*i* P	Pg	18 10 35.4	+0.3
	baz=271						
TWD				*eS*	Sg	18 10 37.3	0.0
	baz=271						
NACB	**Ninganchiao**	**0.14**	**305**	*i* P	Pg	18 10 35.6	+0.1
	baz=304						
NACB				*i* S	Sg	18 10 37.8	-0.1
	baz=304						
EHP	**Heping Village**	**0.21**	**6**	*eP*	Pg	18 10 37.3	+0.5
	baz=359						
EHP				*eS*	Sg	18 10 40.6	+0.6
	baz=359						
EAHA	**Aohua**	**0.23**	**5**	P	Pg	18 10 37.5	+0.3
	baz=1.0						
EAHA				*eS*	Sg	18 10 41.0	+0.5
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.24**	**297**	P	Pg	18 10 37.6	+0.2
	baz=296						
ETLH				*eS*	Sg	18 10 40.9	+0.1
	baz=296						
ETM	**Tongmen**	**0.24**	**238**	*eP*	Pg	18 10 37.8	+0.6
	baz=239						
ETM				*eS*	Sg	18 10 41.5	+0.8
	baz=239						
LXIB	**Xiulin Townshi**	**0.29**	**255**	*eP*	Pg	18 10 38.6	+0.4
	baz=247						
LXIB				*eS*	Sg	18 10 42.8	+0.6
	baz=247						
ENA	**Nanau**	**0.33**	**4**	P	Pg	18 10 39.5	+0.5
	baz=2.0						
ENA				S	Sg	18 10 43.7	+0.3
	baz=2.0						
SHUL	**Shoufeng**	**0.34**	**205**	*eP*	Pb	18 10 41.0	+0.9
	baz=193						
EWUT	**Wuta**	**0.35**	**9**	*eP*	Pb	18 10 40.2	-0.3
	baz=6.0						
EWUT				*eS*	Sg	18 10 44.4	+0.3
	baz=6.0						
ESL	**Shilin**	**0.38**	**223**	*eP*	Pb	18 10 41.0	0.0
	baz=230						
ESL				*eS*	Sb	18 10 46.6	-0.2
	baz=230						
WHF	**Hehuan Shan**	**0.42**	**277**	*eS*	Sg	18 10 46.5	+0.3
	baz=276						
TEGC	**Jichi Village**	**0.42**	**203**	*eP*	Pb	18 10 42.3	+0.8
	baz=194						
NNSB	**Datong**	**0.45**	**317**	P	Pg	18 10 41.6	+0.5
	baz=315						
NNSB				S	Sg	18 10 47.7	+0.5
	baz=315						
NNSH	**Datong**	**0.45**	**317**	*eP*	Pb	18 10 41.7	-0.5
	baz=314						
NNSH				*eS*	Sg	18 10 47.8	+0.6
	baz=314						
FUSS	**Fushou**	**0.46**	**289**	*eP*	Pg	18 10 41.8	+0.5
	baz=288						
FUSS				*eS*	Sb	18 10 48.4	-0.9
	baz=288						
NNS	**Nan Shan**	**0.47**	**318**	*eP*	Pb	18 10 42.0	-0.5
	baz=315						
NNS				S	Sg	18 10 48.1	+0.5
	baz=315						
LATG	**Datong**	**0.47**	**338**	*eP*	Pb	18 10 42.1	-0.5
	baz=335						
LATG				*eS*	Sg	18 10 48.6	+0.8
	baz=335						
WARBT	**Fenglin Townsh**	**0.48**	**219**	*eP*	Pb	18 10 42.7	0.0
	baz=226						
CHGB	**Renai**	**0.50**	**266**	*eS*	Sg	18 10 49.3	+0.7
	baz=258						
EGFH	**Guangfu**	**0.50**	**212**	*eP*	Pb	18 10 43.5	+0.5
	baz=221						
TWT	**Tachien**	**0.52**	**288**	S	Sb	18 10 50.5	-0.5
	baz=286						
TDCB	**Techi**	**0.53**	**287**	*eS*	Sg	18 10 50.5	+0.7
	baz=286						
NDS	**Dongshan**	**0.54**	**360**	*eP*	Pb	18 10 43.7	+0.1
	baz=356						
NDS				*eS*	Sb	18 10 51.0	-0.3
	baz=356						
NDT	**Datong Townshi**	**0.54**	**340**	*eP*	Pb	18 10 43.3	-0.4
	baz=336						
NDT				S	Sb	18 10 50.9	-0.5
	baz=336						
WUSB	**Renai**	**0.56**	**260**	*eS*	Sb	18 10 51.6	-0.4
	baz=260						
ENTT	**Nioudou**	**0.56**	**346**	*eP*	Pb	18 10 44.1	+0.1
	baz=335						
ENTT				S	Sb	18 10 51.5	-0.5
	baz=335						
TWE	**Neicheng**	**0.62**	**356**	*eS*	Sb	18 10 53.7	-0.1
	baz=355						
VWDT	**VWDT**	**0.63**	**237**	*eP*	Pb	18 10 45.5	+0.3
	baz=238						
VWDT				*eS*	Sb	18 10 54.6	+0.7
	baz=238						
YHNB	**Yeheng**	**0.65**	**332**	*eP*	Pb	18 10 45.4	-0.2
	baz=322						
YHNB				*eS*	Sb	18 10 54.4	-0.3
	baz=322						
NSK	**Sanguang**	**0.67**	**331**	*eP*	Pb	18 10 45.7	-0.2
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.67**	**350**	*eP*	Pb	18 10 45.8	-0.2
	baz=347						
FUSB				*eS*	Sb	18 10 54.8	-0.5
	baz=347						
EHY	**Hungye**	**0.69**	**212**	*eP*	Pb	18 10 46.7	+0.6
	baz=212						
EHY	**Hungye**	**0.69**	**212**	S	Pb	18 10 46.7	+0.5
	baz=223						

WHP	**Taichung City**	**0.73**	**285**	*e*P	Pn	18 10 47.8	-0.6
	baz=284							
WHP				*e*S	Sb	18 10 58.1	+1.3
	baz=284							
SSLB	**Suanglung**	**0.76**	**246**	*e*P	Pb	18 10 47.3	-0.2
	baz=256							
SSLB				*e*S	Sb	18 10 58.0	+0.1
	baz=256							
SSLB	**Suanglung**	**0.76**	**246**	*e*S	Pb	18 10 47.3	-0.2
	baz=256							
NFF	**Wufeng Townshi**	**0.76**	**314**	*e*P	Pb	18 10 47.8	+0.2
	baz=305							
SMLT	**Sun Moon Lake**	**0.78**	**254**	*e*P	Pb	18 10 48.0	+0.2
	baz=254							
SMLT				*e*S	Sb	18 10 58.6	+0.3
	baz=254							
SMLT	**Sun Moon Lake**	**0.78**	**254**	*e*S	Pb	18 10 48.3	+0.5
	baz=254							
YULB	**Yu-li**	**0.80**	**209**	*e*P	Pb	18 10 48.3	+0.3
	baz=221							
TYC	**Yuchr**	**0.81**	**257**	*e*P	Pb	18 10 48.2	-0.1
	baz=256							
TWF1	**Yuli**	**0.83**	**208**	*e*P	Pn	18 10 49.4	-0.4
	baz=219							
NSTT	**Nanjuang**	**0.84**	**309**	*e*P	Pb	18 10 49.3	+0.5
	baz=308							
TIPB	**Shuangxi**	**0.88**	**6**	*e*P	Pb	18 10 49.9	+0.4
	baz=349							
NHDH	**Xindian Distri**	**0.88**	**349**	*e*S	Sb	18 11 01.6	+0.3
	baz=336							
WHYT	**Xinyi Township**	**0.89**	**244**	*e*S	Sn	18 11 03.0	-0.4
	baz=251							
TWB1	**Santiao Chiao**	**0.94**	**15**	*e*P	Pn	18 10 52.3	+1.0
	baz=5.0							
SBCB	**Hsinchu**	**0.96**	**316**	*e*P	Pn	18 10 52.1	+0.5
	baz=314							
ALS	**Alishan**	**1.02**	**235**	*e*P	Pn	18 10 53.0	+0.4
	baz=225							
CHKT	**Chengkung**	**1.04**	**198**	*e*P	Pn	18 10 53.0	+0.3
	baz=184							
EHD	**Haiduan**	**1.05**	**207**	*e*P	Pn	18 10 53.6	+0.8
	baz=207							
EHD				*e*S	Sn	18 11 07.9	+0.5
	baz=207							
YM01	**YM01**	**1.05**	**353**	*e*P	Pn	18 10 53.6	+0.7
	baz=357							
CHN5	**Tsauling**	**1.07**	**243**	*e*P	Pn	18 10 54.5	+1.3
	baz=243							
ANP	**Anpu**	**1.10**	**351**	*e*P	Pn	18 10 53.6	0.0
	baz=347							
ELDTW	**Lidau**	**1.11**	**216**	*e*P	Pn	18 10 54.0	+0.4
	baz=202							
WGK	**Gukeng**	**1.13**	**249**	*e*S	Sn	18 11 09.1	-0.3
	baz=248							
STYH	**Taoyuan**	**1.26**	**223**	*e*S	Sb	18 11 11.9	-0.3
	baz=223							
TPUB	**Ta-pu**	**1.27**	**232**	*e*P	Pg	18 10 57.8	+1.1
	baz=231							

*IDC **04** 18:10:45.7±1.6,23°.76N×121°.23E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=74.1km s-min=27.5km az=68.0*

*ASIES **04** 18:10:46.5,24°.12N×121°.71E, h8km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr=3.78; Mθθ=5.90; Mϕϕ=9.68; Mrθ=6.29; Mθϕ=-8.70; Mrϕ=8.25; Fault plane solution: M₀15.95750×10²⁰ NP1: ϕs=196.79000°, δ=77.84000°, λ=-40.69000°. NP2: ϕs=297.05000°, δ=50.41000°, λ=-164.14000°. Principal axes: T Plg17.5610°, Azm252.5650°; N Plg47.8410°, Azm3.0230°; P Plg36.8380°, Azm148.8520°;*

*TAP **04** 18:10:46.5,24°.12N×121°.71E, h8km, ML3.7, C*

ISC 04 18:10:46.3±0.9,24°.11N±0°.02×121°.73E±0°.03, h10km±5km, n64, σ⁰50/95, mb3.4/3, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**297**	*i* P	**Pg**	**18 10 49.1**	**0.0**
	baz=296						
ETL				S	**Sg**	**18 10 50.7**	**-0.4**
	baz=296						
TWD	**Chiawan**	**0.13**	**257**	*i* P	**Pg**	**18 10 49.3**	**0.0**
	baz=258						
TWD				S	**Sg**	**18 10 51.2**	**-0.2**
	baz=258						
NACB	**Ninganchiao**	**0.14**	**297**	*i* P	**Pg**	**18 10 49.4**	**-0.1**
	baz=297						
NACB				S	**Sg**	**18 10 51.4**	**-0.4**
	baz=297						
EHP	**Heping Village**	**0.20**	**2**	P	**Pg**	**18 10 50.9**	**+0.4**
	baz=8.0						
EHP				S	**Sg**	**18 10 54.3**	**+0.8**
	baz=8.0						
EAHA	**Aohua**	**0.22**	**2**	*i* P	**Pg**	**18 10 51.2**	**+0.3**
	baz=5.0						
EAHA				S	**Sg**	**18 10 54.5**	**+0.5**
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.25**	**293**	*e*P	**Pg**	**18 10 51.8**	**+0.3**
	baz=293						
ETLH				*e*S	**Sg**	**18 10 54.9**	**0.0**
	baz=293						
ETM	**Tongmen**	**0.26**	**237**	P	**Pg**	**18 10 51.9**	**+0.2**
	baz=232						
LXIB	**Xiulin Townshi**	**0.30**	**253**	*e*S	**Sg**	**18 10 56.8**	**+0.2**
	baz=252						
ENA	**Nanau**	**0.32**	**2**	*i* P	**Pg**	**18 10 53.1**	**+0.4**
	baz=5.0						
ENA				*i* S	**Sg**	**18 10 57.4**	**+0.4**
	baz=5.0						
EWUT	**Wuta**	**0.34**	**7**	*e*P	**Pg**	**18 10 53.5**	**+0.4**
	baz=9.0						
EWUT				*e*S	**Sg**	**18 10 58.1**	**+0.5**
	baz=9.0						
SHUL	**Shoufeng**	**0.35**	**206**	*e*P	**Pb**	**18 10 55.0**	**+0.3**
	baz=213						
SHUL				*e*S	**Sb**	**18 11 02.2**	**+1.8**
	baz=213						
ESL	**Shilin**	**0.40**	**223**	*e*P	**Pb**	**18 10 55.1**	**-0.4**
	baz=229						
ESL				*e*S	**Sb**	**18 11 01.4**	**-0.3**
	baz=229						
NNSB	**Datong**	**0.45**	**315**	P	**Pg**	**18 10 55.5**	**+0.3**
	baz=315						
NNSB				S	**Sg**	**18 11 01.1**	**0.0**
	baz=315						
NNSH	**Datong**	**0.45**	**315**	*e*P	**Pg**	**18 10 55.5**	**+0.3**
	baz=314						
NNSH				*e*S	**Sg**	**18 11 01.3**	**+0.1**
	baz=314						
LATG	**Datong**	**0.46**	**336**	*e*P	**Pb**	**18 10 56.3**	**-0.4**
	baz=336						
LATG				*e*S	**Sg**	**18 11 02.3**	**+0.7**
	baz=336						
NNS	**Nan Shan**	**0.46**	**315**	*e*P	**Pg**	**18 10 55.8**	**+0.3**
	baz=316						
NNS				S	**Sg**	**18 11 01.8**	**+0.2**
	baz=316						
FUSS	**Fushou**	**0.47**	**287**	*e*P	**Pb**	**18 10 56.1**	**-0.7**
	baz=287						
FUSS				*e*S	**Sg**	**18 11 02.1**	**+0.4**
	baz=287						
WARBT	**Fenglin Townsh**	**0.50**	**219**	*e*S	**Sb**	**18 11 04.4**	**-0.2**
	baz=229						
TWC	**Suao**	**0.51**	**12**	P	**Pb**	**18 10 57.2**	**-0.2**
	baz=7.0						
TWC				S	**Sb**	**18 11 04.5**	**-0.4**
	baz=7.0						
CHGB	**Renai**	**0.51**	**265**	*e*P	**Pb**	**18 10 56.9**	**-0.6**
	baz=256						
CHGB				*e*S	**Sb**	**18 11 04.1**	**-1.0**
	baz=256						
EGFH	**Guangfu**	**0.52**	**212**	*e*S	**Sb**	**18 11 05.9**	**+0.8**
	baz=222						
NDS	**Dongshan**	**0.52**	**358**	P	**Pb**	**18 10 57.2**	**-0.4**
	baz=358						
NDS				S	**Sb**	**18 11 04.3**	**-0.9**
	baz=358						
TWT	**Tachien**	**0.53**	**286**	*e*P	**Pb**	**18 10 57.6**	**-0.2**
	baz=284						
TWT				*e*S	**Sg**	**18 11 04.4**	**+0.8**
	baz=284						
NDT	**Datong Townshi**	**0.53**	**338**	P	**Pb**	**18 10 57.2**	**-0.5**
	baz=337						
NDT				S	**Sg**	**18 11 04.3**	**+0.6**
	baz=337						
OWD	**Renai**	**0.53**	**253**	*e*P	**Pb**	**18 10 57.7**	**-0.2**
	baz=255						
TDCB	**Techi**	**0.54**	**285**	*e*P	**Pb**	**18 10 57.7**	**-0.3**
	baz=285						
TDCB				*e*S	**Sg**	**18 11 04.3**	**+0.2**
	baz=285						
ENTT	**Nioudou**	**0.55**	**344**	P	**Pb**	**18 10 57.8**	**-0.3**
	baz=344						
ENTT				*e*S	**Sg**	**18 11 04.9**	**+0.6**
	baz=344						
WUSB	**Renai**	**0.57**	**258**	*e*P	**Pb**	**18 10 58.3**	**-0.3**
	baz=258						
WUSB				*e*S	**Sg**	**18 11 05.7**	**+0.6**
	baz=258						
TWE	**Neicheng**	**0.61**	**354**	P	**Pb**	**18 10 58.9**	**-0.3**
	baz=356						
TWE				S	**Sb**	**18 11 07.1**	**-0.8**
	baz=356						
VWDT	**VWDT**	**0.65**	**237**	*e*S	**Sb**	**18 11 09.0**	**+0.3**
	baz=237						
YHNB	**Yeheng**	**0.65**	**330**	*e*P	**Pb**	**18 10 59.5**	**-0.2**
	baz=329						
YHNB				*e*S	**Sg**	**18 11 07.6**	**+0.2**
	baz=329						
NSK	**Sanguang**	**0.66**	**329**	*e*S	**Sg**	**18 11 08.1**	**+0.3**
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.66**	**349**	*e*P	**Pb**	**18 10 59.7**	**-0.3**
	baz=348						
FUSB				*e*S	**Sg**	**18 11 08.4**	**+0.5**
	baz=348						
WHP	**Taichung City**	**0.74**	**283**	*e*S	**Sb**	**18 11 11.9**	**+0.4**
	baz=283						
NTC	**Toucheng**	**0.75**	**7**	*e*P	**Pg**	**18 11 00.5**	**-0.3**
	baz=4.0						
NFF	**Wufeng Townshi**	**0.77**	**313**	*e*S	**Sg**	**18 11 11.4**	**+0.2**
	baz=312						
SSLB	**Suanglung**	**0.78**	**246**	*e*S	**Sg**	**18 11 11.5**	**-0.1**
	baz=256						
SMLT	**Sun Moon Lake**	**0.79**	**254**	*e*S	**Sb**	**18 11 13.2**	**+0.1**
	baz=254						
YULB	**Yu-li**	**0.82**	**209**	*e*P	**Pb**	**18 11 02.9**	**+0.2**
	baz=222						
YULB				*e*S	**Sn**	**18 11 15.4**	**-0.7**
	baz=222						
LIOB	**Emei**	**0.84**	**309**	*e*S	**Sb**	**18 11 14.6**	**0.0**
	baz=309						
TWQ1	**Liyutan**	**0.91**	**285**	*e*P	**Pn**	**18 11 05.6**	**+0.4**
	baz=285						
NWF	**Wu-fen Shan**	**0.96**	**3**	*e*S	**Pg**	**18 11 04.5**	**-0.3**
	baz=352						
NWF	**Wu-fen Shan**	**0.96**	**3**	P	**Pg**	**18 11 04.8**	**0.0**
	baz=351						
NWF				S	**Sb**	**18 11 17.9**	**0.0**
	baz=351						
WFSB	**Wu-fen Shan**	**0.96**	**3**	*e*S	**Pg**	**18 11 04.3**	**-0.5**
	baz=352						
WFSB	**Wu-fen Shan**	**0.96**	**3**	*e*P	**Pg**	**18 11 04.5**	**-0.3**
	baz=353						
WFSB				*e*S	**Sb**	**18 11 17.8**	**-0.1**
	baz=353						
WJS	**Zhushan**	**0.96**	**253**	*e*P	**Pn**	**18 11 06.2**	**+0.3**
	baz=255						
CHKH	**Chenggong**	**0.96**	**199**	*e*P	**Pg**	**18 11 04.7**	**-0.2**
	baz=192						
HSN	**Hsinchu**	**0.98**	**315**	*e*P	**Pn**	**18 11 06.9**	**+0.8**
	baz=316						
NCUH	**Zhongli**	**0.99**	**330**	*e*P	**Pn**	**18 11 06.9**	**+0.6**
	baz=329						
NCUH				*e*S	**Sn**	**18 11 21.9**	**+1.6**
	baz=329						
TWS1	**Kuangyinshan**	**1.03**	**344**	*e*P	**Pn**	**18 11 07.3**	**+0.5**
	baz=343						
TWS1				*e*S	**Sn**	**18 11 21.1**	**-0.2**
	baz=343						
ALS	**Alishan**	**1.04**	**235**	*e*P	**Pn**	**18 11 07.0**	**-0.3**
	baz=247						
ALS	**Alishan**	**1.04**	**235**	*e*S	**Pn**	**18 11 06.5**	**-0.1**
	baz=225						
YM01	**YM01**	**1.04**	**352**	*e*P	**Pn**	**18 11 07.2**	**+0.2**
	baz=348						
YM01	**YM01**	**1.04**	**352**	*e*S	**Pn**	**18 11 07.3**	**+0.2**
	baz=357						
CHKT	**Chengkung**	**1.06**	**199**	*e*P	**Pg**	**18 11 06.2**	**-0.5**
	baz=193						
ANP	**Anpu**	**1.09**	**350**	*e*P	**Pn**	**18 11 08.2**	**+0.4**
	baz=346						
CHN5	**Tsauling**	**1.09**	**242**	*e*P	**Pn**	**18 11 08.3**	**+0.5**
	baz=232						
CHN5	**Tsauling**	**1.09**	**242**	*e*S	**Pn**	**18 11 08.3**	**+0.5**
	baz=243						
ELDTW	**Lidau**	**1.13**	**216**	*e*P	**Pg**	**18 11 08.1**	**+0.1**
	baz=210						
ELDTW	**Lidau**	**1.13**	**216**	*e*S	**Pg**	**18 11 08.1**	**+0.1**
	baz=202						
KSRS	**Korea Array**	**14.32**	**20**	Pn	**P**	**18 14 16.1**	**-0.2**
	0.2nm,0.3s,baz=202,slow=11,SNR=7.6 1.5nm,0.6s						
MKAR	**Makanchi Array**	**38.74**	**316**	P	**P**	**18 18 11.0**	**+0.3**
	0.7nm,0.8s,baz=103,slow=10,SNR=4.1 0.7nm,0.8s						
WRA	**Warramunga Arr**	**45.48**	**163**	P	**P**	**18 19 04.7**	**-1.2**
	1.1nm,1.0s,baz=344,slow=8.7,SNR=4.7 1.1nm,1.0s						
ASAR	**Alice Springs**	**48.94**	**165**	P	**P**	**18 19 32.7**	**-0.2**
	0.2nm,1.0s,baz=343,slow=6.7,SNR=1.3 0.2nm,1.0s						

*NEIC **04** 18:11:42.5±2.4, 15°.94S±0°.09×74°.97W±0°.09, h51km±9km, mb4.4/6, Error ellipse: s-maj=17.7km s-min=3.3km az=224.0*

*IDC **04** 18:11:43.4±2.4, 15°.58S×74°.59W, h50km±19km, mb3.5/7, mbtmp3.8/10, ML3.4/3, MS2.7/2, Error ellipse: s-maj=47.6km s-min=15.5km az=47.0*

ISC 04 18:11:39.4±0.6, 15°.88S±0°.07×74°.9W±0°.1, h30km, n53, σ²22/48, mb4.1/10, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.29**	**334**		**Pn**	**18 12 44.5**	**+1.6**
NNA	**Nana**	**4.29**	**334**	P	**Pn**	**18 12 44.3**	**+1.5**
	1.6nm,0.3s,baz=121,slow=13,SNR=3.7						
NNA				S	**Sn**	**18 13 33.4**	**+1.4**
	62nm,0.3s,baz=185,slow=6.0,SNR=6.3						
NNA				LR	LR	18 14 28.4	
	comp=Z,86nm,19.8s,baz=138,slow=39 7.4nm,0.3s						
PB12	**IPOC Station P**	**5.16**	**122**		**Pn**	**18 12 55.6**	**+0.8**
PB16	**IPOC Station P**	**5.72**	**116**		**Pn**	**18 13 05.1**	**+2.2**
PB11	**IPOC Station P**	**6.33**	**128**		**Pn**	**18 13 12.4**	**+1.6**
TA01	**Diego Aracena**	**6.48**	**137**		**Pn**	**18 13 14.9**	**+2.1**
LPAZ	**La Paz**	**6.54**	**95**		**Pn**	**18 13 18.1**	**+3.9**
GO01	**Chusmiza**	**6.63**	**125**		**Pn**	**18 13 17.5**	**+2.2**
PATCX	**Punta Patache**	**6.68**	**138**	Pn	**Pn**	**18 13 17.6**	**+2.0**
PB08	**IPOC Station P**	**6.93**	**129**		**Pn**	**18 13 21.3**	**+1.9**
PB02	**IPOC Station P**	**7.21**	**139**		**Pn**	**18 13 26.0**	**+3.1**
PB01	**IPOC Station P**	**7.28**	**136**		**Pn**	**18 13 26.6**	**+2.8**
PB07	**IPOC Station P**	**7.52**	**141**		**Pn**	**18 13 29.4**	**+2.1**
PB04	**IPOC Station P**	**7.85**	**146**	Pn	**Pn**	**18 13 34.4**	**+2.7**
PB09	**IPOC Station P**	**7.97**	**138**	Pn	**Pn**	**18 13 37.3**	**+3.9**
PB05	**IPOC Station P**	**8.24**	**148**		**Pn**	**18 13 38.8**	**+1.7**
PB10	**IPOC Station P**	**8.64**	**152**	Pn	**Pn**	**18 13 44.1**	**+1.7**
LVC	**Limon Verde**	**8.78**	**141**		**Pn**	**18 13 48.5**	**+3.8**
LVC	**Limon Verde**	**8.78**	**141**	P	**Pn**	**18 13 48.3**	**+3.6**
	1.5nm,0.3s,baz=322,slow=10,SNR=9.8						
LVC				S	**Sn**	**18 15 18.2**	**-4.6**
	4.3nm,0.4s,baz=27,slow=9.9,SNR=6.4 3.8nm,0.4s						
ATAH	**Atahualpa**	**9.33**	**338**	P	**Pn**	**18 13 53.6**	**+1.3**
	0.2nm,0.3s,baz=75,slow=12,SNR=2.0						
ATAH				S	**Sn**	**18 15 33.1**	**-3.4**
	3.3nm,0.6s,baz=118,slow=14,SNR=1.7						
ATAH				LR	LR	18 17 45.3	
	comp=Z,47nm,22.0s,baz=102,slow=39 2.4nm,0.7s						
PB14	**IPOC Station P**	**9.68**	**155**		**Pn**	**18 13 58.7**	**+1.7**
ETMB	**Extrema**	**10.41**	**56**	Pn	**Pn**	**18 14 07.5**	**+0.8**
GO02	**Mina Guanaco**	**10.50**	**152**	Pn	**Pn**	**18 14 10.9**	**+2.7**
COHC	**Cochancay**	**13.99**	**342**		**P**	**18 15 01.6**	**-1.7**
CO06	**Fray Jorge**	**15.03**	**169**	Pn	**Pn**	**18 15 06.4**	**-3.4**
H03N1	**Juan Fernandez**	**17.86**	**191**	T	T	18 34 32.1	
	baz=14,slow=74,SNR=859						
H03N2	**Juan Fernandez**	**17.86**	**191**	T	T	18 34 31.6	
	baz=14,slow=74,SNR=1224						
H03N3	**Juan Fernandez**	**17.87**	**191**	T	T	18 34 33.7	
	baz=14,slow=74,SNR=1287						
BAUV	**El Baul**	**25.59**	**16**	P	**P**	**18 17 02.8**	**-3.3**
BAUV				IAmb	IAmb	18 17 24.7	
	comp=Z,13nm,0.7s						

BDFB	**Brasilia**	**25.89**	**93**	P	**P**	**18 17 08.7**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=325,slow=4.0,SNR=1.6 comp=Z,0.8nm,0.4s							
LCR2	**La Lucha 2**	**27.00**	**340**	P	**P**	**18 17 16.7**	**-2.4**
HNDO	**Hondo**	**50.90**	**332**	P	**P**	**18 20 38.4**	**+0.4**
HNDO				IAmb	IAmb	18 20 40.3	
	comp=Z,4.5nm,0.8s							
TXAR	**Lajitas Array**	**52.83**	**328**	P	**P**	**18 20 52.9**	**+0.5**
TXAR	**Lajitas Array**	**52.83**	**328**	P	**P**	**18 20 53.9**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=151,slow=8.9,SNR=9.9 comp=Z,1.3nm,0.8s							
TX31	**Lajitas Ar. Si**	**52.83**	**328**	P	**P**	**18 20 53.3**	**+0.9**
PDAR	**Pinedale Array**	**66.48**	**333**	P	**P**	**18 22 27.4**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=128,slow=9.6,SNR=2.2 comp=Z,0.2nm,0.5s							
NVAR	**Mina Array Bea**	**67.60**	**324**	P	**P**	**18 22 36.1**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=141,slow=5.8,SNR=2.8 comp=Z,0.2nm,0.5s							
ULM	**Lac du Bonnet**	**68.38**	**346**	P	**P**	**18 22 36.4**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=144,slow=3.3,SNR=3.6 comp=Z,2.2nm,0.6s							
QSPA	**South Pole Qui**	**74.28**	**180**	P	**P**	**18 23 12.7**	**-1.0**
QSPA				IAmb	IAmb	18 23 32.4		
	comp=Z,4.3nm,1.2s							
TORD	**Torodi Ar. Bea**	**81.05**	**74**	P	**P**	**18 23 52.0**	**-0.2**
TORD				IAmb	IAmb	18 23 52.8		
	comp=Z,3.5nm,1.1s							
TORD	**Torodi Ar. Bea**	**81.05**	**74**	P	**P**	**18 23 51.8**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=271,slow=4.0,SNR=9.3 comp=Z,1.6nm,0.7s							
YKA	**Yellowknife Ar**	**84.09**	**343**	P	**P**	**18 24 06.7**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=140,slow=5.3,SNR=9.4 comp=Z,0.4nm,0.7s							
H11N3	**WAKE ISLAND Hyl**	**21.28**	**284**	T	T	20 43 24.8		
	baz=176,slow=74,SNR=3.3							
H11N2	**WAKE ISLAND Hyl**	**21.29**	**284**	T	T	20 43 34.5		
	baz=98,slow=74,SNR=6.9							
H11S2	**WAKE ISLAND Hyl**	**21.31**	**282**	T	T	20 43 32.6		
	baz=98,slow=75,SNR=8.9							
H11S1	**WAKE ISLAND Hyl**	**21.32**	**282**	T	T	20 43 31.4		
	baz=98,slow=75,SNR=7.1							
H11S3	**WAKE ISLAND Hyl**	**21.33**	**282**	T	T	20 43 32.2		
	baz=98,slow=75,SNR=9.9							
ASAR	**Alice Springs**	**131.64**	**216**	PKP	**PKPdf**	**18 30 51.5**	**+1.3**
	comp=Z,0.7nm,1.1s,baz=119,slow=1.5,SNR=5.0							
WRA	**Warramunga Arr**	**134.24**	**220**	PKP	**PKPdf**	**18 30 56.6**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=130,slow=1.9,SNR=9.1							
ZALV	**Zalesovo Beam**	**138.85**	**18**	PKP	**PKPdf**	**18 31 02.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=310,slow=3.3,SNR=5.3							
KURBB	**Kurchatov Arra**	**139.28**	**26**	PKP	**PKPdf**	**18 31 04.6**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=316,slow=3.1,SNR=5.2							
MKAR	**Makanchi Array**	**143.82**	**27**	PKP	**PKPdf**	**18 31 12.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=333,slow=1.6,SNR=2.4							
SONM	**Songino Array**	**148.12**	**358**	PKPbc	**PKPbc**	**18 31 23.3**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=350,slow=0.5,SNR=7.6							

*NOU **04** 18:15:26.3,39°.12S×177°.71E, h75km, MLv4.4/15, Off E. Coast of N. Island, N.Z.*

*NEIC **04** 18:15:26.2±1.8,39°.08S±0°.05×177°.7E±0°.1, h40km±7km, mb4.7/8, Error ellipse: s-maj=12.0km s-min=7.1km az=106.0*

*WEL **04** 18:15:29.1±0.4,39°S±3°×17°7E±°, h38km±4km, M4.3/18, ML4.7/18, MLv4.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=131.4, confirmed*

ISC 04 18:15:29.1±0.8,38°.98S±0°.03×177°.52E±0°.04, h56km±5km, n203, σ1°62/220, mb4.9/7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.13**	**109**	P	**Pn**	**18 15 37.4**	**-0.4**
KNZ				S	**Sn**	**18 15 43.5**	**-0.4**
WHHZ	**Waihua**	**0.24**	**246**	P	**Pn**	**18 15 38.0**	**-0.4**
WHHZ				S	**Sn**	**18 15 45.5**	**+0.5**
SNGZ	**Shannon Statio**	**0.24**	**325**	P	**Pn**	**18 15 37.3**	**-1.1**
SNGZ				S	**Sn**	**18 15 43.6**	**-1.5**
PRGZ	**Paritu Road**	**0.29**	**79**	P	**Pn**	**18 15 38.8**	**0.0**
RIGZ	**Rimuhau**	**0.34**	**35**	P	**Pn**	**18 15 38.7**	**-0.5**
RIGZ				S	**Sn**	**18 15 46.2**	**-0.2**
RAHZ	**Arahi**	**0.34**	**281**	P	**Pn**	**18 15 38.4**	**-0.8**
RAHZ				S	**Sn**	**18 15 45.6**	**-0.9**
MHGZ	**Mahia Peninsul**	**0.35**	**120**	P	**Pn**	**18 15 39.8**	**+0.5**
RAGZ	**Rawiri**	**0.49**	**351**	P	**Pn**	**18 15 39.6**	**-1.2**
RAGZ				S	**Sn**	**18 15 47.9**	**-1.3**
ARHZ	**Aropaoanui**	**0.49**	**235**	P	**Pn**	**18 15 41.0**	**+0.3**
ARHZ				S	**Sn**	**18 15 50.7**	**+1.6**
MTHZ	**Maungataniwha**	**0.54**	**283**	P	**Pn**	**18 15 40.4**	**-0.9**
MTHZ				S	**Sn**	**18 15 49.0**	**-1.1**
RTZ	**Ruatahuna**	**0.56**	**311**	Pn	**Pn**	**18 15 40.4**	**-1.1**
RTZ				Sn	**Sn**	**18 15 49.2**	**-1.3**
RTZ	**Ruatahuna**	**0.56**	**311**	P	**Pn**	**18 15 40.4**	**-1.1**
RTZ				S	**Sn**	**18 15 48.8**	**-1.6**
NMHZ	**Naumai**	**0.56**	**258**	P	**Pn**	**18 15 41.5**	**-0.1**
NMHZ				S	**Sn**	**18 15 50.8**	**+0.1**
TKGZ	**Te Karaka**	**0.60**	**26**	P	**Pn**	**18 15 41.5**	**-0.4**
TKGZ				S	**Sn**	**18 15 51.2**	**0.0**
MWZ	**Matawai**	**0.65**	**1**	P	**Pn**	**18 15 41.4**	**-1.1**
MWZ				S	**Sn**	**18 15 50.7**	**-1.5**
CNGZ	**Carnagh Statio**	**0.73**	**48**	P	**Pn**	**18 15 43.6**	**+0.1**
CKHZ	**Cape Kidnapper**	**0.76**	**207**	P	**Pn**	**18 15 44.1**	**+0.2**
CKHZ				S	**Sn**	**18 15 56.6**	**+2.0**
MUGZ	**Murupara**	**0.77**	**311**	P	**Pn**	**18 15 43.2**	**-0.8**
MUGZ				S	**Sn**	**18 15 53.6**	**-1.4**
URZ	**Urewera**	**0.79**	**336**	P	**Pn**	**18 15 43.5**	**-0.7**
URZ	**Urewera**	**0.79**	**336**	P	**Pn**	**18 15 43.2**	**-1.0**
URZ				S	**Sn**	**18 15 53.9**	**-1.3**
MCHZ	**McNeill Hill**	**0.79**	**234**	P	**Pn**	**18 15 44.8**	**+0.6**
MCHZ				S	**Sn**	**18 15 57.2**	**+1.9**
BKZ	**Black Stump Fm**	**0.82**	**257**		**Pn**	**18 15 44.8**	**+0.1**
BKZ				Sn	**Sn**	**18 15 56.3**	**+0.2**
BKZ	**Black Stump Fm**	**0.82**	**257**	P	**Pn**	**18 15 44.6**	**-0.1**
BKZ	**Black Stump Fm**	**0.82**	**257**	P	**Pn**	**18 15 44.6**	**-0.1**
BKZ				S	**Sn**	**18 15 56.3**	**+0.2**
MRHZ	**Matea Rd**	**0.87**	**279**	P	**Pn**	**18 15 45.0**	**-0.4**
TWGZ	**Tauwhare

KRVZ	Karewarewa	1.46	265	P	Pn	18 15 53.1	-0.2
SNVZ	South Ngauruho	1.47	261	P	Pn	18 15 53.5	0.0
WIZ	White Island	1.47	350	P	Pn	18 15 51.7	-1.6
TUVZ	Tukino	1.48	258	P	Pn	18 15 53.6	+0.1
WSRZ	White Island S	1.48	350	P	Pn	18 15 52.6	-0.9
NNVZ	North Ngauruho	1.49	264	P	Pn	18 15 53.6	-0.1
NGZ	Ngauruhoe	1.50	262	P	Pn	18 15 53.8	-0.1
WTVZ	West Tongariro	1.51	264	P	Pn	18 15 53.7	-0.2
WHVZ	Whangaehu Hut	1.53	258	P	Pn	18 15 54.3	-0.1
WNVZ	Wahianoa	1.53	256	P	Pn	18 15 54.2	-0.1
MXZ	Matakaoa Point	1.55	24		Pn	18 15 53.7	-0.7
MXZ	Matakaoa Point	1.55	24	P	Pn	18 15 53.8	-0.6
MXZ	Matakaoa Point	1.55	24	P	Pn	18 15 53.8	-0.6
MAVZ	Matarangi	1.55	259	P	Pn	18 15 54.5	-0.2
COVZ	Chateau Observ	1.55	261	P	Pn	18 15 54.4	-0.1
FWVZ	Far West T-bar	1.55	259	P	Pn	18 15 54.5	-0.2
TRVZ	Turoa	1.56	258	P	Pn	18 15 54.7	-0.1
TGRZ	Tauranga	1.59	321	P	Pn	18 15 53.7	-1.2
TSZ	Takapari Road	1.61	228	P	Pn	18 15 54.6	-0.8
TWVZ	Taurewa	1.62	266	P	Pn	18 15 54.8	-0.6
MTVZ	Mangateitei	1.64	255	P	Pn	18 15 55.6	-0.1
DVHZ	Dannevirke	1.68	218	P	Pn	18 15 55.1	-1.0
TLZ	Tolley Road	1.68	292	P	Pn	18 15 55.1	-1.1
ANWZ	Angora Road	1.68	208	P	Pn	18 15 55.1	-1.1
PKVZ	Pokaka	1.71	259	P	Pn	18 15 56.6	-0.1
POWZ	Post Office Ro	1.95	223	P	Pn	18 15 58.9	-0.9
BFZ	Birch Farm	1.96	210		Pn	18 15 58.6	-1.3
BFZ	Birch Farm	1.96	210	P	Pn	18 15 58.7	-1.3
BFZ	Birch Farm	1.96	210	P	Pn	18 15 58.7	-1.3
PRWZ	Pori Road	1.97	217	P	Pn	18 15 59.3	-0.8
TOZ	Tahuroa Road	2.02	308		Pn	18 15 58.7	-2.1
TOZ	Tahuroa Road	2.02	308	P	Pn	18 15 59.5	-1.3
OHWZ	Ohakea	2.10	234	P	Pn	18 16 02.2	+0.4
WAZ	Wanganui	2.11	248	P	Pn	18 16 02.7	+0.7
HIZ	Hauiti	2.13	282		Pn	18 16 02.0	-0.3
HIZ	Hauiti	2.13	282	P	Pn	18 16 02.2	-0.1
HIZ	Hauiti	2.13	282	P	Pn	18 16 02.1	-0.3
VRZ	Vera Road	2.15	265	P	Pn	18 16 02.7	+0.1
CPWZ	Castlepoint	2.18	207	P	Pn	18 16 01.7	-1.2
TIWZ	Tintock	2.19	214	P	Pn	18 16 02.0	-1.1
MRZ	Mangatainoka R	2.25	221	Pn	Pn	18 16 02.6	-1.3
MRZ	Mangatainoka R	2.25	221	P	Pn	18 16 02.3	-1.5
HOWZ	Holdsworth Sta	2.46	218	P	Pn	18 16 04.8	-1.9
TMWZ	Te Maipa	2.46	210	P	Pn	18 16 04.9	-2.0
MHEZ	Mangahewa	2.49	267	P	Pn	18 16 08.6	+1.4
OGWZ	Otaki Gorge	2.57	224	P	Pn	18 16 06.6	-1.8
DREZ	Durham Road	2.59	264	P	Pn	18 16 09.5	+1.0
PREZ	Palmer Road	2.63	261	P	Pn	18 16 10.3	+1.1
MKAZ	Moumakai	2.64	314	P	Pn	18 16 08.8	-0.4
KUZ	Kuaotunu	2.65	327	P	Pn	18 16 08.6	-0.7
KUZ	Kuaotunu	2.65	327	P	Pn	18 16 08.3	-1.0
MTW	Mount Morrison	2.67	215	P	Pn	18 16 07.3	-2.4
NEZ	North Egmont	2.68	263	P	Pn	18 16 10.7	+0.8
KHEZ	Kahui Hut	2.74	262	P	Pn	18 16 11.8	+1.1
KHEZ	Kahui Hut	2.74	262	P	Pn	18 16 12.0	+1.3
KIW	Kapiti Island	2.75	226	P	Pn	18 16 09.0	-1.7
PKE	Pukeiti	2.75	264	P	Pn	18 16 12.1	+1.2
TRWZ	Traveller	2.79	210	P	Pn	18 16 08.7	-2.6
CAW	Cannon Point	2.84	221	P	Pn	18 16 09.6	-2.3
NBEZ	Newall Road No	2.85	263	P	Pn	18 16 13.6	+1.5
NMEZ	Namu Road	2.86	260	P	Pn	18 16 13.4	+1.1
ETAZ	East Tamaki Re	2.88	314	P	Pn	18 16 12.7	+0.2
PAWZ	Paruwai Farm	2.88	213	P	Pn	18 16 10.2	-2.4
WIAZ	Waiheke Island	2.88	318	P	Pn	18 16 11.7	-0.9
AWAZ	Awhitu Peninsu	2.97	309	P	Pn	18 16 13.7	0.0
MBAZ	Motutapu North	3.03	316	P	Pn	18 16 14.8	+0.2
WTAZ	Waiatarua	3.10	316	P	Pn	18 16 15.7	+0.2
PLWZ	Palliser	3.11	213		Pn	18 16 12.8	-3.0
PLWZ	Palliser	3.11	213	P	Pn	18 16 12.7	-3.0
WEL	Wellington	3.12	222	P	Pn	18 16 13.2	-2.6
BHW	Baring Head	3.16	219		Pn	18 16 13.4	-2.9
SNZO	South Karori	3.17	222		Pn	18 16 13.8	-2.7
SNZO	South Karori	3.17	222	P	Pn	18 16 13.8	-2.7
GRZ	Great Barrier	3.18	328	P	Pn	18 16 15.8	-0.8
ABAZ	Army Bay	3.19	317	P	Pn	18 16 16.8	0.0
RVAZ	Riverhead Bore	3.20	313	P	Pn	18 16 17.6	+0.7
DUWZ	D'Urville Isla	3.31	236	P	Pn	18 16 16.5	-2.0
TCW	Tory Channel	3.34	227		Pn	18 16 16.1	-2.6
TCW	Tory Channel	3.34	227	P	Pn	18 16 16.1	-2.6
TUWZ	Tuamarina	3.67	227		Pn	18 16 20.3	-3.0
CMWZ	Cape Campbell	3.74	221	Pn	Pn	18 16 21.9	-2.4
CMWZ	Cape Campbell	3.74	221	P	Pn	18 16 21.9	-2.4
NNZ	Nelson	3.88	234	Pn	Pn	18 16 23.6	-2.6
NNZ	Nelson	3.88	234	P	Pn	18 16 23.8	-2.4
BSWZ	Blackbirch Sta	3.90	304		Pn	18 16 23.4	-3.1
WCZ	Waipu Caves	3.95	319	P	Pn	18 16 26.9	-0.3
TKNZ	Takaka Hill	4.05	238		Pn	18 16 26.4	-2.2
TKNZ	Takaka Hill	4.05	238	P	Pn	18 16 26.5	-2.2
QRZ	Quartz Range	4.25	243	Pn	Pn	18 16 28.8	-2.6
QRZ	Quartz Range	4.25	243	P	Pn	18 16 28.8	-2.6
QRZ	Quartz Range	4.25	243	P	Pn	18 16 28.7	-2.7
MRNZ	Matariki Terra	4.37	235		Pn	18 16 30.7	-2.2
MRNZ	Matariki Terra	4.37	235	P	Pn	18 16 30.6	-2.3
THZ	Tophouse	4.49	230		Pn	18 16 31.6	-2.9
KHZ	Kahutara	4.57	220		Pn	18 16 31.6	-4.1
KHZ	Kahutara	4.57	220	P	Pn	18 16 32.3	-3.4
OUZ	Omahuta	4.89	319	P	Pn	18 16 40.5	+0.4
OUZ	Omahuta	4.89	319	P	Pn	18 16 40.3	+0.2
GVZ	Greta Valley S	5.23	219	Pn	Pn	18 16 41.5	-3.3
LTZ	Lake Taylor	5.50	225		Pn	18 16 44.1	-4.3
AMCZ	Amberley	5.58	220	Pn	Pn	18 16 46.5	-2.9
INZ	Inchbonnie	5.93	220	Pn	Pn	18 16 51.1	-3.2
MQZ	McQueen's Vall	5.97	216		Pn	18 16 49.8	-5.0
OXZ	Oxford	5.99	222		Pn	18 16 51.5	-3.7
CTZ	Chatham Island	6.48	139	Pn	Pn	18 17 01.8	0.0
CTZ	Chatham Island	6.48	139	P	Pn	18 17 02.3	+0.5
WVZ	Waitaha Valley	6.56	229	P	Pn	18 17 00.2	-2.7
RPZ	Rata Peaks	6.78	224	Pn	Pn	18 17 02.6	-3.4
RPZ	Rata Peaks	6.78	224	P	Pn	18 17 03.1	-2.9
FOZ	Fox Glacier	7.37	229	Pn	Pn	18 17 10.7	-3.3
LBZ	Lake Benmore	7.70	223	Pn	Pn	18 17 14.9	-3.6
ODZ	Otahua Downs	7.93	218	Pn	Pn	18 17 17.2	-4.4
ODZ	Otahua Downs	7.93	218	P	Pn	18 17 18.2	-3.4
JCZ	Jackson Bay	8.29	229	P	Pn	18 17 23.3	-3.4
WKZ	Wanaka	8.62	225	Pn	Pn	18 17 26.9	-4.3
MLZ	Mavora Lakes	9.45	225	Pn	Pn	18 17 39.7	-2.8
SYZ	Scrubby Hill	9.74	216	P	Pn	18 17 43.3	-3.1
CTAO	Charters Tower	32.85	296	P	P	18 21 55.9	-1.7
BBOO	Buckleboo	33.92	267	P	P	18 22 07.6	+0.7
BBOO				IAmb	IAmb	18 22 43.4	
	comp=Z,11nm,1.2s						
AS31	Alice Springs	39.87	279	P	P	18 22 57.4	-0.1
AS31				IAmb	IAmb	18 22 58.1	
	comp=Z,2.9nm,0.3s						
ASAR	Alice Springs	39.87	279	P	P	18 22 56.9	-0.6
WR0	Warramunga Arr	41.49	285	P	P	18 23 10.1	-0.8
WR0				IAmb	IAmb	18 23 50.7	
	comp=Z,12nm,0.6s						
WB2	Warramunga Arr	41.65	284	P	P	18 23 11.9	-0.3
WRAB	Tennant Creek	41.65	284	P	P	18 23 09.0	-3.2
WRAB				IAmb	IAmb	18 23 31.3	
	comp=Z,13nm,0.6s						
WB0	Warramunga Arr	41.72	285	P	P	18 23 12.2	-0.5
KNRA	Kununurra	48.45	285	P	P	18 24 05.3	-0.8
NJ2	Nanjing	89.23	314	eP	P	18 28 21.7	+2.9
NJ2	Nanjing	89.23	314	pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	PanZhiHua	96.11	299	P	P	18 28 53.6	+2.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
HHC	Hu-ho-hao-te	99.63	315	eP	Pdif	18 29 09.2	+2.9
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.1s						

*IDC **04** 18:21:44.6±1.1,20.5′57N×122.5′55E,h0km,mb3.4/8, mbtmp3.4/8,Error ellipse: s-maj=75.3km s-min=18.7km az=66.0*

ISC 04 18:21:49.2±1.1,**20.5′N**±0.2×**122.5′E**±0.4,**h31**km,**n8, s0g49/8,mb3.3**/8,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	30.19	338	P	P	18 27 57.3	+0.4
	0.2nm,0.4s,baz=145,slow=3.6,SNR=4.2						
	0.2nm,0.4s						
MKAR	Makanchi Array	41.83	318	P	P	18 29 36.5	+0.2
	0.1nm,0.3s,baz=106,slow=8.1,SNR=3.6						
	0.1nm,0.3s						
WRA	Warramunga Arr	41.87	163	P	P	18 29 36.4	-0.4
	0.4nm,0.8s,baz=346,slow=9.3,SNR=5.2						
	0.4nm,0.8s						
ZALV	Zalesovo Beam	43.97	329	P	P	18 29 52.9	-0.5
	0.4nm,0.3s,baz=124,slow=9.0,SNR=2.7						
	0.4nm,0.3s						
ASAR	Alice Springs	45.32	165	P	P	18 30 05.0	+0.4
	0.1nm,0.3s,baz=340,slow=6.5,SNR=9.5						
	0.1nm,0.3s						
KURBB	Kurchatov Arra	45.70	322	P	P	18 30 07.1	-0.1
	0.4nm,0.7s,baz=114,slow=7.6,SNR=7.3						
	0.4nm,0.7s						
BVAR	Borovoye Array	51.28	322	P	P	18 30 49.5	-0.6
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.0						
	0.2nm,0.5s						
YKA	Yellowknife Ar	85.83	23	P	P	18 34 25.6	0.0
	0.1nm,0.5s,baz=308,slow=4.7,SNR=2.5						
	0.1nm,0.5s						

TAP 04 18:25:42.6,24.′26N×121.′76E,h9km,ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.06	341	eP	Pg	18 25 45.1	+0.4
	baz=347						
EAHA	Aohua	0.08	344	*i* P	Pg	18 25 45.0	+0.2
	baz=344						
EAHA				*i* S	Sg	18 25 46.9	+0.4
	baz=344						
ENA	Nanau	0.17	354	*i* P	Pg	18 25 46.6	+0.2
	baz=356						
ENA				*i* S	Sg	18 25 49.4	+0.5
	baz=356						
EWUT	Wuta	0.19	4	P	Pg	18 25 46.9	+0.3
	baz=11						
EWUT				S	Sg	18 25 49.9	+0.6
	baz=11						
LATG	Datong	0.35	322	P	Pg	18 25 50.0	+0.4
	baz=322						
LATG				S	Sg	18 25 55.5	+1.1
	baz=322						
NNSB	Datong	0.39	297	eP	Pg	18 25 50.7	+0.4
	baz=296						
NNSB				S	Sg	18 25 56.1	+0.7
	baz=296						
NNS	Nan Shan	0.40	298	eP	Pg	18 25 51.0	+0.4
	baz=298						
NNS				S	Sg	18 25 56.7	+0.8
	baz=298						
NDT	Datong Townshi	0.41	327	P	Pg	18 25 51.3	+0.5
	baz=326						
NDT				eS	Sb	18 25 57.4	-1.1
	baz=326						
ENTT	Nioudou	0.42	335	P	Pg	18 25 51.4	+0.4
	baz=335						
ENTT				S	Sg	18 25 57.6	+1.0
	baz=335						
TWE	Neicheng	0.47	349	eP	Pg	18 25 52.1	+0.3
	baz=351						
TWE				eS	Sg	18 25 58.5	+0.4
	baz=351						
YHNB	Yeheng	0.54	320	eP	Pb	18 25 53.8	-0.6
	baz=319						
YHNB				eS	Sb	18 26 01.4	-0.9
	baz=319						
NSK	Sanguang	0.56	319	eS	Sg	18 26 01.6	+0.8
	baz=319						

BER 04 18:30:21.8±2.6,83.′46N×0.′23E,h26km±304km,mb(Pn)3.8, ML2.9(NAO)**,Confirmed Earthquake,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	4.88	153	Pn	Pn	18 31 30.6	-2.8
KBS				Sn	Sn	18 32 21.9	-7.0
KBS	Kingsbay	4.88	153	eP	Pn	18 31 31.2	-2.2
KBS				eS	Sn	18 32 22.2	-6.7
KBS				IAML		18 32 31.1	
	comp=Z,6.4nm,0.7s						
BRBB	Barentsburg B	5.81	150	Pn	Pn	18 31 44.6	-1.5
BRBB	Barentsburg B	5.81	150	eP	Pn	18 31 44.6	-1.5
BRBA	Barentsburg A	5.85	150	Pn	Pn	18 31 45.1	-1.5
BRBA	Barentsburg A	5.85	150	eP	Pn	18 31 45.3	-1.2
SPA0	Spitsbergen Ar	5.87	146	Pn	Pn	18 31 45.5	-1.3
	baz=351,slow=12						
SPA0				Sn	Sn	18 32 49.1	-3.9
	baz=344,slow=14						
SPA0	Spitsbergen Ar	5.87	146	Pn	Pn	18 31 45.5	-1.3
	baz=351,slow=12						
SPA0				Sn	Sn	18 32 49.1	-3.9
	baz=344,slow=14						
HOPEN	Hopen	8.08	136	Pn	Pn	18 32 18.3	+1.2

*IDC **04** 18:35:43.9±0.9,24.′19N×121.′97E,h0km,mb3.6/11, mbtmp3.6/12,ML3.1/1,MS3.2/1,Error ellipse: s-maj=31.7km s-min=18.1km az=66.0*

*ASIES **04** 18:35:46.9,24.′19N×121.′78E,h8km,ML4.2,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.29; $M_{\theta\theta}$-3.17; $M_{\phi\phi}$-0.20; $M_{r\theta}$5.00; $M_{\theta\phi}$-1.01; $M_{\phi r}$4.32; Fault plane solution: $M_0$7.22965×10^{21} NP1:ϕ_s51.27000°, δ79.10000°,λ,80.01000°. NP2:ϕ_s274.23000°,δ14.75000°, λ132.00000°. Principal axes: T Plg54.8450°, Azm308.9720°; N Plg9.8090°, Azm53.1830°; P Plg33.3680°, Azm149.7210°;*

*TAP **04** 18:35:46.9,24.′19N×121.′78E,h8km,ML4.2,B*

*JMA **04** 18:35:47.5±0.1,24.′2N±0.′2×121.′8E±0.′4,h6km±1km, MV3.6/14,TAIWAN REGION*

ISC 04 18:35:46.7±0.8,**24.′19N**±0.′01×**121.′79E**±0.′02,**h11**km±5km, **n163,s0g99/239,mb3.7**/11,**3C-17D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.12	339	⇓*i* P	Pg	18 35 50.0	+0.1
	baz=347						
EHP				eS	Sg	18 35 52.3	+0.3
	baz=347						
EAHA	Aohua	0.14	341	⇓*i* P	Pg	18 35 50.3	+0.2
	baz=345						
EAHA				S	Sg	18 35 52.7	+0.2
	baz=345						
ETL	Fush Village	0.16	258	P	Pg	18 35 50.5	+0.2
	baz=258						
ETL				S	Sg	18 35 53.0	+0.2
	baz=258						
NACB	Ninganchiao	0.18	264	P	Pg	18 35 50.7	+0.1
NACB	Ninganchiao	0.18	264	⇓*i* P	Pg	18 35 50.7	+0.1
	baz=265						
NACB				S	Sg	18 35 53.3	-0.1
	baz=265						
TWD	Chiawan	0.21	238	⇓*i* P	Pg	18 35 51.3	+0.1
	baz=244						
TWD				*i* S	Sg	18 35 54.5	+0.3
	baz=244						
ENA	Nanau	0.24	349	⇓*i* P	Pg	18 35 51.9	+0.2
	baz=353						
ENA				S	Sg	18 35 55.6	+0.5
	baz=353						
EWUT	Wuta	0.25	357	*i* P	Pg	18 35 52.3	+0.4
	baz=360						
EWUT				S	Sg	18 35 56.0	+0.6
	baz=360						
HWA	Hwalien	0.27	218	eP	Pb	18 35 53.5	-0.3
	baz=229						
ETLH	Xiulin Townshi	0.28	273	*i* P	Pg	18 35 52.8	+0.2
	baz=269						
ETLH				eS	Sg	18 35 56.8	+0.4
	baz=269						
ETM	Tongmen	0.35	230	⇑P	Pg	18 35 54.0	+0.2
	baz=236						
ESAO	Su ao	0.38	7	P	Pg	18 35 54.7	+0.3
	baz=1.0						
ESAO				S	Sg	18 36 00.2	+0.7
	baz=1.0						
LXIB	Xiulin Townshi	0.39	244	⇓P	Pg	18 35 54.5	0.0
	baz=246						
LXIB				eS	Sg	18 36 00.5	+1.0
	baz=246						
LATG	Datong	0.42	325	⇓*i* P	Pg	18 35 55.4	+0.3
	baz=327						
LATG				S	Sg	18 36 01.3	+0.7
	baz=327						
TWC	Suao	0.42	7	⇓*i* P	Pg	18 35 55.3	+0.3
	baz=3.0						
TWC				S	Sg	18 36 01.4	+0.9
	baz=3.0						
NNSB	Datong	0.44	302	⇓P	Pg	18 35 55.9	+0.4
	baz=305						
NNSB				S	Sg	18 36 01.8	+0.5
	baz=305						
NNSH	Datong	0.44	302	P	Pg	18 35 55.9	+0.4
	baz=304						
NNSH				eS	Sg	18 36 01.8	+0.5
	baz=304						
NDS	Dongshan	0.44	351	⇓*i* P	Pg	18 35 56.0	+0.5
	baz=353						
NDS				S	Sg	18 36 02.6	+1.2
	baz=353						
NNS	Nan Shan	0.45	303	⇓*i* P	Pg	18 35 56.0	+0.3
	baz=305						
NNS				*i* S	Sg	18 36 02.3	+0.6
	baz=305						
SHUL	Shoufeng	0.45	207	P	Pb	18 35 57.3	+0.5
	baz=210						
NDT	Datong Townshi	0.48	328	⇓P	Pg	18 35 56.8	+0.6
	baz=330						
NDT				S	Sg	18 36 03.5	+1.0
	baz=330						
WHF	Hehuan Shan	0.48	264	*i* P	Pg	18 35 56.6	+0.4
	baz=267						
WHF				eS	Sg	18 36 03.2	+0.5
	baz=267						
ENTT	Nioudou	0.49	335	⇓*i* P	Pg	18 35 56.9	+0.5
	baz=338						
ENTT				*i* S	Sb	18 36 03.9	-0.7
	baz=338						
ESL	Shilin	0.50	221	⇑*i* P	Pg	18 35 56.7	+0.2
	baz=231						
ESL				eS	Sb	18 36 06.1	+1.2
	baz=231						
FUSS	Fushou	0.50	276	P	Pb	18 35 57.2	-0.5
	baz=279						
FUSS				eS	Sb	18 36 04.3	-0.9
	baz=279						
TEGC	Jichi Village	0.53	206	eP	Pb	18 35 59.2	+1.1
	baz=208						
TWE	Neicheng	0.54	348	⇓*i* P	Pg	18 35 57.8	+0.5
	baz=351						
TWE				*i* S	Sg	18 36 05.3	+0.9
	baz=351						
TWT	Tachien	0.56	276	eP	Pb	18 35 58.7	-0.1
	baz=278						
TWT				S	Sg	18 36 06.0	+0.7
	baz=278						
ILA	Ilan	0.57	356	eP	Pb	18 35 58.8	0.0
	baz=350						
ILA				eS	Sb	18 36 06.9	-0.1
	baz=350						
CHGB	Renai	0.58	257	⇑P	Pb	18 35 58.6	-0.4
	baz=248						
CHGB				eS	Sb	18 36 06.7	-0.7
	baz=248						
TDCB	Techi	0.58	276	P	Pg	18 35 58.5	+0.4
	baz=278						
TDCB				S	Sg	18 36 06.0	+0.2
	baz=278						
FUSB	Fushanzhiwuyua	0.59	342	⇓P	Pb	18 35 59.0	-0.3
	baz=343						
FUSB				S	Sg	18 36 07.0	+0.8
	baz=343						
WARBT	Fenglin Townsh	0.60	218	eP	Pg	18 35 58.7	+0.3
	baz=227						
WARBT				eS	Sg	18 36 07.0	+0.7
	baz=227						
YHNB	Yeheng	0.61	322	P	Pb	18 35 59.4	-0.1
YHNB	Yeheng	0.61	322	⇓*i* P	Pb	18 35 59.2	-0.2
	baz=323						
YHNB				S	Sg	18 36 07.3	+0.7
	baz=323						
OWD	Renai	0.61	247	P	Pg	18 35 58.8	+0.2
	baz=249						
EGFH	Guangfu	0.62	213	P	Pb	18 35 59.4	-0.2
	baz=224						
NSK	Sanguang	0.62	321	⇓*i* P	Pb	18 35 59.4	-0.3
	baz=323						
NSK				S	Sg	18 36 07.7	+0.6
	baz=323						
WUSB	Renai	0.65	252	P	Pb	18 35 59.8	-0.3
	baz=254						
WUSB				eS	Sb	18 36 08.6	-0.6
	baz=254						
VWDT	VWDT	0.74	234	eP	Pb	18 36 01.5	-0.1
	baz=235						
VWDT				eS	Sb	18 36 12.7	+1.0
	baz=235						
NFF	Wufeng Townshi	0.75	306	*i* P	Pb	18 36 02.2	+0.3
	baz=315						
NFF				*i* S	Sb	18 36 12.2	-0.1
	baz=315						
HGSD	Ruisui	0.77	206	eP	Pb	18 36 02.5	+0.3
	baz=195						
TIPB	Shuangxi	0.78	2	P	Pb	18 36 02.3	0.0
	baz=3.0						
TIPB				eS	Sg	18 36 12.0	+0.1
	baz=3.0						
WHP	Taichung City	0.78	276	eP	Pb	18 36 02.7	+0.3
	baz=278						
WHP				eS	Sb	18 36 12.9	-0.1
	baz=278						
NHDH	Xindian Distri	0.80	343	*i* P	Pb	18 36 03.1	+0.4
	baz=344						
NHDH				S	Sb	18 36 13.5	-0.2
	baz=344						
EHY	Hungye	0.81	212	eP	Pb	18 36 02.4	0.0
	baz=228						
WCS	Beigang Elemen	0.81	261	eP	Pb	18 36 03.2	+0.3
	baz=253						
WCS				S	Sb	18 36 13.9	0.0
	baz=253						
TATO	Taipei	0.83	341	P	Pb	18 36 03.7	+0.5
TWB1	Santiao Chiao	0.83	12	eP	Pg	18 36 03.3	+0.4
	baz=6.0						
LIOB	Emei	0.84	303	eP	Pn	18 36 04.2	-0.3
	baz=305						
LIOB				eS	Sb	18 36 15.0	+0.3
	baz=305						
NSTT	Nanjuang	0.84	301	eP	Pb	18 36 04.1	+0.7
	baz=303						
NSTT				*i* S	Sb	18 36 15.1	+0.4
	baz=303						
SSLB	Suanglung	0.86	242	P	Pb	18 36 03.8	0.0
SSLB	Suanglung	0.86	242	P	Pg	18 36 03.6	+0.2
	baz=255						
SSLB				eS	Sg	18 36 14.8	0.0
	baz=255						
NHY	Taipei	0.87	347	eP	Pn	18 36 04.8	-0.1
	baz=348						
SMLT	Sun Moon Lake	0.87	249	eP	Pb	18 36 03.9	-0.1
	baz=253						
NWF	Wu-fen Shan	0.87	359	*i* P	Pb	18 36 04.5	+0.4
	baz=352						
NWF				eS	Sb	18 36 15.9	+0.1
	baz=352						
WFSB	Wu-fen Shan	0.87	359	*i* P	Pb	18 36 04.6	+0.7
	baz=352						
WFSB				eS	Sg

HSN	**Hsinchu** baz=302	**0.96 309**	*e*P	**Pn**	**18 36 07.2**	**+1.0**
HSN	baz=302		S	**Sb**	**18 36 19.3**	**+1.0**
TWS1	**Kuangyinshan** baz=342	**0.97 340**	*e*P	**Pn**	**18 36 06.8**	**+0.5**
YM01	**YM01** baz=350	**0.97 348**	*e*P	**Pn**	**18 36 06.6**	**+0.2**
NMLH	**Miaoli** baz=293	**0.97 291**	*e*P	**Pn**	**18 36 07.7**	**+1.2**
NMLH	baz=293		*e*S	**Sn**	**18 36 20.3**	**0.0**
WHYT	**Xinyi Township** baz=244	**0.99 240**	*e*P	**Pb**	**18 36 06.3**	**+0.4**
NTST	**Danshui** baz=352	**1.02 342**	*e*P	**Pn**	**18 36 07.6**	**+0.7**
NTST	baz=352		*e*S	**Sn**	**18 36 22.4**	**+1.2**
ANP	**Anpu** baz=348	**1.02 346**	*e*P	**Pn**	**18 36 07.4**	**+0.3**
WJS	**Zhushan** baz=246	**1.04 249**	*e*P	**Pn**	**18 36 08.4**	**+1.1**
WJS	baz=246		*e*S	**Sn**	**18 36 23.7**	**+1.8**
WNT	**Mingjian** baz=251	**1.06 253**	*e*P	**Pn**	**18 36 08.7**	**+1.1**
WNT	baz=251		*e*S	**Sn**	**18 36 24.2**	**+1.8**
CHKH	**Chenggong** baz=191	**1.06 200**	*e*P	**Pb**	**18 36 07.6**	**+0.4**
WDJ	**Dajia District** baz=281	**1.06 279**	P	**Pn**	**18 36 09.5**	**+1.9**
WDJ	baz=281		*e*S	**Sn**	**18 36 24.2**	**+1.8**
JYNG	**Yonagunijimaku**	**1.08 76**	P	**Pn**	**18 36 08.8**	**+0.9**
FULB	**Fuli** baz=226	**1.09 205**	*e*P	**Pb**	**18 36 07.9**	**+0.2**
TWY	**Chenhua** baz=353	**1.09 351**	*e*P	**Pn**	**18 36 10.0**	**+2.0**
ALS	**Alishan** baz=245	**1.13 233**	P	**Pn**	**18 36 09.0**	**+0.2**
WCHH	**Zhanghua** baz=269	**1.13 265**	*e*P	**Pn**	**18 36 10.1**	**+1.6**
YOJ	**Yonaguni jima**	**1.15 76**	P	**Pn**	**18 36 10.0**	**+1.3**
YOJ	**Yonaguni jima** baz=57	**1.15 76**	*e*P	**Pn**	**18 36 09.4**	**+0.7**
YOJ	baz=57		*e*S	**Sn**	**18 36 27.0**	**+2.6**
YOJ	**Yonaguni jima**	**1.15 76**	P	**Pn**	**18 36 09.8**	**+1.1**
CHKT	**Chengkung** baz=191	**1.16 200**	*e*P	**Pb**	**18 36 09.0**	**+0.2**
EHD	**Haiduan** baz=224	**1.17 207**	*e*P	**Pg**	**18 36 08.7**	**-0.5**
CHN5	**Tsauling** baz=243	**1.18 240**	*i* P	**Pn**	**18 36 10.6**	**+1.3**
CHN5	baz=243		*e*S	**Sn**	**18 36 27.7**	**+2.3**
ECS	**Chishang** baz=211	**1.21 206**	*e*P	**Pn**	**18 36 10.5**	**+0.8**
ELDTW	**Lidau** baz=220	**1.23 216**	*e*P	**Pb**	**18 36 08.8**	**-1.2**
WGK	**Gukeng** baz=249	**1.23 246**	*e*P	**Pg**	**18 36 11.4**	**+1.0**
WGK	baz=249		*e*S	**Sn**	**18 36 29.6**	**+3.0**
WDLH	**Douliu** baz=250	**1.25 247**	*e*P	**Pg**	**18 36 12.2**	**+1.4**
WDLH	baz=250		*e*S	**Sn**	**18 36 29.9**	**+2.8**
WCKO	**Fanlu** baz=239	**1.32 236**	*e*P	**Pg**	**18 36 12.8**	**+0.7**
WCKO	baz=239		*e*S	**Sn**	**18 36 32.1**	**+3.3**
WRL	**Guolierlin Hig** baz=261	**1.32 258**	*e*P	**Pg**	**18 36 12.6**	**+0.4**
WRL	baz=261		*e*S	**Sn**	**18 36 31.8**	**+2.9**
WTK	**Tuku** baz=252	**1.38 249**	*e*P	**Pg**	**18 36 13.8**	**+0.6**
WTK	baz=252		*e*S	**Sg**	**18 36 33.4**	**+2.3**
STYH	**Taoyuan** baz=229	**1.38 223**	*i* P	**Pb**	**18 36 12.9**	**+0.3**
CHN4	**Tsaushan** baz=237	**1.38 233**	*e*P	**Pg**	**18 36 14.1**	**+0.8**
CHN4	baz=237		S	**Sg**	**18 36 33.6**	**+2.4**
TPUB	**Ta-pu**	**1.39 230**	P	**Pg**	**18 36 14.0**	**+0.6**
TPUB	**Ta-pu** baz=221	**1.39 230**	P	**Pg**	**18 36 13.4**	**0.0**
TPUB	baz=221		S	**Sg**	**18 36 32.6**	**+1.2**
LONT	**Longtian** baz=211	**1.42 205**	*e*P	**Pn**	**18 36 11.7**	**-0.8**
WTP	**Ta-pu** baz=232	**1.43 229**	*e*P	**Pg**	**18 36 14.4**	**+0.2**
WTP	baz=232		S	**Sg**	**18 36 34.8**	**+1.9**
PCYT	**Pengchaiyu** baz=11	**1.45 10**	*e*P	**Pg**	**18 36 14.7**	**+0.1**
TWK	**Hsinying** baz=237	**1.51 233**	*e*P	**Pg**	**18 36 16.0**	**+0.2**
TWK	baz=237		*e*S	**Sg**	**18 36 36.4**	**+1.0**
TWG	**Pinlang** baz=211	**1.52 206**	*e*P	**Pn**	**18 36 12.2**	**-1.7**
TWGBT	**Beinan**	**1.52 206**	P	**Pn**	**18 36 12.8**	**-1.1**
TWGBT	**Beinan** baz=211	**1.52 206**	*e*P	**Pn**	**18 36 12.6**	**-1.3**
SNST	**Tainan City** baz=235	**1.53 231**	*e*P	**Pg**	**18 36 16.3**	**+0.1**
SNST	baz=235		*e*S	**Sg**	**18 36 37.5**	**+1.5**
CHN1	**Nanshi** baz=234	**1.53 229**	*i* P	**Pg**	**18 36 16.5**	**+0.4**
CHN1	baz=234		*e*S	**Sg**	**18 36 37.4**	**+1.4**
WSF	**Szhu** baz=264	**1.54 249**	*e*P	**Pg**	**18 36 15.8**	**-0.4**
WSF	baz=264		S	**Sg**	**18 36 38.0**	**+1.8**
SGST	**Jiashian** baz=229	**1.56 225**	*e*P	**Pb**	**18 36 15.9**	**+0.1**
SGST	baz=229		*i* S	**Sg**	**18 36 38.4**	**+1.3**
WSL	**Shuilin Townsh** baz=249	**1.58 245**	*e*P	**Pg**	**18 36 16.9**	**-0.1**
WSL	baz=249		*e*S	**Sg**	**18 36 38.9**	**+1.3**
SLGT	**Liugui** baz=225	**1.59 222**	P	**Pb**	**18 36 16.7**	**+0.5**
SLGT	baz=225		*e*S	**Sg**	**18 36 39.0**	**+1.1**
ICHU	**Yijhu** baz=244	**1.61 239**	*e*P	**Pb**	**18 36 17.2**	**+0.6**
ICHU	baz=244		*e*S	**Sg**	**18 36 40.6**	**+2.0**
CHN8	**Yiju** baz=245	**1.68 240**	*e*P	**Pb**	**18 36 17.9**	**+0.3**
CHN8	baz=245		*e*S	**Sg**	**18 36 41.7**	**+1.0**
SCST	**Cishan** baz=228	**1.76 223**	P	**Pg**	**18 36 20.1**	**-0.5**
SCST	baz=228		*e*S	**Sg**	**18 36 45.1**	**+1.7**
SHHT	**Tainan City** baz=234	**1.76 229**	*e*P	**Pg**	**18 36 20.9**	**+0.3**
SHHT	baz=234		*e*S	**Sg**	**18 36 46.4**	**+2.9**
ECL	**Taimali** baz=195	**1.77 206**	*e*P	**Pn**	**18 36 17.6**	**+0.3**
IRIF	**Iriomote-Funau**	**1.78 85**	P	**Pn**	**18 36 18.5**	**+1.1**
IRIF			*e*S	**Sb**	**18 36 42.7**	**+1.1**
SCLT	**Jiali** baz=240	**1.78 236**	*e*P	**Pb**	**18 36 19.7**	**+0.3**
SCLT	baz=240		*e*S	**Sg**	**18 36 45.0**	**+0.9**
TSMG	**Majia** baz=236	**1.82 216**	*e*P	**Pb**	**18 36 20.2**	**+0.2**
HATJ	**Hateruma jima**	**1.84 94**	*e*P	**Pb**	**18 36 21.3**	**+0.8**
TWM1	**Shoushan** baz=224	**1.85 223**	P	**Pg**	**18 36 22.2**	**-0.1**
TSCK	**Chigu Township** baz=242	**1.88 237**	*e*P	**Pb**	**18 36 21.0**	**-0.1**
TSCK	baz=242		*e*S	**Sg**	**18 36 46.4**	**-0.8**
SGLT	**Jiouru** baz=215	**1.89 220**	*e*P	**Pg**	**18 36 22.3**	**-0.6**
MASBT	**Mashibuluo** baz=220	**1.90 214**	P	**Pb**	**18 36 21.3**	**-0.2**
MASBT	baz=220		S	**Sg**	**18 36 47.1**	**-0.7**
SNJT	**Kaohsiung City** baz=229	**1.96 223**	*e*P	**Pb**	**18 36 23.4**	**+0.9**
SNJT	baz=229		*e*S	**Sg**	**18 36 51.1**	**+1.3**
EAST	**Anshuo** baz=197	**2.00 206**	*e*P	**Pn**	**18 36 20.8**	**+0.2**
TAW	**Tawu** baz=212	**2.00 204**	*e*P	**Pn**	**18 36 21.7**	**+1.2**
TAWH	**Dawu Township** baz=196	**2.02 204**	*e*P	**Pn**	**18 36 20.8**	**-0.1**
JKRS	**Kuro-shima**	**2.03 88**	P	**Pb**	**18 36 23.8**	**+0.2**
JKRS			*e*S	**Sb**	**18 36 49.9**	**+1.1**
SCZT	**Fangliau** baz=217	**2.11 211**	*e*P	**Pb**	**18 36 24.1**	**-0.9**
SCZT	baz=217		*e*S	**Sb**	**18 36 52.5**	**+1.3**
PHUB	**P'eng-hu** baz=258	**2.14 252**	*e*P	**Pn**	**18 36 23.7**	**+1.2**
PHUB	baz=258		*e*S	**Sb**	**18 36 51.9**	**-0.2**
JIJ	**Ishigaki jima**	**2.15 85**	P	**Pn**	**18 36 23.5**	**+0.8**
JIJ			S	**Sn**	**18 36 51.3**	**+2.0**
LAY	**Lan-yu** baz=188	**2.16 186**	*e*P	**Pn**	**18 36 21.8**	**-0.8**
SLIU	**Shizi** baz=214	**2.17 205**	*e*P	**Pn**	**18 36 24.6**	**+1.8**
LYUB	**Lan-yu** baz=187	**2.19 185**	*e*P	**Pn**	**18 36 21.4**	**-1.8**
VWUC	**VWUC** baz=293	**2.27 291**	*e*P	**Pn**	**18 36 25.1**	**+0.8**
VWUC	baz=293		*e*S	**Sn**	**18 36 53.5**	**+1.2**
JISG	**Ishigakijimahi**	**2.33 80**	P	**Pn**	**18 36 26.3**	**+1.3**
JISG			S	**Sn**	**18 36 55.9**	**+2.1**
VCHM	**Qimei** baz=236	**2.38 246**	*e*P	**Pn**	**18 36 27.8**	**+2.1**
VCHM	baz=236		*e*S	**Sb**	**18 36 58.4**	**-0.5**
MATB	**Ma-tsu** baz=321	**2.57 320**	*e*S	**Sn**	**18 37 01.8**	**+2.2**
PTMZ	**Houxiangcun** baz=293	**2.57 290**	*e*P	**Pn**	**18 36 29.1**	**+0.7**
KNMB	**Chin-men Tao** baz=280	**3.12 276**	*e*P	**Pn**	**18 36 36.8**	**+0.9**
KSRS	**Korea Array** 0.1nm,0.3s,baz=202,slow=12,SNR=1.1 0.8nm,0.8s	**14.22 20**	Pn	**Pn**	**18 39 07.7**	**-0.4**
CMAR	**Chiang Mai Arr** 0.5nm,0.7s,baz=65,slow=8.5,SNR=4.8 0.5nm,0.7s	**22.02 259**	P	**P**	**18 40 42.3**	**+0.9**
KLR	**Kul'dur** comp=Z,46nm,19.1s,baz=200,slow=35	**26.19 15**	LR	LR	18 51 10.9	
SONM	**Sogino Array** 0.6nm,0.8s,baz=147,slow=11,SNR=3.7 0.6nm,0.8s	**26.58 336**	P	**P**	**18 41 23.4**	**-1.6**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=99,slow=11,SNR=7.9 0.6nm,0.7s	**38.72 316**	P	**P**	**18 43 11.0**	**+0.1**
ZALV	**Zalesovo Beam** 1.0nm,0.6s,baz=106,slow=7.9,SNR=6.0 1.0nm,0.6s	**40.54 327**	P	**P**	**18 43 24.9**	**-1.0**
H11N1	**WAKE ISLAND Hy** baz=283	**41.93 87**	T	T	19 28 52.4	
H11N2	**WAKE ISLAND Hy** baz=283	**41.93 87**	T	T	19 28 50.7	
H11N3	**WAKE ISLAND Hy** baz=283	**41.95 87**	T	T	19 28 45.9	
H11S3	**WAKE ISLAND Hy** baz=283	**42.06 89**	T	T	19 28 49.2	
H11S1	**WAKE ISLAND Hy** baz=283	**42.07 89**	T	T	19 28 49.9	
H11S2	**WAKE ISLAND Hy** baz=283	**42.08 89**	T	T	19 28 50.9	
KURBB	**Kurchatov Arra** 0.5nm,0.9s,baz=106,slow=7.0,SNR=6.3 0.5nm,0.9s	**42.46 320**	P	**P**	**18 43 41.4**	**-0.3**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=344,slow=8.8,SNR=4.9 0.7nm,0.7s	**45.54 163**	P	**P**	**18 44 04.4**	**-2.3**
BVAR	**Borovoye Array** 0.8nm,0.6s,baz=108,slow=8.3,SNR=8.8 0.8nm,0.6s	**48.02 321**	P	**P**	**18 44 25.6**	**-0.2**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=338,slow=6.6,SNR=10.0 0.4nm,0.6s	**49.01 165**	P	**P**	**18 44 32.5**	**-1.2**
FINES	**FINESS Array B** 1.5nm,1.0s,baz=44,slow=6.2,SNR=1.0 1.5nm,1.0s	**71.72 330**	P	**P**	**18 47 08.1**	**-0.5**
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=310,slow=5.4,SNR=5.1 0.5nm,0.7s	**82.75 23**	P	**P**	**18 48 09.2**	**-1.3**
NVAR	**Mina Array Bea** 0.2nm,0.6s,baz=289,slow=9.4,SNR=2.0 0.2nm,0.6s	**96.05 43**	P	**P**	**18 49 13.4**	**-1.5**

*IDC **04** 18:39:59.6±1.3,23°.67N×121°.14E,h0km,mb3.3/7, mbtmp3.4/8,ML3.1/1,MS3.6/1,Error ellipse: s-maj=72.1km s-min=20.9km az=66.0*

*ASIES **04** 18:40:03.1,24°.14N×121°.64E,h11km,ML3.7,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.72; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$0.22; $M_{r\theta}$1.54; $M_{\theta\phi}$-0.47; $M_{r\phi}$2.15; Fault plane solution: M_o2.81694×10^{21} NP1:ϕ_s37.84000°, δ82.63000°,λ75.97000°. NP2:ϕ_s280.65000°,δ15.81000°, λ151.90000°. Principal axes: T Plg50.4530°, Azm292.2290°; N Plg13.9060°, Azm39.6780°; P Plg36.1300°, Azm140.0910°;*

*TAP **04** 18:40:03.1,24°.14N×121°.64E,h11km,ML3.7,C*

ISC 04 18:40:02.3±0.8,24°.12N±0°.02×121°.69E±0°.03,h14km±4km, n102,σ0s86/132,mb3.3/7,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ETL	**Fush Village** baz=325	**0.07**	**300**	P	**Pg**	**18 40 05.3**	**0.0**
ETL	baz=325			S	**Sg**	**18 40 06.9**	**-0.3**
TWD	**Chiawan** baz=211	**0.10**	**244**	P	**Pg**	**18 40 05.5**	**+0.1**
TWD	baz=211			*i* S	**Sg**	**18 40 07.2**	**-0.3**
NACB	**Ninganchiao** baz=313	**0.10**	**300**	*e*P	**Pg**	**18 40 05.4**	**-0.1**
NACB	baz=313			*e*S	**Sg**	**18 40 07.5**	**-0.1**
HWA	**Hwalien** baz=189	**0.17**	**209**	*e*P	**Pg**	**18 40 07.4**	**+1.1**
EHP	**Heping Village** baz=36	**0.19**	**13**	*e*S	**Sg**	**18 40 08.9**	**-0.8**
ETLH	**Xiulin Townshi** baz=296	**0.21**	**294**	*e*P	**Pg**	**18 40 07.2**	**+0.1**
ETLH	baz=296			S	**Sg**	**18 40 09.9**	**-0.5**
ETM	**Tongmen** baz=219	**0.24**	**229**	*e*P	**Pg**	**18 40 08.0**	**+0.4**
ETM	baz=219			*e*S	**Sg**	**18 40 10.8**	**-0.3**
LXIB	**Xiulin Townshi** baz=241	**0.27**	**248**	*e*P	**Pg**	**18 40 08.5**	**+0.3**
LXIB	baz=241			*e*S	**Sg**	**18 40 12.3**	**+0.1**
SHUL	**Shoufeng** baz=199	**0.35**	**200**	*e*S	**Sb**	**18 40 18.1**	**+2.3**
ESL	**Shilin** baz=209	**0.39**	**218**	*e*P	**Pg**	**18 40 10.0**	**-0.1**
ESL	baz=209			*e*S	**Sb**	**18 40 17.0**	**+0.2**
WHF	**Hehuan Shan** baz=271	**0.39**	**273**	*e*P	**Pg**	**18 40 10.6**	**+0.2**
WHF	baz=271			*e*S	**Sb**	**18 40 16.1**	**-1.2**
NNSB	**Datong** baz=321	**0.41**	**317**	*e*P	**Pg**	**18 40 10.3**	**-0.4**
NNSB	baz=321			*e*S	**Sg**	**18 40 16.4**	**0.0**
NNS	**Nan Shan** baz=322	**0.43**	**317**	P	**Pg**	**18 40 11.4**	**+0.4**
NNS	baz=322			*e*S	**Sg**	**18 40 16.8**	**0.0**
TEGC	**Jichi Village** baz=198	**0.43**	**199**	*e*S	**Sb**	**18 40 19.7**	**+1.6**
LATG	**Datong** baz=345	**0.44**	**340**	*e*P	**Pg**	**18 40 11.4**	**+0.2**
LATG	baz=345			*e*S	**Sb**	**18 40 18.4**	**0.0**
CHGB	**Renai** baz=254	**0.48**	**263**	*e*P	**Pb**	**18 40 12.6**	**-0.1**
CHGB	baz=254			*e*S	**Sb**	**18 40 18.6**	**-1.0**
TWT	**Tachien** baz=288	**0.49**	**286**	*e*P	**Pb**	**18 40 12.7**	**-0.1**
WARBT	**Fenglin Townsh** baz=210	**0.49**	**215**	*e*P	**Pg**	**18 40 11.9**	**-0.2**
OWD	**Renai** baz=247	**0.50**	**251**	*e*P	**Pg**	**18 40 12.7**	**+0.4**
TDCB	**Techi** baz=285	**0.50**	**285**	P	**Pg**	**18 40 12.2**	**-0.2**
TDCB	baz=285			*e*S	**Sb**	**18 40 19.4**	**-0.9**
NDT	**Datong Townshi** baz=345	**0.51**	**341**	*e*S	**Sg**	**18 40 19.3**	**+0.2**
TWC	**Suao** baz=17	**0.51**	**16**	*e*P	**Pg**	**18 40 12.3**	**0.0**
NDS	**Dongshan** baz=7.0	**0.51**	**2**	*e*P	**Pg**	**18 40 12.0**	**-0.4**
NDS	baz=7.0			*e*S	**Sg**	**18 40 19.3**	**0.0**
EGFH	**Guangfu** baz=209	**0.51**	**208**	*e*P	**Pg**	**18 40 12.6**	**+0.2**
EGFH	baz=209			*e*S	**Sb**	**18 40 21.4**	**+1.0**
ENTT	**Nioudou** baz=352	**0.53**	**347**	*e*P	**Pg**	**18 40 13.0**	**+0.2**
ENTT	baz=352			*e*S	**Sg**	**18 40 20.3**	**+0.5**
WUSB	**Renai** baz=248	**0.54**	**256**	P	**Pb**	**18 40 13.7**	**0.0**
WUSB	baz=248			*e*S	**Sb**	**18 40 20.9**	**-0.5**
TWE	**Neicheng** baz=3.0	**0.60**	**358**	*e*P	**Pg**	**18 40 14.6**	**+0.5**
YHNB	**Yeheng** baz=335	**0.62**	**332**	*e*P	**Pg**	**18 40 14.3**	**-0.2**
VWDT	**VWDT** baz=230	**0.62**	**234**	*e*P	**Pg**	**18 40 15.1**	**+0.5**
VWDT	baz=230			*e*S	**Sb**	**18 40 24.6**	**+1.0**
NSK	**Sanguang** baz=335	**0.63**	**331**	*e*P	**Pb**	**18 40 15.5**	**+0.3**
NSK	baz=335			*e*S	**Sb**	**18 40 23.9**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=355	**0.64**	**351**	*e*P	**Pg**	**18 40 14.8**	**-0.1**
FUSB	baz=355			*e*S	**Sg**	**18 40 23.6**	**+0.2**
ILA	**Ilan** baz=9.0	**0.64**	**5**	*e*P	**Pb**	**18 40 16.0**	**+0.6**
HGSD	**Ruisui** baz=213	**0.67**	**201**	*e*P	**Pg**	**18 40 15.8**	**+0.3**
EHY	**Hungye** baz=205	**0.70**	**209**	*e*P	**Pg**	**18 40 15.6**	**-0.4**
WCS	**Beigang Elemen** baz=263	**0.72**	**265**	*e*P	**Pg**	**18 40 16.3**	**0.0**
NFF	**Wufeng Townshi** baz=316	**0.73**	**314**	*e*P	**Pg**	**18 40 16.7**	**+0.1**
SSLB	**Suanglung** baz=241	**0.75**	**244**	*e*P	**Pg**	**18 40 16.6**	**-0.4**
SMLT	**Sun Moon Lake** baz=250	**0.76**	**252**	*e*P	**Pb**	**18 40 17.8**	**+0.4**
TYC	**Yuchr** baz=252	**0.79**	**254**	*e*P	**Pb**	**18 40 18.4**	**+0.4**
NSTT	**Nanjuang** baz=310	**0.81**	**309**	*e*P	**Pb**	**18 40 18.6**	**+0.5**
YULB	**Yu-li** baz=213	**0.81**	**207**	*e*P	**Pg**	**18 40 17.7**	**-0.4**
YULB	baz=213			*e*S	**Sb**	**18 40 30.6**	**+1.6**
ECBN	**Changbin** baz=178	**0.83**	**195**	*e*P	**Pg**	**18 40 19.1**	**+0.6**
EYUL	**Yuli** baz=210	**0.84**	**204**	*e*P	**Pb**	**18 40 20.0**	**+1.2**
EYUL	baz=210			*e*S	**Sn**	**18 40 32.4**	**+0.4**
TWF1	**Yuli** baz=211	**0.85**	**205**	*e*P	**Pg**	**18 40 19.0**	**+0.3**
TWF1	baz=211			*e*S	**Sn**	**18 40 32.7**	**+0.6**
NHDH	**Xindian Distri** baz=345	**0.85**	**350**	*e*P	**Pn**	**18 40 20.3**	**+0.4**
TIPB	**Shuangxi** baz=4.0	**0.85**	**8**	*e*P	**Pg**	**18 40 19.5**	**+0.6**
TWQ1	**Liyutan** baz=285	**0.87**	**285**	*e*P	**Pn**	**18 40 21.2**	**+1.1**
WHYT	**Xinyi Township** baz=246	**0.88**	**241**	*e*P	**Pb**	**18 40 20.1**	**+0.7**
WHYT	baz=246			*e*S	**Sn**	**18 40 32.5**	**-0.4**
NSY	**Sanyi** baz=289	**0.90**	**289**	*e*P	**Pn**	**18 40 21.6**	**+1.1**
NHY	**Taipei** baz=7.0	**0.92**	**353**	*e*P	**Pb**	**18 40 20.2**	**+0.1**
NMLH	**Miaoli** baz=297	**0.92**	**297**	*e*P	**Pn**	**18 40 22.0**	**+1.2**
TWB1	**Santiao Chiao** baz=13	**0.92**	**17**	*e*P	**Pg**	**18 40 19.9**	**-0.2**
SBCB	**Hsinchu** baz=317	**0.93**	**316**	*e*P	**Pn**	**18 40 21.3**	**+0.4**
WJS	**Zhushan** baz=243	**0.93**	**251**	*e*P	**Pn**	**18 40 21.2**	**+0.2**
HSN	**Hsinchu** baz=320	**0.94**	**316**	*e*P	**Pn**	**18 40 21.4**	**+0.2**
NWF	**Wu-fen Shan** baz=7.0	**0.95**	**5**	*e*P	**Pb**	**18 40 21.6**	**+1.0**
WFSB	**Wu-fen Shan** baz=7.0	**0.95**	**5**	*e*P	**Pb**	**18 40 21.7**	**+1.1**
WNT	**Mingjian** baz=250	**0.95**	**255**	*e*P	**Pn**	**18 40 21.6**	**+0.3**
WNT	baz=250			*e*S	**Sn**	**18 40 36.6**	**+1.9**
NCUH	**Zhongli** baz=333	**0.96**	**331**	*e*P	**Pb**	**18 40 21.2**	**+0.4**
CHKH	**Chenggong** baz=183	**0.97**	**196**	*e*P	**Pg**	**18 40 20.1**	**-0.9**
FULB	**Fuli** baz=212	**0.99**	**202**	*e*P	**Pg**	**18 40 21.2**	**-0.2**
TWS1	**Kuangyinshan** baz=348	**1.00**	**346**	*e*P	**Pb**	**18 40 22.4**	**+0.8**
TWS1	baz=348			*e*S	**Sn**	**18 40 38.1**	**+2.2**
ALS	**Alishan** baz=231	**1.01**	**233**	*e*P	**Pg**	**18 40 22.2**	**+0.2**
YM01	**YM01** baz=6.0	**1.02**	**354**	*e*P	**Pn**	**18 40 23.2**	**+0.8**
WCHH	**Zhanghua** baz=267	**1.04**	**268**	*e*P	**Pn**	**18 40 23.3**	**+0.9**
NTST	**Danshui** baz=350	**1.06**	**348**	*e*P	**Pg**	**18 40 23.1**	**+0.3**
CHKT	**Chengkung** baz=195	**1.06**	**196**	*e*P	**Pb**	**18 40 22.1**	**-0.4**
CHKT	baz=195			*e*S	**Sn**	**18 40 38.2**	**+0.9**
CHN5	**Tsauling** baz=239	**1.07**	**241**	*e*P	**Pn**	**18 40 23.6**	**+0.7**
ANP	**Anpu** baz=354	**1.07**	**352**	*e*P	**Pg**	**18 40 23.3**	**+0.3**
ELDTW	**Lidau** baz=201	**1.12**	**214**	*e*P	**Pn**	**18 40 24.6**	**+1.0**
WGK	**Gukeng** baz=246	**1.12**	**247**	*e*P	**Pn**	**18 40 25.3**	**+1.7**
WDLH	**Douliu** baz=247	**1.14**	**248**	*e*P	**Pb**	**18 40 23.8**	**0.0**
WCKO	**Fanlu** baz=235	**1.21**	**236**	*e*P	**Pg**	**18 40 25.7**	**+0.1**
WRL	**Guolierlin Hig** baz=259	**1.22**	**260**	*e*P	**Pn**	**18 40 25.6**	**+0.6**
WRL	baz=259			*e*S	**Sn**	**18 40 43.8**	**+2.5**
STYH	**Taoyuan** baz=213	**1.27**	**222**	*e*P	**Pn**	**18 40 26.4**	**+0.8**
STYH	baz=213			*e*S	**Sg**	**18 40 43.0**	**-0.2**
WTK	**Tuku** baz=249	**1.27**	**250**	*e*P	**Pg**	**18 40 26.7**	**0.0**
TPUB	**Ta-pu** baz=216	**1.27**	**230**	*e*P	**Pg**	**18 40 26.9**	**0.0**
TPUB	baz=216			*e*S	**Sn**	**18 40 45.2**	**+2.6**
LONT	**Longtian** baz=202	**1.32**	**203**	*e*P	**Pb**	**18 40 27.7**	**+0.8**
TWK	**Hsinying** baz=232	**1.39**	**233**	*e*P	**Pg**	**18 40 29.6**	**+0.4**

TWG	**Pinlang** baz=203	**1.42**	**204**	*e*P	**Pn**	**18 40 26.7**	**-0.9**
SNST	**Tainan City** baz=215	**1.42**	**231**	*e*P	**Pg**	**18 40 29.5**	**-0.1**
CHN1	**Nanshi** baz=229	**1.42**	**229**	*e*P	**Pb**	**18 40 29.4**	**+0.9**
WSF	**Szhu** baz=249	**1.43**	**251**	*e*P	**Pb**	**18 40 28.8**	**+0.1**
SGST	**Jiashian** baz=213	**1.45**	**225**	*e*P	**Pn**	**18 40 29.2**	**+1.0**
SLGT	**Liugui** baz=220	**1.48**	**221**	*e*P	**Pb**	**18 40 30.1**	**+0.5**
ICHU	**Yijhu** baz=240	**1.50**	**240**	*e*P	**Pn**	**18 40 29.9**	**+1.1**
CHN8	**Yiju** baz=223	**1.56**	**241**	*e*P	**Pb**	**18 40 31.6**	**+0.6**
SCST	**Cishan** baz=222	**1.65**	**222**	*e*P	**Pb**	**18 40 32.7**	**+0.2**
ECL	**Taimali** baz=189	**1.66**	**204**	*e*P	**Pn**	**18 40 30.6**	**-0.4**
TWM1	**Shoushan** baz=222	**1.74**	**222**	*e*P	**Pb**	**18 40 34.1**	**0.0**
SGLT	**Jiouru** baz=219	**1.77**	**219**	*e*P	**Pb**	**18 40 34.9**	**+0.2**
MASBT	**Mashibuluo** baz=216	**1.79**	**213**	*e*S	**Sb**	**18 40 57.5**	**+0.2**
PHUB	**P'eng-hu** baz=253	**2.03**	**253**	*e*P	**Pn**	**18 40 36.7**	**+0.5**
PHUB	baz=253			*e*S	**Sb**	**18 41 03.7**	**-0.6**
KSRS	**Korea Array** 0.1nm,0.3s,baz=203,slow=14,SNR=2.4 1.1nm,0.6s	**14.32**	**20**	Pn	**P**	**18 43 30.9**	**-0.9**
SONM	**Songino Array** 0.5nm,0.8s,baz=150,slow=9.2,SNR=1.9 0.5nm,0.8s	**26.61**	**337**	P	**P**	**18 45 42.9**	**+2.6**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=105,slow=10,SNR=5.6 0.5nm,0.7s	**38.70**	**316**	P	**P**	**18 47 24.9**	**-0.9**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=61,slow=31,SNR=2.1 0.3nm,0.4s	**40.55**	**327**	P	**P**	**18 47 40.0**	**-1.0**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=111,slow=9.3,SNR=1.6 0.1nm,0.3s	**42.45**	**320**	P	**P**	**18 47 56.7**	**0.0**
WRA	**Warramunga Arr** 0.5nm,1.0s,baz=343,slow=8.7,SNR=1.9 0.5nm,1.0s	**45.50**	**163**	P	**P**	**18 48 18.5**	**-3.0**
BVAR	**Borovoye Array** 0.3nm,0.6s,baz=116,slow=3.4,SNR=2.1 0.3nm,0.6s	**48.02**	**321**	P	**P**	**18 48 40.2**	**-0.7**
ASAR	**Alice Springs** 0.3nm,1.0s,baz=346,slow=6.8,SNR=1.2 0.3nm,1.0s	**48.96**	**165**	P	**P**	**18 48 45.7**	**-2.7**
GEYT	**Alibeck** comp=Z,51nm,18.4s,baz=320,slow=42	**55.23**	**300**	LR	LR	19 18 25.8	

NEIC ***04*** *18:42:32.6±1.5,20.89S±0.10×178.6W±0.2,h553km±15km, mb4.4/40,Error ellipse: s-maj=22.4km s-min=13.0km az=72.0*

IDC ***04*** *18:42:39.1±4.3,21.33S×178.74W,h634km±30km,mb3.4/3, mbtmp4.6/5,Error ellipse: s-maj=58.5km s-min=34.2km az=46.0*

ISC 04 18:42:33.5±0.9,20.7S±0.2×178.6W±0.1,h587km,n72, σ1§69/72,mb4.3/20,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**8.29**	**80**	P	**P**	**18 44 35.0**	**-0.2**
PINNC	**Pines Island,**	**13.14**	**259**	P	**P**	**18 45 24.2**	**+0.4**
DZM	**Mont Dzumac**	**14.02**	**262**	P	**P**	**18 45 31.4**	**-1.5**
DZM	**Mont Dzumac** 9.8nm,0.6s,baz=90,slow=20,SNR=24	**14.02**	**262**	P	**P**	**18 45 35.3**	**+2.4**
KOUNC	**Koumac, New Ca**	**16.04**	**267**	P	**P**	**18 45 53.0**	**+1.1**
KOUNC	comp=Z,13nm,1.1s			IAmb	IAmb	18 46 03.4	
KUZ	**Kuaotunu**	**16.77**	**196**	P	**P**	**18 45 59.8**	**+1.5**
WIAZ	**Waiheke Island**	**16.98**	**198**	P	**P**	**18 46 01.6**	**+1.4**
MXZ	**Matakaoa Point**	**17.05**	**188**	P	**P**	**18 45 59.5**	**-1.3**
MKAZ	**Moumakai**	**17.26**	**197**	P	**P**	**18 46 04.1**	**+1.4**
WMGZ	**Waiomatatini S**	**17.29**	**188**	P	**P**	**18 46 02.8**	**-0.2**
HAZ	**Te Kaha**	**17.32**	**190**	P	**P**	**18 46 01.8**	**-1.4**
AWAZ	**Awhitu Peninsu**	**17.37**	**198**	P	**P**	**18 46 05.4**	**+1.7**
RUGZ	**Raukumara Rang**	**17.54**	**190**	P	**P**	**18 46 04.8**	**-0.6**
WHRZ	**Whale Island**	**17.56**	**192**	P	**P**	**18 46 10.7**	**+5.3**
PUZ	**Puketiti**	**17.56**	**188**	P	**P**	**18 46 05.9**	**+0.4**
TWGZ	**Tauwhareparae**	**17.70**	**189**	P	**P**	**18 46 07.5**	**+0.8**
URZ	**Urewera** comp=Z,5.4nm,0.3s,baz=348,slow=3.8,SNR=17	**17.92**	**191**	P	**P**	**18 46 05.7**	**-3.0**
URZ	**Urewera**	**17.92**	**191**	P	**P**	**18 46 06.4**	**-2.3**
MUGZ	**Murupara**	**18.20**	**192**	P	**P**	**18 46 09.9**	**-1.3**
RTZ	**Ruatahuna**	**18.29**	**191**	P	**P**	**18 46 10.6**	**-1.6**
RTZ	comp=Z,7.4nm,0.7s			IAmb	IAmb	18 46 13.7	
TLZ	**Tolley Road**	**18.32**	**195**	P	**P**	**18 46 14.3**	**+1.9**
BKZ	**Black Stump Fm**	**18.92**	**192**	P	**P**	**18 46 16.7**	**-1.2**
BKZ	comp=Z,5.4nm,0.8s			IAmb	IAmb	18 46 26.8	
ETVZ	**East Tongariro**	**19.05**	**194**	P	**P**	**18 46 18.2**	**-1.0**
BFZ	**Birch Farm**	**20.43**	**191**	P	**P**	**18 46 30.5**	**-1.0**
TCW	**Tory Channel**	**21.36**	**195**	P	**P**	**18 46 38.5**	**-1.3**
BHW	**Baring Head**	**21.41**	**194**	P	**P**	**18 46 37.1**	**-3.1**
QRZ	**Quartz Range**	**21.47**	**199**	P	**P**	**18 46 40.7**	**-0.1**
TKNZ	**Takaka Hill**	**21.54**	**198**	P	**P**	**18 46 39.6**	**-1.9**
NNZ	**Nelson**	**21.59**	**197**	P	**P**	**18 46 41.0**	**-0.9**
BSWZ	**Blackbirch Sta**	**21.93**	**195**	P	**P**	**18 46 43.8**	**-1.1**
MRNZ	**Matariki Terra**	**21.93**	**198**	P	**P**	**18 46 43.3**	**-1.7**
THZ	**Tophouse**	**22.23**	**197**	P	**P**	**18 46 46.4**	**-1.3**
THZ	comp=Z,12nm,1.1s			IAmb	IAmb	18 46 58.1	
DSZ	**Denniston Nort**	**22.53**	**199**	P	**P**	**18 46 49.9**	**-0.5**
KHZ	**Kahutara**	**22.68**	**195**	P	**P**	**18 46 49.9**	**-1.6**
KHZ	comp=Z,8.3nm,1.0s			IAmb	IAmb	18 46 56.6	
GVZ	**Greta Valley S**	**23.32**	**196**	P	**P**	**18 46 55.4**	**-1.9**
LTZ	**Lake Taylor**	**23.35**	**197**	P	**P**	**18 46 55.5**	**-2.0**
LTZ	comp=Z,3.9nm,0.6s			IAmb	IAmb	18 47 01.0	
INZ	**Inchbonnie**	**23.54**	**199**	P	**P**	**18 46 57.3**	**-1.9**
FOZ	**Fox Glacier**	**24.78**	**200**	P	**P**	**18 47 07.6**	**-2.5**
WKZ	**Wanaka**	**26.19**	**200**	P	**P**	**18 47 21.1**	**-1.5**
WKZ	comp=Z,18nm,0.9s			IAmb	IAmb	18 47 30.3	
MLZ	**Mavora Lakes**	**26.96**	**201**	P	**P**	**18 47 27.1**	**-2.3**
MLZ	comp=Z,5.7nm,0.9s			IAmb	IAmb	18 47 28.5	
DCZ	**Deep Cove**	**27.38**	**202**	P	**P**	**18 47 31.8**	**-1.2**
WHZ	**Wether Hill Ro**	**27.48**	**201**	P	**P**	**18 47 34.0**	**+0.1**
WHZ	comp=Z,6.7nm,0.9s			IAmb	IAmb	18 47 42.7	
EIDS	**Eidsvold**	**28.28**	**255**	P	**P**	**18 47 38.9**	**-2.2**
EIDS	comp=Z,16nm,1.1s			IAmb	IAmb	18 47 51.6	
ARMA	**Armidale**	**28.50**	**244**	P	**P**	**18 47 42.1**	**-1.1**
ARMA	comp=Z,9.8nm,1.1s			IAmb	IAmb	18 47 44.8	
CTAO	**Charters Tower**	**32.93**	**265**	P	**P**	**18 48 21.2**	**+0.2**
TOO	**Toolangi**	**35.36**	**234**	P	**P**	**18 48 39.4**	**-1.6**
TAU	**Tasmania Unive**	**36.12**	**224**	P	**P**	**18 48 46.7**	**-0.5**
TAU	comp=Z,9.8nm,0.9s			IAmb	IAmb	18 49 04.0	
COEN	**Coen**	**37.05**	**274**	P	**P**	**18 48 56.5**	**+1.3**
COEN	comp=Z,9.9nm,1.1s			IAmb	IAmb	18 49 09.3	
STKA	**Stephens Creek**	**37.23**	**244**	P	**P**	**18 48 57.1**	**+0.7**
STKA	**Stephens Creek** comp=Z,3.0nm,0.5s,baz=90,slow=11,SNR=14 comp=Z,3.0nm,0.5s	**37.23**	**244**	P	**P**	**18 48 56.9**	**+0.5**
BBOO	**Buckleboo**	**41.99**	**244**	P	**P**	**18 49 34.2**	**-0.3**
WR0	**Warramunga Arr**	**43.85**	**262**	P	**P**	**18 49 48.9**	**-0.2**
AS31	**Alice Springs**	**43.95**	**257**	P	**P**	**18 49 50.0**	**+0.1**
ASAR	**Alice Springs**	**43.95**	**257**	P	**P**	**18 49 49.4**	**-0.6**
ASAR	**Alice Springs** comp=Z,7.7nm,0.8s,baz=97,slow=7.7,SNR=124	**43.95**	**257**	P	**P**	**18 49 50.4**	**+0.4**
ASAR	comp=Z,0.2nm,0.7s,baz=115,slow=2.7,SNR=4.2 comp=Z,7.7nm,0.8s			ScP	**ScP**	**18 54 14.4**	**-4.6**
WB0	**Warramunga Arr**	**44.02**	**263**	P	**P**	**18 49 49.9**	**-0.6**
WB0	comp=Z,6.2nm,0.5s			IAmb	IAmb	18 49 51.1	
WB2	**Warramunga Arr**	**44.03**	**262**	P	**P**	**18 49 50.0**	**-0.5**
WB2	comp=Z,12nm,1.1s			IAmb	IAmb	18 49 51.3	
WRA	**Warramunga Arr**	**44.04**	**262**	P	**P**	**18 49 50.5**	**-0.1**
WRA	**Warramunga Arr** comp=Z,3.2nm,0.5s,baz=97,slow=7.5,SNR=82	**44.04**	**262**	P	**P**	**18 49 50.7**	**+0.1**
WRA	comp=Z,0.3nm,0.6s,baz=95,slow=1.9,SNR=5.0 comp=Z,3.2nm,0.5s			ScP	**ScP**	**18 54 15.0**	**-4.5**
MTN	**Manton Dam**	**48.62**	**271**	P	**P**	**18 50 25.5**	**+0.3**
MTN	comp=Z,11nm,1.1s			IAmb	IAmb	18 50 28.8	
FORT	**Forrest**	**48.73**	**247**	P	**P**	**18 50 25.6**	**-0.2**
FORT	comp=Z,12nm,0.8s			IAmb	IAmb	18 50 27.2	
KNRA	**Kununurra**	**50.11**	**267**	P	**P**	**18 50 36.1**	**0.0**
KNRA	comp=Z,12nm,1.1s			IAmb	IAmb	18 50 36.5	
FITZ	**Fitzroy Crossi**	**52.47**	**263**	P	**P**	**18 50 53.5**	**+0.4**
SOEI	**Soe**	**55.96**	**272**	P	**P**	**18 51 17.8**	**0.0**
SOEI	comp=Z,20nm,0.9s			IAmb	IAmb	18 51 25.3	
SBA	**Scott Base**	**57.67**	**184**	P	**P**	**18 51 31.4**	**+3.1**
VNDA	**Vanda**	**57.70**	**185**	P	**P**	**18 51 29.1**	**+0.7**
NWAO	**Narrogin (SRO)**	**57.81**	**243**	P	**P**	**18 51 31.0**	**+1.0**
NWAO	comp=Z,41nm,1.1s			IAmb	IAmb	18 51 37.5	
GIRL	**Giralia**	**61.98**	**255**	P	**P**	**18 51 58.6**	**+0.9**
QSPA	**South Pole Qui**	**69.40**	**180**	P	**P**	**18 52 44.8**	**+1.6**
FW14	**Alvarado**	**93.93**	**57**		pP	18 56 49.5	-7.0
KAN05	**Bluff City Nor**	**95.16**	**52**		pwP	18 57 01.0	-4.2
MMAI	**Mount Meron Ar** comp=Z,0.5nm,0.3s,baz=64,slow=5.7,SNR=4.5	**147.42**	**299**	PKPbc	**PKiKP**	**19 01 14.3**	**+0.1**

IDC ***04*** *18:53:46.2±1.0,12.56N×123.60E,h0km,mb3.9/7, mbtmp3.9/8,ML4.7/1,MS3.3/2,Error ellipse: s-maj=39.7km s-min=19.8km az=65.0*

ISC 04 18:53:48.0±1.0,12.5N±0.2×123.5E±0.1,h13km,n10, σ1§15/9,mb3.9/7,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City** 99nm,0.3s,baz=145,slow=9.8,SNR=9.8	**2.93**	**303**	Pn	**Pn**	**18 54 34.5**	**+0.2**
TGY	58nm,0.3s,baz=94,slow=13,SNR=3.2 139nm,0.4s			Sn	**Sn**	**18 55 08.5**	**-1.0**
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=344,slow=9.3,SNR=2.1 0.5nm,0.9s	**33.99**	**162**	P	**P**	**19 00 30.2**	**-1.5**
ASAR	**Alice Springs** 0.6nm,0.6s,baz=341,slow=6.9,SNR=8.2 0.6nm,0.6s	**37.39**	**164**	P	**P**	**19 01 02.1**	**+1.3**
SONM	**Songino Array** comp=Z,33nm,19.4s,baz=24,slow=38	**37.98**	**341**	LR	LR	19 17 52.8	
MKAR	**Makanchi Array** 1.0nm,0.8s,baz=122,slow=8.7,SNR=8.6 1.0nm,0.8s	**48.58**	**323**	P	**P**	**19 02 31.9**	**+0.7**
PETK	**Petropavlovsk-** 8.8nm,1.1s,baz=202,slow=6.1,SNR=4.3 8.8nm,1.1s	**48.79**	**27**	P	**P**	**19 02 33.0**	**+0.3**
KURBB	**Kurchatov Arra** 0.8nm,0.6s,baz=127,slow=7.3,SNR=10 0.8nm,0.6s	**52.67**	**326**	P	**P**	**19 03 02.7**	**+0.7**
AKTO	**Aktyubinsk** comp=Z,32nm,18.4s,baz=312,slow=40	**64.85**	**320**	LR	LR	19 37 17.2	
ILAR	**Eielson Array** 0.1nm,0.4s,baz=285,slow=5.0,SNR=1.9 0.1nm,0.4s	**78.61**	**26**	P	**P**	**19 05 48.0**	**-1.3**
ARCES	**ARCESS Array B** 6.4nm,1.0s,baz=39,slow=7.2,SNR=2.8 6.4nm,1.0s	**81.13**	**339**	P	**P**	**19 06 03.5**	**+0.6**

TAP 04 18:59:01.5,24.24N×121.73E,h9km,ML1.9,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village** baz=18	**0.07**	**12**	*e*P	Pg	18 59 03.8	+0.2
EAHA	**Aohua** baz=10.0	**0.09**	**8**	*i* P	Pg	18 59 04.1	+0.3
EAHA	baz=10.0			S	Sg	18 59 06.2	+0.6
ETL	**Fush Village** baz=219	**0.12**	**229**	*i* P	Pg	18 59 04.6	+0.2
ETL	baz=219			*i* S	Sg	18 59 06.9	+0.5
NACB	**Ninganchiao** baz=231	**0.14**	**241**	*i* P	Pg	18 59 04.8	+0.2
ENA	**Nanau** baz=6.0	**0.19**	**4**	*i* P	Pg	18 59 05.7	+0.3
ENA	baz=6.0			*i* S	Sg	18 59 08.6	+0.5
TWD	**Chiawan** baz=215	**0.20**	**216**	*i* P	Pg	18 59 05.9	+0.3
EWUT	**Wuta** baz=13	**0.21**	**13**	P	Pg	18 59 06.0	+0.2
EWUT	baz=13			*i* S	Sg	18 59 09.4	+0.6
ETLH	**Xiulin Townshi** baz=262	**0.23**	**261**	*e*P	Pg	18 59 06.2	+0.1
HWA	**Hwalien** baz=201	**0.28**	**203**	P	Pb	18 59 08.3	-0.5
LATG	**Datong** baz=328	**0.34**	**328**	*i* P	Pg	18 59 08.8	+0.4
ETM	**Tongmen** baz=213	**0.35**	**218**	P	Pg	18 59 08.5	+0.1
ESAO	**Su ao** baz=18	**0.35**	**18**	*e*P	Pb	18 59 09.4	-0.5
LXIB	**Xiulin Townshi** baz=232	**0.36**	**233**	P	Pg	18 59 08.8	+0.1
NNSB	**Datong** baz=301	**0.36**	**301**	P	Pg	18 59 09.2	+0.5
NNSB	baz=301			*i* S	Sg	18 59 14.4	+0.9
NNS	**Nan Shan** baz=302	**0.38**	**302**	*i* P	Pg	18 59 09.4	+0.4
NNS	baz=302			S	Sg	18 59 14.9	+0.9
TWC	**Suao** baz=11	**0.38**	**17**	P	Pb	18 59 09.8	-0.7
TWC	baz=11			S	Sb	18 59 16.8	+0.2
NDS	**Dongshan** baz=358	**0.39**	**359**	P	Pg	18 59 09.7	+0.5
NDT	**Datong Townshi** baz=331	**0.41**	**332**	P	Pg	18 59 10.2	+0.7
NDT	baz=331			S	Sb	18 59 16.4	-0.9
ENTT	**Nioudou** baz=340	**0.42**	**340**	*i* P	Pg	18 59 10.4	+0.6
WHF	**Hehuan Shan** baz=257	**0.43**	**257**	*e*P	Pg	18 59 10.3	+0.3
SHUL	**Shoufeng** baz=204	**0.47**	**198**	*e*P	Pb	18 59 11.7	-0.3
ESL	**Shilin** baz=211	**0.50**	**212**	P	Pg	18 59 11.8	+0.5
FUSB	**Fushanzhiwuyua** baz=338	**0.53**	**346**	*e*P	Pg	18 59 12.4	+0.6
YHNB	**Yeheng** baz=323	**0.53**	**323**	P	Pb	18 59 12.8	-0.3
YHNB	baz=323			S	Sg	18 59 19.4	+0.5
CHGB	**Renai** baz=242	**0.54**	**250**	*e*P	Pg	18 59 12.4	+0.5
NSK	**Sanguang** baz=322	**0.55**	**322**	*i* P	Pg	18 59 12.6	+0.5
NSK	baz=322			*i* S	Sg	18 59 19.8	+0.4
OWD	**Renai** baz=232	**0.58**	**240**	*e*P	Pg	18 59 13.2	+0.5

ASIES ***04*** *19:05:47.8,24.13N×121.70E,h8km,ML3.7,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.10; $M_{\theta\theta}$-0.82; $M_{\phi\phi}$0.72; $M_{r\theta}$1.37; $M_{r\phi}$-0.59; $M_{\theta\phi}$1.83; Fault plane solution: M_o2.48559×10^{21} NP1:ϕ_s34.12000°, δ87.76000°, λ67.96000°. NP2:ϕ_s298.60000°, δ22.15000°, λ174.05000°. Principal axes: T Plg43.0440°, Azm282.8230°; N Plg22.0240°, Azm35.0200°; P Plg38.8500°, Azm144.0360°;*

JMA ***04*** *19:05:47.7±0.1,24.1N±0.2×121.7E±0.5,h5km±1km, MV3.4/13,TAIWAN REGION*

TAP ***04*** *19:05:47.8,24.13N×121.70E,h8km,ML3.7,B*

IDC ***04*** *19:05:53.1±22.0,24.43N×120.66E,h0km,mb3.4/5, mbtmp3.5/6,ML3.5/1,MS2.9/1,Error ellipse: s-maj=399.6km s-min=64.5km az=148.0*

ISC 04 19:05:48.0±0.8,24.13N±0.01×121.71E±0.02,h8km±5km, n141,σ0§69/224,mb3.4/5,2C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village** baz=294	**0.09**	**293**	P	**Pg**	**19 05 50.3**	**0.0**
ETL	baz=294			S	**Sg**	**19 05 51.9**	**+0.1**
TWD	**Chiawan** baz=253	**0.12**	**247**	⇓*i*P	**Pg**	**19 05 50.5**	**-0.1**
TWD	baz=253			*i* S	**Sg**	**19 05 52.3**	**-0.1**
NACB	**Ninganchiao**	**0.12**	**295**	P	**Pg**	**19 05 50.5**	**-0.2**
NACB	**Ninganchiao** baz=296	**0.12**	**295**	⇓*i*P	**Pg**	**19 05 50.6**	**0.0**
NACB	baz=296			S	**Sg**	**19 05 52.5**	**+0.1**
HWA	**Hwalien** baz=219	**0.18**	**214**	P	**Pg**	**19 05 52.3**	**+0.7**
EHP	**Heping Village** baz=10.0	**0.19**	**8**	*i* P	**Pg**	**19 05 52.2**	**+0.3**
EHP	baz=10.0			*e*S	**Sg**	**19 05 55.5**	**+1.0**
EAHA	**Aohua** baz=6.0	**0.20**	**7**	P	**Pg**	**19 05 52.4**	**+0.2**
EAHA	baz=6.0			S	**Sg**	**19 05 55.6**	**+0.6**
ETLH	**Xiulin Townshi** baz=292	**0.23**	**291**	P	**Pg**	**19 05 52.6**	**0.0**
ETLH	baz=292			S	**Sg**	**19 05 56.0**	**+0.4**
ETM	**Tongmen** baz=230	**0.26**	**232**	P	**Pg**	**19 05 52.9**	**-0.2**
LXIB	**Xiulin Townshi** baz=250	**0.29**	**249**	P	**Pg**	**19 05 53.6**	**-0.2**
LXIB	baz=250			S	**Sg**	**19 05 57.9**	**+0.1**
ENA	**Nanau** baz=6.0	**0.30**	**5**	⇓*i*P	**Pg**	**19 05 54.2**	**+0.2**
ENA	baz=6.0			*i* S	**Sg**	**19 05 58.6**	**+0.6**
EWUT	**Wuta** baz=10.0	**0.33**	**11**	⇓*i*P	**Pg**	**19 05 54.6**	**+0.2**
EWUT	baz=10.0			S	**Sg**	**19 05 59.2**	**+0.4**
SHUL	**Shoufeng** baz=212	**0.36**	**202**	P	**Pb**	**19 05 56.1**	**-0.6**
SHUL	baz=212			*e*S	**Sb**	**19 06 02.7**	**+0.1**
ESL	**Shilin** baz=231	**0.40**	**220**	⇑*i*P	**Pg**	**19 05 55.4**	**-0.4**
ESL	baz=231			S	**Sg**	**19 06 01.3**	**+0.2**
WHF	**Hehuan Shan** baz=273	**0.41**	**273**	P	**Pg**	**19 05 56.1**	**-0.1**
WHF	baz=273			S	**Sg**	**19 06 01.4**	**-0.1**
NNSB	**Datong** baz=315	**0.43**	**315**	⇓*i*P	**Pg**	**19 05 56.6**	**+0.3**
NNSB	baz=315			*i* S	**Sg**	**19 06 02.4**	**+0.4**
NNSH	**Datong** baz=314	**0.43**	**315**	P	**Pg**	**19 05 56.6**	**+0.3**
NNSH	baz=314			S	**Sg**	**19 06 02.5**	**+0.5**
NNS	**Nan Shan** baz=316	**0.44**	**316**	⇓*i*P	**Pg**	**19 05 56.9**	**+0.2**
NNS	baz=316			*i* S	**Sg**	**19 06 03.0**	**+0.6**
LATG	**Datong** baz=337	**0.44**	**338**	⇓P	**Pg**	**19 05 56.9**	**+0.2**
LATG	baz=337			S	**Sg**	**19 06 03.4**	**+0.9**
TEGC	**Jichi Village** baz=203	**0.44**	**201**	*e*P	**Pb**	**19 05 57.8**	**-0.3**
TEGC	baz=203			*e*S	**Sb**	**19 06 05.5**	**+0.6**
FUSS	**Fushou** baz=286	**0.44**	**286**	P	**Pg**	**19 05 57.0**	**+0.2**
FUSS	baz=286			*i* S	**Sg**	**19 06 03.3**	**+0.7**
ESAO	**Su ao** baz=14	**0.47**	**15**	*i* P	**Pg**	**19 05 57.3**	**+0.2**
ESAO	baz=14			S	**Sg**	**19 06 04.0**	**+0.8**
CHGB	**Renai** baz=255	**0.49**	**263**	P	**Pg**	**19 05 57.8**	**+0.1**
CHGB	baz=255			*e*S	**Sg**	**19 06 04.7**	**+0.5**
TWC	**Suao** baz=14	**0.50**	**15**	*i* P	**Pg**	**19 05 57.9**	**+0.2**
TWC	baz=14			*e*S	**Sg**	**19 06 05.1**	**+0.9**
WARBT	**Fenglin Townsh** baz=228	**0.50**	**216**	*i* P	**Pg**	**19 05 57.5**	**-0.3**
WARBT	baz=228			*e*S	**Sg**	**19 06 04.4**	**0.0**
TWT	**Tachien** baz=284	**0.51**	**285**	*e*P	**Pb**	**19 05 58.5**	**-0.8**
TWT	baz=284			*e*S	**Sb**	**19 06 05.6**	**-1.4**
NDS	**Dongshan** baz=358	**0.51**	**0**	*i* P	**Pg**	**19 05 58.3**	**+0.4**
NDS	baz=358			S	**Sg**	**19 06 05.2**	**+0.7**
NDT	**Datong Townshi** baz=338	**0.51**	**339**	P	**Pb**	**19 05 58.4**	**-0.9**
NDT	baz=338			*e*S	**Sb**	**19 06 05.6**	**-1.3**
OWD	**Renai** baz=254	**0.52**	**251**	*e*P	**Pg**	**19 05 58.1**	**+0.1**
TDCB	**Techi** baz=284	**0.52**	**284**	*e*P	**Pg**	**19 05 58.3**	**+0.1**
TDCB	baz=284			*e*S	**Sg**	**19 06 05.3**	**+0.3**
EGFH	**Guangfu** baz=222	**0.52**	**210**	*e*P	**Pg**	**19 05 58.4**	**+0.2**
EGFH	baz=222			*e*S	**Sb**	**19 06 06.9**	**-0.3**
ENTT	**Nioudou** baz=344	**0.53**	**346**	*i* P	**Pb**	**19 05 58.7**	**-0.9**
ENTT	baz=344			S	**Sb**	**19 06 06.2**	**-1.3**
WUSB	**Renai** baz=257	**0.56**	**256**	P	**Pg**	**19 05 59.0**	**+0.1**
WUSB	baz=257			S	**Sg**	**19 06 06.4**	**+0.2**
TWE	**Neicheng** baz=356	**0.59**	**356**	⇓*i*P	**Pb**	**19 05 59.9**	**-0.8**
TWE	baz=356			*i* S	**Sg**	**19 06 08.0**	**+0.7**
YHNB	**Yeheng** baz=330	**0.62**	**331**	P	**Pb**	**19 06 00.5**	**-0.8**
YHNB	**Yeheng** baz=330	**0.62**	**331**	P	**Pb**	**19 06 00.5**	**-0.8**
YHNB	baz=330			S	**Sg**	**19 06 08.8**	**+0.5**
NSK	**Sanguang** baz=329	**0.64**	**330**	*i* P	**Pb**	**19 06 00.7**	**-0.8**
NSK	baz=329			*i* S	**Sb**	**19 06 09.5**	**-1.1**
ILA	**Ilan** baz=2.0	**0.64**	**3**	*e*P	**Pb**	**19 06 01.0**	**-0.5**
ILA	baz=2.0			*e*S	**Sb**	**19 06 10.0**	**-0.6**
VWDT	**VWDT** baz=236	**0.64**	**235**	*e*P	**Pg**	**19 06 00.6**	**+0.2**
VWDT	baz=236			S	**Sb**	**19 06 10.6**	**0.0**
FUSB	**Fushanzhiwuyua** baz=348	**0.64**	**350**	P	**Pb**	**19 06 00.9**	**-0.7**
FUSB	baz=348			S	**Sg**	**19 06 09.5**	**+0.6**
HGSD	**Ruisui** baz=192	**0.68**	**203**	*e*P	**Pb**	**19 06 01.8**	**-0.4**
HGSD	baz=192			*e*S	**Sb**	**19 06 12.8**	**+1.0**
EHY	**Hungye** baz=214	**0.71**	**210**	P	**Pg**	**19 06 01.1**	**-0.6**
WHP	**Taichung City** baz=282	**0.72**	**282**	P	**Pb**	**19 06 02.6**	**-0.3**
WHP	baz=282			S	**Sb**	**19 06 12.1**	**-0.8**
WCS	**Beigang Elemen** baz=266	**0.73**	**265**	*e*P	**Pb**	**19 06 02.5**	**-0.7**
NFF	**Wufeng Townshi** baz=312	**0.74**	**313**	*i* P	**Pb**	**19 06 03.0**	**-0.2**
NFF	baz=312			*e*S	**Sb**	**19 06 12.7**	**-0.9**

SSLB	**Suanglung**	**0.77**	**244**	P		**Pb**	**19 06 03.0**	**-0.7**
SSLB	**Suanglung**	**0.77**	**244**	*i* P		**Pg**	**19 06 02.8**	**0.0**
	baz=255							
SSLB				*e*S		**Sg**	**19 06 12.6**	**-0.3**
	baz=255							
SMLT	**Sun Moon Lake**	**0.78**	**252**	⇑ *i* P		**Pg**	**19 06 03.0**	**0.0**
	baz=253							
SMLT				*e*S		**Sg**	**19 06 13.5**	**+0.3**
	baz=253							
TYC	**Yuchr**	**0.81**	**254**	P		**Pg**	**19 06 03.6**	**-0.1**
	baz=255							
TYC				S		**Sg**	**19 06 14.3**	**+0.1**
	baz=255							
LIOB	**Emei**	**0.82**	**309**	P		**Pb**	**19 06 04.8**	**+0.2**
	baz=309							
LIOB				*e*S		**Sb**	**19 06 15.5**	**-0.3**
	baz=309							
NSTT	**Nanjuang**	**0.82**	**308**	P		**Pb**	**19 06 04.4**	**-0.2**
	baz=308							
NSTT				*e*S		**Sb**	**19 06 15.7**	**-0.2**
	baz=308							
YULB	**Yu-li**	**0.82**	**208**	P		**Pg**	**19 06 03.6**	**-0.2**
YULB	**Yu-li**	**0.82**	**208**	*e*P		**Pg**	**19 06 03.0**	**-0.9**
	baz=222							
YULB				*e*S		**Sb**	**19 06 16.1**	**+0.3**
	baz=222							
ECBN	**Changbin**	**0.84**	**197**	*e*P		**Pg**	**19 06 04.0**	**-0.2**
	baz=187							
ECBN				*e*S		**Sb**	**19 06 17.1**	**+0.7**
	baz=187							
TIPB	**Shuangxi**	**0.85**	**7**	P		**Pb**	**19 06 04.7**	**-0.4**
	baz=354							
NHDH	**Xindian Distri**	**0.85**	**349**	*i* P		**Pb**	**19 06 05.1**	**0.0**
	baz=346							
NHDH				S		**Sb**	**19 06 16.4**	**-0.3**
	baz=346							
EYUL	**Yuli**	**0.85**	**205**	*e*P		**Pg**	**19 06 04.4**	**0.0**
	baz=222							
TWF1	**Yuli**	**0.86**	**206**	*e*P		**Pg**	**19 06 03.7**	**-0.8**
	baz=223							
TATO	**Taipei**	**0.87**	**347**	P		**Pb**	**19 06 05.4**	**0.0**
TWQ1	**Liyutan**	**0.89**	**285**	P		**Pn**	**19 06 06.1**	**-0.8**
	baz=285							
WHYT	**Xinyi Township**	**0.89**	**242**	P		**Pb**	**19 06 05.7**	**-0.1**
	baz=245							
NSY	**Sanyi**	**0.92**	**289**	*e*P		**Pn**	**19 06 07.1**	**-0.2**
	baz=289							
TWB1	**Santiao Chiao**	**0.92**	**16**	*i* P		**Pb**	**19 06 06.3**	**+0.1**
	baz=5.0							
TWB1				*e*S		**Sg**	**19 06 17.9**	**+0.3**
	baz=5.0							
NHY	**Taipei**	**0.92**	**352**	*e*P		**Pb**	**19 06 06.4**	**+0.1**
	baz=348							
NMLH	**Miaoli**	**0.94**	**296**	*e*P		**Pn**	**19 06 08.0**	**+0.4**
	baz=295							
NMLH				*e*S		**Sn**	**19 06 20.4**	**-0.8**
	baz=295							
SBCB	**Hsinchu**	**0.94**	**315**	*e*P		**Pn**	**19 06 07.8**	**+0.2**
	baz=314							
NWF	**Wu-fen Shan**	**0.94**	**4**	*i* P		**Pb**	**19 06 06.7**	**0.0**
	baz=352							
NWF				*e*S		**Sg**	**19 06 18.8**	**+0.3**
	baz=352							
WFSB	**Wu-fen Shan**	**0.94**	**4**	*e*P		**Pb**	**19 06 06.9**	**+0.2**
	baz=353							
WFSB				*i* S		**Sb**	**19 06 19.2**	**-0.2**
	baz=353							
WJS	**Zhushan**	**0.95**	**252**	*e*P		**Pn**	**19 06 07.1**	**-0.6**
	baz=246							
HSN	**Hsinchu**	**0.95**	**315**	*e*P		**Pn**	**19 06 08.4**	**+0.6**
	baz=316							
NCUH	**Zhongli**	**0.97**	**330**	*e*P		**Pn**	**19 06 08.4**	**+0.4**
	baz=329							
NCUH				*e*S		**Sn**	**19 06 22.4**	**+0.4**
	baz=329							
WNT	**Mingjian**	**0.97**	**256**	P		**Pn**	**19 06 07.6**	**-0.4**
	baz=250							
CHKH	**Chenggong**	**0.97**	**197**	*e*P		**Pg**	**19 06 06.6**	**-0.1**
	baz=191							
CHKH				*e*S		**Sb**	**19 06 20.5**	**+0.3**
	baz=191							
SXI1	**Grass Mountain**	**0.98**	**9**	*e*P		**Pb**	**19 06 07.5**	**+0.2**
	baz=350							
FULB	**Fuli**	**1.00**	**203**	*e*P		**Pg**	**19 06 07.1**	**-0.1**
	baz=224							
WDJ	**Dajia District**	**1.00**	**283**	*e*P		**Pn**	**19 06 09.1**	**+0.7**
	baz=283							
TWS1	**Kuangyinshan**	**1.01**	**345**	P		**Pn**	**19 06 08.5**	**0.0**
	baz=343							
TWS1				*e*S		**Sn**	**19 06 22.3**	**-0.6**
	baz=343							
YM01	**YM01**	**1.02**	**353**	*e*P		**Pn**	**19 06 08.4**	**-0.4**
YM01				*e*S		**Sb**	**19 06 22.1**	**+0.3**
ALS	**Alishan**	**1.03**	**234**	P		**Pb**	**19 06 07.8**	**-0.5**
	baz=236							
ALS				S		**Sb**	**19 06 22.2**	**0.0**
	baz=236							
WCHH	**Zhanghua**	**1.05**	**268**	*e*P		**Pn**	**19 06 10.3**	**+1.1**
	baz=269							
NTST	**Danshui**	**1.06**	**347**	*e*P		**Pn**	**19 06 09.7**	**+0.4**
	baz=354							
NTST				*e*S		**Sn**	**19 06 24.9**	**+0.6**
	baz=354							
CHKT	**Chengkung**	**1.07**	**197**	*e*P		**Pg**	**19 06 07.8**	**-0.8**
	baz=191							
CHKT				*e*S		**Sn**	**19 06 23.6**	**-0.8**
	baz=191							
ANP	**Anpu**	**1.07**	**351**	*e*P		**Pn**	**19 06 09.4**	**0.0**
	baz=346							
EHD	**Haiduan**	**1.08**	**206**	*e*P		**Pb**	**19 06 08.6**	**-0.3**
	baz=221							
EHD				*e*S		**Sb**	**19 06 23.2**	**0.0**
	baz=221							
CHN5	**Tsauling**	**1.08**	**241**	*i* P		**Pn**	**19 06 09.5**	**-0.1**
	baz=243							
CHN5				*e*S		**Sn**	**19 06 25.2**	**+0.3**
	baz=243							
ECS	**Chishang**	**1.12**	**204**	*e*P		**Pg**	**19 06 08.9**	**-0.6**
	baz=223							
ELDTW	**Lidau**	**1.13**	**215**	P		**Pg**	**19 06 07.7**	**-2.0**
	baz=229							
ELDTW				*e*S		**Sb**	**19 06 25.0**	**+0.2**
	baz=229							
WGK	**Gukeng**	**1.14**	**248**	*e*P		**Pn**	**19 06 10.8**	**+0.4**
	baz=249							
WGK				*e*S		**Sn**	**19 06 27.0**	**+0.9**
	baz=249							
TWY	**Chenhua**	**1.15**	**355**	*e*P		**Pn**	**19 06 11.1**	**+0.6**
	baz=337							
WDLH	**Douliu**	**1.16**	**248**	*e*P		**Pn**	**19 06 11.2**	**+0.6**
	baz=251							
WCKO	**Fanlu**	**1.22**	**236**	*e*P		**Pn**	**19 06 11.9**	**+0.4**
	baz=239							
WCKO				*e*S		**Sn**	**19 06 29.3**	**+1.0**
	baz=239							
YOJ	**Yonaguni jima**	**1.23**	**74**	P		**Pg**	**19 06 11.9**	**+0.2**
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P		**Pn**	**19 06 10.2**	**-1.4**
	baz=64							
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P		**Pb**	**19 06 11.6**	**0.0**
YOJ				*e*S		**Sg**	**19 06 28.0**	**+0.3**
WRL	**Guolierlin Hig**	**1.24**	**260**	*e*P		**Pg**	**19 06 12.4**	**+0.5**
	baz=261							
WRL				*e*S		**Sn**	**19 06 29.6**	**+0.9**
	baz=261							
CHN2	**Minshiung**	**1.28**	**243**	*e*P		**Pg**	**19 06 13.6**	**+1.0**
	baz=247							
STYH	**Taoyuan**	**1.28**	**222**	P		**Pn**	**19 06 11.7**	**-0.5**
	baz=227							
STYH				*e*S		**Sn**	**19 06 29.2**	**-0.4**
	baz=227							
CHN4	**Tsaushan**	**1.28**	**233**	*e*P		**Pg**	**19 06 13.2**	**+0.6**
	baz=225							
CHN4				*e*S		**Sn**	**19 06 31.1**	**+1.4**
	baz=225							
TPUB	**Ta-pu**	**1.29**	**231**	P		**Pg**	**19 06 12.8**	**+0.1**
TPUB	**Ta-pu**	**1.29**	**231**	*i* P		**Pg**	**19 06 12.9**	**+0.2**
	baz=223							
TPUB				*e*S		**Sn**	**19 06 30.6**	**+0.8**
	baz=223							
WTK	**Tuku**	**1.29**	**251**	P		**Pg**	**19 06 13.2**	**+0.4**
	baz=252							
WTK				*e*S		**Sn**	**19 06 31.4**	**+1.6**
	baz=252							
LONT	**Longtian**	**1.32**	**204**	*e*P		**Pn**	**19 06 11.0**	**-1.9**
	baz=222							
WTP	**Ta-pu**	**1.33**	**229**	P		**Pg**	**19 06 13.7**	**+0.1**
	baz=232							
WTP				*e*S		**Sn**	**19 06 32.2**	**+1.1**
	baz=232							
TWK	**Hsinying**	**1.41**	**233**	P		**Pg**	**19 06 14.8**	**-0.2**
	baz=237							
TWK				*e*S		**Sg**	**19 06 34.8**	**+1.4**
	baz=237							
TWGBT	**Beinan**	**1.42**	**204**	*e*P		**Pn**	**19 06 13.0**	**-1.3**
	baz=210							
TWG	**Pinlang**	**1.43**	**204**	*e*P		**Pn**	**19 06 13.1**	**-1.2**
	baz=210							
SNST	**Tainan City**	**1.43**	**231**	*e*P		**Pg**	**19 06 15.3**	**-0.2**
	baz=235							
SNST				*e*S		**Sg**	**19 06 35.0**	**+0.9**
	baz=235							
CHN1	**Nanshi**	**1.43**	**229**	P		**Pg**	**19 06 15.3**	**-0.2**
	baz=234							
CHN1				S		**Sg**	**19 06 35.2**	**+1.1**
	baz=234							
WSF	**Szhu**	**1.45**	**251**	*e*P		**Pn**	**19 06 14.4**	**-0.2**
	baz=252							
WSF				*e*S		**Sg**	**19 06 35.7**	**+1.1**
	baz=252							
SGST	**Jiashian**	**1.47**	**225**	P		**Pn**	**19 06 14.6**	**-0.2**
	baz=229							
SGST				*e*S		**Sg**	**19 06 36.2**	**+1.0**
	baz=229							
SLGT	**Liugui**	**1.49**	**221**	*e*P		**Pb**	**19 06 16.0**	**-0.1**
	baz=227							
SLGT				*e*S		**Sg**	**19 06 37.2**	**+1.2**
	baz=227							
ICHU	**Yijhu**	**1.52**	**240**	*e*P		**Pg**	**19 06 16.5**	**-0.7**
	baz=243							
ICHU				*e*S		**Sg**	**19 06 38.4**	**+1.6**
	baz=243							
CHN8	**Yiju**	**1.58**	**241**	*e*S		**Sg**	**19 06 39.9**	**+1.1**
	baz=244							
CHN3	**Shinhua**	**1.62**	**230**	*e*S		**Sg**	**19 06 41.7**	**+1.6**
	baz=234							
SCST	**Cishan**	**1.67**	**222**	*e*P		**Pg**	**19 06 19.5**	**-0.5**
	baz=228							
SCST				*e*S		**Sg**	**19 06 42.7**	**+1.1**
	baz=228							
SHHT	**Tainan City**	**1.67**	**229**	*e*S		**Sg**	**19 06 44.7**	**+3.2**
	baz=233							
SCLT	**Jiali**	**1.68**	**236**	*e*S		**Sg**	**19 06 42.3**	**+0.1**
	baz=240							
TWM1	**Shoushan**	**1.75**	**223**	*e*P		**Pb**	**19 06 20.8**	**+0.2**
	baz=230							
TSCK	**Chigu Township**	**1.78**	**237**	*e*P		**Pb**	**19 06 20.2**	**-0.7**
	baz=241							
TSCK				S		**Sg**	**19 06 44.0**	**-1.3**
	baz=241							
MASBT	**Mashibuluo**	**1.80**	**214**	*e*P		**Pn**	**19 06 19.5**	**0.0**
	baz=219							
MASBT				*i* S		**Sg**	**19 06 45.3**	**-0.7**
	baz=219							
IRIF	**Iriomote-Funau**	**1.85**	**83**	S		**Sn**	**19 06 44.5**	**+0.6**
EAST	**Anshuo**	**1.91**	**205**	*e*P		**Pn**	**19 06 21.4**	**+0.4**
	baz=200							
HATJ	**Hateruma jima**	**1.91**	**92**	*e*S		**Sn**	**19 06 45.2**	**-0.1**
TAWH	**Dawu Township**	**1.93**	**203**	*e*P		**Pb**	**19 06 22.8**	**-0.7**
	baz=212							
SCZT	**Fangliau**	**2.01**	**210**	*e*P		**Pn**	**19 06 23.3**	**+0.9**
	baz=201							
PNG	**Penghu**	**2.05**	**255**	*e*S		**Sb**	**19 06 51.0**	**-0.2**
	baz=257							
PHUB	**P'eng-hu**	**2.05**	**253**	*e*P		**Pn**	**19 06 23.6**	**+0.8**
	baz=255							
PHUB				S		**Sb**	**19 06 50.5**	**-0.8**
	baz=255							
SLIU	**Shizi**	**2.08**	**204**	*e*P		**Pn**	**19 06 24.1**	**+0.8**
	baz=200							
JKRS	**Kuro-shima**	**2.10**	**86**	*e*P		**Pn**	**19 06 24.6**	**+1.0**
JKRS				*e*S		**Sn**	**19 06 50.9**	**+1.0**
JIJ	**Ishigaki jima**	**2.23**	**83**	*e*P		**Pn**	**19 06 24.7**	**-0.6**
JIJ				*e*S		**Sn**	**19 06 51.8**	**-1.4**
VWUC	**VWUC**	**2.23**	**293**	*e*P		**Pn**	**19 06 25.2**	**-0.1**
	baz=292							
VWUC				*e*S		**Sn**	**19 06 53.1**	**-0.1**
	baz=292							
HEN	**Hengchun**	**2.29**	**203**	*e*P		**Pn**	**19 06 27.6**	**+1.4**
	baz=201							
JISG	**Ishigakijimahi**	**2.42**	**78**	*e*P		**Pn**	**19 06 28.2**	**+0.3**
JISG				*e*S		**Sn**	**19 06 57.5**	**-0.1**
PTMZ	**Houxiangcun**	**2.53**	**292**	*e*P		**Pn**	**19 06 29.3**	**-0.2**
	baz=291							
KSRS	**Korea Array**	**14.31**	**20**	Pn		**P**	**19 09 18.8**	**+0.5**
	0.2nm,0.3s,baz=202,slow=11,SNR=10							
	1.8nm,0.7s							
SONM	**Songino Array**	**26.61**	**337**	P		**P**	**19 11 27.1**	**+0.1**
	0.3nm,0.6s,baz=147,slow=8.1,SNR=1.7							
	0.3nm,0.6s							
YAK	**Yakutsk**	**38.28**	**6**	LR		LR	19 29 59.6	
	comp=Z,17nm,20.1s,baz=106,slow=38							
MKAR	**Makanchi Array**	**38.72**	**316**	P		**P**	**19 13 12.2**	**-0.5**
	0.6nm,0.6s,baz=96,slow=8.1,SNR=8.1							
	0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**19 13 26.6**	**-1.2**
	0.4nm,0.4s,baz=120,slow=8.5,SNR=1.6							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**42.46**	**320**	P		**P**	**19 13 42.7**	**-0.8**
	0.2nm,0.6s,baz=114,slow=9.3,SNR=2.0							
	0.2nm,0.6s							
BVAR	**Borovoye Array**	**48.02**	**321**	P		**P**	**19 14 27.1**	**-0.6**
	0.2nm,0.5s,baz=88,slow=7.8,SNR=2.5							
	0.2nm,0.5s							

TAP 04 19:08:29.6, 24°.18N × 121°.87E, h48km ± 2km, ML3.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.23**	**266**	*i* P	Pn	19 08 38.2	+0.2
	baz=265						
NACB	**Ninganchiao**	**0.25**	**269**	*i* P	Pn	19 08 38.4	+0.2
	baz=269						
TWD	**Chiawan**	**0.27**	**249**	*i* P	Pn	19 08 39.2	+0.9
	baz=248						
TWD				*i* S	Sn	19 08 44.9	+0.6
	baz=248						

TAP 04 19:08:35.8, 24°.30N × 121°.78E, h10km, ML2.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.04**	**285**	*e*S	Sg	19 08 39.8	+0.6
	baz=283						
EAHA	**Aohua**	**0.05**	**306**	*i* P	Pg	19 08 37.8	-0.1
	baz=306						
EAHA				*i* S	Sg	19 08 39.9	+0.7
	baz=306						
ENA	**Nanau**	**0.13**	**343**	*i* P	Pg	19 08 39.4	+0.5
	baz=346						
ENA				*i* S	Sg	19 08 42.8	+1.7
	baz=346						
EWUT	**Wuta**	**0.14**	**358**	*i* P	Pg	19 08 39.8	+0.7
	baz=358						
EWUT				*i* S	Sg	19 08 43.1	+1.8
	baz=358						
ETL	**Fush Village**	**0.20**	**226**	*i* P	Pg	19 08 40.8	+0.7
	baz=226						
ETL				*i* S	Sg	19 08 44.7	+1.7
	baz=226						
NACB	**Ninganchiao**	**0.21**	**234**	*i* P	Pb	19 08 41.3	-0.5
	baz=233						
NACB				*i* S	Sg	19 08 45.1	+1.9
	baz=233						
TWD	**Chiawan**	**0.28**	**218**	*i* P	Pb	19 08 43.1	+0.2
	baz=216						
TWD				*i* S	Sb	19 08 47.1	-0.4
	baz=216						
ESAO	**Su ao**	**0.28**	**11**	S	Sb	19 08 47.1	-0.6
	baz=356						
ESAO	**Su ao**	**0.28**	**11**	*i* P	Pg	19 08 42.1	+0.7
	baz=11						
ESAO				*i* S	Sb	19 08 47.1	-0.6
	baz=11						
ETLH	**Xiulin Townshi**	**0.29**	**251**	S	Sb	19 08 48.7	+0.6
	baz=251						
TWC	**Suao**	**0.31**	**11**	S	Sb	19 08 48.8	+0.1
	baz=358						
TWC	**Suao**	**0.31**	**11**	*i* P	Pb	19 08 42.9	-0.6
	baz=12						
TWC				*i* S	Sb	19 08 48.7	0.0
	baz=12						
LATG	**Datong**	**0.33**	**315**	*e*S	Sb	19 08 48.6	-0.7
	baz=318						
LATG	**Datong**	**0.33**	**315**	P	Pg	19 08 42.8	+0.3
	baz=315						
LATG				S	Sb	19 08 49.7	+0.4
	baz=315						
NDS	**Dongshan**	**0.34**	**350**	S	Sb	19 08 49.4	0.0
	baz=342						
NDS	**Dongshan**	**0.34**	**350**	P	Pb	19 08 43.5	-0.5
	baz=349						
NDS				S	Sb	19 08 49.3	-0.1
	baz=349						
NNSB	**Datong**	**0.39**	**289**	*e*S	Sg	19 08 48.8	+0.1
	baz=299						
NDT	**Datong Townshi**	**0.39**	**321**	*e*S	Sb	19 08 51.2	+0.3
	baz=322						
NDT	**Datong Townshi**	**0.39**	**321**	P	Pb	19 08 44.3	-0.5
	baz=320						
NDT				S	Sb	19 08 50.7	-0.1
	baz=320						
ENTT	**Nioudou**	**0.39**	**330**	*e*S	Sb	19 08 50.8	-0.1
	baz=329						
ENTT	**Nioudou**	**0.39**	**330**	P	Pb	19 08 44.4	-0.5
	baz=330						
ENTT				S	Sb	19 08 51.3	+0.4
	baz=330						
NNS	**Nan Shan**	**0.40**	**291**	*e*S	Sg	19 08 49.3	+0.2
	baz=300						
ETM	**Tongmen**	**0.43**	**219**	S	Sg	19 08 47.8	-2.0
	baz=238						
TWE	**Neicheng**	**0.43**	**346**	*e*S	Sb	19 08 52.7	+0.6
	baz=342						
TWE	**Neicheng**	**0.43**	**346**	P	Pb	19 08 45.3	-0.2
	baz=347						
TWE				S	Sb	19 08 52.7	+0.6
	baz=347						
LXIB	**Xiulin Townshi**	**0.44**	**231**	S	Sg	19 08 48.6	-1.6
	baz=249						
FUSB	**Fushanzhiwuyua**	**0.49**	**339**	*e*S	Sb	19 08 54.0	+0.1
	baz=335						
FUSB	**Fushanzhiwuyua**	**0.49**	**339**	*i* P	Pb	19 08 46.5	-0.1
	baz=338						
FUSB				*i* S	Sb	19 08 54.0	+0.2
	baz=338						
WHF	**Hehuan Shan**	**0.50**	**252**	*e*S	Sg	19 08 50.8	-1.5
	baz=266						
YHNB	**Yeheng**	**0.52**	**315**	*i* P	Pb	19 08 46.6	-0.5
	baz=314						
YHNB				*i* S	Sb	19 08 54.8	0.0
	baz=314						
NSK	**Sanguang**	**0.54**	**314**	*i* P	Pg	19 08 46.8	+0.5
	baz=314						
NSK				*i* S	Sb	19 08 54.5	-0.8
	baz=314						
SHUL	**Shoufeng**	**0.55**	**202**	*e*S	Sg	19 08 49.4	-4.3
	baz=216						
TWT	**Tachien**	**0.56**	**265**	*i* P	Pg	19 08 47.1	+0.5
	baz=264						
TEGC	**Jichi Village**	**0.63**	**201**	*e*S	Sg	19 08 53.1	-3.2
	baz=212						
TIPB	**Shuangxi**	**0.67**	**3**	P	Pb	19 08 50.0	+0.3
	baz=3.0						
TIPB				S	Sb	19 08 59.2	+0.2
	baz=3.0						
NFF	**Wufeng Townshi**	**0.69**	**299**	P	Pb	19 08 49.9	-0.1
	baz=298						
NFF				S	Sb	19 08 59.0	-0.6
	baz=298						

TAP 04 19:10:00.4, 24°.14N × 121°.65E, h10km ± 1km, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.03**	**300**	*i* P	Pg	19 10 02.6	+0.3
	baz=298						
ETL				*i* S	Sg	19 10 04.2	+0.5
	baz=298						
NACB	**Ninganchiao**	**0.06**	**300**	*i* P	Pg	19 10 03.0	+0.5
	baz=299						
NACB				*i* S	Sg	19 10 04.9	+0.8
	baz=299						
TWD	**Chiawan**	**0.08**	**220**	*i* S	Sg	19 10 05.8	+1.3
	baz=215						
ETLH	**Xiulin Townshi**	**0.17**	**292**	*i* S	Sg	19 10 08.3	+1.5
	baz=292						

NEIC ***04*** *19:11:01.8 ± 1.6, 55°.83N ± 0°.09 × 149°.2W ± 0°.1, h12km ± 7km, mb3.5/2, ML3.7/38, ML3.5(AEIC), Error ellipse: s-maj=12.9km s-min=8.8km az=169.0*

AEIC ***04*** *19:11:05.3 ± 1.9, 55°.80N ± 0°.08 × 149°.1W ± 0°.1, h7km ± 6km, Error ellipse: s-maj=12.6km s-min=8.3km az=158.0*

IDC ***04*** *19:11:11.6 ± 3.4, 56°.29N × 147°.63W, h0km, mb3.3/1, mbtmp3.1/3, ML2.6/2, Error ellipse: s-maj=55.2km s-min=43.0km az=115.0*

ISC 04 19:11:01.2 ± 1.2, 55°.89N ± 0°.08 × 149°.19W ± 0°.06, h10km, n171, σ1§37/172, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.63**	**302**		**Pn**	**19 11 44.0**	**+0.3**
OHAK					**Sn**	**19 12 13.8**	**-1.8**
OHAK	**Old Harbor**	**2.63**	**302**	P	**Pn**	**19 11 44.0**	**+0.3**
	baz=120						
OHAK				S	**Sn**	**19 12 13.8**	**-1.8**
	baz=120						
KDAK	**Kodiak Island**	**2.66**	**317**		**Pn**	**19 11 44.8**	**+0.8**
KDAK					**Sn**	**19 12 14.8**	**-1.5**
SII	**Sitkinak Islan**	**2.87**	**286**		**Pn**	**19 11 47.2**	**+0.2**
SII					**Sn**	**19 12 19.1**	**-2.4**
SII	**Sitkinak Islan**	**2.87**	**286**	IAML		19 12 36.2	
	comp=E,175nm,4.7s						
SII				IAML		19 12 38.0	
	comp=N,179nm,3.7s						
SII	**Sitkinak Islan**	**2.87**	**286**	P	**Pn**	**19 11 47.2**	**+0.2**
	baz=103						
SII				S	**Sn**	**19 12 19.1**	**-2.4**
	baz=103						
SYI	**Shuyak Island**	**3.23**	**329**		**Pn**	**19 11 52.6**	**+0.7**
SYI	**Shuyak Island**	**3.23**	**329**		**Sn**	**19 12 30.7**	**+0.3**
Q20K	**Shuyak Island**	**3.23**	**329**	P	**Pn**	**19 11 52.6**	**+0.7**
	baz=146						
Q20K				S	**Sn**	**19 12 30.7**	**+0.3**
	baz=146						
R18K	**Karluk**	**3.35**	**302**		**Pn**	**19 11 54.3**	**+0.8**
R18K					**Sn**	**19 12 32.5**	**-0.8**
R18K	**Karluk**	**3.35**	**302**	P	**Pn**	**19 11 54.3**	**+0.8**
	baz=119						
R18K				S	**Sn**	**19 12 32.5**	**-0.8**
	baz=119						
CNPM	**China Poot**	**3.80**	**344**		**Pn**	**19 12 00.2**	**+0.3**
CNPM					**Sn**	**19 12 43.6**	**-1.0**
CNPM	**China Poot**	**3.80**	**344**	IAML		19 12 46.1	
	comp=N,96nm,0.4s						
CNPM				IAML		19 12 46.7	
	comp=E,74nm,0.9s						
Q19K	**Cape Douglas,**	**3.88**	**323**		**Pn**	**19 12 02.5**	**+1.6**
Q19K	**Cape Douglas,**	**3.88**	**323**	IAML		19 12 55.8	
	comp=N,118nm,1.2s						
Q19K				IAML		19 13 23.0	
	comp=E,193nm,1.5s						
Q19K	**Cape Douglas,**	**3.88**	**323**	P	**Pn**	**19 12 02.5**	**+1.6**
	baz=140						
KAHG	**Katmai Hook Gl**	**3.91**	**314**		**Pn**	**19 12 02.6**	**+1.3**
BRSE	**Bradley Lake S**	**3.95**	**348**		**Pn**	**19 12 02.1**	**+0.3**
BRSE					**Sn**	**19 12 46.6**	**-1.5**
BRSE	**Bradley Lake S**	**3.95**	**348**	P	**Pn**	**19 12 02.1**	**+0.3**
	baz=167						
BRSE				S	**Sn**	**19 12 46.6**	**-1.5**
	baz=167						
BRLK	**Bradley Lake**	**3.98**	**348**	IAML		19 12 50.1	
	comp=E,72nm,1.1s						
BRLK				IAML		19 12 58.2	
	comp=N,60nm,3.4s						
HOM	**Homer**	**4.00**	**342**	Pn	**Pn**	**19 12 01.5

SLKM	Skilak Lake	4.66	354			Pn	19 12 11.8 +0.3
HIN	Hinchinbrook I	4.73	16			Pn	19 12 13.5 +0.8
HIN	Hinchinbrook I	4.73	16	IAML			19 13 06.4
	comp=N,116nm,0.7s						
KAIM	Kayak Island	4.78	30			Pn	19 12 14.1 +0.9
KAIM	Kayak Island	4.78	30	P		Pn	19 12 14.1 +0.9
	baz=213						
P18K	Big Mountain,	4.78	320			Pn	19 12 14.0 +0.7
P18K	Big Mountain,	4.78	320	IAML			19 13 08.6
	comp=E,29nm,4.9s						
P18K	Big Mountain,	4.78	320	P		Pn	19 12 14.0 +0.7
	baz=135						
RSO	Redoubt South	4.95	339	Pn		Pn	19 12 15.2 -0.6
RDT	Redoubt	4.99	341			Sn	19 13 12.6 -1.3
EYAK	Cordova Ski Ar	5.01	20			Pn	19 12 17.3 +0.9
EYAK	Cordova Ski Ar	5.01	20	P		Pn	19 12 17.3 +0.9
	baz=202						
DFR	Drift River	5.06	340			Sn	19 13 14.3 -1.3
NCT	North Crescent	5.08	339			Sn	19 13 14.9 -1.2
SUCK	Suckling Hills	5.08	32			Pn	19 12 18.6 +1.3
SUCK	Suckling Hills	5.08	32	IAML			19 14 04.7
	comp=E,92nm,2.8s						
RAGM	Ragged Mountai	5.10	26	Pn		Pn	19 12 18.8 +1.1
RAGM				IAML			19 15 14.9
	comp=E,82nm,3.2s						
O18K	Koktuh Hills	5.11	324			Pn	19 12 18.6 +0.8
O18K	Koktuh Hills	5.11	324	IAML			19 13 46.0
	comp=N,30nm,4.0s						
O18K				IAML			19 15 00.6
	comp=E,26nm,4.7s						
O18K	Koktuh Hills	5.11	324	P		Pn	19 12 18.5 +0.8
	baz=139						
P17K	Kvichak River	5.12	313			Pn	19 12 19.1 +1.3
P17K	Kvichak River	5.12	313	P		Pn	19 12 19.1 +1.3
	baz=128						
NICHA	Nichawak Mount	5.16	30			Pn	19 12 19.6 +1.2
HMT	Hamilton	5.16	28	Pn		Pn	19 12 19.8 +1.3
CHGN	Chignik	5.18	278	Pn		Pn	19 12 19.2 +0.5
CHGN				IAML			19 14 51.1
	comp=N,53nm,4.0s						
CHGN				IAML			19 15 46.7
	comp=E,55nm,3.0s						
RC01	Rabbit Creek A	5.22	357	Pn		Pn	19 12 19.2 -0.1
RC01				IAML			19 13 19.6
	comp=E,45nm,0.4s						
RC01				IAML			19 13 21.5
	comp=N,32nm,1.4s						
BERG	Berg Lake	5.37	31			Pn	19 12 22.2 +0.9
SNH	Sunshine Point	5.46	36	Pn		Pn	19 12 24.0 +1.4
KHIT	Khitrov Hills	5.54	32			Pn	19 12 24.5 +0.8
KNK	Knik Glacier	5.55	4	Pn		Pn	19 12 26.1 +2.3
N20K	Mount Spurr	5.55	345	S		Sn	19 13 26.3 -1.4
	baz=162						
SPCR	Spurr Chakacha	5.55	345			Sn	19 13 26.3 -1.4
BMRM	Bremner River	5.63	23			Pn	19 12 26.1 +1.2
BMRM	Bremner River	5.63	23	P		Pn	19 12 26.1 +1.2
	baz=207						
SUA	Susitna One	5.64	352	Pn		Pn	19 12 25.6 +0.4
N19K	Bonanza Creek	5.67	333	Pn		Pn	19 12 26.1 +0.6
WAX	Waxell Ridge	5.67	34			Pn	19 12 26.8 +1.4
PMR	Palmer	5.71	0	Pn		Pn	19 12 27.4 +1.4
BARK	Barkley Ridge	5.74	35			Pn	19 12 27.4 +0.9
MESA	MESA	5.76	39			Pn	19 12 28.1 +1.2
MESA	MESA	5.76	39	P		Pn	19 12 28.1 +1.2
	baz=224						
CRQM	Cirque	5.82	31			Pn	19 12 28.9 +1.2
KLU	Klutina	5.87	16			Pn	19 12 29.5 +1.3
KLU	Klutina	5.87	16	P		Pn	19 12 29.5 +1.3
	baz=198						
GHO	Glory Hole Cre	5.90	1	Pn		Pn	19 12 30.4 +1.8
BAGL	Bagley Icefiel	5.94	36			Pn	19 12 30.1 +1.0
ISLE	Juniper Island	5.95	35			Pn	19 12 30.5 +1.2
SML	Sawmill	5.95	4	Pn		Pn	19 12 31.1 +1.9
N18K	Kilae Creek	5.96	326	Pn		Pn	19 12 29.3 -0.1
CNBA	Chernabura Isl	6.03	264	Pn		Pn	19 12 28.7 -1.7
SCM	Sheep Creek Mo	6.04	8	Pn		Pn	19 12 33.5 +2.9
O16K	Kokwok River B	6.04	312	Pn		Pn	19 12 31.1 +0.6
VRDI	Verde Repeater	6.13	27			Pn	19 12 32.7 +0.8
SAMH	Samovar Hills	6.16	43			Pn	19 12 33.8 +1.6
KIAG	Kiagna River	6.19	33			Pn	19 12 33.6 +0.9
N25K	Chitina, Valde	6.21	21	Pn		Pn	19 12 34.3 +1.4
SKT	Skwentna	6.22	350	Pn		Pn	19 12 34.8 +1.8
GLB	Gilahina Butte	6.23	25			Pn	19 12 34.2 +1.0
TABL	Table Mountain	6.23	40			Pn	19 12 34.7 +1.4
N17K	Nushagak Hills	6.28	321	Pn		Pn	19 12 34.4 +0.6
M20K	Styx River	6.34	343	Pn		Pn	19 12 35.2 +0.5
PCA	Pinnacle	6.35	45			Pn	19 12 36.4 +1.6
PINM	Pinnacle	6.35	45	P		Pn	19 12 36.4 +1.6
	baz=232						
PTPK	Patty Peak	6.37	31			Pn	19 12 36.5 +1.4
MCARA	McCarthy VSAT	6.37	28			Pn	19 12 36.6 +1.5
MCARA	McCarthy VSAT	6.37	28	P		Pn	19 12 36.6 +1.5
	baz=212						
SDPT	Sand Point	6.42	270			Pn	19 12 35.7 0.0
SDPT	Sand Point	6.42	270	P		Pn	19 12 35.7 0.0
	baz=81						
M24K	Tolsona, Glenn	6.42	13	Pn		Pn	19 12 37.7 +1.9
PNL	Peninsula	6.46	50			Pn	19 12 37.5 +1.2
PNL	Peninsula	6.46	50	P		Pn	19 12 37.5 +1.2
	baz=238						
BARN	Barnard Glacie	6.51	34			Pn	19 12 37.9 +0.8
BCPM	Bancas Point	6.51	47			Pn	19 12 38.3 +1.3
CTG	Chitna Glacier	6.54	36	P		Pn	19 12 38.8 +1.3
	baz=222						
CTGM	Chitina Glacie	6.54	36			Pn	19 12 38.8 +1.2
LOGN	Logan Glacier	6.55	38			Pn	19 12 38.8 +1.0
M19K	Big River Lodg	6.60	338	Pn		Pn	19 12 39.5 +1.3
N16K	Nishlik Lake	6.83	316			Pn	19 12 43.1 +1.7
N16K	Nishlik Lake	6.83	316	P		Pn	19 12 43.1 +1.7
	baz=128						
L19K	White Mountain	6.95	337	Pn		Pn	19 12 43.1 +0.1
M17K	Holitna River	7.00	325	Pn		Pn	19 12 44.5 +0.8
O29M	Mount Kennedy	7.15	47			Pn	19 12 47.3 +1.5
O29M	Mount Kennedy	7.15	47	P		Pn	19 12 47.3 +1.5
	baz=236						
P29M	Windy Craggy	7.18	54			Pn	19 12 47.1 +1.0
P29M	Windy Craggy	7.18	54	P		Pn	19 12 47.1 +1.0
	baz=243						
N15K	Kwethluk River	7.20	311	Pn		Pn	19 12 48.6 +2.2
M16K	Timber Creek	7.25	319	Pn		Pn	19 12 48.4 +1.3
M26K	Nabesna, AK	7.26	23	Pn		Pn	19 12 48.0 +0.7
DHY	Denali Highway	7.26	7	Pn		Pn	19 12 48.8 +1.4
PNFA	Pavlof North-7	7.26	272			Pn	19 12 47.9 +0.6
S31K	Pelican	7.39	68			Pn	19 12 47.6 -1.3
S31K	Pelican	7.39	68	P		Pn	19 12 47.6 -1.3
	baz=258						
M27K	Edge Creek, AK	7.49	27	Pn		Pn	19 12 51.9 +1.4
RND	Reindeer	7.54	1	Pn		Pn	19 12 51.9 +0.8
TRF	Thorofare Moun	7.60	356	Pn		Pn	19 12 52.2 +0.2
CAST	Castle Rocks	7.69	350	Pn		Pn	19 12 54.8 +1.7
KTH	Kantishna Hill	7.73	354	Pn		Pn	19 12 54.6 +0.8
L26K	Log Cabin Wild	7.74	20	Pn		Pn	19 12 56.5 +2.6
SIT	Sitka	7.77	76	Pn		Pn	19 12 51.7 -2.4
HYT	Haines Junctio	7.88	46	Pn		Pn	19 12 57.1 +1.3
L16K	Owhat River	7.90	322	Pn		Pn	19 12 55.8 -0.2
L27K	Beaver Creek,	8.10	24	Pn		Pn	19 13 00.2 +1.4
BCAR	Beaver Creek A	8.11	25	Pn		Pn	19 13 00.7 +1.7
RIDG	Independent Ri	8.17	14	Pn		Pn	19 13 01.3 +1.6
S32K	Killisnoo	8.20	73	Pn		Pn	19 12 59.9 -0.2
SKAG	Skagway	8.24	59	Pn		Pn	19 13 00.2 -0.5
K17K	Iditarod	8.27	330	Pn		Pn	19 13 01.4 +0.3
BPAW	Bear Paw Mtn.	8.28	355	Pn		Pn	19 13 03.5 +2.2
JIS	Juneau Island	8.41	67	Pn		Pn	19 13 02.8 -0.2
O30N	Mendenhall	8.44	49	Pn		Pn	19 13 04.6 +1.1
M29M	Somme Creek	8.56	36			Pn	19 13 07.0 +1.8
J19K	Poorman	8.74	341	Pn		Pn	19 13 08.5 +1.0
CCB	Clear Creek Bu	8.81	4	Pn		Pn	19 13 10.5 +2.0
K27K	Chicken	8.90	21	Pn		Pn	19 13 10.9 +1.2
WHY	Whitehorse	8.92	52	Pn		Pn	19 13 11.1 +1.1
N31M	Braeburn, Yuko	8.94	46	Pn		Pn	19 13 11.9 +1.6
ILAR	Eielson Array	8.98	6	Pn		Pn	19 13 12.5 +1.7
ILAR	Eielson Array	8.98	6	Pn		Pn	19 13 13.8 +3.0
	comp=N,0.1nm,0.3s,baz=189,slow=13,SNR=5.3						
ILAR				Sn		Sn	19 14 46.8 -5.0
	comp=N,0.4nm,0.3s,baz=188,slow=22,SNR=10.0 comp=N,0.4nm,0.5s						
U33K	Whale Pass	9.01	82	Pn		Pn	19 13 09.3 -1.8
K15K	Wolf Creek Mou	9.02	320	Pn		Pn	19 13 12.6 +1.3
P32M	Atlin	9.06	60	Pn		Pn	19 13 12.9 +1.0
J26L	Joseph Creek	9.07	16	Pn		Pn	19 13 14.1 +2.0
MDM	Murphy Dome	9.11	3	Pn		Pn	19 13 13.1 +0.5
L29M	L29M	9.15	33	Pn		Pn	19 13 15.2 +2.0
M30M	Minto, Yukon	9.22	38	Pn		Pn	19 13 15.9 +1.8
DAWY	Dawson	9.54	27	Pn		Pn	19 13 20.1 +1.6
Q32M	Nakina River	9.62	64	Pn		Pn	19 13 21.3 +1.4
P33M	Teslin, Yukon	9.69	57	Pn		Pn	19 13 21.4 +0.8
K29M	Barlow Dome	9.88	31	Pn		Pn	19 13 25.0 +1.7
M31M	Drury Creek, Y	9.89	44	Pn		Pn	19 13 25.5 +2.3
H21K	Melozitna Rive	9.95	351	Pn		Pn	19 13 25.0 +0.9
FARO	Faro, Yukon	10.32	46	Pn		Pn	19 13 30.7 +1.5
IMAR	Indian Mountai	10.36	350	Pn		Pn	19 13 31.3 +1.6
R33M	Jennings River	10.37	63	Pn		Pn	19 13 30.7 +0.7
DLBC	Dease Lake	10.71	68	Pn		Pn	19 13 35.3 +0.8
J30M	Hart River	10.78	31	Pn		Pn	19 13 38.2 +2.7
I30M	Mount Dempster	11.25	29	Pn		Pn	19 13 45.2 +3.2
MMPY	Sheldon Lake,	11.35	46	Pn		Pn	19 13 45.6 +2.3
INK	Inuvik	14.38	24	P		P	19 14 31.9 +0.4
B22K	Teshekpuk Lake	14.62	354	Pn		Pn	19 14 28.1 +0.2
C36M	Paulatuk	17.55	30	Pn		Pn	19 15 05.8 +0.2
C36M				IAmb		IAmb	19 15 06.2
	comp=Z,3.9nm,1.1s						
YKA	Yellowknife Ar	18.72	55	P		P	19 15 18.7 -0.9
	baz=261,slow=12,SNR=3.0 comp=Z,0.3nm,0.8s						
A36M	Sachs Harbour	19.02	23	P		P	19 15 22.8 0.0
A36M				IAmb		IAmb	19 15 27.5
	comp=Z,3.8nm,0.8s						
MKAR	Makanchi Array	68.94	325	P		P	19 22 19.5 +13
	comp=Z,0.2nm,0.6s,baz=34,slow=6.9,SNR=1.9 comp=Z,0.2nm,0.6s						

*IDC **04** 19:25:38.7±2.8,2°.15N×97°.88E,h0km,mb3.4/7, mbtmp3.4/7,Error ellipse: s-maj=132.2km s-min=22.0km az=56.0*

*DJA **04** 19:25:46.5±0.3,2°.N±2°×9°.8E±°,h52km±11km,M3.4/11, MLv3.4/11*

ISC 04 19:25:46.6±1.0,2°.15N±0°.04×97°.88E±0°.08,h62km±13km, n21,σ0°.46/22,mb3.3/7,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.89	200	P		Pn	19 26 03.3	-0.1
GSI				S		Sn	19 26 15.9	+0.2
KCSI	Kotacane, Aceh	1.37	355	P		Pn	19 26 09.7	+0.1
KCSI				S		Sn	19 26 26.5	-0.3
SNSI	Sinabang, Aceh	1.57	279	P		Pn	19 26 11.9	-0.4
SNSI				S		Sn	19 26 31.4	-0.3
PBSI	Pulau Batu	2.23	170	P		Pn	19 26 21.8	+0.6
PBSI				S		Sn	19 26 48.4	+0.8
MLSI	Meulaboh, Aceh	2.57	325	P		Pn	19 26 26.0	+0.2
MLSI				S		Sn	19 26 56.2	+0.3
LHMI	Lhok Sumawe	3.20	343	P		Pn	19 26 34.3	-0.1
LHMI				S		Sn	19 27 11.5	+0.2
SISI	Saibi	3.66	161	P		Pn	19 26 40.0	-0.8
SISI				S		Sn	19 27 22.9	+0.2
PDSI	Padang	3.99	140	P		Pn	19 26 44.6	-0.7
H08S2	Diego Garcia H	27.13	249	T		T	19 59 04.4
	baz=75						
H08S3	Diego Garcia H	27.13	249	T		T	19 58 58.8
	baz=75						
H08S1	Diego Garcia H	27.15	249	T		T	19 58 54.6
	baz=75						
WRA	Warramunga Arr	41.97	123	P		P	19 33 32.4	+0.4
	0.5nm,1.0s,baz=304,slow=8.9,SNR=1.9 0.5nm,1.0s						
ASAR	Alice Springs	43.44	128	P		P	19 33 43.0	-0.7
	0.2nm,0.8s,baz=303,slow=7.4,SNR=4.3 0.2nm,0.8s						
SONM	Songino Array	46.10	8	P		P	19 34 05.0	+0.2
	0.2nm,0.5s,baz=186,slow=8.3,SNR=2.4 0.2nm,0.5s						
MKAR	Makanchi Array	46.49	345	P		P	19 34 07.9	+0.2
	0.2nm,0.5s,baz=161,slow=9.0,SNR=5.6 0.2nm,0.5s						
KURBB	Kurchatov Arra	51.00	344	P		P	19 34 42.5	+0.4
	0.2nm,0.4s,baz=160,slow=7.2,SNR=3.0 0.2nm,0.4s						
ZALV	Zalesovo Beam	52.74	350	P		P	19 34 55.0	0.0
	0.5nm,0.4s,baz=175,slow=8.0,SNR=4.3 0.5nm,0.4s						
BVAR	Borovoye Array	55.59	340	P		P	19 35 15.3	-0.5
	0.4nm,0.5s,baz=140,slow=10,SNR=5.1 0.4nm,0.5s						
H04N2	CROZET ISLANDS	62.94	214	T		T	20 43 50.7
	baz=53						
H04N1	CROZET ISLANDS	62.95	214	T		T	20 43 55.5
	baz=53						
H04N3	CROZET ISLANDS	62.95	214	T		T	20 43 57.3
	baz=53						

*JMA **04** 19:37:05.4±0.3,44°.N±1°.×14°.8E±°,h12km,MV3.7/19,E OFF HOKKAIDO*

*SKHL **04** 19:37:06.4±0.3,43°.60N×148°.20E,h42km±2km,mb4.5/3*

ISC 04 19:37:04.9±3.7,43°.7N±0°.1×148°.1E±0°.1,h12km±16km,n15, σ1°.15/25,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SHO	Shikotan	0.94	280	eP		Pb	19 37 22.8	-0.4
SHO				AMB		AMB	19 37 23.9
	360nm,0.3s						
SHO				eS		Sg	19 37 35.3	-0.2
SHO				A		A	19 37 38.1
	2μm,0.6s						
SHO				A		A	19 37 38.1
	2μm,0.6s						
KUR	Kuril'sk	1.53	353	eP		Pn	19 37 32.1	+0.1
KUR				AMB		AMB	19 37 38.6
	90nm,0.3s						
KUR				eS		Sn	19 37 51.5	-0.3
KUR				A		A	19 37 54.4
	210nm,0.4s						
KUR				A		A	19 37 54.4
	430nm,0.4s						
YUK	Yuzh-Kuril'sk	1.66	282	eP		Pn	19 37 33.3	-0.5
YUK				AMB		AMB	19 37 37.0
	290nm,0.4s						
YUK				eS		Sn	19 37 53.2	-1.8
YUK				A		A	19 37 56.8
	720nm,0.5s						
YUK				A		A	19 37 56.8
	880nm,0.5s						
NEM2	Nemuro 2	1.76	259	eP		Pn	19 37 35.1	0.0
NMR	Nemuro--Hokkai	1.77	260	eP		Pn	19 37 34.2	-1.1
NMR				eS		Sn	19 37 55.3	-2.4
JRA	Rausu	2.18	277	eP		Pn	19 37 41.9	+1.0
JRA				eS		Sn	19 38 08.5	+0.8
JNSB	Nemuroshibetsu	2.26	273	eP		Pn	19 37 43.1	+1.2
JNSB				eS		Sn	19 38 10.5	+0.8
JNK	Nakash	2.47	268	eP		Pn	19 37 45.6	+0.7
JNK				eS		Sn	19 38 16.1	+1.2
AKK	Akkeshi	2.49	255	eP		Pn	19 37 44.8	-0.3
AKK				eS		Sn	19 38 13.4	-2.0
JAK	Akkeshi	2.59	255	eP		Pn	19 37 47.0	+0.4
JTKR	Abashiri--Toko	3.06	276	eP		Pn	19 37 54.0	+1.1
JAR	Ashorobuto	3.19	264	eP		Pn	19 37 55.8	+1.0
JAR				eS		Sn	19 38 33.3	+0.5
JOB	Onbets	3.23	257	eP		Pn	19 37 56.4	+1.1
JCH	Churui	3.65	254	eP		Pn	19 38 02.8	+1.7
JCH				eS		Sn	19 38 44.5	+0.5
JNBK	Urakawa-nobuka	4.19	252	eP		Pn	19 38 09.3	+0.8

*NDI **04** 19:40:45.6±1.4,24°.21N×93°.64E,h30km,ML3.0,MW3.6*

*IDC **04** 19:40:48.1±4.8,24°.00N×93°.87E,h81km±41km,mb3.0/4, mbtmp3.2/5,Error ellipse: s-maj=78.0km s-min=20.9km az=68.0*

ISC 04 19:40:45.5±0.9,24°.19N±0°.05×93°.72E±0°.08,h57km,n11, σ1°.26/15,mb3.2/4,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IMP	Imphal	0.68	18	eP		Pn	19 40 59.6	+0.2
IMP				eS		Sn	19 41 09.8	+0.2
IMP				IAML			19 41 10.1
	comp=N,484nm,0.3s						
IMP				IAML			19 41 13.1
	comp=E,719nm,0.5s						
KOHI	KOHIMA	1.57	13	eP		Pn	19 41 11.6	+0.3
KOHI				eS		Sn	19 41 30.4	-0.2
KOHI				IAML			19 41 43.0
	comp=E,208nm,0.6s						
SAIH	SAIHA	1.82	202	eP		Pn	19 41 14.7	+0.2
SAIH				eS		Sn	19 41 37.7	+1.1
SAIH				IAML			19 41 42.2
	comp=E,121nm,0.3s						
SHL	Shillong	2.16	310	eP		Pn	19 41 19.2	-0.1
SHL				eS		Sn	19 41 44.6	-0.4
MOKO	MOKOCHONG	2.25	19	eP		Pn	19 41 20.6	+0.1
MOKO				eP			19 41 20.8
MOKO				IAML			19 41 50.7
	comp=E,97nm,0.3s						
MOKO				IAML			19 41 51.7
	comp=N,90nm,0.5s						
GUWA	GUWAHATI	2.71	318	eS		Sn	19 41 56.3	-2.0
CMAR	Chiang Mai Arr	7.50	138	P		Pn	19 42 31.6	-0.6
	comp=N,0.4nm,0.5s,baz=313,slow=13,SNR=5.8							
MKAR	Makanchi Array	24.35	341	P		P	19 46 00.3	+2.3
	comp=N,0.2nm,0.6s,baz=156,slow=11,SNR=4.4 comp=N,0.2nm,0.6s							
SONM	Songino Array	25.66	20	P		P	19 46 11.5	+1.4
	comp=N,0.2nm,0.5s,baz=198,slow=9.1,SNR=2.9 comp=N,0.2nm,0.5s							
WRA	Warramunga Arr	59.07	134	P		P	19 50 38.1	-2.0
	comp=N,0.4nm,0.5s,baz=321,slow=7.5,SNR=8.7 comp=N,0.4nm,0.5s							
ASAR	Alice Springs	61.51	138	P		P	19 50 55.4	-1.4
	comp=N,0.2nm,0.5s,baz=322,slow=6.8,SNR=8.0 comp=N,0.2nm,0.5s							

IDC 04 19:45:03.3±6.7,19°.03S×176°.55W,h0km,mb3.9/3, mbtmp3.9/3,MS3.6/1,Error ellipse: s-maj=183.5km s-min=107.4km az=139.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
STKA	Stephens Creek	39.67	243	P		P	19 52 37.1	-0.1
	0.5nm,0.4s,baz=62,slow=11,SNR=4.0 0.5nm,0.4s							
WRA	Warramunga Arr	46.18	260	P		P	19 53 30.1	-0.1
	0.8nm,0.4s,baz=97,slow=7.4,SNR=30 0.8nm,0.4s							
ASAR	Alice Springs	46.20	255	P		P	19 53 30.2	-0.2
	1.6nm,0.5s,baz=93,slow=7.8,SNR=7.2 1.6nm,0.5s							
GUMO	Guam	49.95	308	LR		LR	20 13 53.6	
	comp=Z,55nm,18.7s,baz=230,slow=35							
AKASG	Malin Array Be	142.36	333	PKP		PKPdf	20 04 37.1	-0.7
	0.8nm,0.5s,baz=44,slow=4.2,SNR=4.0							

*JMA **04** 19:51:19.9±0.1,24°.1N±0°.4×121°.8E±0°.3,h0km,MV3.3/11, TAIWAN REGION*

*ASIES **04** 19:51:20.1,24°.10N×121°.81E,h8km,ML3.7,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.64; Mθθ-0.27; Mφφ-0.36; Mrθ1.24; Mrφ-0.37; Mθφ1.08; Fault plane solution: M₀1.77337×10²¹ NP1:φs48.31000°, δ79.07000°,λ,92.85000°. NP2:φs213.59000°,δ11.29000°, λ75.55000°. Principal axes: T Plg55.8410°, Azm321.9050°; N Plg2.8000°, Azm227.7720°; P Plg34.0120°, Azm135.8800°;*

*TAP **04** 19:51:20.1,24°.10N×121°.81E,h8km,ML3.7,C*

ISC 04 19:51:19.1±1.1,24°.11N±0°.01×121°.92E±0°.02,h3km±9km, n153,σ0°.93/284,22C-53D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EHP	Heping Village	0.26	321	⇓iP		Pb	19 51 25.5	-1.0
	baz=343							
EHP				S		Sb	19 51 29.8	-1.6
	baz=343							
EAHA	Aohua	0.27	323	⇓iP		Pb	19 51 25.7	-1.0
	baz=342							
EAHA				iS		Sb	19 51 30.1	-1.7
	baz=342							
ETL	Fush Village	0.27	281	⇓P		Pg	19 51 24.5	+0.1
	baz=290							
ETL				eS		Sg	19 51 27.3	-0.7
	baz=290							
TWD	Chiawan	0.30	265	⇓P		Pg	19 51 24.9	+0.1
	baz=278							
TWD				S		Sg	19 51 28.3	-0.4
	baz=278							
NACB	Ninganchiao	0.30	282	P		Pg	19 51 25.1	+0.1
NACB	Ninganchiao	0.30	282	⇓iP		Pg	19 51 24.9	-0.1
	baz=292							
NACB				S		Sg	19 51 28.6	-0.3
	baz=292							
HWA	Hwalien	0.32	245	⇑P		Pb	19 51 26.7	-0.7
	baz=253							
HWA				eS		Sb	19 51 33.1	+0.2
	baz=253							
ENA	Nanau	0.36	333	⇓iP		Pb	19 51 27.6	-0.6
	baz=348							
ENA				eS		Sg	19 51 31.1	+0.4
	baz=348							
EWUT	Wuta	0.36	339	⇓P		Pb	19 51 27.8	-0.3
	baz=353							
EWUT				eS		Sb	19 51 33.3	-0.9
	baz=353							
ETLH	Xiulin Townshi	0.41	284	⇓eP		Pg	19 51 26.9	-0.2
	baz=290							
ETLH				eS		Sg	19 51 31.8	-0.6
	baz=290							
ETM	Tongmen	0.41	250	⇓iP		Pg	19 51 27.3	+0.2
	baz=259							
ETM				S		Sg	19 51 31.7	-0.8
	baz=259							
SHUL	Shoufeng	0.46	226	⇓eP		Pb	19 51 29.7	-0.1
	baz=218							
SHUL				eS		Sb	19 51 37.7	+0.8
	baz=218							
ESAO	Su ao	0.47	352	⇓P		Pb	19 51 30.3	+0.2
	baz=351							
ESAO				eS		Sb	19 51 37.7	+0.3
	baz=351							
LXIB	Xiulin Townshi	0.47	259	⇓eP		Pg	19 51 28.0	-0.2
	baz=260							
LXIB				eS		Sg	19 51 33.8	-0.5
	baz=260							
TWC	Suao	0.50	353	⇓eP		Pb	19 51 31.0	+0.4
	baz=353							
TWC				eS		Sb	19 51 39.6	+1.3
	baz=353							
TEGC	Jichi Village	0.53	221	eS		Sb	19 51 40.5	+1.5
	baz=214							
ESL	Shilin	0.53	237	⇓eP		Pg	19 51 29.9	+0.6
	baz=244							
ESL				eS		Sg	19 51 37.7	+1.5
	baz=244	

	baz=347								
TWE			S		Sb	19 51 42.6	0.0		
	baz=347								
ILA	**Ilan**	**0.67**	**347**	⇓P	**Pn**	**19 51 34.6**	**-1.0**		
	baz=347								
ILA				*e*S	**Sn**	**19 51 45.0**	**-1.6**		
	baz=347								
CHGB	**Renai**	**0.68**	**266**	⇓*e*P	**Pg**	**19 51 32.2**	**0.0**		
	baz=267								
CHGB				S	**Sg**	**19 51 41.4**	**+0.3**		
	baz=267								
TWT	**Tachien**	**0.69**	**282**	⇓*e*P	**Pg**	**19 51 33.0**	**+0.5**		
	baz=285								
TWT				*i* S	**Sg**	**19 51 41.9**	**+0.4**		
	baz=285								
OWD	**Renai**	**0.70**	**257**	⇓*i*P	**Pg**	**19 51 32.5**	**0.0**		
	baz=267								
OWD				S	**Sg**	**19 51 41.7**	**+0.2**		
	baz=267								
TDCB	**Techi**	**0.71**	**282**	⇓*i*P	**Pg**	**19 51 33.1**	**+0.4**		
	baz=285								
TDCB				*e*S	**Sg**	**19 51 41.8**	**-0.2**		
	baz=285								
FUSB	**Fushanzhiwuyua**	**0.71**	**335**	⇓*i*P	**Pb**	**19 51 34.5**	**+0.3**		
	baz=341								
FUSB				S	**Sb**	**19 51 44.2**	**-0.4**		
	baz=341								
WUSB	**Renai**	**0.74**	**261**	⇓*i*P	**Pg**	**19 51 33.5**	**+0.2**		
	baz=262								
WUSB				*e*S	**Sg**	**19 51 44.0**	**+1.1**		
	baz=262								
YHNB	**Yeheng**	**0.75**	**319**	P	**Pb**	**19 51 34.7**	**-0.1**		
YHNB	**Yeheng**	**0.75**	**319**	⇓*i*P	**Pb**	**19 51 34.6**	**-0.1**		
	baz=324								
YHNB				S	**Sb**	**19 51 44.5**	**-0.9**		
	baz=324								
NTC	**Toucheng**	**0.75**	**354**	*i* P	**Pn**	**19 51 36.2**	**-0.3**		
	baz=348								
NTC				*e*S	**Sn**	**19 51 46.8**	**-1.6**		
	baz=348								
NSK	**Sanguang**	**0.76**	**318**	⇓*i*P	**Pb**	**19 51 34.8**	**-0.3**		
	baz=324								
NSK				S	**Sb**	**19 51 44.7**	**-1.2**		
	baz=324								
HGSD	**Ruisui**	**0.76**	**217**	⇓*e*P	**Pb**	**19 51 35.5**	**+0.5**		
	baz=212								
HGSD				*e*S	**Sn**	**19 51 47.6**	**-1.1**		
	baz=212								
VWDT	**VWDT**	**0.79**	**244**	⇓*i*P	**Pg**	**19 51 34.9**	**+0.6**		
	baz=242								
VWDT				*e*S	**Sg**	**19 51 46.2**	**+1.5**		
	baz=242								
EHY	**Hungye**	**0.81**	**222**	⇑*e*P	**Pg**	**19 51 34.8**	**+0.1**		
	baz=233								
EHY				*e*S	**Sb**	**19 51 46.9**	**-0.3**		
	baz=233								
TIPB	**Shuangxi**	**0.86**	**354**	⇑*i*P	**Pn**	**19 51 38.2**	**0.0**		
	baz=349								
TIPB				*e*S	**Sn**	**19 51 51.5**	**+0.1**		
	baz=349								
ECBN	**Changbin**	**0.90**	**209**	*e*P	**Pg**	**19 51 36.8**	**+0.5**		
	baz=183								
ECBN				*e*S	**Sn**	**19 51 51.2**	**-0.9**		
	baz=183								
NFF	**Wufeng Townshi**	**0.90**	**306**	⇓*e*P	**Pb**	**19 51 37.1**	**-0.3**		
	baz=310								
NFF				S	**Sg**	**19 51 48.0**	**0.0**		
	baz=310								
TWB1	**Santiao Chiao**	**0.90**	**4**	*i* P	**Pn**	**19 51 39.6**	**+0.9**		
	baz=358								
TWB1				*e*S	**Sn**	**19 51 53.3**	**+1.2**		
	baz=358								
WHP	**Taichung City**	**0.90**	**281**	⇑*e*P	**Pg**	**19 51 37.1**	**+0.6**		
	baz=283								
WHP				*e*S	**Sg**	**19 51 49.0**	**+0.8**		
	baz=283								
YULB	**Yu-li**	**0.91**	**219**	P	**Pg**	**19 51 36.8**	**+0.2**		
YULB	**Yu-li**	**0.91**	**219**	⇑*e*P	**Pg**	**19 51 36.4**	**-0.3**		
	baz=228								
YULB				*e*S	**Sb**	**19 51 50.4**	**+0.2**		
	baz=228								
WCS	**Beigang Elemen**	**0.92**	**267**	⇑*e*P	**Pg**	**19 51 37.0**	**+0.2**		
	baz=259								
WCS				*e*S	**Sg**	**19 51 49.0**	**+0.2**		
	baz=259								
NHDH	**Xindian Distri**	**0.92**	**337**	⇓P	**Pn**	**19 51 38.6**	**-0.4**		
	baz=341								
NHDH				*e*S	**Sn**	**19 51 51.7**	**-1.1**		
	baz=341								
EYUL	**Yuli**	**0.94**	**216**	*e*P	**Pg**	**19 51 37.3**	**+0.3**		
	baz=232								
EYUL				*e*S	**Sg**	**19 51 49.8**	**+0.6**		
	baz=232								
SSLB	**Suanglung**	**0.94**	**250**	P	**Pg**	**19 51 37.4**	**+0.3**		
SSLB	**Suanglung**	**0.94**	**250**	⇑*i*P	**Pg**	**19 51 37.0**	**-0.1**		
	baz=261								
SSLB				*e*S	**Sg**	**19 51 49.0**	**-0.3**		
	baz=261								
TWF1	**Yuli**	**0.94**	**217**	⇓P	**Pg**	**19 51 36.9**	**-0.3**		
	baz=233								
TWF1				*e*S	**Sb**	**19 51 52.1**	**+1.0**		
	baz=233								
TATO	**Taipei**	**0.95**	**336**	P	**Pn**	**19 51 39.2**	**-0.1**		
SMLT	**Sun Moon Lake**	**0.96**	**257**	⇓*i*P	**Pg**	**19 51 37.9**	**+0.3**		
	baz=257								
SMLT				*e*S	**Sg**	**19 51 50.2**	**+0.2**		
	baz=257								
NWF	**Wu-fen Shan**	**0.97**	**353**	⇓*i*P	**Pn**	**19 51 40.3**	**+0.6**		
	baz=347								
NWF				*e*S	**Sn**	**19 51 54.3**	**+0.3**		
	baz=347								
WFSB	**Wu-fen Shan**	**0.97**	**353**	⇓*e*P	**Pn**	**19 51 40.5**	**+0.9**		
	baz=347								
WFSB				*e*S	**Sn**	**19 51 53.6**	**-0.3**		
	baz=347								
NHY	**Taipei**	**0.98**	**341**	*e*P	**Pn**	**19 51 40.6**	**+0.8**		
	baz=344								
NHY				*e*S	**Sn**	**19 51 54.8**	**+0.7**		
	baz=344								
LIOB	**Emei**	**0.98**	**303**	⇓*e*P	**Pn**	**19 51 39.1**	**-0.7**		
	baz=307								
LIOB				*e*S	**Sg**	**19 51 50.6**	**-0.1**		
	baz=307								
SXI1	**Grass Mountain**	**0.98**	**358**	⇑*e*P	**Pn**	**19 51 41.0**	**+1.1**		
	baz=352								
SXI1				*e*S	**Sn**	**19 51 54.8**	**+0.4**		
	baz=352								
NSTT	**Nanjuang**	**0.98**	**302**	⇓*i*P	**Pn**	**19 51 39.2**	**-0.7**		
	baz=306								
NSTT				*i* S	**Sg**	**19 51 51.2**	**+0.4**		
	baz=306								
TYC	**Yuchr**	**0.99**	**258**	⇑*i*P	**Pg**	**19 51 38.0**	**-0.1**		
	baz=259								
TYC				*e*S	**Sg**	**19 51 51.0**	**0.0**		
	baz=259								
JYNG	**Yonagunijimaku**	**1.00**	**70**	*e*P	**Pn**	**19 51 41.9**	**+1.9**		
TAP	**Taipei**	**1.00**	**338**	⇑*i*P	**Pn**	**19 51 40.7**	**+0.7**		
	baz=341								
TAP				*e*S	**Sn**	**19 51 53.9**	**-0.8**		
	baz=341								
CHKH	**Chenggong**	**1.03**	**208**	*e*P	**Pn**	**19 51 40.1**	**-0.4**		
	baz=205								
CHKH				*e*S	**Sn**	**19 51 55.0**	**-0.4**		
	baz=205								
TNOU	**National Taiwa**	**1.04**	**353**	*i* P	**Pn**	**19 51 42.2**	**+1.5**		
	baz=347								
TNOU				*e*S	**Sn**	**19 51 57.4**	**+1.6**		
	baz=347								
YOJ	**Yonaguni jima**	**1.06**	**70**	P	**Pn**	**19 51 42.7**	**+1.9**		
	baz=76								
YOJ				*e*S	**Sn**	**19 52 00.8**	**+4.8**		
	baz=76								
YOJ	**Yonaguni jima**	**1.06**	**70**	P	**Pn**	**19 51 42.4**	**+1.5**		
WHYT	**Xinyi Township**	**1.06**	**247**	⇑*i*P	**Pg**	**19 51 39.7**	**+0.3**		
	baz=255								
WHYT				S	**Sg**	**19 51 53.4**	**+0.2**		
	baz=255								
FULB	**Fuli**	**1.07**	**212**	⇑*e*P	**Pn**	**19 51 40.8**	**-0.2**		
	baz=228								
FULB				*e*S	**Sb**	**19 51 55.7**	**+1.0**		
	baz=228								
TWQ1	**Liyutan**	**1.07**	**283**	*e*P	**Pn**	**19 51 41.1**	**0.0**		
	baz=296								
TWQ1				*e*S	**Sn**	**19 51 56.9**	**+0.4**		
	baz=296								
YM01	**YM01**	**1.08**	**343**	⇑*i*P	**Pn**	**19 51 42.2**	**+1.0**		
	baz=334								
YM01				S	**Sn**	**19 51 56.8**	**+0.1**		
	baz=334								
NCUH	**Zhongli**	**1.08**	**322**	*i* P	**Pn**	**19 51 41.7**	**+0.5**		
	baz=324								
NCUH				S	**Sn**	**19 51 58.0**	**+1.1**		
	baz=324								
TWS1	**Kuangyinshan**	**1.09**	**335**	⇓*e*P	**Pn**	**19 51 42.0**	**+0.7**		
	baz=338								
TWS1				*e*S	**Sn**	**19 51 58.0**	**+1.1**		
	baz=338								
SBCB	**Hsinchu**	**1.09**	**309**	*e*P	**Pn**	**19 51 41.8**	**+0.5**		
	baz=312								
SBCB				*e*S	**Sn**	**19 51 58.7**	**+1.8**		
	baz=312								
NSY	**Sanyi**	**1.10**	**286**	⇓*e*P	**Pn**	**19 51 42.1**	**+0.6**		
	baz=289								
NSY				*e*S	**Sb**	**19 51 55.5**	**0.0**		
	baz=289								
HSN	**Hsinchu**	**1.11**	**309**	⇑P	**Pn**	**19 51 42.4**	**+0.8**		
	baz=314								
HSN				*e*S	**Sn**	**19 51 58.9**	**+1.6**		
	baz=314								
NMLH	**Miaoli**	**1.11**	**293**	⇓*e*P	**Pn**	**19 51 42.1**	**+0.5**		
	baz=296								
NMLH				*e*S	**Sb**	**19 51 56.1**	**+0.2**		
	baz=296								
CHKT	**Chengkung**	**1.12**	**207**	*e*P	**Pn**	**19 51 42.0**	**+0.3**		
	baz=183								
CHKT				*e*S	**Sn**	**19 51 57.8**	**0.0**		
	baz=183								
WJS	**Zhushan**	**1.13**	**256**	P	**Pn**	**19 51 41.6**	**-0.2**		
	baz=256								
WJS				*e*S	**Sb**	**19 51 56.8**	**+0.6**		
	baz=256								
ANP	**Anpu**	**1.13**	**341**	⇑*e*P	**Pn**	**19 51 43.0**	**+1.0**		
	baz=343								
ANP				*e*S	**Sn**	**19 51 60.0**	**+1.8**		
	baz=343								
NTST	**Danshui**	**1.14**	**338**	⇓P	**Pn**	**19 51 42.9**	**+1.0**		
	baz=339								
NTST				*e*S	**Sn**	**19 52 00.5**	**+2.5**		
	baz=339								
WNT	**Mingjian**	**1.15**	**259**	⇑*i*P	**Pn**	**19 51 42.0**	**-0.1**		
	baz=259								
WNT				*i* S	**Sb**	**19 51 57.7**	**+0.7**		
	baz=259								
EHD	**Haiduan**	**1.16**	**215**	*e*P	**Pg**	**19 51 40.7**	**-0.6**		
	baz=225								
EHD				*e*S	**Sg**	**19 51 57.1**	**+0.7**		
	baz=225								
ALS	**Alishan**	**1.18**	**240**	*i* P	**Pg**	**19 51 41.9**	**+0.1**		
	baz=239								
ALS				S	**Sg**	**19 51 57.8**	**+0.7**		
	baz=239								
WDJ	**Dajia District**	**1.19**	**282**	⇑*e*P	**Pn**	**19 51 43.4**	**+0.8**		
	baz=294								
WDJ				*e*S	**Sn**	**19 52 00.7**	**+1.3**		
	baz=294								
ECS	**Chishang**	**1.20**	**213**	P	**Pg**	**19 51 42.5**	**+0.4**		
	baz=223								
TWY	**Chenhua**	**1.20**	**346**	⇑P	**Pn**	**19 51 44.8**	**+2.0**		
	baz=337								
TWY				*e*S	**Sn**	**19 52 00.3**	**+0.8**		
	baz=337								
ELDTW	**Lidau**	**1.23**	**222**	*e*P	**Pg**	**19 51 41.4**	**-1.4**		
	baz=209								
ELDTW				*e*S	**Sg**	**19 51 59.2**	**+0.5**		
	baz=209								
WCHH	**Zhanghua**	**1.24**	**269**	*e*P	**Pg**	**19 51 43.8**	**+0.8**		
	baz=270								
WCHH				*e*S	**Sg**	**19 51 59.1**	**0.0**		
	baz=270								
CHN5	**Tsauling**	**1.24**	**246**	⇑*i*P	**Pb**	**19 51 43.5**	**+0.1**		
	baz=231								
CHN5				S	**Sn**	**19 52 00.8**	**0.0**		
	baz=231								
WGK	**Gukeng**	**1.31**	**252**	*e*P	**Pg**	**19 51 44.7**	**+0.4**		
	baz=252								
WGK				*e*S	**Sn**	**19 52 04.2**	**+1.8**		
	baz=252								
WDLH	**Douliu**	**1.33**	**252**	*e*P	**Pg**	**19 51 45.1**	**+0.5**		
	baz=253								
WDLH				*e*S	**Sn**	**19 52 03.2**	**+0.4**		
	baz=253								
WCKO	**Fanlu**	**1.38**	**241**	⇑*e*P	**Pg**	**19 51 45.8**	**+0.3**		
	baz=242								
WCKO				S	**Sg**	**19 52 04.1**	**+0.8**		
	baz=242								
LONT	**Longtian**	**1.40**	**211**	*i* P	**Pn**	**19 51 44.5**	**-1.0**		
	baz=223								
LONT				*e*S	**Sg**	**19 52 04.7**	**+0.6**		
	baz=223								
STYH	**Taoyuan**	**1.40**	**229**	⇓P	**Pn**	**19 51 45.2**	**-0.4**		
	baz=216								
STYH				*e*S	**Sb**	**19 52 04.3**	**0.0**		
	baz=216								
WRL	**Guolierlin Hig**	**1.42**	**262**	⇓P	**Pb**	**19 51 46.1**	**-0.2**		
	baz=262								
WRL				*e*S	**Sn**	**19 52 05.2**	**+0.1**		
	baz=262								
TPUB	**Ta-pu**	**1.43**	**236**	P	**Pb**	**19 51 46.3**	**-0.2**		
TPUB	**Ta-pu**	**1.43**	**236**	⇓*i*P	**Pb**	**19 51 46.2**	**-0.2**		
	baz=237								
TPUB				*e*S	**Sg**	**19 52 06.5**	**+1.4**		
	baz=237								
CHN4	**Tsaushan**	**1.43**	**238**	⇓*e*P	**Pb**	**19 51 46.6**	**+0.2**		
	baz=239								
CHN4				*e*S	**Sg**	**19 52 08.6**	**+3.5**		
	baz=239								
CHN2	**Minshiung**	**1.44**	**247**	*e*P	**Pg**	**19 51 47.4**	**+0.7**		
	baz=243								
WTK	**Tuku**	**1.46**	**254**	⇓P	**Pb**	**19 51 46.9**	**-0.1**		
	baz=255								
WTK				S	**Sg**	**19 52 07.3**	**+1.2**		
	baz=255								
WTP	**Ta-pu**	**1.47**	**235**	*e*P	**Pb**	**19 51 47.4**	**+0.2**		
	baz=235								
WTP				*e*S	**Sg**	**19 52 07.1**	**+0.6**		
	baz=235								
LDUT	**Ludao**	**1.49**	**196**	*e*P	**Pb**	**19 51 47.4**	**0.0**		
	baz=175								
LDUT				*e*S	**Sn**	**19 52 05.0**	**-1.7**		
	baz=175								
CHY	**Chiayi**	**1.50**	**246**	*e*P	**Pg**	**19 51 48.2**	**+0.4**		
	baz=247								
CHY				*e*S	**Sg**	**19 52 08.8**	**+1.5**		
	baz=247								
TWGBT	**Beinan**	**1.50**	**211**	P	**Pn**	**19 51 45.3**	**-1.6**		
TWGBT	**Beinan**	**1.50**	**211**	*e*P	**Pn**	**19 51 45.1**	**-1.8**		
	baz=212								
TWGBT				*e*S	**Sg**	**19 52 08.0**	**+0.8**		
	baz=212								
TWG	**Pinlang**	**1.50**	**211**	*e*P	**Pn**	**19 51 44.9**	**-2.0**		
	baz=212								
TWG				*e*S	**Sn**	**19 52 04.9**	**-2.1**		
	baz=212								
TWK	**Hsinying**	**1.56**	**238**	⇓*i*P	**Pb**	**19 51 48.5**	**-0.1**		
	baz=223								
TWK				*e*S	**Sg**	**19 52 09.9**	**+0.8**		
	baz=223								
CHN1	**Nanshi**	**1.57**	**234**	*e*P	**Pg**	**19 51 49.5**	**+0.2**		
	baz=235								
CHN1				*e*S	**Sg**	**19 52 10.7**	**+1.1**		
	baz=235								
SNST	**Tainan City**	**1.57**	**236**	*e*P	**Pb**	**19 51 48.7**	**-0.2**		
	baz=237								
SNST				*i* S	**Sg**	**19 52 10.5**	**+0.8**		
	baz=237								
SGST	**Jiashian**	**1.59**	**230**	⇑P	**Pn**	**19 51 48.3**	**0.0**		
	baz=231								
SGST				*e*S	**Sg**	**19 52 11.3**	**+0.9**		
	baz=231								
SLGT	**Liugui**	**1.61**	**227**	P	**Pb**	**19 51 49.1**	**-0.4**		
	baz=228								
SLGT				*e*S	**Sg**	**19 52 12.1**	**+1.2**		
	baz=228								
WSF	**Szhu**	**1.62**	**254**	*e*P	**Pb**	**19 51 49.8**	**+0.1**		
	baz=255								
WSF				*e*S	**Sg**	**19 52 11.9**	**+0.7**		
	baz=255								
WSL	**Shuilin Townsh**	**1.65**	**250**	*e*P	**Pb**	**19 51 50.4**	**+0.2**		
	baz=250								
WSL				*e*S	**Sg**	**19 52 13.5**	**+1.2**		
	baz=250								
ICHU	**Yijhu**	**1.68**	**244**	*i* P	**Pb**	**19 51 50.2**	**-0.4**		
	baz=245								
ICHU				*e*S	**Sg**	**19 52 14.1**	**+1.0**		
	baz=245								
CHN8	**Yiju**	**1.74**	**244**	*i* P	**Pn**	**19 51 50.8**	**+0.6**		
	baz=245								
CHN8				*e*S	**Sg**	**19 52 15.1**	**+0.1**		
	baz=245								
ECL	**Taimali**	**1.75**	**211**	*e*P	**Pn**	**19 51 49.7**	**-0.6**		
	baz=212								
ECL				*e*S	**Sn**	**19 52 12.6**	**-0.5**		
	baz=212								
SSHA	**Shanhua**	**1.78**	**237**	*i* S	**Sb**	**19 52 15.8**	**+0.6**		
	baz=239								
SCST	**Cishan**	**1.79**	**227**	*i* P	**Pb**	**19 51 52.8**	**+0.3**		
	baz=230								
SCST				*e*S	**Sg**	**19 52 19.7**	**+3.2**		
	baz=230								
SHHT	**Tainan City**	**1.80**	**233**	*i* P	**Pb**	**19 51 53.1**	**+0.3**		
	baz=229								
TSMG	**Majia**	**1.82**	**220**	P	**Pb**	**19 51 52.4**	**-0.7**		
	baz=223								
TSMG				*i* S	**Sb**	**19 52 16.5**	**+0.2**		
	baz=223								
SCLT	**Jiali**	**1.83**	**240**	*e*S	**Sb**	**19 52 17.6**	**+1.0**		
	baz=241								
TWM1	**Shoushan**	**1.88**	**227**	*e*P	**Pg**	**19 51 55.3**	**+0.2**		
	baz=230								
TWM1				*e*S	**Sg**	**19 52 19.9**	**+0.5**		
	baz=230								
MASBT	**Mashibuluo**	**1.90**	**219**	*e*P	**Pb**	**19 51 53.7**	**-0.7**		
	baz=222								
MASBT				*e*S	**Sn**	**19 52 16.1**	**-0.8**		
	baz=222								
JKRS	**Kuro-shima**	**1.91**	**86**	*e*P	**Pg**	**19 51 55.9**	**+0.1**		
TSCK	**Chigu Township**	**1.93**	**241**	*e*P	**Pn**	**19 51 53.7**	**+0.8**		
	baz=242								
TSCK				*e*S	**Sn**	**19 52 18.6**	**+0.9**		
	baz=242								
EAST	**Anshuo**	**1.98**	**210**	*e*P	**Pn**	**19 51 52.5**	**-1.0**		
	baz=212								
EAST				*e*S	**Sn**	**19 52 19.3**	**+0.4**		
	baz=212								
SNJT	**Kaohsiung City**	**1.98**	**227**	*e*P	**Pn**	**19 51 53.1**	**-0.5**		
	baz=231								
SNJT				*e*S	**Sg**	**19 52 23.2**	**+0.3**		
	baz=231								
TAWH	**Dawu Township**	**2.00**	**209**	*e*P	**Pb**	**19 51 55.3**	**-0.8**		
	baz=211								
TAWH				*e*S	**Sn**	**19 52 18.8**	**-0.5**		
	baz=211								
JIJ	**Ishigaki jima**	**2.05**	**82**	P	**Pb**	**19 51 56.9**	**-0.1**		
JIJ				*e*S	**Sg**	**19 52 23.9**	**-1.0**		
LAY	**Lan-yu**	**2.09**	**189**	*e*S	**Sn**	**19 52 19.2**	**-2.4**		
	baz=183								
SCZT	**Fangliau**	**2.10**	**215**	*e*P	**Pb**	**19 51 56.8**	**-1.0**		
	baz=219								
SCZT				*e*S	**Sn**	**19 52 23.2**	**+1.4**		
	baz=219								
LYUB	**Lan-yu**	**2.12**	**188**	*e*P	**Pn**	**19 51 55.1**	**-0.3**		
	baz=181								
LYUB				*e*S	**Sn**	**19 52 20.2**	**-2.1**		
	baz=181								
SLIU	**Shizi**	**2.15**	**209**	*e*P	**Pb**	**19 51 58.8**	**+0.1**		
	baz=202								
SLIU				*e*S	**Sn**	**19 52 23.3**	**+0.3**		
	baz=202								
PHUB	**P'eng-hu**	**2.23**	**255**	*e*P	**Pn**	**19 51 57.2**	**+0.2**		
	baz=254								
PHUB				*i* S	**Sn**	**19 52 25.3**	**+0.3**		
	baz=254								
PNG	**Penghu**	**2.23**	**256**	*e*P	**Pn**	**19 51 56.8**	**-0.2**		
	baz=255								
PNG				*e*S	**Sn**	**19 52 24.7**	**-0.3**		
	baz=255								
JISG	**Ishigakijimahi**	**2.23**	**77**	P	**Pb**	**19 51 59.5**	**-0.7**		
JISG				S	**Sg**	**19 52 28.9**	**-2.0**		
TWKBT	**Hengchun**	**2.39**	**205**	*e*P	**Pb**	**19 52 01.3**	**-1.4**		
	baz=190								
TWKBT				*e*S	**Sn**	**19 52 28.6**	**-0.3**		
	baz=190								
VWUC	**VWUC**	**2.41**	**292**	*e*P	**Pn**	**19 51 59.2**	**-0.3**		
	baz=295								
VWUC				*e*S	**Sn**	**19 52 27.6**	**-2.0**		
	baz=295								
VCHM	**Qimei**	**2.45**	**249**	*e*P	**Pn**	**19 51 59.6**	**-0.4**		
	baz=237								
VCHM				*e*S	**Sn**	**19 52 29.4**	**-1.1**		
	baz=237								
MATB	**Ma-tsu**	**2.71**	**319**	*e*P	**Pn**	**19 52 03.3**	**-0.2**		
	baz=318								
MATB				*e*S	**Sn**	**19 52 36.4**	**-0.4**		
	baz=318								
PTMZ	**Houxiangcun**	**2.71**	**291**	*e*P	**Pn**	**19 52 03.2**	**-0.4**		
	baz=294								
PTMZ				*e*S	**Sn**	**19 52 35.0**	**-1.9**		
	baz=294								
LYJJ	**Jianjiangzhen**	**3.12**	**322**	*e*S	**Sn**	**19 52 46.7**	**-0.3**		
	baz=320								
JMJ	**Miyako jima 2**	**3.15**	**76**	*e*P	**Pb**	**19 52 13.8**	**-2.1**		
	baz=88								
JMJ				*e*S	**Sb**	**19 52 53.4**	**-1.3**		
	baz=88								
KNM	**Kinmen**	**3.19**	**276**	*e*P	**Pn**	**19 52 11.5**	**+1.3**		
	baz=275								
KNM				*e*S	**Sn**	**19 52 50.2**	**+1.3**		
	baz=275								
XPSS	**Dashiqiu**	**3.21**	**331**	*e*P	**Pn**	**19 52 10.2**	**-0.4**		
	baz=333								
KNMB	**Chin-men Tao**	**3.24**	**277**	*e*P	**Pn**	**19 52 10.2**	**-0.7**		
	baz=270								
AXDP	**Jialang**	**3.68**	**283**	*e*P	**Pn**	**19 52 16.5**	**-0.5**		
	baz=284								
AXDP				*e*S	**Sn**	**19 52 59.0**	**-1.9**		
	baz=284								
ZPLA	**Ao Xicun**	**3.82**	**268**	*e*P	**Pn**	**19 52 18.1**	**-0.7**		
	baz=261								
DSXP	**Dongshan**	**4.13**	**265**	*e*P	**Pn**	**19 52 22.5**	**-0.6**		
	baz=258								

BJI ***04*** *19:55:02.4±0.0,9.°32S×122.°37E,h143km,mb5.1/69, mB5.2/31*

MOS ***04*** *19:55:03.5±1.0,8.°94S×122.°53E,h139km,mb5.2/61,Error ellipse: s-maj=9.9km s-min=4.9km az=120.2*

NEIC ***04*** *19:55:04.8,9.°40S×122.°59E,h150km,Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10¹⁶Nm; Mrr1.64; Mθθ-6.70; Mφφ5.06; Mrθ1.50; Mθφ1.00; Mφr1.89; Fault plane solution: M₀6.54000×10¹⁶ NP1:φ52.72000°, δ79.25000°,λ.24.68000°. NP2:φ317.82000°,δ65.78000°, λ168.20000°. Principal axes: T 6.0794, Plg25.0000°, Azm278.0000°; N 0.9198, Plg63.0000°, Azm75.0000°; P -6.9992, Plg9.0000°, Azm183.0000°;*

NEIC ***04*** *19:55:04.9±2.2,9.°14S±0.°07×122.°47E±0.°08,h138km±4km, mb5.3/87,Mww5.1/19 Error ellipse: s-maj=11.4km s-min=9.4km az=56.0*

NEIC ***04*** *19:55:04.8,9.°10S×122.°49E,h150km*

DJA ***04*** *19:55:05.5±0.1,9.°S±1°×12°2E±°,h136km±1km,M5.2/90, mB5.7/66,mb5.6/90,MLv5.7/19,Mw5.2/27,Mw(mB)5.3/66, MwMwp4.7/11,Mwp5.0/11*

IDC ***04*** *19:55:05.4±1.0,8.°88S×122.°53E,h138km±8km,mb4.7/32, mbtmp5.1/35,MS3.7/27,Error ellipse: s-maj=13.4km s-min=8.1km

SOEI Soe 1.87 112 Pn 19 55 38.1 -0.4
SOEI Soe 1.87 112 P Pn 19 55 38.7 +0.2
SOEI Soe 1.87 112 P Pn 19 55 38.6 +0.1
SOEI S Sn 19 56 03.6 -0.3
BASI Baing, Sumba 2.24 238 P Pn 19 55 43.2 +0.4
BASI S Sn 19 56 11.9 +0.2
BBSI Bau Bau 3.54 1 P Pn 19 56 01.0 +1.7
BKSI Bulukumba 4.40 327 P Pn 19 56 12.0 +1.4
PLAI Plampang 4.69 272 P Pn 19 56 16.3 +1.9
PLAI Plampang 4.69 272 P Pn 19 56 16.0 +1.6
PLAI S Sn 19 57 08.5 +0.2
KAPI Kappang 4.86 325 P Pn 19 56 20.0 +3.3
KAPI Kappang 4.86 325 ⇓iP Pn 19 56 18.4 +1.7
TWSI Taliwang, Sumb 5.58 273 P Pn 19 56 27.1 +0.8
3µm,0.6s,48µm3µm16nm
TTSI Tana Toraja 6.54 336 P Pn 19 56 41.8 +2.7
302nm,0.8s,4µm1.2nm
DNP Denpasar 7.23 272 P Pn 19 56 49.1 +0.7
2µm,0.5s,29µm7µm25nm
SRBI Singaraja 7.29 277 P Pn 19 56 49.0 -0.2
980nm,0.9s,11µm3µm3.5nm
NLAI Namlea 7.35 39 P Pn 19 56 53.0 +3.0
273nm,0.9s,3µm0.8nm
SANI Sanana 7.76 27 P Pn 19 56 57.0 +1.4
SANI Sanana 7.76 27 P Pn 19 56 56.5 +0.9
397nm,0.8s,6µm2µm1.7nm
LUWI Luwuk 7.96 2 Pn Pn 19 56 59.2 +1.1
LUWI Luwuk 7.96 2 P Pn 19 56 59.3 +1.1
LUWI Luwuk 7.96 2 P Pn 19 56 59.2 +1.1
794nm,0.8s,8µm2.6nm
JAGI Jajag, Banyuwa 8.29 273 Pn Pn 19 56 59.6 -3.0
JAGI Jajag, Banyuwa 8.29 273 P Pn 19 57 00.7 -1.9
JAGI Jajag, Banyuwa 8.29 273 P Pn 19 57 00.1 -2.5
1µm,0.8s,13µm1µm4.2nm
SAUI Saumlaki 8.75 84 Pn Pn 19 57 06.3 -2.5
SAUI Saumlaki 8.75 84 P Pn 19 57 08.0 -0.8
SAUI Saumlaki 8.75 84 P Pn 19 57 07.5 -1.3
8µm,0.7s,62µm3µm
BLJI Banyuglugur 8.92 278 P Pn 19 57 11.1 0.0
794nm,0.6s,8µm
KNRA Kununurra 8.98 138 P Pn 19 57 08.5 -3.3
baz=9.1,SNR=1000
KNRA Kununurra 8.98 138 Pn Pn 19 57 08.9 -3.0
KNRA Kununurra 8.98 138 P Pn 19 57 09.0 -2.8
GMJI Gumukmas 9.00 274 P Pn 19 57 10.1 -2.1
MTN Manton Dam 9.26 115 P Pn 19 57 13.0 -2.7
baz=9.3,SNR=1000
MTN Manton Dam 9.26 115 Pn Pn 19 57 13.0 -2.7
MTN Manton Dam 9.26 115 P Pn 19 57 13.8 -1.8
MRSI Marisa 9.48 357 P Pn 19 57 19.5 +1.0
273nm,0.7s,3µm
BKB Balikpapan 9.54 324 P Pn 19 57 25.1 +5.7
BKB Balikpapan 9.54 324 P Pn 19 57 24.9 +5.5
170nm,0.9s,3µm
KMSI Cibinong 9.67 9 P Pn 19 57 24.4 +3.3
837nm,0.9s,6µm2µm
MPSI Mapaga 9.68 344 P Pn 19 57 22.7 +1.5
126nm,1.1s,2µm
LBMI Labuha 9.72 31 P Pn 19 57 23.5 +1.8
222nm,1.0s,3µm
GRJI Gresik 10.16 281 P Pn 19 57 27.6 0.0
2µm,0.8s,14µm3µm
TOLI2 Tolitoli 10.24 350 Pn Pn 19 57 30.9 +2.3
TOLI2 Tolitoli 10.24 350 P Pn 19 57 31.7 +3.1
BWJI Bawean 10.28 287 P Pn 19 57 29.8 +0.6
964nm,1.1s
KDU Kakadu 10.43 111 P Pn 19 57 28.0 -3.1
baz=10,SNR=757
KDU Kakadu 10.43 111 P Pn 19 57 28.5 -2.6
TNTI Ternate 10.88 27 Pn Pn 19 57 38.8 +1.6
TNTI Ternate 10.88 27 P Pn 19 57 38.8 +1.6
TNTI Ternate 10.88 27 P Pn 19 57 38.1 +0.9
90nm,1.0s,1µm
MTKI Muara Teweh, K 11.06 316 P Pn 19 57 42.2 +2.6
177nm,1.0s,2µm
NGJI Ngawi 11.07 278 P Pn 19 57 41.3 +1.6
920nm,1.0s,7µm
FAKI Fak Fak 11.43 58 Pn 19 57 43.5 -1.0
FAKI Fak Fak 11.43 58 P Pn 19 57 44.2 -0.2
FAKI Fak Fak 11.43 58 P Pn 19 57 45.1 +0.7
134nm,0.8s,2µm
SWI Sorong 11.91 47 P Pn 19 57 49.0 -1.7
UGM Wanagama 11.92 275 Pn 19 57 49.3 -1.5
UGM Wanagama 11.92 275 P Pn 19 57 49.9 -0.9
UGM Wanagama 11.92 275 P Pn 19 57 49.7 -1.1
968nm,0.9s,7µm
SMRI Semarang 12.12 279 Pn Pn 19 57 51.1 -2.3
SMRI Semarang 12.12 279 P Pn 19 57 53.4 -0.1
SMRI Semarang 12.12 279 P Pn 19 57 54.1 +0.6
2µm,0.9s,13µm
KMPI Kaimana, Papua 12.34 65 P Pn 19 57 55.2 -1.0
492nm,0.6s,5µm
PSA00 Pilbara Seismi 12.72 191 Pn Pn 19 57 58.3 -2.8
PSA00 Pilbara Seismi 12.72 191 P Pn 19 58 00.3 -0.8
SGSI Sangihe 13.00 13 P Pn 19 58 06.1 +1.3
903nm,1.0s,9µm
KPJI Karang Pucung 13.55 276 P Pn 19 58 10.2 -1.7
685nm,0.6s,5µm
CMJI Cimerak 13.97 274 P Pn 19 58 13.9 -3.4
454nm,1.1s,6µm
STKI Sintang 14.24 309 P P 19 58 22.2 -1.5
388nm,0.9s
JCJI Jatiwangi 14.34 279 P Pn 19 58 20.9 -1.0
855nm,0.9s,8µm
MYLDM Lahad Datu 14.69 344 P P 19 58 29.1 +0.4
BBJI Bungbulang 14.80 275 P Pn 19 58 25.5 -2.2
LEM Lembang 14.92 277 P Pn 19 58 28.3 -1.1
390nm,0.6s,baz=61,slow=10,SNR=47
LEM S Sn 20 01 14.1 -1.0
20nm,0.4s,baz=182,slow=23,SNR=1.2
LEM LR LR 20 04 36.6
comp=Z,291nm,21.0s,baz=84,slow=38
LEM Lembang 14.92 277 P Pn 19 58 28.2 -1.1
612nm,0.7s,6µm
CNJI Cibinong 15.33 275 P Pn 19 58 32.5 -1.7
373nm,0.8s,4µm608nm
SBUM Sibu 15.35 318 P P 19 58 38.3 +2.2
WB0 Warramunga Arr 15.67 134 Pn Pn 19 58 35.3 -3.1
GIRL Giralia 15.68 209 P P 19 58 39.1 -0.5
baz=16,SNR=49
GIRL Giralia 15.68 209 Pn 19 58 35.3 -3.2
GIRL Giralia 15.68 209 P P 19 58 41.8 +2.2
CBJI Citeko 15.74 278 P Pn 19 58 37.0 -2.3
1µm,0.8s,13µm
WRA Warramunga Arr 15.75 135 P Pn 19 58 36.4 -3.0
42nm,0.5s,baz=306,slow=14,SNR=152
WRA S Sn 20 01 20.4 -14
294nm,0.9s,baz=307,slow=24,SNR=17
WRAB Tennant Creek 15.75 135 Pn Pn 19 58 36.5 -2.9
WRAB Tennant Creek 15.75 135 P Pn 19 58 36.5 -2.9
WB2 Warramunga Arr 15.76 135 Pn Pn 19 58 36.4 -3.1
DBJI Dramaga 15.82 278 P Pn 19 58 39.7 -0.6
1µm,1.0s,8µm
WR0 Warramunga Arr 15.90 134 Pn Pn 19 58 38.4 -2.9
SKJI Sukabumi 15.93 276 P Pn 19 58 40.8 -0.9
1µm,1.0s,11µm2µm
KSM Kuching 16.04 310 P P 19 58 44.2 +0.6
KSM Kuching 16.04 310 P P 19 58 44.7 +1.1
KKM Kota Kinabalu 16.25 337 P P 19 58 48.6 +2.5
KKM Kota Kinabalu 16.25 337 P P 19 58 50.0 +3.9
DAV Davao City (W) 16.30 11 P Pn 19 58 44.3 -1.9
74nm,0.3s,baz=199,slow=3.2,SNR=1.3
DAV S Sn 20 01 46.9 -1.0
83nm,0.3s,baz=211,slow=19,SNR=1.6
SBJI Serang 16.50 279 P P 19 58 49.2 +0.5
416nm,1.0s
XMI Christmas Isla 16.64 264 P Pn 19 58 50.5 +0.1
XMIS Christmas Isla 16.68 264 P 19 58 48.8 -2.0
XMIS Christmas Isla 16.68 264 P Pn 19 58 53.9 +3.0
WRKA Warakurna 16.83 162 P Pn 19 58 52.6 0.0
baz=17,SNR=191
WRKA Warakurna 16.83 162 P Pn 19 58 53.7 +1.1
MMPI Merauke 17.67 90 P Pn 19 59 03.3 +0.6
710nm,0.6s
PPBI Pangkal Pinang 17.67 292 P Pn 19 59 02.9 +0.2
200nm,1.2s,4µm
MEEK Meekatharra 17.88 191 P Pn 19 59 05.2 0.0
baz=18,SNR=115
MEEK Meekatharra 17.88 191 P Pn 19 59 05.6 +0.4
AS31 Alice Springs 18.17 144 P 19 59 07.3 +0.2
ASAR Alice Springs 18.17 145 P Pn 19 59 07.9 -0.7
ASAR Alice Springs 18.17 145 P P 19 59 07.8 +0.7
139nm,0.8s,baz=328,slow=11,SNR=565
ASAR S S 20 02 17.7 -10
206nm,0.8s,baz=313,slow=22,SNR=11

ASAR LR LR 20 06 00.0
comp=Z,475nm,20.2s,baz=318,slow=36
ASAR ScP ScP 20 06 57.2 +0.8
4.9nm,0.9s,baz=248,slow=1.7,SNR=1.1
AS01 Alice Springs 18.19 144 P Pn 19 59 08.5 -0.4
KASI Kota Agung 18.21 280 P P 19 59 07.9 +0.4
759nm,0.9s,9µm
PMBI Palembang 18.66 288 P Pn 19 59 16.0 +1.6
PMBI Palembang 18.66 288 P Pn 19 59 18.4 +4.0
GENI Genyem 18.69 71 P Pn 19 59 17.0 +2.3
GENI Genyem 18.69 71 P Pn 19 59 18.4 +3.7
LWLI Liwa 18.75 281 P P 19 59 13.9 +0.4
829nm,0.7s,7µm
TABU Tabubil 18.93 80 P Pn 19 59 16.6 -1.1
DSRI Dabo 19.78 295 P P 19 59 25.4 +0.8
QIS Mount Isa 20.07 127 P P 19 59 28.3 +0.5
baz=20,SNR=154
QIS Mount Isa 20.07 127 P P 19 59 28.8 +1.1
COEN Coen 20.82 105 P P 19 59 35.7 +0.1
baz=21,SNR=53
COEN Coen 20.82 105 P P 19 59 35.8 +0.1
COEN Coen 20.82 105 P P 19 59 36.8 +1.1
MORW Morawa 20.83 196 P P 19 59 36.3 +0.6
baz=21,SNR=86
MORW Morawa 20.83 196 P P 19 59 37.1 +1.4
MORW Morawa 20.83 196 P P 19 59 36.9 +1.2
MYKOM Kota Tinggi 21.49 299 P P 19 59 44.2 +1.3
KRJI Kerinci 22.05 287 P P 19 59 48.6 -0.3
508nm,1.1s,4µm
BLDU Ballidu 22.13 193 P P 19 59 50.1 +0.6
baz=22,SNR=296
BLDU Ballidu 22.13 193 P P 19 59 49.9 +0.4
KMBL Kambalda 22.22 181 P P 19 59 49.7 -0.6
baz=22,SNR=58
KMBL Kambalda 22.22 181 P P 19 59 50.7 +0.4
FORT Forrest 22.23 167 P P 19 59 50.5 +0.1
baz=22,SNR=43
FORT Forrest 22.23 167 P P 19 59 47.5 -3.0
FORT Forrest 22.23 167 P P 19 59 51.4 +1.0
OOD Oodnadatta 22.41 148 P P 19 59 52.3 +0.1
KLBR Kellerberrin 22.87 191 P P 19 59 56.8 +0.3
baz=23,SNR=104
KLBR Kellerberrin 22.87 191 P P 19 59 57.4 +0.9
MTSU Mount Surprise 23.01 115 P P 19 59 59.2 +1.1
baz=23,SNR=115
MTSU Mount Surprise 23.01 115 P P 19 59 59.5 +1.5
PPSI Pulau Pagai 23.23 284 P P 19 59 59.7 -0.3
322nm,0.8s
BKNI Bangkinang 23.33 292 P P 20 00 02.3 +1.3
BKNI Bangkinang 23.33 292 P P 20 00 02.2 +1.3
445nm,1.1s,4µm
PDSI Padang 23.39 289 P P 19 59 59.2 -2.4
60nm,0.8s
MUN Mundaring 23.56 194 P P 20 00 03.8 +1.0
baz=24,SNR=46
MUN Mundaring 23.56 194 P P 20 00 04.1 +1.3
MTKN Mount Kenneth 23.62 194 P P 20 00 05.9 +2.5
MULG Mulgathing 23.72 155 P P 20 00 05.0 +0.7
NWAO Narrogin (SRO) 24.26 191 P P 20 00 09.7 +0.5
NWAO Narrogin (SRO) 24.26 191 P P 20 00 10.0 +0.8
NWAO Narrogin (SRO) 24.26 191 P P 20 00 09.7 +0.5
NWAO pmax pmax
comp=Z,162nm,0.7s
NWAO Narrogin (SRO) 24.26 191 P P 20 00 10.1 +0.8
comp=Z,98nm,0.5s,baz=17,slow=8.4,SNR=114
NWAO LR LR 20 10 39.3
comp=Z,184nm,18.2s,baz=68,slow=38
comp=Z,98nm,0.5s
PMG Port Moresby 24.33 93 P P 20 00 11.1 +1.1
PMG Port Moresby 24.33 93 P P 20 00 12.8 +2.8
PMG Port Moresby 24.33 93 P P 20 00 11.4 +1.4
PMG Port Moresby 24.33 93 ceP P 20 00 10.9 +0.9
PMG pmax pmax
comp=Z,30nm,0.7s
PMG Port Moresby 24.33 93 P P 20 00 10.2 +0.2
comp=Z,11nm,0.7s,baz=297,slow=4.7,SNR=7.3
comp=Z,11nm,0.7s
DLV T Lat 25.09 326 P P 20 00 18.6 +1.5
INKA Innaminka 25.33 140 P P 20 00 20.7 +1.7
CTA Charters Tower 25.42 118 P P 20 00 20.8 +0.9
comp=Z,14nm,0.9s,baz=307,slow=11,SNR=7.7
comp=Z,14nm,0.9s
CTAO Charters Tower 25.42 118 P P 20 00 19.5 -0.4
CTAO IAmb IAmb 20 00 59.6
comp=Z,110nm,1.2s
CTAO Charters Tower 25.42 118 P P 20 00 19.5 -0.4
CTAO pmax pmax
comp=Z,110nm,1.2s
PBSI Pulau Batu 25.73 289 P P 20 00 19.7 -3.1
comp=Z,67nm,0.9s
LCRK Leigh Creek 25.85 148 P P 20 00 24.8 +1.1
RKGY Rocky Gully 25.95 190 P P 20 00 26.6 +2.1
baz=26,SNR=75
RKGY Rocky Gully 25.95 190 P P 20 00 27.1 +2.7
KULM Kulim 26.04 302 P P 20 00 25.0 -0.5
AUALB St Joseph's Co 26.18 189 P P 20 00 28.4 +1.9
RPSI Rantau Prapat 26.25 295 P P 20 00 27.4 +0.1
RPSI IAmb IAmb 20 00 40.2
comp=Z,70nm,1.5s
PSI Prapat 26.30 296 P P 20 00 27.7 -0.3
PSI Prapat 26.30 296 P P 20 00 27.5 -0.5
PSI pmax pmax
comp=Z,70nm,1.5s
BBOO Buckleboo 26.76 154 P P 20 00 32.1 +0.4
baz=27,SNR=53
BBOO Buckleboo 26.76 154 P P 20 00 31.6 -0.2
BBOO IAmb IAmb 20 00 33.3
comp=Z,167nm,1.5s
BBOO Buckleboo 26.76 154 P P 20 00 32.3 +0.5
GSI Gunungsitoli 26.89 291 P P 20 00 30.9 -2.3
GSI IAmb IAmb 20 00 39.5
comp=Z,66nm,1.1s
GSI Gunungsitoli 26.89 291 P P 20 00 35.4 +2.2
GSI Gunungsitoli 26.89 291 P P 20 00 38.3 +5.1
QLP Quilpie 26.97 133 P P 20 00 34.4 +0.7
baz=27,SNR=4.6
QLP Quilpie 26.97 133 P P 20 00 34.0 +0.2
WHYH Whyalla 27.63 152 P P 20 00 40.5 +1.0
KCSI Kotacane, Aceh 27.65 296 P P 20 00 38.2 -1.7
comp=Z,61nm,0.9s
HTT Hallett 28.60 150 P P 20 00 49.1 +0.9
baz=29,SNR=31
HTT Hallett 28.60 150 P P 20 00 49.6 +1.4
SRIT Nakonsritamara 28.78 307 P P 20 00 51.4 +1.5
STKA Stephens Creek 28.81 145 P P 20 00 50.7 +0.7
baz=29,SNR=34
STKA Stephens Creek 28.81 145 P P 20 00 49.6 -0.3
STKA Stephens Creek 28.81 145 P P 20 00 51.3 +1.3
STKA Stephens Creek 28.81 145 P P 20 00 49.7 -0.3
STKA pmax pmax
comp=Z,7.0nm,0.9s
STKA Stephens Creek 28.81 145 P P 20 00 50.9 +0.9
comp=Z,20nm,0.8s,baz=316,slow=9.7,SNR=48
STKA LR LR 20 14 07.2
comp=Z,121nm,21.2s,baz=325,slow=40
comp=Z,20nm,0.8s
SURA Surathani 29.10 308 P P 20 00 54.4 +1.6
MLSI Meulaboh, Aceh 29.20 296 P P 20 00 52.2 -1.5
comp=Z,98nm,0.7s
QIZ Qiongzhong 30.57 336 P P 20 01 07.0 +1.3
QIZ sP sP 20 01 53.7 +1.6
QIZ S S 20 06 00.3 +3.1
QIZ LR LR
comp=Z,330nm,9.5s
QIZ LR LR
comp=Z,420nm,10.3s
QIZ LR LR
comp=Z,340nm,16.1s
QIZ Qiongzhong 30.57 336 P P 20 01 05.9 +0.2
CMSA Cobar Meteorol 31.06 139 P P 20 01 11.3 +1.4
baz=31,SNR=45
CMSA Cobar Meteorol 31.06 139 P P 20 01 11.7 +1.8
TPUB Ta-pu 32.20 357 P P 20 01 18.0 -1.9
ARPS Mount Arapiles 32.70 151 P P 20 01 25.8 +1.7
baz=33,SNR=33
ARPS Mount Arapiles 32.70 151 P P 20 01 26.1 +1.9
AUDCS Dubbo College 33.43 137 P P 20 01 32.1 +1.5
AUPHS Peel High Scho 34.33 134 P P 20 01 40.8 +2.3
BRAT Ballarat 34.35 149 P P 20 01 40.6 +2.2
ARMA Armidale 34.50 132 P P 20 01 41.3 +1.3
baz=35,SNR=8.1
ARMA Armidale 34.50 132 P P 20 01 38.5 -1.5
ARMA Armidale 34.50 132 P P 20 01 42.2 +2.2
YNG Young 34.58 140 P P 20 01 42.7 +2.1
GEXS Deakin Univers 35.03 149 P P 20 01 46.7 +2.4

TOO Toolangi 35.17 147 P P 20 01 47.9 +2.3
baz=35,SNR=14
TOO Toolangi 35.17 147 P P 20 01 43.1 -2.4
TOO IAmb IAmb 20 01 49.2
comp=Z,52nm,0.9s
TOO Toolangi 35.17 147 P P 20 01 48.4 +2.8
TOO Toolangi 35.17 147 P P 20 01 43.2 -2.4
TOO pmax pmax
comp=Z,52nm,0.9s
CAN Canberra 35.62 141 P P 20 01 51.1 +1.6
CAN Canberra 35.62 141 P P 20 01 51.4 +1.9
MGCD Mangrove Creek 35.69 137 P P 20 01 52.3 +2.4
baz=36,SNR=10.0
MGCD Mangrove Creek 35.69 137 P P 20 01 52.4 +2.4
CNB Canberra Magne 35.84 141 P P 20 01 53.3 +1.9
baz=36,SNR=9.4
CNB Canberra Magne 35.84 141 P P 20 01 52.9 +1.5
CM31 Chiang Mai Arr 35.89 320 P P 20 01 50.6 -1.3
CM31 Chiang Mai Arr 35.89 320 P P 20 01 51.9 0.0
CM31 P P 20 01 51.9 0.0
CMAR Chiang Mai Arr 35.89 320 P P 20 01 52.1 +0.2
CMAR Chiang Mai Arr 35.89 320 P P 20 01 52.2 +0.3
comp=Z,14nm,0.8s,baz=145,slow=6.7,SNR=127
CMAR PcP PcP 20 04 17.3 +1.2
comp=Z,7.4nm,1.1s,baz=173,slow=2.6,SNR=4.8
CMAR ScP ScP 20 07 50.0 +0.9
comp=Z,5.6nm,1.1s,baz=173,slow=3.0,SNR=7.4
CMAR LR LR 20 18 29.5
comp=Z,100nm,18.3s,baz=140,slow=39
comp=Z,14nm,0.8s
JOW Kunigami 36.10 9 LR LR 20 17 22.3
comp=Z,118nm,20.9s,baz=265,slow=37
AUSMG Snowy Mountain 36.12 143 P P 20 01 55.8 +2.1
CHTO Chiang Mai 36.15 320 P P 20 01 53.3 -0.8
CHTO Chiang Mai 36.15 320 P P 20 01 53.3 -0.8
CHTO pmax pmax
comp=Z,18nm,0.7s
CHTO Chiang Mai 36.15 320 P P 20 01 54.5 +0.4
CHTO pP pP 20 02 24.6 0.0
CHTO PcP PcP 20 04 18.3 +1.4
CHTO ScP ScP 20 07 51.1 +1.0
WOLH Wollongong Har 36.24 138 P P 20 01 55.7 +1.0
CRAI Chiangrai 36.35 323 P P 20 01 56.2 +0.4
CRAI IAmb IAmb 20 01 58.3
comp=Z,47nm,0.8s
AUUHS Ulladulla High 36.57 140 P P 20 01 59.8 +2.3
MILA Mila 36.87 143 P P 20 01 59.8 +1.9
baz=37,SNR=3.7
MILA Mila 36.87 143 P P 20 02 01.8 +1.7
GYA Guiyang 38.51 337 ⇑iP P 20 02 14.4 +0.4
GYA pmax pmax
comp=Z,25nm,0.8s
GYA pmax pmax
comp=Z,160nm,4.3s
KMI Kunming 39.05 331 ⇑P P 20 02 19.5 +0.8
KMI ScP ScP 20 08 02.6 +1.4
KMI pmax pmax
comp=Z,23nm,0.7s
SSE Sheshan 39.93 358 P P 20 02 27.0 +1.5
SSE PcP PcP 20 04 26.8 -1.5
WHN Wuhan 40.14 349 ⇓P P 20 02 28.8 +1.5
WHN pP pwP 20 03 00.2 -1.4
MND Mandalay 40.29 320 P P 20 02 28.5 -0.2
PZH PanZhiHua 40.69 331 P P 20 02 32.3 +0.2
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,210nm,5.1s
NJ2 Nanjing 41.02 355 ⇑iP P 20 02 35.6 +1.1
NJ2 pP pP 20 03 06.6 +1.4
NJ2 pmax pmax
comp=Z,30nm,0.7s
ENH Enshi 41.05 343 P P 20 02 35.1 +0.3
ENH Enshi 41.05 343 P P 20 02 34.9 0.0
TNCH TengChong 41.16 326 ⇑P P 20 02 36.1 +0.1
TNCH pP pwP 20 03 09.5 0.0
TNCH sP sP 20 03 25.6 +2.6
TNCH PcS PcS 20 08 25.9 +1.6
TNCH S S 20 08 38.7 -0.3
TNCH sS sS 20 09 35.5 +3.3
TNCH SS SS 20 11 43.9 -3.9
TNCH pmax pmax
comp=Z,36nm,0.8s
TNCH pmax pmax
comp=Z,130nm,3.4s
KOUNC Koumac, New Ca 41.85 111 P P 20 02 41.1 -0.5
KOUNC IAmb IAmb 20 03 07.5
comp=Z,50nm,1.3s
SAIH SAIHA 42.66 318 eP P 20 02 47.8 -0.4
SAIH IAmb IAmb 20 02 50.0
comp=Z,99nm,0.8s
JNU Nakatsue 42.68 10 LR LR 20 22 04.6
comp=Z,48nm,20.7s,baz=180,slow=38
CD2 Chengdu 43.61 336 eP P 20 02 57.0 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
IMP Imphal 43.70 321 eP P 20 02 55.5 -1.0
IMP IAmb IAmb 20 02 56.9
comp=Z,12nm,0.6s
DZM Mont Dzumac 44.09 112 eP P 20 03 04.4 +4.7
comp=Z,49nm,0.7s
DZM Mont Dzumac 44.09 112 LR LR 20 21 43.5
comp=Z,145nm,19.1s,baz=284,slow=36
ONTNC Ouen Toro 44.14 113 P P 20 02 59.3 -0.7
KOHI KOHIMA 44.25 322 eP P 20 02 59.7 -1.3
KOHI IAmb IAmb 20 03 01.1
comp=Z,43nm,0.8s
LYN LuoYang 44.39 348 ⇑P P 20 03 01.3 -0.4
LYN pP pwP 20 03 36.2 +0.2
LYN pmax pmax
comp=Z,44nm,0.8s
LYN pmax pmax
comp=Z,310nm,4.4s
MOKO MOKOCHONG 44.45 323 eP P 20 03 02.1 -0.4
MOKO IAmb IAmb 20 03 04.3
comp=Z,50nm,0.7s
OUENC Ouen Island, N 44.52 113 P P 20 02 59.0 -3.9
OUENC IAmb IAmb 20 03 00.2
comp=Z,79nm,1.0s
PALK Pallekele 44.71 290 P P 20 03 00.7 -3.9
PALK Pallekele 44.71 290 P P 20 03 00.7 -3.9
PALK pmax pmax
comp=Z,25nm,1.0s
PALK Pallekele 44.71 290 LR LR 20 23 58.0
comp=Z,43nm,19.2s,baz=217,slow=39
XAN Xi'an 44.75 344 ⇑P P 20 03 04.1 -0.5
XAN pmax pmax
comp=Z,100nm,0.8s
XAN Xi'an 44.75 344 P P 20 03 04.1 -0.5
TIA Tai'an 45.30 354 P P 20 03 08.9 0.0
TIA pmax pmax
comp=Z,9.0nm,0.8s
SHL Shillong 45.53 320 P P 20 03 10.5 -0.5
SHL Shillong 45.53 320 P P 20 03 10.5 -0.5
SHL pmax pmax
comp=Z,26nm,0.8s
SHL Shillong 45.53 320 eP P 20 03 09.9 -1.2
SHL Shillong 45.53 320 P P 20 03 10.3 -0.8
KSRS Korea Array 46.53 6 P P 20 03 18.1 -0.4
comp=Z,2.2nm,0.7s,baz=177,slow=9.7,SNR=6.4
KSRS ScP ScP 20 08 31.2 +0.4
comp=Z,3.4nm,1.0s,baz=180,slow=6.7,SNR=4.3
comp=Z,2.2nm,0.7s
HNS HongShan 46.78 351 ⇓P P 20 03 20.4 0.0
HNS pmax pmax
comp=Z,24nm,1.1s
TIY Taiyuan 47.46 349 eP P 20 03 26.9 +1.1
MJAR Matsushiro Arr 47.69 17 P P 20 03 26.1 -1.4
comp=Z,4.0nm,0.6s,baz=192,slow=9.3,SNR=13
MJAR LR LR 20 24 01.7
comp=Z,38nm,20.8s,baz=212,slow=36
comp=Z,4.0nm,0.6s
MAJO Matsushiro 47.69 17 P P 20 03 25.7 -1.8
MAJO IAmb IAmb 20 04 24.3
comp=Z,58nm,1.6s
MAJO Matsushiro 47.69 17 ⇓eP P 20 03 28.6 +1.1
MAJO pmax pmax
comp=Z,40nm,1.7s
LZH Lanzhou 48.22 340 ⇑P P 20 03 32.5 +0.8
LZH pP pP 20 04 04.7 +0.7
LZH pmax pmax
comp=Z,60nm,1.2s
KNTI KHUNTI 48.43 312 eP P 20 03 32.8 -0.7
KOD Kodaikanal 48.75 292 eP P 20 03 34.9 -1.5
GTK Tadong 48.85 319 eP P 20 03 36.7 -0.1

GTK IAmb IAmb 20 03 38.5
comp=Z,55nm,0.7s
LSA Lhasa 48.95 323 P P 20 03 36.7 -1.1
LSA IAmb IAmb 20 03 39.8
comp=Z,60nm,0.8s
LSA Lhasa 48.95 323 *i* P **P 20 03 38.2 +0.4**
SNR=60
LSA Lhasa 48.95 323 P **P 20 03 36.7 -1.1**
LSA pmax pmax
comp=Z,60nm,0.8s
LSA Lhasa 48.95 323 P **P 20 03 38.5 +0.7**
LSA P **P 20 03 38.5 +0.7**
LSA Lhasa 48.95 323 P **P 20 03 38.5 +0.7**
BJT Baijiatuau 49.17 354 P **P 20 03 38.8 0.0**
BJT IAmb IAmb 20 03 39.9
comp=Z,28nm,0.7s
BJT Baijiatuau 49.17 354 P **P 20 03 38.8 0.0**
BJT pmax pmax
comp=Z,28nm,0.7s
BJT Baijiatuau 49.17 354 P **P 20 03 38.2 -0.5**
BJI Beijing 49.19 354 P **P 20 03 38.4 -0.5**
BJI pP **pP 20 04 10.2 -0.5**
BJI sP **sP 20 04 24.6 -1.6**
BJI pmax pmax
comp=Z,20nm,0.7s
DGAR Diego Garcia 49.55 268 *ce*P **P 20 03 44.8 +2.7**
DGAR pmax pmax
comp=Z,98nm,1.0s
JMM Marumori 49.70 19 P **P 20 03 42.5 -0.3**
JMM IAmb IAmb 20 04 23.1
comp=Z,81nm,1.4s
HHC Hu-ho-hao-te 50.66 349 *e*P **P 20 03 54.9 +4.7**
HHC pmax pmax
comp=Z,16nm,0.5s
HHC pmax pmax
comp=Z,110nm,5.1s
BTO Baotou 50.73 348 *e*P **P 20 03 51.8 +1.1**
BTO pP **pP 20 04 24.5 +1.2**
BTO sP **sP 20 04 43.0 +4.0**
BTO PP **PP 20 05 51.7 +3.4**
BTO S **S 20 10 56.7 +1.4**
BTO SS **SS 20 14 30.4 -1.5**
BTO pmax pmax
comp=Z,18nm,0.9s
BTO pmax pmax
comp=Z,450nm,4.7s
BTO LR LR
comp=Z,300nm,4.8s
BTO LR LR
comp=Z,410nm,4.8s
BTO LR LR
comp=Z,180nm,4.0s
HYB Hyderabad 50.78 301⇑ *e*P **P 20 03 50.8 -0.6**
GOMU GeErMu 52.01 332 P **P 20 04 00.8 +0.2**
GOMU pmax pmax
comp=Z,18nm,0.9s
MNCI Minicoy 52.19 288 P **P 20 04 00.5 -1.4**
GTA Gaotai 52.62 338 ⇑P **P 20 04 05.4 +0.7**
GTA pP pP 20 04 37.6 +0.2
GTA S **S 20 11 19.4 -1.8**
GTA pmax pmax
comp=Z,28nm,0.6s
CN2 Changchun 52.66 3 *e*P **P 20 04 04.6 -0.2**
CN2 *e*S **S 20 11 21.6 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
XLT XiLinHaoTe 53.02 354 *e*P **P 20 04 07.4 -0.1**
XLT pP pP 20 04 39.5 -0.8
XLT pmax pmax
comp=Z,38nm,0.8s
XLT pmax pmax
comp=Z,110nm,4.2s
MLZ Mavora Lakes 53.28 141 P **P 20 04 09.4 0.0**
MLZ IAmb IAmb 20 04 11.8
comp=Z,36nm,0.8s
WHZ Wether Hill Ro 53.42 142 P **P 20 04 09.9 -0.5**
AKL Akola 53.61 304 *e*P **P 20 04 10.6 -1.6**
AKL IAmb IAmb 20 04 12.4
comp=Z,49nm,0.8s
USA0B Ussuriysk Arra 53.69 8 P **P 20 04 12.0 -0.3**
USA0B IAmb IAmb 20 04 52.6
comp=Z,104nm,1.9s
USA0B Ussuriysk Arra 53.69 8⇑ *e*P **P 20 04 12.2 -0.1**
USRK Ussuriysk Ar. 53.69 8 P **P 20 04 11.0 -1.3**
USRK Ussuriysk Ar. 53.69 8 P **P 20 04 12.1 -0.2**
USRK ScP **ScP 20 09 01.3 -0.1**
comp=Z,9.8nm,0.5s,baz=191,slow=6.8,SNR=61
comp=Z,2.9nm,0.9s,baz=180,slow=5.8,SNR=3.6
comp=Z,9.8nm,0.5s
MDJ Mudanjiang 53.79 6 P **P 20 04 13.9 +0.9**
MDJ PcS **PcS 20 09 19.7 +3.4**
MDJ S **S 20 11 40.9 +4.3**
MDJ pmax pmax
comp=Z,22nm,0.8s
MDJ pmax pmax
comp=Z,490nm,5.0s
MDJ Mudanjiang 53.79 6 P **P 20 04 12.6 -0.4**
MDJ IAmb IAmb 20 04 53.3
comp=Z,27nm,1.0s
MDJ Mudanjiang 53.79 6 P **P 20 04 13.4 +0.4**
LBZ Lake Benmore 54.14 139 P **P 20 04 15.0 -0.7**
LBZ IAmb IAmb 20 04 17.5
comp=Z,35nm,0.9s
QRZ Quartz Range 54.31 134 P **P 20 04 16.9 -0.1**
RPZ Rata Peaks 54.42 138 LR LR 20 28 54.7
comp=Z,176nm,18.1s,baz=268,slow=37
KAD Karad 54.47 299 *e*P **P 20 04 16.7 -1.8**
KAD IAmb IAmb 20 04 19.3
comp=Z,27nm,1.1s
NRDN NARMADA NAGAR 54.48 306 *e*P **P 20 04 17.8 -0.7**
MRNZ Matariki Terra 54.68 135 P **P 20 04 20.1 +0.4**
ODZ Otahua Downs 54.72 140 P **P 20 04 20.1 +0.3**
ODZ IAmb IAmb 20 04 56.3
comp=Z,124nm,2.0s
OXZ Oxford 54.92 137 P **P 20 04 21.0 -0.4**
OXZ IAmb IAmb 20 04 23.5
comp=Z,44nm,0.9s
GVZ Greta Valley S 55.45 137 P **P 20 04 24.6 -0.6**
TCW Tory Channel 55.68 134 P **P 20 04 25.7 -1.1**
LGTI Lohaghat 55.87 315 *e*P **P 20 04 27.0 -1.3**
PTH Pithoragarh 55.95 315 *e*P **P 20 04 27.1 -2.0**
ASAJ Asahikawa 55.96 17 P **P 20 04 28.5 -0.1**
ASAJ pmax pmax
comp=Z,90nm,1.6s
ASAJ Asahikawa 55.96 17 LR LR 20 28 44.8
comp=Z,24nm,21.9s,baz=215,slow=36
JKA Kamikawa-asahi 55.96 17 P **P 20 04 28.5 -0.1**
MRZ Mangatainoka R 56.43 133 P **P 20 04 31.8 -0.4**
MRZ IAmb IAmb 20 04 34.0
comp=Z,44nm,0.9s
URZ Urewera 56.85 130 P **P 20 04 36.1 +0.9**
comp=Z,24nm,0.9s,baz=7.4,slow=4.1,SNR=8.9
URZ LR LR 20 30 05.6
comp=Z,114nm,18.5s,baz=300,slow=37
comp=Z,24nm,0.9s
KUDL Kundal 57.84 311 *e*P **P 20 04 39.6 -2.6**
ULN Ulaanbaatar 58.30 348 P **P 20 04 45.4 +0.1**
ULN IAmb IAmb 20 04 46.8
comp=Z,34nm,0.9s
ULN Ulaanbaatar 58.30 348 *c i*P **P 20 04 45.3 +0.1**
ULN pmax pmax
comp=Z,36nm,0.9s
ULN Ulaanbaatar 58.30 348 P **P 20 04 45.5 +0.3**
ULN Ulaanbaatar 58.30 348 P **P 20 04 45.5 +0.3**
AJM Ajmer 58.36 309 *e*P **P 20 04 44.8 -1.2**
SONM Songino Array 58.41 347 P **P 20 04 44.5 -1.5**
SONM IAmb IAmb 20 04 47.4
comp=Z,36nm,0.8s
SONM Songino Array 58.41 347 P **P 20 04 44.5 -1.5**
SONM pmax pmax
comp=Z,36nm,0.8s
SONM Songino Array 58.41 347 P **P 20 04 46.1 +0.2**
comp=Z,27nm,0.6s,baz=165,slow=8.4,SNR=248
SONM ScP **ScP 20 09 22.5 +0.3**
comp=Z,1.5nm,0.9s,baz=139,slow=2.4,SNR=3.4
comp=Z,27nm,0.6s
KLP Kalpa 58.49 316 *e*P **P 20 04 44.6 -2.4**
KLR Kul'dur 58.59 7⇑ *i*P **P 20 04 47.1 +0.1**
KLR pmax pmax
comp=Z,12nm,1.4s
YSS Yuzh-Sakhalins 58.60 16 *e*P **P 20 04 48.0 +0.9**
YSS pmax pmax
comp=Z,10.0nm,0.6s
SMLA Simla 59.01 315 *e*P **P 20 04 48.7 -1.6**
HEH HeiHe 59.21 4 *e*P **P 20 04 51.1 -0.1**
HEH pmax pmax
comp=Z,16nm,0.9s
HEH pmax pmax
comp=Z,480nm,4.4s
DHRM DHARAMSHALA 60.25 315 *e*P **P 20 04 57.7 -1.3**
THN Thein Dam 60.76 315 *e*P **P 20 05 01.2 -1.0**
WMQ Urumqi 61.37 332 *e*P **P 20 05 06.8 +0.6**
WMQ S **S 20 13 15.1 -0.7**
WMQ pmax pmax
comp=Z,84nm,0.9s
WMQ pmax pmax
comp=Z,550nm,3.7s
ZAK Zakamensk 61.51 346 *e*P **P 20 05 06.1 -0.9**
ZAK pmax pmax
comp=Z,22nm,1.2s
ZEA Zeya 62.67 3 *e*P **P 20 05 15.4 +0.8**
ZEA *e* 20 05 58.5
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.8s
NIL Nilore 63.16 315 P **P 20 05 17.0 -1.3**
NIL IAmb IAmb 20 05 18.1
comp=Z,39nm,1.1s
NIL Nilore 63.16 315 P **P 20 05 17.0 -1.3**
NIL pmax pmax
comp=Z,39nm,1.1s
NIL Nilore 63.16 315 P **P 20 05 17.2 -1.1**
MOY Mondy 63.25 345 *e*P **P 20 05 19.3 +0.7**
MOY pmax pmax
comp=Z,50nm,1.7s
WUS Wushi 63.90 325 P **P 20 05 23.7 +0.6**
WUS pP **pP 20 05 56.7 -0.5**
WUS sP **sP 20 06 13.0 +0.4**
KSH Kashi 64.75 322 P **P 20 05 29.0 +0.3**
KSH pmax pmax
comp=Z,160nm,0.8s
TARG Taragay, Kyrgy 65.05 324 P **P 20 05 27.9 -3.0**
TARG IAmb IAmb 20 05 34.1
comp=Z,50nm,0.9s
TARG Taragay, Kyrgy 65.05 324 P **P 20 05 27.9 -3.0**
TARG pmax pmax
comp=Z,50nm,0.9s
SHLS Shalkode 65.06 327 *c i*P **P 20 05 29.9 -0.7**
SHLS *e*S **S 20 14 00.5 -1.3**
PRZ Przheval'sk 65.20 325 P **P 20 05 32.3 +0.7**
PRZ Przheval'sk 65.20 325 P **P 20 05 32.3 +0.7**
PRZ pmax pmax
comp=Z,80nm,0.9s
UZB Uzynbulak 65.29 326 *c i*P **P 20 05 32.5 +0.4**
UZB pmax pmax
comp=Z,41nm,1.1s
ZSN Zaisan 65.42 333 *c i*P **P 20 05 33.0 +0.3**
ZSN pmax pmax
comp=Z,33nm,1.1s
SATY Saty 65.57 326 *c i*P **P 20 05 34.4 +0.5**
SATY *e*S **S 20 14 08.7 +0.6**
SATY pmax pmax
comp=Z,51nm,0.9s
ZHN Zhinishke 65.63 326 *c i*P **P 20 05 34.5 +0.2**
ZHN pmax pmax
comp=Z,28nm,0.9s
KPKS Kokpek 65.69 326 *c i*P **P 20 05 35.1 +0.5**
KPKS pmax pmax
comp=Z,58nm,0.9s
NRN Naryn 65.91 323 P **P 20 05 36.0 -0.4**
NRN Naryn 65.91 323 P **P 20 05 36.0 -0.4**
NRN pmax pmax
comp=Z,46nm,0.8s
CCD Concordia, Ant 66.03 180 P **P 20 05 39.3 +2.6**
DGZ Jazzator, Alta 66.05 336 *c i*P **P 20 05 37.2 +0.4**
DGZ pmax pmax
comp=Z,79nm,1.0s
MK31 Makanchi Array 66.13 331 P **P 20 05 37.4 +0.2**
MK31 Makanchi Array 66.13 331 *c i*P **P 20 05 37.5 +0.2**
MKAR Makanchi Array 66.13 331 P **P 20 05 37.6 +0.3**
comp=Z,71nm,0.8s,baz=138,slow=7.7,SNR=536
MKAR S **S 20 14 12.8 -1.6**
comp=Z,1.7nm,0.9s,baz=144,slow=17,SNR=7.7
MKAR PKP2bc **P'P'bc 20 34 15.6 +1.4**
comp=Z,0.3nm,0.8s,baz=252,slow=2.4,SNR=3.6
comp=Z,71nm,0.8s
MAKZ Makanchi 66.29 331 P **P 20 05 38.2 -0.1**
MAKZ IAmb IAmb 20 05 39.5
comp=Z,48nm,0.9s
MAKZ Makanchi 66.29 331 P **P 20 05 38.2 -0.1**
MAKZ pmax pmax
comp=Z,48nm,0.9s
MAKZ Makanchi 66.29 331 ⇑P **P 20 05 38.4 +0.1**
MAKZ sP **sP 20 06 26.4 -1.6**
TNSS Tian-Shan 66.38 325 *e*P **P 20 05 39.8 +0.4**
MDOK Medeo 66.40 325 *i*P **P 20 05 39.7 +0.5**
AAA Alma-Ata 66.50 325 *e*P **P 20 05 40.2 +0.4**
AAA pmax pmax
comp=Z,53nm,0.8s
KBL Kabul 66.60 314 P **P 20 05 40.0 -0.7**
KBL IAmb IAmb 20 05 40.5
comp=Z,21nm,0.7s
KBL Kabul 66.60 314 P **P 20 05 40.0 -0.7**
KBL pmax pmax
comp=Z,21nm,0.7s
KBL Kabul 66.60 314 P **P 20 05 40.1 -0.7**
SNR=12
MSEY Mahe Island 66.63 269 P **P 20 05 43.4 +2.3**
TDK Taldyqorghan 66.86 328 *c i*P **P 20 05 42.4 +0.5**
CHKK Chushkaly 66.88 326⇑ *i*P **P 20 05 42.0 -0.1**
BOD Bodaibo 67.00 355 *e*P **P 20 05 43.0 +0.5**
BOD pmax pmax
comp=Z,22nm,1.5s
TKM2 Tokmak 2 67.07 324 P **P 20 05 43.8 +0.2**
SNR=41
KUU Kurty 67.26 326 *c i*P **P 20 05 44.5 0.0**
UCH Uchtor 67.28 323 P **P 20 05 45.6 +0.4**
SNR=30
KBK Karagaybulak 67.28 324 P **P 20 05 45.4 +0.5**
SNR=41
AAK Ala-Archa 67.54 324 P **P 20 05 47.0 +0.6**
SNR=56
AAK Ala-Archa 67.54 324 P **P 20 05 46.8 +0.4**
AAK Ala-Archa 67.54 324 *i*P **P 20 05 47.0 +0.6**
SNR=73
AAK Ala-Archa 67.54 324 *c i*P **P 20 05 46.8 +0.4**
AAK pmax pmax
comp=Z,77nm,0.8s
AAK Ala-Archa 67.54 324 P **P 20 05 46.6 +0.1**
comp=Z,60nm,0.8s,baz=136,slow=5.1,SNR=178
AAK LR LR 20 40 17.5
comp=Z,75nm,18.1s,baz=126,slow=40
comp=Z,60nm,0.8s
AAK Ala-Archa 67.54 324 P **P 20 05 46.8 +0.4**
AAK Ala-Archa 67.54 324 ⇑P **P 20 05 46.9 +0.4**
CHMS Chumysh 67.61 324 P **P 20 05 46.4 -0.4**
SNR=23
ARSB Arslanbob 67.66 322 P **P 20 05 46.7 -0.6**
ARSB IAmb IAmb 20 05 48.5
comp=Z,41nm,0.8s
ARSB Arslanbob 67.66 322 P **P 20 05 46.7 -0.6**
ARSB pmax pmax
comp=Z,41nm,0.8s
USP Ospenovka 67.92 324 P **P 20 05 48.8 +0.2**
SNR=43
EKS2 Erkin-Say 67.97 323 P **P 20 05 49.8 +0.6**
SNR=38
BTK Batken 68.30 320 P **P 20 05 51.1 -0.1**
BTK IAmb IAmb 20 05 53.2
comp=Z,51nm,0.9s
BTK Batken 68.30 320 P **P 20 05 51.1 -0.1**
BTK pmax pmax
comp=Z,51nm,1.0s
SIMJ Simiganj 68.73 318 ⇑P **P 20 05 53.3 -0.6**
PEA0B Petropavlovsk- 68.77 22 P **P 20 05 54.0 +0.3**
PEA0B IAmb IAmb 20 06 46.3
comp=Z,36nm,1.1s
PEA0B Petropavlovsk- 68.77 22 P **P 20 05 54.0 +0.3**
PEA0B pmax pmax
comp=Z,36nm,1.1s
PETK Petropavlovsk- 68.77 22 P **P 20 05 53.9 +0.2**
PETK Petropavlovsk- 68.77 22 P **P 20 05 53.9 +0.2**
PETK Petropavlovsk- 68.77 22 P **P 20 05 52.9 -0.9**
comp=Z,11nm,0.8s,baz=236,slow=2.0,SNR=11
comp=Z,11nm,0.8s
JLN Jalan Bani Buh 69.17 298 P **P 20 05 54.8 -2.0**
BTLS Baital 69.26 325 *c i*P **P 20 05 56.7 -0.2**
DZA Taraz 69.57 322 *e*P **P 20 05 58.4 -0.5**
DZA pmax pmax
comp=Z,21nm,0.6s
SEM Semipalatinsk 69.66 333 *e*P **P 20 05 58.9 -0.6**
MHTO MHTO 70.06 296 P **P 20 06 01.2 -1.1**
MHTO P **P 20 06 01.2 -1.1**
DQM DQM 70.11 295 P **P 20 06 01.5 -1.2**
H04N2 CROZET ISLANDS 70.18 224 T T 21 21 38.2
baz=83,slow=75,SNR=6.3
KK31 Karatay Array 70.19 322 P **P 20 06 02.8 +0.2**
KK31 IAmb IAmb 20 06 04.1
comp=Z,24nm,0.9s
KK31 Karatay Array 70.19 322 P **P 20 06 02.8 +0.2**
KK31 pmax pmax
comp=Z,24nm,1.0s
KKAR Karatay Array 70.19 322 P **P 20 06 02.0 -0.6**
KKAR Karatay Array 70.19 322 P **P 20 06 02.9 +0.2**
KKAR IAmb IAmb 20 06 04.1
comp=Z,24nm,0.9s
KKAR Karatay Array 70.19 322 P **P 20 06 02.9 +0.2**
KKAR pmax pmax
comp=Z,24nm,1.0s
H04N3 CROZET ISLANDS 70.20 224 T T 21 21 22.3
baz=83,slow=75,SNR=7.2
H04N1 CROZET ISLANDS 70.20 224 T T 21 21 52.0
baz=83,slow=75,SNR=10.0
WSAR Wadi Sarin 70.21 299 P **P 20 06 02.7 -0.4**
CHM Chimkent 70.31 321 *e*P **P 20 06 03.5 +0.1**
ZAA0 Zalesovo Array 70.37 337 P **P 20 06 02.6 -0.8**
ZALV Zalesovo Beam 70.37 337 P **P 20 06 02.9 -0.6**
ZALV Zalesovo Beam 70.37 337 P **P 20 06 02.9 -0.6**
ZALV Zalesovo Beam 70.37 337 P **P 20 06 02.7 -0.8**
comp=Z,60nm,0.6s,baz=136,slow=4.5,SNR=335
ZALV S **S 20 14 59.3 -5.0**
comp=Z,1.5nm,0.8s,baz=120,slow=8.8,SNR=6.5
ZALV LR LR 20 38 33.3
comp=Z,68nm,18.2s,baz=112,slow=37
comp=Z,60nm,0.6s
JMDO Jabal Madar 70.38 298 P **P 20 06 03.2 -1.0**
KURBB Kurchatov Arra 70.59 332 P **P 20 06 04.5 -0.4**
comp=Z,35nm,0.8s,baz=147,slow=5.2,SNR=339
KURBB S **S 20 15 04.2 -2.9**
comp=Z,0.2nm,0.3s,baz=116,slow=14,SNR=1.2
comp=Z,35nm,0.8s
KURK Kurchatov 70.62 332 P **P 20 06 05.0 -0.1**
KURK Kurchatov 70.62 332 *c i*P **P 20 06 04.9 -0.1**
KURK pmax pmax
comp=Z,146nm,1.3s
KURK Kurchatov 70.62 332 P **P 20 06 05.6 +0.6**
KURK P **P 20 06 05.6 +0.6**
KURK Kurchatov 70.62 332⇑P **P 20 06 05.0 -0.1**
SMDO Samad 70.65 298 P **P 20 06 05.3 -0.7**
BIDO Bidbid 70.74 299 P **P 20 06 06.2 -0.2**
YAK Yakutsk 71.08 4 P **P 20 06 07.6 +0.1**
YAK IAmb IAmb 20 06 12.9
comp=Z,38nm,0.8s
YAK Yakutsk 71.08 4 *e*P **P 20 06 07.5 -0.1**
YAK *e* 20 06 24.5
YAK *e**PP **pP 20 06 41.2 -1.2**
YAK *e* 20 08 46.0
YAK *e*PPP PPP 20 10 30.6
YAK *e*S **S 20 15 12.2 0.0**
YAK *e* 20 15 57.8
YAK pmax pmax
comp=Z,38nm,1.1s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=Z,124nm,5.4s
YAK pmax pmax
comp=N,181nm,6.6s
YAK pmax pmax
comp=E,182nm,9.4s
YAK smax smax
comp=E,164nm,4.5s
YAK smax smax
comp=N,112nm,3.9s
YAK Yakutsk 71.08 4 P **P 20 06 07.5 -0.1**
YAK PcP **PcP 20 06 27.1 +0.2**
BSY Bisya 71.29 298 P **P 20 06 08.8 -1.0**
VNDA Vanda 71.42 172 P **P 20 06 09.7 +0.2**
VNDA Vanda 71.42 172 P **P 20 06 09.7 +0.2**
VNDA pmax pmax
comp=Z,17nm,1.2s
VNDA Vanda 71.42 172 P **P 20 06 10.6 +1.1**
comp=Z,4.8nm,0.5s,baz=314,slow=7.4,SNR=36
VNDA LR LR 20 37 20.0
comp=Z,178nm,19.1s,baz=328,slow=35
comp=Z,4.8nm,0.5s
VNDA Vanda 71.42 172 P **P 20 06 10.8 +1.3**
JASK Jask - Hormozg 71.75 301 P **P 20 06 12.3 -0.1**
DMTO DMTO 71.82 292 P **P 20 06 12.7 -0.3**
ARQ Araqi 72.07 298 P **P 20 06 12.7 -1.7**
SOHO SOHO 72.32 299 *i*P **P 20 06 16.0 +0.2**
SNR=8.0
SOHO SOHO 72.32 299 P **P 20 06 15.5 -0.3**
SBA Scott Base 72.39 171 P **P 20 06 15.2 -0.1**
SBA IAmb IAmb 20 07 50.3
comp=Z,150nm,2.0s
SBA Scott Base 72.39 171 P **P 20 06 15.2 -0.1**
SBA pmax pmax
comp=Z,150nm,2.0s
DOK Doka 72.82 293 P **P 20 06 18.1 -0.8**
DOK P **P 20 06 18.2 -0.7**
UOSS Minazif 72.86 300 P **P 20 06 17.4 -1.7**
UOSS Minazif 72.86 300 P **P 20 06 17.9 -1.2**
UOSS Minazif 72.86 300 P **P 20 06 18.4 -0.7**
HATD Hatta, Dubai 72.88 299 P **P 20 06 18.4 -0.8**
HATD Hatta, Dubai 72.88 299 P **P 20 06 19.2 0.0**
MDH Madha 72.89 300 P **P 20 06 17.3 -1.9**
ASHO Ashiyiah 72.90 299 *i*P **P 20 06 19.0 -0.4**
SNR=11
ASHO Ashiyiah 72.90 299 P **P 20 06 18.8 -0.5**
WHFO Wadi Hawf 72.95 292 P **P 20 06 19.0 -0.8**
SNR=6.9
ALNE Al Ain 72.97 299 P **P 20 06 19.5 -0.2**
BRZS Berezniki 73.03 329 *c i*P **P 20 06 19.4 -0.1**
MSFE Esma-Masafi 73.03 300 P **P 20 06 20.0 -0.1**
MASF Masafi 73.03 300 P **P 20 06 20.1 -0.1**
UMZA Um Al Zommool 73.07 297 P **P 20 06 19.6 -0.7**
ABTO Aybut 73.24 291 P **P 20 06 21.1 -0.3**
FAQ Al Faqa, Dubai 73.32 299 *i*P **P 20 06 21.1 -0.6**
SNR=24
FAQ Al Faqa, Dubai 73.32 299 P **P 20 06 21.5 -0.3**
NAZ Nazwa, Dubai 73.34 299 P **P 20 06 21.3 -0.5**
VOI Vohitsoka 73.49 250 P **P 20 06 25.9 +2.9**
ASUD Al Ashush, Dub 73.51 299 P **P 20 06 22.7 -0.2**
AJN Ajban 73.79 299 P **P 20 06 23.2 -1.3**
MZWR Madinat Zayed 74.51 298 P **P 20 06 28.3 -0.3**
SEY Seymchan 75.35 14⇑ *e*P **P 20 06 32.9 +0.3**
SEY pmax pmax
comp=Z,16nm,0.8s
JRN Qarnain Island 75.76 299 P **P 20 06 35.6 -0.2**
GEYT Alibeck 76.00 313 P **P 20 06 36.1 -0.8**
GEYT IAmb IAmb 20 06 38.5
comp=Z,126nm,1.8s
GEYT Alibeck 76.00 313 P **P 20 06 36.2 -0.8**
GEYT pmax pmax
comp=Z,126nm,1.8s
GEYT Alibeck 76.00 313 P **P 20 06 37.2 +0.2**
comp=Z,12nm,0.7s,baz=145,slow=5.4,SNR=47
comp=Z,12nm,0.7s
GYA0B ALIBECK ARRAY 76.00 313 P **P 20 06 36.4 -0.6**
GYA0B IAmb IAmb 20 06 38.4
comp=Z,92nm,1.7s
BVAR Borovoye Array 76.01 331 P **P 20 06 36.3 -0.4**
comp=Z,17nm,0.8s,baz=134,slow=7.2,SNR=76
BVAR S **S 20 16 03.4 -4.7**
comp=Z,0.5nm,0.5s,baz=81,slow=13,SNR=3.7
BVAR LR LR 20 42 17.5
comp=Z,52nm,18.0s,baz=126,slow=37
comp=Z,17nm,0.8s
BRVK Borovoye 76.08 331 P **P 20 06 35.8 -1.3**
BRVK Borovoye 76.08 331 *d i*P **P 20 06 36.2 -0.8**
BRVK pmax pmax
comp=Z,25nm,1.0s
BRVK Borovoye 76.08 331 P **P 20 06 36.9 -0.1**
SLWR Sila 76.52 297 P **P 20 06 40.2 +0.2**
SLWR P **P 20 06 40.2 +0.2**
TRNA Turayna 77.12 298 P **P 20 06 43.5 0.0**
SMRA Abu-Samra 77.46 298 P **P 20 06 45.3 -0.1**
SNR=8.2
SHMA Al-Shehemyia 77.65 299 P **P 20 06 46.3 -0.1**
SNR=16

ABKAR **Akbulak array** 79.63 324 P **P** 20 06 55.8 -0.9
ABKAR **Akbulak array** 79.63 324 P **P** 20 06 55.5 -1.2
ABKAR IAmb IAmb 20 06 57.2
comp=Z,28nm,1.4s
ADK Adak 79.86 33 P **P** 20 06 58.0 +0.1
ADK Adak 79.86 33 P **P** 20 06 58.0 +0.1
ADK pmax pmax
comp=Z,123nm,1.3s
TIXI Tiksi 80.63 2 P **P** 20 07 01.5 -0.2
TIXI Tiksi 80.63 2⇓*i* P **P** 20 07 01.3 -0.3
TIXI pmax pmax
comp=Z,22nm,1.0s
QSPA South Pole Qui 80.95 180 P **P** 20 07 03.6 -0.2
QSPA IAmb IAmb 20 07 06.5
comp=Z,25nm,0.7s
AKTO Aktyubinsk 81.27 324 P **P** 20 07 04.7 -0.8
comp=Z,11nm,0.7s,baz=110,slow=4.0,SNR=26
comp=Z,11nm,0.7s
RAYN Ar Rayn 81.85 295 P **P** 20 07 09.3 +0.1
RAYN IAmb IAmb 20 07 10.7
comp=Z,62nm,0.9s
RAYN Ar Rayn 81.85 295 *i* P **P** 20 07 09.7 +0.5
SNR=72
RAYN Ar Rayn 81.85 295 P **P** 20 07 09.3 +0.1
RAYN pmax pmax
comp=Z,62nm,0.9s
NRIK Noril'sk 81.88 348 P **P** 20 07 08.4 +0.2
NRIK Noril'sk 81.88 348*c i* P **P** 20 07 08.7 +0.4
NRIK pmax pmax
comp=Z,29nm,1.1s
NRIK Noril'sk 81.88 348 P **P** 20 07 08.3 0.0
comp=Z,35nm,1.2s,baz=135,slow=5.7,SNR=16
NRIK S **S** 20 17 05.7 -4.0
comp=Z,0.8nm,0.3s,baz=135,slow=1.4,SNR=5.7
comp=Z,35nm,1.2s
SVE Sverdlovsk 82.79 331 *e*P **P** 20 07 12.7 -0.6
SVE pmax pmax
comp=Z,34nm,1.3s
LKRN Lenkeran, Azer 83.16 311 P **P** 20 07 16.4 +0.8
ARU Arti 83.62 330 P **P** 20 07 17.6 +0.1
ARU Arti 83.62 330*c i* P **P** 20 07 16.5 -1.0
ARU *PP **pP** 20 07 48.4 -5.0
ARU S **SKSac** 20 17 24.6 -2.1
ARU pmax pmax
comp=Z,17nm,1.0s
ARU Arti 83.62 330 P **P** 20 07 16.3 -1.3
comp=Z,6.1nm,0.7s,baz=122,slow=4.0,SNR=12
ARU LR LR 20 47 38.2
comp=Z,38nm,18.9s,baz=132,slow=38
comp=Z,6.1nm,0.7s
KIBK Kibwezi 84.18 269 P **P** 20 07 21.2 -0.2
KIBK Kibwezi 84.18 269 P **P** 20 07 21.3 -0.2
KIBK Kibwezi 84.18 269 *e*P **P** 20 07 21.4 -0.1
ELIB Princess Elisa 84.30 198 *d*PcP **PcP** 20 07 23.8 -0.6
MNGR Mingechevir, A 85.00 312 P **P** 20 07 25.3 +0.4
SEKA Sheki 85.05 313 P **P** 20 07 25.8 +0.6
KMBO Kilima Mbogo 85.15 270 *i* P **P** 20 07 28.2 +1.7
KMBO pmax pmax
comp=Z,15nm,0.9s
KMBO Kilima Mbogo 85.15 270 P **P** 20 07 27.3 +0.8
comp=Z,15nm,0.9s,baz=68,slow=7.2,SNR=26
comp=Z,15nm,0.9s
PPT2 Papeete2 85.33 107 *e*P **P** 20 07 24.8 -2.3
comp=Z,50nm,27.8s
PPT2 Papeete2 85.33 107 *e*S **S** 20 17 44.6 -2.0
comp=Z,54nm,26.2s
PPT2 Papeete2 85.33 107 *e*LR LR 20 34 24.5
comp=Z,126nm,28.0s
PPT2 *e*LR LR 20 34 45.9
comp=Z,83nm,29.8s
PPT Papeete 85.34 107 LR LR 20 44 35.8
comp=Z,16nm,19.1s,baz=282,slow=35
GANJ Ganja 85.53 312 P **P** 20 07 28.5 +1.0
ZKTA Zakatala 85.58 313 P **P** 20 07 28.5 +0.7
NAX Nakhchivan 85.75 311 P **P** 20 07 29.6 +0.9
GNI Garni 86.56 311 P **P** 20 07 33.4 +0.6
GNI Garni 86.56 311 P **P** 20 07 33.8 +1.0
GNI Garni 86.56 311*c i* P **P** 20 07 33.0 +0.2
GNI pmax pmax
comp=Z,13nm,0.8s
GNI Garni 86.56 311 P **P** 20 07 33.3 +0.6
comp=Z,8.9nm,0.7s,baz=190,slow=8.1,SNR=8.9
GNI LR LR 20 50 19.7
comp=Z,22nm,21.9s,baz=92,slow=38
comp=Z,8.9nm,0.7s
GNI Garni 86.56 311 P **P** 20 07 33.0 +0.2
LODK Lodwar 87.73 274 P **P** 20 07 38.2 -0.6
LODK Lodwar 87.73 274 P **P** 20 07 40.0 +1.2
AKH Akhalkalaki 87.79 312 P **P** 20 07 39.0 +0.3
AKH Akhalkalaki 87.79 312 P **P** 20 07 39.0 +0.3
AKH pmax pmax
comp=Z,67nm,0.8s
ZEI Tsey 87.83 314 *e*P **P** 20 07 38.0 -0.9
ZEI pmax pmax
comp=Z,11nm,0.8s
BELG Belogornoye 88.03 324⇓*i* P **P** 20 07 38.9 -0.4
BELG pmax pmax
comp=Z,4.0nm,0.9s
BELG Belogornoye 88.03 324 P **P** 20 07 38.6 -0.7
comp=Z,15nm,0.8s,baz=195,slow=4.2,SNR=5.7
comp=Z,15nm,0.8s
ONI Oni 88.11 313 P **P** 20 07 40.2 +0.2
ONI IAmb IAmb 20 07 53.9
comp=Z,23nm,1.5s
ONI Oni 88.11 313 P **P** 20 07 40.2 +0.2
ONI pmax pmax
comp=Z,23nm,1.5s
GURO Guroymak-BITLI 88.22 309 P **P** 20 07 41.6 +0.9
GURO IAmb IAmb 20 07 43.3
comp=Z,21nm,1.0s
KBZ Khabaz 88.77 315*c i* P **P** 20 07 42.8 -0.2
KBZ pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 88.77 315 P **P** 20 07 43.1 +0.1
comp=Z,7.9nm,0.8s,baz=113,slow=5.1,SNR=16
KBZ LR LR 20 54 59.9
comp=Z,17nm,19.9s,baz=85,slow=40
comp=Z,7.9nm,0.8s
KVAR Kislovodsk Arr 88.97 315 P **P** 20 07 44.9 +0.8
comp=Z,1.5nm,0.7s,baz=180,slow=2.0,SNR=1.1
comp=Z,1.5nm,0.7s
KIV Kislovodsk 88.97 315 P **P** 20 07 44.2 +0.1
KIRV Kirov 89.01 330*de*P **P** 20 07 43.1 -0.6
KIRV Kirov 89.01 330 P **P** 20 07 42.2 -1.5
comp=Z,13nm,1.0s,baz=156,slow=12,SNR=3.9
comp=Z,13nm,1.0s
TROLL Troll, Antarti 90.28 196 ⇓P **P** 20 07 52.1 +2.3
comp=Z,72nm,0.7s
ARPR Arapgir-MALATY 91.16 309 P **P** 20 07 53.6 -0.9
ARPR IAmb IAmb 20 07 55.9
comp=Z,12nm,0.8s
VRH Novokhopyorsk 91.26 322 *e*P **P** 20 07 51.8 -2.6
VRH pmax pmax
comp=Z,10.0nm,0.7s
MBAR Mbarara 91.66 269 LR LR 20 43 47.9
comp=Z,25nm,18.9s,baz=112,slow=32
LSZ Lusaka 91.78 254 P **P** 20 07 56.0 -1.8
LSZ Lusaka 91.78 254 P **P** 20 07 56.0 -1.8
LSZ pmax pmax
comp=Z,39nm,1.2s
LSZ Lusaka 91.78 254 P **P** 20 07 59.8 +2.0
SNAA Sanae 91.87 195 P **P** 20 07 56.1 -0.9
SNAA IAmb IAmb 20 08 41.6
comp=Z,25nm,1.6s
SNAA Sanae 91.87 195 ⇓P **P** 20 07 59.2 +2.1
comp=Z,123nm,0.7s
SNAA Sanae 91.87 195⇑*i* P **P** 20 07 59.4 +2.3
SNAA Sanae 91.87 195 LR LR 20 49 44.9
comp=Z,93nm,18.8s,baz=172,slow=36
BOSA Boshof 92.02 241 P **P** 20 07 57.5 -1.3
BOSA IAmb IAmb 20 08 01.8
comp=Z,18nm,1.1s
BOSA Boshof 92.02 241 P **P** 20 07 57.5 -1.3
BOSA pmax pmax
comp=Z,18nm,1.1s
BOSA Boshof 92.02 241 P **P** 20 07 59.9 +1.1
comp=Z,6.5nm,0.6s,baz=110,slow=3.8,SNR=20
comp=Z,6.5nm,0.6s
BELA Belgrano 2 92.28 185 P **P** 20 07 59.1 +0.3
EIL Elat 92.32 300 LR LR 20 52 33.9
comp=Z,11nm,20.3s,baz=106,slow=37
LBTB Lobatse 92.42 244 P **P** 20 07 59.3 -1.3
LBTB IAmb IAmb 20 08 03.9
comp=Z,16nm,0.9s
LBTB Lobatse 92.42 244 P **P** 20 07 59.3 -1.3
LBTB pmax pmax
comp=Z,16nm,1.0s
LBTB Lobatse 92.42 244 LR LR 20 44 00.5
comp=Z,50nm,20.3s,baz=129,slow=32
MMAI Mount Meron Ar 92.46 303 P **P** 20 08 01.1 +0.5
comp=Z,2.7nm,0.6s,baz=91,slow=7.5,SNR=11
MMAI LR LR 20 52 10.4
comp=Z,33nm,22.0s,baz=88,slow=37
comp=Z,2.7nm,0.6s
VORD Divnogorie 92.71 321 *e*P **P** 20 07 58.4 -2.7
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 92.84 321 *e*P **P** 20 07 58.4 -3.3
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 92.90 322 *e*P **P** 20 07 59.9 -2.1
VORR pmax pmax
comp=Z,20nm,0.4s
KLMR Klimovskoe 94.43 331 *e*P **P** 20 08 04.3 -4.5
KLMR pmax pmax
comp=Z,23nm,1.5s
MOS Moscow 94.54 326 *e*P **P** 20 08 07.1 -2.3
BR131 Keskin Array S 94.85 309*d i* P **P** 20 08 10.6 -0.9
BR131 Keskin Array S 94.85 309 P **P** 20 08 10.6 -0.9
BRTR Keskin Array B 94.85 309 P **P** 20 08 09.8 -1.6
BRTR Keskin Array B 94.85 309 *i* P **P** 20 08 10.6 -0.9
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 94.85 309 P **P** 20 08 10.4 -1.0
comp=Z,5.7nm,0.9s,baz=122,slow=5.8,SNR=28
comp=Z,5.7nm,0.9s
KDAK Kodiak Island 94.87 32 LR LR 20 45 44.2
comp=Z,20nm,21.1s,baz=267,slow=32
OBN Obninsk 95.03 325 *i* P **P** 20 08 09.7 -2.0
OBN *i* 20 12 08.0
OBN pmax pmax
comp=Z,12nm,1.0s
ILAR Eielson Array 98.37 26 P **P** 20 08 24.7 -1.9
comp=Z,0.9nm,1.0s,baz=249,slow=5.7,SNR=6.6
comp=Z,0.9nm,1.0s
AKASG Malin Array Be 99.01 320 P **Pdif** 20 08 27.8 -2.0
comp=Z,3.7nm,0.8s,baz=82,slow=4.1,SNR=6.7
AKASG PP **PP** 20 12 32.8 -0.9
comp=Z,2.1nm,0.9s,baz=86,slow=6.0,SNR=5.0
comp=Z,3.7nm,0.8s
AKBB Malin Array Si 99.01 320⇑*e*P **Pdif** 20 08 28.3 -1.5
AKBB pmax pmax
comp=Z,8.0nm,0.9s
ARCES ARCESS Array B 100.87 339 P **Pdif** 20 08 36.3 -1.4
comp=Z,5.1nm,0.9s,baz=82,slow=6.6,SNR=2.8
FINES FINESS Array B 100.97 331 P **Pdif** 20 08 36.4 -1.8
comp=Z,5.5nm,1.1s,baz=174,slow=2.5,SNR=2.3
SPITS Spitsbergen Ar 102.09 348 P **Pdif** 20 08 42.3 -0.6
comp=Z,22nm,1.1s,baz=48,slow=2.1,SNR=2.1
GERES GERESS Array B 109.13 319 PKiKP **PKiKP** 20 13 18.9 +0.5
comp=Z,1.2nm,0.8s,baz=93,slow=2.7,SNR=5.8
ABTA Abfaltersbach 110.23 316 *e*PKiKP **PKiKP** 20 13 21.0 +0.4
comp=Z,2.2nm,0.7s
WTTA Wattenberg 110.74 317 *e*PKiKP **PKiKP** 20 13 22.1 +0.5
comp=Z,3.7nm,0.6s
WATA Walderalm 110.77 317 *e*PKiKP **PKiKP** 20 13 22.0 +0.4
comp=Z,1.1nm,0.6s
MOTA Moosalm 111.08 317 *i* PKiKP **PKiKP** 20 13 22.5 +0.3
comp=Z,1.8nm,0.6s
FETA Feichten 111.39 317 *e*PKiKP **PKiKP** 20 13 23.4 +0.5
comp=Z,1.4nm,0.7s
YKA Yellowknife Ar 112.79 25 PKiKP **PKiKP** 20 13 24.4 -0.4
comp=Z,0.8nm,0.8s,baz=298,slow=2.0,SNR=9.3
YKA SKP **SKPdf** 20 16 46.5 -0.6
comp=Z,0.7nm,0.7s,baz=298,slow=2.1,SNR=5.8
KEST Kesra 114.02 305 PKiKP **PKiKP** 20 13 29.0 +1.0
comp=Z,12nm,1.3s,baz=117,slow=4.5,SNR=4.2
EKA Eskdalemuir Ar 117.22 329 PKP **PKiKP** 20 13 33.9 +0.5
comp=Z,0.1nm,0.3s,baz=36,slow=3.8,SNR=1.4
NVAR Mina Array Bea 118.35 51 PKP **PKiKP** 20 13 36.7 +0.1
comp=Z,0.3nm,0.2s,baz=247,slow=2.3,SNR=6.5
HLID Hailey 119.94 45 PKPdf **PKiKP** 20 13 41.7 +2.2
ELK Elko 120.13 48 PKP **PKPdf** 20 13 39.7 -0.2
comp=Z,1.7nm,0.8s,baz=325,slow=3.4,SNR=7.3
TOA0 Torodi Ar. Sit 121.89 280 PKPdf **PKiKP** 20 13 44.7 +0.9
TORD Torodi Ar. Bea 121.89 280 PKPdf **PKiKP** 20 13 44.7 +0.9
TORD Torodi Ar. Bea 121.89 280 PKP **PKiKP** 20 13 44.1 +0.3
comp=Z,13nm,0.7s,baz=56,slow=2.9,SNR=76
ESDC Sonseca Array 123.54 312 PKPdf **PKiKP** 20 13 47.7 +1.2
ESDC Sonseca Array 123.54 312 PKP **PKiKP** 20 13 46.4 -0.1
comp=Z,3.5nm,0.8s,baz=4.1,slow=3.3,SNR=15
PDAR Pinedale Array 123.56 44 PKKP **PKKPdf** 20 24 14.6 -0.3
comp=Z,0.3nm,0.5s,baz=106,slow=7.0,SNR=4.6
PGAV Gavieira, Arco 125.82 316 *e*PKPdf **PKiKP** 20 13 52.4 +1.4
MTE Manteigas 125.90 314 *e*PKPdf **PKiKP** 20 13 52.9 +1.7
PCBR Castelo Branco 126.05 313 *e*PKPdf **PKiKP** 20 13 52.8 +1.4
KIC Kosan Boka 127.70 271⇑*e*PKP2 **PKiKP** 20 13 55.5 +0.1
comp=Z,26nm,0.8s
MORF Marmelete 127.79 311 *e*PKPdf **PKiKP** 20 13 57.0 +2.0
DBIC Dimbokro 127.85 271 PKPdf **PKiKP** 20 13 56.8 +1.1
DBIC Dimbokro 127.85 271 PKP **PKiKP** 20 13 55.4 -0.3
comp=Z,16nm,0.9s,baz=89,slow=3.7,SNR=15
LIC Lamto 127.97 271⇑*e*PKP2 **PKiKP** 20 13 56.1 +0.2
comp=Z,32nm,0.8s
TIC Tumodi 128.01 271⇑*e*PKP2 **PKiKP** 20 13 57.1 +1.1
comp=Z,31nm,0.9s
ULM Lac du Bonnet 128.08 30 PKP **PKPdf** 20 13 53.5 -1.0
comp=Z,1.6nm,0.6s,baz=302,slow=9.5,SNR=2.4
ANMO Albuquerque 128.44 52 PKP **PKiKP** 20 13 57.4 +0.8
comp=Z,0.8nm,0.7s,baz=271,slow=2.7,SNR=4.8
PLCA Paso Flores 129.02 167 PKP **PKiKP** 20 13 59.2 +1.7
comp=Z,0.2nm,0.4s,baz=275,slow=12,SNR=0.9
PLCA SKPbc SKPbc 20 17 06.2 +1.2
comp=Z,2.1nm,0.8s,baz=254,slow=3.7,SNR=5.0
TXAR Lajitas Array 132.32 58 PKP **PKiKP** 20 14 05.0 +0.6
comp=Z,1.0nm,0.8s,baz=189,slow=1.3,SNR=8.5
TXAR SKPbc **SKPbc** 20 17 16.9 -0.1
comp=Z,4.1nm,1.1s,baz=290,slow=3.6,SNR=11
SCHQ Schefferville 133.73 7 PKP **PKiKP** 20 14 06.5 +0.1
comp=Z,1.6nm,0.6s,baz=315,slow=1.4,SNR=1.5
SCHQ SKPbc **SKPbc** 20 17 20.6 -0.3
comp=Z,8.8nm,0.8s,baz=11,slow=5.0,SNR=8.7
S39A Bolivar 136.91 43 PKPdf **PKiKP** 20 14 14.2 +0.8
SADO Sadowa 139.78 24 PKP **PKPdf** 20 14 15.2 -1.4
comp=Z,5.9nm,1.0s,baz=27,slow=2.3,SNR=2.3
SADO SKPbc **SKPbc** 20 17 38.8 -0.5
comp=Z,8.0nm,0.9s,baz=32,slow=3.7,SNR=4.6
GO02 Mina Guanaco 144.01 161 PKPdf **PKPdf** 20 14 25.4 +0.3
PB14 IPOC Station P 144.24 160 PKPdf **PKPdf** 20 14 25.8 +0.2
CPUP Villa Florida 144.84 180 PKPdf **PKPdf** 20 14 27.9 +1.8
CPUP Villa Florida 144.84 180 PKIKP **PKPdf** 20 14 28.0 +1.8
CPUP Villa Florida 144.84 180 PKPbc **PKPdf** 20 14 27.4 +1.2
comp=Z,9.4nm,0.9s,baz=171,slow=4.0,SNR=20
CPUP SKPbc **SKiKP** 20 17 53.8 +0.7
comp=Z,5.1nm,0.9s,baz=249,slow=1.2,SNR=4.3
LVC Limon Verde 146.61 161 PKPbc **PKPab** 20 14 33.2 +0.5
comp=Z,6.5nm,0.7s,baz=272,slow=5.1,SNR=6.4
BDFB Brasilia 153.74 201 PKP **PKPdf** 20 14 41.4 +0.7
comp=Z,4.8nm,1.0s,baz=90,slow=7.1,SNR=4.5
BDFB PKPab **PKPab** 20 15 02.7 +0.9
comp=Z,3.7nm,0.8s,baz=75,slow=9.4,SNR=3.5

TAP 04 20:04:18.9, 24.19N×121.77E, h7km, ML1.9, 2C-16D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**346**	*e*P		Pg	20 04 22.0 +0.5
	baz=349						
EHP				*e*S		Sg	20 04 24.5 +1.1
	baz=349						
EAHA	**Aohua**	**0.14**	**347**	⇓*i*P		Pg	20 04 22.2 +0.4
	baz=347						
EAHA				*i* S		Sg	20 04 24.7 +0.8
	baz=347						
ETL	**Fush Village**	**0.14**	**256**	⇓*i*P		Pg	20 04 22.4 +0.5
	baz=256						
ETL				*i* S		Sg	20 04 25.0 +1.1
	baz=256						
NACB	**Ninganchiao**	**0.17**	**263**	⇓*e*P		Pg	20 04 22.7 +0.4
	baz=264						
NACB				*e*S		Sg	20 04 25.5 +0.9
	baz=264						
TWD	**Chiawan**	**0.20**	**235**	⇓*i*P		Pg	20 04 23.3 +0.5
	baz=243						
TWD				*i* S		Sg	20 04 26.4 +0.8
	baz=243						
ENA	**Nanau**	**0.24**	**353**	⇓*i*P		Pg	20 04 24.0 +0.4
	baz=355						
ENA				*i* S		Sg	20 04 27.6 +0.9
	baz=355						
EWUT	**Wuta**	**0.25**	**1**	⇓*i*P		Pg	20 04 24.2 +0.3
	baz=1.0						
EWUT				*i* S		Sg	20 04 28.0 +0.7
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.27**	**273**	*i* P		Pg	20 04 24.6 +0.4
	baz=269						
ETLH				*e*S		Sg	20 04 28.7 +0.9
	baz=269						
ETM	**Tongmen**	**0.34**	**229**	*e*P		Pg	20 04 26.0 +0.4
	baz=231						
ETM				*e*S		Sg	20 04 31.2 +1.0
	baz=231						
LXIB	**Xiulin Townshi**	**0.37**	**243**⇑	*e*P		Pg	20 04 26.6 +0.4
	baz=245						
LXIB				*e*S		Sg	20 04 31.6 +0.5
	baz=245						
ESAO	**Su ao**	**0.39**	**9**	⇓*i*P		Pg	20 04 26.7 +0.3
	baz=2.0						
ESAO				*i* S		Sg	20 04 32.2 +0.6
	baz=2.0						
LATG	**Datong**	**0.41**	**327**	⇓*i*P		Pg	20 04 27.4 +0.4
	baz=327						
LATG				*e*S		Sg	20 04 32.7 +0.4
	baz=327						
TWC	**Suao**	**0.42**	**9**	⇓*i*P		Pg	20 04 27.4 +0.3
	baz=3.0						
TWC				*e*S		Sg	20 04 33.8 +1.2
	baz=3.0						
NNSB	**Datong**	**0.43**	**303**	⇓*i*P		Pg	20 04 27.8 +0.6
	baz=305						
NNSB				S		Sg	20 04 33.6 +0.8
	baz=305						
NNS	**Nan Shan**	**0.44**	**304**	⇓*i*P		Pg	20 04 28.1 +0.6
	baz=305						
NNS				S		Sg	20 04 34.1 +0.8
	baz=305						
NDS	**Dongshan**	**0.44**	**353**	⇓*i*P		Pg	20 04 28.1 +0.6
	baz=353						
NDS				S		Sg	20 04 34.6 +1.3
	baz=353						
WHF	**Hehuan Shan**	**0.47**	**264**	P		Pg	20 04 28.3 +0.3
	baz=266						
NDT	**Datong Townshi**	**0.47**	**330**	⇓P		Pg	20 04 28.8 +0.7
	baz=331						
NDT				*e*S		Sb	20 04 35.9 -0.8
	baz=331						
ENTT	**Nioudou**	**0.48**	**337**⇑	*i*P		Pg	20 04 28.9 +0.7
	baz=338						
ENTT				*i* S		Sb	20 04 35.9 -1.2
	baz=338						
ESL	**Shilin**	**0.49**	**220**	⇓P		Pb	20 04 29.7 -0.2
	baz=230						
ESL				*e*S		Sb	20 04 37.8 +0.5
	baz=230						
TWE	**Neicheng**	**0.54**	**350**	⇓*i*P		Pg	20 04 29.8 +0.6
	baz=351						
TWE				S		Sb	20 04 37.4 -1.1
	baz=351						
FUSB	**Fushanzhiwuyua**	**0.59**	**343**	⇓*i*P		Pb	20 04 31.0 -0.6
	baz=344						
FUSB				*e*S		Sb	20 04 39.1 -1.1
	baz=344						
WARBT	**Fenglin Townsh**	**0.59**	**217**	*e*P		Pb	20 04 31.5 -0.1
	baz=226						
WARBT				*e*S		Sb	20 04 41.0 +0.9
	baz=226						
EGFH	**Guangfu**	**0.61**	**211**	*e*P		Pb	20 04 32.2 +0.3
	baz=223						
TIPB	**Shuangxi**	**0.78**	**3**	P		Pb	20 04 34.6 -0.2
	baz=13						

TAP 04 20:04:19.6, 24.29N×120.88E, h29km, ML2.3, 1C-12D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
WHP	**Taichung City**	**0.06**	**101**	P		Pb	20 04 25.1 +0.5
	baz=100						
WHP				*i* S		Sb	20 04 28.7 +0.5
	baz=100						
TWQ1	**Liyutan**	**0.12**	**301**	*e*P		Pn	20 04 25.4 -0.1
	baz=299						
TWQ1				S		Sb	20 04 28.9 +0.3
	baz=299						
NSY	**Sanyi**	**0.17**	**319**	⇓P		Pn	20 04 26.1 -0.2
	baz=320						
NSY				*e*S		Sb	20 04 30.7 +1.4
	baz=320						
WDJ	**Dajia District**	**0.23**	**285**	*e*P		Pn	20 04 26.7 -0.4
	baz=284						
WDJ				*i* S		Sb	20 04 31.4 +1.0
	baz=284						
WCS	**Beigang Elemen**	**0.23**	**173**	*i* P		Pb	20 04 26.5 +0.5
	baz=173						
WCS				S		Sb	20 04 31.2 +0.7
	baz=173						
TDCB	**Techi**	**0.26**	**98**	*e*P		Pn	20 04 27.4 -0.2
	baz=98						
TDCB				S		Sb	20 04 31.6 +0.4
	baz=98						
NMLH	**Miaoli**	**0.26**	**341**	⇓P		Pn	20 04 27.1 -0.5
	baz=341						
NMLH				S		Sn	20 04 32.4 -0.2
	baz=341						
TWT	**Tachien**	**0.27**	**97**	*e*P		Pn	20 04 27.5 -0.3
	baz=98						
TWT				S		Sb	20 04 31.8 +0.2
	baz=98						
FUSS	**Fushou**	**0.33**	**97**	⇓P		Pn	20 04 28.3 -0.4
	baz=278						
FUSS				*e*S		Sb	20 04 33.7 +0.6
	baz=278						
FUSS	**Fushou**	**0.33**	**97**	*e*P		Pn	20 04 28.3 -0.4
	baz=97						
FUSS				S		Sb	20 04 33.7 +0.6
	baz=97						
CHGB	**Renai**	**0.35**	**130**	*e*P		Pn	20 04 28.7 -0.3
	baz=130						
CHGB				*i* S		Sn	20 04 34.5 -0.6
	baz=130						
NSTT	**Nanjuang**	**0.36**	**18**	*i* P		Pb	20 04 28.3 +0.5
	baz=18						
NSTT				*e*S		Sb	20 04 33.9 +0.5
	baz=18						
WCHH	**Zhanghua**	**0.36**	**235**	*i* P		Pb	20 04 28.3 +0.5
	baz=234						
WCHH				S		Sn	20 04 35.0 0.0
	baz=234						
WUSB	**Renai**	**0.37**	**144**	P		Pn	20 04 28.8 -0.3
	baz=143						
WUSB				*i* S		Sn	20 04 34.8 -0.5
	baz=143						
LIOB	**Emei**	**0.38**	**19**	*i* P		Pn	20 04 28.7 -0.5
	baz=18						
LIOB				S		Sn	20 04 34.9 -0.5
	baz=18						
WHF	**Hehuan Shan**	**0.38**	**112**	P		Pb	20 04 28.9 +0.4
	baz=112						
WHF				*e*S		Sn	20 04 35.9 -0.1
	baz=112						
TYC	**Yuchr**	**0.38**	**183**	⇓*i*P		Pb	20 04 28.5 +0.4
	baz=181						
TYC				S		Sn	20 04 35.1 -0.5
	baz=181						
NFF	**Wufeng Townshi**	**0.40**	**32**	*i* P		Pb	20 04 29.0 +0.5
	baz=32						
NFF				*e*S		Sb	20 04 35.2 +0.6
	baz=32						
SMLT	**Sun Moon Lake**	**0.41**	**178**	*e*P		Pn	20 04 29.2 -0.3
	baz=176						
SMLT				*e*S		Sb	20 04 35.2 +0.5
	baz=176						
OWD	**Renai**	**0.43**	**141**	P		Pn	20 04 29.7 -0.3
	baz=141						
OWD				*e*S		Sb	20 04 36.1 +0.7
	baz=141						
WNT	**Mingjian**	**0.45**	**204**	P		Pb	20 04 29.6 +0.4
	baz=202						
WNT				*i* S		Sn	20 04 36.9 -0.3
	baz=202						
WJS	**Zhushan**	**0.49**	**197**	*i* P		Pb	20 04 30.1 +0.4
	baz=196						
WJS				*i* S		Sn	20 04 37.6 -0.5
	baz=196						
SSLB	**Suanglung**	**0.50**	**172**	P		Pb	20 04 30.2 +0.1
	baz=172						
SSLB				*e*S		Sb	20 04 36.8 -0.4
	baz=172						
ETLH	**Xiulin Townshi**	**0.55**	**98**	*e*P		Pn	20 04 31.8 +0.2

	baz=98							
NSK	**Sanguang**	**0.58**	**48**	⇓	P	Pb	20 04 31.4	+0.1
	baz=323							
NSK					*i* S	Sb	20 04 39.8	+0.4
	baz=323							
NSK	**Sanguang**	**0.58**	**48**		*i* P	Pb	20 04 31.6	+0.2
	baz=49							
NSK					S	Sb	20 04 39.8	+0.4
	baz=49							
VWDT	**VWDT**	**0.58**	**156**		*e*P	Pn	20 04 32.4	+0.4
	baz=156							
VWDT					*i* S	Sn	20 04 40.6	+0.1
	baz=156							
YHNB	**Yeheng**	**0.59**	**50**	⇓	P	Pb	20 04 31.3	-0.2
	baz=323							
YHNB					S	Sb	20 04 39.5	-0.1
	baz=323							
YHNB	**Yeheng**	**0.59**	**50**		P	Pb	20 04 31.4	-0.1
	baz=49							
YHNB					*e*S	Sb	20 04 39.4	-0.2
	baz=49							
WHYT	**Xinyi Township**	**0.59**	**183**		*i* P	Pb	20 04 31.8	+0.2
	baz=182							
WHYT					S	Sn	20 04 40.4	-0.4
	baz=182							
WRL	**Guolierlin Hig**	**0.60**	**230**		*e*S	Sb	20 04 40.3	+0.5
	baz=230							
WGK	**Gukeng**	**0.67**	**206**		*e*P	Pn	20 04 43.4	+10
	baz=251							
WGK	**Gukeng**	**0.67**	**206**		*e*P	Pb	20 04 32.8	0.0
	baz=205							
WGK					*e*S	Sn	20 04 42.9	+0.3
	baz=205							
WDLH	**Douliu**	**0.68**	**208**		*e*P	Pb	20 04 32.9	0.0
	baz=207							
WDLH					*i* S	Sn	20 04 42.9	+0.1
	baz=207							
CHN5	**Tsauling**	**0.71**	**195**	⇓	P	Pb	20 04 33.5	-0.1
	baz=195							
CHN5					*e*S	Sn	20 04 43.8	0.0
	baz=195							
WARBT	**Fenglin Townsh**	**0.73**	**141**		*e*P	Pn	20 04 34.5	+0.4
	baz=140							
WARBT					*e*S	Sn	20 04 45.4	+1.2
	baz=140							
WTK	**Tuku**	**0.75**	**217**	⇓	P	Pb	20 04 33.6	-0.5
	baz=217							
WTK					*e*S	Sn	20 04 44.8	+0.1
	baz=217							
ALS	**Alishan**	**0.78**	**185**		*e*P	Pn	20 04 35.0	+0.1
	baz=184							
ALS					*e*S	Sn	20 04 45.9	+0.1
	baz=184							
EHY	**Hungye**	**0.88**	**153**		*e*P	Pn	20 04 35.7	-0.3
	baz=224							
EHY					*e*S	Sn	20 04 48.2	+0.4
	baz=224							
EHY	**Hungye**	**0.88**	**153**	⇓	*e*P	Pn	20 04 35.6	-0.4
	baz=152							
EHY					*i* S	Sn	20 04 48.4	+0.6
	baz=152							
WCKO	**Fanlu**	**0.88**	**197**	⇓	*i* P	Pb	20 04 36.3	-0.1
	baz=196							
WCKO					*e*S	Sn	20 04 48.2	+0.3
	baz=196							
HGSD	**Ruisui**	**0.94**	**148**		*e*P	Pn	20 04 35.7	-1.1
	baz=194							
HGSD	**Ruisui**	**0.94**	**148**		*e*P	Pn	20 04 35.8	-0.9
	baz=147							
HGSD					*e*S	Sb	20 04 50.4	+1.1
	baz=147							
WSL	**Shuilin Townsh**	**0.97**	**218**		*e*P	Pn	20 04 36.6	-0.7
	baz=218							
WSL					*e*S	Sn	20 04 50.0	0.0
	baz=218							
YULB	**Yu-li**	**0.97**	**157**	⇓	*e*P	Pb	20 04 38.1	+0.3
	baz=223							
YULB					*e*S	Sb	20 04 51.1	+0.8
	baz=223							
YULB	**Yu-li**	**0.97**	**157**		*e*P	Pb	20 04 38.4	+0.5
	baz=156							
YULB					S	Sb	20 04 51.0	+0.7
	baz=156							
TWF1	**Yuli**	**1.01**	**158**		*e*P	Pn	20 04 37.7	-0.1
	baz=221							
TWF1					*e*S	Sb	20 04 52.3	+1.0
	baz=221							
TWF1	**Yuli**	**1.01**	**158**		P	Pn	20 04 37.9	+0.1
	baz=157							
TWF1					*e*S	Sb	20 04 52.3	+1.0
	baz=157							
TPUB	**Ta-pu**	**1.01**	**193**		*i* P	Pn	20 04 38.1	+0.3
	baz=193							
TPUB					S	Sb	20 04 52.0	+0.5
	baz=193							
EYUL	**Yuli**	**1.02**	**157**		*e*P	Pb	20 04 38.9	+0.2
	baz=224							
EYUL					*e*S	Sb	20 04 52.5	+0.8
	baz=224							
EYUL	**Yuli**	**1.02**	**157**		*e*P	Pb	20 04 38.6	0.0
	baz=156							
EYUL					*e*S	Sb	20 04 52.4	+0.7
	baz=156							
WTP	**Ta-pu**	**1.07**	**193**	⇑	P	Pn	20 04 38.6	0.0
	baz=192							
WTP					S	Sb	20 04 53.2	+0.1
	baz=192							
TWK	**Hsinying**	**1.08**	**200**	⇓	*i* P	Pn	20 04 39.0	+0.2
	baz=198							
TWK					S	Sb	20 04 53.5	+0.1
	baz=198							
ELDTW	**Lidau**	**1.10**	**174**		*e*P	Pb	20 04 42.0	+1.9
	baz=220							
ELDTW	**Lidau**	**1.10**	**174**		*e*P	Pb	20 04 41.4	+1.3
	baz=173							
ELDTW					*e*S	Sb	20 04 54.7	+0.6
	baz=173							
STYH	**Taoyuan**	**1.12**	**185**		*i* P	Pn	20 04 39.5	+0.2
	baz=184							
STYH					*i* S	Sb	20 04 54.1	-0.3
	baz=184							
CHN1	**Nanshi**	**1.15**	**197**		*e*P	Pn	20 04 40.2	+0.5
	baz=196							
CHN1					*e*S	Sb	20 04 56.0	+0.7
	baz=196							
EHD	**Haiduan**	**1.17**	**165**		*e*P	Pb	20 04 41.3	0.0
	baz=221							
EHD					*e*S	Sb	20 04 56.4	+0.3
	baz=221							
EHD	**Haiduan**	**1.17**	**165**		P	Pb	20 04 40.9	-0.4
	baz=165							
EHD					*e*S	Sb	20 04 56.0	-0.1
	baz=165							
SXI1	**Grass Mountain**	**1.21**	**48**		*e*P	Pn	20 04 39.3	-1.3
	baz=48							
SGST	**Jiashian**	**1.23**	**193**		*e*P	Pn	20 04 41.4	+0.5
	baz=192							
SGST					*e*S	Sb	20 04 58.2	+0.4
	baz=192							

*IDC **04** 20:04:37.0±1.0, 43.˚76N×105.˚40W, h0km, mb3.8/1, mbtmp3.4/6, ML3.4/5, MS3.6/1, Error ellipse: s-maj=21.8km s-min=8.0km az=148.0*
*NEIC **04** 20:04:36.8±1.4, 43.˚81N±0.˚04×105.˚37W±0.˚08, h0km±1km, ML3.2/72, Error ellipse: s-maj=10.3km s-min=7.1km az=77.0*
*ANF **04** 20:04:38.3±0.2, 43.˚79N×105.˚33W, h0km, ML3.6/15, Error ellipse: s-maj=3.2km s-min=2.4km az=146.0*

ISC 04 20:04:38.2±0.7, 43.˚83N±0.˚03×105.˚34W±0.˚03, h0km, n64, σ1§45/75, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RSSD	**Black Hills**	**0.99**	**72**			**Pg**	**20 04 57.1**	**-0.1**
RSSD	**Black Hills**	**0.99**	**72**	P		**Pg**	**20 04 57.3**	**+0.1**
	baz=251							
K22A	**Casper**	**1.46**	**217**	Pg		**Pn**	**20 05 03.8**	**-2.2**
K22A				IAML			20 05 26.4	
	comp=N,368nm,0.6s							
K22A				IAML			20 05 26.8	
	comp=E,386nm,0.3s							
K22A	**Casper**	**1.46**	**217**	P		**Pn**	**20 05 04.0**	**-2.0**
	baz=37,SNR=100							
K22A				S		**Sg**	**20 05 25.1**	**+0.1**
	baz=37							
PHWY	**Pilot Hill**	**2.52**	**182**			**Pn**	**20 05 20.1**	**-0.6**
PHWY				IAML			20 05 58.8	
	comp=E,98nm,0.6s							
RWWY	**Rawlins**	**2.54**	**213**			**Pn**	**20 05 21.5**	**+0.5**
RWWY				IAML			20 05 56.6	
	comp=E,135nm,0.9s							
RWWY				IAML			20 05 58.6	
	comp=E,132nm,0.9s							
LAO	**LASA Array**	**2.93**	**348**	Pn		**Pn**	**20 05 25.8**	**-0.4**
LAO	**LASA Array**	**2.93**	**348**	P		**Pn**	**20 05 26.2**	**+0.1**
	baz=168,SNR=8.2							
LAO				Sb		**Sg**	**20 06 11.3**	**-1.1**
	baz=168							
N23A	**Red Feather La**	**2.96**	**189**	Pn		**Pn**	**20 05 26.9**	**+0.1**
N23A				IAML			20 06 17.5	
	comp=E,58nm,1.0s							
N23A	**Red Feather La**	**2.96**	**189**	P		**Pn**	**20 05 26.8**	**+0.1**
	baz=8.7,SNR=27							
RLMT	**Red Lodge**	**3.10**	**296**			**Pn**	**20 05 28.9**	**+0.3**
RLMT				IAML			20 06 20.0	
	comp=E,73nm,0.3s							
RLMT				IAML			20 06 25.5	
	comp=E,55nm,0.4s							
RLMT	**Red Lodge**	**3.10**	**296**	P		**Pn**	**20 05 29.1**	**+0.6**
	baz=114,SNR=18							
RLMT				Sb		**Sg**	**20 06 16.1**	**-1.6**
	baz=114							
BW06	**Boulder Array**	**3.25**	**252**	Pn		**Pn**	**20 05 30.9**	**+0.1**
BW06				IAML			20 06 17.9	
	comp=E,44nm,0.6s							
BW06	**Boulder Array**	**3.25**	**252**	P		**Pn**	**20 05 31.0**	**+0.3**
	baz=70,SNR=24							
BW06				Sb		**Sb**	**20 06 17.6**	**+0.4**
	baz=70							
PD31	**Pinedale Array**	**3.25**	**252**	Pn		**Pn**	**20 05 31.0**	**+0.2**
PDAR	**Pinedale Array**	**3.25**	**252**	Pn		**Pn**	**20 05 31.0**	**+0.2**
PDAR	**Pinedale Array**	**3.25**	**252**	Pn		**Pn**	**20 05 31.0**	**+0.2**
	comp=E,5.2nm,0.3s,baz=69,slow=16,SNR=115							
PDAR				Pg		**Pg**	**20 05 39.1**	**-1.5**
	comp=E,12nm,0.3s,baz=57,slow=18,SNR=17							
PDAR				Lg		Lg	20 06 15.0	
	comp=E,9.8nm,0.3s,baz=73,slow=31,SNR=2.6							
PDAR				LR		LR	20 06 43.5	
	comp=E,32nm,18.2s,baz=4.0,slow=40							
	comp=E,6.7nm,0.3s							
BRIGG	**Briggsdale**	**3.33**	**166**	Pn		**Pn**	**20 05 32.4**	**+0.7**
OGNE	**Ogallala**	**3.78**	**138**			**Pn**	**20 05 37.5**	**-0.4**
OGNE	**Ogallala**	**3.78**	**138**	P		**Pn**	**20 05 38.2**	**+0.4**
	baz=320							
OGNE				Sb		**Sb**	**20 06 35.2**	**+2.9**
	baz=320							
H17A	**Grant Village**	**3.81**	**280**	P		**Pn**	**20 05 39.0**	**+0.5**
	baz=97							
H17A				Sb		**Sb**	**20 06 36.7**	**+3.3**
	baz=97							
FLWY	**Flagg Ranch**	**3.88**	**276**	Pn		**Pn**	**20 05 40.2**	**+0.9**
FLWY				IAML			20 06 54.9	
	comp=E,31nm,1.1s							
FLWY				IAML			20 06 55.8	
	comp=E,37nm,0.9s							
MOOW	**Moose Ponds**	**3.91**	**271**			**Pn**	**20 05 41.1**	**+1.3**
ISCO	**Idaho Springs**	**4.03**	**183**			**Pn**	**20 05 41.4**	**-0.1**
ISCO	**Idaho Springs**	**4.03**	**183**	P		**Pn**	**20 05 41.5**	**0.0**
	baz=2.9,SNR=5.3							
ISCO				Sb		**Sb**	**20 06 39.0**	**-0.6**
	baz=2.9							
REDW	**Red Top Meadow**	**4.03**	**265**			**Pn**	**20 05 42.5**	**+1.1**
O20A	**White River Ci**	**4.27**	**211**	Pn		**Pn**	**20 05 43.5**	**-1.2**
O20A				IAML			20 06 59.3	
	comp=E,39nm,0.9s							
O20A				IAML			20 07 01.4	
	comp=N,31nm,1.4s							
O20A	**White River Ci**	**4.27**	**211**	P		**Pn**	**20 05 44.5**	**-0.2**
	baz=30,SNR=7.9							
O20A				Sb		**Sb**	**20 06 49.6**	**+3.0**
	baz=30							
E28A	**Huff**	**4.28**	**48**			**Pn**	**20 05 45.3**	**+0.6**
AHID	**Auburn Hatcher**	**4.33**	**258**	Pn		**Pn**	**20 05 43.7**	**-1.9**
AHID				IAML			20 06 57.4	
	comp=N,32nm,0.8s							
AHID				IAML			20 07 02.0	
	comp=N,33nm,0.8s							
K30B	**Basset**	**4.34**	**103**	Pn		**Pn**	**20 05 47.0**	**+1.5**
DGMT	**Dagmar**	**4.71**	**9**			**Pn**	**20 05 52.6**	**+2.0**
DGMT	**Dagmar**	**4.71**	**9**	P		**Pn**	**20 05 52.6**	**+2.0**
	baz=190,SNR=7.1							
DGMT				Sb		**Sg**	**20 07 05.8**	**-3.8**
	baz=190							
BOZ	**Bozeman (W)**	**4.82**	**294**			**Pn**	**20 05 51.4**	**-0.8**
BOZ				IAML			20 07 18.9	
	comp=N,14nm,1.1s							
BOZ	**Bozeman (W)**	**4.82**	**294**	P		**Pn**	**20 05 52.6**	**+0.4**
	baz=110,SNR=8.7							
BOZ				Sb		**Sb**	**20 07 07.2**	**+5.0**
	baz=110							
Q24A	**Divide**	**4.86**	**178**	P		**Pn**	**20 05 52.4**	**-0.4**
	baz=358							
Q24A				Sb		**Sb**	**20 07 06.7**	**+3.2**
	baz=358							
HWUT	**Hardware Ranch**	**5.09**	**246**			**Pn**	**20 05 55.6**	**-0.4**
BSUT	**Blindstream Ca**	**5.20**	**233**	Pn		**Pn**	**20 05 57.6**	**0.0**
BSUT				IAML			20 06 44.6	
	comp=E,13nm,4.4s							
BSUT				IAML			20 07 28.8	
	comp=N,11nm,1.0s							
EGMT	**Eagleton**	**5.21**	**325**			**Pn**	**20 05 57.1**	**-0.4**
EGMT	**Eagleton**	**5.21**	**325**	P		**Pn**	**20 05 57.9**	**+0.5**
	baz=142							
EGMT				S		**Sn**	**20 07 01.3**	**+3.1**
	baz=142							
KSCO	**Kaye Shedlock'**	**5.22**	**156**			**Pn**	**20 05 56.9**	**-0.8**
KSCO	**Kaye Shedlock'**	**5.22**	**156**	P		**Pn**	**20 05 56.9**	**-0.8**
	baz=338							
TCUT	**Toone Canyon**	**5.24**	**241**			**Pn**	**20 05 58.1**	**+0.1**
P18A	**Preston Nutter**	**5.57**	**223**			**Pn**	**20 06 02.7**	**+0.1**
MDND	**Maddock**	**5.68**	**43**	Pn		**Pn**	**20 06 04.3**	**+0.4**
MDND	**Maddock**	**5.68**	**43**	S		**Sn**	**20 07 11.3**	**+1.5**
	baz=227							
LYMT	**Lyon Mountain**	**5.81**	**305**			**Pn**	**20 06 04.1**	**-1.8**
SPUT	**South Promonto**	**5.82**	**247**	Pn		**Pn**	**20 06 06.4**	**+0.5**
BGNE	**Belgrade**	**5.83**	**112**	Pn		**Pn**	**20 06 03.9**	**-2.0**
HVU	**Hansel Valley**	**5.84**	**252**	Pn		**Pn**	**20 06 06.0**	**-0.1**
SDCO	**Great Sand Dun**	**6.07**	**181**	P		**Pn**	**20 06 09.7**	**+0.1**
	baz=1.2							
SRU	**San Rafael Swe**	**6.11**	**221**			**Pn**	**20 06 09.1**	**-0.8**
S22A	**4UR Ranch, Cre**	**6.18**	**191**	P		**Pn**	**20 06 10.9**	**0.0**
	baz=10							
ECSD	**EROS Data Cent**	**6.32**	**88**	Pn		**Pn**	**20 06 12.8**	**+0.2**
Q16A	**Castle Valley**	**6.58**	**224**	Pn		**Pn**	**20 06 15.9**	**-0.5**
DUG	**Dugway, Tooele**	**6.64**	**239**	Pn		**Pn**	**20 06 17.1**	**-0.1**
DUG	**Dugway, Tooele**	**6.64**	**239**	P		**Pn**	**20 06 16.8**	**-0.4**
	baz=55,SNR=5.8							
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn		**Pn**	**20 06 48.4**	**-2.5**
	comp=N,3.2nm,0.3s,baz=226,slow=12,SNR=36							
ULM				Lg		Lg	20 09 17.6	
	comp=N,0.3nm,0.3s,baz=300,slow=20,SNR=1.4							
	comp=N,5.3nm,0.3s							
NEW	**Newport**	**9.32**	**303**	Lg		Lg	20 09 27.3	
	comp=N,0.1nm,0.3s,baz=122,slow=14,SNR=2.1							
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn		**Pn**	**20 07 20.7**	**+1.5**
	comp=N,0.1nm,0.3s,baz=50,slow=12,SNR=4.6							
	comp=N,0.4nm,0.6s							
TXAR	**Lajitas Array**	**14.53**	**174**	Pn		**Pn**	**20 08 03.5**	**-1.6**
	baz=4.2,slow=14,SNR=1.6							
TXAR				Lg		Lg	20 12 05.8	
	baz=298,slow=31,SNR=1.5							
	comp=N,0.2nm,0.8s							
YKA	**Yellowknife Ar**	**19.47**	**347**	P		**P**	**20 09 05.8**	**-0.5**
	comp=N,0.1nm,0.3s,baz=155,slow=12,SNR=5.4							
	comp=N,0.2nm,0.6s							
IDI	**Anoyia**	**89.17**	**39**	LR		LR	20 59 07.8	
	comp=N,25nm,18.6s,baz=79,slow=37							
MKAR	**Makanchi Array**	**89.51**	**355**	P		**P**	**20 17 36.5**	**-0.7**
	comp=N,0.3nm,0.6s,baz=9.5,slow=4.4,SNR=4.4							
	comp=N,0.3nm,0.6s							

TAP 04 20:30:06.4, 24.˚12N×121.˚65E, h10km, ML1.1, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ETL	**Fush Village**	**0.05**	**334**	*i* P		Pg	20 30 08.8	+0.4
	baz=334							
ETL				*e*S		Sg	20 30 10.5	+0.6
	baz=334							
TWD	**Chiawan**	**0.06**	**231**	P		Pg	20 30 09.0	+0.5
	baz=226							
TWD				S		Sg	20 30 10.8	+0.8
	baz=226							
NACB	**Ninganchiao**	**0.07**	**321**	⇓	*i* P	Pg	20 30 09.2	+0.5
	baz=321							
NACB					*i* S	Sg	20 30 11.2	+0.8
	baz=321							
HWA	**Hwalien**	**0.14**	**195**		*i* P	Pg	20 30 10.4	+0.7
	baz=191							
ETLH	**Xiulin Townshi**	**0.17**	**301**		*e*P	Pb	20 30 11.3	-0.5
	baz=301							
ETLH					*i* S	Sg	20 30 14.4	+1.5
	baz=301							
ETM	**Tongmen**	**0.20**	**223**		*i* P	Pb	20 30 11.6	-0.7
	baz=222							
ETM					*e*S	Sg	20 30 15.3	+1.6
	baz=222							
LXIB	**Xiulin Townshi**	**0.23**	**246**		*i* P	Pb	20 30 12.2	-0.6
	baz=245							
LXIB					*i* S	Sg	20 30 16.3	+1.7
	baz=245							
WHF	**Hehuan Shan**	**0.35**	**275**		*i* P	Pg	20 30 14.2	+0.6
	baz=274							
WHF					S	Sb	20 30 19.8	-0.9
	baz=274							
EWUT	**Wuta**	**0.35**	**20**		P	Pb	20 30 14.5	-0.3
	baz=20							
NNSB	**Datong**	**0.39**	**322**		P	Pb	20 30 15.1	-0.5
	baz=322							
NNSH	**Datong**	**0.39**	**322**		*e*P	Pb	20 30 14.9	-0.6
	baz=322							
NNSH					*i* S	Sb	20 30 21.6	-0.1
	baz=322							
NNS	**Nan Shan**	**0.41**	**322**		*i* P	Pb	20 30 15.3	-0.4
	baz=323							
NNS					*e*S	Sb	20 30 22.0	-0.1
	baz=323							

TAP 04 20:31:14.9, 24.˚21N×121.˚77E, h11km, ML1.8, 6C-6D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EHP	**Heping Village**	**0.10**	**347**		*e*P	Pg	20 31 17.9	+0.1
	baz=352							
EAHA	**Aohua**	**0.12**	**349**	⇓	P	Pg	20 31 18.2	+0.2
	baz=349							
EAHA					*i* S	Sg	20 31 20.6	+0.4
	baz=349							
ETL	**Fush Village**	**0.14**	**250**	⇓	P	Pg	20 31 18.3	+0.1
	baz=250							
ETL					*e*S	Sg	20 31 21.1	+0.6
	baz=250							
NACB	**Ninganchiao**	**0.16**	**258**	⇓	P	Pg	20 31 18.6	+0.1
	baz=251							
NACB					*i* S	Sg	20 31 21.1	+0.1
	baz=251							
TWD	**Chiawan**	**0.20**	**231**		P	Pg	20 31 19.2	+0.1
	baz=237							
TWD					S	Sg	20 31 22.7	+0.6
	baz=237							
ENA	**Nanau**	**0.22**	**354**	⇑	P	Pg	20 31 19.8	+0.2
	baz=356							
ENA					*i* S	Sg	20 31 23.2	+0.5
	baz=356							
EWUT	**Wuta**	**0.24**	**3**	⇑	P	Pg	20 31 20.2	+0.3
	baz=3.0							
EWUT					*e*S	Sg	20 31 23.7	+0.5
	baz=3.0							
ETLH	**Xiulin Townshi**	**0.26**	**270**		P	Pg	20 31 20.3	0.0
	baz=271							
ETLH					*e*S	Sg	20 31 24.0	+0.1
	baz=271							
HWA	**Hwalien**	**0.27**	**213**		*e*P	Pb	20 31 21.4	-0.5
	baz=221							
ETM	**Tongmen**	**0.35**	**226**		P	Pg	20 31 22.0	+0.1
	baz=232							
LATG	**Datong**	**0.39**	**326**		*e*P	Pg	20 31 22.3	-0.4
	baz=334							
TWC	**Suao**	**0.41**	**11**		*e*P	Pg	20 31 22.9	-0.1
	baz=5.0							
TWC					S	Sb	20 31 29.6	-0.8
	baz=5.0							
NNSB	**Datong**	**0.41**	**302**		*i* P	Pg	20 31 23.5	+0.4
	baz=303							
NNSB					*i* S	Sg	20 31 29.4	+0.7
	baz=303							
NDS	**Dongshan**	**0.43**	**354**		*e*P	Pg	20 31 23.1	-0.3
	baz=354							
NDS					S	Sg	20 31 29.8	+0.8
	baz=354							
NNS	**Nan Shan**	**0.43**	**303**	⇑	P	Pg	20 31 23.9	+0.5
	baz=304							
NNS					*i* S	Sg	20 31 29.6	+0.6
	baz=304							
NDT	**Datong Townshi**	**0.46**	**330**	⇓	*i* P	Pg	20 31 24.4	+0.5
	baz=330							
SHUL	**Shoufeng**	**0.46**	**204**		P	Pg	20 31 24.4	+0.5
	baz=194							
WHF	**Hehuan Shan**	**0.46**	**262**	⇑	*i* P	Pg	20 31 24.3	+0.2
	baz=263							
ENTT	**Nioudou**	**0.47**	**337**		P	Pb	20 31 24.8	-0.5
	baz=338							
ENTT					S	Sb	20 31 31.4	-0.8
	baz=338							
FUSS	**Fushou**	**0.48**	**275**	⇑	*e*P	Pg	20 31 23.9	-0.5
	baz=276							
TWE	**Neicheng**	**0.52**	**350**	⇓	*e*P	Pb	20 31 25.7	-0.4
	baz=351							
CHGB	**Renai**	**0.56**	**255**		P	Pg	20 31 26.4	+0.5
	baz=249							
YHNB	**Yeheng**	**0.58**	**322**	⇓	*e*P	Pb	20 31 26.9	-0.3
	baz=323							
NSK	**Sanguang**	**0.60**	**322**	⇑	*e*P	Pb	20 31 27.1	-0.4
	baz=322							

*HEL **04** 20:41:14.0±0.3, 67.˚77N×20.˚06E, h0km, ML1.8, Explosion*
*IDC **04** 20:41:15.3±1.3, 67.˚78N×20.˚68E, h0km, mbtmp3.0/3, ML2.3/3, Error ellipse: s-maj=20.6km s-min=9.6km az=111.0*

ISC 04 20:41:14.0±1.1, 67.˚80N±0.˚03×20.˚15E±0.˚05, h0km, n26, σ1§61/41, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LANU	**Lannavaara**	**0.74**	**69**	PG		**Pg**	**20 41 28.1**	**-0.2**
LANU				SG		**Sg**	**20 41 37.7**	**-0.2**
KIF	**Kilpisjarvi**	**1.24**	**11**	SG		**Sg**	**20 41 53.5**	**-0.2**
KIF				MSG			20 41 53.7	
	comp=Z,14nm,0.2s							
PAJU	**Pajala**	**1.38**	**123**	PG		**Pg**	**20 41 38.1**	**-2.4**
PAJU				SB		**Sg**	**20 41 57.7**	**-0.7**
HEF	**Hetta**	**1.45**	**63**	MSG			20 41 58.8	
	comp=Z,7.1nm,0.2s							
HEF				SN		**Sn**	**20 42 03.1**	**+1.8**
KLF	**Kolari**	**1.57**	**109**	PN		**Pn**	**20 41 43.9**	**+0.8**
KLF				MSG			20 42 01.7	
	comp=Z,4.6nm,0.2s							
KLF				SG		**Sg**	**20 42 03.4**	**-1.1**
KTK1	**Kautokeino**	**1.67**	**42**	*e*P		Pn	20 41 40.5	-4.1
KTK1	**Kautokeino**	**1.67**	**42**	PG		**Pg**	**20 41 46.4**	**+0.4**
KTK1				SG		**Sn**	**20 42 05.9**	**-0.8**
JETT	**Jettan, Norway**	**1.77**	**3**	*e*P		**Pn**	**20 41 43.1**	**-2.8**
TRO	**Tromso**	**1.90**	**347**	PN		**Pn**	**20 41 47.3**	**-0.3**
TRO				SG		**Sn**	**20 42 13.7**	**+1.5**
KALU	**Kalix**	**2.32**	**145**	PB		**Pn**	**20 41 53.7**	**+0.3**
	baz=326							
KALU				SG		**Sb**	**20 42 26.5**	**+0.6**
TOF	**Tornio**

RAJF	**Raja-Jooseppi**	**3.13**	**74**	PN	**Pn**	**20 42 06.8**	**+2.3**
RAJF				SB	**Sb**	**20 42 48.8**	**-0.3**
RANF	**Ranua**	**3.17**	**121**	PG	**Pb**	**20 42 11.0**	**-0.2**
RANF				SG	**Sg**	**20 42 53.8**	**-2.0**
KEV	**Kevo**	**3.18**	**49**	PN	**Pn**	**20 42 06.0**	**+0.8**
KEV				SN	**Sn**	**20 42 44.8**	**+1.1**
OUL	**Oulu** baz=318	**3.57**	**137**	PG	**Pb**	**20 42 19.2**	**+1.3**
VRF	**Varrio**	**3.60**	**86**	PB	**Pn**	**20 42 14.9**	**+4.0**
OLKF	**Oulanka, Finla**	**3.92**	**108**	PN	**Pn**	**20 42 17.2**	**+1.9**
OLKF				SG	**Sg**	**20 43 15.4**	**-4.2**
UMAU	**Umeaa** baz=1.0	**3.94**	**177**	PB	**Pn**	**20 42 18.3**	**+2.7**
KU6	**Riekki** baz=298	**4.23**	**110**	PG	**Pb**	**20 42 30.4**	**+1.2**
FINES	**FINESS Array B** comp=Z,0.3nm,0.3s,baz=341,slow=20,SNR=1.8	**6.87**	**155**	Pn	**Pn**	**20 42 57.7**	**+1.9**
FINES	comp=Z,0.1nm,0.3s,baz=346,slow=21,SNR=2.5			Sn	**Sn**	**20 44 12.9**	**-1.6**
FINES	comp=Z,0.1nm,0.3s,baz=344,slow=25,SNR=2.7 comp=Z,2.2nm,0.9s			Lg	Lg	20 44 44.2	
NOA	**NORSAR Array B** baz=27,slow=12,SNR=1.0	**7.80**	**214**	Pn	**Pn**	**20 43 09.2**	**+0.6**
NOA	baz=17,slow=19,SNR=1.0 comp=Z,0.5nm,0.8s			Lg	Lg	20 45 22.4	

TAP 04 20:52:30.7, 24.°13N×121.°68E, h9km, ML2.9, 15C-20D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village** baz=297	**0.06**	**299**	⇑P	Pg	20 52 33.4	+0.7
ETL				*i* S	Sg	20 52 34.8	+0.7
NACB	**Ninganchiao** baz=298	**0.09**	**299**	⇓*i*P	Pg	20 52 33.6	+0.7
NACB				S	Sg	20 52 35.3	+0.7
TWD	**Chiawan** baz=233	**0.09**	**236**	⇓*i*P	Pg	20 52 33.6	+0.6
TWD				S	Sg	20 52 35.2	+0.6
HWA	**Hwalien** baz=201	**0.17**	**204**	P	Pg	20 52 35.6	+1.4
HWA				*e*S	Sg	20 52 39.1	+2.5
EHP	**Heping Village** baz=19	**0.19**	**18**	*e*P	Pg	20 52 35.2	+0.6
ETLH	**Xiulin Townshi** baz=292	**0.20**	**293**	⇓*i*P	Pg	20 52 35.7	+0.9
EAHA	**Aohua** baz=15	**0.20**	**16**	⇓P	Pg	20 52 35.6	+0.7
ETM	**Tongmen** baz=225	**0.24**	**226**	P	Pg	20 52 35.9	+0.4
ETM				*e*S	Sg	20 52 39.9	+1.2
LXIB	**Xiulin Townshi** baz=245	**0.27**	**246**	⇓P	Pg	20 52 36.6	+0.5
ENA	**Nanau** baz=12	**0.30**	**11**	⇓P	Pg	20 52 37.4	+0.7
ENA				*e*S	Sg	20 52 41.9	+1.1
EWUT	**Wuta** baz=16	**0.33**	**16**	⇑P	Pg	20 52 37.6	+0.5
EWUT				*e*S	Sg	20 52 42.4	+0.9
SHUL	**Shoufeng** baz=197	**0.36**	**197**	⇑*e*P	Pb	20 52 39.5	+0.3
WHF	**Hehuan Shan** baz=271	**0.38**	**272**	⇑P	Pb	20 52 39.1	-0.7
WHF				S	Sb	20 52 44.9	-1.1
ESL	**Shilin** baz=214	**0.39**	**216**	⇑P	Pg	20 52 38.6	+0.3
ESL				S	Sb	20 52 45.0	-0.8
NNSB	**Datong** baz=317	**0.40**	**318**	⇓P	Pb	20 52 39.7	-0.3
NNSB				S	Sb	20 52 45.7	-0.6
FUSS	**Fushou** baz=286	**0.41**	**286**	⇓P	Pb	20 52 39.9	-0.5
FUSS				S	Sb	20 52 46.2	-0.6
NNS	**Nan Shan** baz=318	**0.41**	**318**	⇓P	Pb	20 52 39.9	-0.4
NNS				*i* S	Sb	20 52 46.1	-0.7
LATG	**Datong** baz=340	**0.43**	**341**	⇓*i*P	Pb	20 52 40.0	-0.5
LATG				S	Sb	20 52 47.0	-0.1
CHGB	**Renai** baz=261	**0.47**	**261**	⇓*i*P	Pb	20 52 40.7	-0.5
CHGB				*e*S	Sb	20 52 47.9	-0.4
ESAO	**Su ao** baz=18	**0.47**	**19**	P	Pb	20 52 41.2	+0.1
ESAO				*e*S	Sb	20 52 47.6	-0.6
TWT	**Tachien** baz=284	**0.47**	**285**	⇑P	Pb	20 52 41.4	+0.1
TWT				*e*S	Sb	20 52 49.0	+0.5
TDCB	**Techi** baz=284	**0.49**	**284**	*e*P	Pb	20 52 41.5	0.0
TDCB				*e*S	Sb	20 52 48.7	-0.2
WARBT	**Fenglin Townsh** baz=213	**0.49**	**213**	⇑*e*P	Pg	20 52 40.3	+0.1
WARBT				S	Sb	20 52 49.3	+0.5
OWD	**Renai** baz=249	**0.49**	**249**	P	Pb	20 52 41.0	-0.6
OWD				*i* S	Sb	20 52 48.9	-0.1
NDT	**Datong Townshi** baz=342	**0.49**	**342**	⇓P	Pb	20 52 41.4	-0.1
NDT				*e*S	Sb	20 52 48.8	-0.1
TWC	**Suao** baz=19	**0.50**	**18**	P	Pg	20 52 41.0	+0.6
TWC				*e*S	Sg	20 52 48.0	+1.0
NDS	**Dongshan** baz=3.0	**0.50**	**4**	⇑*i*P	Pb	20 52 41.4	-0.3
NDS				*e*S	Sb	20 52 49.4	+0.3
EGFH	**Guangfu** baz=206	**0.52**	**207**	P	Pb	20 52 41.3	-0.6
EGFH				S	Sb	20 52 49.8	+0.4
ENTT	**Nioudou** baz=349	**0.52**	**349**	⇓P	Pb	20 52 41.9	0.0
ENTT				*i* S	Sb	20 52 49.8	+0.2
WUSB	**Renai** baz=254	**0.53**	**255**	⇓*i*P	Pb	20 52 42.0	-0.2
WUSB				*e*S	Sb	20 52 49.6	-0.5
TWE	**Neicheng**	**0.59**	**359**	⇓P	Pb	20 52 43.1	0.0
TWE				*i* S	Sb	20 52 51.9	+0.3
YHNB	**Yeheng** baz=332	**0.60**	**333**	⇓P	Pb	20 52 43.7	+0.3
YHNB				S	Sb	20 52 52.3	+0.2
NSK	**Sanguang** baz=332	**0.62**	**332**	⇓P	Pb	20 52 43.9	+0.2
NSK				*i* S	Sb	20 52 52.6	+0.1
VWDT	**VWDT** baz=232	**0.62**	**233**	*e*P	Pb	20 52 44.1	+0.5
VWDT				*e*S	Sb	20 52 53.9	+1.5
FUSB	**Fushanzhiwuyua** baz=352	**0.63**	**352**	⇑P	Pb	20 52 44.0	+0.1
FUSB				S	Sb	20 52 53.0	0.0
WHP	**Taichung City** baz=282	**0.69**	**282**	⇑*e*P	Pb	20 52 45.6	+0.7
WHP				*e*S	Sb	20 52 55.7	+1.2
EHY	**Hungye** baz=207	**0.70**	**208**	P	Pg	20 52 44.4	+0.2
EHY				S	Sb	20 52 55.7	+0.8
WCS	**Beigang Elemen** baz=263	**0.70**	**264**	⇑P	Pb	20 52 45.4	+0.3
WCS				*e*S	Sg	20 52 54.0	+0.5
NFF	**Wufeng Townshi** baz=314	**0.71**	**314**	⇑*e*P	Pb	20 52 46.0	+0.7
NFF				*e*S	Sn	20 52 57.6	-0.6
SSLB	**Suanglung** baz=242	**0.75**	**243**	⇑P	Pb	20 52 45.5	-0.3
SSLB				*i* S	Sb	20 52 56.9	+0.7
SMLT	**Sun Moon Lake** baz=250	**0.75**	**251**	⇓P	Pb	20 52 46.1	+0.1
SMLT				S	Sb	20 52 57.3	+0.8
TYC	**Yuchr** baz=253	**0.79**	**253**	⇓P	Pb	20 52 46.6	+0.1
TYC				*e*S	Sb	20 52 58.3	+1.0
LIOB	**Emei** baz=310	**0.79**	**310**	⇓*e*P	Pn	20 52 47.9	-0.2
LIOB				*i* S	Sb	20 52 58.4	+0.9
NSTT	**Nanjuang** baz=309	**0.79**	**309**	⇑*e*P	Pn	20 52 47.5	-0.5
NSTT				*e*S	Sb	20 52 58.3	+0.8
YULB	**Yu-li** baz=205	**0.81**	**206**	⇑P	Pb	20 52 47.5	+0.5
YULB				*i* S	Sb	20 52 58.9	+0.8

JMA ***04*** *20:58:56.6±0.1, 24.°2N±0.°3×121.°7E±0.°6, h15km, MV2.9/12, TAIWAN REGION*

TAP ***04*** *20:58:56.5, 24.°24N×121.°75E, h11km, ML3.6, B*

ISC 04 20:58:56.3±0.8, 24.°22N±0.°01×121.°76E±0.°02, h10km±5km, n116,n0§74/180, 1C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village** baz=3.0	**0.09**	**348**	⇓*i*P	Pg	**20 58 59.1**	**+0.3**
EHP				S	Sg	**20 59 01.0**	**+0.4**
EAHA	**Aohua** baz=357	**0.11**	**349**	⇓*i*P	Pg	**20 58 59.3**	**+0.2**
EAHA				S	Sg	**20 59 01.2**	**+0.2**
ETL	**Fush Village** baz=226	**0.14**	**244**	⇓*i*P	Pg	**20 58 59.9**	**+0.3**
ETL				S	Sg	**20 59 02.4**	**+0.5**
NACB	**Ninganchiao**	**0.16**	**253**	P	Pg	**20 59 00.0**	**+0.2**
NACB	**Ninganchiao** baz=237	**0.16**	**253**	⇓*i*P	Pg	**20 59 00.0**	**+0.2**
NACB				S	Sg	**20 59 02.7**	**+0.4**
ENA	**Nanau** baz=1.0	**0.21**	**355**	⇓*i*P	Pg	**20 59 00.8**	**+0.1**
ENA				*i* S	Sg	**20 59 03.7**	**+0.1**
TWD	**Chiawan** baz=219	**0.21**	**227**	P	Pg	**20 59 00.9**	**+0.2**
TWD				S	Sg	**20 59 04.2**	**+0.6**
EWUT	**Wuta** baz=8.0	**0.22**	**4**	⇓*i*P	Pg	**20 59 01.2**	**+0.2**
EWUT				*i* S	Sg	**20 59 04.1**	**0.0**
ETLH	**Xiulin Townshi** baz=263	**0.26**	**267**	⇓*i*P	Pg	**20 59 01.7**	**+0.1**
ETLH				*e*S	Sb	**20 59 06.0**	**-1.6**
HWA	**Hwalien** baz=214	**0.28**	**210**	P	Pb	**20 59 03.2**	**-0.3**
HWA				*e*S	Sb	**20 59 07.7**	**-0.6**
ETM	**Tongmen** baz=221	**0.35**	**224**	P	Pg	**20 59 03.6**	**+0.2**
ETM				S	Sg	**20 59 08.4**	**+0.3**
ESAO	**Su ao** baz=15	**0.36**	**12**	P	Pg	**20 59 03.6**	**+0.1**
ESAO				S	Sg	**20 59 08.1**	**-0.2**
LXIB	**Xiulin Townshi** baz=235	**0.38**	**238**	⇓*i*P	Pg	**20 59 03.8**	**-0.1**
LXIB				S	Sb	**20 59 09.4**	**-1.8**
LATG	**Datong** baz=326	**0.38**	**326**	⇓*i*P	Pg	**20 59 04.0**	**+0.2**
LATG				S	Sg	**20 59 09.0**	**0.0**
TWC	**Suao** baz=8.0	**0.39**	**12**	⇓*i*P	Pg	**20 59 04.3**	**+0.1**
TWC				S	Sg	**20 59 09.3**	**-0.1**
NNSB	**Datong** baz=300	**0.40**	**301**	⇓*i*P	Pg	**20 59 04.5**	**+0.2**
NNSB				S	Sg	**20 59 09.8**	**+0.2**
NNSH	**Datong** baz=299	**0.40**	**301**	P	Pg	**20 59 04.6**	**+0.2**
NNSH				S	Sg	**20 59 09.8**	**+0.1**
NDS	**Dongshan** baz=356	**0.41**	**354**	⇓*i*P	Pg	**20 59 04.7**	**+0.3**
NDS				S	Sg	**20 59 10.0**	**0.0**
NNS	**Nan Shan** baz=301	**0.41**	**302**	⇓*i*P	Pg	**20 59 04.7**	**+0.2**
NNS				*i* S	Sg	**20 59 10.3**	**+0.2**
NDT	**Datong Townshi** baz=329	**0.44**	**329**	⇓*i*P	Pg	**20 59 05.4**	**+0.4**
NDT				*i* S	Sg	**20 59 11.2**	**+0.4**
ENTT	**Nioudou** baz=338	**0.45**	**337**	⇓*i*P	Pg	**20 59 05.5**	**+0.3**
ENTT				*i* S	Sg	**20 59 11.5**	**+0.3**
WHF	**Hehuan Shan** baz=258	**0.46**	**260**	⇑*i*P	Pg	**20 59 05.5**	**+0.1**
WHF				S	Sg	**20 59 11.8**	**+0.2**
SHUL	**Shoufeng** baz=207	**0.47**	**203**	P	Pb	**20 59 06.7**	**0.0**
FUSS	**Fushou** baz=271	**0.47**	**273**	P	Pg	**20 59 05.9**	**+0.3**
FUSS				S	Sb	**20 59 12.3**	**-1.7**
TWE	**Neicheng** baz=353	**0.50**	**350**	⇓*i*P	Pg	**20 59 06.5**	**+0.3**
TWE				S	Sg	**20 59 13.0**	**+0.2**
ESL	**Shilin** baz=222	**0.51**	**217**	⇓*i*P	Pg	**20 59 06.1**	**-0.1**
ILA	**Ilan** baz=355	**0.54**	**359**	*e*P	Pg	**20 59 07.3**	**+0.5**
ILA				S	Sg	**20 59 14.8**	**+0.7**
TDCB	**Techi** baz=272	**0.55**	**273**	P	Pb	**20 59 07.5**	**-0.7**
TDCB				S	Sg	**20 59 14.5**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=344	**0.56**	**344**	P	Pg	**20 59 07.6**	**+0.4**
FUSB				*e*S	Sg	**20 59 14.7**	**+0.1**
CHGB	**Renai** baz=244	**0.56**	**253**	⇓P	Pb	**20 59 07.6**	**-0.8**
CHGB				S	Sb	**20 59 15.0**	**-1.5**
YHNB	**Yeheng**	**0.57**	**322**	P	Pb	**20 59 08.0**	**-0.5**
YHNB	**Yeheng** baz=322	**0.57**	**322**	P	Pg	**20 59 07.8**	**+0.4**
YHNB				S	Sg	**20 59 15.0**	**+0.1**
NSK	**Sanguang** baz=321	**0.58**	**321**	⇓*i*P	Pg	**20 59 08.0**	**+0.3**
NSK				S	Sg	**20 59 15.5**	**+0.1**
OWD	**Renai** baz=242	**0.60**	**244**	*e*P	Pg	**20 59 08.0**	**0.0**
WARBT	**Fenglin Townsh** baz=218	**0.61**	**214**	*e*P	Pg	**20 59 08.3**	**+0.1**
EGFH	**Guangfu** baz=215	**0.63**	**209**	*e*P	Pb	**20 59 08.9**	**-0.6**
WUSB	**Renai** baz=240	**0.63**	**249**	*i* P	Pb	**20 59 08.9**	**-0.6**
WUSB				*e*S	Sb	**20 59 17.1**	**-1.4**
NFF	**Wufeng Townshi** baz=304	**0.71**	**305**	P	Pb	**20 59 10.6**	**-0.3**
NFF				*e*S	Sg	**20 59 19.4**	**-0.2**
VWDT	**VWDT** baz=229	**0.73**	**231**	*e*P	Pb	**20 59 10.8**	**-0.4**
VWDT				*e*S	Sb	**20 59 20.8**	**-0.5**
WHP	**Taichung City** baz=273	**0.75**	**274**	*e*P	Pb	**20 59 11.5**	**0.0**
WHP				S	Sb	**20 59 21.4**	**-0.4**
TIPB	**Shuangxi** baz=5.0	**0.75**	**4**	*i* P	Pg	**20 59 11.1**	**+0.3**
TIPB				*i* S	Sg	**20 59 20.3**	**-0.3**
NHDH	**Xindian Distri** baz=344	**0.77**	**344**	*e*P	Pb	**20 59 11.9**	**+0.1**
NHDH				*i* S	Sg	**20 59 21.6**	**+0.3**
HGSD	**Ruisui** baz=219	**0.79**	**203**	*e*P	Pn	**20 59 13.0**	**-0.5**
TATO	**Taipei**	**0.79**	**342**	P	Pb	**20 59 12.4**	**+0.2**
WCS	**Beigang Elemen** baz=257	**0.79**	**258**	*e*P	Pb	**20 59 12.0**	**-0.2**
LIOB	**Emei** baz=301	**0.80**	**302**	*e*P	Pn	**20 59 12.8**	**-1.0**
LIOB				*e*S	Sb	**20 59 22.9**	**-0.4**
NSTT	**Nanjuang** baz=300	**0.80**	**301**	*e*P	Pb	**20 59 12.7**	**+0.3**
NSTT				S	Sb	**20 59 22.7**	**-0.6**
TWB1	**Santiao Chiao** baz=16	**0.81**	**15**	*e*P	Pg	**20 59 12.5**	**+0.5**
TWB1				*i* S	Sg	**20 59 21.9**	**-0.6**
EHY	**Hungye** baz=208	**0.82**	**210**	*e*P	Pg	**20 59 11.8**	**-0.3**
NWF	**Wu-fen Shan** baz=354	**0.84**	**1**	*e*P	Pb	**20 59 13.2**	**+0.1**
NWF				S	Sg	**20 59 23.5**	**-0.2**
WFSB	**Wu-fen Shan** baz=354	**0.84**	**1**	*e*P	Pg	**20 59 12.6**	**-0.1**
WFSB				S	Sg	**20 59 23.9**	**+0.2**
SSLB	**Suanglung**	**0.86**	**240**	P	Pb	**20 59 12.8**	**-0.6**
SSLB	**Suanglung** baz=239	**0.86**	**240**	P	Pb	**20 59 12.7**	**-0.6**
SSLB				*e*S	Sb	**20 59 23.8**	**-1.1**
SMLT	**Sun Moon Lake** baz=236	**0.86**	**247**	*e*P	Pb	**20 59 13.2**	**-0.2**
SMLT				*e*S	Sb	**20 59 24.6**	**-0.4**
SXI1	**Grass Mountain** baz=354	**0.88**	**7**	*e*P	Pg	**20 59 13.7**	**+0.5**
TYC	**Yuchr** baz=248	**0.89**	**249**	*e*P	Pb	**20 59 13.5**	**-0.3**
SBCB	**Hsinchu** baz=314	**0.91**	**309**	*e*P	Pn	**20 59 15.2**	**+0.1**
NCUH	**Zhongli** baz=325	**0.91**	**325**	*e*P	Pn	**20 59 15.2**	**0.0**
NCUH				*e*S	Sn	**20 59 28.0**	**-0.4**
TWQ1	**Liyutan** baz=277	**0.91**	**278**	*e*P	Pn	**20 59 15.6**	**+0.3**
HSN	**Hsinchu** baz=301	**0.92**	**309**	*e*P	Pn	**20 59 15.7**	**+0.3**
TNOU	**National Taiwa** baz=1.0	**0.92**	**1**	*e*P	Pg	**20 59 14.4**	**+0.3**
TWS1	**Kuangyinshan** baz=341	**0.93**	**340**	*e*P	Pn	**20 59 15.5**	**0.0**
YULB	**Yu-li**	**0.93**	**207**	P	Pb	**20 59 14.5**	**-0.1**
YULB	**Yu-li** baz=216	**0.93**	**207**	*e*P	Pg	**20 59 14.1**	**-0.2**
YULB				*e*S	Sn	**20 59 27.3**	**-1.6**
NSY	**Sanyi** baz=281	**0.93**	**282**	*e*P	Pn	**20 59 16.7**	**+1.1**
YM01	**YM01** baz=350	**0.94**	**349**	P	Pn	**20 59 15.6**	**-0.1**
YM01				*e*S	Sg	**20 59 26.8**	**+0.1**
NMLH	**Miaoli** baz=288	**0.94**	**290**	*e*P	Pn	**20 59 16.4**	**+0.8**
EYUL	**Yuli** baz=219	**0.96**	**205**	*e*P	Pn	**20 59 15.2**	**-0.8**
TWF1	**Yuli** baz=218	**0.96**	**206**	*e*P	Pb	**20 59 14.8**	**-0.4**
NTST	**Danshui** baz=343	**0.98**	**343**	*e*P	Pn	**20 59 16.6**	**+0.4**
WHYT	**Xinyi Township** baz=237	**0.98**	**238**	*e*P	Pn	**20 59 15.5**	**-0.8**
ANP	**Anpu** baz=348	**0.98**	**347**	*e*P	Pg	**20 59 15.8**	**+0.5**
WJS	**Zhushan** baz=239	**1.02**	**247**	*e*P	Pn	**20 59 17.5**	**+0.7**
WDJ	**Dajia District** baz=276	**1.03**	**277**	*e*P	Pn	**20 59 18.0**	**+1.1**
WNT	**Mingjian** baz=245	**1.04**	**251**	*e*P	Pn	**20 59 17.7**	**+0.7**
WNT				*e*S	Sn	**20 59 33.4**	**+1.7**
CHKH	**Chenggong** baz=189	**1.08**	**198**	*e*P	Pn	**20 59 17.8**	**+0.3**
CHKH				*e*S	Sn	**20 59 32.9**	**+0.4**
FULB	**Fuli** baz=217	**1.10**	**203**	*e*P	Pg	**20 59 17.4**	**-0.2**
WCHH	**Zhanghua** baz=262	**1.11**	**263**	*e*P	Pn	**20 59 18.9**	**+1.0**
ALS	**Alishan** baz=230	**1.13**	**231**	*e*P	Pn	**20 59 18.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.16**	**78**	P	Pb	**20 59 19.0**	**+0.5**
YOJ	**Yonaguni jima** baz=68	**1.16**	**78**	*e*P	Pb	**20 59 19.1**	**+0.5**
YOJ	**Yonaguni jima**	**1.16**	**78**	P	Pn	**20 59 18.8**	**+0.1**
YOJ				*e*S	Sg	**20 59 34.8**	**+0.9**
CHN5	**Tsauling** baz=238	**1.17**	**238**	*e*P	Pg	**20 59 19.6**	**+0.7**
CHN5				*e*S	Sn	**20 59 36.1**	**+1.2**
CHKT	**Chengkung** baz=190	**1.18**	**198**	*e*P	Pb	**20 59 18.2**	**-0.6**
CHKT				*e*S	Sn	**20 59 35.7**	**+0.8**
EHD	**Haiduan** baz=217	**1.18**	**206**	*e*P	Pg	**20 59 18.9**	**-0.2**
WGK	**Gukeng** baz=244	**1.22**	**244**	*e*P	Pg	**20 59 21.2**	**+1.4**
WGK				*e*S	Sn	**20 59 37.9**	**+1.9**
ELDTW	**Lidau** baz=213	**1.23**	**214**	*e*P	Pn	**20 59 18.3**	**-1.5**
WDLH	**Douliu** baz=245	**1.24**	**245**	*e*P	Pg	**20 59 21.1**	**+0.9**
WDLH				*e*S	Sg	**20 59 38.8**	**+2.5**
WRL	**Guolierlin Hig** baz=256	**1.30**	**256**	*e*P	Pg	**20 59 21.6**	**+0.2**
WRL				*e*S	Sg	**20 59 40.0**	**+1.6**
WCKO	**Fanlu** baz=234	**1.31**	**234**	P	Pg	**20 59 22.6**	**+1.0**
WCKO				*e*S	Sg	**20 59 41.2**	**+2.5**
WTK	**Tuku** baz=259	**1.36**	**247**	*e*P	Pg	**20 59 23.0**	**+0.5**
WTK				*e*S	Sg	**20 59 42.3**	**+2.0**
STYH	**Taoyuan** baz=221	**1.38**	**221**	*e*P	Pg	**20 59 22.6**	**-0.3**
STYH				*e*S	Sg	**20 59 41.5**	**+0.6**
TPUB	**Ta-pu**	**1.38**	**229**	P	Pg	**20 59 23.3**	**+0.4**
TPUB	**Ta-pu** baz=217	**1.38**	**229**	*e*P	Pg	**20 59 23.1**	**+0.2**
TPUB				*e*S	Sg	**20 59 41.8**	**+0.8**

baz=217
LONT Longtian 1.43 204 *e*P **Pn 20 59 21.4 -1.0**
baz=205
WTP Ta-pu 1.43 227 *e*P **Pg 20 59 24.0 +0.2**
baz=228
TWK Hsinying 1.50 231 *e*P **Pg 20 59 25.0 -0.3**
baz=231
WSF Szhu 1.52 248 *e*S **Sg 20 59 46.4 +1.0**
baz=259
SNST Tainan City 1.53 230 *e*P **Pg 20 59 25.8 +0.1**
baz=231
SNST *e*S **Sg 20 59 47.4 +1.8**
baz=231
CHN1 Nanshi 1.53 228 *e*P **Pg 20 59 26.1 +0.4**
baz=218
CHN1 *e*S **Sg 20 59 47.4 +1.8**
baz=218
TWG Pinlang 1.53 205 *e*P **Pn 20 59 23.6 -0.2**
baz=188
TWGBT Beinan 1.53 204 P **Pg 20 59 26.4 +0.6**
TWGBT Beinan 1.53 204 *e*P **Pn 20 59 22.5 -1.3**
baz=188
SGST Jiashian 1.57 224 *e*P **Pb 20 59 25.2 -0.2**
baz=224
SGST *e*S **Sg 20 59 48.3 +1.5**
baz=224
SLGT Liugui 1.59 220 *e*P **Pg 20 59 26.2 -0.8**
baz=221
ICHU Yijhu 1.61 238 *e*P **Pg 20 59 26.6 -0.6**
baz=238
ICHU *e*S **Sg 20 59 49.1 +1.1**
baz=238
CHN8 Yiju 1.67 239 *e*S **Sg 20 59 50.7 +0.8**
baz=239
IRIF Iriomote-Funau 1.80 86 P **Pn 20 59 27.9 +0.4**
TSCK Chigu Township 1.87 235 *e*P **Pb 20 59 30.0 -0.6**
baz=238
TSCK *e*S **Sg 20 59 55.8 -0.7**
baz=238
MASBT Mashibuluo 1.91 213 *e*P **Pb 20 59 31.6 +0.4**
baz=216
JKRS Kuro-shima 2.05 89 *e*P **Pn 20 59 32.0 +1.1**
SCZT Fangliau 2.12 210 *e*P **Pb 20 59 33.6 -1.2**
baz=195
JIJ Ishigaki jima 2.18 86 *e*S **Sn 21 00 00.3 +0.6**
SLIU Shizi 2.18 204 *e*P **Pb 20 59 34.3 -1.7**
baz=194
JISG Ishigakijimahi 2.35 81 *e*P **Pn 20 59 35.7 +0.7**
JISG *e*S **Sn 21 00 03.5 -0.4**
PTMZ Houxiangcun 2.54 289 *e*P **Pn 20 59 37.6 0.0**
baz=290
PTMZ S **Sn 21 00 07.7 -0.9**
baz=290

TAP 04 21:01:10.6, 24°20N×121°70E, h10km, ML2.7, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**242**	*i* P	Pg	21 01 14.0	+0.9
baz=241							
ETL				*i* S	Sg	21 01 15.8	+0.9
baz=241							
NACB	**Ninganchiao**	**0.10**	**256**	*i* P	Pb	21 01 14.2	-0.5
baz=256							
NACB				*i* S	Sg	21 01 16.3	+1.0
baz=256							
EHP	**Heping Village**	**0.12**	**17**	P	Pg	21 01 14.2	+0.6
baz=20							
EHP				S	Sg	21 01 16.8	+1.2
baz=20							
EAHA	**Aohua**	**0.14**	**14**	*i* P	Pb	21 01 14.7	-0.6
baz=13							
EAHA				*i* S	Sg	21 01 17.0	+1.0
baz=13							
TWD	**Chiawan**	**0.15**	**220**	⇓*i* P	Pb	21 01 14.8	-0.7
baz=218							
TWD				*i* S	Sg	21 01 17.4	+0.9
baz=218							
ETLH	**Xiulin Townshi**	**0.20**	**273**	P	Pb	21 01 16.1	-0.4
baz=272							
ETLH				S	Sg	21 01 19.5	+1.6
baz=272							
ENA	**Nanau**	**0.23**	**8**	*i* P	Pb	21 01 16.3	-0.6
baz=10.0							
ENA				*i* S	Sg	21 01 19.9	+1.2
baz=10.0							
HWA	**Hwalien**	**0.24**	**202**	P	Pb	21 01 16.4	-0.6
baz=200							
HWA				*i* S	Sg	21 01 21.4	+2.5
baz=200							
EWUT	**Wuta**	**0.26**	**15**	P	Pb	21 01 16.7	-0.7
baz=15							
EWUT				*i* S	Sg	21 01 20.5	+1.1
baz=15							
ETM	**Tongmen**	**0.30**	**220**	*i* P	Pg	21 01 17.2	+0.5
baz=219							
ETM				S	Sg	21 01 21.5	+0.7
baz=219							
LXIB	**Xiulin Townshi**	**0.32**	**237**	*i* P	Pb	21 01 17.9	-0.6
baz=236							
LXIB				*i* S	Sg	21 01 22.5	+1.1
baz=236							
NNSB	**Datong**	**0.37**	**308**	*i* P	Pb	21 01 19.4	0.0
baz=308							
NNSB				S	Sb	21 01 24.7	-0.5
baz=308							
LATG	**Datong**	**0.37**	**334**	*i* P	Pb	21 01 19.4	0.0
baz=334							
LATG				*i* S	Sb	21 01 25.3	0.0
baz=334							
NNS	**Nan Shan**	**0.39**	**309**	*i* P	Pb	21 01 19.7	+0.1
baz=308							
NNS				*i* S	Sb	21 01 25.3	-0.4
baz=308							
ESAO	**Su ao**	**0.40**	**19**	*e*P	Pb	21 01 19.3	-0.4
baz=18							
ESAO				S	Sg	21 01 24.6	+0.9
baz=18							
WHF	**Hehuan Shan**	**0.40**	**263**	*i* S	Sb	21 01 25.5	-1.0
baz=262							
FUSS	**Fushou**	**0.42**	**277**	P	Pb	21 01 20.5	+0.2
baz=276							
FUSS				S	Sb	21 01 26.3	-0.6
baz=276							
SHUL	**Shoufeng**	**0.43**	**198**	P	Pb	21 01 21.0	+0.8
baz=197							
TWC	**Suao**	**0.43**	**18**	P	Pb	21 01 19.9	-0.4
baz=19							
TWC				S	Sg	21 01 25.6	+0.8
baz=19							
NDS	**Dongshan**	**0.43**	**1**	P	Pb	21 01 20.0	-0.4
baz=1.0							
NDS				S	Sb	21 01 26.6	-0.3
baz=1.0							
NDT	**Datong Townshi**	**0.44**	**337**	P	Pb	21 01 20.8	+0.3
baz=336							
NDT				S	Sb	21 01 27.2	+0.1
baz=336							
ESL	**Shilin**	**0.46**	**213**	P	Pg	21 01 19.7	+0.1
baz=212							
ENTT	**Nioudou**	**0.46**	**344**	*i* P	Pb	21 01 21.0	+0.2
baz=344							
ENTT				*i* S	Sb	21 01 27.5	-0.2
baz=344							
TWT	**Tachien**	**0.48**	**277**	*i* P	Pb	21 01 22.0	+0.6
baz=275							
TWT				S	Sb	21 01 28.3	-0.3
baz=275							
TDCB	**Techi**	**0.50**	**276**	*i* P	Pb	21 01 21.9	+0.3
baz=276							
TDCB				S	Sb	21 01 28.7	-0.3
baz=276							
CHGB	**Renai**	**0.50**	**254**	P	Pb	21 01 21.8	+0.1
baz=254							
CHGB				S	Sb	21 01 28.8	-0.3
baz=254							
TWE	**Neicheng**	**0.52**	**356**	*i* P	Pb	21 01 22.2	+0.3
baz=357							
TWE				*i* S	Sb	21 01 29.4	0.0
baz=357							
OWD	**Renai**	**0.54**	**243**	P	Pb	21 01 22.2	-0.1
baz=243							
OWD				S	Sb	21 01 29.4	-0.8
baz=243							
YHNB	**Yeheng**	**0.56**	**328**	⇓*i* P	Pb	21 01 23.0	+0.5
baz=327							
YHNB				*i* S	Sb	21 01 30.9	+0.3
baz=327							
WARBT Fenglin Townsh		**0.56**	**211**	P	Pb	21 01 22.1	-0.5
baz=211							
WARBT				*e*S	Sg	21 01 29.1	+0.2
baz=211							
FUSB Fushanzhiwuyua		**0.57**	**349**	P	Pb	21 01 23.2	+0.4
baz=349							
FUSB				S	Sb	21 01 30.9	-0.1
baz=349							
NSK Sanguang		**0.57**	**327**	⇓*i* P	Pb	21 01 23.2	+0.4
baz=326							
NSK				*i* S	Sb	21 01 30.9	-0.1
baz=326							
WUSB Renai		**0.57**	**249**	P	Pb	21 01 23.2	+0.4
baz=249							
WUSB				S	Sb	21 01 30.6	-0.5
baz=249							
EGFH Guangfu		**0.58**	**206**	*e*P	Pb	21 01 22.6	-0.3
baz=205							
VWDT VWDT		**0.68**	**229**	*e*P	Pb	21 01 24.5	0.0
baz=229							
VWDT				*e*S	Sb	21 01 35.0	+1.0
baz=229							
NFF Wufeng Townshi		**0.69**	**309**	*e*P	Pb	21 01 24.7	-0.1
baz=308							
NFF				S	Sb	21 01 35.2	+0.9
baz=308							
WHP Taichung City		**0.70**	**277**	P	Pn	21 01 26.0	-0.6
baz=276							
WHP				S	Sb	21 01 35.7	+1.1
baz=276							
WCS Beigang Elemen		**0.74**	**259**	*e*P	Pn	21 01 26.6	-0.5
baz=258							
WCS				*e*S	Sb	21 01 35.9	+0.2
baz=258							
HGSD Ruisui		**0.75**	**200**	*e*P	Pb	21 01 26.0	+0.3
baz=200							
LIOB Emei		**0.77**	**306**	*e*P	Pb	21 01 26.6	+0.4
baz=305							
EHY Hungye		**0.77**	**207**	P	Pg	21 01 25.7	+0.1
baz=206							
SSLB Suanglung		**0.80**	**239**	P	Pb	21 01 26.5	-0.1
baz=239							
SSLB				*e*S	Sb	21 01 38.5	+1.0
baz=239							
SMLT Sun Moon Lake		**0.80**	**247**	*e*P	Pg	21 01 25.3	-0.8
baz=246							
SMLT				*e*S	Sb	21 01 38.0	+0.5
baz=246							
YULB Yu-li		**0.88**	**205**	*e*P	Pg	21 01 27.2	-0.5
baz=204							

JMA 04 21:01:11.4±0.1, 24°3N±0°3, 123°9E±0°3, h14km±1km, MV0.8/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**274**	P	Pg	21 01 14.9	0.0
IRIF				S	Sg	21 01 17.4	+0.1
JKRS	**Kuro-shima**	**0.15**	**126**	P	Pg	21 01 15.1	-0.1
JKRS				S	Sg	21 01 17.9	+0.2
JIJ	**Ishigaki jima**	**0.25**	**81**	P	Pg	21 01 16.5	-0.2
JIJ				S	Sg	21 01 20.2	-0.1
HATJ	**Hateruma jima**	**0.28**	**194**	P	Pg	21 01 17.1	-0.1
HATJ				*e*S	Sg	21 01 21.4	+0.3
JISG	**Ishigakijimahi**	**0.47**	**57**	*e*S	Sg	21 01 27.6	+0.5

*IDC **04** 21:37:41.0±1.0, 12°.98N×143°.47E, h200km±13km, mb3.2/12, mbtmp3.9/13, MS3.1/1, Error ellipse: s-maj=28.0km s-min=12.5km az=88.0*

ISC 04 21:37:40.9±0.7, 13°0N±0°.1×143°4E±0°.1, h200km, n15, σ0°85/15, mb3.3/12, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO Guam		**1.53**	**67**	P	**Pn**	**21 38 15.3**	**+0.4**
58nm,0.3s,baz=197,slow=11,SNR=2.1							
GUMO				S	**Sn**	**21 38 40.9**	**-0.3**
180nm,0.3s,baz=26,slow=21,SNR=15							
JCJ Chichijima		**14.08**	**355**	P	**P**	**21 40 52.6**	**-0.9**
107nm,0.9s,baz=187,slow=17,SNR=1.9							
WRA Warramunga Arr		**33.92**	**195**	P	**P**	**21 44 05.3**	**+0.1**
3.5nm,0.7s,baz=15,slow=9.3,SNR=13							
3.5nm,0.7s							
ASAR Alice Springs		**37.60**	**194**	P	**P**	**21 44 36.8**	**+0.3**
1.5nm,0.8s,baz=18,slow=13,SNR=32							
1.5nm,0.8s							
PETK Petropavlovsk-		**41.61**	**13**	LR	LR	22 01 14.0	
comp=Z,26nm,20.9s,baz=139,slow=34							
CMAR Chiang Mai Arr		**43.07**	**283**	P	**P**	**21 45 21.2**	**-0.3**
0.3nm,0.5s,baz=78,slow=7.4,SNR=4.0							
0.3nm,0.5s							
STKA Stephens Creek		**44.65**	**182**	P	**P**	**21 45 32.9**	**-0.8**
1.3nm,0.4s,baz=349,slow=9.3,SNR=4.3							
1.3nm,0.4s							
SONM Songino Array		**46.42**	**326**	P	**P**	**21 45 48.8**	**+1.2**
0.3nm,0.6s,baz=143,slow=6.4,SNR=1.7							
0.3nm,0.6s							
MKAR Makanchi Array		**60.94**	**317**	P	**P**	**21 47 33.4**	**+0.6**
0.2nm,0.6s,baz=82,slow=8.7,SNR=2.0							
0.2nm,0.6s							
ZALV Zalesovo Beam		**61.29**	**325**	P	**P**	**21 47 35.5**	**+0.6**
0.3nm,0.5s,baz=108,slow=14,SNR=1.7							
0.3nm,0.5s							
KURBB Kurchatov Arra		**64.17**	**320**	P	**P**	**21 47 54.2**	**+0.1**
0.2nm,0.4s,baz=104,slow=6.8,SNR=3.7							
0.2nm,0.4s							
BVAR Borovoye Array		**69.52**	**322**	P	**P**	**21 48 28.4**	**+0.6**
0.7nm,0.3s,baz=97,slow=9.1,SNR=5.8							
0.7nm,0.3s							
ILAR Eielson Array		**69.71**	**25**	P	**P**	**21 48 27.7**	**-1.1**
0.1nm,0.4s,baz=251,slow=5.9,SNR=2.2							
0.1nm,0.4s							
NVAR Mina Array Bea		**88.39**	**51**	P	**P**	**21 50 12.2**	**+1.5**
0.2nm,0.5s,baz=245,slow=8.6,SNR=2.7							
0.2nm,0.5s							
FINES FINESS Array B		**91.10**	**335**	P	**P**	**21 50 21.6**	**-1.0**
3.4nm,1.0s,baz=16,slow=11,SNR=3.4							
3.4nm,1.0s							

*IDC **04** 21:37:35.4±6.8, 34°.88N×23°.17E, h0km, mb3.6/4, mbtmp3.4/6, ML3.2/2, Error ellipse: s-maj=128.4km s-min=42.0km az=29.0*
*THE **04** 21:37:41.3, 35°.13N×22°.87E, h10km±3km, ML2.9/3, Error ellipse: s-maj=3.5km s-min=1.3km az=47.0*
*ATH **04** 21:37:42.9, 35°.14N×22°.98E, h20km±2km, ML3.0/4, Error ellipse: s-maj=3.3km s-min=1.2km az=30.0*

ISC 04 21:37:41.3±1.7, 35°10N±0°06×22°94E±0°06, h17km±10km, n46, σ1§21/52, mb3.5/4, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODP Rodopos		**0.81**	**55**	P	**Pg**	**21 37 57.4**	**+0.3**
RODP				S	**Sb**	**21 38 09.2**	**+1.6**
315nm,0.6s							
ANKY Antikythira Is		**0.82**	**21**	P	**Pb**	**21 37 57.5**	**+0.4**
ANKY				S	**Sb**	**21 38 08.6**	**+0.8**
1µm,0.7s							
ANKY Antikythira Is		**0.82**	**21**	P	**Pb**	**21 37 57.5**	**+0.4**
ANKY				S	**Sg**	**21 38 07.8**	**-0.4**
ANKY				AML	AML	21 38 10.0	
comp=N,2303µm,0.5s							
ANKY				AML	AML	21 38 13.6	
comp=E,2216µm,1.0s							
IMMV Iera Moni Meta		**0.93**	**67**	P	**Pg**	**21 37 59.1**	**-0.2**
IMMV Iera Moni Meta		**0.93**	**67**	P	**Pg**	**21 37 59.0**	**-0.2**
IMMV				S	**Sg**	**21 38 10.4**	**-1.0**
IMMV				AML	AML	21 38 14.1	
comp=N,1450µm,0.6s							
IMMV				AML	AML	21 38 17.0	
comp=E,1181µm,0.9s							
GVD Gavdhos		**0.98**	**105**	P	**Pg**	**21 38 00.2**	**0.0**
GVD				S	**Sn**	**21 38 16.3**	**+2.7**
comp=E,2µm,0.5s							
GVD Gavdhos		**0.98**	**105**	P	**Pg**	**21 38 00.6**	**+0.4**
GVD				S	**Sg**	**21 38 13.8**	**+0.7**
GVD				AML	AML	21 38 17.2	
comp=E,3006µm,0.6s							
GVD				AML	AML	21 38 18.1	
comp=N,3266µm,0.5s							
GVDS Gavdos		**0.98**	**105**	P	**Pg**	**21 38 00.0**	**-0.3**
GVDS				S	**Sn**	**21 38 15.8**	**+2.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHAN Chania		**0.99**	**65**	P	**Pg**	**21 37 59.9**	**-0.6**
CHAN				S	**Sg**	**21 38 13.9**	**+0.3**
PRNS Prines Rethymn		**1.30**	**78**	P	**Pn**	**21 38 03.6**	**-1.1**
IDI Anoyia		**1.61**	**83**	P	**Pn**	**21 38 08.9**	**0.0**
IDI Anoyia		**1.61**	**83**	P	**Pn**	**21 38 08.9**	**0.0**
VLI Veliai		**1.61**	**360**	P	**Pb**	**21 38 10.3**	**-0.3**
VLI				AML	AML	21 38 40.2	
comp=E,615µm,0.5s							
VLI				AML	AML	21 38 41.4	
comp=N,441µm,1.4s							
PYL PYLOS		**2.04**	**332**	P	**Pn**	**21 38 14.7**	**-0.1**
PYL PYLOS		**2.04**	**332**	P	**Pn**	**21 38 15.2**	**+0.4**
PYL				S	**Sn**	**21 38 38.3**	**-1.5**
KRND KRANIDI		**2.29**	**4**	P	**Pn**	**21 38 18.8**	**+0.6**
KRND KRANIDI		**2.29**	**4**	P	**Pn**	**21 38 18.9**	**+0.7**
THR6 Thira Island,		**2.36**	**57**	P	**Pn**	**21 38 18.3**	**-0.9**
SNT5 Nea Kammeni, S		**2.38**	**56**	P	**Pn**	**21 38 18.6**	**-1.0**
THR3 Thira Island,		**2.39**	**56**	P	**Pn**	**21 38 18.4**	**-1.2**
SANT Santorini		**2.41**	**58**	P	**Pn**	**21 38 18.9**	**-1.0**
VLY Voula,Athens		**2.83**	**14**	P	**Pn**	**21 38 26.1**	**+0.4**
GUR Goura		**2.87**	**351**	P	**Pn**	**21 38 27.0**	**+0.7**
GUR Goura		**2.87**	**351**	P	**Pn**	**21 38 27.4**	**+1.1**
ATHU Athens Univers		**2.94**	**13**	P	**Pn**	**21 38 27.2**	**0.0**
KLV Kalavryta, Ach		**3.01**	**348**	P	**Pn**	**21 38 29.2**	**+1.0**
KLV Kalavryta, Ach		**3.01**	**348**	P	**Pn**	**21 38 29.1**	**+1.0**
DRO Drossia		**3.02**	**341**	P	**Pn**	**21 38 29.5**	**+1.3**
PTL Penteli		**3.04**	**14**	P	**Pn**	**21 38 29.0**	**+0.5**
DION Dionisos Attik		**3.08**	**15**	P	**Pn**	**21 38 30.0**	**+0.9**
VIL2 Platees		**3.12**	**5**	P	**Pn**	**21 38 28.7**	**-0.9**
RLS Riolos of Patr		**3.18**	**339**	P	**Pn**	**21 38 31.9**	**+1.4**
EFP Efpalio		**3.42**	**346**	P	**Pn**	**21 38 35.4**	**+1.6**
VLS Valsamata		**3.61**	**329**	P	**Pn**	**21 38 36.2**	**-0.1**
AXAR Agios Charalam		**3.67**	**357**	P	**Pn**	**21 38 37.8**	**+0.6**
EVR Evrytania		**3.92**	**347**	P	**Pn**	**21 38 44.1**	**+3.4**
AGG Agios Georgios		**3.95**	**353**	P	**Pn**	**21 38 41.6**	**+0.6**
MAKR Makrakomi, Fth		**3.96**	**351**	P	**Pn**	**21 38 42.5**	**+1.3**
NYDR Nydri-Lefkada		**4.03**	**334**	P	**Pn**	**21 38 43.8**	**+1.7**
NEO Neokhori		**4.21**	**3**	P	**Pn**	**21 38 44.5**	**-0.1**
BRTR Keskin Array B		**9.68**	**58**	Pn	**Pn**	**21 39 58.5**	**-1.4**
baz=230,slow=13,SNR=3.4							
comp=N,0.8nm,0.9s							
GERES GERESS Array B		**15.34**	**336**	Pn	**Pn**	**21 41 18.6**	**+1.6**
comp=N,0.1nm,0.3s,baz=130,slow=15,SNR=1.7							
comp=N,0.2nm,0.4s							
GEYT Alibeck		**28.31**	**74**	P	**P**	**21 43 30.8**	**-3.2**
comp=N,0.4nm,0.4s,baz=251,slow=7.5,SNR=1.5							
comp=N,0.4nm,0.4s							
KURBB Kurchatov Arra		**42.57**	**51**	P	P	21 45 32.3	-3.8
comp=N,0.3nm,0.5s,baz=276,slow=9.0,SNR=1.9							
comp=N,0.3nm,0.5s							
MKAR Makanchi Array		**45.32**	**56**	P	P	21 45 54.7	-3.6
comp=N,0.2nm,0.3s,baz=266,slow=8.3,SNR=11							
comp=N,0.2nm,0.3s							
ZALV Zalesovo Beam		**46.36**	**46**	P	P	21 46 02.0	-4.2
comp=N,0.5nm,0.3s,baz=269,slow=8.1,SNR=4.6							
comp=N,0.5nm,0.3s							

*IDC **04** 21:47:21.9±0.5, 17°.28S×70°.64W, h0km, mb4.4/14, mbtmp4.4/17, ML4.0/3, MS3.8/37, Error ellipse: s-maj=22.8km s-min=12.7km az=61.0*
*VAO **04** 21:47:23.6±0.5, 17°.36S×70°.88W, h10km, mb4.8*
*GUC **04** 21:47:26.8±0.7, 17°.29S×70°.86W, h34km±2km, ML5.0*
*NEIC **04** 21:47:28.6±1.8, 17°.40S±0°.05×70°.81W±0°.06, h40km±6km, mb4.7/122, Error ellipse: s-maj=9.7km s-min=6.4km az=57.0*
*GCMT **04** 21:47:31.5±0.4, 17°.38S±0°.02×70°.97W±0°.03, h46km±1km, MW4.9/67, Moment Tensor Solution. s21,c21; s67,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.92±.20; $M_{\theta\theta}$-1.10±.13; $M_{\phi\phi}$0.18±.16; $M_{r\theta}$-0.61±.08; $M_{\theta\phi}$-2.13±.09; $M_{r\phi}$0.66±.10; Best double couple: M_o2.50900×10^{16} NP1:ϕ_s273.00000°, δ59.00000°, λ155.00000°. NP2: ϕ_s13.00000°, δ67.00000°, λ23.00000°. Principal axes: T 2.3320, Plg32.0000°, Azm233.0000°; N 0.3560, Plg58.0000°, Azm56.0000°; P -2.6860, Plg2.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 21:47:25.3±1.2, 17°34S±0°03×70°81W±0°05, h19km±4km, n281, σ1§38/227, mb4.8/60, MS3.8/34, 3C-7D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01 Chacalluta		**1.12**	**157**		**Pb**	**21 47 46.9**	**+0.9**
AP01				Sn	**Sn**	**21 48 02.5**	**+1.6**
AP01 Chacalluta		**1.12**	**157**	⇓*i* P	**Pb**	**21 47 46.9**	**+0.9**
AP01				*e*S	**Sg**	**21 48 02.6**	**+0.9**
PB18 Visviri		**1.29**	**101**	⇓*i* P	**Pg**	**21 47 52.0**	**+2.1**
PB12 IPOC Station P		**1.35**	**160**	Pn	**Pb**	**21 47 50.5**	**+0.4**
PB12 IPOC Station P		**1.35**	**160**	⇓*i* P	**Pb**	**21 47 50.5**	**+0.4**
PB12				*e*S	**Sb**	**21 48 08.2**	**+1.2**
PB12				IAML		21 48 09.5	
comp=E,47µm,0.5s							
PB16 IPOC Station P		**1.58**	**129**	Pn	**Pb**	**21 47 55.0**	**+0.7**
PB16 IPOC Station P		**1.58**	**129**	⇓*i* P	**Pb**	**21 47 55.1**	**+0.7**
PB16				*e*S	**Sg**	**21 48 16.9**	**+0.2**
PB16				IAML		21 48 19.3	
comp=N,19µm,0.5s							
PB11 IPOC Station P		**2.65**	**156**	Pn	**Pn**	**21 48 08.0**	**+0.8**
PB11 IPOC Station P		**2.65**	**156**	*e*P	**Pn**	**21 48 08.0**	**+0.8**
PB11				*e*S	**Sn**	**21 48 40.5**	**+1.7**
PB11				IAML		21 48 47.8	
comp=E,9µm,0.4s							
LPAZ La Paz		**2.77**	**68**	Pn	**Pb**	**21 48 15.0**	**+0.5**
GO01 Chusmiza		**2.78**	**147**	Pn	**Pn**	**21 48 11.9**	**+2.7**
GO01 Chusmiza		**2.78**	**147**	*e*P	**Pn**	**21 48 11.7**	**+2.4**
TA02 Huaiquique		**2.98**	**168**	Pn	**Pn**	**21 48 13.5**	**+1.8**
TA02 Huaiquique		**2.98**	**168**	*e*P	**Pn**	**21 48 13.6**	**+2.0**
HMBC Humberstone		**3.05**	**164**	*e*P	**Pn**	**21 48 14.0**	**+1.3**
PB08 IPOC Station P		**3.20**	**151**	Pn	**Pn**	**21 48 17.4**	**+2.5**
PB08 IPOC Station P		**3.20**	**151**	*e*P	**Pn**	**21 48 16.9**	**+2.0**
PB08				*e*S	**Sn**	**21 48 56.3**	**+3.5**
PB08				IAML		21 49 06.2	
comp=E,4µm,0.3s							
TA01 Diego Aracena		**3.26**	**170**	Pn	**Pn**	**21 48 16.9**	**+1.4**
TA01 Diego Aracena		**3.26**	**170**	*e*P	**Pn**	**21 48 16.4**	**+0.9**
PATCX Punta Patache		**3.52**	**170**	Pn	**Pn**	**21 48 20.0**	**+0.9**
PATCX Punta Patache		**3.52**	**170**	*e*P	**Pn**	**21 48 20.1**	**+1.0**
PB01 IPOC Station P		**3.89**	**162**	*e*P	**Pn**	**21 48 25.6**	**+1.4**
PB02 IPOC Station P		**4.05**	**168**	*e*P	**Pn**	**21 48 27.9**	**+1.4**
PB07 IPOC Station P		**4.45**	**169**	Pn	**Pn**	**21 48 32.9**	**+0.9**
PB07 IPOC Station P		**4.45**	**169**	*e*P	**Pn**	**21 48 33.4**	**+1.4**
PB09 IPOC Station P		**4.67**	**162**	Pn	**Pn**	**21 48 37.2**	**+2.2**
PB09 IPOC Station P		**4.67**	**162**	*e*P	**Pn**	**21 48 37.3**	**+2.2**
PB04 IPOC Station P		**5.01**	**173**	Pn	**Pn**	**21 48 40.0**	**+0.4**
PB04 IPOC Station P		**5.01**	**173**	*e*P	**Pn**	**21 48 40.1**	**+0.4**
PB06 IPOC Station P		**5.46**	**168**	Pn	**Pn**	**21 48 46.2**	**+0.3**
LVC Limon Verde		**5.54**	**162**	Pn	**Pn**	**21 48 48.8**	**+1.7**
LVC Limon Verde		**5.54**	**162**	Pn	**Pn**	**21 48 47.8**	**+0.7**
comp=E,12nm,0.3s,baz=332,slow=9.1,SNR=25							
LVC				Pg	**Pb**	**21 49 01.7**	**+0.1**
comp=E,51nm,0.3s,baz=333,slow=8.7,SNR=14							
LVC				Sn	**Sn**	**21 49 49.0**	**-1.5**
comp=E,62nm,0.3s,baz=246,slow=20,SNR=6.3							
LVC				LR	LR	21 50 54.6	
comp=E,1µm,18.3s,baz=296,slow=38							
comp=E,28nm,0.4s							
PB15 IPOC Station P		**5.97**	**168**		**Pn**	**21 48 53.8**	**+0.8**
PB10 IPOC Station P		**6.15**	**178**	Pn	**Pn**	**21 48 54.0**	**-1.2**
PB14 IPOC Station P		**7.26**	**177**	Pn	**Pn**	**21 49 09.3**	**-1.4**
GO02 Mina Guanaco		**7.87**	**172**	Pn	**Pn**	**21 49 18.7**	**-0.4**
NNA Nana		**7.90**	**312**	Pn	**Pn**	21 49 24.4	+5.1
NNA Nana		**7.90**	**312**	Sn	**Sn**	**21 50 50.9**	**+2.6**
comp=E,1.7nm,0.3s,baz=147,slow

comp=E,0.3nm,0.3s,baz=127,slow=20,SNR=1.0
ATAH LR LR 21 55 51.2
comp=E,832nm,18.5s,baz=171,slow=40
comp=E,2.4nm,0.7s
BDQN Bodoquena, MS 13.66 105 *eP* **Pn 21 50 37.7 -0.4**
CO02 Combarbal 13.80 181 Pn **Pn 21 50 40.5 +0.3**
VACA Villa Angela C 13.86 139 *eP* **Pn 21 50 40.9 +0.1**
SALV Santo Antonio 14.55 87 *eP* **Pn 21 50 51.4 +1.0**
AQDB Aquidauana 14.63 105 Pn **Pn 21 50 52.8 +1.4**
AQDB Aquidauana 14.63 105 *eP* **Pn 21 50 52.0 +0.5**
ANTJ Antonio Joao (14.69 111 *eP* **Pn 21 50 52.5 +0.3**
TEFE Tefe 15.02 24 *eP* **Pn 21 50 56.9 +0.2**
VA06 Catapilco 15.16 182 Pn **Pn 21 50 59.0 +0.5**
VA06 IAmb IAmb 21 51 06.5
comp=Z,37nm,0.9s
RVDE Rio Verde (Bra 15.17 99 *eP* **Pn 21 50 58.3 -0.4**
PP1B Ponte de Pedra 15.20 93 *eP* **Pn 21 50 58.7 -0.4**
VA03 San Esteban 15.36 179 IAmb IAmb 21 51 09.2
comp=Z,36nm,0.8s
CPUP Villa Florida 15.37 128 Pn **Pn 21 51 01.5 +0.2**
CPUP Villa Florida 15.37 128 Pn **Pn 21 50 59.0 -2.2**
comp=Z,0.3nm,0.3s,baz=316,slow=14,SNR=11
CPUP Sn **Sn 21 53 49.5 -1.7**
comp=Z,0.1nm,0.3s,baz=338,slow=19,SNR=1.6
CPUP LR LR 21 58 06.5
comp=Z,305nm,20.9s,baz=306,slow=42
comp=Z,3.3nm,0.7s
CPUP Villa Florida 15.37 128 *eP* **Pn 21 51 00.3 -1.0**
MCRA Macar, Loja 15.70 324 Pn **Pn 21 51 06.6 +0.9**
MCRA Macar, Loja 15.70 324 *eP* **P 21 51 10.8 +1.1**
PEL Peldehue 15.74 180 IAmb IAmb 21 51 12.7
comp=Z,29nm,0.8s
MT05 Renca 15.99 180 IAmb IAmb 21 51 34.9
comp=Z,89nm,1.1s
MT16 CCHEN 16.02 179 IAmb IAmb 21 51 43.0
comp=Z,55nm,1.1s
MT03 Universidad Ad 16.09 179 IAmb IAmb 21 51 21.3
comp=Z,54nm,0.9s
VA05 Santo Domingo 16.27 182 IAmb IAmb 21 51 18.2
comp=Z,46nm,1.0s
MT13 San Alfonso 16.34 178 IAmb IAmb 21 51 21.2
comp=Z,22nm,0.8s
ARNL Arenillas 16.44 325 IAmb IAmb 21 51 25.5
comp=Z,36nm,0.9s
LMEL Las Melosas 16.45 178 IAmb IAmb 21 51 24.8
comp=Z,61nm,0.9s
MT01 Popeta 16.46 181 IAmb IAmb 21 51 21.5
comp=Z,62nm,0.8s
RPRD Ribas do Rio P 16.48 104 *eP* **P 21 51 16.7 -1.5**
BO04 La Punta 16.58 179 Pn **Pn 21 51 17.1 +0.2**
MCR1 Marechal Candi 17.19 117 *eP* **Pn 21 51 24.7 +0.2**
MACA Manacapuru-AM 17.24 36 Pn **P 21 51 26.0 -0.6**
MACA IAmb IAmb 21 51 51.0
comp=Z,46nm,0.7s
MACA Manacapuru-AM 17.24 36 *eP* **P 21 51 26.3 -0.3**
H03N1 Juan Fernandez 17.61 203 T T 22 09 10.1
baz=27,slow=73
H03N2 Juan Fernandez 17.62 203 T T 22 09 03.8
baz=27,slow=73,SNR=4963
H03N3 Juan Fernandez 17.63 203 T T 22 09 08.9
baz=27,slow=73
PIAT Ana Tenorio 17.82 335 *eP* **P 21 51 37.2 +3.8**
ITQB Itaqui 17.86 136 Pn 21 51 32.5 -0.4
ITQB Itaqui 17.86 136 *eP* **P 21 51 33.9 +0.5**
SLOR San Lorenzo - 18.16 335 P **P 21 51 40.3 +3.1**
NPGB Novo Progresso 18.22 58 *eP* **P 21 51 38.5 +1.0**
ML02 Panimavida 18.36 182 IAmb IAmb 21 51 41.3
comp=Z,44nm,0.7s
CRSM Crissiumal (Br 18.48 126 *eP* **P 21 51 40.3 0.0**
UNIS Unistalda (Bra 18.56 132 *eP* **Pn 21 51 42.9 +1.5**
FRBT Francisco Belt 18.58 121 *eP* **P 21 51 40.9 -0.5**
PCMB Pacaembu 18.91 106 *eP* **P 21 51 44.9 -0.1**
PTGB Pitanga 18.96 116 *eP* **P 21 51 45.3 -0.3**
OTAV Otavalo 19.02 336 P **Pn 21 51 49.9 +2.4**
OTAV Otavalo 19.02 336 *eP* **P 21 51 45.9 -0.8**
OTAV Otavalo 19.02 336 *eP* **Pn 21 51 52.4 +4.8**
RODS Rosario do Sul 19.25 135 *eP* **P 21 51 48.5 -0.1**
LDASE Londrina, Braz 19.41 111 *eP* **P 21 51 49.9 -0.6**
ITRB Iturama 19.53 100 *eP* **P 21 51 51.7 -0.2**
GCUF Volcan Galeras 19.54 340 *eP* **Pn 21 51 58.2 +4.4**
ITTB Itaituba 19.60 51 *eP* **Pn 21 51 52.9 -1.2**
SNDB Serra Nova Dou 19.61 77 *eP* **Pn 21 51 52.7 -1.5**
TBOT Tacuaremb 19.64 139 *eP* **P 21 51 53.1 +0.2**
ITAB Concordia 19.87 123 P **P 21 51 54.8 -0.7**
ITAB IAmb IAmb 21 52 03.6
comp=Z,71nm,1.3s
ITAB Concordia 19.87 123 *eP* **P 21 51 55.3 -0.2**
ALGR Alto Alegre (B 19.91 128 *eP* **P 21 51 55.9 -0.1**
GARC Garzon, Huila 19.95 346 *eP* **Pn 21 51 58.4 0.0**
CPSB Cacapava Do Su 20.49 133 *eP* **P 21 52 02.1 -0.1**
POPC Popayan, Colom 20.58 343 *eP* Pn 21 52 06.3 +0.5
FRTB Fartura 20.78 110 *eP* **P 21 52 05.1 -0.4**
PLTB Pedras Altas 21.20 136 P **P 21 52 09.4 -1.4**
PLTB Pedras Altas 21.20 136 *eP* **P 21 52 09.3 -0.6**
JAMC Jamundi, Valle 21.23 344 *eP* **P 21 52 14.4 +3.9**
PRAC Prado 21.30 349 *eP* P 21 52 19.9 +8.8
BB19B Bebedouro 21.36 104 *eP* **P 21 52 10.9 -0.8**
GR1C Gorgona, Isla 21.48 340 *eP* **P 21 52 16.8 +3.8**
IPMB Ipameri, GO 21.54 95 *eP* **P 21 52 12.7 -1.1**
ORTC Ortega, Tolima 21.56 348 *eP* **P 21 52 14.3 +0.4**
YOTC Yotoco, Valle 21.88 345 *eP* **P 21 52 22.0 +4.5**
BDFB Brasilia 21.92 89 P **P 21 52 17.2 -0.7**
BDFB IAmb IAmb 21 52 44.1
comp=Z,28nm,1.4s
BDFB Brasilia 21.92 89 P **P 21 52 15.8 -2.1**
comp=Z,8.2nm,0.8s,baz=274,slow=13,SNR=12
BDFB LR LR 22 00 21.7
comp=Z,258nm,21.7s,baz=313,slow=36
comp=Z,8.2nm,0.8s
TRQA Tornquist 22.05 161 P **P 21 52 18.8 -0.1**
TRQA IAmb IAmb 21 52 36.6
comp=Z,23nm,0.7s
GO06 Curarrehue 22.17 181 P **P 21 52 20.6 +0.2**
GO06 IAmb IAmb 21 52 22.8
comp=Z,20nm,1.0s
ROSC El Rosal 22.31 351 P **P 21 52 22.7 +0.4**
comp=Z,2.8nm,0.3s,baz=162,slow=20,SNR=1.4
comp=Z,2.8nm,0.3s
MALB Monte Alegre 22.39 48 *eP* **P 21 52 23.1 +0.4**
RCLB Rio Claro- Sao 22.45 107 *eP* **P 21 52 22.3 -1.2**
SPB Sao Paulo 22.75 110 P **P 21 52 25.2 -1.4**
SPB IAmb IAmb 21 52 33.5
comp=Z,24nm,1.0s
SPB Sao Paulo 22.75 110 *eP* **P 21 52 27.1 +0.6**
PLMC San Jos del P 22.75 346 *eP* **P 21 52 26.7 -0.1**
GUY2C Guyana, Caldas 22.87 348 *eP* **P 21 52 33.3 +5.0**
PLCA Paso Flores 23.31 180 P **P 21 52 32.2 0.0**
PLCA IAmb IAmb 21 52 34.6
comp=Z,51nm,1.1s
PLCA Paso Flores 23.31 180 P **P 21 52 32.5 +0.2**
comp=Z,29nm,1.0s,baz=355,slow=12,SNR=45
PLCA LR LR 22 01 01.1
comp=Z,116nm,20.8s,baz=6.0,slow=35
comp=Z,29nm,1.0s
PLCA Paso Flores 23.31 180 *eP* **P 21 52 32.9 +0.6**
PTBC PUERTO BERRIO, 24.00 351 *eP* **P 21 52 37.1 -1.9**
PARB Paraibuna 24.34 108 *eP* **P 21 52 41.5 -0.8**
PAMC Pamplona, Colo 24.59 355 *eP* **P 21 52 43.9 -1.1**
BSCB Bom Sucesso 24.85 103 *eP* **P 21 52 46.0 -0.9**
DIAM Diamantina, MG 25.84 96 *eP* **P 21 52 55.1 -0.9**
SDV Santo Domingo 26.06 0 LR LR 22 04 22.6
comp=Z,475nm,18.5s,baz=191,slow=39
BAUV El Baul 26.26 6 P **P 21 53 00.1 +0.6**
SJCC San Jacinto, C 27.41 351 *eP* **P 21 53 13.0 +3.0**
PCRV Puerto La Cruz 28.01 13 LR LR 22 05 20.0
comp=Z,567nm,18.6s,slow=39
SJMB Sao Joao De Ma 28.19 97 *eP* **P 21 53 17.3 +0.3**
MDP Montagnes des 28.62 40 LR LR 22 05 18.5
comp=Z,298nm,18.9s,baz=220,slow=38
JTS Las Juntas de 30.81 332 LR LR 22 07 01.0
comp=Z,220nm,19.1s,baz=158,slow=38
SJG San Juan 35.52 8 LR LR 22 11 44.4
comp=Z,110nm,18.3s,baz=192,slow=41
RCBR Riachuelo 35.98 76 LR LR 22 10 05.7
comp=Z,249nm,19.0s,baz=246,slow=38
RCBR Riachuelo 35.98 76 *eP* **P 21 54 25.6 +0.2**
TEIG Tepich 41.08 335 LR LR 22 12 35.8
comp=Z,2µm,20.6s,baz=320,slow=37
CMIG Matias Romero 41.63 324 LR LR 22 10 06.7
comp=Z,65nm,18.6s,baz=150,slow=33
ZAIG Zacatecas 50.54 321 P **P 21 56 23.4 +0.3**
ZAIG IAmb IAmb 21 56 36.2
comp=Z,5.1nm,0.9s
HNDO Hondo 54.09 329 P **P 21 56 47.2 -1.8**

WLAR White Oak Lake 55.02 337 P **P 21 56 55.9 +0.2**
JCT Junction City 55.13 329 P **P 21 56 57.8 +1.2**
JCT IAmb IAmb 21 57 11.7
comp=Z,7.3nm,0.8s
S54A Dingess, Beckl 55.73 350 P **P 21 56 59.7 -1.1**
MIAR Mount Ida 55.96 337 P **P 21 57 00.9 -1.5**
MIAR IAmb IAmb 21 57 19.5
comp=Z,15nm,1.2s
OZNA Ozona 56.15 329 P **P 21 57 04.4 +0.5**
OZNA IAmb IAmb 21 57 21.1
comp=Z,6.5nm,1.0s
TXAR Lajitas Array 56.21 325 P **P 21 57 04.0 -0.5**
comp=Z,0.7nm,0.7s,baz=153,slow=8.4,SNR=9.2
TXAR LR LR 22 19 34.5
comp=Z,47nm,19.2s,baz=122,slow=34
comp=Z,0.7nm,0.7s
S44A Carbondale 57.43 343 P **P 21 57 11.9 -0.9**
SIUC Southern Illin 57.44 343 P **P 21 57 11.4 -1.4**
APMT Aspermont 57.63 331 P **P 21 57 14.6 +0.2**
FVM French Village 58.04 342 P **P 21 57 16.3 -0.8**
M53A Wi Miller and 59.19 351 P **P 21 57 24.3 -0.7**
MSTX Muleshoe 59.42 329 P **P 21 57 26.9 0.0**
319A Douglas 60.91 322 P **P 21 57 35.9 -1.3**
ANMO Albuquerque 62.05 327 P **P 21 57 44.4 -0.6**
ANMO IAmb IAmb 21 58 02.4
comp=Z,4.5nm,1.0s
ANMO Albuquerque 62.05 327 LR LR 22 25 53.8
comp=Z,49nm,18.8s,baz=226,slow=37
SADO Sadowa 62.27 353 LR LR 22 25 45.1
comp=Z,78nm,21.2s,baz=300,slow=37
TUC Tucson 62.47 322 P **P 21 57 48.0 +0.3**
SDCO Great Sand Dun 63.77 330 IAmb IAmb 21 58 13.1
comp=Z,8.2nm,0.8s
X16A Lo Mia Camp, P 64.37 323 IAmb IAmb 21 58 17.7
comp=Z,8.1nm,0.9s
S22A 4UR Ranch, Cre 64.42 329 P **P 21 58 00.5 -0.3**
E46A Sault Ste Mari 64.57 350 P **P 21 58 00.2 -0.9**
WUAZ Wupatki 65.13 324 P **P 21 58 03.6 -1.7**
WUAZ IAmb IAmb 21 58 17.5
comp=Z,5.4nm,0.9s
VNA2 Neumayer--Watz 65.15 161 ⇓P **P 21 58 03.8 -0.9**
comp=Z,5.2nm,0.7s,baz=290,slow=11
ECSD EROS Data Cent 65.21 340 P **P 21 58 04.6 -0.8**
K30B Basset 65.34 337 P **P 21 58 07.2 +0.8**
ISCO Idaho Springs 65.46 331 P **P 21 58 06.4 -1.1**
ISCO IAmb IAmb 21 58 25.8
comp=Z,5.1nm,1.0s
SMCO Snowmass 65.61 330 IAmb IAmb 21 58 28.8
comp=Z,7.8nm,0.9s
F36A Milaca 66.19 343 P **P 21 58 11.2 -0.5**
U15A North Rim 66.30 324 IAmb IAmb 21 58 29.0
comp=Z,5.5nm,0.8s
HMU Henry Mountain 66.56 326 IAmb IAmb 21 58 34.7
comp=Z,8.4nm,0.8s
SNAA Sanae 66.78 161 P **P 21 58 15.4 +0.1**
SNAA Sanae 66.78 161 ⇓P **P 21 58 15.8 +0.5**
comp=Z,97nm,0.6s
SNAA Sanae 66.78 161 P **P 21 58 14.9 -0.3**
comp=Z,6.7nm,0.9s,baz=283,slow=9.9,SNR=13
comp=Z,6.7nm,0.9s
KNB Kanab 67.02 324 P **P 21 58 17.4 -0.1**
KNB IAmb IAmb 21 58 33.0
comp=Z,7.2nm,0.7s
V12A Nelson 67.27 322 P **P 21 58 18.5 -0.4**
V12A IAmb IAmb 21 58 20.8
comp=Z,6.7nm,1.2s
SRU San Rafael Swe 67.33 327 P **P 21 58 20.2 +0.9**
SRU IAmb IAmb 21 58 34.1
comp=Z,4.1nm,0.8s
MTPU Mount Pierson 67.41 326 IAmb IAmb 21 58 34.9
comp=Z,4.5nm,0.8s
P18A Preston Nutter 67.57 328 P **P 21 58 21.1 +0.1**
P18A IAmb IAmb 21 58 38.0
comp=Z,6.7nm,1.0s
SHPR Sheep Range 67.99 323 P **P 21 58 23.4 -0.1**
RSSD Black Hills 68.29 335 P **P 21 58 25.6 +0.2**
RSSD IAmb IAmb 21 58 41.1
comp=Z,4.1nm,0.8s
TROLL Troll, Antarti 68.49 161 ⇓P **P 21 58 25.6 -0.5**
comp=Z,118nm,0.4s
BSUT Blindstream Ca 68.52 328 P **P 21 58 26.5 -0.5**
BSUT IAmb IAmb 21 58 42.2
comp=Z,6.9nm,0.9s
MPU Maple Canyon 68.57 327 P **P 21 58 27.4 +0.2**
MPU IAmb IAmb 21 58 44.2
comp=Z,5.1nm,1.0s
GWY Greenwater Val 68.66 321 IAmb IAmb 21 58 39.3
comp=Z,5.6nm,0.9s
TPNV Topopah Spring 68.93 322 P **P 21 58 30.4 +1.0**
TPNV IAmb IAmb 21 58 48.7
comp=Z,10nm,0.9s
WCT Wildcat Mounta 69.04 322 P **P 21 58 31.3 +1.3**
WCT IAmb IAmb 21 58 45.3
comp=Z,4.5nm,0.8s
LIC Lamto 69.04 76⇑ *e*PKIKP **P 21 58 30.6 +0.2**
comp=Z,18nm,0.9s
TIC Toumodi 69.20 76⇑ *e*PKIKP **P 21 58 30.7 -0.7**
comp=Z,15nm,1.0s
DUG Dugway, Tooele 69.32 327 P **P 21 58 32.4 +0.7**
KIC Kosan Boka 69.36 76⇑ *e*PKIKP **P 21 58 30.8 -1.6**
comp=Z,25nm,0.7s
DBIC Dimbokro 69.36 76 P **P 21 58 31.5 -0.8**
DBIC Dimbokro 69.36 76 P **P 21 58 30.9 -1.4**
comp=Z,11nm,0.8s,baz=221,slow=4.6,SNR=15
DBIC LR LR 22 27 20.5
comp=Z,145nm,20.2s,baz=222,slow=35
comp=Z,11nm,0.8s
R11B Troy Canyon, C 69.51 324 IAmb IAmb 21 58 48.8
comp=Z,3.9nm,0.8s
PD31 Pinedale Array 69.63 331 P **P 21 58 33.7 0.0**
PDAR Pinedale Array 69.63 331 P **P 21 58 33.1 -0.5**
comp=Z,0.6nm,0.7s,baz=144,slow=6.7,SNR=5.3
PDAR LR LR 22 31 13.1
comp=Z,66nm,21.5s,baz=106,slow=38
comp=Z,0.6nm,0.7s
HWUT Hardware Ranch 69.72 329 P **P 21 58 34.2 -0.1**
HWUT IAmb IAmb 21 58 51.0
comp=Z,4.4nm,0.8s
GMN Gold Mountain 69.76 322 P **P 21 58 35.0 +0.4**
MZP Montezuma Peak 70.10 322 P **P 21 58 36.9 +0.1**
DSP Deep Springs 70.22 322 P **P 21 58 37.9 +0.7**
LOHW Long Hollow 70.77 331 P **P 21 58 40.0 -0.6**
ULM Lac du Bonnet 70.83 343 P **P 21 58 41.1 +0.6**
ULM IAmb IAmb 21 59 00.9
comp=Z,11nm,0.8s
ULM Lac du Bonnet 70.83 343 P **P 21 58 39.5 -1.1**
comp=Z,2.6nm,0.5s,baz=165,slow=7.2,SNR=5.9
ULM LR LR 22 31 20.4
comp=Z,90nm,21.9s,baz=117,slow=37
comp=Z,2.6nm,0.5s
ELK Elko 71.00 326 LR LR 22 29 40.7
comp=Z,64nm,18.2s,baz=120,slow=36
LHV Little Huntoon 71.13 322 IAmb IAmb 21 58 55.4
comp=Z,5.6nm,0.9s
NVAR Mina Array Bea 71.13 322 P **P 21 58 43.8 +0.8**
NVAR Mina Array Bea 71.13 322 P **P 21 58 44.0 +1.1**
comp=Z,1.0nm,0.8s,baz=157,slow=7.3,SNR=5.3
comp=Z,1.0nm,0.8s
RLMT Red Lodge 71.32 332 IAmb IAmb 21 58 58.9
comp=Z,4.8nm,0.8s
SCHQ Schefferville 71.96 2 P **P 21 58 46.6 -0.7**
comp=Z,4.5nm,0.9s,baz=280,slow=7.4,SNR=3.9
SCHQ LR LR 22 31 38.3
comp=Z,35nm,19.1s,baz=213,slow=37
comp=Z,4.5nm,0.9s
YHL Hebgen Lake 71.98 331 P **P 21 58 47.4 -0.7**
PNTR Pine Nut 72.32 322 P **P 21 58 50.6 +0.5**
PNTR IAmb IAmb 21 59 06.5
comp=Z,6.3nm,0.7s
HLID Hailey 72.58 328 P **P 21 58 51.3 -0.2**
PAHR Pah Rah Range 72.60 323 IAmb IAmb 21 59 07.7
comp=Z,7.2nm,0.8s
MPK Martis Peak 72.71 322 P **P 21 58 53.4 +0.9**
MFID Camas Ranch 73.20 327 IAmb IAmb 21 59 12.1
comp=Z,10nm,0.9s
ORV Oroville 73.75 321 P **P 21 58 59.3 +1.0**
ORV IAmb IAmb 21 59 00.5
comp=Z,14nm,1.4s
EGMT Eagleton 73.79 334 P **P 21 58 58.5 0.0**
EGMT IAmb IAmb 21 59 12.9
comp=Z,6.8nm,0.8s
PLID Pearl Lake 74.47 329 P **P 21 59 02.5 -0.1**
BMO Blue Mountains 74.96 328 P **P 21 59 05.7 +0.3**
K05A Summer Lake 75.44 324 P **P 21 59 08.6 +0.3**
K05A IAmb IAmb 21 59 25.3
comp=Z,11nm,1.0s

I07A Izee 75.58 326 P **P 21 59 09.8 +0.9**
YBH Yreka Blue Hor 75.84 323 LR LR 22 33 24.5
comp=Z,39nm,18.1s,baz=142,slow=36
NEW Newport 77.27 330 LR LR 22 37 59.5
comp=Z,50nm,19.0s,baz=124,slow=39
TOA0 Torodi Ar. Sit 77.71 72 P **P 21 59 20.1 -1.4**
TORD Torodi Ar. Bea 77.71 72 P **P 21 59 20.1 -1.4**
TORD Torodi Ar. Bea 77.71 72 P **P 21 59 19.9 -1.6**
comp=Z,13nm,0.7s,baz=260,slow=5.3,SNR=77
comp=Z,13nm,0.7s
FCC Fort Churchill 78.20 348 P **P 21 59 22.8 -0.4**
FCC IAmb IAmb 21 59 38.3
comp=Z,5.7nm,0.9s
EDM Edmonton 79.25 336 IAmb IAmb 21 59 43.1
comp=Z,11nm,0.9s
MDT Midelt 80.51 51 LR LR 22 35 11.1
comp=Z,32nm,19.0s,baz=268,slow=36
FRB Frobisher Bay 80.84 1 LR LR 22 37 00.6
comp=Z,39nm,19.3s,baz=195,slow=37
SUR Sutherland 82.24 121 LR LR 22 34 22.8
comp=Z,51nm,22.0s,baz=250,slow=34
TSUM Tsumeb 82.98 108 P **P 21 59 49.3 -0.7**
TSUM Tsumeb 82.98 108 LR LR 22 35 39.9
comp=Z,73nm,18.0s,baz=247,slow=35
ESDC Sonseca Array 84.17 46 P **P 21 59 55.4 -0.2**
ESDC IAmb IAmb 22 00 06.6
comp=Z,9.1nm,1.0s
ESDC Sonseca Array 84.17 46 P **P 21 59 54.5 -1.0**
comp=Z,3.8nm,1.0s,baz=259,slow=5.8,SNR=11
comp=Z,3.8nm,1.0s
TAM Tamanrasset 84.59 64 P **P 21 59 57.4 -0.7**
TAM IAmb IAmb 22 00 10.4
comp=Z,7.1nm,1.0s
SFJD Kangerlussuaq 85.41 8 LR LR 22 41 14.5
comp=Z,19nm,18.0s,baz=180,slow=38
DY2G Dye2 85.56 10 *i* P **P 21 59 59.5 -2.5**
DY2G IAmb IAmb 22 00 06.6
comp=Z,5.4nm,0.6s
YKA Yellowknife Ar 86.69 341 P **P 22 00 06.9 -0.6**
YKA Yellowknife Ar 86.69 341 P **P 22 00 06.6 -0.8**
comp=Z,2.9nm,0.8s,baz=136,slow=4.8,SNR=51
comp=Z,2.9nm,0.8s
BOSA Boshof 86.99 119 P **P 22 00 09.0 -1.1**
comp=Z,2.9nm,1.0s,baz=320,slow=7.9,SNR=2.4
BOSA LR LR 22 34 37.6
comp=Z,85nm,19.0s,baz=203,slow=33
comp=Z,2.9nm,1.0s
LBTB Lobatse 88.40 116 LR LR 22 36 23.7
comp=Z,129nm,21.0s,baz=236,slow=33
MAW Mawson 88.81 164 LR LR 22 40 28.1
comp=Z,61nm,19.4s,baz=238,slow=36
ICESG Greenland Ices 89.03 11 *i* P **P 22 00 21.4 +2.5**
ICESG IAmb IAmb 22 00 34.7
comp=Z,13nm,0.9s
BORG Borgarnes 90.08 19 LR LR 22 38 08.2
comp=Z,28nm,21.6s,baz=223,slow=34
KEST Kesra 92.25 53 LR LR 22 42 02.5
comp=Z,36nm,19.7s,baz=240,slow=36
SUMG Summit 92.26 9 P **P 22 00 34.1 +0.1**
SUMG Summit 92.26 9 *i* P **P 22 00 34.0 0.0**
SUMG IAmb IAmb 22 00 46.4
comp=Z,6.1nm,0.8s
RES Resolute Bay 93.09 354 LR LR 22 46 28.1
comp=Z,31nm,18.2s,baz=134,slow=38
NEEM North Greenlan 95.30 4 *eP* P 22 00 39.7 -8.1
DAVOX Davos/Dischmat 96.25 43 LR LR 22 42 00.2
comp=Z,58nm,20.4s,baz=274,slow=34
GERES GERESS Array B 99.32 42 LR LR 22 43 49.2
comp=Z,25nm,19.0s,baz=293,slow=34
ILAR Eielson Array 99.74 335 LR LR 22 52 12.4
comp=Z,40nm,18.1s,baz=78,slow=39
H11N3 WAKE ISLAND Hyl 25.45 282 T T 00 24 05.2
baz=99,slow=75,SNR=77
H11N2 WAKE ISLAND Hyl 25.46 282 T T 00 24 20.4
baz=99,slow=75,SNR=67
H11N1 WAKE ISLAND Hyl 25.46 282 T T 00 24 19.7
baz=99,slow=75,SNR=29
H11S2 WAKE ISLAND Hyl 25.47 281 T T 00 24 19.3
baz=100,slow=75,SNR=31
H11S1 WAKE ISLAND Hyl 25.47 281 T T 00 24 16.7
baz=100,slow=75,SNR=45
H11S3 WAKE ISLAND Hyl 25.48 281 T T 00 24 20.6
baz=100,slow=75,SNR=40
ARU Arti 125.65 32 PKP **PKPdf 22 06 24.3 -1.0**
comp=Z,0.9nm,0.5s,baz=332,slow=4.4,SNR=3.0
ASAR Alice Springs 132.63 211 PKP **PKPdf 22 06 39.1 -0.6**
comp=Z,0.7nm,0.7s,baz=138,slow=2.0,SNR=5.8
BVAR Borovoye Array 133.29 31 PKP **PKPdf 22 06 40.1 +0.1**
comp=Z,0.3nm,0.5s,baz=44,slow=4.8,SNR=2.6
WRA Warramunga Arr 135.48 215 PKP **PKPdf 22 06 44.2 -0.9**
comp=Z,2.2nm,0.8s,baz=147,slow=2.1,SNR=8.4
KURBB Kurchatov Arra 138.73 30 PKP **PKPdf 22 06 48.4 -1.7**
comp=Z,0.5nm,0.2s,baz=310,slow=2.8,SNR=1.9
ZALV Zalesovo Beam 138.87 22 PKP **PKPdf 22 06 48.5 -1.7**
comp=Z,0.6nm,0.9s,baz=298,slow=3.2,SNR=12
MKAR Makanchi Array 143.17 31 PKhKP PKPpre 22 06 53.2
comp=Z,0.7nm,0.6s,baz=300,slow=3.9,SNR=10
USRK Ussuriysk Ar. 147.05 329 PKPbc **PKPbc 22 07 07.2 +0.2**
comp=Z,6.9nm,0.6s,baz=13,slow=3.1,SNR=24
MJAR Matsushiro Arr 148.02 312 PKPbc **PKPbc 22 07 09.5 -0.5**
comp=Z,6.3nm,0.6s,baz=91,slow=1.7,SNR=17
SONM Songino Array 149.50 4 PKPbc **PKPbc 22 07 13.5 -0.1**
comp=Z,3.2nm,0.5s,baz=328,slow=1.8,SNR=19
KSRS Korea Array 154.06 324 PKPbc **PKPbc 22 07 22.2 -1.9**
comp=Z,1.8nm,0.8s,baz=51,slow=2.5,SNR=3.3

IDC 04 21:49:22.9×2.0,6°92S×129°16E,h0km,mb3.7/1,
mbtmp3.3/3,ML3.5/2,MS3.8/4,Error ellipse:
s-maj=119.3km s-min=31.4km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.89**	**159**	Pn	Pn	21 52 40.4	-0.7
	0.3nm,0.3s,baz=338,slow=13,SNR=14						
WRA				Sn	Sn	21 55 02.6	-14
	0.5nm,0.3s,baz=330,slow=23,SNR=8.4						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.26**	**165**	P	Pn	21 53 26.2	+0.6
	0.1nm,0.3s,baz=344,slow=10.0,SNR=6.0						
ASAR				S	Sn	21 56 21.1	-17
	0.2nm,0.4s,baz=351,slow=22,SNR=1.9						
	0.1nm,0.4s						
JHJ	**Hachijo jima 2**	**41.08**	**14**	LR	LR	22 12 21.4	
	comp=Z,154nm,21.8s,baz=99,slow=34						
MKAR	**Makanchi Array**	**67.70**	**327**	P	P	22 00 22.1	0.0
	0.3nm,0.3s,baz=129,slow=7.3,SNR=8.2						
	0.3nm,0.3s						
RAR	**Rarotonga**	**69.91**	**110**	LR	LR	22 31 39.9	
	comp=Z,13nm,18.2s,baz=113,slow=36						
EIL	**Elat**	**97.03**	**299**	LR	LR	22 55 21.8	
	comp=Z,65nm,18.5s,baz=216,slow=41						
MBAR	**Mbarara**	**98.28**	**268**	LR	LR	22 44 22.2	
	comp=Z,79nm,20.2s,baz=236,slow=34						

TAP 04 21:49:56.3,24.15N×121.79E,h13km,ML1.9,3C-8D,D,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.15**	**274**	P	Pg	21 50 00.2	+0.2
	baz=275						
ETL				*e*S	Sb	21 50 03.9	-0.2
	baz=275						
EHP	**Heping Village**	**0.17**	**346**	*e*S	Sg	21 50 03.7	+0.8
	baz=347						
NACB	**Ninganchiao**	**0.18**	**278**	⇑P	Pg	21 50 00.4	+0.1
	baz=280						
NACB				*i* S	Sg	21 50 03.2	+0.1
	baz=280						
EAHA	**Aohua**	**0.18**	**347**	P	Pg	21 50 01.0	+0.5
	baz=346						
EAHA				*e*S	Sb	21 50 05.5	+0.4
	baz=346						
TWD	**Chiawan**	**0.18**	**249**	⇑*i*P	Pg	21 50 01.0	+0.5
	baz=256						
TWD				*e*S	Sb	21 50 05.6	+0.4
	baz=256						
HWA	**Hwalien**	**0.24**	**224**	*i* P	Pb	21 50 02.2	-0.3
	baz=235						
HWA				*i* S	Sb	21 50 06.6	0.0
	baz=235						
ENA	**Nanau**	**0.28**	**352**	⇓*i*P	Pg	21 50 02.3	+0.2
	baz=352						
ENA				S	Sg	21 50 06.5	+0.4
	baz=352						
ETLH	**Xiulin Townshi**	**0.28**	**282**	P	Pg	21 50 02.7	+0.5

	baz=283								
ETLH				*i*	S	Sb	21 50 07.8	-0.3	
	baz=283								
EWUT	**Wuta**	**0.30**	**359**	⇓	*i* P	Pg	21 50 02.6	+0.2	
	baz=357								
EWUT					S	Sg	21 50 06.9	+0.4	
	baz=357								
ETM	**Tongmen**	**0.32**	**236**		*i* P	Pb	21 50 03.5	-0.4	
	baz=238								
ETM					*i* S	Sb	21 50 08.4	-0.7	
	baz=238								
LXIB	**Xiulin Townshi**	**0.36**	**250**	⇓	P	Pg	21 50 04.1	+0.5	
	baz=252								
LXIB					*e*S	Sg	21 50 09.1	+0.5	
	baz=252								
SHUL	**Shoufeng**	**0.41**	**210**	⇑	P	Pb	21 50 05.0	-0.5	
	baz=212								
SHUL					S	Sb	21 50 12.3	+0.6	
	baz=212								
ESAO	**Su ao**	**0.43**	**7**	⇓	P	Pg	21 50 04.7	-0.2	
	baz=2.0								
ESAO					S	Sb	21 50 11.5	-0.7	
	baz=2.0								
LATG	**Datong**	**0.45**	**329**		*i* P	Pb	21 50 06.1	-0.2	
	baz=328								
LATG					*i* S	Sb	21 50 12.6	-0.3	
	baz=328								
NNSB	**Datong**	**0.46**	**307**		*e*P	Pb	21 50 06.5	+0.1	
	baz=308								
NNSB					*i* S	Sg	21 50 12.4	+0.7	
	baz=308								
ESL	**Shilin**	**0.46**	**224**		P	Pb	21 50 06.1	-0.2	
	baz=233								
ESL					*e*S	Sb	21 50 13.4	+0.3	
	baz=233								
TWC	**Suao**	**0.46**	**7**		*i* P	Pg	21 50 05.9	+0.4	
TWC					*e*S	Sb	21 50 13.2	0.0	
NNS	**Nan Shan**	**0.47**	**308**		*i* P	Pg	21 50 06.1	+0.4	
	baz=309								
WHF	**Hehuan Shan**	**0.47**	**270**	⇓	*i* P	Pb	21 50 06.3	-0.5	
	baz=272								
WHF					S	Sg	21 50 12.8	+0.6	
	baz=272								
NDS	**Dongshan**	**0.49**	**353**		P	Pb	21 50 06.6	-0.2	
	baz=351								
TEGC	**Jichi Village**	**0.49**	**207**		*e*P	Pg	21 50 06.3	+0.3	
	baz=208								
FUSS	**Fushou**	**0.50**	**281**		*e*P	Pb	21 50 07.4	+0.2	
	baz=283								
NDT	**Datong Townshi**	**0.52**	**331**		*e*P	Pb	21 50 07.3	0.0	
	baz=331								
ENTT	**Nioudou**	**0.53**	**338**		*e*P	Pb	21 50 08.4	+0.9	
	baz=338								
WARBT	**Fenglin Townsh**	**0.56**	**221**		*e*P	Pn	21 50 09.1	-0.9	
	baz=229								
WARBT					*e*S	Sb	21 50 16.9	+0.9	
	baz=229								
CHGB	**Renai**	**0.56**	**261**		P	Pb	21 50 08.3	+0.1	
	baz=255								
CHGB					*e*S	Sb	21 50 16.6	+0.3	
	baz=255								
EGFH	**Guangfu**	**0.58**	**215**		P	Pb	21 50 08.2	-0.1	
	baz=224								
EGFH					*i* S	Sb	21 50 17.0	+0.5	
	baz=224								
TWE	**Neicheng**	**0.58**	**349**		*i* P	Pb	21 50 08.1	-0.2	
	baz=350								
OWD	**Renai**	**0.59**	**251**		*e*P	Pn	21 50 10.3	-0.2	
	baz=260								
OWD					*e*S	Sb	21 50 18.1	+1.2	
	baz=260								
ILA	**Ilan**	**0.62**	**357**		*e*P	Pg	21 50 08.6	+0.2	
	baz=351								
ILA					S	Sb	21 50 17.4	-0.2	
	baz=351								
WUSB	**Renai**	**0.63**	**256**	⇓	*e*P	Pb	21 50 09.4	+0.2	
	baz=258								
WUSB					*e*S	Sb	21 50 18.6	+0.5	
	baz=258								
FUSB	**Fushanzhiwuyua**	**0.64**	**344**		P	Pb	21 50 09.4	+0.1	
	baz=334								
YHNB	**Yeheng**	**0.64**	**324**		*e*P	Pb	21 50 09.6	+0.2	
	baz=324								
YHNB					*e*S	Sb	21 50 19.2	+0.9	
	baz=324								
NSK	**Sanguang**	**0.65**	**324**		P	Pb	21 50 10.0	+0.3	
	baz=324								
NSK					*e*S	Sb	21 50 19.9	+1.2	
	baz=324								
VWDT	**VWDT**	**0.71**	**236**		*e*P	Pn	21 50 12.2	+0.2	
	baz=245								
VWDT					*e*S	Sn	21 50 21.7	-1.1	
	baz=245								
EHY	**Hungye**	**0.77**	**214**		*e*P	Pb	21 50 11.7	+0.1	
	baz=227								
EHY					*i* S	Sb	21 50 22.6	+0.7	
	baz=227								
NFF	**Wufeng Townshi**	**0.78**	**309**		*e*P	Pb	21 50 11.6	-0.1	
	baz=309								
NFF					*e*S	Sg	21 50 21.4	-0.1	
	baz=309								
WHP	**Taichung City**	**0.78**	**280**	⇓	*e*P	Pn	21 50 13.1	0.0	
	baz=281								
WHP					*e*S	Sn	21 50 23.9	-0.8	
	baz=281								
TIPB	**Shuangxi**	**0.82**	**3**	⇓	P	Pn	21 50 13.1	-0.5	
	baz=353								
TIPB					*e*S	Sn	21 50 24.6	-1.1	
	baz=353								
SSLB	**Suanglung**	**0.84**	**245**		*e*P	Pb	21 50 12.9	+0.1	
	baz=256								
SSLB					*e*S	Sb	21 50 24.8	+0.8	
	baz=256								
LIOB	**Emei**	**0.86**	**305**		*e*P	Pb	21 50 13.2	+0.1	
	baz=306								
LIOB					*e*S	Sn	21 50 25.9	-0.7	
	baz=306								

TAP 04 21:50:36.2, 24.12N×121.63E, h9km, ML1.6, 1C-4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**357**	⇓P	Pg	21 50 38.2	+0.3
	baz=356						
ETL				S	Sg	21 50 39.9	+0.7
	baz=356						
TWD	**Chiawan**	**0.05**	**212**	⇑P	Pg	21 50 38.6	+0.6
	baz=203						
TWD				S	Sg	21 50 40.3	+1.0
	baz=203						
NACB	**Ninganchiao**	**0.06**	**331**	⇓ *i* P	Pg	21 50 38.7	+0.6
	baz=331						
NACB				*i* S	Sg	21 50 40.4	+1.0
	baz=331						
HWA	**Hwalien**	**0.15**	**187**	*i* P	Pg	21 50 40.3	+1.0
	baz=184						
ETLH	**Xiulin Townshi**	**0.15**	**303**	⇓P	Pg	21 50 40.5	+1.0
	baz=302						
ETLH				S	Sg	21 50 43.6	+1.7
	baz=302						
ETM	**Tongmen**	**0.20**	**218**	*i* P	Pg	21 50 41.1	+0.9
	baz=217						
ETM				*e*S	Sg	21 50 44.5	+1.5
	baz=217						
EHP	**Heping Village**	**0.21**	**30**	*e*P	Pg	21 50 41.4	+0.8
	baz=31						
LXIB	**Xiulin Townshi**	**0.22**	**242**	P	Pg	21 50 41.2	+0.6
	baz=242						
LXIB				*i* S	Sg	21 50 45.4	+1.7
	baz=242						
SHUL	**Shoufeng**	**0.34**	**190**	P	Pb	21 50 44.0	-0.4
	baz=189						
ESL	**Shilin**	**0.35**	**210**	P	Pb	21 50 44.0	-0.7
	baz=208						
FUSS	**Fushou**	**0.37**	**290**	⇓P	Pb	21 50 44.8	-0.3
	baz=289						
FUSS				S	Sb	21 50 51.1	+0.1
	baz=289						
NNSB	**Datong**	**0.38**	**324**	*i* P	Pb	21 50 44.5	-0.6
	baz=323						
NNSB				S	Sb	21 50 50.4	-0.7
	baz=323						
NNS	**Nan Shan**	**0.39**	**324**	*i* S	Sb	21 50 51.1	-0.5
	baz=324						

TAP 04 21:50:40.1, 24.22N×121.75E, h9km, ML1.6, 3C-10D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**358**	*e*S	Sg	21 50 46.3	+2.1
	baz=2.0						
EAHA	**Aohua**	**0.11**	**357**	*e*P	Pg	21 50 43.2	+0.5
	baz=26						
EAHA				S	Sg	21 50 45.9	+1.3
	baz=26						
EAHA	**Aohua**	**0.11**	**357**	⇓P	Pg	21 50 43.3	+0.5
	baz=357						
EAHA				S	Sg	21 50 45.8	+1.2
	baz=357						
ETL	**Fush Village**	**0.13**	**242**	*i* P	Pg	21 50 43.8	+0.8
	baz=242						
ETL				*i* S	Sg	21 50 46.6	+1.5
	baz=242						
NACB	**Ninganchiao**	**0.14**	**252**	⇑ *e*P	Pg	21 50 44.6	+1.4
	baz=252						
NACB				*i* S	Sg	21 50 47.1	+1.6
	baz=252						
TWD	**Chiawan**	**0.19**	**225**	P	Pg	21 50 44.7	+0.6
	baz=223						
TWD				S	Sg	21 50 48.0	+1.2
	baz=223						
ENA	**Nanau**	**0.21**	**359**	⇓ *e*P	Pg	21 50 44.8	+0.4
	baz=20						
ENA				*e*S	Sg	21 50 48.5	+1.1
	baz=20						
ENA	**Nanau**	**0.21**	**359**	⇓ *e*P	Pg	21 50 44.8	+0.4
ENA				*e*S	Sg	21 50 48.5	+1.1
EWUT	**Wuta**	**0.23**	**8**	⇓ *e*P	Pg	21 50 45.1	+0.3
	baz=23						
EWUT				*e*S	Sg	21 50 48.7	+0.8
	baz=23						
EWUT	**Wuta**	**0.23**	**8**	⇓ *e*P	Pg	21 50 45.1	+0.3
	baz=7.0						
EWUT				*e*S	Sg	21 50 48.8	+0.9
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.24**	**267**	*e*P	Pg	21 50 47.1	+2.1
	baz=267						
ETLH				S	Sg	21 50 50.0	+1.7
	baz=267						
LXIB	**Xiulin Townshi**	**0.36**	**237**	*i* P	Pb	21 50 48.2	-0.5
	baz=237						
LXIB				S	Sb	21 50 53.9	-0.6
	baz=237						
ESAO	**Su ao**	**0.37**	**14**	*e*P	Pb	21 50 49.6	+0.8
	baz=14						
LATG	**Datong**	**0.37**	**328**	*i* P	Pb	21 50 48.5	-0.5
	baz=327						
LATG				*i* S	Sb	21 50 54.6	-0.3
	baz=327						
NNSB	**Datong**	**0.39**	**302**	P	Pb	21 50 49.0	-0.3
	baz=302						
NNSB				*e*S	Sb	21 50 54.5	-0.9
	baz=302						
TWC	**Suao**	**0.40**	**14**	*e*P	Pb	21 50 49.6	+0.3
	baz=15						
NNS	**Nan Shan**	**0.41**	**303**	⇑ *e*P	Pb	21 50 49.6	+0.1
	baz=303						
NNS				*i* S	Sb	21 50 55.3	-0.5
	baz=303						
NDS	**Dongshan**	**0.41**	**356**	P	Pb	21 50 49.6	+0.1
	baz=356						
NDS				S	Sb	21 50 56.0	+0.1
	baz=356						
NDT	**Datong Townshi**	**0.44**	**331**	⇓ *i* P	Pb	21 50 49.6	-0.4
	baz=331						
NDT				*i* S	Sb	21 50 56.7	+0.1
	baz=331						
WHF	**Hehuan Shan**	**0.44**	**261**	P	Pg	21 50 49.5	+0.7
	baz=260						
WHF				*i* S	Sb	21 50 56.7	-0.5
	baz=260						
ENTT	**Nioudou**	**0.45**	**339**	⇓P	Pb	21 50 49.9	-0.3
	baz=339						
ENTT				*i* S	Sb	21 50 56.9	-0.1
	baz=339						
FUSS	**Fushou**	**0.46**	**274**	*e*S	Sb	21 50 56.9	-0.6
	baz=273						
SHUL	**Shoufeng**	**0.46**	**201**	⇓ *i* P	Pb	21 50 50.1	-0.2
	baz=201						
TWE	**Neicheng**	**0.51**	**352**	P	Pg	21 50 50.4	+0.5
	baz=353						
TWE				*i* S	Sb	21 50 58.7	+0.1
	baz=353						
CHGB	**Renai**	**0.55**	**253**	*e*P	Pb	21 50 52.2	+0.3
	baz=253						
CHGB				S	Sb	21 50 59.7	-0.2
	baz=253						
FUSB	**Fushanzhiwuyua**	**0.56**	**345**	⇓ *i* P	Pb	21 50 51.8	-0.3
	baz=345						
FUSB				S	Sb	21 50 60.0	-0.2
	baz=345						
YHNB	**Yeheng**	**0.56**	**323**	P	Pb	21 50 52.2	0.0
	baz=323						
NSK	**Sanguang**	**0.58**	**322**	⇑P	Pb	21 50 52.1	-0.2
	baz=322						
WARBT	**Fenglin Townsh**	**0.60**	**213**	*i* P	Pb	21 50 52.5	-0.2
	baz=213						
WARBT				S	Sb	21 51 01.3	+0.1
	baz=213						
WUSB	**Renai**	**0.62**	**249**	⇓ *e*P	Pb	21 50 53.8	+0.7
	baz=248						
WUSB				S	Sb	21 51 02.0	+0.1
	baz=248						
WHP	**Taichung City**	**0.73**	**275**	*e*S	Sn	21 51 06.8	-1.1
	baz=274						
DPDB	**Guoxing**	**0.77**	**256**	S	Sb	21 51 07.3	+1.0
	baz=256						

TAP 04 21:59:42.0, 24.23N×121.79E, h10km, ML1.8, 2C-9D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**333**	*e*S	Sg	21 59 47.1	+0.9
	baz=336						
EAHA	**Aohua**	**0.11**	**337**	*i* P	Pg	21 59 45.4	+0.7
	baz=336						
EAHA				S	Sg	21 59 47.9	+1.2
	baz=336						
ETL	**Fush Village**	**0.16**	**244**	P	Pg	21 59 46.1	+0.5
	baz=243						
NACB	**Ninganchiao**	**0.18**	**252**	P	Pg	21 59 46.5	+0.6
	baz=251						
ENA	**Nanau**	**0.20**	**348**	*i* P	Pg	21 59 46.9	+0.7
	baz=350						
ENA				S	Sg	21 59 50.4	+1.3
	baz=350						
EWUT	**Wuta**	**0.21**	**358**	P	Pg	21 59 47.1	+0.7
	baz=358						
EWUT				*i* S	Sg	21 59 51.2	+1.7
	baz=358						
TWD	**Chiawan**	**0.23**	**229**	P	Pg	21 59 47.4	+0.7
	baz=227						
ETLH	**Xiulin Townshi**	**0.28**	**265**	*e*P	Pb	21 59 48.9	-0.2
	baz=264						
ETLH				*i* S	Sb	21 59 53.3	-0.6
	baz=264						
HWA	**Hwalien**	**0.30**	**213**	S	Sb	21 59 54.2	-0.2
	baz=211						
ESAO	**Su ao**	**0.35**	**9**	P	Pb	21 59 49.6	-0.6
	baz=8.0						
ESAO				*e*S	Sb	21 59 55.4	-0.4
	baz=8.0						
ETM	**Tongmen**	**0.38**	**225**	P	Pb	21 59 50.1	-0.6
	baz=225						
ETM				S	Sb	21 59 56.3	-0.3
	baz=225						
TWC	**Suao**	**0.38**	**9**	⇓P	Pb	21 59 50.2	-0.6
	baz=10.0						
LATG	**Datong**	**0.38**	**322**	P	Pb	21 59 50.9	-0.1
	baz=322						
LATG				S	Sb	21 59 57.2	+0.2
	baz=322						
LXIB	**Xiulin Townshi**	**0.40**	**238**	*e*P	Pb	21 59 52.0	+0.8
	baz=238						
NDS	**Dongshan**	**0.41**	**351**	⇓P	Pb	21 59 51.1	-0.1
	baz=351						
NNSB	**Datong**	**0.42**	**298**	P	Pb	21 59 51.4	-0.1
	baz=298						
NNSB				*e*S	Sb	21 59 57.2	-0.7
	baz=298						
NNS	**Nan Shan**	**0.43**	**299**	*e*P	Pb	21 59 51.8	+0.1
	baz=299						
NNS				S	Sb	21 59 57.7	-0.6
	baz=299						
NDT	**Datong Townshi**	**0.45**	**326**	*e*P	Pb	21 59 52.0	+0.1
	baz=326						
NDT				*e*S	Sb	21 59 59.4	+0.7
	baz=326						
ENTT	**Nioudou**	**0.45**	**334**	*e*P	Pb	21 59 51.8	-0.3
	baz=334						
ENTT				S	Sb	21 59 58.4	-0.4
	baz=334						
WHF	**Hehuan Shan**	**0.48**	**260**	*i* P	Pb	21 59 52.2	-0.6
	baz=259						
FUSS	**Fushou**	**0.49**	**272**	⇓P	Pb	21 59 52.7	-0.2
	baz=271						
FUSS				*e*S	Sb	21 59 59.9	-0.4
	baz=271						
TWE	**Neicheng**	**0.50**	**348**	P	Pb	21 59 52.6	-0.2
	baz=349						
ESL	**Shilin**	**0.53**	**218**	*i* P	Pb	21 59 53.0	-0.2
	baz=216						
ESL				*e*S	Sg	21 59 59.6	+0.5
	baz=216						
FUSB	**Fushanzhiwuyua**	**0.56**	**341**	⇓ *i* P	Pb	21 59 53.7	-0.2
	baz=341						
FUSB				*e*S	Sg	22 00 00.7	+0.5
	baz=341						
YHNB	**Yeheng**	**0.57**	**320**	*e*P	Pb	21 59 54.6	+0.4
	baz=319						
YHNB				*i* S	Sb	22 00 02.7	+0.3
	baz=319						
CHGB	**Renai**	**0.58**	**253**	P	Pb	21 59 54.2	-0.1
	baz=253						
CHGB				*i* S	Sb	22 00 03.0	+0.2
	baz=253						
NSK	**Sanguang**	**0.59**	**319**	⇓P	Pb	21 59 54.6	+0.2
	baz=319						
NSK				*i* S	Sb	22 00 02.9	+0.1
	baz=319						
OWD	**Renai**	**0.62**	**244**	⇓ *i* P	Pb	21 59 54.9	-0.1
	baz=243						
WARBT	**Fenglin Townsh**	**0.63**	**216**	P	Pb	21 59 55.0	0.0
	baz=215						
WARBT				*e*S	Sn	22 00 05.6	-1.4
	baz=215						
EGFH	**Guangfu**	**0.65**	**210**	⇓P	Pb	21 59 55.5	+0.2
	baz=210						
EGFH				S	Sb	22 00 05.1	+0.7
	baz=210						
WUSB	**Renai**	**0.66**	**249**	*i* P	Pb	21 59 55.4	-0.1
	baz=248						
WUSB				S	Sb	22 00 05.5	+0.7
	baz=248						
TIPB	**Shuangxi**	**0.74**	**3**	P	Pb	21 59 57.1	+0.2
	baz=2.0						
TIPB				S	Sb	22 00 07.7	+0.6
	baz=2.0						
VWDT	**VWDT**	**0.76**	**231**	⇓P	Pb	21 59 57.6	+0.4
	baz=231						
WHP	**Taichung City**	**0.77**	**274**	⇑ *e*P	Pn	21 59 59.3	+0.4
	baz=273						
WHP				*e*S	Sb	22 00 09.1	+1.1
	baz=273						
WHP	**Taichung City**	**0.77**	**274**	*e*P	Pn	21 59 59.1	+0.2
	baz=280						
WHP				*e*S	Sn	22 00 09.5	-1.0
	baz=280						
LIOB	**Emei**	**0.81**	**301**	*e*P	Pn	21 59 59.8	+0.3
	baz=300						
LIOB				*e*S	Sn	22 00 10.6	-1.1
	baz=300						
WCS	**Beigang Elemen**	**0.82**	**258**	P	Pn	21 59 59.0	-0.5
	baz=257						
WCS				S	Sb	22 00 10.2	+1.0
	baz=257						
EHY	**Hungye**	**0.84**	**211**	⇓P	Pg	21 59 58.3	+0.2
	baz=209						
EHY				S	Sb	22 00 10.5	+0.6
	baz=209						
SXI1	**Grass Mountain**	**0.86**	**5**	P	Pg	21 59 58.7	0.0
	baz=5.0						
SXI1				S	Sb	22 00 11.3	+0.5
	baz=5.0						
SSLB	**Suanglung**	**0.88**	**240**	P	Pb	21 59 59.2	-0.1
	baz=239						
SSLB				S	Sb	22 00 11.5	+0.4
	baz=239						
YULB	**Yu-li**	**0.95**	**208**	P	Pg	22 00 00.2	0.0
	baz=208						
YULB				S	Sn	22 00 14.2	-0.6
	baz=208						
TWF1	**Yuli**	**0.98**	**207**	P	Pg	22 00 00.8	0.0
	baz=206						
TWF1				S	Sb	22 00 14.7	+0.6
	baz=206						
WHYT	**Xinyi Township**	**1.00**	**238**	⇑P	Pn	22 00 02.5	+0.3
	baz=237						
WHYT				S	Sb	22 00 15.4	+0.6
	baz=237						
ELDTW	**Lidau**	**1.25**	**214**	*e*P	Pg	22 00 06.5	+0.4
	baz=213						
ELDTW				*e*S	Sn	22 00 23.8	+1.2
	baz=213						

TAP 04 21:59:47.0, 24.15N×121.67E, h10km, ML1.7, 2C-3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**281**	⇑P	Pg	21 59 49.6	+0.7
	baz=279						
ETL				S	Sg	21 59 51.2	+0.9
	baz=279						
NACB	**Ninganchiao**	**0.07**	**289**	⇓ *i* P	Pg	21 59 49.7	+0.5
	baz=288						
NACB				S	Sg	21 59 51.9	+1.1
	baz=288						
TWD	**Chiawan**	**0.10**	**222**	P	Pg	21 59 49.9	+0.4
	baz=219						
TWD				S	Sg	21 59 51.6	+0.3
	baz=219						
EHP	**Heping Village**	**0.17**	**23**	*e*P	Pb	21 59 51.6	-0.7
	baz=25						
ETLH	**Xiulin Townshi**	**0.18**	**288**	P	Pb	21 59 52.0	-0.4
	baz=288						
ETLH				*i* S	Sg	21 59 55.0	+1.5
	baz=288						
HWA	**Hwalien**	**0.18**	**198**	P	Pb	21 59 51.8	-0.6
	baz=195						
HWA				S	Sg	21 59 55.4	+1.9
	baz=195						
EAHA	**Aohua**	**0.19**	**21**	⇓P	Pg	21 59 51.7	+0.7
	baz=20						
EAHA				S	Sg	21 59 55.3	+1.5
	baz=20						
ETM	**Tongmen**	**0.24**	**221**	P	Pb	21 59 52.7	-0.8
	baz=220						
ETM				*i* S	Sg	21 59 57.2	+1.9
	baz=220						
LXIB	**Xiulin Townshi**	**0.27**	**241**	P	Pg	21 59 53.0	+0.5
	baz=240						
LXIB				*e*S	Sg	21 59 57.1	+1.0
	baz=240						
ENA	**Nanau**	**0.28**	**14**	*i* P	Pb	21 59 53.7	-0.5
	baz=15						
ENA				S	Sb	21 59 58.3	-0.8
	baz=15						
EWUT	**Wuta**	**0.31**	**19**	*i* P	Pb	21 59 54.2	-0.4
	baz=19						
EWUT				S	Sb	21 59 58.7	-1.1
	baz=19						
WHF	**Hehuan Shan**	**0.37**	**269**	*e*P	Pg	21 59 53.6	-0.8
	baz=268						
WHF				*e*S	Sg	21 59 59.5	+0.2
	baz=268						
SHUL	**Shoufeng**	**0.37**	**195**	*e*P	Pb	21 59 55.8	+0.1
	baz=194						
SHUL				*e*S	Sb	22 00 02.4	+0.9
	baz=194						
NNSB	**Datong**	**0.38**	**317**	*e*P	Pb	21 59 56.2	+0.3
	baz=316						
NNSB				S	Sb	22 00 01.8	0.0
	baz=316						
NNS	**Nan Shan**	**0.39**	**317**	⇑ *e*P	Pb	21 59 56.3	+0.2
	baz=317						
NNS				S	Sb	22 00 02.3	0.0
	baz=317						
ESL	**Shilin**	**0.40**	**212**	⇓P	Pb	21 59 56.1	0.0

	baz=211								
ESL				S		Sb	22 00 02.7	+0.5	
	baz=211								
FUSS	**Fushou**	**0.40**	**284**	*e*P		Pb	21 59 56.3	0.0	
	baz=283								
FUSS				*e*S		Sb	22 00 02.5	0.0	
	baz=283								
LATG	**Datong**	**0.40**	**342**	*e*P		Pg	21 59 55.5	+0.5	
	baz=341								
LATG				*e*S		Sb	22 00 02.2	-0.4	
	baz=341								
ESAO	**Su ao**	**0.45**	**21**	*e*P		Pg	21 59 56.4	+0.6	
	baz=20								
ESAO				*e*S		Sb	22 00 03.7	-0.2	
	baz=20								
TEGC	**Jichi Village**	**0.46**	**195**	P		Pb	21 59 56.6	-0.4	
	baz=193								
TEGC				*i* S		Sb	22 00 04.0	+0.2	
	baz=193								
CHGB	**Renai**	**0.46**	**259**	*e*P		Pg	21 59 56.5	+0.4	
	baz=258								
CHGB				*e*S		Sb	22 00 03.5	-0.7	
	baz=258								
NDT	**Datong Townshi**	**0.47**	**343**	*e*S		Sb	22 00 04.7	+0.3	
	baz=342								
NDS	**Dongshan**	**0.48**	**5**	*i* P		Pb	21 59 57.3	-0.3	
	baz=5.0								
NDS				S		Sb	22 00 05.1	+0.4	
	baz=5.0								
TWC	**Suao**	**0.49**	**20**	*e*P		Pb	21 59 57.3	-0.3	
	baz=21								
TWC				*i* S		Sb	22 00 05.1	+0.2	
	baz=21								
OWD	**Renai**	**0.49**	**247**	*e*P		Pg	21 59 57.0	+0.5	
	baz=246								
OWD				*e*S		Sb	22 00 04.5	-0.6	
	baz=246								
WARBT	**Fenglin Townsh**	**0.50**	**211**	*i* P		Pb	21 59 57.7	-0.2	
	baz=210								
WARBT				*e*S		Sb	22 00 05.1	-0.2	
	baz=210								
WUSB	**Renai**	**0.53**	**253**	*i* P		Pb	21 59 58.0	-0.3	
	baz=252								
WUSB				*e*S		Sb	22 00 06.6	+0.6	
	baz=252								
EGFH	**Guangfu**	**0.53**	**205**	*e*P		Pb	21 59 58.3	0.0	
	baz=204								
EGFH				*i* S		Sb	22 00 06.3	+0.3	
	baz=204								
TWE	**Neicheng**	**0.57**	**0**	*e*P		Pb	21 59 59.8	+0.8	
	baz=1.0								
TWE				S		Sb	22 00 07.8	+0.7	
	baz=1.0								
YHNB	**Yeheng**	**0.58**	**333**	*e*P		Pg	21 59 58.2	-0.1	
	baz=332								
YHNB				*e*S		Sb	22 00 07.4	-0.2	
	baz=332								
NSK	**Sanguang**	**0.59**	**332**	*e*P		Pb	22 00 00.3	+0.8	
	baz=332								
FUSB	**Fushanzhiwuyua**	**0.61**	**353**	*i* P		Pb	21 59 59.6	-0.1	
	baz=353								
FUSB				S		Sb	22 00 09.1	+0.6	
	baz=353								
ILA	**Ilan**	**0.62**	**7**	*e*P		Pb	21 59 59.4	-0.4	
	baz=7.0								
VWDT	**VWDT**	**0.62**	**231**	*e*P		Pb	21 59 59.7	-0.2	
	baz=230								
VWDT				*e*S		Sb	22 00 09.8	+1.1	
	baz=230								
HGSD	**Ruisui**	**0.69**	**199**	*e*P		Pg	22 00 00.4	+0.1	
	baz=198								
HGSD				*e*S		Sb	22 00 11.5	+0.7	
	baz=198								
WCS	**Beigang Elemen**	**0.70**	**262**	S		Sb	22 00 11.1	+0.3	
	baz=262								
EHY	**Hungye**	**0.71**	**206**	*e*P		Pb	22 00 01.4	-0.1	
	baz=205								
EHY				*e*S		Sb	22 00 12.2	+0.7	
	baz=205								
SSLB	**Suanglung**	**0.74**	**241**	*e*P		Pg	22 00 00.6	-0.8	
	baz=240								
SSLB				*e*S		Sb	22 00 12.7	+0.4	
	baz=240								
LIOB	**Emei**	**0.77**	**310**	*e*S		Sg	22 00 11.6	-0.3	
	baz=309								
NSTT	**Nanjuang**	**0.77**	**308**	*e*S		Sg	22 00 12.0	0.0	
	baz=308								
TYC	**Yuchr**	**0.78**	**252**	*e*P		Pg	22 00 02.3	+0.3	
	baz=251								
TYC				*e*S		Sb	22 00 13.4	+0.2	
	baz=251								
YULB	**Yu-li**	**0.83**	**204**	*e*P		Pb	22 00 03.4	0.0	
	baz=204								
YULB				*e*S		Sn	22 00 15.9	-1.1	
	baz=204								
TIPB	**Shuangxi**	**0.83**	**10**	*e*P		Pb	22 00 03.8	+0.3	
	baz=10.0								
TIPB				*e*S		Sb	22 00 15.7	+1.0	
	baz=10.0								

TAP 04 22:10:16.0, 24.19N×121.77E, h11km, ML2.4, 9C-14D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**348**	*e*P	Pb	22 10 19.9	-0.6
	baz=351						
ETL	**Fush Village**	**0.14**	**259**	P	Pb	22 10 20.0	-0.6
	baz=258						
ETL				S	Sg	22 10 22.9	+1.3
	baz=258						
EAHA	**Aohua**	**0.15**	**349**	⇓*i*P	Pb	22 10 20.1	-0.6
	baz=349						
NACB	**Ninganchiao**	**0.16**	**266**	⇓*i*P	Pb	22 10 20.3	-0.7
	baz=265						
NACB				S	Sg	22 10 23.2	+1.1
	baz=265						
TWD	**Chiawan**	**0.19**	**237**	⇑P	Pb	22 10 20.9	-0.6
	baz=235						
TWD				S	Sg	22 10 24.4	+1.5
	baz=235						
ENA	**Nanau**	**0.24**	**354**	⇑P	Pg	22 10 21.6	+0.6
	baz=355						
EWUT	**Wuta**	**0.26**	**2**	⇓*i*P	Pb	22 10 22.1	-0.6
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.26**	**275**	⇓P	Pb	22 10 22.2	-0.7
	baz=274						
ETLH				S	Sb	22 10 26.4	-1.0
	baz=274						
ETM	**Tongmen**	**0.33**	**229**	⇓P	Pb	22 10 23.4	-0.6
	baz=229						
ETM				*e*S	Sb	22 10 28.4	-0.9
	baz=229						
LXIB	**Xiulin Townshi**	**0.36**	**243**	⇑P	Pg	22 10 23.7	+0.4
	baz=243						
ESAO	**Su ao**	**0.40**	**10**	*i* P	Pb	22 10 24.8	-0.2
	baz=9.0						
ESAO				S	Sb	22 10 30.6	-0.5
	baz=9.0						
LATG	**Datong**	**0.41**	**328**	⇓*i*P	Pb	22 10 25.0	-0.4
	baz=327						
LATG				*i* S	Sb	22 10 31.6	-0.2
	baz=327						
NNSB	**Datong**	**0.43**	**305**	⇓*i*P	Pb	22 10 25.3	-0.4
	baz=304						
NNSB				S	Sb	22 10 31.8	-0.4
	baz=304						
TWC	**Suao**	**0.43**	**10**	*i* P	Pb	22 10 25.3	-0.2
	baz=11						
TWC				S	Sb	22 10 31.9	-0.2
	baz=11						
SHUL	**Shoufeng**	**0.44**	**206**	P	Pb	22 10 25.6	-0.1
	baz=205						
SHUL				S	Sb	22 10 32.6	+0.2
	baz=205						
NNS	**Nan Shan**	**0.44**	**305**	*i* P	Pb	22 10 25.4	-0.4
	baz=305						
NNS				*e*S	Sg	22 10 31.4	+0.8
	baz=305						
NDS	**Dongshan**	**0.45**	**354**	⇑P	Pb	22 10 25.8	-0.1
	baz=353						
NDS				S	Sb	22 10 33.0	+0.3
	baz=353						
WHF	**Hehuan Shan**	**0.46**	**265**	*e*P	Pb	22 10 26.0	-0.4
	baz=264						
WHF				*i* S	Sb	22 10 33.0	-0.4
	baz=264						
NDT	**Datong Townshi**	**0.48**	**331**	⇑P	Pb	22 10 26.5	0.0
	baz=330						
NDT				S	Sb	22 10 33.7	+0.2
	baz=330						
ESL	**Shilin**	**0.48**	**220**	P	Pb	22 10 26.1	-0.4
	baz=218						
ESL				*i* S	Sb	22 10 33.6	+0.1
	baz=218						
FUSS	**Fushou**	**0.48**	**278**	⇓P	Pb	22 10 26.5	-0.2
	baz=277						
FUSS				S	Sb	22 10 34.0	+0.1
	baz=277						
ENTT	**Nioudou**	**0.49**	**338**	⇓P	Pb	22 10 26.5	-0.2
	baz=338						
ENTT				*i* S	Sb	22 10 33.9	0.0
	baz=338						
TWE	**Neicheng**	**0.54**	**350**	⇓P	Pb	22 10 27.6	0.0
	baz=351						
TWE				*i* S	Sb	22 10 35.5	+0.2
	baz=351						
TWT	**Tachien**	**0.55**	**277**	⇑P	Pb	22 10 28.0	+0.3
	baz=276						
TWT				S	Sb	22 10 36.4	+0.8
	baz=276						
CHGB	**Renai**	**0.56**	**257**	⇓P	Pb	22 10 27.9	0.0
	baz=257						
CHGB				S	Sb	22 10 36.3	+0.3
	baz=257						
TDCB	**Techi**	**0.56**	**277**	⇑P	Pb	22 10 28.1	+0.2
	baz=276						
TDCB				*i* S	Sb	22 10 36.2	+0.1
	baz=276						
WARBT	**Fenglin Townsh**	**0.58**	**217**	⇓P	Pb	22 10 27.9	-0.4
	baz=217						
WARBT				S	Sb	22 10 36.7	+0.2
	baz=217						
OWD	**Renai**	**0.59**	**247**	*i* P	Pb	22 10 28.2	-0.2
	baz=247						
OWD				*e*S	Sb	22 10 37.0	+0.2
	baz=247						
FUSB	**Fushanzhiwuyua**	**0.60**	**344**	⇑P	Pb	22 10 28.6	+0.2
	baz=343						
FUSB				S	Sb	22 10 37.4	+0.5
	baz=343						
EGFH	**Guangfu**	**0.60**	**211**	*e*P	Pg	22 10 27.9	+0.2
	baz=211						
EGFH				S	Sb	22 10 37.3	+0.3
	baz=211						
YHNB	**Yeheng**	**0.60**	**323**	⇑P	Pb	22 10 28.8	+0.2
	baz=323						
YHNB				*i* S	Sb	22 10 37.4	+0.3
	baz=323						
NSK	**Sanguang**	**0.62**	**323**	*e*P	Pb	22 10 28.9	+0.1
	baz=322						
NSK				*i* S	Sb	22 10 37.7	+0.2
	baz=322						
WUSB	**Renai**	**0.63**	**252**	*e*P	Pb	22 10 29.3	+0.2
	baz=252						
WUSB				S	Sb	22 10 38.5	+0.6
	baz=252						
VWDT	**VWDT**	**0.72**	**233**	*e*P	Pb	22 10 30.8	+0.3
	baz=233						
VWDT				S	Sb	22 10 41.2	+0.9
	baz=233						
NFF	**Wufeng Townshi**	**0.74**	**307**	P	Pb	22 10 31.0	+0.1
	baz=306						
NFF				S	Sb	22 10 41.8	+0.6
	baz=306						
WHP	**Taichung City**	**0.76**	**277**	*e*P	Pn	22 10 32.4	-0.3
	baz=276						
WHP				*e*S	Sn	22 10 43.1	-1.1
	baz=276						
HGSD	**Ruisui**	**0.76**	**205**	*e*P	Pb	22 10 31.5	+0.3
	baz=204						
HGSD				*e*S	Sb	22 10 41.8	+0.3
	baz=204						
TIPB	**Shuangxi**	**0.79**	**4**	*e*P	Pb	22 10 32.2	+0.5
	baz=3.0						
TIPB				*e*S	Sb	22 10 42.5	+0.2
	baz=3.0						
EHY	**Hungye**	**0.79**	**211**	P	Pb	22 10 31.7	-0.1
	baz=210						
EHY				S	Sb	22 10 43.2	+0.7
	baz=210						
SSLB	**Suanglung**	**0.84**	**242**	⇓*e*P	Pb	22 10 33.1	+0.4
	baz=242						
SSLB				*e*S	Sn	22 10 45.4	-0.8
	baz=242						
TWB1	**Santiao Chiao**	**0.84**	**14**	*e*P	Pn	22 10 33.4	-0.5
	baz=14						
TWB1				*e*S	Sb	22 10 44.4	+0.3
	baz=14						
SMLT	**Sun Moon Lake**	**0.85**	**249**	⇓*e*P	Pb	22 10 33.4	+0.6
	baz=248						
SMLT				*e*S	Sb	22 10 45.1	+0.8
	baz=248						
YULB	**Yu-li**	**0.90**	**209**	P	Pg	22 10 33.5	+0.1
	baz=208						
YULB				*i* S	Sn	22 10 46.6	-1.0
	baz=208						

IDC 04 22:23:34.0±1.6, 3.74N×127.72E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=136.1km s-min=23.3km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.41**	**165**	P	P	22 28 54.8	+0.3
	0.5nm,0.6s,baz=344,slow=11,SNR=6.5						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**27.89**	**168**	P	P	22 29 25.6	-0.3
	0.2nm,0.5s,baz=348,slow=7.6,SNR=1.5						
	0.2nm,0.5s						
SONM	**Songino Array**	**47.61**	**341**	P	P	22 32 10.7	-1.2
	0.3nm,0.7s,baz=150,slow=6.0,SNR=1.5						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**58.12**	**325**	P	P	22 33 30.0	+0.5
	0.3nm,0.5s,baz=120,slow=7.3,SNR=6.9						
	0.3nm,0.5s						

*SEA **04** 22:37:32.2±2.6, 45.16N±0.02×124.35W±0.04, h30km±6km, ML3.1/6, ML2.8/48(NEIC), Error ellipse: s-maj=4.4km s-min=3.1km az=116.0*
*PNSN **04** 22:37:32.2, 45.16N×124.35W, h30km, MD3.1, Fault plane solution: NP1:φ=140.00000°, δ=30.00000°, λ=20.00000°.*
NEIC 04 22:37:33.6±3.0, 45.17N±0.02×124.35W±0.03, h35km±7km, Error ellipse: s-maj=4.0km s-min=2.5km az=128.0, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**0.42**	**83**		Pb	22 37 41.5	-1.8
HEBO					Sb	22 37 48.6	-1.2
HEBO	**Mount Hebo**	**0.42**	**83**	IAML		22 37 49.2	
	comp=E,4μm,0.2s						
HEBO				IAML		22 37 49.5	
	comp=N,2μm,0.2s						
G03D	**McMinnville, O**	**0.77**	**86**		Pn	22 37 46.9	-1.1
G03D					Sn	22 37 58.3	0.0
G03D	**McMinnville, O**	**0.77**	**86**	IAML		22 38 00.4	
	comp=E,644nm,0.6s						
B022	**Seaside**	**0.84**	**20**		Pn	22 37 48.5	-0.4
MPOR	**Mary's Peak**	**0.87**	**139**		Pn	22 37 48.5	-1.0
MPOR					Sn	22 38 01.2	+0.2
COR	**Corvallis**	**0.94**	**128**		Pn	22 37 50.0	-0.4
I02E	**Swisshome, OR**	**1.12**	**161**		Pn	22 37 52.4	-0.4
B023	**Clatskanie**	**1.30**	**43**		Pn	22 37 55.3	+0.1
F04D	**Rainier, OR**	**1.31**	**45**		Pn	22 37 54.1	-1.4
H04D	**Lebanon**	**1.31**	**119**		Pn	22 37 55.5	+0.1
H04D				IAML		22 38 16.4	
	comp=N,220nm,0.6s						
G04A	**Mulino**	**1.32**	**88**		Pn	22 37 56.2	+0.6
RNO	**Roman Nose**	**1.33**	**161**		Pn	22 37 55.6	-0.1
PGO	**Gresham**	**1.37**	**77**		Pb	22 37 58.0	-0.7
BUCK	**Buck Mountain**	**1.37**	**134**		Pn	22 37 56.2	-0.1
BUCK				IAML		22 38 18.6	
	comp=N,126nm,0.8s						
BUCK				IAML		22 38 23.0	
	comp=E,101nm,0.6s						
E03A	**Lebam**	**1.48**	**21**		Pn	22 37 57.4	-0.4
E03A				IAML		22 38 25.6	
	comp=E,102nm,1.1s						
E03A				IAML		22 38 31.8	
	comp=N,150nm,1.0s						
RVW	**Rose Valley**	**1.49**	**48**		Pn	22 37 58.8	+0.8
BMW	**Boistfort Moun**	**1.52**	**30**		Pn	22 37 58.5	+0.1
F04A	**Amboy**	**1.56**	**60**		Pn	22 37 58.7	-0.1
H04A	**Detroit Lake**	**1.61**	**107**		Pn	22 38 00.1	+0.5
H04A				IAML		22 38 26.6	
	comp=E,158nm,0.3s						
I03D	**Drain, OR**	**1.64**	**154**		Pn	22 37 58.1	-1.8
MTMW	**Mount Mitchell**	**1.73**	**59**		Pn	22 38 02.7	+1.4
B203	**Quarry, Mount**	**1.73**	**54**		Pn	22 38 02.6	+1.3
FL2	**Flat Top 2**	**1.74**	**53**		Pn	22 38 02.9	+1.4
ERK	**Elk Rock**	**1.81**	**50**		Pn	22 38 03.8	+1.4
TDH	**Tom, Dick, Har**	**1.81**	**85**		Pn	22 38 03.8	+1.4
B201	**Coldwater, Mou**	**1.85**	**51**		Pn	22 38 04.1	+1.2
ESD	**East Dome**	**1.85**	**55**		Pn	22 38 05.0	-1.9
CDFW	**Cedar Flats**	**1.87**	**59**		Pn	22 38 05.1	+1.9
VLL	**Laurance Lake**	**1.91**	**80**		Pn	22 38 06.0	-1.9
HOOD	**Mount Hood Mea**	**1.91**	**84**		Pn	22 38 03.0	-0.8
HOOD				IAML		22 38 45.6	
	comp=E,123nm,1.2s						
HOOD				IAML		22 38 46.4	
	comp=N,98nm,1.1s						
I04A	**Tendick Farm,**	**1.95**	**134**		Pn	22 38 04.4	+0.1
I04A				IAML		22 38 34.0	
	comp=E,69nm,0.8s						
I04A				IAML		22 38 38.3	
	comp=N,62nm,0.7s						
PRLK	**Prince Lake**	**1.95**	**119**		Pn	22 38 06.2	+1.9
HBO	**Huckleberry Mo**	**1.96**	**132**		Pb	22 38 07.0	-1.9
KOSW	**Kosmos**	**1.99**	**49**		Pn	22 38 06.5	+1.7
J01E	**Myrtle Point**	**2.03**	**171**	Pn	Pn	22 38 04.9	-0.3
G05A	**Wamic**	**2.14**	**87**	Pn	Pn	22 38 06.1	-0.9
G05A				IAML		22 38 41.2	
	comp=N,57nm,0.8s						
G05A				IAML		22 38 54.7	
	comp=E,71nm,0.8s						
DBO	**Dodson Butte**	**2.20**	**158**	Pn	Pn	22 38 06.9	-0.8
LON	**Longmire**	**2.38**	**47**		Pn	22 38 09.0	-1.1
LON				IAML		22 38 52.1	
	comp=E,30nm,0.8s						
LON				IAML		22 38 56.3	
	comp=N,32nm,0.8s						
REMR	**Mount Rainier-**	**2.41**	**46**		Pn	22 38 12.3	+1.7
RCM	**Mount Rainier-**	**2.47**	**47**		Pn	22 38 13.4	+1.7
FMW	**Mount Fremont**	**2.57**	**46**		Pn	22 38 14.5	+1.6
SR41	**SR410 Landslid**	**2.61**	**48**		Pn	22 38 15.2	+1.8
GNW	**Green Mountain**	**2.62**	**23**		Pn	22 38 13.9	+0.5
HUMO	**Hull Mountain**	**2.75**	**158**	Pn	Pn	22 38 14.7	-0.5
J05D	**Fort Rock, OR**	**2.92**	**129**		Pn	22 38 17.5	-0.3
J05D				IAML		22 39 16.8	
	comp=E,19nm,2.4s						
J05D				IAML		22 39 34.2	
	comp=N,18nm,3.9s						
MXC	**Moxie City**	**3.16**	**62**	Pn	Pn	22 38 20.2	-0.7
MXC				IAML		22 39 20.7	
	comp=E,15nm,0.8s						
L04D	**Klamath Falls**	**3.30**	**153**	Pn	Pn	22 38 23.2	+0.3
L04D				IAML		22 39 30.5	
	comp=N,13nm,3.0s						
L04D				IAML		22 39 30.6	
	comp=E,19nm,3.7s						
K05A	**Summer Lake**	**3.49**	**133**	Pn	Pn	22 38 25.4	-0.1
HAWA	**Hanford**	**3.58**	**68**	Pn	Pn	22 38 28.0	+1.3
HAWA				IAML		22 39 31.4	
	comp=E,14nm,0.9s						
HAWA				IAML		22 39 34.5	
	comp=E,12nm,1.0s						
I07A	**Izee**	**3.62**	**106**	Pn	Pn	22 38 28.1	+0.8
GBL	**Gable Mountain**	**3.70**	**66**		Pb	22 38 34.3	-3.9
G08A	**Pilot Rock**	**3.81**	**86**	Pn	Pn	22 38 30.6	+0.7
RPW	**Rockport**	**3.81**	**30**		Pn	22 38 31.1	+1.2

TAP 04 22:45:01.2, 24.13N×121.64E, h12km, ML1.5, 3C-6D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.03**	**324**	⇓P	Pg	22 45 04.3	+0.8
	baz=322						
ETL				S	Sg	22 45 05.7	+0.7
	baz=322						
NACB	**Ninganchiao**	**0.06**	**312**	⇓P	Pg	22 45 03.9	+0.3
	baz=311						
NACB				S	Sg	22 45 06.0	+0.7
	baz=311						
TWD	**Chiawan**	**0.07**	**219**	*i* P	Pg	22 45 04.2	+0.5
	baz=213						
TWD				*i* S	Sg	22 45 06.3	+0.8
	baz=213						
HWA	**Hwalien**	**0.16**	**193**	P	Pb	22 45 06.0	-0.2
	baz=189						
HWA				S	Sg	22 45 09.0	+1.5
	baz=189						
ETLH	**Xiulin Townshi**	**0.16**	**296**	⇓*i*P	Pb	22 45 05.8	-0.5
	baz=296						
ETLH				*i* S	Sg	22 45 09.1	+1.4
	baz=296						
EAHA	**Aohua**	**0.21**	**24**	P	Pb	22 45 06.9	-0.2
	baz=24						
EAHA				*i* S	Sg	22 45 10.6	+1.7
	baz=24						
ETM	**Tongmen**	**0.22**	**219**	*i* P	Pb	22 45 06.8	-0.4
	baz=219						
ETM				S	Sg	22 45 10.9	+1.9
	baz=219						
LXIB	**Xiulin Townshi**	**0.24**	**242**	⇑*i*P	Pb	22 45 07.1	-0.5
	baz=241						
LXIB				S	Sg	22 45 11.7	+2.0
	baz=241						
ENA	**Nanau**	**0.31**	**17**	P	Pb	22 45 08.6	-0.1
	baz=18						
ENA				S	Sb	22 45 13.4	-0.3
	baz=18						
EWUT	**Wuta**	**0.33**	**22**	*i* P	Pb	22 45 08.9	-0.3
	baz=21						
EWUT				S	Sb	22 45 14.1	-0.3
	baz=21						
NNSB	**Datong**	**0.38**	**321**	*e*P	Pb	22 45 10.8	+0.8
	baz=320						
NNSB				*e*S	Sb	22 45 16.7	+0.8
	baz=320						
NNSB	**Datong**	**0.38**	**321**	⇑*i*P	Pb	22 45 10.7	+0.8
	baz=242						
NNSB				S	Sb	22 45 16.6	+0.8
	baz=242						
NNS	**Nan Shan**	**0.39**	**321**	*e*P	Pb	22 45 11.1	+0.8
	baz=321						
NNS				*e*S	Sb	22 45 16.8	+0.5
	baz=321						
NNS	**Nan Shan**	**0.39**	**321**	⇓P	Pb	22 45 10.8	+0.6
	baz=243						
NNS				*i* S	Sb	22 45 16.9	+0.6
	baz=243						
LATG	**Datong**	**0.41**	**345**	⇓*e*P	Pg	22 45 09.4	-0.1
	baz=345						
LATG				*e*S	Sg	22 45 14.5	-0.5
	baz=345						
LATG	**Datong**	**0.41**	**345**	⇑P	Pg	22 45 09.4	-0.1
	baz=256						
LATG				*e*S	Sg	22 45 14.5	-0.5
	baz=256						
TEGC	**Jichi Village**	**0.43**	**193**	*e*S	Sg	22 45 16.2	+0.6
	baz=191						
CHGB	**Renai**	**0.43**	**260**	P	Pg	22 45 10.3	+0.4
	baz=260						
CHGB				S	Sb	22 45 17.3	-0.3
	baz=260						
TWT	**Tachien**	**0.44**	**286**	⇓*i*P	Pb	22 45 11.1	0.0
	baz=284						
TWT				S	Sb	22 45 18.0	+0.2
	baz=284						
ESAO	**Su ao**	**0.48**	**23**	*i* P	Pb	22 45 11.4	-0.2
	baz=22						
ESAO				S	Sb	22 45 19.0	+0.4
	baz=22						

TAP 04 22:45:02.8, 24.56N×121.66E, h39km, ML1.7, 1C-8D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDS	**Dongshan**	**0.08**	**34**	⇓*i*P	Pn	22 45 08.9	-0.4
	baz=34						
NDS				S	Sn	22 45 13.8	+0.1
	baz=34						
ENTT	**Nioudou**	**0.12**	**310**	⇓P	Pn	22 45 09.2	-2.7
	baz=311						
ENTT				S	Sn	22 45 14.1	-5.5

baz=311
NDT Datong Townshi 0.14 286 ⇓P Pn 22 45 09.4 -2.1
baz=285
NDT *i* S Sn 22 45 14.2 -4.6
baz=285
ENA Nanau 0.15 153 ⇓*i*P Pn 22 45 09.5 -1.8
baz=150
ENA *e*S Sn 22 45 14.1 -4.4
baz=150
TWE Neicheng 0.16 1 ⇓P Pn 22 45 09.5 -1.8
baz=6.0
TWE S Sn 22 45 14.5 -3.9
baz=6.0
EWUT Wuta 0.16 139 *e*P Pn 22 45 10.5 -0.7
baz=138
TWC Suao 0.17 75 *i* P Pn 22 45 09.5 -1.6
baz=76
TWC *e*S Sn 22 45 14.4 -3.6
baz=76
FUSB Fushanzhiwuyua 0.21 340 ⇑P Pn 22 45 09.8 -1.2
baz=340
FUSB *i* S Sn 22 45 15.0 -2.7
baz=340
YHNB Yeheng 0.28 292 ⇓*i*P Pn 22 45 10.5 -0.6
baz=291
YHNB S Sn 22 45 16.3 -1.2
baz=291
NSK Sanguang 0.30 292 ⇓*i*P Pn 22 45 10.6 -0.5
baz=291
NSK S Sn 22 45 16.4 -1.1
baz=291
TIPB Shuangxi 0.43 20 ⇓*e*P Pn 22 45 12.0 -0.6
baz=19
TIPB S Sn 22 45 19.7 +0.2
baz=19
FUSS Fushou 0.50 231 P Pn 22 45 13.9 +0.2
baz=230
FUSS *e*S Sn 22 45 21.0 -0.3
baz=230
NFF Wufeng Townshi 0.50 278 P Pn 22 45 13.6 0.0
baz=277
NFF S Sn 22 45 21.4 +0.2
baz=277
NWF Wu-fen Shan 0.52 12 P Pn 22 45 14.0 +0.1
baz=11
NWF S Sn 22 45 21.8 +0.3
baz=11
WFSB Wu-fen Shan 0.52 12 P Pn 22 45 13.8 0.0
baz=11
WFSB *i* S Sn 22 45 21.9 +0.5
baz=11

IDC ***04*** *23:03:22.9±0.9, 39°.35N×73°.19E, h0km, mb3.7/15, mbtmp3.7/22, ML3.1/8, MS3.0/3, Error ellipse: s-maj=15.1km s-min=12.3km az=140.0*
MOS ***04*** *23:03:23.2±1.1, 39°.22N×72°.89E, h11km, mb3.8/4, Error ellipse: s-maj=8.7km s-min=4.4km az=81.2*
SOME ***04*** *23:03:24.6, 39°.50N×73°.08E, h0km*
KRNET ***04*** *23:03:26.0±0.1, 39°.53N×72°.97E, h11km, mb3.9*
NNC ***04*** *23:03:27.4±1.2, 39°.53N×73°.13E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=10.1km s-min=5.9km az=175.0*

ISC 04 23:03:23.6±0.8, 39°.53N±0°.03×73°.18E±0°.02, h7km±4km, n137,σ2ϟ13/181, mb3.7/16, 42C-27D, Tajikistan-Xinjiang border region

Code	Station	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.54**	**28**	⇓*e*P		**Pn 23 03 37.5**	**-0.6**
baz=40							
SFK				⇓*e*S		**Sb 23 03 46.5**	**+2.7**
baz=40							
OHH	**Osh**	**1.03**	**343**	*i* PG		**Pn 23 03 45.5**	**+0.8**
OHH	**Osh**	**1.03**	**343**	⇑*i*P		**Pn 23 03 45.5**	**+0.8**
baz=52							
OHH				⇑*i*S		**Sn 23 03 59.1**	**-0.4**
baz=52							
DRK	**Karamyk**	**1.06**	**268**	⇑*e*P		**Pg 23 03 43.4**	**-0.7**
baz=67							
DRK				⇑*e*S		**Sg 23 03 55.6**	**-2.3**
baz=67							
ARSB	**Arslanbob**	**1.79**	**355**	*i* PN		**Pg 23 03 59.6**	**+1.6**
ARSB				*i* S		**Sg 23 04 23.8**	**+2.5**
ARSB	**Arslanbob**	**1.79**	**355**	⇑*i*P		**Pg 23 03 59.6**	**+1.6**
baz=0.0							
ARSB				⇑*i*S		**Sg 23 04 23.8**	**+2.5**
baz=0.0							
BTK	**Batken**	**1.89**	**287**	*i* PN		**Pb 23 03 57.5**	**-1.0**
BTK				*i* S		**Sb 23 04 21.5**	**-0.9**
BTK	**Batken**	**1.89**	**287**	⇓*i*P		**Pb 23 03 58.6**	**+0.1**
baz=88							
BTK				⇓*i*S		**Sb 23 04 21.5**	**-0.9**
baz=88							
KSH	**Kashi**	**2.16**	**90**	Pn		**Pn 23 04 01.0**	**+0.7**
KSH				Sn		**Sb 23 04 31.8**	**+1.4**
KSH				pmax		pmax	
comp=Z,19nm,0.9s							
KSH				smax		smax	
comp=N,1μm,0.6s							
KSH				smax		smax	
comp=E,630nm,0.6s							
ARK	**Arkit**	**2.44**	**338**	*i* PN		**Pg 23 04 08.3**	**-2.2**
ARK				*i* S		**Sg 23 04 39.0**	**-3.1**
ARK	**Arkit**	**2.44**	**338**	⇑*i*P		**Pg 23 04 08.3**	**-2.2**
baz=42							
ARK				⇑*i*S		**Sg 23 04 39.0**	**-3.1**
baz=42							
ARLS	**Aral**	**2.48**	**20**	*i* PN		**Pg 23 04 10.2**	**-1.0**
ARLS				*i* S		**Sg 23 04 42.7**	**-0.7**
ARLS	**Aral**	**2.48**	**20**	⇓*i*P		**Pg 23 04 10.2**	**-1.0**
baz=24							
ARLS				⇓*i*S		**Sg 23 04 42.7**	**-0.7**
baz=24							
TRKS	**Terek-Say**	**2.53**	**323**	*i* PN		**Pb 23 04 08.0**	**-1.4**
TRKS				*i* S		**Sb 23 04 38.5**	**-2.3**
TRKS	**Terek-Say**	**2.53**	**323**	⇑*i*P		**Pb 23 04 08.0**	**-1.4**
baz=25							
TRKS				⇑*i*S		**Sb 23 04 38.5**	**-2.3**
baz=25							
NRN	**Naryn**	**2.87**	**48**	*i* PN		**Pb 23 04 16.3**	**+0.9**
NRN	**Naryn**	**2.87**	**48**	⇑*i*P		**Pb 23 04 16.3**	**+0.9**
baz=50							
NRN				⇑*i*S		**Sg 23 04 53.4**	**-2.5**
baz=50							
UCH	**Uchtor**	**2.88**	**20**	P		**Pg 23 04 16.7**	**-2.1**
SNR=16							
UCH	**Uchtor**	**2.88**	**20**	*e*PN		**Pb 23 04 16.2**	**+0.6**
UCH	**Uchtor**	**2.88**	**20**	⇓*i*P		**Pb 23 04 16.2**	**+0.6**
baz=23							
UCH				⇓*i*S		**Sg 23 04 52.7**	**-3.4**
baz=23							
MNAS	**Manas**	**2.99**	**350**	⇑*e*P		**Pb 23 04 16.8**	**-0.6**
baz=53							
MNAS				⇑*e*S		**Sb 23 04 53.7**	**-0.6**
baz=53							
EKS2	**Erkin-Say**	**3.16**	**8**	P		**Pb 23 04 20.6**	**+0.4**
SNR=47							
EKS2	**Erkin-Say**	**3.16**	**8**	*e*PN		**Pb 23 04 19.5**	**-0.7**
EKS2	**Erkin-Say**	**3.16**	**8**	⇑*i*P		**Pb 23 04 19.5**	**-0.7**
baz=11							
EKS2				⇑*i*S		**Sb 23 04 58.2**	**-0.8**
baz=11							
MRKS	**Merke**	**3.21**	**1**	Pg		**Pg 23 04 24.7**	**-0.4**
comp=E,39nm,0.3s							
MRKS				Lg		Lg 23 05 10.3	
comp=E,84nm,0.5s							
MRKS	**Merke**	**3.21**	**1**	*e*P		**Pg 23 04 25.0**	**-0.1**
comp=E,19nm,0.2s							
MRKS				*e*S		**Sg 23 05 09.2**	**+2.5**
comp=E,99nm,0.3s							
AAK	**Ala-Archa**	**3.26**	**17**	P		**Pb 23 04 22.1**	**+0.2**
SNR=82							
AAK	**Ala-Archa**	**3.26**	**17**	*d* iPN		**Pb 23 04 22.1**	**+0.2**
AAK	**Ala-Archa**	**3.26**	**17**	Pn		**Pb 23 04 22.3**	**+0.4**
comp=E,12nm,0.3s,baz=193,slow=6.9,SNR=317							
AAK				Sn		**Sg 23 05 04.3**	**-4.0**
comp=E,3.4nm,0.3s,baz=165,slow=20,SNR=6.9							
comp=E,79nm,0.6s							
AAK	**Ala-Archa**	**3.26**	**17**	⇓*i*P		**Pb 23 04 21.3**	**-0.6**
baz=20							
AAK				⇓*i*S		**Sb 23 05 01.2**	**-0.7**
baz=20							
KBK	**Karagaybulak**	**3.40**	**23**	P		**Pb 23 04 24.3**	**0.0**
SNR=15							
KBK	**Karagaybulak**	**3.40**	**23**	*i* PN		**Pb 23 04 23.3**	**-1.0**
KBK	**Karagaybulak**	**3.40**	**23**	⇑*i*P		**Pb 23 04 23.3**	**-1.0**
baz=25							
KBK				⇑*i*S		**Sb 23 05 05.0**	**-0.8**
baz=25							
FRU1	**Bishkek**	**3.45**	**18**	*i* PN		**Pb 23 04 24.2**	**-1.0**
FRU1				*i* S		**Sb 23 05 06.3**	**-1.1**
FRU1	**Bishkek**	**3.45**	**18**	⇓*i*P		**Pb 23 04 24.2**	**-1.0**
baz=20							
FRU1				⇓*i*S		**Sb 23 05 06.3**	**-1.1**
baz=20							
ULHL	**Ulahol**	**3.57**	**40**	P		**Pb 23 04 27.3**	**+0.1**
SNR=12							
ULHL	**Ulahol**	**3.57**	**40**	*i* PN		**Pb 23 04 26.4**	**-0.9**
ULHL				*i* S		**Sb 23 05 10.0**	**-0.9**
ULHL	**Ulahol**	**3.57**	**40**	⇑*i*P		**Pb 23 04 26.4**	**-0.9**
baz=41							
ULHL				⇑*i*S		**Sb 23 05 10.0**	**-0.9**
baz=41							
DZA	**Taraz**	**3.63**	**338**	*e*P		**Pg 23 04 33.0**	**-0.3**
comp=E,68nm,0.2s							
DZA				*e*S		**Sg 23 05 22.7**	**+2.4**
comp=E,300nm,0.2s							
CHMS	**Chumysh**	**3.66**	**18**	P		**Pb 23 04 27.5**	**-1.2**
SNR=73							
CHMS	**Chumysh**	**3.66**	**18**	⇑Pn		**Pb 23 04 27.4**	**-1.3**
comp=E,36nm,0.4s							
CHMS				⇑Lg		Lg 23 05 26.6	
comp=E,25nm,0.5s							
CHMS	**Chumysh**	**3.66**	**18**	*e*PN		**Pb 23 04 26.7**	**-2.0**
CHMS	**Chumysh**	**3.66**	**18**	⇑*e*P		**Pb 23 04 26.7**	**-2.0**
baz=21							
CHMS				⇑*i*S		**Sb 23 05 11.1**	**-2.2**
baz=21							
TKM2	**Tokmak 2**	**3.84**	**28**	P		**Pb 23 04 30.2**	**-1.8**
SNR=20							
TKM2	**Tokmak 2**	**3.84**	**28**	⇑Pn		**Pb 23 04 29.9**	**-2.0**
comp=E,44nm,0.9s							
TKM2				⇑Lg		Lg 23 05 30.1	
comp=E,45nm,0.6s							
TKM2	**Tokmak 2**	**3.84**	**28**	*i* PN		**Pb 23 04 29.9**	**-2.0**
TKM2				pmax		pmax	
comp=Z,44nm,0.9s							
TKM2	**Tokmak 2**	**3.84**	**28**	⇑*e*P		**Pb 23 04 29.6**	**-2.4**
baz=29							
TKM2				⇑*i*S		**Sb 23 05 16.3**	**-2.5**
baz=29							
USP	**Ospenovka**	**3.86**	**15**	P		**Pb 23 04 30.1**	**-2.0**
SNR=8.9							
USP	**Ospenovka**	**3.86**	**15**	*i* PN		**Pb 23 04 29.3**	**-2.8**
USP	**Ospenovka**	**3.86**	**15**	⇑*i*P		**Pb 23 04 29.3**	**-2.8**
baz=17							
USP				⇑*i*S		**Sb 23 05 15.5**	**-3.6**
baz=17							
CHM	**Chimkent**	**3.88**	**317**	*e*P		**Pg 23 04 36.4**	**-1.6**
comp=Z,43nm,0.1s							
CHM				*e*S		**Sg 23 05 28.7**	**+0.5**
comp=Z,715nm,0.1s							
KDJ	**Kajisay**	**4.00**	**48**	*e*PN		**Pb 23 04 32.2**	**-2.3**
KDJ				*i* S		**Sb 23 05 20.7**	**-2.4**
KDJ	**Kajisay**	**4.00**	**48**	⇑*e*P		**Pb 23 04 32.2**	**-2.3**
baz=50							
KDJ				⇑*i*S		**Sb 23 05 20.7**	**-2.4**
baz=50							
KST	**Kastek**	**4.09**	**30**	Pg		**Pg 23 04 42.5**	**+0.6**
comp=Z,15nm,0.5s							
KST				Lg		Lg 23 05 39.9	
comp=Z,64nm,0.6s							
KST	**Kastek**	**4.09**	**30**	*e*P		**Pg 23 04 42.5**	**+0.6**
comp=Z,15nm,0.3s							
KST				*e*S		**Sg 23 05 39.0**	**+4.2**
comp=Z,64nm,0.6s							
KK31	**Karatay Array**	**4.09**	**332**	⇓Pn		Pb 23 04 31.2	-4.8
comp=Z,3.7nm,0.3s,baz=137,slow=12,SNR=134							
KK31				⇑Pg		**Pg 23 04 40.4**	**-1.6**
comp=Z,29nm,0.6s,baz=154,slow=15,SNR=9.3							
KK31				⇓Sn		**Sb 23 05 21.8**	**-4.0**
comp=Z,25nm,0.4s,baz=168,slow=26,SNR=7.9							
KK31	**Karatay Array**	**4.09**	**332**	*i* PN		Pb 23 04 31.2	-4.8
KKAR	**Karatay Array**	**4.09**	**332**	*e*PN		Pb 23 04 30.6	-5.4
KKAR	**Karatay Array**	**4.09**	**332**	⇑*i*P		Pb 23 04 30.6	-5.4
baz=33							
KKAR				⇑*i*S		**Sn 23 05 18.1**	**+3.3**
baz=33							
DGS	**Degeres**	**4.19**	**27**	Pg		**Pg 23 04 43.9**	**0.0**
comp=Z,33nm,0.6s							
DGS				Lg		Lg 23 05 41.8	
comp=Z,41nm,0.9s							
DGS	**Degeres**	**4.19**	**27**	*e*P		**Pg 23 04 44.0**	**+0.2**
comp=Z,33nm,0.6s							
DGS				*e*S		**Sg 23 05 41.6**	**+3.5**
comp=Z,41nm,0.9s							
MTBS	**Maitube**	**4.35**	**33**	Pg		**Pg 23 04 46.6**	**-0.3**
comp=Z,12nm,0.4s							
MTBS				Lg		Lg 23 05 47.4	
comp=Z,40nm,0.5s							
MTBS	**Maitube**	**4.35**	**33**	*e*P		**Pg 23 04 46.6**	**-0.3**
comp=Z,12nm,0.4s							
MTBS				*e*S		**Sg 23 05 46.2**	**+2.9**
comp=Z,41nm,0.5s							
IZV	**Izvestkoviy**	**4.35**	**35**	Pg		**Pg 23 04 46.8**	**-0.2**
comp=Z,14nm,0.9s							
IZV				Lg		Lg 23 05 47.8	
comp=Z,73nm,0.7s							
IZV	**Izvestkoviy**	**4.35**	**35**	*e*P		**Pg 23 04 46.8**	**-0.2**
comp=Z,4.7nm,0.2s							
IZV				*e*S		**Sg 23 05 46.2**	**+2.8**
comp=Z,76nm,0.7s							
TNSS	**Tian-Shan**	**4.51**	**38**	Pg		**Pg 23 04 48.9**	**-1.1**
comp=Z,12nm,0.4s							
TNSS				Lg		Lg 23 05 51.4	
comp=Z,18nm,0.6s							
TNSS	**Tian-Shan**	**4.51**	**38**	*e*P		**Pg 23 04 48.9**	**-1.1**
comp=Z,12nm,0.4s							
TNSS				*e*S		**Sg 23 05 50.1**	**+1.7**
comp=Z,18nm,0.6s							
KRBS	**Karabastau**	**4.56**	**23**	Pg		**Pg 23 04 50.5**	**-0.5**
comp=Z,16nm,0.7s							
KRBS				Lg		Lg 23 05 53.4	
comp=Z,29nm,0.6s							
KRBS	**Karabastau**	**4.56**	**23**	*e*P		**Pg 23 04 50.5**	**-0.5**
comp=Z,16nm,0.3s							
KRBS				*e*S		**Sg 23 05 52.8**	**+2.7**
comp=Z,36nm,0.3s							
MDOK	**Medeo**	**4.65**	**38**	⇓Pn		**Pb 23 04 41.7**	**-4.0**
comp=Z,8.8nm,0.6s							
MDOK				Pg		**Pg 23 04 52.8**	**0.0**
comp=Z,9.6nm,0.7s							
MDOK				⇑Pg		**Pg 23 04 55.3**	**+2.5**
comp=Z,27nm,0.8s							
MDOK				⇑Lg		Lg 23 05 56.0	
comp=Z,88nm,0.7s							
MDOK				Lg		Lg 23 05 56.6	
comp=Z,77nm,0.9s							
MDOK	**Medeo**	**4.65**	**38**	*e*P		**Pg 23 04 52.8**	**0.0**
comp=Z,9.6nm,0.2s							
MDOK				*e*S		**Sg 23 05 56.6**	**+3.6**
comp=Z,77nm,0.9s							
MDOK	**Medeo**	**4.65**	**38**	PN		**Pb 23 04 41.7**	**-4.0**
ANVS	**Anan'yevo**	**4.69**	**45**	*e*PN		Pb 23 04 41.9	-4.5
ANVS				*e*S		**Sb 23 05 37.4**	**-5.8**
ANVS	**Anan'yevo**	**4.69**	**45**	⇓*e*P		Pb 23 04 41.9	-4.5
baz=46							
ANVS				⇓*e*S		**Sb 23 05 37.4**	**-5.8**
baz=46							
KOTS	**Kotyrbulak**	**4.74**	**37**	Pg		**Pg 23 04 53.7**	**-0.7**
comp=Z,16nm,0.4s							
KOTS				Lg		Lg 23 05 58.1	
comp=Z,153nm,0.9s							
KOTS	**Kotyrbulak**	**4.74**	**37**	*e*P		**Pg 23 04 53.7**	**-0.7**
comp=Z,16nm,0.4s							
KOTS				*e*S		**Sg 23 05 58.1**	**+2.4**
comp=Z,153nm,0.4s							
KTBS	**Karatobe**	**4.93**	**31**	Pg		**Pg 23 04 56.9**	**-1.3**
comp=Z,14nm,0.6s							
KTBS				Lg		Lg 23 06 03.7	
comp=Z,50nm,0.6s							
KTBS	**Karatobe**	**4.93**	**31**	*e*P		**Pg 23 04 56.9**	**-1.3**
comp=Z,14nm,0.3s							
KTBS				*e*S		**Sg 23 06 03.7**	**+1.7**
comp=Z,50nm,0.6s							
KUU	**Kurty**	**4.96**	**28**	Pg		**Pg 23 04 57.6**	**-1.0**
comp=Z,16nm,0.9s							
KUU				Lg		Lg 23 06 04.6	
comp=Z,56nm,0.6s							
KUU	**Kurty**	**4.96**	**28**	*e*P		**Pg 23 04 57.4**	**-1.2**
comp=Z,17nm,0.5s							
KUU				*e*S		**Sg 23 06 04.6**	**+1.8**
comp=Z,56nm,0.6s							
CHKK	**Chushkaly**	**5.17**	**32**	Pg		**Pg 23 05 02.0**	**-0.7**
comp=Z,7.2nm,0.6s							
CHKK				Lg		Lg 23 06 12.1	
comp=Z,31nm,0.5s							
CHKK	**Chushkaly**	**5.17**	**32**	*e*P		**Pg 23 05 02.0**	**-0.7**
comp=Z,7.0nm,0.3s							
CHKK				*e*S		**Sg 23 06 12.8**	**+3.0**
comp=Z,31nm,0.3s							
SATY	**Saty**	**5.28**	**47**	Pg		**Pg 23 05 03.2**	**-1.6**
comp=Z,4.6nm,0.6s							
SATY				Lg		Lg 23 06 15.5	
comp=Z,57nm,1.3s							
ZHN	**Zhinishke**	**5.37**	**46**	Pg		**Pg 23 05 05.3**	**-1.2**
comp=Z,3.2nm,0.5s							
ZHN				Lg		Lg 23 06 18.4	
comp=Z,20nm,1.0s							
KURS	**Kuram**	**5.45**	**42**	Pg		**Pg 23 05 07.1**	**-0.8**
comp=Z,8.3nm,0.8s							
KURS				Lg		Lg 23 06 21.2	
comp=Z,29nm,1.5s							
UZB	**Uzynbulak**	**5.69**	**49**	Pg		**Pg 23 05 10.2**	**-2.5**
comp=Z,4.8nm,0.3s							
UZB				Lg		Lg 23 06 27.3	
comp=Z,25nm,0.7s							
ARXS	**Arharly**	**5.82**	**35**	Pg		**Pg 23 05 12.9**	**-2.2**
comp=Z,7.6nm,0.6s							
ARXS				Lg		Lg 23 06 31.9	
comp=Z,25nm,0.5s							
PDGK	**Podgornoye**	**6.07**	**49**	Pg		**Pg 23 05 17.2**	**-2.8**
comp=Z,1.9nm,0.7s							
PDGK				Lg		Lg 23 06 39.1	
comp=Z,5.7nm,1.2s							
PDGK	**Podgornoye**	**6.07**	**49**	⇑Pn		Pn 23 04 59.6	+5.5
comp=Z,2.7nm,0.6s							
PDGK				⇑Pg		**Pg 23 05 18.0**	**-1.9**
comp=Z,6.2nm,0.6s							
PDGK				⇑Lg		Lg 23 06 42.3	
comp=Z,31nm,0.8s							
PDGK	**Podgornoye**	**6.07**	**49**	*i* PN		Pn 23 04 59.5	+5.5
PDGK				pmax		pmax	
comp=Z,3.0nm,0.6s							
KNOS	**Konyrlen**	**6.58**	**41**	Pg		**Pg 23 05 28.0**	**-1.6**
comp=Z,5.1nm,0.5s							
KNOS				Lg		Lg 23 06 57.5	
comp=Z,7.5nm,0.7s							
DJR	**Jarkent**	**6.88**	**44**	Pg		**Pg 23 05 31.4**	**-3.9**
DJR				Lg		Lg 23 07 03.1	
KAPS	**Kapalarasan**	**7.34**	**36**	Pg		Pg 23 05 40.1	-4.1
comp=Z,2.2nm,0.6s							
KAPS				Lg		Lg 23 07 17.9	
comp=Z,7.1nm,0.7s							
OTUK	**Ortayu**	**8.73**	**356**	⇓Pn		**Pn 23 05 33.8**	**+3.5**
comp=Z,3.1nm,0.7s							
OTUK				⇓Lg		Lg 23 08 02.1	
comp=Z,28nm,0.7s							
OTUK	**Ortayu**	**8.73**	**356**	*i* P		Pn 23 05 34.4	+4.1
OTUK				pmax		pmax	
comp=Z,3.0nm,0.6s							
MK31	**Makanchi Array**	**9.84**	**40**	⇑Pn		Pn 23 05 54.0	+8.4
comp=Z,1.0nm,0.6s,baz=223,slow=14,SNR=6.2							
MK31				⇓Lg		Lg 23 08 38.6	
comp=Z,3.8nm,0.9s							
MK31	**Makanchi Array**	**9.84**	**40**	⇓*e*P		Pn 23 05 55.0	+9.4
MKAR	**Makanchi Array**	**9.84**	**40**	Pn		**Pn 23 05 48.8**	**+3.2**
baz=260,slow=11,SNR=2.1							
MKAR				Lg		Lg 23 08 37.8	
comp=Z,0.1nm,0.3s,baz=223,slow=24,SNR=2.6							
KURBB	**Kurchatov Arra**	**11.71**	**17**	Pn		**Pn 23 06 12.8**	**+1.7**
baz=208,slow=13,SNR=6.8							
KURBB				Lg		Lg 23 09 39.0	
baz=200,slow=29,SNR=5.1							
comp=Z,0.1nm,0.4s							
KURK	**Kurchatov**	**11.82**	**17**	⇓*e*P		Pn 23 06 16.8	+4.2
GEYT	**Alibeck**	**11.87**	**267**	Pn		**Pn 23 06 12.6**	**-0.8**
comp=Z,0.3nm,0.3s,baz=115,slow=10,SNR=4.4							
GEYT				Sn		**Sn 23 08 20.5**	**-5.6**
comp=Z,0.5nm,0.3s,baz=62,slow=18,SNR=2.3							
comp=Z,1.8nm,0.7s							
AB31	**Akbulak array**	**13.54**	**320**	P		**Pn 23 06 36.0**	**-0.1**
comp=Z,1.4nm,0.3s,baz=129,slow=14,SNR=76							
AB31	**Akbulak array**	**13.54**	**320**	*i* P		**Pn 23 06 36.0**	**-0.1**
AB31				pmax		pmax	
comp=Z,1.0nm,0.3s							
BVAR	**Borovoye Array**	**13.63**	**353**	Pn		**Pn 23 06 37.9**	**+0.6**
baz=168,slow=15,SNR=6.6							
BVAR				Lg		Lg 23 10 38.8	
baz=168,slow=23							
BVAR				LR		LR 23 12 08.7	
comp=Z,33nm,19.3s,baz=303,slow=38							
comp=Z,2.1nm,0.7s							
BRVK	**Borovoye**	**13.67**	**353**	⇓*e*P		**Pn 23 06 39.7**	**+1.8**
DGZ	**Jazzator, Alta**	**14.34**	**40**	⇓*i*P		**P 23 06 52.2**	**-2.2**
DGZ				pmax		pmax	
comp=Z,9.0nm,2.0s							
AKTO	**Aktyubinsk**	**15.26**	**321**	⇓P		**Pn 23 06 59.5**	**+0.1**
comp=Z,2.9nm,0.6s							
AKTO	**Aktyubinsk**	**15.26**	**321**	Pn		**Pn 23 06 59.2**	**-0.2**
comp=Z,0.5nm,0.3s,baz=124,slow=12,SNR=6.0							
AKTO				Sn		**Sn 23 09 42.3**	**-6.3**
comp=Z,0.1nm,0.3s,baz=58,slow=21,SNR=2.3							
comp=Z,1.4nm,0.4s							
ZALV	**Zalesovo Beam**	**16.45**	**25**	*e*P		**P 23 07 20.4**	**+2.9**
ZALV	**Zalesovo Beam**	**16.45**	**25**	Pn		**P 23 07 17.3**	**-0.2**
comp=Z,0.4nm,0.3s,baz=212,slow=10,SNR=7.1							
comp=Z,0.8nm,0.3s							
ARU	**Arti**	**19.46**	**335**	*d* iP		**Pn 23 07 54.4**	**+2.5**
ARU				S		**S 23 11 38.5**	**+7.7**
ARU				pmax		pmax	
comp=Z,9.0nm,1.6s							
ARU	**Arti**	**19.46**	**335**	P		**Pn 23 07 53.7**	**+1.8**
comp=Z,0.6nm,0.3s,baz=146,slow=7.4,SNR=6.3							
comp=Z,1.8nm,0.4s							
GTA	**Gaotai**	**20.55**	**82**	P		Pn 23 08 06.7	+1.6
GTA				sP		sP 23 08 15.2	+8.2
GTA				pmax		pmax	
comp=Z,8.0nm,0.7s							
BELG	**Belogornoye**	**21.79**	**315**	⇑*e*P		**P 23 08 17.3**	**+1.3**
BELG				pmax		pmax	
comp=Z,3.0nm,0.8s							
BELG	**Belogornoye**	**21.79**	**315**	P		**P 23 08 17.6**	**+1.7**
comp=Z,10.0nm,0.6s,baz=79,slow=7.4,SNR=2.5							
comp=Z,10.0nm,0.6s							
KBZ	**Khabaz**	**22.95**	**290**	P		**P 23 08 29.4**	**+0.9**
comp=Z,2.0nm,0.9s,baz=87,slow=18,SNR=1.9							
comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**25.26**	**60**	*e*P		**P 23 08 55.3**	**+4.8**
SONM				pmax		pmax	
comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**25.26**	**60**	P		**P 23 08 51.5**	**+1.0**
comp=Z,0.6nm,0.6s,baz=268,slow=8.7,SNR=4.6							
comp=Z,0.6nm,0.6s							
BRTR	**Keskin Array B**	**30.28**	**283**	P		**P 23 09 36.4**	**+0.8**
comp=Z,0.8nm,1.0s,baz=13,slow=13,SNR=2.8							
comp=Z,0.8nm,1.0s							
PALK	**Pallekele**	**32.83**	**166**	LR		LR 23 23 30.3	
comp=Z,54nm,20.3s,baz=34,slow=37							
MNK	**Minsk**	**33.66**	**312**	*i* P		**P 23 10 05.0**	**0.0**
comp=E,11nm,1.4s							
MNK				*i* P		**P 23 10 05.0**	**0.0**
comp=N,23nm,1.4s							
MNK				*i* P		**P 23 10 05.0**	**0.0**
comp=Z,10.0nm,1.4s,baz=234							
MNK				*i* PP		**PnPn 23 11 10.2**	**-6.3**
MNK				*i* S		**S 23 15 26.4**	**-1.6**
MNK				*i* SS		SnSn 23 17 00.6	-30
MNK				*i* LQ		LQ 23 21 12.0	
MNK				*i* LR		LR 23 23

NB2	**NORSAR Subarra**	**43.05**	**321**	P		**P**	**23 11 24.4**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=92,slow=8.6							
NOA	**NORSAR Array B**	**43.05**	**321**	P		**P**	**23 11 24.7**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=95,slow=8.4,SNR=2.5							
	comp=Z,0.5nm,0.6s							
EKA	**Eskdalemuir Ar**	**51.34**	**315**	P		**P**	**23 12 30.5**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=75,slow=8.3,SNR=1.4							
	comp=Z,0.8nm,0.8s							
ESDC	**Sonseca Array**	**57.59**	**297**	P		**P**	**23 13 16.5**	**+2.3**
	comp=Z,0.8nm,1.0s,baz=42,slow=8.5,SNR=2.4							
	comp=Z,0.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**67.51**	**269**	P		**P**	**23 14 22.1**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=37,slow=5.3,SNR=3.4							
	comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**71.39**	**17**	P		**P**	**23 14 44.5**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=300,slow=5.9,SNR=2.9							
	comp=Z,0.4nm,0.9s							
YKA	**Yellowknife Ar**	**78.13**	**4**	*e*P		**P**	**23 15 24.8**	**+1.8**
YKA	**Yellowknife Ar**	**78.13**	**4**	P		**P**	**23 15 23.2**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=350,slow=5.2,SNR=5.1							
	comp=Z,0.3nm,0.7s							
WRA	**Warramunga Arr**	**82.19**	**124**	P		**P**	**23 15 45.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=322,slow=4.8,SNR=7.7							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**84.63**	**127**	P		**P**	**23 15 58.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=321,slow=4.7,SNR=2.3							
	comp=Z,0.3nm,0.6s							

IDC 04 23:14:46.0±3.7, 5.82S×147.59E, h0km, mb3.3/1, mbtmp3.5/3, ML3.5/1, MS3.1/1, Error ellipse: s-maj=96.7km s-min=44.3km az=97.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.59**	**187**	Pn		Pn	23 15 43.1	+0.1
	28nm,0.6s,baz=34,slow=8.4,SNR=2.5							
PMG				Sn		Sn	23 16 21.5	-4.7
	4.7nm,0.3s,baz=43,slow=19,SNR=2.2							
WRA	**Warramunga Arr**	**19.05**	**221**	P		Pn	23 19 10.4	-0.3
	0.2nm,0.3s,baz=45,slow=11,SNR=6.6							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**22.10**	**215**	P		P	23 19 42.9	-0.2
	0.6nm,0.5s,baz=51,slow=9.3,SNR=13							
	0.6nm,0.5s							
LEM	**Lembang**	**39.73**	**266**	LR		LR	23 42 20.3	
	comp=Z,24nm,18.2s,baz=223,slow=42							
TORD	**Torodi Ar. Bea**	**145.61**	**285**	PKPbc		PKPdf	23 34 26.8	-0.7
	0.4nm,0.7s,baz=61,slow=4.9,SNR=2.8							

*NNC **04** 23:23:29.5±9.0, 36.79N×70.52E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=78.6km s-min=56.1km az=158.0*
*IDC **04** 23:23:36.4±5.7, 36.78N×71.23E, h118km±33km, mb3.5/3, mbtmp3.7/10, MS2.4/1, Error ellipse: s-maj=70.6km s-min=24.4km az=151.0*
ISC 04 23:23:35.9±2.1, 36.8N±0.2×71.0E±0.1, h100km, n19, σ1s74/22, mb4.0/3, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.05**	**25**	P		**Pn**	**23 25 02.5**	**-0.7**
	SNR=5.3							
EKS2	**Erkin-Say**	**6.22**	**19**	P		**Pn**	**23 25 05.1**	**-0.1**
	SNR=27							
KK31	**Karatay Array**	**6.30**	**357**	P		**Pn**	**23 25 05.7**	**-0.6**
	1.7nm,0.2s,baz=181,slow=13,SNR=48							
KK31				⇓S		**Sn**	**23 26 17.9**	**+1.1**
	3.7nm,0.5s,baz=188,slow=23							
AAK	**Ala-Archa**	**6.41**	**24**	P		**Pn**	**23 25 07.4**	**-0.4**
	SNR=8.4							
AAK	**Ala-Archa**	**6.41**	**24**	P		**Pn**	**23 25 07.4**	**-0.4**
	6.2nm,0.3s,baz=164,slow=4.4,SNR=58							
AAK				S		**Sn**	**23 26 18.8**	**-0.8**
	1.2nm,0.4s,baz=118,slow=15,SNR=0.9							
AAK				LR		LR	23 27 27.0	
	comp=Z,32nm,21.3s,baz=30,slow=36							
CHMS	**Chumysh**	**6.81**	**24**	P		**Pn**	**23 25 12.5**	**-0.8**
	SNR=9.3							
TKM2	**Tokmak 2**	**7.04**	**28**	P		**Pn**	**23 25 15.4**	**-1.1**
	SNR=5.4							
TKM2	**Tokmak 2**	**7.04**	**28**	⇑P		**Pn**	**23 25 15.2**	**-1.3**
	6.1nm,0.8s							
TKM2				⇑S		**Sn**	**23 26 40.3**	**+5.2**
	1.8nm,0.8s							
GEYT	**Alibeck**	**10.34**	**280**	P		**Pn**	**23 26 03.9**	**+2.7**
	1.0nm,0.4s,baz=102,slow=13,SNR=4.7							
MKAR	**Makanchi Array**	**13.03**	**37**	P		**Pn**	**23 26 37.8**	**+0.7**
	0.3nm,0.5s,baz=215,slow=12,SNR=8.0							
KURBB	**Kurchatov Arra**	**14.83**	**19**	P		**Pn**	**23 27 01.3**	**+1.1**
	0.5nm,0.5s,baz=204,slow=11,SNR=8.2							
AB31	**Akbulak array**	**14.83**	**331**	P		**Pn**	**23 26 57.3**	**-3.0**
	0.3nm,0.2s,baz=167,slow=12,SNR=42							
BVAR	**Borovoye Array**	**16.23**	**359**	P		**Pn**	**23 27 18.1**	**+0.4**
	0.7nm,0.5s,baz=172,slow=12,SNR=4.1							
AKTO	**Aktyubinsk**	**16.53**	**330**	⇓P		**Pn**	**23 27 20.8**	**-0.8**
	0.5nm,0.4s							
AKTO	**Aktyubinsk**	**16.53**	**330**	P		**Pn**	**23 27 21.6**	**0.0**
	1.1nm,0.3s,baz=131,slow=14,SNR=4.2							
ZALV	**Zalesovo Beam**	**19.63**	**25**	P		**P**	**23 27 54.1**	**-2.2**
	1.9nm,0.5s,baz=214,slow=11,SNR=10							
FINES	**FINESS Array B**	**37.24**	**326**	P		**P**	**23 30 37.0**	**-0.4**
	2.3nm,1.0s,baz=118,slow=12,SNR=1.3							
	2.3nm,1.0s							
HFS	**Hagfors**	**42.84**	**322**	P		**P**	**23 31 23.2**	**-0.5**
	1.1nm,0.4s,baz=88,slow=11,SNR=4.5							
	1.1nm,0.4s							
NOA	**NORSAR Array B**	**44.15**	**323**	P		**P**	**23 31 33.8**	**-0.5**
	0.6nm,0.6s,baz=100,slow=7.8,SNR=1.8							
	0.6nm,0.6s							

*IDC **04** 23:32:00.0±1.0, 4.14N×128.81E, h0km, mb3.7/8, mbtmp3.7/8, MS3.0/3, Error ellipse: s-maj=55.8km s-min=19.7km az=68.0*
ISC 04 23:32:05.1±1.1, 4.1N±0.2×128.7E±0.3, h35km, n10, σ1s11/8, mb3.7/8, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**4.27**	**314**	LR		LR	23 35 21.6	
	comp=Z,196nm,18.3s,baz=59,slow=46							
WRA	**Warramunga Arr**	**24.53**	**167**	P		**P**	**23 37 21.8**	**+0.1**
	0.9nm,0.7s,baz=344,slow=11,SNR=10							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**28.07**	**170**	P		**P**	**23 37 53.9**	**+0.3**
	0.6nm,0.8s,baz=8.5,slow=9.4,SNR=4.1							
	0.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**32.39**	**298**	P		**P**	**23 38 30.6**	**-1.3**
	0.9nm,0.3s,baz=94,slow=8.2,SNR=1.9							
CMAR				LR		LR	23 52 42.8	
	comp=Z,12nm,18.1s,baz=65,slow=38							
	0.9nm,0.3s							
SONM	**Songino Array**	**47.60**	**340**	P		**P**	**23 40 38.4**	**+0.7**
	0.2nm,0.3s,baz=164,slow=7.0,SNR=2.8							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**58.38**	**324**	P		**P**	**23 41 58.3**	**+1.2**
	0.3nm,0.3s,baz=117,slow=7.3,SNR=11							
	0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**62.49**	**327**	P		**P**	**23 42 25.8**	**+0.7**
	0.8nm,0.7s,baz=123,slow=6.3,SNR=11							
	0.8nm,0.7s							
BVAR	**Borovoye Array**	**68.08**	**326**	P		**P**	**23 43 02.0**	**+0.7**
	0.5nm,0.8s,baz=120,slow=7.3,SNR=2.7							
	0.5nm,0.8s							
ILAR	**Eielson Array**	**83.93**	**25**	P		**P**	**23 44 30.1**	**-1.2**
	0.6nm,1.0s,baz=260,slow=3.5,SNR=4.4							
	0.6nm,1.0s							
KBZ	**Khabaz**	**84.14**	**313**	LR		LR	00 27 40.3	
	comp=Z,9.4nm,18.3s,baz=32,slow=40							

*JMA **04** 23:38:22.2±0.1, 24.2N±0.4×121.8E±0.6, h10km±2km, MV2.7/11, TAIWAN REGION*
*TAP **04** 23:38:22.5, 24.23N×121.78E, h7km, ML3.4, D*
ISC 04 23:38:22.3±1.1, 24.20N±0.02×121.86E±0.02, h3km±9km, n98, σ0s72/159, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.15**	**316**	*i* P		**Pg**	**23 38 25.6**	**+0.3**
	baz=342							
EHP				*i* S		**Sg**	**23 38 27.9**	**+0.6**
	baz=342							
EAHA	**Aohua**	**0.17**	**321**	*i* P		**Pg**	**23 38 25.8**	**+0.3**
	baz=341							
EAHA				*i* S		**Sg**	**23 38 28.5**	**+0.7**
	baz=341							
ETL	**Fush Village**	**0.22**	**259**	*i* P		**Pg**	**23 38 26.5**	**0.0**
	baz=242							
ETL				*i* S		**Sg**	**23 38 29.9**	**+0.6**
	baz=242							
NACB	**Ninganchiao**	**0.24**	**264**	P		**Pg**	**23 38 26.8**	**-0.2**
NACB	**Ninganchiao**	**0.24**	**264**	*i* P		**Pg**	**23 38 26.7**	**-0.2**
NACB				*i* S		**Sg**	**23 38 30.0**	**0.0**
	baz=251							
ENA	**Nanau**	**0.25**	**335**	*i* P		**Pg**	**23 38 27.4**	**+0.3**
	baz=353							
ENA				*i* S		**Sg**	**23 38 31.1**	**+0.7**
	baz=353							
EWUT	**Wuta**	**0.25**	**344**	*i* P		**Pg**	**23 38 27.6**	**+0.4**
EWUT				*i* S		**Sg**	**23 38 31.4**	**+0.8**
TWD	**Chiawan**	**0.27**	**243**	*i* P		**Pg**	**23 38 27.4**	**0.0**
	baz=226							
TWD				*i* S		**Sg**	**23 38 31.6**	**+0.7**
	baz=226							
HWA	**Hwalien**	**0.32**	**226**	*i* P		**Pb**	**23 38 29.9**	**-0.6**
	baz=210							
HWA				*i* S		**Sb**	**23 38 37.4**	**+1.2**
	baz=210							
ETLH	**Xiulin Townshi**	**0.34**	**271**	*i* P		**Pg**	**23 38 28.7**	**-0.2**
	baz=265							
ETLH				*i* S		**Sg**	**23 38 33.1**	**-0.3**
	baz=265							
ESAO	**Su ao**	**0.37**	**358**	*i* P		**Pg**	**23 38 29.9**	**+0.4**
	baz=10.0							
ESAO				*i* S		**Sg**	**23 38 33.7**	**-0.7**
	baz=10.0							
ETM	**Tongmen**	**0.41**	**235**	*i* P		**Pg**	**23 38 30.3**	**+0.2**
	baz=224							
TWC	**Suao**	**0.41**	**359**	*i* P		**Pg**	**23 38 30.6**	**+0.4**
	baz=11							
TWC				*i* S		**Sg**	**23 38 36.7**	**+1.3**
	baz=11							
LXIB	**Xiulin Townshi**	**0.44**	**246**	P		**Pg**	**23 38 30.6**	**-0.3**
	baz=237							
LATG	**Datong**	**0.45**	**318**	*i* P		**Pg**	**23 38 31.2**	**+0.3**
	baz=323							
LATG				*i* S		**Sg**	**23 38 36.6**	**-0.2**
	baz=323							
NDS	**Dongshan**	**0.45**	**344**	*e*P		**Pg**	**23 38 31.5**	**+0.5**
	baz=352							
NDS				*e*S		**Sg**	**23 38 36.5**	**-0.4**
	baz=352							
NNSB	**Datong**	**0.49**	**298**	P		**Pg**	**23 38 31.6**	**-0.1**
	baz=298							
NNSB				S		**Sg**	**23 38 37.1**	**-0.9**
	baz=298							
SHUL	**Shoufeng**	**0.49**	**213**	*i* P		**Pb**	**23 38 32.9**	**-0.7**
	baz=203							
SHUL				*i* S		**Sb**	**23 38 42.2**	**+1.1**
	baz=203							
NNS	**Nan Shan**	**0.50**	**299**	P		**Pg**	**23 38 31.9**	**0.0**
	baz=299							
NNS				S		**Sg**	**23 38 38.2**	**-0.2**
	baz=299							
NDT	**Datong Townshi**	**0.51**	**322**	*i* P		**Pg**	**23 38 32.4**	**+0.4**
	baz=327							
NDT				*i* S		**Sg**	**23 38 39.4**	**+0.7**
	baz=327							
ENTT	**Nioudou**	**0.51**	**329**	P		**Pg**	**23 38 32.5**	**+0.3**
	baz=335							
ENTT				*e*S		**Sg**	**23 38 39.3**	**+0.5**
	baz=335							
WHF	**Hehuan Shan**	**0.54**	**264**	*i* P		**Pg**	**23 38 32.7**	**-0.1**
	baz=259							
WHF				*i* S		**Sg**	**23 38 39.9**	**+0.1**
	baz=259							
ESL	**Shilin**	**0.55**	**225**	*i* P		**Pg**	**23 38 32.9**	**+0.2**
	baz=216							
ESL				*i* S		**Sb**	**23 38 42.0**	**-0.7**
	baz=216							
TWE	**Neicheng**	**0.55**	**342**	*i* P		**Pg**	**23 38 33.2**	**+0.4**
	baz=350							
FUSS	**Fushou**	**0.56**	**275**	P		**Pg**	**23 38 33.0**	**-0.1**
	baz=272							
FUSS				S		**Sg**	**23 38 40.4**	**+0.1**
	baz=272							
FUSB	**Fushanzhiwuyua**	**0.61**	**336**	P		**Pb**	**23 38 34.5**	**-1.1**
	baz=342							
FUSB				S		**Sb**	**23 38 43.3**	**-1.3**
	baz=342							
TWT	**Tachien**	**0.62**	**275**	P		**Pb**	**23 38 35.0**	**-0.9**
	baz=272							
TWT				S		**Sg**	**23 38 42.9**	**+0.5**
	baz=272							
CHGB	**Renai**	**0.64**	**258**	P		**Pg**	**23 38 34.6**	**+0.1**
	baz=252							
CHGB				S		**Sg**	**23 38 42.6**	**-0.2**
	baz=252							
TDCB	**Techi**	**0.64**	**275**	P		**Pg**	**23 38 34.9**	**+0.3**
	baz=272							
TDCB				S		**Sg**	**23 38 43.3**	**+0.4**
	baz=272							
YHNB	**Yeheng**	**0.64**	**317**	P		**Pg**	**23 38 34.9**	**+0.3**
YHNB	**Yeheng**	**0.64**	**317**	P		**Pg**	**23 38 34.8**	**+0.2**
	baz=320							
YHNB				S		**Sg**	**23 38 43.4**	**+0.5**
	baz=320							
WARBT	**Fenglin Townsh**	**0.64**	**222**	P		**Pg**	**23 38 34.2**	**-0.4**
	baz=214							
WARBT				S		**Sb**	**23 38 45.3**	**-0.3**
	baz=214							
NSK	**Sanguang**	**0.66**	**316**	P		**Pg**	**23 38 35.0**	**+0.1**
	baz=319							
NSK				S		**Sg**	**23 38 43.7**	**+0.3**
	baz=319							
EGFH	**Guangfu**	**0.66**	**217**	P		**Pg**	**23 38 35.1**	**+0.2**
	baz=209							
WUSB	**Renai**	**0.70**	**253**	P		**Pg**	**23 38 36.1**	**+0.2**
	baz=248							
WUSB				S		**Sg**	**23 38 45.4**	**+0.4**
	baz=248							
TIPB	**Shuangxi**	**0.77**	**358**	P		**Pb**	**23 38 37.6**	**-0.7**
	baz=3.0							
VWDT	**VWDT**	**0.79**	**236**	P		**Pg**	**23 38 37.7**	**+0.3**
	baz=230							
VWDT				S		**Sb**	**23 38 50.3**	**+0.6**
	baz=230							
NFF	**Wufeng Townshi**	**0.80**	**303**	P		**Pg**	**23 38 37.8**	**+0.2**
	baz=303							
NFF				S		**Sg**	**23 38 48.1**	**+0.2**
	baz=303							
HGSD	**Ruisui**	**0.81**	**209**	P		**Pg**	**23 38 37.8**	**0.0**
	baz=203							
NHDH	**Xindian Distri**	**0.82**	**338**	P		**Pn**	**23 38 40.0**	**-0.7**
	baz=342							
WHP	**Taichung City**	**0.83**	**276**	P		**Pb**	**23 38 39.0**	**-0.5**
	baz=273							
WHP				S		**Sb**	**23 38 50.1**	**-1.0**
	baz=273							
TATO	**Taipei**	**0.84**	**337**	P		**Pb**	**23 38 38.8**	**-0.7**
EHY	**Hungye**	**0.85**	**215**	P		**Pg**	**23 38 37.7**	**-0.8**
	baz=209							
NWF	**Wu-fen Shan**	**0.87**	**356**	P		**Pb**	**23 38 39.8**	**-0.3**
WFSB	**Wu-fen Shan**	**0.87**	**356**	P		**Pb**	**23 38 39.7**	**-0.3**
WCS	**Beigang Elemen**	**0.87**	**261**	P		**Pg**	**23 38 39.0**	**-0.1**
	baz=257							
WCS				S		**Sg**	**23 38 50.5**	**+0.1**
	baz=257							
LIOB	**Emei**	**0.89**	**300**	P		**Pb**	**23 38 39.9**	**-0.4**
	baz=300							
NSTT	**Nanjuang**	**0.89**	**299**	*e*P		**Pb**	**23 38 39.7**	**-0.6**
	baz=299							
NSTT				S		**Sb**	**23 38 51.6**	**-1.0**
	baz=299							
SXI1	**Grass Mountain**	**0.89**	**1**	P		**Pb**	**23 38 40.3**	**-0.1**
	baz=6.0							
SXI1				S		**Sn**	**23 38 55.6**	**+0.3**
	baz=6.0							
SSLB	**Suanglung**	**0.92**	**244**	P		**Pg**	**23 38 39.8**	**-0.2**
SSLB	**Suanglung**	**0.92**	**244**	P		**Pg**	**23 38 39.2**	**-0.7**
	baz=239							
SSLB				S		**Sb**	**23 38 52.8**	**-0.8**
	baz=239							
SMLT	**Sun Moon Lake**	**0.93**	**250**	P		**Pg**	**23 38 39.7**	**-0.4**
	baz=246							
SMLT				S		**Sg**	**23 38 52.2**	**0.0**
	baz=246							
YULB	**Yu-li**	**0.95**	**213**	P		**Pg**	**23 38 40.1**	**-0.5**
YULB	**Yu-li**	**0.95**	**213**	*e*P		**Pg**	**23 38 39.4**	**-1.2**
	baz=207							
TYC	**Yuchr**	**0.96**	**252**	P		**Pg**	**23 38 40.2**	**-0.5**
	baz=248							
TYC				S		**Sg**	**23 38 52.6**	**-0.5**
	baz=248							
NCUH	**Zhongli**	**0.98**	**322**	*e*P		**Pb**	**23 38 41.4**	**-0.4**
	baz=323							
NCUH				*e*S		**Sn**	**23 38 57.6**	**+0.3**
	baz=323							
YM01	**YM01**	**0.98**	**345**	P		**Pb**	**23 38 41.6**	**-0.3**
	baz=348							
EYUL	**Yuli**	**0.98**	**210**	*e*P		**Pb**	**23 38 41.4**	**-0.5**
	baz=205							
TWF1	**Yuli**	**0.99**	**211**	*e*P		**Pg**	**23 38 40.1**	**-1.1**
	baz=206							
SBCB	**Hsinchu**	**0.99**	**307**	*e*P		**Pn**	**23 38 42.5**	**-0.5**
	baz=307							
SBCB				*e*S		**Sn**	**23 38 57.7**	**+0.2**
	baz=307							
TWQ1	**Liyutan**	**1.00**	**279**	P		**Pn**	**23 38 43.0**	**-0.2**
	baz=277							
TWQ1				S		**Sb**	**23 38 56.2**	**+0.5**
	baz=277							
NSY	**Sanyi**	**1.02**	**282**	P		**Pn**	**23 38 42.9**	**-0.6**
	baz=281							
NSY				*e*S		**Sn**	**23 38 57.4**	**-1.0**
	baz=281							
JYNG	**Yonagunijimaku**	**1.02**	**76**	*e*P		**Pg**	**23 38 41.3**	**-0.7**
JYNG				*e*S		**Sg**	**23 38 55.1**	**-0.2**
NMLH	**Miaoli**	**1.03**	**289**	*e*P		**Pn**	**23 38 43.0**	**-0.6**
	baz=288							
ANP	**Anpu**	**1.03**	**343**	*e*P		**Pb**	**23 38 42.7**	**-0.1**
	baz=346							
NTST	**Danshui**	**1.03**	**339**	*e*P		**Pb**	**23 38 42.3**	**-0.4**
	baz=342							
NTST				*e*S		**Sn**	**23 38 59.2**	**+0.7**
	baz=342							
YOJ	**Yonaguni jima**	**1.09**	**76**	*e*P		**Pb**	**23 38 43.6**	**-0.1**
WJS	**Zhushan**	**1.10**	**250**	P		**Pb**	**23 38 43.9**	**0.0**
	baz=247							
WJS				S		**Sn**	**23 38 59.6**	**-0.5**
	baz=247							
WNT	**Mingjian**	**1.12**	**254**	*i* P		**Pn**	**23 38 44.7**	**-0.1**
	baz=250							
WNT				*i* S		**Sn**	**23 39 00.9**	**+0.2**
	baz=250							
WDJ	**Dajia District**	**1.12**	**278**	*i* S		**Sn**	**23 39 01.0**	**+0.3**
	baz=276							
FULB	**Fuli**	**1.12**	**207**	P		**Pg**	**23 38 43.0**	**-0.8**
	baz=203							
ALS	**Alishan**	**1.18**	**235**	*i* P		**Pg**	**23 38 44.4**	**-0.5**
	baz=230							
EHD	**Haiduan**	**1.20**	**210**	P		**Pg**	**23 38 43.0**	**-2.4**
	baz=205							
EHD				S		**Sn**	**23 39 02.2**	**-0.6**
	baz=205							
CHN5	**Tsauling**	**1.23**	**241**	P		**Pb**	**23 38 46.1**	**-0.1**
	baz=237							
CHN5				S		**Sn**	**23 39 05.0**	**+1.3**
	baz=237							
ELDTW	**Lidau**	**1.27**	**218**	P		**Pg**	**23 38 43.8**	**-2.8**
	baz=213							
WDLH	**Douliu**	**1.31**	**247**	*e*P		**Pg**	**23 38 47.1**	**-0.2**
	baz=244							
WDLH				*e*S		**Sn**	**23 39 06.1**	**+0.7**
	baz=244							
WCKO	**Fanlu**	**1.37**	**237**	*e*P		**Pb**	**23 38 48.7**	**+0.1**
	baz=233							
WCKO				*e*S		**Sn**	**23 39 09.5**	**+2.5**
	baz=233							
WRL	**Guolierlin Hig**	**1.38**	**258**	P		**Pg**	**23 38 48.4**	**-0.4**
	baz=255							
WRL				S		**Sn**	**23 39 08.0**	**+0.7**
	baz=255							
STYH	**Taoyuan**	**1.43**	**224**	*e*P		**Pn**	**23 38 48.4**	**-0.6**
	baz=221							
TPUB	**Ta-pu**	**1.44**	**232**	P		**Pb**	**23 38 49.4**	**-0.3**
TPUB	**Ta-pu**	**1.44**	**232**	P		**Pn**	**23 38 49.0**	**-0.2**
	baz=228							
TPUB				S		**Sn**	**23 39 11.1**	**+2.5**
	baz=228							
WTK	**Tuku**	**1.44**	**249**	P		**Pn**	**23 38 48.6**	**-0.6**
	baz=246							
WTK				S		**Sn**	**23 39 10.3**	**+1.8**
	baz=246							
LONT	**Longtian**	**1.45**	**207**	P		**Pg**	**23 38 50.5**	**+0.5**
	baz=204							
WTP	**Ta-pu**	**1.48**	**230**	P		**Pn**	**23 38 49.9**	**0.0**
	baz=227							
WTP				S		**Sn**	**23 39 12.3**	**+2.6**
	baz=227							
TWGBT	**Beinan**	**1.55**	**208**	P		**Pg**	**23 38 52.6**	**+0.6**
TWK	**Hsinying**	**1.56**	**234**	P		**Pn**	**23 38 50.5**	**-0.4**
	baz=230							
TWK				S		**Sg**	**23 39 14.0**	**+1.6**
	baz=230							
CHN1	**Nanshi**	**1.58**	**231**	P		**Pn**	**23 38 51.4**	**+0.2**
	baz=227							
SGST	**Jiashian**	**1.61**	**227**	P		**Pn**	**23 38 50.9**	**-0.7**
	baz=223							
SGST				S		**Sg**	**23 39 14.7**	**+0.6**
	baz=223							
SLGT	**Liugui**	**1.64**	**223**	P		**Pn**	**23 38 51.9**	**0.0**
	baz=220							
SLGT				S		**Sg**	**23 39 15.1**	**+0.2**
	baz=220							
ICHU	**Yijhu**	**1.67**	**240**	*e*P		**Pn**	**23 38 52.6**	**+0.2**
	baz=237							
ICHU				*e*S		**Sg**	**23 39 16.3**	**+0.4**
	baz=237							
IRIF	**Iriomote-Funau**	**1.72**	**85**	*e*P		**Pb**	**23 38 53.9**	**-0.5**
ECL	**Taimali**	**1.80**	**208**	*e*P		**Pn**	**23 38 54.5**	**+0.4**
	baz=204							
TSMG	**Majia**	**1.86**	**217**	*e*P		**Pn**	**23 38 55.4**	**+0.4**
	baz=214							
TSMG				*e*S		**Sb**	**23 39 20.2**	**-0.2**
	baz=214							
TSCK	**Chigu Township**	**1.93**	**237**	*e*P		**Pn**	**23 38 56.1**	**+0.1**
	baz=235							
TSCK				*e*S		**Sn**	**23 39 21.4**	**+0.6**
	baz=235							
MASBT	**Mashibuluo**	**1.94**	**216**	*e*P		**Pn**	**23 38 56.5**	**+0.4**
	baz=213							
MASBT				*e*S		**Sb**	**23 39 23.2**	**+0.4**
	baz=213							
EAST	**Anshuo**	**2.03**	**207**	*e*P		**Pb**	**23 38 59.1**	**-0.8**
	baz=204							
JIJ	**Ishigaki jima**	**2.09**	**85**	*e*P		**Pn**	**23 38 58.3**	**+0.1**
SCZT	**Fangliau**	**2.15**	**212**	*e*P		**Pn**	**23 38 59.3**	**+0.4**
	baz=209							

*TAP **04** 23:44:03.7, 24.18N×121.76E, h14km, ML3.7, C*
*JMA **04** 23:44:03.1±0.2, 24.1N±0.5×121.8E±1.0, h11km±2km, MV2.9/12, TAIWAN REGION*
*ASIES **04** 23:44:03.7, 24.18N×121.76E, h14km, ML3.7, M

	baz=242						
HWA	**Hwalien**	**0.24**	**216**	P	**Pg**	**23 44 08.6**	**-0.5**
	baz=224						
HWA				*e*S	**Sb**	**23 44 14.5**	**+0.1**
	baz=224						
ENA	**Nanau**	**0.25**	**356**	⇓*i*P	**Pg**	**23 44 09.2**	**0.0**
	baz=357						
ENA				*i* S	**Sg**	**23 44 13.1**	**+0.3**
	baz=357						
ETLH	**Xiulin Townshi**	**0.26**	**277**	⇓*i*P	**Pg**	**23 44 09.4**	**+0.1**
	baz=277						
ETLH				*i* S	**Sg**	**23 44 13.5**	**+0.5**
	baz=277						
EWUT	**Wuta**	**0.27**	**3**	⇓*i*P	**Pg**	**23 44 09.6**	**+0.1**
	baz=4.0						
EWUT				*i* S	**Sg**	**23 44 13.6**	**+0.3**
	baz=4.0						
ETM	**Tongmen**	**0.32**	**229**	⇓*i*P	**Pg**	**23 44 10.4**	**-0.1**
	baz=230						
ETM				S	**Sg**	**23 44 15.3**	**+0.3**
	baz=230						
LXIB	**Xiulin Townshi**	**0.35**	**244**	⇓*i*P	**Pg**	**23 44 10.9**	**-0.2**
	baz=245						
LXIB				*i* S	**Sg**	**23 44 16.4**	**+0.5**
	baz=245						
ESAO	**Su ao**	**0.40**	**11**	⇓*i*P	**Pg**	**23 44 12.0**	**0.0**
	baz=7.0						
ESAO				*i* S	**Sg**	**23 44 17.6**	**+0.2**
	baz=7.0						
LATG	**Datong**	**0.42**	**329**	⇓*i*P	**Pg**	**23 44 12.4**	**+0.2**
	baz=329						
LATG				*i* S	**Sb**	**23 44 18.4**	**-1.0**
	baz=329						
NNSB	**Datong**	**0.43**	**306**	⇓*i*P	**Pg**	**23 44 12.5**	**+0.1**
	baz=306						
NNSB				S	**Sb**	**23 44 18.7**	**-1.1**
	baz=306						
NNSH	**Datong**	**0.43**	**306**	⇓P	**Pb**	**23 44 12.6**	**-0.8**
	baz=306						
NNSH				S	**Sb**	**23 44 18.7**	**-1.1**
	baz=306						
SHUL	**Shoufeng**	**0.43**	**205**	P	**Pb**	**23 44 13.3**	**0.0**
	baz=197						
SHUL				*e*S	**Sb**	**23 44 21.2**	**+1.5**
	baz=197						
TWC	**Suao**	**0.44**	**11**	⇓*i*P	**Pg**	**23 44 12.7**	**+0.1**
	baz=5.0						
TWC				*i* S	**Sg**	**23 44 18.8**	**+0.3**
	baz=5.0						
NNS	**Nan Shan**	**0.44**	**306**	⇓*i*P	**Pg**	**23 44 12.8**	**+0.1**
	baz=307						
NNS				S	**Sg**	**23 44 19.0**	**+0.4**
	baz=307						
WHF	**Hehuan Shan**	**0.46**	**266**	⇓*i*P	**Pg**	**23 44 13.1**	**0.0**
	baz=266						
WHF				S	**Sg**	**23 44 19.6**	**+0.4**
	baz=266						
NDS	**Dongshan**	**0.46**	**355**	⇓*i*P	**Pb**	**23 44 13.2**	**-0.6**
	baz=354						
NDS				S	**Sb**	**23 44 19.6**	**-0.9**
	baz=354						
ESL	**Shilin**	**0.47**	**220**	*e*P	**Pg**	**23 44 13.2**	**0.0**
	baz=226						
ESL				*e*S	**Sb**	**23 44 20.2**	**-0.6**
	baz=226						
FUSS	**Fushou**	**0.48**	**279**	⇓*i*P	**Pb**	**23 44 13.8**	**-0.6**
	baz=279						
FUSS				S	**Sb**	**23 44 20.5**	**-0.9**
	baz=279						
NDT	**Datong Townshi**	**0.48**	**332**	⇓*i*P	**Pb**	**23 44 13.7**	**-0.5**
	baz=331						
NDT				S	**Sb**	**23 44 20.6**	**-0.6**
	baz=331						
ENTT	**Nioudou**	**0.49**	**339**	⇓*i*P	**Pb**	**23 44 13.9**	**-0.6**
	baz=339						
ENTT				*i* S	**Sb**	**23 44 20.9**	**-0.7**
	baz=339						
TEGC	**Jichi Village**	**0.51**	**204**	*e*P	**Pb**	**23 44 14.4**	**-0.2**
	baz=196						
TEGC				*e*S	**Sb**	**23 44 23.1**	**+1.2**
	baz=196						
TWT	**Tachien**	**0.54**	**278**	P	**Pb**	**23 44 15.1**	**-0.2**
	baz=278						
TWT				*i* S	**Sb**	**23 44 22.6**	**-0.5**
	baz=278						
TWE	**Neicheng**	**0.55**	**351**	⇓*i*P	**Pb**	**23 44 14.8**	**-0.6**
	baz=351						
TWE				S	**Sb**	**23 44 22.5**	**-0.7**
	baz=351						
CHGB	**Renai**	**0.55**	**258**	⇓P	**Pb**	**23 44 14.9**	**-0.6**
	baz=254						
CHGB				*e*S	**Sb**	**23 44 22.5**	**-0.9**
	baz=254						
TDCB	**Techi**	**0.56**	**278**	P	**Pb**	**23 44 15.2**	**-0.3**
	baz=278						
TDCB				*e*S	**Sb**	**23 44 22.6**	**-0.9**
	baz=278						
WARBT	**Fenglin Townsh**	**0.57**	**217**	⇓P	**Pg**	**23 44 14.9**	**-0.2**
	baz=223						
WARBT				*e*S	**Sb**	**23 44 23.7**	**-0.1**
	baz=223						
OWD	**Renai**	**0.58**	**248**	P	**Pg**	**23 44 15.3**	**+0.1**
	baz=248						
OWD				*e*S	**Sb**	**23 44 23.2**	**-0.9**
	baz=248						
ILA	**Ilan**	**0.59**	**359**	*e*S	**Sb**	**23 44 24.4**	**+0.2**
	baz=354						
EGFH	**Guangfu**	**0.59**	**211**	*e*P	**Pg**	**23 44 15.5**	**+0.1**
	baz=226						
EGFH				S	**Sb**	**23 44 24.9**	**+0.5**
	baz=226						
FUSB	**Fushanzhiwuyua**	**0.60**	**345**	*i* P	**Pb**	**23 44 16.1**	**-0.3**
	baz=344						
FUSB				*e*S	**Sb**	**23 44 24.0**	**-0.7**
	baz=344						
YHNB	**Yeheng**	**0.60**	**324**	P	**Pb**	**23 44 16.0**	**-0.4**
YHNB	**Yeheng**	**0.60**	**324**	P	**Pb**	**23 44 16.0**	**-0.4**
	baz=324						
YHNB				S	**Sb**	**23 44 24.2**	**-0.6**
	baz=324						
WUSB	**Renai**	**0.62**	**253**	*i* P	**Pb**	**23 44 16.2**	**-0.3**
	baz=248						
WUSB				*e*S	**Sb**	**23 44 24.6**	**-0.6**
	baz=248						
NSK	**Sanguang**	**0.62**	**324**	*i* P	**Pb**	**23 44 16.1**	**-0.5**
	baz=324						
NSK				*i* S	**Sb**	**23 44 24.6**	**-0.6**
	baz=324						
VWDT	**VWDT**	**0.71**	**233**	⇑P	**Pb**	**23 44 17.8**	**-0.3**
	baz=241						
VWDT				*e*S	**Sb**	**23 44 27.5**	**-0.2**
	baz=241						
NFF	**Wufeng Townshi**	**0.74**	**308**	*i* P	**Pb**	**23 44 18.8**	**+0.1**
	baz=308						
NFF				*i* S	**Sb**	**23 44 28.5**	**-0.3**
	baz=308						
HGSD	**Ruisui**	**0.75**	**204**	*e*P	**Pb**	**23 44 18.8**	**0.0**
	baz=194						
HGSD				*e*S	**Sn**	**23 44 31.7**	**+0.4**
	baz=194						
WHP	**Taichung City**	**0.75**	**278**	*e*P	**Pb**	**23 44 19.0**	**+0.2**
	baz=278						
WHP				S	**Sb**	**23 44 29.3**	**+0.3**
	baz=278						
EHY	**Hungye**	**0.78**	**211**	P	**Pg**	**23 44 17.7**	**-1.3**
	baz=223						
WCS	**Beigang Elemen**	**0.79**	**261**	*e*P	**Pb**	**23 44 19.6**	**+0.2**
	baz=254						
WCS				*e*S	**Sb**	**23 44 29.7**	**-0.2**
	baz=254						
TIPB	**Shuangxi**	**0.79**	**4**	P	**Pb**	**23 44 19.5**	**0.0**
	baz=3.0						
TIPB				*e*S	**Sg**	**23 44 29.4**	**-0.3**
	baz=3.0						
NHDH	**Xindian Distri**	**0.81**	**345**	*e*P	**Pn**	**23 44 20.3**	**-0.7**
	baz=344						
NHDH				*e*S	**Sb**	**23 44 30.7**	**0.0**
	baz=344						
LIOB	**Emei**	**0.82**	**305**	*e*P	**Pn**	**23 44 20.5**	**-0.8**
	baz=304						
LIOB				*e*S	**Sb**	**23 44 31.5**	**+0.4**
	baz=304						
NSTT	**Nanjuang**	**0.83**	**303**	*e*P	**Pn**	**23 44 20.6**	**-0.6**
	baz=303						
NSTT				S	**Sb**	**23 44 31.3**	**+0.1**
	baz=303						
TATO	**Taipei**	**0.83**	**343**	P	**Pn**	**23 44 20.9**	**-0.4**
SSLB	**Suanglung**	**0.83**	**242**	P	**Pb**	**23 44 19.9**	**-0.4**
SSLB	**Suanglung**	**0.83**	**242**	⇑P	**Pg**	**23 44 19.7**	**-0.3**
	baz=252						
SSLB				*e*S	**Sg**	**23 44 30.8**	**-0.1**
	baz=252						
SMLT	**Sun Moon Lake**	**0.84**	**250**	*e*P	**Pb**	**23 44 20.3**	**-0.1**
	baz=250						
SMLT				*e*S	**Sb**	**23 44 31.4**	**-0.2**
	baz=250						
TWB1	**Santiao Chiao**	**0.85**	**14**	*e*P	**Pn**	**23 44 21.2**	**-0.4**
	baz=8.0						
TWB1				*i* S	**Sb**	**23 44 31.9**	**0.0**
	baz=8.0						
TYC	**Yuchr**	**0.87**	**252**	P	**Pb**	**23 44 20.7**	**-0.1**
	baz=253						
TYC				*e*S	**Sb**	**23 44 32.3**	**-0.1**
	baz=253						
NWF	**Wu-fen Shan**	**0.89**	**1**	*e*P	**Pn**	**23 44 21.9**	**-0.3**
	baz=353						
NWF				S	**Sb**	**23 44 33.0**	**0.0**
	baz=353						
WFSB	**Wu-fen Shan**	**0.89**	**1**	*e*P	**Pn**	**23 44 21.4**	**-0.7**
	baz=353						
WFSB				S	**Sb**	**23 44 33.0**	**0.0**
	baz=353						
YULB	**Yu-li**	**0.89**	**209**	P	**Pb**	**23 44 20.7**	**-0.5**
YULB	**Yu-li**	**0.89**	**209**	*e*P	**Pb**	**23 44 19.9**	**-1.3**
	baz=220						
YULB				*e*S	**Sb**	**23 44 33.2**	**+0.2**
	baz=220						
TWQ1	**Liyutan**	**0.92**	**281**	*e*P	**Pn**	**23 44 22.6**	**+0.1**
	baz=281						
SXI1	**Grass Mountain**	**0.92**	**6**	P	**Pn**	**23 44 22.2**	**-0.4**
	baz=5.0						
SXI1				*e*S	**Sb**	**23 44 34.4**	**+0.5**
	baz=5.0						
EYUL	**Yuli**	**0.92**	**206**	*e*P	**Pn**	**23 44 22.0**	**-0.5**
	baz=221						
TWF1	**Yuli**	**0.93**	**207**	*e*P	**Pb**	**23 44 21.0**	**-0.8**
	baz=222						
SBCB	**Hsinchu**	**0.94**	**311**	*e*P	**Pn**	**23 44 22.9**	**+0.2**
	baz=311						
NCUH	**Zhongli**	**0.95**	**326**	*e*P	**Pn**	**23 44 22.9**	**0.0**
	baz=326						
NCUH				*e*S	**Sn**	**23 44 37.2**	**+0.9**
	baz=326						
HSN	**Hsinchu**	**0.95**	**311**	*e*P	**Pn**	**23 44 23.5**	**+0.5**
	baz=305						
HSN				*e*S	**Sn**	**23 44 37.1**	**+0.7**
	baz=305						
NMLH	**Miaoli**	**0.95**	**292**	*e*P	**Pn**	**23 44 23.7**	**+0.7**
	baz=292						
NMLH				*e*S	**Sn**	**23 44 36.4**	**-0.1**
	baz=292						
WHYT	**Xinyi Township**	**0.96**	**240**	P	**Pn**	**23 44 22.5**	**-0.6**
	baz=249						
TWS1	**Kuangyinshan**	**0.97**	**341**	*e*P	**Pn**	**23 44 24.3**	**+1.0**
	baz=341						
YM01	**YM01**	**0.98**	**350**	*e*P	**Pn**	**23 44 23.4**	**0.0**
	baz=348						
YM01				*e*S	**Sn**	**23 44 36.5**	**-0.7**
	baz=348						
WJS	**Zhushan**	**1.01**	**250**	*e*P	**Pn**	**23 44 24.3**	**+0.5**
	baz=246						
WJS				*e*S	**Sn**	**23 44 37.7**	**-0.1**
	baz=246						
ANP	**Anpu**	**1.03**	**348**	*e*P	**Pn**	**23 44 24.2**	**+0.1**
	baz=347						
WNT	**Mingjian**	**1.03**	**253**	*e*P	**Pn**	**23 44 24.7**	**+0.7**
	baz=247						
CHKH	**Chenggong**	**1.04**	**199**	P	**Pb**	**23 44 23.2**	**-0.5**
	baz=200						
CHKH				*e*S	**Sn**	**23 44 38.1**	**-0.4**
	baz=200						
WDJ	**Dajia District**	**1.04**	**280**	*e*P	**Pn**	**23 44 25.2**	**+1.1**
	baz=280						
FULB	**Fuli**	**1.06**	**204**	*e*P	**Pn**	**23 44 24.1**	**-0.4**
	baz=219						
FULB				*e*S	**Sn**	**23 44 38.8**	**-0.4**
	baz=219						
ALS	**Alishan**	**1.10**	**233**	P	**Pb**	**23 44 24.6**	**-0.3**
	baz=223						
WCHH	**Zhanghua**	**1.10**	**265**	*e*P	**Pg**	**23 44 26.0**	**+0.9**
	baz=266						
EHD	**Haiduan**	**1.14**	**207**	*e*P	**Pb**	**23 44 23.6**	**-1.9**
	baz=208						
CHN5	**Tsauling**	**1.15**	**240**	P	**Pg**	**23 44 25.8**	**-0.2**
	baz=241						
CHN5				*e*S	**Sn**	**23 44 43.8**	**+2.4**
	baz=241						
YOJ	**Yonaguni jima**	**1.17**	**76**	P	**Pg**	**23 44 28.9**	**+2.4**
YOJ	**Yonaguni jima**	**1.17**	**76**	*e*P	**Pn**	**23 44 25.3**	**-0.7**
ECS	**Chishang**	**1.19**	**205**	*e*P	**Pg**	**23 44 26.4**	**-0.3**
	baz=206						
ELDTW	**Lidau**	**1.20**	**215**	*e*P	**Pn**	**23 44 25.4**	**-1.0**
	baz=201						
WGK	**Gukeng**	**1.20**	**246**	*e*P	**Pg**	**23 44 27.5**	**+0.5**
	baz=247						
WDLH	**Douliu**	**1.22**	**247**	*e*P	**Pg**	**23 44 28.1**	**+0.7**
	baz=248						
WCKO	**Fanlu**	**1.29**	**235**	*e*P	**Pg**	**23 44 29.2**	**+0.5**
	baz=236						
WCKO				*e*S	**Sg**	**23 44 47.2**	**+1.7**
	baz=236						
WRL	**Guolierlin Hig**	**1.29**	**258**	P	**Pg**	**23 44 28.8**	**0.0**
	baz=259						
WRL				*e*S	**Sg**	**23 44 47.2**	**+1.6**
	baz=259						
WTK	**Tuku**	**1.35**	**249**	*e*P	**Pg**	**23 44 29.6**	**-0.2**
	baz=251						
WTK				*e*S	**Sg**	**23 44 48.4**	**+1.1**
	baz=251						
STYH	**Taoyuan**	**1.35**	**222**	*e*P	**Pb**	**23 44 28.6**	**-0.4**
	baz=223						
STYH				*e*S	**Sg**	**23 44 47.3**	**-0.1**
	baz=223						
TPUB	**Ta-pu**	**1.36**	**230**	P	**Pg**	**23 44 29.4**	**-0.5**
TPUB	**Ta-pu**	**1.36**	**230**	P	**Pg**	**23 44 29.5**	**-0.5**
	baz=220						
TPUB				*e*S	**Sg**	**23 44 48.3**	**+0.7**
	baz=220						
WTP	**Ta-pu**	**1.40**	**229**	*e*P	**Pb**	**23 44 30.0**	**+0.1**
	baz=229						
WTP				*e*S	**Sg**	**23 44 49.9**	**+0.8**
	baz=229						
TWK	**Hsinying**	**1.48**	**232**	*e*P	**Pb**	**23 44 31.2**	**0.0**
	baz=233						
TWK				*e*S	**Sg**	**23 44 52.2**	**+0.7**
	baz=233						
TWGBT	**Beinan**	**1.49**	**205**	P	**Pg**	**23 44 32.3**	**-0.2**
TWGBT	**Beinan**	**1.49**	**205**	*e*P	**Pn**	**23 44 29.4**	**-1.0**
	baz=190						
SNST	**Tainan City**	**1.50**	**231**	*e*P	**Pg**	**23 44 32.2**	**-0.6**
	baz=232						
CHN1	**Nanshi**	**1.50**	**229**	*e*P	**Pg**	**23 44 32.0**	**-0.8**
	baz=221						
CHN1				*e*S	**Sg**	**23 44 52.9**	**+0.6**
	baz=221						
SGST	**Jiashian**	**1.54**	**225**	*e*P	**Pb**	**23 44 31.4**	**-0.8**
	baz=226						
SGST				*e*S	**Sg**	**23 44 52.8**	**-0.5**
	baz=226						
WSL	**Shuilin Townsh**	**1.55**	**245**	*e*P	**Pb**	**23 44 32.5**	**0.0**
	baz=247						
SLGT	**Liugui**	**1.56**	**221**	*e*P	**Pb**	**23 44 32.3**	**-0.4**
	baz=221						
SLGT				S	**Sg**	**23 44 54.7**	**+0.6**
	baz=221						
ICHU	**Yijhu**	**1.58**	**239**	*e*P	**Pb**	**23 44 33.0**	**0.0**
	baz=240						
CHN8	**Yiju**	**1.64**	**240**	*e*S	**Sg**	**23 44 57.2**	**+0.4**
	baz=241						
SCST	**Cishan**	**1.73**	**222**	*e*P	**Pg**	**23 44 36.4**	**-0.8**
	baz=222						
SCLT	**Jiali**	**1.75**	**236**	*e*S	**Sg**	**23 44 59.6**	**-0.6**
	baz=236						
IRIF	**Iriomote-Funau**	**1.80**	**85**	*e*S	**Sn**	**23 44 57.8**	**+0.4**
TSCK	**Chigu Township**	**1.85**	**237**	*e*P	**Pb**	**23 44 36.6**	**-0.9**
	baz=237						
TSCK				S	**Sb**	**23 45 01.2**	**+0.7**
	baz=237						
MASBT	**Mashibuluo**	**1.87**	**214**	P	**Pb**	**23 44 37.1**	**-0.9**
	baz=212						
MASBT				*e*S	**Sb**	**23 45 02.0**	**+0.7**
	baz=212						
JKRS	**Kuro-shima**	**2.05**	**88**	*e*P	**Pn**	**23 44 37.9**	**-0.2**
JKRS				*e*S	**Sn**	**23 45 04.3**	**+0.8**
SCZT	**Fangliau**	**2.08**	**211**	*e*P	**Pn**	**23 44 39.7**	**+1.2**
	baz=208						
SCZT				*e*S	**Sb**	**23 45 07.4**	**+0.1**
	baz=208						
JIJ	**Ishigaki jima**	**2.18**	**85**	*e*S	**Sn**	**23 45 05.9**	**-0.8**
VWUC	**VWUC**	**2.25**	**292**	*e*P	**Pn**	**23 44 40.8**	**-0.1**
	baz=291						
JISG	**Ishigakijimahi**	**2.36**	**80**	*e*P	**Pn**	**23 44 42.0**	**-0.4**
JISG				S	**Sn**	**23 45 10.7**	**-0.5**

*SOF **04** 23:46:15.2, 41.61N ±0.01 × 24.33E, h16km ±2km, MD2.1/8*
*BEO **04** 23:46:16.9 ±0.6, 41.57N × 24.39E, h0km, ML1.8/6*
*SKO **04** 23:46:17.3, 41.61N × 24.27E, h0km, ML2.0*
*ATH **04** 23:46:17.1, 41.58N × 24.34E, h10km ±1km, ML1.8/4, Error ellipse: s-maj=2.5km s-min=1.0km az=173.0*

ISC 04 23:46:16.1 ±0.9, **41.61N** ±0.02 × **24.33E** ±0.02, **h14** km ±8km, **n38**, σ 0.91/70, **4C, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RZN	**Rozhen**	**0.32**	**75**	⇑*i*P		*e*Pg	**Pg**	**23 46 22.4**	**-0.3**
RZN						Sg	**Sg**	**23 46 26.4**	**-0.8**
NVR	**Nevrokopi**	**0.44**	**234**			P	**Pg**	**23 46 25.4**	**+0.6**
NVR						S	**Sg**	**23 46 31.5**	**+0.6**
NVR						AML	AML	23 46 34.2	
	comp=N,176μm,0.2s								
NVR						AML	AML	23 46 35.2	
	comp=E,206μm,0.2s								
MMB	**Musomishta**	**0.44**	**262**	⇑*i*P		g	**Pg**	**23 46 24.6**	**-0.3**
MMB						Sg	**Sg**	**23 46 30.7**	**-0.2**
MMB	**Musomishta**	**0.44**	**262**	*i* P		g	**Pg**	**23 46 24.6**	**-0.3**
MMB				*i* S		g	**Sg**	**23 46 30.9**	**0.0**
PLD	**Plovdiv**	**0.62**	**30**	⇑*i*P		g	**Pg**	**23 46 27.5**	**-0.7**
PLD						Sg	**Sg**	**23 46 36.0**	**-0.4**
PLD	**Plovdiv**	**0.62**	**30**	*e*P		g	**Pg**	**23 46 27.1**	**-1.1**
PLD				*e*S		g	**Sg**	**23 46 35.1**	**-1.3**
PLD	**Plovdiv**	**0.62**	**30**	*i* P		g	**Pg**	**23 46 27.8**	**-0.4**
PLD				*i* S		g	**Sg**	**23 46 35.6**	**-0.8**
KAVA	**Kavala**	**0.63**	**167**	P		g	**Pg**	**23 46 28.1**	**-0.3**
KAVA				S		g	**Sg**	**23 46 36.8**	**+0.1**
KVLA	**Kavala**	**0.68**	**177**	P		g	**Pg**	**23 46 29.7**	**+0.4**
KVLA				S		g	**Sg**	**23 46 38.0**	**-0.2**
SRS	**Serrai**	**0.74**	**229**	*e*P		g	**Pg**	**23 46 30.0**	**-0.6**
SRS				*e*S		g	**Sg**	**23 46 40.7**	**+0.3**
SRS	**Serrai**	**0.74**	**229**	*i* P		g	**Pg**	**23 46 30.1**	**-0.4**
SRS				*i* S		g	**Sg**	**23 46 38.0**	**-2.4**
SRS	**Serrai**	**0.74**	**229**	P		g	**Pg**	**23 46 30.4**	**-0.1**
SRS				S		g	**Sg**	**23 46 40.1**	**-0.3**
SRS						AML	AML	23 46 42.1	
	comp=N,135μm,0.1s								
SRS						AML	AML	23 46 42.2	
	comp=E,191μm,0.2s								
KDZ	**Kurdzhali**	**0.76**	**88**	⇑*i*P		g	**Pg**	**23 46 30.5**	**-0.3**
KDZ						Sg	**Sg**	**23 46 40.2**	**-0.5**
KOKK	**Kokkinochori,**	**0.83**	**198**	P		g	**Pg**	**23 46 31.9**	**-0.3**
KOKK				S		g	**Sg**	**23 46 43.2**	**0.0**
PGB	**Panagyurishte**	**0.91**	**353**	P		g	**Pg**	**23 46 33.4**	**-0.3**
PGB				S		g	**Sg**	**23 46 45.9**	**+0.3**
KKB	**Krupnik**	**0.93**	**285**	P		g	**Pg**	**23 46 33.6**	**-0.4**
KKB				S		g	**Sg**	**23 46 45.9**	**-0.3**
KKB	**Krupnik**	**0.93**	**285**	*i* P		g	**Pg**	**23 46 33.7**	**-0.4**
KKB				*i* S		g	**Sg**	**23 46 46.7**	**+0.5**
RDO	**Rodhopi**	**1.02**	**117**	P		g	**Pg**	**23 46 35.9**	**+0.2**
RDO				S		g	**Sg**	**23 46 49.3**	**+0.2**
RDO						AML	AML	23 46 52.7	
	comp=N,128μm,0.3s								
RDO						AML	AML	23 46 53.3	
	comp=E,124μm,0.2s								
DIM	**Dimitrovgrad**	**1.03**	**65**			g	**Pg**	**23 46 35.6**	**-0.3**
DIM						Sg	**Sg**	**23 46 49.4**	**+0.1**
SOH	**Sokhos**	**1.08**	**223**	*i* P		g	**Pb**	**23 46 36.9**	**+0.4**
SOH				*i* S		g	**Sg**	**23 46 51.0**	**-0.1**
SOH	**Sokhos**	**1.08**	**223**	P		g	**Pb**	**23 46 36.6**	**0.0**
SOH				S		g	**Sg**	**23 46 50.7**	**-0.4**
PEHC	**Pehcevo**	**1.08**	**279**	*i* P		g	**Pg**	**23 46 36.0**	**-1.0**
PEHC				*i* S		g	**Sg**	**23 46 50.8**	**-0.4**
PLNA	**Plana**	**1.09**	**322**	P		g	**Pb**	**23 46 36.5**	**-0.4**
PLNA				S		g	**Sg**	**23 46 52.0**	**+0.4**
KNT	**Kendrikon**	**1.17**	**248**	*i* P		g	**Pb**	**23 46 38.0**	**-0.1**
KNT				*i* S		g	**Sb**	**23 46 53.6**	**+0.6**
KNT	**Kendrikon**	**1.17**	**248**	P		g	**Pb**	**23 46 38.0**	**-0.1**
KNT				S		g	**Sb**	**23 46 53.7**	**+0.7**
KNT						AML	AML	23 46 56.3	
	comp=N,103μm,0.2s								
KNT						AML	AML	23 46 57.5	
	comp=E,81μm,0.2s								
VTS	**Vitosha**	**1.29**	**321**	*e*P		g	**Pn**	**23 46 40.9**	**+1.0**
VTS				*e*S		g	**Sg**	**23 46 58.9**	**+1.0**
OUR	**Ouranopolis**	**1.30**	**192**	P			**Pn**	**23 46 40.0**	**+0.2**
VAY	**Valandovo**	**1.35**	**258**	*e*P		g	**Pn**	**23 46 41.3**	**+0.8**
VAY				*i* S		g	**Sb**	**23 46 57.6**	**-0.8**
VAY				*e*Lg		Lg	Lg	23 47 00.3	
	comp=N,15nm,0.3s								
VAY				*e*Lg		Lg	Lg	23 47 02.0	
	comp=E,20nm,0.5s								
HORT	**Hortiatis**	**1.38**	**223**	P			**Pn**	**23 46 41.8**	**+0.8**
HORT				S			**Sb**	**23 46 59.3**	**+0.2**
THE	**Thessaloniki**	**1.42**	**227**	*i* P		g	**Pn**	**23 46 42.4**	**+0.9**
SMTH	**Samothraki Isl**	**1.46**	**141**	P			**Pn**	**23 46 42.5**	**+0.6**
GRG	**Griva**	**1.59**	**246**	*i* P		g	**Pn**	**23 46 45.6**	**+1.8**
GRG	**Griva**	**1.59**	**246**	P		g	**Pn**	**23 46 45.0**	**+1.1**
STIP	**Stip**	**1.61**	**274**	*i* P		g	**Pn**	**23 46 42.1**	**-2.0**
STIP				*i* S		g	**Sn**	**23 47 01.2**	**-3.4**
MPEP	**Malo Peshtene**	**1.80**	**346**	P			**Pb**	**23 46 50.0**	**+1.2**
PRVS	**Prvonek**	**1.90**	**299**	*e*Pn			**Pb**	**23 46 51.7**	**+1.1**
PRVS				*e*Sn			**Sb**	**23 47 16.7**	**+2.5**
ZAPS	**Zavoj**	**2.08**	**323**	*e*Pn			**Pb**	**23 46 54.3**	**+0.7**
ZAPS				*e*Sn			**Sb**	**23 47 21.0**	**+1.6**
BARS	**Barje**	**2.22**	**304**	*e*Pn			**Pb**	**23 46 56.3**	**+0.3**
BARS				*e*Sn			**Sb**	**23 47 24.3**	**+0.9**

*TIR **04** 23:47:35.5, 44.58N × 20.19E, h0km ±20km, Ml3.9*
*PRU **04** 23:47:37.2, 42.41N × 19.12E, h1km*
*BEO **04** 23:47:49.9 ±0.2, 43.49N × 18.67E, h2km ±2km, ML2.5/14*
*RHSSO **04** 23:47:49.8 ±0.2, 43.49N × 18.71E, h3km ±2km, ML2.6/7*
*PDG **04** 23:47:50.2 ±0.4, 43.40N × 18.71E, h4km ±2km, MD3.1/5, ML3.0/11, Error ellipse: s-maj=1.2km s-min=1.0km az=90.0*

ISC 04 23:47:48.9 ±1.0, **43.45N** ±0.01 × **18.69E** ±0.02, **h9** km ±9km, **n97**, σ 1.36/140, **20C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.29**	**195**	*e*Pg			**Pb**	**23 47 55.9**	**-0.4**
KLINJ				*e*Sg			**Sb**	**23 48 01.1**	**-0.1**
UPM	**Unac-Piva**	**0.29**	**147**	⇑*i*Pg			**Pb**	**23 47 55.9**	**-0.5**
UPM				*i* Sg			**

SJES	**Sjenica**	**0.96**	**101**	⇑*i*Pg	**Pg**	**23**	**48**	**06.9**	**-0.3**
SJES				*e*Sg	**Sg**	**23**	**48**	**19.3**	**-0.4**
HCY	**Herceg Novi**	**1.01**	**188**	⇑*i*Pg	**Pg**	**23**	**48**	**08.0**	**-0.2**
HCY				*i* Sg	**Sb**	**23**	**48**	**22.2**	**+0.3**
HCY	**Herceg Novi**	**1.01**	**188**	*e*Pg	**Pn**	**23**	**48**	**08.9**	**-0.3**
HCY				*e*Sg	**Sn**	**23**	**48**	**23.4**	**-0.1**
IVA	**Berane**	**1.05**	**123**	⇑*i*Pg	**Pg**	**23**	**48**	**09.1**	**0.0**
IVA				*i* Sg	**Sg**	**23**	**48**	**20.6**	**-2.2**
IVAS	**Ivanjica**	**1.07**	**83**	*e*Pg	**Pb**	**23**	**48**	**09.8**	**+0.1**
IVAS				*e*Sg	**Sn**	**23**	**48**	**24.7**	**-0.5**
RICI	**Ricice**	**1.13**	**273**	*e*Pg	**Pn**	**23**	**48**	**11.0**	**0.0**
DIVS	**Divibare**	**1.15**	**55**	*e*Pg	**Pb**	**23**	**48**	**10.4**	**-0.5**
DIVS				*e*Sg	**Sg**	**23**	**48**	**24.7**	**-1.1**
BUM	**Brajici-Budva**	**1.16**	**172**	⇑*i*Pg	**Pn**	**23**	**48**	**11.1**	**-0.2**
BUM				*i* Sg	**Sg**	**23**	**48**	**24.9**	**-1.1**
MAKA	**Makarska**	**1.23**	**263**	*e*Pg	**Pg**	**23**	**48**	**12.5**	**+0.1**
TEKS	**Tekeris**	**1.26**	**29**	*e*Pg	**Pn**	**23**	**48**	**12.4**	**-0.3**
TEKS				*e*Sg	**Sb**	**23**	**48**	**28.7**	**-0.4**
TEKS	**Tekeris**	**1.26**	**29**	*e*Pg	**Pn**	**23**	**48**	**11.9**	**-0.8**
PVY	**Plav**	**1.26**	**132**	⇑*i*Pg	**Pg**	**23**	**48**	**13.1**	**0.0**
PVY				*i* Sg	**Sb**	**23**	**48**	**24.8**	**-4.5**
DRME	**Dracevica, Mon**	**1.31**	**164**	⇓*i*Pg	**Pg**	**23**	**48**	**14.3**	**+0.3**
DRME				*i* Sg	**Sb**	**23**	**48**	**26.7**	**-3.9**
DRME	**Dracevica, Mon**	**1.31**	**164**	⇓*i*Pg	**Pg**	**23**	**48**	**13.9**	**-0.1**
DRME				*e*Sg	**Sg**	**23**	**48**	**33.4**	**+2.4**
TRUS	**Trudelj**	**1.47**	**57**	*e*Pg	**Pb**	**23**	**48**	**16.1**	**-0.2**
TRUS				*e*Sg	**Sg**	**23**	**48**	**37.4**	**+1.4**
LSTV	**Lastovo**	**1.48**	**243**	*e*Pn	**Pg**	**23**	**48**	**16.7**	**-0.5**
BCI	**Bajram Curri**	**1.48**	**136**	P	**Pg**	**23**	**48**	**17.1**	**-0.1**
	baz=183								
BCI				AMP					
	comp=N,2.4nm,0.6s,baz=183								
MGRS	**Mrkonjic Grad**	**1.51**	**310**	⇑*i*Pg	**Pn**	**23**	**48**	**16.4**	**+0.2**
GRUS	**Gruza**	**1.54**	**73**	*e*Pg	**Pb**	**23**	**48**	**17.5**	**0.0**
GRUS				*e*Sg	**Sg**	**23**	**48**	**39.7**	**+1.4**
ULC	**Ulcinj**	**1.54**	**164**	⇓*i*Pg	**Pb**	**23**	**48**	**17.8**	**+0.3**
ULC				*i* Sg	**Sn**	**23**	**48**	**33.0**	**-3.6**
PUK	**Puka**	**1.66**	**147**	P	**Pg**	**23**	**48**	**20.6**	**-0.1**
	baz=186								
BLY	**Banja Luka**	**1.69**	**321**	*e*Pg	**Pb**	**23**	**48**	**20.2**	**0.0**
BLY				*e*Sg	**Sg**	**23**	**48**	**42.9**	**-0.4**
BLY	**Banja Luka**	**1.69**	**321**	⇑*i*Pn	**Pb**	**23**	**48**	**19.5**	**-0.7**
BLY				*e*Sn	**Sb**	**23**	**48**	**41.7**	**+0.1**
KUV	**Kijevo**	**1.75**	**289**	*e*Pn	**Pg**	**23**	**48**	**22.2**	**-0.2**
SELS	**Selova**	**1.79**	**96**	*e*Pg	**Pg**	**23**	**48**	**20.9**	**-0.9**
SELS				*e*Sg	**Sg**	**23**	**48**	**47.6**	**+1.3**
A050A	**Klekovaca**	**1.87**	**304**	*e*Pn	**Pb**	**23**	**48**	**22.5**	**-0.7**
A050A				*e*Sn	**Sb**	**23**	**48**	**46.2**	**-0.5**
FRGS	**Fruska Gora**	**1.89**	**25**	⇓P	**Pb**	**23**	**48**	**22.5**	**-1.1**
FRGS	**Fruska Gora**	**1.89**	**25**	*e*Pg	**Pb**	**23**	**48**	**22.7**	**-0.9**
FRGS				*e*Sg	**Sg**	**23**	**48**	**49.0**	**-0.6**
FRGS	**Fruska Gora**	**1.89**	**25**	*e*Pn	**Pn**	**23**	**48**	**21.6**	**+0.2**
A051A	**Mrakovica**	**2.02**	**321**	⇑*i*Pn	**Pn**	**23**	**48**	**24.3**	**+1.1**
A051A				*e*Sn	**Sb**	**23**	**48**	**49.8**	**-1.3**
PHP	**Peshkopia**	**2.19**	**143**	P	**Pb**	**23**	**48**	**28.8**	**+0.2**
	baz=176								
PHP				S	**Sg**	**23**	**49**	**05.0**	**+5.9**
	baz=176								
PHP				AMP					
	comp=N,0.8nm,1.4s,baz=176								
BOVS	**Bovan**	**2.20**	**84**	*e*Pn	**Pb**	**23**	**48**	**27.9**	**-1.0**
BOVS				*e*Sn	**Sb**	**23**	**48**	**56.3**	**+0.1**
MORI	**Morici**	**2.20**	**282**	*e*Pn	**Pb**	**23**	**48**	**29.7**	**+0.8**
ZIRJ	**Zirje**	**2.22**	**276**	*e*Pn	**Pb**	**23**	**48**	**29.6**	**+0.4**
TIR	**Tirane**	**2.27**	**157**	P	**Pg**	**23**	**48**	**31.6**	**-0.8**
	baz=185								
UDBI	**Udbina**	**2.37**	**298**	*e*Pn	**Pb**	**23**	**48**	**31.9**	**+0.1**
BARS	**Barje**	**2.38**	**104**	*e*Pn	**Pn**	**23**	**48**	**29.5**	**+1.5**
A251A	**Rujevac**	**2.42**	**315**	*e*Pn	**Pb**	**23**	**48**	**31.1**	**-1.5**
MDVR	**Moldovita**	**2.56**	**57**	⇑P	**Pg**	**23**	**48**	**39.5**	**+1.7**
MOSL	**Moslavina**	**2.57**	**328**	*e*Pn	**Pn**	**23**	**48**	**31.6**	**+0.9**
PLIT	**Plitvice**	**2.63**	**304**	*e*Pn	**Pn**	**23**	**48**	**32.4**	**+0.8**
PRVS	**Prvonek**	**2.66**	**110**	*e*Pn	**Pn**	**23**	**48**	**33.6**	**+1.7**
DUGI	**Dugi Otok**	**2.69**	**283**	*e*Pn	**Pb**	**23**	**48**	**35.5**	**-1.6**
VIRC	**Vir**	**2.76**	**289**	*e*Pn	**Pb**	**23**	**48**	**36.8**	**-1.6**
MORH	**Mrgy, Hungar**	**2.77**	**359**	⇑P	**Pn**	**23**	**48**	**35.1**	**+1.7**
ZAPS	**Zavoj**	**2.88**	**92**	*e*Pn	**Pn**	**23**	**48**	**36.4**	**+1.4**
BLKB	**Belogradchik**	**2.91**	**85**	⇑P	**Pg**	**23**	**48**	**44.6**	**+0.1**
BLKB				⇓S	**Sg**	**23**	**49**	**21.5**	**-0.7**
NVLJ	**Novalja**	**2.97**	**293**	*e*Pn	**Pn**	**23**	**48**	**38.8**	**+2.6**
BZS	**Buzias**	**3.02**	**43**	⇓P	**Pg**	**23**	**48**	**47.0**	**+0.4**
RABC	**Rab**	**3.10**	**296**	*e*Pn	**Pn**	**23**	**48**	**40.5**	**+2.5**
KALN	**Kalnik**	**3.12**	**330**	*e*Pn	**Pn**	**23**	**48**	**38.9**	**+0.7**
PTJ	**Puntijarka**	**3.13**	**323**	*e*Pn	**Pn**	**23**	**48**	**40.0**	**+1.6**
BOJS	**Bojanci**	**3.21**	**311**	*e*Pn	**Pn**	**23**	**48**	**40.9**	**+1.5**
LOBO	**Lobor**	**3.29**	**326**	*e*Pn	**Pn**	**23**	**48**	**41.5**	**+0.9**
CRES	**Cresnjev**	**3.31**	**317**	*e*Pn	**Pn**	**23**	**48**	**42.2**	**+1.3**
FNA	**Florina**	**3.33**	**142**	P	**Pn**	**23**	**48**	**43.1**	**+2.0**
	baz=166								
SURR	**Surduc**	**3.37**	**46**	⇑P	**Pg**	**23**	**48**	**54.6**	**+1.2**
SIRR	**Siria**	**3.52**	**36**	⇑P	**Pn**	**23**	**48**	**44.7**	**+0.9**
CEY	**Cerknica**	**3.81**	**308**	*e*Pn	**Pn**	**23**	**48**	**48.9**	**+1.2**
SOKA	**Soboth**	**4.14**	**323**	*e*Pn	**Pn**	**23**	**48**	**54.2**	**+1.9**
	comp=N,0.4nm,0.3s								
SOKA				Pg	**Pg**	**23**	**49**	**06.1**	**-2.1**
	comp=N,3.5nm,0.5s								
OBKA	**Obir**	**4.24**	**318**	*e*Pn	**Pn**	**23**	**48**	**56.4**	**+2.6**
	comp=N,0.3nm,0.2s								
OBKA				*e*Pg	**Pg**	**23**	**49**	**09.0**	**-1.1**
	comp=N,2.2nm,0.3s								
OBKA	**Obir**	**4.24**	**318**	*e*Pn	**Pn**	**23**	**48**	**54.9**	**+1.2**
DRGR		**4.39**	**39**	⇑P	**Pg**	**23**	**49**	**13.9**	**+0.9**
ARSA	**Arzberg**	**4.41**	**331**	*e*Pn	**Pn**	**23**	**48**	**57.8**	**+1.8**
	comp=N,1.5nm,0.3s								
ARSA				*e*P	**Pb**	**23**	**49**	**09.5**	**+3.0**
	comp=N,10nm,0.4s								
RONA	**Rosalia, Austr**	**4.57**	**339**	*e*Pn	**Pn**	**23**	**48**	**59.8**	**+1.6**
	comp=N,0.9nm,0.4s								
ARR	**Arges**	**4.67**	**64**	⇓P	**Pb**	**23**	**49**	**13.3**	**+2.3**
CONA	**Conrad Observa**	**4.90**	**337**	*i* Pn	**Pn**	**23**	**49**	**04.3**	**+1.5**
	comp=N,0.2nm,0.2s								
KBA	**Koelnbreinsper**	**5.24**	**316**	*e*P	**Pb**	**23**	**49**	**21.8**	**+1.1**
	comp=N,1.2nm,0.3s								
MOA	**Molln**	**5.38**	**326**	*e*Pn	**Pn**	**23**	**49**	**10.8**	**+1.4**
	comp=N,0.3nm,0.2s								
ABTA	**Abfaltersbach**	**5.48**	**309**	*e*P	**Pb**	**23**	**49**	**25.1**	**+0.4**
	comp=N,0.9nm,0.4s								
BIOA	**Bad Ischl, Aus**	**5.53**	**322**	*i* Pn	**Pn**	**23**	**49**	**14.0**	**+2.7**
	comp=N,0.5nm,0.2s								
BIOA				*e*P	**Pb**	**23**	**49**	**25.3**	**-0.2**
	comp=N,1.5nm,0.4s								
LESA	**Schwarzleotal**	**5.80**	**315**	*e*Pn	**Pn**	**23**	**49**	**18.0**	**+2.8**
	comp=N,0.8nm,0.4s								
LESA				*e*P	**Pb**	**23**	**49**	**31.7**	**+1.4**
	comp=N,2.9nm,0.4s								
WTTA	**Wattenberg**	**6.26**	**310**	*e*Pn	**Pn**	**23**	**49**	**23.0**	**+1.4**
	comp=N,0.3nm,0.4s								
WATA	**Walderalm**	**6.34**	**310**	*e*P	**Pb**	**23**	**49**	**39.9**	**+0.5**
	comp=N,3.5nm,0.7s								
MOTA	**Moosalm**	**6.61**	**309**	*e*P	**Pb**	**23**	**49**	**42.3**	**-1.8**
	comp=N,1.8nm,0.5s								
KHC	**Kasperske Hory**	**6.70**	**330**	*e*PN	**Pn**	**23**	**49**	**30.4**	**+3.0**

*RHSSO **04** 23:48:01.4±0.1, 43°.49N×18°.82E, h6km±1km, ML3.1/21*
*BEO **04** 23:48:04.2±0.3, 43°.53N×18°.68E, h0km, ML2.9/12*
ISC 04 23:48:01.1±1.1, **43°.51N**±0°.02×**18°.74E**±0°.02, **h1**km±10km, **n71**,σ1°**31**/110, **7C-2D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.33**	**159**	*e*Pg	**Pg**	**23 48 07.1**	**-0.2**
UPM				*e*Sg	**Sg**	**23 48 12.3**	**+0.8**
KLINJ	**Klinje**	**0.36**	**199**	*e*Pg	**Pg**	**23 48 07.7**	**-0.2**
KLINJ				*e*Sg	**Sg**	**23 48 12.9**	**+0.4**
RUDO	**Rudo**	**0.47**	**76**	*e*Pg	**Pn**	**23 48 12.9**	**-2.0**
RUDO				*e*Sg	**Sb**	**23 48 20.2**	**+0.6**
RUDO	**Rudo**	**0.47**	**76**	*e*Pg	**Pg**	**23 48 08.3**	**-1.7**
RUDO				*e*Sg	**Sg**	**23 48 15.4**	**-0.7**
BBLS	**Lazići**	**0.60**	**53**	*e*Pg	**Pn**	**23 48 15.5**	**-1.3**
BBLS				*e*Sg	**Sb**	**23 48 23.0**	**-0.4**
BBLS	**Lazići**	**0.60**	**53**	*e*Pg	**Pg**	**23 48 11.1**	**-1.5**
BBLS				*e*Sg	**Sg**	**23 48 20.0**	**-0.3**
BBLS	**Lazići**	**0.60**	**53**	*e*Sg	**Pg**	**23 48 10.5**	**-2.1**
BBLS	**Lazići**	**0.60**	**53**	*e*Sg	**Pg**	**23 48 10.7**	**-1.9**
HAPS	**Han Pijesak,BI**	**0.60**	**14**	*e*Pg	**Pn**	**23 48 15.7**	**-1.1**
HAPS				*e*Sg	**Sg**	**23 48 21.6**	**+1.3**
HAPS	**Han Pijesak,BI**	**0.60**	**14**	*e*Pg	**Pg**	**23 48 12.5**	**0.0**
HAPS				*e*Sg	**Sg**	**23 48 21.4**	**+1.1**
BRY	**Bratogost**	**0.62**	**194**	*e*Pg	**Pg**	**23 48 13.2**	**+0.2**
BRY				*e*Sg	**Sg**	**23 48 21.4**	**+0.3**
TREB	**Trebinje**	**0.84**	**200**	*e*Pg	**Pn**	**23 48 19.3**	**-0.7**
TREB				*e*Sg	**Sb**	**23 48 30.8**	**+0.6**
TREB	**Trebinje**	**0.84**	**200**	*e*Pg	**Pg**	**23 48 16.8**	**-0.3**
TREB				*e*Sg	**Sg**	**23 48 28.2**	**+0.2**
TREB	**Trebinje**	**0.84**	**200**	*e*Sg	**Pg**	**23 48 16.5**	**-0.6**
SJES	**Sjenica**	**0.93**	**105**	*e*Pg	**Pn**	**23 48 22.7**	**+1.3**
SJES				*e*Sg	**Sn**	**23 48 36.1**	**+0.7**
SJES	**Sjenica**	**0.93**	**105**	*e*Pg	**Pg**	**23 48 17.1**	**-1.8**
SJES				*e*Sg	**Sg**	**23 48 29.5**	**-1.4**
DBRK	**Dubrovnik**	**0.94**	**208**	Sg	**Sb**	**23 48 33.2**	**0.0**
STON	**Ston**	**0.99**	**231**	*e*Pg	**Pb**	**23 48 21.5**	**+0.5**
STON				*e*Sg	**Sg**	**23 48 34.4**	**+1.5**
STON	**Ston**	**0.99**	**231**	Sn	**Sg**	**23 48 34.1**	**+1.2**
STON	**Ston**	**0.99**	**231**	*e*Pg	**Pg**	**23 48 19.3**	**-0.8**
STON				*e*Sg	**Sg**	**23 48 34.3**	**+1.4**
STON	**Ston**	**0.99**	**231**	*e*Sg	**Pg**	**23 48 19.8**	**-0.3**
STON	**Ston**	**0.99**	**231**	*e*Sg	**Pg**	**23 48 20.0**	**-0.1**
IVAS	**Ivanjica**	**1.03**	**86**	*e*Pg	**Pn**	**23 48 23.3**	**+0.6**
IVAS				*e*Sg	**Sn**	**23 48 37.1**	**-0.6**
HCY	**Herceg Novi**	**1.07**	**190**	*e*Pg	**Pg**	**23 48 20.9**	**-0.7**
HCY				*e*Sg	**Sg**	**23 48 35.2**	**-0.3**
DIVS	**Divibare**	**1.08**	**56**	*e*Pg	**Pn**	**23 48 23.7**	**+0.3**
DIVS				*e*Sg	**Sn**	**23 48 39.5**	**+0.4**
TEKS	**Tekeris**	**1.19**	**28**	*e*Pg	**Pn**	**23 48 27.0**	**+2.2**
TEKS				*e*Sg	**Sn**	**23 48 42.8**	**+1.2**
TEKS	**Tekeris**	**1.19**	**28**	*e*Pg	**Pg**	**23 48 23.3**	**-0.5**
TEKS				*e*Sg	**Sg**	**23 48 38.7**	**-0.5**
MAKA	**Makarska**	**1.27**	**261**	Sn	**Sb**	**23 48 41.4**	**-1.4**
DOB	**Doboj**	**1.31**	**340**	*e*Pg	**Pn**	**23 48 25.8**	**-0.7**
DOB				*e*Sg	**Sb**	**23 48 44.6**	**+0.8**
BLJ	**Bijeljina**	**1.33**	**16**	*e*Pg	**Pn**	**23 48 24.9**	**-1.9**
BLJ				*e*Sg	**Sb**	**23 48 42.7**	**-1.6**
DRME	**Dracevica, Mon**	**1.36**	**166**	*e*Pg	**Pn**	**23 48 25.3**	**-1.8**
DRME				*e*Sg	**Sb**	**23 48 43.9**	**-1.2**
TRUS	**Trudelj**	**1.40**	**59**	*e*Pg	**Pg**	**23 48 31.4**	**+3.5**
TRUS				*e*Sg	**Sn**	**23 48 49.7**	**+2.9**
GRUS	**Gruza**	**1.48**	**74**	*e*Pg	**Pg**	**23 48 31.8**	**+2.4**
GRUS				*e*Sg	**Sg**	**23 48 51.8**	**+3.2**
BCI	**Bajram Curri**	**1.50**	**139**	S	**Sg**	**23 48 48.4**	**-0.7**
	baz=183						
MGRS	**Mrkonjic Grad**	**1.50**	**308**	*e*Pn	**Pn**	**23 48 29.2**	**0.0**
MGRS				*e*Sn	**Sn**	**23 48 49.7**	**+0.2**
LSTV	**Lastovo**	**1.54**	**242**	Sn	**Sn**	**23 48 49.9**	**-0.4**
BLY	**Banja Luka**	**1.67**	**318**	*e*Pn	**Pn**	**23 48 31.7**	**+0.2**
BLY				*e*Sn	**Sn**	**23 48 54.2**	**+0.6**
PUK	**Puka**	**1.69**	**150**	S	**Sg**	**23 48 57.5**	**+2.2**
	baz=186						
SELS	**Selova**	**1.76**	**99**	*e*Pg	**Pg**	**23 48 37.7**	**+3.0**
SELS				*e*Sg	**Sg**	**23 49 02.0**	**+4.5**
FRGS	**Fruska Gora**	**1.82**	**25**	*e*Pg	**Pg**	**23 48 36.6**	**+0.7**
FRGS				*e*Sg	**Sg**	**23 49 02.2**	**+2.7**
FRGS	**Fruska Gora**	**1.82**	**25**	*e*Pn	**Pn**	**23 48 33.1**	**-0.4**
FRGS				*e*Sn	**Sn**	**23 48 56.6**	**-0.6**
A050A	**Klekovaca**	**1.87**	**302**	*e*Pn	**Pn**	**23 48 34.7**	**+0.4**
A050A				*e*Sn	**Sn**	**23 48 59.2**	**+0.6**
A051A	**Mrakovica**	**2.00**	**319**	*e*Pn	**Pn**	**23 48 36.0**	**-0.1**
A051A				*e*Sn	**Sn**	**23 49 02.1**	**+0.3**
PRIJ	**Prijedor**	**2.07**	**316**	*e*Pn	**Pn**	**23 48 37.7**	**+0.8**
PRIJ				*e*Sn	**Sn**	**23 49 03.7**	**+0.4**
BOVS	**Bovan**	**2.16**	**86**	⇑P	**Pg**	**23 48 41.9**	**-0.4**
BOVS				⇑S	**Sg**	**23 49 09.8**	**-0.5**
BOVS	**Bovan**	**2.16**	**86**	*e*Pn	**Pg**	**23 48 40.9**	**-1.5**
TIR	**Tirane**	**2.31**	**159**	⇓P	**Pb**	**23 48 43.8**	**+0.3**
TIR	**Tirane**	**2.31**	**159**	S	**Sg**	**23 49 15.6**	**+0.3**
	baz=185						
BANR	**Banloc**	**2.54**	**42**	⇓P	**Pg**	**23 48 49.6**	**-0.1**
PRVS	**Prvonek**	**2.64**	**111**	*e*Pn	**Pb**	**23 48 49.0**	**-0.2**
MORH	**Mrgy, Hungar**	**2.71**	**359**	*e*Pn	**Pn**	**23 48 46.1**	**+0.4**
MORH				*e*Sn	**Sn**	**23 49 19.3**	**+0.2**
SGRT	**San Giovanni R**	**2.82**	**233**	S	Sg	23 49 42.9	+11
	baz=231						
SGRT	**San Giovanni R**	**2.82**	**233**	P	**Pn**	**23 48 47.4**	**+0.1**
	baz=231						
ZAPS	**Zavoj**	**2.84**	**93**	*e*Pn	**Pb**	**23 48 52.1**	**-0.6**
HERR	**Herculane**	**2.98**	**61**	⇑P	**Pn**	**23 48 51.4**	**+2.0**
AMBH	**Ambrzfalva**	**3.17**	**26**	⇑P	**Pg**	**23 49 01.5**	**-0.4**
BOJS	**Bojanci**	**3.20**	**310**	*e*Sn	**Sn**	**23 49 31.6**	**+0.4**
MATE	**Matera**	**3.23**	**209**	⇑P	**Pn**	**23 48 52.9**	**0.0**
BEHE	**Becsehely**	**3.28**	**335**	*e*Pn	**Pn**	**23 48 53.8**	**+0.3**
BEHE				*e*Sn	**Sn**	**23 49 33.1**	**0.0**
CRES	**Cresnjev**	**3.30**	**316**	*e*Pn	**Pn**	**23 48 53.8**	**0.0**
CRES				*e*Sn	**Sn**	**23 49 33.5**	**-0.2**
GZR	**Gura Zlata**	**3.45**	**55**	⇑P	**Pn**	**23 48 54.8**	**-1.2**
DEV	**Deva**	**3.80**	**50**	⇑P	**Pg**	**23 49 11.6**	**-2.3**
CEY	**Cerknica**	**3.81**	**307**	*e*Pn	**Pn**	**23 49 00.7**	**-0.1**
CEY				*e*Sn	**Sn**	**23 49 46.2**	**0.0**
SKDS	**Skadanscina**	**3.95**	**303**	*e*Pn	**Pn**	**23 49 02.0**	**-0.8**
SKDS				*e*Sn	**Sn**	**23 49 49.0**	**-0.8**
OBKA	**Obir**	**4.23**	**317**	*e*Pn	**Pn**	**23 49 07.3**	**+0.6**
ARSA	**Arzberg**	**4.38**	**330**	*e*Pn	**Pn**	**23 49 08.0**	**-0.7**
ZST	**Bratislava**	**4.83**	**347**	*e*SN	**Sn**	**23 50 09.0**	**-2.4**
MODS	**Modra-Piesok**	**4.97**	**349**	*e*PN	**Pn**	**23 49 15.0**	**-1.9**
MODS				*e*SN	**Sn**	**23 50 14.5**	**-0.5**
KECS	**Kecovo**	**5.12**	**13**	*e*SN	**Sn**	**23 50 16.6**	**-2.0**
KHC	**Kasperske Hory**	**6.67**	**329**	*ex*	**Pn**	**23 49 42.1**	**+2.0**
KHC	**Kasperske Hory**	**6.67**	**329**	*e*SN	**Sn**	**23 50 54.9**	**-1.8**

*JMA **04** 23:50:49.4±0.1, 24°.2×122°.9E±0°.4, h86km±1km,*
MV2.2/10, NW OFF ISHIGAKIJIMA IS
*TAP **04** 23:50:49.9, 24°.58N×122°.84E, h82km, ML3.1, C*
ISC 04 23:50:50.2±1.5, **24°.50N**±0°.05×**122°.85E**±0°.03, **h78**km±11km, **n53**,σ0°**77**/89, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.15**	**105**	*e*P	**Pn**	**23 51 02.1**	**+0.5**
	baz=127						
YOJ	**Yonaguni jima**	**0.15**	**105**	P	**Pn**	**23 51 01.8**	**+0.2**
YOJ				*e*S	**Sn**	**23 51 10.9**	**+0.9**
IRIF	**Iriomote-Funau**	**0.81**	**101**	P	**Pn**	**23 51 06.8**	**-0.1**
IRIF				S	**Sn**	**23 51 20.0**	**+0.5**
TWC	**Suao**	**0.92**	**277**	P	**Pn**	**23 51 07.8**	**-0.4**
	baz=277						
TWC				S	**Sn**	**23 51 20.5**	**-1.1**
	baz=277						
ESAO	**Su ao**	**0.92**	**275**	*e*P	**Pn**	**23 51 08.6**	**+0.4**
	baz=274						
ESAO				S	**Sn**	**23 51 20.9**	**-0.7**
	baz=274						
ENA	**Nanau**	**1.02**	**266**	*e*P	**Pn**	**23 51 09.8**	**+0.5**
	baz=261						
ENA				*e*S	**Sn**	**23 51 24.3**	**+0.6**
	baz=261						
EAHA	**Aohua**	**1.03**	**261**	*e*P	**Pn**	**23 51 10.2**	**+0.7**
	baz=255						
EAHA				*e*S	**Sn**	**23 51 24.9**	**+0.9**
	baz=255						
TIPB	**Shuangxi**	**1.05**	**297**	P	**Pn**	**23 51 09.6**	**-0.2**
	baz=287						
TIPB				S	**Sn**	**23 51 23.5**	**-0.9**
	baz=287						
SXI1	**Grass Mountain**	**1.07**	**304**	P	**Pn**	**23 51 09.5**	**-0.6**
	baz=298						
SXI1				*e*S	**Sn**	**23 51 22.4**	**-2.6**
	baz=298						
JKRS	**Kuro-shima**	**1.08**	**104**	P	**Pn**	**23 51 10.3**	**+0.1**
JKRS				*e*S	**Sn**	**23 51 26.3**	**+1.2**
TWE	**Neicheng**	**1.10**	**282**	*e*P	**Pn**	**23 51 10.2**	**-0.2**
	baz=277						
WFSB	**Wu-fen Shan**	**1.13**	**300**	*e*P	**Pn**	**23 51 10.8**	**0.0**
	baz=289						
ETL	**Fush Village**	**1.17**	**253**	*e*P	**Pn**	**23 51 10.7**	**-0.6**
	baz=249						
ETL				*e*S	**Sn**	**23 51 26.8**	**-0.3**
	baz=249						
ENTT	**Nioudou**	**1.18**	**277**	P	**Pn**	**23 51 12.0**	**+0.6**
	baz=272						
ENTT				*e*S	**Sn**	**23 51 27.6**	**+0.3**
	baz=272						
FUSB	**Fushanzhiwuyua**	**1.18**	**283**	P	**Pn**	**23 51 11.6**	**+0.2**
	baz=278						
FUSB				S	**Sn**	**23 51 27.1**	**-0.3**
	baz=278						
JIJ	**Ishigaki jima**	**1.18**	**96**	P	**Pn**	**23 51 11.2**	**-0.2**
JIJ				S	**Sn**	**23 51 27.2**	**-0.1**
NACB	**Ninganchiao**	**1.19**	**254**	*i* P	**Pn**	**23 51 11.2**	**-0.3**
	baz=241						
NACB				*i* S	**Sn**	**23 51 27.0**	**-0.5**
	baz=241						
LATG	**Datong**	**1.21**	**272**	P	**Pn**	**23 51 12.2**	**+0.4**
	baz=272						
LATG				S	**Sn**	**23 51 28.4**	**+0.3**
	baz=272						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**1.22**	**250**	S	**Sn**	**23 51 27.4**	**-0.8**
	baz=245						
NDT	**Datong Townshi**	**1.23**	**275**	*e*P	**Pn**	**23 51 12.5**	**+0.6**
	baz=270						
NDT				S	**Sn**	**23 51 28.8**	**+0.5**
	baz=270						
ETLH	**Xiulin Townshi**	**1.28**	**257**	*e*S	**Sn**	**23 51 29.1**	**-0.7**
	baz=245						
JISG	**Ishigakijimahi**	**1.33**	**86**	P	**Pn**	**23 51 12.7**	**-0.6**
JISG				*e*S	**Sn**	**23 51 30.1**	**-0.5**
PCYT	**Pengchaiyu**	**1.33**	**328**	*e*P	**Pn**	**23 51 13.1**	**-0.2**
	baz=320						
NNSB	**Datong**	**1.34**	**267**	*e*S	**Sn**	**23 51 30.7**	**-0.4**
	baz=254						
ETM	**Tongmen**	**1.35**	**247**	*e*P	**Pn**	**23 51 12.8**	**-0.8**
	baz=238						
ETM				*e*S	**Sn**	**23 51 30.1**	**-1.1**
	baz=238						
YHNB	**Yeheng**	**1.36**	**277**	P	**Pn**	**23 51 13.9**	**+0.2**
	baz=273						
YHNB				S	**Sn**	**23 51 31.5**	**+0.2**
	baz=273						
NSK	**Sanguang**	**1.37**	**278**	P	**Pn**	**23 51 14.2**	**+0.3**
	baz=273						
NSK				S	**Sn**	**23 51 31.6**	**-0.1**
	baz=273						
LXIB	**Xiulin Townshi**	**1.40**	**250**	P	**Pn**	**23 51 13.9**	**-0.4**
	baz=238						
LXIB				*e*S	**Sn**	**23 51 31.5**	**-1.0**
	baz=238						
EGFH	**Guangfu**	**1.54**	**238**	S	**Sn**	**23 51 35.0**	**-0.5**
	baz=229						
TWT	**Tachien**	**1.55**	**261**	S	**Sn**	**23 51 36.6**	**+0.6**
	baz=257						
WARBT	**Fenglin Townsh**	**1.55**	**240**	P	**Pn**	**23 51 15.4**	**-0.7**
	baz=243						
WARBT				S	**Sn**	**23 51 34.4**	**-1.4**
	baz=243						
TDCB	**Techi**	**1.57**	**261**	S	**Sn**	**23 51 35.7**	**-0.6**
	baz=252

SAFE3	**Santa Fe, Vera**	**2.24**	**236**	*eP*		**Pn**	**23 59 52.7**	**+0.2**
SAFE3				*eS*		**Sn**	**00 00 19.4**	**+0.4**
PESE3	**Pese, Herrera**	**2.32**	**217**	*eP*		**Pn**	**23 59 53.7**	**+0.1**
PESE3				*eS*		**Sn**	**00 00 21.1**	**+0.1**
ACHO3	**Achotines, Los**	**2.53**	**202**	*eP*		**Pn**	**23 59 57.2**	**+0.7**
ACHO3				*eS*		**Sn**	**00 00 27.3**	**+1.1**
TOSI3	**Tonosi**	**2.65**	**208**	*eP*		**Pn**	**23 59 58.9**	**+0.7**
TOSI3				*eS*		**Sn**	**00 00 30.4**	**+1.2**
GMAL	**Guarumal, Vera**	**2.83**	**225**	*eP*		**Pn**	**00 00 01.8**	**+1.1**
GMAL				*eS*		**Sn**	**00 00 33.1**	**-0.6**
GMAL	**Guarumal, Vera**	**2.83**	**225**	*eP*		**Pn**	**00 00 02.0**	**+1.3**
CACAO	**El Cacao, Vera**	**2.92**	**214**	*eP*		**Pn**	**00 00 02.2**	**+0.4**
CACAO				*eS*		**Sn**	**00 00 35.3**	**-0.4**
CACAO	**El Cacao, Vera**	**2.92**	**214**	*eP*		**Pn**	**00 00 02.2**	**+0.4**
PTAC	**Punta Ardita,**	**2.95**	**152**	*eP*		**Pn**	**00 00 01.6**	**-0.7**
APAC	**Apartado, Choc**	**3.19**	**126**	*eP*		**Pn**	**00 00 08.4**	**+2.9**
DBBC	**Dabeiba**	**4.03**	**133**	*eP*		**Pn**	**00 00 19.5**	**+2.3**
UREC	**San Jos de Ur**	**4.14**	**119⇑**	*iP*		**Pn**	**00 00 19.2**	**+0.5**
UREC				*eS*		**Sn**	**00 01 03.9**	**-2.0**
UREC	**San Jos de Ur**	**4.14**	**119**	*eP*		**Pn**	**00 00 19.2**	**+0.5**
UREC				*eS*		**Sn**	**00 01 04.0**	**-1.8**
UREC				*i*			00 01 08.6	
	comp=Z,34nm,0.1s							
CBOC	**Ciudad Bolivar**	**5.00**	**141**	*eP*		**Pn**	**00 00 31.8**	**+1.1**
PTBC	**PUERTO BERRIO,**	**5.69**	**124**	*eP*		**Pn**	**00 00 40.1**	**+0.2**
PTBC				*eS*		**Sn**	**00 01 41.2**	**-2.8**
PTBC				*i*			00 01 48.5	
	comp=Z,6.9nm,0.4s							
JTS	**Las Juntas de**	**5.69**	**276**	P		**Pn**	**00 00 41.0**	**+1.0**
	comp=Z,2.8nm,0.3s,baz=69,slow=20,SNR=9.0							
JTS				S		**Sn**	**00 01 44.3**	**+0.1**
	comp=Z,4.2nm,0.4s,baz=270,slow=18,SNR=5.0							
	comp=Z,6.5nm,0.3s							
JTS	**Las Juntas de**	**5.69**	**276**	*eP*		**Pn**	**00 00 41.1**	**+1.1**
GUY2C	**Guyana, Caldas**	**5.90**	**140**	*eP*		**Pn**	**00 00 44.6**	**+1.3**
BARC	**Barichara**	**6.74**	**117**	*eP*		**Pn**	**00 00 54.8**	**+0.3**
POPC	**Popayan, Colom**	**7.61**	**161**	*eP*		**Pn**	**00 01 09.5**	**+3.0**
SDV	**Santo Domingo**	**8.50**	**95**	P		**Pn**	**00 01 20.7**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=279,slow=19,SNR=3.6							
SDV				S		**Sn**	**00 02 48.9**	**-4.5**
	comp=Z,10nm,0.4s,baz=216,slow=19,SNR=12							
	comp=Z,1.6nm,0.3s							
PDAR	**Pinedale Array**	**42.24**	**326**	P		**P**	**00 07 07.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=122,slow=8.6,SNR=1.9							
	comp=Z,0.1nm,0.3s							
YKA	**Yellowknife Ar**	**58.51**	**342**	P		**P**	**00 09 09.3**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=132,slow=7.4,SNR=12							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**71.78**	**335**	P		**P**	**00 10 35.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=106,slow=4.3,SNR=5.4							
	comp=Z,0.3nm,0.5s							
ESDC	**Sonseca Array**	**72.47**	**52**	P		**P**	**00 10 41.4**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=282,slow=6.4,SNR=2.0							
	comp=Z,0.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**74.08**	**35**	P		**P**	**00 10 49.0**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=244,slow=7.3,SNR=3.8							
	comp=Z,0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**79.04**	**78**	P		**P**	**00 11 17.3**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=297,slow=5.3,SNR=2.4							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**85.99**	**20**	P		**P**	**00 11 52.7**	**-0.6**
	comp=Z,3.3nm,0.9s,baz=270,slow=6.3,SNR=3.5							
	comp=Z,3.3nm,0.9s							
WRA	**Warramunga Arr**	**146.11**	**249**	PKPbc		**PKPdf**	**00 18 52.3**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=96,slow=3.2,SNR=2.1							

IDC ***05*** *00:12:09.5±1.0,5.˚78S×123.˚31E,h0km,mb3.8/7, mbtmp3.8/8,ML3.6/1,MS3.3/1,Error ellipse: s-maj=127.0km s-min=18.5km az=59.0*
DJA ***05*** *00:12:13.0±0.3,6.˚5S×12.˚3E±.˚,h10km,M3.8/11, MLv3.8/11*
ISC 05 00:12:10.9±0.8,**6.˚03S**±0.˚06×**122.˚94E**±0.˚09,**h10km**,**n15**, **σ2s05/19**,**mb4.1/6**,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**0.65**	**326**	P	**Pg**	**00 12 24.0**	**+0.5**
BBSI				S	**Sb**	**00 12 34.4**	**+0.9**
MMRI	**Maumere**	**2.68**	**195**	P	**Pn**	**00 12 55.3**	**+1.1**
MMRI				S	**Sn**	**00 13 28.0**	**+1.2**
BKSI	**Bulukumba**	**2.89**	**284**	P	**Pn**	**00 12 56.6**	**-0.4**
BKSI				S	**Sn**	**00 13 31.1**	**-0.7**
EDFI	**Ende, Flores**	**2.97**	**205**	P	**Pn**	**00 12 59.3**	**+1.0**
EDFI				S	**Sn**	**00 13 33.4**	**-0.7**
SOEI	**Soe**	**3.93**	**161**	P	**Pn**	**00 13 14.5**	**+3.0**
BASI	**Baing, Sumba**	**4.78**	**209**	P	**Pn**	**00 13 23.8**	**+0.8**
WRA	**Warramunga Arr**	**17.72**	**142**	P	**Pn**	**00 16 15.7**	**-2.3**
	0.2nm,0.3s,baz=316,slow=13,SNR=9.3						
WRA				S	**Sn**	**00 19 29.2**	**-6.5**
	0.5nm,0.9s,baz=317,slow=29,SNR=2.3						
	1.8nm,0.7s						
ASAR	**Alice Springs**	**20.47**	**150**	P	**P**	**00 16 50.2**	**+1.3**
	1.4nm,0.8s,baz=333,slow=12,SNR=12						
	1.4nm,0.8s						
STKA	**Stephens Creek**	**31.07**	**148**	P	**P**	**00 18 29.8**	**+0.4**
	0.6nm,0.5s,baz=322,slow=19,SNR=1.8						
	0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**33.94**	**316**	P	**P**	**00 18 55.2**	**+0.5**
	0.7nm,0.3s,baz=139,slow=8.4,SNR=1.7						
	0.7nm,0.3s						
JCJ	**Chichijima**	**37.83**	**29**	LR	LR	00 33 51.2	
	comp=Z,46nm,19.4s,baz=121,slow=35						
SONM	**Songino Array**	**55.58**	**347**	P	**P**	**00 21 46.9**	**+0.1**
	0.5nm,0.6s,baz=165,slow=8.0,SNR=2.9						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**63.73**	**330**	P	**P**	**00 22 43.4**	**+0.6**
	1.4nm,0.7s,baz=135,slow=7.1,SNR=12						
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**67.77**	**337**	P	**P**	**00 23 07.3**	**-1.4**
	1.8nm,0.8s,baz=127,slow=4.6,SNR=9.6						
	1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**68.15**	**331**	P	**P**	**00 23 11.3**	**+0.1**
	0.6nm,0.5s,baz=145,slow=5.5,SNR=8.5						
	0.6nm,0.5s						

SJA ***05*** *00:19:53.8±0.7,24.˚07S×66.˚87W,h216km±5km,ML3.5, MW3.6*
GUC ***05*** *00:19:55.8±0.6,24.˚03S×67.˚21W,h242km±9km,ML4.0*
ISC 05 00:19:52.4±1.9,**24.˚04S**±0.˚04×**66.˚89W**±0.˚05, **h232km**±17**km**,**n40**,**σ1s50/73**,**3C**,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.43**	**118**	*eP*	**Pn**	**00 20 29.2**	**+0.6**
FSA	**Cafayete**	**2.22**	**158**	*eP*	**Pn**	**00 20 36.1**	**+0.4**
FSA				*eS*	**S**	**00 21 07.5**	**-2.1**
YJA	**Yavi**	**2.25**	**35**	*eP*	**Pn**	**00 20 37.4**	**+1.1**
YJA				*eS*	**S**	**00 21 10.0**	**-0.6**
LVC	**Limon Verde**	**2.34**	**307**	*eP*	**Pn**	**00 20 38.6**	**+1.4**
LVC				*eS*	**S**	**00 21 11.8**	**-0.3**
LVC	**Limon Verde**	**2.34**	**307⇑**	*eP*	**Pn**	**00 20 38.6**	**+1.4**
LVC				*eS*	**S**	**00 21 11.4**	**-0.7**
LVC				IAML		00 21 14.6	
	371nm,0.4s						
PB15	**IPOC Station P**	**2.51**	**289**	*eP*	**Pn**	**00 20 40.1**	**+1.5**
PB15				*eS*	**S**	**00 21 14.1**	**-0.8**
PB15	**IPOC Station P**	**2.51**	**289**	*eP*	**Pn**	**00 20 40.3**	**+1.6**
PB15				*eS*	**S**	**00 21 13.6**	**-1.3**
GO02	**Mina Guanaco**	**2.70**	**245**	*eP*	**Pn**	**00 20 42.4**	**+1.6**
GO02				*eS*	**S**	**00 21 18.7**	**0.0**
GO02	**Mina Guanaco**	**2.70**	**245**	*eP*	**Pn**	**00 20 42.3**	**+1.6**
GO02				*eS*	**S**	**00 21 18.4**	**-0.3**
GO02				IAML		00 21 18.8	
	comp=N,337nm,0.3s						
PB06	**IPOC Station P**	**2.80**	**298**	*eP*	**Pn**	**00 20 43.2**	**+1.5**
PB06				*eS*	**S**	**00 21 19.3**	**-1.2**
PB06				IAML		00 21 21.0	
	comp=Z,194nm,0.3s						
PB06	**IPOC Station P**	**2.80**	**298⇑**	*iP*	**Pn**	**00 20 43.3**	**+1.5**
PB06				*eS*	**S**	**00 21 19.0**	**-1.5**
PB06				IAML		00 21 20.9	
	comp=N,271nm,0.2s						
AHML	**Horco Molle**	**3.07**	**153**	*eP*	**Pn**	**00 20 45.5**	**+0.9**
AHML				*eS*	**S**	**00 21 24.1**	**-1.6**
PB09	**IPOC Station P**	**3.12**	**315**	*eP*	**Pn**	**00 20 47.1**	**+1.9**
PB09				*eS*	**S**	**00 21 26.6**	**-0.2**
PB09				IAML		00 21 28.6	
	comp=Z,111nm,0.3s						
PB09	**IPOC Station P**	**3.12**	**315⇑**	*eP*	**Pn**	**00 20 47.2**	**+1.9**
PB09				*eS*	**S**	**00 21 26.2**	**-0.6**
PB14	**IPOC Station P**	**3.26**	**259**	*eP*	**Pn**	**00 20 48.3**	**+1.3**
PB14				*eS*	**S**	**00 21 28.8**	**-1.1**
PB14				IAML		00 21 30.3	
	comp=Z,73nm,0.3s						
PB14	**IPOC Station P**	**3.26**	**259**	*eP*	**Pn**	**00 20 48.3**	**+1.3**
PB14				*eS*	**S**	**00 21 27.7**	**-2.2**
PB05	**IPOC Station P**	**3.27**	**291**	*eP*	**Pn**	**00 20 48.4**	**+1.4**
PB05				*eS*	**S**	**00 21 28.4**	**-1.3**
PB05				IAML		00 21 32.1	
	comp=Z,42nm,0.3s						
PB05	**IPOC Station P**	**3.27**	**291**	*eP*	**Pn**	**00 20 48.4**	**+1.4**
PB05				*eS*	**S**	**00 21 27.4**	**-2.3**
PB10	**IPOC Station P**	**3.40**	**278**	*eP*	**Pn**	**00 20 49.9**	**+1.5**
PB10				*eS*	**S**	**00 21 30.7**	**-1.6**
PB10				IAML		00 21 33.4	
	comp=Z,77nm,0.5s						
PB10	**IPOC Station P**	**3.40**	**278**	*eP*	**Pn**	**00 20 49.5**	**+1.2**
PB10				*eS*	**S**	**00 21 31.1**	**-1.2**
AC02	**Maricunga**	**3.44**	**216**	*eP*	**Pn**	**00 20 51.3**	**+2.1**
PB04	**IPOC Station P**	**3.45**	**299**	*eP*	**Pn**	**00 20 50.4**	**+1.3**
PB04				*eS*	**S**	**00 21 32.0**	**-1.6**
PB04				IAML		00 21 35.0	
	comp=Z,124nm,0.5s						
PB04	**IPOC Station P**	**3.45**	**299**	*eP*	**Pn**	**00 20 50.7**	**+1.6**
PB04				*eS*	**S**	**00 21 31.8**	**-1.8**
PB07	**IPOC Station P**	**3.60**	**309**	*eP*	**Pn**	**00 20 51.9**	**+1.0**
PB07				*eS*	**S**	**00 21 35.2**	**-1.6**
PB07				IAML		00 21 41.9	
	comp=Z,99nm,0.3s						
PB07	**IPOC Station P**	**3.60**	**309**	*eP*	**Pn**	**00 20 52.0**	**+1.1**
PB07				*eS*	**S**	**00 21 34.5**	**-2.4**
PB01	**IPOC Station P**	**3.83**	**321**	*eP*	**Pn**	**00 20 54.7**	**+1.1**
PB01				IAML		00 21 43.1	
	comp=Z,61nm,0.2s						
PB01	**IPOC Station P**	**3.83**	**321**	*eP*	**Pn**	**00 20 54.5**	**+1.0**
PB01				*eS*	**S**	**00 21 39.8**	**-1.9**
PB02	**IPOC Station P**	**3.88**	**314**	*eP*	**Pn**	**00 20 55.3**	**+1.2**
PB02				*eS*	**S**	**00 21 40.4**	**-2.4**
AC01	**Pan de Azucar**	**3.96**	**237**	*eP*	**Pn**	**00 20 55.6**	**+0.7**
AC01				*eS*	**S**	**00 21 42.2**	**-2.1**
AC01				IAML		00 21 43.3	
	comp=Z,35nm,0.5s						
AC01	**Pan de Azucar**	**3.96**	**237**	*eP*	**Pn**	**00 20 55.6**	**+0.7**
PATCX	**Punta Patache**	**4.41**	**316**	*eP*	**Pn**	**00 21 01.4**	**+1.0**
PATCX				*eS*	**S**	**00 21 52.9**	**-1.3**
PATCX	**Punta Patache**	**4.41**	**316**	*eP*	**Pn**	**00 21 01.4**	**+1.0**
PB08	**IPOC Station P**	**4.42**	**331**	*eP*	**Pn**	**00 21 02.9**	**+2.0**
PB08				*eS*	**S**	**00 21 54.7**	**-0.2**
PB08				IAML		00 21 58.2	
	comp=Z,26nm,0.5s						
CYA	**Choya**	**4.49**	**168**	*eP*	**Pn**	**00 21 03.5**	**+2.2**
CYA				*eS*	S	00 21 37.8	-18
TA01	**Diego Aracena**	**4.61**	**318**	*eP*	**Pn**	**00 21 04.2**	**+1.4**
TA01				*eS*	**S**	**00 21 56.6**	**-2.0**
TA01				IAML		00 21 59.8	
	comp=Z,22nm,0.5s						
GO03	**Copiap**	**4.65**	**220**	*eP*	**Pn**	**00 21 04.6**	**+1.3**
HMBC	**Humberstone**	**4.67**	**323**	*eP*	**Pn**	**00 21 04.5**	**+0.8**
HMBC				*eS*	**S**	**00 21 57.5**	**-2.6**
GO01	**Chusmiza**	**4.85**	**333**	*eP*	**Pn**	**00 21 08.4**	**+2.0**
GO01				*eS*	**S**	**00 22 04.2**	**-0.5**
PB11	**IPOC Station P**	**4.98**	**328**	*eP*	**Pn**	**00 21 08.1**	**+0.5**
PB11				*eS*	**S**	**00 22 04.5**	**-2.6**
PB11				IAML		00 22 08.5	
	comp=Z,29nm,0.3s						
ACLC	**CERRO LA CRUZ**	**5.36**	**181**	*eP*	**Pn**	**00 21 13.9**	**+1.6**
ACLC				*eS*	**S**	**00 22 15.4**	**-0.3**

SJA ***05*** *00:37:01.2±0.7,22.˚33S×67.˚44W,h194km±6km,ML3.5, MW3.5*
SCB ***05*** *00:37:03.0±1.6,22.˚28S×67.˚46W,h166km±13km,ML3.4/6, MW3.8,Error ellipse: s-maj=4.8km s-min=3.7km az=0.0*
GUC ***05*** *00:37:04.2±0.7,22.˚27S×67.˚64W,h198km±10km,ML3.9*
ISC 05 00:37:01.9±1.5,**22.˚30S**±0.˚03×**67.˚47W**±0.˚04, **h187km**±12**km**,**n61**,**σ1s19/99**,**6C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**0.92**	**225**	Pg	**Pn**	**00 37 30.0**	**-0.1**
LVC	**Limon Verde**	**1.37**	**257**	*eP*	**Pn**	**00 37 34.3**	**+0.7**
LVC				*eS*	**Sn**	**00 37 58.4**	**+0.2**
LVC	**Limon Verde**	**1.37**	**257**	Pg	**Pn**	**00 37 34.4**	**+0.7**
PB09	**IPOC Station P**	**1.72**	**287**	*eP*	**Pn**	**00 37 37.8**	**+1.0**
PB09				*eS*	**Sn**	**00 38 04.6**	**+0.9**
PB09				IAML		00 38 06.1	
	comp=Z,155nm,0.5s						
PB09	**IPOC Station P**	**1.72**	**287⇑**	*eP*	**Pn**	**00 37 37.9**	**+1.1**
PB09				*eS*	**Sn**	**00 38 04.3**	**+0.6**
PB09	**IPOC Station P**	**1.72**	**287**	Pg	**Pn**	**00 37 37.8**	**+1.0**
YJA	**Yavi**	**1.82**	**86**	*eP*	**Pn**	**00 37 38.4**	**+0.4**
YJA				*eS*	**Sn**	**00 38 04.6**	**-1.4**
PB06	**IPOC Station P**	**1.98**	**258**	*eP*	**Pn**	**00 37 40.1**	**+0.6**
PB06				*eS*	Sn	00 37 58.5	-10
PB06				IAML		00 38 13.9	
	comp=Z,195nm,0.2s						
PB06	**IPOC Station P**	**1.98**	**258**	*eP*	**Pn**	**00 37 40.2**	**+0.8**
PB06				*eS*	**Sn**	**00 38 08.3**	**-0.3**
PB06				IAML		00 38 10.8	
	comp=E,325nm,0.2s						
PB06	**IPOC Station P**	**1.98**	**258**	Pg	**Pn**	**00 37 40.3**	**+0.8**
MOCB	**Mochara**	**2.00**	**59**	Pg	**Pn**	**00 37 40.0**	**0.0**
MOCB				Sg	**Sn**	**00 38 07.3**	**-2.1**
MOCB				IAML		00 38 08.5	
	comp=E,191nm,0.4s						
PB15	**IPOC Station P**	**2.06**	**244**	*eP*	**Pn**	**00 37 41.8**	**+1.5**
PB15				*eS*	**Sn**	**00 38 10.7**	**+0.6**
PB15	**IPOC Station P**	**2.06**	**244**	Pg	**Pn**	**00 37 41.6**	**+1.3**
PB01	**IPOC Station P**	**2.25**	**303**	*eP*	**Pn**	**00 37 42.8**	**+0.4**
PB01				*eS*	**Sn**	**00 38 14.4**	**+0.7**
PB01				IAML		00 38 15.2	
	comp=Z,148nm,0.1s						
PB01	**IPOC Station P**	**2.25**	**303**	*eP*	**Pn**	**00 37 42.8**	**+0.4**
PB01				*eS*	**Sn**	**00 38 12.7**	**-1.1**
PB01				IAML		00 38 16.2	
	comp=N,212nm,0.2s						
PB01	**IPOC Station P**	**2.25**	**303**	Pg	**Pn**	**00 37 42.9**	**+0.5**
PB07	**IPOC Station P**	**2.31**	**284**	*eP*	**Pn**	**00 37 43.6**	**+0.5**
PB07				*eS*	**Sn**	**00 38 14.6**	**-0.5**
PB07				IAML		00 38 15.2	
	comp=Z,430nm,0.3s						
PB07	**IPOC Station P**	**2.31**	**284⇑**	*eP*	**Pn**	**00 37 43.6**	**+0.5**
PB07				*eS*	**Sn**	**00 38 13.7**	**-1.3**
PB07				IAML		00 38 14.3	
	comp=N,593nm,0.4s						
PB07	**IPOC Station P**	**2.31**	**284**	Pg	**Pn**	**00 37 43.8**	**+0.7**
PB02	**IPOC Station P**	**2.46**	**293**	*eP*	**Pn**	**00 37 45.0**	**+0.4**
PB02				*eS*	**Sn**	**00 38 16.6**	**-1.3**
PB02	**IPOC Station P**	**2.46**	**293⇑**	*eP*	**Pn**	**00 37 45.0**	**+0.4**
PB02				*eS*	**Sn**	**00 38 16.4**	**-1.4**
PB02				IAML		00 38 16.8	
	comp=N,471nm,0.4s						
PB02	**IPOC Station P**	**2.46**	**293**	Pg	**Pn**	**00 37 45.2**	**+0.5**
PB02				Sg	**Sn**	**00 38 16.3**	**-1.6**
PB02				IAML		00 38 16.9	
	comp=N,344nm,0.4s						
PB04	**IPOC Station P**	**2.48**	**269**	*eP*	**Pn**	**00 37 45.4**	**+0.4**
PB04				*eS*	**Sn**	**00 38 17.5**	**-1.0**
PB04	**IPOC Station P**	**2.48**	**269⇑**	*eP*	**Pn**	**00 37 45.6**	**+0.6**
PB04				*eS*	**Sn**	**00 38 17.0**	**-1.5**
PB04	**IPOC Station P**	**2.48**	**269**	Pg	**Pn**	**00 37 45.4**	**+0.4**
PB05	**IPOC Station P**	**2.58**	**257**	*eP*	**Pn**	**00 37 46.7**	**+0.6**
PB05				*eS*	**Sn**	**00 38 20.0**	**-0.5**
PB05				IAML		00 38 21.6	
	comp=Z,122nm,0.2s						
PB05	**IPOC Station P**	**2.58**	**257**	*eP*	**Pn**	**00 37 46.8**	**+0.6**
PB05				*eS*	**Sn**	**00 38 19.0**	**-1.5**
PB05				IAML		00 38 20.1	
	comp=N,218nm,0.4s						
PB05	**IPOC Station P**	**2.58**	**257**	Pg	**Pn**	**00 37 46.7**	**+0.6**
PB08	**IPOC Station P**	**2.66**	**324**	*eP*	**Pn**	**00 37 48.7**	**+1.3**
PB08				*eS*	**Sn**	**00 38 23.9**	**+1.3**
PB08				IAML		00 38 25.3	
	comp=Z,46nm,0.2s						
PB08	**IPOC Station P**	**2.66**	**324⇑**	*eP*	**Pn**	**00 37 48.7**	**+1.3**
PB08				*eS*	**Sn**	**00 38 22.8**	**+0.2**
PB08	**IPOC Station P**	**2.66**	**324**	Pg	**Pn**	**00 37 48.6**	**+1.3**
PB08				Sg	**Sn**	**00 38 22.1**	**-0.5**
PB08				IAML		00 38 26.7	
	comp=Z,74nm,0.3s						
AOVT	**TarijaAcel**	**2.68**	**74**	Pg	**Pn**	**00 37 47.5**	**+0.2**
PATCX	**Punta Patache**	**2.90**	**300**	*eP*	**Pn**	**00 37 49.8**	**0.0**
PATCX				*eS*	**Sn**	**00 38 25.5**	**-1.6**
SLA	**San Lorenzo**	**3.01**	**144**	*eP*	**Pn**	**00 37 52.5**	**+1.3**
HMBC	**Humberstone**	**3.02**	**311**	Pg	**Pn**	**00 37 51.4**	**+0.1**
HMBC				Sg	**Sn**	**00 38 27.9**	**-1.9**
HMBC				IAML		00 38 30.9	
	comp=Z,131nm,0.3s						
TA01	**Diego Aracena**	**3.06**	**304**	*eP*	**Pn**	**00 37 51.3**	**-0.3**
TA01				*eS*	**Sn**	**00 38 28.4**	**-2.0**
TA01				IAML		00 38 31.6	
	comp=Z,68nm,0.2s						
TA01	**Diego Aracena**	**3.06**	**304**	Pg	**Pn**	**00 37 51.6**	**0.0**
GO01	**Chusmiza**	**3.08**	**328**	*eP*	**Pn**	**00 37 53.3**	**+1.0**
GO01				*eS*	**Sn**	**00 38 34.6**	**+3.0**
GO01	**Chusmiza**	**3.08**	**328**	*eP*	**Pn**	**00 37 53.2**	**+1.0**
GO01				*eS*	**Sn**	**00 38 33.4**	**+1.8**
GO01				IAML		00 38 34.7	
	comp=N,309nm,0.2s						
GO01	**Chusmiza**	**3.08**	**328**	Pg	**Pn**	**00 37 53.4**	**+1.0**
PB10	**IPOC Station P**	**3.09**	**246**	*eP*	**Pn**	**00 37 52.6**	**+0.6**
PB10				*eS*	**Sn**	**00 38 29.3**	**-1.8**
PB10				IAML		00 38 35.0	
	comp=Z,62nm,0.3s						
PB10	**IPOC Station P**	**3.09**	**246**	*eP*	**Pn**	**00 37 52.6**	**+0.6**
PB10				*eS*	**Sn**	**00 38 29.1**	**-2.0**
PB10				IAML		00 38 33.4	
	comp=N,108nm,0.3s						
PB10	**IPOC Station P**	**3.09**	**246**	Pg	**Pn**	**00 37 52.5**	**+0.6**
TA02	**Huaiquique**	**3.20**	**309**	*eP*	**Pn**	**00 37 52.8**	**-0.5**
TA02				*eS*	**Sn**	**00 38 31.6**	**-1.9**
TA02				IAML		00 38 39.2	
	comp=Z,164nm,0.1s						
PB11	**IPOC Station P**	**3.25**	**321**	*eP*	**Pn**	**00 37 53.8**	**-0.3**
PB11				*eS*	**Sn**	**00 38 34.3**	**-0.6**
PB11				IAML		00 38 36.6	
	comp=Z,134nm,0.1s						
PB11	**IPOC Station P**	**3.25**	**321⇑**	*eP*	**Pn**	**00 37 53.9**	**-0.3**
PB11				*eS*	**Sn**	**00 38 32.8**	**-2.0**
PB11				IAML		00 38 34.7	
	comp=N,223nm,0.2s						
PB11	**IPOC Station P**	**3.25**	**321**	Pg	**Pn**	**00 37 54.0**	**-0.1**
PB11				Sg	**Sn**	**00 38 33.2**	**-1.7**
PB11				IAML		00 38 34.8	
	comp=N,207nm,0.1s						
GO02	**Mina Guanaco**	**3.45**	**214**	*eP*	**Pn**	**00 37 57.5**	**+0.9**
GO02				*eS*	**Sn**	**00 38 39.3**	**-0.2**
GO02	**Mina Guanaco**	**3.45**	**214**	Pg	**Pn**	**00 37 57.7**	**+1.0**
PB14	**IPOC Station P**	**3.55**	**229**	*eP*	**Pn**	**00 37 58.5**	**+0.6**
PB14				*eS*	**Sn**	**00 38 39.5**	**-2.3**
PB14				IAML		00 38 42.3	
	comp=Z,44nm,0.2s						
SOEO	**Opoqueri**	**3.74**	**354**	Pg	**Pn**	**00 38 01.2**	**+0.7**
PB16	**IPOC Station P**	**4.38**	**334**	*eP*	**Pn**	**00 38 09.6**	**+0.8**
PB16				*eS*	**Sn**	**00 39 04.5**	**+3.4**
PB16				IAML		00 39 04.9	
	comp=Z,21nm,0.4s						
PB16	**IPOC Station P**	**4.38**	**334**	Pg	**Pn**	**00 38 09.6**	**+0.8**
SOET	**ToroToro**	**4.45**	**21**	Pg	**Pn**	**00 38 09.2**	**-0.1**
SOET				Sg	**Sn**	**00 39 00.4**	**-1.7**
SOET				IAML		00 39 04.7	
	comp=Z,3.9nm,0.3s						
PB12	**IPOC Station P**	**4.54**	**323**	*eP*	**Pn**	**00 38 08.5**	**-1.8**
PB12				IAML		00 39 05.5	
	comp=Z,27nm,0.3s						
AOEA	**Aiquile**	**4.61**	**28**	Pg	**Pn**	**00 38 11.1**	**-0.2**
AC02	**Maricunga**	**4.76**	**198**	*eP*	**Pn**	**00 38 14.3**	**+0.9**
AC02				*eS*	**Sn**	**00 39 12.2**	**+2.6**
AC01	**Pan de Azucar**	**4.78**	**216**	*eP*	**Pn**	**00 38 12.6**	**-0.6**
AC01				*eS*	**Sn**	**00 39 07.7**	**-1.5**
BBOE	**La Paz, Chanca**	**5.48**	**355**	Pg	**Pn**	**00 38 24.3**	**+1.4**
BBOD	**La Paz, Gloria**	**5.73**	**349**	Pg	**Pn**	**00 38 27.7**	**+1.6**
LPAZ	**La Paz**	**6.01**	**354**	Pg	**Pn**	**00 38 31.2**	**+1.3**

IDC ***05*** *00:42:11.7±4.7,16.˚47N×120.˚70E,h84km±41km,mb3.1/5, mbtmp3.

RANF	**Ranua**	**3.10**	**122**	SG	**Sg**		**00 52 51.6**	**-1.0**
KEV	**Kevo**	**3.10**	**48**	SN	**Sn**		**00 52 39.3**	**-1.9**
KEV				MSG			00 52 47.1	
	comp=Z,1.2nm,0.2s							
OLKF	**Oulanka, Finla**	**3.83**	**109**	PG	**Pg**		**00 52 25.5**	**-1.1**
KU6	**Riekki**	**4.14**	**111**	PG	**Pg**		**00 52 30.2**	**-2.5**

GUC 05 00:54:43.3±0.6, 24°.04S×67°.41W, h216$^{km}_{\pm 8km}$, ML3.5, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.98**	**315**	*eP*	Pn	00 55 22.9	-0.4
LVC				*eS*	S	00 55 53.0	-1.1
LVC				IAML		00 55 54.5	
	348nm,0.4s						
PB15	**IPOC Station P**	**2.07**	**293**	*eP*	Pn	00 55 24.2	+0.3
PB15				*eS*	S	00 55 54.4	-0.9
GO02	**Mina Guanaco**	**2.28**	**240**	*eP*	Pn	00 55 26.4	+0.2
GO02				*eS*	S	00 55 59.5	+0.1
GO02				IAML		00 56 00.3	
	comp=N,242nm,0.4s						
PB06	**IPOC Station P**	**2.39**	**303**	*eP*	Pn	00 55 27.5	+0.3
PB06				*eS*	S	00 56 00.7	-0.5
PB06				IAML		00 56 02.8	
	comp=N,274nm,0.1s						
PB14	**IPOC Station P**	**2.80**	**257**	*eP*	Pn	00 55 32.2	+0.4
PB14				*eS*	S	00 56 09.0	-0.4
PB14				IAML		00 56 11.5	
	comp=E,39nm,0.2s						
PB09	**IPOC Station P**	**2.80**	**322**	*eP*	Pn	00 55 32.2	+0.5
PB09				*eS*	S	00 56 08.7	-0.6
PB09				IAML		00 56 12.2	
	comp=N,46nm,0.2s						
PB05	**IPOC Station P**	**2.83**	**294**	*eP*	Pn	00 55 32.5	+0.5
PB05				*eS*	S	00 56 08.8	-0.9
PB05				IAML		00 56 10.9	
	comp=E,68nm,0.3s						
PB10	**IPOC Station P**	**2.93**	**280**	*eP*	Pn	00 55 34.0	+1.0
PB10				*eS*	S	00 56 11.2	-0.4
PB10				IAML		00 56 15.5	
	comp=N,57nm,0.3s						
PB04	**IPOC Station P**	**3.04**	**303**	*eP*	Pn	00 55 34.7	+0.3
PB04				*eS*	S	00 56 13.1	-1.0
AC02	**Maricunga**	**3.19**	**209**	*eP*	Pn	00 55 36.2	-0.3
PB07	**IPOC Station P**	**3.24**	**315**	*eP*	Pn	00 55 36.8	0.0
PB07				*eS*	S	00 56 16.7	-1.8
PB01	**IPOC Station P**	**3.55**	**327**	*eP*	Pn	00 55 39.7	-0.7
PB01				*eS*	S	00 56 22.6	-2.3
PB02	**IPOC Station P**	**3.55**	**319**	*eP*	Pn	00 55 40.5	+0.1
PB02				*eS*	S	00 56 22.6	-2.3
AC01	**Pan de Azucar**	**3.58**	**233**	*eP*	Pn	00 55 40.0	-0.6
AC01				*i* S	S	00 56 23.9	-1.4
PATCX	**Punta Patache**	**4.09**	**321**	*eP*	Pn	00 55 46.9	+0.1
PATCX				*eS*	S	00 56 33.5	-3.1
PB08	**IPOC Station P**	**4.20**	**337**	*eP*	Pn	00 55 48.6	0.0
PB08				*eS*	S	00 56 38.5	-1.2
TA01	**Diego Aracena**	**4.31**	**323**	*eP*	Pn	00 55 49.4	-0.1
TA01				*eS*	S	00 56 38.6	-2.8
GO03	**Copiap**	**4.36**	**215**	*eP*	Pn	00 55 49.0	-1.1
GO03				*eS*	S	00 56 40.7	-2.0
HMBC	**Humberstone**	**4.39**	**328**	*eP*	Pn	00 55 50.2	-0.4
HMBC				*eS*	S	00 56 40.1	-3.4

*IDC **05** 01:24:15.3±1.2, 17°.79N×102°.52W, h0^{km}, mb3.9/5, mbtmp3.8/8, ML3.3/3, MS3.8/37, Error ellipse: s-maj=45.1km s-min=21.1km az=59.0*
*MEX **05** 01:24:20.8±0.5, 17°.74N×102°.42W, h9$^{km}_{\pm 4km}$, MD4.9*
*NEIC **05** 01:24:21.6±2.4, 17°.80N±0°.06×102°.43W±0°.05, h35$^{km}_{\pm 1km}$, mb4.1/55, Md4.9/61(MEX), Error ellipse: s-maj=11.7km s-min=4.7km az=37.0*

ISC 05 01:24:18.6±1.4, 17°.79N±0°.05×102°.44W±0°.03, h17$^{km}_{\pm 9km}$, n172, σ1°49/162, mb4.0/24, MS3.8/32, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.99**	**300**		**Pg**	**01 24 37.7**	**-0.3**
MMIG					**Sg**	**01 24 50.4**	**-0.7**
MMIG	**Aquila**	**0.99**	**300**	*eP*	**Pg**	**01 24 37.7**	**-0.3**
MMIG				*i* S	**Sg**	**01 24 50.9**	**-0.1**
COIG	**Colima**	**1.82**	**320**	*eP*	**Pn**	**01 24 49.4**	**0.0**
COIG				*eS*	**Sn**	**01 25 13.9**	**+1.8**
CDAR	**Ciudad de Arme**	**1.88**	**308**	*eP*	**Pn**	**01 24 49.9**	**-0.2**
CDAR				*eS*	**Sn**	**01 25 13.9**	**+0.5**
MNGA	**Volcan de Coli**	**2.01**	**326**	*eP*	**Pn**	**01 24 53.0**	**+0.9**
MNGA				*eS*	**Sn**	**01 25 17.3**	**+0.3**
EZ5V		**2.01**	**327**		**Pn**	**01 24 52.9**	**+0.8**
EZ5V		**2.01**	**327**	*eP*	**Pn**	**01 24 52.9**	**+0.8**
EZ5V				*eS*	**Sn**	**01 25 16.5**	**-0.5**
JUBC	**Volcan de Coli**	**2.02**	**328**	*eP*	**Pn**	**01 24 52.9**	**+0.6**
JUBC				*eS*	**Sn**	**01 25 14.4**	**-3.0**
ARIG	**Puente Sto Nin**	**2.05**	**76**		**Pn**	**01 24 50.9**	**-1.5**
ARIG					**Sn**	**01 25 16.6**	**-1.2**
ARIG	**Puente Sto Nin**	**2.05**	**76**	*eP*	**Pn**	**01 24 50.9**	**-1.5**
ARIG				*eS*	**Sn**	**01 25 16.6**	**-1.2**
SOMAC	**Volcano de Col**	**2.06**	**327**	*eP*	**Pn**	**01 24 53.7**	**+0.8**
SOMAC				*eS*	**Sn**	**01 25 19.4**	**+0.9**
CEGR	**Campo Tres**	**2.08**	**320**	*eP*	**Pn**	**01 24 53.1**	**+0.1**
CEGR				*eS*	**Sn**	**01 25 15.8**	**-2.9**
CAIG	**El Cayaco**	**2.20**	**109**		**Pn**	**01 24 53.8**	**-0.7**
CAIG					**Sn**	**01 25 19.6**	**-1.7**
CAIG	**El Cayaco**	**2.20**	**109**	*eP*	**Pn**	**01 24 53.8**	**-0.7**
CAIG				*eS*	**Sn**	**01 25 19.6**	**-1.7**
MOIG	**Morelia**	**2.22**	**32**		Pn	01 24 52.6	-2.4
MOIG	**Morelia**	**2.22**	**32**	*eP*	Pn	01 24 53.0	-2.1
MOIG				*eS*	**Sn**	**01 25 21.2**	**-1.1**
CIHU	**Emiliano Zapat**	**2.63**	**304**	*eP*	**Pn**	**01 25 00.2**	**-0.2**
CIHU				*i* S	**Sn**	**01 25 31.5**	**-0.3**
MEIG	**Mezcala**	**2.69**	**87**		**Pn**	**01 25 01.0**	**-0.3**
MEIG	**Mezcala**	**2.69**	**87**	*eP*	**Pn**	**01 25 01.0**	**-0.3**
MEIG				*eS*	**Sn**	**01 25 39.0**	**+5.5**
DAIG	**Los Arroyos**	**2.77**	**106**		**Pn**	**01 25 02.1**	**-0.2**
DAIG	**Los Arroyos**	**2.77**	**106**	*eP*	**Pn**	**01 25 02.1**	**-0.2**
DAIG				*eS*	**Sn**	**01 25 40.3**	**+4.8**
PLIG	**Platanillo**	**2.86**	**77**		**Pn**	**01 25 06.9**	**+3.2**
PLIG	**Platanillo**	**2.86**	**77**	*eP*	**Pn**	**01 25 06.9**	**+3.2**
PLIG				*eS*	**Sn**	**01 25 40.7**	**+2.9**
IGIG	**Irapuato, Guan**	**3.13**	**19**		**Pn**	**01 25 10.2**	**+2.8**
IGIG	**Irapuato, Guan**	**3.13**	**19**	*eP*	**Pn**	**01 25 10.2**	**+2.8**
IGIG				*eS*	**Sb**	**01 25 51.9**	**-0.2**
CRIG	**Cruz Grande**	**3.33**	**108**		**Pn**	**01 25 10.1**	**0.0**
CRIG	**Cruz Grande**	**3.33**	**108**	*eP*	**Pn**	**01 25 10.1**	**0.0**
CRIG				*e*		01 26 00.1	
YAIG	**Yautepec**	**3.38**	**71**		**Pn**	**01 25 10.2**	**-0.7**
YAIG	**Yautepec**	**3.38**	**71**	*eP*	**Pn**	**01 25 10.2**	**-0.7**
YAIG				*eS*	**Sn**	**01 25 55.2**	**+4.6**
ESTA	**Talpa de Allen**	**3.45**	**319**	*eP*	**Pn**	**01 25 13.2**	**+1.5**
ESTA				*eS*	**Sn**	**01 25 54.4**	**+2.0**
UNM	**Universidad Na**	**3.46**	**63**	Pn	**Pn**	**01 25 13.3**	**+1.3**
UNM	**Universidad Na**	**3.46**	**63**	*eP*	**Pn**	**01 25 16.3**	**+4.3**
JRQG	**Juriquilla Cam**	**3.46**	**33**	Pn	**Pn**	**01 25 11.0**	**-1.0**
JRQG	**Juriquilla Cam**	**3.46**	**33**	*eP*	**Pn**	**01 25 12.3**	**+0.3**
JRQG				*eS*	**Sb**	**01 26 01.5**	**-0.1**
TLIG	**Tlapa**	**3.70**	**93**	Pn	**Pn**	**01 25 14.7**	**-0.6**
TLIG	**Tlapa**	**3.70**	**93**	*eP*	**Pn**	**01 25 13.4**	**+0.2**
PPIG	**Popocatepetl**	**3.84**	**70**		**Pn**	**01 25 17.0**	**-0.5**
PPIG					**Sn**	**01 25 59.9**	**-2.6**
PPM	**Popocatepetl**	**3.84**	**70**	*eP*	**Pn**	**01 25 17.0**	**-0.5**
PPM				*eS*	**Sn**	**01 25 59.9**	**-2.6**
DHIG	**Demacu**	**4.08**	**52**		**Pn**	**01 25 18.8**	**-1.7**
DEIG	**Demacu**	**4.08**	**52**	*eP*	**Pn**	**01 25 18.8**	**-1.7**
FTIG	**Fresnillo de T**	**4.11**	**88**		**Pn**	**01 25 20.9**	**+0.1**
FTIG	**Fresnillo de T**	**4.11**	**88**	*eP*	**Pn**	**01 25 20.9**	**+0.1**
FTIG				*eS*	**Sn**	**01 26 03.1**	**-5.5**
PNIG	**Pinotepa**	**4.35**	**108**		**Pn**	**01 25 24.6**	**+0.5**
PNIG					**Sn**	**01 26 12.2**	**-2.4**
PNIG	**Pinotepa**	**4.35**	**108**	*eP*	**Pn**	**01 25 24.6**	**+0.5**
PNIG				*eS*	**Sn**	**01 26 12.2**	**-2.4**
HLIG	**Huajuapan de L**	**4.42**	**89**		**Pn**	**01 25 25.3**	**+0.1**
HLIG	**Huajuapan de L**	**4.42**	**89**	*eP*	**Pn**	**01 25 25.3**	**+0.1**
TXIG	**Tlaxiaco**	**4.49**	**96**		**Pn**	**01 25 27.0**	**+0.7**
TXIG	**Tlaxiaco**	**4.49**	**96**	*eP*	**Pn**	**01 25 27.0**	**+0.7**
RPIG	**Rio Verde**	**4.69**	**29**	*eP*	Pn	01 25 35.4	+6.6
YOIG	**Yosondua**	**4.77**	**100**		**Pn**	**01 25 31.2**	**+1.1**
YOIG	**Yosondua**	**4.77**	**100**	*eP*	**Pn**	**01 25 31.2**	**+1.1**
TPIG	**Tehuac#an**	**4.87**	**82**		**Pn**	**01 25 31.1**	**-0.3**
TPIG	**Tehuac#an**	**4.87**	**82**	*eP*	**Pn**	**01 25 31.1**	**-0.3**

ZAIG	**Zacatecas**	**4.96**	**359**		Pn	**Pn**	**01 25 32.5**	**-0.1**
TOIG	**Toxpalan**	**5.13**	**86**			**Pn**	**01 25 34.9**	**+0.1**
TOIG	**Toxpalan**	**5.13**	**86**	*eP*		**Pn**	**01 25 34.9**	**+0.1**
PEIG	**Puerto Escondi**	**5.37**	**109**			**Pn**	**01 25 39.2**	**+1.0**
PEIG	**Puerto Escondi**	**5.37**	**109**	*eP*		**Pn**	**01 25 39.2**	**+1.0**
PEIG				*eS*		Sn	01 26 31.1	-8.6
OXIG	**Oaxaca**	**5.50**	**97**			**Pn**	**01 25 41.2**	**+1.2**
VHO	**Vista Hermosa**	**5.50**	**97**	*eP*		**Pn**	**01 25 41.2**	**+1.3**
VHO				*eS*		**Sn**	**01 26 45.7**	**+2.7**
CMIG	**Matias Romero**	**7.25**	**94**	Pn		**Pn**	**01 26 04.3**	**+0.4**
	1.7nm,0.3s,baz=266,slow=9.4,SNR=17							
CMIG					Lg	Lg	01 27 58.4	
	4.0nm,0.3s,baz=322,slow=7.0,SNR=5.1							
CMIG					LR	LR	01 28 18.1	
	comp=Z,82nm,19.8s,baz=284,slow=33							
	3.0nm,0.3s							
SLBS	**Sierra La Lagu**	**9.15**	**311**		Pn	**Pn**	**01 26 32.5**	**+2.4**
HPIG		**9.58**	**342**		Pn	**Pn**	**01 26 38.4**	**+2.4**
LPIG	**La Paz**	**9.67**	**312**		LR	LR	01 29 56.8	
	comp=Z,444nm,18.0s,baz=162,slow=36							
CCIG	**Comitan**	**9.97**	**97**		Pn	**Pn**	**01 26 43.9**	**+2.5**
TX31	**Lajitas Ar. Si**	**11.55**	**355**		Pn	**Pn**	**01 27 03.6**	**+0.6**
TXAR	**Lajitas Array**	**11.55**	**355**		Pn	**Pn**	**01 27 04.4**	**+1.5**
TXAR	**Lajitas Array**	**11.55**	**355**		Pn	**Pn**	**01 27 05.7**	**+2.8**
	baz=172,slow=10,SNR=11							
TXAR					Lg	Lg	01 30 19.4	
	0.1nm,0.3s,baz=168,slow=18,SNR=2.2							
TXAR					LR	LR	01 32 00.5	
	comp=Z,516nm,18.4s,baz=160,slow=40							
	1.2nm,0.9s							
DRIO	**Del Rio**	**11.70**	**8**		Pn	**Pn**	**01 27 05.6**	**+0.7**
HNDO	**Hondo**	**12.04**	**13**		Pn	**Pn**	**01 27 08.9**	**-0.7**
ALPN	**Alpine**	**12.58**	**355**		Pn	**Pn**	**01 27 18.3**	**+1.3**
JCT	**Junction City**	**12.86**	**10**		Pn	**Pn**	**01 27 20.8**	**0.0**
OZNA	**Ozona**	**13.13**	**5**		Pn	**Pn**	**01 27 25.0**	**+0.5**
PECS	**Pecos**	**13.59**	**355**		Pn	**Pn**	**01 27 31.7**	**+1.0**
TEIG	**Tepich**	**13.62**	**77**		LR	LR	01 33 22.9	
	comp=Z,2µm,21.1s,baz=7.0,slow=40							
HSIG		**13.63**	**327**		Pn	**Pn**	**01 27 31.8**	**+0.5**
BRDY	**Brady**	**13.80**	**12**		Pn	**Pn**	**01 27 33.6**	**0.0**
SGCY	**Sterling City**	**14.12**	**5**		Pn	**Pn**	**01 27 38.9**	**+0.9**
319A	**Douglas**	**14.88**	**337**		Pn	**Pn**	**01 27 49.9**	**+1.3**
SN01	**Snyder 1**	**15.08**	**5**		Pn	**Pn**	**01 27 52.4**	**+1.4**
POST	**Post**	**15.24**	**3**		Pn	**Pn**	**01 27 52.8**	**-0.4**
POST					IAmb	IAmb	01 28 18.6	
	comp=Z,14nm,1.0s							
PLPT	**Palo Pinto**	**15.42**	**13**		Pn	**Pn**	**01 27 55.6**	**+0.1**
PLPT					IAmb	IAmb	01 28 06.5	
	comp=Z,12nm,0.6s							
NATX	**Nacogdoches**	**15.59**	**25**		Pn	**Pn**	**01 27 55.7**	**-2.0**
WTFS	**Witchita Falls**	**16.31**	**12**		Pn	**Pn**	**01 28 06.1**	**-0.8**
WTFS					IAmb	IAmb	01 28 08.8	
	comp=Z,9.1nm,0.9s							
ANMO	**Albuquerque**	**17.46**	**349**		P	**Pn**	**01 28 22.0**	**+0.3**
	baz=221,slow=11,SNR=1.8							
ANMO					LR	LR	01 35 53.1	
	comp=Z,355nm,19.6s,baz=262,slow=40							
	comp=Z,0.4nm,0.5s							
X18A	**Snowflake**	**17.97**	**340**			**Pn**	**01 28 29.2**	**+1.2**
X16A	**Lo Mia Camp, P**	**18.41**	**336**		P	**P**	**01 28 35.0**	**+1.7**
WUAZ	**Wupatki**	**19.36**	**338**		P	**P**	**01 28 45.0**	**+1.3**
WUAZ					IAmb	IAmb	01 28 51.6	
	comp=Z,7.3nm,1.1s							
SDCO	**Great Sand Dun**	**20.06**	**353**		P	**P**	**01 28 51.7**	**+0.2**
SDCO					IAmb	IAmb	01 29 02.2	
	comp=Z,10nm,1.5s							
S22A	**4UR Ranch, Cre**	**20.25**	**350**		P	**P**	**01 28 53.2**	**-0.3**
V12A	**Nelson**	**20.99**	**331**		P	**P**	**01 29 01.9**	**+0.5**
HMU	**Henry Mountain**	**21.35**	**342**		P	**P**	**01 29 05.4**	**0.0**
HMU					IAmb	IAmb	01 29 09.0	
	comp=Z,16nm,1.4s							
S39A	**Bolivar**	**21.39**	**20**		P	**P**	**01 29 04.1**	**-1.4**
S39A					IAmb	IAmb	01 29 18.4	
	comp=Z,5.5nm,0.7s							
GSC	**Goldstone, Bar**	**21.62**	**327**		P	**P**	**01 29 08.6**	**+0.5**
SMCO	**Snowmass**	**21.68**	**350**		P	**P**	**01 29 08.3**	**-0.7**
SMCO					IAmb	IAmb	01 29 14.2	
	comp=Z,6.8nm,1.0s							
SHPR	**Sheep Range**	**21.77**	**331**		P	**P**	**01 29 11.0**	**+1.2**
MTPU	**Mount Pierson**	**21.91**	**339**		P	**P**	**01 29 11.8**	**+0.3**
MTPU					IAmb	IAmb	01 29 14.6	
	comp=Z,8.6nm,1.2s							
ISCO	**Idaho Springs**	**22.11**	**353**		P	**P**	**01 29 13.8**	**+0.3**
ISCO					IAmb	IAmb	01 29 15.6	
	comp=Z,5.3nm,1.0s							
GWY	**Greenwater Val**	**22.24**	**328**		P	**P**	**01 29 14.8**	**0.0**
GWY					IAmb	IAmb	01 29 25.9	
	comp=Z,5.4nm,1.3s							
MSU	**Marysvale**	**22.33**	**340**		P	**P**	**01 29 14.1**	**-1.8**
PRN	**Pahroc Range**	**22.47**	**333**		P	**P**	**01 29 17.6**	**+0.3**
ISA	**Isabella, Lake**	**22.79**	**325**		P	**P**	**01 29 21.2**	**+0.6**
ISA					IAmb	IAmb	01 29 34.7	
	comp=Z,5.3nm,1.0s							
GMN	**Gold Mountain**	**23.40**	**329**		P	**P**	**01 29 27.9**	**+0.8**
R11B	**Tyco Canyon, C**	**23.49**	**333**		P	**P**	**01 29 28.0**	**+0.2**
MDPB	**Devils Postpil**	**24.58**	**327**		P	**P**	**01 29 37.8**	**-0.4**
MDPB					IAmb	IAmb	01 29 52.4	
	comp=Z,4.0nm,0.9s							
NV11	**Mina Array Sit**	**24.73**	**329**		P	**P**	**01 29 39.7**	**+0.3**
NV11					IAmb	IAmb	01 29 43.5	
	comp=Z,4.7nm,1.1s							
NVAR	**Mina Array Bea**	**24.80**	**329**		P	**P**	**01 29 40.9**	**+0.8**
NVAR	**Mina Array Bea**	**24.80**	**329**		P	**P**	**01 29 40.4**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=148,slow=10,SNR=22							
NVAR					LR	LR	01 39 20.4	
	comp=Z,207nm,18.7s,baz=136,slow=37							
	comp=Z,2.8nm,0.8s							
K22A	**Casper**	**25.03**	**353**		P	**P**	**01 29 41.7**	**-0.3**
RYN	**Ryan**	**25.06**	**329**		P	**P**	**01 29 43.1**	**+0.7**
RYN					IAmb	IAmb	01 29 45.1	
	comp=Z,3.3nm,0.9s							
KVN	**Kaiserville**	**25.19**	**330**		P	**P**	**01 29 43.7**	**+0.1**
KVN					IAmb	IAmb	01 29 47.7	
	comp=Z,5.1nm,1.0s							
ELK	**Elko**	**25.40**	**337**		LR	LR	01 40 32.0	
	comp=Z,263nm,18.2s,baz=142,slow=38							
WAKR	**Walker**	**25.42**	**328**		P	**P**	**01 29 47.3**	**+1.6**
WAKR					IAmb	IAmb	01 29 50.4	
	comp=Z,3.4nm,1.0s							
HVU	**Hansel Valley**	**25.50**	**342**		P	**P**	**01 29 45.4**	**-0.9**
HVU					IAmb	IAmb	01 29 49.0	
	comp=Z,3.6nm,0.9s							
PD31	**Pinedale Array**	**25.62**	**348**		P	**P**	**01 29 46.7**	**-0.9**
PD31					IAmb	IAmb	01 29 47.6	
	comp=Z,4.8nm,1.2s							
PDAR	**Pinedale Array**	**25.62**	**348**		P	**P**	**01 29 46.0**	**-1.6**
PDAR	**Pinedale Array**	**25.62**	**348**		P	**P**	**01 29 46.1**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=153,slow=10.0,SNR=9.7							
PDAR					LR	LR	01 39 44.2	
	comp=Z,86nm,21.6s,baz=184,slow=36							
	comp=Z,1.2nm,0.9s							
EMB	**Emerald Bay**	**26.12**	**328**		P	**P**	**01 29 52.7**	**+0.6**
EMB					IAmb	IAmb	01 29 55.4	
	comp=Z,6.5nm,1.2s							
LOHW	**Long Hollow**	**26.65**	**347**		P	**P**	**01 29 55.6**	**-1.2**
LOHW					IAmb	IAmb	01 29 57.2	
	comp=Z,8.3nm,1.2s							
MOOW	**Moose Ponds**	**26.82**	**347**		P	**P**	**01 29 57.1**	**-1.2**
YBH	**Yreka Blue Hor**	**29.50**	**328**		LR	LR	01 41 18.8	
	comp=Z,41nm,18.3s,baz=140,slow=35							
SDV	**Santo Domingo**	**32.15**	**102**		LR	LR	01 44 38.0	
	comp=Z,97nm,19.5s,baz=277,slow=38							
NEW	**Newport**	**32.67**	**342**		LR	LR	01 44 29.4	
	comp=Z,124nm,19.8s,baz=160,slow=37							
ULM	**Lac du Bonnet**	**32.81**	**8**		LR		01 45 09.0	
	comp=Z,290nm,18.2s,baz=160,slow=38							
ATAH	**Atahualpa**	**34.31**	**134**		LR	LR	01 42 36.2	
	comp=Z,84nm,18.2s,baz=305,slow=32							
SJG	**San Juan**	**34.49**	**84**		LR	LR	01 45 49.8	
	comp=Z,76nm,21.4s,baz=258,slow=38							
NNA	**Nana**	**38.91**	**138**		LR	LR	01 44 15.0	
	comp=Z,88nm,18.8s,baz=332,slow=31							
ETMB	**Extrema**	**45.09**	**125**		P	**P**	**01 32 33.8**	**-0.5**
ETMB					IAmb	IAmb	01 32 34.9	
	comp=Z,5.5nm,1.1s							
RPN	**Rapa Nui**	**45.14**	**189**		LR	LR	01 46 50.9	
	comp=Z,64nm,19.8s,baz=248,slow=30							
DLBC	**Dease Lake**	**45.38**	**340**		P	**P**	**01 32 37.1**	**+1.0**
DLBC					IAmb	IAmb	01 33 01.0	
	comp=Z,5.1nm,1.1s							
YKA	**Yellowknife Ar**	**45.46**	**352**		P	P	01 32 34.1	-2.5
	comp=Z,1.6nm,0.9s,baz=163,slow=7.6,SNR=16							
YKA					LR	LR	01 53 23.0	
	comp=Z,75nm,18.1s,baz=96,slow=38							
	comp=Z,1.6nm,0.9s							

SCHQ	**Schefferville**	**45.91**	**28**		LR	LR	01 53 14.1		
	comp=Z,99nm,19.9s,baz=250,slow=38								
LPAZ	**La Paz**	**47.84**	**133**		P	**P**	**01 32 56.7**	**+0.2**	
MDP	**Montagnes des**	**50.25**	**98**		LR	LR	01 56 32.3		
	comp=Z,46nm,19.6s,baz=277,slow=38								
FRB	**Frobisher Bay**	**51.41**	**18**		LR	LR	01 55 11.3		
	comp=Z,86nm,21.0s,baz=180,slow=36								
INK	**Inuvik**	**54.18**	**346**		LR		01 59 13.3		
	comp=Z,131nm,18.8s,baz=178,slow=39								
J26L	**Joseph Creek**	**54.24**	**339**		P	**P**	**01 33 43.4**	**-0.1**	
J26L					IAmb	IAmb	01 33 52.3		
	comp=Z,3.5nm,0.9s								
KDAK	**Kodiak Island**	**54.30**	**330**		LR	LR	01 55 15.3		
	comp=Z,54nm,19.0s,baz=128,slow=34								
F28M	**Old Crow**	**55.23**	**344**		P	**P**	**01 33 49.6**	**-0.9**	
ILAR	**Eielson Array**	**55.54**	**339**		P	**P**	**01 33 53.0**	**+0.2**	
ILAR	**Eielson Array**	**55.54**	**339**		P	**P**	**01 33 51.5**	**-1.2**	
	comp=Z,1.2nm,0.9s,baz=144,slow=5.9,SNR=11								
ILAR					LR	LR	01 59 59.2		
	comp=Z,203nm,18.2s,baz=98,slow=39								
	comp=Z,1.2nm,0.9s								
H03N2	**Juan Fernandez**	**55.67**	**156**		T	T	02 34 02.9		
	baz=334,slow=77,SNR=196								
H03N1	**Juan Fernandez**	**55.67**	**156**		T	T	02 34 02.7		
	baz=334,slow=77,SNR=255								
H03N3	**Juan Fernandez**	**55.68**	**156**		T	T	02 34 03.1		
	baz=334,slow=77,SNR=278								
TRF	**Thorshare Moun**	**56.04**	**336**		P	**P**	**01 33 56.5**	**-0.1**	
M20K	**Styx Rive**	**56.40**	**334**		P	**P**	**01 33 58.1**	**-0.9**	
H24K	**Noodor Dome**	**56.50**	**339**		P	**P**	**01 33 59.2**	**-0.5**	
CAST	**Castle Rocks**	**56.72**	**336**		P	**P**	**01 34 00.3**	**-0.9**	
CAST					IAmb	IAmb	01 34 01.1		
	comp=Z,4.9nm,1.2s								
RES	**Resolute Bay**	**57.06**	**2**		LR	LR	01 59 40.6		
	comp=Z,156nm,19.8s,baz=7.0,slow=37								
N18K	**Kilae Creek**	**57.07**	**332**		P	**P**	**01 34 02.8**	**-0.9**	
CO03	**El Pedregal**	**57.18**	**147**		P	**P**	**01 34 05.9**	**+0.9**	
J20K	**Nowinta River**	**57.89**	**336**		P	**P**	**01 34 08.6**	**-0.9**	
IMAR	**Indian Mountai**	**58.61**	**338**		P	P	01 34 12.8	-1.7	
SFJD	**Kangerlussuaq**	**59.29**	**21**		LR	LR	01 59 32.8		
	comp=Z,114nm,19.6s,baz=223,slow=36								
D22K	**Ayikyak River**	**59.74**	**341**		P	**P**	**01 34 21.3**	**-1.0**	
K15K	**Wolf Creek Mou**	**60.19**	**332**		P	**P**	**01 34 24.8**	**-0.7**	
J14K	**Nanvaranak Lak**	**61.22**	**333**		P	**P**	**01 34 32.3**	**-0.1**	
CPUP	**Villa Florida**	**62.00**	**134**		P	**P**	**01 34 38.0**	**-0.1**	
	comp=Z,1.1nm,0.5s,baz=323,slow=11,SNR=3.7								
	comp=Z,1.1nm,0.5s								
BORG	**Borgarnes**	**70.28**	**27**		LR	LR	02 06 53.0		
	comp=Z,60nm,20.5s,baz=294,slow=36								
TIXI	**Tiksi**	**84.30**	**346**		LR	LR	02 20 26.3		
	comp=Z,31nm,18.1s,baz=21,slow=40								
NOA	**NORSAR Array B**	**85.46**	**27**		LR	LR	02 15 40.2		
	comp=Z,41nm,20.7s,baz=310,slow=36								
ARCES	**ARCESS Array B**	**85.52**	**16**		LR	LR	02 15 13.6		
	comp=Z,139nm,18.

ZALV	**Zalesovo Beam**	**59.83**	**348**	P	**P**	**01 41 40.4**	**-0.9**
ZALV	**Zalesovo Beam**	**59.83**	**348**	P	**P**	**01 41 40.2**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=167,slow=4.3,SNR=16						
	comp=Z,2.1nm,0.5s						
H04N2	**CROZET ISLANDS**	**60.49**	**218**	T	T	02 47 17.3	
	baz=62,slow=75,SNR=48						
H04N1	**CROZET ISLANDS**	**60.51**	**218**	T	T	02 47 18.5	
	baz=62,slow=75,SNR=34						
H04N3	**CROZET ISLANDS**	**60.51**	**218**	T	T	02 47 15.6	
	baz=62,slow=75,SNR=33						
BVAR	**Borovoye Array**	**63.12**	**339**	P	**P**	**01 42 03.0**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=139,slow=9.5,SNR=9.2						
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**63.19**	**339**	P	**P**	**01 42 03.4**	**-0.6**
BRVK				IAmb	IAmb	01 42 31.0	
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**64.76**	**331**	P	**P**	**01 42 13.2**	**-1.1**
NRIK	**Noril'sk**	**74.13**	**355**	P	**P**	**01 43 10.9**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=170,slow=3.8,SNR=3.6						
	comp=Z,1.0nm,0.3s						
BRTR	**Keskin Array B**	**76.61**	**312**	P	**P**	**01 43 26.0**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=135,slow=7.6,SNR=3.6						
	comp=Z,0.7nm,0.8s						
BURAR	**Bucovina Array**	**84.53**	**318**	P	**P**	**01 44 09.7**	**+0.7**
BURAR				IAmb	IAmb	01 44 11.5	
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**87.21**	**332**	P	**P**	**01 44 22.0**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=120,slow=8.2,SNR=6.6						
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**144.87**	**42**	PKPbc	PKPbc	01 51 12.4	-0.1
	comp=Z,1.0nm,0.7s,baz=257,slow=0.9,SNR=12						

IDC 05 01:44:58.1±11.0,**6°.84S**×**128°.77E**,**h75**km±111km,**mb3.5**/2,
mbtmp3.6/4,**ML3.6**/2,**Error ellipse: s-maj=122.3km**
s-min=42.1km az=61.0,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.10**	**158**	P	Pn	01 48 12.6	-1.8
	0.3nm,0.3s,baz=336,slow=13,SNR=12						
WRA				S	Sn	01 50 38.8	-11
	0.2nm,0.4s,baz=328,slow=22,SNR=1.5						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.44**	**164**	P	P	01 48 58.0	+1.1
	0.1nm,0.3s,baz=347,slow=10,SNR=8.0						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**27.64**	**156**	P	P	01 50 38.6	-0.1
	0.7nm,0.3s,baz=329,slow=12,SNR=4.0						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**67.43**	**327**	P	P	01 55 45.8	0.0
	0.2nm,0.4s,baz=116,slow=6.6,SNR=4.9						
	0.2nm,0.4s						

*SOME **05** 01:48:33.6,39°.52N×71°.65E,h15km*
*KRNET **05** 01:48:38.4±0.1,39°.34N×71°.34E,h13km,mb2.8*
*NNC **05** 01:48:39.3±2.4,39°.15N×71°.33E,h0km,mb3.7,mpv3.2,*
Error ellipse: s-maj=17.4km s-min=11.4km az=14.0
ISC 05 01:48:41.1±1.8,**39°.47N**±0°.09×**71°.38E**±0°.05,**h10**km,**n15,**
σ2$67/30,17C-12D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.33**	**88**	⇑*e*P	**Pg**	**01 48 46.0**	**-1.8**
	baz=68						
DRK				⇑*e*S	**Sg**	**01 48 52.0**	**-0.2**
	baz=68						
BTK	**Batken**	**0.73**	**324**	⇑*e*P	**Pg**	**01 48 54.4**	**-0.8**
	baz=31						
BTK				⇑*e*S	**Sb**	**01 49 05.7**	**-0.4**
	baz=31						
OHH	**Osh**	**1.51**	**45**	⇑*e*P	**Pb**	**01 49 08.8**	**-0.5**
	baz=43						
OHH				⇑*e*S	**Sg**	**01 49 31.1**	**+1.3**
	baz=43						
SFK	**Sufi-Kurgan**	**1.73**	**71**	⇑*e*P	**Pb**	**01 49 12.2**	**-0.9**
	baz=67						
SFK				⇑*e*S	**Sg**	**01 49 36.7**	**0.0**
	baz=67						
TRKS	**Terek-Say**	**2.07**	**355**	⇑*e*P	**Pb**	**01 49 17.2**	**-1.7**
	baz=57						
TRKS				⇑*e*S	**Sb**	**01 49 45.7**	**+1.0**
	baz=57						
ARSB	**Arslanbob**	**2.22**	**33**	⇓*e*P	**Pb**	**01 49 20.4**	**-1.1**
	baz=32						
ARSB				⇓*i*S	**Sb**	**01 49 50.7**	**+1.6**
	baz=32						
ARK	**Arkit**	**2.37**	**11**	⇓*e*P	**Pb**	**01 49 22.2**	**-1.8**
	baz=11						
ARK				⇓*e*S	**Sb**	**01 49 55.0**	**+1.7**
	baz=11						
MNAS	**Manas**	**3.13**	**15**	⇑*e*P	**Pn**	**01 49 33.1**	**+2.4**
	baz=15						
MNAS				⇑*e*S	**Sb**	**01 50 13.0**	**-2.4**
	baz=15						
MRKS	**Merke**	**3.56**	**23**	*e*P	**Pb**	**01 49 40.2**	**-4.0**
	2.3nm,0.3s						
MRKS				*e*S	**Sb**	**01 50 28.5**	**+1.0**
	24nm,0.5s						
UCH	**Uchtor**	**3.64**	**40**	⇓*e*P	**Pn**	**01 49 40.3**	**+2.3**
	baz=39						
UCH				⇓*i*S	**Sn**	**01 50 25.2**	**+4.0**
	baz=39						
KK31	**Karatay Array**	**3.69**	**350**	⇓P*n*	**Pb**	**01 49 41.7**	**-4.7**
	4.3nm,0.5s,baz=174,slow=13,SNR=16						
KK31				⇓S*n*	**Sb**	**01 50 30.9**	**-0.3**
	3.3nm,0.3s,baz=183,slow=24,SNR=5.4						
KK31				⇑L*g*	Lg	01 50 44.7	
	2.2nm,0.3s,baz=177,slow=28,SNR=3.8						
AAK	**Ala-Archa**	**3.95**	**36**	⇓*i*P	**Pn**	**01 49 44.3**	**+2.4**
	baz=35						
AAK				⇓*e*S	**Sn**	**01 50 32.2**	**+3.9**
	baz=35						
CHMS	**Chumysh**	**4.35**	**35**	⇓P*n*	**Pn**	**01 49 50.8**	**+3.5**
	2.8nm,0.5s						
CHMS				⇑S*n*	**Sb**	**01 50 46.7**	**-3.5**
	22nm,1.0s						
TKM2	**Tokmak 2**	**4.69**	**41**	⇑P*n*	**Pn**	**01 49 55.6**	**+3.4**
	1.7nm,0.8s						
TKM2				⇓P*g*	**Pg**	**01 50 08.0**	**-3.1**
	1.8nm,0.5s						
TKM2				⇑S*n*	**Sb**	**01 50 54.6**	**-5.7**
	4.1nm,0.8s						
TKM2				⇑L*g*	Lg	01 51 14.3	
	4.1nm,0.7s						
KRBS	**Karabastau**	**5.31**	**36**	*e*P	Pb	01 50 08.2	-5.9
	0.6nm,0.2s						
KRBS				*e*S	**Sb**	**01 51 16.5**	**-1.4**
	2.0nm,0.2s						

*VAO **05** 01:55:18.5±0.5,21°.22S×68°.64W,h120km,mb4.2*
*SJA **05** 01:55:19.2±0.7,21°.47S×68°.53W,h147km±4km,ML3.9,*
MW3.8
*IDC **05** 01:55:20.4±2.3,21°.41S×68°.23W,h116km±22km,mb3.8/4,*
mbtmp4.3/4,Error ellipse: s-maj=60.9km s-min=31.3km
az=131.0
*GUC **05** 01:55:21.2±0.8,21°.48S×68°.46W,h128km±3km,ML4.1*
ISC 05 01:55:20.5±0.6,**21°.49S**±0°.03×**68°.56W**±0°.05,**h142**km±6km,
n79,σ1$25/118,**mb4.3/3,10C-4D,Chile-Bolivia border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.71**	**244**	*e*P	**Pn**	**01 55 42.5**	**+0.1**
PB09				*e*S	**Sn**	**01 55 58.8**	**-0.3**
PB09				IAML		01 56 00.4	
	comp=Z,3μm,0.7s						
PB09	**IPOC Station P**	**0.71**	**244**	⇑*i*P	**Pn**	**01 55 42.5**	**+0.1**
PB09				*e*S	**Sn**	**01 55 58.3**	**-0.8**
PB09				IAML		01 55 59.6	
	comp=N,3μm,0.5s						
PB01	**IPOC Station P**	**0.97**	**297**	*e*P	**Pn**	**01 55 43.9**	**-0.5**
PB01				*e*S	**Sn**	**01 56 02.8**	**+0.3**
PB01				IAML		01 56 03.2	
	comp=Z,2μm,0.3s						
PB01	**IPOC Station P**	**0.97**	**297**	⇑*i*P	**Pn**	**01 55 44.0**	**-0.5**
PB01				*e*S	**Sn**	**01 56 01.6**	**-0.9**
PB01				IAML		01 56 03.5	
	comp=E,5μm,0.2s						
LVC	**Limon Verde**	**1.17**	**196**	*e*P	**Pn**	**01 55 46.4**	**0.0**
LVC				*e*S	**Sn**	**01 56 05.3**	**-1.0**
LVC				IAML		01 56 06.4	
	comp=Z,889nm,0.3s						
LVC	**Limon Verde**	**1.17**	**196**	P	**Pn**	**01 55 46.5**	**0.0**

2018 FEB

	baz=37,slow=9.8						
LVC				S	**Sn**	**01 56 05.6**	**-0.7**
	comp=Z,814nm,0.3s,baz=235,slow=20,SNR=138						
LVC				LR	LR	01 56 12.8	
	comp=Z,60nm,20.3s,baz=216,slow=39						
LVC	**Limon Verde**	**1.17**	**196**	*e*P	**Pn**	**01 55 46.2**	**-0.3**
LVC				*e*S	**Sn**	**01 56 05.4**	**-0.9**
LVC	**Limon Verde**	**1.17**	**196**	*e*P	**Pn**	**01 55 46.4**	**0.0**
LVC				*e*S	**Sn**	**01 56 05.3**	**-1.0**
LVC				IAML		01 56 06.7	
	comp=Z,5μm,0.5s						
PB02	**IPOC Station P**	**1.26**	**277**	*e*P	**Pn**	**01 55 47.1**	**+0.1**
PB02				*e*S	**Sn**	**01 56 07.5**	**+0.1**
PB02	**IPOC Station P**	**1.26**	**277**	⇑*e*P	**Pn**	**01 55 47.1**	**+0.1**
PB02				*e*S	**Sn**	**01 56 07.0**	**-0.3**
PB02				IAML		01 56 08.6	
	comp=E,5μm,0.4s						
PB07	**IPOC Station P**	**1.26**	**259**	*e*P	**Pn**	**01 55 47.2**	**+0.1**
PB07				*e*S	**Sn**	**01 56 07.2**	**-0.3**
PB07	**IPOC Station P**	**1.26**	**259**	⇑*i*P	**Pn**	**01 55 47.4**	**+0.3**
PB07				*e*S	**Sn**	**01 56 07.1**	**-0.4**
PB07				IAML		01 56 08.6	
	comp=E,4μm,0.3s						
PB08	**IPOC Station P**	**1.45**	**337**	*e*P	**Pn**	**01 55 49.4**	**+0.1**
PB08				*e*S	**Sn**	**01 56 11.3**	**0.0**
PB08				IAML		01 56 14.7	
	comp=Z,956nm,0.7s						
PB08	**IPOC Station P**	**1.45**	**337**	⇑*i*P	**Pn**	**01 55 49.4**	**+0.1**
PB08				*e*S	**Sn**	**01 56 10.4**	**-0.9**
PB08				IAML		01 56 13.1	
	comp=N,2μm,0.4s						
AF01	**San Pedro de A**	**1.50**	**167**	⇓*e*P	**Pn**	**01 55 50.4**	**+0.6**
PB06	**IPOC Station P**	**1.54**	**218**	*e*P	**Pn**	**01 55 50.3**	**+0.3**
PB06				*e*S	**Sn**	**01 56 13.1**	**+0.5**
PB06				IAML		01 56 14.0	
	comp=Z,1μm,0.4s						
PB06	**IPOC Station P**	**1.54**	**218**	*e*P	**Pn**	**01 55 50.5**	**+0.5**
PB06				*e*S	**Sn**	**01 56 12.8**	**+0.1**
PB06				IAML		01 56 13.6	
	comp=E,3μm,0.4s						
PATCX	**Punta Patache**	**1.63**	**294**	*e*P	**Pn**	**01 55 51.2**	**+0.2**
PATCX				*e*S	**Sn**	**01 56 15.4**	**+1.1**
PATCX	**Punta Patache**	**1.63**	**294**	⇑*e*P	**Pn**	**01 55 51.2**	**+0.2**
PATCX				*e*S	**Sn**	**01 56 14.1**	**-0.2**
PATCX				IAML		01 56 16.1	
	comp=N,4μm,0.3s						
PB04	**IPOC Station P**	**1.70**	**240**	*e*P	**Pn**	**01 55 52.1**	**+0.2**
PB04				*e*S	**Sn**	**01 56 16.4**	**+0.5**
PB04	**IPOC Station P**	**1.70**	**240**	*e*P	**Pn**	**01 55 52.1**	**+0.2**
PB04				*e*S	**Sn**	**01 56 15.4**	**-0.5**
PB04				IAML		01 56 19.2	
	comp=N,2μm,0.1s						
HMBC	**Humberstone**	**1.73**	**314**	*e*P	**Pn**	**01 55 51.7**	**-0.4**
HMBC				*e*S	**Sn**	**01 56 15.6**	**-0.8**
HMBC	**Humberstone**	**1.73**	**314**	*i*P	**Pn**	**01 55 51.8**	**-0.4**
HMBC				*e*S	**Sn**	**01 56 15.1**	**-1.3**
HMBC				IAML		01 56 16.7	
	comp=N,4μm,0.5s						
TA01	**Diego Aracena**	**1.77**	**301**	*e*P	**Pn**	**01 55 51.7**	**-0.8**
TA01				*e*S	**Sn**	**01 56 16.6**	**-0.4**
TA01				IAML		01 56 18.1	
	comp=Z,1μm,0.2s						
TA01	**Diego Aracena**	**1.77**	**301**	⇑*i*P	**Pn**	**01 55 52.3**	**-0.2**
TA01				*e*S	**Sn**	**01 56 15.9**	**-1.1**
TA01				IAML		01 56 17.6	
	comp=E,3μm,0.3s						
GO01	**Chusmiza**	**1.90**	**342**	*e*P	**Pn**	**01 55 54.3**	**-0.2**
GO01				*e*S	**Sn**	**01 56 20.0**	**-0.6**
GO01	**Chusmiza**	**1.90**	**342**	⇑*e*P	**Pn**	**01 55 54.4**	**-0.2**
GO01				*e*S	**Sn**	**01 56 19.6**	**-0.9**
GO01				IAML		01 56 21.8	
	comp=E,2μm,0.4s						
TA02	**Huaiquique**	**1.90**	**309**	*e*P	**Pn**	**01 55 53.5**	**-0.5**
TA02				*e*S	**Sn**	**01 56 19.9**	**+0.1**
TA02				IAML		01 56 20.4	
	comp=Z,898nm,0.1s						
TA02	**Huaiquique**	**1.90**	**309**	*e*P	**Pn**	**01 55 53.7**	**-0.4**
TA02				*e*S	**Sn**	**01 56 18.5**	**-1.2**
TA02				IAML		01 56 22.0	
	comp=N,2μm,0.1s						
PB11	**IPOC Station P**	**2.00**	**329**	*e*P	**Pn**	**01 55 54.6**	**-0.8**
PB11	**IPOC Station P**	**2.00**	**329**	⇑*e*P	**Pn**	**01 55 54.8**	**-0.5**
PB05	**IPOC Station P**	**2.04**	**228**	*e*P	**Pn**	**01 55 56.0**	**+0.2**
PB05				*e*S	**Sn**	**01 56 22.9**	**0.0**
PB05				IAML		01 56 28.8	
	comp=Z,404nm,0.2s						
PB05	**IPOC Station P**	**2.04**	**228**	*e*P	**Pn**	**01 55 56.2**	**+0.4**
PB05				*e*S	**Sn**	**01 56 22.5**	**-0.4**
PB05				IAML		01 56 24.1	
	comp=N,576nm,0.5s						
PB10	**IPOC Station P**	**2.74**	**222**	*e*P	**Pn**	**01 56 04.5**	**+0.3**
PB10				*e*S	**Sn**	**01 56 35.0**	**-3.0**
PB10	**IPOC Station P**	**2.74**	**222**	*e*P	**Pn**	**01 56 04.5**	**+0.3**
PB10				*e*S	**Sn**	**01 56 34.8**	**-3.1**
PB10				IAML		01 56 49.1	
	comp=E,219nm,0.4s						
YJA	**Yavi**	**2.91**	**104**	*e*P	**Pn**	**01 56 07.0**	**+0.1**
YJA				*e*S	**Sn**	**01 56 42.3**	**-0.2**
PB16	**IPOC Station P**	**3.26**	**344**	*e*P	**Pn**	**01 56 11.9**	**+0.5**
PB16				*e*S	**Sn**	**01 56 51.3**	**+0.5**
PB16	**IPOC Station P**	**3.26**	**344**	⇑*e*P	**Pn**	**01 56 12.0**	**+0.5**
PB16				*e*S	**Sn**	**01 56 49.9**	**-0.9**
PB16				IAML		01 56 53.3	
	comp=E,162nm,0.4s						
PB12	**IPOC Station P**	**3.31**	**329**	*e*P	**Pn**	**01 56 09.9**	**-1.7**
PB12				*e*S	**Sn**	**01 56 50.0**	**-1.2**
PB12				IAML		01 56 55.5	
	comp=Z,167nm,0.3s						
PB12	**IPOC Station P**	**3.31**	**329**	⇓*e*P	**Pn**	**01 56 10.0**	**-1.6**
PB12				*e*S	**Sn**	**01 56 47.3**	**-3.8**
PB12				IAML		01 56 57.4	
	comp=E,340nm,0.2s						
PB14	**IPOC Station P**	**3.56**	**208**	*e*P	**Pn**	**01 56 14.6**	**-0.5**
PB14				*e*S	Sn	01 56 48.7	-8.6
PB14				IAML		01 57 17.9	
	comp=Z,144nm,0.8s						
PB14	**IPOC Station P**	**3.56**	**208**	*e*P	**Pn**	**01 56 15.5**	**+0.4**
PB14				*e*S	Sn	01 56 47.3	-10
GO02	**Mina Guanaco**	**3.78**	**194**	*e*P	**Pn**	**01 56 18.0**	**0.0**
GO02				*e*S	**Sn**	**01 56 55.1**	**-7.4**
GO02	**Mina Guanaco**	**3.78**	**194**	⇓*e*P	**Pn**	**01 56 17.6**	**-0.3**
GO02				*e*S	**Sn**	**01 57 02.3**	**-0.3**
AC01	**Pan de Azucar**	**5.00**	**202**	*e*P	**Pn**	**01 56 32.3**	**-1.5**
AC01				*e*S	**Sn**	**01 57 28.4**	**-2.6**
AC01				IAML		01 57 49.4	
	comp=Z,41nm,0.3s						
AC01	**Pan de Azucar**	**5.00**	**202**	⇓*e*P	**Pn**	**01 56 32.4**	**-1.4**
LPAZ	**La Paz**	**5.18**	**5**	*e*P	**Pn**	**01 56 38.3**	**+1.4**
AC02	**Maricunga**	**5.35**	**185**	*e*P	**Pn**	**01 56 38.1**	**-0.8**
AC02				IAML		01 58 20.3	
	comp=Z,35nm,0.3s						
BBSD	**Serra de San D**	**8.63**	**62**	*e*P	**Pn**	**01 57 18.4**	**-4.1**
TICA	**Tres Isletas**	**8.93**	**125**	*e*P	**Pn**	**01 57 26.0**	**-0.3**
VACA	**Villa Angela C**	**9.41**	**132**	*e*P	**Pn**	**01 57 33.1**	**+0.3**
PTLB	**Pontes e Lacer**	**10.77**	**58**	*e*P	**Pn**	**01 57 47.6**	**-3.2**
ANTJ	**Antonio Joao (**	**11.68**	**95**	*e*P	**Pn**	**01 58 03.1**	**+0.3**
ETMB	**Extrema**	**11.82**	**11**	*e*P	Pn	01 57 59.2	-5.5
RPRD	**Ribas do Rio P**	**13.91**	**89**	*e*P	**Pn**	**01 58 32.3**	**+0.6**
CRSM	**Crissiumal (Br**	**14.50**	**117**	*e*P	**P**	**01 58 42.1**	**+0.4**
FRBT	**Francisco Belt**	**14.88**	**110**	*e*P	**P**	**01 58 45.3**	**-0.6**
RODS	**Rosario do Sul**	**14.90**	**129**	*e*P	**P**	**01 58 45.9**	**-0.2**
TBOT	**Tacuarembo**	**15.17**	**135**	*e*P	**P**	**01 58 48.8**	**-0.2**
PTGB	**Pitanga**	**15.51**	**105**	*e*P	**P**	**01 58 53.2**	**+0.2**
ALGR	**Alto Alegre (B**	**15.83**	**120**	*e*P	**P**	**01 58 57.6**	**+1.2**
ITAB	**Concordia**	**16.02**	**114**	*e*P	**P**	**01 58 59.1**	**+0.6**
PCMB	**Pacaembu**	**16.09**	**94**	*e*P	**P**	**01 59 00.3**	**+0.8**
LDASE	**Londrina, Braz**	**16.24**	**100**	*e*P	**P**	**01 59 01.5**	**+0.5**
PLTB	**Pedras Altas**	**16.82**	**131**	*e*P	**Pn**	**01 59 07.7**	**+0.1**
ITRB	**Iturama**	**17.13**	**87**	*e*P	**Pn**	**01 59 11.3**	**-0.1**
FRTB	**Fartura**	**17.66**	**100**	*e*P	**Pn**	**01 59 17.9**	**+0.1**
CNLB	**Canela**	**17.78**	**120**	*e*P	**Pn**	**01 59 19.1**	**-0.1**
BB19B	**Bebedouro**	**18.67**	**92**	*e*P	**P**	**01 59 27.9**	**+0.1**
SNDB	**Serra Nova Dou**	**19.03**	**63**	*e*P	**P**	**01 59 31.1**	**-0.5**
IPMB	**Ipameri, GO**	**19.46**	**83**	*e*P	**P**	**01 59 35.8**	**-0.6**
BDFB	**Brasilia**	**20.32**	**77**	P	**P**	**01 59 44.7**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=244,slow=9.7,SNR=6.9						
	comp=Z,1.8nm,0.4s						
ITTB	**Itaituba**	**21.08**	**38**	*e*P	**P**	**01 59 52.5**	**-1.2**
JANB	**Januaria**	**23.88**	**79**	*e*P	**P**	**02 00 21.1**	**-0.1**
MALB	**Monte Alegre**	**23.97**	**37**	*e*P	**P**	**02 00 20.9**	**-1.0**
SNAA	**Sanae**	**62.19**	**161**	P	**P**	**02 05 29.5**	**+3.1**
	comp=Z,1.0nm,0.6s,baz=299,slow=10,SNR=1.2						
	comp=Z,1.0nm,0.6s						

DBIC	**Dimbokro**	**68.42**	**73**	P	**P**	**02 06 08.3**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=231,slow=4.7,SNR=6.3						
	comp=Z,3.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.04**	**70**	P	**P**	**02 06 59.2**	**+0.9**
	comp=Z,3.5nm,0.6s,baz=259,slow=5.2,SNR=28						
	comp=Z,3.5nm,0.6s						
MKAR	**Makanchi Array**	**145.43**	**36**	PKPbc	**PKPab**	**02 14 43.6**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=301,slow=3.5,SNR=7.8						

*IDC **05** 01:56:33.7±1.1,41°.73N×70°.07E,h0km,mb3.9/7,*
mbtmp3.7/14,ML3.3/7,MS2.4/2,Error ellipse:
s-maj=16.9km s-min=10.4km az=1.0
*MOS **05** 01:56:34.3±0.8,41°.81N×69°.88E,h13km,mb4.3/4,Error*
ellipse: s-maj=6.4km s-min=5.2km az=47.7
*KRNET **05** 01:56:35.6±0.1,41°.79N×70°.16E,h17km,mb4.0*
*NNC **05** 01:56:35.0±0.8,41°.82N×70°.02E,h0km,mb4.3,mpv4.0,*
Error ellipse: s-maj=6.0km s-min=4.8km az=62.0
*ISU **05** 01:56:36.4,41°.79N×70°.03E,h11km*
*SOME **05** 01:56:38.8,41°.72N×70°.28E,h5km*
ISC 05 01:56:35.6±0.8,**41°.76N**±0°.02×**69°.98E**±0°.02,**h13**km±5km,
n135,σ2$18/208,**mb4.0**/8,**38C-36D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRV	**Charvak**	**0.12**	**190**	P	**Pg**	**01 56 40.3**	**+1.3**
CHRV				S	**Sg**	**01 56 43.2**	**+1.9**
CHM	**Chimkent**	**0.63**	**334**	*e*P	**Pn**	**01 56 52.0**	**+1.7**
	3μm,0.2s						
CHM				*e*S	**Sn**	**01 57 01.9**	**+1.8**
	6μm,0.2s						
TRKS	**Terek-Say**	**0.90**	**104**	*e*PG	**Pg**	**01 56 51.5**	**-1.5**
TRKS				*e*S	**Sg**	**01 57 02.8**	**-2.0**
TRKS	**Terek-Say**	**0.90**	**104**	⇑*e*P	**Pg**	**01 56 51.5**	**-1.5**
	baz=13						
TRKS				⇑*e*S	**Sg**	**01 57 02.8**	**-2.0**
	baz=13						
KSNS	**Kasansay**	**1.30**	**117**	P	**Pn**	**01 57 00.4**	**+0.9**
KSNS				S	**Sn**	**01 57 18.4**	**+1.6**
KK31	**Karatay Array**	**1.40**	**16**	⇓P	**Pn**	**01 57 00.7**	**-0.2**
	48nm,0.3s,baz=351,slow=3.2,SNR=2122						
KK31				⇓S	**Sn**	**01 57 18.1**	**-1.1**
	641nm,0.4s,baz=193,slow=28,SNR=29						
KK31	**Karatay Array**	**1.40**	**16**	PG	**Pn**	**01 57 00.7**	**-0.2**
KK31				S	**Sn**	**01 57 20.6**	**+1.3**
KKAR	**Karatay Array**	**1.40**	**16**	*e*PG	**Pn**	**01 57 00.8**	**-0.1**
KKAR	**Karatay Array**	**1.40**	**16**	⇓*e*P	**Pn**	**01 57 00.8**	**-0.1**
	baz=11						
KKAR				⇓*e*S	**Sn**	**01 57 19.2**	**-0.1**
	baz=11						
NAM	**Namangan**	**1.48**	**121**	P	**Pb**	**01 57 03.4**	**+0.5**
NAM				S	**Sg**	**01 57 23.6**	**+0.4**
ARK	**Arkit**	**1.48**	**88**	*e*PN	**Pn**	**01 57 01.0**	**-1.1**
ARK				*e*S	**Sn**	**01 57 19.6**	**-1.8**
ARK	**Arkit**	**1.48**	**88**	⇑*e*P	**Pn**	**01 57 01.0**	**-1.1**
	baz=89						
ARK				⇑*e*S	**Sn**	**01 57 19.6**	**-1.8**
	baz=89						
MINT	**Mingtut**	**1.49**	**149**	P	**Pg**	**01 57 04.1**	**-0.2**
MINT				S	**Sg**	**01 57 24.9**	**+1.2**
DZA	**Taraz**	**1.52**	**41**	*e*P	**Pn**	**01 57 03.1**	**+0.6**
	266nm,0.1s						
DZA				*e*S	**Sn**	**01 57 21.1**	**-0.9**
	875nm,0.3s						
BTK	**Batken**	**1.81**	**159**	*e*PN	**Pb**	**01 57 08.8**	**+0.2**
BTK				*e*S	**Sg**	**01 57 32.9**	**-1.0**
BTK	**Batken**	**1.81**	**159**	⇓*e*P	**Pb**	**01 57 08.8**	**+0.2**
	baz=64						
BTK				⇓*e*S	**Sg**	**01 57 32.9**	**-1.0**
	baz=64						
FRG	**Fergana**	**1.94**	**135**	P	**Pb**	**01 57 11.6**	**+0.8**
FRG				S	**Sg**	**01 57 37.7**	**-0.3**
MNAS	**Manas**	**2.02**	**68**	*e*PN	**Pn**	**01 57 10.6**	**+1.2**
MNAS				*e*S	**Sn**	**01 57 35.6**	**+1.0**
MNAS	**Manas**	**2.02**	**68**	⇑*e*P	**Pn**	**01 57 10.3**	**+0.9**
	baz=67						
MNAS				⇑*e*S	**Sn**	**01 57 35.5**	**+1.0**
	baz=67						
ANR	**Andizhan**	**2.05**	**118**	P	**Pb**	**01 57 13.2**	**+0.4**
ANR				S	**Sg**	**01 57 40.7**	**-1.0**
TSTA	**Tashata**	**2.22**	**121**	P	**Pb**	**01 57 15.6**	**0.0**
TSTA				S	**Sb**	**01 57 45.5**	**+2.5**
ARSB	**Arslanbob**	**2.29**	**100**	*e*PN	**Pn**	**01 57 14.6**	**+1.3**
ARSB				*e*S	**Sn**	**01 57 42.7**	**+1.3**
ARSB	**Arslanbob**	**2.29**	**100**	⇑*e*P	**Pn**	**01 57 14.6**	**+1.3**
	baz=1.0						
ARSB				⇑*e*S	**Sn**	**01 57 42.7**	**+1.3**
	baz=1.0						
DZI	**Dzhizak**	**2.31**	**226**	P	**Pb**	**01 57 18.0**	**+0.8**
DZI				S	**Sg**	**01 57 50.0**	**0.0**
OHH	**Osh**	**2.45**	**119**	*e*PN	**Pn**	**01 57 16

baz=64
CHMS Chumysh 3.75 69 P Pg 01 57 45.9 -1.5
SNR=10.0
CHMS Chumysh 3.75 69 ⇓Pn Pn 01 57 33.9 +0.8
3.0nm,0.5s
CHMS ⇑Pg Pb 01 57 42.4 +0.7
14nm,0.5s
CHMS ⇓Lg Lg 01 58 33.7
52nm,0.6s
CHMS Chumysh 3.75 69 *e*PN Pn 01 57 34.5 +1.4
CHMS Chumysh 3.75 69 ⇓*i*P Pn 01 57 34.5 +1.4
baz=69
CHMS ⇓*e*S Sn 01 58 17.4 +0.3
baz=69
KBK Karagaybulak 3.80 75 P Pn 01 57 36.4 +2.5
SNR=15
KBK Karagaybulak 3.80 75 *e*PN Pn 01 57 35.4 +1.4
KBK *e*S Sn 01 58 18.9 +0.3
KBK Karagaybulak 3.80 75⇑*e*P Pn 01 57 35.4 +1.4
baz=75
KBK ⇑*e*S Sn 01 58 18.9 +0.3
baz=75
TMD Tamdy-Bulak 3.99 272 P Pn 01 57 41.7 +5.2
TMD S Sb 01 58 36.6 +2.6
PKMR Pachkamar 4.23 222 P Pb 01 57 45.3 -4.5
PKMR S Sb 01 58 44.5 +3.8
TKM2 Tokmak 2 4.32 72 P Pn 01 57 43.5 +2.3
SNR=8.9
TKM2 Tokmak 2 4.32 72 ⇑Pn Pn 01 57 42.1 +0.9
1.9nm,0.3s
TKM2 ⇑Pg Pb 01 57 52.3 +0.7
12nm,0.4s
TKM2 ⇑Lg Lg 01 58 51.2
54nm,0.5s
TKM2 Tokmak 2 4.32 72 *i* PN Pn 01 57 42.1 +0.9
TKM2 pmax pmax
comp=Z,2.0nm,0.3s
TKM2 Tokmak 2 4.32 72⇓*e*P Pn 01 57 42.4 +1.2
baz=72
TKM2 ⇓*e*S Sn 01 58 31.6 0.0
baz=72
BTLS Baital 4.42 41 *e*P Pb 01 57 56.3 +3.2
comp=Z,17nm,0.2s
BTLS *e*S Sb 01 58 52.0 +5.6
comp=Z,102nm,0.6s
BTLS Baital 4.42 41 *e*PN Pn 01 57 43.8 +1.4
NRN Naryn 4.53 92 *e*PN Pn 01 57 45.2 +1.1
NRN *e*S Sn 01 58 36.0 -0.7
NRN Naryn 4.53 92⇓*e*P Pn 01 57 45.2 +1.1
baz=93
NRN ⇓*e*S Sn 01 58 36.0 -0.7
baz=93
DGS Degeres 4.53 69 Pg Pb 01 57 56.5 +1.4
comp=Z,16nm,0.3s
DGS Lg Lg 01 58 53.7
comp=Z,65nm,0.4s
DGS Degeres 4.53 69 *e*P Pb 01 57 57.4 +2.3
comp=Z,11nm,0.2s
DGS *e*S Sb 01 58 53.4 +3.8
comp=Z,65nm,0.4s
KST Kastek 4.61 72 Pg Pb 01 57 58.0 +1.5
comp=Z,19nm,0.6s
KST Lg Lg 01 58 55.8
comp=Z,39nm,0.7s
KST Kastek 4.61 72 *e*P Pb 01 57 59.0 +2.5
comp=Z,19nm,0.4s
KST *e*S Sb 01 58 55.9 +3.9
comp=Z,39nm,0.7s
KRBS Karabastau 4.62 63 Pg Pb 01 57 57.6 +1.0
comp=Z,20nm,0.3s
KRBS Lg Lg 01 58 55.5
comp=Z,51nm,0.4s
KRBS Karabastau 4.62 63 *e*P Pb 01 57 59.6 +3.0
comp=Z,20nm,0.3s
KRBS *e*S Sb 01 58 57.6 +5.5
comp=Z,51nm,0.4s
ZRB Zarabog 4.63 219 P Pb 01 57 51.8 -4.9
ZRB S Sg 01 59 01.5 -2.7
ULHL Ulahol 4.69 82 P Pn 01 57 47.9 +1.6
SNR=13
ULHL Ulahol 4.69 82 *e*PN Pn 01 57 47.7 +1.4
ULHL *e*S Sn 01 58 40.4 -0.3
ULHL Ulahol 4.69 82⇑*e*P Pn 01 57 47.7 +1.4
baz=82
ULHL ⇑*e*S Sn 01 58 40.4 -0.3
baz=82
MTBS Maitube 4.97 72 Pg Pb 01 58 04.9 +2.5
comp=Z,8.2nm,0.3s
MTBS Lg Lg 01 59 06.1
comp=Z,30nm,0.7s
MTBS Maitube 4.97 72 *e*P Pb 01 58 04.9 +2.5
comp=Z,8.2nm,0.3s
MTBS *e*S Sb 01 59 06.1 +4.0
comp=Z,30nm,0.7s
KSH Kashi 5.08 114 Pn Pn 01 57 52.4 +0.9
KSH Sn Sn 01 58 49.4 -0.6
KSH pmax pmax
comp=Z,15nm,0.5s
KSH smax smax
comp=N,48nm,0.8s
KSH smax smax
comp=E,39nm,0.8s
DZN Dzhankel'dy 5.08 262 P Pn 01 57 57.1 +5.7
DZN S Sg 01 59 15.3 -3.4
KUU Kurty 5.14 63 Pg Pb 01 58 08.1 +2.7
comp=E,13nm,0.4s
KUU Lg Lg 01 59 12.6
comp=E,72nm,0.4s
KUU Kurty 5.14 63 *e*P Pb 01 58 08.1 +2.7
comp=E,13nm,0.4s
KUU *e*S Sb 01 59 12.6 +5.6
comp=E,72nm,0.4s
KTBS Karatobe 5.31 66 Pg Pb 01 58 11.5 +3.2
comp=E,9.3nm,0.3s
KTBS Lg Lg 01 59 18.2
comp=E,77nm,0.4s
KTBS Karatobe 5.31 66 *e*P Pb 01 58 11.5 +3.2
comp=E,9.3nm,0.3s
KTBS *e*S Sb 01 59 18.2 +6.4
comp=E,77nm,0.4s
TNSS Tian-Shan 5.32 74 Pg Pb 01 58 11.8 +3.2
comp=E,13nm,0.4s
TNSS Lg Lg 01 59 18.7
comp=E,13nm,0.4s
TNSS Tian-Shan 5.32 74 *e*P Pb 01 58 12.0 +3.4
comp=E,13nm,0.4s
TNSS *e*S Sb 01 59 18.7 +6.2
comp=E,13nm,0.4s
KNDC Almaty 5.37 72 PN Pb 01 58 14.6 +5.3
KDJ Kajisay 5.38 84 *e*PN Pn 01 57 57.4 +1.7
KDJ Kajisay 5.38 84⇓*e*P Pn 01 57 57.4 +1.7
baz=84
KDJ ⇓*e*S Sn 01 58 57.1 -0.5
baz=84
MDOK Medeo 5.42 73 Pn Pn 01 57 58.1 +2.0
comp=E,5.3nm,0.8s
MDOK Pg Pb 01 58 13.1 +3.0
comp=E,8.9nm,0.5s
MDOK ⇓Pg Pg 01 58 13.7 -5.6
comp=E,20nm,0.8s
MDOK Lg Lg 01 59 19.8
comp=E,36nm,0.5s
MDOK ⇓Lg Lg 01 59 26.8
comp=E,70nm,0.8s
MDOK Medeo 5.42 73 *e*P Pb 01 58 13.1 +3.0
comp=E,8.9nm,0.5s
MDOK *e*S Sb 01 59 21.2 +6.2
comp=E,36nm,0.5s
MDOK Medeo 5.42 73 PN Pn 01 57 58.1 +2.0
KOTS Kotyrbulak 5.48 72 Pg Pb 01 58 14.6 +3.4
comp=E,7.6nm,0.3s
KOTS Lg Lg 01 59 25.1
comp=E,75nm,0.6s
KOTS Kotyrbulak 5.48 72 *e*P Pb 01 58 16.8 +5.6
comp=E,7.6nm,0.3s
KOTS *e*S Sg 01 59 27.3 -4.1
comp=E,75nm,0.6s
CHKK Chushkaly 5.57 66 Pg Pb 01 58 15.9 +3.3
comp=E,3.6nm,0.4s
CHKK Lg Lg 01 59 25.5
comp=E,39nm,0.2s
CHKK Chushkaly 5.57 66 *e*P Pb 01 58 15.9 +3.3
comp=E,3.8nm,0.4s
CHKK *e*S Sb 01 59 25.5 +6.3
comp=E,39nm,0.2s
ANVS Anan'yevo 5.80 77 *e*PN Pn 01 58 02.8 +1.4
ANVS Anan'yevo 5.80 77⇑*e*P Pn 01 58 02.8 +1.4
baz=77
ANVS ⇑*e*S Sn 01 59 06.6 -1.2
baz=77
ARXS Arharly 6.26 64 Pg Pb 01 58 27.7 +3.3
comp=E,8.0nm,0.3s
ARXS Lg Lg 01 59 45.7
comp=E,36nm,0.4s
ARXS Arharly 6.26 64 *e*P Pb 01 58 29.4 +5.0
comp=E,8.0nm,0.3s
ARXS *e*S Sb 01 59 48.6 +9.4
comp=E,36nm,0.4s
OTUK Ortayu 6.70 14 PN Pn 01 58 14.8 +1.1
GEYT Alibeck 9.89 251 Pn Pn 01 58 58.5 +1.1
comp=E,0.7nm,0.3s,baz=72,slow=9.6,SNR=9.2
GEYT Sn Sn 02 00 43.1 -5.2
comp=E,1.7nm,0.3s,baz=7.5,slow=28,SNR=7.1
GEYT LR LR 02 03 59.8
comp=E,52nm,18.4s,baz=122,slow=45
comp=E,0.9nm,0.3s
GYA0 ALIBECK ARRAY 9.89 251 P Pn 01 58 58.8 +1.4
GYA0B ALIBECK ARRAY 9.89 251 ⇓Pn Pn 01 58 58.8 +1.4
GYA0B ⇓Sn Sn 02 00 48.2 0.0
MAKZ Makanchi 9.97 56 ⇑Lg Lg 02 01 52.4
comp=E,4.8nm,0.6s
MK31 Makanchi Array 10.16 56 ⇓Pn Pn 01 59 01.5 +0.3
comp=E,1.0nm,0.4s,baz=241,slow=14,SNR=26
MK31 ⇑Lg Lg 02 01 57.0
comp=E,5.0nm,0.6s,baz=242,slow=26,SNR=3.9
MK31 Makanchi Array 10.16 56 *ce*P Pn 01 59 03.0 +1.9
MKAR Makanchi Array 10.16 56 Pn Pn 01 59 00.2 -0.9
comp=E,0.6nm,0.3s,baz=235,slow=13,SNR=12
MKAR Lg Lg 02 01 54.7
comp=E,0.7nm,0.3s,baz=238,slow=27,SNR=5.6
comp=E,0.4nm,0.3s
AB31 Akbulak array 10.28 320 ⇑Pn Pn 01 59 02.7 0.0
comp=E,4.2nm,0.8s,baz=133,slow=14,SNR=66
AB31 ⇓Sn Sn 02 00 55.7 -2.1
comp=E,6.2nm,0.5s,baz=130,slow=25,SNR=5.3
AB31 Akbulak array 10.28 320 P Pn 01 59 02.0 -0.7
KURBB Kurchatov Arra 10.66 31 ⇑Sn Sn 02 01 10.1 +3.1
comp=E,6.7nm,0.6s
KURBB ⇓Lg Lg 02 02 12.2
comp=E,34nm,0.8s
KURBB Kurchatov Arra 10.66 31 Pn Pn 01 59 05.7 -2.2
comp=E,0.1nm,0.3s,baz=219,slow=13,SNR=4.7
KURBB Sn Sn 02 01 03.9 -3.0
comp=E,0.2nm,0.3s,baz=350,slow=27,SNR=6.3
KURBB Lg Lg 02 02 10.3
comp=E,0.2nm,0.3s,baz=228,slow=30,SNR=5.5
comp=E,0.3nm,0.4s
KURK Kurchatov 10.77 31 ⇑Lg Lg 02 02 13.8
comp=E,16nm,0.7s
KURK Kurchatov 10.77 31 ⇓*e*P Pn 01 59 11.0 +1.7
BVA0 Borovoye Array 11.28 1 Pn Pn 01 59 15.8 -0.5
comp=E,1.1nm,0.3s,baz=144,slow=14,SNR=12
BVA0 ⇑Sn Sn 02 01 21.1 -1.0
comp=E,7.3nm,1.1s
BVA0 ⇓Lg Lg 02 02 30.2
comp=E,14nm,1.1s,baz=163,slow=26,SNR=4.1
BVA0 Borovoye Array 11.28 1 P Pn 01 59 15.8 -0.5
BVA0 SN Sn 02 01 21.1 -1.0
BVAR Borovoye Array 11.28 1 Pn Pn 01 59 16.0 -0.4
comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=13
BVAR Sn Sn 02 01 23.0 +0.9
comp=E,0.1nm,0.3s,baz=161,slow=23,SNR=5.7
comp=E,0.7nm,0.4s
BRVK Borovoye 11.31 1 ⇑Pn Pn 01 59 18.1 +1.3
comp=E,3.6nm,1.0s
BRVK ⇓Lg Lg 02 02 29.8
comp=E,17nm,1.1s
BRVK Borovoye 11.31 1 ⇓*e*P Pn 01 59 18.9 +2.1
AKTO Aktyubinsk 12.00 320 ⇑Pn Pn 01 59 27.4 +1.2
comp=E,4.4nm,0.9s
AKTO ⇓Sn Sn 02 01 37.5 -2.3
comp=E,4.8nm,0.6s
AKTO Aktyubinsk 12.00 320 Pn Pn 01 59 26.4 +0.2
comp=E,0.3nm,0.3s,baz=118,slow=15,SNR=9.8
AKTO Sn Sn 02 01 35.3 -4.5
comp=E,1.3nm,0.3s,baz=350,slow=20,SNR=8.5
comp=E,1.1nm,0.5s
ZALV Zalesovo Beam 15.71 34 Pn Pn 02 00 15.2 -1.1
comp=E,0.2nm,0.3s,baz=230,slow=14,SNR=3.3
ZALV Sn Sn 02 03 01.1 -9.0
comp=E,0.1nm,0.3s,baz=226,slow=18,SNR=2.5
comp=E,0.5nm,0.3s
ARU Arti 16.44 337 ⇑*e*P Pn 02 00 27.6 +1.8
ARU Arti 16.44 337 Pn Pn 02 00 25.9 +0.1
comp=E,0.4nm,0.3s,baz=165,slow=4.2,SNR=10
ARU Sn Sn 02 03 17.9 -10
comp=E,0.6nm,0.3s,baz=114,slow=20,SNR=2.3
MNK Minsk 30.38 309 *i* P P 02 02 42.1 -4.9
comp=E,6.0nm,1.0s
MNK *i* P P 02 02 42.1 -4.9
comp=N,12nm,1.0s
MNK *i* P P 02 02 42.1 -4.9
comp=E,7.0nm,0.9s,baz=97
MNK *i* PP PnPn 02 03 40.3 -4.8
MNK *i* PPP PPP 02 03 48.6
MNK *i* S S 02 07 42.0 -4.8
MNK *i* SS SnSn 02 09 18.4 -3.4
MNK *i* SSS SSS 02 09 33.0
MNK *i* LQ LQ 02 12 34.9
MNK *i* LR LR 02 14 53.4
MNK *i* LRM MLR 02 16 30.5
comp=E,193nm,21.1s
MNK *i* LRM MLR 02 16 30.5
comp=Z,37nm,14.1s
MNK *i* LRM MLR 02 16 40.8
comp=N,604nm,21.7s
MNK Minsk 30.38 309 *i* P P 02 02 42.0 -4.9
MNK *i* PPP PPP 02 03 48.6
MNK *i* 02 05 41.7
MNK *i* S S 02 07 42.0 -4.8
MNK *i* SS SnSn 02 09 18.3 -3.4
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=E,6.0nm,1.0s
MNK pmax pmax
comp=N,12nm,1.0s
MNK MLR MLR
comp=E,193nm,21.0s
MNK MLR MLR
comp=Z,37nm,14.0s
MNK MLR MLR
comp=N,604nm,22.0s
FINES FINESS Array B 32.77 322 P P 02 03 09.2 +1.3
comp=N,1.8nm,0.6s,baz=111,slow=9.9,SNR=11
comp=N,1.8nm,0.6s
ARCES ARCESS Array B 36.02 335 *e*P P 02 03 37.3 +1.3
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 36.02 335 P P 02 03 37.2 +1.2
comp=Z,2.8nm,0.9s,baz=101,slow=6.3,SNR=5.3
comp=Z,2.8nm,0.9s
HFS Hagfors 38.53 318 P P 02 03 58.1 +0.7
comp=Z,1.2nm,0.4s,baz=94,slow=11,SNR=7.4
comp=Z,1.2nm,0.4s
NOA NORSAR Array B 39.79 319 P P 02 04 08.2 +0.3
comp=Z,0.4nm,0.6s,baz=107,slow=3.5,SNR=1.1
comp=Z,0.4nm,0.6s
EKA Eskdalemuir Ar 48.05 313 P P 02 05 13.8 -0.4
comp=Z,2.0nm,0.9s,baz=75,slow=8.9,SNR=3.5
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 76.03 2 *i* P P 02 08 21.7 -0.4
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 76.03 2 P P 02 08 22.2 +0.1
comp=Z,0.4nm,0.7s,baz=350,slow=6.3,SNR=8.6
comp=Z,0.4nm,0.7s
WRA Warramunga Arr 85.43 122 P P 02 09 12.5 -0.5
comp=Z,0.5nm,1.0s,baz=327,slow=4.9,SNR=1.9
comp=Z,0.5nm,1.0s

ISC 05 01:57:23.0±0.8, 24°20N±0°01×121°77E±0°02, h11^{km}±5^{km}, n104, σ0°80/175, 3C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	ISC
EHP	**Heping Village** baz=1.0	**0.11**	**347**	P	**Pg**	**01 57 26.1**	**+0.1**
EHP				S	**Sg**	**01 57 28.4**	**+0.3**
EAHA	**Aohua** baz=356	**0.13**	**348**	*i* P	**Pg**	**01 57 26.4**	**+0.2**
EAHA				*i* S	**Sg**	**01 57 28.9**	**+0.3**
ETL	**Fush Village** baz=249	**0.14**	**253**	⇓*i*P	**Pg**	**01 57 26.3**	**0.0**
ETL				*i* S	**Sg**	**01 57 28.9**	**+0.2**
NACB	**Ninganchiao**	**0.16**	**261**	P	**Pg**	**01 57 26.6**	**-0.1**
NACB	**Ninganchiao** baz=251	**0.16**	**261**	⇓*i*P	**Pg**	**01 57 26.5**	**-0.1**
NACB				S	**Sg**	**01 57 29.1**	**-0.2**
TWD	**Chiawan** baz=234	**0.20**	**233**	⇓*i*P	**Pg**	**01 57 27.1**	**-0.1**
TWD				S	**Sg**	**01 57 30.9**	**+0.7**
ENA	**Nanau**	**0.23**	**354**	⇑*i*P	**Pg**	**01 57 28.0**	**+0.1**
ENA				*i* S	**Sg**	**01 57 31.4**	**+0.3**
EWUT	**Wuta** baz=6.0	**0.25**	**2**	*i* P	**Pg**	**01 57 28.4**	**+0.2**
EWUT				*i* S	**Sg**	**01 57 32.2**	**+0.6**
ETLH	**Xiulin Townshi** baz=271	**0.26**	**272**	P	**Pg**	**01 57 28.3**	**-0.2**
ETLH				*e*S	**Sg**	**01 57 32.6**	**+0.5**
HWA	**Hwalien** baz=219	**0.27**	**214**	P	**Pg**	**01 57 28.8**	**+0.3**
ETM	**Tongmen** baz=225	**0.34**	**227**	P	**Pg**	**01 57 29.8**	**-0.1**
ETM				*e*S	**Sg**	**01 57 35.0**	**+0.6**
LXIB	**Xiulin Townshi** baz=240	**0.37**	**241**	P	**Pg**	**01 57 30.2**	**-0.3**
LXIB				S	**Sg**	**01 57 35.6**	**+0.2**
ESAO	**Su ao** baz=13	**0.38**	**10**	P	**Pg**	**01 57 30.7**	**+0.1**
ESAO				S	**Sg**	**01 57 35.9**	**+0.2**
LATG	**Datong** baz=328	**0.40**	**327**	⇓*i*P	**Pg**	**01 57 31.1**	**+0.1**
LATG				*i* S	**Sg**	**01 57 36.5**	**+0.1**
TWC	**Suao** baz=7.0	**0.41**	**10**	⇑*i*P	**Pg**	**01 57 31.4**	**+0.2**
TWC				*i* S	**Sg**	**01 57 37.2**	**+0.4**
NNSB	**Datong** baz=304	**0.42**	**303**	⇓P	**Pg**	**01 57 31.4**	**+0.1**
NNSB				S	**Sg**	**01 57 36.7**	**-0.3**
NNSH	**Datong** baz=304	**0.42**	**303**	P	**Pg**	**01 57 31.4**	**0.0**
NNSH				S	**Sg**	**01 57 36.9**	**-0.1**
NNS	**Nan Shan** baz=305	**0.43**	**304**	⇓*i*P	**Pg**	**01 57 31.6**	**0.0**
NNS				*i* S	**Sg**	**01 57 37.4**	**0.0**
NDS	**Dongshan** baz=356	**0.43**	**354**	P	**Pg**	**01 57 31.9**	**+0.3**
NDS				S	**Sg**	**01 57 37.8**	**+0.4**
SHUL	**Shoufeng** baz=210	**0.45**	**205**	P	**Pb**	**01 57 32.9**	**-0.1**
SHUL				S	**Sb**	**01 57 42.2**	**+2.5**
WHF	**Hehuan Shan** baz=263	**0.46**	**263**	*i* P	**Pg**	**01 57 32.1**	**-0.1**
WHF				S	**Sg**	**01 57 38.4**	**-0.1**
NDT	**Datong Townshi** baz=331	**0.47**	**330**	⇓*i*P	**Pb**	**01 57 32.5**	**-0.8**
NDT				*i* S	**Sb**	**01 57 38.9**	**-1.2**
ENTT	**Nioudou** baz=340	**0.48**	**337**	P	**Pb**	**01 57 32.8**	**-0.6**
ENTT				S	**Sg**	**01 57 39.2**	**+0.5**
FUSS	**Fushou** baz=276	**0.48**	**276**	P	**Pg**	**01 57 32.6**	**+0.1**
FUSS				S	**Sg**	**01 57 39.1**	**+0.2**
ESL	**Shilin** baz=226	**0.49**	**219**	P	**Pg**	**01 57 32.6**	**-0.1**
ESL				*e*S	**Sb**	**01 57 40.6**	**-0.2**
TWE	**Neicheng** baz=353	**0.53**	**350**	⇑*i*P	**Pb**	**01 57 33.7**	**-0.6**
TWE				*i* S	**Sg**	**01 57 40.8**	**+0.5**
TEGC	**Jichi Village** baz=192	**0.53**	**203**	*e*P	**Pg**	**01 57 33.6**	**+0.3**
TEGC				*e*S	**Sn**	**01 57 44.3**	**-1.1**
TWT	**Tachien** baz=275	**0.54**	**276**	⇓*i*P	**Pb**	**01 57 34.1**	**-0.6**
TWT				S	**Sb**	**01 57 41.2**	**-1.3**
CHGB	**Renai** baz=248	**0.56**	**256**	*i* P	**Pb**	**01 57 34.2**	**-0.8**
CHGB				*i* S	**Sg**	**01 57 41.6**	**+0.2**
TDCB	**Techi** baz=276	**0.56**	**276**	P	**Pb**	**01 57 34.1**	**-0.8**
TDCB				S	**Sg**	**01 57 41.0**	**-0.4**
ILA	**Ilan** baz=355	**0.56**	**358**	P	**Pb**	**01 57 34.6**	**-0.3**
ILA				S	**Sb**	**01 57 42.8**	**-0.1**
FUSB	**Fushanzhiwuyua** baz=345	**0.58**	**344**	P	**Pg**	**01 57 34.5**	**+0.2**
FUSB				S	**Sg**	**01 57 41.8**	**-0.3**
YHNB	**Yeheng**	**0.59**	**323**	P	**Pb**	**01 57 34.9**	**-0.5**
YHNB	**Yeheng** baz=324	**0.59**	**323**	⇓*i*P	**Pb**	**01 57 34.8**	**-0.6**
YHNB				*i* S	**Sg**	**01 57 42.5**	**+0.1**
WARBT	**Fenglin Townsh** baz=223	**0.59**	**216**	P	**Pg**	**01 57 34.3**	**-0.3**
WARBT				S	**Sb**	**01 57 43.5**	**-0.3**
OWD	**Renai** baz=246	**0.59**	**246**	P	**Pg**	**01 57 34.6**	**0.0**
NSK	**Sanguang** baz=323	**0.60**	**322**	⇓*i*P	**Pb**	**01 57 35.0**	**-0.7**
NSK				*i* S	**Sb**	**01 57 43.0**	**-1.2**
WUSB	**Renai** baz=243	**0.63**	**251**	⇓*i*P	**Pg**	**01 57 35.3**	**0.0**
WUSB				*i* S	**Sg**	**01 57 43.1**	**-0.5**
VWDT	**VWDT** baz=232	**0.72**	**232**	P	**Pg**	**01 57 37.0**	**0.0**
VWDT				*e*S	**Sb**	**01 57 47.4**	**-0.1**
NFF	**Wufeng Townshi** baz=307	**0.73**	**306**	P	**Pb**	**01 57 37.6**	**-0.2**
NFF				S	**Sb**	**01 57 47.4**	**-0.5**
WHP	**Taichung City** baz=276	**0.76**	**276**	P	**Pb**	**01 57 38.0**	**-0.2**
WHP				S	**Sb**	**01 57 47.9**	**-0.6**
HGSD	**Ruisui** baz=194	**0.77**	**204**	P	**Pb**	**01 57 38.4**	**0.0**
TIPB	**Shuangxi** baz=5.0	**0.77**	**4**	P	**Pg**	**01 57 38.1**	**+0.2**
TIPB				S	**Sg**	**01 57 47.7**	**-0.4**
NHDH	**Xindian Distri** baz=345	**0.79**	**344**	*e*P	**Pn**	**01 57 39.8**	**-0.3**
NHDH				*e*S	**Sb**	**01 57 49.3**	**-0.2**
WCS	**Beigang Elemen** baz=252	**0.80**	**260**	*e*P	**Pb**	**01 57 38.3**	**-0.5**

*JMA **05** 01:57:22.9±0.1, 24°.2N±0°.4×121°.7E±0°.7, h16^{km}, MV2.8/12, TAIWAN REGION*
*TAP **05** 01:57:23.0, 24°.20N×121°.75E, h12^{km}, ML3.6, C*
*ASIES **05** 01:57:23.0, 24°.20N×121°.75E, h12^{km}, ML3.6, Mw3.1, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-1.75; $M_{\theta\theta}$5.48; $M_{\phi\phi}$-4.05; $M_{r\theta}$1.93; $M_{\theta\phi}$-2.23; $M_{r\phi}$1.88; Fault plane solution: $M_0$6.07895×10^{20} NP1: ϕ_s241.59000°, δ77.46000°, λ-149.98000°. NP2: ϕ_s144.44000°, δ60.77000°, λ-14.40000°. Principal axes: T Plg11.0600°, Azm10.1850°; N Plg57.6990°, Azm262.1750°; P Plg29.9170°, Azm106.6430°;*

WCS				*e*S	**Sb**	**01 57 49.4 -0.2**
	baz=252					
EHY	**Hungye**	**0.80**	**211**	P	**Pg**	**01 57 37.2 -1.3**
	baz=224					
TATO	**Taipei**	**0.81**	**342**	P	**Pn**	**01 57 40.1 -0.3**
LIOB	**Emei**	**0.82**	**303**	P	**Pb**	**01 57 39.3 +0.1**
	baz=303					
LIOB				*e*S	**Sb**	**01 57 50.5 +0.2**
	baz=303					
NSTT	**Nanjuang**	**0.82**	**302**	*e*P	**Pb**	**01 57 39.3 0.0**
	baz=303					
TWB1	**Santiao Chiao**	**0.83**	**14**	*e*P	**Pg**	**01 57 39.2 +0.2**
	baz=15					
TWB1				*e*S	**Sg**	**01 57 49.8 -0.1**
	baz=15					
SSLB	**Suanglung**	**0.85**	**241**	P	**Pg**	**01 57 39.3 -0.2**
SSLB	**Suanglung**	**0.85**	**241**	P	**Pg**	**01 57 39.2 -0.2**
	baz=250					
SSLB				S	**Sg**	**01 57 49.4 -1.1**
	baz=250					
SMLT	**Sun Moon Lake**	**0.85**	**249**	P	**Pb**	**01 57 39.7 -0.2**
	baz=248					
SMLT				S	**Sb**	**01 57 51.0 -0.4**
	baz=248					
NWF	**Wu-fen Shan**	**0.87**	**1**	P	**Pb**	**01 57 40.2 +0.1**
	baz=353					
NWF				S	**Sg**	**01 57 51.1 -0.1**
	baz=353					
WFSB	**Wu-fen Shan**	**0.87**	**1**	P	**Pb**	**01 57 40.3 +0.2**
	baz=354					
WFSB				S	**Sg**	**01 57 50.8 -0.4**
	baz=354					
SXI1	**Grass Mountain**	**0.90**	**6**	P	**Pb**	**01 57 40.6 0.0**
	baz=7.0					
SXI1				S	**Sg**	**01 57 52.1 +0.1**
	baz=7.0					
YULB	**Yu-li**	**0.91**	**208**	P	**Pg**	**01 57 40.1 -0.5**
YULB	**Yu-li**	**0.91**	**208**	*e*P	**Pg**	**01 57 39.8 -0.8**
	baz=219					
YULB				*e*S	**Sn**	**01 57 54.2 -0.6**
	baz=219					
TWQ1	**Liyutan**	**0.92**	**279**	P	**Pn**	**01 57 42.1 +0.3**
	baz=280					
TWQ1				S	**Sn**	**01 57 54.9 -0.2**
	baz=280					
EYUL	**Yuli**	**0.94**	**206**	*e*P	**Pn**	**01 57 42.1 -0.1**
	baz=221					
TNOU	**National Taiwa**	**0.95**	**0**	*e*P	**Pb**	**01 57 41.6 +0.2**
	baz=1.0					
TWF1	**Yuli**	**0.95**	**207**	P	**Pg**	**01 57 40.7 -0.6**
	baz=217					
TWF1				*e*S	**Sn**	**01 57 55.4 -0.3**
	baz=217					
NMLH	**Miaoli**	**0.95**	**291**	*e*P	**Pn**	**01 57 42.5 +0.2**
	baz=291					
NMLH				*e*S	**Sn**	**01 57 55.2 -0.7**
	baz=291					
YM01	**YM01**	**0.96**	**349**	*e*P	**Pn**	**01 57 42.3 -0.2**
	baz=350					
WHYT	**Xinyi Township**	**0.97**	**239**	*e*P	**Pb**	**01 57 41.7 -0.2**
	baz=246					
WHYT				*e*S	**Sn**	**01 57 55.9 -0.6**
	baz=246					
NTST	**Danshui**	**1.00**	**343**	*e*S	**Sn**	**01 57 58.0 +0.8**
	baz=352					
ANP	**Anpu**	**1.01**	**347**	*e*P	**Pb**	**01 57 42.7 +0.1**
	baz=348					
WJS	**Zhushan**	**1.02**	**249**	*e*P	**Pn**	**01 57 43.2 -0.1**
	baz=244					
WJS				*e*S	**Sn**	**01 57 58.4 +0.8**
	baz=244					
WDJ	**Dajia District**	**1.04**	**278**	*e*P	**Pn**	**01 57 44.2 +0.7**
	baz=279					
WDJ				*e*S	**Sn**	**01 57 59.6 +1.6**
	baz=279					
WNT	**Mingjian**	**1.04**	**252**	*e*P	**Pn**	**01 57 44.1 +0.5**
	baz=248					
WNT				*e*S	**Sn**	**01 57 59.6 +1.5**
	baz=248					
CHKH	**Chenggong**	**1.06**	**199**	*e*P	**Pb**	**01 57 42.7 -0.7**
	baz=191					
CHKH				*e*S	**Sn**	**01 57 59.0 +0.6**
	baz=191					
TWY	**Chenhua**	**1.08**	**352**	*e*P	**Pn**	**01 57 44.8 +0.7**
	baz=338					
JYNG	**Yonagunijimaku**	**1.10**	**77**	P	**Pn**	**01 57 44.5 +0.1**
WCHH	**Zhanghua**	**1.11**	**264**	*e*P	**Pn**	**01 57 45.3 +0.8**
	baz=265					
ALS	**Alishan**	**1.12**	**232**	P	**Pb**	**01 57 44.1 -0.4**
	baz=233					
ALS				*e*S	**Sn**	**01 58 00.6 +0.3**
	baz=233					
CHKT	**Chengkung**	**1.16**	**199**	*e*P	**Pb**	**01 57 44.3 -0.7**
	baz=185					
YOJ	**Yonaguni jima**	**1.16**	**77**	P	**Pb**	**01 57 45.4 +0.3**
YOJ	**Yonaguni jima**	**1.16**	**77**	*e*P	**Pb**	**01 57 45.3 +0.2**
CHN5	**Tsauling**	**1.16**	**239**	*e*P	**Pg**	**01 57 45.5 +0.1**
	baz=241					
CHN5				*e*S	**Sn**	**01 58 02.8 +1.6**
	baz=241					
EHD	**Haiduan**	**1.17**	**206**	*e*P	**Pb**	**01 57 44.8 -0.4**
	baz=208					
ELDTW	**Lidau**	**1.22**	**215**	*e*P	**Pn**	**01 57 44.7 -1.4**
	baz=216					
WDLH	**Douliu**	**1.23**	**246**	*e*P	**Pg**	**01 57 46.9 +0.1**
	baz=247					
WRL	**Guolierlin Hig**	**1.31**	**257**	*e*P	**Pb**	**01 57 47.4 -0.2**
	baz=258					
WRL				*e*S	**Sg**	**01 58 06.1 +1.0**
	baz=258					
WCKO	**Fanlu**	**1.31**	**235**	P	**Pg**	**01 57 48.3 +0.2**
	baz=237					
WCKO				S	**Sg**	**01 58 07.0 +1.9**
	baz=237					
CHN4	**Tsaushan**	**1.37**	**232**	P	**Pg**	**01 57 48.8 -0.5**
	baz=234					
CHN4				S	**Sg**	**01 58 10.2 +3.1**
	baz=234					
STYH	**Taoyuan**	**1.37**	**222**	*e*P	**Pn**	**01 57 47.7 -0.3**
	baz=224					
TPUB	**Ta-pu**	**1.37**	**230**	P	**Pb**	**01 57 48.8 +0.1**
TPUB	**Ta-pu**	**1.37**	**230**	P	**Pb**	**01 57 48.5 -0.3**
	baz=220					
TPUB				*e*S	**Sg**	**01 58 09.2 +1.9**
	baz=220					
LONT	**Longtian**	**1.41**	**205**	*e*P	**Pn**	**01 57 48.2 -0.5**
	baz=206					
WTP	**Ta-pu**	**1.42**	**228**	P	**Pb**	**01 57 49.6 +0.1**
	baz=219					
WTP				S	**Sg**	**01 58 10.9 +2.1**
	baz=219					
TWK	**Hsinying**	**1.50**	**232**	*i* P	**Pb**	**01 57 50.8 -0.1**
	baz=234					
TWK				S	**Sg**	**01 58 13.0 +1.8**
	baz=234					
TWG	**Pinlang**	**1.51**	**205**	*e*P	**Pn**	**01 57 46.9 -3.1**
	baz=191					
TWGBT	**Beinan**	**1.51**	**205**	P	**Pn**	**01 57 48.2 -1.8**
TWGBT	**Beinan**	**1.51**	**205**	*e*P	**Pn**	**01 57 47.1 -2.9**
	baz=191					
SNST	**Tainan City**	**1.52**	**230**	*e*P	**Pg**	**01 57 51.8 -0.4**
	baz=233					
SNST				*e*S	**Sg**	**01 58 13.8 +1.9**
	baz=233					
CHN1	**Nanshi**	**1.52**	**229**	P	**Pb**	**01 57 51.4 +0.2**
	baz=221					
CHN1				S	**Sg**	**01 58 14.9 +2.9**
	baz=221					
SGST	**Jiashian**	**1.56**	**225**	*e*P	**Pn**	**01 57 50.8 +0.2**
	baz=227					
SLGT	**Liugui**	**1.58**	**221**	P	**Pb**	**01 57 51.7 -0.6**
	baz=223					
SLGT				S	**Sg**	**01 58 15.1 +1.2**
	baz=223					
ICHU	**Yijhu**	**1.60**	**239**	*e*P	**Pb**	**01 57 52.2 -0.3**
	baz=242					
TSMG	**Majia**	**1.81**	**215**	P	**Pb**	**01 57 55.5 -0.7**
	baz=230					
TSMG				*e*S	**Sg**	**01 58 19.9 -1.3**
	baz=230					
MASBT	**Mashibuluo**	**1.89**	**214**	*e*P	**Pn**	**01 57 56.2 +1.0**
	baz=216					
JKRS	**Kuro-shima**	**2.05**	**88**	*e*P	**Pn**	**01 57 57.9 +0.6**
JKRS				*e*S	**Sb**	**01 58 24.9 -0.7**
JIJ	**Ishigaki jima**	**2.17**	**85**	*e*P	**Pn**	**01 57 58.4 -0.7**
JIJ				S	**Sn**	**01 58 25.7 -0.3**
JISG	**Ishigakijimahi**	**2.35**	**80**	*e*P	**Pn**	**01 58 01.5 0.0**
JISG				*e*S	**Sn**	**01 58 30.9 +0.6**

IDC 05 02:18:06.3±6.3, 4°63S×133°97E, h0km, mb3.2/1, mbtmp3.2/3, ML3.0/2, MS2.8/1, Error ellipse: s-maj=349.8km s-min=34.6km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.23**	**179**	Pn	Pn	02 21 41.3	-1.5
	0.1nm,0.3s,baz=358,slow=13,SNR=2.1						
WRA				Sn	Sn	02 24 20.1	-12
	0.1nm,0.3s,baz=359,slow=23,SNR=3.5						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**18.93**	**180**	P	Pn	02 22 29.6	+0.1
	baz=1.9,slow=11,SNR=3.1						
	0.5nm,0.8s						
GUMO	**Guam**	**21.09**	**31**	LR	LR	02 30 36.3	
	comp=Z,25nm,20.7s,baz=90,slow=36						
MKAR	**Makanchi Array**	**68.50**	**325**	P	P	02 29 10.5	0.0
	0.1nm,0.5s,baz=110,slow=7.0,SNR=1.5						
	0.1nm,0.5s						

*MDD **05** 02:21:22.6±0.5, 40°.48N×3°.84W, h3km±14km, mb_Lg2.0/14, Error ellipse: s-maj=3.1km s-min=2.8km az=129.0*
*SFS **05** 02:21:24.9, 40°.59N×3°.68W, h4km, ML3.0/4, ML3.0/4, MLv3.0/4*

ISC 05 02:21:21.3±1.2, 40°.50N±0°.05×3°.82W±0°.04, h9km±14km, n9, σ1ŝ15/16, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUD	**Guadarrama**	**0.29**	**299**	Pg	**Pg**	**02 21 27.1**	**-0.1**
GUD				Sg	**Sg**	**02 21 30.8**	**-0.3**
GUD				*i* Vmb_Lg		02 21 31.0	
UCM	**Universidad Co**	**0.48**	**113**	Sg	**Sb**	**02 21 39.5**	**+0.4**
UCM				Pg	**Pb**	**02 21 32.3**	**+0.4**
ESDC	**Sonseca Array**	**0.83**	**188**	Pg	Pg	02 21 31.9	-5.3
ESDC				Sg	**Sb**	**02 21 49.6**	**+0.3**
ESDC				*i* Vmb_Lg		02 21 52.7	
PAB	**San Pablo**	**1.04**	**203**	Pg	**Pg**	**02 21 41.7**	**+0.5**
PAB				Sg	**Sg**	**02 21 55.0**	**+0.4**
PAB				*i* Vmb_Lg		02 21 57.7	
ETOR	**Torete**	**1.38**	**76**	Pg	**Pg**	**02 21 48.6**	**+0.9**
ETOR				Sg	**Sn**	**02 22 06.1**	**+0.8**
ETOR				*i* Vmb_Lg		02 22 09.7	
EADA	**Adamuz**	**2.40**	**194**	Sn	**Sb**	**02 22 35.3**	**+0.9**
EADA				Pn	**Pb**	**02 22 03.9**	**-0.8**
ETOB	**Tobarra**	**2.55**	**136**	Pn	**Pb**	**02 22 05.3**	**-1.9**
ETOB				Sn	**Sb**	**02 22 36.3**	**-2.5**
ECAB	**El Cabril**	**2.72**	**208**	Pn	**Pb**	**02 22 11.0**	**+0.9**
ECAB				Sn	**Sb**	**02 22 42.5**	**-1.1**
EBAD	**Badajoz**	**3.02**	**236**	Sn	**Sb**	**02 22 51.6**	**-0.5**

*AEIC **05** 02:37:30.4±1.2, 56°.54N±0°.10×148°.7W±0°.1, h12km±8km, Error ellipse: s-maj=14.2km s-min=8.6km az=164.0*

NEIC 05 02:37:26.4±1.4, 56°.6N±0°.1×148°.7W±0°.1, h21km±10km, ML3.5/46, ML3.1(AEIC), **Error ellipse: s-maj=15.4km s-min=8.1km az=166.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.47**	**301**		Pn	02 38 05.3	-0.1
KDAK					Sn	02 38 33.3	-1.5
OHAK	**Old Harbor**	**2.63**	**287**	Pn	Pn	02 38 07.1	-0.5
OHAK				Sn	Sn	02 38 36.1	-2.7
SYI	**Shuyak Island**	**2.88**	**317**	Pn	Pn	02 38 11.0	+0.1
SYI				Sn	Sn	02 38 44.3	-0.7
SII	**Sitkinak Islan**	**3.06**	**272**	Pn	Pn	02 38 12.6	-1.0
SII				IAML		02 39 10.5	
	comp=E,79nm,1.4s						
Q23K	**Middleton Isla**	**3.13**	**22**	Pn	Pn	02 38 13.6	-0.8
Q23K				IAML		02 39 06.1	
	comp=N,144nm,1.3s						
MID	**Middleton Isla**	**3.13**	**22**	Pn	Pn	02 38 12.7	-1.7
MID				IAML		02 39 06.1	
	comp=N,121nm,1.3s						
CNPM	**China Poot**	**3.28**	**336**	Pn	Pn	02 38 15.3	-1.2
CNPM				Sn	Sn	02 38 53.1	-1.7
BRSE	**Bradley Lake S**	**3.38**	**342**		Pn	02 38 17.8	-0.1
BRSE					Sn	02 38 55.5	-1.9
BRLK	**Bradley Lake**	**3.43**	**341**	Pn	Pn	02 38 18.3	-0.3
HOM	**Homer**	**3.49**	**334**	Pn	Pn	02 38 18.3	-1.1
P23K	**Montague Islan**	**3.51**	**10**		Pn	02 38 19.6	-0.1
Q19K	**Cape Douglas,**	**3.58**	**314**	Pn	Pn	02 38 20.7	+0.1
KAHG	**Katmai Hook Gl**	**3.73**	**304**		Pn	02 38 24.3	+1.7
P19K	**Oil Pt**	**3.94**	**324**	Pn	Pn	02 38 25.5	-0.1
HIN	**Hinchinbrook I**	**4.01**	**15**	Pn	Pn	02 38 24.8	-1.8
KAIM	**Kayak Island**	**4.05**	**32**	Pn	Pn	02 38 27.1	0.0
ANCK	**Angle Creek**	**4.05**	**297**		Pn	02 38 28.2	+1.0
O20K	**Slope Mountain**	**4.11**	**331**		Pn	02 38 28.4	+0.5
IVE	**Iliamna Volcan**	**4.17**	**328**		Pn	02 38 28.7	-0.1
CNTC	**Contact Creek**	**4.27**	**297**		Pn	02 38 31.7	+1.5
EYAK	**Cordova Ski Ar**	**4.28**	**20**	Pn	Pn	02 38 29.4	-0.8
FID	**Port Fidalgo**	**4.36**	**14**	Pn	Pn	02 38 30.5	-0.7
SUCK	**Suckling Hills**	**4.36**	**34**	Pn	Pn	02 38 31.4	0.0
RAGM	**Ragged Mountai**	**4.37**	**27**	Pn	Pn	02 38 31.5	0.0
HMT	**Hamilton**	**4.44**	**29**	Pn	Pn	02 38 31.3	-1.1
NICHA	**Nichawak Mount**	**4.44**	**32**		Pn	02 38 33.1	+0.7
RED	**Redoubt Volcan**	**4.44**	**333**		Pn	02 38 32.5	0.0
RDSO	**Redoubt South**	**4.46**	**333**		Pn	02 38 32.5	-0.3
P18K	**Big Mountain,**	**4.51**	**312**	Pn	Pn	02 38 33.2	-0.3
BERG	**Berg Lake**	**4.64**	**32**	Pn	Pn	02 38 35.3	+0.2
SNH	**Sunshine Point**	**4.75**	**38**	Pn	Pn	02 38 36.9	+0.2
O18K	**Koktuh Hills**	**4.79**	**316**	Pn	Pn	02 38 36.8	-0.5
WAX	**Waxell Ridge**	**4.95**	**35**	Pn	Pn	02 38 39.0	-0.4
ISLE	**Juniper Island**	**5.23**	**37**	Pn	Pn	02 38 43.3	0.0
VRDI	**Verde Repeater**	**5.40**	**28**	Pn	Pn	02 38 46.0	+0.2
GLB	**Gilahina Butte**	**5.50**	**25**	Pn	Pn	02 38 47.6	+0.6
TABL	**Table Mountain**	**5.54**	**42**	Pn	Pn	02 38 48.1	+0.4
N18K	**Kilae Creek**	**5.60**	**321**	Pn	Pn	02 38 48.5	+0.1
MCARA	**McCarthy VSAT**	**5.65**	**29**	Pn	Pn	02 38 49.2	+0.2
BARN	**Barnard Glacie**	**5.79**	**36**	Pn	Pn	02 38 51.2	+0.1
CTGM	**Chitina Glacie**	**5.83**	**38**	Pn	Pn	02 38 51.2	-0.4
BCPM	**Bancas Point**	**5.85**	**51**	Pn	Pn	02 38 51.4	-0.3
O16K	**Kokwok River B**	**5.86**	**305**	Pn	Pn	02 38 51.6	-0.3
N17K	**Nushagak Hills**	**5.98**	**315**	Pn	Pn	02 38 54.4	+0.8
P29M	**Windy Craggy**	**6.55**	**57**	Pn	Pn	02 39 01.6	+0.1
M17K	**Holitna River**	**6.65**	**321**	Pn	Pn	02 39 02.5	-0.2
S31K	**Pelican**	**6.88**	**73**	Pn	Pn	02 39 05.0	-0.9
M16K	**Timber Creek**	**6.98**	**314**	Pn	Pn	02 39 06.7	-0.6
N15K	**Kwethluk River**	**7.02**	**306**	Pn	Pn	02 39 08.4	+0.5
L16K	**Owhat River**	**7.59**	**317**	Pn	Pn	02 39 16.6	+1.0
M29M	**Somme Creek**	**7.85**	**37**	Pn	Pn	02 39 20.0	+0.7
WHY	**Whitehorse**	**8.28**	**55**	Pn	Pn	02 39 25.8	+0.7
L29M	**L29M**	**8.43**	**34**	Pn	Pn	02 39 28.2	+1.0
K29M	**Barlow Dome**	**9.16**	**33**	Pn	Pn	02 39 38.0	+0.8
M31M	**Drury Creek, Y**	**9.21**	**46**	Pn	Pn	02 39 38.5	+0.8

*NEIC **05** 02:39:00.6±1.9, 56°.41N±0°.09×148°.6W±0°.1, h28km±9km, ML3.6/66, ML3.3(AEIC), Error ellipse: s-maj=12.9km s-min=8.4km az=171.0*
*AEIC **05** 02:39:04.6±1.7, 56°.51N±0°.08×148°.60W±0°.10, h11km±7km, Error ellipse: s-maj=12.4km s-min=7.3km az=165.0*

ISC 05 02:39:01.1±1.4, 56°.47N±0°.10×148°.63W±0°.07, h35km, n232, σ1ŝ22/215, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.52**	**303**	Pn	**Pn**	**02 39 40.2**	**+0.7**
KDAK	**Kodiak Island**	**2.52**	**303**		**Sn**	**02 40 08.6**	**-0.5**
OHAK	**Old Harbor**	**2.67**	**288**	Pn	**Pn**	**02 39 41.5**	**0.0**
OHAK				Sn	**Sn**	**02 40 10.7**	**-1.9**
OHAK	**Old Harbor**	**2.67**	**288**	P	**Pn**	**02 39 42.3**	**+0.8**
	baz=104						
OHAK				S	**Sn**	**02 40 11.3**	**-1.3**
	baz=104						
SYI	**Shuyak Island**	**2.95**	**318**	Pn	**Pn**	**02 39 45.3**	**-0.1**
Q20K	**Shuyak Island**	**2.95**	**318**	P	**Pn**	**02 39 46.5**	**+1.1**
	baz=134						
Q20K				S	**Sn**	**02 40 19.9**	**+0.3**
	baz=134						
SII	**Sitkinak Islan**	**3.08**	**274**	Pn	**Pn**	**02 39 46.9**	**-0.3**
SII				IAML		02 40 33.6	
	comp=E,137nm,0.9s						
SII				IAML		02 40 36.3	
	comp=N,140nm,0.9s						
SII	**Sitkinak Islan**	**3.08**	**274**	P	Pn	02 39 55.2	+8.0
SII	**Sitkinak Islan**	**3.08**	**274**	IAML		02 39 41.9	
	comp=N,77nm,1.5s						

Q23K	**Middleton Isla**	**3.21**	**21**	Pn	**Pn**	**02 39 49.0 +0.2**
Q23K				IAML		02 41 15.5
	comp=E,150nm,1.4s					
Q23K				IAML		02 41 59.4
	comp=N,128nm,1.4s					
Q23K	**Middleton Isla**	**3.21**	**21**	P	**Pn**	**02 39 49.1 +0.2**
	baz=203					
Q23K	**Middleton Isla**	**3.21**	**21**	IAML		02 39 12.9
	comp=E,116nm,1.5s					
MID	**Middleton Isla**	**3.21**	**21**	Pn	**Pn**	**02 39 48.8 -0.1**
MID				IAML		02 40 34.4
	comp=N,145nm,1.4s					
MID				IAML		02 40 53.6
	comp=E,156nm,1.5s					
MID	**Middleton Isla**	**3.21**	**21**	P	**Pn**	**02 39 49.2 +0.3**
MID	**Middleton Isla**	**3.21**	**21**	IAML		02 39 44.4
	comp=E,125nm,1.4s					
CNPM	**China Poot**	**3.36**	**337**	Pn	**Pn**	**02 39 51.8 +0.7**
CNPM				Sn	**Sn**	**02 40 28.2 -1.6**
R18K	**Karluk**	**3.37**	**291**	Pn	**Pn**	**02 39 51.1 0.0**
R18K				IAML		02 40 31.1
	comp=N,135nm,0.5s					
R18K				IAML		02 40 34.9
	comp=E,157nm,0.4s					
R18K	**Karluk**	**3.37**	**291**	P	**Pn**	**02 39 52.8 +1.7**
	baz=106					
BRSE	**Bradley Lake S**	**3.46**	**342**		**Pn**	**02 39 53.1 +0.6**
BRSE					**Sn**	**02 40 30.6 -1.7**
BRSE	**Bradley Lake S**	**3.46**	**342**	P	**Pn**	**02 39 53.1 +0.6**
	baz=160					
BRSE				S	**Sn**	**02 40 30.6 -1.7**
	baz=160					
BRLK	**Bradley Lake**	**3.51**	**341**	Pn	**Pn**	**02 39 53.3 +0.1**
BRLK				IAML		02 40 38.3
	comp=E,54nm,1.2s					
HOM	**Homer**	**3.57**	**335**	Pn	**Pn**	**02 39 54.5 +0.5**
HOM	**Homer**	**3.57**	**335**	IAML		02 40 38.6
	comp=E,172nm,1.2s					
P23K	**Montague Islan**	**3.59**	**10**		**Pn**	**02 39 54.6 +0.4**
P23K	**Montague Islan**	**3.59**	**10**	P	**Pn**	**02 39 54.6 +0.4**
	baz=191					
Q19K	**Cape Douglas,**	**3.65**	**315**	Pn	**Pn**	**02 39 56.4 +1.4**
Q19K				IAML		02 40 44.6
	comp=N,143nm,0.8s					
Q19K	**Cape Douglas,**	**3.65**	**315**	P	**Pn**	**02 39 56.5 +1.4**
	baz=130					
Q19K	**Cape Douglas,**	**3.65**	**315**	IAML		02 40 43.4
	comp=E,162nm,1.1s					
Q19K	**Cape Douglas,**	**3.65**	**315**	IAML		02 40 44.6
	comp=N,143nm,0.8s					
KAHG	**Katmai Hook Gl**	**3.78**	**305**		**Pn**	**02 39 58.7 +1.8**
P19K	**Oil Pt**	**4.02**	**324**	Pn	**Pn**	**02 40 01.2 +1.1**
P19K				IAML		02 40 49.9
	comp=N,105nm,0.5s					
P19K	**Oil Pt**	**4.02**	**324**	P	**Pn**	**02 40 01.3 +1.2**
	baz=140					
P19K	**Oil Pt**	**4.02**	**324**	IAML		02 40 49.6
	comp=E,128nm,0.5s					
P19K	**Oil Pt**	**4.02**	**324**	IAML		02 40 49.9
	comp=N,105nm,0.5s					
ACHA	**Angle Creek He**	**4.03**	**298**		**Pn**	**02 40 02.8 +2.5**
O22K	**Cooper Landing**	**4.06**	**352**	Pn	**Pn**	**02 40 01.9 +1.3**
O22K	**Cooper Landing**	**4.06**	**352**	P	**Pn**	**02 40 01.8 +1.1**
	baz=171					
HIN	**Hinchinbrook I**	**4.09**	**15**	Pn	**Pn**	**02 40 00.5 -0.6**
HIN				IAML		02 40 51.8
	comp=E,86nm,1.4s					
HIN				IAML		02 40 53.6
	comp=N,96nm,1.4s					
HIN	**Hinchinbrook I**	**4.09**	**15**	IAML		02 40 51.8
	comp=E,86nm,1.4s					
HIN	**Hinchinbrook I**	**4.09**	**15**	IAML		02 40 53.6
	comp=N,96nm,1.4s					
KAIM	**Kayak Island**	**4.12**	**31**	Pn	**Pn**	**02 40 01.6 +0.1**
KAIM	**Kayak Island**	**4.12**	**31**	P	**Pn**	**02 40 02.2 +0.8**
	baz=214					
SLKM	**Skilak Lake**	**4.13**	**349**		**Pn**	**02 40 02.4 +0.7**
O20K	**Slope Mountain**	**4.19**	**331**		**Pn**	**02 40 03.3 +0.8**
O20K	**Slope Mountain**	**4.19**	**331**	P	**Pn**	**02 40 03.3 +0.8**
	baz=148					
IVE	**Iliamna Volcan**	**4.24**	**329**		**Pn**	**02 40 03.9 +0.7**
CNTC	**Contact Creek**	**4.32**	**298**		**Pn**	**02 40 06.5 +2.2**
Q17K	**Contact Creek**	**4.32**	**298**	P	**Pn**	**02 40 06.5 +2.2**
	baz=111					
EYAK	**Cordova Ski Ar**	**4.36**	**19**	Pn	**Pn**	**02 40 04.9 +0.2**
EYAK	**Cordova Ski Ar**	**4.36**	**19**	P	**Pn**	**02 40 05.5 +0.8**
EYAK	**Cordova Ski Ar**	**4.36**	**19**	P	**Pn**	**02 40 05.5 +0.8**
	baz=201					
SUCK	**Suckling Hills**	**4.43**	**33**	Pn	**Pn**	**02 40 05.7 0.0**
SUCK				IAML		02 41 04.0
	comp=E,55nm,1.3s					
SUCK				IAML		02 41 06.6
	comp=N,68nm,0.5s					
SUCK	**Suckling Hills**	**4.43**	**33**	IAML		02 41 04.0
	comp=E,55nm,1.3s					
SUCK	**Suckling Hills**	**4.43**	**33**	IAML		02 41 06.6
	comp=N,68nm,0.5s					
FID	**Port Fidalgo**	**4.43**	**14**	Pn	**Pn**	**02 40 05.1 -0.7**
FID	**Port Fidalgo**	**4.44**	**14**	IAML		02 41 09.6
	comp=N,28nm,1.0s					
FID	**Port Fidalgo**	**4.44**	**14**	IAML		02 41 11.1
	comp=E,30nm,0.6s					
RAGM	**Ragged Mountai**	**4.44**	**26**	Pn	**Pn**	**02 40 05.9 0.0**
NICHA	**Nichawak Mount**	**4.50**	**31**		**Pn**	**02 40 08.0 +1.3**
HMT	**Hamilton**	**4.50**	**29**	Pn	**Pn**	**02 40 06.8 0.0**
RED	**Redoubt Volcan**	**4.52**	**333**		**Pn**	**02 40 07.3 +0.3**
RSO	**Redoubt South**	**4.55**	**333**		**Pn**	**02 40 08.2 +0.7**
RDT	**Redoubt**	**4.56**	**336**		**Pn**	**02 40 07.9 +0.3**
P18K	**Big Mountain,**	**4.58**	**313**	Pn	**Pn**	**02 40 07.5 -0.2**
P18K	**Big Mountain,**	**4.58**	**313**	P	**Pn**	**02 40 08.6 +0.8**
	baz=126					
P18K	**Big Mountain,**	**4.58**	**313**	IAML		02 41 10.5
	comp=E,12nm,1.4s					
GOAT	**Goat Mountain**	**4.60**	**25**		**Pn**	**02 40 08.8 +0.7**
BGLC	**Bering Glacier**	**4.62**	**35**		**Pn**	**02 40 09.2 +1.0**
BGLC	**Bering Glacier**	**4.62**	**35**	P	**Pn**	**02 40 09.2 +1.0**
	baz=220					
RC01	**Rabbit Creek A**	**4.67**	**353**	Pn	**Pn**	**02 40 09.5 +0.5**
RC01				IAML		02 41 04.7
	comp=E,41nm,1.1s					

WAX	Waxell Ridge	5.01	35	Pn		Pn	02 40 14.3 +0.5
BARK	Barkley Ridge	5.09	37			Pn	02 40 15.4 +0.5
MESA	MESA	5.12	41	Pn		Pn	02 40 15.2 -0.1
MESA	comp=N,41nm,0.9s			IAML			02 41 17.8
MESA	comp=E,31nm,1.3s			IAML			02 41 18.8
MESA	MESA baz=226	5.12	41	P		Pn	02 40 15.5 +0.1
SUA	Susitna One	5.12	349	Pn		Pn	02 40 16.3 +0.9
PMR	Palmer	5.14	357	Pn		Pn	02 40 15.8 +0.4
PMR	comp=N,15nm,0.7s			IAML			02 41 12.6
PMR	comp=E,20nm,0.7s			IAML			02 41 14.0
PMR	Palmer	5.14	357	P		Pn	02 40 17.2 +1.7
KLU	Klutina	5.23	14	Pn		Pn	02 40 16.9 +0.2
KLU	comp=E,18nm,0.8s			IAML			02 41 18.9
KLU	comp=N,24nm,0.9s			IAML			02 41 26.1
KLU	Klutina baz=197	5.23	14	P		Pn	02 40 17.0 +0.2
BAGL	Bagley Icefiel	5.29	38			Pn	02 40 18.3 +0.8
ISLE	Juniper Island	5.29	36	Pn		Pn	02 40 18.4 +0.7
ISLE	comp=N,30nm,1.0s			IAML			02 41 16.8
ISLE	comp=E,24nm,0.8s			IAML			02 41 22.1
ISLE	Juniper Island comp=N,30nm,1.0s	5.29	36	IAML			02 41 16.8
ISLE	Juniper Island comp=E,24nm,0.8s	5.29	36	IAML			02 41 22.1
N19K	Bonanza Creek	5.32	327	Pn		Pn	02 40 18.8 +0.8
N19K	Bonanza Creek baz=142	5.32	327	P		Pn	02 40 18.7 +0.6
GHO	Glory Hole Cre	5.32	358	Pn		Pn	02 40 19.3 +1.3
GHO	comp=E,45nm,0.7s			IAML			02 41 19.9
GHO	comp=N,40nm,0.9s			IAML			02 41 21.6
SML	Sawmill	5.35	2	Pn		Pn	02 40 19.5 +1.0
SCM	Sheep Creek Mo	5.42	7	Pn		Pn	02 40 20.3 +0.9
CHGN	Chignik	5.44	272	Pn		Pn	02 40 21.1 +1.6
VRDI	Verde Repeater	5.47	27	Pn		Pn	02 40 20.9 +0.7
KIAG	Kiagna River	5.53	34			Pn	02 40 21.6 +0.6
N25K	Chitina, Valde	5.55	20	Pn		Pn	02 40 21.5 +0.2
N25K	Chitina, Valde baz=204	5.55	20	P		Pn	02 40 22.1 +0.9
GLB	Gilahina Butte	5.57	25	Pn		Pn	02 40 22.1 +0.7
O17K	Koliganek Bris	5.57	310			Pn	02 40 22.7 +1.3
O17K	Koliganek Bris baz=122	5.57	310	P		Pn	02 40 22.7 +1.3
TABL	Table Mountain	5.59	42	Pn		Pn	02 40 22.9 +1.0
N18K	Kilae Creek	5.67	321	Pn		Pn	02 40 23.1 +0.2
N18K	Kilae Creek baz=134	5.67	321	P		Pn	02 40 23.7 +0.8
PTPK	Patty Peak	5.71	32			Pn	02 40 24.6 +1.1
MCARA	McCarthy VSAT	5.72	28	Pn		Pn	02 40 24.0 +0.6
MCARA	McCarthy VSAT baz=213	5.72	28	P		Pn	02 40 24.5 +1.1
M24K	Tolsona, Glenn	5.79	12	Pn		Pn	02 40 25.9 +1.5
PNL	Peninsula	5.85	53			Pn	02 40 26.0 +0.7
PNL	Peninsula baz=241	5.85	53	P		Pn	02 40 26.0 +0.7
BARN	Barnard Glacie	5.86	35	Pn		Pn	02 40 25.9 +0.4
CTG	Chitna Glacier baz=223	5.89	37	P		Pn	02 40 26.8 +0.9
CTGM	Chitina Glacie	5.89	37	Pn		Pn	02 40 26.7 +0.8
BCPM	Bancas Point	5.90	50	Pn		Pn	02 40 26.1 +0.2
M20K	Styx River	5.90	339	Pn		Pn	02 40 26.5 +0.5
LOGN	Logan Glacier	5.91	39	Pn		Pn	02 40 27.3 +1.2
O16K	Kokwok River B	5.92	306	Pn		Pn	02 40 27.6 +1.4
N17K	Nushagak Hills	6.05	316	Pn		Pn	02 40 28.5 +0.5
M19K	Big River Lodg	6.20	334	Pn		Pn	02 40 30.1 +0.1
O29M	Mount Kennedy	6.53	50	Pn		Pn	02 40 35.8 +1.1
L19K	White Mountain	6.55	334	Pn		Pn	02 40 34.1 -0.7
P29M	Windy Craggy	6.59	57	Pn		Pn	02 40 36.8 +1.3
P29M	Windy Craggy baz=246	6.59	57	P		Pn	02 40 36.9 +1.5
DHY	Denali Highway	6.66	5	Pn		Pn	02 40 37.0 +0.6
M17K	Holitna River	6.72	321	Pn		Pn	02 40 38.6 +1.5
YUK3	Moose Creek	6.78	35			Pn	02 40 40.4 +2.2
YUK3	Moose Creek baz=222	6.78	35	P		Pn	02 40 40.4 +2.2
M27K	Edge Creek, AK	6.83	27	Pn		Pn	02 40 40.2 +1.4
YUK7	Dusty Glacier	6.84	49			Pn	02 40 41.3 +2.3
S31K	Pelican	6.90	72	Pn		Pn	02 40 40.0 +0.4
S31K	Pelican baz=263	6.90	72	P		Pn	02 40 40.0 +0.4
RND	Reindeer	6.96	359	Pn		Pn	02 40 42.6 +2.2
YUK6	Outpost Mounta	6.97	46			Pn	02 40 43.3 +2.4
YUK6	Outpost Mounta baz=235	6.97	46	P		Pn	02 40 43.3 +2.4
M16K	Timber Creek	7.04	315	Pn		Pn	02 40 43.0 +1.3
TRF	Thorofare Moun	7.05	354	Pn		Pn	02 40 42.8 +0.9
N15K	Kwethluk River	7.08	306	Pn		Pn	02 40 44.0 +1.8
L18K	Granite Mounta	7.08	328	Pn		Pn	02 40 42.9 +0.8
L26K	Log Cabin Wild	7.09	20	Pn		Pn	02 40 44.9 +2.6
YUK4	Talbot Arm baz=231	7.11	42	P		Pn	02 40 46.4 +3.7
CAST	Castle Rocks	7.18	347	Pn		Pn	02 40 44.6 +1.1
HYT	Haines Junctio	7.26	48	Pn		Pn	02 40 44.7 0.0
YUK5	Granite Creek	7.28	46			Pn	02 40 48.3 +3.3
O14K	Tigyukauivet M	7.29	298	Pn		Pn	02 40 47.1 +2.1
SIT	Sitka	7.34	80	Pn		Pn	02 40 43.7 -1.9
SIT	Sitka	7.34	80	P		Pn	02 40 44.7 -0.9
K20K	Telida	7.42	341	Pn		Pn	02 40 47.6 +0.8
L27K	Beaver Creek,	7.44	25	Pn		Pn	02 40 47.9 +0.8
BCAR	Beaver Creek A	7.46	25	Pn		Pn	02 40 47.2 -0.1
TTA	Tatalina	7.47	333	Pn		Pn	02 40 47.6 +0.1
RIDG	Independent Ri	7.53	13	Pn		Pn	02 40 50.3 +2.0
L16K	Owhat River	7.66	318	Pn		Pn	02 40 51.3 +1.3
SKAG	Skagway	7.68	62	P		Pn	02 40 49.4 -0.9
BPAW	Bear Paw Mtn.	7.74	352	Pn		Pn	02 40 51.5 +0.4
S32K	Killisnoo	7.75	77	Pn		Pn	02 40 51.0 -0.2
O30N	Mendenhall	7.83	51	Pn		Pn	02 40 53.9 +1.4
SCRK	Sand Creek	7.87	15	Pn		Pn	02 40 53.8 +0.8
M29M	Somme Creek	7.91	37	Pn		Pn	02 40 55.4 +1.8
JIS	Juneau Island	7.91	71	Pn		Pn	02 40 54.0 +0.5
K17K	Iditarod	7.95	326	Pn		Pn	02 40 53.0 -0.9
J18K	Innoko River	8.10	333	Pn		Pn	02 40 54.6 -1.4
M14K	Bethel	8.17	307	Pn		Pn	02 40 58.4 +1.4
J20K	Nowinta River	8.20	343	Pn		Pn	02 40 58.0 +0.7
CCB	Clear Creek Bu	8.21	2	Pn		Pn	02 40 59.9 +2.3
K27K	Chicken	8.25	21	Pn		Pn	02 40 59.5 +1.5
J19K	Poorman	8.30	338	Pn		Pn	02 40 57.9 -1.0
WHY	Whitehorse	8.32	54	Pn		Pn	02 41 00.8 +1.7
N31M	Braeburn, Yuko	8.32	48	Pn		Pn	02 41 00.9 +1.9
J26L	Joseph Creek	8.43	15	Pn		Pn	02 41 00.6 -0.1
L29M	L29M	8.49	34	Pn		Pn	02 41 02.7 +1.2
P32M	Atlin	8.51	62	Pn		Pn	02 41 01.4 -0.2
MDM	Murphy Dome	8.52	1	Pn		Pn	02 41 02.6 +0.8
M30K	Minto, Yukon	8.57	40	Pn		Pn	02 41 03.7 +1.1
U33K	Whale Pass	8.64	86	Pn		Pn	02 41 01.7 -1.7
MLY	Manley	8.65	354	Pn		Pn	02 41 03.2 -0.4
M13K	Dall Lake	8.67	303	Pn		Pn	02 41 05.9 +2.1
I23K	Minto, Yukon-K	8.71	358	Pn		Pn	02 41 04.5 +0.1
L14K	Kuka Creek	8.75	310	Pn		Pn	02 41 06.9 +1.9
CRAG	Craig	8.76	90	P		Pn	02 41 04.0 -1.1
K15K	Wolf Creek Mou	8.79	317	Pn		Pn	02 41 06.6 +1.1
DAWY	Dawson	8.88	27	Pn		Pn	02 41 07.5 +0.6
I21K	Tanana	8.89	351	Pn		Pn	02 41 08.6 +1.7
J16K	Anvik River	9.09	324	Pn		Pn	02 41 09.2 -0.4
Q32M	Nakina River	9.10	67	Pn		Pn	02 41 11.8 +1.9
P33M	Teslin, Yukon	9.12	59	Pn		Pn	02 41 10.4 +0.4
K29M	Barlow Dome	9.22	32	Pn		Pn	02 41 12.8 +1.2
M31M	Drury Creek, Y	9.26	46	Pn		Pn	02 41 13.4 +1.4
N32M	Quiet Lake	9.32	53	Pn		Pn	02 41 12.6 -0.2
H24K	Noodor Dome	9.40	2	Pn		Pn	02 41 14.9 +0.9
H21K	Melozitna Rive	9.43	349	Pn		Pn	02 41 14.4 +0.1
S34M	Telegraph Cree	9.61	74	Pn		Pn	02 41 17.1 +0.3
V35K	Ketchikan	9.63	90	Pn		Pn	02 41 15.3 -1.7
FARO	Faro, Yukon	9.69	47	Pn		Pn	02 41 20.0 +2.1
R33M	Jennings River	9.83	65	Pn		Pn	02 41 20.9 +0.9
IMAR	Indian Mountai	9.85	348	Pn		Pn	02 41 20.8 +0.8
H18K	Honhosa River	9.91	335	Pn		Pn	02 41 20.1 -0.7
I28M	Miner Creek	9.94	21	Pn		Pn	02 41 22.2 +0.9
H17K	Granite Mounta	10.11	332	Pn		Pn	02 41 22.7 -0.9
T35M	Bob Quinn	10.11	79	Pn		Pn	02 41 25.8 +2.1
J30M	Hart River	10.12	32	Pn		Pn	02 41 24.3 +0.5
DLBC	Dease Lake	10.21	71	Pn		Pn	02 41 27.1 +2.0
FYU	Fort Yukon	10.26	8	Pn		Pn	02 41 26.0 +0.5
G24K	Hadweenzic Riv	10.28	3	Pn		Pn	02 41 27.6 +1.7
G21K	Allakaket	10.34	349	Pn		Pn	02 41 28.3 +1.6
G18K	Tagagawik	10.60	337	Pn		Pn	02 41 32.0 +1.7
F21K	Alatna River	11.02	350	Pn		Pn	02 41 38.5 +2.4
F20K	Avaraart Lake	11.12	345	Pn		Pn	02 41 38.1 +0.7
BMAR	Burnt Mountain	11.16	8	Pn		Pn	02 41 38.8 +0.8
ANM	Nome	11.53	322	Pn		Pn	02 41 43.1 +0.1
F17K	Baldwin Pennin	11.65	334	Pn		Pn	02 41 43.4 -1.1
E19K	Redstone River	11.72	344	Pn		Pn	02 41 45.1 -0.5
F15K	North Star Dit	12.03	327	Pn		Pn	02 41 51.2 +1.4
NIKH	Nikolski High	12.20	262	P		P	02 42 00.8 -3.3
G31M	Satah River	12.46	27	Pn		Pn	02 41 57.2 +1.7
F31M	Tsiigehtchic	12.99	26	Pn		Pn	02 42 04.9 +2.1
B22K	Teshekpuk Lake	14.08	353	Pn		Pn	02 42 18.7 +1.1
B20K	Meade River	14.10	348	Pn		Pn	02 42 19.5 +1.6

*ASIES **05** 03:55:05.4,24˚.23N×121˚.76E,h10km,ML3.6,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.20; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-0.83; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.35; $M_{r\phi}$0.41; Fault plane solution: $M_0$1.23329×10^{21} NP1:ϕ_s32.17000°, δ57.54000°,λ,93.63000°. NP2:ϕ_s205.42000°,δ32.64000°, λ84.31000°. Principal axes: T Plg77.1470°, Azm313.7900°; N Plg3.0650°, Azm210.2160°; P Plg12.4700°, Azm119.5370°;*

*JMA **05** 03:55:05.0±0.1,24˚.2N±0˚.4×121˚.8E±0˚.5,h0km,TAIWAN REGION*

*TAP **05** 03:55:05.4,24˚.23N×121˚.76E,h10km,ML3.6,C*

ISC 05 03:55:04.5±1.1,24˚.18N±0˚.02×121˚.86E±0˚.02,h4km±10km, n94,σ0s52/134,3C-21D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village baz=351	0.17	321	⇓*i*P		Pg	03 55 08.1	+0.3
EHP				*i* S		Sg	03 55 10.1	+0.1
EAHA	Aohua baz=348	0.18	325	⇓*i*P		Pg	03 55 08.3	+0.2
EAHA				*i* S		Sg	03 55 10.5	0.0
ETL	Fush Village baz=242	0.21	265	⇑*i*P		Pg	03 55 09.1	+0.4
ETL				*i* S		Sg	03 55 11.7	+0.2
NACB	Ninganchiao baz=244	0.24	269	⇓*i*P		Pg	03 55 09.2	+0.1
NACB				S		Sg	03 55 12.1	-0.2
TWD	Chiawan baz=231	0.26	247	⇑*i*P		Pg	03 55 09.9	+0.5
TWD				S		Sg	03 55 13.4	+0.6
ENA	Nanau baz=356	0.27	337	⇓*i*P		Pg	03 55 09.9	+0.2
ENA				*i* S		Sg	03 55 13.1	-0.1
EWUT	Wuta baz=4.0	0.27	345	⇓*i*P		Pg	03 55 10.2	+0.4
EWUT				S		Sg	03 55 13.4	0.0
HWA	Hwalien baz=218	0.30	229	*e*P		Pb	03 55 13.5	+0.9
ETLH	Xiulin Townshi baz=266	0.34	275	⇓*i*P		Pg	03 55 11.0	-0.1
ETLH				S		Sg	03 55 15.0	-0.6
ESAO	Su ao baz=8.0	0.39	359	P		Pg	03 55 12.5	+0.4
ESAO				S		Sg	03 55 17.1	-0.1
ETM	Tongmen baz=228	0.39	237	P		Pg	03 55 12.6	+0.5
TWC	Suao baz=5.0	0.43	359	⇓*i*P		Pg	03 55 13.2	+0.5
TWC				*i* S		Sg	03 55 18.6	+0.3
LXIB	Xiulin Townshi baz=238	0.43	249	⇓*i*P		Pg	03 55 13.0	+0.1
LXIB				*i* S		Sg	03 55 18.7	+0.2
LATG	Datong baz=325	0.46	320	⇓*i*P		Pg	03 55 13.3	-0.1
LATG				S		Sg	03 55 18.6	-0.9
NDS	Dongshan baz=354	0.47	344	⇓*i*P		Pg	03 55 13.9	+0.3
NDS				*i* S		Sg	03 55 19.6	-0.1
SHUL	Shoufeng baz=192	0.47	214	P		Pb	03 55 16.5	+1.0
NNSB	Datong baz=300	0.50	300	⇓*i*P		Pg	03 55 13.9	-0.2
NNSB				*i* S		Sg	03 55 19.2	-1.3
NNSH	Datong baz=300	0.50	300	P		Pg	03 55 13.9	-0.2
NNSH				S		Sg	03 55 19.3	-1.2
NNS	Nan Shan baz=301	0.51	301	⇓*i*P		Pg	03 55 14.1	-0.2
NNS				*i* S		Sg	03 55 19.7	-1.3
NDT	Datong Townshi baz=328	0.52	324	⇓*i*P		Pg	03 55 14.7	+0.1
NDT				S		Sg	03 55 21.0	-0.4
ENTT	Nioudou baz=337	0.53	330	⇓*i*P		Pg	03 55 14.8	+0.1
ENTT				*i* S		Sg	03 55 21.2	-0.4
ESL	Shilin baz=225	0.53	227	P		Pb	03 55 15.6	-0.9
WHF	Hehuan Shan baz=260	0.54	266	⇑*i*P		Pg	03 55 15.0	+0.1
WHF				*i* S		Sg	03 55 21.2	-0.8
FUSS	Fushou baz=273	0.56	277	⇓*i*P		Pg	03 55 15.4	0.0
FUSS				S		Sg	03 55 22.1	-0.5
TWE	Neicheng baz=351	0.57	342	⇓*i*P		Pg	03 55 15.7	+0.3
TWE				S		Sg	03 55 22.6	-0.1
FUSB	Fushanzhiwuyua baz=343	0.63	337	⇓P		Pg	03 55 16.8	+0.2
FUSB				S		Sg	03 55 24.0	-0.7
WARBT	Fenglin Townsh baz=222	0.63	223	P		Pb	03 55 17.5	-0.6
WARBT				S		Sb	03 55 27.0	-0.3
CHGB	Renai baz=246	0.63	259	⇓*i*P		Pg	03 55 16.9	+0.2
CHGB				S		Sg	03 55 24.4	-0.5
TDCB	Techi baz=273	0.64	277	P		Pg	03 55 16.9	0.0
TDCB				S		Sg	03 55 23.9	-1.2
EGFH	Guangfu baz=217	0.64	218	*e*P		Pb	03 55 18.5	+0.2
YHNB	Yeheng baz=321	0.66	318	⇓P		Pg	03 55 17.2	+0.1
YHNB				S		Sg	03 55 24.6	-1.0
OWD	Renai baz=244	0.66	250	P		Pg	03 55 17.4	+0.2
NSK	Sanguang baz=321	0.67	318	⇓*i*P		Pg	03 55 17.4	0.0
NSK				*i* S		Sg	03 55 25.1	-1.0
WUSB	Renai baz=242	0.70	255	⇓P		Pg	03 55 18.2	+0.3
WUSB				S		Sg	03 55 27.2	+0.1
VWDT	VWDT baz=231	0.78	237	P		Pb	03 55 20.3	-0.3
VWDT				*e*S		Sb	03 55 32.1	+0.6
TIPB	Shuangxi baz=4.0	0.79	358	*e*P		Pg	03 55 20.1	+0.4
TIPB				*e*S		Sg	03 55 28.7	-1.2
HGSD	Ruisui baz=194	0.79	210	*e*P		Pn	03 55 21.8	-0.7
NFF	Wufeng Townshi baz=313	0.81	304	*e*P		Pg	03 55 19.9	-0.1
EHY	Hungye baz=223	0.83	216	*e*P		Pb	03 55 21.8	+0.3
TWB1	Santiao Chiao baz=15	0.83	8	*e*P		Pg	03 55 20.9	+0.4
TWB1				*e*S		Sg	03 55 30.9	-0.4
NHDH	Xindian Distri baz=343	0.84	339	*e*P		Pg	03 55 20.8	+0.3
WHP	Taichung City baz=274	0.84	277	*e*P		Pg	03 55 20.8	+0.2
WHP				*e*S		Sg	03 55 30.8	-0.6
WCS	Beigang Elemen baz=259	0.87	262	*e*P		Pg	03 55 21.4	+0.2
NWF	Wu-fen Shan baz=353	0.89	356	P		Pg	03 55 22.1	+0.5
NWF				S		Sg	03 55 32.8	-0.4
WFSB	Wu-fen Shan baz=353	0.89	356	*e*P		Pb	03 55 22.2	-0.4
WFSB				*e*S		Sg	03 55 32.6	-0.6
LIOB	Emei baz=301	0.90	301	*e*P		Pg	03 55 22.0	+0.3
NSTT	Nanjuang baz=300	0.90	300	*e*P		Pg	03 55 21.8	+0.1
NSTT				*e*S		Sg	03 55 32.5	-0.9
SXI1	Grass Mountain baz=14	0.91	1	*e*P		Pb	03 55 22.7	-0.3
SXI1				S		Sg	03 55 33.9	0.0
SSLB	Suanglung baz=240	0.91	245	*e*P		Pg	03 55 22.1	+0.1
SSLB				*e*S		Sg	03 55 32.8	-1.0
SMLT	Sun Moon Lake baz=238	0.92	252	*e*P		Pg	03 55 22.4	+0.2
SMLT				*e*S		Sg	03 55 33.6	-0.5
YULB	Yu-li baz=220	0.94	213	*e*P		Pg	03 55 22.7	+0.3
TYC	Yuchr baz=250	0.95	253	*e*P		Pg	03 55 22.7	-0.1
EYUL	Yuli baz=220	0.96	211	*e*P		Pn	03 55 24.8	-0.1
TNOU	National Taiwa	0.97	356	*e*P		Pg	03 55 23.2	+0.1
TWF1	Yuli baz=218	0.97	212	*e*P		Pg	03 55 23.1	0.0
NCUH	Zhongli baz=319	0.99	322	*e*P		Pb	03 55 24.2	-0.1
YM01	YM01 baz=349	1.00	345	*e*P		Pb	03 55 24.3	-0.1
SBCB	Hsinchu baz=308	1.00	308	*e*P		Pb	03 55 24.2	-0.2
TWS1	Kuangyinshan baz=340	1.00	337	*e*P		Pb	03 55 24.7	+0.3
TWQ1	Liyutan baz=278	1.00	280	*e*P		Pn	03 55 25.1	-0.3
NMLH	Miaoli baz=289	1.03	290	*e*P		Pn	03 55 26.2	+0.4
WHYT	Xinyi Township baz=239	1.03	243	*e*P		Pn	03 55 25.7	-0.2
ANP	Anpu baz=347	1.05	343	*e*P		Pg	03 55 25.0	+0.3
NTST	Danshui baz=343	1.05	339	*e*P		Pb	03 55 25.5	+0.3
WJS	Zhushan baz=241	1.09	251	*e*P		Pn	03 55 26.5	-0.1
YOJ	Yonaguni jima	1.09	75	P		Pn	03 55 27.0	+0.4
FULB	Fuli baz=219	1.10	208	*e*P		Pn	03 55 26.4	-0.5
WNT	Mingjian baz=247	1.11	255	*e*P		Pn	03 55 27.1	+0.2
WNT				*e*S		Sn	03 55 43.4	+0.7
TWY	Chenhua baz=352	1.12	348	*e*P		Pn	03 55 27.4	+0.4
CHKT	Chengkung baz=189	1.17	203	*e*P		Pg	03 55 26.2	-0.7
ALS	Alishan baz=232	1.17	235	*e*P		Pn	03 55 27.7	-0.3
EHD	Haiduan baz=219	1.19	210	*e*P		Pn	03 55 28.5	+0.5
WCHH	Zhanghua baz=264	1.19	265	*e*P		Pn	03 55 28.9	+0.9
CHN5	Tsauling baz=239	1.22	242	*e*P		Pn	03 55 29.1	+0.5
CHN5				*e*S		Sn	03 55 45.7	+0.2
ELDTW	Lidau baz=215	1.25	218	*e*P		Pg	03 55 28.0	-0.5
WCKO	Fanlu baz=236	1.36	237	*e*P		Pg	03 55 31.6	+1.0
WRL	Guolierlin Hig baz=257	1.38	259	*e*P		Pg	03 55 31.4	+0.4
STYH	Taoyuan baz=223	1.41	225	*e*P		Pg	03 55 32.0	+0.5
CHN4	Tsaushan baz=233	1.42	235	*e*P		Pg	03 55 32.5	+0.7
TPUB	Ta-pu baz=231	1.42	232	*e*P		Pg	03 55 32.0	+0.2
WTK	Tuku baz=235	1.43	250	*e*P		Pb	03 55 31.5	-0.2
WTP	Ta-pu baz=230	1.47	231	*e*P		Pg	03 55 33.2	+0.5
TWGBT	Beinan baz=206	1.53	208	*e*P		Pg	03 55 34.1	+0.2
TWK	Hsinying baz=233	1.55	234	*e*P		Pg	03 55 34.4	+0.2
CHN1	Nanshi baz=230	1.57	231	*e*P		Pg	03 55 34.9	+0.3
SLGT	Liugui baz=223	1.62	223	*e*P		Pb	03 55 35.1	+0.1
ICHU	Yijhu baz=240	1.66	241	*e*P		Pb	03 55 35.6	0.0
IRIF	Iriomote-Funau	1.72	84	*e*P		Pg	03 55 38.0	+0.5
MASBT	Mashibuluo baz=216	1.92	216	*e*P		Pn	03 55 38.8	+0.7
JKRS	Kuro-shima	1.97	88	*e*S		Sg	03 56 07.2	-0.5
EAST	Anshuo baz=194	2.01	208	*e*P		Pb	03 55 41.6	-0.1
JIJ	Ishigaki jima	2.10	85	*e*P		Pb	03 55 42.7	-0.4
SCZT	Fangliau baz=196	2.13	213	*e*P		Pb	03 55 42.7	-1.0
JISG	Ishigakijimahi	2.28	79	P		Pb	03 55 44.8	-1.4

*GCG **05** 03:55:35.5±0.6,13˚.26N×90˚.23W,h21km±4km,MD3.5*

*SNET **05** 03:55:36.5±1.0,13˚.37N×89˚.79W,h38km±19km,ML3.3*

ISC 05 03:55:33.1±2.5,13˚.2N±0˚.1×89˚.91W±0˚.05,h25km±15km, n27,σ0s83/35,2C,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.65	44	⇑*e*P		Pb	03 55 46.8	+0.9
JAYA				*e*S		Sb	03 55 54.0	-0.7
JAYA	comp=Z,3μm,0.2s			IAML			03 55 58.5	
CEVE	Cerro Verde	0.70	24	*e*P		Pb	03 55 47.4	+0.5
CEVE	comp=Z,2μm,0.2s			IAML			03 56 01.8	
SBLS	San Blas	0.71	23	*e*P		Pb	03 55 47.5	+0.5
NUBE	Las Nubes	0.72	10	⇑*e*P		Pb	03 55 47.5	+0.3
NUBE				*e*S		Sb	03 55 55.6	-1.2
SNJE	San Jose	0.74	24	*e*P		Pb	03 55 48.0	+0.4
RTR	El Retiro	0.75	20	*e*P		Pb	03 55 48.3	+0.6
CEDA	San Andres	0.79	39	*e*P		Pn	03 55 48.8	+0.1
CEDA	comp=Z,838nm,0.3s			IAML			03 56 08.0	
BOQS	Boqueron	0.82	48	*e*P		Pn	03 55 49.6	+0.2
SNET	Serv Nac Est T	0.83	53	*e*P		Pn	03 55 49.3	0.0
UEES	Universidad Ev	0.84	51	*e*P		Pn	03 55 49.0	-0.4
SLOZ	Alcaldia de Sa	0.84	8	*e*P		Pn	03 55 49.3	-0.2
PIC2	El Picacho	0.85	49	*e*P		Pn	03 55 50.3	+0.6
LOMA	Loma Larga	0.85	58	*e*P		Pn	03 55 49.3	-0.3
LOMA				*e*S		Sb	03 55 59.6	-0.8
LFRS	El Faro	0.94	62	*e*P		Pn	03 55 50.8	0.0
SJTE	Alcalda de S	0.98	64	*e*P		Pn	03 55 51.4	+0.1
PAVA	Las Pavas	1.08	61	*e*P		Pn	03 55 53.9	+1.0
COEG	Centro de Oper	1.09	67	*e*P		Pn	03 55 53.0	+0.1
COEG				*e*S		Sn	03 56 06.3	-1.0
TECO	Alcaldia de Te	1.16	72	*e*P		Pn	03 55 53.3	-0.4

TECO				*e*S		**Sn**	**03 56 07.9**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.26**	**66**	*e*P		**Pn**	**03 55 56.1**	**+0.9**
MTO3	**Montecristo**	**1.32**	**24**	*e*P		**Pn**	**03 55 56.6**	**+0.5**
PCG	**Pacaya**	**1.38**	**331**	*e*P		**Pn**	**03 55 57.1**	**+0.1**
PCG				*e*S		**Sn**	**03 56 14.7**	**+0.2**
PQSS	**Presa 15 de Se**	**1.39**	**72**	*e*P		**Pn**	**03 55 57.4**	**+0.6**
NBG	**Las Nubes**	**1.46**	**343**	*e*P		**Pn**	**03 55 59.5**	**+1.4**
NBG				*e*S		**Sn**	**03 56 18.4**	**+1.9**
FUG	**Fuego 3**	**1.55**	**324**	*e*P		**Pn**	**03 55 59.3**	**0.0**
PACA	**Pacayal**	**1.57**	**79**	*e*P		**Pn**	**03 56 00.8**	**+1.2**
LCND	**La Caada**	**1.97**	**86**	*e*P		**Pn**	**03 56 05.4**	**+0.4**
STG3	**Santiaguito 3,**	**2.21**	**313**	*e*P		**Pn**	**03 56 08.4**	**0.0**
STG3				*e*S		**Sn**	**03 56 33.0**	**-2.1**

TAP 05 04:15:20.2,24˚19N×121˚78E,h10km,ML2.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=345	**0.13**	**343**	*e*P	**Pg**	04 15 22.9	-0.4
ETL	**Fush Village** baz=260	**0.15**	**260**	*i* P	**Pg**	04 15 23.9	+0.4
ETL	baz=260			S	**Sg**	04 15 26.4	+0.5
EAHA	**Aohua** baz=344	**0.15**	**344**	*e*P	**Pg**	04 15 23.6	+0.1
NACB	**Ninganchiao** baz=267	**0.17**	**266**	*i* P	**Pg**	04 15 24.2	+0.3
TWD	**Chiawan** baz=245	**0.20**	**239**	*i* P	**Pg**	04 15 24.8	+0.4
ENA	**Nanau** baz=353	**0.24**	**351**	*i* P	**Pg**	04 15 25.4	+0.2
ENA	baz=353			*e*S	**Sg**	04 15 29.0	+0.4
EWUT	**Wuta** baz=359	**0.26**	**359**	*i* P	**Pg**	04 15 25.7	+0.2
EWUT	baz=359			*e*S	**Sg**	04 15 29.4	+0.3
ETLH	**Xiulin Townshi** baz=276	**0.28**	**275**	P	**Pg**	04 15 26.2	+0.3
ETLH	baz=276			*e*S	**Sg**	04 15 30.6	+1.0
ETM	**Tongmen** baz=237	**0.34**	**231**	*e*P	**Pg**	04 15 27.6	+0.5
LXIB	**Xiulin Townshi** baz=246	**0.38**	**244**	*i* P	**Pg**	04 15 28.0	+0.3
LXIB	baz=246			*e*S	**Sb**	04 15 34.6	-0.4
ESAO	**Su ao** baz=4.0	**0.39**	**8**	*i* P	**Pg**	04 15 28.3	+0.3
ESAO	baz=4.0			*e*S	**Sg**	04 15 34.2	+0.9
LATG	**Datong** baz=327	**0.42**	**326**	*i* P	**Pg**	04 15 29.0	+0.4
LATG	baz=327			*e*S	**Sg**	04 15 35.2	+1.1
TWC	**Suao** baz=6.0	**0.43**	**8**	P	**Pg**	04 15 28.9	+0.3
TWC	baz=6.0			*e*S	**Sg**	04 15 35.1	+0.8
NNSB	**Datong** baz=305	**0.44**	**304**	*i* P	**Pg**	04 15 29.4	+0.5
NNSB	baz=305			*e*S	**Sg**	04 15 35.7	+1.0
SHUL	**Shoufeng** baz=209	**0.44**	**207**	*e*P	**Pn**	04 15 31.6	-1.1
NDS	**Dongshan** baz=352	**0.45**	**352**	*i* P	**Pg**	04 15 29.4	+0.3
NDS	baz=352			*e*S	**Sg**	04 15 35.5	+0.5
NNS	**Nan Shan** baz=306	**0.45**	**304**	P	**Pg**	04 15 29.6	+0.4
NNS	baz=306			*e*S	**Sg**	04 15 35.8	+0.7
WHF	**Hehuan Shan** baz=268	**0.47**	**265**	P	**Pg**	04 15 30.0	+0.4
NDT	**Datong Townshi** baz=330	**0.48**	**329**	P	**Pg**	04 15 30.2	+0.6
NDT	baz=330			*e*S	**Sg**	04 15 37.1	+1.0
ENTT	**Nioudou** baz=338	**0.49**	**336**	P	**Pg**	04 15 30.3	+0.4
ENTT	baz=338			*e*S	**Sg**	04 15 37.3	+0.8
FUSS	**Fushou** baz=280	**0.50**	**277**	P	**Pg**	04 15 30.5	+0.6
CHGB	**Renai** baz=251	**0.57**	**258**	P	**Pb**	04 15 32.1	-0.4
CHGB	baz=251			*e*S	**Sb**	04 15 41.0	+0.3
TDCB	**Techi** baz=278	**0.57**	**277**	*e*P	**Pb**	04 15 32.4	-0.1
WARBT	**Fenglin Townsh** baz=229	**0.59**	**218**	*e*P	**Pb**	04 15 32.4	-0.3
FUSB	**Fushanzhiwuyua** baz=343	**0.60**	**343**	P	**Pb**	04 15 32.4	-0.5
FUSB	baz=343			*e*S	**Sg**	04 15 40.4	+0.6
YHNB	**Yeheng** baz=324	**0.61**	**323**	P	**Pb**	04 15 32.8	-0.3
NSK	**Sanguang** baz=323	**0.62**	**322**	*e*P	**Pb**	04 15 32.9	-0.4
NSK	baz=323			S	**Sb**	04 15 41.5	-0.6
WUSB	**Renai** baz=255	**0.64**	**253**	*e*P	**Pb**	04 15 33.4	-0.2
VWDT	**VWDT** baz=243	**0.73**	**234**	*e*P	**Pb**	04 15 35.7	+0.7
WHP	**Taichung City** baz=278	**0.77**	**277**	*e*S	**Sb**	04 15 47.0	+0.6
TIPB	**Shuangxi** baz=3.0	**0.78**	**3**	*e*P	**Pb**	04 15 35.9	-0.1
TIPB	baz=3.0			*e*S	**Sg**	04 15 46.1	+0.4
EHY	**Hungye** baz=214	**0.80**	**212**	*e*P	**Pb**	04 15 36.8	+0.6
SSLB	**Suanglung** baz=258	**0.85**	**243**	P	**Pb**	04 15 37.4	+0.2
YULB	**Yu-li** baz=225	**0.91**	**210**	*e*P	**Pn**	04 15 38.9	-0.2
SXI1	**Grass Mountain** baz=12	**0.91**	**5**	*e*P	**Pb**	04 15 38.7	+0.5
YM01	**YM01** baz=349	**0.98**	**349**	*e*P	**Pn**	04 15 40.1	0.0

*IDC **05** 04:24:28.4±1.8,4˚95S×129˚20E,h0km,mb4.0/3, mbtmp4.0/5,ML3.8/2,MS3.1/1,Error ellipse: s-maj=154.3km s-min=25.8km az=69.0*
*DJA **05** 04:24:48.5±0.3,5˚S±2˚×13˚0E±˚,h224km±4km,M4.2/12, mb4.0/6,MLv4.4/12*
ISC 05 04:24:48.8±0.7,5˚27S±0˚05×129˚96E±0˚05,h200km,n24, σ28˚86/32,mb3.8/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.74**	**355**	P	**Pn**	**04 25 20.6**	**+3.6**
BNDI	**Bandanaira**	**0.74**	**355**	P	**Pn**	**04 25 20.1**	**+3.1**
BNDI				S	**Sn**	**04 25 44.8**	**+5.8**
SAUI	**Saumlaki**	**3.00**	**154**	P	**Pn**	**04 25 41.4**	**+2.9**
SAUI				S	**Sn**	**04 26 20.1**	**+2.6**
FAKI	**Fak Fak**	**3.26**	**44**	P	**Pn**	**04 25 43.7**	**+2.1**
FAKI	**Fak Fak**	**3.26**	**44**	P	**Pn**	**04 25 43.5**	**+1.9**
FAKI				S	**Sn**	**04 26 23.4**	**+0.4**
NLAI	**Namlea**	**3.50**	**305**	P	**Pn**	**04 25 47.8**	**+3.4**
NLAI				S	**Sn**	**04 26 30.6**	**+2.6**
KMPI	**Kaimana, Papua**	**4.06**	**67**	P	**Pn**	**04 25 53.4**	**+2.1**
KMPI				S	**Sn**	**04 26 40.7**	**+0.3**
SWI	**Sorong**	**4.56**	**17**	P	**Pn**	**04 25 58.4**	**+0.7**
SWI				S	**Sn**	**04 26 49.1**	**-2.9**
SANI	**Sanana**	**5.10**	**309**	P	**Pn**	**04 26 04.7**	**+0.2**
SANI	**Sanana** 21nm,0.5s,0.1nm	**5.10**	**309**	P	**Pn**	**04 26 03.7**	**-0.8**
LBMI	**Labuha** 89nm,0.8s,0.3nm	**5.22**	**332**	P	**Pn**	**04 26 07.1**	**+1.1**
LBMI	89nm,0.8s,0.3nm			S	**Sn**	**04 27 04.1**	**-2.9**
KDU	**Kakadu**	**7.77**	**162**	P	**Pn**	**04 26 38.9**	**-0.2**
EDFI	**Ende, Flores** 15nm,1.2s	**8.91**	**247**	P	**Pn**	**04 26 55.3**	**+1.2**
KNRA	**Kununurra**	**10.41**	**186**	P	**Pn**	**04 27 11.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**13.43**	**198**	P	**Pn**	**04 27 52.4**	**+0.7**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=343,slow=13,SNR=17	**15.19**	**164**	Pn	**Pn**	**04 28 12.4**	**-1.0**
WRA				Sn	**S**	**04 30 52.7**	**-10**
	1.2nm,0.3s,baz=355,slow=19,SNR=12 0.6nm,0.3s						
COEN	**Coen**	**15.62**	**124**	P	**Pn**	**04 28 20.5**	**+1.9**
QIS	**Mount Isa**	**17.85**	**149**	P	**Pn**	**04 28 44.9**	**-0.3**
ASAR	**Alice Springs** 0.7nm,0.3s,baz=348,slow=11,SNR=39	**18.68**	**169**	P	**P**	**04 28 53.0**	**+0.9**
ASAR	0.7nm,0.7s,baz=349,slow=19,SNR=5.9 2.5nm,0.4s			S	**S**	**04 32 11.2**	**-3.1**
PSA00	**Pilbara Seismi**	**18.94**	**210**	P	**P**	**04 28 54.9**	**0.0**
JNU	**Nakatsue** comp=Z,27nm,20.9s,baz=187,slow=34	**38.19**	**1**	LR	LR	04 45 36.4	
MKAR	**Makanchi Array** 1.7nm,0.7s,baz=122,slow=8.3,SNR=19 1.7nm,0.7s	**66.77**	**326**	P	**P**	**04 35 18.2**	**-0.5**
ZALV	**Zalesovo Beam** 0.6nm,0.5s,baz=128,slow=9.3,SNR=2.1 0.6nm,0.5s	**70.03**	**334**	P	**P**	**04 35 36.6**	**-2.1**
KURBB	**Kurchatov Arra** 1.2nm,0.6s,baz=131,slow=4.4,SNR=9.3 1.2nm,0.6s	**71.03**	**328**	P	**P**	**04 35 44.0**	**-0.8**

*IDC **05** 04:36:51.1±1.2,24˚23N×122˚08E,h0km,mb3.5/5, mbtmp3.5/5,MS2.8/3,Error ellipse: s-maj=69.1km s-min=23.1km az=69.0*
*JMA **05** 04:36:53.6±0.1,24˚2N±0˚5×121˚7E±0˚9,h13km±1km, MV3.4/13,TAIWAN REGION*
*ASIES **05** 04:36:53.2,24˚20N×121˚72E,h9km,ML4.2,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.12; $M_{\theta\theta}$-1.23; $M_{\phi\phi}$2.32; $M_{r\theta}$-0.24; $M_{r\phi}$4.09; $M_{\theta\phi}$-2.87; Fault plane solution: $M_0$5.54137×10^{21} NP1: ϕ_s=164.84000°,δ78.63000°,λ147.41000°. NP2: ϕ_s=262.03000°,δ58.12000°,λ13.42000°. Principal axes: T Plg30.8510°, Azm118.7890°; N Plg55.6870°, Azm327.7180°; P Plg13.5380°, Azm217.0580°;*
*TAP **05** 04:36:53.2,24˚20N×121˚72E,h9km,ML4.2,C*
ISC 05 04:36:53.2±0.8,24˚19N±0˚01×121˚73E±0˚02,h10km±4km, n143,σ0˚72/218,mb3.5/5,15C-19D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=245	**0.11**	**252**	*i* P	**Pg**	**04 36 56.0**	**+0.1**
ETL	baz=245			*i* S	**Sg**	**04 36 57.8**	**+0.1**
EHP	**Heping Village** baz=14	**0.12**	**3**	P	**Pg**	**04 36 56.2**	**+0.2**
EHP	baz=14			S	**Sg**	**04 36 58.4**	**+0.3**
NACB	**Ninganchiao** baz=251	**0.13**	**262**	⇑*i* P	**Pg**	**04 36 56.2**	**0.0**
NACB	baz=251			*i* S	**Sg**	**04 36 58.1**	**-0.1**
EAHA	**Aohua** baz=8.0	**0.14**	**2**	⇓*i* P	**Pg**	**04 36 56.4**	**+0.1**
EAHA	baz=8.0			S	**Sg**	**04 36 58.6**	**+0.1**
TWD	**Chiawan** baz=222	**0.17**	**229**	*i* P	**Pg**	**04 36 56.9**	**+0.1**
TWD	baz=222			*i* S	**Sg**	**04 36 59.4**	**+0.1**
ETLH	**Xiulin Townshi** baz=273	**0.23**	**274**	⇑*i* P	**Pg**	**04 36 58.1**	**+0.1**
ETLH	baz=273			*i* S	**Sg**	**04 37 01.3**	**+0.1**
ENA	**Nanau** baz=7.0	**0.23**	**2**	⇓*i* P	**Pg**	**04 36 58.2**	**+0.2**
ENA	baz=7.0			*i* S	**Sg**	**04 37 01.6**	**+0.3**
HWA	**Hwalien** baz=205	**0.24**	**209**	P	**Pg**	**04 36 58.8**	**+0.7**
HWA	baz=205			S	**Sg**	**04 37 03.2**	**+1.7**
EWUT	**Wuta** baz=12	**0.26**	**9**	⇓*i* P	**Pg**	**04 36 58.6**	**+0.2**
EWUT	baz=12			*i* S	**Sg**	**04 37 02.0**	**+0.1**
ETM	**Tongmen** baz=214	**0.32**	**224**	⇓*i* P	**Pg**	**04 36 59.5**	**0.0**
ETM	baz=214			*i* S	**Sg**	**04 37 03.6**	**-0.1**
LXIB	**Xiulin Townshi** baz=238	**0.34**	**240**	⇓*i* P	**Pg**	**04 36 59.9**	**-0.1**
LXIB	baz=238			S	**Sg**	**04 37 04.6**	**+0.1**
LATG	**Datong** baz=332	**0.39**	**331**	⇑*i* P	**Pg**	**04 37 01.2**	**+0.3**
LATG	baz=332			S	**Sg**	**04 37 06.4**	**+0.3**
ESAO	**Su ao** baz=17	**0.40**	**15**	P	**Pg**	**04 37 01.1**	**+0.1**
ESAO	baz=17			S	**Sg**	**04 37 06.3**	**0.0**
NNSB	**Datong** baz=307	**0.40**	**306**	⇑*i* P	**Pg**	**04 37 01.4**	**+0.4**
NNSB	baz=307			*i* S	**Sg**	**04 37 06.3**	**0.0**
NNSH	**Datong** baz=306	**0.40**	**306**	⇑*i* P	**Pg**	**04 37 01.4**	**+0.4**
NNSH	baz=306			S	**Sg**	**04 37 06.5**	**+0.2**
NNS	**Nan Shan** baz=308	**0.41**	**307**	⇑*i* P	**Pg**	**04 37 01.6**	**+0.3**
NNS	baz=308			*i* S	**Sg**	**04 37 07.0**	**+0.2**
TWC	**Suao** baz=10.0	**0.43**	**14**	⇓*i* P	**Pg**	**04 37 01.9**	**+0.3**
TWC	baz=10.0			*i* S	**Sg**	**04 37 08.0**	**+0.7**
WHF	**Hehuan Shan** baz=263	**0.43**	**264**	⇓*i* P	**Pg**	**04 37 01.9**	**+0.1**
WHF	baz=263			*i* S	**Sg**	**04 37 07.5**	**0.0**
SHUL	**Shoufeng** baz=207	**0.43**	**201**	P	**Pb**	**04 37 02.5**	**-0.4**
SHUL	baz=207			*e*S	**Sb**	**04 37 10.8**	**+1.3**
NDS	**Dongshan** baz=359	**0.44**	**358**	⇓*i* P	**Pg**	**04 37 02.3**	**+0.4**
NDS	baz=359			*i* S	**Sg**	**04 37 08.1**	**+0.4**
NDT	**Datong Townshi** baz=335	**0.46**	**334**	⇑*i* P	**Pb**	**04 37 02.8**	**-0.6**
NDT	baz=335			S	**Sb**	**04 37 08.9**	**-1.3**
ESL	**Shilin** baz=215	**0.47**	**216**	⇓*i* P	**Pg**	**04 37 02.1**	**-0.1**
ESL	baz=215			S	**Sg**	**04 37 08.0**	**-0.4**
ENTT	**Nioudou** baz=343	**0.47**	**341**	⇓*i* P	**Pb**	**04 37 02.9**	**-0.7**
ENTT	baz=343			*i* S	**Sg**	**04 37 09.3**	**+0.6**
TEGC	**Jhi Village** baz=201	**0.51**	**200**	*e*P	**Pb**	**04 37 04.7**	**+0.4**
TWT	**Tachien** baz=276	**0.51**	**277**	⇑*i* P	**Pb**	**04 37 04.0**	**-0.5**
TWT	baz=276			*i* S	**Sb**	**04 37 10.8**	**-1.2**
CHGB	**Renai** baz=247	**0.53**	**256**	⇑*i* P	**Pg**	**04 37 03.9**	**+0.4**
CHGB	baz=247			*i* S	**Sg**	**04 37 10.8**	**+0.3**
TDCB	**Techi** baz=276	**0.53**	**277**	⇑*i* P	**Pb**	**04 37 04.0**	**-0.7**
TDCB	baz=276			*i* S	**Sg**	**04 37 10.6**	**+0.1**
TWE	**Neicheng** baz=4.0	**0.53**	**353**	⇓*i* P	**Pb**	**04 37 04.1**	**-0.5**
TWE	baz=4.0			S	**Sb**	**04 37 11.4**	**-1.0**
OWD	**Renai** baz=244	**0.56**	**245**	P	**Pg**	**04 37 04.2**	**+0.1**
OWD	baz=244			S	**Sg**	**04 37 11.7**	**+0.2**
WARBT	**Fenglin Townsh** baz=221	**0.57**	**214**	⇓*i* P	**Pg**	**04 37 04.0**	**-0.3**
ILA	**Ilan** baz=3.0	**0.57**	**1**	P	**Pb**	**04 37 05.1**	**-0.3**
ILA	baz=3.0			S	**Sb**	**04 37 13.1**	**-0.5**
YHNB	**Yeheng** baz=326	**0.58**	**326**	⇑*i* P	**Pb**	**04 37 05.2**	**-0.3**
YHNB	baz=326			S	**Sg**	**04 37 12.2**	**+0.1**
FUSB	**Fushanzhiwuyua** baz=348	**0.58**	**347**	⇓*i* P	**Pb**	**04 37 05.1**	**-0.5**
FUSB	baz=348			*i* S	**Sg**	**04 37 12.3**	**+0.2**
EGFH	**Guangfu** baz=216	**0.59**	**208**	P	**Pg**	**04 37 04.8**	**+0.1**
NSK	**Sanguang** baz=326	**0.59**	**325**	⇑*i* P	**Pb**	**04 37 05.3**	**-0.4**
NSK	baz=326			*i* S	**Sg**	**04 37 12.8**	**+0.3**
WUSB	**Renai** baz=242	**0.60**	**251**	⇓*i* P	**Pg**	**04 37 05.1**	**+0.3**
WUSB	baz=242			*i* S	**Sg**	**04 37 12.5**	**-0.2**
VWDT	**VWDT** baz=231	**0.70**	**231**	⇓*i* P	**Pg**	**04 37 06.7**	**0.0**
VWDT	baz=231			S	**Sb**	**04 37 16.2**	**-0.8**
NFF	**Wufeng Townshi** baz=315	**0.71**	**308**	P	**Pb**	**04 37 07.7**	**-0.1**
NFF	baz=315			S	**Sb**	**04 37 16.7**	**-1.0**
WHP	**Taichung City** baz=277	**0.72**	**277**	⇑*i* P	**Pb**	**04 37 08.0**	**0.0**
WHP	baz=277			*i* S	**Sb**	**04 37 17.4**	**-0.6**
HGSD	**Ruisui** baz=191	**0.75**	**202**	P	**Pb**	**04 37 08.6**	**+0.2**
WCS	**Beigang Elemen** baz=259	**0.76**	**260**	P	**Pb**	**04 37 08.3**	**-0.3**
WCS	baz=259			*e*S	**Sg**	**04 37 17.8**	**-0.1**
EHY	**Hungye** baz=215	**0.78**	**209**	P	**Pg**	**04 37 07.4**	**-0.8**
TIPB	**Shuangxi** baz=357	**0.78**	**6**	P	**Pb**	**04 37 08.6**	**-0.3**
TIPB	baz=357			S	**Sg**	**04 37 18.3**	**-0.2**
NHDH	**Xindian Distri** baz=347	**0.79**	**346**	P	**Pb**	**04 37 09.3**	**+0.3**
NHDH	baz=347			S	**Sg**	**04 37 18.5**	**-0.3**
LIOB	**Emei** baz=305	**0.80**	**305**	P	**Pb**	**04 37 09.5**	**+0.4**
LIOB	baz=305			S	**Sb**	**04 37 20.2**	**+0.2**
NSTT	**Nanjuang** baz=304	**0.80**	**303**	⇑*i* P	**Pb**	**04 37 09.3**	**+0.1**
NSTT	baz=304			S	**Sb**	**04 37 19.5**	**-0.6**
SSLB	**Suanglung** baz=240	**0.82**	**241**	⇓*i* P	**Pg**	**04 37 08.9**	**-0.1**
SSLB	baz=240			S	**Sg**	**04 37 19.3**	**-0.3**
SMLT	**Sun Moon Lake** baz=238	**0.82**	**248**	⇓*i* P	**Pb**	**04 37 09.3**	**-0.4**
SMLT	baz=238			*i* S	**Sg**	**04 37 19.7**	**-0.1**
TWB1	**Santiao Chiao** baz=17	**0.84**	**16**	P	**Pg**	**04 37 09.7**	**+0.2**
TWB1	baz=17			*e*S	**Sg**	**04 37 20.3**	**-0.2**
TYC	**Yuchr** baz=241	**0.85**	**251**	⇓*i* P	**Pg**	**04 37 09.6**	**0.0**
TYC	baz=241			S	**Sg**	**04 37 20.1**	**-0.6**
NHY	**Taipei** baz=350	**0.86**	**350**	*e*P	**Pn**	**04 37 10.9**	**-0.5**
NHY	baz=350			*e*S	**Sb**	**04 37 21.9**	**+0.1**
TAP	**Taipei** baz=347	**0.87**	**346**	*e*P	**Pn**	**04 37 10.9**	**-0.6**
TAP	baz=347			S	**Sb**	**04 37 22.1**	**0.0**
NWF	**Wu-fen Shan** baz=354	**0.88**	**3**	P	**Pb**	**04 37 10.7**	**+0.1**
NWF	baz=354			S	**Sg**	**04 37 21.7**	**+0.1**
WFSB	**Wu-fen Shan** baz=354	**0.88**	**3**	P	**Pb**	**04 37 10.5**	**0.0**
WFSB	baz=354			S	**Sg**	**04 37 21.7**	**+0.1**
TWQ1	**Liyutan** baz=280	**0.89**	**280**	⇑P	**Pn**	**04 37 11.4**	**-0.4**
TWQ1	baz=280			S	**Sb**	**04 37 23.1**	**+0.3**
YULB	**Yu-li** baz=219	**0.89**	**207**	P	**Pg**	**04 37 09.8**	**-0.5**
SBCB	**Hsinchu** baz=312	**0.91**	**311**	*e*P	**Pn**	**04 37 12.2**	**+0.1**
SBCB	baz=312			*e*S	**Sn**	**04 37 25.7**	**+0.5**
SXI1	**Grass Mountain** baz=16	**0.91**	**8**	⇓*i* P	**Pb**	**04 37 11.2**	**+0.1**
SXI1	baz=16			S	**Sg**	**04 37 22.1**	**-0.4**
ECBN	**Changbin** baz=185	**0.91**	**197**	*e*P	**Pb**	**04 37 11.5**	**+0.4**
NSY	**Sanyi** baz=284	**0.92**	**284**	P	**Pn**	**04 37 12.2**	**+0.1**
NSY	baz=284			*e*S	**Sn**	**04 37 24.4**	**-1.1**
NCUH	**Zhongli** baz=328	**0.92**	**327**	*e*P	**Pn**	**04 37 12.3**	**0.0**
EYUL	**Yuli** baz=217	**0.92**	**204**	P	**Pg**	**04 37 11.1**	**+0.1**
HSN	**Hsinchu** baz=314	**0.92**	**311**	P	**Pn**	**04 37 12.1**	**-0.2**
HSN	baz=314			*e*S	**Sn**	**04 37 25.3**	**-0.3**
NMLH	**Miaoli** baz=292	**0.93**	**292**	*i* P	**Pn**	**04 37 12.5**	**+0.2**
NMLH	baz=292			*e*S	**Sb**	**04 37 24.3**	**+0.5**
TWF1	**Yuli** baz=218	**0.93**	**206**	P	**Pg**	**04 37 09.9**	**-1.1**
WHYT	**Xinyi Township** baz=238	**0.94**	**239**	*e*P	**Pb**	**04 37 11.5**	**-0.2**
TWS1	**Kuangyinshan** baz=353	**0.95**	**342**	*e*P	**Pn**	**04 37 12.7**	**+0.1**
TWS1	baz=353			*e*S	**Sn**	**04 37 25.4**	**-0.9**
TNOU	**National Taiwa** baz=2.0	**0.95**	**2**	*e*P	**Pb**	**04 37 12.0**	**+0.1**
YM01	**YM01** baz=351	**0.96**	**351**	*e*P	**Pn**	**04 37 12.6**	**-0.3**
WJS	**Zhushan** baz=241	**0.99**	**248**	*e*P	**Pn**	**04 37 13.3**	**+0.1**
WJS	baz=241			*e*S	**Sn**	**04 37 27.4**	**+0.1**
NTST	**Danshui** baz=355	**1.00**	**345**	*e*P	**Pn**	**04 37 14.0**	**+0.6**
NTST	baz=355			*e*S	**Sn**	**04 37 28.1**	**+0.5**
ANP	**Anpu** baz=350	**1.01**	**349**	*e*P	**Pn**	**04 37 13.5**	**0.0**
WNT	**Mingjian** baz=247	**1.01**	**252**	P	**Pn**	**04 37 14.0**	**+0.5**
WNT	baz=247			*e*S	**Sn**	**04 37 27.9**	**+0.2**
WDJ	**Dajia District** baz=279	**1.01**	**279**	*e*P	**Pn**	**04 37 14.5**	**+1.1**
WDJ	baz=279			*e*S	**Sn**	**04 37 28.5**	**+0.7**
CHKH	**Chenggong** baz=188	**1.04**	**197**	*e*P	**Pg**	**04 37 13.1**	**-0.1**
FULB	**Fuli** baz=218	**1.07**	**202**	*e*P	**Pg**	**04 37 13.6**	**-0.1**
WCHH	**Zhanghua** baz=264	**1.08**	**264**	*e*P	**Pn**	**04 37 15.5**	**+1.1**
WCHH	baz=264			*e*S	**Sn**	**04 37 31.3**	**+1.8**
TWY	**Chenhua** baz=354	**1.09**	**354**	*e*P	**Pn**	**04 37 15.4**	**+0.9**
TWY	baz=354			*e*S	**Sn**	**04 37 30.2**	**+0.6**
ALS	**Alishan** baz=218	**1.09**	**232**	P	**Pb**	**04 37 14.2**	**-0.1**
CHN5	**Tsauling** baz=238	**1.13**	**239**	*e*P	**Pn**	**04 37 15.6**	**+0.4**
CHN5	baz=238			*e*S	**Sn**	**04 37 32.2**	**+1.3**
JYNG	**Yonagunijimaku**	**1.14**	**77**	*e*P	**Pn**	**04 37 15.9**	**+0.8**
CHKT	**Chengkung** baz=187	**1.14**	**197**	P	**Pg**	**04 37 14.8**	**-0.3**
EHD	**Haiduan** baz=219	**1.15**	**205**	*e*P	**Pg**	**04 37 14.9**	**-0.3**
ECS	**Chishang**	**1.19**	**203**	*e*P	**Pn**	**04 37 16.9**	**+0.9**

baz=217
ELDTW **Lidau** 1.20 213 *e*P Pb 04 37 14.7 -1.3
baz=215
YOJ **Yonaguni jima** 1.20 77 P Pg 04 37 16.6 +0.4
YOJ S Sn 04 37 33.9 +1.6
WDLH **Douliu** 1.20 246 *e*P Pg 04 37 17.0 +0.7
baz=246
WRL **Guolierlin Hig** 1.27 257 *e*P Pg 04 37 17.9 +0.2
baz=257
WRL *e*S Sn 04 37 35.2 +1.0
baz=257
WCKO **Fanlu** 1.28 234 *e*P Pg 04 37 18.5 +0.8
baz=235
WTK **Tuku** 1.33 248 *e*P Pg 04 37 18.8 +0.1
baz=235
WTK *e*S Sg 04 37 37.3 +1.4
baz=235
CHN4 **Tsaushan** 1.34 232 P Pg 04 37 19.2 +0.3
baz=220
CHN4 *e*S Sg 04 37 38.0 +1.7
baz=220
STYH **Taoyuan** 1.34 221 *e*P Pb 04 37 18.3 -0.2
baz=223
TPUB **Ta-pu** 1.35 229 *e*P Pg 04 37 18.9 -0.1
baz=221
TPUB *e*S Sg 04 37 37.8 +1.2
baz=221
STYT **Tauyuan** 1.36 221 P Pg 04 37 19.1 -0.2
baz=222
STYT *e*S Sg 04 37 38.4 +1.4
baz=222
WTP **Ta-pu** 1.39 228 *e*P Pb 04 37 19.5 +0.1
baz=217
WTP *e*S Sg 04 37 40.0 +1.9
baz=217
LONT **Longtian** 1.39 204 *e*P Pn 04 37 17.8 -1.0
baz=216
TWK **Hsinying** 1.47 231 *e*P Pg 04 37 21.2 -0.1
baz=244
TWK *e*S Sg 04 37 41.1 +0.7
baz=244
WSF **Szhu** 1.49 249 *e*S Sg 04 37 42.5 +1.4
baz=236
SNST **Tainan City** 1.49 230 *e*P Pg 04 37 21.9 +0.1
baz=231
CHN1 **Nanshi** 1.49 228 *e*P Pg 04 37 21.6 -0.2
baz=222
CHN1 *e*S Sg 04 37 41.9 +0.7
baz=222
TWG **Pinlang** 1.49 204 *e*P Pn 04 37 18.7 -1.4
baz=216
TWGBT **Beinan** 1.49 204 *e*P Pn 04 37 18.5 -1.6
baz=216
SGST **Jiashian** 1.53 224 P Pb 04 37 21.2 -0.4
baz=224
SGST *e*S Sg 04 37 42.6 +0.2
baz=224
LDUT **Ludao** 1.53 189 *e*P Pn 04 37 18.4 -2.2
baz=194
SLGT **Liugui** 1.56 220 *e*P Pb 04 37 22.5 +0.4
baz=214
SLGT *e*S Sg 04 37 44.3 +1.1
baz=214
ICHU **Yijhu** 1.57 238 *e*P Pb 04 37 22.6 +0.3
baz=239
ICHU *e*S Sg 04 37 45.5 +1.8
baz=239
CHN8 **Yiju** 1.63 239 *e*P Pg 04 37 24.7 +0.3
baz=240
CHN8 *e*S Sg 04 37 47.1 +1.5
baz=240
SHHT **Tainan City** 1.72 228 *e*P Pg 04 37 26.1 -0.1
baz=231
SCST **Cishan** 1.73 221 *e*P Pg 04 37 25.8 -0.6
baz=224
TSMG **Majia** 1.79 214 *e*P Pb 04 37 26.5 +0.4
baz=228
TWM1 **Shoushan** 1.82 222 *e*P Pg 04 37 28.2 +0.2
baz=224
IRIF **Iriomote-Funau** 1.83 85 P Pn 04 37 25.2 +0.6
SGLT **Jiouru** 1.85 218 *e*P Pg 04 37 28.4 -0.4
baz=212
MASBT **Mashibuluo** 1.87 213 *e*P Pb 04 37 27.5 +0.1
baz=210
EAST **Anshuo** 1.98 205 *e*P Pn 04 37 26.1 -0.7
baz=197
TAWH **Dawu Township** 2.00 203 *e*P Pn 04 37 28.2 +1.1
baz=196
JKRS **Kuro-shima** 2.08 88 P Pn 04 37 29.3 +1.2
SCZT **Fangliau** 2.08 210 *e*P Pb 04 37 30.6 -0.5
baz=215
PNG **Penghu** 2.09 253 *e*P Pb 04 37 30.0 -1.2
baz=253
PHUB **P'eng-hu** 2.09 252 *e*P Pn 04 37 29.4 +1.1
baz=252
WDGT **Dungji** 2.12 244 *e*P Pb 04 37 30.3 -1.3
baz=244
JIJ **Ishigaki jima** 2.21 85 P Pn 04 37 30.4 +0.5
JIJ *e*S Sn 04 37 58.1 +0.8
JISG **Ishigakijimahi** 2.38 80 P Pn 04 37 32.6 +0.2
JISG *e*S Sn 04 38 02.3 +0.6
TWK1 **Hengchun** 2.40 201 *e*P Pb 04 37 34.7 -1.8
baz=195
TWKBT **Hengchun** 2.40 201 *e*P Pn 04 37 32.5 -0.1
baz=195
PTMZ **Houxiangcun** 2.52 290 *e*P Pn 04 37 34.5 +0.2
baz=290
MATB **Ma-tsu** 2.54 321 *e*P Pn 04 37 35.4 +0.9
baz=320
LYJJ **Jianjiangzhen** 2.95 323 *e*P Pn 04 37 42.5 +2.4
baz=323
KNM **Kinmen** 3.02 275 *e*P Pn 04 37 43.3 +2.2
baz=274
XPSS **Dashiqiu** 3.06 333 *e*P Pn 04 37 41.7 0.0
baz=333
KNMB **Chin-men Tao** 3.06 276 *e*P Pn 04 37 41.6 -0.1
baz=275
MHZQ **Yeshan** 3.10 308 *e*P Pn 04 37 44.2 +2.0
baz=308
AXDP **Jialang** 3.50 282 *e*P Pn 04 37 48.3 +0.6
baz=282
ZPLA **Ao Xicun** 3.65 267 *e*P Pn 04 37 49.8 0.0
baz=265
SXFK **Yanhouchang** 4.30 302 *e*P Pn 04 37 59.4 +0.6
baz=301
KSRS **Korea Array** 14.24 20 LR LR 04 46 13.3
comp=Z,12nm,18.2s,baz=140,slow=40
DAV **Davao City (W)** 17.42 167 LR LR 04 47 29.6
comp=Z,56nm,18.6s,baz=340,slow=37
CMAR **Chiang Mai Arr** 21.97 259 LR LR 04 50 50.6
comp=Z,26nm,18.0s,baz=100,slow=38
SONM **Songino Array** 26.56 337 P P 04 42 31.8 +0.3
0.4nm,0.7s,baz=134,slow=6.2,SNR=2.7
0.4nm,0.7s
MKAR **Makanchi Array** 38.68 316 P P 04 44 18.3 +1.1
0.5nm,0.6s,baz=98,slow=9.6,SNR=5.0
0.5nm,0.6s
WRA **Warramunga Arr** 45.55 163 P P 04 45 12.0 -1.4
0.8nm,0.7s,baz=345,slow=8.7,SNR=4.0
0.8nm,0.7s
ASAR **Alice Springs** 49.02 165 P P 04 45 39.7 -0.7
0.5nm,0.7s,baz=332,slow=6.5,SNR=5.0
0.5nm,0.7s
YKA **Yellowknife Ar** 82.77 23 P P 04 49 15.9 -1.4
0.2nm,0.6s,baz=318,slow=7.2,SNR=5.1
0.2nm,0.6s

*KRSC **05** 04:48:38.2±1.7, 48˚.45N×152˚.03E, h364km±57km, Ml4.4*
*MOS **05** 04:48:39.0±0.6, 48˚.83N×151˚.12E, h326km, mb4.1/1, Error ellipse: s-maj=56.4km s-min=6.4km az=58.5*
*IDC **05** 04:48:40.2±2.4, 49˚.20N×150˚.87E, h333km±26km, mb3.0/5, mbtmp3.9/7, Error ellipse: s-maj=28.4km s-min=20.2km az=99.0*
*SKHL **05** 04:48:40.4±0.4, 48˚.20N×152˚.00E, h338km±9km, mb4.9/7, mbv5.3/3, msh5.2/4, msha5.1/6*
ISC 05 04:48:37.2±0.7, 48˚.6N±0˚.1×151˚.5E±0˚.1, h350km, n59, σ2§41/71, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.63**	**53**	*e*PN		**Pn**	**04 49 45.5**	**+3.1**
SKR				*e*S		**S**	**04 50 36.0**	**+1.1**
SKR	comp=Z,278nm,0.7s			pmax		pmax		
SKR	comp=E,27nm,0.6s			smax		smax		
SKR	comp=N,61nm,0.8s			smax		smax		
SKR	**Severo-Kuril's**	**3.63**	**53**	*e*P		**Pn**	**04 49 45.3**	**+3.0**
SKR	**Severo-Kuril's**	**3.63**	**53**	*e*P		**Pn**	**04 49 45.5**	**+3.1**
SKR				AMB		AMB	04 49 46.0	
SKR	comp=N,280nm,0.7s			AMB		AMB	04 49 50.4	
SKR	comp=N,600nm,3.0s			*e*S		**S**	**04 50 36.0**	**+1.1**
SKR				A		A	04 50 40.6	
SKR	comp=N,60nm,0.6s			A		A	04 50 40.6	
SKR	comp=N,80nm,0.6s			A		A	04 50 45.9	
SKR	comp=N,2μm,4.0s			A		A	04 50 45.9	
SKR	comp=N,800nm,4.0s			A		A	04 50 45.9	
KUR	**Kuril'sk**	**4.21**	**218**	*e*P		**Pn**	**04 49 49.2**	**+0.8**
KUR				AMB		AMB	04 49 55.2	
KUR	comp=N,50nm,0.4s			*e*S		**S**	**04 50 43.6**	**-2.2**
KUR				A		A	04 50 47.6	
KUR	comp=N,40nm,0.5s			A		A	04 50 47.6	
KUR	comp=N,40nm,0.5s			A		A	04 50 47.6	
PAU	**Pauzhetka**	**4.44**	**48**	PN		**Pn**	**04 49 53.7**	**+3.0**
PAU	**Pauzhetka**	**4.44**	**48**	*e*P		**Pn**	**04 49 53.7**	**+3.0**
PAU	**Pauzhetka**	**4.44**	**48**	*e*P		**Pn**	**04 49 54.0**	**+3.3**
PAU				AMB		AMB	04 49 54.7	
PAU	comp=N,240nm,0.6s			AMB		AMB	04 49 58.3	
PAU	comp=N,700nm,3.0s			*e*S		**S**	**04 50 51.7**	**+1.6**
PAU				A		A	04 50 55.8	
PAU	comp=N,600nm,3.0s			A		A	04 50 55.8	
PAU	comp=N,700nm,3.0s			A		A	04 50 57.2	
PAU	comp=N,50nm,0.4s			A		A	04 50 57.2	
PAU	comp=N,30nm,0.4s			A		A	04 50 57.2	
KDTR	**Khodutka, Kamc**	**5.28**	**50**	PN		**Pn**	**04 50 01.5**	**+1.7**
KDTR				S		**S**	**04 51 03.1**	**-3.5**
KDTR	**Khodutka, Kamc**	**5.28**	**50**	*e*P		**Pn**	**04 50 01.5**	**+1.7**
KDTR				*e*S		**S**	**04 51 03.1**	**-3.5**
ASAK	**Asacha**	**5.55**	**45**	PN		**Pn**	**04 50 04.8**	**+1.9**
ASAK	**Asacha**	**5.55**	**45**	*e*P		**Pn**	**04 50 04.8**	**+1.9**
GRL	**Gorelyy**	**5.74**	**44**	PN		**Pn**	**04 50 08.0**	**+2.9**
GRL	**Gorelyy**	**5.74**	**44**	*e*P		**Pn**	**04 50 08.0**	**+2.9**
SHO	**Shikotan**	**5.75**	**216**	*e*PN		**Pn**	**04 50 07.0**	**+1.8**
SHO				*e*S		**S**	**04 51 15.0**	**-1.5**
SHO	comp=N,7.0nm,0.3s			pmax		pmax		
SHO	comp=E,19nm,0.3s			pmax		pmax		
SHO	comp=Z,35nm,0.3s			pmax		pmax		
SHO	comp=N,63nm,0.3s			smax		smax		
SHO	comp=E,89nm,0.5s			smax		smax		
SHO	**Shikotan**	**5.75**	**216**	*e*P		**Pn**	**04 50 07.4**	**+2.1**
SHO	**Shikotan**	**5.75**	**216**	*e*P		**Pn**	**04 50 06.5**	**+1.3**
SHO				AMB		AMB	04 50 09.0	
SHO	comp=E,40nm,0.3s			AMB		AMB	04 50 11.5	
SHO	comp=E,2μm,3.0s			*e*S		**S**	**04 51 14.0**	**-2.5**
SHO				A		A	04 51 17.2	
SHO	comp=E,1μm,3.0s			A		A	04 51 17.2	
SHO	comp=E,1μm,3.0s			A		A	04 51 20.3	
SHO	comp=E,80nm,0.4s			A		A	04 51 20.3	
SHO	comp=E,90nm,0.4s			A		A	04 51 20.3	
RUS	**Russkaya**	**5.87**	**47**	PN		**Pn**	**04 50 08.7**	**+2.3**
RUS				S		**S**	**04 51 15.4**	**-3.3**
RUS	**Russkaya**	**5.87**	**47**	*e*P		**Pn**	**04 50 08.7**	**+2.3**
RUS				*e*S		**S**	**04 51 15.4**	**-3.3**
RUS	**Russkaya**	**5.87**	**47**	*e*P		**Pn**	**04 50 08.7**	**+2.3**
KRMR	**Karymshinskiy**	**5.95**	**42**	PN		**Pn**	**04 50 08.4**	**+1.1**
KRMR	**Karymshinskiy**	**5.95**	**42**	*e*P		**Pn**	**04 50 08.4**	**+1.1**
PETK	**Petropavlovsk-**	**5.96**	**39**	P		**Pn**	**04 50 08.1**	**+0.6**
	comp=E,21nm,1.0s,baz=217,slow=8.0,SNR=15							
YUK	**Yuzh-Kuril'sk**	**6.03**	**223**	PN		**Pn**	**04 50 10.3**	**+1.9**
YUK				*e*S		**S**	**04 51 20.5**	**-1.7**
YUK	comp=Z,138nm,0.4s			pmax		pmax		
YUK	comp=N,139nm,0.5s			pmax		pmax		
YUK	comp=E,82nm,0.5s			pmax		pmax		
YUK	**Yuzh-Kuril'sk**	**6.03**	**223**	*e*P		**Pn**	**04 50 10.3**	**+1.9**
YUK				AMB		AMB	04 50 12.4	
YUK	comp=E,140nm,0.4s			*e*S		**S**	**04 51 20.8**	**-1.4**
YUK				A		A	04 51 23.6	
YUK	comp=E,350nm,0.5s			A		A	04 51 23.6	
YUK	comp=E,400nm,0.5s			A		A	04 51 25.2	
YUK	comp=E,3μm,3.0s			A		A	04 51 25.2	
YSS	**Yuzh-Sakhalins**	**6.15**	**258**	*e*PN		Pn	04 50 14.6	+5.0
YSS	comp=Z,10.0nm,0.6s			pmax		pmax		
YSS	**Yuzh-Sakhalins**	**6.15**	**258**	*e*P		Pn	04 50 14.6	+5.0
YSS				AMB		AMB	04 50 16.8	
YSS	comp=Z,10.0nm,0.6s			MLR		MLR		
PET	**Petropavlovsk**	**6.32**	**43**	*e*PN		**Pn**	**04 50 13.2**	**+1.8**
PET				*e*S		**S**	**04 51 25.3**	**-2.7**
PET	comp=Z,16nm,0.8s			pmax		pmax		
PET	comp=E,26nm,0.5s			smax		smax		
PET	comp=Z,100nm,14.0s			MLR		MLR		
PET	**Petropavlovsk**	**6.32**	**43**	*e*P		**Pn**	**04 50 13.2**	**+1.8**
PET				AMB		AMB	04 50 14.3	
	comp=Z,20nm,0.8s							
KOK	**Koryaka**	**6.49**	**41**	PN		**Pn**	**04 50 15.6**	**+2.0**
KOK	**Koryaka**	**6.49**	**41**	*e*P		**Pn**	**04 50 15.6**	**+2.0**
AVH	**Avacha**	**6.51**	**42**	PN		**Pn**	**04 50 17.2**	**+3.3**
AVH	**Avacha**	**6.51**	**42**	*e*P		**Pn**	**04 50 17.1**	**+3.3**
AVH	**Avacha**	**6.51**	**42**	*e*P		**Pn**	**04 50 17.2**	**+3.3**
UGLR	**Uglovaya**	**6.51**	**42**	PN		**Pn**	**04 50 17.3**	**+3.4**
UGLR	**Uglovaya**	**6.51**	**42**	*e*P		**Pn**	**04 50 17.3**	**+3.4**
KRX	**Arik**	**6.54**	**41**	PN		**Pn**	**04 50 16.5**	**+2.3**
KRX	**Arik**	**6.54**	**41**	*e*P		**Pn**	**04 50 16.5**	**+2.3**
SMAR	**Somma**	**6.54**	**42**	PN		**Pn**	**04 50 16.4**	**+2.1**
SMAR	**Somma**	**6.54**	**42**	*e*P		**Pn**	**04 50 16.4**	**+2.1**
NMR	**Nemuro--Hokkai**	**6.62**	**220**	*e*PN		**Pn**	**04 50 15.9**	**+0.8**
NMR				*e*S		**S**	**04 51 30.7**	**-3.9**
NMR	**Nemuro--Hokkai**	**6.62**	**220**	*e*P		**Pn**	**04 50 16.0**	**+0.8**
NMR				*e*S		**S**	**04 51 30.9**	**-3.7**
SPN	**Mys Shipunski**	**7.00**	**47**	PN		**Pn**	**04 50 20.6**	**+1.1**
SPN				S		**S**	**04 51 37.5**	**-5.1**
SPN	**Mys Shipunski**	**7.00**	**47**	*e*P		**Pn**	**04 50 20.6**	**+1.1**
SPN				*e*S		**S**	**04 51 37.5**	**-5.1**
AKK	**Akkeshi**	**7.29**	**222**	*e*P		**Pn**	**04 50 25.1**	**+2.1**
TUMR	**Tumrok**	**8.54**	**35**	PN		**P**	**04 50 40.7**	**+0.4**
TUMR	**Tumrok**	**8.54**	**35**	*e*P		**P**	**04 50 40.7**	**+0.4**
TUMD	**Tumrok D**	**8.58**	**36**	*e*P		**P**	**04 50 41.3**	**+0.7**
KMNR	**Kamenistaya**	**8.93**	**33**	PN		**P**	**04 50 45.1**	**+0.4**
KMNR	**Kamenistaya**	**8.93**	**33**	*e*P		**P**	**04 50 45.1**	**+0.4**
SMKR	**Semkarok**	**10.01**	**33**	PN		**P**	**04 50 57.8**	**+1.2**
SMKR	**Semkarok**	**10.01**	**33**	*e*P		**P**	**04 50 57.8**	**+1.2**
KBG	**Krutoberegovo**	**10.24**	**37**	PN		**P**	**04 50 59.5**	**+0.4**
KBG	**Krutoberegovo**	**10.24**	**37**	*e*P		**P**	**04 50 59.5**	**+0.4**
MJAR	**Matsushiro Arr**	**15.52**	**224**	P		**Pn**	**04 52 02.8**	**+2.7**
	comp=Z,10nm,0.7s,baz=19,slow=12,SNR=18							
MKAR	**Makanchi Array**	**45.16**	**295**	P		**P**	**04 56 19.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=53,slow=10,SNR=4.2							
	comp=Z,0.6nm,0.7s							
FINES	**FINESS Array B**	**61.90**	**334**	P		**P**	**04 58 19.2**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=39,slow=9.0,SNR=5.9							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**69.95**	**197**	P		P	04 59 17.9	+6.5
	comp=Z,0.7nm,0.6s,baz=17,slow=6.1,SNR=4.1							
	comp=Z,0.7nm,0.6s							
ASAR	**Alice Springs**	**73.66**	**197**	P		P	04 59 40.5	+7.3
	comp=Z,0.8nm,0.4s,baz=8.6,slow=5.7,SNR=15							
	comp=Z,0.8nm,0.4s							
TXAR	**Lajitas Array**	**77.49**	**60**	P		P	05 00 00.6	+5.6
	comp=Z,0.1nm,0.6s,baz=284,slow=3.6,SNR=1.6							
	comp=Z,0.1nm,0.6s							

IDC 05 05:02:48.3±13.0, 15˚.09S×164˚.91E, h0km, mb3.7/3, mbtmp3.7/4, ML2.9/1, MS2.4/1, Error ellipse: s-maj=233.6km s-min=36.8km az=51.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.10**	**168**	Pn		Pn	05 04 33.4	-0.1
	0.2nm,0.3s,baz=307,slow=18,SNR=2.2							
DZM				Sn		Sn	05 05 56.8	+1.7
	0.1nm,0.3s,baz=80,slow=19,SNR=1.3							
DZM				LR		LR	05 06 22.9	
	comp=Z,27nm,20.2s,baz=340,slow=30							
	6.4nm,0.8s							
STKA	**Stephens Creek**	**27.05**	**228**	P		P	05 08 32.4	-0.1
	1.3nm,0.5s,baz=42,slow=12,SNR=4.0							
	1.3nm,0.5s							
WRA	**Warramunga Arr**	**29.53**	**256**	P		P	05 08 54.8	0.0
	0.3nm,0.4s,baz=87,slow=9.0,SNR=1.8							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**30.42**	**249**	P		P	05 09 02.6	0.0
	0.3nm,0.4s,baz=82,slow=9.0,SNR=6.6							
	0.3nm,0.4s							

*TEH **05** 05:06:11.6, 39˚.92N×54˚.05E, h11km, ML3.4*
*NNC **05** 05:06:27.9±7.5, 40˚.32N×56˚.00E, h0km, mb3.6, Error ellipse: s-maj=137.7km s-min=21.6km az=75.0*
ISC 05 05:06:18.2±1.2, 39˚.76N±0˚.07×54˚.07E±0˚.07, h35km, n12, σ1§24/14, 3C-3D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MRVT	**Maraveh tapeh**	**2.63**	**142**	Pn		**Pn**	**05 06 58.2**	**0.0**
IGLO	**Ghaloghah**	**3.26**	**183**	Pn		**Pn**	**05 07 06.8**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**3.65**	**119**	⇑Pn		**Pn**	**05 07 13.8**	**+1.6**
GYA0B				⇑Sn		**Sn**	**05 07 52.8**	**-1.3**
IALA	**Alasht**	**3.81**	**196**	Pn		**Pn**	**05 07 14.9**	**+0.3**
MZPU	**Pul - Mazandar**	**3.86**	**212**	Pn		**Pn**	**05 07 14.5**	**-0.7**
KLST	**Kelardasht - M**	**4.02**	**217**	Pn		**Pn**	**05 07 17.3**	**-0.2**
ISFR	**Sfrayin**	**4.10**	**130**	Pn		**Pn**	**05 07 18.1**	**-0.6**
IFIR	**Firoozkooh**	**4.24**	**195**	Pn		**Pn**	**05 07 21.4**	**+0.8**
IEMG	**Emamgholi**	**4.29**	**122**	Pn		**Pn**	**05 07 20.6**	**-0.6**
ILAS	**Lasjerd**	**4.46**	**192**	Pn		**Pn**	**05 07 24.3**	**+0.8**
AB31	**Akbulak array**	**10.37**	**22**	⇓Pn		**Pn**	**05 08 46.4**	**+2.1**
	0.7nm,0.6s,baz=194,slow=14,SNR=4.3							
AB31				⇓Sn		Sn	05 10 31.0	-8.2
	0.4nm,0.3s,baz=192,slow=23,SNR=6.6							
AKTO	**Aktyubinsk**	**11.03**	**13**	⇑Pn		**Pn**	**05 08 53.9**	**+0.6**
	1.5nm,0.9s							
AKTO				⇓Sn		**Sn**	**05 10 53.0**	**-2.3**
	1.2nm,0.6s							

*ISK **05** 05:13:27.3, 37˚.64N×26˚.78E, h12km, ML2.6/17*
*AFAD **05** 05:13:28.2±0.0, 37˚.63N×26˚.90E, h7km±3km, ML2.2*
*ATH **05** 05:13:28.2, 37˚.64N×26˚.83E, h10km±2km, ML2.7/4, Error ellipse: s-maj=4.6km s-min=1.1km az=70.0*
*THE **05** 05:13:29.7, 37˚.65N×26˚.95E, h28km±13km, ML2.6/3, Error ellipse: s-maj=14.1km s-min=1.2km az=121.0*
ISC 05 05:13:27.7±0.8, 37˚.65N±0˚.02×26˚.85E±0˚.02, h14km±6km, n43, σ0§48/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMG	**Samos**	**0.06**	**350**	P		**Pg**	**05 13 30.5**	**0.0**
SMG				S		**Sg**	**05 13 32.0**	**-0.4**
SMG				AML		AML	05 13 32.6	
SMG	comp=E,22299μm,0.3s			AML		AML	05 13 32.6	
	comp=N,25345μm,0.4s							
GCAM	**G?zelcaml?**	**0.31**	**80**	Pg		**Pb**	**05 13 34.9**	**-0.2**
GCAM				Sg		**Sb**	**05 13 40.6**	**+0.6**
GCAM	**G?zelcaml?**	**0.31**	**80**	S		**Sb**	**05 13 40.4**	**+0.4**
DDIM	**Aydin, Didim**	**0.36**	**121**	P		**Pb**	**05 13 36.3**	**+0.3**
DDIM				S		**Sb**	**05 13 41.9**	**+0.3**
DGB	**zmir**	**0.40**	**4**	P		**Pg**	**05 13 36.1**	**+0.3**
DGB				*i* AML		AML	05 13 46.0	
DGB	comp=N,195nm,0.3s			*i* AML		AML	05 13 46.0	
	comp=N,326nm,0.4s							
DIDI	**Didim-Aydin**	**0.41**	**131**	Pg		**Pb**	**05 13 36.7**	**-0.1**
GMLD	**Gumuldur**	**0.43**	**7**	Pg		**Pg**	**05 13 36.5**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.62**	**147**	Pg		**Pb**	**05 13 40.4**	**0.0**
YKAV				Sg		**Sb**	**05 13 49.3**	**+0.2**
ZEYE	**Izmir, Urla-Ze**	**0.65**	**335**	P		**Pg**	**05 13 40.9**	**+0.4**
ZEYE				S		**Sn**	**05 13 52.0**	**-0.7**
ZEYE				*i* AML		AML	05 13 52.0	
ZEYE	comp=N,312nm,0.3s			*i* AML		AML	05 13 53.0	
	comp=N,445nm,0.4s							
BODT	**Bodrum**	**0.69**	**148**	Pg		**Pb**	**05 13 41.4**	**-0.2**
BODT				Sg		**Sb**	**05 13 52.0**	**+1.0**
BODT	**Bodrum**	**0.69**	**148**	P		**Pb**	**05 13 41.6**	**0.0**
BODT				S		**Sb**	**05 13 51.6**	**+0.6**
KLNA	**Kalymnos**	**0.70**	**172**	P		**Pg**	**05 13 41.0**	**-0.3**
KLNA				S		**Sb**	**05 13 50.7**	**-0.4**
KLNA				AML		AML	05 13 55.3	
KLNA	comp=N,2942μm,0.2s			AML		AML	05 13 56.1	
	comp=E,4288μm,0.2s							
URLA	**Izmir**	**0.74**	**344**	Pg		**Pg**	**05 13 42.0**	**-0.1**
URLA				Sg		**Sb**	**05 13 52.6**	**+0.2**
URLA	**Izmir**	**0.74**	**344**	P		**Pg**	**05 13 42.5**	**+0.4**
URLA				S		**Sn**	**05 13 54.1**	**-0.8**
URLA				*i* AML		AML	05 13 56.0	
URLA	comp=E,110nm,0.3s			*i* AML		AML	05 13 57.0	
	comp=E,176nm,0.4s							
BDRM	**Kayabasi**	**0.75**	**141**	P		**Pg**	**05 13 42.1**	**-0.2**
BDRM				S		**Sb**	**05 13 53.5**	**+0.8**
BDRM				*i* AML		AML	05 13 56.0	
	comp=E,336nm,0.7s							
BLCB	**Balcova**	**0.75**	**12**	Pg		**Pg**	**05 13 42.5**	**+0.2**
BLCB				Sg		**Sb**	**05 13 53.9**	**+1.1**
BLCB	**Balcova**	**0.75**	**12**	P		**Pb**	**05 13 42.8**	**+0.2**
BLCB				S		**Sn**	**05 13 55.0**	**-0.2**
MLSB	**Milas**	**0.82**	**115**	Pg		**Pn**	**05 13 44.4**	**-0.5**
MLSB				Sg		**Sn**	**05 13 56.6**	**-0.2**
RFTAA	**Mazikoy-Bodrum**	**0.96**	**132**	Pg		**Pn**	**05 13 46.9**	**0.0**
CHOS	**Chios island**	**0.97**	**320**	Pg		**Pb**	**05 13 45.8**	**-0.6**
CHOS				Sg		**Sg**	**05 13 59.4**	**+0.3**
CHOS	**Chios island**	**0.97**	**320**	P		**Pg**	**05 13 46.8**	**+0.3**
CHOS				S		**Sn**	**05 14 00.5**	**-0.2**
	comp=E,245nm,0.3s							
CHOS	**Chios island**	**0.97**	**320**	P		**Pb**	**05 13 46.2**	**-0.2**
CHOS				S		**Sg**	**05 13 59.5**	**+0.3**
CHOS				AML		AML	05 14 02.2	
CHOS	comp=E,635μm,0.4s			AML		AML	05 14 02.3	
	comp=N,350μm,0.3s							
IZMR	**zmir-demi**	**1.00**	**60**	P		**Pn**	**05 13 47.6**	**+0.2**
IZMR				S		**Sg**	**05 14 00.2**	**+0.2**
IZMR				*i* AML		AML	05 14 02.0	
IZMR	comp=N,62nm,0.6s			*i* AML		AML	05 14 04.0	
	comp=N,66nm,0.5s							
YAZI	**Mula-Dat§a-**	**1.08**	**153**	P		**Pn**	**05 13 48.9**	**+0.4**
YAZI				S		**Sn**	**05 14 03.3**	**+0.1**
YAZI				*i* AML		AML	05 14 06.0	
YAZI	comp=N,76nm,0.4s			*i* AML		AML	05 14 06.0	
	comp=N,129nm,0.3s							
DAT	**Datca**	**1.09**	**147**	Pn		**Pn**	**05 13 48.8**	**+0.1**
ESEN	**Aydn-Nazilli**	**1.20**	**82**	P		**Pg**	**05 13 50.6**	**-0.2**
ESEN				*i* AML		AML	05 14 10.0	
ESEN	comp=N,25nm,0.4s			*i* AML		AML	05 14 13.0	
	comp=N,28nm,0.9s							
APE	**Apeiranthos**	**1.20**	**242**	Pn		**Pn**	**05 13 49.8**	**-0.4**
APE	**Apeiranthos**	**1.20**	**242**	P		**Pn**	**05 13 50.3**	**+0.1**
APE				S		**Sg**	**05 14 07.5**	**+1.0**
APE	comp=N,175nm,0.2s							
APE	**Apeiranthos**	**1.20**	**242**	P		**Pn**	**05 13 49.9**	**-0.3**
APE				S		**Sb**	**05 14 05.5**	**-0.2**
APE				AML		AML	05 14 09.7	
APE	comp=N,387μm,0.2s			AML		AML	05 14 09.8	
	comp=E,310μm,0.2s							

MULA	**Mugla, Merkez-**	**1.23**	**108**	P	**Pg**	**05 13 51.3**	**-0.2**
MULA				S	**Sn**	**05 14 07.2**	**0.0**
MULA				*i* AML	AML	05 14 09.0	
	comp=E,22nm,0.4s						
MULA				*i* AML	AML	05 14 16.0	
	comp=E,66nm,0.4s						
YER	**Yerkesik**	**1.25**	**114**	Pn	**Pg**	**05 13 51.6**	**-0.2**
RFT7	**Candarli**	**1.31**	**2**	Pn	**Pn**	**05 13 51.9**	**+0.3**
KIRA	**zmir-Kiraz**	**1.34**	**65**	P	**Pb**	**05 13 52.6**	**-0.2**
KIRA				*i* AML	AML	05 14 15.0	
	comp=E,22nm,0.5s						
KIRA				*i* AML	AML	05 14 16.0	
	comp=E,35nm,0.8s						
TURN	**Turunc**	**1.41**	**128**	Pn	**Pb**	**05 13 54.0**	**+0.1**
PRK	**Paraskevi**	**1.66**	**344**	P	**Pn**	**05 13 56.4**	**0.0**
PRK				S	**Sn**	**05 14 15.9**	**-1.7**
	comp=E,170nm,0.6s						
PRK	**Paraskevi**	**1.66**	**344**	P	**Pb**	**05 13 57.7**	**-0.4**
DALY	**Dalyan (Mula)**	**1.66**	**119**	Pn	**Pb**	**05 13 57.5**	**-0.6**
KULA	**Kula-Manisa**	**1.67**	**58**	Pn	**Pb**	**05 13 58.0**	**-0.3**
THR3	**Thira Island,**	**1.69**	**224**	P	**Pn**	**05 13 57.6**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.70**	**224**	P	**Pn**	**05 13 57.8**	**+0.8**
SIGR	**SIGRI**	**1.75**	**334**	P	**Pn**	**05 13 57.3**	**-0.3**
KARP	**Karpathos**	**2.11**	**173**	P	**Pn**	**05 14 02.1**	**-0.6**
SMTH	**Samothraki Isl**	**3.00**	**340**	P	**Pn**	**05 14 14.8**	**-0.1**

DJA 05 05:15:32.1±0.7,8°S±8°×12°4E±°,h176km±6km,M3.4/7, mb3.9/3,MLv3.1/7,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.67**	**171**	P	Pn	05 16 05.8	+0.3
SOEI				S	Sn	05 16 31.2	-0.3
MMRI	**Maumere**	**1.81**	**253**	P	Pn	05 16 06.8	-0.1
EDFI	**Ende, Flores**	**2.37**	**254**	P	Pn	05 16 13.7	+0.6
BASI	**Baing, Sumba**	**3.97**	**238**	P	Pn	05 16 33.0	+0.2
PLAI	**Plampang**	**6.19**	**263**	P	Pn	05 17 01.1	-0.5
	27nm,0.9s,0.2nm						

*DNK **05** 05:22:30.5±0.8,83°.02N×5°.86W,h27km±11km,ML2.0*
*FCIAR **05** 05:22:31.0,82°.95N×4°.44W,h10km,station OMEGA has station magnitude of 3.80*
*BER **05** 05:22:31.9±2.1,82°.57N×7°.68W,h10km,mb(Pn)4.1, ML2.0(DNK),Confirmed Earthquake*
*KOLA **05** 05:22:33.5,83°.48N×3°.35E,h0km,ML2.7,Error ellipse: s-maj=247.2km s-min=45.2km az=50.0,Arctic Ocean,Gakkel ridge*

ISC 05 05:22:24.0±1.4,83°.0N±0°.1×6°.85W±0°.06,h10km,n15, σ3°26/23,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**5.01**	**135**	P	**Pn**	**05 23 41.6**	**+2.5**
KBS				S	**Sn**	**05 24 33.9**	**-3.0**
KBS	**Kingsbay**	**5.01**	**135**	*e*P	**Pn**	**05 23 42.6**	**+3.5**
KBS				*e*S	**Sn**	**05 24 33.4**	**-3.5**
KBS	**Kingsbay**	**5.01**	**135**	*i* P	**Pn**	**05 23 41.9**	**+2.8**
KBS				*e*S	**Sn**	**05 24 35.5**	**-1.4**
KBS	**Kingsbay**	**5.01**	**135**	*e*P	**Pn**	**05 23 41.2**	**+2.2**
KBS				*e*S	**Sn**	**05 24 33.5**	**-3.4**
BRBB	**Barentsburg B**	**5.96**	**134**	P	**Pn**	**05 23 56.2**	**+4.1**
BRBB	**Barentsburg B**	**5.96**	**134**	*e*P	**Pn**	**05 23 56.1**	**+4.0**
SPA0	**Spitsbergen Ar**	**6.08**	**130**	*e*P	**Pn**	**05 23 56.8**	**+3.0**
SPA0	**Spitsbergen Ar**	**6.08**	**130**	*e*P	**Pn**	**05 23 56.4**	**+2.6**
SPA0				*e*S	**Sn**	**05 24 59.6**	**-3.7**
SPA0				*i* tx	tx	05 26 02.8	
SPITS	**Spitsbergen Ar**	**6.08**	**130**	P	**Pn**	**05 23 56.8**	**+3.0**
OMEGA	**Omega**	**7.72**	**78**	*e*P	**Pn**	**05 24 16.0**	**-0.3**
OMEGA				*e*S	Sn	05 25 33.6	-10
	28nm,2.5s						
NEEM	**North Greenlan**	**9.02**	**257**	*i* P	**Pn**	**05 24 37.8**	**+3.6**
NEEM				*i* S	**Sn**	**05 26 12.3**	**-3.4**
NEEM				IAML		05 26 17.3	
	comp=Z,5.9nm,0.4s						
NEEM	**North Greenlan**	**9.02**	**257**	*i* P	**Pn**	**05 24 37.8**	**+3.6**
NEEM				*i* S	**Sn**	**05 26 12.3**	**-3.4**
NEEM				IAML		05 26 17.3	
	comp=Z,5.9nm,0.4s						
SUMG	**Summit**	**12.09**	**229**	*e*P	**Pn**	**05 25 18.4**	**+2.0**
SUMG				*e*S	**Sn**	**05 27 26.9**	**-4.3**
SUMG				IAML		05 27 34.9	
	comp=Z,1.7nm,0.3s						
SUMG	**Summit**	**12.09**	**229**	*e*P	**Pn**	**05 25 18.4**	**+2.0**
SUMG				*i* S	Sn	05 27 21.5	-10
SUMG				IAML		05 27 34.9	
	comp=Z,1.7nm,0.3s						
UPNV	**Upernavik**	**13.77**	**251**	*i* P	**Pn**	**05 25 38.8**	**-0.1**
UPNV				*i* S	Sn	05 27 58.0	-14

*AEIC **05** 05:22:46.1±1.3,56°.4N±0°.1×148°.9W±0°.1,h12km±8km, Error ellipse: s-maj=15.9km s-min=9.1km az=174.0*

NEIC 05 05:22:43.5±1.2,56°.47N±0°.07×148°.9W±0°.1,h20km±8km, ML3.2/48,ML3.0(AEIC),Error ellipse: s-maj=11.6km s-min=5.8km az=144.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.41**	**305**		Pn	05 23 21.5	-0.3
KDAK					Sn	05 23 49.9	-0.8
KDAK	**Kodiak Island**	**2.41**	**305**		Pn	05 23 21.7	-0.1
KDAK				IAML		05 24 39.0	
	14nm,1.3s						
OHAK	**Old Harbor**	**2.54**	**289**		Pn	05 23 22.6	-0.9
OHAK					Sn	05 23 52.5	-1.2
SYI	**Shuyak Island**	**2.86**	**320**		Pn	05 23 28.6	+0.6
SYI					Sn	05 24 01.7	-0.1
Q23K	**Middleton Isla**	**3.26**	**23**		Pn	05 23 33.4	-0.1
CNPM	**China Poot**	**3.31**	**339**		Pn	05 23 34.2	0.0
CNPM					Sn	05 24 12.6	-0.4
BRSE	**Bradley Lake S**	**3.43**	**344**		Pn	05 23 35.6	-0.2
BRSE					Sn	05 24 14.0	-1.8
BRLK	**Bradley Lake**	**3.47**	**343**		Pn	05 23 36.2	-0.2
BRLK					Sn	05 24 16.2	-0.7
Q19K	**Cape Douglas,**	**3.55**	**316**		Pn	05 23 37.7	+0.2
P23K	**Montague Islan**	**3.62**	**12**		Pn	05 23 37.8	-0.7
P23K					Sn	05 24 18.5	-2.1
P19K	**Oil Pt**	**3.94**	**326**		Pn	05 23 42.9	0.0
SLKM	**Skilak Lake**	**4.11**	**351**		Pn	05 23 45.2	0.0
O20K	**Slope Mountain**	**4.13**	**333**		Pn	05 23 45.9	+0.5
HIN	**Hinchinbrook I**	**4.13**	**17**		Pn	05 23 44.8	-0.7
IVE	**Iliamna Volcan**	**4.17**	**330**		Pn	05 23 46.5	+0.3
KAIM	**Kayak Island**	**4.20**	**32**		Pn	05 23 45.8	-0.5
EYAK	**Cordova Ski Ar**	**4.41**	**21**		Pn	05 23 49.1	-0.1
P18K	**Big Mountain,**	**4.48**	**314**		Pn	05 23 50.6	+0.4
RDSO	**Redoubt South**	**4.48**	**335**		Pn	05 23 49.6	-0.8
RSO	**Redoubt South**	**4.49**	**335**	Pn	Pn	05 23 49.4	-1.2
SUCK	**Suckling Hills**	**4.51**	**35**		Pn	05 23 50.7	+0.1
RAGM	**Ragged Mountai**	**4.51**	**28**		Pn	05 23 50.6	-0.1
HMT	**Hamilton**	**4.58**	**30**		Pn	05 23 51.2	-0.3
NICHA	**Nichawak Mount**	**4.58**	**32**		Pn	05 23 51.5	-0.1
GOAT	**Goat Mountain**	**4.66**	**26**		Pn	05 23 53.0	+0.2
O18K	**Koktuh Hills**	**4.77**	**318**		Pn	05 23 54.2	0.0
BERG	**Berg Lake**	**4.78**	**33**		Pn	05 23 54.0	-0.5
GRIN	**Grindle Hills**	**4.81**	**35**		Pn	05 23 54.6	-0.2
SNH	**Sunshine Point**	**4.90**	**38**		Pn	05 23 55.8	-0.2
SNH				IAML		05 26 28.7	
	comp=E,23nm,1.4s						
BMRM	**Bremner River**	**5.03**	**25**		Pn	05 23 57.8	-0.1
WAX	**Waxell Ridge**	**5.09**	**36**	Pn	Pn	05 23 57.9	-0.8
SUA	**Susitna One**	**5.10**	**350**	Pn	Pn	05 23 59.6	+0.7
MESA	**MESA**	**5.21**	**42**	Pn	Pn	05 24 00.6	+0.1
N19K	**Bonanza Creek**	**5.25**	**328**	Pn	Pn	05 23 59.5	-1.4
N19K				IAML		05 26 25.9	
	comp=N,6.4nm,1.5s						
N19K				IAML		05 26 47.0	
	comp=E,7.6nm,1.4s						
GHO	**Glory Hole Cre**	**5.32**	**360**	Pn	Pn	05 24 03.3	+1.5
GHO				IAML		05 26 26.5	
	comp=E,16nm,0.7s						
GHO				IAML		05 26 35.9	
	comp=N,14nm,0.8s						
SML	**Sawmill**	**5.36**	**3**	Pn	Pn	05 24 02.0	-0.4
SML				IAML		05 26 39.6	
	comp=N,13nm,1.0s						
SML				IAML		05 26 45.9	
	comp=E,9.7nm,1.2s						
ISLE	**Juniper Island**	**5.38**	**37**	Pn	Pn	05 24 03.0	+0.3
ISLE				IAML		05 26 53.9	
	comp=E,11nm,1.5s						
ISLE				IAML		05 26 58.2	
	comp=N,19nm,1.5s						
VRDI	**Verde Repeater**	**5.54**	**28**	Pn	Pn	05 24 04.4	-0.6
N18K	**Kilae Creek**	**5.59**	**322**	Pn	Pn	05 24 05.4	-0.1
N25K	**Chitina, Valde**	**5.61**	**21**	Pn	Pn	05 24 06.5	+0.7
GLB	**Gilahina Butte**	**5.63**	**26**	Pn	Pn	05 24 06.2	0.0
TABL	**Table Mountain**	**5.69**	**42**	Pn	Pn	05 24 07.7	+0.7
MCARA	**McCarthy VSAT**	**5.79**	**29**	Pn	Pn	05 24 08.5	+0.3
O16K	**Kokwok River B**	**5.81**	**306**	Pn	Pn	05 24 09.4	+1.0
M20K	**Styx River**	**5.85**	**340**	Pn	Pn	05 24 09.2	+0.1
BARN	**Barnard Glacie**	**5.94**	**36**	Pn	Pn	05 24 10.4	-0.1
CTGM	**Chitina Glacie**	**5.98**	**38**	Pn	Pn	05 24 12.0	+1.1
LOGN	**Logan Glacier**	**6.00**	**40**	Pn	Pn	05 24 10.6	-0.6
M19K	**Big River Lodg**	**6.14**	**335**	Pn	Pn	05 24 12.8	-0.2
O29M	**Mount Kennedy**	**6.64**	**50**	Pn	Pn	05 24 20.3	+0.3
M16K	**Timber Creek**	**6.95**	**315**	Pn	Pn	05 24 24.8	+0.7
N15K	**Kwethluk River**	**6.97**	**307**	Pn	Pn	05 24 24.8	+0.4
S31K	**Pelican**	**7.03**	**72**	Pn	Pn	05 24 23.2	-2.0
TRF	**Thorofare Moun**	**7.04**	**355**	Pn	Pn	05 24 25.4	-0.1
HYT	**Haines Junctio**	**7.37**	**49**	Pn	Pn	05 24 29.2	-0.7
BCAR	**Beaver Creek A**	**7.52**	**25**	Pn	Pn	05 24 32.9	+0.9
L16K	**Owhat River**	**7.57**	**318**	Pn	Pn	05 24 33.0	+0.4
K17K	**Iditarod**	**7.87**	**327**	Pn	Pn	05 24 37.2	+0.5
M29M	**Somme Creek**	**8.00**	**37**	Pn	Pn	05 24 38.6	0.0
N31M	**Braeburn, Yuko**	**8.42**	**48**	Pn	Pn	05 24 44.9	+0.5
J26L	**Joseph Creek**	**8.47**	**16**	Pn	Pn	05 24 46.5	+1.4
MDM	**Murphy Dome**	**8.53**	**2**	Pn	Pn	05 24 45.4	-0.4
P32M	**Atlin**	**8.63**	**62**	Pn	Pn	05 24 46.6	-0.6
L14K	**Kuka Creek**	**8.64**	**310**	Pn	Pn	05 24 46.6	-0.7
P33M	**Teslin, Yukon**	**9.24**	**59**	Pn	Pn	05 24 55.7	+0.2
K29M	**Barlow Dome**	**9.30**	**33**	Pn	Pn	05 24 56.4	0.0

TAP 05 05:34:36.9,24°.19N×121°.73E,h7km,ML1.9,1C-3D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**251**	P	Pg	05 34 39.2	-0.1
ETL	baz=250			*i* S	Sg	05 34 41.2	+0.3
EHP	**Heping Village**	**0.12**	**4**	*e*P	Pg	05 34 39.2	-0.3
EHP	baz=7.0			*e*S	Sg	05 34 41.7	+0.5
NACB	**Ninganchiao**	**0.13**	**261**	P	Pg	05 34 39.6	0.0
NACB	baz=260			*i* S	Sg	05 34 41.7	+0.3
EAHA	**Aohua**	**0.14**	**3**	*i*P	Pg	05 34 39.6	-0.2
EAHA	baz=2.0			S	Sg	05 34 42.0	+0.3
TWD	**Chiawan**	**0.17**	**228**	*i* P	Pg	05 34 40.1	-0.2
TWD	baz=225			*e*S	Sg	05 34 42.9	+0.2
ETLH	**Xiulin Townshi**	**0.23**	**273**	*i* P	Pg	05 34 41.2	-0.3
ETLH	baz=273			S	Sg	05 34 44.8	+0.2
ENA	**Nanau**	**0.23**	**2**	*i* P	Pg	05 34 41.5	-0.1
ENA	baz=3.0			*e*S	Sg	05 34 44.7	0.0
EWUT	**Wuta**	**0.25**	**10**	*e*P	Pg	05 34 41.7	-0.2
EWUT	baz=9.0			*e*S	Sg	05 34 45.2	-0.1
ETM	**Tongmen**	**0.32**	**224**	*e*P	Pg	05 34 42.8	-0.3
LXIB	baz=223 **Xiulin Townshi**	**0.34**	**239**	P	Pg	05 34 43.6	0.0
LATG	baz=239 **Datong**	**0.39**	**331**	P	Pg	05 34 44.5	0.0
LATG	baz=331			S	Sg	05 34 50.5	+0.8
ESAO	**Su ao**	**0.39**	**15**	*i* P	Pg	05 34 44.5	-0.1
ESAO	baz=15			*e*S	Sg	05 34 50.1	+0.4
NNSB	**Datong**	**0.40**	**306**	⇓P	Pg	05 34 44.5	-0.1
NNSB	baz=306			S	Sg	05 34 49.9	0.0
NNS	**Nan Shan**	**0.41**	**307**	P	Pg	05 34 44.5	-0.4
NNS	baz=307			S	Sg	05 34 50.3	0.0
TWC	**Suao**	**0.43**	**14**	*e*P	Pg	05 34 43.0	-2.2
TWC	baz=15			*e*S	Sg	05 34 51.2	+0.3
WHF	**Hehuan Shan**	**0.43**	**264**	P	Pg	05 34 45.2	-0.1
WHF	baz=263			S	Sg	05 34 51.0	-0.1
NDS	**Dongshan**	**0.44**	**358**	P	Pg	05 34 45.4	0.0
NDS	baz=358			*i* S	Sg	05 34 51.9	+0.7
FUSS	**Fushou**	**0.45**	**277**	P	Pg	05 34 45.6	-0.1
FUSS	baz=276			*i* S	Sg	05 34 52.0	+0.4
NDT	**Datong Townshi**	**0.45**	**334**	P	Pg	05 34 45.6	-0.1
NDT	baz=333			*i* S	Sg	05 34 52.3	+0.6
ESL	**Shilin**	**0.47**	**216**	P	Pg	05 34 45.5	-0.4
ESL	baz=214			S	Sg	05 34 52.5	+0.5
ENTT	**Nioudou**	**0.47**	**341**	P	Pg	05 34 45.8	-0.2
ENTT	baz=341			*i* S	Sg	05 34 52.6	+0.4
CHGB	**Renai**	**0.53**	**255**	P	Pg	05 34 47.2	+0.1
CHGB	baz=255			S	Sg	05 34 54.2	+0.1
TDCB	**Techi**	**0.53**	**277**	*e*P	Pg	05 34 47.4	+0.3
TDCB	baz=276			S	Sg	05 34 54.1	0.0
WARBT	**Fenglin Townsh**	**0.57**	**214**	P	Pg	05 34 48.4	+0.5
WARBT	baz=213			*e*S	Sb	05 34 56.6	-1.0
YHNB	**Yeheng**	**0.57**	**326**	*e*P	Pg	05 34 48.2	+0.2
YHNB	baz=325			*i* S	Sg	05 34 55.9	+0.3
FUSB	baz=325 **Fushanzhiwuyua**	**0.58**	**347**	P	Pg	05 34 48.2	+0.1
FUSB	baz=346			S	Sg	05 34 56.1	+0.4
NSK	**Sanguang**	**0.59**	**325**	⇑*e*P	Pg	05 34 48.5	+0.1
NSK	baz=325			S	Sg	05 34 56.5	+0.5
WUSB	**Renai**	**0.60**	**250**	*e*P	Pg	05 34 48.8	+0.4
WUSB	baz=250			*e*S	Sg	05 34 56.4	+0.1
NWLT	**Wulai**	**0.62**	**340**	P	Pg	05 34 48.9	0.0
NWLT	baz=340			S	Sg	05 34 57.2	+0.3
VWDT	baz=340 **VWDT**	**0.70**	**231**	P	Pg	05 34 50.2	-0.1
VWDT	baz=230			S	Sb	05 35 00.3	-0.9
WHP	**Taichung City**	**0.72**	**277**	⇓P	Pg	05 34 50.5	-0.3
WHP	baz=276			*e*S	Sb	05 35 01.4	-0.7
WRL	**Guolierlin Hig**	**1.27**	**257**	*e*P	Pn	05 34 57.7	-3.5
WRL	baz=256			*e*S	Sg	05 35 18.0	+0.1
	baz=256						

*NEIC **05** 05:55:06.1±1.7,56°.37N±0°.06×149°.1W±0°.1,h21km±10km, ML3.5/42,ML3.3(AEIC),Error ellipse: s-maj=10.2km*

s-min=7.1km az=128.0
*AEIC **05** 05:55:08.2±1.9,56°.4N±0°.1×149°.0W±0°.1,h2km±8km,Error ellipse: s-maj=15.2km s-min=8.7km az=169.0*

ISC 05 05:55:04.7±2.0,56°.4N±0°.1×149°.09W±0°.06,h10km,n136, σ1°10/143,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.35**	**307**		Pn	**05 55 42.5**	**-0.7**
KDAK					Sn	**05 56 11.2**	**-0.9**
OHAK	**Old Harbor**	**2.45**	**291**		Pn	**05 55 45.0**	**+0.4**
OHAK					Sn	**05 56 13.3**	**-1.3**
OHAK	**Old Harbor**	**2.45**	**291**	P	Pn	**05 55 45.0**	**+0.4**
	baz=109						
OHAK				S	Sn	**05 56 13.3**	**-1.3**
	baz=109						
SII	**Sitkinak Islan**	**2.83**	**275**	Pn	Pn	**05 55 51.1**	**+1.2**
SII				IAML		05 56 24.9	
	comp=E,153nm,1.4s						
SII				IAML		05 56 37.8	
	comp=N,134nm,1.4s						
Q20K	**Shuyak Island**	**2.83**	**322**	P	Pn	**05 55 50.6**	**+0.7**
	baz=140						
Q20K				S	Sn	**05 56 24.8**	**+0.7**
	baz=140						
CNPM	**China Poot**	**3.32**	**341**		Pn	**05 55 56.5**	**-0.2**
CNPM					Sn	**05 56 36.3**	**+0.1**
Q23K	**Middleton Isla**	**3.36**	**25**	P	Pn	**05 55 57.4**	**+0.3**
	baz=206						
BRSE	**Bradley Lake S**	**3.45**	**346**		Pn	**05 55 59.1**	**+0.6**
BRSE					Sn	**05 56 37.8**	**-1.6**
BRSE	**Bradley Lake S**	**3.45**	**346**	P	Pn	**05 55 59.1**	**+0.6**
	baz=164						
BRSE				S	Sn	**05 56 37.8**	**-1.6**
	baz=164						
BRLK	**Bradley Lake**	**3.49**	**345**		Pn	**05 55 57.8**	**-1.2**
Q19K	**Cape Douglas,**	**3.51**	**318**	P	Pn	**05 56 00.2**	**+0.9**
	baz=134						
HOM	**Homer**	**3.52**	**338**	Pn	Pn	**05 55 58.7**	**-0.7**
P23K	**Montague Islan**	**3.70**	**13**		Pn	**05 56 01.8**	**0.0**
P23K	**Montague Islan**	**3.70**	**13**	P	Pn	**05 56 01.8**	**0.0**
	baz=194						
P19K	**Oil Pt**	**3.92**	**328**	P	Pn	**05 56 06.6**	**+1.6**
	baz=144						
CNTC	**Contact Creek**	**4.12**	**300**		Pn	**05 56 09.6**	**+1.9**
O20K	**Slope Mountain**	**4.12**	**335**		Pn	**05 56 09.1**	**+1.4**
O20K	**Slope Mountain**	**4.12**	**335**	P	Pn	**05 56 09.1**	**+1.4**
	baz=152						
Q17K	**Contact Creek**	**4.12**	**300**	P	Pn	**05 56 09.6**	**+1.9**
	baz=114						
HIN	**Hinchinbrook I**	**4.22**	**18**		Pn	**05 56 09.5**	**+0.5**
HIN				IAML		05 57 01.6	
	comp=N,73nm,0.7s						
HIN				IAML		05 57 04.4	
	comp=E,64nm,1.2s						
KAIM	**Kayak Island**	**4.30**	**33**		Pn	**05 56 10.5**	**+0.4**
KAIM				IAML		05 57 02.7	
	comp=N,79nm,1.0s						
KAIM				IAML		05 57 10.8	
	comp=E,89nm,1.1s						
KAIM	**Kayak Island**	**4.30**	**33**	P	Pn	**05 56 10.1**	**0.0**
	baz=216						
P18K	**Big Mountain,**	**4.43**	**315**		Pn	**05 56 12.7**	**+0.8**
P18K	**Big Mountain,**	**4.43**	**315**	P	Pn	**05 56 12.7**	**+0.8**
	baz=130						
RED	**Redoubt Volcan**	**4.46**	**336**		Pn	**05 56 12.6**	**+0.2**
RDSO	**Redoubt South**	**4.48**	**336**		Pn	**05 56 12.9**	**+0.2**
RSO	**Redoubt South**	**4.49**	**336**		Pn	**05 56 13.6**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.50**	**22**		Pn	**05 56 11.6**	**-1.2**
EYAK	**Cordova Ski Ar**	**4.50**	**22**	P	Pn	**05 56 12.9**	**+0.1**
	baz=204						
RDT	**Redoubt**	**4.52**	**339**		Pn	**05 56 13.3**	**+0.2**
RAGM	**Ragged Mountai**	**4.61**	**28**		Pn	**05 56 15.1**	**+0.7**
SUCK	**Suckling Hills**	**4.62**	**35**		Pn	**05 56 15.1**	**+0.6**
SUCK				IAML		05 57 19.3	
	comp=N,49nm,1.1s						
SUCK				IAML		05 57 32.4	
	comp=E,41nm,1.4s						
HMT	**Hamilton**	**4.68**	**31**		Pn	**05 56 16.1**	**+0.8**
NICHA	**Nichawak Mount**	**4.69**	**33**		Pn	**05 56 15.7**	**+0.3**
RC01	**Rabbit Creek A**	**4.70**	**356**	Pn	Pn	**05 56 15.2**	**-0.4**
RC01				IAML		05 57 10.8	
	comp=E,39nm,0.3s						
RC01				IAML		05 57 12.2	
	comp=N,33nm,1.0s						
GOAT	**Goat Mountain**	**4.76**	**27**		Pn	**05 56 16.9**	**+0.4**
FIS	**Fire Island**	**4.78**	**353**	Pn	Pn	**05 56 18.4**	**+1.7**
FIS				IAML		05 57 19.0	
	comp=N,62nm,1.2s						
BERG	**Berg Lake**	**4.89**	**33**		Pn	**05 56 18.6**	**+0.4**
BERG				IAML		05 57 14.2	
	comp=N,61nm,1.1s						
GRIN	**Grindle Hills**	**4.92**	**36**		Pn	**05 56 19.2**	**+0.5**
SNH	**Sunshine Point**	**5.01**	**39**		Pn	**05 56 20.3**	**+0.4**
SNH				IAML		05 57 20.7	
	comp=N,30nm,1.5s						
SNH				IAML		05 57 26.1	
	comp=E,32nm,1.5s						
KNK	**Knik Glacier**	**5.02**	**3**	Pn	Pn	**05 56 20.4**	**+0.3**
KNK				IAML		05 57 16.1	
	comp=E,24nm,1.1s						
KNK				IAML		05 57 24.8	
	comp=N,26nm,0.5s						
N20K	**Mount Spurr**	**5.07**	**343**	P	Pn	**05 56 21.7**	**+1.0**
	baz=160						
SPCR	**Spurr Chakacha**	**5.07**	**343**		Pn	**05 56 21.7**	**+1.0**
KHIT	**Khitrov Hills**	**5.07**	**35**		Pn	**05 56 20.8**	**0.0**
SPCP	**Crater Peak Br**	**5.12**	**343**		Pn	**05 56 22.6**	**+1.1**
SUA	**Susitna One**	**5.14**	**351**	Pn	Pn	**05 56 22.0**	**+0.3**
PMR	**Palmer**	**5.19**	**360**	Pn	Pn	**05 56 22.8**	**+0.5**
PMR				IAML		05 57 21.2	
	comp=E,20nm,0.9s						
PMR				IAML		05 57 21.8	
	comp=N,16nm,0.4s						
WAX	**Waxell Ridge**	**5.21**	**36**		Pn	**05 56 22.8**	**+0.3**
WAX				IAML		05 57 21.6	
	comp=N,48nm,0.7s						
WAX				IAML		05 57 22.8	
	comp=E,38nm,1.5s						
BARK	**Barkley Ridge**	**5.29**	**38**		Pn	**05 56 24.1**	**+0.3**
STLK	**Strandline Lak**	**5.29**	**346**		Pn	**05 56 25.1**	**+1.3**
SPNN	**North Nagishla**	**5.31**	**341**		Pn	**05 56 25.9**	**+1.8**
MESA	**MESA**	**5.33**	**42**	Pn	Pn	**05 56 24.6**	**+0.2**
KLU	**Klutina**	**5.35**	**17**		Pn	**05 56 25.7**	**+1.1**
KLU				IAML		05 57 28.2	
	comp=N,25nm,0.4s						
KLU				IAML		05 57 29.9	
	comp=E,21nm,0.4s						
KLU	**Klutina**	**5.35**	**17**	P	Pn	**05 56 25.5**	**+0.9**
	baz=199						
GHO	**Glory Hole Cre**	**5.38**	**1**		Pn	**05 56 26.8**	**+1.9**
SML	**Sawmill**	**5.42**	**4**	Pn	Pn	**05 56 26.9**	**+1.4**
ISLE	**Juniper Island**	**5.49**	**37**		Pn	**05 56 26.6**	**+0.1**
BAGL	**Bagley Icefiel**	**5.49**	**39**		Pn	**05 56 26.8**	**+0.4**
SCM	**Sheep Creek Mo**	**5.51**	**9**	Pn	Pn	**05 56 28.5**	**+1.8**
N18K	**Kilae Creek**	**5.56**	**323**	Pn	Pn	**05 56 28.8**	**+1.4**
VRDI	**Verde Repeater**	**5.64**	**29**	Pn	Pn	**05 56 29.1**	**+0.4**
N25K	**Chitina, Valde**	**5.70**	**22**		Pn	**05 56 30.6**	**+1.2**
N25K	**Chitina, Valde**	**5.70**	**22**	P	Pn	**05 56 30.6**	**+1.2**
	baz=205						
KIAG	**Kiagna River**	**5.72**	**35**		Pn	**05 56 30.2**	**+0.4**
SKT	**Skwentna**	**5.72**	**348**	Pn	Pn	**05 56 31.1**	**+1.5**
GLB	**Gilahina Butte**	**5.73**	**26**		Pn	**05 56 30.3**	**+0.5**
TABL	**Table Mountain**	**5.80**	**43**		Pn	**05 56 31.1**	**+0.2**
M20K	**Styx River**	**5.87**	**341**	Pn	Pn	**05 56 32.0**	**+

M19K	**Big River Lodg**	**6.14**	**336**	Pn		**Pn**	**05 56 34.4**	**-1.0**
L19K	**White Mountain**	**6.49**	**335**			**Pn**	**05 56 40.4**	**+0.2**
M17K	**Holitna River**	**6.61**	**323**	P		**Pn**	**05 56 42.2**	**+0.5**
	baz=136							
DHY	**Denali Highway**	**6.74**	**7**	Pn		**Pn**	**05 56 45.6**	**+1.9**
M26K	**Nabesna, AK**	**6.76**	**25**	Pn		**Pn**	**05 56 42.0**	**-1.9**
O29M	**Mount Kennedy**	**6.76**	**50**			**Pn**	**05 56 45.2**	**+1.2**
P29M	**Windy Craggy**	**6.83**	**57**	P		**Pn**	**05 56 45.2**	**+0.4**
	baz=246							
YUK8	**Steele Glacier**	**6.87**	**41**			**Pn**	**05 56 47.7**	**+2.1**
YUK8	**Steele Glacier**	**6.87**	**41**	P		**Pn**	**05 56 47.7**	**+2.1**
	baz=229							
M16K	**Timber Creek**	**6.91**	**316**	Pn		**Pn**	**05 56 45.8**	**-0.1**
N15K	**Kwethluk River**	**6.91**	**308**	Pn		**Pn**	**05 56 48.8**	**+2.9**
YUK7	**Dusty Glacier**	**7.07**	**50**			**Pn**	**05 56 49.7**	**+1.5**
MENT	**Mentasta**	**7.08**	**20**	Pn		**Pn**	**05 56 50.6**	**+2.3**
CAST	**Castle Rocks**	**7.19**	**349**	Pn		**Pn**	**05 56 50.6**	**+0.9**
YUK6	**Outpost Mounta**	**7.20**	**46**			**Pn**	**05 56 51.5**	**+1.4**
YUK6	**Outpost Mounta**	**7.20**	**46**	P		**Pn**	**05 56 51.5**	**+1.4**
	baz=235							
KTH	**Kantishna Hill**	**7.22**	**353**	Pn		**Pn**	**05 56 50.9**	**+0.6**
YUK4	**Talbot Arm**	**7.32**	**43**	P		**Pn**	**05 56 54.6**	**+2.8**
	baz=231							
K20K	**Telida**	**7.40**	**342**	Pn		**Pn**	**05 56 52.2**	**-0.4**
TTA	**Tatalina**	**7.41**	**335**	Pn		**Pn**	**05 56 52.1**	**-0.8**
PLBC	**Pleasant Camp**	**7.42**	**60**			**Pn**	**05 56 54.0**	**+1.0**
PLBC	**Pleasant Camp**	**7.42**	**60**	P		**Pn**	**05 56 54.0**	**+1.0**
	baz=251							
HYT	**Haines Junctio**	**7.49**	**49**	Pn		**Pn**	**05 56 54.6**	**+0.6**
YUK5	**Granite Creek**	**7.51**	**46**			**Pn**	**05 56 55.8**	**+1.6**
BCAR	**Beaver Creek A**	**7.62**	**26**	Pn		**Pn**	**05 56 57.3**	**+1.7**
RIDG	**Independent Ri**	**7.65**	**14**	Pn		**Pn**	**05 56 58.3**	**+2.2**
BPAW	**Bear Paw Mtn.**	**7.77**	**354**	Pn		**Pn**	**05 56 57.5**	**-0.1**
BWN	**Browne**	**7.79**	**359**	Pn		**Pn**	**05 57 00.5**	**+2.6**
K17K	**Iditarod**	**7.86**	**327**	Pn		**Pn**	**05 56 59.6**	**+0.7**
SKAG	**Skagway**	**7.93**	**62**	Pn		**Pn**	**05 56 59.0**	**-0.8**
SCRK	**Sand Creek**	**8.00**	**16**	Pn		**Pn**	**05 57 00.9**	**0.0**
J18K	**Innoko River**	**8.04**	**335**	Pn		**Pn**	**05 57 01.3**	**0.0**
HDA	**Harding Lake**	**8.09**	**7**	Pn		**Pn**	**05 57 05.7**	**+3.6**
M29M	**Somme Creek**	**8.11**	**37**			**Pn**	**05 57 03.2**	**+0.8**
J20K	**Nowinta River**	**8.18**	**344**	Pn		**Pn**	**05 57 03.0**	**-0.2**
J19K	**Poorman**	**8.27**	**340**	Pn		**Pn**	**05 57 04.2**	**-0.2**
WHY	**Whitehorse**	**8.56**	**54**			**Pn**	**05 57 09.0**	**+0.4**
L14K	**Kuka Creek**	**8.59**	**311**	Pn		**Pn**	**05 57 08.3**	**-0.6**
L29M	**L29M**	**8.69**	**35**			**Pn**	**05 57 10.7**	**+0.4**
L29M	**L29M**	**8.69**	**35**	P		**Pn**	**05 57 10.7**	**+0.4**
	baz=224							
DAWY	**Dawson**	**9.05**	**28**	Pn		**Pn**	**05 57 15.4**	**+0.2**
PRP	**Porcupine Dome**	**9.29**	**9**	Pn		**Pn**	**05 57 19.5**	**+0.8**
Q32M	**Nakina River**	**9.36**	**67**	Pn		**Pn**	**05 57 20.2**	**+0.6**
K29M	**Barlow Dome**	**9.41**	**33**	Pn		**Pn**	**05 57 21.2**	**+0.9**
H21K	**Melozitna River**	**9.45**	**351**	Pn		**Pn**	**05 57 21.3**	**+0.7**
N32M	**Quiet Lake**	**9.56**	**54**	Pn		**Pn**	**05 57 23.0**	**+0.8**
H18K	**Honhosa River**	**9.86**	**337**	Pn		**Pn**	**05 57 26.4**	**+0.2**
IMAR	**Indian Mountai**	**9.86**	**349**	Pn		**Pn**	**05 57 27.4**	**+1.2**
R33M	**Jennings River**	**10.09**	**65**	Pn		**Pn**	**05 57 30.5**	**+0.9**
G23K	**Bananza Creek**	**10.34**	**358**	Pn		**Pn**	**05 57 33.2**	**+0.2**
G24K	**Hadweenzic Riv**	**10.35**	**4**	Pn		**Pn**	**05 57 33.4**	**+0.4**
DLBC	**Dease Lake**	**10.47**	**71**	Pn		**Pn**	**05 57 33.6**	**-1.2**
BMAR	**Burnt Mountain**	**11.25**	**9**	Pn		**Pn**	**05 57 46.1**	**+0.8**

*NEIC **05** 05:58:25.0±1.7,5.°94S±0.°09×129.°10E±0.°09,h227km±22km, mb4.2/4,Error ellipse: s-maj=15.8km s-min=8.4km az=47.0.*
*IDC **05** 05:58:29.9±4.8,6.°06S×129.°11E,h298km±54km,mb3.0/2, mbtmp3.9/4,Error ellipse: s-maj=90.6km s-min=15.1km az=70.0*
ISC 05 05:58:25.0±0.8,5.°96S±0.°08×129.°09E±0.°08,h264km,n30, σ1§25/32,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.37**	**46**		**Pn**	**05 59 32.4**	**-1.4**
FAKI	**Fak Fak**	**4.37**	**46**	P	**Pn**	**05 59 32.4**	**-1.4**
SOEI	**Soe**	**6.08**	**231**	Pn	**Pn**	**05 59 54.9**	**+0.2**
SOEI	**Soe**	**6.08**	**231**	P	**Pn**	**05 59 55.3**	**+0.7**
MTN	**Manton Dam**	**7.13**	**164**		**Pn**	**06 00 07.1**	**-0.5**
MTN	**Manton Dam**	**7.13**	**164**	P	**Pn**	**06 00 07.0**	**-0.5**
KDU	**Kakadu**	**7.47**	**154**	P	**Pn**	**06 00 11.6**	**-0.2**
KNRA	**Kununurra**	**9.66**	**182**	Pn	**Pn**	**06 00 38.7**	**-0.5**
KNRA	**Kununurra**	**9.66**	**182**	P	**Pn**	**06 00 38.7**	**-0.5**
TOLI2	**Tolitoli**	**10.87**	**310**	Pn	**Pn**	**06 00 53.7**	**-0.7**
PLAI	**Plampang**	**11.57**	**255**	P	**P**	**06 01 05.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**12.52**	**195**	Pn	**P**	**06 01 16.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.52**	**195**	P	**P**	**06 01 16.4**	**-0.3**
WB0	**Warramunga Arr**	**14.66**	**160**		**Pn**	**06 01 41.6**	**+0.8**
WRA	**Warramunga Arr**	**14.81**	**160**	Pn	**P**	**06 01 41.3**	**-0.7**
WRA	**Warramunga Arr**	**14.81**	**160**	P	**Pn**	**06 01 42.1**	**-0.4**
	1.0nm,0.3s,baz=340,slow=11,SNR=9.2						
WRA				S	**S**	**06 04 22.7**	**-2.9**
	2.2nm,0.7s,baz=334,slow=20,SNR=6.8						
WB2	**Warramunga Arr**	**14.81**	**160**		**Pn**	**06 01 43.5**	**+1.0**
WR0	**Warramunga Arr**	**14.89**	**160**		**Pn**	**06 01 44.2**	**+0.7**
COEN	**Coen**	**15.98**	**121**	P	**Pn**	**06 01 56.9**	**+0.5**
COEN	**Coen**	**15.98**	**121**	P	**Pn**	**06 01 56.7**	**+0.2**
QIS	**Mount Isa**	**17.74**	**146**	P	**Pn**	**06 02 15.7**	**-1.4**
PSA00	**Pilbara Seismi**	**17.91**	**209**	P	**P**	**06 02 17.3**	**+1.4**
PSA00				IAmb	IAmb	06 02 17.5	
	comp=Z,5.5nm,0.7s						
PSA00	**Pilbara Seismi**	**17.91**	**209**	P	**P**	**06 02 17.3**	**+1.4**
AS31	**Alice Springs**	**18.20**	**166**	P	**Pn**	**06 02 21.4**	**-1.0**
AS31				IAmb	IAmb	06 02 25.1	
	comp=Z,3.2nm,0.3s						
ASAR	**Alice Springs**	**18.20**	**166**	P	**Pn**	**06 02 21.4**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=347,slow=11,SNR=47						
ASAR				S	**S**	**06 05 33.5**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=348,slow=18,SNR=11						
AS01	**Alice Springs**	**18.21**	**166**	P	**Pn**	**06 02 21.5**	**-1.1**
WRKA	**Warakurna**	**18.98**	**182**	P	**P**	**06 02 29.2**	**+1.7**
STKA	**Stephens Creek**	**28.31**	**157**	P	**P**	**06 03 57.5**	**+2.8**
STKA	**Stephens Creek**	**28.31**	**157**	P	**P**	**06 03 56.3**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=348,slow=14,SNR=3.7						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**66.86**	**327**	P	**P**	**06 08 50.8**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=115,slow=6.5,SNR=4.7						
	comp=Z,0.2nm,0.4s						

*DNK **05** 06:00:04.3±4.6,80.°18N×1.°63E,h14km±60km,ML2.0*
*BER **05** 06:00:10.6±2.3,79.°93N×1.°58E,h10km,mb(Pn)3.7, ML2.0(DNK),Confirmed Earthquake*
*KOLA **05** 06:00:10.3,80.°69N×5.°49E,h0km,ML2.4, Error ellipse: s-maj=78.7km s-min=39.6km az=60.0,Greenland sea*
ISC 05 06:00:04.5±1.4,79.°9N±0.°2×0.°88E±0.°09,h10km,n14, σ1§79/16,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.27**	**110**	S	**Sn**	**06 01 09.1**	**-0.7**
KBS	**Kingsbay**	**2.27**	**110**	*i* S	**Sn**	**06 01 08.3**	**-1.5**
KBS	**Kingsbay**	**2.27**	**110**	*i* S	**Sn**	**06 01 08.3**	**-1.5**
BRBB	**Barentsburg B**	**3.13**	**119**	P	**Pb**	**06 00 57.5**	**-2.6**
BRBB				S	**Sn**	**06 01 33.6**	**+2.5**
BRBB	**Barentsburg B**	**3.13**	**119**	*e*P	**Pb**	**06 00 58.7**	**-1.4**
BRBB				*e*S	**Sn**	**06 01 31.7**	**+0.6**
BRBB				*e*		06 01 34.6	
SPA0	**Spitsbergen Ar**	**3.42**	**113**	*e*P	**Pn**	**06 01 00.9**	**+3.1**
SPA0				*e*S	**Sn**	**06 01 38.1**	**-0.2**
SPA0				IAML		06 01 50.2	
	comp=Z,12nm,0.6s						
SPITS	**Spitsbergen Ar**	**3.42**	**113**	P	**Pn**	**06 01 00.8**	**+3.0**
SPITS				S	**Sn**	**06 01 38.3**	**0.0**
HSPB	**Hornsund (broa**	**4.13**	**127**	S	**Sb**	**06 02 06.0**	**-1.0**
NEEM	**North Greenlan**	**10.18**	**283**	*i* P	**Pn**	**06 02 30.0**	**-0.6**
NEEM				*i* S	Sn	06 04 12.3	-12
NEEM				IAML		06 04 20.1	
	comp=Z,4.4nm,0.3s						
NEEM	**North Greenlan**	**10.18**	**283**	*i* P	**Pn**	**06 02 30.0**	**-0.6**
NEEM				*i* S	Sn	06 04 12.3	-12
NEEM				IAML		06 04 20.1	
	comp=Z,4.4nm,0.3s						
SUMG	**Summit**	**11.57**	**252**	*i* P	**Pn**	**06 02 49.5**	**-0.2**
SUMG				*i* S	Sn	06 04 50.1	-8.8
SUMG				IAML		06 04 55.2	
	comp=Z,2.1nm,0.4s						
SUMG	**Summit**	**11.57**	**252**	*i* P	**Pn**	**06 02 49.5**	**-0.2**
SUMG				*i* S	Sn	06 04 50.1	-8.8
SUMG				IAML		06 04 55.2	
	comp=Z,2.1nm,0.4s						
UPNV	**Upernavik**	**14.48**	**272**	*i* S	Sn	06 05 52.0	-17

TAP 05 06:02:30.1,24.°26N×121.°74E,h12km,ML1.8,2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.05**	**6**	*i* P	Pg	06 02 33.2	+0.7
EHP	baz=14			*i* S	Sg	06 02 34.8	+0.7
EAHA	**Aohua**	**0.07**	**3**	*i* P	Pg	06 02 33.3	+0.7
EAHA	baz=3.0			S	Sg	06 02 35.1	+0.7
ETL	**Fush Village**	**0.14**	**226**	P	Pb	06 02 34.5	-0.3
ETL	baz=226			S	Sg	06 02 37.1	+1.1
NACB	**Ninganchiao**	**0.15**	**237**	↓*i* P	Pb	06 02 34.6	-0.3
NACB	baz=237			*i* S	Sg	06 02 37.2	+1.0
ENA	**Nanau**	**0.17**	**2**	*i* P	Pb	06 02 34.7	-0.5
ENA	baz=4.0			*i* S	Sg	06 02 37.5	+0.8
EWUT	**Wuta**	**0.19**	**12**	*i* P	Pb	06 02 35.1	-0.6
EWUT	baz=11			S	Sg	06 02 38.1	+0.9
TWD	**Chiawan**	**0.22**	**216**	↓*i* P	Pb	06 02 35.6	-0.5
TWD	baz=214			*i* S	Sg	06 02 39.0	+1.1
ETLH	**Xiulin Townshi**	**0.24**	**258**	*i* P	Pb	06 02 36.3	-0.1
ETLH	baz=257			*i* S	Sg	06 02 40.0	+1.5
HWA	**Hwalien**	**0.30**	**203**	*e*P	Pb	06 02 37.3	-0.2
HWA	baz=201			*e*S	Sb	06 02 42.8	+0.3
ESAO	**Su ao**	**0.33**	**17**	*e*P	Pb	06 02 37.6	-0.4
LATG	baz=17 **Datong**	**0.34**	**326**	P	Pb	06 02 38.4	+0.2
LATG	baz=325			S	Sb	06 02 43.2	-0.3
NNSB	**Datong**	**0.36**	**298**	P	Pb	06 02 38.5	-0.1
NNSB	baz=298			*i* S	Sb	06 02 44.1	-0.2
ETM	**Tongmen**	**0.36**	**217**	*i* P	Pb	06 02 38.2	-0.4
ETM	baz=217			S	Sb	06 02 43.7	-0.6
TWC	**Suao**	**0.37**	**16**	*i* P	Pb	06 02 38.3	-0.3
TWC	baz=17			*i* S	Sg	06 02 42.9	+0.6
NDS	**Dongshan**	**0.38**	**357**	P	Pb	06 02 39.0	+0.2
NDS	baz=357			S	Sb	06 02 44.1	-0.5
LXIB	**Xiulin Townshi**	**0.38**	**231**	P	Pb	06 02 38.5	-0.3
LXIB	baz=231			S	Sb	06 02 44.2	-0.5
NNS	**Nan Shan**	**0.38**	**299**	P	Pb	06 02 38.3	-0.5
NNS	baz=299			*i* S	Sb	06 02 44.6	-0.1
NDT	**Datong Townshi**	**0.40**	**330**	*e*P	Pb	06 02 39.6	+0.4
NDT	baz=329			S	Sb	06 02 45.7	+0.4
ENTT	**Nioudou**	**0.41**	**338**	*i* P	Pb	06 02 39.6	+0.2
ENTT	baz=338			*i* S	Sb	06 02 45.4	-0.2
WHF	**Hehuan Shan**	**0.44**	**256**	P	Pg	06 02 39.6	+0.6
WHF	baz=255			S	Sg	06 02 45.9	+0.9
FUSS	**Fushou**	**0.45**	**269**	P	Pb	06 02 40.7	+0.6
FUSS	baz=268			S	Sb	06 02 46.6	-0.3
SHUL	**Shoufeng**	**0.49**	**199**	*e*P	Pg	06 02 40.1	+0.4
FUSB	baz=198 **Fushanzhiwuyua**	**0.52**	**345**	*e*P	Pb	06 02 40.9	-0.3
FUSB	baz=345			*e*S	Sg	06 02 47.8	+0.6
ESL	**Shilin**	**0.52**	**212**	*e*P	Pb	06 02 40.9	-0.3
YHNB	baz=211 **Yeheng**	**0.53**	**322**	*e*P	Pb	06 02 41.2	-0.1
YHNB	baz=321			S	Sb	06 02 49.5	+0.5
TDCB	baz=321 **Techi**	**0.53**	**270**	*e*P	Pb	06 02 41.4	0.0
TDCB	baz=269			*e*S	Sb	06 02 49.1	+0.1
NSK	**Sanguang**	**0.54**	**321**	P	Pb	06 02 41.3	-0.3
NSK	baz=321			S	Sb	06 02 49.6	+0.2
CHGB	**Renai**	**0.55**	**249**	*e*P	Pb	06 02 41.8	0.0
CHGB	baz=249			*e*S	Sb	06 02 49.8	+0.1
NWLT	baz=249 **Wulai**	**0.56**	**338**	*e*P	Pb	06 02 41.7	-0.2
NWLT	baz=337			*e*S	Sb	06 02 50.1	+0.2
OWD	baz=337 **Renai**	**0.59**	**240**	*e*P	Pb	06 02 42.8	+0.2
OWD	baz=239			*e*S	Sb	06 02 51.0	0.0
WUSB	baz=239 **Renai**	**0.62**	**245**	*e*P	Pb	06 02 42.7	-0.3
WUSB	baz=244			*e*S	Sb	06 02 52.1	+0.3
WARBT	**Fenglin Townsh**	**0.62**	**211**	*e*P	Pb	06 02 43.0	0.0
TIPB	baz=210 **Shuangxi**	**0.72**	**7**	*e*P	Pb	06 02 44.3	-0.3
TIPB	baz=6.0			*e*S	Sb	06 02 54.4	-0.1
WHP	baz=6.0 **Taichung City**	**0.72**	**272**	*e*P	Pb	06 02 44.8	+0.1
VWDT	baz=271 **VWDT**	**0.74**	**227**	*e*P	Pb	06 02 44.8	-0.1
VWDT	baz=227			*e*S	Sb	06 02 54.8	-0.2
EHY	baz=227 **Hungye**	**0.84**	**207**	*e*P	Pb	06 02 46.8	+0.2
	baz=206						

*CATAC **05** 06:08:53.5±0.4, 13.°82N×92.°62W,h10km,ML4.2*
*IDC **05** 06:08:53.0±2.1, 14.°94N×92.°18W,h0km,mb3.9/6, mbtmp3.9/8,ML3.5/2,MS3.5/8,Error ellipse: s-maj=82.2km s-min=21.2km az=38.0*
*NEIC **05** 06:08:56.7±2.8, 14.°40N±0.°06×92.°80W±0.°06,h24km±11km, mb4.2/34,Md4.2/39(MEX),Error ellipse: s-maj=9.7km s-min=8.7km az=150.0*
*GCG **05** 06:08:57.7±3.1, 14.°39N×92.°50W,h12km±17km,MD4.0*
*MEX **05** 06:08:58.9±0.4, 14.°52N×92.°73W,h62km±9km,MD4.2*
ISC 05 06:08:49.4±1.6,14.°01N±0.°05×92.°82W±0.°03,h4km±9km, n137,σ2§15/178,mb4.2/17,MS3.6/8,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.04**	**31**		**Pg**	**06 09 10.4**	**+0.9**
THIG					**Sg**	**06 09 19.0**	**-4.0**
THIG		**1.04**	**31**	*e*P	**Pg**	**06 09 10.4**	**+0.9**
THIG				*e*S	**Sg**	**06 09 19.0**	**-4.0**
SMCA	**Catarina**	**1.11**	**40**	*i* P	**Pg**	**06 09 11.9**	**+1.2**
SMCA				IAML		06 09 44.8	
	comp=Z,2μm,1.0s						
RTAL	**Retalhuleu**	**1.21**	**65**	*i* P	**Pb**	**06 09 13.0**	**+0.2**
RTAL				*i* S	**Sn**	**06 09 31.1**	**+1.3**
RTAL				IAML		06 09 53.4	
	comp=Z,2μm,1.0s						
PATR	**El Naranjo**	**1.24**	**27**	*e*P	**Pn**	**06 09 12.7**	**-1.0**
SULM	**Suchitepequez,**	**1.25**	**76**	*e*P	**Pg**	**06 09 15.2**	**+1.7**
CHUJ	**Union Juarez**	**1.28**	**32**	*i* P	**Pn**	**06 09 13.6**	**-0.7**
CHUJ				*i* S	**Sb**	**06 09 25.2**	**-6.0**
PAVE	**Pavencul**	**1.33**	**28**	*i* P	**Pn**	**06 09 14.2**	**-0.7**
PAVE				*i* S	Sb	06 09 24.1	-8.5
SMSP	**San Marcos**	**1.39**	**46**	*i* P	**Pn**	**06 09 15.5**	**-0.3**
SMSP				IAML		06 09 17.0	
	comp=Z,5μm,1.0s						
SMSP				*i* S	**Sb**	**06 09 34.1**	**-0.2**
STG3	**Santiaguito 3,**	**1.40**	**60**	*e*P	**Pn**	**06 09 16.3**	**+0.5**
PCIG		**1.73**	**347**		**Pn**	**06 09 19.0**	**-1.3**
PCIG					Sn	06 09 34.9	-7.9
PCIG		**1.73**	**347**	*e*P	**Pn**	**06 09 19.0**	**-1.3**
PCIG				*e*S	Sn	06 09 34.9	-7.9
HUEH	**Huehuetenango**	**1.82**	**44**	*i* P	**Pn**	**06 09 23.0**	**+1.3**
HUEH				*i* S	**Sg**	**06 09 51.3**	**+3.2**
HUEH				IAML		06 09 55.7	
	comp=Z,3μm,1.0s						
CHTG	**Tecpan**	**1.93**	**67**	*i* P	**Pb**	**06 09 24.9**	**-0.4**
CHTG				*i* S	**Sg**	**06 09 51.4**	**-0.1**
CHTG				IAML		06 09 58.1	
	comp=Z,2μm,1.0s						
FUG	**Fuego 3**	**1.97**	**77**	*e*P	**Pn**	**06 09 24.0**	**+0.3**
QUIS	**Sacapulas**	**2.10**	**52**	*i* P	**Pn**	**06 09 27.3**	**+1.8**
QUIS				IAML		06 09 28.0	
	comp=Z,2μm,1.0s						
QUIS				*i* S	**Sg**	**06 09 57.0**	**-0.1**
PCG	**Pacaya**	**2.18**	**80**	*e*P	**Pb**	**06 09 29.7**	**+0.1**
PCG				*e*S	**Sn**	**06 09 54.1**	**-0.1**
GUMI	**Mixco**	**2.23**	**74**	*i* P	**Pn**	**06 09 27.8**	**+0.6**
GUMI				*i* S	**Sg**	**06 10 00.2**	**-0.8**
GUMI				IAML		06 10 05.2	
	comp=Z,2μm,1.0s						
GCG4	**OSOP**	**2.29**	**75**	*i* P	**Pn**	**06 09 28.5**	**+0.4**
GCG4				*i* S	**Sb**	**06 09 58.7**	**-1.4**
GCG4				IAML		06 10 07.7	
	comp=Z,1μm,1.0s						
CCIG	**Comitan**	**2.36**	**16**	Pn	**Pn**	**06 09 31.0**	**+2.0**
CCIG	**Comitan**	**2.36**	**16**	*e*P	**Pn**	**06 09 31.9**	**+2.9**
CARR	**Arriaga**	**2.47**	**335**	*i* P	**Pn**	**06 09 31.5**	**+1.2**
CARR				*i* S	**Sn**	**06 10 02.0**	**+1.1**
NBG	**Las Nubes**	**2.47**	**76**	*e*P	**Pb**	**06 09 33.3**	**-1.1**
GUNB	**GUNB**	**2.47**	**76**	*i* P	**Pn**	**06 09 31.2**	**+0.5**
GUNB				*i* S	**Sb**	**06 10 04.8**	**-0.6**
GUNB				IAML		06 10 12.8	
	comp=Z,500nm,1.0s						
AVCB	**Coban**	**2.75**	**58**	*i* P	**Pb**	**06 09 39.8**	**+0.6**
AVCB				IAML		06 11 11.0	
	comp=Z,3μm,1.0s						
TGIG		**2.77**	**354**		**Pn**	**06 09 35.7**	**+1.1**
TGIG		**2.77**	**354**	*e*P	**Pn**	**06 09 35.7**	**+1.1**
TGIG				*e*S	Sn	06 09 53.0	-16
LOAL	**Lomas de Alarc**	**2.95**	**90**	*i* S	**Sn**	**06 10 12.8**	**-0.1**
NUBE	**Las Nubes**	**2.95**	**92**	*i* P	**Pn**	**06 09 37.1**	**-0.1**
NUBE				*i* S	**Sn**	**06 10 09.6**	**-3.5**
NUBE				IAML		06 10 20.5	
	comp=Z,470nm,1.0s						
NILT	**Santiago Nilte**	**3.08**	**326**	*i* P	**Pn**	**06 09 39.3**	**+0.5**
NILT				*i* S	**Sn**	**06 10 12.1**	**-3.9**
CEVE	**Cerro Verde**	**3.11**	**93**	*i* P	**Pn**	**06 09 40.8**	**+1.4**
CEVE				*i* S	**Sn**	**06 10 15.7**	**-1.4**
CEVE				IAML		06 10 36.7	
	comp=Z,500nm,1.0s						
UNIC	**Universidad Ca**	**3.17**	**90**	*i* P	**Pn**	**06 09 40.9**	**+0.7**
UNIC				*i* S	**Sn**	**06 10 16.5**	**-2.0**
UNIC				IAML		06 11 27.0	
	comp=Z,200nm,1.0s						
JAYA	**Jayaque - finc**	**3.29**	**96**	*i* P	**Pn**	**06 09 42.5**	**+0.6**
JAYA				*i* S	**Sn**	**06 10 17.2**	**-4.3**
JAYA				IAML		06 10 26.2	
	comp=Z,600nm,1.0s						
CEDA	**San Andres**	**3.33**	**93**	*i* P	**Pn**	**06 09 43.5**	**+1.2**
CEDA				*i* S	**Sn**	**06 10 23.9**	**+1.6**
CEDA				IAML		06 10 37.0	
	comp=Z,660nm,1.0s						
MTO3	**Montecristo**	**3.38**	**83**	*i* P	**Pn**	**06 09 44.9**	**+1.8**
MTO3				IAML		06 10 09.3	
	comp=Z,110nm,1.0s						
ESQI	**Esquipulas**	**3.42**	**80**	*i* P	**Pb**	**06 09 47.3**	**-3.2**
ESQI				IAML		06 10 29.7	
	comp=Z,290nm,1.0s						
PMON	**Piamonte**	**3.42**	**94**	*i* P	**Pn**	**06 09 43.7**	**+0.2**
PMON				*i* S	**Sn**	**06 10 23.6**	**-0.9**
PMON				IAML		06 10 32.9	
	comp=Z,350nm,1.0s						
LALI	**Alcalda de L**	**3.44**	**98**	*i* P	**Pn**	**06 09 43.6**	**-0.1**
LALI				IAML		06 10 13.6	
	comp=Z,100nm,1.0s						
LALI				*i* S	**Sn**	**06 10 20.3**	**-4.6**
QUEZ	**Alcaldia de Qu**	**3.45**	**92**	*i* P	**Pn**	**06 09 43.6**	**-0.3**
QUEZ				*i* S	**Sn**	**06 10 22.4**	**-2.8**
QUEZ				IAML		06 10 41.4	
	comp=Z,2μm,1.0s						
ITCA	**Escuela Especi**	**3.46**	**95**	*i* P	**Pn**	**06 09 45.3**	**+1.3**
ITCA				*i* S	**Sn**	**06 10 27.1**	**+1.6**
ITCA				IAML		06 10 52.2	
	comp=Z,2μm,1.0s						
UEES	**Universidad Ev**	**3.49**	**94**	*i* P	**Pn**	**06 09 44.9**	**+0.4**
UEES				*i* S	**Sn**	**06 10 25.5**	**-0.8**
UEES				IAML		06 10 30.4	
	comp=Z,150nm,1.0s						
SNET	**Serv Nac Est T**	**3.50**	**95**	*i* P	**Pn**	**06 09 45.9**	**+1.3**
SNET				*i* S	**Sn**	**06 10 24.3**	**-2.2**
SNET				IAML		06 10 33.0	
	comp=Z,340nm,1.0s						
SEMO	**Seminario San**	**3.50**	**94**	*i* P	**Pn**	**06 09 46.7**	**+2.0**
SEMO				*i* S	**Sn**	**06 10 27.8**	**+1.1**
SEMO				IAML		06 11 56.9	
	comp=Z,2μm,1.0s						
UTEC	**Universidad Te**	**3.53**	**94**	*i* P	**Pn**	**06 09 46.1**	**+1.1**
UTEC				*i* S	**Sn**	**06 10 25.6**	**-1.6**
UTEC				IAML		06 11 03.2	
	comp=Z,340nm,1.0s						
IGN	**Direccin Gen**	**3.56**	**94**	*i* P	**Pn**	**06 09 45.1**	**-0.3**
IGN				*i* S	**Sn**	**06 10 26.0**	**-1.9**
IGN				IAML		06 10 30.4	
	comp=Z,2μm,1.0s						
PANCS	**Alcalda de**	**3.56**	**96**	*i* P	**Pn**	**06 09 47.2**	**+1.8**
PANCS				*i* S	**Sn**	**06 10 24.9**	**-3.0**
PANCS				IAML		06 11 04.5	
	comp=Z,1μm,1.0s						
LOMA	**Loma Larga**	**3.56**	**95**	*i* P	**Pn**	**06 09 48.2**	**+2.7**
LOMA				IAML		06 10 33.9	
	comp=Z,210nm,1.0s						
UDBS	**Universidad Do**	**3.57**	**94**	*i* P	**Pn**	**06 09 46.1**	**+0.5**
UDBS				*i* S	**Sn**	**06 10 25.3**	**-

comp=Z,77nm,1.0s
PETF Flores 4.06 44 *i* P **Pn 06 09 53.4 +1.1**
PETF IAML 06 10 39.4
comp=Z,170nm,1.0s
PQSS Presa 15 de Se 4.16 95 *i* P **Pn 06 09 54.7 +1.1**
PQSS *i* S **Sn 06 10 40.9 -1.7**
PQSS IAML 06 10 47.2
comp=Z,41nm,1.0s
ALJI Alcalda de J 4.18 99 *i* P **Pn 06 09 54.4 +0.4**
ALJI *i* S **Sn 06 10 41.9 -1.4**
ALJI IAML 06 12 02.3
comp=Z,250nm,1.0s
PACA Pacayal 4.40 96 *i* P **Pb 06 10 05.1 -2.3**
PACA *i* S **Sn 06 10 46.6 -2.3**
PACA IAML 06 11 19.4
comp=Z,590nm,1.0s
PEIG Puerto Escondi 4.63 296 **Pn 06 10 00.5 +0.3**
PEIG Sn 06 10 46.9 -7.4
PEIG Puerto Escondi 4.63 296 *i* P **Pn 06 10 00.5 +0.3**
PEIG *i* S Sn 06 10 46.9 -7.4
NEUV Arroyo Zacate 4.67 322 *eP* **Pn 06 09 59.7 -1.0**
NEUV *eS* **Sn 06 10 52.8 -2.6**
LCND La Caada 4.84 98 *i* P **Pn 06 10 00.1 -2.9**
LCND *i* S Sn 06 10 47.2 -12
LCND IAML 06 11 53.1
comp=Z,370nm,1.0s
OXIG Oaxaca 4.85 309 **Pb 06 10 13.7 -1.4**
OXIG **Sn 06 11 02.5 +2.5**
VHO Vista Hermosa 4.85 309 *eP* **Pb 06 10 13.7 -1.4**
VHO *eS* **Sn 06 11 02.5 +2.5**
SCIG Sabancuy 5.18 17 *eP* **Pn 06 10 07.6 0.0**
SCIG *eS* **Sn 06 11 06.6 -1.2**
YOIG Yosondua 5.37 302 **Pn 06 10 12.8 +2.2**
YOIG **Sn 06 11 15.1 +2.2**
YOIG Yosondua 5.37 302 *eP* **Pn 06 10 12.8 +2.2**
YOIG *i* S **Sn 06 11 15.1 +2.2**
TGUH Tegucigalpa,Un 5.38 89 Pn Pn 06 10 16.4 +5.8
PNIG Pinotepa 5.65 296 **Pn 06 10 14.5 +0.4**
PNIG Sn 06 11 10.2 -9.3
PNIG Pinotepa 5.65 296 *eP* **Pn 06 10 14.5 +0.4**
PNIG *eS* Sn 06 11 10.2 -9.3
TOIG Toxpalan 5.76 315 **Pn 06 10 15.4 -0.3**
TOIG **Sn 06 11 24.6 +2.2**
TOIG Toxpalan 5.76 315 *eP* **Pn 06 10 15.4 -0.3**
TOIG *i* S **Sn 06 11 24.6 +2.2**
CRIN San Cristobal 5.76 102 Pn Pn 06 10 22.3 +6.5
HLIG Huajuapan de L 6.12 309 **Pn 06 10 24.5 +3.7**
HLIG **Sn 06 11 35.8 +4.4**
HLIG Huajuapan de L 6.12 309 *eP* **Pn 06 10 24.5 +3.7**
HLIG *eS* **Sn 06 11 35.8 +4.4**
CNGN Cerro Negro 6.14 103 Pn Pn 06 10 27.3 +6.3
FTIG Fresnillo de T 6.42 308 **Pn 06 10 27.8 +3.0**
FTIG **Sn 06 11 46.2 +7.7**
FTIG Fresnillo de T 6.42 308 *eP* **Pn 06 10 27.8 +3.0**
FTIG *eS* **Sn 06 11 46.2 +7.7**
JAUV Jalcomulco 6.56 325 *eP* **Pn 06 10 25.1 -1.6**
JAUV *i* S **Sn 06 11 39.7 -2.2**
TLIG Tlapa 6.57 303 Pn **Pn 06 10 29.3 +2.5**
CRIG Cruz Grande 6.67 295 *eP* **Pn 06 10 28.0 -0.1**
MATN Matagalpa 6.79 98 Pn **Pn 06 10 33.5 +3.6**
BOAB BOACO BROADBAN 7.13 102 Pn **Pn 06 10 38.8 +4.2**
TEIG Tepich 7.56 34 Pn **Pn 06 10 40.3 0.0**
JTS Las Juntas de 8.53 115 Pn **Pn 06 10 56.7 +2.9**
comp=Z,1.1nm,0.3s,baz=299,slow=19,SNR=6.5
comp=Z,2.4nm,0.3s
HDC Heredia 9.40 114 Pn Pn 06 11 11.9 +6.2
SAND Sanderson 18.05 333 **P 06 13 03.7 +2.0**
TXAR Lajitas Array 18.26 328 **P 06 13 06.7 +2.6**
TXAR Lajitas Array 18.26 328 P **P 06 13 07.0 +2.9**
comp=Z,1.7nm,0.9s,baz=160,slow=5.5,SNR=6.9
TX31 Lajitas Ar. Si 18.27 328 **P 06 13 06.6 +2.5**
ALPN Alpine 19.10 330 P **Pn 06 13 15.7 +1.5**
MNHN Monahans 19.52 334 P **P 06 13 19.7 +1.9**
VHRN Van Horn 20.11 328 P **P 06 13 26.5 +2.2**
APMT Aspermont 20.35 342 P **P 06 13 28.6 +1.8**
ROSC El Rosal 20.38 115 P Pn 06 13 31.5 +1.8
comp=Z,2.3nm,0.5s,baz=90,slow=20,SNR=2.1
comp=Z,2.3nm,0.5s
MIAR Mount Ida 20.46 358 P **P 06 13 28.6 +0.6**
MIAR IAmb IAmb 06 13 37.1
comp=Z,10nm,1.1s
OXF Oxford 20.65 8 P **P 06 13 29.0 -1.0**
257A Skidaway Islan 20.89 29 P **P 06 13 33.2 +0.6**
DKNS Dickens 20.91 341 P **P 06 13 33.9 +0.9**
DKNS IAmb IAmb 06 13 39.0
comp=Z,5.1nm,0.7s
MNTX Cornudas Mount 21.04 329 P **P 06 13 35.1 +0.8**
FNO Franklin 21.56 350 P **P 06 13 39.8 -0.1**
SMWD Samnorwood 22.05 344 P **P 06 13 44.9 -0.3**
SMWD IAmb IAmb 06 13 48.7
comp=Z,16nm,1.0s
OK029 Liberty Lake 22.09 350 P **P 06 13 44.9 -0.7**
OK029 IAmb IAmb 06 13 46.1
comp=Z,9.6nm,0.8s
OK052 Battle Ridge R 22.19 351 P **P 06 13 47.5 +0.9**
OK052 IAmb IAmb 06 13 50.5
comp=Z,11nm,1.0s
HHAR Hobbs 22.21 358 P **P 06 13 45.7 -1.1**
AMTX Amarillo 22.27 340 P **P 06 13 49.0 +1.4**
AMTX IAmb IAmb 06 13 50.3
comp=Z,11nm,0.8s
OK051 E0350 and S346 22.69 352 P **P 06 13 51.7 -0.3**
OK051 IAmb IAmb 06 13 53.6
comp=Z,15nm,1.0s
PBMO Poplar Bluff 22.78 5 P **P 06 13 51.4 -1.5**
PBMO IAmb IAmb 06 14 03.3
comp=Z,8.5nm,1.4s
121A Cookes Peak, D 22.95 326 P **P 06 13 57.2 +2.2**
121A IAmb IAmb 06 14 01.3
comp=Z,8.0nm,1.0s
OK032 Salt Plains WL 23.21 349 P **P 06 13 57.8 +0.4**
OK032 IAmb IAmb 06 13 58.1
comp=Z,12nm,0.9s
OK035 E0210 Rd and N 23.21 348 P **P 06 13 56.8 -0.6**
KAN13 South Haven SW 23.29 351 P **P 06 13 57.4 -0.7**
KAN13 IAmb IAmb 06 13 58.1
comp=Z,11nm,1.1s
KAN05 Bluff City Nor 23.45 350 P **P 06 13 59.6 -0.1**
KAN01 Argonia South 23.47 350 P **P 06 13 59.4 -0.7**
KAN01 IAmb IAmb 06 14 00.5
comp=Z,11nm,0.9s
S39A Bolivar 23.59 359 P **P 06 14 00.1 -1.1**
S39A IAmb IAmb 06 14 01.4
comp=Z,7.1nm,0.9s
RTBA Rita Blanca 24.04 340 P **P 06 14 06.5 +0.8**
TUC Tucson 24.52 321 P **P 06 14 12.9 +2.7**
TUC IAmb IAmb 06 14 24.6
comp=Z,6.6nm,1.4s
R32A Long Quarter, 24.87 349 P **P 06 14 12.9 -0.3**
ATAH Atahualpa 25.42 145 LR LR 06 22 09.7
comp=Z,60nm,21.4s,baz=26,slow=31
PDAR Pinedale Array 32.09 336 P **P 06 15 15.1 -2.7**
comp=Z,0.4nm,0.7s,baz=141,slow=4.4,SNR=2.4
comp=Z,0.4nm,0.7s
SADO Sadowa 32.80 18 LR LR 06 29 57.7
comp=Z,91nm,18.8s,baz=218,slow=40
NVAR Mina Array Bea 33.17 322 P **P 06 15 28.9 +1.5**
comp=Z,0.8nm,0.6s,baz=137,slow=8.5,SNR=12
comp=Z,0.8nm,0.6s
YBH Yreka Blue Hor 37.88 323 LR LR 06 31 30.2
comp=Z,61nm,19.0s,baz=196,slow=36
SCHQ Schefferville 45.50 21 LR LR 06 36 51.8
comp=Z,96nm,19.6s,baz=222,slow=38
YKA Yellowknife Ar 50.84 347 P **P 06 17 51.0 +0.1**
comp=Z,3.6nm,0.8s,baz=149,slow=7.4,SNR=63
comp=Z,3.6nm,0.8s
FRB Frobisher Bay 52.49 13 LR LR 06 41 58.6
comp=Z,59nm,19.2s,baz=244,slow=39
SFJD Kangerlussuaq 59.75 18 LR LR 06 44 15.3
comp=Z,65nm,19.4s,baz=177,slow=36
ILAR Eielson Array 62.52 337 P **P 06 19 14.6 +0.6**
comp=Z,1.6nm,1.1s,baz=166,slow=5.5,SNR=8.8
comp=Z,1.6nm,1.1s
EKA Eskdalemuir Ar 78.42 36 P **P 06 20 48.4 -2.8**
comp=Z,0.7nm,0.6s,baz=280,slow=4.2,SNR=4.4
comp=Z,0.7nm,0.6s
NOA NORSAR Array B 84.52 28 LR LR 06 57 07.0
comp=Z,19nm,21.9s,baz=300,slow=35
HFS Hagfors 85.98 29 LR LR 06 58 15.0
comp=Z,24nm,18.4s,baz=321,slow=35
CMAR Chiang Mai Arr 145.72 340 PKPbc **PKPdf 06 28 30.7 +0.6**
comp=Z,1.4nm,0.3s,baz=341,slow=4.0,SNR=9.1

IDC 05 06:14:04.0±2.5, 53.96N×86.62E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=21.0km s-min=12.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**270**	I	I	06 18 50.0	
	0.1nm,0.8s,baz=88,slow=331,SNR=7.3						
ZALV	**Zalesovo Beam**	**1.06**	**270**	Pg	Pg	06 14 23.2	-1.1
	1.3nm,0.3s,baz=86,slow=16,SNR=12						
ZALV				Lg	Lg	06 14 39.2	
	2.4nm,0.3s,baz=91,slow=29,SNR=16						
KURBB	**Kurchatov Arra**	**5.99**	**239**	Pn	Pn	06 15 34.9	+1.2
	0.2nm,0.3s,baz=56,slow=13,SNR=12						
KURBB				Lg	Lg	06 17 16.2	
	baz=46,slow=28,SNR=2.3						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.69**	**203**	Pn	Pn	06 15 58.0	+0.7
	0.2nm,0.3s,baz=23,slow=13,SNR=12						
MKAR				Lg	Lg	06 18 08.9	
	baz=24,slow=28,SNR=2.6						
	0.3nm,0.3s						

CNRM ***05*** *06:15:20.5, 35.66N×3.83W, h13km, ML1.6*
MDD ***05*** *06:15:23.5±0.7, 35.52N×3.81W, h5km±5km, mb_Lg2.1/6, Error ellipse: s-maj=4.9km s-min=4.0km az=70.0*
SFS ***05*** *06:15:23.7, 35.47N×3.77W, h7km, ML2.5/7, ML2.5/7, MLv2.4/7*

ISC 05 06:15:23.2±1.0, 35.50N±0.02×3.79W±0.03, h17km±8km, n27, σ0.97/42, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.31**	**203**	P	**Pg**	**06 15 30.1**	**+0.3**
PALE	**Palemas**	**0.31**	**203**	S	**Sg**	**06 15 34.8**	**+0.5**
GOG	**Mont Gurugu**	**0.71**	**113**	P	**Pg**	**06 15 36.8**	**-0.4**
GOG	**Mont Gurugu**	**0.71**	**113**	S	**Sg**	**06 15 47.0**	**+0.4**
EMEL	**Melilla**	**0.71**	**106**	Pg	**Pg**	**06 15 37.6**	**+0.3**
EMEL				Sg	**Sg**	**06 15 46.0**	**-0.7**
EMLI	**Melilla**	**0.72**	**106**	Pg	**Pg**	**06 15 36.5**	**-0.8**
EMLI				Sg	**Sg**	**06 15 45.5**	**-1.3**
EALB	**Alboran**	**0.76**	**54**	Sg	**Sg**	**06 15 47.9**	**-0.2**
EALB				Pg	**Pg**	**06 15 37.8**	**-0.2**
EALB	**Alboran**	**0.76**	**54**	Pg	**Pg**	**06 15 38.0**	**-0.1**
EALB				Sg	**Sg**	**06 15 48.6**	**+0.5**
EALB				*i* Vmb_Lg		06 15 52.2	
AKLM	**AKL**	**0.99**	**183**	S	**Sb**	**06 15 56.4**	**+1.5**
SMIR	**Smir Dam**	**1.31**	**278**	P	**Pn**	**06 15 45.0**	**-1.8**
SMIR	**Smir Dam**	**1.31**	**278**	S	**Sb**	**06 16 01.4**	**-2.4**
TAF	**Taforalt**	**1.32**	**121**	P	**Pn**	**06 15 45.7**	**-1.3**
TAF	**Taforalt**	**1.32**	**121**	S	**Sb**	**06 16 05.8**	**+1.4**
EMIJ	**Mijas**	**1.32**	**324**	Pn	**Pn**	**06 15 48.0**	**+1.0**
EMIJ				Sn	**Sb**	**06 16 04.3**	**-0.1**
EMIJ	**Mijas**	**1.32**	**324**	Pg	**Pg**	**06 15 48.7**	**-0.1**
EMIJ				Sg	**Sb**	**06 16 04.1**	**-0.3**
EMIJ				*i* Vmb_Lg		06 16 08.5	
ELGU	**Los Guajares,**	**1.37**	**6**	Pn	**Pn**	**06 15 46.6**	**-1.1**
ELGU				Sn	**Sb**	**06 16 05.8**	**0.0**
ELGU	**Los Guajares,**	**1.37**	**6**	Pg	**Pn**	**06 15 47.0**	**-0.8**
ELGU				Sg	**Sb**	**06 16 05.0**	**-0.8**
ELGU				*i* Vmb_Lg		06 16 08.3	
EBER	**Berja**	**1.57**	**27**	Pn	**Pn**	**06 15 50.2**	**-0.4**
EBER				Sn	**Sn**	**06 16 11.3**	**+0.6**
EBER	**Berja**	**1.57**	**27**	Pn	**Pn**	**06 15 50.2**	**-0.4**
EBER				Sn	**Sn**	**06 16 09.5**	**-1.2**
EBER				*i* Vmb_Lg		06 16 09.9	
EGOR	**Sierra Gorda,**	**1.63**	**351**	Pn	**Pn**	**06 15 53.0**	**+1.7**
EGOR				Sn	**Sb**	**06 16 14.2**	**+1.0**
EGOR	**Sierra Gorda,**	**1.63**	**351**	Pn	**Pn**	**06 15 52.6**	**+1.3**
EGOR				Sn	**Sn**	**06 16 12.6**	**+0.7**
EQUE	**Quentar**	**1.72**	**9**	Pn	**Pn**	**06 15 53.5**	**+0.9**
EQUE				Sn	**Sn**	**06 16 14.3**	**0.0**
EQUE				*i* Vmb_Lg		06 16 18.4	
EQTA	**Presa de Quent**	**1.73**	**9**	Pn	**Pn**	**06 15 53.4**	**+0.8**
EQTA				Sn	**Sn**	**06 16 15.9**	**+1.5**
IFR	**Ifrane**	**2.27**	**209**	Sn	**Sn**	**06 16 27.5**	**-0.2**
EQES	**Quesada**	**2.37**	**14**	Pn	**Pn**	**06 16 02.1**	**+0.7**
EQES				Sn	**Sb**	**06 16 33.9**	**-0.7**
EQES				*i* Vmb_Lg		06 16 40.2	
MD31	**MD31**	**2.75**	**197**	P	**Pn**	**06 16 07.0**	**+0.3**
MDT	**Midelt**	**2.76**	**194**	P	**Pn**	**06 16 07.3**	**+0.4**

ASIES ***05*** *06:35:45.7, 24.20N×121.80E, h12km, ML3.5, Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^20 Nm; Mrr=3.33; Mθθ 1.60; Mφφ -2.58; Mrθ 8.85; Mrφ -4.80; Mθφ 3.27; Fault plane solution: M0 11.05160×10^20 NP1: φs 258.34000°, δs 84.83000°, λs -119.52000°. NP2: φs 159.29000°, δs 29.93000°, λs -10.41000°. Principal axes: T Plg33.3020°, Azm12.9740°; N Plg29.3890°, Azm261.2590°; P Plg42.5750°, Azm140.0980°;*

TAP 05 06:35:45.7, 24.20N×121.80E, h12km, ML3.5, 2C-21D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**333**	P	Pg	06 35 49.0	+0.1
	baz=334						
EHP				S	Sg	06 35 51.6	+0.4
	baz=334						
EAHA	**Aohua**	**0.14**	**336**	⇓*i*P	Pg	06 35 49.3	+0.1
	baz=335						
EAHA				S	Sg	06 35 52.1	+0.5
	baz=335						
ETL	**Fush Village**	**0.17**	**257**	*e*P	Pg	06 35 49.6	+0.1
	baz=259						
ETL				*e*S	Sg	06 35 52.6	+0.3
	baz=259						
NACB	**Ninganchiao**	**0.19**	**263**	⇓*i*P	Pg	06 35 49.8	-0.1
	baz=265						
NACB				S	Sg	06 35 53.0	+0.2
	baz=265						
TWD	**Chiawan**	**0.22**	**238**	*e*P	Pg	06 35 50.5	+0.1
	baz=246						
TWD				S	Sg	06 35 54.4	+0.7
	baz=246						
ENA	**Nanau**	**0.24**	**346**	⇓*i*P	Pg	06 35 50.8	+0.2
	baz=346						
ENA				S	Sg	06 35 54.8	+0.7
	baz=346						
EWUT	**Wuta**	**0.25**	**355**	⇓P	Pg	06 35 51.1	+0.3
	baz=352						
EWUT				*e*S	Sg	06 35 55.4	+1.0
	baz=352						
HWA	**Hwalien**	**0.28**	**220**	*e*P	Pb	06 35 52.4	-0.3
	baz=233						
HWA				*e*S	Sb	06 35 59.2	+1.8
	baz=233						
ETLH	**Xiulin Townshi**	**0.29**	**272**	⇓P	Pg	06 35 51.5	-0.2
	baz=273						
ETLH				S	Sg	06 35 55.9	+0.1
	baz=273						
ETM	**Tongmen**	**0.37**	**231**	*e*P	Pg	06 35 53.4	+0.4
	baz=234						
ETM				*e*S	Sb	06 35 59.4	-0.4
	baz=234						
ESAO	**Su ao**	**0.38**	**6**	*e*P	Pg	06 35 53.4	+0.2
	baz=360						
ESAO				*e*S	Sg	06 35 59.0	+0.6
	baz=360						
LXIB	**Xiulin Townshi**	**0.40**	**244**	*e*P	Pg	06 35 53.0	-0.6
	baz=247						
LXIB				*e*S	Sg	06 35 59.9	+0.9
	baz=247						
TWC	**Suao**	**0.41**	**6**	*i*P	Pg	06 35 54.2	+0.3
	baz=4.0						
TWC				S	Sg	06 35 58.9	-0.4
	baz=4.0						
LATG	**Datong**	**0.42**	**323**	⇓*i*P	Pg	06 35 54.3	+0.2
	baz=323						
LATG				S	Sb	06 36 00.9	-0.6
	baz=323						
NDS	**Dongshan**	**0.44**	**350**	⇓*i*P	Pg	06 35 54.9	+0.5
	baz=348						
NDS				*e*S	Sg	06 36 00.5	+0.2
	baz=348						
NNSB	**Datong**	**0.45**	**301**	⇓*i*P	Pg	06 35 54.8	+0.2
	baz=302						
NNSB				*e*S	Sg	06 36 00.9	+0.4
	baz=302						
NNS	**Nan Shan**	**0.46**	**302**	⇓*i*P	Pg	06 35 55.0	+0.2
	baz=303						
NNS				S	Sg	06 36 01.4	+0.4
	baz=303						
SHUL	**Shoufeng**	**0.46**	**208**	*e*P	Pb	06 35 55.8	0.0
	baz=212						
SHUL				*e*S	Sb	06 36 02.8	+0.2
	baz=212						
NDT	**Datong Townshi**	**0.48**	**327**	⇓*i*P	Pn	06 35 55.7	-0.4
	baz=327						
NDT				*e*S	Sb	06 36 03.1	-0.1
	baz=327						
ENTT	**Nioudou**	**0.49**	**334**	⇓*i*P	Pg	06 35 55.8	+0.4
	baz=334						
ENTT				S	Sb	06 36 03.0	-0.4
	baz=334						
WHF	**Hehuan Shan**	**0.49**	**264**	⇓P	Pg	06 35 55.6	+0.1
	baz=266						
WHF				*e*S	Sg	06 36 02.7	+0.5
	baz=266						
ESL	**Shilin**	**0.51**	**222**	*e*P	Pg	06 35 55.8	+0.1
	baz=232						
ESL				*e*S	Sb	06 36 04.2	+0.2
	baz=232						
FUSS	**Fushou**	**0.51**	**276**	⇓P	Pg	06 35 56.1	+0.3
	baz=278						
FUSS				*e*S	Sg	06 36 03.4	+0.7
	baz=278						
TWE	**Neicheng**	**0.54**	**347**	⇓*i*P	Pb	06 35 56.6	-0.4
	baz=346						
TWE				*e*S	Sg	06 36 03.5	+0.2
	baz=346						
TEGC	**Jichi Village**	**0.54**	**206**	*e*P	Pb	06 35 57.1	-0.1
	baz=210						
TEGC				*e*S	Sb	06 36 05.6	+0.7
	baz=210						
TWT	**Tachien**	**0.58**	**276**	⇓P	Pb	06 35 57.6	-0.2
	baz=276						
TWT				*e*S	Sb	06 36 05.6	-0.4
	baz=276						
CHGB	**Renai**	**0.59**	**257**	⇓*i*P	Pg	06 35 57.5	+0.2
	baz=251						
CHGB				*i* S	Sg	06 36 05.8	+0.7
	baz=251						
TDCB	**Techi**	**0.59**	**275**	⇓P	Pg	06 35 57.6	+0.4
	baz=277						
TDCB				S	Sg	06 36 05.0	-0.1
	baz=277						
FUSB	**Fushanzhiwuyua**	**0.59**	**341**	⇓*i*P	Pb	06 35 57.7	-0.3
	baz=330						
FUSB				*e*S	Sg	06 36 05.7	+0.6
	baz=330						
YHNB	**Yeheng**	**0.61**	**320**	⇓*i*P	Pb	06 35 58.1	-0.2
	baz=320						
YHNB				*i* S	Sb	06 36 06.7	-0.2
	baz=320						
WARBT	**Fenglin Townsh**	**0.61**	**219**	⇑P	Pg	06 35 57.6	0.0
	baz=228						
WARBT				*e*S	Sg	06 36 07.3	+0.5
	baz=228						
OWD	**Renai**	**0.62**	**247**	*e*P	Pg	06 35 58.1	+0.3
	baz=249						
OWD				*e*S	Sb	06 36 07.4	0.0
	baz=249						
NSK	**Sanguang**	**0.63**	**320**	⇓*i*P	Pg	06 35 58.2	+0.3
	baz=320						
NSK				S	Sb	06 36 07.2	-0.1
	baz=320						
EGFH	**Guangfu**	**0.63**	**213**	*e*P	Pg	06 35 58.2	+0.3
	baz=223						
EGFH				*e*S	Sb	06 36 07.6	+0.3
	baz=223						
NWLT	**Wulai**	**0.64**	**335**	*e*P	Pb	06 35 58.5	-0.3
	baz=334						
NWLT				S	Sb	06 36 07.2	-0.5
	baz=334						
WUSB	**Renai**	**0.66**	**252**	*e*P	Pb	06 35 59.0	-0.2
	baz=247						
WUSB				*i* S	Sb	06 36 08.2	-0.2
	baz=247						
VWDT	**VWDT**	**0.75**	**234**	*e*P	Pg	06 36 00.3	+0.1
	baz=242						
VWDT				S	Sb	06 36 10.4	-0.4
	baz=242						
NFF	**Wufeng Townshi**	**0.76**	**305**	P	Pb	06 36 01.1	+0.2
	baz=305						
NFF				*e*S	Sb	06 36 11.1	-0.1
	baz=305						
TIPB	**Shuangxi**	**0.77**	**1**	⇑*e*P	Pb	06 36 01.1	+0.1
	baz=359						
TIPB				*e*S	Sb	06 36 11.1	-0.4
	baz=359						
HGSD	**Ruisui**	**0.78**	**206**	⇓P	Pb	06 36 01.4	+0.1
	baz=199						
HGSD				S	Sb	06 36 12.1	+0.3
	baz=199						
WHP	**Taichung City**	**0.79**	**276**	P	Pb	06 36 01.5	+0.2
	baz=277						
WHP				S	Sb	06 36 12.3	+0.3
	baz=277						
NHDH	**Xindian Distri**	**0.80**	**342**	*e*P	Pn	06 36 02.2	-0.6
	baz=340						
NHDH				*e*S	Sb	06 36 12.7	+0.3
	baz=340						
TWA	**Mucha**	**0.80**	**346**	P	Pb	06 36 02.0	+0.4
	baz=334						
TWA				*e*S	Sb	06 36 12.3	-0.2
	baz=334						
EHY	**Hungye**	**0.82**	**213**	P	Pg	06 36 01.0	-0.5
	baz=228						
EHY				*e*S	Sb	06 36 13.0	+0.2
	baz=228						
TWB1	**Santiao Chiao**	**0.82**	**12**	*e*P	Pn	06 36 02.6	-0.5
	baz=9.0						
TWB1				*e*S	Sb	06 36 13.3	+0.3
	baz=9.0						
WCS	**Beigang Elemen**	**0.83**	**260**	*e*P	Pg	06 36 01.5	-0.2
	baz=255						
WCS				*e*S	Sg	06 36 11.8	-0.7
	baz=255						
LIOB	**Emei**	**0.85**	**302**	*e*P	Pn	06 36 03.0	-0.4
	baz=303						
LIOB				*e*S	Sb	06 36 14.2	+0.5
	baz=303						
NSTT	**Nanjuang**	**0.85**	**301**	*e*P	Pb	06 36 02.4	0.0
	baz=302						
NSTT				*e*S	Sb	06 36 13.6	-0.1
	baz=302						
NHY	**Taipei**	**0.86**	**346**	*e*P	Pg	06 36 02.4	0.0
	baz=345						
NWF	**Wu-fen Shan**	**0.87**	**359**	P	Pb	06 36 03.0	+0.3
	baz=350						
NWF				S	Sb	06 36 14.3	0.0
	baz=350						
WFSB	**Wu-fen Shan**	**0.87**	**359**	P	Pb	06 36 03.0	+0.2
	baz=350						
WFSB				*e*S	Sg	06 36 14.0	+0.2
	baz=350						
SSLB	**Suanglung**	**0.88**	**242**	*e*P	Pg	06 36 02.5	-0.1
	baz=254						
SSLB				*e*S	Sb	06 36 14.4	-0.1
	baz=254						
SMLT	**Sun Moon Lake**	**0.88**	**249**	*e*P	Pb	06 36 03.2	+0.2
	baz=252						
SMLT				*i* S	Sb	06 36 15.0	+0.2
	baz=252						
SXI1	**Grass Mountain**	**0.90**	**4**	*e*P	Pn	06 36 03.7	-0.4
	baz=349						
TYC	**Yuchr**	**0.91**	**252**	*e*P	Pg	06 36 03.2	-0.1
	baz=254						
TYC				*e*S	Sg	06 36 15.0	-0.3
	baz=254						
YULB	**Yu-li**	**0.93**	**210**	P	Pg	06 36 02.6	-1.0
	baz=225						
YULB				*e*S	Sg	06 36 15.3	-0.4
	baz=225						
ECBN	**Changbin**	**0.94**	**200**	*e*P	Pb	06 36 04.0	+0.2
	baz=203						
ECBN				*e*S	Sb	06 36 16.7	+0.5
	baz=203						
TNOU	**National Taiwa**	**0.95**	**358**	*e*P	Pb	06 36 04.4	+0.3
	baz=350						
TNOU				*e*S	Sg	06 36 15.9	-0.5
	baz=350						
NCUH	**Zhongli**	**0.95**	**324**	*e*P	Pn	06 36 05.0	+0.2
	baz=324						
NCUH				*e*S	Sn	06 36 17.8	-0.6
	baz=324						
SBCB	**Hsinchu**	**0.95**	**309**	*e*P	Pn	06 36 04.5	-0.3
	baz=310						
TWQ1	**Liyutan**	**0.95**	**279**	*e*P	Pn	06 36 06.5	+1.6
	baz=281						

EYUL	**Yuli**	**0.96 208**	*eP*		Pn	06 36 04.9	0.0
	baz=220						
TWF1	**Yuli**	**0.96 209**	*eP*		Pg	06 36 03.6	-0.6
	baz=212						
TWF1			*eS*		Sn	06 36 17.9	-0.7
	baz=212						
TWS1	**Kuangyinshan**	**0.96 339**	*eP*		Pn	06 36 05.0	0.0
	baz=338						
TWS1			*eS*		Sn	06 36 18.8	+0.1
	baz=338						
YM01	**YM01**	**0.97 347**	*eP*		Pb	06 36 04.7	+0.3
	baz=346						
YM01			*eS*		Sb	06 36 17.6	+0.5
	baz=346						
HSN	**Hsinchu**	**0.97 309**	*eS*		Sn	06 36 20.9	+2.1
	baz=303						
NSY	**Sanyi**	**0.98 283**	*eP*		Pg	06 36 03.9	-0.7
	baz=285						
NMLH	**Miaoli**	**0.98 290**	*eP*		Pn	06 36 05.5	+0.2
	baz=292						
WHYT	**Xinyi Township**	**1.00 240**	*eP*		Pn	06 36 05.3	-0.3
	baz=251						
NTST	**Danshui**	**1.01 342**	*eP*		Pb	06 36 05.2	0.0
	baz=328						
ANP	**Anpu**	**1.02 345**	*eP*		Pb	06 36 05.2	0.0
	baz=344						
ANP			*eS*		Sb	06 36 18.7	0.0
	baz=344						
WJS	**Zhushan**	**1.05 249**	*eP*		Pg	06 36 06.1	+0.1
	baz=247						
WJS			*eS*		Sg	06 36 20.2	+0.5
	baz=247						
WNT	**Mingjian**	**1.07 253**	*eP*		Pb	06 36 06.1	0.0
	baz=248						
TWY	**Chenhua**	**1.09 350**	*eP*		Pb	06 36 06.3	-0.1
	baz=349						
FULB	**Fuli**	**1.10 205**	*eP*		Pb	06 36 06.3	-0.3
	baz=197						
YOJ	**Yonaguni jima**	**1.13 76**	*eP*		Pg	06 36 07.7	+0.2
	baz=62						
ALS	**Alishan**	**1.14 233**	*eP*		Pn	06 36 07.8	0.0
	baz=226						
ALS			*eS*		Sn	06 36 23.6	+0.1
	baz=226						
CHKT	**Chengkung**	**1.17 200**	*eP*		Pb	06 36 07.4	-0.3
	baz=194						
EHD	**Haiduan**	**1.18 208**	*eP*		Pb	06 36 07.8	-0.2
	baz=211						
ELDTW	**Lidau**	**1.24 216**	*eP*		Pn	06 36 08.1	-0.8
	baz=204						
WCKO	**Fanlu**	**1.33 236**	*eP*		Pg	06 36 11.2	-0.1
	baz=239						
WRL	**Guolierlin Hig**	**1.34 258**	*eP*		Pb	06 36 11.0	+0.3
	baz=261						
WRL			*eS*		Sg	06 36 31.3	+2.5
	baz=261						
STYH	**Taoyuan**	**1.39 223**	*eP*		Pb	06 36 11.3	-0.3
	baz=211						
WTK	**Tuku**	**1.39 249**	*eP*		Pn	06 36 10.9	0.0
	baz=252						
WTK			*eS*		Sg	06 36 31.3	+0.8
	baz=252						
CHN4	**Tsaushan**	**1.39 233**	*eP*		Pg	06 36 12.2	-0.3
	baz=237						
TPUB	**Ta-pu**	**1.40 231**	*eP*		Pb	06 36 11.9	+0.2
	baz=224						
TPUB			*eS*		Sg	06 36 31.7	+1.0
	baz=224						
WTP	**Ta-pu**	**1.45 229**	*eP*		Pb	06 36 12.8	+0.2
	baz=233						
TWK	**Hsinying**	**1.52 233**	*eP*		Pb	06 36 13.9	0.0
	baz=236						
CHN1	**Nanshi**	**1.54 229**	*eP*		Pb	06 36 14.4	+0.1
	baz=224						
CHN1			*eS*		Sg	06 36 36.0	+0.6
	baz=224						
SNST	**Tainan City**	**1.54 231**	*eP*		Pb	06 36 13.6	-0.6
	baz=235						
SNST			*eS*		Sg	06 36 37.2	+1.8
	baz=235						
WSF	**Szhu**	**1.55 249**	*eP*		Pn	06 36 12.5	-0.5
	baz=252						
SGST	**Jiashian**	**1.58 225**	*eP*		Pb	06 36 14.3	-0.5
	baz=229						
SGST			*eS*		Sg	06 36 37.3	+0.8
	baz=229						
SLGT	**Liugui**	**1.60 222**	*eP*		Pb	06 36 15.0	-0.2
	baz=226						
ICHU	**Yijhu**	**1.63 239**	*eP*		Pn	06 36 12.9	-1.2
	baz=243						
SCST	**Cishan**	**1.78 223**	*eP*		Pb	06 36 18.2	+0.1
	baz=226						
TSMG	**Majia**	**1.83 216**	*eP*		Pb	06 36 18.1	-0.9
	baz=210						
MASBT	**Mashibuluo**	**1.91 215**	*eP*		Pn	06 36 19.1	+1.0
	baz=207						
EAST	**Anshuo**	**2.01 206**	*eP*		Pn	06 36 19.1	-0.3
	baz=197						
SCZT	**Fangliau**	**2.12 211**	*eP*		Pb	06 36 22.7	-1.3
	baz=213						
VWUC	**VWUC**	**2.28 291**	*eP*		Pn	06 36 23.3	+0.1
	baz=281						

UPA ***05*** *06:39:18.6±0.7,8.˚59N×82.˚25W, h7km±3km, ML3.8, MW3.6*
CATAC ***05*** *06:39:19.5±0.8,8.˚46N×82.˚34W, h8km±2km, ML3.1*

ISC 05 06:39:18.5±1.1,8.˚54N±0.˚04×82.˚24W±0.˚03, h16km±8km, n24, σ0°80/39, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PTAR3	**Potrerillos Ar**	**0.30**	**300**	*eP*		**Pb**	**06 39 25.2**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.32**	**321**	*eP*		**Pg**	**06 39 25.2**	**-0.1**
BCO2	**Palmira**	**0.34**	**301**	*eP*		**Pg**	**06 39 25.9**	**+0.3**
BCO2				AMP			06 39 26.7	
	comp=Z,20μm,0.1s							
BCO2				*eS*		**Sb**	**06 39 31.2**	**-0.2**
CHGR2	**Aguacate**	**0.40**	**13**	*eP*		**Pg**	**06 39 26.3**	**-0.4**
CHGR2				*eS*		**Sg**	**06 39 32.0**	**-0.3**
BC3P	**Paso Ancho**	**0.46**	**306**	*eP*		**Pg**	**06 39 27.4**	**-0.3**
BRU2	**Volcan**	**0.51**	**299**	*eP*		**Pb**	**06 39 28.6**	**-0.6**
BRU2				AMP			06 39 29.4	
	comp=Z,4μm,0.1s							
BRU2				*eS*		**Sg**	**06 39 37.0**	**+1.3**
BRU2	**Volcan**	**0.51**	**299**	*i* P		**Pb**	**06 39 28.6**	**-0.6**
BRU2				*i* S		**Sb**	**06 39 36.1**	**-0.4**
BRU2				IAML			06 39 37.2	
	comp=Z,1μm,1.0s							
CDITO	**Canoas**	**0.63**	**273**	*eP*		**Pb**	**06 39 30.6**	**-0.5**
CDITO				AMP			06 39 31.1	
	comp=Z,6μm,0.1s							
CDITO	**Canoas**	**0.63**	**273**	*i* P		**Pb**	**06 39 30.7**	**-0.4**
CDITO				*i* S		**Sg**	**06 39 40.1**	**+0.9**
CDITO				IAML			06 39 42.8	
	comp=Z,2μm,1.0s							
MLIR3	**Monte Lirio, C**	**0.63**	**293**	*eP*		**Pb**	**06 39 30.9**	**-0.3**
PTPM	**Petroterminale**	**0.72**	**242**	*eP*		**Pn**	**06 39 33.4**	**-0.5**
CNI2	**El Empalme, Bo**	**0.91**	**345**	*eP*		**Pb**	**06 39 35.6**	**-0.3**
CNI2				*eS*		**Sg**	**06 39 48.2**	**+0.2**
RSUS3	**Rio de Jesus,**	**1.20**	**117**	*eP*		**Pb**	**06 39 41.1**	**+0.2**
GMAL	**Guarumal, Vera**	**1.26**	**128**	*eP*		**Pb**	**06 39 41.5**	**-0.4**
OCHAL	**Ojochal**	**1.50**	**292**	*i* P		**Pn**	**06 39 44.1**	**-0.6**
OCHAL				IAML			06 39 48.1	
	comp=Z,3.2nm,1.0s							
OCHAL				*i* S		**Sb**	**06 40 03.9**	**-0.8**
PEZE	**Perez Zeledon,**	**1.65**	**301**	*i* P		**Pn**	**06 39 47.0**	**+0.1**
PEZE				*i* S		**Sn**	**06 40 07.8**	**0.0**
PEZE				IAML			06 40 10.7	
	comp=Z,260nm,1.0s							
CACAO	**El Cacao, Vera**	**1.81**	**131**	*eP*		**Pb**	**06 39 50.4**	**-0.9**
CACAO				AMP			06 39 51.1	
	comp=Z,659nm,0.2s							
CDM	**Cerro de Muert**	**1.81**	**304**	*i* P		**Pn**	**06 39 49.9**	**+0.5**
CDM				*i* S		**Sb**	**06 40 13.3**	**-0.9**
CDM				IAML			06 40 17.4	
	comp=Z,99nm,1.0s							
CHIT3	**Chitre**	**1.89**	**108**	*eP*		**Pn**	**06 39 51.0**	**+0.8**
CHIT3				*eS*		**Sb**	**06 40 15.3**	**-0.8**
VTCV	**VTCV, Calle Va**	**2.05**	**314**	*i* P		**Pb**	**06 39 54.2**	**-1.3**
VTCV				*i* S		**Sb**	**06 40 22.4**	**+1.5**
VTCV				IAML			06 40 24.9	
	comp=Z,230nm,1.0s							
LCR2	**La Lucha 2**	**2.11**	**304**	*i* P		**Pn**	**06 39 54.2**	**+0.8**
LCR2				*i* S		**Sb**	**06 40 21.2**	**-1.5**
LCR2				IAML			06 40 26.5	
	comp=Z,67nm,1.0s							
HAYA	**Volcan Irazu**	**2.13**	**312**	*i* P		**Pb**	**06 39 56.7**	**-0.3**
HAYA				*i* S		**Sb**	**06 40 23.4**	**0.0**
HAYA				IAML			06 40 26.9	
	comp=Z,180nm,1.0s							
OCM	**Ochomogo**	**2.17**	**308**	*i* P		**Pb**	**06 39 56.2**	**-1.3**
OCM				IAML			06 40 02.4	
	comp=Z,71nm,1.0s							
OCM				*i* S		**Sb**	**06 40 23.1**	**-1.1**
JACO	**JACO, Garabito**	**2.64**	**295**	*i* P		**Pn**	**06 40 01.5**	**+1.1**
JACO				*i* S		**Sn**	**06 40 33.7**	**+1.6**
JACO				IAML			06 41 14.6	
	comp=Z,42nm,1.0s							

NEIC ***05*** *06:43:13.5±2.7,36.˚06N±0.˚02×119.˚75W±0.˚02, h10km±2km, Error ellipse: s-maj=3.0km s-min=2.7km az=280.0*
NCEDC ***05*** *06:43:15.1±3.1,36.˚04N±0.˚02×119.˚75W±0.˚02, h22km±7km, Mwr3.5/3,ML3.2/102(NEIC), Error ellipse: s-maj=3.5km s-min=2.7km az=168.0*
ANF ***05*** *06:43:15.0±0.3,35.˚97N×119.˚70W, h17km±1km, Error ellipse: s-maj=2.2km s-min=1.2km az=112.0*

ISC 05 06:43:12.6±1.1,36.˚07N±0.˚02×119.˚74W±0.˚02, h8km±9km, n234, σ0°96/262, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PKEM	**Kettleman Hill**	**0.29**	**269**			**Pn**	**06 43 22.4**	**-0.8**
VOG	**Valley Oaks Go**	**0.39**	**49**			**Pn**	**06 43 23.5**	**-1.0**
VOG	**Valley Oaks Go**	**0.39**	**49**	P		**Pn**	**06 43 23.5**	**-1.0**
	baz=226,SNR=253							
VOG				S		**Sb**	**06 43 28.9**	**+1.0**
	baz=226							
PSRM	**Scobie Ranch**	**0.48**	**244**			**Pb**	**06 43 24.8**	**+1.5**
PMRM	**Maxey Ranch**	**0.49**	**235**			**Pb**	**06 43 24.8**	**+1.3**
CTM	**Castle Mountai**	**0.50**	**254**			**Pn**	**06 43 25.5**	**-0.7**
THIS	**South End of C**	**0.52**	**229**			**Pb**	**06 43 25.2**	**+1.2**
PWMM	**Westland Maint**	**0.53**	**314**			**Pn**	**06 43 26.0**	**-0.4**
GHC	**Gold Hill**	**0.55**	**245**			**Pb**	**06 43 25.3**	**+0.8**
PBPM	**Bitterwater Pu**	**0.56**	**209**			**Pb**	**06 43 25.6**	**+1.0**
PHFM	**Heflinger Ranc**	**0.56**	**251**			**Pb**	**06 43 25.6**	**+0.8**
PKLM	**Kerr Lake**	**0.57**	**239**			**Pb**	**06 43 25.9**	**+1.2**
PDRM	**Domengine Ranc**	**0.57**	**298**			**Pn**	**06 43 26.6**	**-0.5**
MRHM	**Rocky Hill**	**0.57**	**67**			**Pn**	**06 43 26.2**	**-0.9**
PHAM	**Harlan Ranch**	**0.58**	**247**			**Pb**	**06 43 26.0**	**+1.0**
TRAM	**Private Proper**	**0.58**	**228**			**Pb**	**06 43 26.0**	**+1.0**
VES	**Vestal, Richgr**	**0.58**	**113**			**Pb**	**06 43 25.8**	**+0.8**
VES						**Sb**	**06 43 34.1**	**+0.7**
VES	**Vestal, Richgr**	**0.58**	**113**	P		**Pb**	**06 43 25.8**	**+0.8**
	baz=291,SNR=271							
VES				S		**Sb**	**06 43 33.0**	**-0.4**
	baz=291							
TRAY	**Twisselman Ran**	**0.60**	**211**			**Pb**	**06 43 26.1**	**+0.7**
PSTM	**Stockdale Moun**	**0.63**	**258**			**Pb**	**06 43 26.6**	**+0.7**
TCHL	**Shandon**	**0.65**	**235**			**Pb**	**06 43 27.4**	**+1.2**
PVCM	**Vineyard Canyo**	**0.66**	**258**			**Pb**	**06 43 26.9**	**+0.5**
PKD	**Bear Valley Ra**	**0.66**	**260**			**Pb**	**06 43 26.9**	**+0.5**
PWKM	**Work Ranch**	**0.67**	**248**			**Pb**	**06 43 27.4**	**+0.8**
PSMM	**Smith Mountain**	**0.69**	**270**			**Pb**	**06 43 26.9**	**+1.0**
PHPM	**Hope Ranch**	**0.70**	**263**			**Pb**	**06 43 27.6**	**+0.5**
PJUM	**Juniper Ridge**	**0.70**	**283**			**Pb**	**06 43 28.1**	**+0.9**
TSCN	**Private Proper**	**0.72**	**223**			**Pb**	**06 43 28.2**	**+0.9**
PPO	**Portuguese Can**	**0.73**	**254**			**Pb**	**06 43 28.3**	**+0.7**
CARC	**Carrizo Plain**	**0.76**	**186**			**Pb**	**06 43 28.6**	**+0.5**
SMMC	**Simmler**	**0.78**	**195**			**Pb**	**06 43 28.7**	**+0.3**
SMMC	**Simmler**	**0.78**	**195**	P		**Pb**	**06 43 28.5**	**+0.1**
	baz=16,SNR=193							
SMMC				S		**Sb**	**06 43 39.1**	**0.0**
	baz=16							
SPG2	**Springville 2**	**0.80**	**80**			**Pb**	**06 43 29.6**	**+0.7**
TCAS	**Cass Winery, P**	**0.81**	**236**			**Pb**	**06 43 29.8**	**+0.9**
CRGC	**Crocker Grade**	**0.82**	**179**			**Pb**	**06 43 29.6**	**+0.4**
PMPK	**Monarch Peak**	**0.87**	**280**			**Pb**	**06 43 30.6**	**+0.7**
BAKC	**Calstate**	**0.89**	**144**			**Pb**	**06 43 30.5**	**+0.3**
FRI	**Friant**	**0.92**	**2**			**Pn**	**06 43 31.7**	**-0.2**
PSAM	**San Ardo**	**0.93**	**268**			**Pb**	**06 43 31.2**	**+0.2**
MAGC	**SCE Magundon P**	**0.97**	**136**			**Pg**	**06 43 31.7**	**+0.4**
PANM	**San Antonio Re**	**0.99**	**253**			**Pb**	**06 43 32.2**	**+0.3**
RAMR	**Ramage Ranch**	**1.01**	**245**			**Pb**	**06 43 32.7**	**+0.3**
WASM	**Alta Sierra Ca**	**1.02**	**108**			**Pb**	**06 43 32.9**	**+0.3**
PTAM	**Tassajara Cree**	**1.03**	**230**			**Pb**	**06 43 33.2**	**+0.4**
LRC	**Lone Oak Road**	**1.07**	**280**			**Pg**	**06 43 33.3**	**+0.2**
LRV	**Little Rabbit**	**1.09**	**289**			**Pb**	**06 43 34.0**	**+0.2**
PHSB	**Hesperia Broad**	**1.09**	**258**			**Pg**	**06 43 33.3**	**-0.2**
EFD	**Emergency Oper**	**1.09**	**227**			**Pg**	**06 43 33.6**	**+0.1**
ISA	**Isabella, Lake**	**1.11**	**111**			**Pb**	**06 43 34.4**	**+0.3**
ISA				IAML			06 43 48.8	
	comp=E,732nm,0.4s							
ISA	**Isabella, Lake**	**1.11**	**111**	P		**Pb**	**06 43 34.4**	**+0.3**
	baz=290,SNR=136							
ISA				S		**Sg**	**06 43 48.5**	**+0.2**
	baz=290							
PCCM	**Crazy Canyon**	**1.15**	**272**			**Pg**	**06 43 34.6**	**-0.1**
BCW	**Bitter Crk WRg**	**1.16**	**166**			**Pg**	**06 43 33.8**	**-1.0**
BCW				IAML			06 43 50.6	
	comp=N,1μm,0.4s							
BCW				IAML			06 43 50.7	
	comp=E,1μm,0.5s							
BBNM	**San Benito**	**1.16**	**293**			**Pg**	**06 43 35.1**	**+0.1**
BBGB	**Big Mountain B**	**1.16**	**296**			**Pn**	**06 43 35.5**	**+0.2**
PKM	**Mcpherson Peak**	**1.18**	**183**			**Pg**	**06 43 34.5**	**-0.7**
PKM	**Mcpherson Peak**	**1.18**	**183**	P		**Pg**	**06 43 34.6**	**-0.6**
	baz=2.7,SNR=84							
PKM				S		**Sg**	**06 43 50.4**	**-0.1**
	baz=2.7							
LSDC	**Los Osos Digit**	**1.18**	**230**			**Pg**	**06 43 35.3**	**0.0**
DPD	**Davis Peak**	**1.19**	**226**			**Pg**	**06 43 35.3**	**-0.1**
BAVM	**Antelope Valle**	**1.19**	**299**			**Pg**	**06 43 35.1**	**-0.4**
ARVC	**Arvin**	**1.20**	**141**			**Pg**	**06 43 35.1**	**-0.5**
ARVC	**Arvin**	**1.20**	**141**	P		**Pg**	**06 43 35.2**	**-0.4**
	baz=321,SNR=115							
ARVC				S		**Sg**	**06 43 50.5**	**-0.6**
	baz=321							
TEJ	**El Tejon**	**1.20**	**134**			**Pg**	**06 43 34.9**	**-0.7**
PHCM	**Hearst Castle**	**1.21**	**252**			**Pg**	**06 43 35.1**	**-0.7**
HULI	**Fort Hunter Li**	**1.21**	**268**			**Pg**	**06 43 35.4**	**-0.5**
BPIM	**Pinnacles**	**1.23**	**291**			**Pg**	**06 43 35.9**	**-0.2**
DCD	**Diablo Creek**	**1.23**	**227**			**Pb**	**06 43 35.8**	**-0.4**
BEMM	**Emmet**	**1.24**	**299**			**Pg**	**06 43 36.3**	**-0.1**
BSGM	**Shirttail Gulc**	**1.27**	**286**			**Pn**	**06 43 36.2**	**-0.4**
BVL	**Bear Valley**	**1.27**	**294**			**Pn**	**06 43 36.5**	**-0.2**
WORM	**Onyx Ranch**	**1.27**	**106**			**Pg**	**06 43 37.4**	**+0.3**
KCC	**Kaiser Creek**	**1.30**	**15**			**Pg**	**06 43 37.9**	**+0.3**
TJR	**Tejon Ranch**	**1.32**	**142**			**Pn**	**06 43 36.8**	**-0.6**
FIGC	**Figueroa Mtn.**	**1.35**	**189**			**Pn**	**06 43 37.5**	**-0.3**
PMLM	**Mount Lospe**	**1.37**	**211**			**Pn**	**06 43 37.4**	**-0.6**
BJOM	**Mount Johnson**	**1.39**	**294**			**Pn**	**06 43 38.3**	**+0.1**
CWC	**Cottonwood Cre**	**1.40**	**74**			**Pg**	**06 43 40.2**	**+0.8**
CWC	**Cottonwood Cre**	**1.40**	**74**	P		**Pg**	**06 43 40.1**	**+0.6**
	baz=254							
CWC				S		**Sn**	**06 43 58.1**	**+0.9**
	baz=254							
BSMM	**Soledad Missio**	**1.40**	**284**			**Pn**	**06 43 38.0**	**-0.5**
BJCM	**Johnson Can.**	**1.41**	**290**			**Pn**	**06 43 38.6**	**-0.1**
SCZ	**Santa Cruz**	**1.44**	**292**			**Pn**	**06 43 39.1**	**+0.1**
BSLM	**Silva Ranch**	**1.48**	**299**			**Pg**	**06 43 41.0**	**+0.1**
HAST	**Hastings Reser**	**1.50**	**283**			**Pn**	**06 43 39.1**	**-0.7**
WNMM	**Nine Mile Cany**	**1.51**	**98**			**Pg**	**06 43 41.7**	**+0.1**
SAO	**San Andreas Ge**	**1.54**	**297**			**Pn**	**06 43 40.4**	**0.0**
SCKWR	**San Luis Creek**	**1.54**	**317**			**Pn**	**06 43 40.4**	**0.0**
SCHCA	**Scheelite**	**1.54**	**33**			**Pg**	**06 43 40.5**	**+0.2**
BSRM	**Salinas Radio**	**1.55**	**293**			**Pn**	**06 43 40.4**	**-0.1**
PACP	**Pacheco Peak**	**1.56**	**308**			**Pn**	**06 43 41.0**	**+0.3**
FRP	**Fremont Peak**	**1.57**	**296**			**Pn**	**06 43 40.5**	**-0.3**
TIN	**Tinemaha, Big**	**1.57**	**51**			**Pg**	**06 43 43.2**	**+0.6**
TIN	**Tinemaha, Big**	**1.57**	**51**	P		**Pg**	**06 43 43.3**	**+0.6**
	baz=231,SNR=154							
TIN				S		**Sg**	**06 44 03.8**	**+0.7**
	baz=231							
NJQ	**Nojoqui County**	**1.57**	**193**			**Pn**	**06 43 41.0**	**+0.3**
BHPR	**Bishop**	**1.59**	**39**			**Pg**	**06 43 43.6**	**+0.5**
MTUM	**Tungsten Hills**	**1.60**	**36**			**Pg**	**06 43 43.6**	**+0.4**
BPCNC	**Pine Canyon**	**1.60**	**289**			**Pn**	**06 43 41.0**	**-0.2**
HFEM	**San Felipe**	**1.62**	**305**			**Pn**	**06 43 41.5**	**+0.1**
SBC	**Santa Barbara**	**1.62**	**179**			**Pn**	**06 43 41.9**	**+0.5**
SBC	**Santa Barbara**	**1.62**	**179**	P		**Pn**	**06 43 42.1**	**+0.6**
	baz=359,SNR=12							
SBC				S		**Sn**	**06 44 02.7**	**+0.2**
	baz=359							
MRDM	**Red Cones**	**1.62**	**20**			**Pg**	**06 43 43.6**	**-0.2**
GATR	**Gnd/Air Tx Cnt**	**1.63**	**203**			**Pn**	**06 43 41.9**	**+0.2**
RCCR	**Rock Creek Can**	**1.64**	**30**			**Pg**	**06 43 44.2**	**+0.2**
CGO	**Cerro Gordo**	**1.64**	**72**			**Pg**	**06 43 43.9**	**-0.2**
MMPM	**Mammoth Pass**	**1.64**	**20**			**Pg**	**06 43 44.0**	**-0.2**
BPOM	**Post Ranch**	**1.65**	**276**			**Pn**	**06 43 41.1**	**-0.8**
MDPB	**Devils Postpil**	**1.65**	**19**			**Pg**	**06 43 43.9**	**-0.4**
HBTM	**San Juan Bauti**	**1.65**	**299**			**Pb**	**06 43 43.3**	**0.0**
MMSM	**Mammoth Summit**	**1.66**	**20**			**Pg**	**06 43 44.6**	**+0.1**
MLIM	**Lincoln Peak**	**1.67**	**20**			**Pg**	**06 43 44.7**	**0.0**
OSI	**Osito Audit: C**	**1.67**	**150**	P		**Pn**	**06 43 42.5**	**+0.3**
	baz=330,SNR=28							
OSI				S		**Sn**	**06 44 03.0**	**-0.9**
	baz=330							
MINS	**Minaret Summit**	**1.68**	**19**			**Pg**	**06 43 44.5**	**-0.3**
CCAC	**Calif City Air**	**1.68**	**122**			**Pb**	**06 43 43.8**	**0.0**
CCAC				IAML			06 44 07.0	
	comp=E,426nm,0.9s							
MLCM	**Laurel Creek C**	**1.68**	**23**			**Pg**	**06 43 44.7**	**-0.1**
MCVM	**Convict Lake**	**1.69**	**26**			**Pg**	**06 43 44.9**	**-0.1**
MDYM	**Dry Creek**	**1.69**	**20**			**Pg**	**06 43 45.1**	**0.0**
CDC	**Canada Road**	**1.70**	**305**			**Pn**	**06 43 42.8**	**+0.3**
ANZ	**Anzar Road**	**1.70**	**299**			**Pn**	**06 43 43.0**	**+0.5**
MMLB	**Mammoth Lakes**	**1.70**	**21**			**Pg**	**06 43 45.2**	**-0.1**
HTUM	**Tustin Road**	**1.71**	**297**			**Pn**	**06 43 42.5**	**-0.2**
MCBM	**Casa Benchmark**	**1.71**	**23**			**Pg**	**06 43 45.5**	**0.0**
MCSM	**Casa Diablo Ho**	**1.72**	**23**			**Pg**	**06 43 45.6**	**-0.1**
MEMM	**East Mammoth H**	**1.72**	**22**			**Pg**	**06 43 45.5**	**-0.1**
MFBM	**Five Bridges**	**1.72**	**37**			**Pg**	**06 43 45.9**	**+0.3**
MLAC	**Mammoth, Mammo**	**1.72**	**25**			**Pg**	**06 43 45.6**	**0.0**
MLAC	**Mammoth, Mammo**	**1.72**	**25**	P		**Pg**	**06 43 45.7**	**0.0**
	baz=205,SNR=557							
MLAC				S		**Sg**	**06 44 08.5**	**+0.4**
	baz=205							
MDRNC	**Doe Ridge**	**1.73**	**25**			**Pg**	**06 43 45.8**	**0.0**
MDCM	**Deadman Creek**	**1.73**	**19**			**Pg**	**06 43 45.4**	**-0.5**
HERM	**Elkhorn Road**	**1.75**	**295**			**Pn**	**06 43 43.4**	**+0.2**
POCCA	**Poleta Canyon**	**1.75**	**42**			**Pg**	**06 43 46.3**	**+0.2**
HCBM	**Chamberlain**	**1.77**	**300**			**Pb**	**06 43 45.6**	**+0.3**
MLHM	**Little Hot Cre**	**1.77**	**25**			**Pg**	**06 43 46.6**	**0.0**
LRMC	**Laurel Mtn Rad**	**1.78**	**109**	P		**Pb**	**06 43 44.9**	**-0.6**
	baz=289,SNR=92							
LRMC				S		**Sb**	**06 44 08.4**	**+0.4**
	baz=289							
HCOM	**Corn Cob Canyo**	**1.78**	**298**			**Pn**	**06 43 44.6**	**+0.9**
CASR	**Casa Diablo Mo**	**1.78**	**32**			**Pg**	**06 43 46.6**	**-0.2**
ORC	**Owens River**	**1.79**	**29**			**Pg**	**06 43 46.7**	**-0.3**
HLPM	**Lions Peak**	**1.80**	**303**			**Pn**	**06 43 44.2**	**+0.2**
CMPM	**Mikes Peak**	**1.81**	**316**			**Pn**	**06 43 43.5**	**-0.5**
MCDM	**Chidago Canyon**	**1.81**	**35**			**Pg**	**06 43 47.2**	**-0.1**
MPMC	**Manual Prospec**	**1.83**	**90**	P		**Pb**	**06 43 45.7**	**-0.7**
	baz=270,SNR=63							
HMOM	**Monterey**	**1.83**	**288**			**Pn**	**06 43 44.0**	**-0.4**
EDW2	**Edwards Air Fo**	**1.85**	**129**	P		**Pn**	**06 43 45.4**	**+0.6**
	baz=310,SNR=98							
EDW2				S		**Sb**	**06 44 10.3**	**+0.1**
	baz=310							
JELB	**Ellicott, Sant**	**1.89**	**298**			**Pn**	**06 43 44.8**	**-0.3**
MRCM	**Red Rock Canyo**	**1.89**	**31**			**Pg**	**06 43 48.1**	**-0.6**
BENR	**Benton**	**1.89**	**29**			**Pb**	**06 43 48.2**	**+0.6**
ARN	**Arnold Ranch**	**1.92**	**312**			**Pn**	**06 43 45.8**	**+0.1**
DSP	**Deep Springs**	**1.93**	**47**			**Pg**	**06 43 49.2**	**-0.4**
DSP				IAML			06 44 14.7	
	comp=N,354nm,0.5s							
DSP				IAML			06 44 15.6	
	comp=E,277nm,0.9s							
JLAB	**Laurel Hill**	**1.93**	**305**			**Pn**	**06 43 45.4**	**-0.4**
MGNR	**McGee Canyon**	**1.93**	**25**			**Pg**	**06 43 49.2**	**-0.5**
OAT	**Oat Mountain**	**1.95**	**151**			**Pn**	**06 43 47.0**	**+0.8**
CCOB	**Coe Ranch Numb**	**1.95**	**308**			**Pb**	**06 43 48.5**	**0.0**
CMMM	**Mount Mocho**	**1.97**	**315**			**Pn**	**06 43 46.7**	**+0.3**

BBRC Big Bear Solar 2.93 127 P **Pn** **06 43 60.0 +0.3**
baz=308,SNR=17
BBRC S **Sn** **06 44 34.5 -0.7**
baz=308
YERR Yerington 2.94 8 **Pb** **06 44 03.0 -2.4**
TPNV Topopah Spring 2.95 72 **Pn** **06 44 02.4 +2.5**
TPNV IAML 06 44 50.6
comp=N,52nm,0.5s
TPNV IAML 06 44 52.1
comp=N,68nm,0.8s
TPNV Topopah Spring 2.95 72 P **Pn** **06 44 02.2 +2.3**
baz=253,SNR=19
TPNV S **Sn** **06 44 36.3 +0.8**
baz=253
PNTR Pine Nut 3.02 2 **Pb** **06 44 04.2 -2.6**
PNTR IAML 06 45 06.9
comp=E,127nm,0.6s
AFDM Forest Hills D 3.04 342 **Pn** **06 44 02.7 +1.7**
AFDM IAML 06 44 51.3
comp=E,75nm,1.1s
AFDM IAML 06 44 56.1
comp=N,59nm,0.7s
HEC Hector,Ludlow 3.04 113 P **Pn** **06 44 02.0 +0.9**
baz=294
HEC S **Sn** **06 44 37.9 0.0**
baz=294
ELS Elsinore Mount 3.08 141 **Pn** **06 44 01.6 0.0**
TUQ Turquoise Moun 3.17 100 P **Pn** **06 44 03.9 +0.9**
baz=282,SNR=8.5
TUQ S **Sn** **06 44 41.2 +0.2**
baz=282
MPK Martis Peak 3.23 356 **Pn** **06 44 07.0 +3.2**
MURC Murrieta 3.23 139 P **Pn** **06 44 03.8 +0.1**
baz=320,SNR=14
MURC S **Sn** **06 44 41.5 -0.9**
baz=320
KVN Kaiserville 3.25 23 **Pn** **06 44 06.5 +2.4**
KVN IAML 06 45 02.1
comp=E,32nm,0.9s
MCCM Marconi Confer 3.25 311 Pn **Pn** **06 44 04.2 +0.3**
MCCM IAML 06 44 58.9
comp=E,39nm,2.0s
GMRC Granite Mounta 3.57 110 P **Pn** **06 44 08.8 +0.4**
baz=292
GMRC S **Sn** **06 44 50.4 -0.5**
baz=292
PAHR Pah Rah Range 3.64 4 **Pn** **06 44 12.2 +2.8**
PAHR IAML 06 45 11.6
comp=E,54nm,1.5s
PAHR IAML 06 45 13.1
comp=N,40nm,1.2s
PFO Pinyon Flats O 3.65 131 Pn **Pn** **06 44 09.2 -0.2**
PFO Pinyon Flats O 3.65 131 P **Pn** **06 44 09.7 +0.2**
baz=313,SNR=5.5
PFO S **Sn** **06 44 51.6 -1.1**
baz=313
TPFO Pinon Flats 3.65 131 P **Pn** **06 44 09.8 +0.2**
baz=313
TPFO S **Sn** **06 44 52.4 -0.5**
baz=313
GDXM Geysers 3.66 319 Pn **Pn** **06 44 10.2 +0.7**
PMD Palm Desert 3.67 130 **Pn** **06 44 09.8 +0.1**
SHPR Sheep Range 3.73 82 **Pn** **06 44 11.7 +1.1**
ORV Oroville 3.75 339 **Pn** **06 44 12.8 +2.0**
ORV IAML 06 45 15.7
comp=E,28nm,0.5s
ORV IAML 06 45 20.0
comp=N,18nm,0.5s
V12A Nelson 3.99 93 Pn **Pn** **06 44 14.8 +0.7**
R11B Troy Canyon, C 4.03 54 Sb **Sg** **06 45 19.1 -2.8**
baz=236
MONP2 Monument Peak 4.19 138 P **Pn** **06 44 17.2 +0.2**
baz=320,SNR=8.8
MONP2 S **Sn** **06 45 05.0 -1.3**
baz=320
IRM Iron Mountain 4.22 115 P **Pn** **06 44 17.7 +0.4**
baz=298
IRM S **Sn** **06 45 05.7 -1.1**
baz=298
BAR Barrett 4.23 142 Pn **Pn** **06 44 17.9 +0.6**
BC3 Big Chuckawall 4.27 123 P **Pn** **06 44 18.3 +0.3**
baz=305
YUH Yuha Desert 4.65 136 Pn **Pn** **06 44 23.1 0.0**
YUH IAML 06 45 56.1
comp=E,8.8nm,2.9s
BMN Battle Mountai 4.79 24 Pn **Pn** **06 44 25.5 +0.3**
BMN IAML 06 46 01.8
comp=N,9.7nm,2.6s
W13A Hualapai Mount 4.87 100 Pn **Pn** **06 44 26.2 -0.1**
BLYC Blythe 4.87 117 Pn **Pn** **06 44 26.2 0.0**
BLYC IAML 06 45 22.9
comp=N,15nm,0.8s
BLYC IAML 06 46 00.1
comp=E,11nm,0.9s
Q12A Willow Creek R 4.90 51 Pn **Pn** **06 44 26.4 -0.3**
Q12A IAML 06 45 49.9
comp=E,26nm,0.8s
ESJX Sierra Juarez 5.13 141 Pn **Pn** **06 44 31.1 +1.2**
ESJX IAML 06 47 59.2
comp=N,6.5nm,0.1s
LCMT Little Creek M 5.32 78 Pn **Pn** **06 44 32.3 -0.1**
KMPM Mount Pierce 5.54 323 **Pn** **06 44 38.6 +3.1**
KNB Kanab 5.65 78 Pn **Pn** **06 44 38.7 +1.6**
VTX Valle De La Tr 5.71 144 Pn **Pn** **06 44 39.3 +1.5**
ELK Elko 5.86 36 **Pn** **06 44 42.8 +2.9**
113A Mohawk Valley, 5.94 122 Pn **Pn** **06 44 41.8 +1.1**
U15A North Rim 6.03 84 Pn **Pn** **06 44 45.5 +3.1**
BGU Big Grassy Mou 7.16 45 Pn **Pn** **06 44 58.7 +1.0**
AHID Auburn Hatcher 9.46 42 Pn **Pn** **06 45 29.4 +0.1**

IDC 05 06:50:22.8±2.8, 54°24N×87°14E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.9km s-min=16.2km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**259**	I	I	06 58 00.0	
	0.2nm,0.9s,baz=76,slow=329,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.40**	**259**	Pg	Pn	06 50 47.3	-2.3
ZALV	1.8nm,0.3s,baz=75,slow=16,SNR=18			Lg	Lg	06 51 08.1	
KURBB	**Kurchatov Arra**	**6.39**	**239**	Pn	Pn	06 51 59.0	+0.8
KURBB	1.2nm,0.3s,baz=79,slow=24,SNR=8.9 0.1nm,0.3s,baz=55,slow=14,SNR=8.8			Lg	Lg	06 53 44.1	
MKAR	**Makanchi Array**	**8.07**	**204**	Pn	Pn	06 52 22.6	+1.4
MKAR	baz=58,slow=34,SNR=1.9 1.2nm,0.5s 0.1nm,0.3s,baz=26,slow=13,SNR=7.2			Sn	Sn	06 53 53.1	0.0
MKAR	0.1nm,0.3s,baz=24,slow=24,SNR=3.9			Lg	Lg	06 54 35.8	
BVAR	**Borovoye Array**	**10.03**	**270**	Pn	Pn	06 52 49.8	+1.8
	baz=26,slow=33,SNR=1.9 0.2nm,0.3s baz=69,slow=17,SNR=3.7						

*NNC **05** 07:07:15.2±0.6, 50°.01N×78°.88E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=11.7km s-min=2.9km az=71.0, Suspected Mining explosion.*
*IDC **05** 07:07:16.6±1.0, 50°.08N×78°.80E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=11.7km s-min=6.5km az=62.0*

ISC 05 07:07:16.4±1.0, 50°.00N±0°.06×78°.74E±0°.10, h0km, n17, σ0s83/28, 19C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.60**	**346**	⇑P	**Pg**	**07 07 27.2**	**-0.6**
KUR07				⇑S	**Sg**	**07 07 36.0**	**+0.4**
KUR06	**Kurchatov Arra**	**0.61**	**347**	⇓P	**Pg**	**07 07 27.5**	**-0.7**
KUR06				⇓S	**Sg**	**07 07 36.5**	**+0.3**
KUR14	**Kurchatov Arra**	**0.62**	**351**	⇑P	**Pg**	**07 07 27.4**	**-0.8**
KUR14				⇑S	**Sg**	**07 07 36.4**	**+0.1**
KUR15	**Kurchatov Arra**	**0.63**	**350**	⇑P	**Pg**	**07 07 27.7**	**-0.8**
KUR15				⇑S	**Sg**	**07 07 37.1**	**+0.6**
KURBB	**Kurchatov Arra**	**0.63**	**348**	⇑P	**Pg**	**07 07 27.9**	**-0.7**
KURBB	14nm,0.4s 36nm,0.5s			⇑S	**Sg**	**07 07 38.0**	**+1.2**
KURBB	**Kurchatov Arra**	**0.63**	**348**	Pg	**Pg**	**07 07 26.7**	**-1.9**
KURBB	1.4nm,0.3s,baz=164,slow=18,SNR=66			Lg	Lg	07 07 37.2	
KUR16	**Kurchatov Arra**	**0.64**	**346**	⇑P	**Pg**	**07 07 27.9**	**-0.8**
KUR16	1.6nm,0.3s,baz=160,slow=32,SNR=9.6			⇓S	**Sg**	**07 07 37.4**	**+0.3**
KUR05	**Kurchatov Arra**	**0.65**	**349**	⇑P	**Pg**	**07 07 28.2**	**-0.8**
KUR05				⇑S	**Sg**	**07 07 37.1**	**-0.3**
KUR17	**Kurchatov Arra**	**0.65**	**345**	⇑P	**Pg**	**07 07 28.2**	**-0.7**
KUR17				⇑S	**Sg**	**07 07 37.7**	**+0.3**
KUR04	**Kurchatov Arra**	**0.67**	**349**	⇑P	**Pg**	**07 07 28.6**	**-0.7**
KUR04				⇓S	**Sg**	**07 07 38.2**	**+0.2**
KURK	**Kurchatov**	**0.72**	**354**	⇑P	**Pg**	**07 07 29.2**	**-0.9**
KURK	3.0nm,0.3s 5.5nm,0.4s			⇓S	**Sg**	**07 07 39.6**	**+0.2**
MAKZ	**Makanchi**	**3.86**	**145**	⇑Pg	**Pb**	**07 08 23.6**	**-1.7**
MAKZ	0.9nm,0.4s 1.5nm,0.3s			⇑Lg	Lg	07 09 16.2	
MK31	**Makanchi Array**	**3.99**	**142**	⇓Pn	**Pn**	**07 08 19.9**	**+1.1**
MK31	0.1nm,0.2s,baz=6.4,slow=3.9,SNR=14 1.0nm,0.5s,baz=324,slow=14,SNR=14			⇑Pg	**Pb**	**07 08 27.8**	**+0.2**
MK31	4.1nm,0.6s,baz=332,slow=26,SNR=12 0.2nm,0.3s			⇓Lg	Lg	07 09 22.8	
MKAR	**Makanchi Array**	**3.99**	**142**	Pn	**Pn**	**07 08 19.5**	**+0.7**
MKAR	0.1nm,0.3s,baz=320,slow=10,SNR=15 0.4nm,0.3s,baz=320,slow=14,SNR=14			Pg	**Pb**	**07 08 27.7**	**+0.2**
MKAR	0.9nm,0.3s,baz=333,slow=26,SNR=10 0.2nm,0.3s			Lg	Lg	07 09 24.1	
OTUK	**Ortayu**	**4.55**	**250**	⇓Pn	**Pn**	**07 08 27.2**	**+0.6**
OTUK	0.7nm,0.3s 2.4nm,0.6s			⇑Lg	Lg	07 09 41.5	
I46RU	**ZALESOVO INFRA**	**5.45**	**41**	I	I	07 40 00.0	
	baz=225,slow=335,SNR=2.2						
ZALV	**Zalesovo Beam**	**5.45**	**41**	Pn	**Pn**	**07 08 39.7**	**+0.9**
	0.4nm,0.3s,baz=231,slow=13,SNR=6.1 0.9nm,0.2s						

IDC 05 07:13:59.8±3.3, 53°.61N×87°.89E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=31.3km s-min=17.0km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**282**	I	I	07 24 00.0	
	0.1nm,0.8s,baz=99,slow=336,SNR=0.7						
ZALV	**Zalesovo Beam**	**1.85**	**282**	Pg	Pn	07 14 33.5	+0.7
ZALV	2.2nm,0.3s,baz=98,slow=14,SNR=29 1.6nm,0.3s,baz=99,slow=25,SNR=9.3			Lg	Lg	07 14 58.4	
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	07 15 37.2	+0.6
	0.1nm,0.3s,baz=62,slow=14,SNR=6.6 0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	07 15 54.4	+1.1
	0.1nm,0.3s,baz=32,slow=14,SNR=5.6						
MKAR	0.1nm,0.3s,baz=31,slow=28,SNR=3.9 0.3nm,0.4s			Lg	Lg	07 18 04.5	

*FUNV **05** 07:14:45.1, 10°.75N×72°.34W, h25km, MW3.0*
ISC 05 07:14:42.8±1.7, 10°.63N±0°.06×72°.15W±0°.03, h4km±13km, n14, σ1s37/24, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.69**	**214**	⇑*i*P	**Pn**	**07 14 58.8**	**-0.6**
MCQV				*e*S	**Sn**	**07 15 08.9**	**-1.7**
CRJC	**Cerrejon, Guaj**	**0.82**	**299**	*e*P	**Pn**	**07 15 02.1**	**+0.8**
CRJC				*e*S	**Sn**	**07 15 14.3**	**+0.2**
CRJC	comp=Z,36nm,0.2s			*i*		07 15 14.9	
LL6C	**La Loma 6 Bece**	**1.42**	**232**	*e*P	**Pg**	**07 15 11.3**	**+1.3**
LL6C				*e*S	**Sn**	**07 15 29.7**	**+1.1**
ARGC	**Ariguani, Magd**	**2.20**	**250**	*e*P	**Pb**	**07 15 23.3**	**0.0**
ARGC				*e*S	**Sg**	**07 15 52.0**	**-1.7**
ARGC	comp=Z,4.1nm,0.2s			*i*		07 15 56.4	
CURV	**Curarigua**	**2.23**	**106**	*e*P	**Pb**	**07 15 23.2**	**-0.6**
CURV				*e*S	**Sb**	**07 15 50.6**	**-1.3**
SIQV	**Siquisique**	**2.30**	**89**	*e*P	**Pb**	**07 15 23.3**	**-1.6**
SIQV				*e*S	**Sb**	**07 15 51.8**	**-1.9**
OCAC	**Ocana**	**2.64**	**206**	*e*P	**Pn**	**07 15 28.0**	**+1.6**
OCAC				*e*S	**Sn**	**07 16 00.2**	**+1.3**
OCAC	comp=Z,32nm,0.4s			*i*		07 16 11.6	
SOCV	**Socops**	**2.65**	**151**	*e*P	**Pn**	**07 15 27.8**	**+1.4**
SOCV				*e*S	**Sn**	**07 15 59.5**	**+0.5**
CAPV	**Capacho**	**2.75**	**184**	*e*P	**Pn**	**07 15 28.8**	**+0.9**
CAPV				*e*S	**Sn**	**07 16 00.8**	**-1.0**
SANV	**Sanarito**	**2.80**	**113**	*e*P	**Pn**	**07 15 30.5**	**+1.9**
TEPV	**Terepaima**	**2.98**	**102**	*e*P	**Pn**	**07 15 32.4**	**+1.4**
SJCC	**San Jacinto, C**	**3.07**	**257**	*e*P	**Pb**	**07 15 36.8**	**-1.3**
SJCC				*e*S	**Sb**	**07 16 15.8**	**-0.3**
BAUV	**El Baul**	**4.38**	**112**	*e*P	**Pn**	**07 15 51.4**	**+1.3**
BENV	**Beln**	**4.52**	**98**	*e*P	**Pn**	**07 15 53.9**	**+1.7**

*IDC **05** 07:17:07.7±4.2, 1°.00N×99°.24E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=170.3km s-min=26.7km az=60.0*
*DJA **05** 07:17:19.8±0.5, 1°N±2°×9°9E±°, h110km±5km, M3.5/10, MLv3.5/10*
ISC 05 07:17:20.1±0.9, 1°.07N±0°.05×98°.99E±0°.08, h116km±8km, n13, σ1s48/19, mb3.4/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.48**	**349**	P	**Pn**	**07 17 37.6**	**0.0**
SBSI				S	**Sn**	**07 17 50.3**	**-0.5**
PBSI	**Pulau Batu**	**1.32**	**212**	P	**Pn**	**07 17 46.9**	**+1.6**
PBSI				S	**Sn**	**07 18 05.1**	**+0.7**
GSI	**Gunungsitoli**	**1.43**	**279**	P	**Pn**	**07 17 45.9**	**-0.6**
GSI				S	**Sn**	**07 18 06.5**	**-0.1**
SISI	**Saibi**	**2.39**	**178**	P	**Pn**	**07 17 56.6**	**-1.8**
SISI				S	**Sn**	**07 18 27.3**	**-0.4**
PDSI	**Padang**	**2.46**	**143**	P	**Pn**	**07 18 00.8**	**+1.4**
KCSI	**Kotacane, Aceh**	**2.72**	**334**	P	**Pn**	**07 18 01.7**	**-1.0**
KCSI				S	**Sn**	**07 18 33.7**	**-1.7**
SNSI	**Sinabang, Aceh**	**2.97**	**297**	P	**Pn**	**07 18 05.9**	**-0.1**
SNSI				S	**Sn**	**07 18 39.5**	**-1.8**
PPSI	**Pulau Pagai**	**3.95**	**165**	P	**Pn**	**07 18 16.9**	**-2.0**
MLSI	**Meulaboh, Aceh**	**4.09**	**321**	P	**Pn**	**07 18 21.1**	**+0.3**
WRA	**Warramunga Arr**	**40.46**	**123**	P	**P**	**07 24 45.1**	**-2.5**
	0.6nm,0.7s,baz=304,slow=9.0,SNR=2.2 0.6nm,0.7s						
ASAR	**Alice Springs**	**41.91**	**128**	P	**P**	**07 24 59.0**	**-0.4**
	0.2nm,0.9s,baz=310,slow=7.2,SNR=1.3 0.2nm,0.9s						
SONM	**Songino Array**	**47.02**	**7**	P	**P**	**07 25 42.0**	**+2.1**
	0.7nm,0.4s,baz=194,slow=8.7,SNR=6.7 0.7nm,0.4s						
MKAR	**Makanchi Array**	**47.82**	**345**	P	**P**	**07 25 47.2**	**+1.3**
	0.2nm,0.4s,baz=143,slow=8.6,SNR=3.5 0.2nm,0.4s						

*CATAC **05** 07:18:22.3±0.2, 10°.23N×84°.29W, h5km±2km, ML3.0*
*UCR **05** 07:18:22.2±0.9, 10°.25N×84°.27W, h5km±1km, MW3.9*
*UPA **05** 07:18:25.2±0.8, 10°.52N×84°.04W, h10km±29km, MW4.4*
ISC 05 07:18:22.6±0.8, 10°.24N±0°.02×84°.29W±0°.02, h13km±5km, n108, σ0s58/126, 13C-35D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VPS6	**Volcano Poas**	**0.07**	**128**	⇓*e*P	**Pg**	**07 18 24.6**	**-1.0**
CPMI	**Catarata Coope**	**0.10**	**297**	⇑*i*P	**Pg**	**07 18 25.3**	**-0.5**
CPMI	**Catarata Coope**	**0.10**	**297**	*i* P	**Pg**	**07 18 25.3**	**-0.5**
CPMI				*i* S	**Sg**	**07 18 27.3**	**-0.7**
CPMI	comp=Z,22μm,1.0s			IAML		07 18 28.4	
ZARE	**Zarcero**	**0.11**	**241**	⇑*i*P	**Pg**	**07 18 26.6**	**+0.7**
NARAN	**Naranjo de Ala**	**0.16**	**211**	⇓*i*P	**Pg**	**07 18 26.7**	**+0.1**
GREC	**Grecia**	**0.16**	**186**	⇓*i*P	**Pg**	**07 18 27.7**	**+1.1**
TCS1	**Tacares**	**0.19**	**182**	⇓*i*P	**Pg**	**07 18 27.1**	**0.0**
TCS1	**Tacares**	**0.19**	**182**	*i* P	**Pg**	**07 18 27.0**	**0.0**
TCS1	comp=Z,41μm,1.0s			IAML		07 18 36.5	
ITAL	**Pital**	**0.21**	**5**	⇓*i*P	**Pg**	**07 18 27.2**	**0.0**
RAMO	**San Ramon**	**0.23**	**229**	*e*P	**Pb**	**07 18 28.6**	**-0.1**
SRA1	**San Ramn**	**0.24**	**231**	⇓*e*P	**Pg**	**07 18 27.8**	**0.0**
BELE	**Belen**	**0.28**	**159**	⇓*i*P	**Pb**	**07 18 29.3**	**-0.3**
HDC3	**Heredia 3**	**0.29**	**143**	⇓*i*P	**Pg**	**07 18 28.9**	**+0.1**
HDC3	**Heredia 3**	**0.29**	**143**	*i* P	**Pg**	**07 18 28.8**	**+0.1**
HDC3	comp=Z,2μm,1.0s			IAML		07 18 29.1	
HDC3				*i* S	**Sg**	**07 18 33.3**	**+0.4**
SANTA	**Santa Ana**	**0.32**	**161**	⇓*i*P	**Pg**	**07 18 29.0**	**-0.2**
DOMI	**Santo Domingo**	**0.32**	**142**	⇓*i*P	**Pg**	**07 18 29.5**	**+0.2**
SARA	**Sarapiqu**	**0.34**	**51**	*e*P	**Pg**	**07 18 29.3**	**-0.2**
TIBA	**Tibas**	**0.35**	**142**	⇓*i*P	**Pb**	**07 18 30.9**	**+0.1**
SOCE	**Pocosol**	**0.35**	**294**	⇑*i*P	**Pb**	**07 18 30.4**	**-0.4**
SOCE	**Pocosol**	**0.35**	**294**	*i* P	**Pb**	**07 18 30.4**	**-0.4**
SOCE	comp=Z,2μm,1.0s			IAML		07 18 32.7	
MEXI	**Barrio Mexico**	**0.36**	**145**	⇓*i*P	**Pg**	**07 18 29.9**	**+0.1**
TRB2	**Turrubares**	**0.36**	**206**	⇓*i*P	**Pg**	**07 18 29.6**	**-0.2**
CENT	**San Jose**	**0.37**	**146**	⇓*i*P	**Pg**	**07 18 30.1**	**0.0**
LUPE	**Guadalupe**	**0.37**	**141**	⇓*i*P	**Pg**	**07 18 30.2**	**+0.1**
RIFO	**Rio Frio, Sara**	**0.37**	**78**	⇑*i*P	**Pg**	**07 18 30.0**	**-0.1**
RIFO	**Rio Frio, Sara**	**0.37**	**78**	*i* P	**Pg**	**07 18 29.9**	**-0.2**
RIFO				*i* S	**Sg**	**07 18 35.3**	**+0.2**
RIFO	comp=Z,3μm,1.0s			IAML		07 18 43.0	
LUJA	**Lujan**	**0.38**	**145**	⇓*e*P	**Pb**	**07 18 31.2**	**0.0**
SJS	**Escuela Geolog**	**0.38**	**142**	⇓*i*P	**Pg**	**07 18 30.3**	**0.0**
SJS3	**Mercedes San J**	**0.38**	**142**	⇓*i*P	**Pg**	**07 18 30.4**	**+0.2**
CORON	**Coronado**	**0.39**	**133**	⇑*i*P	**Pg**	**07 18 30.9**	**-0.5**
AMPA	**Desamparados**	**0.41**	**146**	⇓*e*P	**Pg**	**07 18 30.4**	**-0.3**
TRIO	**Tres Ríos**	**0.44**	**138**	⇓*i*P	**Pg**	**07 18 31.2**	**-0.2**
ARZA	**Esparza**	**0.44**	**237**	*e*P	**Pb**	**07 18 32.3**	**0.0**
ACOS	**Acosta**	**0.46**	**164**	⇓*i*P	**Pg**	**07 18 31.2**	**-0.4**
OCM	**Ochomogo**	**0.47**	**136**	⇓*i*P	**Pg**	**07 18 31.6**	**-0.3**
OCM	**Ochomogo**	**0.47**	**136**	*i* P	**Pg**	**07 18 31.5**	**-0.5**
OCM	comp=Z,620nm,1.0s			IAML		07 18 33.8	
OCM				*i* S	**Sg**	**07 18 38.4**	**+0.1**
VIRE	**VIRE**	**0.47**	**125**	*i* P	**Pb**	**07 18 32.3**	**-0.7**
VIRE	comp=Z,940nm,1.0s			IAML		07 18 46.1	
ARE1	**Arenal 1**	**0.48**	**298**	⇓*e*P	**Pg**	**07 18 32.5**	**+0.5**
COVE	**Coope Vega, Sa**	**0.49**	**347**	⇓*i*P	**Pg**	**07 18 32.2**	**-0.2**
COVE	**Coope Vega, Sa**	**0.49**	**347**	*i* P	**Pg**	**07 18 32.1**	**-0.2**
COVE				*i* S	**Sg**	**07 18 39.1**	**+0.2**
COVE	comp=Z,2μm,1.0s			IAML		07 18 42.2	
HAYA	**Volcan Irazu**	**0.51**	**120**	*i* P	**Pg**	**07 18 32.7**	**0.0**
HAYA	comp=Z,790nm,1.0s			IAML		07 18 33.0	
ICR3	**Volcano Irazu**	**0.52**	**120**	⇑*i*P	**Pg**	**07 18 33.0**	**0.0**
VTRT	**Volcan Turrial**	**0.54**	**115**	⇑*i*P	**Pg**	**07 18 33.3**	**-0.1**
VTRT	**Volcan Turrial**	**0.54**	**115**	*i* P	**Pg**	**07 18 33.3**	**-0.1**
VTRT	comp=Z,840nm,1.0s			IAML		07 18 33.5	
RAFA	**San Farael, Vo**	**0.55**	**120**	⇑*e*P	**Pg**	**07 18 33.3**	**-0.1**
VTUC	**Crater, Volcan**	**0.56**	**112**	*i* P	**Pg**	**07 18 33.7**	**0.0**
VTUC	comp=Z,500nm,1.0s			IAML		07 18 37.7	
LCR2	**La Lucha 2**	**0.57**	**150**	⇓*e*P	**Pg**	**07 18 33.3**	**-0.5**
LCR2	**La Lucha 2**	**0.57**	**150**	*i* P	**Pg**	**07 18 33.1**	**-0.7**
LCR2	comp=Z,1μm,1.0s			IAML		07 18 33.4	
LCR2				*i* S	**Sg**	**07 18 40.9**	**-0.5**
PCAYA	**Pacayas**	**0.57**	**124**	*e*P	**Pb**	**07 18 34.3**	**-0.3**
REPA	**Paraso**	**0.58**	**134**	⇓*i*P	**Pb**	**07 18 34.7**	**-0.1**
VTLO	**VTLO**	**0.59**	**109**	⇑*i*P	**Pg**	**07 18 34.0**	**-0.2**
VTCV	**VTCV, Calle Va**	**0.61**	**114**	*i* P	**Pg**	**07 18 34.3**	**-0.3**
VTCV	comp=Z,350nm,1.0s			IAML		07 18 56.1	
RIMA	**Rio Macho**	**0.63**	**138**	*e*P	**Pg**	**07 18 34.1**	**-0.8**
RIMA	**Rio Macho**	**0.63**	**138**	*i* P	**Pg**	**07 18 34.1**	**-0.8**
RIMA	comp=Z,480nm,1.0s			IAML		07 18 47.4	
RAZU	**San Marcos de**	**0.63**	**155**	⇓*e*P	**Pg**	**07 18 35.1**	**+0.1**
JTS	**Las Juntas de**	**0.65**	**275**	⇑*e*P	**Pg**	**07 18 35.2**	**-0.1**
JUNT	**Juntas**	**0.66**	**274**	*e*P	**Pg**	**07 18 35.2**	**-0.3**
JACO	**JACO, Garabito**	**0.68**	**212**	⇓*i*P	**Pg**	**07 18 35.3**	**-0.4**
JACO	**JACO, Garabito**	**0.68**	**212**	*i* P	**Pg**	**07 18 35.2**	**-0.6**
JACO	comp=Z,760nm,1.0s			IAML		07 18 35.6	
JACO				*i* S	**Sg**	**07 18 44.8**	**+0.1**
TURIB	**Turrialba**	**0.68**	**119**	⇑*i*P	**Pg**	**07 18 35.6**	**-0.2**
TRT1	**Tortuguero**	**0.68**	**58**	⇓*e*P	**Pg**	**07 18 35.4**	**-0.5**
RVSTA	**Santa Teresita**	**0.69**	**112**	*e*P	**Pg**	**07 18 35.9**	**0.0**
BITO	**Garabito Jaco**	**0.69**	**208**	*e*P	**Pg**	**07 18 35.9**	**-0.2**
RVLA	**Villa Bonita**	**0.70**	**100**	*e*P	**Pb**	**07 18 36.4**	**-0.4**
RITA	**Parrita**	**0.71**	**183**	⇓*i*P	**Pg**	**07 18 36.1**	**-0.4**
LCOCO	**El Coco**	**0.74**	**102**	⇑*i*P	**Pg**	**07 18 36.6**	**-0.3**
LAFE	**Finca La Fe, P**	**0.74**	**235**	*e*P	**Pb**	**07 18 37.6**	**+0.2**
LAFE	**Finca La Fe, P**	**0.74**	**235**	*i* P	**Pg**	**07 18 37.0**	**-0.1**
LAFE				*i* S	**Sb**	**07 18 48.0**	**+0.5**
LAFE	comp=Z,2.5nm,1.0s			IAML		07 18 52.5	
LLNJ	**Naranjito**	**0.78**	**166**	⇓*i*P	**Pg**	**07 18 37.5**	**-0.3**
IRES	**Siquirres**	**0.79**	**100**	⇓*i*P	**Pg**	**07 18 37.8**	**-0.4**
CNAS	**Canas**	**0.81**	**284**	*e*P	**Pb**	**07 18 38.7**	**+0.2**
VERA	**Finca Concepci**	**0.83**	**317**	*e*P	**Pg**	**07 18 38.2**	**-0.6**
CDM	**Cerro de Muert**	**0.85**	**143**	⇓*i*P	**Pg**	**07 18 38.4**	**-0.8**
CDM	**Cerro de Muert**	**0.85**	**143**	*i* P	**Pg**	**07 18 38.3**	**-1.0**
CDM	comp=Z,530nm,1.0s			IAML		07 18 38.7	
CDM				*i* S	**Sg**	**07 18 50.2**	**-0.3**
BUS1	**Rivas**	**0.86**	**142**	⇓*i*P	**Pg**	**07 18 38.5**	**-0.9**
LCHIL	**Los Chiles**	**0.90**	**332**	*e*P	**Pb**	**07 18 39.9**	**-0.1**
CUI	**Cuipilapa**	**0.95**	**296**	*i* P	**Pg**	**07 18 40.9**	**-0.2**
NYURE	**Nandayure**	**0.98**	**256**	*e*P	**Pg**	**07 18 40.7**	**-0.8**
VMAR	**Armenia, Volca**	**0.99**	**305**	⇑*e*P	**Pn**	**07 18 42.6**	**+0.4**
COLC	**Colonia**	**0.99**	**295**	*e*P	**Pg**	**07 18 41.3**	**-0.5**
BAGA	**Bagaces**	**1.00**	**287**	*e*P	**Pg**	**07 18 41.5**	**-0.3**
ZELE	**Perez Zeledon**	**1.03**	**146**	*e*P	**Pg**	**07 18 41.5**	**-1.0**
PEZE	**Perez Zeledon,**	**1.04**	**144**	*e*P	**Pg**	**07 18 41.2**	**-1.5**
PEZE	**Perez Zeledon,**	**1.04**	**144**	*i* P	**Pg**	**07 18 41.2**	**-1.5**
PEZE	comp=Z,200nm,1.0s			IAML		07 18 41.6	
PLVR	**Palo Verde**	**1.05**	**276**	*e*P	**Pg**	**07 18 42.7**	**-0.2**
CMARA	**Lajas Hojancha**	**1.14**	**259**	*e*P	**Pg**	**07 18 43.6**	**-0.9**
NICO	**Nicoya**	**1.14**	**265**	⇓*e*P	**Pg**	**07 18 43.8**	**-0.8**
ORTG	**Ortega, Santa**	**1.16**	**276**	*e*P	**Pg**	**07 18 44.1**	**-0.8**
ORTG	**Ortega, Santa**	**1.16**	**276**	*i* P	**Pg**	**07 18 44.0**	**-0.8**
ORTG	comp=Z,150nm,1.0s			IAML		07 18 49.5	
ORTG				*i* S	**Sg**	**07 19 00.0**	**0.0**
DUNO	**Dulce Nombre,**	**1.19**	**263**	*i* P	**Pg**	**07 18 44.7**	**-0.9**
DUNO	comp=Z,310nm,1.0s

IDC 05 07:34:29.8±2.9, 53°98N×86°55E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=23.5km s-min=14.2km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**269**	I	I	07 40 35.0	
	baz=88,slow=337,SNR=23						
ZALV	**Zalesovo Beam**	**1.02**	**269**	Pg	Pg	07 34 47.9	-1.4
	0.5nm,0.3s,baz=86,slow=17,SNR=5.9						
ZALV				Lg	Lg	07 35 04.1	
	1.7nm,0.3s,baz=89,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**5.96**	**239**	Pn	Pn	07 36 00.2	+1.1
	0.1nm,0.3s,baz=56,slow=13,SNR=4.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.69**	**202**	Pn	Pn	07 36 23.9	+1.0
	0.1nm,0.3s,baz=26,slow=14,SNR=2.2						
	0.1nm,0.4s						

IDC 05 07:51:08.0±2.1, 54°48N×83°58E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=17.0km s-min=10.3km az=158.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**126**	I	I	07 56 20.0	
	baz=308,slow=333,SNR=6.1						
ZALV	**Zalesovo Beam**	**0.90**	**126**	Pg	Pg	07 51 25.1	-0.2
	2.9nm,0.3s,baz=307,slow=17,SNR=22						
ZALV				Lg	Lg	07 51 38.4	
	3.4nm,0.3s,baz=308,slow=28,SNR=23						
KURBB	**Kurchatov Arra**	**4.95**	**221**	Pn	Pn	07 52 23.9	+0.4
	0.1nm,0.3s,baz=33,slow=14,SNR=2.4						
KURBB				Lg	Lg	07 53 43.0	
	baz=40,slow=29,SNR=2.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.74**	**187**	Pn	Pn	07 53 02.3	+0.3
	0.1nm,0.3s,baz=12,slow=14,SNR=4.1						
MKAR				Lg	Lg	07 55 10.7	
	baz=7.1,slow=28,SNR=3.9						
	0.2nm,0.4s						

IDC 05 07:51:54.3±9.3, 18°38S×176°96W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=409.1km s-min=37.8km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.90**	**260**	P	P	08 00 18.5	-0.5
	0.2nm,0.5s,baz=98,slow=7.3,SNR=2.7						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**45.99**	**255**	P	P	08 00 20.0	+0.2
	0.6nm,0.5s,baz=88,slow=8.4,SNR=15						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**86.04**	**12**	P	P	08 04 36.4	0.0
	0.2nm,0.5s,baz=220,slow=5.1,SNR=5.5						
	0.2nm,0.5s						

IDC 05 07:57:24.3±3.6, 54°58N×86°41E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=28.4km s-min=16.2km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**236**	I	I	08 04 10.0	
	baz=56,slow=333,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.12**	**236**	Pg	Pg	07 57 44.6	-1.2
	0.9nm,0.3s,baz=53,slow=17,SNR=12						
ZALV				Lg	Lg	07 58 01.7	
	1.7nm,0.3s,baz=55,slow=29,SNR=8.9						
KURBB	**Kurchatov Arra**	**6.22**	**234**	Pn	Pn	07 58 58.4	+1.2
	0.1nm,0.3s,baz=50,slow=14,SNR=2.8						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.22**	**200**	Pn	Pn	07 59 25.6	+0.8
	0.1nm,0.3s,baz=23,slow=14,SNR=4.4						
	0.1nm,0.3s						

TAP 05 08:00:04.4, 24°25N×121°74E, h10km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.08**	**3**	P	Pg	08 00 06.9	+0.2
	baz=3.0						
EAHA				*e*S	Sg	08 00 08.8	+0.5
	baz=3.0						
ETL	**Fush Village**	**0.14**	**228**	P	Pg	08 00 08.0	+0.4
	baz=219						
ETL				*e*S	Sg	08 00 10.2	+0.5
	baz=219						
NACB	**Ninganchiao**	**0.15**	**239**	P	Pg	08 00 07.9	+0.2
	baz=231						
NACB				*e*S	Sg	08 00 10.7	+0.7
	baz=231						
ENA	**Nanau**	**0.18**	**2**	*i* P	Pg	08 00 08.4	+0.2
	baz=4.0						
ENA				S	Sg	08 00 11.3	+0.5
	baz=4.0						
EWUT	**Wuta**	**0.20**	**12**	P	Pg	08 00 08.8	+0.2
	baz=11						
EWUT				*e*S	Sg	08 00 11.8	+0.4
	baz=11						
TWD	**Chiawan**	**0.21**	**217**	P	Pg	08 00 09.0	+0.2
	baz=215						
ETLH	**Xiulin Townshi**	**0.23**	**259**	P	Pg	08 00 09.8	+0.5
	baz=260						
ETLH				*e*S	Sg	08 00 13.5	+1.0
	baz=260						
LATG	**Datong**	**0.34**	**326**	P	Pg	08 00 11.8	+0.6
	baz=326						
LATG				*e*S	Sb	08 00 17.1	-1.2
	baz=326						
NNSB	**Datong**	**0.37**	**299**	*e*P	Pb	08 00 12.7	-0.5
	baz=299						
NNSB				*e*S	Sg	08 00 17.6	+1.0
	baz=299						
TWC	**Suao**	**0.37**	**16**	*e*S	Sg	08 00 17.3	+0.6
	baz=10.0						
LXIB	**Xiulin Townshi**	**0.37**	**232**	*e*P	Pg	08 00 12.0	+0.2
	baz=233						
LXIB				*e*S	Sb	08 00 18.4	-0.8
	baz=233						
NDT	**Datong Townshi**	**0.40**	**330**	P	Pb	08 00 13.3	-0.4
	baz=330						
NDT				*e*S	Sb	08 00 19.4	-0.6
	baz=330						
ENTT	**Nioudou**	**0.42**	**338**	P	Pb	08 00 13.4	-0.6
	baz=339						
ENTT				S	Sg	08 00 19.3	-1.0
	baz=339						
WHF	**Hehuan Shan**	**0.44**	**256**	*e*P	Pb	08 00 14.0	-0.6
	baz=256						
WHF				*e*S	Sg	08 00 19.8	+0.7
	baz=256						
FUSS	**Fushou**	**0.45**	**270**	*e*P	Pg	08 00 13.8	+0.5
	baz=270						
FUSS				*e*S	Sg	08 00 20.3	+1.1
	baz=270						
YHNB	**Yeheng**	**0.53**	**322**	*e*P	Pb	08 00 15.7	-0.2
	baz=321						
YHNB				*e*S	Sb	08 00 23.1	-0.6
	baz=321						
CHGB	**Renai**	**0.55**	**250**	P	Pg	08 00 15.4	+0.3
	baz=242						
CHGB				*e*S	Sb	08 00 23.5	-0.8
	baz=242						
WUSB	**Renai**	**0.62**	**246**	P	Pg	08 00 16.7	+0.2
	baz=238						
WUSB				*e*S	Sb	08 00 25.6	-0.7
	baz=238						

JMA 05 08:00:06.7±0.1, 24°3N±0°3×123°9E±0°3, h12km±1km, MV0.9/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.14**	**274**	P	Pg	08 00 10.1	0.0
IRIF				*e*S	Sg	08 00 12.7	+0.2
JKRS	**Kuro-shima**	**0.15**	**126**	P	Pg	08 00 10.3	0.0
JKRS				S	Sg	08 00 13.1	+0.4
JIJ	**Ishigaki jima**	**0.24**	**81**	P	Pg	08 00 11.7	-0.2
JIJ				S	Sg	08 00 15.4	0.0
HATJ	**Hateruma jima**	**0.28**	**194**	P	Pg	08 00 12.3	-0.1
HATJ				*e*S	Sg	08 00 16.6	+0.4
JISG	**Ishigakijimahi**	**0.47**	**57**	P	Pg	08 00 16.2	+0.2
JTJ	**Tarama**	**0.81**	**67**	*e*S	Sg	08 00 33.2	+0.1

IDC 05 08:04:54.7±2.8, 54°06N×86°55E, h0km, mbtmp2.7/2, ML2.5/2, 2D, Error ellipse: s-maj=23.2km s-min=13.5km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**265**	I	I	08 10 20.0	
	baz=82,slow=339,SNR=4.2						
ZALV	**Zalesovo Beam**	**1.03**	**265**	Pg	Pg	08 05 12.8	-1.6
	0.4nm,0.3s,baz=83,slow=17,SNR=7.1						
ZALV				Lg	Lg	08 05 29.6	
	0.8nm,0.3s,baz=86,slow=28,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.00**	**238**	Pn	Pn	08 06 25.6	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=3.5						
	0.2nm,0.3s						
MK31	**Makanchi Array**	**7.76**	**202**	||Pg	Pn	08 06 48.5	-0.4
	0.7nm,0.8s,baz=111,slow=14,SNR=9.1						
MK31				||Lg	Lg	08 07 26.6	
	0.9nm,0.7s,baz=113,slow=27,SNR=3.5						
MKAR	**Makanchi Array**	**7.76**	**202**	Pn	Pn	08 06 50.0	+1.1
	0.1nm,0.3s,baz=22,slow=13,SNR=6.2						
	0.1nm,0.2s						

*IDC **05** 08:06:07.0±4.4, 4°22S×103°56E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=248.6km s-min=29.3km az=53.0*

*DJA **05** 08:06:13.7±0.6, 5°S±5°×10°3E±°, h51km±17km, M3.8/6, MLv3.8/6*

ISC 05 08:06:13.1±1.1, 4°8S±0°2×103°1E±0°1, h50km, n10, σ1°50/9, mb3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.01**	**102**	P	**Pn**	**08 06 32.5**	**+1.4**
LWLI				S	**Sn**	**08 06 45.6**	**+1.2**
KASI	**Kota Agung**	**1.59**	**117**	P	**Pn**	**08 06 39.7**	**+0.8**
KASI				S	**Sn**	**08 06 57.8**	**-0.5**
PPSI	**Pulau Pagai**	**3.66**	**304**	P	**Pn**	**08 07 09.1**	**+1.8**
H08S2	**Diego Garcia H**	**30.52**	**263**	T	T	08 44 22.5	
	baz=86						
H08S3	**Diego Garcia H**	**30.52**	**263**	T	T	08 44 25.1	
	baz=86						
H08S1	**Diego Garcia H**	**30.54**	**263**	T	T	08 44 20.8	
	baz=86						
WRA	**Warramunga Arr**	**33.95**	**119**	P	**P**	**08 12 52.4**	**+0.4**
	0.5nm,0.9s,baz=302,slow=8.6,SNR=1.7						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**35.14**	**125**	P	**P**	**08 13 01.6**	**-0.7**
	0.2nm,0.3s,baz=302,slow=8.0,SNR=6.2						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**45.01**	**131**	P	**P**	**08 14 24.0**	**+0.1**
	0.4nm,0.6s,baz=324,slow=14,SNR=1.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**54.57**	**343**	P	**P**	**08 15 34.1**	**-2.2**
	0.3nm,0.6s,baz=166,slow=8.6,SNR=3.6						
	0.3nm,0.6s						

*NEIC **05** 08:09:42.4±1.0, 19°466N±0°008×155°69W±0°01, h9km±1km, Error ellipse: s-maj=1.5km s-min=1.1km az=82.0*

HVO 05 08:09:42.2±1.2, 19°475N±0°007×155°693W±0°008, h5km±3km, ML2.5/3, ML2.1/18(NEIC), Error ellipse: s-maj=1.1km s-min=1.0km az=221.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALEP	**Alea Permanent**	**0.08**	**35**		Pg	08 09 45.0	+0.8
ALEP					Sg	08 09 47.1	+1.5
MWH	**Moku'aweowe**	**0.09**	**84**		Pg	08 09 44.7	+0.3
MLOA	**Mauna Loa Obse**	**0.13**	**61**		Pg	08 09 45.6	+0.6
MLOA					Sg	08 09 48.1	+1.4
MLOA				IAML		08 09 48.3	
	comp=E,778nm,0.1s						
CPH	**Captain Cook**	**0.21**	**273**		Pg	08 09 46.3	-0.1
KHLU	**Kahalu`u**	**0.22**	**302**		Pg	08 09 46.8	+0.2
KHLU					Sg	08 09 50.5	+1.0
KHLU				IAML		08 09 52.3	
	comp=E,411nm,0.2s						
KHLU				IAML		08 09 52.3	
	comp=N,379nm,0.3s						
HMH	**Humu'ula Sheep**	**0.23**	**57**	Pg	Pg	08 09 47.4	+0.5
HMH				IAML		08 09 54.7	
	comp=N,473nm,0.2s						
HMH				IAML		08 09 54.9	
	comp=E,244nm,0.2s						
KHU	**Kahuku**	**0.24**	**162**	Pg	Pg	08 09 46.4	-0.6
KHU				IAML		08 09 50.4	
	comp=N,313nm,4.0s						
KHU				IAML		08 09 50.8	
	comp=E,244nm,2.4s						
HUH	**Hualalai**	**0.25**	**327**		Pg	08 09 48.3	+1.2
HUH				Sg	Sg	08 09 53.1	+2.7
MLH	**Mauna Loa**	**0.29**	**86**	Pg	Pg	08 09 43.0	-4.9
MLH					Sg	08 09 52.9	+1.1
MLH				IAML		08 09 55.7	
	comp=N,212nm,1.7s						
POHA	**Pohakuloa**	**0.32**	**28**	Pg	Pg	08 09 48.5	0.0
POHA				IAML		08 09 49.6	
	comp=N,143nm,4.0s						
HTC	**Hot Caves**	**0.37**	**130**		Pg	08 09 49.8	+0.5
HPO	**Honuapo**	**0.41**	**161**		Pb	08 09 52.1	+0.2
PUH	**Pauahi**	**0.46**	**103**		Pg	08 09 50.3	-0.8
PUH				IAML		08 09 57.3	
	comp=E,188nm,4.0s						
HPAH	**Hawaii Prepara**	**0.55**	**360**	Pg	Pg	08 09 52.5	-0.4

*TUL **05** 08:20:51.7±0.6, 36°033N±0°010×97°91W±0°01, h6km±5km, ML4.1, mb4.1/13(NEIC), mb_Lg4.0/154(NEIC), ML4.0/64(NEIC), Mwr3.7/43(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=91.0*

*NEIC **05** 08:20:51.5±0.6, 36°028N±0°006×97°91W±0°01, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.1km az=282.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.29; Mθθ=4.42; Mφφ=-4.12; Mrθ=0.67; Mθφ=0.70; Mφr=1.05; Fault plane solution: M0=4.51000×10^14^ NP1: φs=220.91000°, δ=86.68000°, λ=-163.84000°. NP2: φs=129.95000°, δ=73.87000°, λ=-3.45000°. Principal axes: T 4.5915, Plg9.0000°, Azm354.0000°; N -0.1685, Plg74.0000°, Azm232.0000°; P -4.4230, Plg14.0000°, Azm87.0000°;*

*NEIC **05** 08:20:51, 36°03N×97°91W, h1km*

*IDC **05** 08:20:52.5±1.7, 36°18N×98°11W, h0km, mb3.4/2, mbtmp3.4/6, ML2.5/2, MS3.2/2, Error ellipse: s-maj=30.3km s-min=11.5km az=110.0*

*ANF **05** 08:20:52.9±1.2, 36°02N×97°91W, h17km±9km, ML4.9/12, Error ellipse: s-maj=2.3km s-min=2.1km az=131.0*

ISC 05 08:20:51.8±1.0, 36°04N±0°02×97°88W±0°02, h14km±7km, n194, σ1°39/177, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.42**	**125**	Pg	**Pg**	**08 21 00.3**	**+0.1**
OK029				Sg	**Sg**	**08 21 06.7**	**+0.8**
OK029				IAML		08 21 07.0	
	12μm,0.6s						
CROK	**Carrier**	**0.47**	**350**		**Pg**	**08 21 01.2**	**0.0**
CROK				Sg	**Sg**	**08 21 08.1**	**+0.5**
CROK				IAML		08 21 14.3	
	comp=N,8μm,0.5s						
ADOK	**Arcadia Dam**	**0.56**	**133**	Pg	**Pg**	**08 21 02.9**	**0.0**
ADOK				Sg	**Sg**	**08 21 11.1**	**+0.7**
OK009	**Oakdale Elemen**	**0.59**	**141**	Sg	**Sg**	**08 21 11.8**	**+0.7**
OKCSW	**OKLAHOMA CITY**	**0.73**	**150**		**Pg**	**08 21 05.6**	**-0.3**
OKCSW				Sg	**Sg**	**08 21 15.9**	**+0.4**
OKCSW				IAML		08 21 21.2	
	comp=E,4μm,0.5s						
OK033	**Mehan**	**0.76**	**89**		**Pb**	**08 21 06.7**	**-0.1**
OK033				Sg	**Sb**	**08 21 17.5**	**+0.5**
CSTR	**Hydro, Custer**	**0.77**	**239**	Pg	**Pb**	**08 21 06.1**	**-0.9**
OK032	**Salt Plains WL**	**0.81**	**341**		**Pb**	**08 21 07.0**	**-0.6**
OK032				Sg	**Sb**	**08 21 18.3**	**-0.2**
OK032				IAML		08 21 18.7	
	comp=E,8μm,0.5s						
OK032				IAML		08 21 20.7	
	comp=E,4μm,0.3s						
GC02	**Grant County #**	**0.81**	**1**		**Pb**	**08 21 07.3**	**-0.4**
GC02				Sg	**Sg**	**08 21 18.8**	**+0.6**
OK038	**West end E0370**	**0.82**	**302**		**Pb**	**08 21 07.1**	**-0.8**
OK038				Sg	**Sb**	**08 21 18.4**	**-0.6**
OK048	**Pawnee Station**	**0.84**	**63**	Pg	**Pb**	**08 21 08.2**	**-0.1**
OK048				IAML		08 21 25.7	
	comp=E,3μm,0.5s						
FNO	**Franklin**	**0.87**	**153**	Pg	**Pb**	**08 21 08.2**	**-0.5**
FNO				IAML		08 21 25.8	
	comp=E,4μm,0.8s						
FNO				IAML		08 21 28.4	
	comp=N,4μm,0.6s						
OK052	**Battle Ridge R**	**0.87**	**93**		**Pb**	**08 21 08.7**	**0.0**
OK052				IAML		08 21 35.2	
	comp=N,3μm,0.4s						
BLOK	**Blackwell**	**0.90**	**36**		**Pb**	**08 21 09.1**	**0.0**
BLOK				IAML		08 21 24.5	
	comp=E,7μm,0.5s						
BLOK				IAML		08 21 30.8	
	comp=N,6μm,0.2s						
KAN14	**Manchester OK**	**0.92**	**356**		**Pb**	**08 21 09.1**	**-0.5**
KAN14				IAML		08 21 30.1	
	comp=E,3μm,0.1s						
KAN14				IAML		08 21 33.0	
	comp=N,3μm,0.6s						
QUOK	**Quay**	**0.96**	**82**		**Pb**	**08 21 10.2**	**+0.1**
QUOK				IAML		08 21 29.6	
	comp=E,3μm,0.3s						
OK051	**E0350 and S346**	**0.96**	**61**		**Pb**	**08 21 10.3**	**+0.1**
U32A	**Winter Ranch,**	**0.97**	**291**		**Pb**	**08 21 09.6**	**-0.8**
U32A				IAML		08 21 25.7	
	comp=E,4μm,0.4s						
KAN17	**Caldwell West**	**1.01**	**5**	Pg	**Pb**	**08 21 10.6**	**-0.5**
KAN17				IAML		08 21 28.6	
	comp=N,5μm,0.3s						
KAN13	**South Haven SW**	**1.02**	**18**		**Pb**	**08 21 11.3**	**-0.1**
KAN05	**Bluff City Nor**	**1.07**	**0**		**Pb**	**08 21 11.8**	**-0.3**
KAN05				IAML		08 21 28.0	
	comp=N,4μm,0.3s						
KAN05				IAML		08 21 32.3	
	comp=E,4μm,0.2s						
KAN10	**Anthony SW Sta**	**1.10**	**351**		**Pb**	**08 21 12.2**	**-0.4**
KAN10				IAML		08 21 31.4	
	comp=N,3μm,0.4s						
KAN10				IAML		08 21 32.8	
	comp=E,2μm,0.1s						
KAN09	**Caldwell North**	**1.11**	**11**		**Pb**	**08 21 12.7**	**-0.2**
KAN01	**Argonia South**	**1.12**	**5**		**Pb**	**08 21 12.7**	**-0.2**
KAN01				IAML		08 21 28.5	
	comp=E,3μm,0.3s						
KAN01				IAML		08 21 32.2	
	comp=N,2μm,0.3s						
DEOK	**Depew**	**1.14**	**100**	Pg	**Pn**	**08 21 13.0**	**-0.3**
DEOK				IAML		08 21 33.8	
	comp=E,3μm,0.3s						
DEOK				IAML		08 21 33.8	
	comp=N,3μm,0.4s						
KAN08	**Anthony NE Sta**	**1.19**	**356**		**Pn**	**08 21 13.8**	**-0.3**
W35A	**Tecumseh**	**1.20**	**137**	Pg	**Pn**	**08 21 14.0**	**-0.2**
KAN06	**Argonia West S**	**1.21**	**1**		**Pn**	**08 21 14.2**	**0.0**
KAN06				IAML		08 21 31.2	
	comp=N,3μm,0.7s						
KAN06				IAML		08 21 35.7	
	comp=E,3μm,0.2s						
ELIS	**Ellis County**	**1.25**	**272**	Pg	**Pn**	**08 21 14.6**	**-0.3**
ELIS				IAML		08 21 36.6	
	comp=E,4μm,0.3s						
ELIS				IAML		08 21 51.4	
	comp=N,3μm,0.7s						
KS21	**Milan North St**	**1.26**	**8**	IAML		08 21 33.0	
	comp=N,4μm,0.3s						
KS21	**Milan North St**	**1.26**	**8**		**Pb**	**08 21 15.3**	**0.0**
KAN12	**Harper NE Stat**	**1.26**	**356**	Pg	**Pn**	**08 21 14.9**	**-0.1**
KAN12				IAML		08 21 47.6	
	comp=E,3μm,0.3s						
T35A	**Sooner Cattle**	**1.41**	**51**	Pg	**Pb**	**08 21 18.1**	**+0.2**
X34A	**Smith Ranch, M**	**1.44**	**179**		**Pb**	**08 21 18.4**	**+0.1**
WMOK	**Wichita Mounta**	**1.49**	**210**	Pg	**Pn**	**08 21 18.1**	**-0.1**
WMOK	**Wichita Mounta**	**1.49**	**210**	P	**Pn**	**08 21 18.1**	**-0.1**
	baz=28						
WMOK				S	**Sb**	**08 21 38.2**	**0.0**
	baz=28						
TUL3	**Leonard**	**1.70**	**94**		**Pb**	**08 21 22.4**	**-0.3**
TUL3				IAmb_Lg		08 21 48.0	
	comp=Z,1μm,0.8s						
TUL3	**Leonard**	**1.70**	**94**	P	**Pb**	**08 21 22.5**	**-0.3**
	baz=274,SNR=394						
TUL3				Sb	**Sg**	**08 21 46.5**	**+0.1**
	baz=274						
LOOK	**Love County**	**2.12**	**164**		**Pb**	**08 21 28.7**	**-1.4**
SMWD	**Samnorwood**	**2.14**	**245**		**Pn**	**08 21 28.5**	**+1.3**
SMWD				IAmb_Lg		08 21 59.5	
	comp=Z,743nm,0.8s						
RLO	**Rose Lookout**	**2.31**	**86**		**Pn**	**08 21 30.8**	**+1.3**
WTFS	**Witchita Falls**	**2.32**	**192**		**Pn**	**08 21 31.3**	**+1.7**
R32A	**Long Quarter,**	**2.47**	**345**		**Pn**	**08 21 32.5**	**+0.9**
Z35A	**Perchaven, San**	**2.75**	**169**		**Pn**	**08 21 36.9**	**+1.4**
Z35A				IAmb_Lg		08 22 20.2	
	comp=Z,286nm,1.2s						
U38A	**Gravette**	**2.85**	**81**	Pn	**Pn**	**08 21 38.2**	**+1.3**
FW03	**Perrin-Whitt E**	**3.00**	**183**		**Pn**	**08 21 41.1**	**+2.2**
FW06	**Azle**	**3.07**	**175**		**Pn**	**08 21 41.6**	**+1.7**
CBKS	**Cedar Bluff**	**3.14**	**332**		**Pn**	**08 21 43.0**	**+2.0**
CBKS				IAmb_Lg		08 22 35.8	
	comp=Z,304nm,0.8s						
CBKS	**Cedar Bluff**	**3.14**	**332**	P	**Pn**	**08 21 42.2**	**+1.3**
	baz=152						
CBKS				Sb	**Sb**	**08 22 28.0**	**+2.4**
	baz=152						
HHAR	**Hobbs**	**3.19**	**84**	Pn	**Pn**	**08 21 42.9**	**+1.3**
HHAR				IAmb_Lg		08 22 41.2	
	comp=Z,258nm,0.7s						
KSU1	**Kansas State U**	**3.22**	**18**		**Pn**	**08 21 43.2**	**+1.3**
KSU1				IAmb_Lg		08 22 37.4	
	comp=Z,306nm,0.9s						
KSU1	**Kansas State U**	**3.22**	**18**	P	**Pn**	**08 21 43.2**	**+1.3**
	baz=199,SNR=9.9						
KSU1				S	**Sn**	**08 22 21.8**	**+1.8**
	baz=199						
PLPT	**Palo Pinto**	**3.24**	**187**		**Pn**	**08 21 43.4**	**+1.1**
APMT	**Aspermont**	**3.28**	**215**		**Pn**	**08 21 44.1**	**+1.3**
AMTX	**Amarillo**	**3.31**	**251**	Pn	**Pn**	**08 21 44.9**	**+1.6**
AMTX				IAmb_Lg		08 22 35.0	
	comp=Z,582nm,0.7s						
AMTX	**Amarillo**	**3.31**	**251**	P	**Pn**	**08 21 44.2**	**+0.9**
	baz=68						
AMTX				Sb	**Sb**	**08 22 32.0**	**+1.4**
	baz=68						
FW07	**Weatherford**	**3.33**	**179**	Pn	**Pn**	**08 21 44.6**	**+1.1**
DKNS	**Dickens**	**3.45**	**228**		**Pn**	**08 21 46.9**	**+1.8**
DKNS				IAmb_Lg		08 22 43.7	
	comp=Z,597nm,0.7s						
TREL	**Terrell**	**3.62**	**155**	Pn	**Pn**	**08 21 47.7**	**+0.3**
TREL				IAmb_Lg		08 22 49.7	
	comp=Z,267nm,0.7s						
FW16	**Waxahatchie**	**3.64**	**167**	Pn	**Pn**	**08 21 49.4**	**+1.7**
Z38A	**Mt. Pleasant**	**3.66**	**138**		**Pn**	**08 21 48.9**	**+0.9**
FW14	**Alvarado**	**3.67**	**171**	Pn	**Pn**	**08 21 50.1**	**+1.9**
FW13	**Cleburne**	**3.70**	**174**	Pn	**Pn**	**08 21 50.5**	**+1.9**
MIAR	**Mount Ida**	**3.82**	**112**		**Pn**	**08 21 52.0**	**+1.7**
MIAR				IAmb_Lg		08 22 55.0	
	comp=Z,239nm,0.7s						
MIAR	**Mount Ida**	**3.82**	**112**	P	**Pn**	**08 21 51.9**	**+1.7**
	baz=294,SNR=53						
MIAR				S	**Sn**	**08 22 37.6**	**+2.7**
	baz=294						
RTBA	**Rita Blanca**	**3.95**	**277**		**Pn**	**08 21 53.1**	**+1.0**
RTBA				IAmb_Lg		08 23 03.6	
	comp=Z,296nm,0.8s						
S39A	**Bolivar**	**4.01**	**64**	Pn	**Pn**	**08 21 54.2**	**+1.4**
S39A				IAmb_Lg		08 23 02.6	
	comp=Z,333nm,0.9s						
SN05	**Snyder 5**	**4.01**	**219**

X40A IAmb_Lg 08 23 23.0
comp=Z,393nm,1.1s
MSTX Muleshoe 4.52 244 Pn 08 22 00.6 +0.7
MSTX Muleshoe 4.52 244 P **Pn 08 22 00.4 +0.5**
baz=61
MSTX Sb **Sb 08 23 09.4 +4.1**
baz=61
WLAR White Oak Lake 4.57 120 Pn 08 22 01.3 +0.8
WLAR IAmb_Lg 08 23 27.5
comp=Z,234nm,0.9s
WHAR Wooly Hollow 4.61 98 Pn **Pn 08 22 02.1 +1.1**
WHAR IAmb_Lg 08 23 23.6
comp=Z,213nm,0.8s
MGMO Mountain Grove 4.65 74 Pn 08 22 01.7 +0.1
MGMO IAmb_Lg 08 23 19.6
comp=Z,330nm,0.7s
FCAR Ozark Folk Cen 4.67 90 Pn 08 22 02.3 +0.4
FCAR IAmb_Lg 08 23 23.1
comp=Z,180nm,0.8s
UALR University of 4.69 104 Pn 08 22 03.3 +1.1
UALR IAmb_Lg 08 23 28.6
comp=Z,290nm,1.0s
KSCO Kaye Shedlock' 4.80 310 Sb **Sb 08 23 19.3 +5.8**
baz=127
BRDY Brady 4.83 191 Pn 08 22 03.9 -0.2
SGCY Sterling City 4.92 214 Pn 08 22 05.5 +0.1
SGCY IAmb_Lg 08 23 37.4
comp=Z,364nm,0.8s
P38A Dawn 4.96 43 Pn **Pn 08 22 06.7 +0.8**
P38A IAmb_Lg 08 23 30.1
comp=Z,298nm,0.8s
R40A Maddies Statio 5.01 62 Pn 08 22 07.8 +1.2
R40A IAmb_Lg 08 23 28.2
comp=Z,309nm,0.9s
Z41A Richland Creek 5.02 122 Pn 08 22 07.5 +0.8
Z41A IAmb_Lg 08 23 38.7
comp=Z,314nm,0.9s
NATX Nacogdoches 5.04 147 P **Pn 08 22 08.0 +1.1**
baz=329
NATX S **Sn 08 23 06.1 +1.1**
baz=329
N35A Tabor 5.12 19 Pn 08 22 08.9 +0.8
435B Jarrell 5.25 177 Pn 08 22 10.4 +0.6
435B IAmb_Lg 08 23 37.9
comp=Z,197nm,0.8s
435B Jarrell 5.25 177 P **Pn 08 22 10.3 +0.4**
baz=357
BGNE Belgrade 5.37 358 IAmb_Lg 08 23 55.4
comp=Z,256nm,0.8s
BGNE Belgrade 5.37 358 P **Pn 08 22 12.2 +0.7**
baz=178
CCAR Cane Creek 5.44 111 IAmb_Lg 08 23 52.6
comp=Z,348nm,1.0s
LCAR Lake Charles 5.45 88 IAmb_Lg 08 23 48.3
comp=Z,161nm,0.8s
ODSA Odessa 5.50 226 IAmb_Lg 08 23 49.5
comp=Z,211nm,1.2s
CCM Cathedral Cave 5.67 67 Pn 08 22 16.0 +0.4
CCM IAmb_Lg 08 24 04.2
comp=Z,221nm,0.8s
CCM Cathedral Cave 5.67 67 P **Pn 08 22 16.2 +0.5**
baz=251
JCT Junction City 5.77 197 Pn **Pn 08 22 17.4 +0.2**
JCT IAmb_Lg 08 24 06.0
comp=Z,320nm,0.8s
JCT Junction City 5.77 197 P **Pn 08 22 17.5 +0.4**
baz=15
OZNA Ozona 5.78 209 Pn **Pn 08 22 17.3 0.0**
OZNA IAmb_Lg 08 24 07.3
comp=Z,276nm,1.0s
P40A Paris 5.78 51 Pn **Pn 08 22 18.1 +1.0**
OGNE Ogallala 5.88 328 P **Pn 08 22 19.9 +1.3**
baz=145,SNR=9.7
N38A Joes South For 5.98 36 Pn 08 22 21.0 +1.0
MNHN Monahans 6.21 222 Pn 08 22 23.0 -0.1
MNHN IAmb_Lg 08 24 11.5
comp=Z,195nm,1.0s
FVM French Village 6.27 70 Pn **Pn 08 22 24.6 +0.8**
FVM IAmb_Lg 08 24 24.2
comp=Z,221nm,0.8s
143A Socs Landing, 6.30 120 IAmb_Lg 08 24 22.3
comp=Z,178nm,0.9s
SDCO Great Sand Dun 6.34 288 Pn 08 22 26.2 +1.1
SDCO Great Sand Dun 6.34 288 P **Pn 08 22 26.2 +1.1**
baz=104
Q24A Divide 6.48 299 IAmb_Lg 08 24 24.6
comp=Z,213nm,0.8s
Q24A Divide 6.48 299 P **Pn 08 22 28.1 +1.1**
baz=115,SNR=15
MET Memphis--Engin 6.54 96 IAmb_Lg 08 24 33.6
comp=Z,193nm,0.8s
HNDO Hondo 6.60 191 Pn 08 22 27.8 -0.6
HNDO IAmb_Lg 08 24 25.7
comp=Z,194nm,0.7s
PVMO Portageville 6.62 84 IAmb_Lg 08 24 33.0
comp=Z,204nm,0.8s
CGM3 Cape Girardeau 6.72 77 IAmb_Lg 08 24 22.3
comp=Z,238nm,0.9s
K30B Basset 6.76 349 IAmb_Lg 08 24 43.2
comp=Z,190nm,0.8s
LNXT Lenox 6.79 87 IAmb_Lg 08 24 35.1
comp=Z,256nm,0.8s
BRIGG Briggsdale 6.80 314 IAmb_Lg 08 24 38.3
comp=Z,197nm,0.8s
PECS Pecos 6.83 229 Pn 08 22 32.5 +0.9
PECS IAmb_Lg 08 24 27.5
comp=Z,202nm,0.9s
SCIA State Center 6.89 30 Pn Pn 08 22 33.9 +1.5
SCIA State Center 6.89 30 P **Pn 08 22 33.5 +1.1**
baz=213
EF01 Eagle Ford 01 6.91 184 IAmb_Lg 08 24 40.8
comp=Z,175nm,0.9s
HALT Halls 6.92 89 IAmb_Lg 08 24 35.8
comp=Z,264nm,0.8s
DRIO Del Rio 6.99 200 Pn 08 22 34.3 +0.5
DRIO IAmb_Lg 08 24 32.5
comp=Z,186nm,1.1s
SAND Sanderson 7.04 212 Pn **Pn 08 22 34.5 0.0**
SAND IAmb_Lg 08 24 54.1
comp=Z,256nm,0.9s
ANMO Albuquerque 7.08 264 P **Pn 08 22 35.9 +0.6**
baz=79
ANMO Albuquerque 7.08 264 Pn **Pn 08 22 35.8 +0.6**
comp=Z,0.1nm,0.3s,baz=189,slow=15,SNR=5.2
ANMO Pg Pb 08 23 00.6 +5.9
comp=Z,1.4nm,0.3s,baz=180,slow=19,SNR=16
ANMO Lg Lg 08 24 32.1
comp=Z,4.1nm,0.3s,baz=150,slow=8.1,SNR=4.7
ANMO LR LR 08 25 40.4
comp=Z,91nm,20.6s,baz=166,slow=42
comp=Z,0.6nm,0.5s
OXF Oxford 7.09 100 Pn 08 22 34.9 -0.2
OXF IAmb_Lg 08 24 42.2
comp=Z,250nm,1.0s
OXF Oxford 7.09 100 P **Pn 08 22 36.3 +1.2**
baz=285,SNR=6.4
S44A Carbondale 7.11 74 Pn 08 22 35.1 -0.2
S44A IAmb_Lg 08 24 40.9
comp=Z,200nm,0.7s
735A Kenedy 7.16 180 IAmb_Lg 08 24 56.7
comp=Z,101nm,0.8s
ISCO Idaho Springs 7.17 304 Pn 08 22 37.4 +0.8
ISCO IAmb_Lg 08 24 43.6
comp=Z,162nm,0.9s
ISCO Idaho Springs 7.17 304 P **Pn 08 22 37.5 +0.9**
baz=119
Y45A Yeager Farm, C 7.18 105 IAmb_Lg 08 24 48.3
comp=Z,135nm,0.8s
VBMS Vicksburg 7.19 120 IAmb_Lg 08 25 00.1
comp=Z,139nm,1.2s
N41A Harden Midland 7.22 48 Pn 08 22 37.2 +0.3
UTMT University of 7.29 85 IAmb_Lg 08 24 55.1
comp=Z,227nm,0.8s
S22A 4UR Ranch, Cre 7.37 286 P **Pn 08 22 40.7 +1.4**
baz=101
ALPN Alpine 7.43 222 Pn **Pn 08 22 39.9 -0.1**
ALPN IAmb_Lg 08 24 52.0
comp=Z,115nm,0.8s
P43A Skaggs, Pawnee 7.53 59 Pn 08 22 41.5 +0.4
MNTX Cornudas Mount 7.59 237 IAmb_Lg 08 24 52.6
comp=Z,105nm,0.8s
MNTX Cornudas Mount 7.59 237 P **Pn 08 22 42.4 +0.3**
baz=53
Q44A Meyer Farm, Va 7.60 65 Pn 08 22 43.1 +1.0
Y22D IRIS PASSCAL I 7.67 258 IAmb_Lg 08 25 12.5
comp=Z,230nm,1.1s
ECSD EROS Data Cent 7.75 7 Pn **Pn 08 22 43.0 -1.1**

833A Chaparral WMA, 7.80 190 IAmb_Lg 08 25 07.7
comp=Z,105nm,0.9s
VHRN Van Horn 7.92 231 IAmb_Lg 08 25 22.1
comp=Z,108nm,0.9s
PHWY Pilot Hill 7.92 314 IAmb_Lg 08 25 15.7
comp=Z,125nm,0.9s
146A Union 8.04 112 IAmb_Lg 08 25 27.9
comp=Z,99nm,0.8s
HDIL Hopedale 8.11 54 P **Pn 08 22 49.4 +0.3**
baz=239,SNR=11
WVT Waverly 8.13 86 P **Pn 08 22 51.0 +1.6**
baz=272
TXAR Lajitas Array 8.28 218 Pn **Pn 08 22 52.0 +0.5**
comp=Z,0.8nm,0.5s,baz=36,slow=11,SNR=17
TXAR Lg Lg 08 25 10.3
comp=Z,4.3nm,0.3s,baz=38,slow=29,SNR=6.8
SUSD Miller 8.44 355 IAmb_Lg 08 25 33.6
comp=Z,110nm,0.9s
SUSD Miller 8.44 355 P **Pn 08 22 54.7 +1.1**
baz=174
Z47A Carrollton 8.56 106 IAmb_Lg 08 25 45.9
comp=Z,76nm,1.1s
I37A Lemond, Waseca 8.67 22 IAmb_Lg 08 25 36.5
comp=Z,123nm,0.8s
JFWS Jewell Farm 9.05 38 P **Pn 08 23 02.3 +0.4**
baz=223,SNR=7.0
RWWY Rawlins 9.21 311 IAmb_Lg 08 25 50.1
comp=Z,99nm,1.0s
RSSD Black Hills 9.35 332 IAmb_Lg 08 25 59.5
comp=Z,79nm,0.8s
RSSD Black Hills 9.35 332 P **Pn 08 23 07.9 +1.6**
baz=148
M44A Midewin, Midew 9.36 52 IAmb_Lg 08 26 04.9
comp=Z,170nm,0.9s
K22A Casper 9.40 317 IAmb_Lg 08 25 58.1
comp=Z,99nm,0.8s
LRAL Lakeview Retre 9.46 105 P **Pn 08 23 08.2 +0.6**
baz=291
WCI Wyandotte Cave 9.50 73 P **Pn 08 23 09.0 +0.7**
baz=260
SFIN Lafayette 9.52 60 P **Pn 08 23 08.6 +0.1**
baz=246
SPMN Marine on St. 9.95 21 IAmb_Lg 08 26 06.1
comp=Z,75nm,0.9s
SPMN Marine on St. 9.95 21 P **Pn 08 23 15.1 +0.7**
baz=205,SNR=6.8
BRAL Brewton 10.25 115 P **Pn 08 23 19.2 +0.8**
baz=301
P49A Miami Univ. Ec 10.98 68 P **Pn 08 23 27.6 -0.9**
baz=256
PDAR Pinedale Array 11.25 310 Pn **Pn 08 23 32.7 +0.3**
comp=Z,0.3nm,0.5s,baz=115,slow=13,SNR=1.7
PDAR Lg Lg 08 26 41.7
comp=Z,1.3nm,0.3s,baz=102,slow=24,SNR=9.6
ACSO Alum Creek Sta 12.45 66 P **Pn 08 23 47.0 -1.5**
baz=255,SNR=5.1
EYMN Ely 12.80 20 P **Pn 08 23 50.3 -3.0**
baz=204
P52A Corning 12.95 69 P **Pn 08 23 55.0 -0.4**
baz=259
DGMT Dagmar 13.27 341 P **Pn 08 23 58.2 -1.5**
baz=157
GLMI Grayling 13.37 45 P **Pn 08 23 58.8 -2.2**
baz=234
O53A New Philadelph 13.77 67 P **Pn 08 24 04.8 -1.8**
baz=258
BLA Blacksburg 14.07 80 P **Pn 08 24 09.6 -1.1**
baz=270
ULM Lac du Bonnet 14.28 5 Pn **Pn 08 24 10.3 -3.2**
comp=Z,0.3nm,0.3s,baz=183,slow=13,SNR=3.1
ULM Sn Sn 08 26 38.0 -14
comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=2.2
ULM Lg Lg 08 28 17.4
comp=Z,0.6nm,0.3s,baz=76,slow=12,SNR=5.1
comp=Z,1.3nm,0.4s
RCRC Randolf Colleg 14.99 79 Pn **Pn 08 24 21.5 -1.6**
T57A Hurt 15.01 81 Pn **Pn 08 24 21.9 -1.5**
S57A Dark Hollow, R 15.24 78 Pn **Pn 08 24 25.0 -1.6**
S57A IAmb IAmb 08 24 26.4
comp=Z,9.7nm,0.7s
M55A Ridgway 15.86 64 Pn **Pn 08 24 31.5 -3.1**
M55A IAmb IAmb 08 24 48.4
comp=Z,14nm,1.1s
R58B Mineral 16.09 77 Pn **Pn 08 24 34.1 -3.5**
R58B IAmb IAmb 08 24 56.3
comp=Z,18nm,1.4s
WVNY West Valley, N 16.22 61 Pn **Pn 08 24 35.0 -4.1**
WVNY IAmb IAmb 08 24 59.8
comp=Z,11nm,1.0s
SSPA Standing Stone 16.34 68 Pn **Pn 08 24 37.3 -3.4**
SSPA IAmb IAmb 08 24 57.7
comp=Z,32nm,1.4s
SADO Sadowa 16.70 53 Pn **Pn 08 24 40.6 -4.6**
M57A Sunshine Farm, 17.03 66 Pn **Pn 08 24 47.5 -1.9**
M57A IAmb IAmb 08 25 05.1
comp=Z,25nm,1.4s
PNTR Pine Nut 17.48 287 Pn **Pn 08 24 52.2 -3.2**
J58A Remsen 18.82 60 P **P 08 25 10.5 -0.5**
J58A IAmb IAmb 08 25 38.2
comp=Z,24nm,1.2s
FFC Flin Flon 18.90 353 P **Pn 08 25 12.5 +0.1**
EDM Edmonton 20.33 332 P **P 08 25 26.5 -0.9**
YKA Yellowknife Ar 28.46 344 P **P 08 26 46.7 +0.7**
comp=Z,0.4nm,0.7s,baz=146,slow=8.7,SNR=7.5
comp=Z,0.4nm,0.7s
ILAR Eielson Array 40.79 330 P **P 08 28 33.0 +0.7**
comp=Z,0.5nm,0.9s,baz=105,slow=6.9,SNR=5.5
comp=Z,0.5nm,0.9s
SEY Seymchan 66.69 332 LR LR 09 00 30.2
comp=Z,36nm,20.0s,baz=5.0,slow=36

NEIC ***05*** *08:25:39.2±0.6,36.03N±0.01×97.90W±0.01,h5km±1km, Error ellipse: s-maj=1.7km s-min=1.5km az=217.0, Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr-0.82; Mθθ7.64; Mφφ-6.81; Mrθ1.30; Mθφ0.18; Mφr0.79; Fault plane solution: M₀7.42000×10¹³ NP1:φs44.32000°, δ89.13000°, λ168.63000°. NP2:φs134.49000°, δ78.63000°, λ0.89000°. Principal axes: T 7.8382, Plg9.0000°, Azm359.0000°; N -0.9229, Plg79.0000°, Azm220.0000°; P -6.9154, Plg7.0000°, Azm90.0000°;*

NEIC ***05*** *08:25:39.4,36.04N×97.90W,h7km*
TUL 05 08:25:39.4±0.6,36.04N±0.01×97.90W±0.01,h7km±1km, ML3.7,mb_Lg3.3/82(NEIC),ML3.6/64(NEIC), Mwr3.2/66(NEIC),Error ellipse: s-maj=1.7km s-min=1.5km az=212.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**123**	Pg	Pg	08 25 48.0	+0.1
OK029				Sg	Sg	08 25 54.4	+0.8
OK029				IAML		08 25 54.6	
5µm,0.5s							
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	08 25 48.8	+0.2
CROK				Sg	Sg	08 25 55.6	+0.8
CROK				IAML		08 25 56.0	
comp=E,3µm,0.3s							
CROK				IAML		08 26 04.5	
comp=N,3µm,0.3s							
ADOK	**Arcadia Dam**	**0.58**	**131**		Pg	08 25 50.6	+0.1
ADOK				Sg	Sg	08 25 58.8	+0.8
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	Pg	08 25 53.4	-0.2
OKCSW				Sg	Sg	08 26 03.5	+0.5
OKCSW				IAML		08 26 06.4	
comp=E,2µm,0.5s							
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	Pg	08 25 53.8	0.0
CSTR				Sg	Sg	08 26 04.3	+0.8
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	08 25 54.4	-0.1
OK033				Sg	Sg	08 26 05.0	+0.4
OK032	**Salt Plains WL**	**0.81**	**342**	Pg	Pg	08 25 54.7	-0.2
OK032				Sg	Sg	08 26 05.6	+0.2
OK032				IAML		08 26 06.2	
comp=E,3µm,0.3s							
OK032				IAML		08 26 08.2	
comp=E,2µm,0.2s							
OK038	**West end E0370**	**0.81**	**303**	Pg	Pg	08 25 54.7	-0.2
OK038				Sg	Sg	08 26 06.1	+0.6
GC02	**Grant County #**	**0.81**	**2**		Pg	08 25 54.9	-0.2
GC02				Sg	Sg	08 26 06.1	+0.5
OK048	**Pawnee Station**	**0.86**	**64**	Pg	Pg	08 25 55.8	-0.2
FNO	**Franklin**	**0.88**	**152**		Pg	08 25 55.9	-0.4
FNO				IAML		08 26 15.6	
comp=N,1µm,0.6s							
FNO				IAML		08 26 15.9	
comp=E,1µm,0.5s							

OK052 Battle Ridge R 0.89 92 Pg Pg 08 25 56.4 -0.2
OK052 IAML 08 26 15.4
comp=E,1µm,0.3s
BLOK Blackwell 0.91 37 Pg Pg 08 25 56.7 -0.2
KAN14 Manchester OK 0.92 357 Pg Pg 08 25 56.6 -0.5
KAN14 IAML 08 26 15.8
comp=N,1µm,0.2s
U32A Winter Ranch, 0.95 291 Pg Pg 08 25 57.3 -0.4
U32A IAML 08 26 13.3
comp=N,2µm,0.3s
U32A IAML 08 26 17.2
comp=E,1µm,0.3s
QUOK Quay 0.98 82 Pg Pg 08 25 57.8 -0.3
QUOK IAML 08 26 17.4
comp=N,2µm,0.2s
QUOK IAML 08 26 20.0
comp=E,1µm,0.3s
OK051 E0350 and S346 0.98 61 Pg Pg 08 25 57.9 -0.3
OK051 IAML 08 26 16.0
comp=E,2µm,0.3s
KAN17 Caldwell West 1.01 6 Pg Pg 08 25 58.4 -0.5
KAN13 South Haven SW 1.03 19 Pg Pg 08 25 58.9 -0.4
KAN05 Bluff City Nor 1.07 1 Pg Pg 08 25 59.4 -0.6
KAN05 IAML 08 26 16.1
comp=N,2µm,0.2s
KAN10 Anthony SW Sta 1.10 352 Pg Pg 08 25 59.9 -0.6
KAN10 IAML 08 26 18.9
comp=N,848nm,0.3s
KAN10 IAML 08 26 19.5
comp=E,992nm,0.2s
KAN01 Argonia South 1.12 6 Pg Pg 08 26 00.3 -0.6
KAN01 IAML 08 26 16.2
comp=E,1µm,0.3s
KAN01 IAML 08 26 20.0
comp=N,834nm,0.1s
KAN09 Caldwell North 1.12 12 Pg Pg 08 26 00.3 -0.7
DEOK Depew 1.16 99 Pg Pg 08 26 00.7 -0.9
DEOK IAML 08 26 21.3
comp=N,1µm,0.3s
DEOK IAML 08 26 24.3
comp=E,1µm,0.2s
KAN08 Anthony NE Sta 1.19 357 Pg Pg 08 26 01.6 -0.6
KAN06 Argonia West S 1.21 2 Pg Pg 08 26 01.8 -0.9
KAN06 IAML 08 26 18.4
comp=N,983nm,0.5s
KAN06 IAML 08 26 22.0
comp=E,1µm,0.2s
W35A Tecumseh 1.22 136 Pg Pg 08 26 01.9 -0.9
ELIS Ellis County 1.23 272 Pg Pg 08 26 02.5 -0.5
ELIS IAML 08 26 24.0
comp=E,2µm,0.3s
ELIS IAML 08 26 31.9
comp=N,1µm,0.3s
KAN12 Harper NE Stat 1.26 357 Pn 08 26 02.7 -0.8
KAN12 IAML 08 26 30.0
comp=N,2µm,0.4s
KAN12 IAML 08 26 35.1
comp=E,2µm,0.3s
KS21 Milan North St 1.26 9 IAML 08 26 20.7
comp=E,1µm,0.2s
KS21 IAML 08 26 20.7
comp=E,1µm,0.3s
KS21 Milan North St 1.26 9 Pn 08 26 03.0 -0.5
T35A Sooner Cattle 1.43 52 Pn 08 26 05.7 0.0
X34A Smith Ranch, M 1.43 178 Pn 08 26 06.0 +0.2
WMOK Wichita Mounta 1.48 209 Pn 08 26 06.0 -0.5
TUL3 Leonard 1.72 94 Pn Pn 08 26 10.0 +0.3
TUL3 IAmb_Lg 08 26 35.9
comp=Z,265nm,0.9s
SMWD Samnorwood 2.12 245 Pn Pn 08 26 15.8 +0.4
SMWD IAmb_Lg 08 26 46.3
comp=Z,221nm,1.0s
LOOK Love County 2.12 164 Pn Pn 08 26 15.3 -0.1
WTFS Witchita Falls 2.31 192 Pn Pn 08 26 18.2 +0.3
RLO Rose Lookout 2.34 86 Pn Pn 08 26 17.8 -0.5
R32A Long Quarter, 2.47 345 Pn Pn 08 26 19.7 -0.5
R32A IAmb_Lg 08 27 02.4
comp=Z,100nm,0.9s
Z35A Perchaven, San 2.75 169 Pn Pn 08 26 23.7 -0.2
U38A Gravette 2.87 81 Pn Pn 08 26 25.5 -0.1
FW06 Azle 3.07 175 Pn Pn 08 26 28.7 +0.4
CBKS Cedar Bluff 3.13 333 Pn Pn 08 26 28.9 -0.4
CBKS IAmb_Lg 08 27 23.4
comp=Z,69nm,0.7s
HHAR Hobbs 3.22 84 Pn Pn 08 26 30.0 -0.4
KSU1 Kansas State U 3.23 18 Pn Pn 08 26 31.2 +0.7
PLPT Palo Pinto 3.23 186 Pn Pn 08 26 30.9 +0.3
AMTX Amarillo 3.29 251 IAmb_Lg 08 27 21.3
comp=Z,115nm,0.8s
FW07 Weatherford 3.33 178 Pn Pn 08 26 31.9 0.0
DKNS Dickens 3.43 227 Pn Pn 08 26 33.0 -0.4
TREL Terrell 3.62 155 IAmb_Lg 08 27 42.9
comp=Z,80nm,0.8s
FW16 Waxahatchie 3.64 166 Pn Pn 08 26 36.2 0.0
Z38A Mt. Pleasant 3.67 138 IAmb_Lg 08 27 45.1
comp=Z,100nm,0.8s
FW14 Alvarado 3.67 171 Pn Pn 08 26 36.2 -0.5
MIAR Mount Ida 3.84 112 Pn Pn 08 26 40.4 +1.5
MIAR IAmb_Lg 08 27 45.8
comp=Z,73nm,0.9s
RTBA Rita Blanca 3.93 277 Pn Pn 08 26 41.1 +0.8
S39A Bolivar 4.03 64 Pn Pn 08 26 41.3 -0.2
WHTX Lake Whitney, 4.05 175 Pn Pn 08 26 42.7 +0.9
POST Post 4.19 226 IAmb_Lg 08 27 58.9
comp=Z,108nm,0.8s
237A Washetta, Mont 4.38 156 Pn Pn 08 26 47.0 +0.6
X40A Basin Creek Fa 4.43 109 IAmb_Lg 08 28 00.9
comp=Z,76nm,0.9s
WLAR White Oak Lake 4.58 119 IAmb_Lg 08 28 14.5
comp=Z,63nm,0.8s
WHAR Wooly Hollow 4.63 98 IAmb_Lg 08 28 19.0
comp=Z,72nm,1.1s
MGMO Mountain Grove 4.67 75 IAmb_Lg 08 28 05.2
comp=Z,78nm,0.7s
FCAR Ozark Folk Cen 4.69 90 IAmb_Lg 08 28 04.5
comp=Z,45nm,0.9s
UALR University of 4.71 104 IAmb_Lg 08 28 18.9
comp=Z,45nm,0.9s
KSCO Kaye Shedlock' 4.79 310 IAmb_Lg 08 28 24.0
comp=Z,97nm,0.8s
P38A Dawn 4.98 43 IAmb_Lg 08 28 23.3
comp=Z,59nm,0.8s
R40A Maddies Statio 5.03 62 IAmb_Lg 08 28 24.6
comp=Z,66nm,0.8s
Z41A Richland Creek 5.04 122 IAmb_Lg 08 28 31.2
comp=Z,49nm,0.8s
435B Jarrell 5.25 177 IAmb_Lg 08 28 29.9
comp=Z,53nm,0.9s
CCM Cathedral Cave 5.70 67 IAmb_Lg 08 28 46.7
comp=Z,65nm,0.9s
OZNA Ozona 5.77 209 IAmb_Lg 08 28 45.0
comp=Z,47nm,0.9s
OGNE Ogallala 5.88 328 IAmb_Lg 08 28 52.6
comp=Z,79nm,0.8s
PBMO Poplar Bluff 6.07 81 IAmb_Lg 08 28 53.8
comp=Z,70nm,0.9s
MNHN Monahans 6.19 222 IAmb_Lg 08 28 51.0
comp=Z,28nm,0.7s
FVM French Village 6.29 70 IAmb_Lg 08 28 58.7
comp=Z,45nm,0.8s
143A Socs Landing, 6.32 120 IAmb_Lg 08 29 11.8
comp=Z,39nm,0.8s
Q24A Divide 6.46 299 IAmb_Lg 08 29 12.2
comp=Z,40nm,0.7s
CGM3 Cape Girardeau 6.75 77 IAmb_Lg 08 29 12.4
comp=Z,61nm,0.9s
BRIGG Briggsdale 6.78 314 IAmb_Lg 08 29 23.6
comp=Z,37nm,0.7s
PECS Pecos 6.81 229 IAmb_Lg 08 29 22.1
comp=Z,36nm,0.7s
DRIO Del Rio 6.98 200 IAmb_Lg 08 29 20.6
comp=Z,34nm,1.0s
SAND Sanderson 7.02 211 IAmb_Lg 08 29 31.5
comp=Z,43nm,0.8s
ISCO Idaho Springs 7.16 304 IAmb_Lg 08 29 30.6
comp=Z,27nm,0.9s
ALPN Alpine 7.41 222 IAmb_Lg 08 29 35.9
comp=Z,30nm,0.9s
MNTX Cornudas Mount 7.58 237 IAmb_Lg 08 29 51.1
comp=Z,23nm,0.8s
PHWY Pilot Hill 7.91 314 IAmb_Lg 08 30 00.1
comp=Z,26nm,0.7s

IDC ***05*** *08:33:32.9±5.0,41.14S×15.43W,h0km,mb3.8/2,*

mbtmp3.8/2, MS3.5/14, Error ellipse: s-maj=259.0km s-min=36.2km az=137.0
NEIC ***05*** *08:33:41.9±0.8, 39.6°S×0.3×16.9°W×0.2, h10km±2km, mb4.3/6, Error ellipse: s-maj=42.9km s-min=20.0km az=180.0*
ISC 05 08:33:37.9±2.2, 40.1°S×16.4°W±0.4, h10km, n31, σ2s11/10, mb4.2/5, MS3.5/14, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**30.78**	**87**	LR		LR	LR	08 49 03.7	
	comp=Z,100nm,21.9s,baz=278,slow=31								
H10S2	**ASCENSION HYDR**	**31.03**	**3**	T		T	T	09 12 59.8	
	baz=182,slow=74,SNR=32								
H10S3	**ASCENSION HYDR**	**31.04**	**3**	T		T	T	09 13 00.3	
	baz=38,slow=74,SNR=66								
H10N1	**ASCENSION HYDR**	**32.14**	**3**	T		T	T	09 14 21.5	
	baz=181,slow=72,SNR=10								
H10N3	**ASCENSION HYDR**	**32.15**	**3**	T		T	T	09 14 21.7	
	baz=181,slow=72,SNR=79								
H10N2	**ASCENSION HYDR**	**32.16**	**3**	T		T	T	09 14 22.1	
	baz=181,slow=72,SNR=21								
TSUM	**Tsumeb**	**35.78**	**64**	LR		LR	LR	08 51 49.0	
	comp=Z,73nm,18.6s,baz=116,slow=31								
BOSA	**Boshof**	**35.91**	**85**	LR		LR	LR	08 53 09.1	
	comp=Z,54nm,18.1s,baz=204,slow=33								
CPUP	**Villa Florida**	**36.60**	**279**	LR		LR	LR	08 53 28.9	
	comp=Z,79nm,19.2s,baz=134,slow=32								
LBTB	**Lobatse**	**38.06**	**80**	LR		LR	LR	08 53 53.5	
	comp=Z,75nm,21.3s,baz=208,slow=32								
RCBR	**Riachuelo**	**38.37**	**328**	LR		LR	LR	08 54 45.6	
	comp=Z,49nm,19.3s,baz=257,slow=32								
PLCA	**Paso Flores**	**40.71**	**251**	P		**P**	**P**	**08 41 19.9**	**+1.1**
PLCA	**Paso Flores**	**40.71**	**251**	P		**P**	**P**	**08 41 17.8**	**-1.0**
	0.9nm,0.8s,baz=90,slow=4.0,SNR=3.2								
PLCA						LR	LR	08 56 22.1	
	comp=Z,66nm,19.5s,baz=143,slow=33								
	0.9nm,0.8s								
LL02	**Futaleuf**	**40.95**	**247**	P		**P**	**P**	**08 41 22.1**	**+1.5**
LL02						IAmb	IAmb	08 41 41.9	
	comp=Z,9.4nm,1.4s								
CO06	**Fray Jorge**	**45.41**	**264**	P		**P**	**P**	**08 41 58.4**	**+1.6**
LSZ	**Lusaka**	**45.92**	**70**	LR		LR	LR	08 58 18.0	
	comp=Z,39nm,19.6s,baz=258,slow=33								
LVC	**Limon Verde**	**47.45**	**275**	LR		LR	LR	09 00 22.1	
	comp=Z,32nm,20.7s,baz=160,slow=33								
H04S2	**CROZET ISLANDS**	**48.58**	**122**	T		T	T	09 34 37.8	
	baz=252,slow=75,SNR=4.7								
H04S3	**CROZET ISLANDS**	**48.58**	**122**	T		T	T	09 34 39.5	
	baz=252,slow=75,SNR=3.6								
H04S1	**CROZET ISLANDS**	**48.59**	**122**	T		T	T	09 34 37.9	
	baz=252,slow=75,SNR=6.1								
SAML	**Samuel**	**51.85**	**294**	P		**P**	**P**	**08 42 45.5**	**-1.0**
SAML						IAmb	IAmb	08 42 47.6	
	comp=Z,3.6nm,0.8s								
ETMB	**Extrema**	**53.41**	**290**	P		**P**	**P**	**08 42 56.7**	**-1.4**
ETMB						IAmb	IAmb	08 42 58.0	
	comp=Z,2.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**55.55**	**21**				**P**	**08 43 15.2**	**+1.7**
TORD						IAmb	IAmb	08 43 16.0	
	comp=Z,4.3nm,1.1s								
TORD	**Torodi Ar. Bea**	**55.55**	**21**	P		**P**	**P**	**08 43 15.1**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=190,slow=6.6,SNR=9.0								
	comp=Z,1.3nm,0.8s								
MDP	**Montagnes des**	**55.99**	**315**	LR		LR	LR	09 05 59.7	
	comp=Z,61nm,18.2s,baz=166,slow=34								
NNA	**Nana**	**59.86**	**280**	LR		LR	LR	09 09 12.0	
	comp=Z,38nm,20.0s,baz=156,slow=35								
ATAH	**Atahualpa**	**64.14**	**283**	LR		LR	LR	09 13 25.6	
	comp=Z,33nm,18.0s,baz=111,slow=37								
PCRV	**Puerto La Cruz**	**67.04**	**307**	LR		LR	LR	09 12 48.0	
	comp=Z,47nm,18.7s,slow=34								
ROSC	**El Rosal**	**69.40**	**296**	LR		LR	LR	09 13 27.9	
	comp=Z,113nm,21.0s,baz=108,slow=34								
YKA	**Yellowknife Ar**	**128.25**	**324**	PKP		**PKPdf**	**PKPdf**	**08 52 42.9**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=109,slow=2.0,SNR=12								
ILAR	**Eielson Array**	**142.48**	**328**	PKP		**PKPdf**	**PKPdf**	**08 53 06.0**	**-3.9**
	comp=Z,0.7nm,0.9s,baz=64,slow=2.1,SNR=5.9								

IDC 05 08:35:09.9±3.4, 54.25°N×87.32°E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=28.4km s-min=17.3km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**259**	I		I	I	08 43 10.0	
	0.1nm,0.8s,baz=80,slow=333,SNR=2.9								
ZALV	**Zalesovo Beam**	**1.50**	**259**	Pg		Pn	Pn	08 35 35.8	-2.3
	2.6nm,0.3s,baz=79,slow=14,SNR=25								
ZALV					Lg		Lg	08 35 57.3	
	2.2nm,0.3s,baz=78,slow=27,SNR=7.2								
KURBB	**Kurchatov Arra**	**6.49**	**239**	Pn		Pn	Pn	08 36 47.9	+1.4
	0.1nm,0.3s,baz=56,slow=14,SNR=3.1								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**8.12**	**205**	Pn		Pn	Pn	08 37 09.9	+0.9
	0.1nm,0.3s,baz=22,slow=13,SNR=4.3								
MKAR						Sn	Sn	08 38 42.3	+0.8
	0.1nm,0.3s,baz=27,slow=25,SNR=2.8								
MKAR						Lg	Lg	08 39 27.6	
	baz=28,slow=34,SNR=5.3								
	0.1nm,0.3s								

IDC 05 08:43:22.1±6.9, 20.39°S×172.61°E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=301.5km s-min=40.4km az=149.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.87**	**264**	P		P	P	08 50 24.2	+0.1
	0.3nm,0.9s,baz=96,slow=7.6,SNR=5.3								
	0.3nm,0.9s								
ASAR	**Alice Springs**	**35.95**	**258**	P		P	P	08 50 24.4	-0.3
	0.5nm,0.9s,baz=98,slow=7.0,SNR=4.3								
	0.5nm,0.9s								
ILAR	**Eielson Array**	**90.42**	**16**	P		P	P	08 56 25.1	0.0
	1.6nm,1.3s,baz=219,slow=5.6,SNR=4.1								
	1.6nm,1.3s								

IDC 05 08:43:29.3±2.9, 53.60N×87.79E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.2km s-min=15.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.80**	**283**	I		I	I	08 54 10.0	
	0.1nm,1.0s,baz=96,slow=336,SNR=6.7								
ZALV	**Zalesovo Beam**	**1.80**	**283**	Pn		Pn	Pn	08 44 01.6	+0.1
	1.7nm,0.3s,baz=102,slow=13,SNR=23								
ZALV					Lg		Lg	08 44 25.8	
	2.2nm,0.3s,baz=103,slow=28,SNR=20								
KURBB	**Kurchatov Arra**	**6.43**	**246**	Pn		Pn	Pn	08 45 06.6	+1.3
	0.1nm,0.3s,baz=61,slow=14,SNR=2.2								
KURBB						Lg	Lg	08 46 53.9	
	baz=64,slow=31,SNR=2.8								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**7.67**	**210**	Pn		Pn	Pn	08 45 23.0	+0.8
	0.1nm,0.3s,baz=31,slow=13,SNR=6.0								
MKAR						Sn	Sn	08 46 49.4	-0.4
	0.1nm,0.3s,baz=30,slow=26,SNR=3.7								
MKAR						Lg	Lg	08 47 32.4	
	baz=20,slow=29,SNR=3.5								
	0.1nm,0.3s								

IDC 05 08:51:30.0±2.6, 53.71N×86.80E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=24.6km s-min=12.7km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**282**	I		I	I	08 58 20.0	
	0.1nm,0.9s,baz=100,slow=340,SNR=9.2								
ZALV	**Zalesovo Beam**	**1.20**	**282**	Pg		Pg	Pg	08 51 51.6	-1.3
	1.8nm,0.3s,baz=103,slow=17,SNR=18								
ZALV					Lg		Lg	08 52 09.8	
	0.7nm,0.3s,baz=104,slow=27,SNR=4.5								
KURBB	**Kurchatov Arra**	**5.96**	**242**	Pn		Pn	Pn	08 53 00.3	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=2.6								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**7.51**	**204**	Pn		Pn	Pn	08 53 21.9	+1.2
	0.2nm,0.3s,baz=24,slow=13,SNR=9.4								
MKAR						Sn	Sn	08 54 47.0	+0.5
	0.1nm,0.3s,baz=27,slow=27,SNR=3.6								
MKAR						Lg	Lg	08 55 27.1	
	baz=19,slow=32,SNR=2.8								
	0.3nm,0.3s								

IDC ***05*** *08:58:26.8±6.9, 18.37S×175.07W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=297.8km s-min=36.9km az=142.0*
NEIC ***05*** *08:58:28.4±0.9, 18.1°S±0.1°×175.18W±0.07, h10km±2km, mb4.2/6, Error ellipse: s-maj=26.9km s-min=6.1km az=156.0*
ISC 05 08:58:28.1±1.0, 18.2°S±0.2°×175.2°W±0.1, h10km, n12, σ0s98/12, mb4.0/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.10**	**101**	Pn		**Pn**	**Pn**	**08 59 44.3**	**-0.3**
AFI	**Afiamalu**	**5.36**	**39**	Pn		**Pn**	**Pn**	**08 59 47.7**	**-0.6**
CTAO	**Charters Tower**	**36.40**	**261**	P		**P**	**P**	**09 05 32.3**	**-0.7**
WB0	**Warramunga Arr**	**47.54**	**260**	P		**P**	**P**	**09 07 05.3**	**+1.2**
WB0						IAmb	IAmb	09 07 26.5	
	comp=Z,6.4nm,1.4s								
WB2	**Warramunga Arr**	**47.56**	**259**	P		**P**	**P**	**09 07 03.7**	**-0.5**
WB2						IAmb	IAmb	09 07 28.5	
	comp=Z,7.5nm,1.3s								
WRA	**Warramunga Arr**	**47.57**	**259**	P		**P**	**P**	**09 07 04.2**	**-0.1**
WRA	**Warramunga Arr**	**47.57**	**259**	P		**P**	**P**	**09 07 04.9**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.6,SNR=30								
	comp=Z,0.5nm,0.3s								
AS31	**Alice Springs**	**47.64**	**254**	P		**P**	**P**	**09 07 03.8**	**-1.1**
AS31						IAmb	IAmb	09 07 21.8	
	comp=Z,1.0nm,1.1s								
ASAR	**Alice Springs**	**47.65**	**254**	P		**P**	**P**	**09 07 03.8**	**-1.2**
ASAR	**Alice Springs**	**47.65**	**254**	P		**P**	**P**	**09 07 06.0**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=92,slow=8.3,SNR=22								
	comp=Z,1.1nm,0.5s								
FITZ	**Fitzroy Crossi**	**55.98**	**260**	P		**P**	**P**	**09 08 06.7**	**-0.5**
FITZ						IAmb	IAmb	09 08 19.8	
	comp=Z,1.8nm,1.2s								
ILAR	**Eielson Array**	**85.48**	**12**	P		**P**	**P**	**09 11 06.8**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=222,slow=6.0,SNR=6.4								
	comp=Z,0.3nm,0.5s								

IDC ***05*** *09:06:41.6±0.6, 24.26°N×122.15°E, h0km, mb4.2/21, mbtmp4.1/25, ML3.5/3, MS3.6/18, Error ellipse: s-maj=18.2km s-min=13.3km az=72.0*
ASIES ***05*** *09:06:42.6, 24.14°N×121.78°E, h8km, ML4.6, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr=0.87; Mθθ=1.20; Mϕϕ2.07; Mrθ=-2.30; Mϕθ0.68; Mϕr=-1.85; Fault plane solution: M₀3.52068×10²² NP1:ϕs47.77000°, δ81.60000°, λ-61.14000°. NP2:ϕs152.61000°, δ29.96000°, λ-162.99000°. Principal axes: T Plg30.6180°, Azm114.3970°; N Plg28.5250°, Azm223.1620°; P Plg45.7190°, Azm347.0340°:*
TAP ***05*** *09:06:42.6, 24.14°N×121.78°E, h8km, ML4.6, C*
JMA ***05*** *09:06:43.2±0.1, 24.2°N±0.2°×121.8E±0.2, h0km, MD4.9/15, MV4.5/15, TAIWAN REGION*
NEIC ***05*** *09:06:44.3±2.2, 24.13N±0.02×121.78E±0.04, h10km±1km, mb4.7/68, Error ellipse: s-maj=7.3km s-min=2.9km az=114.0*
BJI ***05*** *09:06:45.0±0.0, 24.17N×121.83E, h4km, mb4.3/30, mB4.7/16, ML4.2/5, Ms4.6/23, Ms7 4.4/21*
ISC 05 09:06:44.0±0.7, 24.14N±0.01×121.80E±0.02, h8km±4km, n308, σ1s47/322, mb4.6/60, MS3.7/15, 42C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.17**	**276**	*i* P			**Pg**	**09 06 46.0**	**-1.4**
ETL				*i* S			**Sg**	**09 06 49.0**	**-0.8**
	baz=277								
EHP	**Heping Village**	**0.18**	**341**	*i* P			**Pg**	**09 06 46.6**	**-1.0**
	baz=350								
EHP				*i* S			**Sg**	**09 06 49.5**	**-0.7**
	baz=350								
NACB	**Ninganchiao**	**0.19**	**280**				**Pg**	**09 06 46.4**	**-1.5**
NACB	**Ninganchiao**	**0.19**	**280**	P			**Pg**	**09 06 46.7**	**-1.2**
NACB	**Ninganchiao**	**0.19**	**280**	⇑ *i* P			**Pg**	**09 06 46.4**	**-1.5**
	baz=281								
NACB				*i* S			**Sg**	**09 06 49.5**	**-1.1**
	baz=281								
EAHA	**Aohua**	**0.20**	**343**	⇓ *i* P			**Pg**	**09 06 46.8**	**-1.2**
	baz=348								
EAHA				S			**Sg**	**09 06 50.4**	**-0.3**
	baz=348								
TWD	**Chiawan**	**0.20**	**252**	⇑ *i* P			**Pg**	**09 06 46.7**	**-1.3**
	baz=259								
TWD				*e* S			**Sg**	**09 06 50.2**	**-0.5**
	baz=259								
HWA	**Hwalien**	**0.24**	**228**	P			**Pg**	**09 06 48.4**	**-0.4**
	baz=298								
ENA	**Nanau**	**0.29**	**349**	⇓ *i* P			**Pg**	**09 06 48.6**	**-1.1**
	baz=353								
ENA				S			**Sg**	**09 06 53.2**	**-0.5**
	baz=353								
ETLH	**Xiulin Townshi**	**0.30**	**283**	⇑ *i* P			**Pg**	**09 06 48.6**	**-1.4**
	baz=279								
ETLH				S			**Sg**	**09 06 52.9**	**-1.1**
	baz=279								
EWUT	**Wuta**	**0.30**	**356**	⇓ P			**Pg**	**09 06 49.1**	**-0.8**
	baz=358								
EWUT				S			**Sg**	**09 06 53.4**	**-0.7**
	baz=358								
ETM	**Tongmen**	**0.33**	**238**	⇑ P			**Pg**	**09 06 49.4**	**-1.2**
	baz=239								
ETM				S			**Sg**	**09 06 55.1**	**+0.2**
	baz=239								
LXIB	**Xiulin Townshi**	**0.38**	**252**	⇑ *i* P			**Pg**	**09 06 50.0**	**-1.4**
	baz=253								
LXIB				*i* S			**Sg**	**09 06 56.0**	**-0.4**
	baz=253								
SHUL	**Shoufeng**	**0.42**	**212**	P			**Pg**	**09 06 52.4**	**+0.4**
	baz=210								
ESAO	**Su ao**	**0.43**	**5**	⇓ *i* P			**Pg**	**09 06 51.5**	**-0.9**
	baz=359								
ESAO				*e* S			**Sg**	**09 06 58.2**	**+0.1**
	baz=359								
LATG	**Datong**	**0.47**	**327**	⇓ *e* P			**Pg**	**09 06 51.9**	**-1.2**
	baz=330								
LATG				S			**Sg**	**09 06 57.9**	**-1.3**
	baz=330								
TWC	**Suao**	**0.47**	**5**	⇓ *i* P			**Pg**	**09 06 52.2**	**-0.8**
	baz=1.0								
TWC				S			**Sg**	**09 06 59.7**	**+0.5**
	baz=1.0								
EOS4	**EOS4**	**0.47**	**92**	*e* P			**Pn**	**09 06 55.9**	**-0.8**
	baz=91								
ESL	**Shilin**	**0.47**	**226**	⇑ *i* P			**Pg**	**09 06 52.0**	**-1.1**
	baz=236								
ESL				*e* S			**Sg**	**09 06 59.2**	**-0.1**
	baz=236								
EOS2	**EOS2**	**0.48**	**55**	⇓ *e* P			**Pg**	**09 06 54.1**	**+0.9**
	baz=32								
NNSB	**Datong**	**0.48**	**307**	⇑ *i* P			**Pg**	**09 06 52.2**	**-1.1**
	baz=310								
NNSB				*i* S			**Sg**	**09 06 58.2**	**-1.4**
	baz=310								
NNSH	**Datong**	**0.48**	**307**	⇑ *i* P			**Pg**	**09 06 52.2**	**-1.1**
	baz=309								
NNSH				*i* S			**Sg**	**09 06 58.2**	**-1.4**
	baz=309								
EOS3	**EOS3**	**0.49**	**73**	*e* P			**Pb**	**09 06 54.6**	**-0.1**
	baz=52								
WHF	**Hehuan Shan**	**0.49**	**271**	⇑ *i* P			**Pg**	**09 06 52.3**	**-1.3**
	baz=274								
WHF				*e* S			**Sg**	**09 06 59.0**	**-1.1**
	baz=274								
NNS	**Nan Shan**	**0.49**	**307**	⇑ *i* P			**Pg**	**09 06 52.5**	**-1.1**
	baz=310								
NNS				*i* S			**Sg**	**09 06 58.9**	**-1.1**
	baz=310								
TEGC	**Jichi Village**	**0.49**	**209**	*e* P			**Pg**	**09 06 54.4**	**+0.8**
	baz=207								
NDS	**Dongshan**	**0.50**	**351**	P			**Pg**	**09 06 52.7**	**-0.9**
	baz=1.0								
FUSS	**Fushou**	**0.52**	**282**	⇑ *i* P			**Pg**	**09 06 53.1**	**-1.0**
	baz=285								
FUSS				*e* S			**Sg**	**09 07 00.4**	**-0.7**
	baz=285								
NDT	**Datong Townshi**	**0.53**	**330**	⇓ *i* P			**Pg**	**09 06 53.4**	**-0.8**
	baz=332								
NDT				S			**Sg**	**09 07 00.6**	**-0.6**
	baz=332								
ENTT	**Nioudou**	**0.54**	**336**	⇓ *i* P			**Pg**	**09 06 53.6**	**-0.9**
	baz=339								
ENTT				S			**Sg**	**09 07 01.1**	**-0.5**
	baz=339								
WARBT	**Fenglin Townsh**	**0.57**	**222**	⇑ *i* P			**Pg**	**09 06 53.9**	**-1.1**
	baz=233								
WARBT				*e* S			**Sb**	**09 07 04.5**	**0.0**
	baz=233								
CHGB	**Renai**	**0.58**	**262**	⇑ *i* P			**Pg**	**09 06 54.2**	**-1.1**
	baz=266								
CHGB				*e* S			**Sg**	**09 07 02.1**	**-0.8**
	baz=266								
EGFH	**Guangfu**	**0.58**	**216**	*e* P			**Pg**	**09 06 54.8**	**-0.4**
	baz=232								
TWT	**Tachien**	**0.58**	**281**	⇑ *i* P			**Pg**	**09 06 54.6**	**-0.7**
	baz=282								
TWT				*e* S			**Sg**	**09 07 02.5**	**-0.5**
	baz=282								
TWE	**Neicheng**	**0.59**	**348**	⇓ P			**Pg**	**09 06 54.5**	**-0.9**
	baz=350								
TWE				*e* S			**Sg**	**09 07 03.1**	**0.0**
	baz=350								
TDCB	**Techi**	**0.60**	**281**	⇑ *i* P			**Pg**	**09 06 54.7**	**-0.9**
	baz=282								
TDCB				*e* S			**Sg**	**09 07 01.7**	**-1.8**
	baz=282								
OWD	**Renai**	**0.60**	**252**	⇑ P			**Pg**	**09 06 54.4**	**-1.2**
	baz=263								
ILA	**Ilan**	**0.62**	**355**	*e* P			**Pg**	**09 06 55.3**	**-0.7**
	baz=348								
WUSB	**Renai**	**0.65**	**257**	⇑ *i* P			**Pg**	**09 06 55.4**	**-1.1**
	baz=260								
FUSB	**Fushanzhiwuyua**	**0.65**	**342**	⇓ P			**Pg**	**09 06 55.7**	**-0.8**
	baz=343								
FUSB				*e* S			**Sg**	**09 07 03.8**	**-1.1**
	baz=343								
YHNB	**Yeheng**	**0.66**	**324**				**Pg**	**09 06 56.0**	**-0.7**
YHNB	**Yeheng**	**0.66**	**324**	P			**Pg**	**09 06 56.2**	**-0.4**
YHNB	**Yeheng**	**0.66**	**324**	⇓ *i* P			**Pg**	**09 06 55.9**	**-0.7**
	baz=325								
YHNB				S			**Sg**	**09 07 04.2**	**-1.0**
	baz=325								
NSK	**Sanguang**	**0.67**	**323**	⇓ *i* P			**Pg**	**09 06 56.0**	**-0.9**
	baz=325								
NSK				S			**Sg**	**09 07 05.0**	**-0.7**
	baz=325								
NWLT	**Wulai**	**0.69**	**337**	*e* P			**Pg**	**09 06 56.5**	**-0.7**
	baz=338								
NWLT				S			**Sg**	**09 07 05.3**	**-1.0**
	baz=338								
VWDT	**VWDT**	**0.72**	**238**	⇑ P			**Pg**	**09 06 56.9**	**-1.0**
	baz=240								
VWDT				*e* S			**Sg**	**09 07 07.7**	**+0.5**
	baz=240								
HGSD	**Ruisui**	**0.73**	**208**	*e* P			**Pg**	**09 06 58.3**	**+0.2**
	baz=194								
EHY	**Hungye**	**0.77**	**215**	P			**Pg**	**09 06 57.9**	**-0.9**
	baz=214								
WPL	**Puli Township**	**0.79**	**261**	*e* P			**Pg**	**09 06 58.5**	**-0.6**
	baz=253								
WPL				*e* S			**Sg**	**09 07 09.4**	**+0.1**
	baz=253								
NFF	**Wufeng Townshi**	**0.79**	**308**	⇑ P			**Pg**	**09 06 58.5**	**-0.7**
	baz=304								
WHP	**Taichung City**	**0.80**	**280**	⇑ *i* P			**Pg**	**09 06 58.7**	**-0.6**
	baz=282								
WHP				S			**Sg**	**09 07 09.2**	**-0.5**
	baz=282								
DPDB	**Guoxing**	**0.81**	**263**	⇑ *i* P			**Pg**	**09 06 58.7**	**-0.8**
	baz=267								
WCS	**Beigang Elemen**	**0.82**	**264**	⇑ P			**Pg**	**09 06 58.8**	**-0.9**
	baz=269								
TIPB	**Shuangxi**	**0.83**	**1**	⇓ *i* P			**Pg**	**09 06 59.0**	**-0.9**
	baz=10.0								
SSLB	**Suanglung**	**0.85**	**246**	Pg			**Pg**	**09 06 59.2**	**-1.2**
SSLB	**Suanglung**	**0.85**	**246**	P			**Pg**	**09 06 59.4**	**-1.0**
SSLB	**Suanglung**	**0.85**	**246**	⇑ P			**Pg**	**09 06 59.1**	**-1.2**
	baz=259								
SSLB				*e* S			**Sg**	**09 07 11.8**	**+0.3**
	baz=259								
NHDH	**Xindian Distri**	**0.86**	**343**	⇓ P			**Pg**	**09 06 59.8**	**-0.7**
	baz=344								
TWA	**Mucha**	**0.86**	**347**	⇓ *i* P			**Pg**	**09 06 59.9**	**-0.6**
	baz=338								
SMLT	**Sun Moon Lake**	**0.87**	**253**	⇑ *i* P			**Pg**	**09 06 59.6**	**-1.0**
	baz=255								
SMLT				*e* S			**Sg**	**09 07 12.0**	**+0.1**
	baz=255								
LIOB	**Emei**	**0.88**	**305**	⇑ *i* P			**Pg**	**09 07 00.4**	**-0.5**
	baz=307								
LIOB				*e* S			**Sg**	**09 07 11.9**	**-0.4**
	baz=307								
YULB	**Yu-li**	**0.88**	**212**				**Pg**	**09 07 00.1**	**-0.7**
YULB	**Yu-li**	**0.88**	**212**	P			**Pg**	**09 07 00.1**	**-0.7**
YULB	**Yu-li**	**0.88**	**212**	*e* P			**Pg**	**09 06 59.5**	**-1.3**
	baz=227								
YULB				*e* S			**Sb**	**09 07 14.1**	**+0.8**
	baz=227								
NSTT	**Nanjuang**	**0.88**	**304**	⇑ *i* P			**Pg**	**09 07 00.3**	**-0.6**
	baz=306								
NSTT				*e* S			**Sg**	**09 07 11.6**	**-0.7**
	baz=306								
TATO	**Taipei**	**0.88**	**341**				**Pg**	**09 07 00.3**	**-0.6**
TATO	**Taipei**	**0.88**	**341**	P			**Pg**	**09 07 00.7**	**-0.2**
TATO	**Taipei**	**0.88**	**341**	⇓ P			**Pg**	**09 07 00.3**	**-0.6**
	baz=342								
TATO				S			**Sg**	**09 07 11.3**	**-1.0**
	baz=342								
TWB1	**Santiao Chiao**	**0.88**	**11**	*e* P			**Pg**	**09 07 00.3**	**-0.6**
	baz=4.0								
NJD	**Zhudong**	**0.88**	**312**	*e* P			**Pb**	**09 07 01.4**	**-0.1**
	baz=322								
ECBN	**Changbin**	**0.88**	**202**	*e* P			**Pg**	**09 07 00.7**	**-0.3**
	baz=187								
TYC	**Yuchr**	**0.90**	**255**	⇑ *i* P			**Pg**	**09 06 60.0**	**-1.2**
	baz=260								
EYUL	**Yuli**	**0.91

baz=276
WJS Zhushan 1.03 252 *e*P Pg 09 07 03.3 -0.6
baz=258
FULB Fuli 1.05 207 *e*P Pg 09 07 03.5 -0.7
baz=193
WNT1 Nantou City 1.05 257 *e*P Pg 09 07 04.0 -0.2
baz=263
WNT Mingjian 1.06 256⇑*e*P Pb 09 07 03.8 -0.7
baz=254
NWRT Kuosheng 1.06 353 *e*P Pb 09 07 03.8 -0.9
baz=353
NTST Danshui 1.07 342 *e*P Pb 09 07 04.5 -0.2
baz=344
ANP Anpu 1.07 346⇓*e*P Pg 09 07 03.8 -0.8
baz=348
WDJ Dajia District 1.08 281⇑*e*P Pg 09 07 05.0 +0.2
baz=286
JYNG Yonagunijimaku 1.09 73 *e*P Pg 09 07 05.3 +0.5
JYNG Yonagunijimaku 1.09 73 A A 09 07 05.3
comp=E,19nm,1.6s,comp=N,29nm,3.8s
NHW Xinwu Township 1.10 322 *e*P Pb 09 07 04.5 -0.8
baz=324
ALS Alishan 1.11 236⇑*i*P Pg 09 07 04.4 -0.9
baz=239
ALS *e*S Sn 09 07 21.8 +0.1
baz=239
CHKT Chengkung 1.11 201 *e*P Pb 09 07 03.7 -1.8
baz=189
EHD Haiduan 1.13 209 *e*P Pb 09 07 04.4 -1.4
baz=228
WYL Yuanlin Townsh 1.13 261 *e*P Pb 09 07 04.7 -1.1
baz=269
WCHH Zhanghua 1.14 267 *e*P Pb 09 07 05.4 -0.5
baz=274
TWY Chenhua 1.15 351 *e*P Pb 09 07 05.1 -0.9
baz=352
YOJ Yonaguni jima 1.15 74 Pg 09 07 06.3 +0.4
YOJ Yonaguni jima 1.15 74 P Pg 09 07 07.2 +1.2
YOJ Yonaguni jima 1.15 74 *e*P Pb 09 07 05.0 -1.0
baz=56
YOJ Yonaguni jima 1.15 74 P Pb 09 07 06.2 +0.2
YOJ *e*S Sn 09 07 22.5 +0.4
YOJ Yonaguni jima 1.15 74 A A 09 07 06.2
comp=E,20nm,6.8s,comp=N,20nm,5.8s
NSM Shimen 1.16 350 *e*P Pb 09 07 04.0 -2.3
baz=341
CHN5 Tsauling 1.16 242⇑*i*P Pb 09 07 06.0 -0.4
baz=250
ECS Chishang 1.17 207 *e*P Pb 09 07 06.2 -0.3
baz=208
ELDTW Lidau 1.19 217 *e*P Pb 09 07 05.1 -1.7
baz=201
WGK Gukeng 1.22 248⇑*e*P Pn 09 07 07.1 -0.2
baz=258
WDLH Douliu 1.24 249 *e*P Pb 09 07 07.7 0.0
baz=258
WCKO Fanlu 1.30 238⇑*e*P Pb 09 07 08.6 -0.1
baz=234
WCKO *e*S Sg 09 07 27.4 +1.5
baz=234
WRL Guolierlin Hig 1.33 260⇑*e*P Pb 09 07 09.0 -0.1
baz=269
RLNB Erlin 1.34 260 *e*P Pn 09 07 09.1 +0.1
baz=268
STYH Taoyuan 1.35 224 *e*P Pn 09 07 07.9 -1.2
baz=232
CHN2 Minshiung 1.36 244 *e*P Pb 09 07 09.5 -0.2
baz=254
CHN4 Tsaushan 1.36 235⇑*i*P Pb 09 07 09.6 -0.1
baz=243
TPUB Ta-pu 1.36 232 Pn 09 07 09.5 +0.2
TPUB Ta-pu 1.36 232 P Pb 09 07 09.9 +0.2
TPUB Ta-pu 1.36 232⇑*i*P Pn 09 07 09.3 0.0
baz=238
TPUB S Sg 09 07 28.0 +0.2
baz=238
STYT Tauyuan 1.37 225 P Pn 09 07 08.6 -0.8
baz=232
WTK Tuku 1.37 251 *e*P Pn 09 07 09.0 -0.3
baz=261
LONT Longtian 1.38 207 *e*P Pn 09 07 08.1 -1.3
baz=207
WTP Ta-pu 1.41 231⇓*e*P Pn 09 07 09.7 -0.2
baz=238
WTCT Ta-ch'eng 1.42 259 *e*P Pn 09 07 09.7 -0.3
baz=268
TWG Pinlang 1.48 207 Pn 09 07 08.6 -2.2
TWG Pinlang 1.48 207 *e*P Pn 09 07 08.2 -2.6
baz=207
TWGBT Beinan 1.48 207 P Pn 09 07 09.0 -1.8
TWGBT Beinan 1.48 207 *e*P Pn 09 07 08.1 -2.7
baz=207
TWK Hsinying 1.49 234 P Pb 09 07 11.7 -0.2
baz=242
LDUT Ludao 1.49 192 *e*P Pn 09 07 08.8 -2.3
baz=176
PCYT Pengchaiyu 1.50 9 *e*P Pn 09 07 11.4 +0.2
baz=7.0
TTN Taitung 1.51 204 *e*P Pn 09 07 10.5 -0.7
baz=195
CHN1 Nanshi 1.51 231⇑*e*P Pb 09 07 12.1 -0.1
baz=240
SNST Tainan City 1.51 233 *e*P Pb 09 07 11.9 -0.3
baz=241
WSF Szhu 1.53 251 *e*P Pn 09 07 11.7 +0.2
baz=256
WSF *e*S Sg 09 07 33.9 +0.7
baz=256
SGST Jiashian 1.54 227 *e*P Pn 09 07 11.0 -0.7
baz=232
SGST *e*S Sg 09 07 35.4 +1.9
baz=232
SLGT Liugui 1.56 223 *e*P Pn 09 07 12.4 +0.4
baz=209
ICHU Yijhu 1.60 241 *e*P Pn 09 07 12.8 +0.3
baz=252
CHN8 Yiju 1.66 242 *e*P Pn 09 07 13.0 -0.3
baz=253
CHN3 Shinhua 1.69 232 *e*P Pn 09 07 14.4 +0.6
baz=244
ECL Taimali 1.72 207 *e*P Pn 09 07 12.4 -1.8
baz=193
SCST Cishan 1.73 224 *e*P Pn 09 07 14.8 +0.4
baz=216
SHHT Tainan City 1.74 230 *e*P Pb 09 07 15.6 -0.5
baz=243
SSD Sandimen 1.76 218 *e*P Pn 09 07 13.8 -0.9
baz=207
SCLT Jiali 1.76 237 *e*P Pn 09 07 14.0 -0.8
baz=249
IRIF Iriomote-Funau 1.77 83 P Pn 09 07 15.2 +0.4
IRIF *e*S Sb 09 07 39.2 +0.2
IRIF Iriomote-Funau 1.77 83 A A 09 07 15.2
comp=E,12nm,2.6s,comp=N,26nm,1.8s
TSMG Majia 1.78 217 *e*P Pn 09 07 15.2 +0.1
baz=207
TWM1 Shoushan 1.82 224 *e*P Pb 09 07 17.5 -0.1
baz=225
HATJ Hateruma jima 1.83 92 P Pn 09 07 16.0 +0.3
HATJ *e*S Sb 09 07 40.3 -0.5
HATJ Hateruma jima 1.83 92 A A 09 07 16.0
comp=E,26nm,3.6s,comp=N,39nm,2.9s
SGLT Jiouru 1.85 221 *e*P Pn 09 07 16.6 +0.5
baz=210
MASBT Mashibuluo 1.86 215 *e*P Pn 09 07 15.9 -0.2
baz=204
EAST Anshuo 1.96 207 *e*P Pn 09 07 16.5 -1.0
baz=194
TAWH Dawu Township 1.98 205 *e*P Pn 09 07 18.9 +1.2
baz=205
JKRS Kuro-shima 2.02 87 P Pn 09 07 19.0 +0.7
JKRS Kuro-shima 2.02 87 A A 09 07 19.0
comp=E,33nm,3.4s,comp=N,31nm,4.0s
SCZT Fangliau 2.07 212 *e*P Pn 09 07 19.2 +0.2
baz=197
SLIU Shizi 2.13 206 *e*P Pn 09 07 19.6 -0.2
baz=194
PHUB P'eng-hu 2.14 253 *e*P Pn 09 07 19.1 -0.8
baz=265
PNG Penghu 2.14 255 *e*P Pn 09 07 20.3 +0.4
baz=266
LYUB Lan-yu 2.14 185 *e*P Pn 09 07 16.5 -3.4
baz=185
JIJ Ishigaki jima 2.15 84 P Pn 09 07 20.3 +0.3
WDGT Dungji 2.15 246 *e*P Pn 09 07 19.9 -0.2
baz=258
VWUC VWUC 2.31 292 *e*P Pn 09 07 22.6 +0.4
baz=297

JISG Ishigakijimahi 2.33 79 P Pn 09 07 23.0 +0.5
VCHM Qimei 2.37 247 *e*P Pn 09 07 23.2 +0.1
baz=243
TWK1 Hengchun 2.37 203 *e*P Pn 09 07 23.7 +0.6
baz=192
TWKBT Hengchun 2.37 203 *e*P Pn 09 07 22.0 -1.2
baz=192
PTMZ Houxiangcun 2.60 291 *e*P Pn 09 07 26.3 0.0
baz=296
MATB Ma-tsu 2.62 320 *e*P Pn 09 07 26.8 +0.3
baz=322
JTJ Tarama 2.69 79 *e*P Pb 09 07 30.2 -2.2
LYJJ Jianjiangzhen 3.03 323 *e*P Pn 09 07 32.1 0.0
baz=324
QZH Quanzhou 3.03 286⇑*i*Pn Pn 09 07 32.2 0.0
QZH Sn Sn 09 08 06.4 -2.3
QZH smax smax
comp=N,830nm,0.9s
QZH smax smax
comp=N,440nm,0.8s
KNM Kinmen 3.09 276 *e*P Pn 09 07 34.2 +1.3
baz=283
KNMB Chin-men Tao 3.13 277 Pn Pn 09 07 33.4 -0.2
KNMB Chin-men Tao 3.13 277 *e*P Pn 09 07 33.5 -0.1
baz=284
XPSS Dashiqiu 3.14 333 *e*P Pn 09 07 33.9 +0.2
baz=333
MHZQ Yeshan 3.18 308 *e*P Pn 09 07 34.5 +0.2
baz=311
JMJ Miyako jima 2 3.25 77 P Pb 09 07 38.9 -3.0
JMJ Miyako jima 2 3.25 77 *e*P Pn 09 07 37.1 +1.9
baz=72
JMJ2 Miyako jima3 3.27 79 *e*P Pn 09 07 36.9 +1.4
JMJ2 *e*S Sn 09 08 17.9 +3.4
AXDP Jialang 3.57 283 *e*P Pn 09 07 39.4 -0.3
baz=289
ZPLA Ao Xicun 3.71 268 *e*P Pn 09 07 41.6 0.0
baz=277
DSXP Dongshan 4.03 265 *e*P Pn 09 07 45.9 -0.1
baz=275
SXFK Yanhouchang 4.38 302 *e*P Pn 09 07 51.6 +0.7
baz=304
JOW Kunigami 6.43 64 Pn Pn 09 08 14.4 -4.6
comp=N,3.7nm,0.3s,baz=100,slow=19,SNR=2.6
comp=N,23nm,0.8s
SSE Sheshan 6.95 356 Pn Pn 09 08 26.0 -0.1
SSE Sn Sn 09 09 48.1 +2.8
SSE LR LR
comp=N,230nm,12.7s
SSE LR LR
comp=N,920nm,12.6s
WHN Wuhan 9.19 316 *e*P Pn 09 09 03.2 +6.3
WHN S Sn 09 10 48.7 +8.2
WHN LR LR
comp=N,6μm,7.7s
WHN LR LR
comp=N,7μm,9.8s
WHN LR LR
comp=N,8μm,8.6s
TGY Tagaytay City 10.02 185 Pn Pn 09 09 10.1 +1.7
comp=N,50nm,0.3s,baz=17,slow=20,SNR=1.7
TGY LR LR 09 13 54.7
comp=N,338nm,18.4s,baz=58,slow=43
GULI GuiLin 10.46 279 ⇑P Pn 09 09 22.8 +8.5
GULI S Sn 09 11 18.5 +6.8
GULI LR LR
comp=N,2μm,8.1s
GULI LR LR
comp=N,2μm,9.5s
GULI LR LR
comp=N,3μm,9.5s
JNU Nakatsue 11.98 40 Pn Pn 09 09 30.8 -4.2
comp=N,0.3nm,0.3s,baz=3.2,slow=22,SNR=2.3
JNU LR LR 09 14 34.5
comp=N,165nm,20.5s,baz=220,slow=40
comp=N,20nm,1.1s
KSAR Wonju Array Be 14.24 20 Pn Pn 09 10 05.8 -0.2
KSRS Korea Array 14.27 20 Pn Pn 09 10 03.5 -2.7
comp=N,1.1nm,0.7s,baz=201,slow=14,SNR=2.1
KSRS LR LR 09 16 12.5
comp=N,281nm,20.5s,baz=190,slow=41
KS19 Wonju Array Si 14.29 20 Pn Pn 09 10 08.2 +1.5
HNS HongShan 14.55 337 ⇓P P 09 10 18.7 +2.0
HNS *e*S S 09 13 05.7 -5.4
HNS pmax pmax
comp=N,6.0nm,0.5s
HNS LR LR
comp=N,790nm,13.5s
HNS LR LR
comp=N,1μm,14.3s
HNS LR LR
comp=N,600nm,12.2s
XAN Xi'an 14.96 314 ⇓P P 09 10 26.9 +5.5
XAN pP Pn 09 10 32.5 +17
XAN S Sn 09 13 07.5 +5.9
XAN pmax pmax
comp=Z,11nm,1.1s
XAN pmax pmax
comp=Z,290nm,5.6s
XAN LR LR
comp=N,2μm,12.0s
XAN LR LR
comp=E,1μm,10.7s
XAN LR LR
comp=Z,2μm,10.3s
JCJ Chichijima 18.61 77 LR LR 09 16 46.1
comp=Z,123nm,21.9s,baz=12,slow=33
MJAR Matsushiro Arr 18.76 45 P P 09 10 58.4 -5.0
baz=286,slow=17,SNR=2.3
comp=Z,0.6nm,0.5s
BTO Baotou 19.17 332 *e*P Pn 09 11 13.0 +4.2
BTO pP pwP 09 11 15.9 +3.9
BTO sP sP 09 11 20.2 +9.5
BTO PP PnPn 09 11 29.3 +7.7
BTO pmax pmax
comp=Z,10.0nm,1.0s
BTO pmax pmax
comp=Z,520nm,5.4s
BTO LR LR
comp=Z,2μm,10.1s
BTO LR LR
comp=Z,2μm,12.0s
BTO LR LR
comp=Z,1μm,10.2s
LZH Lanzhou 19.54 312 *e*P Pn 09 11 20.7 +7.3
LZH pmax pmax
comp=Z,18nm,1.2s
XLT XiLinHaoTe 20.26 348 *e*P Pn 09 11 22.2 +0.4
XLT pP sP 09 11 26.5 +3.8
XLT sP pP 09 11 30.2 +8.4
XLT PP PnPn 09 11 41.2 +4.6
XLT pmax pmax
comp=Z,18nm,0.9s
XLT pmax pmax
comp=Z,210nm,5.0s
JMM Marumori 21.21 45 P P 09 11 29.9 -0.1
JMM IAmb IAmb 09 12 07.8
comp=Z,35nm,1.2s
USRK Ussuriysk Ar. 21.68 20 P P 09 11 30.5 -4.5
comp=Z,2.0nm,0.7s,baz=96,slow=15,SNR=5.1
USRK LR LR 09 20 40.5
comp=Z,85nm,18.2s,baz=199,slow=39
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 22.02 260 P P 09 11 41.9 +2.9
comp=Z,0.8nm,0.3s,baz=262,slow=18,SNR=5.9
CMAR LR LR 09 21 47.0
comp=Z,200nm,19.3s,baz=90,slow=40
comp=Z,0.8nm,0.3s
GTA Gaotai 24.02 315 *e*P P 09 12 01.0 +1.6
GTA pP pwP 09 12 05.6 +1.8
GTA pmax pmax
comp=Z,3.0nm,1.0s
GUMO Guam 24.18 112 LR LR 09 20 16.0
comp=Z,83nm,20.5s,baz=10,slow=34
GOMU GeErMu 26.15 304 P P 09 12 26.8 +7.6
GOMU pmax pmax
comp=Z,5.0nm,0.7s
GOMU LR LR
comp=Z,970nm,14.0s
GOMU LR LR
comp=Z,400nm,14.1s
GOMU LR LR
comp=Z,460nm,14.6s
ASAJ Asahikawa 26.20 35 LR LR 09 22 49.2
comp=Z,180nm,19.7s,baz=170,slow=37
KLR Kul'dur 26.23 15 LR LR 09 22 46.1
comp=Z,162nm,18.8s,baz=190,slow=37

ULN Ulaanbaatar 26.42 337 P P 09 12 21.3 +0.1
HEH HeiHe 26.43 8 *e*P P 09 12 23.2 +2.1
HEH pmax pmax
comp=Z,9.0nm,0.8s
HEH pmax pmax
comp=Z,220nm,4.2s
SONM Songino Array 26.63 336 P P 09 12 22.6 -0.5
SONM Songino Array 26.63 336 P P 09 12 22.8 -0.3
comp=Z,4.4nm,1.0s,baz=151,slow=9.1,SNR=22
SONM LR LR 09 24 20.1
comp=Z,231nm,18.2s,baz=170,slow=40
comp=Z,4.4nm,1.0s
LSA Lhasa 27.84 288 P P 09 12 36.8 +2.3
EDFI Ende, Flores 32.69 180 P P 09 13 15.9 -1.1
comp=Z,9.7nm,0.7s
YAK Yakutsk 38.25 6 LR LR 09 30 49.1
comp=Z,95nm,18.9s,baz=147,slow=38
MK31 Makanchi Array 38.76 316 P P 09 14 09.6 +0.8
MKAR Makanchi Array 38.76 316 P P 09 14 09.6 +0.9
MKAR Makanchi Array 38.76 316 P P 09 14 09.5 +0.6
comp=Z,3.0nm,0.7s,baz=100,slow=11,SNR=18
comp=Z,3.0nm,0.7s
MAKZ Makanchi 38.97 316 P P 09 14 10.7 +0.1
PETK Petropavlovsk- 39.59 34 LR LR 09 31 00.8
comp=Z,98nm,18.6s,baz=217,slow=37
ZAA0 Zalesovo Array 40.59 327 P P 09 14 24.5 +0.6
ZALV Zalesovo Beam 40.59 327 P P 09 14 24.2 +0.3
ZALV Zalesovo Beam 40.59 327 P P 09 14 23.1 -0.8
comp=Z,2.9nm,0.7s,baz=122,slow=7.9,SNR=11
comp=Z,2.9nm,0.7s
MA2 Magadan 40.81 22 LR LR 09 32 52.8
comp=Z,106nm,18.2s,baz=222,slow=39
KSH Kashi 41.40 303 P P 09 14 36.4 +5.4
KSH sP pwP 09 14 43.6 +8.4
KSH pmax pmax
comp=Z,3.0nm,1.1s
KURBB Kurchatov Arra 42.51 320 P P 09 14 39.7 0.0
comp=Z,0.6nm,0.5s,baz=108,slow=9.2,SNR=2.3
comp=Z,0.6nm,0.5s
PALK Palekele 42.77 254 LR LR 09 34 38.1
comp=Z,44nm,18.1s,baz=179,slow=39
AAK Ala-Archa 42.98 307 LR LR 09 33 04.9
comp=Z,89nm,19.3s,baz=94,slow=37
COEN Coen 43.24 149 P P 09 14 46.6 +0.6
COEN IAmb IAmb 09 14 50.3
comp=Z,14nm,0.9s
WB0 Warramunga Arr 45.33 163 P P 09 15 01.3 -1.4
WB0 IAmb IAmb 09 15 07.0
comp=Z,11nm,1.2s
PSA00 Pilbara Seismi 45.48 183 P P 09 15 04.1 +0.3
WRA Warramunga Arr 45.49 163 P P 09 15 02.0 -1.9
comp=Z,4.1nm,0.8s,baz=344,slow=8.7,SNR=13
comp=Z,4.1nm,0.8s
WB2 Warramunga Arr 45.49 163 P P 09 15 04.0 +0.1
WB2 IAmb IAmb 09 15 07.9
comp=Z,8.5nm,0.8s
WR0 Warramunga Arr 45.56 163 P P 09 15 02.8 -1.7
WR0 IAmb IAmb 09 15 08.4
comp=Z,8.2nm,0.8s
TIXI Tiksi 47.71 3 P P 09 15 19.3 -1.4
TIXI Tiksi 47.71 3 LR LR 09 38 06.8
comp=Z,128nm,18.9s,baz=192,slow=40
BVAR Borovoye Array 48.06 321 P P 09 15 22.1 -1.6
comp=Z,2.7nm,0.6s,baz=101,slow=7.7,SNR=8.1
comp=Z,2.7nm,0.6s
ASAR Alice Springs 48.95 165 P P 09 15 31.1 +0.2
ASAR Alice Springs 48.95 165 P P 09 15 30.2 -0.7
comp=Z,2.2nm,0.8s,baz=343,slow=7.0,SNR=16
comp=Z,2.2nm,0.8s
NRIK Noril'sk 49.59 345 P P 09 15 34.1 -1.2
comp=Z,1.0nm,0.3s,baz=113,slow=3.7,SNR=4.2
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 53.88 314 P P 09 16 08.4 +0.8
ABKAR Akbulak array 53.88 314 P P 09 16 08.3 +0.8
AKTO Aktyubinsk 55.20 316 P P 09 16 17.6 +0.4
comp=Z,1.5nm,0.8s,baz=237,slow=11,SNR=2.7
comp=Z,1.5nm,0.8s
GEYT Ailbeck 55.31 300 P P 09 16 19.5 +1.3
comp=Z,1.6nm,0.3s,baz=96,slow=14,SNR=3.7
comp=Z,1.6nm,0.3s
EIDS Eidsvold 56.80 148 P P 09 16 28.3 -0.5
BBOO Buckleboo 58.24 166 P P 09 16 38.3 -0.6
BBOO IAmb IAmb 09 16 43.7
comp=Z,9.1nm,1.1s
STKA Stephens Creek 58.83 160 P P 09 16 43.0 0.0
STKA Stephens Creek 58.83 160 P P 09 16 42.2 -0.8
comp=Z,3.5nm,0.8s,baz=328,slow=9.9,SNR=7.2
STKA LR LR 09 45 37.2
comp=Z,65nm,19.4s,baz=189,slow=40
comp=Z,3.5nm,0.8s
ANM Nome 61.10 28 P P 09 16 58.1 -0.1
ANM IAmb IAmb 09 17 38.6
comp=Z,5.3nm,1.2s
BELG Belogornoye 61.70 318 P P 09 17 02.6 +0.1
comp=Z,7.6nm,0.8s,baz=336,slow=17,SNR=2.3
comp=Z,7.6nm,0.8s
L14K Kuka Creek 62.19 32 P P 09 17 05.4 -0.3
C18K Utukok River 63.02 24 P P 09 17 10.7 -0.4
E18K Tukpahlearik C 63.20 25 P P 09 17 12.2 -0.1
H17K Granite Mounta 63.45 28 IAmb IAmb 09 17 22.8
comp=Z,7.7nm,1.2s
E19K Redstone River 64.50 25 IAmb IAmb 09 17 40.4
comp=Z,4.3nm,1.0s
B21K Ikpikpuk River 65.37 23 IAmb IAmb 09 17 30.3
comp=Z,5.9nm,0.9s
G21K Allakaket 66.02 26 IAmb IAmb 09 17 35.5
comp=Z,5.8nm,1.3s
MLY Manley 67.33 27 IAmb IAmb 09 17 44.0
comp=Z,5.2nm,1.1s
D24K Happy Valley 67.46 23 IAmb IAmb 09 17 45.3
comp=Z,4.9nm,0.8s
E24K Your Creek 67.75 24 IAmb IAmb 09 17 46.9
comp=Z,3.1nm,0.8s
I23K Minto, Yukon-K 67.89 27 IAmb IAmb 09 17 59.0
comp=Z,7.3nm,1.2s
SUA Susitna One 67.90 31 P P 09 17 42.8 -0.2
F24K Squaw Lake 68.07 24 IAmb IAmb 09 17 45.6
comp=Z,4.3nm,0.8s
NEA2 Nenana 68.10 28 IAmb IAmb 09 17 48.4
comp=Z,6.1nm,0.8s
D25K Kavik River 68.29 22 IAmb IAmb 09 17 50.6
comp=Z,6.2nm,1.1s
G24K Hadweenzic Riv 68.37 25 IAmb IAmb 09 18 21.7
comp=Z,10nm,1.5s
H24K Noodor Dome 68.37 26 IAmb IAmb 09 18 11.4
comp=Z,8.2nm,1.4s
MDM Murphy Dome 68.39 27 P P 09 17 45.9 0.0
ILAR Eielson Array 68.99 27 P P 09 17 47.0 -2.5
comp=Z,0.6nm,0.7s,baz=297,slow=9.0,SNR=11
comp=Z,0.6nm,0.7s
BMAR Burnt Mountain 69.33 24 P P 09 17 52.0 +0.3
SCM Sheep Creek Mo 69.42 30 P P 09 17 52.0 -0.4
SCRK Sand Creek 70.40 28 P P 09 17 58.1 -0.4
SCRK IAmb IAmb 09 18 03.0
comp=Z,10.0nm,1.4s
K27K Chicken 71.20 28 IAmb IAmb 09 18 08.4
comp=Z,5.2nm,1.0s
L27K Beaver Creek, 71.58 28 IAmb IAmb 09 18 10.5
comp=Z,6.3nm,1.0s
I28M Miner Creek 71.66 26 IAmb IAmb 09 18 13.5
comp=Z,12nm,1.4s
FINES FINESS Array B 71.77 330 P P 09 18 06.4 -0.2
comp=Z,2.2nm,0.9s,baz=72,slow=6.2,SNR=5.1
comp=Z,2.2nm,0.9s
DAWY Dawson 72.31 27 P P 09 18 09.4 -0.5
DAWY IAmb IAmb 09 18 14.4
comp=Z,4.5nm,0.8s
CTGM Chitina Glacie 72.44 31 IAmb IAmb 09 18 19.6
comp=Z,6.3nm,1.0s
G30M tAoh Zraii Nji 72.58 24 IAmb IAmb 09 18 15.4
comp=Z,9.2nm,1.3s
J29N Klondike Camp 72.67 27 IAmb IAmb 09 18 17.3
comp=Z,5.5nm,0.7s
INK Inuvik 73.05 22 P P 09 18 13.0 -1.1
I30M Mount Dempster 73.14 26 IAmb IAmb 09 18 22.9
comp=Z,11nm,1.5s
K29M Barlow Dome 73.17 27 IAmb IAmb 09 18 22.3
comp=Z,7.6nm,1.1s
M29M Somme Creek 73.25 29 IAmb IAmb 09 18 21.1
comp=Z,5.3nm,0.9s
F31M Tsiigehtchic 73.31 23 IAmb IAmb 09 18 21.6
comp=Z,9.3nm,1.0s
FARO Faro, Yukon 75.54 28 P P 09 18 28.2 -0.6
FARO IAmb IAmb 09 18 35.6
comp=Z,9.2nm,1.4s
C36M Paulatuk 75.65 20 IAmb IAmb 09 18 30.7
comp=Z,3.3nm,0.6s

HFS	**Hagfors**	**77.88**	**331**	P	**P**	09 18 40.3	**-1.7**
	comp=Z,4.5nm,1.0s,baz=116,slow=13,SNR=2.1							
	comp=Z,4.5nm,1.0s							
NOA	**NORSAR Array B**	**78.53**	**332**	P	**P**	09 18 43.3	**-2.3**
	comp=Z,0.8nm,0.7s,baz=60,slow=5.8,SNR=3.4							
	comp=Z,0.8nm,0.7s							
VRAC	**Vranov**	**81.34**	**320**	P	**P**	09 18 59.9	**-1.2**
	comp=Z,1.3nm,0.2s,baz=60,slow=14,SNR=1.6							
	comp=Z,1.3nm,0.2s							
YKA	**Yellowknife Ar**	**82.79**	**23**	P	**P**	09 19 06.2	**-2.1**
	comp=Z,1.6nm,0.6s,baz=310,slow=5.3,SNR=51							
	comp=Z,1.6nm,0.6s							
RAR	**Rarotonga**	**88.58**	**114**	LR	LR	09 54 20.0		
	comp=Z,31nm,19.8s,baz=172,slow=32							
NVAR	**Mina Array Bea**	**96.08**	**43**	P	**P**	09 20 10.2	**-2.4**
	comp=Z,0.2nm,0.5s,baz=310,slow=5.6,SNR=3.6							
	comp=Z,0.2nm,0.5s							

IDC 05 09:10:19.1±3.3, 53.61N×87.93E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=30.5km s-min=16.9km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**282**	i		i	09 20 50.0	
	0.1nm,0.9s,baz=100,slow=334,SNR=3.3							
ZALV	**Zalesovo Beam**	**1.88**	**282**	Pn		Pn	09 10 52.0	-0.4
	2.4nm,0.3s,baz=94,slow=14,SNR=32							
ZALV				Lg		Lg	09 11 18.8	
	2.7nm,0.3s,baz=99,slow=28,SNR=12							
KURBB	**Kurchatov Arra**	**6.52**	**246**	Pn		Pn	09 11 57.0	+0.9
	0.1nm,0.3s,baz=59,slow=15,SNR=3.6							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**7.72**	**210**	Pn		Pn	09 12 13.8	+1.0
	0.1nm,0.3s,baz=29,slow=13,SNR=5.1							
MKAR				Sn		Sn	09 13 40.4	-0.5
	0.1nm,0.3s,baz=21,slow=34,SNR=2.1							
	0.1nm,0.4s							

KRSC 05 09:11:35.9±1.1, 49.89N×156.88E, h20km±18km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.93**	**329**	*e*P		Pb	09 11 53.1	-0.3
SKR				*e*S		Sb	09 12 05.0	-0.2
PAU	**Pauzhetka**	**1.58**	**358**	*e*P		Pb	09 12 05.0	+0.6
PAU				*e*S		Sb	09 12 24.9	+1.0
KDTR	**Khodutka, Kamc**	**2.06**	**21**	*e*S		Sb	09 12 36.5	-1.3
ASAK	**Asacha**	**2.58**	**14**	*e*P		Pn	09 12 18.9	+2.3
GRL	**Gorelyy**	**2.77**	**15**	*e*P		Pn	09 12 21.8	+2.6
UGLR	**Uglovaya**	**3.54**	**19**	*e*P		Pn	09 12 32.6	+2.8
AVH	**Avacha**	**3.57**	**18**	*e*P		Pn	09 12 34.2	+4.0
KOK	**Koryaka**	**3.58**	**17**	*e*P		Pn	09 12 34.3	+4.0
KRX	**Arik**	**3.64**	**17**	*e*P		Pn	09 12 35.0	+3.8

*IDC **05** 09:13:05.3±0.8, 41.23N×22.82E, h0km, mb3.9/16, mbtmp3.9/23, ML3.5/7, MS3.1/5, Error ellipse: s-maj=13.6km s-min=11.7km az=155.0*

*SOF **05** 09:13:06.7, 41.23N±0.01×22.88E±0.01, h13km±1km, MD4.4/14*

*SKO **05** 09:13:06.7, 41.22N×22.87E, h15km, ML3.8*

*AFAD **05** 09:13:06.4±0.0, 41.33N×22.75E, h9km±5km, MW4.1*

*MED_RC **05** 09:13:06.0±0.9, 41.24N×22.87E, h18km±5km, MW4.1/7, Moment Tensor Solution.Mantle waves: s7,c7; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-0.52±.64; Mθθ 1.69±.66; Mϕϕ-1.17±1.00; Mrθ 0.25±.31; Mθϕ 0.27±.28; Mϕr-0.86±.63; Best double couple: Mo1.77000×10^15 NP1:ϕs304.00000°, δ70.00000°, λ-29.00000°. NP2: ϕs45.00000°, δ63.00000°, λ-157.00000°. Principal axes: T 1.7300, Plg5.0000°, Azm356.0000°; N 0.0700, Plg55.0000°, Azm93.0000°; P -1.8100, Plg35.0000°, Azm263.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ISK **05** 09:13:07.1, 41.19N×22.82E, h10km, ML4.0/36*

*BEO **05** 09:13:07.1±0.3, 41.25N×22.90E, h7km±1km, ML3.9/17*

*ATH **05** 09:13:07.9, 41.20N×22.90E, h9km±1km, ML3.7/13, Error ellipse: s-maj=1.9km s-min=0.9km az=156.0*

*THE **05** 09:13:07.8, 41.21N×22.85E, h5km, ML3.9/10, Error ellipse: s-maj=0.8km s-min=0.3km az=169.0*

*PDG **05** 09:13:07.1±0.4, 41.20N×22.86E, h11km±1km, ML3.6/11, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*

ISC 05 09:13:07.1±0.7, 41.23N±0.01×22.86E±0.01, h13km±4km, n298, σ1s60/384, mb4.0/15, 42C-30D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KNT	**Kendrikon**	**0.07**	**158**	Pg		**Pg**	**09 13 09.7**	**-0.1**
KNT				Sg		**Sg**	**09 13 11.2**	**-0.6**
KNT	**Kendrikon**	**0.07**	**158**	P		**Pg**	**09 13 09.9**	**0.0**
KNT				S		**Sg**	**09 13 10.4**	**-1.4**
	206µm,0.2s							
KNT	**Kendrikon**	**0.07**	**158**	⇓*i* Pg		**Pg**	**09 13 09.8**	**0.0**
KNT				*i* Sg		**Sg**	**09 13 11.9**	**+0.1**
KNT	**Kendrikon**	**0.07**	**158**	P		**Pg**	**09 13 09.8**	**0.0**
KNT				S		**Sg**	**09 13 11.4**	**-0.4**
KNT				AML	AML		09 13 12.0	
KNT				AML	AML		09 13 12.1	
VAY	**Valandovo**	**0.24**	**293**	*e*Pg		**Pg**	**09 13 12.5**	**+0.3**
VAY				*e*Sg		**Sg**	**09 13 16.2**	**+0.5**
VAY	**Valandovo**	**0.24**	**293**	⇓*i* Pg		**Pg**	**09 13 12.6**	**+0.4**
VAY				*i* Sg		**Sg**	**09 13 16.4**	**+0.7**
VAY				*e*Lg		Lg	09 13 16.6	
	comp=E,15µm,0.3s							
VAY				*e*Lg		Lg	09 13 16.7	
	comp=N,27µm,0.2s							
GRG	**Griva**	**0.44**	**232**	Pg		**Pg**	**09 13 15.3**	**-0.6**
GRG				Sg		**Sg**	**09 13 21.3**	**-0.5**
GRG	**Griva**	**0.44**	**232**	P		**Pg**	**09 13 15.8**	**-0.1**
GRG				S		**Sg**	**09 13 21.1**	**-0.7**
	comp=N,33µm,0.3s							
GRG	**Griva**	**0.44**	**232**	⇑*i* Pg		**Pg**	**09 13 15.8**	**-0.1**
GRG				*i* Sg		**Sg**	**09 13 22.4**	**+0.6**
PEHC	**Pehcevo**	**0.55**	**3**	⇑*i* Pg		**Pg**	**09 13 18.1**	**+0.1**
PEHC				*i* Sg		**Sb**	**09 13 26.2**	**-0.3**
SOH	**Sokhos**	**0.55**	**137**	P		**Pg**	**09 13 18.0**	**+0.1**
SOH				S		**Sb**	**09 13 25.9**	**-0.6**
	comp=N,20µm,0.4s							
SOH	**Sokhos**	**0.55**	**137**	*i* Pg		**Pg**	**09 13 17.6**	**-0.4**
SOH				*i* Sg		**Sb**	**09 13 26.0**	**-0.4**
SOH	**Sokhos**	**0.55**	**137**	P		**Pg**	**09 13 17.5**	**-0.4**
SOH				S		**Sg**	**09 13 25.5**	**+0.2**
SOH				AML	AML		09 13 27.1	
	comp=E,51718µm,0.5s							
SOH				AML	AML		09 13 27.7	
	comp=N,47006µm,0.5s							
SRS	**Serrai**	**0.56**	**101**	P		**Pg**	**09 13 18.0**	**-0.1**
SRS				S		**Sb**	**09 13 26.6**	**-0.2**
SRS	**Serrai**	**0.56**	**101**	*e*Pg		**Pg**	**09 13 17.6**	**-0.5**
SRS				*e*Sg		**Sg**	**09 13 25.4**	**-0.2**
SRS	**Serrai**	**0.56**	**101**	⇓*i* Pg		**Pg**	**09 13 17.7**	**-0.4**
SRS				*i* Sg		**Sg**	**09 13 26.1**	**+0.4**
SRS	**Serrai**	**0.56**	**101**	P		**Pg**	**09 13 17.7**	**-0.4**
SRS				S		**Sg**	**09 13 25.2**	**-0.4**
SRS				AML	AML		09 13 30.9	
	comp=E,6496µm,0.3s							
SRS				AML	AML		09 13 33.6	
	comp=N,8092µm,0.3s							
THE	**Thessaloniki**	**0.60**	**172**	P		**Pg**	**09 13 18.6**	**-0.3**
THE				S		**Sg**	**09 13 27.3**	**+0.5**
	comp=N,10µm,0.6s							
THE	**Thessaloniki**	**0.60**	**172**	⇑*i* Pg		**Pg**	**09 13 18.4**	**-0.4**
THE				*i* Sg		**Sg**	**09 13 27.1**	**+0.3**
THE	**Thessaloniki**	**0.60**	**172**	P		**Pg**	**09 13 18.4**	**-0.4**
THE				S		**Sg**	**09 13 25.9**	**-0.9**
THE				AML	AML		09 13 29.2	
	comp=E,17434µm,0.4s							
THE				AML	AML		09 13 30.6	
	comp=N,14908µm,0.6s							
KKB	**Krupnik**	**0.64**	**18**	⇑*i* Pg		**Pg**	**09 13 19.7**	**0.0**
KKB				Sg		**Sg**	**09 13 28.3**	**+0.1**
KKB	**Krupnik**	**0.64**	**18**	⇑*i* Pg		**Pg**	**09 13 19.7**	**0.0**
KKB				*i* Sg		**Sg**	**09 13 28.4**	**+0.2**
HORT	**Hortiatis**	**0.66**	**164**	Pg		**Pg**	**09 13 19.6**	**-0.3**
HORT				Sg		**Sg**	**09 13 28.9**	**+0.3**
HORT	**Hortiatis**	**0.66**	**164**	P		**Pg**	**09 13 19.8**	**-0.1**
HORT				S		**Sb**	**09 13 29.5**	**0.0**
	comp=N,9µm,0.6s							
HORT	**Hortiatis**	**0.66**	**164**	P		**Pg**	**09 13 19.6**	**-0.3**
HORT				S		**Sg**	**09 13 28.1**	**-0.5**
HORT				AML	AML		09 13 33.8	
	comp=N,19071µm,0.6s							
HORT				AML	AML		09 13 34.1	
	comp=E,17403µm,0.6s							
STIP	**Stip**	**0.69**	**313**	*i* Pg		**Pg**	**09 13 18.8**	**-1.7**
STIP				*i* Sg		**Sg**	**09 13 27.6**	**-2.0**
MMB	**Musomishta**	**0.74**	**64**	⇑*i* Pg		**Pg**	**09 13 21.9**	**0.0**
MMB				Sg		**Sg**	**09 13 31.0**	**-0.2**
MMB	**Musomishta**	**0.74**	**64**	⇑*i* Pg		**Pg**	**09 13 21.3**	**-0.2**
MMB				*i* Sg		**Sb**	**09 13 31.5**	**-0.4**
NVR	**Nevrokopi**	**0.76**	**81**	P		**Pn**	**09 13 23.2**	**-0.4**
NVR				S		**Sb**	**09 13 33.5**	**+0.9**
	comp=E,5µm,0.3s							
NVR	**Nevrokopi**	**0.76**	**81**	P		**Pb**	**09 13 22.7**	**+0.4**
NVR				S		**Sg**	**09 13 31.5**	**-0.5**
NVR				AML	AML		09 13 38.0	
	comp=N,9346µm,0.5s							
NVR				AML	AML		09 13 38.2	
	comp=E,8586µm,0.2s							
KOKK	**Kokkinochori,**	**0.95**	**115**	P		**Pg**	**09 13 25.5**	**0.0**
KOKK				S		**Sn**	**09 13 39.9**	**+0.3**
KOKK	**Kokkinochori,**	**0.95**	**115**	P		**Pb**	**09 13 24.9**	**-0.6**
KOKK				S		**Sg**	**09 13 37.3**	**-0.7**
FNA	**Florina**	**1.21**	**249**	P		**Pb**	**09 13 30.0**	**+0.1**
FNA				S		**Sg**	**09 13 46.6**	**+0.5**
	comp=E,6µm,0.6s							
FNA	**Florina**	**1.21**	**249**	P		**Pn**	**09 13 29.4**	**-0.3**
FNA				S		**Sb**	**09 13 45.7**	**+0.3**
FNA	**Florina**	**1.21**	**249**	*e*Pg		**Pn**	**09 13 29.6**	**-0.2**
FNA				*e*Sg		**Sn**	**09 13 46.0**	**0.0**
FNA	**Florina**	**1.21**	**249**	⇑*i* Pg		**Pn**	**09 13 29.4**	**-0.3**
FNA				*i* Sg		**Sg**	**09 13 47.3**	**+1.1**
FNA	**Florina**	**1.21**	**249**	P		**Pn**	**09 13 29.4**	**-0.3**
FNA				AML	AML		09 13 51.6	
	comp=E,10375µm,0.5s							
FNA				AML	AML		09 13 52.3	
	comp=N,11760µm,0.5s							
OUR	**Ouranopolis**	**1.23**	**136**	Pn		**Pg**	**09 13 30.5**	**-0.3**
OUR	**Ouranopolis**	**1.23**	**136**	P		**Pb**	**09 13 30.2**	**0.0**
OUR				S		**Sg**	**09 13 47.9**	**+1.0**
	comp=N,5µm,0.7s							
OUR	**Ouranopolis**	**1.23**	**136**	P		**Pn**	**09 13 29.9**	**-0.1**
OUR				AML	AML		09 13 51.5	
	comp=N,9773µm,0.8s							
OUR				AML	AML		09 13 51.5	
	comp=E,10995µm,0.6s							
KAVA	**Kavala**	**1.27**	**100**	P		**Pb**	**09 13 31.1**	**+0.2**
KAVA				S		**Sg**	**09 13 49.2**	**+1.2**
	comp=E,7µm,0.5s							
KAVA	**Kavala**	**1.27**	**100**	P		**Pn**	**09 13 30.5**	**0.0**
BOSS	**Bosilegrad**	**1.30**	**347**	*e*Pg		**Pb**	**09 13 31.6**	**+0.2**
BOSS				*e*Sg		**Sn**	**09 13 48.5**	**+0.3**
SKO	**Skopje**	**1.30**	**305**	*e*Pg		**Pn**	**09 13 31.1**	**+0.2**
SKO				*e*Sg		**Sg**	**09 13 48.8**	**-0.2**
SKO	**Skopje**	**1.30**	**305**	*i* Pg		**Pn**	**09 13 31.2**	**+0.2**
SKO				*i* Sg		**Sg**	**09 13 49.1**	**+0.1**
PLNA	**Plana**	**1.32**	**18**	⇑*i* Pg		**Pg**	**09 13 32.3**	**-0.1**
PLNA				Sg		**Sg**	**09 13 50.4**	**+0.4**
PRVS	**Prvonek**	**1.41**	**336**	*e*Pg		**Pb**	**09 13 33.0**	**-0.2**
PRVS				*e*Sg		**Sb**	**09 13 51.8**	**+0.7**
VTS	**Vitosha**	**1.42**	**11**	⇑*i* P		**Pb**	**09 13 33.4**	**-0.1**
VTS				S		**Sb**	**09 13 52.1**	**+0.6**
PAIG	**Paliouri**	**1.44**	**154**	Pn		**Pb**	**09 13 33.5**	**-0.3**
PAIG	**Paliouri**	**1.44**	**154**	P		**Pb**	**09 13 33.7**	**-0.1**
PAIG				S		**Sg**	**09 13 52.9**	**-0.6**
RZN	**Rozhen**	**1.48**	**71**	⇓*i* P		**Pb**	**09 13 34.6**	**-0.1**
RZN				S		**Sb**	**09 13 54.1**	**+0.6**
SOF	**Sofia**	**1.50**	**15**	P		**Pg**	**09 13 35.4**	**-0.5**
SOF				Sg		**Sg**	**09 13 55.6**	**+0.3**
THAS	**Thassos island**	**1.54**	**113**	P		**Pb**	**09 13 34.9**	**-0.5**
THAS	**Thassos island**	**1.54**	**113**	P		**Pn**	**09 13 34.1**	**-0.1**
THAS				S		**Sn**	**09 13 52.5**	**-1.6**
THAS				AML	AML		09 13 57.7	
	comp=E,5273µm,0.4s							
THAS				AML	AML		09 13 58.2	
	comp=N,4672µm,0.3s							
OHR	**Ohrid**	**1.56**	**266**	*e*Pn		**Pn**	**09 13 35.2**	**+0.6**
OHR				*e*Sn		**Sg**	**09 13 57.4**	**0.0**
OHR	**Ohrid**	**1.56**	**266**	*i* Pg		**Pn**	**09 13 35.1**	**+0.5**
OHR				*i* Sg		**Sg**	**09 13 58.6**	**+1.2**
OHR				*e*Lg		Lg	09 13 58.6	
	comp=N,787nm,0.5s							
OHR				*e*Lg		Lg	09 13 58.9	
	comp=E,653nm,0.6s							
TYRN	**Tyrnavos**	**1.59**	**198**	P		**Pb**	**09 13 35.8**	**-0.5**
TYRN	**Tyrnavos**	**1.59**	**198**	P		**Pn**	**09 13 35.1**	**+0.2**
NEST	**Nestorio**	**1.60**	**240**	P		**Pb**	**09 13 36.0**	**-0.5**
NEST				S		**Sg**	**09 13 58.3**	**-0.3**
	comp=E,2µm,0.7s							
NEST	**Nestorio**	**1.60**	**240**	P		**Pn**	**09 13 35.5**	**+0.3**
NEST				AML	AML		09 14 06.9	
	comp=E,4285µm,0.5s							
NEST				AML	AML		09 14 09.2	
	comp=N,4109µm,0.7s							
PGB	**Panagyurishte**	**1.61**	**37**	⇑*i* P		**Pb**	**09 13 36.3**	**-0.5**
PGB				S		**Sg**	**09 13 58.1**	**-1.0**
PENT	**Pentalofos**	**1.67**	**232**	P		**Pn**	**09 13 36.7**	**+0.6**
PENT	**Pentalofos**	**1.67**	**232**	P		**Pn**	**09 13 36.5**	**+0.4**
KBN	**Korca**	**1.68**	**250**	P		**Pn**	**09 13 37.1**	**+0.8**
PLD	**Plovdiv**	**1.68**	**56**	Pn		**Pb**	**09 13 37.2**	**-0.7**
PLD				Sn		**Sb**	**09 13 59.5**	**+0.5**
PLD	**Plovdiv**	**1.68**	**56**	*i* P		**Pb**	**09 13 37.1**	**-0.8**
PLD				S		**Sb**	**09 13 58.7**	**-0.3**
KPRO	**Kipourio**	**1.71**	**222**	P		**Pb**	**09 13 37.7**	**-0.7**
KPRO	**Kipourio**	**1.71**	**222**	P		**Pn**	**09 13 36.9**	**+0.2**
BARS	**Barje**	**1.77**	**334**	*e*Pn		**Pn**	**09 13 38.0**	**+0.6**
BARS				*e*Sn		**Sb**	**09 14 02.1**	**+0.6**
BARS	**Barje**	**1.77**	**334**	*i* Pn		**Pn**	**09 13 37.6**	**+0.2**
BARS				*e*Pg		**Pb**	**09 13 39.9**	**+0.6**
BARS				*i* Sg		**Sg**	**09 14 03.0**	**-1.0**
THL	**Klokotos Trika**	**1.78**	**202**	P		**Pn**	**09 13 38.3**	**+0.7**
THL	**Klokotos Trika**	**1.78**	**202**	P		**Pn**	**09 13 37.3**	**-0.3**
XOR	**Xorichti**	**1.88**	**172**	P		**Pn**	**09 13 39.6**	**+0.7**
XOR	**Xorichti**	**1.88**	**172**	P		**Pn**	**09 13 39.2**	**+0.3**
XOR				AML	AML		09 14 02.7	
	comp=N,4518µm,0.6s							
XOR				AML	AML		09 14 06.9	
	comp=E,3662µm,0.9s							
KDZ	**Kurdzhali**	**1.91**	**77**	Pn		**Pb**	**09 13 40.9**	**-0.8**
KDZ	**Kurdzhali**	**1.91**	**77**	*i* P		**Pn**	**09 13 40.0**	**+0.7**
KDZ				S		**Sg**	**09 14 07.2**	**-1.2**
NEO	**Neokhori**	**1.94**	**172**	P		**Pn**	**09 13 40.4**	**+0.6**
RDO	**Rodhopi**	**2.02**	**91**	Pn		**Pn**	**09 13 41.8**	**+0.9**
RDO	**Rodhopi**	**2.02**	**91**	P		**Pn**	**09 13 41.4**	**+0.5**
RDO				S		**Sb**	**09 14 09.1**	**+0.4**
RDO	**Rodhopi**	**2.02**	**91**	P		**Pn**	**09 13 41.1**	**+0.3**
RDO				AML	AML		09 14 14.4	
	comp=E,1908µm,0.3s							
RDO				AML	AML		09 14 17.9	
	comp=N,2854µm,0.4s							
LSK	**Leskovik**	**2.03**	**239**	P		**Pn**	**09 13 42.2**	**+1.1**
ZAPS	**Zavoj**	**2.05**	**355**	*e*Pn		**Pn**	**09 13 42.5**	**+1.2**
ZAPS				*e*Sn		**Sn**	**09 14 06.7**	**-0.1**
SMTH	**Samothraki Isl**	**2.16**	**110**	P		**Pn**	**09 13 43.0**	**+0.2**
SMTH	**Samothraki Isl**	**2.16**	**110**	P		**Pn**	**09 13 42.8**	**0.0**
SMTH				AML	AML		09 14 20.5	
	comp=N,695µm,0.5s							
SMTH				AML	AML		09 14 24.7	
	comp=E,874µm,0.5s							
DIM	**Dimitrovgrad**	**2.19**	**67**	P		**Pn**	**09 13 44.1**	**+0.9**
DIM				Sg		**Sg**	**09 14 18.2**	**+0.6**
JAN	**Janina**	**2.20**	**225**	P		**Pn**	**09 13 44.6**	**+1.3**
LIA	**Limnos Island**	**2.21**	**126**	P		**Pn**	**09 13 44.2**	**+0.7**
LIA				S		**Sb**	**09 14 13.3**	**-0.9**
LIA	**Limnos Island**	**2.21**	**126**	P		**Pn**	**09 13 44.0**	**+0.5**
MPEP	**Malo Peshtene**	**2.22**	**17**	*i* P		**Pn**	**09 13 44.9**	**+1.2**
MPEP				S		**Sg**	**09 14 19.2**	**+0.6**
AGG	**Agios Georgios**	**2.24**	**191**	P		**Pn**	**09 13 44.4**	**+0.5**
AGG	**Agios Georgios**	**2.24**	**191**	P		**Pn**	**09 13 44.0**	**+0.1**
AGG				S		**Sg**	**09 14 18.6**	**-0.5**
AGG	**Agios Georgios**	**2.24**	**191**	P		**Pn**	**09 13 44.4**	**+0.5**
TIR	**Tirane**	**2.26**	**274**	⇓P		**Pb**	**09 13 47.3**	**-0.5**
TIR	**Tirane**	**2.26**	**274**	P		**Pn**	**09 13 45.9**	**+1.7**
TIR	**Tirane**	**2.26**	**274**	*e*Pn		**Pn**	**09 13 45.4**	**+1.2**
MAKR	**Makrakomi, Fth**	**2.28**	**194**	P		**Pn**	**09 13 45.2**	**+0.7**
MAKR	**Makrakomi, Fth**	**2.28**	**194**	P		**Pn**	**09 13 45.5**	**+0.9**
SELS	**Selova**	**2.37**	**328**	*e*Pn		**Pn**	**09 13 45.7**	**-0.1**
BLKB	**Belogradchik**	**2.40**	**357**	⇑P		**Pb**	**09 13 48.2**	**-1.9**
EVR	**Evrytania**	**2.45**	**200**	P		**Pn**	**09 13 48.1**	**+1.3**
EVR	**Evrytania**	**2.45**	**200**	P		**Pn**	**09 13 48.3**	**+1.5**
AXAR	**Agios Charalam**	**2.46**	**184**	P		**Pn**	**09 13 47.8**	**+0.8**
AXAR	**Agios Charalam**	**2.46**	**184**	P		**Pn**	**09 13 47.6**	**+0.6**
VALD	**Valchedram**	**2.50**	**10**	P		**Pn**	**09 13 49.2**	**+1.8**
PLVB	**Pleven**	**2.52**	**31**	⇑P		**Pb**	**09 13 51.0**	**-1.2**
GADA	**Gvkgeada**	**2.53**	**113**	Pn		**Pn**	**09 13 49.8**	**+1.9**
ENEZ	**Enez**	**2.54**	**100**	Pn		**Pn**	**09 13 49.9**	**+1.9**
ENEZ	**Enez**	**2.54**	**100**	P		**Pn**	**09 13 49.0**	**+1.0**
GOAD	**anakkale-G¶**	**2.55**	**114**	P		**Pb**	**09 13 52.1**	**-0.7**
GOAD				S		**Sb**	**09 14 25.9**	**+2.0**
BOVS	**Bovan**	**2.55**	**341**	⇓P		**Pb**	**09 13 51.3**	**-1.5**
BOVS	**Bovan**	**2.55**	**341**	*e*Pn		**Pn**	**09 13 48.5**	**+0.3**
BOVS				*e*Sn		**Sb**	**09 14 21.8**	**-2.2**
PVL	**Pavlikeni**	**2.56**	**41**	P		**Pn**	**09 13 50.0**	**+1.8**
PVL				S		**Sg**	**09 14 27.2**	**-2.0**
CAVK	**Edirne/Enez-Ca**	**2.56**	**101**	P		**Pn**	**09 13 49.9**	**+1.6**
CAVK				S		**Sg**	**09 14 28.5**	**-0.8**
PVY	**Plav**	**2.56**	**303**	⇑*i* Pn		**Pn**	**09 13 49.4**	**+1.0**
PVY				*i* Sn		**Sb**	**09 14 23.3**	**-1.1**
SRN	**Sarande**	**2.56**	**239**	P		**Pn**	**09 13 50.0**	**+1.7**
SRN				S		**Sn**	**09 14 21.2**	**+1.9**
IGT	**Igoumenitsa**	**2.57**	**230**	P		**Pn**	**09 13 50.0**	**+1.6**
IGT	**Igoumenitsa**	**2.57**	**230**	*e*Pn		**Pb**	**09 13 50.9**	**-2.1**
IGT	**Igoumenitsa**	**2.57**	**230**	P		**Pn**	**09 13 50.7**	**+2.2**
ZAGS	**Zajecar**	**2.62**	**350**	*e*Pn		**Pn**	**09 13 49.4**	**+0.2**
ZAGS				*e*Sn		**Sn**	**09 14 23.2**	**+2.4**
ANX	**Ano Chora**	**2.73**	**196**	P		**Pn**	**09 13 51.8**	**+1.1**
ANX	**Ano Chora**	**2.73**	**196**	P		**Pn**	**09 13 51.5**	**+0.8**
IVA	**Berane**	**2.75**	**308**	⇓*i* Pn		**Pn**	**09 13 52.0**	**+1.0**
IVA				*i* Sn		**Sb**	**09 14 27.5**	**-2.4**
KEK	**Kerkira**	**2.78**	**238**	P		**Pn**	**09 13 51.8**	**+0.4**
BOZC	**Bozcaada**	**2.80**	**119**	P		**Pn**	**09 13 56.2**	**-0.5**
BOZC				S		**Sg**	**09 14 35.0**	**-2.0**
ULC	**Ulcinj**	**2.81**	**286**	⇓*i* Pn		**Pn**	**09 13 53.5**	**+1.7**
ULC				*i* Sn		**Sb**	**09 14 28.8**	**-2.7**
ULC	**Ulcinj**	**2.81**	**286**	⇑*i* Pn		**Pn**	**09 13 54.3**	**+2.5**
ELND	**Elena**	**2.81**	**52**	⇓P		**Pb**	**09 13 54.9**	**-2.3**
UKOP	**Uzunkopru-Edir**	**2.85**	**91**	Pn		**Pn**	**09 13 54.3**	**+2.1**
GELI	**Tayfur-Gelibol**	**2.86**	**106**	Pn		**Pn**	**09 13 54.5**	**+2.0**
EFP	**Efpalio**	**2.89**	**195**	P		**Pn**	**09 13 54.0**	**+1.1**
EFP	**Efpalio**	**2.89**	**195**	P		**Pn**	**09 13 53.8**	**+1.0**
DRME	**Dracevica, Mon**	**2.92**	**290**	⇑*i* Pn		**Pb**	**09 13 56.4**	**-2.5**
DRME				*i* Sn		**Sb**	**09 14 31.6**	**-2.9**
DRME	**Dracevica, Mon**	**2.92**	**290**	*e*Pn		**Pn**	**09 13 56.0**	**+2.8**
SJES	**Sjenica**	**2.95**	**314**	*e*Pn		**Pn**	**09 13 54.3**	**+0.5**
SJES	**Sjenica**	**2.95**	**314**	*e*Pn		**Pn**	**09 13 54.6**	**+0.8**
LKD2	**Lefkada island**	**2.97**	**215**	P		**Pn**	**09 13 55.5**	**+1.6**
COMU	**Canakkale**	**2.97**	**111**	Pn		**Pn**	**09 13 55.4**	**+1.5**
EDRB	**Edirne**	**2.98**	**77**	Pn		**Pn**	**09 13 55.0**	**+1.0**
NYKR	**Nydri-Lefkada**	**3.01**	**214**	P		**Pn**	**09 13 56.2**	**+1.7**
KOCA	**Canakkale, Ayv**	**3.04**	**123**	P		**Pn**	**09 13 56.3**	**+1.4**
KOCA				S		**Sg**	**09 14 43.0**	**-1.7**
SIGR	**SIGRI**	**3.05**	**130**	Pn		**Pn**	**09 13 56.8**	**+1.8**
SIGR	**SIGRI**	**3.05**	**130**	P		**Pn**	**09 13 56.4**	**+1.4**
LPK	**Lapseki**	**3.08**	**105**	Pn		**Pn**	**09 13 57.9**	**+2.5**
SZH	**Strazhitsa**	**3.08**	**48**	*i* P		**Pn**	**09 13 56.8**	**+1.4**
SZH				S		**Sg**	**09 14 43.6**	**-2.4**
VILL	**Villia**	**3.08**	**173**	P		**Pn**	**09 13 56.4**	**+0.9**
IVAS	**Ivanjica**	**3.09**	**320**	*e*Pn		**Pn**	**09 13 55.5**	**-0.1**
**

BLY	**Banja Luka**	**5.45**	**312**	*e*Pn		**Pn**	**09 14 26.3**	**-1.7**
TPGR	**Topolog**	**5.45**	**46**	⇓P		**Pn**	**09 14 30.9**	**+2.9**
ODBI	**Odobesti**	**5.46**	**33**	⇓P		**Pn**	**09 14 31.7**	**+3.5**
CFR	**Carcaliu**	**5.52**	**43**	⇓P		**Pn**	**09 14 32.1**	**+3.2**
DRGR		**5.56**	**359**	⇑P		**Pn**	**09 14 32.9**	**+3.3**
SLCR	**Slobozia Conac**	**5.64**	**38**	⇑P		**Pn**	**09 14 33.8**	**+3.2**
A050A	**Klekovaca**	**5.67**	**307**	*e*Pn		**Pn**	**09 14 32.4**	**+1.2**
A051A	**Mrakovica**	**5.77**	**313**	*e*Pn		**Pn**	**09 14 28.5**	**-3.9**
SCTR	**Scanteiesti**	**5.80**	**38**	⇑P		**Pn**	**09 14 36.2**	**+3.4**
MORH	**Mrgy, Hungar**	**5.85**	**330**	⇑P		**Pn**	**09 14 34.3**	**+0.9**
ZIRJ	**Zirje**	**5.86**	**297**	*e*Pn		**Pn**	**09 14 34.4**	**+0.7**
ZIRJ					Sn	**Sn**	**09 15 38.7**	**-2.0**
TLCR		**5.88**	**46**	⇓P		**Pn**	**09 14 35.9**	**+2.0**
TESR	**Tescani**	**5.95**	**26**	⇑P		**Pn**	**09 14 37.8**	**+3.0**
ARCR	**ARCALIA**	**5.95**	**10**	⇑P		**Pn**	**09 14 38.3**	**+3.4**
VLDR	**Vladesti**	**5.97**	**38**	⇑P		**Pn**	**09 14 37.5**	**+2.4**
UDBI	**Udbina**	**6.17**	**305**	*e*Pn		**Pn**	**09 14 40.8**	**+2.9**
MOSL	**Moslavina**	**6.24**	**317**	*e*Pn		**Pn**	**09 14 39.7**	**+0.8**
DUGI	**Dugi Otok**	**6.38**	**298**	*e*Pn		**Pn**	**09 14 41.3**	**+0.4**
VIRC	**Vir**	**6.51**	**301**	*e*Pn		**Pn**	**09 14 43.2**	**+0.6**
BURAR	**Bucovina Array**	**6.60**	**14**	⇓P		**Pn**	**09 14 47.8**	**+3.8**
KALN	**Kalnik**	**6.75**	**319**	*e*Pn		**Pn**	**09 14 46.7**	**+0.8**
BOJS	**Bojanci**	**7.00**	**310**	*e*Pn		**Pn**	**09 14 50.2**	**+0.9**
CRES	**Cresnjev**	**7.08**	**313**	*e*Pn		**Pn**	**09 14 50.2**	**-0.1**
KECS	**Kecovo**	**7.45**	**348**	*e*PN		**Pn**	**09 15 00.0**	**+4.6**
VAE	**Valguarnera**	**7.54**	**243**	Pn		**Pn**	**09 14 57.8**	**+1.1**
	comp=E,1.0nm,0.3s,baz=164,slow=20,SNR=1.3							
	comp=E,3.9nm,0.3s							
CEY	**Cerknica**	**7.61**	**309**	*e*Pn		**Pn**	**09 15 00.4**	**+2.7**
CRVS	**Cervenica-Dubn**	**7.74**	**353**	*e*PN		**Pn**	**09 15 00.4**	**+1.0**
SKDS	**Skadanscina**	**7.75**	**307**	*e*Pn		Pn	09 14 49.9	-10
RONA	**Rosalia, Austr**	**7.99**	**326**	*e*Pn		**Pn**	**09 15 05.5**	**+2.6**
	comp=E,3.9nm,0.4s							
OBKA	**Obir**	**7.99**	**314**	*e*Pn		**Pn**	**09 15 04.1**	**+1.1**
	comp=E,2.1nm,0.3s							
OBKA	**Obir**	**7.99**	**314**	*e*Pn		**Pn**	**09 15 04.0**	**+1.1**
ARSA	**Arzberg**	**8.00**	**321**	*e*Pn		**Pn**	**09 15 03.9**	**+0.9**
	comp=E,4.4nm,0.3s							
ZST	**Bratislava**	**8.08**	**331**	*e*PN		**Pn**	**09 15 06.1**	**+2.0**
MODS	**Modra-Piesok**	**8.17**	**333**	*e*PN		**Pn**	**09 15 08.6**	**+3.3**
MODS				*e*SN		**Sn**	**09 16 37.3**	**-0.2**
BRTR	**Keskin Array B**	**8.35**	**97**	Pn		**Pn**	**09 15 07.8**	**-0.2**
	comp=E,0.3nm,0.3s,baz=314,slow=38,SNR=1.6							
	comp=E,1.0nm,0.5s							
CONA	**Conrad Observa**	**8.35**	**326**	*e*Pn		**Pn**	**09 15 09.6**	**+1.7**
	comp=E,1.0nm,0.2s							
SEV	**Sevastopol'**	**8.60**	**64**	Sm			09 16 49.0	
	comp=E,4.0nm,0.5s							
SEV	**Sevastopol'**	**8.60**	**64**	Pm			09 15 13.3	
	comp=Z,5.0nm,0.4s							
SEV	**Sevastopol'**	**8.60**	**64**	*e*S		**Sn**	**09 16 46.3**	**-1.6**
SEV	**Sevastopol'**	**8.60**	**64**	Sm			09 16 49.0	
	comp=N,5.0nm,0.4s							
SUDU	**Sudak**	**9.61**	**64**	*e*P		**Pn**	**09 15 26.4**	**+1.4**
SUDU				Pm			09 15 27.4	
	comp=Z,9.0nm,0.4s							
SUDU				Sm			09 16 11.3	
	comp=E,6.0nm,0.5s							
SUDU				*e*S		**Sn**	**09 17 11.1**	**-1.6**
SUDU				Sm			09 17 11.3	
	comp=N,11nm,0.6s							
GERES	**GERESS Array B**	**9.99**	**323**	Pn		**Pn**	**09 15 30.8**	**+0.4**
	comp=N,0.2nm,0.3s,baz=6.3,slow=13,SNR=1.5							
	comp=N,0.5nm,0.4s							
WTTA	**Wattenberg**	**10.06**	**311**	*e*Pn		**Pn**	**09 15 34.0**	**+2.6**
	comp=N,2.1nm,0.3s							
SQTA	**Sankt Quirin**	**10.28**	**310**	*e*Pn		**Pn**	**09 15 34.5**	**+0.2**
	comp=N,1.5nm,0.3s							
MOTA	**Moosalm**	**10.41**	**310**	*e*Pn		**Pn**	**09 15 36.1**	**0.0**
	comp=N,3.3nm,0.6s							
AKASG	**Malin Array Be**	**10.45**	**23**	Pn		**Pn**	**09 15 34.9**	**-1.7**
	comp=N,0.8nm,0.3s,baz=207,slow=13,SNR=2.1							
AKASG				LR		LR	09 19 15.9	
	comp=N,55nm,19.4s,baz=227,slow=35							
	comp=N,0.3nm,0.4s							
FETA	**Feichten**	**10.46**	**308**	*e*Pn		**Pn**	**09 15 38.3**	**+1.4**
	comp=N,1.4nm,0.4s							
DAVOX	**Davos/Dischmat**	**10.87**	**305**	Pn		**Pn**	**09 15 42.6**	**+0.1**
	comp=N,0.4nm,0.3s,baz=156,slow=17,SNR=4.6							
DAVOX				LR		LR	09 20 42.6	
	comp=N,152nm,18.7s,baz=106,slow=42							
	comp=N,1.6nm,0.4s							
HFS	**Hagfors**	**19.76**	**346**	P		**P**	**09 17 36.6**	**0.0**
	comp=N,0.2nm,0.3s,baz=175,slow=39,SNR=2.1							
HFS				LR		LR	09 24 53.0	
	comp=N,58nm,19.6s,baz=222,slow=36							
	comp=N,2.4nm,0.8s							
FINES	**FINESS Array B**	**20.34**	**4**	P		**P**	**09 17 41.5**	**-1.3**
	comp=N,4.8nm,0.9s,baz=179,slow=11,SNR=4.9							
	comp=N,4.8nm,0.9s							
ESDC	**Sonseca Array**	**20.45**	**275**	P		**P**	**09 17 43.6**	**-0.6**
	comp=N,1.1nm,0.7s,baz=68,slow=11,SNR=3.3							
	comp=N,1.1nm,0.7s							
NOA	**NORSAR Array B**	**21.08**	**344**	P		**P**	**09 17 50.5**	**-0.4**
	comp=N,0.8nm,0.7s,baz=154,slow=8.9,SNR=4.0							
NOA				LR		LR	09 27 17.8	
	comp=N,32nm,20.0s,baz=170,slow=40							
	comp=N,0.8nm,0.7s							
EKA	**Eskdalemuir Ar**	**22.16**	**318**	P		**P**	**09 18 01.7**	**-0.8**
	comp=N,0.4nm,0.5s,baz=112,slow=12,SNR=2.0							
	comp=N,0.4nm,0.5s							
KIRV	**Kirov**	**24.12**	**35**	P		**P**	**09 18 22.4**	**+0.1**
	comp=N,10nm,0.5s,baz=100,slow=1.5,SNR=3.7							
	comp=N,10nm,0.5s							
GEYT	**Alibeck**	**27.26**	**85**	P		**P**	**09 18 51.1**	**0.0**
	comp=N,0.6nm,0.3s,baz=286,slow=18,SNR=1.2							
	comp=N,0.6nm,0.3s							
ARCES	**ARCESS Array B**	**28.41**	**2**	P		**P**	**09 18 59.5**	**-1.4**
	comp=N,3.9nm,0.9s,baz=188,slow=8.3,SNR=3.6							
	comp=N,3.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**33.53**	**220**	P		**P**	**09 19 46.5**	**-0.1**
	comp=N,1.0nm,0.8s,baz=33,slow=8.5,SNR=5.2							
	comp=N,1.0nm,0.8s							
BVAR	**Borovoye Array**	**33.81**	**53**	P		**P**	**09 19 49.1**	**+0.4**
	comp=N,1.4nm,0.8s,baz=270,slow=5.9,SNR=5.4							
BVAR				LR		LR	09 34 16.3	
	comp=N,67nm,18.4s,baz=106,slow=38							
	comp=N,1.4nm,0.8s							
KURBB	**Kurchatov Arra**	**39.00**	**57**	P		**P**	**09 20 33.2**	**+0.2**
	comp=N,0.3nm,0.4s,baz=278,slow=9.4,SNR=5.6							
	comp=N,0.3nm,0.4s							
KSH	**Kashi**	**39.98**	**74**	P		**P**	**09 20 38.2**	**-3.2**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**42.22**	**62**	P		**P**	**09 21 00.9**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=280,slow=6.1,SNR=22							
	comp=Z,2.2nm,0.7s							
ZALV	**Zalesovo Beam**	**42.34**	**51**	P		**P**	**09 21 01.4**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=276,slow=8.7,SNR=22							
	comp=Z,4.1nm,0.6s							
SONM	**Songino Array**	**57.15**	**53**	P		**P**	**09 22 54.7**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=285,slow=8.8,SNR=12							
	comp=Z,1.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**67.74**	**85**	P		**P**	**09 24 05.2**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=308,slow=8.0,SNR=6.1							
	comp=Z,1.1nm,0.3s							
YKA	**Yellowknife Ar**	**71.13**	**341**	P		**P**	**09 24 25.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=33,slow=5.5,SNR=8.8							
	comp=Z,0.6nm,0.8s							
ULM	**Lac du Bonnet**	**74.30**	**324**	P		**P**	**09 24 44.5**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=63,slow=2.7,SNR=5.1							
	comp=Z,2.7nm,0.8s							

IDC ***05*** *09:25:17.1±0.8,34.°81S×178.°69E, h0km, mb4.2/9, mbtmp4.2/9, ML5.3/1, MS3.6/12, Error ellipse: s-maj=29.8km s-min=22.1km az=3.0*

BJI ***05*** *09:25:18.9±0.0,35.°76S×178.°51E, h5km, mb5.1/12, mB5.6/7, Ms5.3/4, Ms7 4.9/4*

NEIC ***05*** *09:25:19.2±1.2,35.°42S±0.°06×178.°9E±0.°1, h10km±1km, mb5.1/37, Error ellipse: s-maj=18.9km s-min=9.4km az=79.0*

WEL ***05*** *09:25:22.3±0.9,35°S±6.°×17.°9E±.°, h5km, M4.4/62, ML4.5/61, MLv4.4/62, Error ellipse: s-maj=0.0km s-min=0.0km az=55.8, confirmed*

ISC 05 09:25:20.0±0.5,35.°47S±0.°05×178.°79E±0.°07, h10km, n173, σ2.°08/147, mb5.0/24, MS3.6/11, 5D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.12**	**191**		**Pn**	**09 25 54.2**	**-1.3**
MXZ	**Matakaoa Point**	**2.12**	**191**	P	**Pn**	**09 25 54.5**	**-1.1**
MXZ				T	T	09 28 07.9	
WMGZ	**Waiomatatini S**	**2.36**	**187**	P	**Pn**	**09 26 00.7**	**+1.9**
WMGZ				T	T	09 28 20.2	
HAZ	**Te Kaha**	**2.42**	**199**	P	**Pn**	**09 25 58.5**	**-1.1**
WSRZ	**White Island S**	**2.42**	**212**	T	T	09 28 31.3	
WIZ	**White Island**	**2.42**	**212**	P	**Pn**	**09 26 00.5**	**+0.9**
WIZ				T	T	09 28 31.3	
PKGZ	**Pakihiroa**	**2.48**	**193**	P	**Pn**	**09 26 00.2**	**-0.4**
PKGZ				S	**Sb**	**09 26 36.6**	**+1.3**
PUZ	**Puketiti**	**2.63**	**189**	P	**Pn**	**09 26 04.2**	**+1.7**
PUZ				S	**Sb**	**09 26 40.4**	**+0.8**
RUGZ	**Raukumara Rang**	**2.65**	**199**	P	**Pn**	**09 26 03.5**	**+0.6**
TWGZ	**Tauwhareparae**	**2.78**	**193**	P	**Pn**	**09 26 07.0**	**+2.4**
KUZ	**Kuaotunu**	**2.79**	**242**	P	**Pn**	**09 26 01.8**	**-2.9**
KUZ				T	T	09 28 15.5	
GRZ	**Great Barrier**	**2.82**	**253**	P	**Pn**	**09 26 02.2**	**-2.9**
OPRZ	**Ohinepanea**	**2.98**	**217**	P	**Pn**	**09 26 11.2**	**+4.0**
OPRZ				S		09 29 00.3	
MWZ	**Matawai**	**3.03**	**199**	P	**Pn**	**09 26 08.2**	**+0.1**
CNGZ	**Carnagh Statio**	**3.04**	**189**	P	**Pn**	**09 26 10.5**	**+2.3**
TKGZ	**Te Karaka**	**3.06**	**194**	P	**Pn**	**09 26 10.5**	**+2.2**
URZ	**Urewera**	**3.09**	**205**	Pn	**Pn**	**09 26 08.6**	**-0.3**
	17nm,0.3s,baz=211,slow=23,SNR=76						
URZ				Sn	**Sn**	**09 26 45.7**	**-0.2**
	19nm,0.3s,baz=43,slow=13,SNR=4.8						
URZ				LR	LR	09 27 29.5	
	comp=Z,1μm,18.9s,baz=109,slow=36						
URZ	**Urewera**	**3.09**	**205**	P	**Pn**	**09 26 08.7**	**-0.2**
EDRZ	**Edgecumbe**	**3.10**	**211**	P	**Pn**	**09 26 14.2**	**-1.2**
RAGZ	**Rawiri**	**3.21**	**200**	P	**Pn**	**09 26 11.8**	**+1.1**
WIAZ	**Waiheke Island**	**3.24**	**245**	P	**Pn**	**09 26 08.4**	**-2.5**
KARZ	**Kaharoa**	**3.27**	**218**	P	**Pn**	**09 26 12.6**	**+1.3**
KARZ				S		09 29 02.2	
OMRZ	**Omania**	**3.27**	**216**	P	**Pb**	**09 26 16.3**	**-1.9**
KMRZ	**Kaimai**	**3.30**	**223**	P	**Pn**	**09 26 11.5**	**-0.2**
TARZ	**Mount Tarawera**	**3.31**	**213**	P	**Pn**	**09 26 16.1**	**+4.1**
RIGZ	**Rimuhau**	**3.33**	**194**	P	**Pn**	**09 26 14.2**	**+2.0**
MKAZ	**Moumakai**	**3.36**	**240**	P	**Pn**	**09 26 11.3**	**-1.2**
NGRZ	**Ngongotaha**	**3.36**	**218**	P	**Pb**	**09 26 18.2**	**-1.4**
RRRZ	**Republican Roa**	**3.40**	**212**	P	**Pb**	**09 26 18.6**	**-1.7**
HLRZ	**Highlands Stat**	**3.40**	**214**	P	Pn	09 26 17.9	+4.8
ABAZ	**Army Bay**	**3.40**	**249**	P	**Pn**	**09 26 11.3**	**-1.8**
MUGZ	**Murupara**	**3.41**	**208**	P	**Pn**	**09 26 14.5**	**+1.2**
UTU	**Utuhina**	**3.41**	**217**	P	**Pb**	**09 26 19.5**	**-1.0**
RTZ	**Ruatahuna**	**3.46**	**204**		**Pn**	**09 26 13.7**	**-0.3**
RTZ	**Ruatahuna**	**3.46**	**204**	P	**Pn**	**09 26 15.1**	**+1.2**
ETAZ	**East Tamaki Re**	**3.46**	**244**	P	**Pn**	**09 26 13.0**	**-0.9**
TOZ	**Tahuroa Road**	**3.48**	**229**		**Pn**	**09 26 13.7**	**-0.4**
TOZ	**Tahuroa Road**	**3.48**	**229**	P	**Pn**	**09 26 13.0**	**-1.1**
HSRZ	**Hossack Road**	**3.50**	**215**	P	**Pb**	**09 26 20.4**	**-1.5**
SNGZ	**Shannon Statio**	**3.50**	**199**	P	**Pn**	**09 26 16.6**	**+2.1**
PRGZ	**Paritu Road**	**3.52**	**192**	P	**Pn**	**09 26 17.4**	**+2.6**
HRRZ	**Handcock Road**	**3.54**	**214**	P	**Pb**	**09 26 20.9**	**-1.8**
PRRZ	**Plateau Road**	**3.58**	**212**	P	**Pn**	**09 26 18.7**	**+3.1**
GRRZ	**Galatos Road**	**3.59**	**216**	P	**Pb**	**09 26 23.2**	**-0.4**
ALRZ	**Allen Road**	**3.66**	**212**	P	**Pn**	**09 26 21.1**	**+4.5**
KNZ	**Kokohu**	**3.66**	**194**	P	**Pn**	**09 26 17.5**	**+1.0**
RAHZ	**Arahi**	**3.70**	**201**	P	**Pn**	**09 26 18.8**	**+1.5**
WPRZ	**Whakapapatarin**	**3.70**	**214**	P	**Pn**	**09 26 21.9**	**+4.7**
WTAZ	**Waiatarua**	**3.71**	**246**	P	**Pn**	**09 26 15.9**	**-1.5**
MTHZ	**Maungataniwha**	**3.72**	**204**	P	**Pn**	**09 26 19.7**	**+2.2**
MHGZ	**Mahia Peninsul**	**3.74**	**191**	P	**Pn**	**09 26 20.0**	**+2.2**
WHHZ	**Waihua**	**3.81**	**199**	P	**Pn**	**09 26 21.2**	**+2.5**
KUTZ	**Kaahu Road**	**3.84**	**217**	P	**Pn**	**09 26 23.5**	**+4.4**
MRHZ	**Matea Rd**	**3.86**	**209**	P	**Pn**	**09 26 21.7**	**+2.2**
TLZ	**Tolley Road**	**3.87**	**221**	P	**Pn**	**09 26 19.3**	**-0.2**
NMHZ	**Naumai**	**3.95**	**203**	P	**Pn**	**09 26 23.0**	**+2.2**
ARHZ	**Aropaoanui**	**4.05**	**200**	P	**Pn**	**09 26 23.6**	**+1.6**
WATZ	**Wairara**	**4.05**	**216**	P	Pn	09 26 27.1	+5.0
BKZ	**Black Stump Fm**	**4.12**	**206**		**Pn**	**09 26 24.1**	**+1.0**
BKZ	**Black Stump Fm**	**4.12**	**206**	P	**Pn**	**09 26 25.1**	**+2.1**
RATZ	**Rangitukua**	**4.16**	**215**	P	**Pn**	**09 26 27.9**	**+4.3**
RITZ	**Rihia Road**	**4.21**	**213**	P	**Pn**	**09 26 27.9**	**+3.6**
KATZ	**Kakaramea**	**4.28**	**214**	P	Pn	09 26 30.4	+5.0
MCHZ	**McNeill Hill**	**4.30**	**202**	P	**Pn**	**09 26 26.9**	**+1.4**
KWHZ	**Kaweka Forest**	**4.37**	**205**	P	**Pn**	**09 26 27.8**	**+1.3**
HIZ	**Hauiti**	**4.38**	**225**		**Pn**	**09 26 27.0**	**+0.5**
NTVZ	**North Tongarir**	**4.39**	**214**	P	**Pn**	**09 26 30.2**	**+3.4**
TMVZ	**Te Maari**	**4.39**	**213**	P	**Pn**	**09 26 29.7**	**+2.9**
CKHZ	**Cape Kidnapper**	**4.40**	**198**	P	**Pn**	**09 26 27.6**	**+0.8**
KRVZ	**Karewarewa**	**4.41**	**214**	P	**Pn**	**09 26 30.5**	**+3.5**
ETVZ	**East Tongariro**	**4.41**	**213**	P	**Pn**	**09 26 29.8**	**+2.7**
WTVZ	**West Tongariro**	**4.45**	**214**	P	**Pn**	**09 26 31.2**	**+3.7**
NNVZ	**North Ngauruho**	**4.45**	**214**	P	**Pn**	**09 26 31.0**	**+3.3**
OTVZ	**Oturere**	**4.45**	**213**	P	**Pn**	**09 26 31.4**	**+3.8**
SNVZ	**South Ngauruho**	**4.48**	**213**	P	**Pn**	**09 26 31.0**	**+2.9**
TWVZ	**Taurewa**	**4.48**	**216**	P	**Pn**	**09 26 32.0**	**+4.0**
NGZ	**Ngauruhoe**	**4.49**	**214**	P	**Pn**	**09 26 31.6**	**+3.4**
COVZ	**Chateau Observ**	**4.54**	**214**	P	**Pn**	**09 26 32.0**	**+3.2**
BHHZ	**Black Hill Sta**	**4.56**	**208**	P	**Pn**	**09 26 31.0**	**+1.9**
FWVZ	**Far West T-bar**	**4.58**	**213**	P	**Pn**	**09 26 33.0**	**+3.5**
KAHZ	**Kahuranaki**	**4.58**	**199**	P	**Pn**	**09 26 30.0**	**+0.7**
MAVZ	**Matarangi**	**4.58**	**213**	P	**Pn**	**09 26 34.4**	**+4.7**
WHVZ	**Whangaehu Hut**	**4.58**	**213**	P	Pn	09 26 34.7	+5.1
KRHZ	**Kereru**	**4.59**	**204**	P	**Pn**	**09 26 29.8**	**+0.3**
TRVZ	**Turoa**	**4.61**	**213**	P	**Pn**	**09 26 33.5**	**+3.5**
WNVZ	**Wahianoa**	**4.61**	**213**	P	**Pn**	**09 26 33.2**	**+3.2**
MOVZ	**Moawhango**	**4.62**	**211**	P	**Pn**	**09 26 31.7**	**+1.9**
PXZ	**Pawanui**	**4.80**	**198**	P	**Pn**	**09 26 31.5**	**-0.9**
VRZ	**Vera Road**	**4.86**	**220**	P	**Pn**	**09 26 37.5**	**+4.4**
PNHZ	**Pukenui**	**4.89**	**204**	P	**Pn**	**09 26 33.7**	**+0.1**
WPHZ	**Waipukurau**	**4.95**	**201**	P	**Pn**	**09 26 34.2**	**-0.2**
PRHZ	**Porangahau**	**5.08**	**199**	P	**Pn**	**09 26 36.4**	**+0.1**
TSZ	**Takapari Road**	**5.10**	**205**	P	**Pn**	**09 26 36.3**	**-0.2**
WAZ	**Wanganui**	**5.24**	**214**	P	**Pn**	**09 26 42.3**	**+4.0**
NEZ	**North Egmont**	**5.33**	**223**	P	Pb	09 26 48.8	-4.5
PRWZ	**Pori Road**	**5.54**	**203**	P	**Pn**	**09 26 43.7**	**+1.1**
PRWZ				S	**Sn**	**09 27 46.2**	**-0.1**
BFZ	**Birch Farm**	**5.58**	**200**	P	**Pn**	**09 26 41.0**	**-2.0**
MRZ	**Mangatainoka R**	**5.77**	**205**		**Pn**	**09 26 45.4**	**-0.2**
MRZ	**Mangatainoka R**	**5.77**	**205**	P	**Pn**	**09 26 45.6**	**-0.1**
MRZ				S	**Sn**	**09 27 51.3**	**-0.6**
OGWZ	**Otaki Gorge**	**6.05**	**207**	P	**Pn**	**09 26 53.1**	**+3.6**
TMWZ	**Te Maipa**	**6.07**	**201**	P	**Pn**	**09 26 48.7**	**-1.1**
TMWZ				S	**Sn**	**09 27 58.7**	**-0.7**
KIW	**Kapiti Island**	**6.19**	**208**	P	**Pn**	**09 26 51.6**	**+0.2**
RAO	**Raoul Island**	**6.79**	**25**	Pn	Pn	09 26 49.5	-10
	77nm,0.3s,baz=191,slow=22,SNR=1.9						
LTZ	**Lake Taylor**	**8.88**	**213**	P	**Pn**	**09 27 29.5**	**+1.1**
CTZ	**Chatham Island**	**8.98**	**158**	P	**Pn**	**09 27 29.1**	**-0.6**
OXZ	**Oxford**	**9.42**	**212**	P	**Pn**	**09 27 33.9**	**-1.9**
OXZ				S	**Sn**	**09 29 21.2**	**-0.6**
RPZ	**Rata Peaks**	**10.17**	**214**	Pn	**Pn**	**09 27 45.9**	**-0.1**
	0.6nm,0.3s,baz=209,slow=18,SNR=2.1						
RPZ				LR	LR	09 32 27.5	
	comp=Z,441nm,18.5s,baz=33,slow=40						
DZM	**Mont Dzumac**	**17.17**	**318**	LR	LR	09 34 29.2	
	comp=Z,847nm,20.8s,baz=178,slow=33						
ARMA	**Armidale**	**23.31**	**275**	P	**P**	**09 30 27.7**	**-0.6**
RAR	**Rarotonga**	**23.54**	**59**	LR	LR	09 40 46.6	
	comp=Z,42nm,18.1s,baz=218,slow=40						
STKA	**Stephens Creek**	**31.05**	**266**		**P**	**09 31 38.7**	**+0.6**
STKA	**Stephens Creek**	**31.05**	**266**	P	**P**	**09 31 36.8**	**-1.3**
	1.4nm,0.7s,baz=24,slow=4.2,SNR=3.2						
	1.4nm,0.7s						
HNR	**Honiara**	**31.10**	**322**	LR	LR	09 42 15.0	
	comp=Z,2μm,18.6s,baz=144,slow=33						
CTA	**Charters Tower**	**32.43**	**290**	LR	LR	09 43 45.8	
	comp=Z,52nm,19.0s,baz=97,slow=34						
PPT	**Papeete**	**33.25**	**66**	LR	LR	09 41 19.2	
	comp=Z,41nm,20.7s,baz=196,slow=29						
BBOO	**Buckleboo**	**35.27**	**262**	P	**P**	**09 32 15.2**	**+0.2**
BBOO					IAmb	IAmb	09 32 22.1	
	comp=Z,31nm,1.8s						
COEN	**Coen**	**38.49**	**295**	P	**P**	**09 32 42.5**	**-0.1**
PMG	**Port Moresby**	**38.78**	**304**	LR	LR	09 47 09.5	
	comp=Z,280nm,18.2s,baz=150,slow=34						
AS31	**Alice Springs**	**40.46**	**274**	P	**P**	**09 32 58.2**	**-0.7**
ASAR	**Alice Springs**	**40.46**	**274**	P	**P**	**09 32 58.1**	**-0.8**
ASAR	**Alice Springs**	**40.46**	**274**	P	**P**	**09 32 56.3**	**-2.7**
	comp=Z,3.3nm,0.8s,baz=117,slow=7.1,SNR=48						
ASAR				LR	LR	09 49 46.8	
	comp=Z,147nm,18.1s,baz=122,slow=36						
	comp=Z,3.3nm,0.8s						
WR0	**Warramunga Arr**	**41.76**	**280**		**P**	**09 33 08.4**	**-1.2**
WR0					IAmb	IAmb	09 33 32.3	
	comp=Z,55nm,2.0s						
WB2	**Warramunga Arr**	**41.92**	**280**	P	**P**	**09 33 09.4**	**-1.5**
WRA	**Warramunga Arr**	**41.93**	**280**	P	**P**	**09 33 09.8**	**-1.2**
WRA	**Warramunga Arr**	**41.93**	**280**	P	P	09 33 07.5	-3.4
	comp=Z,3.2nm,0.7s,baz=122,slow=7.5,SNR=18						
	comp=Z,3.2nm,0.7s						
WB0	**Warramunga Arr**	**41.97**	**280**	P	**P**	**09 33 10.1**	**-1.3**
FORT	**Forrest**	**42.37**	**261**	P	**P**	**09 33 13.5**	**-1.0**
VNDA	**Vanda**	**42.80**	**185**	P	**P**	**09 33 16.4**	**-0.9**
VNDA				IAmb	IAmb	09 33 55.0	
	comp=Z,47nm,1.9s						
VNDA	**Vanda**	**42.80**	**185**	LR	LR	09 48 30.6	
	comp=Z,68nm,18.5s,baz=28,slow=32						
KNRA	**Kununurra**	**48.68**	**281**		**P**	**09 34 03.7**	**-0.9**
KNRA				IAmb	IAmb	09 34 09.9	
	comp=Z,26nm,1.1s						
FITZ	**Fitzroy Crossi**	**49.91**	**276**	P	**P**	**09 34 12.9**	**-1.2**
NWAO	**Narrogin (SRO)**	**50.25**	**254**	P	**P**	**09 34 14.7**	**-1.7**
NWAO				IAmb	IAmb	09 35 46.6	
	comp=Z,37nm,1.4s						
PSA00	**Pilbara Seismi**	**52.91**	**268**	P	**P**	**09 34 35.7**	**-0.8**
PSA00				IAmb	IAmb	09 34 41.3	
	comp=Z,52nm,1.3s						
QSPA	**South Pole Qui**	**54.65**	**180**	P	**P**	**09 34 49.6**	**+0.8**
QSPA				IAmb	IAmb	09 34 57.0	
	comp=Z,21nm,0.9s						
GUMO	**Guam**	**58.42**	**320**	LR	LR	09 59 40.6	
	comp=Z,33nm,18.1s,baz=120,slow=36						
LEM	**Lembang**	**70.75**	**275**	LR	LR	10 08 12.1	
	comp=Z,46nm,19.9s,baz=124,slow=36						
JCJ	**Chichijima**	**71.19**	**326**	LR	LR	10 03 07.4	
	comp=Z,20nm,20.6s,baz=68,slow=32						
ELIB	**Princess Elisa**	**71.49**	**188**	*d*PcP	**PcP**	**09 37 00.4**	**+0.4**
SNAA	**Sanae**	**73.15**	**179**	P	**P**	**09 36 50.1**	**-0.3**
SNAA				IAmb	IAmb	09 37 23.2	
	comp=Z,53nm,2.0s						
SNAA	**Sanae**	**73.15**	**179**	⇓P	**P**	**09 36 51.3**	**+1.0**
	comp=Z,52nm,0.7s						
SNAA	**Sanae**	**73.15**	**179**	P	**P**	**09 36 54.3**	**+4.0**
	comp=Z,4.6nm,1.0s,baz=255,slow=3.3,SNR=3.6						
	comp=Z,4.6nm,1.0s					

comp=Z,0.6nm,0.3s,baz=86,slow=8.0,SNR=12
SCHQ LR LR 09 39 56.4
comp=Z,1µm,21.2s,baz=82,slow=33
comp=Z,28nm,1.2s
UMMG Uummannaq 18.64 343 *eP* **P 09 34 04.1 -1.6**
EKA Eskdalemuir Ar 18.68 72 P **Pn 09 34 07.2 +0.6**
baz=286,slow=9.3
comp=Z,4.0nm,0.8s
GBN Guysborough 18.80 255 P **Pn 09 34 08.5 +0.3**
GBN IAmb IAmb 09 34 16.8
comp=Z,216nm,1.8s
SUMG Summit 19.02 357 P **Pn 09 34 11.6 +0.6**
SUMG IAmb IAmb 09 34 15.1
comp=Z,176nm,2.0s
SUMG Summit 19.02 357 P **Pn 09 34 11.6 +0.6**
SUMG pmax pmax
comp=Z,176nm,2.0s
SUMG Summit 19.02 357 *eP* **P 09 34 09.8 -0.5**
FRB Frobisher Bay 19.73 314 P **Pn 09 34 19.7 +0.5**
FRB Frobisher Bay 19.73 314 P **P 09 34 18.4 +0.7**
comp=Z,0.2nm,0.3s,baz=98,slow=9.0,SNR=7.3
FRB LR LR 09 40 23.2
comp=Z,2µm,18.7s,baz=106,slow=32
comp=Z,8.9nm,1.0s
BATG Bathurst New B 20.46 264 P **P 09 34 25.1 -0.6**
ROSF Rostrenen 20.76 92 P Pn 09 34 34.3 +2.9
JMIC Jan Mayen 21.04 24 LR LR 09 40 32.5
comp=Z,1µm,18.7s,baz=247,slow=31
UPNV Upernavik 21.10 343 *eP* **P 09 34 32.0 -0.5**
SGMF Saint Gilles 21.22 91 P **P 09 34 36.2 +2.2**
PQI Presque Isle 21.92 265 P **P 09 34 43.4 +1.9**
PQI IAmb IAmb 09 34 46.2
comp=Z,115nm,1.4s
GGN Saint George 22.06 260 P **P 09 34 44.9 +1.9**
GGN IAmb IAmb 09 34 46.6
comp=Z,73nm,1.1s
GRR Gorron 22.17 90 P **P 09 34 48.8 +4.6**
D62A Allapoint, All 22.33 267 P **P 09 34 47.6 +1.8**
PBRG Braganca 22.43 110 *eP* **P 09 34 49.5 +2.4**
comp=Z,118nm,1.6s
G65A Princeton 22.44 261 P **P 09 34 47.2 +0.2**
G65A IAmb IAmb 09 34 52.5
comp=Z,64nm,1.0s
F64A Sherman 22.54 263 P **P 09 34 47.9 -0.2**
F64A IAmb IAmb 09 34 54.5
comp=Z,106nm,1.4s
PCAS Casmilo, Conde 22.69 116 *eP* **P 09 34 51.6 +1.9**
comp=Z,93nm,1.7s
MVO Moncorvo 22.71 112 *eP* **P 09 34 49.5 -0.5**
comp=Z,108nm,1.5s
MVO *e*LR LR 09 40 19.5
comp=Z,1µm,20.0s
E62A Clayton Lake 22.84 266 P **P 09 34 52.1 +0.8**
E62A IAmb IAmb 09 34 58.8
comp=Z,55nm,1.1s
LMQ La Malbaie 22.86 269 P **P 09 34 53.0 +1.5**
LDAQ Lac Daran 23.21 270 P **P 09 34 57.0 +1.8**
PCBR Castelo Branco 23.39 115 *eP* **P 09 34 57.5 +0.6**
comp=Z,134nm,1.5s
PKME Peaks-Kenny Pk 23.42 263 P **P 09 34 57.9 +0.7**
PKME Peaks-Kenny Pk 23.42 263 P **P 09 34 57.4 +0.2**
baz=57
MFF Saint Martin d 23.45 93 P **P 09 34 59.0 +1.4**
PMRV Marv??o 23.73 116 *eP* **P 09 35 02.1 +1.8**
comp=Z,47nm,2.1s
PMRV *e*LR LR 09 40 30.5
comp=Z,1µm,20.0s
G62A West of Eustis 24.18 264 P **P 09 35 02.9 -1.7**
G62A IAmb IAmb 09 35 18.2
comp=Z,42nm,1.1s
CLF Chambon-Foret 24.19 88 P **P 09 35 04.3 -0.2**
BAIF Baives 24.46 82 P **P 09 35 11.2 +4.1**
NEEM North Greenlan 24.55 352 *eP* **P 09 35 07.2 -0.7**
BMRD Maredsous 24.70 81 *dP* **P 09 35 10.5 +1.3**
GIVF Givet 24.81 82 P **P 09 35 16.4 +6.2**
KONO Kongsberg 25.01 58 *i* P **P 09 35 13.2 +1.4**
KONO pmax pmax
comp=Z,21nm,1.1s
TCF Toulx Ste Croi 25.02 92 P **P 09 35 13.4 +1.3**
BGF Bois d'Agland 25.26 91 P **P 09 35 13.2 -1.1**
ETSF Etsaut 25.28 101 P **P 09 35 20.7 +6.1**
PAB San Pablo 25.30 111 P **P 09 35 13.7 -1.2**
PAB IAmb IAmb 09 35 21.4
comp=Z,49nm,1.4s
PAB San Pablo 25.30 111 P **P 09 35 13.7 -1.2**
PAB pmax pmax
comp=Z,49nm,1.4s
BTNL Ternell 25.39 80 *dP* **P 09 35 15.4 0.0**
SSF Saint Saulge 25.40 89 P **P 09 35 15.4 -0.1**
ESBB Sonseca Array 25.43 111 P **P 09 35 16.0 0.0**
ESBB IAmb IAmb 09 35 22.5
comp=Z,48nm,1.2s
ESDC Sonseca Array 25.43 111 P **P 09 35 15.2 -0.7**
comp=Z,15nm,1.1s,baz=310,slow=8.7,SNR=20
ESDC LR LR 09 43 15.5
comp=Z,1µm,18.9s,baz=312,slow=32
comp=Z,15nm,1.1s
AVF Avril sur Loir 25.44 90 P **P 09 35 15.6 -0.3**
LOR Lormes 25.51 88 P **P 09 35 18.6 +2.1**
LBNH Lisbon 25.55 263 P **P 09 35 17.2 +0.3**
baz=55
NB2 NORSAR Subarra 25.68 55 P **P 09 35 17.4 -0.6**
comp=Z,2.4nm,0.8s,baz=274,slow=9.3
NOA NORSAR Array B 25.68 55 P **P 09 35 17.5 -0.6**
comp=Z,2.2nm,0.7s,baz=273,slow=8.9,SNR=4.5
NOA LR LR 09 44 15.6
comp=Z,601nm,18.6s,baz=275,slow=34
comp=Z,2.2nm,0.7s
NC602 NORSAR Array S 25.86 55 IAmb IAmb 09 35 26.0
comp=Z,34nm,1.1s
NC405 NORSAR Array S 25.91 54 IAmb IAmb 09 35 25.6
comp=Z,49nm,1.2s
TRQ Mont Tremblant 26.04 269 IAmb IAmb 09 35 24.7
comp=Z,34nm,1.4s
VLDQ Val d'Or 26.83 275 P **P 09 35 29.8 +1.4**
LONY Lake Ozonia 26.91 266 P **P 09 35 29.6 +0.3**
baz=56
HFS Hagfors 26.99 56 P **P 09 35 30.1 +0.2**
comp=Z,2.9nm,0.8s,baz=147,slow=8.2,SNR=2.9
HFS LR LR 09 44 55.8
comp=Z,952nm,19.2s,baz=270,slow=34
comp=Z,2.9nm,0.8s
ECH Echery 27.01 84 P **P 09 35 29.5 -0.6**
ECH Echery 27.01 84 P **P 09 35 29.5 -0.6**
ECH pmax pmax
comp=Z,38nm,1.6s
CLL Collm 29.09 75 P **P 09 35 48.4 -0.2**
CLL Collm 29.09 75 P **P 09 35 48.4 -0.2**
CLL pmax pmax
comp=Z,11nm,1.1s
CLL Collm 29.09 75 *i* P **P 09 35 48.1 -0.5**
comp=Z,14nm,1.2s
CLL *i* pP **pP 09 35 52.3 0.0**
CLL *ex* x 09 35 59.0
CLL *e*PPP PPP 09 36 51.0
CLL *eS* **S 09 40 42.0 +2.5**
TUE Stuetta 29.16 86 IAmb IAmb 09 35 57.0
comp=Z,36nm,1.4s
DAVOX Davos/Dischmat 29.32 85 LR LR 09 46 34.3
comp=Z,1µm,21.0s,baz=296,slow=34
SADO Sadowa 29.54 271 LR LR 09 46 50.4
comp=Z,2µm,18.4s,baz=57,slow=35
BRG Berggiesshubel 29.80 75 *eP* **P 09 35 55.9 +1.0**
BRG Amp 09 35 56.6
comp=Z,3.8nm,0.9s
BRG Amp 09 48 35.0
comp=N,0.4nm,12.7s
BRG Amp 09 48 44.0
comp=Z,0.9nm,12.5s
BRG Amp 09 48 48.0
comp=E,0.6nm,11.6s
MDT Midelt 30.22 121 LR LR 09 45 13.5
comp=E,152nm,21.1s,baz=345,slow=31
KHC Kasperske Hory 30.36 78 *ceP* **P 09 36 00.4 +0.4**
KHC pmax pmax
comp=Z,23nm,1.7s
GERES GERESS Array B 30.57 79 P **P 09 36 02.4 +0.6**
comp=Z,0.7nm,0.5s,baz=304,slow=10,SNR=3.9
GERES LR LR 09 48 01.1
comp=Z,878nm,18.1s,baz=290,slow=36
comp=Z,0.7nm,0.5s
CTI Castel Tesino 30.75 85 IAmb IAmb 09 36 09.5
comp=Z,27nm,1.3s
SSPA Standing Stone 31.24 263 P **P 09 36 07.6 -0.1**
baz=51
STAL STALIGIAL 31.27 84 IAmb IAmb 09 36 13.1
comp=Z,36nm,1.7s
ARCES ARCESS Array B 31.31 36 P **P 09 36 07.5 -0.6**
comp=Z,3.8nm,0.9s,baz=267,slow=6.8,SNR=7.3
ARCES LR LR 09 46 48.2
comp=Z,144nm,18.2s,baz=283,slow=33
comp=Z,3.8nm,0.9s
PRED Cave del Predi 31.68 83 IAmb IAmb 09 36 16.9
comp=Z,23nm,1.6s
KLNR Kaliningrad 31.84 65 *i* P **P 09 36 14.3 +1.5**
KLNR pmax pmax
comp=Z,68nm,1.1s
VRAC Vranov 32.03 76 LR LR 09 48 51.4
comp=Z,1µm,18.5s,baz=306,slow=36
FCC Fort Churchill 32.13 303 IAmb IAmb 09 36 17.4
comp=Z,16nm,1.1s
M53A Wi Miller and 32.39 267 P **P 09 36 18.1 +0.2**
baz=52
CBN Corbin Frederi 32.52 259 P **P 09 36 20.0 +1.1**
baz=48
FINES FINESS Array B 32.69 51 P **P 09 36 19.1 -1.1**
comp=Z,2.6nm,0.7s,baz=324,slow=9.4,SNR=4.3
FINES LR LR 09 48 06.4
comp=Z,790nm,21.1s,baz=247,slow=34
comp=Z,2.6nm,0.7s
GLMI Grayling 32.76 275 P **P 09 36 21.9 +0.8**
baz=56
MODS Modra-Piesok 32.88 77 *eP* **P 09 36 26.3 +4.3**
MODS Modra-Piesok 32.88 77 *eP* **P 09 36 26.3 +4.3**
MCWV Mont Chateau 33.02 263 P **P 09 36 24.1 +0.8**
baz=50
FDMO Fiordimonte 33.28 89 IAmb IAmb 09 36 31.0
comp=Z,33nm,1.4s
O53A New Philadelph 33.45 265 P **P 09 36 27.7 +0.6**
baz=51
PABE Paberze 33.51 62 P **P 09 36 27.7 +0.2**
VSU Vasula 33.88 56 *i* P **P 09 36 33.1 +2.5**
VSU pmax pmax
comp=Z,16nm,1.0s
P52A Corning 34.39 265 P **P 09 36 36.7 +1.4**
baz=50
ACSO Alum Creek Sta 34.51 267 IAmb IAmb 09 36 43.8
comp=Z,36nm,1.4s
ACSO Alum Creek Sta 34.51 267 P **P 09 36 37.5 +1.2**
baz=51
MORH Mrgy, Hungar 34.78 80 ⇑P **P 09 36 37.9 -0.7**
N49A Columbus Grove 34.80 269 IAmb IAmb 09 36 45.0
comp=Z,42nm,1.6s
LVZ Lovozero 34.81 39 *ceP* **P 09 36 38.8 +0.1**
LVZ pmax pmax
comp=Z,13nm,1.1s
CNNC Cliffs of the 34.87 256 P **P 09 36 40.8 +1.4**
baz=45
BLA Blacksburg 34.97 260 P **P 09 36 41.3 +0.9**
baz=47
CRVS Cervenica-Dubn 35.03 74 *eP* **P 09 36 44.6 +3.8**
CRVS Cervenica-Dubn 35.03 74 *eP* **P 09 36 44.5 +3.8**
EYMN Ely 35.13 284 P **P 09 36 41.2 -0.5**
EYMN IAmb IAmb 09 36 48.0
comp=Z,45nm,1.4s
EYMN Ely 35.13 284 P **P 09 36 42.0 +0.3**
baz=59,SNR=9.2
NACGM Naroch 35.23 62 *eP* **P 09 36 40.3 -2.0**
comp=Z,13nm,0.8s,baz=295
Q51A Peebles 35.50 265 IAmb IAmb 09 36 52.3
comp=Z,31nm,1.1s
SGRT San Giovanni R 35.62 88 IAmb IAmb 09 36 51.3
comp=Z,22nm,1.0s
KEST Kesra 35.76 102 IAmb IAmb 09 36 53.2
comp=Z,38nm,1.2s
KEST Kesra 35.76 102 P **P 09 36 47.3 0.0**
comp=Z,4.4nm,0.8s,baz=160,slow=1.5,SNR=5.7
KEST LR LR 09 48 54.3
comp=Z,362nm,21.2s,baz=240,slow=32
comp=Z,4.4nm,0.8s
O48B Farmland 35.79 269 P **P 09 36 48.2 +0.9**
baz=51
MNK Minsk 35.98 62 *i* P **P 09 36 46.8 -2.0**
comp=E,12nm,0.9s
MNK *i* P **P 09 36 46.8 -2.0**
comp=N,14nm,0.8s
MNK *i* P **P 09 36 46.8 -2.0**
comp=Z,8.0nm,0.8s,baz=295
MNK *i* PPP PPP 09 38 21.6
MNK *i* S **S 09 42 26.7 0.0**
MNK *i* SS **SnSn 09 44 52.5 +1.9**
MNK *i* SSS SSS 09 45 08.8
MNK *i* LQ LQ 09 48 50.4
MNK *i* LR LR 09 51 35.0
MNK *i* LRM MLR 09 53 04.2
comp=N,343nm,18.1s
MNK *i* LRM MLR 09 53 19.0
comp=Z,272nm,16.1s
MNK *i* LRM MLR 09 53 26.8
comp=E,97nm,14.8s
MNK Minsk 35.98 62 *i* P **P 09 36 46.8 -2.0**
MNK *i* 09 39 12.8
MNK *i* S **S 09 42 26.6 0.0**
MNK *i* SS **SnSn 09 44 52.4 +1.9**
MNK *i* 09 47 04.8
MNK pmax pmax
comp=Z,8.0nm,0.8s
MNK pmax pmax
comp=N,14nm,0.9s
MNK pmax pmax
comp=E,12nm,0.9s
MNK MLR MLR
comp=N,343nm,18.0s
MNK MLR MLR
comp=Z,272nm,16.0s
MNK MLR MLR
comp=E,97nm,15.0s
P49A Miami Univ. Ec 35.99 267 P **P 09 36 50.2 +1.1**
baz=50
FRGS Fruska Gora 36.05 81 ⇑P **P 09 36 49.1 -0.4**
P48A Milroy 36.45 268 IAmb IAmb 09 36 58.6
comp=Z,28nm,1.1s
ULM Lac du Bonnet 36.47 290 P **P 09 36 51.0 -2.0**
ULM IAmb IAmb 09 36 58.5
comp=Z,36nm,1.3s
ULM Lac du Bonnet 36.47 290 P **P 09 36 51.0 -2.0**
ULM pmax pmax
comp=Z,36nm,1.3s
ULM Lac du Bonnet 36.47 290 P **P 09 36 53.0 0.0**
comp=Z,12nm,1.0s,baz=73,slow=8.9,SNR=15
ULM LR LR 09 50 28.5
comp=Z,736nm,19.0s,baz=61,slow=34
comp=Z,12nm,1.0s
S51A Beattyville 36.56 264 IAmb IAmb 09 37 00.8
comp=Z,41nm,1.3s
DRGR 36.84 76 ⇑P **P 09 36 55.5 -0.9**
DRGR 36.84 76 ⇑P **P 09 36 55.5 -0.9**
BZS Buzias 36.85 79 ⇑P **P 09 36 56.5 +0.2**
BZS Buzias 36.85 79 ⇑P **P 09 36 56.5 +0.2**
SFIN Lafayette 36.87 270 P **P 09 36 57.1 +0.6**
baz=51
KMSC Kings Mountain 36.93 259 P **P 09 36 57.9 +0.8**
baz=45
MARR Marisel-Cluj 37.14 76 ⇑P **P 09 36 57.9 -1.1**
TZTN Tazewell 37.27 263 P **P 09 37 00.9 +1.0**
baz=47
SPMN Marine on St. 37.36 281 IAmb IAmb 09 37 03.2
comp=Z,22nm,1.1s
SPMN Marine on St. 37.36 281 P **P 09 37 01.3 +0.6**
baz=56
MDVR Moldovita 37.38 80 ⇑P **P 09 37 01.3 +0.4**
F36A Milaca 37.42 282 IAmb IAmb 09 37 07.6
comp=Z,26nm,1.2s
V53A Saluda 37.43 261 IAmb IAmb 09 37 04.8
comp=Z,70nm,1.7s
VAE Valguarnera 37.55 95 LR LR 09 51 04.2
comp=Z,270nm,20.1s,baz=332,slow=34
GZR Gura Zlata 37.65 78 ⇓P **P 09 37 02.0 -1.2**
GZR Gura Zlata 37.65 78 ⇓P **P 09 37 02.0 -1.2**
FFC Flin Flon 37.67 299 P **P 09 37 03.1 0.0**
FFC Flin Flon 37.67 299 P **P 09 37 03.1 0.0**
FFC pmax pmax
comp=Z,9.0nm,1.0s
T50A Nancy 37.71 264 IAmb IAmb 09 37 10.8
comp=Z,39nm,1.4s
NHSC New Hope 37.72 255 P **P 09 37 04.6 +0.9**
baz=43
WCI Wyandotte Cave 37.77 267 P **P 09 37 04.9 +0.7**
baz=49
BUR08 Bucovina Ar. S 37.82 74 P **P 09 37 05.6 +1.0**
BURAR Bucovina Array 37.84 74 ⇑P **P 09 37 04.1 -0.7**
BURAR Bucovina Array 37.84 74 P **P 09 37 05.0 +0.1**
BURAR Bucovina Array 37.84 74 ⇑P **P 09 37 04.1 -0.7**
BOVS Bovan 38.03 81 ⇓P **P 09 37 06.0 -0.3**
HDIL Hopedale 38.06 272 P **P 09 37 07.7 +1.1**
baz=51
KIEV Kiev 38.48 67 ⇑P **P 09 37 09.3 -0.7**
KIEV Kiev 38.48 67 P **P 09 37 10.1 +0.1**
KIEV Kiev 38.48 67 P **P 09 37 10.1 +0.1**
KIEV pmax pmax
comp=Z,12nm,1.0s
AKASG Malin Array Be 38.48 67 *ceP* **P 09 37 10.1 0.0**
AKASG pmax pmax
comp=Z,7.0nm,0.9s
AKASG Malin Array Be 38.48 67 P **P 09 37 09.1 -0.9**
comp=Z,2.3nm,0.8s,baz=304,slow=8.3,SNR=9.8
comp=Z,2.3nm,0.8s
AKBB Malin Array Si 38.48 67 P **P 09 37 09.3 -0.7**
AKBB Malin Array Si 38.48 67 *ceP* **P 09 37 10.7 +0.6**
AKBB pmax pmax
comp=Z,13nm,1.0s
U49A Red Boiling Sp 38.61 264 IAmb IAmb 09 37 18.2
comp=Z,41nm,1.4s
BLKB Belogradchik 38.61 81 ⇑P **P 09 37 10.3 -1.0**
DOPR Dopca 38.84 76 ⇑P **P 09 37 13.4 +0.2**
VOIR 38.95 77 ⇓P **P 09 37 14.3 +0.2**
VOIR 38.95 77 ⇓P **P 09 37 14.3 +0.2**
OZUR 39.00 76 ⇑P **P 09 37 13.3 -1.2**
KLMR Klimovskoe 39.02 49 *eP* **P 09 37 12.9 -1.5**
KLMR pmax pmax
comp=Z,61nm,1.3s
SORM Soroca 39.34 71 ⇑P **P 09 37 15.9 -1.3**
SORM Soroca 39.34 71 ⇑P **P 09 37 15.9 -1.3**
GOGA Godfrey 39.40 259 P **P 09 37 19.3 +1.3**
baz=44
MLR Muntele Rosu 39.44 76 ⇑P **P 09 37 17.4 -0.9**
MLR Muntele Rosu 39.44 76 ⇑P **P 09 37 17.4 -0.9**
PLOR Plostina 39.64 75 ⇑P **P 09 37 19.2 -0.7**
PLOR Plostina 39.64 75 ⇑P **P 09 37 19.2 -0.7**
VRI Vrincioaia 39.67 75 ⇑P **P 09 37 18.8 -1.3**
VRI Vrincioaia 39.67 75 ⇑P **P 09 37 18.8 -1.3**
V48A Smith Brothers 39.75 265 IAmb IAmb 09 37 27.8
comp=Z,73nm,1.6s
MDND Maddock 39.81 289 P **P 09 37 22.2 +1.0**
baz=57
SIUC Southern Illin 39.84 269 IAmb IAmb 09 37 28.2
comp=Z,62nm,1.3s
WVT Waverly 40.08 266 P **P 09 37 20.8 -2.8**
WVT IAmb IAmb 09 37 30.2
comp=Z,81nm,1.8s
WVT Waverly 40.08 266 P **P 09 37 24.3 +0.7**
baz=47
WVT Waverly 40.08 266 P **P 09 37 20.8 -2.8**
WVT pmax pmax
comp=Z,81nm,1.8s
A36M Sachs Harbour 40.17 331 P **P 09 37 24.1 +0.3**
baz=67
OBN Obninsk 40.18 58 *eP* **P 09 37 25.4 +1.2**
OBN pmax pmax
comp=Z,71nm,2.5s
OBN Obninsk 40.18 58 LR LR 09 53 15.1
comp=Z,588nm,18.3s,baz=315,slow=35
YKA Yellowknife Ar 40.24 315 P **P 09 37 24.2 -0.4**
comp=Z,3.5nm,1.0s,baz=63,slow=8.7,SNR=21
YKA PcP **PcP 09 39 27.1 -1.0**
comp=Z,1.0nm,0.9s,baz=56,slow=3.5,SNR=7.3
YKA LR LR 09 52 32.1
comp=Z,473nm,18.5s,baz=68,slow=34
comp=Z,3.5nm,1.0s
ECSD EROS Data Cent 40.45 282 P **P 09 37 27.3 +0.7**
ECSD IAmb IAmb 09 37 33.5
comp=Z,49nm,1.4s
X48A Hartselle 40.77 263 IAmb IAmb 09 37 40.4
comp=Z,70nm,1.9s
CCM Cathedral Cave 40.83 271 P **P 09 37 30.0 +0.3**
CCM Cathedral Cave 40.83 271 P **P 09 37 30.1 +0.3**
baz=49
CCM Cathedral Cave 40.83 271 P **P 09 37 30.0 +0.3**
CCM pmax pmax
comp=Z,23nm,1.3s
C36M Paulatuk 40.87 327 P **P 09 37 29.7 0.0**
baz=65
PLAL Pickwick Lake 41.01 265 IAmb IAmb 09 37 37.1
comp=Z,39nm,1.4s
PBMO Poplar Bluff 41.19 269 IAmb IAmb 09 37 39.1
comp=Z,30nm,1.1s
SUSD Miller 41.39 284 IAmb IAmb 09 37 36.9
comp=Z,19nm,0.7s
SUSD Miller 41.39 284 P **P 09 37 34.5 +0.2**
baz=54
BBTS Babate 41.65 152 LR LR 09 52 08.2
comp=Z,189nm,18.4s,baz=232,slow=32
LRAL Lakeview Retre 41.74 262 P **P 09 37 38.0 +0.7**
baz=44
DGMT Dagmar 42.03 292 IAmb IAmb 09 37 46.1
comp=Z,44nm,1.6s
DGMT Dagmar 42.03 292 P **P 09 37 40.2 +0.7**
baz=56
LCAR Lake Charles 42.10 269 P **P 09 37 40.0 -0.2**
LCAR IAmb IAmb 09 37 46.1
comp=Z,34nm,1.4s
OXF Oxford 42.13 265 IAmb IAmb 09 37 49.3
comp=Z,40nm,1.1s
OXF Oxford 42.13 265 P **P 09 37 40.6 +0.2**
baz=46
DWPF Disney Wildern 42.16 251 P **P 09 37 41.0 +0.2**
baz=40
S39A Bolivar 42.30 272 P **P 09 37 41.5 -0.3**
H05N1 Guadeloupe/Mar 42.34 218 T T 10 20 32.0
SNR=7.2
BGNE Belgrade 42.77 280 P **P 09 37 45.5 -0.1**
baz=51
K30B Basset 42.84 282 IAmb IAmb 09 37 52.8
comp=Z,37nm,1.0s
VORR Voronezh 43.32 61 *eP* **P 09 37 49.2 -0.7**
VORR pmax pmax
comp=Z,10.0nm,0.9s
KSU1 Kansas State U 43.33 276 IAmb IAmb 09 37 56.2
comp=Z,38nm,1.4s
KSU1 Kansas State U 43.33 276 P **P 09 37 50.1 0.0**
baz=49
WRGLY Wrigley 43.49 319 P **P 09 37 51.3 +0.2**
baz=60
VSR Storozhevoye 43.55 62 *eP* **P 09 37 49.4 -2.3**
VSR pmax pmax
comp=Z,20nm,1.2s
TAM Tamanrasset 43.55 119 P **P 09 37 52.2 0.0**
TAM Tamanrasset 43.55 119 P **P 09 37 52.2 0.0**
TAM pmax pmax
comp=Z,15nm,1.1s
VORD Divnogorie 43.75 62 *eP* **P 09 37 51.5 -1.9**
VORD pmax pmax
comp=Z,40nm,1.3s
U38A Gravette 43.77 272 IAmb IAmb 09 37 59.0
comp=Z,51nm,1.9s
X40A Basin Creek Fa 44.18 268 P **P 09 37 55.8 -1.2**
X40A IAmb IAmb 09 38 09.0
comp=Z,54nm,1.9s
LAO LASA Array 44.18 291 P **P 09 37 57.5 +0.5**
baz=54
EDM Edmonton 44.23 303 P **P 09 37 57.3 0.0**
EDM IAmb IAmb 09 38 04.0
comp=Z,26nm,1.3s
EDM Edmonton 44.23 303 P **P 09 37 57.3 0.0**
EDM pmax pmax
comp=Z,26nm,1.3s
RLO Rose Lookout 44.33 272 IAmb IAmb 09 38 00.1
comp=Z,23nm,1.0s
INK Inuvik 44.38 328 P **P 09 37 57.8 -0.4**
INK IAmb IAmb 09 38 07.3
comp=Z,24nm,1.4s
INK Inuvik 44.38 328 P **P 09 37 58.6 +0.4**
baz=57,SNR=10
INK Inuvik 44.38 328 P **P 09 37 57.8 -0.4**
INK pmax pmax
comp=Z,25nm,1.5s
SIM Simferopol' 44.43 72 P **P 09 37 59.4 +0.5**
SIM *e*S **S 09 44 31.0 -1.9**
SIM pmax pmax
comp=Z,28nm,1.2s
KIRV Kirov 44.51 48 *i* P **P 09 38 00.5 +1.2**
KIRV Kirov 44.51 48 LR LR 09 55 15.3
comp=Z,398nm,20.0s,baz=295,slow=34
143A Socs Landing, 44.58 265 P **P 09 37 59.6 -0.6**
MIAR Mount Ida 44.58 269 P **P 09 38 01.1 +0.8**
baz=46,SNR=7.9
F31M Tsiigehtchic 44.93 327 P **P 09 38 02.5 0.0**
baz=56,SNR=13
TUL3 Leonard 44.96 272 P **P 09 38 03.0 -0.3**

baz=47,SNR=7.0
FLDN Fort Liard 45.07 315 P P 09 38 04.3 +0.5
baz=57
OK051 E0350 and S346 45.18 274 IAmb IAmb 09 38 10.0
comp=Z,27nm,1.3s
KAN13 South Haven SW 45.22 275 IAmb IAmb 09 38 07.1
comp=Z,28nm,1.1s
KAN09 Caldwell North 45.22 275 IAmb IAmb 09 38 07.1
comp=Z,24nm,0.9s
KAN01 Argonia South 45.29 275 IAmb IAmb 09 38 08.4
comp=Z,31nm,1.2s
EGMT Eagleton 45.33 295 P P 09 38 05.9 -0.2
EGMT Eagleton 45.33 295 P P 09 38 06.7 +0.6
baz=54,SNR=15
CBKS Cedar Bluff 45.36 278 P P 09 38 06.9 +0.4
baz=49
KOTAN Kotaneelee Air 45.37 315 P P 09 38 06.5 +0.3
baz=57
D28M Stokes Point 45.38 331 P P 09 38 07.0 +0.9
baz=54
G31M Satah River 45.39 327 IAmb IAmb 09 38 12.3
comp=Z,24nm,1.1s
G31M Satah River 45.39 327 P P 09 38 06.6 +0.3
baz=56
F30M Barrier River 45.48 328 P P 09 38 07.3 +0.3
baz=55
E29M Blow River 45.68 330 P P 09 38 08.6 +0.1
baz=54
G30M tAoh Zraii Nji 45.99 328 P P 09 38 11.0 0.0
baz=54
E28M Babbage River 46.04 330 P P 09 38 11.4 0.0
baz=53
EPYK Eagle Plains 46.51 327 P P 09 38 14.9 -0.2
EPYK Eagle Plains 46.51 327 P P 09 38 15.1 0.0
baz=54
F28M Old Crow 46.74 329 P P 09 38 16.6 -0.4
baz=52,SNR=10
RLMT Red Lodge 46.82 291 P P 09 38 18.6 +0.5
baz=52,SNR=16
K22A Casper 46.83 287 P P 09 38 18.2 +0.1
baz=50
KSCO Kaye Shedlock' 46.93 280 P P 09 38 18.9 0.0
baz=49
I30M Mount Dempster 47.09 326 IAmb IAmb 09 38 26.5
comp=Z,12nm,1.1s
I30M Mount Dempster 47.09 326 P P 09 38 20.1 +0.3
baz=53
LOOK Love County 47.11 271 P 09 38 18.8 -1.4
H29M Whitestone 47.13 327 P P 09 38 19.8 -0.2
H29M Whitestone 47.13 327 P P 09 38 20.5 +0.5
baz=52
BELG Belogornoye 47.17 56 LR LR 09 57 44.2
comp=Z,595nm,18.0s,baz=322,slow=36
WTLY Watson Lake, Y 47.33 317 P P 09 38 22.8 +1.1
baz=54,SNR=7.2
BR131 Keskin Array S 47.45 78 P P 09 38 23.2 +0.2
BR131 IAmb IAmb 09 38 29.3
comp=Z,14nm,1.1s
BR131 Keskin Array S 47.45 78 P P 09 38 23.2 +0.2
BR131 pmax pmax
comp=Z,14nm,1.2s
BRTR Keskin Array B 47.45 78 P P 09 38 23.0 0.0
BRTR Keskin Array B 47.45 78 *ce*P **P 09 38 23.7 +0.7**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 47.45 78 P P 09 38 22.7 -0.3
comp=Z,3.1nm,0.8s,baz=308,slow=6.0,SNR=6.1
BRTR LR LR 10 00 01.4
comp=Z,630nm,18.2s,baz=306,slow=38
comp=Z,3.1nm,0.8s
J30M Hart River 47.46 325 IAmb IAmb 09 38 34.1
comp=Z,33nm,1.8s
J30M Hart River 47.46 325 P P 09 38 23.6 +0.8
baz=52
D25K Kavik River 47.51 333 P P 09 38 23.1 +0.2
baz=49,SNR=16
WMOK Wichita Mounta 47.54 273 P 09 38 23.7 +0.1
WMOK IAmb IAmb 09 38 26.4
comp=Z,11nm,1.1s
WMOK Wichita Mounta 47.54 273 P P 09 38 24.1 +0.5
baz=46,SNR=7.8
WMOK Wichita Mounta 47.54 273 P P 09 38 23.7 +0.1
WMOK pmax pmax
comp=Z,11nm,1.1s
N23A Red Feather La 47.62 285 P P 09 38 25.2 +0.8
baz=49,SNR=19
BOZ Bozeman (W) 47.83 293 IAmb IAmb 09 38 29.3
comp=Z,20nm,1.4s
BOZ Bozeman (W) 47.83 293 P P 09 38 26.7 +0.8
baz=51,SNR=19
FARO Faro, Yukon 47.83 321 P P 09 38 26.5 +1.0
baz=53
C24K Franklin Bluff 47.85 334 P P 09 38 26.8 +1.3
baz=48
F26K Sheenjek River 47.96 331 P P 09 38 27.4 +0.9
baz=49
H17A Grant Village 48.00 291 IAmb IAmb 09 38 39.0
comp=Z,14nm,1.2s
H17A Grant Village 48.00 291 P P 09 38 28.5 +1.2
baz=51
YHL Hebgen Lake 48.05 292 IAmb IAmb 09 38 34.8
comp=Z,17nm,1.4s
E25K Arctic Village 48.08 332 IAmb IAmb 09 38 34.1
comp=Z,13nm,1.2s
E25K Arctic Village 48.08 332 P P 09 38 28.6 +1.2
baz=49,SNR=6.8
I28M Miner Creek 48.12 327 IAmb IAmb 09 38 38.8
comp=Z,20nm,1.3s
I28M Miner Creek 48.12 327 P P 09 38 27.9 +0.2
baz=51,SNR=10
H27K Steamboat Moun 48.12 328 P P 09 38 28.6 +0.9
baz=50
ISCO Idaho Springs 48.15 283 P P 09 38 28.9 +0.3
ISCO Idaho Springs 48.15 283 P P 09 38 29.5 +0.9
baz=49,SNR=11
ISCO Idaho Springs 48.15 283 P P 09 38 28.9 +0.3
ISCO pmax pmax
comp=Z,29nm,1.4s
SMWD Samnorwood 48.16 275 P P 09 38 29.1 +0.6
SMWD IAmb IAmb 09 38 34.8
comp=Z,28nm,1.5s
J29N Klondike Camp 48.18 325 IAmb IAmb 09 38 35.8
comp=Z,28nm,1.4s
J29N Klondike Camp 48.18 325 P P 09 38 29.1 +0.9
baz=51
M31M Drury Creek, Y 48.23 322 P P 09 38 29.5 +0.9
baz=52
BMAR Burnt Mountain 48.26 331 P P 09 38 28.7 -0.1
D24K Happy Valley 48.27 334 IAmb IAmb 09 38 35.5
comp=Z,15nm,1.0s
D24K Happy Valley 48.27 334 P P 09 38 29.8 +1.0
baz=47
FW03 Perrin-Whitt E 48.30 271 IAmb IAmb 09 38 37.9
comp=Z,21nm,1.3s
K29M Barlow Dome 48.33 325 P P 09 38 30.2 +0.8
baz=51
N32M Quiet Lake 48.39 320 IAmb IAmb 09 38 40.2
comp=Z,17nm,0.9s
N32M Quiet Lake 48.39 320 P P 09 38 30.7 +0.9
baz=52
SOC Sochi 48.42 70 *e*P **P 09 38 33.7 +3.4**
SOC *e* 09 40 22.6
SOC *e*PPP PPP 09 41 10.9
SOC eS **S 09 45 38.5 +8.3**
SOC *e*SS **SS 09 48 49.6 -10**
SOC eSSS SSS 09 50 17.3
SOC MLR MLR
comp=Z,404nm,17.0s
Q24A Divide 48.43 282 P P 09 38 31.1 +0.3
baz=48
F25K Christian Rive 48.45 331 P P 09 38 31.2 +0.9
baz=48
BW06 Boulder Array 48.47 289 IAmb IAmb 09 38 36.8
comp=Z,23nm,1.4s
BW06 Boulder Array 48.47 289 P P 09 38 31.5 +0.5
baz=50
PD31 Pinedale Array 48.47 289 P P 09 38 30.4 -0.6
PD31 IAmb IAmb 09 38 40.1
comp=Z,25nm,1.6s
PDAR Pinedale Array 48.47 289 P P 09 38 30.4 -0.6
PDAR Pinedale Array 48.47 289 P P 09 38 30.6 -0.4
comp=Z,2.5nm,0.6s,baz=63,slow=7.1,SNR=27
PDAR LR LR 09 57 55.0
comp=Z,624nm,18.2s,baz=53,slow=35
comp=Z,2.5nm,0.6s
LOHW Long Hollow 48.52 290 IAmb IAmb 09 38 40.6
comp=Z,23nm,1.6s

I27K Kandik River 48.55 328 P P 09 38 31.4 +0.3
baz=50
B22K Teshekpuk Lake 48.58 337 P P 09 38 31.7 +0.6
baz=44
A21K Barrow 48.59 338 P P 09 38 31.5 +0.4
baz=43
PLPT Palo Pinto 48.61 271 IAmb IAmb 09 38 35.3
comp=Z,29nm,1.6s
R33M Jennings River 48.64 317 IAmb IAmb 09 38 42.5
comp=Z,33nm,1.6s
R33M Jennings River 48.64 317 P P 09 38 33.2 +1.2
baz=52
WHTX Lake Whitney, 48.68 270 P P 09 38 33.0 +0.6
baz=44
SNOW Snow King Moun 48.70 290 P P 09 38 33.7 +1.0
SNOW IAmb IAmb 09 38 53.3
comp=Z,19nm,1.4s
RTBA Rita Blanca 48.72 278 P P 09 38 32.0 -0.8
DAWY Dawson 48.82 325 P P 09 38 33.7 +0.6
DAWY Dawson 48.82 325 P P 09 38 33.7 +0.6
baz=50
DLBC Dease Lake 48.85 316 P P 09 38 34.0 +0.6
baz=52
DLBC Dease Lake 48.85 316 LR LR 09 58 03.8
comp=Z,502nm,19.3s,baz=69,slow=35
P33M Teslin, Yukon 48.87 319 IAmb IAmb 09 39 14.8
comp=Z,30nm,1.9s
P33M Teslin, Yukon 48.87 319 P P 09 38 34.2 +0.6
baz=52
M30M Minto, Yukon 48.87 323 IAmb IAmb 09 38 41.0
comp=Z,23nm,1.5s
M30M Minto, Yukon 48.87 323 P P 09 38 34.4 +0.9
baz=51
D23K Nanushuk River 48.88 334 P P 09 38 34.3 +0.9
baz=46,SNR=19
E24K Your Creek 48.92 333 P P 09 38 34.3 +0.5
baz=46
EGAK Eagle 48.95 327 P P 09 38 31.8 -2.2
EGAK Eagle 48.95 327 P P 09 38 33.3 -0.7
baz=49
L29M L29M 49.01 324 P P 09 38 34.8 +0.3
L29M L29M 49.01 324 P P 09 38 34.7 +0.1
baz=50
NEW Newport 49.09 299 IAmb IAmb 09 38 41.0
comp=Z,29nm,1.7s
NEW Newport 49.09 299 P P 09 38 36.1 +0.7
baz=51
F24K Squaw Lake 49.14 332 IAmb IAmb 09 38 42.2
comp=Z,24nm,1.5s
F24K Squaw Lake 49.14 332 P P 09 38 36.3 +0.8
baz=47,SNR=9.5
G25K Bearman Lake 49.15 331 P P 09 38 36.5 +1.0
baz=47
AMTX Amarillo 49.16 276 P P 09 38 37.6 +1.4
baz=46
N31M Braeburn, Yuko 49.20 321 IAmb IAmb 09 38 46.3
comp=Z,23nm,1.4s
N31M Braeburn, Yuko 49.20 321 P P 09 38 36.7 +0.6
baz=51
E23K Chandalar 49.24 333 P P 09 38 36.9 +0.5
baz=46
BNN Bunyan 49.31 77 P P 09 38 38.4 +1.0
PCRV Puerto La Cruz 49.31 219 LR LR 09 58 22.8
comp=Z,103nm,19.1s,slow=35
APMT Aspermont 49.33 273 IAmb IAmb 09 38 46.1
comp=Z,26nm,1.5s
AHID Auburn Hatcher 49.34 290 IAmb IAmb 09 38 45.6
comp=Z,18nm,1.4s
WHY Whitehorse 49.38 320 P P 09 38 38.6 +1.0
baz=51
B21K Ikpikpuk River 49.39 336 IAmb IAmb 09 38 44.5
comp=Z,24nm,1.2s
B21K Ikpikpuk River 49.39 336 P P 09 38 38.6 +1.3
baz=43
Q32M Nakina River 49.44 317 P P 09 38 38.5 +0.3
baz=51
O20A White River Ci 49.44 285 P P 09 38 38.9 +0.5
O20A IAmb IAmb 09 38 42.0
comp=Z,17nm,1.1s
O20A White River Ci 49.44 285 P P 09 38 39.5 +1.1
baz=48,SNR=8.4
D22K Ayikyak River 49.45 335 IAmb IAmb 09 38 44.8
comp=Z,24nm,1.4s
D22K Ayikyak River 49.45 335 P P 09 38 39.1 +1.2
baz=44
SDCO Great Sand Dun 49.45 281 P P 09 38 39.4 +0.8
baz=47
M29M Somme Creek 49.55 323 IAmb IAmb 09 38 46.8
comp=Z,27nm,1.4s
M29M Somme Creek 49.55 323 P P 09 38 39.7 +0.9
baz=50,SNR=9.0
G24K Hadweenzic Riv 49.59 331 IAmb IAmb 09 38 49.0
comp=Z,23nm,1.5s
G24K Hadweenzic Riv 49.59 331 P P 09 38 40.2 +1.3
baz=46
P32M Atlin 49.62 319 P P 09 38 40.4 +1.1
baz=51
S34M Telegraph Cree 49.63 316 P P 09 38 40.6 +1.3
baz=51
B20K Meade River 49.70 337 P P 09 38 39.7 +0.1
baz=42
PNT Penticton 49.71 301 P P 09 38 33.9 -6.2
PNT pmax pmax
comp=Z,25nm,1.0s
K27K Chicken 49.74 326 IAmb IAmb 09 38 47.7
comp=Z,18nm,1.4s
K27K Chicken 49.74 326 P P 09 38 41.5 +1.4
baz=48
E22K Anaktuvuk Pass 49.77 334 P P 09 38 41.2 +0.9
baz=44
C21K Knifeblade Rid 49.77 336 P P 09 38 41.3 +1.0
baz=43
O30N Mendenhall 49.77 321 IAmb IAmb 09 38 43.5
comp=Z,12nm,0.9s
O30N Mendenhall 49.77 321 P P 09 38 41.2 +0.8
baz=50,SNR=9.4
ARU Arti 49.77 47 *i* P **P 09 38 42.8 +2.4**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU Arti 49.77 47 LR LR 09 58 09.7
comp=Z,658nm,19.6s,baz=300,slow=34
PRP Porcupine Dome 49.83 329 P P 09 38 42.2 +1.3
baz=47
T35M Bob Quinn 49.85 314 P P 09 38 42.4 +1.4
baz=51
TOA0 Torodi Ar. Sit 49.89 130 P P 09 38 40.4 -1.3
TOA0 IAmb IAmb 09 38 50.0
comp=Z,38nm,1.6s
TORD Torodi Ar. Bea 49.89 130 P P 09 38 40.1 -1.6
TORD IAmb IAmb 09 38 47.0
comp=Z,51nm,2.0s
TORD Torodi Ar. Bea 49.89 130 P P 09 38 40.4 -1.4
comp=Z,6.3nm,0.8s,baz=342,slow=8.1,SNR=28
TORD LR LR 09 57 52.8
comp=Z,236nm,18.4s,baz=328,slow=34
comp=Z,6.3nm,0.8s
J26L Joseph Creek 49.91 327 IAmb IAmb 09 38 48.5
comp=Z,40nm,1.9s
J26L Joseph Creek 49.91 327 P P 09 38 42.8 +1.3
baz=48
C09A Chrisman Ranch 49.98 299 P P 09 38 41.8 -0.4
COLD Coldfoot 49.98 333 P P 09 38 42.7 +0.8
baz=45,SNR=6.1
KBZ Khabaz 50.09 68 *i* P **P 09 38 45.2 +2.2**
KBZ pmax pmax
comp=Z,13nm,1.0s
KBZ Khabaz 50.09 68 P P 09 38 43.9 +0.9
comp=Z,3.5nm,0.9s,baz=340,slow=9.7,SNR=4.2
KBZ LR LR 10 00 28.6
comp=Z,410nm,19.0s,baz=315,slow=37
comp=Z,3.5nm,0.9s
S22A 4UR Ranch, Cre 50.23 282 P P 09 38 45.5 +1.0
baz=47
HYT Haines Junctio 50.26 321 IAmb IAmb 09 38 52.0
comp=Z,27nm,1.4s
HYT Haines Junctio 50.26 321 P P 09 38 45.9 +1.6
baz=49,SNR=6.3
BCAR Beaver Creek A 50.29 325 P P 09 38 45.2 +0.8
G23K Bananza Creek 50.30 332 IAmb IAmb 09 38 51.8
comp=Z,32nm,1.6s
G23K Bananza Creek 50.30 332 P P 09 38 45.5 +1.2
baz=45
L27K Beaver Creek, 50.31 325 P P 09 38 45.0 +0.6
L27K Beaver Creek, 50.31 325 P P 09 38 45.8 +1.4
baz=48
H24K Noodor Dome 50.31 330 IAmb IAmb 09 38 50.9
comp=Z,36nm,1.7s
H24K Noodor Dome 50.31 330 P P 09 38 45.8 +1.4
baz=46
POST Post 50.33 274 IAmb IAmb 09 38 50.2
comp=Z,28nm,1.4s
SKAG Skagway 50.33 319 P P 09 38 46.0 +1.4
baz=50
YUK4 Talbot Arm 50.34 322 P P 09 38 45.4 +0.4
baz=49
HWUT Hardware Ranch 50.36 289 IAmb IAmb 09 38 47.5
comp=Z,21nm,0.8s
SCRK Sand Creek 50.40 327 IAmb IAmb 09 38 52.7
comp=Z,14nm,1.0s
SCRK Sand Creek 50.40 327 P P 09 38 46.5 +1.3
baz=47,SNR=12
J25K Salcha River, 50.40 328 IAmb IAmb 09 38 52.4
comp=Z,40nm,1.7s
J25K Salcha River, 50.40 328 P P 09 38 45.6 +0.4
baz=46
MDP Montagnes des 50.45 203 LR LR 09 55 17.3
comp=Z,96nm,20.8s,baz=27,slow=30
MSTX Muleshoe 50.45 276 P P 09 38 46.9 +0.9
baz=45
NRIK Noril'sk 50.45 23 P P 09 38 44.7 -0.7
NRIK Noril'sk 50.45 23 *ce*P **P 09 38 46.1 +0.7**
NRIK pmax pmax
comp=Z,16nm,1.5s
NRIK Noril'sk 50.45 23 P P 09 38 45.0 -0.4
comp=Z,1.3nm,0.3s,baz=323,slow=6.5,SNR=3.6
NRIK LR LR 09 58 42.8
comp=Z,107nm,20.9s,baz=324,slow=34
comp=Z,1.3nm,0.3s
YUK6 Outpost Mounta 50.50 322 P P 09 38 47.1 +0.9
baz=49
P30M Million Dollar 50.52 321 P P 09 38 47.2 +1.1
baz=49
PLID Pearl Lake 50.53 295 IAmb IAmb 09 38 52.3
comp=Z,27nm,1.4s
D20K Etivluk River 50.54 336 P P 09 38 47.3 +1.2
baz=41
G22K Bettles 50.56 333 P P 09 38 47.0 +0.8
baz=44
F10A Beach Ranch, E 50.61 297 P P 09 38 45.2 -1.8
F10A IAmb IAmb 09 38 52.6
comp=Z,17nm,1.2s
HLID Hailey 50.66 293 P P 09 38 48.4 +0.9
HLID Hailey 50.66 293 P P 09 38 48.9 +1.3
baz=49,SNR=12
POKR Poker Plat Res 50.68 330 P P 09 38 48.2 +0.9
baz=46
YUK3 Moose Creek 50.70 324 P P 09 38 48.6 +0.9
baz=48
PLBC Pleasant Camp 50.73 320 P P 09 38 49.1 +1.4
baz=49
ILAR Eielson Array 50.76 329 P P 09 38 48.0 +0.2
ILAR Eielson Array 50.76 329 P P 09 38 48.0 +0.2
comp=Z,0.7nm,0.5s,baz=43,slow=5.3,SNR=14
ILAR PcP **PcP 09 40 04.1 -0.5**
comp=Z,0.8nm,0.6s,baz=18,slow=3.4,SNR=4.8
ILAR LR LR 09 58 33.7
comp=Z,257nm,21.7s,baz=57,slow=34
comp=Z,0.7nm,0.5s
R32K Eaglecrest 50.78 318 P P 09 38 49.8 +1.7
baz=49
YUK8 Steele Glacier 50.78 323 P P 09 38 49.5 +1.2
baz=48
E20K Nigu River 50.78 336 P P 09 38 49.2 +1.1
baz=41
M27K Edge Creek, AK 50.80 325 IAmb IAmb 09 38 57.1
comp=Z,30nm,1.6s
M27K Edge Creek, AK 50.80 325 P P 09 38 49.4 +1.1
baz=47
RIDG Independent Ri 50.84 327 P P 09 38 49.8 +1.3
baz=46
L26K Log Cabin Wild 50.84 326 P P 09 38 49.4 +0.9
baz=47
F21K Alatna River 50.87 334 IAmb IAmb 09 38 55.5
comp=Z,17nm,1.1s
F21K Alatna River 50.87 334 P P 09 38 49.1 +0.5
baz=43
SGCY Sterling City 50.92 272 IAmb IAmb 09 38 54.8
comp=Z,28nm,1.4s
C19K Lookout Ridge 50.94 338 IAmb IAmb 09 38 59.7
comp=Z,33nm,1.4s
C19K Lookout Ridge 50.94 338 P P 09 38 50.1 +0.9
baz=39
O29M Mount Kennedy 51.01 321 IAmb IAmb 09 38 57.4
comp=Z,41nm,1.6s
O29M Mount Kennedy 51.01 321 P P 09 38 51.1 +1.2
baz=48
HDA Harding Lake 51.03 329 P P 09 38 50.2 +0.4
baz=45
MDM Murphy Dome 51.03 330 IAmb IAmb 09 38 56.1
comp=Z,26nm,1.6s
D19K Kuna River 51.07 337 IAmb IAmb 09 38 60.0
comp=Z,22nm,1.1s
D19K Kuna River 51.07 337 P P 09 38 50.8 +0.7
baz=40
K24K Donnelly Dome 51.09 328 P P 09 38 51.0 +0.6
baz=46
CCB Clear Creek Bu 51.13 329 IAmb IAmb 09 38 53.7
comp=Z,30nm,1.8s
P29M Windy Craggy 51.14 320 P P 09 38 50.9 +0.1
baz=48
M26K Nabesna, AK 51.15 325 IAmb IAmb 09 38 58.5
comp=Z,26nm,1.6s
M26K Nabesna, AK 51.15 325 P P 09 38 50.9 +0.1
baz=47
JCT Junction City 51.16 270 IAmb IAmb 09 38 57.0
comp=Z,27nm,1.3s
JCT Junction City 51.16 270 P P 09 38 51.4 +0.1
baz=43,SNR=7.9
B18K Kokolik River 51.23 339 P P 09 38 52.1 +0.8
baz=38,SNR=15
I23K Minto, Yukon-K 51.24 330 P P 09 38 52.3 +1.0
baz=44
ZEI Tsey 51.26 68 *e*P **P 09 38 52.4 +0.3**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
H22K Ishtalitna Cre 51.27 332 P P 09 38 52.4 +0.7
baz=43
S32K Killisnoo 51.34 317 P P 09 38 52.6 +0.4
baz=49
G21K Allakaket 51.40 333 P P 09 38 53.1 +0.5
baz=42
V35K Ketchikan 51.51 313 P P 09 38 54.4 +1.0
baz=49
MFID Camas Ranch 51.53 293 P P 09 38 53.0 -1.0
MFID IAmb IAmb 09 39 01.2
comp=Z,22nm,1.5s
HNDO Hondo 51.54 269 P P 09 38 53.7 -0.4
HNDO IAmb IAmb 09 38 58.9
comp=Z,21nm,1.4s
NEA2 Nenana 51.55 330 IAmb IAmb 09 39 00.8
comp=Z,44nm,1.9s
NEA2 Nenana 51.55 330 P P 09 38 53.8 0.0
baz=44
CTG Chitna Glacier 51.56 323 P P 09 38 53.9 -0.2
baz=47
MVCO Mesa Verde 51.56 283 IAmb IAmb 09 39 04.9
comp=Z,32nm,1.4s
MVCO Mesa Verde 51.56 283 P P 09 38 55.9 +1.4
baz=46
LTY Liberty 51.58 300 IAmb IAmb 09 39 03.2
comp=Z,32nm,1.6s
PAX Paxson 51.58 327 P P 09 38 54.6 +0.5
baz=46
F20K Avaraart Lake 51.58 334 IAmb IAmb 09 39 01.0
comp=Z,39nm,1.8s
F20K Avaraart Lake 51.58 334 P P 09 38 55.2 +1.2
baz=41
BARN Barnard Glacie 51.61 323 IAmb IAmb 09 39 02.0
comp=Z,22nm,1.2s
E19K Redstone River 51.65 335 P P 09 38 55.1 +0.6
baz=40,SNR=14
C18K Utukok River 51.66 338 IAmb IAmb 09 39 01.4
comp=Z,33nm,1.4s
C18K Utukok River 51.66 338 P P 09 38 55.0 +0.5
baz=38
S31K Pelican 51.67 318 P P 09 38 56.0 +1.3
baz=48
MLY Manley 51.72 331 P P 09 38 54.9 -0.2
MLY IAmb IAmb 09 39 01.2
comp=Z,26nm,1.7s
MLY Manley 51.72 331 P P 09 38 55.7 +0.6
baz=43
PNL Peninsula 51.74 321 P P 09 38 55.5 +0.2
baz=47
PINM Pinnacle 51.77 322 P P 09 38 54.9 -0.6
baz=47

BAUV El Baul 51.77 223 P P 09 38 56.0 +0.1
H21K Melozitna Rive 51.85 332 P P 09 38 56.4 +0.4
baz=42
IMAR Indian Mountai 51.87 333 P P 09 38 56.2 +0.2
MCARA McCarthy VSAT 51.87 324 P P 09 38 55.1 -1.1
MCARA IAmb IAmb 09 39 03.3
comp=Z,35nm,1.4s
MCARA McCarthy VSAT 51.87 324 P P 09 38 57.3 +1.1
baz=46
HARP HAARP 51.88 326 P P 09 38 57.1 +0.9
baz=45
ANMO Albuquerque 51.94 279 P P 09 38 57.5 +0.3
ANMO Albuquerque 51.94 279 P P 09 38 58.2 +1.0
baz=46
ANMO Albuquerque 51.94 279 *i* P P 09 38 57.6 +0.3
ANMO pmax pmax
comp=Z,13nm,1.4s
ANMO Albuquerque 51.94 279 LR LR 10 00 31.5
comp=Z,2µm,18.1s,baz=144,slow=36
I21K Tanana 51.97 331 IAmb IAmb 09 39 03.9
comp=Z,19nm,1.4s
I21K Tanana 51.97 331 P P 09 38 58.0 +1.2
baz=42
BBB Bella Bella 52.00 309 LR LR 10 00 25.4
comp=Z,396nm,18.0s,baz=40,slow=35
DUG Dugway, Tooele 52.01 288 IAmb IAmb 09 39 08.1
comp=Z,20nm,1.2s
DUG Dugway, Tooele 52.01 288 P P 09 38 58.3 +0.7
baz=47,SNR=10
DHY Denali Highway 52.12 328 IAmb IAmb 09 39 05.3
comp=Z,20nm,1.3s
DHY Denali Highway 52.12 328 P P 09 38 58.9 +0.7
baz=44
MCK McKinley 52.13 329 P P 09 38 59.0 +0.9
baz=44
ISLE Juniper Island 52.17 323 P P 09 38 57.9 -0.7
TEIG Tepich 52.19 252 LR LR 10 02 23.2
comp=Z,3µm,18.0s,baz=188,slow=38
C17K DeLong Mountai 52.24 338 P P 09 38 59.5 +0.7
baz=36,SNR=13
N25K Chitina, Valde 52.25 325 P P 09 39 00.0 +0.9
baz=45
F19K Shaleruckik Mo 52.27 335 P P 09 38 59.5 +0.4
baz=39
MESA MESA 52.33 323 P P 09 38 59.9 +0.1
baz=46
HMU Henry Mountain 52.36 285 IAmb IAmb 09 39 07.4
comp=Z,23nm,1.1s
M24K Tolsona, Glenn 52.42 326 P P 09 39 01.4 +1.1
baz=45
BPAW Bear Paw Mtn. 52.48 330 P P 09 39 00.7 0.0
BPAW IAmb IAmb 09 39 07.7
comp=Z,43nm,1.8s
BPAW Bear Paw Mtn. 52.48 330 P P 09 39 01.2 +0.5
baz=43
833A Chaparral WMA, 52.49 268 P P 09 39 01.7 +0.5
baz=42
E18K Tukpahlearik C 52.50 337 P P 09 39 00.7 0.0
E18K IAmb IAmb 09 39 07.6
comp=Z,19nm,1.3s
E18K Tukpahlearik C 52.50 337 P P 09 39 01.5 +0.7
baz=38
RDOG Red Dog Mine 52.52 338 IAmb IAmb 09 39 07.6
comp=Z,21nm,1.2s
RDOG Red Dog Mine 52.52 338 P P 09 39 01.5 +0.6
baz=36,SNR=12
H20K Anotleneega Mo 52.54 333 P P 09 39 02.1 +0.9
baz=41
WAT6 Susitna Watana 52.59 327 P P 09 39 02.2 +0.5
baz=44
G19K Purcell Mounta 52.63 334 IAmb IAmb 09 39 05.1
comp=Z,28nm,1.9s
G19K Purcell Mounta 52.63 334 P P 09 39 02.2 +0.5
baz=40
WAT1 Susitna Watana 52.67 328 P P 09 39 02.3 +0.1
baz=44
TRF Thorofare Moun 52.75 329 P P 09 39 03.1 +0.2
baz=43
KLU Klutina 52.78 326 P P 09 39 03.4 +0.4
baz=44
Y22D IRIS PASSCAL I 52.82 279 P P 09 39 05.3 +1.5
baz=45
Y22F Passcal Instru 52.82 279 P P 09 39 05.4 +1.6
baz=45
D17K Noatak River 52.85 338 P P 09 39 03.3 0.0
baz=36
KTH Kantishna Hill 52.87 330 IAmb IAmb 09 39 10.4
comp=Z,50nm,1.8s
C16K Lisburne Hills 52.87 339 IAmb IAmb 09 39 10.3
comp=Z,25nm,1.2s
C16K Lisburne Hills 52.87 339 P P 09 39 04.0 +0.5
baz=35
F18K Selawik 52.92 336 P P 09 39 04.5 +0.6
baz=38,SNR=7.3
SAND Sanderson 52.92 271 P P 09 39 03.9 -0.6
SAND IAmb IAmb 09 39 13.6
comp=Z,28nm,1.6s
H19K Roundabout Mou 52.94 333 P P 09 39 04.5 +0.5
baz=40
I20K Naaghedeneel 52.96 332 P P 09 39 04.7 +0.5
baz=41
DBIC Dimbokro 52.98 141 P P 09 39 03.9 -1.0
DBIC Dimbokro 52.98 141 P P 09 39 03.9 -1.0
DBIC pmax pmax
comp=Z,8.0nm,0.8s
DBIC Dimbokro 52.98 141 P P 09 39 04.0 -1.0
comp=Z,4.1nm,0.6s,baz=315,slow=6.7,SNR=5.8
DBIC LR LR 09 58 40.2
comp=Z,549nm,20.6s,baz=349,slow=33
comp=Z,4.1nm,0.6s
SCM Sheep Creek Mo 53.00 327 P P 09 39 05.2 +0.6
baz=44
J08A Circle Bar Ran 53.00 295 IAmb IAmb 09 39 11.5
comp=Z,32nm,1.5s
E17K Hotham Inlet 53.06 337 P P 09 39 05.1 +0.2
baz=37,SNR=13
MMAI Mount Meron Ar 53.08 83 P P 09 39 05.0 -0.6
comp=Z,0.6nm,0.3s,baz=328,slow=6.1,SNR=6.2
comp=Z,0.6nm,0.3s
MTPU Mount Pierson 53.12 286 IAmb IAmb 09 39 16.3
comp=Z,22nm,1.3s
NLWA Neilton Lookou 53.12 302 IAmb IAmb 09 39 08.1
comp=Z,31nm,1.2s
M23K Glacier View 53.16 327 P P 09 39 05.6 -0.1
baz=43
G18K Tagagawik 53.23 335 P P 09 39 06.1 0.0
baz=38
CAST Castle Rocks 53.32 330 P P 09 39 07.0 +0.2
baz=42
J20K Nowinta River 53.34 331 P P 09 39 07.0 0.0
baz=40
SML Sawmill 53.35 327 P P 09 39 07.3 +0.1
baz=43
EYAK Cordova Ski Ar 53.40 325 P P 09 39 07.6 +0.2
baz=44
F17K Baldwin Pennin 53.44 336 IAmb IAmb 09 39 14.4
comp=Z,20nm,1.3s
F17K Baldwin Pennin 53.44 336 P P 09 39 07.9 +0.3
baz=37
AKTO Aktyubinsk 53.44 53 LR LR 10 00 37.4
comp=Z,321nm,22.0s,baz=307,slow=35
GNI Garni 53.51 70 LR LR 10 02 04.8
comp=Z,348nm,21.9s,baz=320,slow=36
CUT Chulitna 53.52 328 P P 09 39 08.3 0.0
baz=42
MNTX Cornudas Mount 53.60 276 P P 09 39 09.7 +0.3
baz=44
PKCU Pink Cliffs 53.60 286 IAmb IAmb 09 39 16.1
comp=Z,37nm,1.5s
GCSA Galena City Sc 53.66 333 P P 09 39 09.8 +0.5
baz=39
KNK Knik Glacier 53.68 327 IAmb IAmb 09 39 20.2
comp=Z,26nm,1.2s
KNK Knik Glacier 53.68 327 P P 09 39 10.2 +0.6
baz=43
SPR3 Spring Creek 3 53.68 288 IAmb IAmb 09 39 17.1
comp=Z,23nm,1.6s
WVOR Wild Horse Val 53.72 294 P P 09 39 10.5 +0.3
WVOR IAmb IAmb 09 39 17.5
comp=Z,33nm,1.4s
WVOR Wild Horse Val 53.72 294 P P 09 39 10.5 +0.3
WVOR pmax pmax
comp=Z,33nm,1.4s
W18A Petrified Fore 53.73 282 P P 09 39 10.8 +0.2
W18A Petrified Fore 53.73 282 P P 09 39 11.2 +0.6
baz=45
H18K Honhosa River 53.74 334 IAmb IAmb 09 39 17.4
comp=Z,18nm,1.2s
H18K Honhosa River 53.74 334 P P 09 39 10.3 +0.4
baz=38
PPLA Purkeypile 53.74 330 P P 09 39 09.9 -0.3
baz=41
PMR Palmer 53.76 327 P P 09 39 10.8 +0.7
baz=42
J19K Poorman 53.90 332 IAmb IAmb 09 39 16.9
comp=Z,26nm,1.7s
J19K Poorman 53.90 332 P P 09 39 12.0 +0.9
baz=40
Q12A Willow Creek R 53.93 289 IAmb IAmb 09 39 18.5
comp=Z,19nm,1.4s
SZCU Shurtz Canyon 53.94 286 IAmb IAmb 09 39 18.4
comp=Z,19nm,1.5s
K20K Telida 53.95 331 IAmb IAmb 09 39 20.1
comp=Z,36nm,1.8s
K20K Telida 53.95 331 P P 09 39 12.1 +0.6
baz=40
VHRN Van Horn 54.02 274 IAmb IAmb 09 39 18.1
comp=Z,24nm,1.9s
PINE Pine Mountain 54.03 297 P P 09 39 12.3 -0.3
G17K Kiwalik Mounta 54.05 335 P P 09 39 12.3 +0.2
baz=37
SKT Skwentna 54.23 329 P P 09 39 14.0 +0.4
baz=41
TXAR Lajitas Array 54.29 272 P P 09 39 14.5 0.0
comp=Z,2.7nm,1.0s,baz=86,slow=5.1,SNR=13
TXAR PcP PcP 09 40 19.4 +0.8
comp=Z,1.6nm,0.7s,baz=68,slow=4.0,SNR=5.5
TXAR LR LR 10 01 54.3
comp=Z,443nm,19.2s,baz=40,slow=36
comp=Z,2.7nm,1.0s
TX31 Lajitas Ar. Si 54.29 272 IAmb IAmb 09 39 21.1
comp=Z,19nm,1.6s
H17K Granite Mounta 54.31 334 IAmb IAmb 09 39 21.3
comp=Z,32nm,1.6s
H17K Granite Mounta 54.31 334 P P 09 39 15.0 +0.9
baz=37,SNR=11
RC01 Rabbit Creek A 54.33 327 P P 09 39 15.0 +0.7
RC01 Rabbit Creek A 54.33 327 P P 09 39 15.4 +1.2
baz=42
P23K Montague Islan 54.37 325 P P 09 39 14.6 0.0
baz=43
SUA Susitna One 54.38 328 P P 09 39 15.8 +1.1
SUA IAmb IAmb 09 39 28.6
comp=Z,33nm,1.5s
SUA Susitna One 54.38 328 P P 09 39 15.3 +0.5
baz=41
WUAZ Wupatki 54.41 283 IAmb IAmb 09 39 21.9
comp=Z,14nm,1.2s
WUAZ Wupatki 54.41 283 P P 09 39 16.4 +1.0
baz=45
121A Cookes Peak, D 54.42 278 IAmb IAmb 09 39 22.0
comp=Z,32nm,1.6s
121A Cookes Peak, D 54.42 278 P P 09 39 16.4 +0.8
baz=44
LCMT Little Creek M 54.44 286 IAmb IAmb 09 39 21.4
comp=Z,11nm,1.4s
TIXI Tiksi 54.48 6 P P 09 39 15.3 +0.2
TIXI IAmb IAmb 09 39 22.5
comp=Z,26nm,1.4s
TIXI Tiksi 54.48 6 *ce* P P 09 39 16.2 +1.0
TIXI pmax pmax
comp=Z,27nm,2.5s
TIXI Tiksi 54.48 6 LR LR 09 59 24.6
comp=Z,109nm,21.0s,baz=18,slow=33
J05D Fort Rock, OR 54.53 297 P P 09 39 16.8 +0.6
G16K Koyuk River 54.55 336 P P 09 39 16.5 +0.7
baz=36
ASF Jabal al Asfar 54.56 82 LR LR 10 06 12.8
comp=Z,189nm,18.4s,baz=333,slow=40
L20K Farewell, AK 54.57 330 P P 09 39 15.4 -0.6
baz=40
J18K Innoko River 54.62 332 P P 09 39 16.8 +0.4
baz=38
O22K Cooper Landing 54.78 326 P P 09 39 18.4 +0.8
baz=42
M20K Styx River 54.80 329 P P 09 39 18.0 +0.2
baz=40
I04A Tendick Farm, 54.81 298 IAmb IAmb 09 39 23.6
comp=Z,29nm,1.5s
R11B Troy Canyon, C 54.84 289 P P 09 39 19.3 +0.8
baz=46,SNR=8.3
TTA Tatalina 54.84 331 P P 09 39 17.2 -0.8
TTA IAmb IAmb 09 39 24.3
comp=Z,20nm,1.6s
TTA Tatalina 54.84 331 P P 09 39 17.9 -0.2
baz=39
TTA Tatalina 54.84 331 P P 09 39 17.2 -0.8
TTA pmax pmax
comp=Z,20nm,1.6s
F15K North Star Dit 54.84 337 IAmb IAmb 09 39 25.2
comp=Z,20nm,1.4s
F15K North Star Dit 54.84 337 P P 09 39 18.1 +0.2
baz=34
SEW Seward 54.98 326 P P 09 39 19.2 +0.3
baz=42
N20K Mount Spurr 55.04 328 P P 09 39 20.1 +0.6
baz=40
L19K White Mountain 55.09 330 P P 09 39 20.6 +0.9
baz=39
H16K Elim 55.14 335 P P 09 39 20.9 +0.8
baz=36,SNR=7.1
BOAV Boa Vista 55.16 211 P P 09 39 20.2 -0.5
BOAV IAmb IAmb 09 39 22.0
comp=Z,26nm,1.5s
ABKAR Akbulak array 55.16 53 P P 09 39 20.6 +0.1
M19K Big River Lodg 55.16 330 P P 09 39 20.2 -0.1
baz=39
PRN Pahroc Range 55.19 287 IAmb IAmb 09 39 31.7
comp=Z,29nm,1.6s
EIL Elat 55.22 86 LR LR 10 06 21.2
comp=Z,79nm,20.5s,baz=268,slow=40
X16A Lo Mia Camp, P 55.22 282 IAmb IAmb 09 39 25.1
comp=Z,8.1nm,1.1s
G15K Niukluk 55.29 336 P P 09 39 22.3 +1.2
baz=34
I17K Unalakleet 55.36 334 IAmb IAmb 09 39 26.9
comp=Z,21nm,1.6s
I17K Unalakleet 55.36 334 P P 09 39 22.0 +0.4
baz=36
F14K Arctic Creek 55.42 338 P P 09 39 22.8 +0.7
baz=33
L18K Granite Mounta 55.59 331 P P 09 39 24.0 +0.6
baz=38
K17K Iditarod 55.66 332 P P 09 39 24.3 +0.4
baz=37
BRSE Bradley Lake S 55.68 326 P P 09 39 24.4 +0.4
baz=41
TNA Tin City 55.71 338 P P 09 39 24.6 +0.5
baz=32
KVN Kaiserville 55.76 291 IAmb IAmb 09 39 31.1
comp=Z,25nm,1.4s
J16K Anvik River 55.82 334 P P 09 39 25.3 +0.3
baz=36
M18K Stony River 55.92 330 P P 09 39 25.9 +0.2
baz=38
TPH Tonopah 55.95 289 IAmb IAmb 09 39 33.2
comp=Z,110nm,1.3s
ANM Nome 55.97 336 P P 09 39 26.2 +0.2
baz=33
PAHR Pah Rah Range 56.01 292 IAmb IAmb 09 39 33.5
comp=Z,30nm,1.4s
HOM Homer 56.04 327 P P 09 39 27.3 +0.7
baz=40
N19K Bonanza Creek 56.04 329 P P 09 39 26.6 -0.2
baz=39
319A Douglas 56.14 278 IAmb IAmb 09 39 34.5
comp=Z,24nm,1.3s
TPNV Topopah Spring 56.19 288 IAmb IAmb 09 39 40.9
comp=Z,22nm,1.4s
TPNV Topopah Spring 56.19 288 P P 09 39 28.9 +0.7
baz=45
NV11 Mina Array Sit 56.22 290 P P 09 39 28.0 -0.4
NV11 IAmb IAmb 09 39 34.2
comp=Z,16nm,1.2s
K02D Willamette Mer 56.23 298 IAmb IAmb 09 39 30.2
comp=Z,19nm,1.1s
NVAR Mina Array Bea 56.30 290 P P 09 39 29.2 +0.1
NVAR Mina Array Bea 56.30 290 P P 09 39 29.4 +0.2
comp=Z,1.6nm,0.9s,baz=52,slow=4.3,SNR=6.2
NVAR LR LR 10 02 55.7
comp=Z,482nm,18.3s,baz=47,slow=35
comp=Z,1.6nm,0.9s
TUC Tucson 56.34 280 P P 09 39 30.4 +1.1
TUC IAmb IAmb 09 39 35.9
comp=Z,19nm,1.5s
TUC Tucson 56.34 280 P P 09 39 30.6 +1.3
baz=44
TUC Tucson 56.34 280 P P 09 39 30.4 +1.1
TUC pmax pmax
comp=Z,19nm,1.5s
YBH Yreka Blue Hor 56.40 296 LR LR 10 02 45.1
comp=Z,565nm,18.9s,baz=38,slow=35
Y14A Wickenburg 56.47 283 IAmb IAmb 09 39 36.8
comp=Z,13nm,1.4s
LHV Little Humtoon 56.54 290 IAmb IAmb 09 39 40.0
comp=Z,21nm,1.3s
L02F Cave Junction 56.58 297 P P 09 39 30.0 -0.8
L02F IAmb IAmb 09 39 30.8
comp=Z,34nm,1.6s
MPK Martis Peak 56.65 292 IAmb IAmb 09 39 39.0
comp=Z,41nm,1.4s
GRAC Grapevine Rang 56.79 289 IAmb IAmb 09 39 39.4
comp=Z,16nm,1.0s
GRAC Grapevine Rang 56.79 289 P P 09 39 33.7 +1.4
baz=45,SNR=9.1
PDMCI Parker Dam,Lak 56.87 284 P P 09 39 33.5 +0.7
baz=44
K15K Wolf Creek Mou 56.88 333 P P 09 39 33.2 +0.6
baz=35
FURC Furnace Creek, 56.88 288 P P 09 39 34.1 +1.2
baz=44
GWY Greenwater Val 56.97 287 IAmb IAmb 09 39 40.8
comp=Z,30nm,1.5s
O18K Koktuh Hills 57.02 329 P P 09 39 34.3 +0.6
baz=38
BRVK Borovoye 57.04 44 P P 09 39 36.2 +2.4
BRVK Borovoye 57.04 44 *ce* P P 09 39 34.7 +0.9
BRVK pmax pmax
comp=Z,12nm,1.7s
BVAR Borovoye Array 57.10 44 P P 09 39 34.4 0.0
comp=Z,1.6nm,0.8s,baz=324,slow=9.0,SNR=5.3
BVAR LR LR 10 03 32.7
comp=Z,276nm,18.2s,baz=301,slow=36
comp=Z,1.6nm,0.8s
Q19K Cape Douglas, 57.26 327 P P 09 39 35.4 +0.1
baz=38
L15K Ungalak Mounta 57.38 333 P P 09 39 36.7 +0.7
baz=35
P18K Big Mountain, 57.39 328 P P 09 39 37.1 +0.8
P18K Big Mountain, 57.39 328 P P 09 39 36.4 +0.1
baz=38
GMRC Granite Mounta 57.40 286 P P 09 39 37.6 +0.8
baz=44
BLYC Blythe 57.48 284 P P 09 39 38.1 +0.9
MTO3 Montecristo 57.50 248 IAmb IAmb 09 39 43.3
comp=Z,22nm,1.3s
MPMC Manual Prospec 57.53 288 P P 09 39 38.8 +1.0
baz=44,SNR=11
CCIG Comitan 57.53 252 IAmb IAmb 09 39 44.5
comp=Z,24nm,1.1s
BILL Bilibino 57.54 351 *i* P P 09 39 38.2 +1.0
BILL pmax pmax
comp=Z,9.0nm,1.4s
IRM Iron Mountain 57.55 285 P P 09 39 39.2 +1.4
baz=44
CWC Cottonwood Cre 57.59 289 P P 09 39 38.9 +0.7
baz=44
N16K Nishlik Lake 57.59 331 P P 09 39 37.6 -0.1
baz=36
O17K Koliganek Bris 57.66 329 P P 09 39 38.8 +0.7
baz=37
GSC Goldstone, Bar 57.68 287 P P 09 39 39.8 +1.1
baz=44
113A Mohawk Valley, 57.75 283 IAmb IAmb 09 39 45.8
comp=Z,21nm,1.4s
214A Organ Pipe Nat 57.79 281 IAmb IAmb 09 39 45.9
comp=Z,27nm,1.6s
214A Organ Pipe Nat 57.79 281 P P 09 39 40.9 +1.4
baz=43,SNR=5.7
KDAK Kodiak Island 57.80 326 LR LR 10 03 42.0
comp=Z,283nm,19.2s,baz=65,slow=35
L14K Kuka Creek 57.98 333 P P 09 39 41.5 +1.2
baz=34
LRMC Laurel Mtn Rad 58.05 288 P P 09 39 42.7 +1.4
baz=44,SNR=6.1
BC3 Big Chuckawall 58.09 285 P P 09 39 42.8 +1.1
baz=44,SNR=9.3
O16K Kokwok River B 58.11 330 P P 09 39 42.1 +0.8
baz=36
ROSC El Rosal 58.11 228 P P 09 39 43.3 +1.1
ROSC El Rosal 58.11 228 P P 09 39 43.3 +1.1
ROSC pmax pmax
comp=Z,44nm,1.0s
ROSC El Rosal 58.11 228 P P 09 39 43.4 +1.1
comp=Z,6.6nm,0.5s,baz=24,slow=7.3,SNR=8.1
comp=Z,6.6nm,0.5s
BELC Belle Mtn. Jos 58.15 285 P P 09 39 43.2 +1.0
baz=44,SNR=6.2
M14K Bethel 58.27 332 P P 09 39 42.8 +0.5
baz=34
ISA Isabella, Lake 58.37 288 IAmb IAmb 09 39 50.3
comp=Z,20nm,1.4s
ISA Isabella, Lake 58.37 288 P P 09 39 44.8 +1.3
baz=44
BBRC Big Bear Solar 58.49 286 P P 09 39 46.2 +1.6
baz=44,SNR=6.5
JTS Las Juntas de 58.53 242 LR LR 10 02 05.0
comp=Z,361nm,20.9s,baz=3.5,slow=33
ZAIG Zacatecas 58.54 266 IAmb IAmb 09 39 52.8
comp=Z,30nm,1.7s
VES Vestal, Richgr 58.58 289 P P 09 39 46.1 +1.2
baz=44,SNR=7.3
PMD Palm Desert 58.63 285 IAmb IAmb 09 39 55.3
comp=Z,18nm,1.4s
EDW2 Edwards Air Fo 58.66 287 P P 09 39 46.8 +1.3
baz=44,SNR=9.1
PFO Pinyon Flats O 58.70 285 P P 09 39 46.3 +0.4
PFO IAmb IAmb 09 39 56.1
comp=Z,17nm,1.2s
PFO Pinyon Flats O 58.70 285 P P 09 39 47.6 +1.7
baz=43,SNR=11
PFO Pinyon Flats O 58.70 285 P P 09 39 46.3 +0.4
PFO pmax pmax
comp=Z,17nm,1.2s
TPFO Pinon Flats 58.70 285 P P 09 39 47.3 +1.3
baz=43,SNR=10
SWSC Sam W. Stewart 58.80 284 P P 09 39 47.3 +0.8
baz=43
HSIG 58.84 278 IAmb IAmb 09 39 52.6
comp=Z,18nm,1.4s
BFSC Mount Baldy Ra 58.93 287 P P 09 39 48.4 +0.8
baz=43
ARVC Arvin 58.95 288 P P 09 39 49.2 +1.7
baz=44
YUH Yuha Desert 59.09 284 IAmb IAmb 09 39 55.4
comp=Z,27nm,1.6s
MURC Murrieta 59.13 286 P P 09 39 50.3 +1.5
baz=43
IKP In-Ko-Pah, Jac 59.20 284 P P 09 39 50.9 +1.6
baz=43
MONP2 Monument Peak 59.20 285 P P 09 39 51.2 +1.7
baz=43
RMX La Rumorosa 59.21 284 IAmb IAmb 09 39 56.3
comp=Z,17nm,1.4s
ELS Elsinore Mount 59.23 286 IAmb IAmb 09 39 59.3
comp=Z,24nm,1.5s
RCBR Riachuelo 59.28 181 LR LR 09 58 26.3
comp=Z,83nm,20.9s,baz=75,slow=29
BAR Barrett 59.50 285 IAmb IAmb 09 39 54.7
comp=Z,9.0nm,1.0s
TLIG Tlapa 60.21 259 P P 09 39 56.1 -0.4
ZALV Zalesovo Beam 61.86 35 P P 09 40 08.3 +1.2
comp=Z,0.4nm,0.3s,baz=308,slow=7.1,SNR=1.2
ZALV PcP PcP 09 40 47.4 -0.5
comp=Z,0.8nm,0.6s,baz=328,slow=5.4,SNR=4.8
ZALV LR LR 10 06 25.9
comp=Z,171nm,19.5s,baz=308,slow=36
comp=Z,0.4nm,0.3s
LPIG La Paz 62.13 273 LR LR 10 06 54.7
comp=Z,576nm,19.8s,baz=56,slow=36
KURK Kurchatov 62.17 41 *i* P P 09 40 10.6 +1.4
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 62.21 41 P P 09 40 10.7 +1.3
comp=Z,1.7nm,0.2s,baz=325,slow=7.9,SNR=2.7
KURBB LR LR 10 06 00.7
comp=Z,145nm,18.5s,baz=194,slow=35
comp=Z,1.7nm,0.2s
GEYT Alibeck 62.38 63 P P 09 40 11.9 +1.1
comp=Z,0.7nm,0.3s,baz=280,slow=4.2,SNR=3.7
GEYT LR LR 10 08 06.1
comp=Z,198nm,18.0s,baz=344,slow=37
comp=Z,0.7nm,0.3s
SEY Seymchan 63.58 356 LR LR 10 06 42.3

comp=Z,175nm,21.7s,baz=324,slow=35
YAK Yakutsk 64.03 8 *e*P **P** 09 40 21.5 +0.1
YAK pmax pmax
comp=Z,11nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK Yakutsk 64.03 8 LR LR 10 07 01.0
comp=E,57nm,18.1s,baz=39,slow=35
OTAV Otavalo 64.05 229 P **P** **09 40 23.0 +0.4**
OTAV IAmb IAmb 09 40 29.2
comp=Z,23nm,1.6s
OTAV Otavalo 64.05 229 P **P** **09 40 23.0 +0.4**
OTAV pmax pmax
comp=Z,23nm,1.7s
KK31 Karatay Array 64.65 51 P **P** **09 40 25.8 0.0**
KK31 Karatay Array 64.65 51 P **P** **09 40 25.8 0.0**
KK31 pmax pmax
comp=Z,11nm,1.5s
KKAR Karatay Array 64.65 51 P **P** **09 40 23.9 -1.8**
KKAR Karatay Array 64.65 51 P **P** **09 40 24.0 -1.8**
KKAR pmax pmax
comp=Z,11nm,1.5s
RAYN Ar Rayn 66.06 83 P **P** **09 40 35.3 +0.1**
RAYN IAmb IAmb 09 40 40.8
comp=Z,12nm,1.3s
RAYN Ar Rayn 66.06 83 P **P** **09 40 35.3 +0.1**
RAYN pmax pmax
comp=Z,12nm,1.3s
DGZ Jazzator, Alta 66.29 37 *i*P **P** **09 40 37.1 +0.7**
DGZ pmax pmax
comp=Z,11nm,2.1s
MAKZ Makanchi 66.64 42 P **P** **09 40 38.6 +0.1**
MAKZ IAmb IAmb 09 41 05.3
comp=Z,15nm,1.8s
MAKZ Makanchi 66.64 42 P **P** **09 40 38.7 +0.1**
MAKZ pmax pmax
comp=Z,15nm,1.8s
SAML Samuel 66.70 210 P **P** **09 40 38.1 -1.0**
SAML Samuel 66.70 210 P **P** **09 40 38.1 -1.0**
SAML pmax pmax
comp=Z,6.0nm,1.2s
MK31 Makanchi Array 66.77 41 P **P** **09 40 39.8 +0.4**
MK31 Makanchi Array 66.77 41 *ce*P **P** **09 40 40.8 +1.4**
MKAR Makanchi Array 66.77 41 *ce*P **P** **09 40 39.7 +0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 66.77 41 P **P** **09 40 38.7 -0.7**
comp=Z,1.6nm,0.9s,baz=335,slow=5.4,SNR=9.6
MKAR PP **PP** **09 43 05.1 -0.8**
comp=Z,1.2nm,1.1s,baz=1.1,slow=6.3,SNR=3.5
MKAR LR LR 10 10 27.6
comp=Z,172nm,18.6s,baz=318,slow=37
comp=Z,1.6nm,0.9s
AAK Ala-Archa 66.83 49 P **P** **09 40 41.6 +1.5**
AAK IAmb IAmb 09 40 43.9
comp=Z,19nm,1.8s
AAK Ala-Archa 66.83 49 *ce*P **P** **09 40 41.7 +1.7**
AAK pmax pmax
comp=Z,10.0nm,1.7s
AAK Ala-Archa 66.83 49 LR LR 10 08 51.6
comp=Z,430nm,20.6s,baz=322,slow=35
BOSC San Juan Bosco 67.08 228 P **P** **09 40 42.4 +0.6**
BOSC IAmb IAmb 09 43 05.1
comp=Z,3.7nm,0.4s
BTK Batken 67.16 53 IAmb IAmb 09 40 50.1
comp=Z,24nm,1.6s
ETMB Extrema 68.46 213 IAmb IAmb 09 40 54.5
comp=Z,12nm,1.3s
NRN Naryn 68.47 49 IAmb IAmb 09 41 13.7
comp=Z,19nm,1.9s
BDFB Brasilia 69.89 193 P **P** **09 40 59.1 -0.1**
comp=Z,2.0nm,0.5s,baz=356,slow=10,SNR=2.5
comp=Z,2.0nm,0.5s
KSH Kashi 70.00 50 P **P** **09 41 02.2 +2.4**
KSH pmax pmax
comp=Z,7.0nm,1.2s
KSH LR LR
comp=Z,350nm,16.8s
KSH LR LR
comp=Z,390nm,17.1s
KSH LR LR
comp=Z,580nm,17.5s
ATAH Atahualpa 70.59 226 LR LR 10 12 26.7
comp=Z,63nm,19.9s,baz=9.6,slow=36
UOSS Minazif 71.18 73 P **P** **09 41 05.7 -1.4**
WMQ Urumqi 71.35 40 *e*P **P** **09 41 11.3 +3.4**
WMQ LR LR
comp=Z,210nm,19.7s
PTLB Pontes e Lacer 71.81 204 IAmb IAmb 09 41 16.7
comp=Z,29nm,1.7s
SONM Songino Array 73.79 26 P **P** **09 41 21.6 -0.9**
SONM Songino Array 73.79 26 P **P** **09 41 21.6 -0.9**
SONM pmax pmax
comp=Z,9.0nm,1.2s
SONM Songino Array 73.79 26 P **P** **09 41 22.6 +0.1**
comp=Z,4.0nm,0.9s,baz=323,slow=6.3,SNR=17
SONM LR LR 10 14 14.1
comp=Z,81nm,21.7s,baz=334,slow=36
comp=Z,4.0nm,0.9s
WSAR Wadi Sarin 73.89 73 LR LR 10 16 36.5
comp=Z,87nm,21.2s,baz=317,slow=38
ULN Ulaanbaatar 73.93 25 P **P** **09 41 22.9 -0.4**
ULN IAmb IAmb 09 41 26.5
comp=Z,15nm,1.2s
ULN Ulaanbaatar 73.93 25 *i*P **P** **09 41 24.5 +1.2**
ULN pmax pmax
comp=Z,15nm,1.3s
AQDB Aquidauana 75.91 200 P **P** **09 41 33.6 -1.1**
AQDB IAmb IAmb 09 41 45.0
comp=Z,29nm,1.6s
KLR Kul'dur 76.89 9 *ce*P **P** **09 41 40.9 +0.8**
KLR pmax pmax
comp=Z,11nm,1.7s
GO01 Chusmiza 78.66 212 IAmb IAmb 09 42 00.2
comp=Z,21nm,1.4s
GTA Gaotai 79.55 34 *e*P **P** **09 41 54.3 -0.9**
GTA pP pP 09 41 59.2 +0.2
GTA pmax pmax
comp=Z,4.0nm,1.4s
YSS Yuzh-Sakhalins 79.73 1 *i*P **P** **09 41 57.1 +1.3**
YSS pmax pmax
comp=Z,22nm,1.2s
XLT XiLinHaoTe 79.77 21 *e*P **P** **09 41 53.6 -2.6**
XLT pP pP 09 41 59.0 -1.1
XLT sP sP 09 42 01.7 +0.2
XLT pmax pmax
comp=Z,7.0nm,0.9s
XLT pmax pmax
comp=Z,240nm,5.0s
LVC Limon Verde 81.32 211 P **P** **09 42 04.0 -0.9**
LVC IAmb IAmb 09 42 15.0
comp=Z,19nm,1.3s
LVC Limon Verde 81.32 211 P **P** **09 42 04.0 -0.9**
LVC pmax pmax
comp=Z,19nm,1.3s
BTO Baotou 81.47 26 *e*P **P** **09 42 04.9 -0.5**
BTO pP **pP** **09 42 09.7 +0.4**
BTO sP **PcP** **09 42 11.9 +0.5**
BTO PP **PP** **09 45 08.6 -2.1**
BTO S **S** **09 52 15.3 -1.0**
BTO pmax pmax
comp=Z,18nm,0.9s
BTO pmax pmax
comp=Z,530nm,5.3s
BTO LR LR
comp=Z,390nm,5.6s
BTO LR LR
comp=Z,300nm,4.6s
BTO LR LR
comp=Z,240nm,5.3s
CN2 Changchun 81.51 14 *e*P **P** **09 42 04.5 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 81.63 25 *e*P **P** **09 42 07.5 +1.2**
HHC sP pwP 09 42 15.7 +2.2
HHC pmax pmax
comp=Z,13nm,1.2s
HHC pmax pmax
comp=Z,240nm,5.6s
HHC LR LR
comp=Z,180nm,15.7s
HHC LR LR
comp=Z,160nm,12.6s
HHC LR LR
comp=Z,180nm,16.5s
USRK Ussuriysk Ar. 81.90 9 P **P** **09 42 07.2 -0.3**
comp=Z,5.2nm,1.1s,baz=59,slow=5.6,SNR=2.8
USRK LR LR 10 16 51.4
comp=Z,68nm,20.3s,baz=360,slow=34
comp=Z,5.2nm,1.1s
PB14 IPOC Station P 83.68 212 IAmb IAmb 09 42 27.4
comp=Z,18nm,1.4s
LZH Lanzhou 83.88 32 *e*P **P** **09 42 19.0 +0.9**
LZH pmax pmax
comp=Z,17nm,1.3s
GO02 Mina Guanaco 83.93 211 IAmb IAmb 09 42 28.2
comp=Z,14nm,1.1s
HNS HongShan 85.67 23 ⇓P **P** **09 42 27.2 +0.4**
HNS pmax pmax
comp=Z,14nm,1.5s
LYN LuoYang 87.81 26 ⇓P **P** **09 42 39.4 +2.0**
LYN S **S** **09 53 18.3 -1.1**
LYN pmax pmax
comp=Z,25nm,1.2s
KSRS Korea Array 88.09 13 LR LR 10 21 52.0
comp=Z,63nm,20.2s,baz=335,slow=36
CD2 Chengdu 88.61 34 *e*P **P** **09 42 41.0 -0.3**
HYB Hyderabad 89.48 61 *e*P **P** **09 42 45.7 +0.2**
NJ2 Nanjing 91.74 22 *e*P **P** **09 42 56.7 +0.9**
NJ2 pP **pP** **09 42 59.2 -0.5**
NJ2 sP **sP** **09 43 01.2 +0.1**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
NJ2 pmax pmax
comp=Z,300nm,5.7s
PZH PanZhiHua 91.93 38 P **P** **09 42 56.3 -0.7**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,120nm,3.5s
JNU Nakatsue 92.74 12 LR LR 10 25 02.5
comp=Z,59nm,22.0s,baz=16,slow=36
CMAR Chiang Mai Arr 98.13 43 *ce*P Pdif 09 43 27.2 +1.9
CMAR Chiang Mai Arr 98.13 43 LR LR 10 29 35.3
comp=Z,141nm,21.4s,baz=305,slow=37
PALK Pallekele 99.10 65 LR LR 10 29 47.3
comp=Z,89nm,21.4s,baz=63,slow=36
TAOE Nuku Hiva Isla 105.85 277 *e*LR LR 10 18 44.1
comp=Z,477nm,29.0s
PPT2 Papeete2 118.32 279 *e*LR LR 10 24 34.1
comp=Z,238nm,36.2s
PPT2 *e*LR LR 10 24 47.8
comp=Z,501nm,37.0s
TBI Tubuai 122.70 275 *e*LR LR 10 26 35.6
comp=Z,2μm,28.0s
TBI *e*LR LR 10 26 37.5
comp=Z,878nm,25.5s
WRA Warramunga Arr 145.41 17 PKPbc **PKPbc** **09 49 25.3 -0.8**
comp=Z,2.1nm,0.9s,baz=344,slow=3.0,SNR=8.4
ASAR Alice Springs 148.95 19 PKPbc **PKPbc** **09 49 34.8 -1.3**
comp=Z,2.5nm,0.9s,baz=350,slow=2.3,SNR=26

DJA 05 09:36:29.7±0.5,5°S±7°×10°6E±°,h280km±7km,M4.1/10,
mb4.1/5,mB5.0/2,MLv4.2/10,Mw(mB)4.4/2,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.59**	**260**	P		Pn		09 37 13.5	+2.0
KASI				S		S		09 37 44.8	+0.1
CNJI	**Cibinong**	**2.29**	**153**	P		Pn		09 37 16.5	-0.8
CMJI	**Cimerak**	**3.44**	**137**	P		Pn		09 37 28.4	-0.4
CMJI				S		S		09 38 13.1	-2.8
KPJI	**Karang Pucung**	**3.51**	**126**	P		Pn		09 37 31.3	+1.8
UGM	**Wanagama**	**5.15**	**121**	P		Pn		09 37 48.5	+0.2
	54nm,1.6s,0.3nm								
PPSI	**Pulau Pagai**	**6.53**	**292**	P		Pn		09 38 04.7	-0.4
	48nm,0.8s,0.4nm								
PDSI	**Padang**	**7.07**	**307**	P		Pn		09 38 10.4	-1.3

*NEIC **05** 09:42:11.5±1.3,56°.39N±0°.10×148°.51W±0°.09,h22km±9km,*
ML3.5/60,ML3.1(AEIC),Error ellipse: s-maj=15.2km
s-min=4.2km az=155.0
*AEIC **05** 09:42:14.4±1.1,56°.39N±0°.08×148°.5W±0°.1,h7km±5km,*
Error ellipse: s-maj=11.4km s-min=9.0km az=152.0
ISC 05 09:42:09.3±2.0,56°.4N±0°.1×148°.53W±0°.05,h10km,n150,
σ1§13/148,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.62**	**304**				**Pn**	**09 42 52.3**	**+0.7**
KDAK							**Sn**	**09 43 21.8**	**-1.5**
OHAK	**Old Harbor**	**2.75**	**290**				**Pn**	**09 42 53.8**	**+0.5**
OHAK							**Sn**	**09 43 24.4**	**-2.1**
OHAK	**Old Harbor**	**2.75**	**290**	P			**Pn**	**09 42 53.8**	**+0.5**
	baz=106								
OHAK				S			**Sn**	**09 43 24.4**	**-2.1**
	baz=106								
SYI	**Shuyak Island**	**3.05**	**319**				**Pn**	**09 42 58.6**	**+1.1**
SYI							**Sn**	**09 43 33.8**	**-0.3**
SYI	**Shuyak Island**	**3.05**	**319**	IAML				09 43 39.3	
	comp=E,70nm,1.2s								
Q20K	**Shuyak Island**	**3.05**	**319**	P			**Pn**	**09 42 58.6**	**+1.1**
	baz=135								
Q20K				S			**Sn**	**09 43 33.8**	**-0.3**
	baz=135								
SII	**Sitkinak Islan**	**3.14**	**276**	Pn			**Pn**	**09 42 59.2**	**+0.4**
SII				IAML				09 43 48.8	
	comp=N,102nm,1.1s								
SII				IAML				09 44 25.5	
	comp=E,96nm,1.1s								
MID	**Middleton Isla**	**3.27**	**20**				**Pn**	**09 43 01.5**	**+1.0**
MID				IAML				09 44 40.9	
	comp=E,134nm,1.4s								
MID	**Middleton Isla**	**3.27**	**20**				**Sn**	**09 43 36.8**	**-2.5**
MID	**Middleton Isla**	**3.27**	**20**	IAML				09 43 33.0	
	comp=N,151nm,1.3s								
CNPM	**China Poot**	**3.46**	**337**				**Pn**	**09 43 03.8**	**+0.6**
CNPM							**Sn**	**09 43 43.4**	**-0.8**
BRSE	**Bradley Lake S**	**3.56**	**342**				**Pn**	**09 43 04.8**	**+0.2**
BRSE							**Sn**	**09 43 44.7**	**-2.0**
BRSE	**Bradley Lake S**	**3.56**	**342**	P			**Pn**	**09 43 04.8**	**+0.2**
	baz=160								
BRSE				S			**Sn**	**09 43 44.7**	**-2.0**
	baz=160								
BRLK	**Bradley Lake**	**3.61**	**341**				**Pn**	**09 43 05.2**	**-0.1**
P23K	**Montague Islan**	**3.67**	**9**				**Pn**	**09 43 06.2**	**+0.1**
P23K	**Montague Islan**	**3.67**	**9**	P			**Pn**	**09 43 06.2**	**+0.1**
	baz=190								
HOM	**Homer**	**3.67**	**335**	Pn			**Pn**	**09 43 07.5**	**+1.4**
Q19K	**Cape Douglas,**	**3.75**	**315**				**Pn**	**09 43 08.7**	**+1.6**
Q19K	**Cape Douglas,**	**3.75**	**315**	IAML				09 43 58.2	
	comp=N,104nm,0.9s								
Q19K	**Cape Douglas,**	**3.75**	**315**	P			**Pn**	**09 43 08.7**	**+1.6**
	baz=130								
SEW	**Seward**	**3.76**	**353**				**Pn**	**09 43 07.2**	**0.0**
SEW	**Seward**	**3.76**	**353**	P			**Pn**	**09 43 07.2**	**0.0**
	baz=172								
KAHG	**Katmai Hook Gl**	**3.88**	**306**				**Pn**	**09 43 10.7**	**+1.8**
ACHA	**Angle Creek He**	**4.12**	**299**				**Pn**	**09 43 14.4**	**+2.2**
P19K	**Oil Pt**	**4.12**	**325**				**Pn**	**09 43 13.8**	**+1.6**
P19K	**Oil Pt**	**4.12**	**325**	IAML				09 44 04.9	
	comp=N,74nm,0.7s								
P19K				IAML				09 44 29.3	
	comp=E,57nm,1.1s								
P19K	**Oil Pt**	**4.12**	**325**	P			**Pn**	**09 43 13.8**	**+1.6**
	baz=140								
O22K	**Cooper Landing**	**4.15**	**352**				**Pn**	**09 43 13.3**	**+0.7**
O22K	**Cooper Landing**	**4.15**	**352**	P			**Pn**	**09 43 13.3**	**+0.7**
	baz=170								
HIN	**Hinchinbrook I**	**4.16**	**14**				**Pn**	**09 43 13.4**	**+0.6**
HIN	**Hinchinbrook I**	**4.16**	**14**	IAML				09 43 59.9	
	comp=N,73nm,1.1s								
HIN				IAML				09 44 04.7	
	comp=E,66nm,1.1s								
KAIM	**Kayak Island**	**4.16**	**30**				**Pn**	**09 43 13.3**	**+0.5**
KAIM	**Kayak Island**	**4.16**	**30**	IAML				09 44 13.2	
	comp=E,58nm,1.2s								
KAIM				IAML				09 44 16.4	
	comp=N,69nm,1.5s								
KAIM	**Kayak Island**	**4.16**	**30**	P			**Pn**	**09 43 13.3**	**+0.5**
	baz=213								
SLKM	**Skilak Lake**	**4.23**	**349**				**Pn**	**09 43 14.2**	**+0.5**
O20K	**Slope Mountain**	**4.29**	**331**				**Pn**	**09 43 15.8**	**+1.2**
O20K	**Slope Mountain**	**4.29**	**331**	P			**Pn**	**09 43 15.8**	**+1.2**
	baz=148								
IVE	**Iliamna Volcan**	**4.34**	**329**				**Pn**	**09 43 16.3**	**+0.9**
CNTC	**Contact Creek**	**4.41**	**298**				**Pn**	**09 43 18.4**	**+2.2**
Q17K	**Contact Creek**	**4.41**	**298**	P			**Pn**	**09 43 18.4**	**+2.2**
	baz=112								
EYAK	**Cordova Ski Ar**	**4.42**	**18**	P			**Pn**	**09 43 17.0**	**+0.6**
	baz=200								
SUCK	**Suckling Hills**	**4.47**	**32**				**Pn**	**09 43 17.6**	**+0.6**
SUCK	**Suckling Hills**	**4.47**	**32**	IAML				09 44 11.1	
	comp=N,43nm,1.1s								
SUCK				IAML				09 44 20.6	
	comp=E,37nm,1.4s								
RAGM	**Ragged Mountai**	**4.50**	**25**				**Pn**	**09 43 17.9**	**+0.5**
NICHA	**Nichawak Mount**	**4.55**	**30**				**Pn**	**09 43 18.8**	**+0.6**
HMT	**Hamilton**	**4.55**	**28**	Pn			**Pn**	**09 43 18.7**	**+0.5**
RED	**Redoubt Volcan**	**4.62**	**333**				**Pn**	**09 43 19.6**	**+0.5**
RSO	**Redoubt South**	**4.65**	**333**				**Pn**	**09 43 20.4**	**+0.7**
GOAT	**Goat Mountain**	**4.66**	**24**				**Pn**	**09 43 20.4**	**+0.8**
RDT	**Redoubt**	**4.67**	**336**				**Pn**	**09 43 20.2**	**+0.5**
P18K	**Big Mountain,**	**4.67**	**313**	Pn			**Pn**	**09 43 20.9**	**+1.0**
P18K	**Big Mountain,**	**4.67**	**313**	P			**Pn**	**09 43 20.9**	**+1.0**
	baz=127								
BERG	**Berg Lake**	**4.75**	**30**				**Pn**	**09 43 21.0**	**+0.1**
BERG				IAML				09 44 31.4	
	comp=E,55nm,0.8s								
RC01	**Rabbit Creek A**	**4.76**	**353**				**Pn**	**09 43 22.5**	**+1.5**
RC01				IAML				09 44 16.5	
	comp=N,31nm,0.8s								
RC01				IAML				09 44 17.9	
	comp=E,34nm,0.4s								
RC01	**Rabbit Creek A**	**4.76**	**353**	P			**Pn**	**09 43 22.0**	**+1.1**
	baz=172								
NCT	**North Crescent**	**4.78**	**333**				**Pn**	**09 43 21.9**	**+0.6**
SNH	**Sunshine Point**	**4.85**	**36**				**Pn**	**09 43 23.1**	**+0.9**
SNH	**Sunshine Point**	**4.85**	**36**	IAML				09 43 59.4	
	comp=N,22nm,1.5s								
SNH				IAML				09 44 22.7	
	comp=E,35nm,1.3s								
FIS	**Fire Island**	**4.85**	**350**	Pn			**Pn**	**09 43 22.7**	**+0.5**
FIS							**Sn**	**09 44 19.6**	**+1.3**
O19K	**Port Alsworth**	**4.89**	**324**				**Pn**	**09 43 23.7**	**+1.0**
O19K	**Port Alsworth**	**4.89**	**324**	P			**Pn**	**09 43 23.7**	**+1.0**
	baz=139								
KHIT	**Khitrov Hills**	**4.92**	**32**				**Pn**	**09 43 23.5**	**+0.1**
Q16K	**King Salmon**	**4.94**	**301**				**Pn**	**09 43 25.2**	**+1.7**
Q16K	**King Salmon**	**4.94**	**301**	P			**Pn**	**09 43 25.2**	**+1.7**
	baz=114								
O18K	**Koktuh Hills**	**4.96**	**317**				**Pn**	**09 43 24.5**	**+0.7**
O18K	**Koktuh Hills**	**4.96**	**317**	P			**Pn**	**09 43 24.5**	**+0.7**
	baz=131								
BMRM	**Bremner River**	**5.03**	**22**				**Pn**	**09 43 25.3**	**+0.6**
BMRM	**Bremner River**	**5.03**	**22**	P			**Pn**	**09 43 25.3**	**+0.6**
	baz=206								
KNK	**Knik Glacier**	**5.04**	**0**				**Pn**	**09 43 25.5**	**+0.6**
KNK	**Knik Glacier**	**5.04**	**0**	IAML				09 44 31.3	
	comp=N,16nm,0.7s								
KNK				IAML				09 44 31.5	
	comp=E,22nm,1.5s								
KNK	**Knik Glacier**	**5.04**	**0**	P			**Pn**	**09 43 25.5**	**+0.6**
	baz=180								
WAX	**Waxell Ridge**	**5.05**	**34**	IAML				09 44 24.2	
	comp=E,36nm,0.9s								
MESA	**MESA**	**5.15**	**40**	Pn			**Pn**	**09 43 26.9**	**+0.4**
MESA				IAML				09 44 43.9	
	comp=E,24nm,1.4s								
MESA				IAML				09 46 17.8	
	comp=N,38nm,1.3s								
SUA	**Susitna One**	**5.22**	**348**				**Pn**	**09 43 28.0**	**+0.6**
SUA	**Susitna One**	**5.22**	**348**	P			**Pn**	**09 43 28.0**	**+0.6**
	baz=166								
PMR	**Palmer**	**5.23**	**357**				**Sn**	**09 44 26.6**	**-1.1**
PMR				IAML				09 44 38.3	
	comp=N,16nm,1.0s								
PMR				IAML				09 44 39.1	
	comp=E,13nm,1.0s								
PMR	**Palmer**	**5.23**	**357**				**Pn**	**09 43 28.3**	**+0.9**
PMR	**Palmer**	**5.23**	**357**	P			**Pn**	**09 43 28.3**	**+0.9**
	baz=176								
KLU	**Klutina**	**5.30**	**14**	Pn			**Pn**	**09 43 29.4**	**+1.0**
KLU				IAML				09 44 29.3	
	comp=E,22nm,0.9s								
KLU				IAML				09 44 30.6	
	comp=N,24nm,0.9s								
KLU	**Klutina**	**5.30**	**14**	P			**Pn**	**09 43 29.5**	**+1.1**
	baz=196								
BAGL	**Bagley Icefiel**	**5.33**	**37**				**Pn**	**09 43 29.4**	**+0.6**
ISLE	**Juniper Island**	**5.33**	**35**				**Pn**	**09 43 29.3**	**+0.4**
ISLE	**Juniper Island**	**5.33**	**35**	IAML				09 44 32.0	
	comp=N,24nm,0.9s								
ISLE				IAML				09 44 42.9	
	comp=E,20nm,1.2s								
STLK	**Strandline Lak**	**5.40**	**343**				**Pn**	**09 43 31.0**	**+1.1**
GHO	**Glory Hole Cre**	**5.41**	**358**				**Pn**	**09 43 31.4**	**+1.4**
N19K	**Bonanza Creek**	**5.42**	**327**				**Pn**	**09 43 31.1**	**+0.9**
N19K	**Bonanza Creek**	**5.42**	**327**	P			**Pn**	**09 43 31.1**	**+0.9**
	baz=142								
SML	**Sawmill**	**5.44**	**1**				**Pn**	**09 43 31.4**	**+1.0**
SML	**Sawmill**	**5.44**	**1**	P			**Pn**	**09 43 31.4**	**+1.0**
	baz=181								
SCM	**Sheep Creek Mo**	**5.50**	**6**	Pn			**Pn**	**09 43 31.7**	**+0.5**
VRDI	**Verde Repeater**	**5.53**	**26**				**Pn**	**09 43 32.0**	**+0.3**
SAMH	**Samovar Hills**	**5.55**	**44**				**Pn**	**09 43 33.0**	**+1.1**
KIAG	**Kiagna River**	**5.57**	**33**				**Pn**	**09 43 33.1**	**+0.7**
N25K	**Chitina, Valde**	**5.62**	**20**				**Pn**	**09 43 33.5**	**+0.7**
N25K	**Chitina, Valde**	**5.62**	**20**	P			**Pn**	**09 43 33.5**	**+0.7**
	baz=203								
TABL	**Table Mountain**	**5.62**	**41**				**Pn**	**09 43 33.8**	**+0.8**
GLB	**Gilahina Butte**	**5.63**	**24**	Pn			**Pn**	**09 43 33.6**	**+0.6**
PCA	**Pinnacle**	**5.74**	**46**				**Pn**	**09 43 35.2**	**+0.8**
PINM	**Pinnacle**	**5.74**	**46**	P			**Pn**	**09 43 35.2**	**+0.7**
	baz=233								
PTPK	**Patty Peak**	**5.75**	**31**				**Pn**	**09 43 35.4**	**+0.6**
MCARA	**McCarthy VSAT**	**5.77**	**27**				**Pn**	**09 43 35.6**	**+0.8**
MCARA	**McCarthy VSAT**	**5.77**	**27**	P			**Pn**	**09 43 35.6**	**+0.8**
	baz=212								
N18K	**Kilae Creek**	**5.78**	**321**				**Pn**	**09 43 35.8**	**+0.9**
N18K	**Kilae Creek**	**5.78**	**321**	P			**Pn**	**09 43 35.8**	**+0.9**
	baz=135								
SKT	**Skwentna**	**5.82**	**346**	Pn			**Pn**	**09 43 37.7**	**+2.2**
PNL	**Peninsula**	**5.86**	**52**				**Pn**	**09 43 36.9**	**+0.7**
PNL	**Peninsula**	**5.86**	**52**	P			**Pn**	**09 43 36.9**	**+0.7**
	baz=240								
BCPM	**Bancas Point**	**5.91**	**49**				**Pn**	**09 43 37.6**	**+0.8**
CTG	**Chitna Glacier**	**5.93**	**36**	P			**Pn**	**09 43 37.5**	**+0.4**
	baz=222								
CTGM	**Chitina Glacie**	**5.93**	**36**				**Pn**	**09 43 37.5**	**+0.4**
LOGN	**Logan Glacier**	**5.94**	**38**				**Pn**	**09 43 37.8**	**+0.4**
M20K	**Styx River**	**6.00**	**339**	Pn			**Pn**	**09 43 37.9**	**-0.2**
O16K	**Kokwok River B**	**6.01**	**306**				**Pn**	**09 43 39.6**	**+1.4**
O16K	**Kokwok River B**	**6.01**	**306**	P			**Pn**	**09 43 39.6**	**+1.4**
	baz=118								
N17K	**Nushagak Hills**	**6.15**	**316**	Pn			**Pn**	**09 43 41.0**	**+0.9**
O29M	**Mount Kennedy**	**6.54**	**49**				**Pn**	**09 43 46.8**	**+1.1**
O29M	**Mount Kennedy**	**6.54**	**49**	P			**Pn**	**09 43 46.8**	**+1.1**
	baz=237								
P29M	**Windy Craggy**	**6.59**	**56**				**Pn**	**09 43 46.8**	**+0.7**
P29M	**Windy Craggy**	**6.59**	**56**	P			**Pn**	**09 43 46.8**	**+0.7**
	baz=245								
L19K	**White Mountain**	**6.65**	**334**				**Pn**	**09 43 47.4**	**+0.4**
O15K	**Ungalikthiuk R**	**6.66**	**300**				**Pn**	**09 43 49.0**	**+2.0**
O15K	**Ungalikthiuk R**	**6.66**	**300**	P			**Pn**	**09 43 49.0**	**+2.0**
	baz=110								
DHY	**Denali Highway**	**6.74**	**4**	Pn			**Pn**	**09 43 49.6**	**+1.4**
YUK6	**Outpost Mounta**	**7.00**	**45**	P			**Pn**	**09 43 53.8**	**+1.9**
	baz=234								
RND	**Reindeer**	**7.04**	**359**	Pn			**Pn**	**09 43 54.0**	**+1.6**
YUK4	**Talbot Arm**	**7.13**	**42**	P			**Pn**	**09 43 56.8**	**+3.0**
	baz=230								
TRF	**Thorofare Moun**	**7.14**	**354**	Pn			**Pn**	**09 43 55.6**	**+1.8**
PLBC	**Pleasant Camp**	**7.17**	**60**	P			**Pn**	**09 43 55.4**	**+1.4**
	baz=250								
L18K	**Granite Mounta**	**7.18**	**328**	Pn			**Pn**	**09 43 55.4**	**+1.2**
HYT	**Haines Junctio**	**7.27**	**48**	Pn			**Pn**	**09 43 56.5**	**+0.9**
CAST	**Castle Rocks**	**7.28**	**347**	Pn			**Pn**	**09 43 57.2**	**+1.6**
KTH	**Kantishna Hill**	**7.29**	**352**	Pn			**Pn**	**09 43 57.6**	**+1.9**
TTA	**Tatalina**	**7.57**	**333**	Pn			**Pn**	**09 44 00.5**	**+0.8**
L16K	**Owhat River**	**7.76**	**318**	Pn			**Pn**	**09 44 03.5**	**+1.4**
BPAW	**Bear Paw Mtn.**	**7.83**	**352**	Pn			**Pn**	**09 44 04.5**	**+1.3**
JIS	**Juneau Island**	**7.89**	**70**	Pn			**Pn**	**09 44 03.9**	**0.0**
M29M	**Somme Creek**	**7.95**	**36**				**Pn**	**09 44 06.1**	**+1.3**
K17K	**Iditarod**	**8.05**	**326**	Pn			**Pn**	**09 44 07.0**	**+0.9**
J20K	**Nowinta River**	**8.29**	**343**	Pn			**Pn**	**09 44 09.9**	**+0.5**
CCB	**Clear Creek Bu**	**8.30**	**2**	Pn			**Pn**	**09 44 11.3**	**+1.8**
WHY	**Whitehorse**

DAWY	Dawson	8.93	27	Pn	Pn	09 44 18.6	+0.4
P33M	Teslin, Yukon	9.11	59	Pn	Pn	09 44 21.4	+0.6
J16K	Anvik River	9.19	324	Pn	Pn	09 44 21.8	0.0
K29M	Barlow Dome	9.27	32	Pn	Pn	09 44 23.8	+0.9
H21K	Melozitna Rive	9.53	349	Pn	Pn	09 44 27.4	+1.0
IMAR	Indian Mountai	9.95	348	Pn	Pn	09 44 34.2	+2.1

IDC ***05*** *09:44:52.6±0.8,23°.96N×121°.83E,h0km,mb3.7/11, mbtmp3.7/14,ML3.2/3,MS3.3/3,Error ellipse: s-maj=22.0km s-min=15.4km az=82.0*
JMA ***05*** *09:44:54.4±0.2,24°.1N±0°.3×121°.8E±0°.5,h4km±2km, MV3.9/14,TAIWAN REGION*
ASIES ***05*** *09:44:54.7,24°.10N×121°.75E,h9km,ML4.5,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; Mrr=0.34; Mθθ-0.10; Mϕϕ0.44; Mrθ0.70; Mrϕ-0.28; Mθϕ1.23; Fault plane solution: M0 1.49541×10^{22} NP1: ϕs=204.85000°,δ85.02000°,λ-74.51000°. NP2: ϕs=312.23000°,δ16.26000°,λ-161.94000°. Principal axes: T Plg38.1300°, Azm280.9500°; N Plg15.4380°, Azm23.4690°; P Plg47.7490°, Azm131.1680°;*
TAP ***05*** *09:44:54.7,24°.10N×121°.75E,h9km,ML4.5,C*
ISC 05 09:44:54.7±0.8,24°.08N±0°.01×121°.77E±0°.02,h12km±5km, n198,σ0°.87/269,mb3.8/11,18C-43D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.15**	**299**	⇓	*i*P	**Pg**	**09 44 58.1**	**-0.2**
	baz=299							
ETL				*i*	S	**Sg**	**09 45 00.2**	**-0.7**
	baz=299							
TWD	**Chiawan**	**0.16**	**269**	⇓	iP	**Pg**	**09 44 58.2**	**-0.2**
	baz=273							
TWD				*i*	S	**Sg**	**09 45 00.6**	**-0.3**
	baz=273							
NACB	**Ninganchiao**	**0.18**	**299**		P	**Pg**	**09 44 58.6**	**-0.2**
NACB	**Ninganchiao**	**0.18**	**299**	⇓	iP	**Pg**	**09 44 58.5**	**-0.3**
	baz=291							
NACB				*i*	S	**Sg**	**09 45 01.1**	**-0.5**
	baz=291							
HWA	**Hwalien**	**0.19**	**235**	⇓	P	**Pg**	**09 44 59.6**	**+0.8**
	baz=236							
EHP	**Heping Village**	**0.23**	**353**		P	**Pg**	**09 44 59.6**	**+0.1**
	baz=358							
EHP					S	**Sg**	**09 45 03.4**	**+0.6**
	baz=358							
EAHA	**Aohua**	**0.25**	**353**	⇓	iP	**Pg**	**09 44 60.0**	**+0.1**
	baz=356							
EAHA					S	**Sg**	**09 45 03.8**	**+0.4**
	baz=356							
ETM	**Tongmen**	**0.28**	**245**		P	**Pg**	**09 45 00.5**	**0.0**
	baz=245							
ETM					S	**Sg**	**09 45 04.6**	**+0.3**
	baz=245							
ETLH	**Xiulin Townshi**	**0.29**	**295**	⇓	iP	**Pg**	**09 45 00.5**	**-0.3**
	baz=295							
ETLH					S	**Sg**	**09 45 04.3**	**-0.5**
	baz=295							
LXIB	**Xiulin Townshi**	**0.33**	**259**	⇑	iP	**Pg**	**09 45 01.3**	**-0.2**
	baz=258							
LXIB					eS	**Sg**	**09 45 06.1**	**+0.1**
	baz=258							
ENA	**Nanau**	**0.34**	**355**	⇓	iP	**Pg**	**09 45 01.8**	**+0.2**
	baz=358							
ENA					S	**Sg**	**09 45 06.8**	**+0.5**
	baz=358							
SHUL	**Shoufeng**	**0.35**	**213**	⇓	iP	**Pb**	**09 45 03.0**	**+0.1**
	baz=212							
SHUL					eS	**Sb**	**09 45 09.4**	**+1.0**
	baz=212							
EWUT	**Wuta**	**0.36**	**1**	⇓	P	**Pg**	**09 45 02.2**	**+0.3**
	baz=3.0							
EWUT					eS	**Sg**	**09 45 07.2**	**+0.4**
	baz=3.0							
ESL	**Shilin**	**0.41**	**229**	⇓	iP	**Pg**	**09 45 02.9**	**+0.1**
	baz=238							
ESL					eS	**Sg**	**09 45 08.7**	**+0.4**
	baz=238							
TEGC	**Jichi Village**	**0.43**	**210**		eP	**Pg**	**09 45 03.5**	**+0.4**
	baz=211							
WHF	**Hehuan Shan**	**0.47**	**278**	⇓	iP	**Pg**	**09 45 03.8**	**-0.2**
	baz=278							
WHF					S	**Sg**	**09 45 10.1**	**-0.2**
	baz=278							
ESAO	**Su ao**	**0.49**	**8**	⇓	eP	**Pg**	**09 45 04.7**	**+0.3**
	baz=359							
NNSB	**Datong**	**0.49**	**314**	⇓	iP	**Pg**	**09 45 04.4**	**0.0**
	baz=314							
NNSB				*i*	S	**Sg**	**09 45 10.8**	**-0.2**
	baz=314							
NNSH	**Datong**	**0.49**	**314**	⇓	iP	**Pg**	**09 45 04.5**	**0.0**
	baz=313							
NNSH					S	**Sg**	**09 45 10.8**	**-0.2**
	baz=313							
EOS4	**EOS4**	**0.50**	**86**		eP	**Pb**	**09 45 06.8**	**+1.5**
	baz=89							
LATG	**Datong**	**0.50**	**334**	⇓	iP	**Pg**	**09 45 04.6**	**0.0**
	baz=333							
LATG					eS	**Sg**	**09 45 11.2**	**-0.1**
	baz=333							
WARBT	**Fenglin Townsh**	**0.51**	**224**	⇓	iP	**Pg**	**09 45 04.8**	**+0.1**
	baz=234							
WARBT					S	**Sb**	**09 45 12.5**	**-0.5**
	baz=234							
NNS	**Nan Shan**	**0.51**	**314**	⇓	iP	**Pg**	**09 45 04.7**	**-0.1**
	baz=315							
NNS					eS	**Sg**	**09 45 10.9**	**-0.6**
	baz=315							
FUSS	**Fushou**	**0.51**	**289**	⇓	P	**Pg**	**09 45 04.8**	**0.0**
	baz=289							
FUSS					eS	**Sg**	**09 45 11.5**	**0.0**
	baz=289							
EGFH	**Guangfu**	**0.52**	**217**	⇓	P	**Pg**	**09 45 05.2**	**+0.3**
	baz=220							
TWC	**Suao**	**0.53**	**8**	⇓	iP	**Pb**	**09 45 05.5**	**-0.5**
	baz=3.0							
TWC					eS	**Sb**	**09 45 13.0**	**-0.5**
	baz=3.0							
EOS2	**EOS2**	**0.54**	**51**		eP	**Pn**	**09 45 07.7**	**-0.4**
	baz=31							
EOS3	**EOS3**	**0.54**	**68**	⇓	eP	**Pn**	**09 45 08.2**	**+0.1**
	baz=68							
CHGB	**Renai**	**0.55**	**268**	⇓	iP	**Pg**	**09 45 05.5**	**0.0**
	baz=269							
CHGB					S	**Sg**	**09 45 12.6**	**-0.2**
	baz=269							
NDS	**Dongshan**	**0.55**	**355**		eP	**Pg**	**09 45 05.6**	**+0.1**
	baz=354							
NDS					eS	**Sb**	**09 45 13.4**	**-0.8**
	baz=354							
OWD	**Renai**	**0.56**	**257**	⇑	iP	**Pg**	**09 45 05.7**	**0.0**
	baz=265							
OWD					eS	**Sg**	**09 45 12.3**	**-0.8**
	baz=265							
NDT	**Datong Townshi**	**0.57**	**336**	⇓	iP	**Pb**	**09 45 06.2**	**-0.5**
	baz=335							
NDT					S	**Sg**	**09 45 13.6**	**+0.2**
	baz=335							
TWT	**Tachien**	**0.57**	**287**		P	**Pb**	**09 45 06.2**	**-0.5**
	baz=287							
TWT					S	**Sg**	**09 45 13.7**	**+0.2**
	baz=287							
ENTT	**Nioudou**	**0.58**	**341**	⇓	iP	**Pb**	**09 45 06.4**	**-0.5**
	baz=341							
ENTT				*i*	S	**Sb**	**09 45 14.7**	**-0.5**
	baz=341							
TDCB	**Techi**	**0.58**	**287**	⇑	P	**Pb**	**09 45 06.5**	**-0.5**
	baz=287							
TDCB					S	**Sg**	**09 45 14.0**	**+0.1**
	baz=287							
WUSB	**Renai**	**0.60**	**261**	⇑	iP	**Pb**	**09 45 06.8**	**-0.6**
	baz=262							
WUSB					S	**Sb**	**09 45 15.3**	**-0.5**
	baz=262							
TWE	**Neicheng**	**0.64**	**351**	⇓	iP	**Pb**	**09 45 07.6**	**-0.3**
	baz=353							
TWE					S	**Sb**	**09 45 16.6**	**-0.2**
	baz=353							
VWDT	**VWDT**	**0.66**	**240**	⇑	iP	**Pb**	**09 45 07.9**	**-0.3**
	baz=241							
VWDT					S	**Sb**	**09 45 16.8**	**-0.6**
	baz=241							
HGSD	**Ruisui**	**0.67**	**208**	⇓	P	**Pb**	**09 45 08.2**	**-0.1**
	baz=200							
ILA	**Ilan**	**0.68**	**358**		eP	**Pg**	**09 45 07.5**	**-0.4**
	baz=345							
YHNB	**Yeheng**	**0.69**	**328**		P	**Pb**	**09 45 08.7**	**0.0**
YHNB	**Yeheng**	**0.69**	**328**	⇓	iP	**Pb**	**09 45 08.4**	**-0.3**
	baz=328							
YHNB				*i*	S	**Sb**	**09 45 17.4**	**-0.8**
	baz=328							
FUSB	**Fushanzhiwuyua**	**0.69**	**346**	⇓	iP	**Pb**	**09 45 08.7**	**-0.2**
	baz=337							
FUSB					S	**Sb**	**09 45 17.8**	**-0.6**
	baz=337							
NSK	**Sanguang**	**0.70**	**327**	⇓	iP	**Pb**	**09 45 08.6**	**-0.4**
	baz=327							
NSK					S	**Sb**	**09 45 17.6**	**-1.0**
	baz=327							
EHY	**Hungye**	**0.71**	**216**	⇓	iP	**Pg**	**09 45 07.9**	**-0.5**
	baz=218							
NWLT	**Wulai**	**0.73**	**341**	⇓	iP	**Pb**	**09 45 09.3**	**-0.2**
	baz=340							
NWLT					S	**Sb**	**09 45 19.1**	**-0.4**
	baz=340							
WPL	**Puli Township**	**0.75**	**265**		eP	**Pg**	**09 45 09.1**	**-0.1**
	baz=265							
WPL					eS	**Sg**	**09 45 18.8**	**-0.2**
	baz=265							
DPDB	**Guoxing**	**0.77**	**266**	⇑	iP	**Pb**	**09 45 10.0**	**-0.2**
	baz=267							
WHP	**Taichung City**	**0.78**	**285**	⇑	iP	**Pb**	**09 45 10.3**	**0.0**
	baz=285							
WHP					S	**Sb**	**09 45 20.6**	**-0.3**
	baz=285							
WCS	**Beigang Elemen**	**0.79**	**268**	⇑	iP	**Pb**	**09 45 10.1**	**-0.2**
	baz=261							
WCS					S	**Sb**	**09 45 20.5**	**-0.5**
	baz=261							
SSLB	**Suanglung**	**0.80**	**249**		P	**Pb**	**09 45 10.4**	**-0.3**
SSLB	**Suanglung**	**0.80**	**249**	⇓	P	**Pg**	**09 45 10.2**	**-0.1**
	baz=259							
SSLB					S	**Sg**	**09 45 20.1**	**-0.7**
	baz=259							
NFF	**Wufeng Townshi**	**0.81**	**313**	⇑	eP	**Pb**	**09 45 10.4**	**-0.3**
	baz=303							
NFF					eS	**Sg**	**09 45 20.5**	**-0.4**
	baz=303							
YULB	**Yu-li**	**0.81**	**212**		P	**Pb**	**09 45 11.0**	**+0.2**
YULB	**Yu-li**	**0.81**	**212**	⇓	P	**Pg**	**09 45 09.4**	**-1.0**
	baz=227							
YULB					eS	**Sb**	**09 45 22.4**	**+0.7**
	baz=227							
ECBN	**Changbin**	**0.82**	**201**		eP	**Pg**	**09 45 10.4**	**-0.2**
	baz=191							
SMLT	**Sun Moon Lake**	**0.82**	**256**	⇑	iP	**Pb**	**09 45 10.8**	**-0.2**
	baz=257							
SMLT					eS	**Sb**	**09 45 21.6**	**-0.5**
	baz=257							
EYUL	**Yuli**	**0.84**	**210**		eP	**Pb**	**09 45 11.6**	**+0.3**
	baz=225							
TWF1	**Yuli**	**0.85**	**211**		eP	**Pg**	**09 45 10.2**	**-0.9**
	baz=225							
TYC	**Yuchr**	**0.85**	**258**	⇑	iP	**Pg**	**09 45 11.2**	**-0.1**
	baz=259							
TYC					S	**Sg**	**09 45 22.0**	**-0.5**
	baz=259							
TIPB	**Shuangxi**	**0.89**	**3**		eP	**Pg**	**09 45 11.4**	**-0.4**
	baz=350							
LIOB	**Emei**	**0.89**	**309**	⇑	P	**Pb**	**09 45 12.2**	**+0.1**
	baz=309							
LIOB					eS	**Sb**	**09 45 23.7**	**-0.2**
	baz=309							
NSTT	**Nanjuang**	**0.89**	**308**	⇑	iP	**Pb**	**09 45 12.2**	**+0.1**
	baz=305							
NJD	**Zhudong**	**0.90**	**316**		eP	**Pb**	**09 45 12.5**	**+0.2**
	baz=313							
NHDH	**Xindian Distri**	**0.90**	**346**	⇑	eP	**Pb**	**09 45 12.5**	**+0.2**
	baz=343							
TWA	**Mucha**	**0.91**	**349**	⇓	eP	**Pb**	**09 45 12.8**	**+0.4**
	baz=346							
TATO	**Taipei**	**0.93**	**344**		P	**Pn**	**09 45 13.3**	**-0.3**
TATO	**Taipei**	**0.93**	**344**		eP	**Pb**	**09 45 12.9**	**+0.2**
	baz=343							
TATO					S	**Sb**	**09 45 24.5**	**-0.5**
	baz=343							
WHYT	**Xinyi Township**	**0.93**	**246**		eP	**Pb**	**09 45 12.6**	**-0.1**
	baz=247							
TWB1	**Santiao Chiao**	**0.94**	**12**		eP	**Pb**	**09 45 13.3**	**+0.3**
	baz=359							
TWQ1	**Liyutan**	**0.95**	**286**	⇑	P	**Pn**	**09 45 13.6**	**-0.3**
	baz=285							
CHKH	**Chenggong**	**0.95**	**201**		eP	**Pg**	**09 45 12.2**	**-0.8**
	baz=194							
BACT	**New Taipei Cit**	**0.96**	**342**		eP	**Pb**	**09 45 13.1**	**-0.2**
	baz=337							
NHY	**Taipei**	**0.97**	**349**		eP	**Pb**	**09 45 13.3**	**-0.1**
	baz=345							
HSN1	**Hsinchu**	**0.97**	**315**		eP	**Pn**	**09 45 14.7**	**+0.4**
	baz=312							
NSY	**Sanyi**	**0.98**	**290**	⇑	P	**Pn**	**09 45 14.6**	**+0.2**
	baz=290							
NSY					eS	**Sn**	**09 45 28.7**	**+0.5**
	baz=290							
TAP	**Taipei**	**0.98**	**346**		eP	**Pn**	**09 45 14.2**	**-0.1**
	baz=342							
WWF	**Wufeng**	**0.98**	**268**		eP	**Pn**	**09 45 15.1**	**+0.7**
	baz=268							
NWF	**Wu-fen Shan**	**0.98**	**0**	⇓	P	**Pb**	**09 45 14.2**	**+0.4**
	baz=342							
WFSB	**Wu-fen Shan**	**0.98**	**0**	⇓	iP	**Pn**	**09 45 14.4**	**0.0**
	baz=342							
FULB	**Fuli**	**0.98**	**207**		eP	**Pg**	**09 45 13.0**	**-0.7**
	baz=199							
WJS	**Zhushan**	**0.99**	**255**		eP	**Pn**	**09 45 14.5**	**+0.1**
	baz=257							
WJS					eS	**Sn**	**09 45 28.9**	**+0.5**
	baz=257							
NMLH	**Miaoli**	**1.00**	**297**		eP	**Pn**	**09 45 15.2**	**+0.6**
	baz=295							
TCU	**Taichung**	**1.00**	**274**		eP	**Pn**	**09 45 15.1**	**+0.5**
	baz=270							
SBCB	**Hsinchu**	**1.01**	**315**		P	**Pn**	**09 45 15.7**	**+1.0**
	baz=314							
SBCB					eS	**Sn**	**09 45 28.1**	**-0.7**
	baz=314							
NTY	**Taoyuan**	**1.01**	**335**		eP	**Pn**	**09 45 15.5**	**+0.8**
	baz=324							
SXI1	**Grass Mountain**	**1.01**	**5**	⇓	P	**Pn**	**09 45 14.8**	**0.0**
	baz=4.0							
SXI1					eS	**Sn**	**09 45 28.7**	**-0.4**
	baz=4.0							
WNT1	**Nantou City**	**1.01**	**260**		eP	**Pn**	**09 45 15.6**	**+0.8**
	baz=258							
WNT1					eS	**Sn**	**09 45 30.0**	**+1.0**
	baz=258							
NJN	**Zhunan**	**1.02**	**306**		eP	**Pn**	**09 45 15.1**	**+0.3**
	baz=303							
WNT	**Mingjian**	**1.02**	**259**	⇑	P	**Pn**	**09 45 15.4**	**+0.6**
	baz=260							
WNT					eS	**Sn**	**09 45 29.0**	**-0.1**
	baz=260							
HSN	**Hsinchu**	**1.02**	**315**		eP	**Pn**	**09 45 15.0**	**+0.1**
	baz=313							
NCUH	**Zhongli**	**1.03**	**329**		eP	**Pn**	**09 45 15.4**	**+0.4**
	baz=328							
NCUH					eS	**Sn**	**09 45 31.4**	**+2.0**
	baz=328							
NCU	**National Centr**	**1.03**	**329**		eP	**Pn**	**09 45 15.1**	**+0.1**
	baz=328							
NCU					eS	**Sn**	**09 45 30.7**	**+1.2**
	baz=328							
CHKT	**Chengkung**	**1.05**	**201**		eP	**Pg**	**09 45 13.7**	**-1.2**
	baz=196							
ALS	**Alishan**	**1.05**	**237**	⇓	iP	**Pg**	**09 45 14.9**	**-0.1**
	baz=240							
ALS					eS	**Sn**	**09 45 30.1**	**-0.3**
	baz=240							
TNOU	**National Taiwa**	**1.06**	**0**		eP	**Pb**	**09 45 15.0**	**-0.1**
	baz=355							
TWS1	**Kuangyinshan**	**1.06**	**342**		eP	**Pn**	**09 45 16.0**	**+0.5**
	baz=341							
TWS1					eS	**Sn**	**09 45 31.2**	**+1.0**
	baz=341							
EHD	**Haiduan**	**1.06**	**209**		eP	**Pg**	**09 45 13.7**	**-1.5**
	baz=225							
WDJ	**Dajia District**	**1.07**	**285**		eP	**Pn**	**09 45 16.4**	**+0.9**
	baz=294							
WDJ					eS	**Sn**	**09 45 31.7**	**+1.4**
	baz=294							
YM01	**YM01**	**1.07**	**350**		eP	**Pn**	**09 45 16.2**	**+0.6**
	baz=348							
YM01					eS	**Sb**	**09 45 29.6**	**+0.3**
	baz=348							
WYL	**Yuanlin Townsh**	**1.10**	**264**		eP	**Pg**	**09 45 15.1**	**-0.7**
	baz=264							
ECS	**Chishang**	**1.11**	**207**		eP	**Pg**	**09 45 15.2**	**-0.8**
	baz=212							
WCHH	**Zhanghua**	**1.11**	**270**		eP	**Pn**	**09 45 17.1**	**+1.0**
	baz=270							
CHN5	**Tsauling**	**1.11**	**244**	⇓	iP	**Pn**	**09 45 16.5**	**+0.3**
	baz=232							
CHN5					eS	**Sn**	**09 45 33.3**	**+1.8**
	baz=232							
NTST	**Danshui**	**1.11**	**345**		eP	**Pn**	**09 45 16.8**	**+0.6**
	baz=339							
ANP	**Anpu**	**1.12**	**348**		eP	**Pn**	**09 45 16.7**	**+0.3**
	baz=343							
ELDTW	**Lidau**	**1.13**	**218**		eP	**Pg**	**09 45 14.3**	**-2.1**
	baz=208							
NHW	**Xinwu Township**	**1.13**	**324**		eP	**Pb**	**09 45 16.2**	**0.0**
	baz=322							
NHW					eS	**Sn**	**09 45 31.8**	**-0.1**
	baz=322							
JYNG	**Yonagunijimaku**	**1.13**	**71**		eP	**Pb**	**09 45 15.7**	**-0.5**
JYNG					eS	**Sb**	**09 45 31.8**	**+0.9**
WGK	**Gukeng**	**1.18**	**251**		eP	**Pn**	**09 45 17.7**	**+0.7**
	baz=252							
YOJ	**Yonaguni jima**	**1.19**	**71**		P	**Pg**	**09 45 18.0**	**+0.4**
YOJ	**Yonaguni jima**	**1.19**	**71**		eP	**Pb**	**09 45 17.3**	**+0.1**
	baz=74							
YOJ	**Yonaguni jima**	**1.19**	**71**		eP	**Pn**	**09 45 17.7**	**+0.4**
YOJ					eS	**Sb**	**09 45 32.8**	**+0.1**
WDLH	**Douliu**	**1.20**	**251**		eP	**Pg**	**09 45 18.6**	**+0.8**
	baz=252							
TWY	**Chenhua**	**1.20**	**353**		eP	**Pn**	**09 45 18.2**	**+0.9**
	baz=333							
WCKO	**Fanlu**	**1.25**	**239**		eP	**Pg**	**09 45 18.8**	**+0.1**
	baz=241							
WCKO					eS	**Sn**	**09 45 36.8**	**+2.0**
	baz=241							
WRL	**Guolierlin Hig**	**1.29**	**262**		eP	**Pg**	**09 45 19.4**	**-0.1**
	baz=263							
STYH	**Taoyuan**	**1.29**	**225**		eP	**Pn**	**09 45 18.4**	**-0.1**
	baz=214							
CHN4	**Tsaushan**	**1.30**	**236**		P	**Pg**	**09 45 19.6**	**-0.1**
	baz=239							
CHN4					eS	**Sn**	**09 45 39.0**	**+2.8**
	baz=239							
TPUB	**Ta-pu**	**1.30**	**234**		P	**Pg**	**09 45 19.5**	**-0.3**
TPUB	**Ta-pu**	**1.30**	**234**	⇓	P	**Pn**	**09 45 19.2**	**+0.4**
	baz=236							
TPUB					eS	**Sn**	**09 45 36.9**	**+0.6**
	baz=236							
RLNB	**Erlin**	**1.31**	**262**		eP	**Pg**	**09 45 19.4**	**-0.4**
	baz=263							
RLNB					eS	**Sn**	**09 45 38.1**	**+1.9**
	baz=263							
STYT	**Tauyuan**	**1.31**	**226**	⇓	eP	**Pn**	**09 45 18.6**	**-0.2**
	baz=229							
STYT					eS	**Sn**	**09 45 37.3**	**+1.0**
	baz=229							
CHN2	**Minshiung**	**1.31**	**245**		eP	**Pg**	**09 45 19.9**	**0.0**
	baz=247							
LONT	**Longtian**	**1.31**	**207**		eP	**Pn**	**09 45 17.1**	**-1.8**
	baz=212							
WTK	**Tuku**	**1.33**	**253**		eP	**Pg**	**09 45 20.3**	**+0.1**
	baz=255							
WTP	**Ta-pu**	**1.35**	**232**	⇓	P	**Pn**	**09 45 19.5**	**0.0**
	baz=235							
TWGBT	**Beinan**	**1.41**	**207**		eP	**Pn**	**09 45 18.1**	**-2.1**
	baz=212							
TWG	**Pinlang**	**1.41**	**207**		eP	**Pn**	**09 45 18.1**	**-2.1**
	baz=212							
TWK	**Hsinying**	**1.43**	**236**		eP	**Pb**	**09 45 21.7**	**+0.3**
	baz=237							
TWK					eS	**Sg**	**09 45 42.3**	**+1.5**
	baz=237							
CHN1	**Nanshi**	**1.45**	**232**		eP	**Pb**	**09 45 21.6**	**-0.1**
	baz=234							
CHN1					eS	**Sg**	**09 45 44.2**	**+2.8**
	baz=234							
SNST	**Tainan City**	**1.45**	**234**		eP	**Pb**	**09 45 22.0**	**+0.3**
	baz=237							
SGST	**Jiashian**	**1.48**	**228**		eP	**Pn**	**09 45 21.1**	**-0.1**
	baz=231							
SGST					eS	**Sg**	**09 45 42.8**	**+0.5**
	baz=231							
WSF	**Szhu**	**1.49**	**253**		eP	**Pb**	**09 45 22.5**	**+0.2**
	baz=255							
WSF					eS	**Sg**	**09 45 42.6**	**0.0**
	baz=255							
SLGT	**Liugui**	**1.50**	**224**		eP	**Pn**	**09 45 21.8**	**+0.3**
	baz=214							
WSL	**Shuilin Townsh**	**1.52**	**249**		eP	**Pb**	**09 45 22.6**	**-0.2**
	baz=250							
ICHU	**Yijhu**	**1.54**	**243**		eP	**Pn**	**09 45 22.7**	**+0.6**
	baz=244							
PCYT	**Pengchaiyu**	**1.56**	**10**		eP	**Pn**	**09 45 22.8**	**+0.4**
	baz=1.0							
CHN8	**Yiju**	**1.61**	**243**		eP	**Pb**	**09 45 24.4**	**0.0**
	baz=245							
CHN3	**Shinhua**	**1.63**	**232**		eP	**Pn**	**09 45 25.4**	**+0.5**
	baz=235							
ECL	**Taimali**	**1.66**	**207**		eP	**Pn**	**09 45 22.6**	**-1.1**
	baz=201							
SCST	**Cishan**	**1.67**	**225**		eP	**Pb**	**09 45 25.3**	**-0.2**
	baz=227							
SHHT	**Tainan City**	**1.68**	**231**		eP	**Pg**	**09 45 26.7**	**-0.3**
	baz=233							
SSD	**Sandimen**	**1.69**	**218**		eP	**Pn**	**09 45 24.0**	**-0.2**
	baz=213							
TSMG	**Majia**	**1.72**	**217**		eP	**Pn**	**09 45 25.6**	**+1.1**
	baz=221							
TWM1	**Shoushan**	**1.76**	**225**		eP	**Pb**	**09 45 27.7**	**+0.7**
	baz=226							
MASBT	**Mashibuluo**	**1.80**	**216**		eP	**Pn**	**09 45 26.4**	**+0.8**
	baz=210							
TSCK	**Chigu Township**	**1.81**	**239**		eP	**Pn**	**09 45 26.3**	**+0.7**
	baz=241							
IRIF	**Iriomote-Funau**	**1.81**	**82**		eP	**Pn**	**09 45 26.5**	**+0.9**
IRIF					eS	**Sn**	**09 45 50.2**	**+1.6**
HATJ	**Hateruma jima**	**1.86**	**90**		eS	**Sb**	**09 45 52.7**	**+0.9**
EAST	**Anshuo**	**1.89**	**207**		eP	**Pn**	**09 45 25.6**	**-1.3**
	baz=202							
TAW	**Tawu**	**1.90**	**205**		eP	**Pn**	**09 45 27.9**	**+1.0**
	baz=200							
TAWH	**Dawu Township**	**1.92**	**205**		eP	**Pn**	**09 45 26.3**	**-0.9**
	baz=201							
WSSB	**Gushan**	**2.00**	**224**		eP	**Pn**	**09 45 29.7**	**+1.4**
	baz=226							
SCZT	**Fangliau**	**2.01**	**212**		eP	**Pn**	**09 45 28.7**	**+0.3**
	baz=203							
JKRS	**Kuro-shima**	**2.05**	**85**		eP	**Pn**	**09 45 30.0**	**+0.9**
SLIU	**Shizi**	**2.06**	**206**		eP	**Pn**	**09 45 29.4**	**+0.2**
	baz=202							
LYUB	**Lan-yu**	**2.08**	**185**		eP	**Pn**	**09 45 26.1**	**-3.3**
	baz=193							
PHUB	**P'eng-hu**	**2.09**	**255**		eP	**Pn**	**09 45 30.2**	**+0.6**
	baz=255							
PHUB					eS	**Sn**	**09 45 56.4**	**+0.7**
	baz=255							
PNG	**Penghu**	**2.09**	**256**		eP	**Pn**	**09 45 30.1**	**+0.5**
	baz=257							
WDGT	**Dungji**	**2.10**	**247**		eP	**Pn**	**09 45

JMJ	**Miyako jima 2**	**3.29**	**76**	*e*P		**Pn**	**09 45 47.3**	**+1.2**
	baz=79							
AXDP	**Jialang**	**3.56**	**284**	*e*P		**Pn**	**09 45 50.3**	**+0.5**
	baz=283							
ZPLA	**Ao Xicun**	**3.68**	**268**	*e*P		**Pn**	**09 45 51.8**	**+0.3**
	baz=269							
DSXP	**Dongshan**	**4.00**	**266**	*e*P		**Pn**	**09 45 56.4**	**+0.6**
	baz=266							
SXFK	**Yanhouchang**	**4.39**	**303**⇓	*e*P		**Pn**	**09 46 01.9**	**+0.7**
	baz=298							
JOW	**Kunigami**	**6.48**	**64**	Pn		**Pn**	**09 46 29.2**	**-0.8**
	3.1nm,0.3s,baz=115,slow=9.5,SNR=2.4							
JOW				Sn		**Sn**	**09 47 37.5**	**-6.4**
	baz=105,slow=29 29nm,0.7s							
TGY	**Tagaytay City**	**9.96**	**185**	Pn		**Pn**	**09 47 15.9**	**-1.9**
	40nm,0.3s,baz=242,slow=19,SNR=1.4							
TGY				Sn		**Sn**	**09 49 06.4**	**-3.2**
	56nm,0.3s,baz=204,slow=15,SNR=1.8							
KSRS	**Korea Array**	**14.33**	**20**	Pn		**Pn**	**09 48 17.6**	**+0.2**
	0.1nm,0.3s,baz=252,slow=7.7,SNR=1.3							
KSRS				LR		LR	09 54 04.8	
	comp=Z,41nm,18.6s,baz=195,slow=38 0.6nm,0.7s							
MJAR	**Matsushiro Arr**	**18.82**	**45**	P		**P**	**09 49 14.8**	**+0.4**
	baz=211,slow=14,SNR=1.6 1.1nm,0.8s							
USRK	**Ussuriysk Ar.**	**21.74**	**20**	P		**P**	**09 49 47.1**	**+1.1**
	2.3nm,0.9s,baz=209,slow=8.0,SNR=2.4 2.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**21.99**	**260**	P		**P**	**09 49 49.1**	**+0.3**
	0.9nm,0.3s,baz=319,slow=6.3,SNR=1.2							
CMAR				LR		LR	09 58 54.1	
	comp=Z,27nm,21.7s,baz=310,slow=38 0.9nm,0.3s							
SONM	**Songino Array**	**26.67**	**337**	P		**P**	**09 50 34.8**	**+1.2**
	1.6nm,0.8s,baz=153,slow=9.8,SNR=8.6 1.6nm,0.8s							
MKAR	**Makanchi Array**	**38.78**	**316**	P		**P**	**09 52 19.5**	**+0.3**
	0.7nm,0.7s,baz=103,slow=9.4,SNR=11 0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**40.62**	**327**	P		**P**	**09 52 34.6**	**+0.2**
	1.0nm,0.6s,baz=98,slow=11,SNR=2.7 1.0nm,0.6s							
H11N1	**WAKE ISLAND Hy**	**41.96**	**87**	T		T	10 38 03.0	
	baz=283,slow=75,SNR=5.3							
H11N2	**WAKE ISLAND Hy**	**41.96**	**87**	T		T	10 37 59.7	
	baz=283,slow=75,SNR=6.4							
H11N3	**WAKE ISLAND Hy**	**41.97**	**87**	T		T	10 37 55.7	
	baz=283,slow=75,SNR=5.5							
KURBB	**Kurchatov Arra**	**42.53**	**320**	P		**P**	**09 52 51.2**	**+1.1**
	0.5nm,0.2s,baz=123,slow=6.7,SNR=1.1 0.5nm,0.2s							
WRA	**Warramunga Arr**	**45.44**	**163**	P		**P**	**09 53 11.7**	**-2.1**
	0.8nm,0.5s,baz=345,slow=8.7,SNR=8.6 0.8nm,0.5s							
BVAR	**Borovoye Array**	**48.09**	**321**	P		**P**	**09 53 34.4**	**+0.2**
	0.4nm,0.4s,baz=122,slow=6.4,SNR=3.6 0.4nm,0.4s							
ASAR	**Alice Springs**	**48.91**	**165**	P		**P**	**09 53 40.0**	**-0.7**
	0.4nm,0.4s,baz=339,slow=6.9,SNR=12 0.4nm,0.4s							
ILAR	**Eielson Array**	**69.06**	**27**	P		**P**	**09 56 01.4**	**+1.3**
	0.2nm,0.5s,baz=279,slow=6.1,SNR=4.1 0.2nm,0.5s							
YKA	**Yellowknife Ar**	**82.85**	**23**	P		**P**	**09 57 18.2**	**-0.7**
	0.4nm,0.5s,baz=312,slow=5.4,SNR=15 0.4nm,0.5s							
PPT	**Papeete**	**95.81**	**107**	LR		LR	10 34 02.3	
	comp=Z,111nm,19.5s,baz=10,slow=31							

*IDC **05** 09:55:32.2±0.7,55.˚53S×1.˚29W,h0km,mb4.3/6, mbtmp4.3/7,ML4.7/1,MS4.0/29,Error ellipse: s-maj=42.7km s-min=21.7km az=76.0*
*NEIC **05** 09:55:34.9±0.7,55.˚5S±0.˚1×1.˚6W±0.˚3,h10km±1km, mb4.7/13,Error ellipse: s-maj=29.1km s-min=14.6km az=52.0*
*GCMT **05** 09:55:35.9±0.2,55.˚57S±0.˚03×1.˚33W±0.˚03,h16km, MW5.0/115,Moment Tensor Solution. s45,c55; s115,c151; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.07±.15; Mθθ0.55±.10; Mϕϕ2.52±.10; Mrθ1.49±.36; Mθϕ-0.42±.07; Mrϕ-1.75±.27; Best double couple: Ms3.62800×10¹⁶ NP1:ϕs332.00000°,δ64.00000°, λ-102.00000°. NP2:ϕs178.00000°,δ28.00000°, λ-67.00000°. Principal axes: T 3.2910, Plg19.0000°, Azm71.0000°; N 0.6730, Plg11.0000°, Azm337.0000°; P -3.9640, Plg68.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 09:55:35.1±0.7,55.˚65S±0.˚08×1.˚5W±0.˚2,h16km,n63, σ1°47/32,mb4.6/13,MS4.0/30,9C-1D,Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.34**	**189**	⇑P	**P**	**09 59 14.3**	**-0.9**
	comp=Z,16nm,0.6s						
VNA1				⇑S	**Sn**	**10 01 53.8**	**-6.2**
	comp=Z,0.2nm,0.2s						
VNA2	**Neumayer--Watz**	**15.54**	**187**	⇑P	**Pn**	**09 59 15.7**	**+2.4**
	comp=Z,2.0nm,0.2s,baz=12,slow=14						
VNA2				⇑S	Sn	10 01 54.7	-10
	comp=Z,1.1nm,0.2s,baz=283,slow=21						
VNA3	**Neumayer Olymp**	**16.04**	**190**	⇑P	**P**	**09 59 22.5**	**-0.5**
	comp=Z,10nm,0.2s						
VNA3				⇓S	Sn	10 02 03.5	-13
	comp=Z,2.5nm,0.6s						
SNAA	**Sanae**	**16.09**	**182**	P	**P**	**09 59 23.2**	**-0.5**
SNAA	**Sanae**	**16.09**	**182**	⇑P	**P**	**09 59 23.7**	**0.0**
SNAA	comp=Z,175nm,0.4s			⇑S	Sn	10 02 05.5	-13
	comp=Z,107nm,0.6s						
SNAA	**Sanae**	**16.09**	**182**	Pn	**Pn**	**09 59 21.6**	**+1.2**
	comp=Z,2.7nm,0.3s,baz=7.9,slow=14,SNR=46						
SNAA				Sn	Sn	10 02 08.3	-10
	comp=Z,0.5nm,0.3s,baz=172,slow=13,SNR=8.0 comp=Z,7.6nm,0.3s						
TROLL	**Troll, Antarti**	**16.51**	**176**	⇑P	**P**	**09 59 28.7**	**+0.3**
	comp=Z,2μm,0.8s						
TROLL				⇑S	Sn	10 02 15.7	-13
	comp=Z,158nm,0.2s						
BELA	**Belgrano 2**	**25.10**	**196**	P	**P**	**10 00 59.2**	**+0.7**
BELA				IAmb	IAmb	10 01 09.6	
	comp=Z,12nm,0.9s						
SUR	**Sutherland**	**28.03**	**43**	LR	LR	10 09 42.8	
	comp=Z,444nm,20.6s,baz=234,slow=30						
PMSA	**Palmer Station**	**31.08**	**227**	LR	LR	10 12 32.0	
	comp=Z,122nm,21.0s,baz=104,slow=33						
MAW	**Mawson**	**31.26**	**138**	LR	LR	10 13 40.4	
	comp=Z,151nm,18.1s,baz=270,slow=35						
BOSA	**Boshof**	**33.13**	**46**	LR	LR	10 13 14.0	
	comp=Z,200nm,19.2s,baz=226,slow=32						
H04S2	**CROZET ISLANDS**	**33.79**	**98**	T	T	10 38 19.8	
	baz=236,slow=75,SNR=28						
H04S3	**CROZET ISLANDS**	**33.80**	**98**	T	T	10 38 39.6	
	baz=236,slow=75,SNR=29						
H04S1	**CROZET ISLANDS**	**33.81**	**98**	T	T	10 38 44.6	
	baz=236,slow=75,SNR=30						
QSPA	**South Pole Qui**	**34.59**	**180**	P	**P**	**10 02 24.9**	**+2.0**
QSPA				IAmb	IAmb	10 02 25.6	
	comp=Z,7.1nm,0.8s						
LBTB	**Lobatse**	**36.47**	**44**	LR	LR	10 14 45.7	
	comp=Z,300nm,21.1s,baz=210,slow=32						
TRQA	**Tornquist**	**43.42**	**268**	P	**P**	**10 03 37.6**	**+0.8**
TRQA				IAmb	IAmb	10 03 46.3	
	comp=Z,14nm,1.2s						
PLCA	**Paso Flores**	**46.40**	**258**	LR	LR	10 21 29.4	
	comp=Z,174nm,21.8s,baz=107,slow=34						
VNDA	**Vanda**	**46.69**	**175**	P	**P**	**10 04 04.3**	**+2.0**
VNDA	**Vanda**	**46.69**	**175**	P	**P**	**10 04 03.0**	**+0.7**
	comp=Z,5.2nm,0.7s,baz=212,slow=7.0,SNR=9.7						
VNDA				LR	LR	10 23 16.8	
	comp=Z,176nm,20.4s,baz=168,slow=36 comp=Z,5.2nm,0.7s						
CPUP	**Villa Florida**	**49.51**	**283**	P	**P**	**10 04 25.1**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=228,slow=2.6,SNR=2.6						
CPUP				LR	LR	10 22 29.8	
	comp=Z,139nm,21.6s,baz=166,slow=33 comp=Z,1.7nm,0.7s						
MT01	**Popeta**	**51.66**	**264**	P	**P**	**10 04 41.4**	**+0.5**
MT01				IAmb	IAmb	10 04 51.3	
	comp=Z,9.8nm,1.0s						
BDFB	**Brasilia**	**53.37**	**299**	LR	LR	10 23 56.6	
	comp=Z,174nm,20.8s,baz=146,slow=32						
CO01	**Juntas del Tor**	**53.90**	**269**	P	**P**	**10 04 58.5**	**+0.8**
CO01				IAmb	IAmb	10 05 08.8	
	comp=Z,8.2nm,1.1s						
AC05	**El Transito**	**54.86**	**269**	P	**P**	**10 05 03.8**	**-0.9**
AC05				IAmb	IAmb	10 05 14.9	
	comp=Z,8.4nm,0.9s						
LCO	**Las Campanas**	**54.97**	**269**	P	**P**	**10 05 05.7**	**+0.1**
LCO				IAmb	IAmb	10 05 17.4	
	comp=Z,10nm,1.1s						
AC02	**Maricunga**	**55.75**	**272**	P	**P**	**10 05 11.6**	**+0.1**
RCBR	**Riachuelo**	**56.74**	**318**	LR	LR	10 24 02.6	
	comp=Z,88nm,20.5s,baz=276,slow=30						
LVC	**Limon Verde**	**58.92**	**275**	LR	LR	10 29 16.4	
	comp=Z,120nm,20.5s,baz=146,slow=34						
MBAR	**Mbarara**	**60.80**	**38**	LR	LR	10 30 35.2	
	comp=Z,171nm,18.6s,baz=134,slow=35						
DBIC	**Dimbokro**	**62.16**	**356**	P	**P**	**10 05 54.7**	**-0.6**
DBIC	**Dimbokro**	**62.16**	**356**	P	**P**	**10 05 54.6**	**-0.8**
	comp=Z,4.5nm,0.7s,baz=137,slow=10.0,SNR=5.8						
DBIC				LR	LR	10 26 13.7	
	comp=Z,52nm,19.6s,baz=194,slow=30 comp=Z,4.5nm,0.7s						
KMBO	**Kilima Mbogo**	**62.75**	**45**	LR	LR	10 30 58.9	
	comp=Z,325nm,19.6s,baz=272,slow=34						
LPAZ	**La Paz**	**63.53**	**280**	P	**P**	**10 06 05.0**	**-0.4**
TOA0	**Torodi Ar. Sit**	**68.59**	**3**	P	**P**	**10 06 36.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**68.59**	**3**	P	**P**	**10 06 36.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**68.59**	**3**	P	**P**	**10 06 36.0**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=195,slow=4.7,SNR=5.1						
TORD				LR	LR	10 30 29.9	
	comp=Z,85nm,21.6s,baz=148,slow=31 comp=Z,0.7nm,0.6s						
NNA	**Nana**	**71.91**	**275**	LR	LR	10 36 37.2	
	comp=Z,102nm,21.8s,baz=150,slow=34						
MDP	**Montagnes des**	**73.64**	**306**	LR	LR	10 34 45.7	
	comp=Z,123nm,21.7s,baz=124,slow=32						
H01W2	**Cape Leeuwin H**	**74.48**	**130**	T	T	11 29 55.4	
	baz=212,slow=75,SNR=8.7						
H01W1	**Cape Leeuwin H**	**74.50**	**130**	T	T	11 30 01.6	
	baz=212,slow=75,SNR=9.3						
H01W3	**Cape Leeuwin H**	**74.50**	**130**	T	T	11 29 56.1	
	baz=212,slow=75,SNR=7.9						
ATD	**Arta Tunnel**	**76.50**	**45**	LR	LR	10 41 03.6	
	comp=Z,7.6nm,18.2s,baz=68,slow=36						
ATAH	**Atahualpa**	**76.74**	**277**	LR	LR	10 40 53.2	
	comp=Z,105nm,20.3s,baz=151,slow=35						
PCRV	**Puerto La Cruz**	**83.82**	**298**	LR	LR	10 42 45.6	
	comp=Z,155nm,18.1s,slow=34						
ROSC	**El Rosal**	**84.38**	**287**	LR	LR	10 45 28.0	
	comp=Z,150nm,19.6s,baz=130,slow=36						
SDV	**Santo Domingo**	**85.80**	**292**	LR	LR	10 45 03.5	
	comp=Z,70nm,18.4s,baz=130,slow=35						
STKA	**Stephens Creek**	**87.29**	**149**	P	**P**	**10 08 20.3**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=134,slow=1.5,SNR=5.8 comp=Z,2.2nm,0.7s						
EIL	**Elat**	**90.52**	**31**	LR	LR	10 46 15.0	
	comp=Z,97nm,21.9s,baz=214,slow=34						
SJG	**San Juan**	**91.35**	**301**	LR	LR	10 46 51.1	
	comp=Z,79nm,18.9s,baz=230,slow=34						
ASAR	**Alice Springs**	**92.37**	**140**	P	**P**	**10 08 44.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=198,slow=4.9,SNR=11 comp=Z,0.7nm,0.7s						
IDI	**Anoyia**	**93.35**	**21**	LR	LR	10 50 47.7	
	comp=Z,42nm,19.9s,baz=172,slow=36						
ASF	**Jabal al Asfar**	**93.44**	**32**	LR	LR	10 50 24.4	
	comp=Z,79nm,18.1s,baz=153,slow=35						
VAE	**Valguarnera**	**93.76**	**13**	LR	LR	10 46 34.6	
	comp=Z,42nm,19.2s,baz=144,slow=33						
JTS	**Las Juntas de**	**94.73**	**281**	LR	LR	10 52 56.4	
	comp=Z,28nm,18.6s,baz=112,slow=36						
LEM	**Lembang**	**95.00**	**110**	LR	LR	10 43 47.8	
	comp=Z,142nm,19.7s,baz=126,slow=30						
BRTR	**Keskin Array B**	**99.62**	**27**	LR	LR	10 56 08.4	
	comp=Z,44nm,18.0s,baz=155,slow=37						
BVAR	**Borovoye Array**	**123.38**	**43**	PKP	**PKiKP**	**10 14 30.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=177,slow=2.9,SNR=2.7						
MKAR	**Makanchi Array**	**123.82**	**55**	PKP	**PKPdf**	**10 14 30.7**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=234,slow=6.9,SNR=2.4						
KURBB	**Kurchatov Arra**	**124.94**	**50**	PKP	**PKPdf**	**10 14 31.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=249,slow=3.3,SNR=2.9						
YKA	**Yellowknife Ar**	**146.39**	**309**	PKPbc	**PKPdf**	**10 15 12.2**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=105,slow=3.4,SNR=32						
ILAR	**Eielson Array**	**160.77**	**312**	PKPab	**PKPab**	**10 16 14.7**	**-0.4**
	comp=Z,0.7nm,1.0s,baz=71,slow=3.1,SNR=4.7						

*IDC **05** 10:04:47.0±1.4,5.˚83S×152.˚86E,h0km,mb3.9/8, mbtmp3.9/9,ML2.1/1,MS3.5/1,Error ellipse: s-maj=52.8km s-min=20.7km az=122.0*
*NEIC **05** 10:04:56.2±1.8,5.˚56S±0.˚04×152.˚6E±0.˚1,h44km±10km, mb4.3/19,Error ellipse: s-maj=21.2km s-min=2.8km az=103.0*

ISC 05 10:04:54.3±0.9,5.˚7S±0.˚1×152.˚7E±0.˚2,h40km,n34, σ1°22/38,mb4.2/19,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.57**	**340**		**Pn**	**10 05 19.9**	**+0.2**
PMG	**Port Moresby**	**6.63**	**236**		**Pn**	**10 06 30.8**	**+1.5**
PMG					**Sn**	**10 07 45.3**	**+1.7**
PMG	**Port Moresby**	**6.63**	**236**	Pn	**Pn**	**10 06 28.4**	**-0.9**
	2.3nm,0.3s,baz=14,slow=15,SNR=4.2						
PMG				Sn	**Sn**	**10 07 44.6**	**+1.1**
	4.7nm,0.3s,baz=83,slow=21,SNR=8.2 4.7nm,0.4s						
WB0	**Warramunga Arr**	**22.66**	**230**	P	**P**	**10 09 52.0**	**-0.4**
WR0	**Warramunga Arr**	**22.66**	**230**	P	**P**	**10 09 51.5**	**-0.8**
WR0				IAmb	IAmb	10 10 27.5	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**22.79**	**230**	P	**P**	**10 09 52.9**	**-0.8**
WB2				IAmb	IAmb	10 09 53.9	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**22.80**	**230**	P	**P**	**10 09 51.0**	**-2.8**
	comp=Z,0.8nm,0.6s,baz=53,slow=9.8,SNR=6.4						
WRA				PcP	**PcP**	**10 13 43.8**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=52,slow=2.4,SNR=1.6 comp=Z,0.8nm,0.6s						
ARMA	**Armidale**	**24.64**	**182**	P	**P**	**10 10 12.6**	**+1.4**
ARMA				IAmb	IAmb	10 10 49.5	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**25.44**	**223**	P	**P**	**10 10 18.7**	**+0.1**
ASAR	**Alice Springs**	**25.45**	**223**	P	**P**	**10 10 16.7**	**-2.0**
	comp=Z,1.1nm,1.0s,baz=58,slow=9.3,SNR=8.7						
ASAR				PcP	**PcP**	**10 13 49.5**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=36,slow=2.7,SNR=2.0 comp=Z,1.1nm,1.0s						
KNRA	**Kununurra**	**25.51**	**245**	P	**P**	**10 10 17.3**	**-1.9**
FITZ	**Fitzroy Crossi**	**29.16**	**243**	P	**P**	**10 10 50.3**	**-1.7**
KLR	**Kul'dur**	**57.65**	**344**	LR	LR	10 38 47.8	
	comp=Z,38nm,19.1s,baz=39,slow=35						
SONM	**Songino Array**	**67.01**	**328**	P	**P**	**10 15 44.2**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=171,slow=3.2,SNR=4.3 comp=Z,0.9nm,0.9s						
MK31	**Makanchi Array**	**80.92**	**319**	P	**P**	**10 17 05.0**	**+0.5**
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**10 17 05.2**	**+0.7**
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**10 17 04.2**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=116,slow=5.0,SNR=11 comp=Z,1.1nm,0.8s						
E19K	**Redstone River**	**81.04**	**17**	P	**P**	**10 17 06.3**	**+1.6**
E19K				IAmb	IAmb	10 17 06.7	
	comp=Z,3.2nm,0.7s						
IMAR	**Indian Mountai**	**81.23**	**19**	P	**P**	**10 17 05.8**	**+0.1**
F20K	**Avaraart Lake**	**81.25**	**18**	P	**P**	**10 17 07.2**	**+1.5**
F20K				IAmb	IAmb	10 17 22.9	
	comp=Z,6.2nm,1.4s						
C19K	**Lookout Ridge**	**81.46**	**16**	P	**P**	**10 17 08.6**	**+1.6**
C19K				IAmb	IAmb	10 17 09.2	
	comp=Z,4.6nm,0.9s						
D19K	**Kuna River**	**81.46**	**16**	P	**P**	**10 17 07.8**	**+0.9**
D19K				IAmb	IAmb	10 17 08.3	
	comp=Z,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**10 17 08.6**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=110,slow=6.5,SNR=4.6 comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**83.00**	**22**	P	**P**	**10 17 14.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=245,slow=5.3,SNR=14 comp=Z,1.0nm,0.7s						
J25K	**Salcha River,**	**83.50**	**23**	P	**P**	**10 17 18.3**	**+0.6**
F24K	**Squaw Lake**	**84.03**	**19**	P	**P**	**10 17 21.6**	**+1.2**
F24K				IAmb	IAmb	10 17 25.8	
	comp=Z,3.0nm,1.1s						
KURBB	**Kurchatov Arra**	**84.42**	**322**	P	**P**	**10 17 22.6**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=109,slow=4.8,SNR=4.8 comp=Z,0.7nm,0.8s						
J30M	**Hart River**	**87.05**	**24**	P	**P**	**10 17 36.8**	**+1.3**
J30M				IAmb	IAmb	10 17 37.9	
	comp=Z,2.4nm,0.8s						
I30M	**Mount Dempster**	**87.25**	**23**	P	**P**	**10 17 37.3**	**+0.9**
I30M				IAmb	IAmb	10 18 20.7	
	comp=Z,3.9nm,1.4s						
E28M	**Babbage River**	**87.32**	**20**	P	**P**	**10 17 38.3**	**+1.7**
E28M				IAmb	IAmb	10 17 38.8	
	comp=Z,1.7nm,0.8s						
EPYK	**Eagle Plains**	**87.51**	**22**	P	**P**	**10 17 38.8**	**+1.2**
INK	**Inuvik**	**89.30**	**21**	P	**P**	**10 17 46.3**	**+0.3**
BVAR	**Borovoye Array**	**89.88**	**323**	P	**P**	**10 17 48.9**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=76,slow=6.3,SNR=4.6 comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.47**	**287**	PKPbc	**PKPbc**	**10 24 41.1**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=53,slow=3.5,SNR=6.3						
TORD				PKPab	**PKPab**	**10 24 48.4**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=65,slow=3.7,SNR=6.7						

*CATAC **05** 10:10:07.4±0.3,13.˚09N×89.˚19W,h32km±4km,ML4.6*
*IDC **05** 10:10:08.2±0.9,13.˚31N×89.˚04W,h70km±7km,mb3.7/8, mbtmp4.1/11,MS3.3/15,Error ellipse: s-maj=35.3km s-min=11.1km az=39.0*
*NEIC **05** 10:10:08.8±2.4,13.˚19N±0.˚06×89.˚16W±0.˚06,h61km±7km, mb4.4/58,Error ellipse: s-maj=11.4km s-min=5.0km az=219.0*
*UCR **05** 10:10:09.7±1.4,13.˚19N×89.˚16W,h61km,MB4.4(NEIC)*
*SNET **05** 10:10:09.5±0.9,13.˚28N×89.˚18W,h49km,ML4.7*
*GCG **05** 10:10:12.6±1.7,13.˚53N×89.˚27W,h51km±442km,MD4.1*

ISC 05 10:10:07.8±0.6,13.˚19N±0.˚05×89.˚20W±0.˚03,h64km±4km, n214,σ1°45/244,mb4.3/33,1D,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.32**	**338**	*i* P	**Pn**	**10 10 17.7**	**-0.8**
LALI				*i* S	**Sn**	**10 10 24.8**	**-1.4**
LALI				IAML		10 10 24.9	
	comp=Z,28μm,1.0s						
PANCS	**Alcalda de**	**0.42**	**3**	*e*P	**Pn**	**10 10 19.0**	**-0.5**
PANCS				*e*S	**Sn**	**10 10 26.6**	**-1.2**
PANCS	**Alcalda de**	**0.42**	**3**	*i* P	**Pn**	**10 10 18.9**	**-0.5**
PANCS				*i* S	**Sn**	**10 10 27.5**	**-0.3**
PANCS				IAML		10 10 29.5	
	comp=Z,150μm,1.0s						
LFRS	**El Faro**	**0.45**	**17**	*e*P	**Pn**	**10 10 19.4**	**-0.4**
LOMA	**Loma Larga**	**0.45**	**3**	*e*P	**Pn**	**10 10 19.7**	**-0.1**
LOMA				*e*S	**Sn**	**10 10 27.5**	**-1.0**
SJTE	**Alcalda de S**	**0.46**	**24**	*e*P	**Pn**	**10 10 19.5**	**-0.3**
ITCA	**Escuela Especi**	**0.48**	**351**	*e*P	**Pn**	**10 10 19.8**	**-0.2**
SNET	**Serv Nac Est T**	**0.49**	**356**		**Pn**	**10 10 19.7**	**-0.4**
SNET				Sn	**Sn**	**10 10 29.1**	**0.0**
SNET	**Serv Nac Est T**	**0.49**	**356**	*e*P	**Pn**	**10 10 20.0**	**-0.1**
SNET	**Serv Nac Est T**	**0.49**	**356**	*i* P	**Pn**	**10 10 19.9**	**-0.2**
SNET				*i* S	**Sn**	**10 10 29.3**	**+0.2**
SNET				IAML		10 10 30.4	
	comp=Z,150μm,1.0s						
MAGS	**Ministerio de**	**0.50**	**350**	*e*P	**Pn**	**10 10 19.9**	**-0.3**
MAGS				*e*S	**Sn**	**10 10 28.4**	**-0.8**
UTEC	**Universidad Te**	**0.51**	**360**	*e*P	**Pn**	**10 10 20.3**	**0.0**
AEIL	**Aeropuerto Ilo**	**0.51**	**9**	*e*P	**Pn**	**10 10 20.6**	**+0.3**
SEMO	**Seminario San**	**0.51**	**357**	*e*P	**Pn**	**10 10 20.0**	**-0.3**
IGN	**Direccin Gen**	**0.52**	**3**	*e*P	**Pn**	**10 10 20.5**	**+0.1**
JAYA	**Jayaque - finc**	**0.52**	**332**	*i* P	**Pn**	**10 10 19.9**	**-0.6**
JAYA				*i* S	**Sn**	**10 10 28.4**	**-1.3**
JAYA				IAML		10 10 30.1	
	comp=Z,700μm,1.0s						
UDBS	**Universidad Do**	**0.52**	**5**	*e*P	**Pn**	**10 10 20.4**	**0.0**
UEES	**Universidad Ev**	**0.52**	**356**	*e*P	**Pn**	**10 10 20.4**	**0.0**
UESS	**Universidad de**	**0.52**	**360**	*e*P	**Pn**	**10 10 20.5**	**+0.1**
COEG	**Centro de Oper**	**0.53**	**36**	*e*P	**Pn**	**10 10 20.3**	**-0.2**
PMON	**Piamonte**	**0.53**	**348**	*e*P	**Pn**	**10 10 20.4**	**-0.1**
TECO	**Alcaldia de Te**	**0.53**	**50**	*e*P	**Pn**	**10 10 20.1**	**-0.3**
TECO	**Alcaldia de Te**	**0.53**	**50**	*i* P	**Pn**	**10 10 20.1**	**-0.3**
TECO				*i* S	**Sn**	**10 10 29.6**	**-0.1**
TECO				IAML		10 10 31.1	
	comp=Z,17μm,1.0s						
BOQS	**Boqueron**	**0.55**	**352**	*e*P	**Pn**	**10 10 20.9**	**+0.1**
SNVI	**San Vicente**	**0.55**	**40**	*e*P	**Pn**	**10 10 20.6**	**-0.2**
PIC2	**El Picacho**	**0.55**	**354**	*e*P	**Pn**	**10 10 21.1**	**+0.2**
LFU	**La Fuente**	**0.56**	**8**	*e*P	**Pn**	**10 10 21.1**	**+0.3**
LBRS	**Las Brisas**	**0.56**	**16**	*e*P	**Pn**	**10 10 21.3**	**+0.4**
PAVA	**Las Pavas**	**0.58**	**26**	*e*P	**Pn**	**10 10 21.3**	**+0.2**
PAVA	**Las Pavas**	**0.58**	**26**	*i* P	**Pn**	**10 10 21.3**	**+0.2**
PAVA				*i* S	**Sn**	**10 10 31.7**	**+1.0**
PAVA				IAML		10 10 32.9	
	comp=Z,120μm,1.0s						
UESV	**Universidad de**	**0.60**	**42**	*e*P	**Pn**	**10 10 21.2**	**+0.1**
CEDA	**San Andres**	**0.64**	**343**	*e*

PACN IAML 10 11 26.3
comp=Z,3μm,1.0s
ROCN Rota Cerro Neg 2.49 105 *i* P **Pn 10 10 44.0 -1.9**
ROCN *i* S **Sn 10 11 10.1 -5.1**
ROCN IAML 10 11 22.7
comp=Z,2μm,1.0s
ILCN San Idelfonso 2.51 104 *i* P **Pn 10 10 44.9 -1.4**
ILCN *i* S **Sn 10 11 11.9 -3.9**
ILCN IAML 10 11 27.4
comp=Z,610nm,1.0s
CNGA Al SSO del Vol 2.53 106 *i* P **Pn 10 10 43.8 -2.8**
CNGA *i* S **Sn 10 11 15.2 -1.2**
CNGA IAML 10 11 22.2
comp=Z,3μm,1.0s
CNGN Cerro Negro 2.53 105 Pn **Pn 10 10 46.5 -0.2**
CNGN Cerro Negro 2.53 105 *i* P **Pn 10 10 46.7 +0.1**
CNGN *i* S **Sn 10 11 15.4 -1.0**
CNGN IAML 10 11 33.5
comp=Z,2μm,1.0s
SULM Suchitepequez, 2.55 296 *e*P **Pn 10 10 48.2 +1.4**
MACN El Madrono 2.56 106 *i* P **Pn 10 10 46.9 -0.1**
MACN *i* S **Sn 10 11 16.9 -0.3**
MACN IAML 10 11 38.3
comp=Z,1μm,1.0s
IZABA Izabal, Puerto 2.59 13 *i* P **Pn 10 10 49.5 +2.1**
IZABA IAML 10 10 59.1
comp=Z,6.8nm,1.0s
LEVN Ruinas Leon Vi 2.64 107 *i* P **Pn 10 10 49.0 +1.0**
LEVN *i* S **Sn 10 11 18.8 -0.1**
LEVN IAML 10 11 30.1
comp=Z,2μm,1.0s
MOMN Momotombo 2.71 106 *i* P **Pn 10 10 48.7 -0.3**
MOMN *i* S **Sn 10 11 19.0 -1.7**
MOMN IAML 10 11 33.0
comp=Z,81nm,1.0s
MOM2 El Cardon 2.75 106 *i* P **Pn 10 10 49.7 +0.2**
MOM2 *i* S **Sn 10 11 20.4 -1.3**
MOM2 IAML 10 11 33.2
comp=Z,850nm,1.0s
STG3 Santiaguito 3, 2.75 304 *e*P **Pn 10 10 51.4 +1.6**
STG3 *e*S **Sn 10 11 23.5 +1.5**
LIMN Finca el Limon 2.76 92 *i* P **Pn 10 10 50.1 +0.3**
LIMN *i* S **Sn 10 11 22.2 +0.1**
LIMN IAML 10 11 45.2
comp=Z,810nm,1.0s
RTAL Retalhuleu 2.76 299 Pn **Pn 10 10 51.1 +1.4**
RTAL Retalhuleu 2.76 299 *i* P **Pn 10 10 50.8 +1.1**
RTAL *i* S **Sn 10 11 24.2 +2.3**
RTAL IAML 10 11 35.6
comp=Z,1μm,1.0s
QUIS Sacapulas 2.78 319 *i* P **Pn 10 10 51.6 +1.6**
QUIS IAML 10 11 32.3
comp=Z,790nm,1.0s
BRAN Las Pilas 2.82 99 *i* P **Pn 10 10 53.2 +2.8**
BRAN IAML 10 10 55.1
comp=Z,2μm,1.0s
BRAN *i* S **Sn 10 11 23.2 0.0**
SAPS Ciudad Sandino 2.91 110 *i* P **Pn 10 10 51.4 -0.3**
SAPS *i* S **Sn 10 11 24.4 -1.2**
SAPS IAML 10 11 36.7
comp=Z,2μm,1.0s
MSHP Masachapa 2.93 117 *i* P **Pn 10 10 53.5 +1.5**
MSHP *i* S **Sn 10 11 25.4 -0.7**
MSHP IAML 10 11 35.8
comp=Z,260nm,1.0s
APQ2 Apoyeque 2.97 109 *i* P **Pn 10 10 53.4 +0.8**
APQ2 *i* S **Sn 10 11 26.4 -0.7**
APQ2 IAML 10 11 38.0
comp=Z,1μm,1.0s
RCPN Sur Rio San Ju 3.04 83 *i* P **Pn 10 10 53.3 -0.3**
RCPN IAML 10 11 42.6
comp=Z,2.2nm,1.0s
TISN Laguna Tiscapa 3.04 110 *i* P **Pn 10 10 52.0 -1.5**
TISN IAML 10 11 37.3
comp=Z,110nm,1.0s
UNAN Cigeo UNAN 3.05 110 *i* P **Pn 10 10 52.1 -1.6**
UNAN *i* S **Sn 10 11 27.4 -1.7**
UNAN IAML 10 11 42.1
comp=Z,7μm,1.0s
ENAN Enatrel Managu 3.06 110 *i* P **Pn 10 10 52.9 -0.9**
ENAN *i* S **Sn 10 11 27.5 -1.7**
ENAN IAML 10 12 48.2
comp=Z,7μm,1.0s
HUEH Huehuetenango 3.08 314 Pn **Pn 10 10 56.3 +2.1**
WILN Americas 2 3.11 109 *i* P **Pn 10 10 54.9 +0.4**
WILN *i* S **Sn 10 11 29.1 -1.4**
WILN IAML 10 11 48.9
comp=Z,570nm,1.0s
MAS3 Al N del Volca 3.17 111 *i* P **Pn 10 10 54.6 -0.7**
MAS3 *i* S **Sn 10 11 29.0 -3.0**
MAS3 IAML 10 11 50.4
comp=Z,1μm,1.0s
MATN Matagalpa 3.20 94 Pn **Pn 10 10 55.6 -0.2**
MATN Matagalpa 3.20 94 *i* P **Pn 10 10 55.8 0.0**
MATN *i* S **Sn 10 11 31.8 -1.0**
MATN IAML 10 11 42.7
comp=Z,250nm,1.0s
SMCA Catarina 3.25 301 *i* P **Pn 10 10 57.7 +1.4**
SMCA *i* S **Sn 10 11 33.5 -0.3**
SMCA IAML 10 11 42.0
comp=Z,740nm,1.0s
NADN Granada 3.41 115 *i* S **Sn 10 11 36.4 -1.4**
BOAB BOACO BROADBAN 3.52 102 Pn **Pn 10 10 59.4 -0.7**
BOAB BOACO BROADBAN 3.52 102 *i* P **Pn 10 10 59.8 -0.3**
BOAB IAML 10 12 16.1
comp=Z,240nm,1.0s
PETF Flores 3.76 350 Pn **Pn 10 11 05.7 +2.3**
PETF Flores 3.76 350 *i* P **Pn 10 11 05.9 +2.6**
PETF IAML 10 12 20.3
comp=Z,340nm,1.0s
JAPN Al SSO del Vol 3.82 115 *i* P **Pn 10 11 06.5 +2.4**
JAPN *i* S **Sn 10 11 49.8 +2.0**
JAPN IAML 10 12 07.9
comp=Z,510nm,1.0s
CONN Concepcion 3.85 114 *i* P **Pn 10 11 06.1 +1.6**
CONN IAML 10 12 02.4
comp=Z,3μm,1.0s
ACON Acoyapa 4.11 107 Pn **Pn 10 11 09.5 +1.3**
HZTE Horizontes, Gu 4.30 125 Pn **Pn 10 11 12.3 +1.6**
ORTG Ortega, Santa 4.62 127 Pn **Pn 10 11 15.9 +0.8**
DUNO Dulce Nombre, 4.77 130 Pn **Pn 10 11 18.2 +1.1**
ESPN Las Esperanzas 4.88 101 Pn **Pn 10 11 18.9 +0.2**
JTS Las Juntas de 5.06 124 Pn **Pn 10 11 23.6 +2.4**
JTS Las Juntas de 5.06 124 P **Pn 10 11 22.7 +1.6**
comp=Z,10nm,0.3s,baz=283,slow=21,SNR=22
JTS S **Sn 10 12 18.4 +0.1**
comp=Z,16nm,0.3s,baz=304,slow=21,SNR=0.9
ARE1 Arenal 1 5.16 121 Pn **Pn 10 11 24.2 +1.7**
JACO JACO, Garabito 5.67 128 Pn **Pn 10 11 30.5 +1.1**
HDC3 Heredia 3 5.91 122 *e*P **Pn 10 11 36.5 +3.6**
ACOS Acosta 5.98 124 *e*P **Pn 10 11 37.8 +4.0**
OCM Ochomogo 6.09 122 *e*P **Pn 10 11 37.6 +2.1**
LCR2 La Lucha 2 6.14 123 Pn **Pn 10 11 37.8 +1.7**
LCR2 La Lucha 2 6.14 123 *e*P **Pn 10 11 38.0 +1.9**
ICR3 Volcano Irazu 6.15 121 *e*P **Pn 10 11 39.6 +3.1**
REPA Paraso 6.20 122 *e*P **Pn 10 11 41.5 +4.5**
LLNJ Naranjito 6.22 126 *e*P **Pn 10 11 40.2 +3.2**
RIMA Rio Macho 6.24 123 *e*P **Pn 10 11 39.5 +2.0**
CDM Cerro de Muert 6.44 124 *e*P **Pn 10 11 42.7 +2.3**
BUS1 Rivas 6.45 124 *e*P **Pn 10 11 42.6 +2.0**
PEZE Perez Zeledon, 6.61 124 Pn **Pn 10 11 44.8 +2.4**
PEZE Perez Zeledon, 6.61 124 *e*P **Pn 10 11 45.2 +2.8**
CMIG Matias Romero 6.72 306 P **Pn 10 11 45.4 +1.5**
comp=Z,5.5nm,0.3s,baz=124,slow=8.0,SNR=32
CMIG S **Sn 10 13 00.7 +1.7**
comp=Z,11nm,0.3s,baz=261,slow=23,SNR=7.0
DRK0 Durika 7.03 123 *e*P **Pn 10 11 50.8 +2.6**
EDPN Palmar Norte 7.03 126 *e*P **Pn 10 11 51.1 +3.0**
TEIG Tepich 7.05 7 Pn **Pn 10 11 49.8 +1.5**
TEIG Tepich 7.05 7 LR LR 10 14 49.1
comp=Z,3μm,21.2s,baz=1.5,slow=41
EDBA Buenos Aires 7.06 124 *e*P **Pn 10 11 51.8 +3.3**
POTG Potrero Grande 7.25 124 *e*P **Pn 10 11 54.1 +3.0**
PIRO Carate, Puerto 7.47 129 *e*P **Pn 10 11 56.8 +2.7**
TLIG Tlapa 10.02 297 Pn **Pn 10 12 31.2 +2.0**
JRQG Juriquilla Cam 13.09 306 Pn **Pn 10 13 13.9 +2.8**
SJCC San Jacinto, C 14.12 102 *e*P **P 10 13 28.9 -1.5**
061Z Ochoppi 14.82 31 **P 10 13 37.2 -1.0**
BBAC Balboa, Cauca 16.22 132 *e*P **Pn 10 13 53.6 +1.7**
HBVL Hebbronville 16.41 329 **P 10 13 57.5 +1.8**
HBVL IAmb IAmb 10 14 25.7
comp=Z,36nm,1.4s
ORTC Ortega, Tolima 16.59 123 *e*P **P 10 13 59.4 +1.6**

ROSC El Rosal 16.87 118 LR LR 10 21 08.6
comp=Z,46nm,19.5s,baz=4.0,slow=39
352A Blakely 18.62 11 P **P 10 14 20.4 +0.3**
SDV Santo Domingo 18.71 101 P **P 10 14 21.0 -0.5**
SDV Santo Domingo 18.71 101 P **P 10 14 21.3 -0.2**
comp=Z,4.6nm,0.3s,baz=300,slow=7.9,SNR=9.1
SDV LR LR 10 22 09.1
comp=Z,84nm,20.7s,baz=278,slow=39
SDV Santo Domingo 18.71 101 *e*P **P 10 14 19.8 -1.7**
HNDO Hondo 18.75 332 P **P 10 14 22.6 +1.0**
DRIO Del Rio 19.32 329 P **Pn 10 14 30.4 +1.0**
JCT Junction City 19.80 332 P **P 10 14 33.4 +0.3**
BRDY Brady 20.14 335 IAmb IAmb 10 14 39.2
comp=Z,13nm,0.7s
SAND Sanderson 20.53 326 P **P 10 14 41.6 +0.6**
HPIG 20.61 314 P **P 10 14 43.3 +1.2**
TXAR Lajitas Array 20.93 322 P **P 10 14 46.8 +1.4**
comp=Z,2.7nm,0.5s,baz=142,slow=10.0,SNR=58
TXAR pP **pP 10 15 00.8 +1.5**
comp=Z,1.9nm,0.6s,baz=142,slow=10,SNR=4.0
TXAR LR LR 10 22 46.1
comp=Z,27nm,21.4s,baz=67,slow=36
comp=Z,2.7nm,0.5s
PLPT Palo Pinto 21.23 338 P **P 10 14 48.8 +0.3**
PLPT IAmb IAmb 10 15 12.5
comp=Z,14nm,0.8s
MIAR Mount Ida 21.63 350 IAmb IAmb 10 15 14.1
comp=Z,18nm,1.1s
UALR University of 21.68 353 P **P 10 14 55.2 +2.1**
UALR IAmb IAmb 10 15 18.1
comp=Z,26nm,1.4s
SN01 Snyder 1 22.30 333 IAmb IAmb 10 15 02.1
comp=Z,12nm,0.5s
APMT Aspermont 22.38 335 P **P 10 15 00.7 -0.1**
APMT IAmb IAmb 10 15 02.1
comp=Z,7.9nm,0.7s
X34A Smith Ranch, M 22.71 341 P **P 10 15 05.8 +1.5**
SJG San Juan 22.72 75 LR LR 10 24 25.0
comp=Z,107nm,20.9s,baz=260,slow=38
POST Post 22.75 332 IAmb IAmb 10 15 06.5
comp=Z,8.1nm,0.7s
LCAR Lake Charles 22.85 356 P **P 10 15 06.7 +1.0**
LCAR IAmb IAmb 10 15 08.6
comp=Z,7.1nm,0.7s
DKNS Dickens 23.01 334 IAmb IAmb 10 15 10.9
comp=Z,9.7nm,0.7s
U49A Red Boiling Sp 23.42 7 P **P 10 15 10.8 -0.4**
PBMO Poplar Bluff 23.51 358 IAmb IAmb 10 15 35.5
comp=Z,16nm,0.9s
T42A Van Buren 23.80 356 IAmb IAmb 10 15 17.3
comp=Z,6.8nm,0.6s
SMWD Sanorwood 23.99 337 IAmb IAmb 10 15 39.2
comp=Z,12nm,0.9s
MSTX Muleshoe 24.09 331 IAmb IAmb 10 15 19.0
comp=Z,9.9nm,0.9s
U54A Nelsons Funny 24.16 15 P **P 10 15 19.9 +1.9**
PCRV Puerto La Cruz 24.24 94 LR LR 10 26 55.1
comp=Z,69nm,18.7s,slow=42
S39A Bolivar 24.67 352 IAmb IAmb 10 15 48.8
comp=Z,12nm,0.9s
CCM Cathedral Cave 24.83 356 P **P 10 15 24.4 +0.4**
CCM IAmb IAmb 10 15 24.9
comp=Z,7.8nm,0.8s
ANMO Albuquerque 26.70 327 LR LR 10 29 01.6
comp=Z,66nm,18.9s,baz=228,slow=42
O20A White River Ci 31.63 332 IAmb IAmb 10 16 28.5
comp=Z,7.7nm,1.0s
ETMB Extrema 32.30 134 P **P 10 16 30.7 -0.1**
P17A Butcher Ranch, 32.35 328 IAmb IAmb 10 16 34.1
comp=Z,3.5nm,0.6s
SADO Sadowa 32.62 13 LR LR 10 29 31.4
comp=Z,93nm,21.1s,baz=231,slow=36
SAML Samuel 33.93 129 P **P 10 16 43.4 -1.7**
SAML IAmb IAmb 10 16 45.1
comp=Z,5.6nm,0.8s
PDAR Pinedale Array 34.33 333 P **P 10 16 48.9 +0.4**
comp=Z,0.5nm,0.6s,baz=125,slow=12,SNR=7.6
PDAR PcP **PcP 10 19 22.6 -0.8**
comp=Z,0.4nm,0.4s,baz=111,slow=5.1,SNR=7.4
comp=Z,0.5nm,0.6s
LOHW Long Hollow 35.46 333 IAmb IAmb 10 17 01.2
comp=Z,4.7nm,0.8s
MOOW Moose Ponds 35.63 333 P **P 10 17 00.8 +1.1**
NVAR Mina Array Bea 36.03 319 P **P 10 17 04.5 +1.3**
comp=Z,0.2nm,0.3s,baz=141,slow=9.9,SNR=6.0
NVAR pP **pP 10 17 20.9 +1.9**
comp=Z,1.4nm,0.8s,baz=135,slow=7.8,SNR=4.5
NVAR PcP **PcP 10 19 29.4 +1.0**
comp=Z,1.4nm,0.7s,baz=142,slow=3.7,SNR=8.8
NVAR LR LR 10 33 41.9
comp=Z,60nm,20.1s,baz=112,slow=39
comp=Z,0.2nm,0.3s
ULM Lac du Bonnet 37.35 353 P **P 10 17 13.0 -1.0**
ULM Lac du Bonnet 37.35 353 P **P 10 17 13.0 -1.0**
comp=Z,2.1nm,0.4s,baz=173,slow=8.8,SNR=8.5
ULM LR LR 10 33 47.2
comp=Z,80nm,18.9s,baz=176,slow=38
comp=Z,2.1nm,0.4s
PLID Pend Lake 39.12 330 P **P 10 17 30.1 +0.9**
YBH Yreka Blue Hor 40.70 321 LR LR 10 35 56.4
comp=Z,82nm,19.4s,baz=183,slow=38
FFC Flin Flon 42.63 349 P **P 10 17 57.3 -0.4**
FFC IAmb IAmb 10 17 58.1
comp=Z,14nm,1.5s
RPN Rapa Nui 44.59 206 LR LR 10 31 43.3
comp=Z,65nm,19.5s,baz=129,slow=29
SCHQ Schefferville 45.08 18 P **P 10 18 15.6 -1.8**
comp=Z,1.3nm,0.4s,baz=216,slow=5.5,SNR=8.7
SCHQ PcP **PcP 10 19 55.3 -1.8**
comp=Z,1.6nm,0.3s,baz=229,slow=1.4,SNR=12
comp=Z,1.3nm,0.4s
FCC Fort Churchill 45.63 356 P **P 10 18 20.4 -1.1**
FCC IAmb IAmb 10 18 21.1
comp=Z,3.1nm,0.8s
YKA Yellowknife Ar 52.46 345 P **P 10 19 13.1 -0.6**
YKA Yellowknife Ar 52.46 345 P **P 10 19 12.9 -0.8**
comp=Z,3.1nm,0.7s,baz=144,slow=7.4,SNR=54
YKA PcP **PcP 10 20 22.1 -1.5**
comp=Z,0.1nm,0.4s,baz=151,slow=3.4,SNR=0.7
comp=Z,3.1nm,0.7s
FRB Frobisher Bay 52.52 11 LR LR 10 41 02.0
comp=Z,34nm,20.5s,baz=268,slow=35
DLBC Dease Lake 54.51 335 P **P 10 19 29.5 +0.6**
SFJD Kangerlussuaq 59.48 17 LR LR 10 44 38.0
comp=Z,8.4nm,19.2s,baz=194,slow=35
M29M Somme Creek 60.24 336 P **P 10 20 08.6 -0.7**
M29M IAmb IAmb 10 20 11.5
comp=Z,3.8nm,1.1s
G31M Satah River 61.34 341 P **P 10 20 15.6 -0.9**
G31M IAmb IAmb 10 20 16.3
comp=Z,2.6nm,0.7s
N25K Chitina, Valde 62.38 334 P **P 10 20 23.9 +0.2**
N25K IAmb IAmb 10 20 39.2
comp=Z,3.2nm,1.1s
F28M Old Crow 63.52 341 P **P 10 20 30.6 -0.5**
F28M IAmb IAmb 10 20 32.1
comp=Z,3.2nm,0.8s
ILAR Eielson Array 64.66 336 P **P 10 20 37.5 -1.1**
comp=Z,1.1nm,0.8s,baz=164,slow=4.4,SNR=13
ILAR LR LR 10 55 01.0
comp=Z,30nm,19.2s,baz=156,slow=42
comp=Z,1.1nm,0.8s
BMAR Burnt Mountain 64.99 339 P **P 10 20 40.2 -0.5**
CAST Castle Rocks 66.28 334 P **P 10 20 47.3 -1.8**
CAST IAmb IAmb 10 21 06.7
comp=Z,7.1nm,1.4s
E22K Anaktuvuk Pass 67.78 339 P **P 10 20 57.8 -0.8**
E22K IAmb IAmb 10 21 30.6
comp=Z,4.3nm,1.5s
NOA NORSAR Array B 83.55 29 LR LR 10 56 02.7
comp=Z,9.9nm,21.9s,baz=45,slow=33
ARCES ARCESS Array B 86.04 19 P **P 10 22 39.2 -1.8**
comp=Z,3.1nm,0.8s,baz=280,slow=5.4,SNR=4.4
comp=Z,3.1nm,0.8s
ELIB Princess Elisa 109.38 162 *d*PKiKP **PKiKP 10 28 31.4 +1.0**
SONM Songino Array 117.67 348 PKP **PKPdf 10 28 46.3 -0.7**
comp=Z,0.2nm,0.4s,baz=336,slow=3.2,SNR=3.7
MKAR Makanchi Array 119.80 7 PKP **PKPdf 10 28 49.0 -1.9**
comp=Z,0.2nm,0.5s,baz=341,slow=3.2,SNR=4.8
WRA Warramunga Arr 137.82 255 PKP **PKPdf 10 29 25.1 -0.7**
comp=Z,0.3nm,0.3s,baz=88,slow=2.7,SNR=8.5
WRA pPKP **pPKPdf 10 29 44.2 -0.3**
comp=Z,2.5nm,0.8s,baz=89,slow=1.4,SNR=8.6
ASAR Alice Springs 137.95 249 PKP **PKPdf 10 29 25.5 -0.5**
comp=Z,0.2nm,0.3s,baz=118,slow=3.1,SNR=4.2
ASAR pPKP **pPKPdf 10 29 44.5 -0.1**
comp=Z,1.2nm,0.8s,baz=82,slow=1.9,SNR=7.2

CMAR Chiang Mai Arr 147.54 345 PKPbc **PKPdf 10 29 43.7 +0.7**
comp=Z,1.2nm,0.3s,baz=337,slow=3.5,SNR=11

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*IDC **05** 10:12:20.8±1.1,35.35°S×178.74°E,h0km,mb4.2/4, mbtmp4.1/5,ML3.7/1,MS3.4/4,Error ellipse: s-maj=35.7km s-min=28.0km az=10.0*
*WEL **05** 10:12:20.7±1.8,35.5°S±10.1×17.9°E±1.5,h5km,M4.2/28, ML4.3/30,MLv4.2/28,Error ellipse: s-maj=0.0km s-min=0.0km az=62.4,confirmed*
ISC 05 10:12:21.2±0.7,35.28S±0.06×179.30E±0.0,h10km,n86, s217/76,mb4.2/4,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.41**	**199**	P			**Pn**	**10 12 58.5**	**-2.1**
MXZ				S			**Sn**	**10 13 30.4**	**+0.2**
MXZ				T			T	10 15 06.7	
WMGZ	**Waiomatatini S**	**2.63**	**195**	P			**Pn**	**10 13 04.1**	**+0.4**
WMGZ				T			T	10 15 23.9	
HAZ	**Te Kaha**	**2.75**	**206**	P			**Pn**	**10 13 03.4**	**-2.0**
PKGZ	**Pakihiroa**	**2.78**	**200**	P			**Pn**	**10 13 04.7**	**-1.1**
PUZ	**Puketiti**	**2.91**	**196**	P			**Pn**	**10 13 08.7**	**+1.2**
PUZ				S			**Sn**	**10 13 42.6**	**+0.2**
RUGZ	**Raukumara Rang**	**2.98**	**205**	P			**Pn**	**10 13 07.6**	**-1.0**
TWGZ	**Tauwhareparae**	**3.07**	**200**	P			**Pn**	**10 13 11.6**	**+1.8**
TWGZ				T			T	10 15 36.1	
CNGZ	**Carnagh Statio**	**3.31**	**195**	P			**Pn**	**10 13 15.0**	**+1.9**
MWZ	**Matawai**	**3.36**	**204**	P			**Pn**	**10 13 12.9**	**-0.8**
MWZ				T			T	10 15 38.3	
OPRZ	**Ohinepanea**	**3.38**	**220**	P			**Pn**	**10 13 16.7**	**+2.8**
MARZ	**Manawahe**	**3.42**	**217**	P			**Pn**	**10 13 17.3**	**+2.7**
URZ	**Urewera**	**3.45**	**210**	Pn			**Pn**	**10 13 12.8**	**-2.1**
	8.0nm,0.3s,baz=103,slow=3.7,SNR=61								
URZ					Sn		Sn	10 13 46.5	-9.3
	4.3nm,0.3s,baz=1.3,slow=17,SNR=6.0								
URZ					LR		LR	10 14 35.3	
	comp=Z,364nm,20.1s,baz=121,slow=42								
	45nm,0.6s								
URZ	**Urewera**	**3.45**	**210**	P			**Pn**	**10 13 13.6**	**-1.3**
RAGZ	**Rawiri**	**3.54**	**205**	P			**Pn**	**10 13 16.2**	**-0.1**
RIGZ	**Rimuhau**	**3.63**	**199**	P			**Pn**	**10 13 18.6**	**+1.2**
OMRZ	**Omania**	**3.67**	**219**	P			**Pn**	**10 13 20.8**	**+2.8**
TARZ	**Mount Tarawera**	**3.70**	**216**	P			**Pb**	**10 13 23.7**	**-3.0**
KMRZ	**Kaimai**	**3.72**	**226**	P			**Pn**	**10 13 21.7**	**+3.0**
NGRZ	**Ngongotaha**	**3.76**	**221**	P			**Pn**	**10 13 23.1**	**+3.8**
MUGZ	**Murupara**	**3.77**	**212**	P			**Pn**	**10 13 17.4**	**-2.0**
RRRZ	**Republican Roa**	**3.78**	**215**	P			**Pn**	**10 13 20.4**	**+1.0**
HLRZ	**Highlands Stat**	**3.79**	**218**	P			**Pn**	**10 13 22.4**	**+2.7**
PRGZ	**Paritu Road**	**3.80**	**197**	P			**Pn**	**10 13 21.8**	**+1.9**
UTU	**Utuhina**	**3.81**	**220**	P			**Pn**	**10 13 24.0**	**+4.0**
SNGZ	**Shannon Statio**	**3.83**	**204**	P			**Pn**	**10 13 21.1**	**+0.9**
HSRZ	**Hossack Road**	**3.89**	**218**	P			**Pn**	**10 13 23.6**	**+2.6**
HRRZ	**Handcock Road**	**3.93**	**217**	P			**Pn**	**10 13 25.4**	**+3.8**
KNZ	**Kokohu**	**3.95**	**199**	P			**Pn**	**10 13 22.0**	**+0.2**
PRRZ	**Plateau Road**	**3.96**	**215**	P			**Pn**	**10 13 24.1**	**+2.1**
GRRZ	**Galatos Road**	**3.99**	**219**	P			**Pn**	**10 13 25.9**	**+3.5**
RAHZ	**Arahi**	**4.03**	**205**	P			**Pn**	**10 13 24.7**	**+1.8**
ALRZ	**Allen Road**	**4.04**	**215**	P			**Pn**	**10 13 25.8**	**+2.8**
MTTZ	**Maungatapu Wha**	**4.07**	**208**	P			**Pn**	**10 13 27.2**	**-0.9**
WCZ	**Waipu Caves**	**4.09**	**259**	P			**Pn**	**10 13 17.7**	**-6.0**
WPRZ	**Whakapapatarin**	**4.09**	**217**	P			**Pn**	**10 13 25.2**	**+1.4**
WHHZ	**Waihua**	**4.13**	**203**	P			**Pn**	**10 13 25.6**	**+1.3**
MRHZ	**Matea Rd**	**4.22**	**212**	P			**Pn**	**10 13 26.9**	**+1.3**
TLZ	**Tolley Road**	**4.28**	**224**	P			**Pn**	**10 13 23.9**	**-2.5**
NMHZ	**Naumai**	**4.29**	**207**	P			**Pn**	**10 13 28.1**	**+1.5**
ARHZ	**Aropaoanui**	**4.38**	**204**	P			**Pn**	**10 13 28.3**	**+0.6**
BKZ	**Black Stump Fm**	**4.47**	**209**	P			**Pn**	**10 13 29.7**	**+0.7**
RATZ	**Rangitukua**	**4.55**	**217**	P			**Pn**	**10 13 32.1**	**+2.0**
RITZ	**Rihia Road**	**4.60**	**216**	P			**Pn**	**10 13 32.6**	**+1.8**
MCHZ	**McNeill Hill**	**4.64**	**206**	P			**Pn**	**10 13 31.5**	**+0.1**
OUZ	**Omahuta**	**4.66**	**269**	P			Pn	10 13 23.1	-8.5
KWHZ	**Kaweka Forest**	**4.72**	**208**	P			**Pn**	**10 13 32.6**	**+0.1**
NTVZ	**North Tongarir**	**4.78**	**216**	P			**Pn**	**10 13 34.7**	**+1.4**
TMVZ	**Te Maari**	**4.78**	**216**	P			**Pn**	**10 13 34.6**	**+1.2**
ETVZ	**East Tongariro**	**4.79**	**216**	P			**Pn**	**10 13 34.6**	**+1.1**
WTVZ	**West Tongariro**	**4.83**	**217**	P			**Pn**	**10 13 35.7**	**+1.6**
NNVZ	**North Ngauruho**	**4.83**	**216**	P			**Pn**	**10 13 35.6**	**+1.5**
OTVZ	**Oturere**	**4.83**	**216**	P			**Pn**	**10 13 35.7**	**+1.6**
NGZ	**Ngauruhoe**	**4.88**	**216**	P			**Pn**	**10 13 36.1**	**+1.4**
TWVZ	**Taurewa**	**4.88**	**218**	P			**Pn**	**10 13 36.4**	**+1.8**
KAHZ	**Kahuranaki**	**4.89**	**202**	P			**Pn**	**10 13 34.6**	**-0.3**
BHHZ	**Black Hill Sta**	**4.92**	**211**	P			**Pn**	**10 13 35.3**	**0.0**
KRHZ	**Kereru**	**4.93**	**207**	P			**Pn**	**10 13 34.6**	**-0.8**
FWVZ	**Far West T-bar**	**4.96**	**216**	P			**Pn**	**10 13 37.4**	**+1.5**
MAVZ	**Matarangi**	**4.97**	**216**	P			**Pn**	**10 13 39.1**	**+3.0**
MOVZ	**Moawhango**	**4.99**	**213**	P			**Pn**	**10 13 36.0**	**-0.2**
WNVZ	**Wahianoa**	**5.00**	**215**	P			**Pn**	**10 13 36.9**	**+0.5**
TRVZ	**Turoa**	**5.00**	**216**	P			**Pn**	**10 13 38.1**	**+1.6**
PXZ	**Pawanui**	**5.12**	**201**	P			**Pn**	**10 13 36.6**	**-1.2**
VRZ	**Vera Road**	**5.27**	**222**	P			**Pn**	**10 13 44.1**	**+4.1**
WPHZ	**Waipukurau**	**5.28**	**205**	P			**Pn**	**10 13 38.7**	**-1.4**
TSZ	**Takapari Road**	**5.45**	**208**	P			**Pn**	**10 13 40.7**	**-1.7**
LREZ	**Lake Rotokare**	**5.71**	**222**	P			**Pn**	**10 13 52.6**	**+6.7**
NEZ	**North Egmont**	**5.75**	**225**	P			**Pn**	**10 13 50.9**	**+4.3**
GLKZ	**Green Lake**	**6.45**	**22**	P			**Pb**	**10 14 14.9**	**+1.4**
GLKZ				S			**Sb**	**10 15 24.6**	**-6.1**
MRNZ	**Matariki Terra**	**7.98**	**218**	P			Pn	10 14 23.9	+6.8
CTZ	**Chatham Island**	**9.01**	**161**	P			**Pn**	**10 14 33.9**	**+2.6**
DZM	**Mont Dzumac**	**17.31**	**316**	LR			LR	10 21 07.0	
	comp=Z,132nm,21.1s,baz=192,slow=31								
ASAR	**Alice Springs**	**40.86**	**274**	P			**P**	**10 20 01.0**	**-2.4**
	3.7nm,0.8s,baz=114,slow=7.4,SNR=34								
	3.7nm,0.8s								
WRA	**Warramunga Arr**	**42.30**	**279**	P			**P**	**10 20 12.7**	**-2.5**
	4.0nm,0.8s,baz=123,slow=7.5,SNR=12								
	4.0nm,0.8s								
H03S2	**Juan Fernandez**	**79.65**	**124**	T			T	11 52 40.1	
	baz=232,slow=74,SNR=9.8								
H03S1	**Juan Fernandez**	**79.66**	**124**	T			T	11 52 40.3	
	baz=232,slow=74,SNR=8.4								
H03S3	**Juan Fernandez**	**79.67**	**124**	T			T	11 52 41.9	
	baz=232,slow=74,SNR=9.0								
H03N3	**Juan Fernandez**	**79.87**	**124**	T			T	11 52 56.5	
	baz=236,slow=72,SNR=53								
H03N2	**Juan Fernandez**	**79.87**	**124**	T			T	11 52 54.2	
	baz=236,slow=72,SNR=32								
H03N1	**Juan Fernandez**	**79.89**	**124**	T			T	11 52 57.9	
	baz=236,slow=72,SNR=48								
PLCA	**Paso Flores**	**80.82**	**134**	P			**P**	**10 24 38.5**	**+3.2**
	1.2nm,0.8s,baz=235,slow=8.1,SNR=4.0								
	1.2nm,0.8s								
LPIG	**La Paz**	**89.01**	**59**	LR			LR	10 57 38.7	
	comp=Z,22nm,21.8s,baz=152,slow=30								
NVAR	**Mina Array Bea**	**93.34**	**44**	P			**P**	**10 25 40.1**	**+3.6**
	0.8nm,0.9s,baz=219,slow=7.6,SNR=5.7								
	0.8nm,0.9s								
TXAR	**Lajitas Array**	**96.89**	**59**	LR			LR	11 00 13.3	
	comp=Z,32nm,21.7s,baz=100,slow=30								
FINES	**FINESS Array B**	**148.79**	**335**	PKPbc			**PKPbc**	**10 32 07.5**	**-0.5**
	2.0nm,0.8s,baz=26,slow=4.8,SNR=3.9								
TORD	**Torodi Ar. Bea**	**157.85**	**186**	PKPab			**PKPab**	**10 32 50.3**	**-0.9**
	0.2nm,0.4s,baz=161,slow=3.4,SNR=2.8								

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*JMA **05** 10:44:14.4±0.1,24.2°N±0.4×121.7°E±0.8,h7km±2km, MV3.4/16,TAIWAN REGION*
*TAP **05** 10:44:14.7,24.20°N×121.71°E,h10km,ML3.8,C*
*ASIES **05** 10:44:14.7,24.20°N×121.71°E,h10km,ML3.8,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.32; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$0.36; $M_{r\

baz=18

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res	baz
EAHA	**Aohua**	0.14	6	⇓*i*P	**Pg**	10 44 18.0	+0.1	baz=20
EAHA				*i* S	**Sg**	10 44 20.1	-0.1	baz=20
TWD	**Chiawan**	0.16	227	⇑*i*P	**Pg**	10 44 18.4	+0.2	baz=219
TWD				*i* S	**Sg**	10 44 21.0	+0.4	baz=219
ETLH	**Xiulin Townshi**	0.22	275	⇑P	**Pg**	10 44 19.6	+0.2	baz=272
ETLH				*i* S	**Sg**	10 44 22.8	+0.3	baz=272
HWA	**Hwalien**	0.24	207	⇑P	**Pg**	10 44 20.3	+0.7	baz=203
ENA	**Nanau**	0.24	4	⇓*i*P	**Pg**	10 44 19.7	0.0	baz=9.0
ENA				*i* S	**Sg**	10 44 23.0	0.0	baz=9.0
EWUT	**Wuta**	0.26	11	⇓*i*P	**Pg**	10 44 20.1	0.0	baz=14
EWUT				S	**Sg**	10 44 23.4	-0.2	baz=14
ETM	**Tongmen**	0.30	224	⇑*i*P	**Pg**	10 44 20.9	+0.1	baz=212
ETM				S	**Sg**	10 44 24.9	0.0	baz=212
LXIB	**Xiulin Townshi**	0.33	240	⇑*i*P	**Pg**	10 44 21.2	-0.1	baz=237
LXIB				*e*S	**Sg**	10 44 25.6	-0.1	baz=237
LATG	**Datong**	0.39	333	⇓*i*P	**Pg**	10 44 22.6	+0.1	baz=333
LATG				*i* S	**Sg**	10 44 28.1	+0.4	baz=333
NNSB	**Datong**	0.39	308	⇓*i*P	**Pg**	10 44 22.8	+0.2	baz=307
NNSB				*i* S	**Sg**	10 44 27.6	-0.1	baz=307
NNSH	**Datong**	0.39	308	⇓*e*P	**Pg**	10 44 22.8	+0.2	baz=307
NNSH				*e*S	**Sg**	10 44 27.6	-0.1	baz=307
ESAO	**Su ao**	0.40	16	⇓P	**Pg**	10 44 22.6	-0.1	baz=18
ESAO				S	**Sg**	10 44 27.8	-0.2	baz=18
NNS	**Nan Shan**	0.41	308	⇓*i*P	**Pg**	10 44 23.0	+0.2	baz=308
NNS				*i* S	**Sg**	10 44 28.4	+0.2	baz=308
WHF	**Hehuan Shan**	0.42	264	⇑*i*P	**Pg**	10 44 23.4	+0.3	baz=262
WHF				*i* S	**Sg**	10 44 28.9	+0.1	baz=262
SHUL	**Shoufeng**	0.42	200	⇑P	**Pb**	10 44 23.9	-0.4	baz=203
TWC	**Suao**	0.43	15	⇓*i*P	**Pg**	10 44 23.3	0.0	baz=11
TWC				S	**Sg**	10 44 28.8	-0.3	baz=11
FUSS	**Fushou**	0.44	278	⇓P	**Pb**	10 44 23.9	-0.9	baz=276
FUSS				S	**Sg**	10 44 29.7	+0.4	baz=276
NDS	**Dongshan**	0.44	359	⇓*i*P	**Pg**	10 44 23.6	+0.2	
NDS				*i* S	**Sg**	10 44 29.7	+0.3	
NDT	**Datong Townshi**	0.46	335	⇓*i*P	**Pb**	10 44 24.1	-0.8	baz=335
NDT				*i* S	**Sb**	10 44 30.4	-1.3	baz=335
ESL	**Shilin**	0.46	216	⇑*i*P	**Pg**	10 44 23.5	-0.1	baz=212
ENTT	**Nioudou**	0.47	342	⇓*i*P	**Pg**	10 44 24.2	+0.2	baz=344
ENTT				*i* S	**Sg**	10 44 30.7	+0.4	baz=344
TWT	**Tachien**	0.50	278	⇓P	**Pb**	10 44 25.4	-0.4	baz=276
TWT				*i* S	**Sb**	10 44 31.9	-1.3	baz=276
TEGC	**Jichi Village**	0.51	199	*e*P	**Pb**	10 44 25.9	+0.2	baz=189
CHGB	**Renai**	0.52	256	⇑*i*P	**Pb**	10 44 25.2	-0.8	baz=246
CHGB				S	**Sg**	10 44 31.6	-0.1	baz=246
EOS2	**EOS2**	0.52	63	*e*P	**Pb**	10 44 26.0	+0.2	baz=56
TDCB	**Techi**	0.52	277	⇓*i*P	**Pb**	10 44 25.4	-0.6	baz=276
TDCB				S	**Sg**	10 44 31.5	-0.3	baz=276
TWE	**Neicheng**	0.53	354	⇓*i*P	**Pb**	10 44 25.4	-0.8	baz=5.0
TWE				S	**Sg**	10 44 32.5	+0.3	baz=5.0
EOS4	**EOS4**	0.55	97	*e*P	**Pn**	10 44 27.6	-0.7	baz=86
EOS3	**EOS3**	0.55	80	*e*P	**Pb**	10 44 27.5	+1.1	baz=78
OWD	**Renai**	0.55	245	⇑*i*P	**Pg**	10 44 25.5	+0.1	baz=243
WARBT	**Fenglin Townsh**	0.56	213	⇑*i*P	**Pg**	10 44 25.3	-0.3	baz=219
WARBT				*e*S	**Sb**	10 44 34.5	-0.2	baz=219
YHNB	**Yeheng**	0.57	327	⇓*i*P	**Pb**	10 44 26.3	-0.7	baz=326
YHNB				S	**Sg**	10 44 33.1	-0.4	baz=326
ILA	**Ilan**	0.58	2	⇓P	**Pb**	10 44 26.1	-0.8	baz=355
EGFH	**Guangfu**	0.58	208	⇑P	**Pg**	10 44 26.1	0.0	baz=212
FUSB	**Fushanzhiwuyua**	0.58	348	⇓*i*P	**Pb**	10 44 26.4	-0.7	baz=348
FUSB				S	**Sg**	10 44 33.7	-0.1	baz=348
WUSB	**Renai**	0.59	251	⇑*i*P	**Pg**	10 44 26.5	+0.3	baz=241
WUSB				*i* S	**Sg**	10 44 33.8	-0.1	baz=241
NSK	**Sanguang**	0.59	326	⇓*i*P	**Pb**	10 44 26.5	-0.7	baz=326
NSK				*i* S	**Sb**	10 44 34.5	-1.2	baz=326
NWLT	**Wulai**	0.62	341	⇓P	**Pb**	10 44 27.1	-0.6	baz=341
NWLT				*e*S	**Sg**	10 44 35.0	+0.1	baz=341
VWDT	**VWDT**	0.69	231	⇑*i*P	**Pg**	10 44 28.1	+0.1	baz=221
VWDT				*e*S	**Sb**	10 44 37.7	-0.6	baz=221
NFF	**Wufeng Townshi**	0.71	309	*e*P	**Pb**	10 44 28.7	-0.5	baz=315
NFF				S	**Sb**	10 44 38.0	-1.0	baz=315
WHP	**Taichung City**	0.71	277	P	**Pb**	10 44 29.2	-0.1	baz=276
WHP				S	**Sb**	10 44 38.6	-0.7	baz=276
WPL	**Puli Township**	0.72	256	*e*P	**Pb**	10 44 29.2	-0.1	baz=246
WPL				*e*S	**Sg**	10 44 38.2	+0.1	baz=246
DPDB	**Guoxing**	0.74	258	⇑P	**Pb**	10 44 29.6	-0.2	baz=257
DPDB				*e*S	**Sb**	10 44 39.2	-0.8	baz=257
HGSD	**Ruisui**	0.74	202	*e*P	**Pb**	10 44 29.8	+0.1	baz=214
HGSD				*e*S	**Sn**	10 44 41.8	-0.8	baz=214
WCS	**Beigang Elemen**	0.75	260	*e*P	**Pb**	10 44 29.7	-0.2	baz=259
EHY	**Hungye**	0.77	209	*e*P	**Pg**	10 44 29.0	-0.6	baz=207
TIPB	**Shuangxi**	0.79	7	⇓*i*P	**Pg**	10 44 29.9	0.0	baz=359
TIPB				S	**Sg**	10 44 39.4	-0.8	baz=359
LIOB	**Emei**	0.79	305	⇓*e*P	**Pb**	10 44 30.5	-0.1	baz=305
LIOB				*e*S	**Sb**	10 44 41.4	0.0	baz=305
NHDH	**Xindian Distri**	0.79	347	*e*P	**Pb**	10 44 30.4	-0.2	baz=347
NSTT	**Nanjuang**	0.79	304	⇓P	**Pb**	10 44 30.4	-0.2	baz=304
NSTT				*i* S	**Sb**	10 44 40.9	-0.5	baz=304
NJD	**Zhudong**	0.80	313	*e*P	**Pb**	10 44 30.9	+0.3	baz=313
NJD				*e*S	**Sb**	10 44 41.8	+0.3	baz=313
TWA	**Mucha**	0.80	351	*e*P	**Pb**	10 44 30.4	-0.3	baz=352
SSLB	**Suanglung**	0.81	241	⇑*i*P	**Pg**	10 44 30.3	-0.1	baz=240
SSLB				*e*S	**Sg**	10 44 40.2	-0.6	baz=240
SMLT	**Sun Moon Lake**	0.81	248	P	**Pb**	10 44 30.6	-0.4	baz=237
SMLT				S	**Sg**	10 44 40.9	-0.1	baz=237
TATO	**Taipei**	0.81	345	P	**Pb**	10 44 30.9	-0.1	baz=345
TATO				*e*S	**Sg**	10 44 40.8	-0.2	baz=345
TYC	**Yuchr**	0.84	251	⇑P	**Pg**	10 44 30.9	0.0	baz=249
BACT	**New Taipei Cit**	0.85	342	*e*P	**Pn**	10 44 31.9	-0.8	baz=343
TWB1	**Santiao Chiao**	0.85	16	P	**Pg**	10 44 30.9	-0.2	baz=17
TWB1				S	**Sg**	10 44 41.7	-0.6	baz=17
HSN1	**Hsinchu**	0.87	313	*e*P	**Pn**	10 44 32.4	-0.7	baz=312
TAP	**Taipei**	0.87	347	*e*P	**Pb**	10 44 31.9	0.0	baz=348
NWF	**Wu-fen Shan**	0.88	3	P	**Pb**	10 44 32.1	-0.1	baz=4.0
WFSB	**Wu-fen Shan**	0.88	3	⇓P	**Pb**	10 44 31.9	-0.2	baz=4.0
TWQ1	**Liyutan**	0.88	281	*e*P	**Pn**	10 44 32.8	-0.5	baz=280
YULB	**Yu-li**	0.88	206	*e*P	**Pg**	10 44 30.7	-1.0	baz=206
NTY	**Taoyuan**	0.90	334	*e*P	**Pn**	10 44 33.0	-0.4	baz=328
ECBN	**Changbin**	0.90	196	*e*P	**Pg**	10 44 31.9	-0.2	baz=184
SBCB	**Hsinchu**	0.90	312	*e*P	**Pn**	10 44 33.7	+0.2	baz=312
NSY	**Sanyi**	0.91	285	⇓P	**Pn**	10 44 33.5	-0.1	baz=284
SXI1	**Grass Mountain**	0.91	9	⇓P	**Pb**	10 44 32.4	-0.3	baz=16
SXI1				*e*S	**Sb**	10 44 44.7	-0.2	baz=16
EYUL	**Yuli**	0.92	204	*e*P	**Pb**	10 44 32.6	-0.1	baz=214
TWF1	**Yuli**	0.92	205	*e*P	**Pg**	10 44 31.2	-1.2	baz=215
NCUH	**Zhongli**	0.92	328	*e*P	**Pn**	10 44 33.3	-0.4	baz=328
NMLH	**Miaoli**	0.92	292	*e*P	**Pn**	10 44 33.5	-0.3	baz=299
HSN	**Hsinchu**	0.92	312	*e*P	**Pb**	10 44 32.8	0.0	baz=315
NCU	**National Centr**	0.92	328	*e*P	**Pn**	10 44 33.3	-0.4	baz=329
WHYT	**Xinyi Township**	0.93	239	*e*P	**Pb**	10 44 33.1	+0.1	baz=237
WWF	**Wufeng**	0.95	261	*e*P	**Pn**	10 44 34.5	+0.5	baz=255
TWS1	**Kuangyinshan**	0.95	343	*e*P	**Pn**	10 44 33.7	-0.5	baz=351
TWS1				*e*S	**Sb**	10 44 46.3	+0.3	baz=351
TCU	**Taichung**	0.96	268	*e*P	**Pn**	10 44 35.4	+1.2	baz=267
TNOU	**National Taiwa**	0.96	3	⇓P	**Pb**	10 44 33.5	0.0	baz=4.0
YM01	**YM01**	0.96	352	*e*P	**Pn**	10 44 33.9	-0.4	baz=352
WJS	**Zhushan**	0.98	248	*e*P	**Pn**	10 44 34.9	+0.3	baz=239
WNT1	**Nantou City**	0.99	254	*e*P	**Pn**	10 44 35.2	+0.5	baz=248
WNT1				*e*S	**Sn**	10 44 49.5	+0.7	baz=248
WNT	**Mingjian**	1.00	252	*e*P	**Pn**	10 44 35.3	+0.5	baz=242
WDJ	**Dajia District**	1.00	279	*e*P	**Pn**	10 44 35.6	+0.8	baz=279
NTST	**Danshui**	1.00	346	*e*P	**Pn**	10 44 34.8	-0.1	baz=346
ANP	**Anpu**	1.01	350	*e*P	**Pb**	10 44 34.4	0.0	baz=351
NHW	**Xinwu Township**	1.02	323	*e*P	**Pn**	10 44 34.6	-0.6	baz=323
CHKH	**Chenggong**	1.03	197	*e*P	**Pg**	10 44 34.0	-0.6	baz=187
FULB	**Fuli**	1.06	202	*e*P	**Pg**	10 44 35.1	0.0	baz=214
WCHH	**Zhanghua**	1.07	264	*e*P	**Pn**	10 44 36.6	+0.9	baz=264
ALS	**Alishan**	1.08	231	⇑P	**Pb**	10 44 35.5	-0.1	baz=231
ALS				*e*S	**Sn**	10 44 52.5	+1.2	baz=231
TWY	**Chenhua**	1.09	354	*e*P	**Pn**	10 44 36.3	+0.3	baz=340
CHKT	**Chengkung**	1.13	197	*e*P	**Pb**	10 44 35.7	-0.6	baz=183
EHD	**Haiduan**	1.14	205	*e*P	**Pb**	10 44 35.3	-1.2	baz=205
JYNG	**Yonagunijimaku**	1.15	76	P	**Pb**	10 44 35.8	-0.8	
JYNG				*e*S	**Sb**	10 44 51.4	-0.1	
WGK	**Gukeng**	1.17	245	*e*P	**Pg**	10 44 38.6	+1.3	baz=244
ELDTW	**Lidau**	1.19	213	*e*P	**Pb**	10 44 36.2	-1.2	baz=212
WDLH	**Douliu**	1.19	246	*e*P	**Pg**	10 44 38.7	+1.1	baz=245
YOJ	**Yonaguni jima**	1.21	77	P	**Pn**	10 44 37.5	-0.2	baz=65
YOJ	**Yonaguni jima**	1.21	77	P	**Pn**	10 44 37.6	0.0	
YOJ				*e*S	**Sb**	10 44 53.4	+0.1	
WRL	**Guolierlin Hig**	1.26	257	*e*P	**Pg**	10 44 39.4	+0.4	baz=257
WCKO	**Fanlu**	1.27	234	*e*P	**Pg**	10 44 39.9	+0.8	baz=234
RLNB	**Erlin**	1.28	257	*e*P	**Pg**	10 44 40.0	+0.7	baz=257
RLNB				*e*S	**Sg**	10 44 57.7	+1.7	baz=257
CHN2	**Minshiung**	1.32	241	*e*P	**Pg**	10 44 40.1	+0.2	baz=240
WTK	**Tuku**	1.32	248	*e*P	**Pg**	10 44 40.6	+0.5	baz=233
CHN4	**Tsaushan**	1.33	231	*e*P	**Pg**	10 44 40.8	+0.5	baz=231
STYH	**Taoyuan**	1.33	221	*e*P	**Pb**	10 44 39.9	+0.1	baz=220
TPUB	**Ta-pu**	1.33	229	⇑P	**Pg**	10 44 40.6	+0.2	baz=216
TPUB				*e*S	**Sg**	10 44 59.4	+1.7	baz=216
STYT	**Tauyuan**	1.35	221	P	**Pb**	10 44 40.0	-0.1	baz=221
STYT				*e*S	**Sg**	10 44 58.7	+0.5	baz=221
WTP	**Ta-pu**	1.38	228	*e*P	**Pg**	10 44 41.4	+0.2	baz=227
LONT	**Longtian**	1.39	203	*e*P	**Pn**	10 44 38.7	-1.4	baz=204
TWK	**Hsinying**	1.46	231	*e*P	**Pg**	10 44 42.5	-0.2	baz=232
TWK				*e*S	**Sg**	10 45 03.1	+1.5	baz=232
WSF	**Szhu**	1.48	249	*e*P	**Pg**	10 44 43.7	+0.6	baz=248
SNST	**Tainan City**	1.48	230	*e*P	**Pg**	10 44 43.4	+0.3	baz=230
CHN1	**Nanshi**	1.48	228	*e*P	**Pg**	10 44 43.2	0.0	baz=218
CHN1				*e*S	**Sg**	10 45 04.0	+1.6	baz=218
TWG	**Pinlang**	1.49	204	*e*P	**Pn**	10 44 39.8	-1.7	baz=204
TWGBT	**Beinan**	1.49	204	*e*P	**Pn**	10 44 40.1	-1.4	baz=204
SGST	**Jiashian**	1.52	224	⇑P	**Pb**	10 44 42.5	-0.5	baz=224
SGST				S	**Sg**	10 45 04.9	+1.3	baz=224
SLGT	**Liugui**	1.54	220	*e*P	**Pg**	10 44 44.1	-0.3	baz=220
ICHU	**Yijhu**	1.56	238	*e*P	**Pg**	10 44 44.5	-0.1	baz=238
CHN8	**Yiju**	1.62	239	*e*P	**Pg**	10 44 45.9	+0.1	baz=222
CHN3	**Shinhua**	1.67	229	*e*P	**Pg**	10 44 46.9	+0.2	baz=230
SHHT	**Tainan City**	1.71	228	*e*P	**Pg**	10 44 47.3	-0.3	baz=229
SCST	**Cishan**	1.72	221	*e*P	**Pg**	10 44 47.3	-0.4	baz=222
SCLT	**Jiali**	1.73	235	*e*P	**Pb**	10 44 45.6	-0.9	baz=235
ECL	**Taimali**	1.73	204	*e*P	**Pn**	10 44 44.5	-0.4	baz=193
SSD	**Sandimen**	1.75	215	*e*P	**Pn**	10 44 46.0	+0.8	baz=215
TSMG	**Majia**	1.78	214	*e*P	**Pb**	10 44 47.1	-0.2	baz=226
TWM1	**Shoushan**	1.81	222	*e*P	**Pg**	10 44 48.8	-0.6	baz=222
TSCK	**Chigu Township**	1.82	236	*e*P	**Pb**	10 44 48.0	-0.2	baz=221
IRIF	**Iriomote-Funau**	1.84	85	P	**Pn**	10 44 46.3	0.0	
IRIF				*e*S	**Sn**	10 45 10.3	+0.7	
MASBT	**Mashibuluo**	1.86	213	*e*P	**Pn**	10 44 47.3	+0.6	baz=226
MASBT				*e*S	**Sb**	10 45 13.2	+1.0	baz=226
HATJ	**Hateruma jima**	1.91	93	*e*S	**Sn**	10 45 11.9	+0.5	
EAST	**Anshuo**	1.97	204	*e*P	**Pb**	10 44 50.2	-0.5	baz=195
TAWH	**Dawu Township**	1.99	203	*e*P	**Pb**	10 44 50.7	-0.4	baz=194
SCZT	**Fangliau**	2.07	210	*e*P	**Pb**	10 44 51.3	-1.1	baz=211
PNG	**Penghu**	2.08	253	*e*P	**Pn**	10 44 50.7	+1.1	baz=253
PHUB	**P'eng-hu**	2.08	252	*e*P	**Pn**	10 44 50.3	+0.6	baz=252
PHUB				*e*S	**Sb**	10 45 16.8	-1.6	baz=252
JKRS	**Kuro-shima**	2.09	88	*e*P	**Pn**	10 44 50.4	+0.6	
JKRS				*e*S	**Sn**	10 45 16.7	+0.9	
SLIU	**Shizi**	2.14	204	*e*P	**Pb**	10 44 52.7	-0.8	baz=196
LYUB	**Lan-yu**	2.18	183	*e*P	**Pn**	10 44 48.6	-2.4	baz=188
JIJ	**Ishigaki jima**	2.21	85	P	**Pn**	10 44 51.4	-0.1	
JIJ				*e*S	**Sn**	10 45 18.9	-0.1	
VWUC	**VWUC**	2.22	292	*e*P	**Pn**	10 44 50.9	-0.7	baz=291
VCHM	**Qimei**	2.32	246	*e*P	**Pn**	10 44 53.4	+0.4	baz=237
VCHM				*e*S	**Sb**	10 45 23.5	-1.8	baz=237
TWKBT	**Hengchun**	2.39	201	*e*P	**Pb**	10 44 56.0	-1.8	baz=192
JISG	**Ishigakijimahi**	2.39	80	P	**Pn**	10 44 54.1	+0.1	
JISG				S	**Sn**	10 45 23.6	+0.3	
PTMZ	**Houxiangcun**	2.52	290	*e*P	**Pn**	10 44 55.7	0.0	baz=289
PTMZ				*e*S	**Sn**	10 45 26.1	-0.3	baz=289
MATB	**Ma-tsu**	2.53	321	*e*P	**Pn**	10 44 56.1	+0.2	baz=320
JTJ	**Tarama**	2.75	80	S	**Sn**	10 45 34.2	+2.0	
LYJJ	**Jianjiangzhen**	2.95	323	*e*P	**Pn**	10 45 02.3	+0.7	baz=323
KNM	**Kinmen**	3.01	275	*e*P	**Pn**	10 45 05.1	+2.7	baz=274
KNMB	**Chin-men Tao**	3.06	276	*e*P	**Pn**	10 45 03.3	+0.2	baz=275
XPSS	**Dashiqiu**	3.06	333	*e*P	**Pn**	10 45 02.7	-0.5	baz=333
MHZQ	**Yeshan**	3.10	309	*e*P	**Pn**	10 45 03.6	0.0	baz=308
JIRB	**Irabujima**	3.21	78	*e*P	**Pn**	10 45 06.5	+1.3	
JMJ	**Miyako jima 2**	3.31	78	*e*P	**Pn**	10 45 08.5	+1.9	baz=73
JMJ2	**Miyako jima3**	3.33	80	P	**Pn**	10 45 08.2	+1.3	
AXDP	**Jialang**	3.49	282	*e*P	**Pn**	10 45 09.6	+0.5	baz=282
ZPLA	**Ao Xicun**	3.64	267	*e*P	**Pn**	10 45 11.4	+0.3	baz=265
DSXP	**Dongshan**	3.96	264	*e*P	**Pn**	10 45 15.9	+0.4	baz=262
SXFK	**Yanhouchang**	4.30	302	*e*P	**Pn**	10 45 20.6	+0.4	baz=301

WEL 05 11:03:22.0, 35°.53S×178°.83E, h5km, M3.6/19, ML3.8/25, MLv3.6/19, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	2.07	192	P	Pn	11 03 55.1	-2.4
MXZ				T	T	11 06 03.4	
WMGZ	**Waiomatatini S**	2.31	188	P	Pn	11 04 01.5	+0.8
HAZ	**Te Kaha**	2.38	200	P	Pn	11 04 00.6	-1.0
HAZ				T	T	11 06 19.1	
PKGZ	**Pakihiroa**	2.43	194	P	Pn	11 04 00.9	-1.5
PKGZ				T	T	11 06 29.2	
PUZ	**Puketiti**	2.58	190	P	Pn	11 04 06.0	+1.6
PUZ				S	Sg	11 04 44.0	-0.9
RUGZ	**Raukumara Rang**	2.60	201	P	Pn	11 04 05.1	+0.3
TWGZ	**Tauwhareparae**	2.73	194	P	Pb	11 04 09.1	-2.2
OPRZ	**Ohinepanea**	2.95	218	P	Pb	11 04 14.5	-0.5
MWZ	**Matawai**	2.99	200	P	Pn	11 04 09.3	-0.7
CNGZ	**Carnagh Statio**	2.99	189	P	Pn	11 04 11.2	+1.2
CNGZ				S	Sg	11 04 56.6	-1.4
TKGZ	**Te Karaka**	3.01	195	P	Pb	11 04 13.8	-2.2
URZ	**Urewera**	3.05	206	P	Pn	11 04 10.0	-0.9
RAGZ	**Rawiri**	3.17	201	P	Pn	11 04 11.9	-0.7
RIGZ	**Rimuhau**	3.28	195	P	Pn	11 04 16.3	+2.1
MUGZ	**Murupara**	3.37	209	P	Pn	11 04 16.0	+0.7
SNGZ	**Shannon Statio**	3.46	200	P	Pn	11 04 18.6	+2.1
RAHZ	**Arahi**	3.66	202	P	Pn	11 04 21.5	+2.3
WCZ	**Waipu Caves**	3.67	262	P	Pn	11 04 13.4	-6.0
MTHZ	**Maungataniwha**	3.68	205	P	Pn	11 04 22.9	+3.4
MRHZ	**Matea Rd**	3.82	210	P	Pn	11 04 23.0	+1.5
NMHZ	**Naumai**	3.91	204	P	Pn	11 04 25.5	+2.7
ARHZ	**Aropaoanui**	4.00	201	P	Pn	11 04 22.2	-1.7
BKZ	**Black Stump Fm**	4.08	206	P	Pn	11 04 25.7	+0.6
MCHZ	**McNeill Hill**	4.26	203	P	Pn	11 04 27.5	0.0
OUZ	**Omahuta**	4.29	273	P	Pn	11 04 20.6	-7.3
TMVZ	**Te Maari**	4.36	214	P	Pn	11 04 31.7	+2.7
ETVZ	**East Tongariro**	4.37	214	P	Pn	11 04 32.6	+3.4
NNVZ	**North Ngauruho**	4.41	215	P	Pn	11 04 33.1	+3.3
TWVZ	**Taurewa**	4.45	216	P	Pn	11 04 34.2	+4.0
NGZ	**Ngauruhoe**	4.46	214	P	Pn	11 04 34.0	+3.7
KAHZ	**Kahuranaki**	4.53	199	P	Pn	11 04 32.7	+1.4
KRHZ	**Kereru**	4.55	205	P	Pn	11 04 32.4	+0.9

*SFS **05** 11:06:18.8, 38°.03N×1°.18W, h0km, ML2.2/10, ML2.6/7, MLv2.0/10*

*MDD **05** 11:06:18.9±0.4, 38°.04N×1°.24W, h12km, mb_Lg2.4/9, Error ellipse: s-maj=3.7km s-min=2.8km az=129.0*

ISC 05 11:06:18.3±0.9**, 38°.04N**±0°.02×**1°.21W**±0°.03**, h8**km±9km**, n20,** σ**0s.59**/37**, 3C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
E001A	**Albudeite (Mur**	0.14	261	⇑Pg	**Pg**	**11 06 21.1**	**-0.3**
E001A				Sg	**Sg**	**11 06 23.3**	**-0.2**
E1002	**Yechar (Murcia**	0.18	281	⇑Pg	**Pg**	**11 06 21.7**	**-0.4**
E1002				Sg	**Sg**	**11 06 24.5**	**-0.1**
EMUR	**La Murta**	0.20	187	Pg	**Pg**	**11 06 22.4**	**+0.1**
EMUR				Sg	**Sg**	**11 06 25.5**	**+0.5**
EMUR	**La Murta**	0.20	187	⇓Pg	**Pg**	**11 06 22.4**	**+0.1**
EMUR				Sg	**Sg**	**11 06 25.6**	**+0.5**
EMUR				*i* Vmb_Lg		11 06 26.6	
EZAR	**Zarzadilla de**	0.41	247	⇑Pg	**Pg**	**11 06 25.8**	**-0.6**
EZAR				Sg	**Sg**	**11 06 32.0**	**+0.1**
EZAR				*i* Vmb_Lg		11 06 33.5	
CART	**Cartagena**	0.48	160	Pg	**Pg**	**11 06 27.7**	**+0.1**
CART				Sg	**Sg**	**11 06 33.7**	**-0.2**

TLOR	**Lorca, Murcia**	**0.54**	**225**	Pg	**Pg**	**11 06 28.8**	**+0.1**
TLOR				Sg	**Sg**	**11 06 36.2**	**+0.5**
ETOB	**Tobarra**	**0.66**	**336**	Pg	**Pg**	**11 06 30.8**	**-0.2**
ETOB				Sg	**Sg**	**11 06 40.6**	**+0.9**
ETOB	**Tobarra**	**0.66**	**336**	Pg	**Pg**	**11 06 30.7**	**-0.4**
ETOB				Sg	**Sg**	**11 06 39.8**	**+0.1**
ETOB				*i* Vmb_Lg		11 06 46.4	
AFON	**Font Roja**	**0.82**	**40**	Pg	**Pg**	**11 06 34.5**	**+0.5**
AFON				Sg	**Sg**	**11 06 44.7**	**0.0**
AFON				*i* Vmb_Lg		11 06 52.3	
EVIV	**Cofrentes, Val**	**1.23**	**3**	Pg	**Pn**	**11 06 41.4**	**-0.5**
EVIV				Sg	**Sb**	**11 06 57.5**	**-0.4**
ENIJ	**Nijar**	**1.33**	**217**	Pn	**Pn**	**11 06 42.3**	**-0.9**
EQES	**Quesada**	**1.49**	**261**	Pg	**Pb**	**11 06 46.4**	**+0.1**
EQES				Sg	**Sg**	**11 07 06.1**	**-0.1**
EQES				*i* Vmb_Lg		11 07 10.3	
ECHE	**Chera**	**1.56**	**7**	Pn	**Pn**	**11 06 47.1**	**+0.7**
ECHE				Sn	**Sb**	**11 07 07.6**	**+0.2**
ECHE	**Chera**	**1.56**	**7**	Pg	**Pb**	**11 06 47.7**	**+0.2**
ECHE				Sg	**Sb**	**11 07 07.5**	**0.0**
ECHE				*i* Vmb_Lg		11 07 09.6	
EQTA	**Presa de Quent**	**1.96**	**246**	Pn	**Pn**	**11 06 52.5**	**+0.6**
EQTA				Sn	**Sb**	**11 07 17.9**	**-0.9**
EIBI	**Ibiza**	**2.23**	**63**	Pn	**Pn**	**11 06 54.1**	**-1.5**
ELGU	**Los Guajares,**	**2.25**	**239**	Pn	**Pn**	**11 06 56.5**	**+0.6**
EADA	**Adamuz**	**2.66**	**274**	Pn	**Pn**	**11 07 01.7**	**+0.2**
EADA				Sg	**Sg**	**11 07 43.5**	**-0.2**
PAB	**San Pablo**	**2.88**	**303**	Pn	**Pn**	**11 07 03.7**	**-0.8**
PAB				Sg	**Sb**	**11 07 46.9**	**+1.6**
PAB				*i* Vmb_Lg		11 07 55.3	

IDC 05 11:07:39.9±11.0, 3°32N×127°30E, h194km±107km, mb3.2/5, mbtmp3.7/5, Error ellipse: s-maj=159.6km s-min=21.7km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.12**	**164**	P	P	11 12 37.9	-0.2
	0.4nm,0.3s,baz=342,slow=9.8,SNR=13						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**27.58**	**167**	P	P	11 13 09.4	+0.2
	0.9nm,0.5s,baz=354,slow=7.7,SNR=40						
ASAR				PcP	PcP	11 16 21.6	-0.4
	0.2nm,0.6s,baz=332,slow=2.3,SNR=4.7						
	0.9nm,0.5s						
STKA	**Stephens Creek**	**37.55**	**160**	P	P	11 14 35.3	-0.2
	0.6nm,0.4s,baz=345,slow=12,SNR=2.9						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**58.22**	**325**	P	P	11 17 14.0	+0.1
	0.2nm,0.3s,baz=114,slow=8.0,SNR=3.9						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**62.39**	**327**	P	P	11 17 41.8	-0.2
	0.3nm,0.4s,baz=122,slow=7.5,SNR=2.8						
	0.3nm,0.4s						

*NNC **05** 11:27:47.5±1.1, 51°69N×75°43E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=16.6km s-min=6.8km az=25.0, Suspected Mining explosion.*
*IDC **05** 11:27:51.0±1.0, 51°77N×75°71E, h0km, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=25.4km s-min=7.5km az=31.0*
ISC 05 11:27:47.1±0.9, 51°73N±0°06×75°33E±0°05, h0km, n13, σ1s28/14, 8C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.30**	**118**	⇑Pg	**Pb**	**11 28 28.1**	**-1.3**
	3.9nm,0.5s						
KURBB				⇓Lg	Lg	11 28 59.3	
	34nm,0.5s						
KURBB	**Kurchatov Arra**	**2.30**	**118**	Pg	**Pb**	**11 28 28.5**	**-0.9**
	0.5nm,0.3s,baz=304,slow=18,SNR=12						
KURBB				Lg	Lg	11 28 58.0	
	0.7nm,0.3s,baz=306,slow=32,SNR=8.4						
KURK	**Kurchatov**	**2.31**	**115**	⇑Pg	**Pn**	**11 28 27.1**	**+0.8**
	3.5nm,0.6s						
KURK				⇓Lg	Lg	11 28 58.3	
	9.7nm,0.5s						
BVA0	**Borovoye Array**	**3.29**	**295**	⇓Pg	**Pg**	**11 28 48.7**	**-1.4**
	3.9nm,0.9s,baz=116,slow=15,SNR=9.9						
BVA0				⇓Lg	Lg	11 29 33.1	
	9.1nm,0.5s,baz=116,slow=26,SNR=10						
BVAR	**Borovoye Array**	**3.29**	**295**	Pn	**Pb**	**11 28 46.3**	**0.0**
	0.1nm,0.3s,baz=113,slow=14,SNR=12						
BVAR				Sn	**Sb**	**11 29 27.7**	**+0.8**
	0.2nm,0.3s,baz=112,slow=23,SNR=6.3						
BVAR				Lg	Lg	11 29 35.9	
	0.5nm,0.3s,baz=112,slow=27,SNR=14						
	2.9nm,0.5s						
BRVK	**Borovoye**	**3.36**	**295**	⇑Pg	**Pg**	**11 28 50.0**	**-1.4**
	1.8nm,0.6s						
BRVK				⇓Lg	Lg	11 29 35.5	
	10nm,0.6s						
OTUK	**Ortayu**	**3.98**	**210**	⇓Pg	**Pg**	**11 29 02.3**	**-1.1**
	1.2nm,0.7s						
OTUK				⇑Lg	Lg	11 29 57.3	
	4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**6.17**	**65**	Pn	**Pn**	**11 29 21.1**	**+1.8**
	0.4nm,0.3s,baz=255,slow=14,SNR=6.8						
ZALV				Sn	**Sn**	**11 30 29.7**	**-0.8**
	0.1nm,0.3s,baz=251,slow=23,SNR=2.3						
	1.4nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.17**	**65**	I	I	12 05 20.0	
	baz=252,slow=332,SNR=3.4						
MAKZ	**Makanchi**	**6.57**	**136**	⇑Sn	**Sn**	**11 30 40.7**	**+0.2**
	1.2nm,0.6s						
MAKZ				⇑Lg	Lg	11 31 16.8	
	3.4nm,0.6s						
MK31	**Makanchi Array**	**6.72**	**135**	⇑Sn	**Sn**	**11 30 44.2**	**0.0**
	0.4nm,0.5s,baz=338,slow=31,SNR=5.7						
MK31				⇑Lg	Lg	11 31 18.0	
	3.3nm,0.7s,baz=317,slow=26,SNR=9.1						
MKAR	**Makanchi Array**	**6.72**	**135**	Pn	**Pn**	**11 29 29.1**	**+2.1**
	0.1nm,0.3s,baz=317,slow=12,SNR=5.0						
MKAR				Sn	**Sn**	**11 30 44.8**	**+0.6**
	0.2nm,0.3s,baz=321,slow=20,SNR=7.9						
MKAR				Lg	Lg	11 31 18.6	
	0.5nm,0.3s,baz=321,slow=26,SNR=11						
	0.2nm,0.5s						
AAK	**Ala-Archa**	**9.11**	**184**	Lg	Lg	11 32 36.2	
	0.2nm,0.3s,baz=230,slow=22,SNR=3.5						

KRSC 05 11:34:45.2±0.8, 55°83N×162°31E, h76km±14km, MI3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.48**	**28**	*e*P	Pn	11 34 59.5	+1.2
KBG				*e*S	Sn	11 35 09.3	+1.4
ZLN	**Zelenaya**	**0.87**	**283**	*i* P	Pn	11 35 03.7	+1.1
ZLN				*e*S	Sn	11 35 16.7	+1.4
SMKR	**Semkarok**	**0.89**	**328**	*e*P	Pn	11 35 03.5	+0.8
SMKR				*e*S	Sn	11 35 16.7	+1.0
BZGR	**Bezymyannyi-Gr**	**0.92**	**277**	*i* P	Pn	11 35 04.2	+1.1
BZGR				*e*S	Sn	11 35 17.6	+1.2
CIRR	**Tsirk**	**0.92**	**288**	*e*P	Pn	11 35 04.2	+1.0
BDR	**Baidarnaya**	**0.96**	**321**	*e*P	Pn	11 35 04.7	+1.1
BZP	**Bezymyannyi-Pe**	**1.00**	**275**	*i* P	Pn	11 35 05.0	+0.9
BZMR	**Bezymyannaya**	**1.03**	**276**	*i* P	Pn	11 35 05.6	+1.1
BZWR	**Bezymyannyi-We**	**1.03**	**278**	*e*P	Pn	11 35 05.8	+1.3
SRKR	**Sorokina**	**1.04**	**323**	*e*S	Sn	11 35 20.7	+1.7
KLY	**Klyuchi**	**1.05**	**298**	*i* P	Pn	11 35 04.1	-0.4
KLY				*e*S	Sn	11 35 17.7	-1.3
KIRR	**Kirishev**	**1.11**	**277**	*i* P	Pn	11 35 06.7	+1.1
KMNR	**Kamenistaya**	**1.17**	**267**	*e*P	Pn	11 35 07.4	+1.2
KMNR				*e*S	Sn	11 35 23.9	+2.0
KPT	**Kopyto**	**1.18**	**277**	*e*P	Pn	11 35 07.5	+1.2
TUMD	**Tumrok D**	**1.26**	**241**	*e*P	Pn	11 35 08.5	+1.2
TUMD				*e*S	Sn	11 35 24.7	+1.0
TUMR	**Tumrok**	**1.35**	**247**	*e*P	Pn	11 35 10.1	+1.7
KOZ	**Kozyrevsk**	**1.39**	**280**	*e*P	Pn	11 35 10.6	+1.7
SRDR	**Sredinnyy**	**1.53**	**290**	*e*P	Pn	11 35 11.8	+1.0
SRDR				*e*S	Sn	11 35 31.6	+1.4
ESO	**Esso**	**2.04**	**274**	*e*P	Pn	11 35 18.4	+0.9
BKI	**Bering**	**2.18**	**105**	*e*P	Pn	11 35 21.3	+2.0
BKI				*e*S	Sn	11 35 46.5	+1.2
KII	**Karymskiy**	**2.44**	**224**	*e*P	Pn	11 35 25.7	+2.7
KII				*e*S	Sn	11 35 55.7	+3.8
SPN	**Mys Shipunski**	**3.05**	**207**	*e*P	Pn	11 35 31.8	+0.7
SPN				*e*S	Sn	11 36 05.6	-0.8
KRX	**Arik**	**3.27**	**222**	*e*P	Pn	11 35 37.1	+2.9
SMAR	**Somma**	**3.29**	**220**	*e*P	Pn	11 35 37.1	+2.6
AVH	**Avacha**	**3.31**	**220**	*e*P	Pn	11 35 37.7	+3.0
UGLR	**Uglovaya**	**3.32**	**219**	*e*P	Pn	11 35 37.7	+2.7
KOK	**Koryaka**	**3.33**	**222**	*e*P	Pn	11 35 38.0	+3.1
DALK	**Dalny**	**3.49**	**218**	*e*P	Pn	11 35 39.5	+2.4
PET	**Petropavlovsk**	**3.53**	**219**	*e*P	Pn	11 35 40.4	+2.7
KRMR	**Karymshinskiy**	**3.88**	**221**	*e*P	Pn	11 35 45.9	+3.5
KRMR				*e*S	Sn	11 36 31.5	+4.8
GRL	**Gorelyy**	**4.12**	**219**	*e*P	Pn	11 35 49.6	+3.7
ASAK	**Asacha**	**4.32**	**219**	*e*P	Pn	11 35 52.4	+3.9

*IDC **05** 11:41:58.5±1.9, 10°51S×66°20E, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/11, Error ellipse: s-maj=59.7km s-min=27.0km az=59.0*
ISC 05 11:41:59.7±2.1, 10°6S±0°3×66°1E±0°4, h10km, n24, σ0s39/10, mb4.0/8, MS3.5/11, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**6.90**	**66**	T	T	11 50 19.7	
	baz=245,slow=75,SNR=23						
H08S3	**Diego Garcia H**	**6.92**	**66**	T	T	11 50 28.1	
	baz=245,slow=75,SNR=37						
H08S2	**Diego Garcia H**	**6.92**	**66**	T	T	11 50 28.2	
	baz=245,slow=75,SNR=36						
PALK	**Pallekele**	**22.90**	**40**	LR	LR	11 53 41.6	
	comp=Z,31nm,20.8s,baz=321,slow=31						
MBAR	**Mbarara**	**36.54**	**283**	LR	LR	12 01 20.7	
	comp=Z,54nm,19.4s,baz=59,slow=32						
LSZ	**Lusaka**	**37.24**	**259**	LR	LR	12 02 30.5	
	comp=Z,60nm,20.2s,baz=88,slow=33						
H04N2	**CROZET ISLANDS**	**37.52**	**196**	T	T	12 28 47.9	
	baz=26						
H04N1	**CROZET ISLANDS**	**37.53**	**196**	T	T	12 28 40.4	
	baz=26,slow=74,SNR=4.5						
H04N3	**CROZET ISLANDS**	**37.54**	**196**	T	T	12 28 44.6	
	baz=26,slow=74						
LBTB	**Lobatse**	**41.01**	**244**	LR	LR	12 03 38.4	
	comp=Z,66nm,19.6s,baz=126,slow=32						
BOSA	**Boshof**	**42.23**	**239**	LR	LR	12 06 27.3	
	comp=Z,83nm,18.7s,baz=196,slow=35						
CMAR	**Chiang Mai Arr**	**43.36**	**49**	P	**P**	**11 50 02.6**	**+0.1**
	0.8nm,0.3s,baz=240,slow=9.2,SNR=7.3						
CMAR				LR	LR	12 07 42.6	
	comp=Z,14nm,19.1s,baz=140,slow=36						
	0.8nm,0.3s						
BRTR	**Keskin Array B**	**58.42**	**331**	LR	LR	12 15 51.7	
	comp=Z,18nm,19.4s,baz=1.0,slow=35						
MKAR	**Makanchi Array**	**58.90**	**13**	P	**P**	**11 51 58.4**	**-0.5**
	0.2nm,0.6s,baz=218,slow=11,SNR=2.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**61.88**	**9**	P	**P**	**11 52 18.9**	**-0.2**
	1.8nm,1.0s,baz=206,slow=7.1,SNR=8.4						
	1.8nm,1.0s						
BVAR	**Borovoye Array**	**63.44**	**3**	P	**P**	**11 52 29.3**	**-0.2**
	1.7nm,0.9s,baz=184,slow=4.5,SNR=6.2						
	1.7nm,0.9s						
ASAR	**Alice Springs**	**65.56**	**111**	P	**P**	**11 52 43.9**	**-0.3**
	0.7nm,0.9s,baz=251,slow=7.8,SNR=5.3						
ASAR				LR	LR	12 21 11.8	
	comp=Z,33nm,18.1s,baz=102,slow=36						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**66.10**	**107**	P	**P**	**11 52 47.6**	**0.0**
	1.9nm,1.0s,baz=308,slow=7.2,SNR=5.9						
	1.9nm,1.0s						
ZALV	**Zalesovo Beam**	**66.19**	**12**	P	**P**	**11 52 46.9**	**-0.5**
	1.5nm,1.0s,baz=224,slow=6.2,SNR=6.1						
	1.5nm,1.0s						
SONM	**Songino Array**	**68.23**	**28**	P	**P**	**11 53 01.1**	**+0.4**
	0.5nm,0.6s,baz=230,slow=6.9,SNR=4.8						
SONM				LR	LR	12 21 53.4	
	comp=Z,67nm,18.6s,baz=294,slow=35						
	0.5nm,0.6s						
JNU	**Nakatsue**	**75.35**	**52**	LR	LR	12 25 42.7	
	comp=Z,24nm,19.6s,baz=222,slow=35						
MJAR	**Matsushiro Arr**	**82.20**	**51**	LR	LR	12 30 52.2	
	comp=Z,22nm,18.7s,baz=184,slow=36						
PDAR	**Pinedale Array**	**147.70**	**354**	PKPbc	**PKPbc**	**12 01 45.5**	**+0.2**
	0.4nm,0.9s,baz=29,slow=3.4,SNR=5.4						
NVAR	**Mina Array Bea**	**151.97**	**7**	PKPbc	**PKiKP**	**12 01 56.4**	**+0.2**
	1.1nm,0.9s,baz=332,slow=0.7,SNR=7.5						

*NEIC **05** 11:47:33.5±0.6, 36°03N±0°01×97°91W±0°01, h6km±5km, Error ellipse: s-maj=1.8km s-min=1.2km az=191.0*
TUL 05 11:47:33.8±0.6, 36°031N±0°010×97°91W±0°01, h6km±5km, ML2.3, mb_Lg2.4/9(NEIC), ML2.3/46(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=145.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.44**	**122**		Pg	11 47 42.4	+0.1
OK029				Sg	Sg	11 47 48.7	+0.7
OK029				IAML		11 47 49.0	
	326nm,0.5s						
CROK	**Carrier**	**0.48**	**353**	Pg	Pg	11 47 43.2	+0.2
CROK				Sg	Sg	11 47 50.0	+0.7
CROK				IAML		11 47 50.4	
	comp=E,243nm,0.3s						
CROK				IAML		11 47 58.9	
	comp=N,214nm,0.2s						
CSTR	**Hydro, Custer**	**0.74**	**239**	Pg	Pg	11 47 48.0	0.0
OK033	**Mehan**	**0.79**	**89**		Pg	11 47 48.1	-0.8
OK033				IAML		11 48 02.0	
	comp=N,128nm,0.1s						
OK033				IAML		11 48 04.9	
	comp=N,121nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**343**		Pg	11 47 48.4	-0.9
GC02	**Grant County #**	**0.82**	**3**		Pg	11 47 48.8	-0.7
OK048	**Pawnee Station**	**0.87**	**64**		Pg	11 47 50.1	-0.5
OK048				IAML		11 48 04.0	
	comp=N,76nm,0.1s						
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	11 47 50.2	-0.5
FNO				IAML		11 48 04.0	
	comp=E,113nm,0.1s						
OK052	**Battle Ridge R**	**0.90**	**92**		Pg	11 47 50.8	-0.2
OK052				IAML		11 48 09.8	
	comp=E,67nm,0.3s						
KAN14	**Manchester OK**	**0.93**	**357**		Pg	11 47 51.0	-0.5
KAN14				IAML		11 48 08.8	
	comp=N,87nm,0.1s						
KAN14				IAML		11 48 10.9	
	comp=E,98nm,0.1s						
U32A	**Winter Ranch,**	**0.95**	**292**		Pg	11 47 51.2	-0.8
U32A				IAML		11 48 06.7	
	comp=E,111nm,0.1s						
U32A				IAML		11 48 07.6	
	comp=N,128nm,0.3s						
QUOK	**Quay**	**0.98**	**81**	Pg	Pg	11 47 52.4	-0.3
QUOK				IAML		11 48 12.3	
	comp=N,87nm,0.2s						
QUOK				IAML		11 48 12.6	
	comp=E,88nm,0.2s						
OK051	**E0350 and S346**	**0.99**	**61**	Pg	Pg	11 47 52.7	-0.1
KAN17	**Caldwell West**	**1.02**	**7**		Pg	11 47 52.4	-1.0
KAN17				IAML		11 48 10.9	
	comp=N,127nm,0.2s						
KAN13	**South Haven SW**	**1.04**	**19**	Pg	Pg	11 47 53.0	-0.8
KAN01	**Argonia South**	**1.13**	**6**	Pg	Pg	11 47 54.8	-0.6
KAN01				IAML		11 48 11.2	
	comp=E,74nm,0.1s						
KAN01				IAML		11 48 13.0	
	comp=N,72nm,0.1s						
KAN09	**Caldwell North**	**1.13**	**12**	Pg	Pg	11 47 54.7	-0.7
DEOK	**Depew**	**1.16**	**99**		Pg	11 47 54.7	-1.4
DEOK				IAML		11 48 18.6	
	comp=N,57nm,0.2s						
DEOK				IAML		11 48 19.1	
	comp=E,71nm,0.1s						
KAN06	**Argonia West S**	**1.22**	**2**		Pg	11 47 55.7	-1.4
KAN06				IAML		11 48 17.7	
	comp=E,62nm,0.1s						
KAN06				IAML		11 48 17.9	
	comp=N,76nm,0.1s						
W35A	**Tecumseh**	**1.22**	**136**		Pg	11 47 56.3	-0.8
W35A				IAML		11 48 16.8	
	comp=N,81nm,0.4s						
X34A	**Smith Ranch, M**	**1.43**	**177**		Pn	11 48 00.1	-0.1
T35A	**Sooner Cattle**	**1.43**	**51**		Pn	11 47 60.0	-0.3
T35A				IAmb_Lg		11 48 19.9	
	comp=Z,10nm,1.1s						
WMOK	**Wichita Mounta**	**1.47**	**209**		Pn	11 48 00.3	-0.5
TUL3	**Leonard**	**1.72**	**93**		Pn	11 48 04.0	-0.2
SMWD	**Samnorwood**	**2.11**	**245**		Pn	11 48 10.2	+0.5
DKNS	**Dickens**	**3.42**	**227**	IAmb_Lg		11 49 24.3	
	comp=Z,9.2nm,1.1s						
MNHN	**Monahans**	**6.18**	**222**	IAmb_Lg		11 50 51.4	
	comp=Z,3.7nm,1.0s						
N41A	**Harden Midland**	**7.25**	**48**	IAmb_Lg		11 51 30.2	
	comp=Z,4.8nm,0.9s						
TEIG	**Tepich**	**17.87**	**149**	IAmb_Lg		11 51 15.9	
	comp=Z,9.6nm,1.3s						

*AZER **05** 12:10:52.3, 41°67N×46°09E, h4km, ml2.2*
*MOS **05** 12:10:52.4, 41°92N×46°12E, h19km, MPVA3.1*
*NORS **05** 12:10:53.0, 41°95N×46°09E, h18km, MPVA3.1*
*DRS **05** 12:10:55.3, 41°80N×45°86E, h24km*
ISC 05 12:10:52.6±1.1, 41°87N±0°02×46°06E±0°02, h17km±6km, n25, σ1s06/49, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKTA	**Zakatala**	**0.48**	**118**	P	**Pb**	**12 11 02.7**	**+0.1**
ZKTA				S	**Sn**	**12 11 10.7**	**-1.9**
BTLR	**Botlikh**	**0.81**	**9**	*e*Pg	**Pn**	**12 11 08.6**	**-0.7**
BTLR				*e*Sg	**Sn**	**12 11 19.7**	**-1.2**
KMKR	**Kumukh**	**0.82**	**71**	*e*Pg	**Pn**	**12 11 09.2**	**-0.3**
KMKR				*e*Sg	**Sn**	**12 11 20.8**	**-0.6**
XNZR	**Khunzakh**	**0.83**	**35**	*e*Pg	**Pn**	**12 11 09.5**	**-0.2**
XNZR				*e*Sg	**Sn**	**12 11 21.1**	**-0.5**
QZX	**Qazax, Azerbai**	**0.96**	**213**	P	**Pb**	**12 11 10.6**	**-0.1**
QZX				S	**Sb**	**12 11 24.7**	**+1.6**
UNCR	**Uncukul**	**1.01**	**33**	*e*Pg	**Pg**	**12 11 12.1**	**-0.1**
UNCR				*e*Sg	**Sn**	**12 11 25.8**	**0.0**
ARKR	**Arakani**	**1.01**	**43**	*e*Pg	**Pg**	**12 11 12.3**	**0.0**
ARKR				*e*Sg	**Sn**	**12 11 26.1**	**+0.2**
SEKA	**Sheki**	**1.08**	**127**	P	**Pg**	**12 11 13.2**	**-0.4**
SEKA				S	**Sg**	**12 11 29.4**	**+1.7**
KRNR	**Karanay**	**1.15**	**33**	*e*Pg	**Pg**	**12 11 14.1**	**-0.8**
KRNR				*e*Sg	**Sg**	**12 11 29.9**	**0.0**
GDB	**GEDABAY**	**1.17**	**191**	P	**Pn**	**12 11 13.4**	**-0.8**
GDB				S	**Sb**	**12 11 29.2**	**0.0**
URKR	**Urkarakh**	**1.21**	**75**	*e*Pg	**Pg**	**12 11 15.2**	**-0.8**
URKR				*e*Sg	**Sg**	**12 11 31.7**	**-0.2**
BUJR	**Buynaksk**	**1.23**	**39**	*e*Pg	**Pg**	**12 11 15.3**	**-1.2**
BUJR				*e*Sg	**Sg**	**12 11 31.8**	**-0.8**
GANJ	**Ganja**	**1.24**	**171**	P	**Pn**	**12 11 15.0**	**-0.1**
GANJ				S	**Sg**	**12 11 33.5**	**+0.8**
DLMR	**Dylym**	**1.27**	**19**	*e*Pg	**Pg**	**12 11 19.0**	**+1.8**
DLMR				*i* Sg	**Sg**	**12 11 35.4**	**+1.5**
DBC	**Dubki**	**1.29**	**26**	*e*Pg	**Pg**	**12 11 16.1**	**-1.4**
DBC				*e*Sg	**Sg**	**12 11 33.4**	**-0.9**
AKT	**Akhty**	**1.31**	**107**	*e*Pg	**Pg**	**12 11 17.3**	**-0.6**
AKT				*i* Sg	**Sg**	**12 11 35.4**	**+0.3**
GUDG	**Gudauri**	**1.32**	**297**	*e*Pg	**Pg**	**12 11 18.2**	**+0.1**
GUDG				*e*Sg	**Sg**	**12 11 37.2**	**+1.8**
QBL	**Gabala**	**1.62**	**124**	Sn	**Sg**	**12 11 46.0**	**+1.0**
QSAR	**Qusar**	**1.69**	**101**	Pn	**Pg**	**12 11 25.1**	**+0.1**
QSAR				Sn	**Sg**	**12 11 49.4**	**+2.3**
XNQ	**Khinaliq**	**1.71**	**113**	Pn	**Pg**	**12 11 24.5**	**-1.0**
XNQ				Sn	**Sg**	**12 11 50.3**	**+2.5**
ZEI	**Tsey**	**1.84**	**301**	*e*Pg	**Pg**	**12 11 27.1**	**-1.0**
ZEI				*e*Sg	**Sg**	**12 11 51.6**	**-0.5**
AGDM	**Agdam**	**1.93**	**155**	Pn	**Pb**	**12 11 26.9**	**-0.4**
AGDM				Sn	**Sg**	**12 11 53.7**	**-1.0**
ONI	**Oni**	**2.07**	**291**	*e*Pg	**Pb**	**12 11 30.9**	**+1.3**
ONI				*e*Sg	**Sb**	**12 11 56.3**	**+1.3**
DIGR	**Digorskoe uzhe**	**2.11**	**300**	*e*Pg	**Pb**	**12 11 31.0**	**+0.5**
DIGR				*e*Sg	**Sg**	**12 11 58.9**	**-1.6**
PQL	**Pirkuli**	**2.19**	**119**	Pn	**Pn**	**12 11 29.2**	**+0.9**
PQL				Sn	**Sg**	**12 12 03.4**	**+0.2**

*IDC **05** 12:15:42.7±1.4, 16°28S×178°37W, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=102.0km s-min=19.6km az=149.0*
ISC 05 12:15:47.9±1.4, 16°3S±0°6×178°4W±0°4, h35km, n7, σ0s91/7, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.43**	**239**	P	**P**	**12 23 14.8**	**+0.1**
	5.5nm,0.8s,baz=92,slow=9.7,SNR=12						
	5.5nm,0.8s						
WRA	**Warramunga Arr**	**44.96**	**258**	P	**P**	**12 24 00.2**	**+0.2**
	2.8nm,0.7s,baz=93,slow=6.8,SNR=34						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**45.26**	**253**	P	**P**	**12 24 02.3**	**-0.1**
	22nm,0.7s,baz=88,slow=8.3,SNR=368						
NVAR	**Mina Array Bea**	**78.28**	**44**	P	**P**	**12 27 46.2**	**+1.5**
	0.3nm,0.5s,baz=225,slow=8.8,SNR=4.8						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**84.36**	**13**	P	**P**	**12 28 15.7**	**-0.3**
	0.2nm,0.4s,baz=224,slow=5.5,SNR=7.4						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.14**	**58**	P	**P**	**12 28 20.6**	**-0.3**
	0.4nm,0.7s,baz=211,slow=6.1,SNR=7.4						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**86.20**	**43**	P	**P**	**12 28 25.2**	**-0.8**
	0.3nm,0.5s,baz=164,slow=2.9,SNR=4.4						
	0.3nm,0.5s					

	baz=161									
Q20K	**Shuyak Island**	**0.63**	**155**	P	**Pn**	**12 32 10.8**	**-0.1**			
	baz=335									
Q20K				S	**Sn**	**12 32 21.8**	**-0.3**			
	baz=335									
SYI	**Shuyak Island**	**0.63**	**155**		**Pn**	**12 32 10.8**	**-0.1**			
SYI				IAML		12 32 22.2				
	comp=N,1µm,0.2s									
SYI				IAML		12 32 23.4				
	comp=E,1µm,0.4s									
SYI	**Shuyak Island**	**0.63**	**155**		**Sn**	**12 32 21.8**	**-0.3**			
HOM	**Homer**	**0.81**	**53**	Pn	**Pn**	**12 32 13.2**	**+0.5**			
HOM	**Homer**	**0.81**	**53**	P	**Pn**	**12 32 13.3**	**+0.5**			
	baz=234									
O20K	**Slope Mountain**	**0.92**	**9**		**Pn**	**12 32 14.3**	**+0.2**			
O20K					**Sn**	**12 32 27.7**	**-0.1**			
O20K	**Slope Mountain**	**0.92**	**9**	P	**Pn**	**12 32 14.3**	**+0.2**			
	baz=189									
O20K				S	**Sn**	**12 32 27.7**	**-0.1**			
	baz=189									
CNPM	**China Poot**	**0.92**	**67**	Pn	**Pn**	**12 32 13.9**	**-0.2**			
CNPM				Sn	**Sn**	**12 32 27.9**	**+0.1**			
CNPM				IAML		12 32 28.9				
	comp=N,1µm,0.4s									
KAHG	**Katmai Hook Gl**	**1.09**	**232**		**Pn**	**12 32 16.4**	**+0.2**			
BRLK	**Bradley Lake**	**1.19**	**59**		**Pn**	**12 32 16.5**	**-0.7**			
BRLK	**Bradley Lake**	**1.19**	**59**	Sn	**Sn**	**12 32 32.2**	**-1.2**			
BRLK				IAML		12 32 35.5				
	comp=N,942nm,0.4s									
BRLK				IAML		12 32 36.9				
	comp=E,817nm,0.3s									
KAHC	**Katmai Hardscr**	**1.21**	**245**		**Pn**	**12 32 17.5**	**-0.2**			
KAHC	**Katmai Hardscr**	**1.21**	**245**	P	**Pn**	**12 32 17.5**	**-0.2**			
	baz=63									
P18K	**Big Mountain,**	**1.21**	**281**	Pn	**Pn**	**12 32 16.9**	**-0.7**			
P18K	**Big Mountain,**	**1.21**	**281**		**Sn**	**12 32 32.4**	**-1.6**			
P18K	**Big Mountain,**	**1.21**	**281**	P	**Pn**	**12 32 16.9**	**-0.7**			
	baz=99									
P18K				S	**Sn**	**12 32 32.4**	**-1.6**			
	baz=99									
BRSE	**Bradley Lake S**	**1.24**	**62**		**Pn**	**12 32 17.6**	**-0.4**			
BRSE	**Bradley Lake S**	**1.24**	**62**	P	**Pn**	**12 32 17.5**	**-0.4**			
	baz=244									
RED	**Redoubt Volcan**	**1.25**	**3**		**Pn**	**12 32 17.8**	**-0.3**			
RED					**Sn**	**12 32 34.2**	**-0.7**			
O19K	**Port Alsworth**	**1.25**	**326**	Pn	**Pn**	**12 32 17.7**	**-0.2**			
O19K	**Port Alsworth**	**1.25**	**326**		**Sn**	**12 32 33.9**	**-0.8**			
O19K	**Port Alsworth**	**1.25**	**326**	P	**Pn**	**12 32 17.8**	**-0.2**			
	baz=144									
O19K				S	**Sn**	**12 32 33.9**	**-0.8**			
	baz=144									
RDSO	**Redoubt South**	**1.28**	**4**		**Pn**	**12 32 18.4**	**-0.2**			
RSO	**Redoubt South**	**1.29**	**3**		**Pn**	**12 32 18.5**	**-0.2**			
RDWB	**Redoubt West**	**1.32**	**1**		**Pn**	**12 32 18.8**	**-0.2**			
O18K	**Koktuh Hills**	**1.36**	**301**		**Pn**	**12 32 19.1**	**-0.2**			
O18K				IAML		12 32 37.0				
	comp=E,879nm,0.8s									
O18K				IAML		12 32 37.2				
	comp=N,799nm,0.5s									
O18K	**Koktuh Hills**	**1.36**	**301**		**Sn**	**12 32 36.1**	**-1.1**			
O18K	**Koktuh Hills**	**1.36**	**301**	P	**Pn**	**12 32 19.0**	**-0.4**			
	baz=119									
O18K				S	**Sn**	**12 32 36.1**	**-1.1**			
	baz=119									
NCT	**North Crescent**	**1.39**	**359**		**Pn**	**12 32 19.8**	**-0.1**			
KDAK	**Kodiak Island**	**1.41**	**173**		**Pn**	**12 32 19.8**	**-0.2**			
KDAK				IAML		12 32 38.4				
	comp=N,487nm,0.5s									
KDAK				IAML		12 32 39.0				
	comp=N,651nm,0.4s									
KDAK	**Kodiak Island**	**1.41**	**173**		**Sn**	**12 32 37.3**	**-0.9**			
KDAK	**Kodiak Island**	**1.41**	**173**	P	**Pn**	**12 32 19.9**	**-0.1**			
	comp=N,176nm,0.3s,baz=56,slow=5.6,SNR=232									
KDAK				S	**Sn**	**12 32 37.5**	**-0.7**			
	comp=N,135nm,0.3s,baz=320,slow=22,SNR=11									
RDJH	**Redoubt Jeurge**	**1.42**	**2**		**Pn**	**12 32 20.1**	**-0.2**			
DFR	**Drift River**	**1.43**	**4**		**Pn**	**12 32 20.4**	**+0.1**			
RDT	**Redoubt**	**1.43**	**10**		**Pn**	**12 32 20.1**	**-0.2**			
RDT					**Sn**	**12 32 38.2**	**-0.6**			
KVTA	**Katmai Vly 10**	**1.48**	**238**		**Pn**	**12 32 20.9**	**0.0**			
ACHA	**Angle Creek He**	**1.59**	**234**		**Pn**	**12 32 22.7**	**+0.3**			
KELA	**Mount Kelaz**	**1.65**	**245**		**Pn**	**12 32 23.3**	**+0.1**			
ANCK	**Angle Creek**	**1.67**	**235**		**Pn**	**12 32 24.0**	**+0.6**			
CNTC	**Contact Creek**	**1.80**	**241**		**Pn**	**12 32 25.4**	**+0.2**			
Q17K	**Contact Creek**	**1.81**	**241**	P	**Pn**	**12 32 25.4**	**+0.1**			
	baz=58									
P17K	**Kvichak River**	**1.82**	**272**		**Pn**	**12 32 25.2**	**-0.1**			
P17K	**Kvichak River**	**1.82**	**272**	P	**Pn**	**12 32 25.2**	**-0.1**			
	baz=89									
CAPN	**Captain Cook N**	**1.82**	**28**		**Pn**	**12 32 27.1**	**+1.7**			
CAPN	**Captain Cook N**	**1.82**	**28**	P	**Pn**	**12 32 27.1**	**+1.7**			
	baz=210									
N19K	**Bonanza Creek**	**1.82**	**335**		**Pn**	**12 32 25.5**	**0.0**			
N19K					**Sn**	**12 32 47.0**	**-1.1**			
N19K	**Bonanza Creek**	**1.82**	**335**	IAML		12 32 47.8				
	comp=E,536nm,0.7s									
N19K				IAML		12 32 48.0				
	comp=N,294nm,0.7s									
N19K	**Bonanza Creek**	**1.82**	**335**	P	**Pn**	**12 32 25.5**	**0.0**			
	baz=154									
N19K				S	**Sn**	**12 32 47.0**	**-1.1**			
	baz=154									
SLKM	**Skilak Lake**	**1.90**	**44**		**Pn**	**12 32 26.3**	**-0.2**			
OHAK	**Old Harbor**	**1.97**	**186**	Pn	**Pn**	**12 32 27.0**	**-0.3**			
OHAK	**Old Harbor**	**1.97**	**186**	P	**Pn**	**12 32 27.0**	**-0.3**			
OHAK	**Old Harbor**	**1.97**	**186**	P	**Pn**	**12 32 26.9**	**-0.3**			
	baz=5.6									
Q16K	**King Salmon**	**2.01**	**257**		**Pn**	**12 32 28.1**	**+0.3**			
Q16K	**King Salmon**	**2.01**	**257**	P	**Pn**	**12 32 28.1**	**+0.3**			
	baz=74									
N20K	**Mount Spurr**	**2.06**	**9**	P	**Pn**	**12 32 29.0**	**+0.4**			
	baz=190									
SPCR	**Spurr Chakacha**	**2.06**	**9**		**Pn**	**12 32 29.0**	**+0.4**			
O22K	**Cooper Landing**	**2.07**	**49**		**Pn**	**12 32 28.9**	**+0.3**			
O22K				IAML		12 33 03.0				
	comp=N,486nm,0.6s									
O22K	**Cooper Landing**	**2.07**	**49**	P	**Pn**	**12 32 28.8**	**+0.2**			
	baz=232									
SPCN	**Chakachatna No**	**2.09**	**10**		**Pn**	**12 32 29.4**	**+0.5**			
SPBG	**Spurr Blockage**	**2.11**	**7**		**Pn**	**12 32 29.7**	**+0.5**			
N18K	**Kilae Creek**	**2.13**	**316**		**Pn**	**12 32 29.4**	**0.0**			
N18K	**Kilae Creek**	**2.13**	**316**	IAML		12 33 08.5				
	comp=E,236nm,0.5s									
N18K	**Kilae Creek**	**2.13**	**316**	P	**Pn**	**12 32 29.4**	**0.0**			
	baz=134									
SPCP	**Crater Peak Br**	**2.13**	**10**		**Pn**	**12 32 30.1**	**+0.5**			
SPCG	**Spurr Capps Gl**	**2.17**	**11**		**Pn**	**12 32 30.6**	**+0.5**			
SPNN	**North Nagishla**	**2.20**	**3**		**Pn**	**12 32 30.9**	**+0.4**			
O17K	**Koliganek Bris**	**2.22**	**287**		**Pn**	**12 32 30.5**	**-0.1**			
O17K	**Koliganek Bris**	**2.22**	**287**	P	**Pn**	**12 32 30.5**	**-0.1**			
	baz=104									
SVW2	**Sparrevohn**	**2.35**	**326**		**Pn**	**12 32 32.5**	**+0.1**			
SVW2	**Sparrevohn**	**2.35**	**326**	P	**Pn**	**12 32 32.5**	**+0.1**			
FIS	**Fire Island**	**2.39**	**33**		**Pn**	**12 32 33.5**	**+0.7**			
FIS				IAML		12 33 05.2				
	comp=N,241nm,0.6s									
FIS				IAML		12 33 26.3				
	comp=E,240nm,1.1s									
STLK	**Strandline Lak**	**2.39**	**12**		**Pn**	**12 32 33.6**	**+0.7**			
RC01	**Rabbit Creek A**	**2.49**	**38**	Pn	**Pn**	**12 32 34.7**	**+0.5**			
RC01				IAML		12 33 05.3				
	comp=N,199nm,0.3s									
RC01				IAML		12 33 06.0				
	comp=E,244nm,0.3s									
RC01	**Rabbit Creek A**	**2.49**	**38**	P	**Pn**	**12 32 34.5**	**+0.2**			
	baz=221									
SUA	**Susitna One**	**2.53**	**24**	Pn	**Pn**	**12 32 35.9**	**+1.0**			
SUA				IAML		12 33 11.2				
	comp=N,197nm,0.7s									
SUA	**Susitna One**	**2.53**	**24**	P	**Pn**	**12 32 35.8**	**+0.8**			
	baz=206									
N17K	**Nushagak Hills**	**2.55**	**304**		**Pn**	**12 32 34.9**	**-0.1**			
N17K	**Nushagak Hills**	**2.55**	**304**	P	**Pn**	**12 32 34.9**	**-0.1**			
	baz=120									
P16K	**Nushagak River**	**2.63**	**269**		**Pn**	**12 32 36.5**	**+0.5**			
P16K	**Nushagak River**	**2.63**	**269**	P	**Pn**	**12 32 36.5**	**+0.5**			
	baz=85									
O16K	**Kokwok River B**	**2.69**	**281**		**Pn**	**12 32 36.8**	**-0.1**			
O16K	**Kokwok River B**	**2.69**	**281**	IAML		12 33 22.8				
	comp=N,110nm,0.9s									
O16K	**Kokwok River B**	**2.69**	**281**	P	**Pn**	**12 32 36.8**	**-0.1**			
	baz=97									
SII	**Sitkinak Islan**	**2.71**	**195**	Pn	**Pn**	**12 32 36.5**	**-0.8**			
SII				IAML		12 33 09.8				
	comp=E,270nm,0.4s									
M20K	**Styx River**	**2.72**	**358**		**Pn**	**12 32 38.0**	**+0.6**			
M20K	**Styx River**	**2.72**	**358**	P	**Pn**	**12 32 38.0**	**+0.6**			
	baz=178									
M18K	**Stony River**	**2.74**	**329**		**Pn**	**12 32 37.8**	**+0.2**			
M18K	**Stony River**	**2.74**	**329**	P	**Pn**	**12 32 37.8**	**+0.2**			
	baz=147									
M19K	**Big River Lodg**	**2.83**	**346**		**Pn**	**12 32 39.1**	**+0.3**			
M19K	**Big River Lodg**	**2.83**	**346**	P	**Pn**	**12 32 39.2**	**+0.3**			
	baz=164									
SKT	**Skwentna**	**2.89**	**13**	Pn	**Pn**	**12 32 40.3**	**+0.7**			
SKT				IAML		12 33 19.1				
	comp=E,96nm,0.3s									
SKT	**Skwentna**	**2.89**	**13**	P	**Pn**	**12 32 40.1**	**+0.4**			
	baz=194									
P23K	**Montague Islan**	**2.92**	**71**		**Pn**	**12 32 39.7**	**-0.3**			
P23K	**Montague Islan**	**2.92**	**71**	P	**Pn**	**12 32 39.7**	**-0.3**			
	baz=256									
PMR	**Palmer**	**3.06**	**36**		**Pn**	**12 32 42.0**	**+0.1**			
PMR	**Palmer**	**3.06**	**36**	P	**Pn**	**12 32 41.7**	**-0.2**			
	baz=219									
KNK	**Knik Glacier**	**3.15**	**43**		**Pn**	**12 32 42.7**	**-0.5**			
KNK	**Knik Glacier**	**3.15**	**43**	IAML		12 33 19.6				
	comp=E,170nm,0.6s									
KNK				IAML		12 33 19.9				
	comp=N,152nm,0.4s									
KNK	**Knik Glacier**	**3.15**	**43**	P	**Pn**	**12 32 42.7**	**-0.5**			
	baz=227									
L19K	**White Mountain**	**3.17**	**343**		**Pn**	**12 32 43.7**	**+0.4**			
L19K	**White Mountain**	**3.17**	**343**	IAML		12 33 20.4				
	comp=N,137nm,0.8s									
L19K				IAML		12 33 21.8				
	comp=E,184nm,0.5s									
L19K	**White Mountain**	**3.17**	**343**	P	**Pn**	**12 32 43.7**	**+0.4**			
	baz=162									
M17K	**Holitna River**	**3.17**	**317**		**Pn**	**12 32 43.9**	**+0.5**			
M17K	**Holitna River**	**3.17**	**317**	IAML		12 33 22.8				
	comp=E,185nm,0.6s									
M17K	**Holitna River**	**3.17**	**317**	P	**Pn**	**12 32 43.9**	**+0.5**			
	baz=133									
N16K	**Nishlik Lake**	**3.24**	**296**		**Pn**	**12 32 44.8**	**+0.5**			
N16K	**Nishlik Lake**	**3.24**	**296**	P	**Pn**	**12 32 44.8**	**+0.5**			
	baz=111									
GHO	**Glory Hole Cre**	**3.27**	**35**		**Pn**	**12 32 44.5**	**-0.3**			
GHO	**Glory Hole Cre**	**3.27**	**35**	IAML		12 33 22.6				
	comp=N,122nm,0.5s									
GHO				IAML		12 33 48.7				
	comp=E,105nm,1.0s									
L20K	**Farewell, AK**	**3.35**	**352**		**Pn**	**12 32 46.5**	**+0.6**			
L20K	**Farewell, AK**	**3.35**	**352**	P	**Pn**	**12 32 46.5**	**+0.6**			
	baz=171									
Q23K	**Middleton Isla**	**3.37**	**83**		**Pn**	**12 32 45.8**	**-0.3**			
Q23K	**Middleton Isla**	**3.37**	**83**	P	**Pn**	**12 32 45.8**	**-0.3**			
	baz=269									
MID	**Middleton Isla**	**3.38**	**83**	Pn	**Pn**	**12 32 45.9**	**-0.3**			
MID	**Middleton Isla**	**3.38**	**83**	P	**Pn**	**12 32 46.7**	**+0.6**			
HIN	**Hinchinbrook I**	**3.46**	**67**		**Pn**	**12 32 47.2**	**-0.1**			
HIN				IAML		12 33 27.7				
	comp=E,151nm,1.0s									
SML	**Sawmill**	**3.48**	**39**	Pn	**Pn**	**12 32 48.2**	**+0.6**			
SML				IAML		12 33 53.8				
	comp=N,73nm,1.1s									
SML				IAML		12 33 54.8				
	comp=E,64nm,1.3s									
SML	**Sawmill**	**3.48**	**39**	P	**Pn**	**12 32 47.5**	**0.0**			
	baz=223									
CUT	**Chulitna**	**3.49**	**21**		**Pn**	**12 32 48.2**	**+0.6**			
CUT	**Chulitna**	**3.49**	**21**	P	**Pn**	**12 32 48.2**	**+0.6**			
	baz=203									
M16K	**Timber Creek**	**3.55**	**304**		**Pn**	**12 32 48.9**	**+0.3**			
M16K	**Timber Creek**	**3.55**	**304**	P	**Pn**	**12 32 48.9**	**+0.3**			
	baz=119									
O15K	**Ungalikthiuk R**	**3.56**	**273**		**Pn**	**12 32 49.5**	**+0.8**			
O15K	**Ungalikthiuk R**	**3.56**	**273**	P	**Pn**	**12 32 49.5**	**+0.8**			
	baz=87									
L18K	**Granite Mounta**	**3.58**	**330**		**Pn**	**12 32 48.9**	**+0.1**			
L18K	**Granite Mounta**	**3.58**	**330**	IAML		12 33 30.6				
	comp=E,65nm,0.7s									
L18K	**Granite Mounta**	**3.58**	**330**	P	**Pn**	**12 32 48.9**	**+0.1**			
	baz=147									
M23K	**Glacier View**	**3.67**	**42**		**Pn**	**12 32 50.0**	**-0.2**			
M23K	**Glacier View**	**3.67**	**42**	P	**Pn**	**12 32 50.0**	**-0.2**			
	baz=227									
PPLA	**Purkeypile**	**3.75**	**5**		**Pn**	**12 32 52.3**	**+0.9**			
PPLA	**Purkeypile**	**3.75**	**5**	P	**Pn**	**12 32 52.3**	**+0.9**			
	baz=186									
N15K	**Kwethluk River**	**3.78**	**288**		**Pn**	**12 32 52.7**	**+1.0**			
N15K	**Kwethluk River**	**3.78**	**288**	IAML		12 33 37.2				
	comp=N,63nm,0.9s									
N15K				IAML		12 33 37.8				
	comp=E,93nm,0.8s									
N15K	**Kwethluk River**	**3.78**	**288**	P	**Pn**	**12 32 52.7**	**+1.0**			
	baz=102									
SCM	**Sheep Creek Mo**	**3.83**	**44**		**Pn**	**12 32 53.0**	**+0.5**			
SCM				IAML		12 33 38.2				
	comp=E,99nm,0.6s									
SCM				IAML		12 33 38.6				
	comp=N,112nm,0.7s									
SCM	**Sheep Creek Mo**	**3.83**	**44**	P	**Pn**	**12 32 52.7**	**+0.2**			
	baz=228									
EYAK	**Cordova Ski Ar**	**3.86**	**66**		**Pn**	**12 32 51.9**	**-0.8**			
EYAK	**Cordova Ski Ar**	**3.86**	**66**	P	**Pn**	**12 32 52.2**	**-0.5**			
EYAK	**Cordova Ski Ar**	**3.86**	**66**	P	**Pn**	**12 32 51.9**	**-0.8**			
	baz=252									
L17K	**Donlin**	**3.98**	**321**		**Pn**	**12 32 54.5**	**+0.1**			
L17K	**Donlin**	**3.98**	**321**	P	**Pn**	**12 32 54.5**	**+0.1**			
	baz=136									
TTA	**Tatalina**	**4.06**	**339**	Pn	**Pn**	**12 32 55.5**	**0.0**			
TTA	**Tatalina**	**4.06**	**339**	P	**Pn**	**12 32 55.7**	**+0.2**			
TTA	**Tatalina**	**4.06**	**339**	P	**Pn**	**12 32 55.5**	**0.0**			
	baz=157									
DIV	**Divide**	**4.07**	**58**		**Pn**	**12 32 55.4**	**-0.2**			
L16K	**Owhat River**	**4.13**	**311**	Pn	**Pn**	**12 32 56.6**	**+0.2**			
L16K	**Owhat River**	**4.13**	**311**	P	**Pn**	**12 32 56.5**	**+0.2**			
	baz=125									
WAT7	**Susitna Watana**	**4.17**	**27**		**Pn**	**12 32 57.5**	**+0.5**			
KLU	**Klutina**	**4.18**	**53**	Pn	**Pn**	**12 32 57.0**	**-0.2**			
KLU				IAML		12 33 47.3				
	comp=E,55nm,0.4s									
KLU				IAML		12 33 47.5				
	comp=N,86nm,0.4s									
KLU	**Klutina**	**4.18**	**53**	P	**Pn**	**12 32 56.9**	**-0.2**			
	baz=239									
M15K	**Kasigluk River**	**4.20**	**295**		**Pn**	**12 32 57.5**	**+0.1**			
M15K	**Kasigluk River**	**4.20**	**295**	P	**Pn**	**12 32 57.5**	**+0.1**			
	baz=108									
K20K	**Telida**	**4.23**	**353**		**Pn**	**12 32 58.4**	**+0.6**			
K20K	**Telida**	**4.23**	**353**	P	**Pn**	**12 32 58.4**	**+0.6**			
	baz=172									
WAT1	**Susitna Watana**	**4.23**	**28**		**Pn**	**12 32 58.0**	**+0.2**			
WAT1	**Susitna Watana**	**4.23**	**28**	P	**Pn**	**12 32 58.0**	**+0.2**			
	baz=212									
WAT6	**Susitna Watana**	**4.25**	**34**		**Pn**	**12 32 58.2**	**+0.1**			
WAT6	**Susitna Watana**	**4.25**	**34**	P	**Pn**	**12 32 58.2**	**+0.1**			
	baz=219									
CAST	**Castle Rocks**	**4.28**	**5**		**Pn**	**12 32 58.9**	**+0.4**			
CAST	**Castle Rocks**	**4.28**	**5**	P	**Pn**	**12 32 58.9**	**+0.4**			
	baz=186									
O14K	**Tigyukauivet M**	**4.30**	**275**		**Pn**	**12 32 59.5**	**+0.8**			
O14K	**Tigyukauivet M**	**4.30**	**275**	IAML		12 33 48.8				
	comp=E,35nm,0.8s									
O14K	**Tigyukauivet M**	**4.30**	**275**	P	**Pn**	**12 32 59.5**	**+0.8**			
	baz=87									
RAGM	**Ragged Mountai**	**4.33**	**70**		**Pn**	**12 32 58.9**	**-0.3**			
RAGM				IAML		12 34 39.9				
	comp=E,78nm,2.4s									
GOAT	**Goat Mountain**	**4.36**	**68**		**Pn**	**12 32 59.1**	**-0.4**			
KAIM	**Kayak Island**	**4.38**	**76**	Pn	**Pn**	**12 32 59.8**	**0.0**			
KAIM	**Kayak Island**	**4.38**	**76**	P	**Pn**	**12 33 00.1**	**+0.3**			
	baz=264									
K17K	**Iditarod**	**4.42**	**326**		**Pn**	**12 33 00.6**	**+0.3**			
K17K	**Iditarod**	**4.42**	**326**	IAML		12 34 05.8				
	comp=N,61nm,0.9s									
K17K	**Iditarod**	**4.42**	**326**	P	**Pn**	**12 33 00.6**	**+0.3**			
	baz=141									
M24K	**Tolsona, Glenn**	**4.43**	**46**		**Pn**	**12 33 00.6**	**+0.1**			
M24K	**Tolsona, Glenn**	**4.43**	**46**	IAML		12 33 54.2				
	comp=N,73nm,0.6s									
M24K	**Tolsona, Glenn**	**4.43**	**46**	P	**Pn**	**12 33 00.6**	**+0.1**			
	baz=231									
TRF	**Thorofare Moun**	**4.47**	**15**		**Pn**	**12 33 01.5**	**+0.3**			
TRF	**Thorofare Moun**	**4.47**	**15**	IAML		12 33 54.2				
	comp=N,44nm,0.6s									
TRF				IAML		12 33 57.6				
	comp=E,35nm,0.5s									
TRF	**Thorofare Moun**	**4.47**	**15**	P	**Pn**	**12 33 01.5**	**+0.3**			
	baz=198									
KTH	**Kantishna Hill**	**4.50**	**11**	Pn	**Pn**	**12 33 02.3**	**+0.8**			
KTH				IAML		12 34 23.7				
	comp=N,26nm,1.7s									
HMT	**Hamilton**	**4.52**	**71**		**Pn**	**12 33 01.2**	**-0.6**			
BMRM	**Bremner River**	**4.53**	**63**		**Pn**	**12 33 01.5**	**-0.4**			
BMRM	**Bremner River**	**4.53**	**63**	P	**Pn**	**12 33 01.5**	**-0.4**			
	baz=250									
NICHA	**Nichawak Mount**	**4.65**	**73**		**Pn**	**12 33 03.5**	**0.0**			
RND	**Reindeer**	**4.67**	**23**		**Pn**	**12 33 04.1**	**+0.3**			
RND	**Reindeer**	**4.67**	**23**	IAML		12 33 58.2				
	comp=N,23nm,0.5s									
RND				IAML		12 34 00.1				
	comp=E,31nm,0.3s									
J18K	**Innoko River**	**4.68**	**339**		**Pn**	**12 33 04.0**	**+0.1**			
J18K	**Innoko River**	**4.68**	**339**	P	**Pn**	**12 33 04.0**	**+0.1**			
	baz=155									
SUCK	**Suckling Hills**	**4.72**	**75**		**Pn**	**12 33 04.2**	**-0.2**			
SUCK	**Suckling Hills**	**4.72**	**75**	IAML		12 35 02.6				
	comp=E,55nm,2.5s									
DHY	**Denali Highway**	**4.74**	**32**	P	**Pn**	**12 33 05.2**	**+0.4**			
	baz=217									
N25K	**Chitina, Valde**	**4.79**	**56**		**Pn**	**12 33 05.7**	**+0.3**			
N25K				IAML		12 34 01.1				
	comp=E,24nm,0.6s									
N25K				IAML		12 34 01.5				
	comp=N,24nm,1.0s									
N25K	**Chitina, Valde**	**4.79**	**56**	P	**Pn**	**12 33 05.1**	**-0.3**			
	baz=243									
BERG	**Berg Lake**	**4.81**	**71**		**Pn**	**12 33 05.2**	**-0.4**			
M14K	**Bethel**	**4.82**	**293**		**Pn**	**12 33 06.0**	**+0.3**			
M14K				IAML		12 34 28.8				
	comp=E,40nm,2.3s									
M14K				IAML		12 34 31.4				
	comp=N,45nm,2.0s									
L15K	**Ungalak Mounta**	**4.94**	**304**		**Pn**	**12 33 07.9**	**+0.5**			
L15K	**Ungalak Mounta**	**4.94**	**304**	P	**Pn**	**12 33 07.9**	**+0.5**			
	baz=117									
MCK	**McKinley**	**4.95**	**21**		**Pn**	**12 33 08.2**	**+0.6**			
MCK	**McKinley**	**4.95**	**21**	P	**Pn**	**12 33 08.2**	**+0.6**			
	baz=204									
BGLC	**Bering Glacier**	**4.97**	**75**		**Pn**	**12 33 08.6**	**+0.8**			
BGLC	**Bering Glacier**	**4.97**	**75**	P	**Pn**	**12 33 08.6**	**+0.8**			
	baz=263									
GRIN	**Grindle Hills**	**4.98**	**73**		**Pn**	**12 33 08.1**	**+0.1**			
HARP	**HAARP**	**4.99**	**46**		**Pn**	**12 33 08.8**	**+0.7**			
HARP	**HAARP**	**4.99**	**46**	P	**Pn**	**12 33 08.7**	**+0.7**			
	baz=233									
J19K	**Poorman**	**5.01**	**346**		**Pn**	**12 33 08.6**	**+0.2**			
J19K	**Poorman**	**5.01**	**346**	IAML		12 34 04.1				
	comp=E,32nm,0.5s									
J19K				IAML		12 34 05.0				
	comp=N,38nm,0.5s									
J19K	**Poorman**	**5.01**	**346**	P	**Pn**	**12 33 08.5**	**+0.2**			
	baz=164									
BPAW	**Bear Paw Mtn.**	**5.03**	**10**		**Pn**	**12 33 08.7**	**+0.1**			
BPAW	**Bear Paw Mtn.**	**5.03**	**10**	P	**Pn**	**12 33 08.7**	**+0.1**			
	baz=191									
KHIT	**Khitrov Hills**	**5.04**	**71**		**Pn**	**12 33 08.4**	**-0.4**			
J20K	**Nowinta River**	**5.05**	**354**		**Pn**	**12 33 09.5**	**+0.6**			
J20K	**Nowinta River**	**5.05**	**354**	IAML		12 34 06.6				
	comp=E,26nm,0.6s									
J20K				IAML		12 34 07.2				
	comp=N,22nm,0.6s									
**

	baz=164							
H17K	**Granite Mounta**	**6.65**	**333**			**Pn**	**12 33 31.5**	**+0.8**
H17K	**Granite Mounta**	**6.65**	**333**	P		**Pn**	**12 33 31.5**	**+0.8**
	baz=147							
H22K	**Ishtalitna Cre**	**6.78**	**5**			**Pn**	**12 33 33.2**	**+0.7**
H22K	**Ishtalitna Cre**	**6.78**	**5**	P		**Pn**	**12 33 33.2**	**+0.7**
	baz=187							
BCPM	**Bancas Point**	**6.79**	**78**	Pn		**Pn**	**12 33 32.3**	**-0.3**
IMAR	**Indian Mountai**	**6.84**	**357**	Pn		**Pn**	**12 33 34.1**	**+0.7**
PNL	**Peninsula**	**6.91**	**80**			**Pn**	**12 33 33.9**	**-0.4**
PNL	**Peninsula**	**6.91**	**80**	P		**Pn**	**12 33 34.0**	**-0.3**
PNL	**Peninsula**	**6.91**	**80**	P		**Pn**	**12 33 33.9**	**-0.4**
	baz=272							
J26L	**Joseph Creek**	**6.93**	**36**			**Pn**	**12 33 34.1**	**-0.4**
H16K	**Elim**	**7.03**	**325**			**Pn**	**12 33 36.2**	**+0.5**
H16K	**Elim**	**7.03**	**325**	P		**Pn**	**12 33 36.3**	**+0.5**
	baz=137							
H24K	**Noodor Dome**	**7.08**	**17**			**Pn**	**12 33 36.5**	**-0.1**
H24K	**Noodor Dome**	**7.08**	**17**	P		**Pn**	**12 33 36.5**	**-0.1**
	baz=202							
K27K	**Chicken**	**7.09**	**42**	Pn		**Pn**	**12 33 39.4**	**+2.7**
PRP	**Porcupine Dome**	**7.23**	**25**			**Pn**	**12 33 39.4**	**+0.7**
PRP	**Porcupine Dome**	**7.23**	**25**	P		**Pn**	**12 33 38.7**	**+0.1**
	baz=212							
G18K	**Tagagawik**	**7.25**	**341**			**Pn**	**12 33 40.0**	**+1.2**
G19K	**Purcell Mounta**	**7.25**	**346**			**Pn**	**12 33 39.7**	**+0.8**
G19K	**Purcell Mounta**	**7.25**	**346**	P		**Pn**	**12 33 39.8**	**+0.9**
	baz=163							
O29M	**Mount Kennedy**	**7.33**	**75**			**Pn**	**12 33 40.8**	**+0.8**
O29M	**Mount Kennedy**	**7.33**	**75**	P		**Pn**	**12 33 40.8**	**+0.8**
	baz=267							
G21K	**Allakaket**	**7.37**	**358**			**Pn**	**12 33 41.5**	**+1.0**
G21K	**Allakaket**	**7.37**	**358**	P		**Pn**	**12 33 41.5**	**+1.0**
	baz=178							
YUK4	**Talbot Arm**	**7.42**	**67**	P		**Pn**	**12 33 43.0**	**+1.7**
	baz=259							
G16K	**Koyuk River**	**7.63**	**329**	Pn		**Pn**	**12 33 44.6**	**+0.6**
G23K	**Bananza Creek**	**7.68**	**9**			**Pn**	**12 33 45.0**	**+0.3**
P29M	**Windy Craggy**	**7.75**	**80**			**Pn**	**12 33 46.1**	**+0.3**
YUK5	**Granite Creek**	**7.76**	**69**			**Pn**	**12 33 46.5**	**+0.6**
M29M	**Somme Creek**	**7.78**	**59**			**Pn**	**12 33 46.0**	**-0.2**
M29M	**Somme Creek**	**7.78**	**59**	P		**Pn**	**12 33 46.0**	**-0.2**
	baz=252							
HYT	**Haines Junctio**	**7.89**	**71**	Pn		**Pn**	**12 33 48.4**	**+0.6**
ANM	**Nome**	**7.99**	**318**	Pn		**Pn**	**12 33 50.4**	**+1.5**
F19K	**Shaleruckik Mo**	**8.00**	**346**			**Pn**	**12 33 50.9**	**+1.9**
F20K	**Avaraart Lake**	**8.01**	**352**			**Pn**	**12 33 50.2**	**+1.1**
DAWY	**Dawson**	**8.08**	**47**	Pn		**Pn**	**12 33 50.6**	**+0.3**
L29M	**L29M**	**8.16**	**55**	Pn		**Pn**	**12 33 52.7**	**+1.4**
E19K	**Redstone River**	**8.54**	**349**	Pn		**Pn**	**12 33 58.1**	**+1.7**
O30N	**Mendenhall**	**8.58**	**72**	Pn		**Pn**	**12 33 57.9**	**+0.8**
F24K	**Squaw Lake**	**8.67**	**13**	Pn		**Pn**	**12 33 58.4**	**+0.1**
I28M	**Miner Creek**	**8.71**	**38**	Pn		**Pn**	**12 34 00.6**	**+1.8**
S31K	**Pelican**	**8.80**	**91**	Pn		**Pn**	**12 33 58.9**	**-1.0**
E18K	**Tukpahlearik C**	**8.96**	**341**	Pn		**Pn**	**12 34 04.1**	**+1.9**
SKAG	**Skagway**	**8.99**	**81**	P		**Pn**	**12 34 04.4**	**+1.8**
E22K	**Anaktuvuk Pass**	**9.01**	**3**	Pn		**Pn**	**12 34 04.1**	**+1.2**
BMAR	**Burnt Mountain**	**9.08**	**21**	Pn		**Pn**	**12 34 04.4**	**+0.6**
WHY	**Whitehorse**	**9.17**	**73**	Pn		**Pn**	**12 34 05.7**	**+0.6**
J30M	**Hart River**	**9.50**	**48**	Pn		**Pn**	**12 34 11.4**	**+1.8**
SIT	**Sitka**	**9.54**	**95**	P		**Pn**	**12 34 09.4**	**-0.6**
E25K	**Arctic Village**	**9.54**	**17**	Pn		**Pn**	**12 34 09.7**	**-0.4**
R32K	**Eaglecrest**	**9.60**	**87**	Pn		**Pn**	**12 34 11.0**	**0.0**
JIS	**Juneau Island**	**9.67**	**87**	P		**Pn**	**12 34 13.4**	**+1.6**
D22K	**Ayikyak River**	**9.74**	**0**	Pn		**Pn**	**12 34 12.6**	**-0.2**
S32K	**Killisnoo**	**9.79**	**92**	Pn		**Pn**	**12 34 13.1**	**-0.3**
FARO	**Faro, Yukon**	**10.05**	**64**	Pn		**Pn**	**12 34 17.5**	**+0.5**
P33M	**Teslin, Yukon**	**10.20**	**76**	Pn		**Pn**	**12 34 19.3**	**+0.2**
C19K	**Lookout Ridge**	**10.38**	**347**	Pn		**Pn**	**12 34 22.3**	**+0.8**
D25K	**Kavik River**	**10.57**	**13**	Pn		**Pn**	**12 34 24.3**	**+0.2**
Q32M	**Nakina River**	**10.62**	**82**	Pn		**Pn**	**12 34 25.7**	**+0.7**
C16K	**Lisburne Hills**	**10.64**	**334**	Pn		**Pn**	**12 34 26.1**	**+1.1**
B20K	**Meade River**	**11.03**	**352**	Pn		**Pn**	**12 34 28.4**	**-1.8**
U33K	**Whale Pass**	**11.03**	**98**	Pn		**Pn**	**12 34 28.3**	**-2.0**
R33M	**Jennings River**	**11.21**	**79**	Pn		**Pn**	**12 34 32.3**	**-0.7**
B22K	**Teshekpuk Lake**	**11.21**	**359**	Pn		**Pn**	**12 34 30.9**	**-1.8**
CRAG	**Craig**	**11.31**	**101**	Pn		**Pn**	**12 34 32.3**	**-1.8**
CRAG	**Craig**	**11.31**	**101**	P		**Pn**	**12 34 33.4**	**-0.7**
S34M	**Telegraph Cree**	**11.44**	**87**	Pn		**Pn**	**12 34 36.0**	**+0.1**
DLBC	**Dease Lake**	**11.87**	**84**	Pn		**Pn**	**12 34 43.9**	**+2.0**
DLBC	**Dease Lake**	**11.87**	**84**	P		**Pn**	**12 34 43.5**	**+1.7**
	comp=N,0.4nm,0.3s,baz=215,slow=14,SNR=8.3 comp=N,1.0nm,0.3s							
V35K	**Ketchikan**	**12.13**	**99**	Pn		**Pn**	**12 34 44.9**	**-0.4**
T35M	**Bob Quinn**	**12.17**	**91**	Pn		**Pn**	**12 34 48.0**	**+2.1**
INK	**Inuvik**	**12.48**	**35**	P		**Pn**	**12 34 50.5**	**+0.7**
	comp=N,0.1nm,0.3s,baz=228,slow=11,SNR=2.0 comp=N,0.4nm,0.5s							
YKA	**Yellowknife Ar**	**18.76**	**63**	P		**Pn**	**12 36 09.5**	**+0.3**
	baz=277,slow=10,SNR=2.6 comp=N,0.2nm,0.6s							
PETK	**Petropavlovsk-**	**27.63**	**279**	P		**P**	**12 37 35.2**	**+0.1**
	comp=N,2.5nm,1.0s,baz=67,slow=13,SNR=7.0 comp=N,2.5nm,1.0s							
SONM	**Songino Array**	**55.32**	**306**	P		**P**	**12 41 21.0**	**+0.5**
	comp=N,0.3nm,0.4s,baz=39,slow=7.2,SNR=3.9 comp=N,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**58.07**	**324**	P		**P**	**12 41 40.0**	**+0.2**
	comp=N,0.5nm,0.5s,baz=32,slow=6.4,SNR=3.6 comp=N,0.5nm,0.5s							
BVAR	**Borovoye Array**	**62.82**	**332**	P		**P**	**12 42 12.7**	**+0.5**
	comp=N,0.6nm,0.7s,baz=30,slow=8.9,SNR=3.0 comp=N,0.6nm,0.7s							
MKAR	**Makanchi Array**	**65.11**	**322**	P		**P**	**12 42 26.8**	**-0.4**
	comp=N,0.1nm,0.4s,baz=27,slow=9.7,SNR=2.1 comp=N,0.1nm,0.4s							

NOU 05 12:34:35.1,17°.50S×167°.91E, h45km, MLv4.0/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**4.58**	**228**	P	Pn	12 35 42.1	+0.3
YATNC	**Mamie plateau,**	**4.64**	**192**	P	Pn	12 35 41.3	-1.3
DZM	**Mont Dzumac**	**4.75**	**197**	P	Pn	12 35 43.5	-0.8
NOUC	**Port Laguerre**	**4.82**	**198**	P	Pn	12 35 44.8	-0.4
ONTNC	**Ouen Toro**	**4.97**	**196**	P	Pn	12 35 47.4	+0.1
OUENC	**Ouen Island, N**	**5.00**	**191**	P	Pn	12 35 48.6	+1.0
PINNC	**Pines Island,**	**5.11**	**185**	P	Pn	12 35 49.7	+0.6

*SKHL **05** 12:35:19.5±0.2, 44°.30N×147°.50E, h120km±2km, mb4.7/3, msha5.2/3*
*JMA **05** 12:35:20.2±0.4, 44°N±2°×147°E±°, h125km, MV3.5/24, E OFF HOKKAIDO*

ISC 05 12:35:17.9±2.8, 44°.2N±0°.1×147°.6E±0°.1, h127km±16km, n16, σ0s79/27, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.65**	**236**	*i* P	**Pn**	**12 35 38.2**	**+0.7**
SHO				AMB	AMB	12 35 38.9	
	800nm,0.4s						
SHO				*i* S	**Sn**	**12 35 52.2**	**-0.2**
SHO				A	A	12 35 53.2	
	950nm,0.4s						
SHO				A	A	12 35 53.2	
	2µm,0.4s						
KUR	**Kuril'sk**	**1.02**	**12**	*i* P	**Pn**	**12 35 40.9**	**+0.3**
KUR				AMB	AMB	12 35 41.3	
	140nm,0.4s						
KUR				*i* S	**Sn**	**12 35 57.1**	**-0.8**
KUR				A	A	12 35 59.0	
	110nm,0.3s						
KUR				A	A	12 35 59.0	
	220nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.25**	**261**	*i* P	**Pn**	**12 35 43.5**	**+0.5**
YUK				AMB	AMB	12 35 44.0	
	220nm,0.4s						
YUK				*i* S	**Sn**	**12 36 01.6**	**-0.5**
YUK				A	A	12 36 02.7	
	270nm,0.3s						
YUK				A	A	12 36 02.7	
	310nm,0.3s						
NEM2	**Nemuro 2**	**1.59**	**237**	P	**Pn**	**12 35 47.4**	**+0.6**
NEM2				*e*S	**Sn**	**12 36 07.9**	**-0.8**
NMR	**Nemuro--Hokkai**	**1.60**	**238**	*i* P	**Pn**	**12 35 47.4**	**+0.6**
NMR				*e*S	**Sn**	**12 36 08.3**	**-0.6**
JNSB	**Nemuroshibetsu**	**1.91**	**257**	*e*P	**Pn**	**12 35 51.6**	**+1.0**
JKHN	**Kushirohamanak**	**2.10**	**237**	*e*P	**Pn**	**12 35 53.7**	**+0.8**
JKHN				*e*S	**Sn**	**12 36 19.1**	**-0.6**
JNK	**Nakash**	**2.17**	**253**	*e*P	**Pn**	**12 35 54.6**	**+0.8**
JNK				*e*S	**Sn**	**12 36 21.2**	**+0.1**
AKK	**Akkeshi**	**2.33**	**239**	*e*P	**Pn**	**12 35 56.5**	**+0.7**
AKK				*e*S	**Sn**	**12 36 23.8**	**-1.0**
JAK	**Akkeshi**	**2.43**	**240**	*e*P	**Pn**	**12 35 57.5**	**+0.5**
JAK				*e*S	**Sn**	**12 36 26.1**	**-1.0**
JTKR	**Abashiri--Toko**	**2.66**	**265**	*e*P	**Pn**	**12 36 00.2**	**+0.3**
JOB	**Onbets**	**3.03**	**245**	*e*P	**Pn**	**12 36 05.8**	**+1.1**
JOB				*e*S	**Sn**	**12 36 40.2**	**-0.7**
JMP	**Maruseppu**	**3.05**	**267**	*e*P	**Pn**	**12 36 05.4**	**+0.4**
JCH	**Churui**	**3.47**	**244**	*e*P	**Pn**	**12 36 11.2**	**+0.7**
JCH				*e*S	**Sn**	**12 36 49.8**	**-1.5**
JKK2	**Kamakawa 2**	**3.50**	**266**	*e*P	**Pn**	**12 36 12.0**	**+1.1**
JNBK	**Urakawa-nobuka**	**4.03**	**243**	*e*P	**Pn**	**12 36 17.8**	**-0.1**

TAP 05 13:12:45.2, 24°.24N×121°.71E, h13km, ML1.7, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.08**	**21**	*e*P	Pg	13 12 48.1	+0.1
	baz=26						
EHP				*e*S	Sg	13 12 50.3	+0.3
	baz=26						
EAHA	**Aohua**	**0.10**	**16**	P	Pg	13 12 48.4	+0.2
	baz=15						
EAHA				*e*S	Sg	13 12 50.4	+0.1
	baz=15						
ETL	**Fush Village**	**0.11**	**226**	P	Pg	13 12 48.6	+0.2
	baz=227						
ETL				S	Sg	13 12 50.6	0.0
	baz=227						
NACB	**Ninganchiao**	**0.12**	**240**	*i* P	Pg	13 12 48.6	+0.1
	baz=240						
NACB				*i* S	Sg	13 12 50.8	0.0
	baz=240						
TWD	**Chiawan**	**0.19**	**214**	⇑*i* P	Pg	13 12 49.7	+0.3
	baz=213						
TWD				*i* S	Sg	13 12 52.6	+0.3
	baz=213						
ENA	**Nanau**	**0.19**	**8**	*i* P	Pg	13 12 49.8	+0.2
	baz=10.0						
ENA				*i* S	Sg	13 12 52.7	+0.1
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.21**	**262**	P	Pg	13 12 50.2	+0.3
	baz=262						
ETLH				S	Sg	13 12 53.4	+0.3
	baz=262						
EWUT	**Wuta**	**0.22**	**17**	*i* P	Pg	13 12 50.3	+0.3
	baz=16						
EWUT				*i* S	Sg	13 12 53.4	+0.2
	baz=16						
ETM	**Tongmen**	**0.34**	**216**	P	Pg	13 12 52.2	+0.2
	baz=217						
ETM				S	Sg	13 12 56.7	+0.1
	baz=217						
LATG	**Datong**	**0.34**	**331**	*i* P	Pg	13 12 52.6	+0.4
	baz=330						
LATG				*i* S	Sg	13 12 57.5	+0.6
	baz=330						
LXIB	**Xiulin Townshi**	**0.34**	**232**	P	Pg	13 12 52.5	+0.2
	baz=233						
LXIB				S	Sg	13 12 57.7	+0.6
	baz=233						
NNSB	**Datong**	**0.35**	**303**	P	Pg	13 12 52.7	+0.3
	baz=302						
NNSB				S	Sg	13 12 57.9	+0.5
	baz=302						
ESAO	**Su ao**	**0.36**	**20**	*e*P	Pg	13 12 52.0	-0.5
	baz=19						
ESAO				*e*S	Sg	13 12 57.0	-0.4
	baz=19						
NNS	**Nan Shan**	**0.37**	**304**	*i* P	Pg	13 12 53.1	+0.5
	baz=303						
NNS				*i* S	Sg	13 12 58.5	+0.8
	baz=303						
TWC	**Suao**	**0.39**	**19**	*e*P	Pg	13 12 53.4	+0.3
	baz=12						
TWC				S	Sg	13 12 58.7	+0.3
	baz=12						
NDS	**Dongshan**	**0.40**	**1**	P	Pg	13 12 52.3	-0.9
	baz=360						
NDS				S	Sg	13 12 59.0	+0.5
	baz=360						
NDT	**Datong Townshi**	**0.41**	**334**	P	Pg	13 12 53.8	+0.4
	baz=333						
NDT				S	Sb	13 13 00.1	-0.2
	baz=333						
WHF	**Hehuan Shan**	**0.42**	**258**	P	Pg	13 12 53.3	-0.4
	baz=258						
WHF				S	Sg	13 12 59.2	-0.2
	baz=258						
ENTT	**Nioudou**	**0.42**	**342**	⇑*i* P	Pb	13 12 54.3	-0.3
	baz=342						
ENTT				*i* S	Sg	13 12 60.0	+0.6
	baz=342						
FUSS	**Fushou**	**0.43**	**272**	P	Pg	13 12 54.2	+0.5
	baz=272						
FUSS				S	Sg	13 13 00.2	+0.7
	baz=272						
SHUL	**Shoufeng**	**0.47**	**197**	*e*P	Pg	13 12 54.5	+0.1
	baz=200						
ESL	**Shilin**	**0.49**	**211**	P	Pg	13 12 54.7	-0.2
	baz=212						
ESL				*e*S	Sg	13 13 01.0	-0.4
	baz=212						
CHGB	**Renai**	**0.52**	**250**	P	Pb	13 12 56.1	-0.2
	baz=246						
CHGB				S	Sg	13 12 02.7	+0.3
	baz=246						
YHNB	**Yeheng**	**0.53**	**325**	P	Pb	13 12 56.3	0.0
	baz=324						
YHNB				S	Sb	13 13 03.5	-0.4
	baz=324						
FUSB	**Fushanzhiwuyua**	**0.53**	**348**	*e*P	Pb	13 12 56.1	-0.3
	baz=347						
FUSB				*e*S	Sg	13 13 03.4	+0.6
	baz=347						
NSK	**Sanguang**	**0.54**	**324**	P	Pb	13 12 56.5	-0.1
	baz=324						
NSK				S	Sg	13 13 03.6	+0.4
	baz=324						
OWD	**Renai**	**0.56**	**240**	*e*P	Pb	13 12 56.8	-0.1
	baz=241						
OWD				*e*S	Sg	13 13 03.9	+0.1
	baz=241						
NWLT	**Wulai**	**0.57**	**341**	*e*P	Pg	13 12 55.9	-0.5
	baz=345						
NWLT				*e*S	Sg	13 13 04.5	+0.5
	baz=345						
WUSB	**Renai**	**0.59**	**246**	P	Pb	13 12 57.3	-0.1
	baz=239						
WUSB				S	Sg	13 13 04.7	0.0
	baz=239						
WARBT	**Fenglin Townsh**	**0.59**	**210**	*e*P	Pb	13 12 57.9	+0.4
	baz=216						
WARBT				*e*S	Sb	13 13 05.5	-0.2
	baz=216						
WHP	**Taichung City**	**0.70**	**274**	*e*S	Sb	13 13 09.1	+0.3
	baz=274						
VWDT	**VWDT**	**0.71**	**227**	*e*P	Pb	13 12 59.3	0.0
	baz=228						
VWDT				*e*S	Sb	13 13 09.0	0.0
	baz=228						
WCS	**Beigang Elemen**	**0.75**	**256**	*e*P	Pg	13 12 59.8	+0.1
	baz=257						
WCS				*e*S	Sg	13 13 09.1	-0.5
	baz=257						

JMA 05 13:13:17.7±0.2, 24°.3N±0°.7×123°.9E±0°.4, h10km±3km, MV1.0/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.14**	**273**	P	Pg	13 13 20.9	+0.1
IRIF				S	Sg	13 13 23.4	+0.4
JKRS	**Kuro-shima**	**0.15**	**126**	P	Pg	13 13 21.1	0.0
JKRS				S	Sg	13 13 23.9	+0.5
JIJ	**Ishigaki jima**	**0.24**	**81**	P	Pg	13 13 22.6	-0.1
JIJ				S	Sg	13 13 26.3	+0.2
HATJ	**Hateruma jima**	**0.28**	**194**	S	Sg	13 13 27.4	+0.3
JISG	**Ishigakijimahi**	**0.47**	**57**	P	Pg	13 13 27.2	+0.2

*IDC **05** 13:13:40.8±0.7, 50°.03N×89°.07E, h0km, mb4.2/14, mbtmp4.2/21, ML3.9/7, MS3.0/7, Error ellipse:*
s-maj=11.7km s-min=9.5km az=171.0
*MOS **05** 13:13:41.5±1.2, 49°.97N×88°.80E, h12km, mb4.4/16, Error ellipse: s-maj=7.3km s-min=6.4km az=142.9*
*NEIC **05** 13:13:44.7±1.4, 50°.01N±0°.08×88°.9E±0°.1, h19km±4km, mb4.4/57, Error ellipse: s-maj=13.6km s-min=11.5km az=97.0*
*ASRS **05** 13:13:44.2±0.3, 50°N±1°×8°9E±°, h4km, MLh4.8/22, Error ellipse: s-maj=3.2km s-min=2.0km az=129.6, confirmed*
*NNC **05** 13:13:44.6±1.4, 50°.15N×88°.57E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=12.3km s-min=7.5km az=103.0*

ISC 05 13:13:43.1±1.1, 50°.07N±0°.03×88°.81E±0°.02, h7km±6km, n215, σ1s64/268, mb4.3/47, MS3.2/5, 28C-19D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.30**	**277**	PG	**Pb**	**13 13 50.0**	**-0.9**
CUR						13 13 54.8	
CUR	**Chagan-Uzun**	**0.30**	**277**	⇑Pg	**Pb**	**13 13 49.9**	**-0.9**
CUR				Sg	**Sb**	**13 13 55.3**	**-0.8**
ULGR	**Ulagan, Altay**	**0.78**	**316**	⇓Pg	**Pn**	**13 14 00.6**	**0.0**
ULGR				Sg	**Sn**	**13 14 12.0**	**-0.6**
AKAR	**Aktash**	**0.81**	**289**	PG	**Pb**	**13 13 59.0**	**-0.5**
AKAR						13 14 10.3	
AKAR	**Aktash**	**0.81**	**289**	⇑Pg	**Pb**	**13 13 58.9**	**-0.5**
AKAR				Sg	**Sb**	**13 14 10.5**	**-0.1**
CHBI	**Chibit, Altay**	**0.88**	**287**	⇓Pg	**Pb**	**13 14 00.1**	**-0.5**
CHBI				Sg	**Sb**	**13 14 12.6**	**0.0**
DGZ	**Jazzator, Alta**	**0.96**	**248**	*c* PG	**Pg**	**13 14 01.3**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,321nm,0.4s						
DGZ	**Jazzator, Alta**	**0.96**	**248**	⇑Pg	**Pg**	**13 14 01.4**	**-0.1**
DGZ				Sg	**Sg**	**13 14 13.9**	**-0.2**
YALR	**Yailyu, Altay**	**1.87**	**336**	⇑Pg	**Pg**	**13 14 18.2**	**-0.6**
YALR				Sg	**Sg**	**13 14 45.8**	**+2.8**
ARTR	**Artybash**	**1.98**	**331**	PN	**Pg**	**13 14 21.8**	**+0.7**
ARTR						13 14 50.1	
ARTR	**Artybash**	**1.98**	**331**	Pg	**Pg**	**13 14 21.9**	**+0.8**
ARTR				Sg	**Sg**	**13 14 50.0**	**+3.2**
ELDR	**Elanda**	**2.08**	**305**	PN	**Pb**	**13 14 21.4**	**+0.3**
ELDR	**Elanda**	**2.08**	**305**	⇑Pg	**Pb**	**13 14 21.4**	**+0.3**
ELDR				Sg	**Sg**	**13 14 51.7**	**+1.8**
GALT	**Gorno-Altaysk,**	**2.62**	**317**	Pg	**Pg**	**13 14 32.2**	**-1.1**
GALT				Sg	**Sg**	**13 15 06.9**	**-0.2**
UKR	**Ust'-Kan**	**2.72**	**290**	Pn	**Pb**	**13 14 30.6**	**-1.5**
UKR				Pg	**Pg**	**13 14 35.2**	**0.0**
UKR				Sg	**Sg**	**13 15 09.6**	**-0.9**
TASR	**Tashtagol**	**2.76**	**348**	PN	**Pg**	**13 14 34.8**	**-1.1**
TASR						13 15 12.4	
TASR	**Tashtagol**	**2.76**	**348**	Pg	**Pg**	**13 14 34.6**	**-1.3**
TASR				Sg	**Sg**	**13 15 11.5**	**-0.2**
TBTR	**Tabat**	**3.11**	**22**	PN	**Pg**	**13 14 40.4**	**-2.2**
DJO	**Djoy, Khakassi**	**3.11**	**28**	Pn	**Pb**	**13 14 38.8**	**+0.1**
DJO						13 15 20.9	
DJO	**Djoy, Khakassi**	**3.11**	**28**	Pn	**Pb**	**13 14 35.1**	**-3.6**
DJO				Pg	**Pg**	**13 14 40.6**	**-2.0**
DJO				Sg	**Sg**	**13 15 21.4**	**-1.4**
CERR	**Cheremushki**	**3.23**	**29**	Pn	**Pb**	**13 14 38.1**	**-2.7**
CERR				Pg	**Pg**	**13 14 43.9**	**-1.1**
CERR				Sg	**Sg**	**13 15 26.1**	**-0.8**
HVS	**Khovu-Aksy**	**3.30**	**69**	PN	**Pb**	**13 14 41.6**	**-0.3**
MALIN	**Malinovka, Kuz**	**3.49**	**345**	Pg	**Pg**	**13 14 50.6**	**+0.7**
MALIN				Sg	**Sg**	**13 15 35.8**	**+0.6**
TAIL	**Tailep, Kuzbas**	**3.53**	**344**	Pg	**Pg**	**13 14 48.6**	**-2.1**
TAIL				Sg	**Sg**	**13 15 37.6**	**+1.2**
ELT	**Eltsovka**	**3.58**	**334**	Pn	**Pn**	**13 14 41.7**	**+2.8**
ELT				Pg	**Pb**	**13 14 48.2**	**+1.6**
ELT				Sg	**Sg**	**13 15 38.7**	**+0.8**
LUZB	**Luzhba, Kemero**	**3.60**	**1**	Pn	**Pn**	**13 14 42.4**	**+3.1**
LUZB				Pg	**Pg**	**13 14 49.4**	**-2.6**
LUZB				Sg	**Sg**	**13 15 37.8**	**-0.8**
BLRR	**Bol'shaya Rech**	**3.74**	**36**	PN	**Pb**	**13 14 51.0**	**+1.6**
ABNR	**Abakan**	**4.01**	**23**	PN	**Pg**	**13 14 56.5**	**-3.3**
VCHU	**Verkh-Chumysh,**	**4.16**	**340**	Sg	**Sg**	**13 15 56.3**	**-0.3**
ERU	**Erunakovo, Kuz**	**4.17**	**348**	Pn	**Pn**	**13 14 51.1**	**+4.0**
ERU				Pg	**Pg**	**13 15 01.9**	**-1.0**
ERU				Sg	**Sg**	**13 15 58.3**	**+1.3**
KOTO	**Kotino, Kuzbas**	**4.29**	**345**	Pn	**Pb**	**13 14 54.1**	**-4.6**
KOTO				Pg	**Pg**	**13 15 01.8**	**-3.4**
KOTO				Sg	**Sg**	**13 16 00.9**	**+0.3**
BJR3	**Bachatsky-3 (S**	**4.47**	**340**	Pn	Pb	13 14 56.2	-5.7
BJR3				Pg	**Pg**	**13 15 06.1**	**-2.6**
BJR3				Sg	**Sg**	**13 16 07.5**	**+0.8**
SHRR	**Shira**	**4.51**	**10**	PN	**Pg**	**13 15 05.9**	**-3.5**
BJR1	**Bachatsky 1, K**	**4.51**	**339**	Pn	Pb	13 14 56.7	-5.8
BJR1				Pg	**Pg**	**13 15 07.7**	**-1.8**
BJR1				Sg	**Sg**	**13 16 08.2**	**+0.3**
BJR2	**Bachatsky-2, K**	**4.53**	**340**	Pn	Pn	13 14 56.6	+4.5
BJR2				Pg	**Pg**	**13 15 07.3**	**-2.6**
BJR2				Sg	**Sg**	**13 16 08.8**	**+0.3**
ZAA0	**Zalesovo Array**	**4.60**	**329**	⇑Pn	**Pn**	**13 14 54.5**	**+1.5**
	comp=Z,5.9nm,0.8s						
ZAA0				⇓Lg	Lg	13 16 05.5	
	comp=Z,57nm,0.9s						
ZAA0	**Zalesovo Array**	**4.60**	**329**	Pn	**Pn**	**13 14 53.1**	**+0.1**
ZALV	**Zalesovo Beam**	**4.60**	**329**	Pn	**Pn**	**13 14 53.2**	**+0.2**
ZALV	**Zalesovo Beam**	**4.60**	**329**	*i* PN	**Pn**	**13 14 54.9**	**+1.9**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ZALV	**Zalesov

KURK ⇑Lg Lg 13 17 10.2
comp=E,26nm,0.4s
comp=E,136nm,0.6s
KURK Kurchatov 6.55 280 Pn **Pn 13 15 20.6 +0.9**
KURK Kurchatov 6.55 280 *ce*PN **Pn 13 15 21.0 +1.3**
KURK pmax pmax
comp=Z,26nm,0.7s
KURK Kurchatov 6.55 280 ⇑Pn **Pn 13 15 21.0 +1.3**
KURK S **Sn 13 16 34.9 +0.3**
KURK Sg **Sg 13 17 10.4 -2.8**
KURBB Kurchatov Arra 6.60 279 ⇑Pn **Pn 13 15 21.8 +1.3**
comp=Z,34nm,0.5s
KURBB ⇓Sn **Sn 13 16 36.7 +0.8**
comp=Z,33nm,0.3s
KURBB ⇓Lg Lg 13 17 10.9
comp=Z,128nm,0.6s
KURBB Kurchatov Arra 6.60 279 Pn **Pn 13 15 21.9 +1.4**
comp=Z,2.6nm,0.3s,baz=90,slow=14,SNR=275
KURBB Sn **Sn 13 16 39.2 +3.2**
comp=Z,3.0nm,0.3s,baz=82,slow=27,SNR=7.0
KURBB Lg Lg 13 17 11.0
comp=Z,3.2nm,0.3s,baz=88,slow=31,SNR=5.5
comp=Z,23nm,0.5s
GZL Zheleznogorsk 6.83 23 Pg Pg 13 15 48.5 -5.2
GZL Sg **Sg 13 17 23.1 +1.0**
GZLN Zheleznogorsk 6.99 23 Pg Pb 13 15 49.8 +5.1
GZLN Sg **Sg 13 17 28.8 +1.5**
PDGK Podgornoye 9.29 227 ⇓Pn **Pn 13 15 56.8 -0.7**
comp=Z,12nm,0.6s
PDGK ⇓Lg Lg 13 18 37.8
comp=Z,66nm,1.0s
PDGK Podgornoye 9.29 227 P **Pn 13 15 56.8 -0.7**
ARXS Arharly 9.50 236 *i* P **Pn 13 16 01.0 +0.7**
KPKS Kokpek 9.58 230 *i* P **Pn 13 16 01.5 +0.1**
MDOK Medeo 10.63 234 ⇑Pn **Pn 13 16 15.4 -0.5**
comp=Z,10nm,0.9s
MDOK Sn **Sn 13 18 16.4 +1.2**
comp=Z,9.4nm,0.6s
MDOK ⇓Lg Lg 13 19 19.6
comp=Z,34nm,1.2s
MDOK Medeo 10.63 234 P **Pn 13 16 15.3 -0.5**
MDOK SN **Sn 13 18 16.3 +1.2**
OTUK Ortayu 10.94 267 ⇓Pn **Pn 13 16 19.3 -0.7**
comp=Z,8.0nm,0.7s
OTUK ⇑Lg Lg 13 19 27.2
comp=Z,77nm,1.1s
OTUK Ortayu 10.94 267 P **Pn 13 16 19.3 -0.7**
BTLS Baital 11.17 249 *i* P **Pn 13 16 22.3 -0.7**
TKM2 Tokmak 2 11.56 237 P **Pn 13 16 28.2 -0.5**
SNR=7.2
TKM2 Tokmak 2 11.56 237 ⇑Pn **Pn 13 16 29.1 +0.4**
comp=Z,3.6nm,0.5s
TKM2 ⇓Sn **Sn 13 18 38.4 +0.2**
comp=Z,8.7nm,0.7s
TKM2 ⇑Lg Lg 13 19 48.3
comp=Z,30nm,1.0s
TKM2 Tokmak 2 11.56 237 P **Pn 13 16 29.1 +0.4**
TKM2 SN **Sn 13 18 38.3 +0.2**
BOOM Boomskoye usch 11.68 234 **Pn 13 16 30.6 +0.4**
BOOM Boomskoye usch 11.68 234 P **Pn 13 16 30.6 +0.4**
SGDS Sogindy 11.75 241 *i* P **Pn 13 16 32.5 +1.4**
SONM Songino Array 11.78 94 Pn **Pn 13 16 31.6 +0.1**
baz=277,slow=16
SONM Lg Lg 13 19 49.9
comp=Z,0.4nm,0.3s,baz=279,slow=26,SNR=4.6
BVA0 Borovoye Array 11.84 292 ⇓Pn **Pn 13 16 31.3 -0.9**
comp=Z,3.5nm,0.5s,baz=106,slow=14,SNR=27
BVA0 Sn **Sn 13 18 44.1 -0.5**
comp=Z,15nm,0.8s,baz=95,slow=24,SNR=9.2
BVA0 Borovoye Array 11.84 292 P **Pn 13 16 31.3 -0.9**
BVA0 SN **Sn 13 18 44.5 0.0**
BVAR Borovoye Array 11.84 292 Pn **Pn 13 16 31.9 -0.3**
comp=Z,0.4nm,0.3s,baz=104,slow=14,SNR=32
BVAR Sn **Sn 13 18 40.0 -4.5**
comp=Z,0.6nm,0.3s,baz=90,slow=21,SNR=10
comp=Z,4.4nm,0.4s
BRVK Borovoye 11.91 292 ⇑Pn **Pn 13 16 31.6 -1.5**
comp=Z,7.9nm,0.8s
BRVK ⇑Sn **Sn 13 18 42.8 -3.3**
comp=Z,12nm,0.6s
BRVK ⇑Lg Lg 13 19 55.7
comp=Z,30nm,1.2s
BRVK Borovoye 11.91 292 Pn **Pn 13 16 32.6 -0.5**
BRVK Borovoye 11.91 292 *i* P **Pn 13 16 32.9 -0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.1s
USP Ospenovka 11.94 241 P **Pn 13 16 35.6 +1.9**
SNR=7.6
CHMS Chumysh 11.97 239 P **Pn 13 16 35.7 +1.6**
SNR=5.3
KBK Karagaybulak 12.10 238 P **Pn 13 16 38.0 +2.1**
SNR=5.9
AAK Ala-Archa 12.36 238 P **Pn 13 16 41.3 +1.8**
SNR=16
AAK Ala-Archa 12.36 238 Pn **Pn 13 16 39.0 -0.4**
AAK Ala-Archa 12.36 238 *ce*P **Pn 13 16 38.6 -0.9**
AAK pmax pmax
comp=Z,5.0nm,0.5s
AAK Ala-Archa 12.36 238 Pn **Pn 13 16 40.0 +0.5**
comp=Z,3.5nm,0.3s,baz=92,slow=7.5,SNR=58
AAK Lg Lg 13 20 16.8
comp=Z,0.6nm,0.3s,baz=321,slow=16,SNR=5.6
AAK LR LR 13 20 39.5
comp=Z,25nm,20.1s,baz=43,slow=34
comp=Z,9.5nm,0.5s
UCH Uchtor 12.62 237 P Pn 13 16 57.0 +14
SNR=5.3
EKS2 Erkin-Say 12.74 240 P Pn 13 16 57.2 +13
SNR=6.6
KSH Kashi 13.92 226 P **P 13 17 11.2 +2.1**
KSH pmax pmax
comp=Z,3.0nm,1.1s
KSH LR LR
comp=N,360nm,18.2s
KSH LR LR
comp=E,380nm,15.1s
KSH LR LR
comp=Z,200nm,13.1s
KK31 Karatay Array 14.36 248 ⇓Pn **Pn 13 17 06.5 -0.2**
comp=Z,2.1nm,0.5s,baz=48,slow=12,SNR=34
KK31 ⇑Sn **Sn 13 19 48.9 +2.7**
comp=Z,6.1nm,0.8s,baz=50,slow=24,SNR=6.2
KK31 ⇓Lg Lg 13 21 16.0
comp=Z,8.9nm,0.7s,baz=54,slow=27,SNR=3.7
KK31 Karatay Array 14.36 248 Pn **Pn 13 17 04.6 -2.1**
KK31 Karatay Array 14.36 248 P **Pn 13 17 04.6 -2.1**
KKAR Karatay Array 14.36 248 Pn **Pn 13 17 04.6 -2.1**
KKAR Karatay Array 14.36 248 P **Pn 13 17 04.6 -2.1**
GOMU GeErMu 14.53 160 P **P 13 17 15.4 -0.7**
GOMU pmax pmax
comp=Z,4.0nm,0.6s
HHC Hu-ho-hao-te 18.37 111 *eP* **P 13 17 59.3 +0.9**
HHC pP sP 13 18 05.0 +2.8
HHC PP **PnPn 13 18 17.2 +7.6**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,5.0s
AB31 Akbulak array 18.66 279 ⇓P **P 13 18 01.0 -0.3**
comp=Z,1.8nm,0.7s,baz=81,slow=11,SNR=30
AB31 Akbulak array 18.66 279 P **P 13 18 01.1 -0.3**
ABKAR Akbulak array 18.66 279 P **P 13 18 01.0 -0.4**
ARU Arti 19.08 301 P **Pn 13 18 06.3 -0.3**
ARU Arti 19.08 301 P **Pn 13 18 06.8 +0.2**
ARU S **S 13 21 46.0 +3.7**
ARU Arti 19.08 301 P **Pn 13 18 06.4 -0.3**
comp=Z,1.0nm,0.3s,baz=99,slow=16,SNR=3.7
ARU S **Sn 13 21 34.0 -6.3**
comp=Z,2.1nm,0.4s,baz=134,slow=22,SNR=3.6
comp=Z,2.8nm,0.3s
NRIK Noril'sk 19.34 359 *ce*P **Pn 13 18 10.4 +0.6**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
AKTO Aktyubinsk 19.63 283 ⇑P **P 13 18 12.3 +0.3**
comp=Z,5.5nm,0.8s
AKTO Aktyubinsk 19.63 283 P **P 13 18 12.2 +0.3**
comp=Z,1.2nm,0.3s,baz=66,slow=4.3,SNR=21
comp=Z,6.5nm,0.5s
KBL Kabul 21.22 230 P **P 13 18 30.2 +0.7**
KBL Kabul 21.22 230 P **P 13 18 30.2 +0.7**
KBL pmax pmax
comp=Z,5.0nm,0.7s
BJT Baijiatuau 21.67 107 P **P 13 18 34.5 +0.3**
BJT Baijiatuau 21.67 107 P **P 13 18 34.5 +0.3**
BJT pmax pmax
comp=Z,4.0nm,0.8s

XAN Xi'an 21.79 130 ⇓P **P 13 18 34.7 -0.8**
XAN pP sP 13 18 41.4 +2.1
XAN pmax pmax
comp=Z,8.0nm,0.9s
GEYT Alibeck 25.00 253 P **P 13 19 06.2 -1.2**
GEYT Alibeck 25.00 253 P **P 13 19 06.2 -1.2**
GEYT pmax pmax
comp=Z,3.0nm,0.9s
GEYT Alibeck 25.00 253 P **P 13 19 07.5 +0.1**
comp=Z,2.7nm,0.6s,baz=70,slow=10,SNR=5.0
comp=Z,2.7nm,0.6s
YAK Yakutsk 25.30 46 *eP* **P 13 19 12.1 +2.3**
YAK pmax pmax
comp=Z,5.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK Yakutsk 25.30 46 LR LR 13 29 20.2
comp=E,63nm,18.5s,baz=314,slow=37
BELG Belogornoye 25.65 291 *i* P **P 13 19 14.5 +1.5**
BELG pmax pmax
comp=Z,7.0nm,3.5s
KLR Kul'dur 27.54 75 LR LR 13 29 38.9
comp=Z,12nm,18.7s,baz=294,slow=35
TIXI Tiksi 28.17 26 *i* P **P 13 19 38.0 +2.4**
TIXI pmax pmax
comp=Z,10.0nm,3.4s
KSRS Korea Array 30.58 99 LR LR 13 33 29.5
comp=Z,28nm,18.6s,baz=15,slow=39
OBN Obninsk 31.51 300 ⇑ *eP* **P 13 20 06.0 +0.8**
OBN *eS* **S 13 25 12.3 -1.1**
OBN pmax pmax
comp=Z,43nm,2.5s
KBZ Khabaz 31.60 276 *i* P **P 13 20 06.4 +0.2**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
ONI Oni 31.79 274 P **P 13 20 07.7 -0.3**
ONI IAmb IAmb 13 20 09.8
comp=Z,12nm,1.5s
ONI Oni 31.79 274 P **P 13 20 07.7 -0.3**
ONI pmax pmax
comp=Z,12nm,1.5s
FIA1 FINESS Array S 35.66 313 P **P 13 20 41.8 +0.4**
FINES FINESS Array B 35.66 313 P **P 13 20 41.8 +0.4**
FINES FINESS Array B 35.66 313 *ce*P **P 13 20 41.7 +0.4**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 35.66 313 P **P 13 20 41.2 -0.1**
comp=Z,2.5nm,0.5s,baz=71,slow=9.0,SNR=22
comp=Z,2.5nm,0.5s
WSAR Wadi Sarin 35.67 232 LR LR 13 35 25.7
comp=Z,44nm,19.3s,baz=40,slow=36
AKASG Malin Array Be 37.10 295 P **P 13 20 54.1 +0.4**
AKASG Malin Array Be 37.10 295 P **P 13 20 53.6 -0.1**
comp=Z,1.1nm,0.3s,baz=64,slow=8.8,SNR=5.9
comp=Z,1.1nm,0.3s
BR131 Keskin Array S 39.59 277 P **P 13 21 15.9 +0.9**
BR131 IAmb IAmb 13 21 16.9
comp=Z,6.5nm,0.9s
BR131 Keskin Array S 39.59 277 P **P 13 21 15.9 +0.9**
BR131 pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 39.59 277 P **P 13 21 15.8 +0.7**
BRTR Keskin Array B 39.59 277 *i* P **P 13 21 16.1 +1.1**
BRTR pmax pmax
comp=Z,5.0nm,0.5s
BRTR Keskin Array B 39.59 277 P **P 13 21 15.6 +0.6**
comp=Z,4.9nm,0.5s,baz=84,slow=5.7,SNR=17
comp=Z,4.9nm,0.5s
BILL Bilbino 40.44 34 *i* P **P 13 21 25.4 +3.9**
BUR08 Bucovina Ar. S 40.80 292 P **P 13 21 24.5 -0.4**
BUR08 IAmb IAmb 13 21 33.1
comp=Z,6.9nm,1.3s
BURAR Bucovina Array 40.80 292 P **P 13 21 24.4 -0.6**
HFS Hagfors 41.85 314 P **P 13 21 33.3 0.0**
comp=Z,8.6nm,0.8s,baz=81,slow=9.3,SNR=10
comp=Z,8.6nm,0.8s
NC405 NORSAR Array S 42.41 315 P **P 13 21 37.8 0.0**
NC303 NORSAR Array S 42.52 316 P **P 13 21 38.2 -0.6**
NC602 NORSAR Array S 42.63 315 P **P 13 21 39.3 -0.2**
NB2 NORSAR Subarra 42.66 315 P **P 13 21 39.6 -0.3**
comp=Z,2.7nm,0.6s,baz=61,slow=7.9
NB2 NORSAR Subarra 42.66 315 P **P 13 21 40.0 +0.1**
NOA NORSAR Array B 42.66 315 P **P 13 21 39.8 -0.2**
comp=Z,2.5nm,0.8s,baz=62,slow=7.7,SNR=9.1
comp=Z,2.5nm,0.8s
NC204 NORSAR Array S 42.78 316 P **P 13 21 40.1 -0.8**
RAYN Ar Rayn 42.78 248 P **P 13 21 40.7 -0.6**
RAYN IAmb IAmb 13 21 41.9
comp=Z,4.3nm,0.8s
RAYN Ar Rayn 42.78 248 P **P 13 21 40.7 -0.6**
RAYN pmax pmax
comp=Z,4.0nm,0.8s
NBO00 NORSAR Array S 42.86 316 P **P 13 21 41.6 +0.1**
CLL Collm 46.02 302 P **P 13 22 06.8 0.0**
CLL Collm 46.02 302 P **P 13 22 06.8 0.0**
CLL pmax pmax
comp=Z,9.0nm,0.5s
CLL Collm 46.02 302 *i* P **P 13 22 07.5 +0.7**
comp=Z,7.0nm,0.5s
CIMO Cimolais 48.97 297 P **P 13 22 29.3 -0.6**
CIMO IAmb IAmb 13 22 30.3
comp=Z,4.4nm,0.7s
FUORN Ofenpass-Fuorn 50.04 298 P **P 13 22 38.7 +0.3**
FUORN IAmb IAmb 13 22 43.8
comp=Z,3.6nm,0.7s
DAVOX Davos/Dischmat 50.17 299 LR LR 13 44 01.4
comp=Z,46nm,21.7s,baz=249,slow=36
NRCA Norcia 50.57 293 P **P 13 22 43.3 +1.1**
NRCA IAmb IAmb 13 22 46.6
comp=Z,4.2nm,0.8s
E18K Tukpahlearik C 51.84 27 P **P 13 22 51.4 +0.1**
EKA Eskdalemuir Ar 52.06 314 P **P 13 22 52.9 -0.1**
comp=Z,0.7nm,0.5s,baz=71,slow=6.5,SNR=4.7
comp=Z,0.7nm,0.5s
ANM Nome 52.13 32 P **P 13 22 54.1 +0.6**
ANM Nome 52.13 32 P **P 13 22 54.1 +0.6**
ANM pmax pmax
comp=Z,3.0nm,1.0s
F17K Baldwin Pennin 52.28 29 P **P 13 22 54.6 +0.1**
F17K IAmb IAmb 13 22 59.8
comp=Z,9.7nm,1.2s
E19K Redstone River 52.80 26 P **P 13 22 58.4 0.0**
E19K IAmb IAmb 13 22 59.7
comp=Z,4.0nm,0.9s
D22K Ayikyak River 53.05 23 P **P 13 23 00.7 +0.5**
D22K IAmb IAmb 13 23 01.4
comp=Z,3.5nm,1.0s
E22K Anaktuvuk Pass 53.80 24 P **P 13 23 05.8 0.0**
E22K IAmb IAmb 13 23 32.6
comp=Z,5.7nm,1.5s
H19K Roundabout Mou 54.35 28 P **P 13 23 10.2 +0.4**
H19K IAmb IAmb 13 23 51.5
comp=Z,5.9nm,1.5s
IMAR Indian Mountai 54.82 26 P **P 13 23 13.1 -0.1**
E25K Arctic Village 55.37 22 P **P 13 23 17.6 +0.4**
E25K IAmb IAmb 13 23 43.0
comp=Z,3.1nm,1.4s
BMAR Burnt Mountain 56.15 22 P **P 13 23 24.3 +1.5**
H24K Noodor Dome 56.55 24 P **P 13 23 26.6 +0.9**
E29M Blow River 56.87 19 P **P 13 23 28.7 +0.9**
E29M IAmb IAmb 13 23 34.2
comp=Z,3.5nm,1.1s
CAST Castle Rocks 57.19 28 P **P 13 23 31.8 +1.6**
CAST IAmb IAmb 13 23 34.7
comp=Z,5.6nm,1.4s
PRP Porcupine Dome 57.42 24 P **P 13 23 32.4 +0.4**
IL31 57.64 25 P **P 13 23 33.7 +0.4**
IL31 IAmb IAmb 13 24 07.2
comp=Z,3.6nm,1.5s
ILAR Eielson Array 57.64 25 P **P 13 23 32.9 -0.4**
comp=Z,0.4nm,0.6s,baz=325,slow=6.2,SNR=7.1
comp=Z,0.4nm,0.6s
INK Inuvik 57.81 17 P **P 13 23 34.9 +0.5**
INK IAmb IAmb 13 23 35.9
comp=Z,3.3nm,0.8s
INK Inuvik 57.81 17 P **P 13 23 34.9 +0.5**
INK pmax pmax
comp=Z,3.0nm,0.8s
C36M Paulatuk 58.47 13 P **P 13 23 38.9 -0.1**
C36M IAmb IAmb 13 23 43.2
comp=Z,6.9nm,1.4s
G31M Satah River 58.86 18 P **P 13 23 41.6 -0.2**
RIDG Independent Ri 59.01 25 P **P 13 23 42.3 -0.7**
SCM Sheep Creek Mo 59.82 27 P **P 13 23 48.7 +0.1**
SCM pmax pmax
comp=Z,12nm,1.2s
BCAR Beaver Creek A 60.37 24 P **P 13 23 52.9 +0.5**
CTGM Chitina Glacie 62.22 25 P **P 13 24 05.8 +0.8**
LOGN Logan Glacier 62.43 25 P **P 13 24 06.6 +0.1**
ESDC Sonseca Array 62.47 300 P **P 13 24 06.8 -0.2**
comp=Z,1.4nm,0.8s,baz=46,slow=7.2,SNR=7.0
comp=Z,1.4nm,0.8s
HYT Haines Junctio 63.35 23 P **P 13 24 12.6 +0.1**
HYT IAmb IAmb 13 24 47.9
comp=Z,3.2nm,1.2s
YKA Yellowknife Ar 66.25 12 P **P 13 24 30.1 -1.1**
YKA Yellowknife Ar 66.25 12 P **P 13 24 30.7 -0.6**
comp=Z,0.9nm,0.7s,baz=339,slow=7.0,SNR=19
comp=Z,0.9nm,0.7s
KNRA Kununurra 74.31 140 P **P 13 25 19.2 -1.8**
FFC Flin Flon 75.19 6 P **P 13 25 24.2 -1.5**
FFC IAmb IAmb 13 25 25.9
comp=Z,1.8nm,0.7s
FFC Flin Flon 75.19 6 P **P 13 25 24.3 -1.5**
FFC pmax pmax
comp=Z,2.0nm,0.7s
TOA0 Torodi Ar. Sit 78.20 276 P **P 13 25 43.2 -0.2**
TOA0 IAmb IAmb 13 25 53.2
comp=Z,7.2nm,1.4s
TORD Torodi Ar. Bea 78.20 276 P **P 13 25 42.8 -0.6**
TORD Torodi Ar. Bea 78.20 276 P **P 13 25 42.7 -0.7**
comp=Z,0.6nm,0.7s,baz=35,slow=5.7,SNR=6.3
comp=Z,0.6nm,0.7s
WB0 Warramunga Ar 80.35 137 P **P 13 25 52.4 -2.4**
WB0 IAmb IAmb 13 25 57.2
comp=Z,9.2nm,1.4s
WRA Warramunga Ar 80.48 137 P **P 13 25 53.4 -2.2**
comp=Z,1.7nm,0.7s,baz=341,slow=5.8,SNR=14
comp=Z,1.7nm,0.7s
WB2 Warramunga Arr 80.48 137 P **P 13 25 53.0 -2.6**
WB2 IAmb IAmb 13 26 08.6
comp=Z,5.0nm,1.1s
WR0 Warramunga Ar 80.58 137 P **P 13 25 53.7 -2.4**
WR0 IAmb IAmb 13 26 33.0
comp=Z,8.1nm,1.4s
EGMT Eagleton 80.99 12 P **P 13 25 58.5 +0.3**
EGMT IAmb IAmb 13 25 59.2
comp=Z,6.5nm,1.2s
PLID Pearl Lake 82.80 17 P **P 13 26 07.7 -0.3**
PLID IAmb IAmb 13 26 12.2
comp=Z,2.8nm,0.9s
AS31 Alice Springs 83.58 139 P **P 13 26 09.7 -2.1**
ASAR Alice Springs 83.58 139 P **P 13 26 09.6 -2.2**
comp=Z,1.7nm,0.7s,baz=330,slow=4.8,SNR=32
comp=Z,1.7nm,0.7s
HWUT Hardware Ranch 86.97 15 P **P 13 26 28.9 -0.1**
HWUT IAmb IAmb 13 26 29.9
comp=Z,2.7nm,0.7s
STKA Stephens Creek 94.03 137 P **P 13 26 58.5 -3.0**
comp=Z,0.9nm,0.5s,baz=306,slow=6.0,SNR=3.6
comp=Z,0.9nm,0.5s
CPUP Villa Florida 144.84 300 PKPbc **PKPab 13 33 18.1 -1.5**
comp=Z,1.0nm,0.4s,baz=284,slow=5.0,SNR=3.9
PB11 IPOC Station P 145.24 323 PKPbc **PKPbc 13 33 19.5 -1.8**
BELA Belgrano 2 145.33 198 PKPbc **PKPbc 13 33 18.2 -1.6**

SFS 05 13:14:36.8, 37.73N×6.60W, h7km, ML1.8/7, ML2.3/6, MLv1.5/7, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIN	**Mina Concepcio**	**0.06**	**302**	Pg	Pg	13 14 38.2	-0.3
EMIN				Sg	Sg	13 14 39.6	-0.1
PBAR	**Barrancos**	**0.56**	**322**	Pg	Pg	13 14 47.5	-0.1
PBAR				Sg	Sg	13 14 54.6	-0.3
EGRO	**El Granado**	**0.73**	**254**	Pg	Pg	13 14 50.1	-0.6
EGRO				Sg	Sg	13 14 59.6	-0.5
PVAQ	**Vaqueiros**	**0.94**	**250**	Sg	Sg	13 15 07.6	+0.5
ECAB	**El Cabril**	**1.00**	**70**	Pg	Pg	13 14 54.9	-1.1
ECAB				Sg	Sg	13 15 08.0	-0.8
ESPR	**Espera**	**1.05**	**145**	Pg	Pg	13 14 56.3	-0.6
ESPR				Sg	Sg	13 15 10.6	+0.1
EBAD	**Badajoz**	**1.07**	**343**	Pn	Pg	13 14 57.0	-0.3
EBAD				Sg	Sg	13 15 11.4	+0.1
PCVE	**Castro Verde**	**1.14**	**265**	Pn	Pg	13 14 58.1	-0.6
PCVE				Sn	Sg	13 15 13.0	-0.5
PBDV	**Barranco-do-Ve**	**1.16**	**246**	Sg	Sg	13 15 13.4	-0.8

PGC 05 13:14:54.4±4.8, 50.48N×130.22W, h10km, MLSn3.0/14, Mw3.6/14, 199km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.34**	**82**	Pn	Pn	13 15 16.8	-2.3
HOLB				Sn	Sn	13 15 33.1	-3.8
PHC	**Port Hardy**	**1.79**	**82**	Pn	Pn	13 15 23.5	-1.8
PHC				Sn	Sn	13 15 43.5	-4.5
MAYB	**Maynard**	**1.95**	**91**	Pn	Pn	13 15 25.4	-2.3
BBB	**Bella Bella**	**2.16**	**37**	Pn	Pn	13 15 29.0	-1.4
BBB				Sn	Sn	13 15 51.9	-5.2
BNB	**Barry Inlet**	**2.31**	**336**	Pn	Pn	13 15 30.7	-1.8
WOSB	**Woss**	**2.36**	**96**	Pn	Pn	13 15 31.6	-1.7
NCSB	**Newcastle Ridg**	**2.66**	**90**	Pn	Pn	13 15 35.5	-1.9
BUTB	**Butedale**	**2.81**	**22**	Pn	Pn	13 15 38.7	-0.7
BUTB				Sn	Sn	13 16 10.7	-2.6
BNKB	**Banks Island**	**2.86**	**4**	Pn	Pn	13 15 38.5	-1.6
BNKB				Sn	Sn	13 16 10.6	-4.0
GRIB	**Gribbell Islan**	**2.94**	**13**	Pn	Pn	13 15 39.7	-1.4
BNAB	**Bonilla**	**3.03**	**355**	Pn	Pn	13 15 40.6	-1.7
BNAB				Sn	Sn	13 16 14.3	-4.2
CBB	**Campbell River**	**3.15**	**96**	Pn	Pn	13 15 42.4	-1.6
GRNB	**Grenville Isla**	**3.38**	**3**	Pn	Pn	13 15 45.8	-1.3
KITB	**Kitimat**	**3.73**	**14**	Pn	Pn	13 15 50.8	-1.1
RUBB	**Prince Rupert**	**3.85**	**360**	Pn	Pn	13 15 52.8	-0.8
RUBB				Sn	Sn	13 16 35.8	-3.1
SHB	**Sechelt**	**4.18**	**100**	Pn	Pn	13 15 57.3	-1.0
LLLB	**Lillooet**	**5.32**	**85**	Pn	Pn	13 16 13.2	-0.7
MBW	**Mount Baker**	**5.67**	**104**	Pn	Pn	13 16 19.2	+0.4
JCW	**Jim Creek**	**5.88**	**110**	Pn	Pn	13 16 21.7	+0.1
T35M	**Bob Quinn**	**6.51**	**360**	Pn	Pn	13 16 31.1	+0.9
S34M	**Telegraph Cree**	**7.47**	**356**	Pn	Pn	13 16 44.9	+1.7

MDD 05 13:15:14.6±0.6, 38.20N×4.65W, h24km±3km, mb_Lg1.5/5, Error ellipse: s-maj=6.7km s-min=4.9km az=40.0, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EADA	**Adamuz**	**0.07**	**121**	Pg	Pb	13 15 19.0	0.0
EADA				Sg	Sb	13 15 21.3	-0.7
EADA				*i* Vmb_Lg		13 15 24.8	
ECAB	**El Cabril**	**0.62**	**258**	Pg	Pb	13 15 26.3	-0.6
ECAB				Sg	Sb	13 15 34.9	-0.2
ECAB				*i* Vmb_Lg		13 15 35.9	
EQES	**Quesada**	**1.31**	**107**	Pg	Pb	13 15 38.2	-0.4
EQES				Sg	Sb	13 15 54.7	-0.3
EQES				*i* Vmb_Lg		13 15 56.3	
PAB	**San Pablo**	**1.36**	**10**	Pg	Pn	13 15 38.6	+0.3
PAB				Sg	Sn	13 15 55.7	+0.1
PAB				*i* Vmb_Lg		13 15 57.9	
EQUE	**Quentar**	**1.38**	**136**	Pg	Pn	13 15 38.1	-0.4
EQUE				Sg	Sn	13 15 56.5	+0.5
EQUE				*i* Vmb_Lg		13 15 58.2	

*ISK **05** 13:15:32.5, 39.79N×26.08E, h8km, ML2.8/19*
*THE **05** 13:15:32.9, 39.79N×26.05E, h12km±1km, ML2.5/9, Error ellipse: s-maj=1.6km s-min=0.7km az=88.0*
*AFAD **05** 13:15:33.0±0.0, 39.80N×26.09E, h10km±1km, ML2.7*
*ATH **05** 13:15:33.5, 39.78N×26.03E, h14km±1km, ML2.4/8, Error ellipse: s-maj=2.2km s-min=0.9km az=238.0*

ISC 05 13:15:32.7±0.8, 39.79N±0.02×26.06E±0.02, h13km±5km, n66, σ0.953/101, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.05**	**356**	P	**Pg**	13 15 35.1	**-0.1**
BOZC				*i* AML	AML	13 15 36.0	
	comp=E,1μm,0.2s						
BOZC				S	**Sg**	13 15 36.5	**-0.5**
BOZC				*i* AML	AML	13 15 37.0	
	comp=N,1μm,0.3s						
EZN	**Ezine**	**0.21**	**80**	Pg	**Pg**	13 15 37.1	**-0.2**

EZN				Sg	**Sg**	**13 15 40.1**	**-0.3**
EZN	**Ezine**	**0.21**	**80**	P	**Pg**	**13 15 37.3**	**0.0**
EZN				S	**Sg**	**13 15 40.4**	**0.0**
	2µm,0.3s						
ECEA	**Canakkale, Ece**	**0.27**	**19**	P	**Pg**	**13 15 38.8**	**+0.5**
ECEA				*i* AML	AML	13 15 43.0	
	comp=E,2µm,0.3s						
ECEA				*i* AML	AML	13 15 43.0	
	comp=N,2µm,0.2s						
ECEA				S	**Sg**	**13 15 43.1**	**+0.9**
KOCA	**Canakkale, Ayv**	**0.29**	**168**	P	**Pg**	**13 15 39.1**	**+0.3**
KOCA				S	**Sb**	**13 15 44.0**	**-0.5**
GPNR	**Gulpinar-Canak**	**0.34**	**170**	Pg	**Pg**	**13 15 39.6**	**+0.1**
CNKL	**anakkale-Mer**	**0.38**	**42**	P	**Pg**	**13 15 40.4**	**+0.1**
CNKL				S	**Sg**	**13 15 45.2**	**-0.1**
CNKL				*i* AML	AML	13 15 46.0	
	comp=N,608nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.38**	**97**	P	**Pg**	**13 15 40.3**	**0.0**
BAYC				S	**Sg**	**13 15 45.3**	**-0.2**
GOAD	**anakkale-G¶**	**0.39**	**343**	P	**Pg**	**13 15 40.8**	**+0.3**
GOAD				S	**Sg**	**13 15 46.2**	**+0.4**
GADA	**Gvkgeada**	**0.42**	**343**	Pg	**Pg**	**13 15 41.3**	**+0.3**
COMU	**Canakkale**	**0.45**	**46**	Pg	**Pg**	**13 15 41.4**	**-0.1**
COMU				Sg	**Sg**	**13 15 47.9**	**+0.4**
PRK	**Paraskevi**	**0.57**	**163**	P	**Pg**	**13 15 44.2**	**+0.4**
PRK				S	**Sg**	**13 15 52.1**	**+0.8**
	390nm,0.5s						
PRK	**Paraskevi**	**0.57**	**163**	P	**Pg**	**13 15 44.2**	**+0.4**
PRK				S	**Sg**	**13 15 51.3**	**0.0**
PRK				AML	AML	13 15 56.0	
	comp=N,753µm,0.4s						
PRK				AML	AML	13 15 58.1	
	comp=E,798µm,0.5s						
SIGR	**SIGRI**	**0.60**	**195**	Pg	**Pg**	**13 15 44.6**	**+0.2**
SIGR	**SIGRI**	**0.60**	**195**	P	**Pg**	**13 15 44.6**	**+0.2**
SIGR				S	**Sg**	**13 15 52.9**	**+0.6**
	comp=E,515nm,0.3s						
SIGR	**SIGRI**	**0.60**	**195**	P	**Pg**	**13 15 44.4**	**0.0**
SIGR				S	**Sg**	**13 15 53.0**	**+0.8**
SIGR				AML	AML	13 15 54.0	
	comp=E,789µm,0.2s						
SIGR				AML	AML	13 15 55.2	
	comp=N,1243µm,0.5s						
LIA	**Limnos Island**	**0.68**	**279**	P	**Pg**	**13 15 46.4**	**+0.5**
LIA				S	**Sg**	**13 15 55.4**	**+0.5**
	comp=N,775nm,0.4s						
LIA	**Limnos Island**	**0.68**	**279**	P	**Pg**	**13 15 46.2**	**+0.3**
LIA				S	**Sg**	**13 15 55.4**	**+0.5**
LIA				AML	AML	13 15 58.7	
	comp=N,1111µm,0.3s						
LIA				AML	AML	13 15 58.8	
	comp=E,1287µm,0.3s						
AYVA	**Ayvalik**	**0.69**	**134**	P	**Pb**	**13 15 46.5**	**0.0**
AYVA				*i* AML	AML	13 15 59.0	
	comp=E,355nm,0.5s						
GELI	**Tayfur-Gelibol**	**0.69**	**28**	Pg	**Pg**	**13 15 45.9**	**-0.1**
GELI				Sg	**Sb**	**13 15 55.8**	**-0.1**
SMTH	**Samothraki Isl**	**0.79**	**329**	P	**Pg**	**13 15 48.1**	**0.0**
SMTH				S	**Sg**	**13 15 59.1**	**+0.7**
	comp=E,258nm,0.1s						
SMTH	**Samothraki Isl**	**0.79**	**329**	P	**Pg**	**13 15 48.1**	**0.0**
SMTH				S	**Sg**	**13 15 59.0**	**+0.5**
SMTH				AML	AML	13 16 01.7	
	comp=E,440µm,0.2s						
SMTH				AML	AML	13 16 01.7	
	comp=N,582µm,0.2s						
LPK	**Lapseki**	**0.79**	**43**	Pg	**Pg**	**13 15 47.9**	**-0.2**
CANM	**Can-anakkale**	**0.80**	**74**	Pg	**Pg**	**13 15 47.1**	**-1.0**
EAG3	**Mitilini, Lesv**	**0.81**	**150**	P	**Pb**	**13 15 49.5**	**+0.9**
EAG3				S	**Sn**	**13 16 00.9**	**-0.6**
BUHA	**Balikesir, Bur**	**0.84**	**110**	P	**Pb**	**13 15 49.3**	**+0.2**
BUHA				S	**Sg**	**13 15 59.8**	**-0.1**
BUHA				*i* AML	AML	13 16 03.0	
	comp=N,201nm,0.3s						
EFSA	**Agios Efstrati**	**0.86**	**254**	P	**Pg**	**13 15 49.4**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**0.91**	**5**	P	**Pg**	**13 15 50.1**	**-0.1**
ENEZ	**Enez**	**0.95**	**4**	P	**Pg**	**13 15 50.8**	**-0.2**
ENEZ				S	**Sn**	**13 16 05.4**	**+0.4**
	comp=N,495nm,0.4s						
DKL	**Dikili**	**0.97**	**137**	Pg	**Pn**	**13 15 52.2**	**+0.2**
CAND	**Candarli**	**1.01**	**145**	Pg	**Pg**	**13 15 52.2**	**0.0**
IZMD	**zmir-Dikili-**	**1.05**	**140**	P	**Pn**	**13 15 53.3**	**+0.2**
IZMD				S	**Sn**	**13 16 07.7**	**0.0**
IZMD				*i* AML	AML	13 16 09.0	
	comp=N,144nm,0.7s						
IZMD				*i* AML	AML	13 16 10.0	
	comp=N,184nm,0.5s						
RFT7	**Candarli**	**1.07**	**141**	Pg	**Pb**	**13 15 53.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.13**	**57**	Pn	**Pb**	**13 15 54.1**	**+0.1**
ZEDA	**zmir-Bergama**	**1.14**	**136**	P	**Pb**	**13 15 54.3**	**+0.1**
ZEDA				S	**Sn**	**13 16 10.2**	**+0.5**
ZEDA				*i* AML	AML	13 16 12.0	
	comp=N,128nm,0.3s						
ZEDA				*i* AML	AML	13 16 12.0	
	comp=N,212nm,0.4s						
KARB	**zmir-Karabur**	**1.16**	**166**	P	**Pb**	**13 15 54.3**	**-0.2**
KARB				S	**Sb**	**13 16 08.9**	**-0.5**
FOCM	**Foa**	**1.20**	**154**	Pn	**Pb**	**13 15 55.5**	**+0.4**
BALY	**Balya**	**1.21**	**92**	P	**Pb**	**13 15 55.4**	**+0.1**
BALY				S	**Sb**	**13 16 10.9**	**+0.1**
BALY				*i* AML	AML	13 16 12.0	
	comp=N,185nm,0.5s						
BALY				*i* AML	AML	13 16 12.0	
	comp=N,375nm,0.4s						
SART	**Tekirdag**	**1.24**	**43**	P	**Pn**	**13 15 56.0**	**+0.3**
SART				S	**Sg**	**13 16 12.5**	**-0.3**
SART				*i* AML	AML	13 16 14.0	
	comp=N,189nm,0.3s						
SART				*i* AML	AML	13 16 15.0	
	comp=N,205nm,0.3s						
GONE	**Gonen-Balikesi**	**1.28**	**78**	Pn	**Pb**	**13 15 56.6**	**0.0**
PSRA	**Psara**	**1.30**	**197**	P	**Pn**	**13 15 55.3**	**-1.2**
PSRA				AML	AML	13 16 19.4	
	comp=E,842µm,0.2s						
PSRA				AML	AML	13 16 20.9	
	comp=N,563µm,0.2s						
THAS	**Thassos island**	**1.31**	**309**	P	**Pn**	**13 15 56.5**	**-0.1**
THAS				S	**Sb**	**13 16 12.8**	**-1.0**
	comp=N,72nm,0.3s						
THAS	**Thassos island**	**1.31**	**309**	P	**Pn**	**13 15 56.1**	**-0.5**
THAS				S	**Sb**	**13 16 12.5**	**-1.3**
THAS				AML	AML	13 16 16.2	
	comp=N,156µm,0.2s						
THAS				AML	AML	13 16 16.6	
	comp=E,128µm,0.3s						
STEP	**BALIKESIR_Sava**	**1.35**	**107**	P	**Pb**	**13 15 58.1**	**+0.4**
STEP				S	**Sb**	**13 16 14.9**	**0.0**
STEP				*i* AML	AML	13 16 19.0	
	comp=E,115nm,0.3s						
STEP				*i* AML	AML	13 16 21.0	
	comp=E,130nm,0.7s						
CHOS	**Chios island**	**1.40**	**180**	P	**Pn**	**13 15 57.6**	**-0.4**
CHOS				S	**Sn**	**13 16 15.5**	**-0.8**
	comp=E,125nm,0.4s						
CHOS	**Chios island**	**1.40**	**180**	P	**Pn**	**13 15 57.5**	**-0.4**
CHOS				S	**Sn**	**13 16 15.4**	**-0.9**
CHOS				AML	AML	13 16 20.5	
	comp=E,284µm,0.3s						
CHOS				AML	AML	13 16 22.8	
	comp=N,188µm,0.2s						
RDO	**Rodhopi**	**1.41**	**344**	P	**Pn**	**13 15 58.3**	**+0.3**
RDO				S	**Sn**	**13 16 16.3**	**-0.2**
	comp=N,35nm,0.5s						
RDO	**Rodhopi**	**1.41**	**344**	P	**Pn**	**13 15 58.4**	**+0.3**
RDO				AML	AML	13 16 22.2	
	comp=N,81µm,0.2s						
RDO				AML	AML	13 16 27.9	
	comp=E,78µm,0.3s						
BALB	**Balikesir**	**1.41**	**95**	Pn	**Pn**	**13 15 58.2**	**+0.2**
BKES	**Balkesir-Mer**	**1.44**	**92**	P	**Pn**	**13 15 59.1**	**+0.7**
BKES				S	**Sg**	**13 16 18.5**	**-0.7**
BKES				*i* AML	AML	13 16 20.0	
	comp=E,101nm,0.3s						
BLKS	**Balkesir-Sus**	**1.47**	**86**	P	**Pn**	**13 15 59.3**	**+0.4**
URLA	**Izmir**	**1.49**	**163**	P	**Pn**	**13 15 58.5**	**-0.6**
URLA				S	**Sn**	**13 16 18.8**	**+0.4**
EDC	**Edincik**	**1.49**	**68**	Pn	**Pn**	**13 15 59.8**	**+0.6**
BLCB	**Balcova**	**1.60**	**151**	Pn	**Pn**	**13 16 01.5**	**+0.9**
BLCB	**Balcova**	**1.60**	**151**	P	**Pn**	**13 16 00.4**	**-0.2**
BAND	**Balkesir-Ban**	**1.67**	**70**	P	**Pn**	**13 16 02.5**	**+1.0**
BAND				*i* AML	AML	13 16 28.0	
	comp=E,97nm,0.2s						
OUR	**Ouranopolis**	**1.68**	**290**	P	**Pn**	**13 16 01.4**	**-0.4**
KAVA	**Kavala**	**1.69**	**316**	P	**Pn**	**13 16 02.1**	**+0.3**
KOKK	**Kokkinochori,**	**1.88**	**304**	P	**Pn**	**13 16 04.1**	**-0.4**
KIRK	**Kırklareli**	**2.14**	**21**	P	**Pn**	**13 16 09.5**	**+1.4**
KIRK				S	**Sn**	**13 16 33.1**	**-1.4**
SMG	**Samos**	**2.17**	**163**	P	**Pn**	**13 16 08.5**	**+0.1**
SMG	**Samos**	**2.17**	**163**	P	**Pn**	**13 16 08.2**	**-0.2**
VIZE	**Kirklareli, Vi**	**2.24**	**37**	P	**Pn**	**13 16 09.4**	**-0.1**
NVR	**Nevrokopi**	**2.29**	**314**	P	**Pn**	**13 16 10.9**	**+0.8**
SRS	**Serrai**	**2.30**	**306**	P	**Pn**	**13 16 10.4**	**+0.1**
KULA	**Kula-Manisa**	**2.39**	**121**	Pn	**Pn**	**13 16 12.9**	**+1.3**

JMA 05 13:16:05.3±0.1, 24°.3N±0°.3×123°.9E±0°.2, h9km±1km, MV0.6/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.14**	**271**	P		Pg	13 16 08.4	+0.1
IRIF				S		Sg	13 16 10.8	+0.3
JKRS	**Kuro-shima**	**0.15**	**128**	P		Pg	13 16 08.6	0.0
JKRS				S		Sg	13 16 11.4	+0.5
JIJ	**Ishigaki jima**	**0.24**	**83**	P		Pg	13 16 10.2	-0.1
JIJ				S		Sg	13 16 14.0	+0.5
HATJ	**Hateruma jima**	**0.28**	**194**	P		Pg	13 16 11.0	0.0
HATJ				S		Sg	13 16 15.0	+0.3
JISG	**Ishigakijimahi**	**0.47**	**57**	P		Pg	13 16 14.6	+0.2

TAP 05 13:16:36.7, 24°.25N×121°.75E, h11km, ML1.4, 1C-4D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EAHA	**Aohua** baz=351	**0.08**	**352**	⇓*i* P		Pg	13 16 39.7	+0.6
EAHA				S		Sg	13 16 42.1	+1.2
	baz=351							
ETL	**Fush Village** baz=230	**0.15**	**231**	P		Pg	13 16 40.9	+0.7
ETL				*i* S		Sg	13 16 44.0	+1.4
	baz=230							
NACB	**Ninganchiao** baz=240	**0.16**	**241**	*i* P		Pg	13 16 41.1	+0.7
NACB				S		Sg	13 16 44.1	+1.1
	baz=240							
ENA	**Nanau** baz=359	**0.17**	**357**	⇓P		Pg	13 16 41.2	+0.6
ENA				*i* S		Sg	13 16 44.5	+1.3
	baz=359							
EWUT	**Wuta** baz=7.0	**0.19**	**7**	⇓P		Pg	13 16 41.3	+0.4
EWUT				*e*S		Sg	13 16 44.5	+0.8
	baz=7.0							
ETLH	**Xiulin Townshi** baz=259	**0.25**	**259**	P		Pb	13 16 42.7	-0.7
ETLH				*i* S		Sb	13 16 47.2	-0.5
	baz=259							
HWA	**Hwalien** baz=204	**0.31**	**206**	*e*S		Sb	13 16 49.9	+0.6
LATG	**Datong** baz=323	**0.35**	**324**	*e*P		Pb	13 16 44.9	-0.2
LATG				S		Sb	13 16 49.9	-0.7
	baz=323							
TWC	**Suao** baz=15	**0.36**	**14**	*e*S		Sb	13 16 50.0	-1.0
NNSB	**Datong** baz=297	**0.38**	**297**	*e*P		Pb	13 16 45.6	+0.1
NNSB				S		Sb	13 16 50.6	-0.9
	baz=297							
NDS	**Dongshan** baz=355	**0.38**	**355**	S		Sb	13 16 51.3	-0.2
LXIB	**Xiulin Townshi** baz=233	**0.39**	**233**	*i* P		Pb	13 16 45.4	-0.3
LXIB				S		Sb	13 16 51.5	-0.2
	baz=233							
NNS	**Nan Shan** baz=298	**0.39**	**298**	⇑*e*P		Pb	13 16 46.0	+0.2
NNS				S		Sb	13 16 51.7	-0.2
	baz=298							
NDT	**Datong Townshi** baz=327	**0.41**	**328**	*e*P		Pb	13 16 46.3	+0.2
NDT				S		Sb	13 16 52.6	+0.3
	baz=327							
ENTT	**Nioudou** baz=337	**0.42**	**336**	⇓P		Pb	13 16 46.1	-0.1
ENTT				*i* S		Sb	13 16 52.6	0.0
	baz=337							
WHF	**Hehuan Shan** baz=255	**0.46**	**256**	P		Pg	13 16 46.4	+0.6
WHF				*e*S		Sg	13 16 53.0	+1.0
	baz=255							
FUSS	**Fushou** baz=269	**0.46**	**269**	*e*P		Pb	13 16 47.5	+0.4
FUSS				S		Sb	13 16 53.8	-0.3
	baz=269							
FUSB	**Fushanzhiwuyua** baz=343	**0.53**	**344**	P		Pg	13 16 47.5	+0.5
FUSB				S		Sb	13 16 55.8	+0.1
	baz=343							
YHNB	**Yeheng** baz=320	**0.54**	**321**	*e*P		Pb	13 16 48.6	+0.3
YHNB				S		Sb	13 16 56.5	+0.5
	baz=320							
NSK	**Sanguang** baz=319	**0.55**	**320**	*e*P		Pb	13 16 48.9	+0.4
NSK				*e*S		Sb	13 16 56.9	+0.4
	baz=319							
CHGB	**Renai** baz=249	**0.56**	**250**	P		Pb	13 16 48.6	-0.1
CHGB				S		Sb	13 16 56.9	0.0
	baz=249							
NWLT	**Wulai** baz=336	**0.57**	**337**	P		Pb	13 16 48.9	+0.1
NWLT				*e*S		Sb	13 16 56.8	-0.1
	baz=336							
OWD	**Renai** baz=240	**0.60**	**241**	*e*S		Sb	13 16 59.2	+1.2
WARBT	**Fenglin Townsh** baz=211	**0.63**	**212**	*e*P		Pg	13 16 49.3	+0.3
WARBT				*e*S		Sn	13 17 00.2	-1.5
	baz=211							
WUSB	**Renai** baz=245	**0.64**	**246**	*e*P		Pb	13 16 50.0	0.0
WUSB				*e*S		Sb	13 16 58.6	-0.3
	baz=245							
VWDT	**VWDT** baz=228	**0.75**	**228**	*e*P		Pn	13 16 54.1	+0.9
VWDT				*e*S		Sb	13 17 02.6	+0.6
	baz=228							

TAP 05 13:23:29.5, 23°.99N×121°.70E, h11km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=258	**0.09**	**261**	*e*P		Pg	13 23 32.5	+0.4
TWD	**Chiawan** baz=314	**0.13**	**312**	*e*P		Pg	13 23 32.9	+0.2
TWD				*i* S		Sg	13 23 36.1	+1.1
	baz=314							
ETL	**Fush Village** baz=335	**0.18**	**336**	P		Pg	13 23 34.1	+0.5
ETL				*i* S		Sg	13 23 37.8	+1.4
	baz=335							
ETM	**Tongmen** baz=262	**0.20**	**263**	*i* P		Pb	13 23 34.5	-0.5
ETM				*i* S		Sg	13 23 38.1	+1.5
	baz=262							
NACB	**Ninganchiao** baz=331	**0.21**	**331**	*e*P		Pb	13 23 35.0	-0.3
SHUL	**Shoufeng** baz=212	**0.24**	**213**	*i* P		Pb	13 23 35.5	-0.4
SHUL				S		Sg	13 23 39.8	+1.9
	baz=212							
LXIB	**Xiulin Townshi** baz=276	**0.27**	**276**	*e*P		Pb	13 23 36.7	+0.2
LXIB				*e*S		Sb	13 23 40.8	-0.3
	baz=276							
ETLH	**Xiulin Townshi** baz=316	**0.30**	**317**	*i* P		Pb	13 23 36.4	-0.5
ETLH				*i* S		Sb	13 23 41.5	-0.2
	baz=316							
EAHA	**Aohua** baz=5.0	**0.34**	**5**	P		Pb	13 23 37.3	-0.2
WARBT	**Fenglin Townsh** baz=226	**0.40**	**227**	P		Pg	13 23 37.9	+0.5
WARBT				*e*S		Sb	13 23 44.5	-0.1
	baz=226							

TAP 05 13:23:32.9, 24°.26N×121°.81E, h10km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=313	**0.08**	**311**	*e*S		Sg	13 23 36.7	-0.1
EAHA	**Aohua** baz=319	**0.09**	**319**	*e*P		Pg	13 23 34.8	-0.5
ENA	**Nanau** baz=349	**0.18**	**341**	*e*P		Pg	13 23 36.5	-0.2
ENA				S		Sg	13 23 40.1	+0.8
	baz=349							
EWUT	**Wuta** baz=352	**0.19**	**352**	*i* P		Pg	13 23 37.1	+0.3
EWUT				*e*S		Sg	13 23 40.7	+1.2
	baz=352							
ETL	**Fush Village** baz=239	**0.20**	**239**	*e*P		Pg	13 23 38.4	+1.4
ETL				*i* S		Sg	13 23 40.6	+0.8
	baz=239							
NACB	**Ninganchiao** baz=240	**0.21**	**246**	*e*P		Pg	13 23 38.5	+1.3
NACB				*e*S		Sg	13 23 41.3	+1.1
	baz=240							
TWD	**Chiawan** baz=230	**0.26**	**227**	*e*P		Pb	13 23 39.0	-0.7
TWD				*e*S		Sg	13 23 41.0	-0.7
	baz=230							
ETLH	**Xiulin Townshi** baz=260	**0.30**	**260**	P		Pg	13 23 39.3	+0.4
ETLH				S		Sb	13 23 44.7	-0.9
	baz=260							
HWA	**Hwalien** baz=224	**0.34**	**213**	*i* P		Pb	13 23 40.4	-0.6
HWA				*e*S		Sb	13 23 46.2	-0.3
	baz=224							
LATG	**Datong** baz=317	**0.38**	**317**	P		Pg	13 23 40.7	+0.3
LATG				*e*S		Sb	13 23 46.9	-0.9
	baz=317							
NDS	**Dongshan** baz=347	**0.38**	**348**	P		Pg	13 23 40.6	+0.1
NDS				*e*S		Sb	13 23 47.9	0.0
	baz=347							
NDT	**Datong Townshi** baz=322	**0.43**	**322**	P		Pg	13 23 41.4	0.0
NDT				S		Sg	13 23 48.2	+1.0
	baz=322							
NNS	**Nan Shan** baz=294	**0.43**	**295**	*e*S		Sg	13 23 47.2	0.0
ENTT	**Nioudou** baz=330	**0.44**	**330**	P		Pg	13 23 41.8	+0.4
ENTT				S		Sg	13 23 48.0	+0.7
	baz=330							
TWE	**Neicheng** baz=346	**0.48**	**345**	*i* P		Pg	13 23 42.7	+0.5
TWE				S		Sg	13 23 49.2	+0.7
	baz=346							
FUSS	**Fushou** baz=269	**0.51**	**269**	*e*P		Pb	13 23 42.2	-0.8
FUSS				*e*S		Sg	13 23 49.0	-0.8
	baz=269							
SHUL	**Shoufeng** baz=213	**0.52**	**205**	P		Pb	13 23 44.0	-0.2
SHUL				*e*S		Sb	13 23 51.3	-0.4
	baz=213							
FUSB	**Fushanzhiwuyua** baz=338	**0.54**	**338**	*e*P		Pb	13 23 44.0	-0.5
FUSB				*e*S		Sb	13 23 52.6	+0.3
	baz=338							
YHNB	**Yeheng** baz=316	**0.57**	**316**	*e*P		Pg	13 23 43.8	-0.1
YHNB				S		Sg	13 23 52.2	+0.8
	baz=316							
NSK	**Sanguang** baz=316	**0.58**	**316**	P		Pg	13 23 44.3	+0.1
NSK				*e*S		Sb	13 23 53.2	-0.5
	baz=316							
CHGB	**Renai** baz=244	**0.61**	**251**	*e*P		Pg	13 23 43.5	-1.2
CHGB				*e*S		Sg	13 23 52.1	-0.7
	baz=244							
WARBT	**Fenglin Townsh** baz=222	**0.66**	**216**	*i* P		Pg	13 23 46.1	+0.4
WARBT				*e*S		Sg	13 23 55.1	+0.7
	baz=222							
WUSB	**Renai** baz=240	**0.68**	**247**	*e*P		Pb	13 23 47.7	+0.7
WUSB				*i* S		Sg	13 23 55.8	+0.7
	baz=240							
WHP	**Taichung City** baz=271	**0.79**	**272**	*e*P		Pg	13 23 47.4	-0.6
WHP				*e*S		Sg	13 23 58.1	-0.2
	baz=271							
VWDT	**VWDT** baz=230	**0.79**	**231**	*e*P		Pb	13 23 48.9	+0.1
VWDT				*e*S		Sb	13 23 59.7	+0.2
	baz=230							

*TAP **05** 13:36:20.7, 24°.08N×122°.53E, h45km, ML2.8, D*
*JMA **05** 13:36:21.0±0.1, 24°.1N±0°.8×122°.5E±0°.3, h38km±2km, MV2.2/12, NW OFF ISHIGAKIJIMA IS*
ISC 05 13:36:21.5±1.3, 24°.08N±0°.05×122°.54E±0°.02, h44km±8km, n40, σ0°64/58, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EOS4	**EOS4** baz=282	**0.20**	**283**	⇓*i* P		**Pn**	**13 36 28.8**	**0.0**
EOS4				S		**Sn**	**13 36 34.5**	**+0.7**
	baz=282							
EOS3	**EOS3** baz=317	**0.29**	**316**	⇓*i* P		**Pn**	**13 36 29.6**	**-0.2**
EOS3				*i* S		**Sn**	**13 36 35.6**	**0.0**
	baz=317							
EOS2	**EOS2** baz=321	**0.44**	**321**	*i* P		**Pn**	**13 36 31.5**	**0.0**
EOS2				S		**Sn**	**13 36 39.3**	**+0.7**
	baz=321							
JYNG	**Yonagunijimaku**	**0.53**	**45**	*e*S		**Sn**	**13 36 40.0**	**-0.8**
YOJ	**Yonaguni jima** baz=48	**0.58**	**48**	P		**Pn**	**13 36 33.3**	**-0.1**
YOJ				S		**Sn**	**13 36 41.5**	**-0.3**
	baz=48							
YOJ	**Yonaguni jima**	**0.58**	**48**	P		**Pn**	**13 36 33.0**	**-0.4**
YOJ				*e*S		**Sn**	**13 36 41.2**	**-0.7**
EAHA	**Aohua** baz=289	**0.77**	**289**	*e*P		**Pn**	**13 36 35.9**	**0.0**
EAHA				*e*S		**Sn**	**13 36 46.9**	**+0.5**
	baz=289							
EWUT	**Wuta** baz=298	**0.78**	**298**	*e*P		**Pn**	**13 36 36.8**	**+0.7**
EWUT				*e*S		**Sn**	**13 36 46.9**	**+0.2**
	baz=298							
ESAO	**Su ao** baz=308	**0.81**	**308**	*e*P		**Pn**	**13 36 34.9**	**-1.5**
ESAO				*e*S		**Sn**	**13 36 46.0**	**-1.2**
	baz=308							
ENA	**Nanau** baz=295	**0.81**	**296**	P		**Pn**	**13 36 37.3**	**+0.8**
ENA				S		**Sn**	**13 36 47.5**	**+0.2**
	baz=295							
TWC	**Suao** baz=310	**0.82**	**310**	S		**Sn**	**13 36 46.3**	**-1.4**
ETL	**Fush Village** baz=275	**0.84**	**276**	*e*S		**Sn**	**13 36 48.6**	**+0.4**
NACB	**Ninganchiao** baz=276	**0.87**	**277**	*e*S		**Sn**	**13 36 48.8**	**0.0**
NDS	**Dongshan** baz=306	**0.93**	**307**	*e*S		**Sn**	**13 36 50.8**	**+0.4**
ETM	**Tongmen** baz=263	**0.96**	**264**	*e*S		**Sn**	**13 36 51.1**	**0.0**
ETLH	**Xiulin Townshi** baz=277	**0.97**	**278**	*e*S		**Sn**	**13 36 51.1**	**-0.4**
TWE	**Neicheng** baz=309	**1.02**	**309**	P		**Pn**	**13 36 40.5**	**+1.2**
TWE				S		**Sn**	**13 36 52.6**	**+0.1**
	baz=309							
LXIB	**Xiulin Townshi** baz=266	**1.03**	**267**	*e*S		**Sn**	**13 36 52.1**	**-0.8**
LATG	**Datong** baz=296	**1.03**	**297**	*e*S		**Sn**	**13 36 53.6**	**+0.7**
ESL	**Shilin** baz=255	**1.04**	**256**	*e*S		**Sn**	**13 36 52.8**	**-0.3**

ENTT	**Nioudou**	**1.05**	**303**	*e*S		**Sn**	**13 36 54.0**	**+0.7**
	baz=302							
TWB1	**Santiao Chiao**	**1.05**	**332**	*e*S		**Sn**	**13 36 52.3**	**-1.1**
	baz=332							
FUSB	**Fushanzhiwuyua**	**1.10**	**308**	*e*S		**Sn**	**13 36 55.7**	**+1.1**
	baz=308							
TIPB	**Shuangxi**	**1.10**	**324**	*e*S		**Sn**	**13 36 54.6**	**+0.1**
	baz=324							
WARBT	**Fenglin Townsh**	**1.11**	**252**	*e*S		**Sn**	**13 36 54.1**	**-0.7**
	baz=251							
IRIF	**Iriomote-Funau**	**1.12**	**76**	*e*P		**Pn**	**13 36 40.6**	**-0.1**
IRIF				S		**Sn**	**13 36 55.7**	**+0.8**
NNS	**Nan Shan**	**1.12**	**289**	*e*P		**Pn**	**13 36 40.5**	**-0.4**
	baz=288							
NNS				*e*S		**Sn**	**13 36 55.3**	**+0.1**
	baz=288							
HATJ	**Hateruma jima**	**1.16**	**91**	*e*S		**Sn**	**13 36 55.7**	**-0.2**
HGSD	**Ruisui**	**1.17**	**241**	*e*P		**Pn**	**13 36 41.2**	**-0.2**
	baz=240							
HGSD				*e*S		**Sn**	**13 36 55.8**	**-0.5**
	baz=240							
NWLT	**Wulai**	**1.17**	**307**	*e*S		**Sn**	**13 36 56.1**	**-0.3**
	baz=306							
SXI1	**Grass Mountain**	**1.18**	**329**	*e*P		**Pn**	**13 36 41.4**	**-0.2**
	baz=329							
SXI1				*e*S		**Sn**	**13 36 56.2**	**-0.3**
	baz=329							
FUSS	**Fushou**	**1.19**	**279**	*e*S		**Sn**	**13 36 57.4**	**+0.3**
	baz=278							
NWF	**Wu-fen Shan**	**1.21**	**325**	*e*P		**Pn**	**13 36 42.6**	**+0.6**
	baz=325							
NWF				*e*S		**Sn**	**13 36 56.2**	**-1.0**
	baz=325							
WFSB	**Wu-fen Shan**	**1.21**	**325**	*e*S		**Sn**	**13 36 56.9**	**-0.2**
	baz=325							
YHNB	**Yeheng**	**1.21**	**299**	*e*S		**Sn**	**13 36 56.8**	**-0.6**
	baz=299							
NSK	**Sanguang**	**1.23**	**299**	*e*S		**Sn**	**13 36 57.4**	**-0.4**
	baz=299							
EHY	**Hungye**	**1.25**	**243**	*e*S		**Sn**	**13 36 58.2**	**0.0**
	baz=242							
TWA	**Mucha**	**1.25**	**316**	*e*P		**Pn**	**13 36 42.7**	**+0.2**
	baz=316							
TWA				*e*S		**Sn**	**13 36 59.7**	**+1.5**
	baz=316							
JIJ	**Ishigaki jima**	**1.49**	**79**	P		**Pn**	**13 36 46.1**	**+0.3**
JIJ				*e*S		**Sn**	**13 37 04.3**	**+0.1**
JISG	**Ishigakijimahi**	**1.70**	**72**	P		**Pn**	**13 36 49.0**	**+0.4**
JISG				*e*S		**Sn**	**13 37 09.7**	**+0.6**

TAP 05 13:39:07.4, 24°21N × 121°75E, h13km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**358**	*e*P	Pg	13 39 10.8	+0.3
	baz=2.0						
ETL	**Fush Village**	**0.12**	**247**	P	Pb	13 39 11.4	-0.2
	baz=246						
ETL				S	Sb	13 39 14.3	-0.1
	baz=246						
NACB	**Ninganchiao**	**0.14**	**257**	P	Pb	13 39 11.6	-0.3
	baz=256						
NACB				S	Sb	13 39 14.6	-0.2
	baz=256						
TWD	**Chiawan**	**0.18**	**227**	*i* P	Pb	13 39 12.3	-0.4
	baz=225						
TWD				*i* S	Sb	13 39 15.8	-0.4
	baz=225						
ENA	**Nanau**	**0.22**	**359**	*i* P	Pb	13 39 12.8	-0.4
	baz=1.0						
ENA				*i* S	Sb	13 39 16.9	-0.3
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.24**	**270**	P	Pb	13 39 13.4	-0.3
	baz=270						
ETLH				S	Sb	13 39 17.5	-0.3
	baz=270						
EWUT	**Wuta**	**0.24**	**7**	P	Pb	13 39 13.3	-0.3
	baz=7.0						
EWUT				S	Sb	13 39 17.7	-0.1
	baz=7.0						
ETM	**Tongmen**	**0.33**	**224**	*e*P	Pg	13 39 14.2	0.0
	baz=223						
ETM				*e*S	Sg	13 39 19.5	+0.7
	baz=223						
LXIB	**Xiulin Townshi**	**0.35**	**239**	*e*P	Pg	13 39 14.6	0.0
	baz=238						
LXIB				*e*S	Sb	13 39 21.6	+0.4
	baz=238						
LATG	**Datong**	**0.38**	**329**	*i* P	Pb	13 39 16.2	+0.1
	baz=328						
LATG				S	Sb	13 39 22.2	+0.2
	baz=328						
NNSB	**Datong**	**0.40**	**304**	P	Pb	13 39 16.2	-0.2
	baz=303						
NNSB				S	Sb	13 39 22.5	+0.1
	baz=303						
NNS	**Nan Shan**	**0.41**	**305**	P	Pb	13 39 16.5	-0.1
	baz=304						
NNS				S	Sb	13 39 22.5	-0.3
	baz=304						
WHF	**Hehuan Shan**	**0.44**	**262**	*i* P	Pb	13 39 17.1	-0.2
	baz=261						
WHF				S	Sb	13 39 23.6	-0.4
	baz=261						
NDT	**Datong Townshi**	**0.45**	**332**	*e*P	Pb	13 39 17.2	0.0
	baz=331						
NDT				*e*S	Sb	13 39 24.1	+0.4
	baz=331						
FUSS	**Fushou**	**0.46**	**275**	P	Pb	13 39 17.6	+0.1
	baz=275						
FUSS				S	Sb	13 39 24.9	+0.6
	baz=275						
ENTT	**Nioudou**	**0.46**	**339**	P	Pb	13 39 17.4	0.0
	baz=340						
ENTT				S	Sb	13 39 24.5	+0.3
	baz=340						
CHGB	**Renai**	**0.54**	**255**	*e*P	Pb	13 39 19.0	+0.1
	baz=254						
CHGB				*e*S	Sb	13 39 26.7	0.0
	baz=254						
YHNB	**Yeheng**	**0.57**	**324**	*e*P	Pb	13 39 19.5	+0.2
	baz=323						
YHNB				*e*S	Sb	13 39 27.6	+0.3
	baz=323						
NSK	**Sanguang**	**0.59**	**323**	*e*P	Pb	13 39 19.6	+0.1
	baz=323						
NSK				*e*S	Sb	13 39 28.2	+0.5
	baz=323						
WARBT	**Fenglin Townsh**	**0.59**	**214**	*e*S	Sb	13 39 27.9	+0.2
	baz=213						
WUSB	**Renai**	**0.61**	**250**	*e*P	Pb	13 39 20.6	+0.6
	baz=249						
WUSB				*e*S	Sb	13 39 29.0	+0.5
	baz=249						

JMA 05 13:39:29.9±0.1, 24°3N±0°5 × 123°9E±0°3, h9km±2km, MV0.7/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.14**	**270**	P	Pg	13 39 33.0	+0.1
IRIF				S	Sg	13 39 35.6	+0.5
JKRS	**Kuro-shima**	**0.15**	**129**	P	Pg	13 39 33.3	+0.1
JKRS				S	Sg	13 39 35.9	+0.4
JIJ	**Ishigaki jima**	**0.24**	**83**	P	Pg	13 39 34.8	0.0
JIJ				*e*S	Sg	13 39 38.4	+0.2
HATJ	**Hateruma jima**	**0.29**	**194**	*e*S	Sg	13 39 39.8	+0.3
JISG	**Ishigakijimahi**	**0.47**	**57**	*e*P	Pg	13 39 39.3	+0.2

*NEIC **05** 13:46:56.3±0.5, 59°.5S±0°.1 × 25°.5W±0°.3, h10km±1km, mb4.6/16, Error ellipse: s-maj=32.9km s-min=7.8km az=45.0*
*IDC **05** 13:47:40.7±16.0, 58°.61S × 26°.45W, h365km±153km, mb3.4/3, mbtmp4.0/3, Error ellipse: s-maj=55.0km s-min=46.4km az=153.0*

ISC 05 13:46:56.3±1.0, 59°.6S±0°.2 × 25°.6W±0°.2, h10km, n20, σ0s88/19, mb4.5/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**15.20**	**152**	Pn	**Pn**	**13 50 30.5**	**-0.2**
SNAA				IAmb	IAmb	13 50 33.7	
	comp=Z,15nm,0.7s						
BELA	**Belgrano 2**	**18.64**	**186**	P	**P**	**13 51 14.2**	**+0.5**
TRQA	**Tornquist**	**31.58**	**297**	P	**P**	**13 53 19.0**	**+0.2**
TRQA				IAmb	IAmb	13 53 24.0	
	comp=Z,5.3nm,0.8s						
PLCA	**Paso Flores**	**33.57**	**284**	P	**P**	**13 53 36.0**	**-0.2**
CO02	**Combarbal**	**41.41**	**293**	P	**P**	**13 54 43.9**	**+1.2**
CO02				IAmb	IAmb	13 55 19.9	
	comp=Z,19nm,1.4s						
AC05	**El Transito**	**43.06**	**295**	P	**P**	**13 54 56.1**	**-0.2**
AC05				IAmb	IAmb	13 55 00.1	
	comp=Z,9.8nm,0.9s						
AC02	**Maricunga**	**44.25**	**298**	P	**P**	**13 55 06.3**	**+0.1**
AC02				IAmb	IAmb	13 55 10.1	
	comp=Z,5.9nm,0.8s						
GO02	**Mina Guanaco**	**45.91**	**299**	P	**P**	**13 55 18.7**	**-0.5**
PB14	**IPOC Station P**	**46.73**	**298**	P	**P**	**13 55 24.3**	**-1.4**
PB14				IAmb	IAmb	13 55 27.7	
	comp=Z,7.1nm,0.8s						
LVC	**Limon Verde**	**47.83**	**301**	P	**P**	**13 55 34.1**	**-0.3**
LVC				IAmb	IAmb	13 55 38.0	
	comp=Z,5.5nm,0.7s						
LVC	**Limon Verde**	**47.83**	**301**	P	**P**	**13 55 36.5**	**+2.1**
	comp=Z,4.8nm,0.7s,baz=156,slow=6.0,SNR=6.4						
	comp=Z,4.8nm,0.7s						
PB05	**IPOC Station P**	**48.19**	**300**	P	**P**	**13 55 36.8**	**0.0**
PB07	**IPOC Station P**	**49.03**	**301**	P	**P**	**13 55 43.3**	**-0.1**
PB11	**IPOC Station P**	**50.67**	**302**	P	**P**	**13 55 55.8**	**0.0**
PB11				IAmb	IAmb	13 56 05.8	
	comp=Z,10nm,1.1s						
TOA0	**Torodi Ar. Sit**	**75.75**	**27**	P	**P**	**13 58 41.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**75.75**	**27**	P	**P**	**13 58 41.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**75.75**	**27**	P	**P**	**13 58 43.5**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=194,slow=5.6,SNR=4.1						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**95.38**	**161**	P	P	14 00 28.8	+8.1
	comp=Z,0.2nm,0.7s,baz=190,slow=2.8,SNR=1.6						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**139.31**	**315**	PKP	**PKPdf**	**14 06 21.7**	**-0.2**
	comp=Z,0.1nm,0.6s,baz=125,slow=2.4,SNR=6.4						
ILAR	**Eielson Array**	**153.00**	**306**	PKPbc	**PKPbc**	**14 06 51.4**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=114,slow=1.1,SNR=5.8						

*JSN **05** 13:51:39.4±0.5, 18°.11N × 77°.84W, h8km±999km, MD3.9*
*SSNC **05** 13:51:41.6±1.4, 18°.38N × 77°.72W, h7km±10km, ML3.7, MW3.4*

ISC 05 13:51:39.4±2.3, 18°.35N±0°.08 × 77°.8W±0°.1, h26km±10km, n16, σ1s35/29, 2C-3D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTDJ	**Mount Denham**	**0.24**	**121**	↓*i* P	**Pb**	**13 51 45.7**	**0.0**
MTDJ				↑*i* S	**Sb**	**13 51 49.8**	**-0.2**
MTDJ	**Mount Denham**	**0.24**	**121**	↓*i* P	**Pb**	**13 51 45.6**	**0.0**
MTDJ				*i* S	**Sb**	**13 51 49.9**	**-0.2**
MTDJ				IAML		13 51 50.4	
	comp=Z,15μm,0.5s						
MTDJ				IAML		13 51 50.5	
	21μm,0.3s						
STH	**Stony Hill**	**0.93**	**107**	↓*i* P	**Pn**	**13 51 56.5**	**-0.4**
STH	**Stony Hill**	**0.93**	**107**	*e*P	**Pn**	**13 51 56.4**	**-0.5**
STH				*e*S	**Sn**	**13 52 09.3**	**-0.2**
STH				IAML		13 52 12.0	
	comp=N,1603μm,0.2s						
STH				IAML		13 52 12.7	
	comp=E,1637μm,0.1s						
GWJ	**Greenwich**	**1.01**	**106**	↑*e*P	**Pn**	**13 51 57.9**	**-0.1**
PILO	**Pilon**	**1.58**	**12**	*e*P	**Pb**	**13 52 07.2**	**-0.9**
PILO				*e*S	**Sn**	**13 52 26.0**	**+0.4**
LMGC	**Las Mercedes**	**1.85**	**22**	*e*P	**Pn**	**13 52 10.6**	**+1.2**
LMGC				*e*S	**Sn**	**13 52 30.8**	**-1.2**
LMGC				*e*Sg	**Sb**	**13 52 32.3**	**-2.9**
LMGC				IAML		13 52 34.3	
	comp=E,655nm,0.0s						
LMGC				IAML		13 52 34.3	
	comp=N,862nm,0.2s						
CHIV	**Chivirico**	**2.05**	**38**	*e*P	**Pn**	**13 52 13.2**	**+0.9**
CHIV				*e*S	**Sn**	**13 52 36.0**	**-1.0**
CHIV				IAML		13 52 39.7	
	comp=N,90nm,0.2s						
CHIV				IAML		13 52 43.4	
	comp=E,115nm,0.2s						
YAR	**Yar**	**2.40**	**33**	*e*P	**Pn**	**13 52 18.6**	**+1.6**
YAR				*e*S	**Sn**	**13 52 45.0**	**-0.7**
YAR				IAML		13 52 49.8	
	comp=N,101nm,0.2s						
YAR				IAML		13 52 50.3	
	comp=E,93nm,0.1s						
RCC	**Rio Carpintero**	**2.54**	**50**	*e*P	**Pn**	**13 52 20.0**	**+1.0**
RCC				*e*S	**Sn**	**13 52 49.2**	**+0.1**
RCC				IAML		13 52 52.0	
	comp=E,76nm,0.2s						
RCC				IAML		13 52 53.2	
	comp=N,78nm,0.1s						
PINC	**Pinares de May**	**2.82**	**41**	*e*P	**Pn**	**13 52 24.3**	**+1.5**
GTBY	**Guantanamo Bay**	**2.95**	**57**	*e*P	**Pn**	**13 52 25.5**	**+1.0**
GTBY				*e*S	**Sn**	**13 52 58.8**	**-0.3**
GTBY				IAML		13 53 05.5	
	comp=N,54nm,0.3s						
GTBY				IAML		13 53 05.6	
	comp=N,81nm,0.4s						
GTMO	**Guantanamo**	**3.01**	**55**	*e*P	**Pn**	**13 52 26.5**	**+1.1**
SABCS	**La Quijada**	**3.05**	**49**	*e*P	**Pn**	**13 52 27.6**	**+1.6**
SABCS				*e*S	**Sn**	**13 53 00.4**	**-1.4**
SABCS				IAML		13 53 10.9	
	comp=N,110nm,0.5s						
SABCS				IAML		13 53 12.6	
	comp=E,115nm,0.4s						
NMDO	**Nuevo Mundo**	**3.41**	**49**	*e*P	**Pn**	**13 52 32.2**	**+1.2**
NMDO				*e*S	**Sn**	**13 53 13.2**	**+2.5**
NMDO				IAML		13 53 19.9	
	comp=E,52nm,0.5s						
NMDO				IAML		13 53 19.9	
	comp=N,53nm,0.5s						
MOAC	**Moa**	**3.49**	**48**	*e*P	**Pn**	**13 52 34.3**	**+2.2**
MOAC				*e*S	**Sn**	**13 53 15.0**	**+2.4**
MOAC				IAML		13 53 21.4	
	comp=E,86nm,0.5s						
MOAC				IAML		13 53 26.7	
	comp=N,57nm,0.3s						

*JSN **05** 13:54:23.1±0.5, 17°.76N × 77°.73W, h9km±999km, MD3.2*
SSNC 05 13:54:23.5±0.7, 18°.35N × 77°.78W, h9km±999km, MD3.2, ML2.9, MW3.2, 1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTDJ	**Mount Denham**	**0.26**	**118**	↓*i* P	Pg	13 54 28.4	-0.3
MTDJ				*i* S	Sg	13 54 32.6	+0.3
MTDJ				IAML		13 54 33.0	
	comp=Z,3μm,0.4s						
MTDJ				IAML		13 54 34.1	
	2μm,0.3s						
STH	**Stony Hill**	**0.96**	**106**	*i* P	Pg	13 54 39.3	-2.6
STH				*i* S	Sg	13 54 51.8	-2.6
STH	**Stony Hill**	**0.96**	**106**	*e*P	Pg	13 54 39.2	-2.8
STH				*e*S	Sg	13 54 50.7	-3.7
STH				IAML		13 54 54.5	
	comp=E,137μm,0.2s						
STH				IAML		13 54 55.0	
	comp=N,128μm,0.3s						
GWJ	**Greenwich**	**1.03**	**105**	*i* P	Pg	13 54 40.9	-2.5
HOJ	**Hope**	**1.03**	**109**	*i* P	Pg	13 54 40.0	-3.4
PILO	**Pilon**	**1.59**	**13**	*e*P	Pn	13 54 49.6	-2.4
PILO				*e*S	Sn	13 55 07.8	-4.9
PILO				IAML		13 55 10.9	
	comp=E,115nm,0.3s						
PILO				IAML		13 55 11.1	
	comp=N,83nm,0.3s						
LMGC	**Las Mercedes**	**1.85**	**23**	*e*P	Pn	13 54 53.0	-2.5
LMGC				*e*S	Sn	13 55 14.9	-4.2
LMGC				IAML		13 55 17.1	
	comp=E,62nm,0.0s						
LMGC				IAML		13 55 18.0	
	comp=N,82nm,0.1s						
CHIV	**Chivirico**	**2.07**	**38**	*e*P	Pn	13 54 55.9	-2.6
CHIV				*e*S	Sn	13 55 17.7	-6.7
CHIV				IAML		13 55 21.1	
	comp=N,12nm,0.0s						
CHIV				IAML		13 55 21.9	
	comp=E,9.9nm,0.3s						
YAR	**Yar**	**2.41**	**33**	*e*P	Pn	13 55 01.0	-2.2
YAR				*e*S	Sn	13 55 27.5	-5.5
YAR				IAML		13 55 31.2	
	comp=N,6.6nm,0.2s						
YAR				IAML		13 55 31.5	
	comp=E,7.3nm,0.1s						
RCC	**Rio Carpintero**	**2.56**	**50**	*e*S	Sn	13 55 31.2	-5.3
RCC				IAML		13 55 34.6	
	comp=N,6.4nm,0.1s						
RCC				IAML		13 55 34.8	
	comp=E,5.9nm,0.1s						
PINC	**Pinares de May**	**2.83**	**41**	*e*P	Pn	13 55 07.3	-1.7
PINC				*e*S	Sn	13 55 39.8	-3.5
PINC				IAML		13 55 43.7	
	comp=E,29nm,0.1s						
PINC				IAML		13 55 44.3	
	comp=N,34nm,0.1s						
GTBY	**Guantanamo Bay**	**2.97**	**58**	*e*P	Pn	13 55 09.7	-1.2
SABCS	**La Quijada**	**3.07**	**49**	*e*P	Pn	13 55 10.4	-1.9
SABCS				*e*S	Sn	13 55 44.4	-4.7
SABCS				IAML		13 55 46.2	
	comp=N,16nm,0.8s						
SABCS				IAML		13 55 49.1	
	comp=E,18nm,0.5s						

*IDC **05** 14:10:10.7±5.8, 3°.64N × 96°.53E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=297.8km s-min=22.8km az=56.0*
*DJA **05** 14:10:12.1±0.9, 3°N±3° × 9°6E±1°0, h10km, M4.0/10, mb4.3/2, MLv3.9/10*

ISC 05 14:10:11.6±1.2, 3°.40N±0°.05 × 96°.2E±0°.2, h10km, n17, σ1s10/11, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.90**	**17**	Pg	**Pg**	**14 10 30.0**	**+1.0**
SNSI	**Sinabang, Aceh**	**1.00**	**170**	P	**Pg**	**14 10 31.0**	**+0.1**
KCSI	**Kotacane, Aceh**	**1.63**	**86**	P	**Pn**	**14 10 40.4**	**0.0**
LHMI	**Lhok Sumawe**	**1.99**	**24**	P	**Pn**	**14 10 46.2**	**+0.9**
GSI	**Gunungsitoli**	**2.52**	**145**	P	**Pn**	**14 10 54.6**	**+1.9**
PBSI	**Pulau Batu**	**4.04**	**148**	P	**Pn**	**14 11 14.7**	**+1.1**
H08S2	**Diego Garcia H**	**26.02**	**245**	T	T	14 42 10.8	
	baz=66,SNR=3.9						
H08S3	**Diego Garcia H**	**26.03**	**245**	T	T	14 42 10.8	
	baz=66						
H08S1	**Diego Garcia H**	**26.04**	**245**	T	T	14 42 23.9	
	baz=66						
WRA	**Warramunga Arr**	**44.10**	**123**	P	**P**	**14 18 19.4**	**-1.0**
	0.4nm,0.5s,baz=302,slow=9.0,SNR=6.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**44.87**	**347**	P	**P**	**14 18 25.3**	**-1.0**
	0.2nm,0.5s,baz=167,slow=8.6,SNR=4.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**45.56**	**128**	P	**P**	**14 18 31.3**	**-0.8**
	0.2nm,0.6s,baz=299,slow=7.6,SNR=5.7						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**49.35**	**345**	P	**P**	**14 19 00.6**	**-0.5**
	0.3nm,0.5s,baz=162,slow=7.1,SNR=2.5						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**51.24**	**351**	P	**P**	**14 19 14.9**	**-0.5**
	0.3nm,0.5s,baz=148,slow=8.5,SNR=2.3						
	0.3nm,0.5s						
H04N2	**CROZET ISLANDS**	**63.01**	**213**	T	T	15 28 17.0	
	baz=51,slow=75,SNR=9.3						
H04N1	**CROZET ISLANDS**	**63.02**	**213**	T	T	15 28 14.6	
	baz=51,slow=75,SNR=11						
H04N3	**CROZET ISLANDS**	**63.03**	**213**	T	T	15 28 18.5	
	baz=51,slow=75,SNR=8.9						

*OMAN **05** 14:16:34.2±1.7, 31°.19N × 56°.93E, h10km, ml2.0/1, ms2.3/2, Error ellipse: s-maj=11.6km s-min=9.1km az=40.0*
*IDC **05** 14:16:35.8±1.1, 30°.43N × 57°.33E, h0km, mb3.9/11, mbtmp3.9/14, ML3.4/3, MS3.0/3, Error ellipse: s-maj=24.9km s-min=19.6km az=164.0*
*TEH **05** 14:16:35.4, 30°.67N × 57°.43E, h6km±29km, ML4.2*
*NEIC **05** 14:16:39.2±1.6, 30°.75N±0°.05 × 57°.2E±0°.1, h10km±1km, mb4.1/7, Error ellipse: s-maj=19.5km s-min=6.6km az=108.0*

ISC 05 14:16:37.5±0.4, 30°.66N±0°.03 × 57°.42E±0°.03, h10km, n98, σ2s60/92, mb4.0/14, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.20**	**219**	Pg	**Pg**	**14 16 41.1**	**-0.7**
CHMN	**Cheshme madani**	**0.80**	**173**	Pg	**Pg**	**14 16 52.4**	**-1.4**
ZRDN	**Zarand Kerman**	**0.82**	**292**	Pg	**Pn**	**14 16 52.6**	**-2.7**
KHGB	**Koh Gabri**	**0.86**	**251**	Pg	**Pb**	**14 16 53.1**	**-1.6**
TVBK	**TV Kerman**	**0.88**	**220**	Pg	**Pn**	**14 16 54.2**	**-2.1**
NGRK	**Negar Kerman**	**1.18**	**211**	Pg	**Pn**	**14 16 59.5**	**-0.8**
KBAM	**BAM**	**1.77**	**149**	Pg	**Pg**	**14 17 09.4**	**-1.9**
IBAF	**Bafgh**	**1.84**	**301**	Pn	**Pg**	**14 17 10.7**	**-2.1**
BSRN	**Basiran**	**1.96**	**48**	Pn	**Pg**	**14 17 11.9**	**-3.1**
IKOO	**Kooshah**	**2.22**	**37**	Pn	**Pb**	**14 17 15.6**	**-2.3**
NHDN	**Nehbandan**	**2.37**	**71**	Pn	**Pb**	**14 17 18.2**	**-2.2**
TPRV	**Parvadeh(Tabas**	**2.44**	**345**	Pn	**Pb**	**14 17 18.9**	**-2.6**
ITEG	**Tejag**	**2.50**	**27**	Pn	**Pb**	**14 17 19.4**	**-3.2**
IMEH	**Mehriz**	**2.52**	**288**	Pn	**Pb**	**14 17 20.4**	**-2.6**
IDAH	**Dahanechah**	**2.94**	**45**	Pn	**Pb**	**14 17 26.2**	**-3.9**
TKDS	**Koohdasht(Taba**	**2.96**	**355**	Pn	**Pb**	**14 17 25.8**	**-4.5**
AFRZ	**Afriz**	**3.07**	**26**	Pn	Pb	14 17 27.4	-4.9
ZHDN	**Zahedan**	**3.20**	**112**	Pn	**Pb**	**14 17 29.9**	**-4.6**
TNSJ	**Nastanj**	**3.36**	**348**	Pn	**Pn**	**14 17 31.4**	**+1.2**
SHRT	**Shahrakht**	**3.85**	**39**	Pn	**Pn**	**14 17 38.5**	**+1.7**
ANAR	**Anarak**	**4.03**	**310**	Pn	**Pn**	**14 17 40.8**	**+1.5**
IRAM	**Ramesheh**	**4.46**	**286**	Pn	**Pn**	**14 17 47.2**	**+1.8**
JASK	**Jask - Hormozg**	**4.79**	**175**	Pn	**Pn**	**14 17 51.7**	**+1.9**
JASK	**Jask - Hormozg**	**4.79**	**175**	P	Pn	14 17 52.9	+3.1
	SNR=9.7						
BANOM	**Banah**	**4.82**	**192**	P	Pn	14 17 53.6	+3.4
BANOM				S	**Sb**	**14 18 54.8**	**-5.4**
IZEF	**Zefreh**	**4.87**	**299**	Pn	**Pn**	**14 17 53.2**	**+2.1**
KLNJ	**Kolanjah**	**5.02**	**275**	Pn	**Pn**	**14 17 55.7**	**+2.4**
MASF	**Masafi**	**5.39**	**192**	P	Pn	14 18 01.2	+3.3
MASF				S	**Sb**	**14 19 08.9**	**-7.5**
MDH	**Madha**	**5.43**	**191**	P	**Pn**	**14 18 01.2**	**+2.7**
SRVN	**Saravan**	**5.43**	**125**	Pn	**Pn**	**14 18 01.2**	**+2.5**
HRA	**Herat**	**5.51**	**46**	Pn	**Pn**	**14 18 01.8**	**+1.9**
KRSH	**Karshahi**	**5.56**	**308**	Pn	**Pn**	**14 18 02.1**	**+1.6**
SBZV	**Sabzevar**	**5.71**	**2**	Pn	**Pn**	**14 18 04.2**	**+1.6**
ISFB	**Sefidab**	**5.72**	**311**	Pn	**Pn**	**14 18 04.3**	**+1.8**
UOSS	**Minazif**	**5.79**	**191**		**Pn**	**14 18 05.8**	**+2.2**
UOSS	**Minazif**	**5.79**	**191**	P	Pn	14 18 06.6	+3.0
UOSS				S	**Sb**	**14 19 20.2**	**-8.0**
NAZ	**Nazwa, Dubai**	**5.86**	**196**	P	Pn	14 18 07.9	+3.4
NAZ				S	**Sb**	**14 19 22.5**	**-7.6**
HATD	**Hatta, Dubai**	**5.92**	**191**	P	Pn	14 18 08.5	+3.1
HATD				S	Sb	14 19 22.6	-9.3
ASHO	**Ashiyiah**	**6.08**	**192**	P	Pn	14 18 10.4	+3.0
	SNR=9.5						
IMYA	**Miami**	**6.09**	**21**	Pn	**Pn**	**14 18 10.

SNR=7.3
MZWR Madinat Zayed 7.56 205 P **Pn** 14 18 29.3 +1.5
SMDO Samad 7.59 176 P Pn 14 18 31.9 +3.6
GHWR Ruwais 7.80 212 P **Pn** 14 18 32.1 +1.0
BSY Bisya 7.89 181 P Pn 14 18 36.0 +3.6
TRNA Turayna 8.07 224 P **Pn** 14 18 34.7 0.0
TRNA S **Sn** 14 20 05.8 -0.2
SMRA Abu-Samra 8.30 226 P **Pn** 14 18 38.5 +0.7
MHTO MHTO 9.65 177 P Pn 14 18 59.6 +3.2
DOK Doka 12.36 195 P **Pn** 14 19 36.0 +2.5
RAYN Ar Rayn 12.77 239 Pn **Pn** 14 19 37.9 -1.3
DMTO DMTO 13.08 190 P **Pn** 14 19 45.6 +2.2
WHFO Wadi Hawf 13.11 195 P **Pn** 14 19 45.9 +2.0
SNR=14
RBK Rabkut 13.42 193 P **Pn** 14 19 49.3 +1.2
ABTO Aybut 13.77 197 P **Pn** 14 19 53.7 +0.8
ARSB Arslanbob 16.46 45 P **P** 14 20 34.0 +2.6
KSH Kashi 17.54 55 P **Pn** 14 20 40.2 -2.1
KSH pP pP 14 20 44.1 -2.5
KSH pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 18.14 44 P **P** 14 20 52.7 +2.7
comp=Z,0.1nm,0.3s,baz=230,slow=10,SNR=5.4
comp=Z,1.7nm,0.7s
ABKAR Akbulak array 18.67 5 P **Pn** 14 20 56.0 +0.2
ABKAR IAmb IAmb 14 20 59.6
comp=Z,3.6nm,1.1s
EIL Elat 19.45 273 LR LR 14 30 04.7
comp=Z,45nm,18.0s,baz=8.5,slow=42
AKTO Aktyubinsk 19.76 1 P **Pn** 14 21 09.5 +0.6
comp=Z,0.2nm,0.3s,baz=177,slow=9.5,SNR=4.5
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 21.39 301 P **P** 14 21 26.0 +0.6
comp=Z,14nm,1.3s,baz=104,slow=8.2,SNR=3.7
comp=Z,14nm,1.3s
BRVK Borovoye 24.27 19 P **P** 14 21 55.8 +1.1
BRVK IAmb IAmb 14 22 01.4
comp=Z,4.1nm,1.0s
BVAR Borovoye Array 24.27 19 P **P** 14 21 57.0 +2.2
comp=Z,3.6nm,0.7s,baz=196,slow=7.0,SNR=16
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 25.07 43 P **P** 14 22 04.0 +2.0
MKAR Makanchi Array 25.07 43 P **P** 14 22 03.7 +1.7
comp=Z,0.7nm,0.7s,baz=229,slow=9.4,SNR=6.4
comp=Z,0.7nm,0.7s
KURBB Kurchatov Arra 25.42 32 P **P** 14 22 07.2 +2.1
comp=Z,1.4nm,0.9s,baz=232,slow=9.0,SNR=10
comp=Z,1.4nm,0.9s
ZALV Zalesovo Beam 30.52 32 P **P** 14 22 52.4 +1.7
comp=Z,1.2nm,0.6s,baz=235,slow=5.2,SNR=6.0
comp=Z,1.2nm,0.6s
PUK Puka 32.05 301 P **P** 14 23 02.7 -1.7
PUK IAmb IAmb 14 23 03.2
comp=Z,6.7nm,0.6s
FINES FINESS Array B 37.00 335 P **P** 14 23 46.1 -0.8
FINES FINESS Array B 37.00 335 P **P** 14 23 47.9 +1.0
comp=Z,1.7nm,0.6s,baz=129,slow=11,SNR=5.7
comp=Z,1.7nm,0.6s
GERES GERESS Array B 37.59 312 P **P** 14 23 53.3 +1.1
comp=Z,1.4nm,0.8s,baz=87,slow=7.0,SNR=2.7
comp=Z,1.4nm,0.8s
EKA Eskdalemuir Ar 48.83 319 P **P** 14 25 23.4 +0.6
comp=Z,0.4nm,0.4s,baz=104,slow=6.9,SNR=4.5
comp=Z,0.4nm,0.4s
TOA0 Torodi Ar. Sit 54.03 264 P **P** 14 26 01.8 -0.5
TOA0 IAmb IAmb 14 26 02.3
comp=Z,3.0nm,1.1s
TORD Torodi Ar. Bea 54.03 264 P **P** 14 26 02.0 -0.3
TORD IAmb IAmb 14 26 02.4
comp=Z,1.9nm,1.1s
TORD Torodi Ar. Bea 54.03 264 P **P** 14 26 01.4 -0.9
comp=Z,1.3nm,0.8s,baz=54,slow=7.1,SNR=8.1
comp=Z,1.3nm,0.8s
KSRS Korea Array 57.58 63 LR LR 14 53 51.0
comp=Z,16nm,19.5s,baz=105,slow=39
BOSA Boshof 66.45 211 P **P** 14 27 27.4 +0.2
IMAR Indian Mountai 80.72 12 P **P** 14 28 51.5 +0.9
BMAR Burnt Mountain 80.81 8 P **P** 14 28 52.8 +1.7
WRA Warramunga Arr 89.35 114 P **P** 14 29 34.7 +0.1
comp=Z,0.8nm,0.9s,baz=318,slow=3.8,SNR=3.3
comp=Z,0.8nm,0.9s
ASAR Alice Springs 91.03 117 P **P** 14 29 42.0 -0.4
comp=Z,0.5nm,0.8s,baz=299,slow=4.8,SNR=7.0
comp=Z,0.5nm,0.8s

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*NEIC **05** 15:00:32.2±1.9, 20.8S±0.1×178.8W±0.1, h573km±7km, mb4.5/112, Error ellipse: s-maj=17.4km s-min=14.0km az=154.0*
*IDC **05** 15:00:34.5±1.5, 20.82S×178.88W, h602km±17km, mb3.6/16, mbtmp4.5/18, Error ellipse: s-maj=14.4km s-min=10.5km az=151.0*
*NOU **05** 15:00:34.0, 20.73S×178.52W, h624km, mb4.6/10, Fiji Islands Region*
ISC 05 15:00:33.6±0.4, 20.86S±0.07×178.73W±0.07, h600km, n236, σ1.9s/227, mb4.5/74, 8C-7D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**4.27**	**345**	P	**P**	**15 02 03.3**	**+2.1**
DGTI	**Dogotuki**	**4.76**	**342**	P	**P**	**15 02 06.3**	**+1.5**
YSA	**Yasawairara**	**5.42**	**319**	P	**P**	**15 02 11.5**	**+1.5**
NIUE	**Niue**	**8.47**	**79**	P	**P**	**15 02 36.0**	**-1.5**
AFI	**Afiamalu**	**9.58**	**45**	P	**P**	**15 02 46.4**	**-2.1**
AFI	**Afiamalu**	**9.58**	**45**	P	**P**	**15 02 47.0**	**-1.4**
PINNC	**Pines Island,**	**12.96**	**260**	P	**P**	**15 03 22.1**	**0.0**
DZM	**Mont Dzumac**	**13.86**	**262**	P	**P**	**15 03 29.0**	**-2.2**
DZM	**Mont Dzumac**	**13.86**	**262**	P	**P**	**15 03 33.7**	**+2.5**
DZM	**Mont Dzumac**	**13.86**	**262**	P	**P**	**15 03 30.7**	**-0.6**
	11nm,0.9s,baz=105,slow=22,SNR=3.3						
ONTNC	**Ouen Toro**	**13.86**	**261**	P	**P**	**15 03 30.1**	**-1.1**
NOUC	**Port Laguerre**	**13.99**	**262**	P	**P**	**15 03 35.2**	**+2.8**
OUZ	**Omahuta**	**15.82**	**204**	P	**P**	**15 03 52.1**	**+2.9**
KOUNC	**Koumac, New Ca**	**15.89**	**268**	P	**P**	**15 03 52.8**	**+2.7**
KUZ	**Kuaotunu**	**16.55**	**196**	P	**P**	**15 03 57.8**	**+1.9**
KUZ	**Kuaotunu**	**16.55**	**196**	P	**P**	**15 03 57.5**	**+1.6**
WMGZ	**Waiomatatini S**	**17.08**	**188**	P	**P**	**15 04 00.9**	**+0.2**
HAZ	**Te Kaha**	**17.11**	**189**	P	**P**	**15 04 00.8**	**-0.1**
PKGZ	**Pakihiroa**	**17.20**	**189**	P	**P**	**15 04 03.0**	**+1.2**
RUGZ	**Raukumara Rang**	**17.33**	**190**	P	**P**	**15 04 03.2**	**+0.1**
PUZ	**Puketiti**	**17.35**	**188**	P	**P**	**15 04 03.5**	**+0.3**
TGRZ	**Tauranga**	**17.37**	**193**	P	**P**	**15 04 05.2**	**+2.0**
OPRZ	**Ohinepanea**	**17.41**	**193**	P	**P**	**15 04 05.3**	**+1.5**
TWGZ	**Tauwhareparae**	**17.49**	**189**	P	**P**	**15 04 05.2**	**+0.7**
KMRZ	**Kaimai**	**17.55**	**194**	P	**P**	**15 04 07.2**	**+2.2**
URZ	**Urewera**	**17.71**	**191**	P	**P**	**15 04 05.5**	**-0.9**
URZ	**Urewera**	**17.71**	**191**	P	**P**	**15 04 05.3**	**-1.1**
	20nm,0.8s,baz=304,slow=2.1,SNR=27						
URZ				S	**S**	**15 06 54.6**	**-4.6**
	12nm,1.2s,baz=85,slow=17,SNR=1.9						
URZ	**Urewera**	**17.71**	**191**	P	**P**	**15 04 05.4**	**-1.1**
MWZ	**Matawai**	**17.71**	**190**	P	**P**	**15 04 04.9**	**-1.6**
CNGZ	**Carnagh Statio**	**17.77**	**188**	P	**P**	**15 04 07.4**	**+0.5**
RRRZ	**Republican Roa**	**17.90**	**192**	P	**P**	**15 04 08.2**	**0.0**
MUGZ	**Murupara**	**17.98**	**191**	P	**P**	**15 04 08.0**	**-0.9**
RTZ	**Ruatahuna**	**18.08**	**191**	P	**P**	**15 04 08.2**	**-1.7**
RTZ				IAmb	IAmb	15 04 26.5	
	comp=Z,14nm,0.9s						
SNGZ	**Shannon Statio**	**18.18**	**190**	P	**P**	**15 04 10.3**	**-0.4**
HIZ	**Hauiti**	**18.45**	**196**	P	**P**	**15 04 14.5**	**+1.4**
BKZ	**Black Stump Fm**	**18.70**	**192**	P	**P**	**15 04 14.2**	**-1.3**
BKZ				IAmb	IAmb	15 04 20.0	
	comp=Z,17nm,1.2s						
BKZ	**Black Stump Fm**	**18.70**	**192**	P	**P**	**15 04 14.5**	**-1.0**
MRZ	**Mangatainoka R**	**20.33**	**193**	P	**P**	**15 04 28.6**	**-1.6**
TCW	**Tory Channel**	**21.14**	**195**	P	**P**	**15 04 37.3**	**-0.1**
TCW	**Tory Channel**	**21.14**	**195**	P	**P**	**15 04 37.6**	**+0.2**
QRZ	**Quartz Range**	**21.25**	**199**	P	**P**	**15 04 39.1**	**+0.7**
QRZ	**Quartz Range**	**21.25**	**199**	P	**P**	**15 04 39.0**	**+0.7**
QRZ	**Quartz Range**	**21.25**	**199**	P	**P**	**15 04 38.7**	**+0.4**
NNZ	**Nelson**	**21.37**	**197**	P	**P**	**15 04 38.2**	**-1.3**
MRNZ	**Matariki Terra**	**21.71**	**198**	P	**P**	**15 04 41.6**	**-0.9**
MRNZ	**Matariki Terra**	**21.71**	**198**	P	**P**	**15 04 41.9**	**-0.6**
THZ	**Tophouse**	**22.01**	**197**	P	**P**	**15 04 44.5**	**-0.7**
DSZ	**Denniston Nort**	**22.31**	**199**	P	**P**	**15 04 47.6**	**-0.3**
DSZ	**Denniston Nort**	**22.31**	**199**	P	**P**	**15 04 47.9**	**0.0**
KHZ	**Kahutara**	**22.46**	**195**	P	**P**	**15 04 48.1**	**-1.0**
KHZ	**Kahutara**	**22.46**	**195**	P	**P**	**15 04 47.9**	**-1.2**
LTZ	**Lake Taylor**	**23.13**	**197**	P	**P**	**15 04 53.7**	**-1.5**
LTZ	**Lake Taylor**	**23.13**	**197**	P	**P**	**15 04 53.7**	**-1.5**
INZ	**Inchbonnie**	**23.31**	**199**	P	**P**	**15 04 55.6**	**-1.1**
OXZ	**Oxford**	**23.70**	**197**	P	**P**	**15 04 59.2**	**-1.0**
RPZ	**Rata Peaks**	**24.33**	**198**	P	**P**	**15 04 59.8**	**+1.0**
RPZ	**Rata Peaks**	**24.33**	**198**	P	**P**	**15 05 06.6**	**+0.8**
JCZ	**Jackson Bay**	**25.37**	**201**	P	**P**	**15 05 15.4**	**+0.4**
EIDS	**Eidsvold**	**28.09**	**255**	P	**P**	**15 05 39.0**	**0.0**
ARMA	**Armidale**	**28.30**	**244**	P	**P**	**15 05 42.0**	**+1.1**
ARMA				IAmb	IAmb	15 05 52.0	
	comp=Z,12nm,1.2s						
CTAO	**Charters Tower**	**32.77**	**265**	P	**P**	**15 06 19.4**	**+0.2**
CMSA	**Cobar Meteorol**	**33.51**	**244**	P	**P**	**15 06 26.0**	**+0.8**
QLP	**Quilpie**	**34.30**	**253**	P	**P**	**15 06 33.1**	**+1.3**
PMG	**Port Moresby**	**34.76**	**284**		**P**	**15 06 35.4**	**-0.3**
PMG	**Port Moresby**	**34.76**	**284**	P	**P**	**15 06 36.2**	**+0.5**
COEN	**Coen**	**36.92**	**274**	P	**P**	**15 06 53.8**	**+0.2**
COEN				IAmb	IAmb	15 06 55.0	
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**37.02**	**244**	P	**P**	**15 06 54.9**	**+0.8**
STKA	**Stephens Creek**	**37.02**	**244**	P	**P**	**15 06 54.9**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=90,slow=12,SNR=14						
	comp=Z,3.3nm,0.6s						
BBOO	**Buckleboo**	**41.77**	**244**	P	**P**	**15 07 32.4**	**+0.2**
BBOO				IAmb	IAmb	15 07 33.0	
	comp=Z,7.2nm,0.6s						
WR0	**Warramunga Arr**	**43.68**	**263**	P	**P**	**15 07 46.6**	**-0.6**
WR0				IAmb	IAmb	15 07 48.1	
	comp=Z,7.3nm,0.7s						
AS31	**Alice Springs**	**43.77**	**257**	P	**P**	**15 07 47.6**	**-0.2**
AS31				IAmb	IAmb	15 07 48.5	
	comp=Z,5.2nm,0.6s						
ASAR	**Alice Springs**	**43.77**	**257**	P	**P**	**15 07 47.9**	**0.0**
	comp=Z,16nm,0.5s,baz=96,slow=7.6,SNR=437						
ASAR				PcP	**PcP**	**15 09 21.1**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=110,slow=3.6,SNR=4.4						
ASAR				ScP	**ScP**	**15 12 17.6**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=100,slow=4.2,SNR=5.5						
ASAR				S	**S**	**15 13 33.2**	**-2.9**
	comp=Z,3.1nm,0.8s,baz=94,slow=16,SNR=19						
	comp=Z,16nm,0.5s						
WB0	**Warramunga Arr**	**43.85**	**263**	P	**P**	**15 07 47.8**	**-0.7**
WB2	**Warramunga Arr**	**43.86**	**263**	P	**P**	**15 07 48.0**	**-0.5**
WB2				IAmb	IAmb	15 07 48.8	
	comp=Z,22nm,1.0s						
WRAB	**Tennant Creek**	**43.87**	**263**	P	**P**	**15 07 47.7**	**-0.9**
WRAB				IAmb	IAmb	15 07 48.8	
	comp=Z,20nm,1.0s						
WRA	**Warramunga Arr**	**43.87**	**263**	P	**P**	**15 07 48.2**	**-0.5**
	comp=Z,11nm,0.6s,baz=98,slow=7.9,SNR=174						
WRA				S	**S**	**15 13 37.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=106,slow=14,SNR=3.2						
	comp=Z,11nm,0.6s						
HMH	**Humu'ula Sheep**	**46.20**	**31**	P	**P**	**15 08 05.8**	**-0.9**
MTN	**Manton Dam**	**48.48**	**271**	P	**P**	**15 08 23.0**	**-0.5**
FORT	**Forrest**	**48.52**	**247**	P	**P**	**15 08 23.1**	**-0.4**
FORT				IAmb	IAmb	15 08 24.3	
	comp=Z,12nm,0.7s						
KNRA	**Kununurra**	**49.95**	**267**	P	**P**	**15 08 34.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.30**	**263**	P	**P**	**15 08 51.4**	**+0.2**
SOEI	**Soe**	**55.83**	**272**	P	**P**	**15 09 16.6**	**+0.6**
PSA00	**Pilbara Seismi**	**56.92**	**257**	P	**P**	**15 09 22.6**	**-0.8**
PSA00				IAmb	IAmb	15 09 23.7	
	comp=Z,15nm,0.8s						
SBA	**Scott Base**	**57.47**	**184**	P	**P**	**15 09 28.4**	**+2.3**
VNDA	**Vanda**	**57.50**	**185**	P	**P**	**15 09 28.1**	**+1.9**
VNDA	**Vanda**	**57.50**	**185**	P	**P**	**15 09 28.3**	**+2.0**
	comp=Z,4.1nm,0.9s,baz=14,slow=5.7,SNR=8.4						
	comp=Z,4.1nm,0.9s						
NWAO	**Narrogin (SRO)**	**57.60**	**244**	P	**P**	**15 09 28.2**	**+0.4**
NWAO				IAmb	IAmb	15 09 35.0	
	comp=Z,36nm,1.4s						
MORW	**Morawa**	**59.06**	**248**	P	**P**	**15 09 37.3**	**-0.3**
LUWI	**Luwuk**	**60.33**	**281**	P	**P**	**15 09 46.0**	**-0.2**
LUWI				IAmb	IAmb	15 10 26.4	
	comp=Z,21nm,0.9s						
QSPA	**South Pole Qui**	**69.21**	**180**	P	**P**	**15 10 42.4**	**+1.1**
QSPA				IAmb	IAmb	15 10 43.0	
	comp=Z,12nm,0.7s						
UGM	**Wanagama**	**69.27**	**269**	P	**P**	**15 10 42.3**	**-0.1**
MJAR	**Matsushiro Arr**	**70.09**	**324**	P	**P**	**15 10 46.5**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=160,slow=6.1,SNR=10						
	comp=Z,4.2nm,0.7s						
MAJO	**Matsushiro**	**70.09**	**324**	P	**P**	**15 10 45.5**	**-1.3**
MAJO				IAmb	IAmb	15 10 54.7	
	comp=Z,30nm,1.4s						
MJB9	**Matsu-Tunnel**	**70.10**	**324**	P	**P**	**15 10 46.4**	**-0.4**
MJB9				IAmb	IAmb	15 10 55.7	
	comp=Z,33nm,1.5s						
KIWB	**Kanaga Island**	**72.41**	**1**	P	**P**	**15 10 59.7**	**-0.1**
KSM	**Kuching**	**72.78**	**278**	P	**P**	**15 11 03.5**	**+0.6**
YULB	**Yu-li**	**73.12**	**304**	P	**P**	**15 11 03.4**	**-1.3**
NACB	**Ninganchiao**	**73.31**	**305**	P	**P**	**15 11 05.1**	**-0.6**
TPUB	**Ta-pu**	**73.60**	**303**	P	**P**	**15 11 06.2**	**-1.2**
SSLB	**Suanglung**	**73.60**	**304**	P	**P**	**15 11 06.2**	**-1.2**
SSLB				IAmb	IAmb	15 11 07.2	
	comp=Z,15nm,0.9s						
PEA0B	**Petropavlovsk-**	**76.44**	**346**	P	**P**	**15 11 22.8**	**+0.3**
PETK	**Petropavlovsk-**	**76.44**	**346**	P	**P**	**15 11 22.1**	**-0.3**
	comp=Z,6.8nm,0.7s,baz=115,slow=6.6,SNR=7.3						
	comp=Z,6.8nm,0.7s						
KSRS	**Korea Array**	**76.70**	**319**	P	**P**	**15 11 24.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=122,slow=5.2,SNR=4.4						
	comp=Z,1.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**78.88**	**326**	P	**P**	**15 11 36.6**	**+0.9**
USRK	**Ussuriysk Ar.**	**78.88**	**326**	P	**P**	**15 11 36.9**	**+1.2**
	comp=Z,4.3nm,0.7s,baz=134,slow=4.0,SNR=7.0						
	comp=Z,4.3nm,0.7s						
NJ2	**Nanjing**	**79.58**	**310**	*e*P	**P**	**15 11 41.6**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSXB	**Camp Six Broad**	**80.38**	**38**	P	**P**	**15 11 45.5**	**+1.7**
KSXB				IAmb	IAmb	15 11 46.7	
	comp=Z,27nm,1.4s						
OHAK	**Old Harbor**	**80.65**	**14**	P	**P**	**15 11 45.0**	**+0.3**
YBH	**Yreka Blue Hor**	**81.00**	**39**		**P**	**15 11 48.8**	**+1.8**
WAKR	**Walker**	**81.07**	**43**	P	**P**	**15 11 48.9**	**+1.3**
MPK	**Martis Peak**	**81.16**	**42**	P	**P**	**15 11 49.3**	**+1.2**
MPK				IAmb	IAmb	15 11 50.7	
	comp=Z,19nm,1.4s						
PNTR	**Pine Nut**	**81.31**	**43**	P	**P**	**15 11 50.3**	**+1.5**
PNTR				IAmb	IAmb	15 11 51.2	
	comp=Z,7.1nm,0.8s						
KDAK	**Kodiak Island**	**81.32**	**14**	P	**P**	**15 11 49.0**	**+0.9**
DSP	**Deep Springs**	**81.37**	**45**		**P**	**15 11 50.4**	**+1.5**
HUMO	**Hull Mountain**	**81.39**	**38**	P	**P**	**15 11 50.8**	**+1.9**
LHV	**Little Huntoon**	**81.52**	**44**	P	**P**	**15 11 51.5**	**+1.9**
L04D	**Klamath Falls**	**81.53**	**39**	P	**P**	**15 11 51.1**	**+1.4**
L04D				IAmb	IAmb	15 11 52.2	
	comp=Z,7.0nm,0.8s						
GWY	**Greenwater Val**	**81.58**	**46**	P	**P**	**15 11 51.4**	**+1.2**
NVAR	**Mina Array Bea**	**81.75**	**44**	P	**P**	**15 11 51.1**	**0.0**
NVAR	**Mina Array Bea**	**81.75**	**44**	P	**P**	**15 11 52.4**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=224,slow=7.9,SNR=23						
	comp=Z,1.7nm,0.6s						
NV11	**Mina Array Sit**	**81.85**	**44**	P	**P**	**15 11 52.7**	**+1.2**
O16K	**Kokwok River B**	**81.92**	**10**	P	**P**	**15 11 50.5**	**-0.6**
N15K	**Kwethluk River**	**82.15**	**9**	P	**P**	**15 11 53.1**	**+0.8**
KVN	**Kaiserville**	**82.24**	**43**		**P**	**15 11 54.5**	**+1.1**
TPNV	**Topopah Spring**	**82.28**	**46**	P	**P**	**15 11 55.1**	**+1.4**
M14K	**Bethel**	**82.45**	**8**	P	**P**	**15 11 54.4**	**+0.7**
M14K				IAmb	IAmb	15 11 57.0	
	comp=Z,12nm,1.1s						
K05A	**Summer Lake**	**82.67**	**39**		**P**	**15 11 56.7**	**+1.1**
K05A				IAmb	IAmb	15 11 57.9	
	comp=Z,7.7nm,0.7s						
O18K	**Koktuh Hills**	**82.69**	**12**		**P**	**15 11 55.0**	**0.0**
O18K				IAmb	IAmb	15 11 55.8	
	comp=Z,14nm,0.8s						
J05D	**Fort Rock, OR**	**82.81**	**38**		**P**	**15 11 57.3**	**+1.1**
J05D				IAmb	IAmb	15 11 58.8	
	comp=Z,12nm,0.7s						
M16K	**Timber Creek**	**83.14**	**10**	P	**P**	**15 11 58.3**	**+1.1**
M16K				IAmb	IAmb	15 12 00.3	
	comp=Z,11nm,1.0s						
CNPM	**China Poot**	**83.20**	**14**	P	**P**	**15 11 57.8**	**+0.2**
N18K	**Kilae Creek**	**83.33**	**11**	P	**P**	**15 11 58.0**	**-0.2**
N19K	**Bonanza Creek**	**83.72**	**12**	P	**P**	**15 11 59.4**	**-0.8**
M17K	**Holitna River**	**83.74**	**10**	P	**P**	**15 12 01.0**	**+0.8**
M17K				IAmb	IAmb	15 12 02.3	
	comp=Z,8.9nm,1.0s						
K15K	**Wolf Creek Mou**	**83.99**	**8**	P	**P**	**15 12 02.4**	**+1.0**
K15K				IAmb	IAmb	15 12 04.0	
	comp=Z,19nm,1.4s						
I07A	**Izee**	**84.29**	**38**		**P**	**15 12 04.9**	**+1.4**
GSI	**Gunungsitoli**	**84.56**	**273**	P	**P**	**15 12 06.3**	**+0.9**
L18K	**Granite Mounta**	**84.64**	**10**	P	**P**	**15 12 05.3**	**+0.8**
U15A	**North Rim**	**84.71**	**48**		**P**	**15 12 07.5**	**+1.6**
J16K	**Anvik River**	**85.07**	**8**	P	**P**	**15 12 07.0**	**+0.4**
HEH	**HeiHe**	**85.25**	**329**	*e*P	**P**	**15 12 08.1**	**+0.3**
KNK	**Knik Glacier**	**85.52**	**14**	P	**P**	**15 12 08.7**	**-0.2**
KNK				IAmb	IAmb	15 12 10.9	
	comp=Z,6.1nm,0.8s						
GHO	**Glory Hole Cre**	**85.73**	**14**	P	**P**	**15 12 09.9**	**0.0**
J18K	**Innoko River**	**85.80**	**10**	P	**P**	**15 12 10.6**	**+0.5**
WAX	**Waxell Ridge**	**86.09**	**17**	P	**P**	**15 12 12.2**	**+0.6**
WAX				IAmb	IAmb	15 12 52.0	
	comp=Z,12nm,1.2s						
SCM	**Sheep Creek Mo**	**86.15**	**14**	P	**P**	**15 12 12.1**	**+0.2**
KLU	**Klutina**	**86.18**	**15**	P	**P**	**15 12 13.0**	**+0.9**
KLU				IAmb	IAmb	15 12 52.4	
	comp=Z,13nm,1.4s						
ELIB	**Princess Elisa**	**86.21**	**187**	*d*P	**P**	**15 12 12.4**	**+0.1**
	comp=Z,7.7nm,0.6s						
J19K	**Poorman**	**86.47**	**10**	P	**P**	**15 12 13.6**	**+0.3**
TABL	**Table Mountain**	**86.56**	**18**	P	**P**	**15 12 14.3**	**+0.3**
TABL				IAmb	IAmb	15 12 15.3	
	comp=Z,6.9nm,0.7s						
N25K	**Chitina, Valde**	**86.61**	**16**	P	**P**	**15 12 14.4**	**+0.3**
N25K				IAmb	IAmb	15 12 14.9	
	comp=Z,6.2nm,0.6s						
LOGN	**Logan Glacier**	**86.91**	**17**	P	**P**	**15 12 15.8**	**+0.2**
LOGN				IAmb	IAmb	15 12 18.4	
	comp=Z,9.8nm,1.2s						
BARN	**Barnard Glacie**	**86.92**	**17**	P	**P**	**15 12 16.1**	**+0.5**
BARN				IAmb	IAmb	15 12 16.7	
	comp=Z,7.1nm,0.8s						
CTGM	**Chitina Glacie**	**86.93**	**17**	P	**P**	**15 12 16.0**	**+0.3**
CTGM				IAmb	IAmb	15 12 17.0	
	comp=Z,7.8nm,0.8s						
TRF	**Thorofare Moun**	**86.94**	**12**		**P**	**15 12 15.1**	**-0.6**
RND	**Reindeer**	**87.20**	**13**		**P**	**15 12 16.6**	**-0.2**
DHY	**Denali Highway**	**87.22**	**14**	P	**P**	**15 12 16.7**	**-0.3**
SNAA	**Sanae**	**87.67**	**179**	P	**P**	**15 12 18.8**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=205,slow=8.3,SNR=7.8						
	comp=Z,1.2nm,0.6s						
H19K	**Roundabout Mou**	**87.78**	**9**	P	**P**	**15 12 19.6**	**+0.2**
H19K				IAmb	IAmb	15 12 20.6	
	comp=Z,4.0nm,0.8s						
G18K	**Tagagawik**	**87.82**	**8**	P	**P**	**15 12 18.9**	**-0.6**
TXAR	**Lajitas Array**	**87.83**	**58**		**P**	**15 12 22.8**	**+2.2**
TXAR	**Lajitas Array**	**87.83**	**58**	P	**P**	**15 12 22.5**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=224,slow=6.8,SNR=13						
	comp=Z,1.3nm,0.8s						
M27K	**Edge Creek, AK**	**87.94**	**16**	P	**P**	**15 12 21.0**	**+0.6**
M27K				IAmb	IAmb	15 12 22.1	
	comp=Z,10nm,1.1s						
F17K	**Baldwin Pennin**	**88.03**	**7**	P	**P**	**15 12 20.9**	**+0.4**
F17K				IAmb	IAmb	15 12 21.5	
	comp=Z,5.3nm,0.9s						
I21K	**Tanana**	**88.19**	**11**	P	**P**	**15 12 21.1**	**-0.1**
I21K				IAmb	IAmb	15 12 21.9	
	comp=Z,8.4nm,0.9s						
G19K	**Purcell Mounta**	**88.27**	**9**		**P**	**15 12 21.9**	**+0.3**
G19K				IAmb	IAmb	15 12 22.7	
	comp=Z,4.4nm,0.8s						
MLY	**Manley**	**88.28**	**11**		**P**	**15 12 20.9**	**-0.8**
MLY				IAmb	IAmb	15 12 21.6	
	comp=Z,2.9nm,0.6s						
HDA	**Harding Lake**	**88.48**	**13**	P	**P**	**15 12 22.3**	**-0.4**
HDA				IAmb	IAmb	15 12 23.1	
	comp=Z,6.0nm,0.7s						
CCB	**Clear Creek Bu**	**88.51**	**13**	P	**P**	**15 12 22.1**	**-0.6**
CCB				IAmb	IAmb	15 12 22.9	
	comp=Z,6.9nm,0.8s						
L27K	**Beaver Creek,**	**88.54**	**16**	P	**P**	**15 12 23.4**	**+0.3**
BCAR	**Beaver Creek A**	**88.55**	**16**	P	**P**	**15 12 23.8**	**+0.7**
MDM	**Murphy Dome**	**88.70**	**12**	IAmb	IAmb	15 12 24.3	
	comp=Z,8.3nm,1.0s						
SCRK	**Sand Creek**	**88.78**	**15**	P	**P**	**15 12 24.4**	**+0.1**
IL31		**88.81**	**13**	IAmb	IAmb	15 12 26.8	
	comp=Z,4.8nm,1.2s						
ILAR	**Eielson Array**	**88.81**	**13**	P	**P**	**15 12 23.4**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=222,slow=5.5,SNR=33						
	comp=Z,1.8nm,0.6s						
M29M	**Somme Creek**	**88.94**	**17**	IAmb	IAmb	15 12 26.4	
	comp=Z,4.6nm,0.7s						
J25K	**Salcha River,**	**89.00**	**14**	IAmb	IAmb	15 12 25.8	
	comp=Z,4.2nm,0.8s						
E18K	**Tukpahlearik C**	**89.04**	**7**	IAmb	IAmb	15 12 26.3	
	comp=Z,5.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**89.11**	**315**	*e*P	**P**	**15 12 23.6**	**-2.7**
HHC				p

MODS	**Modra-Piesok**	**149.68**	**339**	*e*PKP	**PKiKP**	**15 19 16.7**	**-0.5**
GZR	**Gura Zlata**	**149.80**	**329**	⇑P	**PKiKP**	**15 19 17.3**	**-0.3**
SURR	**Surduc**	**149.84**	**330**	⇓P	**PKiKP**	**15 19 16.7**	**-0.9**
BZS	**Buzias**	**150.18**	**331**	⇓P	**PKiKP**	**15 19 17.7**	**-0.6**
GERES	**GERESS Array B**	**150.35**	**343**	PKPbc	**PKiKP**	**15 19 18.4**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=20,slow=4.3,SNR=6.8						
CONA	**Conrad Observa**	**150.53**	**340**	*i* PKP	**PKiKP**	**15 19 18.6**	**-0.5**
	comp=Z,4.4nm,0.6s						
RONA	**Rosalia, Austr**	**150.59**	**339**	*i* PKP	**PKiKP**	**15 19 18.9**	**-0.2**
	comp=Z,6.4nm,0.5s						
MORH	**Mrgy, Hungar**	**150.99**	**335**	⇑P	**PKiKP**	**15 19 19.5**	**-0.4**
LESA	**Schwarzleotal**	**151.93**	**343**	*e*PKP	**PKPab**	**15 19 35.3**	**+1.3**
	comp=Z,7.9nm,1.2s						
KBA	**Koelnbreinsper**	**152.06**	**342**	*e*PKP	**PKiKP**	**15 19 22.7**	**+0.3**
	comp=Z,1.8nm,0.4s						
WATA	**Walderalm**	**152.29**	**345**	*e*PKP	**PKiKP**	**15 19 22.1**	**-0.7**
	comp=Z,5.3nm,0.6s						
WTTA	**Wattenberg**	**152.34**	**345**	*i* PKP	**PKiKP**	**15 19 22.3**	**-0.7**
	comp=Z,3.2nm,0.4s						
ABTA	**Abfaltersbach**	**152.59**	**343**	*e*PKP	**PKiKP**	**15 19 22.5**	**-0.9**
	comp=Z,2.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**172.32**	**183**	PKPab	**PKPab**	**15 21 03.8**	**0.0**
	comp=Z,0.9nm,0.8s,baz=177,slow=3.2,SNR=4.3						

*IDC **05** 15:13:15.3±3.9, 5.°76S×146.°23E, h123km±41km, mb3.4/5, mbtmp3.7/7, MS3.0/1, Error ellipse: s-maj=45.8km s-min=23.1km az=118.0*

ISC 05 15:13:13.3±0.9, 5.°64S±0.°10×146.°1E±0.°2, h100km, n10, σ0^{s}79/10, mb3.4/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.90**	**164**	P	**Pn**	**15 14 12.2**	**+1.0**
	38nm,0.4s,baz=333,slow=5.5,SNR=55						
PMG				S	**Sn**	**15 14 55.1**	**-0.9**
	51nm,0.3s,baz=158,slow=21,SNR=13						
WRA	**Warramunga Arr**	**18.22**	**218**	P	**P**	**15 17 18.5**	**-0.3**
	0.7nm,1.0s,baz=31,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**21.40**	**212**	P	**P**	**15 17 53.9**	**+0.7**
	0.4nm,0.9s,baz=50,slow=7.9,SNR=7.9						
	0.4nm,0.9s						
DZM	**Mont Dzumac**	**25.61**	**132**	LR	LR	15 27 13.0	
	comp=Z,37nm,21.4s,baz=34,slow=33						
STKA	**Stephens Creek**	**26.43**	**189**	P	**P**	**15 18 40.3**	**-0.6**
	0.6nm,0.6s,baz=27,slow=11,SNR=1.9						
	0.6nm,0.6s						
PETK	**Petropavlovsk-**	**59.35**	**8**	P	**P**	**15 23 05.7**	**+0.9**
	6.7nm,1.1s,baz=152,slow=6.7,SNR=4.4						
	6.7nm,1.1s						
MKAR	**Makanchi Array**	**76.62**	**321**	P	**P**	**15 24 53.0**	**-0.2**
	0.3nm,0.5s,baz=95,slow=8.0,SNR=6.1						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**85.53**	**23**	P	**P**	**15 25 39.0**	**-1.0**
	1.2nm,0.6s,baz=253,slow=5.1,SNR=23						
	1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**144.09**	**285**	PKP	**PKPab**	**15 32 36.2**	**+0.1**
	0.6nm,0.5s,baz=68,slow=3.1,SNR=6.6						
DBIC	**Dimbokro**	**151.06**	**274**	PKPbc	**PKPbc**	**15 32 55.7**	**-0.2**
	2.3nm,0.5s,baz=82,slow=4.9,SNR=4.7						

*IDC **05** 15:15:22.5±1.0, 4.°07N×128.°62E, h0km, mb3.6/9, mbtmp3.6/9, MS2.9/1, Error ellipse: s-maj=56.6km s-min=18.8km az=68.0*

ISC 05 15:15:28.9±1.1, 4.°0N±0.°2×128.°6E±0.°3, h46km, n10, σ0^{s}41/9, mb3.8/9, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**4.24**	**316**	LR	LR	15 18 33.1	
	comp=Z,131nm,18.6s,baz=106,slow=45						
WRA	**Warramunga Arr**	**24.48**	**167**	P	**P**	**15 20 43.9**	**0.0**
	0.9nm,0.8s,baz=344,slow=11,SNR=14						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**28.01**	**170**	P	**P**	**15 21 15.7**	**-0.1**
	0.3nm,0.7s,baz=350,slow=7.2,SNR=4.9						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**32.32**	**299**	P	**P**	**15 21 54.1**	**+0.2**
	0.4nm,0.6s,baz=113,slow=6.9,SNR=4.9						
	0.4nm,0.6s						
SONM	**Songino Array**	**47.63**	**340**	P	**P**	**15 24 00.5**	**-0.1**
	0.4nm,0.4s,baz=142,slow=7.3,SNR=2.6						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.37**	**324**	P	**P**	**15 25 19.9**	**+0.2**
	0.4nm,0.3s,baz=112,slow=7.9,SNR=12						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**61.17**	**332**	P	**P**	**15 25 37.8**	**-0.9**
	0.3nm,0.3s,baz=140,slow=5.6,SNR=2.6						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**62.49**	**327**	P	**P**	**15 25 47.7**	**0.0**
	0.9nm,0.8s,baz=122,slow=6.2,SNR=12						
	0.9nm,0.8s						
BVAR	**Borovoye Array**	**68.08**	**326**	P	**P**	**15 26 24.1**	**+0.3**
	0.6nm,0.6s,baz=114,slow=9.0,SNR=3.6						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**84.06**	**25**	P	**P**	**15 27 54.8**	**+0.3**
	0.3nm,0.8s,baz=282,slow=4.5,SNR=2.9						
	0.3nm,0.8s						

IDC 05 15:23:57.2±2.4, 2.°28N×127.°25E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=185.1km s-min=28.1km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.16**	**163**	P	P	15 29 05.5	0.0
	0.2nm,0.5s,baz=341,slow=11,SNR=4.9						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**26.60**	**166**	P	P	15 29 37.4	0.0
	0.3nm,0.7s,baz=354,slow=7.5,SNR=16						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	15 33 59.0	0.0
	0.2nm,0.5s,baz=114,slow=8.3,SNR=2.3						
	0.2nm,0.5s						

*THE **05** 15:26:13.8, 37.°66N×26.°92E, h10km±1km, ML2.4/3, Error ellipse: s-maj=2.1km s-min=1.1km az=60.0*
*AFAD **05** 15:26:13.7±0.0, 37.°64N×26.°88E, h7km±2km, ML2.3*
*ATH **05** 15:26:14.5, 37.°61N×26.°83E, h11km±4km, ML2.6/3, Error ellipse: s-maj=10.2km s-min=1.6km az=74.0*

ISC 05 15:26:13.8±0.8, 37.°64N±0.°03×26.°88E±0.°03, h13km±5km, n19, σ0^{s}60/35, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.08**	**336**	P	**Pg**	**15 26 16.4**	**-0.1**
SMG				S	**Sg**	**15 26 18.3**	**-0.1**
	9µm,0.3s						
SMG	**Samos**	**0.08**	**336**	P	**Pg**	**15 26 16.5**	**-0.1**
SMG				S	**Sg**	**15 26 18.4**	**-0.1**
SMG				AML	AML	15 26 18.7	
	comp=N,21743µm,0.3s						
SMG				AML	AML	15 26 19.2	
	comp=E,13757µm,0.4s						
GCAM	**G?zelcaml?**	**0.29**	**77**	P	**Pg**	**15 26 20.0**	**+0.3**
GCAM				S	**Sg**	**15 26 24.2**	**+0.5**
GCAM				*i* AML	AML	15 26 25.0	
	comp=E,733nm,0.1s						
GCAM				*i* AML	AML	15 26 25.0	
	comp=E,470nm,0.1s						
DDIM	**Aydin, Didim**	**0.34**	**122**	P	**Pg**	**15 26 21.0**	**+0.3**
DDIM				S	**Sg**	**15 26 25.5**	**+0.3**
DGB	**zmir**	**0.41**	**0**	P	**Pg**	**15 26 22.0**	**0.0**
DGB				S	**Sg**	**15 26 27.5**	**-0.1**
DGB				*i* AML	AML	15 26 31.0	
	comp=E,172nm,0.2s						
BODT	**Bodrum**	**0.67**	**149**	P	**Pg**	**15 26 26.5**	**-0.3**
BODT				S	**Sg**	**15 26 36.2**	**+0.6**
ZEYE	**Izmir, Urla-Ze**	**0.67**	**334**	P	**Pg**	**15 26 26.9**	**+0.1**
ZEYE				S	**Sb**	**15 26 36.2**	**-0.4**
ZEYE				*i* AML	AML	15 26 38.0	
	comp=E,263nm,0.6s						
ZEYE				*i* AML	AML	15 26 38.0	
	comp=E,167nm,0.3s						
KLNA	**Kalymnos**	**0.68**	**174**	P	**Pg**	**15 26 26.4**	**-0.6**
KLNA				S	**Sg**	**15 26 35.7**	**-0.3**
KLNA				AML	AML	15 26 38.2	
	comp=E,1226µm,0.3s						
KLNA				AML	AML	15 26 39.9	
	comp=N,1436µm,0.2s						
BDRM	**Kayabasi**	**0.73**	**141**	P	**Pg**	**15 26 27.6**	**-0.2**
BDRM				S	**Sg**	**15 26 37.5**	**+0.1**
URLA	**Izmir**	**0.76**	**343**	P	**Pg**	**15 26 28.4**	**0.0**
URLA				S	**Sb**	**15 26 39.2**	**+0.1**
URLA				*i* AML	AML	15 26 42.0	
	comp=N,130nm,0.2s						
URLA				*i* AML	AML	15 26 43.0	
	comp=N,128nm,0.4s						
BLCB	**Balcova**	**0.76**	**10**	P	**Pb**	**15 26 28.9**	**0.0**
BLCB				S	**Sb**	**15 26 38.8**	**-0.3**
IZMR	**zmir-demi**	**0.99**	**59**	P	**Pb**	**15 26 32.8**	**0.0**
IZMR				S	**Sg**	**15 26 44.1**	**-1.6**
CHOS	**Chios island**	**0.99**	**319**	P	**Pg**	**15 26 32.6**	**-0.3**
CHOS				S	**Sg**	**15 26 45.6**	**-0.3**
	comp=N,130nm,0.2s						
CHOS	**Chios island**	**0.99**	**319**	P	**Pg**	**15 26 32.6**	**-0.3**
CHOS				S	**Sb**	**15 26 46.1**	**+0.2**
CHOS				AML	AML	15 26 49.0	
	comp=N,210µm,0.2s						
CHOS				AML	AML	15 26 50.6	
	comp=E,325µm,0.3s						
NISR	**Nisiros**	**1.04**	**169**	P	**Pn**	**15 26 34.6**	**+0.5**
ESEN	**Aydn-Nazilli**	**1.18**	**82**	P	**Pb**	**15 26 36.1**	**+0.1**
ESEN				S	**Sb**	**15 26 49.3**	**-1.8**
APE	**Apeiranthos**	**1.21**	**243**	P	**Pn**	**15 26 36.0**	**-0.5**
APE				S	**Sn**	**15 26 54.3**	**+1.4**
	comp=E,112nm,1.0s						
APE	**Apeiranthos**	**1.21**	**243**	P	**Pn**	**15 26 36.0**	**-0.5**
PRK	**Paraskevi**	**1.68**	**344**	P	**Pn**	**15 26 43.5**	**+0.6**

*IDC **05** 15:35:35.3±5.4, 20.°20S×177.°91W, h444km±57km, mb3.3/8, mbtmp4.1/9, Error ellipse: s-maj=78.1km s-min=22.4km az=152.0*
*NEIC **05** 15:35:36.9±1.7, 20.°6S±0.°1×177.°7W±0.°1, h467km±9km, mb4.3/34, Error ellipse: s-maj=21.8km s-min=16.0km az=146.0*

ISC 05 15:35:35.7±0.6, 20.°5S±0.°1×177.°5W±0.°09, h450km, n50, σ1^{s}15/52, mb4.2/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.50**	**81**	P	**P**	**15 37 26.9**	**+1.0**
AFI	**Afiamalu**	**8.67**	**42**	P	**P**	**15 37 57.7**	**-1.0**
PINNC	**Pines Island,**	**13.94**	**259**	P	**P**	**15 38 38.2**	**+2.6**
DZM	**Mont Dzumac**	**14.82**	**261**	P	**P**	**15 38 46.6**	**+1.5**
DZM	**Mont Dzumac**	**14.82**	**261**	P	**P**	**15 38 43.6**	**-1.5**
	6.6nm,0.9s,baz=87,slow=13,SNR=2.0						
ONTNC	**Quen Toro**	**14.82**	**260**	P	**P**	**15 38 46.7**	**+1.6**
QRZ	**Quartz Range**	**21.91**	**200**	P	**P**	**15 39 54.8**	**+0.5**
EIDS	**Eidsvold**	**29.08**	**254**	P	**P**	**15 40 58.1**	**-0.1**
EIDS				IAmb	IAmb	15 41 27.3	
	comp=Z,26nm,1.2s						
ARMA	**Armidale**	**29.29**	**244**	P	**P**	**15 41 00.5**	**+0.3**
ARMA				IAmb	IAmb	15 41 26.7	
	comp=Z,25nm,1.4s						
CAN	**Canberra**	**32.72**	**236**	P	**P**	**15 41 29.7**	**+0.1**
CAN				IAmb	IAmb	15 41 36.0	
	comp=Z,8.2nm,1.2s						
CTAO	**Charters Tower**	**33.72**	**264**	P	**P**	**15 41 38.3**	**0.0**
PMG	**Port Moresby**	**35.56**	**283**	P	**P**	**15 41 54.0**	**+0.2**
PMG				IAmb	IAmb	15 41 55.4	
	comp=Z,12nm,0.9s						
TOO	**Toolangi**	**36.10**	**234**	P	**P**	**15 41 57.6**	**-0.5**
TOO				IAmb	IAmb	15 42 37.2	
	comp=Z,12nm,1.3s						
COEN	**Coen**	**37.81**	**273**	P	**P**	**15 42 12.3**	**-0.2**
COEN				IAmb	IAmb	15 42 15.1	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**38.01**	**244**	P	**P**	**15 42 13.8**	**-0.2**
STKA	**Stephens Creek**	**38.01**	**244**	P	**P**	**15 42 13.7**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=91,slow=9.8,SNR=9.9						
	comp=Z,3.4nm,0.5s						
BBOO	**Buckleboo**	**42.77**	**244**	P	**P**	**15 42 51.4**	**-0.8**
BBOO				IAmb	IAmb	15 42 52.0	
	comp=Z,8.5nm,0.6s						
WR0	**Warramunga Arr**	**44.64**	**262**	P	**P**	**15 43 06.2**	**-0.9**
WR0				IAmb	IAmb	15 43 07.5	
	comp=Z,4.7nm,0.7s						
AS31	**Alice Springs**	**44.75**	**257**	P	**P**	**15 43 07.2**	**-0.7**
AS31				IAmb	IAmb	15 43 08.3	
	comp=Z,8.5nm,1.1s						
ASAR	**Alice Springs**	**44.75**	**257**	P	**P**	**15 43 07.2**	**-0.7**
	comp=Z,17nm,0.6s,baz=92,slow=8.1,SNR=415						
ASAR				PcP	**pwP**	**15 44 40.3**	**+2.6**
	comp=Z,0.5nm,0.6s,baz=112,slow=4.1,SNR=2.9						
	comp=Z,17nm,0.6s						
WB0	**Warramunga Arr**	**44.81**	**262**	P	**P**	**15 43 07.2**	**-1.2**
WB2	**Warramunga Arr**	**44.82**	**262**	P	**P**	**15 43 07.2**	**-1.2**
WB2				IAmb	IAmb	15 43 08.2	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**44.83**	**262**	P	**P**	**15 43 07.3**	**-1.2**
WRA	**Warramunga Arr**	**44.83**	**262**	P	**P**	**15 43 07.6**	**-1.0**
	comp=Z,9.3nm,0.8s,baz=97,slow=7.4,SNR=99						
WRA				PcP	**pwP**	**15 44 39.9**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=93,slow=3.6,SNR=1.7						
	comp=Z,9.3nm,0.8s						
MTN	**Manton Dam**	**49.39**	**270**	P	**P**	**15 43 42.3**	**-0.9**
MTN				IAmb	IAmb	15 43 43.2	
	comp=Z,15nm,0.8s						
FORT	**Forrest**	**49.52**	**247**	P	**P**	**15 43 42.5**	**-1.4**
FORT				IAmb	IAmb	15 43 52.4	
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	**50.89**	**266**	P	**P**	**15 43 53.4**	**-0.8**
KNRA				IAmb	IAmb	15 43 54.6	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.26**	**262**	P	**P**	**15 44 10.8**	**-0.6**
PSA00	**Pilbara Seismi**	**57.90**	**257**	P	**P**	**15 44 42.8**	**-1.0**
GIRL	**Giralia**	**62.78**	**254**	P	**P**	**15 45 14.9**	**-1.4**
QSPA	**South Pole Qui**	**69.59**	**180**	P	**P**	**15 45 57.2**	**-1.0**
UGM	**Wanagama**	**70.19**	**269**	P	**P**	**15 46 01.3**	**-1.4**
JKA	**Kamikawa-asahi**	**73.81**	**331**	P	**P**	**15 46 24.9**	**+1.8**
SSLB	**Suanglung**	**74.15**	**303**	P	**P**	**15 46 26.6**	**+1.0**
NVAR	**Mina Array Bea**	**80.85**	**43**	P	**P**	**15 47 01.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=227,slow=7.9,SNR=5.6						
	comp=Z,0.8nm,0.8s						
K05A	**Summer Lake**	**81.80**	**39**	P	**P**	**15 47 07.1**	**+0.4**
K05A				IAmb	IAmb	15 47 48.2	
	comp=Z,12nm,1.5s						
J05D	**Fort Rock, OR**	**81.94**	**38**	P	**P**	**15 47 07.7**	**+0.3**
M16K	**Timber Creek**	**82.62**	**9**	P	**P**	**15 47 10.7**	**+0.4**
U15A	**North Rim**	**83.78**	**48**	P	**P**	**15 47 17.3**	**+0.3**
TXAR	**Lajitas Array**	**86.85**	**57**	P	**P**	**15 47 31.6**	**-0.3**
TXAR	**Lajitas Array**	**86.85**	**57**	P	**P**	**15 47 32.0**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=205,slow=5.3,SNR=3.9						
	comp=Z,0.2nm,0.6s						
H21K	**Melozitna Rive**	**87.94**	**10**	P	**P**	**15 47 35.7**	**-0.3**
ILAR	**Eielson Array**	**88.24**	**13**	P	**P**	**15 47 35.7**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=215,slow=5.2,SNR=5.7						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**88.79**	**43**	P	**P**	**15 47 40.2**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=230,slow=4.1,SNR=3.2						
	comp=Z,0.3nm,0.7s						
M30M	**Minto, Yukon**	**88.88**	**18**	P	**P**	**15 47 40.0**	**-0.6**
M30M				IAmb	IAmb	15 47 49.5	
	comp=Z,7.4nm,1.5s						
L29M	**L29M**	**88.93**	**17**	P	**P**	**15 47 40.3**	**-0.4**
L29M				IAmb	IAmb	15 48 19.1	
	comp=Z,5.8nm,1.4s						
DAWY	**Dawson**	**89.37**	**16**	P	**P**	**15 47 42.0**	**-0.8**
DAWY				IAmb	IAmb	15 48 17.4	
	comp=Z,3.2nm,1.5s						
K29M	**Barlow Dome**	**89.69**	**17**	P	**P**	**15 47 44.1**	**-0.3**
K29M				IAmb	IAmb	15 47 54.5	
	comp=Z,3.6nm,1.4s						
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	**P**	**15 47 47.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=106,slow=3.2,SNR=2.7						
	comp=Z,0.5nm,0.7s						
MMAI	**Mount Meron Ar**	**148.00**	**300**	PKPbc	**PKPdf**	**15 54 29.6**	**+3.3**
	comp=Z,0.6nm,0.3s,baz=97,slow=4.5,SNR=4.5						

ROM 05 15:48:46.0±0.1, 42.°900N±0.°003×13.°137E±0.°006, h15km, ML0.5/5, 2D, Error ellipse: s-maj=0.5km s-min=0.3km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.04**	**72**	P	Pg	15 48 49.1	0.0
MC2				S	Sg	15 48 51.3	+0.1
NRCA	**Norcia**	**0.07**	**194**	P	Pg	15 48 49.1	0.0
NRCA				S	Sg	15 48 51.3	+0.2
FDMO	**Fiordimonte**	**0.14**	**345**	P	Pg	15 48 50.0	+0.1
FDMO				S	Sb	15 48 53.0	-0.3
FDMO				AML	AML		
	comp=N,30µm,0.2s						
FDMO				AML	AML		
	comp=E,27µm,1.4s						
T1214	**Arquata del Tr**	**0.15**	**159**	P	Pg	15 48 50.3	+0.2
T1214				S	Sb	15 48 53.3	-0.3
T1214				AML	AML		
	comp=N,23µm,0.2s						
CSP1	**Cessapalombo**	**0.20**	**15**	P	Pg	15 48 50.8	+0.1
CSP1				S	Sg	15 48 54.4	+0.4
CSP1				AML	AML		
	comp=E,7µm,0.3s						
CESI	**CESI - Serrava**	**0.20**	**302**	⇓P	Pg	15 48 51.0	+0.3
CESI				S	Sb	15 48 54.8	-0.2
CESI				AML	AML		
	comp=E,19µm,0.7s						
T1221	**Campello sul C**	**0.22**	**260**	P	Pg	15 48 51.2	+0.2
MTRA	**Matera**	**0.24**	**127**	P	Pg	15 48 51.4	+0.1
GAVE	**Gavelli**	**0.27**	**221**	⇓P	Pb	15 48 52.4	-0.3

ROM 05 15:49:37.1±0.2, 45.°830N±0.°004×10.°525E±0.°009, h5km±1km, ML1.0/8, 1C, Error ellipse: s-maj=0.6km s-min=0.4km az=81.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAG8	**Bagolino**	**0.04**	**260**	P	Pg	15 49 38.5	0.0
BAG8				S	Sg	15 49 39.6	+0.2
MAGA	**Magasa**	**0.09**	**127**	P	Pg	15 49 39.4	+0.2
MAGA				S	Sg	15 49 41.0	+0.4
MAGA				AML	AML		
	comp=N,496µm,0.2s						
MAGA				AML	AML		
	comp=E,608µm,0.6s						
GAVI	**Passo Gaver BS**	**0.10**	**332**	⇑*e*Pg	Pg	15 49 40.2	+0.8
GAVI				*e*Sg	Sg	15 49 42.2	+1.2
RONC	**Roncone**	**0.17**	**24**	*e*Pg	Pg	15 49 41.3	+0.7
RONC				*e*Sg	Sg	15 49 44.0	+1.2
RONC	**Roncone**	**0.17**	**24**	P	Pg	15 49 41.2	+0.7
RONC				S	Sg	15 49 44.2	+1.4
RONC				AML	AML		
	comp=N,96µm,1.0s						
RONC				AML	AML		
	comp=E,87µm,0.6s						
SALO	**Salr**	**0.21**	**180**	P	Pg	15 49 41.8	+0.5
SALO				S	Sg	15 49 45.9	+1.8
SALO				AML	AML		
	comp=E,61µm,0.7s						
SALO				AML	AML		
	comp=E,63µm,1.5s						
MABI	**Malga Bissina**	**0.23**	**358**	P	Pg	15 49 42.4	+0.7
MABI				S	Sg	15 49 45.6	+0.9
MABI				AML	AML		
	comp=E,28µm,0.1s						
MABI				AML	AML		
	comp=N,24µm,0.2s						
BALD	**Monte Baldo**	**0.25**	**125**	*e*Pg	Pg	15 49 42.5	+0.4
BALD				*e*Sg	Sg	15 49 45.9	+0.4
VARA	**Varagna**	**0.26**	**91**	*e*Pg	Pg	15 49 42.9	+0.7
VARA				*e*Sg	Sg	15 49 47.4	+1.6
MBAL	**Monte Baldo -**	**0.27**	**119**	P	Pg	15 49 43.0	+0.6
MBAL				S	Sg	15 49 47.5	+1.5

IDC 05 15:50:48.0±4.4, 0.°85S×130.°62E, h0km, mb3.2/2, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=318.2km s-min=28.7km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.32**	**169**	P	P	15 55 14.3	-0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=6.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**22.90**	**172**	P	P	15 55 54.1	+0.4
	0.4nm,0.4s,baz=350,slow=11,SNR=14						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**63.51**	**325**	P	P	16 01 20.2	0.0
	0.2nm,0.7s,baz=111,slow=8.0,SNR=1.8						
	0.2nm,0.7s						

*TAP **05** 15:53:58.2, 24.°12N×121.°73E, h8km, ML3.5, C*
*JMA **05** 15:53:58.5±0.2, 24.°1N±0.°2×121.°7E±0.°3, h0km±1km, TAIWAN REGION*

ISC 05 15:53:58.6±1.0, 24.°12N±0.°02×121.°75E±0.°02, h6km±7km, n107, σ0^{s}76/159, 4C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**290**	P	**Pg**	**15 54 01.1**	**-0.1**
	baz=291						
ETL				S	**Sg**	**15 54 03.0**	**+0.2**
	baz=291						
TWD	**Chiawan**	**0.14**	**255**	⇑*i*P	**Pg**	**15 54 01.3**	**-0.2**
	baz=260						
TWD				*i* S	**Sg**	**15 54 03.6**	**+0.2**
	baz=260						
NACB	**Ninganchiao**	**0.15**	**292**	P	**Pg**	**15 54 01.4**	**-0.2**
NACB	**Ninganchiao**	**0.15**	**292**	⇓*i*P	**Pg**	**15 54 01.5**	**-0.2**
	baz=284						
NACB				*i* S	**Sg**	**15 54 03.6**	**-0.1**
	baz=284						
HWA	**Hwalien**	**0.19**	**223**	P	**Pg**	**15 54 03.0**	**+0.6**
	baz=233						
EHP	**Heping Village**	**0.19**	**359**	*e*P	**Pg**	**15 54 03.1**	**+0.7**
	baz=2.0						
EHP				*e*S	**Sg**	**15 54 06.0**	**+1.0**
	baz=2.0						
EAHA	**Aohua**	**0.21**	**358**	P	**Pg**	**15 54 02.9**	**+0.1**
	baz=359						
EAHA				S	**Sg**	**15 54 06.0**	**+0.4**
	baz=359						
ETLH	**Xiulin Townshi**	**0.26**	**290**	P	**Pg**	**15 54 03.6**	**-0.1**
	baz=286						
ETLH				S	**Sg**	**15 54 07.4**	**+0.3**
	baz=286						
ETM	**Tongmen**	**0.28**	**237**	P	**Pg**	**15 54 03.8**	**-0.2**
	baz=239						
ETM				S	**Sg**	**15 54 08.3**	**+0.7**
	baz=239						
ENA	**Nanau**	**0.31**	**359**	⇓*i*P	**Pg**	**15 54 04.8**	**+0.1**
	baz=1.0						
ENA				*i* S	**Sg**	**15 54 09.2**	**+0.4**
	baz=1.0						
LXIB	**Xiulin Townshi**	**0.32**	**253**	⇑*i*P	**Pg**	**15 54 04

	baz=287								
TWC	**Suao**	**0.50**	**11**	P		**Pg**	**15 54 08.3**	**+0.1**
	baz=5.0								
TWC				*e*S		**Sg**	**15 54 15.0**	**+0.2**
	baz=5.0								
NDS	**Dongshan**	**0.51**	**357**	P		**Pg**	**15 54 09.0**	**+0.4**
	baz=356								
NDS				S		**Sg**	**15 54 16.4**	**+1.1**
	baz=356								
WARBT	**Fenglin Townsh**	**0.52**	**220**	P		**Pg**	**15 54 08.2**	**-0.4**
	baz=231								
WARBT				S		**Sb**	**15 54 17.5**	**-0.4**
	baz=231								
EOS4	**EOS4**	**0.52**	**90**	*e*P		**Pn**	**15 54 11.6**	**-0.7**
	baz=87								
CHGB	**Renai**	**0.53**	**264**	*i* P		**Pg**	**15 54 08.7**	**0.0**
	baz=265								
CHGB				S		**Sg**	**15 54 15.8**	**+0.2**
	baz=265								
NDT	**Datong Townshi**	**0.53**	**336**	P		**Pg**	**15 54 09.1**	**+0.3**
	baz=336								
NDT				S		**Sb**	**15 54 16.9**	**-1.3**
	baz=336								
EGFH	**Guangfu**	**0.53**	**213**	P		**Pg**	**15 54 09.1**	**+0.2**
	baz=225								
EGFH				S		**Sb**	**15 54 19.1**	**+0.7**
	baz=225								
TWT	**Tachien**	**0.54**	**285**	P		**Pb**	**15 54 09.6**	**-1.0**
	baz=284								
TWT				S		**Sb**	**15 54 16.9**	**-1.7**
	baz=284								
ENTT	**Nioudou**	**0.55**	**343** ⇓	*i* P		**Pg**	**15 54 09.4**	**+0.3**
	baz=342								
ENTT				S		**Sb**	**15 54 17.4**	**-1.4**
	baz=342								
OWD	**Renai**	**0.55**	**253**	P		**Pg**	**15 54 08.8**	**-0.3**
	baz=256								
TDCB	**Techi**	**0.55**	**284**	P		**Pg**	**15 54 09.5**	**+0.2**
	baz=285								
TDCB				S		**Sg**	**15 54 16.5**	**0.0**
	baz=285								
WUSB	**Renai**	**0.59**	**258** ⇑	*i* P		**Pg**	**15 54 09.9**	**0.0**
	baz=259								
WUSB				S		**Sg**	**15 54 17.0**	**-0.6**
	baz=259								
TWE	**Neicheng**	**0.60**	**353** ⇓	*i* P		**Pg**	**15 54 10.7**	**+0.4**
	baz=354								
TWE				S		**Sb**	**15 54 19.3**	**-1.1**
	baz=354								
YHNB	**Yeheng**	**0.65**	**329**	P		**Pg**	**15 54 11.4**	**+0.3**
YHNB	**Yeheng**	**0.65**	**329**	P		**Pg**	**15 54 11.3**	**+0.3**
	baz=328								
YHNB				*e*S		**Sg**	**15 54 19.7**	**+0.3**
	baz=328								
FUSB	**Fushanzhiwuyua**	**0.66**	**347**	P		**Pg**	**15 54 11.6**	**+0.3**
	baz=337								
FUSB				S		**Sg**	**15 54 20.0**	**+0.2**
	baz=337								
NSK	**Sanguang**	**0.66**	**328** ⇓	*i* P		**Pg**	**15 54 11.6**	**+0.3**
	baz=328								
NSK				S		**Sg**	**15 54 20.5**	**+0.6**
	baz=328								
VWDT	**VWDT**	**0.66**	**237**	P		**Pg**	**15 54 11.4**	**+0.1**
	baz=239								
VWDT				S		**Sb**	**15 54 22.0**	**-0.1**
	baz=239								
HGSD	**Ruisui**	**0.69**	**205**	*e*P		**Pb**	**15 54 12.6**	**-0.5**
	baz=197								
NWLT	**Wulai**	**0.69**	**341**	P		**Pg**	**15 54 12.2**	**+0.3**
	baz=341								
NWLT				S		**Sg**	**15 54 21.8**	**+0.8**
	baz=341								
EHY	**Hungye**	**0.72**	**213**	P		**Pg**	**15 54 12.2**	**-0.3**
	baz=217								
WHP	**Taichung City**	**0.75**	**282**	P		**Pb**	**15 54 13.6**	**-0.5**
	baz=283								
WHP				*e*S		**Sb**	**15 54 24.2**	**-0.4**
	baz=283								
WCS	**Beigang Elemen**	**0.77**	**266**	*e*P		**Pb**	**15 54 13.5**	**-0.8**
	baz=259								
WCS				*e*S		**Sg**	**15 54 23.5**	**+0.2**
	baz=259								
NFF	**Wufeng Townshi**	**0.77**	**312**	P		**Pb**	**15 54 13.8**	**-0.6**
	baz=312								
NFF				*e*S		**Sb**	**15 54 23.9**	**-1.3**
	baz=312								
SSLB	**Suanglung**	**0.80**	**246**	P		**Pg**	**15 54 13.6**	**-0.3**
SSLB	**Suanglung**	**0.80**	**246** ⇑	*i* P		**Pg**	**15 54 13.6**	**-0.3**
	baz=259								
SSLB				S		**Sb**	**15 54 25.1**	**-0.9**
	baz=259								
SMLT	**Sun Moon Lake**	**0.81**	**253**	P		**Pg**	**15 54 14.1**	**0.0**
	baz=254								
SMLT				*e*S		**Sb**	**15 54 26.2**	**-0.2**
	baz=254								
YULB	**Yu-li**	**0.83**	**210**	P		**Pg**	**15 54 14.3**	**-0.3**
YULB	**Yu-li**	**0.83**	**210**	P		**Pg**	**15 54 14.2**	**-0.3**
	baz=226								
YULB				S		**Sb**	**15 54 26.8**	**-0.2**
	baz=226								
TYC	**Yuchr**	**0.84**	**256** ⇓	*i* P		**Pg**	**15 54 14.6**	**-0.2**
	baz=257								
TYC				*e*S		**Sn**	**15 54 28.1**	**-1.6**
	baz=257								
LIOB	**Emei**	**0.85**	**308**	*e*P		**Pb**	**15 54 15.8**	**0.0**
	baz=309								
NSTT	**Nanjuang**	**0.85**	**307**	*e*P		**Pb**	**15 54 15.7**	**-0.1**
	baz=308								
TIPB	**Shuangxi**	**0.85**	**5**	*e*P		**Pb**	**15 54 15.5**	**-0.4**
	baz=353								
EYUL	**Yuli**	**0.86**	**207**	*e*P		**Pb**	**15 54 15.7**	**-0.3**
	baz=224								
NHDH	**Xindian Distri**	**0.86**	**347**	*e*P		**Pb**	**15 54 16.2**	**+0.2**
	baz=345								
NHDH				*e*S		**Sg**	**15 54 27.0**	**+0.5**
	baz=345								
TWF1	**Yuli**	**0.87**	**208**	P		**Pg**	**15 54 14.3**	**-0.9**
	baz=225								
TWA	**Mucha**	**0.87**	**350**	*e*P		**Pb**	**15 54 15.8**	**-0.4**
	baz=348								
TATO	**Taipei**	**0.89**	**345**	P		**Pb**	**15 54 16.5**	**+0.1**
TWQ1	**Liyutan**	**0.92**	**285**	P		**Pn**	**15 54 18.9**	**+0.8**
	baz=286								
WHYT	**Xinyi Township**	**0.92**	**243**	P		**Pb**	**15 54 16.8**	**-0.2**
	baz=254								
WHYT				S		**Sn**	**15 54 30.6**	**-1.1**
	baz=254								
NWF	**Wu-fen Shan**	**0.95**	**2**	*e*P		**Pb**	**15 54 17.8**	**+0.2**
	baz=358								
WFSB	**Wu-fen Shan**	**0.95**	**2**	*e*P		**Pb**	**15 54 17.5**	**0.0**
	baz=358								
SBCB	**Hsinchu**	**0.96**	**314**	*e*P		**Pn**	**15 54 19.4**	**+0.6**
	baz=314								
NMLH	**Miaoli**	**0.97**	**296**	*e*P		**Pn**	**15 54 19.4**	**+0.6**
	baz=297								
CHKH	**Chenggong**	**0.98**	**199**	*e*P		**Pg**	**15 54 17.2**	**-0.1**
	baz=195								
WJS	**Zhushan**	**0.98**	**253**	*e*P		**Pn**	**15 54 18.6**	**-0.4**
	baz=256								
SXI1	**Grass Mountain**	**0.98**	**7**	*e*P		**Pb**	**15 54 18.1**	**0.0**
	baz=348								
NCUH	**Zhongli**	**0.99**	**329**	*e*P		**Pn**	**15 54 19.2**	**+0.1**
	baz=327								
WNT	**Mingjian**	**1.00**	**256**	*e*P		**Pn**	**15 54 19.2**	**0.0**
	baz=258								
WNT				*e*S		**Sn**	**15 54 34.5**	**+0.8**
	baz=258								
FULB	**Fuli**	**1.00**	**204**	*e*P		**Pb**	**15 54 18.3**	**-0.2**
	baz=226								
TWS1	**Kuangyinshan**	**1.02**	**343**	*e*P		**Pn**	**15 54 19.2**	**-0.4**
	baz=341								
WDJ	**Dajia District**	**1.03**	**283**	*e*P		**Pn**	**15 54 20.1**	**+0.4**
	baz=284								
YM01	**YM01**	**1.04**	**351**	*e*P		**Pn**	**15 54 19.4**	**-0.4**
	baz=348								
ALS	**Alishan**	**1.05**	**235**	P		**Pg**	**15 54 18.6**	**-0.2**
	baz=248								
CHKT	**Chengkung**	**1.07**	**199**	*e*P		**Pg**	**15 54 18.8**	**-0.4**
	baz=196								
NTST	**Danshui**	**1.08**	**346**	*e*P		**Pn**	**15 54 20.8**	**+0.5**
	baz=342								
ANP	**Anpu**	**1.08**	**349**	*e*P		**Pn**	**15 54 20.2**	**-0.2**
	baz=346								
EHD	**Haiduan**	**1.08**	**207**	*e*P		**Pg**	**15 54 18.2**	**-1.2**
	baz=225								
CHN5	**Tsauling**	**1.11**	**242**	P		**Pn**	**15 54 20.5**	**-0.3**
	baz=246								
CHN5				*e*S		**Sn**	**15 54 36.5**	**+0.1**
	baz=246								
ELDTW	**Lidau**	**1.14**	**216**	*e*P		**Pg**	**15 54 18.6**	**-1.9**
	baz=223								
WGK	**Gukeng**	**1.17**	**249**	*e*P		**Pn**	**15 54 22.2**	**+0.7**
	baz=253								
WDLH	**Douliu**	**1.19**	**249**	*e*P		**Pn**	**15 54 22.0**	**+0.3**
	baz=254								
YOJ	**Yonaguni jima**	**1.20**	**73**	P		**Pg**	**15 54 21.8**	**+0.1**
YOJ				S		**Sn**	**15 54 38.9**	**+0.2**
WCKO	**Fanlu**	**1.25**	**237**	*e*P		**Pn**	**15 54 23.2**	**+0.6**
	baz=244								
WRL	**Guolierlin Hig**	**1.27**	**261**	*e*P		**Pn**	**15 54 23.7**	**+0.7**
	baz=264								
STYH	**Taoyuan**	**1.30**	**224**	*e*P		**Pg**	**15 54 22.9**	**-0.6**
	baz=231								
TPUB	**Ta-pu**	**1.31**	**232**	P		**Pb**	**15 54 23.5**	**-0.1**
TPUB	**Ta-pu**	**1.31**	**232**	*e*P		**Pb**	**15 54 23.8**	**+0.1**
	baz=238								
WTK	**Tuku**	**1.31**	**251**	*e*P		**Pb**	**15 54 24.4**	**+0.7**
	baz=256								
WTP	**Ta-pu**	**1.35**	**230**	P		**Pb**	**15 54 24.9**	**+0.5**
	baz=235								
WTP				*e*S		**Sn**	**15 54 44.2**	**+1.7**
	baz=235								
TWGBT	**Beinan**	**1.43**	**205**	P		**Pn**	**15 54 23.4**	**-1.8**
TWK	**Hsinying**	**1.43**	**234**	*e*P		**Pg**	**15 54 26.0**	**-0.1**
	baz=238								
TWK				*e*S		**Sn**	**15 54 46.8**	**+2.4**
	baz=238								
TWG	**Pinlang**	**1.43**	**206**	*e*P		**Pn**	**15 54 22.6**	**-2.6**
	baz=215								
CHN1	**Nanshi**	**1.45**	**231**	*e*P		**Pb**	**15 54 25.8**	**-0.3**
	baz=236								
CHN1				*e*S		**Sg**	**15 54 48.4**	**+3.1**
	baz=236								
SNST	**Tainan City**	**1.45**	**232**	*e*P		**Pg**	**15 54 26.5**	**0.0**
	baz=240								
WSF	**Szhu**	**1.48**	**251**	*e*P		**Pg**	**15 54 26.8**	**-0.1**
	baz=255								
WSF				*e*S		**Sg**	**15 54 48.8**	**+2.7**
	baz=255								
SGST	**Jiashian**	**1.48**	**226**	*e*P		**Pn**	**15 54 25.7**	**-0.2**
	baz=234								
SLGT	**Liugui**	**1.51**	**222**	*e*P		**Pg**	**15 54 27.1**	**-0.4**
	baz=230								
ICHU	**Yijhu**	**1.54**	**241**	*e*P		**Pg**	**15 54 27.7**	**-0.5**
	baz=248								
ECL	**Taimali**	**1.68**	**206**	*e*P		**Pb**	**15 54 29.7**	**-0.3**
	baz=202								
SCST	**Cishan**	**1.68**	**223**	*e*P		**Pb**	**15 54 29.9**	**-0.1**
	baz=232								
SHHT	**Tainan City**	**1.68**	**230**	*e*P		**Pg**	**15 54 30.2**	**-0.7**
	baz=238								
TSMG	**Majia**	**1.73**	**216**	*e*P		**Pn**	**15 54 29.4**	**+0.1**
	baz=237								
TWM1	**Shoushan**	**1.77**	**224**	*e*P		**Pg**	**15 54 34.6**	**+2.1**
	baz=232								
MASBT	**Mashibuluo**	**1.81**	**215**	*e*P		**Pn**	**15 54 29.8**	**-0.7**
	baz=224								

TAP 05 15:57:02.9, 24.44N×121.62E, h23km, ML1.5, 3D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
ENA	**Nanau**	**0.11**	**96**	⇓ *i* P			Pb	15 57 07.8	+0.4
	baz=95								
ENA				*i* S			Sb	15 57 11.3	+1.0
	baz=95								
LATG	**Datong**	**0.13**	**318**	P			Pb	15 57 07.8	+0.1
	baz=318								
LATG				*i* S			Sb	15 57 11.5	+0.6
	baz=318								
EWUT	**Wuta**	**0.14**	**87**	⇓ P			Pb	15 57 08.0	+0.3
	baz=87								
EWUT				S			Sb	15 57 11.6	+0.7
	baz=87								
EAHA	**Aohua**	**0.15**	**135**	⇓ *e*P			Pb	15 57 08.4	+0.6
	baz=135								
EAHA				S			Sb	15 57 12.1	+1.1
	baz=135								
NDT	**Datong Townshi**	**0.19**	**329**	*i* S			Sb	15 57 12.9	+1.0
	baz=329								
ENTT	**Nioudou**	**0.21**	**346**	*i* P			Pb	15 57 08.8	+0.3
	baz=347								
ENTT				*i* S			Sb	15 57 13.2	+0.9
	baz=347								
NNSB	**Datong**	**0.22**	**267**	*e*P			Pb	15 57 09.3	+0.6
	baz=267								
NNSB				*e*S			Sb	15 57 13.0	+0.4
	baz=267								
ESAO	**Su ao**	**0.24**	**56**	P			Pb	15 57 09.3	+0.3
	baz=56								
NACB	**Ninganchiao**	**0.27**	**185**	*e*P			Pb	15 57 10.2	+0.9
	baz=185								

TAP 05 15:58:31.7, 24.22N×121.75E, h12km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
EAHA	**Aohua**	**0.10**	**354**	*e*P			Pb	15 58 35.2	-0.5
	baz=354								
ETL	**Fush Village**	**0.13**	**241**	P			Pb	15 58 35.7	-0.6
	baz=240								
ETL				*i* S			Sg	15 58 38.6	+1.3
	baz=240								
NACB	**Ninganchiao**	**0.15**	**251**	*e*P			Pb	15 58 35.9	-0.6
	baz=250								
NACB				*i* S			Sg	15 58 38.9	+1.2
	baz=250								
TWD	**Chiawan**	**0.20**	**225**	*e*P			Pb	15 58 36.8	-0.6
	baz=223								
TWD				*e*S			Sg	15 58 40.2	+1.2
	baz=223								
ENA	**Nanau**	**0.20**	**357**	P			Pb	15 58 37.0	-0.5
	baz=359								
ENA				*i* S			Sg	15 58 40.5	+1.4
	baz=359								
EWUT	**Wuta**	**0.22**	**6**	P			Pb	15 58 37.2	-0.5
	baz=6.0								
EWUT				S			Sg	15 58 41.3	+1.6
	baz=6.0								
ETLH	**Xiulin Townshi**	**0.25**	**266**	*e*P			Pb	15 58 37.6	-0.6
	baz=265								
ETLH				*e*S			Sg	15 58 42.1	+1.7
	baz=265								
ETM	**Tongmen**	**0.35**	**223**	*e*P			Pb	15 58 39.3	-0.6
	baz=222								
LATG	**Datong**	**0.37**	**327**	P			Pb	15 58 40.1	-0.3
	baz=326								

TAP 05 15:58:38.0, 24.14N×121.69E, h11km±1km, ML3.0, 3C-1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
ETL	**Fush Village**	**0.07**	**290**	P			Pg	15 58 41.0	+0.6
	baz=289								
ETL				S			Sg	15 58 42.8	+0.8
	baz=289								
NACB	**Ninganchiao**	**0.10**	**293**	⇓ *i* P			Pg	15 58 41.4	+0.8
	baz=293								
TWD	**Chiawan**	**0.10**	**238**	⇑ *i* P			Pg	15 58 41.3	+0.6
	baz=235								
TWD				*i* S			Sg	15 58 43.4	+0.7
	baz=235								
HWA	**Hwalien**	**0.18**	**207**	*e*P			Pb	15 58 43.0	-0.4
	baz=204								
EAHA	**Aohua**	**0.20**	**13**	*e*P			Pg	15 58 42.9	+0.7
	baz=12								
ETLH	**Xiulin Townshi**	**0.20**	**290**	*e*P			Pb	15 58 43.4	-0.5
	baz=290								
ETM	**Tongmen**	**0.25**	**227**	⇑ P			Pg	15 58 43.7	+0.6
	baz=226								
LXIB	**Xiulin Townshi**	**0.28**	**246**	⇑ *i* P			Pg	15 58 44.4	+0.7
	baz=245								
ENA	**Nanau**	**0.29**	**9**	P			Pb	15 58 44.7	-0.7
	baz=10.0								
EWUT	**Wuta**	**0.32**	**14**	*e*P			Pb	15 58 45.1	-0.6
	baz=14								
SHUL	**Shoufeng**	**0.37**	**199**	*e*P			Pb	15 58 47.0	+0.4
	baz=198								
WHF	**Hehuan Shan**	**0.39**	**271**	*e*P			Pb	15 58 46.9	-0.4
	baz=271								

IDC ***05*** *15:58:40.1±0.5, 24.10N×121.90E, h0km, mb4.2/24, mbtmp4.2/26, ML4.2/1, MS4.4/68, Error ellipse: s-maj=18.5km s-min=12.5km az=62.0*

ASIES ***05*** *15:58:41.3, 24.11N×121.74E, h8km, ML5.0, Mw4.8, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}=1.63; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$1.83; $M_{r\theta}$0.38; $M_{\theta\phi}$-0.60; $M_{\phi r}$0.81; Fault plane solution: $M_0$2.04727×10^{23} NP1: ϕ_s182.98000°, δ58.28000°, λ-67.72000°. NP2: ϕ_s325.05000°, δ38.08000°, λ-121.53000°. Principal axes: T Plg10.6530°, Azm257.1520°; N Plg18.8160°, Azm350.8270°; P Plg68.1760°, Azm139.1350°;*

NEIC ***05*** *15:58:41.3±1.2, 24.11N±0.02×121.75E±0.04, h8km±3km, mb4.9/90, Mww4.8/9 Error ellipse: s-maj=5.0km s-min=2.4km az=99.0*

NIED ***05*** *15:58:41.4, 24.10N×121.73E, h0km, MW5.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.15; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$ 1.14; $M_{r\theta}$3.12; $M_{\theta\phi}$-1.21; $M_{\phi r}$0.88; Fault plane solution: $M_0$3.41000×10^{16} NP1:ϕ_s81.00000°, δ83.00000°, λ102.00000°. NP2:ϕ_s201.00000°, δ14.00000°, λ31.00000°.*

NEIC ***05*** *15:58:41.1, 24.00N×121.87E, h12km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50; $M_{\theta\theta}$-1.81; $M_{\phi\phi}$ 1.31; $M_{r\theta}$0.12; $M_{\theta\phi}$-0.57; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.82000×10^{16} NP1: ϕ_s121.64000°, δ71.67000°, λ159.99000°. NP2: ϕ_s218.17000°, δ71.04000°, λ19.42000°. Principal axes: T 1.7228, Plg27.0000°, Azm80.0000°; N 0.1907, Plg63.0000°, Azm261.0000°; P -1.9136, Plg0.0000°, Azm170.0000°;*

BJI ***05*** *15:58:41.1±0.0, 24.14N×121.82E, h8km, mb4.5/65, mB5.0/48, ML5.2/12, Ms5.2/81, Ms7 5.2/75*

TAP ***05*** *15:58:41.3, 24.11N×121.74E, h8km, ML5.0, C*

NEIC ***05*** *15:58:41.1, 24.10N×121.76E, h12km*

JMA ***05*** *15:58:41.4±0.1, 24.1N±0.2×121.7E±0.2, h0km, MD5.2/19, MW5.0/19, TAIWAN REGION*

GCMT ***05*** *15:58:42.3±0.2, 24.08N±0.02×121.69E±0.02, h16km±1km, MW5.0/96, Moment Tensor Solution. s35,c43; s96,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.39±.13; $M_{\theta\theta}$-1.85±.10; $M_{\phi\phi}$0.45±.08; $M_{r\theta}$2.55±.35; $M_{\theta\phi}$-1.53±.07; $M_{\phi r}$0.97±.27; Best double couple: $M_0$3.39300×10^{16} NP1:ϕ_s71.00000°, δ72.00000°, λ97.00000°. NP2: ϕ_s228.00000°, δ19.00000°, λ68.00000°. Principal axes: T 2.7980, Plg62.0000°, Azm352.0000°; N 1.1820, Plg7.0000°, Azm249.0000°; P -3.9880, Plg27.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 15:58:43.1±0.5, 24.11N±0.01×121.73E±0.01, h14km±2km, n611, σ1§70/655, mb4.8/80, MS4.4/71, 49C-28D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
ETL	**Fush Village**	**0.11**	**297**	*e*P			Pg	15 58 44.5	-1.8
	baz=296								
ETL				*e*S			Sg	15 58 46.3	-2.3
	baz=296								
TWD	**Chiawan**	**0.13**	**257**	⇑ *i* P			Pg	15 58 44.6	-1.9
	baz=268								
TWD				*i* S			Sg	15 58 46.7	-2.1
	baz=268								
NACB	**Ninganchiao**	**0.14**	**298**	Pg			Pg	15 58 43.9	-2.8
NACB				Sg			Sg	15 58 46.6	-2.6
NACB	**Ninganchiao**	**0.14**	**298**	P			Pg	15 58 44.7	-2.1
NACB	**Ninganchiao**	**0.14**	**298**	⇓ *i* P			Pg	15 58 44.6	-2.1
	baz=289								
NACB				*i* S			Sg	15 58 46.7	-2.5
	baz=289								
NACB	**Ninganchiao**	**0.14**	**298**	*i* S			Sg	15 58 43.5	-5.7
	baz=293								
HWA	**Hwalien**	**0.17**	**221**	⇑ P			Sg	15 58 46.1	-1.1
	baz=237								
EHP	**Heping Village**	**0.20**	**3**	*e*P			Pg	15 58 46.0	-1.7
	baz=1.0								
EHP				S			Sg	15 58 49.3	-1.5
	baz=1.0								
EAHA	**Aohua**	**0.22**	**2**	P			Pg	15 58 46.0	-1.9
	baz=358								
EAHA				*i* S			Sg	15 58 50.1	-1.1
	baz=358								
ETLH	**Xiulin Townshi**	**0.25**	**293**	*e*P			Pg	15 58 46.8	-1.7
	baz=292								
ETM	**Tongmen**	**0.26**	**237**	⇑ *i* P			Pg	15 58 47.1	-1.5
	baz=242								
ETM				S			Sg	15 58 50.9	-1.4
	baz=242								
LXIB	**Xiulin Townshi**	**0.30**	**253**	⇑ *i* P			Pg	15 58 47.7	-1.8
	baz=256								
LXIB				*e*S			Sg	15 58 52.4	-1.4
	baz=256								
ENA	**Nanau**	**0.32**	**2**	*e*P			Pg	15 58 47.8	-1.8
	baz=360								
ENA				S			Sg	15 58 52.0	-2.1
	baz=360								
EWUT	**Wuta**	**0.34**	**7**	P			Pg	15 58 48.3	-1.7
	baz=4.0								
EWUT				*e*S			Sg	15 58 53.3	-1.4
	baz=4.0								
SHUL	**Shoufeng**	**0.35**	**206**	P			Pg	15 58 50.0	-0.3
	baz=219								
ESL	**Shilin**	**0.40**	**223**	⇑ P			Pg	15 58 49.5	-1.6
	baz=237								
ESL				*e*S			Sg	15 58 55.6	-0.9
	baz=237								
WHF	**Hehuan Shan**	**0.43**	**275**	P			Pg	15 58 50.2	-1.5
	baz=276								
TEGC	**Jichi Village**	**0.43**	**204**	*e*P			Pg	15 58 51.6	-0.1
	baz=210								
NNSB	**Datong**	**0.45**	**315**	⇓ *i* P			Pg	15 58 50.7	-1.4
	baz=314								
NNSB				S			Sg	15 58 56.2	-1.9
	baz=314								
NNSH	**Datong**	**0.45**	**315**	⇓ *e*P			Pg	15 58 50.7	-1.4
	baz=313								
NNSH				*e*S			Sg	15 58 56.7	-1.5
	baz=313								
LATG	**Datong**	**0.46**	**336**	⇓ *i* P			Pg	15 58 50.9	-1.5
	baz=334								
LATG				*e*S			Sg	15 58 56.7	-1.9
	baz=334								
NNS	**Nan Shan**	**0.46**	**315**	P			Pg	15 58 50.8	-1.5
	baz=315								
NNS				S			Sg	15 58 57.3	-1.3
	baz=315								
FUSS	**Fushou**	**0.47**	**287**	P			Pg	15 58 51.2	-1.2
	baz=288								
FUSS				S			Sg	15 58 57.5	-1.2
	baz=288								
ESAO	**Su ao**	**0.48**	**12**	⇓ P			Pg	15 58 50.9	-1.6
	baz=3.0								
ESAO				*e*S			Sg	15 58 57.4	-1.6
	baz=3.0								
WARBT	**Fenglin Townsh**	**0.50**	**219**	⇑ *i* P			Pg	15 58 51.4	-1.6
	baz=233								
WARBT				*e*S			Sb	15 59 00.2	-0.7
	baz=233								
TWC	**Suao**	**0.51**	**12**	P			Pg	15 58 51.6	-1.6
	baz=4.0								
TWC				S			Sg	15 58 58.9	-1.1
	baz=4.0								
CHGB	**Renai**	**0.51**	**265**	⇑ *i* P			Pg	15 58 52.0	-1.2
	baz=260								
CHGB				S			Sg	15 58 58.7	-1.4
	baz=260								
EGFH	**Guangfu**	**0.52**	**212**	⇑ *e*P			Pg	15 58 52.0	-1.3
	baz=230							

TDCB	**Techi**	**0.54**	**285**	⇑P	**Pg**	**15 58 52.8**	**-1.0**
	baz=286								
TDCB				S	**Sg**	**15 58 59.8**	**-1.3**
	baz=286								
ENTT	**Nioudou**	**0.55**	**344**	P	**Pg**	**15 58 52.5**	**-1.4**
	baz=342								
ENTT				S	**Sg**	**15 59 00.8**	**-0.5**
	baz=342								
EOS2	**EOS2**	**0.55**	**56**	*e*P	**Pb**	**15 58 54.0**	**-0.4**
	baz=29								
EOS3	**EOS3**	**0.56**	**72**	*e*P	**Pb**	**15 58 54.3**	**-0.3**
	baz=47								
WUSB	**Renai**	**0.57**	**258**	⇑*i*P	**Pg**	**15 58 53.2**	**-1.1**
	baz=260								
TWE	**Neicheng**	**0.61**	**355**	⇓*i*P	**Pg**	**15 58 53.9**	**-1.2**
	baz=353								
TWE				*i* S	**Sg**	**15 59 02.8**	**-0.4**
	baz=353								
VWDT	**VWDT**	**0.65**	**237**	⇑*i*P	**Pg**	**15 58 54.3**	**-1.3**
	baz=240								
VWDT				S	**Sg**	**15 59 03.8**	**-0.4**
	baz=240								
YHNB	**Yeheng**	**0.65**	**330**		**Pg**	**15 58 54.1**	**-1.6**
YHNB	**Yeheng**	**0.65**	**330**	P	**Pg**	**15 58 54.8**	**-0.9**
YHNB	**Yeheng**	**0.65**	**330**	⇓P	**Pg**	**15 58 54.6**	**-1.1**
	baz=328								
YHNB				S	**Sg**	**15 59 03.2**	**-1.1**
	baz=328								
ILA	**Ilan**	**0.65**	**1**	*e*P	**Pg**	**15 58 54.7**	**-1.2**
	baz=346								
NSK	**Sanguang**	**0.66**	**329**	⇓*i*P	**Pg**	**15 58 54.8**	**-1.1**
	baz=328								
NSK				*i* S	**Sg**	**15 59 04.0**	**-0.7**
	baz=328								
FUSB	**Fushanzhiwuyua**	**0.66**	**349**	⇓*i*P	**Pg**	**15 58 54.9**	**-1.2**
	baz=337								
FUSB				S	**Sg**	**15 59 03.8**	**-1.0**
	baz=337								
HGSD	**Ruisui**	**0.68**	**205**	*e*P	**Pg**	**15 58 55.9**	**-0.3**
	baz=196								
HGSD				*e*S	**Sb**	**15 59 06.1**	**+0.2**
	baz=196								
NWLT	**Wulai**	**0.70**	**343**	⇓P	**Pg**	**15 58 55.5**	**-1.2**
	baz=341								
NWLT				S	**Sg**	**15 59 05.1**	**-0.8**
	baz=341								
EHY	**Hungye**	**0.71**	**212**	*e*P	**Pg**	**15 58 55.4**	**-1.4**
	baz=217								
WPL	**Puli Township**	**0.71**	**262**	⇑*i*P	**Pg**	**15 58 55.8**	**-1.2**
	baz=264								
WHP	**Taichung City**	**0.74**	**283**	⇑*i*P	**Pg**	**15 58 56.7**	**-0.8**
	baz=284								
WHP				S	**Sg**	**15 59 07.0**	**-0.2**
	baz=284								
DPDB	**Guoxing**	**0.74**	**264**	⇑*i*P	**Pg**	**15 58 56.6**	**-0.9**
	baz=266								
NTC	**Toucheng**	**0.75**	**7**	*e*P	**Pg**	**15 58 56.5**	**-1.1**
	baz=1.0								
WCS	**Beigang Elemen**	**0.75**	**266**	⇑*i*P	**Pg**	**15 58 56.6**	**-1.0**
	baz=268								
NFF	**Wufeng Townshi**	**0.76**	**313**	⇓P	**Pg**	**15 58 56.9**	**-1.1**
	baz=312								
NFF				*e*S	**Sg**	**15 59 07.2**	**-0.9**
	baz=312								
SSLB	**Suanglung**	**0.78**	**246**	Pg	**Pg**	**15 58 56.6**	**-1.6**
SSLB				Sg	**Sg**	**15 59 06.8**	**-1.7**
SSLB	**Suanglung**	**0.78**	**246**	P	**Pg**	**15 58 56.8**	**-1.4**
SSLB	**Suanglung**	**0.78**	**246**	⇑*i*P	**Pg**	**15 58 56.8**	**-1.4**
	baz=258								
SSLB				*e*S	**Sg**	**15 59 07.9**	**-0.6**
	baz=258								
SMLT	**Sun Moon Lake**	**0.79**	**254**	⇑*i*P	**Pg**	**15 58 57.3**	**-1.2**
	baz=256								
SMLT				*e*S	**Sg**	**15 59 07.5**	**-1.4**
	baz=256								
YULB	**Yu-li**	**0.82**	**209**	Pg	**Pg**	**15 58 56.9**	**-2.1**
YULB	**Yu-li**	**0.82**	**209**	P	**Pg**	**15 58 57.8**	**-1.1**
YULB	**Yu-li**	**0.82**	**209**	*e*P	**Pg**	**15 58 57.4**	**-1.5**
	baz=227								
YULB				*e*S	**Sb**	**15 59 10.4**	**+0.5**
	baz=227								
TYC	**Yuchr**	**0.82**	**256**	⇑*i*P	**Pg**	**15 58 57.6**	**-1.5**
	baz=258								
TYC				*e*S	**Sg**	**15 59 09.8**	**-0.1**
	baz=258								
ECBN	**Changbin**	**0.83**	**198**	*e*P	**Pg**	**15 58 58.1**	**-1.0**
	baz=193								
LIOB	**Emei**	**0.84**	**309**	*e*P	**Pg**	**15 58 58.8**	**-0.7**
	baz=307								
NSTT	**Nanjuang**	**0.84**	**308**	*e*P	**Pg**	**15 58 58.6**	**-0.9**
	baz=307								
NSTT				S	**Sg**	**15 59 09.6**	**-1.0**
	baz=307								
EYUL	**Yuli**	**0.85**	**207**	*e*P	**Pb**	**15 58 59.5**	**-0.1**
	baz=225								
TWF1	**Yuli**	**0.85**	**208**	*e*P	**Pg**	**15 58 58.6**	**-0.9**
	baz=225								
TWF1				*e*S	**Sb**	**15 59 11.1**	**+0.2**
	baz=225								
NJD	**Zhudong**	**0.86**	**317**	*e*P	**Pb**	**15 58 59.7**	**-0.1**
	baz=314								
TIPB	**Shuangxi**	**0.86**	**6**	⇓*i*P	**Pg**	**15 58 58.4**	**-1.5**
	baz=354								
TIPB				S	**Sg**	**15 59 09.4**	**-1.8**
	baz=354								
NHDH	**Xindian Distri**	**0.87**	**348**	⇓*i*P	**Pg**	**15 58 58.9**	**-1.1**
	baz=345								
NHDH				S	**Sg**	**15 59 09.6**	**-1.8**
	baz=345								
TWA	**Mucha**	**0.88**	**351**	⇓*i*P	**Pg**	**15 58 59.1**	**-1.0**
	baz=349								
TWA				S	**Sg**	**15 59 11.3**	**-0.3**
	baz=349								
TATO	**Taipei**	**0.89**	**346**		**Pg**	**15 58 58.8**	**-1.5**
TATO				Sg	**Sg**	**15 59 09.7**	**-2.3**
TATO	**Taipei**	**0.89**	**346**	P	**Pg**	**15 58 59.5**	**-0.8**
TATO	**Taipei**	**0.89**	**346**	S	**Sg**	**15 59 10.4**	**-1.6**
	baz=343								
WHYT	**Xinyi Township**	**0.90**	**243**	*e*P	**Pg**	**15 58 59.2**	**-1.4**
	baz=255								
WHYT				*e*S	**Sb**	**15 59 12.3**	**-0.2**
	baz=255								
TWQ1	**Liyutan**	**0.91**	**285**	*e*P	**Pn**	**15 59 02.0**	**+0.6**
	baz=285								
BACT	**New Taipei Cit**	**0.92**	**343**	P	**Pg**	**15 59 00.3**	**-0.6**
	baz=341								
BACT				*e*S	**Sb**	**15 59 13.4**	**+0.4**
	baz=341								
TWB1	**Santiao Chiao**	**0.93**	**15**	⇓*i*P	**Pg**	**15 58 59.6**	**-1.4**
	baz=1.0								
HSN1	**Hsinchu**	**0.93**	**316**	P	**Pg**	**15 59 01.3**	**+0.2**
	baz=315								
HSN1				*e*S	**Sb**	**15 59 13.8**	**+0.5**
	baz=315								
NSY	**Sanyi**	**0.94**	**289**	*e*P	**Pb**	**15 59 01.4**	**+0.2**
	baz=289								
NHY	**Taipei**	**0.94**	**351**	*e*P	**Pb**	**15 59 00.6**	**-0.6**
	baz=346								
WWF	**Wufeng**	**0.95**	**266**	⇑*e*P	**Pn**	**15 59 01.8**	**-0.1**
	baz=268								
TAP	**Taipei**	**0.95**	**348**	P	**Pb**	**15 59 00.6**	**-0.7**
	baz=345								
TAP				S	**Sg**	**15 59 13.2**	**-0.7**
	baz=345								
NMLH	**Miaoli**	**0.96**	**297**	*e*P	**Pn**	**15 59 02.2**	**0.0**
	baz=295								
NWF	**Wu-fen Shan**	**0.96**	**3**	⇓*i*P	**Pb**	**15 59 00.4**	**-1.1**
	baz=352								
NWF				S	**Sg**	**15 59 13.1**	**-1.1**
	baz=352								
WFSB	**Wu-fen Shan**	**0.96**	**3**	⇓*i*P	**Pb**	**15 59 00.6**	**-0.9**
	baz=352								
WFSB				S	**Sg**	**15 59 13.2**	**-1.0**
	baz=352								
WJS	**Zhushan**	**0.96**	**253**	⇑P	**Pg**	**15 59 01.4**	**-0.2**
	baz=256								
WJS				*e*S	**Sn**	**15 59 16.8**	**+1.1**
	baz=256								
SBCB	**Hsinchu**	**0.96**	**315**	⇓P	**Pb**	**15 59 01.0**	**-0.6**
	baz=314								
SBCB				*i* S	**Sg**	**15 59 14.6**	**+0.3**
	baz=314								
CHKH	**Chenggong**	**0.96**	**199**	*e*P	**Pb**	**15 58 59.8**	**-1.8**
	baz=195								
TCU	**Taichung**	**0.96**	**273**	⇑P	**Pn**	**15 59 02.0**	**-0.2**
	baz=267								
TCU				*e*S	**Sn**	**15 59 16.4**	**+0.7**
	baz=267								
NJN	**Zhunan**	**0.97**	**306**	*e*P	**Pg**	**15 59 01.8**	**-0.1**
	baz=304								
NTY	**Taoyuan**	**0.97**	**336**	P	**Pg**	**15 59 01.7**	**-0.1**
	baz=334								
NTY				*e*S	**Sn**	**15 59 15.3**	**-0.6**
	baz=334								
HSN	**Hsinchu**	**0.98**	**315**	⇑*i*P	**Pg**	**15 59 02.1**	**+0.1**
	baz=314								
WNT1	**Nantou City**	**0.98**	**258**	⇑P	**Pn**	**15 59 02.3**	**-0.2**
	baz=257								
WNT1				*e*S	**Sn**	**15 59 18.3**	**+2.1**
	baz=257								
WNT	**Mingjian**	**0.98**	**257**	⇑P	**Pg**	**15 59 02.0**	**-0.1**
	baz=252								
NCU	**National Centr**	**0.99**	**330**	P	**Pg**	**15 59 02.1**	**-0.1**
	baz=328								
NCU				*e*S	**Sn**	**15 59 17.2**	**+0.8**
	baz=328								
NCUH	**Zhongli**	**0.99**	**330**	P	**Pn**	**15 59 02.4**	**-0.2**
	baz=328								
NCUH				S	**Sn**	**15 59 16.4**	**0.0**
	baz=328								
SXI1	**Grass Mountain**	**0.99**	**8**	⇓*e*P	**Pb**	**15 59 01.0**	**-1.1**
	baz=4.0								
SXI1				*e*S	**Sn**	**15 59 16.5**	**0.0**
	baz=4.0								
FULB	**Fuli**	**0.99**	**204**	*e*P	**Pb**	**15 59 00.9**	**-1.2**
	baz=200								
WDJ	**Dajia District**	**1.02**	**284**	⇑*i*P	**Pn**	**15 59 03.1**	**0.0**
	baz=284								
TWS1	**Kuangyinshan**	**1.03**	**344**	⇓P	**Pb**	**15 59 02.4**	**-0.3**
	baz=342								
TWS1				*e*S	**Sn**	**15 59 17.5**	**+0.2**
	baz=342								
ALS	**Alishan**	**1.04**	**235**	⇑P	**Pb**	**15 59 01.9**	**-1.1**
	baz=239								
ALS				S	**Sb**	**15 59 16.4**	**-0.2**
	baz=239								
TNOU	**National Taiwa**	**1.04**	**2**	P	**Pb**	**15 59 01.7**	**-1.1**
	baz=359								
TNOU				*e*S	**Sb**	**15 59 15.2**	**-1.1**
	baz=359								
YM01	**YM01**	**1.04**	**352**	⇓P	**Pb**	**15 59 02.1**	**-0.9**
	baz=349								
YM01				S	**Sb**	**15 59 15.9**	**-0.7**
	baz=349								
CHKT	**Chengkung**	**1.06**	**199**	*e*P	**Pb**	**15 58 59.8**	**-3.4**
	baz=196								
WYL	**Yuanlin Townsh**	**1.06**	**262**	⇑*e*P	**Pb**	**15 59 02.0**	**-1.2**
	baz=265								
WYL				*e*S	**Sn**	**15 59 18.1**	**0.0**
	baz=265								
EHD	**Haiduan**	**1.07**	**207**	*e*P	**Pg**	**15 59 03.4**	**-0.3**
	baz=225								
WCHH	**Zhanghua**	**1.07**	**269**	⇑P	**Pg**	**15 59 03.5**	**-0.3**
	baz=271								
WCHH				*e*S	**Sn**	**15 59 20.6**	**+2.2**
	baz=271								
NTST	**Danshui**	**1.08**	**346**	*e*P	**Pb**	**15 59 03.6**	**0.0**
	baz=352								
NTST				*e*S	**Sn**	**15 59 19.6**	**+0.9**
	baz=352								
ANP	**Anpu**	**1.09**	**350**	⇓*e*P	**Pb**	**15 59 03.1**	**-0.7**
	baz=344								
CHN5	**Tsauling**	**1.09**	**242**	⇑P	**Pb**	**15 59 03.6**	**-0.2**
	baz=247								
CHN5				S	**Sn**	**15 59 19.8**	**+0.9**
	baz=247								
NHW	**Xinwu Township**	**1.09**	**325**	P	**Pn**	**15 59 03.9**	**0.0**
	baz=323								
NHW				*e*S	**Sn**	**15 59 18.6**	**-0.2**
	baz=323								
NWRT	**Kuosheng**	**1.09**	**357**	*e*P	**Pb**	**15 59 03.4**	**-0.3**
	baz=350								
ECS	**Chishang**	**1.11**	**205**	*e*P	**Pb**	**15 59 02.9**	**-1.3**
	baz=225								
ELDTW	**Lidau**	**1.13**	**216**	*e*P	**Pb**	**15 59 02.7**	**-1.7**
	baz=207								
ELDTW				*e*S	**Sn**	**15 59 19.9**	**0.0**
	baz=207								
WGK	**Gukeng**	**1.15**	**249**	⇑P	**Pn**	**15 59 04.7**	**-0.1**
	baz=253								
JYNG	**Yonagunijimaku**	**1.16**	**73**	P	**Pb**	**15 59 04.1**	**-0.8**
JYNG				S	**Sg**	**15 59 20.2**	**-0.4**
JYNG	**Yonagunijimaku**	**1.16**	**73**	A	A	15 59 04.1	
	comp=E,54nm,6.1s,comp=N,67nm,3.0s								
TWY	**Chenhua**	**1.17**	**354**	⇑*i*P	**Pn**	**15 59 04.9**	**-0.1**
	baz=335								
WDLH	**Douliu**	**1.17**	**249**	*e*P	**Pg**	**15 59 05.2**	**-0.4**
	baz=254								
NSM	**Shimen**	**1.18**	**354**	*e*P	**Pn**	**15 59 05.1**	**-0.1**
	baz=334								
YOJ	**Yonaguni jima**	**1.22**	**73**		**Pn**	**15 59 04.4**	**-1.3**
YOJ	**Yonaguni jima**	**1.22**	**73**	P	**Pb**	**15 59 05.8**	**-0.1**
YOJ	**Yonaguni jima**	**1.22**	**73**	*e*P	**Pn**	**15 59 04.7**	**-1.0**
	baz=54								
YOJ	**Yonaguni jima**	**1.22**	**73**	P	**Pn**	**15 59 04.9**	**-0.8**
YOJ				S	**Sg**	**15 59 22.2**	**-0.3**
YOJ	**Yonaguni jima**	**1.22**	**73**	A	A	15 59 04.9	
	comp=E,48nm,2.2s,comp=N,73nm,1.9s								
WCKO	**Fanlu**	**1.23**	**237**	⇑*i*P	**Pb**	**15 59 06.0**	**-0.1**
	baz=243								
WRL	**Guolierlin Hig**	**1.25**	**261**	⇑*e*P	**Pb**	**15 59 06.4**	**-0.2**
	baz=264								
WRL				*e*S	**Sg**	**15 59 24.9**	**+1.2**
	baz=264								
RLNB	**Erlin**	**1.27**	**260**	⇑P	**Pb**	**15 59 06.5**	**-0.3**
	baz=263								
RLNB				S	**Sg**	**15 59 24.2**	**+0.1**
	baz=263								
STYH	**Taoyuan**	**1.28**	**223**	*e*P	**Pn**	**15 59 06.2**	**-0.4**
	baz=220								
CHN2	**Minshiung**	**1.29**	**244**	*e*P	**Pb**	**15 59 07.2**	**+0.1**
	baz=248								
CHN2				*e*S	**Sg**	**15 59 26.4**	**+1.8**
	baz=248								
CHN4	**Tsaushan**	**1.29**	**234**	⇑P	**Pb**	**15 59 07.0**	**0.0**
	baz=239								
CHN4				*e*S	**Sg**	**15 59 26.6**	**+2.0**
	baz=239								
TPUB	**Ta-pu**	**1.29**	**232**		**Pn**	**15 59 06.2**	**-0.5**
TPUB	**Ta-pu**	**1.29**	**232**	P	**Pb**	**15 59 06.9**	**-0.3**
TPUB	**Ta-pu**	**1.29**	**232**	⇑P	**Pn**	**15 59 06.5**	**-0.2**
	baz=237								
TPUB				S	**Sg**	**15 59 24.6**	**-0.1**
	baz=237								
STYT	**Tauyuan**	**1.30**	**224**	*e*P	**Pn**	**15 59 06.5**	**-0.4**
	baz=230								
WTK	**Tuku**	**1.30**	**251**	⇑*e*P	**Pb**	**15 59 07.0**	**-0.2**
	baz=255								
WTK				*e*S	**Sg**	**15 59 25.9**	**+1.0**
	baz=255								
LONT	**Longtian**	**1.32**	**205**	*e*P	**Pn**	**15 59 04.6**	**-2.5**
	baz=213								
WTP	**Ta-pu**	**1.34**	**230**	P	**Pb**	**15 59 07.8**	**-0.1**
	baz=235								
WTP				*e*S	**Sg**	**15 59 26.8**	**+0.6**
	baz=235								
CHY	**Chiayi**	**1.34**	**243**	*e*P	**Pg**	**15 59 08.6**	**-0.3**
	baz=248								
CHY				*e*S	**Sg**	**15 59 27.7**	**+1.3**
	baz=248								
WTCT	**Ta-ch'eng**	**1.35**	**260**	⇑P	**Pn**	**15 59 07.4**	**-0.1**
	baz=263								
WTCT				*e*S	**Sg**	**15 59 27.3**	**+0.7**
	baz=263								
WMLT	**Mailiao**	**1.41**	**258**	*e*P	**Pb**	**15 59 09.0**	**-0.2**
	baz=262								
TWK	**Hsinying**	**1.42**	**234**	*e*P	**Pb**	**15 59 09.2**	**-0.1**
	baz=238								
TWK				S	**Sg**	**15 59 29.3**	**+0.6**
	baz=238								
TWGBT	**Beinan**	**1.42**	**205**	P	**Pb**	**15 59 08.9**	**-0.4**
TWGBT	**Beinan**	**1.42**	**205**	*e*P	**Pn**	**15 59 07.0**	**-1.4**
	baz=213								
TWG	**Pinlang**	**1.42**	**205**	Pn	**Pn**	**15 59 05.0**	**-3.4**
TWG	**Pinlang**	**1.42**	**205**	*e*P	**Pn**	**15 59 06.8**	**-1.7**
	baz=213								
CHN1	**Nanshi**	**1.44**	**230**	*e*P	**Pb**	**15 59 09.3**	**-0.3**
	baz=236								
CHN1				*e*S	**Sg**	**15 59 30.3**	**+0.9**
	baz=236								
SNST	**Tainan City**	**1.44**	**232**	P	**Pb**	**15 59 09.3**	**-0.4**
	baz=237								
SNST				*e*S	**Sg**	**15 59 29.3**	**0.0**
	baz=237								
LDUT	**Ludao**	**1.45**	**190**	*e*P	**Pn**	**15 59 06.1**	**-2.8**
	baz=199								
TTN	**Taitung**	**1.45**	**202**	*e*P	**Pg**	**15 59 11.2**	**+0.2**
	baz=203								
WSF	**Szhu**	**1.46**	**252**	P	**Pb**	**15 59 09.5**	**-0.5**
	baz=255								
WSF				*e*S	**Sg**	**15 59 30.9**	**+0.9**
	baz=255								
SGST	**Jiashian**	**1.47**	**226**	*e*P	**Pn**	**15 59 08.3**	**-0.8**
	baz=233								
SLGT	**Liugui**	**1.49**	**222**	*e*P	**Pn**	**15 59 09.3**	**-0.2**
	baz=220								
WSL	**Shuilin Townsh**	**1.50**	**247**	*e*P	**Pb**	**15 59 10.0**	**-0.6**
	baz=252								
ICHU	**Yijhu**	**1.52**	**241**	*e*P	**Pb**	**15 59 10.7**	**-0.4**
	baz=246								
PCYT	**Pengchaiyu**	**1.54**	**11**	*e*P	**Pn**	**15 59 10.5**	**+0.3**
	baz=2.0								
CHN8	**Yiju**	**1.59**	**242**	*e*P	**Pn**	**15 59 10.8**	**0.0**
	baz=246								
CHN8				*e*S	**Sb**	**15 59 32.8**	**+0.7**
	baz=246								
CHN3	**Shinhua**	**1.62**	**231**	*e*P	**Pb**	**15 59 13.0**	**+0.2**
	baz=237								
SSHA	**Shanhua**	**1.64**	**234**	*e*P	**Pb**	**15 59 12.4**	**-0.7**
	baz=240								
SCST	**Cishan**	**1.67**	**223**	*e*P	**Pb**	**15 59 12.7**	**-0.8**
	baz=218								
ECL	**Taimali**	**1.67**	**206**	*e*P	**Pn**	**15 59 09.8**	**-2.0**
	baz=200								
SHHT	**Tainan City**	**1.67**	**230**	*e*P	**Pb**	**15 59 13.1**	**-0.5**
	baz=236								
SCLT	**Jiali**	**1.69**	**237**	*e*P	**Pn**	**15 59 12.2**	**+0.1**
	baz=241								
SCLT				*e*S	**Sb**	**15 59 35.9**	**+0.8**
	baz=241								
SSD	**Sandimen**	**1.69**	**217**	*e*P	**Pn**	**15 59 11.2**	**-1.1**
	baz=216								
TSMG	**Majia**	**1.72**	**216**	*e*P	**Pn**	**15 59 12.9**	**+0.4**
	baz=214								
TAI1	**Yung-k'ang**	**1.74**	**233**	*e*P	**Pb**	**15 59 13.8**	**-1.1**
	baz=238								
TWM1	**Shoushan**	**1.75**	**223**	*e*P	**Pb**	**15 59 14.6**	**-0.5**
	baz=226								
SGLT	**Jiouru**	**1.79**	**220**	*e*P	**Pb**	**15 59 15.3**	**-0.3**
	baz=216								
TSCK	**Chigu Township**	**1.79**	**238**	*e*P	**Pn**	**15 59 13.4**	**-0.1**
	baz=243								
MASBT	**Mashibuluo**	**1.80**	**214**	*e*P	**Pn**	**15 59 12.9**	**-0.8**
	baz=209								
MASBT				*e*S	**Sb**	**15 59 37.7**	**-0.6**
	baz=209								
TSPT	**Pingtung City**	**1.82**	**219**	*e*P	**Pb**	**15 59 15.7**	**-0.5**
	baz=210								
IRIF	**Iriomote-Funau**	**1.84**	**83**	P	**Pn**	**15 59 13.4**	**-0.8**
IRIF				*e*S	**Sn**	**15 59 35.9**	**-1.4**
IRIF	**Iriomote-Funau**	**1.84**	**83**	A	A	15 59 13.4	
	comp=E,28nm,2.5s,comp=N,54nm,2.5s								
SNJT	**Kaohsiung City**	**1.86**	**224**	*e*P	**Pn**	**15 59 15.5**	**+0.9**
	baz=230								
HATJ	**Hateruma jima**	**1.90**	**91**	P	**Pn**	**15 59 15.8**	**+0.7**
HATJ				*e*S	**Sb**	**15 59 40.5**	**-0.5**
HATJ	**Hateruma jima**	**1.90**	**91**	A	A	15 59 15.8	
	comp=E,58nm,2.9s,comp=N,82nm,2.8s								
EAST	**Anshuo**	**1.90**	**205**	*e*P	**Pn**	**15 59 14.9**	**-0.2**
	baz=214								
TAW	**Tawu**	**1.91**	**204**	*e*P	**Pn**	**15 59 14.8**	**-0.4**
	baz=200								
TAWH	**Dawu Township**	**1.92**	**204**	*e*P	**Pn**	**15 59 14.9**	**-0.5**
	baz=200								
SCZT	**Fangliau**	**2.01**	**211**	*e*P	**Pn**	**15 59 16.3**	**-0.3**
	baz=203								
PHUB	**P'eng-hu**	**2.06**	**254**	P	**Pn**	**15 59 16.9**	**-0.4**
	baz=258								
PNG	**Penghu**	**2.06**	**255**	⇓*e*P	**Pn**	**15 59 17.3**	**0.0**
	baz=252								
PNG				*e*S	**Sb**	**15 59 44.6**	**-1.3**
	baz=252								
SLIU	**Shizi**	**2.07**	**205**	*e*P	**Pn**	**15 59 17.2**	**-0.2**
	baz=214								
WDGT	**Dungji**	**2.08**	**246**	*e*P	**Pn**	**15 59 17.5**	**0.0**
	baz=236								
WDGT				*e*S	**Sn**	**15 59 43.1**	**-0.1**
	baz=236								
JKRS	**Kuro-shima**	**2.08**	**86**	P	**Pn**	**15 59 17.8**	**+0.2**
JKRS				S	**Sb**	**15 59 45.2**	**-1.3**
JKRS	**Kuro-shima**	**2.08**	**86**	A	A	15 59 17.8	
	comp=E,57nm,4.1s,comp=N,109nm,4.5s								
LYUB	**Lan-yu**	**2.10**	**184**	*e*P	**Pn**	**15 59 14.8**	**-3.1**
	baz=196								
TWP	**Hsiaoliuchiu**	**2.16**	**216**	*e*P	**Pb**	**15 59 20.6**	**-1.4**
	baz=222								
JIJ	**Ishigaki jima**	**2.22**	**83**	P	**Pn**	**15 59 18.5**	**-0.9**
JIJ				S	**Sn**	**15 59 46.2**	**-0.4**
JIJ	**Ishigaki jima**	**2.22**	**83**	A	A	15 59 18.5	
	comp=E,12nm,5.2s,comp=N,23nm,8.5s								
SMST	**Manzhou Townsh**	**2.24**	**202**	*e*P	**Pn**	**15 59 19.1**	**-0.6**
	baz=199								
VWUC	**VWUC**	**2.26**	**293**	⇑*e*P	**Pn**	**15 59 19.1**	**-0.9**
	baz=292								
HEN	**Hengchun**	**2.28**	**204**	*e*P	**Pb**	**15 59 22.1**	**-2.0**
	baz=202								
VCHM	**Qimei**	**2.29**	**247**	⇑P	**Pn**	**15 59 20.6**	**+0.1**
	baz=236								
TWK1	**Hengchun**	**2.32**	**202**	*e*P	**Pn**	**15 59 20.4**	**-0.4**
	baz=199								
TWKBT	**Hengchun**	**2.32**	**202**	*e*P	**Pn**	**15 59 21.4**	**+0.6**
	baz=199								
TSEB	**Hengchuen, Pin**	**2.33**	**199**	*e*P	**Pn**	**15 59 20.4**	**-0.6**
	baz=199								
JISG	**Ishigakijimahi**	**2.40**	**78**	P	**Pn**	**15 59 21.6**	**-0.4**
JISG				S	**Sn**	**15 59 50.8**	**-0.4**
JISG	**Ishigakijimahi**	**2.40**	**78**	A	A	15 59 21.6	
	comp=E,11nm,2.6s,comp=N,18nm,3.5s								
PTMZ	**Houxiangcun**	**2.55**	**292**	⇑*e*P	**Pn**	**15 59 23.3**	**-0.8**
	baz=291								
PTMZ				*e*S	**Sn**	**15 59 54.0**	**-1.0**
	baz=291								
MATB	**Ma-tsu**	**2.60**	**322**	⇑*e*P	**Pn**	**15 59 23.5**	**-1.2**
	baz=315								
MSUT	**Lienchiang**	**2.63**	**322**	*e*P	**Pn**	**15 59 24.3**	**-0.8**
	baz=316								
JTJ	**Tarama**	**2.76**	**78**	P	**Pn**	**15 59 28.5**	**+1.6**
JTJ				S	**Sn**	**16 00 02.8**	**+2.7**
JTJ	**Tar

baz=285
ZPLA Ao Xicun 3.65 268 *e*P Pn **15 59 38.8 -0.3**
baz=271
DSXP Dongshan 3.96 265 *e*P Pn **15 59 42.9 -0.5**
baz=268
SXFK Yanhouchang 4.35 303 *e*P Pn **15 59 48.3 -0.4**
baz=299
JKE Kume jima 2 5.08 63 A A 16 00 01.1
comp=E,3.0nm,5.4s,comp=N,2.0nm,9.5s
JAGN Aguni-jima 5.56 62 A A 16 00 07.8
comp=E,4.0nm,4.4s,comp=N,6.0nm,5.4s
VDOS Pratas Island 5.74 235 *e*P Pn **16 00 09.3 +1.4**
baz=236
JJT3 Tamagusuku3 5.85 68 A A 16 00 11.8
comp=E,12nm,4.2s,comp=N,12nm,4.2s
JOW Kunigami 6.50 64 Pn Pn **16 00 17.3 -1.1**
JOW Kunigami 6.50 64 P Pn **16 00 17.7 -0.7**
JOW Kunigami 6.50 64 *e*P Pn **16 00 17.2 -1.3**
baz=66
JOW Kunigami 6.50 64 Pn Pn **16 00 16.9 -1.5**
comp=N,13nm,0.3s,baz=211,slow=5.9,SNR=13
comp=N,24nm,0.3s
SSE Sheshan 6.98 356 Pn Pn **16 00 23.0 -1.9**
SSE Sn **Sn** **16 01 44.9 +0.9**
SSE LR LR
comp=N,5µm,12.0s
SSE LR LR
comp=N,1µm,12.3s
HKPS Hong Kong Po S 7.22 257 Pn Pn **16 00 28.0 -0.2**
HKPS Hong Kong Po S 7.22 257 P Pn **16 00 29.1 +0.9**
HKPS Hong Kong Po S 7.22 257 *e*P Pn **16 00 28.6 +0.4**
baz=257
GZH Guangzhou 7.76 264 Pn Pn **16 00 30.9 -4.7**
GZH Sn **Sn** **16 01 55.2 -8.2**
GZH smax smax
comp=N,380nm,1.2s
GZH smax smax
comp=N,400nm,1.3s
NJ2 Nanjing 8.31 343 *e*P Pn **16 00 41.9 -1.3**
NJ2 pP Pn **16 00 44.3 +1.1**
NJ2 S **Sn** **16 02 17.3 +0.4**
NJ2 sS Sb 16 02 25.9 -20
NJ2 pmax pmax
comp=N,13nm,0.5s
NJ2 pmax pmax
comp=N,310nm,5.2s
NJ2 smax smax
comp=N,410nm,1.0s
NJ2 smax smax
comp=N,310nm,1.1s
NJ2 LR LR
comp=N,10µm,8.3s
NJ2 LR LR
comp=N,3µm,8.1s
NJ2 LR LR
comp=N,12µm,10.9s
CNSH ChangSha 8.89 299 ⇑P Pn **16 00 48.9 -2.2**
CNSH S **Sn** **16 02 25.9 -5.1**
CNSH smax smax
comp=N,920nm,1.1s
CNSH smax smax
comp=N,970nm,1.3s
CNSH LR LR
comp=N,9µm,9.2s
CNSH LR LR
comp=N,10µm,9.4s
CNSH LR LR
comp=N,13µm,9.8s
WHN Wuhan 9.17 316 ⇓P Pn **16 00 54.0 -1.0**
WHN S **Sn** **16 02 33.9 -4.1**
WHN LR LR
comp=N,41µm,8.9s
WHN LR LR
comp=N,33µm,8.9s
WHN LR LR
comp=N,55µm,9.5s
TGY Tagaytay City 9.98 184 LR LR 16 05 38.8
comp=N,754nm,20.2s,baz=54,slow=42
GULI GuiLin 10.40 279 ⇓P Pn **16 01 09.1 -2.8**
GULI S **Sn** **16 03 00.2 -8.1**
GULI pmax pmax
comp=Z,10.0nm,1.1s
GULI smax smax
comp=N,540nm,1.2s
GULI smax smax
comp=E,180nm,1.1s
GULI LR LR
comp=N,3µm,12.2s
GULI LR LR
comp=E,13µm,10.8s
GULI LR LR
comp=Z,18µm,9.9s
JNU Nakatsue 12.04 40 P Pn **16 01 35.2 +0.8**
JNU Nakatsue 12.04 40 Pn Pn **16 01 37.3 +2.9**
comp=Z,0.3nm,0.3s,baz=164,slow=11,SNR=6.7
JNU LR LR 16 06 58.2
comp=Z,2µm,18.3s,baz=223,slow=42
QIZ Qiongzhong 12.16 248 P Pn **16 01 34.6 -1.4**
QIZ S **Sn** **16 03 51.5 +0.1**
QIZ LR LR
comp=Z,3µm,13.9s
QIZ LR LR
comp=Z,2µm,11.8s
QIZ LR LR
comp=Z,2µm,8.4s
ENH Enshi 12.50 302 Pn **16 01 39.5 -1.2**
TIA Tai'an 12.70 343 *e*P Pn **16 01 40.9 -2.4**
TIA S **Sn** **16 03 59.6 -5.0**
TIA pmax pmax
comp=Z,3.0nm,1.2s
TIA pmax pmax
comp=Z,80nm,3.6s
TIA LR LR
comp=Z,3µm,10.8s
TIA LR LR
comp=Z,2µm,9.3s
TIA LR LR
comp=Z,5µm,10.8s
LYN LuoYang 13.16 324 *e*P Pn 16 01 54.6 +4.9
LYN PP P 16 02 05.3 +5.6
LYN S Sn 16 04 25.2 +9.3
LYN pmax pmax
comp=Z,17nm,0.8s
LYN pmax pmax
comp=Z,290nm,6.5s
LYN LR LR
comp=Z,27µm,8.6s
LYN LR LR
comp=Z,9µm,7.9s
LYN LR LR
comp=Z,26µm,10.0s
GYA Guiyang 13.83 283 P Pn **16 01 59.6 +0.7**
GYA S **Sn** **16 04 34.0 +1.6**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA LR LR
comp=Z,4µm,10.4s
GYA LR LR
comp=Z,11µm,9.0s
GYA LR LR
comp=Z,12µm,9.5s
KSRS Korea Array 14.32 20 Pn Pn **16 02 06.4 +0.9**
comp=Z,0.3nm,0.3s,baz=206,slow=13,SNR=8.3
KSRS LR LR 16 08 11.7
comp=Z,1µm,18.4s,baz=210,slow=40
KS19 Wonju Array Si 14.35 20 Pn Pn **16 02 04.5 -1.3**
HNS HongShan 14.55 337 ⇑P P **16 02 17.1 +2.0**
HNS PP PnPn **16 02 27.3 +11**
HNS *e*S S **16 05 02.4 -6.7**
HNS pmax pmax
comp=Z,23nm,1.1s
HNS LR LR
comp=N,8µm,12.3s
HNS LR LR
comp=E,3µm,12.7s
HNS LR LR
comp=Z,8µm,12.7s
DL2 Dalian 14.75 360 P P **16 02 18.5 +1.2**
DL2 S S **16 05 07.3 -5.9**
DL2 pmax pmax
comp=Z,56nm,1.4s
DL2 pmax pmax
comp=Z,210nm,6.5s
DL2 LR LR
comp=N,4µm,14.1s
DL2 LR LR
comp=E,790nm,10.4s
DL2 LR LR
comp=Z,5µm,13.3s
XAN Xi'an 14.93 314 ⇑P Pn **16 02 14.5 +0.7**
XAN pP P 16 02 19.5 +0.1
XAN S **Sn** **16 05 00.3 +1.2**
XAN pmax pmax
comp=Z,22nm,1.1s
XAN pmax pmax
comp=Z,160nm,3.6s
XAN LR LR
comp=Z,6µm,7.9s
XAN LR LR
comp=Z,12µm,9.6s
XAN LR LR
comp=Z,16µm,8.2s
BJT Baijiatuan 16.54 345 P Pn **16 02 35.8 +1.1**
BJI Beijing 16.56 345 Pn P **16 02 37.2 -0.2**
BJI Sn **S** **16 05 59.6 +9.4**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI pmax pmax
comp=Z,180nm,9.2s
KMI Kunming 17.30 277 ⇓P P **16 02 49.2 +3.2**
KMI S **Sn** **16 05 53.8 -3.2**
KMI pmax pmax
comp=Z,10.0nm,1.1s
KMI pmax pmax
comp=Z,280nm,8.1s
KMI LR LR
comp=Z,2µm,8.6s
KMI LR LR
comp=Z,12µm,9.1s
KMI LR LR
comp=Z,13µm,9.7s
CD2 Chengdu 17.31 297 P P **16 02 45.6 -0.3**
CD2 S **Sn** **16 05 59.8 +2.8**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 LR LR
comp=Z,5µm,9.6s
CD2 LR LR
comp=Z,8µm,8.7s
CD2 LR LR
comp=Z,6µm,10.2s
DAV Davao City (W) 17.34 167 LR LR 16 09 20.4
comp=Z,576nm,19.2s,baz=346,slow=37
SNY Shenyang 17.74 5 ⇑P Pn **16 02 46.5 -3.1**
SNY S **Sn** **16 06 04.7 -2.3**
SNY pmax pmax
comp=Z,10.0nm,0.5s
SNY pmax pmax
comp=Z,240nm,5.5s
SNY LR LR
comp=Z,4µm,12.7s
SNY LR LR
comp=Z,2µm,10.3s
SNY LR LR
comp=Z,7µm,13.1s
PZH PanZhiHua 18.23 282 P P **16 02 57.3 +1.2**
PZH S **Sn** **16 06 20.3 +0.9**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,230nm,5.5s
PZH LR LR
comp=Z,3µm,13.0s
PZH LR LR
comp=Z,4µm,12.0s
PZH LR LR
comp=Z,4µm,13.3s
HHC Hu-ho-hao-te 18.74 335 *e*P Pn **16 03 03.8 +1.7**
HHC sP sP 16 03 07.7 +0.3
HHC PP **PnPn** **16 03 22.4 +8.2**
HHC S **Sn** **16 06 30.4 -1.2**
HHC sS sS 16 06 41.3 +0.6
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,630nm,5.9s
HHC LR LR
comp=Z,4µm,12.7s
HHC LR LR
comp=Z,2µm,13.7s
HHC LR LR
comp=Z,4µm,12.2s
MJAR Matsushiro Arr 18.83 45 P P **16 03 00.8 -1.7**
comp=Z,1.5nm,0.8s,baz=234,slow=9.3,SNR=2.1
BTO Baotou 19.16 332 *e*P Pn **16 03 09.0 +1.9**
BTO pP **sP** **16 03 12.6 +0.9**
BTO sP **pP** **16 03 16.4 +6.3**
BTO PP **PnPn** **16 03 26.3 +6.3**
BTO pmax pmax
comp=Z,25nm,0.9s
BTO pmax pmax
comp=Z,1µm,6.0s
BTO LR LR
comp=Z,12µm,11.4s
BTO LR LR
comp=Z,6µm,14.1s
BTO LR LR
comp=Z,18µm,11.3s
LZH Lanzhou 19.51 312 ⇑P Pn **16 03 13.0 +1.6**
LZH pP sP 16 03 19.6 +4.1
LZH S **S** **16 06 53.1 +2.8**
LZH SS **SnSn** **16 07 12.0 +7.5**
LZH pmax pmax
comp=Z,12nm,1.2s
LZH pmax pmax
comp=Z,670nm,5.5s
LZH LR LR
comp=Z,3µm,12.0s
LZH LR LR
comp=Z,7µm,12.7s
LZH LR LR
comp=Z,9µm,13.4s
CN2 Changchun 19.88 8 *e*P Pn **16 03 15.1 -0.4**
CN2 *es*P sP 16 03 22.0 +2.0
CN2 *e*S **S** **16 06 53.2 -4.1**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=Z,2µm,11.0s
CN2 LR LR
comp=Z,1µm,11.0s
CN2 LR LR
comp=Z,2µm,12.0s
XLT XiLinHaoTe 20.28 348 *e*P P **16 03 18.2 -0.2**
XLT pP pP 16 03 22.2 -0.1
XLT sP sP 16 03 25.3 +1.0
XLT S Sn 16 07 07.4 -1.2
XLT sS pS 16 07 15.1 -1.9
XLT SS **SnSn** **16 07 29.1 +5.8**
XLT PcP **PcP** **16 07 31.7 -0.1**
XLT pmax pmax
comp=Z,24nm,1.2s
XLT pmax pmax
comp=Z,240nm,3.6s
XLT LR LR
comp=Z,290nm,14.5s
XLT LR LR
comp=Z,2µm,11.5s
XLT LR LR
comp=Z,4µm,13.2s
TNCH TengChong 21.13 277 P P **16 03 28.8 +1.0**
TNCH pP pP 16 03 30.7 -1.2
TNCH sP sP 16 03 33.7 -0.2
TNCH PP **PnPn** **16 03 50.7 +3.7**
TNCH S **S** **16 07 15.5 -7.3**
TNCH SS **SnSn** **16 07 49.8 +5.4**
TNCH pmax pmax
comp=Z,16nm,1.0s
TNCH pmax pmax
comp=Z,190nm,4.3s
TNCH LR LR
comp=Z,3µm,8.2s
TNCH LR LR
comp=Z,7µm,9.9s
TNCH LR LR
comp=Z,7µm,9.7s
MDJ Mudanjiang 21.44 15 P P **16 03 31.3 +0.5**
MDJ S **S** **16 07 31.5 +3.2**
MDJ sS pS 16 07 35.4 -0.3
MDJ SS **SnSn** **16 08 03.3 +12**
MDJ pmax pmax
comp=Z,13nm,2.2s
MDJ pmax pmax
comp=Z,580nm,3.8s
MDJ LR LR
comp=Z,2µm,14.0s
MDJ LR LR
comp=Z,3µm,14.9s
MDJ LR LR
comp=Z,4µm,13.1s
USRK Ussuriysk Ar. 21.73 20 P P **16 03 33.1 -0.8**
USRK Ussuriysk Ar. 21.73 20 P P **16 03 32.6 -1.3**
comp=Z,4.9nm,0.8s,baz=198,slow=10,SNR=7.1
USRK LR LR 16 12 50.0
comp=Z,1µm,18.3s,baz=189,slow=39
comp=Z,4.9nm,0.8s
CMAR Chiang Mai Arr 21.95 260 P P **16 03 38.0 +1.4**
comp=Z,0.9nm,0.6s,baz=72,slow=8.9,SNR=6.4
CMAR PcP **PcP** **16 07 35.5 +0.1**
comp=Z,0.7nm,0.6s,baz=47,slow=1.5,SNR=6.6
CMAR LR LR 16 12 31.9
comp=Z,443nm,19.3s,baz=90,slow=38
comp=Z,0.9nm,0.6s
BNX BinXian 22.07 11 ⇓P P **16 03 36.9 -0.6**
BNX pmax pmax
comp=Z,7.0nm,1.1s
BNX pmax pmax
comp=Z,240nm,5.2s
SBUM Sibu 23.41 205 P P **16 03 50.3 -1.5**
SBUM lAmb lAmb 16 03 52.3
comp=Z,46nm,1.8s
MPSI Mapaga 23.70 185 P P **16 03 53.7 -0.9**
comp=Z,13nm,1.4s
GTA Gaotai 23.99 315 *e*P P **16 03 57.7 +0.2**
GTA pP pP 16 04 01.9 +0.5
GTA S **S** **16 08 15.0 +0.9**
GTA sS sS 16 08 24.6 +3.2
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,210nm,6.8s
GTA LR LR
comp=Z,2µm,11.5s
GTA LR LR
comp=Z,4µm,11.6s
GTA LR LR
comp=Z,5µm,11.9s
GUMO Guam 24.23 111 LR LR 16 11 51.7
comp=Z,337nm,21.7s,baz=297,slow=33
LUWI Luwuk 25.02 178 P P **16 04 06.5 -0.3**
comp=Z,68nm,1.0s
HIA Hailar 25.16 357 P **16 04 07.2 -0.7**
GOMU GeErMu 26.12 304 P P **16 04 18.2 +1.1**
GOMU pmax pmax
comp=Z,13nm,1.3s
GOMU LR LR
comp=Z,3µm,14.0s
GOMU LR LR
comp=Z,1µm,13.1s
GOMU LR LR
comp=Z,1µm,14.9s
ASAJ Asahikawa 26.26 35 LR LR 16 14 57.8
comp=Z,466nm,18.7s,baz=239,slow=37
JKA Kamikawa-asahi 26.26 35 P P **16 04 15.7 -2.2**
KLR Kul'dur 26.28 15 LR LR 16 15 35.9
comp=Z,1µm,19.6s,baz=198,slow=39
ULN Ulaanbaatar 26.42 337 P P **16 04 17.1 -2.3**
HEH HeiHe 26.47 8 *e*P P **16 04 22.7 +3.0**
HEH sP **sP** **16 04 28.8 +3.3**
HEH pmax pmax
comp=Z,11nm,1.2s
HEH pmax pmax
comp=Z,480nm,4.5s
HEH LR LR
comp=Z,2µm,14.8s
HEH LR LR
comp=Z,1µm,13.2s
HEH LR LR
comp=Z,4µm,13.5s
SONM Songino Array 26.63 337 P P **16 04 19.1 -2.3**
SONM lAmb lAmb 16 04 35.4
comp=Z,25nm,1.1s
SONM Songino Array 26.63 337 P P **16 04 21.7 +0.3**
comp=Z,6.4nm,0.9s,baz=154,slow=9.3,SNR=23
SONM LR LR 16 16 05.3
comp=Z,3µm,18.0s,baz=153,slow=39
comp=Z,6.4nm,0.9s
FAKI Fak Fak 28.75 158 P P **16 04 39.1 -1.3**
FAKI lAmb lAmb 16 05 15.8
comp=Z,41nm,1.2s
FAKI Fak Fak 28.75 158 P P **16 04 41.3 +0.9**
FAKI Fak Fak 28.75 158 P P **16 04 37.7 -2.7**
comp=Z,28nm,1.0s
EDFI Ende, Flores 32.66 180 P P **16 05 11.6 -3.4**
comp=Z,18nm,0.6s
GMJI Gumukmas 33.19 195 P P **16 05 19.6 +0.1**
comp=Z,26nm,1.2s
SOEI Soe 33.75 175 P P **16 05 25.2 +0.7**
comp=Z,35nm,1.4s
WMQ Urumqi 34.07 314 *e*P P **16 05 28.0 +0.9**
WMQ pP sP 16 05 32.7 -0.1
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ LR LR
comp=Z,2µm,10.7s
WMQ LR LR
comp=Z,3µm,10.3s
WMQ LR LR
comp=Z,930nm,10.9s
YAK Yakutsk 38.29 6 LR LR 16 23 30.4
comp=Z,1µm,18.4s,baz=180,slow=39
MKAR Makanchi Array 38.74 316 P P **16 06 06.0 -0.9**
MKAR Makanchi Array 38.74 316 P P **16 06 06.9 0.0**
comp=Z,6.2nm,0.9s,baz=105,slow=11,SNR=46
MKAR PcP **PcP** **16 08 19.7 +1.3**
comp=Z,0.6nm,0.7s,baz=89,slow=4.2,SNR=2.1
MKAR LR LR 16 23 20.1
comp=Z,1µm,18.0s,baz=136,slow=38
comp=Z,6.2nm,0.9s
MAKZ Makanchi 38.95 316 P P **16 06 07.8 -0.9**
PETK Petropavlovsk- 39.65 34 LR LR 16 23 50.8
comp=Z,791nm,18.2s,baz=227,slow=38
KNRA Kununurra 40.13 169 P P **16 06 19.4 +0.7**
ZALV Zalesovo Beam 40.58 327 P P **16 06 20.7 -1.4**
ZALV Zalesovo Beam 40.58 327 P P **16 06 21.1 -0.9**
comp=Z,5.4nm,0.7s,baz=117,slow=8.5,SNR=25
ZALV LR LR 16 24 30.4
comp=Z,491nm,21.7s,baz=126,slow=38
comp=Z,5.4nm,0.7s
MA2 Magadan 40.87 22 LR LR 16 25 07.8
comp=Z,633nm,18.1s,baz=222,slow=39
KSH Kashi 41.36 303 P P **16 06 32.2 +3.3**
KSH sP sP 16 06 37.1 +2.5
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH LR LR
comp=Z,1µm,14.4s
KSH LR LR
comp=Z,1µm,14.0s
KSH LR LR
comp=Z,2µm,15.8s
PMG Port Moresby 41.55 140 LR LR 16 23 29.8
comp=Z,240nm,18.4s,baz=303,slow=36
H11N1 WAKE ISLAND Hy 41.99 87 T T 16 51 52.5
baz=275
H11N2 WAKE ISLAND Hy 41.99 87 T T 16 51 52.0
baz=275
H11N3 WAKE ISLAND Hy 42.01 87 T T 16 51 53.1
baz=275
H11S3 WAKE ISLAND Hy 42.12 89 T T 16 52 29.9
baz=275,slow=74
H11S1 WAKE ISLAND Hy 42.13 89 T T 16 52 26.8
baz=275
H11S2 WAKE ISLAND Hy 42.14 89 T T 16 52 25.5
baz=275,slow=74
KURK Kurchatov 42.47 320 P P **16 06 36.4 -1.2**
KURBB Kurchatov Arra 42.49 320 P P **16 06 37.0 -0.8**
comp=Z,3.6nm,1.0s,baz=110,slow=8.5,SNR=15
KURBB PcP **PcP** **16 08 31.4 +1.0**
comp=Z,0.6nm,0.9s,baz=123,slow=3.3,SNR=1.9
KURBB LR LR 16 24 23.7
comp=Z,155nm,19.9s,baz=149,slow=36
comp=Z,3.6nm,1.0s
PALK Pallekele 42.70 254 LR LR 16 25 27.1
comp=Z,292nm,19.7s,baz=158,slow=38
AAK Ala-Archa 42.95 307 P P **16 06 40.4 -1.4**
AAK Ala-Archa 42.95 307 LR LR 16 26 55.5
comp=Z,614nm,18.3s,baz=89,slow=39

COEN Coen 43.25 149 P P 16 06 41.5 -2.7
COEN IAmb IAmb 16 06 54.9
comp=Z,25nm,1.0s
COEN Coen 43.25 149 P P 16 06 44.1 -0.2
SEY Seymchan 43.88 20 LR LR 16 27 06.5
comp=Z,408nm,18.4s,baz=222,slow=39
WB0 Warramunga Arr 45.32 163 P P 16 06 58.1 -2.7
WB0 IAmb IAmb 16 07 23.7
comp=Z,15nm,1.2s
PSA00 Pilbara Seismi 45.44 182 P P 16 07 02.1 +0.4
WRA Warramunga Arr 45.48 163 P P 16 06 59.5 -2.5
comp=Z,3.8nm,0.5s,baz=345,slow=8.7,SNR=25
comp=Z,3.8nm,0.5s
WB2 Warramunga Arr 45.48 163 P P 16 06 57.7 -4.4
WB2 IAmb IAmb 16 07 06.2
comp=Z,9.2nm,0.8s
WR0 Warramunga Arr 45.55 163 IAmb IAmb 16 07 06.3
comp=Z,13nm,0.8s
KBL Kabul 46.65 295 P 16 07 10.3 -1.2
KBL IAmb IAmb 16 07 16.8
comp=Z,12nm,1.1s
QIS Mount Isa 47.69 157 P P 16 07 20.4 +1.0
TIXI Tiksi 47.74 3 P P 16 07 13.2 -6.0
TIXI Tiksi 47.74 3 LR LR 16 29 46.8
comp=Z,1μm,18.6s,baz=199,slow=39
BVAR Borovoye Array 48.05 321 P P 16 07 21.5 -0.4
comp=Z,1.3nm,0.5s,baz=106,slow=9.7,SNR=6.1
BVAR LR LR 16 27 31.2
comp=Z,284nm,20.7s,baz=97,slow=36
comp=Z,1.3nm,0.5s
BRVK Borovoye 48.12 321 P P 16 07 21.1 -1.4
BRVK IAmb IAmb 16 07 39.4
comp=Z,9.6nm,1.1s
SHEM Shemya Is, Ala 48.57 40 LR LR 16 26 58.8
comp=Z,106nm,21.4s,baz=301,slow=35
ASAR Alice Springs 48.94 165 P P 16 07 27.1 -1.9
ASAR Alice Springs 48.94 165 P P 16 07 27.4 -1.6
comp=Z,1.6nm,0.5s,baz=340,slow=7.3,SNR=26
ASAR LR LR 16 29 35.8
comp=Z,93nm,21.3s,baz=2.5,slow=38
comp=Z,1.6nm,0.5s
WRKA Warakurna 49.27 172 P P 16 07 33.2 +1.7
NRIK Noril'sk 49.60 345 P P 16 07 32.5 -1.0
comp=Z,11nm,1.1s,baz=134,slow=10,SNR=5.7
NRIK LR LR 16 29 49.4
comp=Z,595nm,19.8s,baz=144,slow=38
comp=Z,11nm,1.1s
CTA Charters Tower 50.01 149 P P 16 07 36.1 -1.1
comp=Z,8.1nm,1.0s,baz=354,slow=14,SNR=1.8
CTA LR LR 16 26 56.6
comp=Z,333nm,21.5s,baz=333,slow=34
comp=Z,8.1nm,1.0s
HNR Honiara 50.04 127 LR LR 16 27 20.5
comp=Z,2μm,19.3s,baz=309,slow=34
BILL Bilibino 51.59 20 P P 16 07 45.8 -2.8
MORW Morawa 53.15 186 P P 16 08 02.0 +1.4
OOD Oodnadatta 53.33 165 P P 16 08 02.2 +0.3
ABKAR Akbulak array 53.85 314 P P 16 08 03.8 -1.8
FORT Forrest 54.91 173 P P 16 08 12.3 -1.1
FORT Forrest 54.91 173 P P 16 08 14.8 +1.4
AKTO Aktyubinsk 55.18 316 LR LR 16 33 42.7
comp=Z,452nm,19.5s,baz=134,slow=38
GEYT Alibeck 55.27 300 IAmb IAmb 16 08 30.8
comp=Z,12nm,1.1s
GEYT Alibeck 55.27 300 P P 16 08 16.8 +0.7
comp=Z,2.9nm,0.8s,baz=73,slow=13,SNR=8.0
GEYT LR LR 16 34 34.4
comp=Z,422nm,19.4s,baz=96,slow=39
comp=Z,2.9nm,0.8s
GYA0B ALIBECK ARRAY 55.27 300 P P 16 08 14.6 -1.6
GYA0B IAmb IAmb 16 08 31.6
comp=Z,31nm,1.8s
MULG Mulgathing 55.36 167 P P 16 08 17.3 +0.7
ARU Arti 55.47 323 P P 16 08 15.7 -1.5
ARU IAmb IAmb 16 08 31.6
comp=Z,28nm,1.6s
ARU Arti 55.47 323 LR LR 16 32 32.7
comp=Z,420nm,22.0s,baz=92,slow=37
LCRK Leigh Creek 56.50 163 P P 16 08 25.5 +0.7
NWAO Narrogin (SRO) 56.88 185 LR LR 16 33 28.9
comp=Z,52nm,21.0s,baz=28,slow=37
BBOO Buckleboo 58.23 166 P P 16 08 37.1 +0.1
STKA Stephens Creek 58.82 160 P P 16 08 39.4 -1.8
STKA Stephens Creek 58.82 160 P P 16 08 41.8 +0.7
STKA Stephens Creek 58.82 160 P P 16 08 40.2 -1.0
comp=Z,4.6nm,0.6s,baz=337,slow=7.1,SNR=16
STKA LR LR 16 34 47.3
comp=Z,115nm,20.8s,baz=14,slow=37
comp=Z,4.6nm,0.6s
HTT Hallett 59.52 163 P P 16 08 47.4 +1.4
KIRV Kirov 60.57 325 LR LR 16 36 49.7
comp=Z,416nm,21.2s,baz=95,slow=38
F14K Arctic Creek 60.83 27 P P 16 08 53.7 -1.0
baz=264
ANM Nome 61.16 28 P P 16 08 55.7 -1.1
baz=266
C16K Lisburne Hills 61.52 24 P P 16 08 58.6 -0.6
baz=264
F15K North Star Dit 61.55 27 P P 16 08 59.4 -0.1
baz=266
BELG Belogornoye 61.68 318 LR LR 16 40 03.4
comp=Z,231nm,18.2s,baz=102,slow=40
G15K Niukluk 61.76 28 P P 16 09 00.9 0.0
baz=267
M13K Dall Lake 61.92 33 P P 16 09 02.3 +0.2
baz=270
L14K Kuka Creek 62.26 32 P P 16 09 03.0 -1.3
baz=270
D17K Noatak River 62.31 25 P P 16 09 04.7 +0.1
baz=266
C17K DeLong Mountai 62.34 24 P P 16 09 04.2 -0.6
baz=266
G16K Koyuk River 62.48 27 P P 16 09 04.8 -0.9
baz=268
H16K Elim 62.51 28 P P 16 09 05.0 -0.9
baz=268
M14K Bethel 62.61 33 P P 16 09 05.7 -0.9
baz=271
E17K Hotham Inlet 62.77 25 P P 16 09 06.7 -0.9
baz=268
K15K Wolf Creek Mou 62.80 31 P P 16 09 07.8 -0.2
baz=270
B18K Kokolik River 62.90 23 P P 16 09 09.1 +0.6
baz=266
F17K Baldwin Pennin 62.97 26 P P 16 09 08.7 -0.3
baz=268
C18K Utuk River 63.08 24 IAmb IAmb 16 10 17.3
comp=Z,12nm,1.6s
C18K Utukok River 63.08 24 P P 16 09 09.7 0.0
baz=267
I17K Unalakleet 63.17 29 P P 16 09 10.8 +0.5
baz=270
G17K Kiwalik Mounta 63.20 27 P P 16 09 10.5 0.0
baz=269
DZM Mont Dzumac 63.22 133 LR LR 16 31 54.6
comp=Z,281nm,22.0s,baz=323,slow=32
J16K Anvik River 63.22 30 P P 16 09 10.7 0.0
baz=271
M15K Kasigluk River 63.24 33 P P 16 09 11.7 +0.9
baz=272
E18K Tukpahlearik C 63.25 25 P P 16 09 11.0 +0.2
baz=268
H17K Granite Mounta 63.51 28 P P 16 09 12.5 -0.1
baz=270
N15K Kwethluk River 63.55 33 P P 16 09 13.3 +0.4
baz=273
F18K Selawik 63.61 26 P P 16 09 13.3 +0.1
baz=270
C19K Lookout Ridge 63.67 23 P P 16 09 13.9 +0.2
baz=269
O15K Ungalikthiuk R 63.74 34 P P 16 09 13.7 -0.4
baz=273
L16K Owhat River 63.79 31 P P 16 09 14.9 +0.4
baz=272
G18K Tagagawik 64.02 27 P P 16 09 15.7 -0.2
baz=271
M16K Timber Creek 64.07 32 P P 16 09 15.8 -0.5
baz=273
H18K Honhosa River 64.16 28 P P 16 09 16.3 -0.6
baz=272
D19K Kuna River 64.20 24 P P 16 09 16.7 -0.5
baz=270
K17K Iditarod 64.29 30 P P 16 09 17.7 -0.1
baz=273
L17K Donlin 64.32 31 P P 16 09 18.5 +0.5
baz=273
F19K Shaleruckik Mo 64.36 26 P P 16 09 17.8 -0.3
baz=271
B20K Meade River 64.53 22 P P 16 09 19.4 +0.2
baz=270
E19K Redstone River 64.55 25 P P 16 09 19.5 +0.1
baz=272
G19K Purcell Mounta 64.66 26 P P 16 09 20.7 +0.6
baz=272
A21K Barrow 64.70 21 P P 16 09 20.5 +0.2
baz=270
D20K Etivluk River 64.75 24 P P 16 09 20.8 +0.1
baz=272
M17K Holitna River 64.78 32 P P 16 09 19.7 -1.2
baz=274
E20K Nigu River 64.92 24 P P 16 09 20.6 -1.3
baz=272,SNR=9.1
J18K Innoko River 64.96 29 P P 16 09 21.5 -0.6
baz=274
N17K Nushagak Hills 64.97 33 P P 16 09 22.4 +0.1
baz=275
L18K Granite Mounta 65.07 31 P P 16 09 21.5 -1.3
baz=275
F20K Avaraart Lake 65.16 25 P P 16 09 22.4 -0.9
baz=273
GNI Garni 65.26 305 LR LR 16 41 43.6
comp=Z,160nm,20.5s,baz=83,slow=40
TOO Toolangi 65.30 159 P P 16 09 26.4 +1.8
TTA Tatalina 65.32 30 P P 16 09 23.9 -0.7
TTA IAmb IAmb 16 09 29.6
comp=Z,10nm,1.1s
TTA Tatalina 65.32 30 P P 16 09 24.2 -0.4
baz=275
C21K Knifeblade Rid 65.39 23 P P 16 09 24.1 -0.8
baz=273
J19K Poorman 65.41 29 P P 16 09 24.5 -0.5
baz=275
B21K Ikpikpuk River 65.43 23 P P 16 09 25.1 +0.1
baz=273
M18K Stony River 65.54 32 P P 16 09 25.9 0.0
baz=276
N18K Kilae Creek 65.59 32 P P 16 09 26.2 -0.1
baz=276
H20K Anotleneega Mo 65.60 27 P P 16 09 26.1 -0.2
baz=275
ONI Oni 65.73 308 P 16 09 26.3 -1.3
B22K Teshekpuk Lake 65.80 22 P P 16 09 27.1 -0.2
baz=274
I20K Naaghedeneel 65.83 28 P P 16 09 27.8 +0.1
baz=275
KBZ Khabaz 65.92 309 P P 16 09 28.7 0.0
comp=Z,3.0nm,0.9s,baz=63,slow=4.5,SNR=3.2
KBZ LR LR 16 41 36.4
comp=Z,187nm,18.0s,baz=74,slow=39
comp=Z,3.0nm,0.9s
L19K White Mountain 65.93 31 P P 16 09 27.7 -0.8
L19K IAmb IAmb 16 09 33.8
comp=Z,14nm,1.1s
L19K White Mountain 65.93 31 P P 16 09 28.7 +0.2
baz=276
F21K Alatna River 66.02 25 P P 16 09 28.8 -0.2
baz=275
O18K Koktuh Hills 66.02 33 P P 16 09 28.9 -0.2
baz=277
J20K Nowinta River 66.04 28 P P 16 09 28.6 -0.4
baz=276
G21K Allakaket 66.07 26 P P 16 09 28.9 -0.4
baz=275
K20K Telida 66.16 29 P P 16 09 30.3 +0.4
baz=276
D22K Ayikyak River 66.17 23 P P 16 09 28.9 -1.0
D22K Ayikyak River 66.17 23 P P 16 09 28.7 -1.2
baz=275,SNR=14
M19K Big River Lodg 66.18 31 P P 16 09 29.2 -0.8
baz=277
N19K Bonanza Creek 66.26 32 P P 16 09 30.4 -0.3
baz=277
L20K Farewell, AK 66.35 30 P P 16 09 32.0 +0.8
baz=277
H21K Melozitna Rive 66.45 27 P P 16 09 32.1 +0.4
baz=276
E22K Anaktuvuk Pass 66.56 24 P P 16 09 32.0 -0.5
baz=276
M20K Styx River 66.77 31 P P 16 09 34.2 +0.2
baz=278
G22K Bettles 66.82 25 P P 16 09 33.3 -0.7
baz=277
H22K Ishtalitna Cre 67.00 26 P P 16 09 34.8 -0.5
baz=278
CAST Castle Rocks 67.04 29 P P 16 09 36.9 +1.3
baz=278
PPLA Purkeypile 67.06 30 P P 16 09 35.2 -0.7
baz=278
N20K Mount Spurr 67.31 32 P P 16 09 37.6 +0.2
baz=273
E23K Chandalar 67.39 24 P P 16 09 37.2 -0.5
baz=278
MLY Manley 67.39 27 P P 16 09 37.1 -0.6
baz=278,SNR=13
BPAW Bear Paw Mtn. 67.42 28 IAmb IAmb 16 09 42.9
comp=Z,6.8nm,0.8s
BPAW Bear Paw Mtn. 67.42 28 P P 16 09 36.8 -1.2
baz=279
G23K Bananza Creek 67.43 25 IAmb IAmb 16 09 50.3
comp=Z,6.5nm,1.0s
G23K Bananza Creek 67.43 25 P P 16 09 37.4 -0.6
baz=278,SNR=6.1
C24K Franklin Bluff 67.47 22 P P 16 09 37.1 -1.0
baz=278
SKT Skwentna 67.50 31 P P 16 09 38.3 -0.2
baz=279
D24K Happy Valley 67.52 23 IAmb IAmb 16 09 50.1
comp=Z,11nm,0.9s
D24K Happy Valley 67.52 23 P P 16 09 37.5 -0.9
baz=278,SNR=5.3
KTH Kantishna Hill 67.53 29 IAmb IAmb 16 10 13.8
comp=Z,16nm,1.4s
KDAK Kodiak Island 67.68 35 LR LR 16 37 36.1
comp=Z,72nm,21.9s,baz=298,slow=35
E24K Your Creek 67.81 24 P P 16 09 39.9 -0.5
baz=279
OBN Obninsk 67.87 322 LR LR 16 41 50.1
comp=Z,458nm,18.6s,baz=9.0,slow=38
I23K Minto, Yukon-K 67.95 27 IAmb IAmb 16 09 47.5
comp=Z,19nm,1.4s
SUA Susitna One 67.96 31 P P 16 09 41.0 -0.5
baz=280
F24K Squaw Lake 68.12 24 P P 16 09 42.7 +0.4
baz=280
NEA2 Nenana 68.16 28 IAmb IAmb 16 09 47.7
comp=Z,16nm,1.2s
NEA2 Nenana 68.16 28 P P 16 09 42.0 -0.6
baz=280
D25K Kavik River 68.35 22 P P 16 09 43.2 -0.5
baz=281
MCK McKinley 68.38 29 P P 16 09 43.4 -0.6
baz=281
G24K Hadweenzic Riv 68.43 25 P P 16 09 44.2 -0.1
baz=281
H24K Bodor Dome 68.43 26 P P 16 09 44.5 +0.2
baz=281
RC01 Rabbit Creek A 68.51 31 P P 16 09 44.8 +0.1
baz=281
WAT1 Susitna Watana 68.72 30 P P 16 09 46.4 +0.3
baz=281
POKR Poker Plat Res 68.75 27 IAmb IAmb 16 09 53.4
comp=Z,13nm,1.1s
POKR Poker Plat Res 68.75 27 P P 16 09 46.3 0.0
baz=281
SEW Seward 68.84 32 P P 16 09 47.2 +0.4
baz=282
RAYN Ar Rayn 68.85 287 P P 16 09 45.7 -2.0
RAYN IAmb IAmb 16 09 59.5
comp=Z,8.7nm,1.1s
E25K Arctic Village 68.87 24 P P 16 09 47.4 +0.4
baz=282
G25K Bearman Lake 68.95 25 P P 16 09 47.9 +0.5
baz=282
F25K Christian Rive 68.95 24 P P 16 09 47.6 +0.1
baz=282
SML Sawmill 69.03 31 P P 16 09 48.1 0.0
baz=282
KNK Knik Glacier 69.05 31 P P 16 09 46.4 -1.8
KNK IAmb IAmb 16 09 52.4
comp=Z,14nm,1.0s
KNK Knik Glacier 69.05 31 P P 16 09 48.1 -0.1
baz=282
ILAR Eielson Array 69.05 27 P P 16 09 46.4 -1.7
comp=Z,0.9nm,0.5s,baz=270,slow=5.0,SNR=16
ILAR LR LR 16 43 38.2
comp=Z,147nm,18.5s,baz=263,slow=39
comp=Z,0.9nm,0.5s
HDA Harding Lake 69.10 28 IAmb IAmb 16 09 51.6
comp=Z,9.3nm,1.1s
HDA Harding Lake 69.10 28 P P 16 09 48.0 -0.5
baz=282
WAT6 Susitna Watana 69.14 30 P P 16 09 49.0 +0.1
baz=282
DHY Denali Highway 69.20 29 IAmb IAmb 16 09 52.1
comp=Z,20nm,1.6s
DHY Denali Highway 69.20 29 P P 16 09 48.9 -0.3
baz=282
M23K Glacier View 69.31 31 P P 16 09 49.6 -0.2
baz=282
PRP Porcupine Dome 69.45 26 P P 16 09 50.5 -0.3
baz=283
SCM Sheep Creek Mo 69.49 30 P P 16 09 51.2 +0.2
baz=283
SPITS Spitsbergen Ar 69.66 348 LR LR 16 44 20.5
comp=Z,835nm,18.3s,baz=23,slow=39
J25K Salcha River, 69.72 27 P P 16 09 51.7 -0.7
baz=283
K24K Donnelly Dome 69.73 28 P P 16 09 52.2 -0.2
baz=283
ARCES ARCESS Array B 69.80 338 LR LR 16 45 48.3
comp=Z,178nm,19.2s,baz=128,slow=40
P23K Montague Islan 69.86 32 P P 16 09 52.6 -0.6
baz=283
M24K Tolsona, Glenn 69.95 30 P P 16 09 54.6 +0.7
baz=284
PAX Paxson 70.07 29 P P 16 09 54.8 +0.2
baz=284
RIDG Independent Ri 70.15 28 IAmb IAmb 16 09 59.2
comp=Z,18nm,1.2s
RIDG Independent Ri 70.15 28 P P 16 09 54.3 -0.7
baz=284
KLU Klutina 70.22 31 IAmb IAmb 16 10 23.6
comp=Z,24nm,1.5s
KLU Klutina 70.22 31 P P 16 09 54.7 -0.7
baz=284
D27M Malcolm River 70.24 22 P P 16 09 55.2 -0.3
baz=286
SCRK Sand Creek 70.46 28 P P 16 09 55.3 -1.7
SCRK Sand Creek 70.46 28 P P 16 09 55.5 -1.5
baz=285,SNR=9.8
J26L Joseph Creek 70.51 27 P P 16 09 56.2 -1.0
baz=285
EYAK Cordova Ski Ar 70.53 32 P P 16 09 56.1 -1.1
baz=284
N25K Chitina, Valde 70.80 30 P P 16 09 58.0 -1.1
baz=285
H27K Steamboat Moun 70.86 25 P P 16 09 58.7 -0.6
baz=286
E28M Babbage River 70.92 23 P P 16 09 59.6 +0.1
baz=287
L26K Log Cabin Wild 70.99 29 P P 16 09 59.9 -0.2
baz=286
I27K Kandik River 71.00 26 P P 16 10 00.0 -0.1
baz=286
F28M Old Crow 71.09 24 IAmb IAmb 16 10 09.7
comp=Z,6.6nm,0.8s
F28M Old Crow 71.09 24 P P 16 10 00.6 -0.1
baz=287
GLB Gilahina Butte 71.21 30 IAmb IAmb 16 10 05.9
comp=Z,18nm,1.2s
K27K Chicken 71.26 28 P P 16 10 02.5 +0.8
baz=286
M26K Nabesna, AK 71.32 29 IAmb IAmb 16 10 08.7
comp=Z,14nm,0.9s
M26K Nabesna, AK 71.32 29 P P 16 10 01.3 -0.9
baz=286,SNR=8.9
EGAK Eagle 71.42 27 IAmb IAmb 16 10 06.5
comp=Z,11nm,1.0s
EGAK Eagle 71.42 27 P P 16 10 01.9 -0.7
baz=287,SNR=8.4
VRDI Verde Repeater 71.44 31 P P 16 10 01.7 -1.3
VRDI IAmb IAmb 16 10 09.2
comp=Z,9.3nm,0.9s
E29M Blow River 71.56 23 P P 16 10 02.7 -0.7
baz=289
MCARA McCarthy VSAT 71.59 30 P P 16 10 03.5 -0.3
baz=286
L27K Beaver Creek, 71.64 28 P P 16 10 04.3 +0.2
baz=287
I28M Miner Creek 71.72 26 P P 16 10 04.6 +0.1
baz=288
FINES FINESS Array B 71.76 330 P P 16 10 03.9 -0.8
comp=Z,5.4nm,0.9s,baz=34,slow=2.7,SNR=9.4
FINES LR LR 16 44 26.7
comp=Z,884nm,19.6s,baz=61,slow=38
comp=Z,5.4nm,0.9s
M27K Edge Creek, AK 71.83 29 P P 16 10 04.9 -0.4
baz=287
H29M Whitestone 72.09 25 P P 16 10 06.7 +0.1
baz=289
DAWY Dawson 72.37 27 IAmb IAmb 16 10 13.1
comp=Z,20nm,1.3s
DAWY Dawson 72.37 27 P P 16 10 07.6 -0.8
baz=289,SNR=7.0
CTG Chitna Glacier 72.50 31 P P 16 10 09.4 +0.1
baz=288
CTGM Chitina Glacie 72.50 31 IAmb IAmb 16 10 16.1
comp=Z,9.0nm,0.8s
F30M Barrier River 72.57 23 P P 16 10 09.3 -0.2
baz=291
G30M tAoh Zraii Nji 72.64 24 P P 16 10 09.3 -0.7
baz=291
YUK3 Moose Creek 72.64 30 P P 16 10 09.1 -1.2
baz=288
EPYK Eagle Plains 72.66 24 IAmb IAmb 16 10 18.1
comp=Z,9.6nm,1.1s
EPYK Eagle Plains 72.66 24 P P 16 10 09.6 -0.5
baz=290
J29N Klondike Camp 72.73 27 IAmb IAmb 16 10 07.3
comp=Z,30nm,0.3s
INK Inuvik 73.11 22 P P 16 10 12.1 -0.5
baz=293
INK Inuvik 73.11 22 LR LR 16 45 19.5
comp=Z,134nm,18.6s,baz=1.0,slow=38
I30M Mount Dempster 73.20 26 IAmb IAmb 16 10 17.4
comp=Z,9.7nm,1.1s
I30M Mount Dempster 73.20 26 P P 16 10 12.6 -0.8
baz=291
L29M L29M 73.22 28 P P 16 10 12.9 -0.6
baz=290
K29M Barlow Dome 73.23 27 P P 16 10 13.1 -0.5
baz=290
AKASG Malin Array Be 73.26 318 P P 16 10 12.5 -1.3
comp=Z,0.5nm,0.5s,baz=62,slow=4.9,SNR=6.1
AKASG LR LR 16 46 04.4
comp=Z,293nm,19.1s,baz=68,slow=39
comp=Z,0.5nm,0.5s
PINM Pinnacle 73.28 31 P P 16 10 13.8 -0.1
baz=289
M29M Somme Creek 73.31 29 P P 16 10 13.7 -0.4
baz=290
F31M Tsiigehtchic 73.36 23 P P 16 10 13.6 -0.5
baz=293
G31M Satah River 73.37 24 P P 16 10 13.1 -1.0
baz=292
ASF Jabal al Asfar 73.44 298 LR LR 16 47 49.5
comp=Z,129nm,18.9s,baz=302,slow=40
J30M Hart River 73.45 26 P P 16 10 14.1 -0.8
baz=291
YUK4 Talbot Arm 73.61 30 P P 16 10 15.5 -0.5
baz=290,SNR=5.3
BRTR Keskin Array B 73.62 307 P P 16 10 14.5 -1.9
BRTR Keskin Array B 73.62 307 P P 16 10 16.3 -0.1
comp=Z,1.5nm,0.6s,baz=104,slow=4.0,SNR=6.2
BRTR LR LR 16 45 55.5
comp=Z,172nm,21.6s,baz=79,slow=38
comp=Z,1.5nm,0.6s
M30M Minto, Yukon 73.99 28 P P 16 10 18.3 +0.3
baz=291,SNR=8.9
O29M Mount Kennedy 74.00 31 P P 16 10 18.4 +0.2
baz=290
HYT Haines Junctio 74.31 30 P P 16 10 18.8 -1.2
HYT IAmb IAmb 16 10 24.9
comp=Z,19nm,1.3s
HYT Haines Junctio 74.31 30 P P 16 10 19.7 -0.3
baz=291
MMAI Mount Meron Ar 74.37 299 P P 16 10 21.0 +0.2
comp=Z,0.3nm,0.3s,baz=82,slow=10,SNR=1.9
MMAI LR LR 16 48 26.4
comp=Z,111nm,18.3s,baz=31,slow=40
comp=Z,0.3nm,0.3s
P29M Windy Craggy 74.63 31 P P 16 10 22.0 +0.2
baz=291
P30M Million Dollar 74.82 31 P P 16 10 22.6 -0.3

baz=292
N31M Braeburn, Yuko 74.84 29 IAmb IAmb 16 10 46.0
comp=Z,10nm,1.0s
N31M Braeburn, Yuko 74.84 29 P **P** **16 10 23.4 +0.5**
baz=292
O30N Mendenhall 74.97 30 IAmb IAmb 16 10 42.6
comp=Z,10nm,1.1s
O30N Mendenhall 74.97 30 P **P** **16 10 23.4 -0.4**
baz=292
M31M Drury Creek, Y 75.17 28 P **P** **16 10 24.0 -0.9**
baz=293
PLBC Pleasant Camp 75.35 31 P **P** **16 10 25.0 -0.8**
baz=292
WHY Whitehorse 75.56 30 P **P** **16 10 26.8 -0.5**
baz=293
FARO Faro, Yukon 75.60 28 IAmb IAmb 16 10 30.7
comp=Z,20nm,1.5s
FARO Faro, Yukon 75.60 28 P **P** **16 10 27.5 +0.2**
baz=294
SUW Suwalki 75.66 323 P **P** **16 10 26.7 -1.0**
C36M Paulatuk 75.71 20 IAmb IAmb 16 10 32.3
comp=Z,10nm,1.1s
C36M Paulatuk 75.71 20 P **P** **16 10 27.6 -0.1**
baz=301
EIL Elat 75.83 296 LR LR 16 46 08.3
comp=Z,137nm,18.1s,baz=102,slow=38
N32M Quiet Lake 76.17 29 P **P** **16 10 30.5 -0.1**
baz=295
P32M Atlin 76.53 30 P **P** **16 10 32.3 -0.4**
baz=295
P33M Teslin, Yukon 76.68 30 P **P** **16 10 33.4 -0.2**
baz=295
MLR Muntele Rosu 77.06 314 LR LR 16 48 24.0
comp=Z,293nm,19.4s,baz=46,slow=39
Q32M Nakina River 77.47 31 P **P** **16 10 38.1 -0.1**
baz=296
HFS Hagfors 77.88 331 P **P** **16 10 40.8 +0.6**
comp=Z,2.1nm,0.7s,baz=69,slow=7.9,SNR=2.2
HFS LR LR 16 48 06.9
comp=Z,977nm,19.0s,baz=62,slow=38
comp=Z,2.1nm,0.7s
R33M Jennings River 77.88 30 P **P** **16 10 40.4 0.0**
baz=297
S34M Telegraph Cree 78.48 31 P **P** **16 10 43.8 +0.3**
baz=297
NB2 NORSAR Subarra 78.52 332 P **P** **16 10 43.2 -0.6**
comp=Z,5.1nm,0.8s,baz=61,slow=5.6
NOA NORSAR Array B 78.52 332 P **P** **16 10 43.8 0.0**
comp=Z,1.4nm,0.7s,baz=57,slow=5.5,SNR=3.3
NOA LR LR 16 48 39.3
comp=Z,734nm,18.2s,baz=60,slow=38
comp=Z,1.4nm,0.7s
CRVS Cervenica-Dubn 78.60 319 *e*P **P** **16 10 47.5 +3.1**
RAO Raoul Island 78.61 129 LR LR 16 39 27.5
comp=Z,123nm,19.0s,baz=337,slow=31
RES Resolute Bay 78.66 9 LR LR 16 49 53.7
comp=Z,165nm,18.6s,baz=6.0,slow=39
DLBC Dease Lake 78.75 31 IAmb IAmb 16 10 50.0
comp=Z,18nm,1.4s
DLBC Dease Lake 78.75 31 P **P** **16 10 45.1 -0.1**
baz=298
DLBC Dease Lake 78.75 31 LR LR 16 46 18.1
comp=Z,143nm,20.6s,baz=305,slow=36
JMIC Jan Mayen 79.03 345 LR LR 16 50 40.9
comp=Z,277nm,18.2s,baz=81,slow=40
URZ Urewera 80.90 139 LR LR 16 42 50.4
comp=Z,103nm,21.0s,baz=120,slow=33
RPZ Rata Peaks 81.25 146 LR LR 16 44 55.0
comp=Z,59nm,20.7s,baz=329,slow=34
VRAC Vranov 81.32 320 LR LR 16 50 51.8
comp=Z,278nm,19.2s,baz=50,slow=38
CLL Collm 82.41 323 *e*P **P** **16 11 06.0 +1.2**
CLL *e*PP **PP** **16 14 15.0 +1.7**
YKA Yellowknife Ar 82.84 23 P **P** **16 11 05.7 -1.2**
comp=Z,1.9nm,0.7s,baz=313,slow=5.1,SNR=30
YKA LR LR 16 51 19.0
comp=Z,166nm,18.4s,baz=338,slow=38
comp=Z,1.9nm,0.7s
GERES GERESS Array B 83.22 321 P **P** **16 11 09.4 +0.2**
comp=Z,0.8nm,0.7s,baz=60,slow=10,SNR=2.2
GERES LR LR 16 51 22.9
comp=Z,279nm,18.1s,baz=54,slow=38
comp=Z,0.8nm,0.7s
DAVOX Davos/Dischmat 86.48 320 LR LR 16 55 16.2
comp=Z,297nm,18.5s,baz=37,slow=39
BORG Borgarnes 86.93 345 LR LR 16 53 03.5
comp=Z,275nm,20.0s,baz=25,slow=38
RAR Rarotonga 88.63 114 LR LR 16 43 50.4
comp=Z,60nm,21.1s,baz=262,slow=31
SFJD Kangerlussuaq 88.99 357 LR LR 16 54 36.0
comp=Z,155nm,18.1s,baz=350,slow=38
NEW Newport 90.78 35 P **P** **16 11 45.9 -0.1**
baz=309
I07A Izee 92.02 39 IAmb IAmb 16 11 56.3
comp=Z,9.2nm,1.4s
FRB Frobisher Bay 92.07 5 LR LR 16 56 09.2
comp=Z,198nm,20.3s,baz=7.5,slow=38
J08A Circle Bar Ran 93.06 39 IAmb IAmb 16 12 01.0
comp=Z,8.9nm,1.3s
EGMT Eagleton 94.64 32 P **P** **16 12 02.8 -1.0**
baz=314
HLID Hailey 95.23 37 P **P** **16 12 07.1 +0.4**
baz=310
BOZ Bozeman (W) 95.37 34 P **P** **16 12 05.8 -1.6**
baz=313
PPT Papeete 95.85 107 LR LR 16 45 51.6
comp=Z,123nm,20.5s,baz=302,slow=30
NVAR Mina Array Bea 96.14 43 P **P** **16 12 10.4 -0.7**
comp=Z,0.5nm,0.6s,baz=304,slow=4.9,SNR=1.5
comp=Z,0.5nm,0.6s
ULM Lac du Bonnet 98.82 23 LR LR 17 00 15.2
comp=Z,99nm,18.1s,baz=4.5,slow=37
ELIB Princess Elisa 115.31 200 *d*PKiKP **PKPdf** **16 17 23.7 +0.1**
SDV Santo Domingo 145.05 22 **PKPbc** **16 18 18.5 -2.0**
BAUV El Baul 145.79 17 PKPdf **PKPdf** **16 18 20.3 -2.0**

*IDC **05** 16:07:08.9±5.5, 19°.48S×175°.48W, h150km±48km, mb4.2/14, mbtmp4.6/15, Error ellipse: s-maj=20.2km s-min=16.0km az=143.0*
*NEIC **05** 16:07:08.6±2.0, 19°.38S±0°.10×175°.39W±0°.08, h139km±7km, mb4.6/170, Error ellipse: s-maj=14.0km s-min=10.9km az=186.0*
*BGR **05** 16:07:08.4, 19°.44S×174°.48W, h149km±4km*
*NOU **05** 16:07:12.4, 19°.14S×175°.01W, h212km, mb4.6/40, Tonga Islands*

ISC 05 16:07:08.5±0.5, 19°62S±0°06×175°33W±0°06, h150km±4km, h150km:pP-P, n503, σ1§34/452, mb4.6/100, 12C-22D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.12**	**85**			**Pn**	**16 08 25.1**	**+1.5**
NIUE	**Niue**	**5.12**	**85**	P		**Pn**	**16 08 25.6**	**+2.1**
TAVE	**Taveuni**	**5.23**	**303**	P		Pn	16 08 29.9	+4.9
DGTI	**Dogotuki**	**5.74**	**304**	P		Pn	16 08 35.6	+3.8
AFI	**Afiamalu**	**6.62**	**31**			**Pn**	**16 08 39.1**	**-4.5**
AFI	**Afiamalu**	**6.62**	**31**	P		**Pn**	**16 08 40.3**	**-3.2**
GLKZ	**Green Lake**	**9.89**	**193**	P		**Pn**	**16 09 27.5**	**+0.6**
GLKZ				S		**Sn**	**16 11 10.7**	**-5.7**
RAR	**Rarotonga**	**14.67**	**99**			**P**	**16 10 31.9**	**+0.9**
RAR	**Rarotonga**	**14.67**	**99**	P		P	16 10 36.8	+5.8
RAR	13nm,0.5s,baz=250,slow=8.9,SNR=8.6			S		**Sn**	**16 13 11.6**	**0.0**
	6.3nm,0.4s,baz=167,slow=20,SNR=1.2							
PINNC	**Pines Island,**	**16.35**	**256**	P		**P**	**16 10 55.1**	**+5.4**
YATNC	**Mamie plateau,**	**16.80**	**259**	P		**Pn**	**16 10 58.5**	**+3.5**
OUENC	**Ouen Island, N**	**16.88**	**257**	P		**Pn**	**16 10 59.6**	**+3.6**
DZM	**Mont Dzumac**	**17.21**	**259**	Pn		**Pn**	**16 11 03.6**	**+3.5**
DZM				IAmb		IAmb	16 11 05.3	
	comp=Z,27nm,0.6s							
DZM	**Mont Dzumac**	**17.21**	**259**	P		**Pn**	**16 11 04.3**	**+4.2**
DZM	**Mont Dzumac**	**17.21**	**259**	P		**Pn**	**16 11 04.0**	**+3.9**
	comp=Z,26nm,0.6s,baz=76,slow=18,SNR=36							
NOUC	**Port Laguerre**	**17.35**	**259**	P		**Pn**	**16 11 04.6**	**+3.0**
MXZ	**Matakaoa Point**	**18.72**	**196**	P		**Pn**	**16 11 19.7**	**+2.0**
MXZ	**Matakaoa Point**	**18.72**	**196**	P		**Pn**	**16 11 21.3**	**+3.6**
MXZ	**Matakaoa Point**	**18.72**	**196**	P		**Pn**	**16 11 20.3**	**+2.7**
MXZ				S		**S**	**16 14 37.3**	**-3.5**
KUZ	**Kuaotunu**	**18.78**	**203**	P		**Pn**	**16 11 22.2**	**+3.8**
WMGZ	**Waiomatatini S**	**18.94**	**195**	P		**Pn**	**16 11 21.0**	**+0.8**
WMGZ				T		T	16 14 36.3	
HAZ	**Te Kaha**	**19.04**	**197**	P		**Pn**	**16 11 23.4**	**+2.0**
HAZ				S		**S**	**16 14 43.2**	**-4.0**
PKGZ	**Pakihiroa**	**19.09**	**196**	P		**Pn**	**16 11 23.8**	**+1.8**
PKGZ				T		T	16 14 37.7	
KOUNC	**Koumac, New Ca**	**19.17**	**264**	P		**Pn**	**16 11 24.0**	**+0.9**
RUGZ	**Raukumara Rang**	**19.27**	**197**	P		**Pn**	**16 11 25.9**	**+1.7**
RUGZ				T		T	16 14 43.4	
TWGZ	**Tauwhareparae**	**19.39**	**196**	P		**Pn**	**16 11 27.9**	**+2.4**
TWGZ				S		**S**	**16 14 47.0**	**-7.0**
OPRZ	**Ohinepanea**	**19.49**	**200**	P		**Pn**	**16 11 28.1**	**+1.4**
CNGZ	**Carnagh Statio**	**19.62**	**195**	P		**Pn**	**16 11 29.9**	**+1.8**
CNGZ				S		**S**	**16 14 52.4**	**-6.1**
MWZ	**Matawai**	**19.66**	**197**	P		**P**	**16 11 28.3**	**+2.6**
MWZ				T		T	16 14 51.0	
TKGZ	**Te Karaka**	**19.67**	**196**	P		**Pn**	**16 11 30.6**	**+1.9**
TKGZ				T		T	16 14 52.5	
URZ	**Urewera**	**19.70**	**198**	P		**Pn**	**16 11 30.0**	**+0.9**
URZ	**Urewera**	**19.70**	**198**	P		**P**	**16 11 27.6**	**+1.4**
	comp=Z,30nm,0.3s,baz=57,slow=3.0,SNR=50							
URZ				S		**S**	**16 14 55.7**	**-4.4**
	comp=Z,7.0nm,0.7s,baz=344,slow=19,SNR=2.7							
URZ	**Urewera**	**19.70**	**198**	P		**P**	**16 11 27.8**	**+1.7**
URZ				T		T	16 14 58.3	
TOZ	**Tahuroa Road**	**19.74**	**202**	P		**Pn**	**16 11 30.6**	**+1.0**
OMRZ	**Omania**	**19.79**	**200**	P		**Pn**	**16 11 31.9**	**+1.7**
RAGZ	**Rawiri**	**19.84**	**197**	P		**Pn**	**16 11 31.2**	**+0.3**
RTZ	**Ruatahuna**	**20.07**	**198**	P		**P**	**16 11 31.3**	**+1.1**
RTZ				IAmb		IAmb	16 11 42.6	
	comp=Z,24nm,0.8s							
HIZ	**Hauiti**	**20.66**	**202**	P		Pn	16 11 41.8	+1.2
BKZ	**Black Stump Fm**	**20.72**	**198**	P		**P**	**16 11 37.7**	**+0.5**
BKZ	**Black Stump Fm**	**20.72**	**198**	P		**P**	**16 11 40.6**	**+3.5**
QRZ	**Quartz Range**	**23.55**	**204**	P		**P**	**16 12 08.2**	**+3.0**
QRZ	**Quartz Range**	**23.55**	**204**	P		**P**	**16 12 09.6**	**+4.4**
INZ	**Inchbonnie**	**25.60**	**203**	P		**P**	**16 12 26.2**	**+2.5**
RPZ	**Rata Peaks**	**26.60**	**202**	P		**P**	**16 12 36.5**	**+3.7**
JCZ	**Jackson Bay**	**27.77**	**205**	P		**P**	**16 12 44.9**	**+1.6**
EIDS	**Eidsvold**	**31.51**	**253**	P		**P**	**16 13 16.8**	**+0.3**
ARMA	**Armidale**	**31.71**	**244**	P		**P**	**16 13 19.7**	**+1.4**
ARMA				IAmb		IAmb	16 14 03.2	
	comp=Z,11nm,1.2s							
ARMA	**Armidale**	**31.71**	**244**	P		**P**	**16 13 21.6**	**+3.3**
CNB	**Canberra Magne**	**34.80**	**236**	P		**P**	**16 13 46.5**	**+1.5**
TV1H	**Townsville Har**	**35.67**	**264**	P		**P**	**16 13 53.4**	**+0.9**
CTAO	**Charters Tower**	**36.09**	**263**	P		**P**	**16 13 56.2**	**+0.1**
CTAO	**Charters Tower**	**36.09**	**263**	P		**P**	**16 13 56.6**	**+0.5**
CMSA	**Cobar Meteorol**	**36.93**	**243**	P		**P**	**16 14 05.1**	**+2.0**
MTSU	**Mount Surprise**	**38.16**	**265**	P		**P**	**16 14 14.0**	**+0.4**
TOO	**Toolangi**	**38.44**	**234**	P		**P**	**16 14 16.3**	**+0.6**
TOO				IAmb		IAmb	16 14 43.9	
	comp=Z,14nm,1.4s							
TOO	**Toolangi**	**38.44**	**234**	P		**P**	**16 14 18.7**	**+2.9**
COEN	**Coen**	**40.05**	**271**	P		**P**	**16 14 28.9**	**-0.4**
COEN				IAmb		IAmb	16 15 11.1	
	comp=Z,26nm,1.4s							
COEN	**Coen**	**40.05**	**271**	P		**P**	**16 14 29.6**	**+0.2**
STKA	**Stephens Creek**	**40.43**	**244**	P		**P**	**16 14 33.3**	**+1.0**
STKA	**Stephens Creek**	**40.43**	**244**	P		**P**	**16 14 33.4**	**+1.1**
STKA	**Stephens Creek**	**40.43**	**244**	P		**P**	**16 14 32.1**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=102,slow=8.5,SNR=6.3							
	comp=Z,3.2nm,0.9s							
QIS	**Mount Isa**	**42.24**	**261**	P		**P**	**16 14 47.8**	**+0.6**
HTT	**Hallett**	**42.86**	**242**	P		**P**	**16 14 53.9**	**+1.8**
LCRK	**Leigh Creek**	**43.19**	**246**	P		**P**	**16 14 55.7**	**+1.0**
HPAH	**Hawaii Prepara**	**43.85**	**27**	P		**P**	**16 14 59.1**	**-0.9**
BBOO	**Buckleboo**	**45.19**	**243**	P		**P**	**16 15 11.0**	**+0.4**
OOD	**Oodnadatta**	**45.34**	**250**	P		**P**	**16 15 12.5**	**+0.6**
MULG	**Mulgathing**	**46.78**	**247**	P		**P**	**16 15 23.6**	**+0.6**
WR0	**Warramunga Arr**	**47.03**	**261**	P		**P**	**16 15 23.7**	**-1.5**
WR0				IAmb		IAmb	16 15 26.2	
	comp=Z,6.8nm,0.6s							
AS01	**Alice Springs**	**47.13**	**256**	P		**P**	**16 15 26.2**	**+0.3**
AS31	**Alice Springs**	**47.17**	**256**			**P**	**16 15 25.9**	**-0.4**
ASAR	**Alice Springs**	**47.17**	**256**	P		**P**	**16 15 25.8**	**-0.5**
	comp=Z,16nm,0.6s,baz=92,slow=8.0,SNR=233							
ASAR				PcP		**PcP**	**16 16 55.2**	**-0.2**
	comp=Z,6.1nm,0.7s,baz=108,slow=3.7,SNR=15							
ASAR				S		**S**	**16 22 01.9**	**-5.8**
	comp=Z,0.9nm,0.8s,baz=97,slow=16,SNR=8.3							
	comp=Z,16nm,0.6s							
WB0	**Warramunga Arr**	**47.19**	**261**			**P**	**16 15 25.3**	**-1.1**
WB2	**Warramunga Arr**	**47.21**	**261**			**P**	**16 15 25.3**	**-1.2**
WB2				IAmb		IAmb	16 15 26.1	
	comp=Z,12nm,0.6s							
WRAB	**Tennant Creek**	**47.21**	**261**	P		**P**	**16 15 24.9**	**-1.6**
WRAB				IAmb		IAmb	16 15 28.9	
	comp=Z,8.2nm,0.6s							
WRA	**Warramunga Arr**	**47.22**	**261**			**P**	**16 15 25.1**	**-1.5**
WRA	**Warramunga Arr**	**47.22**	**261**	P		**P**	**16 15 25.3**	**-1.3**
	comp=Z,9.5nm,0.5s,baz=96,slow=7.5,SNR=183							
WRA				PcP		**PcP**	**16 16 55.6**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=93,slow=3.5,SNR=5.6							
WRA				S		**S**	**16 22 02.5**	**-5.9**
	comp=Z,1.9nm,0.9s,baz=99,slow=13,SNR=5.3							
	comp=Z,9.5nm,0.5s							
KDU	**Kakadu**	**50.46**	**270**	P		**P**	**16 15 51.7**	**+0.4**
MTN	**Manton Dam**	**51.68**	**269**	P		**P**	**16 16 00.3**	**-0.2**
FORT	**Forrest**	**51.95**	**246**	P		**P**	**16 16 03.0**	**+0.7**
WRKA	**Warakurna**	**52.12**	**253**	P		**P**	**16 16 04.6**	**+0.9**
KNRA	**Kununurra**	**53.23**	**265**	P		**P**	**16 16 10.9**	**-1.0**
KNRA	**Kununurra**	**53.23**	**265**	P		**P**	**16 16 11.7**	**-0.2**
FAKI	**Fak Fak**	**53.77**	**281**	P		**P**	**16 16 14.3**	**-1.6**
FITZ	**Fitzroy Crossi**	**55.64**	**261**	P		**P**	**16 16 28.5**	**-0.8**
SOEI	**Soe**	**59.00**	**270**	P		**P**	**16 16 53.5**	**+0.5**
QSPA	**South Pole Qui**	**70.45**	**180**	P		**P**	**16 18 09.1**	**+2.7**
QSPA				IAmb		IAmb	16 18 10.3	
	comp=Z,13nm,0.9s							
MJAR	**Matsushiro Arr**	**71.03**	**322**	P		**P**	**16 18 09.2**	**-1.0**
	comp=Z,9.7nm,0.8s,baz=151,slow=6.2,SNR=18							
	comp=Z,9.7nm,0.8s							
SNCC	**San Nicolas Is**	**74.82**	**46**	P		**P**	**16 18 33.3**	**+0.8**
	baz=234							
PKM	**Mcpherson Peak**	**75.60**	**44**	P		**P**	**16 18 38.2**	**+1.0**
	baz=233							
SAO	**San Andreas Ge**	**75.68**	**42**	IAmb		IAmb	16 18 39.3	
	comp=Z,14nm,1.1s							
BCW	**Bitter Crk WRg**	**75.89**	**45**	IAmb		IAmb	16 18 41.0	
	comp=Z,16nm,0.9s							
PETK	**Petropavlovsk-**	**76.10**	**344**	P		**P**	**16 18 38.2**	**-1.1**
	comp=Z,4.5nm,0.7s,baz=108,slow=8.8,SNR=5.1							
	comp=Z,4.5nm,0.7s							
ARVC	**Arvin**	**76.39**	**45**	P		**P**	**16 18 42.3**	**+0.9**
	baz=234							
MURC	**Murrieta**	**76.61**	**47**	P		**P**	**16 18 43.7**	**+1.0**
	baz=236							
VES	**Vestal, Richgr**	**76.64**	**44**	P		**P**	**16 18 43.8**	**+1.0**
	baz=234							
BFSC	**Mount Baldy Ra**	**76.66**	**46**	P		**P**	**16 18 43.9**	**+0.7**
	baz=235							
MONP2	**Monument Peak**	**76.75**	**48**	P		**P**	**16 18 44.6**	**+0.9**
	baz=236,SNR=8.8							
EDW2	**Edwards Air Fo**	**76.80**	**45**	P		**P**	**16 18 44.7**	**+0.8**
	baz=235,SNR=16							
RMX	**La Rumorosa**	**76.83**	**48**	IAmb		IAmb	16 18 46.1	
	comp=Z,10nm,0.9s							
IKP	**In-Ko-Pah, Jac**	**76.83**	**48**	P		**P**	**16 18 45.3**	**+1.2**
	baz=236,SNR=8.0							
ISA	**Isabella, Lake**	**76.94**	**44**	IAmb		IAmb	16 18 46.6	
	comp=Z,18nm,1.1s							
ISA	**Isabella, Lake**	**76.94**	**44**	P		**P**	**16 18 45.7**	**+1.1**
	baz=234,SNR=9.7							
CHGN	**Chignik**	**76.96**	**10**	P		**P**	**16 18 43.7**	**-0.4**
	baz=196							
PFO	**Pinyon Flats O**	**77.12**	**47**	P		**P**	**16 18 45.9**	**+0.1**
PFO	**Pinyon Flats O**	**77.12**	**47**	P		**P**	**16 18 46.6**	**+0.8**
	baz=236,SNR=5.3							
TPFO	**Pinon Flats**	**77.12**	**47**	P		**P**	**16 18 46.6**	**+0.8**
	baz=236							
SWSC	**Sam W. Stewart**	**77.21**	**48**	P		**P**	**16 18 47.0**	**+0.9**
	baz=236							
LRMC	**Laurel Mtn Rad**	**77.36**	**45**	P		**P**	**16 18 47.9**	**+0.9**
	baz=235,SNR=6.5							
ORV	**Oroville**	**77.38**	**40**	P		**P**	**16 18 46.7**	**-0.2**
CWC	**Cottonwood Cre**	**77.65**	**44**	P		**P**	**16 18 49.2**	**+0.5**
	baz=234							
BELC	**Belle Mtn. Jos**	**77.66**	**47**	P		**P**	**16 18 49.7**	**+1.0**
	baz=236,SNR=9.6							
MDPB	**Devils Postpil**	**77.71**	**42**	IAmb		IAmb	16 18 50.8	
	comp=Z,13nm,1.1s							
MPMC	**Manual Prospec**	**77.82**	**45**	P		**P**	**16 18 50.7**	**+1.0**
	baz=235,SNR=22							
GSC	**Goldstone, Bar**	**77.84**	**46**	IAmb		IAmb	16 18 51.4	
	comp=Z,12nm,1.0s							
GSC	**Goldstone, Bar**	**77.84**	**46**	P		**P**	**16 18 50.6**	**+0.9**
	baz=235,SNR=7.1							
BC3	**Big Chuckawall**	**77.85**	**48**	P		**P**	**16 18 50.8**	**+1.1**
	baz=237,SNR=7.6							
HEC	**Hector,Ludlow**	**77.89**	**46**	P		**P**	**16 18 50.6**	**+0.6**
	baz=236,SNR=14							
TIN	**Tinemaha, Big**	**77.91**	**43**	P		**P**	**16 18 51.1**	**+1.1**
	baz=234							
KSRS	**Korea Array**	**77.93**	**317**	P		**P**	**16 18 50.6**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=126,slow=6.0,SNR=8.1							
	comp=Z,2.9nm,0.6s							
GLA	**Glamis**	**77.95**	**48**	P		**P**	**16 18 51.7**	**+1.4**
	baz=237							
WAKR	**Walker**	**78.00**	**42**	IAmb		IAmb	16 18 52.6	
	comp=Z,16nm,1.2s							
YBH	**Yreka Blue Hor**	**78.05**	**37**	P		**P**	**16 18 50.9**	**+0.2**
YBH				IAmb		IAmb	16 18 52.6	
	comp=Z,8.4nm,0.8s							
DSP	**Deep Springs**	**78.27**	**43**	P		**P**	**16 18 52.7**	**+0.9**
DSP				IAmb		IAmb	16 18 54.0	
	comp=Z,14nm,0.9s							
GMRC	**Granite Mounta**	**78.33**	**47**	P		**P**	**16 18 53.3**	**+0.9**
	baz=236,SNR=6.0							
IRM	**Iron Mountain**	**78.34**	**47**	P		**P**	**16 18 53.6**	**+1.3**
	baz=237,SNR=11							
YERR	**Yerington**	**78.42**	**41**	IAmb		IAmb	16 18 54.5	
	comp=Z,16nm,1.0s							
GRAC	**Grapevine Rang**	**78.44**	**44**	P		**P**	**16 18 54.2**	**+1.3**
	baz=235,SNR=11							
LHV	**Little Huntoon**	**78.44**	**42**	IAmb		IAmb	16 18 55.0	
	comp=Z,14nm,1.0s							
FURC	**Furnace Creek,**	**78.47**	**45**	P		**P**	**16 18 53.9**	**+1.0**
	baz=235							
TUQ	**Turquoise Moun**	**78.51**	**46**	P		**P**	**16 18 54.2**	**+0.8**
	baz=236,SNR=9.0							
113A	**Mohawk Valley,**	**78.55**	**49**	IAmb		IAmb	16 18 55.5	
	comp=Z,7.6nm,0.8s							
L04D	**Klamath Falls**	**78.59**	**37**	IAmb		IAmb	16 18 54.8	
	comp=Z,10nm,0.9s							
RYN	**Ryan**	**78.65**	**42**	IAmb		IAmb	16 18 55.8	
	comp=Z,7.8nm,0.9s							
NVAR	**Mina Array Bea**	**78.67**	**42**	P		**P**	**16 18 55.1**	**+0.7**
	comp=Z,8.9nm,0.7s,baz=224,slow=8.8,SNR=86							
	comp=Z,8.9nm,0.7s							
GMN	**Gold Mountain**	**78.69**	**44**	IAmb		IAmb	16 18 56.1	
	comp=Z,12nm,0.8s							
HSIG		**78.70**	**54**	IAmb		IAmb	16 18 56.2	
	comp=Z,7.5nm,0.9s							
PAHR	**Pah Rah Range**	**78.76**	**41**	IAmb		IAmb	16 18 56.3	
	comp=Z,11nm,1.0s							
NV11	**Mina Array Sit**	**78.77**	**42**	IAmb		IAmb	16 18 56.4	
	comp=Z,20nm,1.2s							
WCT	**Wildcat Mounta**	**78.81**	**44**	IAmb		IAmb	16 18 56.7	
	comp=Z,5.9nm,0.7s							
214A	**Organ Pipe Nat**	**78.81**	**50**	P		**P**	**16 18 56.4**	**+1.4**
	baz=239							
NEE2	**Needles Airpor**	**79.03**	**47**	P		**P**	**16 18 57.1**	**+1.0**
	baz=237							
PDMCI	**Parker Dam,Lak**	**79.11**	**48**	P		**P**	**16 18 57.9**	**+1.4**
	baz=237,SNR=6.4							
TPNV	**Topopah Spring**	**79.15**	**44**	P		**P**	**16 18 58.0**	**+1.1**
	baz=236,SNR=19							
KVN	**Kaiserville**	**79.17**	**42**	IAmb		IAmb	16 18 58.4	
	comp=Z,11nm,0.7s							
Q17K	**Contact Creek**	**79.25**	**10**	P		**P**	**16 18 56.2**	**-0.6**
	baz=199							
V12A	**Nelson**	**79.40**	**46**	IAmb		IAmb	16 19 00.3	
	comp=Z,15nm,1.2s							
KDAK	**Kodiak Island**	**79.41**	**12**	P		**P**	**16 18 57.3**	**-0.2**
	baz=202							
Y14A	**Wickenburg**	**79.71**	**48**	IAmb		IAmb	16 19 01.9	
	comp=Z,9.3nm,1.0s							
K05A	**Summer Lake**	**79.72**	**38**	IAmb		IAmb	16 19 01.7	
	comp=Z,16nm,0.9s							
J05D	**Fort Rock, OR**	**79.88**	**37**	P		**P**	**16 19 00.9**	**+0.2**
O16K	**Kokwok River B**	**80.18**	**9**	P		**P**	**16 19 00.6**	**-1.0**
	baz=196							
PRN	**Pahroc Range**	**80.19**	**45**	IAmb		IAmb	16 19 04.8	
	comp=Z,16nm,1.1s							
R11B	**Troy Canyon, C**	**80.37**	**44**	P		**P**	**16 19 03.9**	**+0.4**
	baz=236,SNR=6.6							
P18K	**Big Mountain,**	**80.43**	**10**	P		**P**	**16 19 02.2**	**-0.9**
	baz=199							
N15K	**Kwethluk River**	**80.46**	**8**	P		**P**	**16 19 03.1**	**-0.1**
	baz=195							
TUC	**Tucson**	**80.47**	**51**	P		**P**	**16 19 05.7**	**+1.7**
	baz=240							
BMN	**Battle Mountai**	**80.53**	**41**	IAmb		IAmb	16 19 05.7	
	comp=Z,11nm,0.8s							
M14K	**Bethel**	**80.81**	**7**	P		**P**	**16 19 04.9**	**-0.1**
	baz=193							
WVOR	**Wild Horse Val**	**80.86**	**39**	IAmb		IAmb	16 19 07.5	
	comp=Z,9.8nm,0.9s							
M15K	**Kasigluk River**	**80.90**	**7**	P		**P**	**16 19 05.2**	**-0.2**
	baz=194							
X16A	**Lo Mia Camp, P**	**81.07**	**49**	IAmb		IAmb	16 19 10.0	
	comp=Z,8.2nm,0.8s							
319A	**Douglas**	**81.12**	**52**	IAmb		IAmb	16 19 10.3	
	comp=Z,14nm,0.9s							
NJ2	**Nanjing**	**81.28**	**308**	*e*P		**P**	**16 19 08.7**	**+0.5**
NJ2				pP		**pP**	**16 19 41.3**	**-3.3**
NJ2				pmax		pmax		
	comp=Z,16nm,0.7s							
NJ2				pmax		pmax		
	comp=Z,330nm,5.7s							
L14K	**Kuka Creek**	**81.32**	**6**	P		**P**	**16 19 08.0**	**+0.4**
	baz=192							
O19K	**Port Alsworth**	**81.35**	**10**	P		**P**	**16 19 07.7**	**-0.1**
	baz=200							
I07A	**Izee**	**81.36**	**37**	IAmb		IAmb	16 19 10.1	
	comp=Z,7.7nm,0.8s							
M16K	**Timber Creek**	**81.44**	**8**	P		**P**	**16 19 08.8**	**+0.4**
	baz=196						

WRAK	**Wrangell Islan** baz=220	83.93	22	P	P	16 19 21.7	+0.5	
PLID	**Pearl Lake** comp=Z,7.5nm,1.0s	83.97	38	IAmb	IAmb	16 19 24.1		
BMRM	**Bremner River** baz=209	84.03	15	P	P	16 19 21.3	-0.5	
HLID	**Hailey** baz=236,SNR=18	84.03	40	P	P	16 19 23.1	+0.8	
HVU	**Hansel Valley** comp=Z,11nm,0.8s	84.06	42	IAmb	IAmb	16 19 24.1		
J18K	**Innoko River** comp=Z,8.1nm,1.0s	84.09	8	IAmb	IAmb	16 19 22.6		
J18K	**Innoko River** baz=198	84.09	8	P	P	16 19 21.9	-0.1	
VHRN	**Van Horn** comp=Z,11nm,0.8s	84.09	55	IAmb	IAmb	16 19 25.1		
CTU	**Camp Tracy** comp=Z,13nm,1.1s	84.13	43	IAmb	IAmb	16 19 24.5		
SCM	**Sheep Creek Mo** baz=206	84.19	13	P	P	16 19 22.4	-0.3	
MNTX	**Cornudas Mount** baz=243	84.20	54	P	P	16 19 24.7	+1.4	
ANM	**Nome** baz=190	84.27	4	P	P	16 19 22.5	-0.3	
K20K	**Telida** baz=200	84.37	9	P	P	16 19 22.6	-0.7	
TX31	**Lajitas Ar. Si** comp=Z,15nm,1.1s	84.47	56	IAmb	IAmb	16 19 27.7		
TXAR	**Lajitas Array** comp=Z,6.2nm,0.9s,baz=214,slow=7.8,SNR=45 comp=Z,6.2nm,0.9s	84.47	56	P	P	16 19 26.5	+1.6	
H16K	**Elim** baz=192	84.59	6	P	P	16 19 23.9	-0.6	
N25K	**Chitina, Valde** comp=Z,8.1nm,0.6s	84.60	14	IAmb	IAmb	16 19 24.6		
N25K	**Chitina, Valde** baz=209,SNR=7.1	84.60	14	P	P	16 19 24.2	-0.5	
M24K	**Tolsona, Glenn** baz=208	84.69	13	P	P	16 19 25.0	-0.1	
P29M	**Windy Craggy** baz=215	84.72	18	P	P	16 19 25.0	-0.2	
J19K	**Poorman** baz=199	84.74	9	P	P	16 19 25.5	+0.3	
CAST	**Castle Rocks** baz=202	84.75	10	P	P	16 19 23.2	-2.1	
MCARA	**McCarthy VSAT** baz=210	84.78	15	P	P	16 19 25.4	-0.1	
WAT6	**Susitna Watana** baz=206	84.78	12	P	P	16 19 25.3	-0.4	
G15K	**Niukluk** baz=191	84.79	5	P	P	16 19 24.8	-0.6	
CTG	**Chitna Glacier** baz=212	84.84	16	P	P	16 19 25.4	-0.6	
WAT1	**Susitna Watana** baz=205	84.85	12	P	P	16 19 25.3	-0.6	
ANMO	**Albuquerque**	84.90	50	P	P	16 19 27.7	+0.7	
ANMO	comp=Z,11nm,0.9s			IAmb	IAmb	16 19 29.3		
ANMO	**Albuquerque** baz=242	84.90	50	P	P	16 19 28.3	+1.3	
PLBC	**Pleasant Camp** baz=217	84.99	19	P	P	16 19 26.6	0.0	
TRF	**Thorofore Moun** comp=Z,8.0nm,0.7s	85.09	11	IAmb	IAmb	16 19 27.1		
TRF	**Thorofare Moun** baz=204,SNR=5.2	85.09	11	P	P	16 19 25.8	-1.4	
TNA	**Tin City** baz=187	85.10	3	P	P	16 19 26.6	-0.3	
F14K	**Arctic Creek** baz=189	85.11	4	P	P	16 19 27.0	0.0	
H17K	**Granite Mounta** baz=195	85.12	7	P	P	16 19 26.4	-0.7	
J20K	**Nowinta River** baz=200	85.13	9	P	P	16 19 26.5	-0.6	
NEW	**Newport** baz=234	85.21	35	P	P	16 19 27.8	-0.2	
DHY	**Denali Highway** baz=206	85.30	12	P	P	16 19 27.7	-0.6	
G16K	**Koyuk River** baz=192	85.33	5	P	P	16 19 27.8	-0.2	
P30M	**Million Dollar** baz=216	85.35	18	P	P	16 19 28.8	+0.4	
F15K	**North Star Dit** baz=190	85.45	4	P	P	16 19 28.0	-0.7	
RDMU	**Red Mountain** comp=Z,12nm,1.3s	85.49	44	IAmb	IAmb	16 19 31.4		
S34M	**Telegraph Cree** baz=221	85.50	22	P	P	16 19 29.8	+0.7	
H18K	**Honhosa River** baz=196	85.50	7	P	P	16 19 28.0	-1.0	
YUK8	**Steele Glacier** baz=213	85.52	16	P	P	16 19 29.3	-0.2	
G17K	**Kiwalik Mounta** baz=194	85.59	6	P	P	16 19 29.1	-0.3	
MCK	**McKinley** baz=205,SNR=6.1	85.59	11	P	P	16 19 28.7	-0.8	
PAX	**Paxson** baz=208	85.61	13	P	P	16 19 28.8	-0.9	
YUK6	**Outpost Mounta** baz=215	85.62	17	P	P	16 19 29.8	-0.2	
M26K	**Nabesna, AK** baz=210	85.67	14	P	P	16 19 30.1	+0.2	
YUK3	**Moose Creek** baz=213,SNR=7.0	85.75	16	P	P	16 19 30.6	0.0	
HYT	**Haines Junctio** baz=216	85.76	18	P	P	16 19 30.3	-0.3	
YUK4	**Talbot Arm** baz=214	85.87	17	P	P	16 19 31.5	+0.3	
M27K	**Edge Creek, AK** comp=Z,13nm,1.1s	85.89	15	IAmb	IAmb	16 19 32.2		
M27K	**Edge Creek, AK** baz=212	85.89	15	P	P	16 19 31.4	+0.2	
Q32M	**Nakina River** baz=220	85.90	21	P	P	16 19 31.3	-0.1	
P32M	**Atlin** baz=219	85.92	20	P	P	16 19 31.3	0.0	
SAND	**Sanderson** comp=Z,9.6nm,0.9s	85.95	56	IAmb	IAmb	16 19 34.0		
S22A	**4UR Ranch, Cre** comp=Z,6.4nm,0.9s	85.96	48	IAmb	IAmb	16 19 33.9		
S22A	**4UR Ranch, Cre** baz=242	85.96	48	P	P	16 19 33.1	+0.8	
MENT	**Mentasta** comp=Z,10nm,1.3s	85.96	14	IAmb	IAmb	16 19 32.1		
H19K	**Roundabout Mou** baz=198	86.09	8	P	P	16 19 32.1	+0.2	
TPAW	**Teton Pass** comp=Z,9.1nm,1.4s	86.11	41	IAmb	IAmb	16 19 34.5		
L26K	**Log Cabin Wild** baz=210	86.12	14	P	P	16 19 32.2	0.0	
O30N	**Mendenhall** baz=217	86.13	18	P	P	16 19 32.2	0.0	
O20A	**White River Ci** baz=241	86.15	45	P	P	16 19 33.7	+0.6	
G18K	**Tagagawik** baz=196	86.19	7	P	P	16 19 31.8	-0.5	
BVCY	**Beaver Creek** baz=212,SNR=5.6	86.19	15	P	P	16 19 32.4	-0.1	
H20K	**Anotleneega Mo** baz=199	86.27	8	P	P	16 19 32.9	+0.1	
DLBC	**Dease Lake** baz=222	86.28	22	P	P	16 19 33.1	0.0	
K24K	**Donnelly Dome** baz=208	86.28	13	P	P	16 19 32.8	-0.1	
NEA2	**Nenana** baz=205	86.35	11	P	P	16 19 32.1	-1.1	
WHY	**Whitehorse** baz=218	86.40	19	P	P	16 19 33.6	0.0	
I21K	**Tanana** baz=202	86.40	10	P	P	16 19 32.7	-0.7	
RIDG	**Independent Ri** baz=209	86.42	13	P	P	16 19 33.0	-0.6	
F17K	**Baldwin Pennin** baz=193	86.45	6	P	P	16 19 33.5	-0.1	
MLY	**Manley** baz=203	86.47	10	P	P	16 19 32.6	-1.2	
L27K	**Beaver Creek,** baz=212	86.51	15	P	P	16 19 33.6	-0.5	
HDA	**Harding Lake** comp=Z,7.2nm,0.6s	86.59	12	IAmb	IAmb	16 19 33.8		
HDA	**Harding Lake** baz=207	86.59	12	P	P	16 19 33.6	-0.8	
G19K	**Purcell Mounta** baz=197	86.61	7	P	P	16 19 34.3	-0.1	
BW06	**Boulder Array** baz=240	86.61	42	P	P	16 19 35.4	+0.1	
PDAR	**Pinedale Array** comp=Z,1.3nm,0.6s,baz=204,slow=3.3,SNR=17 comp=Z,1.3nm,0.6s	86.61	42	P	P	16 19 35.2	0.0	
CCB	**Clear Creek Bu** comp=Z,6.9nm,0.6s	86.64	11	IAmb	IAmb	16 19 34.2		
R33M	**Jennings River** baz=221	86.67	21	P	P	16 19 35.3	+0.3	
P33M	**Teslin, Yukon** baz=220	86.69	20	P	P	16 19 34.8	-0.2	
H21K	**Melozitna Rive** baz=201	86.72	9	P	P	16 19 34.8	-0.2	
F18K	**Selawik** baz=195	86.76	6	P	P	16 19 34.5	-0.5	
N31M	**Braeburn, Yuko** baz=217	86.79	18	P	P	16 19 35.5	+0.1	
I23K	**Minto, Yukon-K** baz=204	86.81	11	P	P	16 19 34.6	-0.7	
BOZ	**Bozeman (W)** baz=238	86.81	39	P	P	16 19 36.9	+0.8	
SCRK	**Sand Creek** comp=Z,6.1nm,1.0s	86.81	13	IAmb	IAmb	16 19 35.5		
SCRK	**Sand Creek** baz=210	86.81	13	P	P	16 19 35.4	-0.2	
M29M	**Somme Creek** comp=Z,5.0nm,0.9s	86.83	16	IAmb	IAmb	16 19 36.0		
M29M	**Somme Creek** baz=215	86.83	16	P	P	16 19 35.9	+0.2	
COLA	**College** baz=206	86.83	11	P	P	16 19 34.4	-1.1	
SDCO	**Great Sand Dun** baz=242	86.89	48	P	P	16 19 37.6	+0.8	
ILAR	**Eielson Array** comp=Z,1.1nm,0.5s,baz=242,slow=5.8,SNR=16 comp=Z,1.1nm,0.5s	86.92	12	P	P	16 19 34.9	-1.1	
E17K	**Hotham Inlet** baz=193	87.03	5	P	P	16 19 36.4	0.0	
BJI	**Beijing**	87.06	314	P	P	16 19 39.6	+2.4	
BJI				pP	pP	16 20 12.4	-1.7	
BJI	comp=Z,9.0nm,0.8s			pmax	pmax			
J25K	**Salcha River,** baz=208	87.08	12	P	P	16 19 36.3	-0.5	
POKR	**Poker Plat Res** baz=206	87.13	11	P	P	16 19 35.6	-1.3	
H22K	**Ishtalitna Cre** baz=203	87.16	10	P	P	16 19 36.3	-0.8	
MSTX	**Muleshoe** baz=244	87.18	53	P	P	16 19 38.8	+0.7	
F19K	**Shaleruckit Mo** baz=197	87.19	7	P	P	16 19 36.8	-0.3	
K27K	**Chicken** baz=211	87.28	14	P	P	16 19 37.4	-0.3	
J26L	**Joseph Creek** baz=210	87.36	13	P	P	16 19 38.3	+0.1	
M30M	**Minto, Yukon** baz=216	87.39	17	P	P	16 19 38.1	-0.2	
G21K	**Allakaket** baz=201	87.43	9	P	P	16 19 38.0	-0.3	
E18K	**Tukpahlearik C** baz=194	87.47	6	P	P	16 19 38.3	-0.2	
L29M	**L29M** comp=Z,11nm,1.0s	87.47	16	IAmb	IAmb	16 19 39.9		
L29M	**L29M** baz=215	87.47	16	P	P	16 19 39.3	+0.6	
F20K	**Avaraart Lake** baz=198	87.64	8	P	P	16 19 37.8	-1.5	
Q24A	**Divide** baz=243	87.70	47	P	P	16 19 41.5	+0.9	
H24K	**Noodor Dome** baz=206	87.70	11	P	P	16 19 38.1	-1.6	
M31M	**Drury Creek, Y** baz=218	87.76	18	P	P	16 19 39.5	-0.6	
ELIB	**Princess Elisa** comp=Z,7.6nm,0.8s	87.78	186	*d*P	P	16 19 42.1	+1.7	
ELIB				*d*pP	pP	16 20 17.7	+0.1	
ELIB				*d*sP	sP	16 20 33.2	+0.2	
E19K	**Redstone River** baz=197	87.85	7	P	P	16 19 40.3	-0.1	
DAWY	**Dawson** comp=Z,4.9nm,0.9s	87.95	15	IAmb	IAmb	16 19 41.2		
DAWY	**Dawson** baz=214,SNR=6.1	87.95	15	P	P	16 19 40.8	-0.1	
RLMT	**Red Lodge** baz=240	87.99	40	P	P	16 19 42.6	+0.8	
N23A	**Red Feather La** baz=242	88.05	45	P	P	16 19 42.9	+0.6	
FARO	**Faro, Yukon** baz=219	88.09	18	P	P	16 19 41.5	-0.2	
F21K	**Alatna River** baz=201	88.09	8	P	P	16 19 40.3	-1.2	
G22K	**Bettles** baz=202	88.10	9	P	P	16 19 41.1	-0.4	
EGAK	**Eagle** baz=212	88.13	14	P	P	16 19 41.8	+0.1	
G23K	**Bananza Creek** baz=204	88.13	10	P	P	16 19 41.2	-0.5	
K29M	**Barlow Dome** comp=Z,6.2nm,1.0s	88.23	16	IAmb	IAmb	16 19 43.5		
K29M	**Barlow Dome** baz=215	88.23	16	P	P	16 19 42.6	+0.2	
G24K	**Hadweenzic Riv** baz=206	88.55	11	P	P	16 19 43.1	-0.6	
J29N	**Klondike Camp** comp=Z,5.4nm,0.7s	88.56	15	IAmb	IAmb	16 19 44.6		
J29N	**Klondike Camp** baz=215	88.56	15	P	P	16 19 44.0	+0.2	
COLD	**Coldfoot** baz=204	88.58	10	P	P	16 19 43.9	+0.1	
TROLL	**Troll, Antarti** comp=Z,218nm,0.6s	88.59	179	⇑P	P	16 19 45.7	+1.5	
E20K	**Nigu River** baz=198	88.74	7	P	P	16 19 44.2	-0.4	
D19K	**Kuna River** baz=196	88.75	6	P	P	16 19 44.0	-0.6	
SNAA	**Sanae** comp=Z,95nm,0.7s	88.80	178	⇑P	P	16 19 46.4	+1.3	
SNAA	**Sanae** comp=Z,3.4nm,0.7s,baz=210,slow=6.2,SNR=9.2 comp=Z,3.4nm,0.7s	88.80	178	P	P	16 19 45.9	+0.9	
VNA3	**Neumayer Olymp** comp=Z,11nm,0.8s	88.83	175	⇑P	P	16 19 46.0	+0.8	
G25K	**Bearman Lake** baz=208	88.85	11	P	P	16 19 44.9	-0.2	
APMT	**Aspermont** comp=Z,4.8nm,0.8s	88.91	54	IAmb	IAmb	16 19 49.7		
XLT	**XiLinHaoTe**	88.97	318	*e*P	P	16 19 46.3	+0.1	
XLT				pP	PcP	16 19 50.6	+3.0	
XLT				sP	pP	16 19 54.0	-29	
XLT	comp=Z,8.0nm,0.9s			pmax	pmax			
XLT	comp=Z,420nm,5.7s			pmax	pmax			
I28M	**Miner Creek** comp=Z,6.7nm,1.3s	88.98	14	IAmb	IAmb	16 19 47.6		
I28M	**Miner Creek** baz=213	88.98	14	P	P	16 19 45.7	-0.1	
D20K	**Etivluk River** baz=198	89.12	7	P	P	16 19 46.2	-0.1	
J30M	**Hart River** baz=216	89.13	16	P	P	16 19 46.5	-0.1	
E22K	**Anaktuvuk Pass** baz=202	89.18	9	P	P	16 19 46.5	-0.1	
EGMT	**Eagleton** baz=239	89.18	38	P	P	16 19 47.3	+0.1	
C19K	**Lookout Ridge** baz=195	89.20	6	P	P	16 19 46.7	-0.1	
F24K	**Squaw Lake** baz=206	89.22	10	P	P	16 19 46.9	+0.1	
H27K	**Steamboat Moun** baz=212	89.29	13	P	P	16 19 47.2	+0.1	
VNA2	**Neumayer--Watz** comp=Z,14nm,0.6s,baz=186,slow=4.0	89.30	176	⇑P	P	16 19 49.0	+1.7	
E23K	**Chandalar** baz=204	89.43	9	P	P	16 19 47.7	-0.1	
E24K	**Your Creek** baz=205	89.62	10	P	P	16 19 48.5	-0.2	
I30M	**Mount Dempster** comp=Z,3.2nm,0.8s	89.64	15	IAmb	IAmb	16 19 49.1		
I30M	**Mount Dempster** baz=216	89.64	15	P	P	16 19 48.9	-0.1	
C21K	**Knifeblade Rid** baz=199	89.76	7	P	P	16 19 49.2	0.0	
D22K	**Ayikyak River** comp=Z,3.6nm,0.8s	89.76	8	IAmb	IAmb	16 19 49.9		
D22K	**Ayikyak River** baz=201	89.76	8	P	P	16 19 49.4	+0.1	
H29M	**Whitestone** baz=215	89.98	14	P	P	16 19 50.2	-0.1	
E25K	**Arctic Village** baz=208	90.16	11	P	P	16 19 51.0	-0.2	
B21K	**Ikpikpuk River** baz=200	90.22	7	P	P	16 19 51.1	-0.2	
B20K	**Meade River** baz=197	90.31	6	P	P	16 19 51.7	-0.1	
EPYK	**Eagle Plains** baz=216	90.49	15	P	P	16 19 52.5	-0.3	
WMOK	**Wichita Mounta** baz=247	90.50	53	P	P	16 19 54.6	+1.0	
D24K	**Happy Valley** baz=205	90.56	9	P	P	16 19 52.5	-0.5	
HHC	**Hu-ho-hao-te**	90.56	313	*e*P	P	16 19 53.6	-0.2	
HHC	comp=Z,18nm,0.8s			pmax	pmax			
HHC	comp=Z,440nm,8.6s			pmax	pmax			
LAO	**LASA Array** baz=242	90.61	40	P	P	16 19 55.3	+1.5	
OGNE	**Ogallala** baz=245	90.72	47	P	P	16 19 55.4	+0.8	
RSSD	**Black Hills**	90.79	43	P	P	16 19 54.2	-0.7	
RSSD				IAmb	IAmb	16 19 56.0		
RSSD	comp=Z,6.6nm,0.9s **Black Hills** baz=243	90.79	43	P	P	16 19 54.9	0.0	
F28M	**Old Crow** baz=213	90.81	13	P	P	16 19 54.3	+0.1	
B22K	**Teshekpuk Lake** baz=201	91.04	7	P	P	16 19 54.8	-0.3	
C24K	**Franklin Bluff** baz=205	91.09	9	P	P	16 19 55.0	-0.4	
G30M	**tAoh Zraii Nji** baz=217	91.10	14	P	P	16 19 55.1	-0.5	
G31M	**Satah River** baz=218	91.52	15	P	P	16 19 57.2	-0.2	
F30M	**Barrier River** baz=217	91.71	14	P	P	16 19 58.6	+0.3	
E28M	**Babbage River** baz=214	91.72	12	P	P	16 19 58.3	-0.1	
E29M	**Blow River** baz=215	91.88	13	P	P	16 19 58.5	-0.6	
D27M	**Malcolm River** baz=212	91.97	12	P	P	16 19 59.4	-0.2	
F31M	**Tsiigehtchic** baz=219	92.06	15	P	P	16 19 59.6	-0.3	
CMAR	**Chiang Mai Arr**	92.20	289	P	P	16 20 01.5	-0.2	
CMAR	**Chiang Mai Arr** comp=Z,2.1nm,0.8s,baz=117,slow=2.9,SNR=17 comp=Z,2.1nm,0.8s	92.20	289	P	P	16 20 02.3	+0.5	
PZH	**PanZhiHua**	92.53	297	P	P	16 20 01.1	-2.2	
PZH				pmax	pmax			
PZH	comp=Z,10.0nm,0.7s comp=Z,470nm,9.0s			pmax	pmax			
DGMT	**Dagmar** baz=243	92.65	39	P	P	16 20 04.0	+0.8	
INK	**Inuvik** baz=219	92.78	14	P	P	16 20 02.9	-0.4	
BGNE	**Belgrade** baz=247	93.58	47	P	P	16 20 08.4	+0.8	
YKA	**Yellowknife Ar** comp=Z,1.3nm,0.8s,baz=239,slow=4.4,SNR=28 comp=Z,1.3nm,0.8s	94.68	24	P	P	16 20 11.7	-0.4	
SONM	**Songino Array** comp=Z,0.5nm,0.7s,baz=147,slow=5.1,SNR=2.6 comp=Z,0.5nm,0.7s	96.76	318	P	P	16 20 22.8	+0.7	
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.6s,baz=29,slow=3.4,SNR=4.2	111.38	321	PKiKP	PKiKP	16 25 23.2	-1.2	
MKAR	**Makanchi Array** comp=Z,0.6nm,0.7s,baz=110,slow=0.9,SNR=6.6	112.42	313	PKiKP	PKiKP	16 25 25.2	-1.6	
MKAR	comp=Z,0.3nm,0.6s,baz=302,slow=2.7,SNR=4.0			PKKPbc	PKKPbc	16 36 17.8	-0.3	
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.8s,baz=100,slow=1.8,SNR=9.1	115.10	317	PKP	PKiKP	16 25 30.4	-1.2	
BVAR	**Borovoye Array** comp=Z,1.0nm,0.5s,baz=102,slow=3.0,SNR=5.9	120.01	321	PKP	PKPdf	16 25 40.1	-1.0	
BOSA	**Boshof** comp=Z,2.6nm,0.9s,baz=186,slow=6.0,SNR=3.1	128.09	203	PKP	PKPdf	16 25 57.8	+0.2	
ARCES	**ARCESS Array B** comp=Z,2.4nm,0.4s,baz=18,slow=2.1,SNR=21	128.49	351	PKP	PKPdf	16 25 56.2	-0.7	
FINES	**FINESS Array B** comp=Z,2.4nm,0.6s,baz=54,slow=3.3,SNR=4.2	135.60	345	PKhKP	PKPpre	16 26 05.7		
FINES	comp=Z,2.4nm,0.6s,baz=29,slow=4.4,SNR=10.0			PKP	PKPdf	16 26 10.9	+0.5	
NOA	**NORSAR Array B** comp=Z,1.5nm,0.9s,baz=133,slow=4.0,SNR=2.5	138.36	355	PKP	PKiKP	16 26 17.1	-0.6	
HFS	**Hagfors** comp=Z,1.1nm,0.4s,baz=77,slow=6.4,SNR=5.3	139.02	353	PKhKP	PKPpre	16 26 09.3		
HFS	comp=Z,2.0nm,0.6s,baz=88,slow=9.5,SNR=4.4			PKP	PKPdf	16 26 17.5	+0.7	
AKASG	**Malin Array Be** comp=Z,0.7nm,0.4s,baz=41,slow=4.2,SNR=6.1	143.40	334	PKhKP	PKPpre	16 26 20.8		
EKA	**Eskdalemuir Ar** comp=Z,2.0nm,0.7s,baz=334,slow=2.4,SNR=6.2	143.85	8	PKhKP	PKPpre	16 26 22.1		
BSEG	**Bad Segeberg** baz=11,slow=2.7	145.47	354	*e*PKPbc	PKPbc	16 26 28.5	-0.2	
WLF1	**Llynfaes**	145.67	10	*e*P	PKPdf	16 26 28.4	-0.4	
SORM	**Soroca**	145.70	331	⇓P	PKPdf	16 26 27.4	-1.6	
LBWR	**Ladybower, Pea**	145.92	7	*e*P	PKPdf	16 26 28.7	-0.6	
IWEX	**Carrickbyrne,**	146.11	13	*e*P	PKPdf	16 26 28.6	-1.0	
LLW	**Llanuwychllyn**	146.21	9	*e*P	PKPdf	16 26 30.0	+0.3	
SBD1	**Bryn Du**	146.21	9	*e*P	PKiKP	16 26 35.7	+1.6	
FOEL	**Foel Wylfa**	146.23	9	*e*P	PKPdf	16 26 29.3	-0.6	
RSBS	**Rosebush, Pemb**	146.90	11	*e*P	PKPbc	16 26 31.9	-1.1	
NRDL	**Niedersach Rie** baz=11,slow=2.7	146.92	354	*e*PKPbc	PKPbc	16 26 33.2	+0.2	
FLTG	**Flechtingen** baz=11,slow=2.7	146.95	353	*e*PKPbc	PKPbc	16 26 32.9	-0.2	
MCH1	**Michaelchurch**	147.13	9	*e*P	PKPbc	16 26 32.9	-0.8	
ASSE	**Asse, Remlinge** baz=11,slow=2.7	147.22	353	*e*PKPbc	PKPbc	16 26 33.2	-0.6	
IBBN	**Ibbenburen** baz=11,slow=2.7	147.29	356	*e*PKPbc	PKPbc	16 26 34.3	+0.2	
MONM	**Monmouth**	147.31	9	*e*P	PKPbc	16 26 33.3	-0.9	
BURAR	**Bucovina Array**	147.46	334	⇓P	PKPbc	16 26 35.5	+0.6	
CLZ	**Clausthal** baz=11,slow=2.7	147.53	353	*e*PKPbc	PKPbc	16 26 35.0	+0.1	
CLL	**Collm** comp=Z,18nm,0.8s	147.70	350	⇓*i*PKPbc	PKPbc	16 26 34.9	-0.4	
CLL	comp=Z,11nm,0.8s			⇑*i*PKPab	PKiKP	16 26 36.9	-0.3	
CLL	**Collm** baz=11,slow=2.7	147.70	350	*e*PKPbc	PKPbc	16 26 35.3	0.0	
CRVS	**Cervenica-Dubn**	147.81	339	*e*PKP	PKPbc	16 26 36.2	+0.5	
GTTG	**Gottingen** baz=11,slow=2.7	147.87	354	*e*PKPbc	PKPbc	16 26 35.9	+0.2	
BRG	**Berggiesshubel**	147.96	349	*i* PKP	PKPbc	16 26 35.9	-0.1	
BRG	comp=Z,7.6nm,0.7s			Amp		16 26 36.5		
BRG	**Berggiesshubel**	147.96	349	P	PKiKP	16 26 37.9	+0.2	
BRG	comp=Z,4.4nm,0.6s			Amp		16 26 38.5		
BRG	**Berggiesshubel** baz=11,slow=2.7	147.96	349	*e*PKPbc	PKPbc	16 26 36.1	+0.2	
DPC	**Dobruska-Polom**	147.97	346	*e*PKP	PKPbc	16 26 36.0	-0.1	
NEUB	**Neuenburg** baz=11,slow=2.7	147.98	352	*e*PKPbc	PKPbc	16 26 36.1	+0.1	
TPGR	**Topolog**	148.03	327	⇓P	PKPbc	16 26 36.8	+0.4	
BRTR	**Keskin Array B** comp=Z,3.6nm,0.8s,baz=158,slow=3.6,SNR=9.1	148.05	315	PKPbc	PKPbc	16 26 36.0	-0.9	
KRLC	**Kraliky**	148.12	345	*e*PKP	PKPbc	16 26 36.5	0.0	
PVCC	**Panska Ves**	148.17	348	*e*PKP	PKPbc	16 26 37.0	+0.4	
BUG	**Bochum--Univer** baz=11,slow=2.7	148.18	357	*e*PKPbc	PKPbc	16 26 36.2	-0.3	
MORC	**Moravsky Berou**	148.20	344	*e*PKP	PKPbc	16 26 36.5	-0.2	
LANS	**Liptovska Anna**	148.23	341	*e*PKP	PKiKP	16 26 37.7	-0.7	
LANS				*e*		16 26 40.6		
HSKC	**Hora Svate Kat**	148.31	349	*e*PKP	PKPbc	16 26 36.9	0.0	
KASTN	**Kahler Asten** baz=11,slow=2.7	148.35	356	*e*PKPbc	PKPbc	16 26 37.0	0.0	
MAUC	**Maruska**	148.50	343	*e*PKP	PKPbc	16 26 37.9	+0.4	
MOX	**Moxa** baz=11,slow=2.7	148.56	352	*e*PKPbc	PKPbc	16 26 37.6	+0.1	
UBBA	**Unterbreizbach** baz=11,slow=2.7	148.58	354	*e*PKPbc	PKPbc	16 26 37.4	0.0	
TANN	**Tannenbergstha** baz=11,slow=2.7	148.66	350	*e*PKPbc	PKPbc	16 26 38.1	+0.2	
TANN	baz=11,slow=2.7			*e*PKPab	PKPab	16 26 41.0	-0.9	
PRU	**Pruhonice**	148.69	348	*e*PKP	PKPbc	16 26 37.7	-0.2	
VRAC	**Vranov**	148.87	345	*e*PKP	PKPbc	16 26 37.7	-0.7	
JAVC	**Velka Javorina**	149.01	343	*e*PKP	PKiKP	16 26 39.6	-0.4	
MEM	**Membach**	149.06	358	*d*PKP	PKPbc	16 26 38.4	-0.4	
MARR	**Marisel-Cluj**	149.07	335	⇑P	PKPbc	16 26 38.0	-1.1	
BTNL	**Ternell**	149.08	358	*d*PKP	PKPbc	16 26 38.6	-0.3	
BSTI	**Sart Tilman**	149.10	359	*d*PKP	PKPbc	16 26 38.9	+0.1	
MANZ	**Manzenberg** baz=11,slow=2.7	149.13	351	*e*PKPbc	PKPbc	16 26 39.4	+0.3	
MANZ				*e*pPKPbc	pPKPbc	16 27 17.3	-0.5	

DRGR		149.13 336	⇑P	PKPdf	16 26 31.3	-3.6
TREC	Trest	149.15 346	*e*PKP	PKiKP	16 26 41.2	+0.9
KRUC	Moravsky	149.15 345	*e*PKP	PKPbc	16 26 38.8	-0.3
ZVC	Zvikov	149.29 348	*e*PKP	PKPbc	16 26 39.6	+0.2
BGES	Gesves	149.30 359	*d*PKP	PKPbc	16 26 38.9	-0.5
BHOU	Houvegnez	149.32 358	*d*PKiKP	PKiKP	16 26 40.2	-0.4
TNS	Taunus Mts	149.32 355	*e*PKPbc	PKPbc	16 26 39.7	+0.1
	baz=11,slow=2.7					
ROTZ	Rotzenmuhle	149.32 350	*e*PKPbc	PKPbc	16 26 39.7	+0.2
	baz=11,slow=2.7					
ROTZ			*ep*PKPbc	pPKPab	16 27 20.0	-2.3
BMRD	Maredsous	149.38 360	*d*PKP	PKPbc	16 26 39.5	-0.1
ARR	Arges	149.47 332	⇑P	PKPdf	16 26 35.6	+0.1
MMAI	Mount Meron Ar	149.52 302	PKPbc	PKPbc	16 26 40.4	-0.2
	comp=Z,5.6nm,0.6s,baz=72,slow=5.5,SNR=24					
RCHB	Rochefort	149.53 359	*d*PKP	PKPbc	16 26 39.6	-0.4
GRF	Grafenberg Arr	149.54 352	*e*PKPbc	PKPbc	16 26 40.4	+0.3
	baz=11,slow=2.7					
MODS	Modra-Piesok	149.56 343	*e*PKP	PKiKP	16 26 40.7	-0.4
DOU	Dourbes	149.59 0	*d*PKP	PKPbc	16 26 39.8	-0.3
KHC	Kasperske Hory	149.70 348	*e*PKP	PKPbc	16 26 39.0	-1.5
WET	Wettzell	149.81 349	*e*PKPbc	PKPbc	16 26 41.0	+0.2
	baz=11,slow=2.7					
CKRC	Cesky Krumlov	149.85 347	*e*PKP	PKPbc	16 26 40.4	-0.4
GEC2	GERESS Array S	149.95 348	*e*PKPbc	PKPbc	16 26 41.1	0.0
	baz=11,slow=2.7					
GERES	GERESS Array B	149.95 348	PKPbc	PKPbc	16 26 41.1	0.0
	comp=Z,4.5nm,0.8s,baz=27,slow=3,3,SNR=14					
SIRR	Siria	149.98 336	⇑P	PKPbc	16 26 40.1	-1.1
JSA	Saint Aubin	149.99 9	*e*P	PKPbc	16 26 40.5	-0.6
WLF	Walferdange	150.00 358	*d*PKP	PKPbc	16 26 40.5	-0.6
WLF			*d*PKiKP	PKiKP	16 26 41.6	-0.4
WLF	Walferdange	150.00 358	*e*PKPbc	PKiKP	16 26 42.0	0.0
	baz=11,slow=2.7					
SURR	Surduc	150.22 335	⇑P	PKPbc	16 26 40.4	-1.4
CONA	Conrad Observa	150.34 345	*i* PKP	PKPbc	16 26 42.1	0.0
	comp=Z,17nm,1.5s					
RONA	Rosalia, Austr	150.44 344	*i* PKP	PKPbc	16 26 42.2	-0.1
	comp=Z,13nm,0.7s,SNR=9.6					
BZS	Buzias	150.53 335	⇑P	PKPbc	16 26 41.7	-0.9
STU	Stuttgart	150.69 354	*e*PKPbc	PKiKP	16 26 43.1	-0.3
	baz=11,slow=2.7					
ELND	Elena	150.69 327	⇓P	PKPbc	16 26 41.5	-1.6
HERR	Herculane	150.81 334	⇑P	PKPbc	16 26 42.8	-0.4
PLVB	Pleven	150.98 329	⇓P	PKPbc	16 26 43.1	-0.6
FUR	Furstenfeldbru	151.03 351	*e*PKPbc	PKPbc	16 26 43.7	+0.1
	baz=11,slow=2.7					
ARSA	Arzberg	151.05 345	*e*PKP	PKPbc	16 26 43.1	-0.7
	comp=Z,4.6nm,1.0s					
BIOA	Bad Ischl, Aus	151.06 347	*e*PKP	PKPbc	16 26 43.4	-0.3
	comp=Z,5.1nm,0.8s					
MORH	Mrgy, Hungar	151.09 340	⇓P	PKPbc	16 26 43.1	-0.7
MDVR	Moldovita	151.18 334	⇓P	PKPbc	16 26 43.4	-0.8
BFO	Black Forest	151.21 355	*e*PKPbc	PKPbc	16 26 44.1	0.0
	baz=11,slow=2.7					
LESA	Schwarzleotal	151.51 349	*i* PKP	PKPbc	16 26 44.4	-0.5
	comp=Z,4.3nm,0.6s					
UBR	Ueberruh	151.66 352	*e*PKPbc	PKPbc	16 26 45.1	-0.1
	baz=11,slow=2.7					
BLKB	Belogradchik	151.71 332	⇓P	PKPbc	16 26 44.3	-1.1
SOKA	Soboth	151.71 345	*i* PKP	PKPbc	16 26 44.4	-0.9
	comp=Z,9.6nm,1.1s,SNR=4.4					
KBA	Koelnbreinsper	151.71 347	*i* PKP	PKPbc	16 26 45.2	-0.3
	comp=Z,6.5nm,0.5s					
RETA	Reutte	151.76 351	*i* PKP	PKPbc	16 26 45.2	-0.3
	comp=Z,5.7nm,0.6s					
WATA	Walderalm	151.79 350	*i* PKP	PKPbc	16 26 44.9	-0.7
	comp=Z,9.0nm,0.5s,SNR=4.3					
WTTA	Wattenberg	151.85 350	*i* PKP	PKPbc	16 26 45.4	-0.4
	comp=Z,22nm,0.6s					
MOTA	Moosalm	151.85 351	*i* PKP	PKPbc	16 26 45.4	-0.3
	comp=Z,10nm,0.8s,SNR=5.0					
SQTA	Sankt Quirin	151.96 351	*i* PKP	PKPbc	16 26 45.5	-0.5
	comp=Z,11nm,0.6s,SNR=4.9					
OBKA	Obir	151.98 345	*i* PKP	PKPbc	16 26 45.5	-0.5
	comp=Z,10nm,1.5s					
MYKA	Terra Mystica	152.07 347	*i* PKP	PKPbc	16 26 45.0	-1.2
	comp=Z,7.7nm,0.6s,SNR=4.5					
DAVA	Damuels	152.08 352	*e*PKiKP	PKiKP	16 26 46.5	0.0
	comp=Z,5.3nm,0.6s					
ABTA	Abfaltersbach	152.19 348	*i* PKP	PKPbc	16 26 45.3	-1.2
	comp=Z,14nm,0.6s,SNR=12					
FETA	Feichten	152.22 351	*i* PKP	PKPbc	16 26 46.2	-0.4
	comp=Z,8.1nm,0.7s,SNR=6.3					
VNDS	Vrh nad Dolski	152.33 345	*i* PKPbc	PKPbc	16 26 46.0	-0.7
LJU	Ljubljana	152.42 345	*i* PKPbc	PKPbc	16 26 46.4	-0.5
GBRS	Gornja Briga	152.83 344	*i* PKPbc	PKPbc	16 26 47.4	-0.5
ESDC	Sonseca Array	158.67 19	PKPab	PKPab	16 27 24.4	-0.1
	comp=Z,1.7nm,0.8s,baz=323,slow=1.6,SNR=5.3					
TORD	Torodi Ar. Bea	172.96 156	PKP	PKPdf	16 26 59.8	-0.9
	comp=Z,2.0nm,0.9s,baz=2.0,slow=2.3,SNR=9.5					
TORD			PKPab	PKPab	16 28 29.4	+1.6
	comp=Z,0.8nm,0.8s,baz=188,slow=2.2,SNR=4.2					

NNC ***05*** *16:08:59.7±3.6,39.30N×74.23E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=26.7km s-min=14.7km az=165.0*
SOME ***05*** *16:09:01.1,39.38N×74.02E,h10km*
KRNET ***05*** *16:09:06.7±0.1,39.64N×73.94E,h13km,mb3.2*
ISC 05 16:09:08.1±1.3,39.71N±0.06×73.93E±0.03,h10km,n39, σ2s06/69,15C-25D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.45**	**313**	⇓*i*P			**Pg**	**16 09 16.6**	**-0.4**
	baz=18								
SFK				⇓*i*S			**Sg**	**16 09 23.7**	**+0.8**
	baz=18								
OHH	**Osh**	**1.20**	**313**	⇓*i*P			**Pb**	**16 09 30.6**	**-0.4**
	baz=15								
OHH				⇓*i*S			**Sn**	**16 09 47.7**	**+0.3**
	baz=15								
DRK	**Karamyk**	**1.66**	**263**	⇓*e*P			**Pb**	**16 09 37.4**	**-1.6**
	baz=65								
DRK				⇓*e*S			**Sg**	**16 10 00.5**	**-1.1**
	baz=65								
ARSB	**Arslanbob**	**1.77**	**336**	⇓*i*P			**Pb**	**16 09 40.5**	**-0.2**
	baz=37								
ARSB				⇓*i*S			**Sg**	**16 10 05.5**	**+0.5**
	baz=37								
ARLS	**Aral**	**2.17**	**8**	⇑*i*P			**Pb**	**16 09 46.8**	**-0.8**
	baz=7.0								
ARLS				⇑*i*S			**Sb**	**16 10 15.8**	**+1.2**
	baz=7.0								
NRN	**Naryn**	**2.33**	**42**	⇓*i*P			**Pb**	**16 09 48.5**	**-2.0**
	baz=40								
NRN				⇓*i*S			**Sb**	**16 10 19.0**	**-0.5**
	baz=40								
BTK	**Batken**	**2.42**	**279**	⇑*i*P			**Pb**	**16 09 50.2**	**-1.6**
	baz=81								
BTK				⇑*i*S			**Sb**	**16 10 21.6**	**-0.1**
	baz=81								
UCH	**Uchtor**	**2.56**	**10**	⇓*e*P			**Pb**	**16 09 52.4**	**-1.9**
	baz=9.0								
UCH				⇓*i*S			**Sb**	**16 10 25.6**	**-0.4**
	baz=9.0								
ARK	**Arkit**	**2.57**	**325**	⇓*i*P			**Pb**	**16 09 52.3**	**-2.0**
	baz=26								
ARK				⇓*i*S			**Sb**	**16 10 25.6**	**-0.4**
	baz=26								
TRKS	**Terek-Say**	**2.80**	**311**	⇑*i*P			**Pn**	**16 09 54.4**	**+1.3**
	baz=12								
TRKS				⇑*i*S			**Sn**	**16 10 29.4**	**+2.4**
	baz=12								
EKS2	**Erkin-Say**	**2.95**	**358**	⇓*i*P			**Pb**	**16 09 57.9**	**-3.0**
	baz=58								
EKS2				⇓*i*S			**Sb**	**16 10 34.8**	**-2.3**
	baz=58								
AAK	**Ala-Archa**	**2.96**	**8**	⇓*e*P			**Pb**	**16 09 57.8**	**-3.2**
	baz=8.0								
AAK				⇓*i*S			**Sb**	**16 10 35.2**	**-2.0**
	baz=8.0								
MNAS	**Manas**	**2.98**	**339**	⇓*i*P			**Pb**	**16 09 58.2**	**-3.1**
	baz=40								
MNAS				⇓*i*S			**Sb**	**16 10 35.6**	**-2.2**
	baz=40								
KBK	**Karagaybulak**	**3.04**	**14**	⇑*e*P			**Pn**	**16 09 59.0**	**+2.5**
	baz=14								
KBK				⇑*i*S			**Sb**	**16 10 37.1**	**-2.6**
	baz=14								
MRKS	**Merke**	**3.08**	**350**	Pg			**Pb**	**16 10 00.1**	**-2.9**
	4.5nm,0.8s								
MRKS				Lg			Lg	16 10 48.0	
	24nm,0.6s								
MRKS	**Merke**	**3.08**	**350**	*e*P			**Pb**	**16 10 03.3**	**+0.3**
	7.4nm,0.4s								
MRKS				*e*S			**Sg**	**16 10 48.0**	**+1.0**
	24nm,0.6s								
FRU1	**Bishkek**	**3.14**	**9**	⇓*i*P			**Pb**	**16 10 00.6**	**-3.5**
	baz=9.0								
FRU1				⇓*i*S			**Sb**	**16 10 39.7**	**-2.8**
	baz=9.0								
TKM2	**Tokmak 2**	**3.45**	**21**	⇑Pg			**Pb**	**16 10 08.1**	**-1.2**
	3.8nm,0.6s								
TKM2				⇑Lg			Lg	16 10 58.9	
	12nm,0.9s								
KDJ	**Kajisay**	**3.45**	**44**	⇑*e*P			**Pn**	**16 10 04.3**	**+2.2**
	baz=44								
KDJ				⇑*i*S			**Sn**	**16 10 46.7**	**+3.6**
	baz=44								
USP	**Ospenovka**	**3.58**	**7**	⇓*i*P			**Pn**	**16 10 06.5**	**+2.8**
	baz=6.0								
USP				⇓*i*S			**Sn**	**16 10 49.9**	**+3.8**
	baz=6.0								
KST	**Kastek**	**3.67**	**24**	Pg			**Pb**	**16 10 10.9**	**-2.1**
	2.9nm,0.7s								
KST				Lg			Lg	16 11 06.5	
	23nm,0.8s								
KST	**Kastek**	**3.67**	**24**	*e*P			**Pb**	**16 10 13.9**	**+0.9**
	5.5nm,0.5s								
KST				*e*S			**Sg**	**16 11 06.5**	**+0.7**
	23nm,0.8s								
SGDS	**Sogindy**	**3.78**	**8**	Pg			**Pb**	**16 10 14.1**	**-0.8**
	5.7nm,0.6s								
SGDS				Lg			Lg	16 11 11.6	
	53nm,0.9s								
IZV	**Izvestkoviy**	**3.89**	**30**	Pg			**Pb**	**16 10 15.8**	**-1.0**
	2.5nm,0.7s								
IZV				Lg			Lg	16 11 15.1	
	15nm,0.7s								
IZV	**Izvestkoviy**	**3.89**	**30**	*e*P			**Pb**	**16 10 19.0**	**+2.2**
	1.9nm,0.4s								
IZV				*e*S			**Sg**	**16 11 15.1**	**+2.1**
	11nm,0.3s								
MTBS	**Maitube**	**3.90**	**28**	Pg			**Pb**	**16 10 13.7**	**-3.3**
	7.6nm,0.5s								
MTBS				Lg			Lg	16 11 11.2	
	5.5nm,0.6s								
MTBS	**Maitube**	**3.90**	**28**	*e*P			**Pb**	**16 10 17.0**	**0.0**
	5.0nm,0.4s								
MTBS				*e*S			**Sg**	**16 11 11.2**	**-2.1**
	5.5nm,0.6s								
TNSS	**Tian-Shan**	**4.03**	**33**	Pg			**Pb**	**16 10 17.5**	**-1.8**
TNSS				Lg			Lg	16 11 17.4	
TNSS	**Tian-Shan**	**4.03**	**33**	*e*P			**Pb**	**16 10 21.6**	**+2.2**
TNSS				*e*S			**Sg**	**16 11 19.1**	**+1.7**
MDOK	**Medeo**	**4.17**	**33**	Pg			**Pb**	**16 10 19.1**	**-2.5**
	2.8nm,0.6s								
MDOK				Pg			**Pg**	**16 10 23.7**	**-4.3**
	7.5nm,0.7s								
MDOK				⇑Lg			Lg	16 11 20.9	
	13nm,0.8s								
MDOK				Lg			Lg	16 11 20.9	
	11nm,0.8s								
MDOK	**Medeo**	**4.17**	**33**	*e*P			**Pb**	**16 10 22.7**	**+1.1**
	2.2nm,0.6s								
MDOK				*e*S			**Sg**	**16 11 20.9**	**-1.1**
	11nm,0.8s								
KRBS	**Karabastau**	**4.19**	**18**	Pg			**Pb**	**16 10 20.1**	**-1.9**
	1.1nm,0.6s								
KRBS				Lg			Lg	16 11 22.5	
	4.6nm,0.4s								
KRBS	**Karabastau**	**4.19**	**18**	*e*P			**Pb**	**16 10 23.8**	**+1.8**
	2.1nm,0.4s								
KRBS				*e*S			**Sg**	**16 11 22.5**	**-0.2**
	4.6nm,0.4s								
KOTS	**Kotyrbulak**	**4.26**	**33**	Pg			**Pb**	**16 10 21.0**	**-2.1**
	3.7nm,0.5s								
KOTS				Lg			Lg	16 11 24.0	
	24nm,0.6s								
KOTS	**Kotyrbulak**	**4.26**	**33**	*e*P			**Pb**	**16 10 24.3**	**+1.2**
	3.7nm,0.5s								
KOTS				*e*S			**Sg**	**16 11 23.8**	**-0.9**
	24nm,0.6s								
KK31	**Karatay Array**	**4.26**	**324**	Pn			**Pn**	**16 10 15.2**	**+2.2**
	2.2nm,0.6s,baz=131,slow=13,SNR=30								
KK31				⇓Pg			**Pb**	**16 10 25.6**	**+2.6**
	0.9nm,0.3s,baz=144,slow=15,SNR=5.6								
KK31				⇑Sn			**Sb**	**16 11 10.6**	**-3.9**
	3.3nm,0.6s								
KK31				⇑Lg			Lg	16 11 26.8	
	5.4nm,0.6s,baz=148,slow=29								
KUU	**Kurty**	**4.55**	**22**	*e*P			**Pb**	**16 10 30.1**	**+2.0**
	3.4nm,0.1s								
KUU				*e*S			**Sg**	**16 11 34.0**	**-0.2**
	6.8nm,0.6s								
CHKK	**Chushkaly**	**4.73**	**28**	Pg			**Pb**	**16 10 28.7**	**-2.4**
	0.6nm,0.1s								
CHKK				Lg			Lg	16 11 37.6	
	8.6nm,0.7s								
CHKK	**Chushkaly**	**4.73**	**28**	*e*P			**Pb**	**16 10 33.4**	**+2.3**
	0.9nm,0.1s								
CHKK				*e*S			**Sg**	**16 11 39.5**	**-0.4**
	8.6nm,0.7s								

IDC 05 16:11:09.7±7.7,18.43S×178.19W,h0km,mb3.5/2, mbtmp3.5/2,Error ellipse: s-maj=356.6km s-min=118.0km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.75**	**260**	P			P	16 19 26.1	+0.8
	0.2nm,0.3s,baz=91,slow=8.3,SNR=1.4								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**44.86**	**255**	P			P	16 19 25.2	-0.9
	0.4nm,0.3s,baz=95,slow=7.5,SNR=4.8								
	0.4nm,0.3s								
AKASG	**Malin Array Be**	**141.12**	**332**	PKP			PKPdf	16 30 41.6	-0.4
	0.9nm,0.4s,baz=44,slow=3.9,SNR=4.9								

TAP ***05*** *16:32:06.4,24.11N×121.74E,h8km,ML4.3,C*
ASIES ***05*** *16:32:06.4,24.11N×121.74E,h8km,ML4.3,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 1022Nm; Mrr~0.31; Mθθ-0.82; Mφφ0.88; Mrθ-0.19; Mφθ-1.18; Mφr~0.04: Fault plane solution: M0 1.48689×1022 NP1: φs108.27000°,δ84.65000°,λ-172.22000°. NP2: φs17.54000°,δ82.25000°,λ-5.40000°. Principal axes: T Plg1.6860°, Azm242.7690°; N Plg80.5640°, Azm142.5700°; P Plg9.2820°, Azm333.0450°;*
NIED ***05*** *16:32:06.9,24.07N×121.69E,h0km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 1015Nm; Mrr-0.07; Mθθ-1.38; Mφφ1.45; Mrθ2.09; Mθφ-2.05; Mφr0.62; Fault plane solution: M03.17000×1015 NP1: φs289.00000°,δ78.00000°,λ-148.00000°. NP2: φs192.00000°,δ59.00000°,λ-14.00000°.*
JMA ***05*** *16:32:06.9±0.2,24.1N±0.2×121.7E±0.3,h0km±1km, MD4.4/13,MV4.0/13,TAIWAN REGION*
IDC ***05*** *16:32:06.1±0.9,24.01N×121.79E,h0km,mb3.5/10, mbtmp3.5/10,MS3.5/12,Error ellipse: s-maj=32.2km s-min=18.8km az=66.0*
ISC 05 16:32:06.2±1.1,24.09N±0.01×121.80E±0.02,h0km±8km, n202,σ0s74/257,mb3.6/10,MS3.6/7,24C-33D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.17**	**294**	⇓*i*P			**Pg**	**16 32 09.6**	**0.0**
	baz=295								
ETL				*i* S			**Sg**	**16 32 11.9**	**0.0**
	baz=295								
TWD	**Chiawan**	**0.18**	**268**	⇑*i*P			**Pg**	**16 32 09.8**	**0.0**
	baz=268								
TWD				*i* S			**Sg**	**16 32 12.0**	**-0.2**
	baz=268								
NACB	**Ninganchiao**	**0.20**	**295**	P			**Pg**	**16 32 10.1**	**-0.1**
NACB	**Ninganchiao**	**0.20**	**295**	⇓*i*P			**Pg**	**16 32 10.0**	**-0.1**
	baz=288								
NACB				*i* S			**Sg**	**16 32 12.3**	**-0.5**
	baz=288								
HWA	**Hwalien**	**0.21**	**238**	⇑*i*P			**Pg**	**16 32 11.4**	**+1.1**
	baz=238								
EHP	**Heping Village**	**0.23**	**347**	*i* P			**Pg**	**16 32 11.2**	**+0.6**
	baz=359								
EHP				*i* S			**Sg**	**16 32 14.3**	**+0.8**
	baz=359								
EAHA	**Aohua**	**0.25**	**347**	⇓P			**Pg**	**16 32 11.4**	**+0.4**
	baz=357								
EAHA				S			**Sg**	**16 32 14.8**	**+0.6**
	baz=357								
ETM	**Tongmen**	**0.30**	**247**	⇑*i*P			**Pg**	**16 32 12.2**	**+0.2**
	baz=243								
ETM				S			**Sg**	**16 32 16.2**	**+0.2**
	baz=243								
ETLH	**Xiulin Townshi**	**0.31**	**292**	⇓P			**Pg**	**16 32 12.1**	**-0.2**
	baz=293								
ETLH				S			**Sg**	**16 32 16.2**	**-0.1**
	baz=293								
ENA	**Nanau**	**0.34**	**351**	⇓*i*P			**Pg**	**16 32 13.3**	**+0.4**
	baz=359								
ENA				S			**Sg**	**16 32 17.5**	**+0.2**
	baz=359								
EWUT	**Wuta**	**0.36**	**357**	⇓*i*P			**Pg**	**16 32 13.7**	**+0.6**
	baz=3.0								
EWUT				S			**Sg**	**16 32 18.4**	**+0.7**
	baz=3.0								
LXIB	**Xiulin Townshi**	**0.36**	**259**	⇑*i*P			**Pg**	**16 32 13.0**	**-0.1**
	baz=257								
LXIB				*e*S			**Sg**	**16 32 17.6**	**-0.2**
	baz=257								
SHUL	**Shoufeng**	**0.37**	**216**	*e*P			**Pb**	**16 32 15.0**	**-0.6**
	baz=211								
ESL	**Shilin**	**0.43**	**231**	⇑*i*P			**Pg**	**16 32 14.8**	**+0.3**
	baz=238								
TEGC	**Jichi Village**	**0.44**	**212**	*e*P			**Pb**	**16 32 17.1**	**+0.1**
	baz=211								
EOS4	**EOS4**	**0.48**	**86**	*e*P			**Pn**	**16 32 19.5**	**-0.5**
	baz=88								
ESAO	**Su ao**	**0.49**	**5**	⇓*e*P			**Pb**	**16 32 16.2**	**-1.5**
	baz=3.0								
ESAO				*e*S			**Sg**	**16 32 22.5**	**+0.5**
	baz=3.0								
WHF	**Hehuan Shan**	**0.49**	**277**	⇑P			**Pg**	**16 32 15.5**	**-0.1**
	baz=276								
WHF				S			**Sg**	**16 32 21.3**	**-0.8**
	baz=276								
NNSB	**Datong**	**0.51**	**312**	⇓*i*P			**Pg**	**16 32 16.1**	**+0.1**
	baz=314								
NNSB				*i* S			**Sg**	**16 32 22.1**	**-0.5**
	baz=314								
NNSH	**Datong**	**0.51**	**312**	⇓*i*P			**Pg**	**16 32 16.1**	**+0.1**
	baz=313								
NNSH				*e*S			**Sg**	**16 32 22.1**	**-0.5**
	baz=313								
LATG	**Datong**	**0.51**	**331**	⇓*i*P			**Pg**	**16 32 16.3**	**+0.2**
	baz=334								
LATG				S			**Sg**	**16 32 22.8**	**+0.1**
	baz=334								
EOS3	**EOS3**	**0.51**	**67**	*e*P			**Pn**	**16 32 19.9**	**-0.8**
	baz=48								
EOS2	**EOS2**	**0.52**	**50**	*e*P			**Pn**	**16 32 19.2**	**-1.5**
	baz=29								
TWC	**Suao**	**0.52**	**5**	⇓*i*P			**Pb**	**16 32 17.1**	**-1.2**
	baz=4.0								
TWC				*e*S			**Sg**	**16 32 23.4**	**+0.3**
	baz=4.0								
NNS	**Nan Shan**	**0.52**	**312**	⇓*i*P			**Pg**	**16 32 16.3**	**0.0**
	baz=314								
NNS				*i* S			**Sg**	**16 32 22.9**	**-0.1**
	baz=314								
WARBT	**Fenglin Townsh**	**0.53**	**226**	P			**Pg**	**16 32 16.6**	**+0.3**
	baz=233								
WARBT				*e*S			**Sg**	**16 32 25.3**	**+2.2**
	baz=233								
FUSS	**Fushou**	**0.53**	**288**	⇓*i*P			**Pg**	**16 32 16.6**	**+0.2**
	baz=288								
FUSS				*e*S			**Sg**	**16 32 23.3**	**0.0**
	baz=288								
EGFH	**Guangfu**	**0.54**	**219**	*e*P			**Pg**	**16 32 17.4**	**+0.9**
	baz=230								
NDS	**Dongshan**	**0.55**	**352**	⇓*e*P			**Pg**	**16 32 17.2**	**+0.5**
	baz=355								
NDS				S			**Sg**	**16 32 24.9**	**+1.0**
	baz=355								
CHGB	**Renai**	**0.57**	**267**	⇑*i*P			**Pg**	**16 32 17.3**	**+0.1**
	baz=260								
CHGB				*i* S			**Sg**	**16 32 24.0**	**-0.6**
	baz=260								
NDT	**Datong Townshi**	**0.57**	**333**	⇓P			**Pg**	**16 32 17.7**	**+0.4**
	baz=335								
NDT				S			**Sg**	**16 32 25.4**	**+0.6**
	baz=335								
OWD	**Renai**	**0.58**	**257**	⇑P			**Pg**	**16 32 17.4**	**0.0**
	baz=257								
ENTT	**Nioudou**	**0.59**	**339**	⇓*i*P			**Pg**	**16 32 17.9**	**+0.4**
	baz=342								
ENTT				S			**Sg**	**16 32 25.8**	**+0.6**
	baz=342								
TWT	**Tachien**	**0.59**	**286**	P			**Pg**	**16 32 18.1**	**+0.5**
	baz=286								
TWT				*i* S			**Sg**	**16 32 25.1**	**-0.1**
	baz=286								
TDCB	**Techi**	**0.61**	**286**	P			**Pg**	**16 32 18.1**	**+0.2**
	baz=286								
TDCB				*i* S			**Sg**	**16 32 25.3**	**-0.5**
	baz=286								
WUSB	**Renai**	**0.63**	**261**	⇑*i*P			**Pg**	**16 32 18.6**	**+0.2**
	baz=261								
WUSB				S			**Sg**	**16 32 25.9**	**-0.5**
	baz=261								
TWE	**Neicheng**	**0.64**	**349**	⇓*i*P			**Pg**	**16 32 19.1**	**+0.6**
	baz=353								
TWE				S			**Sg**	**16 32 27.4**	**+0.5**
	baz=353								
ILA	**Ilan**	**0.68**	**356**	*e*P			**Pb**	**16 32 19.9**	**-1.1**
	baz=345								
HGSD	**Ruisui**	**0.68**	**210**	*e*P			**Pb**	**16 32 21.2**	**+0.1**
	baz=200								
VWDT	**VWDT**	**0.69**	**241**	⇑*i*P			**Pg**	**16 32 19.7**	**+0.3**
	baz=248								
FUSB	**Fushanzhiwuyua**	**0.70**	**344**	⇓*i*P			**Pg**	**16 32 20.2**	**+0.6**
	baz=337								
FUSB				S			**Sg**	**16 32 28.7**	**0.0**
	baz=337								
YHNB	**Yeheng**	**0.70**	**326**	P			**Pg**	**16 32 20.2**	**+0.6**
YHNB	**Yeheng**	**0.70**	**326**	⇓*i*P			**P

TYC Yuchr 0.88 258⇑*i*P Pg 16 32 23.0 -0.1
baz=259
TYC eS Sg 16 32 33.2 -1.3
baz=259
TIPB Shuangxi 0.88 2⇓*i*P Pb 16 32 23.7 -0.8
baz=2.0
TIPB S Sg 16 32 34.9 +0.3
baz=2.0
LIOB Emei 0.90 308⇓*i*P Pg 16 32 24.2 +0.6
baz=309
LIOB S Sg 16 32 35.1 -0.2
baz=309
NSTT Nanjuang 0.91 307⇓*i*P Pg 16 32 24.1 +0.5
baz=307
NSTT *i* S Sg 16 32 35.0 -0.3
baz=307
NHDH Xindian Distri 0.91 344 ⇓P Pb 16 32 24.3 -0.5
baz=345
NHDH eS Sg 16 32 34.7 -0.7
baz=345
TWA Mucha 0.91 348⇓*i*P Pb 16 32 24.3 -0.6
baz=349
TWA S Sg 16 32 35.4 -0.2
baz=349
NJD Zhudong 0.91 315 *e*P Pb 16 32 25.0 0.0
baz=314
TATO Taipei 0.93 342 P Pb 16 32 24.9 -0.3
TATO Taipei 0.93 342⇓*i*P Pb 16 32 24.8 -0.4
baz=343
TATO *i* S Sg 16 32 35.6 -0.5
baz=343
TWB1 Santiao Chiao 0.93 11 *e*P Pb 16 32 24.6 -0.7
WHYT Xinyi Township 0.95 246 *e*P Pg 16 32 24.5 +0.1
baz=255
WHYT eS Sb 16 32 38.8 +0.1
baz=255
BACT New Taipei Cit 0.96 340 *e*P Pg 16 32 24.8 +0.1
baz=339
CHKH Chenggong 0.96 203 *e*P Pb 16 32 25.2 -0.6
baz=196
NHY Taipei 0.97 348 *e*P Pb 16 32 25.8 -0.2
baz=346
TWQ1 Liyutan 0.97 286 *e*P Pg 16 32 25.7 +0.8
baz=285
NWF Wu-fen Shan 0.98 359 ⇓P Pb 16 32 25.9 -0.2
baz=352
NWF S Sg 16 32 38.0 +0.2
baz=352
WFSB Wu-fen Shan 0.98 359⇓*i*P Pb 16 32 25.9 -0.1
baz=352
WFSB *i* S Sg 16 32 38.0 +0.2
baz=352
TAP Taipei 0.98 344 *e*P Pb 16 32 25.8 -0.4
baz=343
HSN1 Hsinchu 0.99 314 *e*P Pg 16 32 25.8 +0.6
baz=313
FULB Fuli 1.00 208 *e*P Pb 16 32 26.3 -0.1
baz=225
SXI1 Grass Mountain 1.00 4⇓*i*P Pn 16 32 26.5 -1.1
baz=4.0
SXI1 eS Sb 16 32 39.9 -0.5
baz=4.0
WWF Wufeng 1.01 268⇑*e*P Pb 16 32 26.9 +0.3
baz=262
WWF eS Sb 16 32 40.6 +0.3
baz=262
WJS Zhushan 1.01 255 *e*P Pb 16 32 26.7 +0.1
baz=256
NTY Taoyuan 1.02 333 *e*P Pn 16 32 27.1 -0.6
baz=324
SBCB Hsinchu 1.02 314 *e*P Pb 16 32 26.9 +0.2
baz=312
NMLH Miaoli 1.02 296 *e*P Pb 16 32 27.1 +0.3
baz=295
TCU Taichung 1.03 274⇑*e*P Pb 16 32 27.0 +0.1
baz=267
TCU eS Sg 16 32 40.6 +1.3
baz=267
NJN Zhunan 1.03 305 *e*P Pb 16 32 27.0 0.0
baz=304
HSN Hsinchu 1.04 313 *e*P Pg 16 32 26.7 +0.6
baz=316
HSN eS Sg 16 32 40.9 +1.2
baz=316
WNT1 Nantou City 1.04 260 *e*P Pb 16 32 27.2 +0.1
baz=257
WNT1 eS Sb 16 32 41.6 +0.4
baz=257
NCUH Zhongli 1.04 328 *e*P Pb 16 32 27.3 +0.2
baz=328
NCUH eS Sn 16 32 42.3 -1.0
baz=328
NCU National Centr 1.04 328 *e*P Pn 16 32 27.5 -0.5
baz=326
WNT Mingjian 1.04 259 P Pb 16 32 27.6 +0.5
baz=260
WNT eS Sg 16 32 41.5 +1.8
baz=260
TNOU National Taiwa 1.06 359 *e*P Pb 16 32 27.1 -0.3
baz=356
CHKT Chengkung 1.06 202 *e*P Pb 16 32 27.2 -0.2
baz=196
TWS1 Kuangyinshan 1.07 341 P Pn 16 32 27.9 -0.5
baz=342
TWS1 eS Sb 16 32 41.8 -0.3
baz=342
YM01 YM01 1.07 349 ⇓P Pb 16 32 27.7 0.0
baz=349
YM01 eS Sg 16 32 40.9 +0.1
baz=349
ALS Alishan 1.08 238 ⇑P Pg 16 32 27.1 +0.2
baz=240
EHD Haiduan 1.08 210 *e*P Pg 16 32 26.7 -0.3
baz=225
WDJ Dajia District 1.09 284⇑*e*P Pn 16 32 28.9 +0.1
baz=284
JYNG Yonagunijimaku 1.11 71 P Pn 16 32 30.2 +1.3
JYNG S Sn 16 32 46.6 +1.7
JYNG Yonagunijimaku 1.11 71 A A 16 32 30.2
comp=E,7.0nm,4.3s,comp=N,7.0nm,2.8s
NTST Danshui 1.12 344 *e*P Pn 16 32 29.1 -0.1
baz=340
NWRT Kuosheng 1.12 354 *e*P Pb 16 32 28.2 -0.3
baz=348
ECS Chishang 1.12 208 *e*P Pg 16 32 28.0 +0.2
baz=214
WYL Yuanlin Townsh 1.12 264 *e*P Pg 16 32 27.6 -0.1
baz=265
WYL eS Sg 16 32 43.2 +0.9
baz=265
ANP Anpu 1.12 347 ⇓P Pb 16 32 28.4 -0.2
baz=344
WCHH Zhanghua 1.13 270 *e*P Pn 16 32 29.5 +0.2
baz=270
CHN5 Tsauling 1.14 245⇑*i*P Pb 16 32 28.9 +0.2
baz=247
CHN5 S Sb 16 32 45.2 +1.1
baz=247
NHW Xinwu Township 1.14 323 *e*P Pn 16 32 29.3 -0.2
baz=321
ELDTW Lidau 1.15 219 *e*P Pg 16 32 27.2 -1.0
baz=223
YOJ Yonaguni jima 1.17 71 P Pn 16 32 31.9 +2.1
YOJ Yonaguni jima 1.17 71 *e*P Pn 16 32 29.8 0.0
baz=67
YOJ Yonaguni jima 1.17 71 *e*P Pn 16 32 31.3 +1.5
YOJ S Sn 16 32 48.7 +2.2
YOJ Yonaguni jima 1.17 71 A A 16 32 31.3
comp=E,7.0nm,2.1s,comp=N,7.0nm,1.9s
TWY Chenhua 1.20 351 *e*P Pn 16 32 29.6 -0.6
baz=334
WGK Gukeng 1.20 251 *e*P Pn 16 32 30.2 0.0
baz=253
WDLH Douliu 1.22 251 *e*P Pg 16 32 29.8 +0.1
baz=253
WCKO Fanlu 1.27 240⇑*e*P Pn 16 32 30.9 -0.3
baz=242
WCKO eS Sb 16 32 48.5 +0.5
baz=242
STYH Taoyuan 1.31 226 *e*P Pn 16 32 31.3 -0.4
baz=215
WRL Guolierlin Hig 1.31 262 *e*P Pn 16 32 31.3 -0.5
baz=264
CHN4 Tsaushan 1.32 237⇑*i*P Pg 16 32 32.2 +0.6
baz=227
CHN4 eS Sn 16 32 51.8 +1.4
baz=227
LONT Longtian 1.33 208 *e*P Pn 16 32 30.3 -1.7
baz=213
STYT Tauyuan 1.33 226⇑*i*P Pn 16 32 31.3 -0.7
baz=215
TPUB Ta-pu 1.33 234 P Pg 16 32 32.3 +0.6
TPUB Ta-pu 1.33 234 ⇑P Pg 16 32 32.1 +0.5
baz=238
RLNB Erlin 1.33 262 *e*P Pg 16 32 32.6 +0.9
baz=263
RLNB eS Sg 16 32 50.0 +1.0
baz=263
CHN2 Minshiung 1.33 246 *e*P Pg 16 32 32.6 +0.9
baz=249
WTK Tuku 1.35 253 *e*P Pg 16 32 32.8 +0.6
baz=256
WTP Ta-pu 1.37 233 *e*P Pb 16 32 32.8 0.0
baz=236
WTCT Ta-ch'eng 1.41 261 *e*P Pb 16 32 33.5 +0.2
baz=263
WTCT eS Sb 16 32 52.0 +0.3
baz=263
TWG Pinlang 1.43 208 *e*P Pn 16 32 31.6 -1.8
baz=214
TWGBT Beinan 1.43 208 P Pn 16 32 31.4 -2.0
TWGBT Beinan 1.43 208 *e*P Pn 16 32 31.2 -2.1
baz=214
TWK Hsinying 1.45 236 *e*P Pb 16 32 34.0 -0.2
baz=239
CHN1 Nanshi 1.47 233 *e*P Pg 16 32 35.0 +0.5
baz=236
SNST Tainan City 1.47 234 *e*P Pg 16 32 35.2 +0.7
baz=238
SGST Jiashian 1.50 228 *e*P Pn 16 32 34.0 -0.4
baz=232
WSF Szhu 1.51 253 *e*P Pb 16 32 35.1 0.0
baz=256
SLGT Liugui 1.52 224 *e*P Pb 16 32 35.2 0.0
baz=216
PCYT Pengchaiyu 1.56 9 *e*P Pb 16 32 35.1 -0.8
baz=3.0
ICHU Yijhu 1.57 243 *e*P Pb 16 32 36.2 +0.1
baz=246
CHN8 Yiju 1.63 243 *e*P Pn 16 32 35.7 -0.5
baz=246
CHN3 Shinhua 1.66 233 *e*P Pb 16 32 37.1 -0.4
baz=237
ECL Taimali 1.67 208 *e*P Pn 16 32 35.9 -0.9
baz=201
SCST Cishan 1.69 225 *e*P Pg 16 32 39.0 +0.3
baz=218
SHHT Tainan City 1.70 232 *e*P Pg 16 32 39.4 +0.5
baz=236
SSD Sandimen 1.71 219 *e*P Pn 16 32 36.8 -0.5
baz=215
SCLT Jiali 1.73 239 *e*P Pn 16 32 37.4 -0.1
baz=242
TSMG Majia 1.74 218 *e*P Pb 16 32 38.7 -0.2
baz=236
IRIF Iriomote-Funau 1.78 82 *e*P Pg 16 32 41.0 +0.6
IRIF S Sg 16 33 05.4 +1.9
IRIF Iriomote-Funau 1.78 82 A A 16 32 41.0
comp=E,7.0nm,4.5s,comp=N,5.0nm,6.0s
TWM1 Shoushan 1.78 225 *e*P Pg 16 32 41.0 +0.5
baz=226
SGLT Jiouru 1.81 222 *e*P Pb 16 32 40.2 0.0
baz=211
MASBT Mashibuluo 1.82 216 *e*P Pn 16 32 38.7 -0.1
baz=212
TSCK Chigu Township 1.83 240 *e*P Pn 16 32 38.9 +0.1
baz=242
HATJ Hateruma jima 1.83 91 A A 16 32 41.5
comp=E,13nm,2.9s,comp=N,12nm,4.4s
EAST Anshuo 1.91 207 *e*P Pn 16 32 39.0 -1.1
baz=202
TAWH Dawu Township 1.93 206 *e*P Pb 16 32 41.0 -1.3
baz=202
SCZT Fangliau 2.02 213 *e*P Pn 16 32 41.7 +0.1
baz=203
JKRS Kuro-shima 2.02 85 *e*P Pg 16 32 44.8 -0.2
JKRS S Sg 16 33 11.7 +0.3
JKRS Kuro-shima 2.02 85 A A 16 32 44.8
comp=E,15nm,2.5s,comp=N,18nm,3.1s
SLIU Shizi 2.08 206 *e*P Pb 16 32 43.8 -1.0
baz=202
LYUB Lan-yu 2.08 185 *e*P Pn 16 32 39.5 -2.9
baz=196
PHUB P'eng-hu 2.12 255 *e*P Pn 16 32 42.5 -0.3
baz=257
PHUB eS Sn 16 33 09.8 -0.1
baz=257
PNG Penghu 2.12 256 *e*P Pn 16 32 41.9 -1.0
baz=259
WDGT Dungji 2.13 248 *e*P Pn 16 32 43.0 0.0
baz=250
JIJ Ishigaki jima 2.16 82 P Pb 16 32 44.8 -1.3
VWUC VWUC 2.32 293 *e*P Pn 16 32 43.7 -1.9
baz=292
TWKBT Hengchun 2.32 203 *e*P Pn 16 32 46.8 +1.2
baz=201
VCHM Qimei 2.34 249 *e*P Pn 16 32 46.0 0.0
baz=236
JISG Ishigakijimahi 2.34 77 *e*P Pb 16 32 47.3 -2.0
PTMZ Houxiangcun 2.62 292 *e*P Pn 16 32 49.1 -0.7
baz=290
MATB Ma-tsu 2.65 321 *e*P Pn 16 32 49.0 -1.3
baz=319
LYJJ Jianjiangzhen 3.07 323 *e*P Pn 16 32 55.5 -0.4
baz=321
KNM Kinmen 3.09 277 *e*P Pn 16 32 57.1 +0.9
baz=278
KNMB Chin-men Tao 3.13 278 *e*P Pn 16 32 56.3 -0.6
baz=279
XPSS Dashiqiu 3.18 333 *e*P Pn 16 32 56.6 -0.9
baz=329
MHZQ Yeshan 3.21 309 *e*P Pn 16 32 56.9 -1.0
baz=305
AXDP Jialang 3.58 284 *e*P Pn 16 33 02.7 -0.3
baz=284
ZPLA Ao Xicun 3.71 268 *e*P Pn 16 33 04.5 -0.3
baz=271
DSXP Dongshan 4.02 265 *e*P Pn 16 33 08.5 -0.5
baz=268
SXFK Yanhouchang 4.41 302 *e*P Pn 16 33 14.2 -0.2
baz=299
TGY Tagaytay City 9.97 185 LR LR 16 38 26.6
comp=N,271nm,18.7s,baz=304,slow=38
JNU Nakatsue 12.02 39 LR LR 16 40 39.6
comp=N,136nm,20.2s,baz=216,slow=42
KSRS Korea Array 14.32 20 Pn P 16 35 36.2 -1.4
comp=N,0.3nm,0.3s,baz=203,slow=12,SNR=13
KSRS LR LR 16 41 36.6
comp=N,146nm,18.6s,baz=195,slow=40
DAV Davao City (W) 17.31 167 LR LR 16 42 51.2
comp=N,119nm,19.0s,baz=357,slow=37
MJAR Matsushiro Arr 18.80 45 LR LR 16 43 49.8
comp=N,106nm,19.8s,baz=224,slow=37
CMAR Chiang Mai Arr 22.01 260 P P 16 37 03.1 +0.8
comp=N,0.5nm,0.8s,baz=78,slow=6.6,SNR=4.4
CMAR LR LR 16 47 00.7
comp=N,56nm,19.6s,baz=95,slow=41
comp=N,0.5nm,0.8s
KLR Kul'dur 26.29 15 LR LR 16 48 49.6
comp=N,98nm,18.9s,baz=200,slow=38
SONM Songino Array 26.68 337 P P 16 37 47.9 +0.9
comp=N,2.1nm,1.1s,baz=153,slow=7.8,SNR=8.1
SONM LR LR 16 49 22.5
comp=N,182nm,18.9s,baz=158,slow=39
comp=N,2.1nm,1.1s
YAK Yakutsk 38.30 6 LR LR 16 57 29.5
comp=N,100nm,19.8s,baz=154,slow=40
MKAR Makanchi Array 38.80 316 P P 16 39 32.8 +0.1
comp=N,1.2nm,0.9s,baz=108,slow=9.1,SNR=8.1
comp=N,1.2nm,0.9s
PETK Petropavlovsk- 39.63 34 LR LR 16 56 25.0
comp=N,63nm,21.4s,baz=249,slow=37
ZALV Zalesovo Beam 40.63 327 P P 16 39 47.7 -0.1
comp=N,1.4nm,0.7s,baz=112,slow=7.2,SNR=5.9
comp=N,1.4nm,0.7s
KURBB Kurchatov Arra 42.54 320 P P 16 40 03.6 +0.1
comp=N,0.4nm,0.7s,baz=108,slow=9.1,SNR=3.7
comp=N,0.4nm,0.7s
AAK Ala-Archa 43.01 307 LR LR 17 00 23.3
comp=N,76nm,19.1s,baz=114,slow=39
WRA Warramunga Arr 45.44 163 P P 16 40 25.6 -1.4
comp=N,0.8nm,0.7s,baz=345,slow=8.8,SNR=4.8
comp=N,0.8nm,0.7s
BVAR Borovoye Array 48.10 321 P P 16 40 47.3 -0.3
comp=N,0.3nm,0.5s,baz=95,slow=8.8,SNR=3.0
comp=N,0.3nm,0.5s
ASAR Alice Springs 48.90 165 P P 16 40 53.5 -0.6
comp=N,0.3nm,0.7s,baz=347,slow=7.1,SNR=7.5
comp=N,0.3nm,0.7s
ILAR Eielson Array 69.04 27 P P 16 43 15.2 +1.7
comp=N,0.2nm,0.6s,baz=283,slow=7.2,SNR=4.7
comp=N,0.2nm,0.6s
SPITS Spitsbergen Ar 69.70 348 LR LR 17 17 55.3
comp=N,105nm,18.1s,baz=20,slow=39
YKA Yellowknife Ar 82.84 23 P P 16 44 31.6 -0.6
comp=N,0.3nm,0.6s,baz=310,slow=4.5,SNR=4.4
comp=N,0.3nm,0.6s

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*IDC **05** 16:37:46.2±0.5, 8.51S×26.71E, h0km, mb4.5/22, mbtmp4.5/25, ML4.8/3, MS3.8/11, Error ellipse: s-maj=19.4km s-min=10.2km az=92.0*
*NEIC **05** 16:37:48.1±1.8, 8.45S±0.08×26.7E±0.1, h10km±1km, mb4.9/55, Error ellipse: s-maj=20.3km s-min=12.3km az=107.0*
*GCMT **05** 16:37:49.1±0.4, 8.33S±0.04×26.63E±0.03, h20km±1km, MW4.9/70, Moment Tensor Solution. s21, c23; s70, c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr=2.49±.20; Mθθ=0.68±.10; Mφφ=1.81±.14; Mrθ=-0.01±.23; Mrφ=0.51±.06; Mθφ=-0.93±.25; Best double couple: Mo=2.42700×10^{16} NP1:φs=14.00000°, δ56.00000°, λ=-96.00000°. NP2: φs=206.00000°, δ35.00000°, λ=-81.00000°. Principal axes: T 2.1700, Plg11.0000°, Azm109.0000°; N 0.5130, Plg5.0000°, Azm18.0000°; P -2.6850, Plg78.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **05** 16:37:51.5, 7.58S×27.84E, h13km±1km, mb4.7*
ISC 05 16:37:48.3±0.7, 8.46S±0.05×26.89E±0.07, h14km±3km, h14km:pP-P, n233, σ1§41/206, mb4.8/104, MS3.7/9, 16C-13D, Zaire

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.89**	**169**	Pn	**Pn**	**16 39 28.8**	**-0.5**
LSZ	**Lusaka**	**6.89**	**169**	Pn	**Pn**	**16 39 29.5**	**+0.3**
	11nm,0.3s,baz=4.5,slow=11,SNR=64						
LSZ				Sn	Sn	16 40 42.8	-4.8
	11nm,0.3s,baz=1.7,slow=15,SNR=3.7						
LSZ				Lg	Lg	16 41 24.5	
	35nm,0.3s,baz=69,slow=21,SNR=5.2						
	92nm,0.6s						
MBAR	**Mbarara**	**8.70**	**26**		**Pn**	**16 39 54.7**	**+0.6**
MBAR	**Mbarara**	**8.70**	**26**	*e*P	**Pn**	**16 39 56.4**	**+2.3**
MBAR				*e*S	**Sn**	**16 41 24.4**	**-7.8**
MBAR	**Mbarara**	**8.70**	**26**	Pn	**Pn**	**16 39 55.2**	**+1.1**
	6.4nm,0.3s,baz=203,slow=19,SNR=11						
MBAR				Sn	**Sn**	**16 41 31.0**	**-1.1**
	11nm,0.3s,baz=307,slow=23,SNR=6.0						
MBAR				Lg	Lg	16 42 16.7	
	15nm,0.3s,baz=276,slow=21,SNR=6.7						
MBAR				LR	LR	16 43 26.3	
	comp=Z,623nm,18.3s,baz=192,slow=39						
	13nm,0.3s						
MBAR	**Mbarara**	**8.70**	**26**	*e*P	**Pn**	**16 39 58.6**	**+4.5**
MBAR				*e*S	Sg	16 41 59.7	-28
ZOMB	**Zomba**	**10.76**	**131**	*e*PN	**Pn**	**16 40 22.0**	**-0.3**
ZOMB				*e*SN	**Sn**	**16 42 21.8**	**-0.9**
ZOMB	**Zomba**	**10.76**	**131**	*e*PN	**Pn**	**16 40 22.0**	**-0.3**
ZOMB				*e*SN	**Sn**	**16 42 21.8**	**-0.9**
KIBK	**Kibwezi**	**12.66**	**62**	Pn	**Pn**	**16 40 45.9**	**-2.4**
KIBK	**Kibwezi**	**12.66**	**62**	*e*P	**Pn**	**16 40 46.6**	**-1.7**
KIBK				*e*S	Sn	16 44 11.4	+62
TSUM	**Tsumeb**	**13.98**	**219**	Pn	Pn	16 41 00.3	-6.0
TSUM	**Tsumeb**	**13.98**	**219**	*e*P	Pn	16 40 59.3	-7.0
TSUM	**Tsumeb**	**13.98**	**219**	Pn	Pn	16 41 00.7	-5.6
	1.1nm,0.3s,baz=39,slow=11,SNR=22						
TSUM				Sn	Sn	16 43 27.9	-14
	6.1nm,0.3s,baz=296,slow=21,SNR=3.8						
TSUM				Lg	Lg	16 45 04.7	
	5.9nm,0.3s,baz=289,slow=19,SNR=1.5						
TSUM				LR	LR	16 45 23.5	
	comp=Z,39nm,21.5s,baz=46,slow=33						
MUSN	**Musina, Limpop**	**14.04**	**169**	*e*P	Pn	16 40 58.7	-8.4
LODK	**Lodwar**	**14.52**	**36**	Pn	Pn	16 41 08.5	-5.2
LODK	**Lodwar**	**14.52**	**36**	*e*P	Pn	16 41 00.5	-13
LODK				*e*S	Sn	16 43 45.7	-8.9
LODK	**Lodwar**	**14.52**	**36**	*e*P	**Pn**	**16 41 10.0**	**-3.7**
LODK				*e*S	S	16 45 13.9	+60
MPHEP	**Siloam, Limpop**	**14.71**	**168**	*e*P	Pn	16 41 08.6	-7.7
MOPA	**Mopani**	**15.58**	**164**	*e*P	Pn	16 41 23.4	-4.4
LBTB	**Lobatse**	**16.51**	**184**	Pn	Pn	16 41 34.4	-5.4
LBTB	**Lobatse**	**16.51**	**184**	*e*P	**Pn**	**16 41 36.3**	**-3.5**
LBTB	**Lobatse**	**16.51**	**184**	Pn	**Pn**	**16 41 37.2**	**-2.5**
	1.4nm,0.3s,baz=358,slow=15,SNR=13						
LBTB				Sn	Sn	16 44 34.8	-8.2
	1.2nm,0.3s,baz=25,slow=21,SNR=4.1						
LBTB				Lg	Lg	16 46 28.7	
	1.0nm,0.3s,baz=90,slow=21,SNR=6.7						
LBTB				LR	LR	16 48 23.0	
	comp=Z,250nm,21.5s,baz=2.0,slow=39						
	5.0nm,0.5s						
PILG	**Pilgrimsrest,**	**16.78**	**168**	*e*P	**Pn**	**16 41 40.9**	**-2.5**
PILG				IAmb	IAmb	16 41 49.7	
	comp=Z,47nm,1.0s						
WIN	**Windhoek**	**16.89**	**213**		Pn	16 41 36.5	-8.2
MRCO	**Marico , North**	**16.92**	**182**	*e*P	Pn	16 41 36.5	-8.5
DULL	**Dullstroom, Mp**	**17.10**	**170**	*e*P	**Pn**	**16 41 44.7**	**-2.6**
HRAO	**HartRAO**	**17.35**	**178**	*e*P	**Pn**	**16 41 48.0**	**-2.4**
HAGI	**HAGI**	**18.03**	**167**	*e*P	**Pn**	**16 41 56.6**	**-2.2**
PRYS	**Parys**	**18.37**	**179**	*e*P	**Pn**	**16 42 08.9**	**+5.9**
SWZ	**Schweizer**	**18.68**	**184**	*e*P	**P**	**16 42 04.2**	**-2.3**
SWZ				IAmb	IAmb	16 42 19.5	
	comp=Z,18nm,0.8s						
BOSA	**Boshof**	**20.11**	**184**		**P**	**16 42 21.7**	**-0.3**
BOSA	**Boshof**	**20.11**	**184**	*e*P	**P**	**16 42 23.4**	**+1.4**
BOSA				IAmb	IAmb	16 42 27.6	
	comp=Z,20nm,0.8s						
BOSA	**Boshof**	**20.11**	**184**	P	**P**	**16 42 21.9**	**0.0**
	comp=Z,22nm,1.0s,baz=16,slow=11,SNR=20						
BOSA				S	**S**	**16 46 08.2**	**+0.5**
	comp=Z,8.4nm,0.7s,baz=124,slow=14,SNR=2.3						
BOSA				Lg	Lg	16 48 24.2	
	comp=Z,0.5nm,0.3s,baz=286,slow=15,SNR=5.5						
BOSA				LR	LR	16 50 21.3	
	comp=Z,407nm,18.2s,baz=3.5,slow=38						
	comp=Z,22nm,1.0s						
OPO	**Ombohidratompo**	**22.12**	**119**	LR	LR	16 50 14.7	
	comp=Z,262nm,20.0s,baz=158,slow=34						
KSTD	**Kokstad**	**22.16**	**174**	*e*P	**P**	**16 42 47.5**	**+3.3**
KSTD				IAmb	IAmb	16 42 52.6	
	comp=Z,31nm,0.9s						
FRAZ	**Fraserburg**	**23.90**	**192**	*e*P	**P**	**16 43 01.4**	**-0.6**
SOE	**Somerset East**	**24.16**	**183**	P	**P**	**16 43 04.5**	**+0.2**
SUR	**Sutherland**	**24.46**	**192**	P	**P**	**16 43 07.2**	**-0.1**
SUR				IAmb	IAmb	16 43 10.2	
	comp=Z,48nm,1.1s						
SUR	**Sutherland**	**24.46**	**192**	*e*P	**P**	**16 43 10.5**	**+3.3**
SUR	**Sutherland**	**24.46**	**192**	LR	LR	16 53 03.1	
	comp=Z,243nm,19.4s,baz=46,slow=38						
GRHM	**Grahamstown, E**	**24.70**	**181**	*e*P	P	16 42 57.5	-12
TOA0	**Torodi Ar. Sit**	**32.97**	**310**	P	**P**	**16 44 21.5**	**-1.6**
TORD	**Torodi Ar. Bea**	**32.97**	**310**	P	**P**	**16 44 21.5**	**-1.5**
TORD	**Torodi Ar. Bea**	**32.97**	**310**	P	**P**	**16 44 22.1**	**-1.0**
	comp=Z,34nm,0.8s,baz=112,slow=8.1,SNR=82						
TORD				Lg	Lg	16 54 59.4	
	comp=Z,0.1nm,0.3s,baz=143,slow=24,SNR=3.6						
TORD				LR	LR	16 59 23.8	
	comp=Z,96nm,18.4s,baz=122,slow=40						
	comp=Z,34nm,0.8s						
KIC	**Kosan Boka**	**34.80**	**294**	⇑*i*P	**P**	**16 44 37.6**	**-1.5**
	comp=Z,70nm,0.8s						
LIC	**Lamto**	**35.01**	**294**	⇑*e*P	**P**	**16 44 36.2**	**-4.6**
	comp=Z,59nm,0.8s						
DBIC	**Dimbokro**	**35.04**	**294**	P	**P**	**16 44 39.0**	**-2.1**
DBIC				IAmb	IAmb	16 44 46.3	
	comp=Z,11nm,0.8s						
DBIC	**Dimbokro**	**35.04**	**294**	P	**P**	**16 44 39.1**	**-2.0**
	comp=Z,8.8nm,0.7s,baz=112,slow=8.5,SNR=8.2						
DBIC				LR	LR	16 57 37.9	
	comp=Z,150nm,21.4s,baz=74,slow=34						
	comp=Z,8.8nm,0.7s						
TIC	**Toumodi**	**35.17**	**294**	⇓*e*P	P	16 44 34.5	-7.8
	comp=Z,9.3nm,0.4s						
RAYN	**Ar Rayn**	**36.63**	**29**	P	**P**	**16 44 55.3**	**+0.6**
TAM	**Tamanrasset**	**37.45**	**326**	P	**P**	**16 44 60.0**	**-1.8**
EIL	**Elat**	**38.70**	**11**	LR	LR	16 59 26.7	
	comp=Z,109nm,18.4s,baz=247,slow=34						
GHAJ	**Ghor Haditha**	**40.40**	**11**	P	**P**	**16 45 25.7**	**-0.4**

MMAI	**Mount Meron Ar**	**42.04**	**11**	P		**P**	**16 45 40.8**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=184,slow=8.0,SNR=9.2							
	comp=Z,0.6nm,0.3s							
IDI	**Anoyia**	**43.55**	**358**	LR		LR	17 04 25.9	
	comp=Z,75nm,19.6s,baz=228,slow=37							
CSS	**Mathiatis**	**43.62**	**8**	P		**P**	**16 45 52.5**	**+0.1**
CSS				IAmb		IAmb	16 45 58.7	
	comp=Z,18nm,1.0s							
GAZ	**Gaziantep**	**46.41**	**11**	IAmb		IAmb	16 46 21.1	
	comp=Z,10nm,0.9s							
KEST	**Kesra**	**46.96**	**340**	P		**P**	**16 46 17.8**	**-1.3**
KEST	**Kesra**	**46.96**	**340**	P		**P**	**16 46 19.6**	**+0.5**
	comp=Z,23nm,0.9s,baz=269,slow=4.5,SNR=7.7							
	comp=Z,23nm,0.9s							
AGG	**Agios Georgios**	**47.43**	**355**	P		**P**	**16 46 22.8**	**+0.2**
AGG				IAmb		IAmb	16 46 23.6	
	comp=Z,16nm,1.0s							
BRTR	**Keskin Array B**	**48.35**	**7**	P		**P**	**16 46 29.8**	**0.0**
BRTR	**Keskin Array B**	**48.35**	**7**	P		**P**	**16 46 30.6**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=172,slow=10.0,SNR=5.9							
	comp=Z,2.5nm,0.7s							
ARPR	**Arapgir-MALATY**	**48.49**	**12**	IAmb		IAmb	16 46 36.8	
	comp=Z,12nm,0.9s							
MDT	**Midelt**	**50.84**	**325**	LR		LR	17 09 03.8	
	comp=Z,162nm,18.7s,baz=142,slow=37							
BCA	**Borcka**	**51.47**	**14**	⇑P		**P**	**16 46 56.5**	**+3.0**
DBRK	**Dubrovnik**	**51.51**	**352**	*i* P		**P**	**16 46 54.0**	**+0.4**
LSTV	**Lastovo**	**51.79**	**351**	*i* P		**P**	**16 46 55.9**	**+0.1**
BLKB	**Belogradchik**	**51.98**	**356**	⇑P		**P**	**16 46 57.3**	**+0.1**
HVAR	**Hvar**	**52.27**	**350**	*i* P		**P**	**16 46 59.1**	**-0.2**
RICI	**Ricice**	**52.46**	**351**	*i* P		**P**	**16 47 00.8**	**+0.1**
NRCA	**Norcia**	**52.57**	**347**	IAmb		IAmb	16 47 10.8	
	comp=Z,28nm,1.5s							
KIJV	**Kijevo**	**53.08**	**351**	*i* P		**P**	**16 47 05.1**	**-0.2**
MDVR	**Moldovita**	**53.20**	**355**	⇑P		**P**	**16 47 06.9**	**+0.6**
HERR	**Herculane**	**53.25**	**356**	⇑P		**P**	**16 47 07.1**	**+0.6**
DUGI	**Dugi Otok**	**53.30**	**349**	*i* P		**P**	**16 47 06.5**	**-0.4**
CFR	**Carcaliu**	**53.40**	**1**	⇓P		**P**	**16 47 08.3**	**+0.7**
VIRC	**Vir**	**53.59**	**349**	*i* P		**P**	**16 47 08.3**	**-0.7**
VOIR		**53.68**	**358**	⇑P		**P**	**16 47 09.8**	**+0.1**
MLR	**Muntele Rosu**	**53.71**	**359**	⇑P		**P**	**16 47 10.6**	**+0.5**
MLR	**Muntele Rosu**	**53.71**	**359**	P		**P**	**16 47 09.1**	**-0.9**
MLR				IAmb		IAmb	16 47 23.1	
	comp=Z,9.8nm,1.0s							
GZR	**Gura Zlata**	**53.73**	**356**	⇑P		**P**	**16 47 10.9**	**+0.7**
FRGS	**Fruska Gora**	**53.75**	**354**	⇑P		**P**	**16 47 11.6**	**+1.4**
KBZ	**Khabaz**	**53.94**	**14**	P		**P**	**16 47 12.0**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=166,slow=8.3,SNR=2.5							
	comp=Z,2.1nm,0.9s							
BZS	**Buzias**	**54.04**	**355**	⇑P		**P**	**16 47 12.8**	**+0.5**
PLIT	**Plitvice**	**54.06**	**350**	*i* P		**P**	**16 47 12.8**	**+0.3**
SURR	**Surduc**	**54.14**	**356**	⇓P		**P**	**16 47 13.7**	**+0.7**
MOSL	**Moslavina**	**54.59**	**351**	*i* P		**P**	**16 47 16.3**	**0.0**
SIRR	**Siria**	**54.68**	**356**	⇓P		**P**	**16 47 17.9**	**+0.9**
MORH	**Mrgy, Hungar**	**54.93**	**353**	⇑P		**P**	**16 47 19.5**	**+0.8**
MARR	**Marisel-Cluj**	**54.99**	**357**	⇑P		**P**	**16 47 20.5**	**+1.2**
PTJ	**Puntijarka**	**55.00**	**351**	P		**P**	**16 47 19.4**	**-0.1**
CJR	**Cluj-Napoca**	**55.01**	**357**	⇑P		**P**	**16 47 21.1**	**+1.7**
DRGR		**55.13**	**357**	⇑P		**P**	**16 47 21.7**	**+1.3**
JAVS	**Javornik**	**55.32**	**349**	*i* P		**P**	**16 47 21.6**	**-0.1**
GROS	**Grobnik**	**55.61**	**350**	*i* P		**P**	**16 47 24.3**	**+0.5**
CADS	**Cadrg**	**55.70**	**349**	*i* P		**P**	**16 47 24.3**	**-0.1**
ESDC	**Sonseca Array**	**55.77**	**331**	IAmb		IAmb	16 47 26.3	
	comp=Z,11nm,1.2s							
ESDC	**Sonseca Array**	**55.77**	**331**	P		**P**	**16 47 25.2**	**+0.1**
	comp=Z,6.6nm,0.9s,baz=140,slow=7.6,SNR=16							
	comp=Z,6.6nm,0.9s							
OBKA	**Obir**	**55.82**	**350**	*i* P		**P**	**16 47 25.9**	**+0.6**
	comp=Z,8.8nm,1.2s							
SOKA	**Soboth**	**55.90**	**350**	*i* P		**P**	**16 47 26.3**	**+0.4**
	comp=Z,7.8nm,1.1s							
STAL	**STALIGIAL**	**55.93**	**348**	IAmb		IAmb	16 47 29.9	
	comp=Z,8.5nm,0.8s							
PRED	**Cave del Predi**	**55.94**	**349**	IAmb		IAmb	16 47 31.8	
	comp=Z,18nm,1.0s							
CLUD	**Cludinico**	**56.09**	**348**	IAmb		IAmb	16 47 31.6	
	comp=Z,21nm,1.0s							
MYKA	**Terra Mystica**	**56.10**	**349**	*i* P		**P**	**16 47 28.0**	**+0.6**
	comp=Z,4.8nm,0.6s							
ARSA	**Arzberg**	**56.38**	**351**	*i* P		**P**	**16 47 30.0**	**+0.8**
	comp=Z,7.6nm,1.0s							
ABTA	**Abfaltersbach**	**56.44**	**348**	*i* P		**P**	**16 47 30.5**	**+0.8**
	comp=Z,2.7nm,0.6s							
PSZ	**Piszkesteto**	**56.47**	**354**	⇓P		**P**	**16 47 30.7**	**+0.8**
PSZ	**Piszkesteto**	**56.47**	**354**	IAmb		IAmb	16 47 34.7	
	comp=Z,9.5nm,0.8s							
SRO	**Srobarova**	**56.54**	**353**	*eP*		**P**	**16 47 31.3**	**+1.0**
KBA	**Koelnbreinsper**	**56.59**	**349**	*i* P		**P**	**16 47 31.5**	**+0.6**
	comp=Z,9.3nm,0.9s							
RONA	**Rosalia, Austr**	**56.70**	**351**	*i* P		**P**	**16 47 31.7**	**+0.2**
	comp=Z,9.1nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**56.81**	**346**	IAmb		IAmb	16 47 38.7	
	comp=Z,8.1nm,0.9s							
TUE	**Stuetta**	**56.89**	**346**	IAmb		IAmb	16 47 37.9	
	comp=Z,20nm,1.0s							
CONA	**Conrad Observa**	**56.99**	**351**	*i* P		**P**	**16 47 34.1**	**+0.6**
	comp=Z,13nm,1.0s,SNR=8.5							
LESA	**Schwarzleotal**	**57.05**	**349**	*i* P		**P**	**16 47 34.1**	**0.0**
	comp=Z,7.4nm,0.8s							
FETA	**Feichten**	**57.08**	**347**	*i* P		**P**	**16 47 35.0**	**+0.6**
	comp=Z,7.4nm,1.0s							
WTTA	**Wattenberg**	**57.11**	**348**	*i* P		**P**	**16 47 35.1**	**+0.5**
	comp=Z,13nm,0.9s							
BIOA	**Bad Ischl, Aus**	**57.13**	**349**	*i* P		**P**	**16 47 34.6**	**+0.1**
	comp=Z,3.8nm,0.7s							
SQTA	**Sankt Quirin**	**57.16**	**347**	*i* P		**P**	**16 47 35.6**	**+0.7**
	comp=Z,7.7nm,0.8s							
MOA	**Molln**	**57.17**	**350**	*i* P		**P**	**16 47 35.3**	**+0.5**
	comp=Z,12nm,0.8s							
WATA	**Walderalm**	**57.19**	**348**	*i* P		**P**	**16 47 35.5**	**+0.4**
	comp=Z,9.0nm,0.9s							
MODS	**Modra-Piesok**	**57.22**	**352**	*eP*		**P**	**16 47 35.3**	**+0.1**
MOTA	**Moosalm**	**57.30**	**347**	*i* P		**P**	**16 47 36.0**	**0.0**
	comp=Z,15nm,1.0s							
CRVS	**Cervenica-Dubn**	**57.32**	**356**	*eP*		**P**	**16 47 36.8**	**+1.0**
RETA	**Reute**	**57.51**	**347**	*i* P		**P**	**16 47 36.7**	**-0.6**
	comp=Z,12nm,1.1s							
DAVA	**Damuels**	**57.52**	**346**	*i* P		**P**	**16 47 37.5**	**0.0**
	comp=Z,40nm,0.8s,SNR=19							
JAVC	**Velka Javorina**	**57.65**	**353**	*eP*		**P**	**16 47 39.0**	**+0.8**
LANS	**Liptovska Anna**	**57.73**	**354**	*eP*		**P**	**16 47 39.8**	**+1.0**
UBR	**Ueberruh**	**57.84**	**347**	*eP*		**P**	**16 47 39.2**	**-0.4**
	comp=Z,6.9nm,0.8s,baz=161,slow=6.9							
KRUC	**Moravsky**	**58.02**	**352**	*eP*		**P**	**16 47 39.7**	**-1.0**
FUR	**Furstenfeldbru**	**58.05**	**348**	*eP*		**P**	**16 47 41.2**	**+0.2**
	comp=Z,11nm,0.7s,baz=161,slow=6.9							
CKRC	**Cesky Krumlov**	**58.10**	**350**	*eP*		**P**	**16 47 41.8**	**+0.5**
GEC2	**GERESS Array S**	**58.23**	**350**	IAmb		IAmb	16 47 43.4	
	comp=Z,8.6nm,0.8s							
GEC2	**GERESS Array S**	**58.23**	**350**	*eP*		**P**	**16 47 42.8**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=161,slow=6.9							
GERES	**GERESS Array B**	**58.23**	**350**	P		**P**	**16 47 42.2**	**-0.1**
	comp=Z,6.8nm,0.8s,baz=152,slow=6.0,SNR=21							
	comp=Z,6.8nm,0.8s							
VRAC	**Vranov**	**58.23**	**352**	⇑P		**P**	**16 47 42.3**	**0.0**
VRAC	**Vranov**	**58.23**	**352**	*eP*		**P**	**16 47 41.7**	**-0.5**
KHC	**Kasperske Hory**	**58.53**	**350**	*eP*		**P**	**16 47 44.3**	**0.0**
MORC	**Moravsky Berou**	**58.57**	**353**	IAmb		IAmb	16 47 45.8	
	comp=Z,12nm,1.2s							
MORC	**Moravsky Berou**	**58.57**	**353**	*eP*		**P**	**16 47 44.3**	**-0.3**
WET	**Wettzell**	**58.66**	**349**	*eP*		**P**	**16 47 45.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=161,slow=6.9							
ZVC	**Zvikov**	**58.72**	**350**	*eP*		**P**	**16 47 45.3**	**-0.3**
BFO	**Black Forest**	**58.87**	**346**	*eP*		**P**	**16 47 47.0**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=161,slow=6.9							
AKASG	**Malin Array Be**	**58.95**	**2**	P		**P**	**16 47 46.7**	**-0.5**
	comp=Z,6.1nm,0.9s,baz=188,slow=6.3,SNR=10							
	comp=Z,6.1nm,0.9s							
AKBB	**Malin Array Si**	**58.95**	**2**	IAmb		IAmb	16 47 51.1	
	comp=Z,12nm,0.9s							
KRLC	**Kraliky**	**58.95**	**352**	*eP*		**P**	**16 47 48.0**	**+0.7**
ECH	**Echery**	**59.06**	**345**	IAmb		IAmb	16 47 53.4	
	comp=Z,11nm,1.0s							
STU	**Stuttgart**	**59.08**	**346**	*eP*		**P**	**16 47 49.9**	**+1.8**
	comp=Z,28nm,0.7s,baz=161,slow=6.9							
DPC	**Dobruska-Polom**	**59.28**	**352**	*eP*		**P**	**16 47 50.4**	**+0.8**
ROTZ	**Rotzenmuhle**	**59.39**	**349**	*eP*		**P**	**16 47 50.6**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=161,slow=6.9							
GRFO	**Grafenberg**	**59.51**	**348**	P		**P**	**16 47 50.1**	**-1.0**
GRF	**Grafenberg Arr**	**59.51**	**348**	*eP*		**P**	**16 47 51.6**	**+0.5**
	comp=Z,20nm,0.9s,baz=161,slow=6.9							
GRF				*ep*P		**pP**	**16 47 55.0**	**-0.8**
MANZ	**Manzenberg**	**59.62**	**349**	*eP*		**P**	**16 47 52.4**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=161,slow=6.9							
NKC	**Novy Kostel**	**59.79**	**349**	*eP*		**P**	**16 47 53.8**	**+0.7**
TANN	**Tannenbergstha**	**59.96**	**349**	*eP*		**P**	**16 47 55.1**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=161,slow=6.9							
BRG	**Berggiesshubel**	**60.15**	**351**	*eP*		**P**	**16 47 55.7**	**+0.2**
BRG				Amp			16 47 56.5	
	comp=Z,7.0nm,1.0s							
BRG	**Berggiesshubel**	**60.15**	**351**	*eP*		**P**	**16 47 55.7**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=161,slow=6.9							
MOX	**Moxa**	**60.34**	**349**	*eP*		**P**	**16 47 57.5**	**+0.7**
	comp=Z,3.9nm,0.9s,baz=161,slow=6.9							
TNS	**Taunus Mts**	**60.61**	**347**	*eP*		**P**	**16 47 59.3**	**+0.6**
	comp=Z,17nm,0.8s,baz=161,slow=6.9							
TNS				*ep*P		**pP**	**16 48 02.7**	**-0.7**
WLF	**Walferdange**	**60.66**	**345**	*dP*		**P**	**16 47 59.2**	**+0.2**
	comp=Z,11nm,1.3s							
WLF	**Walferdange**	**60.66**	**345**	*eP*		**P**	**16 47 59.6**	**+0.6**
	comp=Z,15nm,1.0s,baz=161,slow=6.9							
CLL	**Collm**	**60.72**	**350**	P		**P**	**16 47 59.0**	**-0.4**
CLL				IAmb		IAmb	16 48 04.9	
	comp=Z,13nm,1.2s							
CLL	**Collm**	**60.72**	**350**	*i* P		**P**	**16 47 59.1**	**-0.3**
	comp=Z,11nm,1.1s							
CLL				*i* x		x	16 48 03.2	
	comp=Z,13nm,1.2s							
CLL	**Collm**	**60.72**	**350**	*eP*		**P**	**16 47 59.6**	**+0.2**
	comp=Z,10nm,1.1s,baz=161,slow=6.9							
CLL				*ep*P		**pP**	**16 48 03.7**	**-0.4**
NIL	**Nilore**	**60.74**	**44**	P		**P**	**16 48 00.9**	**+1.0**
UBBA	**Unterbreizbach**	**60.83**	**348**	*eP*		**P**	**16 48 00.3**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=161,slow=6.9							
NEUB	**Neuenburg**	**60.85**	**349**	*eP*		**P**	**16 48 01.1**	**+0.9**
	comp=Z,30nm,0.8s,baz=161,slow=6.9							
NEUB				*ep*P		**pP**	**16 48 04.6**	**-0.3**
AHRW	**Bad Neuenahr-A**	**61.23**	**346**	*eP*		**P**	**16 48 04.5**	**+1.7**
	comp=Z,10nm,0.9s,baz=161,slow=6.9							
BHOU	**Houvegnez**	**61.33**	**345**	*dP*		**P**	**16 48 03.8**	**+0.3**
RCHB	**Rochefort**	**61.35**	**344**	*dP*		**P**	**16 48 03.9**	**+0.2**
	comp=Z,6.9nm,0.9s							
DOU	**Dourbes**	**61.47**	**344**	*dP*		**P**	**16 48 04.5**	**0.0**
	comp=Z,5.9nm,1.1s							
KASTN	**Kahler Asten**	**61.53**	**347**	*eP*		**P**	**16 48 05.7**	**+0.8**
	comp=Z,6.0nm,0.9s,baz=161,slow=6.9							
MEM	**Membach**	**61.56**	**345**	*dx*		x	16 48 09.1	
BCLA	**Clavier**	**61.57**	**344**	*dP*		**P**	**16 48 04.4**	**-0.8**
	comp=Z,5.2nm,1.1s							
BGES	**Gesves**	**61.59**	**344**	*dP*		**P**	**16 48 05.7**	**+0.4**
BSTI	**Sart Tilman**	**61.65**	**345**	*dP*		**P**	**16 48 06.8**	**+1.1**
CLZ	**Clausthal**	**61.72**	**348**	*eP*		**P**	**16 48 07.2**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=161,slow=6.9							
ASSE	**Asse, Remlinge**	**61.94**	**349**	*eP*		**P**	**16 48 08.1**	**+0.7**
	comp=Z,9.8nm,1.1s,baz=161,slow=6.9							
ASSE				*ep*P		**pP**	**16 48 12.4**	**+0.2**
FLTG	**Flechtingen**	**62.02**	**349**	*eP*		**P**	**16 48 08.7**	**+0.6**
	comp=Z,7.3nm,0.8s,baz=161,slow=6.9							
NRDL	**Niedersach Rie**	**62.39**	**349**	*eP*		**P**	**16 48 12.0**	**+1.4**
	comp=Z,8.4nm,0.9s,baz=161,slow=6.9							
BTK	**Batken**	**63.06**	**37**	IAmb		IAmb	16 48 21.2	
	comp=Z,6.6nm,1.1s							
BSEG	**Bad Segeberg**	**63.72**	**349**	*eP*		**P**	**16 48 19.9**	**+0.5**
	comp=Z,5.9nm,0.8s,baz=161,slow=6.9							
BSEG				*ep*P		**pP**	**16 48 23.3**	**-0.8**
KK31	**Karatay Array**	**64.85**	**34**	IAmb		IAmb	16 48 32.9	
	comp=Z,14nm,1.1s							
KKAR	**Karatay Array**	**64.85**	**34**	IAmb		IAmb	16 48 32.9	
	comp=Z,14nm,1.1s							
DZA	**Taraz**	**65.17**	**35**	*eP*		**P**	**16 48 29.8**	**+0.6**
	comp=Z,5.8nm,1.0s,baz=35							
KSH	**Kashi**	**65.89**	**40**	P		**P**	**16 48 38.6**	**+4.5**
KSH				PcP		**PcP**	**16 49 08.5**	**+3.6**
KSH				pmax		pmax		
	comp=Z,2.0nm,1.0s							
AAK	**Ala-Archa**	**66.83**	**36**	P		**P**	**16 48 41.2**	**+1.2**
BTLS	**Baital**	**68.05**	**34**	*eP*		**P**	**16 48 48.4**	**+0.8**
	comp=Z,5.5nm,1.3s,baz=34							
EKA	**Eskdalemuir Ar**	**68.33**	**342**	P		**P**	**16 48 49.2**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=133,slow=5.2,SNR=8.8							
	comp=Z,2.5nm,0.6s							
MDOK	**Medeo**	**68.65**	**37**	*eP*		**P**	**16 48 52.4**	**+0.9**
	baz=37							
KUU	**Kurty**	**68.66**	**36**	*eP*		**P**	**16 48 51.7**	**+0.3**
	baz=36							
CHKK	**Chushkaly**	**69.02**	**36**	*eP*		**P**	**16 48 54.6**	**+0.9**
	baz=37							
HFS	**Hagfors**	**69.18**	**353**	P		**P**	**16 48 55.6**	**+1.3**
	comp=Z,3.3nm,0.8s,baz=180,slow=7.1,SNR=3.4							
	comp=Z,3.3nm,0.8s							
SATY	**Saty**	**69.41**	**38**	*eP*		**P**	**16 48 57.3**	**+1.1**
	baz=38							
FINES	**FINESS Array B**	**69.69**	**360**	P		**P**	**16 48 57.5**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=130,slow=4.8,SNR=12							
	comp=Z,5.2nm,0.9s							
ARU	**Arti**	**69.75**	**18**	P		**P**	**16 48 56.9**	**-0.9**
UZB	**Uzynbulak**	**69.83**	**38**	*eP*		**P**	**16 48 59.4**	**+0.5**
	baz=38							
SHLS	**Shalkode**	**70.10**	**38**	*eP*		**P**	**16 49 02.5**	**+1.9**
	baz=38							
NB2	**NORSAR Subarra**	**70.38**	**352**	P		**P**	**16 49 01.8**	**+0.2**
	comp=Z,14nm,1.2s,baz=164,slow=6.2							
NOA	**NORSAR Array B**	**70.38**	**352**	P		**P**	**16 49 01.9**	**+0.2**
	comp=Z,4.8nm,1.0s,baz=163,slow=7.9,SNR=5.1							
	comp=Z,4.8nm,1.0s							
BRZS	**Berezniki**	**70.51**	**29**	*eP*		**P**	**16 49 03.6**	**+0.9**
	comp=Z,16nm,2.4s,baz=30							
BRVK	**Borovoye**	**71.50**	**26**	P		**P**	**16 49 08.8**	**+0.1**
BVAR	**Borovoye Array**	**71.52**	**26**	P		**P**	**16 49 09.4**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=226,slow=5.6,SNR=19							
	comp=Z,5.5nm,0.8s							
BDFB	**Brasilia**	**73.30**	**256**	P		**P**	**16 49 19.7**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=108,slow=5.9,SNR=3.2							
	comp=Z,2.3nm,0.6s							
MAKZ	**Makanchi**	**73.58**	**36**	P		**P**	**16 49 21.5**	**+0.2**
MKAR	**Makanchi Array**	**73.76**	**36**	P		**P**	**16 49 23.1**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=243,slow=5.3,SNR=21							
	comp=Z,4.5nm,0.8s							
KURBB	**Kurchatov Arra**	**73.84**	**31**	P		**P**	**16 49 23.7**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=240,slow=6.3,SNR=14							
	comp=Z,4.7nm,0.8s							
KURK	**Kurchatov**	**73.94**	**31**	P		**P**	**16 49 23.2**	**0.0**
WMQ	**Urumqi**	**75.62**	**41**	*eP*		**P**	**16 49 34.9**	**+1.7**
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.9s							
CM31	**Chiang Mai Arr**	**75.92**	**69**	IAmb		IAmb	16 49 41.0	
	comp=Z,8.5nm,1.0s							
CMAR	**Chiang Mai Arr**	**75.92**	**69**	P		**P**	**16 49 36.8**	**+1.5**
	comp=Z,4.6nm,0.9s,baz=261,slow=6.8,SNR=20							
	comp=Z,4.6nm,0.9s							
CHTO	**Chiang Mai**	**76.01**	**68**	P		**P**	**16 49 36.1**	**+0.3**
CHTO				IAmb		IAmb	16 49 41.5	
	comp=Z,7.8nm,0.9s							
PLTB	**Pedras Altas**	**77.54**	**239**	P		**P**	**16 49 44.8**	**+0.5**
PLTB				IAmb		IAmb	16 49 50.9	
	comp=Z,18nm,1.1s							
GOMU	**GeErMu**	**77.60**	**50**	P		**P**	**16 49 47.4**	**+2.5**
GOMU				pmax		pmax		
	comp=Z,9.0nm,1.1s							
CRAI	**Chiangrai**	**77.65**	**67**	IAmb		IAmb	16 49 51.3	
	comp=Z,15nm,1.0s							
ARCES	**ARCESS Array B**	**77.82**	**360**	P		**P**	**16 49 45.4**	**+0.4**
	comp=Z,6.6nm,0.7s,baz=182,slow=4.6,SNR=12							
	comp=Z,6.6nm,0.7s							
ZALV	**Zalesovo Beam**	**78.90**	**31**	P		**P**	**16 49 51.5**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=251,slow=5.4,SNR=10							
	comp=Z,3.0nm,0.8s							
PZH	**PanZhiHua**	**80.40**	**61**	P		**P**	**16 49 57.6**	**-2.6**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
PZH				pmax		pmax		
	comp=Z,150nm,5.9s							
GTA	**Gaotai**	**82.38**	**48**	*eP*		**P**	**16 50 12.5**	**+2.1**
GTA				pP		pP	16 50 15.8	+0.6
GTA				pmax		pmax		
	comp=Z,7.0nm,1.0s							
TRQA	**Tornquist**	**83.96**	**233**	P		**P**	**16 50 18.4**	**-0.2**
LZH	**Lanzhou**	**84.54**	**52**	*eP*		P	16 50 26.7	+5.0
LZH				pmax		pmax		
	comp=Z,19nm,1.6s							
GYA	**Guiyang**	**84.69**	**62**	P		**P**	**16 50 23.9**	**+1.4**
GYA				pmax		pmax		
	comp=Z,11nm,1.3s							
SONM	**Songino Array**	**89.23**	**41**	P		**P**	**16 50 45.4**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=329,slow=1.7,SNR=2.7							
	comp=Z,0.6nm,0.9s							
VNDA	**Vanda**	**90.54**	**171**	LR		LR	17 29 35.0	
	comp=Z,36nm,19.3s,baz=237,slow=34							
HHC	**Hu-ho-hao-te**	**91.47**	**49**	*eP*		**P**	**16 50 55.7**	**+0.9**
HHC				sP		sP	16 51 06.4	+5.1
HHC				pmax		pmax		
	comp=Z,15nm,0.7s							
HHC				pmax		pmax		
	comp=Z,160nm,4.9s							
BJI	**Beijing**	**94.83**	**50**	P		**P**	**16 51 09.6**	**-0.5**
NJ2	**Nanjing**	**96.09**	**59**	*eP*		**P**	**16 51 17.0**	**+1.0**
NJ2				pP		**pP**	**16 51 20.7**	**-0.2**
NJ2				sP		**sP**	**16 51 23.9**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
YKA	**Yellowknife Ar**	**119.27**	**341**	PKP		**PKPdf**	**16 56 36.4**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=83,slow=2.2,SNR=3.8							
ILAR	**Eielson Array**	**123.61**	**357**	PKP		**PKPdf**	**16 56 45.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=334,slow=3.4,SNR=5.6							
PDAR	**Pinedale Array**	**128.82**	**319**	PKP		**PKPdf**	**16 56 55.9**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=99,slow=4.7,SNR=10.0							
TXAR	**Lajitas Array**	**129.26**	**301**	PKP		**PKPdf**	**16 56 57.3**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=127,slow=2.4,SNR=10							
NVAR	**Mina Array Bea**	**136.75**	**319**	PKhKP		PKPpre	16 57 03.4	
	comp=Z,0.1nm,0.3s,baz=205,slow=3.8,SNR=2.0							
NVAR				PKP		**PKPdf**	**16 57 11.6**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=66,slow=3.1,SNR=5.6							
PPT2	**Papeete2**	**153.88**	**188**	*e*LR		LR	17 49 02.0	
	comp=Z,144nm,36.0s							
PPT2				*e*LR		LR	17 49 12.0	
	comp=Z,90nm,25.5s							

*IDC **05** 16:44:35.8±3.4, 31.°73N×139.°56E, h0km, mb3.3/2, mbtmp3.2/3, ML2.1/1, Error ellipse: s-maj=263.2km s-min=33.0km az=84.0*
*JMA **05** 16:44:54.4±0.6, 33.°N±3.°×13.°9E±.°, h284km±4km, MV2.8/28, FAR S OFF TOKAI DISTRICT*

ISC 05 16:44:54.9±1.2, 33.°6N±0.°1×138.°7E±0.°1, h300km, n11, σ0s80/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JOD2	**Odawara 2**	**1.68**	**10**	*eP*		**Pn**	**16 45 39.4**	**+0.2**
BSO3	**Boso 3**	**1.89**	**50**	*eS*		**S**	**16 46 15.8**	**-1.0**
JNY	**Yasuok**	**1.89**	**338**	P		**Pn**	**16 45 41.3**	**+0.4**
BSO1	**Boso 1**	**2.13**	**60**	*eS*		**S**	**16 46 19.3**	**-0.4**
JRY	**Ryogami san**	**2.41**	**3**	P		**Pn**	**16 45 46.7**	**+1.7**
JYTA	**Yamagatataniai**	**2.58**	**321**	P		**Pn**	**16 45 46.5**	**-0.1**
JAG	**Ashikaga**	**2.87**	**12**	P		**Pn**	**16 45 49.8**	**+0.5**
JAG				S		**S**	**16 46 31.9**	**-0.9**
JYT	**Yasato**	**2.88**	**24**	P		**Pn**	**16 45 49.7**	**+0.4**
JYT				S		**S**	**16 46 32.1**	**-0.7**
MJAR	**Matsushiro Arr**	**2.96**	**352**	Pn		**Pn**	**16 45 51.0**	**+0.8**
	0.1nm,0.3s,baz=160,slow=10,SNR=6.7							
	1.6nm,0.6s							
WRA	**Warramunga Arr**	**53.41**	**185**	P		**P**	**16 53 44.4**	**-0.2**
	0.2nm,0.3s,baz=360,slow=7.6,SNR=6.5							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**57.14**	**185**	P		**P**	**16 54 11.1**	**+0.2**
	0.2nm,0.8s,baz=17,slow=11,SNR=5.0							

GYA pmax pmax
comp=N,6.0nm,1.0s
GYA LR LR
comp=N,660nm,9.6s
GYA LR LR
comp=N,700nm,8.9s
GYA LR LR
comp=N,870nm,9.0s
QIZ Qiongzhong 13.03 84 P **Pn** **16 58 37.6 -3.0**
QIZ S **Sn** **17 01 03.3 -2.3**
QIZ LR LR
comp=N,2µm,13.9s
QIZ LR LR
comp=N,710nm,13.0s
QIZ LR LR
comp=N,350nm,11.1s
GULI GuiLin 14.98 59 ⇑P **Pn** **16 59 06.3 -0.9**
HYB Hyderabad 16.76 270 *e*P **P** **16 59 33.2 +0.6**
HYB *e*S **S** **17 02 49.9 +2.2**
GSI Gunungsitoli 16.86 175 Pn **Pn** **16 59 30.9 -0.7**
GSI Gunungsitoli 16.86 175 P **Pn** **16 59 30.5 -1.1**
comp=N,22nm,0.7s
ENH Enshi 17.08 43 P **P** **16 59 34.3 -1.8**
ENH IAmb IAmb 16 59 40.5
comp=Z,52nm,1.3s
GOMU GeErMu 17.95 357 P **Pn** **16 59 43.7 -1.8**
GOMU pmax pmax
comp=Z,13nm,0.9s
LZH Lanzhou 19.07 19 *e*P **Pn** **17 00 02.2 +3.3**
LZH sP sP 17 00 13.9 +12
LZH pmax pmax
comp=Z,17nm,1.2s
LZH LR LR
comp=Z,880nm,12.7s
LZH LR LR
comp=Z,2µm,13.1s
LZH LR LR
comp=Z,740nm,13.7s
XAN Xi'an 19.47 33 ⇓P **Pn** **17 00 03.9 +0.3**
XAN pP sP 17 00 11.9 +5.3
XAN pmax pmax
comp=Z,23nm,0.9s
WHN Wuhan 20.61 50 P Pn 17 00 18.7 +1.7
GTA Gaotai 21.36 8 *e*P **P** **17 00 23.5 +0.5**
GTA pP sP 17 00 28.2 +0.9
GTA S **S** **17 04 21.7 +1.4**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA LR LR
comp=Z,150nm,11.6s
GTA LR LR
comp=Z,180nm,12.3s
GTA LR LR
comp=Z,150nm,12.3s
LYN LuoYang 21.84 39 ⇑P **P** **17 00 32.1 +4.2**
LYN S Sn 17 04 33.8 -5.2
LYN pmax pmax
comp=Z,72nm,0.6s
LYN LR LR
comp=Z,2µm,14.1s
LYN LR LR
comp=Z,2µm,12.4s
LYN LR LR
comp=Z,1µm,17.2s
TIY Taiyuan 24.11 33 *e*P **P** **17 00 52.7 +1.3**
TIY S **S** **17 05 08.6 -0.5**
TIY pmax pmax
comp=Z,26nm,0.8s
TIY LR LR
comp=Z,730nm,12.2s
TIY LR LR
comp=Z,640nm,13.5s
TIY LR LR
comp=Z,370nm,11.8s
NJ2 Nanjing 24.69 52 *e*P **P** **17 00 55.3 -1.3**
NJ2 pP **sP** **17 00 59.4 -1.6**
NJ2 pmax pmax
comp=Z,10.0nm,1.1s
NJ2 pmax pmax
comp=Z,190nm,4.1s
HNS HongShan 25.12 37 ⇑P **P** **17 01 00.8 +0.4**
HNS *e*S **S** **17 05 23.7 -1.5**
HNS pmax pmax
comp=Z,23nm,1.0s
HNS LR LR
comp=Z,700nm,14.3s
HNS LR LR
comp=Z,700nm,14.7s
HNS LR LR
comp=Z,330nm,13.1s
BTO Baotou 25.32 25 *e*P **P** **17 01 02.5 +0.2**
BTO pP **sP** **17 01 07.1 +0.3**
BTO sP **pP** **17 01 09.8 +4.3**
BTO PP **PnPn** **17 01 41.4 +4.4**
BTO S **S** **17 05 31.2 +2.7**
BTO sS **SnSn** **17 06 28.7 +8.8**
BTO pmax pmax
comp=Z,25nm,0.8s
BTO pmax pmax
comp=Z,410nm,4.5s
BTO LR LR
comp=Z,890nm,7.7s
BTO LR LR
comp=Z,1µm,9.9s
BTO LR LR
comp=Z,990nm,11.8s
NIL Nilore 25.60 311 P **P** **17 01 04.3 -0.6**
HHC Hu-ho-hao-te 26.17 27 *e*P **P** **17 01 09.2 -0.9**
HHC sP sP 17 01 18.8 +4.3
HHC PP **PnPn** **17 01 52.5 +3.9**
HHC S **S** **17 05 38.7 -3.4**
HHC sS sS 17 05 50.7 +3.5
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,100nm,4.5s
HHC LR LR
comp=Z,560nm,10.8s
HHC LR LR
comp=Z,600nm,10.3s
HHC LR LR
comp=Z,600nm,11.6s
WMQ Urumqi 26.50 346 *e*P **P** **17 01 11.5 -1.5**
WMQ pmax pmax
comp=Z,170nm,4.3s
LEM Lembang 27.34 154 LR LR 17 12 58.5
comp=Z,303nm,18.2s,baz=52,slow=38
KSH Kashi 27.49 325 P **P** **17 01 22.4 +0.4**
KSH pP sP 17 01 25.2 -1.2
KSH sP pP 17 01 30.6 +5.5
KSH pmax pmax
comp=Z,5.0nm,1.1s
BJI Beijing 27.80 34 P **P** **17 01 23.0 -1.6**
BJI LR LR
comp=Z,250nm,16.2s
BJI LR LR
comp=Z,270nm,18.1s
KBL Kabul 29.08 309 P **P** **17 01 35.4 -1.0**
KBL IAmb IAmb 17 01 44.2
comp=Z,13nm,1.2s
AAK Ala-Archa 30.50 328 P **P** **17 01 48.4 -0.4**
AAK IAmb IAmb 17 02 00.3
comp=Z,5.9nm,0.9s
MKAR Makanchi Array 30.70 341 P **P** **17 01 48.5 -1.9**
MKAR Makanchi Array 30.70 341 P **P** **17 01 49.3 -1.1**
comp=Z,6.1nm,0.7s,baz=154,slow=8.6,SNR=44
comp=Z,6.1nm,0.7s
SONM Songino Array 30.71 14 P **P** **17 01 51.7 +1.1**
comp=Z,1.7nm,1.0s,baz=201,slow=8.1,SNR=8.0
SONM LR LR 17 15 33.9
comp=Z,319nm,18.1s,baz=185,slow=39
comp=Z,1.7nm,1.0s
DAV Davao City (W) 30.74 107 LR LR 17 14 19.1
comp=Z,181nm,18.3s,baz=334,slow=37
MAKZ Makanchi 30.81 341 P **P** **17 01 49.5 -1.8**
MAKZ IAmb IAmb 17 01 55.1
comp=Z,5.9nm,1.0s
KSRS Korea Array 33.79 49 LR LR 17 17 20.7
comp=Z,147nm,20.0s,baz=225,slow=39
JNU Nakatsue 34.48 58 LR LR 17 18 06.0
comp=Z,255nm,18.2s,baz=228,slow=39
KURBB Kurchatov Arra 35.26 341 P **P** **17 02 28.6 -1.4**
comp=Z,9.1nm,0.7s,baz=149,slow=8.7,SNR=38
KURBB PcP **PcP** **17 05 02.4 +1.7**
comp=Z,0.6nm,0.6s,baz=160,slow=2.4,SNR=4.6
KURBB LR LR 17 19 39.7
comp=Z,103nm,20.5s,baz=176,slow=41
comp=Z,9.1nm,0.7s
KURK Kurchatov 35.31 341 **P** **17 02 29.6 -0.8**
WSAR Wadi Sarin 35.36 285 LR LR 17 19 46.7
comp=Z,42nm,20.5s,baz=79,slow=41
ZAA0 Zalesovo Array 36.73 349 P **P** **17 02 40.7 -1.9**
ZAA0 IAmb IAmb 17 02 45.4
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 36.73 349 P **P** **17 02 40.7 -1.8**
ZALV Zalesovo Beam 36.73 349 P **P** **17 02 42.2 -0.4**
comp=Z,13nm,0.8s,baz=176,slow=8.5,SNR=40
ZALV LR LR 17 19 05.6
comp=Z,42nm,18.1s,baz=184,slow=38
comp=Z,13nm,0.8s
GEYT Alibeck 38.52 309 P **P** **17 02 58.0 -0.1**
GEYT IAmb IAmb 17 03 02.3
comp=Z,19nm,1.1s
GEYT Alibeck 38.52 309 P **P** **17 03 00.4 +2.3**
comp=Z,12nm,0.9s,baz=102,slow=14,SNR=17
GEYT LR LR 17 22 12.4
comp=Z,122nm,19.2s,baz=170,slow=41
comp=Z,12nm,0.9s
USRK Ussuriysk Ar. 39.65 41 LR LR 17 19 29.0
comp=Z,78nm,18.1s,baz=217,slow=36
BVAR Borovoye Array 40.12 336 P **P** **17 03 11.7 +0.6**
comp=Z,1.9nm,0.5s,baz=133,slow=9.1,SNR=10
BVAR LR LR 17 21 41.4
comp=Z,64nm,19.6s,baz=146,slow=39
comp=Z,1.9nm,0.5s
BRVK Borovoye 40.18 336 P **P** **17 03 11.8 +0.2**
MJAR Matsushiro Arr 41.21 55 P **P** **17 03 22.1 +1.7**
comp=Z,3.0nm,1.0s,baz=260,slow=11,SNR=4.3
MJAR LR LR 17 23 08.5
comp=Z,92nm,20.1s,baz=227,slow=40
comp=Z,3.0nm,1.0s
KLR Kul'dur 42.17 35 LR LR 17 22 54.5
comp=Z,188nm,18.2s,baz=236,slow=39
ABKAR Akbulak array 42.50 325 P **P** **17 03 29.1 -1.6**
ABKAR IAmb IAmb 17 03 33.3
comp=Z,9.2nm,0.8s
JCJ Chichijima 43.21 70 LR LR 17 22 49.2
comp=Z,29nm,18.3s,baz=266,slow=38
AKTO Aktyubinsk 44.19 326 LR LR 17 24 52.5
comp=Z,156nm,21.9s,baz=22,slow=40
ARU Arti 47.40 333 P **P** **17 04 08.7 -1.0**
ARU IAmb IAmb 17 04 25.0
comp=Z,10nm,1.2s
ARU Arti 47.40 333 LR LR 17 28 09.5
comp=Z,116nm,18.1s,baz=132,slow=41
GNI Garni 49.14 308 LR LR 17 28 50.9
comp=Z,44nm,19.2s,baz=141,slow=41
BELG Belogornoye 50.85 324 LR LR 17 28 54.8
comp=Z,140nm,19.2s,baz=149,slow=39
KBZ Khabaz 51.21 312 P **P** **17 04 40.8 +1.8**
comp=Z,3.1nm,0.9s,baz=150,slow=5.8,SNR=4.0
comp=Z,3.1nm,0.9s
KIV Kislovodsk 51.41 312 P **P** **17 04 40.5 -0.1**
KIRV Kirov 52.70 331 LR LR 17 32 08.7
comp=Z,125nm,18.6s,baz=138,slow=42
WRA Warramunga Arr 53.32 133 P **P** **17 04 54.6 -0.3**
comp=Z,3.9nm,0.7s,baz=320,slow=7.4,SNR=24
comp=Z,3.9nm,0.7s
AS31 Alice Springs 55.60 137 P **P** **17 05 11.1 -0.4**
ASAR Alice Springs 55.60 137 P **P** **17 05 11.5 -0.1**
comp=Z,3.0nm,0.7s,baz=317,slow=7.0,SNR=52
comp=Z,3.0nm,0.7s
MMAI Mount Meron Ar 56.02 298 P **P** **17 05 16.5 +1.9**
comp=Z,0.3nm,0.2s,baz=59,slow=8.6,SNR=3.7
MMAI LR LR 17 36 49.2
comp=Z,52nm,18.6s,baz=62,slow=44
comp=Z,0.3nm,0.2s
EIL Elat 56.51 294 LR LR 17 34 08.8
comp=Z,51nm,19.8s,baz=87,slow=41
TIXI Tiksi 56.78 12 P **P** **17 05 18.1 -1.1**
TIXI IAmb IAmb 17 05 22.4
comp=Z,4.6nm,0.8s
BRTR Keskin Array B 57.57 306 P **P** **17 05 27.6 +2.1**
comp=Z,2.1nm,0.9s,baz=72,slow=9.3,SNR=4.8
BRTR LR LR 17 36 35.1
comp=Z,95nm,18.5s,baz=104,slow=43
comp=Z,2.1nm,0.9s
OBN Obninsk 57.93 324 LR LR 17 33 40.2
comp=Z,118nm,18.4s,baz=354,slow=39
ELL Elmali 60.47 302 P **P** **17 05 45.2 -0.5**
AKASG Malin Array Be 61.52 318 P **P** **17 05 53.1 +0.7**
comp=Z,0.5nm,0.4s,baz=80,slow=6.9,SNR=6.4
AKASG LR LR 17 36 14.0
comp=Z,68nm,18.4s,baz=74,slow=40
comp=Z,0.5nm,0.4s
MLR Muntele Rosu 63.42 312 LR LR 17 38 56.6
comp=Z,27nm,20.4s,baz=45,slow=41
FINES FINESS Array B 64.64 330 P **P** **17 06 13.9 +1.0**
comp=Z,4.6nm,0.5s,baz=98,slow=5.8,SNR=26
FINES LR LR 17 37 41.3
comp=Z,83nm,19.2s,baz=144,slow=39
comp=Z,4.6nm,0.5s
STKA Stephens Creek 66.18 138 P **P** **17 06 23.2 -0.1**
comp=Z,1.4nm,0.7s,baz=320,slow=10,SNR=3.7
STKA LR LR 17 37 45.3
comp=Z,83nm,19.5s,baz=220,slow=38
comp=Z,1.4nm,0.7s
ARCES ARCESS Array B 66.31 339 P **P** **17 06 24.3 +0.6**
comp=Z,11nm,1.0s,baz=94,slow=6.4,SNR=9.8
ARCES LR LR 17 39 43.5
comp=Z,95nm,18.6s,baz=122,slow=40
comp=Z,11nm,1.0s
MBAR Mbarara 66.89 261 LR LR 17 34 58.1
comp=Z,29nm,19.8s,baz=46,slow=35
HFS Hagfors 70.64 328 P **P** **17 06 51.3 +0.4**
comp=Z,4.8nm,0.5s,baz=104,slow=6.3,SNR=23
comp=Z,4.8nm,0.5s
OBKA Obir 71.29 314 *e*pP **P** **17 06 55.9 +0.6**
comp=Z,0.6nm,0.3s
GERES GERESS Array B 71.58 316 P **P** **17 06 58.7 +1.7**
comp=Z,1.8nm,0.6s,baz=100,slow=6.1,SNR=6.5
comp=Z,1.8nm,0.6s
NB2 NORSAR Subarra 71.80 329 P **P** **17 06 58.8 +0.9**
comp=Z,1.7nm,0.5s,baz=86,slow=6.5
NOA NORSAR Array B 71.80 329 P **P** **17 06 58.9 +0.9**
comp=Z,1.9nm,0.5s,baz=90,slow=5.9,SNR=8.8
NOA LR LR 17 43 24.8
comp=Z,62nm,19.4s,baz=85,slow=40
comp=Z,1.9nm,0.5s
LESA Schwarzeotal 72.44 315 *i* pP pP 17 07 03.4 -2.1
comp=Z,0.5nm,0.2s
WTTA Wattenberg 73.17 315 *i* pP pP 17 07 09.0 -0.9
comp=Z,1.0nm,0.4s
MOTA Moosalm 73.51 315 *i* pP **P** **17 07 09.0 +0.4**
comp=Z,2.6nm,0.6s
FETA Feichten 73.82 315 *i* pP pP 17 07 11.8 -2.0
comp=Z,1.7nm,0.8s
LSZ Lusaka 74.74 248 LR LR 17 37 24.1
comp=Z,95nm,18.4s,baz=96,slow=34
JMIC Jan Mayen 77.60 341 LR LR 17 46 24.0
comp=Z,65nm,19.0s,baz=243,slow=39
G19K Purcell Mounta 80.09 23 P **P** **17 07 44.5 -0.7**
EKA Eskdalemuir Ar 80.37 325 P **P** **17 07 47.1 +0.2**
comp=Z,1.2nm,0.5s,baz=80,slow=5.2,SNR=7.7
comp=Z,1.2nm,0.5s
LBTB Lobatse 80.98 240 LR LR 17 42 36.0
comp=Z,88nm,19.6s,baz=39,slow=35
BOSA Boshof 82.77 237 P **P** **17 08 01.1 +0.9**
comp=Z,1.4nm,0.7s,baz=59,slow=6.8,SNR=3.7
BOSA LR LR 17 41 37.6
comp=Z,58nm,18.4s,baz=16,slow=33
comp=Z,1.4nm,0.7s
MDM Murphy Dome 83.91 23 P **P** **17 08 03.8 -1.5**
MDM IAmb IAmb 17 08 12.6
comp=Z,5.0nm,1.0s
ILAR Eielson Array 84.50 23 P **P** **17 08 08.6 +0.4**
comp=Z,0.5nm,0.7s,baz=301,slow=4.7,SNR=7.5
comp=Z,0.5nm,0.7s
TSUM Tsumeb 85.59 248 LR LR 17 43 27.0
comp=Z,44nm,21.2s,baz=357,slow=34
ESDC Sonseca Array 86.05 310 P **P** **17 08 18.3 +1.8**
comp=Z,1.4nm,1.1s,baz=71,slow=4.3,SNR=3.2
comp=Z,1.4nm,1.1s
SUR Sutherland 87.81 235 LR LR 17 42 03.5
comp=Z,40nm,19.9s,baz=352,slow=32

TAP 05 17:08:02.4,24°24'N×121°75'E,h7km,ML1.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=357	**0.07**	**351**	*e*P	Pg	17 08 04.7	+0.4
EAHA	**Aohua** baz=352	**0.09**	**352**	*e*P	Pg	17 08 05.7	+1.1
EAHA				*e*S	Sg	17 08 08.2	+2.0
ETL	**Fush Village** baz=236	**0.14**	**237**	*i* P	Pg	17 08 06.3	+0.9
ETL				*i* S	Sg	17 08 08.9	+1.5
NACB	**Ninganchiao** baz=246	**0.16**	**247**	*i* P	Pg	17 08 06.6	+0.9
NACB				*i* S	Sg	17 08 09.4	+1.5
ENA	**Nanau** baz=358	**0.19**	**357**	*i* P	Pg	17 08 07.1	+0.8
ENA				*i* S	Sg	17 08 10.6	+1.7
EWUT	**Wuta** baz=6.0	**0.21**	**6**	P	Pg	17 08 07.7	+1.1
EWUT				S	Sg	17 08 11.1	+1.6
TWD	**Chiawan** baz=221	**0.21**	**223**	*e*P	Pg	17 08 07.4	+0.8
TWD				S	Sg	17 08 11.0	+1.4
ETLH	**Xiulin Townshi** baz=263	**0.25**	**263**	P	Pg	17 08 09.0	+1.6
HWA	**Hwalien** baz=205	**0.29**	**208**	*e*P	Pb	17 08 09.3	-0.7
ESAO	**Su ao** baz=13	**0.35**	**14**	*e*P	Pb	17 08 10.2	-0.7
ETM	**Tongmen** baz=221	**0.36**	**221**	*e*P	Pb	17 08 10.8	-0.2
LATG	**Datong** baz=325	**0.36**	**325**	P	Pb	17 08 10.9	-0.3
LATG				S	Sb	17 08 16.4	-0.7
TWC	**Suao** baz=14	**0.38**	**13**	P	Pg	17 08 10.6	+0.8
TWC				*e*S	Sb	17 08 16.8	-0.8
NNSB	**Datong** baz=299	**0.39**	**300**	*e*P	Pb	17 08 10.9	-0.8
NDS	**Dongshan** baz=355	**0.40**	**355**	*e*P	Pb	17 08 11.3	-0.5
NNS	**Nan Shan** baz=300	**0.40**	**300**	*e*P	Pb	17 08 11.1	-0.7
NDT	**Datong Townshi** baz=328	**0.42**	**329**	*e*P	Pb	17 08 11.7	-0.6
ENTT	**Nioudou** baz=337	**0.44**	**337**	P	Pb	17 08 12.4	0.0
WHF	**Hehuan Shan** baz=257	**0.46**	**258**	P	Pb	17 08 12.2	-0.7
FUSS	**Fushou** baz=271	**0.47**	**271**	*e*P	Pb	17 08 12.5	-0.5
SHUL	**Shoufeng** baz=201	**0.48**	**201**	*e*P	Pb	17 08 12.8	-0.3
TWE	**Neicheng** baz=352	**0.49**	**351**	*e*P	Pb	17 08 13.1	-0.2
ESL	**Shilin** baz=213	**0.51**	**215**	*e*P	Pb	17 08 13.2	-0.5
FUSB	**Fushanzhiwuyua** baz=343	**0.54**	**344**	*e*P	Pb	17 08 14.2	-0.1
YHNB	**Yeheng** baz=321	**0.55**	**321**	*e*P	Pb	17 08 14.2	-0.3
NSK	**Sanguang** baz=320	**0.57**	**321**	*e*P	Pb	17 08 14.5	-0.2

IDC 05 17:19:04.9±1.8,1°06'N×126°91'E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=167.6km s-min=21.5km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=340,slow=11,SNR=21 1.1nm,0.5s	**22.11**	**161**	P	P	17 24 02.1	+0.1
ASAR	**Alice Springs** 0.2nm,0.3s,baz=341,slow=10,SNR=20 0.2nm,0.3s	**25.50**	**165**	P	P	17 24 35.0	-0.1
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=114,slow=8.8,SNR=4.4 0.1nm,0.4s	**59.85**	**326**	P	P	17 29 12.1	-0.3
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=127,slow=6.2,SNR=5.5 0.3nm,0.5s	**64.08**	**328**	P	P	17 29 40.8	+0.2

*IDC **05** 17:27:17.3±0.8,56°06N×149°84W,h0km,mb4.0/17, mbtmp4.0/22,ML3.7/5,MS3.7/49,Error ellipse: s-maj=21.5km s-min=12.0km az=30.0*
*NEIC **05** 17:27:18.1±1.3,56°19N±0°07×149°90W±0°08,h10km±1km, mb4.4/50,ML4.3/54,ML4.1(AEIC),Error ellipse: s-maj=12.4km s-min=7.4km az=168.0*
*AEIC **05** 17:27:23.0±1.5,56°20N±0°08×149°7W±0°1,h8km±5km, Error ellipse: s-maj=12.4km s-min=8.8km az=183.0*
ISC 05 17:27:18.8±0.6,56°23N±0°07×149°80W±0°05,h10km, n364,n0s82/307,mb4.3/37,MS3.8/43,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.17**	**299**		**Pn**	**17 27 53.8**	**-1.1**
OHAK					**Sn**	**17 28 19.1**	**-2.7**
OHAK	**Old Harbor** baz=116	**2.17**	**299**	P	**Pn**	**17 27 54.0**	**-0.9**
OHAK				S	**Sn**	**17 28 19.5**	**-2.2**
KDAK	**Kodiak Island**	**2.18**	**317**		**Pn**	**17 27 55.0**	**-0.1**
KDAK					**Sn**	**17 28 20.9**	**-1.2**
KDAK	**Kodiak Island** 21nm,0.3s,baz=106,slow=14,SNR=148	**2.18**	**317**	Pn	**Pn**	**17 27 54.7**	**-0.4**
KDAK	40nm,0.3s,baz=28,slow=20,SNR=19			Sn	**Sn**	**17 28 21.2**	**-1.0**
KDAK	comp=Z,3µm,18.8s,baz=208,slow=48 108nm,0.6s			LR	LR	17 29 06.1	
SII	**Sitkinak Islan**	**2.46**	**280**		**Sn**	**17 28 25.6**	**-3.4**
SII	**Sitkinak Islan**	**2.46**	**280**		**Pn**	**17 27 56.9**	**-2.1**
SII	comp=E,2µm,0.8s			IAML		17 28 27.0	
SII	comp=N,1µm,0.9s			IAML		17 28 34.4	
SII	**Sitkinak Islan** baz=96	**2.46**	**280**	P	**Pn**	**17 27 58.9**	**-0.1**
SYI	**Shuyak Island**	**2.77**	**331**		**Sn**	**17 28 35.7**	**-0.9**
SYI	**Shuyak Island**	**2.77**	**331**	Pn	**Pn**	**17 28 02.9**	**-0.3**
SYI	**Shuyak Island** comp=E,382nm,0.6s	**2.77**	**331**	IAML		17 28 38.6	
SYI	comp=N,345nm,1.0s			IAML		17 28 39.0	
Q20K	**Shuyak Island** baz=148	**2.77**	**331**	P	**Pn**	**17 28 03.2**	**0.0**
Q20K				S	**Sn**	**17 28 35.7**	**-1.0**
CNPM	**China Poot**	**3.40**	**348**		**Sn**	**17 28 51.5**	**-0.7**
CNPM	**China Poot**	**3.40**	**348**		**Pn**	**17 28 11.4**	**-0.4**
CNPM	**China Poot** comp=E,358nm,0.8s	**3.40**	**348**	IAML		17 28 53.2	
CNPM	comp=N,284nm,0.4s			IAML		17 28 54.0	
Q19K	**Cape Douglas,**	**3.41**	**324**		**Pn**	**17 28 11.8**	**-0.2**
Q19K	**Cape Douglas,** baz=141	**3.41**	**324**	P	**Pn**	**17 28 12.7**	**+0.6**
KAHG	**Katmai Hook Gl**	**3.43**	**313**		**Pn**	**17 28 13.4**	**+1.0**
KCE	**Katmai Mt Cerb**	**3.56**	**307**		**Pn**	**17 28 15.3**	**+1.2**
BRSE	**Bradley Lake S**	**3.56**	**352**		**Pn**	**17 28 13.7**	**-0.4**
BRSE	**Bradley Lake S** baz=171	**3.56**	**352**	P	**Pn**	**17 28 13.5**	**-0.6**
HOM	**Homer**	**3.58**	**345**	Pn	**Pn**	**17 28 14.3**	**0.0**
HOM	comp=N,868nm,0.8s			IAML		17 29 03.2	
HOM	comp=E,718nm,1.1s			IAML		17 29 05.1	
BRLK	**Bradley Lake**	**3.60**	**351**		**Sn**	**17 28 55.4**	**-1.6**
BRLK	**Bradley Lake**	**3.60**	**351**		**Pn**	**17 28 13.8**	**-0.8**
BRLK	**Bradley Lake** comp=N,391nm,0.9s	**3.60**	**351**	IAML		17 29 00.8	
BRLK	comp=E,337nm,0.6s			IAML		17 29 03.6	
ACHA	**Angle Creek He**	**3.60**	**306**		**Pn**	**17 28 15.4**	**+0.7**
ANCK	**Angle Creek**	**3.68**	**305**		**Pn**	**17 28 16.5**	**+0.8**
KVTA	**Katmai Vly 10**	**3.68**	**308**		**Pn**	**17 28 16.4**	**+0.7**
Q23K	**Middleton Isla**	**3.70**	**28**	Pn	**Pn**	**17 28 15.3**	**-0.7**
Q23K	comp=E,276nm,0.8s			IAML		17 29 02.0	
Q23K	comp=N,274nm,0.8s			IAML		17 29 08.7	
Q23K	**Middleton Isla**	**3.70**	**28**	P	**Pn**	**17 28 15.5**	**-0.5**

baz=210
MID Middleton Isla 3.71 28 Pn 17 28 15.4 -0.6
MID IAML 17 28 57.9
comp=N,314nm,1.3s
PLK3 Peulik 3 3.83 295 Pn 17 28 17.8 0.0
CNTC Contact Creek 3.89 304 Pn 17 28 18.8 +0.1
Q17K Contact Creek 3.89 304 P Pn 17 28 18.4 -0.2
baz=119
P19K Oil Pt 3.89 333 Pn 17 28 18.4 -0.3
P19K IAML 17 29 11.1
comp=E,771nm,0.6s
P19K IAML 17 29 11.1
comp=N,826nm,0.6s
P19K Oil Pt 3.89 333 P Pn 17 28 19.0 +0.3
baz=150
SEW Seward 3.89 3 Pn 17 28 18.1 -0.5
SEW Seward 3.89 3 P Pn 17 28 18.1 -0.5
baz=182
KELA Mount Kelaz 3.91 307 Pn 17 28 19.4 +0.4
P23K Montague Islan 3.99 18 Pn 17 28 19.6 -0.4
P23K Montague Islan 3.99 18 P Pn 17 28 19.6 -0.4
baz=199
PLK1 Peulik 1 4.04 296 Pn 17 28 20.7 +0.1
O20K Slope Mountain 4.15 340 Pn 17 28 22.3 +0.1
O20K Slope Mountain 4.15 340 P Pn 17 28 22.3 +0.1
baz=157
IVE Iliamna Volcan 4.17 337 Pn 17 28 22.2 -0.2
O22K Cooper Landing 4.27 0 Pn 17 28 23.8 0.0
SLKM Skilak Lake 4.30 357 Pn 17 28 23.6 -0.6
P18K Big Mountain, 4.30 320 Pn Pn 17 28 23.5 -0.8
P18K Big Mountain, 4.30 320 P Pn 17 28 24.3 0.0
baz=135
Q16K King Salmon 4.45 306 Pn 17 28 26.5 +0.3
Q16K King Salmon 4.45 306 P Pn 17 28 26.5 +0.3
baz=121
RED Redoubt Volcan 4.49 341 Pn 17 28 25.9 -0.9
RSO Redoubt South 4.53 341 Pn 17 28 26.9 -0.6
HIN Hinchinbrook I 4.53 21 Pn 17 28 27.0 -0.4
HIN IAML 17 29 27.6
comp=E,357nm,1.1s
HIN IAML 17 29 30.2
comp=N,343nm,0.9s
RDWB Redoubt West 4.56 341 Pn 17 28 26.9 -1.1
CAPN Captain Cook N 4.61 352 Pn Pn 17 28 27.5 -0.9
O18K Koktuh Hills 4.64 324 Pn Pn 17 28 28.5 -0.4
O18K IAML 17 29 25.3
comp=E,144nm,0.8s
O18K IAML 17 29 25.7
comp=N,246nm,0.8s
O18K Koktuh Hills 4.64 324 P Pn 17 28 28.7 -0.1
baz=139
P17K Kvichak River 4.64 313 Pn 17 28 29.6 +0.7
P17K Kvichak River 4.64 313 P Pn 17 28 29.6 +0.7
baz=127
O19K Port Alsworth 4.64 331 Pn Pn 17 28 28.0 -0.9
O19K Port Alsworth 4.64 331 P Pn 17 28 28.6 -0.3
baz=147
NCT North Crescent 4.65 341 Pn 17 28 28.2 -0.9
KAIM Kayak Island 4.68 35 Pn Pn 17 28 29.2 -0.2
KAIM IAML 17 29 30.6
comp=E,406nm,1.1s
KAIM IAML 17 29 33.8
comp=N,403nm,0.8s
KAIM Kayak Island 4.68 35 P Pn 17 28 29.1 -0.2
baz=219
CHGN Chignik 4.81 274 Pn Pn 17 28 29.6 -1.5
CHGN IAML 17 29 28.0
comp=E,256nm,0.8s
CHGN IAML 17 29 45.7
comp=N,237nm,0.8s
EYAK Cordova Ski Ar 4.83 24 Pn Pn 17 28 31.6 +0.2
EYAK Cordova Ski Ar 4.83 24 P Pn 17 28 31.5 +0.1
baz=207
RC01 Rabbit Creek A 4.88 0 Pn Pn 17 28 31.6 -0.6
RC01 IAML 17 29 32.3
comp=E,166nm,0.7s
RC01 Rabbit Creek A 4.88 0 P Pn 17 28 32.1 0.0
baz=180
RAGM Ragged Mountai 4.97 31 Pn 17 28 33.0 -0.4
SUCK Suckling Hills 5.00 37 Pn Pn 17 28 33.9 0.0
SUCK IAML 17 29 31.0
comp=N,291nm,0.5s
SUCK IAML 17 29 47.4
comp=E,253nm,1.4s
HMT Hamilton 5.05 33 Pn 17 28 34.4 -0.2
NICHA Nichawak Mount 5.07 35 Pn 17 28 34.7 0.0
GOAT Goat Mountain 5.12 29 Pn 17 28 35.7 +0.2
N20K Mount Spurr 5.14 347 P Pn 17 28 35.2 -0.6
baz=164
SPCR Spurr Chakacha 5.15 347 Pn 17 28 35.2 -0.6
SPCP Crater Peak Br 5.20 347 Pn 17 28 36.4 -0.4
BGLC Bering Glacier 5.21 39 Pn 17 28 37.0 +0.4
BGLC Bering Glacier 5.21 39 P Pn 17 28 37.0 +0.4
baz=224
N19K Bonanza Creek 5.21 334 Pn 17 28 36.0 -0.9
N19K Bonanza Creek 5.21 334 P Pn 17 28 36.4 -0.5
baz=150
P16K Nushagak River 5.22 306 Pn 17 28 37.1 +0.3
P16K Nushagak River 5.22 306 P Pn 17 28 37.1 +0.3
baz=119
KNK Knik Glacier 5.25 7 Pn 17 28 37.4 +0.2
KNK IAML 17 29 42.2
comp=N,100nm,0.5s
KNK IAML 17 29 46.4
comp=E,168nm,0.7s
KNK Knik Glacier 5.25 7 P Pn 17 28 37.3 +0.1
baz=188
O17K Koliganek Bris 5.26 316 Pn 17 28 37.5 +0.1
O17K Koliganek Bris 5.26 316 P Pn 17 28 37.5 +0.1
baz=129
BERG Berg Lake 5.27 35 Pn 17 28 36.9 -0.7
BERG IAML 17 29 46.5
comp=N,272nm,0.8s
SUA Susitna One 5.28 355 Pn Pn 17 28 36.8 -1.0
SUA IAML 17 29 44.3
comp=N,82nm,1.3s
SUA IAML 17 30 09.3
comp=E,87nm,0.8s
SUA Susitna One 5.28 355 P Pn 17 28 37.0 -0.8
baz=174
GRIN Grindle Hills 5.31 37 Pn 17 28 38.3 +0.2
DIV Divide 5.35 21 Pn Pn 17 28 38.0 -0.6
SPNN North Nagishla 5.37 345 Pn 17 28 39.0 0.0
PMR Palmer 5.39 3 Pn 17 28 38.7 -0.5
STLK Strandline Lak 5.39 350 Pn 17 28 39.0 -0.2
SNH Sunshine Point 5.41 40 Pn 17 28 39.5 0.0
KHIT Khitrov Hills 5.46 36 Pn 17 28 39.9 -0.3
BMRM Bremner River 5.47 28 Pn Pn 17 28 40.3 -0.1
BMRM Bremner River 5.47 28 P Pn 17 28 40.4 0.0
baz=211
N18K Kilae Creek 5.49 327 Pn 17 28 40.2 -0.4
N18K Kilae Creek 5.49 327 P Pn 17 28 40.2 -0.4
baz=142
O16K Kokwok River B 5.56 311 Pn Pn 17 28 41.8 +0.3
O16K Kokwok River B 5.56 311 P Pn 17 28 42.0 +0.5
baz=124
GHO Glory Hole Cre 5.58 4 Pn 17 28 43.0 +1.1
WAX Waxell Ridge 5.59 38 Pn 17 28 41.5 -0.6
SML Sawmill 5.65 7 Pn Pn 17 28 42.9 +0.2
SML Sawmill 5.65 7 P Pn 17 28 43.4 +0.6
baz=188
KLU Klutina 5.65 19 Pn Pn 17 28 42.6 -0.2
KLU Klutina 5.65 19 P Pn 17 28 43.3 +0.5
baz=202
BARK Barkley Ridge 5.69 40 Pn 17 28 43.3 0.0
MESA MESA 5.74 43 Pn Pn 17 28 44.4 +0.3
MESA MESA 5.74 43 P Pn 17 28 43.9 -0.2
baz=229
CNBA Chernabura Isl 5.74 260 Pn Pn 17 28 41.7 -2.2
SVW2 Sparrevohn 5.74 331 Pn 17 28 43.2 -0.8
SCM Sheep Creek Mo 5.77 12 Pn 17 28 45.0 +0.6
SCM Sheep Creek Mo 5.77 12 P Pn 17 28 45.5 +1.1
baz=193
N17K Nushagak Hills 5.80 321 Pn 17 28 44.6 -0.2
N17K Nushagak Hills 5.80 321 P Pn 17 28 44.7 -0.1
baz=135
SKT Skwentna 5.84 352 Pn Pn 17 28 44.8 -0.6
SKT Skwentna 5.84 352 P Pn 17 28 45.0 -0.3
baz=170
ISLE Juniper Island 5.88 39 Pn 17 28 44.7 -1.3
M20K Styx River 5.93 345 Pn Pn 17 28 45.7 -0.9
M20K Styx River 5.93 345 P Pn 17 28 46.0 -0.6
baz=161
VRDI Verde Repeater 6.00 31 Pn Pn 17 28 47.2 -0.6
N25K Chitina, Valde 6.03 24 Pn Pn 17 28 47.9 -0.1
baz=208
GLB Gilahina Butte 6.08 28 Pn Pn 17 28 48.2 -0.5
M18K Stony River 6.13 332 Pn 17 28 48.8 -0.6
M18K Stony River 6.13 332 P Pn 17 28 48.8 -0.6
baz=146
O15K Ungalikthiuk R 6.13 303 Pn 17 28 49.4 0.0
O15K Ungalikthiuk R 6.13 303 P Pn 17 28 49.4 0.0
baz=114
M19K Big River Lodg 6.17 339 Pn 17 28 49.2 -0.6
SAMH Samovar Hills 6.17 47 Pn 17 28 50.4 +0.4
M24K Tolsona, Glenn 6.18 16 Pn Pn 17 28 49.8 -0.3
M24K Tolsona, Glenn 6.18 16 P Pn 17 28 51.1 +1.0
baz=199
TABL Table Mountain 6.21 44 Pn 17 28 50.6 0.0
MCARA McCarthy VSAT 6.25 31 Pn 17 28 50.5 -0.5
MCARA McCarthy VSAT 6.25 31 P Pn 17 28 51.0 0.0
baz=217
PTPK Patty Peak 6.27 34 Pn 17 28 51.4 0.0
N16K Nishlik Lake 6.36 316 Pn 17 28 53.2 +0.8
N16K Nishlik Lake 6.36 316 P Pn 17 28 53.2 +0.8
baz=138
PCA Pinnacle 6.37 49 Pn Pn 17 28 52.5 -0.1
PINM Pinnacle 6.37 49 P Pn 17 28 52.9 +0.2
baz=236
WACK Wrangell Chich 6.43 24 Pn 17 28 53.8 +0.2
BARN Barnard Glacie 6.44 38 Pn 17 28 53.3 -0.4
WAT6 Susitna Watana 6.46 8 Pn Pn 17 28 55.0 +1.0
baz=190
CTG Chitna Glacier 6.49 39 P Pn 17 28 54.4 +0.1
baz=226
CTGM Chitina Glacie 6.49 39 Pn 17 28 53.7 -0.6
L19K White Mountain 6.51 339 Pn 17 28 54.2 -0.4
L19K White Mountain 6.51 339 P Pn 17 28 54.0 -0.6
baz=154
LOGN Logan Glacier 6.51 41 Pn 17 28 54.1 -0.7
PNL Peninsula 6.52 54 Pn 17 28 54.3 -0.4
PNL Peninsula 6.52 54 P Pn 17 28 54.3 -0.4
baz=242
M17K Holitna River 6.53 326 Pn 17 28 54.5 -0.3
M17K Holitna River 6.53 326 P Pn 17 28 54.9 +0.1
baz=139
WAZA Wrangell Mount 6.54 24 Pn 17 28 55.9 +0.7
BCPM Bancas Point 6.55 51 Pn 17 28 55.3 +0.1
HARP HAARP 6.63 19 Pn 17 28 56.1 -0.1
HARP HAARP 6.63 19 P Pn 17 28 56.1 -0.1
baz=202
WAT7 Susitna Watana 6.65 4 Pn 17 28 57.1 +0.6
WAT1 Susitna Watana 6.66 5 Pn 17 28 57.4 +0.9
WAT1 Susitna Watana 6.66 5 P Pn 17 28 57.4 +0.9
baz=186
N15K Kwethluk River 6.72 310 Pn 17 28 58.2 +0.7
N15K Kwethluk River 6.72 310 P Pn 17 28 58.6 +1.1
baz=122
M16K Timber Creek 6.78 319 Pn Pn 17 28 58.7 +0.5
M16K Timber Creek 6.78 319 P Pn 17 28 58.7 +0.5
baz=131
O14K Tigyukauivet M 6.85 301 Pn Pn 17 28 59.5 +0.3
O14K Tigyukauivet M 6.85 301 P Pn 17 28 59.8 +0.7
baz=111
L18K Granite Mounta 6.97 332 Pn Pn 17 29 00.1 -0.7
DHY Denali Highway 6.98 9 Pn Pn 17 29 01.5 +0.4
M26K Nabesna, AK 7.10 26 Pn 17 29 03.1 +0.4
M26K Nabesna, AK 7.10 26 P Pn 17 29 03.1 +0.4
baz=212
PAX Paxson 7.11 16 Pn 17 29 03.9 +1.1
PAX Paxson 7.11 16 P Pn 17 29 03.9 +1.1
baz=199
O29M Mount Kennedy 7.19 51 Pn 17 29 04.4 +0.4
O29M Mount Kennedy 7.19 51 P Pn 17 29 04.4 +0.4
baz=240
RND Reindeer 7.22 3 Pn 17 29 05.4 +1.1
YUK2 White River 7.24 36 Pn 17 29 05.4 +0.8
TRF Thorofare Moun 7.25 358 Pn 17 29 05.1 +0.2
TRF Thorofare Moun 7.25 358 P Pn 17 29 05.1 +0.2
baz=177
M15K Kasigluk River 7.26 313 Pn 17 29 05.5 +0.7
M15K Kasigluk River 7.26 313 P Pn 17 29 05.5 +0.7
baz=123
P29M Windy Craggy 7.27 57 Pn 17 29 04.6 -0.4
P29M Windy Craggy 7.27 57 P Pn 17 29 04.6 -0.4
baz=247
YUK8 Steele Glacier 7.27 42 Pn 17 29 05.9 +0.7
YUK8 Steele Glacier 7.27 42 P Pn 17 29 05.9 +0.7
baz=230
N14K Kuskokwak Cree 7.31 305 Pn 17 29 06.1 +0.7
N14K Kuskokwak Cree 7.31 305 P Pn 17 29 06.1 +0.7
baz=115
L17K Donlin 7.36 327 Pn 17 29 06.0 -0.1
L17K Donlin 7.36 327 P Pn 17 29 06.0 -0.1
baz=140
YUK3 Moose Creek 7.36 37 Pn 17 29 07.5 +1.1
YUK3 Moose Creek 7.36 37 P Pn 17 29 07.5 +1.1
baz=225
M27K Edge Creek, AK 7.36 30 Pn 17 29 06.9 +0.5
M27K Edge Creek, AK 7.36 30 P Pn 17 29 06.9 +0.5
baz=216
KTH Kantishna Hill 7.37 356 Pn 17 29 06.9 +0.4
TTA Tatalina 7.42 337 Pn Pn 17 29 06.7 -0.4
L16K Owhat River 7.43 322 Pn 17 29 07.3 +0.2
L16K Owhat River 7.43 322 P Pn 17 29 07.3 +0.2
baz=133
K20K Telida 7.47 345 Pn 17 29 06.9 -0.7
K20K Telida 7.47 345 P Pn 17 29 06.9 -0.7
baz=161
YUK7 Dusty Glacier 7.49 50 Pn 17 29 08.7 +0.6
MCK McKinley 7.54 3 Pn 17 29 10.3 +1.6
MCK McKinley 7.54 3 P Pn 17 29 10.3 +1.6
baz=183
S31K Pelican 7.59 71 Pn 17 29 06.7 -2.6
S31K Pelican 7.59 71 P Pn 17 29 06.7 -2.6
baz=262
YUK6 Outpost Mounta 7.62 47 Pn 17 29 10.4 +0.5
YUK6 Outpost Mounta 7.62 47 P Pn 17 29 10.4 +0.5
baz=236
BVCY Beaver Creek 7.70 33 Pn 17 29 11.2 +0.3
BVCY Beaver Creek 7.70 33 P Pn 17 29 11.2 +0.3
baz=220
YUK4 Talbot Arm 7.73 44 P Pn 17 29 13.8 +2.3
baz=233
K17K Iditarod 7.81 330 Pn 17 29 11.9 -0.4
K17K Iditarod 7.81 330 P Pn 17 29 11.9 -0.4
baz=142
M14K Bethel 7.82 310 Pn Pn 17 29 12.4 0.0
M14K Bethel 7.82 310 P Pn 17 29 13.4 +1.0
baz=120
P30M Million Dollar 7.83 55 Pn 17 29 13.0 +0.4
P30M Million Dollar 7.83 55 P Pn 17 29 13.0 +0.4
baz=245
PLBC Pleasant Camp 7.86 60 Pn 17 29 12.8 -0.2
PLBC Pleasant Camp 7.86 60 P Pn 17 29 12.8 -0.2
baz=251
HYT Haines Junctio 7.91 49 Pn Pn 17 29 14.1 +0.3
YUK5 Granite Creek 7.92 47 Pn 17 29 14.9 +0.9
RIDG Independent Ri 7.93 16 Pn 17 29 14.4 +0.4
RIDG Independent Ri 7.93 16 P Pn 17 29 14.4 +0.4
baz=200
L27K Beaver Creek, 7.95 27 Pn 17 29 14.7 +0.4
L27K Beaver Creek, 7.95 27 P Pn 17 29 14.7 +0.4
baz=214
ISLZ Isanotski Laza 8.05 265 Pn 17 29 13.7 -2.0
J18K Innoko River 8.05 337 Pn 17 29 14.9 -0.8
J18K Innoko River 8.05 337 P Pn 17 29 14.9 -0.8
baz=151
ISNN Isanotski Nort 8.06 266 Pn 17 29 14.3 -1.5
SSLS Shishaldin Sou 8.21 265 Pn 17 29 16.6 -1.3
M13K Dall Lake 8.27 306 Pn 17 29 19.5 +0.8
M13K Dall Lake 8.27 306 P Pn 17 29 19.5 +0.8
baz=114
SCRK Sand Creek 8.30 18 Pn 17 29 19.7 +0.6
SCRK Sand Creek 8.30 18 P Pn 17 29 19.7 +0.6
baz=203
SKAG Skagway 8.37 61 Pn 17 29 19.6 -0.3
BESE Bessie Mountai 8.40 68 Pn 17 29 19.9 -0.7
L14K Kuka Creek 8.42 313 Pn 17 29 21.8 +1.0
L14K Kuka Creek 8.42 313 P Pn 17 29 21.8 +1.0
baz=122
O30N Mendenhall 8.49 52 Pn 17 29 21.4 -0.4
O30N Mendenhall 8.49 52 P Pn 17 29 21.4 -0.4
baz=243
M29M Somme Creek 8.50 38 Pn 17 29 22.4 +0.5
M29M Somme Creek 8.50 38 P Pn 17 29 22.4 +0.5
baz=228
CCB Clear Creek Bu 8.51 6 Pn 17 29 22.4 +0.6
K15K Wolf Creek Mou 8.54 320 Pn 17 29 23.4 +1.0
K15K Wolf Creek Mou 8.54 320 P Pn 17 29 23.4 +1.0
baz=130
IL31 8.69 8 Pn 17 29 25.6 +1.3
ILAR Eielson Array 8.69 8 Pn Pn 17 29 25.0 +0.5
comp=E,0.8nm,0.3s,baz=189,slow=14,SNR=35
ILAR Sn **Sn 17 30 58.7 -3.7**
comp=E,1.5nm,0.3s,baz=198,slow=18,SNR=7.7
ILAR LR LR 17 32 39.2
comp=E,276nm,21.2s,baz=236,slow=36
comp=E,1.7nm,0.4s
J25K Salcha River, 8.69 13 Pn 17 29 25.3 +0.8
J25K Salcha River, 8.69 13 P Pn 17 29 25.3 +0.8
baz=196
K27K Chicken 8.72 23 Pn 17 29 25.7 +1.0
K27K Chicken 8.72 23 P Pn 17 29 25.7 +1.0
baz=209
MDM Murphy Dome 8.80 4 Pn 17 29 26.6 +0.7
J26L Joseph Creek 8.85 18 Pn 17 29 27.2 +0.5
J26L Joseph Creek 8.85 18 P Pn 17 29 27.2 +0.5
baz=203
I21K Tanana 9.05 354 Pn 17 29 30.2 +0.9
I21K Tanana 9.05 354 P Pn 17 29 30.2 +0.9
baz=172
L29M L29M 9.07 36 Pn 17 29 30.1 +0.4
L29M L29M 9.07 36 P Pn 17 29 30.1 +0.4
baz=225
M30M Minto, Yukon 9.18 41 Pn 17 29 31.4 +0.3
M30M Minto, Yukon 9.18 41 P Pn 17 29 31.4 +0.3
baz=232
P32M Atlin 9.20 62 Pn 17 29 30.6 -0.8
P32M Atlin 9.20 62 P Pn 17 29 30.6 -0.8
baz=255
J14K Nanvaranak Lak 9.56 319 Pn 17 29 37.4 +1.1
J14K Nanvaranak Lak 9.56 319 P Pn 17 29 37.4 +1.1
baz=127
P33M Teslin, Yukon 9.80 59 P Pn 17 29 39.0 -0.7
baz=253
M31M Drury Creek, Y 9.90 46 Pn 17 29 41.5 +0.6
IMAR Indian Mountai 9.97 351 Pn Pn 17 29 40.7 -1.3
FARO Faro, Yukon 10.34 48 Pn Pn 17 29 46.8 -0.2
G21K Allakaket 10.48 352 Pn 17 29 48.6 -0.2
R33M Jennings River 10.53 65 Pn Pn 17 29 49.1 -0.6
G19K Purcell Mounta 10.54 344 Pn 17 29 50.6 +0.8
DLBC Dease Lake 10.91 70 Pn Pn 17 29 55.2 +0.4
comp=E,0.6nm,0.3s,baz=302,slow=9.7,SNR=3.3
DLBC Sn **Sn 17 31 54.0 -2.8**
comp=E,0.4nm,0.3s,baz=348,slow=7.3,SNR=1.8
DLBC LR LR 17 33 23.4
comp=E,419nm,20.7s,baz=282,slow=33
comp=E,1.6nm,0.3s
ANM Nome 11.34 324 Pn Pn 17 30 02.0 +1.5
E25K Arctic Village 12.10 8 Pn Pn 17 30 10.5 -0.5
F28M Old Crow 12.32 18 Pn Pn 17 30 14.7 +0.7
BBB Bella Bella 13.30 99 LR LR 17 34 19.0
comp=E,353nm,19.2s,baz=275,slow=32
INK Inuvik 14.22 25 Pn Pn 17 30 40.1 +0.3
INK Inuvik 14.22 25 Pn Pn 17 30 41.2 +1.4
comp=E,0.2nm,0.3s,baz=209,slow=15,SNR=21
INK LR LR 17 36 30.7
comp=E,346nm,19.8s,baz=182,slow=38
comp=E,9.3nm,1.0s
YKA Yellowknife Ar 18.81 56 Pn Pn 17 31 38.6 0.0
comp=E,0.1nm,0.3s,baz=264,slow=11,SNR=38
YKA LR LR 17 38 48.6
comp=E,299nm,18.3s,baz=244,slow=36
comp=E,6.0nm,1.0s
LTY Liberty 20.01 104 IAmb IAmb 17 32 02.7
comp=Z,19nm,1.1s
MXC Moxie City 20.63 105 IAmb IAmb 17 32 17.2
comp=Z,32nm,1.5s
H04A Detroit Lake 20.88 112 IAmb IAmb 17 32 19.6
comp=Z,29nm,1.3s
E07A Sunnyside 20.88 105 IAmb IAmb 17 32 19.1
comp=Z,19nm,1.1s
C09A Chrisman Ranch 21.00 100 IAmb IAmb 17 32 13.6
comp=Z,20nm,1.4s
D08A Wollman Farm, 21.08 103 IAmb IAmb 17 32 11.8
comp=Z,18nm,1.0s
SHEM Shemya Is, Ala 21.11 276 LR LR 17 40 53.0
comp=Z,122nm,19.1s,baz=307,slow=39
HAWA Hanford 21.16 105 IAmb IAmb 17 32 16.0
comp=Z,16nm,1.2s
E08A Dider Farm, El 21.35 104 IAmb IAmb 17 32 14.7
comp=Z,16nm,0.9s
NEW Newport 21.36 98 P P 17 32 06.0 -0.1
NEW Newport 21.36 98 P P 17 32 05.7 -0.4
comp=Z,4.9nm,1.0s,baz=303,slow=13,SNR=3.4
NEW LR LR 17 39 02.4
comp=Z,200nm,18.7s,baz=300,slow=33
comp=Z,4.9nm,1.0s
I04A Tendick Farm, 21.38 114 IAmb IAmb 17 32 18.3
comp=Z,23nm,1.1s
DBO Dodson Butte 21.45 116 IAmb IAmb 17 32 19.0
comp=Z,15nm,1.1s
K02D Willamette Mer 21.55 118 IAmb IAmb 17 32 20.8
comp=Z,21nm,1.1s
F10A Beach Ranch, E 22.67 103 IAmb IAmb 17 32 34.9
comp=Z,19nm,1.1s
I07A Izee 22.69 110 IAmb IAmb 17 32 28.9
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 22.74 118 P P 17 32 20.1 -0.8
comp=Z,1.8nm,0.8s,baz=320,slow=7.9,SNR=3.0
comp=Z,1.8nm,0.8s
BILL Bilibino 23.09 318 P P 17 32 22.7 -1.5
BILL IAmb IAmb 17 32 26.4
comp=Z,9.0nm,1.0s
PLID Pearl Lake 23.90 103 P P 17 32 31.6 -1.1
WVOR Wild Horse Val 24.29 111 IAmb IAmb 17 32 45.3
comp=Z,10nm,1.0s
MPK Martis Peak 25.92 118 IAmb IAmb 17 33 02.6
comp=Z,14nm,1.2s
ELK Elko 27.28 110 LR LR 17 41 50.3
comp=Z,154nm,20.7s,baz=325,slow=32
NVAR Mina Array Bea 27.44 117 P P 17 33 04.6 -0.2
comp=Z,1.3nm,0.8s,baz=307,slow=8.4,SNR=10
NVAR LR LR 17 42 02.0
comp=Z,295nm,18.9s,baz=332,slow=32
comp=Z,1.3nm,0.8s
RES Resolute Bay 27.75 28 P P 17 33 08.8 +1.9
comp=Z,0.4nm,0.3s,baz=255,slow=15,SNR=3.6
RES LR LR 17 44 32.8
comp=Z,227nm,18.5s,baz=338,slow=37
comp=Z,0.4nm,0.3s
R11B Troy Canyon, C 28.87 114 IAmb IAmb 17 33 26.7
comp=Z,6.3nm,1.3s
PDAR Pinedale Array 28.94 101 P P 17 33 17.8 -0.4
comp=Z,0.7nm,0.7s,baz=321,slow=5.6,SNR=7.0
comp=Z,0.7nm,0.7s
SPR3 Spring Creek 3 29.03 111 IAmb IAmb 17 33 29.5
comp=Z,9.4nm,1.3s
SEY Seymchan 29.11 307 LR LR 17 45 45.0
comp=Z,281nm,20.0s,baz=59,slow=38
WCT Wildcat Counta 29.55 117 IAmb IAmb 17 33 33.1
comp=Z,8.5nm,1.4s
PRN Pahroc Range 29.86 114 P P 17 33 26.2 -0.1
PETK Petropavlovsk- 29.92 286 P P 17 33 27.3 +0.9
comp=Z,2.3nm,0.9s,baz=70,slow=10,SNR=1.5
PETK LR LR 17 46 37.3
comp=Z,67nm,19.0s,baz=81,slow=39
comp=Z,2.3nm,0.9s
GWY Greenwater Val 30.00 118 P P 17 33 27.0 -0.6
GWY IAmb IAmb 17 33 39.8
comp=Z,6.0nm,1.3s
MA2 Magadan 30.84 301 LR LR 17 47 13.9
comp=Z,213nm,18.3s,baz=67,slow=39
SRU San Rafael Swe 30.96 107 IAmb IAmb 17 33 47.3
comp=Z,6.5nm,1.0s
HMU Henry Mountain 31.70 109 IAmb IAmb 17 33 51.7
comp=Z,6.8nm,1.0s
ULM Lac du Bonnet 32.10 78 P P 17 33 46.6 +0.9
comp=Z,0.8nm,0.5s,baz=319,slow=11,SNR=1.6
comp=Z,0.8nm,0.5s
PFO Pinyon Flats O 32.17 121 LR LR 17 43 59.5
comp=Z,208nm,21.0s,baz=352,slow=31
W13A Hualapai Mount 32.25 116 IAmb IAmb 17 33 57.2
comp=Z,6.9nm,1.5s
X16A Lo Mia Camp, P 34.03 114 IAmb IAmb 17 34 12.5
comp=Z,4.2nm,1.0s
FRB Frobisher Bay 38.67 45 LR LR 17 50 58.0
comp=Z,322nm,19.0s,baz=308,slow=37
YAK Yakutsk 39.20 313 P P 17 34 46.0 -0.6
YAK Yakutsk 39.20 313 LR LR 17 51 24.7
comp=Z,135nm,19.1s,baz=88,slow=37
TXAR Lajitas Array 42.08 110 P P 17 35 11.2 +0.5
comp=Z,1.3nm,0.9s,baz=326,slow=6.5,SNR=8.0
TXAR LR LR 17 51 32.6
comp=Z,101nm,19.3s,baz=315,slow=35

	comp=Z,1.3nm,0.9s						
LPIG	**La Paz**	**43.05**	**122**	LR	LR	17 50 37.3	
	comp=Z,100nm,18.6s,baz=346,slow=33						
DRIO	**Del Rio**	**43.62**	**107**	P	**P**	**17 35 22.7**	**-0.4**
DRIO				IAmb	IAmb	17 35 31.2	
	comp=Z,5.5nm,0.8s						
SCHQ	**Schefferville**	**44.26**	**55**	LR	LR	17 53 50.3	
	comp=Z,146nm,18.3s,baz=302,slow=36						
SADO	**Sadowa**	**44.44**	**74**	LR	LR	17 53 49.6	
	comp=Z,74nm,18.1s,baz=86,slow=36						
NRIK	**Noril'sk**	**48.04**	**336**	LR	LR	17 59 02.1	
	comp=Z,171nm,18.1s,baz=43,slow=40						
H11N2	**WAKE ISLAND Hy**	**48.61**	**239**	T	T	18 28 26.1	
	baz=30,slow=76						
H11N3	**WAKE ISLAND Hy**	**48.61**	**239**	T	T	18 28 24.8	
	baz=30,slow=76						
H11N1	**WAKE ISLAND Hy**	**48.62**	**239**	T	T	18 28 27.4	
	baz=30,slow=76						
USRK	**Ussuriysk Ar.**	**48.83**	**291**	LR	LR	17 56 43.7	
	comp=Z,39nm,20.0s,baz=54,slow=36						
H11S1	**WAKE ISLAND Hy**	**49.75**	**239**	T	T	18 29 47.4	
	baz=33,slow=74						
H11S2	**WAKE ISLAND Hy**	**49.76**	**239**	T	T	18 29 47.7	
	baz=33						
H11S3	**WAKE ISLAND Hy**	**49.77**	**239**	T	T	18 29 47.3	
	baz=33,slow=74						
KSRS	**Korea Array**	**55.80**	**288**	LR	LR	18 00 53.0	
	comp=Z,22nm,19.3s,baz=155,slow=36						
CMIG	**Matias Romero**	**56.68**	**111**	LR	LR	18 00 23.2	
	comp=Z,69nm,20.9s,baz=358,slow=35						
TEIG	**Tepich**	**57.64**	**102**	LR	LR	18 03 42.5	
	comp=Z,357nm,18.1s,baz=4.5,slow=38						
SONM	**Songino Array**	**58.46**	**310**	P	**P**	**17 37 16.1**	**+1.5**
	comp=Z,3.8nm,0.9s,baz=46,slow=7.4,SNR=15						
	comp=Z,3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**61.45**	**327**	P	**P**	**17 37 34.7**	**-0.2**
ZALV	**Zalesovo Beam**	**61.45**	**327**	P	**P**	**17 37 35.9**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=18,slow=6.2,SNR=11						
ZALV				LR	LR	18 08 34.8	
	comp=Z,86nm,19.8s,baz=30,slow=40						
	comp=Z,2.4nm,0.8s						
NOA	**NORSAR Array B**	**62.12**	**10**	LR	LR	18 05 22.1	
	comp=Z,24nm,20.5s,baz=5.0,slow=37						
FINES	**FINESS Array B**	**62.63**	**2**	P	**P**	**17 37 43.6**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=27,slow=6.7,SNR=1.6						
	comp=Z,2.0nm,0.9s						
KIRV	**Kirov**	**64.51**	**349**	LR	LR	18 10 05.3	
	comp=Z,58nm,18.3s,baz=28,slow=40						
BVAR	**Borovoye Array**	**66.21**	**335**	P	**P**	**17 38 07.0**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=36,slow=7.9,SNR=14						
BVAR				LR	LR	18 11 24.3	
	comp=Z,80nm,18.5s,baz=24,slow=40						
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**66.24**	**329**	P	**P**	**17 38 07.0**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=28,slow=6.3,SNR=8.1						
KURBB				LR	LR	18 09 04.5	
	comp=Z,78nm,19.1s,baz=166,slow=38						
	comp=Z,1.4nm,0.7s						
JTS	**Las Juntas de**	**67.61**	**106**	LR	LR	18 11 09.2	
	comp=Z,18nm,19.3s,baz=9.0,slow=39						
MKAR	**Makanchi Array**	**68.47**	**324**	P	**P**	**17 38 20.8**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=43,slow=6.5,SNR=6.3						
MKAR				LR	LR	18 12 53.8	
	comp=Z,86nm,18.4s,baz=49,slow=40						
	comp=Z,1.4nm,0.8s						
MAKZ	**Makanchi**	**68.56**	**325**	P	**P**	**17 38 21.0**	**-0.3**
BELG	**Belogornoye**	**70.80**	**349**	LR	LR	18 12 56.9	
	comp=Z,57nm,18.3s,baz=147,slow=39						
AKTO	**Aktyubinsk**	**71.23**	**342**	LR	LR	18 14 38.5	
	comp=Z,62nm,18.3s,baz=6.5,slow=40						
AKASG	**Malin Array Be**	**73.44**		LR	LR	18 14 13.5	
	comp=Z,22nm,18.9s,baz=352,slow=38						
GERES	**GERESS Array B**	**74.40**	**11**	LR	LR	18 15 16.7	
	comp=Z,26nm,18.1s,baz=356,slow=39						
AAK	**Ala-Archa**	**74.64**	**328**	LR	LR	18 16 30.9	
	comp=Z,71nm,18.7s,baz=34,slow=40						
DAVOX	**Davos/Dischmat**	**75.96**	**14**	LR	LR	18 16 13.0	
	comp=Z,20nm,18.3s,baz=322,slow=39						
RAR	**Rarotonga**	**77.59**	**190**	LR	LR	18 08 16.5	
	comp=Z,30nm,20.7s,baz=184,slow=32						
KBZ	**Khabaz**	**79.84**	**351**	LR	LR	18 18 39.6	
	comp=Z,17nm,19.4s,baz=22,slow=38						
ESDC	**Sonseca Array**	**80.17**	**26**	P	**P**	**17 39 29.0**	**0.0**
	comp=Z,0.8nm,0.9s,baz=324,slow=6.3,SNR=2.4						
ESDC				LR	LR	18 16 34.3	
	comp=Z,34nm,19.1s,baz=328,slow=37						
	comp=Z,0.8nm,0.9s						
GEYT	**Allbeck**	**83.25**	**338**	P	**P**	**17 39 46.6**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=57,slow=5.3,SNR=4.3						
	comp=Z,1.6nm,0.7s						
VAE	**Valguarnera**	**85.70**	**13**	LR	LR	18 23 13.5	
	comp=Z,43nm,18.0s,baz=144,slow=39						
CMAR	**Chiang Mai Arr**	**86.06**	**298**	P	**P**	**17 39 59.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=22,slow=5.1,SNR=4.6						
CMAR				LR	LR	18 23 08.7	
	comp=Z,33nm,18.2s,baz=140,slow=39						
	comp=Z,0.4nm,0.3s						
MDT	**Midelt**	**86.49**	**29**	LR	LR	18 19 02.8	
	comp=Z,46nm,18.5s,baz=5.5,slow=36						
MDP	**Montagnes des**	**89.77**	**81**	LR	LR	18 23 41.0	
	comp=Z,20nm,18.2s,baz=90,slow=38						
EIL	**Elat**	**94.35**	**356**	LR	LR	18 30 48.5	
	comp=Z,14nm,18.8s,baz=272,slow=40						
WSAR	**Wadi Sarin**	**97.26**	**334**	LR	LR	18 34 05.1	
	comp=Z,14nm,18.6s,baz=218,slow=41						
URZ	**Urewera**	**98.23**	**206**	LR	LR	18 21 43.5	
	comp=Z,49nm,18.4s,baz=120,slow=33						

*AEIC **05** 17:29:29.2s 1.2,56°1′N±0°1′×149°8′W±0°1′, h5km±8km, Error ellipse: s-maj=15.9km s-min=10.4km az=162.0*

NEIC 05 17:29:24.3±1.9**,56°09′N**±0°09′×**149°9′W**±0°1′**,h10**km±2km**,**ML3.6**/38**,ML3.4**(AEIC)**,Error ellipse: s-maj=16.1km s-min=10.5km az=168.0,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.20**	**302**		Pn	17 30 01.2	+0.5
OHAK	**Old Harbor**	**2.20**	**302**		Sn	17 30 26.3	-1.7
OHAK	**Old Harbor**	**2.20**	**302**	IAML		17 30 23.4	
	comp=N,75nm,1.2s						
KDAK	**Kodiak Island**	**2.25**	**320**		Pn	17 30 02.2	+0.7
KDAK					Sn	17 30 27.5	-1.9
SII	**Sitkinak Islan**	**2.44**	**283**		Pn	17 30 04.8	+0.6
SII				IAML		17 30 41.9	
	comp=N,211nm,1.2s						
SII				IAML		17 30 47.4	
	comp=E,259nm,1.2s						
SYI	**Shuyak Island**	**2.87**	**333**		Pn	17 30 10.7	+0.7
SYI					Sn	17 30 43.7	-0.8
KAHG	**Katmai Hook Gl**	**3.50**	**315**		Pn	17 30 20.6	+1.8
Q19K	**Cape Douglas,**	**3.50**	**326**		Pn	17 30 20.1	+1.4
CNPM	**China Poot**	**3.52**	**349**		Pn	17 30 19.1	+0.1
CNPM	**China Poot**	**3.52**	**349**		Sn	17 30 59.0	-1.7
BRSE	**Bradley Lake S**	**3.69**	**353**		Pn	17 30 21.0	-0.3
BRSE					Sn	17 31 03.0	-1.8
HOM	**Homer**	**3.70**	**346**		Pn	17 30 20.9	-0.5
ANCK	**Angle Creek**	**3.72**	**307**		Pn	17 30 22.9	+1.1
BRLK	**Bradley Lake**	**3.72**	**352**		Pn	17 30 21.3	-0.5
BRLK	**Bradley Lake**	**3.72**	**352**	IAML		17 31 07.9	
	comp=N,45nm,0.7s						
BRLK				IAML		17 31 09.1	
	comp=E,62nm,1.2s						
Q23K	**Middleton Isla**	**3.84**	**28**		Pn	17 30 23.0	-0.4
Q23K	**Middleton Isla**	**3.84**	**28**	IAML		17 32 40.0	
	comp=E,118nm,1.4s						
MID	**Middleton Isla**	**3.84**	**28**	Pn	Pn	17 30 23.1	-0.2
MID				IAML		17 32 35.4	
	comp=N,133nm,1.5s						
MID				IAML		17 32 40.0	
	comp=E,119nm,1.3s						
CNTC	**Contact Creek**	**3.93**	**306**		Pn	17 30 25.8	+1.2
P19K	**Oil Pt**	**4.00**	**335**	Pn	Pn	17 30 25.1	-0.4
P19K				IAML		17 31 16.6	
	comp=E,119nm,1.5s						
P19K				IAML		17 31 18.6	
	comp=N,108nm,1.0s						
SEW	**Seward**	**4.03**	**3**		Pn	17 30 25.6	-0.3
P23K	**Montague Islan**	**4.13**	**18**		Pn	17 30 27.3	0.0
IVE	**Iliamna Volcan**	**4.28**	**338**		Pn	17 30 29.5	+0.1
P18K	**Big Mountain,**	**4.38**	**321**		Pn	17 30 31.5	+0.7
P18K	**Big Mountain,**	**4.38**	**321**	IAML		17 31 15.1	
	comp=E,26nm,1.4s						
SLKM	**Skilak Lake**	**4.43**	**358**		Pn	17 30 31.0	-0.5
HIN	**Hinchinbrook I**	**4.67**	**21**		Pn	17 30 34.6	-0.1
HIN	**Hinchinbrook I**	**4.67**	**21**	IAML		17 31 14.1	
	comp=N,47nm,1.3s						
HIN				IAML		17 32 09.4	
	comp=E,44nm,1.5s						
P17K	**Kvichak River**	**4.70**	**314**		Pn	17 30 36.7	+1.6
O18K	**Koktuh Hills**	**4.72**	**325**		Pn	17 30 36.2	+0.8
O18K	**Koktuh Hills**	**4.72**	**325**	IAML		17 31 34.0	
	comp=E,28nm,1.3s						
O18K				IAML		17 31 44.1	
	comp=N,34nm,1.1s						
KAIM	**Kayak Island**	**4.82**	**35**		Pn	17 30 36.7	-0.1
KAIM	**Kayak Island**	**4.82**	**35**	IAML		17 31 39.4	
	comp=E,62nm,1.2s						
KAIM				IAML		17 31 43.8	
	comp=N,67nm,1.4s						
EYAK	**Cordova Ski Ar**	**4.97**	**24**		Pn	17 30 38.9	+0.1
RC01	**Rabbit Creek A**	**5.01**	**1**		Pn	17 30 39.5	0.0
RC01	**Rabbit Creek A**	**5.01**	**1**	IAML		17 31 17.0	
	comp=N,35nm,1.3s						
RC01				IAML		17 31 36.1	
	comp=E,39nm,1.0s						
RAGM	**Ragged Mountai**	**5.11**	**30**	Pn	Pn	17 30 40.1	-0.7
SUCK	**Suckling Hills**	**5.14**	**37**		Pn	17 30 41.2	0.0
SUCK	**Suckling Hills**	**5.14**	**37**	IAML		17 31 40.7	
	comp=N,41nm,1.4s						
SUCK				IAML		17 31 58.6	
	comp=E,50nm,1.5s						
HMT	**Hamilton**	**5.19**	**33**		Pn	17 30 42.1	+0.2
NICHA	**Nichawak Mount**	**5.20**	**35**		Pn	17 30 42.1	+0.1
GOAT	**Goat Mountain**	**5.25**	**29**		Pn	17 30 42.9	0.0
P16K	**Nushagak River**	**5.27**	**307**		Pn	17 30 44.5	+1.6
O17K	**Koliganek Bris**	**5.33**	**317**		Pn	17 30 45.2	+1.4
BERG	**Berg Lake**	**5.41**	**35**		Pn	17 30 44.6	-0.2
GRIN	**Grindle Hills**	**5.45**	**37**		Pn	17 30 45.7	+0.2
SNH	**Sunshine Point**	**5.54**	**39**	Pn	Pn	17 30 47.4	+0.6
N18K	**Lake Creek**	**5.58**	**328**		Pn	17 30 48.0	+0.7
KHIT	**Khitrov Hills**	**5.59**	**36**		Pn	17 30 47.4	-0.1
BMRM	**Bremner River**	**5.61**	**27**		Pn	17 30 48.0	+0.2
O16K	**Kokwok River B**	**5.62**	**312**		Pn	17 30 49.2	+1.4
WAX	**Waxell Ridge**	**5.73**	**37**		Pn	17 30 49.1	-0.2
KLU	**Klutina**	**5.79**	**19**		Pn	17 30 50.8	+0.6
BARK	**Barkley Ridge**	**5.82**	**39**		Pn	17 30 50.8	+0.2
MESA	**MESA**	**5.86**	**42**		Pn	17 30 51.3	0.0
ISLE	**Juniper Island**	**6.01**	**38**		Pn	17 30 53.4	+0.1
BAGL	**Bagley Icefiel**	**6.02**	**40**		Pn	17 30 53.7	+0.4
N25K	**Chitina, Valde**	**6.17**	**24**		Pn	17 30 55.8	+0.4
O15K	**Ungalikthiuk R**	**6.17**	**304**		Pn	17 30 56.8	+1.5
GLB	**Gilahina Butte**	**6.22**	**28**		Pn	17 30 56.5	+0.4
KIAG	**Kiagna River**	**6.24**	**36**		Pn	17 30 56.4	-0.1

*NOU **05** 17:33:23.2, 40°06′S×174°18′E, h54km, MLv3.9/11, Cook Strait, New Zealand*
*WEL **05** 17:33:23.5±0.4, 40°S±2°×17°4′E±°, h37km±11km, M3.4/35, ML3.7/34, MLv3.4/35, Error ellipse: s-maj=0.0km s-min=0.0km az=89.9, confirmed*

ISC 05 17:33:23.9±1.3**, 40°10′S**±0°03′×**174°22′E**±0°03′**, h51**km±17km**,**n120**,σ1°19′/129**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.65**	**13**	P	**Pn**	**17 33 36.4**	**-0.7**
WAZ	**Wanganui**	**0.68**	**60**	P	**Pn**	**17 33 36.4**	**-1.1**
WAZ				S	**Sn**	**17 33 46.5**	**-0.8**
NMEZ	**Namu Road**	**0.73**	**339**	P	**Pn**	**17 33 37.7**	**-0.5**
NMEZ				S	**Sn**	**17 33 50.7**	**+2.2**
DUWZ	**D'Urville Isla**	**0.74**	**198**	P	**Pn**	**17 33 38.0**	**-0.3**
DUWZ				S	**Sn**	**17 33 49.8**	**+1.2**
PREZ	**Palmer Road**	**0.76**	**357**	P	**Pn**	**17 33 38.3**	**-0.2**
PREZ				S	**Sn**	**17 33 51.0**	**+1.9**
KHEZ	**Kahui Hut**	**0.82**	**349**	P	**Pn**	**17 33 38.8**	**-0.6**
KHEZ	**Kahui Hut**	**0.82**	**349**	P	**Pn**	**17 33 38.6**	**-0.7**
KHEZ				S	**Sn**	**17 33 52.2**	**+1.6**
NEZ	**North Egmont**	**0.83**	**353**	P	**Pn**	**17 33 39.2**	**-0.4**
OHWZ	**Ohakea**	**0.85**	**98**	P	**Pn**	**17 33 39.0**	**-0.6**
OHWZ				S	**Sn**	**17 33 51.1**	**0.0**
NBEZ	**Newall Road No**	**0.87**	**342**	P	**Pn**	**17 33 39.5**	**-0.5**
NBEZ				S	**Sn**	**17 33 53.3**	**+1.6**
DREZ	**Durham Road**	**0.91**	**359**	P	**Pn**	**17 33 39.9**	**-0.6**
DREZ				S	**Sn**	**17 33 54.6**	**+2.0**
PKE	**Pukeiti**	**0.92**	**349**	P	**Pn**	**17 33 39.8**	**-0.8**
KIW	**Kapiti Island**	**0.93**	**145**	P	**Pn**	**17 33 39.6**	**-1.1**
KIW				S	**Sn**	**17 33 51.4**	**-1.6**
OGWZ	**Otaki Gorge**	**1.02**	**135**	P	**Pn**	**17 33 41.0**	**-0.9**
MHEZ	**Mangahewa**	**1.02**	**5**	P	**Pn**	**17 33 41.7**	**-0.3**
VRZ	**Vera Road**	**1.06**	**23**	P	**Pn**	**17 33 41.4**	**-1.1**
TCW	**Tory Channel**	**1.11**	**178**	P	**Pn**	**17 33 42.3**	**-0.9**
MRZ	**Mangatainoka R**	**1.18**	**119**	P	**Pn**	**17 33 42.5**	**-0.4**
PKVZ	**Pokaka**	**1.19**	**47**	P	**Pn**	**17 33 42.9**	**-1.3**
CAW	**Cannon Point**	**1.20**	**148**	P	**Pn**	**17 33 43.5**	**-0.8**
MTVZ	**Mangateitei**	**1.20**	**54**	P	**Pn**	**17 33 43.3**	**-1.2**
POWZ	**Post Office Ro**	**1.22**	**104**	P	**Pn**	**17 33 44.2**	**-0.5**
WEL	**Wellington**	**1.25**	**161**	P	**Pn**	**17 33 42.7**	**-2.4**
SNZO	**South Karori**	**1.27**	**163**	P	**Pn**	**17 33 44.5**	**-0.7**
HOWZ	**Holdsworth Sta**	**1.27**	**129**	P	**Pn**	**17 33 44.8**	**-0.5**
NNZ	**Nelson**	**1.29**	**209**	P	**Pn**	**17 33 45.5**	**0.0**
TRVZ	**Turoa**	**1.30**	**53**	P	**Pn**	**17 33 44.5**	**-1.5**
WNVZ	**Wahianoa**	**1.31**	**55**	P	**Pn**	**17 33 44.7**	**-1.4**
MAVZ	**Matarangi**	**1.33**	**52**	P	**Pn**	**17 33 44.9**	**-1.5**
FWVZ	**Far West T-bar**	**1.33**	**51**	P	**Pn**	**17 33 44.9**	**-1.4**
WHVZ	**Whangaehu Hut**	**1.34**	**53**	P	**Pn**	**17 33 45.4**	**-1.0**
TKNZ	**Takaka Hill**	**1.34**	**225**	P	**Pn**	**17 33 46.1**	**-0.1**
TSZ	**Takapari Road**	**1.34**	**89**	P	**Pn**	**17 33 46.1**	**-0.2**
TUWZ	**Tuamarina**	**1.34**	**189**	P	**Pn**	**17 33 45.3**	**-1.0**
COVZ	**Chateau Observ**	**1.36**	**49**	P	**Pn**	**17 33 45.1**	**-1.5**
MOWZ	**Moawhango**	**1.37**	**60**	P	**Pn**	**17 33 45.7**	**-1.1**
TUVZ	**Tukino**	**1.39**	**54**	P	**Pn**	**17 33 46.0**	**-1.0**
TWVZ	**Taurewa**	**1.39**	**43**	P	**Pn**	**17 33 45.6**	**-1.5**
BHW	**Baring Head**	**1.40**	**159**	P	**Pn**	**17 33 46.4**	**-0.6**
NGZ	**Ngauruhoe**	**1.41**	**50**	P	**Pn**	**17 33 45.8**	**-1.6**
PRWZ	**Pori Road**	**1.42**	**109**	P	**Pn**	**17 33 47.7**	**+0.4**
SNVZ	**South Ngauruho**	**1.43**	**51**	P	**Pn**	**17 33 46.5**	**-1.1**
MTW	**Mount Morrison**	**1.44**	**138**	P	**Pn**	**17 33 47.9**	**+0.3**
TIWZ	**Tintock**	**1.44**	**119**	P	**Pn**	**17 33 48.0**	**+0.4**
WTVZ	**West Tongariro**	**1.45**	**48**	P	**Pn**	**17 33 46.2**	**-1.6**
NNVZ	**North Ngauruho**	**1.45**	**49**	P	**Pn**	**17 33 46.3**	**-1.6**
OTVZ	**Oturere**	**1.46**	**51**	P	**Pn**	**17 33 46.5**	**-1.5**
QRZ	**Quartz Range**	**1.48**	**240**	P	**Pn**	**17 33 47.6**	**-0.5**
QRZ	**Quartz Range**	**1.48**	**240**	P	**Pn**	**17 33 47.3**	**-0.9**
KRVZ	**Karewarewa**	**1.49**	**48**	P	**Pn**	**17 33 45.9**	**-2.5**
ETVZ	**East Tongariro**	**1.50**	**51**	P	**Pn**	**17 33 47.1**	**-1.5**
DVHZ	**Dannevirke**	**1.51**	**98**	P	**Pn**	**17 33 50.0**	**+1.4**
NTVZ	**North Tongarir**	**1.51**	**49**	P	**Pn**	**17 33 47.7**	**-0.9**
TMVZ	**Te Maari**	**1.51**	**50**	P	**Pn**	**17 33 47.2**	**-1.5**
BHHZ	**Black Hill Sta**	**1.55**	**67**	P	**Pn**	**17 33 48.1**	**-1.0**
PAWZ	**Paruwai Farm**	**1.58**	**145**	P	**Pn**	**17 33 49.4**	**-0.1**
KATZ	**Kakaramea**	**1.60**	**46**	P	**Pn**	**17 33 49.4**	**-0.6**
TMWZ	**Te Maipa**	**1.62**	**129**	P	**Pn**	**17 33 50.8**	**+0.7**
BSWZ	**Blackbirch Sta**	**1.64**	**189**	P	**Pn**	**17 33 50.3**	**0.0**
CMWZ	**Cape Campbell**	**1.65**	**180**	P	**Pn**	**17 33 51.7**	**+1.2**
BFZ	**Birch Farm**	**1.66**	**111**	P	**Pn**	**17 33 51.3**	**+0.8**
HIZ	**Hauiti**	**1.66**	**18**	P	**Pn**	**17 33 49.5**	**-1.1**
HIZ	**Hauiti**	**1.66**	**18**	P	**Pn**	**17 33 49.3**	**-1.3**
PLWZ	**Palliser**	**1.67**	**152**	P	**Pn**	**17 33 50.4**	**-0.4**
RITZ	**Rihia Road**	**1.69**	**49**	P	**Pn**	**17 33 51.7**	**+0.6**
WPHZ	**Waipukurau**	**1.71**	**90**	P	**Pn**	**17 33 53.3**	**+2.1**
MRNZ	**Matariki Terra**	**1.71**	**220**	P	**Pn**	**17 33 51.3**	**0.0**
TRWZ	**Traveller**	**1.71**	**140**	P	**Pn**	**17 33 52.1**	**+0.7**
CPWZ	**Castlepoint**	**1.72**	**119**	P	**Pn**	**17 33 53.5**	**+2.1**
KRHZ	**Kereru**	**1.72**	**75**	P	**Pn**	**17 33 51.4**	**-0.1**
RATZ	**Rangitukua**	**1.72**	**45**	P	**Pn**	**17 33 50.2**	**-1.3**
WATZ	**Wairara**	**1.82**	**41**	P	**Pn**	**17 33 52.2**	**-0.6**
KWHZ	**Kaweka Forest**	**1.83**	**69**	P	**Pn**	**17 33 54.3**	**+1.3**
THZ	**Tophouse**	**1.94**	**210**	P	**Pn**	**17 33 54.9**	**+0.4**
BKZ	**Black Stump Fm**	**1.99**	**63**	P	**Pn**	**17 33 55.5**	**+0.3**
BKZ	**Black Stump Fm**	**1.99**	**63**	P	**Pn**	**17 33 55.7**	**+0.6**
MCHZ	**McNeill Hill**	**2.02**	**72**	P	**Pn**	**17 33 55.5**	**0.0**
TLZ	**Tolley Road**	**2.04**	**31**	P	**Pn**	**17 33 54.2**	**-1.7**
KAHZ	**Kahuranaki**	**2.07**	**82**	P	**Pn**	**17 33 55.6**	**-0.6**
MRHZ	**Matea Rd**	**2.12**	**54**	P	**Pn**	**17 33 57.0**	**+0.1**
NMHZ	**Naumai**	**2.24**	**64**	P	**Pn**	**17 34 00.4**	**+1.8**
KHZ	**Kahutara**	**2.37**	**192**	P	**Pn**	**17 34 00.4**	**+0.2**
DSZ	**Denniston Nort**	**2.46**	**227**	P	**Pn**	**17 34 01.2**	**-0.4**
RAHZ	**Arahi**	**2.51**	**63**	P	**Pn**	**17 34 03.5**	**+1.2**
TOZ	**Tahuroa Road**	**2.57**	**23**	P	**Pn**	**17 34 01.6**	**-1.4**
RTZ	**Ruatahuna**	**2.60**	**56**	P	**Pn**	**17 34 03.7**	**+0.1**
URZ	**Urewera**	**2.90**	**52**	P	**Pn**	**17 34 06.8**	**-0.8**
URZ	**Urewera**	**2.90**	**52**	P	**Pn**	**17 34 06.6**	**-1.0**
GVZ	**Greta Valley S**	**3.00**	**197**	P	**Pn**	**17 34 08.8**	**-0.1**
AWAZ	**Awhitu Peninsu**	**3.05**	**6**	P	**Pn**	**17 34 08.4**	**-1.3**
LTZ	**Lake Taylor**	**3.05**	**208**	P	**Pn**	**17 34 09.8**	**+0.1**
MKAZ	**Moumakai**	**3.08**	**14**	P	**Pn**	**17 34 08.6**	**-1.4**
MWZ	**Matawai**	**3.12**	**57**	P	**Pn**	**17 34 12.6**	**+2.0**
WTAZ	**Waiatarua**	**3.17**	**5**	P	**Pn**	**17 34 10.3**	**-1.0**
ETAZ	**East Tamaki Re**	**3.19**	**10**	P	**Pn**	**17 34 10.2**	**-1.3**
RVAZ	**Riverhead Bore**	**3.34**	**5**	P	**Pn**	**17 34 12.1**	**-1.5**
INZ	**Inchbonnie**	**3.35**	**218**	P	**Pn**	**17 34 13.7**	**0.0**
MBAZ	**Motutapu North**	**3.37**	**9**	P	**Pn**	**17 34 12.7**	**-1.3**
WIAZ	**Waiheke Island**	**3.38**	**13**	P	**Pn**	**17 34 12.9**	**-1.3**
ABAZ	**Army Bay**	**3.53**	**8**	P	**Pn**	**17 34 14.9**	**-1.2**
KUZ	**Kuaotunu**	**3.55**	**20**	P	**Pn**	**17 34 14.6**	**-1.9**
KUZ	**Kuaotunu**	**3.55**	**20**	P	**Pn**	**17 34 14.6**	**-1.9**
OXZ	**Oxford**	**3.61**	**206**	P	**Pn**	**17 34 15.9**	**-1.4**
MQZ	**McQueen's Vall**	**3.79**	**197**	P	**Pn**	**17 34 17.5**	**-2.3**
AKCZ	**Akaroa Harbour**	**3.89**	**194**	P	**Pn**	**17 34 19.5**	**-1.7**
RACZ	**Rakaia**	**3.94**	**202**	P	**Pn**	**17 34 20.1**	**-1.7**
WVZ	**Waitaha Valley**	**3.96**	**220**	P	**Pn**	**17 34 23.3**	**+1.3**
MHCZ	**Mount Hutt**	**3.96**	**209**	P	**Pn**	**17 34 21.0**	**-1.1**
WCZ	**Waipu Caves**	**4.16**	**1**	P	**Pn**	**17 34 23.4**	**-1.4**
RPZ	**Rata Peaks**	**4.32**	**212**	P	**Pn**	**17 34 27.0**	**+0.1**
RPZ	**Rata Peaks**	**4.32**	**212**	P	**Pn**	**17 34 27.1**	**+0.1**
ARCZ	**Arundel**	**4.46**	**210**	P	**Pn**	**17 34 27.8**	**-1.2**
FOZ	**Fox Glacier**	**4.75**	**222**	P	**Pn**	**17 34 32.1**	**-0.8**
OUZ	**Omahuta**	**4.90**	**354**	P	**Pn**	**17 34 33.9**	**-1.0**
OUZ	**Omahuta**	**4.90**	**354**	P	**Pn**	**17 34 33.8**	**-1.2**
TMZ	**Timaru**	**4.90**	**208**	P	**Pn**	**17 34 33.1**	**-1.9**
ODZ	**Otahua Downs**	**5.60**	**207**	P	**Pn**	**17 34 43.5**	**-1.1**
ODZ	**Otahua Downs**	**5.60**	**207**	P	**Pn**	**17 34 42.5**	**-2.0**
JCZ	**Jackson Bay**	**5.67**	**224**	P	**Pn**	**17 34 44.8**	**-0.8**
JCZ	**Jackson Bay**	**5.67**	**224**	P	**Pn**	**17 34 44.3**	**-1.3**

*ISK **05** 17:35:23.5, 38°83′N×26°04′E, h8km, ML3.0/23*
*ATH **05** 17:35:24.7, 38°87′N×26°12′E, h14km±1km, ML2.8/7, Error ellipse: s-maj=1.6km s-min=0.8km az=90.0*
*THE **05** 17:35:24.9, 38°90′N×26°11′E, h12km±1km, ML2.7/7, Error ellipse: s-maj=1.4km s-min=0.7km az=74.0*
*AFAD **05** 17:35:24.2±0.0, 38°89′N×26°12′E, h7km±3km, ML2.6*

ISC 05 17:35:24.2±0.9**, 38°89′N**±0°02′×**26°13′E**±0°02′**, h15**km±8km**,**n72**,σ0°60/108**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARB	**zmir-Karabur**	**0.32**	**135**	P	**Pb**	**17 35 31.1**	**-0.3**
KARB				S	**Sg**	**17 35 35.6**	**+0.3**
KARB				*i* AML	AML	17 35 39.0	
	comp=N,583nm,0.2s						
EAG2	**Marmaro, Chios**	**0.34**	**183**	P	**Pg**	**17 35 31.3**	**+0.1**
PRK	**Paraskevi**	**0.38**	**17**	P	**Pb**	**17 35 32.4**	**-0.1

comp=N,1515μm,0.5s
SMG Samos 1.30 154 P Pn 17 35 47.6 -0.2
SMG S Sg 17 36 06.8 +0.6
comp=N,192nm,0.4s
SMG Samos 1.30 154 P Pn 17 35 47.0 -0.8
SMG AML AML 17 36 08.5
comp=E,390μm,0.5s
SMG AML AML 17 36 12.4
comp=N,383μm,0.3s
GADA Gvkgeada 1.31 352 Pn Pg 17 35 49.1 -0.4
AKHS Akhisar 1.31 90 P Pg 17 35 50.4 +0.9
AKHS S Sg 17 36 06.4 -0.3
STEP BALIKESIR_Sava 1.33 68 P Pn 17 35 47.7 -0.5
STEP S Sg 17 36 06.6 -0.6
STEP *i* AML AML 17 36 11.0
comp=N,228nm,0.4s
STEP *i* AML AML 17 36 13.0
comp=N,190nm,0.5s
CANM Can-anakkale 1.33 32 Pn Pg 17 35 50.0 +0.2
BALY Balya 1.44 53 P Pn 17 35 49.5 -0.2
BALY S Sb 17 36 08.9 +0.1
BALY *i* AML AML 17 36 14.0
comp=N,103nm,0.4s
BALY *i* AML AML 17 36 16.0
comp=N,182nm,0.4s
GCAM G?zelcaml? 1.47 143 P Pg 17 35 51.9 -0.6
GCAM *i* AML AML 17 36 16.0
comp=N,73nm,0.5s
GELI Tayfur-Gelibol 1.53 10 Pn Pg 17 35 52.7 -0.9
BALB Balikesir 1.55 61 Pn Pn 17 35 51.9 +0.7
LPK Lapseki 1.56 18 Pn Pg 17 35 53.3 -0.9
KYMI Kymi, Euboea I 1.61 262 P Pn 17 35 51.7 -0.3
IZMR zmir-demi 1.61 117 P Pb 17 35 54.0 +0.3
IZMR S Sb 17 36 13.7 -0.1
SMTH Samothraki Isl 1.65 344 P Pn 17 35 52.6 +0.1
SMTH S Sn 17 36 13.6 +0.2
comp=N,75nm,0.5s
SMTH Samothraki Isl 1.65 344 P Pn 17 35 52.4 -0.2
GONE Gonen-Balikesi 1.67 46 Pn Pb 17 35 54.8 +0.2
DDIM Aydin, Didim 1.68 148 P Pg 17 35 56.2 -0.2
DDIM *i* AML AML 17 36 47.0
comp=N,68nm,2.1s
DDIM *i* AML AML 17 36 54.0
comp=N,63nm,1.2s
KRBG Karabiga-Canak 1.75 31 Pn Pb 17 35 55.8 -0.2
ENEZ Enez 1.85 1 Pn Pb 17 35 57.0 -0.6
APE Apeiranthos 1.88 195 Pn Pn 17 35 55.3 -0.4
APE Apeiranthos 1.88 195 P Pn 17 35 54.7 -1.0
DION Dionisos Attik 1.90 246 P Pn 17 35 56.3 +0.2
RKY Sarkoy-Tekirda 1.97 24 Pn Pb 17 35 59.3 -0.5
EDC Edincik 1.98 42 Pn Pb 17 35 59.4 -0.5
BODT Bodrum 2.05 153 P Pn 17 35 57.8 -0.2
OUR Ouranopolis 2.20 312 Pn Pn 17 36 00.9 +0.8
KCTX Karacabey (Bur 2.20 51 Pn Pb 17 36 02.3 -1.4
UKOP Uzunkopru-Edir 2.27 10 Pn Pb 17 36 03.3 -1.5
RDO Rodhopi 2.30 349 P Pn 17 36 01.6 +0.1
RDO Rodhopi 2.30 349 P Pn 17 36 01.9 +0.4
VIL2 Platees 2.34 254 P Pn 17 36 01.8 -0.3
KOKK Kokkinochori, 2.53 320 P Pn 17 36 04.5 -0.1
AGG Agios Georgios 2.96 274 P Pn 17 36 11.1 +0.4
GUR Goura 3.12 253 P Pn 17 36 13.3 +0.4
KLV Kalavryta, Ach 3.23 256 P Pn 17 36 14.5 +0.1

TAP 05 17:37:10.1, 24°15N×121°69E, h10km, ML0.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=281	0.06	282	*i*	P		Pg	17 37 12.6	+0.4
ETL	baz=281			*i*	S		Sg	17 37 14.5	+0.8
NACB	**Ninganchiao** baz=287	0.09	288	*i*	P		Pg	17 37 13.1	+0.6
NACB	baz=287				S		Sg	17 37 15.2	+1.0
TWD	**Chiawan** baz=228	0.10	231	*e*	P		Pg	17 37 13.2	+0.4
TWD	baz=228			*e*	S		Sg	17 37 15.6	+1.0
ETLH	**Xiulin Townshi** baz=287	0.20	288	*e*	P		Pg	17 37 15.1	+0.9
ETLH	baz=287				S		Sg	17 37 18.7	+1.6
ETM	**Tongmen** baz=224	0.25	224	*e*	P		Pb	17 37 16.2	-0.5

NEIC ***05*** *17:37:12.9±1.5, 24°.13N±0°.06×121°.86E±0°.06, h11km±1km, mb4.4/39, Error ellipse: s-maj=10.2km s-min=5.6km az=141.0*

JMA ***05*** *17:37:13.6±0.1, 24°.1N±0°.2×121°.8E±0°.4, h17km, MD4.0/14, MV3.8/14, TAIWAN REGION*

TAP ***05*** *17:37:13.8, 24°.15N×121°.81E, h13km, ML4.6, B*

ASIES ***05*** *17:37:13.8, 24°.15N×121°.81E, h13km, ML4.6, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.59; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-0.11; $M_{r\theta}$0.43; $M_{\theta\phi}$-0.39; $M_{\phi r}$1.15; Fault plane solution: $M_0$1.40139×10^{22} NP1:ϕ_s26.57000°, δ77.87000°, λ73.12000°. NP2:ϕ_s261.86000°, δ20.68000°, λ143.48000°. Principal axes: T Plg54.1110°, Azm276.0770°; N Plg16.4880°, Azm30.2220°; P Plg30.8600°, Azm130.4080°;*

IDC ***05*** *17:37:25.1±5.9, 24°.17N×121°.94E, h119km±57km, mb3.4/12, mbtmp3.8/13, MS3.3/3 Error ellipse: s-maj=23.8km s-min=15.4km az=69.0*

ISC 05 17:37:13.6±0.8, 24°.13N±0°.01×121°.84E±0°.01, h15km±5km, n246, σ0°96/402, mb4.3/33, MS3.7/3, 43C-22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=340	0.20	334	⇓ *i*	P		Pg	17 37 18.0	-0.2
EHP	baz=340			*i*	S		Sb	17 37 21.7	-0.7
ETL	**Fush Village** baz=273	0.20	278	⇓ *i*	P		Pg	17 37 18.1	-0.1
ETL	baz=273			*i*	S		Sb	17 37 21.7	-0.7
EAHA	**Aohua** baz=340	0.21	336	⇓ *i*	P		Pg	17 37 18.3	-0.2
EAHA	baz=340			*i*	S		Sg	17 37 21.7	-0.1
NACB	**Ninganchiao**	0.22	280				Pg	17 37 17.4	-1.2
NACB	**Ninganchiao**	0.22	280		P		Pg	17 37 18.4	-0.2
NACB	**Ninganchiao** baz=277	0.22	280	⇓ *i*	P		Pg	17 37 18.4	-0.2
NACB	baz=277			*i*	S		Sg	17 37 22.1	+0.1
TWD	**Chiawan** baz=250	0.23	256	⇑ *i*	P		Pg	17 37 18.7	+0.1
TWD	baz=250			*i*	S		Sb	17 37 22.8	-0.4
HWA	**Hwalien** baz=226	0.26	234	⇑ *i*	P		Pb	17 37 20.3	+0.3
HWA	baz=226			*e*	S		Sb	17 37 25.9	+1.6
ENA	**Nanau** baz=348	0.31	344	⇓ *i*	P		Pg	17 37 20.0	0.0
ENA	baz=348			*i*	S		Sb	17 37 24.7	-0.9
EWUT	**Wuta** baz=354	0.32	350	⇓ *i*	P		Pg	17 37 20.2	+0.1
EWUT	baz=354			*i*	S		Sg	17 37 24.8	+0.2
ETLH	**Xiulin Townshi** baz=281	0.33	283	⇓ *i*	P		Pg	17 37 20.4	-0.1
ETLH	baz=281				S		Sg	17 37 25.2	0.0
ETM	**Tongmen** baz=238	0.36	242	⇑ *i*	P		Pg	17 37 21.1	+0.3
ETM	baz=238			*i*	S		Sb	17 37 27.2	+0.2
LXIB	**Xiulin Townshi** baz=251	0.40	254	⇑ *i*	P		Pg	17 37 21.8	0.0
LXIB	baz=251			*i*	S		Sb	17 37 28.6	+0.2
SHUL	**Shoufeng** baz=212	0.43	216	⇑ *i*	P		Pb	17 37 23.3	+0.6
SHUL	baz=212			*e*	S		Sb	17 37 31.3	+2.3
EOS4	**EOS4** baz=94	0.44	92		P		Pn	17 37 24.9	0.0
EOS4	baz=94			*e*	S		Sn	17 37 33.6	+1.2
ESAO	**Su ao** baz=4.0	0.44	1	⇓ *i*	P		Pg	17 37 22.6	+0.1
ESAO	baz=4.0				S		Sg	17 37 28.6	+0.1
EOS2	**EOS2** baz=55	0.46	52		P		Pn	17 37 25.2	-0.2
EOS2	baz=55			*e*	S		Sn	17 37 33.9	+0.6
EOS3	**EOS3** baz=74	0.47	71	*e*	P		Pn	17 37 25.7	+0.2
EOS3	baz=74			*e*	S		Sn	17 37 34.1	+0.7
TWC	**Suao** baz=5.0	0.47	1	⇓ *i*	P		Pg	17 37 23.2	+0.2
TWC	baz=5.0				S		Sb	17 37 30.6	+0.2
ESL	**Shilin** baz=225	0.49	229	⇑ *i*	P		Pg	17 37 23.6	+0.3
ESL	baz=225			*i*	S		Sb	17 37 31.4	+0.7
LATG	**Datong** baz=326	0.49	325	⇓ *i*	P		Pg	17 37 23.4	0.0
LATG	baz=326			*i*	S		Sb	17 37 30.4	-0.6
TEGC	**Jichi Village** baz=209	0.50	213		P		Pb	17 37 24.6	+0.6
TEGC	baz=209			*e*	S		Sn	17 37 34.0	-0.4
NNSB	**Datong** baz=305	0.51	305	⇓	P		Pg	17 37 23.8	+0.1
NNSB	baz=305				S		Sb	17 37 30.8	-0.7
NNSH	**Datong** baz=305	0.51	305	⇓ *e*	P		Pg	17 37 23.7	0.0
NNSH	baz=305			*e*	S		Sb	17 37 30.8	-0.7
NDS	**Dongshan** baz=350	0.51	348	⇓ *i*	P		Pb	17 37 24.0	-0.2
NDS	baz=350			*e*	S		Sb	17 37 31.6	+0.2
NNS	**Nan Shan** baz=306	0.52	306	⇓ *e*	P		Pg	17 37 24.0	0.0
NNS	baz=306			*e*	S		Sb	17 37 31.4	-0.5
WHF	**Hehuan Shan** baz=269	0.52	271	⇑ *i*	P		Pg	17 37 24.1	0.0
WHF	baz=269				S		Sb	17 37 31.6	-0.5
FUSS	**Fushou** baz=281	0.55	282	⇑ *i*	P		Pb	17 37 24.8	-0.3
FUSS	baz=281			*e*	S		Sb	17 37 33.1	+0.2
NDT	**Datong Townshi** baz=329	0.55	328	⇓ *i*	P		Pb	17 37 24.8	-0.2
NDT	baz=329			*e*	S		Sb	17 37 32.6	0.0
ENTT	**Nioudou** baz=336	0.56	334	⇓ *i*	P		Pb	17 37 24.9	-0.3
ENTT	baz=336				S		Sb	17 37 33.0	+0.1
WARBT	**Fenglin Townsh** baz=222	0.58	225	⇑ *i*	P		Pg	17 37 25.1	+0.1
WARBT	baz=222				S		Sb	17 37 34.0	+0.4
EGFH	**Guangfu** baz=216	0.59	219	⇑ *i*	P		Pg	17 37 25.4	+0.2
EGFH	baz=216				S		Sb	17 37 34.8	+1.0
TWE	**Neicheng** baz=348	0.60	345	⇓ *i*	P		Pb	17 37 25.8	0.0
TWE	baz=348				S		Sb	17 37 34.2	+0.1
CHGB	**Renai** baz=261	0.61	263	⇑ *i*	P		Pb	17 37 25.9	-0.1
CHGB	baz=261			*e*	S		Sb	17 37 34.8	+0.3
TWT	**Tachien** baz=279	0.61	281	⇑ *i*	P		Pb	17 37 26.3	+0.2
TWT	baz=279			*e*	S		Sb	17 37 34.9	+0.3
OWD	**Renai** baz=252	0.63	254	⇑ *i*	P		Pb	17 37 26.2	-0.1
OWD	baz=252				S		Sb	17 37 35.2	+0.2
TDCB	**Techi** baz=280	0.63	281	⇑ *i*	P		Pb	17 37 26.4	0.0
TDCB	baz=280				S		Sb	17 37 34.8	-0.2
ILA	**Ilan** baz=355	0.64	353	*e*	P		Pb	17 37 26.6	+0.3
ILA	baz=355			*e*	S		Sb	17 37 36.1	+1.1
FUSB	**Fushanzhiwuyua** baz=341	0.66	340	*i*	P		Pb	17 37 26.9	0.0
FUSB	baz=341			*e*	S		Sb	17 37 36.0	+0.1
WUSB	**Renai** baz=256	0.67	258	⇑	P		Pb	17 37 27.1	+0.1
WUSB	baz=256			*e*	S		Sb	17 37 36.4	+0.2
YHNB	**Yeheng**	0.68	322				Pg	17 37 26.3	-0.6
YHNB	**Yeheng**	0.68	322		P		Pb	17 37 27.2	0.0
YHNB	**Yeheng** baz=322	0.68	322	⇑	P		Pb	17 37 27.2	0.0
YHNB	baz=322				S		Sb	17 37 36.5	+0.1
NSK	**Sanguang** baz=322	0.69	321	⇑ *i*	P		Pb	17 37 27.3	-0.1
NSK	baz=322			*e*	S		Sb	17 37 37.0	+0.2
NWLT	**Wulai** baz=336	0.71	335	*i*	P		Pb	17 37 27.6	0.0
NWLT	baz=336			*e*	S		Sb	17 37 37.3	+0.1
NTC	**Toucheng** baz=1.0	0.72	360	*e*	P		Pn	17 37 28.7	-0.4
NTC	baz=1.0			*e*	S		Sn	17 37 39.1	-0.7
VWDT	**VWDT** baz=237	0.74	239	⇑	P		Pb	17 37 28.3	+0.2
VWDT	baz=237			*e*	S		Sn	17 37 39.7	-0.7
HGSD	**Ruisui** baz=208	0.74	211	*e*	P		Pb	17 37 28.5	+0.4
HGSD	baz=208			*e*	S		Sn	17 37 41.4	+0.9
EHY	**Hungye** baz=214	0.78	217	⇑ *e*	P		Pg	17 37 28.1	-0.7
EHY	baz=214			*e*	S		Sb	17 37 40.4	+1.1
WPL	**Puli Township** baz=260	0.81	262	⇑ *e*	P		Pb	17 37 29.6	+0.3
WPL	baz=260			*e*	S		Sb	17 37 40.9	+0.7
NFF	**Wufeng Townshi** baz=307	0.82	307	⇑	P		Pb	17 37 29.6	0.0
NFF	baz=307			*e*	S		Sb	17 37 40.7	+0.2
WHP	**Taichung City** baz=279	0.83	280	⇑ *e*	P		Pn	17 37 30.4	-0.3
WHP	baz=279			*e*	S		Sn	17 37 41.7	-1.0
TIPB	**Shuangxi** baz=1.0	0.83	359	⇓	P		Pb	17 37 30.1	+0.3
TIPB	baz=1.0			*e*	S		Sn	17 37 42.1	-0.7
DPDB	**Guoxing** baz=262	0.84	263	⇑	P		Pb	17 37 30.2	+0.3
DPDB	baz=262			*e*	S		Sn	17 37 42.1	-0.9
WCS	**Beigang Elemen** baz=264	0.85	265	⇑ *e*	P		Pb	17 37 30.2	+0.3
WCS	baz=264			*e*	S		Sb	17 37 42.0	+0.8
NHDH	**Xindian Distri** baz=342	0.87	341	*e*	P		Pb	17 37 30.8	+0.3
NHDH	baz=342			*e*	S		Sb	17 37 42.6	+0.7
TWA	**Mucha** baz=346	0.87	345	⇓ *e*	P		Pb	17 37 30.9	+0.5
TWA	baz=346			*e*	S		Sb	17 37 42.5	+0.5
SSLB	**Suanglung**	0.88	247				Pg	17 37 30.1	-0.6
SSLB	**Suanglung**	0.88	247		P		Pb	17 37 30.8	+0.3
SSLB	**Suanglung** baz=245	0.88	247	⇑	P		Pg	17 37 30.4	-0.2
SSLB	baz=245			*e*	S		Sg	17 37 42.0	-0.2
TWB1	**Santiao Chiao** baz=11	0.88	9	*e*	P		Pb	17 37 30.9	+0.4
TWB1	baz=11			*e*	S		Sn	17 37 44.3	+0.4
ECBN	**Changbin** baz=202	0.89	204	*e*	P		Pg	17 37 30.9	+0.1
ECBN	baz=202			*e*	S		Sb	17 37 43.7	+1.5
YULB	**Yu-li**	0.89	214				Pg	17 37 29.4	-1.4
YULB	**Yu-li**	0.89	214		P		Pg	17 37 30.6	-0.2
YULB	**Yu-li** baz=212	0.89	214	*e*	P		Pg	17 37 29.6	-1.2
YULB	baz=212			*e*	S		Sg	17 37 42.6	+0.1
SMLT	**Sun Moon Lake** baz=252	0.89	254	⇑	P		Pb	17 37 30.9	+0.1
SMLT	baz=252			*e*	S		Sn	17 37 43.8	-0.6
TATO	**Taipei**	0.90	339				Pb	17 37 31.1	+0.3
TATO	**Taipei**	0.90	339		P		Pn	17 37 31.5	-0.1
TATO	**Taipei** baz=341	0.90	339	*e*	P		Pb	17 37 31.3	+0.5
TATO	baz=341			*e*	S		Sb	17 37 43.3	+0.7
LIOB	**Emei** baz=304	0.91	304	⇑	P		Pn	17 37 31.6	-0.2
LIOB	baz=304			*e*	S		Sb	17 37 42.8	0.0
NJD	**Zhudong** baz=311	0.91	311	*e*	P		Pn	17 37 32.2	+0.4
NJD	baz=311			*e*	S		Sn	17 37 45.1	+0.5
NSTT	**Nanjuang** baz=303	0.91	303	⇑ *e*	P		Pb	17 37 31.4	+0.4
NSTT	baz=303			*e*	S		Sb	17 37 42.8	-0.2
EYUL	**Yuli** baz=209	0.92	211	*e*	P		Pg	17 37 30.2	-1.1
EYUL	baz=209			*e*	S		Sn	17 37 47.6	+2.9
TWF1	**Yuli** baz=210	0.92	213	⇑ *e*	P		Pg	17 37 30.2	-1.3
TWF1	baz=210			*e*	S		Sn	17 37 45.5	+0.6
TYC	**Yuchr** baz=254	0.92	256	⇑	P		Pg	17 37 31.3	-0.2
TYC	baz=254			*e*	S		Sb	17 37 44.2	+0.8
BACT	**New Taipei Cit** baz=338	0.93	337	*e*	P		Pn	17 37 32.6	+0.5
BACT	baz=338			*e*	S		Sn	17 37 45.5	+0.4
NHY	**Taipei** baz=346	0.93	345	*e*	P		Pn	17 37 32.5	+0.4
NHY	baz=346			*e*	S		Sn	17 37 45.3	+0.1
NWF	**Wu-fen Shan** baz=358	0.94	357	⇓ *e*	P		Pn	17 37 32.3	+0.1
NWF	baz=358			*e*	S		Sb	17 37 44.6	+0.9
WFSB	**Wu-fen Shan** baz=358	0.94	357	⇓ *e*	P		Pn	17 37 32.3	+0.2
WFSB	baz=358			*e*	S		Sb	17 37 44.5	+0.9
TAP	**Taipei** baz=343	0.95	342	*e*	P		Pn	17 37 32.6	+0.3
TAP	baz=343			*e*	S		Sn	17 37 45.5	-0.1
SXI1	**Grass Mountain** baz=4.0	0.96	2	⇓ *e*	P		Pn	17 37 32.6	+0.1
SXI1	baz=4.0			*e*	S		Sn	17 37 45.4	-0.5
HSN1	**Hsinchu** baz=311	0.98	311	⇑ *e*	P		Pn	17 37 33.7	+0.9
HSN1	baz=311			*e*	S		Sn	17 37 47.2	+0.7
NTY	**Taoyuan** baz=331	0.99	330	*e*	P		Pn	17 37 33.6	+0.7
NTY	baz=331			*e*	S		Sn	17 37 48.3	+1.6
TWQ1	**Liyutan** baz=282	0.99	283	⇑ *e*	P		Pn	17 37 33.5	+0.5
TWQ1	baz=282			*e*	S		Sn	17 37 46.5	-0.2
WHYT	**Xinyi Township** baz=243	1.00	244	*e*	P		Pb	17 37 32.7	+0.1
WHYT	baz=243			*e*	S		Sn	17 37 46.6	-0.3
TNOU	**National Taiwa** baz=358	1.01	357	*e*	P		Pn	17 37 33.8	+0.6
TNOU	baz=358			*e*	S		Sg	17 37 46.3	-0.2
SBCB	**Hsinchu** baz=310	1.02	310	⇑ *e*	P		Pn	17 37 34.2	+1.0
SBCB	baz=310			*e*	S		Sn	17 37 48.6	+1.4
CHKH	**Chenggong** baz=201	1.02	203	*e*	P		Pn	17 37 33.1	+0.2
CHKH	baz=201			*e*	S		Sn	17 37 48.4	+1.1
NCUH	**Zhongli** baz=325	1.02	325	*e*	P		Pn	17 37 34.0	+0.6
NCUH	baz=325			*e*	S		Sn	17 37 48.6	+1.2
NSY	**Sanyi** baz=285	1.02	286	⇑ *e*	P		Pn	17 37 34.4	+1.1
NSY	baz=285			*e*	S		Sn	17 37 49.5	+2.1
NCU	**National Centr** baz=325	1.02	325	*e*	P		Pn	17 37 34.0	+0.6
NCU	baz=325			*e*	S		Sn	17 37 48.9	+1.5
HSN	**Hsinchu** baz=313	1.03	310	*e*	P		Pn	17 37 34.2	+0.8
HSN	baz=313			*e*	S		Sn	17 37 48.9	+1.2
NMLH	**Miaoli** baz=293	1.03	293	*e*	P		Pn	17 37 34.6	+1.1
NMLH	baz=293			*e*	S		Sn	17 37 48.5	+0.8
TWS1	**Kuangyinshan** baz=340	1.04	339	*e*	P		Pn	17 37 34.3	+0.8
TWS1	baz=340			*e*	S		Sn	17 37 49.5	+1.7
NJN	**Zhunan** baz=302	1.04	302	*e*	P		Pn	17 37 34.7	+1.2
NJN	baz=302			*e*	S		Sn	17 37 49.0	+1.2
YM01	**YM01** baz=347	1.04	347	*e*	P		Pn	17 37 34.2	+0.7
YM01	baz=347			*e*	S		Sn	17 37 47.8	0.0
WWF	**Wufeng** baz=264	1.04	265	⇑ *e*	P		Pn	17 37 34.9	+1.3
WWF	baz=264			*e*	S		Sn	17 37 48.9	+0.9
FULB	**Fuli** baz=207	1.05	208	*e*	P		Pb	17 37 33.3	-0.2
FULB	baz=207			*e*	S		Sg	17 37 48.5	+0.7
JYNG	**Yonagunijimaku**	1.06	72		P		Pb	17 37 34.3	+0.7
JYNG					S		Sb	17 37 48.2	+0.9
JYNG	**Yonagunijimaku** comp=E,8.0nm,1.4s,comp=N,7.0nm,3.4s	1.06	72		A		A	17 37 34.3	
TCU	**Taichung** baz=270	1.06	271	⇑ *e*	P		Pn	17 37 35.0	+1.1
TCU	baz=270			*e*	S		Sn	17 37 51.0	+2.6
WJS	**Zhushan** baz=252	1.06	253	⇑ *e*	P		Pn	17 37 34.5	+0.7
WJS	baz=252			*e*	S		Sn	17 37 50.0	+1.7
NWRT	**Kuosheng** baz=353	1.08	351	*e*	P		Pn	17 37 35.0	+0.9
NWRT	baz=353			*e*	S		Sn	17 37 50.4	+1.7
WNT1	**Nantou City** baz=257	1.08	258	⇑ *e*	P		Pn	17 37 35.2	+1.1
WNT1	baz=257			*e*	S		Sn	17 37 51.2	+2.3
WNT	**Mingjian** baz=255	1.08	257	⇑ *e*	P		Pn	17 37 35.2	+1.0
WNT	baz=255			*e*	S		Sn	17 37 51.1	+2.2
NTST	**Danshui** baz=342	1.08	341	*e*	P		Pn	17 37 34.7	+0.5
NTST	baz=342			*e*	S		Sn	17 37 51.2	+2.2

ANP	**Anpu**	**1.09**	**345**	*eP*	**Pn**	**17 37 35.0**	**+0.6**
	baz=346							
ANP				*eS*	**Sn**	**17 37 49.7**	**+0.5**
	baz=346							
WDJ	**Dajia District**	**1.11**	**281**	*eP*	**Pg**	**17 37 35.9**	**+0.9**
	baz=280							
WDJ				*eS*	**Sn**	**17 37 52.4**	**+2.8**
	baz=280							
CHKT	**Chengkung**	**1.12**	**203**	*eP*	**Pb**	**17 37 33.6**	**-0.9**
	baz=201							
CHKT				*eS*	**Sn**	**17 37 50.9**	**+1.2**
	baz=201							
YOJ	**Yonaguni jima**	**1.12**	**73**		**Pb**	**17 37 34.2**	**-0.4**
YOJ	**Yonaguni jima**	**1.12**	**73**	P	**Pn**	**17 37 35.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.12**	**73**	*eP*	**Pb**	**17 37 35.3**	**+0.7**
	baz=74							
YOJ				*eS*	**Sg**	**17 37 50.5**	**+0.6**
	baz=74							
YOJ	**Yonaguni jima**	**1.12**	**73**	P	**Pn**	**17 37 35.4**	**+0.7**
YOJ				*eS*	**Sg**	**17 37 50.4**	**+0.6**
YOJ	**Yonaguni jima**	**1.12**	**73**	A	A	17 37 35.4	
	comp=E,5.0nm,3.8s,comp=N,6.0nm,1.3s							
NHW	**Xinwu Township**	**1.13**	**321**	*eP*	**Pg**	**17 37 35.5**	**+0.1**
	baz=321							
NHW				*eS*	**Sn**	**17 37 52.8**	**+2.8**
	baz=321							
ALS	**Alishan**	**1.13**	**237**⇑	*eP*	**Pb**	**17 37 35.1**	**+0.1**
	baz=235							
ALS				*eS*	**Sn**	**17 37 51.3**	**+0.8**
	baz=235							
EHD	**Haiduan**	**1.14**	**211**	*eP*	**Pb**	**17 37 33.1**	**-1.8**
	baz=209							
EHD				*eS*	**Sb**	**17 37 50.3**	**+0.8**
	baz=209							
TWY	**Chenhua**	**1.16**	**349**	*eP*	**Pg**	**17 37 36.8**	**+0.9**
	baz=351							
TWY				*eS*	**Sn**	**17 37 51.6**	**+0.9**
	baz=351							
WYL	**Yuanlin Townsh**	**1.16**	**262**	*eP*	**Pb**	**17 37 35.0**	**-0.3**
	baz=261							
WYL				*eS*	**Sn**	**17 37 53.2**	**+2.4**
	baz=261							
WCHH	**Zhanghua**	**1.17**	**268**	*eP*	**Pg**	**17 37 36.5**	**+0.4**
	baz=267							
WCHH				*eS*	**Sn**	**17 37 54.3**	**+3.3**
	baz=267							
NSM	**Shimen**	**1.17**	**349**	*eP*	**Pg**	**17 37 37.2**	**+1.1**
	baz=350							
NSM				*eS*	**Sn**	**17 37 54.9**	**+3.9**
	baz=350							
ECS	**Chishang**	**1.18**	**209**	*eP*	**Pn**	**17 37 35.2**	**-0.3**
	baz=207							
ECS				*eS*	**Sn**	**17 37 53.4**	**+2.1**
	baz=207							
ELDTW	**Lidau**	**1.20**	**219**	*eP*	**Pn**	**17 37 34.5**	**-1.4**
	baz=217							
ELDTW				*eS*	**Sg**	**17 37 53.1**	**+0.5**
	baz=217							
WGK	**Gukeng**	**1.25**	**249**	*eP*	**Pb**	**17 37 37.6**	**-0.1**
	baz=248							
WGK				*eS*	**Sg**	**17 37 56.5**	**+2.6**
	baz=248							
WDLH	**Douliu**	**1.27**	**250**	*eP*	**Pg**	**17 37 38.0**	**-0.1**
	baz=249							
WDLH				*eS*	**Sg**	**17 37 56.1**	**+1.5**
	baz=249							
WCKO	**Fanlu**	**1.32**	**239**	*eP*	**Pb**	**17 37 38.7**	**+0.6**
	baz=237							
WCKO				*eS*	**Sg**	**17 37 58.2**	**+1.9**
	baz=237							
WRL	**Guolierlin Hig**	**1.35**	**260**⇑	*eP*	**Pb**	**17 37 39.0**	**+0.4**
	baz=259							
WRL				*eS*	**Sg**	**17 37 57.9**	**+0.6**
	baz=259							
STYH	**Taoyuan**	**1.36**	**226**	*eP*	**Pn**	**17 37 38.2**	**+0.2**
	baz=224							
STYH				*eS*	**Sb**	**17 37 56.7**	**+0.7**
	baz=224							
RLNB	**Erlin**	**1.37**	**260**	*eP*	**Pg**	**17 37 39.5**	**-0.5**
	baz=259							
RLNB				*eS*	**Sg**	**17 37 59.3**	**+1.5**
	baz=259							
CHN4	**Tsaushan**	**1.38**	**236**	*eP*	**Pb**	**17 37 39.4**	**+0.4**
	baz=235							
CHN4				*eS*	**Sg**	**17 37 59.3**	**+1.2**
	baz=235							
TPUB	**Ta-pu**	**1.38**	**233**		**Pb**	**17 37 39.1**	**0.0**
TPUB	**Ta-pu**	**1.38**	**233**	P	**Pb**	**17 37 39.6**	**+0.5**
TPUB	**Ta-pu**	**1.38**	**233**	*eP*	**Pb**	**17 37 39.3**	**+0.2**
	baz=232							
TPUB				*eS*	**Sg**	**17 37 58.7**	**+0.5**
	baz=232							
CHN2	**Minshiung**	**1.38**	**245**	*eP*	**Pg**	**17 37 40.3**	**+0.1**
	baz=243							
CHN2				*eS*	**Sg**	**17 38 00.9**	**+2.7**
	baz=243							
LONT	**Longtian**	**1.38**	**208**	*eP*	**Pn**	**17 37 36.9**	**-1.4**
	baz=207							
LONT				*eS*	**Sg**	**17 37 59.6**	**+1.4**
	baz=207							
STYT	**Tauyuan**	**1.38**	**226**⇑	*eP*	**Pn**	**17 37 38.7**	**+0.3**
	baz=224							
STYT				*eS*	**Sg**	**17 37 58.4**	**+0.1**
	baz=224							
WTK	**Tuku**	**1.40**	**252**	*eP*	**Pb**	**17 37 39.8**	**+0.5**
	baz=251							
WTK				*eS*	**Sg**	**17 37 59.4**	**+0.8**
	baz=251							
WTP	**Ta-pu**	**1.43**	**232**⇑	*eP*	**Pb**	**17 37 39.9**	**0.0**
	baz=230							
WTP				*eS*	**Sg**	**17 37 59.9**	**+0.3**
	baz=230							
CHY	**Chiayi**	**1.44**	**244**	*eP*	**Pb**	**17 37 40.5**	**+0.5**
	baz=243							
CHY				*eS*	**Sg**	**17 38 01.6**	**+1.6**
	baz=243							
WTCT	**Ta-ch'eng**	**1.45**	**260**	*eP*	**Pb**	**17 37 40.5**	**+0.4**
	baz=258							
WTCT				*eS*	**Sg**	**17 38 01.1**	**+0.8**
	baz=258							
TWGBT	**Beinan**	**1.48**	**208**	P	Pg	17 37 38.4	+0.7
TWGBT	**Beinan**	**1.48**	**208**	*eP*	**Pn**	**17 37 38.1**	**-1.5**
	baz=207							
TWGBT				*eS*	**Sn**	**17 37 57.1**	**-1.6**
	baz=207							
TWG	**Pinlang**	**1.48**	**208**		**Pn**	**17 37 38.1**	**-1.6**
TWG	**Pinlang**	**1.48**	**208**	*eP*	**Pn**	**17 37 38.1**	**-1.6**
	baz=207							
TWG				*eS*	**Sn**	**17 37 57.6**	**-1.2**
	baz=207							
LDUT	**Ludao**	**1.49**	**193**	*eP*	**Pn**	**17 37 38.0**	**-1.8**
	baz=192							
LDUT				*eS*	**Sn**	**17 37 58.2**	**-0.7**
	baz=192							
PCYT	**Pengchaiyu**	**1.50**	**8**	*eP*	**Pb**	**17 37 41.2**	**0.0**
	baz=9.0							
PCYT				*eS*	**Sg**	**17 38 02.4**	**+0.2**
	baz=9.0							
TWK	**Hsinying**	**1.51**	**235**	*eP*	**Pb**	**17 37 41.1**	**-0.1**
	baz=234							
TWK				*eS*	**Sg**	**17 38 03.5**	**+1.3**
	baz=234							
TTN	**Taitung**	**1.51**	**205**	*eP*	**Pn**	**17 37 40.0**	**0.0**
	baz=203							
TTN				*eS*	**Sb**	**17 38 01.4**	**+1.2**
	baz=203							
CHN1	**Nanshi**	**1.53**	**232**	*eP*	**Pb**	**17 37 41.8**	**+0.3**
	baz=231							
CHN1				*eS*	**Sg**	**17 38 03.4**	**+0.6**
	baz=231							
SNST	**Tainan City**	**1.53**	**234**	*eP*	**Pb**	**17 37 41.7**	**+0.1**
	baz=232							
SNST				*eS*	**Sg**	**17 38 03.3**	**+0.4**
	baz=232							
SGST	**Jiashian**	**1.56**	**228**	*eP*	**Pn**	**17 37 41.3**	**+0.7**
	baz=226							
SGST				*eS*	**Sg**	**17 38 03.2**	**-0.5**
	baz=226							
WSF	**Szhu**	**1.56**	**252**	*eP*	**Pb**	**17 37 42.4**	**+0.3**
	baz=251							
WSF				*eS*	**Sg**	**17 38 03.9**	**+0.1**
	baz=251							
SLGT	**Liugui**	**1.57**	**224**	*eP*	**Pb**	**17 37 42.2**	**-0.2**
	baz=223							
SLGT				*eS*	**Sg**	**17 38 04.3**	**-0.1**
	baz=223							
WSL	**Shuilin Townsh**	**1.59**	**248**	*eP*	**Pb**	**17 37 42.8**	**+0.2**
	baz=247							
WSL				*eS*	**Sg**	**17 38 05.2**	**+0.3**
	baz=247							
ICHU	**Yijhu**	**1.62**	**242**	*eP*	**Pb**	**17 37 42.9**	**-0.2**
	baz=241							
ICHU				*eS*	**Sg**	**17 38 06.0**	**+0.1**
	baz=241							
CHN8	**Yiju**	**1.68**	**243**	*eP*	**Pb**	**17 37 44.0**	**-0.2**
	baz=241							
CHN8				*eS*	**Sb**	**17 38 05.7**	**+0.5**
	baz=241							
CHN3	**Shinhua**	**1.71**	**232**	*eP*	**Pb**	**17 37 45.6**	**+0.9**
	baz=231							
CHN3				*eS*	**Sg**	**17 38 10.0**	**+1.3**
	baz=231							
ECL	**Taimali**	**1.73**	**208**	*eP*	**Pn**	**17 37 41.9**	**-1.2**
	baz=207							
ECL				*eS*	**Sn**	**17 38 06.1**	**+1.2**
	baz=207							
SSHA	**Shanhua**	**1.73**	**235**	*eP*	**Pb**	**17 37 45.4**	**+0.3**
	baz=234							
SSHA				*eS*	**Sg**	**17 38 09.7**	**+0.3**
	baz=234							
IRIF	**Iriomote-Funau**	**1.74**	**83**	P	**Pn**	**17 37 44.2**	**+1.0**
IRIF				*eS*	**Sn**	**17 38 06.7**	**+1.6**
IRIF	**Iriomote-Funau**	**1.74**	**83**	A	A	17 37 44.2	
	comp=E,4.0nm,4.9s,comp=N,5.0nm,1.9s							
SCST	**Cishan**	**1.75**	**225**	*eP*	**Pb**	**17 37 45.5**	**+0.2**
	baz=224							
SCST				*eS*	**Sg**	**17 38 09.8**	**-0.1**
	baz=224							
SHHT	**Tainan City**	**1.76**	**231**	*eP*	**Pb**	**17 37 45.7**	**+0.2**
	baz=230							
SHHT				*eS*	**Sg**	**17 38 10.6**	**+0.4**
	baz=230							
SSD	**Sandimen**	**1.77**	**219**	*eP*	**Pn**	**17 37 43.2**	**-0.4**
	baz=218							
SSD				*eS*	**Sb**	**17 38 08.4**	**+0.8**
	baz=218							
SCLT	**Jiali**	**1.78**	**238**	*eP*	**Pb**	**17 37 45.4**	**-0.5**
	baz=237							
SCLT				*eS*	**Sb**	**17 38 09.0**	**+0.9**
	baz=237							
TSMG	**Majia**	**1.79**	**218**	*eP*	**Pb**	**17 37 45.8**	**-0.3**
	baz=217							
TSMG				*eS*	**Sb**	**17 38 08.5**	**+0.1**
	baz=217							
HATJ	**Hateruma jima**	**1.80**	**92**	P	**Pn**	**17 37 45.1**	**+1.1**
HATJ				S	**Sn**	**17 38 07.4**	**+0.8**
TAI1	**Yung-k'ang**	**1.83**	**234**	*eP*	**Pn**	**17 37 45.9**	**+1.4**
	baz=233							
TAI1				*eS*	**Sg**	**17 38 12.0**	**-0.6**
	baz=233							
TWM1	**Shoushan**	**1.84**	**225**	*eP*	**Pb**	**17 37 47.4**	**+0.5**
	baz=224							
TWM1				*eS*	**Sg**	**17 38 14.3**	**+1.5**
	baz=224							
SGLT	**Jiouru**	**1.87**	**222**	*eP*	**Pb**	**17 37 47.5**	**+0.1**
	baz=220							
SGLT				*eS*	**Sg**	**17 38 14.3**	**+0.6**
	baz=220							
MASBT	**Mashibuluo**	**1.88**	**216**	*eP*	**Pn**	**17 37 45.5**	**+0.4**
	baz=215							
MASBT				*eS*	**Sb**	**17 38 12.0**	**+1.2**
	baz=215							
TSCK	**Chigu Township**	**1.88**	**239**	*eP*	**Pn**	**17 37 46.5**	**+1.4**
	baz=238							
TSCK				*eS*	**Sb**	**17 38 10.9**	**0.0**
	baz=238							
TSPT	**Pingtung City**	**1.90**	**221**	*eP*	**Pb**	**17 37 47.8**	**-0.2**
	baz=219							
TSPT				*eS*	**Sg**	**17 38 14.2**	**-0.7**
	baz=219							
EAST	**Anshuo**	**1.96**	**208**	*eP*	**Pn**	**17 37 45.5**	**-0.8**
	baz=207							
EAST				*eS*	**Sg**	**17 38 16.1**	**-0.8**
	baz=207							
JKRS	**Kuro-shima**	**1.99**	**87**	P	**Pn**	**17 37 47.3**	**+0.7**
TAWH	**Dawu Township**	**1.99**	**206**	*eP*	**Pn**	**17 37 45.7**	**-0.9**
	baz=205							
TAWH				*eS*	**Sn**	**17 38 11.3**	**+0.1**
	baz=205							
SCZT	**Fangliau**	**2.08**	**213**	*eP*	**Pn**	**17 37 48.7**	**+0.8**
	baz=212							
SCZT				*eS*	**Sb**	**17 38 18.1**	**+1.5**
	baz=212							
JIJ	**Ishigaki jima**	**2.12**	**83**	P	**Pn**	**17 37 49.1**	**+0.7**
JIJ				*eS*	**Sn**	**17 38 15.9**	**+1.5**
PHUB	**P'eng-hu**	**2.16**	**254**	*eP*	**Pn**	**17 37 49.5**	**+0.5**
	baz=253							
PHUB				*eS*	**Sn**	**17 38 16.9**	**+1.4**
	baz=253							
JISG	**Ishigakijimahi**	**2.30**	**78**	P	**Pn**	**17 37 51.8**	**+0.9**
JISG				S	**Sn**	**17 38 20.2**	**+1.2**
VWUC	**VWUC**	**2.33**	**292**	*eP*	**Pn**	**17 37 51.5**	**+0.2**
	baz=291							
VWUC				*eS*	**Sn**	**17 38 19.7**	**-0.1**
	baz=291							
PTMZ	**Houxiangcun**	**2.63**	**291**	*eP*	**Pn**	**17 37 55.4**	**-0.1**
	baz=290							
PTMZ				*eS*	**Sn**	**17 38 27.0**	**-0.1**
	baz=290							
MATB	**Ma-tsu**	**2.64**	**320**	*eP*	**Pn**	**17 37 55.0**	**-0.6**
	baz=319							
MATB				*eS*	**Sb**	**17 38 30.6**	**-2.2**
	baz=319							
KNMB	**Chin-men Tao**	**3.16**	**277**		**Pn**	**17 38 02.5**	**-0.3**
JMJ	**Miyako jima 2**	**3.22**	**77**	P	**Pn**	**17 38 06.2**	**+2.6**
JOW	**Kunigami**	**6.41**	**64**	Pn	**Pn**	**17 38 45.6**	**-1.8**
KSRS	**Korea Array**	**14.27**	**20**	P	**P**	**17 40 41.8**	**-0.4**
	comp=N,2.1nm,0.6s,baz=212,slow=14,SNR=4.2							
CHTO	**Chiang Mai**	**21.94**	**260**	P	**P**	**17 42 03.3**	**-3.4**
CMAR	**Chiang Mai Arr**	**22.05**	**260**	P	**P**	**17 42 12.2**	**+4.3**
	comp=N,0.9nm,0.8s,baz=58,slow=8.6,SNR=5.8							
	comp=N,0.9nm,0.8s							
GUMO	**Guam**	**24.15**	**112**	LR	LR	17 50 27.3		
	comp=N,16nm,21.4s,baz=209,slow=32							
SONM	**Songino Array**	**26.65**	**336**	P	**P**	**17 42 52.7**	**+0.9**
SONM	**Songino Array**	**26.65**	**336**	P	**P**	**17 42 52.6**	**+0.9**
	comp=N,1.3nm,0.7s,baz=152,slow=8.7,SNR=8.9							
	comp=N,1.3nm,0.7s							
MK31	**Makanchi Array**	**38.79**	**316**	P	**P**	**17 44 36.8**	**-0.8**
MKAR	**Makanchi Array**	**38.79**	**316**	P	**P**	**17 44 37.2**	**-0.4**
MKAR	**Makanchi Array**	**38.79**	**316**	P	**P**	**17 44 38.3**	**+0.7**
	comp=N,1.0nm,0.7s,baz=104,slow=9.9,SNR=12							
	comp=N,1.0nm,0.7s							
MAKZ	**Makanchi**	**38.99**	**316**	P	**P**	**17 44 39.1**	**-0.2**
PETK	**Petropavlovsk-**	**39.58**	**34**	P	**P**	**17 44 44.0**	**0.0**
	comp=N,2.7nm,0.9s,baz=235,slow=8.9,SNR=1.4							
	comp=N,2.7nm,0.9s							
ZAA0	**Zalesovo Array**	**40.61**	**327**	P	**P**	**17 44 51.8**	**-0.8**
ZALV	**Zalesovo Beam**	**40.61**	**327**	P	**P**	**17 44 51.8**	**-0.8**
ZALV	**Zalesovo Beam**	**40.61**	**327**	P	**P**	**17 44 52.0**	**-0.6**
	comp=N,1.5nm,0.6s,baz=112,slow=7.9,SNR=8.2							
	comp=N,1.5nm,0.6s							
KURBB	**Kurchatov Arra**	**42.53**	**320**	P	**P**	**17 45 08.1**	**-0.3**
	comp=N,1.7nm,1.0s,baz=115,slow=7.1,SNR=7.6							
	comp=N,1.7nm,1.0s							
ARSB	**Arslanbob**	**43.93**	**305**	P	**P**	**17 45 17.6**	**-2.4**
WRA	**Warramunga Arr**	**45.47**	**163**	P	**P**	**17 45 31.5**	**-0.8**
	comp=N,0.5nm,0.4s,baz=344,slow=8.5,SNR=5.1							
	comp=N,0.5nm,0.4s							
TIXI	**Tiksi**	**47.71**	**3**	P	**P**	**17 45 47.9**	**-1.3**
TIXI				IAmb	IAmb	17 46 01.2		
	comp=Z,5.2nm,1.1s							
TIXI	**Tiksi**	**47.71**	**3**	LR	LR	18 08 33.1		
	comp=Z,72nm,18.9s,baz=344,slow=39							
BVAR	**Borovoye Array**	**48.09**	**321**	P	**P**	**17 45 52.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=128,slow=9.6,SNR=4.4							
	comp=Z,0.6nm,0.6s							
BRVK	**Borovoye**	**48.16**	**321**	P	**P**	**17 45 53.1**	**+0.2**
BRVK				IAmb	IAmb	17 45 54.1		
	comp=Z,4.7nm,1.2s							
AS31	**Alice Springs**	**48.94**	**165**	P	**P**	**17 45 59.5**	**+0.2**
ASAR	**Alice Springs**	**48.94**	**165**	P	**P**	**17 45 59.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=342,slow=7.0,SNR=7.7							
	comp=Z,0.2nm,0.4s							
ABKAR	**Akbulak array**	**53.90**	**314**	P	**P**	**17 46 36.1**	**-0.1**
GEYT	**Alibeck**	**55.34**	**300**	P	**P**	**17 46 48.5**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=63,slow=3.5,SNR=2.2							
	comp=Z,1.3nm,0.8s							
D19K	**Kuna River**	**64.14**	**24**	P	**P**	**17 47 47.3**	**+0.3**
B20K	**Meade River**	**64.47**	**22**	P	**P**	**17 47 49.1**	**0.0**
B20K				IAmb	IAmb	17 48 31.9		
	comp=Z,4.3nm,1.3s							
E19K	**Redstone River**	**64.49**	**25**	P	**P**	**17 47 49.6**	**+0.4**
E19K				IAmb	IAmb	17 47 56.4		
	comp=Z,4.0nm,1.2s							
H19K	**Roundabout Mou**	**64.88**	**27**	P	**P**	**17 47 51.3**	**-0.5**
H19K				IAmb	IAmb	17 47 55.5		
	comp=Z,2.3nm,0.9s							
TTA	**Tatalina**	**65.25**	**30**	P	**P**	**17 47 54.3**	**-0.1**
B21K	**Ikpikpuk River**	**65.37**	**23**	P	**P**	**17 47 55.5**	**+0.6**
B22K	**Teshekpuk Lake**	**65.74**	**22**	P	**P**	**17 47 57.5**	**+0.3**
B22K				IAmb	IAmb	17 48 01.7		
	comp=Z,2.9nm,0.8s							
IMAR	**Indian Mountai**	**65.96**	**26**	P	**P**	**17 47 59.3**	**+0.5**
J20K	**Nowinta River**	**65.97**	**28**	P	**P**	**17 47 59.5**	**+0.6**
J20K				IAmb	IAmb	17 48 27.3		
	comp=Z,4.8nm,1.3s							
G21K	**Allakaket**	**66.01**	**26**	P	**P**	**17 48 00.1**	**+1.0**
G21K				IAmb	IAmb	17 48 42.5		
	comp=Z,2.5nm,1.2s							
D22K	**Ayikyak River**	**66.11**	**23**	P	**P**	**17 47 59.9**	**+0.2**
D22K				IAmb	IAmb	17 48 03.8		
	comp=Z,2.9nm,1.1s							
H21K	**Melozitna Rive**	**66.38**	**27**	P	**P**	**17 48 02.6**	**+1.0**
E24K	**Your Creek**	**67.74**	**24**	P	**P**	**17 48 10.0**	**-0.2**
E24K				IAmb	IAmb	17 48 26.3		
	comp=Z,1.7nm,0.9s							
F24K	**Squaw Lake**	**68.06**	**24**	P	**P**	**17 48 12.9**	**+0.7**
F24K				IAmb	IAmb	17 48 29.0		
	comp=Z,2.3nm,0.8s							
D25K	**Kavik River**	**68.29**	**22**	P	**P**	**17 48 12.5**	**-1.1**
D25K				IAmb	IAmb	17 48 17.7		
	comp=Z,2.0nm,1.0s							
MDM	**Murphy Dome**	**68.39**	**27**	P	**P**	**17 48 13.8**	**-0.5**
RND	**Reindeer**	**68.41**	**29**	P	**P**	**17 48 13.2**	**-1.3**
BMAR	**Burnt Mountain**	**69.33**	**24**	P	**P**	**17 48 21.2**	**+1.1**
M24K	**Tolsona, Glenn**	**69.89**	**30**	P	**P**	**17 48 24.7**	**+1.0**
KLU	**Klutina**	**70.15**	**31**	P	**P**	**17 48 24.7**	**-0.6**
E28M	**Babbage River**	**70.86**	**23**	P	**P**	**17 48 28.0**	**-1.4**
E28M				IAmb	IAmb	17 48 37.4		
	comp=Z,2.1nm,1.1s							
M26K	**Nabesna, AK**	**71.25**	**29**	P	**P**	**17 48 32.0**	**0.0**
M26K				IAmb	IAmb	17 48 52.1		
	comp=Z,3.9nm,1.1s							
I28M	**Miner Creek**	**71.65**	**26**	P	**P**	**17 48 34.8**	**+0.4**
FINES	**FINESS Array B**	**71.79**	**330**	P	**P**	**17 48 35.0**	**-0.1**
	comp=Z,4.6nm,1.1s,baz=29,slow=3.2,SNR=3.3							
	comp=Z,4.6nm,1.1s							
DAWY	**Dawson**	**72.31**	**27**	P	**P**	**17 48 38.6**	**+0.3**
DAWY				IAmb	IAmb	17 48 41.6		
	comp=Z,3.9nm,1.2s							
CTGM	**Chitina Glacie**	**72.43**	**31**	P	**P**	**17 48 39.3**	**+0.1**
CTGM				IAmb	IAmb	17 49 22.9		
	comp=Z,3.4nm,1.0s							
G30M	**tAoh Zraii Nji**	**72.57**	**24**	P	**P**	**17 48 39.0**	**-0.8**
G30M				IAmb	IAmb	17 49 10.9		
	comp=Z,4.1nm,1.4s							
INK	**Inuvik**	**73.05**	**22**	P	**P**	**17 48 41.6**	**-0.9**
INK				IAmb	IAmb	17 48 57.0		
	comp=Z,4.2nm,1.2s							
I30M	**Mount Dempster**	**73.14**	**26**	P	**P**	**17 48 42.0**	**-1.3**
L29M	**L29M**	**73.16**	**28**	P	**P**	**17 48 41.8**	**-1.6**
L29M				IAmb	IAmb	17 49 01.4		
	comp=Z,4.6nm,1.2s							
F31M	**Tsiigehtchic**	**73.30**	**23**	P	**P**	**17 48 42.6**	**-1.4**
F31M				IAmb	IAmb	17 48 58.8		
	comp=Z,4.8nm,1.1s							
G31M	**Satah River**	**73.31**	**24**	P	**P**	**17 48 43.5**	**-0.6**
G31M				IAmb	IAmb	17 48 59.1		
	comp=Z,2.7nm,1.0s							
NOA	**NORSAR Array B**	**78.55**	**332**	LR	LR	18 26 55.0		
	comp=Z,40nm,19.5s,baz=15,slow=38							
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**17 49 35.6**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=312,slow=5.0,SNR=9.6							
	comp=Z,0.6nm,0.8s							
BAUV	**El Baul**	**145.74**	**18**	PKPdf	**PKPdf**	**17 56 50.5**	**-1.9**

WEL 05 17:39:09.4±0.9, 35°S±5°×17°9E±1°0, h5km, M3.9/28, ML4.1/34, MLv3.9/28, Error ellipse: s-maj=0.0km s-min=0.0km az=84.0, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.23**	**189**	P	Pn	17 39 43.8	-3.3
MXZ				S	Sn	17 40 15.2	+0.2
MXZ				T	T	17 41 49.1	
WMGZ	**Waiomatatini S**	**2.48**	**186**	P	Pn	17 39 49.1	-1.3
WMGZ				T	T	17 42 04.0	
HAZ	**Te Kaha**	**2.52**	**197**	P	Pn	17 39 48.8	-2.2
HAZ				S	Sn	17 40 21.4	-0.7
HAZ				T	T	17 42 00.3	
PUZ	**Puketiti**	**2.74**	**188**	P	Pn	17 39 53.1	-1.0
PUZ				S	Sn	17 40 29.1	+1.4
PUZ				T	T	17 42 18.1	
RUGZ	**Raukumara Rang**	**2.75**	**198**	P	Pn	17 39 53.0	-1.1
RUGZ				T	T	17 42 10.2	
TWGZ	**Tauwhareparae**	**2.89**	**192**	P	Pn	17 39 56.4	+0.4
TWGZ				S	Sn	17 40 34.1	+2.9
TWGZ				T	T	17 42 20.9	
MARZ	**Manawahe**	**3.11**	**212**	P	Pb	17 40 03.3	-1.9
MWZ	**Matawai**	**3.13**	**198**	P	Pn	17 39 57.8	-1.7
MWZ				S	Sn	17 40 38.8	+1.5
CNGZ	**Carnagh Statio**	**3.16**	**188**	P	Pn	17 40 00.1	+0.4
CNGZ				S	Sb	17 40 42.8	-1.9
URZ	**Urewera**	**3.18**	**204**	P	Pn	17 39 58.5	-1.6
URZ				S	Sn	17 40 33.9	-4.6
RAGZ	**Rawiri**	**3.31**	**198**	P	Pn	17 40 01.0	-1.0
KMRZ	**Kaimai**	**3.36**	**221**	P	Pb	17 40 09.3	0.0
RIGZ	**Rimuhau**	**3.44**	**193**	P	Pn	17 40 03.2	-0.4
RIGZ				S	Sn	17 40 45.4	+0.6
MUGZ	**Murupara**	**3.50**	**206**	P	Pn	17 40 03.4	-1.0
RTZ	**Ruatahuna**	**3.55**	**203**	P	Pn	17 40 04.3	-0.9
SNGZ	**Shannon Statio**	**3.60**	**198**	P	Pn	17 40 06.2	+0.3
SNGZ				S	Sn	17 40 50.6	+1.8
WCZ	**Waipu Caves**	**3.63**	**259**	P	Pn	17 40 02.3	-3.9
PRGZ	**Paritu Road**	**3.63**	**191**	P	Pn	17 40 06.6	+0.4
PRGZ				S	Sn	17 40 51.0	+1.5
KNZ	**K

comp=E,27nm,0.1s
CRPR IAML 17 44 20.3
comp=N,44nm,0.2s
MLPR Magueyes Islan 0.32 125⇑ *eP* **Pb 17 44 13.2 -1.0**
MLPR Magueyes Islan 0.32 125 *eS* **Sb 17 44 18.9 -0.6**
MLPR Magueyes Islan 0.32 125 *eP*g **Pb 17 44 13.2 -1.0**
MLPR *eS*g **Sb 17 44 19.1 -0.4**
MLPR IAML 17 44 19.2
comp=N,52nm,0.1s
AGPR Aguadilla, PR 0.37 32⇑ *eP* **Pb 17 44 14.2 -0.7**
AGPR Aguadilla, PR 0.37 32 *eS* **Sb 17 44 20.1 -0.7**
AGPR Aguadilla, PR 0.37 32⇑ *eP*g **Pb 17 44 14.3 -0.7**
AGPR IAML 17 44 20.3
comp=N,96nm,0.2s
AGPR IAML 17 44 26.5
comp=E,53nm,0.2s
AOPR Arecibo Observ 0.57 70⇑ *eP* **Pb 17 44 18.2 +0.2**
AOPR Arecibo Observ 0.57 70 *eS* **Sb 17 44 26.2 +0.3**
AOPR Arecibo Observ 0.57 70 *eP*g **Pb 17 44 17.9 -0.1**
AOPR ⇓*eS*g **Sb 17 44 26.2 +0.3**
AOPR IAML 17 44 29.0
comp=E,82nm,0.2s
AOPR IAML 17 44 29.8
comp=N,52nm,0.3s
CELP Cerrillos 0.70 96⇑ *eP* **Pn 17 44 20.1 0.0**
CELP Cerrillos 0.70 96 *eS* **Sb 17 44 30.2 +0.5**
CELP Cerrillos 0.70 96⇓ *eP*g **Pn 17 44 20.4 +0.3**
CELP IAML 17 44 30.1
comp=N,14nm,1.3s
CELP *eS*g **Sb 17 44 30.2 +0.5**
PCDR Punta Cana, DR 1.07 290 *eP*g **Pn 17 44 25.1 -0.1**
HATOM Hato Mayor del 2.06 288 *eP*g **Pn 17 44 39.7 +1.0**

WEL ***05*** *17:54:24.3±1.3,35°S±7°×17°8E±°, h5km,M4.3/10, ML4.5/10,MLv4.3/10,Error ellipse: s-maj=0.0km s-min=0.0km az=48.2,confirmed*
NEIC ***05*** *17:54:26±1.7,35.49S±0.08×178.8E±0.1, h9km±5km, mb4.9/39,Error ellipse: s-maj=15.0km s-min=11.6km az=110.0*
IDC ***05*** *17:54:33.3±4.4,35.68S×178.57E,h73km±37km,mb4.0/6, mbtmp4.2/8,ML3.7/2,MS3.7/25,Error ellipse: s-maj=32.9km s-min=22.3km az=32.0*
ISC 05 17:54:25.9±0.6,35.45S±0.04×178.60E±0.07,h10km,n124, σ1°**63**/106,**mb4.9**/27,**MS3.8**/25,**2C,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.12**	**186**			**Pn**	**17 55 01.1**	**-0.3**
WIZ	**White Island**	**2.36**	**208**	T		T	17 57 33.7	
WMGZ	**Waiomatatini S**	**2.37**	**184**	P		**Pb**	**17 55 07.6**	**-0.9**
WMGZ				S		**Sg**	**17 55 40.5**	**-1.4**
WMGZ				T		T	17 57 26.6	
HAZ	**Te Kaha**	**2.39**	**196**	P		**Pn**	**17 55 06.0**	**+0.9**
HAZ				T		T	17 57 23.0	
RUGZ	**Raukumara Rang**	**2.61**	**196**	P		**Pn**	**17 55 10.4**	**+2.1**
RUGZ				S		**Sb**	**17 55 45.0**	**-0.1**
PUZ	**Puketiti**	**2.63**	**186**	P		**Pb**	**17 55 11.6**	**-1.5**
PUZ				S		**Sb**	**17 55 46.7**	**+1.3**
KUZ	**Kuaotunu**	**2.66**	**240**	P		**Pn**	**17 55 09.7**	**+0.9**
KUZ				S		**Sn**	**17 55 40.3**	**-0.9**
KUZ				T		T	17 57 27.3	
TWGZ	**Tauwhareparae**	**2.76**	**190**	P		**Pb**	**17 55 14.8**	**-0.6**
TWGZ				S		**Sg**	**17 55 52.7**	**-1.9**
MWZ	**Matawai**	**3.00**	**196**	P		**Pn**	**17 55 15.5**	**+2.0**
MWZ				S		**Sb**	**17 55 59.4**	**+3.3**
URZ	**Urewera**	**3.04**	**203**	P		**Pn**	**17 55 16.0**	**+1.9**
	15nm,0.3s,baz=356,slow=4.8,SNR=23							
URZ				S		**Sn**	**17 55 49.9**	**-0.6**
	100nm,0.5s,baz=338,slow=20,SNR=7.9 66nm,0.5s							
URZ	**Urewera**	**3.04**	**203**	P		**Pn**	**17 55 16.0**	**+1.9**
URZ				S		**Sn**	**17 55 53.1**	**+2.5**
MUGZ	**Murupara**	**3.35**	**205**	P		**Pn**	**17 55 20.5**	**+2.1**
TOZ	**Tahuroa Road**	**3.37**	**227**			**Pn**	**17 55 20.5**	**+1.9**
RTZ	**Ruatahuna**	**3.41**	**202**			**Pn**	**17 55 19.9**	**+0.7**
SNGZ	**Shannon Statio**	**3.47**	**196**	P		**Pn**	**17 55 23.3**	**+3.3**
SNGZ				S		**Sb**	**17 56 10.3**	**+0.6**
WCZ	**Waipu Caves**	**3.50**	**261**	P		**Pn**	**17 55 20.2**	**-0.1**
WCZ				S		**Sn**	**17 56 02.4**	**+0.6**
RAHZ	**Arahi**	**3.66**	**199**	P		**Pn**	**17 55 26.6**	**+3.9**
RAHZ				S		**Sb**	**17 56 13.3**	**-1.9**
NMHZ	**Naumai**	**3.91**	**201**	P		**Pn**	**17 55 29.2**	**+3.2**
BKZ	**Black Stump Fm**	**4.07**	**204**			**Pn**	**17 55 31.1**	**+2.9**
BKZ	**Black Stump Fm**	**4.07**	**204**	P		**Pn**	**17 55 32.0**	**+3.8**
BKZ				S		**Sb**	**17 56 26.1**	**-0.8**
RATZ	**Rangitukua**	**4.09**	**213**	P		**Pb**	**17 55 35.0**	**-3.0**
OUZ	**Omahuta**	**4.10**	**272**	P		**Pn**	**17 55 27.0**	**-1.6**
MCHZ	**McNeill Hill**	**4.26**	**200**	P		**Pn**	**17 55 33.3**	**+2.5**
HIZ	**Hauiti**	**4.28**	**223**			**Pn**	**17 55 33.8**	**+2.7**
TMVZ	**Te Maari**	**4.32**	**211**	P		**Pn**	**17 55 35.9**	**+4.1**
ETVZ	**East Tongariro**	**4.34**	**211**	P		**Pn**	**17 55 36.0**	**+4.0**
KRHZ	**Kereru**	**4.54**	**202**	P		**Pn**	**17 55 37.3**	**+2.6**
MOVZ	**Moawhango**	**4.55**	**209**	P		**Pn**	**17 55 38.8**	**+3.9**
BFZ	**Birch Farm**	**5.54**	**199**	Pn		**Pn**	**17 55 48.5**	**+0.2**
MRZ	**Mangatainoka R**	**5.72**	**204**	Pn		**Pn**	**17 55 51.6**	**+0.8**
BHW	**Baring Head**	**6.62**	**205**	Pn		**Pn**	**17 56 02.8**	**-0.5**
PLWZ	**Palliser**	**6.64**	**202**	Pn		**Pn**	**17 56 04.3**	**+0.7**
TCW	**Tory Channel**	**6.67**	**209**	Pn		**Pn**	**17 56 05.2**	**+1.2**
TUWZ	**Tuamarina**	**7.00**	**210**	Pn		**Pn**	**17 56 08.3**	**-0.1**
BSWZ	**Blackbirch Sta**	**7.26**	**209**	Pn		**Pn**	**17 56 14.2**	**+2.2**
MRNZ	**Matariki Terra**	**7.50**	**216**	Pn		Pn	17 56 20.4	+5.2
THZ	**Tophouse**	**7.71**	**214**	Pn		**Pn**	**17 56 18.5**	**+0.2**
KHZ	**Kahutara**	**7.99**	**208**	Pn		**Pn**	**17 56 21.1**	**-0.9**
LTZ	**Lake Taylor**	**8.81**	**212**	Pn		**Pn**	**17 56 33.5**	**+0.1**
CTZ	**Chatham Island**	**9.05**	**157**	Pn		**Pn**	**17 56 34.9**	**-1.7**
RPZ	**Rata Peaks**	**10.09**	**213**	P		**Pn**	**17 56 51.1**	**+0.3**
	0.6nm,0.3s,baz=4.4,slow=13,SNR=1.9							
RPZ				S		**Sn**	**17 58 42.3**	**-1.8**
	8.5nm,0.8s,baz=260,slow=19,SNR=1.3 13nm,0.9s							
ODZ	**Otahua Downs**	**11.34**	**210**	Pn		**Pn**	**17 57 07.6**	**-0.3**
DZM	**Mont Dzumac**	**17.05**	**318**	LR		LR	18 03 45.4	
	comp=Z,801nm,19.4s,baz=185,slow=32							
STKA	**Stephens Creek**	**30.89**	**266**	LR		LR	18 12 42.1	
	comp=Z,96nm,19.8s,baz=45,slow=35							
HNR	**Honiara**	**30.99**	**322**	LR		LR	18 11 00.1	
	comp=Z,2μm,20.0s,baz=4.5,slow=32							
PPT	**Papeete**	**33.39**	**66**	LR		LR	18 12 37.5	
	comp=Z,43nm,20.3s,baz=216,slow=32							
PMG	**Port Moresby**	**38.64**	**304**	LR		LR	18 16 08.3	
	comp=Z,216nm,18.1s,baz=120,slow=33							
AS31	**Alice Springs**	**40.30**	**274**	P		**P**	**18 02 04.5**	**+0.9**
ASAR	**Alice Springs**	**40.30**	**274**	P		**P**	**18 02 04.9**	**+1.4**
ASAR	**Alice Springs**	**40.30**	**274**	P		**P**	**18 02 03.9**	**+0.4**
	3.9nm,0.9s,baz=115,slow=7.7,SNR=32							
ASAR				LR		LR	18 19 02.6	
	comp=Z,229nm,18.1s,baz=116,slow=36 3.9nm,0.9s							
WR0	**Warramunga Arr**	**41.60**	**280**	P		**P**	**18 02 15.3**	**+1.1**
WB2	**Warramunga Arr**	**41.76**	**280**	P		**P**	**18 02 15.2**	**-0.3**
WRAB	**Tennant Creek**	**41.76**	**280**	P		**P**	**18 02 15.8**	**+0.2**
WRA	**Warramunga Arr**	**41.77**	**280**	P		**P**	**18 02 15.9**	**+0.3**
WRA	**Warramunga Arr**	**41.77**	**280**	P		**P**	**18 02 15.8**	**+0.2**
	5.0nm,0.9s,baz=119,slow=7.7,SNR=18 5.0nm,0.9s							
WB0	**Warramunga Arr**	**41.81**	**280**	P		**P**	**18 02 15.6**	**-0.4**
WB0				IAmb		IAmb	18 02 25.2	
	comp=Z,20nm,1.2s							
FORT	**Forrest**	**42.22**	**261**	P		**P**	**18 02 19.9**	**+0.8**
VNDA	**Vanda**	**42.80**	**185**	LR		LR	18 17 48.0	
	comp=Z,73nm,18.4s,baz=30,slow=33							
FITZ	**Fitzroy Crossi**	**49.75**	**276**	P		**P**	**18 03 19.7**	**+1.0**
NWAO	**Narrogin (SRO)**	**50.10**	**254**	P		**P**	**18 03 21.5**	**+0.3**
PSA00	**Pilbara Seismi**	**52.75**	**269**			**P**	**18 03 41.4**	**+0.2**
PSA00					IAmb	IAmb	18 03 48.0	
	comp=Z,22nm,1.4s							
PSA00	**Pilbara Seismi**	**52.75**	**269**	P		**P**	**18 03 41.6**	**+0.4**
PSA00					IAmb	IAmb	18 03 48.1	
	comp=Z,44nm,1.4s							
QSPA	**South Pole Qui**	**54.67**	**180**	P		**P**	**18 03 56.8**	**+2.0**
QSPA					IAmb	IAmb	18 04 04.3	
	comp=Z,20nm,0.9s							
GUMO	**Guam**	**58.30**	**321**	LR		LR	18 28 46.1	
	comp=Z,28nm,18.1s,baz=152,slow=35							
RPN	**Rapa Nui**	**60.93**	**104**	LR		LR	18 24 45.4	
	comp=Z,68nm,19.3s,baz=298,slow=30							
DAV	**Davao City (W)**	**65.37**	**299**	LR		LR	18 33 26.4	
	comp=Z,48nm,19.7s,baz=173,slow=36							
MAW	**Mawson**	**66.57**	**202**	LR		LR	18 33 42.4	
	comp=Z,118nm,18.1s,baz=85,slow=35							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**70.59**	**276**	LR		LR	18 39 38.2	
	comp=Z,60nm,18.0s,baz=228,slow=38							
SNAA	**Sanae**	**73.17**	**180**	LR		LR	18 34 24.6	
	comp=Z,61nm,21.4s,baz=179,slow=33							
VNA3	**Neumayer Olymp**	**73.44**	**177**	⇑P		**P**	**18 05 57.4**	**-0.5**
	comp=Z,14nm,1.0s							
VNA2	**Neumayer--Watz**	**73.83**	**178**	⇑P		**P**	**18 06 00.7**	**+0.5**
	comp=Z,8.7nm,0.8s,baz=187,slow=5.5							
H03S2	**Juan Fernandez**	**80.02**	**124**	T		T	19 34 47.6	
	baz=232,slow=74,SNR=23							
H03S1	**Juan Fernandez**	**80.03**	**124**	T		T	19 34 47.0	
	baz=232,slow=74,SNR=20							
H03S3	**Juan Fernandez**	**80.04**	**124**	T		T	19 34 49.7	
	baz=232,slow=74,SNR=24							
H03N3	**Juan Fernandez**	**80.25**	**124**	T		T	19 34 55.0	
	baz=236,slow=72,SNR=181							
H03N2	**Juan Fernandez**	**80.25**	**124**	T		T	19 34 53.8	
	baz=236,slow=72,SNR=120							
H03N1	**Juan Fernandez**	**80.26**	**124**	T		T	19 35 01.5	
	baz=236,slow=72,SNR=131							
MJAR	**Matsushiro Arr**	**80.88**	**328**	LR		LR	18 40 13.4	
	comp=Z,24nm,18.4s,baz=144,slow=34							
PLCA	**Paso Flores**	**81.11**	**134**	P		**P**	**18 06 41.4**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=268,slow=5.7,SNR=6.2							
PLCA				LR		LR	18 34 18.6	
	comp=Z,73nm,20.9s,baz=211,slow=30 comp=Z,2.9nm,0.9s							
JNU	**Nakatsue**	**81.55**	**321**	LR		LR	18 39 07.7	
	comp=Z,33nm,18.6s,baz=172,slow=33							
ASAJ	**Asahikawa**	**85.69**	**335**	LR		LR	18 39 58.8	
	comp=Z,43nm,21.2s,baz=172,slow=32							
KSRS	**Korea Array**	**86.44**	**322**	P		**P**	**18 07 09.5**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=125,slow=6.2,SNR=3.5 comp=Z,1.5nm,0.9s							
PETK	**Petropavlovsk-**	**90.05**	**348**	LR		LR	18 42 12.4	
	comp=Z,29nm,20.3s,baz=113,slow=32							
SRIG	**Santa Rosalia**	**90.30**	**56**	P		**P**	**18 07 25.4**	**-1.7**
VTX	**Valle De La Tr**	**90.64**	**51**	P		**P**	**18 07 27.8**	**-0.9**
VTX					IAmb	IAmb	18 07 30.6	
	comp=Z,9.8nm,1.5s							
ESJX	**Sierra Juarez**	**90.94**	**51**	P		**P**	**18 07 30.5**	**+0.3**
ESJX					IAmb	IAmb	18 07 38.6	
	comp=Z,11nm,1.4s							
RMX	**La Rumorosa**	**91.26**	**50**	P		**P**	**18 07 31.0**	**-0.6**
RMX					IAmb	IAmb	18 07 39.8	
	comp=Z,13nm,1.2s							
PMD	**Palm Desert**	**91.77**	**49**	P		**P**	**18 07 34.2**	**+0.4**
PMD					IAmb	IAmb	18 07 35.5	
	comp=Z,7.6nm,1.3s							
ISA	**Isabella, Lake**	**91.87**	**47**	P		**P**	**18 07 31.6**	**-2.7**
ISA					IAmb	IAmb	18 07 35.6	
	comp=Z,13nm,1.5s							
PIX	**Pinacate**	**92.24**	**52**	P		**P**	**18 07 36.1**	**+0.2**
PIX					IAmb	IAmb	18 07 43.8	
	comp=Z,8.0nm,1.1s							
HSIG		**92.26**	**56**	P		**P**	**18 07 35.4**	**-0.8**
HSIG					IAmb	IAmb	18 07 44.6	
	comp=Z,12nm,1.4s							
GLA	**Glamis**	**92.34**	**50**	P		**P**	**18 07 35.7**	**-0.8**
CMB	**Columbia Colle**	**92.40**	**44**	P		**P**	**18 07 35.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**92.44**	**291**	LR		LR	18 51 23.1	
	comp=Z,15nm,20.9s,baz=120,slow=37							
AFDM	**Forest Hills D**	**92.71**	**43**	P		**P**	**18 07 35.6**	**-2.5**
AFDM					IAmb	IAmb	18 07 45.1	
	comp=Z,3.9nm,1.0s							
113A	**Mohawk Valley,**	**92.83**	**51**	P		**P**	**18 07 38.5**	**-0.2**
ORV	**Oroville**	**92.85**	**42**	P		**P**	**18 07 37.8**	**-0.8**
214A	**Organ Pipe Nat**	**92.91**	**52**	P		**P**	**18 07 39.8**	**+0.7**
214A					IAmb	IAmb	18 07 47.4	
	comp=Z,8.6nm,1.2s							
BLYC	**Blythe**	**92.99**	**50**	P		**P**	**18 07 40.0**	**+0.6**
BLYC					IAmb	IAmb	18 07 41.4	
	comp=Z,5.7nm,1.1s							
MPK	**Martis Peak**	**93.48**	**43**	P		**P**	**18 07 41.6**	**-0.3**
MPK					IAmb	IAmb	18 07 54.5	
	comp=Z,6.7nm,1.1s							
GMN	**Gold Mountain**	**93.70**	**46**	P		**P**	**18 07 40.3**	**-2.6**
NVAR	**Mina Array Bea**	**93.86**	**45**	P		**P**	**18 07 43.1**	**-0.5**
NVAR	**Mina Array Bea**	**93.86**	**45**	P		**P**	**18 07 43.4**	**-0.2**
	comp=Z,2.0nm,1.1s,baz=216,slow=6.5,SNR=9.3							
NVAR				LR		LR	18 44 12.4	
	comp=Z,32nm,18.4s,baz=273,slow=32 comp=Z,2.0nm,1.1s							
LVC	**Limon Verde**	**93.89**	**121**	LR		LR	18 41 14.6	
	comp=Z,92nm,21.1s,baz=222,slow=30							
KLR	**Kul'dur**	**94.02**	**331**	LR		LR	18 44 07.9	
	comp=Z,48nm,20.1s,baz=152,slow=32							
Y14A	**Wickenburg**	**94.07**	**51**	P		**P**	**18 07 43.6**	**-0.8**
Y14A					IAmb	IAmb	18 07 53.0	
	comp=Z,3.9nm,0.9s							
PAHR	**Pah Rah Range**	**94.12**	**43**			**P**	**18 07 42.9**	**-1.8**
TPH	**Tonopah**	**94.24**	**45**	P		**P**	**18 07 44.7**	**-0.6**
W13A	**Hualapai Mount**	**94.27**	**49**	P		**P**	**18 07 45.0**	**-0.6**
W13A					IAmb	IAmb	18 07 53.2	
	comp=Z,9.4nm,1.8s							
KVN	**Kaiserville**	**94.40**	**44**	P		**P**	**18 07 45.0**	**-1.0**
KVN					IAmb	IAmb	18 07 55.5	
	comp=Z,5.1nm,1.3s							
TUC	**Tucson**	**94.46**	**53**	P		**P**	**18 07 46.1**	**-0.2**
TUC					IAmb	IAmb	18 07 54.6	
	comp=Z,4.5nm,1.1s							
NNA	**Nana**	**94.68**	**108**	LR		LR	18 42 08.1	
	comp=Z,41nm,18.7s,baz=200,slow=30							
X16A	**Lo Mia Camp, P**	**95.37**	**51**			**P**	**18 07 51.3**	**+0.7**
BMN	**Battle Mountai**	**95.83**	**44**	P		**P**	**18 07 52.2**	**-0.3**
BMN					IAmb	IAmb	18 07 59.8	
	comp=Z,6.2nm,1.4s							
CMIG	**Matias Romero**	**96.96**	**74**	LR		LR	18 42 09.9	
	comp=Z,11nm,19.0s,baz=30,slow=29							
MA2	**Magadan**	**97.45**	**346**	LR		LR	18 45 01.3	
	comp=Z,42nm,21.3s,baz=156,slow=31							
TXAR	**Lajitas Array**	**97.47**	**59**	P		**P**	**18 07 59.4**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=216,slow=4.5,SNR=1.8 comp=Z,0.2nm,0.7s							
CPUP	**Villa Florida**	**98.96**	**131**	LR		LR	18 44 55.1	
	comp=Z,95nm,21.0s,baz=219,slow=31							
FINES	**FINESS Array B**	**148.70**	**335**	PKPbc		**PKPdf**	**18 14 10.2**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=67,slow=5.0,SNR=8.6							
GAZ	**Gaziantep**	**148.98**	**285**	PKPdf		**PKPdf**	**18 14 09.3**	**-0.7**
MMAI	**Mont Meron Ar**	**149.59**	**276**	PKPbc		**PKPbc**	**18 14 14.2**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=158,slow=1.6,SNR=2.7							
BNN	**Bunyan**	**150.25**	**288**	PKPdf		**PKPdf**	**18 14 12.7**	**+0.6**
DBIC	**Dimbokro**	**151.18**	**173**	PKPbc		**PKPdf**	**18 14 15.7**	**+1.6**
	comp=Z,3.5nm,1.0s,baz=224,slow=3.7,SNR=3.4							
TORD	**Torodi Ar. Bea**	**157.62**	**188**	PKPab		**PKPab**	**18 14 53.1**	**-1.8**
	comp=Z,2.7nm,1.1s,baz=182,slow=2.0,SNR=4.6							

SJA ***05*** *18:03:09.6±0.7,23.02S×66.83W,h211km±7km, ML3.4, MW3.5*
GUC ***05*** *18:03:12.5±0.7,23.10S×67.04W,h211km±11km,ML3.6*
ISC 05 18:03:09.1±2.0,23.08S±0.04×66.89W±0.06, h219km±16km,n37,σ1°**27**/56,**1C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.56**	**55**	*e*P		**Pn**	**18 03 45.8**	**+0.2**
YJA				*e*S		**S**	**18 04 11.7**	**-2.1**
LVC	**Limon Verde**	**1.92**	**284**	*e*P		**Pn**	**18 03 49.8**	**+1.1**
LVC	**Limon Verde**	**1.92**	**284**	*i* P		**Pn**	**18 03 49.7**	**+0.9**
LVC				*e*S		**S**	**18 04 18.4**	**-1.0**
LVC				IAML			18 04 19.8	
	264nm,0.5s							
SLA	**San Lorenzo**	**2.06**	**142**	*e*P		**Pn**	**18 03 51.1**	**+1.2**
PB06	**IPOC Station P**	**2.50**	**278**	*e*P		**Pn**	**18 03 55.8**	**+1.4**
PB06					IAML		18 04 33.3	
	comp=Z,124nm,0.3s							
PB06	**IPOC Station P**	**2.50**	**278**	*i* P		**Pn**	**18 03 55.3**	**+0.8**
PB06				*e*S		**S**	**18 04 28.7**	**-0.9**
PB06				IAML			18 04 31.2	
	comp=E,152nm,0.1s							
PB09	**IPOC Station P**	**2.52**	**300**	*e*P		**Pn**	**18 03 56.3**	**+1.5**
PB09				*e*S		**S**	**18 04 31.5**	**+1.4**
PB09				IAML			18 04 35.9	
	comp=Z,70nm,0.3s							
PB09	**IPOC Station P**	**2.52**	**300**	*i* P		**Pn**	**18 03 56.2**	**+1.5**
PB09				*e*S		**S**	**18 04 30.7**	**+0.6**
PB09				IAML			18 04 35.2	
	comp=E,91nm,0.3s							
PB05	**IPOC Station P**	**3.06**	**274**	*e*P		**Pn**	**18 04 01.5**	**+0.9**
PB05				IAML			18 04 43.6	
	comp=Z,54nm,0.3s							
PB05	**IPOC Station P**	**3.06**	**274⇑**	*i*P		**Pn**	**18 04 01.5**	**+0.9**
PB05				*e*S		**S**	**18 04 38.5**	**-2.2**
PB05				IAML			18 04 42.4	
	comp=N,60nm,0.2s							

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**3.08**	**295**	*e*P		**Pn**	**18 04 01.7**	**+0.8**
PB07				*e*S		**S**	**18 04 39.8**	**-1.5**
PB07				IAML			18 04 41.7	
	comp=Z,158nm,0.5s							
PB07	**IPOC Station P**	**3.08**	**295**	*i* P		**Pn**	**18 04 01.8**	**+0.8**
PB07				*e*S		**S**	**18 04 39.4**	**-1.9**
PB04	**IPOC Station P**	**3.10**	**283**	*e*P		**Pn**	**18 04 02.2**	**+1.0**
PB04				IAML			18 04 44.4	
	comp=Z,98nm,0.4s							
PB04	**IPOC Station P**	**3.10**	**283**	*i* P		**Pn**	**18 04 01.9**	**+0.7**
PB04				*e*S		**S**	**18 04 40.1**	**-1.6**
PB04				IAML			18 04 43.4	
	comp=N,150nm,0.2s							
PB01	**IPOC Station P**	**3.15**	**310**	*e*P		**Pn**	**18 04 02.4**	**+0.7**
PB01				*e*S		**S**	**18 04 42.3**	**-0.3**
PB01				IAML			18 04 44.3	
	comp=Z,79nm,0.2s							
PB01	**IPOC Station P**	**3.15**	**310**	*e*P		**Pn**	**18 04 02.3**	**+0.7**
PB01				IAML			18 04 44.7	
	comp=E,168nm,0.2s							
GO02	**Mina Guanaco**	**3.22**	**229**	*e*P		**Pn**	**18 04 04.0**	**+1.4**
GO02				*e*S		**S**	**18 04 45.1**	**+0.7**
GO02	**Mina Guanaco**	**3.22**	**229**	*i* P		**Pn**	**18 04 04.0**	**+1.4**
PB02	**IPOC Station P**	**3.29**	**302**	*e*P		**Pn**	**18 04 04.0**	**+0.7**
PB02				*e*S		**S**	**18 04 44.6**	**-1.0**
PB02				IAML			18 04 47.8	
	comp=Z,167nm,0.2s							
PB02	**IPOC Station P**	**3.29**	**302**	*e*P		**Pn**	**18 04 03.7**	**+0.4**
PB10	**IPOC Station P**	**3.40**	**262**	*e*P		**Pn**	**18 04 05.8**	**+1.4**
PB10				*e*S		**S**	**18 04 45.8**	**-1.8**
PB10				IAML			18 04 48.5	
	comp=Z,32nm,0.5s							
PB10	**IPOC Station P**	**3.40**	**262**	*e*P		**Pn**	**18 04 05.4**	**+1.0**
PB14	**IPOC Station P**	**3.56**	**244**	*e*P		**Pn**	**18 04 07.7**	**+1.0**
PB14				*e*S		**S**	**18 04 50.3**	**-1.4**
PB14				IAML			18 04 53.7	
	comp=Z,72nm,0.3s							
PB14	**IPOC Station P**	**3.56**	**244**	*e*P		**Pn**	**18 04 07.6**	**+0.9**
PB08	**IPOC Station P**	**3.61**	**324**	*e*P		**Pn**	**18 04 09.4**	**+2.1**
PB08				*e*S		**S**	**18 04 53.6**	**+0.8**
PB08				IAML			18 04 59.4	
	comp=Z,29nm,0.4s							
PB08	**IPOC Station P**	**3.61**	**324**	*e*P		**Pn**	**18 04 09.1**	**+1.8**
PATCX	**Punta Patache**	**3.77**	**306**	*e*P		**Pn**	**18 04 09.6**	**+0.6**
PATCX	**Punta Patache**	**3.77**	**306**	*e*P		**Pn**	**18 04 09.2**	**+0.2**
HMBC	**Humberstone**	**3.95**	**314**	*e*P		**Pn**	**18 04 11.8**	**+0.7**
HMBC				*e*S		**S**	**18 04 58.1**	**-1.6**
HMBC	**Humberstone**	**3.95**	**314**	*e*P		**Pn**	**18 04 11.0**	**-0.1**
TA01	**Diego Aracena**	**3.95**	**309**	*e*P		**Pn**	**18 04 12.1**	**+1.0**
TA01				*e*S		**S**	**18 04 58.1**	**-1.5**
TA01				IAML			18 05 00.8	
	comp=Z,35nm,0.3s							
TA01	**Diego Aracena**	**3.95**	**309**	*e*P		**Pn**	**18 04 12.1**	**+1.0**
PB11	**IPOC Station P**	**4.19**	**322**	*e*P		**Pn**	**18 04 14.4**	**+0.2**
PB11				*e*S		**S**	**18 05 03.3**	**-1.9**
PB11				IAML			18 05 07.5	
	comp=Z,31nm,0.2s							
AC02	**Maricunga**	**4.25**	**208**	*e*P		**Pn**	**18 04 16.8**	**+1.6**
AC02				IAML			18 05 14.2	
	comp=Z,9.8nm,2.8s							
AC01	**Pan de Azucar**	**4.55**	**227**	*e*P		**Pn**	**18 04 18.4**	**0.0**
AC01				IAML			18 05 12.3	
	comp=Z,15nm,1.5s							
PB16	**IPOC Station P**	**5.32**	**332**	*e*P		**Pn**	**18 04 30.9**	**+2.2**
PB16				IAML			18 05 37.5	
	comp=Z,6.2nm,0.7s							
GO03	**Copiap**	**5.41**	**213**	*e*P		**Pn**	**18 04 29.4**	**+0.1**
GO03				*e*S		**S**	**18 05 30.8**	**-1.9**

WEL 05 18:20:09.9±1.1,35°S±6°×17°9E±1°,0,h5km,M3.7/16, ML3.8/19,MLv3.7/16,Error ellipse: s-maj=0.0km s-min=0.0km az=71.3,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.28**	**184**

HMBC				Sg	S	18 33 39.7	-0.4
HMBC				IAML		18 33 40.7	
	23nm,0.3s						
PB11	**IPOC Station P**	**3.09**	**303**	Pg	Pn	18 33 01.8	+0.3
SOET	**ToroToro**	**3.47**	**17**	Pg	Pn	18 33 06.8	+0.5
AOEA	**Aiquile**	**3.61**	**26**	Pg	Pn	18 33 07.8	-0.1
PB16	**IPOC Station P**	**3.96**	**321**	Pg	Pn	18 33 13.8	+1.4
PB12	**IPOC Station P**	**4.29**	**311**	Pg	Pn	18 33 16.1	+0.1
GO02	**Mina Guanaco**	**4.45**	**213**	Pg	Pn	18 33 18.1	0.0
BBOE	**La Paz, Chanca**	**4.73**	**347**	Pg	Pn	18 33 22.4	+0.4
LPAZ	**La Paz**	**5.27**	**347**	Pg	Pn	18 33 29.7	+0.8

NEIC ***05*** *18:43:33.9±1.3,56°.22N±0°.02×149°.8W±0°.1,h10km±2km, ML3.3/44,ML3.2(AEIC),Error ellipse: s-maj=10.2km s-min=4.7km az=101.0*

AEIC ***05*** *18:43:37.6±1.2,56°.20N±0°.08×149°.8W±0°.1,h4km±7km, Error ellipse: s-maj=12.5km s-min=8.9km az=149.0*

ISC 05 18:43:33.2±2.0,56°.2N±0°.1×149°.83W±0°.06,h10km,n126, σ0$86/127,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.15**	**299**		**Pn**	**18 44 09.8**	**+0.8**
OHAK					**Sn**	**18 44 34.6**	**-1.1**
OHAK	**Old Harbor**	**2.15**	**299**	IAML		18 44 35.5	
	comp=N,87nm,0.6s						
OHAK	**Old Harbor**	**2.15**	**299**	P	**Pn**	**18 44 09.8**	**+0.8**
	baz=116						
OHAK				S	**Sn**	**18 44 34.6**	**-1.1**
	baz=116						
KDAK	**Kodiak Island**	**2.17**	**317**		**Pn**	**18 44 10.4**	**+1.1**
KDAK					**Sn**	**18 44 35.7**	**-0.5**
KDAK	**Kodiak Island**	**2.17**	**317**	IAML		18 44 36.9	
	comp=N,118nm,0.3s						
KDAK				IAML		18 44 37.1	
	comp=N,86nm,0.4s						
SII	**Sitkinak Islan**	**2.44**	**280**	Pn	**Pn**	**18 44 14.0**	**+0.9**
SII				IAML		18 44 51.2	
	comp=N,142nm,1.5s						
SII				IAML		18 45 34.8	
	comp=E,110nm,1.4s						
SYI	**Shuyak Island**	**2.76**	**331**		**Pn**	**18 44 18.5**	**+1.0**
SYI					**Sn**	**18 44 50.8**	**0.0**
Q20K	**Shuyak Island**	**2.77**	**331**	P	**Pn**	**18 44 18.5**	**+1.0**
	baz=149						
Q20K				S	**Sn**	**18 44 50.8**	**0.0**
	baz=149						
CNPM	**China Poot**	**3.40**	**348**		**Pn**	**18 44 26.6**	**+0.4**
CNPM					**Sn**	**18 45 05.4**	**-1.1**
Q19K	**Cape Douglas,**	**3.40**	**324**	Pn	**Pn**	**18 44 27.6**	**+1.3**
Q19K				IAML		18 45 29.7	
	comp=N,108nm,1.1s						
BRSE	**Bradley Lake S**	**3.56**	**353**		**Pn**	**18 44 28.4**	**0.0**
BRSE					**Sn**	**18 45 09.1**	**-1.5**
BRSE	**Bradley Lake S**	**3.56**	**353**	P	**Pn**	**18 44 28.4**	**0.0**
	baz=172						
BRSE				S	**Sn**	**18 45 09.1**	**-1.5**
	baz=172						
BRLK	**Bradley Lake**	**3.59**	**351**		**Pn**	**18 44 28.8**	**-0.1**
ANCK	**Angle Creek**	**3.66**	**305**		**Pn**	**18 44 31.3**	**+1.4**
Q23K	**Middleton Isla**	**3.72**	**29**		**Pn**	**18 44 30.7**	**+0.2**
Q23K	**Middleton Isla**	**3.72**	**29**	P	**Pn**	**18 44 30.7**	**+0.2**
	baz=211						
MID	**Middleton Isla**	**3.72**	**29**	Pn	**Pn**	**18 44 30.9**	**+0.3**
CNTC	**Contact Creek**	**3.87**	**304**		**Pn**	**18 44 34.1**	**+1.3**
Q17K	**Contact Creek**	**3.87**	**304**	P	**Pn**	**18 44 34.1**	**+1.2**
	baz=119						
P19K	**Oil Pt**	**3.89**	**334**		**Pn**	**18 44 34.1**	**+1.1**
P19K	**Oil Pt**	**3.89**	**334**	IAML		18 45 21.9	
	comp=N,58nm,0.4s						
P19K				IAML		18 45 22.1	
	comp=E,69nm,0.7s						
P19K	**Oil Pt**	**3.89**	**334**	P	**Pn**	**18 44 34.1**	**+1.1**
	baz=151						
SEW	**Seward**	**3.90**	**3**		**Pn**	**18 44 33.0**	**0.0**
SEW	**Seward**	**3.90**	**3**	P	**Pn**	**18 44 33.0**	**0.0**
	baz=183						
P23K	**Montague Islan**	**4.00**	**18**		**Pn**	**18 44 34.5**	**+0.1**
P23K	**Montague Islan**	**4.00**	**18**	P	**Pn**	**18 44 34.5**	**+0.1**
	baz=199						
O20K	**Slope Mountain**	**4.14**	**340**		**Pn**	**18 44 36.7**	**+0.3**
O20K	**Slope Mountain**	**4.14**	**340**	P	**Pn**	**18 44 36.7**	**+0.3**
	baz=158						
IVE	**Iliamna Volcan**	**4.16**	**337**		**Pn**	**18 44 37.0**	**+0.2**
O22K	**Cooper Landing**	**4.27**	**1**	Pn	**Pn**	**18 44 38.3**	**+0.1**
O22K				IAML		18 45 35.1	
	comp=E,53nm,1.5s						
O22K				IAML		18 45 36.2	
	comp=N,48nm,0.7s						
RSO	**Redoubt South**	**4.52**	**341**	Pn	**Pn**	**18 44 42.3**	**+0.5**
HIN	**Hinchinbrook I**	**4.54**	**21**		**Pn**	**18 44 42.0**	**+0.1**
O18K	**Koktuh Hills**	**4.63**	**324**	Pn	**Pn**	**18 44 43.6**	**+0.6**
O18K				IAML		18 45 38.2	
	comp=N,15nm,0.8s						
O18K				IAML		18 45 39.0	
	comp=E,11nm,0.7s						
KAIM	**Kayak Island**	**4.70**	**35**		**Pn**	**18 44 44.2**	**+0.2**
KAIM	**Kayak Island**	**4.70**	**35**	IAML		18 45 44.3	
	comp=N,54nm,1.4s						
KAIM	**Kayak Island**	**4.70**	**35**	P	**Pn**	**18 44 44.2**	**+0.2**
	baz=220						
EYAK	**Cordova Ski Ar**	**4.84**	**25**		**Pn**	**18 44 46.4**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.84**	**25**	P	**Pn**	**18 44 46.4**	**+0.4**
	baz=208						
RC01	**Rabbit Creek A**	**4.88**	**1**		**Pn**	**18 44 46.6**	**+0.1**
RC01	**Rabbit Creek A**	**4.88**	**1**	IAML		18 45 42.1	
	comp=E,14nm,0.5s						
RC01	**Rabbit Creek A**	**4.88**	**1**	P	**Pn**	**18 44 46.7**	**+0.1**
	baz=180						
RAGM	**Ragged Mountai**	**4.98**	**31**	Pn	**Pn**	**18 44 48.0**	**0.0**
RAGM				IAML		18 48 03.5	
	comp=E,44nm,1.3s						
SUCK	**Suckling Hills**	**5.02**	**37**		**Pn**	**18 44 49.1**	**+0.6**
SUCK	**Suckling Hills**	**5.02**	**37**	IAML		18 45 58.4	
	comp=N,31nm,1.2s						
HMT	**Hamilton**	**5.07**	**33**		**Pn**	**18 44 49.7**	**+0.6**
NICHA	**Nichawak Mount**	**5.08**	**35**		**Pn**	**18 44 49.9**	**+0.6**
GOAT	**Goat Mountain**	**5.13**	**29**		**Pn**	**18 44 50.7**	**+0.7**
N19K	**Bonanza Creek**	**5.21**	**334**		**Pn**	**18 44 51.3**	**+0.2**
N19K	**Bonanza Creek**	**5.21**	**334**	P	**Pn**	**18 44 51.3**	**+0.2**
	baz=150						
KNK	**Knik Glacier**	**5.25**	**7**		**Pn**	**18 44 51.7**	**0.0**
KNK	**Knik Glacier**	**5.25**	**7**	IAML		18 46 47.3	
	comp=E,20nm,1.0s						
KNK				IAML		18 46 49.3	
	comp=N,17nm,0.9s						
KNK	**Knik Glacier**	**5.25**	**7**	P	**Pn**	**18 44 51.7**	**0.0**
	baz=188						
SUA	**Susitna One**	**5.28**	**355**	Pn	**Pn**	**18 44 52.0**	**-0.1**
BERG	**Berg Lake**	**5.28**	**35**		**Pn**	**18 44 52.2**	**+0.1**
GRIN	**Grindle Hills**	**5.33**	**38**		**Pn**	**18 44 53.3**	**+0.6**
STLK	**Strandline Lak**	**5.39**	**350**		**Pn**	**18 44 53.7**	**+0.1**
SNH	**Sunshine Point**	**5.42**	**40**		**Pn**	**18 44 54.5**	**+0.5**
N18K	**Kilae Creek**	**5.48**	**327**	Pn	**Pn**	**18 44 55.6**	**+0.8**
BMRM	**Bremner River**	**5.49**	**28**	P	**Pn**	**18 44 55.6**	**+0.7**
	baz=212						
GHO	**Glory Hole Cre**	**5.59**	**4**		**Pn**	**18 44 57.3**	**+1.0**
WAX	**Waxell Ridge**	**5.61**	**38**		**Pn**	**18 44 56.8**	**+0.2**
SML	**Sawmill**	**5.66**	**7**	P	**Pn**	**18 44 58.2**	**+1.0**
	baz=188						
KLU	**Klutina**	**5.66**	**19**		**Pn**	**18 44 57.9**	**+0.6**
KLU	**Klutina**	**5.66**	**19**	P	**Pn**	**18 44 58.0**	**+0.7**
	baz=202						
CNBA	**Chernabura Isl**	**5.72**	**260**	Pn	**Pn**	**18 44 58.3**	**+0.3**
SVW2	**Sparrevohn**	**5.73**	**331**	Pn	**Pn**	**18 44 58.7**	**+0.5**
MESA	**MESA**	**5.75**	**43**		**Pn**	**18 44 58.7**	**0.0**
MESA	**MESA**	**5.75**	**43**	P	**Pn**	**18 44 58.7**	**0.0**
	baz=230						
SCM	**Sheep Creek Mo**	**5.77**	**12**		**Pn**	**18 44 59.8**	**+1.0**
SCM	**Sheep Creek Mo**	**5.77**	**12**	P	**Pn**	**18 44 59.8**	**+1.0**
	baz=194						
BAGL	**Bagley Icefiel**	**5.91**	**40**		**Pn**	**18 45 01.1**	**+0.5**
M20K	**Styx River**	**5.92**	**345**	Pn	**Pn**	**18 45 01.4**	**+0.5**
VRDI	**Verde Repeater**	**6.02**	**31**		**Pn**	**18 45 02.7**	**+0.3**
N25K	**Chitina, Valde**	**6.04**	**24**		**Pn**	**18 45 03.4**	**+0.8**
N25K	**Chitina, Valde**	**6.04**	**24**	P	**Pn**	**18 45 03.4**	**+0.8**
	baz=209						
O15K	**Ungalikthiuk R**	**6.12**	**303**		**Pn**	**18 45 04.9**	**+1.4**
O15K	**Ungalikthiuk R**	**6.12**	**303**	P	**Pn**	**18 45 04.9**	**+1.4**
	baz=115						
SAMH	**Samovar Hills**	**6.18**	**47**		**Pn**	**18 45 05.8**	**+1.2**
M24K	**Tolsona, Glenn**	**6.19**	**16**	Pn	**Pn**	**18 45 05.6**	**+1.0**
TABL	**Table Mountain**	**6.23**	**44**		**Pn**	**18 45 05.7**	**+0.4**
MCARA	**McCarthy VSAT**	**6.27**	**32**		**Pn**	**18 45 06.5**	**+1.0**
MCARA	**McCarthy VSAT**	**6.27**	**32**	P	**Pn**	**18 45 06.5**	**+1.0**
	baz=217						
PCA	**Pinnacle**	**6.38**	**49**		**Pn**	**18 45 07.9**	**+0.6**
PINM	**Pinnacle**	**6.38**	**49**	P	**Pn**	**18 45 07.9**	**+0.6**
	baz=236						
WACK	**Wrangell Chich**	**6.44**	**24**		**Pn**	**18 45 09.0**	**+0.9**
BARN	**Barnard Glacie**	**6.46**	**38**		**Pn**	**18 45 09.2**	**+0.8**
WAT6	**Susitna Watana**	**6.47**	**9**		**Pn**	**18 45 08.9**	**+0.5**
WAT6	**Susitna Watana**	**6.47**	**9**	P	**Pn**	**18 45 08.9**	**+0.5**
	baz=190						
CTG	**Chitna Glacier**	**6.50**	**40**	P	**Pn**	**18 45 09.6**	**+0.6**
	baz=226						
L19K	**White Mountain**	**6.51**	**339**		**Pn**	**18 45 08.9**	**+0.1**
L19K	**White Mountain**	**6.51**	**339**	P	**Pn**	**18 45 08.9**	**+0.1**
	baz=154						
M17K	**Holitna River**	**6.52**	**326**	Pn	**Pn**	**18 45 09.7**	**+0.7**
LOGN	**Logan Glacier**	**6.53**	**41**		**Pn**	**18 45 09.7**	**+0.4**
PNL	**Peninsula**	**6.54**	**54**	P	**Pn**	**18 45 09.9**	**+0.6**
	baz=242						
HARP	**HAARP**	**6.64**	**19**		**Pn**	**18 45 12.0**	**+1.3**
HARP	**HAARP**	**6.64**	**19**	P	**Pn**	**18 45 12.0**	**+1.3**
	baz=203						
N15K	**Kwethluk River**	**6.71**	**310**	Pn	**Pn**	**18 45 12.3**	**+0.6**
M16K	**Timber Creek**	**6.77**	**319**	Pn	**Pn**	**18 45 13.1**	**+0.7**
DHY	**Denali Highway**	**6.99**	**9**		**Pn**	**18 45 16.7**	**+1.1**
DHY	**Denali Highway**	**6.99**	**9**	P	**Pn**	**18 45 16.7**	**+1.1**
	baz=191						
RND	**Reindeer**	**7.22**	**4**	Pn	**Pn**	**18 45 19.0**	**+0.3**
TRF	**Thorofare Moun**	**7.25**	**358**	Pn	**Pn**	**18 45 19.1**	**-0.2**
P29M	**Windy Craggy**	**7.29**	**57**		**Pn**	**18 45 19.9**	**+0.3**
P29M	**Windy Craggy**	**7.29**	**57**	P	**Pn**	**18 45 19.9**	**+0.3**
	baz=247						
KTH	**Kantishna Hill**	**7.37**	**356**	Pn	**Pn**	**18 45 21.8**	**+0.9**
M27K	**Edge Creek, AK**	**7.37**	**30**		**Pn**	**18 45 22.1**	**+1.2**
M27K	**Edge Creek, AK**	**7.37**	**30**	P	**Pn**	**18 45 22.1**	**+1.2**
	baz=217						
MENT	**Mentasta**	**7.41**	**22**		**Pn**	**18 45 21.2**	**-0.1**
S31K	**Pelican**	**7.61**	**71**	Pn	**Pn**	**18 45 22.5**	**-1.5**
YUK6	**Outpost Mounta**	**7.63**	**47**	P	**Pn**	**18 45 26.0**	**+1.5**
	baz=236						
YUK4	**Talbot Arm**	**7.75**	**44**	P	**Pn**	**18 45 29.2**	**+3.1**
	baz=233						
L27K	**Beaver Creek,**	**7.96**	**27**	Pn	**Pn**	**18 45 29.6**	**+0.8**
SKAG	**Skagway**	**8.39**	**61**	Pn	**Pn**	**18 45 34.6**	**0.0**
O30N	**Mendenhall**	**8.51**	**52**	Pn	**Pn**	**18 45 37.5**	**+1.1**
M29M	**Somme Creek**	**8.52**	**38**	Pn	**Pn**	**18 45 38.0**	**+1.5**
IL31		**8.70**	**8**	Pn	**Pn**	**18 45 40.9**	**+2.1**
J26L	**Joseph Creek**	**8.86**	**18**	Pn	**Pn**	**18 45 42.7**	**+1.5**
WHY	**Whitehorse**	**9.01**	**54**	Pn	**Pn**	**18 45 44.3**	**+1.1**
I21K	**Tanana**	**9.05**	**354**	Pn	**Pn**	**18 45 44.6**	**+0.9**
L29M	**L29M**	**9.08**	**36**	Pn	**Pn**	**18 45 45.4**	**+1.2**
M30M	**Minto, Yukon**	**9.20**	**41**	Pn	**Pn**	**18 45 47.0**	**+1.2**
P32M	**Atlin**	**9.21**	**62**	Pn	**Pn**	**18 45 46.4**	**+0.4**
H21K	**Melozitna Rive**	**9.57**	**353**	Pn	**Pn**	**18 45 52.2**	**+1.3**
K29M	**Barlow Dome**	**9.80**	**34**	Pn	**Pn**	**18 45 55.0**	**+0.9**
P33M	**Teslin, Yukon**	**9.82**	**59**	Pn	**Pn**	**18 45 54.4**	**+0.1**
J30M	**Hart River**	**10.69**	**33**	Pn	**Pn**	**18 46 07.6**	**+1.4**

AEIC ***05*** *18:45:39.5±1.6,56°.0N±0°.1×149°.34W±0°.03,h12km±9km, Error ellipse: s-maj=19.2km s-min=1.8km az=183.0*

NEIC 05 18:45:35.8±1.6,56°.2N±0°.1×149°.4W±0°.1,h10km±2km, ML3.2/28,ML2.9(AEIC),Error ellipse: s-maj=17.5km s-min=10.2km az=181.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.39**	**314**		Pn	18 46 15.6	+0.7
KDAK					Sn	18 46 43.4	-0.9
OHAK	**Old Harbor**	**2.40**	**298**		Pn	18 46 15.5	+0.4
OHAK					Sn	18 46 42.7	-1.9
OHAK	**Old Harbor**	**2.40**	**298**	IAML		18 47 39.2	
	comp=N,59nm,0.3s						
OHAK				IAML		18 47 39.2	
	comp=E,61nm,0.5s						
SYI	**Shuyak Island**	**2.95**	**328**		Pn	18 46 23.5	+0.9
SYI	**Shuyak Island**	**2.95**	**328**		Sn	18 46 57.6	-0.5
SYI	**Shuyak Island**	**2.95**	**328**	IAML		18 46 54.2	
	comp=N,34nm,1.4s						
CNPM	**China Poot**	**3.52**	**344**		Pn	18 46 30.8	+0.3
CNPM					Sn	18 47 11.2	-1.0
Q19K	**Cape Douglas,**	**3.60**	**322**	Pn	Pn	18 46 31.5	-0.2
BRSE	**Bradley Lake S**	**3.67**	**349**		Pn	18 46 32.6	+0.1
BRSE					Sn	18 47 14.8	-1.0
BRLK	**Bradley Lake**	**3.71**	**348**		Pn	18 46 33.1	0.0
BRLK	**Bradley Lake**	**3.71**	**348**	IAML		18 47 24.7	
	comp=E,20nm,0.9s						
P23K	**Montague Islan**	**3.99**	**14**		Pn	18 46 36.8	-0.2
P19K	**Oil Pt**	**4.06**	**331**		Pn	18 46 39.3	+1.4
P19K	**Oil Pt**	**4.06**	**331**	IAML		18 47 36.4	
	comp=E,51nm,0.6s						
P19K				IAML		18 47 36.4	
	comp=N,49nm,0.6s						
CNTC	**Contact Creek**	**4.12**	**304**		Pn	18 46 39.4	+0.6
O20K	**Slope Mountain**	**4.29**	**338**		Pn	18 46 41.9	+0.7
O22K	**Cooper Landing**	**4.34**	**358**		Pn	18 46 42.7	+1.0
SLKM	**Skilak Lake**	**4.39**	**355**		Pn	18 46 42.4	0.0
HIN	**Hinchinbrook I**	**4.52**	**18**		Pn	18 46 44.1	-0.1
HIN	**Hinchinbrook I**	**4.52**	**18**	IAML		18 47 35.9	
	comp=N,36nm,0.7s						
HIN				IAML		18 47 49.1	
	comp=E,49nm,1.3s						
KAIM	**Kayak Island**	**4.61**	**33**		Pn	18 46 46.0	+0.5
RDSO	**Redoubt South**	**4.66**	**339**		Pn	18 46 46.3	+0.1
EYAK	**Cordova Ski Ar**	**4.80**	**22**		Pn	18 46 48.2	+0.2
SUCK	**Suckling Hills**	**4.92**	**35**	Pn	Pn	18 46 49.7	-0.1
SUCK				IAML		18 47 50.2	
	comp=N,23nm,1.3s						
SUCK				IAML		18 48 00.1	
	comp=E,35nm,1.3s						
RC01	**Rabbit Creek A**	**4.95**	**358**		Pn	18 46 49.5	-0.7
RC01	**Rabbit Creek A**	**4.95**	**358**	IAML		18 47 51.5	
	comp=N,14nm,0.6s						
RC01				IAML		18 47 54.0	
	comp=E,13nm,1.1s						
NICHA	**Nichawak Mount**	**4.99**	**33**		Pn	18 46 51.5	+0.8
BERG	**Berg Lake**	**5.20**	**33**	Pn	Pn	18 46 52.7	-0.8
BERG				IAML		18 47 53.5	
	comp=E,29nm,1.3s						
BERG				IAML		18 47 53.7	
	comp=N,30nm,1.1s						
SUA	**Susitna One**	**5.37**	**353**	Pn	Pn	18 46 55.9	-0.1
SUA				IAML		18 48 12.7	
	comp=E,6.2nm,0.9s						
WAX	**Waxell Ridge**	**5.51**	**36**	Pn	Pn	18 46 57.7	-0.2
O16K	**Kokwok River B**	**5.78**	**310**	Pn	Pn	18 47 01.7	+0.1
VRDI	**Verde Repeater**	**5.95**	**29**	Pn	Pn	18 47 02.7	-1.3
N25K	**Chitina, Valde**	**6.00**	**22**	Pn	Pn	18 47 04.7	0.0
GLB	**Gilahina Butte**	**6.04**	**26**	Pn	Pn	18 47 03.2	-1.9
TABL	**Table Mountain**	**6.11**	**42**	Pn	Pn	18 47 05.8	-0.4
MCARA	**McCarthy VSAT**	**6.20**	**30**	Pn	Pn	18 47 07.8	+0.6
CTGM	**Chitina Glacie**	**6.40**	**38**	Pn	Pn	18 47 09.9	-0.2
L19K	**White Mountain**	**6.66**	**337**	Pn	Pn	18 47 12.8	-0.9
M17K	**Holitna River**	**6.72**	**325**	Pn	Pn	18 47 14.7	+0.3
M16K	**Timber Creek**	**6.98**	**318**	Pn	Pn	18 47 19.7	+1.7
O29M	**Mount Kennedy**	**7.06**	**49**	Pn	Pn	18 47 21.7	+2.6
P29M	**Windy Craggy**	**7.12**	**56**	Pn	Pn	18 47 19.4	-0.5
S31K	**Pelican**	**7.40**	**70**	Pn	Pn	18 47 22.6	-1.1
BPAW	**Bear Paw Mtn.**	**8.01**	**355**	Pn	Pn	18 47 31.6	-0.5
H21K	**Melozitna Rive**	**9.68**	**352**	Pn	Pn	18 47 54.7	-0.2

WEL 05 19:15:25.1±0.9,35°S±5°×17°8E±°,h10km,M3.7/15, ML3.9/18,MLv3.7/15,Error ellipse: s-maj=0.0km s-min=0.0km az=75.6,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.26**	**180**	P	Pn	19 15 58.9	-3.6
MXZ				S	Sn	19 16 25.6	-4.8
MXZ				T	T	19 18 06.3	
HAZ	**Te Kaha**	**2.49**	**190**	P	Pn	19 16 03.1	-2.5
HAZ				S	Sn	19 16 34.9	-1.1
KUZ	**Kuaotunu**	**2.54**	**235**	P	Pn	19 16 04.7	-1.7
KUZ				S	Sn	19 16 37.3	-0.1
PKGZ	**Pakihiroa**	**2.59**	**184**	P	Pn	19 16 04.9	-2.2
PKGZ				S	Sn	19 16 37.8	-0.9
RUGZ	**Raukumara Rang**	**2.71**	**191**	P	Pn	19 16 07.2	-1.5
RUGZ				S	Sn	19 16 40.1	-1.5
PUZ	**Puketiti**	**2.77**	**181**	P	Pn	19 16 08.7	-0.9
PUZ				S	Sn	19 16 43.3	+0.3
TWGZ	**Tauwhareparae**	**2.88**	**185**	P	Pn	19 16 11.5	+0.4
TWGZ				S	Sn	19 16 47.8	+1.9
MWZ	**Matawai**	**3.09**	**191**	P	Pn	19 16 13.2	-0.8
MWZ				S	Sn	19 16 48.9	-2.1
URZ	**Urewera**	**3.10**	**198**	P	Pn	19 16 13.5	-0.7
URZ				S	Sn	19 16 49.2	-2.1
CNGZ	**Carnagh Statio**	**3.18**	**181**	P	Pn	19 16 15.0	-0.1
CNGZ				S	Sb	19 16 58.3	-2.1
RAGZ	**Rawiri**	**3.27**	**192**	P	Pn	19 16 15.9	-0.6
RAGZ				S	Sn	19 16 54.7	-0.7
WCZ	**Waipu Caves**	**3.29**	**258**	P	Pn	19 16 17.6	+0.9
MUGZ	**Murupara**	**3.40**	**201**	P	Pn	19 16 18.3	+0.1
MUGZ				S	Sn	19 16 57.2	-1.5
RIGZ	**Rimuhau**	**3.43**	**187**	P	Pn	19 16 18.6	0.0
RIGZ				S	Sn	19 16 59.7	+0.4
RTZ	**Ruatahuna**	**3.48**	**197**	P	Pn	19 16 18.5	-0.8
SNGZ	**Shannon Statio**	**3.56**	**192**	P	Pn	19 16 21.0	+0.6
SNGZ				S	Sb	19 17 07.2	-4.3
RAHZ	**Arahi**	**3.74**	**195**	P	Pn	19 16 25.0	+2.1
RAHZ				S	Sn	19 17 09.7	+2.8
MRHZ	**Matea Rd**	**3.84**	**203**	P	Pn	19 16 26.6	+2.3
OUZ	**Omahuta**	**3.85**	**270**	P	Pn	19 16 24.1	-0.3
WHHZ	**Waihua**	**3.87**	**192**	P	Pn	19 16 25.4	+0.8
WHHZ				S	Sn	19 17 11.8	+1.7
NMHZ	**Naumai**	**3.97**	**197**	P	Pn	19 16 27.8	+1.6
NMHZ				S	Sn	19 17 16.2	+3.3
ARHZ	**Aropaoanui**	**4.09**	**194**	P	Pn	19 16 28.1	+0.4
ARHZ				S	Sn	19 17 18.4	+2.8
BKZ	**Black Stump Fm**	**4.12**	**200**	P	Pn	19 16 29.7	+1.5
RITZ	**Rihia Road**	**4.16**	**207**	P	Pn	19 16 32.4	+3.8
MCHZ	**McNeill Hill**	**4.33**	**197**	P	Pn	19 16 31.4	+0.4
NTVZ	**North Tongarir**	**4.33**	**208**	P	Pn	19 16 34.5	+3.4
TMVZ	**Te Maari**	**4.34**	**208**	P	Pn	19 16 34.4	+3.2
ETVZ	**East Tongariro**	**4.35**	**208**	P	Pn	19 16 34.3	+2.9
WTVZ	**West Tongariro**	**4.38**	**209**	P	Pn	19 16 35.3	+3.5
OTVZ	**Oturere**	**4.39**	**208**	P	Pn	19 16 35.4	+3.3
TWVZ	**Taurewa**	**4.41**	**210**	P	Pn	19 16 36.2	+4.1
NGZ	**Ngauruhoe**	**4.43**	**208**	P	Pn	19 16 36.6	+4.1
BHHZ	**Black Hill Sta**	**4.55**	**202**	P	Pn	19 16 35.5	+1.5
TRVZ	**Turoa**	**4.56**	**208**	P	Pn	19 16 38.1	+3.8
WNVZ	**Wahianoa**	**4.56**	**207**	P	Pn	19 16 36.7	+2.4
MOVZ	**Moawhango**	**4.58**	**206**	P	Pn	19 16 35.7	+1.3
KRHZ	**Kereru**	**4.60**	**199**	P	Pn	19 16 33.5	-1.2
KRHZ				S	Sn	19 17 30.9	+2.7
KAHZ	**Kahuranaki**	**4.63**	**194**	P	Pn	19 16 34.3	-0.8
PNHZ	**Pukenui**	**4.90**	**199**	P	Pn	19 16 37.9	-0.9

IDC ***05*** *19:22:28.8±0.8,56°.41N×148°.82W,h0km,mb4.3/23, mbtmp4.3/29,ML4.0/6,MS4.3/86,Error ellipse: s-maj=20.4km s-min=11.6km az=24.0*

BJI ***05*** *19:22:28.0±0.0,56°.60N×148°.70W,h10km,mb4.5/30, mB5.1/12,Ms5.2/15,Ms7 4.9/15*

NEIC ***05*** *19:22:29.2±1.1,56°.51N±0°.07×148°.84W±0°.09,h10km±1km, mb4.8/189,ML4.5/72,ML4.3(AEIC),Error ellipse: s-maj=11.9km s-min=8.3km az=175.0*

GCMT ***05*** *19:22:31.2±0.2,56°.47N±0°.01×148°.72W±0°.02,h14km±1km, MW5.1/131,Moment Tensor Solution. s68,c83; s131,c218; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.04±.10; Mθθ-1.26±.10; Mϕϕ 1.22±.10; Mrθ0.74±.21; Mθϕ4.55±.10; Mϕr0.92±.23; Best double couple: Mo4.85800×10¹⁶ NP1:ϕ1 83.00000°, δ81.00000°, λ10.00000°. NP2:ϕ2 352.00000°, δ80.00000°, λ171.00000°. Principal axes: T 4.9790, Plg13.0000°, Azm307.0000°; N -0.2470, Plg77.0000°, Azm126.0000°; P -4.7360, Plg0.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

AEIC ***05*** *19:22:33.1±1.9,56°.41N±0°.08×148°.81W±0°.09,h11km±4km Error ellipse: s-maj=11.8km s-min=7.5km az=174.0*

ISC 05 19:22:29.8±0.4,56°.47N±0°.05×148°.77W±0°.04,h10km, n717,σ1$28/595,mb4.8/96,MS4.3/89,6C-2D,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.46**	**304**		**Sn**	**19 23 36.1**	**-3.8**
**KD

SEW S Sn 19 24 06.2 -3.3
baz=174
KAHG Katmai Hook Gl 3.72 305 Pn 19 23 27.2 0.0
AUCH Augustine Cone 3.82 321 Pn 19 23 28.9 +0.2
P19K Oil Pt 3.97 325 Pn 19 23 29.9 -0.8
P19K Oil Pt 3.97 325 P Pn 19 23 29.9 -0.8
baz=142,SNR=17
KVTA Katmai Vly 10 4.01 301 Pn 19 23 31.2 0.0
ANCK Angle Creek 4.03 298 Pn 19 23 31.4 -0.2
O22K Cooper Landing 4.05 353 Pn 19 23 30.9 -0.8
O22K Cooper Landing 4.05 353 P Pn 19 23 30.8 -0.9
baz=173,SNR=21
HIN Hinchinbrook I 4.11 16 Pn 19 23 31.5 -1.1
HIN IAML 19 24 26.7
comp=N,699nm,0.6s
HIN IAML 19 24 48.1
comp=E,799nm,0.9s
O20K Slope Mountain 4.15 332 Pn 19 23 32.4 -0.8
O20K Slope Mountain 4.15 332 P Pn 19 23 32.4 -0.8
baz=150,SNR=8.5
KAIM Kayak Island 4.16 32 Pn Pn 19 23 31.4 -1.9
KAIM IAML 19 24 34.8
comp=N,904nm,0.8s
KAIM Kayak Island 4.16 32 P Pn 19 23 32.6 -0.7
baz=215,SNR=19
IVE Iliamna Volcan 4.20 330 Pn 19 23 32.7 -1.3
CNTC Contact Creek 4.25 298 Pn 19 23 34.0 -0.6
KELA Mount Kelaz 4.25 301 Pn 19 23 34.5 -0.1
Q17K Contact Creek 4.25 298 P Pn 19 23 33.7 -0.9
baz=113,SNR=43
PLK3 Peulik 3 4.27 290 Pn 19 23 34.2 -0.6
EYAK Cordova Ski Ar 4.38 20 P Pn 19 23 35.9 -0.4
EYAK Cordova Ski Ar 4.38 20 P Pn 19 23 35.7 -0.6
baz=202
SUCK Suckling Hills 4.47 34 Pn Pn 19 23 37.0 -0.5
SUCK IAML 19 24 44.7
comp=E,468nm,0.9s
SUCK IAML 19 24 53.1
comp=N,637nm,1.3s
RAGM Ragged Mountai 4.48 27 Pn 19 23 36.7 -1.0
CAPN Captain Cook N 4.48 345 Pn 19 23 36.7 -0.9
CAPN Captain Cook N 4.48 345 P Pn 19 23 36.8 -0.9
baz=163,SNR=6.1
RDSO Redoubt South 4.50 334 Pn 19 23 36.6 -1.5
RSO Redoubt South 4.51 334 Pn 19 23 36.6 -1.7
P18K Big Mountain, 4.52 313 Pn 19 23 36.4 -1.8
P18K Big Mountain, 4.52 313 P Pn 19 23 36.7 -1.5
baz=128
HMT Hamilton 4.54 30 Pn 19 23 38.0 -0.5
NICHA Nichawak Mount 4.54 32 Pn 19 23 38.4 -0.2
RDWB Redoubt West 4.56 334 Pn 19 23 36.9 -2.0
DFR Drift River 4.61 335 Pn 19 23 38.1 -1.5
GOAT Goat Mountain 4.63 26 Pn 19 23 39.4 -0.4
RDJH Redoubt Jeurge 4.64 335 Pn 19 23 39.1 -0.8
NCT North Crescent 4.64 334 Pn 19 23 38.5 -1.5
RC01 Rabbit Creek A 4.66 354 Pn Pn 19 23 39.0 -1.1
RC01 IAML 19 24 34.8
comp=N,209nm,0.6s
RC01 IAML 19 24 39.8
comp=E,328nm,1.0s
RC01 Rabbit Creek A 4.66 354 P Pn 19 23 39.3 -0.8
baz=174,SNR=26
BGLC Bering Glacier 4.66 36 Pn 19 23 40.1 0.0
BGLC Bering Glacier 4.66 36 P Pn 19 23 40.1 0.0
baz=220
O19K Port Alsworth 4.74 324 Pn 19 23 39.5 -1.6
O19K Port Alsworth 4.74 324 P Pn 19 23 40.1 -1.1
baz=140,SNR=9.6
BERG Berg Lake 4.75 32 Pn 19 23 40.6 -0.8
BERG IAML 19 24 45.8
comp=N,566nm,1.0s
Q16K King Salmon 4.78 301 Pn 19 23 41.2 -0.6
Q16K King Salmon 4.78 301 P Pn 19 23 41.2 -0.6
baz=115
O18K Koktuh Hills 4.81 318 Pn 19 23 40.6 -1.6
O18K IAML 19 24 43.2
comp=N,210nm,1.1s
O18K Koktuh Hills 4.81 318 P Pn 19 23 40.9 -1.2
baz=133,SNR=30
SNH Sunshine Point 4.86 38 Pn 19 23 41.8 -1.1
SNH IAML 19 24 40.3
comp=E,250nm,0.8s
SNH IAML 19 24 51.3
comp=N,290nm,1.1s
P17K Kvichak River 4.92 307 Pn 19 23 42.9 -0.8
P17K Kvichak River 4.92 307 P Pn 19 23 42.6 -1.1
baz=121,SNR=54
KNK Knik Glacier 4.96 2 Pn 19 23 43.4 -0.8
KNK IAML 19 24 42.2
comp=E,210nm,0.9s
KNK Knik Glacier 4.96 2 P Pn 19 23 43.2 -1.0
baz=182,SNR=14
BMRM Bremner River 5.00 24 Pn 19 23 44.3 -0.6
BMRM Bremner River 5.00 24 P Pn 19 23 44.3 -0.6
baz=207
WAX Waxell Ridge 5.05 35 Pn 19 23 44.8 -0.8
N20K Mount Spurr 5.07 341 P Pn 19 23 44.5 -1.2
baz=158,SNR=32
SPCR Spurr Chakacha 5.07 341 Pn 19 23 44.6 -1.2
SPCN Chakachatna No 5.08 341 Pn 19 23 45.7 -0.3
SUA Susitna One 5.11 349 Pn Pn 19 23 44.4 -2.0
SUA IAML 19 24 46.8
comp=E,161nm,0.7s
SUA IAML 19 25 36.4
comp=N,162nm,1.1s
SUA Susitna One 5.11 349 P Pn 19 23 45.3 -1.1
baz=168,SNR=18
SPCP Crater Peak Br 5.12 341 Pn 19 23 46.0 -0.5
SPCG Spurr Capps Gl 5.12 342 Pn 19 23 46.4 -0.1
BARK Barkley Ridge 5.14 37 Pn 19 23 46.3 -0.5
PMR Palmer 5.14 358 Pn 19 23 45.5 -1.2
PMR IAML 19 24 54.2
comp=E,200nm,0.7s
PMR Palmer 5.14 358 P Pn 19 23 47.0 +0.3
PMR Palmer 5.14 358 P Pn 19 23 45.8 -0.9
baz=178,SNR=11
SPBG Spurr Blockage 5.15 340 Pn 19 23 45.8 -1.1
MESA MESA 5.17 41 Pn 19 23 46.5 -0.8
MESA IAML 19 25 06.9
comp=N,241nm,0.6s
MESA IAML 19 25 10.3
comp=E,238nm,0.9s
MESA MESA 5.17 41 P Pn 19 23 46.9 -0.4
baz=227,SNR=14
KLU Klutina 5.25 15 Pn Pn 19 23 47.3 -0.9
KLU IAML 19 24 50.6
comp=E,195nm,0.5s
KLU IAML 19 24 54.3
comp=N,221nm,0.8s
KLU Klutina 5.25 15 P Pn 19 23 47.7 -0.6
baz=198,SNR=56
N19K Bonanza Creek 5.28 328 Pn 19 23 46.7 -1.9
N19K Bonanza Creek 5.28 328 P Pn 19 23 47.6 -1.0
baz=144
STLK Strandline Lak 5.28 344 Pn 19 23 48.1 -0.6
GHO Glory Hole Cre 5.32 359 Pn 19 23 48.7 -0.5
GHO IAML 19 24 51.5
comp=N,349nm,0.8s
GHO IAML 19 24 54.3
comp=E,275nm,1.0s
ISLE Juniper Island 5.34 36 Pn 19 23 48.4 -1.2
ISLE IAML 19 25 24.9
comp=E,193nm,1.1s
ISLE IAML 19 25 29.8
comp=N,270nm,1.7s
BAGL Bagley Icefiel 5.34 38 Pn 19 23 48.5 -0.9
SML Sawmill 5.36 2 Pn Pn 19 23 49.1 -0.6
SML IAML 19 24 57.8
comp=E,236nm,1.0s
SML IAML 19 25 00.3
comp=N,346nm,1.0s
SML Sawmill 5.36 2 P Pn 19 23 49.4 -0.3
baz=183,SNR=36
CHGN Chignik 5.36 272 Pn Pn 19 23 50.2 +0.5
CHGN IAML 19 24 49.1
comp=E,254nm,1.1s
CHGN IAML 19 25 07.7
comp=N,205nm,1.9s
M23K Glacier View 5.36 5 Pn 19 23 49.9 0.0
M23K Glacier View 5.36 5 P Pn 19 23 49.5 -0.3
baz=186,SNR=38
SCM Sheep Creek Mo 5.43 7 Pn 19 23 49.9 -0.8
SCM IAML 19 25 03.4
comp=E,385nm,1.3s
SCM IAML 19 25 08.2
comp=N,269nm,1.9s
SCM Sheep Creek Mo 5.43 7 P Pn 19 23 50.6 -0.2
baz=189,SNR=15
VRDI Verde Repeater 5.51 28 Pn Pn 19 23 50.7 -1.3
O17K Koliganek Bris 5.51 310 Pn 19 23 50.9 -0.9
O17K Koliganek Bris 5.51 310 P Pn 19 23 50.9 -0.9
baz=124,SNR=17
P16K Nushagak River 5.56 301 Pn 19 23 52.4 -0.1
P16K Nushagak River 5.56 301 P Pn 19 23 51.7 -0.7
baz=114,SNR=32
KIAG Kiagna River 5.58 34 Pn 19 23 52.4 -0.5
N25K Chitina, Valde 5.58 21 Pn 19 23 52.1 -0.7
N25K Chitina, Valde 5.58 21 P Pn 19 23 52.4 -0.4
baz=204
SAMH Samovar Hills 5.58 46 Pn 19 23 52.6 -0.3
GLB Gilahina Butte 5.61 25 Pn Pn 19 23 52.2 -0.9
N18K Kilae Creek 5.62 322 Pn 19 23 51.8 -1.6
N18K Kilae Creek 5.62 322 P Pn 19 23 51.8 -1.6
baz=136
TABL Table Mountain 5.64 42 Pn 19 23 52.6 -1.3
SKT Skwentna 5.70 347 Pn Pn 19 23 53.9 -0.5
SKT Skwentna 5.70 347 P Pn 19 23 54.1 -0.3
baz=165,SNR=12
PTPK Patty Peak 5.75 32 Pn 19 23 55.0 -0.3
MCARA McCarthy VSAT 5.75 29 Pn 19 23 54.0 -1.2
MCARA McCarthy VSAT 5.75 29 P Pn 19 23 54.6 -0.5
baz=214,SNR=74
PCA Pinnacle 5.78 48 Pn 19 23 55.1 -0.4
PINM Pinnacle 5.78 48 P Pn 19 23 55.0 -0.4
baz=234,SNR=11
M24K Tolsona, Glenn 5.81 12 Pn 19 23 56.2 +0.3
M24K Tolsona, Glenn 5.81 12 P Pn 19 23 56.2 +0.3
baz=194
SVW2 Sparrevohn 5.83 325 Pn 19 23 55.7 -0.5
SVW2 Sparrevohn 5.83 325 P Pn 19 23 55.8 -0.4
O16K Kokwok River B 5.86 306 Pn 19 23 55.7 -0.8
O16K Kokwok River B 5.86 306 P Pn 19 23 55.6 -0.9
baz=119
BARN Barnard Glacie 5.90 36 Pn 19 23 56.3 -1.1
PNL Peninsula 5.92 53 Pn 19 23 57.0 -0.4
PNL Peninsula 5.92 53 P Pn 19 23 57.4 0.0
PNL Peninsula 5.92 53 P Pn 19 23 57.0 -0.4
baz=241
CTG Chitna Glacier 5.94 38 P Pn 19 23 57.3 -0.5
baz=224,SNR=22
CTGM Chitina Glacie 5.94 38 Pn 19 23 56.4 -1.4
LOGN Logan Glacier 5.96 40 Pn 19 23 57.6 -0.5
BCPM Bancas Point 5.96 50 Pn 19 23 58.0 +0.1
WASW Wrangell South 5.96 21 Pn 19 23 58.4 +0.2
N17K Nushagak Hills 6.00 316 Pn 19 23 57.2 -1.2
N17K Nushagak Hills 6.00 316 P Pn 19 23 57.2 -1.2
baz=130
CUT Chulitna 6.00 353 Pn 19 23 57.7 -0.8
WAZA Wrangell Mount 6.10 21 Pn 19 23 59.4 -0.7
WAT6 Susitna Watana 6.15 4 Pn 19 24 00.3 -0.4
WAT6 Susitna Watana 6.15 4 P Pn 19 24 00.3 -0.4
baz=186
M19K Big River Lodg 6.16 334 Pn 19 23 58.9 -1.9
M19K Big River Lodg 6.16 334 P Pn 19 23 59.2 -1.6
baz=150
M18K Stony River 6.21 327 Pn 19 23 59.6 -1.8
M18K Stony River 6.21 327 P Pn 19 23 60.0 -1.4
baz=141,SNR=32
HARP HAARP 6.22 16 Pn 19 24 02.3 +0.7
HARP HAARP 6.22 16 P Pn 19 24 01.0 -0.6
baz=199,SNR=38
CHNA Chernabura Isl 6.34 259 P Pn 19 24 01.4 -1.7
baz=71
WAT1 Susitna Watana 6.38 1 Pn 19 24 03.8 +0.1
WAT1 Susitna Watana 6.38 1 P Pn 19 24 03.8 +0.1
baz=181
WAT7 Susitna Watana 6.38 360 Pn 19 24 03.9 +0.1
O15K Ungalikthiuk R 6.50 299 Pn 19 24 05.1 -0.2
O15K Ungalikthiuk R 6.50 299 P Pn 19 24 04.5 -0.8
baz=110
L19K White Mountain 6.51 334 Pn 19 24 03.9 -1.7
L19K White Mountain 6.51 334 P Pn 19 24 04.2 -1.4
baz=149
L20K Farewell, AK 6.56 339 Pn 19 24 05.0 -1.2
L20K Farewell, AK 6.56 339 P Pn 19 24 05.0 -1.2
baz=155
O29M Mount Kennedy 6.59 50 Pn 19 24 06.8 0.0
O29M Mount Kennedy 6.59 50 P Pn 19 24 06.7 0.0
baz=238
N16K Nishlik Lake 6.60 312 Pn 19 24 05.8 -0.9
N16K Nishlik Lake 6.60 312 P Pn 19 24 05.8 -0.9
baz=124
M26K Nabesna, AK 6.63 24 Pn 19 24 07.0 -0.2
M26K Nabesna, AK 6.63 24 P Pn 19 24 07.0 -0.2
baz=209
P29M Windy Craggy 6.66 57 Pn 19 24 07.2 -0.3
P29M Windy Craggy 6.66 57 P Pn 19 24 07.7 +0.1
baz=246
DHY Denali Highway 6.66 5 Pn Pn 19 24 05.8 -1.9
DHY Denali Highway 6.66 5 P Pn 19 24 08.0 +0.2
baz=187
M17K Holitna River 6.67 321 Pn 19 24 06.6 -1.1
M17K Holitna River 6.67 321 P Pn 19 24 06.5 -1.1
baz=134
PPLA Purkeypile 6.67 346 Pn 19 24 08.2 +0.4
PPLA Purkeypile 6.67 346 P Pn 19 24 08.4 +0.5
baz=164
SDPT Sand Point 6.68 265 P Pn 19 24 07.2 -0.6
baz=76
PAX Paxson 6.73 13 Pn 19 24 08.9 +0.4
PAX Paxson 6.73 13 P Pn 19 24 08.9 +0.4
baz=196
YUK3 Moose Creek 6.82 35 P Pn 19 24 10.5 +0.5
baz=222,SNR=81
M27K Edge Creek, AK 6.87 28 Pn 19 24 10.6 +0.1
M27K Edge Creek, AK 6.87 28 P Pn 19 24 10.6 +0.1
baz=214
RND Reindeer 6.96 360 Pn Pn 19 24 10.7 -1.0
MENT Mentasta 6.97 19 Pn 19 24 11.2 -0.6
MENT Mentasta 6.97 19 P Pn 19 24 13.0 +1.2
S31K Pelican 6.97 72 Pn 19 24 09.8 -2.0
S31K Pelican 6.97 72 P Pn 19 24 10.2 -1.7
baz=263,SNR=22
M16K Timber Creek 6.99 315 Pn 19 24 11.1 -1.0
M16K Timber Creek 6.99 315 P Pn 19 24 11.8 -0.3
baz=127,SNR=14
N15K Kwethluk River 7.02 307 Pn 19 24 12.3 -0.2
N15K Kwethluk River 7.02 307 P Pn 19 24 12.5 0.0
baz=117
YUK6 Outpost Mounta 7.03 46 Pn 19 24 13.1 +0.2
YUK6 Outpost Mounta 7.03 46 P Pn 19 24 13.4 +0.5
baz=235,SNR=7.7
L18K Granite Mounta 7.04 328 Pn 19 24 11.7 -1.1
L18K Granite Mounta 7.04 328 P Pn 19 24 11.6 -1.1
baz=142
TRF Thorofare Moun 7.04 354 Pn Pn 19 24 11.3 -1.6
TRF Thorofare Moun 7.04 354 P Pn 19 24 13.0 +0.1
baz=173
L26K Log Cabin Wild 7.12 20 Pn 19 24 13.0 -0.9
YUK4 Talbot Arm 7.16 43 P Pn 19 24 16.4 +1.8
baz=231,SNR=29
CAST Castle Rocks 7.16 348 Pn Pn 19 24 14.2 -0.2
CAST Castle Rocks 7.16 348 P Pn 19 24 14.7 +0.2
baz=165
KTH Kantishna Hill 7.18 352 Pn 19 24 15.2 +0.4
BVCY Beaver Creek 7.19 31 Pn 19 24 15.3 +0.5
BVCY Beaver Creek 7.19 31 P Pn 19 24 15.3 +0.5
baz=218
P30M Million Dollar 7.22 55 Pn 19 24 15.3 0.0
P30M Million Dollar 7.22 55 P Pn 19 24 15.7 +0.4
baz=244
O14K Tigyukauivet M 7.22 298 Pn 19 24 14.9 -0.3
O14K Tigyukauivet M 7.22 298 P Pn 19 24 15.3 0.0
baz=108
PLBC Pleasant Camp 7.25 60 Pn 19 24 15.5 -0.1
PLBC Pleasant Camp 7.25 60 P Pn 19 24 15.5 -0.1
baz=251
MCK McKinley 7.28 359 Pn 19 24 16.3 +0.1
MCK McKinley 7.28 359 P Pn 19 24 16.0 -0.1
baz=179,SNR=18
HYT Haines Junctio 7.32 49 Pn 19 24 16.4 -0.3
HYT Haines Junctio 7.32 49 P Pn 19 24 16.4 -0.3
baz=238
YUK5 Granite Creek 7.34 46 Pn 19 24 17.5 +0.5
PS1A Pavlof South-1 7.36 267 Pn 19 24 16.4 -0.8
K20K Telida 7.40 341 Pn 19 24 17.6 -0.1
K20K Telida 7.40 341 P Pn 19 24 17.6 -0.1
baz=157
SIT Sitka 7.42 80 Pn Pn 19 24 15.3 -2.6
TTA Tatalina 7.43 334 Pn Pn 19 24 16.9 -1.4
TTA Tatalina 7.43 334 P Pn 19 24 17.1 -1.2
L17K Donlin 7.48 323 Pn 19 24 17.4 -1.3
L17K Donlin 7.48 323 P Pn 19 24 17.8 -1.0
baz=136
L27K Beaver Creek, 7.48 25 Pn 19 24 18.3 -0.5
L27K Beaver Creek, 7.48 25 P Pn 19 24 18.8 0.0
baz=211
BCAR Beaver Creek A 7.49 25 Pn Pn 19 24 17.5 -1.5
PN7A Pavlof North-7 7.50 268 Pn 19 24 18.2 -0.9
K24K Donnelly Dome 7.50 10 P Pn 19 24 20.1 +0.9
baz=193
M15K Kasigluk River 7.53 309 Pn 19 24 18.7 -0.7
M15K Kasigluk River 7.53 309 P Pn 19 24 19.5 +0.1
baz=119
RIDG Independent Ri 7.55 13 Pn 19 24 19.9 +0.1
RIDG Independent Ri 7.55 13 P Pn 19 24 19.8 +0.1
baz=197,SNR=30
L16K Owhat River 7.61 318 P Pn 19 24 19.8 -0.7
baz=129
CHUM Lake Minchumin 7.64 348 P Pn 19 24 20.6 -0.3
baz=165,SNR=11
N14K Kuskokwak Cree 7.65 302 Pn 19 24 21.1 +0.1
N14K Kuskokwak Cree 7.65 302 P Pn 19 24 21.1 +0.1
baz=112
BPAW Bear Paw Mtn. 7.73 353 Pn 19 24 22.1 -0.1
BPAW Bear Paw Mtn. 7.73 353 P Pn 19 24 22.1 -0.1
baz=171
SKAG Skagway 7.75 62 P Pn 19 24 23.1 +0.6
SKAG Skagway 7.75 62 P Pn 19 24 22.8 +0.4
baz=253
BESE Bessie Mountai 7.78 68 Pn 19 24 21.9 -1.1
S32K Killisnoo 7.82 77 Pn 19 24 21.1 -2.4
S32K Killisnoo 7.82 77 P Pn 19 24 21.7 -1.7
baz=268
N30M Aishikik Lake 7.83 46 Pn 19 24 23.7 0.0
N30M Aishikik Lake 7.83 46 P Pn 19 24 23.7 0.0
baz=235
O30N Mendenhall 7.89 52 Pn 19 24 24.3 -0.2
O30N Mendenhall 7.89 52 P Pn 19 24 24.5 0.0
baz=242,SNR=6.6
SCRK Sand Creek 7.89 16 Pn 19 24 24.8 +0.2
SCRK Sand Creek 7.89 16 P Pn 19 24 24.8 +0.2
baz=200
K17K Iditarod 7.90 326 Pn 19 24 23.0 -1.6
K17K Iditarod 7.90 326 P Pn 19 24 23.0 -1.6
baz=138
R32K Eaglecrest 7.91 71 P Pn 19 24 24.8 0.0
baz=263,SNR=5.4
M29M Somme Creek 7.96 37 Pn 19 24 25.3 -0.2
M29M Somme Creek 7.96 37 P Pn 19 24 25.8 +0.3
baz=226
JIS Juneau Island 7.99 71 Pn 19 24 24.9 -0.8
JIS Juneau Island 7.99 71 P Pn 19 24 25.8 +0.1
HDA Harding Lake 8.01 6 P Pn 19 24 26.3 +0.2
baz=187
J18K Innoko River 8.06 334 Pn 19 24 25.6 -1.1
J18K Innoko River 8.06 334 P Pn 19 24 25.6 -1.1
baz=147
M14K Bethel 8.11 307 Pn 19 24 27.6 +0.2
M14K Bethel 8.11 307 P Pn 19 24 27.5 +0.2
baz=116
NEA2 Nenana 8.15 359 P Pn 19 24 27.3 -0.7
baz=179
J20K Nowinta River 8.17 343 Pn 19 24 27.8 -0.5
J20K Nowinta River 8.17 343 P Pn 19 24 27.8 -0.5
baz=159
CCB Clear Creek Bu 8.22 3 Pn 19 24 29.5 +0.7
J19K Poorman 8.27 339 P Pn 19 24 28.5 -1.1
baz=153
K27K Chicken 8.27 21 P Pn 19 24 29.0 -0.7
baz=207
J25K Salcha River, 8.34 10 P Pn 19 24 29.5 -1.1
baz=193
L15K Ungalak Mounta 8.37 314 P Pn 19 24 30.2 -0.7
baz=123
N31M Braeburn, Yuko 8.38 48 P Pn 19 24 31.0 -0.1
baz=239,SNR=20
IL31 8.38 6 Pn 19 24 31.1 0.0
ILAR Eielson Array 8.38 6 Pn Pn 19 24 30.9 -0.3
comp=N,0.9nm,0.3s,baz=187,slow=13,SNR=28
ILAR Sn Sn 19 26 02.3 -3.3
comp=N,1.3nm,0.3s,baz=192,slow=24,SNR=7.9
ILAR LR LR 19 27 50.2
comp=N,2µm,19.8s,baz=186,slow=38
comp=N,4.1nm,0.5s
WHY Whitehorse 8.38 54 Pn 19 24 30.6 -0.7
WHY Whitehorse 8.38 54 P Pn 19 24 31.1 -0.1
baz=246,SNR=37
FALS False Pass 8.44 265 P Pn 19 24 31.0 -1.0
baz=73
COLA College 8.44 3 Pn 19 24 30.8 -1.1
COLA College 8.44 3 P Pn 19 24 33.5 +1.6
J26L Joseph Creek 8.45 16 Pn 19 24 32.4 +0.2
J26L Joseph Creek 8.45 16 P Pn 19 24 32.1 -0.1
baz=200
MDM Murphy Dome 8.52 2 Pn 19 24 33.2 +0.2
L29M L29M 8.54 34 Pn 19 24 33.6 +0.2
L29M L29M 8.54 34 P Pn 19 24 33.8 +0.5
baz=224
P32M Atlin 8.58 62 Pn 19 24 33.5 -0.4
P32M Atlin 8.58 62 P Pn 19 24 33.5 -0.4
baz=255,SNR=16
M13K Dall Lake 8.60 303 P Pn 19 24 34.1 0.0
baz=111
M30M Minto, Yukon 8.62 40 Pn 19 24 33.3 -1.2
M30M Minto, Yukon 8.62 40 P Pn 19 24 34.2 -0.2
baz=230
MLY Manley 8.64 354 P Pn 19 24 34.4 -0.4
baz=173
ISNN Isanotski Nort 8.64 265 Pn 19 24 33.6 -1.2
L14K Kuka Creek 8.69 310 Pn 19 24 35.7 +0.4
L14K Kuka Creek 8.69 310 P Pn 19 24 35.7 +0.4
baz=118
POKR Poker Plat Res 8.70 4 Pn 19 24 36.3 +0.8
POKR Poker Plat Res 8.70 4 P Pn 19 24 36.3 +0.8
baz=185
I23K Minto, Yukon-K 8.71 358 P Pn 19 24 36.5 +0.9
baz=178
U33K Whale Pass 8.71 86 Pn 19 24 31.9 -3.8
U33K Whale Pass 8.71 86 P Pn 19 24 32.6 -3.1
baz=278
K15K Wolf Creek Mou 8.73 317 P Pn 19 24 35.0 -1.0
baz=127
SSLS Shishaldin Sou 8.80 265 Pn 19 24 35.9 -1.2
I20K Naaghedeneel 8.80 344 P Pn 19 24 35.6 -1.3
baz=159
I21K Tanana 8.88 351 P Pn 19 24 37.4 -0.5
baz=169
DAWY Dawson 8.92 28 Pn 19 24 38.7 +0.1
DAWY Dawson 8.92 28 P Pn 19 24 38.7 +0.1
baz=216
J16K Anvik River 9.04 324 Pn 19 24 38.7 -1.5
J16K Anvik River 9.04 324 P Pn 19 24 39.0 -1.2
baz=134,SNR=9.9
EGAK Eagle 9.12 21 P Pn 19 24 41.0 -0.3
baz=208,SNR=9.6
Q32M Nakina River 9.18 67 P Pn 19 24 42.5 +0.2
baz=261
P33M Teslin, Yukon 9.18 59 Pn 19 24 41.6 -0.7
P33M Teslin, Yukon 9.18 59 P Pn 19 24 41.6 -0.7
baz=253
PRP Porcupine Dome 9.21 8 P Pn 19 24 41.9 -0.7
baz=191
K29M Barlow Dome 9.27 32 P Pn 19 24 43.6 +0.2
baz=222
M31M Drury Creek, Y 9.31 46 P Pn 19 24 44.6 +0.7
baz=238
N32M Quiet Lake 9.38 54 P Pn 19 24 44.6 -0.3
baz=247
H24K Noodor Dome 9.41 2 P Pn 19 24 44.7 -0.6
baz=183
H21K Melozitna Rive 9.42 350 P Pn 19 24 44.4 -1.0
baz=166
I17K Unalakleet 9.50 326 P Pn 19 24 46.2 -0.2
baz=136
H20K Anotleneega Mo 9.52 344 P Pn 19 24 46.7 0.0
baz=159
H22K Ishtalitna Cre 9.54 354 P Pn 19 24 45.8 -1.2
baz=171
J29N Klondike Camp 9.54 29 P Pn 19 24 46.7 -0.3
baz=218,SNR=20
MAYO Mayo, Yukon 9.60 37 P Pn 19 24 46.4 -1.5
baz=228
S34M Telegraph Cree 9.68 74 P Pn 19 24 47.9 -1.1
baz=269
V35K Ketchikan 9.71 90 P Pn 19 24 48.6 -0.7

baz=284
FARO Faro, Yukon 9.75 47 P Pn 19 24 50.2 +0.3
baz=240,SNR=15
I27K Kandik River 9.79 18 P Pn 19 24 50.7 +0.3
baz=204
H19K Roundabout Mou 9.81 341 P Pn 19 24 50.3 -0.4
baz=154
H18K Honhosa River 9.87 336 P Pn 19 24 50.7 -0.9
baz=148
R33M Jennings River 9.91 65 P Pn 19 24 52.1 0.0
baz=260
M11K Mekoryuk 9.94 300 P Pn 19 24 52.2 -0.2
baz=106
I28M Miner Creek 9.96 22 P Pn 19 24 52.8 -0.1
baz=210
H17K Granite Mounta 10.07 332 P Pn 19 24 53.6 -0.7
baz=142
J30M Hart River 10.16 32 P Pn 19 24 55.6 0.0
baz=223
T35M Bob Quinn 10.19 79 Pn 19 24 56.2 +0.2
T35M Bob Quinn 10.19 79 P Pn 19 24 56.4 +0.4
baz=275
G24K Hadweenzic Riv 10.28 3 P Pn 19 24 56.8 -0.4
baz=184
DLBC Dease Lake 10.29 71 Pn Pn 19 24 57.2 -0.1
DLBC Dease Lake 10.29 71 P Pn 19 24 57.7 +0.3
baz=267
DLBC Dease Lake 10.29 71 Pn Pn 19 24 57.6 +0.3
comp=N,2.0nm,0.3s,baz=267,slow=9.3,SNR=9.8
DLBC Sn Sn 19 26 45.9 -6.7
comp=N,0.3nm,0.3s,baz=270,slow=16,SNR=1.2
DLBC LR LR 19 28 18.7
comp=N,2µm,19.0s,baz=268,slow=34
comp=N,4.0nm,0.3s
G23K Bananza Creek 10.29 357 P Pn 19 24 56.9 -0.4
baz=176
G21K Allakaket 10.32 349 P Pn 19 24 57.7 -0.1
baz=165,SNR=12
H27K Steamboat Moun 10.38 16 P Pn 19 24 58.6 0.0
baz=203
G25K Bearman Lake 10.41 6 P Pn 19 24 58.5 -0.3
baz=188
UNV Unalaska Valle 10.48 263 P Pn 19 24 59.4 -0.5
baz=69
G19K Purcell Mounta 10.48 341 P Pn 19 24 59.5 -0.4
baz=154
H16K Elim 10.51 327 P Pn 19 24 59.3 -1.0
baz=135
G22K Bettles 10.56 354 P Pn 19 25 00.4 -0.6
baz=172
G18K Tagagawik 10.57 337 P Pn 19 25 00.1 -1.0
baz=149
I30M Mount Dempster 10.63 29 Pn 19 25 03.0 +0.9
I30M Mount Dempster 10.63 29 P Pn 19 25 02.0 -0.1
baz=220
G17K Kiwalik Mounta 10.71 333 P Pn 19 25 02.5 -0.6
baz=142
MMPY Sheldon Lake, 10.79 48 Pn 19 25 03.8 -0.4
MMPY Sheldon Lake, 10.79 48 P Pn 19 25 04.6 +0.5
baz=243,SNR=11
COLD Coldfoot 10.81 357 P Pn 19 25 04.3 -0.2
baz=176,SNR=7.2
F21K Alatna River 11.01 350 P Pn 19 25 06.5 -0.6
baz=166
G16K Koyuk River 11.09 329 P Pn 19 25 07.9 -0.3
baz=138
F24K Squaw Lake 11.09 2 P Pn 19 25 07.7 -0.6
baz=183
F20K Avaraart Lake 11.10 346 P Pn 19 25 07.9 -0.4
baz=160
WTLY Watson Lake, Y 11.11 63 P Pn 19 25 07.9 -0.7
baz=259
BMAR Burnt Mountain 11.17 8 Pn 19 25 08.3 -1.0
F25K Christian River 11.26 6 P Pn 19 25 10.0 -0.5
baz=189
G15K Niukluk 11.31 325 P Pn 19 25 10.8 -0.5
baz=132
F18K Selawik 11.38 338 P Pn 19 25 12.3 +0.1
baz=148
EPYK Eagle Plains 11.46 25 P Pn 19 25 13.3 0.0
baz=216
F26K Sheenjek River 11.46 9 P Pn 19 25 12.9 -0.4
baz=193
ANM Nome 11.48 322 Pn 19 25 13.1 -0.4
ANM Nome 11.48 322 P Pn 19 25 13.1 -0.4
baz=128,SNR=6.7
F17K Baldwin Pennin 11.61 334 P Pn 19 25 14.6 -0.7
baz=144
E23K Chandalar 11.64 358 P Pn 19 25 16.0 +0.3
baz=178
E24K Your Creek 11.65 1 P Pn 19 25 15.8 0.0
baz=181
TGTN Hyland Airport 11.69 56 P Pn 19 25 16.8 +0.3
baz=253,SNR=14
E19K Redstone River 11.70 344 P Pn 19 25 16.3 -0.3
baz=156
E25K Arctic Village 11.78 6 Pn 19 25 16.7 -1.0
E25K Arctic Village 11.78 6 P Pn 19 25 17.2 -0.5
baz=189,SNR=6.2
F28M Old Crow 11.91 17 P Pn 19 25 19.7 +0.2
baz=205
F15K North Star Dit 11.99 327 P Pn 19 25 20.1 -0.4
baz=133
G30M tAoh Zraii Nji 12.07 24 P Pn 19 25 22.1 +0.5
baz=215
NIKH Nikolski High 12.12 262 P Pn 19 25 22.9 +0.6
baz=65
TOLK Toolik Lake Re 12.22 359 P Pn 19 25 23.2 -0.4
baz=178
E21K Killik River 12.24 351 P Pn 19 25 22.7 -1.3
baz=166
E17K Hotham Inlet 12.27 335 P Pn 19 25 24.4 +0.1
baz=144,SNR=9.4
E18K Tukpahlearik C 12.28 338 Pn 19 25 22.4 -2.0
E18K Tukpahlearik C 12.28 338 P Pn 19 25 24.0 -0.5
baz=148
E20K Nigu River 12.30 347 P Pn 19 25 25.1 +0.3
baz=160
F14K Arctic Creek 12.36 324 P Pn 19 25 25.7 +0.2
baz=129
G31M Satah River 12.49 27 P Pn 19 25 27.8 +0.5
baz=220
D22K Ayikyak River 12.58 353 P Pn 19 25 28.7 +0.2
baz=170
F30M Barrier River 12.69 23 P Pn 19 25 30.1 +0.1
baz=215
D24K Happy Valley 12.73 360 P Pn 19 25 30.6 0.0
baz=180
BBB Bella Bella 12.78 101 Pn Pn 19 25 31.7 +0.4
comp=N,0.5nm,0.3s,baz=316,slow=7.8,SNR=3.0
BBB Sn Sn 19 27 46.1 -7.4
comp=N,0.3nm,0.3s,baz=22,slow=10,SNR=1.9
BBB LR LR 19 29 18.5
comp=N,3µm,19.7s,baz=307,slow=32
comp=N,27nm,1.0s
D20K Etivluk River 12.79 347 P Pn 19 25 32.3 +1.0
baz=160
D19K Kuna River 12.79 344 P Pn 19 25 31.8 +0.4
baz=156
E28M Babbage River 12.88 15 P Pn 19 25 33.8 +1.2
baz=204
E29M Blow River 12.94 18 P Pn 19 25 34.4 +1.0
baz=208
D25K Kavik River 12.94 4 P Pn 19 25 35.0 +1.4
baz=186
TNA Tin City 12.95 322 P Pn 19 25 34.6 +1.1
baz=126
C21K Knifeblade Rid 13.01 350 P Pn 19 25 35.2 +0.8
baz=165
F31M Tsiigehtchic 13.03 26 P Pn 19 25 34.9 +0.3
baz=220,SNR=7.5
C24K Franklin Bluff 13.30 0 P Pn 19 25 38.5 +0.2
baz=180
C18K Utukok River 13.45 340 P Pn 19 25 40.6 +0.1
baz=149
B21K Ikpikpuk River 13.45 351 Pn 19 25 39.6 -0.7
B21K Ikpikpuk River 13.45 351 P Pn 19 25 41.0 +0.6
baz=166,SNR=5.3
KOTAN Kotaneelee Air 13.47 64 P Pn 19 25 42.1 +1.4
baz=265,SNR=12
C19K Lookout Ridge 13.57 343 P Pn 19 25 43.3 +1.2
baz=154
D28M Stokes Point 13.66 15 P Pn 19 25 44.3 +1.1
baz=204
C17K DeLong Mountai 13.70 337 P Pn 19 25 44.5 +0.7
baz=144
INK Inuvik 13.75 24 P Pn 19 25 45.0 +0.5
baz=218,SNR=13
INK Inuvik 13.75 24 Pn Pn 19 25 46.2 +1.7
comp=N,0.3nm,0.3s,baz=210,slow=14,SNR=21
INK LR LR 19 31 25.5
comp=N,2µm,18.6s,baz=184,slow=39
comp=N,9.7nm,0.9s
FLDN Fort Liard 13.77 64 P Pn 19 25 46.1 +1.3
baz=265
C16K Lisburne Hills 14.04 334 P Pn 19 25 48.1 -0.3
baz=140
B22K Teshekpuk Lake 14.07 354 P Pn 19 25 48.7 -0.1
baz=169
B20K Meade River 14.08 348 P Pn 19 25 47.8 -1.1
baz=161
B18K Kokolik River 14.18 341 P Pn 19 25 51.3 +1.0
baz=149
A21K Barrow 15.28 350 P Pn 19 26 05.0 -0.2
baz=163
CLRS Cowichan Lake 16.73 107 P Pn 19 26 23.8 -0.2
C36M Paulatuk 16.93 31 P Pn 19 26 25.3 -1.1
baz=233,SNR=14
HILA High Level 17.10 70 P Pn 19 26 26.8 -1.8
NLWA Neilton Lookou 17.75 110 P Pn 19 26 37.0 +0.2
YKA Yellowknife Ar 18.20 57 P P 19 26 43.1 +0.7
comp=N,0.3nm,0.3s,baz=264,slow=11,SNR=28
YKA LR LR 19 33 32.7
comp=N,1µm,19.2s,baz=278,slow=36
comp=N,3.8nm,0.9s
A36M Sachs Harbour 18.39 23 P P 19 26 44.9 +0.5
baz=225
D05A Enumclaw 18.87 108 Pn 19 26 51.9 +1.5
D05A IAmb IAmb 19 27 01.6
comp=Z,92nm,1.2s
F04A Amboy 19.47 112 IAmb IAmb 19 27 09.1
comp=Z,81nm,1.1s
LTY Liberty 19.53 106 IAmb IAmb 19 27 09.2
comp=Z,123nm,1.6s
COR Corvallis 19.95 116 P P 19 27 00.8 -0.9
MXC Moxie City 20.16 107 IAmb IAmb 19 27 16.5
comp=Z,65nm,1.2s
H04D Lebanon 20.28 115 IAmb IAmb 19 27 18.1
comp=Z,59nm,1.1s
E07A Sunnyside 20.40 107 IAmb IAmb 19 27 11.4
comp=Z,44nm,1.2s
H04A Detroit Lake 20.45 114 P P 19 27 06.6 -0.6
H04A IAmb IAmb 19 27 12.6
comp=Z,129nm,1.6s
C09A Chrisman Ranch 20.48 102 IAmb IAmb 19 27 23.7
comp=Z,62nm,1.7s
EDM Edmonton 20.51 84 P P 19 27 07.4 -0.4
EDM IAmb IAmb 19 27 22.1
comp=Z,46nm,1.4s
I03D Drain, OR 20.58 118 IAmb IAmb 19 27 23.9
comp=Z,76nm,1.4s
HAWA Hanford 20.68 107 IAmb IAmb 19 27 24.0
comp=Z,62nm,1.4s
F07A Phinny Hill Vi 20.79 108 IAmb IAmb 19 27 25.4
comp=Z,126nm,1.8s
NEW Newport 20.84 100 P P 19 27 12.5 +1.1
baz=305,SNR=14
NEW Newport 20.84 100 P P 19 27 10.6 -0.8
comp=Z,8.6nm,1.2s,baz=295,slow=8.7,SNR=7.8
NEW LR LR 19 34 02.2
comp=Z,1µm,21.7s,baz=301,slow=33
comp=Z,8.6nm,1.2s
G06A Carlson Farm, 20.86 111 IAmb IAmb 19 27 25.1
comp=Z,23nm,1.7s
I04A Tendick Farm, 20.97 116 IAmb IAmb 19 27 23.9
comp=Z,92nm,1.4s
I05D Terrebonne, OR 21.12 113 IAmb IAmb 19 27 26.8
comp=Z,78nm,1.4s
KBO Bosley Butte 21.27 122 P P 19 27 15.6 -0.5
E09A Wood Farm, Sta 21.34 105 IAmb IAmb 19 27 26.7
comp=Z,59nm,1.5s
SHEM Shemya Is, Ala 21.65 276 LR LR 19 36 12.0
comp=Z,414nm,18.6s,baz=76,slow=38
L02F Cave Junction 21.65 121 P P 19 27 19.4 -0.7
L02F IAmb IAmb 19 27 32.5
comp=Z,48nm,1.2s
G08A Pilot Rock 21.70 108 IAmb IAmb 19 27 32.9
comp=Z,39nm,1.3s
KSXB Camp Six Broad 21.73 122 P P 19 27 22.4 +1.3
J05D Fort Rock, OR 21.93 115 IAmb IAmb 19 27 37.7
comp=Z,87nm,1.3s
I07A Izee 22.24 111 IAmb IAmb 19 27 36.8
comp=Z,62nm,1.5s
YBH Yreka Blue Hor 22.36 120 IAmb IAmb 19 27 42.8
comp=Z,68nm,1.2s
YBH Yreka Blue Hor 22.36 120 LR LR 19 33 58.5
comp=Z,2µm,20.6s,baz=325,slow=31
KHMM Horse Mountain 22.55 123 P P 19 27 30.1 +0.2
J08A Circle Bar Ran 23.28 111 IAmb IAmb 19 27 49.1
comp=Z,42nm,1.1s
BILL Bilibino 23.29 318 P P 19 27 36.5 -0.7
PLID Pearl Lake 23.41 105 IAmb IAmb 19 27 48.8
comp=Z,54nm,2.0s
WVOR Wild Horse Val 23.86 113 IAmb IAmb 19 28 10.1
comp=Z,33nm,1.1s
MFID Camas Ranch 24.62 108 IAmb IAmb 19 28 01.9
comp=Z,23nm,1.2s
EGMT Eagleton 25.04 93 IAmb IAmb 19 28 03.7
comp=Z,24nm,1.2s
EGMT Eagleton 25.04 93 P P 19 27 54.7 +0.8
baz=304
HLID Hailey 25.27 106 IAmb IAmb 19 28 07.6
comp=Z,20nm,1.1s
HLID Hailey 25.27 106 P P 19 27 56.4 +0.2
baz=313,SNR=19
AFDM Forest Hills D 25.37 122 IAmb IAmb 19 28 08.3
comp=Z,44nm,1.2s
BOZ Bozeman (W) 25.45 99 IAmb IAmb 19 28 09.3
comp=Z,30nm,1.9s
BOZ Bozeman (W) 25.45 99 P P 19 27 58.2 +0.5
baz=309
BMN Battle Mountai 26.05 115 IAmb IAmb 19 28 27.8
comp=Z,62nm,1.9s
FFC Flin Flon 26.10 74 P P 19 28 03.5 +0.1
YERR Yerington 26.16 119 IAmb IAmb 19 28 21.9
comp=Z,43nm,1.2s
CMB Columbia Colle 26.37 122 IAmb IAmb 19 28 16.5
comp=Z,19nm,1.2s
KVN Kaiserville 26.67 118 IAmb IAmb 19 28 22.0
comp=Z,44nm,1.4s
RYN Ryan 26.79 119 IAmb IAmb 19 28 29.4
comp=Z,18nm,1.1s
H17A Grant Village 26.79 100 IAmb IAmb 19 28 32.4
comp=Z,20nm,1.2s
H17A Grant Village 26.79 100 P P 19 28 12.0 +2.0
baz=310,SNR=6.0
ELK Elko 26.83 112 IAmb IAmb 19 28 21.8
comp=Z,28nm,1.4s
ELK Elko 26.83 112 LR LR 19 37 03.5
comp=Z,807nm,20.2s,baz=310,slow=33
FLWY Flagg Ranch 26.93 101 IAmb IAmb 19 28 34.8
comp=Z,38nm,1.4s
RLMT Red Lodge 27.05 98 P P 19 28 12.4 +0.1
baz=309
NVAR Mina Array Bea 27.05 119 P P 19 28 13.8 +1.5
comp=Z,7.6nm,1.0s,baz=306,slow=8.2,SNR=29
NVAR LR LR 19 37 05.8
comp=Z,1µm,18.4s,baz=324,slow=32
comp=Z,7.6nm,1.0s
NV11 Mina Array Sit 27.12 119 IAmb IAmb 19 28 23.4
comp=Z,34nm,1.3s
RES Resolute Bay 27.26 28 P P 19 28 13.8 +0.2
RES Resolute Bay 27.26 28 LR LR 19 39 38.2
comp=Z,1µm,19.0s,baz=232,slow=38
LOHW Long Hollow 27.29 102 IAmb IAmb 19 28 25.8
comp=Z,37nm,2.0s
MLAC Mammoth, Mammo 27.43 121 P P 19 28 17.9 +2.2
baz=323
LAO LASA Array 27.77 92 IAmb IAmb 19 28 28.9
comp=Z,43nm,1.7s
LAO LASA Array 27.77 92 P P 19 28 18.8 +0.2
baz=306
DSP Deep Springs 28.05 120 IAmb IAmb 19 28 32.2
comp=Z,39nm,1.6s
Q12A Willow Creek R 28.31 114 IAmb IAmb 19 28 35.1
comp=Z,32nm,1.3s
BW06 Boulder Array 28.43 102 P P 19 28 24.5 -0.2
baz=312
PDAR Pinedale Array 28.43 102 P P 19 28 25.3 +0.6
comp=Z,0.9nm,0.8s,baz=328,slow=5.3,SNR=6.7
PDAR LR LR 19 38 53.5
comp=Z,273nm,18.9s,baz=318,slow=35
comp=Z,0.9nm,0.8s
R11B Troy Canyon, C 28.46 115 IAmb IAmb 19 28 41.6
comp=Z,20nm,1.3s
R11B Troy Canyon, C 28.46 115 P P 19 28 26.2 +1.4
baz=320,SNR=19
DUG Dugway, Tooele 28.50 109 P P 19 28 25.2 +0.1
baz=317
SPR3 Spring Creek 3 28.60 113 IAmb IAmb 19 28 37.6
comp=Z,43nm,1.8s
GRAC Grapevine Rang 28.64 119 P P 19 28 28.0 +1.6
baz=323
FCC Fort Churchill 28.70 62 P P 19 28 25.8 -0.7
FCC IAmb IAmb 19 28 29.9
comp=Z,50nm,1.9s
CWC Cottonwood Cre 28.74 121 P P 19 28 27.4 -0.1
baz=324
VES Vestal, Richgr 28.76 123 P P 19 28 27.5 +0.2
baz=325
SMMC Simmler 28.78 125 P P 19 28 28.1 +0.5
baz=326
WCT Wildcat Mounta 29.16 119 IAmb IAmb 19 28 41.7
comp=Z,26nm,1.2s
ISA Isabella, Lake 29.19 123 P P 19 28 32.6 +1.3
baz=325
PKM Mcpherson Peak 29.21 125 P P 19 28 33.8 +2.2
baz=327,SNR=9.5
TPNV Topopah Spring 29.22 118 P P 19 28 32.9 +1.3
baz=322
FURC Furnace Creek, 29.30 119 P P 19 28 33.9 +1.7
baz=323
BSUT Blindstream Ca 29.33 107 IAmb IAmb 19 28 43.0
comp=Z,16nm,1.2s
MPMC Manual Prospec 29.33 121 P P 19 28 34.1 +1.4
baz=324,SNR=12
BCW Bitter Crk WRg 29.35 125 IAmb IAmb 19 28 54.1
comp=Z,22nm,1.2s
SEY Seymchan 29.41 307 LR LR 19 41 33.2
comp=Z,2µm,18.7s,baz=118,slow=39
ARVC Arvin 29.46 124 P P 19 28 35.2 +1.6
baz=326
GWY Greenwater Val 29.62 120 IAmb IAmb 19 28 46.4
comp=Z,19nm,1.0s
LRMC Laurel Mtn Rad 29.71 122 P P 19 28 37.0 +1.0
baz=325,SNR=13
OSI Osito Audit: C 29.94 124 P P 19 28 38.5 +0.6
baz=326
SCZ2 Santa Cruz Isl 30.04 126 P P 19 28 40.2 +1.5
baz=327
SHOC Shoshone, Teco 30.04 119 P P 19 28 39.4 +0.6
baz=324
EDW2 Edwards Air Fo 30.05 123 P P 19 28 39.5 +0.6
baz=326
EUNU Eureka 30.23 18 P P 19 28 41.5 +1.4
EUNU IAmb IAmb 19 28 44.1
comp=Z,17nm,1.3s
GSC Goldstone, Bar 30.27 121 IAmb IAmb 19 28 51.5
comp=Z,36nm,1.6s
GSC Goldstone, Bar 30.27 121 P P 19 28 41.9 +1.0
baz=324,SNR=5.8
SZCU Shurtz Canyon 30.30 113 IAmb IAmb 19 28 50.8
comp=Z,17nm,1.3s
PETK Petropavlovsk- 30.39 287 P P 19 28 42.4 +0.7
comp=Z,4.3nm,0.9s,baz=70,slow=13,SNR=7.3
PETK LR LR 19 41 27.7
comp=Z,361nm,19.9s,baz=80,slow=38
comp=Z,4.3nm,0.9s
SRU San Rafael Swe 30.49 108 IAmb IAmb 19 28 54.8
comp=Z,26nm,1.1s
RSSD Black Hills 30.57 95 P P 19 28 43.9 +0.3
RSSD Black Hills 30.57 95 P P 19 28 44.7 +1.2
baz=310
TUQ Turquoise Moun 30.59 119 P P 19 28 44.8 +1.1
baz=324
LCMT Little Creek M 30.67 114 IAmb IAmb 19 28 55.1
comp=Z,34nm,1.8s
SNCC San Nicolas Is 30.72 127 P P 19 28 46.0 +1.3
baz=328
BFSC Mount Baldy Ra 30.74 123 P P 19 28 47.6 +2.5
baz=326,SNR=10.0
PKCU Pink Cliffs 30.81 113 IAmb IAmb 19 28 51.2
comp=Z,17nm,1.1s
HEC Hector,Ludlow 30.88 121 P P 19 28 47.4 +1.2
baz=325,SNR=7.6
O20A White River Ci 30.96 104 IAmb IAmb 19 28 58.5
comp=Z,24nm,1.2s
O20A White River Ci 30.96 104 P P 19 28 48.2 +1.1
baz=316,SNR=6.5
CIS Catalina Islan 31.09 125 P P 19 28 48.8 +0.8
baz=327
MA2 Magadan 31.20 301 LR LR 19 41 58.7
comp=Z,908nm,21.8s,baz=84,slow=38
GMRC Granite Mounta 31.24 120 P P 19 28 49.9 +0.5
baz=324,SNR=6.7
HMU Henry Mountain 31.25 110 IAmb IAmb 19 29 00.1
comp=Z,24nm,1.2s
ELS Elsinore Mount 31.34 123 IAmb IAmb 19 29 00.2
comp=Z,25nm,1.5s
MURC Murrieta 31.48 123 P P 19 28 52.6 +1.1
baz=326
ULM Lac du Bonnet 31.49 79 P P 19 28 53.2 +1.9
comp=Z,3.2nm,1.0s,baz=304,slow=10.0,SNR=3.7
ULM LR LR 19 40 49.6
comp=Z,319nm,18.8s,baz=301,slow=35
comp=Z,3.2nm,1.0s
U15A North Rim 31.60 114 IAmb IAmb 19 29 15.4
comp=Z,20nm,1.6s
N23A Red Feather La 31.67 101 P P 19 28 52.1 -1.3
baz=314
BELC Belle Mtn. Jos 31.71 121 P P 19 28 54.6 +1.0
baz=325,SNR=5.4
NEE2 Needles Airpor 31.76 119 P P 19 28 55.3 +1.4
baz=324
PFO Pinyon Flats O 31.82 122 P P 19 28 53.9 -0.7
PFO IAmb IAmb 19 29 04.6
comp=Z,16nm,1.1s
PFO Pinyon Flats O 31.82 122 P P 19 28 55.0 +0.4
baz=326
PFO Pinyon Flats O 31.82 122 LR LR 19 39 15.9
comp=Z,1µm,21.0s,baz=356,slow=32
TPFO Pinon Flats 31.82 122 P P 19 28 55.0 +0.4
baz=326
PMD Palm Desert 31.83 122 IAmb IAmb 19 29 05.0
comp=Z,21nm,1.4s
W13A Hualapai Mount 31.85 117 IAmb IAmb 19 29 05.7
comp=Z,36nm,1.7s
IRM Iron Mountain 32.00 120 P P 19 28 57.5 +1.5
baz=325,SNR=32
109C Camp Elliot, M 32.12 124 P P 19 28 58.6 +1.6
baz=327
BC3 Big Chuckawall 32.26 121 P P 19 28 58.7 +0.3
baz=325,SNR=6.9
PDMCI Parker Dam,Lak 32.36 118 P P 19 29 00.3 +1.1
baz=324
MONP2 Monument Peak 32.43 123 P P 19 28 59.1 -0.9
baz=326,SNR=7.1
AGMN Agassiz Nation 32.57 82 P P 19 29 02.4 +1.5
baz=305
SWSC Sam W. Stewart 32.68 122 P P 19 29 02.4 +0.5
baz=326
IKP In-Ko-Pah, Jac 32.78 123 P P 19 29 03.8 +0.9
baz=326,SNR=7.3
WUAZ Wupatki 32.78 114 P P 19 29 03.8 +0.8
baz=322,SNR=11
RMX La Rumorosa 32.83 123 IAmb IAmb 19 29 14.6
comp=Z,26nm,1.4s
MVCO Mesa Verde 32.97 108 P P 19 29 04.8 0.0
baz=319
ESJX Sierra Juarez 33.39 123 IAmb IAmb 19 29 19.0
comp=Z,24nm,1.6s
S22A 4UR Ranch, Cre 33.46 106 P P 19 29 08.5 -0.6
baz=318
Q24A Divide 33.47 103 P P 19 29 09.1 -0.2
baz=316
X16A Lo Mia Camp, P 33.61 115 IAmb IAmb 19 29 22.7
comp=Z,9.1nm,0.9s
OGNE Ogallala 33.78 97 P P 19 29 11.6 0.0
baz=313
SDCO Great Sand Dun 34.17 105 P P 19 29 12.4 -2.8
baz=317
KSCO Kaye Shedlock' 34.81 100 P P 19 29 22.0 +1.4
baz=316
214A Organ Pipe Nat 34.92 119 P P 19 29 23.4 +2.0
baz=325,SNR=7.7
EYMN Ely 35.16 79 P P 19 29 23.2 -0.2
EYMN IAmb IAmb 19 29 47.3
comp=Z,13nm,0.9s
EYMN Ely 35.16 79 P P 19 29 24.3 +0.9
baz=306
TUC Tucson 35.62 117 P P 19 29 26.6 -1.0
TUC IAmb IAmb 19 29 38.6
comp=Z,29nm,1.8s
TUC Tucson 35.62 117 P P 19 29 28.3 +0.7

baz=324
TIXI Tiksi 35.66 327 P P 19 29 26.7 -0.7
TIXI Tiksi 35.66 327 LR LR 19 47 15.4
comp=Z,295nm,18.4s,baz=59,slow=42
ANMO Albuquerque 35.76 109 P P 19 29 28.0 -0.9
ANMO Albuquerque 35.76 109 P P 19 29 28.3 -0.6
baz=320
ANMO Albuquerque 35.76 109 LR LR 19 43 11.9
comp=Z,370nm,19.6s,baz=48,slow=35
CBKS Cedar Bluff 36.53 98 P P 19 29 36.1 +0.8
baz=315
121A Cookes Peak, D 36.96 113 IAmb IAmb 19 29 51.0
comp=Z,25nm,1.4s
121A Cookes Peak, D 36.96 113 P P 19 29 40.2 +1.1
baz=323
NEEM North Greenlan 37.30 21 *i* P **P 19 29 40.6 -1.1**
FRB Frobisher Bay 38.09 45 LR LR 19 45 41.8
comp=Z,2μm,18.6s,baz=310,slow=36
HSIG 38.24 120 IAmb IAmb 19 30 00.4
comp=Z,35nm,1.6s
AMTX Amarillo 38.35 104 IAmb IAmb 19 30 01.8
comp=Z,21nm,1.2s
AMTX Amarillo 38.35 104 P P 19 29 51.5 +0.7
baz=319
MSTX Muleshoe 38.46 106 P P 19 29 52.9 +1.2
baz=320
MNTX Cornudas Mount 38.86 111 P P 19 29 56.0 +1.0
baz=323
YAK Yakutsk 39.46 313 P P 19 29 58.5 -1.1
YAK IAmb IAmb 19 30 09.5
comp=Z,21nm,0.8s
YAK Yakutsk 39.46 313 LR LR 19 46 29.2
comp=Z,563nm,21.3s,baz=72,slow=36
WMOK Wichita Mounta 40.03 101 P P 19 30 04.9 +0.1
WMOK IAmb IAmb 19 30 15.7
comp=Z,28nm,1.5s
WMOK Wichita Mounta 40.03 101 P P 19 30 05.0 +0.3
baz=319
TX31 Lajitas Ar. Si 41.63 111 IAmb IAmb 19 30 28.7
comp=Z,42nm,1.9s
TXAR Lajitas Array 41.63 111 P P 19 30 18.6 +0.6
comp=Z,4.5nm,1.1s,baz=320,slow=5.2,SNR=5.2
TXAR LR LR 19 46 53.7
comp=Z,351nm,18.7s,baz=312,slow=35
comp=Z,4.5nm,1.1s
SUMG Summit 42.67 25 P P 19 30 26.8 +0.4
SUMG Summit 42.67 25 *i* P **P 19 30 27.0 +0.5**
LPIG La Paz 42.70 123 LR LR 19 45 52.7
comp=Z,372nm,19.6s,baz=326,slow=33
JCT Junction City 42.75 106 P P 19 30 26.1 -1.0
baz=322
SFJD Kangerlussuaq 42.77 35 LR LR 19 48 13.9
comp=Z,786nm,20.4s,baz=320,slow=36
MIAR Mount Ida 43.03 97 IAmb IAmb 19 30 39.7
comp=Z,34nm,1.6s
MIAR Mount Ida 43.03 97 P P 19 30 28.4 -0.8
baz=318
DRIO Del Rio 43.15 108 P P 19 30 29.9 -0.4
O48B Farmland 43.60 84 IAmb IAmb 19 30 41.1
comp=Z,15nm,0.9s
O48B Farmland 43.60 84 P P 19 30 33.5 -0.3
baz=314
SCHQ Schefferville 43.65 56 P P 19 30 35.8 +1.7
comp=Z,4.3nm,0.8s,baz=316,slow=7.3,SNR=5.9
SCHQ LR LR 19 48 53.2
comp=Z,839nm,18.5s,baz=296,slow=36
comp=Z,4.3nm,0.8s
ASAJ Asahikawa 43.72 284 LR LR 19 50 02.8
comp=Z,245nm,19.6s,baz=60,slow=38
SPITS Spitsbergen Ar 45.30 4 LR LR 19 48 21.6
comp=Z,314nm,20.2s,baz=324,slow=34
KLR Kul'dur 46.00 296 LR LR 19 52 21.2
comp=Z,301nm,18.6s,baz=57,slow=39
HEH HeiHe 47.45 300 *eP* **P 19 31 04.0 -0.2**
HEH LR LR
comp=Z,580nm,12.7s
HEH LR LR
comp=Z,410nm,10.6s
HEH LR LR
comp=Z,520nm,9.2s
NRIK Noril'sk 48.04 337 P P **19 31 09.4 +0.9**
NRIK Noril'sk 48.04 337 P P **19 31 10.0 +1.5**
comp=Z,3.6nm,0.5s,baz=54,slow=7.2,SNR=8.6
NRIK LR LR 19 55 06.2
comp=Z,720nm,18.8s,baz=42,slow=41
comp=Z,3.6nm,0.5s
H11N2 WAKE ISLAND Hy 49.22 240 T T 20 24 17.6
baz=30,slow=74
H11N3 WAKE ISLAND Hy 49.23 240 T T 20 24 18.1
baz=30,slow=74
H11N1 WAKE ISLAND Hy 49.24 240 T T 20 24 19.0
baz=30
USRK Uesuriysk Ar. 49.27 291 LR LR 19 54 00.5
comp=Z,306nm,19.1s,baz=57,slow=38
JMIC Jan Mayen 49.75 16 LR LR 19 53 48.6
comp=Z,228nm,20.7s,baz=282,slow=38
H11S1 WAKE ISLAND Hy 50.37 240 T T 20 25 45.9
baz=30,slow=76,SNR=56
H11S2 WAKE ISLAND Hy 50.38 240 T T 20 25 45.2
baz=30,slow=76,SNR=37
H11S3 WAKE ISLAND Hy 50.38 240 T T 20 25 48.2
baz=30,slow=76,SNR=43
MJAR Matsushiro Arr 51.41 280 LR LR 19 53 43.6
comp=Z,190nm,20.6s,baz=52,slow=36
BORG Borgarnes 52.65 25 LR LR 19 55 08.8
comp=Z,478nm,18.9s,baz=328,slow=37
ARCES ARCESS Array B 54.23 2 P P 19 31 55.2 +0.3
comp=Z,12nm,1.2s,baz=7.5,slow=7.5,SNR=4.0
comp=Z,12nm,1.2s
CMIG Matias Romero 56.24 112 LR LR 19 55 27.2
comp=Z,419nm,20.3s,baz=342,slow=35
KSRS Korea Array 56.27 288 LR LR 19 55 36.2
comp=Z,76nm,21.1s,baz=45,slow=35
JCJ Chichijima 56.37 269 LR LR 19 53 23.4
comp=Z,136nm,21.8s,baz=16,slow=33
TEIG Tepich 57.14 103 LR LR 19 58 19.9
comp=Z,2μm,20.6s,baz=108,slow=38
JNU Nakatsue 57.96 283 LR LR 19 58 56.3
comp=Z,123nm,20.3s,baz=61,slow=38
SONM Songino Array 58.73 310 P P 19 32 29.2 +1.7
SONM IAmb IAmb 19 32 37.5
comp=Z,8.9nm,0.9s
SONM Songino Array 58.73 310 P P 19 32 28.7 +1.2
comp=Z,6.0nm,0.9s,baz=45,slow=6.0,SNR=34
SONM LR LR 20 00 26.4
comp=Z,436nm,18.1s,baz=45,slow=39
comp=Z,6.0nm,0.9s
ZAA0 Zalesovo Array 61.55 327 P P 19 32 45.6 -1.0
ZALV Zalesovo Beam 61.55 327 P P 19 32 45.5 -1.0
ZALV Zalesovo Beam 61.55 327 P P 19 32 47.3 +0.7
comp=Z,2.9nm,0.6s,baz=32,slow=6.8,SNR=16
ZALV LR LR 20 03 10.6
comp=Z,322nm,19.9s,baz=22,slow=40
comp=Z,2.9nm,0.6s
NOA NORSAR Array B 61.77 11 LR LR 20 01 30.4
comp=Z,107nm,19.2s,baz=340,slow=38
HHC Hu-ho-hao-te 61.88 302 *eP* **P 19 32 52.4 +3.3**
HHC sP pwP 19 32 58.8 +2.2
HHC S **S 19 41 12.8 +0.2**
HHC sS sS 19 41 20.8 +5.1
HHC pmax pmax
comp=Z,15nm,0.6s
HHC pmax pmax
comp=Z,88nm,4.6s
HHC LR LR
comp=Z,330nm,17.3s
HHC LR LR
comp=Z,340nm,13.8s
HHC LR LR
comp=Z,520nm,14.5s
FINES FINESS Array B 62.35 3 P P 19 32 52.6 +0.8
comp=Z,2.6nm,0.7s,baz=5.1,slow=7.6,SNR=9.8
comp=Z,2.6nm,0.7s
BTO Baotou 62.79 303 *eP* **P 19 32 54.1 -1.1**
BTO pP **sP 19 32 58.8 +1.0**
BTO sP **pwP 19 33 01.3 -1.4**
BTO PP **PP 19 35 13.8 +1.0**
BTO S **S 19 41 23.1 -1.0**
BTO pmax pmax
comp=Z,6.0nm,0.5s
BTO pmax pmax
comp=Z,200nm,4.3s
BTO LR LR
comp=Z,980nm,14.0s
BTO LR LR
comp=Z,800nm,12.0s
BTO LR LR
comp=Z,480nm,16.9s

HFS Hagfors 62.91 10 LR LR 20 01 21.4
comp=Z,162nm,20.6s,baz=348,slow=37
KIRV Kirov 64.37 350 LR LR 20 04 43.2
comp=Z,124nm,21.2s,baz=23,slow=39
EKA Eskdalemuir Ar 65.10 21 P P 19 33 09.9 -0.1
comp=Z,2.0nm,0.8s,baz=316,slow=5.8,SNR=4.0
comp=Z,2.0nm,0.8s
ARU Arti 65.30 344 P P 19 33 10.2 -1.0
ARU IAmb IAmb 19 33 21.4
comp=Z,9.0nm,0.9s
ARU Arti 65.30 344 LR LR 20 03 57.3
comp=Z,255nm,21.3s,baz=17,slow=38
GUMO Guam 65.76 258 LR LR 19 57 47.6
comp=Z,79nm,19.6s,baz=40,slow=32
KURK Kurchatov 66.21 329 P P 19 33 16.8 -0.5
KURK IAmb IAmb 19 34 15.4
comp=Z,18nm,1.9s
BVAR Borovoye Array 66.23 335 P P 19 33 18.4 +1.1
comp=Z,3.8nm,0.7s,baz=25,slow=7.4,SNR=14
BVAR LR LR 20 07 09.5
comp=Z,286nm,18.1s,baz=24,slow=40
comp=Z,3.8nm,0.7s
KURBB Kurchatov Arra 66.32 329 P P 19 33 18.8 +0.8
comp=Z,1.3nm,0.5s,baz=27,slow=6.3,SNR=12
KURBB LR LR 20 05 48.4
comp=Z,434nm,18.5s,baz=146,slow=39
comp=Z,1.3nm,0.5s
JTS Las Juntas de 67.13 107 LR LR 20 06 00.6
comp=Z,188nm,18.4s,baz=316,slow=39
GTA Gaotai 68.34 309 *eP* **P 19 33 32.5 +1.4**
GTA sP pwP 19 33 39.6 +1.0
GTA pmax pmax
comp=Z,2.0nm,1.4s
GTA LR LR
comp=Z,500nm,16.7s
GTA LR LR
comp=Z,610nm,16.3s
GTA LR LR
comp=Z,930nm,17.1s
MKAR Makanchi Array 68.60 325 P P 19 33 33.3 +0.8
comp=Z,2.7nm,0.8s,baz=40,slow=5.3,SNR=22
MKAR LR LR 20 07 27.1
comp=Z,356nm,18.6s,baz=35,slow=39
comp=Z,2.7nm,0.8s
OBN Obninsk 68.69 357 LR LR 20 08 34.9
comp=Z,113nm,18.9s,baz=1,0,slow=40
MAKZ Makanchi 68.69 325 P P 19 33 33.0 -0.1
MAKZ IAmb IAmb 19 34 10.6
comp=Z,7.3nm,1.4s
LZH Lanzhou 69.29 304 *eP* **P 19 33 39.2 +2.0**
LZH sP pwP 19 33 49.2 +4.5
LZH pmax pmax
comp=Z,12nm,1.2s
LZH LR LR
comp=Z,1μm,18.6s
LZH LR LR
comp=Z,1μm,19.7s
LZH LR LR
comp=Z,2μm,18.1s
WMQ Urumqi 69.38 320 *eP* **P 19 33 41.2 +3.7**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,700nm,18.1s
WMQ LR LR
comp=Z,610nm,20.9s
WMQ LR LR
comp=Z,210nm,18.1s
BELG Belogornoye 70.66 349 LR LR 20 08 15.9
comp=Z,192nm,21.1s,baz=324,slow=39
SJG San Juan 71.05 86 LR LR 20 06 25.7
comp=Z,89nm,18.2s,baz=249,slow=37
AKTO Aktyubinsk 71.17 342 LR LR 20 10 21.6
comp=Z,167nm,18.3s,baz=12,slow=40
GOMU GeErMu 73.17 311 P P 19 34 02.3 +1.4
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU LR LR
comp=Z,570nm,21.2s
GOMU LR LR
comp=Z,330nm,19.9s
GOMU LR LR
comp=Z,740nm,23.8s
AKASG Malin Array Be 73.18 1 P P 19 34 00.8 +0.6
comp=Z,2.1nm,0.6s,baz=358,slow=5.9,SNR=6.0
AKASG LR LR 20 08 22.4
comp=Z,104nm,19.6s,baz=18,slow=38
comp=Z,2.1nm,0.6s
PPT Papeete 73.76 181 LR LR 19 59 32.2
comp=Z,162nm,19.8s,baz=360,slow=30
VRAC Vranov 73.89 10 LR LR 20 09 22.0
comp=Z,79nm,18.6s,baz=350,slow=38
GERES GERESS Array B 74.04 12 P P 19 34 05.4 0.0
comp=Z,0.6nm,0.6s,baz=10,slow=6.1,SNR=4.1
GERES LR LR 20 09 53.4
comp=Z,120nm,19.1s,baz=342,slow=38
comp=Z,0.6nm,0.6s
AAK Ala-Archa 74.73 328 LR LR 20 10 44.5
comp=Z,493nm,18.1s,baz=23,slow=39
MODS Modra-Piesok 74.88 10 *eP* P 19 34 15.8 +5.6
BIOA Bad Ischi, Aus 75.17 12 *i* PcP **PcP 19 34 21.0 -4.5**
comp=Z,7.8nm,1.4s
CONA Conrad Observa 75.18 11 *e*PcP **PcP 19 34 21.3 -4.2**
comp=Z,11nm,2.3s
MOTA Moosalm 75.19 14 *e*PcP **PcP 19 34 20.4 -5.3**
comp=Z,5.3nm,1.3s
WATA Walderalm 75.26 14 *e*PcP **PcP 19 34 21.5 -4.5**
comp=Z,5.2nm,1.0s
LESA Schwarzleotal 75.31 13 *i* PcP **PcP 19 34 23.2 -3.0**
comp=Z,5.2nm,1.1s
SQTA Sankt Quirin 75.33 14 *e*PcP **PcP 19 34 22.8 -3.5**
comp=Z,13nm,1.6s
WTTA Wattenberg 75.34 14 *i* PcP **PcP 19 34 28.7 +2.3**
comp=Z,5.1nm,0.8s
RONA Rosalia, Austr 75.45 10 *i* PcP **PcP 19 34 22.2 -4.5**
comp=Z,5.2nm,1.7s
FETA Feichten 75.46 14 *e*PcP **PcP 19 34 27.2 +0.3**
comp=Z,5.0nm,1.2s
DAVOX Davos/Dischmat 75.57 15 LR LR 20 12 07.7
comp=Z,48nm,18.1s,baz=348,slow=39
SORM Soroca 75.73 2 ⇑P **P 19 34 15.0 0.0**
KBA Koelnbreinsper 75.74 13 *i* PcP **PcP 19 34 27.5 -0.6**
comp=Z,13nm,1.5s
ABTA Abfaltersbach 75.96 13 *e*PcP **PcP 19 34 30.5 +1.5**
comp=Z,3.8nm,1.4s
SDV Santo Domingo 76.09 95 LR LR 20 09 07.0
comp=Z,130nm,19.3s,baz=359,slow=37
BURAR Bucovina Array 76.16 4 ⇑P **P 19 34 16.6 -1.1**
SOKA Soboth 76.33 11 *e*pP **P 19 34 19.1 +0.4**
comp=Z,9.2nm,2.0s
OBKA Obir 76.44 12 *e*pP pP 19 34 21.1 -0.1
comp=Z,4.4nm,0.7s
KSH Kashi 77.15 326 P P 19 34 28.4 +4.9
KSH sP PcP 19 34 35.5 +1.2
KSH pmax pmax
comp=Z,2.0nm,1.1s
KSH LR LR
comp=Z,410nm,19.2s
KSH LR LR
comp=Z,450nm,18.2s
KSH LR LR
comp=Z,590nm,17.9s
ROSC El Rosal 77.41 100 LR LR 20 13 27.0
comp=Z,119nm,18.1s,baz=68,slow=40
SURR Surduc 77.86 7 ⇓P **P 19 34 28.2 +1.1**
RAR Rarotonga 77.94 190 LR LR 19 59 53.4
comp=Z,181nm,21.8s,baz=306,slow=29
PLOR Plostina 77.97 3 ⇓P **P 19 34 27.5 -0.3**
HNR Honiara 78.05 232 LR LR 20 01 53.2
comp=Z,3μm,20.3s,baz=350,slow=30
GZR Gunz Zlata 78.25 6 ⇑P **P 19 34 30.1 +0.7**
PZH PanZhiHua 78.27 300 P **P 19 34 30.1 +0.2**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,80nm,4.7s
MLR Muntele Rosu 78.31 4 LR LR 20 09 05.6
comp=Z,120nm,21.9s,baz=3.5,slow=36
VOIR 78.33 4 ⇑P P 19 34 25.0 -4.9
TGY Tagaytay City 78.54 278 LR LR 20 09 09.0
comp=Z,26nm,19.8s,baz=290,slow=36
CFR Carcaliu 78.69 2 ⇑P P 19 34 36.6 +4.9
KBZ Khabaz 79.68 351 P **P 19 34 39.1 +2.0**
KBZ comp=Z,3.9nm,0.9s,baz=346,slow=1.9,SNR=5.9
LR LR 20 15 30.8
comp=Z,74nm,18.2s,baz=10,slow=40
comp=Z,3.9nm,0.9s
ESDC Sonseca Array 79.69 27 P **P 19 34 38.8 +1.4**
comp=Z,1.6nm,0.8s,baz=344,slow=5.1,SNR=6.4
ESDC LR LR 20 10 26.0
comp=Z,273nm,18.8s,baz=322,slow=36
comp=Z,1.6nm,0.8s
PLVB Pleven 80.35 5 ⇑P **P 19 34 44.9 +4.1**
DAV Davao City (W) 81.75 270 LR LR 20 05 07.4
comp=Z,143nm,21.6s,baz=61,slow=31
GNI Garni 83.06 350 LR LR 20 17 01.4
comp=Z,59nm,19.8s,baz=20,slow=39
GEYT Alibeck 83.23 339 P **P 19 34 55.8 -0.4**
comp=Z,2.1nm,0.8s,baz=328,slow=5.3,SNR=4.0
GEYT LR LR 20 19 51.3
comp=Z,215nm,18.5s,baz=26,slow=41
comp=Z,2.1nm,0.8s
PMG Port Moresby 84.01 243 LR LR 20 06 51.3
comp=Z,142nm,20.0s,baz=338,slow=32
BRTR Keskin Array B 84.15 358 P **P 19 35 02.2 +1.2**
comp=Z,0.9nm,0.7s,baz=354,slow=6.4,SNR=2.2
BRTR LR LR 20 14 47.5
comp=Z,82nm,20.9s,baz=8.5,slow=37
comp=Z,0.9nm,0.7s
ATAH Atahualpa 85.28 110 LR LR 20 11 51.5
comp=Z,110nm,20.6s,baz=339,slow=35
VAE Valguarnera 85.33 13 LR LR 20 15 25.1
comp=Z,180nm,20.4s,baz=334,slow=37
KEST Kesra 86.29 18 LR LR 20 17 14.6
comp=Z,86nm,18.0s,baz=308,slow=38
CMAR Chiang Mai Arr 86.44 298 P **P 19 35 11.2 -1.3**
CMAR Chiang Mai Arr 86.44 298 P **P 19 35 13.4 +0.9**
comp=Z,1.6nm,0.9s,baz=16,slow=5.2,SNR=9.1
CMAR LR LR 20 18 33.5
comp=Z,221nm,18.5s,baz=50,slow=39
comp=Z,1.6nm,0.9s
DZM Mont Dzumac 86.87 221 LR LR 20 05 54.9
comp=Z,202nm,22.0s,baz=34,slow=30
IDI Anoyia 88.44 5 LR LR 20 18 52.0
comp=Z,41nm,19.8s,baz=350,slow=38
RAO Raoul Island 88.91 205 LR LR 20 09 06.8
comp=Z,179nm,18.5s,baz=38,slow=32
MDP Montagnes des 89.17 82 LR LR 20 13 43.5
comp=Z,116nm,21.3s,baz=306,slow=34
RPN Rapa Nui 89.73 146 LR LR 20 07 04.3
comp=Z,154nm,19.1s,baz=322,slow=30
NNA Nana 90.19 112 LR LR 20 13 47.9
comp=Z,66nm,21.5s,baz=346,slow=34
CTA Charters Tower 93.64 239 LR LR 20 13 34.5
comp=Z,90nm,19.4s,baz=53,slow=33
EIL Elat 94.14 357 LR LR 20 25 53.0
comp=Z,33nm,19.1s,baz=50,slow=40
WSAR Wadi Sarin 97.28 335 LR LR 20 26 23.9
comp=Z,70nm,18.1s,baz=30,slow=39
BBTS Babate 98.73 46 LR LR 20 17 42.9
comp=Z,105nm,19.0s,baz=228,slow=34

IDC ***05*** *19:27:01.2±0.8, 13°.13S×78°.32W, h0km, mb4.3/12, mbtmp4.3/14, ML3.7/2, MS3.5/7, Error ellipse: s-maj=24.9km s-min=17.2km az=63.0*
NEIC ***05*** *19:27:05.2±1.3, 12°.88S±0°.07×78°.10W±0°.08, h10km±1km, mb4.8/115, Error ellipse: s-maj=14.8km s-min=9.8km az=226.0*
VAO ***05*** *19:27:11.5±0.6, 12°.75S×77°.50W, h10km, mb4.4*
ISC 05 19:27:04.2±0.5, 12°.89S±0°.06×78°.19W±0°.07, h10km, n147,
σ1§48/110, mb4.8/60, MS3.5/5, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.60**	**56**	Pn	**Pb**	**19 27 32.9**	**-0.9**
	548nm,0.3s,baz=242,slow=12,SNR=648						
NNA				Sn	**Sb**	**19 27 52.7**	**-1.4**
	168nm,0.3s,baz=34,slow=7.1,SNR=10.0						
NNA				LR	LR	19 28 00.2	
	comp=Z,462nm,21.1s,baz=241,slow=32						
ATAH	**Atahualpa**	**5.73**	**358**	Pn	**Pn**	**19 28 33.0**	**+3.3**
	17nm,0.3s,baz=207,slow=1.7,SNR=77						
ATAH				Sn	**Sn**	**19 29 36.5**	**+0.7**
	17nm,0.3s,baz=335,slow=16,SNR=5.9						
ATAH				LR	LR	19 30 47.3	
	comp=Z,292nm,18.6s,baz=181,slow=38						
	46nm,0.4s						
CZSB	**Cruzeiro do Su**	**7.45**	**47**	Pn	**Pn**	**19 28 54.5**	**+1.5**
MCRA	**Macar, Loja**	**8.65**	**348**		**Pn**	**19 29 08.8**	**-0.8**
BOSC	**San Juan Bosco**	**9.69**	**358**	Pn	**Pn**	**19 29 23.6**	**-0.3**
LPAZ	**La Paz**	**10.31**	**110**	Pn	**Pn**	**19 29 33.7**	**+0.9**
COHC	**Cochancay**	**10.41**	**354**		**Pn**	**19 29 35.5**	**+1.8**
SALI	**Salinas**	**10.99**	**345**	Pn	**Pn**	**19 29 43.0**	**+1.4**
CHSH	**Refugio Sur-Vo**	**11.35**	**357**		**Pn**	**19 29 48.2**	**+1.2**
TBTG	**Tabatinga, AM**	**11.91**	**44**	Pn	**Pn**	**19 29 54.1**	**-0.1**
SLOR	**San Lorenzo -**	**12.09**	**359**		**Pn**	**19 29 58.1**	**+1.0**
ETMB	**Extrema**	**12.14**	**77**		**Pn**	**19 29 56.4**	**-0.9**
ETMB	**Extrema**	**12.14**	**77**	*eP*	**Pn**	**19 29 56.6**	**-0.7**
OTAV	**Otavalo**	**13.05**	**359**		**Pn**	**19 30 10.4**	**+0.2**
OTAV	**Otavalo**	**13.05**	**359**	*eP*	**Pn**	**19 30 14.9**	**+4.7**
LVC	**Limon Verde**	**13.09**	**139**	Sn	Sn	19 32 26.0	-11
	0.5nm,0.3s,baz=210,slow=8.1,SNR=2.4						
LVC				LR	LR	19 34 15.5	
	comp=Z,95nm,19.4s,baz=295,slow=33						
GO02	**Mina Guanaco**	**14.66**	**148**		**P**	**19 30 38.6**	**+0.3**
AC01	**Pan de Azucar**	**14.99**	**153**	Pn	**Pn**	**19 30 37.6**	**+1.3**
SAML	**Samuel**	**15.25**	**77**		**Pn**	**19 30 37.3**	**-2.4**
SAML	**Samuel**	**15.25**	**77**	*eP*	**Pn**	**19 30 37.5**	**-2.2**
AC02	**Maricunga**	**16.27**	**150**		**Pn**	**19 30 53.8**	**+0.4**
TEFE	**Tefe**	**16.33**	**56**	*eP*	**Pn**	**19 30 53.4**	**-0.4**
GO03	**Copiap**	**16.41**	**154**		**Pn**	**19 30 54.8**	**0.0**
LCO	**Las Campanas**	**17.49**	**158**		**Pn**	**19 31 08.8**	**+0.3**
VILB	**Vilhena**	**17.54**	**92**		**Pn**	**19 31 08.5**	**-0.6**
VILB				IAmb	IAmb	19 31 13.1	
	comp=Z,92nm,2.0s						
ROSC	**El Rosal**	**18.03**	**13**		**Pn**	**19 31 16.0**	**+0.5**
ROSC	**El Rosal**	**18.03**	**13**	P	**P**	**19 31 18.3**	**+2.4**
	comp=Z,1.0nm,0.3s,baz=158,slow=19,SNR=1.3						
	comp=Z,7.4nm,0.4s						
BBRB	**Robore, Bolivi**	**18.50**	**109**	*eP*	**P**	**19 31 19.2**	**-1.4**
PTLB	**Pontes e Lacer**	**18.65**	**100**		**P**	**19 31 20.2**	**-2.2**
PTLB	**Pontes e Lacer**	**18.65**	**100**	*eP*	**P**	**19 31 20.7**	**-1.7**
MACA	**Manacapuru-AM**	**19.83**	**62**	P	**P**	**19 31 34.7**	**-0.6**
MACA				IAmb	IAmb	19 31 37.6	
	comp=Z,32nm,0.7s						
MACA	**Manacapuru-AM**	**19.83**	**62**	*eP*	**Pn**	**19 31 37.2**	**+0.3**
VA03	**San Esteban**	**20.98**	**162**	P	**P**	**19 31 47.6**	**-0.1**
PDRB	**Porto dos Gac**	**21.01**	**89**	*eP*	**P**	**19 31 48.1**	**-0.1**
MURT	**Porto Murtinho**	**21.48**	**117**	*eP*	**P**	**19 31 53.4**	**+0.2**
BDQN	**Bodoquena, MS**	**21.86**	**113**	*eP*	**P**	**19 31 57.6**	**+0.4**
VACA	**Villa Angela C**	**21.97**	**135**	*eP*	**P**	**19 32 02.9**	**+4.6**
MT13	**San Alfonso**	**21.97**	**162**	P	**P**	**19 31 59.5**	**+1.0**
SALV	**Santo Antonio**	**21.99**	**101**	*eP*	**P**	**19 32 00.8**	**+2.0**
CLDB	**Colider**	**22.01**	**87**	*eP*	**P**	**19 31 59.5**	**+0.6**
AQDB	**Aquidauana**	**22.81**	**112**	P	**P**	**19 32 07.0**	**-0.4**
AQDB	**Aquidauana**	**22.81**	**112**	*eP*	**P**	**19 32 07.8**	**+0.4**
SDV	**Santo Domingo**	**22.90**	**20**	P	**P**	**19 32 08.8**	**+0.2**
SDV	**Santo Domingo**	**22.90**	**20**	P	**P**	**19 32 09.9**	**+1.3**
	comp=Z,4.1nm,0.5s,baz=228,slow=8.7,SNR=5.0						
SDV				LR	LR	19 42 20.2	
	comp=Z,201nm,20.4s,baz=184,slow=40						
	comp=Z,4.1nm,0.5s						
SDV	**Santo Domingo**	**22.90**	**20**	*eP*	**P**	**19 32 11.6**	**+3.0**
PP1B	**Ponte de Pedra**	**22.97**	**105**	*eP*	**P**	**19 32 08.3**	**-0.8**
ANTJ	**Antonio Joao (**	**23.00**	**116**	*eP*	**P**	**19 32 12.8**	**+3.4**
RVDE	**Rio Verde (Bra**	**23.16**	**108**	*eP*	**P**	**19 32 11.4**	**+0.2**
BOAV	**Boa Vista**	**23.21**	**50**	P	**P**	**19 32 10.2**	**-1.3**
BOAV	**Boa Vista**	**23.21**	**50**	*eP*	**P**	**19 32 12.5**	**+0.9**
NPGB	**Novo Progresso**	**23.22**	**78**	*eP*	**P**	**19 32 11.5**	**-0.2**
CPUP	**Villa Florida**	**23.72**	**127**	P	**P**	**19 32 16.4**	**-0.1**
CPUP	**Villa Florida**	**23.72**	**127**	P	**P**	**19 32 15.0**	**-1.6**
	comp=Z,1.2nm,0.4s,baz=320,slow=11,SNR=3.0						
CPUP				LR	LR	19 42 18.2	
	comp=Z,20nm,21.4s,baz=262,slow=39						
	comp=Z,1.2nm,0.4s						
CPUP	**Villa Florida**	**23.72**	**127**	*eP*	**P**	**19 32 19.0**	**+2.5**
ITTB	**Itaituba**	**23.75**	**71**	*eP*	**P**	**19 32 16.4**	**-0.5**
BAUV	**El Baul**	**23.92**	**25**	P	**P**	**19 32 17.8**	**-0.8**
RPRD	**Ribas do Rio P**	**24.62**	**111**	*eP*	**P**	**19 32 26.0**	**+0.9**
SNDB	**Serra Nova Dou**	**26.28**	**91**	*eP*	**P**	**19 32 40.1**	**0.0**
ITRB	**Iturama**	**27.53**	**108**	*eP*	**P**	**19 32 54.1**	**+2.7**
LDASE	**Londrina, Braz**	**27.72**	**116**	*eP*	**P**	**19 32 55.1**	**+2.1**
ITAB	**Concordia**	**28.25**	**124**	*eP*	**P**	**19 33 02.0**	**+4.3**
ALGR	**Alto Alegre (B**	**28.25**	**128**	*eP*	**P**	**19 33 01.6**	**+3.8**
PLCA	**Paso Flores**	**28.53**	**168**	P	**P**	**19 32 56.4**	**-3.7**
	comp=Z,2.3nm,0.8s,baz=337,slow=11,SNR=6.0						
	comp=Z,2.3nm,0.8s						
TRQA	**Tornquist**	**28.93**	**153**	*eP*	P	19 33 09.6	+6.0
BDFB	**Brasilia**	**29.36**	**99**	P	**P**	**19 33 06.0**	**-1.8**
BDFB				IAmb	IAmb	19 33 17.3	
	comp=Z,22nm,1.5s						

BDFB Brasilia 29.36 99 LR LR 19 44 52.9
comp=Z,140nm,20.1s,baz=329,slow=36

BB19B Bebedouro 29.47 110 *eP* **P** **19 33 09.9 +1.2**
PMNB Patos De Minas 31.05 105 *eP* **P** **19 33 25.8 +3.1**
MDP Montagnes des 31.05 56 LR LR 19 46 09.8
comp=Z,114nm,19.5s,baz=232,slow=37

HNDO Hondo 46.83 335 P **P** **19 35 35.0 +0.5**
DRIO Del Rio 47.31 333 P **P** **19 35 38.6 +0.3**
DRIO IAmb IAmb 19 35 39.5
comp=Z,9.2nm,0.9s

HPIG 47.74 326 P **P** **19 35 41.8 0.0**
HPIG IAmb IAmb 19 35 43.8
comp=Z,10.0nm,1.0s

SLBS Sierra La Lagu 47.81 319 P **P** **19 35 43.0 +0.7**
SLBS IAmb IAmb 19 36 40.7
comp=Z,16nm,1.6s

SAND Sanderson 48.44 332 P **P** **19 35 47.1 +0.1**
SAND IAmb IAmb 19 35 48.7
comp=Z,8.8nm,0.8s

TREL Terrell 48.49 340 P **P** **19 35 48.0 +0.7**
TX31 Lajitas Ar. Si 48.66 330 P **P** **19 35 48.6 -0.1**
TXAR Lajitas Array 48.66 330 P **P** **19 35 49.2 +0.4**
TXAR Lajitas Array 48.66 330 P **P** **19 35 49.0 +0.3**
comp=Z,2.0nm,0.8s,baz=153,slow=9.7,SNR=11
comp=Z,2.0nm,0.8s

PLPT Palo Pinto 49.35 338 P **P** **19 35 54.2 +0.3**
ALPN Alpine 49.50 331 P **P** **19 35 55.7 +0.4**
ALPN IAmb IAmb 19 35 56.8
comp=Z,22nm,1.9s

MNHN Monahans 49.91 332 P **P** **19 35 58.5 +0.3**
MNHN IAmb IAmb 19 35 59.7
comp=Z,18nm,0.9s

PECS Pecos 50.44 331 P **P** **19 36 03.2 +0.8**
PECS IAmb IAmb 19 36 04.2
comp=Z,25nm,1.5s

ODSA Odessa 50.47 333 P **P** **19 36 02.4 -0.1**
VHRN Van Horn 50.49 330 P **P** **19 36 03.0 +0.2**
APMT Aspermont 50.50 336 P **P** **19 36 02.6 -0.1**
APMT IAmb IAmb 19 36 04.0
comp=Z,10nm,0.8s

POST Post 50.83 335 P **P** **19 36 05.4 +0.2**
DKNS Dickens 51.12 336 P **P** **19 36 07.8 +0.4**
DKNS IAmb IAmb 19 36 08.5
comp=Z,11nm,0.8s

319A Douglas 53.18 327 IAmb IAmb 19 36 24.6
comp=Z,15nm,1.1s

121A Cookes Peak, D 53.30 329 IAmb IAmb 19 36 25.8
comp=Z,9.6nm,1.2s

ANMO Albuquerque 54.61 331 P **P** **19 36 32.8 -0.5**
ANMO IAmb IAmb 19 36 35.0
comp=Z,8.0nm,0.9s

TUC Tucson 54.71 326 P **P** **19 36 34.1 +0.2**
214A Organ Pipe Nat 55.57 324 IAmb IAmb 19 36 41.8
comp=Z,5.6nm,0.9s

SFX San Felipe 56.10 322 P **P** **19 36 44.1 +0.2**
SFX IAmb IAmb 19 36 45.4
comp=Z,5.8nm,1.0s

W18A Petrified Fore 56.34 329 P **P** **19 36 46.0 +0.3**
W18A IAmb IAmb 19 36 47.6
comp=Z,21nm,1.4s

S22A 4UR Ranch, Cre 57.09 333 P **P** **19 36 51.2 0.0**
S22A IAmb IAmb 19 37 51.6
comp=Z,8.9nm,1.4s

Q24A Divide 57.40 335 IAmb IAmb 19 36 54.9
comp=Z,18nm,1.7s

WUAZ Wupatki 57.48 328 IAmb IAmb 19 36 55.8
comp=Z,8.8nm,0.8s

W13A Hualapai Mount 58.50 326 IAmb IAmb 19 37 03.6
comp=Z,4.3nm,0.9s

KNB Kanab 59.38 328 IAmb IAmb 19 37 09.2
comp=Z,10.0nm,0.9s

LCMT Little Creek M 59.60 328 IAmb IAmb 19 37 10.3
comp=Z,5.7nm,0.9s

SRU San Rafael Swe 59.89 331 IAmb IAmb 19 38 19.3
comp=Z,11nm,1.0s

BSUT Blindstream Ca 61.13 332 IAmb IAmb 19 37 38.3
comp=Z,9.8nm,0.9s

WCT Wildcat Mounta 61.25 325 IAmb IAmb 19 37 21.7
comp=Z,5.1nm,0.8s

SPR3 Spring Creek 3 61.66 329 P **P** **19 37 23.2 +0.4**
SPR3 IAmb IAmb 19 37 24.1
comp=Z,8.7nm,0.8s

R11B Troy Canyon, C 61.83 327 IAmb IAmb 19 37 25.6
comp=Z,5.6nm,0.8s

DUG Dugway, Tooele 61.83 330 IAmb IAmb 19 37 25.5
comp=Z,8.9nm,0.8s

Q12A Willow Creek R 61.95 328 IAmb IAmb 19 37 26.2
comp=Z,8.7nm,0.9s

PDAR Pinedale Array 62.41 334 P **P** **19 37 27.7 0.0**
comp=Z,2.4nm,0.6s,baz=135,slow=8.8,SNR=11
comp=Z,2.4nm,0.6s

DSP Deep Springs 62.42 325 P **P** **19 37 28.3 +0.8**
DSP IAmb IAmb 19 37 29.4
comp=Z,5.9nm,1.1s

BGU Big Grassy Mou 62.50 331 IAmb IAmb 19 37 57.9
comp=Z,13nm,1.2s

TPH Tonopah 62.51 326 P **P** **19 37 28.7 +0.3**
MDPB Devils Postpil 63.23 324 IAmb IAmb 19 37 34.6
comp=Z,3.9nm,0.8s

NV11 Mina Array Sit 63.27 326 IAmb IAmb 19 37 35.0
comp=Z,4.2nm,0.8s

LHV Little Huntoon 63.34 325 IAmb IAmb 19 37 35.7
comp=Z,8.8nm,0.8s

NVAR Mina Array Bea 63.35 326 P **P** **19 37 33.7 -0.3**
comp=Z,4.1nm,0.8s,baz=138,slow=6.7,SNR=22
comp=Z,4.1nm,0.8s

ELK Elko 63.44 329 P **P** **19 37 34.7 +0.2**
ELK IAmb IAmb 19 37 36.0
comp=Z,5.6nm,0.9s

MOOW Moose Ponds 63.71 334 IAmb IAmb 19 37 27.1
comp=Z,10nm,1.2s

WAKR Walker 64.04 325 IAmb IAmb 19 37 40.5
comp=Z,6.3nm,0.9s

ULM Lac du Bonnet 64.76 348 IAmb IAmb 19 37 42.2
comp=Z,12nm,1.1s

ULM Lac du Bonnet 64.76 348 P **P** **19 37 41.9 -0.8**
comp=Z,6.6nm,0.8s,baz=165,slow=6.4,SNR=11
comp=Z,6.6nm,0.8s

HLID Hailey 65.19 332 IAmb IAmb 19 37 47.4
comp=Z,3.5nm,0.7s

BOZ Bozeman (W) 65.58 335 IAmb IAmb 19 37 49.4
comp=Z,4.2nm,0.8s

MFID Camas Ranch 65.74 331 IAmb IAmb 19 37 51.1
comp=Z,10nm,0.9s

I07A Izee 68.03 329 IAmb IAmb 19 38 05.7
comp=Z,9.0nm,0.9s

YBH Yreka Blue Hor 68.08 326 IAmb IAmb 19 38 04.4
comp=Z,6.8nm,0.8s

F10A Beach Ranch, E 68.33 332 IAmb IAmb 19 38 07.1
comp=Z,5.9nm,0.8s

J05D Fort Rock, OR 68.35 328 IAmb IAmb 19 38 07.5
comp=Z,8.4nm,1.1s

PINE Pine Mountain 68.55 328 IAmb IAmb 19 38 09.1
comp=Z,6.0nm,0.9s

G08A Pilot Rock 68.64 330 IAmb IAmb 19 39 02.9
comp=Z,7.3nm,0.7s

NEW Newport 70.01 333 IAmb IAmb 19 38 17.1
comp=Z,5.1nm,0.8s

NEW Newport 70.01 333 P **P** **19 38 14.6 -1.4**
comp=Z,4.6nm,0.7s,baz=129,slow=6.5,SNR=10
comp=Z,4.6nm,0.7s

FCC Fort Churchill 72.57 351 IAmb IAmb 19 38 31.3
comp=Z,7.3nm,0.6s

DBIC Dimbokro 75.39 80 P **P** **19 38 48.4 -0.4**
comp=Z,4.4nm,0.8s,baz=256,slow=8.3,SNR=3.3
comp=Z,4.4nm,0.8s

YKAB2 New Yellowknif 80.28 344 P **P** **19 39 14.1 -0.8**
YKA Yellowknife Ar 80.33 344 P **P** **19 39 14.2 -1.0**
YKA Yellowknife Ar 80.33 344 P **P** **19 39 14.4 -0.8**
comp=Z,1.4nm,0.6s,baz=143,slow=6.0,SNR=13
comp=Z,1.4nm,0.6s

TORD Torodi Ar. Bea 83.30 75 P **P** **19 39 31.7 -0.3**
TORD Torodi Ar. Bea 83.30 75 P **P** **19 39 32.0 +0.1**
comp=Z,1.1nm,0.8s,baz=273,slow=4.3,SNR=4.1
comp=Z,1.1nm,0.8s

ILAR Eielson Array 92.78 336 P **P** **19 40 15.2 -1.3**
comp=Z,0.9nm,0.8s,baz=149,slow=3.7,SNR=8.1
comp=Z,0.9nm,0.8s

MDM Murphy Dome 93.38 336 IAmb IAmb 19 40 19.0
comp=Z,5.6nm,0.8s

RPZ Rata Peaks 95.62 223 LR LR 20 15 46.6
comp=Z,83nm,21.0s,baz=32,slow=31

ASAR Alice Springs 131.98 221 PKP **PKPdf** **19 46 17.2 -1.8**
comp=Z,1.2nm,0.7s,baz=117,slow=2.0,SNR=16

WRA Warramunga Arr 134.28 225 PKP **PKPdf** **19 46 21.6 -1.7**
comp=Z,2.2nm,0.7s,baz=136,slow=1.9,SNR=17

ZALV Zalesovo Beam 136.89 15 PKP **PKPdf** **19 46 27.4 +0.3**
comp=Z,0.7nm,0.6s,baz=318,slow=2.0,SNR=4.4

KURBB Kurchatov Arra 137.86 22 PKP **PKPdf** **19 46 28.3 -0.7**
comp=Z,0.4nm,0.7s,baz=312,slow=2.4,SNR=4.2

MKAR Makanchi Array 142.43 22 PKhKP PKPpre 19 46 32.4
comp=Z,0.2nm,0.6s,baz=350,slow=3.1,SNR=4.1

SONM Songino Array 144.96 355 PKPbc **PKPab** **19 46 40.7 -0.4**
comp=Z,7.4nm,0.8s,baz=329,slow=2.6,SNR=47

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*CATAC **05** 19:28:46.4±0.3, 12°.97N×89°.04W, h30km±2km, ML4.5*
*NEIC **05** 19:28:47.5±2.3, 13°.04N±0°.06×89°.05W±0°.07, h63km±5km, mb4.3/24, Error ellipse: s-maj=10.5km s-min=7.5km az=47.0*
*SNET **05** 19:28:47.3±0.6, 13°.03N×89°.05W, h49km, ML4.5*
*IDC **05** 19:28:50.5±2.5, 13°.34N×88°.59W, h95km±24km, mb3.6/9, mbtmp3.9/10, MS3.8/2, Error ellipse: s-maj=44.4km s-min=16.4km az=46.0*
*GCG **05** 19:28:51.5±0.5, 13°.26N×89°.24W, h93km±62km, MD4.1*
ISC 05 19:28:46.4±0.7, 13°.02N±0°.04×89°.05W±0°.03, h64km±6km, n172, σ1s06/221, mb4.2/18, 6C-43D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.54**	**330**	*i*	P		**Pn**	**19 28 58.9**	**-0.2**
LALI					S		**Sn**	**19 29 07.4**	**-0.9**
LALI	**Alcalda de L**	**0.54**	**330**	*i*	P		**Pn**	**19 28 58.7**	**-0.4**
LALI				*i*	S		**Sn**	**19 29 07.3**	**-1.0**
LALI					IAML			19 29 12.3	
	comp=Z,4μm,1.0s								
ALJI	**Alcalda de J**	**0.56**	**57**	*i*	P		Pn	19 28 49.9	-9.4
ALJI				*i*	S		Sn	19 28 59.9	-8.8
TECO	**Alcaldia de Te**	**0.58**	**27**	*e*	P		**Pn**	**19 28 59.4**	**-0.1**
TECO	**Alcaldia de Te**	**0.58**	**27**	*i*	P		**Pn**	**19 28 59.4**	**-0.1**
TECO					IAML			19 29 00.1	
	comp=Z,16μm,1.0s								
TECO				*i*	S		**Sn**	**19 29 08.9**	**-0.3**
SJTE	**Alcalda de S**	**0.59**	**4**	*i*	P		**Pn**	**19 28 59.5**	**-0.3**
SJTE	**Alcalda de S**	**0.59**	**4**	*i*	P		**Pn**	**19 28 59.5**	**-0.3**
SJTE				*i*	S		**Sn**	**19 29 09.3**	**-0.3**
SJTE					IAML			19 29 10.5	
	comp=Z,15μm,1.0s								
LFRS	**El Faro**	**0.60**	**359**	*i*	P		**Pn**	**19 28 59.7**	**-0.2**
PANCS	**Alcalda de**	**0.60**	**348**	*e*	P		**Pn**	**19 28 59.5**	**-0.4**
PANCS	**Alcalda de**	**0.60**	**348**	*i*	P		**Pn**	**19 28 59.4**	**-0.4**
PANCS				*i*	S		**Sn**	**19 29 09.1**	**-0.6**
PANCS					IAML			19 29 11.6	
	comp=Z,20μm,1.0s								
COEG	**Centro de Oper**	**0.62**	**15**	*i*	P		**Pn**	**19 29 00.1**	**0.0**
COEG				*i*	S		**Sn**	**19 29 10.0**	**-0.1**
COEG					IAML			19 29 16.6	
	comp=Z,8μm,1.0s								
SNVI	**San Vicente**	**0.62**	**19**	*e*	P		**Pn**	**19 29 00.2**	**0.0**
LOMA	**Loma Larga**	**0.63**	**349**	*i*	P		**Pn**	**19 29 00.2**	**-0.1**
LOMA	**Loma Larga**	**0.63**	**349**	*i*	P		**Pn**	**19 29 00.2**	**-0.1**
LOMA				*i*	S		**Sn**	**19 29 10.7**	**+0.3**
LOMA					IAML			19 29 14.7	
	comp=Z,20μm,1.0s								
UESV	**Universidad de**	**0.66**	**23**	*e*	P		**Pn**	**19 29 00.7**	**+0.1**
UESV	**Universidad de**	**0.66**	**23**	*i*	P		**Pn**	**19 29 00.6**	**+0.1**
UESV					IAML			19 29 01.1	
	comp=Z,19μm,1.0s								
UESV				*i*	S		**Sn**	**19 29 11.2**	**+0.3**
AEIL	**Aeropuerto Ilo**	**0.68**	**354**	*e*	P		**Pn**	**19 29 00.9**	**+0.2**
ITCA	**Escuela Especi**	**0.69**	**341**	*i*	P		**Pn**	**19 29 00.9**	**0.0**
ITCA				*i*	S		**Sn**	**19 29 11.7**	**+0.2**
ITCA					IAML			19 29 19.8	
	comp=Z,29μm,1.0s								
SNET	**Serv Nac Est T**	**0.69**	**345**	*i*	P		**Pn**	**19 29 00.8**	**0.0**
SNET	**Serv Nac Est T**	**0.69**	**345**	*i*	P		**Pn**	**19 29 00.7**	**-0.1**
SNET				*i*	S		**Sn**	**19 29 11.3**	**-0.1**
SNET					IAML			19 29 13.1	
	comp=Z,24μm,1.0s								
UTEC	**Universidad Te**	**0.69**	**348**	*i*	P		**Pn**	**19 29 00.8**	**-0.1**
UTEC				*i*	S		**Sn**	**19 29 11.7**	**+0.1**
UTEC					IAML			19 29 14.4	
	comp=Z,11μm,1.0s								
PAVA	**Las Pavas**	**0.70**	**9**	*i*	P		**Pn**	**19 29 01.2**	**+0.2**
PAVA	**Las Pavas**	**0.70**	**9**	*i*	P		**Pn**	**19 29 01.2**	**+0.2**
PAVA				*i*	S		**Sn**	**19 29 12.2**	**+0.5**
PAVA					IAML			19 29 13.4	
	comp=Z,19μm,1.0s								
IGN	**Direccin Gen**	**0.70**	**350**	*e*	P		**Pn**	**19 29 01.1**	**+0.1**
IGN	**Direccin Gen**	**0.70**	**350**	*i*	P		**Pn**	**19 29 01.1**	**+0.1**
IGN				*i*	S		**Sn**	**19 29 12.1**	**+0.4**
IGN					IAML			19 29 12.6	
	comp=Z,62μm,1.0s								
MAGS	**Ministerio de**	**0.70**	**341**	*e*	P		**Pn**	**19 29 01.1**	**+0.1**
SEMO	**Seminario San**	**0.70**	**346**	*i*	P		**Pn**	**19 29 00.9**	**-0.1**
SEMO				*i*	S		**Sn**	**19 29 11.6**	**-0.1**
SEMO					IAML			19 29 13.7	
	comp=Z,27μm,1.0s								
TECA	**Tecapa**	**0.71**	**48**	*i*	P		**Pn**	**19 29 01.6**	**+0.3**
UESS	**Universidad de**	**0.71**	**348**	*e*	P		**Pn**	**19 29 01.3**	**+0.2**
LBRS	**Las Brisas**	**0.71**	**0**	*e*	P		**Pn**	**19 29 01.6**	**+0.4**
UEES	**Universidad Ev**	**0.72**	**345**	*e*	P		**Pn**	**19 29 01.3**	**0.0**
UEES	**Universidad Ev**	**0.72**	**345**	*i*	P		**Pn**	**19 29 01.2**	**0.0**
UEES				*i*	S		**Sn**	**19 29 12.8**	**+0.7**
UEES					IAML			19 29 14.2	
	comp=Z,10μm,1.0s								
LFU	**La Fuente**	**0.73**	**355**	*i*	P		**Pn**	**19 29 01.6**	**+0.3**
PMON	**Piamonte**	**0.73**	**339**	*e*	P		**Pn**	**19 29 01.5**	**+0.1**
PMON	**Piamonte**	**0.73**	**339**	*i*	P		**Pn**	**19 29 01.5**	**+0.1**
PMON				*i*	S		**Sn**	**19 29 13.1**	**+0.6**
PMON					IAML			19 29 18.6	
	comp=Z,20μm,1.0s								
JAYA	**Jayaque - finc**	**0.74**	**328**	*i*	P		**Pn**	**19 29 01.6**	**0.0**
JAYA				*e*	S		**Sn**	**19 29 12.0**	**-0.7**
JAYA	**Jayaque - finc**	**0.74**	**328**	*i*	P		**Pn**	**19 29 01.4**	**-0.2**
JAYA				*i*	S		**Sn**	**19 29 12.2**	**-0.5**
JAYA					IAML			19 29 14.2	
	comp=Z,83nm,1.0s								
BOQS	**Boqueron**	**0.75**	**343**	*i*	P		**Pn**	**19 29 01.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.75**	**25**	*i*	P		**Pn**	**19 29 02.1**	**+0.6**
SCLA				*i*	S		**Sn**	**19 29 13.5**	**+0.9**
PIC2	**El Picacho**	**0.75**	**344**	*i*	P		**Pn**	**19 29 02.1**	**+0.4**
PQSS	**Presa 15 de Se**	**0.77**	**38**	*e*	P		**Pn**	**19 29 02.2**	**+0.5**
PQSS	**Presa 15 de Se**	**0.77**	**38**	*i*	P		**Pn**	**19 29 02.2**	**+0.5**
PQSS				*i*	S		**Sn**	**19 29 14.4**	**+1.4**
PQSS					IAML			19 29 15.9	
	comp=Z,27μm,1.0s								
JUCU	**Jucuarįn**	**0.81**	**73**	*e*	P		**Pn**	**19 29 02.2**	**-0.1**
JUCU				*e*	S		**Sn**	**19 29 14.2**	**+0.1**
PACA	**Pacayal**	**0.84**	**58**	*e*	P		**Pn**	**19 29 03.6**	**+0.9**
PACA	**Pacayal**	**0.84**	**58**	*i*	P		**Pn**	**19 29 03.4**	**+0.7**
PACA				*i*	S		**Sn**	**19 29 16.3**	**+1.6**
PACA					IAML			19 29 17.2	
	comp=Z,150μm,1.0s								
LCY	**Lacayo**	**0.84**	**61**	*e*	P		**Pn**	**19 29 03.2**	**+0.5**
QUEZ	**Alcaldia de Qu**	**0.84**	**345**	*i*	P		**Pn**	**19 29 02.8**	**+0.2**
QUEZ				*i*	S		**Sn**	**19 29 15.3**	**+0.7**
QUEZ					IAML			19 29 19.0	
	comp=Z,23μm,1.0s								
CEDA	**San Andres**	**0.85**	**337**	*e*	P		**Pn**	**19 29 03.1**	**+0.3**
CEDA	**San Andres**	**0.85**	**337**	*i*	P		**Pn**	**19 29 02.9**	**+0.2**
CEDA				*i*	S		**Sn**	**19 29 15.5**	**+0.7**
CEDA					IAML			19 29 19.2	
	comp=Z,29μm,1.0s								
RANC	**El Ranchito**	**0.85**	**61**	*e*	P		**Pn**	**19 29 03.4**	**+0.5**
BLLM	**Bellamira**	**0.90**	**62**	*i*	P		**Pn**	**19 29 03.8**	**+0.5**
CEVE	**Cerro Verde**	**0.98**	**325**	*e*	P		**Pn**	**19 29 05.2**	**+0.7**
CEVE	**Cerro Verde**	**0.98**	**325**	*i*	P		**Pn**	**19 29 05.1**	**+0.5**
CEVE				*i*	S		**Sn**	**19 29 19.3**	**+1.3**
CEVE					IAML			19 29 30.7	
	comp=Z,12μm,1.0s								
SBLS	**San Blas**	**0.99**	**326**	*e*	P		**Pn**	**19 29 05.4**	**+0.7**
SNJE	**San Jose**	**1.00**	**327**	*e*	P		**Pn**	**19 29 05.4**	**+0.6**
RTR	**El Retiro**	**1.05**	**326**	*e*	P		**Pn**	**19 29 06.3**	**+0.9**
UNIC	**Universidad Ca**	**1.07**	**333**	*i*	P		**Pn**	**19 29 06.3**	**+0.7**
UNIC				*i*	S		**Sn**	**19 29 20.9**	**+1.0**
UNIC					IAML			19 29 21.8	
	comp=Z,4μm,1.0s								
NUBE	**Las Nubes**	**1.13**	**321**	*e*	P		**Pn**	**19 29 06.9**	**+0.4**
NUBE	**Las Nubes**	**1.13**	**321**	*i*	P		**Pn**	**19 29 06.8**	**+0.4**
NUBE				*i*	S		**Sn**	**19 29 22.2**	**+0.9**
NUBE					IAML			19 29 24.1	
	comp=Z,16μm,1.0s								
LLGN	**La Laguna**	**1.14**	**5**	*i*	P		**Pn**	**19 29 07.1**	**+0.6**
LLGN				*i*	S		**Sn**	**19 29 22.3**	**+0.8**
LLGN					IAML			19 29 24.3	
	comp=Z,3μm,1.0s								
LCND	**La Caada**	**1.17**	**76**	*e*	P		**Pn**	**19 29 07.4**	**+0.6**
LCND	**La Caada**	**1.17**	**76**	*i*	P		**Pn**	**19 29 07.2**	**+0.5**
LCND				*i*	P			19 29 07.7	
LCND				*i*	S		**Sn**	**19 29 23.2**	**+1.3**
LCND				*i*	S		**Sn**	**19 29 23.2**	**+1.3**
LCND					IAML			19 29 26.2	
	comp=Z,18μm,1.0s								
LCND					IAML			19 29 26.3	
	comp=Z,11μm,1.0s								
LOAL	**Lomas de Alarc**	**1.21**	**324**	*i*	P		**Pn**	**19 29 08.2**	**+0.9**
LOAL					IAML			19 29 30.3	
	comp=Z,11μm,1.0s								
CNCH	**Conchagua**	**1.21**	**78**	*e*	P		**Pn**	**19 29 08.0**	**+0.5**
CNCH	**Conchagua**	**1.21**	**78**	*i*	P		**Pn**	**19 29 07.8**	**+0.3**
CNCH				*i*	S		**Sn**	**19 29 24.1**	**+0.9**
CNCH					IAML			19 29 31.4	
	comp=Z,13μm,1.0s								
SLOZ	**Alcaldia de Sa**	**1.23**	**325**	*e*	P		**Pn**	**19 29 08.6**	**+1.0**
AMPH	**Amapala**	**1.38**	**79**	*e*	P		**Pn**	**19 29 10.1**	**+0.6**
AMPH	**Amapala**	**1.38**	**79**	*i*	P		**Pn**	**19 29 09.7**	**+0.1**
AMPH				*i*	S		**Sn**	**19 29 28.1**	**+1.1**
MTO3	**Montecristo**	**1.40**	**348**	Pn			**Pn**	**19 29 10.5**	**+0.4**
MTO3					S		**Sn**	**19 29 28.4**	**+0.5**
MTO3	**Montecristo**	**1.40**	**348**	*i*	P		**Pn**	**19 29 10.8**	**+0.6**
MTO3	**Montecristo**	**1.40**	**348**	*i*	P		**Pn**	**19 29 10.7**	**+0.6**
MTO3				*i*	S		**Sn**	**19 29 28.3**	**+0.4**
MTO3					IAML			19 29 36.3	
	comp=Z,2μm,1.0s								
CSGN	**Cosiguina Volc**	**1.45**	**92**	*i*	P		**Pn**	**19 29 11.4**	**+0.8**
CSGN					IAML			19 29 32.9	
	comp=Z,190nm,1.0s								
ESQI	**Esquipulas**	**1.56**	**350**	Pn			**Pn**	**19 29 13.1**	**+1.0**
ESQI					S		**Sn**	**19 29 32.5**	**+1.1**
ESQI	**Esquipulas**	**1.56**	**350**	*i*	P		**Pn**	**19 29 13.0**	**+1.0**
ESQI				*i*	S		**Sn**	**19 29 33.4**	**+2.0**
ESQI					IAML			19 29 34.1	
	comp=Z,2μm,1.0s								
CRIN	**San Cristobal**	**1.98**	**99**				**Pn**	**19 29 18.6**	**+0.9**
CRIN	**San Cristobal**	**1.98**	**99**	*i*	P		**Pn**	**19 29 18.5**	**+0.9**
CRIN				*i*	S		**Sn**	**19 29 43.3**	**+1.9**
CRIN					IAML			19 29 48.8	
	comp=Z,6μm,1.0s								
NBG	**Las Nubes**	**2.00**	**321**	*e*	P		**Pn**	**19 29 21.1**	**+2.8**
GUNB	**GUNB**	**2.01**	**321**	*i*	P		**Pn**	**19 29 19.4**	**+1.1**
GUNB					IAML			19 29 59.2	
	comp=Z,1μm,1.0s								
TGUH	**Tegucigalpa,Un**	**2.01**	**59**	Pn			**Pn**	**19 29 17.9**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.01**	**59**	*i*	P		**Pn**	**19 29 18.7**	**+0.5**
TGUH					IAML			19 29 38.9	
	comp=Z,2μm,1.0s								
COMHN	**El Horno**	**2.03**	**46**	*i*	P		**Pn**	**19 29 18.8**	**+0.3**
PCG	**Pacaya**	**2.04**	**312**	*e*	P		**Pn**	**19 29 21.7**	**+3.1**
TEL3	**Telica 3**	**2.20**	**101**	*i*	P		**Pn**	**19 29 20.5**	**-0.1**
TEL3					IAML			19 29 52.9	
	comp=Z,4μm,1.0s								
HERN	**Volcan Telica**	**2.20**	**100**	*i*	P		**Pn**	**19 29 20.7**	**0.0**
HERN				*i*	S		**Sn**	**19 29 47.1**	**+0.1**
HERN					IAML			19 29 50.0	
	comp=Z,3μm,1.0s								
FUG	**Fuego 3**	**2.25**	**309**	*e*	P		**Pn**	**19 29 23.7**	**+2.3**
PACN	**Al O del Volca**	**2.26**	**103**	*i*	P		**Pn**	**19 29 20.9**	**-0.6**
PACN					IAML			19 29 55.7	
	comp=Z,4μm,1.0s								
ILCN	**San Idelfonso**	**2.33**	**101**	*i*	P		**Pn**	**19 29 23.1**	**+0.7**
ILCN				*i*	S		**Sn**	**19 29 49.6**	**-0.5**
ILCN					IAML			19 29 56.1	
	comp=Z,570nm,1.0s								
YUSH	**Yuscaran**	**2.34**	**66**	*i*	P		**Pn**	**19 29 23.4**	**+0.8**
CNGA	**Al SSO del Vol**	**2.35**	**103**	*i*	P		**Pn**	**19 29 22.9**	**+0.2**
CNGA				*i*	S		**Sn**	**19 29 49.2**	**-1.3**
CNGA					IAML			19 29 57.2	
	comp=Z,3μm,1.0s								
CNGN	**Cerro Negro**	**2.35**	**102**				**Pn**	**19 29 23.0**	**+0.3**
CNGN	**Cerro Negro**	**2.35**	**102**	*i*	P		**Pn**	**19 29 23.1**	**+0.3**
CNGN				*i*	S		**Sn**	**19 29 50.4**	**-0.2**
CNGN					IAML			19 30 01.1	
	comp=Z,2μm,1.0s								
LEVN	**Ruinas Leon Vi**	**2.45**	**104**	*i*	P		**Pn**	**19 29 24.9**	**+0.9**
LEVN				*i*	S		**Sn**	**19 29 54.6**	**+1.7**
LEVN					IAML			19 30 01.5	
	comp=Z,2μm,1.0s								
MOMN	**Momotombo**	**2.52**	**104**	*i*	P		**Pn**	**19 29 25.1**	**0.0**
MOMN				*i*	S		**Sn**	**19 29 54.4**	**-0.3**
MOMN					IAML			19 30 02.9	
	comp=Z,57nm,1.0s								
COPN	**Copaltepe**	**2.54**	**109**	*i*	P		**Pn**	**19 29 24.8**	**-0.5**
COPN					IAML			19 29 56.1	
	comp=Z,2μm,1.0s								
MOM2	**El Cardon**	**2.57**	**103**	*i*	P		**Pn**	**19 29 26.2**	**+0.6**
MOM2				*i*	S		**Sn**	**19 29 56.8**	**+1.0**
MOM2					IAML			19 30 05.4	
	comp=Z,590nm,1.0s								
LIMN	**Finca el Limon**	**2.62**	**89**	*i*	P		**Pn**	**19 29 26.9**	**+0.5**
LIMN					IAML			19 29 53.7	
	comp=Z,510nm,1.0s								
LIMN				*i*	S		**Sn**	**19 29 57.7**	**+0.6**
SAPS	**Ciudad Sandino**	**2.72**	**108**	*i*	P		**Pn**	**19 29 28.5**	**+0.8**
SAPS				*i*	S		**Sn**	**19 29 58.8**	**-0.6**
SAPS					IAML			19 30 09.1	
	comp=Z,2μm,1.0s								
TISN	**Laguna Tiscapa**	**2.85**	**108**	*i*	P		**Pn**	**19 29 28.9**	**-0.6**
TISN					IAML			19 30 08.4	
	comp=Z,77nm,1.0s								
UNAN	**Cigeo UNAN**	**2.86**	**108**	*i*	S		**Sn**	**19 30 02.1**	**-0.8**
WILN	**Americas 2**	**2.92**	**107**	*i*	S		**Sn**	**19 30 03.5**	**-0.9**
STG3	**Santiaguito 3,**	**2.97**	**305**	*e*	P		**Pn**	**19 29 34.0**	**+2.7**
STG3				*e*	S		**Sn**	**19 30 07.0**	**+1.1**
RTAL	**Retalhuleu**	**2.97**	**301**				**Pn**	**19 29 32.4**	**+1.2**
MAS3	**Al N del Volca**	**2.98**	**109**	*i*	S		**Sn**	**19 30 04.6**	**-1.2**
MATN	**Matagalpa**	**3.05**	**91**				**Pn**	**19 29 32.5**	**+0.2**
MATN	**Matagalpa**	**3.05**	**91**	*i*	P

MOIG	**Morelia**	**13.40**	**301**	Pn	**Pn**	**19 31 54.6**	**+0.7**
OTAV	**Otavalo**	**16.48**	**140**		**Pn**	**19 32 34.2**	**+0.1**
OTAV				IAmb	IAmb	19 32 46.9	
	comp=Z,15nm,0.6s						
HNDO	**Hondo**	**18.97**	**332**	P	**P**	**19 33 02.5**	**-0.2**
DRIO	**Del Rio**	**19.54**	**328**	P	**P**	**19 33 07.6**	**-1.2**
JCT	**Junction City**	**20.02**	**332**	P	**P**	**19 33 14.5**	**+0.5**
JCT				IAmb	IAmb	19 33 20.2	
	comp=Z,6.8nm,0.8s						
BRDY	**Brady**	**20.36**	**335**	P	**P**	**19 33 17.6**	**-0.1**
BRDY				IAmb	IAmb	19 33 19.2	
	comp=Z,7.4nm,0.7s						
TXAR	**Lajitas Array**	**21.16**	**322**	P	**P**	**19 33 28.7**	**+2.2**
	comp=Z,2.1nm,0.6s,baz=146,slow=11,SNR=19						
TXAR				PcP	**PcP**	**19 37 31.8**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=134,slow=3.6,SNR=5.3						
	comp=Z,2.1nm,0.6s						
MIAR	**Mount Ida**	**21.82**	**350**	IAmb	IAmb	19 33 36.9	
	comp=Z,8.4nm,0.9s						
MNHN	**Monahans**	**22.18**	**327**	IAmb	IAmb	19 33 40.1	
	comp=Z,6.2nm,0.8s						
FCAR	**Ozark Folk Cen**	**22.94**	**354**	P	**P**	**19 33 46.4**	**+1.2**
MGMO	**Mountain Grove**	**24.21**	**354**	IAmb	IAmb	19 33 59.6	
	comp=Z,20nm,1.3s						
SMWD	**Samnorwood**	**24.21**	**337**	IAmb	IAmb	19 33 59.1	
	comp=Z,9.5nm,0.8s						
U54A	**Nelsons Funny**	**24.29**	**14**	P	**P**	**19 33 57.5**	**-0.3**
S39A	**Bolivar**	**24.86**	**352**	P	**P**	**19 34 03.7**	**+0.7**
S39A				IAmb	IAmb	19 34 07.1	
	comp=Z,10.0nm,1.2s						
CCM	**Cathedral Cave**	**25.01**	**356**	P	**P**	**19 34 04.3**	**0.0**
CCM				IAmb	IAmb	19 34 06.6	
	comp=Z,8.9nm,0.7s						
ETMB	**Extrema**	**32.08**	**134**	P	**P**	**19 35 08.4**	**+0.9**
ETMB				IAmb	IAmb	19 35 10.8	
	comp=Z,5.0nm,0.7s						
RSSD	**Black Hills**	**33.56**	**340**		**P**	**19 35 20.6**	**+0.2**
RSSD				IAmb	IAmb	19 35 23.3	
	comp=Z,5.4nm,0.9s						
PDAR	**Pinedale Array**	**34.55**	**333**	P	**P**	**19 35 29.0**	**0.0**
	comp=Z,0.5nm,0.7s,baz=128,slow=12,SNR=5.0						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**36.25**	**320**	P	**P**	**19 35 46.0**	**+2.3**
	comp=Z,0.7nm,0.8s,baz=134,slow=6.7,SNR=4.3						
NVAR				LR	LR	19 54 28.6	
	comp=Z,68nm,19.3s,baz=358,slow=42						
	comp=Z,0.7nm,0.8s						
ULM	**Lac du Bonnet**	**37.54**	**353**	P	**P**	**19 35 52.7**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=201,slow=10,SNR=3.9						
	comp=Z,1.4nm,0.5s						
FFC	**Flin Flon**	**42.83**	**349**		**P**	**19 36 36.4**	**-1.5**
FFC				IAmb	IAmb	19 36 38.8	
	comp=Z,5.2nm,0.9s						
EDM	**Edmonton**	**44.52**	**339**		**P**	**19 36 51.2**	**-0.3**
SCHQ	**Schefferville**	**45.20**	**18**	P	**P**	**19 36 55.1**	**-1.8**
	comp=Z,5.2nm,0.8s,baz=222,slow=5.1,SNR=3.6						
	comp=Z,5.2nm,0.8s						
YKA	**Yellowknife Ar**	**52.66**	**345**	P	**P**	**19 37 52.3**	**-1.5**
YKA	**Yellowknife Ar**	**52.66**	**345**	P	**P**	**19 37 53.5**	**-0.3**
	comp=Z,4.8nm,0.8s,baz=141,slow=7.4,SNR=75						
YKA				PcP	**PcP**	**19 39 02.4**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=145,slow=4.2,SNR=4.1						
	comp=Z,4.8nm,0.8s						
ILAR	**Eielson Array**	**64.87**	**336**	P	**P**	**19 39 17.9**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=112,slow=3.5,SNR=7.8						
	comp=Z,1.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**77.08**	**36**	P	**P**	**19 40 30.6**	**-2.0**
	comp=Z,1.8nm,1.0s,baz=267,slow=6.3,SNR=1.6						
	comp=Z,1.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**87.81**	**77**	P	**P**	**19 41 27.2**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=285,slow=3.7,SNR=1.6						
	comp=Z,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**115.70**	**9**	PKP	**PKPdf**	**19 47 21.7**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=1.4,slow=2.4,SNR=5.2						
MKAR	**Makanchi Array**	**119.96**	**7**	PKP	**PKPdf**	**19 47 29.3**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=346,slow=1.8,SNR=1.7						
WRA	**Warramunga Arr**	**137.92**	**255**	PKP	**PKPdf**	**19 48 05.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=88,slow=2.1,SNR=4.9						
MND	**Mandalay**	**144.82**	**352**	PKPdf	**PKPab**	**19 48 14.8**	**-1.1**
CRAI	**Chiangrai**	**145.68**	**344**		**PKPdf**	**19 48 17.4**	**-1.1**
CM31	**Chiang Mai Arr**	**147.74**	**346**	PKPdf	**PKPdf**	**19 48 20.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**147.74**	**346**	PKPdf	**PKPdf**	**19 48 21.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**147.74**	**346**	PKPbc	**PKPdf**	**19 48 22.4**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=342,slow=2.9,SNR=13						

TAP 05 19:29:32.3, 23.31°N × 121.34°E, h39 km ± 1 km, ML1.5, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYUL	**Yuli**	**0.05**	**331**	*i* P	Pn	19 29 38.8	+0.1
	baz=330						
TWF1	**Yuli**	**0.06**	**317**	*i* P	Pn	19 29 38.8	+0.1
	baz=321						
TWF1				*i* S	Sn	19 29 43.7	+0.6
	baz=321						
YULB	**Yu-li**	**0.10**	**334**	*i* P	Pn	19 29 38.8	0.0
	baz=333						
YULB				*i* S	Sn	19 29 43.7	+0.3
	baz=333						
ECBN	**Changbin**	**0.10**	**85**	S	Sn	19 29 45.1	+1.7
	baz=84						
FULB	**Fuli**	**0.12**	**203**	*i* P	Pn	19 29 39.6	-1.7
	baz=202						
FULB				*i* S	Sn	19 29 45.7	-3.1
	baz=202						
EHY	**Hungye**	**0.20**	**354**	*i* P	Pn	19 29 39.4	-1.0
	baz=356						
EHY				*i* S	Sn	19 29 44.5	-2.5
	baz=356						
HGSD	**Ruisui**	**0.20**	**22**	P	Pn	19 29 40.1	-0.3
	baz=21						
HGSD				S	Sn	19 29 46.4	-0.6
	baz=21						
EHD	**Haiduan**	**0.20**	**219**	*i* P	Pn	19 29 39.3	-1.1
	baz=218						
EHD				*i* S	Sn	19 29 44.7	-2.3
	baz=218						
CHKT	**Chengkung**	**0.21**	**174**	S	Sn	19 29 45.7	-1.2
	baz=172						
ELDTW	**Lidau**	**0.32**	**249**	*i* P	Pn	19 29 41.2	+0.3
	baz=247						
ELDTW				*i* S	Sn	19 29 47.5	+0.2
	baz=247						
WARBT	**Fenglin Townsh**	**0.41**	**6**	*i* P	Pn	19 29 41.1	-0.7
	baz=5.0						
WARBT				*e*S	Sn	19 29 47.4	-1.1
	baz=5.0						
LONT	**Longtian**	**0.44**	**206**	S	Sn	19 29 49.0	-0.2
	baz=206						
VWDT	**VWDT**	**0.48**	**337**	*i* P	Pn	19 29 43.7	+1.0
	baz=337						
VWDT				*i* S	Sn	19 29 51.3	+1.3
	baz=337						
ALS	**Alishan**	**0.53**	**292**	*e*P	Pn	19 29 45.6	+1.8
	baz=292						
ALS				*e*S	Sn	19 29 54.1	+2.4
	baz=292						
STYH	**Taoyuan**	**0.54**	**256**	*e*S	Sn	19 29 54.1	+2.6
	baz=256						
TWGBT	**Beinan**	**0.54**	**206**	*e*S	Sn	19 29 50.6	-1.0
	baz=206						
TWG	**Pinlang**	**0.55**	**207**	*e*S	Sn	19 29 50.7	-0.9
	baz=206						
WHYT	**Xinyi Township**	**0.59**	**311**	*e*P	Pn	19 29 45.7	+1.3
	baz=310						
WHYT				*e*S	Sn	19 29 55.1	+2.3
	baz=310						
SSLB	**Suanglung**	**0.60**	**323**	P	Pn	19 29 45.8	+1.4
	baz=323						
SSLB				S	Sn	19 29 54.0	+1.0
	baz=323						
ETM	**Tongmen**	**0.67**	**12**	*e*P	Pn	19 29 45.9	+0.5
	baz=11						
LXIB	**Xiulin Townshi**	**0.71**	**5**	*e*S	Sn	19 29 56.9	+1.0
	baz=5.0						

*NNC **05** 19:53:42.1±2.1, 41.°14N × 68.°75E, h0 km, mb3.9, mpv3.5, Error ellipse: s-maj=16.0km s-min=11.9km az=1.0*
*SOME **05** 19:53:44.7, 40.°98N × 69.°38E, h0km*
*ISU **05** 19:53:45.5, 41.°03N × 69.°24E, h4km*
*KRNET **05** 19:53:45.5±0.1, 41.°27N × 69.°04E, mb3.3*
ISC 05 19:53:45.0±1.1, 41.°17N±0.°03 × 69.°13E±0.°02, h2 km ± 10 km, n39, σ 2.9 28/74, 22C-19D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHM	**Chimkent**	**1.21**	**17**	*e*P	**Pg**	**19 54 12.1**	**+4.0**
	160nm,0.2s						
CHM				*e*S	**Sn**	**19 54 30.6**	**+4.8**
	980nm,0.3s						
DZI	**Dzhizak**	**1.44**	**224**	P	**Pg**	**19 54 13.0**	**+0.3**
DZI				S	**Sg**	**19 54 33.1**	**+1.7**
TRKS	**Terek-Say**	**1.56**	**76**	⇑*e*P	**Pb**	**19 54 15.0**	**+0.4**
	baz=83						
TRKS				⇑*e*S	**Sg**	**19 54 36.0**	**+1.0**
	baz=83						
MINT	**Mingtut**	**1.56**	**116**	P	**Pn**	**19 54 13.3**	**-0.5**
MINT				S	**Sn**	**19 54 33.7**	**-0.9**
BTK	**Batken**	**1.70**	**130**	⇑*e*P	**Pb**	**19 54 17.8**	**+0.9**
	baz=31						
BTK				⇑*e*S	**Sg**	**19 54 41.4**	**+1.9**
	baz=31						
KSNS	**Kasansay**	**1.81**	**89**	P	**Pb**	**19 54 18.6**	**-0.2**
KSNS				S	**Sb**	**19 54 42.7**	**+0.8**
CHMI	**Chimion**	**2.03**	**115**	P	**Pn**	**19 54 21.7**	**+1.5**
CHMI				S	**Sb**	**19 54 47.9**	**-0.3**
KK31	**Karatay Array**	**2.19**	**28**	⇑Pn	**Pn**	**19 54 22.2**	**-0.2**
	12nm,0.3s,baz=257,slow=17,SNR=94						
KK31				⇓Sn	**Sb**	**19 54 52.5**	**-0.5**
	22nm,0.3s,baz=217,slow=29,SNR=7.2						
KKAR	**Karatay Array**	**2.19**	**28**	⇑*e*P	**Pn**	**19 54 22.2**	**-0.2**
	baz=30						
KKAR				⇑*e*S	**Sn**	**19 54 49.1**	**-1.0**
	baz=30						
ARK	**Arkit**	**2.22**	**73**	⇑*e*P	**Pn**	**19 54 24.2**	**+1.3**
	baz=76						
ARK				⇑*e*S	**Sb**	**19 54 52.3**	**-1.6**
	baz=76						
AGL	**Agalyk**	**2.38**	**227**	P	**Pb**	**19 54 28.7**	**+0.2**
AGL				S	**Sg**	**19 55 02.1**	**+0.7**
DZA	**Taraz**	**2.38**	**43**	*e*P	**Pb**	**19 54 29.1**	**+0.5**
	48nm,0.3s						
DZA				*e*S	**Sg**	**19 55 00.5**	**-1.0**
	141nm,0.4s						
ANR	**Andizhan**	**2.48**	**98**	P	**Pb**	**19 54 29.0**	**-1.3**
ANR				S	**Sb**	**19 55 02.9**	**+1.7**
TSTA	**Tashata**	**2.61**	**102**	P	**Pn**	**19 54 30.5**	**+2.4**
TSTA				S	**Sb**	**19 55 06.3**	**+1.4**
DRK	**Karamyk**	**2.65**	**129**	⇑*e*P	**Pn**	**19 54 31.3**	**+2.4**
	baz=29						
DRK				⇑*e*S	**Sb**	**19 55 04.8**	**-1.5**
	baz=29						
NUT	**Nurota**	**2.69**	**258**	P	**Pb**	**19 54 34.0**	**+0.2**
NUT				S	**Sg**	**19 55 13.5**	**+2.2**
OHH	**Osh**	**2.85**	**102**	⇓*e*P	**Pn**	**19 54 33.5**	**+2.0**
	baz=4.0						
OHH				⇓*e*S	**Sn**	**19 55 08.4**	**+2.1**
	baz=4.0						
MNAS	**Manas**	**2.85**	**61**	⇓*e*P	**Pn**	**19 54 32.5**	**+1.0**
	baz=64						
MNAS				⇓*e*S	**Sn**	**19 55 06.8**	**+0.3**
	baz=64						
ARSB	**Arslanbob**	**2.91**	**86**	⇓*e*P	**Pn**	**19 54 33.9**	**+1.5**
	baz=88						
ARSB				⇓*e*S	**Sn**	**19 55 09.2**	**+1.2**
	baz=88						
BAYS	**Baysun**	**3.30**	**207**	P	**Pb**	**19 54 41.1**	**-3.2**
BAYS				S	**Sb**	**19 55 27.3**	**+2.3**
PKMR	**Pachkamar**	**3.36**	**220**	P	**Pb**	**19 54 42.4**	**-2.9**
PKMR				S	**Sb**	**19 55 29.8**	**+3.2**
TMD	**Tamdy-Bulak**	**3.42**	**281**	P	**Pb**	**19 54 45.3**	**-1.0**
TMD				S	**Sg**	**19 55 35.2**	**+0.3**
MRKS	**Merke**	**3.44**	**61**	*e*P	**Pb**	**19 54 48.9**	**+2.2**
	18nm,0.4s						
MRKS				*e*S	**Sg**	**19 55 34.5**	**-1.0**
	34nm,0.4s						
ZRB	**Zarabog**	**3.77**	**216**	P	**Pb**	**19 54 48.8**	**-3.5**
ZRB				S	**Sb**	**19 55 41.7**	**+3.3**
EKS2	**Erkin-Say**	**3.78**	**65**	⇓*e*P	**Pn**	**19 54 45.4**	**+1.1**
	baz=67						
EKS2				⇓*e*S	**Sn**	**19 55 29.1**	**-0.3**
	baz=67						
ARLS	**Aral**	**3.96**	**78**	⇑*e*P	**Pn**	**19 54 48.4**	**+1.5**
	baz=80						
ARLS				⇑*e*S	**Sn**	**19 55 34.9**	**+0.9**
	baz=80						
UCH	**Uchtor**	**4.17**	**73**	⇓*e*P	**Pn**	**19 54 51.3**	**+1.3**
	baz=75						
UCH				⇓*e*S	**Sn**	**19 55 39.3**	**-0.2**
	baz=75						
AAK	**Ala-Archa**	**4.27**	**68**	⇑*e*P	**Pn**	**19 54 52.4**	**+1.3**
	baz=70						
AAK				⇑*e*S	**Sn**	**19 55 41.2**	**-0.3**
	baz=70						
DZN	**Dzhankel'dy**	**4.39**	**268**	P	**Pb**	**19 54 58.5**	**-4.3**
DZN				S	**Sb**	**19 55 59.5**	**+3.3**
CHMS	**Chumysh**	**4.57**	**64**	⇓Pg	**Pb**	**19 55 09.2**	**+3.3**
	3.1nm,0.5s						
CHMS				⇓Lg	Lg	19 56 14.4	
	20nm,0.6s						
KBK	**Karagaybulak**	**4.59**	**69**	⇑*e*P	**Pn**	**19 54 56.9**	**+1.4**
	baz=71						
KBK				⇑*e*S	**Sn**	**19 55 49.0**	**-0.5**
	baz=71						
TKM2	**Tokmak 2**	**5.13**	**68**	⇓Pg	**Pb**	**19 55 19.6**	**+4.1**
	2.9nm,0.5s						
TKM2				⇓Lg	Lg	19 56 32.3	
	6.9nm,0.4s						
BTLS	**Baital**	**5.29**	**41**	*e*P	**Pg**	**19 55 23.7**	**-2.6**
	2.5nm,0.3s						
BTLS				*e*S	**Sg**	**19 56 34.6**	**-0.2**
	10nm,0.5s						
KST	**Kastek**	**5.42**	**67**	*e*P	**Pb**	**19 55 24.2**	**+3.8**
	3.2nm,0.3s						
KST				*e*S	**Sg**	**19 56 35.4**	**-3.6**
	27nm,0.7s						
MDOK	**Medeo**	**6.21**	**69**	Pg	**Pg**	**19 55 40.5**	**-3.6**
	4.0nm,0.6s						
MDOK				Lg	Lg	19 57 10.1	
	20nm,0.7s						
OTUK	**Ortayu**	**7.44**	**17**	⇑Pn	**Pn**	**19 55 34.1**	**-0.4**
	6.3nm,1.5s						
OTUK				⇑Sn	**Sn**	**19 57 02.5**	**+3.1**
	1.4nm,0.5s						
OTUK				⇑Lg	Lg	19 57 42.7	
	5.4nm,0.7s						
PDGK	**Podgornoye**	**7.99**	**71**	⇑Pg	**Pg**	**19 56 15.9**	**-2.0**
	2.6nm,1.1s						
PDGK				⇓Lg	Lg	19 58 07.3	
	12nm,1.0s						
AB31	**Akbulak array**	**10.36**	**324**	⇑Pn	**Pn**	**19 56 10.3**	**-4.1**
	0.5nm,0.3s,baz=160,slow=11,SNR=45						
AB31				Sn	**Sn**	**19 58 03.8**	**-7.2**
	0.5nm,0.3s,baz=152,slow=23,SNR=4.8						
BVA0	**Borovoye Array**	**11.90**	**4**	⇓Pn	**Pn**	**19 56 34.2**	**-1.3**
	2.9nm,1.3s,baz=172,slow=11,SNR=8.7						
BVA0				⇓Sn	**Sn**	**19 58 50.3**	**+1.6**
	2.3nm,1.2s,baz=222,slow=40,SNR=4.8						
BVA0				⇓Lg	Lg	19 59 58.8	
	2.3nm,0.9s						

HEL 05 20:04:45.7±0.4, 67.°63N × 33.°86E, h0 km, ML1.3, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.41**	**48**	PG	Pg	20 04 54.0	+0.5
	baz=225						
LVZ				SG	Sg	20 04 55.8	-3.0
VRF	**Varrio**	**1.63**	**276**	PG	Pn	20 05 15.1	-0.4
VRF				SG	Sn	20 05 34.3	-2.9
VRF				MSG		20 05 34.4	
	comp=Z,3.3nm,0.2s						
OLKF	**Oulanka, Finla**	**2.19**	**235**	PG	Pb	20 05 24.9	-1.2
OLKF				MSG		20 05 50.5	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	20 05 53.9	+0.2
KU6	**Riekki**	**2.25**	**226**	PG	Pn	20 05 25.5	+1.5
KU6				MSG		20 05 52.3	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sb	20 05 55.8	+0.4
RAJF	**Raja-Jooseppi**	**2.25**	**295**	SB	Sn	20 05 51.8	-0.8
KEV	**Kevo**	**3.29**	**314**	SN	Sn	20 06 16.9	-1.2
ARA0	**ARCESS Array S**	**3.61**	**306**	PN	Pn	20 05 41.6	-1.2
ARA0				SN	Sn	20 06 24.9	-1.2
HEF	**Hetta**	**3.91**	**286**	PG	Pb	20 05 55.2	-0.3

*IDC **05** 20:06:30.6±29.0, 20.°67S × 177.°18W, h407 km ± 260 km, mb3.5/4, mbtmp4.4/4, Error ellipse: s-maj=167.4km s-min=96.5km az=89.0*
ISC 05 20:06:30.0±2.7, 20.°5S±0.°8 × 177.°2W±0.°5, h400 km, n7, σ 0.9 95/7, mb3.9/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.24**	**264**	P	**P**	**20 12 41.1**	**+0.7**
	5.3nm,0.4s,baz=81,slow=8.6,SNR=2.9						
	5.3nm,0.4s						
STKA	**Stephens Creek**	**38.48**	**244**	P	**P**	**20 13 16.1**	**+0.5**
	1.0nm,0.5s,baz=92,slow=14,SNR=6.0						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**45.25**	**257**	P	**P**	**20 14 09.5**	**-0.5**
	5.9nm,0.8s,baz=98,slow=7.8,SNR=86						
ASAR				PcP	**PcP**	**20 15 41.2**	**-0.9**
	0.4nm,0.6s,baz=103,slow=3.4,SNR=4.5						
	5.9nm,0.8s						
WRA	**Warramunga Arr**	**45.34**	**262**	P	**P**	**20 14 09.6**	**-1.1**
	2.3nm,0.5s,baz=101,slow=8.4,SNR=80						
	2.3nm,0.5s						
BVAR	**Borovoye Array**	**119.54**	**320**	PKP	**PKPdf**	**20 24 32.7**	**0.0**
	0.5nm,0.4s,baz=92,slow=2.1,SNR=7.4						
AKASG	**Malin Array Be**	**143.35**	**332**	PKP	PKPab	20 25 15.3	+0.4
	1.3nm,0.4s,baz=43,slow=4.0,SNR=7.9						
MMAI	**Mount Meron Ar**	**148.45**	**300**	PKPbc	**PKPbc**	**20 25 31.5**	**+0.8**
	1.1nm,0.5s,baz=53,slow=5.6,SNR=5.5						

WEL 05 20:32:04.4±1.2, 35.°5S±8.°7 × 17.°9E±1.°4, h5 km, M3.8/18, ML4.0/19, MLv3.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=95.8, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.24**	**189**	P	Pn	20 32 39.4	-2.7
MXZ				S	Sn	20 33 06.5	-3.6
MXZ				T	T	20 34 47.6	
WMGZ	**Waiomatatini S**	**2.48**	**186**	P	Pn	20 32 43.6	-1.8
WIZ	**White Island**	**2.50**	**209**	T	T	20 35 16.8	
HAZ	**Te Kaha**	**2.52**	**197**	P	Pn	20 32 44.0	-2.0
HAZ				S	Sn	20 33 16.4	-0.7
HAZ				T	T	20 34 57.0	
PKGZ	**Pakihiroa**	**2.59**	**191**	P	Pn	20 32 45.3	-1.8
PKGZ				S	Sn	20 33 20.8	+1.9
PUZ	**Puketiti**	**2.75**	**188**	P	Pn	20 32 49.1	-0.1
PUZ				S	Sn	20 33 24.3	+1.6
RUGZ	**Raukumara Rang**	**2.75**	**198**	P	Pn	20 32 47.9	-1.4
RUGZ				S	Sn	20 33 23.1	+0.2
KUZ	**Kuaotunu**	**2.81**	**239**	P	Pn	20 32 47.9	-2.1
KUZ				S	Sn	20 33 18.3	-5.8
TWGZ	**Tauwhareparae**	**2.89**	**192**	P	Pn	20 32 52.3	+1.1
MWZ	**Matawai**	**3.13**	**197**	P	Pn	20 32 53.2	-1.3
CNGZ	**Carnagh Statio**	**3.16**	**187**	P	Pn	20 32 55.6	+0.8
URZ	**Urewera**	**3.18**	**204**	P	Pn	20 32 53.8	-1.3
URZ				S	Sn	20 33 28.8	-4.7
RAGZ	**Rawiri**	**3.31**	**198**	P	Pn	20 32 56.6	-0.4
OMRZ	**Omania**	**3.34**	**214**	P	Pb	20 33 01.2	-2.9
RIGZ	**Rimuhau**	**3.44**	**193**	P	Pn	20 32 59.1	+0.4
MUGZ	**Murupara**	**3.49**	**206**	P	Pn	20 32 59.2	-0.2
MUGZ				S	Sn	20 33 41.5	+0.3
RTZ	**Ruatahuna**	**3.55**	**203**	P	Pn	20 33 01.3	+1.0
SNGZ	**Shannon Statio**	**3.60**	**197**	P	Pn	20 33 01.5	+0.5
PRGZ	**Paritu Road**	**3.63**	**190**	P	Pn	20 33 02.1	+0.7
KNZ	**Kokohu**	**3.76**	**193**	P	Pn	20 33 02.9	-0.1
RAHZ	**Arahi**	**3.79**	**200**	P	Pn	20 33 05.1	+1.5
MTHZ	**Maungataniwha**	**3.81**	**203**	P	Pn	20 33 03.3	-0.5
WHHZ	**Waihua**	**3.91**	**197**	P	Pn	20 33 05.9	+0.8
MRHZ	**Matea Rd**	**3.94**	**207**	P	Pn	20 33 07.3	+1.8
NMHZ	**Naumai**	**4.04**	**202**	P	Pn	20 33 08.3	+1.2
ARHZ	**Aropaoanui**	**4.14**	**199**	P	Pn	20 33 08.9	+0.5
OUZ	**Omahuta**	**4.20**	**270**	P	Pn	20 33 04.2	-4.9
BKZ	**Black Stump Fm**	**4.21**	**204**	P	Pn	20 33 10.0	+0.7
RATZ	**Rangitukua**	**4.23**	**213**	P	Pn	20 33 12.6	+3.0
MCHZ	**McNeill Hill**	**4.40**	**201**	P	Pn	20 33 11.8	0.0
TMVZ	**Te Maari**	**4.47**	**212**	P	Pn	20 33 15.1	+2.1
ETVZ	**East Tongariro**	**4.48**	**212**	P	Pn	20 33 15.3	+2.2
NNVZ	**North Ngauruho**	**4.52**	**212**	P	Pn	20 33 16.1	+2.4
TWVZ	**Taurewa**	**4.55**	**214**	P	Pn	20 33 16.7	+2.7
BHHZ	**Black Hill Sta**	**4.64**	**206**	P	Pn	20 33 16.0	+0.7
KAHZ	**Kahuranaki**	**4.67**	**198**	P	Pn	20 33 14.7	-1.0
KRHZ	**Kereru**	**4.68**	**203**	P	Pn	20 33 14.9	-0.8
TRVZ	**Turoa**	**4.69**	**212**	P	Pn	20 33 18.3	+2.3
WNVZ	**Wahianoa**	**4.69**	**211**	P	Pn	20 33 17.9	+1.9
MOVZ	**Moawhango**	**4.69**	**209**	P	Pn	20 33 16.3	+0.3
PKVZ	**Pokaka**	**4.77**	**213**	P	Pn	20 33 18.6	+1.7
PNHZ	**Pukenui**	**4.98**	**203**	P	Pn	20 33 18.5	-1.4

DJA 05 20:34:04.4±0.5, 11.°5S±6.°7 × 11.°9E±.°, h10 km, M3.8/8, mb4.0/5, mB4.9/1, MLv3.8/8, Mw(mB)4.2/1, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**2.26**	**60**	Pn	Pn	20 34 41.5	-0.3
PLAI	**Plampang**	**2.64**	**342**	Pn	Pn	20 34 46.7	-0.4
TWSI	**Taliwang, Sumb**	**3.10**	**327**	Pn	Pn	20 34 53.5	+0.1
EDFI	**Ende, Flores**	**4.01**	**50**	P	Pn	20 35 04.6	-1.4
SRBI	**Singaraja**	**4.66**	**314**	P	Pn	20 35 16.7	+1.9
JAGI	**Jajag, Banyuwa**	**5.23**	**303**	P	Pn	20 35 21.7	-1.0
	10.0nm,1.1s,1µm0.1nm						
SOEI	**Soe**	**5.80**	**75**	P	Pn	20 35 31.7	+0.9
	21nm,1.5s,0.1nm						
GMJI	**Gumukmas**	**5.93**	**301**	P	Pn	20 35 31.2	-1.1
	20nm,1.6s						
BKSI	**Bul

IDC 05 20:56:23.3s0.7,26°.95N×140°.23E,h481km±7km,mb5.1/27, mbtmp5.9/34 Error ellipse: s-maj=9.9km s-min=6.9km az=77.0

ISC 05 20:56:22.9s0.3,26°.94N±0°.03×140°.29E±0°.03,h483km±2km, h483km:pP-P,n1685,σ1s34/1745,mb5.4/468,74C-204D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.70**	**84**	P	**P**	**20 57 24.0**	**-0.9**
CBIJ				*e*S	**S**	**20 58 11.9**	**-3.4**
CBIJ	**Chichi jima**	**1.70**	**84**	A	A	20 57 24.0	
	comp=E,45nm,1.3s,comp=N,45nm,2.4s						
JCJ	**Chichijima**	**1.70**	**84**	P	**P**	**20 57 24.0**	**-0.9**
JCJ				S	**S**	**20 58 10.9**	**-4.4**
JCJ	**Chichijima**	**1.70**	**84**	P	**P**	**20 57 24.2**	**-0.7**
JCJ	**Chichijima**	**1.70**	**84**	P	P	20 57 19.9	-5.0
	comp=N,6μm,0.4s,baz=190,slow=3.8,SNR=402						
JCJ				S	S	20 58 06.4	-8.9
	comp=N,2μm,0.3s,baz=277,slow=15,SNR=3.5						
JHH2	**Haha-jima-NKT2**	**1.72**	**100**	⇓P	**P**	**20 57 24.7**	**-0.3**
JHH2				⇓S	**S**	**20 58 13.2**	**-2.3**
JHH2	**Haha-jima-NKT2**	**1.72**	**100**	A	A	20 57 24.7	
	comp=E,76nm,0.8s,comp=N,83nm,1.2s						
JAOM	**Aogashimamukai**	**5.53**	**355**	*e*P	**P**	**20 57 54.1**	**+0.3**
JAOM				*e*S	**S**	**20 59 05.2**	**-2.9**
JHCJ	**Hachijojimakas**	**6.13**	**356**	*e*P	**P**	**20 57 59.1**	**-0.5**
JHCJ				S	**S**	**20 59 14.4**	**-4.4**
JHJ2	**Mitsune**	**6.17**	**356**	P	**P**	**20 57 59.1**	**-0.9**
JHJ2	**Mitsune**	**6.17**	**356**	P	**P**	**20 57 59.8**	**-0.2**
JHJ2	**Mitsune**	**6.17**	**356**	P	**P**	**20 57 59.7**	**-0.3**
JHJ2				*e*S	**S**	**20 59 15.2**	**-4.3**
JHJ	**Hachijo jima 2**	**6.18**	**356**	P	**P**	**20 57 59.2**	**-0.9**
	comp=N,580nm,0.4s,baz=92,slow=18,SNR=29						
JHJ				S	**S**	**20 59 14.1**	**-5.6**
	comp=N,1μm,0.5s,baz=80,slow=24,SNR=9.1						
TTO1	**TONANKAI O.B.S**	**7.32**	**336**	P	**P**	**20 58 13.8**	**+2.5**
TK02	**Tokai 2**	**7.32**	**343**	P	**P**	**20 58 12.9**	**+1.5**
BSO1	**Boso 1**	**7.72**	**4**	P	**P**	**20 58 15.6**	**+0.5**
BSO1				*e*S	**S**	**20 59 44.5**	**-2.9**
JIM2	**Oshima 3**	**7.79**	**355**	A	A	20 58 16.4	
	comp=E,16nm,1.1s,comp=N,17nm,4.4s						
JSG	**Sagara**	**7.92**	**347**	P	**P**	**20 58 17.2**	**-0.7**
JSG	**Sagara**	**7.92**	**347**	P	**P**	**20 58 18.9**	**+1.0**
JTNC	**Tanabenakahech**	**7.96**	**331**	P	**P**	**20 58 19.5**	**+1.2**
JTNC				*e*S	**S**	**20 59 54.2**	**+1.0**
JIE	**Ise**	**8.04**	**338**	P	**P**	**20 58 20.9**	**+1.7**
JIE				S	**S**	**20 59 53.8**	**-1.0**
JIE	**Ise**	**8.04**	**338**	A	A	20 58 20.9	
	comp=E,5.0nm,2.8s,comp=N,5.0nm,3.6s						
JHTM	**Izuhatsuma**	**8.07**	**353**	A	A	20 58 19.5	
	comp=E,16nm,2.3s,comp=N,19nm,4.2s						
TATJ	**Tateyama 2**	**8.08**	**358**	A	A	20 58 19.2	
	comp=E,26nm,1.0s,comp=N,25nm,2.4s						
JKUC	**kamogawauchiur**	**8.20**	**360**	A	A	20 58 20.3	
	comp=E,21nm,1.0s,comp=N,14nm,6.8s						
JMZ	**Minamidaito 2**	**8.20**	**264**	P	**P**	**20 58 21.1**	**+0.1**
JMZ	**Minamidaito 2**	**8.20**	**264**	P	**P**	**20 58 21.6**	**+0.6**
JMZ	**Minamidaito 2**	**8.20**	**264**	P	**P**	**20 58 21.3**	**+0.3**
JWY	**Kouya**	**8.31**	**332**	P	**P**	**20 58 23.6**	**+1.6**
JWY				S	**S**	**21 00 00.8**	**+0.8**
JFNN	**Fujinakano**	**8.35**	**351**	P	**P**	**20 58 22.6**	**+0.3**
JOD2	**Odawara 2**	**8.37**	**353**	P	**P**	**20 58 21.8**	**-0.7**
JOD2				*e*S	**S**	**20 59 56.2**	**-4.7**
JOD2	**Odawara 2**	**8.37**	**353**	A	A	20 58 21.8	
	comp=E,6.0nm,0.8s,comp=N,7.0nm,6.4s						
JAI	**Aioi**	**8.49**	**325**	P	**P**	**20 58 25.7**	**+1.8**
JAI				*e*S	**S**	**21 00 06.3**	**+3.0**
JHE	**Heguri**	**8.65**	**334**	A	A	20 58 27.0	
	comp=E,9.0nm,4.5s,comp=N,4.0nm,3.7s						
JYN	**Shimob**	**8.66**	**351**	P	**P**	**20 58 25.4**	**-0.3**
JMN	**Monobe**	**8.74**	**322**	P	**P**	**20 58 28.0**	**+1.4**
JMN	**Monobe**	**8.74**	**322**	P	**P**	**20 58 28.7**	**+2.1**
JMN	**Monobe**	**8.74**	**322**	⇓P	**P**	**20 58 28.8**	**+2.2**
JMN				⇓*e*S	**S**	**21 00 09.6**	**+1.2**
JTO	**Tosashimizu**	**8.78**	**314**	⇓P	**P**	**20 58 29.0**	**+2.1**
JTO				⇓*e*S	**S**	**21 00 10.5**	**+1.6**
JTO	**Tosashimizu**	**8.78**	**314**	A	A	20 58 29.0	
	comp=E,5.0nm,2.4s,comp=N,3.0nm,3.6s						
JEG	**Eigenji**	**8.83**	**339**	A	A	20 58 28.6	
	comp=E,10.0nm,2.7s,comp=N,7.0nm,6.9s						
JAWN	**Awajishima-nag**	**8.84**	**330**	A	A	20 58 29.2	
	comp=E,9.0nm,4.2s,comp=N,6.0nm,2.3s						
JICN	**Ichinomiyachia**	**8.85**	**341**	A	A	20 58 28.5	
	comp=E,11nm,3.0s,comp=N,11nm,3.0s						
JKU	**Kubokawa**	**8.91**	**317**	A	A	20 58 31.0	
	comp=E,5.0nm,3.0s,comp=N,4.0nm,4.4s						
JHU	**Hanno**	**8.93**	**355**	A	A	20 58 28.5	
	comp=E,5.0nm,2.7s,comp=N,4.0nm,1.9s						
JMIK	**Miki**	**9.04**	**331**	A	A	20 58 31.4	
	comp=E,14nm,4.0s,comp=N,15nm,2.2s						
UWA2	**Uwa jima 2**	**9.12**	**315**	A	A	20 58 33.4	
	comp=E,4.0nm,3.2s,comp=N,4.0nm,3.8s						
JRY	**Ryogami san**	**9.13**	**353**	⇓P	**P**	**20 58 29.8**	**-0.8**
JRY				⇓S	**S**	**21 00 10.9**	**-4.9**
JJS	**Sakaide**	**9.21**	**325**	A	A	20 58 33.7	
	comp=E,4.0nm,5.4s,comp=N,3.0nm,5.3s						
JZK	**Kikaishima**	**9.25**	**281**	A	A	20 58 36.7	
	comp=E,44nm,3.0s,comp=N,18nm,4.8s						
JYT	**Yasato**	**9.27**	**360**	A	A	20 58 31.8	
	comp=E,9.0nm,3.0s,comp=N,10.0nm,1.2s						
JKS	**Kasai**	**9.28**	**331**	A	A	20 58 34.0	
	comp=E,5.0nm,3.1s,comp=N,8.0nm,3.1s						
JWT	**Wachi**	**9.31**	**335**	A	A	20 58 34.1	
	comp=E,5.0nm,5.8s,comp=N,9.0nm,5.4s						
JFM	**Mihama**	**9.32**	**338**	A	A	20 58 33.9	
	comp=E,10.0nm,2.4s,comp=N,5.0nm,1.7s						
JSKE	**Saikikamae**	**9.33**	**311**	A	A	20 58 35.9	
	comp=E,7.0nm,0.9s,comp=N,4.0nm,1.3s						
JHYU	**Hitachinakayam**	**9.38**	**1**	A	A	20 58 32.8	
	comp=E,13nm,2.4s,comp=N,20nm,2.0s						
JNA	**Nagahama**	**9.44**	**316**	A	A	20 58 36.7	
	comp=E,5.0nm,3.5s,comp=N,6.0nm,3.7s						
JAG	**Ashikaga**	**9.49**	**356**	A	A	20 58 34.4	
	comp=E,6.0nm,3.0s,comp=N,8.0nm,0.9s						
JAM	**Amami Oshima**	**9.58**	**281**	A	A	20 58 40.3	
	comp=E,9.0nm,3.1s,comp=N,6.0nm,4.7s						
JUS	**Usuki**	**9.59**	**312**	A	A	20 58 38.7	
	comp=E,7.0nm,1.0s,comp=N,7.0nm,3.9s						
JHO	**Hitachi**	**9.65**	**1**	A	A	20 58 35.8	
	comp=E,9.0nm,6.8s,comp=N,14nm,2.2s						
MJAR	**Matsushiro Arr**	**9.74**	**350**	P	**P**	**20 58 36.0**	**-1.2**
	comp=N,174nm,0.4s,baz=172,slow=10,SNR=226						
MJAR				S	**S**	**21 00 27.3**	**-0.4**
	comp=N,51nm,0.6s,baz=147,slow=19,SNR=2.6						
MJAR				ScP	**ScP**	**21 06 47.1**	**-0.4**
	comp=N,4.9nm,0.6s,baz=180,slow=1.5,SNR=6.3						
MAJO	**Matsushiro**	**9.74**	**350**	P	**P**	**20 58 36.0**	**-1.2**
MAJO	**Matsushiro**	**9.74**	**350**	P	**P**	**20 58 36.9**	**-0.3**
MAJO	**Matsushiro**	**9.74**	**350**	*d*P	**P**	**20 58 36.5**	**-0.7**
MJB9	**Matsu-Tunnel**	**9.74**	**350**	P	**P**	**20 58 37.2**	**-0.1**
JHM	**Kurahashi**	**9.81**	**319**	A	A	20 58 40.5	
	comp=E,7.0nm,5.3s,comp=N,4.0nm,3.1s						
JKSM	**Kasumi**	**9.87**	**330**	A	A	20 58 40.3	
	comp=E,5.0nm,3.4s,comp=N,8.0nm,3.8s						
JAMN	**Amaminishikomi**	**9.94**	**280**	P	**P**	**20 58 41.7**	**+2.3**
JAMN				*e*S	**S**	**21 00 34.9**	**+3.1**
JAMN	**Amaminishikomi**	**9.94**	**280**	A	A	20 58 41.7	
	comp=E,12nm,3.1s,comp=N,6.0nm,3.7s						
JBEP	**Beppuamama**	**9.98**	**312**	A	A	20 58 42.9	
	comp=E,9.0nm,2.0s,comp=N,9.0nm,1.3s						
JSB	**Shiboa**	**10.01**	**358**	A	A	20 58 39.9	
	comp=E,19nm,2.4s,comp=N,20nm,3.3s						
JKI	**Kunimi**	**10.06**	**314**	A	A	20 58 43.6	
	comp=E,7.0nm,3.0s,comp=N,8.0nm,3.9s						
JTK	**Tokunoshima**	**10.11**	**277**	A	A	20 58 46.2	
	comp=E,13nm,3.4s,comp=N,5.0nm,9.0s						
JHS	**Saijyo**	**10.12**	**324**	P	**P**	**20 58 42.8**	**+1.5**
JHS				*e*S	**S**	**21 00 36.7**	**+1.5**
JHS	**Saijyo**	**10.12**	**324**	A	A	20 58 42.8	
	comp=E,7.0nm,3.9s,comp=N,4.0nm,2.6s						
JFFD	**Fukushimafurud**	**10.13**	**1**	A	A	20 58 40.9	
	comp=E,15nm,4.2s,comp=N,19nm,2.5s						
JKD	**Kudamatsu**	**10.14**	**316**	A	A	20 58 44.3	
	comp=E,4.0nm,4.7s,comp=N,6.0nm,3.2s						
ONAJ	**Iwakimizuishiy**	**10.15**	**2**	A	A	20 58 41.1	
	comp=E,10.0nm,1.1s,comp=N,10.0nm,2.4s						
JNU	**Nakatsue**	**10.22**	**309**	P	**P**	**20 58 43.7**	**+1.3**
JNU	**Nakatsue**	**10.22**	**309**	P	**P**	**20 58 44.3**	**+1.9**
JNU	**Nakatsue**	**10.22**	**309**	P	**P**	**20 58 44.0**	**+1.6**
	comp=N,2μm,0.8s,baz=112,slow=5.2,SNR=994						
JNU				S	**S**	**21 00 37.0**	**-0.2**
	comp=N,141nm,0.8s,baz=219,slow=18,SNR=3.0						
JHT	**Toyohira**	**10.24**	**321**	A	A	20 58 45.1	
	comp=E,5.0nm,5.1s,comp=N,5.0nm,4.3s						
JSJ	**Shimokoshiki**	**10.36**	**300**	P	**P**	**20 58 45.1**	**+1.1**
JSJ				*e*S	**S**	**21 00 41.2**	**+1.2**
JSJ	**Shimokoshiki**	**10.36**	**300**	A	A	20 58 45.1	
	comp=E,4.0nm,2.2s,comp=N,6.0nm,5.4s						
JTA	**Tamana**	**10.37**	**308**	A	A	20 58 47.4	
	comp=E,3.0nm,8.0s,comp=N,4.0nm,3.8s						
JHD	**Hondo**	**10.40**	**304**	A	A	20 58 47.9	
	comp=E,4.0nm,3.0s,comp=N,7.0nm,2.8s						
JFK	**Kawauchi**	**10.41**	**3**	A	A	20 58 43.9	
	comp=E,10.0nm,2.7s,comp=N,7.0nm,2.5s						
JHIK	**Hikimi**	**10.44**	**319**	A	A	20 58 47.3	
	comp=E,5.0nm,6.1s,comp=N,6.0nm,5.1s						
JFY	**Yanaizu**	**10.45**	**357**	A	A	20 58 44.7	
	comp=E,9.0nm,2.6s,comp=N,6.0nm,4.3s						
JGT2	**ShimaneMisato**	**10.49**	**322**	A	A	20 58 47.6	
	comp=E,8.0nm,4.8s,comp=N,4.0nm,3.7s						
JYRO	**Yoronjima**	**10.56**	**273**	A	A	20 58 51.1	
	comp=E,8.0nm,3.3s,comp=N,5.0nm,4.3s						
JOTO	**OTAMA OYAMA**	**10.59**	**0**	A	A	20 58 46.0	
	comp=E,24nm,2.0s,comp=N,29nm,1.4s						
JOW	**Kunigami**	**10.72**	**272**	P	**P**	**20 58 49.1**	**+1.3**
JOW	**Kunigami**	**10.72**	**272**	P	**P**	**20 58 49.7**	**+1.9**
JOW	**Kunigami**	**10.72**	**272**	P	**P**	**20 58 49.6**	**+1.7**
JOW				S	**S**	**21 00 48.6**	**+1.4**
JOW	**Kunigami**	**10.72**	**272**	A	A	20 58 49.6	
	comp=E,9.0nm,2.9s,comp=N,6.0nm,3.4s						
JOW	**Kunigami**	**10.72**	**272**	P	**P**	**20 58 49.6**	**+1.7**
	comp=N,647nm,0.4s,baz=92,slow=12,SNR=79						
JOW				S	**S**	**21 00 46.6**	**-0.6**
	comp=N,181nm,1.1s,baz=29,slow=28,SNR=9.5						
JMST	**Minamisoumatoc**	**10.77**	**3**	A	A	20 58 47.7	
	comp=E,13nm,2.7s,comp=N,16nm,2.3s						
JMM	**Marumori**	**10.91**	**2**	P	**P**	**20 58 49.8**	**+0.2**
JMM	**Marumori**	**10.91**	**2**	P	**P**	**20 58 50.7**	**+1.1**
JMM	**Marumori**	**10.91**	**2**	A	A	20 58 49.3	
	comp=E,10.0nm,2.2s,comp=N,13nm,1.0s						
JYAR	**Yonezawaarcadi**	**10.95**	**359**	A	A	20 58 49.8	
	comp=E,10.0nm,1.3s,comp=N,9.0nm,4.9s						
JIH	**Iheya**	**10.99**	**273**	A	A	20 58 55.7	
	comp=E,13nm,4.0s,comp=N,7.0nm,2.9s						
JYS	**Shirataka**	**11.26**	**359**	A	A	20 58 53.2	
	comp=E,14nm,2.6s,comp=N,11nm,2.9s						
JOU	**Okura**	**11.40**	**2**	A	A	20 58 54.6	
	comp=E,12nm,2.8s,comp=N,15nm,2.4s						
JYA	**Atsumi**	**11.63**	**358**	A	A	20 58 57.4	
	comp=E,12nm,2.4s,comp=N,7.0nm,2.2s						
JYK	**Kaneyama**	**11.95**	**0**	A	A	20 59 00.5	
	comp=E,8.0nm,3.3s,comp=N,8.0nm,3.6s						
JTU	**Tsushima**	**12.03**	**312**	P	**P**	**20 59 02.2**	**+0.5**
JTU	**Tsushima**	**12.03**	**312**	P	**P**	**20 59 02.7**	**+1.0**
JKE	**Kume jima 2**	**12.09**	**270**	A	A	20 59 07.5	
	comp=E,12nm,3.4s,comp=N,5.0nm,3.9s						
JRG	**Rokugo**	**12.43**	**1**	A	A	20 59 05.6	
	comp=E,8.0nm,5.0s,comp=N,8.0nm,3.2s						
JOGS	**Gusukube**	**13.57**	**264**	A	A	20 59 23.0	
	comp=E,21nm,2.7s,comp=N,18nm,2.1s						
JMJ	**Miyako jima 2**	**13.66**	**264**	P	**P**	**20 59 20.9**	**+1.7**
JTM	**Tenmabayashi**	**13.83**	**2**	P	**P**	**20 59 21.3**	**+0.6**
JTM	**Tenmabayashi**	**13.83**	**2**	P	**P**	**20 59 22.1**	**+1.3**
GUMO	**Guam**	**13.95**	**161**	P	**P**	**20 59 22.8**	**+0.4**
GUMO	**Guam**	**13.95**	**161**	P	**P**	**20 59 23.6**	**+1.2**
GUMO	**Guam**	**13.95**	**161**	P	**P**	**20 59 23.4**	**+1.0**
	comp=N,385nm,0.8s,baz=187,slow=4.2,SNR=15						
GUMO				S	**S**	**21 01 47.0**	**-3.6**
	comp=N,101nm,1.0s,baz=18,slow=19,SNR=1.9						
TJN	**Taejon**	**14.47**	**314**	P	**P**	**20 59 25.8**	**-1.8**
TJN	**Taejon**	**14.47**	**314**	P	**P**	**20 59 27.3**	**-0.3**
TJN	**Taejon**	**14.47**	**314**	*ce*P	**P**	**20 59 26.5**	**-1.1**
KSRS	**Korea Array**	**14.80**	**318**	P	**P**	**20 59 29.9**	**-1.2**
	comp=N,96nm,0.8s,baz=133,slow=10,SNR=120						
KSRS				PcP	**PcP**	**21 04 08.5**	**+1.3**
	comp=N,14nm,0.7s,baz=188,slow=0.6,SNR=8.0						
KSRS				ScP	**ScP**	**21 06 55.7**	**+0.5**
	comp=N,6.6nm,0.8s,baz=158,slow=0.7,SNR=10.0						
KSAR	**Wonju Array Be**	**14.82**	**318**	P	**P**	**20 59 29.2**	**-2.1**
KSAR	**Wonju Array Be**	**14.82**	**318**	P	**P**	**20 59 29.2**	**-2.1**
KS19	**Wonju Array Si**	**14.87**	**318**	P	**P**	**20 59 29.4**	**-2.5**
ERM	**Erimo**	**15.23**	**8**	P	**P**	**20 59 36.6**	**+1.2**
ERM	**Erimo**	**15.23**	**8**	P	**P**	**20 59 36.8**	**+1.3**
ERM	**Erimo**	**15.23**	**8**	*ce*P	**P**	**20 59 36.7**	**+1.2**
ERM				pmax	pmax		
	comp=Z,140nm,0.7s						
JEM	**Erimo**	**15.23**	**8**	P	**P**	**20 59 36.8**	**+1.3**
INCN	**Inchon**	**15.61**	**316**	P	**P**	**20 59 37.7**	**-1.9**
INCN	**Inchon**	**15.61**	**316**	P	**P**	**20 59 39.9**	**+0.3**
INCN	**Inchon**	**15.61**	**316**	P	**P**	**20 59 37.7**	**-1.9**
INCN	**Inchon**	**15.61**	**316**	P	**P**	**20 59 37.8**	**-1.9**
YOJ	**Yonaguni jima**	**15.77**	**265**	P	**P**	**20 59 40.3**	**-1.1**
YOJ	**Yonaguni jima**	**15.77**	**265**	P	**P**	**20 59 41.2**	**-0.2**
YOJ	**Yonaguni jima**	**15.77**	**265**	P	**P**	**20 59 40.3**	**-1.1**
TATO	**Taipei**	**17.02**	**268**	P	**P**	**20 59 52.5**	**-2.1**
TATO	**Taipei**	**17.02**	**268**	P	**P**	**20 59 53.4**	**-1.2**
TATO	**Taipei**	**17.02**	**268**	P	P	20 59 50.3	-4.3
NACB	**Ninganchiao**	**17.09**	**265**	P	**P**	**20 59 52.3**	**-3.0**
NACB	**Ninganchiao**	**17.09**	**265**	P	**P**	**20 59 53.0**	**-2.3**
YHNB	**Yeheng**	**17.18**	**267**	P	**P**	**20 59 53.9**	**-2.4**
YHNB	**Yeheng**	**17.18**	**267**	P	**P**	**20 59 54.7**	**-1.6**
SSE	**Sheshan**	**17.21**	**288**	P	**P**	**20 59 53.6**	**-2.8**
SSE				S	**S**	**21 02 47.8**	**-3.8**
SSE				pmax	pmax		
	comp=Z,180nm,0.8s						
SSE				pmax	pmax		
	comp=Z,190nm,3.5s						
JKA	**Kamikawa-asahi**	**17.25**	**6**	P	**P**	**20 59 56.8**	**+0.2**
ASAJ	**Asahikawa**	**17.25**	**6**	P	**P**	**20 59 57.0**	**+0.4**
	comp=Z,34nm,0.4s,baz=226,slow=10.0,SNR=76						
ASAJ				S	**S**	**21 02 52.3**	**+0.4**
	comp=Z,41nm,0.9s,baz=336,slow=32,SNR=4.7						
ASAJ				ScP	**ScP**	**21 07 00.3**	**+0.5**
	comp=Z,72nm,0.8s,baz=246,slow=8.0,SNR=20						
MSHR	**Mys Shultsa**	**17.30**	**337**	*d*P	**P**	**20 59 56.8**	**-0.3**
MSHR				pmax	pmax		
	comp=Z,1μm,0.8s						
YULB	**Yu-li**	**17.55**	**263**	P	**P**	**20 59 58.1**	**-1.8**
YULB	**Yu-li**	**17.55**	**263**	P	**P**	**20 59 58.8**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**17.65**	**13**	*e*P	**P**	**21 00 01.3**	**+0.8**
YUK				pmax	pmax		
	comp=E,90nm,0.4s						
YUK				pmax	pmax		
	comp=Z,369nm,0.4s						
SSLB	**Suanglung**	**17.75**	**264**	P	**P**	**21 00 00.7**	**-1.1**
SSLB	**Suanglung**	**17.75**	**264**	P	**P**	**21 00 01.3**	**-0.5**
TWGBT	**Beinan**	**17.90**	**261**	P	**P**	**21 00 03.2**	**0.0**
TWG	**Pinlang**	**17.91**	**261**	P	**P**	**21 00 02.1**	**-1.2**
TPUB	**Ta-pu**	**18.16**	**263**	P	**P**	**21 00 04.8**	**-0.9**
TPUB	**Ta-pu**	**18.16**	**263**	P	**P**	**21 00 05.9**	**+0.2**
TEY	**Ternei**	**18.30**	**352**	⇑*e*P	**P**	**21 00 05.8**	**-0.8**
TEY				pmax	pmax		
	comp=Z,350nm,0.9s						
TEY				pmax	pmax		
	comp=N,400nm,0.9s						
TEY				pmax	pmax		
	comp=E,70nm,0.9s						
USRK	**Ussuriysk Ar.**	**18.48**	**341**	P	**P**	**21 00 08.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**18.48**	**341**	P	**P**	**21 00 09.2**	**+0.8**
	comp=E,698nm,0.7s,baz=142,slow=6.8,SNR=539						
USRK				ScP	**ScP**	**21 07 02.8**	**+0.3**
	comp=E,4.4nm,0.7s,baz=48,slow=0.8,SNR=4.1						
USA0B	**Ussuriysk Arra**	**18.48**	**341**	P	**P**	**21 00 08.5**	**+0.2**
USA0B	**Ussuriysk Arra**	**18.48**	**341**	*d*P	**P**	**21 00 08.2**	**-0.1**
KUR	**Kuril'sk**	**19.24**	**16**	*e*P	**P**	**21 00 16.3**	**+1.1**
KUR				*e*S	**S**	**21 03 26.7**	**+2.1**
KUR				pmax	pmax		
	comp=E,86nm,0.6s						
KUR				pmax	pmax		
	comp=Z,491nm,0.6s						
KUR				pmax	pmax		
	comp=N,50nm,0.9s						
NJ2	**Nanjing**	**19.33**	**290**	⇓*i*P	**P**	**21 00 15.6**	**-0.7**
NJ2				S	**S**	**21 03 29.1**	**+2.7**
NJ2				ScP	**ScP**	**21 07 05.3**	**+0.6**
NJ2				pmax	pmax		
	comp=N,380nm,0.8s						
NJ2				pmax	pmax		
	comp=N,2μm,3.6s						
QZH	**Quanzhou**	**19.61**	**269**	⇓*i*P	**P**	**21 00 18.6**	**-0.3**
QZH				S	**S**	**21 03 32.8**	**+1.7**
QZH				pmax	pmax		
	comp=N,350nm,0.5s						
MDJ	**Mudanjiang**	**19.63**	**337**	P	**P**	**21 00 19.7**	**+0.9**
MDJ				sP	sP	21 02 18.0	-6.4
MDJ				S	**S**	**21 03 27.2**	**-3.7**
MDJ				PcS	**PcS**	**21 07 56.6**	**+4.0**
MDJ				ScS	**ScS**	**21 10 45.5**	**-2.2**
MDJ				pmax	pmax		
	comp=N,530nm,1.0s						
MDJ				pmax	pmax		
	comp=N,2μm,4.5s						
MDJ	**Mudanjiang**	**19.63**	**337**	P	**P**	**21 00 19.9**	**+1.1**
DL2	**Dalian**	**19.65**	**312**	P	**P**	**21 00 15.7**	**-3.4**
DL2				S	**S**	**21 03 29.8**	**-1.6**
DL2				PcP	**PcP**	**21 04 16.3**	**+1.1**
DL2				ScP	**ScP**	**21 07 06.3**	**+1.0**
DL2				pmax	pmax		
	comp=N,1μm,0.7s						
DL2				pmax	pmax		
	comp=N,920nm,4.8s						
KNMB	**Chin-men Tao**	**19.88**	**268**	P	**P**	**21 00 21.0**	**-0.4**
YSS	**Yuzh-Sakhalins**	**20.08**	**5**	P	**P**	**21 00 22.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**20.08**	**5**	P	**P**	**21 00 24.4**	**+1.6**
YSS	**Yuzh-Sakhalins**	**20.08**	**5**	*e*P	**P**	**21 00 23.5**	**+0.7**
YSS				*e*S	**S**	**21 03 36.4**	**-1.6**
YSS				*e*		21 10 48.7	
YSS				pmax	pmax		
	comp=Z,300nm,2.5s						
YSS				pmax	pmax		
	comp=Z,160nm,0.5s						
YSS				smax	smax		
	comp=E,1μm,5.4s						
YSS				MLR	MLR		
	comp=Z,900nm,13.0s						
SNY	**Shenyang**	**20.21**	**322**	⇓P	**P**	**21 00 23.8**	**-0.4**
SNY				S	**S**	**21 03 34.7**	**-5.7**
SNY				pmax	pmax		
	comp=Z,310nm,0.8s						
SZP	**Santa**	**20.57**	**247**	P	**P**	**21 00 28.6**	**+0.9**
CN2	**Changchun**	**20.67**	**328**	⇓P	**P**	**21 00 28.0**	**-0.3**
CN2				*e*sP	sP	21 02 37.0	+1.1
CN2				*e*S	**S**	**21 03 46.1**	**-1.6**
CN2				pmax	pmax		
	comp=Z,60nm,0.8s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
BNX	**BinXian**	**21.39**	**335**	⇓P	**P**	**21 00 35.2**	**+0.4**
BNX				S	**S**	**21 03 59.6**	**+0.5**
TIA	**Tai'an**	**21.75**	**301**	⇓P	**P**	**21 00 38.2**	**0.0**
TIA				S	**S**	**21 04 13.7**	**+8.6**
TIA				pmax	pmax		
	comp=Z,1μm,0.7s						
TIA				pmax	pmax		
	comp=Z,310nm,4.3s						
WHN	**Wuhan**	**23.01**	**285**	⇓*i*P	**P**	**21 00 49.9**	**+0.3**
WHN				sP	**sP**	**21 03 03.2**	**+2.2**
KLR	**Kul'dur**	**23.22**	**346**	*de*P	**P**	**21 00 51.6**	**+0.4**
KLR				pmax	pmax		
	comp=Z,174nm,0.9s						
KLR	**Kul'dur**	**23.22**	**346**	ScP	**ScP**	**21 07 14.2**	**+0.1**
	comp=Z,65nm,0.8s,baz=193,slow=1.8,SNR=31						
BJT	**Baijiatuau**	**23.89**	**309**	P	**P**	**21 00 57.0**	**-0.3**
BJI	**Beijing**	**23.89**	**309**	P	**P**	**21 00 56.6**	**-0.8**
BJI				PcP	**PcP**	**21 04 24.8**	**+1.0**
BJI				ScP	**ScP**	**21 07 16.6**	**+0.5**
BJI				ScS	**ScS**	**21 11 03.1**	**-0.7**
BJI				pmax	pmax		
	comp=Z,110nm,0.7s						
TYV	**Tymovskoe**	**23.96**	**4**	*e*P	**P**	**21 00 59.2**	**+1.4**
TYV				*e*S	**S**	**21 04 41.6**	**+2.1**
TYV				pmax	pmax		
	comp=Z,400nm,4.6s						
TYV				pmax	pmax		
	comp=Z,23nm,1.0s						
TYV				smax	smax		
	comp=N,900nm,5.3s						
TYV				smax	smax		
	comp=E,900nm,5.3s						
TYV				smax	smax		
	comp=N,28nm,1.2s						
TYV				smax	smax		
	comp=E

TNTI Ternate 28.82 208 P **P** 21 01 41.1 -0.1
comp=N,101nm,0.9s,comp=N,1µm
SWI Sorong 28.97 199 P **P** 21 01 41.3 -1.2
SWI Sorong 28.97 199 P **P** 21 01 42.7 +0.2
comp=N,81nm,0.9s,comp=N,683nm
QIZ Qiongzhong 29.05 261 P **P** 21 01 43.7 +0.5
QIZ S **S** 21 05 59.9 -0.2
QIZ pmax pmax
comp=N,130nm,1.1s
QIZ Qiongzhong 29.05 261 P **P** 21 01 45.1 +1.9
PEA0B Petropavlovsk- 29.19 22 P **P** 21 01 45.1 +1.2
PEA0B Petropavlovsk- 29.19 22 *ce*P **P** 21 01 44.2 +0.3
PETK Petropavlovsk- 29.19 22 P **P** 21 01 44.5 +0.7
PETK pP **pP** 21 03 02.6 -1.5
PETK Petropavlovsk- 29.19 22 P **P** 21 01 44.6 +0.7
comp=N,14nm,0.5s,baz=200,slow=4.7,SNR=60
PETK ScP **ScP** 21 07 31.1 -0.7
comp=N,15nm,0.7s,baz=181,slow=3.8,SNR=11
comp=N,14nm,0.5s
PET Petropavlovsk 29.44 23 P **P** 21 01 47.3 +1.2
PET Petropavlovsk 29.44 23 P **P** 21 01 47.5 +1.5
PET Petropavlovsk 29.44 23 *e*P P 21 01 47.7 +1.7
PET *e*S **S** 21 06 05.6 +0.4
PET pmax pmax
comp=Z,131nm,0.7s
PET MLR MLR
comp=Z,100nm,17.0s
GYA Guiyang 29.99 277 ⇓*i*P **P** 21 01 51.5 +0.1
GYA pP pP 21 03 13.8 +0.5
GYA PcP **PcP** 21 04 40.6 +1.6
GYA S **S** 21 06 12.0 -2.8
GYA PcS **PcS** 21 08 23.0 -0.4
GYA ScS **ScS** 21 11 32.1 +0.1
GYA pmax pmax
comp=Z,360nm,0.6s
MYLDM Lahad Datu 30.00 228 P **P** 21 01 50.8 -0.6
LBMI Labuha 30.05 206 P **P** 21 01 52.9 +1.0
comp=Z,387nm,1.0s,comp=Z,3µm
KMSI Cibinong 30.54 214 P **P** 21 01 56.3 +0.2
comp=Z,392nm,0.8s,comp=Z,3µm
FAKI Fak Fak 30.68 196 P **P** 21 01 57.1 -0.1
FAKI IAmb IAmb 21 03 25.6
comp=Z,74nm,1.2s
FAKI Fak Fak 30.68 196 P **P** 21 01 57.2 -0.1
comp=Z,47nm,0.9s
MRSI Marisa 31.67 217 P **P** 21 02 06.7 +0.9
comp=Z,277nm,1.0s,comp=Z,2µm
TOLI2 Tolitoli 31.78 219 P **P** 21 02 06.5 -0.3
TOLI2 Tolitoli 31.78 219 P **P** 21 02 07.0 +0.2
SANI Sanana 31.95 208 P **P** 21 02 07.6 -0.6
SANI Sanana 31.95 208 P **P** 21 02 06.9 -1.3
comp=Z,280nm,0.8s,comp=Z,2µm
CIT Chita 32.12 328 *e*P **P** 21 02 09.2 -0.1
CIT *e* 21 03 31.2
CIT *e* 21 04 41.2
CIT *e* 21 06 48.4
CIT pmax pmax
comp=Z,371nm,1.2s
CD2 Chengdu 32.12 286 P **P** 21 02 09.6 0.0
CD2 sP sP 21 04 26.6 -0.9
CD2 S **S** 21 06 42.8 -4.5
CD2 sS sS 21 09 21.9 +0.6
CD2 SS SS 21 09 31.6 -17
CD2 pmax pmax
comp=Z,1µm,0.5s
LZH Lanzhou 32.23 296 ⇓P **P** 21 02 10.9 +0.3
LZH PcP **PcP** 21 04 46.4 +1.4
LZH S **S** 21 06 45.0 -4.0
LZH sS sS 21 09 21.9 -1.1
LZH ScS **ScS** 21 11 43.0 0.0
LZH pmax pmax
comp=Z,450nm,1.2s
LZH pmax pmax
comp=Z,330nm,5.2s
LUWI Luwuk 32.53 214 P **P** 21 02 11.9 -1.3
LUWI IAmb IAmb 21 02 22.2
comp=Z,192nm,1.3s
LUWI Luwuk 32.53 214 P **P** 21 02 13.2 0.0
LUWI Luwuk 32.53 214 P **P** 21 02 12.6 -0.6
comp=Z,112nm,0.9s,comp=Z,2µm
NLAI Namlea 32.59 205 P **P** 21 02 14.8 +1.1
comp=Z,35nm,0.9s
BNDI Bandanaira 32.84 199 pP pP 21 03 34.0 -5.0
comp=Z,595nm,1.2s
MPSI Mapaga 32.92 220 P **P** 21 02 16.6 +0.1
comp=Z,21nm,0.7s
MPSI pP **pP** 21 03 35.8 -3.8
comp=Z,21nm,0.7s
ULN Ulaanbaatar 33.29 318 P **P** 21 02 19.6 +0.2
ULN Ulaanbaatar 33.29 318 *d*⇓*i*P **P** 21 02 19.0 -0.4
ULN pmax pmax
comp=Z,488nm,1.4s
ULN Ulaanbaatar 33.29 318 P **P** 21 02 19.9 +0.5
ULN Ulaanbaatar 33.29 318 ⇓P **P** 21 02 19.9 +0.5
ULN pP **pwP** 21 03 46.9 -0.3
ULN PcP **PcP** 21 04 48.8 +1.1
ULN ScP **ScP** 21 07 46.7 +0.7
DLV T Lat 33.37 250 P **P** 21 02 21.3 +0.7
DLV IAmb IAmb 21 02 22.2
comp=Z,44nm,0.8s
MA2 Magadan 33.42 10 P **P** 21 02 19.9 -0.3
MA2 IAmb IAmb 21 02 22.0
comp=Z,27nm,0.5s
MA2 ScP **ScP** 21 07 45.4 -0.7
MA2 Magadan 33.42 10 P **P** 21 02 21.3 +1.1
MA2 Magadan 33.42 10 *i*P **P** 21 02 20.9 +0.7
MA2 pmax pmax
comp=Z,16nm,0.9s
MA2 Magadan 33.42 10 P **P** 21 02 20.8 +0.7
MA2 pP **pwP** 21 03 49.3 +1.3
MA2 ScP **ScP** 21 07 45.5 -0.5
SLVN Son La 33.59 268 IAmb IAmb 21 02 24.1
comp=Z,112nm,0.9s
SONM Songino Array 33.67 317 P **P** 21 02 22.5 -0.1
SONM Songino Array 33.67 317 P **P** 21 02 22.5 -0.1
SONM pmax pmax
comp=Z,347nm,1.3s
SONM Songino Array 33.67 317 P **P** 21 02 22.9 +0.3
comp=Z,126nm,0.6s,baz=126,slow=8.1,SNR=1136
SONM PP **PP** 21 03 59.5 -1.2
comp=Z,17nm,0.9s,baz=129,slow=8.6,SNR=3.7
SONM PcP **PcP** 21 04 49.6 +0.7
comp=Z,13nm,0.4s,baz=125,slow=2.7,SNR=6.6
SONM ScP **ScP** 21 07 47.8 +0.5
comp=Z,34nm,0.7s,baz=152,slow=4.1,SNR=20
comp=Z,126nm,0.6s
KMI Kunming 33.71 275 ⇓P **P** 21 02 24.1 +0.7
KMI PcP **PcP** 21 04 50.9 +1.4
KMI S **S** 21 07 07.8 -4.2
KMI ScP **ScP** 21 07 49.2 +1.2
KMI pmax pmax
comp=Z,300nm,0.8s
KMI Kunming 33.71 275 ⇓P **P** 21 02 24.1 +0.7
PZH PanZhiHua 34.34 278 P **P** 21 02 28.7 +0.1
PZH sP **sP** 21 04 45.5 -2.0
PZH S **S** 21 07 18.5 -2.8
PZH sS sS 21 09 52.3 -4.2
PZH ScS **ScS** 21 11 52.2 -2.3
PZH pmax pmax
comp=Z,420nm,0.8s
PZH pmax pmax
comp=Z,240nm,5.0s
TTSI Tana Toraja 35.76 217 P **P** 21 02 40.2 -0.2
comp=Z,20nm,0.9s,comp=Z,644nm
YAK Yakutsk 35.80 351 P **P** 21 02 39.6 -0.5
YAK Yakutsk 35.80 351 *de*P **P** 21 02 39.6 -0.5
YAK pmax pmax
comp=Z,452nm,0.9s
YAK Yakutsk 35.80 351 P **P** 21 02 39.8 -0.2
YAK PcP **PcP** 21 04 54.7 0.0
YAK ScP **ScP** 21 07 53.6 -0.9
GTA Gaotai 35.80 301 ⇓P **P** 21 02 40.5 -0.2
GTA pP pP 21 04 03.8 -1.2
GTA PP **PP** 21 04 16.4 +0.5
GTA PcP **PcP** 21 04 56.3 +1.0
GTA ScP **ScP** 21 07 56.5 +1.2
GTA PcS **PcS** 21 08 43.2 -0.4
GTA ScS **ScS** 21 12 00.2 -1.9
GTA pmax pmax
comp=Z,290nm,1.0s
GTA pmax pmax
comp=Z,550nm,7.6s
BOD Bodaibo 36.00 336 *e*P **P** 21 02 41.8 0.0
BOD pmax pmax
comp=Z,375nm,1.3s
SMY Shemya 36.02 35 P P 21 02 43.6 +1.5
SMY Shemya 36.02 35 P P 21 02 43.6 +1.5
SMY pmax pmax
comp=Z,147nm,0.5s
ZAK Zakamensk 36.63 320 *e*P **P** 21 02 47.1 -0.2
ZAK *e* 21 07 58.4
ZAK pmax pmax
comp=Z,349nm,1.1s
ZAK pmax pmax
comp=Z,47nm,1.5s
PMG Port Moresby 36.73 169 ScP **ScP** 21 07 58.7 -0.1
comp=Z,41nm,0.8s,baz=250,slow=23,SNR=18
SEY Seymchan 36.87 9 *i*P **P** 21 02 49.8 +0.9
SEY pmax pmax
comp=Z,12nm,0.7s
MTKI Muara Teweh, K 36.96 225 P **P** 21 02 50.9 +0.5
comp=Z,206nm,0.8s,comp=Z,2µm
CRAI Chiangrai 37.07 268 P **P** 21 02 51.7 +0.4
MIDW Midway 37.42 78 P **P** 21 02 54.6 +0.7
MIDW Midway 37.42 78 P P 21 02 56.2 +2.2
MIDW Midway 37.42 78 P P 21 02 56.2 +2.2
KAPI Kappang 37.46 215 P **P** 21 02 54.9 +0.4
KAPI IAmb IAmb 21 04 32.7
comp=Z,58nm,1.1s
KAPI Kappang 37.46 215 P **P** 21 02 54.9 +0.4
KAPI pmax pmax
comp=Z,58nm,1.2s
KAPI Kappang 37.46 215 P **P** 21 02 55.5 +1.0
KAPI S **S** 21 08 07.3 -0.7
TNCH TengChong 37.47 277 P **P** 21 02 55.2 +0.5
TNCH sP PcP 21 05 09.1 +8.3
TNCH ScP **ScP** 21 08 03.0 +1.2
TNCH S **S** 21 08 07.7 -0.7
TNCH sS sS 21 10 41.5 -4.0
TNCH SS **SS** 21 11 11.5 -8.2
TNCH pmax pmax
comp=Z,370nm,0.7s
BKSI Bulukumba 37.54 214 P **P** 21 02 54.7 -0.4
comp=Z,32nm,1.0s
KSM Kuching 38.32 234 IAmb IAmb 21 03 03.3
comp=Z,31nm,0.6s
NAYO Nakonayok 38.41 259 P **P** 21 03 03.0 +0.7
MOY Mondy 38.48 321 *e*P **P** 21 03 02.5 0.0
MOY pmax pmax
comp=Z,287nm,1.9s
STKI Sintang 38.49 231 P **P** 21 03 03.8 +0.9
comp=Z,51nm,0.5s,comp=Z,18µm
CHTO Chiang Mai 38.80 267 P **P** 21 03 05.2 -0.2
CHTO IAmb IAmb 21 03 06.8
comp=Z,152nm,0.8s
CHTO Chiang Mai 38.80 267 P **P** 21 03 05.7 +0.2
CHTO Chiang Mai 38.80 267 P **P** 21 03 05.2 -0.2
CHTO pmax pmax
comp=Z,152nm,0.9s
CHTO Chiang Mai 38.80 267 P **P** 21 03 05.7 +0.2
CHTO Chiang Mai 38.80 267 ⇓P **P** 21 03 05.7 +0.2
CHTO PcP **PcP** 21 05 05.5 +0.7
CHTO ScP **ScP** 21 08 07.6 +0.8
CM31 Chiang Mai Arr 38.92 266 IAmb IAmb 21 03 08.1
comp=Z,70nm,0.8s
CM31 Chiang Mai Arr 38.92 266 P **P** 21 03 07.0 +0.6
SNR=30
CMAR Chiang Mai Arr 38.92 266 P **P** 21 03 07.0 +0.5
comp=Z,68nm,0.9s,baz=58,slow=8.4,SNR=314
CMAR PcP **PcP** 21 05 06.1 +0.9
comp=Z,17nm,0.9s,baz=55,slow=1.5,SNR=9.9
CMAR ScP **ScP** 21 08 08.3 +1.1
comp=Z,15nm,1.1s,baz=67,slow=2.4,SNR=12
CMAR PKiKP **PKiKP** 21 12 16.9 -0.1
comp=Z,0.8nm,0.6s,baz=294,slow=1.4,SNR=4.3
comp=Z,68nm,0.9s
MMRI Maumere 39.46 209 IAmb IAmb 21 03 12.0
comp=Z,140nm,0.8s
MMRI Maumere 39.46 209 P **P** 21 03 11.6 +0.9
MMRI Maumere 39.46 209 P **P** 21 03 11.0 +0.3
comp=Z,185nm,0.8s,comp=Z,1µm
GOMU GeErMu 39.53 295 P **P** 21 03 12.5 +1.0
GOMU pmax pmax
comp=Z,910nm,0.9s
SOEI Soe 39.65 205 IAmb IAmb 21 03 31.3
comp=Z,135nm,1.0s
SOEI Soe 39.65 205 P **P** 21 03 12.8 +0.4
SOEI Soe 39.65 205 P **P** 21 03 11.9 -0.5
comp=Z,149nm,1.0s,comp=Z,1µm
EDFI Ende, Flores 39.80 210 P **P** 21 03 13.0 -0.6
comp=Z,161nm,0.8s,comp=Z,1µm
KDU Kakadu 40.11 192 P **P** 21 03 16.4 +0.5
SRDT SRDT 40.33 260 P **P** 21 03 18.9 +1.1
MND Mandalay 40.35 273 P **P** 21 03 18.4 +0.5
MTN Manton Dam 40.53 194 ScP **ScP** 21 08 12.8 -0.6
MTN Manton Dam 40.53 194 P **P** 21 03 19.5 +0.2
ADK Adak 40.71 40 P **P** 21 03 21.0 +0.7
ADK Adak 40.71 40 P P 21 03 21.7 +1.4
ADK Adak 40.71 40 P **P** 21 03 21.0 +0.7
ADK pmax pmax
comp=Z,261nm,0.8s
ADK Adak 40.71 40 P **P** 21 03 21.5 +1.2
COEN Coen 40.74 176 P **P** 21 03 22.3 +1.3
COEN Coen 40.74 176 P **P** 21 03 22.4 +1.4
BASI Baing, Sumba 41.59 210 P **P** 21 03 26.4 -1.4
comp=Z,84nm,1.0s
PLAI Plampang 41.72 215 P **P** 21 03 28.5 -0.3
PLAI Plampang 41.72 215 P **P** 21 03 27.4 -1.4
comp=Z,116nm,0.8s,comp=Z,815nm
TWSI Taliwang, Sumb 42.11 216 P **P** 21 03 30.7 -1.2
comp=Z,64nm,0.9s
ATKA Atka Island 42.26 41 P **P** 21 03 32.9 +0.3
ATKA Atka Island 42.26 41 P **P** 21 03 33.9 +1.3
SURA Surathani 42.27 253 P **P** 21 03 34.5 +1.3
SKLT Songkhla 42.46 250 P **P** 21 03 35.9 +1.2
SRBI Singaraja 42.46 218 P **P** 21 03 36.0 +1.3
comp=Z,78nm,0.8s,comp=Z,1µm
SRIT Nakonsritamara 42.58 252 IAmb IAmb 21 03 38.1
comp=Z,157nm,1.0s
SRIT Nakonsritamara 42.58 252 P **P** 21 03 36.9 +1.2
MYKOM Kota Tinggi 42.96 241 IAmb IAmb 21 03 41.0
comp=Z,76nm,0.8s
TPRI Tanjung Pinang 42.99 239 P **P** 21 03 39.4 +0.5
comp=Z,73nm,0.9s
LSA Lhasa 43.09 286 *i*P **P** 21 03 41.6 +1.5
SNR=170
LSA Lhasa 43.09 286 ⇓P **P** 21 03 41.6 +1.5
SHL Shillong 43.22 279 ScP **ScP** 21 08 23.6 -0.9
SHL Shillong 43.22 279 P **P** 21 03 41.0 +0.1
SNR=118
JAGI Jajag, Banyuwa 43.37 219 P **P** 21 03 40.6 -1.3
JAGI IAmb IAmb 21 05 26.3
comp=Z,47nm,1.0s
JAGI Jajag, Banyuwa 43.37 219 P **P** 21 03 40.8 -1.1
comp=Z,42nm,0.7s
KULM Kulim 43.46 247 P **P** 21 03 42.5 -0.1
KULM IAmb IAmb 21 03 44.5
comp=Z,120nm,0.8s
IPM Ipoh 43.61 246 IAmb IAmb 21 03 45.1
comp=Z,100nm,0.8s
IPM Ipoh 43.61 246 P **P** 21 03 44.3 +0.5
KNRA Kununurra 43.81 196 P **P** 21 03 45.3 +0.1
KNRA IAmb IAmb 21 03 48.0
comp=Z,100nm,1.6s
DSRI Dabo 43.85 237 P **P** 21 03 46.7 +1.0
comp=Z,40nm,1.0s
BILL Bilibino 44.00 14 P **P** 21 03 46.8 +0.8
BILL IAmb IAmb 21 03 48.3
comp=Z,85nm,0.9s
BILL Bilibino 44.00 14 P **P** 21 03 47.0 +1.0
BILL Bilibino 44.00 14 P **P** 21 03 47.0 +1.0
BILL ScP **ScP** 21 08 26.5 -0.2
UGM Wanagama 45.08 224 P **P** 21 03 54.8 -0.4
comp=Z,37nm,1.1s
TIXI Tiksi 45.21 355 P **P** 21 03 54.8 -0.5
TIXI IAmb IAmb 21 03 56.4
comp=Z,123nm,1.0s
TIXI Tiksi 45.21 355 *de*P **P** 21 03 55.1 -0.2
TIXI pmax pmax
comp=Z,94nm,0.9s
TIXI Tiksi 45.21 355 ScP **ScP** 21 08 32.1 +0.6
comp=Z,18nm,0.9s,baz=178,slow=5.3,SNR=5.6
TIXI Tiksi 45.21 355 ⇓P **P** 21 03 55.5 +0.2
TIXI PcP **pP** 21 05 26.6 +1.3
TIXI ScP **ScP** 21 08 32.1 +0.6
WMQ Urumqi 45.30 306 ⇓P **P** 21 03 57.5 +1.0
WMQ pP pP 21 05 27.6 +1.7
WMQ pmax pmax
comp=Z,740nm,0.9s
WMQ pmax pmax
comp=Z,2µm,3.7s
NIKH Nikolski High 45.60 41 P **P** 21 03 59.6 +1.0
NIKH Nikolski High 45.60 41 P **P** 21 03 59.3 +0.7
baz=256,SNR=14
KPJI Karang Pucung 45.65 226 P **P** 21 03 59.1 -0.4
comp=Z,83nm,0.7s
SPIA Saint Paul Isl 46.06 35 P **P** 21 04 03.0 +1.0
baz=251
SPIA ScP **ScP** 21 08 33.9 -1.5
baz=251
LEM Lembang 46.13 228 P **P** 21 04 03.7 +0.3
comp=Z,84nm,1.1s
DGZ Jazzator, Alta 46.16 314 *d*⇓*i*P **P** 21 04 04.2 +1.1
DGZ pmax pmax
comp=Z,773nm,0.9s
PSI Prapat 46.28 246 P **P** 21 04 05.5 +1.0
PSI Prapat 46.28 246 P **P** 21 04 04.8 +0.3
PSI pmax pmax
comp=Z,120nm,0.8s
CMJI Cimerak 46.30 226 P **P** 21 04 01.9 -2.5
comp=Z,43nm,1.2s
RPSI Rantau Prapat 46.34 246 P **P** 21 04 04.8 -0.1
RPSI IAmb IAmb 21 04 06.0
comp=Z,120nm,0.8s
RPSI ScP **ScP** 21 08 36.4 -0.9
CBJI Citeko 46.34 229 P **P** 21 04 05.5 +0.7
comp=Z,77nm,1.0s
LHMI Lhok Sumawe 46.57 250 P **P** 21 04 07.5 +0.9
LHMI Lhok Sumawe 46.57 250 P **P** 21 04 08.2 +1.6
comp=Z,280nm,0.7s
WB0 Warramunga Arr 46.77 188 IAmb IAmb 21 04 09.1
comp=Z,80nm,0.5s
WB0 ScP **ScP** 21 08 38.5 -0.4
CNJI Cibinong 46.81 228 P P 21 04 05.7 -2.6
comp=Z,21nm,0.6s
KCSI Kotacane, Aceh 46.82 248 P **P** 21 04 07.0 -1.5
comp=Z,96nm,0.8s,comp=Z,1µm
WRAB Tennant Creek 46.94 188 P **P** 21 04 08.4 -0.9
WRAB IAmb IAmb 21 05 54.6
comp=Z,40nm,0.7s
WRAB Tennant Creek 46.94 188 P **P** 21 04 08.4 -0.9
WRAB pmax pmax
comp=Z,40nm,0.7s
WR0 Warramunga Arr 46.95 187 IAmb IAmb 21 04 10.4
comp=Z,55nm,0.5s
WR0 ScP **ScP** 21 08 39.0 -0.7
WB2 Warramunga Arr 46.95 188 IAmb IAmb 21 05 54.6
comp=Z,42nm,0.7s
WRA Warramunga Arr 46.95 188 P **P** 21 04 09.3 0.0
comp=Z,38nm,0.4s,baz=3.1,slow=7.6,SNR=658
WRA ScP **ScP** 21 08 39.5 -0.1
comp=Z,28nm,0.8s,baz=358,slow=4.3,SNR=20
WRA PKiKP **PKiKP** 21 12 23.0 -1.4
comp=Z,0.6nm,0.4s,baz=328,slow=1.5,SNR=8.4
WRA P4KPbc 21 41 45.6
comp=Z,0.9nm,0.7s,baz=12,slow=4.5,SNR=5.8
comp=Z,38nm,0.4s
FITZ Fitzroy Crossi 46.97 199 P **P** 21 04 09.7 +0.3
FITZ Fitzroy Crossi 46.97 199 P **P** 21 04 10.3 +0.9
SKJI Sukabumi 46.97 229 P **P** 21 04 08.2 -1.4
CTA Charters Tower 47.10 172 P **P** 21 04 11.2 +0.7
comp=Z,8.8nm,0.8s,baz=0.8,slow=9.2,SNR=8.8
UNV Unalaska Valle 47.18 40 P P 21 04 12.1 +1.5
UNV Unalaska Valle 47.18 40 P **P** 21 04 11.2 +0.7
baz=257
QIS Mount Isa 47.22 181 P **P** 21 04 12.4 +1.1
KRJI Kerinci 47.26 239 P **P** 21 04 12.8 +0.9
comp=Z,215nm,1.2s,comp=Z,5µm
PDSI Padang 47.28 241 P **P** 21 04 10.8 -1.2
comp=Z,34nm,0.9s
LWLI Liwa 47.29 233 P **P** 21 04 10.8 -1.3
comp=Z,139nm,0.9s,comp=Z,1µm
KASI Kota Agung 47.33 232 P **P** 21 04 10.4 -1.9
comp=Z,28nm,0.9s
MLSI Meulaboh, Aceh 47.55 250 P **P** 21 04 12.8 -1.2
comp=Z,133nm,0.6s
ZSN Zaisan 47.56 311 ⇓*i*P **P** 21 04 14.4 +0.7
comp=Z,132nm,0.9s,baz=311
ZSN Zaisan 47.56 311 *d*⇓*i*P **P** 21 04 14.4 +0.7
ZSN pmax pmax
comp=Z,133nm,0.9s
AKUT Akutan 47.66 40 P **P** 21 04 14.7 +0.5
AKUT Akutan 47.66 40 P P 21 04 15.8 +1.6
GAMB Gambell 48.01 26 P **P** 21 04 18.4 +1.7
baz=243
GAMB ScP **ScP** 21 08 43.7 +0.2
baz=243
GSI Gunungsitoli 48.24 245 ScP **ScP** 21 08 45.6 +0.2
GSI Gunungsitoli 48.24 245 P **P** 21 04 19.6 +0.4
GSI Gunungsitoli 48.24 245 P **P** 21 04 18.9 -0.3
comp=Z,258nm,1.0s,comp=Z,3µm
PBSI Pulau Batu 48.48 243 P **P** 21 04 20.9 0.0
comp=Z,123nm,1.4s
ZALV Zalesovo Beam 48.50 319 P **P** 21 04 20.3 -0.3
comp=Z,123nm,0.4s,baz=107,slow=7.3,SNR=822
ZALV PcP **PcP** 21 05 37.6 0.0
comp=Z,120nm,0.5s,baz=116,slow=3.8,SNR=17
ZALV ScP **ScP** 21 08 45.3 -0.5
comp=Z,24nm,0.6s,baz=121,slow=4.5,SNR=8.3
ZALV ScS **ScS** 21 13 17.1 -3.4
comp=Z,2.2nm,0.7s,baz=107,slow=9.2,SNR=4.9
ZALV P4KPbc 21 41 50.9
comp=Z,2.3nm,0.4s,baz=119,slow=5.2,SNR=10
comp=Z,123nm,0.4s
SISI Saibi 48.61 241 P **P** 21 04 20.9 -1.0
comp=Z,63nm,0.9s
SNSI Sinabang, Aceh 48.63 248 P **P** 21 04 22.4 +0.3
comp=Z,270nm,1.3s,comp=Z,4µm
PPSI Pulau Pagai 48.80 239 P **P** 21 04 22.9 -0.4
comp=Z,233nm,1.0s
M11K Mekoryuk 49.10 32 P P 21 04 26.8 +2.0
baz=252,SNR=5.2
M11K ScP **ScP** 21 08 48.2 0.0
baz=252
MK31 Makanchi Array 49.27 310 IAmb IAmb 21 04 28.0
comp=Z,181nm,1.1s
MK31 Makanchi Array 49.27 310 *d*⇓*i*P **P** 21 04 26.8 +0.3
MKAR Makanchi Array 49.27 310 P **P** 21 04 26.9 +0.4
comp=Z,191nm,0.8s,baz=93,slow=9.5,SNR=1519
MKAR PcP **PcP** 21 05 40.9 +0.3
comp=Z,64nm,0.7s,baz=84,slow=6.2,SNR=8.5
MKAR ScP **ScP** 21 08 49.5 +0.1
comp=Z,25nm,0.5s,baz=80,slow=4.9,SNR=17
MKAR ScS **ScS** 21 13 22.6 -3.4
comp=Z,1.7nm,0.8s,baz=97,slow=7.1,SNR=3.8
MKAR PKP2bc 21 35 31.1
comp=Z,0.3nm,0.6s,baz=266,slow=3.2,SNR=4.2
MKAR P4KPbc 21 41 54.2
comp=Z,2.2nm,0.5s,baz=86,slow=5.1,SNR=52
comp=Z,191nm,0.8s
MAKZ Makanchi 49.49 310 P **P** 21 04 27.9 -0.2
MAKZ Makanchi 49.49 310 P **P** 21 04 27.9 -0.2
MAKZ pmax pmax
comp=Z,537nm,1.4s
MAKZ Makanchi 49.49 310 ⇓P **P** 21 04 28.7 +0.6
MAKZ PcP **PcP** 21 05 41.5 +0.1
MAKZ ScP **ScP** 21 08 49.8 -0.4
TNA Tin City 50.25 25 P P 21 04 35.3 +2.0
baz=246,SNR=16
TNA ScP **ScP** 21 08 53.3 +0.3
baz=246
M13K Dall Lake 50.46 32 P P 21 04 37.0 +2.1
baz=255,SNR=13
AS01 Alice Springs 50.67 188 P **P** 21 04 37.3 +0.3
ASAR Alice Springs 50.68 188 P **P** 21 04 37.1 0.0
comp=Z,10nm,0.5s,baz=1.1,slow=5.0,SNR=285
ASAR PcP **PcP** 21 05 47.3 +1.2
comp=Z,9.6nm,0.8s,baz=10,slow=4.8,SNR=10
ASAR ScP **ScP** 21 08 55.5 -0.1
comp=Z,11nm,0.7s,baz=5.6,slow=4.6,SNR=13
ASAR P4KPbc 21 42 01.1
comp=Z,0.7nm,0.8s,baz=0.1,slow=4.4,SNR=8.0
comp=Z,10nm,0.5s
F14K Arctic Creek 50.83 26 P P 21 04 40.0 +2.4
baz=248
F14K ScP **ScP** 21 08 56.3 +0.7
baz=248,SNR=6.0
ANM Nome 50.87 27 P P 21 04 39.8 +2.0
baz=249,SNR=41
ANM ScP **ScP** 21 08 56.6 +0.8
baz=249
SDPT Sand Point 50.90 39 P **P** 21 04 39.0 +0.8
SDPT Sand Point 50.90 39 P **P** 21 04 38.5 +0.3
baz=261,SNR=6.3
L14K Kuka Creek 51.03 31 IAmb IAmb 21 04 42.1
comp=Z,89nm,0.7s

L14K Kuka Creek 51.03 31 P P 21 04 41.1 +2.1
baz=255
L14K ScP **ScP** **21 08 57.7 +1.2**
baz=255
J14K Nanvaranak Lak 51.04 29 P P 21 04 40.9 +1.8
baz=253
J14K ScP **ScP** **21 08 57.6 +1.1**
baz=253
N14K Kuskokwak Cree 51.15 33 P P 21 04 41.6 +1.7
baz=257,SNR=22
N14K ScP **ScP** **21 08 57.7 +0.7**
baz=257
O14K Tigyukauivet M 51.20 34 IAmb IAmb 21 04 42.9
comp=Z,114nm,0.7s
O14K Tigyukauivet M 51.20 34 P **P** **21 04 42.0 +1.6**
baz=258
O14K ScP **ScP** **21 08 57.7 +0.4**
baz=258
M14K Bethel 51.21 32 ScP **ScP** **21 08 57.4 +0.1**
M14K Bethel 51.21 32 P P 21 04 42.2 +1.8
baz=256,SNR=21
M14K ScP **ScP** **21 08 58.4 +1.1**
baz=256
SHLS Shalkode 51.28 305⇓*i*P **P** **21 04 39.6 -1.8**
comp=Z,128nm,0.8s,baz=305
SHLS *e*S **S** **21 11 20.7 -3.0**
baz=305
SHLS Shalkode 51.28 305*d i*P **P** **21 04 39.6 -1.8**
SHLS *e*S **S** **21 11 20.6 -3.0**
SHLS pmax pmax
comp=Z,128nm,0.8s
CHNA Chernabura Isl 51.33 40 P **P** **21 04 42.1 +0.8**
baz=263,SNR=7.2
G15K Niukluk 51.55 27 P **P** **21 04 44.5 +1.7**
baz=250,SNR=25
G15K ScP **ScP** **21 08 59.2 +0.4**
baz=250
S14K Fog Glacier 51.56 38 P **P** **21 04 43.3 +0.2**
baz=262
F15K North Star Dit 51.56 26 P P 21 04 44.9 +2.0
baz=249,SNR=44
F15K ScP **ScP** **21 08 59.7 +0.9**
baz=249,SNR=6.3
WUS Wushi 51.57 303⇓P **P** **21 04 44.6 +1.1**
UZB Uzynbulak 51.60 305⇓*i*P **P** **21 04 44.3 +0.5**
comp=Z,82nm,0.6s,baz=305
UZB Uzynbulak 51.60 305*d i*P **P** **21 04 44.2 +0.5**
UZB pmax pmax
comp=Z,82nm,0.6s
L15K Ungalak Mounta 51.67 31 P **P** **21 04 45.1 +1.4**
baz=256
L15K ScP **ScP** **21 09 00.1 +0.8**
baz=256
K15K Wolf Creek Mou 51.81 30 P P 21 04 46.9 +2.2
baz=255
K15K ScP **ScP** **21 09 00.1 +0.2**
baz=255
M15K Kasigluk River 51.81 32 P **P** **21 04 46.2 +1.5**
baz=257
M15K ScP **ScP** **21 09 00.5 +0.6**
baz=257
KPKS Kokpek 51.83 305⇓*i*P **P** **21 04 45.9 +0.5**
comp=Z,58nm,0.5s,baz=305
KPKS Kokpek 51.83 305*d i*P **P** **21 04 45.8 +0.5**
KPKS pmax pmax
comp=Z,58nm,0.5s
KURK Kurchatov 51.89 315 P **P** **21 04 45.5 0.0**
KURK Kurchatov 51.89 315 P **P** **21 04 45.5 0.0**
KURK pmax pmax
comp=Z,633nm,1.1s
KURK Kurchatov 51.89 315 P **P** **21 04 46.0 +0.5**
KURK S **S** **21 11 29.4 -1.9**
KURK Kurchatov 51.89 315⇓P **P** **21 04 45.7 +0.2**
KURK PcP **PcP** **21 05 50.3 +0.1**
O15K Ungalikthiuk R 51.91 34 P **P** **21 04 47.2 +1.6**
baz=259,SNR=12
O15K ScP **ScP** **21 09 00.5 +0.1**
baz=259
KURBB Kurchatov Arra 51.94 315 P **P** **21 04 46.0 +0.2**
comp=Z,390nm,0.7s,baz=92,slow=8.0,SNR=3705
KURBB PcP **PcP** **21 05 50.2 -0.3**
comp=Z,48nm,0.6s,baz=98,slow=4.0,SNR=5.8
KURBB P4KPbc 21 42 04.9
comp=Z,0.5nm,0.2s,baz=294,slow=32,SNR=1.7
comp=Z,390nm,0.7s
TDK Taldyqorghan 51.97 307⇓*i*P **P** **21 04 47.2 +1.0**
comp=Z,175nm,0.6s,baz=307
TDK Taldyqorghan 51.97 307*d i*P **P** **21 04 47.2 +1.0**
TDK pmax pmax
comp=Z,175nm,0.6s
N15K Kwethluk River 51.98 33 P P 21 04 47.9 +1.9
baz=258
N15K ScP **ScP** **21 09 01.5 +0.8**
baz=258
ZHN Zhinishke 52.03 305⇓*i*P **P** **21 04 47.4 +0.6**
baz=305
ZHN Zhinishke 52.03 305*d i*P **P** **21 04 47.4 +0.6**
SATY Saty 52.05 305⇓*i*P **P** **21 04 47.8 +0.8**
comp=Z,90nm,0.8s,baz=305
SATY Saty 52.05 305*d i*P **P** **21 04 47.8 +0.8**
SATY pmax pmax
comp=Z,90nm,0.8s
PSA00 Pilbara Seismi 52.12 204 P **P** **21 04 47.1 -0.4**
PSA00 Pilbara Seismi 52.12 204 P **P** **21 04 47.4 -0.2**
PSA00 IAmb IAmb 21 06 33.3
comp=Z,28nm,1.1s
H16K Elim 52.17 27 P **P** **21 04 48.8 +1.6**
baz=252,SNR=57
H16K ScP **ScP** **21 09 01.9 +0.5**
baz=252,SNR=6.8
NRIK Noril'sk 52.19 339 P **P** **21 04 47.2 -0.1**
NRIK Noril'sk 52.19 339*ce*P **P** **21 04 47.5 +0.2**
NRIK pmax pmax
comp=Z,408nm,0.9s
NRIK Noril'sk 52.19 339 P **P** **21 04 47.7 +0.4**
comp=Z,388nm,0.5s,baz=110,slow=8.5,SNR=616
NRIK ScP **ScP** **21 09 01.4 0.0**
comp=Z,49nm,1.0s,baz=125,slow=6.1,SNR=6.9
comp=Z,388nm,0.5s
C16K Lisburne Hills 52.28 22 P **P** **21 04 49.5 +1.5**
baz=247
C16K ScP **ScP** **21 09 02.4 +0.6**
baz=247
G16K Koyuk River 52.35 26 P **P** **21 04 49.9 +1.3**
baz=252,SNR=18
G16K ScP **ScP** **21 09 03.2 +1.0**
baz=252,SNR=15
J16K Anvik River 52.48 29 P P 21 04 51.7 +2.1
baz=255
J16K ScP **ScP** **21 09 03.8 +0.9**
baz=255
I17K Unalakleet 52.60 29 P P 21 04 52.5 +2.2
baz=255,SNR=41
I17K ScP **ScP** **21 09 04.3 +1.0**
baz=255
L16K Owhat River 52.61 31 P **P** **21 04 52.0 +1.5**
baz=257,SNR=12
L16K ScP **ScP** **21 09 04.2 +0.9**
baz=257
N16K Nishlik Lake 52.69 33 P P 21 04 53.0 +1.8
baz=259,SNR=41
N16K ScP **ScP** **21 09 04.8 +1.0**
baz=259
M16K Timber Creek 52.70 32 P **P** **21 04 52.9 +1.7**
baz=258
M16K ScP **ScP** **21 09 04.8 +1.0**
baz=258
R16K Pilot Point 52.82 37 P **P** **21 04 52.4 +0.4**
baz=262
P16K Nushagak River 52.82 35 P P 21 04 54.0 +1.9
baz=261,SNR=13
P16K ScP **ScP** **21 09 04.3 0.0**
baz=261
O16K Kokwok River B 52.86 34 IAmb IAmb 21 04 54.8
comp=Z,100nm,1.1s
O16K Kokwok River B 52.86 34 P **P** **21 04 54.0 +1.7**
baz=260
O16K ScP **ScP** **21 09 05.3 +0.8**
baz=260
WRKA Warakurna 52.95 194 P **P** **21 04 53.9 +0.4**
CHKK Chushkaly 53.04 306⇓*i*P **P** **21 04 54.5 +0.6**
baz=306
CHKK Chushkaly 53.04 306⇓*i*P **P** **21 04 54.5 +0.6**
MDOK Medeo 53.04 305 *i* P **P** **21 04 55.3 +1.2**
MDOK *e*S **S** **21 11 49.5 +2.3**
baz=305
RDOG Red Dog Mine 53.04 23 P **P** **21 04 55.4 +1.9**
baz=249,SNR=43
RDOG ScP **ScP** **21 09 05.9 +0.7**
baz=249
G17K Kiwalik Mounta 53.06 27 P P 21 04 55.6 +1.9
baz=253,SNR=58
G17K ScP **ScP** **21 09 06.2 +0.9**
baz=253,SNR=9.0
E17K Hotham Inlet 53.10 25 P **P** **21 04 55.9 +1.9**
baz=251,SNR=40
E17K ScP **ScP** **21 09 06.7 +1.3**
baz=251
C17K DeLong Mountai 53.10 23 P **P** **21 04 55.8 +1.8**
baz=249
C17K ScP **ScP** **21 09 06.2 +0.7**
baz=249
F17K Baldwin Pennin 53.11 25 IAmb IAmb 21 04 56.9
comp=Z,56nm,0.7s
F17K Baldwin Pennin 53.11 25 P P 21 04 55.9 +1.9
baz=252
F17K ScP **ScP** **21 09 06.6 +1.1**
baz=252
AAA Alma-Ata 53.13 305⇓*i*P **P** **21 04 56.3 +1.5**
baz=305
AAA Alma-Ata 53.13 305*d i*P **P** **21 04 56.2 +1.5**
H17K Granite Mounta 53.21 27 P P 21 04 56.6 +1.9
baz=255
H17K ScP **ScP** **21 09 07.0 +1.0**
baz=255
L17K Donlin 53.24 31 P P 21 04 57.3 +2.2
baz=258
L17K ScP **ScP** **21 09 07.4 +1.3**
baz=258
QLP Quilpie 53.34 176 P **P** **21 04 57.3 +1.1**
K17K Iditarod 53.36 30 P P 21 04 58.2 +2.3
baz=258
K17K ScP **ScP** **21 09 07.8 +1.1**
baz=258
O17K Koliganek Bris 53.39 34 P **P** **21 04 57.7 +1.6**
baz=261
O17K ScP **ScP** **21 09 07.3 +0.5**
baz=261
N17K Nushagak Hills 53.47 33 P P 21 04 58.8 +2.1
baz=260
N17K ScP **ScP** **21 09 08.2 +1.0**
baz=260
M17K Holitna River 53.50 32 P P 21 04 59.1 +2.2
baz=260,SNR=28
M17K ScP **ScP** **21 09 08.9 +1.6**
baz=260
KUU Kurty 53.50 306⇓*i*P **P** **21 04 57.8 +0.5**
baz=306
KUU Kurty 53.50 306*d i*P **P** **21 04 57.8 +0.5**
P17K Kvichak River 53.63 35 P **P** **21 04 59.3 +1.5**
baz=262,SNR=19
E18K Tukpahlearik C 53.66 24 P P 21 04 59.9 +2.0
baz=252
E18K ScP **ScP** **21 09 09.3 +1.4**
baz=252
ULHL Ulahol 53.71 304 P **P** **21 05 00.2 +1.2**
SNR=125
F18K Selawik 53.77 25 P **P** **21 05 00.5 +1.8**
baz=254,SNR=49
F18K ScP **ScP** **21 09 09.8 +1.4**
baz=254
Q17K Contact Creek 53.80 36 P **P** **21 05 00.1 +0.9**
baz=263
Q17K ScP **ScP** **21 09 08.8 0.0**
baz=263
C18K Utukok River 53.84 23 P **P** **21 05 00.7 +1.4**
baz=251
C18K ScP **ScP** **21 09 09.6 +0.8**
baz=251
B18K Kokolik River 53.88 22 P P 21 05 01.7 +2.3
baz=250
B18K ScP **ScP** **21 09 09.8 +0.9**
baz=250
H18K Honhosa River 53.90 27 P **P** **21 05 01.0 +1.3**
baz=256
H18K ScP **ScP** **21 09 10.2 +1.2**
baz=256
NRN Naryn 53.96 303 IAmb IAmb 21 05 03.0
comp=Z,331nm,1.4s
G18K Tagagawik 53.97 26 P **P** **21 05 01.6 +1.4**
baz=255
G18K ScP **ScP** **21 09 10.2 +0.8**
baz=255
L18K Granite Mounta 54.00 31 IAmb IAmb 21 05 03.7
comp=Z,77nm,0.8s
L18K Granite Mounta 54.00 31 P P 21 05 02.7 +2.3
baz=260
L18K ScP **ScP** **21 09 10.9 +1.4**
baz=260
TKM2 Tokmak 2 54.12 305 P **P** **21 05 03.1 +1.2**
SNR=482
N18K Kilae Creek 54.12 33 P P 21 05 03.3 +1.9
baz=262
N18K ScP **ScP** **21 09 10.9 +0.8**
baz=262
KSH Kashi 54.20 301 P **P** **21 05 06.6 +4.1**
KSH pmax pmax
comp=Z,680nm,0.7s
J18K Innoko River 54.23 30 P **P** **21 05 03.4 +1.4**
baz=259
J18K ScP **ScP** **21 09 11.1 +0.7**
baz=259
P18K Big Mountain, 54.28 35 IAmb IAmb 21 05 04.6
comp=Z,59nm,0.8s
P18K Big Mountain, 54.28 35 P **P** **21 05 03.5 +1.0**
baz=263,SNR=13
M18K Stony River 54.28 32 P P 21 05 04.4 +1.9
baz=261
M18K ScP **ScP** **21 09 12.1 +1.4**
baz=261
SVW2 Sparrevohn 54.34 33 P P 21 05 04.9 +2.1
O18K Koktuh Hills 54.34 34 P P 21 05 04.8 +1.9
baz=263,SNR=22
O18K ScP **ScP** **21 09 11.4 +0.3**
baz=263
INKA Innaminka 54.36 179 P **P** **21 05 04.5 +1.1**
A19K Wainwright 54.42 21 ScP **ScP** **21 09 11.3 +0.2**
baz=250
GCSA Galena City Sc 54.42 28 P **P** **21 05 04.4 +1.1**
baz=258
GCSA ScP **ScP** **21 09 12.6 +1.4**
baz=258
TTA Tatalina 54.44 30 ScP **ScP** **21 09 11.8 +0.3**
TTA Tatalina 54.44 30 P **P** **21 05 05.1 +1.5**
baz=260
TTA ScP **ScP** **21 09 12.7 +1.2**
baz=260
C19K Lookout Ridge 54.54 22 P **P** **21 05 06.3 +2.0**
baz=252
C19K ScP **ScP** **21 09 12.9 +1.1**
baz=252
F19K Shaleruckik Mo 54.55 25 P **P** **21 05 05.3 +1.1**
baz=255,SNR=12
F19K ScP **ScP** **21 09 12.8 +1.0**
baz=255
SII Sitkinak Islan 54.55 38 P **P** **21 05 05.7 +1.3**
baz=266
SII ScP **ScP** **21 09 11.0 -1.1**
baz=266
OOD Oodnadatta 54.59 185 P **P** **21 05 05.7 +0.7**
KBK Karagaybulak 54.62 305 P **P** **21 05 06.5 +1.1**
SNR=30
G19K Purcell Mounta 54.65 26 P **P** **21 05 06.2 +1.3**
baz=256
G19K ScP **ScP** **21 09 13.6 +1.3**
baz=256
CHMS Chumysh 54.73 305 P **P** **21 05 06.7 +0.7**
SNR=123
H19K Roundabout Mou 54.77 27 P P 21 05 07.7 +2.0
baz=258,SNR=105
H19K ScP **ScP** **21 09 14.0 +1.2**
baz=258
SGDS Sogindy 54.78 306⇓*i*P **P** **21 05 06.9 +0.6**
baz=306
SGDS Sogindy 54.78 306*d i*P **P** **21 05 06.9 +0.6**
J19K Poorman 54.80 29 P **P** **21 05 07.8 +1.7**
baz=259,SNR=60
J19K ScP **ScP** **21 09 13.8 +0.8**
baz=259,SNR=5.7
N19K Bonanza Creek 54.83 33 P P 21 05 08.2 +1.8
baz=263
N19K ScP **ScP** **21 09 14.3 +1.0**
baz=263
O19K Port Alsworth 54.83 34 P **P** **21 05 08.0 +1.7**
baz=263,SNR=17
O19K ScP **ScP** **21 09 14.4 +1.3**
baz=263
L19K White Mountain 54.84 31 P P 21 05 08.3 +1.9
baz=261
L19K ScP **ScP** **21 09 14.3 +1.1**
baz=261,SNR=6.9
D19K Kuna River 54.87 23 P **P** **21 05 08.1 +1.6**
baz=254
D19K ScP **ScP** **21 09 13.9 +0.6**
baz=254
USP Ospenovka 54.89 305 P **P** **21 05 07.8 +0.8**
SNR=200
DZM Mont Dzumac 54.90 150 *e*LR LR 21 21 42.2
comp=Z,117nm,23.1s
E19K Redstone River 54.92 25 P **P** **21 05 08.6 +1.8**
baz=256
E19K ScP **ScP** **21 09 14.9 +1.4**
baz=256
AAK Ala-Archa 54.95 305 P **P** **21 05 08.5 +0.8**
SNR=21
AAK Ala-Archa 54.95 305 P **P** **21 05 07.8 +0.1**
AAK IAmb IAmb 21 05 09.5
comp=Z,165nm,0.8s
AAK Ala-Archa 54.95 305 *i* P **P** **21 05 08.5 +0.8**
SNR=33
AAK Ala-Archa 54.95 305*de*P **P** **21 05 08.3 +0.6**
AAK pmax pmax
comp=Z,159nm,0.7s
AAK Ala-Archa 54.95 305 P **P** **21 05 08.7 +1.0**
AAK Ala-Archa 54.95 305⇓P **P** **21 05 08.6 +0.8**
AAK PcP **PcP** **21 06 02.8 +0.4**
UCH Uchtor 54.98 304 P **P** **21 05 09.9 +1.6**
SNR=41
M19K Big River Lodg 55.02 32 P P 21 05 09.7 +2.0
baz=262,SNR=10
M19K ScP **ScP** **21 09 15.3 +1.3**
baz=262
Q19K Cape Douglas, 55.04 35 P **P** **21 05 07.9 +0.1**
baz=265
Q19K ScP **ScP** **21 09 13.9 -0.2**
baz=265
BTLS Baital 55.06 308⇓*i*P **P** **21 05 08.8 +0.6**
comp=Z,171nm,0.7s,baz=308
OHAK Old Harbor 55.09 37 IAmb IAmb 21 05 09.9
comp=Z,54nm,0.8s
OHAK Old Harbor 55.09 37 P **P** **21 05 09.3 +1.2**
OHAK Old Harbor 55.09 37 P **P** **21 05 08.9 +0.7**
baz=266,SNR=5.2
OHAK ScP **ScP** **21 09 13.8 -0.6**
baz=266
P19K Oil Pt 55.32 34 IAmb IAmb 21 05 11.4
comp=Z,126nm,0.6s
P19K Oil Pt 55.32 34 P **P** **21 05 10.6 +0.8**
baz=265
L20K Farewell, AK 55.34 31 P P 21 05 11.8 +1.9
baz=262
L20K ScP **ScP** **21 09 16.9 +1.5**
baz=262
K20K Telida 55.38 30 P P 21 05 12.2 +2.1
baz=261,SNR=53
K20K ScP **ScP** **21 09 16.8 +1.2**
baz=261
F20K Avaraart Lake 55.39 25 P **P** **21 05 11.7 +1.7**
baz=257
F20K ScP **ScP** **21 09 16.8 +1.3**
baz=257
H20K Anotleneega Mo 55.40 27 P **P** **21 05 12.2 +1.9**
baz=259
H20K ScP **ScP** **21 09 17.0 +1.4**
baz=259
I20K Naaghedeneel 55.44 28 P P 21 05 12.7 +2.2
baz=260,SNR=14
I20K ScP **ScP** **21 09 16.9 +1.1**
baz=260
D20K Etivluk River 55.46 23 P **P** **21 05 12.4 +1.7**
baz=255
D20K ScP **ScP** **21 09 16.8 +1.0**
baz=255
J20K Nowinta River 55.47 29 IAmb IAmb 21 05 13.8
comp=Z,137nm,0.8s
J20K Nowinta River 55.47 29 P P 21 05 13.0 +2.2
baz=261
J20K ScP **ScP** **21 09 16.9 +1.0**
baz=261
EKS2 Erkin-Say 55.48 305 P **P** **21 05 12.2 +0.8**
SNR=204
E20K Nigu River 55.50 24 P **P** **21 05 12.6 +1.7**
baz=256
E20K ScP **ScP** **21 09 17.1 +1.0**
baz=256
KDAK Kodiak Island 55.51 37 P **P** **21 05 11.5 +0.4**
KDAK IAmb IAmb 21 05 13.0
comp=Z,114nm,0.9s
KDAK Kodiak Island 55.51 37 P **P** **21 05 12.0 +0.9**
baz=266
KDAK Kodiak Island 55.51 37 *i* P **P** **21 05 12.4 +1.3**
KDAK pmax pmax
comp=Z,75nm,0.4s
KDAK Kodiak Island 55.51 37 P **P** **21 05 11.9 +0.9**
M20K Styx River 55.61 32 P P 21 05 13.7 +1.9
baz=263,SNR=15
M20K ScP **ScP** **21 09 17.9 +1.2**
baz=263
B20K Meade River 55.63 22 IAmb IAmb 21 05 13.9
comp=Z,74nm,0.5s
B20K Meade River 55.63 22 P **P** **21 05 13.5 +1.8**
baz=254
B20K ScP **ScP** **21 09 17.3 +0.8**
baz=254
Q20K Shuyak Island 55.66 36 P **P** **21 05 12.6 +0.5**
baz=266,SNR=7.8
O20K Slope Mountain 55.66 34 P **P** **21 05 12.8 +0.6**
baz=265,SNR=6.5
SYI Shuyak Island 55.66 36 IAmb IAmb 21 05 14.3
comp=Z,143nm,0.9s
BRZS Berezniki 55.69 314⇓*i*P **P** **21 05 12.7 +0.1**
comp=Z,98nm,0.8s,baz=314
BRZS Berezniki 55.69 314*d i*P **P** **21 05 12.6 +0.1**
BRZS pmax pmax
comp=Z,98nm,0.8s
N20K Mount Spurr 55.97 33 P **P** **21 05 15.7 +1.3**
baz=264,SNR=15
N20K ScP **ScP** **21 09 18.6 +0.3**
baz=264
KIP Kipapa 56.09 81 P **P** **21 05 16.3 +0.6**
KIP IAmb IAmb 21 05 18.7
comp=Z,243nm,1.1s
KIP Kipapa 56.09 81 P P 21 05 17.9 +2.2
KIP Kipapa 56.09 81 P P 21 05 17.8 +2.1
KIP Kipapa 56.09 81 P **P** **21 05 16.3 +0.6**
KIP pmax pmax
comp=Z,243nm,1.2s
KIP Kipapa 56.09 81 P P 21 05 18.0 +2.3
HOM Homer 56.12 35 ScP **ScP** **21 09 19.4 +0.5**
baz=266
G21K Allakaket 56.14 26 P **P** **21 05 17.2 +1.9**
baz=260
G21K ScP **ScP** **21 09 20.5 +1.7**
baz=260
PPLA Purkeypile 56.16 31 P **P** **21 05 17.4 +1.7**
baz=263,SNR=18
PPLA ScP **ScP** **21 09 20.4 +1.2**
baz=263
A21K Barrow 56.17 20 P **P** **21 05 17.2 +1.7**
baz=254,SNR=5.6
A21K ScP **ScP** **21 09 19.5 +0.6**
baz=254
C21K Knifeblade Rid 56.21 23 P **P** **21 05 17.8 +2.0**
baz=257
C21K ScP **ScP** **21 09 20.3 +1.2**
baz=257
CHUM Lake Minchumin 56.23 29 P P 21 05 18.2 +2.2
baz=263,SNR=35
CHUM ScP **ScP** **21 09 20.5 +1.3**
baz=263,SNR=6.6
ARSB Arslanbob 56.23 303 IAmb IAmb 21 05 18.8
comp=Z,173nm,1.2s
CAST Castle Rocks 56.27 30 P P 21 05 18.3 +1.9
baz=263,SNR=102
CAST ScP **ScP** **21 09 20.1 +0.6**
baz=263,SNR=5.7
H21K Melozitna Rive 56.28 27 P P 21 05 18.4 +2.1
baz=261,SNR=114
H21K ScP **ScP** **21 09 20.8 +1.4**
baz=261

F21K	**Alatna River**	**56.28**	**25**	P	**P**	**21 05 17.6 +1.3**
	baz=259					
F21K				ScP	**ScP**	**21 09 20.7 +1.2**
	baz=259					
CNPM	**China Poot**	**56.32**	**35**	IAmb	IAmb	21 05 17.9
	comp=Z,83nm,0.8s					
E21K	**Killik River**	**56.34**	**24**	P	**P**	**21 05 18.3 +1.6**
	baz=258					
E21K				ScP	**ScP**	**21 09 20.9 +1.2**
	baz=258					
SKT	**Skwentna**	**56.37**	**32**	IAmb	IAmb	21 05 18.7
	comp=Z,62nm,0.9s					
SKT	**Skwentna**	**56.37**	**32**	P	**P**	**21 05 17.8 +0.8**
	baz=265,SNR=44					
SKT				ScP	**ScP**	**21 09 19.7 -0.3**
	baz=265					
B21K	**Ikpikpuk River**	**56.38**	**22**	P	**P**	**21 05 18.7 +1.8**
	baz=257					
B21K				ScP	**ScP**	**21 09 20.9 +1.1**
	baz=257					
CAPN	**Captain Cook N**	**56.45**	**33**	P	P	21 05 19.4 +1.9
	baz=266					
CAPN				ScP	**ScP**	**21 09 21.1 +0.8**
	baz=266					
BRLK	**Bradley Lake**	**56.51**	**34**	IAmb	IAmb	21 05 20.4
	comp=Z,66nm,0.8s					
I21K	**Tanana**	**56.55**	**28**	P	P	21 05 20.3 +2.2
	baz=262					
I21K				ScP	**ScP**	**21 09 22.1 +1.5**
	baz=262					
BRSE	**Bradley Lake S**	**56.58**	**34**	P	**P**	**21 05 18.8 +0.3**
	baz=267,SNR=13					
BRSE				ScP	**ScP**	**21 09 21.3 +0.4**
	baz=267					
SUA	**Susitna One**	**56.70**	**32**	IAmb	IAmb	21 05 21.8
	comp=Z,61nm,0.5s					
SUA	**Susitna One**	**56.70**	**32**	P	**P**	**21 05 19.8 +0.4**
	baz=266,SNR=38					
SUA				ScP	**ScP**	**21 09 22.3 +0.8**
	baz=266					
KTH	**Kantishna Hill**	**56.81**	**30**	IAmb	IAmb	21 05 22.9
	comp=Z,37nm,0.6s					
BPAW	**Bear Paw Mtn.**	**56.84**	**29**	P	**P**	**21 05 21.8 +1.6**
	baz=264,SNR=12					
BPAW				ScP	**ScP**	**21 09 23.3 +1.3**
	baz=264					
D22K	**Ayikyak River**	**56.89**	**23**	P	P	21 05 22.7 +2.1
	baz=259					
D22K				ScP	**ScP**	**21 09 23.4 +1.2**
	baz=259					
H22K	**Ishtalitna Cre**	**56.90**	**27**	P	P	21 05 22.9 +2.3
	baz=262					
H22K				ScP	**ScP**	**21 09 23.5 +1.2**
	baz=262					
B22K	**Teshekpuk Lake**	**56.95**	**22**	P	**P**	**21 05 22.3 +1.5**
	baz=257					
B22K				ScP	**ScP**	**21 09 23.2 +0.9**
	baz=257					
G22K	**Bettles**	**56.99**	**26**	P	**P**	**21 05 22.8 +1.5**
	baz=261,SNR=92					
G22K				ScP	**ScP**	**21 09 23.5 +0.9**
	baz=261					
CUT	**Chulitna**	**57.00**	**31**	IAmb	IAmb	21 05 23.4
	comp=Z,153nm,1.1s					
CUT	**Chulitna**	**57.00**	**31**	P	**P**	**21 05 21.8 +0.5**
	baz=266,SNR=18					
CUT				ScP	**ScP**	**21 09 23.1 +0.4**
	baz=266					
BVAR	**Borovoye Array**	**57.02**	**317**	P	**P**	**21 05 22.1 +0.4**
	comp=Z,533nm,0.4s,baz=86,slow=6.9,SNR=4651					
BVAR				PcP	**PcP**	**21 06 10.4 +0.3**
	comp=Z,140nm,0.6s,baz=94,slow=3.3,SNR=7.0					
BVAR				ScP	**ScP**	**21 09 22.4 -0.6**
	comp=Z,12nm,0.5s,baz=101,slow=5.3,SNR=3.9					
BVAR				ScS	**ScS**	**21 14 17.9 -3.1**
	comp=Z,4.7nm,0.9s,baz=96,slow=11,SNR=4.3					
BVAR				P4KPbc		21 42 27.6
	comp=Z,1.8nm,0.6s,baz=84,slow=4.3,SNR=14					
MLY	**Manley**	**57.05**	**28**	P	**P**	**21 05 23.5 +1.8**
	baz=263,SNR=61					
MLY				ScP	**ScP**	**21 09 23.6 +0.7**
	baz=263,SNR=6.7					
BRVK	**Borovoye**	**57.08**	**317**	P	**P**	**21 05 22.3 +0.2**
BRVK	**Borovoye**	**57.08**	**317**	P	**P**	**21 05 22.3 +0.2**
BRVK				pmax	pmax	
	comp=Z,479nm,0.9s					
BRVK	**Borovoye**	**57.08**	**317**	P	**P**	**21 05 22.6 +0.6**
BRVK				S	**S**	**21 12 39.5 +0.2**
BRVK	**Borovoye**	**57.08**	**317**	⇓P	**P**	**21 05 22.6 +0.6**
BRVK				PcP	**PcP**	**21 06 10.6 +0.2**
BRVK				PP	**PP**	**21 07 35.3 -0.2**
BRVK				ScP	**ScP**	**21 09 22.8 -0.4**
TRF	**Thorofare Moun**	**57.08**	**30**	ScP	**ScP**	**21 09 22.7 -0.6**
TRF	**Thorofare Moun**	**57.08**	**30**	P	**P**	**21 05 23.1 +1.0**
	baz=265,SNR=58					
TRF				ScP	**ScP**	**21 09 23.3 +0.1**
	baz=265,SNR=5.9					
LCRK	**Leigh Creek**	**57.09**	**182**	P	**P**	**21 05 23.6 +1.2**
O22K	**Cooper Landing**	**57.13**	**34**	P	**P**	**21 05 22.8 +0.5**
	baz=267,SNR=30					
RC01	**Rabbit Creek A**	**57.16**	**33**	IAmb	IAmb	21 05 24.5
	comp=Z,176nm,1.2s					
RC01	**Rabbit Creek A**	**57.16**	**33**	P	**P**	**21 05 23.0 +0.5**
	baz=267,SNR=32					
RC01				ScP	**ScP**	**21 09 23.2 -0.2**
	baz=267					
MULG	**Mulgathing**	**57.21**	**186**	P	**P**	**21 05 23.7 +0.6**
DZA	**Taraz**	**57.24**	**305**	*e*P	**P**	**21 05 24.2 +0.8**
	baz=305					
DZA	**Taraz**	**57.24**	**305**	*e*P	**P**	**21 05 24.1 +0.7**
SEW	**Seward**	**57.25**	**34**	P	**P**	**21 05 23.6 +0.6**
	baz=268,SNR=15					
NIL	**Nilore**	**57.38**	**294**	P	**P**	**21 05 25.2 +0.7**
NIL	**Nilore**	**57.38**	**294**	P	**P**	**21 05 25.2 +0.7**
NIL				pmax	pmax	
	comp=Z,520nm,0.8s					
NIL	**Nilore**	**57.38**	**294**	P	**P**	**21 05 25.7 +1.2**
NIL	**Nilore**	**57.38**	**294**	⇓P	**P**	**21 05 25.6 +1.1**
HYB	**Hyderabad**	**57.47**	**274**	*e*P	**P**	**21 05 25.4 +0.1**
HYB				*e*PcP	**PcP**	**21 06 12.3 -0.3**
HYB				*e*pP	**pP**	**21 07 01.5 +0.9**
HYB				*e*S	**S**	**21 12 45.3 -0.2**
PMR	**Palmer**	**57.48**	**32**	IAmb	IAmb	21 05 26.0
	comp=Z,102nm,0.9s					
PMR	**Palmer**	**57.48**	**32**	P	**P**	**21 05 25.9 +1.3**
PMR	**Palmer**	**57.48**	**32**	P	**P**	**21 05 25.0 +0.4**
	baz=267,SNR=35					
PMR				ScP	**ScP**	**21 09 25.2 +0.4**
	baz=267					
COLD	**Coldfoot**	**57.54**	**26**	P	**P**	**21 05 26.9 +1.9**
	baz=262,SNR=59					
COLD				ScP	**ScP**	**21 09 26.6 +1.5**
	baz=262					
G23K	**Bananza Creek**	**57.55**	**26**	P	**P**	**21 05 27.1 +2.0**
	baz=263,SNR=57					
G23K				ScP	**ScP**	**21 09 26.4 +1.3**
	baz=263,SNR=6.9					
GHO	**Glory Hole Cre**	**57.59**	**32**	IAmb	IAmb	21 05 27.1
	comp=Z,68nm,0.6s					
I23K	**Minto, Yukon-K**	**57.64**	**28**	P	**P**	**21 05 27.4 +1.7**
	baz=265,SNR=50					
I23K				ScP	**ScP**	**21 09 26.4 +0.9**
	baz=265,SNR=12					
MCK	**McKinley**	**57.70**	**30**	P	**P**	**21 05 27.0 +0.8**
	baz=266,SNR=156					
MCK				ScP	**ScP**	**21 09 26.5 +0.6**
	baz=266					
NEA2	**Nenana**	**57.72**	**29**	IAmb	IAmb	21 05 28.6
	comp=Z,99nm,0.6s					
NEA2	**Nenana**	**57.72**	**29**	P	**P**	**21 05 27.4 +1.2**
	baz=265,SNR=47					
NEA2				ScP	**ScP**	**21 09 27.2 +1.3**
	baz=265					
RND	**Reindeer**	**57.72**	**30**	IAmb	IAmb	21 05 27.8
	comp=Z,124nm,0.6s					
C23K	**Itkillik River**	**57.79**	**23**	P	**P**	**21 05 28.5 +1.9**
	baz=260					
C23K				ScP	**ScP**	**21 09 26.9 +0.9**
	baz=260					
KNK	**Knik Glacier**	**57.79**	**33**	P	**P**	**21 05 27.7 +0.9**
	baz=268,SNR=87					
KNK				ScP	**ScP**	**21 09 27.3 +1.0**
	baz=268,SNR=5.9					
WAT1	**Susitna Watana**	**57.82**	**31**	P	**P**	**21 05 27.6 +0.6**
	baz=267					
WAT1				ScP	**ScP**	**21 09 27.0 +0.6**
	baz=267					
SML	**Sawmill**	**57.87**	**32**	IAmb	IAmb	21 05 29.2
	comp=Z,132nm,0.7s					
SML				ScP	**ScP**	**21 09 25.9 -0.7**
SML	**Sawmill**	**57.87**	**32**	P	**P**	**21 05 28.2 +0.8**
	baz=268,SNR=49					
SML				ScP	**ScP**	**21 09 27.1 +0.5**
	baz=268					
E23K	**Chandalar**	**57.88**	**25**	P	P	21 05 29.6 +2.2
	baz=262,SNR=108					
E23K				ScP	**ScP**	**21 09 27.9 +1.3**
	baz=262					
TOLK	**Toolik Lake Re**	**57.97**	**24**	P	**P**	**21 05 29.9 +1.9**
	baz=262					
TOLK				ScP	**ScP**	**21 09 28.2 +1.3**
	baz=262					
BTK	**Batken**	**58.05**	**302**	IAmb	IAmb	21 05 30.7
	comp=Z,327nm,1.2s					
MDM	**Murphy Dome**	**58.10**	**28**	IAmb	IAmb	21 05 31.2
	comp=Z,212nm,1.7s					
M23K	**Glacier View**	**58.16**	**32**	P	**P**	**21 05 30.1 +0.9**
	baz=268,SNR=40					
M23K				ScP	**ScP**	**21 09 28.6 +0.7**
	baz=268					
WAT6	**Susitna Watana**	**58.18**	**31**	P	**P**	**21 05 30.5 +0.9**
	baz=268,SNR=84					
WAT6				ScP	**ScP**	**21 09 28.7 +0.6**
	baz=268,SNR=5.1					
COLA	**College**	**58.26**	**28**	P	**P**	**21 05 30.7 +0.8**
COLA				IAmb	IAmb	21 05 32.3
	comp=Z,36nm,0.5s					
COLA	**College**	**58.26**	**28**	P	**P**	**21 05 31.5 +1.6**
COLA	**College**	**58.26**	**28**	P	**P**	**21 05 31.1 +1.2**
	baz=266					
COLA	**College**	**58.26**	**28**	P	**P**	**21 05 30.7 +0.8**
COLA				pmax	pmax	
	comp=Z,36nm,0.5s					
COLA	**College**	**58.26**	**28**	P	**P**	**21 05 31.4 +1.5**
COLA				pP	**pwP**	**21 07 09.4 -2.9**
P23K	**Montague Islan**	**58.27**	**34**	P	**P**	**21 05 31.3 +1.2**
	baz=270,SNR=9.9					
E24K	**Your Creek**	**58.30**	**25**	P	P	21 05 32.3 +2.1
	baz=264					
E24K				ScP	**ScP**	**21 09 29.9 +1.5**
	baz=264					
D24K	**Happy Valley**	**58.31**	**23**	P	P	21 05 32.3 +2.1
	baz=263,SNR=196					
D24K				ScP	**ScP**	**21 09 29.5 +1.1**
	baz=263					
H24K	**Noodor Dome**	**58.32**	**27**	P	P	21 05 32.4 +2.0
	baz=266					
H24K				ScP	**ScP**	**21 09 30.0 +1.4**
	baz=266					
SCM	**Sheep Creek Mo**	**58.34**	**32**	IAmb	IAmb	21 05 32.6
	comp=Z,144nm,0.6s					
SCM	**Sheep Creek Mo**	**58.34**	**32**	P	**P**	**21 05 31.9 +1.2**
	baz=268,SNR=68					
SCM				ScP	**ScP**	**21 09 29.9 +1.1**
	baz=268					
DHY	**Denali Highway**	**58.37**	**31**	IAmb	IAmb	21 05 35.0
	comp=Z,39nm,0.6s					
DHY	**Denali Highway**	**58.37**	**31**	P	**P**	**21 05 31.6 +0.7**
	baz=268,SNR=44					
DHY				ScP	**ScP**	**21 09 29.9 +0.9**
	baz=268					
CMSA	**Cobar Meteorol**	**58.38**	**175**	P	**P**	**21 05 32.3 +1.2**
C24K	**Franklin Bluff**	**58.43**	**23**	P	**P**	**21 05 32.7 +1.7**
	baz=262,SNR=125					
C24K				ScP	**ScP**	**21 09 29.9 +1.0**
	baz=262					
POKR	**Poker Plat Res**	**58.45**	**28**	IAmb	IAmb	21 05 34.0
	comp=Z,45nm,0.6s					
POKR	**Poker Plat Res**	**58.45**	**28**	P	**P**	**21 05 32.2 +1.0**
	baz=266,SNR=28					
F24K	**Squaw Lake**	**58.47**	**25**	IAmb	IAmb	21 05 34.3
	comp=Z,80nm,0.7s					
F24K	**Squaw Lake**	**58.47**	**25**	P	P	21 05 33.4 +2.0
	baz=264					
F24K				ScP	**ScP**	**21 09 30.9 +1.8**
	baz=264					
STKA	**Stephens Creek**	**58.50**	**179**	P	**P**	**21 05 32.6 +0.7**
STKA	**Stephens Creek**	**58.50**	**179**	*i* P	**P**	**21 05 33.5 +1.6**
STKA	**Stephens Creek**	**58.50**	**179**	P	**P**	**21 05 32.4 +0.5**
	comp=Z,8.4nm,0.6s,baz=348,slow=8.1,SNR=35					
G24K	**Hadweenzic Riv**	**58.55**	**26**	ScP	**ScP**	**21 09 30.2 +0.7**
G24K	**Hadweenzic Riv**	**58.55**	**26**	P	P	21 05 34.1 +2.2
	baz=265					
G24K				ScP	**ScP**	**21 09 30.8 +1.3**
	baz=265					
KHLU	**Kahalu`u**	**58.57**	**83**	P	**P**	**21 05 33.0 +0.1**
KHLU				IAmb	IAmb	21 05 35.6
	comp=Z,130nm,0.8s					
FORT	**Forrest**	**58.57**	**192**	IAmb	IAmb	21 05 33.6
	comp=Z,72nm,0.6s					
FORT	**Forrest**	**58.57**	**192**	P	**P**	**21 05 33.1 +0.7**
HPAH	**Hawaii Prepara**	**58.59**	**82**	IAmb	IAmb	21 05 35.7
	comp=Z,148nm,0.8s					
HDA	**Harding Lake**	**58.62**	**29**	IAmb	IAmb	21 05 33.4
	comp=Z,195nm,1.5s					
HDA	**Harding Lake**	**58.62**	**29**	P	**P**	**21 05 32.6 +0.3**
	baz=267,SNR=62					
HDA				ScP	**ScP**	**21 09 30.1 +0.3**
	baz=267					
HDA				ScP	**ScP**	**21 09 30.1 +0.3**
	baz=267					
ILAR	**Eielson Array**	**58.66**	**29**	P	**P**	**21 05 32.6 0.0**
	comp=Z,39nm,0.9s,baz=245,slow=6.1,SNR=297					
ILAR				ScP	**ScP**	**21 09 29.4 -0.7**
	comp=Z,1.9nm,0.6s,baz=237,slow=5.5,SNR=2.4					
	comp=Z,39nm,0.9s					
POHA	**Pohakuloa**	**58.83**	**82**	P	**P**	**21 05 34.9 0.0**
POHA	**Pohakuloa**	**58.83**	**82**	P	P	21 05 37.1 +2.3
MWH	**Moku'aweowe**	**58.87**	**83**	IAmb	IAmb	21 05 39.6
	comp=Z,88nm,0.9s					
MLOA	**Mauna Loa Obse**	**58.87**	**83**	IAmb	IAmb	21 05 38.3
	comp=Z,163nm,0.8s					
M24K	**Tolsona, Glenn**	**58.90**	**32**	P	**P**	**21 05 35.8 +1.4**
	baz=269,SNR=17					
M24K				ScP	**ScP**	**21 09 32.3 +1.1**
	baz=269					
HMH	**Humu'ula Sheep**	**58.92**	**82**	IAmb	IAmb	21 05 39.1
	comp=Z,342nm,1.5s					
KHU	**Kahuku**	**58.93**	**83**	IAmb	IAmb	21 05 38.5
	comp=Z,201nm,0.9s					
KLU	**Klutina**	**59.01**	**33**	IAmb	IAmb	21 05 37.3
	comp=Z,112nm,0.6s					
KLU	**Klutina**	**59.01**	**33**	P	**P**	**21 05 36.5 +1.4**
	baz=270,SNR=74					
KLU				ScP	**ScP**	**21 09 32.5 +0.8**
	baz=270					
MLH	**Mauna Loa**	**59.05**	**82**	IAmb	IAmb	21 05 39.3
	comp=Z,109nm,0.7s					
EYAK	**Cordova Ski Ar**	**59.10**	**34**	P	**P**	**21 05 37.4 +1.8**
EYAK	**Cordova Ski Ar**	**59.10**	**34**	P	**P**	**21 05 37.0 +1.3**
	baz=271,SNR=14					
EYAK				ScP	**ScP**	**21 09 32.8 +0.8**
	baz=271					
G25K	**Bearman Lake**	**59.10**	**26**	P	P	21 05 37.8 +2.2
	baz=267					
G25K				ScP	**ScP**	**21 09 32.7 +0.8**
	baz=267					
K24K	**Donnelly Dome**	**59.11**	**30**	P	**P**	**21 05 36.3 +0.6**
	baz=269,SNR=42					
K24K				ScP	**ScP**	**21 09 32.9 +0.8**
	baz=269					
D25K	**Kavik River**	**59.20**	**23**	P	**P**	**21 05 38.2 +1.9**
	baz=265,SNR=310					
D25K				ScP	**ScP**	**21 09 33.3 +0.9**
	baz=265					
PAX	**Paxson**	**59.23**	**31**	P	**P**	**21 05 37.8 +1.1**
	baz=270,SNR=59					
PAX				ScP	**ScP**	**21 09 33.8 +1.1**
	baz=270					
PUH	**Pauahi**	**59.24**	**83**	IAmb	IAmb	21 05 40.3
	comp=Z,134nm,1.0s					
PRP	**Porcupine Dome**	**59.27**	**28**	P	**P**	**21 05 36.7 -0.3**
	baz=268,SNR=19					
J25K	**Salcha River,**	**59.31**	**29**	ScP	**ScP**	**21 09 33.2 +0.2**
	baz=269					
F25K	**Christian Rive**	**59.33**	**25**	P	P	21 05 39.6 +2.4
	baz=267					
F25K				ScP	**ScP**	**21 09 35.0 +2.0**
	baz=267					
HARP	**HAARP**	**59.37**	**31**	P	**P**	**21 05 39.2 +1.7**
	baz=270,SNR=103					
HARP				ScP	**ScP**	**21 09 34.6 +1.3**
	baz=270					
E25K	**Arctic Village**	**59.39**	**25**	P	P	21 05 39.9 +2.4
	baz=266,SNR=131					
E25K				ScP	**ScP**	**21 09 34.1 +0.8**
	baz=266,SNR=5.3					
FYU	**Fort Yukon**	**59.44**	**27**	ScP	**ScP**	**21 09 34.2 +0.8**
RIDG	**Independent Ri**	**59.52**	**30**	IAmb	IAmb	21 05 40.1
	comp=Z,76nm,0.5s					
RIDG	**Independent Ri**	**59.52**	**30**	P	**P**	**21 05 39.3 +0.8**
	baz=270,SNR=60					
RIDG				ScP	**ScP**	**21 09 34.8 +0.9**
	baz=270					
BBOO	**Buckleboo**	**59.55**	**184**	P	**P**	**21 05 39.6 +0.6**
N25K	**Chitina, Valde**	**59.64**	**32**	P	**P**	**21 05 40.7 +1.3**
	baz=271,SNR=41					
N25K				ScP	**ScP**	**21 09 35.6 +1.0**
	baz=271					
BMRM	**Bremner River**	**59.65**	**33**	P	**P**	**21 05 40.8 +1.3**
	baz=271,SNR=83					
BMRM				ScP	**ScP**	**21 09 35.3 +0.8**
	baz=271					
PALK	**Pallekele**	**59.66**	**262**	P	**P**	**21 05 40.3 0.0**
PALK				IAmb	IAmb	21 05 41.7
	comp=Z,137nm,0.8s					
PALK	**Pallekele**	**59.66**	**262**	*i* P	**P**	**21 05 40.4 +0.1**
PALK				pmax	pmax	
	comp=Z,143nm,0.9s					
PALK	**Pallekele**	**59.66**	**262**	P	**P**	**21 05 40.9 +0.6**
PALK				P	**P**	**21 05 40.9 +0.6**
PALK	**Pallekele**	**59.66**	**262**	⇓P	**P**	**21 05 40.9 +0.6**
SIMJ	**Simiganj**	**59.69**	**301**	⇓P	**P**	**21 05 40.8 +0.6**
BMAR	**Burnt Mountain**	**59.73**	**26**	ScP	**ScP**	**21 09 35.2 +0.4**
KAIM	**Kayak Island**	**59.78**	**34**	P	**P**	**21 05 41.8 +1.6**
	baz=272,SNR=5.3					
KAIM				ScP	**ScP**	**21 09 36.0 +1.0**
	baz=272					
SCRK	**Sand Creek**	**59.91**	**30**	IAmb	IAmb	21 05 42.9
	comp=Z,97nm,0.6s					
SCRK	**Sand Creek**	**59.91**	**30**	P	**P**	**21 05 42.1 +0.9**
	baz=270,SNR=152					
SCRK				ScP	**ScP**	**21 09 36.7 +0.9**
	baz=270					
F26K	**Sheenjek River**	**59.91**	**25**	P	P	21 05 43.5 +2.4
	baz=268,SNR=130					
F26K				ScP	**ScP**	**21 09 37.4 +1.8**
	baz=268					
G26K	**Porcupine Rive**	**60.02**	**26**	P	P	21 05 43.9 +2.1
	baz=269					
G26K				ScP	**ScP**	**21 09 37.6 +1.5**
	baz=269					
MENT	**Mentasta**	**60.03**	**31**	P	**P**	**21 05 43.4 +1.4**
MENT	**Mentasta**	**60.03**	**31**	P	**P**	**21 05 43.6 +1.7**
J26L	**Joseph Creek**	**60.09**	**29**	P	**P**	**21 05 43.0 +0.7**
	baz=270					
J26L				ScP	**ScP**	**21 09 37.9 +1.4**
	baz=270					
L26K	**Log Cabin Wild**	**60.20**	**31**	P	**P**	**21 05 44.8 +1.7**
	baz=271,SNR=148					
L26K				ScP	**ScP**	**21 09 38.0 +1.0**
	baz=271					
VRDI	**Verde Repeater**	**60.20**	**33**	IAmb	IAmb	21 05 45.3
	comp=Z,194nm,1.6s					
I26K	**Coal Creek Min**	**60.26**	**28**	ScP	**ScP**	**21 09 38.4 +1.3**
	baz=270					
M26K	**Nabesna, AK**	**60.38**	**31**	P	**P**	**21 05 45.6 +1.3**
	baz=272					
MCARA	**McCarthy VSAT**	**60.41**	**33**	P	**P**	**21 05 45.8 +1.4**
	baz=273,SNR=44					
KBL	**Kabul**	**60.58**	**296**	P	**P**	**21 05 46.4 +0.1**
KBL	**Kabul**	**60.58**	**296**	P	**P**	**21 05 46.4 +0.1**
KBL				pmax	pmax	
	comp=Z,521nm,0.9s					
KBL	**Kabul**	**60.58**	**296**	P	**P**	**21 05 46.7 +0.5**
	SNR=217					
KBL				S	**S**	**21 13 23.4 -1.3**
K27K	**Chicken**	**60.74**	**30**	P	**P**	**21 05 48.3 +1.7**
	baz=272					
K27K				ScP	**ScP**	**21 09 41.2 +1.9**
	baz=272					
ISLE	**Juniper Island**	**60.78**	**33**	IAmb	IAmb	21 05 51.4
	comp=Z,42nm,0.8s					
L27K	**Beaver Creek,**	**60.89**	**31**	P	**P**	**21 05 49.2 +1.5**
	baz=273					
L27K				ScP	**ScP**	**21 09 41.6 +1.6**
	baz=273					
I27K	**Kandik River**	**60.90**	**28**	P	**P**	**21 05 49.0 +1.4**
	baz=271					
I27K				ScP	**ScP**	**21 09 41.9 +1.9**
	baz=271					
M27K	**Edge Creek, AK**	**60.90**	**31**	P	**P**	**21 05 49.3 +1.5**
	baz=273					
M27K				ScP	**ScP**	**21 09 41.5 +1.3**
	baz=273					
BCAR	**Beaver Creek A**	**60.91**	**31**	P	**P**	**21 05 48.9 +1.1**
H27K	**Steamboat Moun**	**60.92**	**27**	P	P	21 05 50.0 +2.2
	baz=271,SNR=58					
H27K				ScP	**ScP**	**21 09 42.0 +1.9**
	baz=271					
MESA	**MESA**	**61.00**	**34**	P	**P**	**21 05 50.0 +1.4**
	baz=274,SNR=5.5					
MESA				ScP	**ScP**	**21 09 41.2 +0.4**
	baz=274					
D27M	**Malcolm River**	**61.12**	**24**	IAmb	IAmb	21 05 51.5
	comp=Z,43nm,0.6s					
D27M	**Malcolm River**	**61.12**	**24**	ScP	**ScP**	**21 09 42.6 +1.6**
	baz=270					
EGAK	**Eagle**	**61.12**	**29**	P	**P**	**21 05 49.7 +0.7**
	baz=272,SNR=28					
EGAK				ScP	**ScP**	**21 09 42.7 +1.7**
	baz=272					
CTG	**Chitna Glacier**	**61.24**	**33**	P	**P**	**21 05 51.4 +1.3**
	baz=274,SNR=15					
BVCY	**Beaver Creek**	**61.37**	**31**	P	**P**	**21 05 52.3 +1.5**
	baz=274,SNR=32					
BVCY				ScP	**ScP**	**21 09 43.5 +1.3**
	baz=274					
F28M	**Old Crow**	**61.54**	**25**	P	**P**	**21 05 53.7 +1.9**
	baz=272,SNR=83					
F28M				ScP	**ScP**	**21 09 44.4 +1.6**
	baz=272					
I28M	**Miner Creek**	**61.60**	**28**	IAmb	IAmb	21 05 54.8
	comp=Z,62nm,0.8s					
I28M	**Miner Creek**	**61.60**	**28**	P	**P**	**21 05 53.9 +1.6**
	baz=273					
I28M				ScP	**ScP**	**21 09 45.0 +1.8**
	baz=273					
YUK3	**Moose Creek**	**61.61**	**32**	P	**P**	**21 05 53.9 +1.3**
	baz=275,SNR=56					
E28M	**Babbage River**	**61.64**	**24**	IAmb	IAmb	21 05 55.4
	comp=Z,59nm,0.8s					
E28M	**Babbage River**	**61.64**	**24**	P	**P**	**21 05 54.4 +2.0**
	baz=272					
E28M				ScP	**ScP**	**21 09 44.6 +1.4**
	baz=272					
PINM	**Pinnacle**	**61.85**	**34**	P	**P**	**21 05 55.6 +1.6**
	baz=276,SNR=13					
D28M	**Stokes Point**	**61.91**	**23**	P	**P**	**21 05 55.9 +1.8**
	baz=272					
DAWY	**Dawson**	**61.92**	**29**	P	**P**	**21 05 55.1 +0.7**
DAWY				IAmb	IAmb	21 05 56.9
	comp=Z,74nm,1.5s					
DAWY	**Dawson**	**61.92**	**29**	P	**P**	**21 05 55.8 +1.4**
	baz=274,SNR=34					
YUK8	**Steele Glacier**	**61.98**	**33**	P	**P**	**21 05 56.6 +1.5**
	baz=275,SNR=28					
KLBR	**Kellerberrin**	**62.04**	**202**	P	**P**	**21 05 56.0 +0.5**
H29M	**Whitestone**	**62.20**	**27**	P	**P**	**21 05 57.9 +1.7**
	baz=274					
E29M	**Blow River**	**62.25**	**24**	P	**P**	**21 05 58.2 +1.8**
	baz=273					
SVE	**Sverdlovsk**	**62.32**	**322**	*c* P	**P**	**21 05 57.5 +0.5**
SVE				*e*S	**S**	**21 13 51.4 +6.4**
SVE				pmax	pmax	
	comp=Z,299nm,0.8s					
PNL	**Peninsula**	**62.33**	**34**	P	**P**	**21 05 58.8 +1.7**
PNL	**Peninsula**	**62.33**	**34**	P	**P**	**21 05 58.5 +1.5**
	baz=277,SNR=9.6					
J29N	**Klondike Camp**	**62.40**	**29**	P	**P**	**21 05 59.4 +1.9**
	baz=275,SNR=12					
M29M	**Somme Creek**	**62.48**	**31**	P	P	21 06 00.3 +2.2
	baz=276					
YUK4	**Talbot Arm**	**62.51**	**32**	P	P	21 06 00.6 +2.1
	baz=276,SNR=82					

baz=276
EPYK Eagle Plains 62.86 27 P P 21 06 02.0 +1.6
baz=275,SNR=60
G30M tAoh Zraii Nji 63.00 26 IAmb IAmb 21 06 03.6
comp=Z,164nm,1.3s
G30M tAoh Zraii Nji 63.00 26 P P 21 06 02.6 +1.3
baz=276
F30M Barrier River 63.10 25 P P 21 06 03.7 +1.8
baz=276
I30M Mount Dempster 63.11 28 P P 21 06 03.6 +1.4
baz=276
HYT Haines Junctio 63.12 33 P P 21 06 04.4 +2.1
baz=278,SNR=58
P29M Windy Craggy 63.17 34 P P 21 06 04.7 +2.2
baz=278
J30M Hart River 63.20 29 P P 21 06 04.5 +1.7
baz=277,SNR=36
M30M Minto, Yukon 63.24 31 P P 21 06 04.9 +1.9
baz=277,SNR=46
ARPS Mount Arapiles 63.38 179 P P 21 06 05.3 +1.2
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.2 +0.7
NWAO IAmb IAmb 21 06 06.0
comp=Z,79nm,0.8s
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.0 +0.5
NWAO IAmb IAmb 21 06 06.0
comp=Z,24nm,0.7s
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.4 +0.9
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.2 +0.7
NWAO pmax pmax
comp=Z,79nm,0.8s
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.1 +0.5
NWAO Narrogin (SRO) 63.44 202 P P 21 06 05.2 +0.7
ARU Arti 63.51 322 P P 21 06 04.5 -0.3
ARU Arti 63.51 322*d* iP P 21 06 04.8 +0.1
ARU 21 06 34.3
ARU S S 21 14 01.1 +1.5
ARU pmax pmax
comp=Z,492nm,0.7s
ARU Arti 63.51 322 P P 21 06 05.1 +0.4
comp=Z,456nm,0.5s,baz=90,slow=3.6,SNR=518
comp=Z,456nm,0.5s
ARU Arti 63.51 322 ⇓P P 21 06 04.9 +0.1
MAYO Mayo, Yukon 63.51 30 P P 21 06 06.4 +1.7
baz=278
G31M Satah River 63.77 26 P P 21 06 07.2 +1.1
baz=277
O30N Mendenhall 63.82 33 P P 21 06 08.2 +1.5
baz=279,SNR=30
N31M Braeburn, Yuko 63.86 32 P P 21 06 09.1 +2.1
baz=279,SNR=41
INK Inuvik 63.88 24 IAmb IAmb 21 06 08.1
comp=Z,27nm,0.5s
INK Inuvik 63.88 24 P P 21 06 07.7 +0.9
baz=277,SNR=43
PLBC Pleasant Camp 63.88 34 P P 21 06 09.0 +1.9
baz=279,SNR=53
F31M Tsiigehtchic 63.90 25 IAmb IAmb 21 06 08.2
comp=Z,25nm,0.6s
F31M Tsiigehtchic 63.90 25 P P 21 06 07.7 +0.7
baz=278,SNR=26
ABKAR Akbulak array 63.99 314 P P 21 06 08.1 +0.1
ABKAR Akbulak array 63.99 314 IAmb IAmb 21 06 09.0
comp=Z,504nm,0.7s
S31K Pelican 64.20 36 IAmb IAmb 21 06 11.8
comp=Z,30nm,0.8s
S31K Pelican 64.20 36 P P 21 06 11.0 +1.9
baz=280,SNR=5.2
M31M Drury Creek, Y 64.40 31 P P 21 06 11.9 +1.6
baz=280,SNR=69
SKAG Skagway 64.41 34 P P 21 06 12.5 +2.1
SKAG Skagway 64.41 34 P P 21 06 12.3 +1.9
baz=280,SNR=5.6
WHY Whitehorse 64.42 33 P P 21 06 12.4 +1.8
baz=280,SNR=41
SIT Sitka 64.85 37 P P 21 06 14.9 +1.7
baz=281
FARO Faro, Yukon 64.88 31 P P 21 06 15.0 +1.7
baz=280,SNR=44
R32K Eaglecrest 65.04 36 IAmb IAmb 21 06 17.4
comp=Z,47nm,0.8s
R32K Eaglecrest 65.04 36 P P 21 06 16.5 +2.0
baz=281,SNR=16
JIS Juneau Island 65.11 35 IAmb IAmb 21 06 17.8
comp=Z,82nm,0.8s
JIS Juneau Island 65.11 35 P P 21 06 16.8 +2.0
S32K Killisnoo 65.16 36 IAmb IAmb 21 06 17.9
comp=Z,33nm,0.8s
S32K Killisnoo 65.16 36 P P 21 06 16.9 +1.7
baz=282,SNR=11
P32M Atlin 65.19 34 P P 21 06 17.2 +1.8
baz=281,SNR=19
N32M Quiet Lake 65.20 32 P P 21 06 17.1 +1.6
baz=281
P33M Teslin, Yukon 65.51 33 P P 21 06 19.1 +1.7
baz=282,SNR=22
MMPY Sheldon Lake, 65.75 30 P P 21 06 20.9 +2.0
baz=282,SNR=18
A36M Sachs Harbour 66.01 20 P P 21 06 20.8 +0.6
baz=283,SNR=7.4
Q32M Nakina River 66.05 35 P P 21 06 22.9 +1.9
baz=283
U33K Whale Pass 66.24 38 IAmb IAmb 21 06 24.9
comp=Z,62nm,0.8s
U33K Whale Pass 66.24 38 P P 21 06 23.8 +1.9
baz=283,SNR=7.3
CRAG Craig 66.38 38 IAmb IAmb 21 06 25.8
comp=Z,51nm,0.8s
CRAG Craig 66.38 38 P P 21 06 25.5 +2.6
CRAG Craig 66.38 38 P P 21 06 24.8 +1.9
baz=284,SNR=6.9
WRAK Wrangell Islan 66.59 37 IAmb IAmb 21 06 26.9
comp=Z,86nm,1.4s
WRAK Wrangell Islan 66.59 37 P P 21 06 25.9 +1.8
baz=284
R33M Jennings River 66.60 34 P P 21 06 26.3 +1.9
baz=284
S34M Telegraph Cree 66.87 35 IAmb IAmb 21 06 29.1
comp=Z,111nm,1.5s
S34M Telegraph Cree 66.87 35 P P 21 06 28.1 +2.2
baz=284,SNR=19
C36M Paulatuk 67.04 23 IAmb IAmb 21 06 28.0
comp=Z,37nm,0.7s
C36M Paulatuk 67.04 23 P P 21 06 27.4 +0.7
baz=285,SNR=25
V35K Ketchikan 67.25 38 P P 21 06 29.6 +1.3
baz=285
DIB Dawson Inlet, 67.31 41 P P 21 06 29.9 +1.3
DIB IAmb IAmb 21 06 30.6
comp=Z,76nm,0.6s
DLBC Dease Lake 67.31 35 IAmb IAmb 21 06 31.8
comp=Z,66nm,1.4s
DLBC Dease Lake 67.31 35 P P 21 06 30.9 +2.2
baz=285,SNR=20
TGTN Hyland Airport 67.38 31 P P 21 06 31.1 +2.0
baz=285,SNR=103
WTLY Watson Lake, Y 67.49 33 IAmb IAmb 21 06 32.5
comp=Z,50nm,0.8s
WTLY Watson Lake, Y 67.49 33 P P 21 06 31.6 +1.9
baz=285,SNR=33
T35M Bob Quinn 67.57 36 IAmb IAmb 21 06 33.0
comp=Z,33nm,0.6s
T35M Bob Quinn 67.57 36 P P 21 06 32.5 +2.2
baz=285,SNR=18
KIRV Kirov 67.87 326*d* iP P 21 06 32.1 +0.1
KIRV Kirov 67.87 326 P P 21 06 32.4 +0.4
comp=Z,575nm,0.6s,baz=77,slow=1.9,SNR=71
comp=Z,575nm,0.6s
GEYT Alibeck 68.16 302 P P 21 06 35.1 +0.8
comp=Z,92nm,0.7s,baz=62,slow=3.5,SNR=151
comp=Z,92nm,0.7s
GRNB Grenville Isla 68.58 40 IAmb IAmb 21 06 38.9
comp=Z,44nm,0.6s
HOPEN Hopen 69.61 347 *e*P P 21 06 43.6 +1.4
KAAM Kaadhehdhoo 69.61 260 P P 21 06 44.5 +1.2
KOTAN Kotaneelee Air 69.76 32 P P 21 06 45.0 +1.5
baz=289
NGCH Negor - Chabah 69.88 289 P P 21 06 46.4 +1.6
NGCH S S 21 15 17.9 +2.1
ALE Alert 70.22 3 P P 21 06 47.2 +1.4
SPB2 Spitsbergen Ar 70.23 350 IAmb IAmb 21 06 47.6
comp=Z,99nm,0.7s
SPA0 Spitsbergen Ar 70.23 350 *e*P P 21 06 46.7 +0.7
SPA0 IAmb IAmb 21 06 47.5
comp=Z,69nm,0.8s
SPITS Spitsbergen Ar 70.23 350 P P 21 06 46.9 +0.9
comp=Z,86nm,0.7s,baz=111,slow=6.3,SNR=151
comp=Z,86nm,0.7s

KBS Kingsbay 70.43 351 P P 21 06 48.2 +1.1
KBS IAmb IAmb 21 06 49.1
comp=Z,118nm,0.8s
KBS Kingsbay 70.43 351 *e*P P 21 06 48.2 +1.1
KBS IAmb IAmb 21 06 48.9
comp=Z,97nm,0.8s
KBS Kingsbay 70.43 351 P P 21 06 48.2 +1.1
KBS pmax pmax
comp=Z,118nm,0.9s
KBS Kingsbay 70.43 351 *i* P P 21 06 48.4 +1.3
KBS Kingsbay 70.43 351 P P 21 06 48.4 +1.3
BELG Belogornoye 70.69 320*d* iP P 21 06 49.2 +0.1
BELG pmax pmax
comp=Z,155nm,0.9s
LVZ Lovozero 70.97 337 P P 21 06 50.2 -0.4
LVZ IAmb IAmb 21 06 52.3
comp=Z,151nm,0.9s
LVZ Lovozero 70.97 337*ce*P P 21 06 51.0 +0.4
LVZ pmax pmax
comp=Z,152nm,0.8s
LVZ Lovozero 70.97 337 P P 21 06 50.4 -0.2
HSPB Hornsund (broa 71.11 349 *e*P P 21 06 52.2 +1.1
VADS Vadso 71.68 340 *e*P P 21 06 55.5 +0.9
VADS IAmb IAmb 21 06 56.1
comp=Z,167nm,0.8s
KLMR Klimovskoe 71.87 330*d* iP P 21 06 55.8 0.0
KLMR pmax pmax
comp=Z,248nm,0.8s
JASK Jask - Hormozg 72.45 290 P P 21 07 01.8 +1.9
SNR=8.9
JASK S S 21 15 47.5 +2.6
JLN Jalan Bani Buh 72.53 286 P P 21 07 00.7 +0.3
SNR=11
WSAR Wadi Sarin 72.79 288 P P 21 07 02.6 +0.6
SNR=7.9
HAMF Hammerfest 73.05 342 *e*P P 21 07 02.8 +0.2
HAMF IAmb IAmb 21 07 03.6
comp=Z,157nm,0.9s
YKA Yellowknife Ar 73.08 28 P P 21 07 03.7 +0.8
comp=Z,23nm,0.7s,baz=296,slow=5.9,SNR=352
YKA SKIKP S 21 15 46.6 -3.9
comp=Z,0.8nm,1.0s,baz=293,slow=13,SNR=3.7
YKA ScS ScS 21 16 21.7 -3.2
comp=Z,1.4nm,1.1s,baz=305,slow=6.5,SNR=4.1
comp=Z,23nm,0.7s
BIDO Bidbid 73.11 288 P P 21 07 04.4 +0.6
SNR=7.5
ARA0 ARCESS Array S 73.13 341 ⇓*i*P P 21 07 03.8 +0.8
ARA0 IAmb IAmb 21 07 04.5
comp=Z,306nm,1.0s
ARCES ARCESS Array B 73.13 341 P P 21 07 03.8 +0.7
comp=Z,160nm,0.6s,baz=80,slow=8.7,SNR=712
comp=Z,160nm,0.6s
SMDO Samad 73.35 288 P P 21 07 05.5 +0.2
SNR=12
JMDO Jabal Madar 73.57 287 P P 21 07 06.6 +0.1
SNR=13
DGAR Diego Garcia 73.96 253 P P 21 07 09.4 +0.7
DGAR Diego Garcia 73.96 253*ce*P P 21 07 10.1 +1.4
DGAR pmax pmax
comp=Z,194nm,1.7s
MDH Madha 73.97 291 *i* P P 21 07 08.2 -0.4
SNR=13
MDH Madha 73.97 291 P P 21 07 08.1 -0.6
SNR=5.2
MASF Masafi 74.06 291 P P 21 07 10.0 +0.8
SNR=20
MSFE Esma-Masafi 74.06 291 *i* P P 21 07 09.9 +0.7
SNR=48
KTK1 Kautokeino 74.09 341 ⇓*i*P P 21 07 09.1 +0.5
KTK1 IAmb IAmb 21 07 09.8
comp=Z,134nm,0.8s
PGC Sidney 74.18 43 IAmb IAmb 21 07 12.2
comp=Z,45nm,0.8s
UOSS Minazif 74.18 290 P P 21 07 09.2 -0.7
UOSS IAmb IAmb 21 07 11.1
comp=Z,179nm,1.1s
UOSS Minazif 74.18 290 *i* P P 21 07 10.3 +0.4
SNR=46
UOSS Minazif 74.18 290 P P 21 07 10.1 +0.2
BSY Bisya 74.19 288 P P 21 07 10.3 +0.3
SNR=39
BSY P PcP 21 07 11.0 -11
SNR=21
SOHO SOHO 74.22 289 *i* P P 21 07 10.6 +0.5
SNR=15
SOHO SOHO 74.22 289 P P 21 07 10.5 +0.4
MHTO MHTO 74.22 286 P P 21 07 10.3 +0.2
SNR=36
HATD Hatta, Dubai 74.29 290 *i* P P 21 07 11.1 +0.6
SNR=83
HATD Hatta, Dubai 74.29 290 P P 21 07 11.1 +0.6
SNR=34
NLWA Neilton Lookou 74.41 45 IAmb IAmb 21 07 14.2
comp=Z,64nm,0.7s
ASHO Ashiyiah 74.41 290 *i* P P 21 07 11.6 +0.4
SNR=53
ASHO Ashiyiah 74.41 290 P P 21 07 11.7 +0.4
SNR=33
ARQ Araqi 74.54 289 P P 21 07 12.7 +0.7
SNR=32
VRH Novokhopyorsk 74.54 320 *e*P P 21 07 09.4 -2.0
VRH *e*S S 21 16 02.9 -4.1
VRH pmax pmax
comp=Z,580nm,0.6s
VRH smax smax
comp=E,50nm,1.0s
WISH Wishkah 74.58 45 IAmb IAmb 21 07 15.0
comp=Z,62nm,0.8s
JETT Jettan, Norway 74.60 342 ⇓*i*P P 21 07 12.1 +0.6
JETT IAmb IAmb 21 07 12.8
comp=Z,232nm,0.7s
NAZ Nazwa, Dubai 74.62 290 *i* P P 21 07 12.5 +0.2
SNR=10
NAZ Nazwa, Dubai 74.62 290 P P 21 07 12.5 +0.2
SNR=18
FAQ Al Faqa, Dubai 74.77 290 *i* P P 21 07 13.3 +0.1
SNR=27
FAQ Al Faqa, Dubai 74.77 290 P P 21 07 13.4 +0.2
SNR=13
LKRN Lenkeran, Azer 74.80 306 P P 21 07 13.4 +0.3
RADR Rader Ridge 74.83 45 IAmb IAmb 21 07 16.6
comp=Z,102nm,0.8s
MOS Moscow 74.88 325 *e*P P 21 07 12.2 -1.0
MOS *e**PP pP 21 08 55.8 -0.2
MOS *e* 21 10 07.8
MOS *e*S S 21 16 06.9 -3.6
MOS *e* 21 16 35.5
MOS pmax pmax
comp=Z,500nm,1.0s
MOS pmax pmax
comp=Z,386nm,1.0s
MOS pmax pmax
comp=E,177nm,1.0s
ALNE Al Ain 74.91 290 *i* P P 21 07 14.4 +0.4
SNR=23
ALNE Al Ain 74.91 290 P P 21 07 14.6 +0.5
SNR=29
E03A Lebam 74.93 45 IAmb IAmb 21 07 16.9
comp=Z,100nm,0.9s
SEKA Sheki 74.96 309 P P 21 07 14.2 +0.1
TRO Tromso 74.97 342 ⇓*i*P P 21 07 13.8 +0.4
TRO IAmb IAmb 21 07 14.4
comp=Z,169nm,0.8s
GNW Green Mountain 74.99 44 IAmb IAmb 21 07 17.3
comp=Z,68nm,1.0s
DQM DQM 75.01 285 P P 21 07 14.8 +0.2
SNR=9.7
ASUD Al Ashush, Dub 75.04 290 *i* P P 21 07 15.2 +0.5
SNR=22
ASUD Al Ashush, Dub 75.04 290 P P 21 07 15.4 +0.7
SNR=22
ASUD P PcP 21 07 16.0 -10
SNR=8.4
ZKTA Zakatala 75.20 309 P P 21 07 15.9 +0.6
TULEG Thule 75.21 7 IAmb IAmb 21 07 16.3
comp=Z,83nm,0.8s
TULEG Thule 75.21 7 *i* P P 21 07 15.2 +0.5
TULEG IAmb IAmb 21 07 16.6
comp=Z,56nm,0.7s
MNGR Mingechevir, A 75.21 308 P P 21 07 15.7 +0.3
HEBO Mount Hebo 75.33 47 IAmb IAmb 21 07 19.3
comp=Z,116nm,1.0s
AJN Ajban 75.35 290 *i* P P 21 07 16.4 0.0
SNR=15
AJN Ajban 75.35 290 P P 21 07 16.5 0.0
SNR=13

LPSR Galich'ya Gora 75.53 322 *e*P P 21 07 14.7 -2.2
LPSR *e*S S 21 16 13.3 -4.4
LPSR pmax pmax
comp=Z,350nm,0.8s
LPSR smax smax
comp=N,30nm,0.9s
NEEM North Greenlan 75.63 3 *i* P P 21 07 17.5 0.0
G03D McMinnville, O 75.65 46 IAmb IAmb 21 07 21.0
comp=Z,87nm,1.1s
D05A Enumclaw 75.66 44 IAmb IAmb 21 07 21.1
comp=Z,48nm,0.8s
OBN Obninsk 75.69 325 ⇓P P 21 07 18.0 +0.3
OBN Obninsk 75.69 325 P P 21 07 17.4 -0.3
OBN Obninsk 75.69 325 *i* P P 21 07 17.8 +0.1
OBN Obninsk 75.69 325 P P 21 07 18.1 +0.3
comp=Z,221nm,0.8s,baz=29,slow=2.1,SNR=42
comp=Z,221nm,0.8s
VORR Voronezh 75.78 321 ⇓*i*P P 21 07 18.6 +0.3
VORR pmax pmax
comp=Z,347nm,0.6s
GANJ Ganja 75.80 308 P P 21 07 19.1 +0.4
COR Corvallis 75.88 47 P P 21 07 19.2 +0.2
COR IAmb IAmb 21 07 22.7
comp=Z,64nm,0.9s
COR Corvallis 75.88 47 P P 21 07 19.2 +0.2
COR pmax pmax
comp=Z,64nm,0.9s
F04A Amboy 75.90 46 IAmb IAmb 21 07 22.0
comp=Z,89nm,0.7s
UMZA Um Al Zommool 75.93 288 P P 21 07 19.8 0.0
VSR Storozhevoye 76.00 321 *e*P P 21 07 17.1 -2.4
VSR *e*S S 21 16 18.1 -4.7
VSR pmax pmax
comp=Z,350nm,0.5s
VSR smax smax
comp=N,90nm,1.1s
VORD Divnogorie 76.03 320 *e*P P 21 07 18.0 -1.7
VORD *e*S S 21 16 20.5 -2.6
VORD pmax pmax
comp=Z,360nm,0.8s
VORD smax smax
comp=N,100nm,1.0s
J01E Myrtle Point 76.04 49 IAmb IAmb 21 07 23.1
comp=Z,75nm,0.9s
I03D Drain, OR 76.21 48 IAmb IAmb 21 07 24.2
comp=Z,76nm,0.8s
GOF Gofitskoye 76.23 314*ce*P P 21 07 21.6 +0.6
BUCK Buck Mountain 76.24 47 IAmb IAmb 21 07 24.7
comp=Z,123nm,0.8s
H04D Lebanon 76.27 47 IAmb IAmb 21 07 24.5
comp=Z,126nm,1.5s
K02D Willamette Mer 76.41 49 IAmb IAmb 21 07 25.0
comp=Z,53nm,1.1s
PUL Pulkovo 76.44 331*ce*P P 21 07 22.3 +0.5
PUL pmax pmax
comp=Z,322nm,0.6s
LTY Liberty 76.45 44 IAmb IAmb 21 07 24.6
comp=Z,46nm,1.1s
H04A Detroit Lake 76.57 47 IAmb IAmb 21 07 25.6
comp=Z,66nm,0.9s
ZEI Tsey 76.59 311 *e*P P 21 07 14.6 -8.7
ZEI pmax pmax
comp=Z,222nm,0.9s
MZWR Madinat Zayed 76.60 290 P P 21 07 23.2 -0.2
KSXB Camp Six Broad 76.61 50 IAmb IAmb 21 07 26.5
comp=Z,46nm,0.9s
HOOD Mount Hood Mea 76.64 46 IAmb IAmb 21 07 26.4
comp=Z,84nm,0.8s
KRMB Red Mountain 76.72 50 IAmb IAmb 21 07 27.1
comp=Z,61nm,1.3s
I04A Tendick Farm, 76.79 48 IAmb IAmb 21 07 26.8
comp=Z,61nm,0.8s
B08A Colville Reser 76.80 42 IAmb IAmb 21 07 26.6
comp=Z,32nm,0.8s
KBZ Khabaz 76.87 312*de*P P 21 07 25.2 +0.7
KBZ pmax pmax
comp=Z,306nm,0.9s
KBZ Khabaz 76.87 312 P P 21 07 25.4 +0.9
comp=Z,403nm,0.8s,baz=98,slow=3.2,SNR=1363
G05A Wamic 76.89 46 IAmb IAmb 21 07 27.6
comp=Z,42nm,0.8s
KIV Kislovodsk 76.92 313 ⇑P P 21 07 26.2 +1.3
KIV Kislovodsk 76.92 313 P P 21 07 24.6 -0.3
KIV Kislovodsk 76.92 313 *i* P P 21 07 25.5 +0.6
SNR=61
KIV Kislovodsk 76.92 313 ⇑P P 21 07 26.2 +1.3
KIV Kislovodsk 76.92 313 P P 21 07 25.8 +0.8
NAX Nakhchivan 76.97 307 P P 21 07 25.3 0.0
MXC Moxie City 76.97 44 IAmb IAmb 21 07 28.0
comp=Z,56nm,0.9s
JRN Qarnain Island 76.98 291 P P 21 07 24.9 -0.6
SNR=7.0
KMPM Mount Pierce 77.02 51 IAmb IAmb 21 07 28.9
comp=Z,59nm,0.9s
STEI Steigen 77.09 341 ⇓*i*P P 21 07 25.6 +0.4
STEI IAmb IAmb 21 07 26.3
comp=Z,230nm,0.7s
GNI Garni 77.10 308 P P 21 07 25.4 -0.7
GNI Garni 77.10 308*d* iP P 21 07 27.2 +1.1
GNI pmax pmax
comp=Z,122nm,1.1s
GNI Garni 77.10 308 P P 21 07 27.3 +1.2
KHMM Horse Mountain 77.11 51 IAmb IAmb 21 07 29.5
comp=Z,85nm,1.2s
MZR Muzera 77.24 289 P P 21 07 27.3 +0.4
E07A Sunnyside 77.25 44 IAmb IAmb 21 07 29.6
comp=Z,59nm,1.2s
FINES FINESS Array B 77.34 333 P P 21 07 26.8 +0.1
comp=Z,489nm,0.5s,baz=68,slow=5.2,SNR=5084
FINES PP PP 21 10 28.6 -0.2
comp=Z,36nm,0.9s,baz=52,slow=11,SNR=5.6
GHWR Ruwais 77.36 291 P P 21 07 27.5 0.0
LOF Lofoten 77.43 342 *e*P P 21 07 27.2 +0.1
LOF IAmb IAmb 21 07 27.6
comp=Z,81nm,0.8s
SHAO Shalim 77.43 284 *i* P P 21 07 28.1 +0.1
SNR=15
SHAO Shalim 77.43 284 P P 21 07 28.3 +0.3
FAUS Fauske 77.44 341 *e*P P 21 07 27.4 +0.3
FAUS IAmb IAmb 21 07 28.2
comp=Z,212nm,0.8s
YBH Yreka Blue Hor 77.45 50 IAmb IAmb 21 07 30.9
comp=Z,50nm,0.8s
L04D Klamath Falls 77.52 49 IAmb IAmb 21 07 30.9
comp=Z,62nm,0.7s
HAWA Hanford 77.53 44 IAmb IAmb 21 07 30.4
comp=Z,25nm,0.6s
ERBR Yeremizino-Bor 77.58 315*d* iP P 21 07 29.3 +0.9
ERBR *e* 21 10 31.1
ERBR *e*S S 21 16 45.8 +5.9
ERBR pmax pmax
comp=Z,613nm,1.0s
D08A Wollman Farm, 77.61 43 IAmb IAmb 21 07 31.1
comp=Z,46nm,0.7s
C09A Chrisman Ranch 77.68 43 IAmb IAmb 21 07 31.0
comp=Z,60nm,0.5s
KCPM Cahto Peak 77.70 52 IAmb IAmb 21 07 32.3
comp=Z,74nm,0.9s
K04D Chiloquin, OR 77.72 48 IAmb IAmb 21 07 32.2
comp=Z,102nm,0.8s
PINE Pine Mountain 77.75 47 IAmb IAmb 21 07 32.9
comp=Z,109nm,0.8s
J05D Fort Rock, OR 77.78 48 P P 21 07 31.5 +1.8
J05D IAmb IAmb 21 07 32.8
comp=Z,69nm,0.8s
LABN Labinsk 77.90 314 *e*P P 21 07 31.0 +0.9
LABN *e*S S 21 16 47.3 +4.0
LABN pmax pmax
comp=Z,108nm,0.7s
EDM Edmonton 77.95 36 IAmb IAmb 21 07 32.6
comp=Z,48nm,1.0s
DMTO DMTO 78.14 284 P P 21 07 31.7 -0.2
SNR=6.4
NEW Newport 78.16 42 IAmb IAmb 21 07 34.0
comp=Z,52nm,0.9s
NEW Newport 78.16 42 P P 21 07 33.2 +1.6
baz=297,SNR=40
SHMA Al-Shehemyia 78.17 293 P P 21 07 31.7 -0.3
SNR=7.2
K05A Summer Lake 78.25 48 IAmb IAmb 21 07 35.4
comp=Z,73nm,0.8s
SLWR Sila 78.30 291 P P 21 07 32.8 +0.1
E09A Wood Farm, Sta 78.33 44 IAmb IAmb 21 07 35.2
comp=Z,52nm,0.9s
TRNA Turayna 78.43 292 P P 21 07 32.9 -0.4
SNR=7.2

SAKB Bahrain 78.47 293 P **P** 21 07 33.3 -0.2
DOK Doka 78.48 285 P **P** 21 07 33.4 -0.3
SNR=9.3
MOR8 Moi Rana 78.50 340 *e*P **P** 21 07 32.1 -0.9
MOR8 IAmb IAmb 21 07 32.7
comp=Z,330nm,0.8s
KONS Konsvik 78.67 341 *e*P **P** 21 07 34.0 +0.2
KONS IAmb IAmb 21 07 34.8
comp=Z,63nm,0.8s
BCA Borcka 78.70 311 ⇓P **P** 21 07 35.2 +0.7
VSU Vasula 78.71 331 *ce*P **P** 21 07 34.2 +0.1
VSU pmax pmax
comp=Z,416nm,1.3s
VSU Vasula 78.71 331 *e*P **P** 21 07 34.6 +0.5
MEF Metsahovi 78.71 333 *e*P **P** 21 07 34.6 +0.5
SMRA Abu-Samra 78.75 292 P **P** 21 07 34.7 -0.3
SNR=14
STOK Stokkvaagen 78.81 341 *e*P **P** 21 07 34.6 +0.1
STOK IAmb IAmb 21 07 35.3
comp=Z,132nm,0.8s
RBK Rabkut 78.88 284 P **P** 21 07 35.6 -0.3
SNR=6.7
SOC Sochi 79.02 313 *e*P **P** 21 07 35.8 -0.3
SOC *e* 21 10 42.1
SOC *e*PPP PPP 21 12 34.8
SOC *e*S **S** 21 16 55.7 +0.7
SOC *e*SS **SS** 21 22 15.4 +2.4
SOC *e*SSS SSS 21 25 44.3
SOC pmax pmax
comp=Z,181nm,0.6s
WHFO Wadi Hawf 79.08 285 P **P** 21 07 36.3 -0.7
SNR=6.8
RAF Rauma 79.28 334 *e*P **P** 21 07 37.1 0.0
KBD Kabd 79.44 297 P **P** 21 07 42.4 +3.8
J08A Circle Bar Ran 79.55 47 IAmb IAmb 21 07 42.0
comp=Z,69nm,1.0s
BMO Blue Mountains 79.61 45 IAmb IAmb 21 07 42.0
comp=Z,51nm,1.0s
GURO Guroymak-BITLI 79.68 308 IAmb IAmb 21 07 42.0
comp=Z,106nm,0.9s
ABTO Aybut 79.73 284 P **P** 21 07 40.2 -0.2
SNR=8.2
MTSE Matsula 79.82 332 *e*P **P** 21 07 40.3 +0.3
UPNV Upernavik 79.92 5 *i*P **P** 21 07 39.8 -0.5
ANN Anapa 79.92 315 *d i*P **P** 21 07 40.9 0.0
ANN *e**PP **pP** 21 09 24.3 -0.6
ANN *e*S **S** 21 17 07.6 +3.4
ANN pmax pmax
comp=Z,462nm,1.1s
KTUT Trabzon 80.15 311 ⇓P **P** 21 07 42.4 +0.2
MPK Martis Peak 80.35 51 IAmb IAmb 21 07 46.2
comp=Z,119nm,1.3s
MNK Minsk 80.36 327 *i* P **P** 21 07 43.6 +0.6
MNK *i* *PP **pP** 21 09 26.5 -0.7
MNK *i* 21 10 54.0
MNK *i* PPP PPP 21 12 47.1
MNK *i* S **S** 21 17 10.0 +1.6
MNK *i* SS **SS** 21 22 34.8 +2.7
MNK *i* SSS SSS 21 26 06.0
MNK pmax pmax
comp=E,34nm,0.9s
MNK pmax pmax
comp=Z,257nm,0.8s
MNK pmax pmax
comp=N,72nm,0.9s
MNK MLR MLR
comp=Z,139nm,15.0s
MNK MLR MLR
comp=E,39nm,15.0s
MNK MLR MLR
comp=N,83nm,15.0s
NSS Namsos 80.39 340 *e*P **P** 21 07 42.8 -0.1
NSS IAmb IAmb 21 07 43.4
comp=Z,192nm,0.7s
EMB Emerald Bay 80.44 51 IAmb IAmb 21 07 46.5
comp=Z,46nm,0.9s
IZAR Zarasai 80.44 328 *e*P **P** 21 07 43.7 +0.3
IDID Didziasalis 80.46 328 *e*P **P** 21 07 42.9 -0.5
ISAL Salakas 80.60 328 *e*P **P** 21 07 44.4 +0.2
PAHR Pah Rah Range 80.61 50 IAmb IAmb 21 07 47.2
comp=Z,40nm,0.9s
CMB Columbia Colle 80.67 52 IAmb IAmb 21 07 47.4
comp=Z,34nm,0.8s
IIGN Ignalina 80.68 328 *e*P **P** 21 07 45.0 +0.3
PNTR Pine Nut 80.74 51 IAmb IAmb 21 07 48.3
comp=Z,53nm,0.7s
SUMG Summit 80.75 360 IAmb IAmb 21 07 46.8
comp=Z,42nm,0.6s
SUMG Summit 80.75 360 *i* P **P** 21 07 45.2 0.0
SUMG IAmb IAmb 21 07 48.9
comp=Z,31nm,0.5s
BBGB Big Mountain B 80.85 54 IAmb IAmb 21 07 49.4
comp=Z,54nm,0.9s
YERR Yerington 81.03 51 IAmb IAmb 21 07 49.6
comp=Z,45nm,0.7s
WAKR Walker 81.12 51 IAmb IAmb 21 07 50.3
comp=Z,30nm,0.7s
SLIT Slitere, Latvi 81.12 331 *e*P **P** 21 07 46.3 -0.6
PPT2 Papeete2 81.14 115 *e*LR LR 21 33 57.3
comp=Z,80nm,23.2s
MFID Camas Ranch 81.23 46 IAmb IAmb 21 07 50.7
comp=Z,45nm,0.8s
VSVD Vaisvydziai 81.38 329 *e*P **P** 21 07 48.1 -0.1
PABE Paberze 81.64 329 *e*P **P** 21 07 49.6 0.0
RYN Ryan 81.70 51 IAmb IAmb 21 07 53.1
comp=Z,35nm,0.7s
AKASG Malin Array Be 81.74 323 P **P** 21 07 50.0 -0.2
AKASG Malin Array Be 81.74 323 P **P** 21 07 50.0 -0.2
comp=Z,295nm,0.6s,baz=52,slow=5.1,SNR=838
comp=Z,295nm,0.6s
AKBB Malin Array Si 81.74 323 *ce*P **P** 21 07 49.8 -0.4
AKBB pmax pmax
comp=Z,337nm,0.8s
BMN Battle Mountai 81.74 49 IAmb IAmb 21 07 53.6
comp=Z,88nm,1.6s
KVN Kaiserville 81.79 50 IAmb IAmb 21 07 53.5
comp=Z,33nm,0.6s
TBLU Trondheim 81.84 340 *e*P **P** 21 07 49.8 -0.7
TBLU IAmb IAmb 21 07 50.2
comp=Z,109nm,0.7s
LHV Little Huntoon 81.89 51 IAmb IAmb 21 07 54.5
comp=Z,46nm,1.0s
SIM Simferopol' 81.91 316 *c i*P **P** 21 07 51.5 +0.3
SIM pmax pmax
comp=Z,577nm,0.8s
MLAC Mammoth, Mammo 81.94 52 P **P** 21 07 53.6 +1.8
baz=298
NVAR Mina Array Bea 81.94 51 P **P** 21 07 53.4 +1.6
comp=Z,22nm,0.6s,baz=296,slow=5.8,SNR=178
comp=Z,22nm,0.6s
SCO Scoresbysund 82.03 354 *i* P **P** 21 07 51.7 +0.4
HLID Hailey 82.06 45 P **P** 21 07 54.2 +2.0
baz=300,SNR=33
VOG Valley Oaks Go 82.16 53 P **P** 21 07 53.7 +1.0
baz=298
PBUR Paburge 82.25 330 *e*P **P** 21 07 53.1 +0.4
PKM Mcpherson Peak 82.51 55 P **P** 21 07 56.6 +1.9
baz=298,SNR=14
EGMT Eagleton 82.57 40 IAmb IAmb 21 07 57.0
comp=Z,36nm,0.7s
EGMT Eagleton 82.57 40 P **P** 21 07 55.8 +1.2
baz=302
VES Vestal, Richgr 82.60 54 P **P** 21 07 55.7 +0.8
baz=298,SNR=7.2
TIN Tinemaha, Big 82.64 52 P **P** 21 07 56.9 +1.7
baz=298,SNR=7.9
BOZ Bozeman (W) 82.75 42 P **P** 21 07 57.3 +1.6
baz=301,SNR=31
FFC Flin Flon 82.76 31 P **P** 21 07 55.5 +0.1
FFC Flin Flon 82.76 31 P **P** 21 07 55.5 +0.1
FFC pmax pmax
comp=Z,17nm,0.9s
BCW Bitter Crk WRg 82.78 55 IAmb IAmb 21 07 59.0
comp=Z,49nm,1.1s
SBC Santa Barbara 82.79 55 P **P** 21 07 57.5 +1.6
baz=298
DIKM Dikmen 82.83 313 ⇑P **P** 21 07 56.4 +0.5
HFS Hagfors 82.89 336 P **P** 21 07 55.0 -0.9
comp=Z,170nm,0.6s,baz=111,slow=3.3,SNR=1033
HFS PP **PP** 21 11 12.3 -1.8
comp=Z,36nm,0.8s,baz=64,slow=6.8,SNR=9.3
HFS ScS **S** 21 17 29.6 -4.1
comp=Z,5.2nm,0.7s,baz=90,slow=19,SNR=5.5
comp=Z,170nm,0.6s
SUW Suwalki 82.90 328 *e*P **P** 21 07 55.6 -0.4
SUW Suwalki 82.90 328 *e*P **P** 21 07 56.5 +0.5

ELK Elko 82.91 48 IAmb IAmb 21 07 59.4
comp=Z,25nm,0.7s
CWC Cottonwood Cre 83.03 53 P **P** 21 07 58.4 +1.1
baz=298
SCZ2 Santa Cruz Isl 83.05 55 P **P** 21 07 58.4 +1.1
baz=298
DOMB Dombas 83.10 339 *e*P **P** 21 07 56.7 -0.3
DOMB IAmb IAmb 21 07 57.4
comp=Z,192nm,0.9s
ARVC Arvin 83.11 54 P **P** 21 07 58.9 +1.3
baz=298
ISA Isabella, Lake 83.12 54 P **P** 21 07 58.3 +0.6
baz=298,SNR=9.7
NB2 NORSAR Subarra 83.12 338 P **P** 21 07 56.3 -0.8
comp=Z,131nm,0.6s,baz=45,slow=4.8
NB2 PP **PP** 21 11 11.0 -5.0
comp=Z,10.0nm,0.8s,baz=44,slow=7.9
NB2 NORSAR Subarra 83.12 338 P **P** 21 07 56.3 -0.8
baz=45,slow=4.8
NOA NORSAR Array B 83.12 338 P **P** 21 07 56.4 -0.8
comp=Z,175nm,0.6s,baz=32,slow=4.9,SNR=771
NOA PP **PP** 21 11 15.1 -0.9
comp=Z,20nm,0.8s,baz=46,slow=8.3,SNR=9.0
comp=Z,175nm,0.6s
MOL Molde 83.18 340 *e*P **P** 21 07 57.6 +0.3
MOL IAmb IAmb 21 07 58.1
comp=Z,229nm,1.3s
NC602 NORSAR Array S 83.23 337 IAmb IAmb 21 07 57.6
comp=Z,98nm,1.1s
NC602 NORSAR Array S 83.23 337 *e*P **P** 21 07 56.6 -0.9
NC602 IAmb IAmb 21 07 57.3
comp=Z,67nm,0.6s
GRAC Grapevine Rang 83.27 52 IAmb IAmb 21 08 01.0
comp=Z,58nm,1.3s
GRAC Grapevine Rang 83.27 52 P **P** 21 07 59.9 +1.5
baz=299
OSI Oslo Audit: C 83.43 55 P **P** 21 08 00.7 +1.5
baz=298,SNR=5.8
SNCC San Nicolas Is 83.48 56 P **P** 21 08 00.9 +1.4
baz=298
SORM Soroca 83.62 321 ⇓P **P** 21 07 58.3 -1.4
SORM Soroca 83.62 321 ⇓P **P** 21 07 58.3 -1.4
PURM Purcari 83.63 319 ⇓P **P** 21 07 59.8 0.0
MPMC Manual Prospec 83.64 53 P **P** 21 08 01.8 +1.4
baz=299
AKN Aaknes 83.64 340 *e*P **P** 21 08 00.1 +0.5
AKN IAmb IAmb 21 08 00.5
comp=Z,205nm,0.9s
RAYN Ar Rayn 83.66 293 P **P** 21 08 00.7 +0.2
RAYN Ar Rayn 83.66 293 *i* P **P** 21 08 01.2 +0.8
SNR=52
RAYN Ar Rayn 83.66 293 P **P** 21 08 00.7 +0.2
RAYN pmax pmax
comp=Z,544nm,0.8s
RAYN Ar Rayn 83.66 293 P **P** 21 08 01.3 +0.8
LRMC Laurel Mtn Rad 83.77 53 P **P** 21 08 02.3 +1.3
baz=299,SNR=42
ILULI Ilulissat 83.77 4 IAmb IAmb 21 08 01.7
comp=Z,89nm,1.2s
ILULI Ilulissat 83.77 4 *i* P **P** 21 07 59.9 -0.2
ILULI IAmb IAmb 21 08 02.0
comp=Z,27nm,0.6s
YFT Old Faithful 83.83 43 IAmb IAmb 21 08 05.8
comp=Z,36nm,0.8s
EDW2 Edwards Air Fo 83.83 54 P **P** 21 08 03.0 +1.8
baz=299,SNR=43
R11B Troy Canyon, C 83.86 50 IAmb IAmb 21 08 03.9
comp=Z,29nm,0.9s
R11B Troy Canyon, C 83.86 50 P **P** 21 08 02.9 +1.5
baz=300,SNR=53
FURC Furnace Creek, 83.88 52 P **P** 21 08 02.9 +1.6
baz=299,SNR=12
DECC Green Verdugo 83.89 55 P **P** 21 08 02.8 +1.4
baz=299
WCT Wildcat Mounta 83.89 52 IAmb IAmb 21 08 03.8
comp=Z,76nm,1.7s
KIS Kishinev 83.98 320 ⇑P **P** 21 08 01.1 -0.5
HVU Hansel Valley 84.00 46 IAmb IAmb 21 08 04.9
comp=Z,26nm,0.7s
H17A Grant Village 84.01 43 IAmb IAmb 21 08 06.8
comp=Z,42nm,1.1s
H17A Grant Village 84.01 43 P P 21 08 05.9 +3.7
baz=302,SNR=21
MILM Milestii Mici 84.03 320 ⇓ *i*P **P** 21 08 01.0 -0.8
comp=Z,170nm,1.2s
MILM Milestii Mici 84.03 320 ⇓P **P** 21 08 01.6 -0.2
MILM Milestii Mici 84.03 320 *d i*P **P** 21 08 01.0 -0.8
MILM pmax pmax
comp=Z,170nm,1.2s
LKWY Lake 84.03 43 IAmb IAmb 21 08 06.8
comp=Z,39nm,0.8s
PASC Pasadena Art C 84.03 55 IAmb IAmb 21 08 04.2
comp=Z,28nm,0.8s
TPNV Topopah Spring 84.08 52 P **P** 21 08 04.1 +1.5
baz=299
YMP Mirror Lake PI 84.08 42 IAmb IAmb 21 08 06.2
comp=Z,34nm,1.1s
OSL Oslo 84.09 337 *e*P **P** 21 08 01.4 -0.4
OSL IAmb IAmb 21 08 02.1
comp=Z,184nm,0.7s
S11A Rachel 84.09 51 IAmb IAmb 21 08 05.1
comp=Z,40nm,0.9s
FLWY Flagg Ranch 84.10 43 IAmb IAmb 21 08 06.2
comp=Z,32nm,0.8s
GWY Greenwater Val 84.16 52 IAmb IAmb 21 08 05.2
comp=Z,49nm,0.9s
FMP Fort Macarthur 84.17 55 P **P** 21 08 04.0 +1.2
baz=299
CIS Catalina Islan 84.23 56 P **P** 21 08 04.2 +1.0
baz=299,SNR=8.9
ICESG Greenland Ices 84.26 360 *i* P **P** 21 08 02.9 -0.1
ICESG IAmb IAmb 21 08 04.4
comp=Z,54nm,0.6s
SKAR Skarslia 84.36 338 *e*P **P** 21 08 03.3 +0.1
SKAR IAmb IAmb 21 08 04.6
comp=Z,114nm,1.2s
BFSC Mount Baldy Ra 84.38 54 P **P** 21 08 04.9 +0.9
baz=299,SNR=10
RLMT Red Lodge 84.41 42 IAmb IAmb 21 08 06.6
comp=Z,26nm,0.6s
RLMT Red Lodge 84.41 42 P **P** 21 08 06.1 +2.0
baz=303,SNR=26
GSC Goldstone, Bar 84.49 53 IAmb IAmb 21 08 06.9
comp=Z,54nm,0.9s
GSC Goldstone, Bar 84.49 53 P **P** 21 08 06.1 +1.6
baz=299,SNR=46
SHOC Shoshone, Teco 84.57 52 P **P** 21 08 06.2 +1.4
baz=300
STRU Stroemstad 84.58 336 *i* P **P** 21 08 02.3 -1.9
IAS Iasi 84.59 321 ⇑P **P** 21 08 04.1 -0.5
LEOM Leova 84.60 320 ⇓P **P** 21 08 04.2 -0.4
HYA Hoyanger 84.67 340 ⇓ *i*P **P** 21 08 04.6 -0.1
HYA IAmb IAmb 21 08 05.4
comp=Z,243nm,1.0s
FOO Floro 84.69 340 *e*P **P** 21 08 04.8 +0.1
FOO IAmb IAmb 21 08 05.5
comp=Z,123nm,0.8s
KONO Kongsberg 84.69 337 P **P** 21 08 03.5 -1.3
KONO IAmb IAmb 21 08 05.2
comp=Z,196nm,1.9s
KONO Kongsberg 84.69 337 *e*P **P** 21 08 04.5 -0.3
KONO Kongsberg 84.69 337 *i* P **P** 21 08 05.6 +0.8
KONO pmax pmax
comp=Z,28nm,1.0s
PRN Pahroc Range 84.69 51 IAmb IAmb 21 08 08.2
comp=Z,42nm,1.1s
BLEU Blekinge 84.69 333 *i* P **P** 21 08 02.6 -2.3
VASR Vaslui 84.77 320 ⇓P **P** 21 08 05.7 +0.2
TAOE Nuku Hiva Isla 84.79 103 *e*LR LR 21 35 42.4
comp=Z,265nm,25.2s
DUG Dugway, Tooele 84.79 47 IAmb IAmb 21 08 08.4
comp=Z,52nm,1.3s
DUG Dugway, Tooele 84.79 47 P **P** 21 08 07.6 +1.7
baz=301,SNR=36
BR131 Keskin Array S 84.86 312 IAmb IAmb 21 08 08.1
comp=Z,70nm,0.7s
BR131 Keskin Array S 84.86 312 *i* P **P** 21 08 05.6 -0.7
BR131 Keskin Array S 84.86 312 P **P** 21 08 05.8 -0.5
SNR=48
BRTR Keskin Array B 84.86 312 P **P** 21 08 05.8 -0.5
comp=Z,62nm,0.7s,baz=88,slow=3.0,SNR=299
BRTR PP **PP** 21 11 30.1 -0.7
comp=Z,7.4nm,0.8s,baz=83,slow=5.1,SNR=4.3
comp=Z,62nm,0.7s
BBRC Big Bear Solar 84.91 54 P **P** 21 08 07.7 +1.0
baz=299
SOEG Soedalen 84.95 357 *i* P **P** 21 08 05.2 -0.7

SOEG IAmb IAmb 21 08 07.1
comp=Z,27nm,0.8s
LVV L'vov 84.98 324 *e*P **P** 21 08 06.1 -0.4
TLCR 84.98 319 ⇓P **P** 21 08 07.5 +1.0
BORU Boraas 84.99 335 *i* P **P** 21 08 04.3 -1.9
MURC Murrieta 85.03 55 P **P** 21 08 08.2 +1.1
baz=299,SNR=8.2
VLDR Vladesti 85.05 319 ⇑P **P** 21 08 07.9 +1.1
TUQ Turquoise Moun 85.05 53 P **P** 21 08 08.9 +1.6
baz=300,SNR=42
HEC Hector,Ludlow 85.05 53 P **P** 21 08 08.8 +1.6
baz=300,SNR=48
BIR Birlad 85.07 320 ⇑P **P** 21 08 07.6 +0.6
TJOU Tjoern 85.14 335 *i* P **P** 21 08 04.7 -2.3
VARL Varlezi 85.15 320 ⇓P **P** 21 08 08.3 +0.9
GIUM Giurgiulesti 85.17 319 ⇑P **P** 21 08 06.1 -1.4
SCTR Scanteiesti 85.19 319 ⇓P **P** 21 08 09.0 +1.5
SUE Sulen 85.19 340 *e*P **P** 21 08 07.6 +0.4
SUE IAmb IAmb 21 08 08.1
comp=Z,118nm,0.8s
TATR Tatarca 85.20 319 ⇓P **P** 21 08 07.5 0.0
PRAR RASCA 85.24 321 ⇑P **P** 21 08 07.3 -0.5
GISR Galati 85.29 319 ⇓P **P** 21 08 07.9 -0.1
LAO LASA Array 85.31 39 P **P** 21 08 09.9 +1.7
baz=305
GHRR 85.31 320 ⇑P **P** 21 08 08.7 +0.5
NEGRR Negrea 85.34 319 ⇑P **P** 21 08 08.6 +0.4
ANTO Ankara 85.34 313 ⇓P **P** 21 08 08.5 0.0
ANTO Ankara 85.34 313 P **P** 21 08 07.5 -1.0
ANTO Ankara 85.34 313 P **P** 21 08 07.6 -1.0
ANTO pmax pmax
comp=Z,75nm,0.6s
ANTO Ankara 85.34 313 P **P** 21 08 08.3 -0.3
SLCR Slobozia Conac 85.37 319 ⇑P **P** 21 08 08.3 -0.1
BR231 Keskin MP Arra 85.37 313 IAmb IAmb 21 08 09.4
comp=Z,115nm,1.4s
DEL Delary 85.37 333 *i* P **P** 21 08 05.9 -2.3
BEL Belsk 85.38 327 *e*P **P** 21 08 08.4 +0.1
SCHL Schela 85.38 319 ⇓P **P** 21 08 07.2 -1.3
CFR Carcaliu 85.39 319 ⇓P **P** 21 08 08.0 -0.5
DGMT Dagmar 85.39 37 P **P** 21 08 09.6 +1.0
baz=306
IZVR Izvoarele 85.40 319 ⇓P **P** 21 08 08.7 +0.1
TPGR Topolog 85.40 319 ⇑P **P** 21 08 07.2 -1.4
SCHLR Schela 85.40 319 ⇓P **P** 21 08 07.2 -1.4
TUDR 85.42 319 ⇑P **P** 21 08 09.4 +0.7
109C Camp Elliot, M 85.44 55 P **P** 21 08 10.3 +1.2
baz=299
FABU Falkenberg 85.45 334 *i* P **P** 21 08 06.2 -2.3
ONAU Onsala 85.48 335 *i* P **P** 21 08 06.2 -2.4
ODD1 Odda 85.49 339 *e*P **P** 21 08 08.5 -0.2
ODD1 IAmb IAmb 21 08 09.4
comp=Z,114nm,1.0s
TESR Tescani 85.49 321 ⇓P **P** 21 08 09.4 +0.4
ASK Askoy 85.51 339 *e*P **P** 21 08 11.5 +2.8
ASK IAmb IAmb 21 08 12.1
comp=Z,72nm,0.8s
BW06 Boulder Array 85.51 44 P **P** 21 08 10.4 +0.9
baz=303,SNR=12
PDAR Pinedale Array 85.51 44 P **P** 21 08 10.7 +1.2
comp=Z,4.7nm,0.6s,baz=235,slow=2.5,SNR=46
PDAR PP **PP** 21 11 35.2 -0.7
comp=Z,3.2nm,0.9s,baz=303,slow=5.1,SNR=3.9
BER Bergen 85.54 339 *e*P **P** 21 08 09.1 +0.2
GMRC Granite Mounta 85.56 53 P **P** 21 08 11.4 +1.6
baz=300,SNR=35
PFO Pinyon Flats O 85.56 55 P **P** 21 08 10.4 +0.6
PFO IAmb IAmb 21 08 12.1
comp=Z,52nm,0.9s
PFO Pinyon Flats O 85.56 55 P **P** 21 08 11.1 +1.3
baz=300,SNR=35
PFO Pinyon Flats O 85.56 55 *i* P **P** 21 08 10.8 +1.0
PFO pmax pmax
comp=Z,74nm,0.9s
TPFO Pinon Flats 85.56 55 P **P** 21 08 11.2 +1.4
baz=300,SNR=34
PANC Panciu 85.57 320 ⇓P **P** 21 08 11.6 +2.2
PMD Palm Desert 85.60 54 IAmb IAmb 21 08 12.0
comp=Z,50nm,0.8s
TIRR Tirgusor 85.62 318 ⇑P **P** 21 08 10.5 +0.8
BUR08 Bucovina Ar. S 85.64 322 IAmb IAmb 21 08 10.9
comp=Z,86nm,0.8s
TSCT Constanta Port 85.64 318 ⇓P **P** 21 08 10.1 +0.4
BURAR Bucovina Array 85.65 322 ⇓P **P** 21 08 09.8 -0.1
BURAR Bucovina Array 85.65 322 ⇓P **P** 21 08 09.8 -0.1
ODBI Odobesti 85.68 320 ⇓P **P** 21 08 11.2 +1.3
BELC Belle Mtn. Jos 85.70 54 P **P** 21 08 11.6 +1.2
baz=300,SNR=36
EFOR EFORIE 85.70 318 ⇑P **P** 21 08 10.3 +0.2
BEIL Beino 85.71 307 *e*P **P** 21 08 10.3 -0.1
MFTR Murfatlar 85.77 318 ⇑P **P** 21 08 09.7 -0.7
HARR Harsova 85.78 319 ⇓P **P** 21 08 10.4 0.0
KWP Kalwaria Pacla 85.78 325 *e*P **P** 21 08 10.4 0.0
TLBR Topalu 85.79 318 ⇓P **P** 21 08 09.0 -1.5
VRI Vrincioaia 85.81 320 ⇓P **P** 21 08 10.5 -0.1
VRI Vrincioaia 85.81 320 ⇑P **P** 21 08 12.3 +1.7
BAR Barrett 85.86 55 IAmb IAmb 21 08 13.3
comp=Z,42nm,1.3s
PLOR Plostina 85.87 320 ⇓P **P** 21 08 11.6 +0.7
BSD Bornholm Skovb 85.88 332 *i* P **P** 21 08 08.9 -1.8
BSD *i* P **PcP** 21 08 09.7 -2.9
BLS5 Blasjo 85.92 338 *e*P **P** 21 08 10.7 -0.1
BLS5 IAmb IAmb 21 08 11.5
comp=Z,146nm,1.1s
MONP2 Monument Peak 85.94 55 P **P** 21 08 12.9 +1.2
baz=300,SNR=24
GRER 85.95 320 ⇓P **P** 21 08 12.2 +1.0
BJUU Bjuv 85.99 333 *i* P **P** 21 08 09.4 -1.7
SFJD Kangerlussuaq 86.00 4 P **P** 21 08 10.8 -0.2
SFJD IAmb IAmb 21 08 12.2
comp=Z,72nm,0.8s
SFJD Kangerlussuaq 86.00 4 P **P** 21 08 10.8 -0.2
SFJD pmax pmax
comp=Z,72nm,0.8s
SFJD Kangerlussuaq 86.00 4 *i* P **P** 21 08 10.6 -0.4
SFJD IAmb IAmb 21 08 12.2
comp=Z,51nm,0.7s
BISRR Bisoca 86.01 320 ⇓P **P** 21 08 12.3 +0.7
HWQ Hawqa 86.01 306 *e*P **P** 21 08 11.1 -0.9
MVU Marysvale 86.06 49 IAmb IAmb 21 08 15.2
comp=Z,82nm,1.3s
HOMB Homborsund 86.09 337 *e*P **P** 21 08 10.4 -1.2
HOMB IAmb IAmb 21 08 11.5
comp=Z,66nm,0.9s
HOMB Homborsund 86.09 337 *i* P **P** 21 08 09.2 -2.4
TURR Turia 86.11 320 ⇓P **P** 21 08 12.7 +0.7
GKP Gorka Klasztor 86.11 330 *e*P **P** 21 08 11.2 -0.6
GKP Gorka Klasztor 86.11 330 *e*P **P** 21 08 11.4 -0.4
COVR Voineasa-Covas 86.12 320 ⇑P **P** 21 08 12.1 0.0
LUNU Lund 86.13 333 *i* P **P** 21 08 10.4 -1.4
AMRR Amara 86.17 319 ⇑P **P** 21 08 13.1 +0.8
ICOR Ion Corvin 86.18 318 ⇑P **P** 21 08 12.3 0.0
OVD Ostervraa, Den 86.18 335 *i* P **P** 21 08 10.5 -1.5
OVD *i* P **PcP** 21 08 11.1 -2.8
OVD IAmb IAmb 21 08 12.0
comp=Z,111nm,0.7s
OVD IAmb IAmb 21 08 13.0
comp=Z,103nm,0.6s
PGOR Pogoanele 86.21 319 ⇑P **P** 21 08 14.2 +1.7
OZUR 86.22 321 ⇓P **P** 21 08 13.1 +0.5
IRM Iron Mountain 86.24 54 P **P** 21 08 14.5 +1.6
baz=300,SNR=20
PSN Preselentsi 86.25 318 *e*P **P** 21 08 12.6 -0.1
BC3 Big Chuckawall 86.27 54 P **P** 21 08 14.8 +1.6
baz=300,SNR=31
IKP In-Ko-Pah, Jac 86.29 55 P **P** 21 08 14.6 +1.4
baz=300,SNR=15
BOSR Bodos 86.30 321 ⇑P **P** 21 08 13.6 +0.7
NEHR Nehoiu 86.31 320 ⇑P **P** 21 08 13.8 +0.8
RMX La Rumorosa 86.33 55 IAmb IAmb 21 08 16.2
comp=Z,51nm,1.3s
ISR Istrita 86.35 320 ⇑P **P** 21 08 13.8 +0.5
SWSC Sam W. Stewart 86.37 55 P **P** 21 08 14.8 +1.3
baz=300,SNR=5.9
BHL Bhannes 86.41 306 *e*P **P** 21 08 13.1 -0.7
KNB Kanab 86.42 50 IAmb IAmb 21 08 17.5
comp=Z,34nm,1.1s
YUH Yuha Desert 86.42 55 IAmb IAmb 21 08 16.1
comp=Z,52nm,1.4s
ARCR ARCALIA 86.44 322 ⇑P **P** 21 08 13.8 +0.3
KMY Karmoy 86.48 339 *e*P **P** 21 08 13.1 -0.3
KMY IAmb IAmb 21 08 14.1
comp=Z,70nm,1.0s
MLR Muntele Rosu 86.48 320 ⇑P **P** 21 08 12.9 -0.9

MLR **Muntele Rosu** 86.48 320 IAmb IAmb 21 08 15.2
comp=Z,36nm,0.7s
MLR **Muntele Rosu** 86.48 320 ⇑P P **21 08 13.0 -0.9**
RCY **Rachaya** 86.48 306 *eP* P **21 08 14.0 -0.2**
SNART **Snartemo** 86.49 337 *eP* P **21 08 13.2 -0.3**
SNART IAmb IAmb 21 08 13.8
comp=Z,181nm,0.9s
SNART **Snartemo** 86.49 337 *i P* P **21 08 11.9 -1.6**
DOPR **Dopca** 86.52 321 ⇓P P **21 08 14.4 +0.4**
BMR **Baia Mare** 86.55 323 ⇓P P **21 08 14.6 +0.6**
DQRL **Deir Qamar** 86.57 306 *eP* P **21 08 14.2 -0.4**
SHBL **Chebaa** 86.62 306 *eP* P **21 08 14.6 -0.3**
TGMR **Targu Mures** 86.67 321 ⇓P P **21 08 16.0 +1.4**
DY2G **Dye2** 86.75 3 *i* P P **21 08 14.8 -0.1**
DY2G IAmb IAmb 21 08 16.4
comp=Z,33nm,0.6s
PLAR **PLOIESTI** 86.77 320 ⇓P P **21 08 15.6 +0.5**
SULR 86.77 319 ⇑P P **21 08 14.9 -0.2**
CRVS **Cervenica-Dubn** 86.87 325 *eP* P **21 08 15.8 +0.2**
CRVS pmax pmax
comp=Z,192nm,1.2s
CRVS **Cervenica-Dubn** 86.87 325 *eP* P **21 08 15.8 +0.2**
PDMCI **Parker Dam,Lak** 86.88 53 P P **21 08 17.3 +1.4**
baz=301,SNR=7.2
OJC **Ojcow** 86.89 326 *eP* P **21 08 15.3 -0.3**
RGN **Rugen** 86.94 332 *eP* P **21 08 15.2 -0.4**
comp=Z,92nm,0.8s,baz=43,slow=4.7
RGN *ePP* **PP** **21 11 47.0 +0.5**
RGN **Rugen** 86.94 332 *eP* **PP** **21 11 44.3 -2.2**
comp=Z,92nm,1.0s,baz=43,slow=8.1
PRD **Provadia** 86.95 318 *eP* P **21 08 16.3 +0.3**
MDB **Medias** 86.98 321 ⇓P P **21 08 17.9 +1.8**
VOIR 87.02 320 ⇑P P **21 08 17.1 +0.7**
GLA **Glamis** 87.02 54 P P **21 08 18.2 +1.6**
baz=300
MMAI **Mount Meron Ar** 87.04 306 P P **21 08 16.6 -0.1**
comp=Z,48nm,0.6s,baz=56,slow=6.2,SNR=231
MMAI PP **PP** **21 11 48.0 -0.3**
comp=Z,4.7nm,0.8s,baz=56,slow=9.4,SNR=5.5
comp=Z,48nm,0.6s
CBBR **Cluj-Babes-Bol** 87.07 322 ⇑P P **21 08 13.8 -2.7**
CJR **Cluj-Napoca** 87.07 322 ⇓P P **21 08 17.0 +0.4**
MTUR **Matau** 87.14 320 ⇑P P **21 08 18.3 +1.3**
MTUR **Matau** 87.14 320 ⇑P P **21 08 18.3 +1.3**
NIE **Niedzica** 87.14 326 *eP* P **21 08 17.2 +0.4**
MESR **Meseseni** 87.16 323 ⇑P P **21 08 16.7 -0.2**
SGRR **Singureni** 87.20 319 ⇓P P **21 08 15.7 -1.5**
MUD **Monsted U'grnd** 87.20 335 *i* P P **21 08 15.0 -1.9**
MUD *i* P **PcP** **21 08 15.5 -2.9**
MUD IAmb IAmb 21 08 17.0
comp=Z,82nm,1.0s
MUD IAmb IAmb 21 08 18.0
comp=Z,46nm,1.0s
RAZG **Razgrad** 87.26 318 ⇓P P **21 08 17.1 -0.4**
ARR **Arges** 87.30 320 ⇓P P **21 08 18.2 +0.5**
LOZB **Loznitsa** 87.32 318 ⇓P P **21 08 17.3 -0.5**
BALJ **Balqa** 87.33 305 IAmb IAmb 21 08 18.8
comp=Z,164nm,1.1s
MARR **Marisel-Cluj** 87.36 322 ⇓P P **21 08 17.9 -0.1**
K22A **Casper** 87.43 43 P P **21 08 19.5 +1.0**
baz=305
MSEY **Mahe Island** 87.47 264 P P **21 08 19.4 +0.3**
DRGR 87.51 322 ⇓P P **21 08 18.4 -0.3**
DRGR 87.51 322 ⇓P P **21 08 18.4 -0.3**
CSS **Mathiatis** 87.52 308 IAmb IAmb 21 08 19.1
comp=Z,62nm,0.6s
LTVH **Ltavrtes, Hu** 87.58 323 ⇓P P **21 08 17.8 -1.0**
HUMR **Humele** 87.60 320 ⇑P P **21 08 18.3 -0.8**
KECS **Kecovo** 87.64 325 *eP* P **21 08 19.4 +0.2**
KECS pmax pmax
comp=Z,66nm,0.8s
KECS **Kecovo** 87.64 325 *eP* P **21 08 19.3 +0.1**
KECS *ePP* **PP** **21 11 51.0 -1.3**
LRW **Lerwick** 87.67 342 *eP* P **21 08 19.3 +0.3**
LRW IAmb IAmb 21 08 20.0
comp=Z,95nm,0.7s
COPA **Copaceanca** 87.69 319 ⇓P P **21 08 18.8 -0.7**
LANS **Liptovska Anna** 87.73 326 *eP* P **21 08 20.3 +0.7**
LANS pmax pmax
comp=Z,32nm,0.6s
LANS **Liptovska Anna** 87.73 326 *eP* P **21 08 20.3 +0.7**
LOT **Lotru** 87.74 321 ⇑P P **21 08 19.4 -0.4**
SSRD **Sdr. Stenderup** 87.75 334 *i* P P **21 08 18.5 -0.9**
SSRD *i* P **PcP** **21 08 18.7 -2.1**
SSRD IAmb IAmb 21 08 19.9
comp=Z,223nm,0.8s
SSRD IAmb IAmb 21 08 20.9
comp=Z,179nm,0.7s
SZH **Strazhitsa** 87.75 318 *eP* P **21 08 19.7 -0.1**
O20A **White River Ci** 87.78 46 P P **21 08 21.4 +1.1**
baz=304
BORR **Bors** 87.83 323 ⇓P P **21 08 20.8 +0.8**
Y14A **Wickenburg** 87.88 53 IAmb IAmb 21 08 23.2
comp=Z,24nm,0.6s
ISP **Isparta** 87.93 312 IAmb IAmb 21 08 24.4
comp=Z,36nm,0.7s
ISP **Isparta** 87.93 312 *ceP* P **21 08 19.8 -1.1**
ISP pmax pmax
comp=Z,24nm,0.9s
OKC **Ostrava-Krasne** 87.94 327 ⇓*eP* P **21 08 20.2 -0.3**
DEV **Deva** 87.96 322 ⇓P P **21 08 20.8 +0.1**
ELND **Elena** 88.01 318 ⇓P P **21 08 20.8 -0.2**
RSSD **Black Hills** 88.05 40 P P **21 08 21.6 +0.1**
RSSD **Black Hills** 88.05 40 P P **21 08 22.4 +0.9**
baz=307
RSSD **Black Hills** 88.05 40 P P **21 08 21.6 +0.1**
RSSD pmax pmax
comp=Z,10.0nm,0.8s
KSP **Ksiaz** 88.17 328 *eP* P **21 08 21.6 0.0**
RUE **Ruedersdorf** 88.19 331 *eP* P **21 08 21.7 +0.1**
RUE **Ruedersdorf** 88.19 331 *eP* P **21 08 21.3 -0.3**
comp=Z,35nm,0.4s,baz=43,slow=4.7
RUE **Ruedersdorf** 88.19 331 *eP* **PP** **21 11 57.0 +0.5**
comp=Z,38nm,0.9s,baz=43,slow=8.1
WUAZ **Wupatki** 88.20 51 P P **21 08 23.8 +1.5**
baz=302,SNR=5.9
MDND **Maddock** 88.20 36 P P **21 08 23.2 +1.4**
baz=310
VLAD **Vladila** 88.24 319 ⇑P P **21 08 21.2 -0.8**
MORC **Moravsky Berou** 88.28 327 ⇓P P **21 08 21.6 -0.6**
MORC **Moravsky Berou** 88.28 327 IAmb IAmb 21 08 23.0
comp=Z,67nm,0.7s
MORC **Moravsky Berou** 88.28 327 *eP* P **21 08 22.0 -0.2**
MORC *ePP* **PP** **21 11 56.9 -0.5**
PSZ **Piszkesteto** 88.30 325 ⇑P P **21 08 22.7 +0.3**
PVL **Pavlikeni** 88.31 318 *eP* P **21 08 22.1 -0.3**
GZR **Gura Zlata** 88.33 321 ⇓P P **21 08 23.8 +1.3**
GZR **Gura Zlata** 88.33 321 ⇓P P **21 08 23.8 +1.3**
OSTC **Ostas** 88.40 328 ⇓*eP* P **21 08 22.6 -0.1**
SIRR **Siria** 88.41 322 ⇑P P **21 08 23.1 +0.2**
MAUC **Maruska** 88.41 327 ⇓*eP* P **21 08 22.8 0.0**
KRLC **Kraliky** 88.45 327 ⇓*iP* P **21 08 22.8 -0.2**
CHVC **Chvalec** 88.45 328 *eP* P **21 08 22.8 -0.1**
CHVC *ePP* **PP** **21 11 57.0 -1.7**
SURR **Surduc** 88.47 322 ⇓P P **21 08 22.7 -0.4**
PLVB **Pleven** 88.48 319 ⇓P P **21 08 22.9 -0.3**
DPC **Dobruska-Polom** 88.48 328 ⇓*iP* P **21 08 23.3 +0.2**
ULM **Lac du Bonnet** 88.49 32 P P **21 08 23.3 +0.2**
comp=Z,1.6nm,0.4s,baz=313,slow=4.3,SNR=8.2
BSZH **Besenyszg** 88.50 324 ⇓P P **21 08 23.8 +0.6**
UPC **Upice** 88.53 328 ⇓*eP* P **21 08 23.2 -0.1**
SRE **Strehaia** 88.53 321 ⇓P P **21 08 24.5 +1.1**
BSEG **Bad Segeberg** 88.61 333 *eP* P **21 08 23.1 -0.4**
comp=Z,89nm,0.8s,baz=43,slow=4.7
BSEG *ePP* **PP** **21 11 59.1 -0.6**
BSEG **Bad Segeberg** 88.61 333 *eP* **PP** **21 12 01.6 +1.9**
comp=Z,35nm,1.0s,baz=43,slow=8.1
N23A **Red Feather La** 88.79 44 P P **21 08 26.9 +1.9**
baz=305,SNR=9.5
JAVC **Velka Javorina** 88.82 326 *eP* P **21 08 25.8 +1.0**
JAVC *ePP* **PP** **21 12 01.8 +0.1**
BZS **Buzias** 88.83 322 ⇓P P **21 08 24.1 -0.7**
BAIL **Bailesti** 88.84 320 ⇑P P **21 08 25.4 +0.5**
HERR **Herculane** 88.84 321 ⇓P P **21 08 23.8 -1.1**
AMBH **Ambrzfalva** 88.86 323 ⇑P P **21 08 25.5 +0.6**
PUNG **Punghina** 88.92 320 ⇑P P **21 08 25.3 +0.1**
VALD **Valchedram** 88.99 320 *eP* P **21 08 25.6 +0.1**
MPEP **Malo Peshtene** 89.01 319 *eP* P **21 08 25.8 +0.1**
214A **Organ Pipe Nat** 89.04 54 P P **21 08 28.0 +1.9**
baz=302,SNR=13
VRAC **Vranov** 89.05 327 ⇑P P **21 08 25.7 -0.1**
VRAC **Vranov** 89.05 327 *eP* P **21 08 25.9 +0.1**
VRAC *ePP* **PP** **21 12 02.3 -1.1**

SMOL **Smolenice** 89.17 326 *eP* P **21 08 27.0 +0.7**
PVCC **Panska Ves** 89.19 329 ⇓*eP* P **21 08 26.2 -0.1**
SRO **Srobarova** 89.19 325 *eP* P **21 08 26.6 +0.2**
SRO pmax pmax
comp=Z,109nm,0.7s
SRO **Srobarova** 89.19 325 *eP* P **21 08 26.6 +0.2**
BRG **Berggiesshubel** 89.23 329 *i* P P **21 08 26.2 -0.3**
BRG Amp 21 08 27.3
comp=Z,63nm,0.8s
BRG **Berggiesshubel** 89.23 329 P P 21 08 32.9 +6.4
BRG Amp 21 08 33.2
comp=Z,18nm,0.7s
BRG PP **PP** **21 12 04.0 -0.8**
BRG Amp 21 12 07.0
comp=Z,17nm,0.9s
BRG **Berggiesshubel** 89.23 329 P **PP** **21 12 11.7 +7.0**
BRG Amp 21 12 13.2
comp=Z,10nm,0.9s
BRG **Berggiesshubel** 89.23 329 *eP* P **21 08 26.2 -0.3**
comp=Z,49nm,0.7s,baz=43,slow=4.7
BRG **Berggiesshubel** 89.23 329 *eP* **PP** **21 12 03.4 -1.4**
comp=Z,9.9nm,0.8s,baz=43,slow=8.1
MVCO **Mesa Verde** 89.23 48 P P **21 08 28.3 +1.2**
baz=304
BANR **Banloc** 89.25 322 ⇓P P **21 08 27.0 +0.3**
RDO **Rodhopi** 89.25 317 P P **21 08 25.7 -1.1**
RDO IAmb IAmb 21 08 27.1
comp=Z,40nm,0.8s
MDVR **Moldovita** 89.30 321 ⇓P P **21 08 26.0 -1.1**
KRUC **Moravsky** 89.31 327 *eP* P **21 08 26.8 -0.2**
KRUC *ePP* **PP** **21 12 04.6 -0.9**
MODS **Modra-Piesok** 89.34 326 *eP* P **21 08 27.6 +0.4**
MODS pmax pmax
comp=Z,311nm,1.2s
MODS **Modra-Piesok** 89.34 326 *eP* P **21 08 27.5 +0.4**
MODS *ePP* **PP** **21 12 07.6 +1.9**
CLL **Collm** 89.35 330 IAmb IAmb 21 08 27.5
comp=Z,70nm,0.8s
CLL **Collm** 89.35 330 ⇓*iP* P **21 08 26.4 -0.6**
CLL *i* 21 12 06.3
CLL *eS* **S** **21 18 29.0 -6.5**
CLL pmax pmax
comp=Z,108nm,1.1s
CLL pmax pmax
comp=Z,29nm,0.8s
CLL **Collm** 89.35 330 *eP* P **21 08 26.5 -0.6**
comp=Z,54nm,0.8s,baz=43,slow=4.7
CLL *ePP* **PP** **21 12 06.1 +0.4**
CLL **Collm** 89.35 330 *eP* **PP** **21 12 00.5 -5.1**
comp=Z,17nm,0.8s,baz=43,slow=8.1
HLG **Helgoland** 89.39 334 *eP* **PP** **21 12 02.8 -2.9**
comp=Z,144nm,1.0s,baz=43,slow=8.1
FLTG **Flechtingen** 89.39 332 *eP* P **21 08 26.3 -0.9**
comp=Z,71nm,0.9s,baz=43,slow=4.7
FLTG **Flechtingen** 89.39 332 *eP* **PP** **21 12 02.3 -3.6**
comp=Z,12nm,0.9s,baz=43,slow=8.1
BLKB **Belogradchik** 89.47 320 ⇓P P **21 08 27.5 -0.3**
GOPC **GO Pecny, Ondr** 89.51 328 ⇓*eP* P **21 08 27.7 -0.2**
ZST **Bratislava** 89.55 326 *eP* P **21 08 28.4 +0.4**
ZST pmax pmax
comp=Z,373nm,1.5s
ZST **Bratislava** 89.55 326 *eP* P **21 08 28.4 +0.4**
ZST *ePP* **PP** **21 12 07.0 -0.3**
PRA **Prague** 89.56 329 ⇓*eP* P **21 08 28.1 0.0**
PRU **Pruhonice** 89.57 328 ⇓*eP* P **21 08 27.8 -0.3**
TREC **Trest** 89.60 327 ⇓*eP* P **21 08 28.0 -0.3**
ISCO **Idaho Springs** 89.63 45 P P **21 08 30.8 +1.8**
baz=306,SNR=12
NRDL **Niedersach Rie** 89.75 332 *eP* P **21 08 28.4 -0.4**
comp=Z,21nm,0.8s,baz=43,slow=4.7
NRDL **Niedersach Rie** 89.75 332 *eP* **PP** **21 12 06.4 -2.2**
comp=Z,15nm,1.0s,baz=43,slow=8.1
VTS **Vitosha** 89.75 319 *eP* P **21 08 29.4 +0.1**
ASSE **Asse, Remlinge** 89.78 332 *eP* P **21 08 28.5 -0.4**
comp=Z,6.3nm,0.4s,baz=43,slow=4.7
ASSE *ePP* **PP** **21 12 09.5 +0.6**
ASSE **Asse, Remlinge** 89.78 332 *eP* **PP** **21 12 06.0 -2.8**
comp=Z,14nm,1.0s,baz=43,slow=8.1
BIGH **Upper Bighouse** 89.82 342 *eP* P **21 08 29.2 +0.2**
RETH **Rethem/Aller,** 89.88 333 *eP* P **21 08 28.9 -0.5**
baz=43,slow=4.7
NEUB **Neuenburg** 89.97 331 *eP* P **21 08 29.5 -0.4**
comp=Z,115nm,0.9s,baz=43,slow=4.7
NEUB **Neuenburg** 89.97 331 *eP* **PP** **21 12 09.4 -1.1**
comp=Z,19nm,0.8s,baz=43,slow=8.1
S22A **4UR Ranch, Cre** 90.03 47 P P **21 08 32.9 +1.9**
baz=305,SNR=8.6
MORH **Mrgy, Hungar** 90.06 324 ⇑P P **21 08 29.7 -0.8**
MMB **Musomishta** 90.10 318 *eP* P **21 08 30.4 -0.4**
FRGS **Fruska Gora** 90.11 322 ⇓P P **21 08 30.5 -0.2**
FRGS **Fruska Gora** 90.11 322 ⇓*iP* P **21 08 30.2 -0.6**
ZVC **Zvikov** 90.11 328 ⇓*iP* P **21 08 30.4 -0.3**
ZVC *ePP* **PP** **21 12 10.5 -1.2**
CLZ **Clausthal** 90.11 332 *eP* P **21 08 30.3 -0.3**
comp=Z,38nm,0.7s,baz=43,slow=4.7
CLZ *ePP* **PP** **21 12 10.6 -1.1**
CLZ **Clausthal** 90.11 332 *eP* **PP** **21 12 09.9 -1.7**
comp=Z,23nm,0.9s,baz=43,slow=8.1
TANN **Tannenbergstha** 90.23 330 *eP* P **21 08 30.9 -0.4**
comp=Z,23nm,0.8s,baz=43,slow=4.7
RONA **Rosalia, Austr** 90.28 326 *i* PcP **PcP** **21 08 31.6 -0.7**
comp=Z,64nm,0.7s,SNR=44
RONA *i* PP **PP** **21 12 13.0 -0.1**
comp=Z,40nm,1.4s,SNR=6.1
KKB **Krupnik** 90.29 318 *eP* P **21 08 31.3 -0.3**
PLN **Plauen** 90.31 330 *eP* P **21 08 31.3 -0.3**
baz=43,slow=4.7
TUC **Tucson** 90.32 53 P P **21 08 32.4 +0.3**
TUC **Tucson** 90.32 53 P P **21 08 34.0 +2.0**
baz=303
TUC **Tucson** 90.32 53 P P **21 08 32.4 +0.3**
TUC pmax pmax
comp=Z,12nm,1.0s
CONA **Conrad Observa** 90.34 326 *i* PcP **PcP** **21 08 32.1 -0.6**
comp=Z,46nm,0.6s,SNR=57
CONA *i* PP **PP** **21 12 10.5 -3.1**
comp=Z,41nm,1.4s,SNR=5.6
NKC **Novy Kostel** 90.36 330 ⇓*eP* P **21 08 31.5 -0.3**
MCD **Coleburn Disti** 90.41 341 *eP* P **21 08 31.6 -0.3**
MCD IAmb IAmb 21 08 32.1
comp=Z,70nm,0.8s
Q24A **Divide** 90.41 45 P P **21 08 34.2 +1.6**
baz=306,SNR=9.8
MOX **Moxa** 90.44 330 *eP* P **21 08 31.8 -0.4**
comp=Z,26nm,0.7s,baz=43,slow=4.7
MOX *ePP* **PP** **21 12 13.6 -0.6**
MOX **Moxa** 90.44 330 *eP* **PP** **21 12 14.2 0.0**
comp=Z,16nm,0.8s,baz=43,slow=8.1
PEHC **Pehcevo** 90.46 318 *i* P P **21 08 32.4 -0.2**
CKRC **Cesky Krumlov** 90.49 328 *eP* P **21 08 32.1 -0.3**
CKRC *ePP* **PP** **21 12 11.8 -2.8**
GTTG **Gottingen** 90.50 332 *eP* P **21 08 32.0 -0.4**
comp=Z,32nm,0.6s,baz=43,slow=4.7
GTTG **Gottingen** 90.50 332 *eP* **PP** **21 12 11.5 -3.2**
comp=Z,18nm,0.8s,baz=43,slow=8.1
KHC **Kasperske Hory** 90.62 328 ⇓*iP* P **21 08 32.7 -0.3**
KHC *ePP* **PP** **21 12 15.4 -0.3**
KHC **Kasperske Hory** 90.62 328 *ceP* P **21 08 32.7 -0.3**
KHC pmax pmax
comp=Z,183nm,0.8s
TEKS **Tekeris** 90.66 322 ⇓*iP* P **21 08 31.7 -1.6**
MANZ **Manzenberg** 90.69 330 *eP* P **21 08 33.2 -0.2**
comp=Z,14nm,1.0s,baz=43,slow=4.7
GEC2 **GERESS Array S** 90.76 328 *eP* P **21 08 33.2 -0.5**
comp=Z,52nm,0.6s,baz=43,slow=4.7
GEC2 *ePP* **PP** **21 12 16.0 -0.9**
GEC2 **GERESS Array S** 90.76 328 *eP* **PP** **21 12 15.9 -0.9**
comp=Z,9.9nm,0.8s,baz=43,slow=8.1
GERES **GERESS Array B** 90.76 328 P P **21 08 33.2 -0.5**
comp=Z,60nm,0.7s,baz=45,slow=5.8,SNR=232
GERES PP **PP** **21 12 16.0 -0.9**
comp=Z,9.7nm,0.8s,baz=56,slow=8.2,SNR=7.5
comp=Z,60nm,0.7s
ROTZ **Rotzenmuhle** 90.80 329 *eP* P **21 08 33.9 +0.1**
comp=Z,12nm,0.7s,baz=43,slow=4.7
ROTZ *ePP* **PP** **21 12 14.5 -2.5**
ROTZ **Rotzenmuhle** 90.80 329 *eP* **PP** **21 12 14.3 -2.7**
comp=Z,4.3nm,1.1s,baz=43,slow=8.1
IBBN **Ibbenburen** 90.85 333 *eP* P **21 08 33.5 -0.5**
comp=Z,70nm,0.4s,baz=43,slow=4.7
IBBN **Ibbenburen** 90.85 333 *eP* **PP** **21 12 14.1 -3.2**
comp=Z,26nm,0.9s,baz=43,slow=8.1
SDCO **Great Sand Dun** 90.89 46 P P **21 08 36.7 +1.8**
baz=306,SNR=17
WET **Wettzell** 90.94 329 *eP* P **21 08 34.3 -0.2**
comp=Z,59nm,1.1s,baz=43,slow=4.7
WET *ePP* **PP** **21 12 18.6 +0.4**
WET **Wettzell** 90.94 329 *eP* **PP** **21 12 17.2 -1.0**
comp=Z,12nm,0.9s,baz=43,slow=8.1
STIP **Stip** 90.94 319 *i* P P **21 08 33.1 -1.5**
VAY **Valandovo** 90.94 318 *i* P P **21 08 33.9 -0.7**
ARSA **Arzberg** 90.97 326 *i* PcP P **21 08 34.4 -0.3**
comp=Z,72nm,1.1s,SNR=30
ARSA *i* PP **PP** **21 12 17.4 -1.0**
comp=Z,18nm,1.3s,SNR=5.1
UBBA **Unterbreizbach** 91.02 331 *eP* P **21 08 34.2 -0.5**
comp=Z,12nm,0.5s,baz=43,slow=4.7
UBBA *ePP* **PP** **21 12 17.6 -1.0**
UBBA **Unterbreizbach** 91.02 331 *eP* **PP** **21 12 17.6 -1.0**
comp=Z,7.7nm,0.9s,baz=43,slow=8.1
KOGS **Kog** 91.14 325 *i* P P **21 08 34.6 -0.9**
KOGS *i* 21 08 36.0
comp=Z,34nm,0.9s
OGNE **Ogallala** 91.15 42 P P **21 08 36.7 +1.0**
baz=308
BBLS **Lazić** 91.16 322 ⇓*iP* P **21 08 34.9 -0.8**
MOA **Molln** 91.18 327 *i* PcP **PcP** **21 08 35.6 -0.7**
comp=Z,68nm,0.7s,SNR=13
MOA *ePP* **PP** **21 12 19.4 -0.7**
comp=Z,18nm,1.4s
SKO **Skopje** 91.20 319 *i* P P **21 08 35.9 +0.1**
SJES **Sjenica** 91.23 321 ⇓*iP* P **21 08 35.7 -0.4**
F33A **5 Mile Ranch,** 91.24 36 IAmb IAmb 21 08 38.0
comp=Z,20nm,1.0s
KALN **Kalnik** 91.25 325 *i* P P **21 08 35.1 -0.9**
HAPS **Han Pijesak,Bl** 91.27 322 ⇓*iP* P **21 08 35.1 -1.2**
GRF **Grafenberg Arr** 91.30 330 *eP* P **21 08 36.3 +0.1**
comp=Z,110nm,1.0s,baz=43,slow=4.7
GRF **Grafenberg Arr** 91.30 330 *eP* **PP** **21 12 19.3 -1.6**
comp=Z,15nm,0.8s,baz=43,slow=8.1
GRFO **Grafenberg** 91.30 330 P P **21 08 35.7 -0.5**
GRFO **Grafenberg** 91.30 330 P P **21 08 35.7 -0.5**
GRFO pmax pmax
comp=Z,118nm,1.0s
RUDO **Rudo** 91.34 321 *eP* P **21 08 35.4 -1.1**
KASTN **Kahler Asten** 91.41 332 *eP* P **21 08 36.1 -0.5**
comp=Z,16nm,0.6s,baz=43,slow=4.7
KASTN *ePP* **PP** **21 12 22.1 +0.3**
KASTN **Kahler Asten** 91.41 332 *eP* **PP** **21 12 22.2 +0.5**
comp=Z,12nm,0.8s,baz=43,slow=8.1
LOBO **Lobor** 91.44 325 *i* P P **21 08 36.2 -0.7**
MOSL **Moslavina** 91.44 324 *i* P P **21 08 36.0 -0.9**
PERS **Pernice** 91.59 326 *i* P P **21 08 37.0 -0.7**
PERS *i* 21 08 37.9
comp=Z,46nm,0.5s
PERS *i* PP **PP** **21 12 24.5 +1.1**
BIOA **Bad Ischl, Aus** 91.59 327 *i* PcP **PcP** **21 08 37.3 -0.8**
comp=Z,77nm,1.0s,SNR=29
BIOA *ePP* **PP** **21 12 22.9 -0.4**
comp=Z,7.7nm,0.9s
SOKA **Soboth** 91.61 326 *i* PcP P **21 08 37.2 -0.6**
comp=Z,53nm,0.5s,SNR=58
SOKA *i* PP **PP** **21 12 23.6 +0.1**
comp=Z,9.4nm,0.8s
INVG **Invergeldie, C** 91.62 341 *eP* P **21 08 37.0 -0.4**
PTJ **Puntijarka** 91.66 325 P P **21 08 36.9 -1.0**
BUG **Bochum--Univer** 91.71 333 *eP* P **21 08 37.1 -0.8**
comp=Z,36nm,0.8s,baz=43,slow=4.7
BUG **Bochum--Univer** 91.71 333 *eP* **PP** **21 12 22.6 -1.3**
comp=Z,13nm,0.9s,baz=43,slow=8.1
A051A **Mrakovica** 91.77 324 ⇓*iP* P **21 08 37.6 -0.9**
BLY **Banja Luka** 91.79 323 ⇓*iP* P 21 08 33.2 -5.3
ANMO **Albuquerque** 91.87 49 P P **21 08 39.5 +0.2**
ANMO IAmb IAmb 21 08 42.1
comp=Z,17nm,0.8s
ANMO **Albuquerque** 91.87 49 P P **21 08 41.1 +1.7**
baz=305
ANMO **Albuquerque** 91.87 49 P P **21 08 39.5 +0.2**
ANMO pmax pmax
comp=Z,17nm,0.8s
PRIJ **Prijedor** 91.89 324 *eP* P **21 08 37.3 -1.6**
319A **Douglas** 91.90 53 IAmb IAmb 21 08 42.8
comp=Z,14nm,0.9s
OBKA **Obir** 91.97 326 *i* P P **21 08 38.6 -0.8**
comp=Z,42nm,0.5s,SNR=21
OBKA *ePP* **PP** **21 12 24.9 -1.4**
comp=Z,18nm,1.2s,SNR=6.1
OBKA **Obir** 91.97 326 ⇓*iP* P **21 08 37.4 -2.0**
CRES **Cresnjev** 91.97 325 ⇓*iP* P **21 08 38.5 -0.8**
A251A **Rujevac** 92.02 324 *i* P P **21 08 39.2 -0.3**
MGRS **Mrkonjic Grad** 92.07 323 ⇓*iP* P **21 08 40.0 +0.2**
OHR **Ohrid** 92.11 319 *i* P P **21 08 39.9 -0.3**
TNS **Taunus Mts** 92.13 331 *eP* P **21 08 39.5 -0.5**
comp=Z,20nm,0.5s,baz=43,slow=4.7
TNS *ePP* **PP** **21 12 26.3 -1.1**
TNS **Taunus Mts** 92.13 331 *eP* **PP** **21 12 26.8 -0.6**
comp=Z,12nm,0.9s,baz=43,slow=8.1
LAWE **Loch Awe, Argy** 92.15 342 *eP* P **21 08 39.4 -0.5**
KBA **Koelnbreinsper** 92.17 327 *i* P P **21 08 39.5 -0.8**
comp=Z,34nm,0.7s,SNR=40
KBA *ePP* **PP** **21 12 26.0 -1.9**
comp=Z,38nm,1.0s
LESA **Schwarzleotal** 92.25 327 *i* P P **21 08 39.8 -0.8**
comp=Z,81nm,0.6s
LESA *ePP* **PP** **21 12 28.1 -0.3**
comp=Z,13nm,1.1s
NEVS **Nevesinje** 92.25 322 *eP* P **21 08 39.3 -1.4**
BRY **Bratogost** 92.27 321 ⇓*iP* P **21 08 39.6 -1.3**
PGBU **Glenifferbraes** 92.28 341 *eP* P **21 08 40.3 -0.1**
EKA **Eskdalemuir Ar** 92.29 340 P P **21 08 40.2 -0.3**
comp=Z,3.8nm,0.4s,baz=46,slow=4.8,SNR=40
EKA PP **PP** **21 12 25.9 -2.5**
comp=Z,7.9nm,0.7s,baz=35,slow=6.9,SNR=6.6
EKA PKKP **PKKPbc** **21 25 53.8 -0.1**
comp=Z,1.1nm,0.8s,baz=235,slow=2.9,SNR=4.7
comp=Z,3.8nm,0.4s
BOJS **Bojanci** 92.30 325 ⇓*iP* P **21 08 40.0 -0.8**
LJU **Ljubljana** 92.30 326 *i* P P **21 08 40.0 -0.9**
LJU *i* 21 08 41.0
comp=Z,117nm,0.6s
LJU *i* PP **PP** **21 12 29.5 +0.7**
A050A **Klekovaca** 92.32 323 ⇓*iP* P **21 08 40.1 -0.9**
121A **Cookes Peak, D** 92.32 52 P P **21 08 43.3 +1.9**
baz=304,SNR=5.7
ESK **Eskdalemuir** 92.32 340 P P **21 08 39.4 -1.3**
ESK IAmb IAmb 21 08 41.2
comp=Z,29nm,0.8s
ESK **Eskdalemuir** 92.32 340 *eP* P **21 08 40.2 -0.4**
ESK **Eskdalemuir** 92.32 340 P P **21 08 39.4 -1.3**
ESK pmax pmax
comp=Z,29nm,0.9s
MYKA **Terra Mystica** 92.33 326 *i* P P **21 08 40.0 -1.0**
comp=Z,60nm,0.5s,SNR=28
MYKA *ePP* **PP** **21 12 27.3 -1.8**
comp=Z,35nm,1.1s
EDMD **Edmundbyers** 92.34 339 *eP* P **21 08 40.2 -0.6**
DRME **Dracevica, Mon** 92.36 320 ⇓*iP* P **21 08 40.4 -0.8**
FUR **Furstenfeldbru** 92.38 329 *eP* P **21 08 41.1 -0.1**
comp=Z,144nm,0.6s,baz=43,slow=4.7
AHRW **Bad Neuenahr-A** 92.47 332 *eP* P **21 08 41.2 -0.3**
comp=Z,19nm,0.8s,baz=43,slow=4.7
AHRW **Bad Neuenahr-A** 92.47 332 *eP* **PP** **21 12 30.1 +0.2**
comp=Z,7.8nm,0.8s,baz=43,slow=8.1
AGG **Agios Georgios** 92.49 316 IAmb IAmb 21 08 40.2
comp=Z,12nm,0.7s
TREB **Trebinje** 92.49 321 *eP* P **21 08 40.6 -1.2**
PRED **Cave del Predi** 92.50 326 IAmb IAmb 21 08 41.2
comp=Z,40nm,0.9s
TIR **Tirane** 92.51 319 ⇑P P **21 08 41.2 -0.7**
TIR **Tirane** 92.51 319 IAmb IAmb 21 08 42.4
comp=Z,57nm,1.1s
CEY **Cerknica** 92.56 325 *i* P P **21 08 41.0 -1.1**
CEY *i* 21 08 42.1
comp=Z,40nm,0.6s
CEY **Cerknica** 92.56 325 ⇓*iP* P **21 08 40.7 -1.3**
HCY **Herceg Novi** 92.59 321 ⇓*iP* P **21 08 41.0 -1.2**
DBRK **Dubrovnik** 92.64 321 *i* P P **21 08 40.9 -1.6**
RICI **Ricice** 92.65 322 *i* P P **21 08 41.3 -1.2**
UDBI **Udbina** 92.69 324 *i* P P **21 08 41.6 -1.1**
KIJV **Kijevo** 92.70 323 *i* P P **21 08 41.8 -0.9**
STON **Ston** 92.75 322 *i* P P **21 08 41.1 -1.8**
STON **Ston** 92.75 322 ⇓*iP* P **21 08 41.4 -1.5**
NEWG **New Galloway** 92.80 340 *eP* P **21 08 41.8 -1.1**
ABTA **Abfaltersbach** 92.80 327 *i* P P **21 08 41.7 -1.5**
comp=Z,76nm,0.6s,SNR=46
ABTA *i* PP **PP** **21 12 33.8 +1.1**
comp=Z,10nm,1.0s
SABO **M.te Sabotino** 92.81 326 IAmb IAmb 21 08 42.7
comp=Z,67nm,0.7s
BTNL **Ternell** 92.83 333 *dP* P **21 08 41.4 -1.8**

	comp=Z,16nm,1.0s							
WATA	**Walderalm**	**92.83**	**328**	*i* P		**P**	**21 08 42.6**	**-0.8**
	comp=Z,28nm,0.6s,SNR=11							
WATA				*i* PP		**PP**	**21 12 31.1**	**-2.0**
	comp=Z,9.5nm,1.0s							
BEBN	**Eben Emael**	**92.85**	**333**	*d*P		**P**	**21 08 42.4**	**-0.8**
MAKA	**Makarska**	**92.85**	**322**	*i* P		**P**	**21 08 41.9**	**-1.5**
MEM	**Membach**	**92.86**	**333**	*d*P		**P**	**21 08 42.4**	**-0.8**
	comp=Z,22nm,1.0s							
WTTA	**Wattenberg**	**92.86**	**328**	*i* PcP		**P**	**21 08 42.8**	**-0.7**
	comp=Z,44nm,0.6s,SNR=20							
WTTA				*i* PP		**PP**	**21 12 28.3**	**-5.0**
	comp=Z,24nm,1.1s							
STU	**Stuttgart**	**92.88**	**330**	*e*P		**P**	**21 08 43.1**	**-0.4**
	comp=Z,206nm,0.9s,baz=43,slow=4.7							
STU	**Stuttgart**	**92.88**	**330**	*e*P		**PP**	**21 12 35.5**	**+2.3**
	comp=Z,50nm,0.7s,baz=43,slow=8.1							
SKDS	**Skadanscina**	**92.90**	**325**	⇓*i* P		P	21 08 31.4	-12
HPK	**Haverah Park**	**92.97**	**339**	*e*P		**P**	**21 08 42.9**	**-0.8**
MOTA	**Moosalm**	**93.05**	**328**	*i* PcP		**P**	**21 08 43.6**	**-0.8**
	comp=Z,37nm,0.6s,SNR=12							
MOTA				*i* PP		**PP**	**21 12 29.5**	**-5.2**
	comp=Z,26nm,1.1s							
BHOU	**Houvegnez**	**93.06**	**333**	*d*P		**P**	**21 08 44.1**	**0.0**
	comp=Z,19nm,1.0s							
RABC	**Rab**	**93.06**	**324**	*i* P		**P**	**21 08 42.8**	**-1.5**
BSTI	**Sart Tilman**	**93.06**	**333**	*d*P		**P**	**21 08 43.7**	**-0.4**
	comp=Z,6.2nm,0.9s							
SQTA	**Sankt Quirin**	**93.09**	**328**	*i* PcP		**P**	**21 08 43.8**	**-0.8**
	comp=Z,42nm,0.6s,SNR=22							
SQTA				*i* PP		**PP**	**21 12 32.3**	**-2.7**
	comp=Z,24nm,1.5s							
RETA	**Reutte**	**93.11**	**328**	*i* PcP		**P**	**21 08 44.0**	**-0.6**
	comp=Z,24nm,0.6s,SNR=15							
RETA				*i* PP		**PP**	**21 12 34.8**	**-0.3**
	comp=Z,22nm,1.3s							
NVLJ	**Novalja**	**93.14**	**324**	*i* P		**P**	**21 08 43.1**	**-1.5**
GAL1	**Galloway**	**93.16**	**341**	*e*P		**P**	**21 08 43.8**	**-0.7**
MORI	**Morici**	**93.17**	**323**	*i* P		**P**	**21 08 43.6**	**-1.2**
SMRN	**Sveta Marina**	**93.18**	**325**	*i* P		**P**	**21 08 43.2**	**-1.6**
WACR	**West Acre**	**93.22**	**337**	*e*P		**P**	**21 08 44.3**	**-0.5**
WACR					IAmb	IAmb	21 08 45.0	
	comp=Z,145nm,0.9s							
VIRC	**Vir**	**93.23**	**324**	*i* P		**P**	**21 08 43.6**	**-1.4**
HVAR	**Hvar**	**93.23**	**323**	*i* P		**P**	**21 08 43.7**	**-1.5**
LSTV	**Lastovo**	**93.27**	**322**	*i* P		**P**	**21 08 43.6**	**-1.7**
UBR	**Ueberruh**	**93.27**	**329**	*e*P		**P**	**21 08 44.6**	**-0.7**
	comp=Z,25nm,0.7s,baz=43,slow=4.7							
UBR				*e*PP		**PP**	**21 12 36.5**	**+0.2**
UBR	**Ueberruh**	**93.27**	**329**	*e*P		**PP**	**21 12 37.0**	**+0.7**
	comp=Z,12nm,0.8s,baz=43,slow=8.1							
BCLA	**Clavier**	**93.29**	**333**	*d*P		**P**	**21 08 44.6**	**-0.6**
	comp=Z,20nm,1.0s							
ZIRJ	**Zirje**	**93.35**	**323**	*i* P		**P**	**21 08 44.1**	**-1.5**
BGES	**Gesves**	**93.40**	**333**	*d*P		**P**	**21 08 45.0**	**-0.8**
	comp=Z,18nm,1.0s							
DUGI	**Dugi Otok**	**93.43**	**324**	*i* P		**P**	**21 08 44.5**	**-1.5**
FETA	**Feichten**	**93.46**	**328**	*i* PcP		**P**	**21 08 45.7**	**-0.6**
	comp=Z,44nm,0.7s,SNR=18							
FETA				*e*PP		**PP**	**21 12 38.9**	**+1.0**
	comp=Z,9.6nm,1.1s							
LBWR	**Ladybower, Pea**	**93.47**	**338**	*e*P		**P**	**21 08 44.9**	**-1.0**
BRJN	**Brijuni**	**93.48**	**325**	*i* P		**P**	**21 08 44.2**	**-2.0**
WLF	**Walferdange**	**93.52**	**332**	*d*P		**P**	**21 08 46.1**	**-0.2**
	comp=Z,42nm,1.1s							
WLF	**Walferdange**	**93.52**	**332**	*e*P		**P**	**21 08 46.3**	**0.0**
	comp=Z,41nm,0.8s,baz=43,slow=4.7							
WLF				*e*PP		**PP**	**21 12 36.1**	**-1.9**
WLF	**Walferdange**	**93.52**	**332**	*e*P		**PP**	**21 12 36.5**	**-1.6**
	comp=Z,10nm,0.9s,baz=43,slow=8.1							
RCHB	**Rochefort**	**93.53**	**333**	*d*P		**P**	**21 08 45.5**	**-0.8**
	comp=Z,38nm,0.9s							
KEK	**Kerkira**	**93.59**	**318**		IAmb	IAmb	21 08 44.8	
	comp=Z,43nm,0.9s							
BFO	**Black Forest**	**93.60**	**330**		P	**P**	**21 08 45.1**	**-1.6**
BFO	**Black Forest**	**93.60**	**330**		P	**P**	**21 08 45.1**	**-1.6**
BFO					pmax	pmax		
	comp=Z,56nm,0.8s							
BFO	**Black Forest**	**93.60**	**330**	*e*P		**P**	**21 08 46.2**	**-0.6**
	comp=Z,41nm,0.6s,baz=43,slow=4.7							
BFO				*e*PP		**PP**	**21 12 37.2**	**-1.5**
BFO	**Black Forest**	**93.60**	**330**	*e*P		**PP**	**21 12 37.4**	**-1.3**
	comp=Z,11nm,0.9s,baz=43,slow=8.1							
BMRD	**Maredsous**	**93.60**	**333**	*d*P		**P**	**21 08 46.0**	**-0.6**
	comp=Z,21nm,1.1s							
ELMS	**Elmsett, Ipswi**	**93.61**	**336**	*e*P		**P**	**21 08 46.0**	**-0.7**
ELMS					IAmb	IAmb	21 08 47.0	
	comp=Z,100nm,0.7s							
DAVA	**Damuels**	**93.67**	**329**	*i* PcP		**P**	**21 08 46.7**	**-0.5**
	comp=Z,86nm,1.0s,SNR=17							
DAVA				*i* PP		**PP**	**21 12 39.1**	**-0.3**
	comp=Z,13nm,0.9s							
CTI	**Castel Tesino**	**93.72**	**327**		IAmb	IAmb	21 08 46.8	
	comp=Z,26nm,0.8s							
GIVF	**Givet**	**93.73**	**333**		P	**P**	**21 08 45.4**	**-1.9**
DOU	**Dourbes**	**93.83**	**333**	*d*P		**P**	**21 08 46.9**	**-0.8**
	comp=Z,11nm,1.0s							
CWF	**Charnwood Fore**	**93.88**	**338**	*e*P		**P**	**21 08 47.2**	**-0.7**
CWF					IAmb	IAmb	21 08 47.9	
	comp=Z,46nm,0.8s							
BAIF	**Baives**	**94.01**	**333**		P	**P**	**21 08 46.9**	**-1.6**
ECH	**Echery**	**94.20**	**331**		IAmb	IAmb	21 08 49.8	
	comp=Z,40nm,1.0s							
FOEL	**Foel Wylfa**	**94.38**	**339**	*e*P		**P**	**21 08 49.9**	**-0.2**
FOEL					IAmb	IAmb	21 08 50.1	
	comp=Z,37nm,0.7s							
WLF1	**Llynfaes**	**94.42**	**340**	*e*P		**P**	**21 08 49.2**	**-1.0**
MNTX	**Cornudas Mount**	**94.47**	**51**		P	**P**	**21 08 52.4**	**+1.4**
	baz=306							
TUE	**Stuetta**	**94.51**	**328**		IAmb	IAmb	21 08 51.5	
	comp=Z,34nm,0.8s							
LLW	**Llanuwchllyn**	**94.56**	**339**	*e*P		**P**	**21 08 50.5**	**-0.5**
HINF	**Hinteralfeld**	**94.64**	**331**		P	**P**	**21 08 46.9**	**-4.6**
MATE	**Matera**	**94.78**	**320**	⇓P		**P**	**21 08 51.1**	**-1.1**
STRD	**Stroud**	**94.97**	**338**	*e*P		**P**	**21 08 52.4**	**-0.4**
GUMA	**Gualdo di Mace**	**94.98**	**324**		IAmb	IAmb	21 08 54.1	
	comp=Z,75nm,1.3s							
MCH1	**Michaelchurch**	**95.07**	**338**	*e*P		**P**	**21 08 52.7**	**-0.6**
MCH1					IAmb	IAmb	21 08 53.0	
	comp=Z,21nm,0.6s							
AMTX	**Amarillo**	**95.07**	**47**		IAmb	IAmb	21 10 44.0	
	comp=Z,21nm,1.3s							
AMTX	**Amarillo**	**95.07**	**47**		P	**P**	**21 08 55.1**	**+1.3**
	baz=308							
MONM	**Monmouth**	**95.14**	**338**	*e*P		**P**	**21 08 53.0**	**-0.6**
SCHQ	**Schefferville**	**95.29**	**15**		P	**P**	**21 08 54.7**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=304,slow=11,SNR=2.1							
	comp=Z,2.3nm,0.7s							
INTR	**Introdacqua**	**95.41**	**323**		IAmb	IAmb	21 08 56.0	
	comp=Z,29nm,0.8s							
CESX	**Cesi**	**95.69**	**324**		IAmb	IAmb	21 08 56.2	
	comp=Z,22nm,0.9s							
PAOL	**Paolisi**	**95.72**	**322**		IAmb	IAmb	21 08 56.4	
	comp=Z,22nm,0.9s							
CUC	**Castrocucco**	**95.72**	**320**		IAmb	IAmb	21 08 56.7	
	comp=Z,26nm,0.7s							
TIP	**Timpagrande**	**95.73**	**319**	⇓P		**P**	**21 08 58.2**	**+1.5**
OSSC	**Osservatorio P**	**95.73**	**325**		IAmb	IAmb	21 08 56.1	
	comp=Z,25nm,1.0s							
LOR	**Lormes**	**96.35**	**332**		P	**P**	**21 08 58.3**	**-0.9**
LPL	**La Plagne**	**96.44**	**329**		P	**P**	**21 08 58.3**	**-1.6**
LPG	**La Plagne**	**96.44**	**329**		P	**P**	**21 08 58.4**	**-1.6**
SSF	**Saint Saulge**	**96.66**	**332**		P	**P**	**21 08 59.0**	**-1.6**
BNI	**Bardonecchia**	**96.81**	**329**		IAmb	IAmb	21 09 02.0	
	comp=Z,19nm,0.7s							
LDF	**La Druitiere**	**96.88**	**335**		P	**P**	**21 08 59.6**	**-1.9**
AVF	**Avril sur Loir**	**96.94**	**332**		P	**P**	**21 09 00.5**	**-1.3**
MBDF	**Montbardon**	**97.02**	**329**		P	**P**	**21 09 00.9**	**-1.5**
TX31	**Lajitas Ar. Si**	**97.05**	**52**		IAmb	IAmb	21 09 05.3	
	comp=Z,6.8nm,0.8s							
TXAR	**Lajitas Array**	**97.05**	**52**		P	**P**	**21 09 04.2**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=306,slow=2.4,SNR=58							
TXAR					PP	**PP**	**21 13 05.2**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=291,slow=4.8,SNR=5.9							
	comp=Z,5.3nm,0.7s							
ORIF	**Oris-en-Rattie**	**97.28**	**329**		P	**P**	**21 09 01.8**	**-1.8**
SBF	**Sospel**	**97.36**	**328**		P	**P**	**21 09 02.0**	**-1.9**
SSB	**Saint Sauveur**	**97.61**	**330**		IAmb	IAmb	21 09 05.2	
	comp=Z,24nm,0.9s							
VIVF	**Saint-Julien-l**	**97.88**	**330**		P	Pdif	21 09 04.5	-1.6
ROSF	**Rostrenen**	**98.26**	**336**		P	Pdif	21 09 06.1	-1.6
KEST	**Kesra**	**102.36**	**321**		P	**Pdif**	**21 09 26.8**	**+0.5**
	comp=Z,7.5nm,0.8s,baz=326,slow=3.6,SNR=8.1							
LSZ	**Lusaka**	**116.24**	**266**			**PKiKP**	**21 14 11.5**	**-0.1**
LSZ	**Lusaka**	**116.24**	**266**		PKIKP	**PKiKP**	**21 14 11.5**	**-0.1**
LSZ	**Lusaka**	**116.24**	**266**		P	**PKiKP**	**21 14 12.6**	**+1.0**
BOSA	**Boshof**	**123.14**	**252**		PKP	**PKPdf**	**21 14 24.4**	**-0.2**
	comp=Z,8.8nm,0.8s,baz=70,slow=1.6,SNR=19							
TOA0	**Torodi Ar. Sit**	**123.39**	**309**			**PKPdf**	**21 14 24.4**	**-0.9**
TOA0	**Torodi Ar. Sit**	**123.39**	**309**		P	**PKiKP**	**21 14 25.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**123.39**	**309**		PKP	**PKiKP**	**21 14 25.0**	**-0.6**
	comp=Z,29nm,0.6s,baz=19,slow=2.6,SNR=120							
TORD					SKKPbc	SKKPbc	21 27 16.3	-0.1
	comp=Z,1.0nm,0.8s,baz=166,slow=2.4,SNR=2.8							
LCR2	**La Lucha 2**	**123.66**			**96**	**PKiKP**	**21 14 26.3**	**-0.1**
ELIB	**Princess Elisa**	**123.66**	**200**	*d*PKPdf		**PKiKP**	**21 14 24.3**	**-0.3**
TSUM	**Tsumeb**	**127.09**	**266**			**PKPdf**	**21 14 31.6**	**-0.8**
SUR	**Sutherland**	**127.72**	**249**		P	**PKPdf**	**21 14 32.7**	**-0.6**
TROLL	**Troll, Antarti**	**129.32**	**196**	⇑PKPdf		**PKiKP**	**21 14 35.9**	**0.0**
	comp=Z,1μm,0.3s							
TROLL				⇑	SKPbc	SKPbc	21 17 11.2	+0.1
	comp=Z,5μm,1.0s							
SNAA	**Sanae**	**130.80**	**195**			**PKPdf**	**21 14 37.1**	**-0.7**
SNAA	**Sanae**	**130.80**	**195**	⇑PKPdf		**PKPdf**	**21 14 37.9**	**+0.1**
	comp=Z,161nm,0.4s							
SNAA				⇑	SKPbc	**SKPbc**	**21 17 16.1**	**-0.4**
	comp=Z,834nm,0.7s							
SNAA	**Sanae**	**130.80**	**195**		PKP	**PKPdf**	**21 14 37.9**	**+0.1**
	comp=Z,9.3nm,0.6s,baz=213,slow=5.5,SNR=28							
SNAA					SKPbc	**SKPbc**	**21 17 15.8**	**-0.7**
	comp=Z,40nm,0.8s,baz=153,slow=3.2,SNR=34							
VNA2	**Neumayer--Watz**	**132.34**	**194**	⇑PKPdf		**PKiKP**	**21 14 41.3**	**-0.6**
	comp=Z,48nm,0.6s,baz=123,slow=1.3							
VNA2				⇑	SKPbc	**SKPbc**	**21 17 21.6**	**-0.3**
	comp=Z,51nm,0.8s,baz=126,slow=2.3							
DBIC	**Dimbokro**	**132.51**	**310**		PKP	**PKiKP**	**21 14 43.0**	**-0.9**
	comp=Z,36nm,0.7s,baz=41,slow=1.9,SNR=34							
DBIC					SKPbc	**SKPbc**	**21 17 24.5**	**+0.3**
	comp=Z,126nm,1.0s,baz=26,slow=4.7,SNR=20							
VNA3	**Neumayer Olymp**	**132.56**	**193**	⇑PKPdf		**PKiKP**	**21 14 42.4**	**+0.2**
	comp=Z,14nm,0.4s							
VNA3				⇑	SKPbc	**SKPbc**	**21 17 22.0**	**-0.7**
	comp=Z,37nm,1.1s							
TIC	**Toumodi**	**132.64**	**310**	⇑*i*PKIKP		**PKiKP**	**21 14 44.0**	**-0.2**
	comp=Z,43nm,0.7s							
KIC	**Kosan Boka**	**132.65**	**309**	⇑*i*PKIKP		**PKiKP**	**21 14 43.9**	**-0.3**
	comp=Z,70nm,0.6s							
VNA1	**Neumayer--Stat**	**132.74**	**194**	⇑PKPdf		**PKiKP**	**21 14 43.0**	**+0.5**
	comp=Z,31nm,0.9s							
VNA1				⇑	SKPbc	**SKPbc**	**21 17 22.5**	**-0.6**
	comp=Z,55nm,1.0s							
LIC	**Lamto**	**132.94**	**309**	⇑*i*PKIKP		**PKiKP**	**21 14 44.4**	**-0.4**
	comp=Z,96nm,0.8s							
SDV	**Santo Domingo**	**133.44**	**44**			**PKiKP**	**21 14 44.8**	**-1.2**
SDV	**Santo Domingo**	**133.44**	**44**	*e*P		**PKiKP**	**21 14 45.4**	**-0.6**
ROSC	**El Rosal**	**133.98**	**52**		SKPbc	**SKPab**	**21 17 29.8**	**-3.3**
	comp=Z,10nm,0.5s,baz=269,slow=16,SNR=5.2							
PMSA	**Palmer Station**	**139.09**	**164**	*e*P		**PKiKP**	**21 14 54.7**	**-0.9**
CZSB	**Cruzeiro do Su**	**143.35**	**65**	*e*P		**PKPdf**	**21 15 00.7**	**-1.8**
BOAV	**Boa Vista**	**144.60**	**38**			**PKPab**	**21 15 02.9**	**-2.2**
BOAV	**Boa Vista**	**144.60**	**38**	*e*P		**PKPdf**	**21 15 04.2**	**-0.5**
SHEL	**Horse Pasture**	**146.65**	**282**			**PKPbc**	**21 15 09.2**	**-1.4**
SHEL	**Horse Pasture**	**146.65**	**282**		PKIKP	**PKPbc**	**21 15 09.2**	**-1.4**
GO08	**Villa O'Higgin**	**146.67**	**139**		PKPdf	**PKPdf**	**21 15 07.0**	**-0.1**
TEFE	**Tefe**	**146.67**	**50**	*e*P		**PKPbc**	**21 15 09.3**	**-1.4**
MACA	**Manacapuru-AM**	**148.99**	**44**	*e*P		**PKPbc**	**21 15 13.1**	**-3.5**
ASCN	**Ascension**	**149.42**	**304**		PKPbc	**PKPbc**	**21 15 14.8**	**-2.8**
ETMB	**Extrema**	**149.74**	**61**	*e*P		**PKPdf**	**21 15 13.8**	**+0.7**
MCPB	**Macapa, AP**	**151.03**	**26**	*e*P		**PKPdf**	**21 15 15.8**	**+0.7**
PLCA	**Paso Flores**	**151.09**	**126**		PKP	**PKPdf**	**21 15 14.7**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=233,slow=3.5,SNR=10							
PLCA					PKPbc	**PKiKP**	**21 15 22.2**	**+0.9**
	comp=Z,23nm,0.7s,baz=237,slow=2.8,SNR=104							
PLCA					PKPab	**PKPab**	**21 15 31.2**	**+0.4**
	comp=Z,3.8nm,0.6s,baz=335,slow=5.3,SNR=3.4							
PLCA	**Paso Flores**	**151.09**	**126**	*e*P		**PKPdf**	**21 15 15.4**	**+0.9**
MALB	**Monte Alegre**	**151.42**	**32**	*e*P		**PKPdf**	**21 15 16.6**	**+0.8**
SAML	**Samuel**	**151.48**	**56**			**PKPdf**	**21 15 15.4**	**-0.3**
SAML						**PKiKP**	**21 15 22.5**	**-0.2**
SAML	**Samuel**	**151.48**	**56**		PKIKP	**PKPdf**	**21 15 15.5**	**-0.3**
SAML	**Samuel**	**151.48**	**56**	*e*P		**PKPdf**	**21 15 16.4**	**+0.6**
ITTB	**Itaituba**	**152.84**	**37**	*e*P		**PKPdf**	**21 15 18.3**	**+0.4**
LVC	**Limon Verde**	**153.17**	**87**		PKPdf	**PKPdf**	**21 15 16.5**	**-2.0**
LVC						**PKiKP**	**21 15 27.2**	**+0.8**
LVC	**Limon Verde**	**153.17**	**87**		PKIKP	**PKPdf**	**21 15 16.5**	**-2.0**
LVC	**Limon Verde**	**153.17**	**87**	*e*P		**PKPdf**	**21 15 19.1**	**+0.6**
NPGB	**Novo Progresso**	**155.25**	**40**	*e*P		**PKPdf**	**21 15 22.0**	**+0.8**
VILB	**Vilhena**	**156.29**	**58**	*e*P		**PKPdf**	**21 15 23.5**	**+1.0**
PDRB	**Porto dos Gac**	**157.90**	**50**	*e*P		**PKPdf**	**21 15 25.6**	**+1.1**
BBSD	**Serra de San D**	**158.37**	**68**	*e*P		**PKPdf**	**21 15 25.7**	**+0.8**
PTLB	**Pontes e Lacer**	**158.62**	**62**	*e*P		**PKPdf**	**21 15 26.2**	**+1.0**
RCBR	**Riachuelo**	**158.70**	**350**	*e*P		**PKPdf**	**21 15 26.1**	**+0.6**
BBRB	**Robore, Bolivi**	**159.57**	**69**	*e*P		**PKPdf**	**21 15 27.8**	**+1.4**
TICA	**Tres Isletas**	**161.52**	**93**	*e*P		**PKPdf**	**21 15 29.1**	**+0.9**
SALV	**Santo Antonio**	**161.53**	**57**	*e*P		**PKPdf**	**21 15 29.3**	**+0.8**
SNDB	**Serra Nova Dou**	**161.56**	**38**	*e*P		**PKPdf**	**21 15 29.8**	**+1.2**
MURT	**Porto Murtinho**	**162.87**	**76**	*e*P		**PKPdf**	**21 15 30.5**	**+0.8**
BDQN	**Bodoquena, MS**	**163.12**	**71**	*e*P		**PKPdf**	**21 15 31.0**	**+1.0**
PP1B	**Ponte de Pedra**	**163.18**	**60**	*e*P		**PKPdf**	**21 15 30.8**	**+0.7**
RVDE	**Rio Verde (Bra**	**163.93**	**64**	*e*P		**PKPdf**	**21 15 32.2**	**+1.4**
AQDB	**Aquidauana**	**164.02**	**70**	*e*P		**PKPdf**	**21 15 31.7**	**+0.9**
CPUP	**Villa Florida**	**164.23**	**92**		PKP	**PKPdf**	**21 15 31.0**	**+0.2**
	comp=Z,8.5nm,0.8s,baz=21,slow=0.9,SNR=18							
CPUP					PKPab	**PKPab**	**21 16 29.3**	**+1.2**
	comp=Z,3.1nm,0.5s,baz=246,slow=5.3,SNR=4.3							
CPUP	**Villa Florida**	**164.23**	**92**	*e*P		**PKPdf**	**21 15 31.3**	**+0.5**
ANTJ	**Antonio Joao (**	**164.38**	**75**	*e*P		**PKPdf**	**21 15 32.0**	**+0.9**
SDBA	**SAO DESIDERIO**	**164.75**	**20**	*e*P		**PKPdf**	**21 15 32.2**	**+0.6**
ITQB	**Itaqui**	**164.86**	**104**	*e*P		**PKPdf**	**21 15 31.9**	**+0.7**
TBOT	**Tacuaremb**	**165.08**	**112**	*e*P		**PKPdf**	**21 15 31.7**	**+0.3**
RPRD	**Ribas do Rio P**	**165.67**	**66**	*e*P		**PKPdf**	**21 15 33.9**	**+1.7**
RODS	**Rosario do Sul**	**165.99**	**108**	*e*P		**PKPdf**	**21 15 33.4**	**+1.2**
UNIS	**Unistalda (Bra**	**166.26**	**102**	*e*P		**PKPdf**	**21 15 34.2**	**+1.8**
BDFB	**Brasilia**	**166.37**	**36**		PKP	**PKPdf**	**21 15 33.4**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=199,slow=3.0,SNR=8.7							
BDFB					PKPab	**PKPab**	**21 16 38.5**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=170,slow=6.1,SNR=1.8							
MCR1	**Marechal Candi**	**166.85**	**82**	*e*P		**PKPdf**	**21 15 34.0**	**+1.0**
PLTB	**Pedras Altas**	**166.97**	**115**	*e*P		**PKPdf**	**21 15 33.8**	**+0.9**
CRSM	**Crissiumal (Br**	**167.23**	**96**	*e*P		**PKPdf**	**21 15 34.1**	**+0.9**
JANB	**Januaria**	**167.43**	**21**	*e*P		**PKPdf**	**21 15 34.7**	**+1.0**
CPSB	**Cacapava Do Su**	**167.46**	**109**	*e*P		**PKPdf**	**21 15 34.4**	**+1.2**
ITRB	**Iturama**	**167.86**	**56**	*e*P		**PKPdf**	**21 15 34.8**	**+1.0**
FRBT	**Francisco Belt**	**168.00**	**88**	*e*P		**PKPdf**	**21 15 34.8**	**+1.0**
ALGR	**Alto Alegre (B**	**168.07**	**102**	*e*P		**PKPdf**	**21 15 35.0**	**+1.2**
IPMB	**Ipameri, GO**	**168.13**	**43**	*e*P		**PKPdf**	**21 15 35.4**	**+1.3**
PCMB	**Pacaembu**	**168.27**	**66**	*e*P		**PKPdf**	**21 15 35.0**	**+1.0**
PTGB	**Pitanga**	**168.66**	**81**	*e*P		**PKPdf**	**21 15 35.6**	**+1.3**
ITAB	**Concordia**	**168.93**	**94**	*e*P		**PKPdf**	**21 15 35.2**	**+0.9**
LDASE	**Londrina, Braz**	**169.09**	**74**	*e*P		**PKPdf**	**21 15 36.0**	**+1.4**
PMNB	**Patos De Minas**	**169.59**	**38**	*e*P		**PKPdf**	**21 15 36.2**	**+1.2**
GUA01	**Guaratinga, BA**	**169.70**	**0**	*e*P		**PKPdf**	**21 15 35.6**	**+0.6**
CNLB	**Canela**	**169.88**	**106**	*e*P		**PKPdf**	**21 15 35.5**	**+0.6**
BB19B	**Bebedouro**	**170.05**	**56**	*e*P		**PKPdf**	**21 15 36.5**	**+1.2**
FRTB	**Fartura**	**170.39**	**70**	*e*P		**PKPdf**	**21 15 36.8**	**+1.5**
DIAM	**Diamantina, MG**	**170.66**	**24**	*e*P		**PKPdf**	**21 15 36.6**	**+0.9**
RCLB	**Rio Claro- Sao**	**171.59**	**59**	*e*P		**PKPdf**	**21 15 37.0**	**+1.0**
SJMB	**Sao Joao De Ma**	**171.69**	**10**	*e*P		**PKPdf**	**21 15 36.8**	**+0.8**
SPB	**Sao Paulo**	**172.26**	**66**	*e*P		**PKPdf**	**21 15 37.8**	**+1.6**
RIB01	**Linhares ES**	**172.39**	**5**	*e*P		**PKPdf**	**21 15 36.4**	**0.0**
BSCB	**Bom Sucesso**	**172.50**	**39**	*e*P		**PKPdf**	**21 15 37.6**	**+1.1**
ALF01	**Guarapari-ES**	**173.64**	**9**	*e*P		**PKPdf**	**21 15 37.8**	**+1.0**
VAS01	**Vassouras-RJ**	**174.26**	**37**	*e*P		**PKPdf**	**21 15 38.4**	**+1.4**
DUB01	**Friburgo-RJ**	**174.59**	**27**	*e*P		**PKPdf**	**21 15 37.8**	**+0.6**

JMA 05 20:57:19.4±0.1, 31°.3N±0°.1×130°.61E±0°.09, h9km,
SATSUMA PENINSULA REGION, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.22**	**322**	*e*P	Pg	20 57 24.1	+0.2

*JMA **05** 21:12:37.0±0.2, 24°.0N±0°.2×121°.7E±0°.7, h3km±2km,*
MV3.0/11, TAIWAN REGION
*TAP **05** 21:12:37.1, 24°.07N×121°.64E, h9km, ML3.5, B*
*ASIES **05** 21:12:37.1, 24°.07N×121°.64E, h9km, ML3.5, Mw3.4,*
Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm;
M_{rr}0.12; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$0.00; $M_{r\theta}$1.34; $M_{\theta\phi}$-0.32; $M_{\phi r}$0.71;
Fault plane solution: $M_0$1.55437×10^{21} NP1:ϕ_s62.98000°,
δ85.51000°, λ95.01000°. NP2:ϕ_s194.76000°, δ6.72000°,
λ41.98000°. Principal axes: T Plg49.2530°,
Azm338.4000°; N Plg4.9900°, Azm242.5840°; P
Plg40.3090°, Azm148.3350°;
ISC 05 21:12:37.3±0.9, 24°.06N±0°.01×121°.69E±0°.02, h6km±6km,
n158, σ0$63/227, 9C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**283**	P	**Pg**	**21 12 39.1**	**-0.3**
	baz=295						
TWD				*i* S	**Sg**	**21 12 40.4**	**-0.4**
	baz=295						
HWA	**Hwalien**	**0.12**	**225**	⇑*i* P	**Pg**	**21 12 40.2**	**+0.4**
	baz=195						
HWA				*e*S	**Sg**	**21 12 42.7**	**+1.3**
	baz=195						
ETL	**Fush Village**	**0.12**	**327**	⇓*i* P	**Pg**	**21 12 39.8**	**-0.1**
	baz=351						
ETL				*i* S	**Sg**	**21 12 41.5**	**-0.1**
	baz=351						
NACB	**Ninganchiao**	**0.14**	**321**	⇓*i* P	**Pg**	**21 12 40.1**	**-0.3**
	baz=338						
NACB				*i* S	**Sg**	**21 12 42.0**	**-0.3**
	baz=338						
ETM	**Tongmen**	**0.21**	**243**	P	**Pg**	**21 12 41.0**	**-0.4**
	baz=234						
ETM				S	**Sg**	**21 12 43.7**	**-0.5**
	baz=234						
ETLH	**Xiulin Townshi**	**0.24**	**307**	⇓*i* P	**Pg**	**21 12 41.8**	**-0.3**
	baz=314						
ETLH				S	**Sg**	**

SMLT	**Sun Moon Lake**	**0.75**	**257**	⇓*i*P	**Pg**	**21 12 51.4**	**-0.3**
	baz=254								
SMLT				*e*S	**Sg**	**21 13 00.9**	**-0.6**
	baz=254								
YULB	**Yu-li**	**0.76**	**209**	⇓*e*P	**Pg**	**21 12 51.1**	**-0.8**
	baz=206								
ECBN	**Changbin**	**0.77**	**197**	*e*P	**Pg**	**21 12 52.4**	**+0.2**
	baz=183								
ECBN				*e*S	**Sb**	**21 13 04.6**	**+0.7**
	baz=183								
NFF	**Wufeng Townshi**	**0.78**	**317**	⇑P	**Pg**	**21 12 52.4**	**+0.2**
	baz=320								
NFF				*e*S	**Sg**	**21 13 00.9**	**-1.4**
	baz=320								
TYC	**Yuchr**	**0.78**	**259**	*e*P	**Pg**	**21 12 51.8**	**-0.5**
	baz=257								
TYC				S	**Sg**	**21 13 00.9**	**-1.6**
	baz=257								
EYUL	**Yuli**	**0.79**	**206**	*e*P	**Pg**	**21 12 52.2**	**-0.3**
	baz=217								
TWF1	**Yuli**	**0.79**	**207**	*e*P	**Pg**	**21 12 51.7**	**-0.9**
	baz=218								
LIOB	**Emei**	**0.85**	**313**	⇑P	**Pg**	**21 12 54.1**	**+0.5**
	baz=315								
LIOB				*e*S	**Sg**	**21 13 05.2**	**+0.5**
	baz=315								
NSTT	**Nanjuang**	**0.85**	**312**	⇑P	**Pg**	**21 12 54.0**	**+0.4**
	baz=314								
NSTT				S	**Sg**	**21 13 04.8**	**0.0**
	baz=314								
WHYT	**Xinyi Township**	**0.85**	**245**	*e*P	**Pg**	**21 12 54.2**	**+0.6**
	baz=244								
NJD	**Zhudong**	**0.87**	**321**	*e*P	**Pb**	**21 12 55.0**	**+0.2**
	baz=323								
NJD				*e*S	**Sb**	**21 13 06.9**	**+0.1**
	baz=323								
TWQ1	**Liyutan**	**0.89**	**289**	*e*P	**Pb**	**21 12 55.2**	**0.0**
	baz=302								
TWQ1				*e*S	**Sb**	**21 13 08.0**	**+0.7**
	baz=302								
CHKH	**Chenggong**	**0.91**	**198**	*e*P	**Pg**	**21 12 54.3**	**-0.4**
	baz=185								
WWF	**Wufeng**	**0.91**	**269**	*e*P	**Pb**	**21 12 56.1**	**+0.5**
	baz=269								
NHDH	**Xindian Distri**	**0.91**	**350**	*e*P	**Pb**	**21 12 55.8**	**+0.2**
	baz=344								
WJS	**Zhushan**	**0.92**	**255**	*e*P	**Pb**	**21 12 56.4**	**+0.7**
	baz=253								
WJS				*e*S	**Sb**	**21 13 08.7**	**+0.7**
	baz=253								
TIPB	**Shuangxi**	**0.92**	**7**	*e*P	**Pg**	**21 12 54.9**	**-0.1**
	baz=355								
TWA	**Mucha**	**0.92**	**354**	*e*P	**Pb**	**21 12 55.8**	**+0.1**
	baz=356								
NSY	**Sanyi**	**0.92**	**293**	P	**Pb**	**21 12 55.9**	**+0.1**
	baz=304								
NSY				S	**Sg**	**21 13 07.2**	**+0.2**
	baz=304								
TATO	**Taipei**	**0.93**	**348**	*e*P	**Pb**	**21 12 55.6**	**-0.3**
	baz=351								
TATO				S	**Sg**	**21 13 06.7**	**-0.7**
	baz=351								
FULB	**Fuli**	**0.93**	**203**	*e*P	**Pg**	**21 12 55.7**	**+0.5**
	baz=215								
TCU	**Taichung**	**0.93**	**276**	*e*P	**Pb**	**21 12 56.4**	**+0.4**
	baz=270								
WNT1	**Nantou City**	**0.94**	**261**	*e*P	**Pb**	**21 12 56.2**	**+0.2**
	baz=260								
WNT	**Mingjian**	**0.94**	**259**	*e*P	**Pb**	**21 12 56.4**	**+0.3**
	baz=257								
WNT				*e*S	**Sb**	**21 13 09.3**	**+0.5**
	baz=257								
HSN1	**Hsinchu**	**0.94**	**319**	*e*P	**Pn**	**21 12 56.6**	**-0.5**
	baz=321								
NMLH	**Miaoli**	**0.95**	**300**	*e*P	**Pb**	**21 12 56.4**	**+0.1**
	baz=301								
SBCB	**Hsinchu**	**0.97**	**319**	*e*P	**Pn**	**21 12 57.3**	**-0.3**
	baz=320								
ALS	**Alishan**	**0.98**	**236**	*e*P	**Pg**	**21 12 55.9**	**-0.3**
	baz=222								
ALS				*e*S	**Sg**	**21 13 09.6**	**+0.7**
	baz=222								
TWB1	**Santiao Chiao**	**0.98**	**16**	*e*P	**Pb**	**21 12 56.7**	**0.0**
	baz=10.0								
TAP	**Taipei**	**0.99**	**350**	P	**Pn**	**21 12 57.7**	**-0.1**
	baz=343								
TAP				S	**Sb**	**21 13 09.6**	**-0.6**
	baz=343								
HSN	**Hsinchu**	**0.99**	**318**	*e*P	**Pn**	**21 12 57.5**	**-0.3**
	baz=322								
CHKT	**Chengkung**	**1.00**	**198**	*e*P	**Pg**	**21 12 55.5**	**-1.0**
	baz=196								
WDJ	**Dajia District**	**1.00**	**287**	*e*P	**Pn**	**21 12 58.0**	**+0.1**
	baz=287								
NWF	**Wu-fen Shan**	**1.01**	**4**	*e*P	**Pn**	**21 12 58.0**	**-0.2**
	baz=7.0								
NWF				*e*S	**Sg**	**21 13 09.6**	**-0.3**
	baz=7.0								
WFSB	**Wu-fen Shan**	**1.01**	**4**	*e*P	**Pn**	**21 12 58.1**	**0.0**
	baz=7.0								
WFSB				*e*S	**Sg**	**21 13 09.7**	**-0.1**
	baz=7.0								
EHD	**Haiduan**	**1.01**	**206**	*e*P	**Pg**	**21 12 56.5**	**-0.2**
	baz=205								
NCUH	**Zhongli**	**1.02**	**333**	*e*P	**Pn**	**21 12 57.8**	**-0.4**
	baz=334								
NCU	**National Centr**	**1.02**	**333**	*e*P	**Pg**	**21 12 55.7**	**-1.2**
	baz=335								
WYL	**Yuanlin Townsh**	**1.02**	**265**	*e*P	**Pb**	**21 12 57.9**	**+0.4**
	baz=265								
WCHH	**Zhanghua**	**1.04**	**271**	*e*P	**Pb**	**21 12 58.2**	**+0.5**
	baz=271								
SXI1	**Grass Mountain**	**1.04**	**9**	*e*P	**Pn**	**21 12 58.9**	**+0.3**
	baz=4.0								
SXI1				*e*S	**Sn**	**21 13 14.3**	**+0.8**
	baz=4.0								
ECS	**Chishang**	**1.05**	**205**	*e*P	**Pg**	**21 12 57.9**	**+0.3**
	baz=216								
ELDTW	**Lidau**	**1.07**	**216**	*e*P	**Pg**	**21 12 56.2**	**-1.6**
	baz=203								
TWS1	**Kuangyinshan**	**1.07**	**346**	*e*P	**Pn**	**21 12 58.8**	**0.0**
	baz=349								
TWS1				*e*S	**Sn**	**21 13 13.0**	**-1.0**
	baz=349								
TNOU	**National Taiwa**	**1.09**	**4**	*e*P	**Pn**	**21 12 59.6**	**+0.4**
	baz=5.0								
YM01	**YM01**	**1.09**	**354**	*e*P	**Pn**	**21 12 58.9**	**-0.3**
	baz=7.0								
WGK	**Gukeng**	**1.10**	**250**	P	**Pb**	**21 12 59.2**	**+0.4**
	baz=249								
WGK				*e*S	**Sb**	**21 13 14.1**	**+0.7**
	baz=249								
NHW	**Xinwu Township**	**1.11**	**328**	*e*P	**Pn**	**21 12 59.2**	**-0.2**
	baz=329								
WDLH	**Douliu**	**1.12**	**251**	*e*P	**Pb**	**21 12 59.5**	**+0.4**
	baz=251								
NTST	**Danshui**	**1.12**	**349**	*e*P	**Pn**	**21 12 59.4**	**-0.2**
	baz=350								
ANP	**Anpu**	**1.13**	**352**	*e*P	**Pb**	**21 12 59.3**	**-0.1**
	baz=354								
WCKO	**Fanlu**	**1.17**	**238**	*e*P	**Pg**	**21 13 00.0**	**+0.1**
	baz=237								
WCKO				*e*S	**Sn**	**21 13 16.8**	**+0.1**
	baz=237								
TWY	**Chenhua**	**1.21**	**356**	*e*P	**Pn**	**21 13 01.4**	**+0.6**
	baz=345								
WRL	**Guolierlin Hig**	**1.22**	**263**	*e*P	**Pb**	**21 13 00.9**	**+0.1**
	baz=262								
WRL				*e*S	**Sb**	**21 13 17.3**	**+0.6**
	baz=262								
STYH	**Taoyuan**	**1.22**	**224**	*e*P	**Pb**	**21 13 00.1**	**-0.8**
	baz=223								
CHN4	**Tsaushan**	**1.23**	**235**	*e*P	**Pn**	**21 13 01.1**	**0.0**
	baz=221								
CHN4				*e*S	**Sn**	**21 13 18.6**	**+0.5**
	baz=221								
RLNB	**Erlin**	**1.23**	**262**	*e*P	**Pg**	**21 13 01.4**	**+0.4**
	baz=261								
RLNB				*e*S	**Sn**	**21 13 18.6**	**+0.5**
	baz=261								
CHN2	**Minshiung**	**1.23**	**245**	*e*P	**Pg**	**21 13 01.6**	**+0.6**
	baz=245								
TPUB	**Ta-pu**	**1.23**	**232**	P	**Pn**	**21 13 00.7**	**-0.5**
	baz=218								
TPUB				*e*S	**Sn**	**21 13 18.8**	**+0.7**
	baz=218								
STYT	**Tauyuan**	**1.24**	**224**	P	**Pn**	**21 13 00.3**	**-1.0**
	baz=221								
STYT				*e*S	**Sg**	**21 13 17.6**	**+0.4**
	baz=221								
WTK	**Tuku**	**1.25**	**253**	*e*P	**Pb**	**21 13 01.6**	**+0.3**
	baz=253								
LONT	**Longtian**	**1.26**	**204**	*e*P	**Pn**	**21 13 00.4**	**-1.1**
	baz=204								
YOJ	**Yonaguni jima**	**1.27**	**71**	*e*P	**Pn**	**21 13 00.9**	**-0.6**
	baz=71								
YOJ	**Yonaguni jima**	**1.27**	**71**	P	**Pn**	**21 13 01.2**	**-0.4**
YOJ				*e*S	**Sn**	**21 13 18.8**	**-0.1**
WTP	**Ta-pu**	**1.28**	**231**	P	**Pn**	**21 13 01.6**	**-0.2**
	baz=228								
WTP				*e*S	**Sn**	**21 13 19.9**	**+0.5**
	baz=228								
TWG	**Pinlang**	**1.36**	**205**	*e*P	**Pn**	**21 13 01.9**	**-1.0**
	baz=204								
TWGBT	**Beinan**	**1.36**	**205**	*e*P	**Pn**	**21 13 00.8**	**-2.1**
	baz=204								
TWK	**Hsinying**	**1.36**	**235**	P	**Pb**	**21 13 03.5**	**+0.3**
	baz=233								
TWK				S	**Sg**	**21 13 22.1**	**+1.0**
	baz=233								
CHN1	**Nanshi**	**1.38**	**231**	*e*P	**Pn**	**21 13 03.3**	**+0.1**
	baz=219								
CHN1				*e*S	**Sg**	**21 13 23.2**	**+1.5**
	baz=219								
SNST	**Tainan City**	**1.38**	**233**	*e*P	**Pb**	**21 13 03.6**	**+0.1**
	baz=222								
LDUT	**Ludao**	**1.40**	**189**	*e*P	**Pn**	**21 13 02.7**	**-0.7**
	baz=174								
SGST	**Jiashian**	**1.41**	**227**	*e*P	**Pn**	**21 13 03.0**	**-0.6**
	baz=216								
SGST				*e*S	**Sg**	**21 13 23.2**	**+0.5**
	baz=216								
WSF	**Szhu**	**1.41**	**253**	*e*P	**Pb**	**21 13 04.3**	**+0.2**
	baz=253								
SLGT	**Liugui**	**1.43**	**222**	*e*P	**Pn**	**21 13 04.2**	**+0.3**
	baz=223								
WSL	**Shuilin Townsh**	**1.45**	**249**	*e*P	**Pb**	**21 13 04.8**	**+0.1**
	baz=249								
ICHU	**Yijhu**	**1.47**	**242**	*e*P	**Pb**	**21 13 05.2**	**+0.1**
	baz=242								
CHN8	**Yiju**	**1.53**	**243**	*e*P	**Pn**	**21 13 05.4**	**+0.1**
	baz=243								
CHN3	**Shinhua**	**1.56**	**231**	*e*P	**Pb**	**21 13 07.2**	**+0.5**
	baz=232								
ECL	**Taimali**	**1.61**	**205**	*e*P	**Pn**	**21 13 05.0**	**-1.3**
	baz=188								
SCST	**Cishan**	**1.61**	**224**	*e*P	**Pb**	**21 13 07.5**	**+0.1**
	baz=224								
SHHT	**Tainan City**	**1.61**	**230**	*e*P	**Pb**	**21 13 07.7**	**+0.2**
	baz=231								
SSD	**Sandimen**	**1.63**	**217**	*e*P	**Pn**	**21 13 06.0**	**-0.6**
	baz=207								
TWM1	**Shoushan**	**1.70**	**224**	*e*P	**Pn**	**21 13 08.5**	**+1.0**
	baz=224								
MASBT	**Mashibuluo**	**1.74**	**214**	*e*P	**Pn**	**21 13 07.1**	**-1.0**
	baz=205								
EAST	**Anshuo**	**1.84**	**205**	*e*P	**Pn**	**21 13 09.4**	**-0.1**
	baz=189								
WSSB	**Gushan**	**1.93**	**223**	*e*P	**Pn**	**21 13 11.6**	**+0.8**
	baz=224								
SCZT	**Fangliau**	**1.95**	**211**	*e*P	**Pn**	**21 13 11.2**	**+0.2**
	baz=212								
SLIU	**Shizi**	**2.01**	**204**	*e*P	**Pn**	**21 13 11.5**	**-0.3**
	baz=189								
PHUB	**P'eng-hu**	**2.02**	**255**	P	**Pn**	**21 13 12.1**	**+0.2**
	baz=255								
PHUB				S	**Sn**	**21 13 37.5**	**+0.1**
	baz=255								
PNG	**Penghu**	**2.02**	**256**	*e*P	**Pn**	**21 13 12.2**	**+0.2**
	baz=257								
LYUB	**Lan-yu**	**2.05**	**183**	*e*P	**Pn**	**21 13 09.1**	**-3.2**
	baz=181								
JKRS	**Kuro-shima**	**2.12**	**85**	P	**Pn**	**21 13 14.1**	**+0.7**
JKRS				*e*S	**Sb**	**21 13 41.4**	**-1.4**
VCHM	**Qimei**	**2.24**	**248**	*e*P	**Pn**	**21 13 15.4**	**+0.3**
	baz=248								
VCHM				*e*S	**Sn**	**21 13 42.7**	**-0.4**
	baz=248								
VWUC	**VWUC**	**2.25**	**295**	*e*P	**Pn**	**21 13 13.3**	**-1.8**
	baz=295								
JIJ	**Ishigaki jima**	**2.26**	**82**	P	**Pn**	**21 13 14.6**	**-0.6**
JIJ				*e*S	**Sn**	**21 13 43.5**	**+0.1**
TWKBT	**Hengchun**	**2.26**	**201**	*e*P	**Pn**	**21 13 17.0**	**+1.7**
	baz=202								
JISG	**Ishigakijimahi**	**2.44**	**77**	P	**Pn**	**21 13 17.4**	**-0.3**
JISG				*e*S	**Sn**	**21 13 48.4**	**+0.4**
PTMZ	**Houxiangcun**	**2.54**	**293**	*e*P	**Pn**	**21 13 17.8**	**-1.3**
	baz=293								
MATB	**Ma-tsu**	**2.62**	**323**	*e*P	**Pn**	**21 13 20.5**	**+0.3**
	baz=323								
KNM	**Kinmen**	**3.00**	**277**	*e*P	**Pn**	**21 13 27.1**	**+1.7**
	baz=277								
LYJJ	**Jianjiangzhen**	**3.04**	**325**	*e*P	**Pn**	**21 13 26.1**	**+0.2**
	baz=326								
KNMB	**Chin-men Tao**	**3.04**	**278**	*e*P	**Pn**	**21 13 25.2**	**-0.8**
	baz=278								
MHZQ	**Yeshan**	**3.16**	**311**	*e*P	**Pn**	**21 13 27.7**	**+0.1**
	baz=297								
XPSS	**Dashiqiu**	**3.17**	**335**	*e*P	**Pn**	**21 13 27.1**	**-0.6**
	baz=335								
JMJ	**Miyako jima 2**	**3.37**	**76**	*e*P	**Pn**	**21 13 31.9**	**+1.4**
	baz=79								
AXDP	**Jialang**	**3.50**	**285**	*e*P	**Pn**	**21 13 31.6**	**-0.6**
	baz=284								
ZPLA	**Ao Xicun**	**3.61**	**269**	*e*P	**Pn**	**21 13 33.6**	**-0.2**
	baz=269								
DSXP	**Dongshan**	**3.92**	**266**	*e*P	**Pn**	**21 13 37.7**	**-0.4**
	baz=264								
SXFK	**Yanhouchang**	**4.34**	**303**	*e*P	**Pn**	**21 13 43.6**	**-0.4**
	baz=302								

NEIC ***05*** *21:20:47.9±0.7, 36°.024N±0°.010×97°.90W±0°.01, h5km±4km, Error ellipse: s-maj=1.7km s-min=1.4km az=225.0*

TUL 05 21:20:48.3±0.6, **36°.04N**±0°.01×**97°.91W**±0°.01, **h7**km±4km, **ML2.6, mb_Lg2.3**/9(NEIC), **ML2.6**/58(NEIC), **Error ellipse: s-maj=1.7km s-min=1.3km az=210.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.44**	**123**	Pg	Pg	21 20 56.8	0.0
OK029				Sg	Sg	21 21 03.0	+0.5
OK029				IAML		21 21 03.5	
	593nm,0.3s						
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	21 20 57.6	+0.1
CROK				Sg	Sg	21 21 04.1	+0.4
CROK				IAML		21 21 09.6	
	comp=E,321nm,0.2s						
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	Pg	21 21 02.5	-0.1
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	21 21 03.1	-0.3
OK033				Sg	Sg	21 21 13.6	0.0
OK033				IAML		21 21 17.9	
	comp=E,166nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**342**	Pg	Pg	21 21 03.5	-0.3
OK032				Sg	Sg	21 21 14.5	+0.2
OK032				IAML		21 21 15.0	
	comp=E,342nm,0.2s						
OK032				IAML		21 21 22.3	
	comp=E,308nm,0.2s						
OK038	**West end E0370**	**0.81**	**303**	Pg	Pg	21 21 03.5	-0.4
OK038				Sg	Sg	21 21 14.6	+0.2
GC02	**Grant County #**	**0.82**	**3**	Pg	Pg	21 21 03.5	-0.5
GC02				Sg	Sg	21 21 14.8	+0.2
OK048	**Pawnee Station**	**0.87**	**64**	Pg	Pg	21 21 04.6	-0.3
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	21 21 04.2	-0.9
FNO				Sg	Sg	21 21 16.8	+0.2
FNO				IAML		21 21 18.4	
	comp=E,133nm,0.2s						
OK052	**Battle Ridge R**	**0.90**	**92**	Pg	Pg	21 21 05.1	-0.4
OK052				Sg	Sg	21 21 16.9	-0.2
OK052				IAML		21 21 20.4	
	comp=E,142nm,0.1s						
OK052				IAML		21 21 26.6	
	comp=E,128nm,0.3s						
KAN14	**Manchester OK**	**0.92**	**357**	Pg	Pg	21 21 05.3	-0.7
KAN14				Sg	Sg	21 21 17.7	-0.3
KAN14				IAML		21 21 24.2	
	comp=N,190nm,0.1s						
KAN14				IAML		21 21 25.1	
	comp=E,153nm,0.1s						
OK035	**E0210 Rd and N**	**0.93**	**316**	Pg	Pg	21 21 05.8	-0.5
OK035				Sg	Sg	21 21 18.7	+0.3
U32A	**Winter Ranch,**	**0.95**	**292**	Pg	Pg	21 21 06.0	-0.6
U32A				Sg	Sg	21 21 19.2	+0.3
U32A				IAML		21 21 21.7	
	comp=E,142nm,0.2s						
U32A				IAML		21 21 22.2	
	comp=N,243nm,0.4s						
QUOK	**Quay**	**0.98**	**82**	Pg	Pg	21 21 06.7	-0.4
QUOK				Sg	Sb	21 21 20.4	-0.3
QUOK				IAML		21 21 26.1	
	comp=N,150nm,0.2s						
QUOK				IAML		21 21 26.8	
	comp=E,157nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**	Pg	Pg	21 21 07.3	-0.4
KAN17				Sg	Sg	21 21 21.3	+0.4
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	21 21 07.6	-0.6
KAN05	**Bluff City Nor**	**1.07**	**1**	Pg	Pg	21 21 07.9	-1.0
KAN05				IAML		21 21 26.5	
	comp=N,207nm,0.2s						
KAN10	**Anthony SW Sta**	**1.10**	**352**	Pg	Pg	21 21 08.5	-0.9
KAN10				IAML		21 21 27.7	
	comp=N,119nm,0.2s						
KAN10				IAML		21 21 30.9	
	comp=E,124nm,0.1s						
KAN01	**Argonia South**	**1.12**	**6**	Pg	Pg	21 21 08.9	-0.9
KAN01				IAML		21 21 25.0	
	comp=E,199nm,0.2s						
KAN01				IAML		21 21 28.9	
	comp=N,141nm,0.1s						
KAN09	**Caldwell North**	**1.12**	**12**	Pg	Pg	21 21 09.0	-0.9
DEOK	**Depew**	**1.16**	**99**	Pg	Pg	21 21 09.4	-1.1
DEOK				IAML		21 21 30.8	
	comp=N,113nm,0.2s						
DEOK				IAML		21 21 33.6	
	comp=E,125nm,0.2s						
KAN08	**Anthony NE Sta**	**1.19**	**357**	Pg	Pg	21 21 10.2	-1.0
KAN08				IAML		21 21 31.3	
	comp=E,82nm,0.1s						
KAN06	**Argonia West S**	**1.21**	**2**	Pg	Pg	21 21 10.6	-1.0
KAN06				IAML		21 21 29.5	
	comp=N,167nm,0.1s						
KAN06				IAML		21 21 30.4	
	comp=E,142nm,0.1s						
W35A	**Tecumseh**	**1.22**	**136**	Pg	Pg	21 21 10.4	-1.2
W35A				IAML		21 21 31.3	
	comp=N,149nm,0.5s						
KAN12	**Harper NE Stat**	**1.26**	**357**	Pg	Pn	21 21 12.2	-0.2
KAN12				IAML		21 21 21.2	
	comp=N,161nm,0.3s						
KS21	**Milan North St**	**1.26**	**9**	IAML		21 21 32.4	
	comp=N,173nm,0.2s						
KS21	**Milan North St**	**1.26**	**9**		Pn	21 21 11.5	-1.0
X34A	**Smith Ranch, M**	**1.43**	**178**		Pn	21 21 14.8	0.0
X34A				IAmb_Lg		21 21 34.6	
	comp=Z,18nm,1.3s						
WMOK	**Wichita Mounta**	**1.48**	**209**		Pn	21 21 14.7	-0.6
TUL3	**Leonard**	**1.72**	**94**	Pn	Pn	21 21 18.1	-0.6
TUL3				IAmb_Lg		21 21 46.3	
	comp=Z,17nm,0.8s						
SMWD	**Samnorwood**	**2.12**	**245**	Pn	Pn	21 21 23.8	-0.4
SMWD				IAmb_Lg		21 21 57.9	
	comp=Z,14nm,0.8s						
LOOK	**Love County**	**2.12**	**164**	Pn	Pn	21 21 23.7	-0.5
AMTX	**Amarillo**	**3.29**	**251**	IAmb_Lg		21 22 39.7	
	comp=Z,8.7nm,0.9s						
MIAR	**Mount Ida**	**3.84**	**112**	Pn	Pn	21 21 47.5	-0.3
X40A	**Basin Creek Fa**	**4.43**	**109**	Pn	Pn	21 21 54.8	-1.1
X40A				IAmb_Lg		21 23 15.1	
	comp=Z,4.3nm,0.8s						
R40A	**Maddies Statio**	**5.03**	**62**	Pn	Pn	21 22 03.2	-1.0

NEIC ***05*** *21:26:21.5±1.5, 56°.50N±0°.08×149°.0W±0°.1, h26km±9km, ML3.7/68, ML3.4(AEIC), Error ellipse: s-maj=11.8km s-min=7.4km az=157.0*

AEIC ***05*** *21:26:23.7±1.3, 56°.54N±0°.07×149°.02W±0°.09, h1km±7km, Error ellipse: s-maj=11.1km s-min=7.0km az=160.0*

ISC 05 21:26:18.9±1.6, **56°.53N**±0°.09×**148°.98W**±0°.05, **h10**km, **n233, σ1°47/242, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.33**	**304**	Pn	**Pn**	**21 26 59.2**	**+1.9**
OHAK	**Old Harbor**	**2.47**	**288**	Pn	**Pn**	**21 27 00.1**	**+0.9**
OHAK					**Sn**	**21 27 26.8**	**-2.5**
OHAK	**Old Harbor**	**2.47**	**288**	P	**Pn**	**21 27 00.0**	**+0.9**
OHAK	**Old Harbor**	**2.47**	**288**	P	**Pn**	**21 26 59.8**	**+0.7**
	baz=104						
OHAK				S	**Sn**	**21 27 27.4**	**-1.9**
	baz=104						
SYI	**Shuyak Island**	**2.78**	**320**	Pn	**Pn**	**21 27 04.9**	**+1.5**
SYI				Sn	**Sn**	**21 27 37.0**	**0.0**
SYI				IAML		21 27 38.4	
	comp=N,156nm,0.4s						
SYI				IAML		21 27 39.1	
	comp=E,180nm,0.3s						
Q20K	**Shuyak Island**	**2.78**	**320**	P	**Pn**	**21 27 05.0**	**+1.5**
	baz=137						
Q20K				S	**Sn**	**21 27 37.3**	**+0.3**
	baz=137						
SII	**Sitkinak Islan**	**2.88**	**273**	Pn	**Pn**	**21 27 04.3**	**-0.6**
SII				Sn	**Sn**	**21 27 37.1**	**-2.5**
SII				IAML		21 27 41.0	
	comp=N,216nm,3.0s						
SII				IAML		21 27 40.0	
	comp=E,399nm,3.0s						
SII	**Sitkinak Islan**	**2.88**	**273**	S	**Sn**	**21 27 37.8**	**-1.9**
	baz=88						
Q23K	**Middleton Isla**	**3.22**	**25**	Pn	**Pn**	**21 27 09.8**	**+0.2**
Q23K				Sn	**Sn**	**21 27 45.0**	**-2.9**
Q23K				IAML		21 28 48.3	
	comp=N,212nm,2.0s						
Q23K				IAML		21 28 52.7	
	comp=E,227nm,2.2s						
Q23K	**Middleton Isla**	**3.22**	**25**	P	**Pn**	**21 27 09.9**	**+0.4**
	baz=207						
Q23K				S	**Sn**	**21 27 45.9**	**-2.0**
	baz=207						
MID	**Middleton Isla**	**3.22**	**25**	Pn	**Pn**	**21 27 10.0**	**+0.5**
MID				IAML		21 28 48.2	
	comp=N,206nm,2.0s						
MID				IAML		21 28 52.6	
	comp=E,222nm,2.3s						
MID	**Middleton Isla**	**3.22**	**25**	P	**Pn**	**21 27 10.1**	**+0.5**
CNPM	**China Poot**	**3.23**	**339**	Pn	**Pn**	**21 27 10.5**	**+0.8**
CNPM				Sn	**Sn**	**21 27 46.9**	**-1.4**
BRSE	**Bradley Lake S**	**3.35**	**345**	Pn	**Pn**	**21 27 11.6**	**+0.3**
BRSE	**Bradley Lake S**	**3.35**	**345**	P	**Pn**	**21 27 11.6**	**+0.3**
	baz=163						
BRLK	**Bradley Lake**	**3.40**	**343**	Pn	**Pn**	**21 27 12.2**	**+0.3**
BRLK				Sn	**Sn**	**21 27 49.8**	**-2.4**
HOM	**Homer**	**3.44**	**337**	Pn	**Pn**	**21 27 13.2**	**+0.7**
HOM				IAML		21 28 50.6	
	comp=E,206nm,1.1s						
Q19K	**Cape Douglas,**	**3.47**	**316**	Pn	**Pn**	**21 27 15.3**	**+2.3**
Q19K	**Cape

IVE	Iliamna Volcan	4.09	330			Pn	21 27 22.5 +0.9
CNTC	Contact Creek	4.12	298			Pn	21 27 23.6 +1.6
Q17K	Contact Creek baz=112	4.12	298		P	Pn	21 27 23.6 +1.6
KAIM	Kayak Island	4.17	33	Pn		Pn	21 27 23.8 +1.3
KAIM	Kayak Island baz=218	4.17	33	P		Pn	21 27 23.6 +1.0
EYAK	Cordova Ski Ar	4.37	21	Pn		Pn	21 27 26.0 +0.8
EYAK	Cordova Ski Ar	4.37	21	P		Pn	21 27 26.3 +1.1
EYAK	Cordova Ski Ar baz=204	4.37	21	P		Pn	21 27 26.5 +1.3
P18K	Big Mountain,	4.39	313	Pn		Pn	21 27 26.5 +0.8
P18K	comp=N,36nm,3.0s			IAML			21 28 18.4
P18K	Big Mountain, baz=128	4.39	313	P		Pn	21 27 26.2 +0.6
RDSO	Redoubt South	4.40	335			Pn	21 27 26.6 +0.7
RSO	Redoubt South	4.41	335	Pn		Pn	21 27 27.3 +1.3
RAGM	Ragged Mountai	4.47	29	Pn		Pn	21 27 27.7 +0.9
SUCK	Suckling Hills	4.48	36	Pn		Pn	21 27 27.5 +0.6
SUCK	comp=E,89nm,0.6s			IAML			21 28 19.8
SUCK	comp=N,113nm,0.4s			IAML			21 28 19.8
DFR	Drift River	4.51	336			Pn	21 27 27.6 +0.3
NCT	North Crescent	4.54	334			Pn	21 27 28.6 +0.9
HMT	Hamilton	4.55	31	Pn		Pn	21 27 28.9 +1.2
RC01	Rabbit Creek A	4.59	355	Pn		Pn	21 27 28.9 +0.6
RC01	comp=E,30nm,0.5s			IAML			21 28 22.0
RC01	Rabbit Creek A baz=175	4.59	355	P		Pn	21 27 29.3 +1.0
BGLC	Bering Glacier	4.68	37			Pn	21 27 31.1 +1.6
BGLC	Bering Glacier baz=222	4.68	37	P		Pn	21 27 31.1 +1.6
O18K	Koktuh Hills	4.69	318	Pn		Pn	21 27 30.7 +1.0
O18K	comp=N,42nm,1.1s			IAML			21 28 25.2
O18K	Koktuh Hills baz=133	4.69	318	P		Pn	21 27 30.4 +0.8
BERG	Berg Lake	4.76	33	Pn		Pn	21 27 31.3 +0.7
P17K	Kvichak River	4.80	307			Pn	21 27 31.2 +0.1
P17K	Kvichak River baz=121	4.80	307	P		Pn	21 27 31.2 +0.1
SNH	Sunshine Point	4.88	39	Pn		Pn	21 27 33.1 +0.8
SNH	comp=E,64nm,2.1s			IAML			21 28 38.5
SNH	comp=N,67nm,1.8s			IAML			21 29 53.5
DIV	Divide	4.90	19	Pn		Pn	21 27 33.2 +0.5
KNK	Knik Glacier	4.90	3	Pn		Pn	21 27 33.1 +0.5
KNK	Knik Glacier baz=184	4.90	3	P		Pn	21 27 33.7 +1.0
CYK	Cape Yakataga	4.94	41			Pn	21 27 34.7 +1.7
N20K	Mount Spurr baz=159	4.97	342	P		Pn	21 27 34.4 +0.7
BMRM	Bremner River baz=209	5.00	25	P		Pn	21 27 35.0 +1.1
SPCG	Spurr Capps Gl	5.03	343			Pn	21 27 35.5 +1.1
SUA	Susitna One	5.03	350	Pn		Pn	21 27 35.1 +0.7
SUA	comp=N,27nm,4.2s			IAML			21 28 47.5
SUA	comp=E,28nm,3.2s			IAML			21 29 03.2
SUA	Susitna One baz=169	5.03	350	P		Pn	21 27 35.1 +0.7
WAX	Waxell Ridge	5.07	37	Pn		Pn	21 27 36.2 +1.2
PMR	Palmer	5.08	359	Pn		Pn	21 27 35.8 +0.8
PMR	Palmer	5.08	359	P		Pn	21 27 36.4 +1.5
PMR	Palmer baz=179	5.08	359	P		Pn	21 27 35.8 +0.8
N19K	Bonanza Creek	5.17	328	Pn		Pn	21 27 36.8 +0.5
N19K	Bonanza Creek baz=144	5.17	328	P		Pn	21 27 37.1 +0.8
MESA	MESA	5.20	42	Pn		Pn	21 27 37.8 +1.0
MESA	comp=E,63nm,0.1s			IAML			21 28 50.1
MESA	MESA baz=229	5.20	42	P		Pn	21 27 38.0 +1.2
CRQM	Cirque	5.22	33			Pn	21 27 38.1 +1.0
CRQM	Cirque comp=E,68nm,0.8s	5.22	33	IAML			21 28 38.2
SPNN	North Nagishla	5.22	340			Pn	21 27 38.3 +1.2
KLU	Klutina	5.22	16	Pn		Pn	21 27 38.2 +1.3
KLU	comp=E,36nm,0.2s			IAML			21 28 37.6
KLU	comp=N,48nm,0.5s			IAML			21 28 38.7
KLU	Klutina baz=199	5.22	16	P		Pn	21 27 38.3 +1.3
CRQE	Cirque baz=219	5.23	34	P		Pn	21 27 38.1 +0.9
CHGN	Chignik	5.25	271	Pn		Pn	21 27 39.2 +2.0
GHO	Glory Hole Cre	5.25	0	Pn		Pn	21 27 39.1 +1.5
GHO	comp=N,20nm,0.6s			IAML			21 28 38.9
GHO	comp=E,25nm,0.5s			IAML			21 28 41.0
SML	Sawmill	5.30	3	Pn		Pn	21 27 39.5 +1.3
SML	comp=E,22nm,3.5s			IAML			21 28 58.2
SML	comp=N,20nm,2.4s			IAML			21 29 02.4
SML	Sawmill baz=184	5.30	3	P		Pn	21 27 39.8 +1.6
M23K	Glacier View	5.32	6			Pn	21 27 40.1 +1.8
M23K	Glacier View baz=188	5.32	6	P		Pn	21 27 40.1 +1.8
ISLE	Juniper Island	5.36	38	Pn		Pn	21 27 40.2 +1.2
ISLE	comp=E,25nm,0.7s			IAML			21 28 37.4
ISLE	comp=N,32nm,0.7s			IAML			21 28 40.1
SCM	Sheep Creek Mo	5.38	8	Pn		Pn	21 27 40.8 +1.6
SCM	Sheep Creek Mo baz=190	5.38	8	P		Pn	21 27 40.9 +1.6
O17K	Koliganek Bris	5.39	310			Pn	21 27 40.8 +1.6
O17K	Koliganek Bris baz=124	5.39	310	P		Pn	21 27 40.8 +1.6
N18K	Kilae Creek	5.51	322	Pn		Pn	21 27 41.9 +1.0
N18K	Kilae Creek baz=136	5.51	322	P		Pn	21 27 41.7 +0.8
VRDI	Verde Repeater	5.51	29	Pn		Pn	21 27 42.2 +1.1
N25K	Chitina, Valde	5.56	22	Pn		Pn	21 27 42.7 +0.9
N25K	Chitina, Valde baz=206	5.56	22	P		Pn	21 27 43.1 +1.4
GLB	Gilahina Butte	5.60	26	Pn		Pn	21 27 43.3 +1.1
SKT	Skwentna	5.62	348	Pn		Pn	21 27 43.5 +1.0
SKT	Skwentna baz=166	5.62	348	P		Pn	21 27 43.4 +0.9
SAMH	Samovar Hills	5.62	47			Pn	21 27 44.6 +2.0
TABL	Table Mountain	5.67	43	Pn		Pn	21 27 44.4 +1.0
SVW2	Sparrevohn	5.72	326	Pn		Pn	21 27 44.2 +0.4
SVW2	Sparrevohn	5.72	326	P		Pn	21 27 44.5 +0.7
O16K	Kokwok River B	5.73	306	Pn		Pn	21 27 45.4 +1.4
MCARA	McCarthy VSAT	5.75	30	Pn		Pn	21 27 45.8 +1.5
MCARA	McCarthy VSAT baz=215	5.75	30	P		Pn	21 27 45.6 +1.3
M24K	Tolsona, Glenn	5.77	13	Pn		Pn	21 27 46.0 +1.4
M24K	Tolsona, Glenn baz=196	5.77	13	P		Pn	21 27 46.6 +2.0
M20K	Styx River	5.77	340	Pn		Pn	21 27 45.3 +0.7
M20K	Styx River baz=157	5.77	340	P		Pn	21 27 45.4 +0.8
PINM	Pinnacle baz=236	5.82	49	P		Pn	21 27 46.8 +1.6
N17K	Nushagak Hills	5.88	316			Pn	21 27 47.2 +1.2
N17K	Nushagak Hills baz=130	5.88	316	P		Pn	21 27 47.2 +1.2
BARN	Barnard Glacie	5.92	37	Pn		Pn	21 27 48.2 +1.5
CUT	Chulitna	5.93	354	Pn		Pn	21 27 48.3 +1.7
WASW	Wrangell South	5.95	22			Pn	21 27 48.8 +1.7
CTG	Chitna Glacier baz=225	5.96	39	P		Pn	21 27 48.5 +1.3
CTGM	Chitina Glacie	5.96	39	Pn		Pn	21 27 48.4 +1.1
WACK	Wrangell Chich	5.96	22			Pn	21 27 49.0 +1.6
PNL	Peninsula	5.97	54			Pn	21 27 48.9 +1.6
PNL	Peninsula	5.97	54	P		Pn	21 27 48.3 +1.0
PNL	Peninsula baz=243	5.97	54	P		Pn	21 27 48.9 +1.6
LOGN	Logan Glacier	5.98	41	Pn		Pn	21 27 48.5 +1.0
BCPM	Bancas Point	6.00	51	Pn		Pn	21 27 48.9 +1.1
M19K	Big River Lodg	6.06	335			Pn	21 27 49.3 +0.8
M19K	Big River Lodg baz=150	6.06	335	P		Pn	21 27 49.3 +0.8
WAZA	Wrangell Mount	6.08	22			Pn	21 27 51.3 +2.3
WAT6	Susitna Watana baz=187	6.10	5	P		Pn	21 27 50.5 +1.4
M18K	Stony River	6.10	327			Pn	21 27 49.6 +0.6
M18K	Stony River baz=142	6.10	327	P		Pn	21 27 49.6 +0.6
HARP	HAARP	6.20	17			Pn	21 27 52.9 +2.5
HARP	HAARP baz=200	6.20	17	P		Pn	21 27 52.9 +2.5
CNBA	Chernabura Isl	6.25	258	Pn		Pn	21 27 51.7 +0.7
WAT1	Susitna Watana	6.32	2			Pn	21 27 53.8 +1.7
WAT1	Susitna Watana baz=182	6.32	2	P		Pn	21 27 53.8 +1.7
WAT7	Susitna Watana	6.32	1			Pn	21 27 53.9 +1.7
L19K	White Mountain	6.41	335	Pn		Pn	21 27 53.9 +0.5
L19K	White Mountain baz=150	6.41	335	P		Pn	21 27 53.8 +0.5
M17K	Holitna River	6.55	322	Pn		Pn	21 27 56.4 +1.2
M17K	Holitna River baz=134	6.55	322	P		Pn	21 27 56.5 +1.2
DHY	Denali Highway	6.61	6	Pn		Pn	21 27 57.5 +1.3
DHY	Denali Highway baz=188	6.61	6	P		Pn	21 27 57.5 +1.3
M26K	Nabesna, AK	6.62	25			Pn	21 27 58.0 +1.7
M26K	Nabesna, AK baz=210	6.62	25	P		Pn	21 27 58.0 +1.7
O29M	Mount Kennedy	6.64	51			Pn	21 27 58.4 +1.8
O29M	Mount Kennedy baz=240	6.64	51	P		Pn	21 27 58.4 +1.8
PAX	Paxson	6.70	14			Pn	21 27 59.6 +2.3
PAX	Paxson baz=197	6.70	14	P		Pn	21 27 59.6 +2.3
P29M	Windy Craggy	6.72	58	Pn		Pn	21 27 58.5 +1.0
P29M	Windy Craggy baz=248	6.72	58	P		Pn	21 27 57.6 +0.1
YUK2	White River	6.72	35			Pn	21 27 59.8 +2.1
YUK8	Steele Glacier	6.74	41			Pn	21 28 00.2 +2.1
YUK8	Steele Glacier baz=229	6.74	41	P		Pn	21 28 00.2 +2.1
YUK3	Moose Creek	6.84	36			Pn	21 28 01.9 +2.5
YUK3	Moose Creek baz=224	6.84	36	P		Pn	21 28 01.9 +2.5
M16K	Timber Creek	6.87	315	Pn		Pn	21 28 00.8 +1.3
M27K	Edge Creek, AK	6.87	29	Pn		Pn	21 28 01.3 +1.6
M27K	Edge Creek, AK baz=215	6.87	29	P		Pn	21 28 01.2 +1.5
N15K	Kwethluk River	6.89	307	Pn		Pn	21 28 02.2 +2.4
RND	Reindeer	6.90	0	Pn		Pn	21 28 02.2 +2.2
L18K	Granite Mounta	6.93	329	Pn		Pn	21 28 00.9 +0.5
YUK7	Dusty Glacier	6.94	50			Pn	21 28 02.7 +1.9
MENT	Mentasta	6.95	20	Pn		Pn	21 28 02.0 +1.3
TRF	Thorofare Moun	6.97	355	Pn		Pn	21 28 03.3 +2.2
TRF	Thorofare Moun baz=174	6.97	355	P		Pn	21 28 03.5 +2.4
S31K	Pelican	7.06	73	Pn		Pn	21 28 00.8 -1.4
YUK6	Outpost Mounta	7.07	47			Pn	21 28 05.0 +2.4
YUK6	Outpost Mounta baz=236	7.07	47	P		Pn	21 28 05.0 +2.4
CAST	Castle Rocks	7.08	349	Pn		Pn	21 28 03.1 +0.6
CAST	Castle Rocks baz=166	7.08	349	P		Pn	21 28 03.5 +1.0
L26K	Log Cabin Wild	7.10	21	Pn		Pn	21 28 05.2 +2.4
KTH	Kantishna Hill	7.11	353	Pn		Pn	21 28 04.0 +1.1
YUK4	Talbot Arm baz=232	7.19	44	P		Pn	21 28 08.1 +3.8
BVCY	Beaver Creek baz=219	7.20	32	P		Pn	21 28 06.5 +2.4
MCK	McKinley baz=180	7.22	0	P		Pn	21 28 07.0 +2.5
K20K	Telida	7.30	342	Pn		Pn	21 28 05.8 +0.2
PLBC	Pleasant Camp baz=252	7.31	61	P		Pn	21 28 05.5 -0.2
TTA	Tatalina	7.33	334	Pn		Pn	21 28 05.6 -0.4
HYT	Haines Junctio	7.36	50	Pn		Pn	21 28 08.3 +1.8
K24K	Donnelly Dome	7.46	11			Pn	21 28 10.5 +2.7
K24K	Donnelly Dome baz=194	7.46	11	P		Pn	21 28 10.5 +2.7
L27K	Beaver Creek,	7.47	26	Pn		Pn	21 28 08.9 +1.0
BCAR	Beaver Creek A	7.48	26	Pn		Pn	21 28 09.4 +1.4
L16K	Owhat River	7.49	318	Pn		Pn	21 28 09.2 +1.1
RIDG	Independent Ri	7.52	14	Pn		Pn	21 28 10.1 +1.6
SIT	Sitka	7.52	80	P		Pn	21 28 06.7 -1.7
BPAW	Bear Paw Mtn.	7.66	353	Pn		Pn	21 28 11.7 +1.3
K17K	Iditarod	7.79	327	Pn		Pn	21 28 12.9 +0.7
SCRK	Sand Creek	7.87	16	Pn		Pn	21 28 14.2 +0.8
S32K	Killisnoo	7.92	77	Pn		Pn	21 28 13.5 -0.4
O30N	Mendenhall	7.94	52	Pn		Pn	21 28 15.9 +1.5
J18K	Innoko River	7.96	334	Pn		Pn	21 28 14.7 +0.2
M29M	Somme Creek	7.98	38	Pn		Pn	21 28 17.0 +2.1
R32K	Eaglecrest	8.00	71	Pn		Pn	21 28 16.0 +0.9
JIS	Juneau Island	8.07	71	Pn		Pn	21 28 14.6 -1.4
J20K	Nowinta River	8.08	344	Pn		Pn	21 28 16.4 +0.2
CCB	Clear Creek Bu	8.16	4	Pn		Pn	21 28 18.9 +1.6
J25K	Salcha River,	8.30	11	Pn		Pn	21 28 19.5 +0.2
IL31		8.33	6	Pn		Pn	21 28 20.9 +1.4
ILAR	Eielson Array	8.33	6	Pn		Pn	21 28 20.2 +0.6
COLA	College	8.39	3	P		Pn	21 28 22.3 +2.0
N31M	Braeburn, Yuko	8.42	48	Pn		Pn	21 28 22.8 +1.9
J26L	Joseph Creek	8.42	16	Pn		Pn	21 28 22.3 +1.3
WHY	Whitehorse	8.44	55	Pn		Pn	21 28 22.5 +1.3
MDM	Murphy Dome	8.46	2	Pn		Pn	21 28 22.2 +0.8
L29M	L29M	8.55	35	Pn		Pn	21 28 24.4 +1.7
I23K	Minto, Yukon-K	8.65	359	Pn		Pn	21 28 24.8 +0.9
M30M	Minto, Yukon	8.65	41	Pn		Pn	21 28 25.0 +1.0
M30M	Minto, Yukon baz=231	8.65	41	P		Pn	21 28 26.2 +2.2
P32M	Atlin	8.65	63	Pn		Pn	21 28 25.3 +1.3
DAWY	Dawson	8.92	28	Pn		Pn	21 28 27.9 +0.2
J16K	Anvik River	8.93	324	Pn		Pn	21 28 27.9 +0.1
P33M	Teslin, Yukon	9.25	60	Pn		Pn	21 28 33.5 +1.3
Q32M	Nakina River	9.26	68	Pn		Pn	21 28 34.1 +1.6
K29M	Barlow Dome	9.28	33	Pn		Pn	21 28 34.1 +1.5
H21K	Melozitna Rive	9.34	350	Pn		Pn	21 28 33.4 0.0
H24K	Noodor Dome	9.35	3	Pn		Pn	21 28 36.5 +2.8
M31M	Drury Creek, Y	9.35	47	Pn		Pn	21 28 35.6 +2.0
J14K	Nanvaranak Lak	9.64	316	Pn		Pn	21 28 38.1 +0.5
IMAR	Indian Mountai	9.75	348	Pn		Pn	21 28 39.5 +0.4
FARO	Faro, Yukon	9.79	48	Pn		Pn	21 28 42.1 +2.5
I28M	Miner Creek	9.95	22	Pn		Pn	21 28 45.2 +3.3
H17K	Granite Mounta	9.97	332	Pn		Pn	21 28 42.7 +0.7
R33M	Jennings River	9.98	66	Pn		Pn	21 28 43.4 +1.0
J30M	Hart River	10.17	32	Pn		Pn	21 28 46.9 +2.0
FYU	Fort Yukon	10.22	8	Pn		Pn	21 28 45.7 +0.3
G23K	Bananza Creek	10.23	358	Pn		Pn	21 28 47.8 +2.2
MMPY	Sheldon Lake,	10.83	48	Pn		Pn	21 28 56.1 +2.2
F24K	Squaw Lake	11.04	2	Pn		Pn	21 28 58.9 +2.2
BMAR	Burnt Mountain	11.12	9	Pn		Pn	21 28 58.5 +0.6
F17K	Baldwin Pennin	11.51	335	Pn		Pn	21 29 02.9 -0.1
C23K	Itkillik River	13.37	358	Pn		Pn	21 29 30.6 +2.1

*IDC **05** 21:32:40.5±3.1, 33°.25N×45°.67E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=69.0km s-min=25.7km az=19.0*
*TEH **05** 21:32:44.7, 33°.64N×45°.85E, h9km±32km, ML3.6*

ISC 05 21:32:45.7±1.1, 33°.64N±0°.09×45°.82E±0°.07, h19km, n32, σ1°66/33, mb3.6/6, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILBA	Ilam Banvizeh	0.32	92	Pg	Pg	21 32 51.3	-1.4
ILBA				Sg	Sg	21 32 56.4	-1.2
KGS1	Ghasr-e-Shirin	0.89	348	Pg	Pb	21 33 01.7	-0.8
IGHG	Ghaleghazi	0.93	42	Pg	Pb	21 33 02.6	-0.7
IDHR	Dehrash	1.16	24	Pg	Pb	21 33 06.4	-0.8
KCHF	Cheshme Sefid,	1.20	58	Pg	Pb	21 33 07.7	+0.1
ILIN	Lien	1.59	36	Pg	Pb	21 33 14.7	+0.1
IKFM	Kafar-mosalman	1.69	93	Pg	Pn	21 33 16.3	+2.1
IBZA	Bozab	1.89	63	Pn	Pn	21 33 19.0	+1.9
IDOB	Doab	1.97	85	Pn	Pn	21 33 19.9	+1.7
IALM	Almabolaq	2.29	57	Pn	Pn	21 33 25.2	+2.4
HSAM	Samen	2.38	75	Pn	Pn	21 33 25.3	+1.4
SDS1	Sardasht. Az.	2.52	354	Pn	Pb	21 33 28.6	-1.9
HAGD	Aghdareh	2.99	66	Pn	Pn	21 33 34.4	+2.1
MAHB	Mahabad	3.12	358	Pn	Pn	21 33 36.7	+2.6
IRAZ	Razeghan	3.82	61	Pn	Pn	21 33 45.6	+1.9
IPIR	Pirpir	4.36	101	Pn	Pn	21 33 53.0	+1.9
IQOM	Qom	4.51	73	Pn	Pn	21 33 55.1	+1.9
QAMS	Qamsar	4.65	87	Pn	Pn	21 33 57.1	+2.0
IKLH	Kolahrood	4.82	92	Pn	Pn	21 33 59.7	+2.2
IMRD	Marand	5.07	359	Pn	Pn	21 34 02.2	+1.5
IVRN	Varamin	5.07	73	Pn	Pn	21 34 02.3	+1.5
KRSH	Karshahi	5.27	85	Pn	Pn	21 34 04.9	+1.4
IDMV	Damavand	5.47	68	Pn	Pn	21 34 07.6	+1.1
IZEF	Zefreh	5.50	96	Pn	Pn	21 34 08.9	+2.1
IRAM	Ramesheh	5.82	106	Pn	Pn	21 34 12.6	+1.4
AKASG	Malin Array Be	20.94	329	P	P	21 37 26.5	-0.7
	0.6nm,0.6s,baz=136,slow=12,SNR=4.3 0.6nm,0.6s						
BVAR	Borovoye Array	26.14	35	P	P	21 38 21.0	+2.5
	0.5nm,0.6s,baz=226,slow=7.7,SNR=4.1 0.5nm,0.6s						
MKAR	Makanchi Array	30.51	54	P	P	21 38 58.4	+0.9
	0.7nm,0.7s,baz=247,slow=7.4,SNR=9.6 0.7nm,0.7s						
HFS	Hagfors	33.80	331	P	P	21 39 26.4	+0.2
	4.9nm,1.1s,baz=114,slow=13,SNR=4.8 4.9nm,1.1s						
ZALV	Zalesovo Beam	34.11	42	P	P	21 39 28.8	-0.2
	0.4nm,0.3s,baz=266,slow=7.1,SNR=2.3 0.4nm,0.3s						
EKA	Eskdalemuir Ar	40.06	318	P	P	21 40 19.5	0.0
	1.0nm,0.7s,baz=110,slow=9.3,SNR=1.8 1.0nm,0.7s						
CMAR	Chiang Mai Arr	49.55	94	P	P	21 41 33.9	-1.7
	0.2nm,0.4s,baz=306,slow=7.7,SNR=1.4 0.2nm,0.4s						

IDC 05 21:40:37.4±2.1, 6°.82S×128°.87E, h0km, mb3.4/1, mbtmp3.4/3, ML3.3/2, MS3.0/1, Error ellipse: s-maj=116.0km s-min=32.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.09	158	Pn	Pn	21 43 59.2	+0.8
	0.1nm,0.3s,baz=337,slow=12,SNR=11						
WRA				Sn	Sn	21 46 20.8	-15
	0.4nm,0.3s,baz=328,slow=23,SNR=8.3 0.5nm,0.8s						
ASAR	Alice Springs	17.44	164	P	Pn	21 44 41.6	-0.6
	0.2nm,0.3s,baz=344,slow=11,SNR=12						
ASAR				S	Sn	21 47 39.0	-18
	0.2nm,0.3s,baz=352,slow=27,SNR=2.0 0.9nm,0.5s						
PMG	Port Moresby	18.29	99	LR	LR	21 53 14.1	
	comp=Z,43nm,19.7s,baz=148,slow=41						
MKAR	Makanchi Array	67.46	327	P	P	21 51 35.1	0.0
	0.2nm,0.5s,baz=134,slow=6.2,SNR=4.2 0.2nm,0.5s						

IDC 05 21:46:30.4±8.3, 15°.69S×174°.28W, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=355.3km s-min=65.4km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.96	257	P	P	21 55 19.2	+0.2
	0.3nm,0.4s,baz=91,slow=6.8,SNR=7.0 0.3nm,0.4s						
ASAR	Alice Springs	49.22	252	P	P	21 55 20.6	-0.4
	2.6nm,0.5s,baz=88,slow=8.3,SNR=36 2.6nm,0.5s						
BRTR	Keskin Array B	145.84	320	PKPbc	PKPdf	22 06 11.4	-0.3
	0.4nm,0.5s,baz=90,slow=2.9,SNR=3.8						

IDC 05 21:48:30.2±2.1, 8°.18S×121°.32E, h0km, mb3.2/1, mbtmp3.3/3, ML3.4/2, Error ellipse: s-maj=204.1km s-min=28.8km az=54.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.20	134	P	Pn	21 52 31.4	-0.7
	0.1nm,0.3s,baz=318,slow=12,SNR=8.5 0.4nm,0.6s						
ASAR	Alice Springs	19.57	143	P	P	21 52 59.8	-0.1
	0.2nm,0.3s,baz=315,slow=8.7,SNR=9.1 1.0nm,0.6s						
MKAR	Makanchi Array	64.80	331	P	P	21 59 11.0	+0.2
	0.1nm,0.5s,baz=136,slow=7.7,SNR=5.4 0.1nm,0.5s						

*IDC **05** 21:50:59.1±0.9, 20°.13S×68°.35E, h0km, mb3.8/12, mbtmp3.8/12, MS3.9/41, Error ellipse: s-maj=29.2km s-min=23.4km az=5.0*
*GCMT **05** 21:51:00.7±0.4, 20°.31S±0°.02×68°.03E±0°.02, h16km±1km, MW4.8/85, Moment Tensor Solution. s15,c15; s85,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.35±.10; Mθθ 1.78±.10; Mφφ-1.43±.09; Mrθ-0.36±.23; Mrφ-0.85±.07; Mθφ 0.63±.29; Best double couple: M0 1.96700×10^16 NP1:φ=147.00000°, δ84.00000°, λ-23.00000°. NP2: φ=240.00000°, δ67.00000°, λ-174.00000°. Principal axes: T 2.0970, Plg12.0000°, Azm196.0000°; N -0.2610, Plg66.0000°, Azm314.0000°; P -1.8380, Plg20.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 21:51:05.7±1.2, 19°.8S±0°.2×67°.42E±0°.09, h10km±2km, mb4.4/14 Error ellipse: s-maj=34.4km s-min=5.0km az=158.0*

ISC 05 21:50:59.0±0.9, 20°.8S±0°.2×68°.0E±0°.1, h10km, n71, σ1°74/30, mb4.0/16, MS4.0/41, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	13.74	19	T	T	22 07 40.7	
	baz=199,slow=76,SNR=43						
H08S2	Diego Garcia H	13.75	19	T	T	22 07 44.0	
	baz=199,slow=76,SNR=102						
H08S3	Diego Garcia H	13.76	19	T	T	22 07 42.9	
	baz=199,slow=76,SNR=87						
H04N2	CROZET ISLANDS	28.59	204	T	T	22 27 21.6	
	baz=32,slow=75,SNR=1732						
H04N1	CROZET ISLANDS	28.60	204	T	T	22 27 23.2	
	baz=32,slow=75,SNR=1822						
H04N3	CROZET ISLANDS	28.61	204	T	T	22 27 22.6	
	baz=32,slow=75,SNR=1556						
PALK	Pallekele	30.54	26	LR	LR	22 06 08.9	
	comp=Z,19nm,22.0s,baz=307,slow=30						
LSZ	Lusaka	38.13	272	P	P	21 58 19.3	+0.5
LSZ	Lusaka	38.13	272	LR	LR	22 12 13.6	
	comp=Z,94nm,20.1s,baz=116,slow=33						
LBTB	Lobatse	39.14	256	LR	LR	22 13 48.8	
	comp=Z,84nm,18.1s,baz=96,slow=34						
BOSA	Boshof	39.41	250	P	P	21 58 35.0	+5.5
BOSA				IAmb	IAmb	21 58 41.7	
	comp=Z,14nm,1.4s						
BOSA	Boshof	39.41	250	P	P	21 58 35.2	+5.7
	comp=Z,1.0nm,0.5s,baz=93,slow=4.9,SNR=5.2						
BOSA				S	S	22 04 30.4	-1.0
	comp=Z,1.8nm,0.8s,baz=191,slow=5.2,SNR=2.0						
BOSA				LR	LR	22 10 49.2	

comp=Z,25nm,19.3s,baz=56,slow=32
ASAR Alice Springs 60.64 106 P **P 22 01 10.9 +0.2**
comp=Z,0.5nm,0.6s,baz=271,slow=6.2,SNR=8.9
ASAR LR LR 22 24 35.2
comp=Z,250nm,18.8s,baz=282,slow=33
comp=Z,0.5nm,0.6s
WRA Warramunga Ar 61.83 102 P **P 22 01 18.6 -0.2**
comp=Z,2.0nm,1.2s,baz=264,slow=9.3,SNR=2.7
comp=Z,2.0nm,1.2s
MMAI Mount Meron Ar 61.84 329 P **P 22 01 18.7 +0.2**
comp=Z,0.2nm,0.3s,baz=139,slow=9.5,SNR=2.1
MMAI LR LR 22 25 34.4
comp=Z,34nm,19.7s,baz=104,slow=34
comp=Z,0.2nm,0.3s
AAK Ala-Archa 63.35 5 LR LR 22 26 48.9
comp=Z,136nm,18.1s,baz=207,slow=34
KKAR Karatay Array 63.58 2 P **P 22 01 28.6 -1.2**
GNI Garni 64.33 340 LR LR 22 27 50.8
comp=Z,74nm,19.6s,baz=158,slow=35
STKA Stephens Creek 65.84 117 LR LR 22 26 17.2
comp=Z,171nm,20.3s,baz=209,slow=32
KBZ Khabaz 68.16 341 LR LR 22 28 50.9
comp=Z,70nm,21.0s,baz=193,slow=34
MK31 Makanchi Array 68.46 11 P **P 22 02 02.0 +0.8**
MK31 IAmb IAmb 22 02 04.2
comp=Z,2.1nm,0.9s
MKAR Makanchi Array 68.46 11 P **P 22 02 02.1 +1.0**
MKAR Makanchi Array 68.46 11 P **P 22 01 57.6 -3.6**
comp=Z,0.2nm,0.4s,baz=215,slow=4.8,SNR=5.0
MKAR LR LR 22 31 30.5
comp=Z,110nm,18.3s,baz=224,slow=36
comp=Z,0.2nm,0.4s
ABKAR Akbulak array 70.05 354 P **P 22 02 11.3 +0.4**
VNDA Vanda 70.74 167 LR LR 22 31 31.1
comp=Z,83nm,18.1s,baz=218,slow=34
KURBB Kurchatov Arra 71.67 7 P **P 22 02 18.1 -2.6**
comp=Z,0.5nm,0.7s,baz=206,slow=6.1,SNR=3.9
comp=Z,0.5nm,0.7s
KURK Kurchatov 71.77 7 P **P 22 02 22.8 +1.5**
KURK IAmb IAmb 22 02 24.6
comp=Z,3.3nm,0.9s
CTA Charters Tower 72.63 105 LR LR 22 30 54.2
comp=Z,144nm,21.2s,baz=264,slow=33
TORD Torodi Ar. Bea 73.29 291 P **P 22 02 30.9 -0.3**
TORD Torodi Ar. Bea 73.29 291 P **P 22 02 34.2 +3.0**
comp=Z,0.4nm,0.5s,baz=93,slow=4.9,SNR=1.6
TORD LR LR 22 33 30.6
comp=Z,92nm,18.2s,baz=138,slow=35
comp=Z,0.4nm,0.5s
BVAR Borovoye Array 73.49 2 P **P 22 02 29.2 -2.3**
comp=Z,1.1nm,0.7s,baz=166,slow=7.3,SNR=8.3
BVAR LR LR 22 33 09.9
comp=Z,150nm,21.9s,baz=190,slow=35
comp=Z,1.1nm,0.7s
ZAA0 Zalesovo Array 75.80 10 P **P 22 02 46.1 +1.2**
ZAA0 IAmb IAmb 22 02 47.5
comp=Z,3.6nm,0.8s
ZALV Zalesovo Beam 75.80 10 P **P 22 02 45.8 +0.9**
ZALV Zalesovo Beam 75.80 10 P **P 22 02 42.2 -2.6**
comp=Z,1.9nm,0.7s,baz=208,slow=7.4,SNR=4.8
ZALV LR LR 22 34 45.0
comp=Z,74nm,18.0s,baz=216,slow=35
comp=Z,1.9nm,0.7s
DBIC Dimbokro 76.46 283 LR LR 22 34 58.5
comp=Z,100nm,18.4s,baz=76,slow=34
SONM Songino Array 76.49 26 P **P 22 02 50.6 +1.4**
SONM Songino Array 76.49 26 P **P 22 02 46.7 -2.4**
comp=Z,1.0nm,1.1s,baz=212,slow=4.6,SNR=4.2
SONM LR LR 22 35 22.0
comp=Z,151nm,20.4s,baz=175,slow=35
comp=Z,1.0nm,1.1s
PMG Port Moresby 76.70 95 LR LR 22 34 02.4
comp=Z,86nm,20.8s,baz=243,slow=34
ULN Ulaanbaatar 76.78 26 P **P 22 02 52.7 +1.8**
ULN IAmb IAmb 22 02 55.3
comp=Z,3.3nm,1.1s
AKASG Malin Array Be 78.90 336 LR LR 22 36 02.4
comp=Z,34nm,19.6s,baz=5.0,slow=34
JNU Nakatsue 80.45 49 LR LR 22 38 57.8
comp=Z,74nm,18.5s,baz=222,slow=36
KIRV Kirov 80.51 350 LR LR 22 37 25.1
comp=Z,46nm,19.9s,baz=151,slow=35
KSRS Korea Array 80.83 44 LR LR 22 37 23.2
comp=Z,68nm,20.9s,baz=245,slow=35
PMSA Palmer Station 87.14 199 LR LR 22 39 11.6
comp=Z,96nm,19.2s,baz=121,slow=33
MDT Midelt 87.34 306 LR LR 22 43 53.9
comp=Z,94nm,18.1s,baz=164,slow=36
MJAR Matsushiro Arr 87.38 49 P **P 22 03 45.7 -0.8**
comp=Z,1.6nm,0.6s,baz=207,slow=3.7,SNR=2.0
MJAR LR LR 22 40 23.2
comp=Z,54nm,21.4s,baz=254,slow=34
comp=Z,1.6nm,0.6s
KLR Kul'dur 89.72 36 LR LR 22 46 50.1
comp=Z,60nm,18.1s,baz=239,slow=38
BBTS Babate 90.08 286 LR LR 22 43 37.7
comp=Z,48nm,18.0s,baz=70,slow=35
ASAJ Asahikawa 93.78 44 LR LR 22 43 36.4
comp=Z,38nm,21.4s,baz=245,slow=34
ARCES ARCESS Array B 94.98 346 LR LR 22 47 32.5
comp=Z,65nm,18.7s,baz=196,slow=36
YAK Yakutsk 95.83 25 LR LR 22 47 06.9
comp=Z,78nm,21.6s,baz=271,slow=35
YKA Yellowknife Ar 138.25 2 PKP **PKiKP 22 10 25.1 -1.0**
comp=Z,0.4nm,0.8s,baz=358,slow=2.2,SNR=3.0
FFC Flin Flon 145.23 350 PKPdf **PKiKP 22 10 39.6 -0.9**
EDM Edmonton 147.57 1 PKPdf **PKPbc 22 10 44.3 +0.9**
ULM Lac du Bonnet 147.90 340 PKPbc **PKiKP 22 10 45.4 -0.9**
comp=Z,2.4nm,0.6s,baz=28,slow=3.6,SNR=4.4

TAP 05 22:09:03.9, 24.13N×121.71E, h10km, ML1.9, 1C-4D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**288**	⇓P	Pg	22 09 07.2	+0.7
	baz=287						
ETL				*i* S	Sg	22 09 09.0	+0.8
	baz=287						
NACB	**Ninganchiao**	**0.11**	**291**	*e*P	Pb	22 09 07.7	-0.5
	baz=290						
NACB				*i* S	Sg	22 09 09.9	+1.1
	baz=290						
TWD	**Chiawan**	**0.12**	**243**	*i* P	Pg	22 09 07.3	+0.5
	baz=241						
TWD				*i* S	Sg	22 09 09.9	+1.0
	baz=241						
EAHA	**Aohua**	**0.20**	**8**	⇓*e*P	Pg	22 09 08.7	+0.6
	baz=7.0						
EAHA				S	Sg	22 09 12.8	+1.8
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.22**	**289**	*i* P	Pb	22 09 09.5	-0.6
	baz=289						
ETLH				S	Sg	22 09 13.2	+1.5
	baz=289						
ETM	**Tongmen**	**0.26**	**230**	*i* P	Pb	22 09 10.1	-0.6
	baz=229						
ETM				*i* S	Sb	22 09 14.8	-0.3
	baz=229						
LXIB	**Xiulin Townshi**	**0.29**	**248**	P	Pb	22 09 10.7	-0.7
	baz=247						
LXIB				*i* S	Sb	22 09 15.8	-0.5
	baz=247						
ENA	**Nanau**	**0.29**	**5**	⇑*i* P	Pb	22 09 10.7	-0.6
	baz=6.0						
ENA				*e*S	Sb	22 09 15.2	-1.0
	baz=6.0						
NNSB	**Datong**	**0.42**	**315**	*i* P	Pb	22 09 13.1	-0.4
	baz=314						
NNSB				S	Sb	22 09 19.7	-0.3
	baz=314						
LATG	**Datong**	**0.43**	**337**	⇓P	Pb	22 09 13.7	0.0
	baz=337						
LATG				S	Sb	22 09 20.6	+0.2
	baz=337						
NNS	**Nan Shan**	**0.43**	**315**	P	Pg	22 09 13.1	+0.6
	baz=315						
NNS				*e*S	Sb	22 09 20.1	-0.2
	baz=315						
FUSS	**Fushou**	**0.44**	**285**	*i* P	Pb	22 09 13.5	-0.4
	baz=284						
FUSS				*e*S	Sb	22 09 21.0	+0.3
	baz=284						
TEGC	**Jichi Village**	**0.45**	**200**	*e*S	Sb	22 09 20.4	-0.3
	baz=199						
ESAO	**Su ao**	**0.46**	**15**	*i* P	Pb	22 09 13.9	-0.2
	baz=15						
TWC	**Suao**	**0.49**	**15**	*e*P	Pb	22 09 15.0	+0.3
	baz=16						
CHGB	**Renai**	**0.49**	**262**	⇓*e*P	Pb	22 09 15.4	+0.6
	baz=261						
CHGB				S	Sb	22 09 22.5	+0.3
	baz=261						
NDS	**Dongshan**	**0.50**	**1**	P	Pb	22 09 14.9	+0.1
NDT	**Datong Townshi**	**0.50**	**339**	*e*P	Pb	22 09 15.1	+0.3
	baz=338						
NDT				*e*S	Sb	22 09 21.9	-0.3
	baz=338						
WARBT	**Fenglin Townsh**	**0.51**	**216**	*e*P	Pb	22 09 15.2	+0.3
	baz=215						
WARBT				S	Sb	22 09 22.4	+0.1
	baz=215						
WUSB	**Renai**	**0.56**	**256**	*i* P	Pb	22 09 15.6	-0.3
	baz=255						
WUSB				*e*S	Sb	22 09 23.8	-0.2
	baz=255						
TWE	**Neicheng**	**0.59**	**356**	P	Pb	22 09 15.9	-0.4
	baz=357						
VWDT	**VWDT**	**0.64**	**234**	P	Pb	22 09 16.8	-0.4
	baz=234						
HGSD	**Ruisui**	**0.69**	**202**	*i* P	Pb	22 09 17.9	-0.2
	baz=202						
HGSD				*i* S	Sb	22 09 28.5	+0.9
	baz=202						
SSLB	**Suanglung**	**0.77**	**244**	*e*P	Pb	22 09 19.8	+0.4
	baz=243						
SSLB				*i* S	Sb	22 09 30.7	+0.7
	baz=243						

*RHSSO **05** 22:15:05.8±0.2, 43.34N×17.48E, h4km±1km, ML2.6/21*
*BEO **05** 22:15:05.6±0.5, 43.31N×17.34E, h0km, ML2.5/10*
*PDG **05** 22:15:05.1±0.2, 43.30N×17.38E, h6km, ML2.7/11, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*
*VIE **05** 22:15:07.7±0.7, 43.31N×17.68E, h84km±35km, mb2.7/10, ml2.4/10, ms3.6/2, Error ellipse: s-maj=6.7km s-min=6.2km az=91.0*

ISC 05 22:15:05.1±1.0, 43.29N±0.02×17.46E±0.02, h9km±8km, n82, σ1s04/139, 14C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RICI	**Ricice**	**0.31**	**311**	*i* Pg	**Pg**	**22 15 10.6**	**-0.8**
RICI				S	Sg	22 15 15.0	-0.5
MAKA	**Makarska**	**0.32**	**270**	*i* Pg	**Pg**	**22 15 11.2**	**-0.2**
MAKA				S	Sg	22 15 16.5	+0.9
STON	**Ston**	**0.45**	**157**	*e*Pg	**Pb**	**22 15 14.4**	**-0.9**
STON				*e*Sg	**Sb**	**22 15 22.9**	**+0.8**
STON	**Ston**	**0.45**	**157**	*e*Pg	**Pb**	**22 15 14.4**	**-0.9**
STON				Sg	**Sb**	**22 15 22.1**	**+0.1**
STON	**Ston**	**0.45**	**157**	⇓*i*Pg	**Pb**	**22 15 14.2**	**-1.1**
STON				*e*Sg	**Sb**	**22 15 22.2**	**+0.1**
NEVS	**Nevesinje**	**0.47**	**88**	*e*Pg	**Pg**	**22 15 14.1**	**-0.2**
NEVS				*e*Sg	**Sb**	**22 15 21.3**	**-1.5**
LSTV	**Lastovo**	**0.66**	**219**	*e*Pg	**Pg**	**22 15 17.8**	**-0.1**
HVAR	**Hvar**	**0.74**	**262**	*e*Pg	**Pg**	**22 15 18.6**	**-0.8**
DBRK	**Dubrovnik**	**0.80**	**140**	*i* Pg	**Pb**	**22 15 20.5**	**-0.7**
KLINJ	**Klinje**	**0.83**	**98**	*e*Pg	**Pg**	**22 15 20.1**	**-1.0**
KLINJ				*e*Sg	**Sb**	**22 15 33.1**	**-0.1**
TREB	**Trebinje**	**0.87**	**131**	*e*Pg	**Pb**	**22 15 21.8**	**-0.6**
TREB				*e*Sg	**Sn**	**22 15 35.1**	**-1.3**
TREB	**Trebinje**	**0.87**	**131**	⇑*i*Pg	**Pb**	**22 15 21.6**	**-0.8**
TREB				*e*Sg	**Sn**	**22 15 35.0**	**-1.3**
BRY	**Bratogost**	**0.88**	**116**	⇑*i*Pg	**Pg**	**22 15 21.3**	**-0.8**
BRY				*i* Sg	**Sn**	**22 15 36.0**	**-0.9**
BRY	**Bratogost**	**0.88**	**116**	⇑*i*Pg	**Pg**	**22 15 21.4**	**-0.7**
BRY				*e*Sg	**Sb**	**22 15 34.2**	**-0.5**
KIJV	**Kijevo**	**1.05**	**314**	*e*Pg	**Pb**	**22 15 23.2**	**-2.3**
UPM	**Unac-Piva**	**1.06**	**94**	⇓*i*Pg	**Pg**	**22 15 24.3**	**-1.2**
UPM				*i* Sg	**Sn**	**22 15 42.1**	**+0.7**
UPM	**Unac-Piva**	**1.06**	**94**	*e*Pg	**Pg**	**22 15 24.4**	**-1.1**
UPM				*e*Sg	**Sn**	**22 15 40.0**	**-1.4**
HCY	**Herceg Novi**	**1.13**	**137**	⇑*i*Pg	**Pb**	**22 15 25.8**	**-1.1**
HCY				*i* Sg	**Sn**	**22 15 43.7**	**+0.8**
HCY	**Herceg Novi**	**1.13**	**137**	⇑*i*Pg	**Pg**	**22 15 26.4**	**-0.5**
HCY				*e*Sg	**Sn**	**22 15 43.4**	**+0.5**
MGRS	**Mrkonjic Grad**	**1.16**	**347**	⇓*i*Pg	**Sb**	**22 15 25.5**	**-2.1**
MGRS				*e*Sg	**Sb**	**22 15 41.4**	**-1.2**
NKME	**Niksic**	**1.21**	**115**	⇑*i*Pg	**Pn**	**22 15 27.8**	**-0.6**
NKME				*i* Sg	**Sn**	**22 15 46.6**	**+1.6**
CEME	**Cevo**	**1.30**	**124**	⇓*i*Pg	**Pg**	**22 15 29.4**	**-0.7**
CEME				*i* Sg	**Sg**	**22 15 49.6**	**+2.6**
HAPS	**Han Pijesak,Bl**	**1.35**	**53**	*e*Pg	**Pn**	**22 15 29.8**	**-0.5**
HAPS				*e*Sg	**Sg**	**22 15 50.6**	**+2.2**
HAPS	**Han Pijesak,Bl**	**1.35**	**53**	⇑*i*Pg	**Pn**	**22 15 29.5**	**-0.8**
HAPS				*e*Sg	**Sb**	**22 15 47.2**	**-0.8**
A050A	**Klekovaca**	**1.37**	**331**	⇑*i*Pg	**Pn**	**22 15 29.3**	**-1.2**
A050A				*e*Sg	**Sn**	**22 15 48.1**	**-0.8**
ZIRJ	**Zirje**	**1.37**	**286**	*e*Pn	**Pn**	**22 15 29.0**	**-1.4**
MORI	**Morici**	**1.40**	**295**	*e*Pn	**Pn**	**22 15 29.5**	**-1.3**
PLE	**Pljevlja**	**1.41**	**88**	⇓*i*Pg	**Pb**	**22 15 31.4**	**-0.3**
PLE				*i* Sg	**Sg**	**22 15 53.1**	**+2.6**
RUDO	**Rudo**	**1.43**	**76**	⇑*i*Pg	**Pn**	**22 15 30.2**	**-1.1**
RUDO				*e*Sg	**Sb**	**22 15 50.0**	**-0.4**
BUM	**Brajici-Budva**	**1.45**	**133**	⇓*i*Pg	**Pg**	**22 15 32.0**	**-0.7**
BUM				*i* Sg	**Sg**	**22 15 54.0**	**+2.4**
BLY	**Banja Luka**	**1.47**	**352**	*e*Pg	**Pn**	**22 15 31.6**	**-0.3**
BLY				*e*Sg	**Sb**	**22 15 53.0**	**+1.4**
BLY	**Banja Luka**	**1.47**	**352**	⇓*i*Pg	**Pn**	**22 15 30.8**	**-1.1**
BLY				*e*Sg	**Sn**	**22 15 51.5**	**+0.2**
DOB	**Doboj**	**1.52**	**18**	*e*Pg	**Pn**	**22 15 32.0**	**-0.5**
DOB				*e*Sg	**Sn**	**22 15 51.7**	**-0.7**
BBLS	**Lazići**	**1.53**	**67**	*e*Pg	**Pb**	**22 15 33.9**	**+0.2**
BBLS				*e*Sg	**Sg**	**22 15 55.5**	**+1.2**
BBLS	**Lazići**	**1.53**	**67**	*e*Pg	**Pn**	**22 15 32.5**	**-0.2**
BBLS				*e*Sg	**Sb**	**22 15 53.3**	**+0.1**
KOME	**Kolasin**	**1.57**	**105**	⇑*i*Pn	**Pg**	**22 15 34.4**	**-0.8**
KOME				*i* Sn	**Sg**	**22 15 57.8**	**+2.2**
DRME	**Dracevica, Mon**	**1.68**	**130**	⇓*i*Pn	**Pb**	**22 15 35.9**	**-0.4**
DRME				*i* Sn	**Sg**	**22 16 00.5**	**+1.3**
DRME	**Dracevica, Mon**	**1.68**	**130**	⇑*i*Pn	**Pb**	**22 15 36.1**	**-0.2**
DRME				*e*Sn	**Sg**	**22 15 58.3**	**-0.9**
UDBI	**Udbina**	**1.74**	**316**	*e*Pn	**Pn**	**22 15 36.6**	**+0.9**
A051A	**Mrakovica**	**1.77**	**347**	⇓*i*Pn	**Pn**	**22 15 36.3**	**+0.3**
A051A				*e*Sn	**Sn**	**22 15 59.1**	**+0.4**
PRIJ	**Prijedor**	**1.77**	**343**	*e*Sn	**Sn**	**22 15 59.5**	**+0.9**
IVA	**Berane**	**1.83**	**102**	⇓*i*Pn	**Pb**	**22 15 37.9**	**-1.0**
IVA				*i* Sn	**Sg**	**22 16 03.8**	**-0.2**
SJES	**Sjenica**	**1.84**	**90**	*e*Pn	**Pg**	**22 15 40.0**	**-0.3**
SJES				*e*Sn	**Sg**	**22 16 04.6**	**+0.4**
SJES	**Sjenica**	**1.84**	**90**	⇓*i*Pn	**Pb**	**22 15 38.4**	**-0.6**
SJES				*e*Sn	**Sb**	**22 16 01.4**	**-0.8**
ULC	**Ulcinj**	**1.87**	**134**	⇑*i*Pn	**Pb**	**22 15 38.4**	**-1.1**
ULC				*i* Sn	**Sg**	**22 16 05.0**	**-0.1**
DUGI	**Dugi Otok**	**1.88**	**293**	*e*Pn	**Pn**	**22 15 37.9**	**+0.5**
TEKS	**Tekeris**	**1.96**	**49**	*e*Pn	**Pb**	**22 15 41.4**	**+0.4**
TEKS				*e*Sn	**Sb**	**22 16 05.8**	**+0.3**
TEKS	**Tekeris**	**1.96**	**49**	*e*Pn	**Pn**	**22 15 39.7**	**+1.1**
TEKS				*e*Sn	**Sn**	**22 16 03.4**	**+0.1**
IVAS	**Ivanjica**	**1.98**	**81**	*e*Pn	**Pn**	**22 15 40.9**	**-0.6**
IVAS				*e*Sn	**Sg**	**22 16 08.3**	**-0.6**
DIVS	**Divibare**	**2.01**	**65**	*e*Pn	**Pb**	**22 15 42.3**	**+0.4**
DIVS				*e*Sn	**Sb**	**22 16 08.0**	**+0.9**
VIRC	**Vir**	**2.01**	**301**	*e*Pn	**Pn**	**22 15 40.2**	**+1.0**
PLIT	**Plitvice**	**2.07**	**321**	*e*Pn	**Pn**	**22 15 41.6**	**+1.5**
NVLJ	**Novalja**	**2.26**	**305**	*e*Pn	**Pn**	**22 15 43.4**	**+0.7**
MOSL	**Moslavina**	**2.38**	**348**	*e*Pn	**Pn**	**22 15 44.4**	**0.0**
RABC	**Rab**	**2.42**	**308**	*e*Pn	**Pn**	**22 15 45.8**	**+0.9**
GRUS	**Gruza**	**2.44**	**75**	*e*Pn	**Pb**	**22 15 48.0**	**-1.2**
GRUS				*e*Sn	**Sb**	**22 16 20.3**	**+0.9**
FRGS	**Fruska Gora**	**2.52**	**41**	*e*Pn	**Pn**	**22 15 47.1**	**+0.8**
FRGS				*e*Sn	**Sn**	**22 16 17.3**	**+0.1**
SELS	**Selova**	**2.68**	**90**	*e*Pn	**Pn**	**22 15 49.9**	**+1.4**
BOJS	**Bojanci**	**2.72**	**325**	*e*Pn	**Pn**	**22 15 49.9**	**+0.9**
BOJS				*e*Sn	**Sn**	**22 16 22.7**	**+0.6**
OZLJ	**Ozalj**	**2.73**	**329**	*e*Pn	**Pn**	**22 15 50.2**	**+1.1**
CRES	**Cresnjev**	**2.91**	**331**	⇑*i*Pn	**Pn**	**22 15 52.1**	**+0.4**
CRES				*e*Sn	**Sn**	**22 16 27.7**	**+0.8**
KALN	**Kalnik**	**2.93**	**346**	*e*Pn	**Pn**	**22 15 51.4**	**+0.5**
MORH	**Mrgy, Hungar**	**3.05**	**16**	*e*Pn	**Pn**	**22 15 54.1**	**+0.6**
MORH				*e*Sn	**Sn**	**22 16 30.4**	**+0.3**
BEHE	**Becsehely**	**3.22**	**352**	*e*Pn	**Pn**	**22 15 56.8**	**+0.9**
BEHE				*e*Sn	**Sn**	**22 16 33.6**	**-0.8**
CEY	**Cerknica**	**3.27**	**320**	⇑*i*Pn	**Pn**	**22 15 57.5**	**+0.9**
CEY				*e*Sn	**Sn**	**22 16 35.6**	**-0.1**
SOKA	**Soboth**	**3.80**	**334**	*e*Pn	**Pn**	**22 16 04.4**	**+0.4**
	0.6nm,0.3s,SNR=4.6						
SOKA				*i* Sn	**Sn**	**22 16 48.8**	**-0.1**
	2.2nm,0.4s						
OBKA	**Obir**	**3.83**	**328**	*e*Pn	**Pn**	**22 16 05.2**	**+0.9**
	0.5nm,0.2s						
OBKA				*e*Sn	**Sn**	**22 16 51.5**	**+2.0**
	2.2nm,0.3s						
OBKA	**Obir**	**3.83**	**328**	*e*Pn	**Pn**	**22 16 05.3**	**+0.9**
OBKA				*e*Sn	**Sn**	**22 16 49.2**	**-0.3**
ARSA	**Arzberg**	**4.19**	**342**	*i* Pn	**Pn**	**22 16 09.5**	**+0.2**
	1.2nm,0.2s						
ARSA				*e*Sn	**Sn**	**22 16 58.7**	**+0.3**
	0.4nm,0.3s						
ARSA	**Arzberg**	**4.19**	**342**	⇓*i*Pn	**Pn**	**22 16 09.2**	**-0.1**
ARSA				*e*Sn	**Sn**	**22 16 57.7**	**-0.7**
RONA	**Rosalia, Austr**	**4.49**	**350**	*e*Pn	**Pn**	**22 16 13.9**	**+0.5**
	0.4nm,0.2s						
RONA				*i* Sn	**Sn**	**22 17 04.7**	**-1.0**
	0.3nm,0.1s						
CONA	**Conrad Observa**	**4.77**	**347**	*e*Pn	**Pn**	**22 16 17.1**	**-0.2**
	0.5nm,0.3s						
CONA				*i* Sn	**Sn**	**22 17 11.4**	**-1.5**
	0.9nm,0.4s						
KBA	**Koelnbreinsper**	**4.78**	**324**	*e*Pn	**Pn**	**22 16 18.8**	**+1.4**
	0.4nm,0.3s						
KBA				*e*Sn	**Sn**	**22 17 15.0**	**+2.0**
	1.1nm,0.4s						
ABTA	**Abfaltersbach**	**4.92**	**316**	*e*Pn	**Pn**	**22 16 20.3**	**+0.9**
	0.1nm,0.1s						
ABTA				*e*Sn	**Sn**	**22 17 18.7**	**+2.2**
	1.2nm,0.3s						
MOA	**Molln**	**5.08**	**335**	*e*Sn	**Sn**	**22 17 20.7**	**+0.4**
	2.0nm,0.6s						
MODS	**Modra-Piesok**	**5.09**	**359**	*e*PN	Pn	22 16 28.3	+6.7
MODS				*e*SN	**Sn**	**22 17 18.5**	**-2.0**
BIOA	**Bad Ischl, Aus**	**5.16**	**330**	*e*Pn	**Pn**	**22 16 23.9**	**+1.4**
	0.9nm,0.3s						
LESA	**Schwarzleotal**	**5.33**	**323**	*e*Pn	**Pn**	**22 16 26.4**	**+1.4**
	0.8nm,0.3s						
WATA	**Walderalm**	**5.79**	**316**	*i* Pn	**Pn**	**22 16 32.4**	**+1.0**
	4.1nm,1.5s						
SQTA	**Sankt Quirin**	**5.91**	**314**	*i* Pn	**Pn**	**22 16 34.3**	**+1.4**
	0.2nm,0.2s						
MOTA	**Moosalm**	**6.04**	**314**	*e*Pn	**Pn**	**22 16 36.0**	**+1.2**
	0.2nm,0.2s						
FETA	**Feichten**	**6.05**	**310**	*e*Pn	**Pn**	**22 16 36.1**	**+1.2**
	0.3nm,0.3s						

*NEIC **05** 22:15:22.3±1.6, 16.2S±0.2×179.61W±0.08, h467km±5km, mb4.2/69, Error ellipse: s-maj=24.1km s-min=11.5km az=181.0*
*IDC **05** 22:15:23.7±2.7, 16.40S×179.61W, h489km±28km, mb3.5/13, mbtmp4.3/14, Error ellipse: s-maj=28.6km s-min=14.9km az=142.0*
*NOU **05** 22:15:25.1, 16.37S×179.45W, h498km, MLv3.7/9, Fiji Islands Region*

ISC 05 22:15:24.3±0.5, 16.5S±0.1×179.51W±0.09, h500km, n173, σ0s81/158, mb4.1/51, 12C-19D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**0.45**	**238**	P	**P**	**22 16 25.6**	**+1.1**
DGTI	**Dogotuki**	**0.74**	**283**	P	**P**	**22 16 25.6**	**+0.6**
LKBA	**Tubou, Lakemba**	**1.88**	**159**	P	**P**	**22 16 29.7**	**+1.0**
YSA	**Yasawairara**	**2.80**	**265**	P	**P**	**22 16 35.3**	**+1.4**
AFI	**Afiamalu**	**7.89**	**72**		**P**	**22 17 17.2**	**-2.4**
AFI	**Afiamalu**	**7.89**	**72**	P	**P**	**22 17 19.5**	**-0.2**
NIUE	**Niue**	**9.49**	**107**	P	**P**	**22 17 36.3**	**+0.1**
NIUE	**Niue**	**9.49**	**107**	P	**P**	**22 17 36.9**	**+0.6**
PINNC	**Pines Island,**	**13.73**	**242**	P	**P**	**22 18 19.5**	**-1.6**
OUENC	**Ouen Island, N**	**14.16**	**243**	P	**P**	**22 18 25.1**	**-0.6**
OUENC	**Ouen Island, N**	**14.16**	**243**	P	**P**	**22 18 27.2**	**+1.5**
DZM	**Mont Dzumac**	**14.38**	**245**	P	**P**	**22 18 27.0**	**-1.1**
DZM	**Mont Dzumac**	**14.38**	**245**	P	**P**	**22 18 29.6**	**+1.5**
DZM	**Mont Dzumac**	**14.38**	**245**	P	**P**	**22 18 28.1**	**0.0**
	4.3nm,0.4s,baz=60,slow=20,SNR=12						
ONTNC	**Ouen Toro**	**14.46**	**244**	P	**P**	**22 18 29.0**	**+0.3**
NOUC	**Port Laguerre**	**14.51**	**245**	P	**P**	**22 18 31.8**	**+2.4**
KOUNC	**Koumac, New Ca**	**15.89**	**253**	P	**P**	**22 18 42.2**	**-1.6**
EIDS	**Eidsvold**	**28.81**	**247**	P	**P**	**22 20 40.3**	**-1.0**
ARMA	**Armidale**	**29.79**	**237**	P	**P**	**22 20 51.3**	**+1.3**
CTAO	**Charters Tower**	**32.67**	**258**	P	**P**	**22 21 14.7**	**-0.1**
COEN	**Coen**	**36.06**	**269**	P	**P**	**22 21 44.1**	**+0.8**
COEN				IAmb	IAmb	22 21 44.8	
	comp=Z,9.6nm,1.0s						
STKA	**Stephens Creek**	**38.43**	**239**	P	**P**	**22 22 02.8**	**+0.3**
STKA	**Stephens Creek**	**38.43**	**239**	P	**P**	**22 22 02.6**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=70,slow=6.9,SNR=6.7						
	comp=Z,2.5nm,0.6s						
BBOO	**Buckleboo**	**43.20**	**239**	P	**P**	**22 22 40.2**	**-0.5**
BBOO				IAmb	IAmb	22 22 52.2	
	comp=Z,8.8nm,1.2s						
WB0	**Warramunga Arr**	**43.83**	**258**	P	**P**	**22 22 45.0**	**-0.7**
WB0				IAmb	IAmb	22 23 04.8	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Ar**	**43.87**	**258**	P	**P**	**22 22 45.2**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=94,slow=7.0,SNR=16						
WRA				PcP	**pwP**	**22 24 21.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=88,slow=3.7,SNR=6.0						
	comp=Z,1.1nm,0.5s						
AS31	**Alice Springs**	**44.19**	**253**	P	**P**	**22 22 47.8**	**-0.7**
AS31				IAmb	IAmb	22 22 48.8	
	comp=Z,3.9nm,0.5s						
ASAR	**Alice Springs**	**44.19**	**253**	P	**P**	**22 22 46.7**	**-1.8**
ASAR	**Alice Springs**	**44.19**	**253**	P	**P**	**22 22 48.1**	**-0.4**
	comp=Z,7.6nm,0.4s,baz=85,slow=8

GHO Glory Hole Cre 81.67 14 P P 22 26 48.0 -1.4
GHO IAmb IAmb 22 27 22.5
comp=Z,14nm,1.4s
SCM Sheep Creek Mo 82.11 15 P P 22 26 50.8 -0.9
G08A Pilot Rock 82.33 38 P P 22 26 54.0 +0.7
U15A North Rim 82.35 49 P P 22 26 54.8 +0.9
U15A IAmb IAmb 22 26 56.1
comp=Z,4.7nm,0.7s
VRDI Verde Repeater 82.61 17 P P 22 26 54.0 -0.4
N25K Chitina, Valde 82.61 16 P P 22 26 54.1 -0.1
N25K IAmb IAmb 22 26 54.7
comp=Z,5.7nm,0.6s
M24K Tolsona, Glenn 82.62 15 P P 22 26 54.3 0.0
TABL Table Mountain 82.63 18 P P 22 26 54.7 +0.2
G16K Koyuk River 82.64 7 P P 22 26 54.5 +0.3
GLB Gilahina Butte 82.68 16 P P 22 26 54.1 -0.5
GLB IAmb IAmb 22 26 54.8
comp=Z,4.0nm,0.5s
J20K Nowinta River 82.73 11 P P 22 26 54.4 -0.4
J20K IAmb IAmb 22 26 55.8
comp=Z,4.8nm,0.8s
KTH Kantishna Hill 82.80 12 P P 22 26 53.8 -1.4
KTH IAmb IAmb 22 27 03.1
comp=Z,13nm,1.4s
TRF Thorofare Moun 82.84 13 P P 22 26 54.4 -1.1
BARN Barnard Glacie 82.97 18 P P 22 26 55.9 -0.3
BARN IAmb IAmb 22 26 57.2
comp=Z,4.6nm,0.8s
LOGN Logan Glacier 82.97 18 P P 22 26 55.6 -0.6
LOGN IAmb IAmb 22 27 36.7
comp=Z,12nm,1.5s
P29M Windy Craggy 83.05 20 P P 22 26 56.9 +0.5
P29M IAmb IAmb 22 26 57.6
comp=Z,5.4nm,0.9s
RND Reindeer 83.11 13 P P 22 26 56.1 -0.7
DHY Denali Highway 83.16 14 P P 22 26 56.9 -0.2
DHY IAmb IAmb 22 27 31.9
comp=Z,7.8nm,1.4s
M27K Edge Creek, AK 83.96 17 P P 22 27 01.3 +0.2
M27K IAmb IAmb 22 27 02.4
comp=Z,5.7nm,0.9s
HYT Haines Junctio 84.05 19 P P 22 27 01.2 -0.3
G19K Purcell Mounta 84.07 9 P P 22 27 01.0 -0.3
S34M Telegraph Cree 84.15 24 P P 22 27 02.4 +0.5
HDA Harding Lake 84.41 14 P P 22 27 02.7 -0.4
HDA IAmb IAmb 22 27 03.7
comp=Z,3.6nm,0.8s
CCB Clear Creek Bu 84.42 13 P P 22 27 01.7 -1.4
CCB IAmb IAmb 22 27 03.6
comp=Z,12nm,1.5s
IMAR Indian Mountai 84.45 10 P P 22 27 02.7 -0.5
O30N Mendenhall 84.46 20 P P 22 27 03.5 +0.1
Q32M Nakina River 84.46 22 P P 22 27 03.9 +0.2
Q32M IAmb IAmb 22 27 05.3
comp=Z,5.0nm,1.1s
BCAR Beaver Creek A 84.56 16 P P 22 27 04.1 +0.2
MDM Murphy Dome 84.60 13 P P 22 27 03.1 -0.9
MDM IAmb IAmb 22 27 04.5
comp=Z,7.1nm,1.2s
IL31 84.73 13 P P 22 27 03.9 -0.7
IL31 IAmb IAmb 22 27 05.4
comp=Z,5.4nm,0.9s
ILAR Eielson Array 84.73 13 P P 22 27 03.6 -1.0
ILAR Eielson Array 84.73 13 P P 22 27 03.9 -0.8
comp=Z,3.6nm,0.9s,baz=225,slow=5.3,SNR=28
comp=Z,3.6nm,0.9s
SCRK Sand Creek 84.74 15 P P 22 27 04.9 +0.1
WHY Whitehorse 84.77 20 P P 22 27 05.3 +0.2
J25K Salcha River, 84.94 14 P P 22 27 04.7 -1.1
J25K IAmb IAmb 22 27 06.3
comp=Z,2.5nm,0.6s
M29M Somme Creek 85.00 18 P P 22 27 05.5 -0.7
R33M Jennings River 85.24 23 P P 22 27 08.0 +0.6
J26L Joseph Creek 85.28 15 P P 22 27 07.3 -0.1
J26L IAmb IAmb 22 27 08.8
comp=Z,3.8nm,0.8s
HHC Hu-ho-hao-te 85.52 315 *e*P **P 22 27 09.0 -0.2**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,69nm,4.5s
M30M Minto, Yukon 85.60 18 P P 22 27 08.7 -0.3
M30M IAmb IAmb 22 27 09.9
comp=Z,3.6nm,0.8s
TXAR Lajitas Array 86.12 58 P P 22 27 13.9 +1.6
comp=Z,0.7nm,0.8s,baz=217,slow=6.1,SNR=11
comp=Z,0.7nm,0.8s
PD31 Pinedale Array 87.04 44 P P 22 27 16.5 0.0
PDAR Pinedale Array 87.04 44 P P 22 27 16.9 +0.4
comp=Z,1.4nm,0.5s,baz=209,slow=3.3,SNR=21
comp=Z,1.4nm,0.5s
PZH PanZhiHua 87.55 298 P P 22 27 19.0 -0.1
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,5.0s
E28M Babbage River 89.56 14 P P 22 27 27.2 -0.1
E28M IAmb IAmb 22 27 28.1
comp=Z,2.6nm,0.8s
ELIB Princess Elisa 90.46 187 *d*P **P 22 27 29.3 -2.6**
comp=Z,3.7nm,2.0s
SONM Songino Array 91.78 320 P P 22 27 38.7 +0.4
comp=Z,0.4nm,0.6s,baz=123,slow=5.3,SNR=2.6
comp=Z,0.4nm,0.6s
SNAA Sanae 92.05 179 P P 22 27 39.2 +0.1
comp=Z,1.5nm,0.6s,baz=186,slow=16,SNR=6.0
comp=Z,1.5nm,0.6s
YKA Yellowknife Ar 93.47 25 P P 22 27 45.3 -0.2
comp=Z,0.8nm,0.6s,baz=246,slow=4.6,SNR=14
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 107.38 315 PKiKP PKiKP 22 32 53.0 -0.7
comp=Z,0.2nm,0.5s,baz=182,slow=1.4,SNR=5.3
BVAR Borovoye Array 115.07 321 PKP PKPdf 22 33 07.5 -0.5
comp=Z,1.3nm,0.3s,baz=89,slow=1.2,SNR=21
ARCES ARCESS Array B 124.72 350 PKP PKPdf 22 33 25.6 -0.5
comp=Z,1.8nm,0.5s,baz=15,slow=1.4,SNR=14
FINES FINESS Array B 131.52 344 PKP PKPdf 22 33 39.0 -0.2
comp=Z,2.7nm,0.9s,baz=38,slow=3.4,SNR=6.7
EKA Eskdalemuir Ar 141.11 3 PKhKP PKPpre 22 33 50.6
comp=Z,1.2nm,0.8s,baz=297,slow=15,SNR=1.4
EKA PKP sPdif 22 33 58.3 -1.0
comp=Z,0.6nm,0.6s,baz=18,slow=5.6,SNR=3.8
BR131 Keskin Array S 143.02 315 PKPdf PKPbc 22 33 59.8 +0.7
BRTR Keskin Array B 143.02 315 PKP PKPbc 22 33 59.4 +0.3
comp=Z,2.0nm,0.7s,baz=90,slow=1.4,SNR=15
CFR Carcaliu 143.16 327 ⇓P PKPbc 22 33 59.1 0.0
PANC Panciu 143.19 328 ⇓P PKPbc 22 33 59.6 +0.4
TPGR Topolog 143.22 326 ⇑P PKPdf 22 34 01.9 +0.7
ODBI Odobesti 143.32 328 ⇑P PKPdf 22 34 00.9 -0.4
VRI Vrincioaia 143.41 329 ⇑P PKPab 22 33 59.1 -0.5
PLOR Plostina 143.46 329 ⇓P PKPab 22 33 59.3 -0.6
TIRR Tirgusor 143.49 326 ⇓P PKPab 22 33 59.6 -0.3
HARR Harsova 143.59 326 ⇓P PKPdf 22 34 01.2 -0.6
TURR Turia 143.62 330 ⇓P PKPbc 22 34 00.7 +0.1
TLBR Topalu 143.63 326 ⇓P PKPdf 22 34 01.4 -0.5
OZUR 143.71 330 ⇑P PKPbc 22 34 00.9 +0.1
CLL Collm 143.83 347 PKPdf PKPbc 22 34 00.9 -0.1
CLL Collm 143.83 347 *ep*PKPdf pPKPdf 22 35 55.0 -5.8
CLL Collm 143.83 347 *i* PKPdf PKPbc 22 34 01.0 0.0
comp=Z,9.0nm,0.8s
DOPR Dopca 143.99 330 ⇑P PKPdf 22 34 03.5 +1.0
MORC Moravsky Berou 144.02 341 *e*PKP PKPbc 22 34 01.6 -0.1
BRG Berggiesshubel 144.02 345 Amp 22 34 02.8
comp=Z,11nm,1.0s
BRG Berggiesshubel 144.02 345 *i* PKP **PKPdf 22 34 02.0 -0.4**
ISR Istrita 144.02 328 ⇑P PKPab 22 34 02.2 +0.2
MLR Muntele Rosu 144.06 329 ⇓P PKPbc 22 34 00.6 -1.6
MLR Muntele Rosu 144.06 329 PKPdf **PKPab 22 34 02.4 +0.1**
MMAI Mount Meron Ar 144.47 304 PKP PKPab 22 34 04.4 +0.2
comp=Z,2.2nm,0.5s,baz=56,slow=3.2,SNR=12
MARR Marisel-Cluj 144.50 333 ⇑P PKPbc 22 34 03.2 -0.2
VOIR 144.54 330 ⇓P PKPab 22 34 03.8 -0.2
DRGR 144.59 333 ⇓P PKPab 22 34 05.2 +1.1
VRAC Vranov 144.72 342 *e*PKP **PKPab 22 34 04.4 0.0**
JAVC Velka Javorina 144.78 340 *e*PKP **PKPab 22 34 05.1 +0.4**
ARR Arges 144.79 330 ⇓P PKPab 22 34 06.0 +1.1
KRUC Moravsky 145.00 342 *e*PKP **PKPab 22 34 05.0 -0.5**
SIRR Siria 145.45 334 ⇑P PKPbc 22 34 06.5 +0.3
GZR Gura Zlata 145.64 332 ⇓P PKPbc 22 34 06.5 -0.3
SURR Surduc 145.65 333 ⇓P PKPab 22 34 07.5 -0.7
MEM Membach 145.65 354 *d*PKiKP **PKiKP 22 34 09.8 +0.3**
VLAD Vladila 145.90 329 ⇓P PKPbc 22 34 07.7 +0.2
GERES GERESS Array B 145.95 344 PKPbc **PKPbc 22 34 08.0 +0.4**
comp=Z,1.3nm,0.6s,baz=16,slow=4.5,SNR=6.8

BZS Buzias 145.98 333 ⇑P PKPdf 22 34 06.0 +0.1
CONA Conrad Observa 146.17 341 *i* PKP **PKPbc 22 34 09.1 +0.8**
comp=Z,2.1nm,0.6s
HERR Herculane 146.19 332 ⇑P PKPbc 22 34 07.8 -0.5
PLVB Pleven 146.22 328 ⇑P PKPbc 22 34 07.6 -0.8
RONA Rosalia, Austr 146.24 341 *i* PKP **PKPab 22 34 09.5 -0.9**
comp=Z,5.8nm,1.2s
WLF Walferdange 146.57 353 *d*PKP **PKiKP 22 34 10.2 -1.2**
MORH Mrgy, Hungar 146.70 337 ⇓P PKPbc 22 34 10.1 +0.4
ARSA Arzberg 146.88 341 *e*PKP **PKPbc 22 34 11.0 +0.9**
comp=Z,1.6nm,0.5s
BLKB Belogradchik 147.02 330 ⇑P PKPbc 22 34 10.3 -0.4
BIOA Bad Ischl, Aus 147.03 344 *e*PKP **PKiKP 22 34 11.4 -1.1**
comp=Z,1.0nm,0.5s
FRGS Fruska Gora 147.11 334 ⇓P PKPbc 22 34 10.4 -0.5
LESA Schwarzleotal 147.53 345 *e*PKP **PKPbc 22 34 12.5 +0.5**
comp=Z,1.5nm,0.4s
SOKA Soboth 147.54 341 *e*PKP **PKPbc 22 34 11.8 -0.2**
comp=Z,5.2nm,1.5s
KBA Koelnbreinsper 147.67 343 *i* PKP **PKPbc 22 34 12.1 -0.3**
comp=Z,1.1nm,0.4s
OBKA Obir 147.84 342 *e*PKP **PKPbc 22 34 12.4 -0.4**
comp=Z,0.4nm,0.6s
WATA Walderalm 147.88 346 *e*PKP **PKPbc 22 34 12.0 -1.0**
comp=Z,5.4nm,1.3s
RETA Reutte 147.92 347 *e*PKP **PKPbc 22 34 13.4 +0.4**
comp=Z,1.4nm,0.6s
WTTA Wattenberg 147.94 346 *i* PKP **PKPbc 22 34 13.4 +0.3**
comp=Z,2.6nm,0.4s
MOTA Moosalm 147.98 346 *e*PKP **PKPbc 22 34 13.3 +0.1**
comp=Z,6.7nm,1.2s
MYKA Terra Mystica 148.00 343 *e*PKP **PKPbc 22 34 12.8 -0.4**
comp=Z,2.5nm,0.5s
SQTA Sankt Quirin 148.08 346 *i* PKP **PKPbc 22 34 13.6 +0.2**
comp=Z,5.3nm,0.8s
ABTA Abfaltersbach 148.20 344 *e*PKP **PKPbc 22 34 12.4 -1.2**
comp=Z,2.5nm,1.1s
DAVA Damuels 148.30 348 *e*PKiKP **PKiKP 22 34 15.9 +0.6**
comp=Z,10.0nm,1.2s
FETA Feichten 148.37 347 *i* PKP **PKPbc 22 34 14.6 +0.4**
comp=Z,6.1nm,1.1s
FUORN Ofenpass-Fuorn 148.85 347 PKPbc 22 34 15.8 +0.3
FNA Florina 149.77 327 PKPbc **PKPbc 22 34 17.6 0.0**

TAP 05 22:18:04.5, 24°24N×121°75E, h10km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.09**	**357**	*i* P		P	Pg	22 18 07.7	+0.8
EAHA	baz=356			*i* S		S	Sg	22 18 09.8	+1.2
ETL	**Fush Village**	**0.14**	**234**	*i* P		P	Pg	22 18 08.4	+0.7
NACB	baz=233 **Ninganmiao** baz=243	**0.15**	**244**	*i* P		P	Pg	22 18 08.7	+0.8
NACB				*i* S		S	Sg	22 18 11.6	+1.3
ENA	baz=243 **Nanau** baz=1.0	**0.19**	**359**	*e*P		P	Pg	22 18 09.4	+0.9
ENA				S		S	Sg	22 18 12.5	+1.3
EWUT	baz=1.0 **Wuta** baz=8.0	**0.21**	**8**	*e*P		P	Pg	22 18 09.5	+0.7
EWUT				S		S	Sg	22 18 12.8	+1.1
TWD	baz=8.0 **Chiawan** baz=218	**0.21**	**220**	*e*P		P	Pg	22 18 09.4	+0.6
ETLH	**Xiulin Townshi** baz=261	**0.24**	**262**	*e*P		P	Pg	22 18 10.9	+1.4
ESAO	**Su ao** baz=15	**0.34**	**15**	*e*S		S	Sb	22 18 17.2	-1.1
LATG	**Datong** baz=325	**0.35**	**326**	*e*P		P	Pb	22 18 13.5	+0.5
LATG	baz=325			*e*S		S	Sb	22 18 18.6	-0.2
NNSB	**Datong** baz=299	**0.38**	**300**	*e*P		P	Pb	22 18 14.2	+0.7
NNSB	baz=299			*i* S		S	Sb	22 18 19.1	-0.4
NNS	**Nan Shan** baz=300	**0.39**	**300**	*i* S		S	Sb	22 18 19.4	-0.5
NDT	**Datong Townshi** baz=329	**0.42**	**330**	S		S	Sb	22 18 20.5	0.0
ENTT	**Nioudou** baz=338	**0.43**	**338**	P		P	Pb	22 18 14.4	+0.1
ENTT	baz=338			S		S	Sb	22 18 20.7	-0.2
TWE	**Neicheng** baz=353	**0.48**	**352**	*e*S		S	Sb	22 18 22.1	-0.3
YHNB	**Yeheng** baz=321	**0.54**	**322**	*e*P		P	Pb	22 18 17.1	+0.8
YHNB	baz=321			*e*S		S	Sb	22 18 24.4	+0.3
NSK	**Sanguang** baz=321	**0.56**	**321**	*e*S		S	Sb	22 18 24.7	+0.1

JMA 05 22:18:06.0±0.2, 24°4N±0.5'×123°7E±0.6', h6km±1km, MV1.1/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.05**	**170**	P		P	Pg	22 18 07.4	0.0
IRIF				S		S	Sg	22 18 08.4	0.0
JKRS	**Kuro-shima**	**0.30**	**119**	P		P	Pg	22 18 12.0	+0.2
JKRS				S		S	Sg	22 18 16.0	+0.2
HATJ	**Hateruma jima**	**0.33**	**167**	P		P	Pg	22 18 12.6	+0.1
HATJ				S		S	Sg	22 18 16.8	0.0
JIJ	**Ishigaki jima**	**0.39**	**93**	*e*P		P	Pg	22 18 13.4	-0.1
JIJ				S		S	Sg	22 18 19.1	+0.6
JISG	**Ishigakijimahi**	**0.57**	**69**	P		P	Pg	22 18 17.3	+0.3
JISG				S		S	Sg	22 18 25.1	+0.5

*NEIC **05** 22:30:59.2±1.6, 15°.90S±0°.08×74°.73W±0°.10, h10km±1km, mb4.7/5, Error ellipse: s-maj=17.3km s-min=10.8km az=239.0*
*IDC **05** 22:31:02.2±4.0, 15°.79S×74°.62W, h33km±29km, mb4.1/12, mbtmp4.2/17, ML3.8/5, MS3.6/16, Error ellipse: s-maj=25.5km s-min=12.5km az=55.0*
*VAO **05** 22:31:10.0±0.5, 16°.04S×73°.69W, h10km, mb4.4*
ISC 05 22:30:58.4±0.4, **15°.96S**±0°.05×**74°.77W**±0°.07, **h10**km, **n159**, σ1°**44**/141, **mb4.7**/35, **MS3.8**/11, **1C**, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.43**	**333**	Pn		Pn	**Pn**	**22 32 05.3**	**-0.5**
NNA	**Nana**	**4.43**	**333**	Pn		Pn	**Pn**	**22 32 05.9**	**+0.1**
NNA	1.4nm,0.3s,baz=196,slow=15,SNR=1.8			Sn		Sn	**Sn**	**22 32 56.8**	**-0.7**
NNA	24nm,0.3s,baz=227,slow=13,SNR=2.0			LR		LR		22 33 59.8	
AP01	comp=Z,333nm,19.3s,baz=162,slow=41 9.7nm,0.5s **Chacalluta**	**4.87**	**120**	Pn		Pn	**Pn**	**22 32 13.1**	**+1.4**
PB12	**IPOC Station P**	**5.00**	**123**	Pn		Pn	**Pn**	**22 32 14.3**	**+0.7**
PB16	**IPOC Station P**	**5.56**	**116**	Pn		Pn	**Pn**	**22 32 22.7**	**+1.0**
TA02	**Huaiquique**	**6.15**	**135**	Pn		Pn	**Pn**	**22 32 30.7**	**+1.3**
PB11	**IPOC Station P**	**6.17**	**129**	Pn		Pn	**Pn**	**22 32 30.7**	**+1.0**
TA01	**Diego Aracena**	**6.32**	**137**	Pn		Pn	**Pn**	**22 32 32.4**	**+0.7**
LPAZ	**La Paz**	**6.39**	**94**	Pn		Pn	**Pn**	**22 32 36.0**	**+2.8**
GO01	**Chusmiza**	**6.47**	**126**	Pn		Pn	**Pn**	**22 32 35.9**	**+1.7**
PATCX	**Punta Patache**	**6.53**	**138**	Pn		Pn	**Pn**	**22 32 36.7**	**+2.1**
PB08	**IPOC Station P**	**6.77**	**129**	Pn		Pn	**Pn**	**22 32 39.7**	**+1.4**
PB02	**IPOC Station P**	**7.05**	**140**	Pn		Pn	**Pn**	**22 32 43.2**	**+1.3**
PB01	**IPOC Station P**	**7.12**	**136**	Pn		Pn	**Pn**	**22 32 43.9**	**+1.1**
PB07	**IPOC Station P**	**7.37**	**142**	Pn		Pn	**Pn**	**22 32 47.3**	**+1.1**
PB04	**IPOC Station P**	**7.70**	**146**	Pn		Pn	**Pn**	**22 32 50.0**	**-0.8**
PB09	**IPOC Station P**	**7.81**	**139**	Pn		Pn	**Pn**	**22 32 54.7**	**+2.3**
PB05	**IPOC Station P**	**8.10**	**149**	Pn		Pn	**Pn**	**22 32 57.5**	**+1.2**
CZSB	**Cruzeiro do Su**	**8.43**	**14**	Pn		Pn	**Pn**	**22 33 02.6**	**+1.9**
LVC	**Limon Verde**	**8.62**	**141**	Pn		Pn	**Pn**	**22 33 06.2**	**+2.5**
LVC	3.2nm,0.3s,baz=322,slow=11,SNR=34 7.6nm,0.3s,baz=104,slow=21,SNR=13			Sn		Sn	**Sn**	**22 34 35.4**	**-5.8**
LVC	comp=Z,203nm,21.7s,baz=314,slow=36 8.3nm,0.3s			LR		LR		22 36 17.6	
LVC	**Limon Verde**	**8.62**	**141**	*e*P		Pn	**Pn**	**22 33 07.0**	**+3.3**
LVC				*e*S		Sn	**Sn**	**22 34 36.4**	**-4.9**
ATAH	**Atahualpa**	**9.46**	**338**	Pn		Pn	**Pn**	**22 33 15.2**	**0.0**
ATAH	0.4nm,0.3s,baz=140,slow=16,SNR=1.3 baz=114,slow=20			Sn		Sn	**Sn**	**22 35 00.4**	**-1.6**
ATAH	comp=Z,203nm,21.2s,baz=182,slow=39 1.3nm,0.3s			LR		LR		22 37 06.4	
ETMB	**Extrema**	**10.34**	**55**	Pn		Pn	**Pn**	**22 33 27.4**	**+0.6**
ETMB	**Extrema**	**10.34**	**55**	*e*P		Pn	**Pn**	**22 33 28.1**	**+1.2**
GO02	**Mina Guanaco**	**10.36**	**153**	Pn		Pn	**Pn**	**22 33 28.8**	**+1.3**
AC02	**Maricunga**	**12.03**	**155**	Pn		Pn	**Pn**	**22 33 48.8**	**-1.7**
SIV	**San Ignacio** baz=274,slow=10,SNR=8.8	**13.17**	**92**	Pn		Pn	**Pn**	**22 34 03.6**	**-2.1**
SIV	comp=Z,248nm,19.3s,baz=282,slow=39 1.4nm,0.5s			LR		LR		22 39 36.2	
BOSC	**San Juan Bosco**	**13.24**	**344**	Pn		Pn	**Pn**	**22 34 07.9**	**+1.0**
SAML	**Samuel**	**13.28**	**60**	Pn		Pn	**Pn**	**22 34 05.0**	**-2.2**
SAML	**Samuel**	**13.28**	**60**	*e*P		Pn	**Pn**	**22 34 06.4**	**-0.8**
BBSD	**Serra de San D**	**13.63**	**97**	*e*P		Pn	**Pn**	**22 34 10.0**	**-2.0**
COHC	**Cochancay**	**14.12**	**341**	P		P	**P**	**22 34 28.4**	**+2.1**
VILB	**Vilhena**	**14.42**	**80**	*e*P		Pn	**Pn**	**22 34 20.5**	**-2.3**
BBRB	**Robore, Bolivi**	**14.49**	**101**	*e*P		Pn	**Pn**	**22 34 20.1**	**-3.5**
CO01	**Juntas del Tor**	**14.60**	**164**	P		P	**P**	**22 34 32.6**	**+0.8**
CHSH	**Refugio Sur-Vo**	**14.93**	**344**	Pn		Pn	**Pn**	**22 34 33.0**	**+2.7**
PTLB	**Pontes e Lacer**	**15.06**	**90**	*e*P		Pn	**Pn**	**22 34 28.8**	**-2.6**
CO03	**El Pedregal**	**15.28**	**167**	P		P	**P**	**22 34 40.5**	**+1.2**
CO03	comp=Z,21nm,0.9s			LR		LR		22 34 43.7	
CO02	**Combarbal**	**15.56**	**168**	P		P	**P**	**22 34 43.7**	**+1.2**
SLOR	**San Lorenzo -**	**15.57**	**346**	P		P	**P**	**22 34 44.7**	**+1.7**
TEFE	**Tefe**	**15.89**	**40**	*e*P		P	**P**	**22 34 46.3**	**+0.3**
OTAV	**Otavalo**	**16.50**	**347**	*e*P		P		22 35 06.6	+13
TULM	**Tulcn-Chalpat**	**16.84**	**350**				**P**	**22 34 56.3**	**-0.7**
TULM	comp=Z,46nm,1.2s			LR		LR		22 35 13.2	
MURT	**Porto Murtinho**	**17.20**	**112**	*e*P		Pn	**Pn**	**22 34 58.4**	**-0.6**
PEL	**Peldehue**	**17.50**	**169**				**P**	**22 35 05.0**	**+1.1**
BDQN	**Bodoquena, MS**	**17.69**	**107**	*e*P		Pn	**Pn**	**22 35 05.0**	**0.0**
H03N1	**Juan Fernandez** baz=14,slow=74,SNR=3617	**17.80**	**191**	T		T	T	22 53 50.4	
H03N2	**Juan Fernandez** baz=14,slow=74,SNR=4312	**17.81**	**191**	T		T	T	22 53 49.3	
H03N3	**Juan Fernandez** baz=14,slow=74,SNR=4644	**17.82**	**191**	T		T	T	22 53 49.1	
PDRB	**Porto dos Gac**	**18.04**	**78**	*e*P		Pn	**Pn**	**22 35 09.6**	**+0.1**
MT13	**San Alfonso**	**18.16**	**168**	P		Pn	**Pn**	**22 35 11.6**	**+0.7**
LMEL	**Las Melosas**	**18.28**	**168**	P		Pn	**Pn**	**22 35 13.9**	**+1.5**
SALV	**Santo Antonio**	**18.35**	**92**	*e*P		Pn	**Pn**	**22 35 13.1**	**-0.1**
AQDB	**Aquidauana**	**18.66**	**107**	P		P	**P**	**22 35 16.5**	**-0.1**
AQDB	**Aquidauana**	**18.66**	**107**	*e*P		P	**P**	**22 35 15.3**	**-1.4**
MACA	**Manacapuru-AM**	**18.81**	**49**	P		P	**P**	**22 35 17.4**	**-0.9**
MACA	**Manacapuru-AM**	**18.81**	**49**	*e*P		P	**Pn**	**22 35 20.7**	**+1.9**
BO02	**Sierra Bellavi**	**19.09**	**170**	P		P	**P**	**22 35 22.4**	**+1.0**
RVDE	**Rio Verde (Bra**	**19.16**	**102**	*e*P		P	**P**	**22 35 23.1**	**+1.0**
CPUP	**Villa Florida** comp=Z,0.3nm,0.3s,baz=312,slow=9.6,SNR=4.8	**19.24**	**125**	P		P	**Pn**	**22 35 24.8**	**+0.8**
CPUP	comp=Z,118nm,18.2s,baz=284,slow=42 comp=Z,1.0nm,0.3s			LR		LR		22 44 30.6	
ROSC	**El Rosal** comp=Z,200nm,20.4s,baz=223,slow=40	**20.67**	**1**	LR		LR		22 44 40.6	
MCR1	**Marechal Candi**	**21.20**	**117**	*e*P		P	**P**	**22 35 46.6**	**+2.3**
ITQB	**Itaqui**	**21.55**	**132**	P		P	**P**	**22 35 49.3**	**+1.3**
ITQB	comp=Z,43nm,0.9s			IAmb		IAmb		22 35 52.8	
ITQB	**Itaqui**	**21.55**	**132**	*e*P		P	**P**	**22 35 50.1**	**+2.1**
UNIS	**Unistalda (Bra**	**22.35**	**129**	*e*P		P	**P**	**22 35 59.1**	**+2.5**
CRSM	**Crissiumal (Br**	**22.38**	**124**	*e*P		P	**P**	**22 35 59.4**	**+2.5**
FRBT	**Francisco Belt**	**22.56**	**120**	*e*P		P	**P**	**22 36 00.1**	**+1.2**
PCMB	**Pacaembu**	**22.94**	**108**	*e*P		P	**P**	**22 36 02.9**	**-0.2**
PTGB	**Pitanga**	**22.98**	**116**	*e*P		P	**P**	**22 36 05.4**	**+2.0**
TBOT	**Tacuarambo**	**23.22**	**136**	*e*P		P	**P**	**22 36 07.8**	**+2.1**
LDASE	**Londrina, Braz**	**23.45**	**112**	*e*P		P	**P**	**22 36 08.5**	**+0.3**
ITRB	**Iturama**	**23.53**	**103**	*e*P		P	**P**	**22 36 09.7**	**+0.7**
ITAB	**Concordia**	**23.81**	**122**	P		P	**P**	**22 36 11.9**	**+0.2**
ITAB	comp=Z,24nm,1.0s			IAmb		IAmb		22 36 13.2	
ITAB	**Concordia**	**23.81**	**122**	*e*P		P	**P**	**22 36 12.4**	**+0.8**
MALB	**Monte Alegre**	**24.59**	**57**	*e*P		P	**P**	**22 36 21.9**	**+3.0**
PLTB	**Pedras Altas**	**24.87**	**133**	P		P	**P**	**22 36 21.9**	**+0.5**
PLTB	comp=Z,12nm,0.7s			IAmb		IAmb		22 36 23.1	
PLCA	**Paso Flores**	**24.95**	**172**	P		P	**P**	**22 36 23.2**	**+1.1**
PLCA	comp=Z,11nm,1.0s			IAmb		IAmb		22 36 25.1	
PLCA	**Paso Flores** comp=Z,5.7nm,0.8s,baz=343,slow=9.4,SNR=15 comp=Z,5.7nm,0.8s	**24.95**	**172**	P		P	**P**	**22 36 23.8**	**+1.7**
SDV	**Santo Domingo**	**25.02**	**10**	P		P	**P**	**22 36 21.9**	**-1.2**
SDV	comp=Z,9.6nm,0.8s			IAmb		IAmb		22 36 45.4	
SDV	**Santo Domingo** comp=Z,162nm,18.0s,baz=206,slow=39	**25.02**	**10**	LR		LR		22 47 21.1	
SDV	**Santo Domingo**	**25.02**	**10**	*e*P		P		22 36 34.5	+11
BAUV	**El Baul**	**25.62**	**16**	P		P	**P**	**22 36 27.5**	**-0.8**
BDFB	**Brasilia**	**25.74**	**93**	P		P	**P**	**22 36 29.7**	**+0.1**
BDFB	comp=Z,3.1nm,0.5s,baz=260,slow=10,SNR=5.7 comp=Z,83nm,20.3s,baz=80,slow=41 comp=Z,3.1nm,0.5s			LR		LR		22 48 25.1	
JTS	**Las Juntas de** comp=Z,110nm,19.9s,baz=154,slow=35	**27.96**	**338**	LR		LR		22 47 12.8	
JANB	**Januaria**	**29.35**	**92**	*e*P		P	**P**	**22 37 03.0**	**+1.1**
MDP	**Montagnes des** comp=Z,284nm,18.6s,baz=242,slow=38	**30.29**	**48**	LR		LR		22 50 06.4	
MATN	**Matagalpa**	**30.75**	**338**	P		P	**P**	**22 37 12.8**	**-1.4**
SJMB	**Sao Joao De Ma**	**32.15**	**100**	*e*P		P	**P**	**22 37 28.2**	**+1.7**
TEIG	**Tepich** comp=Z,608nm,19.7s,baz=311,slow=36	**38.33**	**339**	LR		LR		22 54 13.1	
CMIG	**Matias Romero** comp=Z,46nm,20.0s,baz=180,slow=34	**38.37**	**328**	LR		LR		22 52 35.1	
RCBR	**Riachuelo** comp=Z,152nm,19.7s,baz=242,slow=38	**39.40**	**80**	LR		LR		22 55 49.5	
TX31	**Lajitas Ar. Si**	**52.97**	**328**	P		P	**P**	**22 40 15.5**	**0.0**
TXAR	**Lajitas Array** comp=Z,1.5nm,0.6s,baz=151,slow=8.5,SNR=22 comp=Z,1.5nm,0.6s	**52.97**	**328**	P		P	**P**	**22 40 15.8**	**+0.3**
VHRN	**Van Horn**	**54.82**	**328**	P		P	**P**	**22 40 29.0**	**0.0**
X34A	**Smith Ranch, M**	**54.86**	**337**	P		P	**P**	**22 40 28.8**	**-0.3**
RLO	**Rose Lookout**	**55.27**	**340**	P		P	**P**	**22 40 31.2**	**-0.8**
RLO	comp=Z,46nm,1.4s			IAmb		IAmb		22 41 12.1	
TUL3	**Leonard**	**55.29**	**339**	P		P	**P**	**22 40 31.6**	**-0.6**
MGMO	**Mountain Grove**	**55.34**	**343**	P		P	**P**	**22 40 31.2**	**-1.3**
MGMO	comp=Z,10nm,0.9s			IAmb		IAmb		22 40 32.7	
S39A	**Bolivar**	**56.15**	**342**	P

comp=Z,0.4nm,0.5s,baz=128,slow=5.8,SNR=5.7
comp=Z,0.4nm,0.5s

SPUT	**South Promonto**	**66.81**	**330**	P	**P**	**22 41 49.4**	**-1.1**
SPUT				IAmb	IAmb	22 41 52.8	
	comp=Z,4.5nm,1.0s						
MDND	**Maddock**	**67.29**	**342**	P	**P**	**22 41 52.8**	**-0.5**
HVU	**Hansel Valley**	**67.32**	**330**	P	**P**	**22 41 53.6**	**-0.2**
HVU				IAmb	IAmb	22 41 55.1	
	comp=Z,4.5nm,0.7s						
NVAR	**Mina Array Bea**	**67.75**	**324**	P	**P**	**22 41 57.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=158,slow=4.3,SNR=4.7						
	comp=Z,0.4nm,0.6s						
FXWY	**Fox Creek**	**67.96**	**332**	P	**P**	**22 41 57.2**	**-0.7**
FXWY				IAmb	IAmb	22 42 10.3	
	comp=Z,6.2nm,1.3s						
IMW	**Indian Meadow**	**68.12**	**333**	P	**P**	**22 41 58.5**	**-0.5**
IMW				IAmb	IAmb	22 42 11.6	
	comp=Z,6.8nm,1.4s						
FLWY	**Flagg Ranch**	**68.17**	**333**	P	**P**	**22 41 58.4**	**-0.7**
FLWY				IAmb	IAmb	22 42 01.0	
	comp=Z,7.5nm,0.8s						
ULM	**Lac du Bonnet**	**68.49**	**346**	P	**P**	**22 41 59.5**	**-1.3**
	comp=Z,3.0nm,0.5s,baz=146,slow=5.8,SNR=7.5						
	comp=Z,3.0nm,0.5s						
YHH	**Holmes Hill**	**68.79**	**333**	P	**P**	**22 42 03.2**	**+0.1**
PAHR	**Pah Rah Range**	**69.25**	**325**	P	**P**	**22 42 05.7**	**-0.2**
PAHR				IAmb	IAmb	22 42 19.5	
	comp=Z,6.5nm,1.2s						
SNAA	**Sanae**	**69.29**	**161**	⇑P	**P**	**22 42 06.9**	**+1.3**
SNAA	**Sanae**	**69.29**	**161**	P	**P**	**22 42 06.5**	**+0.9**
	comp=Z,6.2nm,0.7s,baz=275,slow=8.8,SNR=15						
	comp=Z,6.2nm,0.7s						
MFID	**Camas Ranch**	**70.04**	**329**	P	**P**	**22 42 11.1**	**+0.4**
MFID				IAmb	IAmb	22 42 13.0	
	comp=Z,5.3nm,0.8s						
ORV	**Oroville**	**70.34**	**323**	P	**P**	**22 42 13.4**	**+1.0**
ORV				IAmb	IAmb	22 42 15.2	
	comp=Z,8.6nm,1.2s						
DBIC	**Dimbokro**	**72.75**	**78**	P	**P**	**22 42 25.7**	**-1.8**
	comp=Z,3.6nm,0.8s,baz=269,slow=9.7,SNR=4.5						
	comp=Z,3.6nm,0.8s						
FRB	**Frobisher Bay**	**79.60**	**3**	LR	LR	23 19 19.8	
	comp=Z,48nm,19.2s,baz=133,slow=36						
TOA0	**Torodi Ar. Sit**	**80.94**	**74**	P	**P**	**22 43 12.9**	**-0.8**
TOA0				IAmb	IAmb	22 43 14.4	
	comp=Z,11nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.94**	**74**	P	**P**	**22 43 12.5**	**-1.2**
TORD				IAmb	IAmb	22 43 14.3	
	comp=Z,8.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.94**	**74**	P	**P**	**22 43 13.4**	**-0.3**
	comp=Z,7.4nm,0.5s,baz=262,slow=5.3,SNR=81						
TORD				LR	LR	23 18 22.2	
	comp=Z,36nm,18.9s,baz=140,slow=35						
	comp=Z,7.4nm,0.5s						
YKA	**Yellowknife Ar**	**84.21**	**343**	P	**P**	**22 43 29.1**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=138,slow=5.2,SNR=19						
	comp=Z,1.2nm,0.8s						
ESDC	**Sonseca Array**	**85.97**	**47**	P	**P**	**22 43 38.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=263,slow=5.1,SNR=4.5						
	comp=Z,0.4nm,0.7s						
BOSA	**Boshof**	**90.98**	**120**	P	**P**	**22 44 03.1**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=274,slow=3.5,SNR=5.6						
	comp=Z,2.2nm,0.7s						
LSZ	**Lusaka**	**97.85**	**108**	LR	LR	23 28 57.1	
	comp=Z,26nm,18.0s,baz=258,slow=36						
KBZ	**Khabaz**	**120.80**	**48**	PKP	**PKPdf**	**22 49 51.2**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=216,slow=8.7,SNR=4.5						
H11N3	**WAKE ISLAND Hyl**	**21.44**	**284**	T	T	01 03 29.9	
	baz=98,slow=74						
H11N2	**WAKE ISLAND Hyl**	**21.45**	**284**	T	T	01 03 14.9	
	baz=98,slow=74						
H11N1	**WAKE ISLAND Hyl**	**21.45**	**284**	T	T	01 03 16.0	
	baz=98						
H11S2	**WAKE ISLAND Hyl**	**21.47**	**282**	T	T	01 03 20.5	
	baz=99,slow=75,SNR=40						
H11S1	**WAKE ISLAND Hyl**	**21.48**	**282**	T	T	01 03 21.7	
	baz=99,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hyl**	**21.49**	**282**	T	T	01 03 21.7	
	baz=99,slow=75,SNR=21						
PETK	**Petropavlovsk-**	**124.84**	**324**	PKP	**PKPdf**	**22 49 57.2**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=86,slow=4.6,SNR=1.1						
ASAR	**Alice Springs**	**131.66**	**216**	PKP	**PKPdf**	**22 50 12.3**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=125,slow=1.8,SNR=11						
BVAR	**Borovoye Array**	**134.00**	**29**	PKP	**PKPdf**	**22 50 15.3**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=300,slow=2.8,SNR=4.2						
WRA	**Warramunga Arr**	**134.27**	**220**	PKP	**PKPdf**	**22 50 17.9**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=144,slow=1.9,SNR=14						
ZALV	**Zalesovo Beam**	**138.88**	**18**	PKP	**PKPdf**	**22 50 22.9**	**-2.0**
	comp=Z,3.2nm,0.7s,baz=318,slow=2.0,SNR=18						
KURBB	**Kurchatov Arra**	**139.29**	**26**	PKP	**PKPdf**	**22 50 24.6**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=309,slow=2.9,SNR=5.6						
MKAR	**Makanchi Array**	**143.82**	**27**	PKP	PKPbc	22 50 32.1	+0.4
	comp=Z,0.7nm,0.8s,baz=327,slow=1.9,SNR=8.2						
USRK	**Ussuriysk Ar.**	**143.87**	**327**	PKP	PKPab	22 50 31.1	-0.1
	comp=Z,7.4nm,1.1s,baz=64,slow=3.4,SNR=4.4						
MJAR	**Matsushiro Arr**	**144.28**	**311**	PKP	**PKPab**	**22 50 32.7**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=127,slow=3.4,SNR=4.5						
SONM	**Songino Array**	**148.20**	**359**	PKPbc	**PKPbc**	**22 50 45.1**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=342,slow=1.9,SNR=22						
KSRS	**Korea Array**	**150.66**	**321**	PKPbc	**PKPbc**	**22 50 51.8**	**+0.7**
	comp=Z,6.9nm,0.9s,baz=334,slow=0.9,SNR=14						

*IDC **05** 22:31:13.9±1.5, 19°.74S×69°.00E, h0km, mb3.9/11, mbtmp3.9/11, MS3.5/11, Error ellipse: s-maj=52.4km s-min=23.4km az=40.0*

ISC 05 22:31:14.6±1.6, 19°.9S±0°.3×68°.9E±0°.2, h10km, n31, σ1°20/14, mb4.0/11, MS3.5/11, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**12.71**	**16**	T	T	22 48 00.9	
	baz=199,slow=76,SNR=19						
H08S2	**Diego Garcia H**	**12.72**	**17**	T	T	22 47 50.9	
	baz=199,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**12.73**	**16**	T	T	22 47 57.4	
	baz=199,slow=76,SNR=24						
PALK	**Pallekele**	**29.44**	**24**	LR	LR	22 47 27.3	
	comp=Z,72nm,18.8s,baz=312,slow=33						
H04N2	**CROZET ISLANDS**	**29.68**	**204**	T	T	23 07 40.2	
	baz=32,slow=75,SNR=693						
H04N1	**CROZET ISLANDS**	**29.68**	**204**	T	T	23 07 41.2	
	baz=32,slow=75,SNR=442						
H04N3	**CROZET ISLANDS**	**29.70**	**204**	T	T	23 07 49.0	
	baz=32,slow=75,SNR=636						
LSZ	**Lusaka**	**38.99**	**270**	LR	LR	22 51 28.7	
	comp=Z,75nm,21.0s,baz=109,slow=31						
LBTB	**Lobatse**	**40.18**	**255**	LR	LR	22 51 06.8	
	comp=Z,53nm,20.4s,baz=104,slow=30						
BOSA	**Boshof**	**40.50**	**249**	LR	LR	22 52 34.1	
	comp=Z,62nm,19.4s,baz=98,slow=32						
H01W2	**Cape Leeuwin H**	**42.49**	**120**	T	T	23 25 06.2	
	baz=279						
H01W3	**Cape Leeuwin H**	**42.49**	**120**	T	T	23 25 07.1	
	baz=279						
H01W1	**Cape Leeuwin H**	**42.51**	**120**	T	T	23 25 15.7	
	baz=279						
SUR	**Sutherland**	**44.54**	**244**	LR	LR	22 54 30.7	
	comp=Z,47nm,21.9s,baz=102,slow=31						
TSUM	**Tsumeb**	**48.17**	**262**	LR	LR	22 56 54.6	
	comp=Z,61nm,20.3s,baz=130,slow=32						
CMAR	**Chiang Mai Arr**	**48.23**	**40**	P	**P**	**22 39 56.8**	**+0.9**
	0.3nm,0.4s,baz=224,slow=5.0,SNR=1.7						
CMAR				LR	LR	22 59 56.0	
	comp=Z,41nm,18.4s,baz=240,slow=36						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**60.04**	**106**	P	**P**	**22 41 22.6**	**+0.4**
	1.3nm,0.8s,baz=262,slow=5.8,SNR=14						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**61.16**	**102**	P	**P**	**22 41 30.2**	**+0.4**
	0.9nm,0.8s,baz=264,slow=6.3,SNR=5.5						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**67.52**	**10**	P	**P**	**22 42 10.2**	**-0.7**
	0.8nm,0.8s,baz=198,slow=5.8,SNR=7.0						
MKAR				LR	LR	23 11 06.5	
	comp=Z,43nm,18.3s,baz=218,slow=36						
	0.8nm,0.8s						
BRTR	**Keskin Array B**	**67.86**	**331**	P	**P**	**22 42 14.8**	**+1.4**
	1.3nm,1.1s,baz=175,slow=6.0,SNR=5.5						
	1.3nm,1.1s						
KURBB	**Kurchatov Arra**	**70.77**	**6**	P	**P**	**22 42 30.2**	**-0.7**
	0.6nm,0.2s,baz=203,slow=6.9,SNR=1.8						
	0.6nm,0.2s						
BVAR	**Borovoye Array**	**72.67**	**1**	P	**P**	**22 42 40.9**	**-1.4**
	0.6nm,0.7s,baz=188,slow=3.0,SNR=3.8						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**74.86**	**10**	P	**P**	**22 42 53.6**	**-1.5**
	1.0nm,0.7s,baz=219,slow=5.6,SNR=5.2						
ZALV				LR	LR	23 15 10.0	
	comp=Z,36nm,18.0s,baz=50,slow=35						
	1.0nm,0.7s						
SONM	**Songino Array**	**75.39**	**25**	P	**P**	**22 42 58.2**	**-0.3**
	0.7nm,0.8s,baz=187,slow=7.5,SNR=4.1						
	0.7nm,0.8s						
AKASG	**Malin Array Be**	**78.52**	**336**	P	**P**	**22 43 17.0**	**+1.1**
	0.5nm,0.5s,baz=134,slow=4.4,SNR=4.2						
	0.5nm,0.5s						
JNU	**Nakatsue**	**79.27**	**49**	LR	LR	23 17 11.6	
	comp=Z,42nm,19.9s,baz=208,slow=35						
KSRS	**Korea Array**	**79.65**	**44**	LR	LR	23 17 41.9	
	comp=Z,29nm,20.2s,baz=270,slow=35						
HFS	**Hagfors**	**91.41**	**336**	P	**P**	**22 44 19.4**	**-1.2**
	3.4nm,0.9s,baz=146,slow=8.0,SNR=5.1						
	3.4nm,0.9s						
YKA	**Yellowknife Ar**	**137.42**	**2**	PKP	**PKPdf**	**22 50 36.1**	**-2.0**
	0.1nm,0.5s,baz=45,slow=3.3,SNR=3.7						
ULM	**Lac du Bonnet**	**147.42**	**342**	PKPbc	**PKPbc**	**22 50 59.2**	**+0.6**
	3.5nm,0.9s,baz=80,slow=2.0,SNR=4.7						
TXAR	**Lajitas Array**	**168.45**	**325**	PKPab	**PKPab**	**22 52 32.0**	**+0.6**
	0.7nm,0.9s,baz=72,slow=5.4,SNR=4.9						

LJU 05 22:32:56.6, 46°.49N×14°.06E, h12km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GORS	**Gorjuse**	**0.17**	**194**	*i* Pg	Pg	22 33 00.6	0.0
GORS				*i* Sg	Sg	22 33 03.5	+0.2
GORS				IAML		22 33 03.7	
	comp=Z,4.3nm,0.1s						
MOZS	**Mozjanca**	**0.33**	**126**	*i* Pg	Pg	22 33 03.5	+0.3
CADS	**Cadrg**	**0.34**	**220**	*i* Pg	Pg	22 33 03.8	+0.3
CADS				*i* Sg	Sg	22 33 09.0	+1.0
CADS				IAML		22 33 10.0	
	comp=Z,1.2nm,0.1s						
ROBS	**Robic**	**0.45**	**237**	*i* Pg	Pg	22 33 05.4	0.0
VOJS	**Vojsko**	**0.47**	**195**	*i* Pg	Pg	22 33 05.8	-0.1
JAVS	**Javornik**	**0.59**	**179**	*i* Pg	Pg	22 33 08.4	+0.2

*CATAC **05** 22:38:15.9±0.8, 8°.27N×82°.82W, h11km±2km, ML2.8*
*UPA **05** 22:38:16.7±0.7, 8°.35N×82°.85W, h17km±2km, MW3.4*

ISC 05 22:38:17.0±1.1, 8°.33N±0°.05×82°.80W±0°.03, h25km±7km, n23, σ1°04/36, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.14**	**211**	*e*P	**Pb**	**22 38 21.5**	**-0.6**
PTPM				*e*S	**Sb**	**22 38 26.4**	**+0.9**
CCOL	**Caracol de Cor**	**0.19**	**295**	*i* P	**Pb**	**22 38 22.1**	**-0.5**
CCOL				*i* S	**Sb**	**22 38 26.6**	**+0.3**
CCOL				IAML		22 38 29.0	
	comp=Z,5μm,1.0s						
LIMO3	**Limones**	**0.23**	**195**	*e*P	**Pb**	**22 38 22.4**	**-0.7**
CDITO	**Canoas**	**0.25**	**344**	*e*P	**Pb**	**22 38 21.8**	**-1.7**
CDITO	**Canoas**	**0.25**	**344**	*i* P	**Pb**	**22 38 22.6**	**-0.8**
CDITO				*i* S	**Sb**	**22 38 28.0**	**+0.2**
CDITO				IAML		22 38 31.8	
	comp=Z,630nm,1.0s						
DVD	**David**	**0.36**	**73**	*e*P	**Pb**	**22 38 25.2**	**+0.1**
PTAR3	**Potrerillos Ar**	**0.47**	**40**	*e*P	**Pb**	**22 38 23.6**	**-3.3**
BCO2	**Palmira**	**0.47**	**35**	*e*P	**Pb**	**22 38 27.1**	**+0.1**
BCO2				*e*S	**Sn**	**22 38 35.7**	**-0.3**
BRU2	**Volcan**	**0.47**	**13**	*e*P	**Pb**	**22 38 27.0**	**0.0**
BRU2				*e*S	**Sb**	**22 38 35.1**	**+1.4**
BRU2	**Volcan**	**0.47**	**13**	*i* P	**Pb**	**22 38 27.1**	**+0.1**
BRU2				*i* S	**Sb**	**22 38 34.9**	**+1.2**
BRU2				IAML		22 38 42.5	
	comp=Z,330nm,1.0s						
BC3P	**Paso Ancho**	**0.52**	**21**	*e*P	**Pb**	**22 38 27.7**	**0.0**
PIRO	**Carate, Puerto**	**0.53**	**278**	*i* P	**Pb**	**22 38 27.0**	**-0.8**
PIRO				IAML		22 38 43.5	
	comp=Z,490nm,1.0s						
LNBQ3	**Los Naranjos,**	**0.58**	**38**	*e*P	**Pb**	**22 38 28.5**	**-0.2**
POTG	**Potrero Grande**	**0.78**	**337**	*i* S	**Sn**	**22 38 43.3**	**-0.2**
CHGR2	**Aguacate**	**0.89**	**47**	*e*P	**Pb**	**22 38 32.9**	**-0.9**
CHGR2				*e*S	**Sb**	**22 38 45.5**	**+0.1**
PLAN	**Los Planes de**	**0.93**	**291**	*i* P	**Pb**	**22 38 33.1**	**-1.4**
PLAN				*i* S	**Sb**	**22 38 46.3**	**-0.2**
PLAN				IAML		22 38 53.8	
	comp=Z,550nm,1.0s						
OCHAL	**Ojochal**	**1.13**	**313**	*i* P	**Pn**	**22 38 36.9**	**-0.3**
OCHAL				*i* S	**Sn**	**22 38 52.9**	**+0.9**
OCHAL				IAML		22 38 56.3	
	comp=Z,4.7nm,1.0s						
CNI2	**El Empalme, Bo**	**1.14**	**17**	*e*P	**Pn**	**22 38 36.2**	**-1.1**
CDM	**Cerro de Muert**	**1.54**	**322**	*i* P	**Pn**	**22 38 42.7**	**-0.6**
CDM				*i* S	**Sn**	**22 39 03.8**	**+1.0**
CDM				IAML		22 39 08.5	
	comp=Z,93nm,1.0s						
LCR2	**La Lucha 2**	**1.84**	**320**	*i* P	**Pb**	**22 38 49.1**	**-1.0**
LCR2				*i* S	**Sb**	**22 39 12.6**	**-0.2**
LCR2				IAML		22 39 17.2	
	comp=Z,100nm,1.0s						
VTCV	**VTCV, Calle Va**	**1.88**	**331**	*i* S	**Sb**	**22 39 13.9**	**-0.1**
OCM	**Ochomogo**	**1.93**	**324**	*i* P	**Pn**	**22 38 50.3**	**+1.9**
OCM				*i* S	**Sb**	**22 39 16.1**	**+0.6**
OCM				IAML		22 39 18.4	
	comp=Z,98nm,1.0s						
JACO	**JACO, Garabito**	**2.26**	**306**	*i* P	**Pn**	**22 38 53.2**	**+0.4**
JACO				*i* S	**Sn**	**22 39 21.5**	**+1.6**
JACO				IAML		22 39 32.6	
	comp=Z,47nm,1.0s						

*IDC **05** 22:41:56.3±1.5, 20°.33S×67°.95E, h0km, mb3.7/10, mbtmp3.7/10, MS3.3/1, Error ellipse: s-maj=46.8km s-min=25.4km az=37.0*

ISC 05 22:41:58.6±1.4, 20°.4S±0°.3×67°.9E±0°.2, h15km, n18, σ0°70/11, mb3.7/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.41**	**20**	T	T	22 58 41.7	
	baz=200,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**13.41**	**20**	T	T	22 58 42.9	
	baz=200,slow=76,SNR=34						
H08S3	**Diego Garcia H**	**13.43**	**20**	T	T	22 58 42.2	
	baz=200,slow=76,SNR=17						
H04N2	**CROZET ISLANDS**	**28.92**	**204**	T	T	23 18 21.8	
	baz=32,slow=75,SNR=686						
H04N1	**CROZET ISLANDS**	**28.92**	**204**	T	T	23 18 19.1	
	baz=32,slow=75,SNR=582						
H04N3	**CROZET ISLANDS**	**28.94**	**204**	T	T	23 18 19.2	
	baz=32,slow=75,SNR=564						
NWAO	**Narrogin (SRO)**	**45.42**	**116**	LR	LR	23 05 05.8	
	comp=Z,36nm,18.8s,baz=61,slow=31						
CMAR	**Chiang Mai Arr**	**49.13**	**40**	P	**P**	**22 50 46.1**	**+0.1**
	0.9nm,0.3s,baz=215,slow=7.7,SNR=1.9						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**60.75**	**106**	P	**P**	**22 52 10.3**	**+0.1**
	1.2nm,0.8s,baz=255,slow=6.6,SNR=9.8						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**61.91**	**102**	P	**P**	**22 52 18.3**	**+0.2**
	1.9nm,1.0s,baz=261,slow=6.9,SNR=4.9						
	1.9nm,1.0s						
BRTR	**Keskin Array B**	**67.84**	**332**	P	**P**	**22 52 57.4**	**+1.1**
	0.6nm,1.0s,baz=134,slow=8.3,SNR=2.1						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**68.11**	**11**	P	**P**	**22 52 57.0**	**-0.8**
	0.3nm,0.7s,baz=184,slow=4.3,SNR=2.6						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**71.31**	**7**	P	**P**	**22 53 17.4**	**0.0**
	0.5nm,0.7s,baz=202,slow=6.9,SNR=4.6						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**73.13**	**2**	P	**P**	**22 53 28.2**	**0.0**
	0.6nm,0.9s,baz=151,slow=3.3,SNR=2.4						
	0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.16**	**291**	P	**P**	**22 53 28.6**	**-0.5**
	0.6nm,0.9s,baz=96,slow=8.8,SNR=3.1						
	0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**75.45**	**10**	P	**P**	**22 53 40.3**	**-1.3**
	0.4nm,0.6s,baz=165,slow=6.0,SNR=2.3						
	0.4nm,0.6s						
SONM	**Songino Array**	**76.17**	**26**	P	**P**	**22 53 46.1**	**0.0**
	0.5nm,0.8s,baz=240,slow=4.8,SNR=1.8						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**137.89**	**2**	PKP	**PKiKP**	**23 01 24.2**	**+0.2**
	0.2nm,0.7s,baz=342,slow=2.3,SNR=2.6						

BER 05 22:45:49.9±2.1, 83°.46N×5°.37E, h30km±394km, mb(Pn)3.5, ML2.7(NAO), Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.67**	**164**	*e*P	Pn	22 46 55.3	-2.8
KBS				IAML		22 46 56.1	
	comp=Z,5.6nm,0.3s						
KBS				*e*S	Sn	22 47 46.0	-5.1
KBS	**Kingsbay**	**4.67**	**164**	Pn	Pn	22 46 55.5	-2.6
KBS				Sn	Sn	22 47 47.2	-3.9
BRBB	**Barentsburg B**	**5.57**	**161**	*e*P	Pn	22 47 09.6	-0.9
BRBB	**Barentsburg B**	**5.57**	**161**	Pn	Pn	22 47 09.3	-1.2
SPA0	**Spitsbergen Ar**	**5.58**	**156**	Pn	Pn	22 47 10.1	-0.5
	baz=352,slow=12						
SPA0	**Spitsbergen Ar**	**5.58**	**156**	Pn	Pn	22 47 10.1	-0.5
	baz=352,slow=12						

*IDC **05** 22:47:00.6±3.4, 20°.47S×68°.15E, h0km, mb3.7/8, mbtmp3.7/8, MS3.2/2, Error ellipse: s-maj=116.9km s-min=28.8km az=48.0*

ISC 05 22:47:02.9±3.2, 20°.5S±0°.6×68°.1E±0°.6, h15km, n16, σ0°42/8, mb3.8/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**13.48**	**19**	T	T	23 03 44.8	
	baz=200,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**13.49**	**19**	T	T	23 03 45.3	
	baz=200,slow=76,SNR=63						
H08S3	**Diego Garcia H**	**13.50**	**19**	T	T	23 03 49.1	
	baz=200,slow=76,SNR=34						
H04N2	**CROZET ISLANDS**	**28.86**	**204**	T	T	23 23 22.7	
	baz=32,slow=75,SNR=476						
H04N1	**CROZET ISLANDS**	**28.86**	**204**	T	T	23 23 23.7	
	baz=32,slow=75,SNR=447						
H04N3	**CROZET ISLANDS**	**28.87**	**204**	T	T	23 23 22.4	
	baz=32,slow=75,SNR=428						
PALK	**Pallekele**	**30.27**	**25**	LR	LR	23 03 12.3	
	comp=Z,56nm,18.8s,baz=313,slow=32						
CMAR	**Chiang Mai Arr**	**49.14**	**40**	LR	LR	23 12 46.2	
	comp=Z,22nm,21.3s,baz=250,slow=32						
ASAR	**Alice Springs**	**60.56**	**106**	P	**P**	**22 57 12.9**	**-0.3**
	0.7nm,0.9s,baz=264,slow=5.4,SNR=5.2						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**61.73**	**102**	P	**P**	**22 57 21.6**	**+0.4**
	1.5nm,1.1s,baz=266,slow=5.5,SNR=1.8						
	1.5nm,1.1s						
BRTR	**Keskin Array B**	**68.04**	**332**	P	**P**	**22 58 02.1**	**+0.2**
	0.6nm,0.9s,baz=165,slow=6.0,SNR=2.7						
	0.6nm,0.9s						
MKAR	**Makanchi Array**	**68.22**	**10**	P	**P**	**22 58 02.5**	**-0.2**
	0.5nm,0.9s,baz=183,slow=4.9,SNR=4.5						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**71.43**	**7**	P	**P**	**22 58 22.5**	**+0.2**
	0.3nm,0.3s,baz=204,slow=6.3,SNR=4.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**73.27**	**1**	P	**P**	**22 58 32.7**	**-0.6**
	0.6nm,0.7s,baz=177,slow=8.6,SNR=4.2						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**75.55**	**10**	P	**P**	**22 58 46.1**	**-0.4**
	0.4nm,0.3s,baz=202,slow=6.2,SNR=4.3						
	0.4nm,0.3s						
SONM	**Songino Array**	**76.23**	**25**	P	**P**	**22 58 50.9**	**+0.2**
	0.4nm,0.7s,baz=217,slow=9.4,SNR=2.7						
	0.4nm,0.7s						

*IDC **05** 22:54:23.0±0.5, 58°.87S×26°.08W, h141km±4km, mb4.3/10, mbtmp4.8/12, MS3.5/7, Error ellipse: s-maj=16.6km s-min=13.3km az=82.0*
*NEIC **05** 22:54:23.1±1.6, 58°.9S±0°.1×26°.2W±0°.2, h141km±5km, mb4.6/58, Error ellipse: s-maj=17.1km s-min=13.3km az=224.0*

ISC 05 22:54:23.3±0.3, 58°.97S±0°.06×26°.15W±0°.07, h150km, n145, σ1°35/152, mb4.6/33, 3C-7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.38**	**305**	Pn	**Pn**	**22 56 05.3**	**-3.0**
VNA1	**Neumayer--Stat**	**13.89**	**155**	⇓P	**P**	**22 57 37.0**	**+0.3**
	comp=Z,47nm,0.3s						
VNA1				⇓S	**Sn**	**23 00 00.6**	**-6.3**
VNA3	**Neumayer Olymp**	**14.06**	**158**	⇓P	**P**	**22 57 38.9**	**+0.3**
	comp=Z,68nm,0.3s						
VNA3				⇑S	Sn	23 00 01.8	-9.3
	comp=Z,1.7nm,0.3s						
VNA2	**Neumayer--Watz**	**14.29**	**155**	⇓P	**P**	**22 57 42.1**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=317,slow=15						
VNA2				⇑S	Sn	23 00 08.9	-7.7
	comp=Z,4.7nm,0.6s,baz=344,slow=13						
SNAA	**Sanae**	**15.86**	**153**	P	**P**	**22 58 03.3**	**+4.6**
SNAA	**Sanae**	**15.86**	**153**	⇓P	**P**	**22 58 03.3**	**+4.6**
SNAA				⇓S	**Sn**	**23 00 46.2**	**-8.1**
	comp=Z,14nm,0.2s					

comp=Z,11nm,0.7s
AC02 Maricunga 43.72 298 P **P** **23 02 14.4 +0.5**
AC01 Pan de Azucar 44.98 297 P **P** **23 02 23.6 +0.3**
AC01 IAmb IAmb 23 02 25.2
comp=Z,13nm,1.1s
GO02 Mina Guanaco 45.37 299 P **P** **23 02 26.8 0.0**
GO02 IAmb IAmb 23 02 27.9
comp=Z,8.1nm,0.8s
H04S2 CROZET ISLANDS 45.91 111 T T 23 53 09.9
baz=225,slow=75,SNR=5.8
H04S3 CROZET ISLANDS 45.92 111 T T 23 53 11.1
baz=225,slow=75,SNR=5.3
H04S1 CROZET ISLANDS 45.93 111 T T 23 53 11.1
baz=225,slow=75,SNR=5.4
BDFB Brasilia 46.18 330 P **P** **23 02 33.0 +0.1**
BDFB Brasilia 46.18 330 P **P** **23 02 33.2 +0.3**
comp=Z,2.6nm,0.5s,baz=165,slow=9.1,SNR=5.7
comp=Z,2.6nm,0.5s
BOSA Boshof 46.24 72 P **P** **23 02 33.2 -0.1**
BOSA IAmb IAmb 23 02 34.1
comp=Z,9.4nm,0.8s
BOSA Boshof 46.24 72 P **P** **23 02 33.5 +0.1**
comp=Z,9.0nm,0.6s,baz=199,slow=6.8,SNR=25
comp=Z,9.0nm,0.6s
LVC Limon Verde 47.28 301 P **P** **23 02 42.2 +0.5**
PB05 IPOC Station P 47.64 300 P **P** **23 02 43.6 -0.7**
PB05 IAmb IAmb 23 02 44.7
comp=Z,19nm,1.0s
PB04 IPOC Station P 48.07 300 P **P** **23 02 47.0 -0.6**
PB09 IPOC Station P 48.14 302 P **P** **23 02 47.9 -0.2**
PB09 IAmb IAmb 23 02 50.9
comp=Z,18nm,1.4s
PB07 IPOC Station P 48.48 301 P **P** **23 02 50.8 0.0**
PB07 IAmb IAmb 23 02 51.8
comp=Z,6.7nm,0.7s
PB02 IPOC Station P 48.84 301 P **P** **23 02 54.3 +0.8**
PB02 IAmb IAmb 23 03 08.1
comp=Z,16nm,1.2s
PB01 IPOC Station P 48.91 302 P **P** **23 02 53.6 -0.3**
PB01 IAmb IAmb 23 02 54.6
comp=Z,6.9nm,0.9s
LBTB Lobatse 49.40 70 P **P** **23 02 57.8 +0.1**
LBTB IAmb IAmb 23 02 59.0
comp=Z,12nm,0.8s
LBTB Lobatse 49.40 70 LR LR 23 20 42.5
comp=Z,44nm,18.7s,baz=220,slow=32
PB08 IPOC Station P 49.55 303 P **P** **23 02 59.4 +0.2**
PTLB Pontes e Lacer 49.80 317 P **P** **23 03 00.9 +0.3**
GO01 Chusmiza 49.99 303 P **P** **23 03 02.0 -0.6**
PB11 IPOC Station P 50.11 302 P **P** **23 03 01.6 -1.4**
PB11 IAmb IAmb 23 03 17.3
comp=Z,15nm,1.4s
H10N1 ASCENSION HYDR 51.78 15 T T 23 59 19.4
baz=195
H10N3 ASCENSION HYDR 51.78 15 T T 23 59 06.1
baz=195,slow=74
H10N2 ASCENSION HYDR 51.80 15 T T 23 59 10.4
baz=195,slow=74
LPAZ La Paz 52.54 306 P **P** **23 03 21.4 -0.3**
SAML Samuel 57.26 315 P **P** **23 03 54.5 -0.5**
SAML IAmb IAmb 23 03 54.9
comp=Z,5.4nm,0.7s
ETMB Extrema 57.61 311 P **P** **23 03 56.7 -0.7**
LSZ Lusaka 58.97 66 P **P** **23 04 07.7 +0.8**
LSZ IAmb IAmb 23 04 08.7
comp=Z,5.5nm,0.8s
RPN Rapa Nui 63.73 261 LR LR 23 25 57.3
comp=Z,50nm,21.3s,baz=298,slow=30
ATAH Atahualpa 65.15 300 LR LR 23 32 10.3
comp=Z,15nm,21.6s,baz=87,slow=35
BOAV Boa Vista 66.94 322 P **P** **23 04 58.0 -1.4**
MDP Montagnes des 67.27 331 LR LR 23 33 56.3
comp=Z,18nm,19.5s,baz=132,slow=35
DBIC Dimbokro 67.61 23 P **P** **23 05 03.6 0.0**
DBIC IAmb IAmb 23 05 17.3
comp=Z,16nm,1.4s
DBIC Dimbokro 67.61 23 P **P** **23 05 04.4 +0.8**
comp=Z,2.7nm,0.3s,baz=188,slow=4.6,SNR=14
DBIC LR LR 23 28 59.2
comp=Z,54nm,19.4s,baz=182,slow=31
comp=Z,2.7nm,0.3s
MCRA Macar, Loja 68.30 300 P **P** **23 05 07.6 -0.4**
TOA0 Torodi Ar. Sit 75.35 28 P **P** **23 05 51.0 +1.1**
TORD Torodi Ar. Bea 75.35 28 P **P** **23 05 50.8 +0.9**
TORD Torodi Ar. Bea 75.35 28 P **P** **23 05 51.0 +1.2**
comp=Z,3.3nm,0.4s,baz=198,slow=6.0,SNR=92
TORD pP **pP** **23 06 24.5 -1.4**
comp=Z,6.5nm,0.6s,baz=193,slow=5.2,SNR=10
comp=Z,3.3nm,0.4s
SDV Santo Domingo 76.47 315 LR LR 23 41 15.1
comp=Z,22nm,19.7s,baz=72,slow=37
TAU Tasmania Unive 78.34 175 P **P** **23 06 07.1 +0.7**
THZ Tophouse 78.39 194 P **P** **23 06 07.8 +1.0**
DSZ Denniston Nort 78.55 194 P **P** **23 06 07.5 -0.2**
MRNZ Matariki Terra 78.77 194 P **P** **23 06 09.9 +1.1**
NNZ Nelson 78.87 195 P **P** **23 06 10.4 +1.1**
MRZ Mangatainoka R 79.11 197 P **P** **23 06 10.6 0.0**
FORT Forrest 88.05 158 P **P** **23 06 57.6 +1.3**
STKA Stephens Creek 88.92 170 P **P** **23 07 01.5 +1.1**
comp=Z,6.8nm,0.7s,baz=161,slow=4.7,SNR=19
comp=Z,6.8nm,0.7s
MDT Midelt 93.18 18 LR LR 23 47 31.9
comp=Z,39nm,18.0s,baz=52,slow=34
ASAR Alice Springs 96.03 162 P **P** **23 07 33.2 -0.2**
ASAR Alice Springs 96.03 162 P **P** **23 07 33.9 +0.4**
comp=Z,5.5nm,0.7s,baz=183,slow=4.1,SNR=44
ASAR PKKP **PKKPbc** **23 24 19.1 +1.8**
comp=Z,0.6nm,0.4s,baz=20,slow=2.3,SNR=8.7
comp=Z,5.5nm,0.7s
AS31 Alice Springs 96.04 162 P **P** **23 07 33.6 +0.1**
AS31 IAmb IAmb 23 07 34.4
comp=Z,2.1nm,0.7s
WRA Warramunga Ar 99.75 161 P **Pdif** **23 07 49.8 -0.3**
comp=Z,0.8nm,0.8s,baz=203,slow=4.7,SNR=3.8
WRA PKKP **PKKPdf** **23 24 09.9 -0.2**
comp=Z,0.3nm,0.4s,baz=349,slow=2.7,SNR=5.8
comp=Z,0.8nm,0.8s
SCHQ Schefferville 118.06 335 PKP **PKiKP** **23 12 50.8 0.0**
comp=Z,2.3nm,0.4s,baz=158,slow=6.8,SNR=14
AKASG Malin Array Be 118.22 36 PKP **PKiKP** **23 12 51.1 -0.1**
comp=Z,0.5nm,0.4s,baz=228,slow=1.2,SNR=4.1
ULM Lac du Bonnet 122.72 314 PKP **PKPdf** **23 12 59.6 -0.3**
comp=Z,1.1nm,0.5s,baz=124,slow=18,SNR=3.1
HFS Hagfors 122.78 22 PKP **PKPdf** **23 12 59.0 -0.7**
comp=Z,0.8nm,0.4s,baz=172,slow=4.4,SNR=9.1
NOA NORSAR Array B 123.14 21 PKP **PKiKP** **23 13 00.6 -0.1**
comp=Z,0.9nm,1.0s,baz=203,slow=2.3,SNR=4.2
NB201 NORSAR Array S 123.17 21 PKPdf **PKiKP** **23 13 00.8 +0.1**
CMAR Chiang Mai Arr 123.50 111 PKP **PKiKP** **23 13 03.5 +0.9**
comp=Z,3.1nm,0.3s,baz=234,slow=4.0,SNR=14
CMAR pPKP **pPKPdf** **23 13 40.0 -1.3**
comp=Z,2.2nm,0.3s,baz=227,slow=2.8,SNR=2.5
MOOW Moose Ponds 123.64 300 PKPdf **PKPdf** **23 13 01.9 -0.3**
FINES FINESS Array B 126.70 28 PKPdf **PKiKP** **23 13 07.3 -0.3**
FINES FINESS Array B 126.70 28 PKP **PKiKP** **23 13 07.7 +0.1**
comp=Z,2.1nm,0.5s,baz=186,slow=1.4,SNR=26
FIA1 FINESS Array S 126.70 28 PKPdf **PKiKP** **23 13 07.7 +0.1**
ABKAR Akbulak array 128.54 57 PKPdf **PKiKP** **23 13 11.4 -0.3**
ARCES ARCESS Array B 133.44 22 PKPdf **PKPdf** **23 13 20.0 +0.2**
ARCES ARCESS Array B 133.44 22 PKP **PKiKP** **23 13 20.5 -0.5**
comp=Z,2.4nm,0.6s,baz=215,slow=2.2,SNR=22
ARCES SKPab **SKPab** **23 16 37.1 +0.7**
comp=Z,5.3nm,1.0s,baz=31,slow=7.3,SNR=4.7
BVAR Borovoye Array 135.83 59 PKP **PKPdf** **23 13 24.6 -0.1**
comp=Z,2.6nm,0.6s,baz=247,slow=0.6,SNR=12
BVAR pPKP **pPKPdf** **23 14 01.8 -1.9**
comp=Z,1.0nm,0.6s,baz=240,slow=2.7,SNR=3.6
BVAR SKPbc **SKPbc** **23 16 40.0 -2.0**
comp=Z,1.2nm,0.8s,baz=240,slow=2.9,SNR=5.5
MKAR Makanchi Array 137.23 74 PKhKP PKPpre 23 13 17.6
comp=Z,0.6nm,0.8s,baz=212,slow=1.9,SNR=7.4
MKAR PKP **PKPdf** **23 13 27.2 -0.4**
comp=Z,1.1nm,0.9s,baz=205,slow=1.7,SNR=5.5
MKAR SKPbc **SKPbc** **23 16 45.8 -0.7**
comp=Z,0.5nm,0.4s,baz=186,slow=24,SNR=11
KURBB Kurchatov Arra 137.99 67 PKhKP PKPpre 23 13 19.9
comp=Z,0.3nm,0.2s,baz=232,slow=4.0,SNR=6.5
KURBB PKP **PKPdf** **23 13 29.2 +0.5**
comp=Z,1.1nm,0.7s,baz=233,slow=2.4,SNR=10.0
YKA Yellowknife Ar 138.68 315 PKPdf **PKPdf** **23 13 30.4 +0.8**
YKA Yellowknife Ar 138.68 315 PKP **PKiKP** **23 13 30.6 -1.3**
comp=Z,3.0nm,0.6s,baz=122,slow=2.4,SNR=49
YKA pPKP **pPKPdf** **23 14 07.5 -1.6**
comp=Z,0.6nm,0.7s,baz=127,slow=2.3,SNR=2.8
YKA SKPbc **SKPbc** **23 16 50.2 +0.2**
comp=Z,0.9nm,0.6s,baz=133,slow=2.4,SNR=13

ZALV Zalesovo Beam 143.08 67 PKPpre PKPpre 23 13 34.4
ZALV Zalesovo Beam 143.08 67 PKhKP PKPpre 23 13 34.1
comp=Z,2.0nm,0.4s,baz=235,slow=4.4,SNR=10
ZALV PKP **PKiKP** **23 13 40.5 -0.7**
comp=Z,1.5nm,0.7s,baz=226,slow=3.9,SNR=4.6
ZALV SKPbc **SKPbc** **23 17 00.7 -1.0**
comp=Z,0.6nm,0.6s,baz=228,slow=3.5,SNR=2.7
P33M Teslin, Yukon 144.62 304 PKPdf **PKPdf** **23 13 40.1 -0.4**
P32M Atlin 144.68 303 PKPdf **PKPdf** **23 13 40.5 0.0**
MMPY Sheldon Lake, 145.17 309 **PKPab** **23 13 41.7 +0.1**
M31M Drury Creek, Y 146.26 307 PKPdf **PKPab** **23 13 44.9 -0.8**
HYT Haines Junctio 146.94 303 PKPbc **PKPab** **23 13 48.0 -0.6**
A36M Sachs Harbour 146.97 326 **PKPbc** **23 13 46.2 0.0**
M30M Minto, Yukon 147.43 306 PKPbc **PKPbc** **23 13 48.5 +0.6**
K29M Barlow Dome 148.26 308 PKPbc **PKPbc** **23 13 50.3 +0.2**
I30M Mount Dempster 148.34 311 PKPbc **PKPbc** **23 13 49.9 -0.4**
INK Inuvik 148.38 317 PKPbc **PKiKP** **23 13 50.9 -0.7**
INK Inuvik 148.38 317 PKPbc **PKiKP** **23 13 50.6 -1.0**
comp=Z,1.2nm,0.4s,baz=111,slow=4.1,SNR=11
INK SKPbc **SKiKP** **23 17 14.6 +1.3**
comp=Z,2.8nm,0.7s,baz=80,slow=2.8,SNR=8.6
LOGN Logan Glacier 148.47 302 PKPbc **PKPbc** **23 13 51.2 +0.4**
EPYK Eagle Plains 148.89 313 PKPbc **PKiKP** **23 13 51.9 -0.9**
DAWY Dawson 149.10 308 PKPbc **PKPbc** **23 13 51.5 -0.6**
VRDI Verde Repeater 149.72 302 PKPbc **PKiKP** **23 13 54.6 -0.3**
BCAR Beaver Creek A 149.72 305 PKPdf **PKPdf** **23 13 48.3 -0.6**
BCAR PKPbc **PKiKP** **23 13 54.6 -0.1**
BCAR PKPab **PKPab** **23 14 00.0 +0.4**
E29M Blow River 149.95 317 PKPbc **PKiKP** **23 13 54.4 -0.5**
SONM Songino Array 150.23 91 PKPbc **PKiKP** **23 13 56.3 +0.1**
comp=Z,7.4nm,0.6s,baz=218,slow=3.0,SNR=44
SONM pPKPbc **pPKPbc** **23 14 33.2 -1.1**
comp=Z,4.1nm,0.8s,baz=226,slow=2.7,SNR=6.4
NRIK Noril'sk 150.87 42 PKPbc **PKiKP** **23 13 56.8 0.0**
comp=Z,4.5nm,1.1s,baz=281,slow=4.3,SNR=8.1
NRIK pPKPbc **pPKPbc** **23 14 32.4 -2.6**
comp=Z,2.2nm,0.8s,baz=95,slow=2.6,SNR=2.9
SCRK Sand Creek 150.97 307 PKPbc **PKiKP** **23 13 57.1 -0.2**
RIDG Independent Ri 151.25 306 PKPbc **PKiKP** **23 13 58.2 +0.4**
SCM Sheep Creek Mo 151.66 301 PKPbc **PKiKP** **23 13 59.8 +1.1**
BMAR Burnt Mountain 152.16 313 PKPbc **PKiKP** **23 14 00.2 +0.7**
GHO Glory Hole Cre 152.35 301 PKPbc **PKiKP** **23 14 00.8 +0.7**
ILAR Eielson Array 152.41 307 PKPbc **PKiKP** **23 14 00.4 +0.4**
comp=Z,0.7nm,0.3s,baz=139,slow=2.4,SNR=19
ILAR pPKPbc **pPKPbc** **23 14 38.3 -0.9**
comp=Z,0.9nm,0.7s,baz=134,slow=2.7,SNR=2.9
KDAK Kodiak Island 152.51 291 PKPbc **PKiKP** **23 14 01.0 +0.6**
KSRS Korea Array 152.72 131 PKPbc **PKiKP** **23 14 02.0 +0.5**
comp=Z,1.6nm,0.6s,baz=237,slow=1.5,SNR=3.4
KSRS PKPab **PKPab** **23 14 13.8 +1.0**
comp=Z,1.9nm,0.7s,baz=186,slow=5.0,SNR=4.4
D25K Kavik River 153.15 317 PKPbc **PKiKP** **23 14 01.9 +0.4**
TOLK Toolik Lake Re 154.21 315 PKPbc **PKiKP** **23 14 05.0 +1.2**
MJAR Matsushiro Arr 155.34 149 PKPab **PKPab** **23 14 24.7 +0.7**
comp=Z,0.6nm,0.3s,baz=178,slow=4.7,SNR=4.2
IMAR Indian Mountai 155.48 309 PKPdif PKPdf 23 14 07.4 +10
C18K Utukok River 158.46 315 PKPab **PKPab** **23 14 37.2 +0.4**
USRK Ussuriysk Ar. 160.06 128 PKPab **PKPab** **23 14 44.7 +0.5**
KLR Kul'dur 163.86 117 PKPab **PKPab** **23 15 00.8 0.0**
comp=Z,1.9nm,0.9s,baz=243,slow=4.9,SNR=4.8

*IDC **05** 22:56:43.5±2.2, 35°.27S×179°.12E, h0km, mb4.2/2, mbtmp4.2/3, ML3.9/1, MS3.6/5, Error ellipse: s-maj=49.6km s-min=40.2km az=70.0*
*WEL **05** 22:56:46.8±1.2, 35°S±7°×17°8E±°, h5km, M4.0/9, ML4.1/10, MLv4.0/9, Error ellipse: s-maj=0.0km s-min=0.0km az=61.3, confirmed*
*NEIC **05** 22:56:46.0±2.3, 35°.4S±0°.1×179°.00E±0°.05, h10km±2km, mb4.5/7, Error ellipse: s-maj=21.1km s-min=7.3km az=7.0*
ISC 05 22:56:47.1±2.0, 35°.38S±0°.04×178°.74E±0°.07, h13km±12km, n91, σ2s25/89, mb4.4/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.21**	**189**				**Pn**	**22 57 22.5**	**-0.9**
MXZ	**Matakaoa Point**	**2.21**	**189**	P			**Pn**	**22 57 23.2**	**-0.3**
MXZ				S			**Sn**	**22 57 49.9**	**-0.7**
MXZ				T			T	22 59 23.4	
WMGZ	**Waiomatatini S**	**2.45**	**186**	P			**Pn**	**22 57 27.5**	**+0.7**
WMGZ				S			**Sg**	**22 58 06.4**	**+0.6**
HAZ	**Te Kaha**	**2.50**	**198**	P			**Pn**	**22 57 27.8**	**+0.5**
HAZ				S			**Sn**	**22 57 58.6**	**+1.0**
PKGZ	**Pakihiroa**	**2.56**	**192**	P			**Pn**	**22 57 29.0**	**+0.6**
PKGZ				S			**Sb**	**22 58 06.5**	**+2.1**
PUZ	**Puketiti**	**2.72**	**188**	P			**Pb**	**22 57 33.1**	**-2.5**
PUZ				S			**Sb**	**22 58 06.8**	**-2.0**
RUGZ	**Raukumara Rang**	**2.72**	**198**	P			**Pn**	**22 57 31.8**	**+1.2**
RUGZ				S			**Sn**	**22 58 04.9**	**+1.6**
KUZ	**Kuaotunu**	**2.80**	**240**	P			**Pn**	**22 57 30.9**	**-0.6**
KUZ				S			**Sn**	**22 58 02.3**	**-2.8**
TWGZ	**Tauwhareparae**	**2.86**	**192**	P			**Pb**	**22 57 35.9**	**-2.1**
TWGZ				S			**Sb**	**22 58 14.3**	**+1.4**
OPRZ	**Ohinepanea**	**3.02**	**215**	P			**Pn**	**22 57 36.6**	**+2.0**
MWZ	**Matawai**	**3.11**	**198**	P			**Pn**	**22 57 37.0**	**+1.2**
MWZ				S			**Sn**	**22 58 13.0**	**+0.2**
CNGZ	**Carnagh Statio**	**3.13**	**188**	P			**Pb**	**22 57 39.3**	**-3.2**
CNGZ				S			**Sb**	**22 58 20.6**	**0.0**
URZ	**Urewera**	**3.16**	**204**	Pn			**Pn**	**22 57 37.5**	**+1.1**
URZ	10nm,0.3s,baz=93,slow=4.8,SNR=52					Sn	**Sn**	**22 58 13.7**	**-0.3**
URZ	19nm,0.3s,baz=321,slow=23,SNR=13					LR	LR	22 58 58.9	
	comp=Z,478nm,18.4s,baz=120,slow=40 47nm,0.5s								
URZ	**Urewera**	**3.16**	**204**	P			**Pn**	**22 57 37.7**	**+1.2**
URZ				S			**Sn**	**22 58 13.8**	**-0.2**
RAGZ	**Rawiri**	**3.29**	**198**	P			**Pn**	**22 57 40.4**	**+2.0**
RAGZ				S			**Sn**	**22 58 18.7**	**+1.4**
RIGZ	**Rimuhau**	**3.41**	**193**	P			**Pn**	**22 57 43.0**	**+2.9**
RIGZ				S			**Sb**	**22 58 28.9**	**+0.1**
MUGZ	**Murupara**	**3.47**	**206**	P			**Pn**	**22 57 42.9**	**+2.1**
MUGZ				S			**Sn**	**22 58 22.4**	**+0.6**
TOZ	**Tahuroa Road**	**3.51**	**227**	Pn			**Pn**	**22 57 42.3**	**+1.0**
RTZ	**Ruatahuna**	**3.52**	**203**	Pn			**Pn**	**22 57 41.9**	**+0.3**
RTZ	**Ruatahuna**	**3.52**	**203**	P			**Pn**	**22 57 43.0**	**+1.4**
RTZ				S			**Sn**	**22 58 24.3**	**+1.1**
SNGZ	**Shannon Statio**	**3.58**	**198**	P			**Pn**	**22 57 45.5**	**+3.2**
SNGZ				S			**Sb**	**22 58 33.7**	**+0.2**
PRGZ	**Paritu Road**	**3.60**	**191**	P			**Pn**	**22 57 45.5**	**+2.8**
PRGZ				S			**Sb**	**22 58 30.2**	**-4.1**
WCZ	**Waipu Caves**	**3.62**	**260**	P			Pn	22 57 37.4	-5.5
KNZ	**Kokohu**	**3.73**	**193**	P			**Pn**	**22 57 46.3**	**+1.9**
RAHZ	**Arahi**	**3.77**	**200**	P			**Pn**	**22 57 48.7**	**+3.8**
MTHZ	**Maungataniwha**	**3.78**	**203**	P			**Pn**	**22 57 46.9**	**+1.7**
MHGZ	**Mahia Peninsul**	**3.83**	**190**	P			**Pn**	**22 57 48.2**	**+2.5**
WHNZ	**Waihua**	**3.88**	**198**	P			**Pn**	**22 57 49.9**	**+3.5**
MRHZ	**Matea Rd**	**3.92**	**208**	P			**Pn**	**22 57 49.3**	**+2.3**
NMHZ	**Naumai**	**4.02**	**202**	P			**Pn**	**22 57 52.0**	**+3.5**
ARHZ	**Aropaoanui**	**4.12**	**199**	P			**Pn**	**22 57 52.6**	**+2.9**
BKZ	**Black Stump Fm**	**4.18**	**205**	Pn			**Pn**	**22 57 51.9**	**+1.3**
BKZ	**Black Stump Fm**	**4.18**	**205**	P			**Pn**	**22 57 53.8**	**+3.2**
RATZ	**Rangitukua**	**4.21**	**213**	P			Pn	22 57 56.4	+5.4
RITZ	**Rihia Road**	**4.26**	**212**	P			Pn	22 57 56.7	+5.0
MCHZ	**McNeill Hill**	**4.37**	**201**	P			**Pn**	**22 57 55.7**	**+2.5**
HIZ	**Hauiti**	**4.41**	**224**	Pn			**Pn**	**22 57 55.0**	**+1.2**
KWHZ	**Kaweka Forest**	**4.44**	**204**	P			**Pn**	**22 57 56.7**	**+2.5**
NTVZ	**North Tongarir**	**4.44**	**212**	P			Pn	22 57 59.0	+4.7
TMVZ	**Te Maari**	**4.45**	**212**	P			**Pn**	**22 57 58.5**	**+4.1**
ETVZ	**East Tongariro**	**4.46**	**212**	P			**Pn**	**22 57 59.2**	**+4.6**
CKHZ	**Cape Kidnapper**	**4.47**	**197**	P			**Pn**	**22 57 56.0**	**+1.4**
WTVZ	**West Tongariro**	**4.50**	**213**	P			Pn	22 57 59.8	+4.7
NNVZ	**North Ngauruho**	**4.50**	**213**	P			Pn	22 57 59.9	+4.8
OTVZ	**Oturere**	**4.50**	**212**	P			**Pn**	**22 57 59.6**	**+4.5**
TWVZ	**Tauwera**	**4.53**	**215**	P			Pn	22 58 00.5	+5.1
SNVZ	**South Ngauruho**	**4.53**	**212**	P			**Pn**	**22 57 59.1**	**+3.5**
NGZ	**Ngauruhoe**	**4.54**	**212**	P			**Pn**	**22 57 60.0**	**+4.3**
COVZ	**Chateau Observ**	**4.59**	**213**	P			**Pn**	**22 58 00.8**	**+4.5**
BHHZ	**Black Hill Sta**	**4.62**	**207**	P			**Pn**	**22 57 59.7**	**+3.0**
FWVZ	**Far West T-bar**	**4.63**	**212**	P			**Pn**	**22 58 01.4**	**+4.5**
MAVZ	**Matarangi**	**4.63**	**212**	P			**Pn**	**22 58 00.3**	**+3.2**
KAHZ	**Kahuranaki**	**4.65**	**198**	P			**Pn**	**22 57 59.0**	**+1.9**
KRHZ	**Kereru**	**4.65**	**203**	P			**Pn**	**22 57 58.7**	**+1.6**
TRVZ	**Turoa**	**4.67**	**212**	P			**Pn**	**22 58 01.2**	**+3.8**
WNVZ	**Wahianoa**	**4.67**	**211**	P			**Pn**	**22 58 01.0**	**+3.6**
MOVZ	**Moawhango**	**4.67**	**210**	P			**Pn**	**22 58 00.1**	**+2.8**
PKVZ	**Pokaka**	**4.75**	**214**	P			Pn	22 58 04.6	+6.1
VRZ	**Vera Road**	**4.90**	**219**	P			Pn	22 58 07.8	+7.3
PNHZ	**Pukenui**	**4.96**	**203**	P			**Pn**	**22 58 02.3**	**+1.1**
DREZ	**Durham Road**	**5.25**	**222**	P			Pn	22 58 12.5	+7.2
BFZ	**Birch Farm**	**5.65**	**200**	Pn			**Pn**	**22 58 09.8**	**-0.9**
MRZ	**Mangatainoka R**	**5.83**	**204**	Pn			**Pn**	**22 58 12.0**	**-1.3**
BHW	**Baring Head**	**6.74**	**206**	Pn			**Pn**	**22 58 24.0**	**-1.8**
PLWZ	**Palliser**	**6.76**	**203**	Pn			**Pn**	**22 58 24.3**	**-1.7**
BSWZ	**Blackbirch Sta**	**7.38**	**210**	Pn			**Pn**	**22 58 35.1**	**+0.5**
THZ	**Tophouse**	**7.84**	**214**	Pn			**Pn**	**22 58 40.5**	**-0.4**
RPZ	**Rata Peaks**	**10.22**	**213**	LR			LR	23 03 34.9	
	comp=Z,212nm,18.8s,baz=43,slow=39								
DZM	**Mont Dzumac**	**17.07**	**318**	LR			LR	23 06 07.2	
	comp=Z,243nm,18.5s,baz=150,slow=33								
PMG	**Port Moresby**	**38.69**	**304**	LR			LR	23 18 39.5	
	comp=Z,101nm,18.6s,baz=152,slow=34								
AS31	**Alice Springs**	**40.41**	**274**	P			**P**	**23 04 24.2**	**-0.9**
ASAR	**Alice Springs**	**40.41**	**274**	P			**P**	**23 04 24.8**	**-0.4**
ASAR	**Alice Springs**	**40.41**	**274**	P			**P**	**23 04 25.9**	**+0.8**
	3.4nm,0.8s,baz=115,slow=7.3,SNR=28 3.4nm,0.8s								
WB2	**Warramunga Arr**	**41.85**	**280**	P			**P**	**23 04 37.5**	**+0.4**
WB2						IAmb	IAmb	23 04 39.6	
	comp=Z,6.9nm,0.9s								
WRA	**Warramunga Ar**	**41.86**	**280**	P			**P**	**23 04 37.9**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=123,slow=7.4,SNR=12 comp=Z,3.2nm,0.8s								
WB0	**Warramunga Arr**	**41.91**	**280**	P			**P**	**23 04 38.6**	**+1.1**
WB0						IAmb	IAmb	23 04 40.2	
	comp=Z,7.6nm,0.9s								
FORT	**Forrest**	**42.34**	**261**	P			**P**	**23 04 41.5**	**+0.7**
FORT						IAmb	IAmb	23 04 42.8	
	comp=Z,14nm,0.8s								
FITZ	**Fitzroy Crossi**	**49.86**	**276**	P			**P**	**23 05 42.0**	**+1.8**
FITZ						IAmb	IAmb	23 06 02.1	
	comp=Z,4.3nm,1.3s								
PSA00	**Pilbara Seismi**	**52.87**	**268**	P			**P**	**23 06 03.0**	**+0.3**
PSA00						IAmb	IAmb	23 06 11.6	
	comp=Z,18nm,1.2s								
QSPA	**South Pole Qui**	**54.74**	**180**	P			**P**	**23 06 18.3**	**+2.2**
H03S2	**Juan Fernandez**	**79.97**	**124**	T			T	00 37 05.2	
	baz=232,slow=74								
H03S1	**Juan Fernandez**	**79.98**	**124**	T			T	00 37 06.6	
	baz=232,slow=74								
H03S3	**Juan Fernandez**	**79.99**	**124**	T			T	00 37 08.8	
	baz=232								
H03N3	**Juan Fernandez**	**80.20**	**124**	T			T	00 37 18.2	
	baz=236,slow=72,SNR=23								
H03N2	**Juan Fernandez**	**80.20**	**124**	T			T	00 37 20.3	
	baz=236,slow=72,SNR=17								
H03N1	**Juan Fernandez**	**80.21**	**124**	T			T	00 37 20.7	
	baz=236,slow=72,SNR=45								
PLCA	**Paso Flores**	**81.08**	**134**	LR			LR	23 38 39.5	
	comp=Z,40nm,18.0s,baz=192,slow=31								
FIA1	**FINESS Array S**	**148.68**	**335**	PKPbc			**PKPbc**	**23 16 31.6**	**-1.5**
FINES	**FINESS Array B**	**148.68**	**335**	PKPbc			**PKPbc**	**23 16 31.5**	**-1.7**
FINES	**FINESS Array B**	**148.68**	**335**	PKPbc			**PKPbc**	**23 16 31.2**	**-2.0**
	comp=Z,2.3nm,0.8s,baz=69,slow=4.6,SNR=4.0								
TORD	**Torodi Ar. Bea**	**157.71**	**188**	PKPab			**PKPab**	**23 17 15.2**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=150,slow=2.5,SNR=3.8								

*IDC **05** 23:01:38.7±1.2, 49°.94N×114°.35W, h0km, mb2.6/1, mbtmp2.9/5, ML3.2/4, Error ellipse: s-maj=18.6km s-min=12.8km az=110.0*
*PGC **05** 23:01:42.1±0.0, 50°.19N×114°.85W, h0km, ML3.2/9, 101km northeast of Cranbrook, Bc Alberta, Canada Mining explosion.*
ISC 05 23:01:38.3±0.7, 50°.27N±0°.03×114°.87W±0°.04, h0km, n21, σ2s59/30, Alberta

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSPGA	**Hill Springs,**	**1.21**	**139**	Pn			**Pn**	**23 02 03.7**	**+1.1**
SLEB	**Sale Mountain**	**2.26**	**295**	Sg			**Sg**	**23 02 54.1**	**+3.2**
MKRVA	**Milk River, Al**	**2.31**	**118**	Pn			**Pb**	**23 02 20.6**	**-0.2**
MKRVA				Sg			**Sb**	**23 02 51.5**	**+1.6**
BSMT	**Bassoo Peak**	**2.42**	**179**	Pn			**Pn**	**23 02 21.3**	**+2.0**
BSMT				Sg			**Sb**	**23 02 54.5**	**+1.1**
YBMT	**Yellow Bay**	**2.48**	**166**	Pn			**Pn**	**23 02 22.4**	**+2.3**
YBMT				Sg			**Sb**	**23 02 56.6**	**+1.8**
NEW	**Newport**	**2.49**	**217**	Pn			**Pn**	**23 02 22.4**	**+2.2**
	1.6nm,0.3s,baz=48,slow=8.6,SNR=20								
NEW				Sn			**Sn**	**23 02 53.0**	**+1.8**
	4.9nm,0.3s,baz=304,slow=17,SNR=10 6.0nm,0.4s								
I56US	**NEWPORT INFRAS**	**2.49**	**217**	I			I	23 17 50.0	
	baz=43,slow=328,SNR=4.1								
JTMT	**Jette**	**2.56**	**171**	Pn			**Pn**	**23 02 23.4**	**+2.3**
JTMT				Sg			**Sb**	**23 02 58.6**	**+1.5**
MNB	**Mounoet Dainar**	**2.93**	**313**	Pn			**Pb**	**23 02 31.7**	**+0.1**
MNB				Sg			**Sg**	**23 03 16.5**	**+4.0**
EDM	**Edmonton**	**3.10**	**17**	Pn			**Pn**	**23 02 30.6**	**+2.0**
PNT	**Penticton**	**3.22**	**255**	Pn			**Pn**	**23 02 31.7**	**+1.5**
PNT				Sg		

baz=287
P23K S Sn 23 38 53.4 +2.0
baz=287
RC01 Rabbit Creek A 0.95 339 Pn Pn 23 38 41.3 -0.3
RC01 Sn Sb 23 38 53.9 -1.0
RC01 Rabbit Creek A 0.95 339 P Pn 23 38 41.2 -0.3
baz=157
RC01 S Sb 23 38 54.7 -0.2
baz=157
BRSE Bradley Lake S 0.97 242 Pn 23 38 42.7 +0.8
BRSE Sn 23 38 56.2 +1.6
BRSE Bradley Lake S 0.97 242 P Pn 23 38 42.7 +0.8
baz=59
BRSE S Sn 23 38 56.2 +1.6
baz=59
BRLK Bradley Lake 1.03 245 Pn 23 38 43.6 +0.9
BRLK Sn Sn 23 38 57.6 +1.6
FIS Fire Island 1.10 329 Pn 23 38 44.6 +0.9
FIS Sn Sb 23 39 00.0 +0.8
CAPN Captain Cook N 1.19 299 Pb 23 38 46.5 0.0
CAPN Sn Sb 23 39 02.9 +1.3
CAPN Captain Cook N 1.19 299 P Pb 23 38 46.6 0.0
baz=116
KNK Knik Glacier 1.24 13 Pn 23 38 45.6 -0.1
KNK Sn Sn 23 39 01.4 +0.2
KNK IAML 23 39 04.1
comp=N,570nm,0.6s
KNK IAML 23 39 04.2
comp=E,839nm,0.6s
KNK Knik Glacier 1.24 13 P Pn 23 38 45.5 -0.1
baz=193
KNK S Sn 23 39 01.4 +0.2
baz=193
HIN Hinchinbrook I 1.28 80 Pn 23 38 46.5 +0.3
HIN Sn Sn 23 39 03.3 +1.2
HIN IAML 23 39 04.7
comp=E,660nm,0.4s
CNPM China Poot 1.30 239 Pn 23 38 47.5 +1.1
CNPM Sn Sn 23 39 03.4 +0.8
CNPM IAML 23 39 07.0
comp=E,687nm,0.4s
PMR Palmer 1.39 358 Pn 23 38 47.6 +0.1
PMR Sn Sn 23 39 05.0 +0.2
PMR IAML 23 39 07.1
comp=E,553nm,0.6s
PMR IAML 23 39 07.1
comp=N,552nm,0.5s
PMR Palmer 1.39 358 P Pn 23 38 48.1 +0.5
PMR Palmer 1.39 358 P Pn 23 38 47.7 +0.1
baz=178
PMR S Sn 23 39 05.0 +0.2
baz=178
HOM Homer 1.42 248 Pn Pn 23 38 48.6 +0.6
HOM Sn Sb 23 39 08.4 +0.2
HOM Homer 1.42 248 P Pn 23 38 50.1 +2.1
baz=65
SUA Susitna One 1.51 327 Pn 23 38 49.5 +0.1
SUA IAML 23 39 13.4
comp=E,386nm,0.5s
SUA Susitna One 1.51 327 Sn 23 39 09.2 +1.2
SUA Susitna One 1.51 327 P Pn 23 38 49.9 +0.5
baz=145
SUA S Sn 23 39 09.2 +1.2
baz=145
Q23K Middleton Isla 1.57 119 Pn Pn 23 38 48.9 -1.1
Q23K IAML 23 39 25.1
comp=N,359nm,1.0s
Q23K IAML 23 39 25.7
comp=E,439nm,0.8s
Q23K Middleton Isla 1.57 119 P Pb 23 38 53.1 +0.1
baz=302
GHO Glory Hole Cre 1.57 2 Pn 23 38 50.6 +0.4
GHO IAML 23 39 16.6
comp=E,451nm,0.8s
MID Middleton Isla 1.57 119 Pn Pn 23 38 48.5 -1.6
MID IAML 23 39 25.2
comp=E,506nm,1.0s
MID Middleton Isla 1.57 119 P Pb 23 38 52.6 -0.5
SML Sawmill 1.64 12 Pn Pn 23 38 51.5 +0.4
SML IAML 23 39 15.9
comp=E,323nm,0.6s
SML IAML 23 39 33.6
comp=N,274nm,0.7s
SML Sawmill 1.64 12 P Pn 23 38 51.5 +0.4
baz=192
EYAK Cordova Ski Ar 1.67 77 P Pn 23 38 51.7 +0.2
EYAK Cordova Ski Ar 1.67 77 P Pn 23 38 51.6 +0.1
baz=261
RDT Redoubt 1.71 284 Pn 23 38 52.0 -0.1
O20K Slope Mountain 1.80 268 Pn 23 38 54.4 +1.1
O20K Slope Mountain 1.80 268 P Pn 23 38 54.4 +1.1
baz=83
SCM Sheep Creek Mo 1.83 26 Pn 23 38 54.5 +0.7
SCM IAML 23 39 23.5
comp=E,370nm,0.5s
SCM Sheep Creek Mo 1.83 26 P Pn 23 38 54.5 +0.7
baz=208
N20K Mount Spurr 1.85 304 P Pn 23 38 54.0 0.0
baz=120
DFR Drift River 1.85 284 Pn 23 38 54.4 +0.3
SPCN Chakachatna No 1.85 305 Pn 23 38 54.2 +0.2
RDSO Redoubt South 1.86 279 Pn 23 38 54.8 +0.6
SPCP Crater Peak Br 1.86 306 Pn 23 38 55.0 +0.8
RSO Redoubt South 1.86 279 Pn 23 38 55.2 +0.8
STLK Strandline Lak 1.88 315 Pn 23 38 54.8 +0.4
RDJH Redoubt Jeurge 1.91 283 Pn 23 38 55.4 +0.5
SPBG Spurr Blockage 1.95 304 Pn 23 38 56.0 +0.7
NCT North Crescent 1.96 282 Pn 23 38 56.0 +0.4
KLU Klutina 2.00 48 Pn 23 38 57.0 +0.9
KLU IAML 23 39 23.9
comp=N,315nm,0.4s
KLU IAML 23 39 28.9
comp=E,276nm,0.5s
KLU Klutina 2.00 48 P Pn 23 38 56.6 +0.5
baz=232
IVE Iliamna Volcan 2.00 266 Pn 23 38 56.8 +0.7
SPNN North Nagishla 2.14 305 Pn 23 38 58.9 +0.9
SKT Skwentna 2.15 327 Pn 23 38 59.7 +1.6
SKT Skwentna 2.15 327 P Pn 23 38 58.8 +0.7
baz=144
P19K Oil Pt 2.18 257 Pn 23 38 59.5 +0.9
P19K Oil Pt 2.18 257 P Pn 23 39 00.8 +2.3
baz=73
RAGM Ragged Mountai 2.18 83 Pn 23 38 58.5 0.0
RAGM IAML 23 39 43.1
comp=E,267nm,0.7s
CUT Chulitna 2.28 346 Pn 23 39 01.4 +1.5
BMRM Bremner River 2.32 69 P Pn 23 39 00.6 +0.2
baz=253
KAIM Kayak Island 2.33 95 Pn Pn 23 39 01.0 +0.4
KAIM IAML 23 39 47.3
comp=N,141nm,1.1s
KAIM Kayak Island 2.33 95 P Pn 23 39 00.9 +0.4
baz=280
SYI Shuyak Island 2.34 228 Pn Pn 23 39 01.7 +1.0
SYI IAML 23 39 47.6
comp=N,157nm,1.2s
Q20K Shuyak Island 2.35 228 P Pn 23 39 02.4 +1.6
baz=45
M24K Tolsona, Glenn 2.36 35 Pn 23 39 02.6 +1.6
M24K IAML 23 39 39.3
comp=N,192nm,0.8s
M24K Tolsona, Glenn 2.36 35 P Pn 23 39 01.8 +0.8
baz=218
HMT Hamilton 2.39 85 Pn Pn 23 39 01.7 +0.4
WAT6 Susitna Watana 2.46 14 Pn 23 39 03.1 +0.6
WAT6 Susitna Watana 2.46 14 P Pn 23 39 03.1 +0.6
baz=195
NICHA Nichawak Mount 2.53 87 Pn 23 39 03.2 -0.1
N25K Chitina, Valde 2.58 55 Pn Pn 23 39 05.3 +1.2
N25K IAML 23 39 42.4
comp=E,117nm,0.4s
N25K IAML 23 39 42.9
comp=N,171nm,0.7s
N25K Chitina, Valde 2.58 55 P Pn 23 39 04.9 +0.8
baz=240
M20K Styx River 2.60 312 Pn 23 39 06.3 +1.9
M20K Styx River 2.60 312 IAML 23 39 42.3
comp=N,100nm,0.8s
M20K IAML 23 39 42.8
comp=E,111nm,0.8s
M20K Styx River 2.60 312 P Pn 23 39 06.3 +1.9
baz=128
O19K Port Alsworth 2.64 272 Pn 23 39 05.5 +0.8
SUCK Suckling Hills 2.64 91 Pn Pn 23 39 05.3 +0.5

WAT7 Susitna Watana 2.64 2 Pn 23 39 05.4 +0.6
WAT1 Susitna Watana 2.64 5 Pn 23 39 06.2 +1.3
WAT1 Susitna Watana 2.64 5 P Pn 23 39 06.2 +1.3
baz=185
BERG Berg Lake 2.67 84 Pn 23 39 04.8 -0.4
Q19K Cape Douglas, 2.67 243 Pn 23 39 05.9 +0.6
Q19K Cape Douglas, 2.67 243 P Pn 23 39 06.7 +1.5
baz=59
N19K Bonanza Creek 2.76 285 Pn 23 39 06.9 +0.3
N19K IAML 23 39 39.8
comp=E,106nm,0.3s
N19K IAML 23 39 58.4
comp=N,113nm,0.8s
N19K Bonanza Creek 2.76 285 P Pn 23 39 06.8 +0.3
baz=100
GLB Gilahina Butte 2.85 62 Pn Pn 23 39 08.4 +0.7
GLB IAML 23 39 50.2
comp=E,126nm,0.6s
GRIN Grindle Hills 2.85 86 Pn 23 39 07.4 -0.4
HARP HAARP 2.89 39 Pn 23 39 08.9 +0.7
HARP HAARP 2.89 39 P Pn 23 39 08.9 +0.7
baz=222
KHIT Khitrov Hills 2.89 83 Pn 23 39 07.7 -0.6
WACK Wrangell Chich 2.90 50 Pn 23 39 09.8 +1.2
WASW Wrangell South 2.93 52 Pn 23 39 10.3 +1.3
VRDI Verde Repeater 2.93 67 Pn Pn 23 39 09.4 +0.4
VRDI IAML 23 40 00.6
comp=N,116nm,1.0s
CRQM Cirque 2.97 77 Pn Pn 23 39 09.8 +0.2
CRQM IAML 23 40 00.1
comp=N,118nm,0.5s
CRQM IAML 23 40 08.4
comp=E,131nm,0.8s
DHY Denali Highway 2.99 15 Pn 23 39 11.8 +2.1
DHY IAML 23 39 55.5
comp=E,100nm,0.4s
DHY IAML 23 39 56.4
comp=N,75nm,0.6s
DHY Denali Highway 2.99 15 P Pn 23 39 10.6 +0.9
baz=196
CRQE Cirque 3.00 77 P Pn 23 39 09.5 -0.3
baz=263
KDAK Kodiak Island 3.04 219 Pn Pn 23 39 10.8 +0.5
KDAK IAML 23 39 46.0
comp=N,69nm,0.9s
KDAK Kodiak Island 3.04 219 P Pn 23 39 10.9 +0.6
comp=N,3.2nm,0.3s,baz=66,slow=5.5,SNR=50
KDAK S Sn 23 39 44.0 -1.5
comp=N,32nm,0.7s,baz=337,slow=23,SNR=11
comp=N,10nm,0.2s
WAX Waxell Ridge 3.09 83 Pn 23 39 10.8 -0.2
WAX IAML 23 39 49.3
comp=E,93nm,0.4s
WAX IAML 23 40 02.6
comp=N,120nm,0.5s
PPLA Purkeypile 3.09 332 Pn 23 39 11.6 +0.5
PPLA Purkeypile 3.09 332 P Pn 23 39 11.6 +0.5
baz=149
SNH Sunshine Point 3.10 88 Pn Pn 23 39 11.7 +0.6
SNH IAML 23 40 11.1
comp=E,67nm,1.2s
M19K Big River Lodg 3.11 306 Pn 23 39 12.6 +1.4
M19K IAML 23 39 58.0
comp=N,68nm,0.6s
O18K Koktuh Hills 3.12 266 Pn 23 39 12.3 +1.0
O18K IAML 23 40 05.2
comp=N,110nm,1.1s
O18K IAML 23 40 07.9
comp=E,90nm,0.6s
O18K Koktuh Hills 3.12 266 P Pn 23 39 11.9 +0.5
baz=80
MCARA McCarthy VSAT 3.18 66 Pn 23 39 12.9 +0.7
MCARA McCarthy VSAT 3.18 66 P Pn 23 39 12.6 +0.5
baz=251
RND Reindeer 3.21 2 Pn 23 39 14.6 +1.9
RND IAML 23 40 00.7
comp=N,97nm,1.2s
RND IAML 23 40 00.7
comp=E,63nm,0.5s
P18K Big Mountain, 3.23 258 Pn Pn 23 39 12.4 -0.5
P18K IAML 23 40 13.3
comp=N,64nm,1.5s
P18K IAML 23 40 13.4
comp=E,66nm,0.9s
PAX Paxson 3.25 30 Pn 23 39 14.9 +1.6
PAX Paxson 3.25 30 P Pn 23 39 14.9 +1.6
baz=213
L20K Farewell, AK 3.26 316 Pn 23 39 14.6 +1.2
L20K Farewell, AK 3.26 316 P Pn 23 39 14.6 +1.2
baz=132
BARK Barkley Ridge 3.27 84 Pn 23 39 13.5 0.0
TRF Thorofare Moun 3.31 350 Pn 23 39 16.2 +2.1
TRF IAML 23 40 05.4
comp=E,81nm,0.6s
TRF IAML 23 40 07.5
comp=N,103nm,0.8s
TRF Thorofare Moun 3.31 350 P Pn 23 39 14.4 +0.3
baz=169
SVW2 Sparrevohn 3.34 288 Pn 23 39 14.9 +0.4
SVW2 IAML 23 40 14.4
comp=E,59nm,0.7s
SVW2 IAML 23 40 15.8
comp=N,60nm,0.7s
SVW2 Sparrevohn 3.34 288 P Pn 23 39 15.1 +0.7
ISLE Juniper Island 3.35 80 Pn 23 39 14.7 0.0
ISLE IAML 23 40 13.9
comp=N,75nm,0.5s
ISLE IAML 23 40 21.6
comp=E,67nm,0.8s
KIAG Kiagna River 3.38 75 Pn 23 39 15.1 0.0
PTPK Patty Peak 3.38 70 Pn 23 39 15.4 +0.3
N18K Kilae Creek 3.43 281 Pn 23 39 15.8 +0.2
N18K Kilae Creek 3.43 281 P Pn 23 39 15.6 0.0
baz=94
L19K White Mountain 3.44 308 Pn 23 39 17.0 +1.2
L19K IAML 23 40 22.5
comp=E,53nm,0.8s
L19K IAML 23 40 25.6
comp=N,55nm,0.9s
L19K White Mountain 3.44 308 P Pn 23 39 16.5 +0.7
baz=122
BAGL Bagley Icefiel 3.47 82 Pn 23 39 16.3 +0.2
KTH Kantishna Hill 3.47 346 Pn 23 39 18.3 +2.0
KTH IAML 23 40 10.1
comp=E,90nm,0.6s
CAST Castle Rocks 3.53 337 Pn 23 39 19.6 +2.5
CAST IAML 23 40 11.0
comp=E,51nm,0.6s
CAST IAML 23 40 20.5
comp=N,48nm,0.6s
CAST Castle Rocks 3.53 337 P Pn 23 39 18.0 +1.0
baz=154
MCK McKinley 3.54 1 Pn 23 39 18.8 +1.6
MCK McKinley 3.54 1 P Pn 23 39 18.8 +1.6
baz=181
MESA MESA 3.54 87 Pn Pn 23 39 17.7 +0.3
MESA IAML 23 39 59.1
comp=N,76nm,0.6s
MESA IAML 23 40 27.2
comp=E,51nm,1.4s
MESA MESA 3.54 87 P Pn 23 39 17.6 +0.2
baz=274
M18K Stony River 3.56 294 Pn 23 39 17.6 +0.2
M18K Stony River 3.56 294 P Pn 23 39 17.6 +0.2
baz=108
M26K Nabesna, AK 3.65 50 Pn 23 39 20.0 +1.2
M26K Nabesna, AK 3.65 50 P Pn 23 39 20.0 +1.2
baz=236
OHAK Old Harbor 3.72 218 Pn Pn 23 39 19.7 +0.1
OHAK IAML 23 40 05.4
comp=N,38nm,1.5s
OHAK Old Harbor 3.72 218 P Pn 23 39 20.3 +0.6
BARN Barnard Glacie 3.73 74 Pn 23 39 20.8 +0.8
BARN IAML 23 40 21.6
comp=N,44nm,1.1s
BARN IAML 23 40 32.3
comp=E,40nm,0.7s
MENT Mentasta 3.74 41 Pn 23 39 21.6 +1.6
MENT IAML 23 40 18.1
comp=N,74nm,0.6s
CTG Chitna Glacier 3.87 75 P Pn 23 39 22.2 +0.3
baz=262
CTGM Chitina Glacie 3.88 75 Pn Pn 23 39 22.3 +0.4
L26K Log Cabin Wild 3.92 41 Pn 23 39 24.0 +1.6
L26K IAML 23 40 30.2
comp=E,47nm,0.5s

K24K Donnelly Dome 3.92 22 Pn 23 39 24.1 +1.7
K24K Donnelly Dome 3.92 22 P Pn 23 39 24.1 +1.7
baz=204
TABL Table Mountain 3.94 83 Pn Pn 23 39 22.9 +0.1
K20K Telida 3.96 325 Pn 23 39 24.7 +1.7
K20K IAML 23 40 21.7
comp=E,45nm,0.9s
K20K IAML 23 40 45.2
comp=N,34nm,1.1s
BWN Browne 3.98 357 Pn 23 39 25.2 +2.0
BPAW Bear Paw Mtn. 4.01 348 Pn Pn 23 39 25.0 +1.3
BPAW IAML 23 40 28.8
comp=E,36nm,0.7s
BPAW IAML 23 40 36.3
comp=N,40nm,1.0s
LOGN Logan Glacier 4.02 78 Pn 23 39 24.2 +0.3
N17K Nushagak Hills 4.06 278 Pn 23 39 25.1 +0.8
N17K IAML 23 40 39.0
comp=N,39nm,0.9s
N17K Nushagak Hills 4.06 278 P Pn 23 39 24.3 0.0
baz=90
RIDG Independent Ri 4.06 27 Pn Pn 23 39 26.1 +1.7
RIDG IAML 23 40 40.0
comp=N,47nm,0.9s
RIDG Independent Ri 4.06 27 P Pn 23 39 26.0 +1.7
baz=211
M27K Edge Creek, AK 4.07 55 Pn 23 39 26.1 +1.4
L18K Granite Mounta 4.21 302 Pn 23 39 27.9 +1.5
L18K IAML 23 40 49.6
comp=N,30nm,1.1s
L18K Granite Mounta 4.21 302 P Pn 23 39 27.2 +0.8
baz=115
M17K Holitna River 4.28 290 Pn 23 39 27.8 +0.4
M17K Holitna River 4.28 290 P Pn 23 39 28.2 +0.8
baz=102
YUK2 White River 4.29 65 Pn 23 39 28.8 +1.2
WRH Wood River Hil 4.30 6 Pn Pn 23 39 29.4 +1.7
TTA Tatalina 4.31 312 Pn Pn 23 39 29.6 +1.8
TTA IAML 23 40 49.8
comp=N,29nm,1.5s
TTA Tatalina 4.31 312 P Pn 23 39 30.6 +2.8
TTA Tatalina 4.31 312 P Pn 23 39 30.1 +2.3
baz=126
HDA Harding Lake 4.33 12 Pn 23 39 29.8 +1.9
HDA IAML 23 40 39.3
comp=E,37nm,0.6s
HDA Harding Lake 4.33 12 P Pn 23 39 29.9 +1.9
baz=194
PCA Pinnacle 4.39 88 Pn 23 39 29.1 +0.2
PINM Pinnacle 4.39 88 P Pn 23 39 29.1 +0.2
baz=276
NEA2 Nenana 4.40 360 Pn 23 39 30.5 +1.4
NEA2 Nenana 4.40 360 P Pn 23 39 30.4 +1.4
baz=180
YUK3 Moose Creek 4.46 66 Pn 23 39 31.3 +1.2
YUK3 Moose Creek 4.46 66 P Pn 23 39 31.3 +1.2
baz=254
SCRK Sand Creek 4.47 30 Pn Pn 23 39 31.1 +1.1
SCRK Sand Creek 4.47 30 P Pn 23 39 30.9 +0.9
baz=214
L27K Beaver Creek, 4.48 47 Pn 23 39 31.1 +1.1
L27K Beaver Creek, 4.48 47 P Pn 23 39 31.2 +1.1
baz=234
CCB Clear Creek Bu 4.49 7 Pn Pn 23 39 31.7 +1.5
BCAR Beaver Creek A 4.49 47 Pn Pn 23 39 31.4 +1.1
O16K Kokwok River B 4.60 266 Pn Pn 23 39 32.6 +0.9
O16K IAML 23 40 57.6
comp=N,31nm,1.5s
J20K Nowinta River 4.64 331 Pn 23 39 33.1 +0.8
J20K IAML 23 40 32.9
comp=E,28nm,0.6s
J20K IAML 23 40 56.8
comp=N,32nm,0.8s
YUK8 Steele Glacier 4.68 73 Pn 23 39 34.4 +1.4
YUK8 Steele Glacier 4.68 73 P Pn 23 39 34.4 +1.4
baz=261
IL31 4.69 11 Pn 23 39 34.2 +1.3
ILAR Eielson Array 4.69 11 P Pn 23 39 34.0 +1.1
comp=N,3.7nm,0.3s,baz=192,slow=13,SNR=191
ILAR S Sn 23 40 26.6 +0.5
comp=N,2.6nm,0.6s,baz=188,slow=20,SNR=6.3
comp=N,8.4nm,0.3s
IL03 Eielson Array 4.69 12 Pn Pn 23 39 34.5 +1.5
COLA College 4.72 6 Pn 23 39 34.9 +1.6
COLA College 4.72 6 P Pn 23 39 34.9 +1.6
J25K Salcha River, 4.74 20 Pn 23 39 34.8 +1.1
J25K IAML 23 40 47.0
comp=E,26nm,0.5s
J25K Salcha River, 4.74 20 P Pn 23 39 34.6 +0.9
baz=203
MDM Murphy Dome 4.78 4 Pn Pn 23 39 35.6 +1.4
MDM IAML 23 40 54.8
comp=N,18nm,0.7s
MDM IAML 23 40 56.3
comp=E,20nm,1.2s
N16K Nishlik Lake 4.84 277 Pn 23 39 36.0 +0.9
N16K Nishlik Lake 4.84 277 P Pn 23 39 36.0 +0.9
baz=88
L17K Donlin 4.88 297 Pn 23 39 35.8 +0.2
L17K Donlin 4.88 297 P Pn 23 39 35.8 +0.2
baz=109
PNL Peninsula 4.88 92 P Pn 23 39 35.8 +0.2
J18K Innoko River 4.89 315 Pn Pn 23 39 36.9 +1.2
J18K Innoko River 4.89 315 P Pn 23 39 36.9 +1.2
baz=128
J19K Poorman 4.90 324 Pn 23 39 36.9 +1.1
J19K IAML 23 40 56.8
comp=E,23nm,0.9s
J19K IAML 23 41 14.2
comp=N,23nm,1.4s
J19K Poorman 4.90 324 P Pn 23 39 36.7 +0.9
baz=138
MLY Manley 4.91 352 Pn 23 39 37.5 +1.6
MLY IAML 23 40 38.1
comp=N,17nm,0.5s
MLY Manley 4.91 352 P Pn 23 39 37.4 +1.5
baz=170
M16K Timber Creek 4.95 284 Pn Pn 23 39 37.1 +0.6
M16K IAML 23 41 11.7
comp=E,20nm,1.0s
M16K IAML 23 41 11.9
comp=N,24nm,1.2s
I23K Minto, Yukon-K 4.96 358 Pn 23 39 38.3 +1.7
I23K IAML 23 41 04.7
comp=E,26nm,0.9s
I23K IAML 23 41 08.5
comp=N,22nm,1.3s
I23K Minto, Yukon-K 4.96 358 P Pn 23 39 38.3 +1.7
baz=178
POKR Poker Plat Res 4.98 8 Pn Pn 23 39 38.4 +1.4
POKR Poker Plat Res 4.98 8 IAML 23 41 04.6
comp=E,18nm,0.9s
POKR IAML 23 41 13.9
comp=N,16nm,0.8s
POKR Poker Plat Res 4.98 8 P Pn 23 39 38.5 +1.5
baz=189
J26L Joseph Creek 5.01 28 Pn 23 39 38.3 +0.9
J26L IAML 23 40 58.9
comp=E,16nm,1.1s
J26L IAML 23 41 05.1
comp=N,22nm,0.7s
J26L Joseph Creek 5.01 28 P Pn 23 39 38.3 +0.9
baz=213
K27K Chicken 5.04 37 Pn Pn 23 39 39.4 +1.7
K27K Chicken 5.04 37 P Pn 23 39 39.1 +1.4
baz=224
K17K Iditarod 5.10 304 Pn 23 39 39.5 +0.9
K17K IAML 23 41 08.3
comp=N,24nm,1.3s
K17K IAML 23 41 22.4
comp=E,28nm,1.2s
I21K Tanana 5.17 346 Pn 23 39 40.8 +1.3
I21K IAML 23 41 06.5
comp=N,15nm,0.8s
L16K Owhat River 5.30 291 Pn Pn 23 39 41.5 +0.2
L16K IAML 23 41 33.5
comp=N,16nm,1.0s
L16K IAML 23 41 41.4
comp=E,12nm,1.4s
N15K Kwethluk River 5.51 274 Pn Pn 23 39 43.6 -0.7
M29M Somme Creek 5.57 62 Pn 23 39 45.8 +0.8
M29M Somme Creek 5.57 62 P Pn 23 39 46.2 +1.1
baz=251
PRP Porcupine Dome 5.57 15 Pn Pn 23 39 46.2 +1.1
PRP Porcupine Dome 5.57 15 P Pn 23 39 45.9 +0.8
baz=198

H24K	**Noodor Dome**	**5.68**	**5**	Pn		**Pn**	**23**	**39**	**47.5 +1.0**
H24K	**Noodor Dome**	**5.68**	**5**	P		**Pn**	**23**	**39**	**47.9 +1.4**
	baz=186								
P29M	**Windy Craggy**	**5.72**	**91**			**Pn**	**23**	**39**	**46.8 -0.2**
P29M	**Windy Craggy**	**5.72**	**91**	P		**Pn**	**23**	**39**	**47.2 +0.2**
	baz=281								
H21K	**Melozitna Rive**	**5.73**	**344**			**Pn**	**23**	**39**	**47.5 +0.3**
H21K	**Melozitna Rive**	**5.73**	**344**	P		**Pn**	**23**	**39**	**47.9 +0.6**
	baz=161								
HYT	**Haines Junctio**	**5.73**	**79**	Pn		**Pn**	**23**	**39**	**48.1 +0.7**
I26K	**Coal Creek Min**	**5.79**	**25**	Pn		**Pn**	**23**	**39**	**49.0 +1.0**
I26K	**Coal Creek Min**	**5.79**	**25**	P		**Pn**	**23**	**39**	**48.8 +0.9**
	baz=210								
H22K	**Ishtalitna Cre**	**5.81**	**350**			**Pn**	**23**	**39**	**49.3 +1.0**
H22K	**Ishtalitna Cre**	**5.81**	**350**	P		**Pn**	**23**	**39**	**49.3 +1.0**
	baz=168								
EGAK	**Eagle**	**5.86**	**35**			**Pn**	**23**	**39**	**50.7 +1.7**
DAWY	**Dawson**	**5.95**	**45**	Pn		**Pn**	**23**	**39**	**51.8 +1.5**
L29M	**L29M**	**5.96**	**56**	Pn		**Pn**	**23**	**39**	**51.6 +1.3**
IMAR	**Indian Mountai**	**6.18**	**342**	Pn		**Pn**	**23**	**39**	**54.2 +0.8**
O14K	**Tigyukauivet M**	**6.26**	**267**	Pn		**Pn**	**23**	**39**	**56.3 +1.9**
J16K	**Anvik River**	**6.30**	**304**			**Pn**	**23**	**39**	**55.9 +0.9**
CHGN	**Chignik**	**6.31**	**236**	Pn		**Pn**	**23**	**39**	**55.2 +0.1**
H19K	**Roundabout Mou**	**6.32**	**331**			**Pn**	**23**	**39**	**56.1 +0.9**
M30M	**Minto, Yukon**	**6.34**	**63**	Pn		**Pn**	**23**	**39**	**56.4 +0.7**
K15K	**Wolf Creek Mou**	**6.38**	**295**	Pn		**Pn**	**23**	**39**	**57.4 +1.3**
I27K	**Kandik River**	**6.39**	**29**	P		**Pn**	**23**	**39**	**57.9 +1.6**
	baz=216								
M14K	**Bethel**	**6.41**	**280**	Pn		**Pn**	**23**	**39**	**57.4 +0.8**
O30N	**Mendenhall**	**6.43**	**79**	Pn		**Pn**	**23**	**39**	**56.9 0.0**
K29M	**Barlow Dome**	**6.53**	**51**	Pn		**Pn**	**23**	**39**	**58.8 +0.5**
G23K	**Bananza Creek**	**6.54**	**357**			**Pn**	**23**	**40**	**00.2 +1.8**
I17K	**Unalakleet**	**6.60**	**309**	Pn		**Pn**	**23**	**40**	**02.1 +3.0**
FYU	**Fort Yukon**	**6.61**	**13**	Pn		**Pn**	**23**	**40**	**00.3 +1.1**
N31M	**Braeburn, Yuko**	**6.61**	**73**	Pn		**Pn**	**23**	**40**	**01.4 +2.1**
I28M	**Miner Creek**	**6.71**	**34**			**Pn**	**23**	**40**	**02.7 +2.0**
I28M	**Miner Creek**	**6.71**	**34**	P		**Pn**	**23**	**40**	**02.0 +1.3**
	baz=223								
L14K	**Kuka Creek**	**6.78**	**286**	Pn		**Pn**	**23**	**40**	**02.8 +1.2**
WHY	**Whitehorse**	**7.02**	**80**	Pn		**Pn**	**23**	**40**	**05.3 +0.2**
J30M	**Hart River**	**7.35**	**48**			**Pn**	**23**	**40**	**11.7 +2.2**
F20K	**Avaraart Lake**	**7.48**	**339**			**Pn**	**23**	**40**	**12.8 +1.7**
BMAR	**Burnt Mountain**	**7.51**	**13**			**Pn**	**23**	**40**	**12.4 +0.8**
I30M	**Mount Dempster**	**7.68**	**44**	Pn		**Pn**	**23**	**40**	**16.3 +2.2**
R32K	**Eaglecrest**	**7.70**	**98**	Pn		**Pn**	**23**	**40**	**13.3 -0.9**
H29M	**Whitestone**	**7.71**	**34**	Pn		**Pn**	**23**	**40**	**15.6 +1.2**
P32M	**Atlin**	**7.73**	**88**	Pn		**Pn**	**23**	**40**	**15.3 +0.6**
E24K	**Your Creek**	**7.90**	**2**			**Pn**	**23**	**40**	**18.7 +1.7**
E24K	**Your Creek**	**7.90**	**2**	P		**Pn**	**23**	**40**	**17.9 +0.9**
	baz=182								
G16K	**Koyuk River**	**8.01**	**316**	Pn		**Pn**	**23**	**40**	**21.0 +2.7**
P33M	**Teslin, Yukon**	**8.08**	**83**	Pn		**Pn**	**23**	**40**	**20.6 +1.0**
E25K	**Arctic Village**	**8.09**	**9**	Pn		**Pn**	**23**	**40**	**21.3 +1.7**
F28M	**Old Crow**	**8.45**	**25**	Pn		**Pn**	**23**	**40**	**26.2 +1.7**
TOLK	**Toolik Lake Re**	**8.47**	**359**	Pn		**Pn**	**23**	**40**	**27.4 +2.5**
INK	**Inuvik**	**10.53**	**33**	P		**Pn**	**23**	**40**	**54.1 +1.3**
	comp=E,0.1nm,0.3s,baz=219,slow=12,SNR=3.6								
	comp=E,1.2nm,0.8s								
YKA	**Yellowknife Ar**	**16.55**	**67**	P		**P**	**23**	**42**	**16.6 +0.6**
	comp=E,0.1nm,0.3s,baz=280,slow=13,SNR=7.8								
	comp=E,0.5nm,0.7s								
ARCES	**ARCESS Array B**	**50.49**	**2**	P		**P**	**23**	**47**	**17.3 -1.3**
	comp=E,2.5nm,0.8s,baz=342,slow=7.8,SNR=3.6								
	comp=E,2.5nm,0.8s								
SONM	**Songino Array**	**56.25**	**308**	P		**P**	**23**	**48**	**00.9 -0.4**
	comp=E,0.4nm,0.5s,baz=46,slow=6.2,SNR=3.5								
	comp=E,0.4nm,0.5s								
FINES	**FINESS Array B**	**58.62**	**3**	P		**P**	**23**	**48**	**16.7 -0.9**
	comp=E,1.3nm,0.8s,baz=5.7,slow=7.7,SNR=5.2								
	comp=E,1.3nm,0.8s								
KURBB	**Kurchatov Arra**	**63.05**	**328**	P		**P**	**23**	**48**	**46.7 -1.1**
	comp=E,0.2nm,0.4s,baz=29,slow=6.9,SNR=5.0								
	comp=E,0.2nm,0.4s								

WEL 05 23:39:23.2±1.0,35°S±6'×17°9E±1'1,h33km,M4.0/24, mB4.5/6,ML4.5/25,MLv4.3/24,Mw(mB)3.6/6,Error ellipse: s-maj=0.0km s-min=0.0km az=93.9,confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.08**	**190**	P	Pn	23 40 06.1	-3.4
WMGZ	**Waiomatatini S**	**3.32**	**187**	P	Pn	23 40 13.8	+1.0
HAZ	**Te Kaha**	**3.36**	**196**	P	Pn	23 40 11.0	-2.4
HAZ				S	Sn	23 40 50.7	-1.5
PKGZ	**Pakihiroa**	**3.43**	**192**	P	Pn	23 40 12.1	-2.4
PKGZ				S	Sn	23 40 57.3	+3.2
KUZ	**Kuaotunu**	**3.44**	**229**	P	Pn	23 40 13.5	-1.1
PUZ	**Puketiti**	**3.59**	**189**	P	Pn	23 40 16.1	-0.5
PUZ				S	Sn	23 41 00.5	+2.7
RUGZ	**Raukumara Rang**	**3.59**	**196**	P	Pn	23 40 14.6	-2.0
TWGZ	**Tauwhareparae**	**3.73**	**192**	P	Pn	23 40 19.1	+0.5
MWZ	**Matawai**	**3.98**	**196**	P	Pn	23 40 22.6	+0.7
CNGZ	**Carnagh Statio**	**4.00**	**188**	P	Pn	23 40 22.4	+0.3
URZ	**Urewera**	**4.02**	**201**	P	Pn	23 40 20.9	-1.5
RAGZ	**Rawiri**	**4.16**	**197**	P	Pn	23 40 23.4	-1.0
RIGZ	**Rimuhau**	**4.29**	**193**	P	Pn	23 40 26.0	-0.1
MUGZ	**Murupara**	**4.32**	**203**	P	Pn	23 40 25.6	-1.0
RTZ	**Ruatahuna**	**4.38**	**201**	P	Pn	23 40 25.9	-1.7
SNGZ	**Shannon Statio**	**4.45**	**197**	P	Pn	23 40 28.9	+0.6
OUZ	**Omahuta**	**4.46**	**260**	P	Pn	23 40 30.3	+1.7
RAHZ	**Arahi**	**4.64**	**198**	P	Pn	23 40 32.0	+1.0
RAHZ				S	Sn	23 41 26.8	+3.1
MTHZ	**Maungataniwha**	**4.64**	**201**	P	Pn	23 40 32.3	+1.2
MTHZ				S	Sn	23 41 24.0	+0.1
WHHZ	**Waihua**	**4.75**	**196**	P	Pn	23 40 32.8	+0.3
MRHZ	**Matea Rd**	**4.76**	**205**	P	Pn	23 40 32.1	-0.7
NMHZ	**Naumai**	**4.88**	**200**	P	Pn	23 40 35.1	+0.7
ARHZ	**Aropaoanui**	**4.99**	**198**	P	Pn	23 40 35.7	0.0
ARHZ				S	Sn	23 41 32.2	0.0
BKZ	**Black Stump Fm**	**5.04**	**202**	P	Pn	23 40 36.8	+0.3
HIZ	**Hauiti**	**5.17**	**218**	P	Pn	23 40 38.0	-0.3
MCHZ	**McNeill Hill**	**5.24**	**200**	P	Pn	23 40 40.8	+1.6
TMVZ	**Te Maari**	**5.28**	**209**	P	Pn	23 40 42.0	+2.2
NGZ	**Ngauruhoe**	**5.37**	**209**	P	Pn	23 40 43.1	+2.0
BHHZ	**Black Hill Sta**	**5.47**	**204**	P	Pn	23 40 41.8	-0.6
WNVZ	**Wahianoa**	**5.50**	**208**	P	Pn	23 40 44.1	+1.2
WNVZ				S	Sn	23 41 49.0	+3.9
MOVZ	**Moawhango**	**5.51**	**207**	P	Pn	23 40 43.2	+0.2
MOVZ				S	Sn	23 41 39.9	-5.4
KRHZ	**Kereru**	**5.51**	**201**	P	Pn	23 40 41.8	-1.2

*TAP **05** 23:40:01.1,24.°30N×121.°79E,h11km,ML3.7,B*
*ASIES **05** 23:40:01.1,24.°30N×121.°79E,h11km,ML3.7,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=0.15; $M_{\theta\theta}$=0.59; $M_{\phi\phi}$=-0.44; $M_{r\theta}$=1.30; $M_{\theta\phi}$=-0.25; $M_{\phi r}$=1.13; Fault plane solution: M_0=1.81717×10^{21} NP1: ϕ_s=232.51000°, δ=88.79000°, λ=-108.30000°. NP2: ϕ_s=138.86000°, δ=18.34000°, λ=-3.85000°. Principal axes: T Plg41.0150°, Azm339.6290°; N Plg18.2970°, Azm232.9150°; P Plg43.3240°, Azm124.7440°;*
*JMA **05** 23:40:01.3±0.1,24.°2N±0.°3×121.°8E±0.°6,h19km±1km, MV2.9/13,TAIWAN REGION*

ISC 05 23:40:01.1±0.8,24.°29N±0.°01×121.°79E±0.°02,h11km±4km, n139,σ0°54/192,16C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.05**	**294**	⇓*i*P	**Pg**	**23 40 03.4**	**0.0**
	baz=285						
EHP				S	**Sg**	**23 40 05.0**	**0.0**
	baz=285						
EAHA	**Aohua**	**0.06**	**310**	⇓*i*P	**Pg**	**23 40 03.5**	**+0.1**
	baz=307						
EAHA				S	**Sg**	**23 40 05.2**	**+0.1**
	baz=307						
ENA	**Nanau**	**0.14**	**342**	⇓*i*P	**Pg**	**23 40 04.7**	**+0.1**
	baz=345						
ENA				S	**Sg**	**23 40 07.1**	**+0.1**
	baz=345						
EWUT	**Wuta**	**0.15**	**356**	P	**Pg**	**23 40 04.8**	**+0.1**
	baz=5.0						
EWUT				S	**Sg**	**23 40 07.3**	**+0.1**
	baz=5.0						
ETL	**Fush Village**	**0.20**	**230**	*e*P	**Pg**	**23 40 05.3**	**-0.2**
	baz=221						
ETL				S	**Sg**	**23 40 08.7**	**+0.2**
	baz=221						
NACB	**Ninganchiao**	**0.21**	**237**	P	**Pg**	**23 40 05.4**	**-0.3**
NACB	**Ninganchiao**	**0.21**	**237**	⇓*i*P	**Pg**	**23 40 05.4**	**-0.3**
	baz=229						
NACB				*i* S	**Sg**	**23 40 08.9**	**+0.2**
	baz=229						
TWD	**Chiawan**	**0.27**	**220**	⇓*e*P	**Pg**	**23 40 06.3**	**-0.4**
	baz=217						
TWD				S	**Sg**	**23 40 10.7**	**+0.1**
	baz=217						
ESAO	**Su ao**	**0.29**	**10**	⇑P	**Pg**	**23 40 07.0**	**-0.1**
	baz=5.0						
ESAO				*e*S	**Sg**	**23 40 10.9**	**0.0**
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.29**	**254**	⇓*i*P	**Pg**	**23 40 07.1**	**-0.1**
	baz=252						
ETLH				S	**Sg**	**23 40 11.5**	**+0.3**
	baz=252						
TWC	**Suao**	**0.32**	**9**	⇑*i*P	**Pg**	**23 40 07.7**	**0.0**
	baz=7.0						
TWC				*i* S	**Sg**	**23 40 11.9**	**-0.1**
	baz=7.0						
LATG	**Datong**	**0.34**	**315**	⇓*i*P	**Pg**	**23 40 08.4**	**+0.3**
	baz=315						
LATG				*i* S	**Sg**	**23 40 12.7**	**0.0**
	baz=315						
NDS	**Dongshan**	**0.35**	**349**	⇑*i*P	**Pg**	**23 40 08.4**	**+0.3**
	baz=349						
NDS				*i* S	**Sg**	**23 40 13.3**	**+0.4**
	baz=349						
HWA	**Hwalien**	**0.35**	**209**	*e*P	**Pb**	**23 40 09.1**	**-0.4**
	baz=213						
NNSB	**Datong**	**0.40**	**290**	⇓*i*P	**Pg**	**23 40 09.4**	**+0.3**
	baz=290						
NNSB				*i* S	**Sg**	**23 40 14.4**	**0.0**
	baz=290						
NNSH	**Datong**	**0.40**	**290**	⇓P	**Pg**	**23 40 09.4**	**+0.3**
	baz=289						
NNSH				*i* S	**Sg**	**23 40 14.5**	**+0.1**
	baz=289						
NDT	**Datong Townshi**	**0.40**	**321**	⇑*i*P	**Pb**	**23 40 09.6**	**-0.7**
	baz=321						
NDT				S	**Sg**	**23 40 14.8**	**+0.4**
	baz=321						
ENTT	**Nioudou**	**0.40**	**330**	⇑*i*P	**Pb**	**23 40 09.6**	**-0.8**
	baz=330						
ENTT				*i* S	**Sb**	**23 40 15.3**	**-1.3**
	baz=330						
NNS	**Nan Shan**	**0.41**	**291**	⇓*i*P	**Pg**	**23 40 09.5**	**+0.2**
	baz=291						
NNS				S	**Sg**	**23 40 14.7**	**0.0**
	baz=291						
EOS2	**EOS2**	**0.42**	**72**	*e*P	**Pb**	**23 40 10.1**	**-0.4**
	baz=69						
ETM	**Tongmen**	**0.42**	**220**	P	**Pg**	**23 40 09.2**	**-0.3**
	baz=215						
LXIB	**Xiulin Townshi**	**0.44**	**232**	*e*P	**Pg**	**23 40 09.3**	**-0.5**
	baz=232						
LXIB				S	**Sg**	**23 40 15.3**	**-0.3**
	baz=232						
TWE	**Neicheng**	**0.44**	**345**	⇑*i*P	**Pg**	**23 40 10.2**	**+0.3**
	baz=347						
TWE				S	**Sg**	**23 40 15.9**	**+0.1**
	baz=347						
ILA	**Ilan**	**0.47**	**355**	*e*P	**Pb**	**23 40 10.8**	**-0.7**
	baz=348						
EOS3	**EOS3**	**0.48**	**90**	*e*P	**Pb**	**23 40 11.2**	**-0.3**
	baz=92						
FUSS	**Fushou**	**0.50**	**265**	⇓*i*P	**Pg**	**23 40 11.3**	**+0.3**
	baz=265						
FUSS				S	**Sg**	**23 40 18.1**	**+0.4**
	baz=265						
WHF	**Hehuan Shan**	**0.50**	**253**	P	**Pg**	**23 40 11.1**	**0.0**
	baz=252						
WHF				S	**Sg**	**23 40 18.1**	**+0.3**
	baz=252						
FUSB	**Fushanzhiwuyua**	**0.50**	**338**	⇑*i*P	**Pb**	**23 40 11.4**	**-0.7**
	baz=338						
FUSB				*i* S	**Sg**	**23 40 17.5**	**-0.2**
	baz=338						
EOS4	**EOS4**	**0.51**	**109**	*e*P	**Pg**	**23 40 11.5**	**+0.5**
	baz=101						
YHNB	**Yeheng**	**0.54**	**315**	P	**Pb**	**23 40 12.2**	**-0.4**
YHNB	**Yeheng**	**0.54**	**315**	⇑*i*P	**Pb**	**23 40 12.0**	**-0.6**
	baz=315						
YHNB				S	**Sg**	**23 40 19.1**	**+0.3**
	baz=315						
SHUL	**Shoufeng**	**0.54**	**203**	*e*P	**Pb**	**23 40 12.7**	**0.0**
	baz=207						
NSK	**Sanguang**	**0.55**	**314**	⇑*i*P	**Pb**	**23 40 12.3**	**-0.6**
	baz=315						
NSK				*i* S	**Sg**	**23 40 19.6**	**+0.3**
	baz=315						
NWLT	**Wulai**	**0.55**	**332**	P	**Pg**	**23 40 12.1**	**+0.2**
	baz=331						
NWLT				S	**Sg**	**23 40 19.4**	**+0.1**
	baz=331						
TWT	**Tachien**	**0.56**	**266**	P	**Pb**	**23 40 12.7**	**-0.4**
	baz=265						
TWT				S	**Sb**	**23 40 20.3**	**-0.9**
	baz=265						
ESL	**Shilin**	**0.58**	**215**	P	**Pg**	**23 40 11.9**	**-0.5**
	baz=221						
TDCB	**Techi**	**0.58**	**266**	⇓*i*P	**Pb**	**23 40 12.8**	**-0.5**
	baz=266						
TDCB				*i* S	**Sg**	**23 40 20.3**	**+0.1**
	baz=266						
CHGB	**Renai**	**0.61**	**248**	⇓*i*P	**Pg**	**23 40 13.2**	**+0.2**
	baz=240						
CHGB				*i* S	**Sg**	**23 40 21.4**	**+0.3**
	baz=240						
OWD	**Renai**	**0.65**	**239**	*e*P	**Pg**	**23 40 13.6**	**-0.3**
	baz=231						
WARBT	**Fenglin Townsh**	**0.68**	**213**	⇑P	**Pg**	**23 40 13.8**	**-0.6**
	baz=227						
TIPB	**Shuangxi**	**0.68**	**3**	⇑*i*P	**Pg**	**23 40 14.4**	**0.0**
	baz=3.0						
TIPB				S	**Sg**	**23 40 22.7**	**-0.6**
	baz=3.0						
WUSB	**Renai**	**0.68**	**244**	⇓P	**Pg**	**23 40 14.3**	**-0.1**
	baz=237						
WUSB				*e*S	**Sb**	**23 40 24.2**	**-0.4**
	baz=237						
NFF	**Wufeng Townshi**	**0.70**	**299**	*e*P	**Pb**	**23 40 15.2**	**-0.2**
	baz=307						
NFF				*e*S	**Sb**	**23 40 24.3**	**-0.8**
	baz=307						
NHDH	**Xindian Distri**	**0.71**	**340**	*e*P	**Pb**	**23 40 15.6**	**0.0**
	baz=340						
NHDH				*e*S	**Sg**	**23 40 24.0**	**-0.3**
	baz=340						
TWA	**Mucha**	**0.71**	**345**	P	**Pb**	**23 40 15.6**	**0.0**
	baz=345						
TWA				*e*S	**Sg**	**23 40 24.1**	**-0.2**
	baz=345						
TATO	**Taipei**	**0.74**	**338**	P	**Pb**	**23 40 16.0**	**0.0**
TATO	**Taipei**	**0.74**	**338**	P	**Pb**	**23 40 15.6**	**-0.3**
	baz=338						
TATO				S	**Sg**	**23 40 24.7**	**-0.3**
	baz=338						
TWB1	**Santiao Chiao**	**0.74**	**14**	*e*P	**Pg**	**23 40 14.9**	**-0.6**
	baz=9.0						
WHP	**Taichung City**	**0.77**	**269**	P	**Pb**	**23 40 16.6**	**0.0**
	baz=269						
WHP				S	**Sg**	**23 40 26.4**	**+0.2**
	baz=269						
NWF	**Wu-fen Shan**	**0.78**	**359**	⇑*i*P	**Pb**	**23 40 16.5**	**-0.2**
	baz=351						
NWF				*i* S	**Sg**	**23 40 26.2**	**-0.2**
	baz=351						
WFSB	**Wu-fen Shan**	**0.78**	**359**	⇑*i*P	**Pb**	**23 40 16.4**	**-0.3**
	baz=351						
WFSB				*i* S	**Sg**	**23 40 26.1**	**-0.3**
	baz=351						
LIOB	**Emei**	**0.79**	**297**	*e*P	**Pb**	**23 40 17.3**	**+0.4**
	baz=296						
TAP	**Taipei**	**0.79**	**341**	*e*P	**Pb**	**23 40 17.1**	**+0.2**
	baz=333						
NSTT	**Nanjuang**	**0.80**	**295**	*e*P	**Pb**	**23 40 17.1**	**+0.1**
	baz=295						
NSTT				S	**Sb**	**23 40 27.3**	**-0.5**
	baz=295						
VWDT	**VWDT**	**0.80**	**228**	⇑*i*P	**Pg**	**23 40 16.4**	**-0.2**
	baz=228						
VWDT				S	**Sb**	**23 40 28.0**	**+0.2**
	baz=228						
SXI1	**Grass Mountain**	**0.80**	**5**	⇑*i*P	**Pb**	**23 40 17.0**	**-0.2**
	baz=11						
SXI1				*e*S	**Sg**	**23 40 26.3**	**-1.0**
	baz=11						
WPL	**Puli Township**	**0.81**	**250**	*e*P	**Pg**	**23 40 16.9**	**+0.1**
	baz=249						
DPDB	**Guoxing**	**0.83**	**252**	*e*P	**Pb**	**23 40 17.4**	**-0.2**
	baz=251						
WCS	**Beigang Elemen**	**0.84**	**254**	*e*P	**Pb**	**23 40 17.7**	**0.0**
	baz=253						
HSN1	**Hsinchu**	**0.85**	**305**	*e*P	**Pn**	**23 40 18.6**	**-0.5**
	baz=293						
TNOU	**National Taiwa**	**0.86**	**359**	*e*P	**Pb**	**23 40 18.0**	**0.0**
	baz=359						
TNOU				S	**Sg**	**23 40 28.4**	**-0.5**
	baz=359						
HGSD	**Ruisui**	**0.86**	**203**	P	**Pb**	**23 40 18.4**	**+0.3**
	baz=217						
HGSD				*e*S	**Sn**	**23 40 33.0**	**+1.3**
	baz=217						
NCUH	**Zhongli**	**0.87**	**321**	*e*P	**Pn**	**23 40 19.0**	**-0.3**
	baz=320						
NCU	**National Centr**	**0.87**	**321**	S	**Sn**	**23 40 31.8**	**-0.2**
	baz=321						
TWS1	**Kuangyinshan**	**0.88**	**337**	*e*P	**Pn**	**23 40 18.9**	**-0.5**
	baz=337						
TWS1				S	**Sn**	**23 40 31.4**	**-0.7**
	baz=337						
YM01	**YM01**	**0.88**	**347**	P	**Pb**	**23 40 18.6**	**+0.2**
	baz=347						
SBCB	**Hsinchu**	**0.89**	**304**	*e*P	**Pn**	**23 40 19.8**	**+0.2**
	baz=304						
EHY	**Hungye**	**0.89**	**209**	*e*P	**Pg**	**23 40 17.5**	**-0.8**
	baz=221						
HSN	**Hsinchu**	**0.91**	**304**	*e*P	**Pn**	**23 40 20.3**	**+0.5**
	baz=295						
SMLT	**Sun Moon Lake**	**0.91**	**244**	*e*P	**Pg**	**23 40 18.8**	**+0.1**
	baz=243						
SSLB	**Suanglung**	**0.91**	**237**	P	**Pg**	**23 40 18.6**	**-0.2**
SSLB	**Suanglung**	**0.91**	**237**	P	**Pg**	**23 40 18.5**	**-0.3**
	baz=237						
SSLB				*e*S	**Sg**	**23 40 30.2**	**-0.5**
	baz=237						
NTST	**Danshui**	**0.92**	**340**	*e*P	**Pb**	**23 40 19.1**	**-0.1**
	baz=340						
ANP	**Anpu**	**0.93**	**345**	*e*P	**Pn**	**23 40 19.7**	**-0.5**
	baz=345						
TWQ1	**Liyutan**	**0.93**	**274**	*e*P	**Pn**	**23 40 20.3**	**+0.2**
	baz=273						
TYC	**Yuchr**	**0.94**	**246**	*e*P	**Pg**	**23 40 19.0**	**-0.2**
	baz=245						
NMLH	**Miaoli**	**0.94**	**285**	*e*P	**Pn**	**23 40 20.6**	**+0.2**
	baz=284						
NSY	**Sanyi**	**0.95**	**278**	*e*P	**Pn**	**23 40 20.8**	**+0.4**
	baz=277						
TWY	**Chenhua**	**1.00**	**350**	*e*P	**Pn**	**23 40 20.9**	**-0.1**
	baz=350						
YULB	**Yu-li**	**1.00**	**207**	P	**Pg**	**23 40 20.2**	**-0.2**
YULB	**Yu-li**	**1.00**	**207**	*e*P	**Pg**	**23 40 19.1**	**-1.4**
	baz=218						
WWF	**Wufeng**	**1.03**	**256**	*e*P	**Pn**	**23 40 22.8**	**+1.3**
	baz=249						
EYUL	**Yuli**	**1.03**	**205**	*e*P	**Pn**	**23 40 21.5**	**0.0**
	baz=217						
TWF1	**Yuli**	**1.04**	**206**	*e*P	**Pb**	**23 40 20.0**	**-1.1**
	baz=217						
WHYT	**Xinyi Township**	**1.04**	**236**	*e*P	**Pn**	**23 40 21.9**	**+0.2**
	baz=235						
WDJ	**Dajia District**	**1.05**	**273**	*e*P	**Pn**	**23 40 23.2**	**+1.4**
	baz=273						
JYNG	**Yonaguni jima**	**1.06**	**81**	*e*P	**Pn**	**23 40 21.9**	**-0.1**
JYNG				S	**Sn**	**23 40 36.5**	**-0.2**
WJS	**Zhushan**	**1.08**	**245**	*e*P	**Pn**	**23 40 22.8**	**+0.7**
	baz=235						
YOJ	**Yonaguni jima**	**1.13**	**81**	P	**Pg**	**23 40 23.5**	**+0.7**
YOJ	**Yonaguni jima**	**1.13**	**81**	*e*P	**Pb**	**23 40 22.7**	**+0.1**
	baz=70						
YOJ	**Yonaguni jima**	**1.13**	**81**	P	**Pb**	**23 40 22.7**	**+0.1**
YOJ				S	**Sn**	**23 40 38.3**	**+0.1**
WCHH	**Zhanghua**	**1.15**	**260**	*e*P	**Pg**	**23 40 23.5**	**+0.3**
	baz=259						
CHKH	**Chenggong**	**1.15**	**198**	*e*P	**Pb**	**23 40 22.2**	**-0.8**
	baz=184						
FULB	**Fuli**	**1.18**	**203**	*e*P	**Pb**	**23 40 23.2**	**-0.4**
	baz=217						
ALS	**Alishan**	**1.19**	**229**	⇓P	**Pg**	**23 40 24.3**	**+0.2**
	baz=215						
ALS				*e*S	**Sn**	**23 40 41.0**	**+0.7**
	baz=215						
CHN5	**Tsauling**	**1.23**	**236**	⇑P	**Pg**	**23 40 25.1**	**+0.3**
	baz=226						
CHN5				*e*S	**Sn**	**23 40 42.0**	**+1.0**
	baz=226						
CHKT	**Chengkung**	**1.25**	**198**	*e*P	**Pn**	**23 40 23.6**	**-0.9**
	baz=185						
EHD	**Haiduan**	**1.26**	**205**	*e*P	**Pn**	**23 40 24.0**	**-0.7**
	baz=216						
WDLH	**Douliu**	**1.29**	**243**	*e*P	**Pb**	**23 40 25.5**	**+0.1**
	baz=229						
ELDTW	**Lidau**	**1.30**	**213**	*e*P	**Pn**	**23 40 24.3**	**-1.1**
	baz=212						
WRL	**Guolierlin Hig**	**1.35**	**254**	*e*P	**Pg**	**23 40 26.7**	**-0.3**
	baz=253						
PCYT	**Pengchaiyu**	**1.36**	**11**	*e*P	**Pb**	**23 40 26.7**	**+0.1**
	baz=11						
RLNB	**Erlin**	**1.37**	**253**	*e*P	**Pg**	**23 40 27.2**	**-0.2**
	baz=253						
WCKO	**Fanlu**	**1.38**	**232**	*e*P	**Pg**	**23 40 27.9**	**+0.2**
	baz=233						
CHN4	**Tsaushan**	**1.44**	**230**	*e*P	**Pg**	**23 40

baz=331
MHZQ Yeshan 3.08 306 *e*P Pn 23 40 50.1 +0.4
baz=306
KNMB Chin-men Tao 3.11 274 *e*P Pn 23 40 50.5 +0.4
baz=273
AXDP Jialang 3.53 281 *e*P Pn 23 40 56.4 +0.5
baz=280

ISK ***05*** *23:47:42.5,36˚.18N×28˚.21E,h61km±2km, ML2.9/9*
ATH ***05*** *23:47:42.9,36˚.18N×28˚.22E,h59km±2km, ML2.7/8, Error ellipse: s-maj=3.0km s-min=1.8km az=125.0*
THE ***05*** *23:47:43.5,36˚.17N×28˚.23E,h58km±2km, ML2.7/5, Error ellipse: s-maj=2.2km s-min=1.1km az=120.0*
AFAD ***05*** *23:47:43.6±0.0,36˚.36N×28˚.12E,h67km±1km, ML2.7*

ISC 05 23:47:42.6±1.3,36˚.16N±0˚.03×28˚.21E±0˚.03,h63km±7km, n61,σ0°75/86, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.08**	**308**	Pg	**Pn**	**Pn**	**23 47 52.1**	**+0.2**
ARG				Sg	**Sn**	**Sn**	**23 47 59.0**	**+0.4**
ARG	**Arkhangelos**	**0.08**	**308**	P	**Pn**	**Pn**	**23 47 52.2**	**+0.3**
ARG				S	**Sn**	**Sn**	**23 47 58.7**	**+0.1**
	1µm,0.3s							
ARG	**Arkhangelos**	**0.08**	**308**	P	**Pn**	**Pn**	**23 47 52.2**	**+0.3**
ARG				S	**Sn**	**Sn**	**23 47 57.2**	**-1.4**
ARG				AML	AML	AML	23 47 59.9	
	comp=E,3512µm,0.2s							
ARG				AML	AML	AML	23 48 00.2	
	comp=N,2167µm,0.3s							
TURN	**Turunc**	**0.61**	**3**	P	**Pn**	**Pn**	**23 47 56.6**	**+0.7**
TURN				S	**Sn**	**Sn**	**23 48 05.7**	**0.0**
TURN				*i* AML	AML	AML	23 48 09.0	
	comp=N,363nm,0.3s							
TURN				*i* AML	AML	AML	23 48 10.0	
	comp=N,231nm,0.4s							
DALY	**Dalyan (Mula)**	**0.74**	**29**	Pg	**Pn**	**Pn**	**23 47 57.9**	**+0.4**
DALY				Sg	**Sn**	**Sn**	**23 48 08.8**	**+0.4**
DAT	**Datca**	**0.76**	**318**	Pg	**Pn**	**Pn**	**23 47 58.1**	**+0.3**
DAT				Sg	**Sn**	**Sn**	**23 48 08.6**	**-0.4**
DAT	**Datca**	**0.76**	**318**	P	**Pn**	**Pn**	**23 47 58.2**	**+0.4**
DAT				S	**Sn**	**Sn**	**23 48 08.7**	**-0.3**
DAT	**Datca**	**0.76**	**318**	P	**Pn**	**Pn**	**23 47 57.6**	**-0.1**
DAT				S	**Sn**	**Sn**	**23 48 08.2**	**-0.8**
DAT				*i* AML	AML	AML	23 48 10.0	
	comp=N,231nm,0.4s							
DAT				*i* AML	AML	AML	23 48 10.0	
	comp=N,223nm,0.4s							
YAZI	**Mula-Dat§a-**	**0.80**	**311**	P	**Pn**	**Pn**	**23 47 58.4**	**+0.3**
YAZI				S	**Sn**	**Sn**	**23 48 09.0**	**-0.6**
YAZI				*i* AML	AML	AML	23 48 10.0	
	comp=N,232nm,0.2s							
FETY	**Fethiye**	**0.85**	**56**	Pg	**Pn**	**Pn**	**23 47 58.7**	**-0.1**
FETI	**Fethiye-Mugla**	**0.89**	**54**	Pg	**Pn**	**Pn**	**23 47 59.4**	**+0.2**
SABU	**Mula-Dalaman**	**0.90**	**43**	P	**Pn**	**Pn**	**23 47 59.8**	**+0.3**
RFTAA	**Mazikoy-Bodrum**	**0.91**	**336**	Pg	**Pn**	**Pn**	**23 48 00.2**	**+0.7**
YER	**Yerkesik**	**0.97**	**4**	Pg	**Pn**	**Pn**	**23 48 01.3**	**+0.9**
YER	**Yerkesik**	**0.97**	**4**	P	**Pn**	**Pn**	**23 48 01.6**	**+1.2**
YER				S	**Sn**	**Sn**	**23 48 13.4**	**-0.2**
NISR	**Nisiros**	**0.98**	**297**	P	**Pn**	**Pn**	**23 48 00.8**	**+0.4**
NISR	**Nisiros**	**0.98**	**297**	P	**Pn**	**Pn**	**23 48 00.6**	**+0.2**
KARP	**Karpathos**	**1.05**	**234**	P	**Pn**	**Pn**	**23 48 01.6**	**+0.2**
KARP				S	**Sn**	**Sn**	**23 48 15.3**	**-0.1**
	comp=N,678nm,0.1s							
KARP	**Karpathos**	**1.05**	**234**	P	**Pn**	**Pn**	**23 48 01.8**	**+0.4**
KARP				S	**Sn**	**Sn**	**23 48 15.3**	**-0.1**
KARP				AML	AML	AML	23 48 16.1	
	comp=N,1392µm,0.1s							
KARP				AML	AML	AML	23 48 16.3	
	comp=E,1268µm,0.1s							
BDRM	**Kayabasi**	**1.09**	**326**	P	**Pn**	**Pn**	**23 48 02.1**	**+0.3**
MULA	**Mugla, Merkez-**	**1.09**	**5**	P	**Pn**	**Pn**	**23 48 03.2**	**+1.2**
MULA				S	**Sn**	**Sn**	**23 48 15.2**	**-1.3**
KSL	**Kastellorizon**	**1.11**	**90**	P	**Pn**	**Pn**	**23 48 02.3**	**+0.1**
KSL				S	**Sn**	**Sn**	**23 48 16.0**	**-0.8**
	comp=E,135nm,0.5s							
KSL	**Kastellorizon**	**1.11**	**90**	P	**Pn**	**Pn**	**23 48 01.8**	**-0.3**
KSL				AML	AML	AML	23 48 18.9	
	comp=E,274µm,0.3s							
KSL				AML	AML	AML	23 48 21.5	
	comp=N,256µm,0.7s							
BODT	**Bodrum**	**1.15**	**321**	Pn	**Pn**	**Pn**	**23 48 03.1**	**+0.4**
BODT	**Bodrum**	**1.15**	**321**	P	**Pn**	**Pn**	**23 48 03.0**	**+0.4**
BODT				S	**Sn**	**Sn**	**23 48 17.7**	**0.0**
CAME	**Cameli-Denizli**	**1.18**	**48**	Pn	**Pn**	**Pn**	**23 48 03.7**	**+0.6**
MLSB	**Milas**	**1.18**	**343**	Pn	**Pn**	**Pn**	**23 48 03.8**	**+0.7**
YKAV	**Yalikavak-Bodr**	**1.21**	**322**	Pn	**Pn**	**Pn**	**23 48 03.9**	**+0.4**
KLNA	**Kalymnos**	**1.27**	**309**	P	**Pn**	**Pn**	**23 48 04.2**	**0.0**
KLNA				AML	AML	AML	23 48 20.7	
	comp=N,333µm,0.3s							
KLNA				AML	AML	AML	23 48 20.8	
	comp=E,404µm,0.2s							
DNZT	**Denizli-Tavas-**	**1.29**	**30**	P	**Pn**	**Pn**	**23 48 04.8**	**+0.2**
DNZT				S	**Sn**	**Sn**	**23 48 21.4**	**+0.3**
KNIK	**Mula-Seydike**	**1.29**	**58**	P	**Pn**	**Pn**	**23 48 05.2**	**+0.6**
KNIK				S	**Sn**	**Sn**	**23 48 20.9**	**-0.3**
CAEL	**Denizli, Camel**	**1.31**	**43**	P	**Pn**	**Pn**	**23 48 05.8**	**+0.9**
CAEL				*i* AML	AML	AML	23 48 29.0	
	comp=E,117nm,0.4s							
CAEL				*i* AML	AML	AML	23 48 32.0	
	comp=E,121nm,0.5s							
TAVA	**DENIZLI_Tavas**	**1.42**	**23**	P	**Pn**	**Pn**	**23 48 07.0**	**+0.7**
TAVA				S	**Sn**	**Sn**	**23 48 23.7**	**-0.4**
DDIM	**Aydin, Didim**	**1.50**	**329**	P	**Pn**	**Pn**	**23 48 09.7**	**+2.3**
DDIM				S	**Sn**	**Sn**	**23 48 25.4**	**-0.7**
GOLH	**Golhisar**	**1.53**	**45**	P	**Pn**	**Pn**	**23 48 09.1**	**+1.4**
GOLH				S	**Sn**	**Sn**	**23 48 26.9**	**+0.1**
GOLH				*i* AML	AML	AML	23 48 29.0	
	comp=E,87nm,0.5s							
APMY	**Acipayam-Deniz**	**1.57**	**34**	Pn	**Pn**	**Pn**	**23 48 08.9**	**+0.5**
DNIZ	**Denizli-Tavas-**	**1.60**	**24**	P	**Pn**	**Pn**	**23 48 09.5**	**+0.7**
DNIZ				*i* AML	AML	AML	23 48 31.0	
	comp=E,147nm,0.5s							
DNIZ				*i* AML	AML	AML	23 48 31.0	
	comp=E,140nm,0.4s							
ESEN	**Aydn-Nazilli**	**1.64**	**4**	P	**Pn**	**Pn**	**23 48 09.5**	**+0.4**
ESEN				S	**Sn**	**Sn**	**23 48 27.5**	**-1.7**
GCAM	**G?zelcaml?**	**1.72**	**333**	P	**Pn**	**Pn**	**23 48 10.1**	**-0.1**
INCE	**Denizli-Bozkur**	**1.89**	**35**	P	**Pn**	**Pn**	**23 48 13.0**	**+0.3**
INCE				*i* AML	AML	AML	23 48 37.0	
	comp=E,73nm,0.5s							
INCE				*i* AML	AML	AML	23 48 37.0	
	comp=E,65nm,0.4s							
SMG	**Samos**	**1.89**	**325**	P	**Pn**	**Pn**	**23 48 12.7**	**+0.1**
SMG				S	**Sn**	**Sn**	**23 48 34.9**	**-0.5**
	comp=E,148nm,0.3s							
SMG	**Samos**	**1.89**	**325**	P	**Pn**	**Pn**	**23 48 12.7**	**+0.1**
SMG				AML	AML	AML	23 48 36.3	
	comp=N,336µm,0.3s							
SMG				AML	AML	AML	23 48 37.3	
	comp=E,252µm,0.3s							
ZKR	**Zakros**	**1.93**	**238**	P	**Pn**	**Pn**	**23 48 14.2**	**+1.1**
ZKR				S	**Sn**	**Sn**	**23 48 37.7**	**+1.4**
	comp=E,110nm,0.6s							
ZKR	**Zakros**	**1.93**	**238**	P	**Pn**	**Pn**	**23 48 14.2**	**+1.1**
ZKR				S	**Sn**	**Sn**	**23 48 35.7**	**-0.7**
ZKR				AML	AML	AML	23 48 38.6	
	comp=N,152µm,0.3s							
ZKR				AML	AML	AML	23 48 38.8	
	comp=E,293µm,0.3s							
IZMR	**zmir-demi**	**1.98**	**354**	P	**Pn**	**Pn**	**23 48 14.5**	**+0.7**
IZMR				S	**Sn**	**Sn**	**23 48 35.5**	**-2.0**
KIRA	**zmir-Kiraz**	**2.03**	**4**	P	**Pn**	**Pn**	**23 48 14.8**	**+0.2**
DGB	**zmir**	**2.16**	**331**	P	**Pn**	**Pn**	**23 48 16.1**	**-0.1**
THR8	**Santorini-Mono**	**2.22**	**277**	P	**Pn**	**Pn**	**23 48 17.2**	**+0.2**
SANT	**Santorini**	**2.23**	**276**	P	**Pn**	**Pn**	**23 48 17.6**	**+0.4**
THR6	**Thira Island,**	**2.28**	**276**	P	**Pn**	**Pn**	**23 48 18.5**	**+0.6**
THR6	**Thira Island,**	**2.28**	**276**	P	**Pn**	**Pn**	**23 48 18.4**	**+0.6**
THR3	**Thira Island,**	**2.28**	**277**	P	**Pn**	**Pn**	**23 48 18.3**	**+0.5**
THR3	**Thira Island,**	**2.28**	**277**	P	**Pn**	**Pn**	**23 48 18.4**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.28**	**277**	P	**Pn**	**Pn**	**23 48 18.5**	**+0.6**
FRMA	**Ierapetra Chan**	**2.32**	**241**	P	**Pn**	**Pn**	**23 48 17.3**	**-1.0**
FRMA				AML	AML	AML	23 48 47.6	
	comp=E,342µm,0.3s							
FRMA				AML	AML	AML	23 48 48.4	
	comp=N,246µm,0.4s							
APE	**Apeiranthos**	**2.33**	**294**	P	**Pn**	**Pn**	**23 48 19.5**	**+0.9**
USAK	**Uak-Merkez**	**2.63**	**14**	P	**Pn**	**Pn**	**23 48 22.8**	**+0.2**
USAK				*i* AML	AML	AML	23 49 51.0	
	comp=N,46nm,3.1s							
KSTL	**Kastelli Herak**	**2.69**	**252**	P	**Pn**	**Pn**	**23 48 21.5**	**-2.0**
CHOS	**Chios island**	**2.81**	**323**	P	**Pn**	**Pn**	**23 48 25.7**	**+0.6**
IDI	**Anoyia**	**2.84**	**253**	P	**Pn**	**Pn**	**23 48 25.4**	**-0.1**
IDI				AML	AML	AML	23 48 59.2	
	comp=E,99µm,0.3s							
IDI				AML	AML	AML	23 49 02.5	
	comp=N,116µm,0.3s							
TMBK	**Timbaki Herakl**	**3.01**	**250**	P	**Pn**	**Pn**	**23 48 28.8**	**+1.1**

OMAN ***05*** *23:49:40.5±0.8,31˚.00N×57˚.63E,h10km,mb4.8/34, ml2.5/1,ms2.7/4, Error ellipse: s-maj=14.2km s-min=3.8km az=83.0*
TEH ***05*** *23:49:40.4,30˚.78N×57˚.34E,h8km±36km, ML4.5*
THR ***05*** *23:49:41.4±1.0,30˚.81N×57˚.31E,h14km±6km, ML4.5*
NEIC ***05*** *23:49:42.0±1.5,30˚.72N±0˚.06×57˚.23E±0˚.08,h10km±1km, mb4.4/67, Error ellipse: s-maj=12.2km s-min=10.0km az=290.0*
DSN ***05*** *23:49:43.3±1.9,30˚.88N×57˚.44E,h196km±63km, ML3.8/13, Error ellipse: s-maj=41.4km s-min=24.0km az=119.0*
IDC ***05*** *23:49:45.9±1.7,30˚.63N×57˚.29E,h50km±16km, mb3.9/23, mbtmp4.1/33, ML3.9/10, MS3.4/12, Error ellipse: s-maj=12.2km s-min=11.7km az=33.0*

ISC 05 23:49:41.4±0.3,30˚.76N±0˚.02×57˚.34E±0˚.03,h10km,n276, σ2°09/291,mb4.3/65,MS3.4/9,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.26**	**192**	Pg	**Pg**	**Pg**	**23 49 46.5**	**-0.3**
ZRDN	**Zarand Kerman**	**0.72**	**287**	Pg	**Pg**	**Pg**	**23 49 54.6**	**-0.8**
KHGB	**Koh Gabri**	**0.83**	**243**	Pg	**Pg**	**Pg**	**23 49 56.5**	**-1.1**
CHMN	**Cheshme madani**	**0.92**	**169**	Pg	**Pg**	**Pg**	**23 49 58.1**	**-1.0**
TVBK	**TV Kerman**	**0.92**	**213**	Pg	**Pb**	**Pb**	**23 49 59.1**	**-0.5**
KRBR	**Kerman**	**0.92**	**213**	*e*Pg	**Pb**	**Pb**	**23 49 59.2**	**-0.5**
NGRK	**Negar Kerman**	**1.23**	**205**	Pg	**Pg**	**Pg**	**23 50 04.8**	**-0.3**
KBAM	**BAM**	**1.89**	**149**	Pn	**Pb**	**Pb**	**23 50 14.9**	**-1.1**
BSRN	**Basiran**	**1.94**	**51**	*e*Pn	**Pb**	**Pb**	**23 50 15.5**	**-1.6**
BSRN				*e*Sg	**Sg**	**Sg**	**23 50 42.7**	**-1.3**
BSRN				IAML			23 50 45.1	
	comp=E,3µm,0.4s							
BSRN				IAML			23 50 48.4	
	comp=N,3µm,0.7s							
BSRN	**Basiran**	**1.94**	**51**	Pn	**Pb**	**Pb**	**23 50 15.4**	**-1.6**
IKOO	**Kooshah**	**2.19**	**40**	Pn	**Pb**	**Pb**	**23 50 19.2**	**-2.0**
TPRV	**Parvadeh(Tabas**	**2.33**	**346**	Pn	**Pb**	**Pb**	**23 50 20.6**	**-2.9**
NHDN	**Nehbandan**	**2.41**	**74**	Pn	**Pb**	**Pb**	**23 50 22.3**	**-2.7**
ITEG	**Tejag**	**2.44**	**29**	Pn	**Pn**	**Pn**	**23 50 22.1**	**+0.5**
KHNJ	**Kahnooj**	**2.82**	**173**	Pn	**Pb**	**Pb**	**23 50 29.2**	**-2.7**
TKDS	**Koohdasht(Taba**	**2.85**	**356**	Pn	**Pn**	**Pn**	**23 50 28.0**	**+0.9**
YZKH	**Yazd**	**2.85**	**305**	*e*Pn	**Pn**	**Pn**	**23 50 28.1**	**+1.0**
YZKH				*e*Sg	**Sb**	**Sb**	**23 51 08.5**	**+1.0**
YZKH				IAML			23 51 16.5	
	comp=N,1µm,0.5s							
YZKH				IAML			23 51 16.8	
	comp=E,1µm,0.4s							
TABS	**Tabas**	**2.88**	**356**	*e*Pn	**Pn**	**Pn**	**23 50 28.4**	**+0.9**
TABS				IAML			23 51 28.5	
	comp=N,2µm,0.7s							
IDAH	**Dahanechah**	**2.92**	**47**	Pn	**Pn**	**Pn**	**23 50 28.9**	**+0.7**
AFRZ	**Afriz**	**3.01**	**28**	Pn	**Pn**	**Pn**	**23 50 30.0**	**+0.7**
ZHSF	**Zahedan**	**3.19**	**110**	*e*Pn	**Pn**	**Pn**	**23 50 33.7**	**+1.9**
TNSJ	**Nastanj**	**3.25**	**349**	Pn	**Pn**	**Pn**	**23 50 33.5**	**+0.9**
ZHDN	**Zahedan**	**3.30**	**113**	Pn	**Pn**	**Pn**	**23 50 35.0**	**+1.6**
ISAD	**Sadrabad**	**3.33**	**291**	Pn	**Pn**	**Pn**	**23 50 35.0**	**+1.2**
IBND	**Bandar-abas**	**3.37**	**192**	Pn	**Pn**	**Pn**	**23 50 36.9**	**+2.8**
GENO	**Geno**	**3.50**	**197**	Pn	**Pn**	**Pn**	**23 50 38.7**	**+2.6**
BNDS	**Bandar-Abbas**	**3.50**	**197**	*e*Pn	**Pn**	**Pn**	**23 50 38.4**	**+2.3**
SHRT	**Shahrakht**	**3.81**	**40**	*e*Pn	**Pn**	**Pn**	**23 50 41.5**	**+1.2**
SHRT	**Shahrakht**	**3.81**	**40**	Pn	**Pn**	**Pn**	**23 50 41.8**	**+1.5**
ANAR	**Anarak**	**3.91**	**309**	Pn	**Pn**	**Pn**	**23 50 42.2**	**+0.5**
JHRM	**Jahrom**	**3.97**	**226**	Pn	**Pn**	**Pn**	**23 50 45.1**	**+2.6**
LAR1	**LAR**	**4.02**	**221**	Pn	**Pn**	**Pn**	**23 50 45.6**	**+2.4**
SHI	**Shiraz**	**4.32**	**256**	Pn	**Pn**	**Pn**	**23 50 49.3**	**+1.9**
NASN	**Na'in**	**4.36**	**299**	*e*Pn	**Pn**	**Pn**	**23 50 49.0**	**+1.0**
IRAM	**Ramesheh**	**4.37**	**285**	Pn	**Pn**	**Pn**	**23 50 49.8**	**+1.7**
QIR1	**Qir**	**4.38**	**240**	Pn	**Pn**	**Pn**	**23 50 49.6**	**+1.5**
GHIR	**Ghir-Karzin**	**4.52**	**238**	*e*Pn	**Pn**	**Pn**	**23 50 51.8**	**+1.7**
IZEF	**Zefreh**	**4.76**	**298**	Pn	**Pn**	**Pn**	**23 50 55.2**	**+1.6**
IGAR	**Gharneh**	**4.81**	**291**	Pn	**Pn**	**Pn**	**23 50 56.0**	**+1.9**
JASK	**Jask - Hormozg**	**4.90**	**174**	Pn	**Pn**	**Pn**	**23 50 57.4**	**+2.2**
JASK	**Jask - Hormozg**	**4.90**	**174**	P	**Pn**	**Pn**	**23 50 58.1**	**+3.0**
	SNR=23							
JASK				S	**Sn**	**Sn**	**23 51 58.6**	**+6.7**
TBHD	**Torbat heydari**	**4.91**	**18**	Pn	**Pn**	**Pn**	**23 50 56.8**	**+1.4**
BANOM	**Banah**	**4.91**	**191**	*i* P	**Pn**	**Pn**	**23 50 57.7**	**+2.4**
	SNR=7.1							
BANOM	**Banah**	**4.91**	**191**	P	**Pn**	**Pn**	**23 50 58.4**	**+3.1**
BANOM				S	**Sb**	**Sb**	**23 52 01.0**	**-5.6**
KLNJ	**Kolanjah**	**4.94**	**274**	Pn	**Pn**	**Pn**	**23 50 58.1**	**+2.0**
LMD1	**Lamerd**	**5.00**	**228**	Pn	**Pn**	**Pn**	**23 50 58.1**	**+1.6**
TBJM	**Torbat-e-JAM**	**5.15**	**28**	Pn	**Pn**	**Pn**	**23 51 00.4**	**+1.6**
SHRO	**Shahrood**	**5.33**	**348**	*e*Pn	**Pn**	**Pn**	**23 51 02.5**	**+1.3**
SHRO				IAML			23 52 37.1	
	comp=N,196nm,0.6s							
SHRO				IAML			23 52 40.4	
	comp=E,217nm,0.5s							
KRSH	**Karshahi**	**5.44**	**307**	Pn	**Pn**	**Pn**	**23 51 03.9**	**+1.1**
MASF	**Masafi**	**5.47**	**191**	P	**Pn**	**Pn**	**23 51 06.5**	**+3.5**
	SNR=14							
MASF				S	**Sn**	**Sn**	**23 52 12.8**	**+6.7**
MSFE	**Esma-Masafi**	**5.48**	**191**	*i* P	**Pn**	**Pn**	**23 51 05.9**	**+2.7**
	SNR=14							
HRA	**Herat**	**5.50**	**48**	Pn	**Pn**	**Pn**	**23 51 05.3**	**+1.8**
IANJ	**Anjilo**	**5.50**	**329**	Pn	**Pn**	**Pn**	**23 51 04.3**	**+0.6**
IKLH	**Kolahrood**	**5.51**	**299**	Pn	**Pn**	**Pn**	**23 51 06.4**	**+2.5**
MDH	**Madha**	**5.52**	**190**	P	**Pn**	**Pn**	**23 51 05.5**	**+1.8**
MDH	**Madha**	**5.52**	**190**	P	**Pn**	**Pn**	**23 51 05.4**	**+1.8**
MDH				S	**Sb**	**Sb**	**23 52 16.6**	**-7.6**
SRVN	**Saravan**	**5.55**	**126**	Pn	**Pn**	**Pn**	**23 51 07.3**	**+3.0**
ISFB	**Sefidab**	**5.60**	**311**	Pn	**Pn**	**Pn**	**23 51 05.9**	**+1.0**
SBZV	**Sabzevar**	**5.62**	**2**	Pn	**Pn**	**Pn**	**23 51 06.6**	**+1.4**
ZNGN	**Zangian**	**5.70**	**285**	Pn	**Pn**	**Pn**	**23 51 09.3**	**+2.8**
IPIR	**Pirpir**	**5.82**	**291**	Pn	**Pn**	**Pn**	**23 51 10.9**	**+2.9**
QAMS	**Qamsar**	**5.84**	**302**	Pn	**Pn**	**Pn**	**23 51 10.3**	**+2.0**
CHBR	**Chabahar**	**5.85**	**151**	*e*Pn	**Pn**	**Pn**	**23 51 10.2**	**+2.0**
UOSS	**Minazif**	**5.88**	**190**		**Pn**	**Pn**	**23 51 08.0**	**-0.7**
UOSS	**Minazif**	**5.88**	**190**	P	**Pn**	**Pn**	**23 51 11.1**	**+2.4**
UOSS	**Minazif**	**5.88**	**190**	P	**Pn**	**Pn**	**23 51 11.1**	**+2.4**
UOSS				S	**Sn**	**Sn**	**23 52 24.0**	**+7.9**
JHBN	**Jahan bin**	**5.88**	**286**	Pn	**Pn**	**Pn**	**23 51 11.1**	**+2.1**
ILAS	**Lasjerd**	**5.89**	**323**	Pn	**Pn**	**Pn**	**23 51 10.2**	**+1.1**
NAZ	**Nazwa, Dubai**	**5.94**	**195**	P	**Pn**	**Pn**	**23 51 11.8**	**+2.3**
NAZ	**Nazwa, Dubai**	**5.94**	**195**	P	**Pn**	**Pn**	**23 51 13.0**	**+3.5**
	SNR=7.0							
NAZ				S	**Sn**	**Sn**	**23 52 26.5**	**+8.9**
IAKL	**Akhelmad**	**5.95**	**11**	Pn	**Pn**	**Pn**	**23 51 10.3**	**+0.5**
HATD	**Hatta, Dubai**	**6.01**	**191**	P	**Pn**	**Pn**	**23 51 13.1**	**+2.7**
HATD	**Hatta, Dubai**	**6.01**	**191**	P	**Pn**	**Pn**	**23 51 13.6**	**+3.2**
HATD				S	**Sn**	**Sn**	**23 52 30.6**	**+7.2**
IMYA	**Miami**	**6.03**	**22**	Pn	**Pn**	**Pn**	**23 51 12.5**	**+1.8**
ASHO	**Ashiyiah**	**6.16**	**191**	*i* P	**Pn**	**Pn**	**23 51 14.9**	**+2.4**
	SNR=24							
ASHO				S	**Sn**	**Sn**	**23 52 27.3**	**+4.3**
ASHO	**Ashiyiah**	**6.16**	**191**	P	**Pn**	**Pn**	**23 51 15.2**	**+2.7**
	SNR=24							
ASHO				S	**Sn**	**Sn**	**23 52 27.4**	**+4.3**
FAQ	**Al Faqa, Dubai**	**6.19**	**195**	P	**Pn**	**Pn**	**23 51 15.0**	**+2.1**
FAQ	**Al Faqa, Dubai**	**6.19**	**195**	P	**Pn**	**Pn**	**23 51 15.6**	**+2.7**
	SNR=13							
IFIR	**Firoozkooh**	**6.20**	**323**	Pn	**Pn**	**Pn**	**23 51 14.1**	**+0.9**
IKRD	**Kardeh**	**6.27**	**16**	Pn	**Pn**	**Pn**	**23 51 15.6**	**+1.4**
ISFR	**Sfrayin**	**6.30**	**5**	Pn	**Pn**	**Pn**	**23 51 16.2**	**+1.5**
GHVR	**GHOM**	**6.30**	**308**	*e*Pn	**Pn**	**Pn**	**23 51 17.1**	**+2.6**
IVRN	**Varamin**	**6.33**	**313**	Pn	**Pn**	**Pn**	**23 51 16.4**	**+1.5**
NGCH	**Negor - Chabah**	**6.34**	**147**	P	**Pn**	**Pn**	**23 51 15.7**	**+0.8**
NGCH				S	**Sn**	**Sn**	**23 52 34.9**	**+7.4**
ASUD	**Al Ashush, Dub**	**6.37**	**197**	*i* P	**Pn**	**Pn**	**23 51 17.1**	**+1.8**
	SNR=7.1							
ASUD	**Al Ashush, Dub**	**6.37**	**197**	P	**Pn**	**Pn**	**23 51 18.7**	**+3.4**
	SNR=13							
ASUD				S	**Sn**	**Sn**	**23 52 34.3**	**+6.3**
IGLO	**Ghaloghah**	**6.43**	**334**	Pn	**Pn**	**Pn**	**23 51 18.5**	**+2.1**
AJN	**Ajban**	**6.52**	**199**	*i* P	**Pn**	**Pn**	**23 51 21.2**	**+3.8**
	SNR=8.9							
AJN	**Ajban**	**6.52**	**199**	P	**Pn**	**Pn**	**23 51 19.1**	**+1.7**
	SNR=8.9							
IDMV	**Damavand**	**6.54**	**319**	Pn	**Pn**	**Pn**	**23 51 19.1**	**+1.1**
DAMV	**Damavand**	**6.62**	**319**	*e*Pn	**Pn**	**Pn**	**23 51 20.0**	**+1.0**
SOHO	**SOHO**	**6.64**	**186**	*i* P	**Pn**	**Pn**	**23 51 19.2**	**+0.1**
	SNR=17							
SOHO	**SOHO**	**6.64**	**186**	P	**Pn**	**Pn**	**23 51 20.0**	**+0.9**
SOHO				S	**Sn**	**Sn**	**23 52 41.6**	**+6.8**
IMND	**Minoodasht**	**6.67**	**347**	Pn	**Pn**	**Pn**	**23 51 20.9**	**+1.4**
IEMG	**Emamgholi**	**6.73**	**9**	Pn	**Pn**	**Pn**	**23 51 22.1**	**+1.6**
ALNE	**Al Ain**	**6.83**	**192**	P	**Pn**	**Pn**	**23 51 24.3**	**+2.6**
ALNE	**Al Ain**	**6.83**	**192**	P	**Pn**	**Pn**	**23 51 23.6**	**+1.9**
	SNR=13							
IPRN	**Peran**	**6.88**	**324**	Pn	**Pn**	**Pn**	**23 51 23.7**	**+1.3**
IHSB	**Hasanabad**	**6.90**	**314**	Pn	**Pn**	**Pn**	**23 51 24.1**	**+1.4**
BJRD	**Bojnurd**	**6.92**	**0**	*e*Pn	**Pn**	**Pn**	**23 51 23.6**	**+0.6**
MRVT	**Maraveh tapeh**	**6.96**	**352**	*e*Pn	**Pn**	**Pn**	**23 51 25.4**	**+1.9**
MRVT	**Maraveh tapeh**	**6.96**	**352**	Pn	**Pn**	**Pn**	**23 51 25.5**	**+2.0**
JRN	**Qarnain Island**	**7.03**	**215**	P	**Pn**	**Pn**	**23 51 26.1**	**+1.7**
	SNR=5.9							
GEYT	**Alibeck**	**7.18**	**5**	Pn	**Pn**	**Pn**	**23 51 28.0**	**+1.5**
GEYT	**Alibeck**	**7.18**	**5**	P	**Pn**	**Pn**	**23 51 29.3**	**+2.8**
	comp=E,1.6nm,0.3s,baz=190,slow=18,SNR=18							
GEYT				S	**Sn**	**Sn**	**23 52 54.3**	**+6.2**
	comp=E,18nm,0.7s,baz=162,slow=12,SNR=3.6							
	comp=E,3.4nm,0.3s							
GYA0B	**ALIBECK ARRAY**	**7.18**	**5**	Pn	**Pn**	**Pn**	**23 51 28.0**	**+1.5**
ASAO	**Ashtian**	**7.23**	**303**	*e*Pn	**Pn**	**Pn**	**23 51 29.7**	**+2.3**
BIDO	**Bidbid**	**7.25**	**174**	P	**Pn**	**Pn**	**23 51 29.0**	**+1.6**
CHTH	**Charan**	**7.30**	**316**	*e*Pn	**Pn**	**Pn**	**23 51 29.6**	**+1.2**
MZPU	**Pul - Mazandar**	**7.43**	**321**	Pn	**Pn**	**Pn**	**23 51 32.2**	**+2.1**
ARQ	**Araqi**	**7.43**	**186**	P	**Pn**	**Pn**	**23 51 33.2**	**+3.2**
	SNR=43							
SHMA	**Al-Shehemyia**	**7.44**	**231**	P	**Pn**	**Pn**	**23 51 31.0**	**+0.9**
	SNR=16							
WSAR	**Wadi Sarin**	**7.58**	**171**	P	**Pn**	**Pn**	**23 51 31.6**	**-0.5**
	comp=E,11nm,0.3s,baz=9.9,slow=8.4,SNR=163							
WSAR				S	**Sn**	**Sn**	**23 52 57.3**	**-0.8**
	comp=E,5.5nm,0.7s,baz=235,slow=22,SNR=0.7							
	comp=E,52nm,0.5s							
**WSAR

MAKZ				IAmb	IAmb	23 55 06.4	
	comp=Z,6.2nm,0.8s						
ARG	**Arkhangelos**	**24.91**	**290**	P	**P**	**23 55 01.6**	**-3.0**
MK31	**Makanchi Array**	**25.04**	**43**	P	**P**	**23 55 06.2**	**+0.5**
MKAR	**Makanchi Array**	**25.04**	**43**	P	**P**	**23 55 06.6**	**+0.9**
MKAR	**Makanchi Array**	**25.04**	**43**	P	**P**	**23 55 06.8**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=228,slow=9.4,SNR=20						
MKAR				PcP	**PcP**	**23 58 39.2**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=244,slow=3.1,SNR=4.1						
MKAR				LR	LR	00 04 43.3	
	comp=Z,42nm,18.4s,baz=236,slow=36						
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**25.37**	**33**	P	**P**	**23 55 09.3**	**+0.7**
	comp=Z,4.9nm,0.8s,baz=232,slow=9.1,SNR=50						
KURBB				PcP	**PcP**	**23 58 40.1**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=223,slow=3.6,SNR=4.0						
	comp=Z,4.9nm,0.8s						
KURK	**Kurchatov**	**25.48**	**32**	P	**P**	**23 55 10.7**	**+1.1**
KURK				IAmb	IAmb	23 55 17.3	
	comp=Z,5.2nm,0.8s						
KURK	**Kurchatov**	**25.48**	**32**	P	**P**	**23 55 11.2**	**+1.6**
BALB	**Balikesir**	**25.56**	**298**	P	**P**	**23 55 10.6**	**+0.2**
BALB				IAmb	IAmb	23 55 13.6	
	comp=Z,18nm,1.2s						
KARP	**Karpathos**	**25.66**	**289**	P	**P**	**23 55 10.6**	**-0.9**
ARU	**Arti**	**25.67**	**2**	P	**P**	**23 55 12.9**	**+1.6**
ARU				IAmb	IAmb	23 55 15.0	
	comp=Z,4.6nm,0.9s						
TIRR	**Tirgusor**	**26.52**	**309**	P	**P**	**23 55 20.8**	**+1.7**
WMQ	**Urumqi**	**27.28**	**53**	*e*P	**P**	**23 55 29.7**	**+3.6**
KIRV	**Kirov**	**28.34**	**351**	LR	LR	00 09 07.7	
	comp=Z,90nm,18.3s,baz=159,slow=41						
OBN	**Obninsk**	**28.48**	**335**	P	**P**	**23 55 36.8**	**+0.2**
AKASG	**Malin Array Be**	**28.89**	**322**	P	**P**	**23 55 40.8**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=127,slow=8.2,SNR=4.1						
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**28.89**	**322**	P	**P**	**23 55 40.8**	**+0.6**
AKBB				IAmb	IAmb	23 55 45.9	
	comp=Z,4.4nm,0.7s						
BURAR	**Bucovina Array**	**29.77**	**314**	P	**P**	**23 55 50.3**	**+2.0**
BUR08	**Bucovina Ar. S**	**29.79**	**314**	P	**P**	**23 55 49.1**	**+0.6**
BUR08				IAmb	IAmb	23 55 59.7	
	comp=Z,7.2nm,1.2s						
ZAA0	**Zalesovo Array**	**30.47**	**33**	P	**P**	**23 55 54.7**	**+0.5**
ZAA0				IAmb	IAmb	23 55 59.4	
	comp=Z,7.2nm,0.6s						
ZALV	**Zalesovo Beam**	**30.47**	**33**	P	**P**	**23 55 54.6**	**+0.4**
ZALV	**Zalesovo Beam**	**30.47**	**33**	P	**P**	**23 55 55.1**	**+0.9**
	comp=Z,6.3nm,0.5s,baz=242,slow=9.4,SNR=38						
ZALV				PcP	**PcP**	**23 58 51.5**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=204,slow=3.2,SNR=3.2						
ZALV				LR	LR	00 09 51.5	
	comp=Z,48nm,19.0s,baz=27,slow=39						
	comp=Z,6.3nm,0.5s						
FNA	**Florina**	**30.66**	**299**	P	**P**	**23 55 55.9**	**-0.3**
TIR	**Tirane**	**31.86**	**300**	P	**P**	**23 56 05.8**	**-0.9**
KWP	**Kalwaria Pacla**	**32.09**	**316**	P	**P**	**23 56 09.1**	**+0.6**
OJC	**Ojcow**	**34.05**	**316**	P	**P**	**23 56 25.4**	**-0.3**
LODK	**Lodwar**	**34.20**	**222**	P	**P**	**23 56 26.9**	**-0.5**
LODK				IAmb	IAmb	23 56 42.2	
	comp=Z,3.6nm,1.1s						
MODS	**Modra-Piesok**	**35.06**	**312**	*e*P	**P**	**23 56 35.7**	**+1.3**
RONA	**Rosalia, Austr**	**35.53**	**310**	*e*P	**P**	**23 56 38.9**	**+0.3**
	comp=Z,7.1nm,1.3s						
GTA	**Gaotai**	**35.55**	**64**	*e*P	**P**	**23 56 41.0**	**+2.1**
GTA				pP	sP	23 56 49.5	+5.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CONA	**Conrad Observa**	**35.87**	**311**	*i* P	**P**	**23 56 41.9**	**+0.5**
	comp=Z,4.8nm,1.2s						
SOKA	**Soboth**	**36.16**	**308**	*e*P	**P**	**23 56 44.0**	**0.0**
	comp=Z,3.6nm,1.2s						
OBKA	**Obir**	**36.45**	**308**	*e*P	**P**	**23 56 47.3**	**+0.8**
	comp=Z,4.9nm,1.2s						
FINES	**FINESS Array B**	**36.88**	**335**	P	**P**	**23 56 50.7**	**+0.9**
FINES	**FINESS Array B**	**36.88**	**335**	P	**P**	**23 56 50.2**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=124,slow=9.0,SNR=19						
	comp=Z,4.8nm,0.7s						
MOA	**Molln**	**36.90**	**310**	*e*P	**P**	**23 56 50.5**	**+0.3**
	comp=Z,4.1nm,1.0s						
PRED	**Cave del Predi**	**37.11**	**308**	P	**P**	**23 56 51.7**	**-0.4**
PRED				IAmb	IAmb	23 56 57.2	
	comp=Z,7.3nm,1.2s						
KBA	**Koelnbreinsper**	**37.37**	**309**	*i* P	**P**	**23 56 54.5**	**+0.1**
	comp=Z,3.4nm,0.9s						
GEC2	**GERESS Array S**	**37.47**	**311**	P	**P**	**23 56 55.0**	**-0.2**
GEC2				IAmb	IAmb	23 56 56.4	
	comp=Z,5.9nm,0.9s						
GERES	**GERESS Array B**	**37.47**	**311**	P	**P**	**23 56 55.0**	**-0.2**
GERES	**GERESS Array B**	**37.47**	**311**	P	**P**	**23 56 55.1**	**0.0**
	comp=Z,4.2nm,0.8s,baz=96,slow=9.5,SNR=15						
	comp=Z,4.2nm,0.8s						
KHC	**Kasperske Hory**	**37.62**	**312**	P	**P**	**23 56 56.0**	**-0.3**
KHC				IAmb	IAmb	23 56 57.0	
	comp=Z,5.6nm,1.2s						
LESA	**Schwarzleotal**	**37.87**	**309**	*i* P	**P**	**23 56 58.3**	**-0.2**
	comp=Z,3.3nm,0.7s						
ABTA	**Abfaltersbach**	**37.88**	**308**	*e*P	**P**	**23 56 58.1**	**-0.5**
	comp=Z,3.1nm,0.7s						
CLL	**Collm**	**38.49**	**315**	P	**P**	**23 57 04.4**	**+0.7**
CLL				IAmb	IAmb	23 57 05.9	
	comp=Z,5.2nm,1.0s						
CLL	**Collm**	**38.49**	**315**	*i* P	**P**	**23 57 04.5**	**+0.9**
	comp=Z,7.0nm,1.1s						
CLL				*e*PP	**PP**	**23 58 32.0**	**+0.4**
WTTA	**Wattenberg**	**38.55**	**309**	*i* P	**P**	**23 57 03.7**	**-0.6**
	comp=Z,6.0nm,0.8s						
WATA	**Walderalm**	**38.60**	**309**	*i* P	**P**	**23 57 03.7**	**-1.0**
	comp=Z,4.3nm,0.9s						
SQTA	**Sankt Quirin**	**38.83**	**308**	*i* P	**P**	**23 57 06.0**	**-0.7**
	comp=Z,6.2nm,0.7s,SNR=6.5						
MOTA	**Moosalm**	**38.92**	**309**	*i* P	**P**	**23 57 06.2**	**-1.2**
	comp=Z,6.2nm,1.0s,SNR=4.9						
PZH	**PanZhiHua**	**39.02**	**85**	P	**P**	**23 57 11.6**	**+3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,140nm,4.3s						
FETA	**Feichten**	**39.12**	**308**	*e*P	**P**	**23 57 08.5**	**-0.7**
	comp=Z,9.0nm,1.1s,SNR=5.9						
RETA	**Reutte**	**39.17**	**309**	*i* P	**P**	**23 57 07.6**	**-1.8**
	comp=Z,10nm,1.8s						
CHTO	**Chiang Mai**	**39.39**	**98**	P	**P**	**23 57 12.0**	**+0.4**
CHTO				IAmb	IAmb	23 57 15.7	
	comp=Z,6.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**39.55**	**98**	P	**P**	**23 57 12.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=296,slow=8.4,SNR=5.9						
	comp=Z,0.6nm,0.3s						
DAVA	**Damuels**	**39.73**	**308**	*i* P	**P**	**23 57 12.0**	**-2.3**
	comp=Z,8.9nm,0.7s						
CRAI	**Chiangrai**	**40.02**	**95**	P	**P**	**23 57 18.1**	**+1.3**
MBAR	**Mbarara**	**40.15**	**224**	P	**P**	**23 57 17.4**	**-0.6**
MBAR	**Mbarara**	**40.15**	**224**	LR	LR	00 14 23.0	
	comp=Z,54nm,21.3s,baz=30,slow=37						
SONM	**Songino Array**	**40.88**	**51**	P	**P**	**23 57 23.9**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=269,slow=8.7,SNR=4.3						
	comp=Z,1.0nm,0.9s						
HFS	**Hagfors**	**41.20**	**328**	P	**P**	**23 57 25.4**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=108,slow=8.2,SNR=2.0						
	comp=Z,1.6nm,0.8s						
NRIK	**Noril'sk**	**42.29**	**15**	P	**P**	**23 57 35.1**	**+0.4**
	comp=Z,2.3nm,1.0s,baz=192,slow=7.0,SNR=4.2						
	comp=Z,2.3nm,1.0s						
NOA	**NORSAR Array B**	**42.70**	**329**	P	**P**	**23 57 37.9**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=107,slow=8.9,SNR=2.0						
	comp=Z,1.3nm,0.9s						
NAO01	**NORSAR Array S**	**42.76**	**328**	P	**P**	**23 57 38.8**	**+0.1**
NAO01				IAmb	IAmb	23 57 41.1	
	comp=Z,16nm,1.2s						
ARCES	**ARCESS Array B**	**42.81**	**344**	P	**P**	**23 57 39.2**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=147,slow=2.9,SNR=8.0						
	comp=Z,1.8nm,0.8s						
SRIT	**Nakonsritamara**	**45.13**	**110**	P	**P**	**23 57 59.0**	**+0.7**
EKA	**Eskdalemuir Ar**	**48.71**	**319**	P	**P**	**23 58 25.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=99,slow=7.2,SNR=6.4						
	comp=Z,0.7nm,0.5s						
ESDC	**Sonseca Array**	**50.01**	**298**	P	**P**	**23 58 34.2**	**-1.9**
ESDC	**Sonseca Array**	**50.01**	**298**	P	**P**	**23 58 34.7**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=73,slow=7.7,SNR=4.9						
	comp=Z,1.1nm,0.9s						
SPITS	**Spitsbergen Ar**	**50.80**	**350**	P	**P**	**23 58 40.9**	**-0.6**
	comp=Z,17nm,0.9s,baz=139,slow=13,SNR=2.7						
	comp=Z,17nm,0.9s						
RER	**Riviere de l'E**	**51.65**	**182**	P	**P**	**23 58 47.6**	**-0.9**
TOA0	**Torodi Ar. Sit**	**53.97**	**264**	P	**P**	**23 59 04.5**	**-1.3**
TOA0				IAmb	IAmb	23 59 05.9	
	comp=Z,5.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	**53.97**	**264**	P	**P**	**23 59 04.6**	**-1.2**
	SNR=5.9						
TORD	**Torodi Ar. Bea**	**53.97**	**264**	P	**P**	**23 59 04.7**	**-1.1**
TORD				IAmb	IAmb	23 59 05.9	
	comp=Z,4.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**53.97**	**264**	P	**P**	**23 59 04.8**	**-1.0**
	comp=Z,5.1nm,0.7s,baz=54,slow=8.3,SNR=37						
	comp=Z,5.1nm,0.7s						
LBTB	**Lobatse**	**63.24**	**212**	LR	LR	00 30 13.7	
	comp=Z,35nm,19.8s,baz=178,slow=38						
UGM	**Wanagama**	**63.81**	**118**	P	**P**	**00 00 13.4**	**-0.8**
BOSA	**Boshof**	**66.50**	**211**	LR	LR	00 29 25.3	
	comp=Z,30nm,18.0s,baz=188,slow=36						
JHJ	**Hachijo jima 2**	**68.18**	**64**	LR	LR	00 35 52.7	
	comp=Z,189nm,18.2s,baz=120,slow=40						
B22K	**Teshekpuk Lake**	**76.79**	**10**	P	**P**	**00 01 33.1**	**+0.3**
C18K	**Utukok River**	**76.88**	**14**	P	**P**	**00 01 33.5**	**0.0**
C18K				IAmb	IAmb	00 01 37.8	
	comp=Z,3.9nm,0.9s						
D22K	**Ayikyak River**	**78.22**	**11**	P	**P**	**00 01 42.3**	**+1.5**
D22K				IAmb	IAmb	00 01 45.7	
	comp=Z,7.3nm,1.1s						
D25K	**Kavik River**	**78.71**	**8**	P	**P**	**00 01 43.9**	**+0.3**
D25K				IAmb	IAmb	00 01 49.6	
	comp=Z,3.5nm,0.9s						
TOLK	**Toolik Lake Re**	**78.91**	**10**	P	**P**	**00 01 45.3**	**+0.6**
TOLK				IAmb	IAmb	00 01 50.8	
	comp=Z,3.9nm,0.6s						
F21K	**Alatna River**	**79.58**	**12**	P	**P**	**00 01 49.9**	**+1.6**
F21K				IAmb	IAmb	00 01 54.9	
	comp=Z,4.2nm,1.2s						
E24K	**Your Creek**	**79.59**	**10**	P	**P**	**00 01 48.9**	**+0.4**
E24K				IAmb	IAmb	00 01 55.2	
	comp=Z,5.9nm,1.2s						
E25K	**Arctic Village**	**79.94**	**9**	P	**P**	**00 01 50.9**	**+0.6**
E25K				IAmb	IAmb	00 01 56.7	
	comp=Z,6.9nm,1.4s						
C36M	**Paulatuk**	**80.18**	**1**	P	**P**	**00 01 52.3**	**+0.8**
SMY	**Shemya**	**80.31**	**33**	P	**P**	**00 01 52.4**	**-0.1**
BMAR	**Burnt Mountain**	**80.72**	**8**	P	**P**	**00 01 55.4**	**+0.8**
F31M	**Tsiigehtchic**	**81.75**	**4**	P	**P**	**00 02 01.1**	**+1.2**
F31M				IAmb	IAmb	00 02 05.3	
	comp=Z,4.6nm,0.7s						
SCHQ	**Schefferville**	**82.22**	**331**	P	**P**	**00 02 02.3**	**-0.4**
	comp=Z,3.9nm,1.0s,baz=49,slow=6.0,SNR=1.9						
	comp=Z,3.9nm,1.0s						
ILAR	**Eielson Array**	**82.91**	**10**	P	**P**	**00 02 05.5**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=333,slow=6.4,SNR=4.7						
	comp=Z,0.7nm,0.9s						
YKA	**Yellowknife Ar**	**86.85**	**356**	P	**P**	**00 02 25.6**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=359,slow=5.6,SNR=9.9						
	comp=Z,0.7nm,0.9s						
WRA	**Warramunga Arr**	**89.45**	**114**	P	**P**	**00 02 37.1**	**-1.9**
	comp=Z,1.0nm,1.0s,baz=317,slow=3.8,SNR=1.4						
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**91.13**	**117**	P	**P**	**00 02 44.8**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=302,slow=5.3,SNR=1.4						
	comp=Z,0.7nm,0.8s						

IDC 05 23:52:17.1±2.1, 15°46S×173°49W, h0km, mb3.7/5, mbtmp3.7/5, MS3.6/24, Error ellipse: s-maj=127.5km s-min=24.1km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.22**	**116**	LR	LR	23 59 17.3	
	comp=Z,79nm,21.8s,baz=220,slow=30						
DZM	**Mont Dzumac**	**20.09**	**248**	LR	LR	00 03 40.3	
	comp=Z,205nm,18.1s,baz=52,slow=34						
URZ	**Urewera**	**24.18**	**198**	LR	LR	00 06 00.3	
	comp=Z,169nm,18.3s,baz=121,slow=34						
RPZ	**Rata Peaks**	**31.09**	**202**	LR	LR	00 09 21.7	
	comp=Z,176nm,21.2s,baz=42,slow=33						
CTA	**Charters Tower**	**38.54**	**257**	LR	LR	00 14 57.6	
	comp=Z,46nm,18.2s,baz=83,slow=35						
H11S2	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	00 40 24.7	
	baz=146,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**38.99**	**329**	T	T	00 40 25.4	
	baz=146,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**38.99**	**329**	T	T	00 40 26.0	
	baz=146,slow=76,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**39.92**	**330**	T	T	00 42 04.2	
	baz=149,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**39.93**	**330**	T	T	00 42 11.4	
	baz=149,slow=76,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**39.94**	**330**	T	T	00 41 43.1	
	baz=149,slow=76,SNR=3.0						
STKA	**Stephens Creek**	**43.93**	**240**	LR	LR	00 15 53.0	
	comp=Z,50nm,18.4s,baz=31,slow=32						
WRA	**Warramunga Arr**	**49.75**	**257**	P	P	00 01 11.4	-0.3
	0.9nm,0.7s,baz=92,slow=7.4,SNR=11						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**50.01**	**252**	P	P	00 01 14.0	+0.3
	3.3nm,0.8s,baz=86,slow=8.6,SNR=21						
ASAR				LR	LR	00 23 13.6	
	comp=Z,31nm,18.2s,baz=92,slow=37						
	3.3nm,0.8s						
MJAR	**Matsushiro Arr**	**68.93**	**320**	LR	LR	00 26 24.7	
	comp=Z,60nm,21.9s,baz=164,slow=30						
ASAJ	**Asahikawa**	**71.55**	**328**	LR	LR	00 32 48.5	
	comp=Z,25nm,18.6s,baz=156,slow=34						
PETK	**Petpavlovsk-**	**72.67**	**342**	LR	LR	00 28 03.1	
	comp=Z,26nm,21.2s,baz=127,slow=30						
PFO	**Pinyon Flats O**	**73.03**	**47**	LR	LR	00 27 18.1	
	comp=Z,73nm,21.5s,baz=253,slow=29						
LPIG	**La Paz**	**73.14**	**58**	LR	LR	00 27 41.0	
	comp=Z,39nm,18.1s,baz=316,slow=29						
YBH	**Yreka Blue Hor**	**73.70**	**37**	LR	LR	00 27 40.0	
	comp=Z,66nm,21.7s,baz=228,slow=29						
NVAR	**Mina Array Bea**	**74.43**	**42**	P	P	00 03 58.6	+1.1
	1.0nm,0.8s,baz=220,slow=8.3,SNR=6.3						
NVAR				LR	LR	00 28 31.1	
	comp=Z,57nm,19.5s,baz=271,slow=29						
	1.0nm,0.8s						
ELK	**Elko**	**77.69**	**41**	LR	LR	00 34 07.0	
	comp=Z,40nm,19.5s,baz=238,slow=32						
KLR	**Kul'dur**	**80.53**	**327**	LR	LR	00 34 11.1	
	comp=Z,24nm,20.0s,baz=185,slow=31						
TXAR	**Lajitas Array**	**80.72**	**56**	P	P	00 04 31.7	-1.0
	0.2nm,0.8s,baz=233,slow=5.5,SNR=2.4						
TXAR				LR	LR	00 32 00.8	
	comp=Z,24nm,19.1s,baz=303,slow=30						
	0.2nm,0.8s						
ANMO	**Albuquerque**	**80.91**	**50**	LR	LR	00 31 58.0	
	comp=Z,46nm,18.9s,baz=360,slow=29						
DLBC	**Dease Lake**	**81.79**	**21**	LR	LR	00 35 17.3	
	comp=Z,55nm,18.2s,baz=178,slow=32						
PDAR	**Pinedale Array**	**82.37**	**42**	LR	LR	00 35 27.8	
	comp=Z,44nm,18.6s,baz=274,slow=32						
ILAR	**Eielson Array**	**82.53**	**11**	P	P	00 04 41.2	-0.1
	0.2nm,0.9s,baz=229,slow=6.1,SNR=5.4						
ILAR				LR	LR	00 32 38.7	
	comp=Z,37nm,21.9s,baz=194,slow=29						
	0.2nm,0.9s						
H03S2	**Juan Fernandez**	**85.24**	**124**	T	T	01 39 11.3	
	baz=245,slow=74						
H03S1	**Juan Fernandez**	**85.25**	**124**	T	T	01 39 15.4	
	baz=245,slow=74						
H03S3	**Juan Fernandez**	**85.25**	**124**	T	T	01 39 09.1	
	baz=245,slow=74						
H03N2	**Juan Fernandez**	**85.34**	**123**	T	T	01 39 18.0	
	baz=243						
H03N3	**Juan Fernandez**	**85.34**	**123**	T	T	01 39 22.9	
	baz=243						
H03N1	**Juan Fernandez**	**85.35**	**123**	T	T	01 39 18.3	
	baz=243						
INK	**Inuvik**	**88.35**	**14**	LR	LR	00 42 21.3	
	comp=Z,24nm,18.5s,baz=189,slow=34						
PLCA	**Paso Flores**	**89.53**	**132**	LR	LR	00 38 12.5	
	comp=Z,30nm,18.3s,baz=187,slow=31						
YKA	**Yellowknife Ar**	**90.19**	**23**	LR	LR	00 40 23.8	
	comp=Z,44nm,18.2s,baz=330,slow=32						
BRTR	**Keskin Array B**	**146.15**	**321**	PKPbc	PKPdf	00 11 58.2	-0.6
	0.7nm,0.7s,baz=36,slow=2.7,SNR=6.4						

*TEH **06** 00:00:25.0, 35°48N×45°47E, h5km, ML2.5*
*AFAD **06** 00:00:27.0±0.0, 35°36N×45°19E, h16km, ML2.4*
ISC 06 00:00:23.8±1.0, 35°50N±0°05×45°52E±0°08, h10km, n11, σ1°11/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDS1	**Sardasht. Az.**	**0.65**	**358**	Pg	**Pg**	**00 00 36.4**	**0.0**
SDS1				Sg	**Sb**	**00 00 45.7**	**-0.9**
IDHR	**Dehrash**	**1.07**	**138**	Pg	**Pg**	**00 00 44.0**	**-0.3**
IGHG	**Ghaleghazi**	**1.45**	**143**	Pg	**Pg**	**00 00 51.7**	**0.0**
KCHF	**Cheshme Sefid,**	**1.75**	**134**	Pg	**Pg**	**00 00 56.7**	**-0.6**
ILBA	**Ilam Banvizeh**	**1.95**	**163**	Pn	**Pg**	**00 01 00.9**	**-0.3**
YOVA	**Hakkari_Yksek**	**2.31**	**335**	P	**Pb**	**00 01 04.8**	**-0.8**
YOVA				S	**Sb**	**00 01 34.8**	**+0.6**
CUKT	**Cukurca**	**2.33**	**319**	P	**Pb**	**00 01 05.2**	**-0.7**
CUKT				S	**Sg**	**00 01 37.5**	**-1.2**
CUKT				*i* AML	AML	00 01 45.0	
	comp=N,26nm,0.5s						
CUKT				*i* AML	AML	00 01 45.0	
	comp=E,43nm,0.6s						
HAKT	**HAKKARI**	**2.52**	**325**	P	**Pb**	**00 01 08.6**	**-0.7**
HAKT				S	**Sb**	**00 01 40.5**	**+0.1**
ISHB	**Shabestar**	**2.78**	**2**	Pn	**Pb**	**00 01 13.8**	**0.0**
SIRN	**Sirnak**	**3.20**	**310**	P	**Pn**	**00 01 16.4**	**+2.2**
SIRN				*i* AML	AML	00 02 13.0	
	comp=N,9.3nm,0.6s						
SIRN				*i* AML	AML	00 02 15.0	
	comp=E,13nm,0.6s						
MIDY	**Mardin/Midyat-**	**3.83**	**301**	P	**Pn**	**00 01 24.9**	**+2.0**
MIDY				S	**Sn**	**00 02 06.4**	**-1.5**

*UPP **06** 00:17:54.6±0.0, 67°81N×20°20E, h0km, ML2.5, Suspected explosion*
*HEL **06** 00:17:54.7±0.2, 67°78N×20°17E, h0km, ML1.3, Suspected explosion*
ISC 06 00:17:54.2±0.8, 67°77N±0°03×20°22E±0°03, h0km, n24, σ0s90/40, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.20**	**13**	P	**Pg**	**00 17 57.8**	**-0.1**
KUA				S	**Sg**	**00 18 00.0**	**-0.4**
RATU	**Laukkuluspa**	**0.25**	**284**	P	**Pg**	**00 17 59.1**	**+0.2**
RATU				S	**Sg**	**00 18 02.5**	**+0.4**
DUNU	**Dundret**	**0.66**	**168**	P	**Pb**	**00 18 07.8**	**-0.8**
LANU	**Lannavaara**	**0.73**	**66**	P	**Pb**	**00 18 08.1**	**-0.1**
LANU	**Lannavaara**	**0.73**	**66**	PG	**Pg**	**00 18 08.0**	**-0.1**
LANU				SG	**Sg**	**00 18 17.8**	**+0.2**
MASU	**Masugnsbyn**	**0.75**	**114**	P	**Pb**	**00 18 09.2**	**-0.9**
SALU	**Saltoluokta**	**0.76**	**240**	P	**Pb**	**00 18 09.2**	**-1.1**
PAJU	**Pajala**	**1.34**	**122**	P	**Pn**	**00 18 19.8**	**-0.4**
PAJU	**Pajala**	**1.34**	**122**	PG	**Pg**	**00 18 19.6**	**-0.3**
	baz=301						
PAJU				SN	**Sn**	**00 18 38.1**	**-0.6**
HEF	**Hetta**	**1.44**	**62**	*e*P	**Pn**	**00 18 21.0**	**-0.6**
HEF	**Hetta**	**1.44**	**62**	PG	**Pn**	**00 18 20.9**	**-0.6**
	baz=242						
HEF				MSG		00 18 38.5	
	comp=Z,2.8nm,0.2s						
HEF				SG	**Sg**	**00 18 39.8**	**-0.6**
KLF	**Kolari**	**1.54**	**109**	PN	**Pb**	**00 18 23.0**	**-0.4**
KLF				MSG		00 18 41.4	
	comp=Z,2.3nm,0.2s						
KLF				SN	**Sg**	**00 18 44.0**	**+0.6**
KTK1	**Kautokeino**	**1.68**	**40**	*e*P	**Pn**	**00 18 24.7**	**-0.1**
KTK1	**Kautokeino**	**1.68**	**40**	PG	**Pn**	**00 18 24.7**	**-0.1**
KTK1				SN	**Sn**	**00 18 47.4**	**+0.4**
TRO	**Tromso**	**1.94**	**346**	PG	**Pb**	**00 18 29.2**	**-1.0**
TRO				SG	**Sb**	**00 18 54.7**	**-0.2**
KALU	**Kalix**	**2.28**	**146**	PG	**Pb**	**00 18 35.7**	**-0.5**
KALU				SG	**Sg**	**00 19 06.5**	**-0.9**
TOF	**Tornio**	**2.34**	**134**	PG	**Pb**	**00 18 37.0**	**-0.2**
TOF				MSG		00 19 04.7	
	comp=Z,1.1nm,0.2s						
TOF				SG	**Sb**	**00 19 07.0**	**+0.4**
SGF	**Sodankyl**	**2.44**	**95**	PG	**Pb**	**00 18 37.8**	**-1.0**
SGF				SG	**Sb**	**00 19 09.7**	**+0.4**
RNF	**Rovaniemi**	**2.54**	**115**	PB	**Pb**	**00 18 39.1**	**-1.4**
RNF				SG	**Sb**	**00 19 12.7**	**+0.5**
ARA0	**ARCESS Array S**	**2.63**	**45**	PN	**Pn**	**00 18 38.6**	**+0.8**
	baz=228						
ARA0				SB	**Sn**	**00 19 12.2**	**+1.9**
KMNF	**Kaamanen**	**2.86**	**58**	PN	**Pn**	**00 18 42.0**	**+1.1**
KMNF				SN	**Sn**	**00 19 17.5**	**+1.5**
RAJF	**Raja-Jooseppi**	**3.11**	**73**	PB	**Pb**	**00 18 48.4**	**-1.9**
RAJF				SG	**Sb**	**00 19 28.4**	**-0.3**
RANF	**Ranua**	**3.13**	**121**	SG	**Sb**	**00 19 31.3**	**+2.0**
KEV	**Kevo**	**3.18**	**48**	PN	**Pn**	**00 18 47.1**	**+1.8**
KEV				SN	**Sn**	**00 19 24.5**	**+0.7**

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SLKM	**Skilak Lake**	**4.81**	**354**			**Pn**	**00 19 19.9 +0.4**
HIN	**Hinchinbrook I**	**4.88**	**16**	Pn		**Pn**	**00 19 22.2 +1.6**
HIN				IAML			00 20 18.6
	comp=N,41nm,0.7s						
HIN				IAML			00 20 18.7
	comp=E,44nm,0.7s						
KAIM	**Kayak Island**	**4.92**	**29**	Pn		**Pn**	**00 19 22.1 +1.2**
RSO	**Redoubt South**	**5.09**	**340**	Pn		**Pn**	**00 19 24.2 +0.7**
EYAK	**Cordova Ski Ar**	**5.16**	**19**			**Pn**	**00 19 25.6 +1.4**
EYAK	**Cordova Ski Ar**	**5.16**	**19**	P		**Pn**	**00 19 25.9 +1.7**
EYAK	**Cordova Ski Ar** baz=202	**5.16**	**19**	P		**Pn**	**00 19 25.6 +1.4**
CHGN	**Chignik**	**5.19**	**280**	Pn		**Pn**	**00 19 25.4 +0.7**
O18K	**Koktuh Hills**	**5.22**	**325**			**Pn**	**00 19 26.2 +1.1**
O18K	**Koktuh Hills**	**5.22**	**325**	IAML			00 20 11.3
	comp=E,11nm,1.4s						
O18K				IAML			00 22 03.2
	comp=N,12nm,1.4s						
O18K	**Koktuh Hills** baz=140	**5.22**	**325**	P		**Pn**	**00 19 26.2 +1.1**
SUCK	**Suckling Hills**	**5.22**	**32**	Pn		**Pn**	**00 19 26.6 +1.5**
SUCK				IAML			00 20 40.7
	comp=N,37nm,1.4s						
SUCK				IAML			00 21 08.0
	comp=E,37nm,1.2s						
O19K	**Port Alsworth**	**5.22**	**331**			**Pn**	**00 19 25.9 +0.8**
O19K	**Port Alsworth**	**5.22**	**331**	IAML			00 20 30.7
	comp=E,30nm,0.5s						
O19K				IAML			00 20 30.9
	comp=N,29nm,0.5s						
O19K	**Port Alsworth** baz=147	**5.22**	**331**	P		**Pn**	**00 19 25.9 +0.8**
NICHA	**Nichawak Mount**	**5.30**	**30**			**Pn**	**00 19 27.9 +1.7**
RC01	**Rabbit Creek A**	**5.37**	**357**			**Pn**	**00 19 28.1 +0.9**
RC01				IAML			00 20 29.3
	comp=N,23nm,0.4s						
RC01				IAML			00 20 34.0
	comp=E,22nm,0.6s						
RC01	**Rabbit Creek A** baz=177	**5.37**	**357**	P		**Pn**	**00 19 28.2 +1.1**
BERG	**Berg Lake**	**5.50**	**30**			**Pn**	**00 19 30.3 +1.3**
GRIN	**Grindle Hills**	**5.52**	**32**			**Pn**	**00 19 31.1 +1.8**
SNH	**Sunshine Point**	**5.59**	**35**	Pn		**Pn**	**00 19 31.6 +1.3**
KHIT	**Khitrov Hills**	**5.67**	**31**			**Pn**	**00 19 32.8 +1.3**
N20K	**Mount Spurr** baz=163	**5.69**	**345**	P		**Pn**	**00 19 32.4 +0.7**
SPCR	**Spurr Chakacha**	**5.69**	**345**			**Pn**	**00 19 32.4 +0.7**
KNK	**Knik Glacier**	**5.70**	**4**	Pn		**Pn**	**00 19 30.9 -0.8**
BMRM	**Bremner River**	**5.77**	**23**			**Pn**	**00 19 33.9 +1.2**
BMRM	**Bremner River** baz=207	**5.77**	**23**	P		**Pn**	**00 19 34.6 +1.8**
P16K	**Nushagak River**	**5.78**	**308**			**Pn**	**00 19 34.5 +1.8**
P16K	**Nushagak River** baz=122	**5.78**	**308**	P		**Pn**	**00 19 34.5 +1.8**
N19K	**Bonanza Creek**	**5.79**	**334**			**Pn**	**00 19 33.0 -0.1**
N19K	**Bonanza Creek** baz=149	**5.79**	**334**	P		**Pn**	**00 19 33.6 +0.5**
SUA	**Susitna One**	**5.79**	**353**			**Pn**	**00 19 33.3 +0.2**
SUA	**Susitna One** baz=172	**5.79**	**353**	P		**Pn**	**00 19 33.9 +0.9**
WAX	**Waxell Ridge**	**5.80**	**33**			**Pn**	**00 19 34.5 +1.3**
PMR	**Palmer**	**5.87**	**0**	Pn		**Pn**	**00 19 34.6 +0.7**
BARK	**Barkley Ridge**	**5.88**	**35**			**Pn**	**00 19 35.8 +1.5**
MESA	**MESA**	**5.89**	**38**			**Pn**	**00 19 36.0 +1.5**
MESA	**MESA** baz=224	**5.89**	**38**	P		**Pn**	**00 19 36.0 +1.5**
STLK	**Strandline Lak**	**5.93**	**348**			**Pn**	**00 19 36.0 +1.0**
CRQM	**Cirque**	**5.96**	**30**	Pn		**Pn**	**00 19 36.8 +1.3**
CNBA	**Chernabura Isl**	**6.00**	**265**	Pn		**Pn**	**00 19 35.2 -0.6**
KLU	**Klutina**	**6.02**	**15**			**Pn**	**00 19 37.5 +1.3**
KLU	**Klutina** baz=198	**6.02**	**15**	P		**Pn**	**00 19 37.5 +1.3**
GHO	**Glory Hole Cre**	**6.05**	**1**	Pn		**Pn**	**00 19 38.4 +1.9**
BAGL	**Bagley Icefiel**	**6.07**	**35**			**Pn**	**00 19 38.3 +1.5**
N18K	**Kilae Creek**	**6.08**	**327**			**Pn**	**00 19 37.9 +1.0**
N18K	**Kilae Creek** baz=142	**6.08**	**327**	P		**Pn**	**00 19 37.9 +1.0**
ISLE	**Juniper Island**	**6.08**	**34**			**Pn**	**00 19 38.4 +1.4**
SML	**Sawmill**	**6.10**	**4**	Pn		**Pn**	**00 19 39.1 +1.8**
O16K	**Kokwok River B**	**6.13**	**313**	Pn		**Pn**	**00 19 38.6 +1.0**
SCM	**Sheep Creek Mo**	**6.19**	**8**	Pn		**Pn**	**00 19 40.0 +1.5**
VRDI	**Verde Repeater**	**6.27**	**26**			**Pn**	**00 19 41.1 +1.4**
SAMH	**Samovar Hills**	**6.28**	**42**			**Pn**	**00 19 41.9 +2.1**
SVW2	**Sparrevohn**	**6.32**	**331**	Pn		**Pn**	**00 19 39.8 -0.5**
KIAG	**Kiagna River**	**6.32**	**32**			**Pn**	**00 19 41.8 +1.4**
N25K	**Chitina, Valde**	**6.35**	**20**			**Pn**	**00 19 42.6 +1.9**
N25K	**Chitina, Valde** baz=204	**6.35**	**20**	P		**Pn**	**00 19 42.6 +1.9**
TABL	**Table Mountain**	**6.36**	**39**			**Pn**	**00 19 42.7 +1.7**
SKT	**Skwentna**	**6.37**	**350**	Pn		**Pn**	**00 19 41.5 +0.6**
GLB	**Gilahina Butte**	**6.37**	**24**			**Pn**	**00 19 42.2 +1.2**
N17K	**Nushagak Hills**	**6.39**	**322**	Pn		**Pn**	**00 19 41.6 +0.5**
SDPT	**Sand Point**	**6.40**	**271**			**Pn**	**00 19 41.6 +0.3**
SDPT	**Sand Point** baz=82	**6.40**	**271**	P		**Pn**	**00 19 42.1 +0.8**
PCA	**Pinnacle**	**6.46**	**44**			**Pn**	**00 19 44.1 +1.9**
PINM	**Pinnacle** baz=231	**6.47**	**44**	P		**Pn**	**00 19 44.1 +1.8**
M20K	**Styx River**	**6.48**	**343**	Pn		**Pn**	**00 19 42.1 -0.4**
PTPK	**Patty Peak**	**6.50**	**30**			**Pn**	**00 19 44.5 +1.6**
MCARA	**McCarthy VSAT**	**6.52**	**27**	Pn		**Pn**	**00 19 44.6 +1.7**
PNL	**Peninsula**	**6.57**	**49**			**Pn**	**00 19 45.1 +1.4**
PNL	**Peninsula**	**6.57**	**49**	P		**Pn**	**00 19 45.6 +2.0**
PNL	**Peninsula** baz=237	**6.57**	**49**	P		**Pn**	**00 19 45.1 +1.4**
M24K	**Tolsona, Glenn**	**6.57**	**13**			**Pn**	**00 19 46.2 +2.5**
BCPM	**Bancas Point**	**6.63**	**47**			**Pn**	**00 19 46.3 +1.9**
BARN	**Barnard Glacie**	**6.64**	**34**			**Pn**	**00 19 46.4 +1.6**
CTG	**Chitna Glacier** baz=221	**6.67**	**35**	P		**Pn**	**00 19 46.7 +1.5**
O15K	**Ungalikthiuk R**	**6.68**	**305**			**Pn**	**00 19 46.7 +1.7**
O15K	**Ungalikthiuk R** baz=117	**6.68**	**305**	P		**Pn**	**00 19 46.7 +1.7**
CTGM	**Chitina Glacie**	**6.68**	**35**			**Pn**	**00 19 46.7 +1.5**
LOGN	**Logan Glacier**	**6.68**	**37**			**Pn**	**00 19 46.8 +1.5**
M18K	**Stony River**	**6.71**	**332**			**Pn**	**00 19 46.3 +0.7**
M18K	**Stony River** baz=146	**6.71**	**332**	P		**Pn**	**00 19 46.3 +0.7**
M19K	**Big River Lodg**	**6.74**	**339**	Pn		**Pn**	**00 19 47.1 +1.2**
N16K	**Nishlik Lake**	**6.93**	**317**			**Pn**	**00 19 50.4 +1.8**
N16K	**Nishlik Lake** baz=129	**6.93**	**317**	P		**Pn**	**00 19 50.4 +1.8**
L19K	**White Mountain**	**7.08**	**338**	Pn		**Pn**	**00 19 50.3 -0.4**
M17K	**Holitna River**	**7.11**	**326**	Pn		**Pn**	**00 19 52.0 +0.9**
WAT7	**Susitna Watana**	**7.12**	**1**			**Pn**	**00 19 52.7 +1.5**
O29M	**Mount Kennedy**	**7.26**	**47**			**Pn**	**00 19 55.0 +1.7**
O29M	**Mount Kennedy** baz=235	**7.26**	**47**	P		**Pn**	**00 19 55.3 +2.0**
P29M	**Windy Craggy**	**7.28**	**53**			**Pn**	**00 19 55.0 +1.6**
P29M	**Windy Craggy** baz=242	**7.28**	**53**	P		**Pn**	**00 19 54.6 +1.2**
M16K	**Timber Creek**	**7.36**	**320**	Pn		**Pn**	**00 19 55.8 +1.4**
O14K	**Tigyukauivet M**	**7.38**	**303**	Pn		**Pn**	**00 19 55.2 +0.5**
M26K	**Nabesna, AK**	**7.40**	**23**	Pn		**Pn**	**00 19 56.7 +1.6**
DHY	**Denali Highway**	**7.42**	**7**	Pn		**Pn**	**00 19 57.8 +2.5**
S31K	**Pelican**	**7.46**	**67**			**Pn**	**00 19 55.1 -0.7**
S31K	**Pelican** baz=258	**7.46**	**67**	P		**Pn**	**00 19 55.1 -0.7**
RND	**Reindeer**	**7.69**	**1**	Pn		**Pn**	**00 20 01.1 +2.0**
TRF	**Thorofare Moun**	**7.75**	**356**	Pn		**Pn**	**00 20 00.9 +0.9**
SIT	**Sitka**	**7.82**	**75**	P		**Pn**	**00 19 59.4 -1.3**
CAST	**Castle Rocks**	**7.84**	**350**	Pn		**Pn**	**00 20 03.3 +2.3**
KTH	**Kantishna Hill**	**7.88**	**354**	Pn		**Pn**	**00 20 02.4 +0.7**
HYT	**Haines Junctio**	**8.00**	**46**	Pn		**Pn**	**00 20 05.5 +2.2**
TTA	**Tatalina**	**8.00**	**337**	Pn		**Pn**	**00 20 01.6 -1.6**
L16K	**Owhat River**	**8.01**	**322**			**Pn**	**00 20 03.9 +0.6**
L16K	**Owhat River** baz=134	**8.01**	**322**	P		**Pn**	**00 20 04.5 +1.1**
MCK	**McKinley**	**8.02**	**1**	Pn		**Pn**	**00 20 05.1 +1.6**
L27K	**Beaver Creek,**	**8.25**	**24**	Pn		**Pn**	**00 20 08.2 +1.6**
BCAR	**Beaver Creek A**	**8.26**	**24**	Pn		**Pn**	**00 20 07.9 +1.0**
S32K	**Killisnoo**	**8.26**	**72**			**Pn**	**00 20 06.3 -0.5**
S32K	**Killisnoo** baz=264	**8.26**	**72**	P		**Pn**	**00 20 06.3 -0.5**
BESE	**Bessie Mountai**	**8.31**	**64**			**Pn**	**00 20 08.0 +0.5**
SKAG	**Skagway**	**8.33**	**58**	Pn		**Pn**	**00 20 10.0 +2.2**
SKAG	**Skagway**	**8.33**	**58**	P		**Pn**	**00 20 10.3 +2.5**
K17K	**Iditarod**	**8.39**	**330**	Pn		**Pn**	**00 20 09.4 +0.8**
R32K	**Eaglecrest**	**8.41**	**66**	Pn		**Pn**	**00 20 09.6 +0.7**
JIS	**Juneau Island**	**8.48**	**66**	Pn		**Pn**	**00 20 10.7 +0.9**
O30N	**Mendenhall**	**8.55**	**49**			**Pn**	**00 20 12.6 +1.7**
O30N	**Mendenhall** baz=239	**8.55**	**49**	P		**Pn**	**00 20 12.7 +1.9**
SCRK	**Sand Creek**	**8.66**	**15**	Pn		**Pn**	**00 20 14.7 +2.2**
M29M	**Somme Creek**	**8.70**	**35**	Pn		**Pn**	**00 20 15.5 +2.6**

*JMA **06** 00:18:32.1±0.3,36°N±1°×12°9E±°, h8km,MV3.2/10,S KOREAN PENINSULA REG*
*KMA **06** 00:18:33.9±0.2,36°08N×129°32E,h11km±2km,Error ellipse: s-maj=0.9km s-min=0.7km az=109.0*
*KEA **06** 00:18:33.1,36°25N×129°10E,h1km,ML2.8/3*
ISC 06 00:18:33.9±1.0,**36°16N**±0°03×**129°21E**±0°03,**h12**km±8km, **n22,σ1°10/37,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSPHA	**Pohang**	**0.13**	**75**	P	**Pg**	**00 18 36.8**	**-0.3**
YOCB	**Yeongcheon** SNR=26	**0.28**	**229**	P	**Pb**	**00 18 40.5**	**-0.3**
YOCB				S	**Sb**	**00 18 45.1**	**-0.4**
KSADO	**Andong** SNR=54	**0.33**	**320**	P	**Pn**	**00 18 43.0**	**-1.6**
YODB	**Yeongdeok** SNR=12	**0.41**	**23**	P	**Pb**	**00 18 42.9**	**-0.1**
YODB	SNR=12			P	**Pb**	**00 18 42.9**	**-0.1**
KSUSN	**Ulsan**	**0.46**	**189**	P	**Pg**	**00 18 42.1**	**-0.8**
KSUSN				P	**Pg**	**00 18 42.1**	**-0.8**
EUSB	**Uiseong** SNR=15	**0.47**	**295**	P	**Pn**	**00 18 45.3**	**-1.2**
EUSB	SNR=15			P	**Pn**	**00 18 45.3**	**-1.2**
EUSB				S	**Sb**	**00 18 53.2**	**+2.3**
EUSB				S	**Sb**	**00 18 53.2**	**+2.3**
KSDAG	**Daegu** SNR=87	**0.47**	**213**	P	**Pg**	**00 18 43.2**	**+0.1**
KSDAG	SNR=87			P	**Pg**	**00 18 43.2**	**+0.1**
KSDAG				S	**Sg**	**00 18 49.5**	**+0.3**
KSDAG				S	**Sg**	**00 18 49.5**	**+0.3**
YEYB	**Yeongyang** SNR=17	**0.48**	**348**	P	**Pn**	**00 18 45.1**	**-1.4**
GUWB	**Gunwi** SNR=76	**0.50**	**273**	P	**Pn**	**00 18 45.6**	**-1.3**
GUWB	SNR=76			P	**Pn**	**00 18 45.6**	**-1.3**
JEJB	**Jeongja** SNR=11	**0.55**	**160**	P	**Pg**	**00 18 42.7**	**-1.9**
KSDAU	**Deagu-acc** SNR=15	**0.55**	**241**	P	**Pb**	**00 18 45.7**	**+0.2**
KSULJ	**Uljin** SNR=73	**0.56**	**16**	P	**Pb**	**00 18 45.9**	**+0.1**
KSULJ	SNR=73			P	**Pb**	**00 18 45.9**	**+0.1**
KSCIG	**Chilgok** SNR=63	**0.68**	**260**	P	**Pn**	**00 18 48.6**	**-0.8**
KSCIG	SNR=63			P	**Pn**	**00 18 48.6**	**-0.8**
MIYA	**Miryang-si** SNR=15	**0.77**	**210**	P	**Pg**	**00 18 48.4**	**-0.3**
JTU	**Tsushima**	**1.64**	**175**	*e*P	**Pn**	**00 19 02.0**	**-0.5**
JTU				*e*S	**Sn**	**00 19 23.0**	**-0.5**
JTSM	**Tsushimamitsus**	**1.82**	**175**	*e*P	**Pn**	**00 19 04.7**	**-0.3**
JTSM				*e*S	**Sn**	**00 19 28.2**	**+0.1**
JII	**Iki**	**2.40**	**170**	*e*S	**Sn**	**00 19 43.8**	**+1.5**
JTY	**Toyota**	**2.42**	**141**	*e*S	**Sn**	**00 19 43.2**	**+0.2**
HJU	**Haeju**	**3.36**	**305**	Pg	**Pg**	**00 19 36.3**	**-2.0**
HJU				Sg	**Sg**	**00 20 23.3**	**+1.4**
HJU	comp=N,88nm,0.9s			AML	AML		
HJU	comp=E,27nm,0.1s			AML	AML		
HJU	comp=Z,26nm,0.2s			AML	AML		
JHS	**Saijyo**	**3.39**	**109**	*e*P	**Pn**	**00 19 27.0**	**+0.4**
PYAG	**Pyongyang**	**3.98**	**317**	Sg	**Sg**	**00 20 42.7**	**+1.0**
PYAG	comp=N,24nm,0.2s			AML	AML		
PYAG	comp=E,21nm,0.3s			AML	AML		
PYAG	comp=Z,12nm,0.1s			AML	AML		
PYS	**Pyongsong**	**4.08**	**320**	Sg	**Sg**	**00 20 45.9**	**+1.2**
PYS	comp=N,22nm,0.3s			AML	AML		
PYS	comp=E,24nm,0.3s			AML	AML		
PYS	comp=Z,12nm,0.3s			AML	AML		

*KNET **06** 00:19:26.1±0.3,42°55N×75°22E,h20km±5km, ml1.4, Error ellipse: s-maj=3.6km s-min=2.0km az=148.0*
*SOME **06** 00:19:27.8,42°53N×75°17E,h15km*
*NNC **06** 00:19:27.1±0.5,42°56N×75°21E,h0km,mb2.6,mpv2.5, Error ellipse: s-maj=3.1km s-min=1.3km az=5.0*
ISC 06 00:19:27.0±1.0,**42°53N**±0°03×**75°22E**±0°02,**h15**km±9km, **n42,σ0°76/79,13C-9D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBK	**Karagaybulak** 7.4nm,0.1s,SNR=30	**0.23**	**303**	⇓P	**Pg**	**00 19 32.3**	**0.0**
KBK	83nm,0.3s			⇑S	**Sg**	**00 19 35.8**	**-0.1**
TKM2	**Tokmak 2** 5.8nm,0.1s,SNR=68	**0.48**	**36**	⇓P	**Pg**	**00 19 36.7**	**+0.1**
TKM2	24nm,0.1s			⇑S	**Sg**	**00 19 43.1**	**-0.1**
TKM2	**Tokmak 2** 1.6nm,0.2s	**0.48**	**36**	⇓P	**Pg**	**00 19 36.1**	**-0.5**
TKM2	4.2nm,0.3s			⇓S	**Sg**	**00 19 42.9**	**-0.2**
AAK	**Ala-Archa** 3.4nm,0.1s,SNR=8.9	**0.54**	**282**	⇑P	**Pg**	**00 19 37.5**	**-0.3**
AAK	14nm,0.2s			⇓S	**Sg**	**00 19 44.8**	**-0.3**
CHMS	**Chumysh** 4.0nm,0.2s,SNR=7.2	**0.58**	**324**	⇓P	**Pg**	**00 19 38.1**	**-0.3**
CHMS	57nm,0.1s			⇑S	**Sg**	**00 19 46.1**	**0.0**
CHMS	**Chumysh** 1.2nm,0.3s	**0.58**	**324**	⇑P	**Pg**	**00 19 38.0**	**-0.5**
CHMS	6.2nm,0.4s			⇓S	**Sg**	**00 19 45.8**	**-0.4**
UCH	**Uchtor** 1.1nm,0.2s,SNR=5.8	**0.60**	**240**	⇑P	**Pg**	**00 19 38.6**	**-0.4**
UCH	13nm,0.2s			⇑S	**Sg**	**00 19 46.6**	**-0.4**
KST	**Kastek** 1.8nm,0.1s	**0.75**	**47**	P	**Pg**	**00 19 41.7**	**+0.1**
KST	6.7nm,0.1s			S	**Sg**	**00 19 51.7**	**+0.1**
KST	**Kastek** 1.8nm,0.1s	**0.75**	**47**	*e*P	**Pg**	**00 19 41.7**	**+0.1**
KST	6.7nm,0.1s			*e*S	**Sg**	**00 19 51.7**	**+0.1**
ULHL	**Ulahol** 0.9nm,0.1s,SNR=5.1	**0.81**	**110**	⇓P	**Pg**	**00 19 42.7**	**-0.1**
ULHL	5.1nm,0.2s			⇑S	**Sg**	**00 19 52.9**	**-0.6**
DGS	**Degeres** 2.4nm,0.1s	**0.82**	**30**	P	**Pb**	**00 19 43.0**	**-0.1**
DGS	6.1nm,0.2s			S	**Sb**	**00 19 53.9**	**-0.1**
DGS	**Degeres** 2.4nm,0.1s	**0.82**	**30**	*e*P	**Pb**	**00 19 43.0**	**-0.1**
DGS	6.1nm,0.2s			*e*S	**Sb**	**00 19 53.9**	**-0.1**
USP	**Ospenovka** 3.0nm,0.1s,SNR=7.0	**0.91**	**325**	⇑P	**Pb**	**00 19 44.1**	**-0.4**
USP	4.7nm,0.1s			⇑S	**Sg**	**00 19 56.2**	**-0.2**
SGDS	**Sogindy** 1.3nm,0.0s	**1.02**	**335**	P	**Pg**	**00 19 46.4**	**-0.3**
SGDS	2.6nm,0.1s			S	**Sg**	**00 19 59.4**	**-0.5**
MTBS	**Maitube** 1.1nm,0.1s	**1.07**	**56**	P	**Pn**	**00 19 47.7**	**0.0**
MTBS	10nm,0.3s			S	**Sg**	**00 20 01.7**	**-0.1**
MTBS	**Maitube** 1.1nm,0.1s	**1.07**	**56**	*e*P	**Pn**	**00 19 47.7**	**0.0**
MTBS	10nm,0.1s			*e*S	**Sg**	**00 20 01.7**	**-0.1**
KRBS	**Karabastau** 1.5nm,0.1s	**1.21**	**16**	P	**Pg**	**00 19 50.1**	**-0.3**
KRBS				S	**Sg**	**00 20 06.0**	**-0.2**
TNSS	**Tian-Shan** 0.6nm,0.2s	**1.37**	**68**	P	**Pb**	**00 19 53.2**	**+0.6**
TNSS	2.0nm,0.3s			S	**Sg**	**00 20 11.2**	**-0.2**
TNSS	**Tian-Shan** 0.6nm,0.1s	**1.37**	**68**	*e*P	**Pb**	**00 19 53.2**	**+0.6**
TNSS	2.0nm,0.3s			*e*S	**Sg**	**00 20 11.2**	**-0.2**
MRKS	**Merke** 2.6nm,0.3s	**1.48**	**279**	P	**Pb**	**00 19 54.7**	**+0.3**
MRKS	3.6nm,0.3s			S	**Sb**	**00 20 13.7**	**+0.6**
MRKS	**Merke** 1.9nm,0.1s	**1.48**	**279**	*e*P	**Pb**	**00 19 54.7**	**+0.3**
MRKS	11nm,0.2s			*e*S	**Sb**	**00 20 13.7**	**+0.6**
MDOK	**Medeo** 0.3nm,0.4s	**1.49**	**64**	⇑P	**Pb**	**00 19 54.4**	**-0.1**
MDOK	0.6nm,0.3s			Pg	**Pg**	**00 19 55.5**	**-0.1**
MDOK	1.3nm,0.5s			⇓S	**Sg**	**00 20 14.5**	**-0.5**
MDOK	2.7nm,0.2s			Lg	Lg	00 20 15.0	
MDOK	**Medeo** 0.9nm,0.1s	**1.49**	**64**	*e*P	**Pg**	**00 19 55.5**	**-0.1**
MDOK	2.8nm,0.1s			*e*S	**Sg**	**00 20 15.0**	**0.0**
KOTS	**Kotyrbulak** 0.8nm,0.2s	**1.56**	**63**	P	**Pg**	**00 19 57.1**	**+0.1**
KOTS	3.3nm,0.2s			S	**Sg**	**00 20 17.8**	**+0.5**
KOTS	**Kotyrbulak** 1.0nm,0.1s	**1.56**	**63**	*e*P	**Pg**	**00 19 57.1**	**+0.1**
KOTS	3.3nm,0.2s			*e*S	**Sg**	**00 20 17.8**	**+0.5**
KUU	**Kurty** 3.1nm,0.2s	**1.59**	**31**	P	**Pb**	**00 19 56.7**	**+0.6**
KUU	4.8nm,0.3s			S	**Sg**	**00 20 17.2**	**-1.0**
KUU	**Kurty** 3.1nm,0.2s	**1.59**	**31**	*e*P	**Pb**	**00 19 56.7**	**+0.6**
KUU	4.8nm,0.1s			*e*S	**Sg**	**00 20 17.2**	**-1.0**
KTBS	**Karatobe** 2.2nm,0.1s	**1.60**	**42**	P	**Pb**	**00 19 56.8**	**+0.5**
KTBS	6.9nm,0.3s			S	**Sg**	**00 20 17.3**	**-1.1**
KTBS	**Karatobe** 2.2nm,0.1s	**1.60**	**42**	*e*P	**Pb**	**00 19 56.8**	**+0.5**
KTBS	6.9nm,0.1s			*e*S	**Sg**	**00 20 17.3**	**-1.1**
CHKK	**Chushkaly** 0.9nm,0.2s	**1.85**	**44**	P	**Pg**	**00 20 01.9**	**-0.6**
CHKK	7.4nm,0.2s			S	**Sg**	**00 20 26.0**	**-0.6**
CHKK	**Chushkaly** 0.9nm,0.1s	**1.85**	**44**	*e*P	**Pg**	**00 20 01.9**	**-0.6**
CHKK	7.3nm,0.1s			*e*S	**Sg**	**00 20 26.0**	**-0.6**
SATY	**Saty** 0.9nm,0.2s	**2.41**	**76**	Pg	**Pg**	**00 20 12.0**	**-1.2**
SATY				Lg	Lg	00 20 43.2	
SATY	**Saty** 1.0nm,0.1s	**2.41**	**76**	*e*P	**Pg**	**00 20 12.0**	**-1.2**
SATY	2.5nm,0.1s			*e*S	**Sg**	**00 20 43.2**	**-1.2**
ARXS	**Arharly** 0.7nm,0.3s	**2.54**	**48**	Pg	**Pb**	**00 20 13.8**	**+1.4**
ARXS	5.0nm,0.4s			Lg	Lg	00 20 46.6	
ARXS	**Arharly** 0.7nm,0.3s	**2.54**	**48**	*e*P	**Pb**	**00 20 13.8**	**+1.4**
ARXS	5.0nm,0.4s			*e*S	**Sg**	**00 20 46.6**	**-2.0**
KPKS	**Kokpek** 0.1nm,0.1s	**2.71**	**69**	Pg	**Pb**	**00 20 16.2**	**+0.9**
KPKS	2.5nm,0.3s			Lg	Lg	00 20 50.8	
KPKS	**Kokpek** 0.6nm,0.2s	**2.71**	**69**	*e*P	**Pb**	**00 20 16.3**	**+1.1**
KPKS	3.8nm,0.3s			*e*S	**Sb**	**00 20 50.8**	**+2.4**
UZB	**Uzynbulak** 4.4nm,0.3s	**2.87**	**76**	Pg	**Pg**	**00 20 20.5**	**-1.4**
UZB	1.9nm,0.4s			Lg	Lg	00 20 57.9	
UZB	**Uzynbulak** 4.4nm,0.3s	**2.87**	**76**	*e*P	**Pg**	**00 20 20.5**	**-1.4**
UZB	1.9nm,0.4s			*e*S	**Sg**	**00 20 57.9**	**-1.2**
PDGK	**Podgornoye** 0.3nm,0.6s	**3.24**	**74**	Pg	**Pb**	**00 20 25.9**	**+1.6**
PDGK	0.9nm,0.3s			Lg	Lg	00 21 07.2	
PDGK	**Podgornoye** 0.2nm,0.4s	**3.24**	**74**	⇑Pg	**Pb**	**00 20 22.7**	**-1.6**
PDGK	1.6nm,0.7s			⇑Lg	Lg	00 21 09.2	

*VIE **06** 00:34:25.4±0.6,49°82N×19°39E,h0km,mb2.6/5,ml2.1/6, ms3.5/1,Error ellipse: s-maj=6.9km s-min=3.1km az=140.0, Suspected Mining induced.*
*PRU **06** 00:34:26.9,50°25N×19°10E,h0km*
*IPEC **06** 00:34:26.6±0.2,50°16N×19°14E,h1km,ML2.2/4,Error ellipse: s-maj=2.5km s-min=1.0km az=167.0*
ISC 06 00:34:26.2±0.8,**50°07N**±0°04×**19°14E**±0°02,**h0**km,**n31, σ1°13/50,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.45**	**70**	*e*Pg	**Pg**	**00 34 34.9**	**+0.1**
OJC				*e*Sg	**Sg**	**00 34 41.0**	**+0.3**
OKC	**Ostrava-Krasne**	**0.68**	**251**	*e*PG	**Pb**	**00 34 40.9**	**0.0**
OKC	comp=Z,25nm,0.4s			*e*SG	**Sb**	**00 34 51.4**	**+0.5**
LANS	**Liptovska Anna**	**0.94**	**167**	*e*PG	**Pb**	**00 34 46.1**	**+0.7**
LANS				*e*SG	**Sn**	**00 35 00.1**	**-0.8**
LANS				*e*LG	Lg	00 35 00.6	
NIE	**Niedzica**	**0.99**	**130**	*e*Pg	**Pb**	**00 34 46.5**	**+0.1**
NIE				*e*Sg	**Sn**	**00 35 01.4**	**-0.8**
MORC	**Moravsky Berou** baz=69	**1.07**	**255**	*e*Pg	**Pb**	**00 34 47.9**	**+0.3**
MORC	34nm,0.6s,baz=69			*e*Sg	**Sg**	**00 35 01.2**	**+0.6**
MORC	**Moravsky Berou**	**1.07**	**255**	*e*PG	**Pb**	**00 34 48.0**	**+0.3**
MORC				*e*SG	**Sg**	**00 35 01.3**	**+0.6**
MAUC	**Maruska**	**1.10**	**231**	*e*SG	**Sn**	**00 35 05.1**	**+0.2**
KRLC	**Kraliky**	**1.52**	**271**	*e*PG	**Pn**	**00 34 53.9**	**-0.8**
KRLC	comp=Z,19nm,0.4s			*e*SG	**Sn**	**00 35 15.2**	**0.0**
JAVC	**Velka Javorina** baz=36	**1.54**	**219**	*e*Pn	**Pg**	**00 34 56.1**	**+0.4**
KECS	**Kecovo**	**1.81**	**150**	*e*PN	**Pn**	**00 34 58.9**	**+0.2**
KECS				*e*SN	**Sn**	**00 35 22.2**	**-0.1**
KECS				*e*LG	Lg	00 35 27.1	
VRAC	**Vranov** baz=62	**1.82**	**246**	*e*Pn	**Pn**	**00 34 59.5**	**+0.7**
VRAC	14nm,0.5s,baz=62			*e*Sg	**Sg**	**00 35 24.9**	**+0.3**
DPC	**Dobruska-Polom**	**1.83**	**280**	*e*PG	**Pn**	**00 34 59.0**	**0.0**
DPC	comp=Z,18nm,0.4s			*e*SG	**Sb**	**00 35 23.9**	**-0.2**
CRVS	**Cervenica-Dubn**	**1.91**	**127**	*e*PG	**Pg**	**00 35 03.1**	**+0.3**
OSTC	**Ostas**	**1.94**	**286**	*e*PG	**Pn**	**

	1.1nm,0.3s						
CONA	**Conrad Observa**	**3.04**	**227**	*e*Pn	**Pn**	**00 35 14.1**	**-1.5**
	0.2nm,0.2s						
CONA				*e*Sn	**Sn**	**00 35 49.1**	**-3.6**
	0.4nm,0.3s						
CKRC	**Cesky Krumlov**	**3.39**	**250**	*e*SG	**Sg**	**00 36 16.7**	**+1.7**
BRG	**Berggiesshubel**	**3.42**	**286**	Pg	**Pg**	**00 35 32.1**	**+0.5**
BRG				Sg	**Sg**	**00 36 15.3**	**-0.6**
BRG				Amp		00 36 21.3	
	comp=Z,3.8nm,0.4s						
ARSA	**Arzberg**	**3.70**	**222**	*e*Sn	**Sn**	**00 36 07.2**	**-1.7**
	comp=Z,0.3nm,0.3s						
KHC	**Kasperske Hory**	**3.74**	**258**	*e*PN	**Pn**	**00 35 25.6**	**+0.4**
KHC				*e*PG	**Pb**	**00 35 32.8**	**-0.3**
KHC				*e*SG	**Sg**	**00 36 26.1**	**-0.1**
	comp=Z,5.3nm,0.6s						
MOA	**Molln**	**3.90**	**237**	*i* Pn	**Pn**	**00 35 26.9**	**-0.5**
	comp=Z,0.4nm,0.3s						
MOA				*e*Sn	**Sn**	**00 36 13.2**	**-0.7**
	comp=Z,2.4nm,0.4s						
CLL	**Collm**	**4.09**	**290**	*e*Sg	**Sg**	**00 36 39.0**	**+1.3**
BIOA	**Bad Ischl, Aus**	**4.34**	**239**	*e*Sn	**Sn**	**00 36 25.9**	**+1.2**
	comp=Z,1.9nm,0.4s						
KBA	**Koelnbreinsper**	**4.87**	**234**	*e*Sn	**Sn**	**00 36 37.8**	**-0.2**
	comp=Z,0.4nm,0.4s						
WTTA	**Wattenberg**	**5.71**	**243**	*e*Sn	**Sn**	**00 37 02.3**	**+3.7**
	comp=Z,2.1nm,0.5s						

TAP **06** *00:35:10.0,24˚.13N×121˚.71E,h8km,ML4.2,C*
NEIC **06** *00:35:10.3±1.3,24˚.11N±0˚.02×121˚.72E±0˚.03,h10km±4km, mb4.2/51,Mwr3.9/16,Error ellipse: s-maj=4.9km s-min=2.7km az=115.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-5.69; Mθθ3.31; Mφφ2.38; Mrθ3.27; Mθφ-5.09; Mφr1.67; Fault plane solution: M₀7.99000×10¹⁴ NP1:φs284.88000°,δ57.98000°, λ-127.38000°. NP2:φs160.13000°,δ47.64000°, λ-45.84000°. Principal axes: T 8.0836, Plg6.0000°, Azm40.0000°; N -0.1873, Plg31.0000°, Azm307.0000°; P -7.8963, Plg58.0000°, Azm140.0000°;*
NEIC **06** *00:35:10.3,24˚.11N×121˚.72E,h10km*
ASIES **06** *00:35:10.0,24˚.13N×121˚.71E,h8km,ML4.2,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.49; Mθθ-1.20; Mφφ0.71; Mrθ4.70; Mθφ-1.37; Mφr5.03; Fault plane solution: M₀7.09696×10²¹ NP1:φs41.75000°, δ85.96000°,λ81.08000°. NP2:φs287.57000°,δ9.79000°, λ155.51000°. Principal axes: T Plg48.3010°, Azm302.2530°; N Plg8.9020°, Azm42.3790°; P Plg40.3130°, Azm140.0150°;*
JMA **06** *00:35:10.2±0.0,24˚.1N±0˚.1×121˚.7E±0˚.3,h7km,MV3.7/15, TAIWAN REGION*
IDC **06** *00:35:19.0±6.3,24˚.00N×121˚.63E,h95km±59km,mb3.4/10, mbtmp3.8/11,ML3.9/1,MS3.2/1,Error ellipse: s-maj=33.9km s-min=18.6km az=63.0*
ISC 06 00:35:10.1±0.7,24˚.11N±0˚.01×121˚.72E±0˚.02,h10km±4km, n254,σθ80/344,mb4.2/37,8C-34D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**297**		*i*P	**Pg**	**00 35 12.6**	**-0.1**
	baz=291							
ETL					*i* S	**Sg**	**00 35 14.2**	**-0.4**
	baz=291							
TWD	**Chiawan**	**0.12**	**253**		*i*P	**Pg**	**00 35 12.9**	**0.0**
	baz=253							
TWD					*i* S	**Sg**	**00 35 14.8**	**-0.2**
	baz=253							
NACB	**Ninganchiao**	**0.13**	**298**	Pg		**Pg**	**00 35 12.8**	**-0.2**
NACB				Sg		**Sg**	**00 35 14.7**	**-0.5**
NACB	**Ninganchiao**	**0.13**	**298**	P		**Pg**	**00 35 12.9**	**-0.2**
NACB	**Ninganchiao**	**0.13**	**298**		*i*P	**Pg**	**00 35 12.9**	**-0.2**
	baz=294							
NACB					*i* S	**Sg**	**00 35 14.9**	**-0.4**
	baz=294							
HWA	**Hwalien**	**0.17**	**217**	P		**Pg**	**00 35 14.8**	**+1.0**
	baz=224							
HWA					*e*S	**Sg**	**00 35 19.4**	**+3.0**
	baz=224							
EHP	**Heping Village**	**0.20**	**6**		*i*P	**Pg**	**00 35 14.3**	**+0.1**
	baz=10.0							
EHP					S	**Sg**	**00 35 17.4**	**+0.2**
	baz=10.0							
EAHA	**Aohua**	**0.21**	**5**		*i*P	**Pg**	**00 35 14.6**	**0.0**
	baz=6.0							
EAHA					S	**Sg**	**00 35 17.6**	**-0.1**
	baz=6.0							
ETLH	**Xiulin Townshi**	**0.23**	**293**		*i*P	**Pg**	**00 35 15.0**	**0.0**
	baz=291							
ETLH					*i* S	**Sg**	**00 35 18.4**	**+0.1**
	baz=291							
ETM	**Tongmen**	**0.25**	**234**		*i*P	**Pg**	**00 35 15.3**	**0.0**
	baz=234							
ETM					S	**Sg**	**00 35 18.7**	**0.0**
	baz=234							
LXIB	**Xiulin Townshi**	**0.29**	**252**		*i*P	**Pg**	**00 35 15.9**	**-0.1**
	baz=250							
LXIB					*e*S	**Sg**	**00 35 20.1**	**+0.1**
	baz=250							
ENA	**Nanau**	**0.31**	**4**		*i*P	**Pg**	**00 35 16.4**	**0.0**
	baz=5.0							
ENA					*i* S	**Sg**	**00 35 20.6**	**0.0**
	baz=5.0							
EWUT	**Wuta**	**0.33**	**9**		P	**Pg**	**00 35 16.8**	**0.0**
	baz=9.0							
EWUT					S	**Sg**	**00 35 21.3**	**0.0**
	baz=9.0							
SHUL	**Shoufeng**	**0.35**	**204**		P	**Pb**	**00 35 18.4**	**0.0**
	baz=212							
SHUL					*e*S	**Sb**	**00 35 26.1**	**+2.0**
	baz=212							
ESL	**Shilin**	**0.40**	**221**	P		**Pg**	**00 35 17.9**	**0.0**
	baz=233							
WHF	**Hehuan Shan**	**0.41**	**274**	*e*P		**Pg**	**00 35 18.4**	**0.0**
	baz=273							
WHF					S	**Sg**	**00 35 23.5**	**-0.4**
	baz=273							
TEGC	**Jichi Village**	**0.43**	**202**	*e*P		**Pb**	**00 35 20.0**	**+0.2**
	baz=191							
TEGC					*e*S	**Sb**	**00 35 28.6**	**+2.2**
	baz=191							
NNSB	**Datong**	**0.44**	**316**		*i*P	**Pg**	**00 35 18.9**	**+0.2**
	baz=315							
NNSB					*i* S	**Sg**	**00 35 24.7**	**+0.2**
	baz=315							
NNSH	**Datong**	**0.44**	**316**		*i*P	**Pg**	**00 35 18.8**	**+0.1**
	baz=314							
NNSH					S	**Sg**	**00 35 24.7**	**+0.2**
	baz=314							
NNS	**Nan Shan**	**0.45**	**316**		*i*P	**Pg**	**00 35 19.1**	**+0.1**
	baz=316							
NNS					*i* S	**Sg**	**00 35 25.2**	**+0.2**
	baz=316							
FUSS	**Fushou**	**0.45**	**287**		*i*P	**Pg**	**00 35 19.4**	**+0.3**
	baz=295							
LATG	**Datong**	**0.45**	**337**		*i*P	**Pg**	**00 35 19.1**	**+0.1**
	baz=336							
LATG					S	**Sg**	**00 35 25.0**	**-0.1**
	baz=336							
ESAO	**Su ao**	**0.47**	**14**	*e*P		**Pg**	**00 35 19.4**	**+0.1**
	baz=12							
WARBT	**Fenglin Townsh**	**0.50**	**218**	*i* P		**Pg**	**00 35 19.8**	**0.0**
	baz=228							
WARBT					*e*S	**Sb**	**00 35 28.5**	**+0.3**
	baz=228							
CHGB	**Renai**	**0.50**	**264**		*i*P	**Pg**	**00 35 20.1**	**+0.3**
	baz=255							
CHGB					S	**Sg**	**00 35 26.9**	**+0.3**
	baz=255							
TWC	**Suao**	**0.51**	**14**		*i*P	**Pg**	**00 35 20.0**	**+0.1**
	baz=7.0							
TWT	**Tachien**	**0.51**	**286**		*i*P	**Pg**	**00 35 20.7**	**+0.6**
	baz=283							
TWT					*i* S	**Sg**	**00 35 27.8**	**+0.8**
	baz=283							
EGFH	**Guangfu**	**0.52**	**211**	*e*P		**Pg**	**00 35 20.5**	**+0.3**
	baz=223							
NDS	**Dongshan**	**0.52**	**360**		*i*P	**Pg**	**00 35 20.4**	**+0.2**
	baz=358							
NDS					S	**Sg**	**00 35 27.4**	**+0.4**
	baz=358							
NDT	**Datong Townshi**	**0.52**	**339**		*i*P	**Pg**	**00 35 20.6**	**+0.4**
	baz=338							
NDT					S	**Sg**	**00 35 27.9**	**+0.7**
	baz=338							
OWD	**Renai**	**0.52**	**252**	P		**Pg**	**00 35 20.4**	**+0.1**
	baz=254							
TDCB	**Techi**	**0.53**	**285**		*i*P	**Pg**	**00 35 20.8**	**+0.4**
	baz=284							
TDCB					S	**Sg**	**00 35 27.6**	**+0.2**
	baz=284							
ENTT	**Nioudou**	**0.54**	**345**		*i*P	**Pg**	**00 35 20.9**	**+0.3**
	baz=344							
ENTT					S	**Sg**	**00 35 27.9**	**+0.1**
	baz=344							
EOS4	**EOS4**	**0.55**	**89**	*e*P		**Pb**	**00 35 22.4**	**+0.9**
	baz=84							
WUSB	**Renai**	**0.56**	**258**		*i*P	**Pg**	**00 35 21.4**	**+0.3**
	baz=259							
EOS3	**EOS3**	**0.57**	**72**	*e*P		**Pn**	**00 35 24.0**	**-0.2**
	baz=51							
TWE	**Neicheng**	**0.61**	**356**		*i*P	**Pg**	**00 35 22.1**	**+0.2**
	baz=356							
TWE					S	**Sg**	**00 35 30.7**	**+0.9**
	baz=356							
YHNB	**Yeheng**	**0.64**	**331**			**Pg**	**00 35 22.7**	**+0.3**
YHNB						**Sg**	**00 35 30.9**	**+0.1**
YHNB	**Yeheng**	**0.64**	**331**	P		**Pb**	**00 35 23.0**	**-0.3**
YHNB	**Yeheng**	**0.64**	**331**		*i*P	**Pg**	**00 35 22.8**	**+0.3**
	baz=330							
YHNB					S	**Sg**	**00 35 30.7**	**-0.1**
	baz=330							
VWDT	**VWDT**	**0.64**	**236**		P	**Pg**	**00 35 22.6**	**+0.1**
	baz=236							
VWDT					*e*S	**Sb**	**00 35 32.7**	**+0.5**
	baz=236							
ILA	**Ilan**	**0.65**	**2**	*e*P		**Pg**	**00 35 23.2**	**+0.5**
	baz=1.0							
NSK	**Sanguang**	**0.65**	**330**		*i*P	**Pg**	**00 35 22.9**	**+0.3**
	baz=329							
NSK					*i* S	**Sg**	**00 35 31.2**	**-0.1**
	baz=329							
FUSB	**Fushanzhiwuyua**	**0.65**	**350**		*i*P	**Pg**	**00 35 23.1**	**+0.3**
	baz=348							
FUSB					S	**Sg**	**00 35 31.2**	**-0.2**
	baz=348							
HGSD	**Ruisui**	**0.68**	**204**		P	**Pb**	**00 35 24.0**	**0.0**
	baz=220							
HGSD					*e*S	**Sn**	**00 35 35.5**	**-0.8**
	baz=220							
NWLT	**Wulai**	**0.69**	**343**		*i*P	**Pg**	**00 35 23.7**	**+0.3**
	baz=329							
NWLT					*e*S	**Sg**	**00 35 32.6**	**+0.1**
	baz=329							
WPL	**Puli Township**	**0.70**	**262**	P		**Pb**	**00 35 24.1**	**-0.4**
	baz=262							
EHY	**Hungye**	**0.71**	**211**	P		**Pg**	**00 35 23.7**	**0.0**
	baz=214							
WHP	**Taichung City**	**0.72**	**283**	P		**Pb**	**00 35 24.8**	**0.0**
	baz=282							
WHP					S	**Sb**	**00 35 34.5**	**-0.3**
	baz=282							
DPDB	**Guoxing**	**0.73**	**264**	P		**Pb**	**00 35 24.5**	**-0.3**
	baz=255							
DPDB					*e*S	**Sb**	**00 35 35.1**	**+0.2**
	baz=255							
WCS	**Beigang Elemen**	**0.74**	**266**	*e*P		**Pb**	**00 35 24.7**	**-0.3**
	baz=266							
NFF	**Wufeng Townshi**	**0.75**	**313**	P		**Pb**	**00 35 25.1**	**-0.2**
	baz=312							
SSLB	**Suanglung**	**0.77**	**245**			**Pg**	**00 35 24.8**	**-0.2**
SSLB						**Sg**	**00 35 34.5**	**-0.6**
SSLB	**Suanglung**	**0.77**	**245**	P		**Pg**	**00 35 25.2**	**+0.2**
SSLB	**Suanglung**	**0.77**	**245**		*i*P	**Pg**	**00 35 25.1**	**+0.1**
	baz=255							
SSLB					S	**Sg**	**00 35 35.2**	**+0.1**
	baz=255							
SMLT	**Sun Moon Lake**	**0.78**	**253**		*i*P	**Pb**	**00 35 25.7**	**-0.1**
	baz=253							
SMLT					S	**Sg**	**00 35 35.6**	**+0.1**
	baz=253							
TYC	**Yuchr**	**0.81**	**255**	P		**Pb**	**00 35 26.1**	**-0.2**
	baz=255							
TYC					*e*S	**Sb**	**00 35 37.9**	**+0.5**
	baz=255							
YULB	**Yu-li**	**0.81**	**208**			**Pg**	**00 35 25.3**	**-0.5**
YULB						**Sg**	**00 35 37.4**	**0.0**
YULB	**Yu-li**	**0.81**	**208**	P		**Pb**	**00 35 26.2**	**-0.1**
YULB	**Yu-li**	**0.81**	**208**	*e*P		**Pg**	**00 35 25.9**	**+0.1**
	baz=222							
YULB					*e*S	**Sb**	**00 35 38.6**	**+1.2**
	baz=222							
ECBN	**Changbin**	**0.83**	**197**	*e*P		**Pg**	**00 35 26.2**	**+0.1**
	baz=187							
ECBN					*e*S	**Sn**	**00 35 39.5**	**-0.6**
	baz=187							
LIOB	**Emei**	**0.83**	**310**	P		**Pb**	**00 35 26.9**	**+0.3**
	baz=309							
LIOB					S	**Sb**	**00 35 38.0**	**+0.2**
	baz=309							
NSTT	**Nanjuang**	**0.83**	**308**		P	**Pb**	**00 35 26.6**	**0.0**
	baz=308							
NSTT					S	**Sg**	**00 35 36.6**	**-0.4**
	baz=308							
NJD	**Zhudong**	**0.84**	**317**	*e*P		**Pb**	**00 35 27.6**	**+0.8**
	baz=316							
EYUL	**Yuli**	**0.85**	**206**	*e*P		**Pn**	**00 35 27.7**	**-0.4**
	baz=220							
TWF1	**Yuli**	**0.85**	**207**	*e*P		**Pg**	**00 35 26.0**	**-0.5**
	baz=221							
TWF1					*e*S	**Sb**	**00 35 38.6**	**+0.2**
	baz=221							
TIPB	**Shuangxi**	**0.86**	**7**		P	**Pg**	**00 35 26.8**	**+0.1**
	baz=354							
NHDH	**Xindian Distri**	**0.86**	**348**	*e*P		**Pg**	**00 35 27.0**	**+0.3**
	baz=345							
TWA	**Mucha**	**0.87**	**352**		*i*P	**Pb**	**00 35 27.4**	**+0.2**
	baz=351							
TWA					S	**Sg**	**00 35 38.1**	**-0.2**
	baz=351							
TATO	**Taipei**	**0.88**	**346**			**Pg**	**00 35 27.4**	**+0.3**
TATO						**Sg**	**00 35 38.6**	**0.0**
TATO	**Taipei**	**0.88**	**346**	P		**Pb**	**00 35 27.7**	**+0.2**
TATO	**Taipei**	**0.88**	**346**	P		**Pg**	**00 35 27.3**	**+0.3**
	baz=345							
TATO					*e*S	**Sg**	**00 35 37.1**	**-1.5**
	baz=345							
TWQ1	**Liyutan**	**0.89**	**285**	*e*P		**Pn**	**00 35 28.9**	**+0.2**
	baz=285							
WHYT	**Xinyi Township**	**0.89**	**242**	*e*P		**Pb**	**00 35 28.3**	**+0.6**
	baz=252							
WHYT					*e*S	**Sb**	**00 35 40.8**	**+1.1**
	baz=252							
HSN1	**Hsinchu**	**0.92**	**316**	*e*P		**Pn**	**00 35 29.1**	**+0.1**
	baz=315							
NSY	**Sanyi**	**0.92**	**289**	*e*P		**Pn**	**00 35 29.4**	**+0.3**
	baz=288							
NSY					*e*S	**Sn**	**00 35 43.1**	**+0.7**
	baz=288							
TWB1	**Santiao Chiao**	**0.92**	**15**	*e*P		**Pg**	**00 35 27.7**	**-0.2**
	baz=4.0							
WWF	**Wufeng**	**0.94**	**266**	*e*P		**Pn**	**00 35 29.9**	**+0.7**
	baz=260							
WWF					*e*S	**Sn**	**00 35 44.1**	**+1.4**
	baz=260							
TAP	**Taipei**	**0.94**	**348**	P		**Pb**	**00 35 29.0**	**+0.5**
	baz=337							
TAP					S	**Sg**	**00 35 40.5**	**0.0**
	baz=337							
NMLH	**Miaoli**	**0.94**	**297**	*e*P		**Pn**	**00 35 30.1**	**+0.7**
	baz=295							
SBCB	**Hsinchu**	**0.95**	**315**	P		**Pn**	**00 35 29.9**	**+0.4**
	baz=315							
SBCB					S	**Sb**	**00 35 41.5**	**+0.2**
	baz=315							
WJS	**Zhushan**	**0.95**	**252**	*e*P		**Pn**	**00 35 29.3**	**-0.2**
	baz=253							
WJS					*e*S	**Sn**	**00 35 43.0**	**-0.1**
	baz=253							
TCU	**Taichung**	**0.95**	**272**	P		**Pn**	**00 35 29.7**	**+0.2**
	baz=264							
TCU					*e*S	**Sn**	**00 35 44.0**	**+0.9**
	baz=264							
NWF	**Wu-fen Shan**	**0.95**	**3**	P		**Pg**	**00 35 28.7**	**+0.2**
	baz=352							
NWF					*e*S	**Sg**	**00 35 41.0**	**+0.1**
	baz=352							
WFSB	**Wu-fen Shan**	**0.95**	**3**		*i*P	**Pb**	**00 35 28.8**	**+0.1**
	baz=353							
WFSB					*i* S	**Sg**	**00 35 40.3**	**-0.6**
	baz=353							
NJN	**Zhunan**	**0.96**	**306**	*e*P		**Pn**	**00 35 29.7**	**+0.2**
	baz=305							
NTY	**Taoyuan**	**0.96**	**337**	*e*P		**Pb**	**00 35 29.4**	**+0.6**
	baz=328							
CHKH	**Chenggong**	**0.96**	**198**	*e*P		**Pg**	**00 35 27.6**	**-1.0**
	baz=192							
HSN	**Hsinchu**	**0.97**	**315**	*e*P		**Pn**	**00 35 30.1**	**+0.4**
	baz=317							
HSN					*e*S	**Sn**	**00 35 43.4**	**-0.1**
	baz=317							
WNT1	**Nantou City**	**0.97**	**258**	*e*P		**Pn**	**00 35 29.9**	**+0.1**
	baz=253							
WNT1					*e*S	**Sn**	**00 35 44.4**	**+0.8**
	baz=253							
WNT	**Mingjian**	**0.97**	**256**		P	**Pn**	**00 35 30.0**	**+0.2**
	baz=252							
WNT					*e*S	**Sn**	**00 35 44.7**	**+1.0**
	baz=252							
NCUH	**Zhongli**	**0.98**	**330**	*e*P		**Pn**	**00 35 30.1**	**+0.2**
	baz=327							
NCU	**National Centr**	**0.98**	**331**	P		**Pn**	**00 35 30.1**	**+0.2**
	baz=336							
NCU					*e*S	**Sn**	**00 35 45.2**	**+1.4**
	baz=336							
SXI1	**Grass Mountain**	**0.99**	**8**		*i*P	**Pg**	**00 35 29.3**	**+0.2**
	baz=352							
SXI1					*e*S	**Sg**	**00 35 42.4**	**+0.5**
	baz=352							
FULB	**Fuli**	**0.99**	**203**	*e*P		**Pg**	**00 35 29.1**	**-0.1**
	baz=223							
WDJ	**Dajia District**	**1.01**	**284**	*e*P		**Pn**	**00 35 31.1**	**+0.8**
	baz=293							
WDJ					*e*S	**Sn**	**00 35 45.5**	**+0.9**
	baz=293							
TWS1	**Kuangyinshan**	**1.02**	**345**	P		**Pn**	**00 35 30.8**	**+0.4**
	baz=343							
TWS1					S	**Sn**	**00 35 44.8**	**0.0**
	baz=343							
ALS	**Alishan**	**1.03**	**234**		*i*P	**Pb**	**00 35 30.3**	**+0.1**
	baz=236							
ALS					S	**Sb**	**00 35 44.8**	**+1.0**
	baz=236							
TNOU	**National Taiwa**	**1.03**	**3**	*e*P		**Pg**	**00 35 29.6**	**-0.3**
	baz=359							
YM01	**YM01**	**1.04**	**353**	P		**Pn**	**00 35 30.5**	**+0.3**
	baz=350							
YM01					S	**Sg**	**00 35 43.9**	**+0.3**
	baz=350							
WYL	**Yuanlin Townsh**	**1.05**	**262**	*e*P		**Pn**	**00 35 31.0**	**+0.2**
	baz=264							
CHKT	**Chengkung**	**1.06**	**198**	*e*P		**Pg**	**00 35 29.5**	**-1.0**
	baz=191							
CHKT					*e*S	**Sn**	**00 35 45.5**	**-0.2**
	baz=191							
WCHH	**Zhanghua**	**1.06**	**268**	*e*P		**Pn**	**00 35 31.7**	**+0.8**
	baz=270							
EHD	**Haiduan**	**1.07**	**206**	*e*P		**Pg**	**00 35 30.0**	**-0.7**
	baz=224							
NTST	**Danshui**	**1.07**	**347**	*e*P		**Pn**	**00 35 31.3**	**+0.1**
	baz=343							
NHW	**Xinwu Township**	**1.08**	**326**	*e*P		**Pn**	**00 35 31.5**	**+0.3**
	baz=324							
NHW					*e*S	**Sn**	**00 35 46.6**	**+0.4**
	baz=324							
ANP	**Anpu**	**1.08**	**350**	*e*P		**Pb**	**00 35 31.2**	**+0.3**
	baz=347							
CHN5	**Tsauling**	**1.08**	**242**		*i*P	**Pn**	**00 35 31.8**	**+0.5**
	baz=243							
CHN5					*i* S	**Sn**	**00 35 47.6**	**+1.2**
	baz=243							
NWRT	**Kuosheng**	**1.08**	**357**	*e*P		**Pb**	**00 35 31.3**	**+0.3**
	baz=353							
ECS	**Chishang**	**1.11**	**204**	*e*P		**Pg**	**00 35 31.5**	**0.0**
	baz=222							
ELDTW	**Lidau**	**1.12**	**215**	*e*P		**Pg**	**00 35 31.0**	**-0.7**
	baz=210							
WGK	**Gukeng**	**1.14**	**248**	*e*P		**Pn**	**00 35 32.8**	**+0.7**
	baz=251							
WDLH	**Douliu**	**1.16**	**249**	*e*P		**Pn**	**00 35 33.1**	**+0.7**
	baz=252							
TWY	**Chenhua**	**1.16**	**355**	*e*P		**Pn**	**00 35 33.0**	**+0.7**
	baz=337							
JYNG	**Yonaguni jima**	**1.17**	**73**	P		**Pg**	**00 35 32.8**	**+0.3**
JYNG						*e*S	**Sn**	**00 35 48.7**	**+0.2**
WCKO	**Fanlu**	**1.22**	**237**	*e*P		**Pg**	**00 35 34.5**	**+1.0**
	baz=242							
YOJ	**Yonaguni jima**	**1.23**	**73**			**Pn**	**00 35 33.6**	**+0.3**
YOJ						**Sn**	**00 35 50.8**	**+0.9**
YOJ	**Yonaguni jima**	**1.23**	**73**	P		**Pb**	**00 35 33.9**	**+0.5**
YOJ	**Yonaguni jima**	**1.23**	**73**	*e*P		**Pn**	**00 35 33.6**	**+0.3**
	baz=79							
YOJ	**Yonaguni jima**	**1.23**	**73**	*e*P		**Pn**	**00 35 33.6**	**+0.3**
YOJ						*e*S	**Sn**	**00 35 50.9**	**+0.9**
WRL	**Guolierlin Hig**	**1.24**	**260**	*e*P		**Pg**	**00 35 35.0**	**+1.0**
	baz=261							
WRL					*e*S	**Sn**	**00 35 53.4**	**+3.1**
	baz=261							
RLNB	**Erlin**	**1.26**	**260**	P		**Pg**	**00 35 34.8**	**+0.5**
	baz=261							
RLNB					*e*S	**Sn**	**00 35 53.8**	**+3.0**
	baz=261							
CHN2	**Minshiung**	**1.28**	**243**	*e*P		**Pg**	**00 35 35.8**	**+1.1**
	baz=245							
CHN2					*e*S	**Sn**	**00 35 53.9**	**+2.8**
	baz=245							
STYH	**Taoyuan**	**1.28**	**223**	*e*P		**Pn**	**00 35 33.7**	**-0.2**
	baz=229							
CHN4	**Tsaushan**	**1.28**	**234**	*i* P		**Pg**	**00 35 35.3**	**+0.6**
	baz=224							
CHN4					*i* S	**Sn**	**00 35 53.8**	**+2.6**
	baz=224							
TPUB	**Ta-pu**	**1.28**	**231**			**Pn**	**00 35 33.2**	**-0.9**
TPUB						Sn	**Sn**	**00 35 53.0**	**+1.6**
TPUB	**Ta-pu**	**1.28**	**231**	P		**Pg**	**00 35 35.2**	**+0.4**
TPUB	**Ta-pu**	**1.28**	**231**	*e*P		**Pg**	**00 35 34.6**	**-0.2**
	baz=234							
TPUB					*e*S	**Sn**	**00 35 53.8**	**+2.4**
	baz=234							
WTK	**Tuku**	**1.29**	**251**	*e*P		**Pg**	**00 35 35.7**	**+0.9**
	baz=254							
STYT	**Tauyuan**	**1.29**	**223**	P		**Pn**	**00 35 34.2**	**0.0**
	baz=226							
STYT					*e*S	**Sg**	**00 35 51.7**	**-0.1**
	baz=226							
LONT	**Longtian**	**1.32**	**204**	*e*P		**Pn**	**00 35 32.8**	**-1.8**
	baz=211							
WTP	**Ta-pu**	**1.33**	**230**	P		**Pg**	**00 35 35.6**	**0.0**
	baz=233							
WTP					S	**Sn**	**00 35 54.4**	**+1.8**
	baz=233							
WTCT	**Ta-ch'eng**	**1.34**	**260**	*e*P		**Pg**	**00 35 35.6**	**-0.2**
	baz=262							
TWK	**Hsinying**	**1.41**	**233**	*e*P		**Pg**	**00 35 37.1**	**0.0**
	baz=237							
TWK					S	**Sg**	**00 35 56.9**	**+1.4**
	baz=237							
TWGBT	**Beinan**	**1.42**	**205**	*e*P		**Pn**	**00 35 33.9**	**-2.0**
	baz=211							
TWG	**Pinlang**	**1.42**	**205**			**Pn**	**00 35 33.3**	**-2.6**
TWG	**Pinlang**	**1.42**	**205**	*e*P		**Pn**	**00 35 33.6**	**-2.2**
	baz=211							
SNST	**Tainan City**	**1.43**	**232**	*e*P		**Pg**	**00 35 37.4**	**-0.1**
	baz=238							
CHN1	**Nanshi**	**1.43**	**230**	P		**Pg**	**00 35 37.6**	**0.0**
	baz=234							
CHN1			

baz=233
TSMG Majia 1.71 215 *e*P Pb 00 35 41.7 0.0
baz=235
TWM1 Shoushan 1.75 223 *e*P Pb 00 35 43.0 +0.7
baz=230
MASBT Mashibuluo 1.80 214 *e*P Pn 00 35 41.4 +0.3
baz=213
IRIF Iriomote-Funau 1.85 83 *e*P Pn 00 35 43.0 +1.2
IRIF *e*S Sn 00 36 06.5 +1.2
EAST Anshuo 1.90 205 *e*P Pn 00 35 42.8 +0.3
baz=199
HATJ Hateruma jima 1.91 91 P Pn 00 35 43.9 +1.3
HATJ S Sn 00 36 08.2 +1.5
TAWH Dawu Township 1.92 204 *e*P Pn 00 35 44.0 +1.2
baz=211
SCZT Fangliau 2.01 210 *e*P Pb 00 35 46.0 -0.7
baz=206
PNG Penghu 2.05 255 *e*P Pn 00 35 45.2 +0.6
baz=258
PHUB P'eng-hu 2.06 254 *e*P Pn 00 35 44.8 +0.2
baz=256
PHUB S Sb 00 36 12.1 -1.0
baz=256
SLIU Shizi 2.07 204 *e*P Pn 00 35 46.1 +1.3
baz=203
WDGT Dungji 2.07 246 *e*P Pn 00 35 45.9 +1.1
baz=250
JKRS Kuro-shima 2.10 86 *e*P Pn 00 35 46.5 +1.3
JKRS *e*S Sn 00 36 13.4 +2.1
LYUB Lan-yu 2.11 183 *e*P Pn 00 35 42.0 -3.4
baz=192
JIJ Ishigaki jima 2.23 83 P Pn 00 35 47.0 -0.1
JIJ *e*S Sn 00 36 14.9 +0.3
VWUC VWUC 2.24 293 *e*P Pn 00 35 46.6 -0.6
baz=293
VCHM Qimei 2.28 247 *e*P Pn 00 35 48.3 +0.5
baz=238
TWKBT Hengchun 2.32 201 *e*P Pn 00 35 48.4 +0.1
baz=195
JISG Ishigakijimahi 2.41 78 *e*P Pn 00 35 49.6 +0.1
JISG S Sn 00 36 19.6 +0.4
PTMZ Houxiangcun 2.54 292 *e*P Pn 00 35 50.2 -1.1
baz=291
MATB Ma-tsu 2.59 322 *e*P Pn 00 35 51.2 -0.7
baz=319
JTJ Tarama 2.77 78 P Pn 00 35 55.8 +1.3
JTJ *e*S Sn 00 36 29.6 +1.6
LYJJ Jianjiangzhen 3.00 324 *e*P Pn 00 35 56.7 -1.0
baz=321
KNM Kinmen 3.01 276 *e*P Pn 00 35 59.7 +1.9
baz=277
KNMB Chin-men Tao 3.06 277 Pn 00 35 58.4 -0.1
KNMB Chin-men Tao 3.06 277 *e*P Pn 00 35 58.3 -0.1
baz=278
XPSS Dashiqiu 3.12 334 *e*P Pn 00 35 58.9 -0.5
baz=330
MHZQ Yeshan 3.14 310 *e*P Pn 00 35 59.9 +0.3
baz=308
AXDP Jialang 3.50 284 *e*P Pn 00 36 04.5 0.0
baz=284
ZPLA Ao Xicun 3.63 268 *e*P Pn 00 36 06.7 +0.3
baz=269
DSXP Dongshan 3.95 265 *e*P Pn 00 36 10.7 0.0
baz=266
SXFK Yanhouchang 4.33 303 *e*P Pn 00 36 16.0 0.0
baz=302
JOW Kunigami 6.51 64 Pn Pn 00 36 44.7 -1.3
KSRS Korea Array 14.32 20 P P 00 38 40.6 +0.6
0.6nm,0.3s,baz=203,slow=11,SNR=14
5.3nm,0.7s
KLR Kul'dur 26.28 15 LR LR 00 53 31.4
comp=Z,46nm,18.3s,baz=196,slow=41
SONM Songino Array 26.62 337 P P 00 40 49.5 +0.7
0.8nm,0.7s,baz=145,slow=9.5,SNR=4.4
0.8nm,0.7s
MK31 Makanchi Array 38.73 316 P P 00 42 34.5 +0.2
MKAR Makanchi Array 38.73 316 P P 00 42 34.6 +0.2
MKAR Makanchi Array 38.73 316 P P 00 42 33.8 -0.6
1.4nm,0.6s,baz=104,slow=10,SNR=22
1.4nm,0.6s
MAKZ Makanchi 38.93 316 P P 00 42 36.3 +0.3
ZALV Zalesovo Beam 40.57 327 P P 00 42 49.7 +0.2
ZALV Zalesovo Beam 40.57 327 P P 00 42 48.9 -0.6
1.3nm,0.7s,baz=101,slow=7.5,SNR=5.8
1.3nm,0.7s
H11N1 WAKE ISLAND Hy 42.00 87 T T 01 28 17.6
baz=283
H11N2 WAKE ISLAND Hy 42.00 87 T T 01 28 15.0
baz=283,slow=74,SNR=5.9
H11N3 WAKE ISLAND Hy 42.02 87 T T 01 28 15.0
baz=283,slow=74,SNR=5.2
KURBB Kurchatov Arra 42.48 320 P P 00 43 03.5 -1.7
1.0nm,0.3s,baz=108,slow=8.3,SNR=1.6
1.0nm,0.3s
WB0 Warramunga Arr 45.33 163 P P 00 43 27.8 -0.7
WRA Warramunga Arr 45.48 163 P P 00 43 30.1 +0.4
WRA Warramunga Arr 45.48 163 P P 00 43 27.3 -2.4
0.3nm,0.4s,baz=344,slow=8.7,SNR=2.5
0.3nm,0.4s
WR0 Warramunga Arr 45.55 163 P P 00 43 29.8 -0.4
WR0 IAmb IAmb 00 43 36.7
comp=Z,2.9nm,0.9s
BVAR Borovoye Array 48.04 321 P P 00 43 49.2 -0.2
comp=Z,0.7nm,0.6s,baz=112,slow=9.6,SNR=8.3
BVAR PcP PcP 00 45 16.3 -0.9
comp=Z,0.6nm,0.8s,baz=104,slow=4.8,SNR=1.8
comp=Z,0.7nm,0.6s
ASAR Alice Springs 48.95 165 P P 00 43 55.8 -0.9
comp=Z,0.2nm,0.3s,baz=354,slow=8.7,SNR=2.4
comp=Z,0.2nm,0.3s
M14K Bethel 62.61 33 P P 00 45 33.1 -1.2
C18K Utukok River 63.08 24 P P 00 45 36.3 -1.0
M16K Timber Creek 64.07 32 P P 00 45 44.0 0.0
H18K Honhosa River 64.16 28 P P 00 45 44.8 +0.3
H18K IAmb IAmb 00 46 03.2
comp=Z,2.0nm,1.1s
D19K Kuna River 64.20 24 P P 00 45 44.7 0.0
D19K IAmb IAmb 00 45 46.9
comp=Z,1.9nm,0.8s
K17K Iditarod 64.29 30 P P 00 45 45.8 +0.4
E19K Redstone River 64.55 25 P P 00 45 47.7 +0.7
E19K IAmb IAmb 00 45 51.2
comp=Z,1.7nm,0.9s
H19K Roundabout Mou 64.95 27 P P 00 45 50.0 +0.5
H19K IAmb IAmb 00 46 05.6
comp=Z,3.2nm,1.1s
L18K Granite Mounta 65.07 31 P P 00 45 50.9 +0.5
L18K IAmb IAmb 00 46 04.1
comp=Z,3.5nm,1.1s
TTA Tatalina 65.32 30 P P 00 45 52.2 0.0
J19K Poorman 65.41 29 P P 00 45 52.9 +0.3
B21K Ikpikpuk River 65.43 23 P P 00 45 52.7 +0.1
B21K IAmb IAmb 00 45 54.7
comp=Z,2.3nm,0.8s
F24K Squaw Lake 68.12 24 P P 00 46 09.9 0.0
F24K IAmb IAmb 00 46 17.4
comp=Z,2.2nm,0.7s
MCK McKinley 68.38 29 P P 00 46 11.4 -0.2
MCK IAmb IAmb 00 46 12.2
comp=Z,0.7nm,0.6s
H24K Noodor Dome 68.43 26 P P 00 46 12.3 +0.4
H24K IAmb IAmb 00 46 24.4
comp=Z,1.6nm,1.1s
MDM Murphy Dome 68.45 27 P P 00 46 12.1 +0.1
RND Reindeer 68.47 29 P P 00 46 11.2 -1.0
E25K Arctic Village 68.87 24 P P 00 46 14.9 +0.4
ILAR Eielson Array 69.05 27 P P 00 46 14.2 -1.5
comp=Z,0.2nm,0.5s,baz=281,slow=4.9,SNR=4.8
comp=Z,0.2nm,0.5s
DHY Denali Highway 69.20 29 P P 00 46 16.3 -0.5
BMAR Burnt Mountain 69.39 24 P P 00 46 18.4 +0.5
SCM Sheep Creek Mo 69.49 30 P P 00 46 18.3 -0.2
ARCES ARCESS Array B 69.78 338 P P 00 46 21.2 +1.0
M24K Tolsona, Glenn 69.96 30 P P 00 46 21.4 0.0
KLU Klutina 70.22 31 P P 00 46 22.6 -0.5
KLU IAmb IAmb 00 46 27.1
comp=Z,1.8nm,0.7s
I26K Coal Creek Min 70.47 26 P P 00 46 23.9 -0.5
I26K IAmb IAmb 00 46 27.6
comp=Z,0.8nm,0.6s
J26L Joseph Creek 70.51 27 P P 00 46 23.4 -1.3
E28M Babbage River 70.92 23 P P 00 46 27.4 +0.3
E28M IAmb IAmb 00 46 27.7
comp=Z,0.9nm,0.6s
F28M Old Crow 71.09 24 P P 00 46 28.3 +0.1
F28M IAmb IAmb 00 46 29.1
comp=Z,2.5nm,1.0s
GLB Gilahina Butte 71.21 30 P P 00 46 28.8 -0.3
GLB IAmb IAmb 00 46 33.0
comp=Z,3.8nm,1.1s
K27K Chicken 71.26 28 P P 00 46 29.3 +0.1
M26K Nabesna, AK 71.32 29 P P 00 46 29.6 -0.1
M26K IAmb IAmb 00 46 31.9
comp=Z,2.5nm,1.0s
EGAK Eagle 71.43 27 P P 00 46 29.8 -0.4
EGAK IAmb IAmb 00 46 35.8
comp=Z,2.1nm,1.1s
VRDI Verde Repeater 71.44 31 P P 00 46 30.5 -0.1
E29M Blow River 71.56 23 P P 00 46 31.6 +0.6
E29M IAmb IAmb 00 46 44.2
comp=Z,1.5nm,1.1s
I28M Miner Creek 71.72 26 P P 00 46 32.3 +0.1
I28M IAmb IAmb 00 46 36.9
comp=Z,2.0nm,1.1s
FINES FINESS Array B 71.75 330 P P 00 46 32.0 -0.2
FINES FINESS Array B 71.75 330 P P 00 46 31.5 -0.7
comp=Z,3.5nm,1.0s,baz=46,slow=4.0,SNR=6.9
comp=Z,3.5nm,1.0s
M27K Edge Creek, AK 71.83 29 P P 00 46 32.9 0.0
M27K IAmb IAmb 00 46 49.4
comp=Z,2.6nm,1.1s
BARN Barnard Glacie 72.32 30 P P 00 46 36.0 +0.1
DAWY Dawson 72.38 27 P P 00 46 36.0 -0.1
CTGM Chitina Glacie 72.50 31 P P 00 46 36.2 -0.7
G30M tAoh Zrail Nji 72.64 24 P P 00 46 36.3 -1.2
G30M IAmb IAmb 00 46 36.8
comp=Z,1.4nm,0.8s
INK Inuvik 73.11 22 P P 00 46 38.5 -1.7
INK IAmb IAmb 00 46 40.5
comp=Z,1.4nm,0.8s
I30M Mount Dempster 73.20 26 P P 00 46 40.8 -0.2
L29M L29M 73.23 28 P P 00 46 41.6 +0.5
L29M IAmb IAmb 00 46 59.3
comp=Z,1.9nm,1.1s
K29M Barlow Dome 73.23 27 P P 00 46 41.2 0.0
M29M Somme Creek 73.31 29 P P 00 46 42.4 +0.7
M29M IAmb IAmb 00 46 47.6
comp=Z,2.4nm,0.9s
F31M Tsiigehtchic 73.36 23 P P 00 46 40.5 -1.2
F31M IAmb IAmb 00 46 42.4
comp=Z,3.5nm,1.1s
G31M Satah River 73.37 24 P P 00 46 40.6 -1.2
M30M Minto, Yukon 73.99 28 P P 00 46 46.1 +0.6
P29M Windy Craggy 74.64 31 P P 00 46 49.9 +0.5
P29M IAmb IAmb 00 46 54.4
comp=Z,5.1nm,1.1s
WHY Whitehorse 75.56 30 P P 00 46 54.8 0.0
WHY IAmb IAmb 00 47 05.6
comp=Z,2.8nm,1.1s
YKA Yellowknife Ar 82.84 23 P P 00 47 33.3 -1.1
comp=Z,0.3nm,0.5s,baz=310,slow=4.9,SNR=9.2
comp=Z,0.3nm,0.5s

*NEIC **06** 00:49:02.7±1.4, 9.07N±0.10×126.2E±0.3, h55km±10km, mb4.3/16, Error ellipse: s-maj=37.3km s-min=13.9km az=89.0*
*IDC **06** 00:49:04.9±2.3, 9.01N×126.07E, h87km±22km, mb3.7/15, mbtmp4.0/15, MS2.9/4, Error ellipse: s-maj=31.5km s-min=12.6km az=71.0*
ISC 06 00:49:02.9±0.5, 9.12N±0.06×126.2E±0.2, h66km, n43, σ0s87/40, mb4.2/23, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.13**	**197**	P	**Pn**	**00 49 37.6**	**+1.4**
	133nm,0.3s,baz=34,slow=15,SNR=1.4						
DAV				S	**Sn**	**00 50 01.7**	**+0.1**
	310nm,0.3s,baz=212,slow=22,SNR=9.7						
MTN	**Manton Dam**	**22.36**	**167**	P	**P**	**00 53 55.4**	**-0.2**
MTN				IAmb	IAmb	00 53 57.1	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**24.76**	**174**	P	**P**	**00 54 18.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**27.05**	**181**	P	**P**	**00 54 39.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**28.03**	**292**	P	**P**	**00 54 48.4**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=110,slow=7.8,SNR=1.8						
CMAR				LR	LR	01 05 36.2	
	comp=Z,18nm,19.7s,baz=160,slow=36						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**28.26**	**3**	LR	LR	01 07 03.4	
	comp=Z,11nm,20.2s,baz=350,slow=38						
WB0	**Warramunga Arr**	**29.81**	**164**	P	**P**	**00 55 02.8**	**-1.1**
WRA	**Warramunga Arr**	**29.96**	**165**	P	**P**	**00 55 04.8**	**-0.4**
WRA	**Warramunga Arr**	**29.96**	**165**	P	**P**	**00 55 03.0**	**-2.2**
	comp=Z,0.9nm,0.6s,baz=341,slow=8.0,SNR=8.0						
	comp=Z,0.9nm,0.6s						
WB2	**Warramunga Arr**	**29.97**	**165**	P	**P**	**00 55 04.5**	**-0.7**
WB2				IAmb	IAmb	00 55 08.3	
	comp=Z,6.7nm,1.2s						
WR0	**Warramunga Arr**	**30.03**	**164**	P	**P**	**00 55 04.9**	**-1.0**
WR0				IAmb	IAmb	00 55 07.1	
	comp=Z,4.4nm,0.9s						
ASAR	**Alice Springs**	**33.44**	**167**	P	**P**	**00 55 34.5**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=12,slow=9.9,SNR=11						
	comp=Z,0.5nm,0.3s						
USA0B	**Ussuriysk Arra**	**35.31**	**7**	P	**P**	**00 55 53.2**	**+1.6**
USRK	**Ussuriysk Ar.**	**35.31**	**7**	P	**P**	**00 55 53.5**	**+1.9**
USRK	**Ussuriysk Ar.**	**35.31**	**7**	P	**P**	**00 55 53.8**	**+2.1**
	comp=Z,8.1nm,0.7s,baz=179,slow=6.6,SNR=13						
USRK				LR	LR	01 10 50.1	
	comp=Z,29nm,20.2s,baz=244,slow=37						
	comp=Z,8.1nm,0.7s						
ASAJ	**Asahikawa**	**37.67**	**19**	LR	LR	01 10 14.1	
	comp=Z,27nm,20.9s,baz=110,slow=34						
MORW	**Morawa**	**39.21**	**194**	P	**P**	**00 56 24.9**	**+0.1**
FORT	**Forrest**	**39.70**	**178**	P	**P**	**00 56 28.9**	**0.0**
H11S3	**WAKE ISLAND Hy**	**40.31**	**72**	T	T	01 39 34.7	
	baz=262,slow=75,SNR=46						
H11S1	**WAKE ISLAND Hy**	**40.33**	**72**	T	T	01 39 33.3	
	baz=262,slow=75,SNR=112						
H11S2	**WAKE ISLAND Hy**	**40.33**	**72**	T	T	01 39 35.2	
	baz=262,slow=75,SNR=108						
SONM	**Songino Array**	**42.08**	**340**	P	**P**	**00 56 47.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=111,slow=7.9,SNR=2.9						
	comp=Z,0.2nm,0.3s						
BBOO	**Buckleboo**	**42.73**	**168**	P	**P**	**00 56 53.7**	**0.0**
BBOO				IAmb	IAmb	00 56 54.7	
	comp=Z,7.9nm,0.8s						
STKA	**Stephens Creek**	**43.34**	**161**	P	**P**	**00 56 58.4**	**-0.3**
STKA	**Stephens Creek**	**43.34**	**161**	P	**P**	**00 56 58.3**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=321,slow=13,SNR=3.9						
	comp=Z,1.8nm,0.7s						
MK31	**Makanchi Array**	**52.91**	**323**	P	**P**	**00 58 13.1**	**+0.7**
MK31				IAmb	IAmb	00 58 13.7	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**52.91**	**323**	P	**P**	**00 58 12.8**	**+0.5**
MKAR	**Makanchi Array**	**52.91**	**323**	P	**P**	**00 58 12.6**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=121,slow=8.0,SNR=25						
MKAR				PcP	**PcP**	**00 59 20.8**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=110,slow=4.0,SNR=4.9						
	comp=Z,1.8nm,0.7s						
MAKZ	**Makanchi**	**53.10**	**323**	P	**P**	**00 58 13.6**	**-0.2**
MAKZ				IAmb	IAmb	00 58 15.1	
	comp=Z,1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**55.61**	**332**	P	**P**	**00 58 31.4**	**-0.4**
ZALV	**Zalesovo Beam**	**55.61**	**332**	P	**P**	**00 58 30.6**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=139,slow=6.5,SNR=4.9						
	comp=Z,0.8nm,0.6s						
KURK	**Kurchatov**	**56.98**	**326**	P	**P**	**00 58 41.5**	**-0.2**
KURK				IAmb	IAmb	00 58 42.7	
	comp=Z,3.1nm,0.7s						
KURBB	**Kurchatov Arra**	**56.99**	**326**	P	**P**	**00 58 41.0**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=124,slow=6.8,SNR=14						
	comp=Z,1.5nm,0.6s						
KKAR	**Karatay Array**	**59.02**	**315**	P	**P**	**00 58 55.4**	**-0.7**
TIXI	**Tiksi**	**62.50**	**1**	P	**P**	**00 59 19.8**	**+0.6**
TIXI				IAmb	IAmb	00 59 20.6	
	comp=Z,4.8nm,0.7s						
BVAR	**Borovoye Array**	**62.58**	**326**	P	**P**	**00 59 19.5**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=134,slow=6.2,SNR=6.7						
	comp=Z,1.4nm,0.9s						
NRIK	**Noril'sk**	**65.11**	**346**	P	**P**	**00 59 35.8**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=135,slow=3.7,SNR=6.9						
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**80.50**	**26**	P	**P**	**01 01 07.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=248,slow=4.9,SNR=7.6						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**86.87**	**332**	P	**P**	**01 01 39.4**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=72,slow=4.5,SNR=9.9						
	comp=Z,1.6nm,0.7s						
VNDA	**Vanda**	**88.80**	**173**	P	**P**	**01 01 48.6**	**-0.4**
	comp=Z,3.2nm,1.0s,baz=286,slow=8.2,SNR=1.5						
	comp=Z,3.2nm,1.0s						
YKA	**Yellowknife Ar**	**94.83**	**24**	P	**P**	**01 02 17.6**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=295,slow=4.0,SNR=5.8						
	comp=Z,0.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**120.63**	**291**	PKP	**PKPdf**	**01 07 47.8**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=58,slow=2.6,SNR=2.1						
PLCA	**Paso Flores**	**145.17**	**157**	PKPbc	**PKPbc**	**01 08 33.4**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=216,slow=3.8,SNR=8.9						

*TAP **06** 00:57:05.3,24.17N×121.77E,h9km,ML3.5,C*
*ASIES **06** 00:57:05.3,24.17N×121.77E,h9km,ML3.5,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.05; Mθθ-0.78; Mφφ1.03; Mrθ0.10; Mrφ0.65; Mθφ-0.59; Fault plane solution: M₀1.27196×10²¹ NP1: φs152.46000°,δ86.09000°,λ153.57000°. NP2: φs244.40000°,δ63.63000°,λ4.36000°. Principal axes: T Plg21.2380°, Azm105.2490°; N Plg63.2970°, Azm324.6600°; P Plg15.4210°, Azm201.4030°;*
ISC 06 00:57:05.2±1.1, 24.16N±0.01×121.82E±0.03, h5km±8km, n104, σ0s92/171, 5C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.17**	**334**	*e*S	**Sg**	**00 57 12.3**	**+1.4**
	baz=351						
ETL	**Fush Village**	**0.18**	**271**	*e*P	**Pg**	**00 57 08.4**	**-0.4**
	baz=267						
ETL				*e*S	**Sg**	**00 57 11.7**	**+0.5**
	baz=267						
EAHA	**Aohua**	**0.19**	**336**	P	**Pg**	**00 57 09.1**	**+0.1**
	baz=349						
EAHA				S	**Sg**	**00 57 12.0**	**+0.5**
	baz=349						
NACB	**Ninganchiao**	**0.21**	**275**	↑*i*P	**Pg**	**00 57 08.8**	**-0.5**
	baz=273						
NACB				S	**Sg**	**00 57 12.2**	**+0.1**
	baz=273						
TWD	**Chiawan**	**0.22**	**250**	↑*i*P	**Pg**	**00 57 09.2**	**-0.3**
	baz=249						
TWD				S	**Sg**	**00 57 12.3**	**0.0**
	baz=249						
HWA	**Hwalien**	**0.27**	**228**	P	**Pb**	**00 57 12.1**	**-0.4**
	baz=232						
ENA	**Nanau**	**0.28**	**345**	P	**Pg**	**00 57 10.9**	**+0.2**
	baz=355						
ENA				S	**Sg**	**00 57 14.6**	**+0.2**
	baz=355						
EWUT	**Wuta**	**0.29**	**352**	P	**Pg**	**00 57 11.1**	**+0.2**
	baz=1.0						
EWUT				S	**Sg**	**00 57 15.5**	**+0.8**
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.32**	**280**	↑*i*P	**Pg**	**00 57 10.9**	**-0.4**
	baz=275						
ETLH				S	**Sg**	**00 57 14.8**	**-0.8**
	baz=275						
ETM	**Tongmen**	**0.35**	**238**	P	**Pg**	**00 57 11.8**	**-0.3**
	baz=240						
LXIB	**Xiulin Townshi**	**0.40**	**251**	↑*i*P	**Pg**	**00 57 12.5**	**-0.4**
	baz=248						
LXIB				*e*S	**Sg**	**00 57 17.7**	**-0.4**
	baz=248						
ESAO	**Su ao**	**0.42**	**3**	P	**Pg**	**00 57 13.7**	**+0.4**
	baz=5.0						
ESAO				*e*S	**Sg**	**00 57 19.6**	**+0.8**
	baz=5.0						
SHUL	**Shoufeng**	**0.44**	**213**	P	**Pb**	**00 57 15.3**	**-0.1**
	baz=210						
SHUL				S	**Sb**	**00 57 23.4**	**+1.1**
	baz=210						
EOS4	**EOS4**	**0.45**	**94**	*e*P	**Pn**	**00 57 18.2**	**+0.2**
	baz=94						
LATG	**Datong**	**0.47**	**325**	*e*P	**Pg**	**00 57 14.2**	**+0.1**
	baz=329						
LATG				*e*S	**Sg**	**00 57 20.9**	**+0.6**
	baz=329						
NNSB	**Datong**	**0.48**	**304**	↑*i*P	**Pg**	**00 57 14.6**	**+0.1**
	baz=307						
NNSB				S	**Sg**	**00 57 20.8**	**-0.1**
	baz=307						
NDS	**Dongshan**	**0.49**	**349**	*e*P	**Pg**	**00 57 15.1**	**+0.5**
	baz=353						
NDS				*e*S	**Sg**	**00 57 21.7**	**+0.7**
	baz=353						
ESL	**Shilin**	**0.49**	**226**	P	**Pg**	**00 57 14.6**	**0.0**
	baz=235						
NNS	**Nan Shan**	**0.50**	**305**	*i* P	**Pg**	**00 57 14.8**	**0.0**
	baz=308						
NNS				S	**Sg**	**00 57 21.1**	**-0.3**
	baz=308						
WHF	**Hehuan Shan**	**0.51**	**269**	P	**Pg**	**00 57 14.8**	**-0.3**
	baz=269						
WHF				*e*S	**Sg**	**00 57 21.6**	**-0.1**
	baz=269						
TEGC	**Jichi Village**	**0.51**	**210**	*e*S	**Sn**	**00 57 26.5**	**-1.9**
	baz=207						
NDT	**Datong Townshi**	**0.53**	**328**	P	**Pg**	**00 57 15.7**	**+0.3**
	baz=332						
NDT				*e*S	**Sg**	**00 57 23.0**	**+0.7**
	baz=332						
FUSS	**Fushou**	**0.54**	**280**	P	**Pg**	**00 57 15.4**	**-0.1**
	baz=281						
FUSS				*e*S	**Sg**	**00 57 22.2**	**-0.4**
	baz=281						
ENTT	**Nioudou**	**0.54**	**334**	*e*P	**Pg**	**00 57 15.8**	**+0.2**
	baz=339						
ENTT				*e*S	**Sg**	**00 57 22.9**	**+0.4**
	baz=339						
TWE	**Neicheng**	**0.58**	**346**	*e*P	**Pb**	**00 57 16.9**	**-0.9**
	baz=351						
TWE				*e*S	**Sb**	**00 57 26.2**	**-0.3**
	baz=351						
WARBT	**Fenglin Townsh**	**0.59**	**223**	P	**Pg**	**00 57 16.5**	**-0.1**
	baz=228						
WARBT				*e*S	**Sb**	**00 57 25.6**	**-1.1**
	baz=228						
TWT	**Tachien**	**0.60**	**280**	*e*P	**Pg**	**00 57 17.0**	**+0.3**
	baz=280						
TWT				*e*S	**Sg**	**00 57 25.1**	**+0.6**
	baz=280						
CHGB	**Renai**	**0.60**	**261**	P	**Pg**	**00 57 16.7**	**-0.1**
	baz=254						
CHGB				*e*S	**Sg**	**00 57 24.2**	**-0.4**
	baz=254						
EGFH	**Guangfu**	**0.60**	**217**	*e*P	**Pb**	**00 57 17.4**	**-0.9**
	baz=224						
EGFH				*e*S	**Sb**	**00 57 26.0**	**-1.1**
	baz=224						
ILA	**Ilan**	**0.61**	**354**	*e*S	**Sb**	**00 57 27.1**	**-0.2**
	baz=351						
TDCB	**Techi**	**0.61**	**279**	*e*P	**Pg**	**00 57 17.1**	**0.0**
	baz=286						
OWD	**Renai**	**0.62**	**252**	*e*P	**Pg**	**00 57 17.0**	**-0.2**
	baz=252						
FUSB	**Fushanzhiwuyua**	**0.64**	**340**	*e*P	**Pb**	**00 57 18.1**	**-0.9**
	baz=344						
FUSB				*e*S	**Sg**	**00 57 26.8**	**+0.9**
	baz=344						
YHNB	**Yeheng**	**0.66**	**322**	P	**Pb**	**00 57 18.5**	**-0.7**
YHNB	**Yeheng**	**0.66**	**322**	*e*P	**Pg**	**00 57 18.3**	**+0.5**
	baz=325						
YHNB				*e*S	**Sg**	**00 57 26.7**	**+0.3**
	baz=325						
WUSB	**Renai**	**0.66**	**256**	P	**Pg**	**00 57 17.8**	**-0.1**
	baz=257						
NSK	**Sanguang**	**0.67**	**321**	*e*P	**Pg**	**00 57 18.6**	**+0.5**
	baz=324						
NSK				*e*S	**Sg**	**00 57 26.7**	**-0.1**
	baz=324						
NWLT	**Wulai**	**0.69**	**335**	*e*P	**Pb**	**00 57 19.3**	**-0.3**
	baz=338						
NWLT				*e*S	**Sg**	**00 57 27.6**	**+0.3**
	baz=338						
VWDT	**VWDT**	**0.74**	**238**	*e*P	**Pb**	**00 57 20.1**	**-0.5**
	baz=245						
HGSD	**Ruisui**	**0.75**	**209**	*e*P	**Pb**	**00 57 20.8**	**0.0**
	baz=230						
EHY	**Hungye**	**0.79**	**215**	*e*P	**Pg**	**00 57 20.5**	**+0.1**
	baz=226						
EHY				*e*S	**Sb**	**00 57 32.3**	**-0.2**
	baz=226						
NFF	**Wufeng Townshi**	**0.80**	**307**	*e*P	**Pg**	**00 57 20.9**	**+0.3**
	baz=309						
WHP	**Taichung City**	**0.81**	**279**	P	**Pg**	**00 57 21.1**	**+0.4**
	baz=280						
WHP				*e*S	**Sg**	**00 57 32.1**	**+0.8**
	baz=280						

TIPB	**Shuangxi** baz=3.0	**0.81**	**0**	*eP*	**Pb**	**00 57 21.6**	**-0.3**
TIPB	baz=3.0			*eS*	**Sb**	**00 57 32.7**	**-0.5**
WCS	**Beigang Elemen** baz=256	**0.84**	**264**	*eP*	**Pg**	**00 57 21.4**	**+0.2**
WCS	baz=256			*eS*	**Sg**	**00 57 32.0**	**-0.2**
TWA	**Mucha** baz=348	**0.85**	**345**	*eP*	**Pb**	**00 57 22.3**	**-0.2**
TWA	baz=348			*eS*	**Sb**	**00 57 33.8**	**-0.5**
TWB1	**Santiao Chiao** baz=13	**0.86**	**10**	*eP*	**Pb**	**00 57 22.2**	**-0.5**
TWB1	baz=13			*eS*	**Sn**	**00 57 35.5**	**-1.6**
TATO	**Taipei**	**0.87**	**340**	P	**Pb**	**00 57 22.7**	**-0.1**
SSLB	**Suanglung**	**0.87**	**245**	P	**Pg**	**00 57 21.8**	**-0.2**
SSLB	**Suanglung** baz=257	**0.87**	**245**	P	**Pg**	**00 57 21.7**	**-0.2**
SSLB	baz=257			S	**Sg**	**00 57 33.8**	**+0.4**
LIOB	**Emei** baz=307	**0.88**	**304**	*eP*	**Pb**	**00 57 22.8**	**-0.3**
NSTT	**Nanjuang** baz=305	**0.89**	**303**	P	**Pb**	**00 57 22.9**	**-0.2**
NSTT	baz=305			*eS*	**Sb**	**00 57 34.5**	**-0.8**
SMLT	**Sun Moon Lake** baz=253	**0.89**	**252**	P	**Pg**	**00 57 22.2**	**0.0**
SMLT	baz=253			*eS*	**Sg**	**00 57 33.9**	**+0.2**
YULB	**Yu-li**	**0.90**	**212**	P	**Pn**	**00 57 23.6**	**-0.9**
YULB	**Yu-li** baz=223	**0.90**	**212**	*eP*	**Pg**	**00 57 22.1**	**-0.3**
YULB	baz=223			*eS*	**Sb**	**00 57 35.8**	**+0.2**
ECBN	**Changbin** baz=203	**0.90**	**202**	*eP*	**Pb**	**00 57 23.1**	**-0.2**
NWF	**Wu-fen Shan** baz=352	**0.91**	**358**	*eP*	**Pn**	**00 57 23.9**	**-0.9**
NWF	baz=352			*eS*	**Sb**	**00 57 36.0**	**-0.1**
WFSB	**Wu-fen Shan** baz=352	**0.91**	**358**	*eP*	**Pn**	**00 57 23.8**	**-0.9**
WFSB	baz=352			*eS*	**Sb**	**00 57 35.5**	**-0.5**
TYC	**Yuchr** baz=255	**0.92**	**254**	*eP*	**Pg**	**00 57 22.5**	**-0.3**
TYC	baz=255			*eS*	**Sg**	**00 57 34.2**	**-0.4**
EYUL	**Yuli** baz=230	**0.93**	**210**	*eP*	**Pb**	**00 57 23.7**	**-0.1**
TWF1	**Yuli** baz=221	**0.93**	**211**	*eP*	**Pb**	**00 57 23.4**	**-0.4**
TWF1	baz=221			*eS*	**Sn**	**00 57 38.3**	**-0.5**
SXI1	**Grass Mountain** baz=12	**0.94**	**3**	*eP*	**Pn**	**00 57 24.1**	**-1.0**
SXI1	baz=12			*eS*	**Sb**	**00 57 36.2**	**-0.6**
TWQ1	**Liyutan** baz=284	**0.98**	**282**	*eP*	**Pb**	**00 57 24.8**	**+0.1**
TNOU	**National Taiwa** baz=360	**0.99**	**357**	*eP*	**Pn**	**00 57 25.3**	**-0.5**
TNOU	baz=360			*eS*	**Sn**	**00 57 41.6**	**+1.3**
NCUH	**Zhongli** baz=327	**1.00**	**324**	*eP*	**Pn**	**00 57 25.5**	**-0.4**
NCUH	baz=327			*eS*	**Sn**	**00 57 40.7**	**+0.4**
WHYT	**Xinyi Township** baz=246	**1.00**	**243**	*eP*	**Pn**	**00 57 25.6**	**-0.3**
NSY	**Sanyi** baz=288	**1.00**	**285**	*eP*	**Pn**	**00 57 25.7**	**-0.3**
TWS1	**Kuangyinshan** baz=341	**1.01**	**339**	*eS*	**Sn**	**00 57 41.3**	**+0.5**
YM01	**YM01** baz=349	**1.01**	**347**	*eP*	**Pn**	**00 57 25.7**	**-0.5**
YM01	baz=349			*eS*	**Sb**	**00 57 38.3**	**-0.7**
NMLH	**Miaoli** baz=303	**1.01**	**292**	*eP*	**Pb**	**00 57 25.3**	**0.0**
CHKH	**Chenggong** baz=202	**1.03**	**202**	*eP*	**Pb**	**00 57 25.3**	**-0.3**
CHKH	baz=202			*eS*	**Sn**	**00 57 40.6**	**-0.6**
WJS	**Zhushan** baz=253	**1.05**	**252**	*eS*	**Sn**	**00 57 42.0**	**+0.2**
NTST	**Danshui** baz=344	**1.06**	**341**	*eS*	**Sn**	**00 57 44.3**	**+2.3**
ANP	**Anpu** baz=348	**1.06**	**345**	*eP*	**Pn**	**00 57 26.7**	**-0.2**
FULB	**Fuli** baz=224	**1.07**	**207**	*eP*	**Pb**	**00 57 25.9**	**-0.3**
FULB	baz=224			*eS*	**Sn**	**00 57 41.4**	**-0.8**
WNT	**Mingjian** baz=252	**1.08**	**255**	*eP*	**Pn**	**00 57 27.1**	**+0.1**
WNT	baz=252			*eS*	**Sn**	**00 57 43.5**	**+1.2**
ALS	**Alishan** baz=237	**1.13**	**236**	*eP*	**Pg**	**00 57 27.0**	**+0.1**
ALS	baz=237			*eS*	**Sn**	**00 57 44.4**	**+0.3**
CHKT	**Chengkung** baz=202	**1.13**	**202**	*eP*	**Pn**	**00 57 27.3**	**-0.4**
CHKT	baz=202			*eS*	**Sn**	**00 57 44.7**	**+1.1**
TWY	**Chenhua** baz=337	**1.14**	**350**	*eP*	**Pn**	**00 57 28.0**	**+0.2**
EHD	**Haiduan** baz=212	**1.15**	**210**	*eP*	**Pg**	**00 57 26.6**	**-0.7**
EHD	baz=212			*eS*	**Sn**	**00 57 44.2**	**0.0**
CHN5	**Tsauling** baz=244	**1.19**	**242**	*eP*	**Pn**	**00 57 29.0**	**+0.4**
CHN5	baz=244			*eS*	**Sn**	**00 57 44.5**	**-0.6**
ELDTW	**Lidau** baz=206	**1.21**	**218**	*eP*	**Pb**	**00 57 27.3**	**-1.4**
ELDTW	baz=206			*eS*	**Sn**	**00 57 44.8**	**-1.0**
WCKO	**Fanlu** baz=241	**1.32**	**238**	*eP*	**Pg**	**00 57 30.9**	**+0.4**
WCKO	baz=241			*eS*	**Sg**	**00 57 49.6**	**+1.8**
WRL	**Guolierlin Hig** baz=262	**1.34**	**259**	*eP*	**Pg**	**00 57 31.3**	**+0.3**
WRL	baz=262			*eS*	**Sg**	**00 57 49.6**	**+1.2**
STYH	**Taoyuan** baz=227	**1.37**	**225**	*eP*	**Pb**	**00 57 31.1**	**-0.3**
STYH	baz=227			*eS*	**Sg**	**00 57 49.4**	**+0.1**
CHN4	**Tsaushan** baz=238	**1.38**	**235**	P	**Pg**	**00 57 32.3**	**+0.6**
CHN4	baz=238			*eS*	**Sg**	**00 57 53.7**	**+4.1**
TPUB	**Ta-pu**	**1.39**	**232**	P	**Pg**	**00 57 31.9**	**+0.2**
TPUB	**Ta-pu** baz=223	**1.39**	**232**	*eP*	**Pg**	**00 57 31.5**	**-0.2**
TPUB	baz=223			*eS*	**Sg**	**00 57 53.5**	**+3.8**
WTK	**Tuku** baz=254	**1.39**	**251**	*eP*	**Pg**	**00 57 32.7**	**+0.8**
WTK	baz=254			*eS*	**Sg**	**00 57 52.4**	**+2.4**
WTP	**Ta-pu** baz=234	**1.43**	**231**	*eP*	**Pg**	**00 57 33.1**	**+0.5**
WTP	baz=234			*eS*	**Sg**	**00 57 55.4**	**+4.2**
TWGBT	**Beinan**	**1.50**	**207**	P	**Pn**	**00 57 30.5**	**-2.2**
TWK	**Hsinying** baz=238	**1.51**	**234**	*eP*	**Pg**	**00 57 34.3**	**+0.1**
TWK	baz=238			*eS*	**Sg**	**00 57 54.4**	**+0.6**
LDUT	**Ludao** baz=183	**1.51**	**192**	*eS*	**Sb**	**00 57 52.8**	**-0.4**
CHN1	**Nanshi** baz=235	**1.53**	**231**	*eP*	**Pg**	**00 57 35.3**	**+0.8**
CHN1	baz=235			*eS*	**Sg**	**00 57 56.6**	**+2.2**
SNST	**Tainan City** baz=237	**1.53**	**233**	*eS*	**Sg**	**00 57 56.7**	**+2.3**
SGST	**Jiashian** baz=230	**1.56**	**227**	*eP*	**Pn**	**00 57 33.2**	**-0.5**
SGST				*eS*	**Sg**	**00 57 57.4**	**+2.1**
	baz=230						
SLGT	**Liugui** baz=227	**1.58**	**223**	*eP*	**Pb**	**00 57 34.8**	**-0.1**
SLGT	baz=227			*eS*	**Sg**	**00 57 57.8**	**+1.7**
ICHU	**Yijhu** baz=245	**1.62**	**241**	*eP*	**Pb**	**00 57 35.4**	**-0.2**
ICHU	baz=245			*eS*	**Sg**	**00 57 59.6**	**+2.4**
SCST	**Cishan** baz=231	**1.76**	**224**	*eP*	**Pb**	**00 57 37.8**	**-0.1**
TSMG	**Majia** baz=235	**1.80**	**217**	*eP*	**Pb**	**00 57 38.4**	**-0.3**
TSMG	baz=235			*eS*	**Sg**	**00 58 02.5**	**-0.7**
TSCK	**Chigu Township** baz=243	**1.88**	**238**	*eS*	**Sg**	**00 58 05.7**	**0.0**
MASBT	**Mashibuluo** baz=221	**1.89**	**216**	*eP*	**Pn**	**00 57 38.5**	**+0.4**
MASBT	baz=221			*eS*	**Sb**	**00 58 04.1**	**+0.1**
EAST	**Anshuo** baz=202	**1.98**	**207**	*eP*	**Pn**	**00 57 39.6**	**+0.2**
PNG	**Penghu** baz=260	**2.16**	**255**	*eS*	**Sn**	**00 58 09.2**	**+0.3**

*IDC **06** 01:01:00.5±1.9,20˚.98S×70˚.30W,h0km,mb3.5/3, mbtmp3.7/5,ML4.0/2,Error ellipse: s-maj=46.1km s-min=29.4km az=41.0*
*SJA **06** 01:01:06.3±2.0,21˚.31S×70˚.19W,h50km,ML3.7,MW3.8*
*NEIC **06** 01:01:06.5±0.8,21˚.34S±0˚.03×70˚.20W±0˚.07,h71km±4km, mb4.2/3,Error ellipse: s-maj=9.2km s-min=4.3km az=91.0*
*GUC **06** 01:01:07.5±0.7,21˚.32S×70˚.11W,h76km±2km,ML3.8*
ISC 06 01:01:05.8±0.9,21˚.34S±0˚.02×70˚.26W±0˚.05,h79km±5km, n81,σ1s00/112,mb3.7/4,6C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.34**	**88**				**Pn**	**01 01 18.4**	**+0.1**
PB02				*Sn*			**Sn**	**01 01 26.6**	**-0.9**
PB02	**IPOC Station P**	**0.34**	**88**	*eP*			**Pn**	**01 01 18.4**	**+0.1**
PB02				*eS*			**Sn**	**01 01 27.1**	**-0.4**
PB02				IAML				01 01 31.0	
	comp=Z,7μm,0.3s								
PB02	**IPOC Station P**	**0.34**	**88**	*iP*	⇓		**Pn**	**01 01 18.6**	**+0.3**
PB02				*i S*			**Sn**	**01 01 26.7**	**-0.8**
PB02				IAML				01 01 27.4	
	comp=N,7μm,0.5s								
PATCX	**Punta Patache**	**0.52**	**11**				**Pn**	**01 01 19.5**	**-0.2**
PATCX				*Sn*			**Sn**	**01 01 29.6**	**-0.4**
PATCX	**Punta Patache**	**0.52**	**11**	*eP*			**Pn**	**01 01 19.6**	**-0.2**
PATCX				*eS*			**Sn**	**01 01 30.3**	**+0.3**
PATCX				IAML				01 01 30.7	
	comp=Z,3μm,0.4s								
PATCX	**Punta Patache**	**0.52**	**11**	*iP*	⇓		**Pn**	**01 01 20.3**	**+0.6**
PATCX				*i S*			**Sn**	**01 01 29.9**	**0.0**
PATCX				IAML				01 01 31.4	
	comp=E,5μm,0.3s								
PB07	**IPOC Station P**	**0.52**	**139**				**Pn**	**01 01 19.7**	**-0.1**
PB07				*Sn*			**Sn**	**01 01 29.3**	**-0.8**
PB07	**IPOC Station P**	**0.52**	**139**	*eP*			**Pn**	**01 01 20.1**	**+0.3**
PB07				IAML				01 01 32.0	
	comp=Z,3μm,0.3s								
PB07	**IPOC Station P**	**0.52**	**139**	*iP*	⇓		**Pn**	**01 01 20.3**	**+0.5**
PB07				*i S*			**Sn**	**01 01 29.5**	**-0.6**
PB07				IAML				01 01 30.4	
	comp=E,7μm,0.3s								
TA01	**Diego Aracena**	**0.77**	**5**				**Pn**	**01 01 22.5**	**+0.4**
TA01				*Sn*			**Sn**	**01 01 34.0**	**-0.2**
TA01	**Diego Aracena**	**0.77**	**5**	*eP*			**Pn**	**01 01 21.9**	**-0.2**
TA01				*eS*			**Sn**	**01 01 34.4**	**+0.2**
TA01				IAML				01 01 35.1	
	comp=Z,2μm,0.2s								
TA01	**Diego Aracena**	**0.77**	**5**	*eP*			**Pn**	**01 01 22.7**	**+0.6**
TA01				*i S*			**Sn**	**01 01 34.1**	**-0.1**
TA01				IAML				01 01 35.2	
	comp=N,4μm,0.7s								
PB01	**IPOC Station P**	**0.77**	**68**				**Pn**	**01 01 22.1**	**-0.1**
PB01				*Sn*			**Sn**	**01 01 32.8**	**-1.6**
PB01	**IPOC Station P**	**0.77**	**68**	*eP*			**Pn**	**01 01 22.1**	**-0.1**
PB01				*eS*			**Sn**	**01 01 33.2**	**-1.3**
PB01				IAML				01 01 33.2	
	comp=Z,9μm,0.2s								
PB01	**IPOC Station P**	**0.77**	**68**	*iP*	⇓		**Pn**	**01 01 22.2**	**-0.1**
PB01				*i S*			**Sn**	**01 01 33.0**	**-1.4**
PB04	**IPOC Station P**	**1.00**	**174**				**Pn**	**01 01 25.2**	**+0.2**
PB04				*Sn*			**Sn**	**01 01 39.2**	**0.0**
PB04	**IPOC Station P**	**1.00**	**174**	*eP*			**Pn**	**01 01 25.2**	**+0.2**
PB04				*eS*			**Sn**	**01 01 40.7**	**+1.5**
PB04				IAML				01 01 45.4	
	comp=Z,2μm,0.3s								
PB04	**IPOC Station P**	**1.00**	**174**	*iP*	⇑		**Pn**	**01 01 25.9**	**+0.9**
PB04				*i S*			**Sn**	**01 01 39.4**	**+0.2**
PB04				IAML				01 01 42.8	
	comp=E,2μm,0.2s								
PB09	**IPOC Station P**	**1.05**	**116**				**Pn**	**01 01 25.1**	**-0.4**
PB09	**IPOC Station P**	**1.05**	**116**	*eP*			**Pn**	**01 01 25.2**	**-0.3**
PB09				*eS*			**Sn**	**01 01 39.8**	**-0.5**
PB09				IAML				01 01 39.9	
	comp=Z,3μm,0.5s								
PB09	**IPOC Station P**	**1.05**	**116**	*iP*	⇓		**Pn**	**01 01 25.9**	**+0.4**
PB09				*i S*			**Sn**	**01 01 39.6**	**-0.6**
PB09				IAML				01 01 40.4	
	comp=N,4μm,0.3s								
TA02	**Huaiquique**	**1.06**	**6**				**Pn**	**01 01 26.1**	**+0.6**
TA02				*Sn*			**Sn**	**01 01 40.1**	**-0.2**
TA02	**Huaiquique**	**1.06**	**6**	*eP*			**Pn**	**01 01 25.6**	**+0.1**
TA02				*eS*			**Sn**	**01 01 40.8**	**+0.5**
TA02				IAML				01 01 41.2	
	comp=Z,2μm,0.2s								
TA02	**Huaiquique**	**1.06**	**6**	*eP*			**Pn**	**01 01 26.2**	**+0.6**
TA02				*i S*			**Sn**	**01 01 40.3**	**0.0**
TA02				IAML				01 01 41.5	
	comp=N,3μm,0.2s								
PX03	**IPOC Station P**	**1.09**	**32**	*eP*			**Pn**	**01 01 25.6**	**-0.4**
PX03				*i S*			**Sn**	**01 01 40.1**	**-1.0**
PX03				IAML				01 01 41.4	
	comp=N,6μm,0.5s								
HMBC	**Humberstone**	**1.11**	**18**	*eP*			**Pn**	**01 01 26.0**	**-0.2**
HMBC				IAML				01 01 46.7	
	comp=Z,2μm,0.3s								
HMBC	**Humberstone**	**1.11**	**18**	*iP*	⇑		**Pn**	**01 01 26.5**	**+0.3**
HMBC				*i S*			**Sn**	**01 01 41.2**	**-0.2**
HMBC				IAML				01 01 43.7	
	comp=N,2μm,0.3s								
PB06	**IPOC Station P**	**1.50**	**155**				**Pn**	**01 01 31.1**	**-0.2**
PB06	**IPOC Station P**	**1.50**	**155**	*eP*			**Pn**	**01 01 31.4**	**+0.2**
PB06				*eS*			**Sn**	**01 01 50.5**	**0.0**
PB06				IAML				01 01 52.3	
	comp=Z,1μm,0.2s								
PB06	**IPOC Station P**	**1.50**	**155**	*iP*	⇑		**Pn**	**01 01 31.6**	**+0.3**
PB06				*i S*			**Sn**	**01 01 50.2**	**-0.3**
PB06				IAML				01 01 51.1	
	comp=E,2μm,0.3s								
PB05	**IPOC Station P**	**1.51**	**178**				**Pn**	**01 01 31.6**	**+0.2**
PB08	**IPOC Station P**	**1.57**	**41**				**Pn**	**01 01 32.4**	**0.0**
PB08	**IPOC Station P**	**1.57**	**41**	*eP*			**Pn**	**01 01 32.1**	**-0.3**
PB08				*eS*			**Sn**	**01 01 52.2**	**-0.2**
PB08				IAML				01 01 52.9	
	comp=Z,1μm,0.5s								
PB08	**IPOC Station P**	**1.57**	**41**	*iP*	⇑		**Pn**	**01 01 32.6**	**+0.3**
PB08				*i S*			**Sn**	**01 01 51.7**	**-0.8**
PB08				IAML				01 01 52.9	
	comp=N,2μm,0.2s								
PB11	**IPOC Station P**	**1.66**	**20**				**Pn**	**01 01 33.4**	**0.0**
PB11	**IPOC Station P**	**1.66**	**20**	*eP*			**Pn**	**01 01 33.2**	**-0.2**
PB11				*eS*			**Sn**	**01 01 53.2**	**-1.0**
PB11				IAML				01 01 56.8	
	comp=Z,836nm,0.3s								
PB11	**IPOC Station P**	**1.66**	**20**	*iP*	⇑		**Pn**	**01 01 33.4**	**0.0**
PB11				*i S*			**Sn**	**01 01 53.3**	**-1.0**
PB11				IAML				01 01 55.2	
	comp=E,1μm,0.2s								
LVC	**Limon Verde**	**1.78**	**136**	Pn			**Pn**	**01 01 36.0**	**+1.0**
LVC	**Limon Verde**	**1.78**	**136**	*eP*			**Pn**	**01 01 35.7**	**+0.6**
LVC				*eS*			**Sn**	**01 01 58.1**	**+0.8**
LVC				IAML				01 01 58.9	
	comp=Z,601nm,0.4s								
LVC	**Limon Verde**	**1.78**	**136**	Pn			**Pn**	**01 01 36.5**	**+1.4**
	comp=Z,91nm,0.3s,baz=331,slow=10.0,SNR=748								
LVC				*Sn*			**Sn**	**01 01 58.0**	**+0.8**
	comp=Z,178nm,0.3s,baz=340,slow=9.7,SNR=28								
	comp=Z,252nm,0.3s								
LVC	**Limon Verde**	**1.78**	**136**	*eP*			**Pn**	**01 01 35.9**	**+0.8**
LVC				*eS*			**Sn**	**01 01 57.5**	**+0.2**
LVC				IAML				01 01 59.3	
	comp=Z,4μm,0.4s								
GO01	**Chusmiza**	**1.93**	**31**				**Pn**	**01 01 37.5**	**+0.2**
GO01	**Chusmiza**	**1.93**	**31**	*eP*			**Pn**	**01 01 36.9**	**-0.3**
GO01				*eS*			**Sn**	**01 01 01.0**	**-0.1**
GO01				IAML				01 02 01.6	
	comp=Z,902nm,0.3s								
GO01	**Chusmiza**	**1.93**	**31**	*eP*			**Pn**	**01 01 37.5**	**+0.2**
GO01				*eS*			**Sn**	**01 02 00.4**	**-0.6**
GO01				IAML				01 02 01.5	
	comp=E,3μm,0.2s								
PB15	**IPOC Station P**	**2.00**	**159**				**Pn**	**01 01 38.1**	**+0.3**
PB10	**IPOC Station P**	**2.19**	**187**				**Pn**	**01 01 40.6**	**+0.5**
PB10	**IPOC Station P**	**2.19**	**187**	*eP*			**Pn**	**01 01 40.0**	**-0.1**
PB10				*eS*			**Sn**	**01 02 06.3**	**-0.1**
PB10	**IPOC Station P**	**2.19**	**187**	*iP*	⇑		**Pn**	**01 01 40.7**	**+0.5**
PB10				*i S*			**Sn**	**01 02 03.3**	**-3.1**
AF01	**San Pedro de A**	**2.51**	**130**				**Pn**	**01 01 45.8**	**+1.1**
PB12	**IPOC Station P**	**2.71**	**359**	Pn			**Pn**	**01 01 47.6**	**+0.4**
PB12	**IPOC Station P**	**2.71**	**359**	*eP*			**Pn**	**01 01 47.2**	**0.0**
PB12				*eS*			**Sn**	01 02 01.7	-17
PB12				IAML				01 02 19.8	
	comp=Z,249nm,0.7s								
AP01	**Chacalluta**	**2.95**	**358**	Pn			**Pn**	**01 01 50.5**	**+0.1**
PB16	**IPOC Station P**	**3.07**	**13**	Pn			**Pn**	**01 01 53.0**	**+0.5**
PB16	**IPOC Station P**	**3.07**	**13**	*eP*			**Pn**	**01 01 53.1**	**+0.5**
PB16				*eS*			**Sn**	**01 02 24.2**	**-4.3**
PB16				IAML				01 02 44.4	
	comp=Z,118nm,0.6s								
PB14	**IPOC Station P**	**3.28**	**182**	Pn			**Pn**	**01 01 54.3**	**-0.9**
PB14	**IPOC Station P**	**3.28**	**182**	*eP*			**Pn**	**01 01 55.0**	**-0.2**
PB14				*eS*			**Sn**	**01 02 31.6**	**-1.7**
GO02	**Mina Guanaco**	**3.86**	**171**	Pn			**Pn**	**01 02 03.4**	**+0.3**
GO02	**Mina Guanaco**	**3.86**	**171**	*eP*			**Pn**	**01 02 03.0**	**-0.1**
GO02				*eS*			**Sn**	**01 02 48.1**	**+0.7**
GO02				IAML				01 03 15.4	
	comp=Z,104nm,0.3s								
AC01	**Pan de Azucar**	**4.80**	**184**	Pn			**Pn**	**01 02 14.6**	**-1.1**
AC01	**Pan de Azucar**	**4.80**	**184**	*eP*			**Pn**	**01 02 14.6**	**-1.1**
AC01				*eS*			**Sn**	**01 03 07.0**	**-3.0**
LPAZ	**La Paz**	**5.41**	**22**				**Pn**	**01 02 24.8**	**+0.3**
AC02	**Maricunga**	**5.57**	**170**				**Pn**	**01 02 26.8**	**+0.2**
GO03	**Copiap**	**6.23**	**180**	Pn			**Pn**	**01 02 32.9**	**-2.3**
AC04	**Llanos de Chal**	**6.88**	**186**	Pn			**Pn**	**01 02 41.0**	**-3.0**
LCO	**Las Campanas**	**7.65**	**183**	Pn			**Pn**	**01 02 52.0**	**-2.8**
SIV	**San Ignacio**	**10.20**	**60**	Pn			**Pn**	**01 03 26.4**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=252,slow=12,SNR=11								
	comp=Z,1.2nm,0.4s								
H03N1	**Juan Fernandez** baz=36,slow=72,SNR=31	**14.29**	**211**	T		T		01 18 57.7	
H03N2	**Juan Fernandez** baz=36,slow=72,SNR=14	**14.30**	**211**	T		T		01 18 60.0	
H03N3	**Juan Fernandez** baz=36,slow=72,SNR=20	**14.31**	**211**	T		T		01 19 05.9	
MACA	**Manacapuru-AM**	**20.32**	**29**	P		**P**		**01 05 35.8**	**+0.1**
MACA				IAmb		IAmb		01 05 36.5	
	comp=Z,9.2nm,0.6s								
BDFB	**Brasilia**	**21.83**	**79**	P		**P**		**01 05 51.7**	**-0.3**
BDFB				IAmb		IAmb		01 06 02.2	
	comp=Z,13nm,1.4s								
BDFB	**Brasilia**	**21.83**	**79**	P		**P**		**01 05 52.8**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=243,slow=7.2,SNR=6.2								
	comp=Z,1.7nm,0.4s								
BOAV	**Boa Vista**	**25.43**	**23**	P		**P**		**01 06 27.3**	**+1.0**
BOAV				IAmb		IAmb		01 06 57.0	
	comp=Z,8.6nm,1.3s								
TXAR	**Lajitas Array**	**59.79**	**326**	P		**P**		**01 11 04.7**	**+1.7**
	comp=Z,0.2nm,0.8s,baz=157,slow=9.8,SNR=2.8								
	comp=Z,0.2nm,0.8s								
TORD	**Torodi Ar. Bea**	**78.48**	**71**	P		P		01 13 04.8	+6.0
	comp=Z,0.3nm,0.5s,baz=258,slow=5.1,SNR=26								
	comp=Z,0.3nm,0.5s								
H11S2	**WAKE ISLAND Hyl** baz=103,slow=74,SNR=16	**26.61**	**278**	T		T		03 39 34.9	
H11S1	**WAKE ISLAND Hyl** baz=103,slow=74,SNR=16	**26.62**	**278**	T		T		03 39 34.5	
H11S3	**WAKE ISLAND Hyl** baz=103,slow=74,SNR=13	**26.63**	**278**	T		T		03 39 37.9	
H11N3	**WAKE ISLAND Hyl** baz=104,slow=74,SNR=9.8	**26.69**	**279**	T		T		03 40 07.1	
H11N2	**WAKE ISLAND Hyl** baz=104,slow=74,SNR=8.4	**26.71**	**279**	T		T		03 40 08.2	
H11N1	**WAKE ISLAND Hyl** baz=104,slow=74,SNR=8.1	**26.71**	**279**	T		T		03 40 08.0	

*IDC **06** 01:02:57.2±0.8,0˚.85N×123˚.29E,h0km,mb4.0/8, mbtmp4.0/8,Error ellipse: s-maj=69.1km s-min=15.7km az=61.0*
*DJA **06** 01:03:21.4±0.5,0˚.N±3˚×12˚2E±˚,h125km±6km,M4.0/6, MLv4.0/6*
ISC 06 01:03:15.8±0.8,0˚.2N±0˚.1×122˚.1E±0˚.1,h150km,n11, σ2s33/11,mb3.8/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.40**	**153**			Pg		01 03 47.3	
LUWI						Pn	**Pn**	**01 03 46.3**	**+2.0**
LUWI						S	**Sn**	**01 04 07.7**	**+1.6**
KMSI	**Cibinong**	**1.87**	**79**	Pn		Pn	**Pn**	**01 03 50.6**	**+1.2**
SANI	**Sanana**	**4.45**	**120**	P		P	**Pn**	**01 04 24.6**	**+2.6**
WRA	**Warramunga Arr** 3.1nm,0.6s,baz=334,slow=8.5,SNR=36 3.1nm,0.6s	**23.32**	**150**	P		**P**	**P**	**01 08 07.7**	**-3.0**
ASAR	**Alice Springs** 0.7nm,0.3s,baz=343,slow=16,SNR=20 0.7nm,0.3s	**26.34**	**155**	P		**P**	**P**	**01 08 35.7**	**-2.3**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=141,slow=5.9,SNR=6.3 0.6nm,0.3s	**29.12**	**310**	P		**P**	**P**	**01 09 05.5**	**+2.8**
STKA	**Stephens Creek** 14nm,1.1s,baz=332,slow=11,SNR=13 14nm,1.1s	**36.84**	**152**	P		**P**	**P**	**01 10 07.7**	**-2.0**
MKAR	**Makanchi Array** 0.7nm,0.5s,baz=125,slow=8.6,SNR=8.2 0.7nm,0.5s	**57.99**	**329**	P		**P**	**P**	**01 12 52.2**	**-0.5**
KURBB	**Kurchatov Arra** 0.8nm,0.7s,baz=129,slow=5.8,SNR=11 0.8nm,0.7s	**62.35**	**330**	P		**P**	**P**	**01 13 21.0**	**-1.3**
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=108,slow=7.7,SNR=3.7 0.5nm,0.6s	**67.86**	**329**	P		**P**	**P**	**01 13 57.1**	**-0.7**
ILAR	**Eielson Array** 0.4nm,1.0s,baz=240,slow=5.6,SNR=4.8 0.4nm,1.0s	**90.23**	**25**	P		P	P	01 15 55.2	-3.9

*IDC **06** 01:09:05.8±2.9,7˚.36S×128˚.53E,h155km±27km,mb4.1/17, mbtmp4.5/18,MS3.1/2,Error ellipse: s-maj=23.5km s-min=10.9km az=75.0*
*NEIC **06** 01:09:05.8±1.7,7˚.38S±0˚.07×128˚.46E±0˚.06,h149km±7km, mb4.5/30,Error ellipse: s-maj=10.9km s-min=8.3km az=204.0*
*DJA **06** 01:09:06.1±0.2,8˚S±2˚×12˚8E±˚,h145km±4km,M4.7/23, mB5.1/8,mb4.7/23,MLv5.0/16,Mw(mB)4.5/8*
**ISC 06

MTN	Manton Dam	6.00	154	P		Pn	01 10 32.2	+0.1
MMRI	Maumere	6.29	258	Pn		Pn	01 10 36.1	0.0
MMRI	Maumere	6.29	258	P		Pn	01 10 36.4	+0.3
	69nm,0.8s,0.7nm							
KMPI	Kaimana, Papua	6.41	55	P		Pn	01 10 39.2	+1.5
	142nm,0.8s,2.6nm							
KDU	Kakadu	6.55	143	P		Pn	01 10 38.1	-1.5
	baz=6.6,SNR=288							
KDU	Kakadu	6.55	143	P		Pn	01 10 39.0	-0.6
LBMI	Labuha	6.80	352	P		Pn	01 10 46.1	+3.1
	68nm,1.1s,0.2nm							
EDFI	Ende, Flores	6.84	258	P		Pn	01 10 45.5	+1.9
	27nm,0.6s,588nm0.2nm							
SWI	Sorong	7.08	23	P		Pn	01 10 48.0	+1.4
	160nm,0.8s,2µm0.5nm							
KNRA	Kununurra	8.21	178	P		Pn	01 11 00.7	-1.0
	baz=8.2,SNR=79							
KNRA	Kununurra	8.21	178			Pn	01 11 00.9	-0.8
KNRA	Kununurra	8.21	178	P		Pn	01 11 01.1	-0.7
BASI	Baing, Sumba	8.28	250	P		Pn	01 11 02.6	-0.1
	96nm,1.2s							
LUWI	Luwuk	8.51	318	P		Pn	01 11 07.2	+1.5
	32nm,1.0s,2µm							
PLAI	Plampang	10.68	262	P		Pn	01 11 33.1	-1.4
	27nm,0.6s							
FITZ	Fitzroy Crossi	10.97	194	P		Pn	01 11 35.7	-2.6
	baz=11,SNR=27							
FITZ	Fitzroy Crossi	10.97	194			Pn	01 11 36.0	-2.3
TWSI	Taliwang, Sumb	11.55	263	P		Pn	01 11 46.6	+0.7
	14nm,0.9s							
WB0	Warramunga Arr	13.56	156	Pn		Pn	01 12 09.6	-2.2
WRA	Warramunga Arr	13.69	156	Pn		Pn	01 12 12.5	-1.0
WRA	Warramunga Arr	13.69	156	P		Pn	01 12 10.3	-3.2
	6.0nm,0.4s,baz=331,slow=14,SNR=80							
WRA				S		Sn	01 14 32.1	-13
	46nm,0.7s,baz=323,slow=25,SNR=8.8							
WB2	Warramunga Arr	13.70	156	P		Pn	01 12 10.9	-2.6
	baz=14							
WB2	Warramunga Arr	13.70	156	Pn		Pn	01 12 12.7	-0.9
WR0	Warramunga Arr	13.79	155	Pn		Pn	01 12 13.2	-1.6
DAV	Davao City (W)	14.68	349	LR		LR	01 18 42.4	
	comp=Z,38nm,19.1s,baz=138,slow=39							
GMJI	Gumukmas	14.91	266	P		Pn	01 12 28.9	+0.1
COEN	Coen	15.84	115	P		Pn	01 12 39.8	-0.5
	baz=16,SNR=64							
COEN	Coen	15.84	115	P		Pn	01 12 41.1	+0.8
MYLDM	Lahad Datu	15.98	321	P		Pn	01 12 42.2	+0.1
MYLDM				IAmb		IAmb	01 12 56.0	
	comp=Z,41nm,1.0s							
PSA00	Pilbara Seismi	16.35	210			Pn	01 12 46.5	0.0
PSA00	Pilbara Seismi	16.35	210			Pn	01 12 45.2	-1.3
PSA00				IAmb		IAmb	01 13 03.8	
	comp=Z,21nm,0.7s							
PSA00	Pilbara Seismi	16.35	210	P		Pn	01 12 46.6	+0.1
QIS	Mount Isa	16.94	142	P		P	01 12 52.6	-0.6
	baz=17,SNR=18							
QIS	Mount Isa	16.94	142	P		P	01 12 53.8	+0.7
AS31	Alice Springs	16.98	163	P		P	01 12 54.3	+0.7
AS31				IAmb		IAmb	01 12 55.9	
	comp=Z,14nm,0.7s							
ASAR	Alice Springs	16.98	163			P	01 12 54.4	+0.8
ASAR	Alice Springs	16.98	163	P		P	01 12 52.9	-0.7
	comp=Z,36nm,0.6s,baz=338,slow=11,SNR=379							
ASAR				S		S	01 15 50.2	-13
	comp=Z,3.9nm,0.4s,baz=347,slow=25,SNR=4.1							
ASAR				ScP		ScP	01 20 50.1	-2.1
	comp=Z,1.7nm,0.7s,baz=352,slow=2.7,SNR=4.1							
ASPA	Alice Springs	16.98	163	P		P	01 12 54.2	+0.6
	baz=17							
AS01	Alice Springs	16.99	163	P		Pn	01 12 55.2	+0.9
WRKA	Warakurna	17.52	181	P		P	01 13 00.9	+1.4
	baz=18,SNR=49							
WRKA	Warakurna	17.52	181	P		P	01 13 01.0	+1.4
PMG	Port Moresby	18.59	97	Pn		Pn	01 13 14.5	+1.1
PMG				IAmb		IAmb	01 13 17.2	
	comp=Z,34nm,0.8s							
PMG	Port Moresby	18.59	97	P		Pn	01 13 14.3	+0.9
MTSU	Mount Surprise	18.75	126	P		P	01 13 14.5	+1.5
	baz=19,SNR=6.5							
KPJI	Karang Pucung	19.38	269	P		P	01 13 18.5	-1.3
	comp=Z,17nm,0.8s							
GIRL	Giralia	20.42	221	P		P	01 13 32.1	+1.2
	baz=20,SNR=4.7							
GIRL	Giralia	20.42	221	P		P	01 13 32.1	+1.2
MEEK	Meekatharra	21.29	205	P		P	01 13 40.1	-0.2
	baz=21,SNR=5.9							
MEEK	Meekatharra	21.29	205	P		P	01 13 40.1	-0.2
CTA	Charters Tower	21.35	128	P		P	01 13 40.9	-0.1
	comp=Z,10nm,0.9s,baz=324,slow=15,SNR=3.7							
	comp=Z,10nm,0.9s							
OOD	Oodnadatta	21.39	162	P		P	01 13 41.8	+0.5
FORT	Forrest	23.25	181	P		P	01 14 00.2	+0.8
	baz=23,SNR=34							
FORT	Forrest	23.25	181	P		P	01 13 59.5	+0.1
FORT	Forrest	23.25	181	P		P	01 14 00.2	+0.8
INKA	Innaminka	23.32	152	P		P	01 14 01.8	+1.7
MULG	Mulgathing	23.34	168	P		P	01 14 01.3	+1.0
QLP	Quilpie	24.25	144	P		P	01 14 09.4	+0.9
	baz=24,SNR=16							
QLP	Quilpie	24.25	144	P		P	01 14 09.5	+0.9
MORW	Morawa	24.52	207	P		P	01 14 11.1	+0.1
	baz=25,SNR=16							
MORW	Morawa	24.52	207	P		P	01 14 11.9	+0.9
MORW	Morawa	24.52	207	P		P	01 14 12.7	+1.7
KMBL	Kambalda	24.61	194	P		P	01 14 12.3	+0.4
	baz=25,SNR=9.5							
KMBL	Kambalda	24.61	194	P		P	01 14 12.4	+0.6
LCRK	Leigh Creek	24.67	159	P		P	01 14 13.2	+0.9
BLDU	Ballidu	25.57	204	P		P	01 14 21.4	+0.8
	baz=26,SNR=13							
KLBR	Kellerberrin	26.05	201	P		P	01 14 25.4	+0.6
	baz=26,SNR=6.1							
KLBR	Kellerberrin	26.05	201	P		P	01 14 25.7	+0.9
BBOO	Buckleboo	26.23	165	P		P	01 14 26.9	+0.5
	baz=26,SNR=9.9							
BBOO	Buckleboo	26.23	165	P		P	01 14 27.1	+0.6
BBOO				IAmb		IAmb	01 14 27.9	
	comp=Z,18nm,0.8s							
BBOO	Buckleboo	26.23	165	P		P	01 14 27.2	+0.7
WHYH	Whyalla	26.85	163	P		P	01 14 32.9	+0.9
STKA	Stephens Creek	27.24	155	P		P	01 14 36.1	+0.7
	baz=27,SNR=11							
STKA	Stephens Creek	27.24	155	P		P	01 14 35.0	-0.5
STKA	Stephens Creek	27.24	155	P		P	01 14 36.2	+0.7
STKA	Stephens Creek	27.24	155	P		P	01 14 36.2	+0.7
	comp=Z,14nm,0.8s,baz=327,slow=10,SNR=28							
	comp=Z,14nm,0.8s							
NWAO	Narrogin (SRO)	27.44	201	P		P	01 14 37.7	+0.4
	baz=28,SNR=3.8							
NWAO				P		P	01 14 37.7	+0.4
	baz=28,SNR=3.8							
NWAO	Narrogin (SRO)	27.44	201	P		P	01 14 37.6	+0.3
NWAO				IAmb		IAmb	01 14 48.9	
	comp=Z,19nm,1.1s							
NWAO	Narrogin (SRO)	27.44	201	P		P	01 14 37.3	0.0
	comp=Z,5.1nm,0.6s,baz=31,slow=7.8,SNR=3.9							
NWAO				LR		LR	01 25 57.2	
	comp=Z,53nm,18.1s,baz=337,slow=37							
	comp=Z,5.1nm,0.6s							
HTT	Hallett	27.64	161	P		P	01 14 39.9	+0.8
	baz=28,SNR=11							
HTT	Hallett	27.64	161	P		P	01 14 40.2	+1.1
CMSA	Cobar Meteorol	28.89	148	P		P	01 14 51.1	+1.0
	baz=29,SNR=15							
CMSA	Cobar Meteorol	28.89	148	P		P	01 14 51.3	+1.2
RPSI	Rantau Prapat	31.15	288	P		P	01 15 10.1	-0.1
RPSI				IAmb		IAmb	01 15 11.5	
	comp=Z,7.6nm,0.9s							
ARPS	Mount Arapiles	31.66	159	P		P	01 15 16.2	+1.7
	baz=32,SNR=14							
ARPS	Mount Arapiles	31.66	159	P		P	01 15 16.2	+1.7
AUMAG	Moama Anglican	32.20	155	P		P	01 15 21.4	+2.2
BRAT	Ballarat	33.12	157	P		P	01 15 29.6	+2.4
CMAR	Chiang Mai Arr	38.85	312	P		P	01 16 15.8	-0.4
	comp=Z,1.4nm,0.3s,baz=139,slow=7.6,SNR=10.0							
	comp=Z,1.4nm,0.3s							
KSRS	Korea Array	44.64	359	P		P	01 17 02.4	-0.5
	comp=Z,2.1nm,0.8s,baz=178,slow=9.7,SNR=4.1							
	comp=Z,2.1nm,0.8s							
MJAR	Matsushiro Arr	44.67	11	P		P	01 17 00.9	-2.4
	comp=Z,3.6nm,0.6s,baz=188,slow=9.6,SNR=6.3							
	comp=Z,3.6nm,0.6s							
BJT	Baijiatuau	48.55	347			P	01 17 32.7	-0.6
BJT				IAmb		IAmb	01 17 33.8	
	comp=Z,11nm,0.9s							
JTM	Tenmabayashi	49.35	13	P		P	01 17 38.1	-1.3

WHZ	Wether Hill Ro	51.21	145	P		P	01 17 54.4	+0.9
USRK	Ussuriysk Ar.	51.47	3	P		P	01 17 55.9	+0.6
USRK	Ussuriysk Ar.	51.47	3	P		P	01 17 54.8	-0.5
	comp=Z,2.9nm,0.7s,baz=176,slow=6.8,SNR=4.5							
	comp=Z,2.9nm,0.7s							
TCW	Tory Channel	52.72	137	P		P	01 18 05.0	+0.4
ASAJ	Asahikawa	52.86	13	P		P	01 18 04.5	-1.1
	comp=Z,4.2nm,0.6s,baz=244,slow=7.4,SNR=3.5							
	comp=Z,4.2nm,0.6s							
ULN	Ulaanbaatar	58.20	343	P		P	01 18 44.0	+0.1
ULN				IAmb		IAmb	01 18 46.1	
	comp=Z,6.8nm,0.9s							
SONM	Songino Array	58.37	343	P		P	01 18 46.3	+1.3
SONM				IAmb		IAmb	01 18 47.2	
	comp=Z,5.8nm,0.9s							
SONM	Songino Array	58.37	343	P		P	01 18 45.5	+0.5
	comp=Z,5.5nm,0.9s,baz=166,slow=9.5,SNR=28							
	comp=Z,5.5nm,0.9s							
PEA0B	Petropavlovsk-	65.20	19	P		P	01 19 30.5	+0.1
PETK	Petropavlovsk-	65.20	19	P		P	01 19 30.3	-0.1
PETK	Petropavlovsk-	65.20	19	P		P	01 19 30.1	-0.4
	comp=Z,7.5nm,0.7s,baz=169,slow=4.2,SNR=14							
	comp=Z,7.5nm,0.7s							
MK31	Makanchi Array	67.75	328	P		P	01 19 46.4	-0.4
MKAR	Makanchi Array	67.75	328	P		P	01 19 47.2	+0.4
MKAR	Makanchi Array	67.75	328	P		P	01 19 46.8	0.0
	comp=Z,1.2nm,0.5s,baz=126,slow=7.7,SNR=16							
	comp=Z,1.2nm,0.5s							
MAKZ	Makanchi	67.93	327	P		P	01 19 48.7	+0.8
MAKZ				IAmb		IAmb	01 20 30.7	
	comp=Z,6.0nm,1.4s							
YAK	Yakutsk	69.25	1	P		P	01 19 55.3	-0.4
	comp=Z,14nm,0.5s,baz=164,slow=3.5,SNR=5.6							
	comp=Z,14nm,0.5s							
ARSB	Arslanbob	70.19	319	P		P	01 20 02.5	+0.3
ZAA0	Zalesovo Array	71.29	334	P		P	01 20 07.7	-0.7
ZALV	Zalesovo Beam	71.29	334	P		P	01 20 07.7	-0.6
	comp=Z,1.5nm,0.4s,baz=143,slow=5.6,SNR=11							
	comp=Z,1.5nm,0.4s							
KURBB	Kurchatov Arra	72.08	329	P		P	01 20 13.0	-0.1
	comp=Z,3.0nm,0.8s,baz=132,slow=5.0,SNR=36							
	comp=Z,3.0nm,0.8s							
KURK	Kurchatov	72.09	329	P		P	01 20 13.4	+0.3
KURK				IAmb		IAmb	01 20 14.7	
	comp=Z,4.9nm,0.9s							
VNDA	Vanda	72.22	173	P		P	01 20 13.6	+0.1
	comp=Z,2.6nm,0.7s,baz=310,slow=3.2,SNR=5.6							
	comp=Z,2.6nm,0.7s							
KKAR	Karatay Array	72.66	319	P		P	01 20 17.1	+0.3
BVAR	Borovoye Array	77.61	328	P		P	01 20 44.9	0.0
	comp=Z,2.6nm,0.7s,baz=122,slow=8.0,SNR=13							
	comp=Z,2.6nm,0.7s							
BRVK	Borovoye	77.68	328	P		P	01 20 44.8	-0.4
TIXI	Tiksi	78.90	0	P		P	01 20 50.9	-0.6
TIXI				IAmb		IAmb	01 20 52.3	
	comp=Z,3.8nm,0.7s							
VOI	Vohitsoka	79.58	249	P		P	01 20 56.0	-0.6
NRIK	Noril'sk	81.60	346	P		P	01 21 06.1	0.0
NRIK				IAmb		IAmb	01 21 07.8	
	comp=Z,12nm,1.2s							
NRIK	Noril'sk	81.60	346	P		P	01 21 05.8	-0.2
	comp=Z,4.9nm,0.8s,baz=136,slow=6.1,SNR=7.2							
	comp=Z,4.9nm,0.8s							
ABKAR	Akbulak array	81.89	322	P		P	01 21 07.8	-0.3
ABKAR	Akbulak array	81.89	322	P		P	01 21 08.0	0.0
QSPA	South Pole Qui	82.56	180	P		P	01 21 11.4	0.0
QSPA				IAmb		IAmb	01 21 12.0	
	comp=Z,3.8nm,0.8s							
TORD	Torodi Ar. Bea	127.40	281	PKP		PKPdf	01 27 52.4	-0.9
	comp=Z,0.6nm,0.7s,baz=58,slow=2.3,SNR=4.6							
CPUP	Villa Florida	145.99	171	PKPbc		PKPdf	01 28 27.9	+0.6
	comp=Z,2.9nm,0.8s,baz=179,slow=4.9,SNR=6.8							

*CNRM **06** 01:11:26.7,35°.73N×3°.89W,h22km,ML2.1*
*MDD **06** 01:11:29.7±0.4,35°.51N×3°.82W,h0km,mb_Lg2.4/13,*
Error ellipse: s-maj=3.1km s-min=2.7km az=22.0
*INMG **06** 01:11:31.4±1.5,35°.41N×3°.78W,h18km,ML1.7,Error*
ellipse: s-maj=7.9km s-min=5.3km az=15.0
*SFS **06** 01:11:32.2,35°.46N×3°.74W,h13km,ML2.1/10,ML2.5/8,*
MLv1.9/10

ISC 06 01:11:29.0±1.8,35°.46N±0°.02×3°.73W±0°.02,h5km±14km,
n44,σ1s50/64,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.30	216	P	Pb	01 11 37.9	+1.1
PALE	Palemas	0.30	216	S	Sb	01 11 43.4	+1.3
GOG	Mont Gurugu	0.64	111	P	Pn	01 11 43.6	-1.3
GOG	Mont Gurugu	0.64	111	S	Sn	01 11 55.1	-0.5
EMEL	Melilla	0.65	104	Pg	Pn	01 11 43.8	-1.1
EMEL				Sg	Sb	01 11 52.4	+0.2
EMLI	Melilla	0.66	104	Pg	Pn	01 11 43.7	-1.2
EMLI				Sg	Sb	01 11 52.3	-0.1
EALB	Alboran	0.74	49	Pg	Pn	01 11 45.9	-0.3
EALB				Sg	Sn	01 11 56.3	-1.5
EALB	Alboran	0.74	49	Pg	Pn	01 11 45.8	-0.3
EALB				Sg	Sb	01 11 55.5	+0.6
EALB				*i*	Vmb_Lg	01 11 59.5	
AKLM	AKL	0.95	187	P	Pb	01 11 48.0	-0.1
AKLM	AKL	0.95	187	S	Sn	01 12 02.9	-0.3
TAF	Taforalt	1.25	120	P	Pg	01 11 53.2	+0.1
TAF	Taforalt	1.25	120	S	Sn	01 12 11.9	+1.3
SMIR	Smir Dam	1.37	280	P	Pn	01 11 47.4	-7.4
SMIR	Smir Dam	1.37	280	S	Sb	01 12 05.9	-6.9
EMIJ	Mijas	1.39	323	Pn	Pn	01 11 55.7	+0.5
EMIJ	Mijas	1.39	323	Pg	Pn	01 11 55.5	+0.4
EMIJ				Sg	Sb	01 12 13.0	-0.6
ELGU	Los Guajares,	1.41	3	Pn	Pn	01 11 55.3	-0.2
ELGU				Sn	Sb	01 12 14.0	-0.2
ELGU	Los Guajares,	1.41	3	Pg	Pn	01 11 55.6	+0.1
ELGU				Sg	Sb	01 12 12.9	-1.3
ELGU				*i*	Vmb_Lg	01 12 19.2	
ECEU	Ceuta	1.41	289	Pn	Pb	01 11 56.2	+0.3
ECEU	Ceuta	1.41	289	Sg	Sn	01 12 11.9	-2.6
ECEU				*i*	Vmb_Lg	01 12 13.9	
EMAL	Malaga-Limoner	1.42	337	Pn	Pb	01 11 56.2	+0.2
EMAL				Sn	Sn	01 12 13.6	-1.0
EBER	Berja	1.59	25	Pn	Pn	01 11 58.6	+0.6
EBER				Sn	Sb	01 12 19.5	0.0
EBER	Berja	1.59	25	Pg	Pn	01 11 58.4	+0.3
EBER				Sg	Sn	01 12 19.1	0.0
EBER				*i*	Vmb_Lg	01 12 24.2	
EGOR	Sierra Gorda,	1.68	350	Pg	Pb	01 12 00.4	0.0
EGOR				Sg	Sn	01 12 20.1	-1.1
EGOR				*i*	Vmb_Lg	01 12 30.2	
EQUE	Quentar	1.76	8	Pg	Pb	01 12 02.1	+0.3
EQUE				Sg	Sb	01 12 24.2	-0.1
EQUE				*i*	Vmb_Lg	01 12 33.9	
EQTA	Presa de Quent	1.76	7	Pn	Pb	01 12 01.8	-0.1
EQTA				Sn	Sn	01 12 21.8	-1.4
ENIJ	Nijar	1.95	39	Pn	Pn	01 12 03.5	+0.7
ENIJ				Sn	Sn	01 12 27.1	-0.6
ENIJ				*i*	Vmb_Lg	01 12 43.5	
ESPR	Espera	2.22	310	Pg	Pn	01 12 08.1	+1.5
IFR	Ifrane	2.25	211	Pn	Pn	01 12 08.4	+1.3
IFR				Sn	Sn	01 12 34.8	-0.7
EQES	Quesada	2.40	13	Pg	Pb	01 12 12.2	-0.6
EQES				Sg	Sb	01 12 42.0	-0.8
EQES				*i*	Vmb_Lg	01 12 45.8	
MD31	MD31	2.72	199	P	Pn	01 12 12.4	-1.1
MD31	MD31	2.72	199	S	Sn	01 12 47.8	+0.9
MDT	Midelt	2.74	196	P	Pn	01 12 13.1	-0.6
MDT	Midelt	2.74	196	S	Sn	01 12 48.2	+0.9
TLOR	Lorca, Murcia	2.74	36	Pn	Pn	01 12 14.1	+0.5
EADA	Adamuz	2.79	346	Pg	Pb	01 12 17.8	-1.6
EADA				Sn	Sn	01 12 49.5	+1.0
EADA				Sg	Sb	01 12 54.7	+0.9
EADA				*i*	Vmb_Lg	01 12 58.1	
ECAB	El Cabril	2.94	333	Pg	Pb	01 12 19.8	-2.2
ECAB				Sg	Sn	01 12 55.3	+3.0
ECAB				*i*	Vmb_Lg	01 13 09.0	
ETOB	Tobarra	3.63	28	Pn	Pn	01 12 28.8	+2.8
ETOB	Tobarra	3.63	28	Pn	Pn	01 12 28.7	+2.8
ETOB				*i*	Vmb_Lg	01 13 14.5	
EGRO	El Granado	3.67	306	Pn	Pn	01 12 27.6	+1.2
PVAQ	Vaqueiros	3.76	302	*eS*	Sn	01 13 11.4	-0.9
PBAR	Barrancos	3.80	317	*eP*	Pn	01 12 30.3	+2.1
PBAR				*eS*	Sn	01 13 13.1	-0.1
MESJ	Messejana	4.32	305	*eP*	Pn	01 12 37.0	+1.6
MESJ				*eS*	Sn	01 13 28.1	+1.8
PNCL	Nicolau / Gran	4.67	306	*eP*	Pn	01 12 42.4	+2.1

*IDC **06** 01:14:46.0±2.8,2°.91N×127°.19E,h0km,mb3.8/3,*
mbtmp3.8/3,MS2.3/1,Error ellipse: s-maj=255.7km
s-min=26.0km az=67.0
*DJA **06** 01:14:55.2±1.9,3°.N±6°×12°.7E±°,h22km±20km,M4.5/11,*
mB5.5/4,mb4.3/8,MLv4.4/11,Mw(mB)5.0/4

ISC 06 01:14:52.9±1.4,3°.2N±0°.1×127°.6E±0°.1,h49km,n14,
σ1s95/13,mb3.6/3,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.12	284	P	Pn	01 15 27.8	+1.9
TNTI	Ternate	2.38	185	P	Pn	01 15 31.6	+2.1
LBMI	Labuha	3.77	181	P	Pn	01 15 50.5	+1.9
KMSI	Cibinong	4.42	235	P	Pn	01 15 58.9	+1.4
SANI	Sanana	5.41	197	P	Pn	01 16 10.2	-0.9
	26nm,0.7s,3µm0.2nm						
SWI	Sorong	5.42	137	P	Pn	01 16 14.0	+2.7
	28nm,0.5s,0.2nm						
LUWI	Luwuk	6.37	229	P	Pn	01 16 25.7	+1.4
	35nm,0.6s,4µm0.4nm						
NLAI	Namlea	6.37	184	P	Pn	01 16 24.8	+0.5
	15nm,0.7s,6µm0.1nm						
BKSI	Bulukumba	11.25	222	P	Pn	01 17 31.8	+0.7
	11nm,0.8s						
EDFI	Ende, Flores	13.21	206	P	Pn	01 17 58.9	+0.9
WRA	Warramunga Arr	23.89	164	P	P	01 19 58.9	-3.4
	0.6nm,0.3s,baz=342,slow=9.8,SNR=1.7						
	0.6nm,0.3s						
ASAR	Alice Springs	27.36	167	P	P	01 20 32.6	-1.1
	0.8nm,0.6s,baz=339,slow=11,SNR=1.4						
	0.8nm,0.6s						
KSRS	Korea Array	34.13	0	LR	LR	01 41 37.9	
	comp=Z,4.7nm,18.0s,baz=20,slow=47						
MKAR	Makanchi Array	58.51	325	P	P	01 24 44.2	-0.1
	1.0nm,0.5s,baz=125,slow=8.5,SNR=8.7						
	1.0nm,0.5s						

*IDC **06** 01:17:52.0±2.2,56°.11N×148°.50W,h0km,mb3.5/3,*
mbtmp3.5/8,ML3.3/5,MS3.2/4,Error ellipse: s-maj=38.4km
s-min=25.5km az=176.0
*NEIC **06** 01:17:56.4±1.1,56°.31N±0°.06×148°.5W±0°.1,h22km±10km,*
ML3.4/12,ML3.4(AEIC),Error ellipse: s-maj=9.4km
s-min=7.9km az=115.0
*AEIC **06** 01:17:59.7±1.0,56°.3N±0°.1×148°.5W±0°.1,h10km±8km,*
Error ellipse: s-maj=15.6km s-min=8.9km az=177.0

ISC 06 01:17:55.1±1.2,56°.41N±0°.09×148°.49W±0°.05,h10km,
n158,σ1s109/157,mb3.5/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.62	303	S	Sn	01 19 07.3	-2.0
	baz=121						
KDAK	Kodiak Island	2.62	303	Pn	Pn	01 18 37.9	+0.4
	4.5nm,0.3s,baz=131,slow=9.8,SNR=48						
KDAK				Sn	Sn	01 19 07.6	-1.7
	5.5nm,0.3s,baz=67,slow=24,SNR=10						
	18nm,0.5s						
OHAK	Old Harbor	2.76	289		Pn	01 18 39.5	+0.2
OHAK				IAML		01 19 27.6	
	comp=E,102nm,2.2s						
OHAK	Old Harbor	2.76	289	P	Pn	01 18 39.3	0.0
	baz=107						
OHAK				S	Sn	01 19 10.9	-1.8
	baz=107						
SYI	Shuyak Island	3.05	318		Pn	01 18 44.6	+1.3
SYI					Sn	01 19 20.2	+0.4
SYI	Shuyak Island	3.05	318	IAML		01 19 20.8	
	comp=N,92nm,2.7s						
SYI				IAML		01 19 30.0	
	comp=E,101nm,2.0s						
Q20K	Shuyak Island	3.05	318	P	Pn	01 18 44.6	+1.3
	baz=136						
Q20K				S	Sn	01 19 20.2	+0.4
	baz=136						
Q23K	Middleton Isla	3.23	20		Pn	01 18 46.6	+0.8
Q23K	Middleton Isla	3.23	20	P	Pn	01 18 46.8	+1.0
	baz=201						
MID	Middleton Isla	3.23	20		Pn	01 18 46.6	+0.8
MID				IAML		01 20 26.7	
	comp=N,154nm,2.2s						
CNPM	China Poot	3.45	336		Pn	01 18 49.7	+0.9
CNPM				IAML		01 19 43.5	
	comp=E,60nm,1.5s						
CNPM				IAML		01 19 52.1	
	comp=N,61nm,3.0s						
CNPM	China Poot	3.45	336		Sn	01 19 29.6	-0.1
BRSE	Bradley Lake S	3.55	341		Pn	01 18 50.9	+0.7
BRSE	Bradley Lake S	3.55	341	P	Pn	01 18 50.9	+0.7
	baz=160						
BRLK	Bradley Lake	3.59	340		Pn	01 18 51.7	+0.9
P23K	Montague Islan	3.64	9		Pn	01 18 52.2	+0.7
P23K					Sn	01 19 33.6	-0.9
P23K	Montague Islan	3.64	9	P	Pn	01 18

KIAG Kiagna River 5.54 33 Pn 01 19 18.7 +1.0
N25K Chitina, Valde 5.58 19 Pn 01 19 19.3 +1.1
N25K Chitina, Valde baz=202 5.58 19 P Pn 01 19 19.3 +1.1
TABL Table Mountain 5.58 41 Pn 01 19 19.6 +1.3
GLB Gilahina Butte 5.59 24 Pn 01 19 19.4 +1.0
PCA Pinnacle 5.70 46 Pn 01 19 21.3 +1.5
PINM Pinnacle baz=232 5.70 46 P Pn 01 19 21.3 +1.5
PTPK Patty Peak 5.72 31 Pn 01 19 21.4 +1.3
P16K Nushagak River 5.73 301 Pn 01 19 20.7 +0.6
P16K Nushagak River baz=114 5.73 301 P Pn 01 19 20.7 +0.6
MCARA McCarthy VSAT 5.73 27 Pn 01 19 21.2 +1.0
MCARA McCarthy VSAT baz=211 5.73 27 P Pn 01 19 21.8 +1.7
N18K Kilae Creek 5.77 321 Pn 01 19 21.4 +0.7
N18K Kilae Creek baz=135 5.77 321 P Pn 01 19 21.4 +0.7
PNL Peninsula 5.83 52 Pn 01 19 22.5 +1.0
PNL Peninsula baz=239 5.83 52 P Pn 01 19 22.5 +1.0
M24K Tolsona, Glenn 5.83 11 Pn 01 19 22.9 +1.3
M24K Tolsona, Glenn baz=192 5.83 11 P Pn 01 19 22.9 +1.3
BARN Barnard Glacie 5.86 35 Pn 01 19 23.3 +1.2
BCPM Bancas Point 5.87 49 Pn 01 19 23.1 +1.0
CTG Chitna Glacier baz=222 5.89 36 P Pn 01 19 23.4 +0.9
CTGM Chitina Glacie 5.89 36 Pn 01 19 23.4 +0.9
LOGN Logan Glacier 5.90 38 Pn 01 19 24.0 +1.3
M20K Styx River 5.98 338 Pn 01 19 24.3 +0.6
M20K Styx River baz=155 5.98 338 P Pn 01 19 24.3 +0.6
O16K Kokwok River B 6.02 306 Pn 01 19 25.4 +1.3
O16K Kokwok River B baz=118 6.02 306 P Pn 01 19 25.4 +1.3
N17K Nushagak Hills 6.15 316 Pn 01 19 26.7 +0.8
N17K Nushagak Hills baz=129 6.15 316 P Pn 01 19 26.7 +0.8
WAT6 Susitna Watana 6.20 3 Pn 01 19 27.6 +0.8
WAT6 Susitna Watana baz=184 6.20 3 P Pn 01 19 27.6 +0.8
HARP HAARP 6.24 14 Pn 01 19 28.4 +1.2
HARP HAARP baz=197 6.24 14 P Pn 01 19 28.3 +1.2
M18K Stony River 6.35 326 Pn 01 19 29.4 +0.8
M18K Stony River baz=140 6.35 326 P Pn 01 19 29.4 +0.8
O29M Mount Kennedy 6.51 49 Pn 01 19 32.2 +1.2
O29M Mount Kennedy baz=237 6.51 49 P Pn 01 19 32.2 +1.2
P29M Windy Craggy 6.56 56 Pn 01 19 32.3 +0.8
P29M Windy Craggy baz=244 6.56 56 P Pn 01 19 32.3 +0.8
L19K White Mountain 6.64 333 Pn 01 19 33.0 +0.3
DHY Denali Highway 6.71 4 Pn Pn 01 19 34.9 +1.2
M17K Holitna River 6.81 321 Pn 01 19 36.0 +0.9
S31K Pelican 6.84 72 Pn 01 19 34.4 -1.0
S31K Pelican baz=261 6.84 72 P Pn 01 19 34.4 -1.0
RND Reindeer 7.02 359 Pn Pn 01 19 39.4 +1.5
TRF Thorofare Moun 7.12 353 Pn Pn 01 19 41.1 +1.8
P30M Million Dollar 7.12 54 Pn 01 19 40.1 +0.8
P30M Million Dollar baz=243 7.12 54 P Pn 01 19 40.1 +0.8
PLBC Pleasant Camp 7.14 60 Pn 01 19 40.4 +1.0
PLBC Pleasant Camp baz=249 7.14 60 P Pn 01 19 40.4 +1.0
M16K Timber Creek 7.14 315 Pn 01 19 40.2 +0.7
M16K Timber Creek baz=126 7.14 315 P Pn 01 19 40.2 +0.7
L18K Granite Mounta 7.17 328 Pn 01 19 40.2 +0.2
L18K Granite Mounta baz=141 7.17 328 P Pn 01 19 40.2 +0.2
HYT Haines Junctio 7.24 48 Pn 01 19 41.8 +0.8
HYT Haines Junctio baz=236 7.24 48 P Pn 01 19 41.8 +0.8
CAST Castle Rocks 7.25 347 Pn Pn 01 19 42.4 +1.3
KTH Kantishna Hill 7.27 351 Pn Pn 01 19 43.3 +2.0
L27K Beaver Creek, 7.46 24 Pn 01 19 45.2 +1.2
BESE Bessie Mountai 7.66 68 Pn 01 19 46.8 +0.2
S32K Killisnoo 7.68 76 Pn 01 19 45.7 -1.2
S32K Killisnoo baz=267 7.68 76 P Pn 01 19 45.7 -1.2
O30N Mendenhall 7.81 51 Pn Pn 01 19 49.7 +1.1
M29M Somme Creek 7.91 36 Pn 01 19 51.2 +1.1
M29M Somme Creek baz=224 7.91 36 P Pn 01 19 51.3 +1.1
K17K Iditarod 8.04 326 Pn 01 19 52.1 +0.3
K17K Iditarod baz=138 8.04 326 P Pn 01 19 52.1 +0.3
WHY Whitehorse 8.29 53 Pn Pn 01 19 56.3 +1.0
ILAR Eielson Array comp=N,0.1nm,0.3s,baz=187,slow=13,SNR=6.4 8.42 5 Pn Pn 01 19 58.4 +1.3
ILAR Sn Sn 01 21 28.9 -3.1
comp=N,0.2nm,0.3s,baz=185,slow=21,SNR=3.7
comp=N,0.2nm,0.4s
P32M Atlin 8.46 62 Pn Pn 01 19 58.2 +0.5
P32M Atlin baz=254 8.46 62 P Pn 01 19 58.5 +0.8
J26L Joseph Creek 8.47 15 Pn 01 19 58.8 +1.0
L29M L29M 8.50 34 Pn 01 19 59.6 +1.4
P33M Teslin, Yukon baz=252 9.08 59 P Pn 01 20 06.8 +0.7
DLBC Dease Lake comp=N,0.5nm,0.3s,baz=270,slow=8.1,SNR=2.6 10.16 71 Pn Pn 01 20 20.8 -0.1
comp=N,1.3nm,0.4s
BBB Bella Bella comp=N,126nm,18.3s,baz=253,slow=32 12.62 101 LR LR 01 24 27.3
INK Inuvik baz=196,slow=11,SNR=7.8 13.74 24 Pn Pn 01 21 11.0 +1.3
INK LR LR 01 26 01.7
comp=N,56nm,18.0s,baz=280,slow=35
comp=N,3.1nm,1.0s
YKA Yellowknife Ar comp=N,0.1nm,0.3s,baz=264,slow=11,SNR=13 18.10 56 P Pn 01 22 08.1 +1.8
comp=N,1.3nm,0.9s
NEW Newport comp=N,54nm,21.0s,baz=289,slow=33 20.67 100 LR LR 01 29 13.3
SFJD Kangerlussuaq comp=N,55nm,19.9s,baz=78,slow=35 42.73 35 LR LR 01 42 52.8
H11N2 WAKE ISLAND Hy baz=33 49.33 241 T T 02 20 34.5
H11N3 WAKE ISLAND Hy baz=33 49.34 241 T T 02 20 30.1
H11N1 WAKE ISLAND Hy baz=33 49.35 241 T T 02 20 42.4
H11S1 WAKE ISLAND Hy baz=28 50.47 240 T T 02 22 08.8
H11S2 WAKE ISLAND Hy baz=28 50.49 240 T T 02 22 16.3
H11S3 WAKE ISLAND Hy baz=28 50.49 240 T T 02 22 05.3
SONM Songino Array comp=N,0.1nm,0.3s,baz=49,slow=7.1,SNR=1.8 58.89 311 P P 01 27 53.3 -0.7
comp=N,0.1nm,0.3s
BVAR Borovoye Array comp=N,0.4nm,0.7s,baz=30,slow=9.0,SNR=1.8 66.35 336 P P 01 28 43.8 +0.3
comp=N,0.4nm,0.7s
ESDC Sonseca Array comp=N,0.5nm,1.0s,baz=337,slow=5.6,SNR=1.0 79.67 27 P P 01 30 01.8 -0.9
comp=N,0.5nm,1.0s

*IDC **06** 01:21:06.4±1.6,55°.87N×149°.31W,h0km,mb3.8/4, mbtmp3.7/9,ML3.4/5,MS3.3/3,Error ellipse: s-maj=30.4km s-min=20.4km az=37.0*

*NEIC **06** 01:21:06.5±1.3,55°.88N±0°.09×149°.2W±0°.1,h7km±6km, ML3.9/42,ML3.6(AEIC),Error ellipse: s-maj=13.9km s-min=8.1km az=166.0*

*AEIC **06** 01:21:10.1±1.7,55°.77N±0°.10×149°.2W±0°.1,h7km±6km, Error ellipse: s-maj=14.1km s-min=8.3km az=167.0*

ISC 06 01:21:07.6±0.9,55°.96N±0°.08×149°.26W±0°.05,h10km, n209,σ0°79/197,mb3.8/4,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res
						ISC	h m s	ISC
OHAK	Old Harbor	2.56	301			Pn	01 21 48.8	-0.4
OHAK						Sn	01 22 17.9	-2.4
OHAK	Old Harbor comp=N,219nm,2.1s	2.56	301	IAML			01 22 18.8	
OHAK	Old Harbor baz=121	2.56	301	P		Pn	01 21 48.8	-0.4
OHAK				S		Sn	01 22 17.9	-2.4
KDAK	Kodiak Island	2.58	316			Pn	01 21 49.5	+0.1
KDAK	Kodiak Island	2.58	316			Sn	01 22 19.4	-1.5
KDAK	Kodiak Island comp=N,9.5nm,0.3s,baz=128,slow=6.8,SNR=62	2.58	316	Pn		Pn	01 21 49.4	0.0
KDAK						Sn	01 22 18.8	-2.1
	comp=N,14nm,0.3s,baz=45,slow=20,SNR=11							
	comp=N,26nm,0.3s							
SII	Sitkinak Islan comp=E,438nm,0.7s	2.81	284	IAML			01 22 25.3	
SII				IAML			01 22 27.3	
	comp=N,287nm,0.9s							
SII	Sitkinak Islan	2.81	284			Pn	01 21 51.6	-1.0
SII						Sn	01 22 24.4	-2.2
SII	Sitkinak Islan baz=104	2.81	284	S		Sn	01 22 24.3	-2.2
SYI	Shuyak Island	3.15	329			Pn	01 21 57.5	+0.2
SYI	Shuyak Island	3.15	329			Sn	01 22 35.9	+1.0
Q20K	Shuyak Island baz=147	3.16	329	P		Pn	01 21 57.5	+0.2
Q20K				S		Sn	01 22 35.9	+1.0
	baz=147							
CNPM	China Poot	3.73	344			Pn	01 22 05.0	-0.2
CNPM						Sn	01 22 48.8	-0.4
Q19K	Cape Douglas,	3.81	323			Pn	01 22 07.3	+1.0
Q19K	Cape Douglas, baz=141	3.81	323	P		Pn	01 22 07.3	+1.0
Q23K	Middleton Isla	3.81	23			Pn	01 22 06.2	-0.2
Q23K	Middleton Isla comp=N,175nm,1.7s	3.81	23	IAML			01 23 28.6	
Q23K				IAML			01 24 20.1	
	comp=E,218nm,1.9s							
MID	Middleton Isla	3.82	23			Pn	01 22 06.0	-0.3
MID	Middleton Isla comp=N,205nm,1.9s	3.82	23	IAML			01 23 31.8	
MID				IAML			01 24 20.1	
	comp=E,236nm,1.8s							
BRSE	Bradley Lake S	3.88	349			Pn	01 22 07.0	-0.3
BRSE						Sn	01 22 51.6	-1.2
BRSE	Bradley Lake S baz=168	3.88	349	P		Pn	01 22 06.9	-0.3
BRSE				S		Sn	01 22 51.6	-1.2
	baz=168							
BRLK	Bradley Lake	3.91	348			Pn	01 22 07.4	-0.4
BRLK				IAML			01 22 55.3	
	comp=E,74nm,0.6s							
BRLK	Bradley Lake	3.91	348			Sn	01 22 52.7	-1.1
SEW	Seward	4.16	359			Pn	01 22 10.6	-0.5
SEW	Seward baz=178	4.16	359	P		Pn	01 22 10.6	-0.5
P23K	Montague Islan	4.17	13			Pn	01 22 11.2	-0.1
P23K	Montague Islan baz=194	4.17	13	P		Pn	01 22 11.2	-0.1
P19K	Oil Pt	4.27	332			Pn	01 22 13.3	+0.6
P19K						Sn	01 23 03.7	+1.2
P19K	Oil Pt comp=N,134nm,0.6s	4.27	332	IAML			01 23 07.6	
P19K				IAML			01 23 07.9	
	comp=E,124nm,0.6s							
P19K	Oil Pt baz=149	4.27	332	P		Pn	01 22 13.3	+0.6
P19K				S		Sn	01 23 03.7	+1.2
	baz=149							
CNTC	Contact Creek	4.29	305			Pn	01 22 13.8	+0.8
Q17K	Contact Creek baz=122	4.29	305	P		Pn	01 22 13.8	+0.8
O20K	Slope Mountain	4.50	338			Pn	01 22 16.0	+0.1
O20K	Slope Mountain baz=156	4.50	338	P		Pn	01 22 16.0	+0.1
IVE	Iliamna Volcan	4.53	335			Pn	01 22 16.3	-0.1
IVE						Sn	01 23 08.6	-0.5
O22K	Cooper Landing	4.54	357			Pn	01 22 16.3	0.0
O22K	Cooper Landing baz=176	4.54	357	P		Pn	01 22 16.6	+0.2
SLKM	Skilak Lake	4.59	354			Pn	01 22 16.7	-0.4
HIN	Hinchinbrook I	4.68	17			Pn	01 22 18.3	-0.1
HIN						Sn	01 23 09.5	-3.2
HIN	Hinchinbrook I comp=N,100nm,0.8s	4.68	17	IAML			01 23 14.3	
HIN				IAML			01 23 14.4	
	comp=E,86nm,0.9s							
P18K	Big Mountain,	4.70	320			Pn	01 22 18.8	+0.2
P18K	Big Mountain, baz=136	4.70	320	P		Pn	01 22 18.8	+0.2
KAIM	Kayak Island	4.74	31			Pn	01 22 19.1	0.0
KAIM	Kayak Island comp=N,116nm,2.0s	4.74	31	IAML			01 23 20.7	
KAIM				IAML			01 23 21.4	
	comp=E,106nm,1.7s							
KAIM	Kayak Island baz=214	4.74	31	P		Pn	01 22 19.1	0.0
RED	Redoubt Volcan	4.84	339			Pn	01 22 19.8	-0.8
RDSO	Redoubt South	4.87	339			Pn	01 22 20.1	-0.9
RSO	Redoubt South	4.88	339	Pn		Pn	01 22 20.5	-0.6
RDT	Redoubt	4.92	342			Pn	01 22 20.9	-0.7
RDWB	Redoubt West	4.92	339			Pn	01 22 20.6	-1.1
EYAK	Cordova Ski Ar	4.96	20			Pn	01 22 22.1	0.0
EYAK	Cordova Ski Ar baz=202	4.96	20	P		Pn	01 22 22.5	+0.4
DFR	Drift River	4.99	340			Pn	01 22 21.7	-0.8
O19K	Port Alsworth	5.03	330			Pn	01 22 22.5	-0.4
O18K	Koktuh Hills	5.03	323			Pn	01 22 23.1	+0.1
O18K	Koktuh Hills comp=E,48nm,2.2s	5.03	323	IAML			01 23 48.8	
O18K				IAML			01 23 53.2	
	comp=N,51nm,1.8s							
O18K	Koktuh Hills baz=139	5.03	323	P		Pn	01 22 23.4	+0.3
P17K	Kvichak River	5.04	313			Pn	01 22 24.2	+1.0
P17K	Kvichak River baz=128	5.04	313	P		Pn	01 22 24.2	+1.0
SUCK	Suckling Hills	5.05	33			Pn	01 22 23.8	+0.4
SUCK	Suckling Hills comp=E,78nm,1.8s	5.05	33	IAML			01 23 36.6	
SUCK				IAML			01 24 01.5	
	comp=N,65nm,1.5s							
RAGM	Ragged Mountai	5.06	27			Pn	01 22 23.9	+0.4
RAGM	Ragged Mountai comp=E,98nm,1.0s	5.06	27	IAML			01 23 21.6	
HMT	Hamilton	5.13	29			Pn	01 22 24.9	+0.5
NICHA	Nichawak Mount	5.13	31			Pn	01 22 24.9	+0.5
RC01	Rabbit Creek A	5.15	357			Pn	01 22 24.6	-0.1
RC01	Rabbit Creek A comp=E,45nm,0.7s	5.15	357	IAML			01 23 25.1	
RC01				IAML			01 23 30.8	
	comp=N,41nm,0.6s							
RC01	Rabbit Creek A baz=177	5.15	357	P		Pn	01 22 24.6	-0.1
GOAT	Goat Mountain	5.22	25			Pn	01 22 26.1	+0.4
BERG	Berg Lake	5.33	31			Pn	01 22 26.9	-0.3
BERG	Berg Lake comp=E,80nm,0.2s	5.33	31	IAML			01 23 28.1	
GRIN	Grindle Hills	5.36	34			Pn	01 22 27.9	+0.3
N20K	Mount Spurr baz=163	5.48	345	P		Pn	01 22 28.9	-0.4
SPCR	Spurr Chakacha	5.48	345			Pn	01 22 28.9	-0.4
KNK	Knik Glacier	5.49	4			Pn	01 22 29.4	+0.1
KNK	Knik Glacier baz=184	5.49	4	P		Pn	01 22 29.5	+0.1
KHIT	Khitrov Hills	5.50	33			Pn	01 22 29.6	-0.1
SPCP	Crater Peak Br	5.53	345			Pn	01 22 30.2	+0.1
SPCG	Spurr Capps Gl	5.54	346			Pn	01 22 30.1	-0.1
SUA	Susitna One	5.58	353			Pn	01 22 30.3	-0.4
SUA	Susitna One baz=171	5.58	353	P		Pn	01 22 30.4	-0.4
BMRM	Bremner River	5.58	24			Pn	01 22 30.7	0.0
BMRM	Bremner River baz=207	5.58	24	P		Pn	01 22 30.6	-0.2
N19K	Bonanza Creek	5.59	333			Pn	01 22 30.4	-0.5
N19K	Bonanza Creek baz=149	5.59	333	P		Pn	01 22 30.4	-0.5
P16K	Nushagak River	5.62	307			Pn	01 22 31.6	+0.4
P16K	Nushagak River baz=121	5.62	307	P		Pn	01 22 31.6	+0.4
WAX	Waxell Ridge	5.63	34			Pn	01 22 31.4	-0.1
O17K	Koliganek Bris	5.67	316			Pn	01 22 32.2	+0.5
O17K	Koliganek Bris baz=130	5.67	316	P		Pn	01 22 32.2	+0.5
SPNN	North Nagishla	5.71	343			Pn	01 22 32.5	-0.1
BARK	Barkley Ridge	5.72	36			Pn	01 22 32.6	0.0
STLK	Strandline Lak	5.72	348			Pn	01 22 32.2	-0.4
MESA	MESA	5.74	39			Pn	01 22 33.1	+0.2
MESA	MESA baz=224	5.74	39	P		Pn	01 22 33.2	+0.2
KLU	Klutina	5.82	16			Pn	01 22 34.2	+0.3
KLU	Klutina baz=198	5.82	16	P		Pn	01 22 34.2	+0.3
GHO	Glory Hole Cre	5.83	2			Pn	01 22 34.9	+0.7
N18K	Kilae Creek	5.88	326			Pn	01 22 34.4	-0.3
N18K	Kilae Creek baz=141	5.88	326	P		Pn	01 22 34.6	-0.2
SML	Sawmill	5.89	4			Pn	01 22 35.5	+0.6
SML	Sawmill baz=185	5.89	4	P		Pn	01 22 35.5	+0.6
BAGL	Bagley Icefiel	5.91	37			Pn	01 22 35.2	0.0
ISLE	Juniper Island	5.92	35			Pn	01 22 35.5	+0.2
O16K	Kokwok River B	5.97	311			Pn	01 22 36.6	+0.7
O16K	Kokwok River B baz=125	5.97	311	P		Pn	01 22 36.6	+0.7
SCM	Sheep Creek Mo	5.98	9			Pn	01 22 37.1	+1.0
SCM	Sheep Creek Mo baz=190	5.98	9	P		Pn	01 22 37.1	+1.0
CHNA	Chernabura Isl baz=77	6.00	263	P		Pn	01 22 35.0	-1.3
CNBA	Chernabura Isl	6.00	263			Pn	01 22 34.6	-1.7
VRDI	Verde Repeater	6.09	27			Pn	01 22 37.8	0.0
SAMH	Samovar Hills	6.14	44			Pn	01 22 39.1	+0.7
SKT	Skwentna	6.15	350			Pn	01 22 38.4	-0.1
SKT	Skwentna baz=168	6.15	350	P		Pn	01 22 38.7	+0.2
KIAG	Kiagna River	6.16	33			Pn	01 22 38.6	0.0
N25K	Chitina, Valde	6.16	21			Pn	01 22 39.4	+0.7
N25K	Chitina, Valde baz=204	6.16	21	P		Pn	01 22 39.3	+0.7
GLB	Gilahina Butte	6.19	25	Pn		Pn	01 22 39.2	+0.2
N17K	Nushagak Hills	6.20	321			Pn	01 22 39.1	-0.1
N17K	Nushagak Hills baz=135	6.20	321	P		Pn	01 22 39.2	+0.1
TABL	Table Mountain	6.21	40			Pn	01 22 39.6	+0.1
M20K	Styx River	6.27	343			Pn	01 22 39.7	-0.5
M20K	Styx River baz=160	6.27	343	P		Pn	01 22 39.9	-0.2
PCA	Pinnacle	6.33	45			Pn	01 22 41.2	+0.2
PINM	Pinnacle baz=232	6.33	45	P		Pn	01 22 41.2	+0.2
PTPK	Patty Peak	6.33	31			Pn	01 22 41.3	+0.2
MCARA	McCarthy VSAT	6.34	28			Pn	01 22 41.3	+0.3
MCARA	McCarthy VSAT baz=212	6.34	28	P		Pn	01 22 41.5	+0.5
PNL	Peninsula	6.45	51			Pn	01 22 42.7	+0.1
PNL	Peninsula baz=238	6.45	51	P		Pn	01 22 42.7	+0.1
BARN	Barnard Glacie	6.48	35			Pn	01 22 43.3	+0.2
BCPM	Bancas Point	6.50	48			Pn	01 22 43.6	+0.4
CTG	Chitna Glacier baz=222	6.51	36	P		Pn	01 22 43.2	-0.3
M18K	Stony River	6.51	331			Pn	01 22 42.9	-0.5
M18K	Stony River baz=146	6.51	331	P		Pn	01 22 42.9	-0.5
CTGM	Chitina Glacie	6.52	36			Pn	01 22 43.3	-0.3
LOGN	Logan Glacier	6.53	38			Pn	01 22 43.7	-0.1
O15K	Ungalikthiuk R	6.53	304			Pn	01 22 44.3	+0.6
O15K	Ungalikthiuk R baz=116	6.53	304	P		Pn	01 22 44.3	+0.6
WACK	Wrangell Chich	6.56	21			Pn	01 22 45.6	+1.3
WAT6	Susitna Watana	6.69	6			Pn	01 22 46.3	+0.3
WAT6	Susitna Watana baz=187	6.69	6	P		Pn	01 22 46.7	+0.7
N16K	Nishlik Lake	6.76	316			Pn	01 22 47.9	+1.1
N16K	Nishlik Lake baz=129	6.76	316	P		Pn	01 22 47.9	+1.1
HARP	HAARP	6.79	16			Pn	01 22 48.6	+1.3
HARP	HAARP baz=199	6.79	16	P		Pn	01 22 48.6	+1.3
L19K	White Mountain	6.87	338			Pn	01 22 47.7	-0.7
M17K	Holitna River	6.92	325			Pn	01 22 49.0	0.0
M17K	Holitna River baz=139	6.92	325	P		Pn	01 22 49.3	+0.3
N15K	Kwethluk River	7.13	311			Pn	01 22 53.1	+1.3
N15K	Kwethluk River baz=122	7.13	311	P		Pn	01 22 53.1	+1.3
O29M	Mount Kennedy	7.13	48			Pn	01 22 52.6	+0.5
O29M	Mount Kennedy baz=236	7.13	48	P		Pn	01 22 52.8	+0.8
P29M	Windy Craggy	7.17	54			Pn	01 22 52.4	-0.1
P29M	Windy Craggy baz=243	7.17	54	P		Pn	01 22 52.4	-0.1
M16K	Timber Creek	7.18	319			Pn	01 22 53.4	+0.9
M16K	Timber Creek baz=132	7.18	319	P		Pn	01 22 53.9	+1.3
DHY	Denali Highway	7.20	7			Pn	01 22 53.5	+0.5
DHY	Denali Highway baz=188	7.20	7	P		Pn	01 22 53.5	+0.5
PN7A	Pavlof North-7	7.22	271			Pn	01 22 52.8	-0.4
S31K	Pelican	7.40	69			Pn	01 22 53.1	-2.5
S31K	Pelican baz=258	7.40	69	P		Pn	01 22 53.4	-2.1
RND	Reindeer	7.47	1			Pn	01 22 57.6	+1.0
TRF	Thorofare Moun	7.53	356			Pn	01 22 57.8	+0.3
TRF	Thorofare Moun baz=175	7.53	356	P		Pn	01 22 57.8	+0.3
CAST	Castle Rocks	7.62	350			Pn	01 22 58.9	+0.3
CAST	Castle Rocks baz=168	7.62	350	P		Pn	01 22 58.9	+0.3
KTH	Kantishna Hill	7.67	354			Pn	01 22 59.7	+0.4
P30M	Million Dollar	7.74	52			Pn	01 23 01.1	+0.8
P30M	Million Dollar baz=242	7.74	52	P		Pn	01 23 01.1	+0.8
PLBC	Pleasant Camp	7.74	58			Pn	01 23 00.4	+0.1
PLBC	Pleasant Camp baz=247	7.74	58	P		Pn	01 23 00.4	+0.1
L16K	Owhat River	7.83	322			Pn	01 23 01.7	+0.3
L16K	Owhat River baz=134	7.83	322	P		Pn	01 23 01.7	+0.3
S32K	Killisnoo	8.22	73			Pn	01 23 04.6	-2.2
S32K	Killisnoo baz=264	8.22	73	P		Pn	01 23 04.8	-1.9
BESE	Bessie Mountai	8.24	65			Pn	01 23 06.1	-1.0
ISLZ	Isanotski Isaza	8.33	267			Pn	01 23 07.3	-1.1
O30N	Mendenhall	8.43	50			Pn	01 23 09.8	0.0
O30N	Mendenhall baz=240	8.43	50	P		Pn	01 23 09.7	0.0
M29M	Somme Creek	8.53	36			Pn	01 23 11.9	+0.7
M29M	Somme Creek baz=224	8.53	36	P		Pn	01 23 11.9	+0.7
L14K	Kuka Creek	8.83	313			Pn	01 23 16.1	+1.0
WHY	Whitehorse	8.91	52			Pn	01 23 16.9	+0.6
ILAR	Eielson Array comp=E,0.3nm,0.3s,baz=191,slow=13,SNR=6.4	8.92	7	Pn		Pn	01 23 16.4	+0.1
ILAR						Sn	01 24 53.1	-3.6
	baz=182,slow=19,SNR=1.3							
	comp=E,1.0nm,0.8s							
P32M	Atlin	9.06	60			Pn	01 23 18.1	-0.4
P32M	Atlin baz=252	9.06	60	P		Pn	01 23 18.1	-0.4
P33M	Teslin, Yukon	9.69	57			Pn	01 23 26.3	-0.7
H21K	Melozitna Rive	9.88	351			Pn	01 23 29.9	+0.3
DLBC	Dease Lake comp=E,0.5nm,0.3s,baz=212,slow=9.5,SNR=1.7	10.72	69	Pn		Pn	01 23 41.9	+0.8
	comp=E,1.2nm,0.3s							
G21K	Allakaket	10.79	351			Pn	01 23 42.6	+0.7
G24K	Hadweenzic Riv	10.81	4	Pn		Pn	01 23 42.9	+0.6
INK	Inuvik baz=205,slow=14,SNR=3.7	14.34	24	Pn		Pn	01 24 31.1	+0.7
	comp=E,1.4nm,1.0s							
YKA	Yellowknife Ar	18.71	55	P		P	01 25 24.8	-1.1
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=264,slow=10,SNR=8.2	18.71	55	P		P	01 25 25.8	-0.2
YKA				LR		LR	01 31 50.5	
	comp=E,94nm,18.7s,baz=258,slow=34							
	comp=E,1.3nm,0.9s							
NVAR	Mina Array Bea comp=E,0.9nm,0.9s,baz=310,slow=7.0,SNR=4.5	27.05	117	P		P	01 26 51.3	+1.1
	comp=E,0.9nm,0.9s							
ULM	Lac du Bonnet comp=E,28nm,18.1s,baz=332,slow=36	31.86	77	LR		LR	01 40 31.4	
FRB	Frobisher Bay comp=E,82nm,18.3s,baz=347,slow=35	38.65	45	LR		LR	01 43 26.9	
H11N2	WAKE ISLAND Hy baz=31,SNR=8.1	48.73	240	T		T	02 22 28.2	
H11N3	WAKE ISLAND Hy baz=31,slow=74,SNR=7.5	48.74	240	T		T	02 23 03.7	
H11N1	WAKE ISLAND Hy baz=31,slow=76,SNR=6.5	48.75	240	T		T	02 22 46.8	
H11S1	WAKE ISLAND Hy baz=28,slow=76,SNR=4.6	49.87	240	T		T	02 24 32.7	
H11S2	WAKE ISLAND Hy baz=28,slow=76,SNR=4.0	49.88	240	T		T	02 24 28.3	
H11S3	WAKE ISLAND Hy baz=28,slow=76,SNR=10	49.89	240	T		T	02 24 30.8	

ZALV	**Zalesovo Beam**	**61.84**	**327**	P		**P**		**01 31 27.4**	**+1.1**
	comp=E,0.6nm,0.6s,baz=34,slow=9.2,SNR=3.7								
	comp=E,0.6nm,0.6s								
FINES	**FINESS Array B**	**62.88**	**3**	P		**P**		**01 31 33.5**	**+0.3**
	comp=E,3.6nm,1.0s,baz=357,slow=12,SNR=3.3								
	comp=E,3.6nm,1.0s								
MKAR	**Makanchi Array**	**68.87**	**325**	P		**P**		**01 32 13.2**	**+1.1**
MKAR	**Makanchi Array**	**68.87**	**325**	P		**P**		**01 32 11.3**	**-0.8**
	comp=E,0.2nm,0.5s,baz=46,slow=6.2,SNR=2.5								
	comp=E,0.2nm,0.5s								
ABKAR	**Akbulak array**	**72.36**	**340**	P		**P**		**01 32 33.9**	**+0.7**

*SDD **06** 01:25:10.6±1.7, 18.˚54N×67.˚98W, h18km±202km, MD3.1, ML1.9, MW2.3*
*RSPR **06** 01:25:12.5, 18.˚24N×67.˚99W, h16km±3km, MD3.1/3*
ISC 06 01:25:09.3±1.0, 18.˚4N±0.˚2×67.˚99W±0.˚04, h10km, n14, σ1§67/15, 1C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SADR	**Isla Saona**	**0.77**	**257**	*e*Sg		**Sg**	**01 25 36.1**	**+1.9**
SADR				IAML			01 25 58.7	
	comp=N,103nm,2.5s							
LSP	**Las Mesas**	**0.88**	**102**	*e*P		**Pg**	**01 25 27.4**	**+1.0**
LSP	**Las Mesas**	**0.88**	**102**	*e*S		**Sg**	**01 25 40.1**	**+2.2**
CRPR	**Cabo Rojo, PR**	**0.91**	**113**	*e*P		**Pg**	**01 25 26.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.91**	**113**	*e*S		**Sg**	**01 25 38.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.91**	**113**	*e*Pg		**Pg**	**01 25 27.0**	**+0.1**
CRPR				*e*Sg		**Sb**	**01 25 42.1**	**+2.7**
CRPR				IAML			01 25 54.5	
	comp=N,44nm,1.6s							
MLPR	**Magueyes Islan**	**0.98**	**113**	*e*P		**Pg**	**01 25 27.1**	**-1.2**
MLPR	**Magueyes Islan**	**0.98**	**113**	*e*S		**Sg**	**01 25 39.9**	**-1.1**
AOPR	**Arecibo Observ**	**1.18**	**91**	*e*P		**Pb**	**01 25 31.9**	**+0.1**
AOPR	**Arecibo Observ**	**1.18**	**91**	*e*S		**Sb**	**01 25 49.0**	**+1.9**
MIDR	**Miches**	**1.18**	**302**	IAML			01 25 52.9	
	comp=N,14nm,0.6s							
CELP	**Cerrillos**	**1.37**	**102**	*e*P		**Pn**	**01 25 33.8**	**-0.8**
CELP	**Cerrillos**	**1.37**	**102**	*e*S		**Sb**	**01 25 50.1**	**-2.6**
HATOM	**Hato Mayor del**	**1.38**	**288**	*e*Pg		**Pn**	**01 25 34.2**	**-0.6**
HATOM				*e*Sg		**Sn**	**01 25 51.6**	**-1.5**
HATOM				IAML			01 25 54.5	
	comp=N,21nm,2.5s							
HATOM				IAML			01 25 56.0	
	comp=E,7.9nm,0.1s							

IDC 06 01:41:34.4±1.4, 24.˚23S×178.˚26W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=67.3km s-min=35.9km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**36.08**	**249**	P		P	01 48 38.5	+0.5
	1.4nm,0.4s,baz=90,slow=11,SNR=5.3							
	1.4nm,0.4s							
ASAR	**Alice Springs**	**43.55**	**261**	P		P	01 49 40.2	-0.2
	1.2nm,0.3s,baz=91,slow=7.2,SNR=21							
ASAR				PcP		PcP	01 51 25.6	-2.7
	0.2nm,0.5s,baz=110,slow=5.0,SNR=2.1							
	1.2nm,0.3s							
WRA	**Warramunga Arr**	**43.97**	**266**	P		P	01 49 43.6	-0.1
	5.1nm,0.5s,baz=102,slow=7.5,SNR=56							
	5.1nm,0.5s							
MKAR	**Makanchi Array**	**113.55**	**312**	PKiKP		PKiKP	02 00 13.6	-1.0
	0.1nm,0.5s,baz=90,slow=4.3,SNR=1.9							
BVAR	**Borovoye Array**	**121.73**	**319**	PKP		PKPdf	02 00 30.0	-0.1
	0.6nm,0.4s,baz=131,slow=2.2,SNR=4.7							
HFS	**Hagfors**	**143.16**	**350**	PKP		PKPdf	02 01 10.0	0.0
	2.7nm,0.5s,baz=49,slow=4.4,SNR=13							
AKASG	**Malin Array Be**	**146.09**	**328**	PKPbc		PKPbc	02 01 16.0	-0.2
	0.8nm,0.4s,baz=45,slow=4.3,SNR=4.5							
MMAI	**Mount Meron Ar**	**149.28**	**294**	PKPbc		PKPbc	02 01 25.5	-0.1
	2.2nm,0.4s,baz=77,slow=4.7,SNR=18							
TORD	**Torodi Ar. Bea**	**168.98**	**180**	PKPab		PKPab	02 02 55.1	0.0
	0.1nm,0.4s,baz=138,slow=4.8,SNR=1.6							

*NAO **06** 01:58:18.3±5.1, 75.˚79N×7.˚76E, ML2.9*
*BER **06** 01:58:22.4±5.0, 75.˚80N×7.˚64E, h31km±75km, mb(Pn)3.8, ML2.9(NAO)*
*KOLA **06** 01:58:23.7, 76.˚19N×8.˚64E, h0km, ML2.3, Greenland sea,Knipovich ridge, middle*
ISC 06 01:58:19.7±3.3, 75.˚89N±0.˚08×8.˚5E±0.˚2, h11km±23km, n20, σ2§70/42, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HSPB	**Hornsund (broa**	**2.00**	**53**	P		**Pb**	**01 58 55.6**	**-0.4**
HSPB				S		**Sn**	**01 59 19.9**	**+1.4**
HSPB	**Hornsund (broa**	**2.00**	**53**	Pn		**Pb**	**01 58 56.4**	**+0.4**
HSPB				Sn		**Sn**	**01 59 21.0**	**+2.6**
HSPB	**Hornsund (broa**	**2.00**	**53**	Pn		**Pb**	**01 58 56.4**	**+0.4**
HSPB				Sn		**Sn**	**01 59 21.0**	**+2.6**
BRBA	**Barentsburg A**	**2.54**	**28**	Pn		**Pn**	**01 59 02.6**	**+1.8**
BRBA				Sn		**Sn**	**01 59 28.8**	**-2.8**
BRBA	**Barentsburg A**	**2.54**	**28**	Pn		**Pn**	**01 59 02.6**	**+1.8**
BRBA				Sn		**Sn**	**01 59 28.8**	**-2.8**
BRBB	**Barentsburg B**	**2.57**	**27**	P		**Pn**	**01 59 02.6**	**+1.4**
BRBB				S		**Sn**	**01 59 29.2**	**-3.1**
BRBB	**Barentsburg B**	**2.57**	**27**	Pn		**Pb**	**01 59 03.2**	**-2.5**
BRBB				Sn		**Sn**	**01 59 29.3**	**-3.1**
BRBB	**Barentsburg B**	**2.57**	**27**	Pn		**Pb**	**01 59 03.2**	**-2.5**
BRBB				Sn		**Sn**	**01 59 29.3**	**-3.1**
SPA0	**Spitsbergen Ar**	**2.91**	**34**	Pn		**Pb**	**01 59 09.0**	**-2.5**
	baz=208,slow=16							
SPA0				*e*P		**Pn**	**01 59 09.2**	**+3.3**
SPA0				IAML			01 59 09.4	
	comp=Z,11nm,0.3s							
SPA0				*e*S		**Sn**	**01 59 43.3**	**+2.6**
SPA0				Sn		**Sn**	**01 59 43.4**	**+2.6**
	baz=201,slow=16							
SPA0				*e*			01 59 44.9	
SPA0	**Spitsbergen Ar**	**2.91**	**34**	Pn		**Pb**	**01 59 09.0**	**-2.5**
	baz=208,slow=16							
SPA0				Sn		**Sn**	**01 59 43.4**	**+2.6**
	baz=201,slow=16							
SPITS	**Spitsbergen Ar**	**2.91**	**34**	P		**Pb**	**01 59 08.9**	**-2.5**
SPITS				S		**Sn**	**01 59 42.9**	**+2.2**
KBS	**Kingsbay**	**3.15**	**12**	P		**Pn**	**01 59 09.8**	**+0.7**
KBS				S		**Sn**	**01 59 45.8**	**-0.9**
KBS	**Kingsbay**	**3.15**	**12**	*e*P		**Pn**	**01 59 10.6**	**+1.5**
KBS				IAML			01 59 12.1	
	comp=Z,19nm,0.3s							
KBS				*e*S		**Sn**	**01 59 44.7**	**-2.0**
KBS	**Kingsbay**	**3.15**	**12**	Pn		**Pn**	**01 59 10.2**	**+1.0**
KBS				Sn		**Sn**	**01 59 44.2**	**-2.4**
HOPEN	**Hopen**	**4.00**	**73**	Pn		**Pn**	**01 59 24.7**	**+3.9**
HOPEN				Sn		**Sn**	**02 00 09.7**	**+2.1**
HOPEN	**Hopen**	**4.00**	**73**	Pn		**Pn**	**01 59 24.7**	**+3.9**
HOPEN				Sn		**Sn**	**02 00 09.7**	**+2.1**
ARA0	**ARCESS Array S**	**8.10**	**133**	Pn		**Pn**	**02 00 17.4**	**+0.3**
	baz=324,slow=16							
ARA0				Sn		**Sn**	**02 01 44.3**	**-4.2**
	baz=331,slow=18							
ARA0	**ARCESS Array S**	**8.10**	**133**	Pn		**Pn**	**02 00 17.4**	**+0.3**
	baz=324,slow=16							
ARA0				Sn		**Sn**	**02 01 44.3**	**-4.2**
	baz=331,slow=18							
KEV	**Kevo**	**8.19**	**129**	Pn		**Pn**	**02 00 18.6**	**+0.3**
KEV				Sn		**Sn**	**02 01 45.8**	**-4.9**
KEV	**Kevo**	**8.19**	**129**	Pn		**Pn**	**02 00 18.6**	**+0.3**
KEV				Sn		**Sn**	**02 01 45.8**	**-4.9**

*IDC **06** 02:05:51.0±1.8, 35.˚53N×26.˚37E, h0km, mb3.3/2, mbtmp3.2/5, ML2.8/3, MS2.9/2, Error ellipse: s-maj=64.6km s-min=25.1km az=145.0*
*ISK **06** 02:05:54.6, 35.˚71N×26.˚32E, h17km, ML2.9/20*
*GII **06** 02:05:56.0±0.4, 35.˚205N±0.˚001×26.˚913E±0.˚002, h0km, Mws3.0, confirmed*
*ATH **06** 02:05:56.5, 35.˚66N×26.˚36E, h24km±4km, ML2.9/8, Error ellipse: s-maj=4.4km s-min=0.9km az=155.0*
*THE **06** 02:05:57.2, 35.˚65N×26.˚36E, h31km±4km, ML2.9/8, Error ellipse: s-maj=4.5km s-min=0.4km az=184.0*
*AFAD **06** 02:05:59.9±0.0, 35.˚95N×26.˚62E, h27km±1km, ML2.6*
ISC 06 02:05:53.3±1.2, 35.˚62N±0.˚02×26.˚43E±0.˚02, h15km±9km, n130, σ1§59/169, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**0.53**	**199**	Pg		**Pn**	**02 06 07.5**	**+1.1**
ZKR				Sg		**Sn**	**02 06 15.7**	**+0.6**
ZKR	**Zakros**	**0.53**	**199**	P		**Pn**	**02 06 07.9**	**+1.5**
ZKR				S		**Sn**	**02 06 15.7**	**+0.6**
	812nm,0.2s							
ZKR	**Zakros**	**0.53**	**199**	P		**Pn**	**02 06 07.9**	**+1.5**
ZKR				S		**Sn**	**02 06 15.4**	**+0.3**
ZKR				AML		AML	02 06 15.9	
	comp=E,2398μm,0.2s							
ZKR				AML		AML	02 06 16.2	
	comp=N,819μm,0.2s							
KARP	**Karpathos**	**0.60**	**96**	Pg		**Pn**	**02 06 08.9**	**+1.6**
KARP				Sg		**Sn**	**02 06 18.8**	**+2.0**
KARP	**Karpathos**	**0.60**	**96**	P		**Pn**	**02 06 09.2**	**+1.8**
KARP				S		**Sn**	**02 06 18.2**	**+1.4**
	comp=N,2μm,0.2s							
KARP	**Karpathos**	**0.60**	**96**	P		**Pn**	**02 06 09.2**	**+1.8**
KARP				S		**Sn**	**02 06 18.0**	**+1.2**
KARP				AML		AML	02 06 18.9	
	comp=E,3631μm,0.2s							
KARP				AML		AML	02 06 20.2	
	comp=N,2222μm,0.1s							
FRMA	**Ierapetra Chan**	**0.83**	**224**	P		**Pg**	**02 06 10.7**	**+1.3**
FRMA				S		**Sb**	**02 06 20.8**	**+0.4**
	comp=N,495nm,0.4s							
FRMA	**Ierapetra Chan**	**0.83**	**224**	P		**Pn**	**02 06 11.0**	**+0.5**
FRMA				S		**Sb**	**02 06 20.7**	**+0.4**
SANT	**Santorini**	**1.09**	**314**	Pg		**Pb**	**02 06 13.6**	**-0.3**
SANT				Sg		**Sg**	**02 06 27.5**	**-1.2**
SANT	**Santorini**	**1.09**	**314**	P		**Pg**	**02 06 14.3**	**-0.1**
SANT				S		**Sg**	**02 06 27.7**	**-1.0**
	comp=N,512nm,0.3s							
SANT	**Santorini**	**1.09**	**314**	P		**Pg**	**02 06 14.4**	**-0.1**
SANT				AML		AML	02 06 28.1	
	comp=N,385μm,0.3s							
SANT				AML		AML	02 06 28.2	
	comp=E,1655μm,0.3s							
THR8	**Santorini-Mono**	**1.10**	**316**	P		**Pg**	**02 06 14.5**	**-0.2**
THR8	**Santorini-Mono**	**1.10**	**316**	P		**Pg**	**02 06 14.9**	**+0.2**
THR6	**Thira Island,**	**1.12**	**312**	P		**Pg**	**02 06 14.9**	**0.0**
THR6	**Thira Island,**	**1.12**	**312**	P		**Pg**	**02 06 15.1**	**+0.2**
HRKL	**Herakleio**	**1.13**	**255**	Pg		**Pg**	**02 06 15.2**	**+0.1**
HRKL	**Herakleio**	**1.13**	**255**	P		**Pn**	**02 06 15.0**	**+0.5**
HRKL	**Herakleio**	**1.13**	**255**	P		**Pn**	**02 06 15.1**	**+0.5**
NISR	**Nisiros**	**1.14**	**29**	P		**Pb**	**02 06 15.9**	**+1.1**
NISR				S		**Sn**	**02 06 30.6**	**+0.4**
	comp=E,515nm,0.5s							
NISR	**Nisiros**	**1.14**	**29**	P		**Pg**	**02 06 16.0**	**+0.6**
THR9	**Santorini-Faro**	**1.14**	**311**	P		**Pg**	**02 06 15.3**	**-0.1**
THR9				S		**Sg**	**02 06 29.7**	**-0.7**
THR9	**Santorini-Faro**	**1.14**	**311**	P		**Pg**	**02 06 15.4**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.15**	**313**	P		**Pg**	**02 06 15.4**	**-0.2**
THR3	**Thira Island,**	**1.15**	**314**	P		**Pg**	**02 06 15.3**	**-0.3**
THR3	**Thira Island,**	**1.15**	**314**	P		**Pg**	**02 06 15.6**	**+0.1**
KSTL	**Kastelli Herak**	**1.16**	**255**	P		**Pn**	**02 06 13.5**	**-1.4**
THT2	**Imerovigli**	**1.16**	**315**	P		**Pg**	**02 06 15.6**	**-0.1**
THT2				S		**Sb**	**02 06 29.1**	**-0.8**
CMBO	**Columbo, Santo**	**1.19**	**316**	P		**Pg**	**02 06 16.1**	**-0.2**
CMBO				S		**Sn**	**02 06 30.1**	**-1.3**
	comp=E,1μm,0.4s							
CMBO	**Columbo, Santo**	**1.19**	**316**	P		**Pg**	**02 06 16.2**	**-0.1**
CMBO				S		**Sn**	**02 06 30.1**	**-1.3**
CMBO				AML		AML	02 06 30.6	
	comp=N,3158μm,0.5s							
CMBO				AML		AML	02 06 30.7	
	comp=E,2577μm,0.3s							
IDI	**Anoyia**	**1.30**	**256**	Pn		**Pb**	**02 06 17.5**	**0.0**
IDI	**Anoyia**	**1.30**	**256**	P		**Pn**	**02 06 17.1**	**+0.1**
IDI	**Anoyia**	**1.30**	**256**	P		**Pn**	**02 06 17.4**	**+0.3**
IDI				AML		AML	02 06 33.0	
	comp=N,555μm,0.2s							
IDI				AML		AML	02 06 36.3	
	comp=E,416μm,0.2s							
YAZI	**Mula-Datşa-**	**1.35**	**38**	P		**Pn**	**02 06 18.6**	**+1.0**
YAZI				S		**Sn**	**02 06 33.2**	**-2.0**
KLNA	**Kalymnos**	**1.41**	**18**	P		**Pb**	**02 06 19.5**	**+0.2**
KLNA				AML		AML	02 06 37.1	
	comp=N,460μm,0.2s							
KLNA				AML		AML	02 06 37.5	
	comp=E,651μm,0.3s							
DAT	**Datca**	**1.45**	**40**	Pn		**Pb**	**02 06 20.7**	**+0.7**
DAT	**Datca**	**1.45**	**40**	P		**Pb**	**02 06 20.9**	**+0.9**
DAT				S		**Sn**	**02 06 36.0**	**-1.8**
DAT				*i* AML		AML	02 07 06.0	
	comp=E,588nm,2.2s							
TMBK	**Timbaki Herakl**	**1.47**	**249**	P		**Pb**	**02 06 20.7**	**+0.4**
TMBK				S		**Sn**	**02 06 37.9**	**-0.2**
TMBK	**Timbaki Herakl**	**1.47**	**249**	P		**Pb**	**02 06 20.8**	**+0.5**
ARG	**Arkhangelos**	**1.50**	**66**	Pn		**Pb**	**02 06 22.2**	**+1.3**
ARG	**Arkhangelos**	**1.50**	**66**	P		**Pb**	**02 06 22.1**	**+1.2**
ARG				S		**Sn**	**02 06 40.5**	**+1.5**
	comp=E,385nm,0.4s							
ARG	**Arkhangelos**	**1.50**	**66**	P		**Pb**	**02 06 22.1**	**+1.2**
ARG				S		**Sn**	**02 06 40.7**	**+1.7**
BODT	**Bodrum**	**1.61**	**26**	Pn		**Pn**	**02 06 22.4**	**+1.2**
BODT	**Bodrum**	**1.61**	**26**	P		**Pb**	**02 06 22.8**	**+0.1**
BODT				S		**Sn**	**02 06 42.0**	**+0.3**
APE	**Apeiranthos**	**1.62**	**334**	Pn		**Pn**	**02 06 21.6**	**+0.2**
APE	**Apeiranthos**	**1.62**	**334**	P		**Pn**	**02 06 22.0**	**+0.6**
APE	**Apeiranthos**	**1.62**	**334**	P		**Pn**	**02 06 22.1**	**+0.6**
APE				S		**Sn**	**02 06 40.2**	**-1.9**
APE				AML		AML	02 06 41.2	
	comp=E,634μm,0.3s							
APE				AML		AML	02 06 42.2	
	comp=N,523μm,0.3s							
BDRM	**Kayabasi**	**1.66**	**29**	P		**Pn**	**02 06 23.3**	**+1.4**
BDRM				S		**Sn**	**02 06 41.7**	**-1.3**
RFTAA	**Mazikoy-Bodrum**	**1.74**	**37**	Pn		**Pb**	**02 06 24.8**	**-0.2**
TURN	**Turunc**	**1.87**	**51**	P		**Pn**	**02 06 26.4**	**+1.7**
TURN				S		**Sn**	**02 06 48.9**	**+0.9**
CHAN	**Chania**	**1.95**	**268**	P		**Pn**	**02 06 27.2**	**+1.3**
MHLO	**Agia Marina, M**	**1.96**	**304**	P		**Pb**	**02 06 27.6**	**-1.1**
MLSB	**Milas**	**2.00**	**32**	Pn		**Pn**	**02 06 28.2**	**+1.6**
IMMV	**Iera Moni Meta**	**2.00**	**266**	Pn		**Pn**	**02 06 27.5**	**+0.8**
IMMV	**Iera Moni Meta**	**2.00**	**266**	P		**Pn**	**02 06 27.0**	**+0.3**
IMMV	**Iera Moni Meta**	**2.00**	**266**	P		**Pn**	**02 06 27.3**	**+0.6**
IMMV				AML		AML	02 06 51.9	
	comp=N,462μm,0.3s							
IMMV				AML		AML	02 06 55.2	
	comp=E,359μm,0.3s							
GVD	**Gavdhos**	**2.07**	**249**	Pn		**Pn**	**02 06 28.8**	**+1.3**
GVD	**Gavdhos**	**2.07**	**249**	P		**Pb**	**02 06 30.1**	**-0.5**
SMG	**Samos**	**2.11**	**9**	P		**Pn**	**02 06 29.0**	**+0.8**
SMG				S		**Sn**	**02 06 54.0**	**-0.2**
SMG	**Samos**	**2.11**	**9**	P		**Pn**	**02 06 28.9**	**+0.8**
YER	**Yerkesik**	**2.13**	**44**	Pn		**Pb**	**02 06 30.9**	**-0.7**
DALY	**Dalyan (Mula)**	**2.16**	**56**	Pn		**Pb**	**02 06 31.5**	**-0.6**
GCAM	**G?zelcaml?**	**2.18**	**17**	P		**Pg**	**02 06 34.8**	**-0.3**
GCAM				S		**Sn**	**02 06 54.5**	**-1.1**
RODP	**Rodopos**	**2.18**	**269**	Pn		**Pn**	**02 06 29.5**	**+0.4**
RODP	**Rodopos**	**2.18**	**269**	P		**Pn**	**02 06 30.0**	**+0.9**
MULA	**Mugla, Merkez-**	**2.23**	**42**	P		**Pb**	**02 06 33.4**	**0.0**
MULA				S		**Sn**	**02 06 58.0**	**+0.7**
FETY	**Fethiye**	**2.38**	**64**	Pn		**Pn**	**02 06 34.9**	**+3.1**
FETY	**Fethiye**	**2.38**	**64**	P		**Pb**	**02 06 37.0**	**+1.2**
FETY				S		**Sn**	**02 07 03.6**	**+3.0**
SABU	**Mula-Dalaman**	**2.38**	**59**	P		**Pb**	**02 06 35.1**	**-0.7**
SABU				S		**Sn**	**02 07 02.1**	**+1.4**
SABU				*i* AML		AML	02 07 04.0	
	comp=E,34nm,0.3s							
SABU				*i* AML		AML	02 07 08.0	
	comp=E,36nm,0.4s							
IZZE	**Mula-Seydike**	**2.41**	**69**	P		**Pn**	**02 06 35.3**	**+3.2**
IZZE				S		**Sn**	**02 07 02.5**	**+1.1**
IZZE				*i* AML		AML	02 07 09.0	
	comp=E,55nm,0.3s							
IZZE				*i* AML		AML	02 07 12.0	
	comp=E,39nm,0.4s							
IZZE				*i* AML		AML	02 07 20.0	
	comp=E,50nm,0.5s							
ANKY	**Antikythira Is**	**2.56**	**277**	P		**Pn**	**02 06 34.7**	**+0.4**
ANKY	**Antikythira Is**	**2.56**	**277**	P		**Pn**	**02 06 34.7**	**+0.4**
KSL	**Kastellorizon**	**2.61**	**77**	P		**Pn**	**02 06 37.9**	**+2.9**
KSL				S		**Sn**	**02 07 08.6**	**+2.1**
KSL	**Kastellorizon**	**2.61**	**77**	P		**Pn**	**02 06 38.0**	**+2.9**
ESEN	**Aydn-Nazilli**	**2.67**	**35**	P		**Pn**	**02 06 38.7**	**+3.0**
ESEN				S		**Sn**	**02 07 08.0**	**+0.2**
DNZT	**Denizli-Tavas-**	**2.67**	**51**	P		**Pb**	**02 06 40.3**	**-0.5**
DNZT				S		**Sb**	**02 07 11.7**	**-1.7**
CAME	**Cameli-Denizli**	**2.67**	**59**	Pn		**Pn**	**02 06 38.8**	**+2.9**
TAVA	**DENIZLI_Tavas**	**2.72**	**47**	P		**Pb**	**02 06 43.0**	**+1.2**
TAVA				S		**Sn**	**02 07 10.9**	**+1.6**
CAEL	**Denizli, Camel**	**2.77**	**56**	P		**Pb**	**02 06 42.0**	**-0.7**
CAEL				S		**Sn**	**02 07 14.6**	**+4.0**
CAEL				*i* AML		AML	02 07 19.0	
	comp=E,44nm,0.7s							
CAEL				*i* AML		AML	02 07 26.0	
	comp=E,52nm,0.5s							
CAEL				*i* AML		AML	02 07 26.0	
	comp=E,38nm,0.5s							
CHOS	**Chios island**	**2.78**	**354**	P		**Pn**	**02 06 38.4**	**+1.0**
CHOS				S		**Sn**	**02 07 10.2**	**-0.6**
CHOS	**Chios island**	**2.78**	**354**	P		**Pn**	**02 06 38.3**	**+0.9**
BLCB	**Balcova**	**2.81**	**10**	P		**Pn**	**02 06 38.3**	**+0.6**
BLCB				S		**Sn**	**02 07 10.9**	**-0.3**
DNIZ	**Denizli-Tavas-**	**2.90**	**46**	P		**Pb**	**02 06 43.0**	**-1.9**
DNIZ				S		**Sn**	**02 07 15.4**	**+1.7**
DNIZ				*i* AML		AML	02 07 22.0	
	comp=E,37nm,0.3s							
DNIZ				*i* AML		AML	02 07 24.0	
	comp=E,27nm,0.4s							
APMY	**Acipayam-Deniz**	**2.96**	**50**	Pn		**Pn**	**02 06 42.9**	**+3.0**
KIRA	**zmir-Kiraz**	**3.02**	**31**	P		**Pn**	**02 06 43.0**	**+2.3**
KIRA				S		**Sn**	**02 07 16.1**	**-0.6**
ELL	**Elmali**	**3.03**	**67**	Pn		**Pn**	**02 06 44.2**	**+3.3**
VLI	**Veliai**	**3.04**	**292**	P		**Pn**	**02 06 41.8**	**+1.0**
VLI	**Veliai**	**3.04**	**292**	P		**Pn**	**02 06 41.7**	**+0.9**
ATHU	**Athens Univers**	**3.17**	**319**	P		**Pn**	**02 06 44.1**	**+1.5**
KRND	**KRANIDI**	**3.18**	**305**	P		**Pn**	**02 06 44.1**	**+1.3**
KRND				S		**Sn**	**02 07 20.4**	**0.0**
KRND	**KRANIDI**	**3.18**	**305**	P		**Pn**	**02 06 44.5**	**+1.7**
KYMI	**Kymi, Euboea I**	**3.54**	**329**	P		**Pn**	**02 06 49.3**	**+1.5**
SIGR	**SIGRI**	**3.62**	**353**	P		**Pn**	**02 06 49.7**	**+0.9**
THAL	**Thalero**	**3.87**	**310**	P		**Pn**	**02 06 53.4**	**+1.1**
KLV	**Kalavryta, Ach**	**4.20**	**306**	P		**Pn**	**02 06 57.4**	**+0.5**
PAIG	**Paliouri**	**4.82**	**334**	P		**Pn**	**02 07 07.3**	**+1.9**
CSS	**Mathiatis**	**5.68**	**95**	P		**Pn**	**02 07 17.6**	**+0.4**
BRTR	**Keskin Array B**	**7.03**	**52**	Pn		**Pn**	**02 07 38.3**	**+2.5**
	comp=E,0.1nm,0.3s,baz=222,slow=16,SNR=2.6							
	comp=E,0.3nm,0.6s							
MMC7	**Mount Meron ar**	**7.85**	**107**	P		**Pn**	**02 07 46.3**	**-0.7**
MMAI	**Mount Meron Ar**	**7.86**	**107**	Pn		**Pn**	**02 07 46.9**	**-0.3**
	comp=E,0.4nm,0.3s,baz=298,slow=13,SNR=7.6							
MMAI				LR		LR	02 12 23.6	
	comp=E,24nm,20.0s,baz=258,slow=50							
	comp=E,0.3nm,0.2s							
MMA0B	**Mount Meron ar**	**7.86**	**107**	P		**Pn**	**02 07 46.6**	**-0.6**
MMA0B	**Mount Meron ar**	**7.86**	**107**	S		**Sn**	**02 09 13.1**	**-2.8**
GEM	**Giv'at Ha'Em**	**8.00**	**105**	S		**Sn**	**02 09 16.6**	**-2.5**
GEM	**Giv'at Ha'Em**	**8.00**	**105**	P		**Pn**	**02 07 48.1**	**-0.8**
NATI	**Neve Ativ**	**8.04**	**104**	S		**Sn**	**02 09 17.5**	**-2.6**
NATI	**Neve Ativ**	**8.04**	**104**	P		**Pn**	**02 07 49.0**	**-0.5**
SALP	**Salfit**	**8.10**	**113**	P		**Pn**	**02 07 49.2**	**-1.2**
SALP	**Salfit**	**8.10**	**113**	S		**Sn**	**02 09 18.7**	**-3.1**
KZIT	**Kziot**	**8.16**	**123**	P		**Pn**	**02 07 50.3**	**-0.9**
KZIT	**Kziot**	**8.16**	**123**	S		**Sn**	**02 09 17.9**	**-5.2**
KSHT	**Keshet**	**8.19**	**106**	P		**Pn**	**02 07 51.2**	**-0.5**
KSHT	**Keshet**	**8.19**	**106**	S		**Sn**	**02 09 21.2**	**-2.9**
HMDT	**Nahal Hemdat**	**8.27**	**111**	P		**Pn**	**02 07 51.6**	**-1.0**
HMDT	**Nahal Hemdat**	**8.27**	**111**	S		**Sn**	**02 09 22.9**	**-3.0**
YTIR	**Yattir**	**8.40**	**118**	S		**Sn**	**02 09 26.1**	**-3.2**
YTIR	**Yattir**	**8.40**	**118**	P		**Pn**	**02 07 53.7**	**-1.0**
DSI	**Dead Sea**	**8.48**	**116**	S		**Sn**	**02 09 27.9**	**-3.2**
DSI	**Dead Sea**	**8.48**	**116**	P		**Pn**	**02 07 54.6**	**-1.1**
MSBI	**Mazada**	**8.60**	**117**	P		**Pn**	**02 07 56.7**	**-0.6**
MSBI	**Mazada**	**8.60**	**117**	S		**Sn**	**02 09 30.2**	**-3.8**
GHAJ	**Ghor Haditha**	**8.76**	**117

JTK eS Sn 02 35 07.4 -2.6
JMZ Minamidaito 2 2.38 95 Pn 02 34 54.3 -1.2
JMZ Minamidaito 2 2.38 95 P Pn 02 34 54.1 -1.4
JMZ eS Sn 02 35 21.7 -3.2
JKDJ Kitadaitoujima 2.44 91 P Pn 02 34 55.1 -1.2
JKDJ S Sn 02 35 22.7 -3.5
NACB Ninganchiao 6.61 255 Pn Pn 02 35 51.7 -2.0
YHNB Yeheng 6.67 260 Pn Pn 02 35 54.9 +0.3
SSLB Suanglung 7.29 254 Pn Pn 02 36 00.7 -2.3
JNU Nakatsue 7.34 15 Pn Pn 02 36 04.5 +0.8
JNU Nakatsue 7.34 15 Pn Pn 02 36 04.3 +0.6
comp=N,2.3nm,0.3s,baz=216,slow=1.8,SNR=10.0
JNU Sn Sn 02 37 23.1 -4.2
comp=N,0.6nm,0.3s,baz=230,slow=16,SNR=1.2
comp=N,10nm,0.4s
TPUB Ta-pu 7.74 251 Pn Pn 02 36 08.2 -0.9
JMN Monobe 8.94 30 Pn Pn 02 36 26.9 +1.3
KSRS Korea Array 11.40 357 Pn Pn 02 36 55.8 -3.5
comp=N,0.2nm,0.3s,baz=167,slow=8.6,SNR=1.3
KSRS LR LR 02 41 42.5
comp=N,149nm,19.4s,baz=175,slow=40
comp=N,17nm,0.7s
JCJ Chichijima 12.21 82 LR LR 02 40 57.1
comp=N,75nm,21.3s,baz=64,slow=33
USRK Ussuriysk Ar. 18.34 8 P 02 38 31.9 +1.0
USRK Ussuriysk Ar. 18.34 8 P Pn 02 38 31.1 +0.3
comp=N,0.2nm,0.3s,baz=175,slow=9.2,SNR=7.1
comp=N,3.6nm,0.7s
ULN Ulaanbaatar 27.60 328 P P 02 40 04.4 +0.3
SONM Songino Array 27.89 327 P P 02 40 07.5 +0.8
comp=N,3.2nm,0.8s,baz=139,slow=11,SNR=15
comp=N,3.2nm,0.8s
CMAR Chiang Mai Arr 28.41 261 P P 02 40 12.3 +0.9
comp=N,1.3nm,0.3s,baz=54,slow=7.5,SNR=5.3
comp=N,1.3nm,0.3s
MK31 Makanchi Array 41.91 312 P P 02 42 06.3 -0.9
MKAR Makanchi Array 41.91 312 P P 02 42 06.2 -1.0
comp=N,1.3nm,0.6s,baz=98,slow=10,SNR=22
comp=N,1.3nm,0.6s
MAKZ Makanchi 42.12 312 P P 02 42 08.8 -0.1
ZALV Zalesovo Beam 42.60 323 P P 02 42 10.2 -2.4
comp=N,1.0nm,0.5s,baz=119,slow=9.7,SNR=6.2
ZALV LR LR 03 01 25.4
comp=N,47nm,18.5s,baz=103,slow=38
comp=N,1.0nm,0.5s
KURBB Kurchatov Arra 45.22 317 P P 02 42 32.0 -1.8
comp=N,1.3nm,0.5s,baz=102,slow=8.6,SNR=13
comp=N,1.3nm,0.5s
WB0 Warramunga Arr 45.87 172 P P 02 42 39.4 +0.2
WB0 lAmb lAmb 02 42 48.0
comp=Z,4.7nm,0.6s
WRA Warramunga Arr 46.04 172 P P 02 42 40.1 -0.4
comp=Z,1.6nm,0.5s,baz=353,slow=8.4,SNR=14
comp=Z,1.6nm,0.5s
BILL Bilibino 47.76 18 P P 02 42 55.5 +2.1
BILL lAmb lAmb 02 42 56.9
comp=Z,8.5nm,1.2s
ASAR Alice Springs 49.67 174 P P 02 43 09.4 +0.7
comp=Z,0.7nm,0.6s,baz=8.6,slow=13,SNR=17
comp=Z,0.7nm,0.6s
KKAR Karatay Array 49.79 306 P 02 43 09.1 -0.4
BVAR Borovoye Array 50.64 318 P P 02 43 14.6 -1.2
comp=Z,1.6nm,0.5s,baz=73,slow=9.7,SNR=10
comp=Z,1.6nm,0.5s
KBL Kabul 51.48 295 P P 02 43 22.8 +0.2
KBL lAmb lAmb 02 43 40.9
comp=Z,5.8nm,0.7s
ABKAR Akbulak array 57.02 313 P P 02 44 02.1 -0.3
ABKAR lAmb lAmb 02 44 03.6
comp=Z,3.7nm,0.7s
ABKAR Akbulak array 57.02 313 P P 02 44 02.9 +0.5
C18K Utukok River 58.82 24 P P 02 44 15.7 +0.8
C18K lAmb lAmb 02 44 28.4
comp=Z,4.7nm,1.2s
STKA Stephens Creek 58.91 167 P P 02 44 16.1 +0.3
comp=Z,0.4nm,0.3s,baz=325,slow=12,SNR=4.9
comp=Z,0.4nm,0.3s
GEYT Allbeck 59.67 300 P P 02 44 21.0 -0.3
comp=Z,2.0nm,0.7s,baz=76,slow=6.1,SNR=3.6
comp=Z,2.0nm,0.7s
D19K Kuna River 59.93 24 P P 02 44 23.7 +1.2
E19K Redstone River 60.18 25 P P 02 44 25.4 +1.3
E19K lAmb lAmb 02 44 42.6
comp=Z,3.2nm,0.8s
B21K Ikpikpuk River 61.26 23 P P 02 44 33.1 +1.7
B21K lAmb lAmb 02 44 38.0
comp=Z,4.8nm,1.0s
PPLA Purkeypile 62.28 31 P P 02 44 40.1 +1.4
HOM Homer 62.79 34 P P 02 44 42.6 +0.7
SUA Susitna One 63.06 32 P P 02 44 44.9 +1.0
SUA lAmb lAmb 02 44 47.5
comp=Z,5.4nm,1.0s
E24K Your Creek 63.50 25 P P 02 44 47.8 +1.2
E24K lAmb lAmb 02 44 53.9
comp=Z,2.6nm,0.7s
MCK McKinley 63.68 29 P P 02 44 48.0 +0.2
MCK lAmb lAmb 02 44 51.1
comp=Z,7.7nm,1.2s
RND Reindeer 63.75 30 P P 02 44 48.7 +0.3
RND lAmb lAmb 02 45 04.2
comp=Z,5.3nm,0.9s
F24K Squaw Lake 63.77 25 P P 02 44 49.9 +1.5
F24K lAmb lAmb 02 44 55.7
comp=Z,2.9nm,0.6s
MDM Murphy Dome 63.87 28 P P 02 44 50.5 +1.4
MDM lAmb lAmb 02 45 05.0
comp=Z,5.8nm,0.9s
H24K Noodor Dome 63.93 27 P P 02 44 50.8 +1.4
H24K lAmb lAmb 02 45 11.9
comp=Z,7.4nm,1.5s
ILAR Eielson Array 64.46 28 P P 02 44 52.1 -0.7
comp=Z,0.2nm,0.6s,baz=266,slow=3.9,SNR=4.5
comp=Z,0.2nm,0.6s
BMAR Burnt Mountain 65.05 25 P P 02 44 58.5 +1.8
SCRK Sand Creek 65.82 29 P P 02 45 01.9 0.0
SCRK lAmb lAmb 02 45 05.4
comp=Z,6.0nm,1.4s
M26K Nabesna, AK 66.55 30 P P 02 45 07.4 +0.9
M26K lAmb lAmb 02 45 09.9
comp=Z,6.1nm,1.1s
VRDI Verde Repeater 66.58 32 P P 02 45 07.9 +1.0
E28M Babbage River 66.72 24 P P 02 45 08.7 +1.2
BCAR Beaver Creek A 66.96 30 P P 02 45 10.2 +1.0
I28M Miner Creek 67.24 27 P P 02 45 12.3 +1.4
H29M Whitestone 67.69 26 P P 02 45 15.1 +1.4
H29M lAmb lAmb 02 45 28.2
comp=Z,8.2nm,1.4s
G30M tAoh Zraii Nji 68.33 25 P P 02 45 18.2 +0.5
G30M lAmb lAmb 02 45 22.0
comp=Z,9.2nm,1.4s
L29M L29M 68.57 29 P P 02 45 19.9 +0.7
L29M lAmb lAmb 02 45 57.0
comp=Z,9.2nm,1.4s
I30M Mount Dempster 68.74 27 P P 02 45 20.6 +0.2
J30M Hart River 68.94 27 P P 02 45 22.3 +0.7
INK Inuvik 68.94 23 P P 02 45 22.1 +0.7
INK Inuvik 68.94 23 P P 02 45 21.6 +0.2
comp=Z,1.0nm,0.7s,baz=298,slow=8.0,SNR=6.4
comp=Z,1.0nm,0.7s
SPITS Spitsbergen Ar 69.09 348 P P 02 45 22.0 -0.3
comp=Z,15nm,1.0s,baz=111,slow=11,SNR=1.6
comp=Z,15nm,1.0s
M30M Minto, Yukon 69.31 30 P P 02 45 25.1 +1.2
M30M lAmb lAmb 02 45 52.9
comp=Z,4.6nm,1.2s
KBZ Khabaz 69.53 310 P P 02 45 25.1 -0.4
comp=Z,1.7nm,0.7s,baz=90,slow=8.1,SNR=6.1
comp=Z,1.7nm,0.7s
N31M Braeburn, Yuko 70.08 31 P P 02 45 29.5 +0.8
A36M Sachs Harbour 70.31 19 P P 02 45 31.2 +1.4
M31M Drury Creek, Y 70.49 30 P P 02 45 32.0 +0.9
C36M Paulatuk 71.76 21 P P 02 45 39.4 +0.7
C36M lAmb lAmb 02 45 56.2
comp=Z,2.5nm,0.7s
S32K Killisnoo 71.97 34 P P 02 45 41.8 +1.7
FIA1 FINESS Array S 73.19 331 P P 02 45 47.1 -0.2
FINES FINESS Array B 73.19 331 P P 02 45 46.8 -0.5
FINES FINESS Array B 73.19 331 P P 02 45 46.4 -0.9
comp=Z,2.7nm,0.8s,baz=54,slow=5.3,SNR=8.9
comp=Z,2.7nm,0.8s
RAYN Ar Rayn 74.18 289 P P 02 45 53.5 -0.4
AKASG Malin Array Be 75.89 320 P P 02 46 04.6 +1.4
AKASG Malin Array Be 75.89 320 P P 02 46 02.0 -1.2
comp=Z,1.8nm,0.5s,baz=59,slow=6.3,SNR=7.5
comp=Z,1.8nm,0.5s
AKBB Malin Array Si 75.89 320 P P 02 46 02.6 -0.6
AKBB lAmb lAmb 02 46 04.4
comp=Z,3.6nm,0.7s
BR131 Keskin Array S 77.41 308 P 02 46 11.9 -0.3
BR131 lAmb lAmb 02 46 15.2
comp=Z,4.6nm,0.8s
BRTR Keskin Array B 77.41 308 P 02 46 12.4 +0.2
BRTR Keskin Array B 77.41 308 P P 02 46 12.2 0.0
comp=Z,2.3nm,0.8s,baz=93,slow=5.7,SNR=16
comp=Z,2.3nm,0.8s
YKA Yellowknife Ar 78.57 25 P P 02 46 18.1 +0.1
comp=Z,0.6nm,0.8s,baz=299,slow=5.7,SNR=7.4
comp=Z,0.6nm,0.8s
HFS Hagfors 79.14 332 P P 02 46 20.3 -0.9
comp=Z,2.2nm,0.9s,baz=72,slow=14,SNR=1.7
comp=Z,2.2nm,0.9s
NC405 NORSAR Array S 79.39 334 P P 02 46 22.1 -0.5
BUR08 Bucovina Ar. S 79.59 318 P P 02 46 23.9 -0.1
BURAR Bucovina Array 79.59 318 P P 02 46 24.1 0.0
NB2 NORSAR Subarra 79.63 334 P P 02 46 23.4 -0.5
comp=Z,1.0nm,0.7s,baz=52,slow=5.6
NOA NORSAR Array B 79.63 334 P P 02 46 22.8 -1.1
comp=Z,2.8nm,1.0s,baz=52,slow=5.4,SNR=4.4
comp=Z,2.8nm,1.0s
NC204 NORSAR Array S 79.67 334 P P 02 46 23.9 -0.3
MLR Muntele Rosu 80.11 316 P P 02 46 27.2 +0.2
MLR lAmb lAmb 02 46 37.7
comp=Z,6.4nm,1.1s
SUMG Summit 81.25 356 P P 02 46 36.5 +3.6
SUMG lAmb lAmb 02 46 38.4
comp=Z,6.8nm,0.8s
SUMG Summit 81.25 356 *i* P P 02 46 36.0 +3.1
ELL Elmali 81.32 307 P P 02 46 33.4 -0.2
CLL Collm 84.50 325 *eP* P 02 46 50.0 +0.4
GERES GERESS Array B 85.55 323 P P 02 46 54.3 -0.8
comp=Z,0.5nm,0.6s,baz=81,slow=6.1,SNR=2.7
comp=Z,0.5nm,0.6s

SNET ***06*** *02:35:40.8±1.6, 13°.57N×90°.06W, h54km, ML3.8*
CATAC ***06*** *02:35:41.0±0.5, 13°.41N×90°.00W, h29km±3km, ML3.8*
GCG ***06*** *02:35:42.0±0.5, 13°.38N×90°.13W, h33km±5km, MD3.5*

ISC 06 02:35:40.7±1.5, 13°.40N±0°.06×90°.02W±0°.04, h25km±13km, n66, σ0°.56/95, 5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.55**	**25**	⇓*i* P	**Pn**		**02 35 52.9**	**-0.3**
NUBE	**Las Nubes**	**0.55**	**25**	*i* P	**Pn**		**02 35 52.8**	**-0.3**
NUBE				*i* S	**Sn**		**02 36 02.3**	**+0.7**
NUBE				lAML			02 36 02.9	
	comp=Z,4μm,1.0s							
CEVE	**Cerro Verde**	**0.58**	**42**	⇓*i* P	**Pn**		**02 35 53.4**	**-0.1**
CEVE				*eS*	**Sn**		**02 36 03.2**	**+0.9**
CEVE	**Cerro Verde**	**0.58**	**42**	*i* P	**Pn**		**02 35 53.5**	**-0.1**
CEVE				lAML			02 36 04.1	
	comp=Z,14μm,1.0s							
SBLS	**San Blas**	**0.58**	**42**	⇓*i* P	**Pn**		**02 35 53.5**	**-0.1**
JAYA	**Jayaque - finc**	**0.61**	**66**	*eP*	**Pb**		**02 35 53.5**	**+0.6**
JAYA				*eS*	**Sn**		**02 36 03.9**	**+0.8**
JAYA	**Jayaque - finc**	**0.61**	**66**	*i* P	**Pb**		**02 35 53.5**	**+0.6**
JAYA				lAML			02 36 04.6	
	comp=Z,15μm,1.0s							
RTR	**El Retiro**	**0.62**	**37**	*eP*	**Pn**		**02 35 54.0**	**-0.1**
SNJE	**San Jose**	**0.62**	**41**	⇓*i* P	**Pn**		**02 35 53.9**	**-0.2**
SNJE				⇓*i* P	**Pn**		**02 35 53.9**	**-0.2**
LOAL	**Lomas de Alarc**	**0.64**	**22**	*i* P	**Pn**		**02 35 54.1**	**-0.1**
LOAL				lAML			02 36 06.6	
	comp=Z,11μm,1.0s							
SLOZ	**Alcaldia de Sa**	**0.66**	**21**	*eP*	**Pn**		**02 35 54.4**	**-0.2**
LALI	**Alcalda de L**	**0.69**	**83**	*eP*	**Pb**		**02 35 54.0**	**-0.1**
LALI	**Alcalda de L**	**0.69**	**83**	*i* P	**Pb**		**02 35 54.0**	**-0.1**
LALI				*i* S	**Sb**		**02 36 03.4**	**+0.2**
LALI				lAML			02 36 07.5	
	comp=Z,660nm,1.0s							
CEDA	**San Andres**	**0.73**	**57**	*eP*	**Pb**		**02 35 55.1**	**+0.3**
CEDA				*eS*	**Sn**		**02 36 06.3**	**+0.5**
CEDA	**San Andres**	**0.73**	**57**	*i* P	**Pb**		**02 35 55.1**	**+0.3**
CEDA				*i* S	**Sn**		**02 36 06.5**	**+0.7**
CEDA				lAML			02 36 10.4	
	comp=Z,9μm,1.0s							
UNIC	**Universidad Ca**	**0.74**	**39**	*i* P	**Pb**		**02 35 55.2**	**+0.2**
UNIC				lAML			02 35 55.6	
	comp=Z,2μm,1.0s							
UNIC				*i* S	**Sn**		**02 36 06.4**	**+0.3**
PMON	**Piamonte**	**0.76**	**66**	*i* P	**Pb**		**02 35 55.3**	**0.0**
PMON				lAML			02 36 11.8	
	comp=Z,6μm,1.0s							
ITCA	**Escuela Especi**	**0.77**	**69**	*i* P	**Pb**		**02 35 55.5**	**-0.1**
ITCA				*i* S	**Sb**		**02 36 05.7**	**-0.1**
ITCA				lAML			02 36 09.2	
	comp=Z,6μm,1.0s							
BOQS	**Boqueron**	**0.80**	**65**	*eP*	**Pb**		**02 35 56.1**	**+0.1**
SNET	**Serv Nac Est T**	**0.82**	**70**	*eP*	**Pb**		**02 35 56.1**	**-0.3**
SNET				*eS*	**Sb**		**02 36 08.1**	**+1.0**
SNET	**Serv Nac Est T**	**0.82**	**70**	*i* P	**Pb**		**02 35 56.1**	**-0.3**
SNET				lAML			02 35 57.0	
	comp=Z,6μm,1.0s							
SNET				*i* S	**Sb**		**02 36 07.5**	**+0.4**
UEES	**Universidad Ev**	**0.82**	**68**	*eP*	**Pb**		**02 35 56.4**	**-0.1**
UEES	**Universidad Ev**	**0.82**	**68**	*i* P	**Pb**		**02 35 56.5**	**+0.1**
UEES				*i* S	**Sb**		**02 36 08.0**	**+0.8**
UEES				lAML			02 36 12.0	
	comp=Z,2μm,1.0s							
SEMO	**Seminario San**	**0.83**	**69**	*i* P	**Pn**		**02 35 57.4**	**+0.5**
SEMO				lAML			02 36 10.4	
	comp=Z,7μm,1.0s							
PANCS	**Alcalda de**	**0.85**	**76**	*i* P	**Pb**		**02 35 56.1**	**-0.7**
PANCS				*i* S	**Sb**		**02 36 07.7**	**-0.1**
PANCS				lAML			02 36 10.2	
	comp=Z,8μm,1.0s							
QUEZ	**Alcaldia de Qu**	**0.85**	**59**	*i* P	**Pb**		**02 35 56.4**	**-0.4**
QUEZ				*i* S	**Sn**		**02 36 09.0**	**+0.2**
QUEZ				lAML			02 36 10.3	
	comp=Z,12μm,1.0s							
UTEC	**Universidad Te**	**0.85**	**69**	*i* P	**Pb**		**02 35 57.2**	**+0.3**
UTEC				lAML			02 36 12.2	
	comp=Z,2μm,1.0s							
LOMA	**Loma Larga**	**0.86**	**74**	*eP*	**Pb**		**02 35 56.7**	**-0.5**
LOMA				*eS*	**Sn**		**02 36 09.6**	**+0.3**
LOMA	**Loma Larga**	**0.86**	**74**	*i* P	**Pb**		**02 35 56.6**	**-0.5**
LOMA				*i* S	**Sb**		**02 36 08.8**	**+0.4**
LOMA				lAML			02 36 11.4	
	comp=Z,4μm,1.0s							
IGN	**Direccin Gen**	**0.89**	**69**	*i* P	**Pb**		**02 35 57.2**	**-0.3**
IGN				*i* S	**Sb**		**02 36 09.5**	**+0.5**
IGN				lAML			02 36 15.5	
	comp=Z,7μm,1.0s							
LFU	**La Fuente**	**0.95**	**69**	*eP*	**Pb**		**02 35 58.4**	**-0.2**
LFRS	**El Faro**	**0.96**	**77**	*eP*	**Pb**		**02 35 58.6**	**-0.2**
SJTE	**Alcalda de S**	**1.01**	**78**	*eP*	**Pn**		**02 35 58.7**	**-0.6**
SJTE	**Alcalda de S**	**1.01**	**78**	*i* P	**Pn**		**02 35 58.7**	**-0.6**
SJTE				*i* S	**Sb**		**02 36 11.9**	**-0.6**
SJTE				lAML			02 36 15.8	
	comp=Z,1μm,1.0s							
PAVA	**Las Pavas**	**1.10**	**73**	*eP*	**Pn**		**02 36 00.5**	**-0.2**
PAVA	**Las Pavas**	**1.10**	**73**	*i* P	**Pn**		**02 36 00.6**	**0.0**
PAVA				*i* S	**Sb**		**02 36 14.7**	**-0.5**
PAVA				lAML			02 36 23.0	
	comp=Z,2μm,1.0s							
COEG	**Centro de Oper**	**1.13**	**79**	*eP*	**Pn**		**02 36 00.5**	**-0.5**
COEG				*eS*	**Sb**		**02 36 15.9**	**-0.1**
COEG	**Centro de Oper**	**1.13**	**79**	*i* P	**Pn**		**02 36 00.6**	**-0.5**
COEG				*i* S	**Sb**		**02 36 15.6**	**-0.4**
COEG				lAML			02 36 19.6	
	comp=Z,1μm,1.0s							
PCG	**Pacaya**	**1.14**	**330**	*eP*	**Pb**		**02 36 01.9**	**+0.1**
PCG				*eS*	**Sn**		**02 36 16.4**	**+0.3**
SNVI	**San Vicente**	**1.17**	**79**	*eP*	**Pn**		**02 36 01.3**	**-0.3**
MTO3	**Montecristo**	**1.18**	**33**	*i* P	**Pn**		**02 36 01.2**	**-0.7**
MTO3	**Montecristo**	**1.18**	**33**	*i* P	**Pn**		**02 36 01.1**	**-0.7**
MTO3				lAML			02 36 01.2	
	comp=Z,670nm,1.0s							
TECO	**Alcaldia de Te**	**1.22**	**83**	*eP*	**Pn**		**02 36 01.7**	**-0.4**
TECO				*eS*	**Sn**		**02 36 17.9**	**+0.1**
TECO	**Alcaldia de Te**	**1.22**	**83**	*i* P	**Pn**		**02 36 01.4**	**-0.7**
TECO				*i* S	**Sn**		**02 36 17.7**	**-0.1**
TECO				lAML			02 36 22.0	
	comp=Z,530nm,1.0s							
NBG	**Las Nubes**	**1.22**	**345**	*eP*	**Pb**		**02 36 03.5**	**+0.2**
NBG				*eS*	**Sn**		**02 36 20.6**	**+2.3**
UESV	**Universidad de**	**1.23**	**79**	*i* P	**Pn**		**02 36 01.9**	**-0.4**
UESV				*i* S	**Sn**		**02 36 17.8**	**-0.2**
UESV				lAML			02 36 22.5	
	comp=Z,920nm,1.0s							
GUNB	**GUNB**	**1.23**	**345**	*i* P	**Pn**		**02 36 01.7**	**-0.9**
GUNB				lAML			02 36 02.0	
	comp=Z,920nm,1.0s							
GUNB				*i* S	**Sb**		**02 36 17.5**	**-1.5**
LLGN	**La Laguna**	**1.29**	**54**	*i* P	**Pn**		**02 36 02.3**	**-1.0**
LLGN				lAML			02 36 28.1	
	comp=Z,370nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.29**	**76**	*eP*	**Pn**		**02 36 02.6**	**-0.6**
SCLA				*eS*	**Sb**		**02 36 21.1**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.29**	**76**	*i* P	**Pn**		**02 36 02.8**	**-0.4**
SCLA				lAML			02 36 29.2	
	comp=Z,230nm,1.0s							
FUG	**Fuego 3**	**1.31**	**323**	*eP*	**Pb**		**02 36 04.0**	**-0.7**
ESQI	**Esquipulas**	**1.33**	**30**	*i* P	**Pn**		**02 36 03.3**	**-0.5**
ESQI				lAML			02 36 03.4	
	comp=Z,500nm,1.0s							
TECA	**Tecapa**	**1.48**	**86**	*eP*	**Pn**		**02 36 05.6**	**-0.3**
PACA	**Pacayal**	**1.66**	**87**	*i* P	**Pn**		**02 36 08.1**	**-0.2**
PACA				lAML			02 36 35.9	
	comp=Z,4μm,1.0s							
STG3	**Santiaguito 3,**	**1.99**	**311**	*eP*	**Pn**		**02 36 13.4**	**+0.5**
STG3				*eS*	**Sn**		**02 36 37.4**	**+0.3**
LCND	**La Caada**	**2.08**	**92**	*eP*	**Pn**		**02 36 13.6**	**-0.4**
LCND	**La Caada**	**2.08**	**92**	*i* P	**Pn**		**02 36 13.5**	**-0.4**
LCND				lAML			02 36 42.3	
	comp=Z,420nm,1.0s							
CNCH	**Conchagua**	**2.14**	**93**	*i* P	**Pn**		**02 36 15.0**	**+0.1**
CNCH				lAML			02 36 48.8	
	comp=Z,1μm,1.0s							
COMHN	**El Horno**	**2.61**	**66**	*i* P	**Pn**		**02 36 19.9**	**-1.6**
TGUH	**Tegucigalpa,Un**	**2.75**	**76**	*i* P	**Pn**		**02 36 22.6**	**-0.8**
TGUH				lAML			02 37 01.1	
	comp=Z,59nm,1.0s							
CRIN	**San Cristobal**	**2.98**	**103**	*i* P	**Pn**		**02 36 26.4**	**0.0**
CRIN				lAML			02 37 11.0	
	comp=Z,500nm,1.0s							
YUSH	**Yuscaran**	**3.14**	**80**	*i* P	**Pn**		**02 36 27.8**	**-0.9**
ROCN	**Rota Cerro Neg**	**3.31**	**105**	*i* P	**Pn**		**02 36 30.8**	**-0.2**
ROCN				lAML			02 37 20.2	
	comp=Z,82nm,1.0s							
CNGA	**Al SSO del Vol**	**3.36**	**105**	*i* P	**Pn**		**02 36 31.7**	**0.0**
CNGA				lAML			02 37 25.4	
	comp=Z,150nm,1.0s							
COPN	**Copaltepe**	**3.56**	**110**	*i* P	**Pn**		**02 36 35.0**	**+0.6**
COPN				lAML			02 37 24.0	
	comp=Z,150nm,1.0s							
LIMN	**Finca el Limon**	**3.58**	**95**	*i* P	**Pn**		**02 36 33.9**	**-0.8**
LIMN				lAML			02 37 28.0	
	comp=Z,39nm,1.0s							

IDC ***06*** *02:35:51.6±1.3, 26°.04N×128°.49E, h0km, mb3.6/7, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=58.1km s-min=18.9km az=77.0*
JMA ***06*** *02:35:55.4±0.3, 26°.1N±0°.9×12°.9E°, h43km±3km, MV3.3/12, NEAR OKINAWAJIMA ISLAND*

ISC 06 02:35:54.2±1.0, 26°.05N±0°.06×128°.63E±0°.04, h20km±8km, n19, σ0°.77/30, mb3.6/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.72**	**311**	P	**Pb**		**02 36 08.3**	**+0.2**
JNTH				S	**Sb**		**02 36 18.1**	**+0.6**
JJT3	**Tamagusuku3**	**0.77**	**278**	P	**Pn**		**02 36 09.5**	**-0.4**
JJT3				*eS*	**Sb**		**02 36 19.9**	**+1.0**
JOW	**Kunigami**	**0.85**	**338**	P	**Pb**		**02 36 10.4**	**+0.2**
JOW				*eS*	**Sb**		**02 36 21.3**	**+0.1**
JOW	**Kunigami**	**0.85**	**338**	Pn	**Pb**		**02 36 10.2**	**0.0**
	301nm,0.3s,baz=158,slow=14,SNR=5.6							
JOW				Sn	**Sb**		**02 36 20.6**	**-0.6**
	299nm,0.3s,baz=132,slow=23,SNR=6.2							
JYRO	**Yoronjima**	**0.99**	**351**	*eP*	**Pb**		**02 36 12.7**	**0.0**
JYRO				S	**Sb**		**02 36 24.7**	**-0.5**
JIH	**Iheya**	**1.15**	**329**	P	**Pn**		**02 36 15.1**	**-0.1**
JIH				S	**Sb**		**02 36 29.3**	**-0.6**
JAGN	**Aguni-jima**	**1.36**	**294**	P	**Pn**		**02 36 18.1**	**+0.1**
JAGN				*eS*	**Sn**		**02 36 34.2**	**-1.3**
JKE	**Kume jima 2**	**1.68**	**280**	P	**Pn**		**02 36 21.9**	**-0.6**
JKE				*eS*	**Sn**		**02 36 41.9**	**-1.5**
JTK	**Tokunoshima**	**1.76**	**9**	P	**Pn**		**02 36 23.8**	**+0.3**
JTK				S	**Sn**		**02 36 44.7**	**-0.6**
JMZ	**Minamidaito 2**	**2.34**	**95**	*eP*	**Pn**		**02 36 31.2**	**-0.4**
JMZ				S	**Sn**		**02 36 59.1**	**-0.7**
JKDJ	**Kitadaitoujima**	**2.40**	**92**	*eP*	**Pn**		**02 36 32.2**	**-0.2**
JKDJ				S	**Sn**		**02 36 59.7**	**-1.4**
JNU	**Nakatsue**	**7.32**	**15**	Pn	**Pn**		**02 37 40.6**	**+0.6**
	0.6nm,0.3s,baz=225,slow=20,SNR=1.2							
	5.0nm,0.6s							
SONM	**Songino Array**	**27.90**	**327**	P	**P**		**02 41 44.3**	**+1.4**
	0.8nm,0.7s,baz=137,slow=9.8,SNR=2.5							
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**41.93**	**312**	P	**P**		**02 43 43.2**	**-0.2**
	0.4nm,0.5s,baz=102,slow=9.6,SNR=3.3							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**45.23**	**317**	P	**P**		**02 44 08.7**	**-1.2**
	0.3nm,0.4s,baz=103,slow=8.5,SNR=2.4							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**46.05**	**173**	P	**P**		**02 44 17.7**	**+1.0**
	0.4nm,0.6s,baz=354,slow=8.6,SNR=1.7							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**49.68**	**174**	P	**P**		**02 44 45.0**	**+0.2**
	0.2nm,0.6s,baz=9.8,slow=12,SNR=1.8							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**73.20**	**331**	P	**P**		**02 47 23.0**	**-0.3**
	1.6nm,0.9s,baz=59,slow=5.4,SNR=1.4							
	1.6nm,0.9s							
BRTR	**Keskin Array B**	**77.43**	**308**	P	**P**		**02 47 48.9**	**+0.6**
	0.7nm,0.7s,baz=75,slow=6.1,SNR=2.8							
	0.7nm,0.7s							

IDC ***06*** *02:56:02.6±1.1, 50°.60N×170°.96W, h0km, mb4.0/16, mbtmp4.0/17, ML3.2/1, MS2.9/1, Error ellipse: s-maj=32.4km s-min=18.0km az=7.0*
NEIC ***06*** *02:56:05.9±1.9, 50°.86N±0°.09×170°.95W±0°.07, h14km±5km, mb4.2/87, ML3.7/6, ML3.5(AEIC), Error ellipse: s-maj=13.3km s-min=6.2km az=173.0*
AEIC ***06*** *02:56:06.2±2.7, 50°.6N±0°.1×170°.8W±0°.1, h7km±5km, Error ellipse: s-maj=16.2km s-min=8.7km az=165.0*

ISC 06 02:56:04.9±0.7, 50°.81N±0°.09×170°.93W±0°.04, h10km, n151, σ1°.13/150, mb4.1/37, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**2.12**	**20**			**Pn**	**02 56 39.7**	**-0.6**
CLCO						**Sn**	**02 57 05.1**	**-1.5**
CLES	**Cleveland East**	**2.12**	**17**			**Pn**	**02 56 39.8**	**-0.5**
CLES	**Cleveland East**	**2.12**	**17**	lAML			02 57 09.6	
	comp=E,770nm,0.3s							
CLES				lAML			02 57 15.8	
	comp=N,788nm,0.6s							
KOFP	**Korovin Flat P**	**2.46**	**308**			**Pn**	**02 56 44.7**	**-0.4**
ATKA	**Atka Island**	**2.47**	**306**			**Pn**	**

AKRB Akutan Reef Bi 4.46 40 Pn Pn 02 57 12.3 -0.2
AKV Akutan Volcano 4.50 40 Pn Pn 02 57 13.2 +0.1
TAFP Tanaga Falls P 4.55 287 Pn Pn 02 57 13.7 -0.1
AKUT Akutan 4.59 41 P Pn Pn 02 57 14.8 +0.6
WESE West Dahl East 5.33 44 Pn Pn 02 57 24.5 0.0
AMKA Amchitka 6.18 279 Pn Pn 02 57 34.9 -1.2
SDPT Sand Point 7.76 50 Pn Pn 02 57 57.2 -0.6
SDPT Sand Point 7.76 50 P Pn Pn 02 57 58.0 +0.2
OHAK Old Harbor 12.18 51 P Pn Pn 02 58 56.3 -1.9
KDAK Kodiak Island 12.76 50 Pn Pn Pn 02 59 04.0 -2.1
comp=E,1.4nm,0.3s,baz=268,slow=5.5,SNR=8.8
J18K Innoko River 14.79 26 Pn Pn Pn 02 59 33.9 -0.1
H18K Honhosa River 15.80 20 Pn Pn Pn 02 59 47.2 +0.1
H18K IAmb IAmb 02 59 53.9
comp=Z,12nm,0.8s
CUT Chulitna 16.16 36 Pn Pn Pn 02 59 51.9 +0.1
CAST Castle Rocks 16.17 31 Pn Pn Pn 02 59 52.1 +0.1
G18K Tagagawik 16.39 18 Pn Pn Pn 02 59 55.2 +0.4
F17K Baldwin Pennin 16.43 14 Pn Pn Pn 02 59 54.9 -0.3
F17K IAmb IAmb 03 00 02.5
comp=Z,19nm,1.4s
SCM Sheep Creek Mo 17.01 41 Pn Pn Pn 02 59 59.1 -3.5
SCM IAmb IAmb 03 00 06.2
comp=Z,18nm,1.0s
EYAK Cordova Ski Ar 17.11 46 P Pn Pn 03 00 01.5 -2.4
KLU Klutina 17.44 43 P Pn Pn 03 00 04.7 -3.3
KLU IAmb IAmb 03 00 37.5
comp=Z,21nm,1.3s
H21K Melozitna Rive 17.57 25 Pn Pn 03 00 10.0 +0.5
M24K Tolsona, Glenn 17.62 41 Pn Pn Pn 03 00 08.2 -2.0
MLY Manley 17.71 29 Pn Pn 03 00 12.8 +1.5
MLY IAmb IAmb 03 00 16.2
comp=Z,8.6nm,0.7s
E19K Redstone River 18.04 17 Pn Pn 03 00 15.9 +0.6
N25K Chitina, Valde 18.06 43 Pn Pn 03 00 13.1 -2.7
I23K Minto, Yukon-K 18.21 30 P Pn Pn 03 00 16.9 -0.6
GLB Gilahina Butte 18.34 44 P Pn Pn 03 00 17.1 -2.0
GLB IAmb IAmb 03 00 24.3
comp=Z,10nm,0.8s
CCB Clear Creek Bu 18.40 32 P P P 03 00 17.3 -2.5
VRDI Verde Repeater 18.41 45 P P 03 00 17.7 -2.4
C18K Utukok River 18.51 11 P P P 03 00 20.1 -0.9
MCARA McCarthy VSAT 18.66 45 P P P 03 00 21.1 -1.6
MCARA IAmb IAmb 03 00 27.9
comp=Z,13nm,1.0s
IL31 18.79 33 P P P 03 00 22.4 -1.6
ILAR Eielson Array 18.79 33 P P P 03 00 22.2 -1.9
comp=Z,3.0nm,0.9s,baz=233,slow=11,SNR=21
ILAR LR LR 03 08 10.7
comp=Z,32nm,18.3s,baz=190,slow=38
D19K Kuna River 18.81 15 P P P 03 00 23.2 -1.1
M26K Nabesna, AK 19.08 42 P P P 03 00 26.3 -1.0
M26K IAmb IAmb 03 00 31.6
comp=Z,14nm,1.2s
G23K Bananza Creek 19.11 26 P P P 03 00 28.6 +1.0
H24K Noodor Dome 19.14 29 P P P 03 00 27.5 -0.4
H24K IAmb IAmb 03 00 30.5
comp=Z,9.1nm,0.7s
BARN Barnard Glacie 19.17 46 P P P 03 00 29.2 +0.7
BARN IAmb IAmb 03 00 33.9
comp=Z,21nm,0.9s
L26K Log Cabin Wild 19.20 40 P P P 03 00 29.0 +0.3
J25K Salcha River, 19.23 34 P P P 03 00 27.8 -1.2
CTGM Chitina Glacie 19.29 47 P P P 03 00 29.8 +0.1
CTGM IAmb IAmb 03 00 35.3
comp=Z,15nm,0.8s
PETK Petropavlovsk- 19.39 289 P P P 03 00 32.3 +1.6
comp=Z,0.3nm,0.3s,baz=102,slow=11,SNR=2.6
comp=Z,2.9nm,0.7s
LOGN Logan Glacier 19.40 47 P P P 03 00 30.9 0.0
LOGN IAmb IAmb 03 00 36.7
comp=Z,24nm,1.2s
SCRK Sand Creek 19.41 37 P P P 03 00 30.5 -0.4
M27K Edge Creek, AK 19.54 43 P P P 03 00 32.7 +0.2
M27K IAmb IAmb 03 00 40.8
comp=Z,27nm,1.4s
PRP Porcupine Dome 19.70 32 P P P 03 00 33.9 -0.3
PRP IAmb IAmb 03 00 35.9
comp=Z,6.1nm,0.6s
G24K Hadweenzic Riv 19.83 28 P P P 03 00 35.8 +0.4
G24K IAmb IAmb 03 00 39.3
comp=Z,11nm,0.7s
J26L Joseph Creek 19.83 36 P P P 03 00 35.6 0.0
J26L IAmb IAmb 03 00 37.3
comp=Z,10nm,0.6s
L27K Beaver Creek, 19.84 41 P P P 03 00 35.7 0.0
D22K Ayikyak River 20.15 19 P P P 03 00 38.1 -0.8
D22K IAmb IAmb 03 00 45.4
comp=Z,18nm,1.4s
F24K Squaw Lake 20.27 26 P P P 03 00 39.7 -0.6
B20K Meade River 20.32 14 P P P 03 00 40.8 +0.1
B20K IAmb IAmb 03 00 41.7
comp=Z,7.8nm,1.0s
B21K Ikpikpuk River 20.40 16 P P P 03 00 41.7 +0.2
B21K IAmb IAmb 03 00 45.5
comp=Z,7.8nm,0.8s
I26K Coal Creek Min 20.40 34 P P P 03 00 40.7 -0.9
O29M Mount Kennedy 20.41 50 P P P 03 00 42.6 +0.7
FYU Fort Yukon 20.43 30 P P P 03 00 42.7 +0.8
FYU IAmb IAmb 03 00 46.8
comp=Z,18nm,1.4s
E24K Your Creek 20.51 24 P P P 03 00 43.7 +0.8
E24K IAmb IAmb 03 00 50.7
comp=Z,4.1nm,0.6s
BILL Bilibino 20.58 336 P P P 03 00 44.0 +0.4
TOLK Toolik Lake Re 20.66 22 P P P 03 00 45.2 +0.8
TOLK IAmb IAmb 03 00 51.0
comp=Z,14nm,1.4s
EGAK Eagle 20.87 37 P P P 03 00 47.3 +0.6
EGAK IAmb IAmb 03 00 59.5
comp=Z,6.4nm,0.8s
HYT Haines Junctio 21.05 49 P P P 03 00 50.6 +1.8
M29M Somme Creek 21.06 44 P P P 03 00 50.5 +1.6
M29M IAmb IAmb 03 00 53.8
comp=Z,11nm,0.7s
BMAR Burnt Mountain 21.17 28 P P P 03 00 50.4 +0.4
D24K Happy Valley 21.23 22 P P P 03 00 50.8 +0.3
B22K Teshekpuk Lake 21.23 16 P P P 03 00 50.8 +0.3
B22K IAmb IAmb 03 00 52.2
comp=Z,7.3nm,1.1s
DAWY Dawson 21.25 39 P P P 03 00 52.0 +1.1
DAWY IAmb IAmb 03 00 55.8
comp=Z,8.6nm,1.4s
E25K Arctic Village 21.33 26 P P P 03 00 52.4 +0.7
E25K IAmb IAmb 03 00 58.1
comp=Z,6.2nm,0.8s
L29M L29M 21.42 42 P P P 03 00 53.5 +0.8
L29M IAmb IAmb 03 00 59.3
comp=Z,16nm,1.2s
I28M Miner Creek 21.64 36 P P P 03 00 55.4 +0.2
O30N Mendenhall 21.72 49 P P P 03 00 57.2 +1.3
O30N IAmb IAmb 03 01 01.0
comp=Z,4.8nm,0.8s
K29M Barlow Dome 21.93 41 P P P 03 00 58.3 0.0
K29M IAmb IAmb 03 01 04.7
comp=Z,8.4nm,1.1s
D25K Kavik River 21.95 23 P P P 03 00 58.6 +0.3
H29M Whitestone 22.57 35 P P P 03 01 04.8 -0.1
J30M Hart River 22.68 39 P P P 03 01 06.7 +0.5
M31M Drury Creek, Y 22.82 46 P P P 03 01 08.2 +0.6
M31M IAmb IAmb 03 01 12.1
comp=Z,4.0nm,0.7s
I30M Mount Dempster 22.90 38 P P P 03 01 07.5 -1.1
I30M IAmb IAmb 03 01 09.8
comp=Z,6.9nm,0.9s
P33M Teslin, Yukon 23.23 51 P P P 03 01 13.5 +1.6
P33M IAmb IAmb 03 01 26.0
comp=Z,4.8nm,0.9s
N32M Quiet Lake 23.23 49 P P P 03 01 14.1 +2.2
EPYK Eagle Plains 23.24 35 P P P 03 01 11.8 -0.2
FARO Faro, Yukon 23.30 46 P P P 03 01 13.5 +0.9
D27M Malcolm River 23.35 27 P P P 03 01 12.9 -0.1
D27M IAmb IAmb 03 01 16.1
comp=Z,5.6nm,0.7s
E28M Babbage River 23.40 29 P P P 03 01 13.5 0.0
E28M IAmb IAmb 03 01 17.4
comp=Z,6.6nm,1.1s
G30M tAoh Zraii Nji 23.68 34 P P P 03 01 14.7 -1.7
G30M IAmb IAmb 03 01 24.4
comp=Z,16nm,1.4s
E29M Blow River 23.79 30 P P P 03 01 15.9 -1.5
E29M IAmb IAmb 03 01 20.9
comp=Z,5.8nm,0.8s
G31M Satah River 24.36 35 P P P 03 01 21.5 -1.1
G31M IAmb IAmb 03 01 31.0
comp=Z,4.4nm,0.7s
F31M Tsiigehtchic 24.75 34 P P P 03 01 26.0 -0.1
F31M IAmb IAmb 03 01 36.4
comp=Z,12nm,1.4s
INK Inuvik 25.19 32 P P P 03 01 30.5 +0.5
INK IAmb IAmb 03 01 32.9
comp=Z,5.2nm,0.7s
YKA Yellowknife Ar 32.01 47 P P P 03 02 31.7 +0.7
comp=Z,0.8nm,0.8s,baz=277,slow=9.0,SNR=16
comp=Z,0.8nm,0.8s
H11S1 WAKE ISLAND Hy 36.81 217 T T 03 42 12.6
baz=23
H11S2 WAKE ISLAND Hy 36.82 217 T T 03 42 14.1
baz=23
H11S3 WAKE ISLAND Hy 36.83 217 T T 03 42 18.2
baz=23
LYMT Lyon Mountain 37.87 72 P P P 03 03 21.9 -0.1
PD31 Pinedale Array 41.69 76 P P P 03 03 54.2 +0.4
PD31 IAmb IAmb 03 03 55.5
comp=Z,4.4nm,1.4s
PDAR Pinedale Array 41.69 76 P P P 03 03 53.5 -0.2
comp=Z,0.7nm,0.6s,baz=314,slow=2.9,SNR=10.0
comp=Z,0.7nm,0.6s
RDMU Red Mountain 42.91 79 P P P 03 04 03.6 -0.1
RDMU IAmb IAmb 03 04 05.3
comp=Z,3.4nm,0.7s
O20A White River Ci 43.99 79 P P P 03 04 12.8 +0.4
O20A IAmb IAmb 03 04 29.6
comp=Z,2.7nm,0.7s
SPITS Spitsbergen Ar 51.20 358 P P P 03 05 08.1 +0.4
comp=Z,13nm,1.0s,baz=8.9,slow=10,SNR=1.8
comp=Z,13nm,1.0s
SONM Songino Array 51.27 301 P P P 03 05 09.6 +0.9
comp=Z,0.4nm,0.6s,baz=53,slow=7.8,SNR=3.9
comp=Z,0.4nm,0.6s
TX31 Lajitas Ar. Si 53.78 87 P P P 03 05 27.2 -0.4
TXAR Lajitas Array 53.78 87 P P P 03 05 27.3 -0.2
comp=Z,0.6nm,0.6s,baz=306,slow=6.1,SNR=11
comp=Z,0.6nm,0.6s
HDIL Hopedale 55.19 67 P P P 03 05 38.4 +0.9
ZALV Zalesovo Beam 57.92 317 P P P 03 05 57.3 +0.6
comp=Z,0.5nm,0.6s,baz=45,slow=2.2,SNR=2.5
comp=Z,0.5nm,0.6s
ARCES ARCESS Array B 59.37 353 P P P 03 06 07.2 +0.6
comp=Z,7.1nm,0.9s,baz=5.7,slow=4.9,SNR=4.4
comp=Z,7.1nm,0.9s
J54A Appleton 59.38 58 P P P 03 06 07.1 +0.1
KURK Kurchatov 62.89 318 P P 03 06 40.7 +10
KURK IAmb IAmb 03 06 51.2
comp=Z,1.3nm,0.7s
KURBB Kurchatov Arra 62.99 318 P P P 03 06 31.6 +0.2
comp=Z,0.8nm,0.7s,baz=46,slow=6.9,SNR=11
comp=Z,0.8nm,0.7s
N62A Caumsett State 63.77 57 P P P 03 06 37.8 +1.1
MKAR Makanchi Array 64.17 313 P P P 03 06 39.7 +0.4
MKAR Makanchi Array 64.17 313 P P P 03 06 38.0 -1.3
comp=Z,0.8nm,0.8s,baz=54,slow=6.3,SNR=7.9
comp=Z,0.8nm,0.8s
BVAR Borovoye Array 64.40 324 P P P 03 06 41.6 +0.9
comp=Z,1.9nm,0.5s,baz=52,slow=7.3,SNR=16
comp=Z,1.9nm,0.5s
FINES FINESS Array B 67.27 351 P P P 03 06 59.2 +0.2
comp=Z,3.7nm,1.0s,baz=352,slow=5.8,SNR=4.6
comp=Z,3.7nm,1.0s
NC204 NORSAR Array S 68.26 359 P P P 03 07 06.2 +0.8
NC303 NORSAR Array S 68.30 359 P P P 03 07 06.5 +1.0
NC405 NORSAR Array S 68.41 359 P P P 03 07 07.4 +1.1
NB201 NORSAR Array S 68.48 359 P P P 03 07 07.7 +1.0
NOA NORSAR Array B 68.49 359 P P P 03 07 08.0 +1.3
comp=Z,0.5nm,0.5s,baz=357,slow=6.7,SNR=2.5
comp=Z,0.5nm,0.5s
HFS Hagfors 69.35 358 P P P 03 07 12.3 +0.2
comp=Z,1.7nm,0.4s,baz=46,slow=4.3,SNR=10
comp=Z,1.7nm,0.4s
BOOM Boomskoye usch 70.38 314 P P P 03 07 20.1 +1.2
AAK Ala-Archa 70.92 315 P P P 03 07 22.8 +0.6
AAK IAmb IAmb 03 07 56.9
comp=Z,1.9nm,0.9s
ABKAR Akbulak array 71.24 328 P P P 03 07 24.3 +0.5
ABKAR Akbulak array 71.24 328 P P P 03 07 24.7 +0.9
ABKAR IAmb IAmb 03 07 31.5
comp=Z,4.9nm,1.5s
EKA Eskdalemuir Ar 73.74 7 P P P 03 07 39.9 +1.3
comp=Z,1.4nm,0.8s,baz=351,slow=4.3,SNR=4.0
comp=Z,1.4nm,0.8s
AKASG Malin Array Be 77.42 347 P P P 03 07 59.1 -0.7
comp=Z,0.6nm,0.4s,baz=17,slow=6.8,SNR=2.8
comp=Z,0.6nm,0.4s
ASAR Alice Springs 88.64 229 P P P 03 08 56.2 -1.8
comp=Z,0.7nm,0.9s,baz=47,slow=4.6,SNR=6.5
comp=Z,0.7nm,0.9s

IDC 06 02:57:17.6±1.9, 5°.98S×130°.41E, h0km, mb3.7/2, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=104.9km s-min=29.2km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.39**	**165**	Pn	Pn	03 00 44.0	+1.2
	0.2nm,0.3s,baz=345,slow=11,SNR=11						
WRA				Sn	Sn	03 03 11.8	-11
	0.5nm,0.3s,baz=343,slow=20,SNR=5.9						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**17.90**	**170**	P	Pn	03 01 27.5	-0.7
	0.2nm,0.3s,baz=348,slow=12,SNR=9.9						
ASAR				S	Sn	03 04 38.5	-10
	0.3nm,0.6s,baz=0.0,slow=27,SNR=1.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**67.61**	**326**	P	P	03 08 16.3	+0.1
	0.7nm,0.4s,baz=130,slow=6.9,SNR=12						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**71.86**	**328**	P	P	03 08 42.2	-0.1
	0.1nm,0.3s,baz=132,slow=5.3,SNR=2.1						
	0.1nm,0.3s						

*NNC **06** 03:00:36.8±0.3, 43°.21N×78°.61E, h1km±3km, mb3.1, mpv3.2, Error ellipse: s-maj=4.0km s-min=1.8km az=170.0*
*KRNET **06** 03:00:37.3±0.1, 43°.20N×78°.59E, h19km, mb2.9*
*SOME **06** 03:00:38.4, 43°.25N×78°.57E, h20km*

ISC 06 03:00:37.7±0.8, 43°.23N±0°.02×78°.59E±0°.01, h11km±5km, n72, σ1°.40/135, 16C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.13**	**241**	P	Pg	03 00 40.6	-0.4
	524nm,0.1s						
ZHN				S	Sg	03 00 42.6	-0.7
	1μm,0.1s						
ZHN	**Zhinishke**	**0.13**	**241**	eP	Pg	03 00 40.6	-0.4
	524nm,0.1s						
ZHN				eS	Sg	03 00 42.6	-0.7
	1μm,0.1s						
ZHN	**Zhinishke**	**0.13**	**241**	eP	Pg	03 00 40.6	-0.4
	baz=54						
ZHN				eS	Sg	03 00 42.6	-0.7
	baz=54						
SATY	**Saty**	**0.22**	**218**	P	Pg	03 00 42.0	-0.4
	90nm,0.1s						
SATY				S	Sg	03 00 45.1	-0.5
	2μm,0.1s						
SATY	**Saty**	**0.22**	**218**	eP	Pg	03 00 42.0	-0.4
	90nm,0.1s						
SATY				eS	Sg	03 00 45.1	-0.5
	2μm,0.1s						
SATY	**Saty**	**0.22**	**218**	eP	Pg	03 00 42.0	-0.4
	baz=24						
SATY				eS	Sg	03 00 45.1	-0.5
	baz=24						
KPKS	**Kokpek**	**0.24**	**16**	P	Pg	03 00 43.2	+0.3
	58nm,0.1s						
KPKS				S	Sg	03 00 46.4	+0.2
	369nm,0.1s						
KPKS	**Kokpek**	**0.24**	**16**	eP	Pg	03 00 43.1	+0.3
	58nm,0.1s						
KPKS				eS	Sg	03 00 46.4	+0.2
	369nm,0.1s						
KPKS	**Kokpek**	**0.24**	**16**	eP	Pg	03 00 43.2	+0.3
	baz=14						
KPKS				eS	Sg	03 00 46.5	+0.2
	baz=14						
UZB	**Uzunbulak**	**0.33**	**105**	P	Pb	03 00 43.8	-1.9
	134nm,0.1s						
UZB				S	Sg	03 00 47.9	-0.9
	180nm,0.1s						
UZB	**Uzunbulak**	**0.33**	**105**	eP	Pb	03 00 43.8	-1.9
	94nm,0.0s						
UZB				eS	Sg	03 00 47.9	-0.9
	180nm,0.1s						
UZB	**Uzynbulak**	**0.33**	**105**	eP	Pb	03 00 43.8	-1.9
	baz=0.0						
UZB				eS	Sg	03 00 47.9	-0.9
	baz=0.0						
KURS	**Kuram**	**0.40**	**310**	P	Pb	03 00 45.9	-1.0
	3.7nm,0.1s						
KURS				S	Sb	03 00 51.7	-1.4
	15nm,0.1s						
KURS	**Kuram**	**0.40**	**310**	eP	Pb	03 00 45.9	-1.0
	3.7nm,0.1s						
KURS				eS	Sb	03 00 51.7	-1.4
	15nm,0.1s						
KURS	**Kuram**	**0.40**	**310**	eP	Pb	03 00 45.9	-1.0
	baz=13						
KURS				eS	Sb	03 00 51.7	-1.4
	baz=13						
SHLS	**Shalkode**	**0.64**	**96**	P	Pn	03 00 55.3	+2.4
	12nm,0.1s						
SHLS				S	Sn	03 01 07.7	+4.5
	15nm,0.1s						
SHLS	**Shalkode**	**0.64**	**96**	eP	Pn	03 00 55.3	+2.4
	12nm,0.1s						
SHLS				eS	Sn	03 01 07.7	+4.5
	15nm,0.1s						
SHLS	**Shalkode**	**0.64**	**96**	eP	Pn	03 00 55.3	+2.4
	baz=92						
SHLS				eS	Sn	03 01 07.7	+4.5
	baz=92						
PDGK	**Podgornoye**	**0.66**	**81**	P	Pb	03 00 49.9	-1.5
	12nm,0.2s						
PDGK				S	Sg	03 00 58.3	-1.1
	14nm,0.1s						
PDGK	**Podgornoye**	**0.66**	**81**	P	Pb	03 00 49.7	-1.7
	7.2nm,0.3s						
PDGK				S	Sg	03 00 58.2	-1.1
	9.8nm,0.5s						
PRZ	**Przheval'sk**	**0.76**	**191⇑**	eP	Pg	03 00 51.1	-1.3
	baz=92						
PRZ			⇑	eS	Sg	03 01 01.1	-1.3
	baz=92						
ANVS	**Anan'yevo**	**0.81**	**237⇑**	iP	Pg	03 00 52.7	-0.7
	baz=39						
ANVS			⇑	iS	Sg	03 01 03.2	-0.9
	baz=39						
BLB	**Baldybastay**	**0.87**	**355**	P	Pb	03 00 54.7	-0.3
	9.3nm,0.1s						
BLB				S	Sb	03 01 06.4	-0.2
	17nm,0.2s						
KOTS	**Kotyrbulak**	**1.08**	**271**	P	Pb	03 00 58.2	-0.3
	36nm,0.2s						
KOTS				S	Sb	03 01 12.5	-0.2
	55nm,0.2s						
KOTS	**Kotyrbulak**	**1.08**	**271**	eP	Pb	03 00 58.2	-0.3
	36nm,0.2s						
KOTS				eS	Sb	03 01 12.5	-0.2
	55nm,0.2s						
ARXS	**Arharly**	**1.13**	**331**	P	Pn	03 00 59.2	-0.3
	0.5nm,0.0s						
ARXS				S	Sb	03 01 14.1	+0.1
	11nm,0.2s						
ARXS	**Arharly**	**1.13**	**331**	eP	Pn	03 00 59.2	-0.3
	0.5nm,0.0s						
ARXS				eS	Sb	03 01 14.1	+0.1
	11nm,0.2s						
MDOK	**Medeo**	**1.13**	**267**	P	Pg	03 00 58.0	-1.5
	1.7nm,0.2s						
MDOK				Pg	Pg	03 00 58.6	-0.9
	7.2nm,0.2s						
MDOK				Lg	Lg	03 01 13.2	
	30nm,0.4s						
MDOK				S	Sg	03 01 13.4	-0.8
	18nm,0.5s						
MDOK	**Medeo**	**1.13**	**267**	eP	Pg	03 00 58.6	-0.9
	7.2nm,0.2s						
MDOK				eS	Sg	03 01 13.2	-1.0
	30nm,0.4s						
MDOK	**Medeo**	**1.13**	**267**	eP	Pg	03 00 58.6	-0.9
	baz=69						
MDOK				eS	Sg	03 01 13.2	-1.0
	baz=69						
KNOS	**Konyrlen**	**1.21**	**20**	P	Pn	03 01 00.7	0.0
	7.2nm,0.1s						
KNOS				S	Sn	03 01 16.5	-0.6
	5.3nm,0.1s						
TNSS	**Tian-Shan**	**1.22**	**261**	P	Pg	03 01 00.0	-1.2
	7.2nm,0.2s						
TNSS				S	Sg	03 01 16.0	-1.1
	15nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**261**	eP	Pg	03 01 00.0	-1.2
	7.2nm,0.2s						
TNSS				eS	Sg	03 01 16.0	-1.1
	15nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**261**	eP	Pg	03 01 00.0	-1.2
	baz=63						
TNSS				eS	Sg	03 01 16.0	-1.1
	baz=63						
KTMS	**Ketmen**	**1.30**	**80**	P	Pn	03 01 03.0	+0.9
	4.3nm,0.1s						
KTMS				S	Sn	03 01 20.3	+0.8
	13nm,0.3s						
KTMS	**Ketmen**	**1.30**	**80**	eP	Pn	03 01 03.0	+0.9
	4.3nm,0.1s						
KTMS				eS	Sn	03 01 20.3	+0.8
	13nm,0.3s						
CHKK	**Chushkaly**	**1.32**	**299**	P	Pb	03 01 02.2	-0.4
	4.0nm,0.1s						
CHKK				S	Sb	03 01 19.7	+0.2
	25nm,0.2s						
CHKK	**Chushkaly**	**1.32**	**299**	eP	Pb	03 01 02.2	-0.4
	4.0nm,0.1s						
CHKK				eS	Sb	03 01 19.7	+0.2
	25nm,0.2s						
CHKK	**Chushkaly**	**1.32**	**299**	eP	Pb	03 01 02.2	-0.4
	baz=0.0						
CHKK				eS	Sb	03 01 19.7	+0.2
	baz=0.0						
DJR	**Jarkent**	**1.40**	**38**	P	Pb	03 01 04.1	+0.1
	3.2nm,0.1s						
DJR				S	Sn	03 01 22.6	+0.7
	43nm,0.2s						
DJR	**Jarkent**	**1.40**	**38**	eP	Pb	03 01 04.1	+0.1
	3.2nm,0.1s						
DJR				eS	Sn	03 01 22.6	+0.7
	43nm,0.2s						
IZV	**Izvestkoviy**	**1.46**	**263**	P	Pg	03 01 06.3	+0.5
	4.5nm,0.2s						
IZV				S	Sn	03 01 25.8	+2.3
	27nm,0.3s						
IZV	**Izvestkoviy**	**1.46**	**263**	eP	Pg	03 01 06.3	+0.5
	4.5nm,0.2s						
IZV				eS	Sn	03 01 25.8	+2.3
	27nm,0.3s						
KTBS	**Karatobe**	**1.47**	**290**	P	Pg	03 01 05.1	-0.9
	8.8nm,0.2s						
KTBS				S	Sb	03 01 24.0	+0.2
	60nm,0.3s						
KTBS	**Karatobe**	**1.47**	**290**	eP	Pg	03 01 05.1	-0.9
	8.8nm,0.2s						
KTBS				eS	Sb	03 01 24.0	+0.2
	60nm,0.3s						
KDJ	**Kajisay**	**1.52**	**224⇑**	iP	Pn	03 01 04.7	-0.3
	baz=24						
KDJ			⇑	iS	Sn	03 01 24.0	-0.8
	baz=24						
MTBS	**Maitube**	**1.58**	**267**	P	Pb	03 01 06.9	-0.2
	4.4nm,0.1s						
MTBS				S	Sb	03 01 27.5	+0.3
	20nm,0.2s						
MTBS	**Maitube**	**1.58**	**267**	eP	Pb	03 01 06.9	-0.2
	4.4nm,0.1s						
MTBS				eS	Sb	03 01 27.4	+0.3
	20nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.61**	**201⇓**	iP	Pn	03 01 06.4	-0.1
	baz=2.0						
TARG			⇓	iS	Sn	03 01 27.1	-0.4
	baz=2.0						
KUU	**Kurty**	**1.77**	**293**	P	Pg	03 01 10.6	-1.0
	3.4nm,0.2s						
KUU				S	Sg	03 01 33.3	-1.2
	24nm,0.3s						
KUU	**Kurty**	**1.77**	**293**	eP	Pg	03 01 10.6	-1.0
	3.4nm,0.2s						
KUU				eS	Sg	03 01 33.3	-1.2
	24nm,0.3s						
KST	**Kastek**	**1.93**	**265**	P	Pg	03 01 13.5	-1.3
	3.2nm,0.2s						

KST				S		**Sb**	**03 01 38.4**	**+1.1**
	11nm,0.4s							
KST	**Kastek**	**1.93**	**265**	*eP*		**Pg**	**03 01 13.5**	**-1.3**
	3.2nm,0.2s							
KST				*eS*		**Sb**	**03 01 38.4**	**+1.1**
	11nm,0.4s							
ULHL	**Ulahol**	**1.99**	**241**	⇑*iP*		**Pb**	**03 01 13.0**	**-1.1**
	baz=42							
ULHL				⇑*iS*		**Sb**	**03 01 38.6**	**-0.4**
	baz=42							
DGS	**Degeres**	**2.06**	**271**	Pg		**Pb**	**03 01 14.9**	**-0.3**
	4.4nm,0.3s							
DGS				Lg		Lg	03 01 41.1	
	25nm,0.4s							
DGS	**Degeres**	**2.06**	**271**	*eP*		**Pb**	**03 01 14.9**	**-0.3**
	4.4nm,0.3s							
DGS				*eS*		**Sb**	**03 01 41.1**	**+0.2**
	25nm,0.4s							
KAPS	**Kapalarasan**	**2.13**	**15**	Pg		**Pg**	**03 01 17.0**	**-1.5**
	1.5nm,0.2s							
KAPS				Lg		Lg	03 01 44.2	
	6.9nm,0.2s							
KAPS	**Kapalarasan**	**2.13**	**15**	*eP*		**Pg**	**03 01 17.0**	**-1.5**
	1.5nm,0.2s							
KAPS				*eS*		**Sg**	**03 01 44.2**	**-1.9**
	6.9nm,0.2s							
KRBS	**Karabastau**	**2.17**	**283**	Pg		**Pg**	**03 01 17.7**	**-1.7**
	2.9nm,0.2s							
KRBS				Lg		Lg	03 01 45.5	
	25nm,0.3s							
KRBS	**Karabastau**	**2.17**	**283**	*eP*		**Pg**	**03 01 17.7**	**-1.7**
	2.9nm,0.2s							
KRBS				*eS*		**Sb**	**03 01 45.5**	**+1.4**
	25nm,0.3s							
TKM2	**Tokmak 2**	**2.22**	**263**	⇑Pg		**Pb**	**03 01 17.7**	**-0.3**
	1.3nm,0.4s							
TKM2				⇓Lg		Lg	03 01 48.2	
	7.3nm,0.5s							
TKM2	**Tokmak 2**	**2.22**	**263**	⇓*iP*		**Pb**	**03 01 16.2**	**-1.7**
	baz=64							
TKM2				⇓*iS*		**Sn**	**03 01 44.1**	**+2.0**
	baz=64							
KBK	**Karagaybulak**	**2.74**	**259**	⇑*iP*		**Pn**	**03 01 23.3**	**+1.5**
	baz=60							
KBK				⇑*iS*		**Sn**	**03 01 56.5**	**+1.6**
	baz=60							
CHMS	**Chumysh**	**2.82**	**267**	⇓Pg		**Pb**	**03 01 28.1**	**0.0**
	0.4nm,0.3s							
CHMS				⇑Lg		Lg	03 02 04.0	
	2.6nm,0.5s							
CHMS	**Chumysh**	**2.82**	**267**	⇓*eP*		**Pn**	**03 01 24.6**	**+1.8**
	baz=67							
CHMS				⇓*iS*		**Sn**	**03 01 58.5**	**+1.7**
	baz=67							
USP	**Ospenovka**	**2.99**	**272**	⇑*iP*		**Pn**	**03 01 27.0**	**+1.9**
	baz=73							
USP				⇑*iS*		**Sn**	**03 02 02.8**	**+1.8**
	baz=73							
BTLS	**Baital**	**3.74**	**300**	Pg		**Pb**	**03 01 44.6**	**+0.8**
	0.8nm,0.2s							
BTLS				Lg		Lg	03 02 31.9	
	2.0nm,0.6s							
BTLS	**Baital**	**3.74**	**300**	*eP*		**Pb**	**03 01 44.6**	**+0.8**
	0.8nm,0.2s							
BTLS				*eS*		**Sb**	**03 02 31.9**	**+2.9**
	2.0nm,0.6s							
MRKS	**Merke**	**3.97**	**265**	Pg		**Pb**	**03 01 49.7**	**+2.1**
	0.9nm,0.4s							
MRKS				Lg		Lg	03 02 40.5	
	2.8nm,0.3s							
MRKS	**Merke**	**3.97**	**265**	*eP*		**Pb**	**03 01 49.8**	**+2.1**
	0.9nm,0.4s							
MRKS				*eS*		**Sg**	**03 02 40.5**	**-4.6**
	2.8nm,0.3s							
MAKZ	**Makanchi**	**4.31**	**33**	⇑Pg		Pb	03 01 47.8	-5.7
	0.3nm,0.4s							
MAKZ				⇓Lg		Lg	03 02 50.6	
	0.9nm,0.6s							
MK31	**Makanchi Array**	**4.42**	**35**	⇓Pg		**Pb**	**03 01 51.6**	**-3.8**
	0.1nm,0.3s,baz=208,slow=15							
MK31				⇑Lg		Lg	03 02 53.8	
	0.9nm,0.5s,baz=216,slow=29,SNR=9.9							

IDC ***06*** *03:06:10.9±0.6,26°.97N×129°.35E,h0km,mb4.3/26, mbtmp4.3/30,ML4.0/3,MS3.7/24,Error ellipse: s-maj=15.7km s-min=13.2km az=139.0*

JMA ***06*** *03:06:13.5±0.1,26°.9N±0°.4×129°.5E±0°.5,h40km±4km, MD4.3/16,MV4.0/16,NEAR OKINAWAJIMA ISLAND*

NIED ***06*** *03:06:13.5,26°.89N×129°.49E,h40km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.97; $M_{\theta\theta}$-0.69; $M_{\phi\phi}$-3.27; $M_{r\theta}$0.40; $M_{\theta\phi}$-4.25; $M_{\phi r}$1.48; Fault plane solution: $M_0$5.47000×10^{15} NP1:ϕ_s22.00000°, δ55.00000°,λ70.00000°. NP2:ϕ_s234.00000°,δ40.00000°, λ116.00000°.*

NEIC ***06*** *03:06:14.9±1.2,26°.83N±0°.08×129°.42E±0°.04,h27km±5km, mb4.8/93 Error ellipse: s-maj=11.1km s-min=5.3km az=172.0*

ISC 06 03:06:12.6±1.2,26°.89N±0°.03×129°.47E±0°.03,h13km±7km, n205,σ1$06/201,mb4.8/94,MS3.9/25,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYRO	**Yoronjima**	**0.92**	**279**	P		**Pb**	**03 06 30.2**	**-0.3**
JYRO				*eS*		**Sb**	**03 06 43.0**	**+0.4**
JYRO	**Yoronjima**	**0.92**	**279**	A		A	03 06 30.2	
	comp=E,14nm,1.5s,comp=N,10.0nm,2.6s							
JTK	**Tokunoshima**	**1.00**	**333**	P		**Pb**	**03 06 31.8**	**-0.1**
JTK				S		**Sb**	**03 06 44.9**	**-0.2**
JTK	**Tokunoshima**	**1.00**	**333**	A		A	03 06 31.8	
	comp=E,14nm,2.3s,comp=N,14nm,2.2s							
JOW	**Kunigami**	**1.07**	**267**			**Pb**	**03 06 32.8**	**-0.3**
JOW						**Sb**	**03 06 45.8**	**-1.2**
JOW	**Kunigami**	**1.07**	**267**	P		**Pb**	**03 06 32.9**	**-0.2**
JOW				*eS*		**Sb**	**03 06 46.5**	**-0.4**
JOW	**Kunigami**	**1.07**	**267**	A		A	03 06 32.9	
	comp=E,11nm,1.3s,comp=N,13nm,1.6s							
JOW	**Kunigami**	**1.07**	**267**	Pn		**Pb**	**03 06 32.8**	**-0.3**
	comp=N,336nm,0.3s,baz=108,slow=19,SNR=298							
JOW				Sn		**Sb**	**03 06 46.2**	**-0.7**
	comp=N,525nm,0.3s,baz=101,slow=26,SNR=7.4							
JOW				LR		LR	03 07 02.3	
	comp=N,1μm,21.3s,baz=292,slow=53							
JNTH	**Nagotoyohara**	**1.35**	**254**	P		**Pn**	**03 06 36.6**	**-0.6**
JNTH				*eS*		**Sn**	**03 06 53.6**	**-1.4**
JIH	**Iheya**	**1.35**	**276**	P		**Pn**	**03 06 36.6**	**-0.6**
JIH				S		**Sn**	**03 06 54.4**	**-0.6**
JIH	**Iheya**	**1.35**	**276**	A		A	03 06 36.6	
	comp=E,11nm,2.8s,comp=N,8.0nm,1.0s							
JAMN	**Amaminishikomi**	**1.37**	**349**	P		**Pn**	**03 06 36.7**	**-0.8**
JAMN				*eS*		**Sn**	**03 06 53.6**	**-2.0**
JAMN	**Amaminishikomi**	**1.37**	**349**	A		A	03 06 36.7	
	comp=E,7.0nm,4.2s,comp=N,7.0nm,5.3s							
JZK	**Kikaishima**	**1.49**	**17**	P		**Pn**	**03 06 38.9**	**-0.3**
JZK				S		**Sn**	**03 06 57.0**	**-1.5**
JZK	**Kikaishima**	**1.49**	**17**	A		A	03 06 38.9	
	comp=E,19nm,4.1s,comp=N,17nm,2.8s							
JAM	**Amami Oshima**	**1.52**	**5**	P		**Pn**	**03 06 38.7**	**-0.9**
JAM	**Amami Oshima**	**1.52**	**5**	A		A	03 06 38.7	
	comp=E,5.0nm,3.5s,comp=N,4.0nm,2.6s							
JJT3	**Tamagusuku3**	**1.68**	**244**	*eP*		**Pn**	**03 06 41.8**	**0.0**
JJT3				*eS*		**Sn**	**03 07 02.9**	**-0.4**
JJT3	**Tamagusuku3**	**1.68**	**244**	A		A	03 06 41.8	
	comp=E,19nm,1.8s,comp=N,19nm,3.2s							
JKDJ	**Kitadaitoujima**	**1.89**	**119**	*eP*		**Pn**	**03 06 44.2**	**-0.4**
JKDJ				*eS*		**Sn**	**03 07 06.9**	**-1.4**
JKDJ	**Kitadaitoujima**	**1.89**	**119**	A		A	03 06 44.2	
	comp=E,7.0nm,3.6s,comp=N,8.0nm,4.7s							
JMZ	**Minamidaito 2**	**1.90**	**124**			**Pn**	**03 06 44.5**	**-0.4**
JMZ	**Minamidaito 2**	**1.90**	**124**	P		**Pn**	**03 06 44.1**	**-0.7**
JMZ				*eS*		**Sn**	**03 07 06.6**	**-2.1**
JAGN	**Aguni-jima**	**2.01**	**262**	P		**Pn**	**03 06 46.2**	**-0.2**
JAGN				S		**Sn**	**03 07 10.1**	**-1.4**
JAGN	**Aguni-jima**	**2.01**	**262**	A		A	03 06 46.2	
	comp=E,8.0nm,2.5s,comp=N,11nm,2.8s							
JTAJ	**Takarajima**	**2.27**	**354**	*eP*		**Pn**	**03 06 49.8**	**-0.1**
JTAJ				*eS*		**Sn**	**03 07 16.6**	**-1.1**
JNU	**Nakatsue**	**6.33**	**11**	Pn		**Pn**	**03 07 46.8**	**+1.0**
JNU	**Nakatsue**	**6.33**	**11**	Pn		**Pn**	**03 07 46.3**	**+0.6**
	comp=N,13nm,0.3s,baz=283,slow=0.6,SNR=49							
JNU				Sn		**Sn**	**03 08 56.1**	**-1.8**
	baz=242,slow=19							
JNU				LR		LR	03 09 52.3	
	comp=N,94nm,18.3s,baz=178,slow=35							
	comp=N,51nm,0.5s							
YHNB	**Yeheng**	**7.62**	**255**			**Pn**	**03 08 03.2**	**-0.3**
SSLB	**Suanglung**	**8.30**	**250**			**Pn**	**03 08 11.4**	**-1.5**
KSRS	**Korea Array**	**10.61**	**353**	Pn		**Pn**	**03 08 45.0**	**+0.5**
	comp=N,0.2nm,0.3s,baz=170,slow=12,SNR=7.3							
	comp=N,2.5nm,0.7s							
MJAR	**Matsushiro Arr**	**12.15**	**36**	Pn		**Pn**	**03 09 07.0**	**+1.4**
	comp=N,0.6nm,0.5s,baz=201,slow=12,SNR=1.3							
BJT	**Baijiatuan**	**17.14**	**323**	P		**Pn**	**03 10 12.4**	**+0.5**
USRK	**Ussuriysk Ar.**	**17.39**	**6**	P		**Pn**	**03 10 15.5**	**+0.5**
	comp=N,13nm,0.3s,baz=178,slow=9.5,SNR=5.5							
	comp=N,5.7nm,0.9s							
GUMO	**Guam**	**19.56**	**130**	LR		LR	03 17 29.1	
	comp=N,132nm,18.1s,baz=63,slow=34							
ASAJ	**Asahikawa**	**20.19**	**28**	P		**P**	**03 10 48.0**	**+0.9**
	comp=N,11nm,0.7s,baz=250,slow=7.6,SNR=12							
ASAJ				LR		LR	03 19 13.2	
	comp=N,214nm,21.8s,baz=343,slow=39							
	comp=N,11nm,0.7s							
KLR	**Kul'dur**	**22.37**	**4**	LR		LR	03 20 04.1	
	comp=N,135nm,18.5s,baz=183,slow=37							
YSS	**Yuzh-Sakhalins**	**22.61**	**24**	P		**P**	**03 11 12.3**	**-0.7**
YSS				IAmb		IAmb	03 11 15.4	
	comp=Z,40nm,1.0s							
LZH	**Lanzhou**	**23.64**	**299**	*eP*		**P**	**03 11 23.7**	**-0.2**
LZH				pP		sP	03 11 32.1	+4.4
LZH				pmax		pmax		
	comp=Z,15nm,1.2s							
LZH				LR		LR		
	comp=N,390nm,13.3s							
LZH				LR		LR		
	comp=E,530nm,15.1s							
LZH				LR		LR		
	comp=Z,870nm,14.4s							
ULN	**Ulaanbaatar**	**27.31**	**326**	P		**P**	**03 11 56.5**	**-0.8**
SONM	**Songino Array**	**27.62**	**325**	P		**P**	**03 12 00.4**	**+0.4**
	comp=Z,3.4nm,1.0s,baz=134,slow=10,SNR=15							
	comp=Z,3.4nm,1.0s							
GTA	**Gaotai**	**27.66**	**304**	P		**P**	**03 11 58.4**	**-2.0**
GTA				pP		sP	03 12 07.9	+3.6
GTA				sS		sS	03 17 09.1	+22
GTA				pmax		pmax		
	comp=Z,13nm,0.9s							
GTA				LR		LR		
	comp=N,480nm,15.3s							
GTA				LR		LR		
	comp=E,690nm,15.6s							
GTA				LR		LR		
	comp=Z,860nm,14.2s							
CMAR	**Chiang Mai Arr**	**29.33**	**260**	P		**P**	**03 12 16.6**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=59,slow=8.6,SNR=4.4							
CMAR				PcP		**PcP**	**03 15 23.1**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=61,slow=2.2,SNR=4.3							
CMAR				LR		LR	03 25 39.1	
	comp=Z,210nm,18.5s,baz=5.0,slow=40							
	comp=Z,1.4nm,0.3s							
GOMU	**GeErMu**	**30.82**	**296**	P		**P**	**03 12 27.8**	**-1.0**
GOMU				S		**S**	**03 17 39.2**	**+6.7**
GOMU				pmax		pmax		
	comp=Z,9.0nm,1.1s							
GOMU				LR		LR		
	comp=E,130nm,12.2s							
GOMU				LR		LR		
	comp=Z,310nm,13.3s							
SHL	**Shillong**	**33.66**	**276**	P		**P**	**03 12 52.4**	**-1.3**
SHL				IAmb		IAmb	03 12 53.4	
	comp=Z,13nm,0.8s							
H11N1	**WAKE ISLAND Hy**	**35.01**	**94**	T		T	03 50 50.3	
	baz=286							
H11N2	**WAKE ISLAND Hy**	**35.01**	**94**	T		T	03 50 52.1	
	baz=286							
H11N3	**WAKE ISLAND Hy**	**35.02**	**94**	T		T	03 50 57.2	
	baz=286							
MA2	**Magadan**	**35.83**	**18**	LR		LR	03 30 13.8	
	comp=Z,74nm,18.0s,baz=234,slow=40							
PMG	**Port Moresby**	**39.96**	**152**	LR		LR	03 30 20.4	
	comp=Z,86nm,18.3s,baz=164,slow=36							
MK31	**Makanchi Array**	**41.93**	**311**	P		**P**	**03 14 02.0**	**-1.0**
MKAR	**Makanchi Array**	**41.93**	**311**	P		**P**	**03 14 01.4**	**-1.7**
MKAR	**Makanchi Array**	**41.93**	**311**	P		**P**	**03 14 01.1**	**-2.0**
	comp=Z,2.2nm,0.7s,baz=98,slow=10,SNR=23							
MKAR				PcP		**PcP**	**03 15 58.2**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=66,slow=3.0,SNR=4.4							
	comp=Z,2.2nm,0.7s							
SHEM	**Shemya Is, Ala**	**41.96**	**40**	LR		LR	03 34 47.8	
	comp=Z,19nm,18.8s,baz=254,slow=41							
ZALV	**Zelesovo Beam**	**42.40**	**322**	P		**P**	**03 14 04.5**	**-2.3**
	comp=Z,1.4nm,0.6s,baz=109,slow=8.3,SNR=6.0							
ZALV				PcP		**PcP**	**03 15 58.7**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=104,slow=4.6,SNR=4.9							
ZALV				LR		LR	03 35 34.4	
	comp=Z,58nm,18.3s,baz=100,slow=42							
	comp=Z,1.4nm,0.6s							
TARG	**Taragay, Kyrgy**	**44.52**	**303**	P		**P**	**03 14 24.4**	**-0.1**
TIXI	**Tiksi**	**44.80**	**360**	P		**P**	**03 14 25.8**	**0.0**
TIXI	**Tiksi**	**44.80**	**360**	LR		LR	03 34 14.4	
	comp=Z,144nm,19.3s,baz=200,slow=38							
KURK	**Kurchatov**	**45.11**	**316**	P		**P**	**03 14 27.1**	**-1.5**
KURBB	**Kurchatov Arra**	**45.15**	**316**	P		**P**	**03 14 26.9**	**-2.0**
	comp=Z,3.0nm,0.5s,baz=103,slow=8.8,SNR=21							
KURBB				PcP		**PcP**	**03 16 08.7**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=107,slow=3.5,SNR=1.0							
KURBB				LR		LR	03 35 10.6	
	comp=Z,151nm,21.6s,baz=170,slow=39							
	comp=Z,3.0nm,0.5s							
NRN	**Naryn**	**45.87**	**303**	P		**P**	**03 14 34.1**	**-1.0**
NRN				IAmb		IAmb	03 14 44.7	
	comp=Z,15nm,1.4s							
WRA	**Warramunga Arr**	**46.79**	**174**	P		**P**	**03 14 42.2**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=351,slow=8.4,SNR=8.6							
	comp=Z,1.7nm,0.8s							
ARSB	**Arslanbob**	**48.14**	**303**	P		**P**	**03 14 52.0**	**-0.7**
ARSB				IAmb		IAmb	03 15 46.1	
	comp=Z,3.5nm,0.4s							
NIL	**Nilore**	**48.52**	**292**	P		**P**	**03 14 55.1**	**-0.5**
CTA	**Charters Tower**	**49.45**	**159**	LR		LR	03 37 30.6	
	comp=Z,41nm,18.0s,baz=82,slow=38							
KK31	**Karatay Array**	**49.94**	**305**	P		**P**	**03 15 05.7**	**-0.7**
KK31				IAmb		IAmb	03 15 16.4	
	comp=Z,15nm,1.6s							
KKAR	**Karatay Array**	**49.94**	**305**	P		**P**	**03 15 05.7**	**-0.6**
KKAR				IAmb		IAmb	03 15 16.4	
	comp=Z,15nm,1.6s							
KKAR	**Karatay Array**	**49.94**	**305**	P		**P**	**03 15 05.7**	**-0.6**
PALK	**Pallekele**	**50.17**	**256**	LR		LR	03 37 57.9	
	comp=Z,80nm,20.5s,baz=160,slow=38							
ASAR	**Alice Springs**	**50.44**	**175**	P		**P**	**03 15 10.9**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=359,slow=6.9,SNR=15							
	comp=Z,1.7nm,0.9s							
BVAR	**Borovoye Array**	**50.53**	**318**	P		**P**	**03 15 08.9**	**-1.7**
	comp=Z,2.0nm,0.6s,baz=84,slow=9.3,SNR=11							
BVAR				PcP		**PcP**	**03 16 28.1**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=94,slow=4.5,SNR=3.9							
BVAR				LR		LR	03 38 11.8	
	comp=Z,162nm,19.4s,baz=86,slow=38							
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**50.59**	**318**	P		**P**	**03 15 09.6**	**-1.5**
SIMJ	**Simiganj**	**51.35**	**299**	P		**P**	**03 15 17.0**	**-0.1**
SIMJ				IAmb		IAmb	03 15 27.2	
	comp=Z,18nm,1.2s							
KBL	**Kabul**	**51.85**	**294**	P		**P**	**03 15 20.1**	**-1.0**
L14K	**Kuka Creek**	**56.19**	**33**	P		**P**	**03 15 52.6**	**+0.6**
ABKAR	**Akbulak array**	**57.01**	**313**	P		**P**	**03 15 57.5**	**-0.5**
ABKAR	**Akbulak array**	**57.01**	**313**	P		**P**	**03 15 57.6**	**-0.5**
ARU	**Arti**	**57.56**	**322**	LR		LR	03 42 53.1	
	comp=Z,88nm,19.5s,baz=81,slow=38							
C18K	**Utukok River**	**57.72**	**24**	P		**P**	**03 16 03.7**	**+0.8**
AKTO	**Aktyubinsk**	**58.16**	**314**	LR		LR	03 45 17.9	
	comp=Z,51nm,19.3s,baz=170,slow=40							
D19K	**Kuna River**	**58.82**	**24**	P		**P**	**03 16 10.9**	**+0.4**
D19K				IAmb		IAmb	03 16 21.9	
	comp=Z,7.3nm,1.0s							
E19K	**Redstone River**	**59.07**	**26**	P		**P**	**03 16 13.1**	**+0.8**
E19K				IAmb		IAmb	03 16 23.6	
	comp=Z,4.4nm,0.7s							
B20K	**Meade River**	**59.31**	**23**	P		**P**	**03 16 14.4**	**+0.5**
B20K				IAmb		IAmb	03 16 25.2	
	comp=Z,5.3nm,0.8s							
GEYT	**Alibeck**	**59.92**	**300**	P		**P**	**03 16 18.4**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=54,slow=2.6,SNR=4.7							
GEYT				LR		LR	03 47 09.7	
	comp=Z,93nm,18.5s,baz=67,slow=41							
	comp=Z,2.4nm,0.6s							
B21K	**Ikpikpuk River**	**60.17**	**23**	P		**P**	**03 16 20.8**	**+1.0**
B21K				IAmb		IAmb	03 16 31.3	
	comp=Z,10nm,0.8s							
B22K	**Teshekpuk Lake**	**60.61**	**22**	P		**P**	**03 16 23.6**	**+0.8**
B22K				IAmb		IAmb	03 16 34.0	
	comp=Z,6.0nm,0.7s							
H21K	**Melozitna Rive**	**60.78**	**28**	P		**P**	**03 16 24.7**	**+0.6**
H21K				IAmb		IAmb	03 16 35.9	
	comp=Z,5.3nm,0.9s							
D22K	**Ayikyak River**	**60.83**	**24**	P		**P**	**03 16 24.3**	**0.0**
D22K				IAmb		IAmb	03 16 36.1	
	comp=Z,10nm,0.8s							
SUA	**Susitna One**	**61.92**	**32**	P		**P**	**03 16 32.2**	**+0.2**
D24K	**Happy Valley**	**62.21**	**24**	P		**P**	**03 16 34.9**	**+1.2**
E24K	**Your Creek**	**62.40**	**25**	P		**P**	**03 16 36.2**	**+1.3**
E24K				IAmb		IAmb	03 16 46.7	
	comp=Z,3.8nm,0.7s							
RND	**Reindeer**	**62.62**	**30**	P		**P**	**03 16 36.5**	**0.0**
F24K	**Squaw Lake**	**62.66**	**25**	P		**P**	**03 16 38.0**	**+1.3**
F24K				IAmb		IAmb	03 16 48.4	
	comp=Z,8.1nm,0.7s							
MDM	**Murphy Dome**	**62.74**	**28**	P		**P**	**03 16 37.8**	**+0.5**
H24K	**Noodor Dome**	**62.81**	**27**	P		**P**	**03 16 38.8**	**+1.0**
H24K				IAmb		IAmb	03 16 50.1	
	comp=Z,7.4nm,1.1s							
G24K	**Hadweenzic Riv**	**62.89**	**26**	P		**P**	**03 16 37.4**	**-0.9**
G24K				IAmb		IAmb	03 16 50.2	
	comp=Z,5.2nm,0.8s							
POKR	**Poker Plat Res**	**63.06**	**28**	P		**P**	**03 16 39.9**	**+0.5**
POKR				IAmb		IAmb	03 16 51.5	
	comp=Z,9.7nm,0.9s							
D25K	**Kavik River**	**63.07**	**23**	P		**P**	**03 16 40.5**	**+1.1**
D25K				IAmb		IAmb	03 16 50.8	
	comp=Z,4.1nm,0.8s							
IL31		**63.33**	**28**	P		**P**	**03 16 41.9**	**+0.8**
ILAR	**Eielson Array**	**63.33**	**28**	P		**P**	**03 16 40.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=269,slow=6.4,SNR=10							
	comp=Z,0.9nm,0.8s							
E25K	**Arctic Village**	**63.48**	**25**	P		**P**	**03 16 43.3**	**+1.2**
PRP	**Porcupine Dome**	**63.81**	**28**	P		**P**	**03 16 45.5**	**+1.1**
SCRK	**Sand Creek**	**64.69**	**29**	P		**P**	**03 16 50.4**	**+0.1**
SCRK				IAmb		IAmb	03 17 01.2	
	comp=Z,5.9nm,0.8s							
J26L	**Joseph Creek**	**64.79**	**29**	P		**P**	**03 16 50.8**	**0.0**
J26L				IAmb		IAmb	03 17 01.6	
	comp=Z,8.7nm,0.8s							
M26K	**Nabesna, AK**	**65.42**	**31**	P		**P**	**03 16 55.6**	**+0.7**
M26K				IAmb		IAmb	03 17 06.7	
	comp=Z,10nm,1.1s							
K27K	**Chicken**	**65.51**	**29**	P		**P**	**03 16 56.4**	**+0.9**
K27K				IAmb		IAmb	03 17 07.0	
	comp=Z,5.3nm,0.9s							
E28M	**Babbage River**	**65.62**	**24**	P		**P**	**03 16 57.3**	**+1.2**
E28M				IAmb		IAmb	03 17 07.9	
	comp=Z,6.3nm,0.8s							
F28M	**Old Crow**	**65.69**	**25**	P		**P**	**03 16 57.1**	**+0.5**
BCAR	**Beaver Creek A**	**65.83**	**30**	P		**P**	**03 16 58.8**	**+1.2**
M27K	**Edge Creek, AK**	**65.94**	**31**	P		**P**	**03 16 58.8**	**+0.4**
M27K				IAmb		IAmb	03 17 09.7	
	comp=Z,5.4nm,0.8s							
I28M	**Miner Creek**	**66.12**	**27**	P		**P**	**03 17 00.5**	**+1.1**
I28M				IAmb		IAmb	03 17 11.4	
	comp=Z,5.7nm,0.8s							
H29M	**Whitestone**	**66.57**	**26**	P		**P**	**03 17 03.3**	**+1.1**
H29M				IAmb		IAmb	03 17 14.0	
	comp=Z,6.2nm,0.8s							
EPYK	**Eagle Plains**	**67.18**	**26**	P		**P**	**03 17 07.1**	**+0.9**
G30M	**tAoh Zraii Nji**	**67.22**	**25**	P		**P**	**03 17 06.8**	**+0.4**
G30M				IAmb		IAmb	03 17 17.3	
	comp=Z,10nm,0.9s							
L29M	**L29M**	**67.44**	**29**	P		**P**	**03 17 09.1**	**+1.2**
L29M				IAmb		IAmb	03 17 20.0	
	comp=Z,7.8nm,0.8s							
M29M	**Somme Creek**	**67.46**	**30**	P		**P**	**03 17 08.1**	**0.0**
M29M				IAmb		IAmb	03 17 20.2	
	comp=Z,4.3nm,0.8s							
K29M	**Barlow Dome**	**67.51**	**29**	P		**P**	**03 17 09.4**	**+1.0**
K29M				IAmb		IAmb	03 17 20.6	
	comp=Z,14nm,1.6s							
I30M	**Mount Dempster**	**67.62**	**27**	P		**P**	**03 17 10.1**	**+1.0**
J30M	**Hart River**	**67.82**	**28**	P		**P**	**03 17 10.8**	**+0.5**
J30M				IAmb		IAmb	03 17 21.9	
	comp=Z,5.1nm,0.9s							
INK	**Inuvik**	**67.84**	**23**	P		**P**	**03 17 10.8**	**+0.6**
INK				IAmb		IAmb	03 18 43.8	
	comp=Z,19nm,1.9s							
G31M	**Satah River**	**67.97**	**25**	P		**P**	**03 17 11.6**	**+0.6**
M30M	**Minto, Yukon**	**68.17**	**30**	P		**P**	**03 17 13.9**	**+1.4**
M30M				IAmb		IAmb	03 17 26.9	
	comp=Z,21nm,2.0s							
SPITS	**Spitsbergen Ar**	**68.41**	**348**	P		**P**	**03 17 13.4**	**-0.3**
	comp=Z,39nm,1.3s,baz=96,slow=12,SNR=1.3							
	comp=Z,39nm,1.3s							
KBZ

NBO00	NORSAR Array S	79.38	334	P		P	03 18 17.9	-0.4
BUR08	Bucovina Ar. S	79.48	318	P		P	03 18 18.8	-0.4
BURAR	Bucovina Array	79.48	318	P		P	03 18 18.8	-0.3
GHAJ	Ghor Haditha	79.60	300	P		P	03 18 19.7	-0.2
GHAJ				IAmb		IAmb	03 18 21.3	
	comp=Z,9.8nm,0.9s							
KWP	Kalwaria Pacla	79.96	321	P		P	03 18 21.7	+0.1
KWP				IAmb		IAmb	03 18 23.2	
	comp=Z,15nm,1.0s							
MLR	Muntele Rosu	80.05	316	P		P	03 18 22.1	-0.2
MLR				IAmb		IAmb	03 18 23.5	
	comp=Z,9.7nm,1.3s							
SUMG	Summit	80.45	356	P		P	03 18 25.0	+0.7
SUMG	Summit	80.45	356	*i* P		P	03 18 24.0	-0.3
SUMG				IAmb		IAmb	03 18 28.9	
	comp=Z,12nm,0.7s							
EIL	Elat	80.77	298	LR		LR	03 59 34.7	
	comp=Z,23nm,19.4s,baz=48,slow=40							
CRVS	Cervenica-Dubn	81.03	321	*e*P		P	03 18 30.5	+3.1
OJC	Ojcow	81.28	322	P		P	03 18 28.7	+0.1
OJC				IAmb		IAmb	03 18 39.8	
	comp=Z,9.7nm,0.9s							
ELL	Elmali	81.44	307	P		P	03 18 29.8	-0.1
MODS	Modra-Piesok	83.66	322	*e*P		P	03 18 40.7	-0.4
ICESG	Greenland Ices	83.97	356	*i* P		P	03 18 45.3	+2.6
BRG	Berggiesshubel	84.02	325	*e*P		P	03 18 43.5	+0.7
BRG				Amp			03 18 43.9	
	comp=Z,3.6nm,0.8s							
BRG	Berggiesshubel	84.02	325	P		P	03 18 52.9	+10
BRG				Amp			03 18 53.8	
	comp=Z,5.9nm,0.9s							
CLL	Collm	84.24	326	P		P	03 18 43.4	-0.5
CLL	Collm	84.24	326	*e*P		P	03 18 44.0	0.0
	comp=Z,9.0nm,0.7s							
CLL				*i* pP		pwP	03 18 53.5	+1.7
	comp=Z,9.0nm,1.0s							
RONA	Rosalia, Austr	84.59	321	*e*PcP		P	03 18 47.1	+1.2
	comp=Z,6.4nm,1.6s							
PINE	Pine Mountain	84.64	43	P		P	03 18 45.5	-0.9
PINE				IAmb		IAmb	03 18 58.8	
	comp=Z,6.5nm,0.8s							
CONA	Conrad Observa	84.70	322	*i* PcP		P	03 18 47.5	+1.0
	comp=Z,12nm,1.7s							
ARSA	Arzberg	85.27	321	*e*PcP		P	03 18 52.4	+3.0
	comp=Z,0.5nm,0.5s							
FNA	Florina	85.29	314	P		P	03 18 48.7	-0.9
GERES	GERESS Array B	85.34	323	P		P	03 18 49.6	-0.1
	comp=Z,1.9nm,0.7s,baz=46,slow=5.8,SNR=9.5							
GERES				LR		LR	04 01 04.3	
	comp=Z,168nm,18.7s,baz=356,slow=39							
	comp=Z,1.9nm,0.7s							
MOA	Molln	85.62	322	*i* PcP		P	03 18 52.3	+1.2
	comp=Z,4.6nm,0.9s							
SOKA	Soboth	85.88	321	*i* PcP		P	03 18 52.9	+0.4
	comp=Z,7.3nm,1.4s							
BIOA	Bad Ischl, Aus	86.06	322	*e*PcP		P	03 18 53.1	-0.1
	comp=Z,10nm,1.5s							
BMO	Blue Mountains	86.23	41	P		P	03 18 53.1	-1.1
OBKA	Obir	86.25	321	*i* PcP		P	03 18 54.1	-0.1
	comp=Z,3.6nm,1.1s							
SFJD	Kangerlussuaq	86.41	0	*i* P		P	03 18 55.9	+1.4
KBA	Koelnbreinsper	86.58	322	*e*PcP		P	03 18 56.8	+0.8
	comp=Z,3.8nm,0.8s							
MYKA	Terra Mystica	86.68	322	*i* PcP		P	03 18 58.3	+1.9
	comp=Z,4.9nm,0.9s							
LESA	Schwarzleotal	86.74	323	*i* PcP		P	03 18 56.8	+0.2
	comp=Z,5.6nm,1.0s							
ABTA	Abfaltersbach	87.24	322	*i* PcP		P	03 18 58.6	-0.4
	comp=Z,4.6nm,0.9s							
WATA	Walderalm	87.39	323	*e*PcP		P	03 18 59.5	-0.3
	comp=Z,1.2nm,0.4s							
WTTA	Wattenberg	87.40	323	*e*PcP		P	03 19 00.5	+0.5
	comp=Z,1.9nm,0.5s							
FFC	Flin Flon	87.50	27	P		P	03 19 00.6	+0.5
MOTA	Moosalm	87.63	323	*e*PcP		P	03 19 00.2	-0.9
	comp=Z,6.2nm,1.5s							
SQTA	Sankt Quirin	87.65	323	*e*PcP		P	03 19 01.1	-0.1
	comp=Z,6.0nm,1.4s							
FETA	Feichten	88.03	323	*e*PcP		P	03 19 03.9	+0.9
	comp=Z,5.7nm,1.2s							
DAVA	Damuels	88.32	324	*e*PcP		P	03 19 05.7	+1.4
	comp=Z,7.0nm,1.2s							
DAVOX	Davos/Dischmat	88.64	323	LR		LR	04 02 49.4	
	comp=Z,116nm,18.4s,baz=70,slow=38							
EKA	Eskdalemuir Ar	88.65	335	P		P	03 19 06.9	+1.4
	comp=Z,2.1nm,0.5s,baz=33,slow=4.9,SNR=12							
	comp=Z,2.1nm,0.5s							
HLID	Hailey	88.67	41	P		P	03 19 05.8	-0.3
NVAR	Mina Array Bea	89.25	47	P		P	03 19 09.7	+0.8
	comp=Z,0.1nm,0.3s,baz=289,slow=8.5,SNR=1.2							
	comp=Z,0.1nm,0.3s							
PDAR	Pinedale Array	91.95	39	P		P	03 19 21.9	+0.4
	comp=Z,0.9nm,0.9s,baz=0.0,slow=0.0,SNR=5.8							
	comp=Z,0.9nm,0.9s							
ULM	Lac du Bonnet	93.33	27	P		P	03 19 27.2	-0.1
	comp=Z,3.2nm,0.8s,baz=283,slow=3.5,SNR=3.2							
	comp=Z,3.2nm,0.8s							

UPA ***06*** *03:40:46.3±2.0, 7°.76N×77°.62W, h21km±17km, MD3.9, MW4.2*

RSNC ***06*** *03:40:46.4±1.6, 7°.80N±0°.03×77°.62W±0°.03, h14km±5km, ML2.2*

ISC 06 03:40:44.4±1.2, 7°.80N±0°.03×77°.62W±0°.03, h9km±10km, n24, σ0s78/41, 2D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTAC	Punta Ardita,	0.68	196	*e*P		Pb	03 40 58.0	-0.4
PTAC				*i* S		Sg	03 41 07.1	+0.8
PTAC	Punta Ardita,	0.68	196	*e*P		Pg	03 40 57.5	0.0
PTAC				*e*S		Sb	03 41 08.2	+0.3
PTAC				*i*			03 41 11.6	
	comp=Z,149nm,0.2s							
UPD2	Meteti	0.84	332	↓*i* P		Pb	03 41 01.4	+0.2
UPD2				*i* S		Sb	03 41 12.8	+0.2
UPD2	Meteti	0.84	332	*e*P		Pb	03 41 01.4	+0.2
UPD2				*e*S		Sb	03 41 13.7	+1.1
UPD2				*i*			03 41 15.6	
	comp=Z,149nm,0.2s							
CAPC	Capurgana	0.87	18	*e*P		Pb	03 41 01.9	+0.1
CAPC				*e*S		Sg	03 41 12.4	-0.2
CAPC				*i*			03 41 12.7	
	comp=Z,213nm,0.3s							
APAC	Apartado, Choc	1.04	84	↓*e*P		Pb	03 41 04.6	0.0
APAC				*e*S		Sn	03 41 19.7	-0.2
APAC				*i*			03 41 22.9	
	comp=Z,101nm,0.4s							
TOTI	Torti	1.31	329	*i* P		Pb	03 41 10.2	+0.9
TOTI				*i* S		Sg	03 41 25.1	-1.7
DBBC	Dabeiba	1.60	119	*e*P		Pb	03 41 14.1	-0.2
DBBC				*e*S		Sn	03 41 34.2	+0.3
DBBC				*i*			03 41 40.1	
	comp=Z,13nm,0.4s							
CNTA3	Canitas, Panam	1.89	318	*e*P		Pn	03 41 17.2	+0.3
CHPO	Chepo, Panama	2.01	313	*i* P		Pb	03 41 20.5	-0.7
CHPO				*e*S		Sn	03 41 43.6	-0.2
UREC	San Jos de Ur	2.07	91	*i* P		Pn	03 41 19.7	+0.3
UREC				*i* S		Sn	03 41 43.9	-1.5
UREC	San Jos de Ur	2.07	91	*e*P		Pn	03 41 19.1	-0.4
UREC				*e*S		Sn	03 41 45.5	+0.1
UREC				*i*			03 41 52.6	
	comp=Z,8.6nm,0.5s							
UPA	Univ. de Panam	2.23	302	*e*P		Pn	03 41 23.1	+1.5
CBOC	Ciudad Bolivar	2.50	140	*e*P		Pn	03 41 25.9	+0.3
CBOC				*e*S		Sn	03 41 56.1	-0.1
CBOC				*i*			03 42 10.2	
	comp=Z,5.7nm,0.6s							
ZANG	Zanguenga, Cho	2.50	297	*e*P		Pn	03 41 23.5	-1.8
FRIJ	El Hiral	2.52	304	*e*P		Pn	03 41 26.0	+0.5
BCIP	Isla Barro Col	2.58	302	*e*P		Pn	03 41 27.7	+1.2
BCIP				*e*S		Sn	03 41 56.5	-1.4
BCIP	Isla Barro Col	2.58	302	*e*P		Pn	03 41 27.6	+1.2
BCIP				*e*S		Sn	03 41 57.8	-0.1
BCIP				*i*			03 42 06.1	
	comp=Z,9.6nm,0.5s							
AZU	Azuero	2.63	270	*e*P		Pn	03 41 27.5	+0.4
AZU				*e*S		Sn	03 41 58.1	-1.0
AZU	Azuero	2.63	270	*e*S		Sn	03 41 59.3	+0.1
CHIT3	Chitre	2.77	273	*e*P		Pn	03 41 28.4	-0.7
PTBC	PUERTO BERRIO,	3.38	112	*e*P		Pn	03 41 37.5	0.0
PTBC				*e*S		Sn	03 42 17.7	-0.1
PTBC				*i*			03 42 28.1	
	comp=Z,2.7nm,0.5s							
GUY2C	Guyana, Caldas	3.40	139	*e*P		Pn	03 41 38.4	+0.2
GUY2C				*e*S		Sn	03 42 18.6	-0.3
GMAL	Guarumal, Vera	3.58	270	*e*P		Pn	03 41 40.7	+0.6

IDC ***06*** *03:46:55.6±3.0, 35°.27S×179°.06E, h0km, mb4.0/2, mbtmp4.0/3, ML3.9/1, MS2.8/1, Error ellipse: s-maj=63.8km s-min=44.1km az=104.0*

WEL ***06*** *03:47:00.7±1.6, 35°.5S±10°×17°.9E±1°.2, h12km, M3.8/15, ML3.9/19, MLv3.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=55.1, confirmed*

NEIC ***06*** *03:47:01.9±1.5, 35°.5S±0°.1×178°.9E±0°.2, h35km±2km, mb4.1/5, Error ellipse: s-maj=21.9km s-min=20.7km az=124.0*

ISC 06 03:46:59.0±1.4, 35°.31S±0°.09×178°.7E±0°.1, h10km, n85, σ2s14/79, mb4.0/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	Matakaoa Point	2.27	188			Pn	03 47 35.0	-1.5
MXZ	Matakaoa Point	2.27	188	P		Pn	03 47 35.1	-1.5
MXZ				T		T	03 49 41.9	
WMGZ	Waiomatatini S	2.51	185	P		Pn	03 47 40.5	+0.6
WMGZ				T		T	03 49 59.3	
WIZ	White Island	2.52	208	T		T	03 50 06.9	
HAZ	Te Kaha	2.54	196	P		Pn	03 47 40.4	0.0
PKGZ	Pakihiroa	2.62	191	P		Pn	03 47 41.1	-0.3
RUGZ	Raukumara Rang	2.77	197	P		Pn	03 47 43.9	+0.3
PUZ	Puketiti	2.78	187	P		Pn	03 47 45.0	+1.4
PUZ				S		Sn	03 48 20.5	+3.3
KUZ	Kuaotunu	2.79	238	P		Pn	03 47 42.5	-1.2
TWGZ	Tauwhareparae	2.92	191	P		Pn	03 47 47.9	+2.3
TWGZ				T		T	03 50 14.5	
OPRZ	Ohinepanea	3.05	213	P		Pb	03 47 53.2	-0.2
TGRZ	Tauranga	3.10	218	P		Pb	03 47 54.8	+0.5
CNGZ	Carnagh Statio	3.19	187	P		Pn	03 47 51.4	+2.1
TKGZ	Te Karaka	3.19	192	P		Pn	03 47 51.7	+2.5
URZ	Urewera	3.20	203	Pn		Pn	03 47 49.5	+0.1
	13nm,0.3s,baz=31,slow=3.0,SNR=30							
URZ				Sn		Sn	03 48 24.5	-3.1
	6.3nm,0.3s,baz=26,slow=22,SNR=2.0							
URZ				LR		LR	03 49 11.0	
	comp=Z,127nm,19.3s,baz=121,slow=40							
	29nm,0.3s							
URZ	Urewera	3.20	203	P		Pn	03 47 49.9	+0.5
URZ				S		Sn	03 48 27.6	0.0
RAGZ	Rawiri	3.34	197	P		Pn	03 47 52.1	+0.7
OMRZ	Omania	3.35	213	P		Pb	03 47 57.3	-1.3
KMRZ	Kaimai	3.36	220	P		Pb	03 47 58.2	-0.5
MKAZ	Moumakai	3.36	237	P		Pn	03 47 51.8	+0.2
RIGZ	Rimuhau	3.47	192	P		Pn	03 47 54.7	+1.6
MUGZ	Murupara	3.51	205	P		Pn	03 47 55.0	+1.3
TOZ	Tahuroa Road	3.52	226	Pn		Pn	03 47 54.5	+0.8
RTZ	Ruatahuna	3.57	202			Pn	03 47 54.6	+0.1
RTZ	Ruatahuna	3.57	202	P		Pn	03 47 54.9	+0.4
WCZ	Waipu Caves	3.59	259	P		Pn	03 47 55.0	+0.3
SNGZ	Shannon Statio	3.63	197	P		Pn	03 47 57.1	+1.9
PRGZ	Paritu Road	3.66	190	P		Pn	03 47 57.6	+1.8
AWAZ	Awhitu Peninsu	3.71	241	P		Pn	03 47 57.2	+0.9
ALRZ	Allen Road	3.75	209	P		Pn	03 48 01.4	+4.5
WPRZ	Whakapapatarin	3.79	211	P		Pn	03 48 03.0	+5.5
RAHZ	Arahi	3.82	199	P		Pn	03 48 00.8	+2.9
MTHZ	Maungataniwha	3.83	202	P		Pn	03 47 58.7	+0.6
WHHZ	Waihua	3.93	197	P		Pn	03 48 01.9	+2.4
MRHZ	Matea Rd	3.96	207	P		Pn	03 48 02.3	+2.5
NMHZ	Naumai	4.07	201	P		Pn	03 48 04.0	+2.7
ARHZ	Aropaoanui	4.17	198	P		Pn	03 48 04.6	+2.0
BKZ	Black Stump Fm	4.22	204			Pn	03 48 03.9	+0.3
BKZ	Black Stump Fm	4.22	204	P		Pn	03 48 05.8	+2.2
RITZ	Rihia Road	4.30	211	P		Pn	03 48 08.7	+4.1
MCHZ	McNeill Hill	4.42	200	P		Pn	03 48 07.8	+1.7
HIZ	Hauiti	4.43	223	Pn		Pn	03 48 07.5	+1.2
NTVZ	North Tongarir	4.48	212	P		Pn	03 48 10.8	+3.7
TMVZ	Te Maari	4.48	211	P		Pn	03 48 10.8	+3.7
KWHZ	Kaweka Forest	4.48	203	P		Pn	03 48 08.5	+1.5
KRVZ	Karewarewa	4.49	212	P		Pn	03 48 11.1	+3.9
ETVZ	East Tongariro	4.49	211	P		Pn	03 48 10.6	+3.3
WTVZ	West Tongariro	4.53	212	P		Pn	03 48 11.7	+3.9
NNVZ	North Ngauruho	4.53	212	P		Pn	03 48 11.8	+3.9
OTVZ	Oturere	4.54	211	P		Pn	03 48 11.4	+3.5
TWVZ	Taurewa	4.56	214	P		Pn	03 48 12.6	+4.4
SNVZ	South Ngauruho	4.57	211	P		Pn	03 48 11.8	+3.4
NGZ	Ngauruhoe	4.57	212	P		Pn	03 48 12.1	+3.6
FWVZ	Far West T-bar	4.66	211	P		Pn	03 48 13.1	+3.5
BHHZ	Black Hill Sta	4.66	206	P		Pn	03 48 11.8	+2.3
MAVZ	Matarangi	4.67	211	P		Pn	03 48 14.9	+5.0
KAHZ	Kahuranaki	4.70	197	P		Pn	03 48 10.9	+0.8
KRHZ	Keru	4.70	202	P		Pn	03 48 10.8	+0.8
TRVZ	Turoa	4.70	211	P		Pn	03 48 13.9	+3.7
WNVZ	Wahianoa	4.70	211	P		Pn	03 48 12.9	+2.8
MOVZ	Moawhango	4.71	209	P		Pn	03 48 12.1	+1.9
MTVZ	Mangateitei	4.80	211	P		Pn	03 48 13.3	+1.8
PXZ	Pawanui	4.93	196	P		Pn	03 48 12.9	-0.2
PNHZ	Pukenui	5.00	202	P		Pn	03 48 14.2	+0.1
BFZ	Birch Farm	5.70	199	Pn		Pn	03 48 22.6	-1.1
MRZ	Mangatainoka R	5.88	204	Pn		Pn	03 48 24.9	-1.3
MRZ	Mangatainoka R	5.88	204	P		Pn	03 48 26.1	0.0
PLWZ	Palliser	6.80	202	Pn		Pn	03 48 36.5	-2.4
THZ	Tophouse	7.87	213	Pn		Pn	03 48 52.7	-0.9
KHZ	Kahutara	8.15	208	Pn		Pn	03 48 55.9	-1.5
AS31	Alice Springs	40.36	274	P		P	03 54 36.4	-0.7
ASAR	Alice Springs	40.36	274	P		P	03 54 36.9	-0.2
ASAR	Alice Springs	40.36	274	P		P	03 54 37.6	+0.5
	2.0nm,0.8s,baz=114,slow=7.6,SNR=16							
	2.0nm,0.8s							
WB2	Warramunga Arr	41.80	279	P		P	03 54 48.5	-0.5
WB2				IAmb		IAmb	03 54 52.3	
	comp=Z,7.3nm,1.2s							
WRA	Warramunga Arr	41.81	279	P		P	03 54 49.6	+0.5
	comp=Z,2.2nm,0.9s,baz=124,slow=7.2,SNR=6.0							
	comp=Z,2.2nm,0.9s							
WB0	Warramunga Arr	41.86	280	P		P	03 54 49.8	+0.3
WB0				IAmb		IAmb	03 54 51.8	
	comp=Z,4.0nm,0.9s							
FITZ	Fitzroy Crossi	49.81	276	P		P	03 55 53.7	+1.4
FITZ				IAmb		IAmb	03 56 08.9	
	comp=Z,2.4nm,1.4s							
QSPA	South Pole Qui	54.81	180	P		P	03 56 27.3	-1.7
H03S2	Juan Fernandez	80.05	124	T		T	05 27 22.1	
	baz=232,slow=74,SNR=6.3							
H03S1	Juan Fernandez	80.06	124	T		T	05 27 22.3	
	baz=232,slow=74,SNR=5.4							
H03S3	Juan Fernandez	80.06	124	T		T	05 27 22.4	
	baz=232,slow=74,SNR=6.4							
H03N3	Juan Fernandez	80.27	124	T		T	05 27 39.4	
	baz=236,slow=72,SNR=63							
H03N2	Juan Fernandez	80.27	124	T		T	05 27 32.8	
	baz=236,slow=72,SNR=40							
H03N1	Juan Fernandez	80.29	124	T		T	05 27 32.5	
	baz=236,slow=72,SNR=55							
FINES	FINESS Array B	148.60	335	PKPbc		PKPdf	04 06 43.3	+1.6
	comp=Z,0.7nm,0.6s,baz=74,slow=4.9,SNR=4.7							

IDC ***06*** *03:49:27.8±28.0, 11°.50N×86°.14W, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=596.4km s-min=127.9km az=3.0*

CATAC ***06*** *03:49:36.2±0.8, 11°.37N×87°.23W, h23km±8km, ML3.6*

ISC 06 03:49:33.8±1.5, 11°.20N±0°.04×87°.24W±0°.05, h29km±13km, n68, σ1s15/77, mb3.0/3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSHP	Masachapa	0.94	48	*i* P		Pb	03 49 52.5	+1.1
MSHP				IAML			03 50 12.8	
	comp=Z,220nm,1.0s							
COPN	Copaltepe	1.17	33	*i* P		Pb	03 49 55.0	-0.3
COPN				IAML			03 50 18.6	
	comp=Z,2μm,1.0s							
ADRN	Diriamba	1.18	56	*i* P		Pb	03 49 55.6	0.0
ADRN				IAML			03 50 19.3	
	comp=Z,4μm,1.0s							
CRUN	El Crucero	1.21	50	*i* P		Pb	03 49 55.6	-0.5
CRUN				IAML			03 50 12.5	
	comp=Z,4.7nm,1.0s							
BC86	Nagarote	1.25	32	*i* P		Pn	03 49 55.9	+0.5
BC86				IAML			03 51 04.6	
	comp=Z,6μm,1.0s							
SAPS	Ciudad Sandino	1.27	40	*i* P		Pb	03 49 56.4	-0.7
SAPS				*i* S		Sn	03 50 11.7	0.0
SAPS				IAML			03 50 37.0	
	comp=Z,870nm,1.0s							
NADN	Granada	1.30	65	*i* P		Pb	03 49 57.6	-0.1
NADN				*i* S		Sb	03 50 14.3	+0.2
NADN				IAML			03 50 37.9	
	comp=Z,2μm,1.0s							
UNAN	Cigeo UNAN	1.31	46	*i* P		Pb	03 49 57.2	-0.7
UNAN				*i* S		Sn	03 50 12.7	-0.2
UNAN				IAML			03 50 18.3	
	comp=Z,3μm,1.0s							
USIM	UNAN	1.32	46	*i* P		Pb	03 49 57.3	-0.6
USIM				*i* S		Sn	03 50 13.0	+0.1
USIM				IAML			03 50 24.2	
	comp=Z,6μm,1.0s							
NANN	Nandasmo	1.32	56	*i* P		Pb	03 49 58.6	+0.6
NANN				IAML			03 50 34.1	
	comp=Z,11μm,1.0s							
ENAN	Enatrel Managu	1.32	46	*i* P		Pb	03 49 57.7	-0.3
ENAN				IAML			03 51 00.4	
	comp=Z,7μm,1.0s							
MASN	Masaya	1.32	53	IAML			03 49 57.2	
	comp=Z,270nm,1.0s							
MASN				*i* P		Pb	03 49 58.1	0.0
MAFN	Magfor	1.33	48	IAML			03 49 56.8	
	comp=Z,5μm,1.0s							
MAFN				*i* P		Pb	03 49 57.4	-0.7
MAS3	Al N del Volca	1.33	52	*i* P		Pb	03 49 57.5	-0.6
MAS3				IAML			03 49 57.9	
	comp=Z,640nm,1.0s							
MAS3				*i* S		Sn	03 50 13.7	+0.4
TISN	Laguna Tiscapa	1.34	45	*i* P		Pb	03 49 57.7	-0.6
TISN				IAML			03 50 05.1	
	comp=Z,83nm,1.0s							
APQ2	Apoyeque	1.34	42	*i* P		Pb	03 49 57.8	-0.5
APQ2				IAML			03 50 25.4	
	comp=Z,740nm,1.0s							
APYN	Apoyeque	1.35	40	*i* P		Pb	03 49 57.8	-0.7
APYN				IAML			03 50 19.2	
	comp=Z,630nm,1.0s							
AMYN	Masaya	1.36	55	*i* P		Pb	03 49 58.3	-0.4
AMYN				IAML			03 50 29.1	
	comp=Z,4μm,1.0s							
PACN	Al O del Volca	1.37	19	*i* P		Pn	03 49 57.9	+0.9
PACN				*i* S		Sn	03 50 15.1	+0.9
PACN				IAML			03 50 23.5	
	comp=Z,580nm,1.0s							
APQN	BB Volcan Apoy	1.37	42	*i* P		Pb	03 49 58.2	-0.7
MACN	El Madrono	1.38	24	*i* P		Pn	03 49 57.8	+0.6
MACN				*i* S		Sn	03 50 13.6	-0.9
MACN				IAML			03 50 25.9	
	comp=Z,490nm,1.0s							
MOMN	Momotombo	1.39	30	*i* P		Pn	03 49 57.8	+0.5
MOMN				IAML			03 50 09.2	
	comp=Z,24nm,1.0s							
MOMN				*i* S		Sn	03 50 14.6	-0.1
CNGA	Al SSO del Vol	1.39	22	*i* P		Pn	03 49 57.9	+0.5
CNGA				IAML			03 50 21.9	
	comp=Z,750nm,1.0s							
CNGN	Cerro Negro	1.40	22	*i* P		Pn	03 49 58.1	+0.6
CNGN				*i* S		Sn	03 50 15.2	+0.1
CNGN				IAML			03 50 25.0	
	comp=Z,740nm,1.0s							
ROCN	Rota Cerro Neg	1.40	20	*i* P		Pn	03 49 58.2	+0.7
ROCN				IAML			03 50 05.8	
	comp=Z,500nm,1.0s							
ROCN				*i* S		Sn	03 50 14.7	-0.4
WILN	Americas 2	1.41	47	*i* P		Pb	03 49 58.6	-0.8
WILN				IAML			03 50 09.2	
	comp=Z,430nm,1.0s							
TEL3	Telica 3	1.42	16	*i* P		Pn	03 49 58.4	+0.6
TEL3				IAML			03 50 42.7	
	comp=Z,900nm,1.0s							
MOM2	El Cardon	1.44	31	*i* P		Pn	03 49 58.9	+0.9
MOM2				IAML			03 50 06.2	
	comp=Z,680nm,1.0s							
PLRN	Geotermica Pol	1.46	18	*i* P		Pn	03 49 58.5	+0.3
PLRN				IAML			03 50 23.7	
	comp=Z,350nm,1.0s							
HERN	Volcan Telica	1.46	16	*i* P		Pn	03 49 58.8	+0.5
HERN				IAML			03 50 22.3	
	comp=Z,580nm,1.0s							
ILCN	San Idelfonso	1.47	21	*i* P		Pn	03 49 58.6	+0.2
ILCN				IAML			03 50 05.4	
	comp=Z,260nm,1.0s							
ILCN				*i* S		Sn	03 50 16.0	-0.7
CRIN	San Cristobal	1.51	7	*i* P		Pn	03 49 59.5	+0.5
CRIN				IAML			03 50 20.3	
	comp=Z,1μm,1.0s							
JAPN	Al SSO del Vol	1.57	78	*i* P		Pb	03 50 02.0	-0.1
JAPN				IAML			03 50 27.3	
	comp=Z,420nm,1.0s							
MORN	Al O del Volca	1.60	77	*i* P		Pb	03 50 01.8	-0.9
MORN				IAML			03 50 31.0	
	comp=Z,1μm,1.0s							
HZTE	Horizontes, Gu	1.69	106	*i* P		Pb	03 50 04.9	+0.8
HZTE				IAML			03 50 44.1	
	comp=Z,300nm,1.0s							
BRAN	Las Pilas	1.75	30	*i* P		Pn

PLAN	**Los Planes de**	**4.31**	**125**	*i* P	Pn	03 50 41.8	+4.3
PLAN				IAML		03 51 34.4	
	comp=Z,120nm,1.0s						
TXAR	**Lajitas Array**	**23.68**	**322**	P	**P**	**03 54 45.0**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=148,slow=11,SNR=9.3						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**36.97**	**332**	P	**P**	**03 56 41.6**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=134,slow=8.9,SNR=2.4						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**54.87**	**345**	P	**P**	**03 58 59.6**	**-1.7**
	comp=Z,0.2nm,0.8s,baz=134,slow=7.8,SNR=3.5						
	comp=Z,0.2nm,0.8s						

IDC 06 03:49:56.0±11.0, 4°69S×129°10E, h380km±146km, mb3.3/2, mbtmp3.8/4, Error ellipse: s-maj=68.7km s-min=36.7km az=34.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.99**	**162**	P	P	03 53 18.9	-1.1
	0.3nm,0.3s,baz=336,slow=13,SNR=11						
WRA				S	S	03 56 11.1	+2.0
	0.7nm,1.1s,baz=336,slow=26,SNR=1.7						
ASAR	**Alice Springs**	**19.43**	**167**	P	P	03 53 57.5	+1.2
	4.1nm,0.6s,baz=348,slow=11,SNR=37						
CTA	**Charters Tower**	**22.65**	**134**	P	P	03 54 24.8	-1.2
	10nm,0.7s,baz=309,slow=6.5,SNR=11						
	10nm,0.7s						
MKAR	**Makanchi Array**	**65.82**	**327**	P	P	04 00 02.0	+0.2
	0.3nm,0.6s,baz=134,slow=6.2,SNR=2.6						
	0.3nm,0.6s						

*CATAC **06** 03:52:17.3±0.5, 13°59N×88°67W, h11km±3km, ML2.2*
SNET 06 03:52:17.7±0.7, 13°60N×88°67W, h7km±3km, ML2.3, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PQSS	**Presa 15 de Se**	**0.11**	**76**	*e*P	Pg	03 52 20.7	+0.6
PQSS				*e*S	Sg	03 52 22.5	+0.8
PQSS	**Presa 15 de Se**	**0.11**	**76**	*i* P	Pg	03 52 20.7	+0.6
PQSS				IAML		03 52 20.7	
	comp=Z,2μm,1.0s						
PQSS				*i* S	Sg	03 52 22.9	+1.2
SCLA	**Alcaldia de Sa**	**0.12**	**330**	*i* P	Pg	03 52 21.6	+1.3
SCLA				*e*S	Sg	03 52 24.0	+1.9
SCLA	**Alcaldia de Sa**	**0.12**	**330**	*i* P	Pg	03 52 21.6	+1.3
SCLA				IAML		03 52 21.7	
	comp=Z,430nm,1.0s						
SCLA				*i* S	Sg	03 52 24.6	+2.5
UESV	**Universidad de**	**0.12**	**288**	*i* P	Pg	03 52 21.5	+1.1
UESV				*i* S	Sg	03 52 24.6	+2.4
UESV				IAML		03 52 24.8	
	comp=Z,880nm,1.0s						
TECO	**Alcaldia de Te**	**0.13**	**241**	*e*P	Pg	03 52 21.2	+0.8
TECO				*e*S	Sg	03 52 23.3	+1.1
TECO	**Alcaldia de Te**	**0.13**	**241**	*i* P	Pg	03 52 21.2	+0.8
TECO				*i* S	Sg	03 52 23.9	+1.7
TECO				IAML		03 52 24.8	
	comp=Z,1μm,1.0s						
COEG	**Centro de Oper**	**0.21**	**276**	*e*P	Pg	03 52 22.9	+1.0
COEG				*e*S	Sg	03 52 26.1	+1.4
COEG				*e*S		03 52 26.4	
COEG				IAML		03 52 27.5	
	comp=Z,910nm,0.2s						
COEG	**Centro de Oper**	**0.21**	**276**	*i* P	Pg	03 52 23.0	+1.1
COEG				*i* S	Sg	03 52 26.9	+2.2
COEG				IAML		03 52 27.4	
	comp=Z,950nm,1.0s						
PAVA	**Las Pavas**	**0.29**	**294**	*e*P	Pb	03 52 24.5	-0.8
PAVA				*e*S	Sb	03 52 29.2	-1.1
PAVA				IAML		03 52 31.0	
	comp=Z,335nm,0.1s						
PAVA	**Las Pavas**	**0.29**	**294**	*i* P	Pb	03 52 24.5	-0.8
PAVA				*i* S	Sb	03 52 29.4	-1.0
PAVA				IAML		03 52 30.9	
	comp=Z,1μm,1.0s						
SJTE	**Alcalda de S**	**0.33**	**273**	*e*P	Pg	03 52 25.0	+0.8
SJTE				*e*S	Sb	03 52 30.5	-1.1
SJTE	**Alcalda de S**	**0.33**	**273**	*i* P	Pg	03 52 24.9	+0.7
SJTE				*i* S	Sb	03 52 30.4	-1.2
SJTE				IAML		03 52 31.3	
	comp=Z,190nm,1.0s						
PACA	**Pacayal**	**0.36**	**111**	*i* P	Pb	03 52 26.3	-0.2
PACA				IAML		03 52 32.5	
	comp=Z,1μm,1.0s						
LOMA	**Loma Larga**	**0.49**	**275**	*e*P	Pb	03 52 28.2	-0.6
JAYA	**Jayaque - finc**	**0.76**	**274**	*e*P	Pg	03 52 32.7	+0.3
JAYA				*e*S	Sb	03 52 43.3	-0.8
JAYA	**Jayaque - finc**	**0.76**	**274**	*i* P	Pg	03 52 32.8	+0.4
JAYA				*i* S	Sg	03 52 41.6	-0.7
JAYA				IAML		03 52 44.4	
	comp=Z,230nm,1.0s						
LCND	**La Caada**	**0.81**	**111**	*e*P	Pg	03 52 33.3	0.0
LCND				*e*S	Sg	03 52 44.4	+0.7
MTO3	**Montecristo**	**1.04**	**320**	*i* P	Pg	03 52 37.2	-0.6
MTO3				IAML		03 52 38.2	
	comp=Z,28nm,1.0s						
MTO3				*i* S	Sg	03 52 51.4	+0.1

*IDC **06** 03:52:53.0±1.5, 35°.28S×178°.79E, h0km, mb3.9/3, mbtmp3.8/4, ML3.6/1, MS3.6/8, Error ellipse: s-maj=40.1km s-min=35.4km az=141.0*
*WEL **06** 03:52:56.5±1.1, 35°.5S±7°×17°.8E±°, h5km, M4.0/25, ML4.2/26, MLv4.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=39.8, confirmed*
ISC 06 03:52:53.8±2.2, 35°.44S±0°.07×178°.41E±0°.07, h3km±12km, n82, σ2s08/71, mb3.7/3, MS3.6/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.12**	**182**	P	**Pb**	**03 53 31.4**	**-1.4**
MXZ				S	**Sb**	**03 53 58.3**	**-1.2**
MXZ				T	T	03 55 35.4	
WSRZ	**White Island S**	**2.30**	**205**	T	T	03 55 59.6	
WIZ	**White Island**	**2.30**	**205**	T	T	03 56 00.1	
HAZ	**Te Kaha**	**2.36**	**192**	P	**Pb**	**03 53 37.6**	**+0.6**
HAZ				T	T	03 55 53.2	
WMGZ	**Waiomatatini S**	**2.37**	**180**	P	**Pb**	**03 53 37.2**	**+0.1**
WMGZ				S	**Sg**	**03 54 13.3**	**+3.3**
PKGZ	**Pakihiroa**	**2.46**	**186**	P	**Pb**	**03 53 37.8**	**-0.8**
PKGZ				S	**Sg**	**03 54 13.9**	**+1.2**
PKGZ				T	T	03 55 51.0	
GRZ	**Great Barrier**	**2.53**	**251**	P	**Pb**	**03 53 38.3**	**-1.6**
GRZ				S	**Sn**	**03 54 06.7**	**-0.4**
KUZ	**Kuaotunu**	**2.54**	**238**	P	**Pb**	**03 53 39.0**	**-1.0**
KUZ				S	**Sb**	**03 54 10.1**	**-1.4**
RUGZ	**Raukumara Rang**	**2.59**	**193**	P	**Pb**	**03 53 40.2**	**-0.7**
PUZ	**Puketiti**	**2.63**	**183**	P	**Pb**	**03 53 41.9**	**+0.4**
PUZ				S	**Sg**	**03 54 17.1**	**-1.1**
WHRZ	**Whale Island**	**2.67**	**205**	T	T	03 56 28.6	
TWGZ	**Tauwhareparae**	**2.75**	**187**	P	**Pb**	**03 53 44.1**	**+0.5**
TWGZ				S	**Sg**	**03 54 23.9**	**+1.7**
OPRZ	**Ohinepanea**	**2.83**	**211**	P	**Pg**	**03 53 49.8**	**+1.9**
MWZ	**Matawai**	**2.97**	**194**	P	**Pb**	**03 53 45.7**	**-1.7**
URZ	**Urewera**	**3.00**	**200**	Pn	**Pb**	**03 53 45.8**	**-2.0**
	5.9nm,0.3s,baz=351,slow=4.0,SNR=22						
URZ				Sn	**Sb**	**03 54 21.2**	**-3.6**
	6.7nm,0.3s,baz=0.3,slow=18,SNR=1.7						
	30nm,0.4s						
URZ	**Urewera**	**3.00**	**200**	P	**Pb**	**03 53 46.1**	**-1.7**
TKGZ	**Te Karaka**	**3.02**	**188**	P	**Pb**	**03 53 49.1**	**+0.8**
CNGZ	**Carnagh Statio**	**3.04**	**183**	P	**Pb**	**03 53 47.8**	**-0.7**
KARZ	**Kaharoa**	**3.11**	**213**	P	**Pg**	**03 53 53.5**	**+0.2**
OMRZ	**Omania**	**3.12**	**211**	P	**Pg**	**03 53 53.6**	**0.0**
RAGZ	**Rawiri**	**3.15**	**194**	P	**Pb**	**03 53 48.5**	**-1.9**
TARZ	**Mount Tarawera**	**3.18**	**208**	P	**Pg**	**03 53 54.2**	**-0.5**
HLRZ	**Highlands Stat**	**3.25**	**210**	P	**Pg**	**03 53 55.3**	**-0.8**
TOZ	**Tahuroa Road**	**3.27**	**225**	P	**Pb**	**03 53 50.8**	**-1.7**
RIGZ	**Rimuhau**	**3.30**	**189**	P	**Pb**	**03 53 51.0**	**-1.9**
MUGZ	**Murupara**	**3.30**	**203**	P	**Pb**	**03 53 50.9**	**-2.1**
WCZ	**Waipu Caves**	**3.35**	**260**	P	**Pn**	**03 53 48.1**	**+1.1**
RTZ	**Ruatahuna**	**3.37**	**199**	P	**Pb**	**03 53 51.1**	**-3.0**
SNGZ	**Shannon Statio**	**3.44**	**194**	P	**Pb**	**03 53 53.9**	**-1.4**
PRGZ	**Paritu Road**	**3.50**	**187**	P	**Pb**	**03 53 54.2**	**-2.2**
ALRZ	**Allen Road**	**3.53**	**207**	P	**Pb**	**03 53 58.6**	**+1.8**
KNZ	**Kokohu**	**3.62**	**189**	P	**Pb**	**03 53 55.3**	**-3.1**
RAHZ	**Arahi**	**3.63**	**197**	P	**Pb**	**03 53 57.0**	**-1.5**
MTHZ	**Maungataniwha**	**3.63**	**200**	P	**Pb**	**03 53 58.0**	**-0.5**
MHGZ	**Mahia Peninsul**	**3.73**	**186**	P	**Pb**	**03 53 56.7**	**-3.5**
MRHZ	**Matea Rd**	**3.74**	**205**	P	**Pb**	**03 53 58.0**	**-2.6**
WHHZ	**Waihua**	**3.75**	**194**	P	**Pb**	**03 53 58.4**	**-2.2**
NMHZ	**Naumai**	**3.87**	**199**	P	**Pb**	**03 54 00.3**	**-2.4**
OUZ	**Omahuta**	**3.94**	**272**	P	**Pn**	**03 53 55.8**	**+0.7**
ARHZ	**Aropaoanui**	**3.98**	**196**	P	**Pb**	**03 54 01.1**	**-3.4**
RATZ	**Rangitukua**	**4.02**	**211**	P	**Pb**	**03 54 04.7**	**-0.5**
BKZ	**Black Stump Fm**	**4.02**	**202**	P	**Pb**	**03 54 02.3**	**-3.0**
RITZ	**Rihia Road**	**4.08**	**209**	P	**Pb**	**03 54 05.3**	**-0.8**
KATZ	**Kakaramea**	**4.14**	**211**	P	**Pb**	**03 54 07.5**	**+0.2**
MCHZ	**McNeill Hill**	**4.22**	**198**	P	**Pb**	**03 54 04.1**	**-4.5**
MCHZ				S	**Sb**	**03 54 57.9**	**-2.2**
NTVZ	**North Tongarir**	**4.25**	**210**	P	**Pb**	**03 54 07.2**	**-2.1**
TMVZ	**Te Maari**	**4.25**	**210**	P	**Pb**	**03 54 07.0**	**-2.3**
ETVZ	**East Tongariro**	**4.27**	**209**	P	**Pb**	**03 54 07.2**	**-2.4**
KWHZ	**Kaweka Forest**	**4.28**	**201**	P	Pb	03 54 04.9	-4.8
WTVZ	**West Tongariro**	**4.30**	**211**	P	**Pb**	**03 54 08.4**	**-1.7**
NNVZ	**North Ngauruho**	**4.30**	**210**	P	**Pb**	**03 54 08.2**	**-2.0**
OTVZ	**Oturere**	**4.31**	**210**	P	**Pb**	**03 54 07.9**	**-2.4**
TWVZ	**Taurewa**	**4.33**	**212**	P	**Pb**	**03 54 08.8**	**-1.7**
SNVZ	**South Ngauruho**	**4.34**	**210**	P	**Pb**	**03 54 07.9**	**-2.9**
NGZ	**Ngauruhoe**	**4.35**	**210**	P	**Pb**	**03 54 08.4**	**-2.5**
TUVZ	**Tukino**	**4.41**	**209**	P	**Pb**	**03 54 09.5**	**-2.4**
FWVZ	**Far West T-bar**	**4.43**	**210**	P	**Pb**	**03 54 10.1**	**-2.3**
MAVZ	**Matarangi**	**4.44**	**210**	P	**Pb**	**03 54 11.4**	**-1.2**
TRVZ	**Turoa**	**4.47**	**210**	P	**Pb**	**03 54 11.7**	**-1.4**
WNVZ	**Wahianoa**	**4.48**	**209**	P	**Pb**	**03 54 09.3**	**-3.9**
MOVZ	**Moawhango**	**4.49**	**207**	P	Pb	03 54 08.4	-4.8
KRHZ	**Kereru**	**4.50**	**201**	P	Pn	03 54 07.1	+4.3
KAHZ	**Kahuranaki**	**4.51**	**195**	P	Pn	03 54 07.2	+4.1
PNHZ	**Pukenui**	**4.80**	**201**	P	Pn	03 54 11.0	+4.1
PNHZ				S	**Sn**	**03 55 07.9**	**+4.9**
RAO	**Raoul Island**	**6.91**	**28**	LR	LR	03 56 38.7	
	comp=Z,346nm,19.0s,baz=338,slow=34						
RPZ	**Rata Peaks**	**10.02**	**212**	LR	LR	03 59 35.5	
	comp=Z,284nm,20.8s,baz=20,slow=39						
DZM	**Mont Dzumac**	**16.94**	**319**	LR	LR	04 02 24.5	
	comp=Z,447nm,18.5s,baz=178,slow=34						
CTA	**Charters Tower**	**32.13**	**290**	LR	LR	04 11 48.4	
	comp=Z,45nm,18.2s,baz=84,slow=35						
PMG	**Port Moresby**	**38.51**	**305**	LR	LR	04 13 22.3	
	comp=Z,138nm,20.2s,baz=167,slow=32						
ASAR	**Alice Springs**	**40.15**	**275**	P	**P**	**04 00 33.7**	**+2.5**
	1.5nm,0.7s,baz=115,slow=7.8,SNR=14						
ASAR				LR	LR	04 17 15.2	
	comp=Z,82nm,18.9s,baz=125,slow=36						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**41.61**	**280**	P	**P**	**04 00 44.9**	**+1.6**
	0.9nm,0.7s,baz=119,slow=7.6,SNR=5.3						
	0.9nm,0.7s						
VNDA	**Vanda**	**42.80**	**185**	LR	LR	04 15 20.8	
	comp=Z,51nm,19.9s,baz=35,slow=31						
SNAA	**Sanae**	**73.18**	**180**	LR	LR	04 34 54.9	
	comp=Z,57nm,18.1s,baz=2.0,slow=34						
H03S2	**Juan Fernandez**	**80.16**	**124**	T	T	05 33 13.0	
	baz=232,slow=74,SNR=10						
H03S1	**Juan Fernandez**	**80.16**	**125**	T	T	05 33 12.8	
	baz=232,slow=74,SNR=9.3						
H03S3	**Juan Fernandez**	**80.17**	**124**	T	T	05 33 12.2	
	baz=232,slow=74,SNR=8.8						
H03N3	**Juan Fernandez**	**80.38**	**124**	T	T	05 33 25.7	
	baz=236,slow=72,SNR=34						
H03N2	**Juan Fernandez**	**80.38**	**124**	T	T	05 33 24.5	
	baz=236,slow=72,SNR=36						
H03N1	**Juan Fernandez**	**80.40**	**124**	T	T	05 33 28.0	
	baz=236,slow=72,SNR=30						
NVAR	**Mina Array Bea**	**93.96**	**45**	P	**P**	**04 06 12.5**	**-0.6**
	0.2nm,0.5s,baz=195,slow=6.5,SNR=2.4						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**148.62**	**335**	PKPbc	**PKPbc**	**04 12 39.4**	**-2.0**
	2.7nm,1.0s,baz=42,slow=2.3,SNR=1.9						
TORD	**Torodi Ar. Bea**	**157.60**	**188**	PKPab	**PKPab**	**04 13 23.3**	**-0.6**
	0.2nm,0.6s,baz=155,slow=4.2,SNR=1.3						

*TEH **06** 03:54:41.4, 33°.60N×45°.86E, h12km±35km, ML3.2*
*ISN **06** 03:54:42.2±0.9, 33°.65N×45°.91E, h13km±4km, ML3.0*
ISC 06 03:54:42.9±0.9, 33°.63N±0°.03×45°.89E±0°.04, h19km, n18, σ1s38/22, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.26**	**90**	Pg	**Pg**	**03 54 47.7**	**-1.3**
IBDR	**Badra**	**0.52**	**176**	*e*Pg	**Pg**	**03 54 53.0**	**-0.3**
IBDR				*e*Sg	**Sb**	**03 55 00.5**	**+0.1**
IBDR				AML	AML	03 55 07.3	
	comp=N,570nm,0.3s						
IBDR				AML	AML	03 55 13.8	
	comp=E,594nm,0.4s						
IGHG	**Ghaleghazi**	**0.90**	**39**	Pg	**Pb**	**03 54 59.4**	**-0.7**
IGHG				Sg	**Sn**	**03 55 14.1**	**+0.7**
KGS1	**Ghasr-e-Shirin**	**0.91**	**344**	Pg	**Pg**	**03 55 00.0**	**-0.7**
IDHR	**Dehrash**	**1.15**	**21**	Pg	**Pn**	**03 55 03.5**	**-0.6**
KCHF	**Cheshme Sefid,**	**1.15**	**56**	Pg	**Pb**	**03 55 04.1**	**-0.2**
BHD	**Baghdad**	**1.31**	**255**	*e*Pg	**Pg**	**03 55 08.0**	**-0.3**
BHD				*e*Sg	**Sg**	**03 55 26.0**	**+0.6**
BHD				AML	AML	03 55 28.6	
	comp=E,546nm,0.6s						
ILIN	**Lien**	**1.56**	**34**	Pg	**Pb**	**03 55 11.6**	**+0.2**
IKFM	**Kafar-mosalman**	**1.64**	**93**	Pg	**Pb**	**03 55 12.4**	**-0.1**
IBZA	**Bozab**	**1.84**	**62**	Pn	**Pb**	**03 55 15.3**	**-0.8**
RAFI	**Al-Rafai**	**1.91**	**174**	*e*Pn	**Pb**	**03 55 16.0**	**-1.1**
RAFI				*e*Sn	**Sg**	**03 55 42.0**	**-2.4**
RAFI				AML	AML	03 55 46.7	
	comp=N,194nm,0.4s						
RAFI				AML	AML	03 55 58.5	
	comp=E,251nm,0.4s						
IDOB	**Doab**	**1.91**	**85**	Pn	**Pb**	**03 55 16.4**	**-0.9**
IALM	**Almabolaq**	**2.25**	**56**	Pn	**Pb**	**03 55 21.3**	**-1.9**
HSAM	**Samen**	**2.33**	**75**	Pn	**Pn**	**03 55 22.0**	**+1.6**
HAGD	**Aghdareh**	**2.94**	**65**	Pn	**Pn**	**03 55 31.0**	**+2.1**
IKLH	**Kolahrood**	**4.76**	**92**	Pn	**Pn**	**03 55 56.6**	**+2.7**
KRSH	**Karshahi**	**5.21**	**85**	Pn	**Pn**	**03 56 01.6**	**+1.6**
IRAM	**Ramesheh**	**5.76**	**107**	Pn	**Pn**	**03 56 09.5**	**+1.9**

WEL 06 03:58:03.6±1.1, 35°S±7°×17°8E±°, h5km, M3.5/11, ML3.6/16, MLv3.5/11, Error ellipse: s-maj=0.0km s-min=0.0km az=72.4, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.34**	**180**	P	Pn	03 58 39.1	-3.6
MXZ				T	T	04 00 44.8	
HAZ	**Te Kaha**	**2.57**	**189**	P	Pn	03 58 45.2	-0.6
HAZ				T	T	04 00 58.7	
KUZ	**Kuaotunu**	**2.58**	**233**	P	Pn	03 58 46.6	+0.6
KUZ				S	Sn	03 59 15.5	-2.2
WMGZ	**Waiomatatini S**	**2.60**	**178**	P	Pn	03 58 44.7	-1.6
WMGZ				S	Sn	03 59 18.2	+1.0
PKGZ	**Pakihiroa**	**2.67**	**184**	P	Pn	03 58 43.9	-3.4
RUGZ	**Raukumara Rang**	**2.79**	**190**	P	Pn	03 58 48.0	-0.9
RUGZ				T	T	04 01 04.6	
PUZ	**Puketiti**	**2.85**	**180**	P	Pn	03 58 50.0	+0.3
PUZ				S	Sn	03 59 23.5	-1.0
TWGZ	**Tauwhareparae**	**2.97**	**185**	P	Pn	03 58 52.0	+0.7
MKAZ	**Moumakai**	**3.15**	**232**	P	Pn	03 58 54.6	+0.8
MWZ	**Matawai**	**3.17**	**191**	P	Pn	03 58 53.5	-0.6
MWZ				S	Sn	03 59 35.3	+2.9
URZ	**Urewera**	**3.18**	**197**	P	Pn	03 58 54.0	-0.2
URZ				S	Sn	03 59 29.9	-2.6
CNGZ	**Carnagh Statio**	**3.26**	**181**	P	Pn	03 58 55.7	+0.3
RAGZ	**Rawiri**	**3.35**	**192**	P	Pn	03 58 56.3	-0.3
MUGZ	**Murupara**	**3.47**	**200**	P	Pn	03 58 59.0	+0.7
RIGZ	**Rimuhau**	**3.51**	**187**	P	Pn	03 58 59.1	+0.3
RIGZ				S	Sn	03 59 40.6	-0.1
RTZ	**Ruatahuna**	**3.55**	**197**	P	Pn	03 59 02.1	+2.7
RTZ				S	Sn	03 59 45.4	+3.6
SNGZ	**Shannon Statio**	**3.64**	**192**	P	Pn	03 59 01.8	+1.2
MTHZ	**Maungataniwha**	**3.81**	**197**	P	Pn	03 59 03.4	+0.5
RAHZ	**Arahi**	**3.82**	**194**	P	Pn	03 59 05.4	+2.4
RAHZ				S	Sn	03 59 52.4	+4.1
MRHZ	**Matea Rd**	**3.91**	**202**	P	Pn	03 59 05.0	+0.7
NMHZ	**Naumai**	**4.05**	**197**	P	Pn	03 59 08.2	+1.9
ARHZ	**Aropaoanui**	**4.17**	**194**	P	Pn	03 59 08.8	+1.0
BKZ	**Black Stump Fm**	**4.19**	**199**	P	Pn	03 59 10.4	+2.2
RITZ	**Rihia Road**	**4.23**	**207**	P	Pn	03 59 13.0	+4.3
NTVZ	**North Tongarir**	**4.40**	**207**	P	Pn	03 59 15.2	+4.0
TMVZ	**Te Maari**	**4.41**	**207**	P	Pn	03 59 14.8	+3.6
KRVZ	**Karewarewa**	**4.41**	**208**	P	Pn	03 59 13.4	+2.1
ETVZ	**East Tongariro**	**4.42**	**207**	P	Pn	03 59 14.9	+3.5
NNVZ	**North Ngauruho**	**4.45**	**208**	P	Pn	03 59 16.0	+4.1
KWHZ	**Kaweka Forest**	**4.46**	**199**	P	Pn	03 59 12.8	+1.0
OTVZ	**Oturere**	**4.46**	**207**	P	Pn	03 59 15.9	+3.9
NGZ	**Ngauruhoe**	**4.50**	**208**	P	Pn	03 59 16.3	+3.8
FWVZ	**Far West T-bar**	**4.58**	**208**	P	Pn	03 59 17.6	+3.9
TRVZ	**Turoa**	**4.62**	**207**	P	Pn	03 59 17.4	+3.1
WNVZ	**Wahianoa**	**4.63**	**207**	P	Pn	03 59 17.1	+2.8
MOVZ	**Moawhango**	**4.64**	**205**	P	Pn	03 59 16.4	+2.0
KRHZ	**Kereru**	**4.67**	**198**	P	Pn	03 59 15.0	+0.1
KAHZ	**Kahuranaki**	**4.71**	**193**	P	Pn	03 59 15.0	-0.2

*IDC **06** 04:01:16.1±1.2, 11°.95N×86°.74W, h0km, mb3.4/7, mbtmp3.5/8, ML2.9/2, Error ellipse: s-maj=64.0km s-min=17.7km az=52.0*
*CATAC **06** 04:01:19.7±0.8, 11°.45N×87°.23W, h25km±9km, ML3.6*
ISC 06 04:01:21.2±1.3, 11°.47N±0°.05×87°.17W±0°.06, h55km±13km, n63, σ1s38/70, mb3.3/6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSHP	**Masachapa**	**0.72**	**60**	*i* P	**Pn**	**04 01 35.4**	**0.0**
MSHP				IAML		04 01 42.4	
	comp=Z,320nm,1.0s						
COPN	**Copaltepe**	**0.90**	**39**	*i* P	**Pn**	**04 01 37.8**	**0.0**
COPN				IAML		04 02 00.9	
	comp=Z,3μm,1.0s						
BC86	**Nagarote**	**0.99**	**37**	*i* P	**Pn**	**04 01 38.6**	**-0.3**
BC86				IAML		04 01 55.7	
	comp=Z,6μm,1.0s						
ADRN	**Diriamba**	**0.99**	**67**	*i* P	**Pn**	**04 01 38.3**	**-0.7**
ADRN				IAML		04 02 06.0	
	comp=Z,6μm,1.0s						
SAPS	**Ciudad Sandino**	**1.02**	**47**	*i* P	**Pn**	**04 01 39.0**	**-0.3**
SAPS				*i* S	**Sn**	**04 01 53.7**	**+0.9**
SAPS				IAML		04 02 15.3	
	comp=Z,1μm,1.0s						
ABCN	**Banco Central**	**1.06**	**53**	*i* P	**Pn**	**04 01 39.6**	**-0.3**
ABCN				IAML		04 02 49.5	
	comp=Z,6μm,1.0s						
LEVN	**Ruinas Leon Vi**	**1.07**	**31**	*i* P	**Pn**	**04 01 39.9**	**-0.1**
PACN	**Al O del Volca**	**1.09**	**20**	*i* P	**Pn**	**04 01 40.1**	**-0.1**
PACN				*i* S	**Sn**	**04 01 55.4**	**+1.1**
PACN				IAML		04 01 57.7	
	comp=Z,890nm,1.0s						
UNAN	**Cigeo UNAN**	**1.09**	**54**	*i* P	**Pn**	**04 01 40.1**	**-0.1**
UNAN				*i* S	**Sn**	**04 01 55.3**	**+0.9**
UNAN				IAML		04 02 10.1	
	comp=Z,5μm,1.0s						
USIM	**UNAN**	**1.09**	**54**	*i* P	**Pn**	**04 01 39.9**	**-0.3**
USIM				IAML		04 02 29.9	
	comp=Z,6μm,1.0s						
ENAN	**Enatrel Managu**	**1.10**	**54**	*i* P	**Pn**	**04 01 39.9**	**-0.4**
ENAN				IAML		04 02 14.5	
	comp=Z,5μm,1.0s						
APQ2	**Apoyeque**	**1.10**	**49**	*i* P	**Pn**	**04 01 40.7**	**+0.3**
APQ2				IAML		04 02 08.1	
	comp=Z,1μm,1.0s						
MACN	**El Madrono**	**1.10**	**26**	*i* P	**Pn**	**04 01 40.3**	**-0.1**
MACN				IAML		04 02 08.5	
	comp=Z,740nm,1.0s						
APYN	**Apoyeque**	**1.10**	**47**	*i* P	**Pn**	**04 01 40.3**	**-0.2**
APYN				IAML		04 02 06.7	
	comp=Z,1μm,1.0s						
TISN	**Laguna Tiscapa**	**1.11**	**53**	*i* P	**Pn**	**04 01 40.1**	**-0.4**
TISN				IAML		04 01 47.7	
	comp=Z,77nm,1.0s						
CNGA	**Al SSO del Vol**	**1.11**	**24**	*i* P	**Pn**	**04 01 40.4**	**-0.2**
CNGA				IAML		04 02 11.3	
	comp=Z,900nm,1.0s						
MOMN	**Momotombo**	**1.12**	**34**	*i* P	**Pn**	**04 01 40.5**	**-0.2**
MOMN				*i* S	**Sn**	**04 01 56.5**	**+1.4**
MOMN				IAML		04 02 05.3	
	comp=Z,38nm,1.0s						
MAS3	**Al N del Volca**	**1.12**	**61**	*i* P	**Pn**	**04 01 40.0**	**-0.7**
MAS3				IAML		04 01 48.6	
	comp=Z,960nm,1.0s						
CNGN	**Cerro Negro**	**1.12**	**24**	*i* P	**Pn**	**04 01 40.5**	**-0.2**
CNGN				IAML		04 02 04.9	
	comp=Z,1μm,1.0s						
ROCN	**Rota Cerro Neg**	**1.12**	**22**	*i* P	**Pn**	**04 01 40.9**	**+0.2**
ROCN				IAML		04 02 08.6	
	comp=Z,740nm,1

SJTE	**Alcalda de S**	**2.78**	**320**	*i* P		**Pn**	**04 02 02.3**	**-1.0**
SJTE				IAML			04 02 37.6	
	comp=Z,86nm,1.0s							
PAVA	**Las Pavas**	**2.81**	**322**	*i* P		**Pn**	**04 02 03.6**	**-0.2**
PAVA				IAML			04 02 42.7	
	comp=Z,170nm,1.0s							
JACO	**JACO, Garabito**	**3.06**	**126**	*i* P		**Pn**	**04 02 06.8**	**-0.3**
JACO				IAML			04 03 03.3	
	comp=Z,72nm,1.0s							
JAYA	**Jayaque - finc**	**3.10**	**315**	*i* P		**Pn**	**04 02 06.3**	**-1.5**
JAYA				IAML			04 02 46.8	
	comp=Z,430nm,1.0s							
NUBE	**Las Nubes**	**3.51**	**314**	*i* P		**Pn**	**04 02 12.3**	**-1.1**
NUBE				IAML			04 02 55.1	
	comp=Z,84nm,1.0s							
LCR2	**La Lucha 2**	**3.56**	**119**	*i* P		**Pn**	**04 02 13.6**	**-0.5**
LCR2				IAML			04 03 19.8	
	comp=Z,37nm,1.0s							
MTO3	**Montecristo**	**3.60**	**324**	*i* P		**Pn**	**04 02 14.0**	**-0.8**
MTO3				IAML			04 03 16.6	
	comp=Z,27nm,1.0s							
CDM	**Cerro de Muert**	**3.86**	**119**	*i* P		**Pn**	**04 02 20.4**	**+1.9**
CDM				IAML			04 03 09.9	
	comp=Z,46nm,1.0s							
CMIG	**Matias Romero**	**9.33**	**308**	Pn		**Pn**	**04 03 33.0**	**0.0**
	comp=Z,0.7nm,0.3s,baz=140,slow=6.7,SNR=10.0							
	comp=Z,1.9nm,0.4s							
ATAH	**Atahualpa**	**20.45**	**154**	P		Pn	04 05 58.6	+1.3
	comp=Z,4.8nm,0.7s,baz=9.7,slow=18,SNR=2.2							
	comp=Z,4.8nm,0.7s							
TXAR	**Lajitas Array**	**23.50**	**322**	P		**P**	**04 06 27.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=135,slow=11,SNR=13							
	comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**36.76**	**332**	P		**P**	**04 08 23.8**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=104,slow=7.6,SNR=2.4							
	comp=Z,0.3nm,0.7s							
NVAR	**Mina Array Bea**	**38.61**	**319**	P		**P**	**04 08 41.1**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=85,slow=10.0,SNR=2.2							
	comp=Z,0.2nm,0.6s							
ULM	**Lac du Bonnet**	**39.32**	**351**	P		**P**	**04 08 43.7**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=146,slow=3.6,SNR=2.2							
	comp=Z,1.2nm,0.6s							
YKA	**Yellowknife Ar**	**54.62**	**345**	P		**P**	**04 10 44.2**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=137,slow=7.3,SNR=5.7							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**67.02**	**336**	P		**P**	**04 12 08.1**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=114,slow=5.5,SNR=4.0							
	comp=Z,0.2nm,0.8s							
WRA	**Warramunga Arr**	**139.25**	**253**	PKP		**PKiKP**	**04 20 46.4**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=95,slow=2.2,SNR=2.2							

*SFS **06** 04:04:53.6,37.3′N×2.1′3W,h0km,mb4.2/4,ML3.5/23, ML3.6/23,MLv3.1/23*
*LDG **06** 04:04:53.3±0.2,37.3′5N×2.1′3W,h10km,Ml2.9/3,Error ellipse: s-maj=4.7km s-min=2.8km az=137.0*
*MDD **06** 04:04:54.6±0.2,37.3′4N×2.0′9W,h12km,mb_Lg3.2/48, Error ellipse: s-maj=2.0km s-min=1.1km az=148.0*
*INMG **06** 04:04:54.1±1.4,37.3′4N×2.1′0W,h12km±3km,ML2.8, Error ellipse: s-maj=2.0km s-min=1.8km az=127.0*
*IGIL **06** 04:04:54.7,37.3′4N×2.0′9W,h12km*
*CNRM **06** 04:04:55.5,37.3′5N×2.1′2W,h51km,ML3.8*

ISC 06 04:04:53.2±0.9,**37.38N**±0.02×**2.13W**±0.02,**h17**km±7km, **n121**,σ1s**68**/228,**3C-1D**,**Spain**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELOR	**Lorca, Murcia**	**0.40**	**50**	Pg		**Pg**	**04 05 00.9**	**-0.3**
ELOR				Sg		**Sg**	**04 05 06.5**	**-0.3**
ELOR				*i* Vmb_Lg			04 05 08.6	
ENIJ	**Nijar**	**0.42**	**189**	⇓Pg		**Pg**	**04 05 01.5**	**-0.2**
ENIJ				Sg		**Sg**	**04 05 06.7**	**-0.7**
ENIJ				*i* Vmb_Lg			04 05 07.7	
TLOR	**Lorca, Murcia**	**0.44**	**52**	Sg		**Sb**	**04 05 08.5**	**-0.4**
TLOR				Pg		**Pg**	**04 05 02.2**	**+0.1**
TLOR	**Lorca, Murcia**	**0.44**	**52**	Pg		**Pg**	**04 05 02.0**	**-0.1**
TLOR				Sg		**Sb**	**04 05 08.5**	**-0.4**
EZAR	**Zarzadilla de**	**0.60**	**35**	Pg		**Pg**	**04 05 04.5**	**-0.5**
EZAR				Sg		**Sg**	**04 05 12.9**	**-0.2**
EZAR				*i* Vmb_Lg			04 05 14.6	
EBER	**Berja**	**0.78**	**232**	⇑Pg		**Pg**	**04 05 07.9**	**-0.6**
EBER				Sg		**Sg**	**04 05 17.1**	**-1.6**
EBER				*i* Vmb_Lg			04 05 19.4	
EMUR	**La Murta**	**0.84**	**57**	Sg		**Sn**	**04 05 08.9**	**-0.4**
EMUR				Pg		**Pg**	**04 05 09.2**	**-0.3**
EMUR	**La Murta**	**0.84**	**57**	⇑Pg		**Pg**	**04 05 09.1**	**-0.4**
EMUR				Sg		**Sn**	**04 05 22.1**	**-0.2**
EMUR				*i* Vmb_Lg			04 05 27.4	
E001A	**Albudeite (Mur**	**0.86**	**42**	Pg		**Pg**	**04 05 09.7**	**-0.2**
E001A				Sg		**Sb**	**04 05 21.7**	**+0.8**
EQES	**Quesada**	**0.86**	**299**	Pg		**Pb**	**04 05 10.1**	**+0.3**
EQES				Sg		**Sb**	**04 05 22.7**	**+1.6**
EQES				*i* Vmb_Lg			04 05 28.2	
E1002	**Yechar (Murcia**	**0.88**	**38**	Pg		**Pb**	**04 05 09.2**	**-0.8**
E1002				Sg		**Sn**	**04 05 22.8**	**-0.4**
CART	**Cartagena**	**0.92**	**77**	Pg		**Pb**	**04 05 10.1**	**-0.5**
CART				Sg		**Sg**	**04 05 23.0**	**-0.1**
CART	**Cartagena**	**0.92**	**77**	P		**Pn**	**04 05 11.2**	**-0.1**
CART	**Cartagena**	**0.92**	**77**	S		**Sn**	**04 05 24.9**	**+0.8**
EQUE	**Quentar**	**1.06**	**261**	⇑Pg		**Pb**	**04 05 12.6**	**-0.6**
EQUE				Sg		**Sb**	**04 05 27.4**	**+0.5**
EQUE				*i* Vmb_Lg			04 05 37.9	
EQTA	**Presa de Quent**	**1.06**	**261**	Pg		**Pb**	**04 05 12.7**	**-0.6**
ETRV	**Los Montesinos**	**1.25**	**59**	Pg		**Pn**	**04 05 16.3**	**+0.3**
ETRV				Sg		**Sg**	**04 05 33.5**	**-0.3**
ETRV				*i* Vmb_Lg			04 05 41.8	
ELGU	**Los Guajares,**	**1.31**	**247**	Pg		**Pn**	**04 05 17.0**	**+0.2**
ELGU	**Los Guajares,**	**1.31**	**247**	Pg		**Pn**	**04 05 16.9**	**+0.2**
ELGU				Sg		**Sb**	**04 05 31.9**	**-2.0**
ELGU				*i* Vmb_Lg			04 05 41.0	
ETOB	**Tobarra**	**1.34**	**20**	Pn		**Pb**	**04 05 18.5**	**+0.6**
ETOB				Sn		**Sg**	**04 05 36.3**	**-0.2**
ETOB	**Tobarra**	**1.34**	**20**	Pg		**Pb**	**04 05 18.4**	**+0.5**
ETOB				Sg		**Sg**	**04 05 37.7**	**+1.2**
ETOB				*i* Vmb_Lg			04 05 40.5	
EGOR	**Sierra Gorda,**	**1.61**	**261**	Pn		**Pn**	**04 05 22.5**	**+1.6**
EGOR	**Sierra Gorda,**	**1.61**	**261**	Pn		**Pn**	**04 05 22.3**	**+1.3**
EGOR				Pg		**Pg**	**04 05 24.6**	**+0.5**
EGOR				Sg		**Sg**	**04 05 46.0**	**+0.9**
EGOR				*i* Vmb_Lg			04 05 53.3	
EALB	**Alboran**	**1.62**	**207**	Sn		**Sb**	**04 05 43.8**	**+1.1**
EALB	**Alboran**	**1.62**	**207**	Sg		**Sb**	**04 05 43.9**	**+1.2**
AFON	**Font Roja**	**1.79**	**44**	Pn		**Pn**	**04 05 24.2**	**+0.7**
AFON				Sg		**Sb**	**04 05 48.7**	**+0.9**
AFON				*i* Vmb_Lg			04 06 00.7	
EMAL	**Malaga-Limoner**	**1.94**	**252**	Pn		**Pn**	**04 05 27.2**	**+1.7**
EMAL				Sn		**Sn**	**04 05 50.5**	**+1.0**
EBEN2	**Beniarda presa**	**2.00**	**49**	Pn		**Pn**	**04 05 26.1**	**-0.1**
EBEN2				Sn		**Sn**	**04 05 51.0**	**0.0**
EBEN2				*i* Vmb_Lg			04 06 17.8	
EVIV	**Cofrentes, Val**	**2.04**	**23**	Pn		**Pn**	**04 05 27.9**	**+1.1**
EVIV				Pg		**Pg**	**04 05 31.3**	**-1.1**
EVIV				Sg		**Sg**	**04 05 58.4**	**-0.4**
EVIV				*i* Vmb_Lg			04 06 03.4	
EADA	**Adamuz**	**2.09**	**293**	Pn		**Pn**	**04 05 28.7**	**+1.0**
EADA				Sn		**Sn**	**04 05 54.9**	**+1.6**
EADA	**Adamuz**	**2.09**	**293**	Pn		**Pn**	**04 05 28.6**	**+1.0**
EADA				Sn		**Sn**	**04 05 55.3**	**+2.1**
EADA				Sg		**Sg**	**04 06 00.1**	**-0.5**
EADA				*i* Vmb_Lg			04 06 05.9	
EMLI	**Melilla**	**2.18**	**198**	Sn		**Sn**	**04 05 56.1**	**+0.7**
EMEL	**Melilla**	**2.19**	**198**	Sn		**Sn**	**04 05 55.5**	**0.0**
GOG	**Mont Gurugu**	**2.27**	**198**	P		**Pn**	**04 05 29.9**	**-0.1**
GOG	**Mont Gurugu**	**2.27**	**198**	S		**Sn**	**04 05 57.9**	**+0.2**
EMIJ	**Mijas**	**2.27**	**250**	Pn		**Pn**	**04 05 29.7**	**-0.4**
EMIJ				Sn		**Sn**	**04 05 58.4**	**+0.8**
EMIJ	**Mijas**	**2.27**	**250**	Pg		**Pb**	**04 05 34.1**	**+0.3**
ECHE	**Chera**	**2.38**	**22**	Pn		**Pn**	**04 05 33.6**	**+2.0**
ECHE				Sg		**Sg**	**04 06 10.7**	**+0.9**
ECHE	**Chera**	**2.38**	**22**	Pn		**Pn**	**04 05 33.8**	**+2.2**
ECHE				Pg		**Pg**	**04 05 37.5**	**-1.4**
ECHE				Sg		**Sg**	**04 06 10.4**	**+0.6**
ECHE				*i* Vmb_Lg			04 06 15.1	
TAF	**Taforalt**	**2.58**	**185**	P		**Pn**	**04 05 35.4**	**+1.2**
TAF	**Taforalt**	**2.58**	**185**	S		**Sn**	**04 06 05.1**	**-0.1**
PALE	**Palemas**	**2.61**	**215**	P		**Pn**	**04 05 35.2**	**+0.5**
PALE	**Palemas**	**2.61**	**215**	S		**Sn**	**04 06 05.9**	**-0.1**
ECAB	**El Cabril**	**2.70**	**286**	Pn		**Pn**	**04 05 36.8**	**+0.9**
ECAB				Sn		**Sn**	**04 06 10.1**	**+1.9**
ECAB	**El Cabril**	**2.70**	**286**	Pn		**Pn**	**04 05 36.8**	**+0.9**
ECAB				Sn		**Sn**	**04 06 09.6**	**+1.3**
ECAB				Sg		**Sg**	**04 06 19.1**	**-0.9**
ECAB				*i* Vmb_Lg			04 06 21.3	
ESDC	**Sonseca Array**	**2.70**	**328**	Pn		**Pn**	**04 05 37.4**	**+1.4**
ESDC				Pg		**Pb**	**04 05 42.8**	**+1.7**
ESDC				Sn		**Sn**	**04 06 08.4**	**0.0**
ESDC				Sg		**Sg**	**04 06 18.5**	**-1.5**
ESDC				*i* Vmb_Lg			04 06 22.9	
PAB	**San Pablo**	**2.77**	**322**	Pn		**Pn**	**04 05 38.0**	**+1.0**
PAB				Sn		**Sn**	**04 06 09.7**	**-0.5**
PAB				Sg		**Sg**	**04 06 20.6**	**-1.8**
PAB				*i* Vmb_Lg			04 06 27.4	
EJIF	**Jimena Fronter**	**2.84**	**252**	Pg		**Pb**	**04 05 44.3**	**+0.9**
ESPR	**Espera**	**3.02**	**261**	Pg		**Pb**	**04 05 47.1**	**+0.5**
ESPR				Sn		**Sn**	**04 06 17.7**	**+1.5**
ESPR				Sg		**Sb**	**04 06 26.8**	**+3.5**
ESPR				*i* Vmb_Lg			04 06 42.5	
UCM	**Universidad Co**	**3.05**	**344**	Sn		**Sn**	**04 06 16.8**	**0.0**
SMIR	**Smir Dam**	**3.12**	**238**	P		**Pn**	**04 05 42.1**	**+0.4**
SMIR	**Smir Dam**	**3.12**	**238**	S		**Sn**	**04 06 19.6**	**+1.0**
EIBI	**Ibiza**	**3.19**	**58**	Pn		**Pn**	**04 05 42.8**	**+0.2**
EIBI	**Ibiza**	**3.19**	**58**	Pn		**Pn**	**04 05 42.6**	**+0.1**
EIBI				Sn		**Sn**	**04 06 18.0**	**-2.2**
EIBI				*i* Vmb_Lg			04 06 21.1	
E0901	**Celadas (Terue**	**3.19**	**14**	Pn		**Pn**	**04 05 43.8**	**+1.1**
E0901				Sn		**Sn**	**04 06 20.9**	**+0.5**
E0901				Sg		**Sg**	**04 06 34.7**	**-0.9**
E0901				*i* Vmb_Lg			04 06 47.2	
AKLM	**AKL**	**3.20**	**207**	P		**Pn**	**04 05 43.2**	**+0.5**
AKLM	**AKL**	**3.20**	**207**	S		**Sn**	**04 06 18.3**	**-2.2**
EMOS	**Mosqueruela**	**3.24**	**23**	Pn		**Pn**	**04 05 46.0**	**+2.5**
EMOS				Pg		**Pg**	**04 05 54.5**	**-0.8**
EMOS				Sn		**Sn**	**04 06 24.6**	**+2.8**
EMOS				Sg		**Sb**	**04 06 33.3**	**+3.5**
EMOS				*i* Vmb_Lg			04 06 56.0	
ETOR	**Torete**	**3.43**	**1**	Pn		**Pn**	**04 05 48.0**	**+2.0**
ETOR				Pg		**Pg**	**04 05 57.4**	**-1.5**
ETOR				Sn		**Sn**	**04 06 26.6**	**+0.2**
ETOR				Sg		**Sg**	**04 06 41.9**	**-1.5**
ETOR				*i* Vmb_Lg			04 06 53.4	
GUD	**Guadarrama**	**3.62**	**335**	Pn		**Pn**	**04 05 50.6**	**+2.0**
GUD				Pg		**Pg**	**04 06 00.4**	**-2.1**
GUD				Sn		**Sn**	**04 06 30.9**	**-0.1**
GUD				Sg		**Sg**	**04 06 46.2**	**-3.2**
GUD				*i* Vmb_Lg			04 06 55.0	
EMIN	**Mina Concepcio**	**3.63**	**277**	Pn		**Pn**	**04 05 49.4**	**+0.8**
EMIN				Sn		**Sn**	**04 06 32.5**	**+1.3**
EMIN	**Mina Concepcio**	**3.63**	**277**	Pn		**Pn**	**04 05 49.5**	**+0.8**
EMIN				Sn		**Sn**	**04 06 31.3**	**+0.1**
EMIN				Sg		**Sg**	**04 06 46.6**	**-3.3**
EMIN				*i* Vmb_Lg			04 06 55.9	
PBAR	**Barrancos**	**3.97**	**283**	*e*Pn		**Pn**	**04 05 54.2**	**+0.9**
PBAR				*e*Sn		**Sn**	**04 06 40.0**	**+0.4**
PBAR				A		A	04 07 12.3	
	10nm,0.6s							
PBAR	**Barrancos**	**3.97**	**283**	Pn		**Pn**	**04 05 54.3**	**+0.9**
ERTA	**Horta de San J**	**4.05**	**27**	Pn		**Pn**	**04 05 55.7**	**+1.3**
ERTA				Sn		**Sn**	**04 06 44.4**	**+2.9**
EPLA	**Plasencia**	**4.09**	**312**	Pn		**Pn**	**04 05 56.3**	**+1.3**
EPLA				Pg		**Pg**	**04 06 10.2**	**-1.3**
EPLA				Sn		Sn	04 06 31.2	-11
EPLA				Sg		**Sb**	**04 06 59.9**	**+5.9**
EPLA				*i* Vmb_Lg			04 07 12.7	
EBAD	**Badajoz**	**4.09**	**291**	Pn		**Pn**	**04 05 55.6**	**+0.6**
EBAD				Sn		**Sn**	**04 06 42.9**	**+0.4**
EBAD	**Badajoz**	**4.09**	**291**	Pn		**Pn**	**04 05 55.7**	**+0.6**
EBAD				Sn		**Sn**	**04 06 41.6**	**-0.9**
EBAD				Sg		**Sg**	**04 07 01.7**	**-2.8**
EBAD				*i* Vmb_Lg			04 07 05.8	
EGRO	**El Granado**	**4.26**	**274**	Pn		**Pn**	**04 05 57.9**	**+0.6**
EGRO				Sn		**Sn**	**04 06 46.5**	**-0.2**
EGRO	**El Granado**	**4.26**	**274**	Pn		**Pn**	**04 05 58.0**	**+0.6**
EGRO				Sn		**Sn**	**04 06 46.9**	**+0.1**
EGRO				*i* Vmb_Lg			04 07 20.6	
PVAQ	**Vaqueiros**	**4.45**	**272**	*e*Pn		**Pn**	**04 06 00.7**	**+0.8**
PVAQ				*e*Sn		**Sn**	**04 06 51.0**	**-0.4**
PVAQ	**Vaqueiros**	**4.45**	**272**	Pn		**Pn**	**04 06 00.8**	**+0.8**
PVAQ				Sn		**Sn**	**04 06 50.8**	**-0.6**
ESAC	**San Caprasio**	**4.52**	**16**	Pn		**Pn**	**04 06 02.4**	**+1.5**
ESAC				Sg		**Sg**	**04 07 13.9**	**-4.2**
ETOS	**Mallorca**	**4.54**	**57**	Pn		**Pn**	**04 06 02.2**	**+0.9**
ETOS	**Mallorca**	**4.54**	**57**	Pn		**Pn**	**04 06 02.2**	**+0.9**
ETOS				Sn		**Sn**	**04 06 52.0**	**-1.7**
ETOS				*i* Vmb_Lg			04 07 01.1	
PESTR	**Estremoz**	**4.56**	**291**	*e*Pn		**Pn**	**04 06 02.9**	**+1.5**
PESTR				*e*Sn		**Sn**	**04 06 54.0**	**0.0**
PESTR				*e*Sg		**Sg**	**04 07 16.9**	**-2.5**
PESTR				A		A	04 07 26.7	
	16nm,0.6s							
PESTR	**Estremoz**	**4.56**	**291**	Pn		**Pn**	**04 06 01.8**	**+0.4**
PESTR				Sn		**Sn**	**04 06 54.2**	**+0.2**
PESTR	**Estremoz**	**4.56**	**291**	P		**Pn**	**04 06 02.0**	**+0.6**
PESTR	**Estremoz**	**4.56**	**291**	S		**Sn**	**04 06 54.6**	**+0.6**
IFR	**Ifrane**	**4.57**	**213**	Sn		**Sn**	**04 06 53.8**	**-0.8**
PBEJ	**Beja**	**4.60**	**280**	*e*Pn		**Pn**	**04 06 03.2**	**+1.2**
PBEJ				*e*Sn		**Sn**	**04 06 54.5**	**-0.5**
PBEJ				A		A	04 07 29.3	
	5.0nm,0.7s							
PMRV	**Marv??o**	**4.61**	**298**	*e*Pn		**Pn**	**04 06 03.8**	**+1.6**
PMRV				*e*Sn		**Sn**	**04 06 55.4**	**0.0**
PMRV				*e*Sg		**Sg**	**04 07 18.2**	**-3.0**
PMRV				A		A	04 07 28.5	
	17nm,0.5s							
PBDV	**Barranco-do-Ve**	**4.63**	**270**	*e*Pn		**Pn**	**04 06 03.3**	**+0.9**
PBDV				*e*Sn		**Sn**	**04 06 56.0**	**+0.2**
PBDV				A		A	04 06 59.7	
	7.6nm,0.7s							
PBDV	**Barranco-do-Ve**	**4.63**	**270**	Pn		**Pn**	**04 06 03.7**	**+1.3**
PBDV				Sn		**Sn**	**04 06 55.8**	**-0.1**
EPOB	**Poblet**	**4.68**	**31**	Pn		**Pn**	**04 06 06.2**	**+3.1**
EPOB				Sn		**Sn**	**04 06 56.4**	**-0.7**
PCVE	**Castro Verde**	**4.71**	**275**	*e*Pn		**Pn**	**04 06 04.6**	**+1.1**
PCVE				*e*Sn		**Sn**	**04 06 57.6**	**-0.1**
PCVE				A		A	04 07 27.2	
	7.7nm,0.5s							
PCVE	**Castro Verde**	**4.71**	**275**	Pn		**Pn**	**04 06 04.6**	**+1.1**
PCVE				Sn		**Sn**	**04 06 56.6**	**-1.1**
EJUZ	**Juzbado, Salam**	**4.71**	**323**	Sg		**Sb**	**04 07 09.6**	**-2.3**
EVO	**Evora**	**4.79**	**286**	*e*Pn		**Pn**	**04 06 06.5**	**+1.9**
EVO				*e*Sn		**Sn**	**04 06 58.9**	**-0.9**
EVO				*e*Sg		**Sg**	**04 07 26.6**	**-0.4**
EVO				A		A	04 07 31.0	
	8.1nm,0.4s							
EVO	**Evora**	**4.79**	**286**	Pn		**Pn**	**04 06 06.5**	**+1.9**
EVO				Sn		**Sn**	**04 06 57.6**	**-2.2**
PCPR	**Castro Branco**	**4.86**	**302**	*e*Pn		**Pn**	**04 06 07.2**	**+1.1**
PCBR				*e*Sn		**Sn**	**04 07 01.5**	**+0.2**
PCBR				*e*Sg		**Sg**	**04 07 25.3**	**-3.7**
PCBR				A		A	04 07 37.3	
	10nm,0.7s							
MESJ	**Messejana**	**4.86**	**277**	*e*Pn		**Pn**	**04 06 06.3**	**+0.7**
MESJ				*e*Sn		**Sn**	**04 07 00.5**	**-1.0**
MESJ				A		A	04 07 36.7	
	8.2nm,0.6s							
MESJ	**Messejana**	**4.86**	**277**	*e*P		**Pn**	**04 06 06.2**	**+0.6**
MDT	**Midelt**	**4.99**	**205**	P		**Pn**	**04 06 08.6**	**+1.1**
MDT	**Midelt**	**4.99**	**205**	S		**Sn**	**04 07 03.3**	**-1.6**
MD31	**MD31**	**5.00**	**206**	P		**Pn**	**04 06 08.2**	**+0.7**
MD31	**MD31**	**5.00**	**206**	S		**Sn**	**04 07 04.1**	**-0.9**
PMTG	**Montargil**	**5.09**	**291**	*e*Pn		**Pn**	**04 06 09.9**	**+1.2**
PMTG				*e*Sn		**Sn**	**04 07 06.3**	**-0.8**
PMTG				*e*Sg		**Sg**	**04 07 34.5**	**-2.0**
PMTG				A		A	04 07 41.8	
	12nm,0.8s							
PNCL	**Nicolau / Gran**	**5.13**	**280**	*e*Pn		**Pn**	**04 06 10.6**	**+1.4**
PNCL				*e*Sn		**Sn**	**04 07 07.3**	**-0.7**
PNCL				A		A	04 07 41.8	
	4.9nm,0.9s							
PNCL	**Nicolau / Gran**	**5.13**	**280**	Pn		**Pn**	**04 06 10.1**	**+0.9**
MTE	**Manteigas**	**5.19**	**307**	*e*Sg		**Sg**	**04 07 35.6**	**-4.1**
MTE				A		A	04 07 41.6	
	14nm,0.6s							
PTEO	**Sao Teotonio**	**5.25**	**274**	*e*Pn		**Pn**	**04 06 12.3**	**+1.4**
PTEO				*e*Sn		**Sn**	**04 07 11.5**	**+0.4**
PTEO				*e*Sg		**Sg**	**04 07 40.4**	**-1.3**
PFVI	**Vila Bisbo**	**5.35**	**269**	*e*Sn		**Sn**	**04 07 13.7**	**+0.1**
MVO	**Moncorvo**	**5.36**	**316**	*e*Pn		**Pn**	**04 06 13.8**	**+1.3**
MVO				*e*Sn		**Sn**	**04 07 12.4**	**-1.4**
MVO				A		A	04 07 48.0	
	7.8nm,0.6s							
ETSF	**Etsaut**	**5.64**	**12**	*e*Pn		**Pn**	**04 06 15.0**	**-1.3**
ETSF				*e*Sn		**Sn**	**04 07 17.0**	**-3.7**
ETSF				*e*Sg		**Sg**	**04 07 51.8**	**-2.3**
	3.6nm,0.5s							
PCAS	**Casmilo, Conde**	**5.65**	**300**	*e*Pn		**Pn**	**04 06 18.1**	**+1.7**
PCAS				*e*Sn		**Sn**	**04 07 20.4**	**-0.6**
PCAS				A		A	04 07 58.0	
	13nm,0.5s							
PSBE	**So Bento**	**5.65**	**294**	*e*Pn		**Pn**	**04 06 18.0**	**+1.6**
PSBE				*e*Sn		**Sn**	**04 07 21.5**	**+0.5**
PSBE				A		A	04 07 55.6	
	13nm,0.6s							
COI	**Coimbra**	**5.66**	**302**	*e*Pn		**Pn**	**04 06 18.1**	**+1.5**
PBRG	**Braganca**	**5.67**	**323**	*e*Pn		**Pn**	**04 06 18.4**	**+1.6**
PBRG				*e*Sn		**Sn**	**04 07 20.9**	**-0.7**
PBRG				A		A	04 08 10.0	
	4.8nm,0.7s							
SJPF	**Ste Jean**	**5.76**	**7**	*e*Pn		**Pn**	**04 06 16.8**	**-1.2**
SJPF	**Ste Jean**	**5.76**	**7**	*e*P		**Pn**	**04 06 21.1**	**+3.1**
SJPF				*e*Sg		**Sg**	**04 07 54.2**	**-3.9**
	2.7nm,0.3s							
ECAL	**Calabor**	**5.78**	**323**	Pn		**Pn**	**04 06 19.9**	**+1.7**
ECAL	**Calabor**	**5.78**	**323**	Pn		**Pn**	**04 06 19.3**	**+1.1**
ECAL				Sn		**Sn**	**04 07 23.4**	**-0.8**
ECAL				Sg		**Sg**	**04 07 54.2**	**-4.3**
ECAL				*i* Vmb_Lg			04 08 14.9	
PMAFR	**Mafra**	**5.85**	**288**	*e*Pn		**Pn**	**04 06 20.6**	**+1.4**
PMAFR				*e*Sn		**Sn**	**04 07 25.5**	**-0.5**
PMAFR	**Mafra**	**5.85**	**288**	Pn		**Pn**	**04 06 20.4**	**+1.2**
ELAN	**Lanestosa**	**5.93**	**351**	Pn		**Pn**	**04 06 22.0**	**+1.8**
ELAN				Sn		**Sn**	**04 07 29.5**	**+1.8**
ELAN				Sg		**Sg**	**04 07 60.0**	**-3.3**
AVE	**Averroes**	**5.94**	**228**	Pn		**Pn**	**04 06 20.9**	**+0.5**
EPF	**Esparros**	**5.95**	**18**	*e*P		**Pn**	**04 06 23.4**	**+2.9**
EPF				*e*Sn		**Sn**	**04 07 24.7**	**-3.6**
EPF				*e*Sg		**Sg**	**04 08 00.8**	**-3.2**
	2.6nm,0.3s							
EARI	**Arriondas**	**6.36**	**339**	Pn		**Pn**	**04 06 28.4**	**+2.2**
EARI				Sn		**Sn**	**04 07 36.1**	**-2.4**
ELOB	**Lobios**	**6.41**	**316**	Sn		**Sn**	**04 07 38.5**	**-1.2**
ELOB				Sg		**Sg**	**04 08 10.7**	**-7.9**
ELOB				*i* Vmb_Lg			04 08 24.4	
EAGO	**Agolada(Pontev**	**7.08**	**322**	Sg		**Sb**	**04 08 27.0**	**+7.1**

*IDC **06** 04:04:52.7±1.0,25.′34N×128.′32E,h0km,mb3.5/10, mbtmp3.5/10,MS3.0/1,Error ellipse: s-maj=45.7km s-min=21.6km az=63.0*
*JMA **06** 04:04:59.7±0.3,26.′N±1.′×12.′9E±.′,h38km,MV3.2/12, NEAR OKINAWAJIMA ISLAND*

ISC 06 04:04:58.8±0.9,**25.′98N**±0.′07×**128.′59E**±0.′04,**h21**km±5km, **n21**,σ0s**69**/28,**mb3.5**/10,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.74**	**317**	P		**Pb**	**04 05 12.9**	**-0.1**
JNTH				S		**Sb**	**04 05 22.9**	**+0.2**
JJT3	**Tamagusuku3**	**0.74**	**283**	P		**Pn**	**04 05 13.9**	**-0.1**
JJT3				eS		**Sn**	**04 05 24.4**	**-0.2**
**JOW

MT01				Sn		Sn	04 14 11.7	+1.4
MT01	**Popeta**	**0.96**	**23**	*i* P		Pn	04 13 59.4	+1.5
MT01				*e*S		Sn	04 14 13.0	+2.6
MT01				IAML			04 14 15.1	
	comp=Z,10µm,0.4s							
MT01	**Popeta**	**0.96**	**23**	*e*P		Pn	04 13 59.3	+1.5
MT01				*e*S		Sn	04 14 12.1	+1.7
MT01				IAML			04 14 14.3	
	comp=N,12µm,0.2s							
ML02	**Panimavida**	**1.03**	**167**			Pn	04 13 59.6	+0.8
ML02	**Panimavida**	**1.03**	**167**⇓	*e*P		Pn	04 13 59.6	+0.8
ML02				*e*S		Sn	04 14 13.0	+0.9
ML02				IAML			04 14 15.5	
	comp=N,11µm,0.5s							
VA05	**Santo Domingo**	**1.10**	**4**			Pn	04 14 00.7	+1.0
VA05	**Santo Domingo**	**1.10**	**4**	*e*P		Pn	04 14 00.7	+1.0
VA05				*e*S		Sn	04 14 15.3	+1.7
VA05				IAML			04 14 24.1	
	comp=E,14µm,0.6s							
MT09	**Talagante**	**1.14**	**31**			Pn	04 14 01.9	+1.6
MT09	**Talagante**	**1.14**	**31**	*e*P		Pn	04 14 02.2	+1.8
MT09				*e*S		Sn	04 14 17.6	+2.7
MT09				IAML			04 14 20.4	
	comp=N,23µm,0.2s							
BO04	**La Punta**	**1.18**	**50**	Pn		Pn	04 14 02.2	+1.4
BO04	**La Punta**	**1.18**	**50**⇓	*e*P		Sn	04 14 02.3	+1.4
BO04				*e*S		Sn	04 14 18.3	+2.5
BO04				IAML			04 14 20.2	
	comp=E,14µm,0.2s							
MT12	**Pirque**	**1.39**	**43**⇓	*e*P		Pn	04 14 05.5	+1.7
MT12				*e*S		Sn	04 14 24.1	+3.1
MT15	**Las Vizcachas**	**1.52**	**41**⇓	*e*P		Pn	04 14 07.4	+1.9
MT15				*e*S		Sn	04 14 27.0	+3.0
LMEL	**Las Melosas**	**1.53**	**54**			Pn	04 14 07.5	+1.7
LMEL	**Las Melosas**	**1.53**	**54**	*e*P		Pn	04 14 07.5	+1.7
LMEL				*e*S		Sn	04 14 27.9	+3.3
LMEL				IAML			04 14 31.5	
	comp=N,6µm,0.3s							
MT13	**San Alfonso**	**1.54**	**50**	Pn		Pn	04 14 07.5	+1.6
MT13	**San Alfonso**	**1.54**	**50**	*e*P		Pn	04 14 07.6	+1.6
MT13				*e*S		Sn	04 14 28.1	+3.3
MT13				IAML			04 14 31.2	
	comp=E,10µm,0.3s							
MT02	**Curacav**	**1.56**	**17**			Pn	04 14 07.7	+1.7
MT02	**Curacav**	**1.56**	**17**	*i* P		Pn	04 14 07.0	+0.9
MT02				IAML			04 14 35.2	
	comp=Z,2µm,0.7s							
MT02	**Curacav**	**1.56**	**17**⇑	*i* P		Pn	04 14 07.8	+1.7
MT02				*e*S		Sn	04 14 26.7	+1.6
MT02				IAML			04 14 37.8	
	comp=E,4µm,0.4s							
MT05	**Renca**	**1.57**	**31**			Pn	04 14 08.0	+1.7
MT05	**Renca**	**1.57**	**31**	*i* P		Pn	04 14 07.0	+0.8
MT05				IAML			04 14 35.3	
	comp=Z,3µm,0.7s							
MT05	**Renca**	**1.57**	**31**⇓	*e*P		Pn	04 14 08.2	+1.9
MT05				*e*S		Sn	04 14 29.6	+4.1
MT05				IAML			04 14 34.0	
	comp=N,11µm,0.6s							
MT03	**Universidad Ad**	**1.60**	**38**			Pn	04 14 08.2	+1.6
MT03	**Universidad Ad**	**1.60**	**38**	*i* P		Pn	04 14 07.7	+1.0
MT03				IAML			04 14 32.7	
	comp=Z,9µm,0.2s							
MT03	**Universidad Ad**	**1.60**	**38**⇓	*e*P		Pn	04 14 08.3	+1.7
MT03				*e*S		Sn	04 14 30.3	+4.2
MT03				IAML			04 14 32.6	
	comp=N,14µm,0.3s							
MT16	**CCHEN**	**1.64**	**37**			Pn	04 14 08.8	+1.6
MT16	**CCHEN**	**1.64**	**37**⇓	*e*P		Pn	04 14 09.0	+1.8
MT16				*e*S		Sn	04 14 30.3	+3.1
MT16				IAML			04 14 38.0	
	comp=N,4µm,0.4s							
MT14	**Cerro Cal¡n**	**1.66**	**36**	*e*P		Pn	04 14 09.4	+1.9
MT14				*e*S		Sn	04 14 30.9	+3.2
MT14				IAML			04 14 39.6	
	comp=N,11µm,0.2s							
VA01	**Torpederas**	**1.73**	**1**			Pn	04 14 09.6	+1.3
VA01	**Torpederas**	**1.73**	**1**	*i* P		Pn	04 14 08.9	+0.6
VA01				IAML			04 14 46.2	
	comp=Z,776nm,0.2s							
VA01	**Torpederas**	**1.73**	**1**	*e*P		Pn	04 14 09.7	+1.4
MT10	**Hacienda Santa**	**1.76**	**33**	*e*P		Pn	04 14 11.0	+2.0
MT10				*e*S		Sn	04 14 34.6	+4.4
PEL	**Peldehue**	**1.81**	**28**			Pn	04 14 11.3	+1.8
PEL	**Peldehue**	**1.81**	**28**	*e*P		Pn	04 14 11.5	+2.0
PEL				*e*S		Sn	04 14 35.6	+4.3
PEL				IAML			04 14 40.8	
	comp=N,4µm,0.6s							
FCH	**Farellones**	**1.84**	**40**	*e*P		Pn	04 14 12.1	+1.9
FCH				*e*S		Sn	04 14 36.8	+4.3
FCH				IAML			04 14 40.5	
	comp=N,5µm,0.3s							
MT04	**Ro Olivares**	**1.87**	**44**	*e*P		Pn	04 14 12.7	+2.2
MT04				*i* S		Sn	04 14 36.1	+3.2
MT04				IAML			04 14 40.6	
	comp=N,4µm,0.4s							
ROCH	**El Roble**	**1.87**	**18**⇑	*e*P		Pn	04 14 12.3	+1.9
ROCH				⇑*e*P			04 14 12.4	
ROCH				*e*S		Sn	04 14 35.4	+2.5
ROCH				*e*S			04 14 35.7	
ROCH				IAML			04 14 42.9	
	comp=N,5µm,0.5s							
ROCH				IAML			04 14 43.0	
	comp=N,11µm,0.5s							
EDS3	**Malargue**	**2.14**	**119**	*i* P		Pn	04 14 19.2	+5.1
VA03	**San Esteban**	**2.20**	**26**			Pn	04 14 16.5	+1.5
VA03	**San Esteban**	**2.20**	**26**⇑	*e*P		Pn	04 14 16.9	+1.9
VA03				*e*S		Sn	04 14 43.4	+2.4
VA03				IAML			04 14 50.5	
	comp=E,5µm,0.3s							
VA06	**Catapilco**	**2.21**	**9**	Pn		Pn	04 14 16.4	+1.4
VA06	**Catapilco**	**2.21**	**9**⇑	*i* P		Pn	04 14 16.4	+1.4
VA06				*e*S		Sn	04 14 46.3	+5.2
VA06				IAML			04 14 55.2	
	comp=E,6µm,0.5s							
BI05	**Punta Hualpn**	**2.33**	**211**	Pn		Pn	04 14 16.9	+0.3
BI05	**Punta Hualpn**	**2.33**	**211**	*e*P		Pn	04 14 17.8	+1.2
BI05				*e*S		Sn	04 14 51.9	+7.9
BI05				IAML			04 14 55.4	
	comp=N,2µm,0.7s							
AAGR	**Agrelo**	**2.91**	**56**	*i* P		Pn	04 14 28.8	+4.2
AAGR				IAML			04 15 26.2	
	comp=Z,219nm,0.6s							
ARCO	**CERRO ARCO**	**2.99**	**51**	*i* P		Pn	04 14 30.3	+4.5
ARCO				IAML			04 15 24.1	
	comp=Z,380nm,0.5s							
CO02	**Combarbal**	**3.59**	**10**			Pn	04 14 35.0	+1.0
CO02	**Combarbal**	**3.59**	**10**	*i* P		Pn	04 14 34.5	+0.4
CO02				IAML			04 15 39.8	
	comp=Z,949nm,0.5s							
CO02	**Combarbal**	**3.59**	**10**	*e*P		Pn	04 14 35.1	+1.0
CO02				*e*S		Sn	04 15 17.3	+2.1
CO03	**El Pedregal**	**4.00**	**13**	*i* P		Pn	04 14 40.5	+0.9
CO03				IAML			04 15 46.5	
	comp=Z,422nm,0.5s							
CO03	**El Pedregal**	**4.00**	**13**	*e*P		Pn	04 14 41.0	+1.5
CO03				*e*S		Sn	04 15 26.2	+1.0
CO06	**Fray Jorge**	**4.07**	**1**	Pn		Pn	04 14 40.7	+0.2
CO06	**Fray Jorge**	**4.07**	**1**	*e*P		Pn	04 14 40.8	+0.2
RTLL	**Cerro Villicun**	**4.36**	**39**	*i* P		Pn	04 14 46.8	+2.3
GO04	**Tololo Observa**	**4.63**	**10**			Pn	04 14 49.4	+1.0
GO04	**Tololo Observa**	**4.63**	**10**	*i* P		Pn	04 14 49.0	+0.6
GO04				IAML			04 16 01.0	
	comp=Z,678nm,0.5s							
GO04	**Tololo Observa**	**4.63**	**10**	*e*P		Pn	04 14 49.6	+1.2
GO06	**Curarrehue**	**4.82**	**178**	Pn		Pn	04 14 52.3	+1.3
GO06	**Curarrehue**	**4.82**	**178**	*e*P		Pn	04 14 52.9	+1.9
CO05	**La Serena**	**4.84**	**5**			Pn	04 14 51.6	+0.5
CO05	**La Serena**	**4.84**	**5**	*e*P		Pn	04 14 51.8	+0.7
LR03	**Panguipulli**	**4.90**	**186**			Pn	04 14 52.1	+0.3
LR03	**Panguipulli**	**4.90**	**186**	*e*P		Pn	04 14 52.1	+0.3
AROD	**Rodeo**	**4.95**	**23**	*i* P		Pn	04 14 56.0	+3.1
CO01	**Juntas del Tor**	**4.95**	**16**			Pn	04 14 54.0	+1.2
CO01	**Juntas del Tor**	**4.95**	**16**	*i* P		Pn	04 14 54.5	+1.7
CO01				IAML			04 16 18.2	
	comp=Z,128nm,0.7s							
CO01	**Juntas del Tor**	**4.95**	**16**	*e*P		Pn	04 14 54.6	+1.7
ACDV	**Cuesta del Vie**	**5.06**	**26**	*i* P		Pn	04 14 56.9	+2.6
ACDV				IAML			04 16 14.9	
	comp=Z,156nm,0.4s							
LR04	**Corral**	**5.30**	**195**			Pn	04 14 56.6	-0.7
LR05	**Currie**	**5.47**	**182**	Pn		Pn	04 15 00.7	+1.0
LCO	**Las Campanas**	**5.79**	**9**	Pn		Pn	04 15 04.6	+0.2

VA04	**Juan Fernndez**	**6.01**	**279**			Pn	04 15 08.3	+1.1
AC05	**El Transito**	**6.02**	**12**			Pn	04 15 08.2	+0.7
H03S1	**Juan Fernandez**	**6.04**	**277**	T	T		04 20 56.6	
	baz=97,slow=75,SNR=147							
PLCA	**Paso Flores**	**6.04**	**172**	Pn		Pn	04 15 09.6	+2.0
PLCA	**Paso Flores**	**6.04**	**172**	P		Pn	04 15 10.1	+2.6
	comp=Z,3.3nm,0.3s,baz=335,slow=12,SNR=35							
PLCA				S		Sn	04 16 18.6	+3.1
	comp=Z,15nm,0.7s,baz=248,slow=19,SNR=3.0							
PLCA				LR	LR		04 17 46.9	
	comp=Z,115nm,20.4s,baz=346,slow=40							
	comp=Z,7.6nm,0.4s							
H03S3	**Juan Fernandez**	**6.04**	**277**	T	T		04 20 58.0	
	baz=97,slow=75,SNR=147							
H03S2	**Juan Fernandez**	**6.05**	**277**	T	T		04 21 03.1	
	baz=97,slow=75,SNR=38							
H03N1	**Juan Fernandez**	**6.13**	**280**	T	T		04 21 14.8	
	baz=94,slow=74,SNR=33							
H03N3	**Juan Fernandez**	**6.13**	**280**	T	T		04 21 09.7	
	baz=94,slow=74,SNR=42							
H03N2	**Juan Fernandez**	**6.14**	**280**	T	T		04 21 16.0	
	baz=94,slow=74,SNR=41							
AC04	**Llanos de Chal**	**6.55**	**5**	Pn		Pn	04 15 14.4	-0.2
GO03	**Copiap**	**7.25**	**10**	Pn		Pn	04 15 23.5	-0.7
LL01	**San Ignacio de**	**7.63**	**184**			Pn	04 15 29.0	-0.4
AC02	**Maricunga**	**8.20**	**16**	Pn		Pn	04 15 37.2	-0.4
GO07	**Milladeo Hill,**	**8.49**	**190**			Pn	04 15 41.5	+0.4
TRQA	**Tornquist**	**8.50**	**116**	Pn		Pn	04 15 43.0	+1.7
LVC	**Limon Verde**	**12.34**	**12**	P		Pn	04 16 32.1	-2.1
	comp=Z,0.3nm,0.3s,baz=180,slow=4.7,SNR=1.8							
LVC				S		Sn	04 18 48.4	-2.2
	comp=Z,2.7nm,0.7s,baz=90,slow=20,SNR=1.6							
LVC				LR	LR		04 21 11.3	
	comp=Z,115nm,20.6s,baz=214,slow=37							
	comp=Z,1.1nm,0.3s							
PB01	**IPOC Station P**	**13.80**	**9**	Pn		Pn	04 16 55.0	+1.1
CPUP	**Villa Florida**	**14.95**	**60**	P		Pn	04 17 06.0	-3.2
	comp=Z,0.1nm,0.3s,baz=182,slow=16,SNR=1.5							
CPUP				S		Sn	04 19 49.8	-3.8
	comp=Z,2.2nm,0.8s,baz=230,slow=14,SNR=2.1							
CPUP				LR	LR		04 23 40.1	
	comp=Z,148nm,20.3s,baz=228,slow=41							
	comp=Z,0.3nm,0.4s							
PB16	**IPOC Station P**	**16.47**	**7**	Pn		Pn	04 17 29.7	+0.3
LPAZ	**La Paz**	**18.67**	**11**	P		Pn	04 17 56.5	-0.1
EFI	**East Falkland**	**19.56**	**154**	P		Pn	04 18 05.0	+0.3
EFI				IAmb	IAmb		04 18 08.8	
	comp=Z,68nm,1.4s							
AQDB	**Aquidauana**	**20.04**	**49**	P		Pn	04 18 10.9	+0.6
AQDB				IAmb	IAmb		04 18 11.3	
	comp=Z,22nm,0.6s							
TRCB	**Terra Rica**	**20.48**	**59**	P		Pn	04 18 15.6	+0.5
TRCB				IAmb	IAmb		04 18 31.1	
	comp=Z,16nm,0.6s							
SIV	**San Ignacio**	**20.98**	**30**	P		Pn	04 18 19.8	-0.7
	comp=Z,14nm,0.8s,baz=207,slow=8.4,SNR=57							
	comp=Z,14nm,0.8s							
PTLB	**Pontes e Lacer**	**22.30**	**34**	P		Pn	04 18 35.4	+0.8
ETMB	**Extrema**	**25.32**	**13**	P		Pn	04 19 04.5	+0.9
ETMB				IAmb	IAmb		04 19 07.2	
	comp=Z,24nm,0.8s							
BDFB	**Brasilia**	**28.54**	**54**	P		Pn	04 19 31.3	-1.4
BDFB				IAmb	IAmb		04 19 46.1	
	comp=Z,6.1nm,0.9s							
BDFB	**Brasilia**	**28.54**	**54**	P		Pn	04 19 30.0	-2.7
	comp=Z,2.0nm,0.6s,baz=224,slow=8.3,SNR=4.8							
BDFB				LR	LR		04 32 02.1	
	comp=Z,69nm,21.7s,baz=126,slow=39							
	comp=Z,2.0nm,0.6s							
MCRA	**Macar, Loja**	**31.19**	**344**	P		Pn	04 19 56.6	+0.5
BOAV	**Boa Vista**	**38.42**	**18**	P		Pn	04 20 57.9	-0.4
BOAV				IAmb	IAmb		04 20 59.1	
	comp=Z,6.4nm,0.9s							
BAUV	**El Baul**	**43.60**	**5**	P		Pn	04 21 40.5	-0.4
BAUV				IAmb	IAmb		04 21 41.4	
	comp=Z,17nm,0.8s							
RCBR	**Riachuelo**	**43.81**	**57**	P		Pn	04 21 43.1	+0.3
SNAA	**Sanae**	**50.78**	**158**	P		Pn	04 22 37.0	+0.7
SNAA				IAmb	IAmb		04 22 37.6	
	comp=Z,8.0nm,1.1s							
SNAA	**Sanae**	**50.78**	**158**	P		Pn	04 22 36.3	0.0
	comp=Z,6.2nm,1.1s,baz=290,slow=12,SNR=4.0							
	comp=Z,6.2nm,1.1s							
CELP	**Cerrillos**	**52.76**	**6**	P		Pn	04 22 51.3	-0.3
TEIG	**Tepich**	**56.90**	**341**	P		Pn	04 23 22.2	+0.7
TXAR	**Lajitas Array**	**70.53**	**331**	P		Pn	04 24 52.4	+1.1
	comp=Z,0.7nm,0.6s,baz=156,slow=8.3,SNR=18							
	comp=Z,0.7nm,0.6s							
MAW	**Mawson**	**72.38**	**163**	LR	LR		04 56 10.5	
	comp=Z,30nm,18.6s,baz=306,slow=35							
DBIC	**Dimbokro**	**75.16**	**71**	P		Pn	04 25 18.7	-0.3
	comp=Z,6.1nm,0.7s,baz=214,slow=5.5,SNR=9.9							
	comp=Z,6.1nm,0.7s							
BOSA	**Boshof**	**79.47**	**117**	P		Pn	04 25 43.0	-0.3
	comp=Z,5.0nm,0.5s,baz=235,slow=4.1,SNR=14							
	comp=Z,5.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**84.20**	**70**	P		Pn	04 26 07.7	-0.3
	comp=Z,3.1nm,0.8s,baz=277,slow=3.2,SNR=18							
	comp=Z,3.1nm,0.8s							
PDAR	**Pinedale Array**	**84.56**	**333**	P		Pn	04 26 09.8	+0.3
	comp=Z,0.4nm,0.8s,baz=145,slow=5.4,SNR=3.8							
	comp=Z,0.4nm,0.8s							
NVAR	**Mina Array Bea**	**84.66**	**325**	P		Pn	04 26 10.6	+0.5
	comp=Z,0.4nm,0.7s,baz=139,slow=5.9,SNR=3.2							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**120.24**	**209**	PKP		**PKPdf**	04 32 26.7	-1.0
	comp=Z,0.2nm,0.6s,baz=165,slow=1.5,SNR=1.2							
MMAI	**Mount Meron Ar**	**120.74**	**69**	PKP		**PKPdf**	04 32 26.9	-1.3
	comp=Z,0.4nm,0.3s,baz=141,slow=4.8,SNR=1.6							
BVAR	**Borovoye Array**	**147.63**	**44**	PKPbc		**PKPbc**	04 33 20.7	+0.6
	comp=Z,3.1nm,0.8s,baz=286,slow=3.6,SNR=11							
KURBB	**Kurchatov Arra**	**153.22**	**45**	PKPbc		**PKPbc**	04 33 33.5	0.0
	comp=Z,0.7nm,0.4s,baz=288,slow=2.5,SNR=9.4							
KURBB				PKPab		**pPKPbc**	04 33 48.7	+1.9
	comp=Z,0.3nm,0.3s,baz=296,slow=3.3,SNR=5.8							
KSH	**Kashi**	**153.87**	**70**	PKPbc		**PKiKP**	04 33 35.6	0.0
KSH				pPKP		**PKPab**	04 33 47.8	-1.0
ZALV	**Zalesovo Beam**	**154.71**	**33**	PKPbc		**PKPbc**	04 33 35.2	-1.4
	comp=Z,0.5nm,0.4s,baz=292,slow=7.8,SNR=3.5							
MKAR	**Makanchi Array**	**157.03**	**51**	PKPab		**PKPab**	04 34 02.0	0.0
	comp=Z,0.8nm,0.8s,baz=289,slow=3.7,SNR=6.6							
PZH	**PanZhiHua**	**170.03**	**144**	PKP		**PKPdf**	04 33 44.0	-0.3
HHC	**Hu-ho-hao-te**	**173.39**	**338**	*e*P		**PKPdf**	04 33 46.5	+1.1

*IDC **06** 04:19:42.6±1.1,56.31N×148.73W,h0km,mb3.5/9, mbtmp3.6/14,ML3.4/5,MS2.6/2,Error ellipse: s-maj=22.7km s-min=16.0km az=23.0*
*NEIC **06** 04:19:45.3±0.8,56.43N±0.08×148.89W±0.10,h22km±6km, mb4.1/5,ML3.9/50,ML3.7(AEIC),Error ellipse: s-maj=11.6km s-min=7.2km az=161.0*
*AEIC **06** 04:19:47.5±1.3,56.34N±0.08×148.8W±0.1,h12km±5km, Error ellipse: s-maj=11.7km s-min=8.5km az=169.0*

ISC 06 04:19:43.9±0.6,56.47N±0.06×148.88W±0.04,h10km, n235,σ1$00/234,mb3.7/12,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KDAK	**Kodiak Island**	**2.41**	**305**		Pn	04 20 23.7	+0.4
KDAK	**Kodiak Island**	**2.41**	**305**	Pn	Pn	04 20 24.1	+0.8
	4.7nm,0.3s,baz=122,slow=5.6,SNR=46						
KDAK				Sn	Sn	04 20 48.4	-4.5
	7.8nm,0.3s,baz=77,slow=7.9,SNR=6.0						
KDAK				LR	LR	04 20 58.5	
	comp=Z,58nm,18.8s,baz=30,slow=30						
	12nm,0.3s						
OHAK	**Old Harbor**	**2.54**	**289**		Pn	04 20 24.9	-0.2
OHAK	**Old Harbor**	**2.54**	**289**	P	Pn	04 20 24.9	-0.2
OHAK	**Old Harbor**	**2.54**	**289**	P	Pn	04 20 24.9	-0.2
	baz=107						
OHAK				S	Sn	04 20 52.9	-3.1
	baz=107						
SYI	**Shuyak Island**	**2.86**	**320**		Pn	04 20 30.2	+0.7
SYI	**Shuyak Island**	**2.86**	**320**	IAML		04 21 05.6	
	comp=N,214nm,0.7s						
SYI				IAML		04 21 06.0	
	comp=E,309nm,0.7s						
Q20K	**Shuyak Island**	**2.87**	**320**	P	Pn	04 20 30.6	+1.0
	baz=137						
SII	**Sitkinak Islan**	**2.94**	**274**		Pn	04 20 30.0	-0.7
SII					Sn	04 21 02.9	-3.1
SII	**Sitkinak Islan**	**2.94**	**274**	IAML		04 21 04.2	
	comp=E,226nm,1.0s						
SII				IAML		04 21 25.1	
	comp=N,265nm,3.4s						
SII	**Sitkinak Islan**	**2.94**	**274**	P	Pn	04 20 30.7	0.0
	baz=91						
SII				S	Sn	04 21 02.9	-3.1
	baz=91						
Q23K	**Middleton Isla**	**3.26**	**23**		Pn	04 20 35.0	0.0
Q23K					Sn	04 21 11.2	-2.6
Q23K	**Middleton Isla**	**3.26**	**23**	IAML		04 21 30.8	
	comp=N,300nm,2.1s						
Q23K				IAML		04 22 11.4	
	comp=E,302nm,2.1s						
Q23K	**Middleton Isla**	**3.26**	**23**	P	Pn	04 20 35.0	0.0
	baz=204						
Q23K				S	Sn	04 21 11.2	-2.6
	baz=204						
MID	**Middleton Isla**	**3.26**	**23**		Pn	04 20 35.0	0.0
MID	**Middleton Isla**	**3.26**	**23**	IAML		04 22 11.3	
	comp=E,312nm,2.2s						
MID				IAML		04 22 29.1	
	comp=N,272nm,2.2s						
MID	**Middleton Isla**	**3.26**	**23**	P	Pn	04 20 35.3	+0.3
CNPM	**China Poot**	**3.31**	**339**		Pn	04 20 36.4	+0.6
CNPM	**China Poot**	**3.31**	**339**		Sn	04 21 14.4	-0.8
BRSE	**Bradley Lake S**	**3.43**	**344**		Pn	04 20 37.7	+0.3
BRSE					Sn	04 21 17.0	-1.0
BRSE	**Bradley Lake S**	**3.43**	**344**	P	Pn	04 20 37.7	+0.3
	baz=162						
BRSE				S	Sn	04 21 17.0	-1.0
	baz=162						
BRLK	**Bradley Lake**	**3.47**	**343**		Pn	04 20 38.2	+0.2
BRLK					Sn	04 21 18.1	-1.0
Q19K	**Cape Douglas,**	**3.55**	**316**		Pn	04 20 40.0	+0.9
Q19K	**Cape Douglas,**	**3.55**	**316**	IAML		04 21 30.5	
	comp=N,397nm,0.9s						
Q19K	**Cape Douglas,**	**3.55**	**316**	P	Pn	04 20 40.0	+0.9
	baz=132						
P23K	**Montague Islan**	**3.62**	**12**		Pn	04 20 40.4	+0.3
P23K					Sn	04 21 20.7	-2.1
P23K	**Montague Islan**	**3.62**	**12**	P	Pn	04 20 40.3	+0.3
	baz=192						
P23K				S	Sn	04 21 20.7	-2.1
	baz=192						
SEW	**Seward**	**3.66**	**355**		Pn	04 20 40.6	+0.2
SEW					Sn	04 21 22.0	-1.6
SEW	**Seward**	**3.66**	**355**	P	Pn	04 20 40.7	+0.2
	baz=174						
SEW				S	Sn	04 21 22.0	-1.6
	baz=174						
AUCH	**Augustine Cone**	**3.79**	**322**		Pn	04 20 42.2	-0.1
CHIR	**Chirikof Islan**	**3.83**	**263**		Pn	04 20 42.1	-0.7
CHIR	**Chirikof Islan**	**3.83**	**263**	P	Pn	04 20 42.2	-0.7
	baz=79						
P19K	**Oil Pt**	**3.94**	**326**		Pn	04 20 45.5	+1.1
P19K	**Oil Pt**	**3.94**	**326**	IAML		04 21 35.8	
	comp=N,251nm,0.5s						
P19K	**Oil Pt**	**3.94**	**326**	P	Pn	04 20 45.5	+1.1
	baz=142						
O22K	**Cooper Landing**	**4.05**	**354**		Pn	04 20 46.1	+0.2
O22K	**Cooper Landing**	**4.05**	**354**	P	Pn	04 20 46.1	+0.2
	baz=173						
SLKM	**Skilak Lake**	**4.11**	**351**		Pn	04 20 47.0	+0.2
O20K	**Slope Mountain**	**4.13**	**333**		Pn	04 20 47.6	+0.6
O20K	**Slope Mountain**	**4.13**	**333**	P	Pn	04 20 47.6	+0.6
	baz=150						
HIN	**Hinchinbrook I**	**4.13**	**17**	Pn	Pn	04 20 47.1	+0.1
HIN				IAML		04 21 35.6	
	comp=N,234nm,0.6s						
HIN				IAML		04 21 37.4	
	comp=E,160nm,0.6s						
IVE	**Iliamna Volcan**	**4.18**	**330**		Pn	04 20 48.1	+0.4
KAIM	**Kayak Island**	**4.19**	**32**	Pn	Pn	04 20 48.2	+0.4
KAIM	**Kayak Island**	**4.19**	**32**	P	Pn	04 20 48.2	+0.4
	baz=215						
CNTC	**Contact Creek**	**4.20**	**298**		Pn	04 20 48.9	+0.9
Q17K	**Contact Creek**	**4.20**	**298**	P	Pn	04 20 48.9	+0.9
	baz=13						
EYAK	**Cordova Ski Ar**	**4.41**	**21**		Pn	04 20 51.5	+0.8
EYAK	**Cordova Ski Ar**	**4.41**	**21**	P	Pn	04 20 51.5	+0.8
EYAK	**Cordova Ski Ar**	**4.41**	**21**	P	Pn	04 20 51.5	+0.8
	baz=202						
RED	**Redoubt Volcan**	**4.46**	**334**		Pn	04 20 51.7	+0.1
P18K	**Big Mountain,**	**4.48**	**314**		Pn	04 20 52.1	+0.4
P18K	**Big Mountain,**	**4.48**	**314**	P	Pn	04 20 52.1	+0.4
	baz=128						
RDSO	**Redoubt South**	**4.48**	**335**		Pn	04 20 52.2	+0.2
RSO	**Redo

SML	Sawmill	5.36	3	P	Pn	04 21 05.3	+1.4
	baz=183						
M23K	Glacier View	5.37	6		Pn	04 21 05.5	+1.5
M23K	Glacier View	5.37	6	P	Pn	04 21 05.5	+1.5
	baz=186						
BAGL	Bagley Icefiel	5.38	39		Pn	04 21 04.8	+0.7
SCM	Sheep Creek Mo	5.44	8	P	Pn	04 21 06.3	+1.3
	baz=188						
P16K	Nushagak River	5.52	302		Pn	04 21 07.5	+1.5
P16K	Nushagak River	5.52	302	P	Pn	04 21 07.5	+1.5
	baz=114						
VRDI	Verde Repeater	5.54	28	Pn	Pn	04 21 07.2	+0.7
N18K	Kilae Creek	5.59	322		Pn	04 21 07.4	+0.4
N18K	Kilae Creek	5.59	322	P	Pn	04 21 07.4	+0.4
	baz=136						
N25K	Chitina, Valde	5.61	21	Pn	Pn	04 21 08.4	+1.1
N25K	Chitina, Valde	5.61	21	P	Pn	04 21 08.3	+1.0
	baz=204						
KIAG	Kiagna River	5.61	35		Pn	04 21 08.0	+0.6
SAMH	Samovar Hills	5.63	46		Pn	04 21 08.6	+1.0
GLB	Gilahina Butte	5.63	26	Pn	Pn	04 21 08.6	+0.9
SKT	Skwentna	5.69	347		Pn	04 21 08.9	+0.5
SKT	Skwentna	5.69	347	P	Pn	04 21 08.9	+0.5
	baz=165						
PTPK	Patty Peak	5.78	32		Pn	04 21 10.5	+0.7
MCARA	McCarthy VSAT	5.79	29		Pn	04 21 10.5	+0.8
MCARA	McCarthy VSAT	5.79	29	P	Pn	04 21 10.5	+0.8
	baz=213						
SVW2	Sparrevohn	5.80	326		Pn	04 21 09.8	-0.1
SVW2	Sparrevohn	5.80	326	P	Pn	04 21 10.0	+0.1
O16K	Kokwok River B	5.81	306		Pn	04 21 10.6	+0.5
PCA	Pinnacle	5.82	48		Pn	04 21 11.0	+0.7
M24K	Tolsona, Glenn	5.82	13		Pn	04 21 11.8	+1.6
M24K	Tolsona, Glenn	5.82	13	P	Pn	04 21 11.8	+1.6
	baz=194						
PINM	Pinnacle	5.82	48	P	Pn	04 21 11.0	+0.7
	baz=234						
M20K	Styx River	5.85	340		Pn	04 21 11.2	+0.5
M20K	Styx River	5.85	340	P	Pn	04 21 11.2	+0.5
	baz=156						
N17K	Nushagak Hills	5.96	316		Pn	04 21 12.6	+0.5
N17K	Nushagak Hills	5.96	316	P	Pn	04 21 12.6	+0.5
	baz=130						
PNL	Peninsula	5.96	54		Pn	04 21 12.6	+0.4
PNL	Peninsula	5.96	54	P	Pn	04 21 12.7	+0.5
PNL	Peninsula	5.96	54	P	Pn	04 21 12.6	+0.4
	baz=241						
CTG	Chitna Glacier	5.98	38	P	Pn	04 21 13.2	+0.7
	baz=224						
BCPM	Bancas Point	6.00	51		Pn	04 21 13.3	+0.7
WACK	Wrangell Chich	6.00	21		Pn	04 21 13.9	+1.0
WAZA	Wrangell Mount	6.12	21		Pn	04 21 15.5	+0.9
M19K	Big River Lodg	6.14	335		Pn	04 21 14.9	+0.3
M19K	Big River Lodg	6.14	335	P	Pn	04 21 14.9	+0.3
	baz=150						
WAT6	Susitna Watana	6.16	5		Pn	04 21 16.1	+1.1
WAT6	Susitna Watana	6.16	5	P	Pn	04 21 16.1	+1.1
	baz=185						
M18K	Stony River	6.18	327		Pn	04 21 15.3	+0.2
M18K	Stony River	6.18	327	P	Pn	04 21 15.3	+0.2
	baz=142						
CHNA	Chernabura Isl	6.28	259	P	Pn	04 21 16.1	-0.4
	baz=71						
CNBA	Chernabura Isl	6.29	259		Pn	04 21 16.1	-0.4
L19K	White Mountain	6.49	334		Pn	04 21 19.5	+0.1
L19K	White Mountain	6.49	334	P	Pn	04 21 19.5	+0.1
	baz=149						
N16K	Nishlik Lake	6.56	312		Pn	04 21 20.6	+0.3
N16K	Nishlik Lake	6.56	312	P	Pn	04 21 20.6	+0.3
	baz=124						
SDPT	Sand Point	6.62	265		Pn	04 21 21.0	-0.1
SDPT	Sand Point	6.62	265	P	Pn	04 21 21.0	-0.1
	baz=76						
M17K	Holitna River	6.64	322		Pn	04 21 22.0	+0.6
M17K	Holitna River	6.64	322	P	Pn	04 21 22.0	+0.6
	baz=134						
M26K	Nabesna, AK	6.66	24	P	Pn	04 21 22.8	+1.1
	baz=209						
DHY	Denali Highway	6.67	6	P	Pn	04 21 23.1	+1.2
	baz=187						
P29M	Windy Craggy	6.71	57		Pn	04 21 22.6	+0.3
P29M	Windy Craggy	6.71	57	P	Pn	04 21 22.6	+0.3
	baz=246						
PAX	Paxson	6.75	13		Pn	04 21 24.0	+1.1
PAX	Paxson	6.75	13	P	Pn	04 21 24.0	+1.1
	baz=196						
MENT	Mentasta	6.99	20	Pn	Pn	04 21 25.9	-0.3
L18K	Granite Mounta	7.01	329		Pn	04 21 26.6	+0.1
L18K	Granite Mounta	7.01	329	P	Pn	04 21 26.6	+0.1
	baz=142						
S31K	Pelican	7.03	72		Pn	04 21 25.1	-1.6
S31K	Pelican	7.03	72	P	Pn	04 21 25.1	-1.6
	baz=262						
CAST	Castle Rocks	7.16	348		Pn	04 21 29.1	+0.7
CAST	Castle Rocks	7.16	348	P	Pn	04 21 29.1	+0.7
	baz=165						
KTH	Kantishna Hill	7.18	353		Pn	04 21 30.0	+1.1
PVV	Pavlof Volcano	7.34	267		Pn	04 21 30.3	-0.7
K20K	Telida	7.38	341		Pn	04 21 32.3	+0.7
L17K	Donlin	7.45	324		Pn	04 21 32.5	+0.1
L17K	Donlin	7.45	324	P	Pn	04 21 32.5	+0.1
	baz=136						
L16K	Owhat River	7.57	318		Pn	04 21 35.0	+0.8
L16K	Owhat River	7.57	318	P	Pn	04 21 35.0	+0.8
	baz=129						
BESE	Bessie Mountai	7.84	69		Pn	04 21 37.1	-0.8
K17K	Iditarod	7.88	327		Pn	04 21 38.5	+0.2
K17K	Iditarod	7.88	327	P	Pn	04 21 38.5	+0.2
	baz=138						
S32K	Killisnoo	7.88	77		Pn	04 21 36.6	-1.7
S32K	Killisnoo	7.88	77	P	Pn	04 21 36.6	-1.7
	baz=268						
O30N	Mendenhall	7.94	52		Pn	04 21 39.9	+0.6
O30N	Mendenhall	7.94	52	P	Pn	04 21 39.9	+0.6
	baz=242						
R32K	Eaglecrest	7.97	71		Pn	04 21 38.9	-0.8
J18K	Innoko River	8.04	334		Pn	04 21 40.7	+0.1
J18K	Innoko River	8.04	334	P	Pn	04 21 40.7	+0.1
	baz=147						
JIS	Juneau Island	8.04	71		Pn	04 21 40.1	-0.5
JIS	Juneau Island	8.04	71	P	Pn	04 21 40.3	-0.3
J20K	Nowinta River	8.16	344		Pn	04 21 42.5	+0.3
CCB	Clear Creek Bu	8.22	3		Pn	04 21 43.0	-0.1
J25K	Salcha River,	8.35	10		Pn	04 21 45.6	+0.7
ILAR	Eielson Array	8.39	6	Pn	Pn	04 21 45.5	+0.1
	comp=N,0.7nm,0.3s,baz=189,slow=13,SNR=39						
ILAR				Sn	Sn	04 23 16.3	-3.7
	comp=N,0.6nm,0.3s,baz=185,slow=17,SNR=7.9						
ILAR				LR	LR	04 25 08.7	
	comp=N,83nm,20.0s,baz=74,slow=38						
	comp=N,1.3nm,0.3s						
COLA	College	8.45	3	P	Pn	04 21 47.9	+1.8
MDM	Murphy Dome	8.53	2	Pn	Pn	04 21 47.7	+0.4
P32M	Atlin	8.63	62		Pn	04 21 48.7	0.0
P32M	Atlin	8.63	62	P	Pn	04 21 48.7	0.0
	baz=255						
M30M	Minto, Yukon	8.66	40		Pn	04 21 49.0	-0.1
M30M	Minto, Yukon	8.66	40	P	Pn	04 21 49.0	-0.1
	baz=230						
I23K	Minto, Yukon-K	8.71	359		Pn	04 21 50.4	+0.6
I23K	Minto, Yukon-K	8.71	359	P	Pn	04 21 50.4	+0.6
	baz=178						
PRP	Porcupine Dome	9.22	9	P	Pn	04 21 58.4	+1.5
	baz=191						
Q32M	Nakina River	9.23	67	Pn	Pn	04 21 57.0	-0.1
P33M	Teslin, Yukon	9.23	59		Pn	04 21 57.4	+0.3
P33M	Teslin, Yukon	9.23	59	P	Pn	04 21 57.4	+0.3
	baz=252						
K29M	Barlow Dome	9.30	33	P	Pn	04 21 58.8	+0.9
	baz=222						
M31M	Drury Creek, Y	9.36	46		Pn	04 21 57.3	-1.4
H21K	Melozitna Rive	9.41	350		Pn	04 21 59.6	+0.2
H21K	Melozitna Rive	9.41	350	P	Pn	04 22 00.5	+1.1
	baz=166						
IMAR	Indian Mountai	9.83	348	Pn	Pn	04 22 05.7	+0.6
R33M	Jennings River	9.96	65		Pn	04 22 06.9	-0.1
FYU	Fort Yukon	10.28	8		Pn	04 22 11.7	+0.5
DLBC	Dease Lake	10.34	71	Pn	Pn	04 22 11.8	-0.3
	comp=N,0.6nm,0.3s,baz=222,slow=18,SNR=5.3						
DLBC				Sn	Sn	04 24 03.7	-4.3
	comp=N,0.5nm,0.3s,baz=264,slow=23,SNR=2.6						
	comp=N,1.5nm,0.4s						
UNV	Unalaska Valle	10.42	263	P	Pn	04 22 12.2	-1.0
F20K	Avaraart Lake	11.09	346		Pn	04 22 23.4	+1.1
F20K	Avaraart Lake	11.09	346	P	Pn	04 22 23.4	+1.1
	baz=160						
E19K	Redstone River	11.69	344	Pn	Pn	04 22 30.9	+0.4
INK	Inuvik	13.78	24		Pn	04 22 59.6	+0.6
INK	Inuvik	13.78	24	Pn	Pn	04 23 01.4	+2.4
	comp=N,0.1nm,0.3s,baz=196,slow=12,SNR=4.3						
	comp=N,2.2nm,1.0s						
B22K	Teshekpuk Lake	14.07	354		Pn	04 23 03.1	+0.2
YKA	Yellowknife Ar	18.25	57	P	Pn	04 23 56.6	-0.3
	comp=N,0.1nm,0.3s,baz=267,slow=12,SNR=11						
	comp=N,1.3nm,0.9s						
HUMO	Hull Mountain	21.63	119	P	P	04 24 35.8	+1.8
NVAR	Mina Array Bea	27.10	119	P	P	04 25 25.9	-1.0
	comp=N,0.3nm,0.6s,baz=312,slow=11,SNR=2.2						
	comp=N,0.3nm,0.6s						
PDAR	Pinedale Array	28.48	102	P	P	04 25 39.4	+0.2
	comp=N,0.1nm,0.5s,baz=253,slow=7.5,SNR=2.4						
	comp=N,0.1nm,0.5s						
MNHN	Monahans	40.56	108	P	P	04 27 22.4	-0.9
MNHN				IAmb	IAmb	04 27 23.8	
	comp=Z,5.9nm,1.5s						
TXAR	Lajitas Array	41.68	111	P	P	04 27 31.4	-1.2
	comp=Z,0.5nm,1.0s,baz=28,slow=4.1,SNR=3.5						
	comp=Z,0.5nm,1.0s						
BATG	Bathurst New B	48.97	64	P	P	04 28 30.1	+0.1
H11N2	WAKE ISLAND Hy	49.17	240	T	T	05 21 34.5	
	baz=31,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	49.18	240	T	T	05 21 31.7	
	baz=31,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	49.19	240	T	T	05 21 36.9	
	baz=31,slow=76,SNR=3.5						
MJAR	Matsushiro Arr	51.36	280	P	P	04 28 49.4	+1.0
	comp=Z,1.0nm,0.6s,baz=12,slow=7.8,SNR=1.7						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	58.69	310	P	P	04 29 42.9	+1.6
	comp=Z,0.7nm,1.0s,baz=33,slow=5.3,SNR=2.4						
	comp=Z,0.7nm,1.0s						
BVAR	Borovoye Array	66.21	335	P	P	04 30 32.6	+1.3
	comp=Z,0.7nm,0.6s,baz=231,slow=52,SNR=2.0						
	comp=Z,0.7nm,0.6s						
MK31	Makanchi Array	68.57	325	P	P	04 30 46.0	-0.5
MK31				IAmb	IAmb	04 30 49.4	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	68.57	325	P	P	04 30 45.4	-1.1
MKAR	Makanchi Array	68.57	325	P	P	04 30 46.6	+0.1
	comp=Z,0.1nm,0.4s,baz=25,slow=6.5,SNR=2.3						
	comp=Z,0.1nm,0.4s						
ABKAR	Akbulak array	71.95	341	P	P	04 31 07.2	+0.2
ABKAR	Akbulak array	71.95	341	P	P	04 31 07.5	+0.5
ABKAR				IAmb	IAmb	04 31 16.3	
	comp=Z,1.7nm,1.2s						
GERES	GERESS Array B	74.06	12	P	P	04 31 20.6	+1.0
	comp=Z,0.4nm,0.6s,baz=343,slow=18,SNR=1.8						
	comp=Z,0.4nm,0.6s						
ESDC	Sonseca Array	79.72	27	P	P	04 31 53.0	+1.3
	comp=Z,0.6nm,0.8s,baz=356,slow=40,SNR=2.1						
	comp=Z,0.6nm,0.8s						

*SJA **06** 04:22:54.2±0.7,34.°90S×71.°75W,h69km±4km, ML3.6, MW3.6*

*GUC **06** 04:22:57.3±0.9,34.°77S×71.°71W,h47km±2km, ML3.5*

ISC 06 04:22:58.4±1.9,34.°79S±0.°04×71.°72W±0.°05,h35km±2km, n43,σ1°02/77,4C-7D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.28	218	eP	Pn	04 23 05.3	-1.0
GO05				eS	Sn	04 23 13.4	+0.8
GO05				IAML		04 23 13.7	
	comp=Z,1μm,0.2s						
GO05	Huala	0.28	218	eP	Pn	04 23 05.9	-0.4
GO05				eS	Sn	04 23 12.4	-0.3
BO03	Pichilemu	0.36	326↑	eP	Pn	04 23 06.8	-0.2
BO03				eS	Sn	04 23 13.5	+0.3
BO03				IAML		04 23 14.1	
	comp=N,3μm,0.3s						
BO01	Tunca	0.66	53	eP	Pn	04 23 10.2	-1.0
BO01				eS	Sn	04 23 20.3	-0.1
BO01				IAML		04 23 20.5	
	comp=Z,1μm,0.3s						
BO01	Tunca	0.66	53	eP	Pn	04 23 10.5	-0.8
BO01				i S	Sn	04 23 19.7	-0.7
BO02	Sierra Bellavi	0.77	90	eP	Pn	04 23 11.2	-1.6
BO02				eS	Sn	04 23 24.0	+0.7
BO02				IAML		04 23 24.1	
	comp=Z,4μm,0.1s						
BO02	Sierra Bellavi	0.77	90	eP	Pn	04 23 11.8	-1.0
BO02				eS	Sn	04 23 22.7	-0.6
BO02				IAML		04 23 23.7	
	comp=N,5μm,0.2s						
ML02	Panimavida	1.00	166	eP	Pn	04 23 15.5	-0.3
ML02				i S	Sn	04 23 28.9	+0.2
ML02				IAML		04 23 31.2	
	comp=E,1μm,0.4s						
MT01	Popeta	1.00	23	eP	Pn	04 23 15.2	-0.7
MT01				eS	Sn	04 23 30.4	+1.5
MT01				IAML		04 23 31.2	
	comp=Z,1μm,0.1s						
MT01	Popeta	1.00	23	eP	Pn	04 23 15.1	-0.8
MT01				eS	Sn	04 23 27.9	-0.9
MT01				IAML		04 23 30.6	
	comp=E,2μm,0.2s						
VA05	Santo Domingo	1.14	5	eP	Pn	04 23 16.5	-1.2
VA05				eS	Sn	04 23 31.1	-1.0
VA05				IAML		04 23 37.4	
	comp=E,1μm,0.2s						
MT09	Talagante	1.18	31	eP	Pn	04 23 18.1	-0.5
MT09				i S	Sn	04 23 33.1	-0.4
MT09				IAML		04 23 36.9	
	comp=N,2μm,0.2s						
BO04	La Punta	1.22	49	eP	Pn	04 23 18.2	-0.8
BO04				eS	Sn	04 23 34.0	-0.3
BO04				IAML		04 23 36.0	
	comp=E,3μm,0.3s						
MT12	Pirque	1.44	43	eP	Pn	04 23 21.4	-0.5
MT12				eS	Sn	04 23 39.8	+0.2
MT12				IAML		04 23 44.2	
	comp=N,2μm,0.6s						
MT15	Las Vizcachas	1.56	41	eP	Pn	04 23 23.3	-0.3
MT15				i S	Sn	04 23 43.1	+0.5
LMEL	Las Melosas	1.57	54	eP	Pn	04 23 23.5	-0.4
LMEL				eS	Sn	04 23 43.8	+0.7
LMEL				IAML		04 23 48.7	
	comp=N,1μm,0.1s						
MT13	San Alfonso	1.58	49	eP	Pn	04 23 24.0	0.0
MT13				eS	Sn	04 23 43.8	+0.5
MT13				IAML		04 23 47.0	
	comp=E,823nm,0.4s						
MT02	Curacav	1.60	18	eP	Pn	04 23 23.6	-0.6
MT02				eS	Sn	04 23 45.2	+1.5
MT02				IAML		04 23 51.0	
	comp=Z,213nm,0.5s						
MT02	Curacav	1.60	18↑	iP	Pn	04 23 23.6	-0.6
MT02				eS	Sn	04 23 44.6	+0.9
MT05	Renca	1.62	31	eP	Pn	04 23 23.6	-0.8
MT05				eP		04 23 24.3	
MT05				eS	Sn	04 23 46.4	+2.3
MT05				IAML		04 23 49.3	
	comp=Z,387nm,0.3s						
MT05	Renca	1.62	31	eP	Pn	04 23 24.1	-0.4
MT05				eS	Sn	04 23 44.0	-0.1
MT05				IAML		04 23 51.6	
	comp=E,2μm,0.2s						
MT03	Universidad Ad	1.64	38	eP	Pn	04 23 24.3	-0.5
MT03				eS	Sn	04 23 47.5	+2.8
MT03				IAML		04 23 48.6	
	comp=Z,1μm,0.2s						
MT03	Universidad Ad	1.64	38	eP	Pn	04 23 24.2	-0.6
MT03				eS	Sn	04 23 45.3	+0.6
MT03				IAML		04 23 49.0	
	comp=E,2μm,0.4s						
MT16	CCHEN	1.69	36	eP	Pn	04 23 24.9	-0.5
MT16				eS	Sn	04 23 46.0	+0.2
MT16				IAML		04 23 53.9	
	comp=N,473nm,0.2s						
MT14	Cerro Cal¡n	1.71	36	eP	Pn	04 23 25.4	-0.2
MT14				eS	Sn	04 23 47.1	+0.9
MT14				IAML		04 23 54.3	
	comp=N,941nm,0.2s						
MT10	Hacienda Santa	1.81	33	eP	Pn	04 23 26.8	-0.3
MT10				eS	Sn	04 23 50.0	+1.1
MT10				IAML		04 23 55.1	
	comp=N,2μm,0.2s						
PEL	Peldehue	1.86	28	eP	Pn	04 23 27.6	-0.1
PEL				eS	Sn	04 23 52.4	+2.4
PEL				IAML		04 23 57.2	
	comp=N,424nm,0.5s						
FCH	Farellones	1.88	39↑	eP	Pn	04 23 28.1	-0.2
FCH				eS	Sn	04 23 51.6	+0.6
FCH				IAML		04 23 55.2	
	comp=N,796nm,0.1s						
MT04	Ro Olivares	1.91	44	eP	Pn	04 23 28.7	+0.1
MT04				eS	Sn	04 23 52.5	+1.0
MT04				IAML		04 23 57.4	
	comp=E,675nm,0.2s						
ROCH	El Roble	1.91	18	eP	Pn	04 23 28.4	-0.3
ROCH				eP	Pn	04 23 28.4	-0.3
ROCH				i S	Sn	04 23 52.0	+0.5
ROCH				eS		04 23 52.1	
ROCH				IAML		04 23 58.8	
	comp=N,362nm,0.5s						
ROCH				IAML		04 23 58.8	
	comp=N,796nm,0.6s						
VA03	San Esteban	2.25	26	eP	Pn	04 23 32.9	-0.2
VA03				eS	Sn	04 24 02.7	+3.0
VA03				IAML		04 24 09.2	
	comp=Z,258nm,0.3s						
VA03	San Esteban	2.25	26	eP	Pn	04 23 33.0	-0.1
VA03				eS	Sn	04 24 01.3	+1.6
VA03				IAML		04 24 07.9	
	comp=E,531nm,0.2s						
VA06	Catapilco	2.25	9↑	eP	Pn	04 23 32.3	-0.9
VA06				eS	Sn	04 24 02.0	+2.4
VA06				IAML		04 24 10.2	
	comp=E,463nm,0.3s						
RFA	San Rafael	2.68	90	eP	Pn	04 23 39.1	+0.1
RFA				eP		04 23 40.5	
RFA				eS	Sn	04 23 56.7	-14
AAGR	Agrelo	2.95	55	eP	Pn	04 23 44.7	+2.0
AAGR				eS	Sn	04 24 02.5	-14
CO02	Combarbal	3.63	10	eP	Pn	04 23 51.1	-1.1
CO02				eS	Sn	04 24 40.5	+6.6
CO02	Combarbal	3.63	10	eP	Pn	04 23 51.2	-1.0
CO03	El Pedregal	4.04	13	eP	Pn	04 23 57.2	-0.6
CO03				eS	Sn	04 24 54.6	+11
CO03	El Pedregal	4.04	13	eP	Pn	04 23 57.3	-0.5
CO03				eS	Sn	04 24 42.5	-1.3
CO06	Fray Jorge	4.11	1	eP	Pn	04 23 56.8	-1.8
DOCA	Reserva Natura	4.43	31	eP	Pn	04 24 02.7	-0.7
GO04	Tololo Observa	4.67	10	eP	Pn	04 24 05.6	-1.0
GO06	Curarrehue	4.79	178	eP	Pn	04 24 09.6	+1.6

*IDC **06** 04:25:22.7±1.2,25.°65S×70.°36W,h0km,mb3.9/3, mbtmp3.7/6,ML3.5/3,MS2.9/2,Error ellipse: s-maj=32.2km s-min=19.2km az=114.0*

*SJA **06** 04:25:25.6±2.1,25.°67S×70.°58W,h34km±13km,ML4.1, MW3.7*

*GUC **06** 04:25:27.4±0.7,25.°72S×70.°57W,h48km±4km,ML4.0*

ISC 06 04:25:26.9±1.2,25.°71S±0.°03×70.°58W±0.°07,h36km±2km, n46,σ1°88/44,mb4.0/3,4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC01	Pan de Azucar	0.44	182	i P	Pn	04 25 36.8	+0.2
AC01				⇓eS	Sn	04 25 44.0	+0.4
AC01				IAML		04 25 44.9	
	comp=Z,6μm,0.5s						
AC01	Pan de Azucar	0.44	182	eP	Pn	04 25 37.8	+1.2
AC01				IAML		04 25 45.0	
	comp=E,17μm,0.1s						
GO02	Mina Guanaco	1.04	59	i P	Pn	04 25 46.0	+0.7
GO02				IAML		04 26 07.0	
	comp=Z,3μm,0.6s						
GO02	Mina Guanaco	1.04	59	⇓iP	Pn	04 25 46.6	+1.4
GO02				IAML		04 26 05.7	
	comp=E,5μm,0.5s						
PB14	IPOC Station P	1.09	8	i P	Pn	04 25 47.5	+1.6
PB14				⇓eS	Sn	04 26 03.2	+3.4
PB14				IAML		04 26 06.8	
	comp=Z,2μm,0.5s						
PB14	IPOC Station P	1.09	8	eP	Pn	04 25 48.0	+2.1
PB14				eS	Sn	04 26 02.9	+3.1
PB14				IAML		04 26 05.1	
	comp=N,2μm,0.5s						
AC02	Maricunga	1.72	131	i P	Pn	04 25 56.0	+1.2
AC02				⇓eS	Sn	04 26 17.6	+1.8
AC02				IAML		04 26 18.2	
	comp=Z,2μm,0.2s						
AC02	Maricunga	1.72	131	eP	Pn	04 25 56.5	+1.8
AC02				IAML		04 26 18.4	
	comp=E,3μm,0.2s						
GO03	Copiap	1.91	171	i P	Pn	04 25 58.1	+1.2
GO03				IAML		04 26 36.9	
	comp=Z,948nm,0.3s						
GO03	Copiap	1.91	171	eP	Pn	04 25 58.6	+1.6
GO03				IAML		04 26 24.7	
	comp=E,840nm,0.3s						
PB10	IPOC Station P	2.18	1	i P	Pn	04 26 01.6	+0.9
PB10				IAML		04 26 38.9	
	comp=Z,520nm,0.8s						
PB10	IPOC Station P	2.18	1	eP	Pn	04 26 02.0	+1.3
PB10				eS	Sn	04 26 29.1	+2.7
PB10				IAML		04 26 40.6	
	comp=E,561nm,0.3s						
AC04	Llanos de Chal	2.53	190	eP	Pn	04 26 05.3	-0.1
AC04				IAML		04 26 47.0	
	comp=E,348nm,0.3s						
PB05	IPOC Station P	2.86	7	i P	Pn	04 26 10.7	+0.6
PB05				IAML		04 27 03.5	
	comp=Z,351nm,0.4s						
PB05	IPOC Station P	2.86	7	IAML		04 27 06.4	
	comp=E,451nm,0.4s						
PB06	IPOC Station P	3.12	17	i P	Pn	04 26 15.1	+1.3
PB06				IAML		04 27 11.7	
	comp=Z,577nm,0.4s						
PB06	IPOC Station P	3.12	17	eP	Pn	04 26 15.7	+1.9
PB06				IAML		04 27 06.8	
	comp=E,610nm,0.3s						
LCO	Las Campanas	3.29	182	eP	Pn	04 26 17.7	+1.5
LCO				IAML		04 27 13.2	
	comp=E,2μm,0.6s						
PB04	IPOC Station P	3.38	7	i P	Pn	04 26 17.6	+0.3
PB04				IAML		04 27 19.1	
	comp=Z,347nm,0.6s						
PB04	IPOC Station P	3.38	7	eP	Pn	04 26 18.1	+0.8
PB04				IAML		04 27 16.2	
	comp=E,668nm,0.1s						
LVC	Limon Verde	3.44	27	i P	Pn	04 26 20.5	+2.2
LVC				IAML		04 27 19.7	
	comp=Z,881nm,0.5s						
LVC	Limon Verde	3.44	27	Pg	Pn	04 26 21.1	+2.9
	comp=Z,6.6nm,0

H03N3	**Juan Fernandez**	**10.60**	**221**	T	T	04 38 42.7			
	baz=47,slow=72,SNR=82								
CPUP	**Villa Florida**	**11.93**	**96**	Pn	**Pn**	**04 28 11.1**	**-3.5**		
	comp=Z,0.1nm,0.3s,baz=302,slow=15,SNR=1.9								
CPUP				LR	LR	04 33 23.2			
	comp=Z,77nm,19.1s,baz=260,slow=41								
	comp=Z,1.0nm,0.7s								
SIV	**San Ignacio**	**13.12**	**44**	Pn	**Pn**	**04 28 28.4**	**-2.5**		
	comp=Z,0.1nm,0.3s,baz=262,slow=5.7,SNR=10								
SIV				Sn	**Sn**	**04 30 54.1**	**-1.5**		
	baz=184,slow=19,SNR=2.0								
SIV				LR	LR	04 33 50.1			
	comp=Z,37nm,21.0s,baz=97,slow=39								
	comp=Z,1.4nm,0.5s								
PLCA	**Paso Flores**	**14.99**	**180**	Pn	**Pn**	**04 28 56.1**	**0.0**		
	baz=22,slow=23,SNR=0.9								
	comp=Z,0.7nm,0.8s								
BDFB	**Brasilia**	**23.33**	**69**	P	**P**	**04 30 31.0**	**-1.2**		
	comp=Z,3.5nm,0.6s,baz=230,slow=8.8,SNR=6.9								
	comp=Z,3.5nm,0.6s								
TXAR	**Lajitas Array**	**63.27**	**328**	P	**P**	**04 35 53.9**	**+1.8**		
	comp=Z,0.2nm,0.6s,baz=144,slow=7.8,SNR=2.7								
	comp=Z,0.2nm,0.6s								
TORD	**Torodi Ar. Bea**	**80.21**	**70**	P	**P**	**04 37 34.5**	**+0.3**		
	comp=Z,1.8nm,0.5s,baz=266,slow=4.7,SNR=33								
	comp=Z,1.8nm,0.5s								
H11S2	**WAKE ISLAND Hyl**	**26.78**	**275**	T	T	07 04 03.2			
	baz=107,slow=74,SNR=25								
H11S1	**WAKE ISLAND Hyl**	**26.79**	**275**	T	T	07 04 04.8			
	baz=107,slow=74,SNR=32								
H11S3	**WAKE ISLAND Hyl**	**26.80**	**275**	T	T	07 04 03.9			
	baz=107,slow=74,SNR=23								
ZALV	**Zalesovo Bea**	**146.39**	**26**	PKPbc	**PKPbc**	**04 45 03.7**	**+0.1**		
	comp=Z,3.9nm,0.7s,baz=306,slow=3.8,SNR=15								
MKAR	**Makanchi Array**	**149.89**	**39**	PKPbc	**PKiKP**	**04 45 14.2**	**+0.1**		
	comp=Z,1.9nm,0.7s,baz=329,slow=2.5,SNR=16								

*IDC **06** 04:29:47.1±1.6,28.84S×178.00W,h69km±18km,mb3.6/4, mbtmp3.9/4,Error ellipse: s-maj=46.7km s-min=24.9km az=166.0*

ISC 06 04:29:45.3±0.8,28.5S±0.1×178.1W±0.2,h50km,n22, σ1839/15,mb4.1/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.74**	**166**	P			**Pn**	**04 30 00.3**	**+0.6**
	434nm,0.2s,baz=82,slow=15,SNR=16								
RAO				S			**Sn**	**04 30 10.2**	**+0.2**
	5μm,0.3s,baz=30,slow=20,SNR=33								
STKA	**Stephens Creek**	**34.84**	**254**	P			**P**	**04 36 31.3**	**-0.3**
	1.1nm,0.4s,baz=82,slow=9.7,SNR=4.0								
	1.1nm,0.4s								
ASAR	**Alice Springs**	**43.13**	**265**	P			**P**	**04 37 40.8**	**-0.3**
	0.6nm,0.7s,baz=101,slow=7.6,SNR=6.2								
	0.6nm,0.7s								
WRA	**Warramunga Arr**	**43.95**	**270**	P			**P**	**04 37 48.8**	**+1.1**
	1.8nm,0.5s,baz=111,slow=7.8,SNR=17								
	1.8nm,0.5s								
H03S2	**Juan Fernandez**	**81.59**	**124**	T			T	06 10 21.1	
	baz=242,slow=75,SNR=15								
H03S1	**Juan Fernandez**	**81.60**	**124**	T			T	06 10 21.6	
	baz=242,slow=75,SNR=17								
H03S3	**Juan Fernandez**	**81.61**	**124**	T			T	06 10 20.8	
	baz=242,slow=75,SNR=18								
NVAR	**Mina Array Bea**	**86.94**	**43**	P			**P**	**04 42 25.3**	**+0.1**
	0.1nm,0.3s,baz=252,slow=7.5,SNR=2.5								
	0.1nm,0.3s								
KDAK	**Kodiak Island**	**88.62**	**13**	P			**P**	**04 42 31.5**	**-0.9**
	19nm,1.1s,baz=153,slow=4.5,SNR=1.6								
KURBB	**Kurchatov Arra**	**119.71**	**314**	PKP			**PKPdf**	**04 48 29.6**	**+0.2**
	0.1nm,0.3s,baz=114,slow=2.2,SNR=1.8								
BVAR	**Borovoye Array**	**124.98**	**317**	PKP			**PKPdf**	**04 48 39.9**	**+0.4**
	0.3nm,0.4s,baz=82,slow=3.1,SNR=2.2								
H10S3	**ASCENSION HYDR**	**139.46**	**154**	T			T	07 25 06.0	
	baz=19								
H10S2	**ASCENSION HYDR**	**139.46**	**154**	T			T	07 25 13.4	
	baz=201								
H10N3	**ASCENSION HYDR**	**140.54**	**154**	T			T	07 26 30.7	
	baz=204								
H10N1	**ASCENSION HYDR**	**140.54**	**154**	T			T	07 26 12.8	
	baz=204								
H10N2	**ASCENSION HYDR**	**140.55**	**154**	T			T	07 26 33.1	
	baz=204								
FINES	**FINESS Array B**	**143.35**	**341**	PKP			PKPbc	04 49 14.3	+3.7
	1.1nm,0.4s,baz=57,slow=2.9,SNR=12								
HFS	**Hagfors**	**147.39**	**349**	PKPbc			**PKPdf**	**04 49 23.2**	**+2.8**
	1.7nm,0.8s,baz=31,slow=3.4,SNR=1.7								
AKASG	**Malin Array Be**	**146.74**	**325**	PKPbc			**PKPbc**	**04 49 29.6**	**+0.4**
	0.6nm,0.5s,baz=50,slow=2.9,SNR=2.5								
MMAI	**Mount Meron Ar**	**150.92**	**287**	PKPbc			**PKPbc**	**04 49 32.5**	**-0.3**
	0.4nm,0.3s,baz=106,slow=3.1,SNR=1.4								
BRTR	**Keskin Array B**	**151.57**	**301**	PKPbc			**PKPbc**	**04 49 33.7**	**-0.5**
	0.1nm,0.4s,baz=134,slow=4.1,SNR=1.3								
TORD	**Torodi Ar. Bea**	**164.69**	**179**	PKP			**PKPdf**	**04 49 44.8**	**+0.4**
	0.2nm,0.5s,baz=251,slow=1.8,SNR=1.0								
TORD				PKPab			**PKPab**	**04 50 36.2**	**-3.5**
	0.6nm,0.9s,baz=135,slow=3.8,SNR=2.3								

*TAP **06** 04:42:18.7,24.11N×121.72E,h8km,ML3.7,C*
*ASIES **06** 04:42:18.7,24.11N×121.72E,h8km,ML3.7,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr1.17; Mθθ-2.33; Mϕϕ-1.10; Mrθ2.54; Mθϕ-0.90; Mϕr2.28; Fault plane solution: M₀4.05594×10²¹ NP1:ϕs50.03000°, δ75.17000°,λ83.24000°. NP2:ϕs254.86000°,δ16.26000°, λ113.96000°. Principal axes: T Plg59.2890°, Azm310.6480°; N Plg6.5290°, Azm51.7560°; P Plg29.8610°, Azm145.5240°;*
*JMA **06** 04:42:19.2±0.1,24.1N±0.2×121.7E±0.3,h0km,MV3.4/11, TAIWAN REGION*

ISC 06 04:42:18.9±0.8,24.11N±0.01×121.72E±0.02,h9km±5km, n139,σ0872/233,6C-30D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**298**	⇓*i*P			**Pg**	**04 42 21.4**	**-0.1**
	baz=296								
ETL				S			**Sg**	**04 42 23.3**	**0.0**
	baz=296								
TWD	**Chiawan**	**0.12**	**254**	⇓P			**Pg**	**04 42 21.5**	**-0.2**
	baz=261								
TWD				S			**Sg**	**04 42 23.6**	**+0.1**
	baz=261								
NACB	**Ninganchiao**	**0.13**	**299**	P			**Pg**	**04 42 21.7**	**-0.2**
NACB	**Ninganchiao**	**0.13**	**299**	⇓*i*P			**Pg**	**04 42 21.7**	**-0.2**
	baz=289								
NACB				*i* S			**Sg**	**04 42 23.8**	**-0.1**
	baz=289								
HWA	**Hwalien**	**0.17**	**218**	*e*P			**Pg**	**04 42 23.7**	**+1.2**
	baz=230								
HWA				*e*S			**Sg**	**04 42 26.5**	**+1.5**
	baz=230								
EHP	**Heping Village**	**0.20**	**6**	P			**Pg**	**04 42 23.2**	**+0.1**
	baz=5.0								
EHP				S			**Sg**	**04 42 26.7**	**+0.8**
	baz=5.0								
EAHA	**Aohua**	**0.22**	**5**	⇓*i*P			**Pg**	**04 42 23.5**	**+0.1**
	baz=2.0								
EAHA				*i* S			**Sg**	**04 42 27.1**	**+0.6**
	baz=2.0								
ETLH	**Xiulin Townshi**	**0.24**	**294**	⇓P			**Pg**	**04 42 23.7**	**0.0**
	baz=293								
ETLH				S			**Sg**	**04 42 27.4**	**+0.4**
	baz=293								
ETM	**Tongmen**	**0.25**	**235**	⇑P			**Pg**	**04 42 24.0**	**0.0**
	baz=238								
ETM				*e*S			**Sg**	**04 42 27.7**	**+0.3**
	baz=238								
LXIB	**Xiulin Townshi**	**0.29**	**252**	⇓*i*P			**Pg**	**04 42 24.6**	**-0.2**
	baz=253								
LXIB				*e*S			**Sg**	**04 42 29.0**	**+0.2**
	baz=253								
ENA	**Nanau**	**0.32**	**4**	⇓P			**Pg**	**04 42 25.3**	**+0.1**
	baz=3.0								
ENA				S			**Sg**	**04 42 29.9**	**+0.4**
	baz=3.0								
EWUT	**Wuta**	**0.34**	**9**	⇓*i*P			**Pg**	**04 42 25.7**	**+0.1**
	baz=7.0								
EWUT				S			**Sg**	**04 42 30.8**	**+0.7**
	baz=7.0								
SHUL	**Shoufeng**	**0.35**	**204**	⇓*i*P			**Pb**	**04 42 27.2**	**-0.2**
	baz=215								
SHUL				*e*S			**Sb**	**04 42 33.8**	**+0.8**
	baz=215								
ESL	**Shilin**	**0.40**	**221**	*e*P			**Pg**	**04 42 26.2**	**-0.5**
	baz=230								
ESL				*e*S			**Sg**	**04 42 32.9**	**+1.0**
	baz=230								
WHF	**Hehuan Shan**	**0.42**	**275**	*e*P			**Pg**	**04 42 27.2**	**0.0**
	baz=275								
WHF				*e*S			**Sg**	**04 42 33.1**	**+0.4**
	baz=275								
NNSB	**Datong**	**0.44**	**316**	⇓*i*P			**Pg**	**04 42 27.8**	**+0.2**
	baz=314								
NNSB				*i* S			**Sg**	**04 42 33.9**	**+0.6**
	baz=314								
FUSS	**Fushou**	**0.45**	**287**	⇓P			**Pg**	**04 42 28.2**	**+0.3**
	baz=287								
FUSS				S			**Sg**	**04 42 34.8**	**+0.9**
	baz=287								
NNS	**Nan Shan**	**0.45**	**316**	⇓*i*P			**Pg**	**04 42 28.1**	**+0.3**
	baz=315								
NNS				S			**Sg**	**04 42 34.4**	**+0.5**
	baz=315								
LATG	**Datong**	**0.46**	**337**	⇓*i*P			**Pg**	**04 42 27.9**	**+0.1**
	baz=335								
LATG				*e*S			**Sg**	**04 42 33.9**	**0.0**
	baz=335								
ESAO	**Su ao**	**0.48**	**14**	⇓P			**Pg**	**04 42 28.4**	**+0.2**
	baz=11								
ESAO				*e*S			**Sg**	**04 42 34.9**	**+0.4**
	baz=11								
WARBT	**Fenglin Townsh**	**0.50**	**218**	⇑P			**Pg**	**04 42 28.4**	**-0.2**
	baz=230								
WARBT				*e*S			**Sg**	**04 42 35.6**	**+0.5**
	baz=230								
CHGB	**Renai**	**0.50**	**264**	⇓P			**Pg**	**04 42 28.9**	**+0.2**
	baz=258								
CHGB				S			**Sg**	**04 42 34.6**	**-0.7**
	baz=258								
TWC	**Suao**	**0.51**	**13**	⇓*i*P			**Pg**	**04 42 29.0**	**+0.1**
	baz=7.0								
TWC				S			**Sg**	**04 42 36.2**	**+0.7**
	baz=7.0								
EGFH	**Guangfu**	**0.52**	**211**	⇓P			**Pg**	**04 42 29.4**	**+0.4**
	baz=225								
TWT	**Tachien**	**0.52**	**286**	⇑P			**Pb**	**04 42 29.9**	**-0.4**
	baz=285								
TWT				*e*S			**Sb**	**04 42 37.2**	**-0.7**
	baz=285								
NDS	**Dongshan**	**0.52**	**360**	⇓P			**Pg**	**04 42 29.4**	**+0.4**
	baz=357								
NDS				*i* S			**Sg**	**04 42 36.6**	**+0.7**
	baz=357								
OWD	**Renai**	**0.52**	**253**	*e*P			**Pg**	**04 42 29.2**	**+0.2**
	baz=255								
OWD				*e*S			**Sg**	**04 42 36.6**	**+0.6**
	baz=255								
NDT	**Datong Townshi**	**0.52**	**339**	⇓P			**Pb**	**04 42 29.5**	**-0.8**
	baz=337								
NDT				*e*S			**Sb**	**04 42 37.0**	**-1.0**
	baz=337								
TDCB	**Techi**	**0.53**	**286**	⇓P			**Pb**	**04 42 29.7**	**-0.8**
	baz=285								
TDCB				*e*S			**Sg**	**04 42 35.6**	**-0.7**
	baz=285								
ENTT	**Nioudou**	**0.54**	**345**	⇓P			**Pb**	**04 42 29.9**	**-0.7**
	baz=343								
ENTT				*e*S			**Sb**	**04 42 37.6**	**-1.0**
	baz=343								
EOS4	**EOS4**	**0.55**	**89**	*e*P			**Pn**	**04 42 32.4**	**-0.1**
	baz=89								
EOS2	**EOS2**	**0.56**	**57**	*e*P			**Pb**	**04 42 31.5**	**+0.7**
	baz=32								
WUSB	**Renai**	**0.56**	**258**	⇓P			**Pg**	**04 42 30.1**	**+0.2**
	baz=259								
WUSB				*e*S			**Sg**	**04 42 37.4**	**+0.1**
	baz=259								
EOS3	**EOS3**	**0.57**	**72**	*e*P			**Pn**	**04 42 33.2**	**+0.1**
	baz=48								
TWE	**Neicheng**	**0.61**	**356**	⇓*i*P			**Pb**	**04 42 31.1**	**-0.6**
	baz=355								
TWE				*i* S			**Sb**	**04 42 39.6**	**-0.8**
	baz=355								
VWDT	**VWDT**	**0.64**	**236**	⇑P			**Pg**	**04 42 31.4**	**+0.1**
	baz=238								
VWDT				*e*S			**Sg**	**04 42 39.0**	**-0.6**
	baz=238								
YHNB	**Yeheng**	**0.64**	**331**	P			**Pb**	**04 42 31.8**	**-0.5**
YHNB	**Yeheng**	**0.64**	**331**	⇓*i*P			**Pb**	**04 42 31.8**	**-0.5**
	baz=329								
YHNB				S			**Sg**	**04 42 40.0**	**+0.3**
	baz=329								
NSK	**Sanguang**	**0.65**	**330**	⇓*i*P			**Pb**	**04 42 31.9**	**-0.6**
	baz=329								
NSK				S			**Sb**	**04 42 40.8**	**-0.9**
	baz=329								
ILA	**Ilan**	**0.65**	**2**	*e*P			**Pb**	**04 42 32.4**	**0.0**
	baz=354								
ILA				*e*S			**Sb**	**04 42 41.3**	**-0.3**
	baz=354								
FUSB	**Fushanzhiwuyua**	**0.66**	**350**	⇓P			**Pb**	**04 42 32.1**	**-0.5**
	baz=347								
FUSB				*e*S			**Sb**	**04 42 40.9**	**-1.0**
	baz=347								
HGSD	**Ruisui**	**0.67**	**204**	⇓P			**Pb**	**04 42 32.4**	**-0.4**
	baz=194								
HGSD				*e*S			**Sb**	**04 42 43.4**	**+1.2**
	baz=194								
NWLT	**Wulai**	**0.69**	**343**	⇓P			**Pb**	**04 42 32.8**	**-0.4**
	baz=342								
NWLT				*e*S			**Sg**	**04 42 41.6**	**+0.2**
	baz=342								
EHY	**Hungye**	**0.70**	**211**	*e*P			**Pg**	**04 42 32.1**	**-0.4**
	baz=215								
WHP	**Taichung City**	**0.72**	**283**	*e*P			**Pb**	**04 42 33.8**	**0.0**
	baz=283								
WHP				*e*S			**Sb**	**04 42 43.1**	**-0.7**
	baz=283								
WCS	**Beigang Elemen**	**0.74**	**266**	*e*P			**Pb**	**04 42 33.5**	**-0.5**
	baz=267								
NFF	**Wufeng Townshi**	**0.75**	**314**	*e*P			**Pg**	**04 42 33.4**	**-0.1**
	baz=312								
NFF				*e*S			**Sb**	**04 42 43.8**	**-0.9**
	baz=312								
SSLB	**Suanglung**	**0.77**	**245**	P			**Pg**	**04 42 33.9**	**+0.1**
SSLB	**Suanglung**	**0.77**	**245**	⇑P			**Pg**	**04 42 33.8**	**0.0**
	baz=257								
SSLB				*e*S			**Sg**	**04 42 44.1**	**+0.3**
	baz=257								
SMLT	**Sun Moon Lake**	**0.78**	**253**	⇑P			**Pb**	**04 42 34.3**	**-0.4**
	baz=255								
SMLT				S			**Sb**	**04 42 45.0**	**-0.5**
	baz=255								
YULB	**Yu-li**	**0.81**	**208**	P			**Pb**	**04 42 35.0**	**-0.2**
YULB	**Yu-li**	**0.81**	**208**	*e*P			**Pg**	**04 42 33.5**	**-1.1**
	baz=223								
YULB				*e*S			**Sg**	**04 42 45.3**	**+0.1**
	baz=223								
TYC	**Yuchr**	**0.81**	**255**	*e*P			**Pb**	**04 42 35.0**	**-0.2**
	baz=257								
TYC				*e*S			**Sg**	**04 42 45.1**	**-0.1**
	baz=257								
ECBN	**Changbin**	**0.83**	**197**	*e*P			**Pg**	**04 42 35.0**	**+0.1**
	baz=191								
LIOB	**Emei**	**0.83**	**310**	*e*P			**Pb**	**04 42 36.0**	**+0.4**
	baz=309								
LIOB				*e*S			**Sb**	**04 42 46.8**	**-0.1**
	baz=309								
NSTT	**Nanjuang**	**0.83**	**308**	⇓P			**Pb**	**04 42 35.8**	**+0.2**
	baz=307								
NSTT				*e*S			**Sb**	**04 42 46.8**	**-0.1**
	baz=307								
EYUL	**Yuli**	**0.84**	**206**	*e*P			**Pn**	**04 42 36.4**	**-0.6**
	baz=225								
TWF1	**Yuli**	**0.85**	**207**	*e*P			**Pg**	**04 42 34.6**	**-0.7**
	baz=223								
TIPB	**Shuangxi**	**0.86**	**6**	⇓*e*P			**Pb**	**04 42 36.0**	**-0.1**
	baz=355								
TIPB				*i* S			**Sb**	**04 42 47.1**	**-0.6**
	baz=355								
NHDH	**Xindian Distri**	**0.87**	**348**	*e*P			**Pb**	**04 42 35.9**	**-0.2**
	baz=337								
NHDH				*e*S			**Sb**	**04 42 47.4**	**-0.5**
	baz=337								
TATO	**Taipei**	**0.89**	**346**	P			**Pb**	**04 42 36.8**	**+0.3**
WHYT	**Xinyi Township**	**0.89**	**243**	*e*P			**Pn**	**04 42 37.4**	**-0.3**
	baz=253								
WHYT				*e*S			**Sb**	**04 42 48.4**	**-0.2**
	baz=253								
TWQ1	**Liyutan**	**0.90**	**285**	*e*P			**Pn**	**04 42 38.3**	**+0.6**
	baz=285								
NSY	**Sanyi**	**0.93**	**289**	*e*P			**Pn**	**04 42 38.6**	**+0.5**
	baz=289								
NSY				*e*S			**Sn**	**04 42 51.0**	**-0.5**
	baz=289								
TWB1	**Santiao Chiao**	**0.93**	**15**	*e*P			**Pb**	**04 42 37.1**	**-0.1**
	baz=5.0								
TWB1				*e*S			**Sg**	**04 42 48.5**	**-0.3**
	baz=5.0								
TAP	**Taipei**	**0.94**	**348**	*e*P			**Pn**	**04 42 39.0**	**+0.7**
	baz=336								
TAP				*e*S			**Sb**	**04 42 49.7**	**-0.4**
	baz=336								
NMLH	**Miaoli**	**0.95**	**297**	*e*P			**Pn**	**04 42 39.6**	**+1.3**
	baz=296								
NMLH				*e*S			**Sn**	**04 42 51.9**	**-0.1**
	baz=296								
WJS	**Zhushan**	**0.95**	**253**	*e*P			**Pn**	**04 42 38.4**	**-0.1**
	baz=255								
WJS				*e*S			**Sb**	**04 42 50.5**	**+0.3**
	baz=255								
SBCB	**Hsinchu**	**0.95**	**316**	*e*P			**Pn**	**04 42 39.2**	**+0.8**
	baz=313								
NWF	**Wu-fen Shan**	**0.96**	**3**	*i* P			**Pn**	**04 42 38.1**	**-0.5**
	baz=351								
NWF				*i* S			**Sb**	**04 42 50.3**	**-0.2**
	baz=351								
WFSB	**Wu-fen Shan**	**0.96**	**3**	P			**Pb**	**04 42 37.9**	**+0.2**
	baz=353								
WFSB				*e*S			**Sb**	**04 42 50.1**	**-0.3**
	baz=353								
CHKH	**Chenggong**	**0.96**	**198**	*e*P			**Pg**	**04 42 37.3**	**-0.1**
	baz=193								
HSN	**Hsinchu**	**0.97**	**315**	*e*P			**Pn**	**04 42 39.4**	**+0.7**
	baz=315								
WNT	**Mingjian**	**0.97**	**256**	P			**Pn**	**04 42 39.2**	**+0.5**
	baz=253								
WNT				*e*S			**Sn**	**04 42 52.3**	**-0.4**
	baz=253								
NCUH	**Zhongli**	**0.98**	**330**	*e*P			**Pn**	**04 42 39.2**	**+0.3**
	baz=328								
NCUH				*e*S			**Sn**	**04 42 53.0**	**+0.1**
	baz=328								
FULB	**Fuli**	**0.99**	**203**	*e*P			**Pg**	**04 42 37.6**	**-0.4**
	baz=224								
FULB				*e*S			**Sn**	**04 42 53.7**	**+0.6**
	baz=224								
SXI1	**Grass Mountain**	**0.99**	**8**	*e*P			**Pb**	**04 42 38.4**	**+0.1**
	baz=349								
WDJ	**Dajia District**	**1.01**	**284**	*e*P			**Pn**	**04 42 39.6**	**+0.3**
	baz=294								
WDJ				*e*S			**Sb**	**04 42 52.3**	**+0.3**
	baz=294								
TWS1	**Kuangyinshan**	**1.02**	**345**	*e*P			**Pn**	**04 42 39.2**	**-0.3**
	baz=342								
TWS1				*e*S			**Sb**	**04 42 52.6**	**+0.2**
	baz=342								
ALS	**Alishan**	**1.03**	**235**	*e*P			**Pn**	**04 42 39.4**	**-0.4**
	baz=238								
ALS				*e*S			**Sg**	**04 42 52.0**	**-0.1**
	baz=238								
TNOU	**National Taiwa**	**1.03**	**3**	*e*P			**Pb**	**04 42 38.7**	**-0.3**
	baz=360								
TNOU				*e*S			**Sg**	**04 42 51.6**	**-0.7**
	baz=360								
YM01	**YM01**	**1.04**	**353**	*e*P			**Pn**	**04 42 39.7**	**0.0**
	baz=350								
YM01				*e*S			**Sb**	**04 42 52.7**	**-0.1**
	baz=350								
WCHH	**Zhanghua**	**1.06**	**269**	*e*P			**Pn**	**04 42 40.5**	**+0.6**
	baz=270								
EHD	**Haiduan**	**1.07**	**206**	*e*P			**Pg**	**04 42 37.9**	**-1.6**
	baz=222								
EHD				*e*S			**Sb**	**04 42 53.8**	**+0.2**
	baz=222								
NTST	**Danshui**	**1.08**	**347**	*e*P			**Pn**	**04 42 40.8**	**+0.6**
	baz=353								
NTST				*e*S			**Sn**	**04 42 55.4**	**+0.2**
	baz=353								
CHN5	**Tsauling**	**1.08**	**242**	*i* P			**Pn**	**04 42 40.9**	**+0.6**
	baz=245								
CHN5				*i* S			**Sn**	**04 42 56.9**	**+1.4**
	baz=245								
ANP	**Anpu**	**1.08**	**350**	*e*P			**Pn**	**04 42 40.2**	**-0.2**
	baz=345								
ECS	**Chishang**	**1.11**	**204**	*e*P			**Pb**	**04 42 40.2**	**-0.1**
	baz=210								
ECS				*e*S			**Sb**	**04 42 54.9**	**+0.1**
	baz=210								
ELDTW	**Lidau**	**1.12**	**215**	*e*P			**Pg**	**04 42 38.9**	**-1.6**
	baz=221								
WGK	**Gukeng**	**1.14**	**248**	*e*P			**Pn**	**04 42 42.0**	**+0.9**
	baz=251								
WGK				*e*S			**Sn**	**04 42 57.6**	**+0.8**
	baz=251								
WDLH	**Douliu**	**1.16**	**249**	*e*P			**Pn**	**04 42 42.3**	**+1.0**
	baz=252								
WDLH				*e*S			**Sn**	**04 42 58.2**	**+1.0**
	baz=252								
TWY	**Chenhua**	**1.16**	**355**	*e*P			**Pn**	**04 42 42.3**	**+0.9**
	baz=341								
TWY				*e*S			**Sn**	**04 42 57.6**	**+0.2**
	baz=341								
JYNG	**Yonagunijimaku**	**1.17**	**73**	P			**Pn**	**04 42 42.0**	**+0.6**
JYNG				S			**Sn**	**04 42 58.4**	**+0.9**
WCKO	**Fanlu**	**1.22**	**237**	*e*P			**Pg**	**04 42 43.0**	**+0.6**
	baz=241								
WCKO				*e*S			**Sn**	**04 43 00.4**	**+1.6**
	baz=241								
YOJ	**Yonaguni jima**	**1.23**	**73**	P			**Pg**	**04 42 44.2**	**+1.7**
YOJ	**Yonaguni jima**	**1.23**	**73**	*e*P			**Pn**	**04 42 40.3**	**-2.0**
	baz=64								
YOJ	**Yonaguni jima**	**1.23**	**73**	P			**Pg**	**04 42 43.1**	**+0.5**
YOJ				*e*S			**Sn**	**04 42 59.6**	**+0.6**
WRL	**Guolierlin Hig**	**1.24**	**261**	*e*P			**Pg**	**04 42 43.6**	**+0.8**
	baz=263								
WRL				*e*S			**Sn**	**04 43 01.0**	**+1.6**
	baz=263								
STYH	**Taoyuan**	**1.27**	**223**	*e*P			**Pn**	**04 42 42.4**	**-0.5**
	baz=228								
STYH				*e*S			**Sg**	**04 42 59.9**	**-0.1**
	baz=228								
CHN4	**Tsaushan**	**1.28**	**234**	P			**Pg**	**04 42

baz=228
SHHT Tainan City 1.66 229 *e*P **Pg 04 42 50.5 -0.3**
baz=235
TSMG Majia 1.71 215 *e*P **Pb 04 42 49.7 -0.8**
baz=234
TSMG *e*S **Sg 04 43 13.3 -0.7**
baz=234
TSCK Chigu Township 1.78 238 *e*P **Pn 04 42 49.8 0.0**
baz=242
TSCK *e*S **Sb 04 43 14.8 +0.7**
baz=242
MASBT Mashibuluo 1.80 214 *e*P **Pn 04 42 50.7 +0.6**
baz=218
MASBT *e*S **Sg 04 43 16.3 -0.4**
baz=218
EAST Anshuo 1.90 205 *e*P **Pn 04 42 52.0 +0.5**
baz=202
SCZT Fangliau 2.00 210 *e*P **Pb 04 42 54.3 -1.2**
baz=201
PHUB P'eng-hu 2.05 254 *e*P **Pn 04 42 54.3 +0.7**
baz=257
PHUB *e*S **Sb 04 43 21.9 -0.1**
baz=257
PNG Penghu 2.05 255 *e*P **Pn 04 42 54.7 +1.1**
baz=259
SLIU Shizi 2.07 204 *e*P **Pn 04 42 52.5 -1.3**
baz=213
JKRS Kuro-shima 2.10 86 P **Pb 04 42 56.1 -1.0**
JKRS *e*S **Sb 04 43 23.1 -0.2**
LYUB Lan-yu 2.10 183 *e*P **Pn 04 42 51.5 -2.8**
baz=192
JIJ Ishigaki jima 2.23 83 P **Pn 04 42 55.8 -0.2**
JIJ *e*S **Sn 04 43 25.0 +1.3**
VWUC VWUC 2.24 293 *e*P **Pn 04 42 55.7 -0.5**
baz=292
VWUC *e*S **Sn 04 43 24.8 +0.8**
baz=292
VCHM Qimei 2.28 247 *e*P **Pn 04 42 57.6 +0.8**
baz=237
JISG Ishigakijimahi 2.41 78 P **Pn 04 42 58.3 -0.2**
JISG S **Sn 04 43 28.2 +0.1**
PTMZ Houxiangcun 2.54 292 *e*P **Pn 04 42 59.6 -0.7**
baz=291
PTMZ *e*S **Sn 04 43 31.0 -0.4**
baz=291
MATB Ma-tsu 2.59 322 *e*P **Pn 04 42 60.0 -1.0**
baz=318
LYJJ Jianjiangzhen 3.01 324 *e*P **Pn 04 43 06.5 -0.2**
baz=321
KNM Kinmen 3.01 276 *e*P **Pn 04 43 08.0 +1.2**
baz=278
KNMB Chin-men Tao 3.06 277 *e*P **Pn 04 43 05.6 -1.8**
baz=279
XPSS Dashiqiu 3.13 334 *e*P **Pn 04 43 06.5 -1.9**
baz=328
MHZQ Yeshan 3.14 310 *e*P **Pn 04 43 08.0 -0.6**
baz=307
AXDP Jialang 3.50 284 *e*P **Pn 04 43 13.2 -0.3**
baz=284
SXFK Yanhouchang 4.33 303 *e*P **Pn 04 43 24.2 -0.9**
baz=300

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*TAP **06** 04:42:26.6,24.˚10N×121.˚68E,h14km,ML3.7,C*
*IDC **06** 04:42:32.8±7.9,24.˚18N×121.˚50E,h124km±76km,mb3.1/6, mbtmp3.6/7,MS2.9/1,Error ellipse: s-maj=48.3km s-min=24.9km az=61.0*
ISC 06 04:42:23.1±1.0,24.˚07N±0.˚06×121.˚72E±0.˚07,h33km±4km, n19,σ1♀41/29,mb3.5/6,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TWD	**Chiawan**	**0.11**	**277**	P	**Pb**		**04 42 29.6**	**+0.7**
	baz=257							
TWD				*e*S	**Sb**		**04 42 31.6**	**-1.4**
	baz=257							
ETL	**Fush Village**	**0.13**	**317**	*i* P	**Pb**		**04 42 29.5**	**+0.4**
	baz=321							
ETL				S	**Sb**		**04 42 31.1**	**-2.1**
	baz=321							
HWA	**Hwalien**	**0.14**	**229**	P	**Pb**		**04 42 30.7**	**+1.6**
	baz=205							
NACB	**Ninganchiao**	**0.15**	**314**	*e*P	**Pb**		**04 42 29.7**	**+0.4**
	baz=316							
NACB				S	**Sb**		**04 42 32.0**	**-1.5**
	baz=316							
ETM	**Tongmen**	**0.23**	**244**	*e*P	**Pb**		**04 42 31.6**	**+1.6**
	baz=233							
ETM				*e*S	**Sb**		**04 42 35.7**	**+1.0**
	baz=233							
EHP	**Heping Village**	**0.24**	**5**	*e*P	**Pb**		**04 42 31.5**	**+1.3**
	baz=11							
ETLH	**Xiulin Townshi**	**0.26**	**303**	*e*P	**Pb**		**04 42 31.8**	**+1.4**
	baz=301							
ETLH				*e*S	**Sb**		**04 42 35.5**	**0.0**
	baz=301							
EAHA	**Aohua**	**0.26**	**5**	*e*P	**Pb**		**04 42 31.9**	**+1.4**
	baz=11							
EAHA				*e*S	**Sb**		**04 42 36.3**	**+0.9**
	baz=11							
LXIB	**Xiulin Townshi**	**0.28**	**261**	*e*P	**Pb**		**04 42 32.4**	**+1.6**
	baz=253							
LXIB				*e*S	**Sb**		**04 42 36.9**	**+0.9**
	baz=253							
ENA	**Nanau**	**0.36**	**4**	*e*P	**Pn**		**04 42 33.8**	**+1.6**
	baz=10.0							
ENA				*e*S	**Sb**		**04 42 38.9**	**+1.3**
	baz=10.0							
EWUT	**Wuta**	**0.38**	**9**	*e*P	**Pn**		**04 42 34.0**	**+1.6**
	baz=14							
EWUT				*e*S	**Sb**		**04 42 39.6**	**+1.6**
	baz=14							
NNSB	**Datong**	**0.47**	**320**	*e*P	**Pn**		**04 42 35.5**	**+1.7**
	baz=320							
NNSB				*e*S	**Sn**		**04 42 42.0**	**+1.0**
	baz=320							
KSRS	**Korea Array**	**14.37**	**20**	P	**P**		**04 45 49.7**	**-1.0**
	2.5nm,0.6s,baz=202,slow=12,SNR=7.7							
KSRS				LR	LR		04 52 33.1	
	comp=Z,42nm,18.6s,baz=30,slow=42							
SONM	**Songino Array**	**26.67**	**337**	P	**P**		**04 47 58.2**	**-0.9**
	0.8nm,0.8s,baz=151,slow=6.3,SNR=3.3							
	0.8nm,0.8s							
MKAR	**Makanchi Array**	**38.76**	**316**	P	**P**		**04 49 43.5**	**-1.0**
	0.6nm,0.6s,baz=100,slow=10,SNR=5.7							
	0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**40.61**	**327**	P	**P**		**04 49 58.0**	**-1.6**
	1.3nm,0.9s,baz=145,slow=11,SNR=3.5							
	1.3nm,0.9s							
WRA	**Warramunga Arr**	**45.44**	**163**	P	**P**		**04 50 40.5**	**+1.4**
	0.2nm,0.6s,baz=344,slow=8.7,SNR=1.4							
	0.2nm,0.6s							
BVAR	**Borovoye Array**	**48.07**	**321**	P	**P**		**04 50 57.8**	**-1.6**
	0.4nm,0.6s,baz=104,slow=6.1,SNR=2.3							
	0.4nm,0.6s							
YKA	**Yellowknife Ar**	**82.89**	**23**	P	**P**		**04 54 43.2**	**-1.0**
	0.2nm,0.6s,baz=316,slow=4.7,SNR=4.1							
	0.2nm,0.6s							

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*NEIC **06** 04:48:45.5±1.7,35.˚29S±0.˚05×74.˚19W±0.˚06,h10km±1km, mb5.0/151,Mwr4.5/31,Error ellipse: s-maj=9.4km s-min=5.8km az=222.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=7.44; Mθθ3.97; Mϕϕ3.47; Mrθ2.64; Mθϕ2.56; Mϕr3.14; Fault plane solution: M₀8.06000×10¹⁵ NP1:ϕs224.16000°,δ60.42000°, λ-93.05000°. NP2:ϕs50.32000°,δ29.72000°,λ-84.65000°. Principal axes: T 7.4083, Plg15.0000°, Azm316.0000°; N 1.1777, Plg3.0000°, Azm226.0000°; P -8.5860, Plg74.0000°, Azm126.0000°:*
*MOS **06** 04:48:45.0±1.1,35.˚21S×74.˚02W,h10km,mb5.1/20 Error ellipse: s-maj=13.4km s-min=7.9km az=89.8*
*IDC **06** 04:48:45.2±0.5,35.˚26S×74.˚09W,h0km,mb4.7/11, mbtmp4.7/15,ML4.6/4,MS3.8/29,Error ellipse: s-maj=22.6km s-min=14.4km az=76.0*
*VAO **06** 04:48:46.9±0.5,35.˚31S×74.˚22W,h10km,mb4.7*
*NEIC **06** 04:48:46,35.˚29S×74.˚15W,h10km*
*GCMT **06** 04:48:49.5±0.3,35.˚37S±0.˚03×74.˚30W±0.˚04,h19km±1km, MW4.8/83,Moment Tensor Solution. s21,c22; s83,c108; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.49±. 16; Mθθ1.10±.09; Mϕϕ1.40±.10; Mrθ0.21±.22; Mθϕ0.77±.05; Mϕr0.06±.21; Best double couple: M₀2.27400×10¹⁶ NP1:ϕs222.00000°,δ47.00000°,λ-87.00000°. NP2:*

ϕs37.00000°,δ43.00000°,λ-94.00000°. Principal axes: T 2.0450, Plg2.0000°, Azm310.0000°; N 0.4680, Plg2.0000°, Azm40.0000°; P -2.5030, Plg87.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
*GUC **06** 04:48:49.1±0.6,35.˚13S×73.˚93W,h28km±3km,ML4.4*
ISC 06 04:48:46.3±0.8,35.˚29S±0.˚03×74.˚20W±0.˚05,h13km±4km, n372,σ1♀60/329,mb5.0/100,MS3.9/26,8C-6D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BI05	**Punta Hualpn**	**1.67**	**151**	Pn	**Pn**		**04 49 13.4**	**-1.8**
BI05	**Punta Hualpn**	**1.67**	**151**	*e*P	**Pn**		**04 49 13.0**	**-2.2**
BI05				*e*S	**Sn**		**04 49 31.0**	**-5.4**
BI05				IAML			04 49 33.7	
	comp=N,6μm,0.3s							
GO05	**Huala**	**1.88**	**82**		**Pn**		**04 49 17.2**	**-1.0**
GO05	**Huala**	**1.88**	**82**	*e*P	**Pn**		**04 49 16.9**	**-1.2**
GO05				*e*S	**Sn**		**04 49 38.8**	**-3.0**
GO05				IAML			04 49 39.9	
	comp=N,8μm,0.3s							
BO03	**Pichilemu**	**2.01**	**67**	*e*P	**Pn**		**04 49 18.6**	**-1.2**
BO03				*e*S	**Sn**		**04 49 42.0**	**-2.8**
BO03				IAML			04 49 44.0	
	comp=E,6μm,0.6s							
ML02	**Panimavida**	**2.32**	**102**		**Pn**		**04 49 23.4**	**-0.7**
ML02				Sn	**Sn**		**04 49 50.6**	**-1.9**
ML02	**Panimavida**	**2.32**	**102⇓**	*e*P	**Pn**		**04 49 24.2**	**+0.1**
ML02				*e*S	**Sn**		**04 49 49.1**	**-3.4**
VA05	**Santo Domingo**	**2.69**	**53**	Pn	**Pn**		**04 49 27.6**	**-1.6**
VA05	**Santo Domingo**	**2.69**	**53**	*e*P	**Pn**		**04 49 27.8**	**-1.4**
VA05				*e*S	**Sn**		**04 49 56.4**	**-5.2**
VA05				IAML			04 50 01.3	
	comp=N,3μm,0.4s							
BO01	**Tunca**	**2.72**	**72**		**Pn**		**04 49 28.9**	**-0.7**
BO01	**Tunca**	**2.72**	**72**	*e*P	**Pn**		**04 49 28.9**	**-0.7**
BO01				*e*S	**Sn**		**04 49 59.1**	**-3.3**
BO01				IAML			04 50 02.3	
	comp=N,1μm,0.3s							
MT01	**Popeta**	**2.82**	**60**		**Pn**		**04 49 29.4**	**-1.6**
MT01	**Popeta**	**2.82**	**60**	*e*P	**Pn**		**04 49 29.3**	**-1.7**
MT01				*e*S	**Sn**		**04 50 01.2**	**-3.7**
MT01				IAML			04 50 03.9	
	comp=N,889nm,0.1s							
BO02	**Sierra Bellavi**	**2.85**	**81**		**Pn**		**04 49 31.2**	**-0.3**
BO02	**Sierra Bellavi**	**2.85**	**81⇓**	*e*P	**Pn**		**04 49 31.3**	**-0.2**
BO02				*e*S	**Sn**		**04 50 04.3**	**-1.5**
MT09	**Talagante**	**3.05**	**61**		**Pn**		**04 49 32.8**	**-1.5**
MT09	**Talagante**	**3.05**	**61⇓**	*e*P	**Pn**		**04 49 33.2**	**-1.2**
MT09				*e*S	**Sn**		**04 50 07.7**	**-3.1**
MT09				IAML			04 50 13.4	
	comp=N,2μm,0.2s							
VA01	**Torpederas**	**3.10**	**44**	Pn	**Pn**		**04 49 32.7**	**-2.1**
VA01	**Torpederas**	**3.10**	**44**	*e*P	**Pn**		**04 49 33.5**	**-1.4**
VA01				*e*S	**Sn**		**04 50 08.7**	**-3.1**
VA01				IAML			04 50 10.6	
	comp=E,708nm,0.1s							
BI04	**Isla Mocha**	**3.12**	**175**	*e*P	**Pn**		**04 49 32.8**	**-2.4**
BO04	**La Punta**	**3.23**	**67**		**Pn**		**04 49 36.2**	**-0.6**
BO04	**La Punta**	**3.23**	**67**	*e*P	**Pn**		**04 49 36.7**	**-0.1**
BO04				*e*S	**Sn**		**04 50 14.4**	**-0.8**
MT02	**Curacav**	**3.25**	**52**		**Pn**		**04 49 35.3**	**-1.7**
MT02	**Curacav**	**3.25**	**52**	*e*P	**Pn**		**04 49 35.5**	**-1.5**
MT02				*e*S	**Sn**		**04 50 11.9**	**-3.6**
MT02				IAML			04 50 15.1	
	comp=E,530nm,0.6s							
MT12	**Pirque**	**3.39**	**64**	*e*P	**Pn**		**04 49 38.2**	**-0.7**
MT12				*e*S	**Sn**		**04 50 14.7**	**-4.4**
MT05	**Renca**	**3.44**	**57**		**Pn**		**04 49 38.6**	**-1.0**
MT05	**Renca**	**3.44**	**57**	*e*P	**Pn**		**04 49 38.6**	**-1.0**
MT05				*e*S	**Sn**		**04 50 16.6**	**-3.6**
MT05				IAML			04 50 20.0	
	comp=N,2μm,0.4s							
MT15	**Las Vizcachas**	**3.49**	**62**	*e*P	**Pn**		**04 49 40.4**	**+0.1**
MT15				*e*S	**Sn**		**04 50 19.5**	**-2.0**
ROCH	**El Roble**	**3.52**	**50⇓**	*e*P	**Pn**		**04 49 39.9**	**-0.9**
ROCH				⇓*e*P	**Pn**		**04 49 39.9**	**-0.9**
ROCH				*i* S	**Sn**		**04 50 18.1**	**-4.3**
ROCH				*e*S	**Sn**		**04 50 19.2**	**-3.2**
ROCH				IAML			04 50 31.0	
	comp=N,432nm,0.6s							
ROCH				IAML			04 50 31.1	
	comp=N,1μm,0.8s							
MT03	**Universidad Ad**	**3.54**	**61**		**Pn**		**04 49 40.2**	**-0.8**
MT03	**Universidad Ad**	**3.54**	**61**	*e*P	**Pn**		**04 49 40.3**	**-0.8**
MT03				*e*S	**Sn**		**04 50 21.0**	**-1.8**
MT03				IAML			04 50 26.4	
	comp=N,1μm,0.2s							
LC02	**Puerto Saavedr**	**3.55**	**170**	Pn	**Pn**		**04 49 39.3**	**-1.8**
LC02	**Puerto Saavedr**	**3.55**	**170**	*e*P	**Pn**		**04 49 39.0**	**-2.0**
LC02				*e*S	**Sn**		**04 50 16.6**	**-6.3**
MT16	**CCHEN**	**3.57**	**60**		**Pn**		**04 49 40.6**	**-0.7**
MT16	**CCHEN**	**3.57**	**60⇓**	*e*P	**Pn**		**04 49 41.0**	**-0.3**
MT16				*e*S	**Sn**		**04 50 19.4**	**-4.0**
MT16				IAML			04 50 30.6	
	comp=E,490nm,0.6s							
MT14	**Cerro Cal¡n**	**3.58**	**59**	*e*P	**Pn**		**04 49 41.2**	**-0.3**
MT14				*e*S	**Sn**		**04 50 21.3**	**-2.3**
MT14				IAML			04 50 28.1	
	comp=E,1μm,0.7s							
MT13	**San Alfonso**	**3.58**	**66**		**Pn**		**04 49 41.1**	**-0.5**
MT13	**San Alfonso**	**3.58**	**66**	*e*P	**Pn**		**04 49 41.5**	**-0.1**
MT13				*e*S	**Sn**		**04 50 22.4**	**-1.5**
LMEL	**Las Melosas**	**3.60**	**68**		**Pn**		**04 49 41.8**	**-0.2**
LMEL	**Las Melosas**	**3.60**	**68**	*e*P	**Pn**		**04 49 42.5**	**+0.6**
LMEL				*e*S	**Sn**		**04 50 23.6**	**-0.8**
LMEL				IAML			04 50 27.9	
	comp=N,1μm,0.1s							
PEL	**Peldehue**	**3.62**	**55**		**Pn**		**04 49 41.9**	**-0.2**
PEL	**Peldehue**	**3.62**	**55**	P	**Pn**		**04 49 41.9**	**-0.2**
PEL	**Peldehue**	**3.62**	**55**	*e*P	**Pn**		**04 49 41.9**	**-0.2**
PEL				*e*S	**Sn**		**04 50 22.4**	**-2.2**
VA06	**Catapilco**	**3.64**	**42**		**Pn**		**04 49 40.4**	**-2.0**
VA06	**Catapilco**	**3.64**	**42**	*e*P	**Pn**		**04 49 40.9**	**-1.4**
VA06				*e*S	**Sn**		**04 50 21.0**	**-4.2**
MT10	**Hacienda Santa**	**3.64**	**57**	*e*P	**Pn**		**04 49 42.0**	**-0.5**
MT10				*e*S	**Sn**		**04 50 23.7**	**-1.7**
FCH	**Farellones**	**3.79**	**60**	*e*P	**Pn**		**04 49 44.0**	**-0.6**
FCH				*e*S	**Sn**		**04 50 27.4**	**-1.7**
FCH				IAML			04 50 30.5	
	comp=N,884nm,0.3s							
MT04	**Ro Olivares**	**3.85**	**62**	*e*P	**Pn**		**04 49 45.5**	**0.0**
MT04				*e*S	**Sn**		**04 50 28.7**	**-2.1**
VA03	**San Esteban**	**3.94**	**51**		**Pn**		**04 49 45.7**	**-0.9**
VA03	**San Esteban**	**3.94**	**51**	*e*P	**Pn**		**04 49 46.4**	**-0.2**
VA03				*e*S	**Sn**		**04 50 30.9**	**-1.9**
H03S1	**Juan Fernandez**	**4.14**	**289**	T	T		04 54 01.1	
	baz=123,slow=79,SNR=38							
H03S3	**Juan Fernandez**	**4.15**	**289**	T	T		04 54 04.8	
	baz=123,slow=79,SNR=26							
H03S2	**Juan Fernandez**	**4.16**	**289**	T	T		04 54 01.1	
	baz=123,slow=79,SNR=32							
VA04	**Juan Fernndez**	**4.16**	**292**		**Pn**		**04 49 47.3**	**-2.2**
VA04	**Juan Fernndez**	**4.16**	**292**	*e*P	**Pn**		**04 49 47.0**	**-2.4**
LR03	**Panguipulli**	**4.58**	**162**		**Pn**		**04 49 54.8**	**-0.3**
LR03	**Panguipulli**	**4.58**	**162**	*e*P	**Pn**		**04 49 54.5**	**-0.6**
LR03				*e*S	**Sn**		**04 50 43.1**	**-5.1**
LR04	**Corral**	**4.62**	**173**		**Pn**		**04 49 53.9**	**-1.9**
LR04	**Corral**	**4.62**	**173**	*e*P	**Pn**		**04 49 53.7**	**-2.0**
GO06	**Curarrehue**	**4.80**	**154**	Pn	**Pn**		**04 49 57.5**	**-0.8**
GO06	**Curarrehue**	**4.80**	**154**	*e*P	**Pn**		**04 49 58.7**	**+0.4**
CO02	**Combarbal**	**4.88**	**34**		**Pn**		**04 49 58.3**	**-1.2**
CO02	**Combarbal**	**4.88**	**34**	*e*P	**Pn**		**04 49 58.5**	**-1.0**
CO02				*e*S	**Sn**		**04 50 51.8**	**-4.1**
CO06	**Fray Jorge**	**5.09**	**26**		**Pn**		**04 50 00.2**	**-2.0**
CO06	**Fray Jorge**	**5.09**	**26**	*e*P	**Pn**		**04 50 00.0**	**-2.2**
LR05	**Currie**	**5.23**	**161**	Pn	**Pn**		**04 50 03.2**	**-0.8**
LR05	**Currie**	**5.23**	**161**	*e*P	**Pn**		**04 50 04.2**	**+0.1**
CO03	**El Pedregal**	**5.33**	**35**	Pn	**Pn**		**04 50 05.2**	**-0.5**
CO03	**El Pedregal**	**5.33**	**35**	*e*P	**Pn**		**04 50 05.2**	**-0.5**
GO04	**Tololo Observa**	**5.86**	**30**		**Pn**		**04 50 11.2**	**-1.8**
CO05	**La Serena**	**5.91**	**26**		**Pn**		**04 50 12.4**	**-1.2**
LL05	**Los Muermos**	**6.13**	**175**		**Pn**		**04 50 14.9**	**-1.5**
PLCA	**Paso Flores**	**6.15**	**153**	Pn	**Pn**		**04 50 16.9**	**0.0**
PLCA	**Paso Flores**	**6.15**	**153**	*e*P	**Pn**		**04 50 17.1**	**+0.3**
PLCA				pmax	pmax			
	comp=Z,5.0nm,0.3s							
PLCA	**Paso Flores**	**6.15**	**153**	Pn	**Pn**		**04 50 16.7**	**-0.1**
	comp=Z,4.6nm,0.3s,baz=324,slow=11,SNR=68							
PLCA				Sn	**Sn**		**04 51 28.9**	**+1.9**
	comp=Z,2.2nm,0.3s,baz=196,slow=23,SNR=1.2							
PLCA				LR	LR		04 52 39.9	
	comp=Z,2μm,20.3s,baz=331,slow=38							
	comp=Z,14nm,0.4s							
PLCA	**Paso Flores**	**6.15**	**153**	*e*P	**Pn**		**04 50 17.4**	**+0.6**
CO01	**Juntas del Tor**	**6.33**	**34**		**Pn**		**04 50 19.0**	**-0.5**
LL06	**Loncomilla**	**6.93**	**176**	Pn	**Pn**		**04 50 25.9**	**-1.5**
LCO	**Las Campanas**	**6.93**	**26**	Pn	**Pn**		**04 50 26.2**	**-1.6**
LCO	**Las Campanas**	**6.93**	**26**	P	**Pn**		**04 50 26.2**	**-1.6**
LL01	**San Ignacio de**	**7.21**	**169**		**Pn**		**04 50 30.7**	**-0.6**
AC05	**El Transito**	**7.25**	**28**	Pn	**Pn**		**04 50 31.6**	**-0.5**
GO07	**Milladeo Hill,**	**7.82**	**177**		**Pn**		**04 50 39.0**	**-0.7**
GO03	**Copiap**	**8.39**	**25**		**Pn**		**04 50 47.3**	**-0.3**
AY01	**Puyuhuapi**	**9.19**	**173**		**Pn**		**04 50 58.8**	**+0.3**
TRQA	**Tornquist**	**10.20**	**109**	Pn	**Pn**		**04 51 12.8**	**+0.5**
TRQA	**Tornquist**	**10.20**	**109**	P	**Pn**		**04 51 12.8**	**+0.5**
COYC	**Coyhaique**	**10.39**	**172**	Pn	**Pn**		**04 51 15.7**	**+0.8**
AY03	**Cochrane**	**12.01**	**175**		**Pn**		**04 51 37.6**	**+0.6**
PB05	**IPOC Station P**	**12.88**	**17**		**Pn**		**04 51 49.1**	**-0.1**
GO08	**Villa O'Higgin**	**13.22**	**175**		**Pn**		**04 51 53.9**	**+0.3**
LVC	**Limon Verde**	**13.46**	**21**	Pn	**Pn**		**04 51 56.5**	**-0.8**
LVC	**Limon Verde**	**13.46**	**21**	Pn	**Pn**		**04 51 57.0**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=65,slow=15,SNR=8.0							
LVC				Sn	**Sn**		**04 54 26.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=357,slow=22,SNR=1.6							
LVC				LR	LR		04 56 50.5	
	comp=Z,109nm,20.2s,baz=216,slow=36							
	comp=Z,7.9nm,0.6s							
LVC	**Limon Verde**	**13.46**	**21**	*e*P	**Pn**		**04 51 57.4**	**+0.2**
VACA	**Villa Angela C**	**13.81**	**60**	*e*P	**Pn**		**04 52 03.0**	**+1.3**
PB09	**IPOC Station P**	**14.13**	**19**	Pn	**Pn**		**04 52 05.7**	**-0.6**
PB01	**IPOC Station P**	**14.79**	**18**	Pn	**Pn**		**04 52 14.9**	**-0.3**
TICA	**Tres Isletas**	**14.81**	**57**	*e*P	**Pn**		**04 52 16.6**	**+1.2**
TBOT	**Tacuaremb**	**15.66**	**82**	*e*P	**P**		**04 52 28.8**	**-1.9**
PB08	**IPOC Station P**	**15.74**	**18**	Pn	**Pn**		**04 52 27.4**	**-0.6**
ITQB	**Itaqui**	**15.85**	**74**	Pn	**Pn**		**04 52 27.8**	**-1.3**
ITQB	**Itaqui**	**15.85**	**74**	*e*P	**Pn**		**04 52 29.9**	**+0.8**
PB11	**IPOC Station P**	**15.99**	**16**	Pn	**Pn**		**04 52 29.6**	**-1.5**
GO09	**Cerro Castillo**	**16.03**	**176**	Pn	**Pn**		**04 52 30.3**	**-1.0**
GO01	**Chusmiza**	**16.18**	**17**	Pn	**Pn**		**04 52 31.9**	**-1.9**
CPUP	**Villa Florida**	**17.01**	**63**	P	**Pn**		**04 52 42.5**	**-1.4**
CPUP	**Villa Florida**	**17.01**	**63**	P	**Pn**		**04 52 42.5**	**-1.4**
CPUP				pmax	pmax			
	comp=Z,14nm,1.2s							
CPUP	**Villa Florida**	**17.01**	**63**	Pn	**Pn**		**04 52 43.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=235,slow=11,SNR=12							
CPUP				LR	LR		04 59 17.9	
	comp=Z,100nm,21.2s,baz=237,slow=37							
	comp=Z,4.3nm,0.8s							
CPUP	**Villa Florida**	**17.01**	**63**	*e*P	**P**		**04 52 45.8**	**+0.1**
ESFA	**Espinillo Form**	**17.03**	**57**	*e*P	**P**		**04 52 46.6**	**+0.6**
UNIS	**Unistalda (Bra**	**17.33**	**74**	*e*P	**P**		**04 52 49.2**	**-0.1**
PB16	**IPOC Station P**	**17.40**	**15**	P	**Pn**		**04 52 49.0**	**-0.3**
CPSB	**Cacapava Do Su**	**18.11**	**80**	*e*P	**P**		**04 52 58.4**	**+0.6**
CRSM	**Crissiumal (Br**	**18.86**	**71**	*e*P	**Pn**		**04 53 08.1**	**+1.4**
ALGR	**Alto Alegre (B**	**19.07**	**76**	*e*P	**Pn**		**04 53 09.9**	**+0.6**
LPAZ	**La Paz**	**19.69**	**18**	P	**P**		**04 53 15.4**	**-0.5**
LPAZ	**La Paz**	**19.69**	**18**	P	**P**		**04 53 15.4**	**-0.5**
USHA	**Ushuaia**	**19.95**	**170**	P	**Pn**		**04 53 18.5**	**-0.9**
	comp=Z,6.9nm,0.3s,baz=3.2,slow=3.5,SNR=5.8							
	comp=Z,35nm,0.4s							
EFI	**East Falkland**	**20.05**	**150**	P	**P**		**04 53 18.9**	**-0.1**
EFI				IAmb	IAmb		04 53 21.2	
	comp=Z,83nm,0.8s							
EFI	**East Falkland**	**20.05**	**150**	*i* P	Pn		04 53 19.7	-1.1
EFI				pmax	pmax			
	comp=Z,59nm,0.9s							
FRBT	**Francisco Belt**	**20.39**	**69**	*e*P	Pn		04 53 24.3	-0.7
ITAB	**Concordia**	**20.48**	**73**	P	**P**		**04 53 22.4**	**-1.4**
ITAB				IAmb	IAmb		04 53 26.2	
	comp=Z,66nm,0.9s							
ITAB	**Concordia**	**20.48**	**73**	*e*P	Pn		04 53 25.1	-0.9
MCR1	**Marechal Candi**	**20.51**	**64**	*e*P	Pn		04 53 26.1	-0.3
CNLB	**Canela**	**20.60**	**80**	*e*P	Pn		04 53 25.9	-1.5
ANTJ	**Antonio Joao (**	**20.70**	**55**	*e*P	Pn		04 53 27.8	-0.9
BBRB	**Robore, Bolivi**	**21.22**	**41**	*e*P	**P**		**04 53 33.1**	**+1.2**
BDQN	**Bodoquena, MS**	**21.32**	**51**	*e*P	**P**		**04 53 33.7**	**+0.7**
BBSD	**Serra de San D**	**21.72**	**37**	*e*P	**P**		**04 53 38.0**	**+0.7**
PTGB	**Pitanga**	**21.83**	**67**	*e*P	**P**		**04 53 40.7**	**+2.2**
AQDB	**Aquidauana**	**21.98**	**53**	P	**P**		**04 53 38.4**	**-1.6**
AQDB	**Aquidauana**	**21.98**	**53**	*e*P	**P**		**04 53 40.7**	**+0.7**
SIV	**San Ignacio**	**22.53**	**35**	LR	LR		05 03 48.0	
	comp=Z,90nm,18.4s,baz=290,slow=40							
LDASE	**Londrina, Braz**	**23.30**	**66**	*e*P	**P**		**04 53 53.0**	**-1.0**
RPRD	**Ribas do Rio P**	**23.30**	**56**	*e*P	**P**		**04 53 54.3**	**+0.4**
NNA	**Nana**	**23.33**	**353**	P	**P**		**04 53 53.6**	**-0.6**
NNA	**Nana**	**23.33**	**353**	*i* P	**P**		**04 53 55.0**	**+0.8**
NNA				pmax	pmax			
	comp=Z,18nm,0.9s							
NNA	**Nana**	**23.33**	**353**	LR	LR		05 00 36.8	
	comp=Z,280nm,21.1s,baz=191,slow=30							
RVDE	**Rio Verde (Bra**	**23.52**	**51**	*e*P	**P**		**04 53 56.9**	**+0.8**
PTLB	**Pont

PCRV **Puerto La Cruz** 46.12 13 LR LR 05 15 56.6
comp=Z,127nm,20.8s,slow=35
JTS **Las Juntas de** 46.46 345 *i* P P **04 57 14.0 +0.9**
JTS **Las Juntas de** 46.46 345 LR LR 05 12 26.9
comp=Z,67nm,18.1s,baz=162,slow=31
VNA3 **Neumayer Olymp** 48.85 157 ⇑P P **04 57 32.1 +1.0**
comp=Z,14nm,0.8s
VNA2 **Neumayer--Watz** 49.52 157 ⇑P P **04 57 37.2 +1.0**
comp=Z,13nm,0.8s,baz=304,slow=9.6
SNAA **Sanae** 51.07 157 P P **04 57 48.1 +0.1**
SNAA IAmb IAmb 04 57 49.9
comp=Z,25nm,1.0s
SNAA **Sanae** 51.07 157 *e*P P **04 57 48.4 +0.5**
SNAA **Sanae** 51.07 157 ⇑P P **04 57 48.9 +0.9**
comp=Z,381nm,1.0s
SNAA **Sanae** 51.07 157 *i* P P **04 57 49.1 +1.1**
SNAA pmax pmax
comp=Z,25nm,1.1s
SNAA **Sanae** 51.07 157 P P **04 57 48.8 +0.9**
comp=Z,16nm,0.9s,baz=266,slow=6.5,SNR=16
SNAA LR LR 05 18 32.4
comp=Z,69nm,18.5s,baz=356,slow=35
comp=Z,16nm,0.9s
TROLL **Troll, Antarti** 52.77 158 ⇑P P **04 58 01.8 +1.1**
comp=Z,752nm,0.8s
SJG **San Juan** 53.66 10 LR LR 05 21 06.7
comp=Z,53nm,19.8s,baz=95,slow=36
QSPA **South Pole Qui** 54.94 180 P P **04 58 17.1 +0.4**
CMIG **Matias Romero** 55.67 336 LR LR 05 16 23.9
comp=Z,63nm,21.2s,baz=158,slow=30
TEIG **Tepich** 56.81 344 LR LR 05 17 48.0
comp=Z,286nm,18.8s,baz=344,slow=31
VNDA **Vanda** 62.48 192 P P **04 59 10.8 +2.0**
comp=Z,3.2nm,0.9s,baz=92,slow=13,SNR=2.0
comp=Z,3.2nm,0.9s
LPIG **La Paz** 68.26 325 LR LR 05 22 29.0
comp=Z,152nm,22.0s,baz=184,slow=30
PPT2 **Papeete2** 68.30 263 *e*S S **05 08 50.7 +2.4**
comp=Z,71nm,25.2s
PPT2 **Papeete2** 68.30 263 *e*LR LR 05 20 23.1
PPT2 *e*LR LR 05 20 23.3
comp=Z,160nm,26.8s
HNDO **Hondo** 68.67 337 P P **04 59 48.7 -0.6**
HNDO IAmb IAmb 04 59 54.2
comp=Z,17nm,1.2s
LRAL **Lakeview Retre** 69.02 349 P P **04 59 50.8 -0.6**
LRAL IAmb IAmb 05 00 01.1
comp=Z,12nm,1.3s
Z47A **Carrollton** 69.36 348 P P **04 59 53.8 +0.4**
143A **Socs Landing,** 69.54 345 P P **04 59 54.5 -0.1**
JCT **Junction City** 69.72 337 P P **04 59 55.6 -0.2**
JCT IAmb IAmb 05 00 00.4
comp=Z,22nm,1.2s
JCT **Junction City** 69.72 337 P P **04 59 55.6 -0.2**
JCT pmax pmax
comp=Z,22nm,1.3s
SAND **Sanderson** 70.03 334 P P **04 59 56.8 -0.9**
SAND IAmb IAmb 05 00 02.5
comp=Z,16nm,1.1s
TX31 **Lajitas Ar. Si** 70.03 333 P P **04 59 57.3 -0.5**
TX31 IAmb IAmb 05 00 02.7
comp=Z,15nm,1.4s
TXAR **Lajitas Array** 70.03 333 P P **04 59 58.2 +0.4**
TXAR **Lajitas Array** 70.03 333 P P **04 59 59.5 +1.7**
comp=Z,2.5nm,0.7s,baz=160,slow=8.3,SNR=40
TXAR LR LR 05 25 35.7
comp=Z,82nm,19.3s,baz=136,slow=32
comp=Z,2.5nm,0.7s
X51A **Calhoun** 70.21 351 P P **04 59 57.0 -1.7**
BRDY **Brady** 70.21 338 P P **04 59 58.6 -0.2**
BG3 **Lake Jocassee** 70.40 352 P P **04 59 58.8 -1.1**
BG3 IAmb IAmb 05 00 03.9
comp=Z,11nm,0.9s
WHTX **Lake Whitney,** 70.41 339 IAmb IAmb 05 00 04.4
comp=Z,20nm,1.1s
OZNA **Ozona** 70.57 336 IAmb IAmb 05 00 05.5
comp=Z,16nm,1.2s
ALPN **Alpine** 70.96 333 IAmb IAmb 05 00 08.4
comp=Z,11nm,1.4s
SWET **Sewanee** 71.00 350 IAmb IAmb 05 00 07.7
comp=Z,19nm,1.0s
CPCT **Cooper Cave** 71.04 351 IAmb IAmb 05 00 07.6
comp=Z,7.6nm,0.7s
PLAL **Pickwick Lake** 71.11 348 IAmb IAmb 05 00 07.8
comp=Z,10nm,0.9s
MNHN **Monahans** 71.51 334 IAmb IAmb 05 00 11.2
comp=Z,21nm,1.4s
U54A **Nelsons Funny** 71.80 354 IAmb IAmb 05 00 11.9
comp=Z,12nm,0.8s
VHRN **Van Horn** 71.83 332 P P **05 00 07.3 -1.5**
CLTN **Cedars of Leba** 71.92 350 IAmb IAmb 05 00 13.1
comp=Z,18nm,0.9s
WVT **Waverly** 72.19 348 P P **05 00 11.3 +0.7**
WVT **Waverly** 72.19 348 P P **05 00 11.3 +0.7**
WVT pmax pmax
comp=Z,29nm,1.1s
U49A **Red Boiling Sp** 72.25 350 IAmb IAmb 05 00 28.9
comp=Z,14nm,1.4s
WTFS **Witchita Falls** 72.36 339 P P **05 00 12.1 +0.4**
WTFS IAmb IAmb 05 00 15.9
comp=Z,25nm,1.3s
MAW **Mawson** 72.44 164 P P **05 00 12.9 +1.1**
comp=Z,12nm,0.8s,baz=239,slow=8.0,SNR=6.7
MAW LR LR 05 31 48.6
comp=Z,95nm,18.0s,baz=230,slow=36
comp=Z,12nm,0.8s
APMT **Aspermont** 72.45 337 IAmb IAmb 05 00 16.6
comp=Z,18nm,1.1s
LCAR **Lake Charles** 72.73 346 IAmb IAmb 05 00 17.5
comp=Z,15nm,0.7s
FCAR **Ozark Folk Cen** 72.76 345 IAmb IAmb 05 00 17.7
comp=Z,7.5nm,0.7s
T47A **Sharon Grove** 72.91 349 IAmb IAmb 05 00 18.5
comp=Z,11nm,1.0s
S51A **Beattyville** 73.09 352 IAmb IAmb 05 00 19.6
comp=Z,9.8nm,0.7s
PBMO **Poplar Bluff** 73.28 346 IAmb IAmb 05 00 20.8
comp=Z,13nm,0.8s
TUL3 **Leonard** 73.64 342 IAmb IAmb 05 00 23.2
comp=Z,14nm,0.8s
DEOK **Depew** 73.76 341 P P **05 00 19.9 0.0**
BBTS **Babate** 73.81 58 LR LR 05 31 25.9
comp=Z,65nm,19.6s,baz=221,slow=35
MSTX **Muleshoe** 73.91 336 IAmb IAmb 05 00 25.2
comp=Z,11nm,1.0s
SIUC **Southern Illin** 73.97 348 IAmb IAmb 05 00 24.7
comp=Z,11nm,0.8s
MGMO **Mountain Grove** 74.01 345 IAmb IAmb 05 00 25.4
comp=Z,17nm,1.2s
SMWD **Samnorwood** 74.14 338 IAmb IAmb 05 00 26.6
comp=Z,24nm,1.3s
CER **Ceres** 74.15 120 *e*P P **05 00 22.7 0.0**
CER IAmb IAmb 05 00 24.9
comp=Z,27nm,1.0s
Q52A **Bidwell** 74.26 353 IAmb IAmb 05 00 23.7
comp=Z,22nm,1.1s
OK048 **Pawnee Station** 74.42 341 IAmb IAmb 05 00 28.0
comp=Z,18nm,0.9s
FVM **French Village** 74.45 347 IAmb IAmb 05 00 28.6
comp=Z,22nm,1.3s
CCM **Cathedral Cave** 74.67 346 P P **05 00 25.9 +0.7**
CCM **Cathedral Cave** 74.67 346 P P **05 00 25.9 +0.7**
CCM pmax pmax
comp=Z,24nm,0.8s
P51A **Williamsport** 74.85 353 IAmb IAmb 05 00 29.7
comp=Z,16nm,0.8s
P52A **Corning** 74.92 354 IAmb IAmb 05 00 30.2
comp=Z,12nm,0.8s
U32A **Winter Ranch,** 74.95 339 IAmb IAmb 05 00 31.4
comp=Z,24nm,1.1s
R40A **Maddies Statio** 75.11 345 IAmb IAmb 05 00 31.4
comp=Z,11nm,0.9s
MATJ **Matjiesfontein** 75.12 120 *e*P P **05 00 29.1 +0.8**
MATJ IAmb IAmb 05 00 37.2
comp=Z,954nm,3.3s
CVNA **Calvinia** 75.49 118 *e*P P **05 00 30.4 -0.1**
CVNA IAmb IAmb 05 00 40.2
comp=Z,237nm,2.8s
TUC **Tucson** 75.51 329 P P **05 00 31.9 +1.6**
TUC **Tucson** 75.51 329 P P **05 00 31.9 +1.6**
TUC pmax pmax
comp=Z,8.0nm,1.2s
SUR **Sutherland** 75.75 120 *e*P P 05 00 24.3 -7.9
SUR **Sutherland** 75.75 120 LR LR 05 28 50.7
comp=Z,86nm,19.7s,baz=226,slow=32
PIX **Pinacate** 76.05 326 P P **05 00 32.7 -0.5**

ANMO **Albuquerque** 76.09 333 P P **05 00 33.8 +0.1**
ANMO IAmb IAmb 05 00 39.0
comp=Z,11nm,1.1s
ANMO **Albuquerque** 76.09 333 *i* P P **05 00 35.1 +1.4**
ANMO pmax pmax
comp=Z,12nm,1.2s
ANMO **Albuquerque** 76.09 333 LR LR 05 29 30.8
comp=Z,72nm,18.7s,baz=235,slow=32
N51A **Ashland** 76.21 354 IAmb IAmb 05 00 37.5
comp=Z,15nm,0.8s
FRAZ **Fraserburg** 76.42 119 *e*P P **05 00 36.9 +1.0**
FRAZ IAmb IAmb 05 00 38.3
comp=Z,20nm,0.9s
GRAN **Grantham** 76.76 120 *e*P P **05 00 37.9 +0.2**
GRAN IAmb IAmb 05 00 39.8
comp=Z,7.6nm,0.8s
LIC **Lamto** 76.87 73⇓*e*P P **05 00 39.0 +0.6**
comp=Z,43nm,0.9s
TIC **Toumodi** 77.13 72⇓*e*P P **05 00 40.8 +0.9**
comp=Z,23nm,0.9s
N41A **Harden Midland** 77.17 347 IAmb IAmb 05 00 42.8
comp=Z,18nm,0.9s
KIC **Kosan Boka** 77.18 73⇓*e*P P **05 00 40.9 +0.8**
comp=Z,39nm,0.7s
113A **Mohawk Valley,** 77.20 327 P P **05 00 38.9 -0.9**
DBIC **Dimbokro** 77.28 72 P P **05 00 40.1 -0.6**
DBIC **Dimbokro** 77.28 72 P P **05 00 40.1 -0.6**
DBIC pmax pmax
comp=Z,20nm,0.9s
DBIC **Dimbokro** 77.28 72 P P **05 00 41.9 +1.3**
comp=Z,15nm,0.7s,baz=221,slow=5.4,SNR=16
comp=Z,15nm,0.7s
AUGR **Augrabies** 77.47 116 *e*P P **05 00 42.5 +0.8**
L42A **Oliver, Polo** 78.22 348 IAmb IAmb 05 00 48.7
comp=Z,13nm,0.8s
UPI **Upington** 78.27 116 *e*P P **05 00 47.2 +1.0**
UPI IAmb IAmb 05 00 47.4
comp=Z,40nm,0.8s
WUAZ **Wupatki** 78.52 330 P P **05 00 46.5 -0.8**
WUAZ IAmb IAmb 05 00 52.9
comp=Z,11nm,1.1s
L40A **Anamosa** 78.55 347 IAmb IAmb 05 00 50.5
comp=Z,22nm,1.1s
MVCO **Mesa Verde** 78.86 333 IAmb IAmb 05 00 54.9
comp=Z,20nm,1.4s
PFO **Pinyon Flats O** 79.14 325 P P **05 00 49.4 -1.3**
PFO IAmb IAmb 05 00 56.6
comp=Z,11nm,1.1s
PFO **Pinyon Flats O** 79.14 325 *i* P P **05 00 52.2 +1.5**
PFO pmax pmax
comp=Z,15nm,1.2s
PFO **Pinyon Flats O** 79.14 325 LR LR 05 28 46.7
comp=Z,62nm,21.2s,baz=159,slow=30
JFWS **Jewell Farm** 79.20 348 P P **05 00 50.5 -0.1**
JFWS **Jewell Farm** 79.20 348 P P **05 00 50.6 -0.1**
JFWS pmax pmax
comp=Z,42nm,1.4s
Q24A **Divide** 79.24 336 IAmb IAmb 05 00 56.4
comp=Z,12nm,1.1s
SADO **Sadowa** 79.82 356 LR LR 05 38 42.3
comp=Z,40nm,18.1s,baz=352,slow=38
TSUM **Tsumeb** 80.56 107 P P **05 00 56.5 -2.4**
TSUM **Tsumeb** 80.56 107 LR LR 05 31 15.4
comp=Z,131nm,21.9s,baz=200,slow=32
GSC **Goldstone, Bar** 80.70 326 P P **05 00 58.1 -0.9**
GSC **Goldstone, Bar** 80.70 326 P P **05 00 58.2 -0.9**
GSC pmax pmax
comp=Z,7.0nm,1.3s
BOSA **Boshof** 81.03 119 P P **05 01 00.6 -0.7**
BOSA **Boshof** 81.03 119 *e*P P **05 01 01.6 +0.3**
BOSA IAmb IAmb 05 01 02.6
comp=Z,31nm,1.1s
BOSA **Boshof** 81.03 119 P P **05 01 00.6 -0.7**
BOSA pmax pmax
comp=Z,27nm,1.1s
BOSA **Boshof** 81.03 119 P P **05 01 02.2 +0.9**
comp=Z,14nm,0.8s,baz=227,slow=4.8,SNR=16
BOSA LR LR 05 32 37.2
comp=Z,80nm,18.4s,baz=198,slow=32
comp=Z,14nm,0.8s
TRQ **Mont Tremblant** 81.14 360 P P **05 01 00.9 -0.2**
TRQ IAmb IAmb 05 01 07.0
comp=Z,27nm,1.5s
ECSD **EROS Data Cent** 81.26 344 P P **05 01 00.9 -0.8**
QSM **Queen of Sheba** 81.28 326 P P **05 00 58.4 -3.6**
SRU **San Rafael Swe** 81.29 332 P P **05 00 59.8 -2.5**
SRU **San Rafael Swe** 81.29 332 P P **05 00 59.8 -2.5**
SRU pmax pmax
comp=Z,6.0nm,1.0s
O20A **White River Ci** 81.35 334 P P **05 01 00.9 -1.6**
GWY **Greenwater Val** 81.37 326 P P **05 01 00.7 -2.0**
PRN **Pahroc Range** 81.67 328 P P **05 01 03.2 -1.0**
PRN IAmb IAmb 05 01 10.2
comp=Z,16nm,1.2s
SPMN **Marine on St.** 81.90 347 IAmb IAmb 05 01 08.2
comp=Z,11nm,0.7s
RDMU **Red Mountain** 82.21 334 IAmb IAmb 05 01 11.8
comp=Z,11nm,1.0s
MPU **Maple Canyon** 82.50 332 IAmb IAmb 05 01 13.6
comp=Z,11nm,1.0s
NLU **North Lily Min** 82.62 332 IAmb IAmb 05 01 14.6
comp=Z,8.8nm,1.2s
BSUT **Blindstream Ca** 82.62 333 IAmb IAmb 05 01 14.6
comp=Z,13nm,1.2s
F36A **Milaca** 82.65 347 IAmb IAmb 05 01 12.4
comp=Z,8.4nm,0.7s
SPR3 **Spring Creek 3** 82.71 330 IAmb IAmb 05 01 15.0
comp=Z,13nm,1.2s
K22A **Casper** 83.01 337 IAmb IAmb 05 01 16.0
comp=Z,18nm,1.1s
F33A **5 Mile Ranch,** 83.19 345 IAmb IAmb 05 01 15.2
comp=Z,9.6nm,0.9s
LBTB **Lobatse** 83.36 116 *e*P P **05 01 12.8 -0.7**
LBTB IAmb IAmb 05 01 14.3
comp=Z,7.5nm,0.8s
RSSD **Black Hills** 83.57 339 P P **05 01 13.2 -0.8**
RSSD IAmb IAmb 05 01 18.2
comp=Z,5.4nm,0.8s
RSSD **Black Hills** 83.57 339 P P **05 01 13.3 -0.8**
RSSD pmax pmax
comp=Z,5.0nm,0.9s
BGU **Big Grassy Mou** 83.83 331 IAmb IAmb 05 01 20.9
comp=Z,8.7nm,1.3s
NVAR **Mina Airpy Bea** 83.95 327 P P **05 01 18.1 +1.9**
comp=Z,3.5nm,1.0s,baz=149,slow=6.1,SNR=13
NVAR LR LR 05 33 35.8
comp=Z,66nm,18.2s,baz=190,slow=32
comp=Z,3.5nm,1.0s
PDAR **Pinedale Array** 84.14 335 P P **05 01 18.1 +1.0**
comp=Z,1.2nm,0.7s,baz=157,slow=4.8,SNR=9.2
comp=Z,1.2nm,0.7s
KVN **Kaiserville** 84.37 327 IAmb IAmb 05 01 23.3
comp=Z,8.5nm,1.2s
HVU **Hansel Valley** 84.46 332 IAmb IAmb 05 01 23.1
comp=Z,12nm,0.9s
WAKR **Walker** 84.53 326 P P **05 01 18.0 -1.1**
CMB **Columbia Colle** 84.59 325 P P **05 01 18.6 -0.6**
CMB **Columbia Colle** 84.59 325 P P **05 01 18.6 -0.6**
CMB pmax pmax
comp=Z,4.0nm,1.2s
NYAT **Nyati, Northwe** 84.60 117 *e*P P **05 01 18.4 -1.4**
NYAT IAmb IAmb 05 01 21.1
comp=Z,118nm,2.1s
AHID **Auburn Hatcher** 84.69 334 IAmb IAmb 05 01 23.4
comp=Z,14nm,1.4s
B35A **Bob, Littlefor** 85.09 347 IAmb IAmb 05 01 24.9
comp=Z,8.2nm,0.7s
LOHW **Long Hollow** 85.25 334 IAmb IAmb 05 01 27.1
comp=Z,10nm,1.4s
FXWY **Fox Creek** 85.42 334 IAmb IAmb 05 01 27.9
comp=Z,9.6nm,1.4s
IMW **Indian Meadow** 85.61 334 IAmb IAmb 05 01 30.0
comp=Z,20nm,1.4s
FLWY **Flagg Ranch** 85.69 335 IAmb IAmb 05 01 29.8
comp=Z,20nm,1.2s
TOA0 **Torodi Ar. Sit** 86.32 71 P P **05 01 26.4 -1.9**
TOA0 IAmb IAmb 05 01 30.1
comp=Z,14nm,1.1s
TORD **Torodi Ar. Bea** 86.32 71 P P **05 01 27.0 -1.3**
TORD IAmb IAmb 05 01 30.0
comp=Z,11nm,1.1s
TORD **Torodi Ar. Bea** 86.32 71 P P **05 01 28.8 +0.5**
comp=Z,5.6nm,1.0s,baz=285,slow=2.9,SNR=24
comp=Z,5.6nm,1.0s
ULM **Lac du Bonnet** 87.31 346 IAmb IAmb 05 01 35.7
comp=Z,10nm,0.8s
ULM **Lac du Bonnet** 87.31 346 *e*P P **05 01 31.3 -0.9**
ULM pmax pmax
comp=Z,8.0nm,0.8s
ULM **Lac du Bonnet** 87.31 346 P P **05 01 32.5 +0.2**
comp=Z,8.2nm,0.8s,baz=172,slow=3.8,SNR=12
comp=Z,8.2nm,0.8s
L04D **Klamath Falls** 88.81 326 P P **05 01 40.2 +0.4**
L04D IAmb IAmb 05 01 46.3
comp=Z,17nm,1.4s
YKA **Yellowknife Ar** 102.72 342 P Pdif **05 02 43.0 +0.6**
comp=Z,0.4nm,0.9s,baz=144,slow=4.2,SNR=3.9
BRTR **Keskin Array B** 124.02 62 *e*PKIKP PKiKP **05 07 44.9 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR **Keskin Array B** 124.02 62 PKP PKPdf **05 07 44.1 -0.2**
comp=Z,1.1nm,0.8s,baz=184,slow=4.0,SNR=6.2
AKASG **Malin Array Be** 124.38 49 PKP PKPdf **05 07 44.2 -0.2**
comp=Z,1.0nm,0.5s,baz=256,slow=2.3,SNR=2.1
ARCES **ARCESS Array B** 125.94 25 PKP PKPdf **05 07 46.8 -0.1**
comp=Z,7.3nm,1.0s,baz=353,slow=4.9,SNR=2.6
OBN **Obninsk** 129.60 44⇑*i* PKIKP PKiKP **05 07 57.5 +2.5**
OBN *e* 05 08 04.8
OBN pmax pmax
comp=Z,8.0nm,1.0s
KLMR **Klimovskoe** 131.50 37 *e*PKIKP PKPdf **05 07 56.7 -1.0**
KLMR pmax pmax
comp=Z,28nm,1.8s
KBZ **Khabaz** 131.78 60 *i* PKIKP PKiKP **05 07 59.6 -0.2**
KBZ pmax pmax
comp=Z,3.0nm,1.3s
BILL **Bilibino** 133.20 333 *i* PKIKP PKPdf **05 08 00.7 0.0**
KIRV **Kirov** 136.65 39 *i* PKIKP PKiKP **05 08 08.7 -0.4**
SEY **Seymchan** 140.23 329 *i* PKHKP PKPpre 05 08 03.3
SEY pmax pmax
comp=Z,4.0nm,0.9s
ARU **Arti** 141.89 41 PKP PKPdf **05 08 17.8 +0.8**
comp=Z,3.9nm,0.2s,baz=265,slow=9.5,SNR=3.0
ABKAR **Akbulak array** 143.88 53 PKPdf PKPdf **05 08 19.8 -1.1**
ABKAR **Akbulak array** 143.88 53 PKPdf PKPdf **05 08 19.7 -1.1**
YAK **Yakutsk** 149.30 338 *e*PKP2 PKiKP **05 08 34.5 -0.5**
YAK *e**SS 05 15 31.6
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,6.0nm,0.4s
BVAR **Borovoye Array** 149.44 44 PKPbc PKiKP **05 08 36.1 +0.5**
comp=Z,3.4nm,0.4s,baz=313,slow=2.2,SNR=15
YSS **Yuzn-Sakhalins** 150.09 304 *e*PKIKP PKPbc **05 08 35.2 -1.1**
YSS pmax pmax
comp=Z,20nm,1.1s
KSH **Kashi** 155.99 71 PKP PKPdf **05 08 42.0 +1.7**
KSH PP PP **05 12 44.9 -0.5**
ZALV **Zalesovo Beam** 156.27 32 PKP PKPdf **05 08 40.3 +0.3**
comp=Z,5.1nm,1.0s,baz=329,slow=1.7,SNR=5.4
MKAR **Makanchi Array** 158.96 50 PKP PKPdf **05 08 44.6 +0.9**
comp=Z,2.2nm,0.8s,baz=256,slow=4.2,SNR=2.1
MKAR PKPab pPKPab **05 09 20.7 -2.0**
comp=Z,3.4nm,0.8s,baz=281,slow=1.6,SNR=4.5
KSRS **Korea Array** 162.06 283 PKPab PKPab **05 09 33.6 -0.2**
comp=Z,0.7nm,0.4s,baz=101,slow=3.9,SNR=3.0
CMAR **Chiang Mai Arr** 162.16 158 PKP PKPdf **05 08 48.8 +0.9**
comp=Z,1.4nm,0.3s,baz=256,slow=2.7,SNR=1.9
CMAR PKPab PKPab **05 09 34.8 +0.4**
comp=Z,0.4nm,0.3s,baz=224,slow=5.1,SNR=4.5
WMQ **Urumqi** 163.67 53 *e*P PKPdf **05 08 47.3 -1.5**
SONM **Songino Array** 167.46 358 PKPab PKPab **05 09 57.9 +0.7**
comp=Z,2.1nm,0.9s,baz=358,slow=4.4,SNR=6.2
PZH **PanZhiHua** 170.57 157 PKP PKPdf **05 08 55.0 +0.5**
HHC **Hu-ho-hao-te** 172.83 322 *e*P PKPdf **05 08 52.4 -2.7**
GTA **Gaotai** 173.71 47 PKP PKPdf **05 08 58.5 +3.0**
GTA PKPab **sPKPab** **05 10 27.0 -2.0**
BTO **Baotou** 173.74 329 *e*PKPbc PKPdf **05 08 54.6 -0.8**
BTO pPKP **sPKPdf** **05 09 01.5 +2.4**
BTO sPKP 05 09 08.8
BTO *e*PKPab PKPab **05 10 24.4 -0.9**
BTO PP PP 05 13 38.4 -38
BTO SKS **SKSdf** **05 15 52.6 -5.7**
LYN **LuoYang** 174.47 264 PKP PKPdf **05 08 59.2 +3.5**

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*BJI **06** 04:59:13.6±0.0, 18°.28N×120°.72E, h35km, mb4.8/73, mB5.0/32, ML5.0/4, Ms4.5/40, Ms7 4.2/37*
*NEIC **06** 04:59:15.5±1.6, 18°.23N±0°.08×120°.78E±0°.09, h54km±7km, mb4.8/134, Error ellipse: s-maj=12.3km s-min=11.2km az=100.0*
*GCMT **06** 04:59:17.5±0.3, 18°.26N±0°.02×120°.76E±0°.02, h72km±4km, MW4.9/81,Moment Tensor Solution. s19,c21; s81,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.45±.15; $M_{\theta\theta}$2.03±.11; $M_{\phi\phi}$-1.59±.13; $M_{r\theta}$0.94±.07; $M_{r\phi}$0.68±.09; $M_{\theta\phi}$1.27±.07; Best double couple: $M_0$2.51900×10^{16} NP1:ϕ_s219.0000°, δ84.0000°, λ-139.00000°. NP2: ϕ_s123.00000°, δ50.00000°, λ-9.00000°. Principal axes: T 2.6270, Plg22.0000°, Azm344.0000°; N -0.2220, Plg49.0000°, Azm226.0000°; P -2.4120, Plg33.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **06** 04:59:18.5±0.6, 18°N±4°×12°1E±°, h65km±9km, M5.2/11, mB5.8/2, mb5.0/11, MLv5.3/4, Mw(mB)5.3/2*
*IDC **06** 04:59:20.3±1.8, 18°.07N×120°.86E, h111km±17km, mb4.1/37, mbtmp4.5/39, MS4.1/11, Error ellipse: s-maj=14.3km s-min=9.4km az=70.0*
ISC 06 04:59:15.5±0.5, 18°.22N±0°.04×120°.73E±0°.05, h58km±4km, h58km:pP-P, n411, σ1°36/381, mb4.7/114, MS4.2/15, 6C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res
TGY	**Tagaytay City**	4.10	177	P		Pn	**05 00 18.7**	**+2.9**
	353nm,0.5s,baz=326,slow=5.5,SNR=7.7							
TGY				S		Sn	**05 01 05.6**	**+3.1**
	1μm,0.6s,baz=359,slow=13,SNR=4.4							
TGY				LR		LR	05 02 06.1	
	comp=Z,2μm,18.4s,baz=2.5,slow=42							
TWG	**Pinlang**	4.59	4			Pn	**05 00 21.6**	**-0.9**
TPUB	**Ta-pu**	5.06	359	Pn		Pn	**05 00 28.5**	**-0.4**
YULB	**Yu-li**	5.18	6			Pn	**05 00 29.4**	**-1.1**
SSLB	**Suanglung**	5.55	2			Pn	**05 00 35.2**	**-0.4**
NACB	**Ninganchiao**	5.98	8			Pn	**05 00 40.8**	**-0.7**
YHNB	**Yeheng**	6.45	5			Pn	**05 00 49.5**	**+1.5**
KNMB	**Chin-men Tao**	6.59	341	Pn		Pn	**05 00 49.0**	**-0.7**
TATO	**Taipei**	6.76	6			Pn	**05 00 54.4**	**+2.2**
QZH	**Quanzhou**	6.98	344	P		Pn	**05 00 54.5**	**-0.7**
QZH				S		Sn	**05 02 09.2**	**-4.0**
QZH				smax		smax		
	comp=N,200nm,0.7s							
QZH				smax		smax		
	comp=E,320nm,0.7s							
HKPS	**Hong Kong Po S**	7.38	304	Pn		Pn	**05 01 00.1**	**-0.6**
QIZ	**Qiongzhong**	10.35	276	P		Pn	**05 01 39.9**	**-1.4**
QIZ				S		Sn	**05 03 37.0**	**+1.1**
QIZ				pmax		pmax		
	comp=Z,47nm,0.7s							
QIZ				LR		LR		
	comp=N,480nm,19.6s							
QIZ				LR		LR		
	comp=E,690nm,21.0s							
QIZ				LR		LR		
	comp=Z,760nm,25.2s							
QIZ	**Qiongzhong**	10.35	276			Pn	**05 01 40.0**	**-1.4**
JOW	**Kunigami**	11.05	38	P		Pn	**05 01 51.3**	**+0.4**
	36nm,0.5s,baz=210,slow=7.8,SNR=6.9							
GULI	**GuiLin**	11.92	308	⇓P		Pn	**05 02 01.1**	**-1.7**
GULI				pmax		pmax		
	comp=Z,30nm,1.6s							
GULI				LR		LR		
	comp=N,740nm,14.1s							
GULI				LR		LR		
	comp=E,950nm,15.2s							
GULI				LR		LR		
	comp=Z,820nm,18.9s							
DAV	**Davao City (W)**	12.05	156	LR		LR	05 07 44.5	
	comp=Z,860nm,18.7s,baz=348,slow=42							
CNSH	**ChangSha**	12.23	326	⇑P		Pn	**05 02 08.7**	**+1.7**
CNSH				pmax		pmax		
	comp=Z,60nm,1.0s							
WHN	**Wuhan**	13.57	336	P		Pn	**05 02 26.1**	**+0.9**
WHN				PP		PnPn	**05 02 34.9**	**+1.3**
WHN				S		Sn	**05 04 55.1**	**+0.7**

WHN pmax pmax
comp=Z,94nm,1.1s
WHN LR LR
comp=Z,3µm,27.6s
NJ2 Nanjing 13.88 353 *e*P **Pn 05 02 29.4 0.0**
NJ2 pmax pmax
comp=Z,18nm,0.6s
NJ2 pmax pmax
comp=Z,320nm,4.0s
GYA Guiyang 15.37 305 P **Pn 05 02 50.5 +1.5**
GYA S **Sn 05 05 39.3 +0.9**
GYA pmax pmax
comp=Z,23nm,1.0s
GYA LR LR
comp=N,850nm,14.8s
GYA LR LR
comp=E,620nm,11.9s
GYA LR LR
comp=Z,650nm,17.6s
ENH Enshi 15.77 322 Pn **Pn 05 02 54.2 +0.2**
ENH IAmb IAmb 05 03 00.6
comp=Z,90nm,1.2s
SLVN Son La 16.13 284 Pn **Pn 05 02 58.8 +0.1**
TOLI2 Tolitoli 17.00 180 P **Pn 05 03 09.7 +0.2**
JNU Nakatsue 17.42 30 **Pn 05 03 13.8 -0.8**
JNU IAmb IAmb 05 03 18.0
comp=Z,46nm,0.9s
JNU Nakatsue 17.42 30 P **P 05 03 15.1 -0.1**
comp=Z,41nm,0.8s,baz=208,slow=5.6,SNR=13
LYN LuoYang 17.86 337 ⇓P **P 05 03 21.5 +1.5**
LYN pP pP 05 03 31.1 -1.0
LYN PP **sP 05 03 38.1 -1.1**
LYN pmax pmax
comp=Z,99nm,1.2s
LYN pmax pmax
comp=Z,890nm,7.4s
KMI Kunming 18.06 295 ⇑P **Pn 05 03 25.5 +2.7**
KMI S **S 05 06 49.7 +3.0**
KMI pmax pmax
comp=Z,19nm,0.8s
KMI LR LR
comp=Z,530nm,13.7s
KMI LR LR
comp=Z,520nm,15.9s
KMI LR LR
comp=Z,680nm,23.2s
TIA Tai'an 18.20 351 P **Pn 05 03 25.6 +1.4**
TIA pmax pmax
comp=Z,25nm,1.3s
XAN Xi'an 18.96 328 ⇑P **Pn 05 03 33.9 +0.5**
XAN pP pP 05 03 42.4 -2.1
XAN pmax pmax
comp=Z,56nm,1.1s
XAN pmax pmax
comp=Z,490nm,3.7s
XAN LR LR
comp=Z,660nm,14.6s
XAN LR LR
comp=Z,430nm,13.3s
XAN LR LR
comp=Z,640nm,21.3s
LUWI Luwuk 19.24 174 P **P 05 03 34.0 -1.3**
LUWI IAmb IAmb 05 03 42.5
comp=Z,82nm,1.2s
LUWI Luwuk 19.24 174 P **P 05 03 36.1 +0.8**
CRAI Chiangrai 19.32 279 Pn **Pn 05 03 38.1 +0.4**
PZH PanZhiHua 19.38 299 P **Pn 05 03 39.5 +1.0**
PZH S **Sn 05 07 15.6 +0.2**
PZH pmax pmax
comp=Z,40nm,0.8s
PZH pmax pmax
comp=Z,230nm,3.7s
PZH LR LR
comp=Z,620nm,16.0s
PZH LR LR
comp=Z,430nm,17.0s
PZH LR LR
comp=Z,440nm,18.3s
HNS HongShan 19.83 346 ⇑P **Pn 05 03 43.8 +0.3**
HNS *e*S **S 05 07 20.5 -1.2**
HNS pmax pmax
comp=Z,180nm,1.4s
HNS LR LR
comp=Z,360nm,14.5s
HNS LR LR
comp=Z,350nm,12.5s
HNS LR LR
comp=Z,530nm,16.7s
LBMI Labuha 19.89 160 P Pn 05 03 56.7 +12
CD2 Chengdu 19.91 313 P **Pn 05 03 44.3 -0.4**
CD2 S **Sn 05 07 27.6 -0.4**
CD2 pmax pmax
comp=Z,90nm,0.8s
CD2 LR LR
comp=Z,830nm,10.5s
CD2 LR LR
comp=Z,570nm,11.2s
CD2 LR LR
comp=Z,500nm,11.4s
KSRS Korea Array 20.18 17 P **P 05 03 45.6 +0.3**
comp=Z,16nm,0.9s,baz=198,slow=11,SNR=17
comp=Z,16nm,0.9s
KS19 Wonju Array Si 20.21 17 P **P 05 03 45.1 -0.5**
KS19 IAmb IAmb 05 03 48.6
comp=Z,44nm,1.3s
CHTO Chiang Mai 20.66 275 P **P 05 03 50.7 -0.1**
CMAR Chiang Mai Arr 20.68 274 P **P 05 03 52.6 +1.6**
CMAR Chiang Mai Arr 20.68 274 P Pn 05 03 53.4 -0.4
comp=Z,10nm,0.9s,baz=89,slow=8.9,SNR=52
CMAR PcP **PcP 05 07 57.2 -2.1**
comp=Z,0.8nm,0.3s,baz=48,slow=1.3,SNR=2.2
comp=Z,10nm,0.9s
TIY Taiyuan 20.74 341 ⇓P Pn 05 03 54.1 -0.3
TIY pmax pmax
comp=Z,40nm,0.8s
SANI Sanana 20.80 165 P Pn 05 04 06.0 +11
JCJ Chichijima 21.66 62 P **P 05 04 00.9 -0.5**
TNCH TengChong 21.71 292 P **P 05 04 03.0 +0.8**
TNCH pP pP 05 04 14.7 +0.5
TNCH sP sP 05 04 19.4 -2.3
TNCH PP **PnPn 05 04 27.7 +2.5**
TNCH S **S 05 07 51.2 -8.4**
TNCH sS Sn 05 08 10.4 -1.0
TNCH pmax pmax
comp=Z,39nm,0.9s
TNCH pmax pmax
comp=Z,250nm,3.4s
TNCH LR LR
comp=Z,280nm,8.7s
TNCH LR LR
comp=Z,210nm,5.9s
TNCH LR LR
comp=Z,270nm,15.4s
BJT Baijiatuau 22.08 351 P **P 05 04 05.5 -0.3**
BJI Beijing 22.10 351 P **P 05 04 06.7 +0.8**
BJI pP **pP 05 04 18.2 -0.2**
BJI S **S 05 08 05.4 -0.8**
BJI pmax pmax
comp=Z,18nm,0.9s
BJI pmax pmax
comp=Z,120nm,5.7s
LZH Lanzhou 23.23 323 ⇑P **P 05 04 19.4 +1.5**
LZH pP pP 05 04 32.7 +2.0
LZH S **S 05 08 26.4 +0.7**
LZH pmax pmax
comp=Z,33nm,1.2s
LZH pmax pmax
comp=Z,240nm,4.1s
LZH LR LR
comp=Z,410nm,12.4s
LZH LR LR
comp=Z,490nm,13.4s
LZH LR LR
comp=Z,530nm,13.4s
SNY Shenyang 23.66 5 ⇓P P 05 04 13.6 -8.1
SNY S **S 05 08 29.7 -2.5**
SNY pmax pmax
comp=Z,18nm,0.8s
SNY pmax pmax
comp=Z,340nm,5.7s
SNY LR LR
comp=N,2µm,13.7s
SNY LR LR
comp=E,1µm,8.6s
SNY LR LR
comp=Z,4µm,11.8s

HHC Hu-ho-hao-te 23.89 343 *e*P **P 05 04 25.4 +1.4**
HHC pP pP 05 04 36.0 -1.9
HHC S **S 05 08 34.5 -1.8**
HHC pmax pmax
comp=Z,48nm,1.2s
HHC pmax pmax
comp=Z,280nm,4.1s
HHC LR LR
comp=Z,2µm,11.2s
HHC LR LR
comp=Z,860nm,9.5s
HHC LR LR
comp=Z,2µm,12.1s
MJAR Matsushiro Arr 23.89 37 P **P 05 04 25.3 +1.3**
comp=Z,4.1nm,0.8s,baz=224,slow=7.9,SNR=7.4
comp=Z,4.1nm,0.8s
BTO Baotou 24.14 340 *e*P **P 05 04 29.4 +3.1**
BTO pP **pP 05 04 40.7 +0.2**
BTO sP **sP 05 04 46.0 -1.4**
BTO S **S 05 08 47.6 +7.3**
BTO pmax pmax
comp=Z,49nm,1.4s
BTO pmax pmax
comp=Z,450nm,6.9s
BTO LR LR
comp=Z,590nm,7.5s
BTO LR LR
comp=Z,220nm,6.4s
BTO LR LR
comp=Z,440nm,6.2s
CN2 Changchun 25.82 8 P **P 05 04 42.4 +1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
XLT XiLinHaoTe 25.90 352 ⇓*i*P **P 05 04 43.6 +1.4**
XLT pmax pmax
comp=Z,71nm,1.1s
XLT pmax pmax
comp=Z,210nm,3.5s
USRK Ussuriysk Ar. 27.58 18 P **P 05 04 58.5 +1.3**
comp=Z,7.0nm,0.9s,baz=197,slow=6.0,SNR=8.9
comp=Z,7.0nm,0.9s
SHL Shillong 27.70 290 P **P 05 04 57.4 -1.3**
GTA Gaotai 27.83 324 P **P 05 05 00.8 +1.1**
GTA pP pP 05 05 12.2 -1.7
GTA PP **PnPn 05 05 54.4 +5.8**
GTA pmax pmax
comp=Z,7.0nm,1.3s
GTA LR LR
comp=Z,170nm,18.9s
GTA LR LR
comp=Z,200nm,19.6s
GTA LR LR
comp=Z,320nm,18.2s
BNX BinXian 28.00 10 ⇓P **P 05 05 01.6 +0.7**
BNX pmax pmax
comp=Z,12nm,0.8s
BNX pmax pmax
comp=Z,470nm,4.7s
GOMU GeErMu 29.04 313 P **P 05 05 12.2 +1.4**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
GOMU LR LR
comp=Z,2µm,16.8s
GOMU LR LR
comp=Z,550nm,14.9s
GOMU LR LR
comp=Z,660nm,14.6s
LSA Lhasa 29.26 299 P **P 05 05 12.6 -0.3**
ULN Ulaanbaatar 31.61 342 P **P 05 05 31.1 -1.9**
ULN Ulaanbaatar 31.61 342 P **P 05 05 34.6 +1.5**
SONM Songino Array 31.78 342 P **P 05 05 34.4 -0.1**
SONM Songino Array 31.78 342 P **P 05 05 35.5 +1.0**
comp=Z,7.1nm,0.9s,baz=156,slow=10,SNR=21
comp=Z,7.1nm,0.9s
HEH HeiHe 32.41 8 *e*P **P 05 05 38.8 -1.0**
WMQ Urumqi 37.70 320 *e*P **P 05 06 27.4 +1.8**
WMQ pmax pmax
comp=Z,12nm,0.9s
PSA00 Pilbara Seismi 39.55 181 P **P 05 06 39.7 -1.5**
PSA00 IAmb IAmb 05 06 40.8
comp=Z,21nm,1.4s
HYB Hyderabad 40.09 276 *e*P **P 05 06 41.8 -4.1**
WRA Warramunga Arr 40.21 160 P **P 05 06 43.0 -3.6**
comp=Z,4.1nm,0.7s,baz=340,slow=9.3,SNR=16
comp=Z,4.1nm,0.7s
WB2 Warramunga Arr 40.21 160 P **P 05 06 46.4 -0.3**
WB2 IAmb IAmb 05 07 26.2
comp=Z,14nm,1.1s
WR0 Warramunga Arr 40.29 160 P **P 05 06 46.8 -0.5**
PALK Pallekele 40.43 260 LR LR 05 22 52.5
comp=Z,90nm,20.2s,baz=162,slow=35
MK31 Makanchi Array 42.50 321 P **P 05 07 05.9 +0.7**
MKAR Makanchi Array 42.50 321 P **P 05 07 05.8 +0.7**
MKAR Makanchi Array 42.50 321 P **P 05 07 06.8 +1.6**
comp=Z,25nm,0.8s,baz=113,slow=9.3,SNR=154
comp=Z,25nm,0.8s
MAKZ Makanchi 42.69 321 P **P 05 07 08.1 +1.3**
MAKZ Makanchi 42.69 321 P **P 05 07 08.5 +1.7**
MAKZ PP **PP 05 08 49.5 +2.8**
PRZ Przheval'sk 43.20 313 P **P 05 07 12.3 +1.1**
TARG Taragay, Kyrgy 43.36 312 P **P 05 07 13.4 +0.6**
TARG IAmb IAmb 05 07 16.4
comp=Z,21nm,1.4s
AS31 Alice Springs 43.57 162 P **P 05 07 12.7 -1.4**
ASAR Alice Springs 43.57 162 P **P 05 07 11.8 -2.3**
comp=Z,3.1nm,0.6s,baz=335,slow=6.9,SNR=24
comp=Z,3.1nm,0.6s
KSH Kashi 44.02 308 P **P 05 07 21.7 +4.0**
KSH pP sP 05 07 36.5 -2.5
KSH PP **PcP 05 09 07.5 +5.0**
KSH pmax pmax
comp=Z,12nm,0.9s
NRN Naryn 44.55 311 P **P 05 07 22.2 +0.1**
NRN IAmb IAmb 05 07 40.9
comp=Z,20nm,1.2s
NIL Nilore 44.98 300 P **P 05 07 25.2 -0.2**
NIL Nilore 44.98 300 P **P 05 07 26.2 +0.9**
NIL pP **pP 05 07 41.4 +1.3**
PETK Petropavlovsk- 45.11 31 P **P 05 07 26.2 +0.2**
comp=Z,6.5nm,0.8s,baz=226,slow=8.1,SNR=5.9
comp=Z,6.5nm,0.8s
ZALV Zalesovo Beam 45.11 331 P **P 05 07 26.6 +0.6**
comp=Z,12nm,0.8s,baz=115,slow=7.0,SNR=24
comp=Z,12nm,0.8s
AAK Ala-Archa 45.98 312 P **P 05 07 33.1 -0.2**
AAK Ala-Archa 45.98 312 P **P 05 07 34.1 +0.8**
comp=Z,1.8nm,0.8s,baz=92,slow=13,SNR=4.8
comp=Z,1.8nm,0.8s
AAK Ala-Archa 45.98 312 P **P 05 07 36.2 +2.9**
AAK pP **sP 05 07 51.5 -3.0**
KURK Kurchatov 46.52 324 P **P 05 07 36.5 -0.6**
KURK Kurchatov 46.52 324 P **P 05 07 38.2 +1.1**
KURBB Kurchatov Arra 46.52 324 P **P 05 07 38.1 +0.9**
comp=Z,23nm,1.0s,baz=121,slow=8.2,SNR=103
comp=Z,23nm,1.0s
HNR Honiara 47.47 122 LR LR 05 24 50.1
comp=Z,2µm,21.1s,baz=68,slow=32
BTK Batken 48.01 308 IAmb IAmb 05 08 43.4
comp=Z,10nm,1.1s
KBL Kabul 48.56 300 P **P 05 07 52.8 -0.8**
KK31 Karatay Array 48.92 312 P **P 05 07 55.4 -0.6**
KK31 IAmb IAmb 05 08 14.0
comp=Z,8.1nm,1.0s
KKAR Karatay Array 48.92 312 IAmb IAmb 05 08 14.0
comp=Z,8.0nm,1.0s
SIMJ Simiganj 49.13 306 P **P 05 07 57.0 -0.8**
SIMJ IAmb IAmb 05 08 39.4
comp=Z,8.3nm,0.8s
SIMJ Simiganj 49.13 306 P **P 05 07 58.0 +0.2**
FORT Forrest 49.22 172 P **P 05 07 58.5 +0.3**
BVAR Borovoye Array 52.11 324 P **P 05 08 20.6 +0.8**
comp=Z,4.1nm,0.7s,baz=123,slow=11,SNR=13
comp=Z,4.1nm,0.7s
BRVK Borovoye 52.19 324 P **P 05 08 20.1 -0.3**
BRVK Borovoye 52.19 324 pmax pmax
comp=Z,20nm,1.7s
BRVK Borovoye 52.19 324 P **P 05 08 21.4 +1.1**
BRVK Borovoye 52.19 324*c*PKHKP **P 05 08 21.3 +1.0**
BBOO Buckleboo 52.82 164 P **P 05 08 23.5 -1.7**
BBOO IAmb IAmb 05 08 25.5
comp=Z,20nm,1.4s
TIXI Tiksi 53.65 3 P **P 05 08 30.6 -0.2**
TIXI IAmb IAmb 05 08 59.1
comp=Z,13nm,1.1s
TIXI Tiksi 53.65 3 P **P 05 08 31.1 +0.3**
TIXI pP **pP 05 08 46.4 +0.2**

STKA Stephens Creek 53.68 158 P **P 05 08 31.1 -0.5**
STKA Stephens Creek 53.68 158 P **P 05 08 30.4 -1.2**
comp=Z,5.9nm,0.7s,baz=332,slow=7.7,SNR=16
comp=Z,5.9nm,0.7s
NRIK Noril'sk 55.05 346 P **P 05 08 41.4 +0.4**
comp=Z,14nm,0.8s,baz=120,slow=6.3,SNR=14
comp=Z,14nm,0.8s
BILL Bilibino 57.43 19 P **P 05 08 57.2 -0.9**
BILL IAmb IAmb 05 09 26.6
comp=Z,9.4nm,1.1s
GEYT Alibeck 57.59 304 P **P 05 09 00.5 +0.8**
comp=Z,4.3nm,0.8s,baz=115,slow=7.0,SNR=7.3
GEYT LR LR 05 36 28.7
comp=Z,218nm,21.1s,baz=107,slow=39
comp=Z,4.3nm,0.8s
AKTO Aktyubinsk 58.83 318 P **P 05 09 08.6 +0.5**
comp=Z,4.0nm,0.7s,baz=99,slow=8.3,SNR=7.7
comp=Z,4.0nm,0.7s
ARU Arti 59.67 325 P **P 05 09 12.6 -1.2**
ARU IAmb IAmb 05 09 14.2
comp=Z,7.3nm,0.8s
ARU Arti 59.67 325 P **P 05 09 14.0 +0.2**
comp=Z,5.5nm,0.4s,baz=127,slow=4.8,SNR=11
comp=Z,5.5nm,0.4s
NIKH Nikolski High 63.89 39 P **P 05 09 41.4 -0.8**
baz=266
KIRV Kirov 64.90 327 P **P 05 09 48.7 0.0**
comp=Z,14nm,0.7s,baz=71,slow=3.5,SNR=5.0
comp=Z,14nm,0.7s
TNA Tin City 65.86 26 P **P 05 09 55.0 +0.2**
baz=261
M11K Mekoryuk 65.97 31 P **P 05 09 56.1 +0.5**
baz=264
F14K Arctic Creek 66.50 26 P **P 05 09 60.0 +1.1**
baz=262
ANM Nome 66.79 27 P **P 05 10 01.3 +0.5**
baz=263
F15K North Star Dit 67.22 26 IAmb IAmb 05 10 05.8
comp=Z,15nm,1.4s
F15K North Star Dit 67.22 26 P **P 05 10 04.3 +0.8**
baz=264
C16K Lisburne Hills 67.27 23 IAmb IAmb 05 10 33.9
comp=Z,14nm,1.2s
C16K Lisburne Hills 67.27 23 P **P 05 10 04.2 +0.5**
baz=262
M13K Dall Lake 67.39 31 P **P 05 10 05.0 +0.4**
baz=267
G15K Niukluk 67.41 26 P **P 05 10 05.1 +0.5**
baz=264
J14K Nanvaranak Lak 67.43 29 P **P 05 10 05.4 +0.6**
baz=266
L14K Kuka Creek 67.76 30 P **P 05 10 07.7 +0.7**
baz=267
GNI Garni 67.91 307 LR LR 05 43 18.7
comp=Z,92nm,19.6s,baz=86,slow=39
D17K Noatak River 68.05 24 P **P 05 10 09.8 +1.1**
baz=264
M14K Bethel 68.09 31 P **P 05 10 09.8 +0.8**
baz=268
C17K DeLong Mountai 68.09 23 P **P 05 10 10.0 +1.0**
baz=264
H16K Elim 68.14 27 P **P 05 10 10.0 +0.7**
baz=266
G16K Koyuk River 68.15 26 P **P 05 10 09.7 +0.4**
baz=266
N14K Kuskokwak Cree 68.20 32 P **P 05 10 10.4 +0.7**
baz=269
K15K Wolf Creek Mou 68.35 29 P **P 05 10 11.3 +0.7**
baz=268
L15K Ungalak Mounta 68.35 30 P **P 05 10 11.0 +0.4**
baz=268
E17K Hotham Inlet 68.48 24 P **P 05 10 12.4 +1.0**
baz=266
F17K Baldwin Pennin 68.67 25 P **P 05 10 13.5 +1.0**
baz=266
B18K Kokolik River 68.68 22 P **P 05 10 13.9 +1.4**
baz=265
M15K Kasigluk River 68.71 31 P **P 05 10 12.7 -0.2**
baz=269
I17K Unalakleet 68.78 28 IAmb IAmb 05 10 15.7
comp=Z,19nm,1.4s
I17K Unalakleet 68.78 28 P **P 05 10 13.4 +0.1**
baz=268
C18K Utukok River 68.84 23 P **P 05 10 14.2 +0.6**
baz=266
G17K Kiwalik Mounta 68.86 26 P **P 05 10 14.9 +1.1**
baz=267
KBZ Khabaz 68.94 311 P **P 05 10 14.7 0.0**
comp=Z,2.4nm,0.8s,baz=138,slow=2.9,SNR=5.2
comp=Z,2.4nm,0.8s
E18K Tukpahlearik C 68.98 24 P **P 05 10 15.2 +0.7**
baz=267
KVAR Kislovodsk Arr 69.07 311 P **P 05 10 15.8 +0.2**
comp=Z,2.6nm,0.4s,baz=45,slow=1.4,SNR=1.8
comp=Z,2.6nm,0.4s
KIV Kislovodsk 69.07 311 P **P 05 10 15.6 0.0**
KIV IAmb IAmb 05 10 17.1
comp=Z,10nm,0.8s
O15K Ungalikthiuk R 69.15 33 P **P 05 10 16.1 +0.5**
baz=270
H17K Granite Mounta 69.15 27 P **P 05 10 16.4 +0.8**
baz=268
L16K Owhat River 69.31 30 P **P 05 10 16.8 +0.2**
baz=270
F18K Selawik 69.31 25 P **P 05 10 17.1 +0.5**
baz=268
C19K Lookout Ridge 69.45 22 P **P 05 10 18.1 +0.7**
baz=267
M16K Timber Creek 69.56 31 P **P 05 10 19.2 +1.0**
baz=271
N16K Nishlik Lake 69.66 31 P **P 05 10 19.4 +0.6**
baz=271
G18K Tagagawik 69.70 26 P **P 05 10 19.8 +0.8**
baz=269
RAYN Ar Rayn 69.77 289 P **P 05 10 19.3 -0.9**
RAYN IAmb IAmb 05 10 37.6
comp=Z,19nm,1.2s
RAYN Ar Rayn 69.77 289 P **P 05 10 20.7 +0.5**
H18K Honhosa River 69.81 26 P **P 05 10 20.8 +1.1**
baz=270
K17K Iditarod 69.85 29 P **P 05 10 21.3 +1.4**
baz=270
L17K Donlin 69.86 30 P **P 05 10 21.5 +1.5**
baz=271
D19K Kuna River 69.96 23 IAmb IAmb 05 10 23.2
comp=Z,26nm,1.6s
D19K Kuna River 69.96 23 P **P 05 10 21.0 +0.5**
baz=269
P16K Nushagak River 70.10 33 P **P 05 10 22.1 +0.6**
baz=272
E19K Redstone River 70.28 24 P **P 05 10 23.4 +0.9**
baz=270
M17K Holitna River 70.29 30 P **P 05 10 23.3 +0.6**
baz=272
G19K Purcell Mounta 70.34 25 P **P 05 10 24.2 +1.3**
baz=270
R16K Pilot Point 70.39 34 P **P 05 10 24.9 +1.6**
baz=273
N17K Nushagak Hills 70.44 31 P **P 05 10 24.6 +1.0**
baz=272
GCSA Galena City Sc 70.45 27 P **P 05 10 24.8 +1.2**
baz=271
D20K Etivluk River 70.51 23 P **P 05 10 24.9 +0.9**
baz=270
O17K Koliganek Bris 70.52 32 P **P 05 10 24.6 +0.5**
baz=273
A21K Barrow 70.53 20 P **P 05 10 25.1 +1.2**
baz=269
J18K Innoko River 70.56 28 P **P 05 10 25.3 +1.0**
baz=272
L18K Granite Mounta 70.61 30 P **P 05 10 26.0 +1.4**
baz=272
H19K Roundabout Mou 70.61 26 P **P 05 10 26.0 +1.5**
baz=271
E20K Nigu River 70.67 23 P **P 05 10 25.9 +1.0**
baz=270
F20K Avaraart Lake 70.87 24 IAmb IAmb 05 10 44.9
comp=Z,22nm,1.9s
F20K Avaraart Lake 70.87 24 P **P 05 10 27.1 +1.1**
baz=271
P17K Kvichak River 70.89 33 P **P 05 10 27.5 +1.2**
baz=273
TTA Tatalina 70.89 29 P **P 05 10 26.5 +0.1**
TTA IAmb IAmb 05 10 28.1
comp=Z,18nm,1.3s
TTA Tatalina 70.89 29 P **P 05 10 27.2 +0.8**
baz=272
J19K Poorman 71.02 28 P **P 05 10 28.0 +0.9**
baz=272

M18K	Stony River baz=273	71.06	30	P	P	05 10 28.2	+0.9
N18K	Kilae Creek baz=273	71.07	31	P	P	05 10 28.2	+0.7
C21K	Knifeblade Rid baz=272	71.17	22	P	P	05 10 29.1	+1.2
Q17K	Contact Creek baz=274	71.24	34	P	P	05 10 27.9	-0.7
H20K	Anotleneega Mo baz=273	71.27	26	P	P	05 10 29.3	+0.7
O18K	Koktuh Hills baz=274	71.47	32	P	P	05 10 30.9	+1.0
L19K	White Mountain baz=274	71.47	30	P	P	05 10 31.5	+1.6
E21K	Killik River baz=272	71.49	23	P	P	05 10 31.3	+1.5
P18K	Big Mountain, baz=274	71.49	32	P	P	05 10 31.1	+1.1
B22K	Teshekpuk Lake baz=272	71.60	21	P	P	05 10 31.7	+1.3
J20K	Nowinta River baz=274	71.66	27	P	P	05 10 32.3	+1.4
M19K	Big River Lodg baz=274	71.71	30	P	P	05 10 32.6	+1.3
K20K	Telida baz=274	71.75	28	P	P	05 10 32.1	+0.6
N19K	Bonanza Creek baz=275	71.75	31	P	P	05 10 33.2	+1.5
G21K	Allakaket comp=Z,9.8nm,0.9s	71.77	25	IAmb	IAmb	05 10 33.6	
G21K	Allakaket baz=274	71.77	25	P	P	05 10 33.1	+1.5
O19K	Port Alsworth baz=275	71.88	32	P	P	05 10 33.1	+0.9
L20K	Farewell, AK baz=274	71.90	29	P	P	05 10 33.9	+1.4
D22K	Ayikyak River comp=Z,11nm,1.2s	71.94	22	IAmb	IAmb	05 11 13.4	
D22K	Ayikyak River baz=274	71.94	22	P	P	05 10 33.9	+1.4
H21K	Melozitna Rive comp=Z,9.8nm,1.1s	72.12	26	IAmb	IAmb	05 10 59.5	
H21K	Melozitna Rive baz=274	72.12	26	P	P	05 10 35.3	+1.6
Q19K	Cape Douglas, baz=276	72.35	33	P	P	05 10 36.2	+1.1
CHUM	Lake Minchumin baz=275	72.48	28	P	P	05 10 37.1	+1.3
I21K	Tanana baz=275	72.50	26	P	P	05 10 37.1	+1.2
G22K	Bettles baz=275	72.53	24	P	P	05 10 37.3	+1.2
CAST	Castle Rocks comp=Z,14nm,0.8s	72.63	28	IAmb	IAmb	05 10 38.5	
CAST	Castle Rocks baz=276,SNR=12	72.63	28	P	P	05 10 37.7	+0.9
PPLA	Purkeypile baz=276	72.64	29	P	P	05 10 37.9	+0.9
D23K	Nanushuk River baz=275	72.65	22	P	P	05 10 38.1	+1.4
H22K	Ishtalitna Cre baz=276	72.68	25	P	P	05 10 38.5	+1.5
COLD	ColdFoot baz=276	73.01	24	P	P	05 10 40.2	+1.3
MLY	Manley comp=Z,8.1nm,0.9s	73.04	26	IAmb	IAmb	05 10 41.1	
MLY	Manley baz=276	73.04	26	P	P	05 10 40.3	+1.1
SKT	Skwentna comp=Z,14nm,1.1s	73.05	30	IAmb	IAmb	05 11 02.0	
TOLK	Toolik Lake Re baz=276,SNR=5.1	73.09	23	P	P	05 10 40.6	+1.2
E23K	Chandalar baz=277	73.14	23	P	P	05 10 40.9	+1.1
G23K	Bananza Creek comp=Z,13nm,1.4s	73.14	25	IAmb	IAmb	05 10 42.4	
G23K	Bananza Creek baz=277	73.14	25	P	P	05 10 40.8	+1.0
C24K	Franklin Bluff baz=277	73.27	21	P	P	05 10 41.3	+1.0
HOM	Homer baz=277	73.28	32	P	P	05 10 41.4	+0.8
D24K	Happy Valley baz=277	73.29	22	P	P	05 10 41.3	+0.7
TRF	Thorofare Moun baz=277	73.43	28	P	P	05 10 42.2	+0.5
E24K	Your Creek baz=278	73.56	23	P	P	05 10 43.3	+1.1
CUT	Chulitna baz=278	73.58	29	P	P	05 10 42.8	+0.4
I23K	Minto, Yukon-K comp=Z,25nm,1.6s	73.61	26	IAmb	IAmb	05 11 31.1	
I23K	Minto, Yukon-K baz=278	73.61	26	P	P	05 10 43.6	+1.2
BRSE	Bradley Lake S baz=278	73.72	32	P	P	05 10 44.2	+1.0
NEA2	Nenana baz=278	73.81	27	P	P	05 10 44.6	+0.9
F24K	Squaw Lake baz=278	73.86	24	P	P	05 10 44.8	+0.8
MCK	McKinley baz=278	73.99	28	P	P	05 10 45.3	+0.5
RND	Reindeer comp=Z,14nm,0.9s	74.08	28	IAmb	IAmb	05 10 55.4	
MDM MDM	Murphy Dome comp=Z,9.6nm,1.0s	74.11	26	P IAmb	P IAmb	05 10 43.9 05 10 47.1	-1.6
H24K	Noodor Dome comp=Z,10.0nm,1.1s	74.12	25	IAmb	IAmb	05 11 15.1	
H24K	Noodor Dome baz=279	74.12	25	P	P	05 10 46.6	+1.1
D25K	Kavik River comp=Z,8.6nm,0.9s	74.13	22	IAmb	IAmb	05 10 47.1	
D25K	Kavik River baz=279,SNR=6.9	74.13	22	P	P	05 10 46.5	+1.0
G24K	Hadweenzic Riv baz=279	74.14	24	P	P	05 10 46.6	+1.0
PMR	Palmer baz=279	74.23	30	P	P	05 10 46.3	+0.2
CCB	Clear Creek Bu comp=Z,13nm,1.5s	74.34	27	IAmb	IAmb	05 10 48.4	
POKR	Poker Plat Res baz=279	74.42	26	P	P	05 10 47.4	+0.2
SML	Sawmill baz=280	74.57	30	P	P	05 10 48.9	+0.6
E25K	Arctic Village baz=280	74.63	23	P	P	05 10 49.4	+0.9
G25K	Bearman Lake baz=280	74.67	24	P	P	05 10 50.0	+1.4
F25K	Christian Rive baz=280	74.70	23	P	P	05 10 50.1	+1.2
IL31	comp=Z,23nm,1.9s	74.71	26	IAmb	IAmb	05 10 49.1	
ILAR	Eielson Array comp=Z,1.5nm,0.8s,baz=275,slow=5.6,SNR=13 comp=Z,1.5nm,0.8s	74.71	26	P	P	05 10 47.9	-1.0
WAT6	Susitna Watana baz=280	74.71	29	P	P	05 10 49.2	+0.1
HDA	Harding Lake baz=280	74.74	27	P	P	05 10 49.1	0.0
DHY	Denali Highway baz=280	74.79	28	P	P	05 10 50.2	+0.6
M23K	Glacier View baz=280	74.86	29	P	P	05 10 50.4	+0.6
ARCES	ARCESS Array B comp=Z,1.5nm,0.7s,baz=38,slow=4.6,SNR=4.3 comp=Z,1.5nm,0.7s	74.90	339	P	P	05 10 49.5	-0.5
SCM	Sheep Creek Mo baz=280	75.04	29	P	P	05 10 51.6	+0.7
PRP	Porcupine Dome baz=281	75.13	25	P	P	05 10 52.4	+0.8
SPITS	Spitsbergen Ar comp=Z,12nm,0.9s,baz=120,slow=5.0,SNR=2.1 comp=Z,12nm,0.9s	75.20	348	P	P	05 10 50.2	-1.4
F26K	Sheenjek River baz=282	75.24	23	P	P	05 10 53.3	+1.4
P23K	Montague Islan baz=281	75.34	31	P	P	05 10 52.4	-0.2
K24K	Donnelly Dome baz=281	75.36	27	P	P	05 10 53.1	+0.4
J25K	Salcha River, baz=281	75.38	26	P	P	05 10 52.1	-0.7
ASF	Jabal al Asfar comp=Z,1.6nm,0.4s,baz=72,slow=20,SNR=4.2 comp=Z,1.6nm,0.4s	75.44	299	P	P	05 10 54.5	+0.7
M24K	Tolsona, Glenn baz=281	75.52	29	P	P	05 10 54.6	+1.0
G26K	Porcupine Rive baz=282	75.53	24	P	P	05 10 54.9	+1.3
PAX	Paxson baz=282	75.67	28	P	P	05 10 54.8	+0.3
RIDG	Independent Ri baz=282	75.78	27	P	P	05 10 54.7	-0.5
HIZ	Hauiti	75.86	139	P	P	05 10 57.2	+1.3
HARP	HAARP baz=282	75.93	29	P	P	05 10 57.1	+1.1
D27M	Malcolm River baz=284	76.03	21	P	P	05 10 56.8	+0.3
SCRK SCRK	Sand Creek comp=Z,14nm,1.6s	76.10	27	P IAmb	P IAmb	05 10 56.4 05 11 16.5	-0.6
SCRK	Sand Creek baz=283	76.10	27	P	P	05 10 57.8	+0.8
I26K	Coal Creek Min comp=Z,11nm,0.9s	76.15	25	IAmb	IAmb	05 10 58.1	
I26K	Coal Creek Min baz=283	76.15	25	P	P	05 10 57.6	+0.4
J26L	Joseph Creek baz=283	76.16	26	P	P	05 10 57.2	-0.2
N25K	Chitina, Valde baz=283	76.36	29	P	P	05 10 59.0	+0.6
FINES	FINESS Array B comp=Z,4.2nm,0.9s,baz=54,slow=9.7,SNR=9.8 comp=Z,4.2nm,0.9s	76.38	330	P	P	05 10 58.4	-0.1
BRTR BRTR	Keskin Array B comp=Z,0.4nm,0.6s,baz=140,slow=7.5,SNR=2.4 comp=Z,86nm,18.7s,baz=107,slow=39 comp=Z,0.4nm,0.6s	76.41	308	P LR	P LR	05 11 00.0 05 48 56.1	+0.8
BMRM	Bremner River baz=283	76.50	30	P	P	05 10 59.8	+0.6
H27K	Steamboat Moun baz=284	76.58	24	P	P	05 11 00.8	+1.2
L26K	Log Cabin Wild baz=284	76.60	28	P	P	05 11 01.0	+1.2
E28M	Babbage River baz=286	76.70	22	P	P	05 11 01.3	+1.1
I27K	Kandik River baz=284	76.70	25	P	P	05 11 01.6	+1.3
GLB	Gilahina Butte comp=Z,9.9nm,0.9s	76.76	29	IAmb	IAmb	05 11 42.6	
D28M	Stokes Point baz=286	76.78	21	P	P	05 11 01.7	+1.1
F28M	Old Crow comp=Z,8.4nm,0.8s	76.85	23	IAmb	IAmb	05 11 02.8	
F28M	Old Crow baz=286	76.85	23	P	P	05 11 02.0	+0.9
M26K	Nabesna, AK comp=Z,11nm,0.8s	76.91	28	IAmb	IAmb	05 11 03.1	
M26K	Nabesna, AK baz=284	76.91	28	P	P	05 11 02.4	+0.8
K27K	Chicken comp=Z,8.3nm,1.0s	76.91	27	IAmb	IAmb	05 11 03.5	
K27K	Chicken baz=284	76.91	27	P	P	05 11 02.8	+1.4
AKASG	Malin Array Be comp=Z,0.5nm,0.3s,baz=64,slow=4.3,SNR=6.2 comp=Z,0.5nm,0.3s	77.06	319	P	P	05 11 00.7	-1.8
EGAK	Eagle baz=285	77.10	26	P	P	05 11 03.1	+0.6
URZ	Urewera comp=Z,5.3nm,0.7s,baz=329,slow=12,SNR=2.4 comp=Z,5.3nm,0.7s	77.14	138	P	P	05 10 59.7	-3.3
MCARA	McCarthy VSAT baz=284	77.14	29	P	P	05 11 03.9	+1.1
L27K	Beaver Creek, baz=285	77.26	28	P	P	05 11 04.8	+1.3
RTZ	Ruatahuna	77.26	138	P	P	05 11 03.8	-0.1
E29M	Blow River baz=287	77.34	22	P	P	05 11 04.9	+1.1
I28M	Miner Creek baz=286	77.42	25	P	P	05 11 05.7	+1.3
M27K	Edge Creek, AK baz=285	77.42	28	P	P	05 11 05.4	+0.8
EIL	Elat comp=Z,1.5nm,0.4s,baz=31,slow=8.5,SNR=1.7 comp=Z,1.5nm,0.4s	77.64	297	P	P	05 11 04.8	-1.5
H29M	Whitestone comp=Z,11nm,1.0s	77.81	24	IAmb	IAmb	05 11 48.6	
H29M	Whitestone baz=287	77.81	24	P	P	05 11 07.6	+1.1
BVCY	Beaver Creek baz=286	77.86	28	P	P	05 11 08.1	+1.2
BARN	Barnard Glacie comp=Z,12nm,0.8s	77.86	30	IAmb	IAmb	05 11 08.9	
DAWY	Dawson comp=Z,27nm,1.9s	78.03	26	IAmb	IAmb	05 11 09.7	
DAWY	Dawson baz=287	78.03	26	P	P	05 11 08.2	+0.4
CTG	Chitna Glacier baz=286,SNR=10	78.04	30	P	P	05 11 08.8	+0.8
YUK3	Moose Creek baz=286	78.22	29	P	P	05 11 09.7	+0.6
LOGN	Logan Glacier comp=Z,13nm,0.9s	78.24	30	IAmb	IAmb	05 11 17.2	
F30M	Barrier River baz=289	78.34	22	P	P	05 11 10.2	+0.8
G30M	tAoh Zraii Nji comp=Z,14nm,1.2s	78.39	23	IAmb	IAmb	05 11 10.9	
G30M	tAoh Zraii Nji baz=289	78.39	23	P	P	05 11 10.1	+0.4
EPYK	Eagle Plains comp=Z,6.0nm,0.8s	78.40	24	IAmb	IAmb	05 11 10.6	
EPYK	Eagle Plains baz=289	78.40	24	P	P	05 11 09.9	+0.1
J29N	Klondike Camp comp=Z,9.5nm,0.9s	78.41	26	IAmb	IAmb	05 11 11.9	
J29N	Klondike Camp baz=288	78.41	26	P	P	05 11 10.5	+0.6
YUK8	Steele Glacier baz=287	78.68	29	P	P	05 11 12.6	+0.9
PINM	Pinnacle baz=287	78.80	30	P	P	05 11 13.1	+1.0
L29M	L29M baz=288	78.86	27	P	P	05 11 13.9	+1.5
K29M	Barlow Dome baz=288	78.89	26	P	P	05 11 13.6	+1.0
INK	Inuvik baz=291,SNR=5.6	78.90	21	P	P	05 11 12.4	+0.1
I30M	Mount Dempster baz=289	78.91	25	P	P	05 11 13.3	+0.6
M29M	Somme Creek comp=Z,9.4nm,0.8s	78.92	28	IAmb	IAmb	05 11 15.2	
M29M	Somme Creek baz=288	78.92	28	P	P	05 11 14.2	+1.4
G31M	Salcha River baz=291	79.13	23	P	P	05 11 13.8	+0.1
F31M	Tsiigehtchic comp=Z,9.4nm,0.9s	79.14	22	IAmb	IAmb	05 11 14.4	
F31M	Tsiigehtchic baz=291,SNR=6.5	79.14	22	P	P	05 11 13.8	+0.1
J30M	Hart River baz=289	79.14	25	P	P	05 11 14.8	+0.8
YUK4	Talbot Arm baz=288	79.18	29	P	P	05 11 15.4	+1.0
PNL	Peninsula baz=288	79.34	31	P	P	05 11 16.2	+1.2
YUK6	Outpost Mounta baz=288	79.44	29	P	P	05 11 16.9	+1.1
O29M	Mount Kennedy baz=288	79.54	30	P	P	05 11 17.4	+1.2
M30M	Minto, Yukon comp=Z,18nm,1.3s	79.61	27	IAmb	IAmb	05 11 18.8	
M30M	Minto, Yukon baz=289	79.61	27	P	P	05 11 17.9	+1.4
MAYO	Mayo, Yukon baz=290	79.66	26	P	P	05 11 18.1	+1.4
HYT	Haines Junctio comp=Z,12nm,1.1s	79.87	29	IAmb	IAmb	05 11 19.7	
HYT	Haines Junctio baz=289,SNR=6.1	79.87	29	P	P	05 11 19.1	+1.1
P29M	Windy Craggy comp=Z,10nm,0.8s	80.15	30	IAmb	IAmb	05 11 21.8	
P29M	Windy Craggy baz=289	80.15	30	P	P	05 11 20.8	+1.3
P30M	Million Dollar baz=290	80.36	30	P	P	05 11 21.9	+1.3
N31M	Braeburn, Yuko comp=Z,8.8nm,0.9s	80.43	28	IAmb	IAmb	05 11 23.1	
N31M	Braeburn, Yuko baz=290	80.43	28	P	P	05 11 21.7	+0.8
MLR MLR	Muntelo Rosu comp=Z,2.7nm,0.7s,baz=149,slow=8.7,SNR=5.2 comp=Z,183nm,18.4s,baz=64,slow=39 comp=Z,2.7nm,0.7s	80.49	315	P LR	P LR	05 11 21.7 05 51 38.1	0.0
O30N	Mendenhall baz=290,SNR=5.2	80.54	29	P	P	05 11 22.7	+1.2
M31M	Drury Creek, Y baz=291,SNR=7.4	80.79	27	P	P	05 11 23.5	+0.7
PLBC	Pleasant Camp baz=290	80.87	30	P	P	05 11 24.1	+0.9
WHY	Whitehorse comp=Z,8.5nm,1.0s	81.14	29	IAmb	IAmb	05 11 26.8	
WHY	Whitehorse baz=291,SNR=5.7	81.14	29	P	P	05 11 25.7	+0.9
FARO	Faro, Yukon comp=Z,12nm,1.0s	81.24	27	IAmb	IAmb	05 11 27.0	
FARO	Faro, Yukon baz=292,SNR=10	81.24	27	P	P	05 11 26.3	+1.1
S31K	Pelican baz=290	81.46	32	P	P	05 11 27.8	+1.5
C36M	Paulatuk comp=Z,12nm,1.1s	81.55	19	IAmb	IAmb	05 11 46.2	
C36M	Paulatuk baz=300	81.55	19	P	P	05 11 26.8	+0.2
N32M	Quiet Lake baz=293	81.77	28	P	P	05 11 28.9	+0.8
P32M	Atlin baz=292	82.08	30	P	P	05 11 30.5	+0.8
R32K	Eaglecrest baz=292	82.19	31	P	P	05 11 31.3	+1.1
SIT	Sitka baz=291	82.24	32	P	P	05 11 31.3	+0.9
P33M	Teslin, Yukon comp=Z,12nm,1.2s	82.25	29	IAmb	IAmb	05 11 33.2	
P33M	Teslin, Yukon baz=293	82.25	29	P	P	05 11 31.9	+1.2
S32K	Killisnoo baz=292	82.46	32	P	P	05 11 33.1	+1.4
HFS	Hagfors comp=Z,3.1nm,0.7s,baz=344,slow=4.8,SNR=6.3 comp=Z,3.1nm,0.7s	82.55	331	P	P	05 11 31.1	-1.0
Q32M	Nakina River baz=294	83.01	30	P	P	05 11 35.9	+1.2
NB2	NORSAR Subarra comp=Z,5.9nm,0.9s,baz=64,slow=5.3	83.28	332	P	P	05 11 35.0	-0.9
NOA	NORSAR Array B comp=Z,1.6nm,0.7s,baz=64,slow=5.0,SNR=8.3 comp=Z,1.6nm,0.7s	83.28	332	P	P	05 11 34.8	-1.2
R33M	Jennings River baz=295	83.44	29	P	P	05 11 38.5	+1.6
TGTN	Hyland Airport baz=297	83.72	27	P	P	05 11 39.4	+1.3
U33K	Whale Pass baz=293	83.72	33	P	P	05 11 39.4	+1.3
CRAG	Craig baz=293	83.98	33	P	P	05 11 40.4	+0.9
S34M	Telegraph Cree comp=Z,8.4nm,1.0s	83.99	31	IAmb	IAmb	05 11 42.0	
S34M	Telegraph Cree baz=295	83.99	31	P	P	05 11 40.8	+1.3
WRAK	Wrangell Islan baz=294	84.00	32	P	P	05 11 41.0	+1.4
WTLY	Watson Lake, Y comp=Z,6.4nm,0.8s	84.12	28	IAmb	IAmb	05 11 43.4	
WTLY	Watson Lake, Y baz=296	84.12	28	P	P	05 11 41.7	+1.5
IDI	Anoyia comp=Z,101nm,21.4s,baz=226,slow=38	84.28	305	LR	LR	05 53 21.9	
DLBC	Dease Lake comp=Z,10nm,1.1s	84.29	30	IAmb	IAmb	05 11 43.2	
DLBC	Dease Lake baz=296	84.29	30	P	P	05 11 42.4	+1.3
NEEM NEEM	North Greenlan comp=Z,9.1nm,0.9s	84.41	358	*i* P IAmb	P IAmb	05 11 42.5 05 11 45.5	+0.8
JAVC	Velka Javorina	84.75	320	*e*P	P	05 11 44.6	+1.0
T35M	Bob Quinn baz=296	84.81	31	P	P	05 11 45.1	+1.3
V35K	Ketchikan baz=294	84.82	33	P	P	05 11 44.4	+0.7
WRGLY	Wrigley comp=Z,12nm,1.1s	84.86	24	IAmb	IAmb	05 11 47.3	
WRGLY	Wrigley baz=301	84.86	24	P	P	05 11 45.2	+1.4
VRAC	Vranov	85.24	320	*e*P	P	05 11 46.5	+0.5
VRAC VRAC	Vranov comp=Z,3.1nm,0.7s,baz=57,slow=4.3,SNR=3.6 comp=Z,126nm,18.4s,baz=57,slow=38 comp=Z,3.1nm,0.7s	85.24	320	P LR	P LR	05 11 44.2 05 53 16.1	-1.9
RONA	Rosalia, Austr comp=Z,0.6nm,0.3s	86.03	319	*e*P	P	05 11 46.7	-3.4
CLL	Collm	86.54	323	*e*P	P	05 11 53.0	+0.6
RAR	Rarotonga comp=Z,62nm,19.0s,baz=250,slow=35	87.14	113	LR	LR	05 49 53.3	
GERES	GERESS Array B comp=Z,0.9nm,0.7s,baz=51,slow=4.3,SNR=4.0 comp=Z,0.9nm,0.7s	87.17	321	P	P	05 11 54.8	-0.9
MOA	Molln comp=Z,0.4nm,0.2s	87.23	320	*e*PcP	PcP	05 11 57.4	-0.6
BIOA	Bad Ischl, Aus comp=Z,1.1nm,0.3s	87.68	320	*e*P	P	05 11 57.2	-0.9
KBA	Koelnbreinsper comp=Z,0.2nm,0.2s	88.12	319	*e*P	P	05 12 00.1	-0.3
SUMG SUMG	Summit comp=Z,7.3nm,1.1s	88.36	354	*i* P IAmb	P IAmb	05 12 02.0 05 12 04.8	+0.8
YKA	Yellowknife Ar comp=Z,3.9nm,0.9s,baz=312,slow=4.6,SNR=47 comp=Z,3.9nm,0.9s	88.61	22	P	P	05 12 01.6	-0.5
VAE	Valguarnera comp=Z,9.4nm,1.0s,baz=350,slow=6.1,SNR=1.5 comp=Z,9.4nm,1.0s	91.38	310	P	P	05 12 16.1	+0.5
NEW	Newport baz=326	96.13	35	P	P	05 12 37.7	+0.5
NVAR	Mina Array Bea comp=Z,0.4nm,0.6s,baz=280,slow=12,SNR=3.6	101.06	43	P	Pdif	05 12 58.2	-1.5
TXAR	Lajitas Array comp=Z,0.7nm,0.8s,baz=257,slow=0.4,SNR=9.2	116.21	43	PKP	PKPdf	05 17 53.1	-0.1
MIAR	Mount Ida baz=323	118.21	32	P	PKPdf	05 17 56.3	-0.5
HRV	Adam Dziewonsk baz=347	118.53	10	P	PKiKP	05 17 57.5	+0.4
WVT	Waverly baz=328	119.57	26	P	PKPdf	05 17 58.3	-1.0
OXF	Oxford baz=326	120.24	29	P	PKPdf	05 17 59.6	-1.0
TZTN	Tazewell baz=333	120.90	23	P	PKPdf	05 18 02.0	+0.1
BRAL	Brewton baz=328	124.11	29	P	PKPdf	05 18 08.0	-0.1
NHSC	New Hope baz=335	125.19	21	P	PKPdf	05 18 09.5	-0.7
TIGA	Tifton baz=331	125.39	26	P	PKPdf	05 18 09.6	-1.0
DWPF	Disney Wildern baz=332	129.20	25	P	PKPdf	05 18 17.3	-0.6

IDC 06 05:00:13.1±3.1, 54°.13N×87°.25E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.5km s-min=18.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA 1.45 264 0.1nm,0.9s,baz=81,slow=342,SNR=13			I	I	05 08 10.0	
ZALV	Zalesovo Beam 1.45 264 3.7nm,0.3s,baz=82,slow=12,SNR=30			Pg	Pn	05 00 39.1	-1.4
ZALV				Lg	Lg	05 00 59.9	
KURBB	1.5nm,0.3s,baz=84,slow=28,SNR=5.5 Kurchatov Arra 6.39 240 0.1nm,0.3s,baz=54,slow=13,SNR=3.7			Pn	Pn	05 01 48.5	0.0
KURBB				Lg	Lg	05 03 36.0	
MKAR	baz=58,slow=32,SNR=1.4 0.5nm,0.3s Makanchi Array 8.00 205 0.1nm,0.3s,baz=26,slow=15,SNR=5.5 0.1nm,0.3s			Pn	Pn	05 02 12.2	+1.7

*IDC **06** 05:01:29.0±7.6, 18°.27S×178°.37W, h646km±103km, mb3.1/7, mbtmp4.1/8, Error ellipse: s-maj=91.8km s-min=34.7km az=156.0*

ISC 06 05:01:29.2±1.5, 18°.3S±0°.6×178°.4W±0°.4, h650km, n9, σ0s79/9, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 14.70 253 9.4nm,0.9s,baz=106,slow=15,SNR=2.5			P	P	05 04 32.0	-0.8
STKA	Stephens Creek 38.44 242 1.5nm,0.4s,baz=66,slow=9.9,SNR=6.7 1.5nm,0.4s			P	P	05 07 58.6	+0.3

WRA **Warramunga Arr 44.55 260** P **P** **05 08 46.9 +0.7**
1.7nm,0.4s,baz=97,slow=7.2,SNR=13
1.7nm,0.4s
ASAR **Alice Springs 44.68 255** P **P** **05 08 47.9 +0.6**
4.6nm,0.7s,baz=85,slow=8.5,SNR=18
4.6nm,0.7s
NVAR **Mina Array Bea 79.69 44** P **P** **05 12 31.9 +0.1**
0.8nm,0.7s,baz=225,slow=8.7,SNR=6.8
0.8nm,0.7s
TXAR **Lajitas Array 86.20 58** P **P** **05 13 04.6 +0.4**
1.1nm,0.8s,baz=221,slow=6.4,SNR=17
1.1nm,0.8s
ILAR **Eielson Array 86.23 13** P **P** **05 13 03.7 +0.3**
0.3nm,0.4s,baz=216,slow=5.1,SNR=2.9
0.3nm,0.4s
PDAR **Pinedale Array 87.62 43** P **P** **05 13 10.3 -0.4**
0.4nm,0.7s,baz=215,slow=6.9,SNR=3.6
0.4nm,0.7s
EKA **Eskdalemuir Ar 142.81 4** PKP **PKPdf** **05 19 48.8 -1.3**
6.1nm,1.2s,baz=339,slow=1.8,SNR=2.8

*IDC **06** 05:06:27.8±1.4,34.76N×23.25E,h0km,mb3.8/7, mbtmp3.7/13,ML3.7/6,MS3.6/2,Error ellipse: s-maj=25.3km s-min=21.3km az=22.0*
*ISK **06** 05:06:33.9,35.06N×23.14E,h24km,ML3.8/9*
*ATH **06** 05:06:37.4,35.06N×23.31E,h22km±2km,ML3.6/4, Error ellipse: s-maj=3.1km s-min=1.2km az=43.0*
*THE **06** 05:06:37.5,35.08N×23.33E,h15km,ML3.4/7, Error ellipse: s-maj=1.1km s-min=0.5km az=224.0*
ISC 06 05:06:32.5±1.0,34.96N±0.06×23.21E±0.05,h10km,n84, **σ1s99/97,mb3.6/7,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.73**	**99**	Pg	**Pn**	**05 06 50.1**	**+1.2**
GVD				Sg	**Sn**	**05 07 02.2**	**+2.1**
GVD	**Gavdhos**	**0.73**	**99**	P	**Pn**	**05 06 50.8**	**+1.9**
GVD				S	**Sn**	**05 06 59.7**	**-0.4**
GVD	**Gavdhos**	**0.73**	**99**	P	**Pn**	**05 06 50.4**	**+1.6**
GVD				S	**Sb**	**05 06 59.4**	**+2.0**
GVD				AML	AML	05 07 04.4	
	comp=E,27208μm,0.4s						
GVD				AML	AML	05 07 05.2	
	comp=N,30214μm,0.3s						
GVDS	**Gavdos**	**0.73**	**99**	Pg	**Pn**	**05 06 49.9**	**+1.0**
GVDS				Sg	**Sn**	**05 07 01.4**	**+1.3**
GVDS	**Gavdos**	**0.73**	**99**	P	**Pn**	**05 06 50.0**	**+1.0**
GVDS				S	**Sn**	**05 07 00.0**	**-0.1**
	comp=N,8μm,0.5s						
RODP	**Rodopos**	**0.75**	**37**	Pg	**Pb**	**05 06 48.6**	**+1.0**
RODP				Sg	**Sb**	**05 06 59.0**	**+1.1**
RODP	**Rodopos**	**0.75**	**37**	P	**Pb**	**05 06 49.3**	**+1.7**
IMMV	**Iera Moni Meta**	**0.80**	**51**	Pg	**Pb**	**05 06 50.1**	**+1.5**
IMMV				Sg	**Sb**	**05 07 01.5**	**+2.0**
IMMV	**Iera Moni Meta**	**0.80**	**51**	P	**Pb**	**05 06 49.8**	**+1.2**
IMMV				S	**Sb**	**05 06 59.9**	**+0.4**
	comp=N,7μm,0.6s						
IMMV	**Iera Moni Meta**	**0.80**	**51**	P	**Pb**	**05 06 50.2**	**+1.6**
IMMV				S	**Sg**	**05 06 59.3**	**+0.8**
IMMV				AML	AML	05 07 03.0	
	comp=E,15604μm,0.6s						
IMMV				AML	AML	05 07 07.9	
	comp=N,11112μm,0.7s						
ANKY	**Antikythira Is**	**0.91**	**5**	P	**Pb**	**05 06 52.4**	**+2.0**
ANKY				S	**Sb**	**05 07 03.9**	**+1.4**
	comp=N,3μm,0.8s						
ANKY	**Antikythira Is**	**0.91**	**5**	P	**Pn**	**05 06 52.8**	**+1.4**
ANKY				S	**Sb**	**05 07 03.6**	**+1.1**
ANKY				AML	AML	05 07 07.6	
	comp=E,5843μm,0.9s						
ANKY				AML	AML	05 07 09.9	
	comp=N,5969μm,0.6s						
PRNS	**Prines Rethymn**	**1.13**	**69**	P	**Pb**	**05 06 54.7**	**+0.6**
PRNS				S	**Sg**	**05 07 07.7**	**-1.2**
	comp=N,2μm,0.6s						
TMBK	**Timbaki Herakl**	**1.28**	**85**	P	**Pg**	**05 06 58.5**	**+1.4**
TMBK				S	**Sn**	**05 07 14.9**	**+1.3**
IDI	**Anoyia**	**1.41**	**76**	Pn	**Pn**	**05 06 59.2**	**+0.8**
IDI	**Anoyia**	**1.41**	**76**	P	**Pn**	**05 06 59.7**	**+1.3**
IDI				S	**Sb**	**05 07 17.7**	**+0.6**
	comp=N,915nm,0.7s						
IDI	**Anoyia**	**1.41**	**76**	LR	LR	05 07 38.8	
	comp=N,260nm,18.2s,baz=252,slow=49						
IDI	**Anoyia**	**1.41**	**76**	P	**Pn**	**05 06 59.7**	**+1.3**
IDI				S	**Sb**	**05 07 16.8**	**-0.3**
IDI				AML	AML	05 07 21.6	
	comp=E,2201μm,0.5s						
IDI				AML	AML	05 07 25.2	
	comp=N,2226μm,0.8s						
IACM	**Heraklion**	**1.56**	**77**	P	**Pn**	**05 07 01.8**	**+1.5**
IACM				S	**Sn**	**05 07 21.8**	**+1.2**
IACM	**Heraklion**	**1.56**	**77**	P	**Pb**	**05 07 02.2**	**+0.8**
HRKL	**Herakleio**	**1.59**	**77**	Pn	**Pn**	**05 07 01.9**	**+1.2**
HRKL	**Herakleio**	**1.59**	**77**	P	**Pn**	**05 07 02.5**	**+1.8**
VLI	**Veliai**	**1.77**	**353**	P	**Pn**	**05 07 05.3**	**+2.1**
VLI	**Veliai**	**1.77**	**353**	P	**Pn**	**05 07 05.4**	**+2.1**
MHLO	**Agia Marina, M**	**1.98**	**29**	P	**Pn**	**05 07 06.9**	**+0.8**
MHLO	**Agia Marina, M**	**1.98**	**29**	P	**Pn**	**05 07 07.4**	**+1.4**
FRMA	**Ierapetra Chan**	**2.07**	**88**	P	**Pb**	**05 07 11.1**	**+0.9**
THR9	**Santorini-Faro**	**2.23**	**51**	P	**Pn**	**05 07 10.3**	**+0.7**
PYL	**PYLOS**	**2.27**	**329**	P	**Pn**	**05 07 12.1**	**+2.0**
PYL	**PYLOS**	**2.27**	**329**	P	**Pn**	**05 07 11.8**	**+1.7**
SNT5	**Nea Kammeni, S**	**2.29**	**50**	P	**Pn**	**05 07 10.6**	**+0.3**
THR3	**Thira Island,**	**2.29**	**50**	P	**Pn**	**05 07 11.1**	**+0.7**
SANT	**Santorini**	**2.31**	**52**	Pn	**Pn**	**05 07 10.9**	**+0.3**
SANT	**Santorini**	**2.31**	**52**	P	**Pn**	**05 07 10.9**	**+0.3**
KRND	**KRANIDI**	**2.42**	**359**	P	**Pn**	**05 07 14.9**	**+2.8**
KRND	**KRANIDI**	**2.42**	**359**	P	**Pn**	**05 07 14.5**	**+2.4**
ZKR	**Zakros**	**2.47**	**86**	Pn	**Pn**	**05 07 14.5**	**+1.7**
ZKR	**Zakros**	**2.47**	**86**	P	**Pn**	**05 07 14.8**	**+2.0**
ZKR				S	**Sn**	**05 07 44.9**	**+1.8**
	comp=N,338nm,1.0s						
ZKR	**Zakros**	**2.47**	**86**	P	**Pn**	**05 07 15.3**	**+2.4**
APE	**Apeiranthos**	**2.82**	**41**	Pn	**Pn**	**05 07 18.9**	**+1.2**
VLY	**Voula,Athens**	**2.92**	**9**	P	**Pn**	**05 07 20.2**	**+1.1**
VLY	**Voula,Athens**	**2.92**	**9**	P	**Pn**	**05 07 20.2**	**+1.1**
LOUT	**Loutraki**	**3.03**	**356**	P	**Pn**	**05 07 22.8**	**+2.3**
GUR	**Goura**	**3.05**	**347**	P	**Pn**	**05 07 23.8**	**+2.9**
LTK	**Loutraki**	**3.06**	**356**	P	**Pn**	**05 07 23.1**	**+2.1**
PTL	**Penteli**	**3.13**	**9**	P	**Pn**	**05 07 23.7**	**+1.8**
KLV	**Kalavryta, Ach**	**3.19**	**345**	P	**Pn**	**05 07 27.2**	**+4.3**
VILL	**Villia**	**3.20**	**1**	P	**Pn**	**05 07 24.1**	**+1.2**
DRO	**Drossia**	**3.22**	**338**	P	**Pn**	**05 07 26.4**	**+3.2**
DRO	**Drossia**	**3.22**	**338**	P	**Pn**	**05 07 26.0**	**+2.8**
VIL2	**Platees**	**3.25**	**1**	P	**Pn**	**05 07 24.1**	**+0.6**
KARP	**Karpathos**	**3.28**	**79**	Pn	**Pn**	**05 07 26.1**	**+2.0**
KARP	**Karpathos**	**3.28**	**79**	P	**Pn**	**05 07 25.3**	**+1.2**
RLS	**Riolos of Patr**	**3.40**	**336**	P	**Pn**	**05 07 27.9**	**+2.3**
EFP	**Efpalio**	**3.62**	**343**	P	**Pn**	**05 07 32.2**	**+3.6**
KYMI	**Kymi, Euboea I**	**3.73**	**11**	P	**Pn**	**05 07 30.6**	**+0.4**
ANX	**Ano Chora**	**3.77**	**344**	P	**Pn**	**05 07 33.1**	**+2.3**
ANX				S	**Sn**	**05 08 16.5**	**+1.2**
	comp=N,108nm,1.2s						
ANX	**Ano Chora**	**3.77**	**344**	P	**Pn**	**05 07 34.0**	**+3.1**
AXAR	**Agios Charalam**	**3.82**	**353**	P	**Pn**	**05 07 33.0**	**+1.5**
FSK	**Fiskardo**	**4.09**	**329**	P	**Pn**	**05 07 39.2**	**+4.1**
MAKR	**Makrakomi, Fth**	**4.14**	**348**	P	**Pn**	**05 07 38.0**	**+2.2**
MAKR				S	**Sn**	**05 08 25.5**	**+1.3**
EVGI	**Lefkada island**	**4.19**	**331**	P	**Pn**	**05 07 39.2**	**+2.7**
NYDR	**Nydri-Lefkada**	**4.25**	**332**	P	**Pn**	**05 07 40.4**	**+3.1**
LKD2	**Lefkada island**	**4.33**	**333**	P	**Pn**	**05 07 40.9**	**+2.4**
YER	**Yerkesik**	**4.64**	**61**	P	**Pn**	**05 07 44.4**	**+1.6**
LSTV	**Lastovo**	**9.22**	**330**	*e*Pn	**Pn**	**05 08 42.8**	**-2.8**
LSTV				Sn	Sn	05 10 18.8	-10
BRTR	**Keskin Array B**	**9.56**	**57**	Pn	**Pn**	**05 08 50.7**	**+0.3**
	comp=N,0.1nm,0.3s,baz=239,slow=16,SNR=5.6						
BRTR				Sn	**Sn**	**05 10 30.7**	**-7.3**
	comp=N,0.1nm,0.3s,baz=140,slow=44,SNR=1.0						
	comp=N,0.7nm,0.5s						
RICI	**Ricice**	**9.74**	**333**	*e*Pn	**Pn**	**05 08 50.1**	**-2.5**
RICI				Sn	Sn	05 10 32.0	-10
MMAI	**Mount Meron Ar**	**10.31**	**97**	Pn	Pn	05 08 56.2	-4.3
	comp=N,1.3nm,0.3s,baz=303,slow=13,SNR=2.0						
MMAI				Sn	Sn	05 10 47.6	-8.5
	comp=N,1.3nm,0.3s,baz=305,slow=28,SNR=1.7						
	comp=N,0.8nm,0.3s						
KIJV	**Kijevo**	**10.45**	**332**	*e*Pn	**Pn**	**05 09 01.0**	**-1.3**
KIJV				Sn	Sn	05 10 49.5	-10
MORI	**Morici**	**10.62**	**329**	*i* Pn	Pn	05 09 01.2	-3.4
MLR	**Muntele Rosu**	**10.72**	**10**	Pn	**Pn**	**05 09 05.7**	**-0.5**
	comp=N,0.1nm,0.3s,baz=234,slow=15,SNR=2.4						
	comp=N,0.8nm,0.5s						
EIL	**Elat**		**11.24 115**	Pn	Pn	05 09 09.3	-4.0
	comp=N,0.3nm,0.3s,baz=293,slow=5.6,SNR=2.3						
	comp=N,1.9nm,0.5s						
VRAC	**Vranov**		**15.14 343**	Pn	**Pn**	**05 10 08.0**	**+1.6**
	comp=N,0.2nm,0.3s,baz=144,slow=18,SNR=2.0						
	comp=N,2.3nm,0.8s						
GERES	**GERESS Array B**		**15.56 336**	Pn	**Pn**	**05 10 13.0**	**+1.0**
	comp=N,0.1nm,0.3s,baz=158,slow=11,SNR=1.7						
	comp=N,0.2nm,0.3s						
GNI	**Garni**		**17.82 67**	LR	LR	05 18 41.6	
	comp=N,54nm,20.1s,baz=295,slow=41						
NOA	**NORSAR Array B**		**27.21 347**	P	**P**	**05 12 13.9**	**-2.4**
	comp=N,0.6nm,0.8s,baz=124,slow=2.8,SNR=3.0						
	comp=N,0.6nm,0.8s						
EKA	**Eskdalemuir Ar**		**27.30 326**	P	**P**	**05 12 16.1**	**-0.9**
	comp=N,1.1nm,0.9s,baz=138,slow=6.7,SNR=1.6						
	comp=N,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**		**29.16 227**	P	P	05 12 29.5	-4.5
	comp=N,0.3nm,0.8s,baz=37,slow=10,SNR=1.2						
	comp=N,0.3nm,0.8s						
KURBB	**Kurchatov Arra**		**42.49 51**	P	**P**	**05 14 25.2**	**-2.5**
	comp=N,0.9nm,0.9s,baz=270,slow=7.6,SNR=3.6						
	comp=N,0.9nm,0.9s						
SPITS	**Spitsbergen Ar**		**43.42 358**	P	**P**	**05 14 33.3**	**-1.7**
	comp=N,12nm,0.9s,baz=246,slow=11,SNR=1.1						
	comp=N,12nm,0.9s						
MKAR	**Makanchi Array**		**45.21 56**	P	**P**	**05 14 47.5**	**-2.2**
	comp=N,0.3nm,0.3s,baz=267,slow=8.1,SNR=8.1						
	comp=N,0.3nm,0.3s						
ZALV	**Zalesovo Beam**		**46.29 46**	P	**P**	**05 14 55.2**	**-2.9**
	comp=N,0.5nm,0.3s,baz=263,slow=9.3,SNR=2.9						
	comp=N,0.5nm,0.3s						
DLBC	**Dease Lake**		**84.30 346**	LR	LR	05 57 28.5	
	comp=N,126nm,18.2s,baz=297,slow=36						

*IDC **06** 05:09:12.7±0.5,24.22N×121.77E,h0km,mb4.3/26, mbtmp4.3/29,ML3.5/3,MS4.1/41,Error ellipse: s-maj=16.9km s-min=12.7km az=65.0*
*GCMT **06** 05:09:12.8±0.3,24.06N±0.02×121.70E±0.03,h23km±1km, MW4.9/73,Moment Tensor Solution. s31,c33; s73,c98; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.68±.20; Mθθ-2.24±.12; Mϕϕ-0.43±.12; Mre1.56±.15; Mθθ-0.74±.07; Mϕr-0.34±.20; Best double couple: M₀3.03300×10^16 NP1:ϕs85.00000°,δ60.00000°,λ104.00000°. NP2: ϕs238.00000°,δ32.00000°,λ67.00000°. Principal axes: T 3.2120, Plg71.0000°, Azm27.0000°; N -0.3570, Plg12.0000°, Azm258.0000°; P -2.8540, Plg14.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **06** 05:09:13.5±0.0,24.18N×121.83E,h10km,mb4.5/66, mB5.1/40,ML4.6/11,Ms4.9/70,Ms7 4.8/69*
*ASIES **06** 05:09:14.9,24.19N×121.72E,h11km,ML5.1,Mw4.8, Moment Tensor Solution. Moment tensor: Scale 10^23Nm; Mrr0.70; Mθθ-1.50; Mϕϕ0.41; Mre0.99; Mθϕ-0.43; Mϕr-0.73; Fault plane solution: M₀1.77299×10^23 NP1: ϕs111.48000°,δ72.44000°,λ125.05000°. NP2: ϕs224.75000°,δ38.69000°,λ28.86000°. Principal axes: T Plg49.9310°, Azm60.5820°; N Plg33.1940°, Azm279.5250°; P Plg19.7900°, Azm175.9090°;*
*NEIC **06** 05:09:14.8±2.0,24.17N±0.03×121.71E±0.04,h9km±4km, mb5.1/166,Mwr4.8/24 Error ellipse: s-maj=5.9km s-min=1.4km az=126.0,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr1.22; Mθθ-1.38; Mϕϕ0.15; Mre1.11; Mθϕ-0.80; Mϕr-0.25; Fault plane solution: M₀1.91000×10^16 NP1:ϕs220.18000°,δ35.11000°, λ45.24000°. NP2:ϕs90.65000°,δ65.89000°,λ116.34000°. Principal axes: T 1.8082, Plg60.0000°, Azm40.0000°; N 0.1922, Plg24.0000°, Azm259.0000°; P -2.0004, Plg17.0000°, Azm162.0000°;*
*TAP **06** 05:09:14.9,24.19N×121.72E,h11km,ML5.1,B*
*NEIC **06** 05:09:15.7,24.17N×121.69E,h10km*
*JMA **06** 05:09:15.2±0.1,24.2N±0.3×121.7E±0.6,h11km,MD5.1/19, MV4.8/19,TAIWAN REGION*
*NIED **06** 05:09:15.2,24.15N×121.70E,h11km,MW4.8,Moment Tensor Solution. s2 Moment tensor: Scale 10^16Nm; Mrr0.28; Mθθ-0.84; Mϕϕ0.56; Mre1.45; Mθϕ-0.65; Mϕr-0.11; Fault plane solution: M₀1.72000×10^16 NP1: ϕs101.00000°,δ83.00000°,λ119.00000°. NP2: ϕs203.00000°,δ30.00000°,λ13.00000°.*
ISC 06 05:09:15.7±0.4,24.17N±0.01×121.73E±0.01,h14km±2km, **h14km:pP-P,n618,σ1s27/682,mb5.0/122,MS4.3/42,** **40C-53D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.10**	**261**	⇑*i*P	**Pg**	**05 09 17.8**	**-1.1**
	baz=253						
ETL				S	**Sg**	**05 09 19.9**	**-1.0**
	baz=253						
NACB	**Ninganchiao**	**0.12**	**270**		**Pg**	**05 09 17.9**	**-1.1**
NACB				Sg	**Sg**	**05 09 20.0**	**-1.4**
NACB	**Ninganchiao**	**0.12**	**270**	P	**Pg**	**05 09 18.1**	**-1.0**
NACB	**Ninganchiao**	**0.12**	**270**	⇑*i*P	**Pg**	**05 09 18.0**	**-1.1**
	baz=264						
NACB				*i* S	**Sg**	**05 09 20.0**	**-1.4**
	baz=264						
EHP	**Heping Village**	**0.14**	**5**	⇓*i*P	**Pg**	**05 09 18.2**	**-1.1**
	baz=12						
EHP				*i* S	**Sg**	**05 09 20.5**	**-1.3**
	baz=12						
TWD	**Chiawan**	**0.15**	**232**	⇑*i*P	**Pg**	**05 09 18.5**	**-1.0**
	baz=226						
TWD				*e*S	**Sg**	**05 09 21.2**	**-0.9**
	baz=226						
EAHA	**Aohua**	**0.15**	**4**	⇓*i*P	**Pg**	**05 09 18.4**	**-1.1**
	baz=6.0						
EAHA				*i* S	**Sg**	**05 09 20.9**	**-1.3**
	baz=6.0						
ETLH	**Xiulin Townshi**	**0.23**	**278**	⇑*i*P	**Pg**	**05 09 19.8**	**-0.9**
	baz=276						
ETLH				S	**Sg**	**05 09 23.0**	**-1.1**
	baz=276						
HWA	**Hwalien**	**0.23**	**210**	⇑*i*P	**Pg**	**05 09 20.4**	**-0.3**
	baz=216						
HWA				S	**Sg**	**05 09 23.5**	**-0.5**
	baz=216						
ENA	**Nanau**	**0.25**	**3**	⇓*i*P	**Pg**	**05 09 20.2**	**-1.0**
	baz=5.0						
ENA				S	**Sg**	**05 09 23.8**	**-1.1**
	baz=5.0						
EWUT	**Wuta**	**0.27**	**10**	⇓*i*P	**Pg**	**05 09 20.6**	**-1.0**
	baz=11						
EWUT				S	**Sg**	**05 09 24.2**	**-1.2**
	baz=11						
ETM	**Tongmen**	**0.30**	**226**	⇑*i*P	**Pg**	**05 09 21.0**	**-0.9**
	baz=224						
ETM				*e*S	**Sg**	**05 09 25.1**	**-1.0**
	baz=224						
LXIB	**Xiulin Townshi**	**0.33**	**242**	⇑*i*P	**Pg**	**05 09 21.4**	**-1.0**
	baz=241						
LXIB				S	**Sg**	**05 09 26.3**	**-0.8**
	baz=241						
NNSB	**Datong**	**0.40**	**309**	⇓*i*P	**Pg**	**05 09 23.1**	**-0.8**
	baz=308						
NNSB				*i* S	**Sg**	**05 09 28.3**	**-1.1**
	baz=308						
LATG	**Datong**	**0.40**	**333**	⇓*i*P	**Pg**	**05 09 23.1**	**-0.8**
	baz=332						
LATG				*e*S	**Sg**	**05 09 28.4**	**-1.0**
	baz=332						
SHUL	**Shoufeng**	**0.41**	**201**	⇑P	**Pg**	**05 09 24.1**	**+0.1**
	baz=206						
ESAO	**Su ao**	**0.41**	**15**	⇓*i*P	**Pg**	**05 09 23.0**	**-1.0**
	baz=16						
ESAO				S	**Sg**	**05 09 28.8**	**-0.8**
	baz=16						
NNS	**Nan Shan**	**0.42**	**309**	⇓*i*P	**Pg**	**05 09 23.3**	**-0.8**
	baz=309						
NNS				S	**Sg**	**05 09 28.8**	**-1.1**
	baz=309						
WHF	**Hehuan Shan**	**0.42**	**266**	⇑P	**Pg**	**05 09 23.5**	**-0.8**
	baz=265						
WHF				S	**Sg**	**05 09 29.1**	**-1.1**
	baz=265						
FUSS	**Fushou**	**0.45**	**280**	⇑*i*P	**Pg**	**05 09 24.2**	**-0.5**
	baz=278						
FUSS				*i* S	**Sg**	**05 09 30.0**	**-0.8**
	baz=278						
TWC	**Suao**	**0.45**	**14**	⇓*i*P	**Pg**	**05 09 23.8**	**-0.9**
	baz=9.0						
TWC				S	**Sg**	**05 09 29.0**	**-1.7**
	baz=9.0						
ESL	**Shilin**	**0.45**	**217**	⇑*i*P	**Pg**	**05 09 23.7**	**-1.0**
	baz=222						
ESL				*e*S	**Sg**	**05 09 30.0**	**-0.7**
	baz=222						
NDS	**Dongshan**	**0.46**	**359**	⇓*i*P	**Pg**	**05 09 24.1**	**-0.7**
	baz=358						
NDS				S	**Sg**	**05 09 30.2**	**-0.8**
	baz=358						
NDT	**Datong Townshi**	**0.47**	**335**	⇓*i*P	**Pg**	**05 09 24.6**	**-0.5**
	baz=335						
NDT				*e*S	**Sg**	**05 09 31.0**	**-0.3**
	baz=335						
ENTT	**Nioudou**	**0.49**	**342**	⇓*i*P	**Pg**	**05 09 24.7**	**-0.7**
	baz=342						
ENTT				S	**Sg**	**05 09 31.5**	**-0.4**
	baz=342						
TEGC	**Jichi Village**	**0.49**	**200**	*e*P	**Pb**	**05 09 26.1**	**-0.1**
	baz=190						
TEGC				S	**Sn**	**05 09 35.1**	**-1.6**
	baz=190						
TWT	**Tachien**	**0.51**	**279**	⇑*i*P	**Pg**	**05 09 25.7**	**-0.2**
	baz=277						
TWT				*e*S	**Sg**	**05 09 32.4**	**-0.3**
	baz=277						
CHGB	**Renai**	**0.52**	**257**	⇑*i*P	**Pg**	**05 09 25.4**	**-0.6**
	baz=249						
CHGB				S	**Sg**	**05 09 32.1**	**-0.9**
	baz=249						
EOS2	**EOS2**	**0.52**	**62**	⇓*e*P	**Pb**	**05 09 26.4**	**-0.2**
	baz=56						
TDCB	**Techi**	**0.53**	**279**	⇑*i*P	**Pg**	**05 09 25.8**	**-0.4**
	baz=278						
TDCB				*i* S	**Sg**	**05 09 31.9**	**-1.3**
	baz=278						
EOS4	**EOS4**	**0.54**	**95**	*e*P	**Pn**	**05 09 28.0**	**-0.7**
	baz=95						
TWE	**Neicheng**	**0.55**	**354**	⇓*i*P	**Pg**	**05 09 25.9**	**-0.7**
	baz=355						
TWE				*i* S	**Sg**	**05 09 33.2**	**-0.7**
	baz=355						
OWD	**Renai**	**0.55**	**247**	⇑*i*P	**Pg**	**05 09 25.8**	**-0.8**
	baz=246						
OWD				*e*S	**Sg**	**05 09 33.2**	**-0.7**
	baz=246						
EOS3	**EOS3**	**0.55**	**78**	*e*P	**Pb**	**05 09 27.7**	**+0.6**
	baz=76						
WARBT	**Fenglin Townsh**	**0.55**	**215**	⇑*i*P	**Pg**	**05 09 25.5**	**-1.1**
	baz=223						
WARBT				S	**Sb**	**05 09 35.2**	**+0.2**
	baz=223						
EGFH	**Guangfu**	**0.57**	**209**	⇑*i*P	**Pg**	**05 09 26.3**	**-0.7**
	baz=216						
EGFH				*e*S	**Sg**	**05 09 34.5**	**-0.1**
	baz=216						
WUSB	**Renai**	**0.59**	**252**	⇑*i*P	**Pg**	**05 09 26.7**	**-0.6**
	baz=244						
WUSB				*e*S	**Sg**	**05 09 33.7**	**-1.4**
	baz=244						
YHNB	**Yeheng**	**0.59**	**327**		**Pg**	**05 09 26.3**	**-1.0**
YHNB				Sg	**Sg**	**05 09 33.7**	**-1.4**
YHNB	**Yeheng**	**0.59**	**327**	P	**Pg**	**05 09 26.8**	**-0.5**
YHNB	**Yeheng**	**0.59**	**327**	⇓*i*P	**Pg**	**05 09 26.8**	**-0.5**
	baz=326						
YHNB				S	**Sg**	**05 09 34.0**	**-1.1**
	baz=326						
ILA	**Ilan**	**0.59**	**2**	⇓*i*P	**Pg**	**05 09 26.8**	**-0.5**
	baz=3.0						
ILA				*e*S	**Sg**	**05 09 35.0**	**-0.1**
	baz=3.0						
FUSB	**Fushanzhiwuyua**	**0.60**	**348**	⇓*i*P	**Pg**	**05 09 26.8**	**-0.7**
	baz=347						
FUSB				*i* S	**Sg**	**05 09 34.4**	**-1.1**
	baz=347						
NSK	**Sanguang**	**0.60**	**326**	⇓*i*P	**Pg**	**05 09 26.9**	**-0.7**
	baz=326						
NSK				*e*S	**Sg**	**05 09 34.6**	**-1.0**
	baz=326						
NWLT	**Wulai**	**0.63**	**341**	⇓*i*P	**Pg**	**05 09 27.5**	**-0.7**
	baz=341						
NWLT				S	**Sg**	**05 09 35.2**	**-1.4**
	baz=341						
VWDT	**VWDT**	**0.68**	**232**	⇑*i*P	**Pg**	**05 09 28.3**	**-0.7**
	baz=232						
VWDT				*e*S	**Sg**	**05 09 35.4**	**-2.6**
	baz=232						
NTC	**Toucheng**	**0.68**	**8**	*e*P	**Pg**	**05 09 28.4**	**-0.7**
	baz=8.0						
NTC				*e*S	**Sg**	**05 09 37.2**	**-0.9**
	baz=8.0						
NFF	**Wufeng Townshi**	**0.72**	**309**	⇓*i*P	**Pg**	**05 09 29.2**	**-0.6**
	baz=315						
NFF				*e*S	**Sg**	**05 09 38.4**	**-0.8**
	baz=315						
WHP	**Taichung City**	**0.72**	**278**	⇓*e*P	**Pb**	**05 09 29.9**	**-0.2**
	baz=278						
WHP				*i* S	**Sg**	**05 09 39.2**	**-0.1**
	baz=278						
HGSD	**Ruisui**	**0.73**	**202**	⇑*e*P	**Pg**	**05 09 29.9**	**-0.1**
	baz=217						
HGSD				*e*S	**Sn**	**05 09 43.2**	**+0.5**
	baz=217						
WCS	**Beigang Elemen**	**0.75**	**261**	⇑P	**Pg**	**05 09 29.9**	**-0.5**
	baz=253						
WCS				*e*S	**Sg**	**05 09 39.6**	**-0.7**
	baz=253						
EHY	**Hungye**	**0.76**	**209**	*e*P	**Pg**	**05 09 29.3**	**-1.2**
	baz=219						
EHY				*e*S	**Sg**	**05 09 39.8**	**-0.8**
	baz=219						
TIPB	**Shuangxi**	**0.80**	**6**	⇓*i*P	**Pg**	**05 09 30.4**	**-0.9**
	baz=358						
TIPB				*e*S	**Sg**	**05 09 40.1**	**-1.7**
	baz=358						
LIOB	**Emei**	**0.80**	**306**	⇓*i*P	**Pg**	**05 09 31.0**	**-0.3**
	baz=305						
LIOB				*e*S	**Sg**	**05 09 40.9**	**-1.0**
	baz=305						
NSTT	**Nanjuang**	**0.80**	**305**	⇓*i*P	**Pg**	**05 09 30.8**	**-0.5**
	baz=304						
NSTT				*e*S	**Sg**	**05 09 40.6**	**-1.3**
	baz=304						
SSLB	**Suanglung**	**0.81**	**242**		**Pg**	**05 09 30.1**	**-1

baz=354
NWF eS Sg 05 09 42.5 -2.4
baz=354
WFSB Wu-fen Shan 0.89 3 ⇓iP Pg 05 09 32.4 -0.7
baz=354
WFSB eS Sg 05 09 41.7 -3.1
baz=354
EYUL Yuli 0.90 205 ⇓eP Pg 05 09 32.0 -1.2
baz=220
TWF1 Yuli 0.91 206 eP Pg 05 09 31.6 -1.7
baz=217
NSY Sanyi 0.91 285 ⇓iP Pn 05 09 33.9 -0.3
baz=285
NSY eS Sb 05 09 46.0 +0.5
baz=285
SBCB Hsinchu 0.91 312 ⇓iP Pn 05 09 33.8 -0.5
baz=311
SBCB eS Sb 05 09 45.4 -0.1
baz=311
SXI1 Grass Mountain 0.93 8 ⇓iP Pg 05 09 33.0 -0.7
baz=353
NMLH Miaoli 0.93 293 ⇓eP Pn 05 09 34.2 -0.2
baz=292
NMLH eS Sb 05 09 45.9 +0.1
baz=292
WHYT Xinyi Township 0.93 239 eP Pg 05 09 32.8 -0.9
baz=246
WHYT eS Sg 05 09 45.5 -0.4
baz=246
HSN Hsinchu 0.93 312 eP Pb 05 09 33.7 0.0
baz=314
HSN eS Sg 05 09 45.0 -1.0
baz=314
NCUH Zhongli 0.93 328 ⇓eP Pb 05 09 33.8 +0.1
baz=327
NCUH eS Sn 05 09 47.2 -0.5
baz=327
TWS1 Kuangyinshan 0.96 343 ⇓iP Pg 05 09 34.3 -0.1
baz=350
TWS1 eS Sb 05 09 46.9 -0.1
baz=350
TNOU National Taiwa 0.97 2 ⇓P Pb 05 09 33.8 -0.6
baz=2.0
TNOU eS Sb 05 09 44.9 -2.2
baz=2.0
WJS Zhushan 0.98 249 ⇑eP Pn 05 09 35.0 -0.2
baz=244
WJS eS Sb 05 09 47.0 -0.3
baz=244
YM01 YM01 0.98 352 ⇓iP Pb 05 09 34.1 -0.5
baz=351
YM01 eS Sg 05 09 46.5 -1.0
baz=351
WNT Mingjian 1.00 253 ⇑P Pn 05 09 35.3 -0.1
baz=248
WNT eS Sn 05 09 49.2 -0.1
baz=248
WDJ Dajia District 1.01 280 eP Pn 05 09 36.0 +0.5
baz=280
WDJ eS Sn 05 09 49.1 -0.4
baz=280
NTST Danshui 1.02 346 ⇓iP Pg 05 09 35.3 -0.1
baz=354
NTST eS Sn 05 09 49.8 +0.1
baz=354
CHKH Chenggong 1.02 197 ⇓eP Pb 05 09 34.5 -0.8
baz=190
CHKH eS Sg 05 09 48.6 -0.3
baz=190
ANP Anpu 1.02 349 ⇓eP Pb 05 09 34.9 -0.5
baz=349
FULB Fuli 1.05 202 ⇓eP Pb 05 09 35.1 -0.6
baz=219
FULB eS Sn 05 09 50.2 -0.4
baz=219
ALS Alishan 1.07 232 ⇑iP Pb 05 09 35.7 -0.6
baz=233
ALS eS Sb 05 09 49.1 -1.2
baz=233
WCHH Zhanghua 1.07 265 eP Pn 05 09 37.4 +1.0
baz=265
WCHH eS Sn 05 09 52.0 +0.9
baz=265
TWY Chenhua 1.10 354 ⇑iP Pg 05 09 36.8 -0.2
baz=353
TWY eS Sb 05 09 49.1 -1.8
baz=353
CHN5 Tsauling 1.12 239 eP Pg 05 09 37.2 -0.1
baz=240
CHN5 eS Sn 05 09 52.8 +0.4
baz=240
CHKT Chengkung 1.12 197 eP Pb 05 09 35.2 -1.7
baz=191
CHKT eS Sn 05 09 52.8 +0.5
baz=191
EHD Haiduan 1.13 205 eP Pb 05 09 35.9 -1.2
baz=208
EHD eS Sb 05 09 51.4 -0.2
baz=208
JYNG Yonagunijimaku 1.15 76 P Pn 05 09 37.2 -0.2
JYNG S Sg **05 09 52.4 -0.3**
JYNG Yonagunijimaku 1.15 76 A A 05 09 37.2
comp=E,39nm,3.0s,comp=N,48nm,3.7s
ECS Chishang 1.17 204 eP Pn 05 09 36.7 -1.1
baz=219
ECS eS Sb 05 09 53.0 +0.1
baz=219
WGK Gukeng 1.17 246 ⇑iP Pg 05 09 38.2 -0.1
baz=246
WGK eS Sn 05 09 54.9 +1.3
baz=246
ELDTW Lidau 1.18 214 eP Pb 05 09 36.1 -1.9
baz=228
ELDTW eS Sb 05 09 52.5 -0.7
baz=228
WDLH Douliu 1.19 246 ⇑iP Pg 05 09 38.7 0.0
baz=247
WDLH eS Sg 05 09 55.1 +0.9
baz=247
YOJ Yonaguni jima 1.21 76 Pn **Pn 05 09 38.1 -0.2**
YOJ Yonaguni jima 1.21 76 P **Pb 05 09 38.2 -0.2**
YOJ Yonaguni jima 1.21 76 ⇑iP Pn 05 09 38.1 -0.2
baz=68
YOJ eS Sg 05 09 54.8 +0.1
baz=68
YOJ Yonaguni jima 1.21 76 P **Pb 05 09 38.4 0.0**
YOJ eS **Sn 05 09 54.4 0.0**
YOJ Yonaguni jima 1.21 76 A A 05 09 38.4
comp=E,50nm,2.8s,comp=N,42nm,4.8s
WCKO Fanlu 1.26 235 ⇑P Pg 05 09 39.6 -0.4
baz=236
WCKO eS Sg 05 09 57.6 +1.1
baz=236
WRL Guolierlin Hig 1.26 258 eP Pg 05 09 39.5 -0.5
baz=258
WRL S Sg 05 09 57.5 +0.9
baz=258
WTK Tuku 1.32 249 eP Pg 05 09 40.5 -0.6
baz=249
WTK eS Sg 05 09 58.5 +0.3
baz=249
CHN4 Tsaushan 1.32 232 ⇑eP Pg 05 09 41.0 -0.3
baz=222
CHN4 eS Sg 05 09 57.8 -0.7
baz=222
STYH Taoyuan 1.33 221 eP Pn 05 09 40.0 +0.1
baz=224
STYH eS Sg 05 09 57.9 -0.6
baz=224
TPUB Ta-pu 1.33 229 Pn **Pb 05 09 40.2 -0.3**
TPUB Ta-pu 1.33 229 P **Pb 05 09 40.6 +0.1**
TPUB Ta-pu 1.33 229 ⇓iP Pb 05 09 40.6 +0.1
baz=220
TPUB eS Sg 05 09 59.0 +0.3
baz=220
WTCT Ta-ch'eng 1.36 257 eP Pb 05 09 41.2 +0.2
baz=257
WTCT eS Sg 05 09 59.9 +0.4
baz=257
CHY Chiayi 1.37 241 eP Pg 05 09 42.2 +0.1
baz=242
CHY eS Sb 05 09 59.0 +0.4
baz=242
LONT Longtian 1.38 204 eP Pn 05 09 39.0 -1.6
baz=207
WTP Ta-pu 1.38 228 ⇓eP Pb 05 09 41.3 0.0
baz=219
WTP eS Sg 05 10 00.4 +0.2
baz=219
TWK Hsinying 1.45 232 ⇓P Pb 05 09 42.7 +0.1
baz=234
TWK eS Sg 05 10 02.2 -0.3
baz=234
SNST Tainan City 1.47 230 ⇓eP Pb 05 09 43.0 0.0
baz=233
SNST eS Sg 05 10 03.5 +0.2
baz=233
TWG Pinlang 1.48 204 Pn 05 09 39.8 -2.2
TWG Pinlang 1.48 204 eP Pn 05 09 39.6 -2.3
baz=190
TWGBT Beinan 1.48 204 P Pn 05 09 39.9 -2.1
TWGBT Beinan 1.48 204 eP Pn 05 09 39.6 -2.3
baz=190
CHN1 Nanshi 1.48 228 eP Pb 05 09 43.0 0.0
baz=221
CHN1 eS Sg 05 10 03.7 +0.4
baz=221
WSF Szhu 1.48 249 eP Pb 05 09 43.3 +0.3
baz=239
WSF S Sg 05 10 04.4 +1.0
baz=239
PCYT Pengchaiyu 1.48 12 eP Pn 05 09 42.2 +0.2
baz=10.0
SGST Jiashian 1.51 224 ⇓P Pn 05 09 42.4 -0.1
baz=226
SGST eS Sg 05 10 04.4 0.0
baz=226
TTN Taitung 1.51 201 eP Pb 05 09 43.0 -0.6
baz=204
LDUT Ludao 1.51 189 eP Pn 05 09 40.5 -2.0
baz=181
LDUT eS Sn 05 09 59.0 -3.0
baz=181
WSL Shuilin Townsh 1.52 245 eP Pg 05 09 44.2 -0.7
baz=246
WSL eS Sg 05 10 05.1 +0.5
baz=246
SLGT Liugui 1.54 220 ⇓eP Pb 05 09 43.7 -0.3
baz=224
SLGT eS Sb 05 10 04.0 +0.6
baz=224
ICHU Yijhu 1.55 239 eP Pb 05 09 44.0 -0.4
baz=242
ICHU eS Sg 05 10 06.2 +0.4
baz=242
CHN8 Yiju 1.61 240 eP Pb 05 09 45.2 -0.2
baz=227
CHN8 eS Sg 05 10 07.7 -0.1
baz=227
CHN3 Shinhua 1.66 229 eP Pg 05 09 47.1 -0.5
baz=234
SHHT Tainan City 1.71 228 eP Pg 05 09 47.7 -0.9
baz=233
SCST Cishan 1.71 222 eP Pb 05 09 47.4 +0.4
baz=227
SCST eS Sg 05 10 11.4 +0.6
baz=227
ECL Taimali 1.72 204 eP Pn 05 09 43.6 -1.8
baz=194
TSMG Majia 1.77 214 eP Pb 05 09 47.6 -0.3
baz=230
TSMG eS Sg 05 10 11.4 -1.2
baz=230
TWM1 Shoushan 1.80 222 eP Pn 05 09 48.6 0.0
baz=226
TSCK Chigu Township 1.82 236 eP Pb 05 09 47.9 -1.0
baz=241
TSCK eS Sb 05 10 11.4 -0.1
baz=241
IRIF Iriomote-Funau 1.83 85 P **Pn 05 09 47.4 +0.6**
IRIF eS **Sn 05 10 10.6 +0.6**
IRIF Iriomote-Funau 1.83 85 A A 05 09 47.4
comp=E,34nm,1.8s,comp=N,59nm,2.9s
SGLT Jiouru 1.83 218 eP Pb 05 09 48.7 -0.4
baz=223
MASBT Mashibuluo 1.85 213 eP Pn 05 09 47.1 0.0
baz=219
MASBT eS Sb 05 10 13.4 +1.0
baz=219
HATJ Hateruma jima 1.90 93 eP Pn 05 09 48.6 +0.8
HATJ S **Sb 05 10 12.9 -1.0**
HATJ Hateruma jima 1.90 93 A A 05 09 48.6
comp=E,53nm,3.2s,comp=N,57nm,2.3s
SNJT Kaohsiung City 1.91 222 eP Pb 05 09 50.2 -0.1
baz=228
TAWH Dawu Township 1.98 203 eP Pn 05 09 48.7 -0.2
baz=195
WSSB Gushan 2.03 222 eP Pn 05 09 50.8 +1.1
baz=228
SCZT Fangliau 2.06 210 eP Pn 05 09 50.5 +0.5
baz=197
PNG Penghu 2.08 254 eP Pn 05 09 50.5 +0.3
baz=256
PNG eS Sn 05 10 17.1 +1.2
baz=256
PHUB P'eng-hu 2.08 252 eP Pn 05 09 50.5 +0.3
baz=254
PHUB eS Sn 05 10 15.9 -0.1
baz=254
JKRS Kuro-shima 2.08 88 P **Pn 05 09 51.2 +0.9**
JKRS eS **Sb 05 10 17.6 -1.5**
JKRS Kuro-shima 2.08 88 A A 05 09 51.2
comp=E,47nm,2.8s,comp=N,67nm,4.9s
WDGT Dungji 2.10 245 eP Pn 05 09 51.7 +1.2
baz=234
WDGT eS Sb 05 10 18.8 -0.9
baz=234
SLIU Shizi 2.13 204 eP Pn 05 09 51.3 +0.3
baz=196
LAY Lan-yu 2.13 184 eP Pn 05 09 48.9 -2.2
baz=189
LYUB Lan-yu 2.17 184 eP Pn 05 09 48.4 -3.1
baz=188
JIJ Ishigaki jima 2.21 85 *i* P **Pn 05 09 52.1 0.0**
JIJ S **Sn 05 10 19.7 +0.4**
JIJ Ishigaki jima 2.21 85 A A 05 09 52.1
comp=E,9.0nm,2.3s,comp=N,14nm,3.7s
VWUC VWUC 2.23 292 eP Pn 05 09 51.6 -0.7
baz=290
VWUC eS Sn 05 10 19.1 -0.6
baz=290
SMST Manzhou Townsh 2.29 201 eP Pn 05 09 54.6 +1.4
baz=194
VCHM Qimei 2.31 246 eP Pn 05 09 54.1 +0.6
baz=236
VCHM eS Sn 05 10 23.1 +1.3
baz=236
HEN Hengchun 2.34 203 eP Pn 05 09 55.1 +1.2
baz=197
TWK1 Hengchun 2.38 201 eP Pn 05 09 55.9 +1.5
baz=192
TWKBT Hengchun 2.38 201 eP Pn 05 09 54.3 -0.1
baz=192
JISG Ishigakijimahi 2.39 80 P **Pn 05 09 55.2 +0.6**
JISG S **Sn 05 10 24.7 +1.0**
JISG Ishigakijimahi 2.39 80 A A 05 09 55.2
comp=E,8.0nm,0.8s,comp=N,16nm,3.9s
PTMZ Houxiangcun 2.52 291 eP Pn 05 09 55.9 -0.4
baz=290
MATB Ma-tsu 2.55 321 eP Pn 05 09 55.6 -1.1
baz=320
JTJ Tarama 2.75 80 eP Pn 05 10 00.9 +1.4
JTJ eS **Sn 05 10 34.6 +2.1**
JTJ Tarama 2.75 80 A A 05 10 00.9
comp=E,28nm,1.8s,comp=N,26nm,2.6s
QZH Quanzhou 2.96 286 ⇑iPn Pn 05 10 01.7 -0.6
QZH Sn **Sn 05 10 36.8 -0.8**
QZH smax smax
comp=N,3μm,1.0s
QZH smax smax
comp=N,2μm,1.3s
QZH LR LR
comp=N,12μm,10.0s
LYJJ Jianjiangzhen 2.96 323 eP Pn 05 10 01.5 -0.9
baz=323
KNM Kinmen 3.02 275 eP Pn 05 10 04.7 +1.5
baz=274
KNMB Chin-men Tao 3.06 276 Pn **Pn 05 10 03.6 -0.1**
KNMB Chin-men Tao 3.06 276 eP Pn 05 10 03.2 -0.5
baz=275
XPSS Dashiqiu 3.08 333 eP Pn 05 10 02.7 -1.2
baz=333
MHZQ Yeshan 3.11 309 eP Pn 05 10 03.1 -1.3
baz=308
JIRB Irabujima 3.21 78 eP Pn 05 10 07.5 +1.7
JIRB eS **Sn 05 10 45.6 +1.8**
JIRB Irabujima 3.21 78 A A 05 10 07.5
comp=E,13nm,3.0s,comp=N,18nm,4.5s
JIKM Ikemajima 3.29 76 eP Pn 05 10 08.3 +1.4
JIKM S **Sn 05 10 48.1 +2.2**
JIKM Ikemajima 3.29 76 A A 05 10 08.3
comp=E,18nm,3.3s,comp=N,15nm,5.3s
JMJ Miyako jima 2 3.31 78 P Pn 05 10 08.8 +1.6
JMJ2 Miyako jima3 3.33 80 eP Pn 05 10 09.1 +1.6
JMJ2 S **Sn 05 10 48.9 +2.0**
JMJ2 Miyako jima3 3.33 80 A A 05 10 09.1
comp=E,24nm,4.1s,comp=N,25nm,3.6s
JOGS Gusukube 3.40 79 eP Pn 05 10 10.2 +1.7
JOGS S **Sn 05 10 50.8 +2.1**
JOGS Gusukube 3.40 79 A A 05 10 10.2
comp=E,22nm,3.1s,comp=N,29nm,5.0s
AXDP Jialang 3.50 283 eP Pn 05 10 09.4 -0.4
baz=282
ZPLA Ao Xicun 3.64 267 eP Pn 05 10 11.8 +0.1
baz=266
DSXP Dongshan 3.96 264 eP Pn 05 10 15.9 -0.3
baz=262
SXFK Yanhouchang 4.31 302 eP Pn 05 10 19.9 -1.1
baz=301
JOW Kunigami 6.48 65 Pn **Pn 05 10 50.5 -0.3**
JOW Kunigami 6.48 65 Pn **Pn 05 10 48.7 -2.1**
comp=N,2.9nm,0.3s,baz=314,slow=19,SNR=1.9
JOW Sn **Sn 05 12 04.6 0.0**
baz=108,slow=19
comp=N,27nm,0.5s
SSE Sheshan 6.91 356 Pn **Pn 05 10 56.4 -0.3**
SSE Sn **Sn 05 12 16.7 +1.6**
SSE smax smax
comp=N,120nm,1.6s
SSE smax smax
comp=N,140nm,1.4s
SSE LR LR
comp=N,3μm,11.0s
SSE LR LR
comp=N,800nm,11.1s
NJ2 Nanjing 8.25 343 ⇑P Pn 05 11 16.3 +1.3
NJ2 S **Sn 05 12 49.6 +1.6**
NJ2 pmax pmax
comp=N,49nm,0.8s
NJ2 smax smax
comp=N,80nm,0.7s
NJ2 smax smax
comp=N,55nm,1.0s
NJ2 LR LR
comp=N,2μm,5.9s
NJ2 LR LR
comp=N,2μm,4.7s
NJ2 LR LR
comp=N,6μm,10.4s
CNSH ChangSha 8.85 299 ⇑P Pn 05 11 22.9 -0.4
CNSH S **Sn 05 13 05.6 +2.7**
CNSH smax smax
comp=N,740nm,1.5s
CNSH smax smax
comp=N,670nm,1.1s
CNSH LR LR
comp=N,4μm,6.9s
CNSH LR LR
comp=N,4μm,9.5s
CNSH LR LR
comp=N,5μm,8.8s
WHN Wuhan 9.12 316 P **Pn 05 11 24.3 -2.7**
WHN pP 05 11 28.7
WHN S **Sn 05 13 06.3 -3.2**
WHN LR LR
comp=N,20μm,9.1s
WHN LR LR
comp=N,10μm,6.4s
WHN LR LR
comp=N,24μm,9.9s
TGY Tagaytay City 10.05 184 LR LR 05 15 49.2
comp=N,504nm,20.5s,baz=324,slow=39
GULI GuiLin 10.39 278 eP Pn 05 11 43.7 -0.7
GULI S **Sn 05 13 41.7 +1.0**
GULI LR LR
comp=N,4μm,8.3s
GULI LR LR
comp=N,5μm,9.7s
GULI LR LR
comp=N,7μm,10.1s
JNU Nakatsue 12.00 40 Pn **Pn 05 12 06.4 0.0**
comp=N,0.3nm,0.3s,baz=235,slow=23,SNR=2.3
JNU LR LR 05 17 30.7
comp=N,1μm,18.9s,baz=219,slow=42
comp=N,13nm,1.0s
QIZ Qiongzhong 12.18 247 P **Pn 05 12 09.3 +0.3**
QIZ S **Sn 05 14 27.2 +2.5**
QIZ LR LR
comp=N,2μm,14.5s
QIZ LR LR
comp=N,740nm,12.8s
QIZ LR LR
comp=N,1μm,22.3s
LYN LuoYang 13.11 324 ⇑P Pn 05 12 24.8 +3.2
LYN pP P 05 12 27.6 -4.2
LYN PP **PnPn 05 12 37.5 +7.9**
LYN pmax pmax
comp=N,20nm,0.5s
LYN pmax pmax
comp=N,260nm,4.8s
LYN LR LR
comp=N,11μm,8.8s
LYN LR LR
comp=N,4μm,10.9s
LYN LR LR
comp=N,12μm,9.7s
GYA Guiyang 13.81 283 P **Pn 05 12 33.0 +1.6**
GYA S **Sn 05 15 06.5 +1.8**
GYA pmax pmax
comp=N,18nm,1.2s
GYA LR LR
comp=N,2μm,7.6s
GYA LR LR
comp=N,1μm,6.4s
GYA LR LR
comp=N,4μm,9.5s
KSAR Wonju Array Be 14.24 20 Pn **Pn 05 12 37.3 +0.3**
KSRS Korea Array 14.26 20 Pn **Pn 05 12 38.9 +1.6**
comp=N,1.4nm,0.3s,baz=200,slow=13,SNR=13
KSRS LR LR 05 18 49.6
comp=N,689nm,19.4s,baz=205,slow=41
KS19 Wonju Array Si 14.29 20 Pn **Pn 05 12 36.6 -1.1**
HNS HongShan 14.49 337 ⇓P Pn 05 12 42.9 +2.5
HNS PP **PnPn 05 12 54.9 +6.4**
HNS eS **Sn 05 15 28.3 +7.4**
HNS pmax pmax
comp=N,10.0nm,1.1s
HNS LR LR
comp=N,3μm,12.8s
HNS LR LR
comp=N,2μm,11.5s
HNS LR LR
comp=N,4μm,13.5s
XAN Xi'an 14.88 314 P **Pn 05 12 46.3 +0.4**
XAN S **Sn 05 15 33.3 +2.7**
XAN pmax pmax
comp=N,48nm,1.1s
XAN LR LR
comp=N,5μm,4.3s
XAN LR LR
comp=N,5μm,4.1s
XAN LR LR
comp=N,7μm,11.0s
BJT Baijiatuau 16.48 345 Pn **Pn 05 13 05.6 -1.0**
BJI Beijing 16.50 345 P **P 05 13 09.0 -0.4**
BJI pP **pP 05 13 12.3 -1.1**
BJI S **S 05 16 17.8 -3.8**
BJI pmax pmax
comp=E,5.0nm,1.2s
BJI pmax pmax
comp=N,230nm,5.4s
BJI LR LR
comp=N,760nm,12.1s
BJI LR LR
comp=N,360nm,10.3s
BJI LR LR
comp=N,910nm,11.8s
CD2 Chengdu 17.28 297 P **P 05 13 18.8 +0.6**
CD2 pmax pmax
comp=N,30nm,0.6s
CD2 LR LR

comp=N,2µm,7.6s
CD2 LR LR
comp=N,2µm,7.5s
CD2 LR LR
comp=N,3µm,7.0s
KMI Kunming 17.29 277 ⇑P P 05 13 21.5 +3.0
KMI S S **05 16 37.7 -0.7**
KMI pmax pmax
comp=N,17nm,0.8s
KMI pmax pmax
comp=N,320nm,8.4s
KMI LR LR
comp=N,910nm,6.7s
KMI LR LR
comp=N,4µm,9.4s
KMI LR LR
comp=N,4µm,9.9s
DAV Davao City (W) 17.40 167 P P 05 13 19.0 -0.6
comp=N,268nm,0.3s,baz=138,slow=7.8,SNR=2.1
DAV LR LR 05 20 05.5
comp=N,390nm,18.7s,baz=348,slow=37
JHJ Hachijo jima 2 18.16 57 LR LR 05 20 10.2
comp=N,422nm,19.1s,baz=298,slow=36
PZH PanZhiHua 18.21 282 P P 05 13 29.4 +0.8
PZH sP **sP 05 13 34.8 -0.1**
PZH SS S 05 17 17.2 +20
PZH pmax pmax
comp=N,10.0nm,0.6s
PZH pmax pmax
comp=N,230nm,5.7s
PZH LR LR
comp=N,2µm,15.0s
PZH LR LR
comp=N,2µm,14.0s
PZH LR LR
comp=N,2µm,12.9s
JCJ Chichijima 18.67 77 LR LR 05 20 18.1
comp=N,237nm,18.8s,baz=237,slow=36
HHC Hu-ho-hao-te 18.68 335 *e*P **Pn 05 13 36.3 +2.3**
HHC sP sP 05 13 42.4 +3.2
HHC S **Sn 05 17 01.9 -0.9**
HHC SS **SnSn 05 17 26.0 +9.1**
HHC pmax pmax
comp=N,6.0nm,0.6s
HHC pmax pmax
comp=N,740nm,4.6s
HHC LR LR
comp=N,2µm,13.0s
HHC LR LR
comp=N,860nm,10.7s
HHC LR LR
comp=N,2µm,13.0s
MJAR Matsushiro Arr 18.79 45 P **P 05 13 33.0 -1.8**
MJAR LR LR 05 22 18.8
comp=N,0.1nm,0.3s,baz=26,slow=2.9,SNR=2.0
comp=N,514nm,18.6s,baz=232,slow=42
comp=N,1.2nm,0.4s
BTO Baotou 19.10 332 *e*P **Pn 05 13 42.4 +3.3**
BTO pP **sP 05 13 47.8 +4.0**
BTO pmax pmax
comp=N,19nm,0.8s
BTO pmax pmax
comp=N,1µm,5.0s
BTO LR LR
comp=N,6µm,11.6s
BTO LR LR
comp=N,2µm,8.9s
BTO LR LR
comp=N,9µm,10.1s
LZH Lanzhou 19.46 312 ⇑P Pn 05 13 44.7 +1.2
LZH pP sP 05 13 48.5 +0.7
LZH sS sS 05 17 29.2 +1.1
LZH pmax pmax
comp=N,18nm,1.2s
LZH LR LR
comp=N,2µm,11.3s
LZH LR LR
comp=N,2µm,12.7s
LZH LR LR
comp=N,4µm,12.0s
CN2 Changchun 19.82 8 P **Pn 05 13 47.2 -0.3**
CN2 pP sP 05 13 54.4 +2.8
CN2 pmax pmax
comp=N,10.0nm,1.1s
CN2 pmax pmax
comp=N,500nm,6.0s
CN2 LR LR
comp=N,3µm,13.0s
CN2 LR LR
comp=N,2µm,13.0s
CN2 LR LR
comp=N,3µm,12.0s
XLT XiLinHaoTe 20.21 348 ⇓*i*P Pn 05 13 51.9 -0.4
XLT sP sP 05 13 57.9 +1.9
XLT PP **PnPn 05 14 11.7 +4.6**
XLT sS sS 05 17 47.1 +4.0
XLT SS **SnSn 05 17 59.9 +5.4**
XLT pmax pmax
comp=N,31nm,1.2s
XLT pmax pmax
comp=N,400nm,4.6s
XLT LR LR
comp=N,120nm,13.3s
XLT LR LR
comp=N,900nm,13.2s
XLT LR LR
comp=N,2µm,15.4s
TNCH TengChong 21.12 277 P **P 05 13 59.6 -0.8**
TNCH pP pP 05 14 02.4 -2.3
TNCH sP sP 05 14 06.2 -0.6
TNCH PP **PnPn 05 14 21.2 +1.6**
TNCH S **S 05 17 48.7 -6.6**
TNCH SS **SnSn 05 18 23.8 +7.0**
TNCH pmax pmax
comp=N,47nm,1.3s
TNCH pmax pmax
comp=N,320nm,3.7s
TNCH LR LR
comp=N,1µm,8.1s
TNCH LR LR
comp=N,2µm,8.6s
TNCH LR LR
comp=N,2µm,11.1s
MDJ Mudanjiang 21.38 16 P **P 05 14 05.4 +2.5**
MDJ pP pwP 05 14 07.5 -0.9
MDJ PP **PnPn 05 14 24.5 +1.6**
MDJ S Sn 05 18 03.6 -4.0
MDJ sS pS 05 18 08.4 +0.8
MDJ PcS **PcS 05 21 47.8 +3.3**
MDJ ScS **ScS 05 25 28.0 +1.0**
MDJ pmax pmax
comp=N,15nm,1.7s
MDJ pmax pmax
comp=N,410nm,4.3s
MDJ LR LR
comp=N,2µm,16.1s
MDJ LR LR
comp=N,2µm,15.3s
MDJ LR LR
comp=N,3µm,14.4s
USRK Ussuriysk Ar. 21.67 20 P **P 05 14 06.0 +0.1**
comp=N,5.3nm,0.7s,baz=208,slow=8.2,SNR=9.8
USRK LR LR 05 23 20.1
comp=N,517nm,18.0s,baz=194,slow=39
comp=N,5.3nm,0.7s
CMAR Chiang Mai Arr 21.96 259 P **P 05 14 10.8 +1.4**
comp=N,0.9nm,0.3s,baz=96,slow=8.4,SNR=2.2
CMAR PcP **PcP 05 18 08.0 -0.1**
comp=N,0.7nm,0.3s,baz=325,slow=1.1,SNR=1.7
CMAR LR LR 05 23 13.9
comp=N,339nm,18.1s,baz=80,slow=38
comp=N,0.9nm,0.3s
BNX BinXian 22.00 11 ⇓P P 05 14 09.6 +0.1
BNX pmax pmax
comp=N,10.0nm,1.1s
BNX pmax pmax
comp=N,370nm,4.4s
SBUM Sibu 23.47 204 P **P 05 14 23.8 -1.4**
GTA Gaotai 23.95 315 ⇑P P 05 14 29.8 +0.1
GTA pmax pmax
comp=N,9.0nm,1.2s
GTA pmax pmax
comp=N,200nm,6.2s
GTA LR LR
comp=N,1µm,12.7s
GTA LR LR
comp=N,2µm,12.0s
GTA LR LR
comp=N,2µm,12.7s
GUMO Guam 24.26 112 LR LR 05 22 22.6
comp=N,256nm,21.0s,baz=271,slow=33
HIA Hailar 25.09 357 P **P 05 14 39.2 -0.8**
HIA IAmb IAmb 05 14 58.5
comp=Z,52nm,1.7s
GOMU GeErMu 26.08 304 P **P 05 14 54.4 +4.9**
GOMU pmax pmax
comp=Z,10.0nm,1.0s
GOMU LR LR
comp=Z,2µm,16.8s
GOMU LR LR
comp=Z,550nm,14.9s
GOMU LR LR
comp=Z,660nm,14.6s
ASAJ Asahikawa 26.21 36 LR LR 05 25 55.4
comp=Z,913nm,18.5s,baz=187,slow=38
KLR Kul'dur 26.22 15 LR LR 05 26 05.0
comp=Z,675nm,18.6s,baz=199,slow=39
ULN Ulaanbaatar 26.36 337 P **P 05 14 51.3 -0.4**
HEH HeiHe 26.41 8 *e*P **P 05 14 51.5 -0.3**
HEH sP **sP 05 14 58.5 +0.7**
HEH pmax pmax
comp=Z,21nm,1.4s
HEH pmax pmax
comp=Z,350nm,5.6s
HEH LR LR
comp=Z,1µm,14.8s
HEH LR LR
comp=Z,620nm,14.8s
HEH LR LR
comp=Z,2µm,13.3s
SONM Songino Array 26.57 337 P **P 05 14 53.8 +0.3**
SONM Songino Array 26.57 337 P **P 05 14 53.3 -0.2**
comp=Z,9.6nm,1.0s,baz=155,slow=9.7,SNR=28
SONM LR LR 05 26 33.9
comp=Z,1µm,18.8s,baz=155,slow=39
comp=Z,9.6nm,1.0s
WMQ Urumqi 34.02 314 *e*P **P 05 15 58.1 -1.3**
WMQ sP sP 05 16 09.9 +4.7
WMQ pmax pmax
comp=Z,11nm,1.5s
WMQ LR LR
comp=Z,480nm,7.5s
WMQ LR LR
comp=Z,2µm,8.7s
WMQ LR LR
comp=Z,360nm,9.9s
YAK Yakutsk 38.23 6 LR LR 05 32 57.4
comp=Z,419nm,19.2s,baz=174,slow=37
MK31 Makanchi Array 38.69 316 P **P 05 16 38.2 -1.0**
MKAR Makanchi Array 38.69 316 P **P 05 16 38.4 -0.8**
MKAR Makanchi Array 38.69 316 P **P 05 16 37.8 -1.5**
comp=Z,4.1nm,0.8s,baz=107,slow=10.0,SNR=28
MKAR PcP **PcP 05 18 49.9 -1.1**
comp=Z,1.5nm,0.9s,baz=96,slow=5.4,SNR=2.0
MKAR LR LR 05 33 02.1
comp=Z,187nm,18.0s,baz=122,slow=37
comp=Z,4.1nm,0.8s
MAKZ Makanchi 38.90 316 P **P 05 16 40.1 -0.8**
PETK Petropavlovsk- 39.60 34 LR LR 05 34 13.8
comp=Z,420nm,18.3s,baz=227,slow=38
ZAA0 Zalesovo Array 40.52 327 P **P 05 16 53.3 -1.0**
ZALV Zalesovo Beam 40.52 327 P **P 05 16 53.7 -0.6**
ZALV Zalesovo Beam 40.52 327 P **P 05 16 52.6 -1.7**
comp=Z,2.7nm,0.5s,baz=116,slow=7.8,SNR=12
ZALV PcP **PcP 05 18 55.8 -0.8**
comp=Z,0.3nm,0.3s,baz=150,slow=3.2,SNR=0.9
ZALV LR LR 05 33 08.2
comp=Z,98nm,20.5s,baz=124,slow=35
comp=Z,2.7nm,0.5s
HYB Hyderabad 40.79 269 *e*P **P 05 16 56.3 -0.7**
HYB *es*P **pP 05 17 00.6 -1.3**
MA2 Magadan 40.81 22 LR LR 05 34 21.4
comp=Z,416nm,18.4s,baz=224,slow=37
KSH Kashi 41.32 303 P P 05 17 09.2 +7.9
KSH sP sP 05 17 16.2 +9.0
KSH pmax pmax
comp=Z,5.0nm,1.0s
KSH LR LR
comp=Z,480nm,13.1s
KSH LR LR
comp=Z,470nm,17.5s
KSH LR LR
comp=Z,730nm,14.8s
KURK Kurchatov 42.42 320 P **P 05 17 09.4 -0.5**
KURBB Kurchatov Arra 42.44 320 P **P 05 17 08.8 -1.2**
comp=Z,9.3nm,1.2s,baz=114,slow=7.9,SNR=14
KURBB PcP **PcP 05 19 01.8 -1.1**
comp=Z,0.3nm,0.5s,baz=114,slow=3.4,SNR=1.4
comp=Z,9.3nm,1.2s
COEN Coen 43.31 149 P **P 05 17 16.8 -0.6**
COEN IAmb IAmb 05 17 25.0
comp=Z,42nm,1.1s
WB0 Warramunga Arr 45.39 163 P **P 05 17 33.6 -0.4**
WB0 IAmb IAmb 05 17 43.8
comp=Z,21nm,1.3s
PSA00 Pilbara Seismi 45.51 182 P **P 05 17 35.5 +0.5**
PSA00 IAmb IAmb 05 17 37.0
comp=Z,24nm,0.9s
PSA00 Pilbara Seismi 45.51 182 IAmb IAmb 05 17 37.8
comp=Z,54nm,1.9s
WRA Warramunga Arr 45.54 163 P **P 05 17 33.6 -1.7**
comp=Z,3.4nm,0.6s,baz=344,slow=8.7,SNR=23
WRA PcP **PcP 05 19 12.9 -1.1**
comp=Z,0.7nm,0.6s,baz=342,slow=3.2,SNR=1.2
comp=Z,3.4nm,0.6s
WB2 Warramunga Arr 45.54 163 P **P 05 17 35.3 0.0**
WR0 Warramunga Arr 45.61 163 P **P 05 17 34.7 -1.1**
KKAR Karatay Array 45.87 307 P **P 05 17 38.0 +0.2**
TIXI Tiksi 47.68 3 LR LR 05 39 45.8
comp=Z,583nm,20.5s,baz=200,slow=38
BVAR Borovoye Array 48.00 321 P **P 05 17 53.0 -1.2**
comp=Z,2.0nm,0.7s,baz=226,slow=43,SNR=7.0
BVAR PcP **PcP 05 19 22.5 +0.4**
comp=Z,0.9nm,0.5s,baz=120,slow=4.9,SNR=2.3
comp=Z,2.0nm,0.7s
BRVK Borovoye 48.07 321 P **P 05 17 54.5 -0.3**
SHEM Shemya Is, Ala 48.52 40 LR LR 05 37 54.0
comp=Z,83nm,21.9s,baz=262,slow=36
AS31 Alice Springs 49.00 165 P **P 05 18 00.1 -2.1**
ASAR Alice Springs 49.00 165 P **P 05 18 01.8 -0.5**
comp=Z,2.3nm,0.8s,baz=338,slow=6.5,SNR=13
comp=Z,2.3nm,0.8s
NRIK Noril'sk 49.54 345 P **P 05 18 04.7 -1.1**
comp=Z,4.3nm,0.6s,baz=146,slow=6.1,SNR=6.8
NRIK LR LR 05 40 40.6
comp=Z,308nm,18.2s,baz=140,slow=38
comp=Z,4.3nm,0.6s
CTA Charters Tower 50.06 149 LR LR 05 37 31.1
comp=Z,157nm,21.3s,baz=298,slow=34
ABKAR Akbulak array 53.80 314 P **P 05 18 37.3 -0.7**
ABKAR Akbulak array 53.80 314 P **P 05 18 37.6 -0.3**
FORT Forrest 54.98 173 P **P 05 18 45.4 -1.2**
FORT IAmb IAmb 05 18 50.5
comp=Z,16nm,0.8s
GEYT Alibeck 55.23 300 P **P 05 18 48.1 -0.4**
GEYT Alibeck 55.23 300 P **P 05 18 48.4 -0.2**
comp=Z,3.5nm,0.9s,baz=350,slow=16,SNR=2.8
comp=Z,3.5nm,0.9s
ARU Arti 55.41 323 LR LR 05 43 04.1
comp=Z,218nm,19.8s,baz=92,slow=37
WSAR Wadi Sarin 57.32 283 LR LR 05 46 01.9
comp=Z,203nm,19.2s,baz=96,slow=38
P08K Saint George I 58.50 37 P **P 05 19 11.4 +0.1**
baz=267
STKA Stephens Creek 58.88 160 P **P 05 19 14.8 +0.5**
STKA Stephens Creek 58.88 160 P **P 05 19 13.8 -0.5**
comp=Z,2.2nm,0.5s,baz=327,slow=6.3,SNR=6.8
STKA LR LR 05 48 18.5
comp=Z,57nm,19.6s,baz=23,slow=40
comp=Z,2.2nm,0.5s
TNA Tin City 60.13 27 P **P 05 19 22.9 +0.4**
baz=263
UNV Unalaska Valle 60.17 40 P **P 05 19 22.9 -0.1**
baz=271
M11K Mekoryuk 60.46 33 P **P 05 19 24.9 +0.1**
baz=267
KIRV Kirov 60.51 325 LR LR 05 48 23.0
comp=Z,342nm,20.1s,baz=109,slow=39
F14K Arctic Creek 60.78 27 P **P 05 19 27.4 +0.5**
baz=264,SNR=6.0
ANM Nome 61.10 28 IAmb IAmb 05 19 33.7
comp=Z,20nm,1.4s
ANM Nome 61.10 28 P **P 05 19 29.7 +0.5**
baz=266
C16K Lisburne Hills 61.46 24 P **P 05 19 31.1 -0.5**
baz=264
F15K North Star Dit 61.49 27 IAmb IAmb 05 19 36.1
comp=Z,25nm,1.4s
F15K North Star Dit 61.49 27 P **P 05 19 31.6 -0.2**
baz=266
G15K Niukluk 61.70 28 P **P 05 19 33.0 -0.2**
baz=267
J14K Nanvaranak Lak 61.81 30 P **P 05 19 33.8 -0.2**
baz=268
L14K Kuka Creek 62.20 32 P **P 05 19 36.5 -0.1**
baz=270
D17K Noatak River 62.26 25 P **P 05 19 37.0 +0.1**
baz=266
C17K DeLong Mountai 62.28 24 P **P 05 19 36.8 -0.3**
baz=266
G16K Koyuk River 62.43 27 IAmb IAmb 05 19 42.9
comp=Z,30nm,1.7s
G16K Koyuk River 62.43 27 P **P 05 19 37.7 -0.4**
baz=268
H16K Elim 62.45 28 P **P 05 19 38.1 -0.2**
baz=268,SNR=7.0
E17K Hotham Inlet 62.71 25 P **P 05 19 39.7 -0.3**
baz=268,SNR=8.3
K15K Wolf Creek Mou 62.75 31 P **P 05 19 40.5 +0.2**
baz=270
B18K Kokolik River 62.84 23 P **P 05 19 41.0 +0.2**
baz=266
F17K Baldwin Pennin 62.91 26 P **P 05 19 41.6 +0.3**
baz=268
C18K Utukok River 63.02 24 IAmb IAmb 05 19 42.0
comp=Z,11nm,1.2s
C18K Utukok River 63.02 24 P **P 05 19 41.8 -0.3**
baz=267
I17K Unalakleet 63.12 29 IAmb IAmb 05 19 47.8
comp=Z,14nm,1.1s
I17K Unalakleet 63.12 29 P **P 05 19 42.4 -0.3**
baz=270
G17K Kiwalik Mounta 63.14 27 P **P 05 19 43.0 +0.1**
baz=270
E18K Tukpahlearik C 63.20 25 P **P 05 19 41.6 -1.5**
E18K Tukpahlearik C 63.20 25 P **P 05 19 43.0 -0.1**
baz=269,SNR=7.1
H17K Granite Mounta 63.45 28 P **P 05 19 44.9 0.0**
baz=270
N15K Kwethluk River 63.50 33 P **P 05 19 45.1 -0.2**
baz=273
F18K Selawik 63.56 26 P **P 05 19 45.4 -0.1**
baz=270,SNR=14
SDPT Sand Point 63.61 39 P **P 05 19 46.3 +0.2**
baz=275
C19K Lookout Ridge 63.62 23 IAmb IAmb 05 19 46.5
comp=Z,11nm,1.1s
C19K Lookout Ridge 63.62 23 P **P 05 19 46.0 0.0**
baz=269
O15K Ungalikthiuk R 63.69 34 P **P 05 19 45.8 -0.8**
baz=273
L16K Owhat River 63.73 31 P **P 05 19 46.8 0.0**
baz=272
G18K Tagagawik 63.97 27 IAmb IAmb 05 19 48.3
comp=Z,21nm,1.4s
G18K Tagagawik 63.97 27 P **P 05 19 48.0 -0.4**
baz=271
M16K Timber Creek 64.01 32 P **P 05 19 48.4 -0.3**
baz=273
H18K Honhosa River 64.11 28 P **P 05 19 48.1 -1.2**
H18K Honhosa River 64.11 28 P **P 05 19 49.0 -0.3**
baz=272
N16K Nishlik Lake 64.14 33 P **P 05 19 49.3 -0.2**
baz=274
D19K Kuna River 64.14 24 P **P 05 19 48.5 -1.0**
D19K Kuna River 64.14 24 P **P 05 19 49.7 +0.2**
baz=270
K17K Iditarod 64.23 30 P **P 05 19 50.3 +0.2**
baz=273
L17K Donlin 64.27 31 P **P 05 19 50.2 -0.2**
baz=273
F19K Shaleruckik Mo 64.30 26 IAmb IAmb 05 19 51.1
comp=Z,31nm,1.8s
F19K Shaleruckik Mo 64.30 26 P **P 05 19 49.7 -0.8**
baz=271
E19K Redstone River 64.50 25 IAmb IAmb 05 19 52.0
comp=Z,11nm,1.1s
E19K Redstone River 64.50 25 P **P 05 19 51.0 -0.8**
baz=272
G19K Purcell Mounta 64.60 26 IAmb IAmb 05 19 55.7
comp=Z,14nm,1.3s
G19K Purcell Mounta 64.60 26 P **P 05 19 51.9 -0.6**
baz=272
A21K Barrow 64.65 21 P **P 05 19 51.8 -0.8**
baz=270
D20K Etivluk River 64.69 24 P **P 05 19 52.7 -0.4**
baz=272
M17K Holitna River 64.72 32 P **P 05 19 52.8 -0.5**
baz=274
GCSA Galena City Sc 64.76 28 P **P 05 19 53.3 -0.1**
baz=273
E20K Nigu River 64.86 24 P **P 05 19 53.8 -0.4**
baz=272
H19K Roundabout Mou 64.89 27 P **P 05 19 54.6 +0.2**
baz=273
J18K Innoko River 64.91 29 P **P 05 19 54.7 +0.1**
baz=274
L18K Granite Mounta 65.02 31 P **P 05 19 55.6 +0.4**
baz=275
F20K Avaraart Lake 65.10 25 P **P 05 19 55.0 -0.6**
baz=273,SNR=6.7
TTA Tatalina 65.27 30 P **P 05 19 56.3 -0.6**
baz=275
C21K Knifeblade Rid 65.33 23 P **P 05 19 57.2 0.0**
baz=273
J19K Poorman 65.35 29 IAmb IAmb 05 19 58.6
comp=Z,12nm,1.1s
J19K Poorman 65.35 29 P **P 05 19 57.4 +0.1**
baz=275,SNR=5.2
B21K Ikpikpuk River 65.37 23 P **P 05 19 56.1 -1.2**
B21K Ikpikpuk River 65.37 23 P **P 05 19 57.1 -0.3**
baz=273
M18K Stony River 65.49 32 P **P 05 19 58.9 +0.6**
baz=276
H20K Anotteneega Mo 65.55 27 P **P 05 19 58.5 -0.2**
baz=275
E21K Killik River 65.67 24 P **P 05 19 58.9 -0.5**
baz=274
ONI Oni 65.69 307 P **P 05 20 00.4 +0.4**
ONI IAmb IAmb 05 20 02.2
comp=Z,12nm,1.1s
B22K Teshekpuk Lake 65.74 22 IAmb IAmb 05 20 05.2
comp=Z,14nm,0.9s
B22K Teshekpuk Lake 65.74 22 P **P 05 19 59.1 -0.6**
baz=274
KBZ Khabaz 65.87 309 P **P 05 20 00.2 -0.8**
comp=Z,2.4nm,0.9s,baz=142,slow=8.3,SNR=4.3
comp=Z,2.4nm,0.9s
L19K White Mountain 65.87 31 P **P 05 20 00.8 0.0**
baz=276
AKH Akhalkalaki 65.89 306 P **P 05 20 01.1 -0.5**
F21K Alatna River 65.96 25 P **P 05 20 00.2 -1.1**
F21K Alatna River 65.96 25 P **P 05 20 00.8 -0.5**
baz=275
IMAR Indian Mountai 65.97 26 P **P 05 19 59.6 -1.7**
O18K Koktuh Hills 65.97 33 P **P 05 20 01.5 +0.1**
baz=277
KVAR Kislovodsk Arr 65.97 309 P **P 05 20 01.2 -0.7**
comp=Z,1.6nm,0.4s,baz=156,slow=23,SNR=1.7
comp=Z,1.6nm,0.4s
J20K Nowinta River 65.98 28 IAmb IAmb 05 20 02.4
comp=Z,22nm,1.3s
J20K Nowinta River 65.98 28 P **P 05 20 01.7 +0.3**
baz=276
G21K Allakaket 66.02 26 IAmb IAmb 05 20 02.8
comp=Z,22nm,1.3s
G21K Allakaket 66.02 26 P **P 05 20 01.6 0.0**
baz=276
K20K Telida 66.10 29 P **P 05 20 02.4 +0.2**
K20K Telida 66.10 29 P **P 05 20 02.5 +0.2**
baz=276
D22K Ayikyak River 66.11 23 P **P 05 20 00.8 -1.4**
D22K Ayikyak River 66.11 23 P **P 05 20 02.5 +0.3**
baz=275
M19K Big River Lodg 66.12 31 P **P 05 20 02.6 +0.2**
baz=277
L20K Farewell, AK 66.29 30 P **P 05 20 03.7 +0.2**
baz=277
H21K Melozitna Rive 66.39 27 IAmb IAmb 05 20 04.8
comp=Z,14nm,1.1s
H21K Melozitna Rive 66.39 27 P **P 05 20 04.0 -0.1**
baz=276,SNR=9.0

M20K **Styx River** 66.72 31 P P 05 20 07.6 +1.3
M20K **Styx River** 66.72 31 P P 05 20 06.3 0.0
baz=278
G22K **Bettles** 66.76 25 P P 05 20 05.9 -0.5
baz=277
I21K **Tanana** 66.79 27 P P 05 20 06.9 +0.3
baz=277
CHUM **Lake Minchumin** 66.82 29 P P 05 20 06.9 +0.2
baz=278
H22K **Ishtalitna Cre** 66.95 26 P P 05 20 08.0 +0.4
baz=278
CAST **Castle Rocks** 66.98 29 P P 05 20 06.8 -1.1
CAST IAmb IAmb 05 20 15.0
comp=Z,28nm,1.5s
CAST **Castle Rocks** 66.98 29 P P 05 20 07.4 -0.5
baz=278,SNR=7.1
PPLA **Purkeypile** 67.01 30 P P 05 20 07.9 -0.3
baz=278
COLD **Coldfoot** 67.23 25 P P 05 20 09.2 -0.2
baz=278
N20K **Mount Spurr** 67.25 32 P P 05 20 09.0 -0.7
baz=279
TOLK **Toolik Lake Re** 67.26 23 P P 05 20 08.6 -1.1
TOLK IAmb IAmb 05 20 09.4
comp=Z,12nm,1.1s
TOLK **Toolik Lake Re** 67.26 23 P P 05 20 09.2 -0.5
baz=278,SNR=5.7
E23K **Chandalar** 67.33 24 P P 05 20 09.7 -0.4
baz=278
MLY **Manley** 67.33 27 P P 05 20 09.8 -0.3
MLY IAmb IAmb 05 20 10.7
comp=Z,17nm,1.2s
MLY **Manley** 67.33 27 P P 05 20 09.2 -1.0
baz=279
G23K **Bananza Creek** 67.37 26 IAmb IAmb 05 20 15.3
comp=Z,25nm,1.5s
G23K **Bananza Creek** 67.37 26 P P 05 20 10.1 -0.3
baz=278,SNR=7.4
C24K **Franklin Bluff** 67.42 22 P P 05 20 09.7 -0.8
baz=278
D24K **Happy Valley** 67.46 23 IAmb IAmb 05 20 11.1
comp=Z,17nm,1.1s
D24K **Happy Valley** 67.46 23 P P 05 20 10.5 -0.2
baz=279
KDAK **Kodiak Island** 67.63 35 P P 05 20 11.4 -0.6
baz=280
KDAK **Kodiak Island** 67.63 35 LR LR 05 50 35.4
comp=Z,69nm,21.0s,baz=295,slow=37
E24K **Your Creek** 67.75 24 P P 05 20 11.5 -1.2
E24K IAmb IAmb 05 20 13.2
comp=Z,14nm,1.1s
E24K **Your Creek** 67.75 24 P P 05 20 12.1 -0.6
baz=279,SNR=13
TRF **Thorofare Moun** 67.78 29 P P 05 20 12.5 -0.6
baz=280
HOM **Homer** 67.78 33 P P 05 20 12.6 -0.4
baz=280
I23K **Minto, Yukon-K** 67.89 27 P P 05 20 13.5 -0.1
baz=280
SUA **Susitna One** 67.91 31 P P 05 20 12.1 -1.8
SUA **Susitna One** 67.91 31 P P 05 20 13.5 -0.4
baz=280
F24K **Squaw Lake** 68.07 24 IAmb IAmb 05 20 15.2
comp=Z,12nm,1.0s
F24K **Squaw Lake** 68.07 24 P P 05 20 14.3 -0.4
baz=280
NEA2 **Nenana** 68.11 28 P P 05 20 14.7 -0.2
baz=280
D25K **Kavik River** 68.29 22 IAmb IAmb 05 20 16.3
comp=Z,16nm,1.1s
D25K **Kavik River** 68.29 22 P P 05 20 15.6 -0.5
baz=281
MCK **McKinley** 68.32 29 P P 05 20 15.8 -0.5
baz=281
G24K **Hadweenzic Riv** 68.37 25 IAmb IAmb 05 20 17.4
comp=Z,16nm,1.1s
G24K **Hadweenzic Riv** 68.37 25 P P 05 20 16.3 -0.3
baz=281
H24K **Noodor Dome** 68.38 26 P P 05 20 17.0 +0.3
baz=281
MDM **Murphy Dome** 68.39 27 P P 05 20 15.4 -1.4
RC01 **Rabbit Creek A** 68.45 31 P P 05 20 17.4 +0.2
baz=281
CCB **Clear Creek Bu** 68.63 28 IAmb IAmb 05 20 36.8
comp=Z,24nm,1.9s
PMR **Palmer** 68.64 31 P P 05 20 17.6 -0.7
baz=281
WAT1 **Susitna Watana** 68.67 30 P P 05 20 17.9 -0.6
baz=281
POKR **Poker Plat Res** 68.70 27 P P 05 20 18.3 -0.4
POKR IAmb IAmb 05 20 19.6
comp=Z,18nm,1.2s
POKR **Poker Plat Res** 68.70 27 P P 05 20 18.9 +0.2
baz=281,SNR=5.4
SEW **Seward** 68.78 32 P P 05 20 19.2 0.0
baz=282
E25K **Arctic Village** 68.81 24 P P 05 20 18.8 -0.6
baz=282,SNR=7.2
RAYN **Ar Rayn** 68.82 287 P P 05 20 20.3 +0.1
RAYN IAmb IAmb 05 20 26.8
comp=Z,14nm,1.4s
G25K **Bearman Lake** 68.89 25 P P 05 20 19.8 -0.1
baz=282
F25K **Christian Rive** 68.90 24 P P 05 20 20.0 +0.1
baz=282
SML **Sawmill** 68.97 31 P P 05 20 19.0 -1.5
SML **Sawmill** 68.97 31 P P 05 20 20.5 0.0
baz=282
ILAR **Eielson Array** 68.99 27 P P 05 20 19.0 -1.5
ILAR **Eielson Array** 68.99 27 P P 05 20 18.6 -1.8
comp=Z,0.6nm,0.6s,baz=271,slow=5.1,SNR=8.8
ILAR LR LR 05 52 08.2
comp=Z,103nm,19.6s,baz=270,slow=37
comp=Z,0.6nm,0.6s
KNK **Knik Glacier** 69.00 31 P P 05 20 19.5 -1.1
baz=282
HDA **Harding Lake** 69.05 28 P P 05 20 19.3 -1.5
baz=282
WAT6 **Susitna Watana** 69.08 30 P P 05 20 20.0 -1.3
baz=282
DHY **Denali Highway** 69.14 29 P P 05 20 21.2 -0.5
baz=282
M23K **Glacier View** 69.26 31 P P 05 20 21.7 -0.5
baz=282
BMAR **Burnt Mountain** 69.33 24 P P 05 20 21.9 -0.7
PRP **Porcupine Dome** 69.39 26 P P 05 20 22.5 -0.6
PRP IAmb IAmb 05 20 23.4
comp=Z,22nm,1.5s
PRP **Porcupine Dome** 69.39 26 P P 05 20 22.6 -0.5
baz=283
SCM **Sheep Creek Mo** 69.43 30 P P 05 20 22.1 -1.3
baz=283
F26K **Sheenjek River** 69.43 24 P P 05 20 23.2 0.0
baz=283
SPITS **Spitsbergen Ar** 69.60 348 P P 05 20 23.0 -1.0
comp=Z,10nm,0.9s,baz=79,slow=15,SNR=1.2
SPITS LR LR 05 54 40.4
comp=Z,206nm,19.0s,baz=25,slow=39
comp=Z,10nm,0.9s
J25K **Salcha River,** 69.67 27 P P 05 20 23.8 -0.9
baz=283
K24K **Donnelly Dome** 69.68 28 P P 05 20 24.1 -0.6
baz=283
ARCES **ARCESS Array B** 69.73 338 P P 05 20 24.1 -0.9
comp=Z,3.2nm,0.8s,baz=74,slow=9.5,SNR=1.2
comp=Z,3.2nm,0.8s
G26K **Porcupine Rive** 69.75 25 P P 05 20 25.0 -0.1
baz=284
P23K **Montague Islan** 69.81 32 P P 05 20 25.8 +0.2
baz=283
M24K **Tolsona Glenn** 69.90 30 P P 05 20 26.1 -0.1
baz=284
PAX **Paxson** 70.01 29 P P 05 20 26.0 -1.0
baz=284
RIDG **Independent Ri** 70.10 28 P P 05 20 25.9 -1.5
baz=284
KLU **Klutina** 70.16 31 P P 05 20 26.4 -1.4
baz=284
D27M **Malcolm River** 70.18 22 IAmb IAmb 05 20 31.0
comp=Z,19nm,1.2s
D27M **Malcolm River** 70.18 22 P P 05 20 27.3 -0.5
baz=286
HARP **HAARP** 70.29 30 P P 05 20 27.9 -0.7
baz=284
SCRK **Sand Creek** 70.41 28 P P 05 20 27.3 -2.1
SCRK IAmb IAmb 05 20 29.7
comp=Z,18nm,1.4s
SCRK **Sand Creek** 70.41 28 P P 05 20 28.0 -1.3
baz=285,SNR=6.7
I26K **Coal Creek Min** 70.41 26 P P 05 20 27.8 -1.4
I26K IAmb IAmb 05 20 33.3
comp=Z,23nm,1.4s
I26K **Coal Creek Min** 70.41 26 P P 05 20 28.5 -0.7
baz=285
J26L **Joseph Creek** 70.45 27 IAmb IAmb 05 20 31.0
comp=Z,13nm,1.1s
J26L **Joseph Creek** 70.45 27 P P 05 20 28.4 -1.2
baz=285
EYAK **Cordova Ski Ar** 70.48 32 P P 05 20 30.3 +0.6
baz=284
N25K **Chitina, Valde** 70.75 30 IAmb IAmb 05 20 33.3
comp=Z,20nm,1.2s
N25K **Chitina, Valde** 70.75 30 P P 05 20 31.3 -0.2
baz=285
MENT **Mentasta** 70.79 29 P P 05 20 31.0 -0.7
MENT IAmb IAmb 05 20 38.8
comp=Z,10nm,0.8s
H27K **Steamboat Moun** 70.81 25 P P 05 20 31.4 -0.3
baz=286
E28M **Babbage River** 70.86 23 P P 05 20 30.6 -1.3
E28M IAmb IAmb 05 20 32.3
comp=Z,19nm,1.3s
E28M **Babbage River** 70.86 23 P P 05 20 31.3 -0.6
baz=287
BMRM **Bremner River** 70.91 31 P P 05 20 32.4 0.0
baz=285
D28M **Stokes Point** 70.92 22 P P 05 20 31.3 -0.8
baz=288
L26K **Log Cabin Wild** 70.93 29 P P 05 20 32.0 -0.4
baz=286,SNR=7.9
I27K **Kandik River** 70.95 26 P P 05 20 32.2 -0.3
baz=286
F28M **Old Crow** 71.03 24 IAmb IAmb 05 20 33.4
comp=Z,21nm,1.2s
F28M **Old Crow** 71.03 24 P P 05 20 32.3 -0.7
baz=287,SNR=14
K27K **Chicken** 71.20 28 IAmb IAmb 05 20 36.0
comp=Z,22nm,1.2s
K27K **Chicken** 71.20 28 P P 05 20 33.7 -0.4
baz=286
M26K **Nabesna, AK** 71.26 29 P P 05 20 33.9 -0.6
baz=286
EGAK **Eagle** 71.37 27 P P 05 20 34.0 -1.1
baz=287
VRDI **Verde Repeater** 71.38 31 P P 05 20 36.0 +0.6
VRDI IAmb IAmb 05 20 37.4
comp=Z,17nm,1.2s
E29M **Blow River** 71.50 23 P P 05 20 35.0 -0.8
baz=289
MCARA **McCarthy VSAT** 71.54 30 P P 05 20 35.4 -0.8
MCARA IAmb IAmb 05 20 39.0
comp=Z,18nm,0.9s
MCARA **McCarthy VSAT** 71.54 30 P P 05 20 35.3 -0.8
baz=286
L27K **Beaver Creek,** 71.59 28 P P 05 20 35.6 -0.8
L27K IAmb IAmb 05 20 37.2
comp=Z,26nm,1.4s
L27K **Beaver Creek,** 71.59 28 P P 05 20 36.0 -0.5
baz=287
BCAR **Beaver Creek A** 71.61 28 P P 05 20 35.3 -1.2
I28M **Miner Creek** 71.66 26 IAmb IAmb 05 20 43.5
comp=Z,34nm,1.8s
I28M **Miner Creek** 71.66 26 P P 05 20 36.3 -0.6
baz=288
FINES **FINESS Array B** 71.70 330 P P 05 20 35.7 -1.4
comp=Z,6.6nm,1.0s,baz=72,slow=6.2,SNR=7.8
FINES LR LR 05 55 03.9
comp=Z,347nm,18.6s,baz=61,slow=38
comp=Z,6.6nm,1.0s
M27K **Edge Creek, AK** 71.77 29 IAmb IAmb 05 20 40.0
comp=Z,14nm,1.1s
M27K **Edge Creek, AK** 71.77 29 P P 05 20 37.1 -0.6
baz=287
H29M **Whitestone** 72.03 25 IAmb IAmb 05 20 43.8
comp=Z,31nm,1.4s
H29M **Whitestone** 72.03 25 P P 05 20 38.3 -0.7
baz=289
BVCY **Beaver Creek** 72.21 29 P P 05 20 39.8 -0.4
baz=288
BARN **Barnard Glacie** 72.26 30 P P 05 20 40.0 -0.8
BARN IAmb IAmb 05 20 53.4
comp=Z,16nm,1.1s
DAWY **Dawson** 72.32 27 P P 05 20 39.5 -1.4
DAWY IAmb IAmb 05 20 43.4
comp=Z,12nm,0.9s
DAWY **Dawson** 72.32 27 P P 05 20 39.8 -1.1
baz=289,SNR=13
MESA **MESA** 72.40 31 P P 05 20 41.2 -0.4
baz=288
CTG **Chitna Glacier** 72.44 31 P P 05 20 40.9 -0.9
baz=288
CTGM **Chitina Glacie** 72.44 31 IAmb IAmb 05 20 44.2
comp=Z,32nm,1.4s
F30M **Barrier River** 72.51 23 P P 05 20 40.9 -0.9
baz=291
G30M **tAoh Zraii Nji** 72.58 24 P P 05 20 41.0 -1.4
baz=291
YUK3 **Moose Creek** 72.59 30 P P 05 20 41.6 -1.1
baz=288
EPYK **Eagle Plains** 72.61 24 P P 05 20 41.0 -1.4
baz=290,SNR=6.4
J29N **Klondike Camp** 72.67 27 IAmb IAmb 05 20 47.3
comp=Z,13nm,0.8s
J29N **Klondike Camp** 72.67 27 P P 05 20 42.9 -0.1
baz=290,SNR=7.9
INK **Inuvik** 73.05 22 P P 05 20 43.5 -1.5
baz=293,SNR=12
YUK8 **Steele Glacier** 73.06 30 P P 05 20 44.4 -1.1
baz=289
I30M **Mount Dempster** 73.14 26 IAmb IAmb 05 20 45.8
comp=Z,17nm,1.2s
I30M **Mount Dempster** 73.14 26 P P 05 20 44.6 -1.2
baz=291,SNR=11
L29M **L29M** 73.17 28 IAmb IAmb 05 20 52.4
comp=Z,30nm,1.3s
L29M **L29M** 73.17 28 P P 05 20 45.5 -0.4
baz=290
K29M **Barlow Dome** 73.17 27 P P 05 20 45.6 -0.4
baz=290,SNR=9.4
AKASG **Mali Array Be** 73.21 318 P P 05 20 44.2 -2.1
comp=Z,1.3nm,0.6s,baz=62,slow=6.1,SNR=5.6
AKASG LR LR 05 56 34.9
comp=Z,151nm,19.9s,baz=76,slow=39
comp=Z,1.3nm,0.6s
PINM **Pinnacle** 73.23 31 P P 05 20 46.1 -0.2
baz=289
M29M **Somme Creek** 73.25 29 P P 05 20 46.5 0.0
baz=290
F31M **Tsiigehtchic** 73.31 23 P P 05 20 44.9 -1.7
baz=293,SNR=11
G31M **Satah River** 73.31 24 P P 05 20 44.6 -1.9
baz=292
J30M **Hart River** 73.40 26 P P 05 20 46.0 -1.3
J30M **Hart River** 73.40 26 P P 05 20 47.1 -0.2
baz=291
YUK4 **Talbot Arm** 73.55 30 P P 05 20 48.0 -0.4
baz=290
BRTR **Keskin Array B** 73.58 307 P P 05 20 48.0 -0.8
BRTR **Keskin Array B** 73.58 307 P P 05 20 48.6 -0.2
comp=Z,2.3nm,0.8s,baz=58,slow=15,SNR=6.2
comp=Z,2.3nm,0.8s
PNL **Peninsula** 73.78 31 P P 05 20 49.4 -0.1
baz=290
YUK6 **Outpost Mounta** 73.82 30 P P 05 20 49.7 -0.3
baz=290
M30M **Minto, Yukon** 73.93 28 IAmb IAmb 05 20 55.5
comp=Z,16nm,1.1s
M30M **Minto, Yukon** 73.93 28 P P 05 20 50.3 -0.1
baz=291,SNR=12
A36M **Sachs Harbour** 73.99 17 P P 05 20 51.0 +0.6
baz=299
HYT **Haines Junctio** 74.25 30 P P 05 20 52.3 -0.1
baz=291,SNR=9.0
MMAI **Mount Meron Ar** 74.33 299 LR LR 05 58 16.8
comp=Z,118nm,18.2s,baz=44,slow=40
P29M **Windy Craggy** 74.58 31 P P 05 20 54.1 -0.1
baz=291
P30M **Million Dollar** 74.76 31 P P 05 20 55.9 +0.6
baz=292
N31M **Braeburn, Yuko** 74.78 29 IAmb IAmb 05 21 01.1
comp=Z,25nm,1.1s
N31M **Braeburn, Yuko** 74.78 29 P P 05 20 55.5 +0.2
baz=292
O30N **Mendenhall** 74.92 30 P P 05 20 55.6 -0.6
baz=292
M31M **Drury Creek, Y** 75.11 28 IAmb IAmb 05 21 07.5
comp=Z,28nm,1.8s
M31M **Drury Creek, Y** 75.11 28 P P 05 20 56.5 -0.7
baz=294
PLBC **Pleasant Camp** 75.29 31 P P 05 20 57.3 -0.9
baz=292
WHY **Whitehorse** 75.51 30 IAmb IAmb 05 21 00.2
comp=Z,25nm,1.4s
WHY **Whitehorse** 75.51 30 P P 05 20 59.6 -0.1
baz=293,SNR=7.3
FARO **Faro, Yukon** 75.55 28 IAmb IAmb 05 21 04.3
comp=Z,14nm,1.2s
FARO **Faro, Yukon** 75.55 28 P P 05 20 58.8 -1.0
baz=294,SNR=11
SUW **Suwalki** 75.60 323 P P 05 20 58.5 -1.6
C36M **Paulatuk** 75.65 20 P P 05 20 58.1 -2.0
baz=301,SNR=6.5
SKAG **Skagway** 75.78 31 P P 05 21 00.9 -0.1
baz=293
N32M **Quiet Lake** 76.11 29 IAmb IAmb 05 22 25.2
comp=Z,9.8nm,0.6s
N32M **Quiet Lake** 76.11 29 P P 05 21 02.9 -0.1
baz=295
P32M **Atlin** 76.48 30 IAmb IAmb 05 21 08.2
comp=Z,14nm,1.2s
P32M **Atlin** 76.48 30 P P 05 21 04.6 -0.5
baz=295
P33M **Teslin, Yukon** 76.63 30 IAmb IAmb 05 21 24.8
comp=Z,16nm,1.4s
P33M **Teslin, Yukon** 76.63 30 P P 05 21 05.6 -0.4
baz=295
R32K **Eaglecrest** 76.64 32 P P 05 21 05.6 -0.4
baz=294
S32K **Killisnoo** 76.95 33 P P 05 21 07.7 0.0
baz=294
MLR **Muntele Rosu** 77.01 314 P P 05 21 07.0 -1.6
Q32M **Nakina River** 77.42 31 P P 05 21 10.5 -0.1
baz=296
HFS **Hagfors** 77.82 331 P P 05 21 11.6 -1.0
comp=Z,6.3nm,1.1s,baz=119,slow=12,SNR=2.4
HFS LR LR 05 58 36.1
comp=Z,415nm,19.8s,baz=71,slow=38
comp=Z,6.3nm,1.1s
R33M **Jennings River** 77.83 30 IAmb IAmb 05 21 13.8
comp=Z,20nm,1.4s
R33M **Jennings River** 77.83 30 P P 05 21 12.8 0.0
baz=297
TGTN **Hyland Airport** 78.01 27 P P 05 21 13.3 -0.4
baz=299
U33K **Whale Pass** 78.25 34 P P 05 21 15.1 +0.2
baz=296
S34M **Telegraph Cree** 78.42 31 P P 05 21 15.4 -0.6
baz=297
NB2 **NORSAR Subarra** 78.46 332 P P 05 21 14.3 -1.9
comp=Z,9.1nm,1.4s,baz=61,slow=5.3
NOA **NORSAR Array B** 78.46 332 P P 05 21 14.2 -1.9
comp=Z,1.1nm,0.9s,baz=149,slow=10,SNR=2.6
NOA LR LR 05 58 43.3
comp=Z,189nm,20.2s,baz=65,slow=38
comp=Z,1.1nm,0.9s
WTLY **Watson Lake, Y** 78.47 29 P P 05 21 15.4 -0.8
baz=298
RES **Resolute Bay** 78.59 9 LR LR 06 00 04.9
comp=Z,155nm,19.0s,baz=0.0,slow=39
DLBC **Dease Lake** 78.70 31 P P 05 21 17.0 -0.5
DLBC **Dease Lake** 78.70 31 P P 05 21 17.3 -0.3
baz=298
JMIC **Jan Mayen** 78.97 345 LR LR 05 59 30.4
comp=Z,98nm,18.2s,baz=66,slow=38
OJC **Ojcow** 79.00 320 P P 05 21 17.7 -1.6
WRGLY **Wrigley** 79.08 25 P P 05 21 18.6 -0.8
baz=302
T35M **Bob Quinn** 79.28 32 P P 05 21 20.4 -0.3
baz=298
URZ **Urewera** 80.95 139 LR LR 05 56 54.9
comp=Z,51nm,18.9s,baz=302,slow=35
CONA **Conrad Observa** 82.33 319 *e*P P 05 21 37.6 +0.3
comp=Z,6.0nm,0.8s
CLL **Collm** 82.36 323 *e*Px Px 05 21 42.0
CLL *i* x x 05 21 56.6
CLL AMS AMS 06 02 00.0
comp=Z,400nm,18.1s
YKA **Yellowknife Ar** 82.79 23 P P 05 21 37.6 -1.6
comp=Z,4.6nm,0.8s,baz=313,slow=4.9,SNR=69
comp=Z,4.6nm,0.8s
GERES **GERESS Array B** 83.16 321 P P 05 21 41.1 -0.6
comp=Z,0.7nm,0.6s,baz=28,slow=6.0,SNR=4.3
comp=Z,0.7nm,0.6s
MOA **Molln** 83.31 320 *i* pP P 05 21 43.0 +0.6
comp=Z,7.1nm,1.1s
LESA **Schwarzleotal** 84.46 320 *e*P P 05 21 47.8 -0.5
comp=Z,6.4nm,1.3s
WTTA **Wattenberg** 85.15 320 *e*pP P 05 21 52.5 +0.6
comp=Z,13nm,1.8s
FETA **Feichten** 85.81 320 *e*P P 05 21 55.3 +0.2
comp=Z,5.1nm,1.1s
DAVA **Damuels** 86.16 321 *e*P P 05 21 56.7 -0.2
comp=Z,18nm,2.0s
DAVOX **Davos/Dischmat** 86.43 320 LR LR 06 04 51.8
comp=Z,214nm,18.6s,baz=29,slow=39
BORG **Borgarnes** 86.86 345 LR LR 06 03 41.7
comp=Z,134nm,18.8s,baz=33,slow=38
BRLDA **Berland Lookou** 86.96 30 IAmb IAmb 05 22 00.9
comp=Z,16nm,1.0s
GNW **Green Mountain** 88.06 38 IAmb IAmb 05 22 08.5
comp=Z,9.7nm,1.1s
EDM **Edmonton** 89.37 30 P P 05 22 10.2 -1.8
LTY **Liberty** 89.43 37 IAmb IAmb 05 22 43.7
comp=Z,15nm,1.4s
MXC **Moxie City** 90.04 38 IAmb IAmb 05 22 16.4
comp=Z,11nm,0.8s
E07A **Sunnyside** 90.30 37 IAmb IAmb 05 22 19.0
comp=Z,13nm,1.0s
C09A **Chrisman Ranch** 90.41 36 P P 05 22 15.9 -1.0
I04A **Tendick Farm,** 90.44 41 P P 05 22 17.1 -0.1
I04A IAmb IAmb 05 22 22.1
comp=Z,15nm,1.2s
HAWA **Hanford** 90.58 37 IAmb IAmb 05 22 20.0
comp=Z,11nm,1.2s
NEW **Newport** 90.73 35 IAmb IAmb 05 22 23.9
comp=Z,16nm,1.2s
NEW **Newport** 90.73 35 P P 05 22 18.7 +0.3
baz=309
PINE **Pine Mountain** 91.31 40 P P 05 22 20.5 -1.0
YBH **Yreka Blue Hor** 91.43 42 P P 05 22 22.9 +1.0
YBH IAmb IAmb 05 22 24.1
comp=Z,15nm,1.4s
YBH **Yreka Blue Hor** 91.43 42 LR LR 05 59 18.1
comp=Z,55nm,21.6s,baz=317,slow=33
J05D **Fort Rock, OR** 91.43 41 P P 05 22 21.2 -0.7
BMO **Blue Mountains** 92.75 38 IAmb IAmb 05 22 33.2
comp=Z,17nm,1.8s
FFC **Flin Flon** 92.94 24 P P 05 22 25.9 -2.6
J08A **Circle Bar Ran** 93.01 39 IAmb IAmb 05 22 30.6
comp=Z,9.4nm,1.2s
WVOR **Wild Horse Val** 93.47 40 IAmb IAmb 05 22 33.7
comp=Z,8.7nm,1.4s
AFDM **Forest Hills D** 94.11 44 P P 05 22 32.8 -1.5
AFDM IAmb IAmb 05 22 35.7
comp=Z,20nm,2.0s
MPK **Martis Peak** 94.50 43 IAmb IAmb 05 22 41.1
comp=Z,10nm,1.1s
EGMT **Eagleton** 94.59 32 P P 05 22 35.8 -0.6
baz=314
EMB **Emerald Bay** 94.65 44 IAmb IAmb 05 22 38.6
comp=Z,15nm,1.5s
PAHR **Pah Rah Range** 94.66 43 IAmb IAmb 05 22 42.1
comp=Z,9.0nm,1.3s
CMB **Columbia Colle** 95.02 44 IAmb IAmb 05 22 43.4
comp=Z,7.9nm,1.2s
HLID **Hailey** 95.18 37 P P 05 22 38.4 -0.9
HLID **Hailey** 95.18 37 P P 05 22 39.2 0.0
baz=310
BOZ **Bozeman (W)** 95.32 34 P P 05 22 40.0 +0.2
baz=313
KVN **Kaiserville** 95.85 43 IAmb IAmb 05 22 44.3
comp=Z,15nm,1.6s
PPT2 **Papeete2** 95.88 107 *e*LR LR 05 53 44.9
PPT2 *e*LR LR 05 53 54.8
comp=Z,127nm,25.2s
NVAR **Mina Array Bea** 96.10 43 P P 05 22 43.1 -0.5
comp=Z,1.4nm,0.8s,baz=303,slow=4.1,SNR=8.1
comp=Z,1.4nm,0.8s
H17A **Grant Village** 96.69 35 P P 05 22 43.5 -2.7
DGMT **Dagmar** 96.83 29 P P 05 22 46.1 -0.4
baz=319
LAO **LASA Array** 97.22 31 P P 05 22 47.5 -0.8
baz=317

PKM	**Mcpherson Peak**	**97.23**	**47**	P		**P**	**05 22 48.6**	**-0.1**
	baz=306							
SBC	**Santa Barbara**	**97.56**	**47**	P		Pdif	05 22 50.3	+0.3
	baz=306							
R11B	**Troy Canyon, C**	**97.83**	**42**	P		Pdif	05 22 51.3	-0.1
	baz=309							
PDAR	**Pinedale Array**	**98.35**	**36**	P		**P**	**05 22 52.8**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=45,slow=0.6,SNR=2.4							
PDAR				LR		LR	06 08 15.3	
	comp=Z,35nm,19.7s,baz=354,slow=36							
	comp=Z,0.2nm,0.4s							

CATAC ***06*** *05:14:43.4±0.2,9.°92N×84.°21W, h6km±2km, ML2.2*
UPA ***06*** *05:14:44.7±1.0,9.°46N×84.°65W, h52km±66km, MD3.8*

ISC 06 05:14:43.6±0.9, 9.°91N±0.°03×84.°23W±0.°02, h11km±7km, n27, σ0°66/46, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HDC3	**Heredia 3**	**0.15**	**52**	*i* P	**Pg**		**05 14 47.3**	**+0.2**
HDC3				*i* S	**Sg**		**05 14 49.7**	**0.0**
HDC3				IAML			05 14 50.3	
	comp=Z,1μm,1.0s							
TCS1	**Tacares**	**0.15**	**333**	*i* P	**Pg**		**05 14 47.5**	**+0.4**
TCS1				IAML			05 14 51.9	
	comp=Z,8μm,1.0s							
OCM	**Ochomogo**	**0.27**	**93**	*i* P	**Pg**		**05 14 49.0**	**-0.2**
OCM				*i* S	**Sg**		**05 14 52.5**	**-0.4**
OCM				IAML			05 14 53.1	
	comp=Z,480nm,1.0s							
LCR2	**La Lucha 2**	**0.28**	**127**	*i* P	**Pg**		**05 14 49.6**	**+0.2**
LCR2				*i* S	**Sg**		**05 14 53.5**	**+0.3**
LCR2				IAML			05 14 53.7	
	comp=Z,870nm,1.0s							
VIRE	**VIRE**	**0.33**	**80**	*i* P	**Pg**		**05 14 50.6**	**+0.2**
VIRE				*i* S	**Sg**		**05 14 54.8**	**-0.2**
VIRE				IAML			05 15 00.4	
	comp=Z,450nm,1.0s							
HAYA	**Volcan Irazu**	**0.39**	**80**	*i* P	**Pg**		**05 14 51.5**	**+0.1**
HAYA				IAML			05 14 51.6	
	comp=Z,290nm,1.0s							
CPMI	**Catarata Coope**	**0.40**	**338**	*i* P	**Pg**		**05 14 51.0**	**-0.6**
CPMI				*i* S	**Sg**		**05 14 56.8**	**-0.2**
CPMI				IAML			05 15 00.1	
	comp=Z,160nm,1.0s							
VTRT	**Volcan Turrial**	**0.44**	**78**	*i* P	**Pg**		**05 14 52.7**	**+0.3**
VTRT				IAML			05 14 54.7	
	comp=Z,190nm,1.0s							
JACO	**JACO, Garabito**	**0.49**	**240**	*i* P	**Pg**		**05 14 53.8**	**+0.6**
JACO				IAML			05 14 57.3	
	comp=Z,130nm,1.0s							
JACO				*i* S	**Sb**		**05 15 01.2**	**-0.2**
VTCV	**VTCV, Calle Va**	**0.50**	**82**	*i* P	**Pg**		**05 14 52.9**	**-0.6**
VTCV				IAML			05 14 57.9	
	comp=Z,120nm,1.0s							
RIFO	**Rio Frio, Sara**	**0.51**	**37**	*i* P	**Pg**		**05 14 53.5**	**0.0**
RIFO				*i* S	**Sg**		**05 15 00.8**	**+0.6**
RIFO				IAML			05 15 08.5	
	comp=Z,110nm,1.0s							
CDM	**Cerro de Muert**	**0.58**	**127**	*i* P	**Pg**		**05 14 54.3**	**-0.7**
CDM				*i* S	**Sg**		**05 15 02.8**	**0.0**
CDM				IAML			05 15 03.4	
	comp=Z,94nm,1.0s							
LAFE	**Finca La Fe, P**	**0.68**	**261**	*i* P	**Pg**		**05 14 57.0**	**+0.3**
LAFE				IAML			05 14 57.9	
	comp=Z,0.8nm,1.0s							
LAFE				*i* S	**Sb**		**05 15 07.1**	**+0.3**
PEZE	**Perez Zeledon,**	**0.76**	**134**	*i* P	**Pg**		**05 14 57.5**	**-0.7**
PEZE				*i* S	**Sg**		**05 15 08.5**	**+0.3**
PEZE				IAML			05 15 11.4	
	comp=Z,75nm,1.0s							
JTS	**Las Juntas de**	**0.81**	**298**	*eP*	**Pn**		**05 15 00.7**	**-0.2**
JTS				*i* S	**Sg**		**05 15 09.5**	**-0.3**
COVE	**Coope Vega, Sa**	**0.82**	**348**	*i* P	**Pg**		**05 14 59.2**	**-0.3**
COVE				*i* S	**Sg**		**05 15 10.6**	**+0.3**
COVE				IAML			05 15 14.0	
	comp=Z,130nm,1.0s							
OCHAL	**Ojochal**	**0.99**	**144**	*i* P	**Pg**		**05 15 02.6**	**-0.1**
OCHAL				*i* S	**Sb**		**05 15 16.2**	**+0.3**
OCHAL				IAML			05 16 06.7	
	comp=Z,1.3nm,1.0s							
INDI	**Punta indio, G**	**1.25**	**268**	*i* P	**Pn**		**05 15 06.7**	**-0.3**
INDI				IAML			05 15 55.8	
	comp=Z,44nm,1.0s							
DUNO	**Dulce Nombre,**	**1.26**	**278**	*i* P	**Pn**		**05 15 06.8**	**-0.3**
DUNO				IAML			05 15 08.3	
	comp=Z,61nm,1.0s							
ORTG	**Ortega, Santa**	**1.29**	**291**	*i* P	**Pn**		**05 15 07.0**	**-0.6**
ORTG				*i* S	**Sb**		**05 15 24.9**	**+0.3**
ORTG				IAML			05 15 25.9	
	comp=Z,50nm,1.0s							
SAJU	**San Juanillo,**	**1.47**	**276**	*i* P	**Pn**		**05 15 10.2**	**+0.2**
SAJU				IAML			05 15 14.5	
	comp=Z,37nm,1.0s							
SAJU				*i* S	**Sb**		**05 15 30.2**	**+0.7**
MLIR3	**Monte Lirio, C**	**1.78**	**129**	*eP*	**Pn**		**05 15 14.4**	**+0.1**
MLIR3				*i* S	**Sb**		**05 15 38.6**	**0.0**
BRU2	**Volcan**	**1.88**	**126**	*eP*	**Pb**		**05 15 17.3**	**-0.7**
BRU2				*i* S	**Sb**		**05 15 41.9**	**+0.3**
BCO2	**Palmira**	**2.05**	**125**	*eP*	**Pn**		**05 15 19.7**	**+1.5**
BCO2				*i* S	**Sn**		**05 15 45.5**	**+1.5**
LNBQ3	**Los Naranjos,**	**2.09**	**122**	*eP*	**Pb**		**05 15 20.6**	**-1.0**
PTPM	**Petroterminale**	**2.16**	**142**	*eP*	**Pn**		**05 15 17.8**	**-1.7**
CHGR2	**Aguacate**	**2.27**	**115**	*eP*	**Pn**		**05 15 23.0**	**+1.9**
CHGR2				*i* S	**Sb**		**05 15 52.1**	**-0.7**

NOU ***06*** *05:28:20.1,34.°77S×179.°37E, h20km, MLv4.6/7, South of Kermadec Islands*
IDC ***06*** *05:28:27.9±1.6,35.°59S×178.°73E, h0km, mb4.0/2, mbtmp3.9/2, MS3.6/10, Error ellipse: s-maj=71.5km s-min=42.2km az=173.0*
WEL ***06*** *05:28:34.2±0.9,36.°5S±6.°×17.°8E±.°, h5km, M4.0/27, ML4.3/29, MLv4.0/27, Error ellipse: s-maj=0.0km s-min=0.0km az=73.5, confirmed*

ISC 06 05:28:29.9±1.1, 35.°33S±0.°06×178.°56E±0.°08, h10km, n89, σ2°38/79, MS3.7/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.24**	**185**	P	**Pn**		**05 29 05.6**	**-1.5**
MXZ	**Matakaoa Point**	**2.24**	**185**	P	**Pn**		**05 29 05.6**	**-1.5**
MXZ				S	**Sn**		**05 29 31.5**	**-3.2**
MXZ				T			05 31 11.8	
WMGZ	**Waiomatatini S**	**2.49**	**183**	P	**Pn**		**05 29 10.8**	**+0.4**
HAZ	**Te Kaha**	**2.50**	**194**	P	**Pn**		**05 29 10.0**	**-0.7**
PKGZ	**Pakihiroa**	**2.59**	**189**	P	**Pn**		**05 29 11.5**	**-0.4**
KUZ	**Kuaotunu**	**2.70**	**238**	P	**Pn**		**05 29 13.1**	**-0.3**
KUZ	**Kuaotunu**	**2.70**	**238**	P	**Pn**		**05 29 13.2**	**-0.3**
KUZ				S	**Sn**		**05 29 44.1**	**-2.0**
RUGZ	**Raukumara Rang**	**2.73**	**195**	P	**Pn**		**05 29 14.0**	**+0.1**
PUZ	**Puketiti**	**2.75**	**185**	P	**Pn**		**05 29 15.5**	**+1.4**
TWGZ	**Tauwhareparae**	**2.88**	**189**	P	**Pn**		**05 29 18.3**	**+2.4**
OPRZ	**Ohinepanea**	**2.99**	**212**	P	**Pb**		**05 29 23.5**	**+0.3**
MWZ	**Matawai**	**3.11**	**195**	P	**Pn**		**05 29 19.4**	**+0.3**
EDRZ	**Edgecumbe**	**3.14**	**207**	P	**Pn**		**05 29 22.4**	**+2.9**
URZ	**Urewera**	**3.15**	**201**	P	**Pn**		**05 29 20.0**	**+0.5**
URZ	**Urewera**	**3.15**	**201**	LR	LR		05 30 43.3	
	comp=Z,755nm,19.4s,baz=115,slow=46							
URZ	**Urewera**	**3.15**	**201**	S	**Pn**		**05 29 20.1**	**+0.5**
URZ				S	**Sn**		**05 29 56.5**	**-0.7**
TKGZ	**Te Karaka**	**3.16**	**190**	P	**Pn**		**05 29 22.5**	**+2.9**
CNGZ	**Carnagh Statio**	**3.16**	**185**	P	**Pn**		**05 29 22.3**	**+2.6**
OMRZ	**Omania**	**3.29**	**212**	P	**Pb**		**05 29 27.4**	**-0.9**
RAGZ	**Rawiri**	**3.29**	**196**	P	**Pn**		**05 29 22.6**	**+1.0**
TARZ	**Mount Tarawera**	**3.34**	**209**	P	**Pb**		**05 29 28.6**	**-0.7**
HLRZ	**Highlands Stat**	**3.42**	**211**	P	**Pb**		**05 29 29.2**	**-1.4**
RRRZ	**Republican Roa**	**3.43**	**208**	P	**Pb**		**05 29 30.2**	**-0.5**
RIGZ	**Rimuhau**	**3.43**	**191**	P	**Pn**		**05 29 25.5**	**+2.0**
MUGZ	**Murupara**	**3.46**	**204**	P	**Pn**		**05 29 24.8**	**+1.0**
WCZ	**Waipu Caves**	**3.49**	**259**	P	**Pn**		**05 29 24.1**	**-0.1**
RTZ	**Ruatahuna**	**3.52**	**201**	P	**Pn**		**05 29 25.3**	**+0.6**
RTZ				S	**Sn**		**05 30 05.1**	**-1.4**
SNGZ	**Shannon Statio**	**3.58**	**195**	P	**Pn**		**05 29 28.2**	**+2.7**
SNGZ				S	**Sn**		**05 30 09.7**	**+1.7**
PRGZ	**Paritu Road**	**3.63**	**188**	P	**Pn**		**05 29 27.8**	**+1.6**
PRGZ				S	**Sn**		**05 30 09.1**	**0.0**
ALRZ	**Allen Road**	**3.69**	**208**	P	**Pn**		**05 29 31.2**	**+4.3**
KNZ	**Kokohu**	**3.76**	**191**	P	**Pn**		**05 29 28.8**	**+0.9**
KNZ				S	**Sb**		**05 30 16.0**	**-5.9**
RAHZ	**Arahi**	**3.77**	**198**	P	**Pn**		**05 29 31.1**	**+3.0**
RAHZ				S	**Sn**		**05 30 14.8**	**+2.2**
MTHZ	**Maungataniwha**	**3.78**	**201**	P	**Pn**		**05 29 29.4**	**+1.2**
MHGZ	**Mahia Peninsul**	**3.85**	**188**	P	**Pn**		**05 29 31.4**	**+2.2**
MHGZ				S	**Sn**		**05 30 16.5**	**+1.9**
WHHZ	**Waihua**	**3.89**	**195**	P	**Pn**		**05 29 30.8**	**+1.1**
MRHZ	**Matea Rd**	**3.90**	**205**	P	**Pn**		**05 29 31.8**	**+1.9**
NMHZ	**Naumai**	**4.02**	**200**	P	**Pn**		**05 29 33.4**	**+1.8**
NMHZ				S	**Sn**		**05 30 22.6**	**+3.9**
OUZ	**Omahuta**	**4.07**	**270**	P	**Pn**		**05 29 31.1**	**-1.0**
ARHZ	**Aropaoanui**	**4.12**	**197**	P	**Pn**		**05 29 35.2**	**+2.2**
BKZ	**Black Stump Fm**	**4.17**	**203**	P	**Pn**		**05 29 36.3**	**+2.6**
RATZ	**Rangitukua**	**4.18**	**211**	P	Pn		05 29 38.9	+5.2
RITZ	**Rihia Road**	**4.24**	**210**	P	**Pn**		**05 29 39.1**	**+4.6**
HIZ	**Hauiti**	**4.35**	**222**	P	**Pn**		**05 29 38.0**	**+1.9**
MCHZ	**McNeill Hill**	**4.37**	**199**	P	**Pn**		**05 29 37.9**	**+1.6**
MCHZ				S	**Sn**		**05 30 31.2**	**+3.8**
NTVZ	**North Tongarir**	**4.41**	**211**	P	**Pn**		**05 29 41.3**	**+4.2**
TMVZ	**Te Maari**	**4.42**	**210**	P	**Pn**		**05 29 40.4**	**+3.3**
KWHZ	**Kaweka Forest**	**4.43**	**202**	P	**Pn**		**05 29 39.0**	**+1.8**
WTVZ	**West Tongariro**	**4.46**	**211**	P	**Pn**		**05 29 42.1**	**+4.3**
NNVZ	**North Ngauruho**	**4.47**	**211**	P	**Pn**		**05 29 41.2**	**+3.4**
OTVZ	**Oturere**	**4.47**	**210**	P	**Pn**		**05 29 40.7**	**+2.8**
TWVZ	**Taurewa**	**4.49**	**213**	P	Pn		05 29 42.8	+4.7
SNVZ	**South Ngauruho**	**4.50**	**210**	P	**Pn**		**05 29 41.2**	**+2.9**
NGZ	**Ngauruhoe**	**4.51**	**211**	P	**Pn**		**05 29 42.3**	**+3.9**
FWVZ	**Far West T-bar**	**4.60**	**211**	P	**Pn**		**05 29 43.3**	**+3.6**
MAVZ	**Matarangi**	**4.60**	**210**	P	**Pn**		**05 29 43.6**	**+3.8**
BHHZ	**Black Hill Sta**	**4.61**	**205**	P	**Pn**		**05 29 42.1**	**+2.4**
TRVZ	**Turoa**	**4.64**	**210**	P	**Pn**		**05 29 43.6**	**+3.4**
WNVZ	**Wahianoa**	**4.64**	**210**	P	**Pn**		**05 29 43.4**	**+3.2**
MOVZ	**Moawhango**	**4.65**	**208**	P	**Pn**		**05 29 42.5**	**+2.3**
KRHZ	**Kereru**	**4.65**	**201**	P	**Pn**		**05 29 41.2**	**+1.0**
KAHZ	**Kahuranaki**	**4.66**	**196**	P	**Pn**		**05 29 41.4**	**+1.1**
VRZ	**Vera Road**	**4.86**	**218**	P	Pn		05 29 48.8	+5.8
PXZ	**Pawanui**	**4.89**	**196**	P	**Pn**		**05 29 43.1**	**-0.3**
PNHZ	**Pukenui**	**4.95**	**202**	P	**Pn**		**05 29 44.6**	**+0.3**
NEZ	**North Egmont**	**5.31**	**221**	P	**Pn**		**05 29 53.6**	**+4.3**
KHEZ	**Kahui Hut**	**5.37**	**221**	P	**Pn**		**05 29 51.1**	**+1.0**
KHEZ	**Kahui Hut**	**5.37**	**221**	P	Pn		05 29 55.0	+4.8
BFZ	**Birch Farm**	**5.65**	**198**	P	**Pn**		**05 29 52.5**	**-1.4**
RAO	**Raoul Island**	**6.75**	**27**	LR	LR		05 32 13.4	
	comp=Z,443nm,18.7s,baz=168,slow=33							
BSWZ	**Blackbirch Sta**	**7.36**	**209**	P	**Pn**		**05 30 20.6**	**+3.2**
AMCZ	**Amberley**	**9.08**	**209**	P	Pn		05 30 49.9	+8.9
RPZ	**Rata Peaks**	**10.18**	**212**	LR	LR		05 35 08.7	
	comp=Z,358nm,20.6s,baz=43,slow=40							
CTA	**Charters Tower**	**32.21**	**290**	LR	LR		05 48 45.8	
	comp=Z,80nm,18.1s,baz=88,slow=38							
PMG	**Port Moresby**	**38.55**	**304**	LR	LR		05 49 53.5	
	comp=Z,127nm,18.1s,baz=146,slow=33							
ASAR	**Alice Springs**	**40.27**	**274**	P	**P**		**05 36 08.2**	**+1.0**
	3.1nm,0.8s,baz=113,slow=7.7,SNR=24							
	3.1nm,0.8s							
NWAO	**Narrogin (SRO)**	**50.11**	**254**	LR	LR		05 56 16.0	
	comp=Z,66nm,20.9s,baz=238,slow=33							
GUMO	**Guam**	**58.19**	**321**	LR	LR		06 03 03.8	
	comp=Z,22nm,18.3s,baz=74,slow=36							
MAW	**Mawson**	**66.68**	**202**	LR	LR		06 08 08.3	
	comp=Z,90nm,18.1s,baz=133,slow=36							
H03S2	**Juan Fernandez**	**80.12**	**124**	T	T		07 08 39.5	
	baz=232,slow=74,SNR=14							
H03S1	**Juan Fernandez**	**80.13**	**124**	T	T		07 08 40.7	
	baz=232,slow=74,SNR=11							
H03S3	**Juan Fernandez**	**80.14**	**124**	T	T		07 08 39.6	
	baz=232,slow=74,SNR=11							
H03N3	**Juan Fernandez**	**80.34**	**124**	T	T		07 08 57.6	
	baz=236,slow=72,SNR=111							
H03N2	**Juan Fernandez**	**80.35**	**124**	T	T		07 08 51.8	
	baz=236,slow=72,SNR=66							
H03N1	**Juan Fernandez**	**80.36**	**124**	T	T		07 08 56.7	
	baz=236,slow=72,SNR=103							
PLCA	**Paso Flores**	**81.22**	**134**	LR	LR		06 08 56.1	
	comp=Z,34nm,19.9s,baz=180,slow=30							
ASAJ	**Asahikawa**	**85.56**	**335**	LR	LR		06 13 41.3	
	comp=Z,33nm,20.4s,baz=150,slow=32							
NVAR	**Mina Array Bea**	**93.79**	**45**	P	**P**		**05 41 48.1**	**+0.8**
	0.1nm,0.3s,baz=235,slow=7.2,SNR=1.6							
	0.1nm,0.3s							
FINES	**FINESS Array B**	**148.57**	**335**	PKPbc	**PKPdf**		**05 48 15.1**	**+2.6**
	0.7nm,0.7s,baz=349,slow=0.7,SNR=1.5							
TORD	**Torodi Ar. Bea**	**157.74**	**188**	PKPab	**PKPab**		**05 48 57.4**	**-2.1**
	0.3nm,0.7s,baz=168,slow=2.9,SNR=2.2							

DJA ***06*** *05:33:08.6±0.3,7.°S±4.°×12.°8E±.°, h147km±8km, M4.7/8, mb4.6/7, mB5.2/5, MLv4.8/8, Mw(mB)4.6/5*
IDC ***06*** *05:33:08.6±3.0,7.°37S×128.°49E, h155km±27km, mb3.7/11, mbtmp4.2/13, Error ellipse: s-maj=39.9km s-min=14.2km az=73.0*

ISC 06 05:33:08.4±0.5, 7.°40S±0.°07×128.°49E±0.°07, h151km, n47, σ1°06/49, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.84**	**102**	P	**Pn**		**05 33 56.0**	**+2.2**
SOEI	**Soe**	**4.79**	**240**	P	**Pn**		**05 34 19.8**	**+0.7**
SOEI	**Soe**	**4.79**	**240**	P	**Pn**		**05 34 20.0**	**+0.9**
SOEI				S	**Sn**		**05 35 13.0**	**-1.3**
FAKI	**Fak Fak**	**5.82**	**40**	P	**Pn**		**05 34 32.6**	**-0.1**
	37nm,0.7s,1μm0.3nm							
MTN	**Manton Dam**	**6.00**	**155**	P	**Pn**		**05 34 34.9**	**-0.3**
KMPI	**Kaimana, Papua**	**6.38**	**55**	P	**Pn**		**05 34 40.8**	**+0.6**
	116nm,0.7s,1.1nm							
KDU	**Kakadu**	**6.56**	**144**	P	**Pn**		**05 34 42.1**	**-0.4**
SWI	**Sorong**	**7.06**	**23**	P	**Pn**		**05 34 49.4**	**+0.2**
	71nm,0.8s,1μm0.3nm							
KNRA	**Kununurra**	**8.23**	**178**	P	**Pn**		**05 35 03.6**	**-1.3**
WRA	**Warramunga Arr**	**13.70**	**156**	P	**Pn**		**05 36 14.0**	**-2.5**
	2.5nm,0.3s,baz=334,slow=13,SNR=66							
WRA				S		Sn	05 38 35.7	-13
	18nm,0.7s,baz=333,slow=22,SNR=9.5							
JAGI	**Jajag, Banyuwa**	**14.24**	**265**	P	**P**		**05 36 25.0**	**-1.2**
PSA00	**Pilbara Seismi**	**16.38**	**210**	P	**P**		**05 36 50.6**	**+0.8**
QIS	**Mount Isa**	**16.94**	**142**	P	**Pn**		**05 36 56.7**	**+0.1**
ASAR	**Alice Springs**	**16.99**	**163**	P	**Pn**		**05 36 57.6**	**+0.5**
	16nm,0.5s,baz=338,slow=10,SNR=207							
ASAR				S		S	05 39 52.7	-13
	1.4nm,0.4s,baz=328,slow=16,SNR=4.3							
ASAR				ScP		**ScP**	**05 44 52.6**	**-2.5**
	0.9nm,0.4s,baz=0.6,slow=2.0,SNR=4.3							
AS01	**Alice Springs**	**17.00**	**163**	P	**Pn**		**05 36 57.6**	**+0.3**
WRKA	**Warakurna**	**17.54**	**181**	P	**Pn**		**05 37 03.8**	**0.0**
GIRL	**Giralia**	**20.45**	**221**	P	**P**		**05 37 35.8**	**+1.7**
MEEK	**Meekatharra**	**21.31**	**205**	P	**P**		**05 37 43.0**	**-0.4**
OOD	**Oodnadatta**	**21.40**	**162**	P	**P**		**05 37 44.7**	**+0.4**
FORT	**Forrest**	**23.26**	**181**	P	**P**		**05 38 03.0**	**+0.5**
INKA	**Innaminka**	**23.33**	**152**	P	**P**		**05 38 04.4**	**+1.3**
MULG	**Mulgathing**	**23.36**	**168**	P	**P**		**05 38 03.8**	**+0.5**
QLP	**Quilpie**	**24.25**	**144**	P	**P**		**05 38 13.0**	**+1.5**
MORW	**Morawa**	**24.54**	**207**	P	**P**		**05 38 15.5**	**+1.4**
KMBL	**Kambalda**	**24.63**	**194**	P	**P**		**05 38 15.2**	**+0.3**
LCRK	**Leigh Creek**	**24.68**	**160**	P	**P**		**05 38 16.1**	**+0.8**
BLDU	**Ballidu**	**25.60**	**204**	P	**P**		**05 38 24.1**	**+0.4**
BBOO	**Buckleboo**	**26.24**	**165**	P	**P**		**05 38 29.6**	**+0.1**
STKA	**Stephens Creek**	**27.25**	**155**	P	**P**		**05 38 39.0**	**+0.5**
STKA	**Stephens Creek**	**27.25**	**155**	P	**P**		**05 38 39.0**	**+0.5**
	4.9nm,0.5s,baz=327,slow=8.9,SNR=15							
	4.9nm,0.5s							
NWAO	**Narrogin (SRO)**	**27.47**	**201**	P	**P**		**05 38 40.5**	**+0.1**
HTT	**Hallett**	**27.65**	**161**	P	**P**		**05 38 42.1**	**0.0**
CMSA	**Cobar Meteorol**	**28.89**	**148**	P	**P**		**05 38 53.9**	**+0.8**
SKLT	**Songkhla**	**31.34**	**297**	P	**P**		**05 39 16.2**	**+1.4**
ARPS	**Mount Arapiles**	**31.67**	**159**	P	**P**		**05 39 19.0**	**+1.5**
KSRS	**Korea Array**	**44.62**	**359**	P	**P**		**05 41 06.4**	**+0.7**
	1.0nm,0.5s,baz=180,slow=11,SNR=2.5							
	1.0nm,0.5s							
MJAR	**Matsushiro Arr**	**44.65**	**11**	P	**P**		**05 41 04.2**	**-1.8**
	1.0nm,0.3s,baz=175,slow=13,SNR=1.6							
	1.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.46**	**3**	P	**P**		**05 41 56.2**	**-1.9**
	0.9nm,0.5s,baz=145,slow=5.3,SNR=1.8							
	0.9nm,0.5s							
SONM	**Songino Array**	**58.36**	**343**	P	**P**		**05 42 48.1**	**+0.3**
	1.8nm,0.8s,baz=172,slow=8.5,SNR=9.5							
	1.8nm,0.8s							
PETK	**Petropavlovsk-**	**65.18**	**19**	P	**P**		**05 43 33.5**	**+0.4**
	3.4nm,0.6s,baz=191,slow=3.7,SNR=5.1							
	3.4nm,0.6s							
MKAR	**Makanchi Array**	**67.75**	**328**	P	**P**		**05 43 49.8**	**+0.1**
	0.8nm,0.4s,baz=119,slow=8.2,SNR=15							
	0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**71.29**	**334**	P	**P**		**05 44 10.4**	**-0.7**
	0.9nm,0.4s,baz=138,slow=4.8,SNR=4.2							
	0.9nm,0.4s							
KURBB	**Kurchatov Arra**	**72.07**	**329**	P	**P**		**05 44 15.7**	**-0.3**
	0.5nm,0.3s,baz=131,slow=5.0,SNR=13							
	0.5nm,0.3s							
BVAR	**Borovoye Array**	**77.61**	**328**	P	**P**		**05 44 46.4**	**-1.3**
	0.5nm,0.4s,baz=106,slow=11,SNR=4.3							
	0.5nm,0.4s							
ILAR	**Eielson Array**	**94.34**	**25**	P	**P**		**05 46 10.6**	**+0.1**
	0.3nm,0.8s,baz=254,slow=5.2,SNR=1.9							
	0.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**127.42**	**281**	PKP		**PKPdf**	**05 51 55.5**	**-0.8**
	0.2nm,0.6s,baz=42,slow=2.4,SNR=2.2							
CPUP	**Villa Florida**	**146.00**	**171**	PKPbc		**PKPbc**	**05 52 31.0**	**-0.2**
	1.4nm,0.8s,baz=180,slow=2.6,SNR=3.7							

TEH ***06*** *05:43:04.7,31.°39N×56.°30E, h6km±24km, ML3.7*
IDC ***06*** *05:43:05.6±1.9,31.°50N×56.°15E, h0km, mb3.4/5, mbtmp3.5/6, MS2.7/1, Error ellipse: s-maj=57.9km s-min=25.3km az=131.0*

ISC 06 05:43:06.5±0.8, 31.°36N±0.°04×56.°30E±0.°04, h10km, n46, σ1°04/44, mb3.5/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ZRDN	**Zarand Kerman**	**0.44**	**153**		Pg	**Pg**	**05 43 14.3**	**-1.0**
IBAF	**Bafgh**	**0.67**	**290**		Pg	Pg	05 43 17.4	-2.1
KHGB	**Koh Gabri**	**1.00**	**171**		Pg	**Pg**	**05 43 24.9**	**-0.8**
KRM1	**Kerman Provinc**	**1.20**	**136**		Pg	**Pb**	**05 43 29.0**	**-0.5**
TVBK	**TV Kerman**	**1.43**	**164**		Pg	**Pn**	**05 43 33.0**	**+0.1**
IMEH	**Mehriz**	**1.45**	**271**		Pg	**Pn**	**05 43 32.2**	**-0.8**
TPRV	**Parvadeh(Tabas**	**1.69**	**11**		Pg	**Pn**	**05 43 36.4**	**+0.1**
NGRK	**Negar Kerman**	**1.75**	**168**		Pg	**Pn**	**05 43 38.6**	**+1.2**
ICHK	**Chekchek**	**1.84**	**299**		Pn	**Pn**	**05 43 38.6**	**+0.2**
CHMN	**Cheshme madani**	**1.84**	**144**		Pn	**Pn**	**05 43 39.9**	**+1.4**
ISAD	**Sadrabad**	**2.30**	**284**		Pn	**Pn**	**05 43 46.0**	**+1.2**
BSRN	**Basiran**	**2.48**	**75**		Pn	**Pn**	**05 43 47.5**	**+0.3**
IKOO	**Kooshah**	**2.53**	**65**		Pn	**Pn**	**05 43 48.5**	**+0.6**
ITEG	**Tejag**	**2.58**	**53**		Pn	**Pn**	**05 43 49.2**	**+0.6**
TNSJ	**Nastanj**	**2.60**	**6**		Pn	**Pn**	**05 43 49.3**	**+0.4**
ANAR	**Anarak**	**2.84**	**311**		Pn	**Pn**	**05 43 52.9**	**+0.8**
KBAM	**BAM**	**2.90**	**140**		Pn	**Pn**	**05 43 54.6**	**+1.7**
AFRZ	**Afriz**	**3.08**	**47**		Pn	**Pn**	**05 43 55.8**	**+0.4**
NHDN	**Nehbandan**	**3.21**	**89**		Pn	**Pn**	**05 43 58.1**	**+1.0**
IRAM	**Ramesheh**	**3.38**	**279**		Pn	**Pn**	**05 44 00.7**	**+1.2**
IZEF	**Zefreh**	**3.70**	**295**		Pn	**Pn**	**05 44 05.3**	**+1.2**
KLNJ	**Kolanjah**	**4.05**	**266**		Pn	**Pn**	**05 44 10.9**	**+2.0**
SHRT	**Shahrakht**	**4.07**	**55**		Pn	**Pn**	**05 44 09.8**	**+0.9**
KRSH	**Karshahi**	**4.37**	**308**		Pn	**Pn**	**05 44 13.4**	**+0.2**
IKLH	**Kol

OK032				IAML		06 18 07.3		
	comp=N,220nm,0.2s							
OK038	**West end E0370**	**0.49**	**284**		Pg	06 17 55.5	+0.1	
OK038				IAML		06 18 05.4		
	comp=N,468nm,0.4s							
OK038				IAML		06 18 07.9		
	comp=N,392nm,0.3s							
GC02	**Grant County #**	**0.54**	**26**	Pg	Pg	06 17 56.6	+0.2	
GC02				Sg	Sg	06 18 04.3	+0.8	
OK035	**E0210 Rd and N**	**0.56**	**308**	Sg	Sg	06 18 04.5	+0.4	
KAN14	**Manchester OK**	**0.61**	**15**	Pg	Pg	06 17 57.8	0.0	
KAN14					Sg	06 18 04.2	-1.5	
KAN14				Sg	Sb	06 18 06.1	-2.0	
KAN14				IAML		06 18 06.9		
	comp=E,215nm,0.1s							
KAN14				IAML		06 18 07.1		
	comp=N,161nm,0.1s							
U32A	**Winter Ranch,**	**0.68**	**271**	Pg	Pg	06 17 59.1	0.0	
KAN17	**Caldwell West**	**0.75**	**25**	Pg	Pg	06 18 00.2	-0.1	
KAN17				Sg	Sg	06 18 10.5	+0.4	
KAN10	**Anthony SW Sta**	**0.76**	**4**	Pg	Pg	06 18 00.4	-0.2	
OK029	**Liberty Lake**	**0.80**	**135**	Pg	Pg	06 18 01.3	-0.1	
OK029				Sg	Sg	06 18 12.3	+0.5	
OK029				IAML		06 18 14.8		
	comp=N,151nm,0.4s							
OK029				IAML		06 18 15.0		
	comp=N,181nm,0.4s							
CSTR	**Hydro, Custer**	**0.84**	**211**	Pg	Pg	06 18 02.0	-0.1	
CSTR				Sg	Sg	06 18 13.5	+0.6	
BLOK	**Blackwell**	**0.85**	**62**	Pg	Pg	06 18 02.3	-0.1	
BLOK				Sg	Sg	06 18 13.7	+0.2	
KAN09	**Caldwell North**	**0.88**	**29**	Sg	Sg	06 18 14.8	+0.4	
OK048	**Pawnee Station**	**0.98**	**87**	Pg	Pg	06 18 04.5	-0.3	
OK033	**Mehan**	**1.04**	**108**	Pg	Pg	06 18 05.6	-0.3	
ELIS	**Ellis County**	**1.06**	**254**	Pg	Pg	06 18 06.3	-0.1	
ELIS				IAML		06 18 25.3		
	comp=E,97nm,0.2s							
ELIS				IAML		06 18 34.0		
	comp=N,119nm,0.1s							
OK051	**E0350 and S346**	**1.07**	**82**	Pg	Pg	06 18 05.7	-0.9	
OK051				Sg	Sb	06 18 21.1	-0.2	
OK052	**Battle Ridge R**	**1.16**	**108**	Pg	Pg	06 18 07.8	-0.4	
OK052				Sg	Sg	06 18 23.0	-0.2	
OK052				IAML		06 18 25.3		
	comp=N,80nm,0.2s							
QUOK	**Quay**	**1.19**	**99**	Pg	Pg	06 18 08.3	-0.4	
QUOK				Sg	Sg	06 18 24.2	+0.1	
QUOK				IAML		06 18 25.9		
	comp=E,122nm,0.2s							
T35A	**Sooner Cattle**	**1.43**	**67**		Pn	06 18 12.6	+0.1	
T35A					Sb	06 18 31.5	-0.1	
W35A	**Tecumseh**	**1.60**	**139**		Pn	06 18 14.6	-0.3	
WMOK	**Wichita Mounta**	**1.70**	**198**		Pn	06 18 16.2	0.0	
WMOK				IAmb_Lg		06 18 39.4		
	comp=Z,5.3nm,1.3s							
X34A	**Smith Ranch, M**	**1.78**	**171**	Pn	Pn	06 18 18.2	+0.8	
R32A	**Long Quarter,**	**2.10**	**348**		Pb	06 18 23.3	-1.2	
CBKS	**Cedar Bluff**	**2.75**	**333**	IAmb_Lg		06 19 11.8		
	comp=Z,3.9nm,0.7s							
N35A	**Tabor**	**4.90**	**23**	IAmb_Lg		06 20 29.8		
	comp=Z,25nm,1.2s							

IDC 06 06:25:10.3±3.8, 53.47N×87.55E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=36.7km s-min=18.0km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**288**	I	I	06 34 27.2	
	baz=106,slow=338,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.69**	**288**	Pg	Pn	06 25 40.7	-0.4
	0.7nm,0.3s,baz=105,slow=16,SNR=5.2						
ZALV				Lg	Lg	06 26 04.0	
	0.6nm,0.3s,baz=112,slow=28,SNR=1.5						
KURBB	**Kurchatov Arra**	**6.25**	**247**	Pn	Pn	06 26 44.8	+1.1
	baz=60,slow=13,SNR=1.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.49**	**209**	Pn	Pn	06 27 01.5	+0.8
	0.1nm,0.3s,baz=27,slow=14,SNR=2.3						
	0.1nm,0.3s						

*IDC **06** 06:27:07.5±1.1, 23.98N×121.74E, h0km, mb3.5/6, mbtmp3.5/8, ML3.6/2, MS3.1/4, Error ellipse: s-maj=37.9km s-min=22.3km az=69.0*

*ASIES **06** 06:27:10.0, 24.11N×121.73E, h8km, ML4.1, Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=3.63; $M_{\theta\theta}$=-1.61; $M_{\phi\phi}$=5.24; $M_{r\theta}$=2.78; $M_{r\phi}$=-3.67; $M_{\theta\phi}$=-0.16; Fault plane solution: $M_0$6.54640×10^{21} NP1: ϕ_s303.36000°, δ64.06000°, λ-136.98000°. NP2: ϕ_s191.15000°, δ52.15000°, λ-33.64000°. Principal axes: T Plg7.1560°, Azm64.7580°; N Plg41.1010°, Azm328.4700°; P Plg48.0040°, Azm162.7740°;*

*TAP **06** 06:27:10.0, 24.11N×121.73E, h8km, ML4.1, B*

*JMA **06** 06:27:10.3±0.1, 24.1N±0.2×121.7E±0.5, h4km±1km, MV3.6/13, TAIWAN REGION*

ISC 06 06:27:10.2±0.8, 24.11N±0.01×121.73E±0.02, h10km±5km, n163, σ0.971/223, mb3.4/6, 18C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**294**	⇓*i*P	**Pg**	**06 27 13.0**	**0.0**
	baz=295						
ETL				*i* S	**Sg**	**06 27 14.9**	**-0.1**
	baz=295						
TWD	**Chiawan**	**0.13**	**255**	⇑*i*P	**Pg**	**06 27 13.2**	**0.0**
	baz=264						
TWD				*i* S	**Sg**	**06 27 15.3**	**0.0**
	baz=264						
NACB	**Ninganchiao**	**0.14**	**295**	P	**Pg**	**06 27 13.4**	**0.0**
NACB	**Ninganchiao**	**0.14**	**295**	⇓*i*P	**Pg**	**06 27 13.4**	**0.0**
	baz=289						
NACB				*i* S	**Sg**	**06 27 15.5**	**-0.1**
	baz=289						
HWA	**Hwalien**	**0.18**	**220**	⇑*i*P	**Pg**	**06 27 14.6**	**+0.6**
	baz=234						
EHP	**Heping Village**	**0.20**	**2**	⇓*i*P	**Pg**	**06 27 14.6**	**+0.3**
	baz=3.0						
EHP				*i* S	**Sg**	**06 27 17.7**	**+0.5**
	baz=3.0						
EAHA	**Aohua**	**0.21**	**2**	⇓*i*P	**Pg**	**06 27 14.9**	**+0.2**
	baz=360						
EAHA				*i* S	**Sg**	**06 27 18.4**	**+0.7**
	baz=360						
ETLH	**Xiulin Townshi**	**0.25**	**292**	⇓*i*P	**Pg**	**06 27 15.5**	**+0.2**
	baz=293						
ETLH				*i* S	**Sg**	**06 27 19.3**	**+0.6**
	baz=293						
ETM	**Tongmen**	**0.26**	**236**	⇑*i*P	**Pg**	**06 27 15.7**	**+0.1**
	baz=240						
ETM				S	**Sg**	**06 27 19.4**	**+0.3**
	baz=240						
LXIB	**Xiulin Townshi**	**0.31**	**252**	⇑*i*P	**Pg**	**06 27 16.4**	**0.0**
	baz=255						
LXIB				*e*S	**Sg**	**06 27 20.7**	**+0.1**
	baz=255						
ENA	**Nanau**	**0.31**	**1**	⇓*i*P	**Pg**	**06 27 16.8**	**+0.3**
	baz=1.0						
ENA				S	**Sg**	**06 27 21.1**	**+0.4**
	baz=1.0						
EWUT	**Wuta**	**0.33**	**7**	⇓*i*P	**Pg**	**06 27 17.2**	**+0.3**
	baz=5.0						
EWUT				S	**Sg**	**06 27 21.8**	**+0.5**
	baz=5.0						
SHUL	**Shoufeng**	**0.36**	**206**	P	**Pb**	**06 27 18.4**	**-0.2**
	baz=209						
SHUL				*e*S	**Sb**	**06 27 26.3**	**+2.0**
	baz=209						
ESL	**Shilin**	**0.41**	**223**	⇑*i*P	**Pg**	**06 27 18.1**	**0.0**
	baz=236						
WHF	**Hehuan Shan**	**0.43**	**274**	⇑*i*P	**Pg**	**06 27 18.9**	**+0.1**
	baz=275						
WHF				*i* S	**Sg**	**06 27 24.6**	**+0.2**
	baz=275						
TEGC	**Jichi Village**	**0.44**	**204**	*e*P	**Pb**	**06 27 20.2**	**+0.1**
	baz=192						
TEGC				*e*S	**Sb**	**06 27 29.5**	**+2.9**
	baz=192						
NNSB	**Datong**	**0.45**	**315**	⇓*i*P	**Pg**	**06 27 19.4**	**+0.4**
	baz=314						
NNSB				*i* S	**Sg**	**06 27 25.5**	**+0.6**
	baz=314						
NNSH	**Datong**	**0.45**	**315**	⇓*i*P	**Pg**	**06 27 19.4**	**+0.4**
	baz=314						
NNSH				S	**Sg**	**06 27 25.6**	**+0.7**
	baz=314						
LATG	**Datong**	**0.46**	**336**	⇓*i*P	**Pg**	**06 27 19.6**	**+0.4**
	baz=335						
LATG				S	**Sg**	**06 27 26.0**	**+0.6**
	baz=335						
NNS	**Nan Shan**	**0.46**	**315**	⇓*i*P	**Pg**	**06 27 19.7**	**+0.4**
	baz=315						
NNS				*i* S	**Sg**	**06 27 26.1**	**+0.7**
	baz=315						
FUSS	**Fushou**	**0.47**	**287**	⇑P	**Pb**	**06 27 19.8**	**-0.8**
	baz=287						
FUSS				S	**Sg**	**06 27 26.4**	**+0.8**
	baz=287						
ESAO	**Su ao**	**0.47**	**12**	*e*P	**Pg**	**06 27 19.7**	**+0.3**
	baz=10.0						
ESAO				*e*S	**Sg**	**06 27 26.5**	**+0.8**
	baz=10.0						
TWC	**Suao**	**0.51**	**12**	⇓*i*P	**Pg**	**06 27 20.4**	**+0.4**
	baz=5.0						
TWC				S	**Sg**	**06 27 27.3**	**+0.6**
	baz=5.0						
WARBT	**Fenglin Townsh**	**0.51**	**219**	⇑*i*P	**Pg**	**06 27 20.0**	**-0.1**
	baz=231						
WARBT				*e*S	**Sb**	**06 27 28.4**	**-0.2**
	baz=231						
CHGB	**Renai**	**0.51**	**264**	⇑*i*P	**Pb**	**06 27 20.6**	**-0.8**
	baz=259						
CHGB				S	**Sg**	**06 27 27.4**	**+0.4**
	baz=259						
NDS	**Dongshan**	**0.52**	**358**	⇓P	**Pb**	**06 27 20.8**	**-0.6**
	baz=356						
NDS				S	**Sb**	**06 27 28.2**	**-0.7**
	baz=356						
EGFH	**Guangfu**	**0.52**	**212**	*e*P	**Pb**	**06 27 21.1**	**-0.4**
	baz=226						
NDT	**Datong Townshi**	**0.53**	**338**	⇓*i*P	**Pb**	**06 27 21.1**	**-0.4**
	baz=336						
NDT				*i* S	**Sb**	**06 27 28.4**	**-0.8**
	baz=336						
TWT	**Tachien**	**0.53**	**285**	P	**Pb**	**06 27 21.2**	**-0.4**
	baz=285						
TWT				S	**Sb**	**06 27 28.4**	**-0.9**
	baz=285						
OWD	**Renai**	**0.53**	**253**	*e*P	**Pg**	**06 27 20.7**	**+0.1**
	baz=256						
EOS4	**EOS4**	**0.54**	**89**	*e*P	**Pn**	**06 27 23.0**	**-0.5**
	baz=93						
TDCB	**Techi**	**0.54**	**285**	⇑*i*P	**Pb**	**06 27 21.4**	**-0.5**
	baz=286						
TDCB				*i* S	**Sg**	**06 27 28.2**	**+0.2**
	baz=286						
ENTT	**Nioudou**	**0.55**	**344**	⇓*i*P	**Pb**	**06 27 21.4**	**-0.4**
	baz=342						
ENTT				S	**Sb**	**06 27 29.1**	**-0.6**
	baz=342						
EOS2	**EOS2**	**0.55**	**56**	*e*P	**Pn**	**06 27 23.0**	**-0.9**
	baz=31						
EOS3	**EOS3**	**0.56**	**72**	*e*P	**Pn**	**06 27 24.2**	**+0.1**
	baz=47						
WUSB	**Renai**	**0.57**	**258**	⇑*i*P	**Pb**	**06 27 21.8**	**-0.6**
	baz=260						
WUSB				S	**Sg**	**06 27 28.8**	**-0.2**
	baz=260						
TWE	**Neicheng**	**0.61**	**354**	⇓*i*P	**Pb**	**06 27 22.6**	**-0.3**
	baz=354						
TWE				S	**Sg**	**06 27 30.7**	**+0.7**
	baz=354						
YHNB	**Yeheng**	**0.64**	**330**	P	**Pb**	**06 27 23.4**	**-0.1**
YHNB	**Yeheng**	**0.64**	**330**	⇓*i*P	**Pb**	**06 27 23.4**	**-0.1**
	baz=329						
YHNB				*i* S	**Sb**	**06 27 32.1**	**-0.4**
	baz=329						
ILA	**Ilan**	**0.65**	**1**	*e*P	**Pb**	**06 27 23.7**	**+0.1**
	baz=347						
VWDT	**VWDT**	**0.65**	**237**	⇑P	**Pb**	**06 27 23.0**	**-0.6**
	baz=239						
VWDT				*e*S	**Sb**	**06 27 32.0**	**-0.6**
	baz=239						
NSK	**Sanguang**	**0.66**	**329**	⇓*i*P	**Pb**	**06 27 23.6**	**-0.2**
	baz=328						
NSK				S	**Sg**	**06 27 32.0**	**+0.5**
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.66**	**348**	⇓*i*P	**Pb**	**06 27 23.6**	**-0.2**
	baz=338						
FUSB				*i* S	**Sg**	**06 27 31.9**	**+0.4**
	baz=338						
HGSD	**Ruisui**	**0.68**	**205**	P	**Pb**	**06 27 24.2**	**+0.1**
	baz=198						
NWLT	**Wulai**	**0.69**	**342**	⇓*i*P	**Pb**	**06 27 24.3**	**0.0**
	baz=341						
NWLT				S	**Sb**	**06 27 33.6**	**-0.4**
	baz=341						
EHY	**Hungye**	**0.71**	**212**	P	**Pg**	**06 27 23.8**	**-0.2**
	baz=227						
EHY				*e*S	**Sb**	**06 27 35.5**	**+1.0**
	baz=227						
WPL	**Puli Township**	**0.72**	**262**	P	**Pb**	**06 27 24.6**	**-0.2**
	baz=255						
WPL				S	**Sg**	**06 27 33.7**	**+0.3**
	baz=255						
WHP	**Taichung City**	**0.74**	**283**	⇑*i*P	**Pb**	**06 27 25.3**	**+0.2**
	baz=284						
WHP				S	**Sb**	**06 27 35.6**	**+0.3**
	baz=284						
DPDB	**Guoxing**	**0.74**	**264**	⇑*i*P	**Pb**	**06 27 25.1**	**-0.1**
	baz=266						
WCS	**Beigang Elemen**	**0.75**	**266**	⇑P	**Pb**	**06 27 25.2**	**-0.1**
	baz=260						
WCS				*e*S	**Sb**	**06 27 34.9**	**-0.8**
	baz=260						
NFF	**Wufeng Townshi**	**0.76**	**313**	⇓P	**Pb**	**06 27 25.6**	**+0.1**
	baz=312						
NFF				*e*S	**Sb**	**06 27 35.6**	**-0.4**
	baz=312						
SSLB	**Suanglung**	**0.78**	**246**	P	**Pg**	**06 27 25.4**	**+0.1**
SSLB	**Suanglung**	**0.78**	**246**	⇑*i*P	**Pg**	**06 27 25.4**	**+0.1**
	baz=258						
SSLB				*i* S	**Sg**	**06 27 35.7**	**+0.2**
	baz=258						
SMLT	**Sun Moon Lake**	**0.80**	**253**	*i* P	**Pb**	**06 27 25.9**	**-0.2**
	baz=255						
SMLT				*e*S	**Sb**	**06 27 36.5**	**-0.5**
	baz=255						
YULB	**Yu-li**	**0.82**	**209**	P	**Pb**	**06 27 26.6**	**+0.1**
YULB	**Yu-li**	**0.82**	**209**	*e*P	**Pg**	**06 27 25.3**	**-0.8**
	baz=224						
YULB				*e*S	**Sn**	**06 27 39.0**	**-1.0**
	baz=224						
TYC	**Yuchr**	**0.83**	**256**	P	**Pg**	**06 27 26.1**	**0.0**
	baz=258						
TYC				*e*S	**Sg**	**06 27 36.3**	**-0.7**
	baz=258						
ECBN	**Changbin**	**0.83**	**198**	*e*P	**Pb**	**06 27 27.1**	**+0.4**
	baz=204						
LIOB	**Emei**	**0.84**	**309**	*e*P	**Pn**	**06 27 27.7**	**-0.4**
	baz=308						
LIOB				*e*S	**Sb**	**06 27 39.0**	**+0.7**
	baz=308						
NSTT	**Nanjuang**	**0.84**	**308**	⇓*i*P	**Pb**	**06 27 27.4**	**+0.5**
	baz=307						
NSTT				*i* S	**Sb**	**06 27 38.0**	**-0.3**
	baz=307						
EYUL	**Yuli**	**0.85**	**206**	*e*P	**Pb**	**06 27 27.4**	**+0.3**
	baz=228						
NJD	**Zhudong**	**0.85**	**317**	*e*P	**Pn**	**06 27 28.0**	**-0.3**
	baz=314						
TWF1	**Yuli**	**0.86**	**208**	*e*P	**Pg**	**06 27 26.5**	**-0.2**
	baz=224						
TIPB	**Shuangxi**	**0.86**	**6**	P	**Pb**	**06 27 27.2**	**0.0**
	baz=354						
TIPB				S	**Sg**	**06 27 37.9**	**0.0**
	baz=354						
NHDH	**Xindian Distri**	**0.87**	**347**	*e*P	**Pb**	**06 27 27.8**	**+0.5**
	baz=344						
TWA	**Mucha**	**0.87**	**351**	⇓*i*P	**Pb**	**06 27 27.8**	**+0.4**
	baz=349						
TWA				S	**Sb**	**06 27 38.9**	**-0.3**
	baz=349						
TATO	**Taipei**	**0.89**	**346**	P	**Pb**	**06 27 28.1**	**+0.4**
TATO	**Taipei**	**0.89**	**346**	P	**Pb**	**06 27 28.1**	**+0.4**
	baz=344						
TATO				S	**Sg**	**06 27 39.1**	**+0.3**
	baz=344						
TWQ1	**Liyutan**	**0.91**	**285**	*e*P	**Pn**	**06 27 29.0**	**0.0**
	baz=285						
WHYT	**Xinyi Township**	**0.91**	**243**	*e*P	**Pn**	**06 27 28.6**	**-0.4**
	baz=247						
TWB1	**Santiao Chiao**	**0.92**	**15**	*e*P	**Pb**	**06 27 28.2**	**0.0**
	baz=4.0						
TWB1				*e*S	**Sg**	**06 27 40.1**	**+0.1**
	baz=4.0						
HSN1	**Hsinchu**	**0.93**	**316**	*e*P	**Pn**	**06 27 29.8**	**+0.6**
	baz=314						
NSY	**Sanyi**	**0.94**	**289**	*e*P	**Pn**	**06 27 30.0**	**+0.6**
	baz=289						
TAP	**Taipei**	**0.94**	**347**	*e*P	**Pb**	**06 27 28.8**	**+0.1**
	baz=343						
WWF	**Wufeng**	**0.95**	**266**	*e*P	**Pn**	**06 27 29.9**	**+0.4**
	baz=268						
NWF	**Wu-fen Shan**	**0.95**	**3**	P	**Pb**	**06 27 29.2**	**+0.3**
	baz=352						
NWF				*e*S	**Sb**	**06 27 41.7**	**+0.1**
	baz=352						
WFSB	**Wu-fen Shan**	**0.95**	**3**	⇓*i*P	**Pn**	**06 27 29.3**	**-0.4**
	baz=352						
WFSB				S	**Sb**	**06 27 41.3**	**-0.2**
	baz=352						
NMLH	**Miaoli**	**0.96**	**296**	*e*P	**Pn**	**06 27 30.7**	**+1.0**
	baz=295						
SBCB	**Hsinchu**	**0.96**	**315**	*e*P	**Pn**	**06 27 30.7**	**+1.0**
	baz=312						
WJS	**Zhushan**	**0.96**	**253**	*e*P	**Pn**	**06 27 29.5**	**-0.3**
	baz=255						
WJS				*e*S	**Sn**	**06 27 44.3**	**+0.8**
	baz=255						
TCU	**Taichung**	**0.96**	**272**	*e*P	**Pn**	**06 27 30.6**	**+0.8**
	baz=269						
NTY	**Taoyuan**	**0.97**	**336**	*e*P	**Pn**	**06 27 29.9**	**+0.1**
	baz=325						
CHKH	**Chenggong**	**0.97**	**199**	*e*P	**Pb**	**06 27 29.0**	**0.0**
	baz=194						
HSN	**Hsinchu**	**0.98**	**315**	*e*P	**Pn**	**06 27 30.5**	**+0.6**
	baz=321						
WNT1	**Nantou City**	**0.98**	**258**	*e*P	**Pn**	**06 27 30.5**	**+0.5**
	baz=261						
SXI1	**Grass Mountain**	**0.98**	**8**	P	**Pn**	**06 27 29.8**	**-0.3**
	baz=348						
NCU	**National Centr**	**0.99**	**330**	*e*P	**Pn**	**06 27 31.0**	**+1.0**
	baz=327						
NCUH	**Zhongli**	**0.99**	**330**	*e*P	**Pn**	**06 27 30.7**	**+0.7**
	baz=327						
WNT	**Mingjian**	**0.99**	**256**	⇓P	**Pn**	**06 27 30.8**	**+0.7**
	baz=252						
FULB	**Fuli**	**1.00**	**204**	*e*P	**Pb**	**06 27 29.7**	**+0.1**
	baz=198						
TWS1	**Kuangyinshan**	**1.02**	**344**	*e*P	**Pn**	**06 27 31.1**	**+0.5**
	baz=340						
WDJ	**Dajia District**	**1.02**	**283**	*e*P	**Pn**	**06 27 31.7**	**+1.1**
	baz=284						
TNOU	**National Taiwa**	**1.03**	**2**	*e*P	**Pb**	**06 27 30.4**	**+0.3**
	baz=357						
YM01	**YM01**	**1.04**	**352**	*e*P	**Pn**	**06 27 31.2**	**+0.4**
	baz=349						
YM01				*e*S	**Sn**	**06 27 45.3**	**-0.1**
	baz=349						
ALS	**Alishan**	**1.04**	**235**	P	**Pb**	**06 27 30.3**	**-0.1**
	baz=238						
ALS				*e*S	**Sn**	**06 27 46.5**	**+0.7**
	baz=238						
CHKT	**Chengkung**	**1.06**	**198**	*e*P	**Pg**	**06 27 30.0**	**-0.6**
	baz=195						
WCHH	**Zhanghua**	**1.07**	**268**	*e*P	**Pb**	**06 27 32.1**	**+0.8**
	baz=270						
EHD	**Haiduan**	**1.07**	**207**	*e*P	**Pb**	**06 27 30.8**	**0.0**
	baz=212						
EHD				*e*S	**Sn**	**06 27 47.6**	**+1.4**
	baz=212						
NTST	**Danshui**	**1.08**	**346**	*e*P	**Pn**	**06 27 32.2**	**+0.9**
	baz=341						
ANP	**Anpu**	**1.08**	**350**	*e*P	**Pn**	**06 27 31.9**	**+0.4**
	baz=345						
NHW	**Xinwu Township**	**1.09**	**325**	*e*P	**Pn**	**06 27 32.5**	**+1.1**
	baz=322						
NWRT	**Kuosheng**	**1.09**	**357**	*e*P	**Pn**	**06 27 32.2**	**+0.8**
	baz=351						
CHN5	**Tsauling**	**1.09**	**242**	P	**Pn**	**06 27 31.9**	**+0.3**
	baz=246						
CHN5				S	**Sn**	**06 27 48.0**	**+1.1**
	baz=246						
ECS	**Chishang**	**1.12**	**205**	*e*P	**Pn**	**06 27 32.4**	**+0.5**
	baz=224						
ELDTW	**Lidau**	**1.13**	**216**	*e*P	**Pg**	**06 27 31.4**	**-0.6**
	baz=222						
WGK	**Gukeng**	**1.15**	**249**	*e*P	**Pn**	**06 27 33.4**	**+1.0**
	baz=253						
JYNG	**Yonagunijimaku**	**1.16**	**73**	P	**Pn**	**06 27 33.1**	**+0.7**
JYNG				S	**Sn**	**06 27 50.0**	**+1.7**
TWY	**Chenhua**	**1.16**	**354**	*e*P	**Pn**	**06 27 33.5**	**+1.0**
	baz=349						
WDLH	**Douliu**	**1.17**	**249**	*e*P	**Pn**	**06 27 33.2**	**+0.6**
	baz=253						
YOJ	**Yonaguni jima**	**1.22**	**73**	P	**Pg**	**06 27 36.5**	**+2.9**
YOJ	**Yonaguni jima**	**1.22**	**73**	*e*P	**Pg**	**06 27 33.4**	**-0.1**
	baz=53						
YOJ	**Yonaguni jima**	**1.22**	**73**	P	**Pg**	**06 27 33.6**	**+0.1**
WCKO	**Fanlu**	**1.23**	**237**	*e*P	**Pg**	**06 27 34.8**	**+0.9**
	baz=243						
WRL	**Guolierlin Hig**	**1.26**	**261**	*e*P	**Pg**	**06 27 35.0**	**+0.6**
	baz=256						
RLNB	**Erlin**	**1.27**	**260**	*e*P	**Pg**	**06 27 35.9**	**+1.2**
	baz=264						
STYH	**Taoyuan**	**1.28**	**223**	*e*P	**Pg**	**06 27 34.6**	**-0.3**
	baz=230						
CHN2	**Minshiung**	**1.29**	**244**	*e*P	**Pg**	**06 27 35.6**	**+0.6**
	baz=249						
CHN4	**Tsaushan**	**1.29**	**234**	⇑P	**Pg**	**06 27 35.5**	**+0.5**
	baz=240						
TPUB	**Ta-pu**	**1.29**	**232**	P	**Pg**	**06 27 35.7**	**+0.6**
TPUB	**Ta-pu**	**1.29**	**232**	⇑P	**Pg**	**06 27 35.3**	**+0.2**
	baz=236						
TPUB				S	**Sn**	**06 27 52.9**	**+1.2**
	baz=236						
WTK	**Tuku**	**1.30**	**251**	*e*P	**Pg**	**06 27 35.9**	**+0.7**
	baz=256						
STYT	**Tauyuan**	**1.30**	**224**	P	**Pn**	**06 27 34.5**	**0.0**
	baz=230						
LONT	**Longtian**	**1.32**	**205**	*e*P	**Pg**	**06 27 36.2**	**+0.6**
	baz=213						
WTP	**Ta-pu**	**1.34**	**230**	*e*P	**Pg**	**06 27 36.3**	**+0.3**
	baz=236						
TWK	**Hsinying**	**1.42**	**234**	*e*P	**Pg**	**06 27 37.1**	**-0.3**
	baz=231						
TWK				*e*S	**Sg**	**06 27 58.1**	**+2.3**
	baz=231						
TWG	**Pinlang**	**1.42**	**205**	*e*P	**Pn**	**06 27 36.2**	**+0.1**
	baz=213						
TWGBT	**Beinan**	**1.42**	**205**	P	**Pg**	**06 27 38.2**	**+0.7**
TWGBT	**Beinan**	**1.42**	**205**	*e*P	**Pg**	**06 27 37.3**	**-0.2**
	baz=213						
CHN1	**Nanshi**	**1.44**	**230**	*e*P	**Pg**	**06 27 38.1**	**+0.3**
	baz=236						
CHN1				*e*S	**Sg**	**06 27 59.2**	**+2.7**
	baz=236						
SNST	**Tainan City**	**1.44**	**232**	*e*P	**Pg**	**06 27 37.7**	**-0.1**
	baz=238						
LDUT	**Ludao**	**1.45**	**190**	*e*P	**Pn**	**06 27 34.4**	**-2.1**
	baz=198						
WSF	**Szhu**	**1.46**	**251**	*e*P	**Pg**	**06 27 38.5**	**+0.2**
	baz=256						
SGST	**Jiashian**	**1.47**	**226**	*e*P	**Pb**	**06 27 37.2**	**-0.4**
	baz=232						
SLGT	**Liugui

baz=214
IRIF **Iriomote-Funau** 1.84 83 P Pb 06 27 43.3 -0.6
IRIF eS Sb 06 28 06.5 -0.4
HATJ **Hateruma jima** 1.90 91 eS Sn 06 28 07.7 +1.2
EAST **Anshuo** 1.91 205 eP Pb 06 27 44.4 -0.6
baz=200
SCZT **Fangliau** 2.01 211 eP Pn 06 27 45.4 +1.2
baz=202
JKRS **Kuro-shima** 2.08 86 P Pn 06 27 45.9 +0.8
JIJ **Ishigaki jima** 2.21 83 P Pn 06 27 47.2 +0.2
JIJ eS Sn 06 28 14.8 +0.4
JISG **Ishigakijimahi** 2.40 78 P Pn 06 27 49.8 +0.3
JISG eS Sn 06 28 19.6 +0.7
JOW **Kunigami** 6.50 64 Pn Pn 06 28 45.2 -0.8
2.4nm,0.3s,baz=318,slow=28,SNR=1.7
13nm,0.4s
JNU **Nakatsue** 12.04 40 LR LR 06 35 43.7
comp=Z,122nm,18.7s,baz=183,slow=42
KSRS **Korea Array** 14.32 20 Pn Pn 06 30 34.4 +1.5
0.3nm,0.3s,baz=205,slow=12,SNR=1.6
KSRS LR LR 06 36 08.9
comp=Z,51nm,19.9s,baz=185,slow=38
0.4nm,0.4s
CMAR **Chiang Mai Arr** 21.96 260 LR LR 06 42 14.1
comp=Z,29nm,19.3s,baz=55,slow=41
KLR **Kul'dur** 26.28 15 LR LR 06 44 04.8
comp=Z,44nm,18.4s,baz=212,slow=38
SONM **Songino Array** 26.63 337 P P 06 32 49.0 +0.1
0.3nm,0.5s,baz=145,slow=10,SNR=1.2
0.3nm,0.5s
MKAR **Makanchi Array** 38.74 316 P P 06 34 34.9 +0.3
0.5nm,0.7s,baz=101,slow=12,SNR=3.5
0.5nm,0.7s
ZALV **Zalesovo Beam** 40.58 327 P P 06 34 48.5 -1.2
0.5nm,0.5s,baz=129,slow=8.0,SNR=2.1
0.5nm,0.5s
WRA **Warramunga Arr** 45.48 163 P P 06 35 27.1 -2.6
0.4nm,0.7s,baz=344,slow=8.7,SNR=2.3
0.4nm,0.7s
ASAR **Alice Springs** 48.94 165 P P 06 35 55.0 -1.8
0.2nm,0.6s,baz=345,slow=6.0,SNR=2.1
0.2nm,0.6s
YKA **Yellowknife Ar** 82.84 23 P P 06 39 33.9 -0.6
0.4nm,0.9s,baz=312,slow=5.0,SNR=5.9
0.4nm,0.9s

*SDD **06** 06:29:10.7±1.4, 18°.20N×67°.45W, h29km±31km, MD2.8, ML1.7,MW2.3*
*RSPR **06** 06:29:11.9, 18°.16N×67°.39W, h20km±1km, MD3.1/10*
*OSPL **06** 06:29:12.2±1.2, 18°.24N×67°.39W, h11km±999km, ML1.5*
ISC 06 06:29:10.8±1.1, 18°.17N±0°.05×67°.40W±0°.04, h32km, n32, σ1§19/37, 7C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRSN	**Puerto Rico Se**	**0.25**	**80**	⇑*e*P	**Pb**		**06 29 17.3**	**-0.5**
PRSN	**Puerto Rico Se**	**0.25**	**80**	*e*S	**Sb**		**06 29 21.0**	**-1.6**
LSP	**Las Mesas**	**0.30**	**90**	*e*P	**Pb**		**06 29 18.1**	**-0.4**
LSP	**Las Mesas**	**0.30**	**90**	*e*S	**Sb**		**06 29 23.1**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.33**	**121**	⇓*e*P	**Pb**		**06 29 18.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.33**	**121**	*e*Pg	**Pb**		**06 29 18.8**	**0.0**
CRPR				IAML			06 29 25.1	
	comp=E,27nm,0.2s							
CRPR				IAML			06 29 28.4	
	comp=N,52nm,1.8s							
CRPR	**Cabo Rojo, PR**	**0.33**	**121**	*i* P	**Pb**		**06 29 18.9**	**+0.1**
CRPR				*e*S	**Sb**		**06 29 23.4**	**-0.8**
CRPR				IAML			06 29 24.0	
	comp=Z,57nm,1.4s							
MLPR	**Magueyes Islan**	**0.40**	**121**	⇓*e*P	**Pb**		**06 29 18.5**	**-1.3**
MLPR	**Magueyes Islan**	**0.40**	**121**	*e*S	**Sb**		**06 29 24.4**	**-1.5**
AGPR	**Aguadilla, PR**	**0.40**	**44**	⇑*i*P	**Pb**		**06 29 19.6**	**-0.3**
AGPR	**Aguadilla, PR**	**0.40**	**44**	*e*S	**Sb**		**06 29 25.4**	**-0.7**
AGPR	**Aguadilla, PR**	**0.40**	**44**	⇑*e*Pg	**Pb**		**06 29 19.6**	**-0.3**
AGPR				IAML			06 29 28.8	
	comp=E,52nm,0.1s							
AGPR				IAML			06 29 42.5	
	comp=N,100nm,0.5s							
AGPR	**Aguadilla, PR**	**0.40**	**44**	*i* P	**Pb**		**06 29 19.6**	**-0.3**
AGPR				*e*S	**Sb**		**06 29 23.0**	**-3.1**
AGPR				IAML			06 29 27.1	
	comp=Z,52nm,1.1s							
AOPR	**Arecibo Observ**	**0.64**	**74**	⇑*e*P	**Pb**		**06 29 23.3**	**-0.4**
AOPR	**Arecibo Observ**	**0.64**	**74**	*e*S	**Sb**		**06 29 31.3**	**-1.1**
AOPR	**Arecibo Observ**	**0.64**	**74**	*e*Pg	**Pb**		**06 29 23.1**	**-0.5**
AOPR				*e*Sg	**Sb**		**06 29 31.6**	**-0.8**
AOPR				IAML			06 29 32.6	
	comp=N,67nm,0.3s							
AOPR				IAML			06 29 34.2	
	comp=E,58nm,0.3s							
OBIP	**Obispado Ponce**	**0.77**	**100**	⇑*e*P	**Pn**		**06 29 24.3**	**-1.1**
OBIP	**Obispado Ponce**	**0.77**	**100**	*e*S	**Sb**		**06 29 34.2**	**-1.8**
CELP	**Cerrillos**	**0.79**	**97**	⇑*e*P	**Pn**		**06 29 25.5**	**-0.2**
CELP	**Cerrillos**	**0.79**	**97**	*e*S	**Sn**		**06 29 36.1**	**-0.3**
CELP	**Cerrillos**	**0.79**	**97**	*e*Pg	**Pn**		**06 29 25.5**	**-0.2**
CELP				⇓*e*Sg	**Sn**		**06 29 36.1**	**-0.3**
CELP				IAML			06 29 39.2	
	comp=N,14nm,1.1s							
EMPR	**Esperanza - Ma**	**0.88**	**70**	⇓*e*P	**Pn**		**06 29 27.3**	**+0.3**
EMPR	**Esperanza - Ma**	**0.88**	**70**	*e*S	**Sb**		**06 29 39.6**	**+0.4**
PCDR	**Punta Cana, DR**	**0.99**	**290**	*i* P	**Pn**		**06 29 29.3**	**+0.9**
SJG	**San Juan**	**1.19**	**93**	⇓*e*P	**Pn**		**06 29 32.0**	**+0.7**
SJG	**San Juan**	**1.19**	**93**	*e*S	**Sn**		**06 29 48.0**	**+1.6**
IGPR	**InterUniversit**	**1.25**	**99**	*e*S	**Sb**		**06 29 50.3**	**+0.7**
GCPR	**Guaynabo City**	**1.26**	**84**	⇓*e*P	**Pn**		**06 29 33.7**	**+1.5**
GCPR	**Guaynabo City**	**1.26**	**84**	*e*S	**Sn**		**06 29 49.4**	**+1.3**
HUMP	**Col San Antoni**	**1.48**	**91**	⇑*e*P	**Pn**		**06 29 37.6**	**+2.4**
HUMP	**Col San Antoni**	**1.48**	**91**	*e*S	**Sn**		**06 29 55.7**	**+2.3**
HATOM	**Hato Mayor del**	**1.97**	**288**	*e*Pg	**Pn**		**06 29 43.4**	**+1.3**
HATOM				*e*Sg	**Sn**		**06 30 04.9**	**-0.8**

IDC 06 06:45:54.4±3.0, 54°.41N×86°.03E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=21.1km s-min=12.5km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.85**	**238**		I	I	06 51 00.0	
	0.2nm,0.9s,baz=58,slow=340,SNR=8.9							
ZALV	**Zalesovo Beam**	**0.85**	**237**		Pg	Pg	06 46 09.3	-1.3
	0.5nm,0.3s,baz=58,slow=17,SNR=5.5							
ZALV					Lg	Lg	06 46 23.3	
	1.3nm,0.3s,baz=52,slow=27,SNR=12							
KURBB	**Kurchatov Arra**	**5.95**	**233**		Pn	Pn	06 47 24.6	+1.1
	baz=48,slow=13,SNR=4.0							
KURBB					Lg	Lg	06 49 01.4	
	baz=52,slow=30,SNR=1.5							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.99**	**199**		Pn	Pn	06 47 52.5	+0.8
	baz=22,slow=14,SNR=2.2							
	0.1nm,0.3s							

TAP 06 06:50:17.8, 24°.12N×121°.67E, h10km, ML2.0, 4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.06**	**314**	⇓*i*P		Pg	06 50 20.7	+0.8
	baz=313							
TWD	**Chiawan**	**0.08**	**244**	*i* P		Pg	06 50 20.7	+0.7
	baz=241							
NACB	**Ninganchiao**	**0.09**	**309**	⇓*i*P		Pg	06 50 21.0	+0.8
	baz=309							
ETLH	**Xiulin Townshi**	**0.20**	**298**	*i* P		Pg	06 50 22.9	+1.0
	baz=297							
ETLH				*e*S		Sg	06 50 26.2	+1.4
	baz=297							
EHP	**Heping Village**	**0.20**	**18**	*e*P		Pg	06 50 22.6	+0.6
	baz=19							
EAHA	**Aohua**	**0.22**	**16**	*e*P		Pg	06 50 22.9	+0.5
	baz=15							
ETM	**Tongmen**	**0.22**	**228**	P		Pg	06 50 23.1	+0.8
	baz=227							
LXIB	**Xiulin Townshi**	**0.26**	**249**	*i* P		Pg	06 50 23.8	+0.8
	baz=248							
LXIB				*e*S		Sb	06 50 27.9	-1.2
	baz=248							
ENA	**Nanau**	**0.32**	**11**	⇓*i*P		Pg	06 50 24.9	+0.7
	baz=12							
ENA				*e*S		Sg	06 50 28.9	+0.5
	baz=12							
SHUL	**Shoufeng**	**0.34**	**197**	*e*P		Pb	06 50 25.6	-0.4
	baz=197							
EWUT	**Wuta**	**0.34**	**16**	*e*P		Pg	06 50 25.2	+0.6
	baz=16							
WHF	**Hehuan Shan**	**0.37**	**275**	*e*P		Pb	06 50 26.1	-0.7
	baz=274							
NNSB	**Datong**	**0.41**	**320**	⇓⇓P		Pb	06 50 27.0	-0.2
	baz=319							
NNSB				*e*S		Sb	06 50 32.9	-0.8
	baz=319							
NNSH	**Datong**	**0.41**	**320**	*e*P		Pb	06 50 26.9	-0.4
	baz=319							
FUSS	**Fushou**	**0.41**	**289**	P		Pb	06 50 27.0	-0.4
	baz=288							
NNS	**Nan Shan**	**0.42**	**320**	*e*P		Pb	06 50 27.2	-0.3
	baz=320							
LATG	**Datong**	**0.44**	**342**	*e*P		Pb	06 50 27.4	-0.4
	baz=342							
CHGB	**Renai**	**0.46**	**263**	P		Pb	06 50 28.0	-0.1
	baz=263							
WARBT	**Fenglin Townsh**	**0.47**	**214**	P		Pb	06 50 27.7	-0.6
	baz=213							
TWC	**Suao**	**0.52**	**18**	*e*P		Pb	06 50 28.9	-0.1
	baz=19							
WUSB	**Renai**	**0.52**	**257**	*e*P		Pb	06 50 29.1	-0.1
	baz=256							
ENTT	**Nioudou**	**0.53**	**349**	P		Pb	06 50 29.2	-0.1
	baz=350							
VWDT	**VWDT**	**0.60**	**234**	*e*P		Pb	06 50 30.6	+0.1
	baz=233							

IDC 06 07:00:45.6±3.2, 54°.25N×87°.31E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=28.5km s-min=20.2km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**259**		I	I	07 09 45.8	
	0.1nm,0.8s,baz=78,slow=335,SNR=2.9							
ZALV	**Zalesovo Beam**	**1.50**	**259**		Pg	Pn	07 01 11.8	-1.8
	0.9nm,0.3s,baz=78,slow=15,SNR=7.8							
ZALV					Lg	Lg	07 01 33.0	
	1.7nm,0.3s,baz=77,slow=25,SNR=3.8							
KURBB	**Kurchatov Arra**	**6.48**	**239**		Pn	Pn	07 02 23.1	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=10							
KURBB					Lg	Lg	07 04 11.2	
	baz=51,slow=35							
	1.2nm,0.6s							
MKAR	**Makanchi Array**	**8.12**	**205**		Pn	Pn	07 02 45.6	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=5.8							
MKAR					Lg	Lg	07 05 04.9	
	0.1nm,0.3s,baz=24,slow=30,SNR=6.1							
	0.4nm,0.4s							

IDC 06 07:03:23.9±1.5, 28°.07N×101°.39E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=368.4km s-min=24.1km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.96**	**326**		P	P	07 08 41.3	+1.4
	0.7nm,0.7s,baz=133,slow=10,SNR=7.8							
	0.7nm,0.7s							
KURBB	**Kurchatov Arra**	**28.42**	**329**		P	P	07 09 18.3	-1.8
	0.1nm,0.3s,baz=143,slow=9.3,SNR=1.4							
	0.1nm,0.3s							
WRA	**Warramunga Arr**	**57.39**	**143**		P	P	07 13 12.7	-1.6
	0.4nm,0.6s,baz=330,slow=7.6,SNR=2.6							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**60.24**	**145**		P	P	07 13 35.7	+1.6
	0.2nm,0.5s,baz=326,slow=7.6,SNR=1.7							
	0.2nm,0.5s							

KRSC 06 07:03:40.8±0.7, 56°.24N×161°.49E, h91km±6km, Ml3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.34**	**358**	*e*P		Pn	07 03 55.4	+0.7
SMKR				*e*S		Sn	07 04 06.9	+2.0
BDR	**Baidarnaya**	**0.36**	**335**	*e*P		Pn	07 03 55.6	+0.8
BDR				*e*S		Sn	07 04 06.8	+1.6
CIRR	**Tsirk**	**0.43**	**253**	*e*P		Pn	07 03 56.1	+0.8
ZLN	**Zelenaya**	**0.45**	**240**	*e*P		Pn	07 03 56.4	+1.0
SRKR	**Sorokina**	**0.45**	**337**	*e*P		Pn	07 03 56.3	+1.0
SRKR				*e*S		Sn	07 04 07.4	+1.2
KLY	**Klyuchi**	**0.47**	**279**	*e*P		Pn	07 03 55.3	0.0
KLY				*e*S		Sn	07 04 05.7	-0.5
KRSR	**Krestovskiy**	**0.52**	**268**	*e*P		Pn	07 03 56.4	+0.5
KRSR				*e*S		Sn	07 04 07.8	+0.7
BZGR	**Bezymyannyi-Gr**	**0.54**	**236**	*e*P		Pn	07 03 57.2	+1.2
BZGR				*e*S		Sn	07 04 08.9	+1.4
BZWR	**Bezymyannyi-We**	**0.62**	**244**	*e*P		Pn	07 03 57.9	+1.0
BZWR				*e*S		Sn	07 04 10.3	+1.5
BZP	**Bezymyannyi-Pe**	**0.63**	**239**	*e*P		Pn	07 03 57.7	+0.9
BZP				*e*S		Sn	07 04 09.6	+0.8
BZMR	**Bezymyannaya**	**0.64**	**242**	*e*P		Pn	07 03 58.1	+1.1
BZMR				*e*S		Sn	07 04 10.3	+1.3
KBG	**Krutoberegovo**	**0.68**	**88**	*e*P		Pn	07 03 58.4	+1.3
KBG				*e*S		Sn	07 04 11.5	+2.1
KIRR	**Kirishev**	**0.70**	**246**	*e*P		Pn	07 03 58.4	+0.8
KIRR				*e*S		Sn	07 04 10.7	+0.6
KPT	**Kopyto**	**0.76**	**249**	*e*P		Pn	07 03 58.8	+0.8
KPT				*e*S		Sn	07 04 12.2	+1.3
KMNR	**Kamenistaya**	**0.86**	**236**	*e*P		Pn	07 03 59.9	+0.8
KOZ	**Kozyrevsk**	**0.92**	**259**	*e*P		Pn	07 04 00.6	+0.9
SRDR	**Sredinnyy**	**0.99**	**275**	*e*P		Pn	07 04 01.0	+0.5
SRDR				*e*S		Sn	07 04 15.5	+0.3
TUMD	**Tumrok D**	**1.21**	**211**	*e*P		Pn	07 04 04.0	+0.9
TUMD				*e*S		Sn	07 04 20.6	+0.8
TUMR	**Tumrok**	**1.23**	**219**	*e*P		Pn	07 04 05.2	+1.9
ESO	**Esso**	**1.59**	**260**	*e*P		Pn	07 04 09.3	+1.5
TIGL	**Tigil**	**2.17**	**316**	*e*P		Pn	07 04 16.1	+0.9
KII	**Karymskiy**	**2.50**	**209**	*e*P		Pn	07 04 20.7	+1.0
BKI	**Bering**	**2.74**	**110**	*e*P		Pn	07 04 23.6	+0.9
BKI				*e*S		Sn	07 04 54.8	-0.3
OSSR	**Ossora**	**3.13**	**15**	*e*P		Pn	07 04 30.5	+2.6
SPN	**Mys Shipunski**	**3.26**	**196**	*e*P		Pn	07 04 30.3	+0.5
GNL	**Ganaly**	**3.27**	**220**	*e*P		Pn	07 04 32.0	+2.0
KRX	**Arik**	**3.32**	**211**	*e*P		Pn	07 04 33.3	+2.5
SMAR	**Somma**	**3.37**	**209**	*e*P		Pn	07 04 34.8	+3.3
AVH	**Avacha**	**3.38**	**209**	*e*P		Pn	07 04 34.8	+3.3
KOK	**Koryaka**	**3.39**	**210**	*e*P		Pn	07 04 34.8	+3.2
UGLR	**Uglovaya**	**3.41**	**208**	*e*P		Pn	07 04 35.3	+3.4
DALK	**Dalny**	**3.59**	**207**	*e*P		Pn	07 04 37.0	+2.8
KRMR	**Karymshinskiy**	**3.94**	**211**	*e*P		Pn	07 04 41.3	+2.4
APC	**Apacha**	**4.17**	**219**	*e*P		Pn	07 04 43.7	+1.7
GRL	**Gorelyy**	**4.20**	**210**	*e*P		Pn	07 04 46.4	+3.8
ASAK	**Asacha**	**4.40**	**210**	*e*P		Pn	07 04 48.3	+3.0

*IDC **06** 07:08:12.0±1.1, 24°.26N×122°.09E, h0km, mb3.5/6, mbtmp3.6/7, ML3.4/1, MS3.3/1, Error ellipse: s-maj=54.0km s-min=21.9km az=69.0*
*TAP **06** 07:08:14.6, 24°.17N×121°.72E, h10km, ML4.0, C*
*ASIES **06** 07:08:14.6, 24°.17N×121°.72E, h10km, ML4.0, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.63; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$-0.66; $M_{r\theta}$0.72; $M_{r\phi}$-1.48; $M_{\theta\phi}$1.98; Fault plane solution: M_o2.98780×10^{21} NP1:∅=27.43000°, δ69.78000°, λ68.06000°. NP2:∅=256.79000°, δ29.49000°, λ135.41000°. Principal axes: T Plg59.3010°, Azm266.2610°; N Plg20.5220°, Azm35.3460°; P Plg21.7850°, Azm133.9500°;*
*JMA **06** 07:08:15.2±0.1, 24°.2N±0°.4×121°.7E±0°.7, h6km±2km, MV3.3/13, TAIWAN REGION*
ISC 06 07:08:15.7±0.6, 24°.16N±0°.01×121°.75E±0°.02, h12km±3km, n149, σ1§19/217, mb3.5/6, 40D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.12**	**271**	⇓*i*P		**Pg**	**07 08 17.5**	**-1.2**
	baz=262							
ETL				*i* S		**Sg**	**07 08 19.3**	**-1.6**
	baz=262							
NACB	**Ninganchiao**	**0.14**	**276**	⇓*i*P		**Pg**	**07 08 17.8**	**-1.3**
	baz=271							
NACB				*i* S		**Sg**	**07 08 19.8**	**-1.7**
	baz=271							
EHP	**Heping Village**	**0.15**	**357**	⇓*i*P		**Pg**	**07 08 18.1**	**-1.2**
	baz=9.0							
EHP				*i* S		**Sg**	**07 08 20.7**	**-1.1**
	baz=9.0							
TWD	**Chiawan**	**0.16**	**241**	⇓*i*P		**Pg**	**07 08 18.2**	**-1.2**
	baz=231							
TWD				*i* S		**Sg**	**07 08 20.7**	**-1.2**
	baz=231							
EAHA	**Aohua**	**0.17**	**357**	⇓*i*P		**Pg**	**07 08 18.3**	**-1.2**
	baz=5.0							
EAHA				S		**Sg**	**07 08 20.7**	**-1.6**
	baz=5.0							
HWA	**Hwalien**	**0.22**	**216**	*e*P		**Pg**	**07 08 20.2**	**-0.2**
	baz=221							
ETLH	**Xiulin Townshi**	**0.25**	**281**	⇓*i*P		**Pg**	**07 08 19.7**	**-1.2**
	baz=279							
ETLH				*i* S		**Sg**	**07 08 23.1**	**-1.4**
	baz=279							
ENA	**Nanau**	**0.27**	**358**	⇓*i*P		**Pg**	**07 08 20.1**	**-1.2**
	baz=4.0							
ENA				*i* S		**Sg**	**07 08 23.8**	**-1.2**
	baz=4.0							
EWUT	**Wuta**	**0.29**	**5**	⇓P		**Pg**	**07 08 20.4**	**-1.2**
	baz=10.0							
EWUT				*e*S		**Sg**	**07 08 24.4**	**-1.2**
	baz=10.0							
ETM	**Tongmen**	**0.30**	**231**	⇓*i*P		**Pg**	**07 08 20.7**	**-1.1**
	baz=227							
ETM				S		**Sg**	**07 08 24.8**	**-1.2**
	baz=227							
LXIB	**Xiulin Townshi**	**0.34**	**246**	⇓*i*P		**Pg**	**07 08 21.2**	**-1.3**
	baz=243							
LXIB				*e*S		**Sg**	**07 08 25.6**	**-1.5**
	baz=243							
SHUL	**Shoufeng**	**0.41**	**205**	*e*P		**Pb**	**07 08 24.1**	**-0.7**
	baz=210							
SHUL				*e*S		**Sb**	**07 08 32.7**	**+1.7**
	baz=210							
ESAO	**Su ao**	**0.42**	**12**	⇓P		**Pg**	**07 08 22.9**	**-1.2**
	baz=14							
LATG	**Datong**	**0.43**	**332**	⇓*i*P		**Pg**	**07 08 23.1**	**-1.1**
	baz=333							
LATG				*i* S		**Sg**	**07 08 29.1**	**-0.8**
	baz=333							
NNSB	**Datong**	**0.43**	**309**	⇓*i*P		**Pg**	**07 08 23.1**	**-1.1**
	baz=309							
NNSB				*i* S		**Sg**	**07 08 28.6**	**-1.4**
	baz=309							
NNSH	**Datong**	**0.43**	**309**	⇓*e*P		**Pg**	**07 08 23.1**	**-1.1**
	baz=309							
WHF	**Hehuan Shan**	**0.44**	**268**	⇓P		**Pg**	**07 08 23.4**	**-1.2**
	baz=267							
WHF				*i* S		**Sg**	**07 08 28.9**	**-1.6**
	baz=267							
NNS	**Nan Shan**	**0.44**	**309**	⇓*i*P		**Pg**	**07 08 23.3**	**-1.1**
	baz=310							
NNS				S		**Sg**	**07 08 28.9**	**-1.5**
	baz=310							
ESL	**Shilin**	**0.45**	**220**	⇓P		**Pg**	**07 08 23.4**	**-1.1**
	baz=228							
TWC	**Suao**	**0.46**	**11**	⇓*i*P		**Pg**	**07 08 23.7**	**-1.0**
	baz=9.0							
TWC				*e*S		**Sg**	**07 08 28.7**	**-2.1**
	baz=9.0							
FUSS	**Fushou**	**0.47**	**281**	⇓*i*P		**Pg**	**07 08 24.0**	**-1.0**
	baz=280							
FUSS				*e*S		**Sg**	**07 08 29.1**	**-2.2**
	baz=280							
NDS	**Dongshan**	**0.47**	**356**	⇓*i*P		**Pg**	**07 08 24.1**	**-0.9**
	baz=358							
NDS				S		**Sg**	**07 08 30.6**	**-0.8**
	baz=358							
TEGC	**Jichi Village**	**0.49**	**203**	*e*P		**Pb**	**07 08 25.9**	**-0.3**
	baz=191							
TEGC				*e*S		**Sb**	**07 08 34.9**	**+1.6**
	baz=191							
NDT	**Datong Townshi**	**0.49**	**334**	⇓*i*P		**Pg**	**07 08 24.6**	**-0.8**
	baz=335							
NDT				*i* S		**Sg**	**07 08 31.3**	**-0.6**
	baz=335							
ENTT	**Nioudou**	**0.51**	**341**	⇓*i*P		**Pg**	**07 08 24.8**	**-0.9**
	baz=342							
ENTT				S		**Sg**	**07 08 31.6**	**-0.8**
	baz=342							
TWT	**Tachien**	**0.53**	**280**	⇓*i*P		**Pg**	**07 08 25.6**	**-0.6**
	baz=279							
TWT				S		**Sg**	**07 08 32.5**	**-0.8**
	baz=279							
CHGB	**Renai**	**0.53**	**260**	⇓P		**Pg**	**07 08 25.3**	**-0.9**
	baz=251							
CHGB				*i* S		**Sg**	**07 08 32.0**	**-1.4**
	baz=251							
TDCB	**Techi**	**0.55**	**280**	⇓*i*P		**Pg**	**07 08 25.6**	**-0.8**
	baz=279							
TDCB				*i* S		**Sg**	**07 08 32.1**	**-1.6**
	baz=279							
WARBT	**Fenglin Townsh**	**0.55**	**217**	*e*P		**Pg**	**07 08 25.2**	**-1.2**
	baz=224							
OWD	**Renai**	**0.56**	**249**	*e*P		**Pg**	**07 08 25.6**	**-1.1**
	baz=249							
TWE	**Neicheng**	**0.57**	**352**	⇓*i*P		**Pg**	**07 08 25.9**	**-0.9**
	baz=355							
TWE				S		**Sg**	**07 08 33.5**	**-0.7**
	baz=355							
EGFH	**Guangfu**	**0.57**	**211**	*e*P		**Pg**	**07 08 26.3**	**-0.5**
	baz=218							
WUSB	**Renai**	**0.60**	**254**	⇓*i*P		**Pg**	**07 08 26.5**	**-0.9**
	baz=245							
WUSB				S		**Sg**	**07 08 34.1**	**-1.3**
	baz=245							
YHNB	**Yeheng**	**0.61**	**326**	⇓*i*P		**Pg**	**07 08 26.9**	**-0.8**
	baz=327							
YHNB				S		**Sg**	**07 08 34.5**	**-1.2**
	baz=327							
FUSB	**Fushanzhiwuyua**	**0.62**	**346**	⇓*i*P		**Pg**	**07 08 26.9**	**-0.8**
	baz=347							
FUSB				S		**Sg**	**07 08 34.8**	**-1.1**
	baz=347							
NSK	**Sanguang**	**0.63**	**325**	⇓*i*P		**Pg**	**07 08 27.1**	**-0.9**
	baz=326							
NSK				*i* S		**Sg**	**07 08 35.2**	**-1.0**
	baz=326							
NWLT	**Wulai**	**0.66**	**340**	⇓*i*P		**Pg**	**07 08 27.6**	**-0.8**
	baz=341							
NWLT				S		**Sg**	**07 08 36.0**	**-1.1**
	baz=341							
VWDT	**VWDT**	**0.69**	**234**	*e*P		**Pg**	**07 08 28.2**	**-0.8**
	baz=241							
HGSD	**Ruisui**	**0.73**	**204**	*e*P		**Pb**	**07 08 30.3**	**0.0**
	baz=211							
WPL	**Puli Township**	**0.74**	**259**	*e*P		**Pg**	**07 08 29.2**	**-0.7**
	baz=250							
WPL				*e*S		**Sg**	**07 08 38.6**	**-1.1**
	baz=250							

TATO eS Sg 07 08 42.2 -1.0
baz=344
TYC Yuchr 0.85 253 P Pg 07 08 31.4 -0.8
baz=243
TYC eS Sg 07 08 41.1 -2.3
baz=243
YULB Yu-li 0.87 209 eP Pg 07 08 31.1 -1.4
baz=220
TWB1 Santiao Chiao 0.87 14 eP Pg 07 08 31.5 -1.1
baz=8.0
ECBN Changbin 0.88 198 eP Pg 07 08 31.7 -1.0
baz=186
NHY Taipei 0.89 349 eP Pg 07 08 32.4 -0.5
baz=350
EYUL Yuli 0.90 206 eP Pb 07 08 34.0 +0.7
baz=218
TWF1 Yuli 0.90 207 eP Pg 07 08 32.4 -0.7
baz=218
TWF1 eS Sb 07 08 45.7 +0.4
baz=218
TAP Taipei 0.91 346 eP Pg 07 08 32.6 -0.6
baz=346
HSN1 Hsinchu 0.91 313 eP Pb 07 08 33.3 -0.1
baz=313
NWF Wu-fen Shan 0.91 2⇓*i*P Pg 07 08 32.4 -0.9
baz=2.0
WFSB Wu-fen Shan 0.91 2⇓*i*P Pg 07 08 32.5 -0.7
baz=354
WFSB eS Sb 07 08 45.8 +0.2
baz=354
TWQ1 Liyutan 0.91 282 eP Pb 07 08 33.1 -0.3
baz=282
NTY Taoyuan 0.93 334 eP Pg 07 08 33.4 -0.3
baz=328
SXI1 Grass Mountain 0.94 7 ⇓P Pg 07 08 32.9 -0.9
baz=14
SXI1 eS Sb 07 08 48.2 +1.7
baz=14
SBCB Hsinchu 0.94 312 eP Pb 07 08 34.2 +0.2
baz=312
WHYT Xinyi Township 0.94 241 eP Pb 07 08 33.9 -0.1
baz=242
NMLH Miaoli 0.95 294 eP Pb 07 08 34.5 +0.4
baz=293
NCUH Zhongli 0.96 328 eP Pg 07 08 33.8 -0.4
baz=328
HSN Hsinchu 0.96 312 eP Pb 07 08 34.0 -0.2
baz=315
HSN eS Sn 07 08 48.7 +0.1
baz=315
NCU National Centr 0.96 328 eP Pb 07 08 34.3 +0.1
baz=328
NCU eS Sb 07 08 48.4 +1.5
baz=328
WWF Wufeng 0.97 263 eP Pb 07 08 34.7 +0.3
baz=259
TCU Taichung 0.98 270 eP Pn 07 08 35.3 0.0
baz=270
TWS1 Kuangyinshan 0.99 342 P Pb 07 08 34.8 0.0
baz=350
TWS1 eS Sb 07 08 49.2 +1.5
baz=350
TNOU National Taiwa 0.99 1 P Pg 07 08 33.8 -1.0
baz=1.0
WJS Zhushan 0.99 250 eP Pb 07 08 34.7 -0.1
baz=246
WJS eS Sb 07 08 48.7 +0.8
baz=246
YM01 YM01 1.00 351 ⇓P Pg 07 08 34.5 -0.4
baz=350
YM01 eS Sb 07 08 48.6 +0.5
baz=350
WNT1 Nantou City 1.01 256 eP Pb 07 08 35.2 +0.1
baz=247
WNT Mingjian 1.01 254 eP Pb 07 08 35.0 -0.2
baz=249
WNT eS Sb 07 08 50.0 +1.6
baz=249
CHKH Chenggong 1.01 199 eP Pg 07 08 33.8 -1.4
baz=190
WDJ Dajia District 1.03 281 eP Pn 07 08 36.1 +0.2
baz=281
NTST Danshui 1.04 345 eP Pb 07 08 35.8 +0.2
baz=354
NTST eS Sn 07 08 51.1 +0.5
baz=354
FULB Fuli 1.04 204 eP Pb 07 08 35.9 +0.2
baz=221
ANP Anpu 1.04 349 eP Pg 07 08 34.6 -1.2
baz=349
ALS Alishan 1.08 233 eP Pg 07 08 35.7 -0.8
baz=234
ALS eS Sb 07 08 52.0 +1.3
baz=234
WYL Yuanlin Townsh 1.09 260 eP Pn 07 08 37.2 +0.5
baz=261
WCHH Zhanghua 1.09 266 eP Pb 07 08 36.5 0.0
baz=266
CHKT Chengkung 1.11 199 eP Pg 07 08 35.5 -1.6
baz=191
EHD Haiduan 1.12 206 eP Pg 07 08 36.1 -1.2
baz=222
TWY Chenhua 1.12 353 eP Pb 07 08 37.2 +0.2
baz=353
CHN5 Tsauling 1.13 241 P Pb 07 08 37.2 0.0
baz=241
CHN5 eS Sn 07 08 53.4 +0.5
baz=241
JYNG Yonagunijimaku 1.13 75 eP Pb 07 08 37.5 +0.4
JYNG eS Sb 07 08 52.7 +0.9
ECS Chishang 1.16 205 eP Pg 07 08 37.4 -0.6
baz=221
ELDTW Lidau 1.18 215 eP Pg 07 08 36.1 -2.2
baz=218
WGK Gukeng 1.18 247 eP Pb 07 08 38.3 +0.2
baz=248
YOJ Yonaguni jima 1.19 75 eP Pg 07 08 37.9 -0.7
baz=62
YOJ Yonaguni jima 1.19 75 P Pg 07 08 37.8 -0.7
YOJ eS Sb 07 08 54.5 +1.0
WDLH Douliu 1.20 247 eP Pn 07 08 38.9 +0.6
baz=249
WCKO Fanlu 1.27 236 eP Pb 07 08 39.8 +0.2
baz=237
WCKO eS Sn 07 08 58.0 +1.7
baz=237
WRL Guolierlin Hig 1.28 259 eP Pg 07 08 39.8 -0.5
baz=260
RLNB Erlin 1.30 258 eP Pg 07 08 39.8 -0.8
baz=259
RLNB eS Sn 07 08 58.0 +1.1
baz=259
CHN2 Minshiung 1.32 242 eP Pb 07 08 41.3 +0.8
baz=245
STYH Taoyuan 1.33 222 eP Pg 07 08 39.9 -1.4
baz=226
CHN4 Tsaushan 1.33 233 eP Pg 07 08 40.6 -0.6
baz=223
CHN4 S Sn 07 08 59.7 +1.9
baz=223
WTK Tuku 1.33 250 eP Pn 07 08 40.7 +0.6
baz=251
TPUB Ta-pu 1.33 230 P Pg 07 08 40.6 -0.8
baz=221
TPUB eS Sn 07 08 59.5 +1.6
baz=221
STYT Tauyuan 1.34 223⇓*i*P Pn 07 08 40.0 -0.4
baz=224
STYT eS Sg 07 08 58.4 -0.6
baz=224
WTP Ta-pu 1.38 229 P Pn 07 08 41.4 +0.5
baz=231
WTP eS Sn 07 09 00.2 +1.2
baz=231
TWK Hsinying 1.46 233 P Pn 07 08 42.6 +0.7
baz=235
TWK eS Sn 07 09 03.6 +2.7
baz=235
TWG Pinlang 1.47 205 eP Pn 07 08 42.1 +0.1
baz=218
TWGBT Beinan 1.47 205 eP Pn 07 08 41.9 -0.1
baz=218
SNST Tainan City 1.48 231 eP Pn 07 08 42.5 +0.3
baz=224
CHN1 Nanshi 1.48 229 eP Pn 07 08 42.8 +0.6
baz=225
CHN1 eS Sg 07 09 03.8 +0.4
baz=225

PCYT Pengchaiyu 1.49 11 eP Pn 07 08 41.3 -1.1
baz=10.0
SGST Jiashian 1.51 225 eP Pn 07 08 42.4 -0.2
baz=228
SGST eS Sg 07 09 03.9 -0.6
baz=228
WSL Shuilin Townsh 1.53 246 eP Pn 07 08 43.6 +0.8
baz=248
SLGT Liugui 1.54 221 eP Pn 07 08 43.5 +0.5
baz=226
ICHU Yijhu 1.56 240 eP Pn 07 08 44.1 +0.8
baz=243
SCST Cishan 1.71 223 eP Pn 07 08 46.3 +0.9
baz=228
ECL Taimali 1.72 205 eP Pn 07 08 46.5 +1.0
baz=195
SSD Sandimen 1.74 216 eP Pn 07 08 45.6 -0.2
baz=233
TSMG Majia 1.77 215 eP Pn 07 08 46.9 +0.8
baz=232
IRIF Iriomote-Funau 1.82 84 eS Sn 07 09 10.3 +0.6
MASBT Mashibuluo 1.85 214 eP Pn 07 08 48.2 +1.0
baz=207
HATJ Hateruma jima 1.88 93 eS Sn 07 09 13.3 +1.9
EAST Anshuo 1.95 205 eP Pn 07 08 50.0 +1.3
baz=197
SCZT Fangliau 2.06 211 eP Pn 07 08 51.1 +1.0
baz=199
JKRS Kuro-shima 2.06 87 eP Pn 07 08 51.7 +1.5
PNG Penghu 2.09 254 eP Pn 07 08 51.7 +1.1
baz=257
PNG eS Sn 07 09 17.4 +0.8
baz=257
PHUB P'eng-hu 2.09 253 eP Pn 07 08 51.0 +0.4
baz=255
PHUB eS Sn 07 09 16.9 +0.3
baz=255
SLIU Shizi 2.12 205 eP Pn 07 08 52.0 +1.0
baz=198
LYUB Lan-yu 2.15 184 eP Pn 07 08 50.0 -1.4
baz=190
JIJ Ishigaki jima 2.19 84 eP Pn 07 08 53.2 +1.2
JIJ eS Sn 07 09 18.7 -0.4
VCHM Qimei 2.33 247 eP Pn 07 08 53.6 -0.2
baz=236
JISG Ishigakijimahi 2.38 79 eP Pn 07 08 56.1 +1.6
JISG eS Sn 07 09 23.8 +0.3
KNMB Chin-men Tao 3.08 276 eP Pn 07 09 03.4 -0.8
baz=276
AXDP Jialang 3.52 283 eP Pn 07 09 09.8 -0.4
baz=282
KSRS Korea Array 14.27 20 Pn Pn 07 11 32.4 -5.2
0.2nm,0.3s,baz=199,slow=12,SNR=2.4
0.5nm,0.3s
BTO Baotou 19.13 332 eP Pn 07 12 40.2 +0.6
BTO pP sP 07 12 43.9 0.0
BTO sP pP 07 12 47.3 +5.3
BTO PP PnPn 07 12 57.7 +5.4
BTO S S 07 16 19.0 +3.4
BTO pmax pmax
comp=Z,8.0nm,0.5s
BTO pmax pmax
comp=Z,390nm,4.7s
BTO LR LR
comp=N,410nm,9.9s
BTO LR LR
comp=E,240nm,5.2s
BTO LR LR
comp=Z,220nm,8.0s
SONM Songino Array 26.59 337 P P 07 13 51.9 -2.0
comp=Z,0.4nm,0.6s,baz=161,slow=9.2,SNR=2.2
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 38.72 316 P P 07 15 38.2 -1.4
comp=Z,0.7nm,0.8s,baz=99,slow=9.5,SNR=6.0
comp=Z,0.7nm,0.8s
ZALV Zalesovo Beam 40.55 327 P P 07 15 54.6 -0.1
comp=Z,1.3nm,0.8s,baz=98,slow=8.9,SNR=4.4
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 45.52 163 P P 07 16 32.7 -2.6
comp=Z,0.4nm,0.5s,baz=344,slow=8.7,SNR=1.9
comp=Z,0.4nm,0.5s
ASAR Alice Springs 48.98 165 P P 07 17 01.2 -1.1
comp=Z,0.5nm,0.9s,baz=338,slow=8.3,SNR=2.3
comp=Z,0.5nm,0.9s
STKA Stephens Creek 58.86 160 LR LR 07 48 44.9
comp=Z,23nm,18.1s,baz=23,slow=41
YKA Yellowknife Ar 82.79 23 P P 07 20 36.5 -3.0
comp=Z,0.2nm,0.7s,baz=312,slow=4.8,SNR=5.2
comp=Z,0.2nm,0.7s

*IDC **06** 07:09:44.5±2.7, 49.72N×177.25W, h0km, mb3.5/5, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=69.0km s-min=28.1km az=179.0*
*AEIC **06** 07:09:49.6±0.8, 49.80N±0.10×177.2W±0.1, h12km±9km, Error ellipse: s-maj=14.4km s-min=11.1km az=175.0*
*NEIC **06** 07:09:50.8±1.6, 50.16N±0.04×176.99W±0.08, h22km±11km, ML3.3/6, ML3.0(AEIC), Error ellipse: s-maj=8.1km s-min=5.3km az=107.0*
ISC 06 07:09:47.0±1.1**, 50.13N**±0.07×**177.20W**±0.05**, h10**km**, n25,**
σ1$48/29, mb3.4/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**1.63**	**359**		**Pg**	**07 10 17.9**	**-0.3**
KIWB	**Kanaga Island**	**1.72**	**1**		**Pg**	**07 10 19.3**	**-0.7**
KIWB					**Sg**	**07 10 42.8**	**+0.5**
KIRH	**Kanaga Island**	**1.77**	**2**		**Pg**	**07 10 20.0**	**-0.9**
ADK	**Adak**	**1.78**	**10**		**Pb**	**07 10 19.5**	**-0.2**
ADK					**Sg**	**07 10 43.0**	**-1.2**
ADK	**Adak**	**1.78**	**10**	IAML		07 10 44.1	
210nm,0.6s							
ADK				IAML		07 10 45.1	
179nm,0.3s							
TASE	**Tanaga Southea**	**1.79**	**343**		**Pg**	**07 10 20.3**	**-0.9**
TAFP	**Tanaga Falls P**	**1.84**	**345**		**Pb**	**07 10 20.8**	**+0.1**
TAFP					**Sg**	**07 10 45.5**	**-0.5**
ADAG	**Mount Adagdak**	**1.89**	**11**		**Pb**	**07 10 21.2**	**-0.3**
GASW	**Gareloi Southw**	**1.95**	**328**		**Sg**	**07 10 48.7**	**-1.1**
GSCK	**Great Sitkin C**	**1.99**	**19**		**Pb**	**07 10 22.8**	**-0.5**
GSCK					**Sb**	**07 10 48.1**	**0.0**
GSMY	**Great Sitkin M**	**2.04**	**20**		**Pb**	**07 10 23.2**	**-1.0**
GSMY					**Sb**	**07 10 49.6**	**-0.1**
GSTR	**Great Sitkin T**	**2.09**	**20**	Pn	**Pb**	**07 10 22.9**	**-2.1**
AMKA	**Amchitka**	**2.55**	**301**	Pn	**Pb**	**07 10 30.9**	**-1.9**
AMKA	**Amchitka**	**2.55**	**301**		**Sn**	**07 10 57.9**	**-1.5**
ATKA	**Atka Island**	**2.80**	**41**		**Pn**	**07 10 32.4**	**+0.6**
ATKA					**Sn**	**07 11 06.3**	**+0.7**
ATKA	**Atka Island**	**2.80**	**41**	IAML		07 11 09.2	
comp=E,47nm,0.8s							
KOKL	**Mount Kliuchef**	**2.89**	**40**		**Pn**	**07 10 34.5**	**+1.4**
KOWE	**Korovin West**	**2.90**	**38**		**Pb**	**07 10 34.9**	**-3.9**
CLES	**Cleveland East**	**5.30**	**57**	Pn	**Pn**	**07 11 03.9**	**-2.2**
CLES				IAML		07 13 33.8	
comp=N,376nm,1.1s							
KDAK	**Kodiak Island**	**16.31**	**53**	Pn	**P**	**07 13 38.8**	**-0.1**
comp=N,0.6nm,0.3s,baz=256,slow=7.5,SNR=4.3							
comp=N,30nm,1.2s							
ILAR	**Eielson Array**	**21.62**	**36**	P	**P**	**07 14 40.2**	**+3.4**
comp=N,0.4nm,0.7s,baz=244,slow=10.0,SNR=4.8							
comp=N,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**35.37**	**45**	P	**P**	**07 16 44.0**	**+1.8**
comp=N,0.3nm,0.7s,baz=278,slow=7.0,SNR=6.6							
comp=N,0.3nm,0.7s							
TXAR	**Lajitas Array**	**57.83**	**82**	P	**P**	**07 19 38.4**	**-0.3**
comp=N,0.3nm,0.8s,baz=289,slow=5.6,SNR=3.2							
comp=N,0.3nm,0.8s							
BVAR	**Borovoye Array**	**62.50**	**321**	P	**P**	**07 20 11.0**	**+0.8**
comp=N,1.5nm,0.5s,baz=46,slow=6.6,SNR=6.8							
comp=N,1.5nm,0.5s							
AKTO	**Aktyubinsk**	**69.29**	**326**	P	**P**	**07 20 55.5**	**+1.5**
comp=N,1.5nm,0.7s,baz=349,slow=7.6,SNR=4.8							
comp=N,1.5nm,0.7s							

*IDC **06** 07:16:41.8±0.8, 0.33N×125.83E, h0km, mb4.2/11, mbtmp4.2/11, MS3.0/2, Error ellipse: s-maj=124.1km s-min=10.4km az=67.0*
*NEIC **06** 07:16:44.1±1.1, 0.67N±0.10×126.29E±0.03, h10km±1km, mb4.5/16, Error ellipse: s-maj=17.4km s-min=3.1km az=346.0*
*DJA **06** 07:16:45.9±0.4, 1.1°N±5°×12.6E±°, h10km, M4.1/6, mb4.2/1, MLv4.1/6*
ISC 06 07:16:44.1±0.5**, 0.55N**±0.06×**126.22E**±0.04**, h10**km**, n48,**
σ1$41/50, mb4.4/22, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**79**		**Pn**	**07 17 05.3**	**-1.3**
TNTI				Sn	**Sn**	**07 17 24.2**	**+1.6**
TNTI	**Ternate**	**1.17**	**79**	P	**Pn**	**07 17 09.6**	**+3.1**
LBMI	**Labuha**	**1.74**	**133**	P	**Pb**	**07 17 16.1**	**-0.1**
KMSI	**Cibinong**	**2.24**	**271**	P	**Pn**	**07 17 22.0**	**+0.8**
KMSI				S	**Sn**	**07 17 48.1**	**-0.8**
SANI	**Sanana**	**2.59**	**185**	P	**Pn**	**07 17 27.2**	**+1.1**
LUWI	**Luwuk**	**3.79**	**245**		**Pn**	**07 17 43.9**	**+1.3**
LUWI	**Luwuk**	**3.79**	**245**	P	**Pn**	**07 17 44.7**	**+2.1**
NLAI	**Namlea**	**3.86**	**167**	P	**Pn**	**07 17 46.4**	**+2.8**
TOLI2	**Tolitoli**	**5.46**	**276**	Pn	**Pn**	**07 18 06.7**	**+1.1**
EDFI	**Ende, Flores**	**10.28**	**206**	P	**Pn**	**07 19 14.7**	**+2.8**
KNRA	**Kununurra**	**16.32**	**171**		**Pn**	**07 20 34.3**	**+0.8**
KNRA				IAmb	IAmb	07 20 35.9	
comp=Z,32nm,1.1s							
WB0	**Warramunga Arr**	**21.72**	**159**	P	**P**	**07 21 35.6**	**-0.1**
WB0				IAmb	IAmb	07 21 40.3	
comp=Z,36nm,0.8s							
WRA	**Warramunga Arr**	**21.86**	**159**	P	**P**	**07 21 36.4**	**-0.8**
WRA	**Warramunga Arr**	**21.86**	**159**	P	**P**	**07 21 37.0**	**-0.1**
comp=Z,21nm,0.7s,baz=338,slow=12,SNR=46							
WRA				S	**S**	**07 25 36.6**	**-2.4**
comp=Z,1.2nm,1.0s,baz=336,slow=18,SNR=4.0							
comp=Z,21nm,0.7s							
WB2	**Warramunga Arr**	**21.87**	**159**	P	**P**	**07 21 37.2**	**-0.1**
WR0	**Warramunga Arr**	**21.95**	**159**	P	**P**	**07 21 38.0**	**-0.1**
WR0				IAmb	IAmb	07 21 43.1	
comp=Z,13nm,1.0s							
COEN	**Coen**	**22.13**	**131**	P	**P**	**07 21 40.7**	**+0.6**
AS31	**Alice Springs**	**25.20**	**163**	P	**P**	**07 22 10.4**	**+0.3**
ASAR	**Alice Springs**	**25.20**	**163**	P	**P**	**07 22 11.6**	**+1.4**
ASAR	**Alice Springs**	**25.20**	**163**	P	**P**	**07 22 10.0**	**-0.2**
comp=Z,7.8nm,0.8s,baz=351,slow=16,SNR=70							
ASAR				S	**S**	**07 26 35.4**	**-0.2**
comp=Z,0.2nm,0.5s,baz=350,slow=20,SNR=2.2							
comp=Z,7.8nm,0.8s							
FORT	**Forrest**	**31.20**	**177**	P	**P**	**07 23 03.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**32.15**	**305**	LR	LR	07 36 58.6	
comp=Z,19nm,20.1s,baz=125,slow=38							
BBOO	**Buckleboo**	**34.46**	**165**	P	**P**	**07 23 31.8**	**-0.3**
BBOO				IAmb	IAmb	07 23 32.5	
comp=Z,6.1nm,0.8s							
PZH	**PanZhiHua**	**34.94**	**320**	P	**P**	**07 23 39.0**	**+2.5**
PZH				pmax	pmax		
comp=Z,10.0nm,0.5s							
PZH				pmax	pmax		
comp=Z,100nm,5.0s							
STKA	**Stephens Creek**	**35.38**	**157**	P	**P**	**07 23 40.5**	**+0.3**
STKA	**Stephens Creek**	**35.38**	**157**	P	**P**	**07 23 40.0**	**-0.2**
comp=Z,6.1nm,0.7s,baz=325,slow=7.6,SNR=21							
comp=Z,6.1nm,0.7s							
HHC	**Hu-ho-hao-te**	**42.26**	**343**	eP	**P**	**07 24 39.6**	**+1.8**
HHC				pmax	pmax		
comp=Z,13nm,0.7s							
HHC				pmax	pmax		
comp=Z,170nm,4.7s							
CN2	**Changchun**	**43.07**	**359**	P	**P**	**07 24 44.8**	**+0.6**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
ASAJ	**Asahikawa**	**45.77**	**16**	LR	LR	07 45 22.9	
comp=Z,20nm,18.8s,baz=280,slow=37							
SONM	**Songino Array**	**50.15**	**343**	P	**P**	**07 25 39.1**	**-0.7**
comp=Z,0.3nm,0.4s,baz=178,slow=10,SNR=1.6							
comp=Z,0.3nm,0.4s							
WMQ	**Urumqi**	**55.05**	**327**	eP	**P**	**07 26 17.6**	**+1.4**
MK31	**Makanchi Array**	**59.88**	**327**	P	**P**	**07 26 49.1**	**-1.1**
MK31				IAmb	IAmb	07 26 54.5	
comp=Z,3.6nm,1.4s							
MKAR	**Makanchi Array**	**59.88**	**327**	P	**P**	**07 26 49.3**	**-0.9**
MKAR	**Makanchi Array**	**59.88**	**327**	P	**P**	**07 26 49.5**	**-0.8**
comp=Z,1.3nm,0.6s,baz=120,slow=8.4,SNR=13							
comp=Z,1.3nm,0.6s							
KSH	**Kashi**	**59.95**	**317**	P	**P**	**07 26 53.8**	**+2.9**
KSH				pmax	pmax		
comp=Z,3.0nm,2.5s							
TUWZ	**Tuamarina**	**60.03**	**140**	P	**P**	**07 26 50.1**	**-1.1**
MAKZ	**Makanchi**	**60.07**	**326**	P	**P**	**07 26 50.8**	**-0.7**
MAKZ				IAmb	IAmb	07 26 59.3	
comp=Z,2.1nm,0.8s							
ZALV	**Zalesovo Beam**	**63.19**	**334**	P	**P**	**07 27 11.9**	**-0.4**
comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=1.5							
comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**64.14**	**328**	P	**P**	**07 27 18.4**	**-0.3**
comp=Z,1.6nm,0.7s,baz=127,slow=5.9,SNR=18							
comp=Z,1.6nm,0.7s							
KURK	**Kurchatov**	**64.15**	**329**	P	**P**	**07 27 18.1**	**-0.6**
KURK				IAmb	IAmb	07 27 21.6	
comp=Z,4.4nm,0.7s							
NIUE	**Niue**	**65.57**	**111**	P	**P**	**07 27 26.1**	**-2.5**
BVAR	**Borovoye Array**	**69.71**	**328**	P	**P**	**07 27 51.7**	**-2.4**
comp=Z,0.6nm,0.7s,baz=104,slow=6.1,SNR=2.2							
comp=Z,0.6nm,0.7s							
NRIK	**Noril'sk**	**73.38**	**347**	P	**P**	**07 28 15.8**	**-0.1**
comp=Z,1.2nm,0.4s,baz=78,slow=5.8,SNR=4.5							
comp=Z,1.2nm,0.4s							
ABKAR	**Akbulak array**	**74.29**	**321**	P	**P**	**07 28 20.0**	**-1.6**
AKTO	**Aktyubinsk**	**75.83**	**322**	P	**P**	**07 28 29.5**	**-1.0**
comp=Z,1.8nm,0.6s,baz=94,slow=7.0,SNR=5.0							
comp=Z,1.8nm,0.6s							
VNDA	**Vanda**	**80.36**	**173**	P	**P**	**07 28 54.7**	**-0.4**
BELG	**Belogornoye**	**82.61**	**323**	P	**P**	**07 29 05.8**	**-1.7**
comp=Z,8.8nm,0.9s,baz=78,slow=9.3,SNR=2.7							
comp=Z,8.8nm,0.9s							
QSPA	**South Pole Qui**	**90.48**	**180**	P	**P**	**07 29 45.4**	**-0.6**
QSPA				IAmb	IAmb	07 29 48.0	
comp=Z,3.1nm,0.9s							

*NNC **06** 07:17:52.4±0.7, 50.10N×79.03E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=20.2km s-min=3.7km az=60.0, Suspected Mining explosion.*
*IDC **06** 07:17:53.6±0.9, 50.07N×78.78E, h0km, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=12.9km s-min=6.7km az=59.0.*
ISC 06 07:17:47.6±1.3**, 50.00N**±0.06×**77.81E**±0.08**, h0**km**, n9,**
σ1$03/13, 5C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.78**	**36**	⇑P	**Pb**	**07 18 04.3**	**+0.3**
19nm,0.3s							
KURBB				⇓S	**Sg**	**07 18 13.3**	**+0.6**
42nm,0.6s							
KURBB	**Kurchatov Arra**	**0.78**	**36**	Pg	**Pb**	**07 18 04.2**	**+0.1**
2.8nm,0.3s,baz=166,slow=17,SNR=59							
KURBB				Lg	Lg	07 18 13.4	
2.4nm,0.3s,baz=166,slow=32,SNR=7.8							
KURK	**Kurchatov**	**0.89**	**36**	⇓P	**Pb**	**07 18 05.4**	**-0.5**
6.5nm,0.3s							
KURK				⇑S	**Sg**	**07 18 15.0**	**-1.1**
13nm,0.6s							
MAKZ	**Makanchi**	**4.23**	**137**	⇑Pg	**Pb**	**07 19 01.0**	**-1.9**
0.5nm,0.3s							
MAKZ				⇑Lg	Lg	07 19 51.2	
5.5nm,0.8s							
MK31	**Makanchi Array**	**4.38**	**135**	⇑Pn	**Pn**	**07 18 56.3**	**+0.9**
0.1nm,0.3s,baz=322,slow=10,SNR=12							
MK31				⇓Pg	**Pb**	**07 19 05.1**	**-0.3**
0.3nm,0.3s,baz=336,slow=15,SNR=11							
MK31				⇓Lg	Lg	07 19 59.3	
13nm,1.0s,baz=327,slow=26,SNR=12							
MKAR	**Makanchi Array**	**4.38**	**135**	Pn	**Pn**	**07 18 56.4**	**+1.0**
0.3nm,0.3s,baz=321,slow=10,SNR=14							
MKAR				Pg	**Pb**	**07 19 04.2**	**-1.2**
0.8nm,0.3s,baz=326,slow=13,SNR=7.3							
MKAR				Lg	Lg	07 19 57.4	
2.4nm,0.3s,baz=332,slow=26,SNR=14							
0.4nm,0.4s							
BVAR	**Borovoye Array**	**5.54**	**306**	Pn	**Pb**	**07 19 24.5**	**-0.5**
baz=103,slow=12,SNR=1.7							
BVAR				Sn	**Sb**	**07 20 31.3**	**-0.6**
0.1nm,0.3s,baz=112,slow=22,SNR=3.9							
BVAR				Lg	Lg	07 20 59.5	
baz=122,slow=26,SNR=1.8							
0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**5.87**	**45**	Pn	**Pn**	**07 19 16.6**	**+0.9**
0.8nm,0.3s,baz=231,slow=14,SNR=10.0							
1.7nm,0.4s							
I46RU	**ZALESOVO INFRA**	**5.87**	**45**	I	I	07 51 30.0	
0.1nm,0.8s,baz=223,slow=335,SNR=2.5							

IDC 06 07:32:15.5±3.2, 53.48N×87.41E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=30.2km s-min=16.6km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.61	288	I	I	07 42 30.0	
	baz=106,slow=330,SNR=3.4						
ZALV	Zalesovo Beam	1.61	288	Pg	Pn	07 32 43.8	-1.3
	0.4nm,0.3s,baz=105,slow=15,SNR=4.6						
ZALV				Lg	Lg	07 33 06.4	
	0.7nm,0.3s,baz=114,slow=27,SNR=7.0						
KURBB	Kurchatov Arra	6.18	246	Pn	Pn	07 33 49.5	+1.7
	0.1nm,0.3s,baz=60,slow=13,SNR=3.5						
KURBB				Lg	Lg	07 35 30.0	
	baz=62,slow=35,SNR=3.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.46	208	Pn	Pn	07 34 06.2	+0.8
	0.1nm,0.3s,baz=23,slow=11,SNR=5.1						
	0.1nm,0.3s						

*NEIC **06** 07:33:44.5±1.0, 35.40N×98.13W×0.01, h5km±1km, Error ellipse: s-maj=3.1km s-min=2.8km az=209.0*

TUL 06 07:33:45.3±1.1, 35.39N×98.11W×0.02, h7km±4km, ML2.5, mb_Lg2.7/55(NEIC), ML2.7/26(NEIC), Error ellipse: s-maj=2.5km s-min=1.7km az=196.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSTR	Hydro, Custer	0.54	298	Pg	Pg	07 33 55.8	+0.2
CSTR				Sg	Sg	07 34 00.0	-2.6
OKCSW	OKLAHOMA CITY	0.55	88		Pg	07 33 55.3	-0.6
OKCSW				Sg	Sg	07 34 03.2	+0.1
OKCSW				IAML		07 34 07.2	
	comp=E,261nm,0.3s						
OKCSW				IAML		07 34 07.9	
	comp=N,238nm,0.3s						
ADOK	Arcadia Dam	0.66	66		Pg	07 33 58.2	+0.3
OK029	Liberty Lake	0.67	53		Pg	07 33 58.3	+0.1
OK029				IAML		07 34 10.7	
	comp=N,249nm,0.4s						
OK029				IAML		07 34 16.5	
	comp=N,204nm,0.6s						
WMOK	Wichita Mounta	0.85	220	Pg	Pg	07 34 00.9	-0.8
W35A	Tecumseh	1.04	103		Pg	07 34 04.5	-0.8
W35A				IAML		07 34 27.3	
	comp=N,190nm,0.3s						
W35A				IAML		07 34 27.8	
	comp=E,182nm,0.2s						
CROK	Carrier	1.11	5	Pg	Pg	07 34 06.0	-0.7
OK033	Mehan	1.15	55		Pg	07 34 06.7	-0.8
OK033				IAML		07 34 27.9	
	comp=E,265nm,0.1s						
OK033				IAML		07 34 28.4	
	comp=E,258nm,0.1s						
OK038	West end E0370	1.20	335		Pg	07 34 07.4	-0.9
OK052	Battle Ridge R	1.22	60		Pg	07 34 07.4	-1.3
OK052				IAML		07 34 29.8	
	comp=E,238nm,0.2s						
U32A	Winter Ranch,	1.22	324		Pg	07 34 06.9	-1.9
U32A				IAML		07 34 30.5	
	comp=N,256nm,0.3s						
QUOK	Quay	1.38	55		Pn	07 34 10.2	-0.8
DEOK	Depew	1.39	71		Pn	07 34 10.2	-0.9
OK048	Pawnee Station	1.39	42		Pn	07 34 10.8	-0.4
OK035	E0210 Rd and N	1.40	340		Pn	07 34 10.4	-1.0
OK032	Salt Plains WL	1.41	357		Pn	07 34 10.5	-1.0
OK051	E0350 and S346	1.52	43		Pn	07 34 11.2	-1.7
BLOK	Blackwell	1.55	28		Pn	07 34 12.8	-0.5
KAN14	Manchester OK	1.57	4		Pn	07 34 13.1	-0.5
LOOK	Love County	1.59	151	Pg	Pn	07 34 14.2	+0.3
WTFS	Witchita Falls	1.65	190	Pg	Pn	07 34 14.7	-0.1
KAN17	Caldwell West	1.67	9		Pn	07 34 14.8	-0.3
KAN10	Anthony SW Sta	1.73	0		Pn	07 34 15.5	-0.3
SMWD	Samnorwood	1.77	261		Pn	07 34 16.2	-0.2
KAN01	Argonia South	1.78	9		Pn	07 34 16.2	-0.3
KAN01				IAmb_Lg		07 34 41.5	
	comp=Z,30nm,0.9s						
KAN09	Caldwell North	1.79	13		Pn	07 34 15.9	-0.7
KAN09				IAmb_Lg		07 34 41.7	
	comp=Z,66nm,1.2s						
KAN06	Argonia West S	1.86	6		Pn	07 34 17.2	-0.5
TUL3	Leonard	1.96	74		Pn	07 34 19.1	+0.2
TUL3				IAmb_Lg		07 34 51.6	
	comp=Z,44nm,1.1s						
T35A	Sooner Cattle	2.00	40		Pn	07 34 19.7	+0.2
Z35A	Perchaven, San	2.17	161		Pn	07 34 22.1	+0.1
FW03	Perrin-Whitt E	2.35	179		Pn	07 34 24.9	+0.6
FW03				IAmb_Lg		07 35 02.3	
	comp=Z,34nm,0.7s						
FW06	Azle	2.46	169		Pn	07 34 27.3	+1.4
APMT	Aspermont	2.65	219	IAmb_Lg		07 35 11.3	
	comp=Z,22nm,1.1s						
DKNS	Dickens	2.89	234	IAmb_Lg		07 35 23.9	
	comp=Z,17nm,0.7s						
AMTX	Amarillo	2.97	261	IAmb_Lg		07 35 20.1	
	comp=Z,18nm,0.8s						
TREL	Terrell	3.14	147	IAmb_Lg		07 35 30.4	
	comp=Z,18nm,0.8s						
Z38A	Mt. Pleasant	3.35	129	IAmb_Lg		07 35 33.7	
	comp=Z,20nm,0.8s						
SN05	Snyder 5	3.40	223	IAmb_Lg		07 35 40.4	
	comp=Z,25nm,0.7s						
HHAR	Hobbs	3.50	74	IAmb_Lg		07 35 39.5	
	comp=Z,14nm,0.8s						
POST	Post	3.64	231	IAmb_Lg		07 35 47.1	
	comp=Z,15nm,0.9s						
CBKS	Cedar Bluff	3.66	340	IAmb_Lg		07 35 45.7	
	comp=Z,26nm,1.1s						
MIAR	Mount Ida	3.82	101	IAmb_Lg		07 35 52.8	
	comp=Z,18nm,0.9s						
KSU1	Kansas State U	3.89	17	IAmb_Lg		07 35 53.2	
	comp=Z,24nm,0.9s						
SGCY	Sterling City	4.29	217	IAmb_Lg		07 36 05.9	
	comp=Z,21nm,0.8s						
X40A	Basin Creek Fa	4.43	100	IAmb_Lg		07 36 12.1	
	comp=Z,16nm,0.8s						
435B	Jarrell	4.62	174	IAmb_Lg		07 36 17.3	
	comp=Z,15nm,0.8s						
MGMO	Mountain Grove	5.04	68	IAmb_Lg		07 36 24.7	
	comp=Z,10nm,0.7s						
JCT	Junction City	5.10	197	IAmb_Lg		07 36 39.7	
	comp=Z,21nm,1.1s						
P38A	Dawn	5.58	39	IAmb_Lg		07 36 51.2	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	6.12	62	IAmb_Lg		07 37 04.2	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.37	75	IAmb_Lg		07 37 11.8	
	comp=Z,12nm,0.7s						
Q24A	Divide	6.66	304	IAmb_Lg		07 37 35.4	
	comp=Z,10nm,0.7s						
FVM	French Village	6.69	65	IAmb_Lg		07 37 29.8	
	comp=Z,13nm,0.9s						
SLM	Saint Louis	7.08	60	IAmb_Lg		07 37 34.5	
	comp=Z,14nm,0.7s						
BRIGG	Briggsdale	7.13	318	IAmb_Lg		07 37 34.5	
	comp=Z,14nm,0.9s						
ISCO	Idaho Springs	7.40	309	IAmb_Lg		07 37 56.3	
	comp=Z,7.8nm,1.1s						

IDC 06 07:35:01.7±3.0, 53.96N×86.56E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=24.0km s-min=14.2km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	270	I	I	07 40 57.7	
	baz=89,slow=343,SNR=3.2						
ZALV	Zalesovo Beam	1.03	270	Pg	Pg	07 35 20.0	-1.4
	0.6nm,0.3s,baz=88,slow=16,SNR=6.6						
ZALV				Lg	Lg	07 35 36.1	
	1.5nm,0.3s,baz=87,slow=28,SNR=12						
KURBB	Kurchatov Arra	5.95	239	Pn	Pn	07 36 32.8	+1.8
	0.1nm,0.3s,baz=56,slow=14,SNR=3.3						
	0.3nm,0.4s						
MKAR	Makanchi Array	7.68	202	Pn	Pn	07 36 55.3	+0.6
	0.1nm,0.3s,baz=18,slow=14,SNR=1.9						
MKAR				Lg	Lg	07 39 04.3	
	baz=28,slow=34,SNR=2.7						
	0.1nm,0.3s						

IDC 06 07:40:06.7±2.9, 53.63N×87.19E, h0km, mbtmp3.0/2, ML2.2/2, Error ellipse: s-maj=28.9km s-min=16.3km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.44	284	I	I	07 48 00.0	
	0.1nm,0.8s,baz=102,slow=342,SNR=7.8						
ZALV	Zalesovo Beam	1.44	284	Pg	Pn	07 40 32.5	-1.5
	0.6nm,0.3s,baz=103,slow=16,SNR=6.7						
ZALV				Lg	Lg	07 40 52.5	
	0.8nm,0.3s,baz=99,slow=28,SNR=5.3						
KURBB	Kurchatov Arra	6.13	244	Pn	Pn	07 41 39.1	+0.8
	baz=61,slow=14,SNR=7.0						
	1.7nm,0.8s						
MKAR	Makanchi Array	7.53	207	Pn	Pn	07 41 59.1	+1.4
	baz=20,slow=12,SNR=6.7						
MKAR				Lg	Lg	07 44 03.9	
	baz=29,slow=33,SNR=3.8						
	0.6nm,0.8s						

BER 06 07:49:54.5±2.8, 83.60N×2.74E, h10km, mb(Pn)3.9, ML3.0(NAO), Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	4.90	159	eP	Pn	07 51 05.4	-2.5
KBS				eS	Sn	07 51 57.0	-7.6
KBS				IAML		07 52 00.5	
	comp=Z,6.1nm,0.4s						
KBS	Kingsbay	4.90	159	Pn	Pn	07 51 04.8	-3.2
KBS				Sn	Sn	07 51 56.6	-7.9
BRBB	Barentsburg B	5.81	156	eP	Pn	07 51 18.7	-1.8
BRBB				eS	Sn	07 52 20.2	-6.8
BRBB	Barentsburg B	5.81	156	Pn	Pn	07 51 18.9	-1.7
BRBB				Sn	Sn	07 52 19.6	-7.4
SPA0	Spitsbergen Ar	5.84	151	Pn	Pn	07 51 19.8	-1.1
	baz=359,slow=12						
SPA0				Sn	Sn	07 52 22.8	-5.0
SPA0	Spitsbergen Ar	5.84	151	Pn	Pn	07 51 19.8	-1.1
	baz=359,slow=12						
SPA0				Sn	Sn	07 52 22.8	-5.0
BRBA	Barentsburg A	5.84	156	eP	Pn	07 51 19.3	-1.7
BRBA				eS	Sn	07 52 22.4	-5.5
BRBA				IAML		07 52 35.5	
	comp=Z,7.2nm,0.7s						
BRBA	Barentsburg A	5.84	156	Pn	Pn	07 51 19.5	-1.5
HOPEN	Hopen	7.99	140	eP	Pn	07 51 46.9	-3.5

*DJA **06** 07:53:13.9±0.8, 5.1N×9.5E, h10km, M4.4/9, mb4.5/6, mB5.4/1, MLv4.3/9, Mw(mB)4.8/1*

*NEIC **06** 07:53:14.9±1.2, 4.68N×0.09×95.02E±0.02, h56km±10km, mb4.6/15, Error ellipse: s-maj=12.9km s-min=3.0km az=186.0*

*IDC **06** 07:53:17.1±5.1, 4.79N×95.15E, h76km±46km, mb3.9/16, mbtmp4.2/18, ML4.0/2, MS3.3/7, Error ellipse: s-maj=27.9km s-min=14.2km az=49.0*

ISC 06 07:53:13.7±0.6, 4.63N×0.06×95.05E×0.08, h48km, n72, σ1§14/60, mb4.4/25, MS3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	1.40	105	P	Pn	07 53 38.4	+1.5
LHMI	Lhok Sumawe	1.98	73	Pn	Pn	07 53 46.1	+1.3
LHMI	Lhok Sumawe	1.98	73	P	Pn	07 53 46.7	+1.9
SNSI	Sinabang, Aceh	2.55	150	P	Pn	07 53 52.2	-0.5
KCSI	Kotacane, Aceh	2.93	112	P	Pn	07 53 59.9	+2.0
GSI	Gunungsitoli	4.16	143	Pn	Pn	07 54 16.3	+1.5
GSI	Gunungsitoli	4.16	143	P	Pn	07 54 15.6	+0.8
RPSI	Rantau Prapat	4.32	116	Pn	Pn	07 54 18.9	+2.0
KULM	Kulim	5.62	83	Pn	Pn	07 54 35.2	+0.4
PBSI	Pulau Batu	5.67	145	P	Pn	07 54 35.8	+0.3
IPM	Ipoh	5.96	91	Pn	Pn	07 54 41.5	+2.0
SRIT	Nakonsritamara	6.00	49	Pn	Pn	07 54 40.3	+0.3
SISI	Saibi	7.17	146	P	Pn	07 54 56.6	+0.6
	32nm,0.6s,0.1nm						
CMAR	Chiang Mai Arr	14.26	15	P	Pn	07 56 34.0	+1.0
	1.0nm,0.3s,baz=204,slow=13,SNR=2.0						
CMAR				LR	LR	08 02 10.4	
	comp=Z,63nm,18.5s,baz=200,slow=38						
	0.9nm,0.3s						
PALK	Pallekele	14.51	281	P	Pn	07 56 39.8	+3.5
	0.1nm,0.3s,baz=138,slow=19,SNR=2.3						
PALK				S	Sn	07 59 03.1	-13
	4.2nm,0.4s,baz=291,slow=16,SNR=2.6						
PALK				LR	LR	08 02 03.8	
	comp=Z,55nm,18.7s,baz=221,slow=36						
	4.1nm,1.1s						
H08S2	Diego Garcia H	25.60	242	T	T	08 24 50.0	
	baz=65						
H08S3	Diego Garcia H	25.60	242	T	T	08 24 50.0	
	baz=65,slow=74						
H08S1	Diego Carcia H	25.61	242	T	T	08 24 51.2	
	baz=65,slow=74						
DAV	Davao City (W)	30.46	84	LR	LR	08 12 51.5	
	comp=Z,36nm,21.0s,baz=292,slow=39						
KNRA	Kununurra	39.00	122	P	P	08 00 34.6	-1.3
KNRA				IAmb	IAmb	08 00 57.6	
	comp=Z,21nm,1.1s						
ULHL	Ulahol	41.03	339	P	P	08 00 53.5	+0.8
	SNR=7.9						
BOOM	Boomskoye usch	41.35	339	P	P	08 00 55.5	+0.2
BOOM				IAmb	IAmb	08 00 56.8	
	comp=Z,9.6nm,0.7s						
UCH	Uchtor	41.67	337	P	P	08 00 59.3	+1.1
	SNR=10						
TKM2	Tokmak 2	41.85	338	P	P	08 01 00.3	+0.9
	SNR=5.5						
KBK	Karagaybulak	41.87	338	P	P	08 01 01.2	+1.7
	SNR=9.9						
AAK	Ala-Archa	42.02	337	P	P	08 01 03.1	+2.4
	SNR=6.5						
EKS2	Erkin-Say	42.32	337	P	P	08 01 04.4	+1.3
	SNR=6.5						
USP	Ospenovka	42.56	338	P	P	08 01 05.7	+0.8
	SNR=18						
MK31	Makanchi Array	43.43	347	P	P	08 01 11.5	-0.4
MK31				IAmb	IAmb	08 01 12.2	
	comp=Z,6.3nm,1.2s						
MKAR	Makanchi Array	43.43	347	P	P	08 01 11.3	-0.6
	comp=Z,1.5nm,0.4s,baz=164,slow=7.9,SNR=14						
MKAR				LR	LR	08 22 03.1	
	comp=Z,35nm,18.6s,baz=198,slow=40						
	comp=Z,1.5nm,0.4s						
KK31	Karatay Array	44.05	334	P	P	08 01 15.1	-1.8
KKAR	Karatay Array	44.05	334	P	P	08 01 16.4	-0.5
SONM	Songino Array	44.13	11	P	P	08 01 16.4	-1.3
	comp=Z,0.6nm,0.4s,baz=183,slow=9.4,SNR=2.3						
	comp=Z,0.6nm,0.4s						
KSRS	Korea Array	44.37	38	P	P	08 01 17.3	-2.3
	comp=Z,0.8nm,0.5s,baz=219,slow=11,SNR=2.3						
	comp=Z,0.8nm,0.5s						
WB0	Warramunga Arr	45.65	123	P	P	08 01 29.8	-0.2
WB0				IAmb	IAmb	08 01 30.8	
	comp=Z,7.9nm,0.7s						
WRA	Warramunga Arr	45.69	124	P	P	08 01 30.6	+0.2
WRA	Warramunga Arr	45.69	124	P	P	08 01 30.8	+0.4
	comp=Z,8.7nm,0.9s,baz=302,slow=9.2,SNR=36						
	comp=Z,8.7nm,0.9s						
WB2	Warramunga Arr	45.70	124	P	P	08 01 30.9	+0.5
WB2				IAmb	IAmb	08 01 31.8	
	comp=Z,12nm,0.9s						
WR0	Warramunga Arr	45.87	124	P	P	08 01 31.9	+0.2
WR0				IAmb	IAmb	08 01 33.2	
	comp=Z,13nm,0.8s						
AS31	Alice Springs	47.18	128	P	P	08 01 41.2	-0.8
ASAR	Alice Springs	47.18	128	P	P	08 01 41.6	-0.4
ASAR	Alice Springs	47.18	128	P	P	08 01 42.5	+0.4
	comp=Z,1.7nm,0.7s,baz=299,slow=8.0,SNR=29						
ASAR				PcP	PcP	08 03 13.6	+0.6
	comp=Z,0.5nm,0.8s,baz=326,slow=4.5,SNR=2.2						
	comp=Z,1.7nm,0.7s						
GEYT	Ailbeck	47.22	320	P	P	08 01 42.6	+0.5
	comp=Z,3.7nm,0.8s,baz=168,slow=8.3,SNR=6.4						
	comp=Z,3.7nm,0.8s						
KURBB	Kurchatov Arra	47.89	346	P	P	08 01 47.1	+0.1
	comp=Z,1.5nm,0.2s,baz=170,slow=6.7,SNR=7.3						
	comp=Z,1.5nm,0.2s						
ZALV	Zalesovo Beam	49.87	352	P	P	08 02 00.8	-1.3
	comp=Z,1.6nm,0.3s,baz=179,slow=9.5,SNR=1.9						
	comp=Z,1.6nm,0.3s						
USRK	Ussuriysk Ar.	51.04	34	P	P	08 02 10.1	-1.0
	comp=Z,1.2nm,0.5s,baz=246,slow=9.3,SNR=2.3						
	comp=Z,1.2nm,0.5s						
BVAR	Borovoye Array	52.33	341	P	P	08 02 20.6	0.0
	comp=Z,7.7nm,0.7s,baz=140,slow=7.7,SNR=32						
	comp=Z,7.7nm,0.7s						
BRVK	Borovoye	52.39	341	P	P	08 02 20.6	-0.5
BRVK				IAmb	IAmb	08 02 21.7	
	comp=Z,7.3nm,0.7s						
ABKAR	Akbulak array	53.49	332	P	P	08 02 28.7	-0.6
YAK	Yakutsk	62.78	18	LR	LR	08 32 57.3	
	comp=Z,65nm,19.4s,baz=256,slow=38						
H04N2	CROZET ISLANDS	63.45	212	T	T	09 12 08.1	
	baz=50,slow=75,SNR=453						
H04N1	CROZET ISLANDS	63.46	212	T	T	09 12 02.4	
	baz=50,slow=75,SNR=361						
H04N3	CROZET ISLANDS	63.47	212	T	T	09 12 01.1	
	baz=50,slow=75,SNR=439						
H04S1	CROZET ISLANDS	63.83	212	T	T	09 12 33.4	
	baz=52						
H04S3	CROZET ISLANDS	63.84	212	T	T	09 12 27.6	
	baz=52						
H04S2	CROZET ISLANDS	63.85	212	T	T	09 12 29.6	
	baz=52						
BRTR	Keskin Array B	65.23	312	P	P	08 03 49.9	-0.8
	comp=Z,1.1nm,0.7s,baz=135,slow=7.3,SNR=3.7						
	comp=Z,1.1nm,0.7s						
LSZ	Lusaka	69.08	252	LR	LR	08 30 46.3	
	comp=Z,40nm,19.1s,baz=111,slow=32						
AKASG	Malin Array Be	71.24	322	P	P	08 04 26.6	-1.4
	comp=Z,0.4nm,0.4s,baz=93,slow=5.0,SNR=6.9						
	comp=Z,0.4nm,0.4s						
BURAR	Bucovina Array	73.05	318	P	P	08 04 38.2	-0.7
BURAR				IAmb	IAmb	08 04 40.4	
	comp=Z,2.3nm,0.8s						
BUR08	Bucovina Ar. S	73.06	318	P	P	08 04 39.2	+0.1
BUR08				IAmb	IAmb	08 04 40.3	
	comp=Z,3.7nm,0.8s						
LBTB	Lobatse	73.52	242	LR	LR	08 35 27.7	
	comp=Z,37nm,18.1s,baz=83,slow=34						
LVZ	Lovozero	74.89	340	P	P	08 04 48.4	-0.9
FIA1	FINESS Array S	75.98	332	P	P	08 04 54.8	-0.7
FINES	FINESS Array B	75.98	332	P	P	08 04 54.8	-0.7
FINES	FINESS Array B	75.98	332	P	P	08 04 55.0	-0.5
	comp=Z,1.1nm,0.3s,baz=110,slow=5.3,SNR=14						
	comp=Z,1.1nm,0.3s						
ARCES	ARCESS Array B	78.60	340	P	P	08 05 09.1	-1.0
ARCES	ARCESS Array B	78.60	340	P	P	08 05 09.9	-0.1
	comp=Z,4.2nm,0.8s,baz=94,slow=6.4,SNR=14						
	comp=Z,4.2nm,0.8s						
GERES	GERESS Array B	80.83	319	P	P	08 05 23.0	+0.3
	comp=Z,3.0nm,0.9s,baz=77,slow=6.0,SNR=6.3						
	comp=Z,3.0nm,0.9s						
HFS	Hagfors	81.69	330	P	P	08 05 26.8	-0.1
	comp=Z,3.7nm,0.8s,baz=107,slow=5.1,SNR=6.2						
	comp=Z,3.7nm,0.8s						
TXAR	Lajitas Array	141.74	27	PKhKP	PKPpre	08 12 33.0	
	baz=212,slow=19,SNR=2.2						
TXAR				PKP	PKPdf	08 12 41.7	+0.8
	comp=Z,0.2nm,0.7s,baz=90,slow=1.1,SNR=3.4						
CPUP	Villa Florida	145.89	228	PKPbc	PKPdf	08 12 48.2	+0.2
	comp=Z,1.2nm,0.8s,baz=183,slow=7.8,SNR=3.4						

IDC 06 08:05:14.1±3.0, 54.04N×86.45E, h0km, mbtmp3.0/2, ML2.7/1, Error ellipse: s-maj=23.8km s-min=14.6km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.97	265	I	I	08 11 00.0	
	0.3nm,0.9s,baz=84,slow=332,SNR=4.1						
ZALV	Zalesovo Beam	0.97	265	Pg	Pg	08 05 32.1	-0.6
	0.8nm,0.3s,baz=82,slow=16,SNR=8.7						
ZALV				Lg	Lg	08 05 46.4	
	1.4nm,0.3s,baz=93,slow=28,SNR=9.7						
KURBB	Kurchatov Arra	5.94	238	Pn	Pn	08 06 44.2	+1.0
	0.8nm,0.2s,baz=56,slow=14,SNR=4.4						
MKAR	Makanchi Array	7.72	202	Pn	Pn	08 07 08.8	+1.0
	0.1nm,0.3s,baz=16,slow=14,SNR=3.8						
MKAR				Lg	Lg	08 09 17.1	
	baz=22,slow=27						
	0.4nm,0.6s						

*IDC **06** 08:16:27.7±12.0, 11.63N×93.29E, h104km±92km, mb3.3/4, mbtmp3.6/5, ML4.4/1, MS2.4/1, Error ellipse: s-maj=130.7km s-min=22.6km az=60.0*

ISC 06 08:16:26.4±1.2, 11.7N×93.0E×0.1, h100km, n13, σ1§11/9, mb3.7/4, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	1.47	356	eP	Pn	08 16 51.5	-0.9
DGPR				eS	Sn	08 17 11.1	-0.9
DGPR				IAML		08 17 16.8	
	comp=E,1μm,0.6s						
CMAR	Chiang Mai Arr	8.81	40	P	Pn	08 18 30.7	-0.3
	comp=E,1.3nm,0.3s,baz=227,slow=15,SNR=15						
CMAR				LR	LR	08 21 53.7	
	comp=E,27nm,21.9s,baz=190,slow=37						
	comp=E,3.0nm,0.4s						
VIS	Vishakhapatnam	11.14	304	eP	Pn	08 19 02.2	-0.5
VIS				eS	Sn	08 20 54.6	-11
H08S3	Diego Garcia H	28.05	228	T	T	08 50 39.9	
	baz=51						
H08S2	Diego Garcia H	28.05	228	T	T	08 50 43.0	
	baz=51						
H08S1	Diego Carcia H	28.07	228	T	T	08 50 39.4	
	baz=51						
MKAR	Makanchi Array	36.14	347	P	P	08 23 21.1	+2.1
	comp=E,0.1nm,0.3s,baz=160,slow=8.8,SNR=1.5						
MKAR				PcP	PcP	08 25 42.9	+0.2
	comp=E,0.2nm,0.6s,baz=160,slow=4.6,SNR=2.0						
	comp=E,0.1nm,0.3s						
WRA	Warramunga Arr	51.39	127	P	P	08 25 20.8	-0.6
	comp=E,1.1nm,0.6s,baz=304,slow=8.7,SNR=12						
	comp=E,1.1nm,0.6s						
ASAR	Alice Springs	53.22	131	P	P	08 25 34.1	-0.8
	comp=E,0.5nm,0.6s,baz=306,slow=6.4,SNR=10						
	comp=E,0.5nm,0.6s						
H04N2	CROZET ISLANDS	68.47	210	T	T	09 41 08.3	
	baz=45,slow=75,SNR=3.5						
H04N1	CROZET ISLANDS	68.48	210	T	T	09 41 08.3	
	baz=45,slow=75,SNR=4.1						
H04N3	CROZET ISLANDS	68.48	210	T	T	09 41 08.0	
	baz=45,slow=75,SNR=3.8						
ILAR	Eielson Array	91.62	22	P	P	08 29 22.4	+0.4
	comp=E,0.3nm,0.7s,baz=304,slow=4.7,SNR=2.7						
	comp=E,0.3nm,0.7s						

*IDC **06** 08:26:37.2±0.8, 23.84N×121.49E, h0km, mb3.7/11, mbtmp3.8/11, MS3.3/2, Error ellipse: s-maj=33.3km s-min=17.5km az=64.0*

*TAP **06** 08:26:38.9, 24.08N×121.76E, h6km, ML4.3, C*

*ASIES **06** 08:26:38.9, 24.08N×121.76E, h6km, ML4.3, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^22Nm; Mrr=0.64; Mθθ=-1.11; Mφφ=0.38; Mrθ=-0.25; Mrφ=0.66; Mθφ

baz=246
NACB Ninganchiao 0.18 303 P Pg 08 26 43.2 -0.3
NACB Ninganchiao 0.18 303 ⇓*i*P Pg 08 26 43.1 -0.3
baz=300
NACB *i* S **Sg 08 26 46.1 -0.1**
baz=300
EHP Heping Village 0.23 356 *e*P Pg 08 26 44.5 +0.2
baz=357
EHP *e*S **Sg 08 26 48.4 +0.7**
baz=357
EAHA Aohua 0.25 356 P Pg 08 26 44.4 -0.3
baz=355
EAHA *e*S **Sg 08 26 49.0 +0.8**
baz=355
ETM Tongmen 0.27 246 P Pb 08 26 45.0 -1.3
baz=248
ETM *e*S **Sb 08 26 49.9 -0.9**
baz=248
ETLH Xiulin Townshi 0.29 297 ⇓*i*P Pg 08 26 45.1 -0.2
baz=295
ETLH *i* S **Sb 08 26 50.0 -1.5**
baz=295
LXIB Xiulin Townshi 0.32 260 ⇑*i*P Pb 08 26 45.9 -1.4
baz=260
LXIB S **Sb 08 26 51.0 -1.5**
baz=260
SHUL Shoufeng 0.34 212 P Pb 08 26 47.8 +0.3
baz=212
ENA Nanau 0.35 357 ⇓*i*P Pg 08 26 46.3 -0.2
baz=357
ENA S **Sb 08 26 52.2 -1.0**
baz=357
EWUT Wuta 0.37 3 P Pg 08 26 46.7 -0.1
baz=2.0
EWUT *e*S **Sb 08 26 53.6 -0.1**
baz=2.0
ESL Shilin 0.40 229 ⇑*i*P Pb 08 26 47.5 -0.9
baz=240
ESL *i* S **Sb 08 26 56.0 +1.5**
baz=240
TEGC Jichi Village 0.42 209 P Pb 08 26 49.1 +0.3
baz=208
WHF Hehuan Shan 0.46 279 P Pb 08 26 48.6 -1.1
baz=279
WHF S **Sb 08 26 55.1 -1.6**
baz=279
NNSB Datong 0.49 316 ⇓*i*P Pb 08 26 49.2 -0.9
baz=314
NNSB S **Sb 08 26 55.8 -1.6**
baz=314
NNSH Datong 0.49 316 P Pb 08 26 49.2 -0.9
baz=313
NNSH S **Sb 08 26 56.5 -0.9**
baz=313
WARBT Fenglin Townsh 0.49 224 ⇑*i*P Pb 08 26 49.3 -0.8
baz=237
WARBT S **Sb 08 26 58.2 +0.9**
baz=237
FUSS Fushou 0.50 290 *e*P Pb 08 26 49.6 -0.8
baz=290
FUSS S **Sb 08 26 56.4 -1.4**
baz=290
ESAO Su ao 0.50 9 *e*P Pg 08 26 49.2 -0.1
baz=7.0
LATG Datong 0.51 335 P Pb 08 26 49.3 -1.1
baz=333
LATG S **Sb 08 26 57.3 -0.5**
baz=333
NNS Nan Shan 0.51 316 ⇓*i*P Pb 08 26 49.4 -1.0
baz=314
NNS S **Sb 08 26 56.9 -0.9**
baz=314
EGFH Guangfu 0.51 217 *e*P Pb 08 26 50.2 -0.2
baz=233
EGFH *e*S **Sn 08 27 01.3 +0.1**
baz=233
CHGB Renai 0.54 268 ⇑*i*P Pb 08 26 50.3 -0.7
baz=270
CHGB S **Sb 08 26 58.5 -0.3**
baz=270
TWC Suao 0.54 9 *e*P Pb 08 26 49.9 -0.9
baz=9.0
OWD Renai 0.55 257 P Pb 08 26 50.5 -0.6
baz=270
OWD *e*S **Sb 08 26 58.6 -0.4**
baz=270
NDS Dongshan 0.56 356 *e*P Pb 08 26 50.6 -0.6
baz=353
TWT Tachien 0.56 288 P Pb 08 26 51.2 -0.2
baz=287
TWT S **Sb 08 26 59.0 -0.5**
baz=287
NDT Datong Townshi 0.57 337 P Pb 08 26 50.9 -0.5
baz=334
NDT S **Sb 08 26 59.6 0.0**
baz=334
TDCB Techi 0.58 288 *e*P Pb 08 26 51.3 -0.3
baz=287
TDCB *e*S **Sb 08 26 59.0 -0.8**
baz=287
ENTT Nioudou 0.59 343 ⇓*i*P Pb 08 26 51.0 -0.7
baz=342
ENTT S **Sb 08 26 59.8 -0.3**
baz=342
WUSB Renai 0.59 262 P Pb 08 26 51.4 -0.5
baz=262
WUSB S **Sb 08 26 59.6 -0.7**
baz=262
TWE Neicheng 0.65 352 P Pb 08 26 52.3 -0.4
baz=353
TWE *e*S **Sb 08 27 02.2 +0.4**
baz=353
VWDT VWDT 0.65 241 ⇑P Pb 08 26 52.5 -0.3
baz=241
VWDT S **Sb 08 27 02.9 +1.1**
baz=241
HGSD Ruisui 0.66 208 *e*P Pb 08 26 53.0 +0.1
baz=195
ILA Ilan 0.69 359 *e*P Pn 08 26 54.4 -0.7
baz=347
YHNB Yeheng 0.69 329 P Pb 08 26 53.3 -0.2
YHNB Yeheng 0.69 329 ⇓*i*P Pb 08 26 53.2 -0.3
baz=328
YHNB *e*S **Sb 08 27 03.2 +0.2**
baz=328
EHY Hungye 0.69 215 P Pb 08 26 52.8 -0.8
baz=215
FUSB Fushanzhiwuyua 0.70 347 P Pb 08 26 53.3 -0.3
baz=346
FUSB *e*S **Sb 08 27 04.5 +1.2**
baz=346
NSK Sanguang 0.70 329 ⇓*i*P Pb 08 26 53.4 -0.3
baz=327
NSK S **Sb 08 27 04.3 +0.9**
baz=327
NWLT Wulai 0.74 341 *e*P Pb 08 26 54.1 -0.2
baz=340
NWLT *e*S **Sb 08 27 04.7 +0.4**
baz=340
WHP Taichung City 0.77 285 P Pn 08 26 55.3 -1.0
baz=285
WHP S **Sn 08 27 06.7 -1.2**
baz=285
WCS Beigang Elemen 0.78 269 *e*P Pn 08 26 55.3 -0.9
baz=269
SSLB Suanglung 0.79 249 P Pb 08 26 55.1 -0.1
SSLB Suanglung 0.79 249 P Pb 08 26 55.0 -0.2
baz=262
SSLB S **Sn 08 27 07.5 -0.9**
baz=262
YULB Yu-li 0.80 212 P Pb 08 26 55.2 -0.2
YULB Yu-li 0.80 212 P Pg 08 26 54.2 -0.8
baz=213
YULB *e*S **Sn 08 27 08.7 +0.1**
baz=213
NFF Wufeng Townshi 0.81 314 P Pb 08 26 55.7 +0.2
baz=303
ECBN Changbin 0.81 201 *e*P Pb 08 26 55.5 0.0
baz=201
ECBN S **Sn 08 27 08.9 +0.3**
baz=201
SMLT Sun Moon Lake 0.81 256 *e*P Pb 08 26 55.6 +0.1
baz=258
SMLT *e*S **Sn 08 27 07.6 -1.3**
baz=258
EYUL Yuli 0.83 209 *e*P Pn 08 26 57.2 +0.2
baz=224
TWF1 Yuli 0.84 211 *e*P Pg 08 26 54.8 -0.8
baz=225
TYC Yuchr 0.84 258 P Pb 08 26 56.0 0.0
baz=260
TYC *e*S **Sb 08 27 08.0 +0.6**
baz=260
LIOB Emei 0.89 310 P Pn 08 26 57.4 -0.4
baz=309
LIOB *e*S **Sn 08 27 10.4 -0.3**
baz=309
NSTT Nanjuang 0.89 309 ⇓*i*P Pn 08 26 57.3 -0.5
baz=308
NSTT S **Sn 08 27 10.8 +0.2**
baz=308
TIPB Shuangxi 0.89 4 *e*P Pb 08 26 57.1 +0.1
baz=3.0
TIPB *e*S **Sn 08 27 10.5 -0.4**
baz=3.0
NHDH Xindian Distri 0.91 346 *e*P Pn 08 26 58.0 -0.1
baz=345
NHDH *e*S **Sn 08 27 11.1 -0.1**
baz=345
WHYT Xinyi Township 0.91 246 P Pn 08 26 59.3 +1.1
baz=256
WHYT *e*S **Sn 08 27 12.0 +0.7**
baz=256
TWA Mucha 0.92 350 ⇓*i*P Pb 08 26 57.4 +0.1
baz=349
TATO Taipei 0.93 345 P Pn 08 26 58.1 -0.3
CHKH Chenggong 0.94 201 *e*P Pb 08 26 57.4 -0.4
baz=190
TWQ1 Liyutan 0.94 287 *e*P Pn 08 26 59.2 +0.6
baz=285
TWB1 Santiao Chiao 0.95 13 *e*P Pn 08 26 59.1 +0.4
baz=4.0
FULB Fuli 0.97 206 *e*P Pn 08 26 58.8 -0.2
baz=223
NSY Sanyi 0.97 291 *e*P Pn 08 27 00.1 +1.1
baz=291
NSY *e*S **Sn 08 27 14.2 +1.4**
baz=291
WJS Zhushan 0.98 255 P Pn 08 26 59.8 +0.8
baz=263
WJS *e*S **Sn 08 27 13.7 +0.8**
baz=263
NWF Wu-fen Shan 0.99 1 *e*P Pn 08 26 59.6 +0.3
baz=360
WFSB Wu-fen Shan 0.99 1 *e*P Pn 08 26 59.2 -0.1
baz=352
WFSB *e*S **Sn 08 27 14.2 +1.0**
baz=352
TCU Taichung 0.99 274 P Pn 08 27 00.8 +1.5
baz=269
TCU *e*S **Sn 08 27 16.3 +3.1**
baz=269
NMLH Miaoli 1.00 298 P Pn 08 27 00.2 +0.9
baz=295
SBCB Hsinchu 1.00 315 *e*P Pn 08 27 00.4 +1.0
baz=314
SBCB *e*S **Sn 08 27 14.3 +0.7**
baz=314
WNT Mingjian 1.00 259 *e*P Pn 08 27 00.6 +1.2
baz=260
WNT *e*S **Sn 08 27 16.3 +2.8**
baz=260
SXI1 Grass Mountain 1.02 6 P Pn 08 26 59.6 -0.1
baz=5.0
SXI1 *e*S **Sn 08 27 16.5 +2.5**
baz=5.0
HSN Hsinchu 1.02 315 *e*P Pn 08 27 01.6 +2.0
baz=314
NCUH Zhongli 1.03 330 *e*P Pn 08 27 00.9 +1.1
baz=327
NCUH *e*S **Sn 08 27 18.0 +3.8**
baz=327
CHKT Chengkung 1.04 201 *e*P Pg 08 26 58.9 -0.6
baz=191
ALS Alishan 1.04 237 ⇑*i*P Pn 08 26 60.0 -0.2
baz=241
ALS S **Sn 08 27 16.7 +1.9**
baz=241
EHD Haiduan 1.05 209 *e*P Pb 08 26 59.7 0.0
baz=223
WDJ Dajia District 1.06 285 *e*P Pn 08 27 02.3 +2.1
baz=284
TWS1 Kuangyinshan 1.07 343 *e*P Pn 08 27 01.5 +1.2
baz=340
TNOU National Taiwa 1.07 1 *e*P Pn 08 27 01.2 +0.8
baz=359
YM01 YM01 1.08 351 *e*P Pn 08 27 01.2 +0.7
baz=329
WCHH Zhanghua 1.10 270 *e*P Pn 08 27 02.6 +2.0
baz=271
CHN5 Tsauling 1.10 245 P Pn 08 27 01.5 +0.7
baz=248
CHN5 S **Sn 08 27 19.3 +3.2**
baz=248
ELDTW Lidau 1.11 218 *e*P Pg 08 26 59.1 -1.8
baz=218
NTST Danshui 1.12 345 *e*P Pn 08 27 02.5 +1.5
baz=353
NTST *e*S **Sn 08 27 19.4 +3.0**
baz=353
ANP Anpu 1.13 349 *e*P Pn 08 27 01.9 +0.7
baz=347
JYNG Yonagunijimaku 1.14 71 P Pn 08 27 01.5 +0.2
JYNG S **Sn 08 27 18.3 +1.4**
JYNG Yonagunijimaku 1.14 71 A A 08 27 01.5
comp=E,7.0nm,3.5s,comp=N,9.0nm,2.3s
WGK Gukeng 1.16 251 *e*P Pn 08 27 03.4 +1.8
baz=251
WDLH Douliu 1.18 251 *e*P Pn 08 27 03.5 +1.6
baz=255
WDLH *e*S **Sn 08 27 22.3 +4.4**
baz=255
TWY Chenhua 1.20 353 P Pn 08 27 04.1 +1.9
baz=334
YOJ Yonaguni jima 1.20 71 P Pn 08 27 05.6 +3.4
YOJ Yonaguni jima 1.20 71 *e*P Pn 08 27 02.8 +0.7
baz=73
YOJ Yonaguni jima 1.20 71 P Pn 08 27 02.8 +0.7
YOJ *e*S **Sn 08 27 20.6 +2.1**
YOJ Yonaguni jima 1.20 71 A A 08 27 02.8
comp=E,6.0nm,3.6s,comp=N,6.0nm,2.3s
WCKO Fanlu 1.23 239 *e*P Pn 08 27 04.2 +1.6
baz=244
WCKO *e*S **Sn 08 27 21.7 +2.5**
baz=244
STYH Taoyuan 1.28 225 *e*P Pg 08 27 03.5 -0.5
baz=213
WRL Guolierlin Hig 1.28 262 *e*P Pg 08 27 04.6 +0.6
baz=266
WRL *e*S **Sn 08 27 24.8 +4.6**
baz=266
CHN4 Tsaushan 1.29 236 P Pg 08 27 04.8 +0.5
baz=241
CHN4 *e*S **Sn 08 27 24.9 +4.3**
baz=241
TPUB Ta-pu 1.29 234 P Pg 08 27 04.7 +0.4
TPUB Ta-pu 1.29 234 *e*P Pg 08 27 04.1 -0.2
baz=238
TPUB S **Sn 08 27 24.0 +3.3**
baz=238
CHN2 Minshiung 1.30 246 *e*P Pg 08 27 05.7 +1.4
baz=251
CHN2 *e*S **Sn 08 27 25.9 +5.2**
baz=251
LONT Longtian 1.30 207 *e*P Pn 08 27 02.5 -1.0
baz=207
WTK Tuku 1.31 253 P Pg 08 27 05.8 +1.1
baz=258
WTK S **Sn 08 27 25.3 +4.1**
baz=258
WTP Ta-pu 1.34 232 ⇑*i*P Pg 08 27 04.9 -0.3
baz=237
WTP *e*S **Sn 08 27 25.1 +3.3**
baz=237
TWG Pinlang 1.40 207 *e*P Pn 08 27 03.7 -1.1
baz=207
TWGBT Beinan 1.40 207 P Pg 08 27 06.7 +0.4
TWGBT Beinan 1.40 207 *e*P Pn 08 27 03.4 -1.5
baz=207
CHN1 Nanshi 1.44 232 ⇓P Pg 08 27 06.8 -0.3
baz=237
CHN1 S **Sg 08 27 29.1 +3.4**
baz=237
SNST Tainan City 1.44 234 *e*P Pg 08 27 07.2 +0.1
baz=235
SGST Jiashian 1.47 228 P Pb 08 27 06.5 -0.1
baz=211
SLGT Liugui 1.48 224 P Pg 08 27 07.2 -0.8
baz=209
ICHU Yijhu 1.53 243 *e*P Pg 08 27 08.1 -0.8
baz=246
CHN8 Yiju 1.59 243 *e*P Pg 08 27 09.8 -0.3
baz=247
ECL Taimali 1.65 207 P Pb 08 27 09.1 -0.7
baz=193
SCST Cishan 1.66 225 P Pg 08 27 10.5 -0.8
baz=211
SHHT Tainan City 1.67 231 *e*P Pg 08 27 11.8 +0.4
baz=229
TSMG Majia 1.71 217 *e*P Pb 08 27 10.4 -0.4
baz=207
TWM1 Shoushan 1.75 225 *e*P Pg 08 27 12.3 -0.7
baz=223
MASBT Mashibuluo 1.79 216 P Pn 08 27 10.7 +0.5
baz=204
TSCK Chigu Township 1.79 239 *e*P Pb 08 27 12.1 -0.2
baz=243
IRIF Iriomote-Funau 1.82 81 *e*S Sb 08 27 35.6 +0.2
HATJ Hateruma jima 1.87 90 *e*P Pb 08 27 13.7 +0.1
EAST Anshuo 1.88 207 P Pn 08 27 11.1 -0.4
baz=197
TAWH Dawu Township 1.91 205 *e*P Pn 08 27 12.7 +0.9
baz=194
SCZT Fangliau 1.99 212 *e*P Pb 08 27 15.2 -0.5
baz=198
SLIU Shizi 2.05 206 *e*P Pb 08 27 15.7 -0.9
baz=197
JKRS Kuro-shima 2.06 85 P Pn 08 27 15.6 +1.6
LYUB Lan-yu 2.07 185 *e*P Pn 08 27 11.3 -2.8
baz=187
PHUB P'eng-hu 2.08 255 *e*P Pb 08 27 15.8 -1.4
baz=256
WDGT Dungji 2.09 248 *e*P Pb 08 27 16.0 -1.4
baz=249
JIJ Ishigaki jima 2.19 82 P Pn 08 27 16.3 +0.6
JIJ *e*S **Sn 08 27 43.8 +0.9**
VWUC VWUC 2.29 294 *e*P Pn 08 27 17.9 +0.8
baz=291
TWKBT Hengchun 2.30 203 *e*P Pn 08 27 18.1 +0.9
baz=193
VCHM Qimei 2.31 248 *e*P Pn 08 27 18.2 +0.9
baz=249
JISG Ishigakijimahi 2.38 77 P Pn 08 27 19.1 +0.7
JISG S **Sn 08 27 48.9 +1.4**
MATB Ma-tsu 2.64 322 *e*P Pn 08 27 22.6 +0.6
baz=311
LYJJ Jianjiangzhen 3.06 324 *e*P Pn 08 27 28.7 +1.0
baz=312
KSRS Korea Array 14.34 20 Pn P 08 30 08.5 -0.9
comp=N,0.2nm,0.3s,baz=204,slow=12,SNR=6.9
DAV Davao City (W) 17.30 167 LR LR 08 36 29.3
comp=N,77nm,19.6s,baz=346,slow=35
MJAR Matsushiro Arr 18.84 45 LR LR 08 38 45.6
comp=N,93nm,18.1s,baz=218,slow=38
CMAR Chiang Mai Arr 21.97 260 P P 08 31 28.1 -5.3
comp=N,1.1nm,0.3s,baz=62,slow=11,SNR=1.6
comp=N,1.1nm,0.3s
GOMU GeErMu 26.16 304 P P 08 32 16.9 +2.7
GOMU pmax pmax
comp=N,3.0nm,1.1s
SONM Songino Array 26.67 337 P P 08 32 18.0 -0.5
comp=N,1.9nm,0.8s,baz=147,slow=8.6,SNR=5.2
comp=N,1.9nm,0.8s
MKAR Makanchi Array 38.78 316 P P 08 34 04.9 +0.9
comp=N,1.3nm,0.7s,baz=103,slow=9.8,SNR=12
MKAR PcP **PcP 08 36 15.0 -0.3**
comp=N,0.6nm,0.9s,baz=122,slow=1.9,SNR=3.2
comp=N,1.3nm,0.7s
ZALV Zalesovo Beam 40.62 327 P P 08 34 19.0 -0.2
comp=N,2.2nm,0.7s,baz=116,slow=10,SNR=10
comp=N,2.2nm,0.7s
KURBB Kurchatov Arra 42.53 320 P P 08 34 33.9 -0.9
comp=N,0.4nm,0.3s,baz=106,slow=6.5,SNR=1.7
comp=N,0.4nm,0.3s
WRA Warramunga Arr 45.44 163 P P 08 34 56.7 -1.7
comp=N,0.7nm,0.8s,baz=344,slow=9.2,SNR=3.6
comp=N,0.7nm,0.8s
BVAR Borovoye Array 48.09 321 P P 08 35 19.6 +0.7
comp=N,0.5nm,0.5s,baz=119,slow=12,SNR=3.6
comp=N,0.5nm,0.5s
ASAR Alice Springs 48.90 165 P P 08 35 24.3 -1.2
comp=N,0.3nm,0.5s,baz=329,slow=6.9,SNR=3.6
comp=N,0.3nm,0.5s
STKA Stephens Creek 58.78 160 P P 08 36 36.1 -1.5
comp=N,1.4nm,0.9s,baz=335,slow=14,SNR=2.4
comp=N,1.4nm,0.9s
ILAR Eielson Array 69.07 27 P P 08 37 47.8 +2.8
comp=N,0.2nm,0.6s,baz=284,slow=8.8,SNR=2.6
comp=N,0.2nm,0.6s
YKA Yellowknife Ar 82.86 23 P P 08 39 03.4 -0.3
comp=N,0.6nm,0.8s,baz=316,slow=4.9,SNR=9.2
comp=N,0.6nm,0.8s

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*NNC **06** 08:35:21.9±1.8, 53°.48N×87°.69E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=18.8km s-min=7.3km az=44.0, Suspected Mining explosion.*

IDC 06 08:35:22.6±2.9, 53°.57N×87°.56E, h0km, mbtmp3.1/2, ML2.7/2, 6C-4D, Error ellipse: s-maj=25.5km s-min=14.1km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.67**	**284**	I	I	08 45 10.0	
	0.1nm,0.9s,baz=100,slow=339,SNR=9.7						
ZAA0	**Zalesovo Array**	**1.67**	**284**	⇓P	Pn	08 35 53.4	+0.2
	0.3nm,0.3s						
ZAA0				⇑S	Sg	08 36 17.7	+1.3
	4.2nm,0.9s						
ZALV	**Zalesovo Beam**	**1.67**	**284**	Pg	Pn	08 35 53.7	+0.5
	1.4nm,0.3s,baz=100,slow=17,SNR=16						
ZALV				Lg	Lg	08 36 15.7	
	2.3nm,0.3s,baz=100,slow=24,SNR=10						
KURK	**Kurchatov**	**6.20**	**246**	⇑Pn	Pn	08 36 54.0	-1.4
	0.4nm,0.4s						
KURK				⇑Lg	Lg	08 38 38.7	
	5.7nm,0.9s						
KURBB	**Kurchatov Arra**	**6.30**	**246**	⇑Pn	Pn	08 36 55.7	-1.0
	0.7nm,0.3s						
KURBB				⇑Lg	Lg	08 38 40.8	
	11nm,1.0s						
KURBB	**Kurchatov Arra**	**6.30**	**246**	Pn	Pn	08 36 57.0	+0.3
	0.1nm,0.3s,baz=62,slow=13,SNR=2.0						
KURBB				Lg	Lg	08 38 39.7	
	baz=63,slow=32,SNR=5.2						
	0.8nm,0.3s						
MK31	**Makanchi Array**	**7.58**	**209**	⇓Pn	Pn	08 37 14.9	+0.5
	0.3nm,0.5s,baz=29,slow=14,SNR=9.6						
MK31				⇑Lg	Lg	08 39 21.1	
	1.1nm,0.7s,baz=35,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	Pn	08 37 15.5	+1.2
	0.2nm,0.3s,baz=29,slow=13,SNR=9.2						
MKAR				Sn	Sn	08 38 41.5	+0.5
	0.2nm,0.3s,baz=32,slow=27,SNR=2.5						
MKAR				Lg	Lg	08 39 21.9	
	0.1nm,0.3s,baz=36,slow=32,SNR=7.5						
	0.4nm,0.4s						
MAKZ	**Makanchi**	**7.66**	**210**	⇓Pn	Pn	08 37 14.4	-1.1
	0.1nm,0.3s						
MAKZ				⇓Lg	Lg	08 39 24.0	
	1.6nm,0.9s						

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*IDC **06** 08:36:46.7±0.7, 24°.09N×121°.99E, h0km, mb3.9/17, mbtmp4.0/18, ML3.9/1, MS3.8/40, Error ellipse: s-maj=23.4km s-min=15.0km az=67.0*

*ASIES **06** 08:36:48.6, 24°.08N×121°.77E, h7km, ML4.6, Mw4.5, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}-0.91; $M_{\theta\theta}$-2.19; $M_{\phi\phi}$-0.28; $M_{r\theta}$-0.09; $M_{\theta\phi}$-2.64; $M_{\phi r}$6.58; Fault plane solution: $M_0$7.28938×10^{22} NP1: ϕ_s183.49000°, δ89.81000°, λ-67.37000°. NP2: ϕ_s273.95000°, δ22.63000°, λ-179.51000°. Principal axes: T Plg40.5670°, Azm252.5110°; N Plg22.6290°, Azm3.4190°; P Plg40.9190°, Azm114.6010°;*

*JMA **06** 08:36:48.9±0.1, 24°.1N±0°.2×121°.8E±0°.3, h0km, MD4.9/16, MV4.5/16, TAIWAN REGION*

*NIED **06** 08:36:48.9, 24°.05N×121°.75E, h0km, MW4.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.75; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-0.10; $M_{r\theta}$-1.01; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.13; Fault plane solution: $M_0$1.35000×10^{16} NP1: ϕ_s266.00000°, δ72.00000°, λ114.00000°. NP2:*

ϕs32.00000°,δ30.00000°,λ39.00000°.
*BJI **06** 08:36:48.5±0.0,24°.01N×121°.86E,h8km,mb4.2/48,*
mB4.9/30,ML4.5/7,Ms4.7/55,Ms7 4.6/51
*TAP **06** 08:36:48.6,24°.08N×121°.77E,h7km,ML4.6,C*
*NEIC **06** 08:36:49.1±1.5,24°.03N±0°.02×121°.78E±0°.03,h6km±5km,*
mb4.6/24,Error ellipse: s-maj=3.9km s-min=2.3km
az=80.0

ISC 06 08:36:49.8±0.6,**24°.07N**±0°.01×**121°.82E**±0°.02,**h13**km±3km,
n282,σ1s**77**/342,**mb4.1**/31,**MS3.9**/39,**15C-17D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.20**	**297**	⇓*iP*	**Pg**	**08 36 52.6**	**-1.6**
	baz=300						
ETL				S	**Sg**	**08 36 55.3**	**-2.0**
	baz=300						
TWD	**Chiawan**	**0.20**	**273**	⇓*iP*	**Pg**	**08 36 52.5**	**-1.7**
	baz=285						
TWD				*i* S	**Sg**	**08 36 55.1**	**-2.2**
	baz=285						
HWA	**Hwalien**	**0.21**	**245**	⇑*iP*	**Pg**	**08 36 53.6**	**-0.8**
	baz=248						
HWA				*e*S	**Sg**	**08 36 57.8**	**+0.1**
	baz=248						
NACB	**Ninganchiao**	**0.23**	**297**		**Pg**	**08 36 52.9**	**-1.9**
NACB	**Ninganchiao**	**0.23**	**297**	P	**Pg**	**08 36 53.1**	**-1.6**
NACB	**Ninganchiao**	**0.23**	**297**	⇓*iP*	**Pg**	**08 36 53.1**	**-1.6**
	baz=300						
NACB				*i* S	**Sg**	**08 36 56.0**	**-2.0**
	baz=300						
EHP	**Heping Village**	**0.25**	**344**	P	**Pg**	**08 36 54.1**	**-1.0**
	baz=353						
EHP				S	**Sg**	**08 36 58.2**	**-0.5**
	baz=353						
EAHA	**Aohua**	**0.27**	**345**	P	**Pg**	**08 36 54.4**	**-1.0**
	baz=351						
EAHA				S	**Sb**	**08 36 59.3**	**-1.7**
	baz=351						
ETM	**Tongmen**	**0.31**	**251**	P	**Pg**	**08 36 54.7**	**-1.5**
	baz=257						
ETM				S	**Sb**	**08 36 59.8**	**-2.5**
	baz=257						
ETLH	**Xiulin Townshi**	**0.34**	**294**	⇓*iP*	**Pg**	**08 36 55.1**	**-1.6**
	baz=295						
ETLH				S	**Sg**	**08 36 59.8**	**-1.5**
	baz=295						
ENA	**Nanau**	**0.36**	**349**	⇓*iP*	**Pb**	**08 36 56.4**	**-1.8**
	baz=355						
ENA				S	**Sb**	**08 37 01.9**	**-1.9**
	baz=355						
SHUL	**Shoufeng**	**0.36**	**220**	⇑*iP*	**Pb**	**08 36 57.4**	**-0.7**
	baz=215						
SHUL				*i* S	**Sb**	**08 37 04.3**	**+0.6**
	baz=215						
LXIB	**Xiulin Townshi**	**0.37**	**263**	⇑*iP*	**Pg**	**08 36 55.7**	**-1.6**
	baz=260						
EWUT	**Wuta**	**0.38**	**355**	P	**Pb**	**08 36 56.7**	**-1.6**
	baz=359						
EWUT				*e*S	**Sb**	**08 37 02.7**	**-1.4**
	baz=359						
ESL	**Shilin**	**0.43**	**234**	⇑*iP*	**Pg**	**08 36 57.2**	**-1.2**
	baz=244						
ESL				S	**Sb**	**08 37 04.8**	**-1.0**
	baz=244						
TEGC	**Jichi Village**	**0.44**	**215**	*e*P	**Pb**	**08 36 58.7**	**-0.7**
	baz=211						
TEGC				*e*S	**Sb**	**08 37 07.3**	**+1.4**
	baz=211						
EOS4	**EOS4**	**0.46**	**83**	P	**Pn**	**08 37 01.6**	**-0.1**
	baz=92						
ESAO	**Su ao**	**0.51**	**3**	*e*P	**Pb**	**08 36 59.3**	**-1.2**
	baz=357						
ESAO				*e*S	**Sb**	**08 37 08.7**	**+0.9**
	baz=357						
WHF	**Hehuan Shan**	**0.51**	**279**	P	**Pg**	**08 36 58.4**	**-1.6**
	baz=279						
WHF				S	**Sg**	**08 37 05.1**	**-1.8**
	baz=279						
EOS2	**EOS2**	**0.51**	**47**	P	**Pn**	**08 37 02.5**	**-0.2**
	baz=62						
WARBT	**Fenglin Townsh**	**0.53**	**229**	⇑*iP*	**Pg**	**08 36 59.0**	**-1.1**
	baz=238						
WARBT				S	**Sb**	**08 37 06.9**	**-1.6**
	baz=238						
NNSB	**Datong**	**0.53**	**312**	⇓*iP*	**Pb**	**08 36 59.2**	**-1.9**
	baz=314						
NNSB				S	**Sg**	**08 37 05.7**	**-1.8**
	baz=314						
EGFH	**Guangfu**	**0.54**	**222**	*e*P	**Pb**	**08 36 59.6**	**-1.4**
	baz=218						
LATG	**Datong**	**0.54**	**330**	P	**Pb**	**08 36 59.4**	**-1.7**
	baz=333						
LATG				S	**Sb**	**08 37 07.2**	**-1.6**
	baz=333						
TWC	**Suao**	**0.54**	**3**	⇓*iP*	**Pb**	**08 36 59.9**	**-1.2**
	baz=359						
NNS	**Nan Shan**	**0.55**	**312**	⇓*iP*	**Pb**	**08 36 59.4**	**-1.9**
	baz=315						
NNS				S	**Sb**	**08 37 06.7**	**-2.5**
	baz=315						
FUSS	**Fushou**	**0.55**	**289**	⇓*iP*	**Pb**	**08 36 59.6**	**-1.9**
	baz=290						
FUSS				S	**Sg**	**08 37 06.6**	**-1.5**
	baz=290						
NDS	**Dongshan**	**0.57**	**351**	P	**Pb**	**08 37 00.2**	**-1.4**
	baz=353						
NDS				S	**Sb**	**08 37 09.4**	**-0.3**
	baz=353						
CHGB	**Renai**	**0.59**	**269**	⇑*iP*	**Pb**	**08 37 00.1**	**-2.0**
	baz=270						
CHGB				*i* S	**Sb**	**08 37 08.3**	**-2.1**
	baz=270						
OWD	**Renai**	**0.60**	**259**	P	**Pg**	**08 37 00.1**	**-1.4**
	baz=269						
OWD				S	**Sb**	**08 37 08.7**	**-1.9**
	baz=269						
NDT	**Datong Townshi**	**0.60**	**332**	⇓*iP*	**Pb**	**08 37 00.8**	**-1.3**
	baz=335						
NDT				*i* S	**Sb**	**08 37 09.4**	**-1.1**
	baz=335						
ENTT	**Nioudou**	**0.61**	**338**	⇓*iP*	**Pb**	**08 37 01.0**	**-1.3**
	baz=341						
ENTT				*i* S	**Sb**	**08 37 10.0**	**-0.9**
	baz=341						
TWT	**Tachien**	**0.61**	**287**	P	**Pb**	**08 37 00.9**	**-1.6**
	baz=287						
TWT				S	**Sb**	**08 37 09.4**	**-1.8**
	baz=287						
TDCB	**Techi**	**0.63**	**287**	P	**Pb**	**08 37 00.9**	**-1.8**
	baz=287						
TDCB				S	**Sg**	**08 37 08.6**	**-1.9**
	baz=287						
WUSB	**Renai**	**0.65**	**263**	P	**Pb**	**08 37 01.1**	**-1.8**
	baz=263						
WUSB				S	**Sb**	**08 37 11.2**	**-0.7**
	baz=263						
TWE	**Neicheng**	**0.66**	**348**	*i* P	**Pb**	**08 37 01.9**	**-1.3**
	baz=352						
TWE				S	**Sb**	**08 37 12.1**	**-0.3**
	baz=352						
HGSD	**Ruisui**	**0.68**	**212**	⇑*iP*	**Pb**	**08 37 02.8**	**-0.7**
	baz=196						
HGSD				*i* S	**Sn**	**08 37 15.6**	**+0.1**
	baz=196						
VWDT	**VWDT**	**0.69**	**243**	⇑*iP*	**Pb**	**08 37 02.3**	**-1.5**
	baz=251						
VWDT				*i* S	**Sb**	**08 37 12.7**	**-0.5**
	baz=251						
ILA	**Ilan**	**0.70**	**355**	*e*P	**Pn**	**08 37 04.7**	**-0.7**
	baz=358						
FUSB	**Fushanzhiwuyua**	**0.72**	**343**	⇓*iP*	**Pb**	**08 37 03.2**	**-1.0**
	baz=345						
FUSB				S	**Sb**	**08 37 13.8**	**-0.3**
	baz=345						
EHY	**Hungye**	**0.72**	**219**	⇑*iP*	**Pg**	**08 37 02.5**	**-1.4**
	baz=231						
EHY				*i* S	**Sn**	**08 37 15.8**	**-0.8**
	baz=231						
YHNB	**Yeheng**	**0.72**	**326**		**Pb**	**08 37 03.0**	**-1.2**
YHNB	**Yeheng**	**0.72**	**326**	P	**Pb**	**08 37 03.4**	**-0.9**
YHNB	**Yeheng**	**0.72**	**326**	⇓*iP*	**Pb**	**08 37 03.1**	**-1.2**
	baz=328						
YHNB				S	**Sb**	**08 37 13.2**	**-0.9**
	baz=328						
NSK	**Sanguang**	**0.73**	**325**	⇓*iP*	**Pb**	**08 37 03.3**	**-1.2**
	baz=327						
NSK				S	**Sb**	**08 37 13.9**	**-0.6**
	baz=327						
NWLT	**Wulai**	**0.76**	**338**	P	**Pb**	**08 37 04.0**	**-1.0**
	baz=340						
NWLT				S	**Sb**	**08 37 14.4**	**-0.8**
	baz=340						
ECBN	**Changbin**	**0.82**	**204**	P	**Pb**	**08 37 05.5**	**-0.4**
	baz=202						
ECBN				S	**Sn**	**08 37 18.4**	**-0.7**
	baz=202						
WHP	**Taichung City**	**0.82**	**285**	⇓*iP*	**Pb**	**08 37 04.9**	**-1.1**
	baz=285						
WHP				*i* S	**Sb**	**08 37 16.4**	**-0.6**
	baz=285						
YULB	**Yu-li**	**0.82**	**215**		**Pg**	**08 37 04.2**	**-1.6**
YULB	**Yu-li**	**0.82**	**215**	P	**Pg**	**08 37 04.4**	**-1.4**
YULB	**Yu-li**	**0.82**	**215**	*e*P	**Pg**	**08 37 04.0**	**-1.8**
	baz=214						
YULB				*e*S	**Sn**	**08 37 17.9**	**-1.3**
	baz=214						
WCS	**Beigang Elemen**	**0.83**	**269**	P	**Pb**	**08 37 05.0**	**-1.1**
	baz=269						
WCS				S	**Sb**	**08 37 16.0**	**-1.1**
	baz=269						
SSLB	**Suanglung**	**0.84**	**251**		**Pb**	**08 37 04.8**	**-1.5**
SSLB	**Suanglung**	**0.84**	**251**	P	**Pb**	**08 37 04.9**	**-1.3**
SSLB	**Suanglung**	**0.84**	**251**	⇑*iP*	**Pb**	**08 37 04.8**	**-1.5**
	baz=262						
SSLB				S	**Sb**	**08 37 16.4**	**-1.0**
	baz=262						
NFF	**Wufeng Townshi**	**0.85**	**311**	P	**Pb**	**08 37 05.4**	**-1.0**
	baz=304						
EYUL	**Yuli**	**0.85**	**213**	P	**Pb**	**08 37 06.1**	**-0.3**
	baz=231						
EYUL				*e*S	**Sn**	**08 37 21.1**	**+1.2**
	baz=231						
TWF1	**Yuli**	**0.86**	**214**	P	**Pg**	**08 37 04.6**	**-1.8**
	baz=212						
TWF1				S	**Sn**	**08 37 20.7**	**+0.7**
	baz=212						
SMLT	**Sun Moon Lake**	**0.86**	**258**	⇑*iP*	**Pb**	**08 37 05.3**	**-1.3**
	baz=257						
SMLT				S	**Sn**	**08 37 18.4**	**-1.8**
	baz=257						
TYC	**Yuchr**	**0.89**	**260**	P	**Pb**	**08 37 05.7**	**-1.4**
	baz=259						
TYC				S	**Sb**	**08 37 17.9**	**-1.0**
	baz=259						
TIPB	**Shuangxi**	**0.90**	**0**	*e*P	**Pn**	**08 37 07.1**	**-1.1**
	baz=11						
NHDH	**Xindian Distri**	**0.93**	**343**	*e*P	**Pn**	**08 37 07.4**	**-1.1**
	baz=345						
LIOB	**Emei**	**0.93**	**308**	P	**Pn**	**08 37 07.1**	**-1.5**
	baz=308						
NSTT	**Nanjuang**	**0.93**	**307**	⇓*iP*	**Pn**	**08 37 07.1**	**-1.5**
	baz=308						
NSTT				S	**Sb**	**08 37 19.6**	**-0.5**
	baz=308						
TWA	**Mucha**	**0.93**	**347**	P	**Pb**	**08 37 07.4**	**-0.5**
	baz=348						
TWA				S	**Sn**	**08 37 20.9**	**-0.9**
	baz=348						
TWB1	**Santiao Chiao**	**0.95**	**9**	P	**Pn**	**08 37 08.4**	**-0.4**
	baz=4.0						
TATO	**Taipei**	**0.95**	**342**		**Pn**	**08 37 07.7**	**-1.2**
TATO	**Taipei**	**0.95**	**342**	P	**Pn**	**08 37 08.0**	**-0.8**
CHKH	**Chenggong**	**0.95**	**204**	*e*P	**Pb**	**08 37 07.4**	**-0.8**
	baz=182						
CHKH				*e*S	**Sn**	**08 37 23.3**	**+0.9**
	baz=182						
WHYT	**Xinyi Township**	**0.96**	**247**	*e*P	**Pn**	**08 37 07.8**	**-1.1**
	baz=246						
FULB	**Fuli**	**0.99**	**209**	*e*P	**Pb**	**08 37 08.0**	**-0.8**
	baz=227						
FULB				*e*S	**Sn**	**08 37 25.2**	**+1.9**
	baz=227						
TWQ1	**Liyutan**	**0.99**	**286**	P	**Pn**	**08 37 08.6**	**-0.9**
	baz=298						
TWQ1				S	**Sn**	**08 37 24.0**	**+0.7**
	baz=298						
NWF	**Wu-fen Shan**	**1.00**	**358**	P	**Pn**	**08 37 08.9**	**-0.7**
	baz=338						
WFSB	**Wu-fen Shan**	**1.00**	**358**	P	**Pn**	**08 37 09.2**	**-0.3**
	baz=351						
WFSB				*e*S	**Sn**	**08 37 23.5**	**0.0**
	baz=351						
TAP	**Taipei**	**1.01**	**344**	P	**Pn**	**08 37 10.1**	**+0.5**
	baz=344						
TAP				S	**Sn**	**08 37 23.1**	**-0.6**
	baz=344						
SXI1	**Grass Mountain**	**1.02**	**3**	*e*P	**Pn**	**08 37 10.1**	**+0.1**
	baz=342						
SXI1				*e*S	**Sn**	**08 37 26.4**	**+2.3**
	baz=342						
NSY	**Sanyi**	**1.02**	**290**	P	**Pn**	**08 37 09.6**	**-0.3**
	baz=291						
NSY				S	**Sn**	**08 37 24.9**	**+0.8**
	baz=291						
WJS	**Zhushan**	**1.03**	**256**	P	**Pn**	**08 37 09.6**	**-0.3**
	baz=255						
NMLH	**Miaoli**	**1.05**	**297**	*e*P	**Pn**	**08 37 10.1**	**-0.1**
	baz=297						
NMLH				*e*S	**Sn**	**08 37 26.1**	**+1.4**
	baz=297						
SBCB	**Hsinchu**	**1.05**	**314**	*e*P	**Pn**	**08 37 10.6**	**+0.4**
	baz=315						
SBCB				*e*S	**Sn**	**08 37 24.4**	**-0.2**
	baz=315						
TCU	**Taichung**	**1.05**	**275**	*e*P	**Pn**	**08 37 10.5**	**+0.4**
	baz=276						
TCU				*e*S	**Sn**	**08 37 25.8**	**+1.1**
	baz=276						
CHKT	**Chengkung**	**1.05**	**203**	*e*P	**Pb**	**08 37 08.9**	**-0.9**
	baz=182						
CHKT				*e*S	**Sn**	**08 37 25.4**	**+0.6**
	baz=182						
WNT	**Mingjian**	**1.05**	**260**	P	**Pn**	**08 37 10.0**	**-0.3**
	baz=261						
WNT				S	**Sn**	**08 37 26.0**	**+1.1**
	baz=261						
HSN	**Hsinchu**	**1.06**	**314**	P	**Pn**	**08 37 10.9**	**+0.5**
	baz=315						
NCUH	**Zhongli**	**1.06**	**327**	*e*P	**Pn**	**08 37 11.0**	**+0.6**
	baz=328						
NCUH				*e*S	**Sn**	**08 37 27.7**	**+2.6**
	baz=328						
EHD	**Haiduan**	**1.07**	**212**	*e*P	**Pb**	**08 37 09.2**	**-1.0**
	baz=209						
TNOU	**National Taiwa**	**1.08**	**358**	*e*P	**Pn**	**08 37 11.1**	**+0.5**
	baz=339						
TNOU				*e*S	**Sn**	**08 37 27.6**	**+2.2**
	baz=339						
ALS	**Alishan**	**1.08**	**239**	⇑*iP*	**Pb**	**08 37 09.6**	**-1.0**
	baz=237						
TWS1	**Kuangyinshan**	**1.09**	**341**	P	**Pn**	**08 37 11.1**	**+0.3**
	baz=354						
TWS1				S	**Sn**	**08 37 28.4**	**+2.7**
	baz=354						
YM01	**YM01**	**1.10**	**348**	*e*P	**Pn**	**08 37 11.0**	**+0.1**
	baz=336						
YM01				*e*S	**Sn**	**08 37 27.4**	**+1.4**
	baz=336						
JYNG	**Yonagunijimaku**	**1.10**	**69**	P	**Pn**	**08 37 11.4**	**+0.6**
JYNG				S	**Sn**	**08 37 28.0**	**+2.1**
JYNG	**Yonagunijimaku**	**1.10**	**69**	A	A	08 37 11.4	
	comp=E,19nm,2.6s,comp=N,36nm,3.5s						
WDJ	**Dajia District**	**1.11**	**285**	*e*P	**Pn**	**08 37 12.0**	**+0.9**
	baz=295						
WDJ				*e*S	**Sn**	**08 37 28.4**	**+2.1**
	baz=295						
ECS	**Chishang**	**1.11**	**210**	*e*P	**Pn**	**08 37 11.2**	**+0.1**
	baz=208						
NTST	**Danshui**	**1.14**	**343**	*e*P	**Pn**	**08 37 12.5**	**+1.0**
	baz=355						
NTST				*e*S	**Sn**	**08 37 29.0**	**+2.0**
	baz=355						
ELDTW	**Lidau**	**1.14**	**220**	*e*P	**Pg**	**08 37 09.2**	**-2.7**
	baz=203						
ANP	**Anpu**	**1.15**	**346**	*e*P	**Pn**	**08 37 11.8**	**+0.2**
	baz=349						
CHN5	**Tsauling**	**1.15**	**246**	P	**Pn**	**08 37 11.3**	**-0.3**
	baz=230						
CHN5				S	**Sn**	**08 37 28.5**	**+1.3**
	baz=230						
WCHH	**Zhanghua**	**1.15**	**271**	*e*P	**Pn**	**08 37 12.3**	**+0.8**
	baz=271						
WCHH				*e*S	**Sn**	**08 37 30.3**	**+3.1**
	baz=271						
YOJ	**Yonaguni jima**	**1.16**	**70**	Pg	**Pn**	**08 37 12.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.16**	**70**	*e*P	**Pn**	**08 37 12.4**	**+0.7**
	baz=73						
YOJ	**Yonaguni jima**	**1.16**	**70**	P	**Pn**	**08 37 12.5**	**+0.9**
YOJ				*e*S	**Sn**	**08 37 29.2**	**+1.9**
YOJ	**Yonaguni jima**	**1.16**	**70**	A	A	08 37 12.5	
	comp=E,26nm,4.1s,comp=N,28nm,6.5s						
WGK	**Gukeng**	**1.21**	**252**	P	**Pn**	**08 37 13.0**	**+0.6**
	baz=253						
WGK				S	**Sn**	**08 37 31.4**	**+2.7**
	baz=253						
TWY	**Chenhua**	**1.22**	**351**	*e*P	**Pn**	**08 37 13.8**	**+1.3**
	baz=353						
WDLH	**Douliu**	**1.23**	**252**	*e*P	**Pn**	**08 37 13.0**	**+0.3**
	baz=249						
WCKO	**Fanlu**	**1.28**	**241**	*e*P	**Pg**	**08 37 13.9**	**-0.5**
	baz=238						
STYH	**Taoyuan**	**1.31**	**227**	*e*P	**Pn**	**08 37 12.8**	**-1.0**
	baz=209						
LONT	**Longtian**	**1.32**	**209**	*e*P	**Pn**	**08 37 11.5**	**-2.5**
	baz=207						
WRL	**Guolierlin Hig**	**1.33**	**263**	*e*P	**Pg**	**08 37 14.2**	**-1.2**
	baz=264						
WRL				*e*S	**Sn**	**08 37 34.5**	**+2.9**
	baz=264						
CHN4	**Tsaushan**	**1.33**	**238**	*e*P	**Pg**	**08 37 14.1**	**-1.3**
	baz=239						
CHN4				*e*S	**Sn**	**08 37 35.7**	**+4.0**
	baz=239						
TPUB	**Ta-pu**	**1.33**	**235**	Pn	**Pg**	**08 37 13.9**	**-1.5**
TPUB	**Ta-pu**	**1.33**	**235**	P	**Pg**	**08 37 14.3**	**-1.1**
TPUB	**Ta-pu**	**1.33**	**235**	P	**Pg**	**08 37 14.1**	**-1.3**
	baz=236						
TPUB				*e*S	**Sn**	**08 37 34.2**	**+2.5**
	baz=236						
CHN2	**Minshiung**	**1.34**	**247**	*e*P	**Pg**	**08 37 15.7**	**+0.1**
	baz=244						
WTK	**Tuku**	**1.36**	**254**	*e*P	**Pg**	**08 37 15.6**	**-0.4**
	baz=252						
WTP	**Ta-pu**	**1.38**	**234**	*e*P	**Pg**	**08 37 14.5**	**-1.8**
	baz=234						
WTP				*e*S	**Sn**	**08 37 36.8**	**+3.9**
	baz=234						
TWGBT	**Beinan**	**1.42**	**209**	*e*P	**Pn**	**08 37 12.8**	**-2.5**
	baz=207						
TWG	**Pinlang**	**1.42**	**209**		**Pn**	**08 37 12.5**	**-2.8**
TWG	**Pinlang**	**1.42**	**209**	*e*P	**Pn**	**08 37 12.8**	**-2.5**
	baz=207						
WTCT	**Ta-ch'eng**	**1.42**	**262**	*e*S	**Sg**	**08 37 36.5**	**+1.0**
	baz=263						
LDUT	**Ludao**	**1.43**	**193**	*e*P	**Pn**	**08 37 13.1**	**-2.2**
	baz=178						
TTN	**Taitung**	**1.45**	**205**	*e*P	**Pn**	**08 37 14.7**	**-1.0**
	baz=215						
TWK	**Hsinying**	**1.46**	**237**	P	**Pb**	**08 37 15.8**	**-1.0**
	baz=237						
TWK				S	**Sg**	**08 37 38.1**	**+1.4**
	baz=237						
CHN1	**Nanshi**	**1.47**	**234**	⇑*iP*	**Pg**	**08 37 16.6**	**-1.5**
	baz=234						
CHN1				S	**Sg**	**08 37 38.7**	**+1.4**
	baz=234						
SNST	**Tainan City**	**1.48**	**235**	P	**Pb**	**08 37 15.9**	**-1.2**
	baz=236						
SNST				S	**Sg**	**08 37 39.6**	**+2.3**
	baz=236						
SGST	**Jiashian**	**1.50**	**229**	P	**Pn**	**08 37 15.7**	**-0.7**
	baz=230						
SGST				S	**Sg**	**08 37 39.6**	**+1.5**
	baz=230						
SLGT	**Liugui**	**1.52**	**225**	*e*P	**Pb**	**08 37 16.8**	**-1.0**
	baz=227						
SLGT				*e*S	**Sg**	**08 37 39.8**	**+1.1**
	baz=227						
WSF	**Szhu**	**1.52**	**254**	*e*P	**Pg**	**08 37 17.6**	**-1.4**
	baz=256						
WSF				S	**Sg**	**08 37 40.4**	**+1.5**
	baz=256						
WSL	**Shuilin Townsh**	**1.56**	**250**	*e*P	**Pg**	**08 37 17.6**	**-2.0**
	baz=246						
PCYT	**Pengchaiyu**	**1.57**	**8**	*e*P	**Pg**	**08 37 18.6**	**-1.3**
	baz=10.0						
ICHU	**Yijhu**	**1.58**	**244**	*e*P	**Pg**	**08 37 18.3**	**-1.8**
	baz=240						
CHN8	**Yiju**	**1.64**	**244**	*e*P	**Pg**	**08 37 20.4**	**-0.8**
	baz=245						
CHN8				*e*S	**Sg**	**08 37 43.1**	**+0.5**
	baz=245						
ECL	**Taimali**	**1.67**	**209**	*e*P	**Pn**	**08 37 17.8**	**-0.9**
	baz=194						
SCST	**Cishan**	**1.69**	**226**	*e*P	**Pg**	**08 37 20.4**	**-1.9**
	baz=224						
SHHT	**Tainan City**	**1.71**	**233**	*e*P	**Pg**	**08 37 20.9**	**-1.6**
	baz=229						
TSMG	**Majia**	**1.73**	**219**	P	**Pb**	**08 37 20.1**	**-1.4**
	baz=217						
IRIF	**Iriomote-Funau**	**1.77**	**81**	*e*P	**Pb**	**08 37 21.4**	**-0.7**
IRIF				*e*S	**Sb**	**08 37 45.3**	**+1.2**
IRIF	**Iriomote-Funau**	**1.77**	**81**	A	A	08 37 21.4	
	comp=E,15nm,3.8s,comp=N,20nm,3.6s						
TWM1	**Shoushan**	**1.78**	**226**	*e*P	**Pg**	**08 37 22.8**	**-1.2**
	baz=224						
MASBT	**Mashibuluo**	**1.81**	**217**	*e*P	**Pn**	**08 37 20.2**	**-0.5**
	baz=217						
HATJ	**Hateruma jima**	**1.82**	**90**	*e*P	**Pb**	**08 37 22.7**	**-0.2**
HATJ	**Hateruma jima**	**1.82**	**90**	A	A	08 37 22.7	
	comp=E,39nm,3.0s,comp=N,35nm,3.0s						
TSCK	**Chigu Township**	**1.83**	**240**	*e*P	**Pb**	**08 37 21.5**	**-1.7**
	baz=235						
SNJT	**Kaohsiung City**	**1.89**	**226**	*e*P	**Pb**	**08 37 22.8**	**-1.3**
	baz=224						
EAST	**Anshuo**	**1.90**	**208**	*e*P	**Pn**	**08 37 20.3**	**-1.7**
	baz=197						
TAWH	**Dawu Township**	**1.92**	**207**	*e*P	**Pb**	**08 37 23.4**	**-1.3**
	baz=206						
JKRS	**Kuro-shima**	**2.01**	**85**	*e*P	**Pb**	**08 37 25.2**	**-1.0**
JKRS	**Kuro-shima**	**2.01**	**85**	A	A	08 37 25.2	
	comp=E,43nm,3.7s,comp=N,26nm,3.3s						
SCZT	**Fangliau**	**2.02**	**213**	*e*P	**Pn**	**08 37 24.1**	**+0.6**
	baz=199						
LYUB	**Lan-yu**	**2.07**	**186**	*e*P	**Pn**	**08 37 21.2**	**-3.0**
	baz=187						
SLIU	**Shizi**	**2.07**	**207**	*e*P	**Pn**	**08 37 23.5**	**-0.7**
	baz=206						
PHUB	**P'eng-hu**	**2.13**	**255**	*e*P	**Pn**	**08 37 24.6**	**-0.4**
	baz=255						
PHUB				*e*S	**Sb**	**08 37 53.8**	**-0.7**
	baz=255						
PNG	**Penghu**	**2.13**	**257**	*e*P	**Pn**	**08 37 24.8**	**-0.3**
	baz=256						
PNG				*e*S	**Sb**	**08 37 53.6**	**-1.0**
	baz=256						
WDGT	**Dungji**	**2.14**	**248**	*e*P	**Pn**	**08 37 25.1**	**0.0**
	baz=243						
JIJ	**Ishigaki jima**	**2.14**	**82**	P	**Pn**	**08 37 25.9**	**+0.7**
JIJ				*e*S	**Sn**	**08 37 53.7**	**+2.0**
TWK1	**Hengchun**	**2.31**	**204**	*e*P	**Pn**	**08 37 27.9**	**+0.3**
	baz=193						
TWKBT	**Hengchun**	**2.31**	**204**	*e*P	**Pn**	**08 37 26.8**	**-0.7**
	baz=193						
JISG	**Ishigakijimahi**	**2.33**	**77**	P	**Pn**	**08 37 28.7**	**+0.9**
JISG				*e*S	**Sb**	**08 37 59.3**	**-1.1**
JISG	**Ishigakijimahi**	**2.33**	**77**	A	A	08 37 28.7	
	comp=E,7.0nm,7.7s,comp=N,9.0nm,3.7s						
VWUC	**VWUC**	**2.34**	**294**	*e*P	**Pn**	**08 37 26.9**	**-1.1**
	baz=290						
VCHM	**Qimei**	**2.35**	**249**	*e*P	**Pn**	**08 37 28.1**	**0.0**
	baz=244						
PTMZ	**Houxiangcun**	**2.64**	**292**	*e*P	**Pn**	**08 37 31.6**	**-0.4**
	baz=288						
MATB	**Ma-tsu**	**2.68**	**321**	*e*P	**Pn**	**08 37 32.7**	**+0.1**
	baz=315						
JTJ

baz=273
KNMB Chin-men Tao 3.15 278 Pn **Pn 08 37 38.2 -0.9**
KNMB Chin-men Tao 3.15 278 *e*P **Pn 08 37 38.8 -0.4**
baz=275
XPSS Dashiqiu 3.21 333 *e*P **Pn 08 37 39.0 -0.9**
baz=331
MHZQ Yeshan 3.24 309 *e*P **Pn 08 37 40.2 0.0**
baz=303
JMJ2 Miyako jima3 3.27 77 *e*P **Pn 08 37 43.7 +3.0**
AXDP Jialang 3.60 284 *e*P **Pn 08 37 45.0 -0.3**
baz=281
ZPLA Ao Xicun 3.72 269 *e*P **Pn 08 37 46.5 -0.5**
baz=265
SXFK Yanhouchang 4.43 302 *e*P **Pn 08 37 57.1 +0.3**
baz=295
JOW Kunigami 6.45 63 Pn **Pn 08 38 21.5 -3.0**
comp=N,5.8nm,0.3s,baz=172,slow=21,SNR=5.6
JOW Sn **Sn 08 39 30.8 -7.2**
comp=N,1.8nm,0.3s,baz=317,slow=28,SNR=1.2
comp=N,17nm,0.3s
SSE Sheshan 7.02 356 Pn **Pn 08 38 31.1 -1.2**
SSE Sn **Sn 08 39 52.9 +0.9**
SSE smax smax
comp=N,54nm,1.5s
SSE smax smax
comp=N,72nm,1.0s
SSE LR LR
comp=N,970nm,6.7s
SSE LR LR
comp=N,970nm,6.4s
NJ2 Nanjing 8.37 342 *e*P **Pn 08 38 47.5 -3.3**
NJ2 S **Sn 08 40 25.6 +0.4**
NJ2 pmax pmax
comp=Z,16nm,0.6s
NJ2 smax smax
comp=N,37nm,0.1s
NJ2 smax smax
comp=E,31nm,0.1s
NJ2 LR LR
comp=N,2μm,5.2s
NJ2 LR LR
comp=E,2μm,5.6s
NJ2 LR LR
comp=Z,3μm,10.0s
CNSH ChangSha 8.97 299 ⇑P **Pn 08 39 01.2 +2.1**
CNSH S **Sn 08 40 47.2 +7.1**
CNSH smax smax
comp=Z,330nm,1.4s
CNSH smax smax
comp=Z,340nm,1.2s
CNSH LR LR
comp=Z,3μm,8.1s
CNSH LR LR
comp=Z,4μm,8.5s
CNSH LR LR
comp=Z,4μm,8.4s
WHN Wuhan 9.26 316 P **Pn 08 39 06.2 +3.3**
WHN S **Sn 08 40 45.4 -1.6**
WHN pmax pmax
comp=Z,68nm,1.2s
WHN LR LR
comp=Z,14μm,8.2s
WHN LR LR
comp=Z,10μm,7.6s
WHN LR LR
comp=Z,16μm,8.6s
TGY Tagaytay City 9.95 185 LR LR 08 43 33.1
comp=Z,319nm,18.3s,baz=358,slow=41
JNU Nakatsue 12.02 39 LR LR 08 45 04.3
comp=Z,848nm,19.1s,baz=210,slow=42
QIZ Qiongzhong 12.22 248 P **Pn 08 39 43.8 +0.2**
QIZ S **Sn 08 42 00.4 +0.7**
QIZ LR LR
comp=Z,1μm,11.6s
QIZ LR LR
comp=Z,750nm,13.1s
QIZ LR LR
comp=Z,980nm,9.2s
LYN LuoYang 13.24 324 ⇑P **P 08 40 05.5 -1.9**
LYN sP Pn 08 40 12.1 +15
LYN PP PnPn 08 40 15.7 +10
LYN S Sn 08 42 35.1 +10
LYN pmax pmax
comp=Z,13nm,0.6s
LYN pmax pmax
comp=Z,280nm,4.3s
LYN LR LR
comp=Z,8μm,7.8s
LYN LR LR
comp=Z,3μm,8.6s
LYN LR LR
comp=Z,8μm,8.5s
GYA Guiyang 13.92 283 P **Pn 08 40 08.4 +1.5**
GYA S **Sn 08 42 43.2 +1.8**
GYA pmax pmax
comp=Z,19nm,1.2s
GYA LR LR
comp=Z,1μm,8.3s
GYA LR LR
comp=Z,710nm,5.2s
GYA LR LR
comp=Z,5μm,9.6s
KSRS Korea Array 14.33 20 Pn **Pn 08 40 14.7 +2.3**
baz=231,slow=23
KSRS LR LR 08 46 11.3
comp=Z,228nm,20.9s,baz=195,slow=40
HNS HongShan 14.62 337 *e*P **P 08 40 21.3 -1.4**
HNS *e*S S 08 43 08.6 -8.7
HNS LR LR
comp=Z,2μm,12.3s
HNS LR LR
comp=Z,810nm,8.4s
HNS LR LR
comp=Z,2μm,10.4s
XAN Xi'an 15.02 314 P **Pn 08 40 18.3 -3.5**
XAN S **Sn 08 43 02.9 -5.1**
XAN pmax pmax
comp=Z,16nm,1.3s
XAN smax smax
comp=N,100nm,2.4s
XAN smax smax
comp=E,59nm,2.0s
XAN LR LR
comp=N,2μm,7.6s
XAN LR LR
comp=E,3μm,9.6s
XAN LR LR
comp=Z,5μm,8.8s
BJI Beijing 16.62 345 P **P 08 40 45.8 +0.9**
BJI pP **pwP 08 40 49.5 +1.4**
BJI S **Sn 08 43 51.5 +4.7**
BJI pmax pmax
comp=Z,5.0nm,1.4s
BJI LR LR
comp=Z,410nm,11.4s
BJI LR LR
comp=Z,230nm,11.2s
BJI LR LR
comp=Z,410nm,11.9s
DAV Davao City (W) 17.28 167 LR LR 08 47 42.2
comp=Z,194nm,18.1s,baz=358,slow=38
CD2 Chengdu 17.40 297 P **P 08 40 53.2 -0.5**
CD2 S **Sn 08 44 07.7 +1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 LR LR
comp=Z,2μm,5.2s
CD2 LR LR
comp=Z,2μm,6.7s
CD2 LR LR
comp=Z,3μm,7.8s
PZH PanZhiHua 18.32 282 P **Pn 08 41 02.0 -1.8**
PZH S **Sn 08 44 19.5 -8.8**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,230nm,5.1s
PZH LR LR
comp=Z,2μm,14.9s
PZH LR LR
comp=Z,2μm,13.0s
PZH LR LR
comp=Z,2μm,11.8s
MJAR Matsushiro Arr 18.80 45 LR LR 08 49 15.7
comp=Z,423nm,18.0s,baz=217,slow=40
HHC Hu-ho-hao-te 18.81 335 *e*P **Pn 08 41 12.6 +2.9**
HHC sP pwP 08 41 18.3 +3.8
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,230nm,6.3s
HHC LR LR
comp=Z,1μm,9.9s
HHC LR LR
comp=Z,550nm,9.2s
HHC LR LR
comp=Z,920nm,8.9s
BTO Baotou 19.23 332 *e*P **Pn 08 41 17.5 +2.7**
BTO pP **pwP 08 41 21.4 +2.2**
BTO sP sP 08 41 24.4 +5.7
BTO PP **PnPn 08 41 34.6 +6.8**
BTO pmax pmax
comp=Z,12nm,0.5s
BTO pmax pmax
comp=Z,510nm,5.8s
BTO LR LR
comp=Z,3μm,9.4s
BTO LR LR
comp=Z,1μm,11.2s
BTO LR LR
comp=Z,4μm,10.3s
LZH Lanzhou 19.59 312 *e*P **Pn 08 41 23.8 +4.6**
LZH sP sP 08 41 31.2 +8.5
LZH sS sS 08 45 02.8 -1.2
LZH SS **SnSn 08 45 21.1 +7.6**
LZH pmax pmax
comp=Z,8.0nm,1.3s
LZH pmax pmax
comp=Z,360nm,5.2s
LZH LR LR
comp=Z,710nm,12.7s
LZH LR LR
comp=Z,2μm,13.4s
LZH LR LR
comp=Z,2μm,13.4s
CN2 Changchun 19.91 8 P **Pn 08 41 23.2 +0.5**
CN2 S **S 08 45 02.9 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
XLT XiLinHaoTe 20.33 348 *e*P Pn 08 41 27.7 -0.1
XLT pP pwP 08 41 32.2 +3.1
XLT sP sP 08 41 34.9 +4.2
XLT sS Sn 08 45 18.5 +1.8
XLT pmax pmax
comp=Z,16nm,1.5s
XLT pmax pmax
comp=Z,180nm,5.9s
XLT LR LR
comp=Z,590nm,11.2s
XLT LR LR
comp=Z,670nm,14.0s
TNCH TengChong 21.21 277 P **P 08 41 36.6 +1.0**
TNCH sP pP 08 41 42.0 +3.0
TNCH pmax pmax
comp=Z,100nm,2.5s
TNCH LR LR
comp=Z,1μm,6.8s
TNCH LR LR
comp=Z,2μm,9.0s
TNCH LR LR
comp=Z,3μm,9.7s
USRK Ussuriysk Ar. 21.74 20 P **P 08 41 38.0 -2.8**
comp=Z,1.8nm,0.7s,baz=221,slow=12,SNR=2.3
USRK LR LR 08 51 05.6
comp=Z,255nm,18.6s,baz=193,slow=40
comp=Z,1.8nm,0.7s
CMAR Chiang Mai Arr 22.02 260 P **P 08 41 44.9 +0.8**
comp=Z,1.7nm,0.3s,baz=83,slow=7.4,SNR=2.3
CMAR LR LR 08 51 53.2
comp=Z,255nm,19.4s,baz=65,slow=41
comp=Z,1.7nm,0.3s
SBUM Sibu 23.41 205 P **P 08 41 57.9 -0.7**
GTA Gaotai 24.08 315 P **P 08 42 05.4 +0.3**
GTA S **S 08 46 28.0 +5.7**
GTA pmax pmax
comp=Z,3.0nm,1.5s
GTA LR LR
comp=Z,530nm,13.5s
GTA LR LR
comp=Z,890nm,12.4s
GTA LR LR
comp=Z,950nm,12.4s
GUMO Guam 24.14 111 LR LR 08 49 45.2
comp=Z,124nm,21.7s,baz=294,slow=32
GOMU GeErMu 26.20 304 P **P 08 42 27.1 +2.4**
GOMU pmax pmax
comp=Z,6.0nm,1.3s
GOMU LR LR
comp=Z,360nm,8.5s
GOMU LR LR
comp=Z,440nm,8.7s
GOMU LR LR
comp=Z,580nm,9.6s
ASAJ Asahikawa 26.25 35 LR LR 08 53 55.5
comp=Z,298nm,18.7s,baz=202,slow=39
KLR Kul'dur 26.30 15 P **P 08 42 23.7 -1.3**
comp=Z,1.4nm,0.8s,baz=83,slow=23,SNR=3.6
KLR LR LR 08 52 52.5
comp=Z,181nm,19.1s,baz=198,slow=37
comp=Z,1.4nm,0.8s
ULN Ulaanbaatar 26.49 337 P **P 08 42 27.4 +0.4**
ULN IAmb IAmb 08 42 28.5
comp=Z,11nm,1.1s
HEH HeiHe 26.50 8 *e*P **P 08 42 30.1 +3.3**
HEH pP **sP 08 42 34.6 +2.7**
HEH pmax pmax
comp=Z,10.0nm,1.3s
HEH pmax pmax
comp=Z,230nm,6.5s
HEH LR LR
comp=Z,580nm,16.3s
HEH LR LR
comp=Z,430nm,15.7s
HEH LR LR
comp=Z,1μm,15.8s
SONM Songino Array 26.70 336 P **P 08 42 29.0 +0.2**
SONM Songino Array 26.70 336 P **P 08 42 28.7 -0.1**
comp=Z,1.9nm,0.5s,baz=152,slow=6.7,SNR=10
SONM LR LR 08 53 56.2
comp=Z,424nm,18.5s,baz=151,slow=38
comp=Z,1.9nm,0.5s
SHL Shillong 27.19 279 P **P 08 42 33.4 -0.1**
SHL IAmb IAmb 08 43 15.0
comp=Z,16nm,1.3s
WMQ Urumqi 34.15 314 *e*P **P 08 43 36.9 +2.2**
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ LR LR
comp=Z,490nm,12.3s
WMQ LR LR
comp=Z,830nm,9.1s
WMQ LR LR
comp=Z,230nm,9.7s
YAK Yakutsk 38.32 6 LR LR 09 02 10.5
comp=Z,275nm,18.1s,baz=128,slow=40
MK31 Makanchi Array 38.82 316 P **P 08 44 14.6 +0.1**
MKAR Makanchi Array 38.82 316 P **P 08 44 14.9 +0.4**
MKAR Makanchi Array 38.82 316 P **P 08 44 14.4 0.0**
comp=Z,1.4nm,0.7s,baz=107,slow=12,SNR=8.7
MKAR LR LR 09 02 21.6
comp=Z,101nm,18.7s,baz=141,slow=39
comp=Z,1.4nm,0.7s
MAKZ Makanchi 39.03 316 P **P 08 44 16.5 +0.4**
ZAA0 Zalesovo Array 40.66 327 **P 08 44 28.9 -0.7**
ZALV Zalesovo Beam 40.66 327 P **P 08 44 29.0 -0.5**
ZALV Zalesovo Beam 40.66 327 P **P 08 44 28.8 -0.7**
comp=Z,5.0nm,0.9s,baz=115,slow=7.0,SNR=14
ZALV LR LR 09 01 57.1
comp=Z,130nm,18.1s,baz=118,slow=37
comp=Z,5.0nm,0.9s
KSH Kashi 41.45 303 P P 08 44 42.5 +6.1
KSH pmax pmax
comp=Z,2.0nm,0.8s
PMG Port Moresby 41.47 140 LR LR 09 01 35.4
comp=Z,35nm,20.6s,baz=299,slow=36
NRN Naryn 41.72 306 P **P 08 44 40.4 +1.5**
NRN IAmb IAmb 08 44 45.2
comp=Z,14nm,1.5s
H11N1 WAKE ISLAND Hy 41.91 87 T T 09 29 44.3
baz=281
H11N2 WAKE ISLAND Hy 41.92 87 T T 09 29 43.2
baz=281
H11N3 WAKE ISLAND Hy 41.93 87 T T 09 29 45.9
baz=281
H11S3 WAKE ISLAND Hy 42.04 89 T T 09 30 01.1
baz=281,slow=74,SNR=37
H11S1 WAKE ISLAND Hy 42.05 89 T T 09 29 59.6
baz=281,slow=74,SNR=19
H11S2 WAKE ISLAND Hy 42.06 89 T T 09 30 00.3
baz=281,SNR=14
KURK Kurchatov 42.55 320 P **P 08 44 43.7 -1.4**
KURBB Kurchatov Arra 42.57 320 P **P 08 44 43.4 -1.8**
comp=Z,1.2nm,0.6s,baz=116,slow=7.5,SNR=10
KURBB LR LR 09 04 40.0
comp=Z,107nm,19.4s,baz=178,slow=39
comp=Z,1.2nm,0.6s
PALK Pallekele 42.76 254 LR LR 09 03 33.4
comp=Z,68nm,19.8s,baz=162,slow=37
AAK Ala-Archa 43.04 307 LR LR 09 03 11.7
comp=Z,143nm,20.2s,baz=92,slow=37
COEN Coen 43.17 149 P **P 08 44 50.4 -0.1**
WB0 Warramunga Arr 45.26 163 P **P 08 45 05.9 -1.3**
WB0 IAmb IAmb 08 45 49.3
comp=Z,14nm,1.4s
WRA Warramunga Arr 45.41 163 P **P 08 45 06.7 -1.7**
comp=Z,0.8nm,0.5s,baz=345,slow=8.7,SNR=9.7
comp=Z,0.8nm,0.5s
WB2 Warramunga Arr 45.42 163 P **P 08 45 06.8 -1.7**
WB2 IAmb IAmb 08 45 36.2
comp=Z,7.4nm,1.1s
WR0 Warramunga Arr 45.48 163 P **P 08 45 07.3 -1.7**
WR0 IAmb IAmb 08 45 49.2
comp=Z,7.1nm,1.1s
KKAR Karatay Array 46.00 307 P **P 08 45 12.5 -0.4**
KBL Kabul 46.73 295 P **P 08 45 19.9 +0.9**
TIXI Tiksi 47.78 3 P **P 08 45 25.1 -1.2**
BVAR Borovoye Array 48.13 321 P **P 08 45 29.2 -0.1**
comp=Z,0.8nm,0.6s,baz=101,slow=12,SNR=5.1
comp=Z,0.8nm,0.6s
BRVK Borovoye 48.20 321 P **P 08 45 29.4 -0.5**
BRVK IAmb IAmb 08 45 47.4
comp=Z,4.3nm,1.0s
ASAR Alice Springs 48.88 165 P **P 08 45 34.6 -0.9**
comp=Z,1.1nm,1.0s,baz=350,slow=6.5,SNR=8.4
comp=Z,1.1nm,1.0s
NRIK Noril'sk 49.66 345 P **P 08 45 40.6 -0.3**
NRIK IAmb IAmb 08 45 42.0
comp=Z,14nm,1.5s
NRIK Noril'sk 49.66 345 P **P 08 45 39.5 -1.4**
comp=Z,1.0nm,0.3s,baz=151,slow=7.0,SNR=4.3
comp=Z,1.0nm,0.3s
CTA Charters Tower 49.93 149 LR LR 09 06 48.2
comp=Z,37nm,19.9s,baz=274,slow=36
MORW Morawa 53.12 186 P **P 08 46 06.2 -1.1**
ABKAR Akbulak array 53.94 314 P **P 08 46 12.4 -0.6**
ABKAR Akbulak array 53.94 314 P **P 08 46 12.9 -0.2**
ABKAR IAmb IAmb 08 46 15.5
comp=Z,8.4nm,1.3s
AKTO Aktyubinsk 55.26 316 LR LR 09 11 32.4
comp=Z,140nm,19.3s,baz=49,slow=38
GEYT Alibeck 55.35 300 P **P 08 46 24.2 +0.6**
GEYT Alibeck 55.35 300 P **P 08 46 23.4 -0.2**
comp=Z,1.7nm,0.7s,baz=53,slow=9.8,SNR=6.1
GEYT LR LR 09 12 43.7
comp=Z,132nm,18.8s,baz=92,slow=39
comp=Z,1.7nm,0.7s
ARU Arti 55.55 323 LR LR 09 10 28.9
comp=Z,215nm,19.5s,baz=90,slow=36
NWAO Narrogin (SRO) 56.85 185 LR LR 09 13 28.7
comp=Z,23nm,18.3s,baz=190,slow=39
WSAR Wadi Sarin 57.43 283 LR LR 09 13 37.1
comp=Z,72nm,19.5s,baz=91,slow=38
STKA Stephens Creek 58.76 160 P **P 08 46 45.8 -1.8**
comp=Z,0.8nm,0.6s,baz=349,slow=8.0,SNR=1.7
STKA LR LR 09 12 18.8
comp=Z,20nm,22.0s,baz=25,slow=36
comp=Z,0.8nm,0.6s
KIRV Kirov 60.64 325 LR LR 09 16 55.3
comp=Z,141nm,18.9s,baz=96,slow=40
DZM Mont Dzumac 63.13 133 LR LR 09 11 60.0
comp=Z,65nm,18.7s,baz=52,slow=34
GNI Garni 65.34 305 LR LR 09 18 46.6
comp=Z,56nm,20.9s,baz=67,slow=38
KBZ Khabaz 66.00 309 LR LR 09 19 09.3
comp=Z,59nm,18.4s,baz=56,slow=38
RAYN Ar Rayn 68.93 287 P **P 08 47 54.3 -0.7**
SPITS Spitsbergen Ar 69.72 348 LR LR 09 23 03.7
comp=Z,114nm,18.2s,baz=22,slow=40
FINES FINESS Array B 71.84 330 P **P 08 48 10.9 -1.1**
comp=Z,1.9nm,1.0s,baz=69,slow=7.6,SNR=1.3
comp=Z,1.9nm,1.0s
AKASG Malin Array Be 73.34 318 P **P 08 48 20.4 -0.7**
comp=Z,0.1nm,0.3s,baz=64,slow=3.7,SNR=5.6
comp=Z,0.1nm,0.3s
BR131 Keskin Array S 73.71 307 P **P 08 48 23.3 -0.4**
BR131 IAmb IAmb 08 48 24.6
comp=Z,6.9nm,1.2s
BRTR Keskin Array B 73.71 307 P **P 08 48 22.8 -1.0**
BRTR Keskin Array B 73.71 307 P **P 08 48 24.2 +0.5**
comp=Z,0.8nm,0.6s,baz=103,slow=3.1,SNR=2.4
comp=Z,0.8nm,0.6s
MMAI Mount Meron Ar 74.46 299 LR LR 09 29 17.5
comp=Z,39nm,18.2s,baz=7.5,slow=42
EIL Elat 75.92 296 LR LR 09 24 26.5
comp=Z,59nm,19.1s,baz=65,slow=38
HFS Hagfors 77.95 331 LR LR 09 28 44.2
comp=Z,228nm,19.6s,baz=70,slow=40
NOA NORSAR Array B 78.59 332 LR LR 09 26 48.6
comp=Z,153nm,18.3s,baz=20,slow=38
JMIC Jan Mayen 79.09 345 LR LR 09 28 27.9
comp=Z,81nm,18.2s,baz=320,slow=39
RPZ Rata Peaks 81.17 146 LR LR 09 25 50.4
comp=Z,38nm,18.3s,baz=2.5,slow=36
IDI Anoyia 81.78 305 LR LR 09 31 48.0
comp=Z,44nm,18.1s,baz=28,slow=40
YKA Yellowknife Ar 82.85 23 P **P 08 49 12.8 -0.9**
comp=Z,0.5nm,0.8s,baz=314,slow=5.4,SNR=4.2
comp=Z,0.5nm,0.8s
OPO Ambohidratompo 84.18 247 LR LR 09 22 47.7
comp=Z,75nm,21.8s,baz=298,slow=33
NEW Newport 90.77 35 LR LR 09 34 15.5
comp=Z,47nm,18.1s,baz=356,slow=38
FRB Frobisher Bay 92.10 5 LR LR 09 34 36.1
comp=Z,79nm,18.4s,baz=8.0,slow=38

IDC ***06*** *08:43:34.3± 1.0, 56.52N× 148.69W, h0km, mb3.8/11, mbtmp3.9/16, ML3.4/5, MS3.7/33, Error ellipse: s-maj=23.3km s-min=15.9km az=26.0*
NEIC ***06*** *08:43:36.7± 1.7, 56.48N± 0.07× 148.65W± 0.09, h20km± 8km, mb4.3/6, ML4.2/70, ML4.0(AEIC), Error ellipse: s-maj=10.8km s-min=7.2km az=171.0*
AEIC ***06*** *08:43:38.9± 1.8, 56.42N± 0.07× 148.59W± 0.09, h12km± 6km, Error ellipse: s-maj=10.8km s-min=7.2km az=172.0*
ISC 06 08:43:35.8±0.7,**56.56N**±0.06×**148.60W**±0.05,**h10**km,
n360,σ1**s21**/323**, mb4.0**/14**, MS3.7**/28**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.49**	**301**		**Pn**	**08 44 15.8**	**-0.6**
KDAK	**Kodiak Island**	**2.49**	**301**		**Sn**	**08 44 44.3**	**-2.6**
KDAK	**Kodiak Island**	**2.49**	**301**	Pn	**Pn**	**08 44 15.4**	**-1.0**
	8.5nm,0.3s,baz=121,slow=4.7,SNR=105						
KDAK				Sn	**Sn**	**08 44 44.0**	**-2.8**
	22nm,0.3s,baz=84,slow=7.5,SNR=15						
	20nm,0.3s						
OHAK	**Old Harbor**	**2.66**	**286**		Pn	08 44 17.1	-1.5
OHAK	**Old Harbor**	**2.66**	**286**		**Sn**	**08 44 47.1**	**-3.8**
OHAK	**Old Harbor**	**2.66**	**286**	IAML		08 44 51.5	
	comp=N,202nm,0.6s						
OHAK				IAML		08 44 54.2	
	comp=E,204nm,0.6s						
OHAK	**Old Harbor**	**2.66**	**286**	P	**Pn**	**08 44 17.4**	**-1.3**
OHAK	**Old Harbor**	**2.66**	**286**	P	**Pn**	**08 44 17.4**	**-1.3**
	baz=106						
SYI	**Shuyak Island**	**2.90**	**317**		**Pn**	**08 44 21.6**	**-0.4**
Q20K	**Shuyak Island**	**2.90**	**317**	P	**Pn**	**08 44 22.3**	**+0.3**
	baz=135						
Q20K				S	**Sn**	**08 44 55.9**	**-0.9**
	baz=135						
SII	**Sitkinak Islan**	**3.09**	**272**		**Pn**	**08 44 23.8**	**-0.9**
SII	**Sitkinak Islan**	**3.09**	**272**	P	**Pn**	**08 44 23.6**	**-1.1**
SII	**Sitkinak Islan**	**3.09**	**272**	P	**Pn**	**08 44 23.3**	**-1.3**
	baz=91						

SII S Sn 08 44 57.9 -3.8
baz=91
Q23K Middleton Isla 3.12 22 Pn Pn 08 44 25.2 +0.3
Q23K IAML 08 44 49.2
comp=E,418nm,2.2s
Q23K Middleton Isla 3.12 22 Sn 08 45 00.2 -1.9
Q23K Middleton Isla 3.12 22 P Pn 08 44 25.1 +0.3
baz=202
MID Middleton Isla 3.12 22 Pn 08 44 24.8 -0.1
MID Middleton Isla 3.12 22 Sn 08 45 00.1 -2.0
MID Middleton Isla 3.12 22 IAML 08 44 49.2
comp=E,430nm,2.2s
CNPM China Poot 3.29 336 Pn 08 44 27.2 -0.1
CNPM Sn 08 45 06.0 -0.5
CNPM China Poot 3.29 336 IAML 08 45 12.8
comp=E,342nm,0.7s
BRSE Bradley Lake S 3.39 341 Pn 08 44 28.5 -0.2
BRSE Sn 08 45 07.9 -1.0
BRSE Bradley Lake S 3.39 341 P Pn 08 44 29.5 +0.8
baz=160
BRSE S Sn 08 45 07.9 -1.0
baz=160
BRLK Bradley Lake 3.43 340 Pn 08 44 29.3 -0.1
HOM Homer 3.50 334 Pn Pn 08 44 30.7 +0.5
HOM Homer 3.50 334 P Pn 08 44 30.7 +0.5
baz=152
P23K Montague Islan 3.50 10 Pn 08 44 29.9 -0.4
P23K Sn 08 45 09.8 -1.9
P23K Montague Islan 3.50 10 P Pn 08 44 30.3 0.0
baz=190
P23K S Sn 08 45 09.8 -1.9
baz=190
SEW Seward 3.58 353 Pn 08 44 31.2 -0.2
SEW Sn 08 45 11.7 -2.0
SEW Seward 3.58 353 P Pn 08 44 31.5 +0.2
baz=172
SEW S Sn 08 45 11.7 -2.0
baz=172
Q19K Cape Douglas, 3.60 313 Pn 08 44 32.2 +0.5
Q19K Sn 08 45 15.1 +0.9
Q19K Cape Douglas, 3.60 313 IAML 08 45 42.6
comp=N,608nm,1.1s
Q19K Cape Douglas, 3.60 313 P Pn 08 44 32.2 +0.5
baz=131
KAHG Katmai Hook Gl 3.75 304 Pn 08 44 35.2 +1.5
AUCH Augustine Cone 3.82 319 Pn 08 44 35.3 +0.7
P19K Oil Pt 3.96 324 Pn 08 44 37.1 +0.5
P19K Oil Pt 3.96 324 IAML 08 45 27.9
comp=E,384nm,0.8s
P19K IAML 08 45 29.0
comp=N,478nm,0.6s
P19K Oil Pt 3.96 324 P Pn 08 44 37.1 +0.5
baz=141
O22K Cooper Landing 3.98 352 Pn 08 44 37.7 +0.9
O22K Cooper Landing 3.98 352 P Pn 08 44 37.3 +0.5
baz=171
ACHA Angle Creek He 4.00 297 Pn 08 44 38.5 +1.3
HIN Hinchinbrook I 4.00 15 Pn 08 44 37.4 +0.2
KAIM Kayak Island 4.03 31 Pn 08 44 37.2 -0.3
KAIM Kayak Island 4.03 31 IAML 08 45 27.7
comp=N,559nm,0.7s
KAIM IAML 08 45 32.2
comp=E,448nm,1.2s
KAIM Kayak Island 4.03 31 P Pn 08 44 37.2 -0.3
baz=213
KAHC Katmai Hardscr 4.04 304 Pn 08 44 38.6 +0.9
SLKM Skilak Lake 4.05 349 Pn 08 44 37.9 +0.1
IVE Iliamna Volcan 4.18 328 Pn 08 44 39.1 -0.5
EYAK Cordova Ski Ar 4.27 19 Pn 08 44 41.1 +0.4
EYAK Cordova Ski Ar 4.27 19 P Pn 08 44 41.2 +0.4
EYAK Cordova Ski Ar 4.27 19 P Pn 08 44 41.5 +0.7
baz=200
CNTC Contact Creek 4.30 296 Pn 08 44 41.8 +0.5
Q17K Contact Creek 4.30 296 P Pn 08 44 41.8 +0.5
baz=112
SUCK Suckling Hills 4.34 34 Pn 08 44 42.2 +0.4
SUCK IAML 08 45 38.3
comp=E,230nm,1.2s
SUCK IAML 08 45 39.4
comp=N,349nm,1.0s
RAGM Ragged Mountai 4.35 27 Pn 08 44 42.5 +0.5
NICHA Nichawak Mount 4.42 32 Pn 08 44 42.9 +0.1
HMT Hamilton 4.42 29 Pn 08 44 43.5 +0.6
CAPN Captain Cook N 4.43 344 Pn 08 44 38.7 -4.2
RED Redoubt Volcan 4.45 332 Pn 08 44 42.8 -0.5
RDSO Redoubt South 4.47 333 Pn 08 44 43.2 -0.5
RSO Redoubt South 4.48 333 Pn 08 44 43.9 0.0
RDT Redoubt 4.49 335 Pn 08 44 43.6 -0.3
GOAT Goat Mountain 4.51 25 Pn 08 44 45.0 +0.8
RDWB Redoubt West 4.52 332 Pn 08 44 43.8 -0.6
P18K Big Mountain, 4.53 312 Pn Pn 08 44 44.3 -0.1
P18K Big Mountain, 4.53 312 P Pn 08 44 44.2 -0.1
baz=127
DFR Drift River 4.57 334 Pn 08 44 45.0 -0.1
RC01 Rabbit Creek A 4.58 353 Pn Pn 08 44 46.0 +0.9
RC01 IAML 08 45 41.5
comp=E,311nm,1.1s
RC01 IAML 08 45 45.5
comp=N,214nm,0.7s
RC01 Rabbit Creek A 4.58 353 P Pn 08 44 45.8 +0.7
baz=172
NCT North Crescent 4.61 332 Pn 08 44 45.1 -0.5
BERG Berg Lake 4.62 32 Pn 08 44 46.0 +0.3
BERG IAML 08 45 50.6
comp=N,310nm,0.8s
GRIN Grindle Hills 4.65 34 Pn 08 44 46.5 +0.5
SNH Sunshine Point 4.73 37 Pn Pn 08 44 46.9 -0.2
SNH IAML 08 46 14.5
comp=E,161nm,1.4s
SNH IAML 08 46 45.6
comp=N,128nm,2.1s
O19K Port Alsworth 4.73 323 Pn 08 44 47.1 0.0
O19K Port Alsworth 4.73 323 IAML 08 45 49.4
comp=E,344nm,0.5s
O19K Port Alsworth 4.73 323 P Pn 08 44 47.3 +0.3
baz=139
CYK Cape Yakataga 4.78 40 Pn 08 44 47.9 +0.2
KHIT Khitrov Hills 4.80 34 Pn 08 44 48.1 0.0
O18K Koktuh Hills 4.81 316 Pn 08 44 48.2 0.0
O18K Koktuh Hills 4.81 316 P Pn 08 44 48.4 +0.2
baz=132
DIV Divide 4.81 17 Pn 08 44 48.7 +0.4
Q16K King Salmon 4.83 299 Pn 08 44 48.3 -0.1
Q16K King Salmon 4.83 299 P Pn 08 44 48.3 -0.1
baz=114
KNK Knik Glacier 4.87 1 Pn Pn 08 44 50.2 +1.1
KNK IAML 08 45 48.7
comp=E,174nm,0.7s
KNK IAML 08 45 53.0
comp=N,118nm,0.6s
KNK Knik Glacier 4.87 1 P Pn 08 44 49.8 +0.8
baz=180
BMRM Bremner River 4.88 24 Pn 08 44 49.7 +0.4
BMRM Bremner River 4.88 24 P Pn 08 44 49.7 +0.4
baz=206
WAX Waxell Ridge 4.93 35 Pn 08 44 50.4 +0.5
WAX IAML 08 45 48.7
comp=E,252nm,0.6s
WAX IAML 08 45 51.7
comp=N,284nm,0.6s
P17K Kvichak River 4.95 306 Pn 08 44 50.7 +0.6
P17K Kvichak River 4.95 306 P Pn 08 44 50.7 +0.6
baz=120
BARK Barkley Ridge 5.01 37 Pn 08 44 51.2 +0.2
N20K Mount Spurr 5.02 340 P Pn 08 44 51.5 +0.4
baz=157
SPCR Spurr Chakacha 5.02 340 Pn 08 44 51.2 +0.1
CKL Chakachamna La 5.04 339 Pn 08 44 51.9 +0.4
MESA MESA 5.04 41 Pn 08 44 51.6 0.0
MESA MESA 5.04 41 IAML 08 45 53.5
comp=N,126nm,0.9s
MESA IAML 08 45 58.1
comp=E,115nm,1.6s
MESA MESA 5.04 41 P Pn 08 44 51.6 0.0
baz=225
SUA Susitna One 5.04 348 Pn 08 44 51.5 0.0
SUA Susitna One 5.04 348 IAML 08 45 53.3
comp=E,106nm,0.9s
SUA IAML 08 45 55.7
comp=N,105nm,0.9s
SUA Susitna One 5.04 348 P Pn 08 44 52.0 +0.5
baz=166
PMR Palmer 5.05 357 Pn 08 44 52.2 +0.6
PMR Palmer 5.05 357 IAML 08 45 50.7
comp=E,171nm,0.7s
PMR IAML 08 45 57.8
comp=N,105nm,0.9s
PMR Palmer 5.05 357 P Pn 08 44 52.7 +1.2
PMR Palmer 5.05 357 P Pn 08 44 52.2 +0.6
baz=176
SPCG Spurr Capps Gl 5.07 341 Pn 08 44 52.5 +0.6
SPCP Crater Peak Br 5.07 340 Pn 08 44 52.6 +0.8
CRQM Cirque 5.08 32 Pn 08 44 52.3 +0.2
CRQM Cirque 5.08 32 IAML 08 45 49.8
comp=N,207nm,0.5s
CRQM IAML 08 45 51.5
comp=E,132nm,0.8s
CRQE Cirque 5.09 32 P Pn 08 44 52.3 +0.2
baz=215
KLU Klutina 5.13 14 Pn 08 44 53.8 +1.0
KLU IAML 08 45 56.1
comp=N,141nm,1.2s
KLU IAML 08 46 00.1
comp=E,159nm,1.1s
KLU Klutina 5.13 14 P Pn 08 44 53.5 +0.7
baz=196
ISLE Juniper Island 5.21 36 Pn 08 44 54.0 +0.2
ISLE Juniper Island 5.21 36 IAML 08 46 05.8
comp=N,128nm,0.9s
ISLE IAML 08 46 13.9
comp=E,127nm,1.1s
BAGL Bagley Icefiel 5.21 38 Pn 08 44 53.8 +0.2
STLK Strandline Lak 5.23 343 Pn 08 44 54.0 0.0
GHO Glory Hole Cre 5.23 358 Pn 08 44 54.7 +0.7
N19K Bonanza Creek 5.25 327 Pn 08 44 53.7 -0.7
N19K IAML 08 46 02.6
comp=N,91nm,1.4s
N19K IAML 08 46 03.0
comp=E,81nm,1.4s
N19K Bonanza Creek 5.25 327 P Pn 08 44 54.6 +0.2
baz=142
SML Sawmill 5.26 1 Pn 08 44 55.2 +0.7
SML Sawmill 5.26 1 IAML 08 45 58.1
comp=N,206nm,1.1s
SML IAML 08 46 04.3
comp=E,157nm,0.9s
SML Sawmill 5.26 1 P Pn 08 44 55.2 +0.7
baz=181
SPNN North Nagishla 5.27 338 Pn 08 44 55.2 +0.5
M23K Glacier View 5.27 5 Pn 08 44 55.2 +0.7
M23K Glacier View 5.27 5 P Pn 08 44 55.2 +0.7
baz=185
SCM Sheep Creek Mo 5.33 6 Pn 08 44 56.6 +1.3
SCM Sheep Creek Mo 5.33 6 P Pn 08 44 56.7 +1.3
baz=187
VRDI Verde Repeater 5.39 28 Pn 08 44 56.9 +0.6
KIAG Kiagna River 5.45 34 Pn 08 44 57.3 +0.2
SAMH Samovar Hills 5.45 46 Pn 08 44 57.4 +0.2
CHGN Chignik 5.46 271 Pn Pn 08 44 56.0 -1.0
N25K Chitina, Valde 5.46 20 Pn 08 44 58.3 +1.0
N25K Chitina, Valde 5.46 20 P Pn 08 44 58.2 +1.0
baz=203
GLB Gilahina Butte 5.48 25 Pn Pn 08 44 58.3 +0.8
TABL Table Mountain 5.51 42 Pn 08 44 58.3 +0.3
O17K Koliganek Bris 5.53 309 Pn 08 44 58.5 +0.5
O17K Koliganek Bris 5.53 309 P Pn 08 44 58.5 +0.5
baz=123
P16K Nushagak River 5.60 300 Pn 08 44 59.2 +0.1
P16K Nushagak River 5.60 300 P Pn 08 44 59.1 +0.1
baz=141
N18K Kilae Creek 5.62 320 Pn 08 44 58.8 -0.6
N18K Kilae Creek 5.62 320 P Pn 08 44 59.6 +0.2
baz=135
PTPK Patty Peak 5.62 32 Pn 08 45 00.1 +0.5
MCARA McCarthy VSAT 5.63 28 Pn 08 45 00.2 +0.8
MCARA McCarthy VSAT 5.63 28 P Pn 08 45 00.1 +0.7
baz=212
SKT Skwentna 5.64 346 Pn 08 45 01.2 +1.6
SKT Skwentna 5.64 346 P Pn 08 45 00.9 +1.3
baz=163
PCA Pinnacle 5.64 48 Pn 08 44 59.8 +0.1
PINM Pinnacle 5.64 48 P Pn 08 44 59.8 0.0
baz=233
M24K Tolsona, Glenn 5.70 12 Pn 08 45 01.9 +1.4
M24K Tolsona, Glenn 5.70 12 P Pn 08 45 01.9 +1.4
baz=193
BARN Barnard Glacie 5.77 36 Pn 08 45 02.2 +0.6
PNL Peninsula 5.79 54 Pn 08 45 01.7 +0.1
PNL Peninsula 5.79 54 P Pn 08 45 01.8 +0.1
PNL Peninsula 5.79 54 P Pn 08 45 01.7 +0.1
baz=240
CTG Chitna Glacier 5.81 38 P Pn 08 45 02.5 +0.4
baz=222
CTGM Chitina Glacie 5.81 38 Pn 08 45 02.2 +0.1
SVW2 Sparrevohn 5.82 324 Pn 08 45 01.7 -0.4
SVW2 Sparrevohn 5.82 324 P Pn 08 45 01.6 -0.4
M20K Styx River 5.82 338 Pn 08 45 02.7 +0.5
M20K Styx River 5.82 338 P Pn 08 45 02.7 +0.5
baz=155
BCPM Bancas Point 5.82 51 Pn 08 45 02.6 +0.5
LOGN Logan Glacier 5.82 40 Pn 08 45 01.6 -0.7
O16K Kokwok River B 5.88 305 Pn Pn 08 45 02.6 -0.4
N17K Nushagak Hills 6.00 315 Pn 08 45 04.6 +0.1
N17K Nushagak Hills 6.00 315 P Pn 08 45 04.6 +0.1
baz=129
WAT6 Susitna Watana 6.05 4 Pn 08 45 06.4 +1.0
WAT6 Susitna Watana 6.05 4 P Pn 08 45 06.4 +1.0
baz=184
S14K Fog Glacier 6.09 272 P Pn 08 45 04.8 -1.1
baz=84
VNFG Fog Glacier, M 6.09 272 Pn 08 45 04.8 -1.1
M19K Big River Lodg 6.13 333 Pn 08 45 06.2 -0.1
M19K Big River Lodg 6.13 333 P Pn 08 45 06.5 +0.2
baz=149
M18K Stony River 6.19 326 Pn 08 45 06.7 -0.5
M18K Stony River 6.19 326 P Pn 08 45 06.9 -0.3
baz=140
WAT7 Susitna Watana 6.29 359 Pn 08 45 09.0 +0.3
CHNA Chernabura Isl 6.45 259 P Pn 08 45 09.4 -1.4
baz=72
CNBA Chernabura Isl 6.46 259 Pn Pn 08 45 08.8 -2.1
O29M Mount Kennedy 6.46 50 Pn 08 45 11.6 +0.6
O29M Mount Kennedy 6.46 50 P Pn 08 45 11.6 +0.6
baz=238
L19K White Mountain 6.48 333 Pn 08 45 10.7 -0.4
L19K White Mountain 6.48 333 P Pn 08 45 10.9 -0.2
baz=148
M26K Nabesna, AK 6.51 24 Pn 08 45 12.1 +0.5
M26K Nabesna, AK 6.51 24 P Pn 08 45 12.1 +0.5
baz=208
L20K Farewell, AK 6.51 338 Pn 08 45 12.3 +0.7
L20K Farewell, AK 6.51 338 P Pn 08 45 12.3 +0.7
baz=154
P29M Windy Craggy 6.53 57 Pn 08 45 11.4 -0.4
P29M Windy Craggy 6.53 57 P Pn 08 45 11.5 -0.3
baz=245
O15K Ungalikthiuk R 6.54 298 Pn 08 45 12.4 +0.5
O15K Ungalikthiuk R 6.54 298 P Pn 08 45 12.5 +0.5
baz=110
DHY Denali Highway 6.56 5 Pn 08 45 14.4 +2.0
N16K Nishlik Lake 6.62 311 Pn 08 45 13.3 +0.3
N16K Nishlik Lake 6.62 311 P Pn 08 45 13.3 +0.3
baz=123
PAX Paxson 6.62 12 Pn 08 45 14.2 +1.1
PAX Paxson 6.62 12 P Pn 08 45 14.2 +1.1
baz=195
M17K Holitna River 6.66 320 Pn 08 45 13.8 +0.2
M17K Holitna River 6.66 320 P Pn 08 45 13.8 +0.2
baz=134
M27K Edge Creek, AK 6.74 28 Pn 08 45 16.9 +2.0
SDPT Sand Point 6.78 265 Pn Pn 08 45 14.5 -0.8
SDPT Sand Point 6.78 265 P Pn 08 45 14.2 -1.1
SDPT Sand Point 6.78 265 P Pn 08 45 14.1 -1.1
baz=76
MENT Mentasta 6.85 19 Pn 08 45 16.9 +0.6
S31K Pelican 6.85 73 Pn 08 45 13.7 -2.5
S31K Pelican 6.85 73 P Pn 08 45 14.6 -1.6
baz=262
RND Reindeer 6.87 359 Pn Pn 08 45 18.7 +2.2
TRF Thorofare Moun 6.96 354 Pn Pn 08 45 20.9 +3.0
M16K Timber Creek 7.00 314 Pn 08 45 18.4 +0.2
M16K Timber Creek 7.00 314 P Pn 08 45 18.4 +0.2
baz=126
L26K Log Cabin Wild 7.00 20 Pn 08 45 20.2 +1.9
L18K Granite Mounta 7.02 327 Pn 08 45 18.6 +0.1
L18K Granite Mounta 7.02 327 P Pn 08 45 19.0 +0.5
baz=141
N15K Kwethluk River 7.04 306 Pn 08 45 19.8 +0.9
N15K Kwethluk River 7.04 306 P Pn 08 45 19.5 +0.6
baz=117
CAST Castle Rocks 7.10 347 Pn Pn 08 45 22.2 +2.6
KTH Kantishna Hill 7.11 352 Pn Pn 08 45 21.8 +1.9
PLBC Pleasant Camp 7.12 61 Pn 08 45 20.2 +0.3
PLBC Pleasant Camp 7.12 61 P Pn 08 45 19.9 0.0
baz=250
HYT Haines Junctio 7.18 49 Pn Pn 08 45 22.2 +1.3
SIT Sitka 7.30 81 Pn Pn 08 45 19.3 -3.1
SIT Sitka 7.30 81 P Pn 08 45 19.7 -2.7
SIT Sitka 7.30 81 P Pn 08 45 19.3 -3.1
baz=270
K20K Telida 7.35 340 Pn 08 45 25.1 +2.0
L27K Beaver Creek, 7.36 25 Pn 08 45 23.5 +0.3
L27K Beaver Creek, 7.36 25 P Pn 08 45 23.5 +0.3
baz=210
BCAR Beaver Creek A 7.37 25 Pn Pn 08 45 25.0 +1.6
K24K Donnelly Dome 7.40 10 Pn 08 45 25.6 +1.8
K24K Donnelly Dome 7.40 10 P Pn 08 45 25.3 +1.5
baz=192
TTA Tatalina 7.40 333 Pn Pn 08 45 24.0 +0.1
TTA Tatalina 7.40 333 P Pn 08 45 24.6 +0.8
RIDG Independent Ri 7.44 13 Pn Pn 08 45 26.5 +2.1
L16K Owhat River 7.61 317 Pn 08 45 26.9 +0.3
L16K Owhat River 7.61 317 P Pn 08 45 27.0 +0.4
baz=129
SKAG Skagway 7.62 62 Pn 08 45 29.1 +2.4
SKAG Skagway 7.62 62 P Pn 08 45 26.4 -0.3
BESE Bessie Mountai 7.66 69 Pn 08 45 26.5 -0.9
S32K Killisnoo 7.71 77 Pn Pn 08 45 26.3 -1.6
O30N Mendenhall 7.76 52 Pn 08 45 29.9 +1.1
SCRK Sand Creek 7.78 15 Pn 08 45 30.1 +1.0
SCRK Sand Creek 7.78 15 P Pn 08 45 30.1 +1.0
baz=199
R32K Eaglecrest 7.79 71 Pn Pn 08 45 28.2 -0.9
M29M Somme Creek 7.83 37 Pn 08 45 30.7 +1.0
JIS Juneau Island 7.86 71 Pn Pn 08 45 29.4 -0.7
JIS Juneau Island 7.86 71 P Pn 08 45 29.4 -0.7
K17K Iditarod 7.88 326 Pn 08 45 30.1 -0.3
K17K Iditarod 7.88 326 P Pn 08 45 31.2 +0.8
baz=138
HDA Harding Lake 7.92 5 Pn 08 45 33.2 +2.4
J18K Innoko River 8.03 333 Pn Pn 08 45 32.9 +0.6
J20K Nowinta River 8.12 343 Pn 08 45 34.9 +1.3
CCB Clear Creek Bu 8.12 2 Pn 08 45 36.0 +2.3
K27K Chicken 8.16 21 Pn 08 45 34.7 +0.6
K27K Chicken 8.16 21 P Pn 08 45 34.7 +0.6
baz=206
J19K Poorman 8.23 338 Pn 08 45 35.4 +0.3
J25K Salcha River, 8.23 10 Pn 08 45 36.3 +1.1
N31M Braeburn, Yuko 8.24 48 Pn 08 45 36.3 +0.9
N31M Braeburn, Yuko 8.24 48 P Pn 08 45 36.3 +0.9
baz=238
WHY Whitehorse 8.25 54 Pn Pn 08 45 36.9 +1.4
IL31 8.28 5 Pn 08 45 37.2 +1.4
ILAR Eielson Array 8.28 5 Pn 08 45 38.0 +2.2
ILAR Eielson Array 8.28 5 Pn Pn 08 45 34.5 -1.3
comp=E,0.4nm,0.3s,baz=189,slow=13,SNR=18
ILAR Sn Sn 08 47 05.4 -3.9
comp=E,0.7nm,0.3s,baz=184,slow=15,SNR=4.9
ILAR LR LR 08 48 54.4
comp=E,270nm,18.9s,baz=212,slow=38
comp=E,1.2nm,0.5s
J26L Joseph Creek 8.34 15 Pn 08 45 37.6 +0.9
J26L Joseph Creek 8.34 15 P Pn 08 45 37.7 +0.9
baz=199
COLA College 8.35 2 P Pn 08 45 39.4 +2.7
L29M L29M 8.41 34 Pn Pn 08 45 39.0 +1.3
MDM Murphy Dome 8.43 1 Pn Pn 08 45 39.9 +2.0
P32M Atlin 8.45 63 Pn 08 45 38.0 -0.2
P32M Atlin 8.45 63 P Pn 08 45 38.0 -0.2
baz=254
M30M Minto, Yukon 8.49 40 Pn 08 45 39.2 +0.5
M30M Minto, Yukon 8.49 40 P Pn 08 45 39.2 +0.5
baz=229
U33K Whale Pass 8.61 87 Pn Pn 08 45 37.2 -3.1
I23K Minto, Yukon-K 8.62 358 Pn 08 45 42.3 +1.8
L14K Kuka Creek 8.71 309 Pn Pn 08 45 41.8 +0.2
DAWY Dawson 8.79 27 Pn Pn 08 45 44.3 +1.4
J16K Anvik River 9.03 323 Pn 08 45 45.4 -0.7
Q32M Nakina River 9.05 68 Pn Pn 08 45 46.8 +0.3
P33M Teslin, Yukon 9.05 60 Pn 08 45 46.6 +0.2
P33M Teslin, Yukon 9.05 60 P Pn 08 45 46.6 +0.2
baz=252
K29M Barlow Dome 9.14 32 Pn 08 45 48.7 +1.0
I26K Coal Creek Min 9.16 14 Pn 08 45 49.0 +1.2
M31M Drury Creek, Y 9.18 46 Pn 08 45 49.3 +1.1
M31M Drury Creek, Y 9.18 46 P Pn 08 45 49.3 +1.1
baz=237
N32M Quiet Lake 9.25 54 Pn 08 45 50.8 +1.6
H24K Noodor Dome 9.32 2 Pn 08 45 52.4 +2.4
H21K Melozitna Rive 9.35 349 Pn 08 45 51.4 +1.0
J29N Klondike Camp 9.41 29 Pn Pn 08 45 52.7 +1.3
S34M Telegraph Cree 9.56 75 Pn Pn 08 45 54.9 +1.5
FARO Faro, Yukon 9.62 48 Pn Pn 08 45 56.2 +2.0
I27K Kandik River 9.67 17 Pn 08 45 56.3 +1.3
I27K Kandik River 9.67 17 P Pn 08 45 56.3 +1.3
baz=203
IMAR Indian Mountai 9.77 347 Pn 08 45 57.8 +1.6
R33M Jennings River 9.78 66 Pn 08 45 57.0 +0.5
H18K Honhosa River 9.83 335 Pn 08 45 56.6 -0.5
H18K Honhosa River 9.83 335 P Pn 08 45 57.0 -0.1
baz=147
I28M Miner Creek 9.85 22 Pn Pn 08 45 59.7 +2.4
I28M Miner Creek 9.85 22 P Pn 08 45 59.0 +1.7
baz=209
DIB Dawson Inlet, 9.88 103 Pn Pn 08 46 01.9 +4.3
J30M Hart River 10.03 32 Pn Pn 08 46 02.6 +2.7
T35M Bob Quinn 10.08 80 Pn Pn 08 46 02.2 +1.8
DLBC Dease Lake 10.16 72 Pn Pn 08 46 02.7 +1.0
DLBC Dease Lake 10.16 72 Pn Pn 08 46 01.4 -0.3
comp=E,0.4nm,0.3s,baz=284,slow=5.7,SNR=13
DLBC Sn Sn 08 47 49.3 -6.3
comp=E,0.2nm,0.3s,baz=254,slow=9.7,SNR=1.7
DLBC LR LR 08 49 21.6
comp=E,271nm,18.9s,baz=278,slow=34
comp=E,1.3nm,0.2s
FYU Fort Yukon 10.17 8 Pn Pn 08 46 02.6 +1.0
I30M Mount Dempster 10.51 29 Pn Pn 08 46 08.9 +2.5
F21K Alatna River 10.94 350 Pn 08 46 13.4 +1.1
F20K Avaraart Lake 11.04 345 Pn 08 46 15.2 +1.7
BMAR Burnt Mountain 11.07 8 Pn Pn 08 46 15.2 +1.2
EPYK Eagle Plains 11.33 25 Pn Pn 08 46 20.0 +2.3
ANM Nome 11.47 321 Pn Pn 08 46 20.2 +0.7
F17K Baldwin Pennin 11.58 334 Pn 08 46 20.8 0.0
E25K Arctic Village 11.69 6 Pn Pn 08 46 24.9 +2.4
F28M Old Crow 11.80 17 Pn Pn 08 46 26.8 +2.8
G30M tAoh Zrail Nji 11.95 24 Pn 08 46 27.8 +1.8
TOLK Toolik Lake Re 12.13 358 Pn 08 46 31.0 +2.4
BBB Bella Bella 12.70 102 Sn Sn 08 48 46.3 -11
comp=E,0.1nm,0.3s,baz=135,slow=15,SNR=2.3
BBB LR LR 08 50 11.3
comp=E,466nm,20.0s,baz=302,slow=31
F31M Tsiigehtchic 12.90 26 Pn Pn 08 46 41.4 +2.5
INK Inuvik 13.63 24 Pn Pn 08 46 51.3 +2.4
INK Inuvik 13.63 24 Pn Pn 08 46 49.6 +0.7
comp=E,0.1nm,0.3s,baz=205,slow=14,SNR=24
INK LR LR 08 52 37.0
comp=E,224nm,18.1s,baz=186,slow=40
comp=E,8.0nm,0.9s
C16K Lisburne Hills 14.01 334 Pn 08 46 52.9 -1.1
C36M Paulatuk 16.81 31 P Pn 08 47 33.7 +2.9
C36M IAmb IAmb 08 47 43.4
comp=Z,15nm,1.1s
HILA High Level 16.98 70 Pn 08 47 34.6 +1.5
YKA Yellowknife Ar 18.07 57 P Pn 08 47 47.0 +0.4
comp=Z,0.1nm,0.3s,baz=264,slow=11,SNR=29
YKA LR LR 08 54 35.1
comp=Z,229nm,18.3s,baz=306,slow=36
comp=Z,7.0nm,1.0s
A36M Sachs Harbour 18.27 23 P Pn 08 47 50.1 +1.1
A36M IAmb IAmb 08 47 54.6
comp=Z,19nm,0.8s
NEW Newport 20.76 100 LR LR 08 55 05.6
comp=Z,186nm,21.8s,baz=300,slow=33
HUMO Hull Mountain 21.54 120 P P 08 48 23.9 -1.1
HUMO IAmb IAmb 08 48 28.1
comp=Z,9.8nm,1.2s
SHEM Shemya Is, Ala 21.74 276 LR LR 08 56 22.4
comp=Z,81nm,21.7s,baz=90,slow=35
YBH Yreka Blue Hor 22.32 121 P P 08 48 34.2 +0.7
comp=Z,1.5nm,1.0s,baz=252,slow=22,SNR=2.0
YBH LR LR 08 55 12.1
comp=Z,249nm,18.1s,baz=336,slow=31
comp=Z,1.5nm,1.0s
BILL Bilibino 23.29 318 P P 08 48 43.9 +0.6

BILL					IAmb	IAmb	08 48 47.6	
	comp=Z,36nm,1.5s							
WVOR	**Wild Horse Val**	**23.80**	**114**	P		**P**	**08 48 50.6**	**+1.9**
ELK	**Elko**	**26.77**	**112**	LR		LR	08 57 57.6	
	comp=Z,150nm,21.8s,baz=316,slow=32							
NVAR	**Mina Array Bea**	**27.01**	**119**	P		**P**	**08 49 19.5**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=324,slow=7.3,SNR=4.5							
NVAR				LR		LR	08 58 01.6	
	comp=Z,196nm,19.2s,baz=272,slow=32							
	comp=Z,0.2nm,0.3s							
RES	**Resolute Bay**	**27.14**	**28**	LR		LR	09 00 50.0	
	comp=Z,179nm,18.5s,baz=354,slow=38							
PDAR	**Pinedale Array**	**28.35**	**102**	LR		LR	08 59 00.8	
	comp=Z,64nm,20.1s,baz=9.5,slow=33							
MA2	**Magadan**	**31.24**	**301**	LR		LR	09 03 05.9	
	comp=Z,281nm,19.6s,baz=100,slow=38							
PFO	**Pinyon Flats O**	**31.78**	**123**	LR		LR	09 00 30.5	
	comp=Z,207nm,19.3s,baz=326,slow=32							
ANMO	**Albuquerque**	**35.70**	**109**	LR		LR	09 04 39.7	
	comp=Z,72nm,19.2s,baz=52,slow=35							
FRB	**Frobisher Bay**	**37.96**	**45**	LR		LR	09 06 43.8	
	comp=Z,292nm,18.1s,baz=340,slow=36							
TXAR	**Lajitas Array**	**41.57**	**112**	LR		LR	09 07 48.5	
	comp=Z,49nm,19.0s,baz=328,slow=35							
SFJD	**Kangerlussuaq**	**42.65**	**35**	LR		LR	09 09 15.3	
	comp=Z,179nm,18.1s,baz=339,slow=36							
LPIG	**La Paz**	**42.67**	**123**	LR		LR	09 05 48.1	
	comp=Z,75nm,21.6s,baz=336,slow=31							
SCHQ	**Schefferville**	**43.52**	**56**	LR		LR	09 10 04.1	
	comp=Z,119nm,18.1s,baz=2.5,slow=36							
ASAJ	**Asahikawa**	**43.79**	**284**	LR		LR	09 10 50.2	
	comp=Z,55nm,18.8s,baz=118,slow=37							
KLR	**Kul'dur**	**46.05**	**296**	P		**P**	**08 51 59.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=18,slow=12,SNR=2.5							
KLR				LR		LR	09 11 41.8	
	comp=Z,73nm,21.5s,baz=54,slow=37							
	comp=Z,0.7nm,0.6s							
NRIK	**Noril'sk**	**48.00**	**337**	P		**P**	**08 52 13.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=9.9,slow=6.0,SNR=2.3							
	comp=Z,0.8nm,0.3s							
USRK	**Ussuriysk Ar.**	**49.33**	**291**	LR		LR	09 15 19.9	
	comp=Z,57nm,18.5s,baz=39,slow=39							
H11N2	**WAKE ISLAND Hy**	**49.35**	**240**	T		T	09 46 02.6	
	baz=30,slow=76,SNR=17							
H11N3	**WAKE ISLAND Hy**	**49.36**	**240**	T		T	09 46 10.7	
	baz=30,slow=76,SNR=12							
H11N1	**WAKE ISLAND Hy**	**49.37**	**240**	T		T	09 46 10.4	
	baz=29,slow=76,SNR=28							
H11S1	**WAKE ISLAND Hy**	**50.49**	**240**	T		T	09 47 45.5	
	baz=29,slow=76,SNR=12							
H11S2	**WAKE ISLAND Hy**	**50.51**	**240**	T		T	09 47 46.4	
	baz=29,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	**50.51**	**240**	T		T	09 47 46.7	
	baz=29,slow=76,SNR=11							
CMIG	**Matias Romero**	**56.18**	**112**	LR		LR	09 16 30.9	
	comp=Z,79nm,19.4s,baz=336,slow=35							
KSRS	**Korea Array**	**56.34**	**288**	LR		LR	09 16 34.2	
	comp=Z,18nm,20.5s,baz=110,slow=35							
TEIG	**Tepich**	**57.07**	**104**	LR		LR	09 18 38.1	
	comp=Z,326nm,19.6s,baz=220,slow=37							
JNU	**Nakatsue**	**58.04**	**283**	LR		LR	09 19 44.7	
	comp=Z,23nm,19.7s,baz=25,slow=37							
SONM	**Songino Array**	**58.75**	**310**	P		**P**	**08 53 34.0**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=69,slow=7.9,SNR=1.6							
	comp=Z,1.1nm,0.6s							
ZALV	**Zalesovo Beam**	**61.53**	**327**	P		**P**	**08 53 52.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=46,slow=8.3,SNR=2.9							
ZALV				LR		LR	09 22 54.2	
	comp=Z,52nm,18.5s,baz=62,slow=38							
	comp=Z,0.6nm,0.5s							
FINES	**FINESS Array B**	**62.26**	**3**	P		**P**	**08 53 56.1**	**-1.1**
	comp=Z,3.9nm,1.0s,baz=12,slow=7.1,SNR=2.4							
	comp=Z,3.9nm,1.0s							
ARU	**Arti**	**65.24**	**344**	P		**P**	**08 54 18.4**	**+1.4**
	comp=Z,7.8nm,0.2s,baz=286,slow=17,SNR=1.5							
BVAR	**Borovoye Array**	**66.19**	**335**	P		**P**	**08 54 23.3**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=0.0,slow=5.9,SNR=2.3							
BVAR				LR		LR	09 29 44.8	
	comp=Z,54nm,18.1s,baz=13,slow=42							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**66.30**	**329**	P		**P**	**08 54 23.1**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=22,slow=6.5,SNR=2.2							
	comp=Z,0.3nm,0.6s							
JTS	**Las Juntas de**	**67.06**	**107**	LR		LR	09 25 50.7	
	comp=Z,31nm,19.4s,baz=293,slow=38							
AKTO	**Aktyubinsk**	**71.11**	**342**	P		**P**	**08 54 52.6**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=16,slow=8.5,SNR=1.7							
	comp=Z,0.8nm,0.8s							
AAK	**Ala-Archa**	**74.71**	**328**	LR		LR	09 31 43.4	
	comp=Z,59nm,20.0s,baz=18,slow=39							
DAV	**Davao City (W)**	**81.85**	**270**	LR		LR	09 26 43.0	
	comp=Z,37nm,20.8s,baz=108,slow=32							
CMAR	**Chiang Mai Arr**	**86.49**	**298**	P		**P**	**08 56 18.2**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=35,slow=3.3,SNR=1.7							
CMAR				LR		LR	09 39 23.1	
	comp=Z,28nm,18.4s,baz=65,slow=39							
	comp=Z,1.5nm,0.3s							

IDC 06 08:51:38.3±2.6, 7.39S×131.28E, h0km, mb3.6/1, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=129.0km s-min=34.7km az=71.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.82**	**167**	Pn	Pn	08 54 42.0	-0.1
	0.1nm,0.3s,baz=350,slow=13,SNR=2.8						
WRA				Sn	Sn	08 56 56.7	-8.9
	0.3nm,0.3s,baz=351,slow=24,SNR=5.8						
	1.9nm,1.2s						
ASAR	**Alice Springs**	**16.38**	**171**	Pn	Pn	08 55 29.9	+0.1
	0.1nm,0.3s,baz=359,slow=9.8,SNR=5.2						
ASAR				Sn	Sn	08 58 19.8	-12
	baz=359,slow=29,SNR=0.9						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**69.25**	**326**	P	P	09 02 47.3	0.0
	0.4nm,0.5s,baz=126,slow=7.3,SNR=2.9						
	0.4nm,0.5s						

*SOME **06** 08:51:40.9, 43.40N×69.34E*
NNC 06 08:51:44.8±1.9, 43.71N×69.99E, h0km, mb3.7, mpv3.1, 3C-3D, Error ellipse: s-maj=10.3km s-min=5.9km az=134.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.72**	**148**	⇓P	Pg	08 51 58.1	-0.4
	1.0nm,0.3s,baz=323,slow=18,SNR=80						
KK31				⇑S	Sg	08 52 09.0	+1.1
	28nm,0.6s,baz=333,slow=33,SNR=39						
MRKS	**Merke**	**2.56**	**111**	Pg	Pb	08 52 32.3	+0.7
	5.3nm,0.4s						
MRKS				Lg	Lg	08 53 09.8	
	10nm,0.5s						
BTLS	**Baital**	**3.20**	**64**	Pg	Pg	08 52 46.0	-0.1
	11nm,0.4s						
BTLS				Lg	Lg	08 53 33.0	
	6.9nm,0.7s						
CHMS	**Chumysh**	**3.55**	**100**	⇑Pg	Pb	08 52 50.0	+1.5
	3.5nm,0.5s						
CHMS				⇑Lg	Lg	08 53 35.6	
	3.1nm,0.8s						
KRBS	**Karabastau**	**4.12**	**88**	Pg	Pg	08 53 01.5	-2.3
	4.3nm,0.8s						
KRBS				Lg	Lg	08 53 59.5	
	3.8nm,0.5s						
TKM2	**Tokmak 2**	**4.17**	**99**	⇓Pg	Pb	08 53 00.2	+1.0
	1.6nm,0.5s						
TKM2				⇓Lg	Lg	08 53 59.7	
	2.2nm,0.8s						
DGS	**Degeres**	**4.24**	**94**	Pg	Pg	08 53 03.5	-2.4
	3.0nm,0.5s						
DGS				Lg	Lg	08 54 02.9	
	7.4nm,0.4s						
KST	**Kastek**	**4.41**	**97**	Pg	Pg	08 53 06.5	-2.8
	3.4nm,0.6s						
KST				Lg	Lg	08 54 08.0	
	11nm,0.6s						
KUU	**Kurty**	**4.60**	**86**	Pg	Pg	08 53 10.0	-3.0
	2.7nm,0.6s						
KUU				Lg	Lg	08 54 14.3	
	7.6nm,0.5s						
OTUK	**Ortayu**	**4.82**	**19**	Pg	Pb	08 53 09.2	-0.9
	0.5nm,0.5s						
OTUK				Lg	Lg	08 54 12.6	
	1.0nm,0.4s						
KTBS	**Karatobe**	**4.85**	**88**	Pg	Pg	08 53 14.8	-3.0
	4.3nm,0.4s						
KTBS				Lg	Lg	08 54 22.3	
TNSS	**Tian-Shan**	**5.12**	**95**	Pg	Pg	08 53 21.0	-1.8
	1.8nm,0.4s						
TNSS				Lg	Lg	08 54 33.1	
	2.6nm,0.7s						

IDC 06 08:54:11.6±3.5, 4.29S×152.93E, h0km, mb3.1/2, mbtmp3.1/2, Error ellipse: s-maj=159.9km s-min=49.2km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**228**	P	P	08 59 27.8	+0.7
	0.2nm,0.4s,baz=55,slow=10,SNR=1.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**26.61**	**222**	P	P	08 59 52.6	+0.5
	0.2nm,0.7s,baz=55,slow=8.5,SNR=1.3						
	0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.27**	**289**	PKPbc	PKPbc	09 14 04.8	-1.1
	0.3nm,0.3s,baz=69,slow=1.8,SNR=5.8						

IDC 06 08:54:58.0±2.5, 54.23N×86.13E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=19.7km s-min=12.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.82**	**251**	I	I	08 59 50.0	
	0.1nm,0.6s,baz=68,slow=341,SNR=12						
ZALV	**Zalesovo Beam**	**0.82**	**251**	Pg	Pg	08 55 12.1	-1.6
	1.3nm,0.3s,baz=70,slow=17,SNR=12						
ZALV				Lg	Lg	08 55 25.7	
	5.2nm,0.3s,baz=74,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**5.88**	**235**	Pn	Pn	08 56 27.6	+1.3
	0.2nm,0.3s,baz=51,slow=13,SNR=14						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**7.83**	**200**	Pn	Pn	08 56 53.8	+0.7
	0.2nm,0.3s,baz=25,slow=14,SNR=5.8						
	0.3nm,0.3s						

IDC 06 08:55:22.8±3.8, 53.64N×87.88E, h0km, mbtmp2.9/2, ML2.8/2, Error ellipse: s-maj=36.4km s-min=19.0km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**281**	I	I	09 05 47.6	
	0.1nm,0.9s,baz=98,slow=340,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.84**	**281**	Pg	Pb	08 55 56.6	-0.7
	baz=99,slow=16						
ZALV				Lg	Lg	08 56 21.1	
	3.3nm,0.3s,baz=98,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn	Pn	08 57 00.1	+0.5
	0.1nm,0.3s,baz=63,slow=14,SNR=3.5						
KURBB				Lg	Lg	08 58 44.3	
	baz=58,slow=28,SNR=1.9						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.73**	**210**	Pn	Pn	08 57 17.7	+1.1
	0.3nm,0.3s,baz=26,slow=13,SNR=2.5						
MKAR				Lg	Lg	08 59 22.3	
	0.1nm,0.3s,baz=33,slow=31,SNR=2.4						
	0.4nm,0.4s						

IDC 06 08:59:18.0±3.2, 53.58N×87.22E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=31.3km s-min=17.7km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.47**	**285**	I	I	09 07 28.3	
	baz=104,slow=339,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.47**	**285**	Pg	Pn	08 59 44.5	-1.3
	0.9nm,0.3s,baz=107,slow=13,SNR=14						
ZALV				Lg	Lg	09 00 05.2	
	1.5nm,0.3s,baz=103,slow=24,SNR=7.5						
KURBB	**Kurchatov Arra**	**6.12**	**245**	Pn	Pn	09 00 49.9	+0.3
	baz=55,slow=13,SNR=1.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.49**	**207**	Pn	Pn	09 01 10.0	+1.5
	0.1nm,0.3s,baz=24,slow=15,SNR=1.8						
	0.3nm,0.3s						

*EST **06** 09:04:55.9±0.1, 59.65N×27.60E, h0km, ML1.5(HEL), Explosion*
*LVSN **06** 09:05:04.9±4.6, 59.06N×25.48E, h0km±267km, ML1.2*
HEL 06 09:04:55.7±0.1, 59.64N×27.62E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.86**	**257**	*e*P	Pg	09 05 10.8	-1.3
ARBE				*e*S	Sg	09 05 22.1	-1.1
VJF	**Virojoki**	**0.90**	**358**	*e*P	Pg	09 05 12.1	-0.9
VJF				*e*SB	Sg	09 05 24.4	-0.4
EE03	**Tooma soojaam,**	**1.03**	**223**	*e*P	Pg	09 05 14.0	-1.5
VSU	**Vasula**	**1.27**	**202**	*e*P	Pg	09 05 18.6	-1.3
VSU				AML	AML	09 05 21.1	
	comp=Z,7.7nm,0.4s						
VSU				AML	AML	09 05 28.4	
	comp=N,12nm,0.5s						
VSU				*e*S	Sg	09 05 34.2	-2.1
VSU				AML	AML	09 05 40.9	
	comp=E,13nm,0.4s						
VSU	**Vasula**	**1.27**	**202**	*e*P	Pg	09 05 18.5	-1.4
VSU				*e*SB	Sg	09 05 35.9	-0.4
PVF	**Pernaja**	**1.27**	**317**	*e*P	Pg	09 05 18.4	-1.6
PVF				*e*PN	Pn	09 05 20.5	-0.1
PVF				*e*S	Sg	09 05 35.4	-1.0
EE08	**Sarghaua, Vand**	**1.57**	**232**	*e*P	Pn	09 05 23.8	-1.0
EE08				*e*SN	Sb	09 05 46.0	0.0
MEF	**Metsahovi**	**1.73**	**291**	*e*P	Pb	09 05 27.6	-0.7
MEF				AML	AML	09 05 27.9	
	comp=Z,4.8nm,0.1s						
MEF				AML	AML	09 05 28.0	
	comp=E,5.8nm,0.1s						
MEF				*e*S	Sn	09 05 45.4	-4.2
MEF				AML	AML	09 05 52.4	
	comp=N,4.7nm,0.1s						
MEF	**Metsahovi**	**1.73**	**291**	*e*P	Pn	09 05 26.2	-0.7
MEF				*e*SG	Sn	09 05 48.9	-0.7
MEF				MSG		09 05 51.7	
	comp=Z,2.9nm,0.1s						
NUR	**Nurmijrvi**	**1.73**	**302**	*e*PG	Pn	09 05 26.5	-0.4
NUR				*e*S	Sn	09 05 48.5	-1.2
EE07	**Piusa Caves, O**	**1.80**	**183**	*e*PG	Pn	09 05 28.6	+0.7
EE07				*e*SG	Sn	09 05 51.5	0.0
RUF	**Ruokolahti**	**1.91**	**20**	*e*PN	Pn	09 05 29.7	+0.2
RUF				*e*SG	Sn	09 05 54.5	+0.4
RUF				MSG		09 05 56.7	
	comp=Z,2.5nm,0.1s						
FIA0	**FINESS Array S**	**1.97**	**338**	*e*P	Pn	09 05 29.9	-0.3
FIA0				*e*SG	Sn	09 05 55.9	+0.3
FIA0				MSG		09 05 58.9	
	comp=Z,2.7nm,0.1s						
FIA1	**FINESS Array S**	**1.97**	**338**	MSG		09 05 59.0	
	comp=Z,3.6nm,0.1s						
EE01	**Perakula, Nova**	**2.09**	**260**	*e*P	Pn	09 05 31.7	-0.2
EE01				*e*PG	Pb	09 05 32.8	-1.6
EE01				*e*SG	Sn	09 05 59.6	+1.0
MTSE	**Matsula**	**2.17**	**246**	*e*S	Pn	09 05 34.0	+1.1
MTSE	**Matsula**	**2.17**	**246**	*e*PB	Pn	09 05 33.9	+0.9
MTSE				*e*SB	Sn	09 06 01.6	+1.1
KAF	**Kangasniemi**	**2.56**	**346**	*e*P	Pn	09 05 38.5	0.0

*PRU **06** 09:17:12.2, 50.28N×12.45E, h10km, West Bohemia*
WBNET 06 09:17:14.3, 50.27N×12.45E, h8km, Ml0.4, 11C-11D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBCW	**Luby**	**0.03**	**271**	⇓P	Pg	09 17 15.1	-0.7
LBCW				S	Sg	09 17 16.2	-0.6
LBCW	**Luby**	**0.03**	**271**	⇓P	Pg	09 17 15.9	+0.1
LBCW				S	Sg	09 17 17.1	+0.2
NKC	**Novy Kostel**	**0.03**	**185**	*e*SG	Sg	09 17 16.2	-0.7
	comp=Z,8.2nm,0.1s						
NKC	**Novy Kostel**	**0.03**	**185**	⇑P	Pg	09 17 15.1	-0.7
NKC				S	Sg	09 17 16.2	-0.7
NKC	**Novy Kostel**	**0.03**	**185**	S	Sg	09 17 17.1	+0.1
STCW	**Studenec**	**0.04**	**98**	⇑P	Pg	09 17 15.2	-0.7
STCW				S	Sg	09 17 16.4	-0.8
STCW	**Studenec**	**0.04**	**98**	⇑P	Pg	09 17 16.1	+0.1
STCW				S	Sg	09 17 17.2	+0.1
POCW	**Potky**	**0.06**	**344**	⇓P	Pg	09 17 15.4	-0.8
POCW				S	Sg	09 17 16.7	-0.7
POCW	**Potky**	**0.06**	**344**	⇓P	Pg	09 17 16.2	+0.1
POCW				S	Sg	09 17 17.6	+0.1
VAC	**Vackov**	**0.06**	**238**	*e*SG	Sg	09 17 16.4	-1.0
VAC	**Vackov**	**0.06**	**238**	⇑P	Pg	09 17 15.3	-0.8
VAC				S	Sg	09 17 16.5	-0.9
VAC	**Vackov**	**0.06**	**238**	⇑P	Pg	09 17 16.2	+0.1
VAC				S	Sg	09 17 17.3	-0.1
KVC	**Kvetna**	**0.07**	**146**	⇓P	Pg	09 17 15.6	-0.7
KVC				S	Sg	09 17 16.9	-0.7
KVC	**Kvetna**	**0.07**	**146**	⇓P	Pg	09 17 16.4	+0.1
KVC				S	Sg	09 17 17.8	+0.1
KRCW	**Kraslice**	**0.08**	**37**	⇑P	Pg	09 17 15.7	-0.8
KRCW				S	Sg	09 17 17.2	-0.8
KRCW	**Kraslice**	**0.08**	**37**	⇑P	Pg	09 17 16.5	+0.1
KRCW				S	Sg	09 17 18.0	0.0
SKC	**Skalna**	**0.11**	**212**	⇑P	Pg	09 17 16.0	-0.8
SKC				S	Sg	09 17 17.9	-0.7
SKC	**Skalna**	**0.11**	**212**	⇑P	Pg	09 17 16.9	0.0
SKC				S	Sg	09 17 18.7	+0.1
KOCW	**Kopaniny**	**0.14**	**270**	⇓P	Pg	09 17 16.4	-0.9
KOCW				S	Sg	09 17 18.3	-1.0
TRCW	**Trojmez**	**0.20**	**281**	⇓P	Pg	09 17 17.4	-1.0
TRCW				S	Sg	09 17 20.1	-1.1
TRCW	**Trojmez**	**0.20**	**281**	⇓P	Pg	09 17 18.3	-0.1
TRCW				S	Sg	09 17 21.0	-0.2
ZHC	**Zelena Hora**	**0.21**	**205**	⇑P	Pg	09 17 17.8	-0.8
ZHC				S	Sg	09 17 20.8	-0.8
ZHC	**Zelena Hora**	**0.21**	**205**	⇑P	Pg	09 17 18.7	0.0
ZHC				S	Sg	09 17 21.6	+0.1
LACW	**Lazy**	**0.24**	**153**	⇓P	Pg	09 17 18.5	-0.6
LACW				S	Sg	09 17 22.0	-0.4
LACW	**Lazy**	**0.24**	**153**	⇓P	Pg	09 17 19.3	+0.2
LACW				S	Sg	09 17 22.7	+0.3
MORC	**Moravsky Berou**	**3.32**	**97**	*e*PG	Pg	09 18 21.1	+3.2

*TAP **06** 09:20:01.7, 24.23N×121.77E, h11km, ML3.5, C*
*ASIES **06** 09:20:01.7, 24.23N×121.77E, h11km, ML3.5, Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^20 Nm; Mrr4.84; Mθθ0.12; Mϕϕ-4.95; Mrθ5.77; Mϕθ-3.42; Mrϕ2.30; Fault plane solution: Mo8.61602×10^20 NP1:ϕ55.49000°, δ70.78000°, λ116.50000°. NP2:ϕ178.92000°, δ32.32000°, λ38.00000°. Principal axes: T Plg56.1310°, Azm359.9650°; N Plg24.9170°, Azm226.1660°; P Plg21.3960°, Azm125.6790°;*
*JMA **06** 09:20:01.8±0.2, 24.2N±0.3×121.8E±0.3, h1km±2km, TAIWAN REGION*
ISC 06 09:20:02.0±0.8, 24.23N±0.01×121.78E±0.02, h9km±5km, n111, σ0.79/175, 16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.08**	**337**	*i* P	Pg	09 20 04.4	+0.1
	baz=346						
EHP				S	Sg	09 20 06.5	+0.6
	baz=346						
EAHA	**Aohua**	**0.10**	**341**	*i* P	Pg	09 20 04.7	+0.1
	baz=344						
EAHA				S	Sg	09 20 06.8	+0.5
	baz=344						
ETL	**Fush Village**	**0.16**	**242**	⇓*i* P	Pg	09 20 05.4	-0.1
	baz=243						
ETL				*i* S	Sg	09 20 08.1	+0.3
	baz=243						
NACB	**Ninganchiao**	**0.18**	**250**	P	Pg	09 20 06.1	+0.4
NACB	**Ninganchiao**	**0.18**	**250**	⇓*i* P	Pg	09 20 05.6	-0.1
	baz=245						
NACB				*i* S	Sg	09 20 08.4	+0.1
	baz=245						
ENA	**Nanau**	**0.20**	**351**	⇓*i* P	Pg	09 20 06.2	+0.1
	baz=354						
ENA				*i* S	Sg	09 20 09.4	+0.5
	baz=354						
EWUT	**Wuta**	**0.21**	**0**	⇓*i* P	Pg	09 20 06.5	+0.1
	baz=7.0						
EWUT				S	Sg	09 20 09.8	+0.4
	baz=7.0						
TWD	**Chiawan**	**0.23**	**227**	P	Pg	09 20 06.3	-0.2
	baz=232						
TWD				S	Sg	09 20 09.8	+0.1
	baz=232						
ETLH	**Xiulin Townshi**	**0.27**	**264**	⇓*i* P	Pg	09 20 07.4	-0.1
	baz=266						
ETLH				S	Sg	09 20 11.3	+0.2
	baz=266						
HWA	**Hwalien**	**0.30**	**212**	*e*P	Pb	09 20 08.8	-0.7
	baz=219						
ESAO	**Su ao**	**0.35**	**10**	P	Pg	09 20 08.7	-0.2
	baz=6.0						
ESAO				S	Sg	09 20 13.7	+0.2
	baz=6.0						
ETM	**Tongmen**	**0.37**	**224**	P	Pg	09 20 09.2	-0.2
	baz=225						
ETM				S	Sg	09 20 14.2	0.0
	baz=225						
LATG	**Datong**	**0.38**	**323**	⇓*i* P	Pg	09 20 09.7	+0.2
	baz=324						
LATG				S	Sg	09 20 15.1	+0.6
	baz=324						
TWC	**Suao**	**0.38**	**10**	⇓*i* P	Pg	09 20 09.5	-0.1
	baz=4.0						
TWC				*i* S	Sg	09 20 14.7	+0.2
	baz=4.0						
LXIB	**Xiulin Townshi**	**0.39**	**238**	*i* P	Pg	09 20 09.5	-0.3
	baz=239						
LXIB				S	Sg	09 20 15.0	0.0
	baz=239						
NDS	**Dongshan**	**0.40**	**352**	P	Pg	09 20 10.1	+0.2
	baz=353						
NDS				S	Sg	09 20 15.9	+0.6
	baz=353						
NNSB	**Datong**	**0.41**	**298**	⇓*i* P	Pg	09 20 10.2	+0.2
	baz=300						
NNSB				S	Sg	09 20 15.6	+0.1
	baz=300						
NNS	**Nan Shan**	**0.42**	**299**	⇓*i* P	Pg	09 20 10.4	+0.1
	baz=301						
NNS				S	Sg	09 20 16.1	+0.2
	baz=301						
NDT	**Datong Townshi**	**0.44**	**327**	⇓*i* P	Pb	09 20 11.0	-0.9
	baz=328						
NDT				S	Sb	09 20 17.5	-1.2
	baz=328						
ENTT	**Nioudou**	**0.45**	**335**	⇓*i* P	Pg	09 20 11.1	+0.3
	baz=336						
ENTT				*i* S	Sb	09 20 17.6	-1.3
	baz=336						
EOS2	**EOS2**	**0.46**	**66**	P	Pb	09 20 11.9	-0.3
	baz=60						
WHF	**Hehuan

	baz=273								
TWT				S		Sb	09 20 20.9	-1.1	
	baz=273								
FUSB	**Fushanzhiwuyua**	**0.55**	**342**	⇓*i*	P	**Pb**	09 20 13.1	-0.9	
	baz=342								
FUSB				S		**Sg**	09 20 20.2	+0.2	
	baz=342								
TDCB	**Techi**	**0.56**	**272**		P	**Pb**	09 20 13.2	-1.0	
	baz=273								
TDCB				S		**Sg**	09 20 20.6	+0.1	
	baz=273								
TEGC	**Jichi Village**	**0.56**	**203**	*e*	P	**Pb**	09 20 14.2	+0.1	
	baz=192								
YHNB	**Yeheng**	**0.57**	**320**		P	**Pb**	09 20 13.6	-0.6	
YHNB	**Yeheng**	**0.57**	**320**		P	**Pb**	09 20 13.5	-0.7	
	baz=321								
YHNB				S		**Sg**	09 20 21.1	+0.6	
	baz=321								
CHGB	**Renai**	**0.58**	**253**	⇓*i*	P	**Pg**	09 20 13.3	0.0	
	baz=245								
CHGB				S		**Sg**	09 20 20.9	0.0	
	baz=245								
NSK	**Sanguang**	**0.58**	**319**	⇓*i*	P	**Pb**	09 20 13.6	-0.8	
	baz=320								
NSK				*i* S		**Sg**	09 20 21.4	+0.3	
	baz=320								
NWLT	**Wulai**	**0.60**	**335**	⇓*i*	P	**Pb**	09 20 13.9	-0.8	
	baz=336								
NWLT				S		**Sg**	09 20 21.5	+0.1	
	baz=336								
OWD	**Renai**	**0.61**	**243**		P	**Pg**	09 20 13.8	-0.2	
	baz=244								
WARBT	**Fenglin Townsh**	**0.62**	**215**		P	**Pg**	09 20 13.4	-0.7	
	baz=223								
EGFH	**Guangfu**	**0.65**	**210**	*e*	P	**Pb**	09 20 15.0	-0.5	
	baz=217								
EGFH				*e*S		**Sn**	09 20 26.2	-1.5	
	baz=217								
WUSB	**Renai**	**0.65**	**248**		P	**Pb**	09 20 14.7	-1.0	
	baz=242								
WUSB				S		**Sg**	09 20 22.8	-0.3	
	baz=242								
NFF	**Wufeng Townshi**	**0.72**	**304**	*e*	P	**Pb**	09 20 16.2	-0.6	
	baz=304								
NFF				*e*S		**Sb**	09 20 26.1	-0.7	
	baz=304								
TIPB	**Shuangxi**	**0.74**	**3**	*e*	P	**Pg**	09 20 16.4	+0.1	
	baz=4.0								
TIPB				*e*S		**Sg**	09 20 25.7	-0.2	
	baz=4.0								
VWDT	**VWDT**	**0.75**	**231**		P	**Pb**	09 20 16.6	-0.7	
	baz=231								
VWDT				*e*S		**Sb**	09 20 27.0	-0.6	
	baz=231								
WHP	**Taichung City**	**0.76**	**274**	*e*	P	**Pb**	09 20 17.2	-0.3	
	baz=274								
WHP				*e*S		**Sb**	09 20 27.5	-0.4	
	baz=274								
NHDH	**Xindian Distri**	**0.76**	**343**	*e*	P	**Pb**	09 20 17.4	-0.1	
	baz=343								
TWA	**Mucha**	**0.76**	**347**	*e*	P	**Pb**	09 20 17.1	-0.4	
	baz=347								
TWA				S		**Sb**	09 20 28.0	-0.1	
	baz=347								
TATO	**Taipei**	**0.78**	**340**		P	**Pb**	09 20 17.9	0.0	
TWB1	**Santiao Chiao**	**0.80**	**14**	*e*	P	**Pb**	09 20 17.8	-0.2	
	baz=7.0								
HGSD	**Ruisui**	**0.81**	**204**		P	**Pn**	09 20 18.3	-1.3	
	baz=223								
LIOB	**Emei**	**0.81**	**301**	*e*	P	**Pb**	09 20 18.2	0.0	
	baz=301								
LIOB				*e*S		**Sb**	09 20 29.4	+0.2	
	baz=301								
WCS	**Beigang Elemen**	**0.81**	**258**	*e*	P	**Pb**	09 20 17.8	-0.4	
	baz=259								
NSTT	**Nanjuang**	**0.81**	**299**		P	**Pb**	09 20 18.2	-0.1	
	baz=300								
NSTT				*e*S		**Sb**	09 20 29.3	0.0	
	baz=300								
NWF	**Wu-fen Shan**	**0.83**	**0**	*e*	P	**Pb**	09 20 18.5	-0.3	
	baz=353								
NWF				*e*S		**Sg**	09 20 28.9	-0.2	
	baz=353								
WFSB	**Wu-fen Shan**	**0.83**	**0**	*e*	P	**Pb**	09 20 18.5	-0.2	
	baz=353								
WFSB				*e*S		**Sg**	09 20 29.3	+0.3	
	baz=353								
EHY	**Hungye**	**0.83**	**210**		P	**Pb**	09 20 18.1	-0.6	
	baz=223								
SXI1	**Grass Mountain**	**0.86**	**6**	*e*	P	**Pb**	09 20 19.0	-0.3	
	baz=352								
SSLB	**Suanglung**	**0.87**	**240**		P	**Pb**	09 20 18.7	-0.7	
SSLB	**Suanglung**	**0.87**	**240**	*e*	P	**Pg**	09 20 18.6	-0.3	
	baz=249								
SSLB				*e*S		**Sg**	09 20 29.1	-1.1	
	baz=249								
SMLT	**Sun Moon Lake**	**0.87**	**247**		P	**Pb**	09 20 19.0	-0.5	
	baz=238								
SMLT				*e*S		**Sb**	09 20 30.1	-1.1	
	baz=238								
TYC	**Yuchr**	**0.90**	**249**	*e*	P	**Pb**	09 20 19.2	-0.6	
	baz=241								
TYC				*e*S		**Sg**	09 20 30.8	-0.3	
	baz=241								
NCUH	**Zhongli**	**0.91**	**324**	*e*	P	**Pn**	09 20 20.3	-0.7	
	baz=324								
SBCB	**Hsinchu**	**0.91**	**308**	*e*	P	**Pn**	09 20 20.8	-0.3	
	baz=308								
TNOU	**National Taiwa**	**0.91**	**360**	*e*	P	**Pb**	09 20 20.1	+0.1	
	baz=360								
TWQ1	**Liyutan**	**0.92**	**277**	*e*	P	**Pn**	09 20 20.6	-0.6	
	baz=278								
TWS1	**Kuangyinshan**	**0.92**	**339**	*e*	P	**Pn**	09 20 20.4	-0.8	
	baz=340								
YM01	**YM01**	**0.93**	**348**	*e*	P	**Pn**	09 20 20.7	-0.6	
	baz=333								
NSY	**Sanyi**	**0.94**	**281**	*e*	P	**Pg**	09 20 19.1	-1.1	
	baz=282								
YULB	**Yu-li**	**0.94**	**208**		P	**Pb**	09 20 19.9	-0.7	
YULB	**Yu-li**	**0.94**	**208**	*e*	P	**Pg**	09 20 19.6	-0.6	
	baz=218								
NMLH	**Miaoli**	**0.95**	**289**	*e*	P	**Pn**	09 20 22.5	+1.0	
	baz=289								
NTST	**Danshui**	**0.97**	**342**	*e*	P	**Pn**	09 20 22.2	+0.3	
	baz=350								
NTST				*e*S		**Sn**	09 20 37.3	+1.5	
	baz=350								
EYUL	**Yuli**	**0.98**	**205**	*e*	P	**Pn**	09 20 21.4	-0.5	
	baz=222								
TWF1	**Yuli**	**0.98**	**207**	*e*	P	**Pb**	09 20 20.9	-0.3	
	baz=218								
TWF1				*e*S		**Sn**	09 20 35.9	-0.1	
	baz=218								
WHYT	**Xinyi Township**	**1.00**	**238**	*e*	P	**Pn**	09 20 21.9	-0.4	
	baz=245								
WHYT				*e*S		**Sn**	09 20 36.7	+0.2	
	baz=245								
TCU	**Taichung**	**1.01**	**265**		P	**Pn**	09 20 23.1	+0.8	
	baz=266								
TCU				S		**Sn**	09 20 38.5	+1.8	
	baz=266								
WDJ	**Dajia District**	**1.04**	**277**	*e*	P	**Pn**	09 20 24.2	+1.4	
	baz=277								
WJS	**Zhushan**	**1.04**	**247**		P	**Pn**	09 20 23.4	+0.5	
	baz=242								
WJS				S		**Sn**	09 20 38.3	+0.8	
	baz=242								
TWY	**Chenhua**	**1.05**	**351**	*e*	P	**Pn**	09 20 22.9	0.0	
	baz=336								
WNT	**Mingjian**	**1.06**	**251**	*e*	P	**Pn**	09 20 23.5	+0.5	
	baz=247								
WNT				*e*S		**Sn**	09 20 38.9	+1.0	
	baz=247								
JYNG	**Yonagunijimaku**	**1.09**	**78**	*e*	P	**Pb**	09 20 22.7	-0.3	
CHKH	**Chenggong**	**1.09**	**199**	*e*	P	**Pb**	09 20 21.9	-1.2	
	baz=184								
FULB	**Fuli**	**1.12**	**203**	*e*	P	**Pn**	09 20 23.8	-0.1	
	baz=219								
ALS	**Alishan**	**1.14**	**231**		P	**Pn**	09 20 24.1	-0.4	
	baz=232								
ALS				S		**Sn**	09 20 40.2	-0.3	
	baz=232								
YOJ	**Yonaguni jima**	**1.15**	**78**		P	**Pg**	09 20 24.1	0.0	
YOJ	**Yonaguni jima**	**1.15**	**78**	*e*	P	**Pb**	09 20 23.1	-0.9	
	baz=66								
YOJ	**Yonaguni jima**	**1.15**	**78**	*e*	P	**Pb**	09 20 23.7	-0.4	
YOJ				*e*S		**Sn**	09 20 40.8	+0.6	
CHN5	**Tsauling**	**1.19**	**238**	*e*	P	**Pg**	09 20 25.1	+0.3	
	baz=240								
CHN5				S		**Sn**	09 20 42.1	+0.8	
	baz=240								
CHKT	**Chengkung**	**1.19**	**199**	*e*	P	**Pb**	09 20 24.1	-0.7	
	baz=184								
EHD	**Haiduan**	**1.20**	**206**		P	**Pg**	09 20 25.2	+0.1	
	baz=208								
EHD				*e*S		**Sn**	09 20 41.3	-0.2	
	baz=208								
ELDTW	**Lidau**	**1.25**	**214**		P	**Pn**	09 20 24.1	-1.8	
	baz=229								
ELDTW				*e*S		**Sn**	09 20 42.8	0.0	
	baz=229								
WDLH	**Douliu**	**1.26**	**245**	*e*	P	**Pg**	09 20 26.6	+0.4	
	baz=246								
WDLH				*e*S		**Sn**	09 20 44.9	+2.1	
	baz=246								
WRL	**Guolierlin Hig**	**1.32**	**256**	*e*	P	**Pg**	09 20 27.0	-0.4	
	baz=258								
WCKO	**Fanlu**	**1.33**	**234**		P	**Pg**	09 20 28.1	+0.5	
	baz=236								
WCKO				S		**Sg**	09 20 47.1	+2.2	
	baz=236								
WTK	**Tuku**	**1.38**	**247**	*e*	P	**Pg**	09 20 28.3	-0.2	
	baz=260								
WTK				*e*S		**Sg**	09 20 48.5	+2.0	
	baz=260								
CHN4	**Tsaushan**	**1.40**	**231**		P	**Pg**	09 20 28.9	0.0	
	baz=233								
CHN4				S		**Sg**	09 20 50.0	+3.0	
	baz=233								
STYH	**Taoyuan**	**1.40**	**221**		P	**Pb**	09 20 28.0	-0.3	
	baz=223								
TPUB	**Ta-pu**	**1.40**	**229**		P	**Pg**	09 20 28.6	-0.3	
TPUB	**Ta-pu**	**1.40**	**229**		P	**Pg**	09 20 28.9	-0.1	
	baz=231								
TPUB				S		**Sg**	09 20 48.2	+1.0	
	baz=231								
WTP	**Ta-pu**	**1.45**	**228**		P	**Pg**	09 20 29.6	-0.3	
	baz=229								
WTP				S		**Sg**	09 20 50.2	+1.5	
	baz=229								
TWK	**Hsinying**	**1.52**	**231**		P	**Pg**	09 20 30.9	-0.4	
	baz=233								
TWK				S		**Sg**	09 20 53.6	+2.6	
	baz=233								
SNST	**Tainan City**	**1.55**	**230**	*e*	S	**Sg**	09 20 54.5	+2.7	
	baz=232								
TWGBT	**Beinan**	**1.55**	**205**		P	**Pb**	09 20 30.5	-0.4	
TWGBT	**Beinan**	**1.55**	**205**	*e*	P	**Pn**	09 20 29.2	-0.6	
	baz=189								
TWG	**Pinlang**	**1.55**	**205**	*e*	P	**Pn**	09 20 29.2	-0.6	
	baz=189								
CHN1	**Nanshi**	**1.55**	**228**	*e*	P	**Pg**	09 20 31.9	+0.2	
	baz=230								
CHN1				*e*S		**Sg**	09 20 53.8	+2.0	
	baz=230								
SLGT	**Liugui**	**1.61**	**220**	*e*	P	**Pg**	09 20 32.0	-0.9	
	baz=223								
ICHU	**Yijhu**	**1.62**	**238**	*e*	P	**Pg**	09 20 32.1	-1.0	
	baz=241								
TSMG	**Majia**	**1.84**	**215**	*e*	P	**Pb**	09 20 34.9	-1.0	
	baz=230								
MASBT	**Mashibuluo**	**1.93**	**213**	*e*	P	**Pn**	09 20 35.5	+0.5	
	baz=216								

IDC ***06*** *09:32:36.3±1.2,56.00N×149.59W,h0km,mb3.9/11, mbtmp3.9/17,ML3.7/6,MS2.4/1,Error ellipse: s-maj=27.3km s-min=16.6km az=24.0*

NEIC ***06*** *09:32:38.2±1.9,56.02N±0.07×149.60W±0.09,h20km±5km, mb4.2/6,ML4.2/50,ML3.8(AEIC),Error ellipse: s-maj=10.8km s-min=7.3km az=169.0*

AEIC ***06*** *09:32:41.4±1.9,56.02N±0.06×149.55W±0.09,h11km±5km, Error ellipse: s-maj=9.4km s-min=6.9km az=188.0*

ISC 06 09:32:37.4±3.7,56.07N±0.07×149.61W±0.05, h11km±25km,n387,σ0.99/399,mb4.3/13,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
				Op		ISC		
OHAK	**Old Harbor**	**2.33**	**301**			**Pn**	**09 33 15.4**	**-0.3**
OHAK						**Sn**	**09 33 41.8**	**-2.6**
OHAK	**Old Harbor**	**2.33**	**301**	P		**Pn**	**09 33 15.4**	**-0.3**
OHAK	**Old Harbor**	**2.33**	**301**	P		**Pn**	**09 33 15.4**	**-0.3**
	baz=119							
OHAK				S		**Sn**	**09 33 41.7**	**-2.6**
	baz=119							
KDAK	**Kodiak Island**	**2.37**	**318**			**Pn**	**09 33 16.0**	**-0.1**
KDAK	**Kodiak Island**	**2.37**	**318**	Pn		**Pn**	**09 33 16.0**	**-0.1**
	17nm,0.3s,baz=157,slow=4.5,SNR=369							
KDAK				Sn		**Sn**	**09 33 42.8**	**-2.3**
	61nm,0.3s,baz=30,slow=21,SNR=42							
KDAK				LR		LR	09 34 10.4	
	comp=Z,88nm,20.4s,baz=98,slow=39 49nm,0.3s							
SII	**Sitkinak Islan**	**2.59**	**283**			**Pn**	**09 33 18.8**	**-0.5**
SII						**Sn**	**09 33 48.2**	**-2.7**
SII				IAML			09 33 52.0	
	comp=N,904nm,0.6s							
SII	**Sitkinak Islan**	**2.59**	**283**	P		**Pn**	**09 33 18.8**	**-0.5**
SII	**Sitkinak Islan**	**2.59**	**283**	P		**Pn**	**09 33 18.8**	**-0.5**
	baz=100							
SII				S		**Sn**	**09 33 48.0**	**-2.8**
	baz=100							
Q20K	**Shuyak Island**	**2.96**	**330**	P		**Pn**	**09 33 24.3**	**0.0**
	baz=148							
Q20K				S		**Sn**	**09 33 59.0**	**-0.7**
	baz=148							
SYI	**Shuyak Island**	**2.96**	**331**			**Pn**	**09 33 24.2**	**0.0**
SYI						**Sn**	**09 33 58.9**	**-0.8**
CNPM	**China Poot**	**3.57**	**347**			**Pn**	**09 33 32.3**	**-0.4**
Q19K	**Cape Douglas,**	**3.60**	**324**			**Pn**	**09 33 33.9**	**+0.8**
Q19K	**Cape Douglas,**	**3.60**	**324**	P		**Pn**	**09 33 33.6**	**+0.5**
	baz=141							
KAHG	**Katmai Hook Gl**	**3.62**	**314**			**Pn**	**09 33 34.6**	**+1.2**
BRSE	**Bradley Lake S**	**3.73**	**351**			**Pn**	**09 33 34.2**	**-0.7**
BRSE						**Sn**	**09 34 16.3**	**-2.5**
BRSE	**Bradley Lake S**	**3.73**	**351**	P		**Pn**	**09 33 34.2**	**-0.7**
	baz=170							
BRSE				S		**Sn**	**09 34 16.3**	**-2.5**
	baz=170							
HOM	**Homer**	**3.76**	**344**			**Pn**	**09 33 35.1**	**-0.1**
HOM						**Sn**	**09 34 18.4**	**-1.0**
HOM				IAML			09 34 38.5	
	comp=N,329nm,0.8s							
HOM				IAML			09 34 44.0	
	comp=E,298nm,1.1s							
HOM	**Homer**	**3.76**	**344**	P		**Pn**	**09 33 35.3**	**+0.1**
	baz=162							
HOM				S		**Sn**	**09 34 18.6**	**-0.8**
	baz=162							
BRLK	**Bradley Lake**	**3.76**	**350**			**Pn**	**09 33 34.6**	**-0.8**
ACHA	**Angle Creek He**	**3.78**	**307**			**Pn**	**09 33 36.4**	**+0.7**
Q23K	**Middleton Isla**	**3.79**	**26**	Pn		**Pn**	**09 33 35.3**	**-0.4**
Q23K				IAML			09 34 18.7	
	comp=E,399nm,1.4s							
Q23K				IAML			09 35 24.3	
	comp=N,257nm,1.5s							
Q23K	**Middleton Isla**	**3.79**	**26**	P		**Pn**	**09 33 35.2**	**-0.5**
	baz=208							
Q23K				S		**Sn**	**09 34 16.8**	**-3.4**
	baz=208							
MID	**Middleton Isla**	**3.79**	**26**	Pn		**Pn**	**09 33 35.3**	**-0.4**
MID				IAML			09 34 17.6	
	comp=N,260nm,1.0s							
MID				IAML			09 34 22.9	
	comp=E,255nm,1.4s							
ANCK	**Angle Creek**	**3.85**	**306**			**Pn**	**09 33 37.5**	**+0.9**
KVTA	**Katmai Vly 10**	**3.86**	**309**			**Pn**	**09 33 38.1**	**+1.4**
AUCH	**Augustine Cone**	**3.89**	**330**			**Pn**	**09 33 37.9**	**+0.8**
KAHC	**Katmai Hardscr**	**3.90**	**314**			**Pn**	**09 33 38.5**	**+1.1**
PLK3	**Peulik 3**	**4.00**	**297**			**Pn**	**09 33 39.2**	**+0.7**
SEW	**Seward**	**4.04**	**1**			**Pn**	**09 33 38.3**	**-0.9**
SEW	**Seward**	**4.04**	**1**			**Sn**	**09 34 22.9**	**-3.5**
SEW	**Seward**	**4.04**	**1**	P		**Pn**	**09 33 38.2**	**-0.9**
	baz=181							
SEW				S		**Sn**	**09 34 23.0**	**-3.5**
	baz=181							
CNTC	**Contact Creek**	**4.06**	**305**			**Pn**	**09 33 40.3**	**+0.7**
Q17K	**Contact Creek**	**4.06**	**305**	P		**Pn**	**09 33 40.4**	**+0.8**
	baz=121							
P19K	**Oil Pt**	**4.08**	**333**			**Pn**	**09 33 39.9**	**+0.2**
P19K				IAML			09 34 31.5	
	comp=N,278nm,0.5s							
P19K				IAML			09 34 31.5	
	comp=E,279nm,0.4s							
P19K	**Oil Pt**	**4.08**	**333**	P		**Pn**	**09 33 39.9**	**+0.2**
	baz=150							
P23K	**Montague Islan**	**4.11**	**16**			**Pn**	**09 33 39.7**	**-0.4**
P23K	**Montague Islan**	**4.11**	**16**	P		**Pn**	**09 33 39.7**	**-0.4**
	baz=197							
PLK1	**Peulik 1**	**4.21**	**297**			**Pn**	**09 33 42.4**	**+1.0**
O20K	**Slope Mountain**	**4.33**	**340**			**Pn**	**09 33 43.1**	**0.0**
O20K						**Sn**	**09 34 32.3**	**-1.3**
O20K	**Slope Mountain**	**4.33**	**340**	P		**Pn**	**09 33 43.1**	**0.0**
	baz=157							
O20K				S		**Sn**	**09 34 32.3**	**-1.3**
	baz=157							
IVE	**Iliamna Volcan**	**4.35**	**337**			**Pn**	**09 33 42.7**	**-0.8**
O22K	**Cooper Landing**	**4.42**	**359**			**Pn**	**09 33 43.8**	**-0.6**
O22K				IAML			09 34 40.0	
	comp=E,325nm,0.5s							
O22K				IAML			09 34 41.6	
	comp=N,334nm,0.7s							
O22K	**Cooper Landing**	**4.42**	**359**	P		**Pn**	**09 33 43.7**	**-0.7**
	baz=179							
SLKM	**Skilak Lake**	**4.46**	**356**			**Pn**	**09 33 44.1**	**-0.9**
SLKM						**Sn**	**09 34 33.3**	**-3.5**
P18K	**Big Mountain,**	**4.49**	**320**			**Pn**	**09 33 45.2**	**-0.1**
P18K	**Big Mountain,**	**4.49**	**320**	P		**Pn**	**09 33 45.2**	**-0.1**
	baz=136							
P18K				S		**Sn**	**09 34 34.3**	**-3.2**
	baz=136							
Q16K	**King Salmon**	**4.62**	**307**			**Pn**	**09 33 47.6**	**+0.5**
Q16K						**Sn**	**09 34 39.3**	**-1.3**
Q16K	**King Salmon**	**4.62**	**307**	P		**Pn**	**09 33 47.8**	**+0.7**
	baz=122							
Q16K				S		**Sn**	**09 34 39.3**	**-1.3**
	baz=122							
R16K	**Pilot Point**	**4.62**	**292**			**Pn**	**09 33 48.5**	**+1.3**
R16K				IAML			09 34 44.0	
	comp=E,158nm,1.4s							
R16K				IAML			09 35 12.9	
	comp=N,133nm,1.2s							
R16K	**Pilot Point**	**4.62**	**292**	P		**Pn**	**09 33 47.7**	**+0.6**
	baz=106							
HIN	**Hinchinbrook I**	**4.64**	**19**	Pn		**Pn**	**09 33 47.3**	**-0.1**
HIN				IAML			09 34 38.8	
	comp=E,300nm,0.6s							
RED	**Redoubt Volcan**	**4.67**	**340**			**Pn**	**09 33 46.7**	**-1.2**
RSO	**Redoubt South**	**4.70**	**341**			**Pn**	**09 33 47.8**	**-0.6**
RDWB	**Redoubt West**	**4.74**	**340**			**Pn**	**09 33 47.5**	**-1.4**
RDT	**Redoubt**	**4.75**	**343**			**Pn**	**09 33 47.6**	**-1.3**
KAIM	**Kayak Island**	**4.75**	**33**	Pn		**Pn**	**09 33 48.9**	**0.0**
KAIM	**Kayak Island**	**4.75**	**33**	P		**Pn**	**09 33 49.0**	**+0.1**
	baz=217							
CAPN	**Captain Cook N**	**4.78**	**351**	Pn		**Pn**	**09 33 50.2**	**+1.0**
CAPN				IAML			09 34 47.9	
	comp=E,145nm,1.0s							
CAPN				IAML			09 35 05.1	
	comp=N,181nm,1.4s							
DFR	**Drift River**	**4.81**	**342**			**Pn**	**09 33 48.9**	**-0.9**
O18K	**Koktuh Hills**	**4.82**	**324**			**Pn**	**09 33 49.9**	**0.0**
O18K				IAML			09 34 47.2	
	comp=E,93nm,0.7s							
O18K				IAML			09 34 47.2	
	comp=N,122nm,0.8s							
O18K	**Koktuh Hills**	**4.82**	**324**	P		**Pn**	**09 33 49.9**	**0.0**
	baz=140							
P17K	**Kvichak River**	**4.82**	**313**			**Pn**	**09 33 50.9**	**+1.0**
P17K	**Kvichak River**	**4.82**	**313**	P		**Pn**	**09 33 50.9**	**+1.0**
	baz=128							
O19K	**Port Alsworth**	**4.83**	**331**			**Pn**	**09 33 49.5**	**-0.4**
O19K				IAML			09 34 46.6	
	comp=N,221nm,0.5s							
O19K	**Port Alsworth**	**4.83**	**331**	P		**Pn**	**09 33 49.5**	**-0.4**
	baz=147							
ANPB	**Aniakchak Plen**	**4.87**	**282**			**Pn**	**09 33 51.0**	**+0.4**
CHGN	**Chignik**	**4.92**	**276**			**Pn**	**09 33 51.1**	**-0.2**
CHGN				IAML			09 34 47.3	
	comp=N,160nm,0.4s							
CHGN				IAML			09 34 47.8	
	comp=E,162nm,0.6s							
CHGN	**Chignik**	**4.92**	**276**	P		**Pn**	**09 33 51.2**	**-0.1**
	baz=90							
EYAK	**Cordova Ski Ar**	**4.93**	**23**			**Pn**	**09 33 51.5**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.93**	**23**	P		**Pn**	**09 33 51.6**	**+0.2**
	comp=E,65nm,0.5s							
EYAK	**Cordova Ski Ar**	**4.93**	**23**	P		**Pn**	**09 33 51.5**	**+0.2**
	baz=205							
RC01	**Rabbit Creek A**	**5.03**	**359**			**Pn**	**09 33 52.3**	**-0.5**
RC01				IAML			09 34 52.1	
	comp=E,81nm,0.3s							
RC01				IAML			09 34 53.6	
	comp=N,83nm,0.5s							
RC01	**Rabbit Creek A**	**5.03**	**359**	P		**Pn**	**09 33 52.2**	**-0.5**
	baz=179							
RAGM	**Ragged Mountai**	**5.05**	**29**			**Pn**	**09 33 53.2**	**+0.1**
RAGM				IAML			09 34 53.5	
	comp=E,217nm,0.5s							
SUCK	**Suckling Hills**	**5.07**	**35**			**Pn**	**09 33 53.5**	**+0.2**
SUCK				IAML			09 34 49.4	
	comp=N,203nm,0.8s							
SUCK				IAML			09 34 53.2	
	comp=E,139nm,0.8s							
HMT	**Hamilton**	**5.12**	**31**	Pn		**Pn**	**09 33 54.9**	**+0.8**
NICHA	**Nichawak Mount**	**5.13**	**33**			**Pn**	**09 33 54.6**	**+0.4**
GOAT	**Goat Mountain**	**5.20**	**28**			**Pn**	**09 33 55.4**	**+0.2**
BGLC	**Bering Glacier**	**5.26**	**37**			**Pn**	**09 33 56.0**	**0.0**
BGLC	**Bering Glacier**	**5.26**	**37**	P		**Pn**	**09 33 56.0**	**0.0**
	baz=222							
N20K	**Mount Spurr**	**5.32**	**346**	P		**Pn**	**09 33 55.8**	**-1.0**
	baz=164							
SPCR	**Spurr Chakacha**	**5.32**	**346**			**Pn**	**09 33 55.7**	**-1.1**
BERG	**Berg Lake**	**5.34**	**33**			**Pn**	**09 33 57.1**	**+0.2**
SPCN	**Chakachatna No**	**5.34**	**346**			**Pn**	**09 33 56.3**	**-0.8**
VNHG	**Veniaminof 1**	**5.34**	**276**			**Pn**	**09 33 57.6**	**+0.4**
GRIN	**Grindle Hills**	**5.37**	**36**			**Pn**	**09 33 57.9**	**+0.5**
SPCP	**Crater Peak Br**	**5.38**	**347**			**Pn**	**09 33 57.5**	**-0.1**
SPCG	**Spurr Capps Gl**	**5.38**	**347**			**Pn**	**09 33 56.7**	**-1.0**
KNK	**Knik Glacier**	**5.39**	**6**	Pn		**Pn**	**09 33 57.4**	**-0.4**
KNK	**Knik Glacier**	**5.39**	**6**	P		**Pn**	**09 33 57.3**	**-0.4**
	baz=186							
N19K	**Bonanza Creek**	**

M23K	Glacier View	5.82	9		Pn	09 34 03.8	+0.2
M23K	Glacier View baz=190	5.82	9	P	Pn	09 34 03.8	+0.2
SCM	Sheep Creek Mo	5.90	11	Pn	Pn	09 34 05.2	+0.5
SCM	Sheep Creek Mo baz=192	5.90	11	P	Pn	09 34 05.2	+0.5
SVW2	Sparrevohn	5.93	331		Pn	09 34 04.3	-0.7
SVW2	Sparrevohn	5.93	331	P	Pn	09 34 04.3	-0.7
ISLE	Juniper Island	5.94	37		Pn	09 34 05.3	-0.1
BAGL	Bagley Icefiel	5.94	39		Pn	09 34 05.3	+0.1
N17K	Nushagak Hills	5.99	321		Pn	09 34 05.9	0.0
N17K	Nushagak Hills baz=135	5.99	321	P	Pn	09 34 05.7	-0.2
SKT	Skwentna	6.01	351		Pn	09 34 05.8	-0.3
SKT	Skwentna baz=170	6.01	351	P	Pn	09 34 05.7	-0.5
VRDI	Verde Repeater	6.08	29	Pn	Pn	09 34 07.4	0.0
M20K	Styx River	6.10	344		Pn	09 34 06.8	-0.7
M20K	Styx River baz=161	6.10	344	P	Pn	09 34 06.8	-0.7
N25K	Chitina, Valde	6.13	23		Pn	09 34 08.5	+0.6
N25K	Chitina, Valde baz=207	6.13	23	P	Pn	09 34 08.2	+0.3
GLB	Gilahina Butte	6.17	27	Pn	Pn	09 34 08.8	+0.3
KIAG	Kiagna River	6.17	35		Pn	09 34 08.4	-0.2
SDPT	Sand Point	6.19	268		Pn	09 34 08.7	+0.1
SDPT	Sand Point	6.19	268	P	Pn	09 34 08.8	+0.2
SDPT	Sand Point baz=80	6.19	268	P	Pn	09 34 08.4	-0.2
SAMH	Samovar Hills	6.20	45		Pn	09 34 09.3	+0.4
TABL	Table Mountain	6.25	42		Pn	09 34 09.9	+0.2
M24K	Tolsona, Glenn	6.30	15	Pn	Pn	09 34 11.3	+1.1
M24K	Tolsona, Glenn baz=197	6.30	15	P	Pn	09 34 10.7	+0.4
O15K	Ungalikthiuk R	6.31	304		Pn	09 34 10.9	+0.7
O15K	Ungalikthiuk R baz=116	6.31	304	P	Pn	09 34 10.9	+0.7
M18K	Stony River	6.32	332		Pn	09 34 09.7	-0.7
M18K	Stony River baz=147	6.32	332	P	Pn	09 34 09.7	-0.7
MCARA	McCarthy VSAT	6.33	30		Pn	09 34 11.5	+0.9
MCARA	McCarthy VSAT baz=215	6.33	30	P	Pn	09 34 11.0	+0.4
YKU2	Yakutat	6.33	53	Pn	Pn	09 34 11.4	+0.8
PTPK	Patty Peak	6.34	33		Pn	09 34 11.2	+0.3
M19K	Big River Lodg	6.35	339		Pn	09 34 11.1	+0.3
M19K	Big River Lodg baz=155	6.35	339	P	Pn	09 34 10.0	-0.8
PCA	Pinnacle	6.39	47		Pn	09 34 11.8	+0.3
PINM	Pinnacle baz=234	6.39	47	P	Pn	09 34 11.6	+0.1
BARN	Barnard Glacie	6.50	36		Pn	09 34 13.5	+0.4
WASW	Wrangell South	6.51	23		Pn	09 34 13.7	+0.4
PNL	Peninsula	6.53	52		Pn	09 34 13.2	-0.1
PNL	Peninsula	6.53	52	P	Pn	09 34 13.6	+0.2
PNL	Peninsula baz=240	6.53	52	P	Pn	09 34 13.2	-0.1
N16K	Nishlik Lake	6.54	316		Pn	09 34 14.2	+0.7
N16K	Nishlik Lake baz=129	6.54	316	P	Pn	09 34 14.2	+0.7
CTG	Chitna Glacier baz=224	6.54	38	P	Pn	09 34 13.7	+0.1
CTGM	Chitina Glacie	6.54	38	Pn	Pn	09 34 14.0	+0.3
LOGN	Logan Glacier	6.56	40		Pn	09 34 14.0	+0.1
BCPM	Bancas Point	6.57	50		Pn	09 34 14.4	+0.5
WAT6	Susitna Watana	6.60	8		Pn	09 34 14.6	+0.2
WAT6	Susitna Watana baz=189	6.60	8	P	Pn	09 34 14.6	+0.2
L19K	White Mountain	6.69	338		Pn	09 34 14.8	-0.8
L19K	White Mountain baz=154	6.69	338	P	Pn	09 34 14.5	-1.0
M17K	Holitna River	6.72	326		Pn	09 34 16.1	+0.3
M17K	Holitna River baz=139	6.72	326	P	Pn	09 34 15.9	0.0
HARP	HAARP	6.74	18		Pn	09 34 16.9	+0.7
HARP	HAARP baz=201	6.74	18	P	Pn	09 34 16.9	+0.7
L20K	Farewell, AK	6.79	343		Pn	09 34 15.4	-1.5
WAT7	Susitna Watana	6.79	3		Pn	09 34 17.4	+0.3
WAT1	Susitna Watana	6.80	4		Pn	09 34 17.5	+0.5
WAT1	Susitna Watana baz=185	6.80	4	P	Pn	09 34 17.5	+0.5
PS1A	Pavlof South-1	6.88	270		Pn	09 34 18.0	-0.1
N15K	Kwethluk River	6.90	311		Pn	09 34 19.9	+1.5
N15K	Kwethluk River baz=122	6.90	311	P	Pn	09 34 19.9	+1.5
PVV	Pavlof Volcano	6.92	269		Pn	09 34 18.1	-0.6
M16K	Timber Creek	6.96	319		Pn	09 34 19.9	+0.6
M16K	Timber Creek baz=132	6.96	319	P	Pn	09 34 19.7	+0.4
O14K	Tigyukauivet M	7.02	302	Pn	Pn	09 34 21.4	+1.5
PN7A	Pavlof North-7	7.02	270		Pn	09 34 20.6	+0.4
DHY	Denali Highway	7.12	8		Pn	09 34 21.5	+0.1
DHY	Denali Highway baz=190	7.12	8	P	Pn	09 34 22.0	+0.5
L18K	Granite Mounta	7.16	332	Pn	Pn	09 34 21.2	-0.7
L18K	Granite Mounta baz=146	7.16	332	P	Pn	09 34 21.0	-0.9
M26K	Nabesna, AK	7.19	25	Pn	Pn	09 34 23.1	+0.6
M26K	Nabesna, AK baz=211	7.19	25	P	Pn	09 34 23.4	+1.0
O29M	Mount Kennedy	7.21	49		Pn	09 34 23.2	+0.6
O29M	Mount Kennedy baz=238	7.21	49	P	Pn	09 34 23.3	+0.6
PAX	Paxson	7.23	15		Pn	09 34 24.1	+1.1
PAX	Paxson baz=198	7.23	15	P	Pn	09 34 24.3	+1.3
P29M	Windy Craggy	7.27	56		Pn	09 34 23.1	-0.3
P29M	Windy Craggy baz=245	7.27	56	P	Pn	09 34 23.2	-0.3
RND	Reindeer	7.37	3		Pn	09 34 24.9	0.0
TRF	Thorofare Moun	7.41	358		Pn	09 34 25.8	+0.2
TRF	Thorofare Moun baz=177	7.41	358	P	Pn	09 34 25.4	-0.1
YUK3	Moose Creek	7.42	36		Pn	09 34 27.0	+1.3
YUK3	Moose Creek baz=223	7.42	36	P	Pn	09 34 27.0	+1.3
M15K	Kasigluk River	7.44	313		Pn	09 34 26.4	+0.7
M15K	Kasigluk River baz=124	7.44	313	P	Pn	09 34 26.5	+0.7
M27K	Edge Creek, AK	7.44	29		Pn	09 34 26.9	+1.0
M27K	Edge Creek, AK baz=215	7.44	29	P	Pn	09 34 26.8	+0.8
CAST	Castle Rocks	7.47	351	Pn	Pn	09 34 26.2	-0.1
CAST	Castle Rocks baz=169	7.47	351	P	Pn	09 34 26.9	+0.7
N14K	Kuskokwak Cree	7.49	306		Pn	09 34 27.5	+1.1
N14K	Kuskokwak Cree baz=116	7.49	306	P	Pn	09 34 27.5	+1.1
MENT	Mentasta	7.51	21	Pn	Pn	09 34 24.3	-2.5
YUK7	Dusty Glacier	7.51	49		Pn	09 34 27.9	+1.0
KTH	Kantishna Hill	7.53	356	Pn	Pn	09 34 25.7	-1.4
L17K	Donlin	7.54	327		Pn	09 34 26.9	-0.2
L17K	Donlin baz=140	7.54	327	P	Pn	09 34 26.9	-0.2
S31K	Pelican	7.54	70		Pn	09 34 25.2	-2.0
S31K	Pelican baz=261	7.54	70	P	Pn	09 34 25.8	-1.4
TTA	Tatalina	7.61	337	P	Pn	09 34 27.8	-0.3
L16K	Owhat River	7.61	322		Pn	09 34 28.4	+0.3
L16K	Owhat River baz=134	7.61	322	P	Pn	09 34 28.4	+0.3
K20K	Telida	7.64	345		Pn	09 34 27.6	-1.0
K20K	Telida baz=161	7.64	345	P	Pn	09 34 27.7	-1.0
L26K	Log Cabin Wild	7.66	22		Pn	09 34 30.1	+1.2
MCK	McKinley	7.69	2		Pn	09 34 29.9	+0.6
MCK	McKinley baz=183	7.69	2	P	Pn	09 34 30.1	+0.9
BVCY	Beaver Creek	7.78	32		Pn	09 34 31.4	+1.0
BVCY	Beaver Creek baz=219	7.78	32	P	Pn	09 34 31.4	+1.0
P30M	Million Dollar	7.83	54		Pn	09 34 31.6	+0.4
P30M	Million Dollar baz=244	7.83	54	P	Pn	09 34 31.9	+0.7
PLBC	Pleasant Camp	7.85	59		Pn	09 34 31.3	-0.1
PLBC	Pleasant Camp baz=250	7.85	59	P	Pn	09 34 31.6	+0.2
R31K	City Hall, Gus	7.88	67		Pn	09 34 30.9	-0.9
R31K	City Hall, Gus baz=258	7.88	67	P	Pn	09 34 30.9	-0.9
HYT	Haines Junctio	7.93	48	Pn	Pn	09 34 32.8	+0.1
HYT	Haines Junctio baz=238	7.93	48	P	Pn	09 34 33.3	+0.6
FALS	False Pass	7.94	267		Pn	09 34 30.6	-2.1
FALS	False Pass	7.94	267	P	Pn	09 34 32.8	+0.1
FALS	False Pass baz=76	7.94	267	P	Pn	09 34 32.7	+0.1
SIT	Sitka	7.95	77	Pn	Pn	09 34 30.6	-2.2
SIT	Sitka	7.95	77	P	Pn	09 34 29.7	-3.1
SIT	Sitka baz=268	7.95	77	P	Pn	09 34 30.8	-2.0
K17K	Iditarod	8.00	330		Pn	09 34 33.0	-0.4
K17K	Iditarod baz=143	8.00	330	P	Pn	09 34 32.8	-0.6
BWN	Browne	8.13	0	Pn	Pn	09 34 33.7	-1.5
ISLZ	Isanotski Laza	8.14	266		Pn	09 34 35.4	-0.1
ISNN	Isanotski Nort	8.15	267		Pn	09 34 35.9	+0.3
J18K	Innoko River	8.23	337		Pn	09 34 36.9	+0.2
J18K	Innoko River baz=151	8.23	337	P	Pn	09 34 36.1	-0.5
L15K	Ungalak Mounta	8.32	317		Pn	09 34 38.2	+0.3
L15K	Ungalak Mounta baz=127	8.32	317	P	Pn	09 34 38.5	+0.6
SKAG	Skagway	8.35	60		Pn	09 34 38.8	+0.5
SKAG	Skagway	8.35	60	P	Pn	09 34 38.8	+0.5
BESE	Bessie Mountai	8.37	66	Pn	Pn	09 34 38.2	-0.4
S32K	Killisnoo	8.38	74	Pn	Pn	09 34 37.5	-1.1
S32K	Killisnoo baz=266	8.38	74	P	Pn	09 34 36.9	-1.7
SCRK	Sand Creek	8.41	17		Pn	09 34 40.2	+1.0
J20K	Nowinta River	8.44	346		Pn	09 34 39.1	-0.3
J20K	Nowinta River baz=162	8.44	346	P	Pn	09 34 38.7	-0.7
WRH	Wood River Hil	8.46	4	Pn	Pn	09 34 39.2	-0.5
HDA	Harding Lake	8.47	8		Pn	09 34 42.1	+2.2
R32K	Eaglecrest	8.49	69		Pn	09 34 40.6	+0.4
J19K	Poorman	8.49	342		Pn	09 34 39.4	-0.8
O30N	Mendenhall	8.51	51	Pn	Pn	09 34 41.0	+0.5
O30N	Mendenhall baz=242	8.51	51	P	Pn	09 34 40.8	+0.3
NEA2	Nenana	8.55	2	Pn	Pn	09 34 42.0	+1.0
M29M	Somme Creek	8.56	37		Pn	09 34 42.2	+1.0
M29M	Somme Creek baz=226	8.56	37	P	Pn	09 34 41.9	+0.7
JIS	Juneau Island	8.56	69		Pn	09 34 40.7	-0.4
JIS	Juneau Island	8.56	69	P	Pn	09 34 40.9	-0.2
L14K	Kuka Creek	8.61	313	Pn	Pn	09 34 43.3	+1.6
L14K	Kuka Creek baz=122	8.61	313	P	Pn	09 34 42.9	+1.2
CCB	Clear Creek Bu	8.65	5		Pn	09 34 42.8	+0.5
WESE	West Dahl East	8.70	266		Pn	09 34 43.1	0.0
K15K	Wolf Creek Mou	8.73	320	Pn	Pn	09 34 43.8	+0.4
K15K	Wolf Creek Mou baz=130	8.73	320	P	Pn	09 34 44.3	+0.9
WECS	Westdahl Cape	8.79	266		Pn	09 34 44.2	-0.2
K27K	Chicken	8.82	22	Pn	Pn	09 34 46.1	+1.4
J25K	Salcha River,	8.82	12		Pn	09 34 45.3	+0.6
IL31		8.83	8		Pn	09 34 44.3	-0.5
ILAR	Eielson Array comp=E,1.0nm,0.3s,baz=191,slow=13,SNR=49	8.83	8	Pn	Pn	09 34 44.7	-0.1
ILAR				Sn	Sn	09 36 21.7	-2.5
	comp=E,0.9nm,0.3s,baz=202,slow=20,SNR=6.8 comp=E,2.2nm,0.4s						
COLA	College	8.87	5	Pn	Pn	09 34 45.8	+0.4
COLA	College	8.87	5	P	Pn	09 34 46.5	+1.1
MDM	Murphy Dome	8.94	4	Pn	Pn	09 34 45.7	-0.7
J26L	Joseph Creek	8.97	17	Pn	Pn	09 34 47.7	+0.9
N31M	Braeburn, Yuko	8.99	47	Pn	Pn	09 34 48.2	+1.1
WHY	Whitehorse	8.99	53	Pn	Pn	09 34 47.7	+0.5
MLY	Manley	9.01	357	Pn	Pn	09 34 48.6	+1.3
I23K	Minto, Yukon-K	9.11	1		Pn	09 34 48.8	+0.2
J16K	Anvik River	9.11	327		Pn	09 34 48.8	+0.1
J16K	Anvik River baz=138	9.11	327	P	Pn	09 34 48.5	-0.2
L29M	L29M	9.13	35	Pn	Pn	09 34 50.0	+1.0
L29M	L29M baz=224	9.13	35	P	Pn	09 34 49.6	+0.5
POKR	Poker Plat Res	9.14	6	Pn	Pn	09 34 47.7	-1.3
P32M	Atlin	9.18	61	Pn	Pn	09 34 49.6	0.0
P32M	Atlin baz=254	9.18	61	P	Pn	09 34 49.7	0.0
I21K	Tanana	9.21	354	Pn	Pn	09 34 50.4	+0.4
U33K	Whale Pass	9.22	83		Pn	09 34 48.2	-1.9
U33K	Whale Pass baz=276	9.22	83	P	Pn	09 34 48.5	-1.6
M30M	Minto, Yukon	9.23	40	Pn	Pn	09 34 51.4	+1.1
M30M	Minto, Yukon baz=230	9.23	40	P	Pn	09 34 50.7	+0.3
CRAG	Craig	9.31	87		Pn	09 34 51.0	-0.5
CRAG	Craig	9.31	87	P	Pn	09 34 49.0	-2.4
CRAG	Craig baz=280	9.31	87	P	Pn	09 34 49.1	-2.4
DAWY	Dawson	9.49	28	Pn	Pn	09 34 53.1	-0.9
EGAK	Eagle	9.67	22	Pn	Pn	09 34 58.6	+2.3
H21K	Melozitna Rive	9.74	352	Pn	Pn	09 34 56.4	-0.9
I26K	Coal Creek Min	9.78	16	Pn	Pn	09 34 59.0	+1.1
P33M	Teslin, Yukon	9.79	58	Pn	Pn	09 34 57.9	-0.2
P33M	Teslin, Yukon baz=252	9.79	58	P	Pn	09 34 58.2	+0.1
H24K	Noodor Dome	9.83	4	Pn	Pn	09 35 00.1	+1.5
K29M	Barlow Dome	9.86	33	Pn	Pn	09 34 59.6	+0.6
M31M	Drury Creek, Y	9.93	46	Pn	Pn	09 35 00.8	+0.9
UNV	Unalaska Valle	9.97	264	P	Pn	09 34 59.2	-1.2
N32M	Quiet Lake	10.00	53	Pn	Pn	09 34 59.7	-1.2
H19K	Roundabout Mou	10.05	343	Pn	Pn	09 35 00.2	-1.2
H18K	Honhosa River	10.06	338	Pn	Pn	09 35 01.4	-0.2
J29N	Klondike Camp	10.11	29	Pn	Pn	09 35 03.9	+1.4
IMAR	Indian Mountai	10.14	350	Pn	Pn	09 35 02.9	+0.1
FARO	Faro, Yukon	10.36	47	Pn	Pn	09 35 07.0	+1.2
R33M	Jennings River	10.50	64	Pn	Pn	09 35 07.8	0.0
G21K	Allakaket	10.64	352	Pn	Pn	09 35 09.9	+0.2
G23K	Bananza Creek	10.68	359	Pn	Pn	09 35 12.6	+2.4
G24K	Hadweenzic Riv	10.71	5	Pn	Pn	09 35 11.5	+0.9
FYU	Fort Yukon	10.73	9	Pn	Pn	09 35 11.5	+0.7
J30M	Hart River	10.75	32	Pn	Pn	09 35 12.6	+1.5
DLBC	Dease Lake	10.86	69	Pn	Pn	09 35 12.7	0.0
DLBC	Dease Lake comp=E,2.4nm,0.3s,baz=306,slow=6.4,SNR=42 comp=E,4.2nm,0.3s	10.86	69	Pn	Pn	09 35 11.8	-0.9
F21K	Alatna River	11.34	352	Pn	Pn	09 35 19.2	+0.1
F20K	Avaraart Lake	11.38	348	Pn	Pn	09 35 19.6	-0.1
F24K	Squaw Lake	11.52	3	Pn	Pn	09 35 22.6	+1.0
ANM	Nome	11.52	324	Pn	Pn	09 35 23.2	+1.6
WTLY	Watson Lake, Y	11.71	61	Pn	Pn	09 35 24.9	+0.6
E19K	Redstone River	11.97	346	Pn	Pn	09 35 28.4	+0.6
E24K	Your Creek	12.06	2	Pn	Pn	09 35 30.5	+1.5
E25K	Arctic Village	12.23	7	Pn	Pn	09 35 31.8	+0.4
TOLK	Toolik Lake Re	12.62	0	Pn	Pn	09 35 37.9	+1.3
G30M	tAoh Zrail Nji	12.63	25	Pn	Pn	09 35 37.6	+0.8
BBB	Bella Bella comp=E,0.1nm,0.3s,baz=270,slow=10,SNR=2.1	13.18	98	Pn	Pn	09 35 43.0	-1.3
BBB				Sn	Sn	09 37 58.8	-12
	comp=E,0.2nm,0.3s,baz=183,slow=2.8,SNR=1.8 comp=E,18nm,1.2s						
F31M	Tsiigehtchic	13.59	27	Pn	Pn	09 35 49.2	-0.6
C18K	Utukok River	13.68	342	Pn	Pn	09 35 49.9	-1.2
INK	Inuvik	14.31	25	Pn	Pn	09 36 00.1	+0.4
INK	Inuvik comp=E,0.1nm,0.3s,baz=212,slow=11,SNR=4.5 comp=E,0.7nm,0.6s	14.31	25	Pn	Pn	09 36 00.5	+0.8
FLDN	Fort Liard	14.36	62	Pn	Pn	09 36 02.5	+2.0
ATKA	Atka Island	14.89	265	Pn	Pn	09 36 06.1	-1.5
ADK	Adak	16.42	267	Pn	Pn	09 36 24.9	-2.6
ADK	Adak comp=E,34nm,1.5s	16.42	267	P	Pn	09 36 27.1	-0.4
KIWB	Kanaga Island	16.69	267	Pn	Pn	09 36 30.9	-0.1
CLRS	Cowichan Lake	17.07	104	Pn	Pn	09 36 35.1	-0.8
CLRS	comp=Z,20nm,1.5s			IAmb	IAmb	09 36 53.2	
C36M	Paulatuk	17.52	31		Pn	09 36 41.1	0.0
YKAB2	New Yellowknif	18.80	56		P	09 36 57.4	+0.9
YKA	Yellowknife Ar	18.81	56	P	P	09 36 57.0	+0.3
YKA	Yellowknife Ar comp=Z,0.1nm,0.3s,baz=264,slow=9.7,SNR=13 comp=Z,1.4nm,0.9s	18.81	56	P	P	09 36 57.8	+1.2
AMKA	Amchitka	18.89	269	P	P	09 36 56.0	-1.6
A36M	Sachs Harbour	18.95	23	P	P	09 36 58.5	+0.5
A36M	comp=Z,7.9nm,0.8s			IAmb	IAmb	09 37 02.4	
PDAR	Pinedale Array comp=Z,0.1nm,0.4s,baz=330,slow=5.2,SNR=2.6 comp=Z,0.1nm,0.4s	28.81	100	P	P	09 38 36.4	+0.8
TXAR	Lajitas Array	41.92	110	P	P	09 40 24.6	-3.4
TXAR	Lajitas Array comp=Z,0.2nm,0.8s,baz=323,slow=5.9,SNR=3.4 comp=Z,0.2nm,0.8s	41.92	110	P	P	09 40 29.1	+1.1
H11N2	WAKE ISLAND Hy baz=29,slow=76,SNR=7.0	48.62	240	T	T	10 34 12.9	
H11N3	WAKE ISLAND Hy baz=29,slow=76,SNR=6.3	48.62	240	T	T	10 34 06.4	
H11N1	WAKE ISLAND Hy baz=29,slow=76,SNR=5.8	48.64	240	T	T	10 34 26.6	
H11S1	WAKE ISLAND Hy baz=29,slow=76,SNR=7.0	49.76	239	T	T	10 35 36.9	
H11S2	WAKE ISLAND Hy baz=29,slow=76,SNR=4.9	49.77	239	T	T	10 35 48.0	
H11S3	WAKE ISLAND Hy baz=29,slow=76,SNR=6.2	49.78	239	T	T	10 35 20.0	
ARCES	ARCESS Array B comp=Z,4.1nm,0.9s,baz=12,slow=6.2,SNR=5.3 comp=Z,4.1nm,0.9s	54.65	2	P	P	09 42 06.1	+0.6
SONM	Songino Array comp=Z,0.7nm,0.4s,baz=43,slow=6.6,SNR=3.8 comp=Z,0.7nm,0.4s	58.63	310	P	P	09 42 35.4	+1.0
ZALV	Zalesovo Beam comp=Z,2.4nm,0.7s,baz=35,slow=7.4,SNR=11 comp=Z,2.4nm,0.7s	61.64	327	P	P	09 42 55.7	+1.1
NOA	NORSAR Array B comp=Z,0.5nm,0.6s,baz=349,slow=5.9,SNR=1.5 comp=Z,0.5nm,0.6s	62.25	10	P	P	09 43 00.5	+1.8
FINES	FINESS Array B comp=Z,2.3nm,0.6s,baz=0.7,slow=9.3,SNR=13 comp=Z,2.3nm,0.6s	62.77	2	P	P	09 43 02.8	+0.7
KURK	Kurchatov	66.31	329	P	P	09 43 26.8	+1.4
KURK	comp=Z,2.6nm,1.1s			IAmb	IAmb	09 43 28.6	
BRVK	Borovoye	66.39	335	P	P	09 43 27.2	+1.3
BRVK	comp=Z,3.4nm,1.1s			IAmb	IAmb	09 43 27.6	
BVAR	Borovoye Array comp=Z,1.6nm,0.7s,baz=49,slow=10,SNR=8.7 comp=Z,1.6nm,0.7s	66.40	335	P	P	09 43 27.1	+1.1
KURBB	Kurchatov Arra comp=Z,1.4nm,0.6s,baz=30,slow=6.5,SNR=9.3 comp=Z,1.4nm,0.6s	66.42	329	P	P	09 43 26.8	+0.7
MKAR	Makanchi Array	68.66	325	P	P	09 43 41.2	+0.8
MKAR	Makanchi Array comp=Z,0.7nm,0.5s,baz=39,slow=6.0,SNR=11 comp=Z,0.7nm,0.5s	68.66	325	P	P	09 43 41.4	+1.0
ABKAR	Akbulak array	72.19	340	P	P	09 44 03.1	+1.3
AKASG	Malin Array Be comp=Z,0.7nm,0.5s,baz=1.7,slow=6.2,SNR=4.1 comp=Z,0.7nm,0.5s	73.59	1	P	P	09 44 10.7	+0.6
KKAR	Karatay Array	75.54	331	P	P	09 44 22.2	+0.6

*HEL **06** 09:32:57.2±0.3, 69°.55N×34°.92E, h0km, ML2.3, Explosion*
*KOLA **06** 09:32:57.2, 69°.57N×35°.02E, h0km, ML2.6, Error ellipse: s-maj=9.7km s-min=2.9km az=60.0, Barentz Sea*
*IDC **06** 09:33:00.1±1.7, 69°.38N×34°.24E, h0km, mbtmp3.5/4, ML2.8/4, Error ellipse: s-maj=17.4km s-min=13.3km az=77.0*

ISC 06 09:32:57.0±1.4, 69°.48N±0°.06×34°.75E±0°.07, h0km, n18, σ1§14/30, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TERR	Teriberka	0.31	156	P	Pg		09 33 03.7	+0.8
TERR				S	Sg		09 33 07.7	+0.9
LVZ	Lovozero	1.59	181	P	Pn		09 33 26.9	+0.5
LVZ				S	Sn		09 33 48.0	+0.4
LVZ	Lovozero	1.59	181	eP	Pb		09 33 26.9	-0.3
LVZ				eS	Sb		09 33 48.3	+0.4
VADS	Vadso	1.98	291	P	Pn		09 33 31.9	+0.2
VADS				S	Sn		09 33 57.5	+0.3
APA	Apatity	1.98	195	P	Pb		09 33 33.6	-0.3
APA				S	Sb		09 33 59.6	+0.6
APA0	Apatity Array	1.99	200	P	Pb		09 33 33.6	-0.4
APA0				S	Sb		09 33 59.5	+0.2
RAJF	Raja-Jooseppi	2.53	250	eP	Pn		09 33 40.4	+1.1
RAJF				eSB	Sb		09 34 15.5	+0.6
VRF	Varrio	2.56	230	eP	Pn		09 33 40.7	+0.9
VRF				eSB	Sb		09 34 16.7	+0.9
VRF				MSG			09 34 23.3	
	comp=Z,10.0nm,0.3s							
KEV	Kevo	2.73	279	eP	Pn		09 33 42.9	+1.0
KEV				eSB	Sb		09 34 20.8	+0.4
KEV				MSG			09 34 27.0	
	comp=Z,14nm,0.3s							
KMNF	Kaamanen	2.77	267	eP	Pn		09 33 43.7	+1.0
KMNF				eS	Sn		09 34 18.3	+1.5
ARA0	ARCESS Array S	3.25	275	eP	Pn		09 33 50.0	+0.8
ARCES	ARCESS Array B	3.25	275	P	Pn		09 33 49.9	+0.6
ARCES				S	Sn		09 34 29.4	+0.8
ARCES	ARCESS Array B comp=Z,0.6nm,0.3s,baz=90,slow=14,SNR=58	3.25	275	Pn	Pn		09 33 50.0	+0.8
ARCES				Lg	Lg		09 34 36.9	
	comp=Z,1.7nm,0.3s,baz=84,slow=23,SNR=5.5 comp=Z,1.8nm,0.3s							
SGF	Sodankyl	3.66	240	eP	Pn		09 33 55.2	+0.4
FAUS	Fauske	7.46	263	P	Pn		09 34 47.3	+0.3
FAUS				S	Sn		09 36 09.8	-2.3
FINES	FINESS Array B comp=Z,0.3nm,0.3s,baz=20,slow=13,SNR=11	8.83	208	Pn	Pn		09 35 03.9	-1.8
FINES				Lg	Lg		09 37 28.1	
	comp=Z,0.5nm,0.3s,baz=30,slow=26,SNR=3.5 comp=Z,0.7nm,0.4s							
SPITS	Spitsbergen Ar baz=148,slow=12 comp=Z,11nm,0.9s	10.05	338	Pn	Pn		09 35 22.0	-0.3
NOA	NORSAR Array B baz=35,slow=11,SNR=1.8 comp=Z,0.4nm,0.6s	12.89	241	Pn	Pn		09 35 57.6	-3.7

*SKHL **06** 09:36:14.8±0.3, 42°.80N×

mb4.1/20,mbtmp4.6/21,Error ellipse: s-maj=16.2km s-min=12.5km az=88.0
*NEIC **06** 09:41:19.2±1.7, 14.3S±0.1×167.4E±0.1,h198km±7km, mb4.5/83,Error ellipse: s-maj=18.3km s-min=15.0km az=95.0*

ISC 06 09:41:18.7±0.4,**14.34S**±0.05×**167.44E**±0.07,**h200**km, **n185**,σ1§**18**/181,**mb4.5**/60,**2D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.87**	**206**	Pn		**Pn**	**09 42 58.7**	**+1.4**
KOUNC	**Koumac, New Ca**	**6.87**	**206**	P		**Pn**	**09 42 59.9**	**+2.6**
YATNC	**Mamie plateau,**	**7.69**	**184**	P		Pn	09 43 11.0	+3.0
DZM	**Mont Dzumac**	**7.75**	**187**	Pn		**Pn**	**09 43 10.4**	**+1.6**
DZM	**Mont Dzumac**	**7.75**	**187**	P		Pn	09 43 12.9	+4.1
DZM	**Mont Dzumac**	**7.75**	**187**	P		**Pn**	**09 43 11.0**	**+2.3**
	8.6nm,0.8s,baz=77,slow=18,SNR=14							
DZM				S		**Sn**	**09 44 37.3**	**+1.0**
	6.4nm,0.8s,baz=168,slow=21,SNR=0.9							
ONTNC	**Ouen Toro**	**7.98**	**187**	Pn		**Pn**	**09 43 11.6**	**-0.1**
OUENC	**Ouen Island, N**	**8.05**	**184**	Pn		**Pn**	**09 43 12.7**	**+0.1**
PINNC	**Pines Island,**	**8.23**	**180**	Pn		**Pn**	**09 43 15.5**	**+0.5**
PINNC	**Pines Island,**	**8.23**	**180**	P		Pn	09 43 18.2	+3.3
HNR	**Honiara**	**8.81**	**303**	P		**Pn**	**09 43 22.5**	**-0.1**
	2µm,0.8s,baz=316,slow=8.1,SNR=4.4							
HNR				S		**Sn**	**09 45 02.1**	**+0.7**
	369nm,0.3s,baz=4.3,slow=17,SNR=1.5							
EIDS	**Eidsvold**	**18.88**	**232**	P		**Pn**	**09 45 26.2**	**-0.9**
EIDS	**Eidsvold**	**18.88**	**232**	P		**Pn**	**09 45 26.1**	**-1.0**
PMG	**Port Moresby**	**20.44**	**282**	P		**P**	**09 45 39.2**	**-1.7**
PMG				IAmb		IAmb	09 45 43.8	
	comp=Z,14nm,0.7s							
PMG	**Port Moresby**	**20.44**	**282**	P		**P**	**09 45 40.7**	**-0.3**
	comp=Z,14nm,0.6s,baz=89,slow=9.0,SNR=7.3							
	comp=Z,14nm,0.6s							
CTA	**Charters Tower**	**21.02**	**251**	P		**P**	**09 45 46.7**	**-0.4**
	comp=Z,18nm,0.9s,baz=83,slow=11,SNR=7.5							
	comp=Z,18nm,0.9s							
CTAO	**Charters Tower**	**21.02**	**251**	P		**P**	**09 45 45.7**	**-1.4**
CTAO				IAmb		IAmb	09 45 49.6	
	comp=Z,18nm,0.8s							
ARMA	**Armidale**	**21.63**	**220**	P		**P**	**09 45 55.0**	**+1.5**
ARMA				IAmb		IAmb	09 45 57.0	
	comp=Z,30nm,1.4s							
ARMA	**Armidale**	**21.63**	**220**	P		**P**	**09 45 55.2**	**+1.8**
MTSU	**Mount Surprise**	**22.52**	**257**	P		**P**	**09 46 02.5**	**+0.6**
COEN	**Coen**	**23.53**	**268**	P		**P**	**09 46 11.6**	**+0.5**
COEN				IAmb		IAmb	09 46 12.2	
	comp=Z,10nm,0.7s							
COEN	**Coen**	**23.53**	**268**	P		**P**	**09 46 11.6**	**+0.5**
MGCD	**Mangrove Creek**	**23.94**	**216**	P		**P**	**09 46 16.6**	**+1.9**
MXZ	**Matakaoa Point**	**25.07**	**159**	P		**P**	**09 46 23.5**	**-1.2**
CAN	**Canberra**	**26.68**	**215**	P		**P**	**09 46 40.6**	**+1.3**
CAN				IAmb		IAmb	09 46 45.1	
	comp=Z,21nm,1.4s							
QIS	**Mount Isa**	**27.24**	**253**	P		**P**	**09 46 44.3**	**-0.2**
INKA	**Innaminka**	**28.18**	**237**	P		**P**	**09 46 53.1**	**+0.4**
STKA	**Stephens Creek**	**29.37**	**229**	P		**P**	**09 47 04.1**	**+0.9**
STKA				IAmb		IAmb	09 47 05.1	
	comp=Z,3.3nm,0.6s							
STKA	**Stephens Creek**	**29.37**	**229**	P		**P**	**09 47 04.2**	**+0.9**
STKA	**Stephens Creek**	**29.37**	**229**	P		**P**	**09 47 04.1**	**+0.9**
	comp=Z,10nm,0.4s,baz=54,slow=8.9,SNR=42							
	comp=Z,10nm,0.4s							
TOO	**Toolangi**	**30.26**	**216**	P		**P**	**09 47 12.2**	**+1.2**
TOO	**Toolangi**	**30.26**	**216**	P		**P**	**09 47 12.3**	**+1.2**
LCRK	**Leigh Creek**	**31.29**	**234**	P		**P**	**09 47 20.0**	**-0.1**
GLAD	**Gladstone**	**31.48**	**209**	P		**P**	**09 47 23.2**	**+1.5**
WR0	**Warramunga Arr**	**31.89**	**255**	P		**P**	**09 47 24.3**	**-1.3**
WR0				IAmb		IAmb	09 47 24.7	
	comp=Z,14nm,1.1s							
ARPS	**Mount Arapiles**	**31.95**	**221**	P		**P**	**09 47 27.0**	**+1.2**
WB0	**Warramunga Arr**	**32.02**	**256**	P		**P**	**09 47 25.1**	**-1.5**
WB2	**Warramunga Arr**	**32.07**	**255**	P		**P**	**09 47 25.7**	**-1.4**
WRAB	**Tennant Creek**	**32.07**	**255**	P		**P**	**09 47 26.1**	**-1.0**
WRAB				IAmb		IAmb	09 47 26.2	
	comp=Z,13nm,0.6s							
WRA	**Warramunga Arr**	**32.08**	**255**	P		**P**	**09 47 24.3**	**-2.9**
WRA	**Warramunga Arr**	**32.08**	**255**	P		**P**	**09 47 25.4**	**-1.8**
	comp=Z,11nm,0.5s,baz=86,slow=9.4,SNR=119							
WRA				PcP		**PcP**	**09 50 11.4**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=94,slow=3.6,SNR=5.9							
	comp=Z,11nm,0.5s							
HTT	**Hallett**	**32.10**	**229**	P		**P**	**09 47 28.3**	**+1.1**
OOD	**Oodnadatta**	**32.40**	**240**	P		**P**	**09 47 29.7**	**-0.2**
AS01	**Alice Springs**	**32.92**	**249**	P		**P**	**09 47 33.2**	**-1.3**
AS31	**Alice Springs**	**32.97**	**249**	P		**P**	**09 47 33.2**	**-1.7**
AS31				IAmb		IAmb	09 47 34.8	
	comp=Z,6.3nm,0.5s							
ASAR	**Alice Springs**	**32.97**	**249**	P		**P**	**09 47 33.4**	**-1.5**
	comp=Z,9.5nm,0.4s,baz=77,slow=9.3,SNR=224							
ASAR				PcP		**PcP**	**09 50 13.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=77,slow=2.5,SNR=6.1							
	comp=Z,9.5nm,0.4s							
BBOO	**Buckleboo**	**33.95**	**232**	P		**P**	**09 47 43.6**	**+0.4**
BBOO	**Buckleboo**	**33.95**	**232**	P		**P**	**09 47 43.5**	**+0.3**
MULG	**Mulgathing**	**34.56**	**237**	P		**P**	**09 47 47.7**	**-0.8**
MTN	**Manton Dam**	**35.30**	**268**	P		**P**	**09 47 54.6**	**-0.4**
MTN				IAmb		IAmb	09 47 54.9	
	comp=Z,11nm,0.9s							
FAKI	**Fak Fak**	**36.53**	**285**	P		**P**	**09 48 04.9**	**-0.5**
FAKI	**Fak Fak**	**36.53**	**285**	P		**P**	**09 48 05.1**	**-0.4**
KNRA	**Kununurra**	**37.35**	**263**	P		**P**	**09 48 11.6**	**-0.8**
KNRA	**Kununurra**	**37.35**	**263**	P		**P**	**09 48 11.6**	**-0.8**
WRKA	**Warakurna**	**38.24**	**248**	P		**P**	**09 48 18.9**	**-0.8**
FORT	**Forrest**	**39.64**	**239**	P		**P**	**09 48 30.8**	**-0.4**
FORT	**Forrest**	**39.64**	**239**	P		**P**	**09 48 30.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.25**	**259**	P		**P**	**09 48 36.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**40.25**	**259**	P		**P**	**09 48 36.2**	**-0.2**
KMBL	**Kambalda**	**44.93**	**240**	P		**P**	**09 49 13.4**	**-0.5**
PSA00	**Pilbara Seismi**	**45.70**	**254**	P		**P**	**09 49 19.9**	**-0.2**
PSA00				IAmb		IAmb	09 49 20.7	
	comp=Z,12nm,0.9s							
MEEK	**Meekatharra**	**47.09**	**247**	P		**P**	**09 49 30.4**	**-0.5**
KLBR	**Kellerberrin**	**48.44**	**240**	P		**P**	**09 49 40.5**	**-0.6**
PLAI	**Plampang**	**48.89**	**271**	P		**P**	**09 49 44.3**	**-0.5**
NWAO	**Narrogin (SRO)**	**49.09**	**239**	P		**P**	**09 49 45.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**49.09**	**239**	P		**P**	**09 49 45.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**49.09**	**239**	P		**P**	**09 49 45.1**	**-1.0**
BLDU	**Ballidu**	**49.19**	**242**	P		**P**	**09 49 45.9**	**-0.9**
MUN	**Mundaring**	**49.80**	**240**	P		**P**	**09 49 51.2**	**-0.2**
UGM	**Wanagama**	**56.10**	**270**	P		**P**	**09 50 37.5**	**-0.2**
JMN	**Monobe**	**57.52**	**327**	P		**P**	**09 50 47.8**	**+0.5**
MJAR	**Matsushiro Arr**	**57.64**	**332**	P		**P**	**09 50 46.5**	**-1.6**
	comp=Z,4.1nm,0.6s,baz=169,slow=8.0,SNR=11							
	comp=Z,4.1nm,0.6s							
MAJO	**Matsushiro**	**57.64**	**332**	P		**P**	**09 50 47.9**	**-0.2**
MAJO				IAmb		IAmb	09 51 09.6	
	comp=Z,21nm,1.4s							
JMM	**Marumori**	**57.65**	**335**	P		**P**	**09 50 48.7**	**+0.6**
MJB9	**Matsu-Tunnel**	**57.65**	**332**	P		**P**	**09 50 48.8**	**+0.7**
MJB9				IAmb		IAmb	09 51 10.6	
	comp=Z,23nm,1.4s							
JNU	**Nakatsue**	**58.71**	**324**	P		**P**	**09 50 55.2**	**-0.3**
JTM	**Tenmabayashi**	**60.05**	**337**	P		**P**	**09 51 04.8**	**+0.3**
ERM	**Erimo**	**60.38**	**339**	P		**P**	**09 51 06.2**	**-0.5**
JKA	**Kamikawa-asahi**	**62.43**	**340**	P		**P**	**09 51 21.7**	**+1.2**
VNDA	**Vanda**	**63.25**	**181**	P		**P**	**09 51 27.2**	**+1.7**
VNDA				IAmb		IAmb	09 51 33.2	
	comp=Z,19nm,1.4s							
VNDA	**Vanda**	**63.25**	**181**	P		**P**	**09 51 26.4**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=14,slow=4.2,SNR=1.1							
	comp=Z,1.2nm,0.6s							
KSRS	**Korea Array**	**63.52**	**326**	P		**P**	**09 51 27.1**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=141,slow=6.5,SNR=5.3							
	comp=Z,2.3nm,0.7s							
USRK	**Ussuriysk Ar.**	**66.62**	**333**	P		**P**	**09 51 47.1**	**-0.5**
USRK	**Ussuriysk Ar.**	**66.62**	**333**	P		**P**	**09 51 48.2**	**+0.7**
	comp=Z,7.1nm,0.9s,baz=125,slow=6.5,SNR=6.3							
	comp=Z,7.1nm,0.9s							
USA0B	**Ussuriysk Arra**	**66.62**	**333**	P		**P**	**09 51 46.6**	**-0.9**
USA0B				IAmb		IAmb	09 51 49.3	
	comp=Z,18nm,1.1s							
PEA0B	**Petropavlovsk-**	**67.69**	**354**	P		**P**	**09 51 55.0**	**+0.8**
PETK	**Petropavlovsk-**	**67.69**	**354**	P		**P**	**09 51 54.5**	**+0.3**
PETK	**Petropavlovsk-**	**67.69**	**354**	P		**P**	**09 51 54.8**	**+0.6**
	comp=Z,8.7nm,0.8s,baz=146,slow=7.5,SNR=9.0							
	comp=Z,8.7nm,0.8s							
MDJ	**Mudanjiang**	**68.02**	**332**	P		**P**	**09 51 56.8**	**+0.4**
MDJ				PcP		**PcP**	**09 52 22.0**	**+0.9**
MDJ				S		**S**	**10 00 41.8**	**+2.5**
MDJ				ScS		**ScS**	**10 01 38.9**	**+2.9**
MDJ	**Mudanjiang**	**68.02**	**332**	sS		sS	10 01 58.9	+0.3
MDJ				pmax		pmax		
	comp=Z,20nm,1.0s							
MDJ				pmax		pmax		
	comp=Z,440nm,5.1s							
MDJ	**Mudanjiang**	**68.02**	**332**	P		**P**	**09 51 56.1**	**-0.2**
MDJ				IAmb		IAmb	09 51 57.7	
	comp=Z,15nm,0.9s							
CN2	**Changchun**	**69.40**	**329**	P		**P**	**09 52 04.8**	**-0.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
BNX	**BinXian**	**69.88**	**331**	||P	**P**	**09 52 07.6**	**-0.2**
BNX				pmax		pmax		
	comp=Z,29nm,0.6s							
BNX				pmax		pmax		
	comp=Z,330nm,4.5s							
LYN	**LuoYang**	**71.33**	**314**	||P	**P**	**09 52 17.0**	**+0.2**
LYN				pP		pwP	09 53 03.9	-2.3
LYN				PP		**PP**	**09 55 01.0**	**+3.0**
LYN				pmax		pmax		
	comp=Z,21nm,0.7s							
LYN				pmax		pmax		
	comp=Z,150nm,5.8s							
HEH	**HeiHe**	**73.28**	**334**	*e*P		**P**	**09 52 27.8**	**-0.2**
HEH				pmax		pmax		
	comp=Z,6.0nm,0.8s							
XAN	**Xi'an**	**73.55**	**312**	*e*P		**P**	**09 52 29.9**	**-0.1**
XAN				pmax		pmax		
	comp=Z,9.0nm,0.9s							
CRAI	**Chiangrai**	**74.33**	**296**	P		**P**	**09 52 35.0**	**+0.1**
CRAI				IAmb		IAmb	09 52 36.2	
	comp=Z,11nm,0.9s							
XLT	**XiLinHaoTe**	**74.49**	**324**	*e*P		**P**	**09 52 35.5**	**+0.2**
XLT				pmax		pmax		
	comp=Z,7.0nm,0.7s							
XLT				pmax		pmax		
	comp=Z,170nm,5.3s							
CMAR	**Chiang Mai Arr**	**74.94**	**294**	P		**P**	**09 52 39.0**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=118,slow=4.5,SNR=8.7							
	comp=Z,1.8nm,0.3s							
CHTO	**Chiang Mai**	**75.07**	**294**	P		**P**	**09 52 37.6**	**-1.5**
CHTO				IAmb		IAmb	09 52 40.3	
	comp=Z,12nm,1.4s							
HHC	**Hu-ho-hao-te**	**75.40**	**320**	*e*P		**P**	**09 52 41.1**	**+0.5**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,78nm,4.4s							
PZH	**PanZhiHua**	**75.63**	**303**	P		**P**	**09 52 41.8**	**-0.5**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
PZH				pmax		pmax		
	comp=Z,90nm,5.3s							
QSPA	**South Pole Qui**	**75.68**	**180**	P		**P**	**09 52 42.1**	**+0.2**
QSPA				IAmb		IAmb	09 52 42.9	
	comp=Z,6.0nm,1.0s							
LZH	**Lanzhou**	**78.18**	**312**	*e*P		**P**	**09 52 55.7**	**-0.7**
LZH				pP		pwP	09 53 45.7	-0.7
LZH				sP		sP	09 54 03.7	-1.2
LZH				pmax		pmax		
	comp=Z,12nm,1.3s							
M16K	**Timber Creek**	**79.74**	**16**	P		**P**	**09 53 04.7**	**+0.7**
M16K				IAmb		IAmb	09 53 19.5	
	comp=Z,22nm,1.4s							
K15K	**Wolf Creek Mou**	**80.18**	**14**	P		**P**	**09 53 07.1**	**+0.8**
K15K				IAmb		IAmb	09 53 09.8	
	comp=Z,14nm,1.3s							
J16K	**Anvik River**	**81.25**	**14**	P		P	09 53 13.4	+1.5
J16K				IAmb		IAmb	09 53 22.0	
	comp=Z,6.9nm,1.3s							
ULN	**Ulaanbaatar**	**81.92**	**324**	P		**P**	**09 53 15.6**	**-0.5**
ULN				IAmb		IAmb	09 53 17.3	
	comp=Z,10nm,1.0s							
BILL	**Bilibino**	**82.16**	**360**	P		**P**	**09 53 16.9**	**+0.2**
BILL				IAmb		IAmb	09 53 17.5	
	comp=Z,20nm,1.5s							
SONM	**Songino Array**	**82.28**	**323**	P		**P**	**09 53 17.8**	**-0.1**
SONM				IAmb		IAmb	09 53 19.1	
	comp=Z,6.1nm,1.0s							
SONM	**Songino Array**	**82.28**	**323**	P		**P**	**09 53 18.3**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=142,slow=4.3,SNR=10							
	comp=Z,1.9nm,0.4s							
J18K	**Innoko River**	**82.36**	**15**	P		**P**	**09 53 17.3**	**-0.5**
GTA	**Gaotai**	**82.52**	**314**	P		**P**	**09 53 20.1**	**+0.7**
GTA				pmax		pmax		
	comp=Z,7.0nm,1.2s							
SHL	**Shillong**	**83.53**	**298**	P		**P**	**09 53 25.0**	**+0.1**
SHL				IAmb		IAmb	09 53 25.5	
	comp=Z,8.5nm,0.8s							
YBH	**Yreka Blue Hor**	**85.03**	**45**	P		P	09 53 33.0	+1.0
H21K	**Melozitna Rive**	**85.13**	**15**	P		**P**	**09 53 32.6**	**+0.8**
IMAR	**Indian Mountai**	**85.15**	**15**	P		**P**	**09 53 32.7**	**+0.8**
HUMO	**Hull Mountain**	**85.22**	**44**	P		**P**	**09 53 33.2**	**+0.4**
DBO	**Dodson Butte**	**85.24**	**43**	P		**P**	**09 53 32.2**	**-0.8**
DBO				IAmb		IAmb	09 53 39.4	
	comp=Z,4.9nm,1.1s							
CTGM	**Chitina Glacie**	**85.34**	**22**	P		**P**	**09 53 33.3**	**+0.1**
CTGM				IAmb		IAmb	09 53 52.9	
	comp=Z,21nm,1.4s							
L04D	**Klamath Falls**	**85.50**	**45**	P		**P**	**09 53 35.0**	**+0.7**
L04D				IAmb		IAmb	09 53 42.2	
	comp=Z,19nm,1.5s							
F20K	**Avaraart Lake**	**85.54**	**14**	P		**P**	**09 53 34.5**	**+0.8**
E19K	**Redstone River**	**85.54**	**13**	P		**P**	**09 53 34.7**	**+0.9**
G21K	**Allakaket**	**85.63**	**15**	P		**P**	**09 53 35.0**	**+0.7**
M26K	**Nabesna, AK**	**85.70**	**21**	P		**P**	**09 53 35.6**	**+0.9**
M26K				IAmb		IAmb	09 53 58.9	
	comp=Z,12nm,1.5s							
C18K	**Utukok River**	**85.75**	**11**	P		**P**	**09 53 35.5**	**+0.6**
C18K				IAmb		IAmb	09 53 37.0	
	comp=Z,4.7nm,1.1s							
HDA	**Harding Lake**	**85.83**	**18**	P		**P**	**09 53 35.2**	**0.0**
HDA				IAmb		IAmb	09 53 35.6	
	comp=Z,7.5nm,0.8s							
I04A	**Tendick Farm,**	**86.06**	**43**	P		**P**	**09 53 36.7**	**-0.3**
IL31		**86.11**	**18**	P		**P**	**09 53 35.4**	**-1.2**
IL31				IAmb		IAmb	09 53 36.7	
	comp=Z,3.9nm,0.8s							
ILAR	**Eielson Array**	**86.11**	**18**	P		**P**	**09 53 35.6**	**-1.1**
ILAR	**Eielson Array**	**86.11**	**18**	P		**P**	**09 53 35.3**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=237,slow=4.9,SNR=40							
	comp=Z,3.0nm,0.7s							
F21K	**Alatna River**	**86.20**	**14**	P		**P**	**09 53 37.8**	**+0.7**
D19K	**Kuna River**	**86.22**	**12**	P		**P**	**09 53 37.7**	**+0.6**
D19K				IAmb		IAmb	09 53 41.4	
	comp=Z,5.9nm,1.3s							
SCRK	**Sand Creek**	**86.44**	**19**	P		**P**	**09 53 39.3**	**+0.9**
J25K	**Salcha River,**	**86.45**	**18**	P		**P**	**09 53 39.1**	**+0.7**
J25K				IAmb		IAmb	09 53 47.0	
	comp=Z,4.9nm,1.1s							
K05A	**Summer Lake**	**86.66**	**44**	P		**P**	**09 53 41.0**	**+0.9**
K05A				IAmb		IAmb	09 53 41.4	
	comp=Z,4.0nm,0.8s							
DSP	**Deep Springs**	**86.76**	**50**	P		**P**	**09 53 40.3**	**-0.1**
DSP				IAmb		IAmb	09 53 42.1	
	comp=Z,4.2nm,1.0s							
NVAR	**Mina Array Bea**	**86.89**	**49**	P		**P**	**09 53 40.2**	**-1.1**
NVAR	**Mina Array Bea**	**86.89**	**49**	P		**P**	**09 53 41.5**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=227,slow=5.0,SNR=6.0							
	comp=Z,1.1nm,0.8s							
NV11	**Mina Array Sit**	**87.00**	**49**	P		**P**	**09 53 42.0**	**+0.2**
E22K	**Anaktuvuk Pass**	**87.31**	**14**	P		**P**	**09 53 43.2**	**+0.7**
GNW	**Green Mountain**	**87.35**	**39**	P		P	09 53 44.1	+1.1
GNW				IAmb		IAmb	09 53 44.3	
	comp=Z,2.5nm,0.7s							
WCT	**Wildcat Mounta**	**87.57**	**51**	P		**P**	**09 53 45.2**	**+0.7**
D22K	**Ayikyak River**	**87.70**	**13**	P		**P**	**09 53 45.2**	**+0.9**
D22K				IAmb		IAmb	09 53 46.4	
	comp=Z,4.2nm,0.9s							
SPR3	**Spring Creek 3**	**90.01**	**50**	P		**P**	**09 53 56.2**	**0.0**
LCMT	**Little Creek M**	**90.21**	**52**	P		**P**	**09 53 57.0**	**+0.1**
F10A	**Beach Ranch, E**	**90.30**	**42**	P		**P**	**09 53 56.7**	**-0.3**
F10A				IAmb		IAmb	09 53 57.9	
	comp=Z,4.7nm,0.7s							
TUC	**Tucson**	**90.77**	**57**	P		**P**	**09 53 59.6**	**+0.1**
PLID	**Pearl Lake**	**90.81**	**44**	P		**P**	**09 53 59.3**	**-0.3**
WMQ	**Urumqi**	**92.58**	**315**	*e*P		**P**	**09 54 09.1**	**+1.5**
PDAR	**Pinedale Array**	**94.56**	**47**	P		**P**	**09 54 16.1**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=216,slow=4.5,SNR=2.3							
	comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**95.95**	**61**	P		**P**	**09 54 23.4**	**0.0**
	comp=Z,0.4nm,0.9s,baz=225,slow=8.9,SNR=3.6							
	comp=Z,0.4nm,0.9s							
MK31	**Makanchi Array**	**97.04**	**316**	P		Pdif	09 54 27.5	-0.4
MKAR	**Makanchi Array**	**97.04**	**316**	P		Pdif	09 54 27.0	-0.9
MKAR	**Makanchi Array**	**97.04**	**316**	P		Pdif	09 54 27.8	-0.1
	comp=Z,4.6nm,0.7s,baz=91,slow=6.3,SNR=43							
	comp=Z,4.6nm,0.7s							
YKA	**Yellowknife Ar**	**97.13**	**27**	P		Pdif	09 54 26.5	-1.3
	comp=Z,0.6nm,0.8s,baz=255,slow=4.5,SNR=9.7							
	comp=Z,0.6nm,0.8s							
ZAA0	**Zalesovo Array**	**97.18**	**324**	P		Pdif	09 54 27.4	-0.9
ZALV	**Zalesovo Beam**	**97.18**	**324**	P		Pdif	09 54 26.9	-1.3
ZALV	**Zalesovo Beam**	**97.18**	**324**	P		Pdif	09 54 26.6	-1.7
	comp=Z,3.7nm,0.7s,baz=117,slow=4.5,SNR=17							
	comp=Z,3.7nm,0.7s							
NRIK	**Noril'sk**	**99.77**	**339**	P		**Pdif**	**09 54 37.6**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=94,slow=4.4,SNR=4.5							
	comp=Z,1.5nm,0.3s							
KURBB	**Kurchatov Arra**	**100.25**	**320**	P		**Pdif**	**09 54 41.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=87,slow=4.5,SNR=4.1							
ARCES	**ARCESS Array B**	**119.92**	**346**	PKP		**PKiKP**	**09 59 44.5**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=52,slow=1.9,SNR=30							
KBZ	**Khabaz**	**124.61**	**313**	PKP		**PKiKP**	**09 59 55.1**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=97,slow=3.3,SNR=5.6							
FINES	**FINESS Array B**	**125.43**	**338**	PKP		**PKiKP**	**09 59 55.4**	**-0.5**
	comp=Z,4.9nm,0.9s,baz=45,slow=3.0,SNR=10							
NB2	**NORSAR Subarra**	**130.29**	**345**	PKPdf		**PKiKP**	**10 00 05.2**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=31,slow=1.9							
NB2				SKPa			10 03 10.7	
	comp=Z,4.3nm,1.1s,baz=38,slow=4.8							
NOA	**NORSAR Array B**	**130.29**	**345**	PKP		**PKiKP**	**10 00 05.1**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=32,slow=2.0,SNR=5.3							
NOA				SKPbc		**SKPab**	**10 03 10.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=32,slow=3.2,SNR=4.2							
HFS	**Hagfors**	**130.40**	**343**	SKPbc		**SKPab**	**10 03 11.5**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=90,slow=6.2,SNR=6.7							
AKASG	**Malin Array Be**	**130.51**	**326**	PKP		**PKiKP**	**10 00 05.9**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=71,slow=1.4,SNR=4.7							
BRTR	**Keskin Array B**	**132.38**	**311**	PKP		**PKiKP**	**10 00 10.1**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=138,slow=4.9,SNR=2.7							
RONA	**Rosalia, Austr**	**139.02**	**330**	*i* PKiKP		**PKiKP**	**10 00 23.4**	**-0.4**
	comp=Z,3.3nm,0.6s							
CONA	**Conrad Observa**	**139.06**	**331**	*i* PKP		**PKiKP**	**10 00 21.5**	**-2.4**
	comp=Z,4.1nm,1.0s							
GERES	**GERESS Array B**	**139.37**	**333**	PKP		**PKiKP**	**10 00 22.2**	**-2.4**
	comp=Z,1.2nm,0.6s,baz=29,slow=3.0,SNR=5.8							
ARSA	**Arzberg**	**139.71**	**330**	*i* PKP		**PKiKP**	**10 00 23.4**	**-1.8**
	comp=Z,1.1nm,0.5s							
SOKA	**Soboth**	**140.35**	**330**	*e*PKP		**PKPdf**	**10 00 21.7**	**-2.4**
	comp=Z,3.3nm,1.0s							
OBKA	**Obir**	**140.70**	**330**	*e*PKP		**PKiKP**	**10 00 25.4**	**-2.0**
	comp=Z,6.9nm,1.4s							
LESA	**Schwarzleotal**	**140.90**	**333**	*i* PKP		**PKiKP**	**10 00 24.4**	**-3.4**
	comp=Z,1.3nm,0.4s							
MYKA	**Terra Mystica**	**141.05**	**331**	*e*PKP		**PKiKP**	**10 00 24.8**	**-3.2**
	comp=Z,5.8nm,0.9s							
WTTA	**Wattenberg**	**141.48**	**333**	*e*PKP		**PKiKP**	**10 00 25.6**	**-3.4**
	comp=Z,2.1nm,0.6s							
ABTA	**Abfaltersbach**	**141.48**	**332**	*i* PKP		**PKiKP**	**10 00 26.1**	**-2.9**
	comp=Z,6.1nm,1.0s							
MOTA	**Moosalm**	**141.64**	**334**	*e*PKP		**PKiKP**	**10 00 25.5**	**-3.9**
	comp=Z,2.9nm,0.7s							
RETA	**Reutte**	**141.68**	**334**	*e*PKiKP		**PKiKP**	**10 00 28.9**	**-0.4**
	comp=Z,3.1nm,0.6s							
FETA	**Feichten**	**142.06**	**334**	*i* PKP		**PKPdf**	**10 00 24.7**	**-2.5**
	comp=Z,7.1nm,0.9s							
KEST	**Kesra**	**151.02**	**321**	PKPbc		**PKiKP**	**10 00 48.3**	**-0.6**
	comp=Z,21nm,0.7s,baz=67,slow=1.8,SNR=14							
ESDC	**Sonseca Array**	**153.66**	**345**	PKPbc		**PKiKP**	**10 00 54.0**	**-0.2**
	comp=Z,1.2n

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.41**	**150**	P	P	09 52 41.5	+0.2
	0.9nm,0.7s,baz=326,slow=11,SNR=5.4						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**26.44**	**155**	P	P	09 53 09.1	-0.1
	0.3nm,0.5s,baz=343,slow=13,SNR=7.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**57.90**	**329**	P	P	09 57 24.3	-0.1
	0.2nm,0.4s,baz=122,slow=8.8,SNR=4.8						
	0.2nm,0.4s						

IDC 06 09:54:42.5±1.7, 17°48S×177°39W, h0km, mb4.0/5, mbtmp4.0/5, MS3.0/1, Error ellipse: s-maj=102.6km s-min=24.5km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.69**	**241**	P	P	10 02 16.9	+0.3
	0.9nm,0.3s,baz=60,slow=8.1,SNR=5.8						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**45.66**	**259**	P	P	10 03 05.4	+0.1
	1.2nm,0.4s,baz=98,slow=6.9,SNR=30						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**45.84**	**254**	P	P	10 03 06.2	-0.6
	2.5nm,0.6s,baz=90,slow=7.6,SNR=51						
	2.5nm,0.6s						
GUMO	**Guam**	**48.38**	**307**	LR	LR	10 20 49.9	
	comp=Z,18nm,22.0s,baz=224,slow=32						
TXAR	**Lajitas Array**	**84.95**	**57**	P	P	10 07 20.6	+0.5
	0.4nm,0.7s,baz=220,slow=6.2,SNR=6.6						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**85.25**	**13**	P	P	10 07 20.1	-0.6
	0.2nm,0.4s,baz=223,slow=5.0,SNR=9.0						
	0.2nm,0.4s						

ANF ***06*** *10:06:01.6±0.8, 30°.74N×115°.10W, h13km±10km, Error ellipse: s-maj=14.6km s-min=4.5km az=5.0*
ECX ***06*** *10:06:05.9±0.4, 30°.94N×115°.27W, h8km±1km, MD3.8, ML4.1, Fault plane solution: NP1:φ=22.00000°, δ=68.00000°, λ=-62.00000°.*
MEX ***06*** *10:06:06.4±0.8, 30°.95N×115°.24W, h5km, MD4.1*

ISC 06 10:06:05.0±0.9, 30°93N±0°.02×115°24W±0°.02, h14km±7km, n78, σ1s=10/99, 21C-31D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.23**	**302**	*eP*	**Pg**	**10 06 10.0**	**-0.2**
SPIG				*eS*	**Sg**	**10 06 13.1**	**-0.7**
SPIG	**San Pedro Mart**	**0.23**	**302**	↑*iP*	**Pg**	**10 06 10.0**	**-0.2**
SPIG				*eS*	**Sg**	**10 06 13.3**	**-0.5**
SPIG				IAML		10 06 13.5	
	comp=N,33μm,0.3s						
SPIG				*e*		10 06 13.5	
SPIG				↑*e*		10 06 13.6	
SPIG				IAML		10 06 13.6	
	comp=E,24μm,0.3s						
SFX	**San Felipe**	**0.35**	**72**	*eP*	**Pg**	**10 06 12.4**	**+0.2**
SFX				*eS*	**Sg**	**10 06 17.6**	**+0.5**
SFX	**San Felipe**	**0.35**	**72**	↑*iP*	**Pb**	**10 06 12.8**	**-0.3**
SFX				*eS*	**Sg**	**10 06 17.9**	**+0.8**
SFX				IAML		10 06 18.0	
	comp=N,18μm,0.1s						
SFX				↑*e*		10 06 18.0	
SFX				IAML		10 06 18.1	
	comp=E,23μm,0.2s						
SFX				↓*e*		10 06 18.1	
ECBX	**El Chinero**	**0.57**	**17**	↓*iP*	**Pg**	**10 06 16.1**	**-0.1**
ECBX				*eS*	**Sg**	**10 06 23.6**	**-0.1**
ECBX				IAML		10 06 25.7	
	comp=E,11μm,0.3s						
ECBX				↓*e*		10 06 25.7	
ECBX				↓*e*		10 06 25.8	
ECBX				IAML		10 06 25.8	
	comp=N,15μm,0.3s						
SQX	**San Quintin**	**0.65**	**238**	↑*iP*	**Pb**	**10 06 17.4**	**-0.7**
SQX				*eS*	**Sb**	**10 06 26.0**	**-0.9**
SQX				↓*e*		10 06 26.7	
SQX				IAML		10 06 26.7	
	comp=E,24μm,0.2s						
SQX				↑*e*		10 06 27.4	
SQX				IAML		10 06 27.4	
	comp=N,26μm,0.7s						
VTX	**Valle De La Tr**	**0.66**	**315**	↑*iP*	**Pg**	**10 06 17.4**	**-0.5**
VTX				*eS*	**Sg**	**10 06 25.6**	**-0.9**
VTX				IAML		10 06 25.9	
	comp=N,8μm,0.2s						
VTX				↓*e*		10 06 26.4	
VTX				IAML		10 06 26.4	
	comp=E,12μm,0.1s						
SV2X	**San Vicente**	**0.95**	**296**	↑*iP*	**Pg**	**10 06 22.0**	**-1.4**
SJX	**San Joaquin**	**1.04**	**324**	↓*iP*	**Pn**	**10 06 27.0**	**+2.0**
SJX				IAML		10 06 44.2	
	comp=E,4μm,0.2s						
SJX				↑*e*		10 06 44.2	
SJX				IAML		10 06 45.3	
	comp=N,2μm,0.1s						
SJX				*e*		10 06 45.3	
EDOMX	**El Doctor, EDO**	**1.11**	**22**	↑*eP*	**Pg**	**10 06 25.2**	**-1.3**
ALAMX	**Rancho Alamar**	**1.15**	**340**	↓*iP*	**Pg**	**10 06 25.5**	**-1.7**
RHX	**Rio Hardy**	**1.21**	**358**	↓*iP*	**Pb**	**10 06 25.6**	**-2.0**
RITX	**Riito Sonora**	**1.26**	**11**	↓*eP*	**Pn**	**10 06 27.0**	**-1.1**
SLGB	**San Luis Gonza**	**1.31**	**146**	↑*iP*	**Pn**	**10 06 28.2**	**-0.6**
AGSX	**Ej. Aguas Cali**	**1.34**	**3**	↓*eP*	**Pn**	**10 06 27.9**	**-1.3**
GUVIX	**Guadalupe Vict**	**1.38**	**6**	↓*eP*	**Pn**	**10 06 29.0**	**-0.8**
PPXB	**Puerto Peasco**	**1.44**	**73**	↑*iP*	**Pn**	**10 06 29.6**	**-1.0**
MBIG	**Mexicali**	**1.48**	**1**	*eP*	**Pb**	**10 06 32.3**	**+0.1**
MBIG				*eP*	**Pg**	**10 06 33.5**	**+0.1**
MBIG				*eS*	**Sg**	**10 06 53.4**	**+0.8**
MBIG				*eS*	**Sb**	**10 06 54.1**	**+3.2**
CPBX	**Cerro Prieto**	**1.49**	**358**	↓*eP*	**Pb**	**10 06 32.3**	**-0.1**
PBX	**Punta Banda**	**1.51**	**303**	↓*eP*	**Pn**	**10 06 31.3**	**-0.3**
CCX	**Cicese**	**1.54**	**308**	↓*eP*	**Pn**	**10 06 31.6**	**-0.4**
CCX				IAML		10 06 54.3	
	comp=E,3μm,0.6s						
CCX				*e*		10 06 54.3	
CCX				IAML		10 06 55.5	
	comp=N,2μm,0.7s						
CCX				↓*e*		10 06 55.5	
CTLX	**Tlaxcala, TLX**	**1.54**	**3**	↑*eP*	**Pn**	**10 06 30.7**	**-1.3**
SLRCX	**San Luis Rio C**	**1.59**	**17**	↓*eP*	**Pb**	**10 06 34.5**	**+0.3**
JARAX	**Ej. Heriberto**	**1.63**	**350**	↓*eP*	**Pn**	**10 06 32.0**	**-1.2**
PIX	**Pinacate**	**1.65**	**67**	↑*eP*	**Pn**	**10 06 32.6**	**-0.9**
YUCAX	**Ej. Yucatɨn**	**1.68**	**4**	↑*eP*	**Pn**	**10 06 33.1**	**-0.8**
UABX	**UABC, Campus M**	**1.71**	**354**	↓*eP*	**Pb**	**10 06 36.2**	**0.0**
YUH2	**Yuha Desert**	**1.81**	**342**	↓*eP*	**Pn**	**10 06 34.6**	**-1.2**
RMX	**La Rumorosa**	**1.82**	**337**	↓*eP*	**Pn**	**10 06 37.0**	**+1.0**
RMX				↓*e*		10 07 00.2	
RMX				IAML		10 07 00.2	
	comp=E,2μm,0.4s						
CBX	**Cerro Bola**	**1.84**	**319**	*eP*	**Pn**	**10 06 35.3**	**-1.0**
CBX				*eS*	**Sn**	**10 06 59.9**	**+0.5**
CBX	**Cerro Bola**	**1.84**	**319**	↓*eP*	**Pn**	**10 06 35.9**	**-0.3**
CBX				*eS*	**Sn**	**10 07 00.4**	**+1.0**
IKP	**In-Ko-Pah, Jac**	**1.87**	**337**	P	**Pn**	**10 06 35.8**	**-0.8**
	baz=156,SNR=622						
IKP				S	**Sb**	**10 07 02.7**	**+0.4**
	baz=156						
IKP	**In-Ko-Pah, Jac**	**1.87**	**337**	*eP*	**Pn**	**10 06 36.0**	**-0.7**
TJIG	**Tijuana**	**1.94**	**321**	*eP*	**Pn**	**10 06 37.3**	**-0.3**
TJIG				*eS*	**Sn**	**10 07 02.4**	**+0.7**
TJIG	**Tijuana**	**1.94**	**321**	↓*eP*	**Pn**	**10 06 37.2**	**-0.3**
SWSC	**Sam W. Stewart**	**2.07**	**347**	P	**Pn**	**10 06 37.9**	**-1.4**
	baz=165						
SWSC	**Sam W. Stewart**	**2.07**	**347**	↓*eP*	**Pn**	**10 06 38.1**	**-1.2**
BAR	**Barrett**	**2.13**	**326**	↓*eP*	**Pn**	**10 06 40.1**	**-0.1**
MONP2	**Monument Peak**	**2.20**	**333**	P	**Pn**	**10 06 40.9**	**-0.5**
	baz=152						
MONP2				S	**Sb**	**10 07 12.0**	**+0.1**
	baz=152						
MONP2	**Monument Peak**	**2.20**	**333**	↓*eP*	**Pn**	**10 06 41.1**	**-0.2**
OLP	**Otay Lakes Par**	**2.21**	**320**	↓*eP*	**Pn**	**10 06 41.2**	**-0.1**
TJX	**Tijuana**	**2.21**	**316**	↓*eP*	**Pb**	**10 06 43.7**	**-1.0**
SDRC	**San Diego Road**	**2.31**	**322**	↓*eP*	**Pn**	**10 06 42.7**	**0.0**
214A	**Organ Pipe Nat**	**2.32**	**63**	Pb	**Pn**	**10 06 42.3**	**-0.4**
	baz=239						
214A				S	**Sn**	**10 07 08.7**	**-2.4**
	baz=239						
214A	**Organ Pipe Nat**	**2.32**	**63**	*i* P	**Pn**	**10 06 41.9**	**-0.8**
214A				*eS*	**Sn**	**10 07 08.9**	**-2.2**
214A	**Organ Pipe Nat**	**2.32**	**63**	↑*eP*	**Pn**	**10 06 42.4**	**-0.4**
EML	**El Monte Cty P**	**2.39**	**326**	↑*eP*	**Pn**	**10 06 44.1**	**+0.4**
SLH	**Sleepy Hollow**	**2.42**	**339**	↑*eP*	**Pn**	**10 06 43.9**	**-0.3**
BAHB	**Baha de los**	**2.46**	**143**	*eP*	**Pn**	**10 06 44.5**	**-0.1**
BAHB				*eS*	**Sg**	**10 07 24.1**	**+0.1**
BAHB	**Baha de los**	**2.46**	**143**	↑*eP*	**Pn**	**10 06 44.8**	**+0.2**
109C	**Camp Elliot, M**	**2.52**	**321**	P	**Pn**	**10 06 45.7**	**+0.2**
	baz=141,SNR=38						
109C				S	**Sb**	**10 07 19.5**	**-1.3**
	baz=141						
MATG	**Mataguay Scout**	**2.56**	**333**	↓*eP*	**Pn**	**10 06 45.9**	**-0.3**
BC3	**Big Chuckawall**	**2.73**	**356**	P	**Pn**	**10 06 47.8**	**-0.7**
	baz=174						
PFO	**Pinyon Flats O**	**2.87**	**339**	P	**Pn**	**10 06 49.5**	**-1.0**
	baz=158,SNR=41						
NE74	**Guerrero Negro**	**3.10**	**159**	↑*eP*	**Pn**	**10 06 56.4**	**+2.9**
BELC	**Belle Mtn. Jos**	**3.13**	**348**	P	**Pn**	**10 06 53.7**	**-0.4**
	baz=167,SNR=11						
MURC	**Murrieta**	**3.14**	**329**	P	**Pn**	**10 06 53.8**	**-0.2**
	baz=148						
IRM	**Iron Mountain**	**3.22**	**1**	P	**Pn**	**10 06 55.0**	**-0.3**
	baz=179,SNR=9.0						
SFQB	**San Francisqui**	**3.26**	**140**	↑*eP*	**Pn**	**10 06 57.7**	**+2.1**
SCI2	**San Clemente I**	**3.48**	**307**	P	**Pn**	**10 06 58.6**	**0.0**
	baz=126						
SCI2				S	**Sn**	**10 07 39.9**	**+0.2**
	baz=126						
PDMCI	**Parker Dam,Lak**	**3.49**	**15**	P	**Pn**	**10 06 58.8**	**-0.1**
	baz=193						
BBRC	**Big Bear Solar**	**3.62**	**337**	P	**Pn**	**10 07 01.1**	**+0.3**
	baz=156						
CIS	**Catalina Islan**	**3.65**	**313**	P	**Pn**	**10 07 01.0**	**-0.1**
	baz=133						
GMRC	**Granite Mounta**	**3.86**	**355**	P	**Pn**	**10 07 04.1**	**0.0**
	baz=173						
NEE2	**Needles Airpor**	**3.87**	**8**	P	**Pn**	**10 07 04.6**	**+0.6**
	baz=186						
BFSC	**Mount Baldy Ra**	**3.88**	**329**	P	**Pn**	**10 07 04.4**	**0.0**
	baz=148						
HEC	**Hector,Ludlow**	**4.00**	**347**	P	**Pn**	**10 07 07.3**	**+1.4**
	baz=165						
TUC	**Tucson**	**4.04**	**69**	P	**Pn**	**10 07 06.7**	**+0.1**
	baz=248						
RRX	**Edison Barstow**	**4.21**	**340**	Pb	**Pb**	**10 07 20.7**	**+1.9**
	baz=158						
DECC	**Green Verdugo**	**4.22**	**323**	Pb	**Pb**	**10 07 20.4**	**+1.4**
	baz=141						
SRIG	**Santa Rosalia**	**4.45**	**143**	*eP*	**Pb**	**10 07 24.5**	**+1.6**
SRIG				*eS*	**Sg**	**10 08 24.2**	**-3.7**
TUQ	**Turquoise Moun**	**4.53**	**353**	Pg	**Pg**	**10 07 32.5**	**+0.6**
	baz=171						
GSC	**Goldstone, Bar**	**4.56**	**344**	P	**Pn**	**10 07 14.0**	**+0.4**
	baz=162						
LRMC	**Laurel Mtn Rad**	**4.98**	**336**	P	**Pn**	**10 07 21.1**	**+1.6**
	baz=155						
SHOC	**Shoshone, Teco**	**5.04**	**350**	P	**Pn**	**10 07 22.1**	**+2.0**
	baz=169						
ISA	**Isabella, Lake**	**5.44**	**331**	P	**Pn**	**10 07 27.3**	**+1.5**
	baz=149						
MPMC	**Manual Prospec**	**5.45**	**340**	P	**Pn**	**10 07 27.3**	**+1.3**
	baz=159						
WUAZ	**Wupatki**	**5.61**	**34**	P	**Pn**	**10 07 29.2**	**+1.0**
	baz=214						

IDC ***06*** *10:08:45.7±1.2, 1°.23N×126°.16E, h0km, mb3.9/7, mbtmp3.9/7, MS3.3/1, Error ellipse: s-maj=204.2km s-min=16.3km az=67.0*
DJA ***06*** *10:08:45.1±1.8, 2°.1N±6°×12°.7E±°, h30km±22km, M4.2/7, MLv4.2/7*
NEIC ***06*** *10:08:47.4±1.0, 1°.4N±0°.1×126°.43E±0°.03, h10km±1km, mb4.4/18, Error ellipse: s-maj=17.9km s-min=4.3km az=185.0*

ISC 06 10:08:46.9±0.6, 1°40N±0°.06×126°50E±0°.06, h10km, n37, σ0s=90/39, mb4.3/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.07**	**126**	P	**Pn**	**10 09 08.8**	**+0.8**
TNTI	**Ternate**	**1.07**	**126**	P	**Pn**	**10 09 09.0**	**+1.0**
LBMI	**Labuha**	**2.26**	**154**	P	**Pn**	**10 09 25.7**	**+1.3**
SGSI	**Sangihe**	**2.47**	**337**	P	Pn	10 09 18.1	-9.1
KMSI	**Cibinong**	**2.65**	**252**	P	**Pn**	**10 09 30.5**	**+0.9**
KMSI				S	**Sb**	**10 10 06.5**	**-0.5**
SANI	**Sanana**	**3.47**	**188**	P	**Pn**	**10 09 41.9**	**+1.0**
SANI				S	**Sb**	**10 10 30.1**	**-0.5**
LUWI	**Luwuk**	**4.45**	**237**		**Pn**	**10 09 53.5**	**-0.9**
LUWI	**Luwuk**	**4.45**	**237**	P	**Pn**	**10 09 57.3**	**+2.9**
KNRA	**Kununurra**	**17.12**	**173**	Pn	**Pn**	**10 12 45.7**	**-0.7**
KNRA				IAmb	IAmb	10 13 04.9	
	comp=Z,26nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.40**	**182**	P	**P**	**10 13 13.2**	**0.0**
WB0	**Warramunga Arr**	**22.42**	**160**	P	**P**	**10 13 45.5**	**-0.5**
WB0				IAmb	IAmb	10 13 51.1	
	comp=Z,25nm,1.4s						
WRAB	**Tennant Creek**	**22.56**	**160**	P	**P**	**10 13 47.0**	**-0.5**
WRAB				IAmb	IAmb	10 13 48.5	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**22.57**	**160**	P	**P**	**10 13 46.9**	**-0.7**
WRA	**Warramunga Arr**	**22.57**	**160**	P	**P**	**10 13 46.7**	**-0.8**
	comp=Z,7.3nm,0.5s,baz=339,slow=11,SNR=67						
	comp=Z,7.3nm,0.5s						
WB2	**Warramunga Arr**	**22.57**	**160**	P	**P**	**10 13 47.0**	**-0.5**
WB2				IAmb	IAmb	10 13 51.8	
	comp=Z,11nm,0.7s						
WR0	**Warramunga Arr**	**22.65**	**160**	P	**P**	**10 13 47.9**	**-0.5**
WR0				IAmb	IAmb	10 13 50.4	
	comp=Z,8.2nm,0.8s						
JOW	**Kunigami**	**25.34**	**4**	P	**P**	**10 14 12.7**	**-1.4**
BKNI	**Bangkinang**	**25.48**	**268**	P	**P**	**10 14 14.2**	**-1.4**
AS31	**Alice Springs**	**25.94**	**164**	P	**P**	**10 14 19.5**	**-0.1**
ASAR	**Alice Springs**	**25.94**	**164**	P	**P**	**10 14 18.2**	**-1.4**
ASAR	**Alice Springs**	**25.94**	**164**	P	**P**	**10 14 19.2**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=343,slow=7.7,SNR=46						
ASAR				PcP	**PcP**	**10 17 49.5**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=351,slow=2.5,SNR=4.1						
	comp=Z,1.9nm,0.7s						
RABL	**Rabaul**	**26.25**	**102**	P	**P**	**10 14 21.6**	**-0.9**
BBOO	**Buckleboo**	**35.21**	**166**	P	**P**	**10 15 41.5**	**+0.1**
BBOO				IAmb	IAmb	10 15 44.6	
	comp=Z,4.8nm,1.1s						
KS19	**Wonju Array Si**	**35.95**	**2**	P	**P**	**10 15 47.2**	**-0.5**
STKA	**Stephens Creek**	**36.06**	**158**	P	**P**	**10 15 49.3**	**+0.5**
STKA	**Stephens Creek**	**36.06**	**158**	P	**P**	**10 15 48.7**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=330,slow=11,SNR=4.3						
	comp=Z,1.2nm,0.5s						
JTM	**Tenmabayashi**	**41.37**	**17**	P	**P**	**10 16 33.2**	**+0.1**
JTM				IAmb	IAmb	10 16 51.4	
	comp=E,61nm,1.3s						
SONM	**Songino Array**	**49.42**	**342**	P	**P**	**10 17 37.8**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=165,slow=6.0,SNR=1.9						
SONM				LR	LR	10 42 31.9	
	comp=Z,29nm,20.4s,baz=189,slow=41						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**59.33**	**326**	P	**P**	**10 18 49.8**	**+0.6**
MK31				IAmb	IAmb	10 18 50.0	
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**10 18 49.0**	**-0.2**
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**10 18 49.5**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=121,slow=7.7,SNR=19						
	comp=Z,0.5nm,0.4s						
ZAA0	**Zalesovo Array**	**62.55**	**334**	P	**P**	**10 19 11.6**	**+0.7**
ZAA0				IAmb	IAmb	10 19 20.3	
	comp=Z,3.8nm,1.4s						
ZALV	**Zalesovo Beam**	**62.55**	**334**	P	**P**	**10 19 11.2**	**+0.3**
ZALV	**Zalesovo Beam**	**62.55**	**334**	P	**P**	**10 19 10.9**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=134,slow=6.2,SNR=2.0						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.57**	**328**	P	**P**	**10 19 17.7**	**0.0**
	comp=Z,1.7nm,0.7s,baz=127,slow=6.2,SNR=14						
	comp=Z,1.7nm,0.7s						
KURK	**Kurchatov**	**63.57**	**328**	P	**P**	**10 19 18.8**	**+1.1**
KURK				IAmb	IAmb	10 19 19.4	
	comp=Z,3.7nm,1.0s						
ABKAR	**Akbulak array**	**73.80**	**321**	P	**P**	**10 20 22.3**	**+0.7**

WEL 06 10:11:09.5±1.1, 36°S±6°×17°9E±1°.4, h5km, M3.5/23, ML3.8/30, MLv3.5/23, Error ellipse: s-maj=0.0km s-min=0.0km az=88.9, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.04**	**191**	P	Pn	10 11 41.1	-3.3
MXZ				S	Sn	10 12 07.9	-2.4
MXZ				T	T	10 13 46.0	
WMGZ	**Waiomatatini S**	**2.28**	**188**	P	Pn	10 11 46.4	-1.4
WMGZ				S	Sb	10 12 19.3	-0.2
HAZ	**Te Kaha**	**2.34**	**200**	P	Pn	10 11 46.8	-1.9
HAZ				S	Sn	10 12 16.8	-1.0
PKGZ	**Pakihiroa**	**2.40**	**194**	P	Pn	10 11 46.9	-2.5
PKGZ				S	Sb	10 12 24.4	+1.4
PUZ	**Puketiti**	**2.54**	**190**	P	Pn	10 11 50.9	-0.6
PUZ				S	Sb	10 12 25.4	-1.9
RUGZ	**Raukumara Rang**	**2.57**	**200**	P	Pn	10 11 49.7	-2.1
RUGZ				S	Sn	10 12 21.4	-2.2
TWGZ	**Tauwhareparae**	**2.69**	**194**	P	Pn	10 11 53.8	+0.2
TWGZ				S	Sb	10 12 32.6	+1.0
OPRZ	**Ohinepanea**	**2.91**	**218**	P	Pn	10 11 58.6	+2.1
MWZ	**Matawai**	**2.95**	**200**	P	Pn	10 11 55.3	-1.8
MWZ				S	Sn	10 12 30.3	-2.6
CNGZ	**Carnagh Statio**	**2.96**	**189**	P	Pn	10 11 56.9	-0.2
CNGZ				S	Sb	10 12 37.1	-2.0
URZ	**Urewera**	**3.02**	**206**	P	Pn	10 11 55.8	-2.1
URZ				S	Sn	10 12 30.6	-3.8
RAGZ	**Rawiri**	**3.13**	**200**	P	Pn	10 12 00.4	+0.8
RIGZ	**Rimuhau**	**3.25**	**195**	P	Pn	10 12 00.8	-0.4
HLRZ	**Highlands Stat**	**3.33**	**216**	P	Pn	10 12 04.7	+2.4
MUGZ	**Murupara**	**3.34**	**209**	P	Pn	10 12 00.8	-1.6
RTZ	**Ruatahuna**	**3.38**	**205**	P	Pn	10 12 00.7	-2.4
SNGZ	**Shannon Statio**	**3.42**	**200**	P	Pn	10 12 03.7	+0.1
RAHZ	**Arahi**	**3.62**	**202**	P	Pn	10 12 06.7	+0.4
MTHZ	**Maungataniwha**	**3.64**	**205**	P	Pn	10 12 06.7	+0.1
MRHZ	**Matea Rd**	**3.78**	**210**	P	Pn	10 12 07.5	-1.0
NMHZ	**Naumai**	**3.87**	**204**	P	Pn	10 12 09.9	+0.1
BKZ	**Black Stump Fm**	**4.04**	**206**	P	Pn	10 12 12.0	-0.1
RITZ	**Rihia Road**	**4.14**	**214**	P	Pn	10 12 15.7	+2.2
MCHZ	**McNeill Hill**	**4.22**	**203**	P	Pn	10 12 13.8	-0.8
KWHZ	**Kaweka Forest**	**4.30**	**206**	P	Pn	10 12 14.7	-0.9
NTVZ	**North Tongarir**	**4.33**	**214**	P	Pn	10 12 16.8	+0.8
TMVZ	**Te Maari**	**4.33**	**214**	P	Pn	10 12 16.9	+0.8
KRVZ	**Karewarewa**	**4.34**	**215**	P	Pn	10 12 18.1	+1.9
WTVZ	**West Tongariro**	**4.38**	**215**	P	Pn	10 12 18.4	+1.7
NNVZ	**North Ngauruho**	**4.38**	**215**	P	Pn	10 12 19.2	+2.4
OTVZ	**Oturere**	**4.38**	**214**	P	Pn	10 12 17.4	+0.5
SNVZ	**South Ngauruho**	**4.41**	**214**	P	Pn	10 12 18.5	+1.2
TWVZ	**Taurewa**	**4.42**	**217**	P	Pn	10 12 18.7	+1.4
NGZ	**Ngauruhoe**	**4.42**	**214**	P	Pn	10 12 18.4	+1.0
BHHZ	**Black Hill Sta**	**4.49**	**208**	P	Pn	10 12 18.0	-0.3
KAHZ	**Kahuranaki**	**4.50**	**199**	P	Pn	10 12 16.8	-1.6
KRHZ	**Kereru**	**4.51**	**205**	P	Pn	10 12 16.8	-1.7
MOVZ	**Moawhango**	**4.54**	**211**	P	Pn	10 12 18.2	-0.8
WNVZ	**Wahianoa**	**4.55**	**213**	P	Pn	10 12 18.2	-1.0

WEL 06 10:19:33.8±1.7, 35°S±9°×17°9E±1°7, h5km, M3.3/9, ML3.7/16, MLv3.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=70.2, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.51**	**190**	P	Pn	10 20 11.7	-3.5
MXZ				T	T	10 22 22.4	
WMGZ	**Waiomatatini S**	**2.75**	**187**	P	Pn	10 20 19.2	+0.7
HAZ	**Te Kaha**	**2.80**	**198**	P	Pn	10 20 15.7	-3.6
PKGZ	**Pakihiroa**	**2.86**	**193**	P	Pn	10 20 19.5	-0.7
PKGZ				S	Sn	10 20 55.9	+0.8
PUZ	**Puketiti**	**3.02**	**189**	P	Pn	10 20 23.1	+0.9
PUZ				S	Sn	10 20 58.7	-0.1
RUGZ	**Raukumara Rang**	**3.02**	**198**	P	Pn	10 20 22.1	-0.4
KUZ	**Kuaotunu**	**3.04**	**236**	T	T	10 20 19.8	
TWGZ	**Tauwhareparae**	**3.16**	**193**	P	Pn	10 20 26.1	+1.8
TWGZ				S	Sn	10 21 02.5	+0.1
MWZ	**Matawai**	**3.41**	**198**	P	Pn	10 20 26.4	-1.3
URZ	**Urewera**	**3.46**	**203**	P	Pn	10 20 25.8	-2.5
MKAZ	**Moumakai**	**3.61**	**235**	P	Pn	10 20 27.9	-2.4
RIGZ	**Rimuhau**	**3.72**	**193**	P	Pn	10 20 28.8	-3.1
MUGZ	**Murupara**	**3.77**	**206**	P	Pn	10 20 36.0	+3.4
RTZ	**Ruatahuna**	**3.83**	**203**	P	Pn	10 20 34.8	+1.3
RAHZ	**Arahi**	**4.08**	**200**	P	Pn	10 20 39.8	+3.0
MTHZ	**Maungataniwha**	**4.09**	**203**	P	Pn	10 20 38.7	+1.7
OUZ	**Omahuta**	**4.32**	**267**	P	Pn	10 20 39.2	-0.9
NMHZ	**Naumai**	**4.32**	**202**	P	Pn	10 20 41.4	+1.2
NTVZ	**North Tongarir**	**4.74**	**212**	P	Pn	10 20 48.2	+2.1
KWHZ	**Kaweka Forest**	**4.74**	**203**	P	Pn	10 20 46.0	-0.1
OTVZ	**Oturere**	**4.80**	**211**	P	Pn	10 20 48.8	+1.9
WVZ	**Waitaha Valley**	**10.17**	**216**	P	Pn	10 22 04.5	+4.1

**TAP 06 10:36:29.4, 23°.45N

	baz=159									
STYH	**Taoyuan**	**0.42**	**132**	⇓	P		Pb	10 36 38.3	-0.4	
	baz=133									
STYH					S		Sb	10 36 44.8	-0.1	
	baz=133									
TSCK	**Chigu Township**	**0.44**	**227**	⇑	P		Pb	10 36 38.9	-0.2	
	baz=240									
TSCK					S		Sb	10 36 46.5	+0.8	
	baz=240									
WRL	**Guolierlin Hig**	**0.45**	**353**	⇓	P		Pb	10 36 39.0	-0.2	
	baz=344									
WRL					S		Sb	10 36 46.0	+0.1	
	baz=344									
WHYT	**Xinyi Township**	**0.45**	**58**	⇑	*i* P		Pb	10 36 39.2	-0.1	
	baz=58									
WHYT					*e* S		Sb	10 36 46.1	+0.1	
	baz=58									
WJS	**Zhushan**	**0.45**	**36**	⇑	*i* P		Pb	10 36 39.3	0.0	
	baz=36									
WJS					S		Sb	10 36 46.6	+0.6	
	baz=36									
WNT	**Mingjian**	**0.48**	**28**		*i* P		Pb	10 36 39.7	0.0	
	baz=29									
WNT					*e* S		Sb	10 36 48.0	+1.3	
	baz=29									
SLGT	**Liugui**	**0.50**	**157**		*e* P		Pb	10 36 40.9	+0.9	
	baz=147									
SLGT					*e* S		Sb	10 36 48.3	+1.1	
	baz=147									
SSLB	**Suanglung**	**0.58**	**55**		*i* P		Pb	10 36 41.4	0.0	
	baz=55									
SSLB					S		Sb	10 36 49.9	+0.2	
	baz=55									
TYC	**Yuchr**	**0.59**	**41**	⇓	P		Pb	10 36 42.0	+0.3	
	baz=41									
TYC					S		Sb	10 36 51.1	+1.1	
	baz=41									
ELDTW	**Lidau**	**0.59**	**116**		*e* P		Pb	10 36 41.8	+0.1	
	baz=116									
ELDTW					*i* S		Sb	10 36 51.0	+0.9	
	baz=116									
SMLT	**Sun Moon Lake**	**0.60**	**45**	⇓	P		Pb	10 36 42.2	+0.3	
	baz=45									
SMLT					S		Sb	10 36 51.5	+1.1	
	baz=45									
WCHH	**Zhanghua**	**0.63**	**10**		P		Pb	10 36 42.1	-0.3	
	baz=10.0									
WCHH					S		Sb	10 36 51.8	+0.6	
	baz=10.0									
VWDT	**VWDT**	**0.71**	**65**	⇓	P		Pb	10 36 44.2	+0.5	
	baz=65									
VWDT					*e* S		Sb	10 36 54.5	+1.1	
	baz=65									
WCS	**Beigang Elemen**	**0.74**	**36**		*e* P		Pb	10 36 44.2	0.0	
	baz=36									
WCS					S		Sb	10 36 55.5	+1.2	
	baz=36									
TSMG	**Majia**	**0.77**	**166**	⇓	P		Pn	10 36 45.4	-0.6	
	baz=154									
TSMG					S		Sn	10 36 56.5	-0.9	
	baz=154									
EHD	**Haiduan**	**0.77**	**113**	⇑	P		Pb	10 36 44.8	+0.1	
	baz=106									
EHD					*e* S		Sb	10 36 55.4	+0.3	
	baz=106									
YULB	**Yu-li**	**0.79**	**94**	⇓	*i* P		Pb	10 36 45.4	+0.3	
	baz=104									
YULB					*e* S		Sb	10 36 56.3	+0.5	
	baz=104									
PHUB	**P'eng-hu**	**0.80**	**274**	⇓	*e* P		Pg	10 36 44.7	-0.1	
	baz=274									
PHUB					S		Sb	10 36 56.8	+1.0	
	baz=274									
TWF1	**Yuli**	**0.80**	**97**	⇑	P		Pb	10 36 45.7	+0.5	
	baz=107									
TWF1					S		Sn	10 36 57.4	-0.7	
	baz=107									
EHY	**Hungye**	**0.81**	**86**	⇑	*i* P		Pb	10 36 45.9	+0.4	
	baz=87									
EHY					*e* S		Sb	10 36 57.1	+0.8	
	baz=87									
EYUL	**Yuli**	**0.82**	**97**		P		Pb	10 36 45.9	+0.4	
	baz=98									
EYUL					S		Sb	10 36 57.2	+0.8	
	baz=98									
PNG	**Penghu**	**0.82**	**278**		*e* P		Pg	10 36 44.8	-0.4	
	baz=278									
PNG					*e* S		Sg	10 36 55.5	-0.4	
	baz=278									
WUSB	**Renai**	**0.82**	**49**	⇓	P		Pb	10 36 45.7	0.0	
	baz=49									
WUSB					*e* S		Sb	10 36 57.0	+0.2	
	baz=49									
FULB	**Fuli**	**0.83**	**108**		P		Pn	10 36 46.5	-0.3	
	baz=108									
FULB					*e* S		Sn	10 36 58.9	0.0	
	baz=108									
LONT	**Longtian**	**0.84**	**130**		*i* P		Pb	10 36 46.1	+0.3	
	baz=131									
LONT					S		Sn	10 36 58.4	-0.8	
	baz=131									
OWD	**Renai**	**0.84**	**53**		*i* P		Pb	10 36 46.1	+0.1	
	baz=54									
OWD					*e* S		Sb	10 36 57.5	+0.2	
	baz=54									
MASBT	**Mashibuluo**	**0.86**	**168**		*i* P		Pb	10 36 46.4	+0.3	
	baz=157									
MASBT					*e* S		Sn	10 36 59.6	-0.1	
	baz=157									
TWG	**Pinlang**	**0.86**	**137**		*e* P		Pn	10 36 47.1	-0.1	
	baz=127									
TWG					*i* S		Sn	10 36 59.1	-0.6	
	baz=127									
TWGBT	**Beinan**	**0.87**	**137**		*e* P		Pn	10 36 47.1	-0.2	
	baz=127									
TWGBT					S		Sn	10 36 59.2	-0.7	
	baz=127									
CHGB	**Renai**	**0.91**	**48**		P		Pb	10 36 47.5	+0.3	
	baz=48									
HGSD	**Ruisui**	**0.91**	**87**	⇑	*e* P		Pb	10 36 48.6	+0.7	
	baz=75									
HGSD					*e* S		Sn	10 37 01.9	+1.0	
	baz=75									
WARBT	**Fenglin Townsh**	**0.91**	**73**	⇑	P		Pn	10 36 47.6	-0.4	
	baz=73									
WARBT					S		Sb	10 36 59.9	+0.8	
	baz=73									
WARBT	**Fenglin Townsh**	**0.91**	**73**	⇑	*e* P		Pn	10 36 47.5	-0.4	
	baz=215									
WARBT					*i* S		Sb	10 36 59.8	+0.7	
	baz=215									
EGFH	**Guangfu**	**0.93**	**77**		P		Pb	10 36 47.6	+0.1	
	baz=64									
EGFH					*i* S		Sn	10 37 01.0	-0.5	
	baz=64									
TWQ1	**Liyutan**	**0.94**	**19**		*i* P		Pn	10 36 48.0	-0.4	
	baz=20									
TWQ1					S		Sn	10 37 01.6	-0.2	
	baz=20									
WHP	**Taichung City**	**0.94**	**29**	⇓	P		Pn	10 36 48.3	-0.2	
	baz=30									
WHP					S		Sn	10 37 01.6	-0.4	
	baz=30									
ECL	**Taimali**	**0.98**	**151**		*i* P		Pn	10 36 48.6	-0.3	
	baz=150									
ECL					S		Sn	10 37 02.9	+0.3	
	baz=150									
ESL	**Shilin**	**0.98**	**68**		*e* S		Sn	10 37 02.1	-0.7	
	baz=69									
WHF	**Hehuan Shan**	**1.02**	**48**	⇓	*e* P		Pg	10 36 49.0	-0.2	
	baz=48									
WHF					S		Sb	10 37 03.6	+0.8	
	baz=48									
LXIB	**Xiulin Townshi**	**1.06**	**58**		*i* P		Pg	10 36 49.9	+0.1	
	baz=46									
LXIB					*e* S		Sg	10 37 04.2	+0.6	
	baz=46									
FUSS	**Fushou**	**1.08**	**43**	⇓	P		Pb	10 36 50.2	+0.1	
	baz=43									
FUSS					*e* S		Sn	10 37 06.8	+1.2	
	baz=43									
ETM	**Tongmen**	**1.09**	**62**		*e* P		Pb	10 36 50.1	-0.1	
	baz=73									
ETM					S		Sn	10 37 06.1	+0.5	
	baz=73									
EAST	**Anshuo**	**1.13**	**160**		*i* P		Pg	10 36 51.2	+0.1	
	baz=160									
EAST					*i* S		Sn	10 37 07.2	+0.7	
	baz=160									
ETLH	**Xiulin Townshi**	**1.22**	**52**		*e* P		Pg	10 36 53.2	+0.4	
	baz=45									
ETLH					*e* S		Sn	10 37 09.9	+1.3	
	baz=45									
SLIU	**Shizi**	**1.27**	**165**		*i* P		Pb	10 36 53.4	0.0	
	baz=165									
NACB	**Ninganchiao**	**1.28**	**56**		P		Pb	10 36 53.4	0.0	
	baz=56									
NACB					*i* S		Sg	10 37 10.8	+0.1	
	baz=56									
NSTT	**Nanjuang**	**1.28**	**24**		P		Pn	10 36 53.2	+0.1	
	baz=24									
NSTT					*i* S		Sg	10 37 10.9	+0.2	
	baz=24									
LIOB	**Emei**	**1.30**	**24**		S		Sg	10 37 11.2	-0.1	
	baz=24									
NNSB	**Datong**	**1.30**	**42**		*e* P		Pn	10 36 52.9	-0.5	
	baz=31									
NNSB					S		Sg	10 37 11.7	+0.3	
	baz=31									
NNS	**Nan Shan**	**1.30**	**41**		*e* P		Pn	10 36 53.2	-0.3	
	baz=31									
NNS					S		Sg	10 37 11.6	+0.1	
	baz=31									
NFF	**Wufeng Townshi**	**1.33**	**28**		P		Pn	10 36 53.9	+0.1	
	baz=29									
NFF					S		Sn	10 37 11.8	+0.4	
	baz=29									
LATG	**Datong**	**1.47**	**43**		*e* P		Pb	10 36 57.0	+0.4	
	baz=33									
LATG					*e* S		Sg	10 37 16.6	-0.1	
	baz=33									
NSK	**Sanguang**	**1.48**	**34**		*i* P		Pn	10 36 56.2	+0.4	
	baz=18									
YHNB	**Yeheng**	**1.48**	**35**		*i* P		Pn	10 36 56.3	+0.4	
	baz=23									
YHNB					*e* S		Sg	10 37 16.5	-0.7	
	baz=23									
FUSB	**Fushanzhiwuyua**	**1.67**	**39**		*e* P		Pn	10 36 56.9	-1.6	
	baz=27									
FUSB					*e* S		Sn	10 37 20.0	+0.1	
	baz=27									
VWUC	**VWUC**	**1.78**	**330**		S		Sb	10 37 23.4	-0.7	
	baz=330									

TAP 06 10:36:37.1, 24°23N×121°79E, h8km, ML1.5, 2C-1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**333**	*e* P	Pg	10 36 39.9	+0.5
	baz=337						
EAHA	**Aohua**	**0.11**	**337**	P	Pg	10 36 40.3	+0.7
	baz=337						
EAHA				*i* S	Sg	10 36 42.9	+1.5
	baz=337						
ETL	**Fush Village**	**0.16**	**246**	*i* P	Pg	10 36 41.5	+0.9
	baz=245						
ETL				S	Sg	10 36 44.9	+2.0
	baz=245						
NACB	**Ninganchiao**	**0.18**	**254**	P	Pg	10 36 42.3	+1.4
	baz=253						
NACB				*i* S	Sg	10 36 45.4	+2.0
	baz=253						
ENA	**Nanau**	**0.20**	**348**	⇓ P	Pg	10 36 42.6	+1.3
	baz=350						
ENA				S	Sg	10 36 45.8	+1.7
	baz=350						
EWUT	**Wuta**	**0.22**	**358**	*e* P	Pg	10 36 42.8	+1.3
	baz=357						
EWUT				S	Sg	10 36 46.2	+1.7
	baz=357						
TWD	**Chiawan**	**0.23**	**230**	*i* P	Pg	10 36 42.6	+0.9
	baz=229						
TWD				*e* S	Sg	10 36 46.2	+1.5
	baz=229						
ETLH	**Xiulin Townshi**	**0.28**	**266**	*i* P	Pb	10 36 43.8	-0.7
	baz=266						
ETLH				S	Sb	10 36 48.4	-1.0
	baz=266						
TWC	**Suao**	**0.39**	**8**	P	Pb	10 36 46.1	-0.2
	baz=9.0						
TWC				*i* S	Sb	10 36 52.3	-0.2
	baz=9.0						
LATG	**Datong**	**0.39**	**322**	*e* P	Pb	10 36 46.2	-0.2
	baz=322						
LATG				*i* S	Sb	10 36 52.3	-0.3
	baz=322						
NDS	**Dongshan**	**0.41**	**351**	P	Pb	10 36 46.1	-0.6
	baz=351						
NDS				*i* S	Sb	10 36 53.1	-0.1
	baz=351						
NNSB	**Datong**	**0.42**	**299**	P	Pb	10 36 46.6	-0.3
	baz=298						
NNS	**Nan Shan**	**0.43**	**300**	P	Pb	10 36 47.0	-0.2
	baz=299						
NDT	**Datong Townshi**	**0.45**	**326**	⇑ *e* P	Pb	10 36 47.7	+0.3
	baz=326						
NDT				S	Sb	10 36 54.5	+0.2
	baz=326						
ENTT	**Nioudou**	**0.46**	**334**	P	Pb	10 36 47.0	-0.5
	baz=334						
SHUL	**Shoufeng**	**0.48**	**205**	*e* P	Pb	10 36 47.2	-0.7
	baz=205						
ESL	**Shilin**	**0.52**	**218**	*e* P	Pb	10 36 48.8	+0.2
	baz=217						
FUSB	**Fushanzhiwuyua**	**0.56**	**341**	P	Pb	10 36 49.1	-0.2
	baz=341						
YHNB	**Yeheng**	**0.58**	**320**	⇑ *e* P	Pb	10 36 50.0	+0.3
	baz=319						
CHGB	**Renai**	**0.58**	**254**	*e* P	Pg	10 36 48.9	+0.5
	baz=253						
NSK	**Sanguang**	**0.59**	**319**	P	Pb	10 36 49.4	-0.4
	baz=319						
NWLT	**Wulai**	**0.61**	**335**	P	Pb	10 36 50.2	+0.1
	baz=334						
NWLT				*i* S	Sb	10 36 59.3	+0.5
	baz=334						
EGFH	**Guangfu**	**0.65**	**211**	P	Pb	10 36 50.3	-0.4
	baz=210						
EGFH				S	Sb	10 37 00.5	+0.7
	baz=210						
TIPB	**Shuangxi**	**0.74**	**3**	*i* S	Sb	10 37 03.6	+0.8
	baz=2.0						
LIOB	**Emei**	**0.82**	**301**	*e* P	Pb	10 36 53.5	-0.2
	baz=300						

IDC 06 10:44:57.3±13.0, 3°50S×128°82E, h0km, mb3.7/2, mbtmp3.6/3, ML3.7/1, MS3.0/1, Error ellipse: s-maj=208.2km s-min=160.3km az=128.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.20**	**162**	P	Pn	10 48 57.5	-1.7
	0.3nm,0.3s,baz=344,slow=12,SNR=19						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**20.64**	**167**	P	Pn	10 49 40.0	-0.8
	0.5nm,0.4s,baz=344,slow=10,SNR=7.9						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**30.67**	**158**	P	P	10 51 13.3	-0.4
	2.4nm,0.7s,baz=306,slow=8.7,SNR=3.9						
	2.4nm,0.7s						
ASAJ	**Asahikawa**	**48.99**	**13**	LR	LR	11 12 27.1	
	comp=Z,17nm,21.3s,baz=178,slow=34						

DJA 06 10:46:51.0±0.5, 1°N±4°×122°2E±°, h10km, M2.9/5, MLv2.9/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.55**	**176**	P	Pb	10 47 02.5	-0.3
MRSI				S	Sb	10 47 10.2	-0.5
MPSI	**Mapaga**	**2.12**	**251**	P	Pn	10 47 26.1	-0.4
LUWI	**Luwuk**	**2.23**	**157**	P	Pn	10 47 29.2	+1.1

*NNC **06** 11:07:20.8±0.5, 51°74N×75°33E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=10.3km s-min=3.1km az=21.0, Suspected Mining explosion.*

*IDC **06** 11:07:22.0±1.1, 51°68N×75°60E, h0km, mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=21.4km s-min=9.2km az=31.0*

ISC 06 11:07:18.8±0.9, 51°68N±0°06×75°21E±0°05, h0km, n11, σ1§27/14, 7C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.34**	**116**	⇑ Pn	**Pb**	**11 08 00.4**	**-1.5**
	7.1nm,0.4s						
KURBB				⇓ Sn	**Sb**	**11 08 30.4**	**-0.9**
	47nm,0.7s						
KURBB	**Kurchatov Arra**	**2.34**	**116**	Pg	**Pn**	**11 07 59.8**	**+1.2**
	0.7nm,0.3s,baz=304,slow=19,SNR=40						
KURBB				Lg	Lg	11 08 27.6	
	0.4nm,0.3s,baz=306,slow=31,SNR=4.3						
KURK	**Kurchatov**	**2.35**	**113**	⇑ Pn	**Pn**	**11 07 60.0**	**+1.3**
	1.0nm,0.3s						
KURK				⇓ Sn	**Sn**	**11 08 29.2**	**+1.0**
	30nm,0.9s						
BVA0	**Borovoye Array**	**3.25**	**296**	⇓ Pg	**Pg**	**11 08 20.7**	**-0.3**
	0.8nm,0.3s,baz=110,slow=14,SNR=10						
BVA0				⇑ Lg	Lg	11 09 05.2	
	15nm,0.8s,baz=113,slow=27,SNR=12						
BVAR	**Borovoye Array**	**3.25**	**296**	Pn	**Pb**	**11 08 16.6**	**-0.7**
	0.1nm,0.3s,baz=106,slow=13,SNR=8.7						
BVAR				Lg	Lg	11 09 05.4	
	0.4nm,0.3s,baz=120,slow=28,SNR=15						
	0.8nm,0.4s						
BRVK	**Borovoye**	**3.32**	**296**	⇑ Pg	**Pg**	**11 08 21.9**	**-0.4**
	1.2nm,0.4s						
BRVK				⇓ Lg	Lg	11 09 07.7	
	20nm,0.7s						
OTUK	**Ortayu**	**3.91**	**209**	⇑ Pg	**Pg**	**11 08 34.0**	**+0.3**
	0.4nm,0.3s						
OTUK				⇑ Lg	Lg	11 09 26.2	
	9.3nm,0.8s						
I46RU	**ZALESOVO INFRA**	**6.25**	**65**	I	I	11 45 40.0	
	baz=251,slow=331,SNR=3.9						
ZALV	**Zalesovo Beam**	**6.25**	**65**	Pn	**Pn**	**11 08 54.0**	**+1.8**
	0.3nm,0.3s,baz=254,slow=14,SNR=7.2						
ZALV				Sn	**Sn**	**11 10 04.0**	**-0.3**
	0.5nm,0.3s,baz=253,slow=26,SNR=5.6						
ZALV				Lg	Lg	11 10 35.9	
	0.2nm,0.3s,baz=249,slow=31,SNR=6.0						
	1.1nm,0.5s						
MK31	**Makanchi Array**	**6.74**	**134**	⇑ Pn	**Pn**	**11 09 00.5**	**+1.5**
	0.4nm,0.4s,baz=316,slow=11,SNR=12						
MK31				⇓ Lg	Lg	11 10 54.4	
	9.4nm,0.9s,baz=324,slow=27,SNR=9.0						
MKAR	**Makanchi Array**	**6.74**	**134**	Pn	**Pn**	**11 09 00.2**	**+1.3**
	0.1nm,0.3s,baz=313,slow=12,SNR=11						
MKAR				Sn	**Sn**	**11 10 14.8**	**-1.5**
	0.4nm,0.3s,baz=316,slow=24,SNR=8.6						
MKAR				Lg	Lg	11 10 47.8	
	0.7nm,0.3s,baz=323,slow=26,SNR=7.7						
	0.9nm,0.7s						

*IDC **06** 11:12:02.1±3.6, 20°44S×66°18E, h0km, mb3.8/8, mbtmp3.8/8, MS3.6/19, Error ellipse: s-maj=109.7km s-min=29.4km az=55.0*

*NEIC **06** 11:12:03.6±0.9, 20°6S±0°1×66°5E±0°1, h10km±1km, mb4.5/14, Error ellipse: s-maj=24.9km s-min=16.3km az=177.0*

ISC 06 11:12:02.9±0.7, 20°6S±0°2×66°36E±0°08, h10km, n46, σ1§32/26, mb4.1/14, MS3.7/19, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**2.92**	**286**		**Pb**	**11 12 52.5**	**-2.6**
RER	**Riviere de l'E**	**9.94**	**265**	Pn	**Pn**	**11 14 27.5**	**+1.5**
H08S1	**Diego Garcia H**	**14.15**	**26**	T	T	11 29 10.6	
	baz=204,slow=75,SNR=101						
H08S2	**Diego Garcia H**	**14.15**	**26**	T	T	11 29 11.2	
	baz=204,slow=75,SNR=94						
H08S3	**Diego Garcia H**	**14.17**	**26**	T	T	11 29 12.2	
	baz=204,slow=75,SNR=116						
VOI	**Vohitsoka**	**18.29**	**262**	P	**Pn**	**11 16 16.8**	**-0.3**
H04N2	**CROZET ISLANDS**	**28.18**	**202**	T	T	11 48 10.6	
	baz=30,slow=75,SNR=5616						
H04N1	**CROZET ISLANDS**	**28.19**	**202**	T	T	11 48 12.5	
	baz=30,slow=75,SNR=5196						
H04N3	**CROZET ISLANDS**	**28.20**	**202**	T	T	11 48 11.3	
	baz=30,slow=75,SNR=8580						
PALK	**Pallekele**	**31.05**	**28**	LR	LR	11 27 39.0	
	comp=Z,119nm,19.9s,baz=322,slow=90						
LSZ	**Lusaka**	**36.64**	**272**	LR	LR	11 32 02.7	
	comp=Z,58nm,21.8s,baz=128,slow=33						
BOSA	**Boshof**	**38.08**	**250**	LR	LR	11 32 56.8	
	comp=Z,54nm,18.6s,baz=157,slow=33						
SOE	**Somerset East**	**38.20**	**243**	P	**P**	**11 19 24.7**	**+1.6**
SUR	**Sutherland**	**42.15**	**244**	LR	LR	11 34 39.3	
	comp=Z,108nm,18.4s,baz=145,slow=32						
NWAO	**Narrogin (SRO)**	**46.67**	**116**	LR	LR	11 35 21.8	
	comp=Z,94nm,21.8s,baz=216,slow=30						
MAW	**Mawson**	**47.08**	**182**	LR	LR	11 37 41.8	
	comp=Z,41nm,18.9s,baz=10,slow=33						
PSA00	**Pilbara Seismi**	**49.71**	**101**	P	**P**	**11 20 53.4**	**-2.3**
PSA00				IAmb	IAmb	11 20 54.3	
	comp=Z,10nm,1.5s						
CMAR	**Chiang Mai Arr**	**50.25**	**42**	P	**P**	**11 20 58.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**50.25**	**42**	P	**P**	**11 21 00.3**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=235,slow=8.6,SNR=7.2						
CMAR				LR	LR	11 38 34.2	
	comp=Z,41nm,21.7s,baz=225,slow=32						
	comp=Z,0.9nm,0.5s						
SHL	**Shillong**	**52.13**	**30**	P	**P**	**11 21 14.6**	**+0.7**
SHL				IAmb	IAmb	11 21 19.9	
	comp=Z,5.8nm,0.9s						
ASAR	**Alice Springs**	**62.12**	**107**	P	**P**	**11 22 27.5**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=270,slow=5.8,SNR=7.1						
ASAR				LR	LR	11 45 53.6	
	comp=Z,79nm,20.7s,baz=302,slow=33						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**63.33**	**103**	P	**P**	**11 22 31.9**	**-0.8**
WRA	**Warramunga Arr**	**63.33**	**103**	P	**P**	**11 22 33.6**	**+1.0**
	comp=Z,1.3nm,1.1s,baz=259,slow=6.0,SNR=3.8						
	comp=Z,1.3nm,1.1s						
AAK	**Ala-Archa**	**63.34**	**7**	LR	LR	11 46 02.7	
	comp=Z,93nm,18.4s,baz=221,slow=32						
WRAB	**Tennant Creek**	**63.34**	**103**	P	**P**	**11 22 31.2**	**-1.6**
WRAB				IAmb	IAmb	11 22 48.4	
	comp=Z,5.0nm,1.2s						
WB0	**Warramunga Arr**	**63.42**	**102**	P	**P**	**11 22 31.7**	**-1.6**
WR0	**Warramunga Arr**	**63.51**	**103**	P	**P**	**11 22 33.0**	**-0.9**
WR0				IAmb	IAmb	11 23 01.2	
	comp=Z,7.0nm,1.2s						
STKA	**Stephens Creek**	**67.25**	**117**	LR	LR	11 47 50.4	
	comp=Z,45nm,19.4s,baz=210,slow=32						
MK31	**Makanchi Array**	**68.58**	**12**	P	**P**	**11 23 06.4**	**+0.6**
MK31				IAmb	IAmb	11 23 07.0	
	comp=Z,2.9nm,1.4s						
MKAR	**Makanchi Array**	**68.58**	**12**	P	**P**	**11 23 05.7**	**-0.1**
MKAR	**Makanchi Array**	**68.58**	**12**	P	**P**	**11 23 06.0**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=201,slow=6.5,SNR=7.1						
	comp=Z,0.8nm,0.8s						
ABKAR	**Akbulak array**	**69.74**	**356**	P	**P**	**11 23 13.8**	**+0.9**
KURBB	**Kurchatov Arra**	**71.69**	**8**	P	**P**	**11 23 24.9**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=203,slow=7.0,SNR=6.0						
KURBB				LR	LR	11 51 46.2	
	comp=Z,51nm,19.4s,baz=174,slow=33						
	comp=Z,0.5nm,0.6s						
BVAR	**Borovoye Array**	**73.37**	**3**	P	**P**	**11 23 34.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=160,slow=6.0,SNR=2.4						
BVAR				LR	LR	11 53 20.0	
	comp=Z,47nm,21.8s,baz=191,slow=34						
	comp=Z,0.6nm,0.6s						
CTA	**Charters Tower**	**74.11**	**106**	LR	LR	11 54 06.3	
	comp=Z,42nm,19.0s,baz=269,slow=34						
DBIC	**Dimbokro**	**74.96**	**283**	LR	LR	11 55 20.4	
	comp=Z,73nm,18.0s,baz=127,slow=35						
ZAA0	**Zalesovo Array**	**75.90**	**11**	P	**P**	**11 23 50.3**	**+0.

comp=Z,30nm,19.9s,baz=256,slow=35

TAP 06 11:40:01.7,24°11N×121°64E,h11km,ML1.4,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**235**	*i* P	Pg	11 40 04.3	+0.5
	baz=229						
TWD				*i* S	Sg	11 40 05.9	+0.6
	baz=229						
ETL	**Fush Village**	**0.05**	**344**	*i* P	Pg	11 40 04.4	+0.5
	baz=343						
ETL				S	Sg	11 40 06.1	+0.6
	baz=343						
NACB	**Ninganchiao**	**0.08**	**328**	⇓ *i* P	Pg	11 40 04.7	+0.6
	baz=328						
ETLH	**Xiulin Townshi**	**0.17**	**304**	P	Pb	11 40 06.4	-0.6
	baz=304						
ETLH				S	Sg	11 40 09.7	+1.4
	baz=304						
ETM	**Tongmen**	**0.20**	**223**	*i* P	Pb	11 40 06.7	-0.6
	baz=223						
ETM				*i* S	Sg	11 40 09.7	+1.0
	baz=223						
LXIB	**Xiulin Townshi**	**0.22**	**247**	*i* P	Pb	11 40 07.5	-0.4
	baz=247						
LXIB				S	Sg	11 40 11.3	+1.6
	baz=247						
EAHA	**Aohua**	**0.24**	**23**	*e*P	Pb	11 40 08.3	+0.2
	baz=22						
SHUL	**Shoufeng**	**0.33**	**192**	*e*P	Pg	11 40 08.8	+0.6
	baz=192						
WHF	**Hehuan Shan**	**0.34**	**276**	*e*P	Pb	11 40 09.8	-0.2
	baz=275						
WHF				S	Sb	11 40 15.2	-0.5
	baz=275						
ESL	**Shilin**	**0.35**	**213**	*e*P	Pb	11 40 09.8	0.0
	baz=211						
FUSS	**Fushou**	**0.39**	**291**	*e*P	Pb	11 40 10.2	-0.5
	baz=291						
NNS	**Nan Shan**	**0.41**	**324**	*e*P	Pb	11 40 10.5	-0.5
	baz=324						
CHGB	**Renai**	**0.43**	**264**	*e*P	Pb	11 40 11.4	+0.1
	baz=263						
CHGB				*e*S	Sb	11 40 17.8	-0.1
	baz=263						
WARBT	**Fenglin Townsh**	**0.45**	**211**	*e*P	Pg	11 40 10.6	0.0
	baz=210						
WARBT				*e*S	Sb	11 40 17.7	-0.7
	baz=210						
WUSB	**Renai**	**0.49**	**256**	*e*P	Pb	11 40 12.3	-0.1
	baz=256						
WUSB				*e*S	Sb	11 40 19.5	-0.2
	baz=256						
ESAO	**Su ao**	**0.50**	**22**	*e*P	Pb	11 40 12.3	-0.2
	baz=21						

TAP 06 11:40:03.1,24°23N×121°69E,h14km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**225**	*e*P	Pg	11 40 06.8	+0.6
	baz=224						
ETL				S	Sg	11 40 09.1	+0.8
	baz=224						
NACB	**Ninganchiao**	**0.10**	**241**	*e*P	Pb	11 40 06.8	-0.1
	baz=240						
NACB				S	Sb	11 40 09.3	-0.1
	baz=240						
EAHA	**Aohua**	**0.11**	**22**	*e*P	Pb	11 40 06.8	-0.2
	baz=21						
TWD	**Chiawan**	**0.17**	**212**	P	Pb	11 40 07.7	-0.3
	baz=209						
TWD				*e*S	Sb	11 40 11.1	-0.1
	baz=209						
ETLH	**Xiulin Townshi**	**0.20**	**265**	*e*P	Pb	11 40 08.2	-0.3
	baz=264						
ETLH				S	Sb	11 40 12.2	+0.2
	baz=264						
EWUT	**Wuta**	**0.23**	**19**	*e*P	Pb	11 40 08.8	-0.3
	baz=19						
HWA	**Hwalien**	**0.26**	**198**	*e*P	Pb	11 40 09.5	-0.1
	baz=196						
LXIB	**Xiulin Townshi**	**0.33**	**232**	*e*P	Pg	11 40 10.2	+0.3
	baz=231						
LXIB				S	Sb	11 40 15.7	-0.2
	baz=231						
LATG	**Datong**	**0.34**	**334**	P	Pb	11 40 10.9	-0.1
	baz=346						
LATG				S	Sb	11 40 16.6	+0.2
	baz=346						
LATG	**Datong**	**0.34**	**334**	P	Pb	11 40 11.0	-0.1
	baz=333						
LATG				*e*S	Sb	11 40 16.6	+0.2
	baz=333						
NNSB	**Datong**	**0.35**	**306**	P	Pb	11 40 11.0	-0.1
	baz=323						
NNSB				*e*S	Sb	11 40 16.4	-0.2
	baz=323						
NNSB	**Datong**	**0.35**	**306**	P	Pb	11 40 11.1	-0.1
	baz=305						
NNSB				S	Sb	11 40 16.4	-0.2
	baz=305						
NNS	**Nan Shan**	**0.36**	**306**	*e*P	Pb	11 40 11.1	-0.2
	baz=306						
NNS				*e*S	Sb	11 40 17.2	+0.2
	baz=306						
ESAO	**Su ao**	**0.38**	**21**	*e*P	Pb	11 40 11.7	+0.2
	baz=21						
WHF	**Hehuan Shan**	**0.40**	**259**	P	Pb	11 40 11.9	-0.2
	baz=258						
WHF				S	Sb	11 40 18.6	+0.3
	baz=258						
NDS	**Dongshan**	**0.41**	**3**	*e*S	Sb	11 40 17.8	-0.3
	baz=2.0						
NDT	**Datong Townshi**	**0.41**	**336**	*e*P	Pb	11 40 12.1	0.0
	baz=346						
NDT				*e*S	Sb	11 40 19.0	+0.7
	baz=346						
NDT	**Datong Townshi**	**0.41**	**336**	P	Pb	11 40 12.2	+0.1
	baz=336						
NDT				S	Sb	11 40 18.5	+0.2
	baz=336						
FUSS	**Fushou**	**0.41**	**273**	*e*P	Pb	11 40 12.3	0.0
	baz=273						
ENTT	**Nioudou**	**0.43**	**344**	*e*P	Pb	11 40 13.0	+0.5
	baz=353						
ENTT	**Nioudou**	**0.43**	**344**	P	Pb	11 40 12.6	+0.2
	baz=345						
ENTT				*e*S	Sb	11 40 19.0	+0.2
	baz=345						
SHUL	**Shoufeng**	**0.45**	**195**	*e*P	Pb	11 40 12.7	-0.1
	baz=195						
CHGB	**Renai**	**0.50**	**251**	*e*P	Pb	11 40 13.5	-0.3
	baz=250						
CHGB				S	Sb	11 40 21.2	+0.1
	baz=250						
YHNB	**Yeheng**	**0.53**	**327**	*e*P	Pb	11 40 14.5	+0.3
	baz=336						
YHNB				*e*S	Sb	11 40 22.7	+0.9
	baz=336						
YHNB	**Yeheng**	**0.53**	**327**	*e*P	Pb	11 40 14.1	-0.1
	baz=326						
YHNB				*e*S	Sb	11 40 22.6	+0.9
	baz=326						
FUSB	**Fushanzhiwuyua**	**0.54**	**350**	*e*P	Pb	11 40 15.0	+0.6
	baz=355						
FUSB				*e*S	Sn	11 40 24.6	-0.8
	baz=355						
FUSB	**Fushanzhiwuyua**	**0.54**	**350**	*e*P	Pb	11 40 14.7	+0.3
	baz=349						
FUSB				*e*S	Sb	11 40 22.8	+0.7
	baz=349						
NSK	**Sanguang**	**0.54**	**326**	*e*P	Pb	11 40 14.2	-0.3
	baz=336						
NSK	**Sanguang**	**0.54**	**326**	*e*P	Pb	11 40 14.1	-0.3
	baz=326						
NSK				*e*S	Sb	11 40 22.1	-0.1
	baz=326						
OWD	**Renai**	**0.55**	**240**	*e*P	Pb	11 40 14.2	-0.3
	baz=240						
WUSB	**Renai**	**0.58**	**246**	*e*P	Pb	11 40 15.7	+0.7
	baz=246						
WUSB				*e*S	Sb	11 40 23.9	+0.8
	baz=246						
NWLT	**Wulai**	**0.58**	**342**	*e*P	Pg	11 40 14.6	+0.1
	baz=342						
NWLT				*e*S	Sb	11 40 23.6	+0.5
	baz=342						
WARBT	**Fenglin Townsh**	**0.58**	**209**	*e*P	Pb	11 40 14.9	-0.1
	baz=209						

*SJA **06** 11:54:47.8±1.4,29°.35S×71°.91W,h15km,ML4.1,MW4.1*
*IDC **06** 11:54:48.1±1.2,29°.42S×71°.78W,h0km,mb4.3/3, mbtmp4.1/7,ML4.0/4,MS3.5/2,Error ellipse: s-maj=51.0km s-min=23.2km az=102.0*
*NEIC **06** 11:54:50.2,29°.40S×72°.00W,h23km*
*NEIC **06** 11:54:51.5±2.2,29°.36S±0°.04×71°.97W±0°.02,h38km±7km, mb4.4/9,Mwr4.1/25,Error ellipse: s-maj=5.9km s-min=1.8km az=188.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr 1.26; Mθθ -0.12; Mφφ -1.14; Mrθ -0.98; Mθφ 1.29; Mφr -0.11; Fault plane solution: M₀2.03000×10¹⁵ NP1:φ295.35000°, δ62.46000°, λ49.37000°. NP2:φ177.03000°, δ47.70000°, λ141.31000°. Principal axes: T 1.9545, Plg53.0000°, Azm155.0000°; N 0.1351, Plg35.0000°, Azm317.0000°; P -2.0896, Plg9.0000°, Azm53.0000°;*
*GUC **06** 11:54:52.2±0.8,29°.40S×71°.74W,h44km±2km,ML4.0*
ISC 06 11:54:47.5±2.8,29°36S±0°.03×72°12W±0°.04,h10km±18km, n142,σ2s04/185,mb4.5/7,7C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.95**	**126**		**Pb**	**11 55 06.2**	**+0.1**
CO05					Sb	11 55 16.0	-2.8
CO05	**La Serena**	**0.95**	**126**	*e*P	**Pb**	**11 55 06.2**	**+0.1**
CO05				*e*S	**Sb**	**11 55 15.9**	**-2.8**
CO05				IAML		11 55 16.7	
	comp=E,22μm,0.3s						
LCO	**Las Campanas**	**1.29**	**75**		**Pn**	**11 55 11.6**	**-0.3**
LCO				Sn	**Sb**	**11 55 25.4**	**-3.4**
LCO	**Las Campanas**	**1.29**	**75**	*e*P	**Pn**	**11 55 10.7**	**-1.2**
LCO				*e*S	**Sb**	**11 55 25.2**	**-3.6**
CO06	**Fray Jorge**	**1.38**	**162**	Pn	**Pn**	**11 55 13.7**	**+0.8**
CO06	**Fray Jorge**	**1.38**	**162**	⇑ *e*P	**Pn**	**11 55 13.6**	**+0.8**
CO06				*e*S	**Sn**	**11 55 28.3**	**-2.8**
CO06				IAML		11 55 29.8	
	comp=E,3μm,0.2s						
GO04	**Tololo Observa**	**1.41**	**125**		**Pn**	**11 55 13.3**	**-0.2**
GO04				Sn	**Sn**	**11 55 29.0**	**-3.2**
GO04	**Tololo Observa**	**1.41**	**125**	*e*P	**Pn**	**11 55 13.3**	**-0.2**
GO04				*e*S	**Sn**	**11 55 29.4**	**-2.8**
GO04				IAML		11 55 33.4	
	comp=Z,10μm,0.7s						
GO04	**Tololo Observa**	**1.41**	**125**	⇑ *e*P	**Pn**	**11 55 13.2**	**-0.2**
GO04				*e*S	**Sn**	**11 55 28.4**	**-3.8**
AC04	**Llanos de Chal**	**1.48**	**39**		**Pn**	**11 55 14.9**	**+0.7**
AC04	**Llanos de Chal**	**1.48**	**39**	*e*P	**Pn**	**11 55 14.1**	**-0.1**
AC04				*e*S	**Sn**	**11 55 32.1**	**-1.4**
AC04				IAML		11 55 40.4	
	comp=Z,1μm,0.6s						
AC04	**Llanos de Chal**	**1.48**	**39**	⇓ *e*P	**Pn**	**11 55 14.8**	**+0.7**
AC04				*e*S	**Sn**	**11 55 31.2**	**-2.3**
AC04				IAML		11 55 32.1	
	comp=E,3μm,0.2s						
AC05	**El Transito**	**1.70**	**73**	Pn	**Pn**	**11 55 17.6**	**+0.2**
CO01	**Juntas del Tor**	**1.87**	**110**		**Pn**	**11 55 20.2**	**+0.4**
CO01	**Juntas del Tor**	**1.87**	**110**	*e*P	**Pn**	**11 55 20.2**	**+0.4**
CO01				*e*S	**Sn**	**11 55 40.5**	**-3.1**
CO01				IAML		11 55 41.9	
	comp=Z,1μm,0.3s						
CO01	**Juntas del Tor**	**1.87**	**110**	⇑ *e*P	**Pn**	**11 55 20.2**	**+0.4**
CO01				*e*S	**Sn**	**11 55 40.1**	**-3.5**
CO01				IAML		11 55 43.7	
	comp=N,2μm,0.3s						
CO03	**El Pedregal**	**1.93**	**140**		**Pn**	**11 55 20.9**	**+0.4**
CO03	**El Pedregal**	**1.93**	**140**	*e*P	**Pn**	**11 55 21.0**	**+0.4**
CO03				*e*S	**Sn**	**11 55 42.9**	**-2.0**
CO03				IAML		11 55 50.8	
	comp=Z,1μm,0.3s						
CO03	**El Pedregal**	**1.93**	**140**	⇑ *e*P	**Pn**	**11 55 20.9**	**+0.4**
CO03				*e*S	**Sn**	**11 55 42.2**	**-2.7**
CO03				IAML		11 55 45.6	
	comp=N,2μm,0.5s						
CO02	**Combarbal**	**2.08**	**152**		**Pn**	**11 55 24.0**	**+1.4**
CO02	**Combarbal**	**2.08**	**152**	*e*P	**Pn**	**11 55 23.2**	**+0.6**
CO02				*e*S	**Sn**	**11 55 41.7**	**-6.9**
CO02				IAML		11 55 57.9	
	comp=Z,2μm,0.4s						
CO02	**Combarbal**	**2.08**	**152**	*e*P	**Pn**	**11 55 24.0**	**+1.4**
CO02				*e*S	**Sn**	**11 55 46.4**	**-2.2**
GO03	**Copiap**	**2.42**	**44**		**Pn**	**11 55 28.1**	**+0.9**
GO03	**Copiap**	**2.42**	**44**	*e*P	**Pn**	**11 55 28.2**	**+0.9**
GO03				*e*S	**Sn**	**11 55 53.7**	**-3.3**
GO03				IAML		11 56 08.5	
	comp=Z,774nm,0.8s						
GO03	**Copiap**	**2.42**	**44**	*e*P	**Pn**	**11 55 28.1**	**+0.9**
GO03				*e*S	**Sn**	**11 55 56.2**	**-0.7**
GO03				IAML		11 56 06.8	
	comp=E,1μm,0.6s						
AROD	**Rodeo**	**2.44**	**110**	*e*P	**Pn**	**11 55 29.5**	**+1.7**
AROD				*e*S	**Sn**	**11 55 52.2**	**-5.6**
AROD				IAML		11 55 52.7	
ACDV	**Cuesta del Vie**	**2.73**	**108**	*e*P	**Pn**	**11 55 33.6**	**+2.0**
ACDV				*e*S	**Sn**	**11 56 04.7**	**-0.2**
ACDV				IAML		11 56 14.6	
	comp=Z,591nm,0.5s						
ACCO	**Cerro Coronel**	**2.92**	**115**	*e*P	**Pn**	**11 55 37.0**	**+2.6**
ACCO				*e*S	**Sn**	**11 56 09.4**	**-0.3**
DOCA	**Reserva Natura**	**3.07**	**122**	*e*P	**Pn**	**11 55 38.6**	**+2.2**
DOCA				*e*S	**Sn**	**11 56 13.2**	**-0.3**
DOCA				IAML		11 56 21.2	
	comp=Z,379nm,0.7s						
AGUA	**GUANDACOL**	**3.17**	**93**	*e*P	**Pn**	**11 55 40.9**	**+3.3**
AGUA				*e*S	**Sn**	**11 56 15.7**	**+0.1**
AGUA				IAML		11 56 29.6	
	comp=Z,640nm,0.3s						
VA06	**Catapilco**	**3.27**	**168**	Pn	**Pn**	**11 55 40.3**	**+1.5**
VA06	**Catapilco**	**3.27**	**168**	*e*P	**Pn**	**11 55 40.2**	**+1.4**
VA06				*e*S	**Sn**	**11 56 13.8**	**-4.0**
RTLS	**Leoncito**	**3.44**	**136**	*e*P	**Pn**	**11 55 44.6**	**+3.1**
RTLS				*e*S	**Sn**	**11 56 25.2**	**+2.7**
RTLS				IAML		11 56 36.1	
	comp=Z,1μm,1.2s						
AC01	**Pan de Azucar**	**3.47**	**23**	Pn	**Pn**	**11 55 42.2**	**+0.5**
AC01	**Pan de Azucar**	**3.47**	**23**	*e*P	**Pn**	**11 55 42.3**	**+0.7**
AC01				*e*S	**Sn**	**11 56 22.8**	**-0.1**
AC01				IAML		11 56 52.1	
	comp=Z,227nm,0.8s						
AC01	**Pan de Azucar**	**3.47**	**23**	*e*P	**Pn**	**11 55 42.4**	**+0.8**
AC01				*e*S	**Sn**	**11 56 19.1**	**-3.7**
VCA	**Vinchina**	**3.49**	**81**	*e*P	**Pn**	**11 55 45.7**	**+3.7**
VCA				*e*S	**Sb**	**11 56 31.0**	**-1.0**
VCA				IAML		11 56 33.0	
	comp=Z,525nm,0.3s						
VCA	**Vinchina**	**3.49**	**81**	*e*P	**Pn**	**11 55 46.1**	**+4.1**
AC02	**Maricunga**	**3.65**	**47**		**Pn**	**11 55 46.3**	**+1.7**
AC02	**Maricunga**	**3.65**	**47**	*e*P	**Pn**	**11 55 45.6**	**+1.1**
AC02				*e*S	**Sn**	**11 56 28.7**	**+0.8**
AC02				IAML		11 56 46.7	
	comp=Z,344nm,0.5s						
AC02	**Maricunga**	**3.65**	**47**	*e*P	**Pn**	**11 55 46.2**	**+1.7**
AC02				*e*S	**Sb**	**11 56 40.0**	**+3.0**
VA03	**San Esteban**	**3.65**	**159**		**Pn**	**11 55 45.8**	**+1.7**
VA03	**San Esteban**	**3.65**	**159**	*e*P	**Pn**	**11 55 45.9**	**+1.7**
VA03				*e*S	**Sn**	**11 56 26.7**	**-0.7**
VA03				IAML		11 56 41.9	
	comp=Z,272nm,0.3s						
VA03	**San Esteban**	**3.65**	**159**	*e*P	**Pn**	**11 55 46.5**	**+2.3**
VA03				*e*S	**Sn**	**11 56 27.4**	**+0.1**
VA01	**Torpederas**	**3.67**	**174**	Pn	**Pn**	**11 55 45.6**	**+1.2**
VA01	**Torpederas**	**3.67**	**174**	*e*P	**Pn**	**11 55 45.3**	**+0.9**
RTLL	**Cerro Villicun**	**3.71**	**123**	*e*P	**Pn**	**11 55 47.0**	**+2.0**
RTLL				*e*S	**Sn**	**11 56 27.2**	**-1.7**
ROCH	**El Roble**	**3.72**	**165**	⇑ *e*P	**Pn**	**11 55 47.0**	**+1.7**
ROCH				*e*S	**Sn**	**11 56 27.1**	**-2.3**
PEL	**Peldehue**	**3.97**	**162**	⇑ *e*P	**Pn**	**11 55 50.4**	**+2.0**
PEL				*i* S	**Sn**	**11 56 33.0**	**-2.1**
RTCV	**Cerro Valdivia**	**3.97**	**130**	*e*P	**Pn**	**11 55 51.8**	**+3.3**
RTCV				*e*S	**Sn**	**11 56 39.6**	**+4.4**
MT02	**Curacav**	**3.98**	**168**		**Pn**	**11 55 49.7**	**+1.1**
MT02	**Curacav**	**3.98**	**168**	*e*P	**Pn**	**11 55 49.7**	**+1.1**
MT02				*e*S	**Sb**	**11 56 41.7**	**-4.2**
MT02				IAML		11 57 01.6	
	comp=Z,140nm,0.5s						
MT02	**Curacav**	**3.98**	**168**	*e*P	**Pn**	**11 55 49.7**	**+1.1**
MT10	**Hacienda Santa**	**4.13**	**161**	*e*P	**Pn**	**11 55 52.9**	**+2.1**
MT10				*e*S	**Sn**	**11 56 37.2**	**-2.0**
MT05	**Renca**	**4.19**	**164**		**Pn**	**11 55 53.4**	**+1.8**
MT05	**Renca**	**4.19**	**164**	*e*P	**Pn**	**11 55 53.5**	**+2.0**
MT05				*e*S	**Sn**	**11 56 42.6**	**+2.0**
MT05				IAML		11 57 02.7	
	comp=Z,211nm,0.9s						
MT05	**Renca**	**4.19**	**164**	*e*P	**Pn**	**11 55 53.4**	**+1.8**
MT14	**Cerro Cal¡n**	**4.25**	**162**	*e*P	**Pn**	**11 55 54.5**	**+2.2**
MT14				*e*S	**Sn**	**11 56 39.7**	**-2.3**
FCH	**Farellones**	**4.25**	**159**	*e*P	**Pn**	**11 55 54.6**	**+2.0**
MT16	**CCHEN**	**4.28**	**162**		**Pn**	**11 55 53.6**	**+0.9**
MT16	**CCHEN**	**4.28**	**162**	*e*P	**Pn**	**11 55 54.0**	**+1.2**
ASAL	**Salagasta**	**4.28**	**140**	*e*P	**Pn**	**11 55 56.3**	**+3.5**
ASAL				*e*S	**Sb**	**11 57 00.2**	**+5.4**
ASAL				IAML		11 57 07.2	
	comp=Z,242nm,0.9s						
VA05	**Santo Domingo**	**4.30**	**174**		**Pn**	**11 55 54.0**	**+1.0**
VA05	**Santo Domingo**	**4.30**	**174**	*e*P	**Pn**	**11 55 54.0**	**+1.0**
MT03	**Universidad Ad**	**4.34**	**162**		**Pn**	**11 55 56.0**	**+2.3**
MT03	**Universidad Ad**	**4.34**	**162**	*e*P	**Pn**	**11 55 55.6**	**+1.9**
MT03				IAML		11 57 12.4	
	comp=Z,156nm,0.5s						
MT03	**Universidad Ad**	**4.34**	**162**	*e*P	**Pn**	**11 55 55.7**	**+2.0**
MT04	**Ro Olivares**	**4.38**	**158**	*e*P	**Pn**	**11 55 56.9**	**+2.6**
ARCO	**CERRO ARCO**	**4.42**	**143**	*e*P	**Pn**	**11 55 53.7**	**-1.1**
ARCO				*e*P		11 55 59.0	
ARCO				*e*S	**Sb**	**11 57 03.7**	**+4.9**
ARCO				IAML		11 57 12.0	
	comp=Z,232nm,1.1s						
MT15	**Las Vizcachas**	**4.45**	**162**	*e*P	**Pn**	**11 55 57.0**	**+1.9**
MT09	**Talagante**	**4.51**	**168**		**Pn**	**11 55 57.8**	**+1.8**
MT09	**Talagante**	**4.51**	**168**	⇑ *i* P	**Pn**	**11 55 57.7**	**+1.8**
ACLC	**CERRO LA CRUZ**	**4.51**	**92**	*e*P	**Pn**	**11 55 52.2**	**-3.9**
ACLC				*e*S	**Sn**	**11 56 47.6**	**-1.2**
ACLC				IAML		11 57 08.8	
	comp=Z,369nm,0.9s						
MT01	**Popeta**	**4.55**	**171**		**Pn**	**11 55 57.9**	**+1.4**
MT01	**Popeta**	**4.55**	**171**	*e*P	**Pn**	**11 55 57.2**	**+0.7**
MT01				IAML		11 57 16.4	
	comp=Z,94nm,0.6s						
MT01	**Popeta**	**4.55**	**171**	*e*P	**Pn**	**11 55 57.7**	**+1.2**
MT12	**Pirque**	**4.56**	**163**	*e*P	**Pn**	**11 55 58.4**	**+1.7**
MT13	**San Alfonso**	**4.64**	**161**		**Pn**	**11 56 00.4**	**+2.6**
MT13	**San Alfonso**	**4.64**	**161**	*e*P	**Pn**	**11 56 00.6**	**+2.7**
GO02	**Mina Guanaco**	**4.75**	**29**	Pn	**Pn**	**11 56 00.6**	**+1.1**
GO02	**Mina Guanaco**	**4.75**	**29**	*e*P	**Pn**	**11 56 00.4**	**+0.9**
LMEL	**Las Melosas**	**4.76**	**160**		**Pn**	**11 56 02.4**	**+2.8**
LMEL	**Las Melosas**	**4.76**	**160**	*e*P	**Pn**	**11 56 02.1**	**+2.6**
BO04	**La Punta**	**4.79**	**165**	Pn	**Pn**	**11 56 01.6**	**+1.8**
PB14	**IPOC Station P**	**4.96**	**18**	Pn	**Pn**	**11 56 02.3**	**-0.1**
PB14	**IPOC Station P**	**4.96**	**18**	*e*P	**Pn**	**11 56 02.2**	**-0.2**
BO01	**Tunca**	**5.09**	**170**	Pn	**Pn**	**11 56 05.1**	**+1.2**
BO02	**Sierra Bellavi**	**5.53**	**168**	Pn	**Pn**	**11 56 11.5**	**+1.4**
GO05	**Huala**	**5.63**	**178**		**Pn**	**11 56 11.8**	**+0.5**
PB10	**IPOC Station P**	**5.99**	**14**	Pn	**Pn**	**11 56 16.8**	**+0.5**
PB15	**IPOC Station P**	**6.57**	**22**		**Pn**	**11 56 25.3**	**+0.8**
PB05	**IPOC Station P**	**6.71**	**15**	Pn	**Pn**	**11 56 25.5**	**-0.8**
PB06	**IPOC Station P**	**7.01**	**20**	Pn	**Pn**	**11 56 29.7**	**-0.7**
H03N1	**Juan Fernandez**	**7.08**	**233**	Pn	**Pn**	**11 56 34.1**	**+3.1**
	baz=108,slow=18						
H03N1				T	T	12 04 21.3	
	baz=62,slow=72,SNR=740						
H03N2	**Juan Fernandez**	**7.10**	**233**	Pn	**Pn**	**11 56 34.2**	**+3.0**
	baz=108,slow=18						
H03N2				T	T	12 04 21.4	
	baz=62,slow=72,SNR=884						
H03N3	**Juan Fernandez**	**7.10**	**233**	Pn	**Pn**	**11 56 34.1**	**+2.8**
	baz=108,slow=18						
H03N3				T	T	12 04 20.1	
	baz=62,slow=72,SNR=849						
VA04	**Juan Fernndez**	**7.14**	**232**	Pn	**Pn**	**11 56 33.5**	**+1.5**
PB04	**IPOC Station P**	**7.22**	**15**	Pn	**Pn**	**11 56 32.4**	**-0.9**
AF01	**San Pedro de A**	**7.30**	**30**	Pn	**Pn**	**11 56 35.2**	**+0.7**
H03S3	**Juan Fernandez**	**7.30**	**231**	Pn	**Pn**	**11 56 35.9**	**+1.9**
	baz=25,slow=28						
H03S1	**Juan Fernandez**	**7.31**	**231**	Pn	**Pn**	**11 56 35.8**	**+1.7**
	baz=25,slow=28						
LVC	**Limon Verde**	**7.32**	**24**	Pn	**Pn**	**11 56 35.6**	**+0.8**
LVC	**Limon Verde**	**7.32**	**24**	Pn	**Pn**	**11 56 35.3**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=164,slow=6.6,SNR=15						
LVC				Sn	**Sn**	**11 57 55.2**	**-2.9**
	comp=Z,2.2nm,0.3s,baz=330,slow=12,SNR=3.8						
LVC				Lg	Lg	11 58 29.0	
	comp=Z,4.3nm,0.3s,baz=53,slow=21,SNR=5.2						
LVC				LR	LR	11 59 37.1	
	comp=Z,184nm,18.6s,baz=211,slow=40						
	comp=Z,3.5nm,0.3s						
H03S2	**Juan Fernandez**	**7.32**	**231**	Pn	**Pn**	**11 56 36.0**	**+1.8**
	baz=25,slow=28						
PB07	**IPOC Station P**	**7.87**	**15**	Pn	**Pn**	**11 56 41.7**	**-0.5**
PB09	**IPOC Station P**	**7.97**	**20**	Pn	**Pn**	**11 56 43.6**	**0.0**
PB02	**IPOC Station P**	**8.26**	**15**	Pn	**Pn**	**11 56 47.5**	**0.0**
PB01	**IPOC Station P**	**8.62**	**17**	Pn	**Pn**	**11 56 51.3**	**-1.1**
PATCX	**Punta Patache**	**8.69**	**12**	Pn	**Pn**	**11 56 51.7**	**-1.7**
TA01	**Diego Aracena**	**8.93**	**12**	Pn	**Pn**	**11 56 56.5**	**-0.2**
PB08	**IPOC Station P**	**9.57**	**17**	Pn	**Pn**	**11 57 04.8**	**-0.9**
PB11	**IPOC Station P**	**9.82**	**14**	Pn	**Pn**	**11 57 08.1**	**-0.8**
GO01	**Chusmiza**	**10.01**	**16**	Pn	**Pn**	**11 57 10.5**	**-1.4**
GO06	**Curarrehue**	**10.21**	**177**		**Pn**	**11 57 14.4**	**+0.1**
PB12	**IPOC Station P**	**10.82**	**9**	Pn	**Pn**	**11 57 22.5**	**-0.2**
LR05	**Currie**	**10.84**	**180**	Pn	**Pn**	**11 57 23.8**	**+1.0**
PB16	**IPOC Station P**	**11.23**	**13**	Pn	**Pn**	**11 57 28.4**	**-0.3**
PLCA	**Paso Flores**	**11.42**	**174**	Pn	**Pn**	**11 57 31.2**	**+0.5**
PLCA	**Paso Flores**	**11.42**	**174**	Pn	**Pn**	**11 57 31.6**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=348,slow=13,SNR=6.9						
	comp=Z,1.6nm,0.4s						
TRQA	**Tornquist**	**12.10**	**138**	Pn	**Pn**	**11 57 40.1**	**+0.2**
CPUP	**Villa Florida**	**

HRFI	**Mount Harif**	**1.20 282**	P	Pg	12 06 41.9	+0.2
HRFI	**Mount Harif**	**1.20 282**	S	Sn	12 06 59.5	-0.2
EIL	**Elat**	**1.26 264**	P	Pb	12 06 43.2	-0.2
EIL	**Elat**	**1.26 264**	S	Sn	12 07 01.6	+0.4
MBRI	**Mt Berech**	**1.28 270**	P	Pn	12 06 44.1	+0.1
MBRI	**Mt Berech**	**1.28 270**	S	Sn	12 07 02.9	+0.9
ZFRI	**Zfri**	**1.29 306**	S	Sn	12 07 02.6	+0.7
ZFRI	**Zfri**	**1.29 306**	P	Pn	12 06 44.5	+0.5
PRNI	**Paran**	**1.32 295**	P	Pg	12 06 44.1	+0.1
KRMI	**Paran Flat**	**1.48 283**	S	Sn	12 07 08.0	+1.3
KRMI	**Paran Flat**	**1.48 283**	P	Pn	12 06 46.8	+0.2

GII 06 12:06:24.9±0.5, 31°27N±0″.02×36°26E±0″.03, h0km, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHAJ	**Ghor Haditha**	**0.59**	**273**	P	Pg	12 06 37.2	+0.9
GHAJ	**Ghor Haditha**	**0.59**	**273**	P	Pg	12 06 37.2	+0.9
GHAJ	**Ghor Haditha**	**0.59**	**273**	S	Sb	12 06 47.4	+0.3
MDBI	**Mazsada**	**0.77**	**273**	P	Pb	12 06 40.9	-0.4
MDBI	**Mazsada**	**0.77**	**273**	S	Sb	12 06 52.0	-0.2
MSBI	**Mazada**	**0.77**	**273**	P	Pb	12 06 41.5	+0.2
MSBI	**Mazada**	**0.77**	**273**	P	Pb	12 06 40.6	-0.7
MSBI	**Mazada**	**0.77**	**273**	S	Sb	12 06 52.9	+0.6
DSI	**Dead Sea**	**0.81**	**292**	P	Pb	12 06 41.9	0.0
DSI	**Dead Sea**	**0.81**	**292**	S	Sb	12 06 54.0	+0.6
DSI	**Dead Sea**	**0.81**	**292**	P	Pb	12 06 41.7	-0.2
DSI	**Dead Sea**	**0.81**	**292**	S	Sb	12 06 54.3	+0.9
YTIR	**Yattir**	**0.98**	**276**	P	Pb	12 06 44.7	-0.2
YTIR	**Yattir**	**0.98**	**276**	P	Pb	12 06 44.5	-0.4
SALP	**Salfit**	**1.21**	**311**	P	Pn	12 06 49.1	-0.1
SALP	**Salfit**	**1.21**	**311**	S	Sn	12 07 06.2	-0.1
MMLI	**Mount Malkishu**	**1.36**	**329**	P	Pb	12 06 52.4	+1.0
MMLI	**Mount Malkishu**	**1.36**	**329**	S	Sn	12 07 11.6	+1.5
SLTI	**Sal'it**	**1.42**	**313**	P	Pb	12 06 52.6	+0.3
SLTI	**Sal'it**	**1.42**	**313**	S	Sn	12 07 11.4	0.0
KSHT	**Keshet**	**1.75**	**348**	P	Pn	12 06 56.3	-0.3
KSHT	**Keshet**	**1.75**	**348**	S	Sg	12 07 21.2	+0.1

UPP ***06*** *12:13:17.4±3.2, 58°.35N×30°.15E, h0km, ML2.1*
EST ***06*** *12:13:35.2±0.1, 59°.27N×27°.65E, h0km, ML1.8(HEL), Explosion*
LVSN ***06*** *12:13:36.4±3.0, 59°.24N×27°.64E, h0km±36km, ML2.2*
HEL 06 12:13:34.7±0.4, 59°.29N×27°.66E, h0km, ML1.9, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE03	**Tooma soojaam,**	**0.83**	**240**	*e*P	Pg	12 13 49.6	-1.0
EE03				*e*S	Sg	12 13 60.0	-1.3
ARBE	**Arbavere**	**0.87**	**280**	*e*P	Pg	12 13 50.8	-0.6
ARBE				*e*S	Sg	12 14 02.0	-0.7
ARBE				AML	AML	12 14 04.3	
	comp=E,252nm,0.2s						
ARBE				AML	AML	12 14 09.4	
	comp=N,309nm,0.1s						
ARBE				AML	AML	12 14 28.2	
	comp=Z,100nm,0.5s						
ARBE	**Arbavere**	**0.87**	**280**	*e*P	Pg	12 13 50.7	-0.7
ARBE				*e*S	Sg	12 14 01.9	-0.7
VSU	**Vasula**	**0.96**	**211**	*e*P	Pg	12 13 52.0	-1.0
VSU	**Vasula**	**0.96**	**211**	*e*P	Pg	12 13 52.2	-0.8
VSU				*e*S	Sg	12 14 04.1	-1.4
VSU				AML	AML	12 14 07.9	
	comp=E,35nm,0.6s						
VSU				AML	AML	12 14 12.4	
	comp=Z,19nm,0.1s						
VSU				AML	AML	12 14 14.5	
	comp=N,41nm,0.4s						
VSU	**Vasula**	**0.96**	**211**	*e*P	Pg	12 13 52.1	-0.9
VSU				*e*S	Sg	12 14 03.9	-1.5
VJF	**Virojoki**	**1.25**	**358**	*e*P	Pg	12 13 58.3	-0.4
VJF				*e*SB	Sg	12 14 15.0	0.0
EE08	**Sarghaua, Vand**	**1.41**	**244**	*e*P	Pn	12 13 60.0	-1.5
EE08				*e*PN	Pg	12 14 01.1	-0.5
EE08				*e*S	Sg	12 14 18.0	-1.8
EE08				*e*SN	Sn	12 14 21.4	+0.7
EE07	**Piusa Caves, O**	**1.46**	**184**	*e*P	Pn	12 14 01.0	-1.2
EE07				*e*S	Sg	12 14 19.6	-1.8
PVF	**Pernaja**	**1.55**	**325**	*e*PG	Pn	12 14 03.2	-0.4
PVF				MSG		12 14 21.4	
	comp=Z,7.5nm,0.2s						
PVF				*e*SB	Sn	12 14 23.4	-0.9
HEL1	**Helsinki**	**1.67**	**304**	*e*PN	Pn	12 14 05.5	+0.4
HEL1				*e*SN	Sn	12 14 27.4	+0.2
HEL1				MSG		12 14 28.9	
	comp=Z,6.9nm,0.1s						
MEF	**Metsahovi**	**1.90**	**301**	*e*P	Pb	12 14 09.5	-0.6
MEF	**Metsahovi**	**1.90**	**301**	*e*P	Pb	12 14 09.6	-0.6
MEF				AML	AML	12 14 09.8	
	comp=Z,19nm,0.2s						
MEF				AML	AML	12 14 09.8	
	comp=N,8.1nm,0.2s						
MEF				AML	AML	12 14 09.9	
	comp=E,28nm,0.2s						
MEF				*e*S	Sn	12 14 33.6	+0.8
MEF	**Metsahovi**	**1.90**	**301**	*e*P	Pn	12 14 08.3	0.0
MEF				*e*PG	Pb	12 14 09.4	-0.7
MEF				*e*SG	Sn	12 14 33.5	+0.7
MEF				MSG		12 14 34.4	
	comp=Z,9.5nm,0.1s						
NUR	**Nurmijrvi**	**1.95**	**310**	*e*PG	Pb	12 14 10.3	-0.8
NUR				*e*SG	Sb	12 14 35.4	-0.5
NUR				MSG		12 14 36.3	
	comp=Z,4.1nm,0.1s						
MTSE	**Matsula**	**2.07**	**256**	*e*P	Pn	12 14 11.7	+1.0
MTSE	**Matsula**	**2.07**	**256**	*e*P	Pn	12 14 11.4	+0.8
MTSE				*e*S	Sn	12 14 38.2	+1.0
MTSE	**Matsula**	**2.07**	**256**	*e*PB	Pn	12 14 11.4	+0.7
MTSE				*e*SG	Sb	12 14 38.5	-0.9
EE01	**Perakula, Nova**	**2.08**	**269**	*e*PB	Pn	12 14 11.9	+1.1
EE01				*e*SG	Sb	12 14 39.2	-0.3
RUF	**Ruokolahti**	**2.24**	**16**	*e*P	Pn	12 14 13.5	+0.6
RUF				*e*S	Sn	12 14 41.7	+0.5
FIA0	**FINESS Array S**	**2.30**	**341**	*e*PB	Pb	12 14 15.5	-1.5
FIA0				MSG		12 14 42.9	
	comp=Z,3.8nm,0.2s						
FIA0				*e*SB	Sb	12 14 44.8	-1.2
KAF	**Kangasniemi**	**2.91**	**347**	*e*PB	Pb	12 14 25.5	-1.9
KAF				MSG		12 15 00.2	
	comp=Z,2.4nm,0.2s						
KAF				*e*SG	Sb	12 15 05.1	+1.6
SLIT	**Slitere, Latvi**	**3.28**	**242**	AML	AML	12 15 11.6	
	comp=N,82nm,0.7s						
SLIT				AML	AML	12 15 25.7	
	comp=Z,67nm,0.9s						
SLIT				AML	AML	12 15 32.8	
	comp=E,81nm,0.8s						
RAF	**Rauma**	**3.42**	**303**	*e*P	Pn	12 14 30.9	+1.7
RAF	**Rauma**	**3.42**	**303**	*e*P	Pn	12 14 30.5	+1.3
RAF	**Rauma**	**3.42**	**303**	*e*P	Pn	12 14 30.5	+1.3
JOF	**Joensuu**	**4.05**	**24**	*e*P	Pn	12 14 38.3	+0.5
NRTU	**Norrtaelje**	**4.62**	**279**	P	Pn	12 14 46.8	+1.1
NRTU				S	Sb	12 15 57.5	+4.7
GRAU	**Graesoe**	**4.72**	**287**	P	Pn	12 14 47.4	+0.3
GRAU				S	Sb	12 15 59.7	+4.0
FIBU	**Brunna**	**5.28**	**281**	P	Pn	12 14 57.4	+2.7
BACU	**Backbrunna**	**5.40**	**281**	P	Pn	12 14 57.6	+1.3
UMAU	**Umeaa**	**5.69**	**327**	P	Pn	12 15 01.6	+1.3

IDC ***06*** *12:26:42.8±1.2, 50°.75N×170°.97W, h0km, mb3.8/10, mbtmp3.8/12, ML3.4/2, MS2.9/2, Error ellipse: s-maj=34.9km s-min=18.8km az=2.0*
NEIC ***06*** *12:26:45.1±1.8, 50°.8N±0°.1×170°.96W±0°.06, h15km±6km, mb4.0/74, ML3.6/8, ML3.4(AEIC), Error ellipse: s-maj=15.5km s-min=2.8km az=161.0*
AEIC ***06*** *12:26:48.0±2.1, 50°.82N±0°.10×170°.94W±0°.08, h3km±6km, Error ellipse: s-maj=14.8km s-min=6.7km az=166.0*
ISC 06 12:26:46.1±0.8, 50°.82N±0°.09×170°.96W±0°.05, h23km, n153, σ1℗14/157, mb4.0/24, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**2.12**	**18**		**Pn**	**12 27 17.7**	**-2.4**
CLES				IAML		12 27 52.5	
	comp=N,649nm,0.8s						
CLCO	**Concord Point,**	**2.12**	**21**		**Pn**	**12 27 19.3**	**-0.8**
CLCO					**Sn**	**12 27 44.8**	**-0.8**
KOFP	**Korovin Flat P**	**2.44**	**308**		**Pn**	**12 27 24.6**	**0.0**
ATKA	**Atka Island**	**2.45**	**306**		**Pn**	**12 27 24.0**	**-0.6**
ATKA					**Sn**	**12 27 52.2**	**-1.7**
ATKA	**Atka Island**	**2.45**	**306**	P	**Pn**	**12 27 23.9**	**-0.8**
KOKL	**Mount Kliuchef**	**2.52**	**308**		**Pn**	**12 27 25.5**	**-0.3**
NIKH	**Nikolski High**	**2.52**	**30**		**Pn**	**12 27 24.3**	**-1.4**
NIKH	**Nikolski High**	**2.52**	**30**		**Sn**	**12 27 54.0**	**-1.7**
NIKH	**Nikolski High**	**2.52**	**30**	P	**Pn**	**12 27 24.7**	**-1.0**
KOWE	**Korovin West**	**2.57**	**308**		**Pn**	**12 27 26.7**	**+0.3**
OKWE	**Okmok W'ng Wal**	**3.14**	**31**		**Pn**	**12 27 34.0**	**-0.2**
OKFG	**Magazine Ridge**	**3.21**	**35**		**Pn**	**12 27 34.2**	**-0.9**
OKFG					**Sn**	**12 28 10.9**	**-1.7**
GSMY	**Great Sitkin M**	**3.42**	**293**		**Pn**	**12 27 37.5**	**-0.5**
GSTR	**Great Sitkin T**	**3.44**	**294**	Pn	**Pn**	**12 27 38.2**	**-0.1**
GSCK	**Great Sitkin C**	**3.47**	**292**		**Pn**	**12 27 38.0**	**-0.7**
GSSP	**Great Sitkin S**	**3.50**	**293**		**Pn**	**12 27 38.9**	**-0.2**
ADAG	**Mount Adagdak**	**3.72**	**290**		**Pn**	**12 27 42.2**	**+0.1**
ADK	**Adak**	**3.74**	**289**		**Pn**	**12 27 41.8**	**-0.7**
ADK				IAML		12 28 25.1	
	comp=N,139nm,0.3s						
ADK	**Adak**	**3.74**	**289**		**Sn**	**12 28 22.9**	**-2.8**
ADK	**Adak**	**3.74**	**289**	P	**Pn**	**12 27 41.6**	**-0.8**
MAPS	**Pakushin South**	**3.88**	**38**		**Pn**	**12 27 43.7**	**-0.6**
MAPS					**Sn**	**12 28 26.1**	**-3.0**
MGOD	**Makushin Gods**	**3.90**	**38**		**Pn**	**12 27 44.0**	**-0.6**
KIRH	**Kanaga Island**	**4.00**	**288**		**Pn**	**12 27 45.9**	**+0.1**
KIWB	**Kanaga Island**	**4.02**	**287**		**Pn**	**12 27 45.9**	**-0.3**
MSW	**Makushin Switc**	**4.02**	**38**		**Pn**	**12 27 45.7**	**-0.6**
MNAT	**Makushin Natee**	**4.04**	**39**		**Pn**	**12 27 46.1**	**-0.4**
MNAT					**Sn**	**12 28 30.7**	**-2.3**
UNV	**Unalaska Valle**	**4.08**	**40**		**Pn**	**12 27 46.4**	**-0.7**
UNV	**Unalaska Valle**	**4.08**	**40**		**Sn**	**12 28 33.5**	**-0.6**
UNV	**Unalaska Valle**	**4.08**	**40**	P	**Pn**	**12 27 46.4**	**-0.7**
AKV	**Akutan Volcano**	**4.51**	**41**		**Pn**	**12 27 53.2**	**+0.2**
TAFP	**Tanaga Falls P**	**4.53**	**287**		**Pn**	**12 27 53.4**	**+0.1**
TAFP					**Sn**	**12 28 44.5**	**-0.8**
TASE	**Tanaga Southea**	**4.55**	**286**		**Pn**	**12 27 53.5**	**-0.1**
AKUT	**Akutan**	**4.59**	**42**	Pn	**Pn**	**12 27 54.3**	**+0.2**
AKUT				IAML		12 28 36.2	
	comp=N,36nm,1.4s						
AKUT				IAML		12 29 50.8	
	comp=E,52nm,1.3s						
AKUT	**Akutan**	**4.59**	**42**	P	**Pn**	**12 27 54.5**	**+0.4**
GANO	**Gareloi North**	**5.02**	**285**		**Pn**	**12 27 59.7**	**-0.3**
WECS	**Westdahl Cape**	**5.29**	**43**		**Pn**	**12 28 04.0**	**+0.3**
ISLZ	**Isanotski Laza**	**5.89**	**46**		**Pn**	**12 28 11.6**	**-0.3**
ISNN	**Isanotski Nort**	**5.93**	**44**		**Pn**	**12 28 12.3**	**-0.1**
AMKA	**Amchitka**	**6.16**	**279**		**Pn**	**12 28 15.2**	**-0.4**
PS1A	**Pavlof South-1**	**7.21**	**47**		**Pn**	**12 28 30.4**	**+0.4**
SDPT	**Sand Point**	**7.77**	**50**		**Pn**	**12 28 37.3**	**-0.4**
SDPT	**Sand Point**	**7.77**	**50**	P	**Pn**	**12 28 38.1**	**+0.4**
CNBA	**Chernabura Isl**	**7.97**	**55**	Pn	**Pn**	**12 28 40.8**	**+0.4**
VNFG	**Fog Glacier, M**	**8.72**	**47**		**Pn**	**12 28 50.3**	**-0.5**
CHGN	**Chignik**	**9.26**	**49**		**Pn**	**12 28 57.8**	**-0.3**
P16K	**Nushagak River**	**11.09**	**37**		**Pn**	**12 29 22.2**	**-0.9**
OHAK	**Old Harbor**	**12.19**	**51**	Pn	**Pn**	**12 29 36.1**	**-2.0**
OHAK	**Old Harbor**	**12.19**	**51**	P	**Pn**	**12 29 35.9**	**-2.3**
L16K	**Owhat River**	**12.62**	**26**	Pn	**Pn**	**12 29 45.4**	**+1.3**
O18K	**Koktuh Hills**	**12.71**	**39**	Pn	**Pn**	**12 29 45.4**	**+0.1**
KDAK	**Kodiak Island**	**12.77**	**50**	Pn	**Pn**	**12 29 43.3**	**-2.8**
Q19K	**Cape Douglas,**	**12.83**	**44**	Pn	**Pn**	**12 29 46.5**	**-0.4**
CNPM	**China Poot**	**14.20**	**45**	Pn	**Pn**	**12 30 03.9**	**-1.7**
M19K	**Big River Lodg**	**14.36**	**33**	Pn	**Pn**	**12 30 08.0**	**+0.2**
BRLK	**Bradley Lake**	**14.47**	**44**	Pn	**Pn**	**12 30 07.0**	**-2.3**
M20K	**Styx River**	**14.79**	**35**	Pn	**Pn**	**12 30 12.3**	**-1.4**
J18K	**Innoko River**	**14.80**	**26**	Pn	**Pn**	**12 30 12.1**	**-1.6**
G16K	**Koyuk River**	**15.28**	**14**	Pn	**Pn**	**12 30 20.0**	**-0.2**
F15K	**North Star Dit**	**15.29**	**10**	Pn	**Pn**	**12 30 19.9**	**-0.3**
F15K				IAmb	IAmb	12 30 28.4	
	comp=Z,6.8nm,1.0s						
SUA	**Susitna One**	**15.44**	**39**	Pn	**Pn**	**12 30 20.2**	**-2.0**
SKT	**Skwentna**	**15.44**	**36**	Pn	**Pn**	**12 30 20.9**	**-1.3**
SKT				IAmb	IAmb	12 30 34.0	
	comp=Z,14nm,1.4s						
J19K	**Poorman**	**15.52**	**26**	Pn	**Pn**	**12 30 23.4**	**+0.3**
J19K				IAmb	IAmb	12 30 30.5	
	comp=Z,7.5nm,1.2s						
H18K	**Honhosa River**	**15.80**	**20**	Pn	**Pn**	**12 30 27.8**	**+0.9**
H18K				IAmb	IAmb	12 30 33.5	
	comp=Z,12nm,0.9s						
J20K	**Nowinta River**	**16.07**	**27**	Pn	**Pn**	**12 30 30.0**	**-0.4**
CUT	**Chulitna**	**16.17**	**36**	Pn	**Pn**	**12 30 32.6**	**+1.1**
CAST	**Castle Rocks**	**16.17**	**32**		**Pn**	**12 30 33.0**	**+1.3**
GHO	**Glory Hole Cre**	**16.33**	**39**	Pn	**Pn**	**12 30 32.9**	**-0.8**
GHO				IAmb	IAmb	12 30 37.4	
	comp=Z,18nm,1.3s						
KNK	**Knik Glacier**	**16.34**	**41**	Pn	**Pn**	**12 30 31.8**	**-2.0**
KNK				IAmb	IAmb	12 30 40.0	
	comp=Z,10nm,1.0s						
KTH	**Kantishna Hill**	**16.65**	**32**	Pn	**Pn**	**12 30 38.1**	**+0.3**
KTH				IAmb	IAmb	12 30 42.0	
	comp=Z,7.9nm,0.9s						
TRF	**Thorofare Moun**	**16.80**	**33**		**Pn**	**12 30 40.2**	**+0.4**
SCM	**Sheep Creek Mo**	**17.01**	**41**	Pn	**Pn**	**12 30 40.1**	**-2.3**
SCM				IAmb	IAmb	12 30 45.1	
	comp=Z,21nm,1.1s						
E18K	**Tukpahlearik C**	**17.44**	**13**	P	**P**	**12 30 50.0**	**+1.4**
I21K	**Tanana**	**17.45**	**27**		**Pn**	**12 30 48.5**	**+0.9**
I21K				IAmb	IAmb	12 30 49.6	
	comp=Z,19nm,0.9s						
KLU	**Klutina**	**17.45**	**43**	P	**Pn**	**12 30 44.8**	**-3.0**
KLU				IAmb	IAmb	12 31 07.9	
	comp=Z,28nm,1.4s						
KAIM	**Kayak Island**	**17.51**	**48**	P	**Pn**	**12 30 48.1**	**-0.4**
H21K	**Melozitna Rive**	**17.57**	**25**	P	**Pn**	**12 30 49.6**	**+0.4**
IMAR	**Indian Mountai**	**17.57**	**24**	P	**Pn**	**12 30 49.6**	**+0.4**
M24K	**Tolsona, Glenn**	**17.62**	**41**	P	**Pn**	**12 30 48.3**	**-1.6**
DHY	**Denali Highway**	**17.64**	**37**	P	**Pn**	**12 30 50.2**	**0.0**
BERG	**Berg Lake**	**18.01**	**47**		**Pn**	**12 30 53.9**	**-0.7**
E19K	**Redstone River**	**18.04**	**17**		**Pn**	**12 30 55.3**	**+0.4**
I23K	**Minto, Yukon-K**	**18.22**	**30**	P	**Pn**	**12 30 57.1**	**-0.1**
GLB	**Gilahina Butte**	**18.34**	**44**	P	**P**	**12 30 58.0**	**-0.7**
GLB				IAmb	IAmb	12 31 04.3	
	comp=Z,10nm,1.0s						
CRQM	**Cirque**	**18.39**	**47**	P	**P**	**12 30 56.9**	**-2.5**
CCB	**Clear Creek Bu**	**18.41**	**32**	P	**P**	**12 30 56.5**	**-2.8**
VRDI	**Verde Repeater**	**18.42**	**45**	P	**P**	**12 30 58.5**	**-1.2**
VRDI				IAmb	IAmb	12 31 09.3	
	comp=Z,12nm,1.1s						
WAX	**Waxell Ridge**	**18.42**	**48**	P	**P**	**12 30 59.1**	**-0.6**
C18K	**Utukok River**	**18.51**	**11**	P	**P**	**12 31 00.2**	**-0.3**
HDA	**Harding Lake**	**18.56**	**34**	P	**P**	**12 31 01.7**	**+0.7**
MCARA	**McCarthy VSAT**	**18.67**	**45**	P	**P**	**12 31 01.8**	**-0.5**
MCARA				IAmb	IAmb	12 31 08.7	
	comp=Z,16nm,1.0s						
IL31		**18.80**	**33**	P	**P**	**12 31 02.2**	**-1.4**
ILAR	**Eielson Array**	**18.80**	**33**	P	**P**	**12 31 02.4**	**-1.3**
ILAR	**Eielson Array**	**18.80**	**33**	P	**P**	**12 31 02.2**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=231,slow=9.1,SNR=18						
	comp=Z,2.4nm,0.9s						
D19K	**Kuna River**	**18.80**	**15**	P	**P**	**12 31 03.7**	**0.0**
M26K	**Nabesna, AK**	**19.09**	**42**	P	**P**	**12 31 06.2**	**-0.7**
M26K				IAmb	IAmb	12 31 14.1	
	comp=Z,12nm,1.4s						
H24K	**Noodor Dome**	**19.14**	**29**	P	**Pn**	**12 31 08.5**	**+0.2**
H24K				IAmb	IAmb	12 31 10.4	
	comp=Z,9.7nm,1.0s						
BARN	**Barnard Glacie**	**19.18**	**46**	P	**Pn**	**12 31 09.1**	**+0.1**
BARN				IAmb	IAmb	12 31 13.1	
	comp=Z,15nm,1.0s						
L26K	**Log Cabin Wild**	**19.21**	**40**	P	**P**	**12 31 08.9**	**+0.7**
J25K	**Salcha River,**	**19.24**	**34**	P	**P**	**12 31 08.2**	**-0.4**
CTGM	**Chitina Glacie**	**19.30**	**47**	P	**P**	**12 31 08.2**	**-1.1**
PEA0B	**Petropavlovsk-**	**19.37**	**289**	P	**P**	**12 31 09.2**	**-0.8**
PETK	**Petropavlovsk-**	**19.37**	**289**	P	**P**	**12 31 09.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=82,slow=13,SNR=8.5						
	comp=Z,2.1nm,0.8s						
LOGN	**Logan Glacier**	**19.41**	**47**	P	**P**	**12 31 11.3**	**+0.8**
LOGN				IAmb	IAmb	12 31 18.4	
	comp=Z,16nm,1.1s						
SCRK	**Sand Creek**	**19.41**	**37**	P	**P**	**12 31 10.9**	**+0.4**
M27K	**Edge Creek, AK**	**19.55**	**43**	P	**P**	**12 31 12.8**	**+0.9**
M27K				IAmb	IAmb	12 31 16.5	
	comp=Z,7.0nm,1.0s						
E22K	**Anaktuvuk Pass**	**19.74**	**21**	P	**P**	**12 31 13.9**	**-0.1**
BCPM	**Bancas Point**	**19.83**	**50**	P	**P**	**12 31 13.5**	**-1.4**
G24K	**Hadweenzic Riv**	**19.83**	**28**	P	**P**	**12 31 14.3**	**-0.6**
G24K				IAmb	IAmb	12 31 19.4	
	comp=Z,9.5nm,0.8s						
J26L	**Joseph Creek**	**19.84**	**36**	P	**P**	**12 31 15.0**	**-0.1**
J26L				IAmb	IAmb	12 31 16.9	
	comp=Z,7.5nm,0.6s						
D22K	**Ayikyak River**	**20.15**	**19**	P	**P**	**12 31 19.0**	**+0.6**
F24K	**Squaw Lake**	**20.28**	**26**	P	**P**	**12 31 21.1**	**+1.3**
F24K				IAmb	IAmb	12 31 28.1	
	comp=Z,8.2nm,1.1s						
B21K	**Ikpikpuk River**	**20.40**	**16**	P	**P**	**12 31 20.9**	**-0.1**
B21K				IAmb	IAmb	12 31 25.6	
	comp=Z,6.0nm,0.9s						
I26K	**Coal Creek Min**	**20.41**	**34**	P	**P**	**12 31 21.6**	**+0.4**
E24K	**Your Creek**	**20.51**	**24**	P	**P**	**12 31 23.5**	**+1.1**
BILL	**Bilibino**	**20.56**	**336**	P	**P**	**12 31 23.4**	**+0.6**
TOLK	**Toolik Lake Re**	**20.66**	**22**	P	**P**	**12 31 25.1**	**+1.1**
TOLK				IAmb	IAmb	12 31 43.8	
	comp=Z,9.0nm,1.4s						
EGAK	**Eagle**	**20.88**	**37**	P	**P**	**12 31 26.0**	**-0.2**
EGAK				IAmb	IAmb	12 31 36.9	
	comp=Z,5.0nm,0.8s						
HYT	**Haines Junctio**	**21.06**	**49**	P	**P**	**12 31 31.1**	**+2.7**
M29M	**Somme Creek**	**21.07**	**44**	P	**P**	**12 31 31.2**	**+2.8**
M29M				IAmb	IAmb	12 31 33.4	
	comp=Z,7.9nm,0.7s						
BMAR	**Burnt Mountain**	**21.17**	**28**	P	**P**	**12 31 30.3**	**+0.9**
D24K	**Happy Valley**	**21.23**	**22**	P	**P**	**12 31 27.9**	**-2.1**
D24K				IAmb	IAmb	12 31 36.0	
	comp=Z,4.7nm,1.0s						
E25K	**Arctic Village**	**21.33**	**26**	P	**P**	**12 31 31.4**	**+0.2**
E25K				IAmb	IAmb	12 31 37.8	
	comp=Z,5.5nm,0.8s						
L29M	**L29M**	**21.43**	**42**	P	**P**	**12 31 30.7**	**-1.6**
L29M				IAmb	IAmb	12 31 36.4	
	comp=Z,16nm,1.5s						
I28M	**Miner Creek**	**21.65**	**36**	P	**P**	**12 31 34.7**	**0.0**
I28M				IAmb	IAmb	12 31 37.7	
	comp=Z,4.9nm,0.6s						
O30N	**Mendenhall**	**21.73**	**49**	P	**P**	**12 31 34.7**	**-0.7**
K29M	**Barlow Dome**	**21.94**	**41**	P	**P**	**12 31 39.7**	**+1.9**
K29M				IAmb	IAmb	12 31 40.8	
	comp=Z,4.7nm,0.9s						
H29M	**Whitestone**	**22.58**	**35**	P	**P**	**12 31 46.0**	**+1.5**
I30M	**Mount Dempster**	**22.91**	**38**	P	**P**	**12 31 48.9**	**+0.8**
I30M				IAmb	IAmb	12 31 49.9	
	comp=Z,5.0nm,0.9s						
MA2	**Magadan**	**23.23**	**307**	LR	LR	12 40 01.3	
	comp=Z,22nm,20.9s,baz=96,slow=34						
EPYK	**Eagle Plains**	**23.24**	**35**	P	**P**	**12 31 51.6**	**+0.2**
E28M	**Babbage River**	**23.40**	**29**	P	**P**	**12 31 54.0**	**+1.0**
E28M				IAmb	IAmb	12 31 57.0	
	comp=Z,5.4nm,1.0s						
G30M	**tAoh Zraii Nji**	**23.69**	**34**	P	**P**	**12 31 56.1**	**+0.3**
G30M				IAmb	IAmb	12 32 00.8	
	comp=Z,4.4nm,1.1s						
E29M	**Blow River**	**23.80**	**30**	P	**P**	**12 31 58.0**	**+1.3**
E29M				IAmb	IAmb	12 32 00.8	
	comp=Z,6.1nm,1.1s						
INK	**Inuvik**	**25.19**	**32**	P	**P**	**12 32 10.9**	**+1.4**
INK				IAmb	IAmb	12 32 12.6	
	comp=Z,2.9nm,0.6s						
YKA	**Yellowknife Ar**	**32.02**	**47**	P	**P**	**12 33 10.4**	**0.0**
YKA	**Yellowknife Ar**	**32.02**	**47**	P	**P**	**12 33 11.7**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=279,slow=8.2,SNR=11						
	comp=Z,0.5nm,0.7s						
YKAB2	**New Yellowknif**	**32.03**	**47**	P	**P**	**12 33 12.2**	**+1.8**
YAK	**Yakutsk**	**33.47**	**313**	LR	LR	12 47 37.5	
	comp=Z,22nm,19.2s,baz=97,slow=37						
PDAR	**Pinedale Array**	**41.70**	**76**	P	**P**	**12 34 33.9**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=316,slow=2.5,SNR=6.4						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**51.25**	**301**	P	**P**	**12 35 49.5**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=56,slow=7.0,SNR=2.6						
	comp=Z,0.3nm,0.4s						
TX31	**Lajitas Ar. Si**	**53.80**	**87**

*NEIC **06** 12:30:26.9±0.6,31°.3S±0°.2×177°.5W±0°.3,h10km±2km, mb4.2/8,Error ellipse: s-maj=41.9km s-min=15.9km az=120.0*

*IDC **06** 12:30:29.3±2.1,30°.93S×178°.13W,h0km,mb4.1/3, mbtmp4.1/4,ML3.4/1,Error ellipse: s-maj=53.0km s-min=21.5km az=119.0*

ISC 06 12:30:28.9±1.9,31°.1S±0°.1×177°.9W±0°.3,h10km,n18, σ1§29/21,mb4.2/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.85**	**1**	Pn	**Pn**	**12 30 59.9**	**-0.7**
	45nm,0.3s,baz=63,slow=23,SNR=1.4						
RAO				Sn	**Sn**	**12 31 22.0**	**-2.0**
	208nm,0.3s,baz=306,slow=23,SNR=4.4						
URZ	**Urewera**	**8.22**	**208**	Pn	**Pn**	**12 32 28.9**	**+0.7**
	0.5nm,0.3s,baz=25,slow=17,SNR=6.6						
URZ				Sn	**Sn**	**12 33 58.8**	**-2.2**
	1.0nm,0.3s,baz=178,slow=18,SNR=8.5						
	2.2nm,0.3s						
RTZ	**Ruatahuna**	**8.57**	**208**	Pn	**Pn**	**12 32 32.3**	**-0.8**
RTZ				Sn	**Sn**	**12 34 08.3**	**-1.7**
TUWZ	**Tuamarina**	**12.20**	**210**	Pn	**Pn**	**12 33 22.4**	**-0.3**
STKA	**Stephens Creek**	**34.37**	**258**	P	**P**	**12 37 17.4**	**+1.3**
STKA	**Stephens Creek**	**34.37**	**258**	P	**P**	**12 37 18.3**	**+2.1**
	0.5nm,0.3s,baz=103,slow=8.3,SNR=6.7						
	0.5nm,0.3s						
BBOO	**Buckleboo**	**38.83**	**255**	P	**P**	**12 37 54.4**	**+0.3**
BBOO				IAmb	IAmb	12 38 07.6	
	comp=Z,7.1nm,1.2s						
AS31	**Alice Springs**	**43.12**	**268**	P	**P**	**12 38 30.1**	**+0.4**
AS31				IAmb	IAmb	12 38 30.6	
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**43.12**	**268**	P	**P**	**12 38 29.7**	**0.0**
ASAR	**Alice Springs**	**43.12**	**268**	P	**P**	**12 38 30.1**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=106,slow=7.4,SNR=64						
	comp=Z,2.1nm,0.6s						
WR0	**Warramunga Arr**	**44.00**	**273**	P	**P**	**12 38 37.3**	**+0.5**
WR0				IAmb	IAmb	12 38 37.6	
	comp=Z,7.6nm,1.3s						
WB2	**Warramunga Arr**	**44.17**	**273**	P	**P**	**12 38 38.4**	**+0.3**
WRAB	**Tennant Creek**	**44.17**	**273**	P	**P**	**12 38 38.2**	**+0.1**
WRA	**Warramunga Arr**	**44.18**	**273**	P	**P**	**12 38 38.4**	**+0.2**
WRA	**Warramunga Arr**	**44.18**	**273**	P	**P**	**12 38 38.4**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=111,slow=8.0,SNR=26						
	comp=Z,1.7nm,0.4s						
WB0	**Warramunga Arr**	**44.20**	**273**	P	**P**	**12 38 38.7**	**+0.3**
WB0				IAmb	IAmb	12 38 39.2	
	comp=Z,3.7nm,0.8s						
NRIK	**Noril'sk**	**120.30**	**336**	PKP	**PKiKP**	**12 49 22.4**	**+3.0**
	comp=Z,2.3nm,0.5s,baz=97,slow=2.3,SNR=5.5						
FINES	**FINESS Array B**	**145.82**	**340**	PKPbc	**PKPab**	**12 50 07.2**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=54,slow=2.4,SNR=9.7						

*IDC **06** 12:34:51.1±4.0,15°.40N×146°.21E,h43km±39km,mb3.4/9, mbtmp3.6/10,ML3.6/1,Error ellipse: s-maj=31.5km s-min=24.4km az=94.0*

*NEIC **06** 12:34:53.0±1.5,15°.3N±0°.1×146°.3E±0°.1,h56km±6km, mb4.3/23,Error ellipse: s-maj=17.0km s-min=14.9km az=122.0*

ISC 06 12:34:50.5±0.8,15°.4N±0°.1×146°.3E±0°.2,h35km,n43, σ0§82/38,mb4.2/22,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.27**	**218**	P	**Pn**	**12 35 26.8**	**+1.3**
	17nm,0.3s,baz=359,slow=4.0,SNR=14						
GUMO				S	**Sn**	**12 35 51.9**	**-0.2**
	184nm,0.3s,baz=140,slow=22,SNR=15						
	31nm,0.3s						
H11S3	**WAKE ISLAND Hy 19.74**	**78**		T	T	13 00 41.8	
	baz=263,slow=74,SNR=3.6						
H11S1	**WAKE ISLAND Hy 19.76**	**78**		T	T	13 00 46.1	
	baz=263,slow=74,SNR=2.8						
H11S2	**WAKE ISLAND Hy 19.76**	**78**		T	T	13 00 16.1	
	baz=263,slow=74,SNR=3.7						
H11N1	**WAKE ISLAND Hy 20.09**	**75**		T	T	13 00 41.5	
	baz=263,slow=75,SNR=4.4						
H11N2	**WAKE ISLAND Hy 20.10**	**75**		T	T	13 00 34.2	
	baz=263,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy 20.11**	**75**		T	T	13 00 34.9	
	baz=263,slow=75,SNR=5.1						
WB0	**Warramunga Arr**	**36.85**	**199**	P	**P**	**12 41 55.7**	**0.0**
WR0	**Warramunga Arr**	**36.98**	**199**	P	**P**	**12 41 56.9**	**+0.1**
WR0				IAmb	IAmb	12 42 07.5	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**37.03**	**199**	P	**P**	**12 41 56.6**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=21,slow=9.7,SNR=3.9						
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**40.66**	**198**	P	**P**	**12 42 27.4**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=26,slow=6.7,SNR=1.9						
	comp=Z,0.2nm,0.8s						
STKA	**Stephens Creek**	**47.21**	**185**	P	**P**	**12 43 18.9**	**-1.1**
ZALV	**Zalesovo Beam**	**60.99**	**324**	P	**P**	**12 44 59.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=104,slow=4.9,SNR=2.5						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**61.18**	**315**	P	**P**	**12 45 01.9**	**+0.1**
MKAR	**Makanchi Array**	**61.18**	**315**	P	**P**	**12 45 01.7**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=98,slow=7.7,SNR=5.3						
	comp=Z,0.2nm,0.4s						
L18K	**Granite Mounta**	**61.38**	**27**	P	**P**	**12 45 02.3**	**-0.4**
F17K	**Baldwin Pennin**	**61.46**	**21**	P	**P**	**12 45 04.2**	**+1.0**
N19K	**Bonanza Creek**	**61.84**	**29**	P	**P**	**12 45 05.7**	**-0.4**
H18K	**Honhosa River**	**61.91**	**23**	P	**P**	**12 45 06.4**	**+0.1**
H18K				IAmb	IAmb	12 45 25.6	
	comp=Z,3.1nm,1.3s						
C18K	**Utukok River**	**62.59**	**19**	P	**P**	**12 45 11.4**	**+0.6**
C18K				IAmb	IAmb	12 45 38.3	
	comp=Z,2.4nm,1.2s						
D19K	**Kuna River**	**63.50**	**20**	P	**P**	**12 45 17.6**	**+0.7**
D19K				IAmb	IAmb	12 45 36.3	
	comp=Z,2.8nm,1.3s						
CAST	**Castle Rocks**	**63.78**	**26**	P	**P**	**12 45 19.9**	**+1.1**
CAST				IAmb	IAmb	12 45 21.7	
	comp=Z,5.6nm,1.4s						
KURK	**Kurchatov**	**64.12**	**319**	P	**P**	**12 45 21.2**	**0.0**
KURK				IAmb	IAmb	12 45 24.0	
	comp=Z,2.5nm,1.0s						
KURBB	**Kurchatov Arra**	**64.17**	**319**	P	**P**	**12 45 20.8**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=98,slow=7.2,SNR=20						
	comp=Z,1.7nm,0.7s						
H21K	**Melozitna River**	**64.25**	**24**	P	**P**	**12 45 22.9**	**+1.1**
H21K				IAmb	IAmb	12 45 38.0	
	comp=Z,3.6nm,1.3s						
D22K	**Ayikyak River**	**65.47**	**20**	P	**P**	**12 45 29.2**	**-0.5**
D22K				IAmb	IAmb	12 45 40.5	
	comp=Z,3.5nm,1.1s						
E22K	**Anaktuvuk Pass**	**65.49**	**21**	P	**P**	**12 45 30.2**	**+0.3**
IL31		**66.36**	**25**	P	**P**	**12 45 35.1**	**-0.3**
ILAR	**Eielson Array**	**66.36**	**25**	P	**P**	**12 45 34.5**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=249,slow=6.3,SNR=7.7						
	comp=Z,0.2nm,0.4s						
RAGM	**Ragged Mountai**	**66.40**	**30**	P	**P**	**12 45 35.7**	**-0.2**
E24K	**Your Creek**	**66.65**	**22**	P	**P**	**12 45 38.9**	**+1.5**
F24K	**Squaw Lake**	**66.71**	**22**	P	**P**	**12 45 38.5**	**+0.8**
F24K				IAmb	IAmb	12 45 54.4	
	comp=Z,6.2nm,1.5s						
D24K	**Happy Valley**	**66.87**	**21**	P	**P**	**12 45 40.4**	**+1.8**
D24K				IAmb	IAmb	12 45 40.6	
	comp=Z,6.6nm,1.5s						
J26L	**Joseph Creek**	**67.69**	**26**	P	**P**	**12 45 44.9**	**+0.9**
J26L				IAmb	IAmb	12 45 46.1	
	comp=Z,1.5nm,0.8s						
BMAR	**Burnt Mountain**	**67.91**	**23**	P	**P**	**12 45 47.0**	**+1.6**
I28M	**Miner Creek**	**69.37**	**25**	P	**P**	**12 45 54.9**	**+0.3**
BVAR	**Borovoye Array**	**69.39**	**321**	P	**P**	**12 45 54.0**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=96,slow=7.6,SNR=4.9						
	comp=Z,0.7nm,0.5s						
F28M	**Old Crow**	**69.72**	**23**	P	**P**	**12 45 55.9**	**-0.7**
G31M	**Satah River**	**71.81**	**24**	P	**P**	**12 46 09.4**	**+0.2**
G31M				IAmb	IAmb	12 46 29.2	
	comp=Z,2.5nm,1.1s						
F31M	**Tsiigehtchic**	**72.05**	**24**	P	**P**	**12 46 11.2**	**+0.6**
F31M				IAmb	IAmb	12 46 17.2	
	comp=Z,6.1nm,1.5s						
ABKAR	**Akbulak array**	**76.15**	**318**	P	**P**	**12 46 34.1**	**-0.9**
YKA	**Yellowknife Ar**	**80.63**	**28**	P	**P**	**12 46 59.4**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=290,slow=5.5,SNR=4.0						
	comp=Z,0.2nm,0.7s						
NVAR	**Mina Array Bea**	**84.72**	**52**	P	**P**	**12 47 22.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=273,slow=5.9,SNR=5.5						
	comp=Z,0.4nm,0.6s						

IDC 06 12:53:59.9±3.2,10°.97S×114°.81E,h0km,mb3.3/3, mbtmp3.4/3,Error ellipse: s-maj=167.7km s-min=28.4km az=46.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.81**	**118**	P	P	12 58 43.8	+0.6
	1.0nm,0.8s,baz=292,slow=11,SNR=4.3						
WRA				S	S	13 02 26.4	-10
	0.6nm,0.3s,baz=285,slow=26,SNR=3.6						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**22.14**	**127**	P	P	12 58 57.0	-0.5
	0.8nm,0.8s,baz=302,slow=10,SNR=13						
ASAR				S	S	13 02 55.8	-6.7
	0.2nm,0.6s,baz=318,slow=26,SNR=2.0						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**64.43**	**336**	P	P	13 04 38.1	+0.1
	0.3nm,0.5s,baz=144,slow=7.2,SNR=3.7						
	0.3nm,0.5s						

*IDC **06** 13:00:33.5±1.4,16°.82S×177°.57W,h0km,mb4.3/5, mbtmp4.3/5,Error ellipse: s-maj=48.4km s-min=30.1km az=150.0*

*NEIC **06** 13:01:14.1±0.9,17°.3S±0°.2×177°.2W±0°.2,h431km±5km, mb4.4/20,Error ellipse: s-maj=31.6km s-min=13.4km az=128.0*

ISC 06 13:01:10.8±1.2,17°.3S±0°.2×177°.2W±0°.2,h400km,n26, σ0§91/25,mb4.2/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOZ	**Tahuroa Road**	**21.40**	**196**	P	**P**	**13 05 25.3**	**-2.5**
TOZ				IAmb	IAmb	13 05 44.3	
	comp=Z,23nm,1.3s						
URZ	**Urewera**	**21.52**	**192**	P	**P**	**13 05 27.7**	**-1.2**
	comp=Z,68nm,1.4s,baz=14,slow=2.4,SNR=6.1						
	comp=Z,68nm,1.4s						
RTZ	**Ruatahuna**	**21.89**	**192**	P	**P**	**13 05 31.1**	**-1.4**
MRZ	**Mangatainoka R**	**24.15**	**194**	P	**P**	**13 05 53.3**	**+0.5**
MRZ				IAmb	IAmb	13 06 10.1	
	comp=Z,48nm,1.5s						
QRZ	**Quartz Range**	**25.12**	**199**	P	**P**	**13 06 02.6**	**+1.2**
THZ	**Tophouse**	**25.87**	**197**	P	**P**	**13 06 09.1**	**+0.9**
THZ				IAmb	IAmb	13 06 09.1	
	comp=Z,23nm,1.1s						
FOZ	**Fox Glacier**	**28.43**	**200**	P	**P**	**13 06 31.6**	**+1.0**
MLZ	**Mavora Lakes**	**30.62**	**201**	P	**P**	**13 06 51.2**	**+1.4**
MLZ				IAmb	IAmb	13 07 03.1	
	comp=Z,64nm,1.5s						
WHZ	**Wether Hill Ro**	**31.14**	**200**	P	**P**	**13 06 55.1**	**+0.9**
WHZ				IAmb	IAmb	13 06 57.0	
	comp=Z,52nm,1.3s						
CAN	**Canberra**	**35.05**	**232**	P	**P**	**13 07 28.1**	**+0.1**
CAN				IAmb	IAmb	13 07 31.6	
	comp=Z,16nm,1.2s						
TOO	**Toolangi**	**38.51**	**231**	P	**P**	**13 07 56.9**	**+0.1**
TOO				IAmb	IAmb	13 08 14.7	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**39.99**	**241**	P	**P**	**13 08 09.0**	**+0.1**
STKA	**Stephens Creek**	**39.99**	**241**	P	**P**	**13 08 09.7**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=98,slow=14,SNR=7.2						
	comp=Z,2.1nm,0.5s						
WRMHI	**West Rim**	**42.29**	**31**	P	**P**	**13 08 27.4**	**-0.2**
BBOO	**Buckleboo**	**44.77**	**241**	P	**P**	**13 08 46.4**	**-0.4**
BBOO				IAmb	IAmb	13 08 46.9	
	comp=Z,3.8nm,0.6s						
WR0	**Warramunga Arr**	**45.74**	**259**	P	**P**	**13 08 54.4**	**-0.2**
WB0	**Warramunga Arr**	**45.90**	**259**	P	**P**	**13 08 55.9**	**+0.1**
WB0				IAmb	IAmb	13 09 06.3	
	comp=Z,7.0nm,1.2s						
WB2	**Warramunga Arr**	**45.92**	**259**	P	**P**	**13 08 55.8**	**-0.2**
WRA	**Warramunga Arr**	**45.93**	**259**	P	**P**	**13 08 56.1**	**0.0**
WRA	**Warramunga Arr**	**45.93**	**259**	P	**P**	**13 08 55.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=94,slow=7.0,SNR=42						
	comp=Z,1.3nm,0.5s						
AS31	**Alice Springs**	**46.12**	**254**	P	**P**	**13 08 57.0**	**-0.5**
ASAR	**Alice Springs**	**46.12**	**254**	P	**P**	**13 08 56.9**	**-0.6**
ASAR	**Alice Springs**	**46.12**	**254**	P	**P**	**13 08 57.2**	**-0.3**
	comp=Z,5.3nm,0.6s,baz=91,slow=8.2,SNR=171						
ASAR				PcP	PcP	13 10 34.8	+8.8
	comp=Z,0.2nm,0.4s,baz=108,slow=4.8,SNR=1.9						
	comp=Z,5.3nm,0.6s						
PSA00	**Pilbara Seismi**	**59.24**	**255**	P	**P**	**13 10 31.6**	**-0.6**
PSA00				IAmb	IAmb	13 11 09.6	
	comp=Z,18nm,1.3s						
JMM	**Marumori**	**67.59**	**325**	P	**P**	**13 11 26.4**	**+0.5**
TXAR	**Lajitas Array**	**84.64**	**57**	P	P	13 13 10.1	+9.0
	comp=Z,0.5nm,0.9s,baz=213,slow=6.0,SNR=5.1						
	comp=Z,0.5nm,0.9s						

TAP 06 13:10:03.7,24°.25N×121°.75E,h11km±1km,ML1.4,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.08**	**351**	P	Pg	13 10 06.9	+0.6
	baz=351						
ETL	**Fush Village**	**0.15**	**233**	*i* P	Pb	13 10 08.0	-0.5
	baz=232						
NACB	**Ninganchiao**	**0.16**	**243**	*i* P	Pb	13 10 08.2	-0.6
	baz=242						
ENA	**Nanau**	**0.18**	**357**	P	Pb	13 10 08.4	-0.6
	baz=358						
EWUT	**Wuta**	**0.20**	**7**	P	Pb	13 10 08.8	-0.6
	baz=6.0						
TWD	**Chiawan**	**0.22**	**221**	*i* P	Pb	13 10 09.1	-0.6
	baz=219						
ETLH	**Xiulin Townshi**	**0.25**	**261**	*e*P	Pb	13 10 10.0	-0.3
	baz=260						
LATG	**Datong**	**0.35**	**324**	*i* P	Pb	13 10 11.9	-0.1
	baz=324						
ETM	**Tongmen**	**0.37**	**220**	*e*P	Pb	13 10 11.7	-0.6
	baz=220						
TWC	**Suao**	**0.37**	**14**	*e*P	Pg	13 10 11.4	+0.3
	baz=15						
LXIB	**Xiulin Townshi**	**0.38**	**234**	*e*P	Pg	13 10 12.0	+0.5
	baz=233						
NNS	**Nan Shan**	**0.40**	**299**	*e*P	Pb	13 10 12.7	-0.2
	baz=299						
NDT	**Datong Townshi**	**0.41**	**328**	*e*P	Pb	13 10 13.2	+0.1
	baz=328						
ENTT	**Nioudou**	**0.43**	**336**	*i* P	Pb	13 10 13.4	+0.2
	baz=337						
ENTT				*i* S	Sb	13 10 19.3	-0.4
	baz=337						
WHF	**Hehuan Shan**	**0.46**	**257**	*e*P	Pb	13 10 13.7	-0.3
	baz=256						
TWE	**Neicheng**	**0.48**	**351**	*e*P	Pg	13 10 13.4	+0.3
	baz=352						
ESL	**Shilin**	**0.52**	**214**	*e*P	Pb	13 10 14.6	-0.2
	baz=213						
YHNB	**Yeheng**	**0.54**	**321**	*e*P	Pg	13 10 14.3	-0.1
	baz=320						

TAP 06 13:16:01.4,24°.12N×121°.64E,h10km,ML1.9,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.04**	**339**	*i* P	Pg	13 16 03.9	+0.5
	baz=338						
ETL				*i* S	Sg	13 16 05.5	+0.7
	baz=338						
TWD	**Chiawan**	**0.06**	**226**	*i* P	Pg	13 16 03.8	+0.4
	baz=220						
TWD				*i* S	Sg	13 16 05.5	+0.7
	baz=220						
NACB	**Ninganchiao**	**0.07**	**323**	*i* P	Pg	13 16 04.2	+0.6
	baz=322						
NACB				*i* S	Sg	13 16 06.0	+0.8
	baz=322						
ETLH	**Xiulin Townshi**	**0.17**	**301**	P	Pg	13 16 05.9	+0.8
	baz=301						
ETLH				S	Sg	13 16 09.2	+1.5
	baz=301						
ETM	**Tongmen**	**0.20**	**221**	S	Sg	13 16 10.3	+1.7
	baz=221						
NNSB	**Datong**	**0.39**	**323**	P	Pb	13 16 10.3	-0.3
	baz=322						
NNSB				S	Sb	13 16 16.4	-0.3
	baz=322						

TAP 06 13:16:04.5,24°.27N×121°.79E,h14km,ML1.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.08**	**322**	P	Pg	13 16 07.9	+0.5
	baz=23						
EAHA				S	Sg	13 16 10.7	+1.3
	baz=23						
EAHA	**Aohua**	**0.08**	**322**	*i* P	Pg	13 16 07.8	+0.5
	baz=322						
EAHA				*i* S	Sg	13 16 10.6	+1.2
	baz=322						
ENA	**Nanau**	**0.17**	**343**	*i* P	Pg	13 16 09.0	+0.4
	baz=18						
ENA				*e*S	Sb	13 16 12.6	-0.1
	baz=18						
ENA	**Nanau**	**0.17**	**343**	*i* P	Pb	13 16 09.0	-0.4
	baz=345						
ENA				*i* S	Sb	13 16 12.6	-0.1
	baz=345						
EWUT	**Wuta**	**0.18**	**355**	*i* P	Pg	13 16 09.1	+0.4
	baz=21						
EWUT				*e*S	Sb	13 16 12.7	-0.3
	baz=21						
EWUT	**Wuta**	**0.18**	**355**	*i* P	Pb	13 16 09.2	-0.4
	baz=355						
EWUT				*i* S	Sb	13 16 12.8	-0.2
	baz=355						
ETL	**Fush Village**	**0.19**	**236**	*i* P	Pb	13 16 09.4	-0.3
	baz=235						
ETL				*i* S	Sb	13 16 13.1	-0.2
	baz=235						
NACB	**Ninganchiao**	**0.20**	**244**	P	Pb	13 16 09.7	-0.2
	baz=243						
NACB				S	Sb	13 16 13.6	0.0
	baz=243						
TWD	**Chiawan**	**0.26**	**225**	P	Pg	13 16 10.4	+0.4
	baz=223						
TWD				*e*S	Sb	13 16 15.0	-0.2
	baz=223						
ETLH	**Xiulin Townshi**	**0.29**	**259**	*e*S	Sb	13 16 15.9	-0.3
	baz=258						
TWC	**Suao**	**0.35**	**8**	P	Pb	13 16 12.0	-0.4
	baz=9.0						
TWC				S	Sb	13 16 17.3	-0.5
	baz=9.0						
LATG	**Datong**	**0.36**	**318**	P	Pb	13 16 12.5	-0.3
	baz=317						
LATG				S	Sb	13 16 19.8	+1.4
	baz=317						
NDS	**Dongshan**	**0.37**	**349**	P	Pb	13 16 12.7	-0.2
	baz=349						
NDS				S	Sb	13 16 18.7	+0.1
	baz=349						
ETM	**Tongmen**	**0.41**	**223**	*e*P	Pb	13 16 13.5	+0.1
	baz=222						
ETM				*e*S	Sb	13 16 20.3	+0.8
	baz=222						
NNSB	**Datong**	**0.41**	**294**	P	Pb	13 16 13.4	-0.1
	baz=293						
NNSB				S	Sb	13 16 19.7	0.0
	baz=293						
NNS	**Nan Shan**	**0.42**	**294**	*i* P	Pb	13 16 13.6	-0.2
	baz=294						
NNS				*i* S	Sb	13 16 20.0	-0.1
	baz=294						
NDT	**Datong Townshi**	**0.42**	**323**	*i* P	Pb	13 16 13.6	-0.1
	baz=322						
NDT				*i* S	Sb	13 16 20.7	+0.7
	baz=322						
LXIB	**Xiulin Townshi**	**0.42**	**235**	*e*S	Sb	13 16 20.6	+0.5
	baz=234						
ENTT	**Nioudou**	**0.43**	**331**	*i* P	Pb	13 16 13.7	-0.1
	baz=331						
ENTT				*i* S	Sb	13 16 20.4	+0.2
	baz=331						
EOS2	**EOS2**	**0.43**	**69**	*e*P	Pb	13 16 14.1	+0.4
	baz=69						
EOS2				*e*S	Sn	13 16 22.6	-1.1
	baz=69						
TWE	**Neicheng**	**0.47**	**346**	*i* P	Pb	13 16 14.6	+0.1
	baz=347						
TWE				*i* S	Sb	13 16 21.8	+0.5
	baz=347						
WHF	**Hehuan Shan**	**0.50**	**256**	*e*S	Sb	13 16 22.6	0.0
	baz=255						
FUSS	**Fushou**	**0.50**	**268**	S	Sb	13 16 22.5	0.0
	baz=267						
FUSB	**Fushanzhiwuyua**	**0.53**	**339**	*e*P	Pb	13 16 15.3	-0.2
	baz=339						
FUSB				*e*S	Sb	13 16 23.5	+0.5
	baz=339						
YHNB	**Yeheng**	**0.56**	**317**	P	Pb	13 16 15.9	-0.1
	baz=316						
YHNB				S	Sb	13 16 24.2	+0.3
	baz=316						
NSK	**Sanguang**	**0.57**	**316**	P	Pb	13 16 16.6	+0.3
	baz=316						
NSK				S	Sb	13 16 24.7	+0.4
	baz=316						
NWLT	**Wulai**	**0.57**	**333**	*e*P	Pb	13 16 16.7	+0.3
	baz=332						
NWLT				S	Sb	13 16 24.9	+0.5
	baz=332						
CHGB	**Renai**	**0.60**	**250**	*e*P	Pb	13 16 16.9	0.0
	baz=250						
CHGB				*e*S	Sb	13 16 25.9	+0.5
	baz=250						
OWD	**Renai**	**0.64**	**241**	*e*P	Pb	13 16 18.2	+0.6
	baz=241						
OWD				*e*S	Sb	13 16 27.3	+0.8
	baz=241						
WUSB	**Renai**	**0.68**	**246**	*e*P	Pb	13 16 18.5	+0.4
	baz=246						
TIPB	**Shuangxi**	**0.70**	**2**	*e*S	Sb	13 16 28.1	0.0
	baz=2.0						
NFF	**Wufeng Townshi**	**0.72**	**301**	*e*S	Sb	13 16 29.5	+1.0
	baz=300						
WHP	**Taichung City**	**0.77**	**271**	*e*P	Pn	13 16 22.5	+1.5
	baz=270						
WHP				*e*S	Sn	13 16 31.7	-0.9
	baz=270						
LIOB	**Emei**	**0.80**	**298**	*e*S	Sn	13 16 32.3	-0.9
	baz=298						

*IDC **06** 13:17:39.3±0.8,10°.57N×43°.18W,h0km,mb3.9/16, mbtmp3.9/17,ML4.5/2,MS4.3/71,Error ellipse: s-maj=21.4km s-min=18.1km az=180.0*

*NEIC **06** 13:17:44.8±2.6,10°.1N±0°.1×43°.27W±0°.09,h10km±1km, mb4.8/26,Error ellipse: s-maj=22.0km s-min=14.0km az=156.0*

*GCMT **06** 13:17:46.8±0.1,10°.90N±0°.01×43°.24W±0°.01,h27km, MW5.3/135,Moment Tensor Solution. s91,c125; s135,c230; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$-0.19±.02; $M_{\phi\phi}$0.38±.02; $M_{r\theta}$-0.10±.04; $M_{r\phi}$-1.04±.02; $M_{\theta\phi}$0.47±.04; Best double couple: $M_0$1.17100×10^{17} NP1:ϕ_s7.00000°, δ89.00000°, λ23.00000°. NP2:ϕ_s277.00000°,δ67.00000°,λ179.00000°. Principal axes: T 1.3030, Plg16.0000°, Azm234.0000°; N -0.2650, Plg67.0000°, Azm10.0000°; P -1.0380, Plg15.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

**ISC 06 13:17:41.3±0.5,10°

BAUV	**El Baul**	**24.47**	**269**	P	**P**	**13 23 02.3**	**+1.4**
BAUV				IAmb	IAmb	13 23 26.4	
	comp=Z,31nm,1.0s						
BDFB	**Brasilia**	**26.37**	**190**	LR	LR	13 33 24.8	
	comp=Z,1μm,18.5s,baz=356,slow=36						
BBTS	**Babate**	**26.41**	**78**	LR	LR	13 30 46.4	
	comp=Z,894nm,21.9s,baz=222,slow=30						
SDV	**Santo Domingo**	**27.03**	**269**	LR	LR	13 35 24.2	
	comp=Z,435nm,18.7s,baz=88,slow=39						
SAML	**Samuel**	**27.66**	**226**	P	**P**	**13 23 30.8**	**+1.1**
ETMB	**Extrema**	**30.46**	**229**	P	**P**	**13 23 56.1**	**+1.6**
ROSC	**El Rosal**	**31.27**	**262**	LR	LR	13 37 29.5	
	comp=Z,2μm,18.6s,baz=90,slow=38						
SIV	**San Ignacio**	**31.66**	**214**	LR	LR	13 36 49.1	
	comp=Z,580nm,21.0s,baz=65,slow=36						
PMOZ	**Porto Moniz, M**	**32.72**	**43**	*e*T	T	13 57 24.0	
PMAR	**Madeira**	**32.85**	**44**	*e*T	T	13 57 25.8	
H10N3	**ASCENSION HYDR**	**33.92**	**121**	T	T	14 00 21.0	
	baz=303,slow=75,SNR=21						
H10N2	**ASCENSION HYDR**	**33.92**	**121**	T	T	14 00 20.9	
	baz=303,slow=75,SNR=18						
H10N1	**ASCENSION HYDR**	**33.94**	**121**	T	T	14 00 15.2	
	baz=303,slow=75,SNR=20						
H10S3	**ASCENSION HYDR**	**34.38**	**123**	T	T	14 00 57.8	
	baz=298,slow=74,SNR=22						
H10S2	**ASCENSION HYDR**	**34.40**	**123**	T	T	14 00 59.1	
	baz=282,slow=74,SNR=18						
DBIC	**Dimbokro**	**38.14**	**93**	P	**P**	**13 25 02.9**	**+1.7**
DBIC				IAmb	IAmb	13 25 04.6	
	comp=Z,42nm,1.4s						
DBIC	**Dimbokro**	**38.14**	**93**	P	**P**	**13 24 58.3**	**-2.9**
	comp=Z,5.0nm,1.2s,baz=267,slow=9.0,SNR=1.5						
DBIC				LR	LR	13 37 17.0	
	comp=Z,468nm,18.8s,baz=262,slow=31						
	comp=Z,5.0nm,1.2s						
GBN	**Guysborough**	**38.17**	**339**	P	P	13 25 06.5	+5.5
NNA	**Nana**	**40.14**	**237**	LR	LR	13 41 52.6	
	comp=Z,414nm,20.9s,baz=56,slow=36						
JTS	**Las Juntas de**	**40.99**	**274**	LR	LR	13 44 36.5	
	comp=Z,187nm,18.6s,baz=75,slow=39						
LVC	**Limon Verde**	**41.38**	**217**	LR	LR	13 43 39.5	
	comp=Z,423nm,21.9s,baz=28,slow=38						
MDT	**Midelt**	**41.91**	**52**	LR	LR	13 40 52.8	
	comp=Z,185nm,19.2s,baz=268,slow=33						
TOA0	**Torodi Ar. Sit**	**44.04**	**82**	P	**P**	**13 25 51.2**	**+1.4**
TOA0				IAmb	IAmb	13 26 08.4	
	comp=Z,27nm,1.2s						
TORD	**Torodi Ar. Bea**	**44.04**	**82**	P	**P**	**13 25 51.2**	**+1.4**
TORD				IAmb	IAmb	13 26 08.4	
	comp=Z,17nm,1.1s						
TORD	**Torodi Ar. Bea**	**44.04**	**82**	P	**P**	**13 25 49.5**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=288,slow=7.4,SNR=12						
TORD				LR	LR	13 41 53.8	
	comp=Z,623nm,19.3s,baz=274,slow=33						
	comp=Z,4.9nm,0.9s						
TEIG	**Tepich**	**44.36**	**288**	LR	LR	13 42 09.8	
	comp=Z,1μm,20.4s,baz=201,slow=33						
ESDC	**Sonseca Array**	**45.39**	**43**	P	**P**	**13 25 58.5**	**-1.8**
	comp=Z,1.3nm,1.1s,baz=245,slow=7.3,SNR=4.3						
ESDC				LR	LR	13 40 22.7	
	comp=Z,280nm,21.3s,baz=236,slow=30						
	comp=Z,1.3nm,1.1s						
SADO	**Sadowa**	**46.02**	**325**	LR	LR	13 42 39.5	
	comp=Z,240nm,18.0s,baz=114,slow=33						
SCHQ	**Schefferville**	**48.02**	**342**	P	**P**	**13 26 19.0**	**-1.6**
	comp=Z,4.1nm,1.0s,baz=158,slow=11,SNR=2.3						
SCHQ				LR	LR	13 46 01.3	
	comp=Z,115nm,18.2s,baz=124,slow=36						
	comp=Z,4.1nm,1.0s						
KEST	**Kesra**	**53.78**	**53**	P	**P**	**13 27 02.5**	**-1.9**
	comp=Z,2.7nm,0.8s,baz=340,slow=11,SNR=1.6						
KEST				LR	LR	13 47 51.0	
	comp=Z,248nm,21.0s,baz=196,slow=34						
	comp=Z,2.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**54.69**	**27**	P	**P**	**13 27 08.2**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=236,slow=6.4,SNR=2.1						
	comp=Z,0.4nm,0.4s						
H09N1	**TRISTAN DA CUN**	**55.50**	**150**	T	T	14 27 34.2	
	SNR=21						
H09W1	**TRISTAN DA CUN**	**55.51**	**150**	T	T	14 27 38.8	
	SNR=14						
FRB	**Frobisher Bay**	**56.14**	**347**	LR	LR	13 45 50.5	
	comp=Z,147nm,21.9s,baz=156,slow=30						
BORG	**Borgarnes**	**56.33**	**11**	LR	LR	13 45 24.5	
	comp=Z,191nm,19.3s,baz=208,slow=30						
SFJD	**Kangerlussuaq**	**56.67**	**357**	LR	LR	13 46 14.9	
	comp=Z,275nm,18.9s,baz=180,slow=30						
PLCA	**Paso Flores**	**56.85**	**205**	P	**P**	**13 27 26.6**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=2.0,slow=7.9,SNR=2.5						
PLCA				LR	LR	13 52 57.0	
	comp=Z,218nm,18.1s,baz=36,slow=37						
	comp=Z,0.9nm,0.9s						
DAVOX	**Davos/Dischmat**	**57.55**	**41**	LR	LR	13 48 11.4	
	comp=Z,350nm,20.7s,baz=253,slow=32						
VAE	**Valguarnera**	**58.14**	**52**	LR	LR	13 51 46.2	
	comp=Z,266nm,18.1s,baz=342,slow=35						
ULM	**Lac du Bonnet**	**58.55**	**323**	P	**P**	**13 27 37.0**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=117,slow=9.0,SNR=1.5						
ULM				LR	LR	13 48 16.7	
	comp=Z,268nm,22.0s,baz=94,slow=31						
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**59.20**	**298**	P	**P**	**13 27 42.0**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=119,slow=7.3,SNR=3.0						
TXAR				LR	LR	13 53 42.9	
	comp=Z,18nm,21.8s,baz=82,slow=36						
	comp=Z,0.2nm,0.7s						
GERES	**GERESS Array B**	**60.67**	**39**	LR	LR	13 52 19.1	
	comp=Z,186nm,18.9s,baz=272,slow=34						
MNTX	**Cornudas Mount**	**60.90**	**300**	P	P	13 27 59.3	+4.6
FCC	**Fort Churchill**	**61.45**	**333**		P	13 28 02.6	+4.8
SDCO	**Great Sand Dun**	**61.76**	**307**		P	13 28 05.8	+5.1
SDCO				IAmb	IAmb	13 28 31.3	
	comp=Z,7.0nm,1.1s						
SUMG	**Summit**	**62.13**	**2**	P	P	13 28 07.2	+4.5
ANMO	**Albuquerque**	**62.14**	**304**	LR	LR	13 52 36.2	
	comp=Z,345nm,20.4s,baz=190,slow=34						
ISCO	**Idaho Springs**	**62.18**	**310**	P	P	13 28 08.9	+5.3
ISCO				IAmb	IAmb	13 28 45.3	
	comp=Z,7.7nm,1.1s						
VRAC	**Vranov**	**62.63**	**40**	LR	LR	13 54 42.5	
	comp=Z,128nm,18.0s,baz=264,slow=36						
FFC	**Flin Flon**	**63.69**	**326**	P	P	13 28 17.4	+4.5
NOA	**NORSAR Array B**	**64.16**	**26**	P	**P**	**13 28 19.7**	**+3.7**
	comp=Z,0.9nm,0.9s,baz=236,slow=12,SNR=2.4						
NOA				LR	LR	13 50 33.4	
	comp=Z,165nm,21.5s,baz=240,slow=31						
HFS	**Hagfors**	**64.87**	**28**	P	**P**	**13 28 19.9**	**-0.6**
	comp=Z,4.5nm,1.0s,baz=198,slow=7.6,SNR=2.5						
HFS				LR	LR	13 52 46.4	
	comp=Z,99nm,20.3s,baz=250,slow=32						
	comp=Z,4.5nm,1.0s						
LPIG	**La Paz**	**64.92**	**292**	LR	LR	13 57 26.7	
	comp=Z,64nm,19.9s,baz=92,slow=37						
PDAR	**Pinedale Array**	**65.59**	**312**	P	**P**	**13 28 26.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=87,slow=6.4,SNR=1.5						
PDAR				LR	LR	13 53 27.8	
	comp=Z,402nm,21.8s,baz=117,slow=33						
	comp=Z,0.1nm,0.3s						
IDI	**Anoyia**	**66.22**	**56**	LR	LR	13 59 22.1	
	comp=Z,36nm,18.7s,baz=273,slow=38						
TSUM	**Tsumeb**	**66.81**	**116**	LR	LR	13 51 06.3	
	comp=Z,359nm,21.1s,baz=322,slow=30						
MLR	**Muntele Rosu**	**68.04**	**45**		pP	13 28 47.8	+4.7
MLR	**Muntele Rosu**	**68.04**	**45**	LR	LR	13 56 53.5	
	comp=Z,123nm,18.1s,baz=244,slow=35						
ELK	**Elko**	**69.60**	**310**	LR	LR	13 56 09.8	
	comp=Z,185nm,21.6s,baz=98,slow=33						
PFO	**Pinyon Flats O**	**70.32**	**302**	LR	LR	13 59 41.8	
	comp=Z,176nm,18.2s,baz=100,slow=36						
RES	**Resolute Bay**	**70.35**	**347**	LR	LR	13 57 31.5	
	comp=Z,135nm,18.6s,baz=63,slow=34						
AKASG	**Malin Array Be**	**70.88**	**40**	P	**P**	**13 28 57.7**	**-0.9**
AKASG				LR	LR	13 56 30.0	
	comp=Z,149nm,21.1s,baz=224,slow=33						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**71.03**	**28**	LR	LR	13 55 09.7	
	comp=Z,159nm,20.8s,baz=254,slow=32						
NEW	**Newport**	**71.52**	**317**	LR	LR	13 59 07.4	
	comp=Z,267nm,18.8s,baz=97,slow=35						
NVAR	**Mina Array Bea**	**71.87**	**307**	P	**P**	**13 29 04.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=100,slow=4.7,SNR=1.8						
	comp=Z,0.1nm,0.3s						
LHV	**Little Huntoon**	**72.03**	**307**	P	**P**	**13 29 08.7**	**+3.0**
LHV				IAmb	IAmb	13 29 47.2	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**72.18**	**332**	P	**P**	**13 29 10.1**	**+3.8**
YKA	**Yellowknife Ar**	**72.18**	**332**	P	**P**	**13 29 06.6**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=103,slow=6.1,SNR=4.9						
YKA				LR	LR	13 59 05.5	
	comp=Z,282nm,18.8s,baz=272,slow=34						
	comp=Z,0.7nm,0.9s						
EUNU	**Eureka**	**72.39**	**353**	P	P	13 29 13.5	+6.2
EUNU				IAmb	IAmb	13 29 24.8	
	comp=Z,8.0nm,1.0s						
ARCES	**ARCESS Array B**	**72.89**	**20**	P	**P**	**13 29 08.6**	**-1.7**
	comp=Z,5.9nm,1.1s,baz=279,slow=7.2,SNR=2.0						
ARCES				LR	LR	13 55 53.9	
	comp=Z,220nm,19.5s,baz=254,slow=32						
	comp=Z,5.9nm,1.1s						
BRTR	**Keskin Array B**	**73.33**	**52**	P	P	13 29 18.6	+4.9
BRTR	**Keskin Array B**	**73.33**	**52**	LR	LR	14 01 20.5	
	comp=Z,66nm,19.5s,baz=270,slow=36						
SPITS	**Spitsbergen Ar**	**73.79**	**11**	LR	LR	13 53 25.2	
	comp=Z,324nm,20.1s,baz=207,slow=29						
RPN	**Rapa Nui**	**74.12**	**238**	LR	LR	13 59 32.8	
	comp=Z,82nm,20.2s,baz=58,slow=34						
MBAR	**Mbarara**	**74.38**	**94**	LR	LR	13 59 12.7	
	comp=Z,198nm,20.1s,baz=298,slow=34						
SUR	**Sutherland**	**74.47**	**128**	LR	LR	13 54 49.7	
	comp=Z,295nm,21.0s,baz=308,slow=30						
EIL	**Elat**	**74.70**	**62**	LR	LR	14 03 54.9	
	comp=Z,324nm,18.1s,baz=250,slow=37						
MMAI	**Mount Meron Ar**	**74.91**	**59**	LR	LR	14 02 22.7	
	comp=Z,144nm,22.0s,baz=264,slow=36						
LSZ	**Lusaka**	**75.24**	**109**	LR	LR	13 56 34.3	
	comp=Z,205nm,20.8s,baz=310,slow=31						
YBH	**Yreka Blue Hor**	**75.26**	**310**	LR	LR	14 01 02.9	
	comp=Z,185nm,19.3s,baz=88,slow=35						
OBN	**Obninsk**	**75.67**	**36**	LR	LR	13 58 13.4	
	comp=Z,180nm,21.0s,baz=178,slow=32						
LBTB	**Lobatse**	**75.76**	**119**	LR	LR	13 57 02.8	
	comp=Z,322nm,19.3s,baz=282,slow=31						
ASF	**Jabal al Asfar**	**76.22**	**59**	LR	LR	14 03 57.4	
	comp=Z,67nm,21.6s,baz=333,slow=36						
BOSA	**Boshof**	**76.66**	**123**	LR	LR	13 57 28.8	
	comp=Z,210nm,18.9s,baz=294,slow=31						
BBB	**Bella Bella**	**78.66**	**321**	LR	LR	14 02 00.5	
	comp=Z,171nm,20.4s,baz=88,slow=34						
DLBC	**Dease Lake**	**79.47**	**328**	LR	LR	14 01 57.8	
	comp=Z,179nm,20.6s,baz=82,slow=34						
INK	**Inuvik**	**80.45**	**338**	P	P	13 29 58.9	+5.8
INK				IAmb	IAmb	13 30 13.0	
	comp=Z,8.1nm,1.0s						
INK	**Inuvik**	**80.45**	**338**	LR	LR	14 03 25.7	
	comp=Z,226nm,18.4s,baz=3.0,slow=34						
F31M	**Tsiigehtchic**	**80.60**	**337**	P	P	13 30 00.1	+6.2
F31M				IAmb	IAmb	13 30 13.6	
	comp=Z,8.2nm,1.0s						
J30M	**Hart River**	**81.95**	**334**	P	**P**	**13 30 05.0**	**+3.7**
E29M	**Blow River**	**82.06**	**338**	P	P	13 30 07.7	+6.1
E29M				IAmb	IAmb	13 30 21.4	
	comp=Z,8.2nm,1.2s						
BELG	**Belgopmoye**	**82.34**	**38**	LR	LR	14 05 19.7	
	comp=Z,174nm,19.0s,baz=136,slow=35						
KIRV	**Kirov**	**82.55**	**32**	LR	LR	14 04 32.9	
	comp=Z,222nm,19.0s,baz=283,slow=34						
D27M	**Malcolm River**	**83.01**	**339**	P	P	13 30 12.4	+5.7
D27M				IAmb	IAmb	13 30 26.3	
	comp=Z,9.8nm,1.2s						
ATD	**Arta Tunnel**	**84.19**	**79**	LR	LR	14 05 39.2	
	comp=Z,9.0nm,21.2s,baz=110,slow=34						
D25K	**Kavik River**	**84.87**	**340**	P	P	13 30 23.1	+6.9
SNAA	**Sanae**	**86.24**	**168**	LR	LR	14 04 49.2	
	comp=Z,142nm,18.4s,baz=3.0,slow=33						
ILAR	**Eielson Array**	**86.34**	**335**	P	P	13 30 27.8	+4.3
ILAR	**Eielson Array**	**86.34**	**335**	P	**P**	**13 30 23.3**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=68,slow=4.1,SNR=4.4						
ILAR				LR	LR	14 07 42.5	
	comp=Z,111nm,18.4s,baz=60,slow=35						
	comp=Z,0.7nm,0.8s						
H24K	**Noodor Dome**	**86.42**	**336**	P	P	13 30 31.3	+7.3
H24K				IAmb	IAmb	13 31 02.8	
	comp=Z,14nm,1.4s						
CCB	**Clear Creek Bu**	**86.76**	**335**	P	P	13 30 31.6	+6.1
D22K	**Ayikyak River**	**87.15**	**340**	P	P	13 30 32.9	+5.4
D22K				IAmb	IAmb	13 30 53.4	
	comp=Z,10nm,1.1s						
ARU	**Arti**	**87.81**	**33**	LR	LR	14 07 02.5	
	comp=Z,152nm,20.1s,baz=284,slow=34						
AKTO	**Aktyubinsk**	**89.09**	**39**	LR	LR	14 10 41.3	
	comp=Z,115nm,18.2s,baz=228,slow=36						
KDAK	**Kodiak Island**	**91.25**	**330**	LR	LR	14 10 14.3	
	comp=Z,172nm,20.2s,baz=82,slow=35						
NRIK	**Noril'sk**	**93.40**	**16**	LR	LR	14 09 01.4	
	comp=Z,109nm,20.2s,baz=328,slow=33						
BVAR	**Borovoye Array**	**95.42**	**34**	LR	LR	14 11 08.0	
	comp=Z,270nm,21.6s,baz=300,slow=34						
WSAR	**Wadi Sarin**	**96.64**	**65**	LR	LR	14 15 04.6	
	comp=Z,293nm,21.1s,baz=304,slow=36						
TIXI	**Tiksi**	**97.90**	**3**	LR	LR	14 10 49.2	
	comp=Z,50nm,20.9s,baz=336,slow=33						
CMAR	**Changi Mai Arr**	**132.91**	**53**	PKP	**PKiKP**	**13 37 04.0**	**+4.9**
	comp=Z,0.2nm,0.3s,baz=270,slow=3.6,SNR=2.4						
ASAR	**Alice Springs**	**166.60**	**169**	PKPab	**PKPab**	**13 38 51.2**	**+1.2**
	comp=Z,0.7nm,1.0s,baz=184,slow=3.3,SNR=2.5						

IDC 06 13:24:56.0±692.0, 55.02N×7.94E, h0km, Error ellipse: s-maj=325.3km s-min=195.3km az=117.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**16.46**	**72**	I	I	15 03 20.0	
	baz=275,slow=339,SNR=1.2						
I48TN	**KESRA INFRASON**	**19.23**	**177**	I	I	15 24 50.0	
	0.1nm,1.1s,baz=351,slow=327,SNR=3.6						
I31KZ	**AKTYUBINSK INF**	**30.16**	**78**	I	I	16 27 20.0	
	baz=294,slow=344,SNR=0.5						

TAP 06 13:25:04.0, 24.70N×121.80E, h61km±1km, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.08**	**324**	*e*P	Pn	13 25 13.3	+0.2
	baz=328						
NDS	**Dongshan**	**0.10**	**228**	P	Pn	13 25 13.8	+0.7
NDS	baz=228			S	Sn	13 25 20.6	+0.9
	baz=228						
TWC	**Suao**	**0.10**	**154**	*i* P	Pn	13 25 13.2	0.0
	baz=149						
TWC				*i* S	Sn	13 25 20.3	+0.6
	baz=149						
TWE	**Neicheng**	**0.12**	**279**	*e*P	Pn	13 25 13.4	+0.2
	baz=279						
TWE				S	Sn	13 25 20.2	+0.3
	baz=279						
ESAO	**Su ao**	**0.13**	**162**	*e*P	Pn	13 25 13.4	+0.2
	baz=161						
NTC	**Toucheng**	**0.15**	**10**	*e*P	Pn	13 25 14.2	+0.8
	baz=10.0						
FUSB	**Fushanzhiwuyua**	**0.20**	**287**	P	Pn	13 25 14.0	+0.3
	baz=286						
FUSB				S	Sn	13 25 20.9	+0.3
	baz=286						
ENTT	**Nioudou**	**0.22**	**254**	*i* P	Pn	13 25 14.0	+0.3
	baz=253						
ENTT				*i* S	Sn	13 25 21.7	+1.0
	baz=253						
EWUT	**Wuta**	**0.26**	**184**	P	Pn	13 25 13.9	0.0
	baz=184						
EWUT				S	Sn	13 25 21.2	+0.2
	baz=184						
TIPB	**Shuangxi**	**0.27**	**5**	P	Pn	13 25 14.5	+0.4
	baz=5.0						
TIPB				S	Sn	13 25 21.7	+0.4
	baz=5.0						
NDT	**Datong Townshi**	**0.28**	**249**	*e*P	Pn	13 25 14.2	+0.1
	baz=249						
NDT				S	Sn	13 25 22.4	+1.0
	baz=249						
NWLT	**Wulai**	**0.28**	**286**	*e*P	Pn	13 25 14.0	-0.1
	baz=285						
NWLT				*e*S	Sn	13 25 21.6	+0.2
	baz=285						
LATG	**Datong**	**0.30**	**236**	*i* P	Pn	13 25 14.5	+0.1
	baz=236						
LATG				*i* S	Sn	13 25 22.4	+0.6
	baz=236						
YHNB	**Yeheng**	**0.39**	**265**	P	Pn	13 25 15.1	+0.1
	baz=265						
YHNB				S	Sn	13 25 23.5	+0.5
	baz=265						
NSK	**Sanguang**	**0.40**	**267**	*i* P	Pn	13 25 15.3	+0.2
	baz=266						
NSK				*i* S	Sn	13 25 23.6	+0.3
	baz=266						
NNSB	**Datong**	**0.47**	**234**	P	Pn	13 25 16.5	+0.7
	baz=234						
NNSB				S	Sn	13 25 24.7	+0.3
	baz=234						
NNS	**Nan Shan**	**0.47**	**236**	P	Pn	13 25 16.6	+0.7
	baz=235						
EOS2	**EOS2**	**0.48**	**125**	*e*S	Sn	13 25 25.8	+1.5
	baz=125						
YM01	**YM01**	**0.49**	**335**	*e*S	Sn	13 25 25.8	+1.1
	baz=334						
NFF	**Wufeng Townshi**	**0.62**	**264**	*e*P	Pn	13 25 17.0	-0.5
	baz=263						
NFF				*e*S	Sn	13 25 28.1	+0.8
	baz=263						
FUSS	**Fushou**	**0.68**	**228**	*e*P	Pn	13 25 18.2	-0.1
	baz=228						
FUSS				*e*S	Sn	13 25 29.6	+0.8
	baz=228						

IDC 06 13:26:05.2±1.3, 18.39N×145.79E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=49.9km s-min=26.3km az=91.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.72**	**197**	P	P	13 33 40.3	+0.7
	0.2nm,0.4s,baz=16,slow=8.1,SNR=5.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**43.38**	**196**	P	P	13 34 08.4	-1.2
	0.2nm,0.7s,baz=13,slow=7.2,SNR=4.8						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**61.60**	**318**	P	P	13 36 24.8	+0.3
	0.2nm,0.5s,baz=91,slow=7.8,SNR=2.5						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**66.77**	**320**	P	P	13 36 58.5	+0.1
	0.4nm,0.5s,baz=106,slow=8.2,SNR=4.8						
	0.4nm,0.5s						
NVAR	**Mina Array Bea**	**83.26**	**52**	P	P	13 38 34.0	-0.2
	0.3nm,0.4s,baz=273,slow=6.4,SNR=4.8						
	0.3nm,0.4s						

TAP 06 13:27:37.5, 24.18N×121.75E, h14km, ML1.8, 2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**261**	*i* P	Pg	13 27 41.0	+0.2
	baz=262						
NACB	**Ninganchiao**	**0.14**	**269**	⇓*e*P	Pg	13 27 41.5	+0.4
	baz=270						
EAHA	**Aohua**	**0.15**	**358**	P	Pg	13 27 41.7	+0.4
	baz=357						
ETLH	**Xiulin Townshi**	**0.24**	**277**	P	Pb	13 27 43.5	-0.3
	baz=278						
ETLH				S	Sg	13 27 46.9	+0.5
	baz=278						
ENA	**Nanau**	**0.25**	**359**	P	Pg	13 27 42.9	0.0
	baz=359						
ENA				*i* S	Sg	13 27 47.0	+0.5
	baz=359						
EWUT	**Wuta**	**0.27**	**6**	*e*P	Pg	13 27 43.1	-0.1
	baz=6.0						
EWUT				*e*S	Sg	13 27 47.2	+0.1
	baz=6.0						
ESAO	**Su ao**	**0.41**	**13**	*e*P	Pg	13 27 45.1	-0.6
	baz=12						
LATG	**Datong**	**0.41**	**331**	⇓*i*P	Pb	13 27 46.5	-0.1
	baz=330						
LATG				S	Sb	13 27 52.5	-0.3
	baz=330						
NNSB	**Datong**	**0.42**	**307**	*e*P	Pb	13 27 47.3	+0.6
	baz=307						
NNSB				*e*S	Sb	13 27 53.8	+0.8
	baz=307						
NNS	**Nan Shan**	**0.43**	**308**	*e*P	Pb	13 27 47.4	+0.4
	baz=308						
NNS				*e*S	Sb	13 27 54.1	+0.7
	baz=308						
WHF	**Hehuan Shan**	**0.44**	**266**	*e*P	Pb	13 27 46.9	-0.4
	baz=267						
WHF				S	Sg	13 27 52.7	+0.3
	baz=267						
TWC	**Suao**	**0.44**	**12**	*e*P	Pg	13 27 46.2	-0.1
	baz=9.0						
NDS	**Dongshan**	**0.46**	**357**	*e*P	Pg	13 27 46.6	0.0
	baz=2.0						
FUSS	**Fushou**	**0.46**	**279**	*e*P	Pb	13 27 47.7	+0.1
	baz=286						
NDT	**Datong Townshi**	**0.47**	**333**	*e*P	Pb	13 27 47.5	-0.2
	baz=332						
NDT				*e*S	Sb	13 27 54.4	-0.2
	baz=332						
ENTT	**Nioudou**	**0.49**	**340**	P	Pb	13 27 47.7	-0.2
	baz=340						
ENTT				S	Sb	13 27 54.8	-0.3
	baz=340						
CHGB	**Renai**	**0.54**	**258**	*e*P	Pg	13 27 47.6	-0.5
	baz=254						
TWE	**Neicheng**	**0.55**	**352**	*e*P	Pg	13 27 48.4	+0.1
	baz=352						
TWE				*e*S	Sg	13 27 55.6	0.0
	baz=352						
YHNB	**Yeheng**	**0.60**	**326**	*e*P	Pb	13 27 50.1	+0.3
	baz=325						
YHNB				*e*S	Sb	13 27 57.9	-0.2
	baz=325						

*IDC **06** 13:36:44.3±1.0, 24.12N×121.87E, h0km, mb3.4/8, mbtmp3.4/8, Error ellipse: s-maj=48.1km s-min=20.4km az=67.0*

*ASIES **06** 13:36:46.0, 24.14N×121.69E, h10km, ML4.2, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.74; $M_{\theta\theta}$-2.20; $M_{\phi\phi}$-0.63; $M_{r\theta}$2.38; $M_{\theta\phi}$-1.31; $M_{r\phi}$0.60; Fault plane solution: $M_0$3.75767×10^{21} NP1:ϕ_s70.54000°, δ65.53000°, λ98.82000°. NP2:ϕ_s230.01000°, δ25.91000°, λ71.39000°. Principal axes: T Plg68.2560°, Azm357.5370°; N Plg8.0160°, Azm246.8610°; P Plg20.0720°, Azm153.9110°;*

*TAP **06** 13:36:46.0, 24.14N×121.69E, h10km, ML

LXIB	**Xiulin Townshi**	**0.28**	**247**	⇓*i*P	**Pg**	**13 36 51.8**	**0.0**
	baz=244							
LXIB				*e*S	**Sg**	**13 36 55.3**	**-0.4**
	baz=244							
ENA	**Nanau**	**0.30**	**7**	⇓*i*P	**Pg**	**13 36 52.1**	**+0.1**
	baz=10.0							
ENA				*i* S	**Sg**	**13 36 55.9**	**-0.1**
	baz=10.0							
EWUT	**Wuta**	**0.32**	**13**	⇓*i*P	**Pg**	**13 36 52.5**	**+0.1**
	baz=14							
EWUT				S	**Sg**	**13 36 56.7**	**0.0**
	baz=14							
SHUL	**Shoufeng**	**0.36**	**200**	*e*P	**Pb**	**13 36 54.4**	**-0.1**
	baz=204							
SHUL				*e*S	**Sb**	**13 37 02.1**	**+1.9**
	baz=204							
WHF	**Hehuan Shan**	**0.40**	**272**	⇓*i*P	**Pg**	**13 36 54.1**	**+0.1**
	baz=270							
WHF				S	**Sg**	**13 36 58.8**	**-0.6**
	baz=270							
ESL	**Shilin**	**0.40**	**218**⇑	*i*P	**Pg**	**13 36 53.9**	**0.0**
	baz=216							
NNSB	**Datong**	**0.41**	**316**	⇓*i*P	**Pg**	**13 36 54.5**	**+0.3**
	baz=316							
NNSB				*i* S	**Sg**	**13 36 59.8**	**+0.1**
	baz=316							
NNSH	**Datong**	**0.41**	**316**	⇓*i*P	**Pg**	**13 36 54.4**	**+0.2**
	baz=315							
NNSH				*i* S	**Sg**	**13 36 59.9**	**+0.2**
	baz=315							
NNS	**Nan Shan**	**0.43**	**316**	⇓*i*P	**Pg**	**13 36 54.7**	**+0.2**
	baz=316							
NNS				*i* S	**Sg**	**13 37 00.3**	**+0.2**
	baz=316							
LATG	**Datong**	**0.43**	**338**	⇓*i*P	**Pg**	**13 36 54.6**	**+0.1**
	baz=339							
LATG				S	**Sg**	**13 37 00.5**	**+0.2**
	baz=339							
FUSS	**Fushou**	**0.43**	**286**	⇓*i*P	**Pb**	**13 36 55.0**	**-0.8**
	baz=284							
FUSS				S	**Sb**	**13 37 01.1**	**-1.4**
	baz=284							
TEGC	**Jichi Village**	**0.45**	**199**	P	**Pb**	**13 36 56.4**	**+0.5**
	baz=188							
ESAO	**Su ao**	**0.46**	**16**	⇓*e*P	**Pg**	**13 36 55.0**	**0.0**
	baz=17							
ESAO				S	**Sg**	**13 37 01.4**	**+0.2**
	baz=17							
CHGB	**Renai**	**0.49**	**262**	⇓*i*P	**Pg**	**13 36 56.0**	**+0.4**
	baz=251							
CHGB				*i* S	**Sg**	**13 37 02.2**	**+0.2**
	baz=251							
TWC	**Suao**	**0.49**	**16**	⇓*i*P	**Pg**	**13 36 55.8**	**+0.1**
	baz=11							
TWC				*e*S	**Sg**	**13 37 02.1**	**-0.1**
	baz=11							
TWT	**Tachien**	**0.49**	**284**	⇓*i*P	**Pb**	**13 36 56.4**	**-0.4**
	baz=282							
TWT				S	**Sb**	**13 37 03.0**	**-1.1**
	baz=282							
NDS	**Dongshan**	**0.50**	**2**	⇓*i*P	**Pg**	**13 36 56.0**	**+0.3**
	baz=2.0							
NDS				*e*S	**Sg**	**13 37 02.4**	**0.0**
	baz=2.0							
NDT	**Datong Townshi**	**0.50**	**340**	⇓*i*P	**Pb**	**13 36 56.2**	**-0.6**
	baz=341							
NDT				*i* S	**Sb**	**13 37 02.9**	**-1.2**
	baz=341							
WARBT	**Fenglin Townsh**	**0.50**	**215**⇑	*i*P	**Pg**	**13 36 55.6**	**-0.2**
	baz=219							
TDCB	**Techi**	**0.51**	**284**	⇓*i*P	**Pb**	**13 36 56.5**	**-0.6**
	baz=283							
TDCB				*i* S	**Sg**	**13 37 02.6**	**-0.2**
	baz=283							
OWD	**Renai**	**0.51**	**250**	⇓*e*P	**Pg**	**13 36 56.2**	**+0.2**
	baz=248							
ENTT	**Nioudou**	**0.52**	**346**	⇓*i*P	**Pb**	**13 36 56.5**	**-0.6**
	baz=348							
ENTT				*i* S	**Sg**	**13 37 03.3**	**+0.2**
	baz=348							
EGFH	**Guangfu**	**0.53**	**209**	*e*P	**Pg**	**13 36 56.5**	**+0.3**
	baz=214							
WUSB	**Renai**	**0.55**	**255**	⇓*i*P	**Pb**	**13 36 57.1**	**-0.6**
	baz=246							
WUSB				*i* S	**Sg**	**13 37 03.6**	**-0.4**
	baz=246							
EOS2	**EOS2**	**0.56**	**59**	*e*P	**Pb**	**13 36 58.5**	**+0.7**
	baz=49							
EOS4	**EOS4**	**0.56**	**91**	*e*P	**Pn**	**13 36 59.8**	**+0.2**
	baz=92							
EOS3	**EOS3**	**0.58**	**75**	*e*P	**Pn**	**13 36 59.6**	**-0.5**
	baz=59							
TWE	**Neicheng**	**0.59**	**357**	⇓*i*P	**Pb**	**13 36 57.8**	**-0.5**
	baz=359							
TWE				S	**Sg**	**13 37 05.3**	**+0.1**
	baz=359							
YHNB	**Yeheng**	**0.61**	**331**	P	**Pb**	**13 36 58.4**	**-0.3**
YHNB	**Yeheng**	**0.61**	**331**	P	**Pb**	**13 36 58.5**	**-0.3**
YHNB	**Yeheng**	**0.61**	**331**	⇓*i*P	**Pb**	**13 36 58.2**	**-0.5**
	baz=331							
YHNB				S	**Sg**	**13 37 06.1**	**+0.1**
	baz=331							
NSK	**Sanguang**	**0.62**	**330**	⇓*i*P	**Pb**	**13 36 58.5**	**-0.5**
	baz=331							
NSK				*e*S	**Sg**	**13 37 06.7**	**+0.3**
	baz=331							
ILA	**Ilan**	**0.63**	**4**	⇓*e*P	**Pb**	**13 36 58.7**	**-0.4**
	baz=5.0							
FUSB	**Fushanzhiwuyua**	**0.63**	**351**	⇓P	**Pb**	**13 36 58.7**	**-0.4**
	baz=351							
FUSB				S	**Sg**	**13 37 06.4**	**-0.3**
	baz=351							
VWDT	**VWDT**	**0.64**	**234**	⇓P	**Pg**	**13 36 58.6**	**+0.3**
	baz=232							
VWDT				S	**Sg**	**13 37 07.2**	**+0.5**
	baz=232							
NWLT	**Wulai**	**0.67**	**344**	⇓*i*P	**Pb**	**13 36 59.3**	**-0.4**
	baz=331							
NWLT				*e*S	**Sg**	**13 37 07.5**	**-0.2**
	baz=331							
HGSD	**Ruisui**	**0.69**	**202**	⇓P	**Pb**	**13 37 00.3**	**+0.4**
	baz=217							
WPL	**Puli Township**	**0.69**	**260**	*e*P	**Pb**	**13 36 59.8**	**-0.2**
	baz=250							
WPL				*e*S	**Sg**	**13 37 08.4**	**0.0**
	baz=250							
WHP	**Taichung City**	**0.70**	**282**	⇓P	**Pb**	**13 37 00.3**	**0.0**
	baz=281							
WHP				S	**Sb**	**13 37 09.9**	**-0.2**
	baz=281							
EHY	**Hungye**	**0.71**	**209**	*e*P	**Pg**	**13 36 59.6**	**-0.2**
	baz=210							
DPDB	**Guoxing**	**0.71**	**262**	⇓P	**Pb**	**13 37 00.4**	**-0.1**
	baz=252							
DPDB				*e*S	**Sb**	**13 37 09.9**	**-0.4**
	baz=252							
WCS	**Beigang Elemen**	**0.72**	**264**	*e*P	**Pb**	**13 37 00.2**	**-0.4**
	baz=263							
NFF	**Wufeng Townshi**	**0.73**	**313**	*e*P	**Pb**	**13 37 00.5**	**-0.2**
	baz=313							
NFF				*e*S	**Sb**	**13 37 10.2**	**-0.6**
	baz=313							
SSLB	**Suanglung**	**0.76**	**243**	P	**Pg**	**13 37 00.9**	**+0.1**
SSLB	**Suanglung**	**0.76**	**243**	P	**Pb**	**13 37 01.1**	**-0.2**
SSLB	**Suanglung**	**0.76**	**243**	⇓*i*P	**Pg**	**13 37 00.9**	**+0.1**
	baz=252							
SSLB				*i* S	**Sg**	**13 37 09.5**	**-1.3**
	baz=252							
SMLT	**Sun Moon Lake**	**0.77**	**251**	⇓*i*P	**Pb**	**13 37 01.3**	**-0.2**
	baz=250							
SMLT				*i* S	**Sg**	**13 37 11.1**	**0.0**
	baz=250							
TYC	**Yuchr**	**0.80**	**254**	⇓*i*P	**Pg**	**13 37 01.6**	**+0.1**
	baz=243							
TYC				*i* S	**Sg**	**13 37 11.4**	**-0.6**
	baz=243							
LIOB	**Emei**	**0.81**	**309**	⇓*i*P	**Pb**	**13 37 02.3**	**+0.3**
	baz=309							
LIOB				S	**Sb**	**13 37 13.3**	**+0.3**
	baz=309							
NSTT	**Nanjuang**	**0.81**	**308**	⇓*i*P	**Pb**	**13 37 02.2**	**+0.1**
	baz=308							
NSTT				*i* S	**Sg**	**13 37 11.8**	**-0.4**
	baz=308							
NJD	**Zhudong**	**0.82**	**317**	*e*P	**Pn**	**13 37 03.2**	**-0.3**
	baz=323							
YULB	**Yu-li**	**0.82**	**207**	P	**Pb**	**13 37 02.3**	**0.0**
YULB	**Yu-li**	**0.82**	**207**	P	**Pg**	**13 37 01.9**	**0.0**
YULB	**Yu-li**	**0.82**	**207**	*e*P	**Pg**	**13 37 01.7**	**-0.2**
	baz=209							
NHDH	**Xindian Distri**	**0.84**	**349**	*e*P	**Pb**	**13 37 02.4**	**-0.2**
	baz=350							
ECBN	**Changbin**	**0.84**	**196**	*e*P	**Pg**	**13 37 02.6**	**+0.3**
	baz=185							
TIPB	**Shuangxi**	**0.84**	**8**	⇓*i*P	**Pb**	**13 37 02.4**	**-0.3**
	baz=358							
TIPB				S	**Sg**	**13 37 12.8**	**-0.5**
	baz=358							
TWA	**Mucha**	**0.85**	**353**	⇓*i*P	**Pb**	**13 37 02.7**	**-0.1**
	baz=354							
TWA				S	**Sg**	**13 37 13.4**	**-0.1**
	baz=354							
EYUL	**Yuli**	**0.86**	**204**	*e*P	**Pn**	**13 37 04.1**	**+0.1**
	baz=217							
TWF1	**Yuli**	**0.86**	**206**	*e*P	**Pg**	**13 37 02.1**	**-0.5**
	baz=218							
TATO	**Taipei**	**0.86**	**347**	P	**Pb**	**13 37 03.0**	**0.0**
TATO	**Taipei**	**0.86**	**347**	⇓*i*P	**Pb**	**13 37 02.9**	**-0.1**
	baz=338							
TATO				*i* S	**Sg**	**13 37 13.1**	**-0.8**
	baz=338							
TWQ1	**Liyutan**	**0.87**	**284**	P	**Pn**	**13 37 03.7**	**-0.5**
	baz=284							
WHYT	**Xinyi Township**	**0.89**	**241**	*e*P	**Pb**	**13 37 03.9**	**+0.4**
	baz=240							
BACT	**New Taipei Cit**	**0.89**	**345**	*e*P	**Pb**	**13 37 03.9**	**+0.4**
	baz=345							
HSN1	**Hsinchu**	**0.90**	**316**	*e*P	**Pn**	**13 37 04.5**	**0.0**
	baz=316							
NSY	**Sanyi**	**0.90**	**288**	⇓P		**13 37 04.8**	**+0.1**
	baz=288							
NHY	**Taipei**	**0.91**	**352**	*e*P	**Pb**	**13 37 04.2**	**+0.4**
	baz=5.0							
TWB1	**Santiao Chiao**	**0.91**	**17**	P	**Pb**	**13 37 03.7**	**-0.1**
	baz=10.0							
TWB1				S	**Sg**	**13 37 15.1**	**-0.4**
	baz=10.0							
TAP	**Taipei**	**0.92**	**349**	P	**Pb**	**13 37 04.2**	**+0.3**
	baz=341							
TAP				*i* S	**Sb**	**13 37 16.0**	**-0.3**
	baz=341							
WWF	**Wufeng**	**0.92**	**265**	⇓*e*P	**Pn**	**13 37 05.5**	**+0.7**
	baz=258							
WWF				*e*S	**Sn**	**13 37 19.4**	**+1.3**
	baz=258							
NMLH	**Miaoli**	**0.92**	**296**	*e*P	**Pn**	**13 37 05.1**	**+0.2**
	baz=296							
SBCB	**Hsinchu**	**0.93**	**315**	P	**Pn**	**13 37 05.5**	**+0.5**
	baz=315							
NJN	**Zhunan**	**0.94**	**306**	*e*P	**Pn**	**13 37 05.2**	**+0.2**
	baz=306							
TCU	**Taichung**	**0.94**	**271**	*e*P	**Pn**	**13 37 05.7**	**+0.7**
	baz=270							
NTY	**Taoyuan**	**0.94**	**337**	*e*P	**Pn**	**13 37 05.4**	**+0.3**
	baz=331							
NWF	**Wu-fen Shan**	**0.94**	**4**	⇓*i*P	**Pb**	**13 37 04.5**	**+0.2**
	baz=355							
NWF				S	**Sg**	**13 37 15.9**	**-0.4**
	baz=355							
WFSB	**Wu-fen Shan**	**0.94**	**4**	⇓*i*P	**Pb**	**13 37 04.3**	**+0.1**
	baz=357							
WFSB				*i* S	**Sg**	**13 37 15.9**	**-0.4**
	baz=357							
WJS	**Zhushan**	**0.94**	**251**	*e*P	**Pn**	**13 37 05.3**	**+0.2**
	baz=244							
HSN	**Hsinchu**	**0.94**	**315**	*e*P	**Pn**	**13 37 05.2**	**0.0**
	baz=318							
HSN				*e*S	**Sn**	**13 37 18.7**	**+0.1**
	baz=318							
NCUH	**Zhongli**	**0.95**	**331**	*e*P	**Pn**	**13 37 05.4**	**+0.1**
	baz=331							
NCU	**National Centr**	**0.96**	**331**	*e*P	**Pn**	**13 37 05.4**	**0.0**
	baz=338							
NCU				*e*S	**Sn**	**13 37 19.5**	**+0.5**
	baz=338							
WNT1	**Nantou City**	**0.96**	**257**	*e*P	**Pn**	**13 37 06.0**	**+0.6**
	baz=246							
WNT	**Mingjian**	**0.96**	**255**	*e*P	**Pn**	**13 37 06.0**	**+0.6**
	baz=246							
SXI1	**Grass Mountain**	**0.97**	**9**	⇓*i*P	**Pb**	**13 37 05.0**	**+0.1**
	baz=356							
CHKH	**Chenggong**	**0.98**	**197**	*e*P	**Pg**	**13 37 04.7**	**-0.1**
	baz=188							
WDJ	**Dajia District**	**0.99**	**283**	*e*P	**Pn**	**13 37 06.9**	**+1.1**
	baz=282							
TWS1	**Kuangyinshan**	**1.00**	**345**	⇓*i*P	**Pn**	**13 37 06.1**	**+0.1**
	baz=346							
TWS1				*e*S	**Sn**	**13 37 20.4**	**+0.3**
	baz=346							
FULB	**Fuli**	**1.00**	**202**	*e*P	**Pb**	**13 37 05.5**	**+0.1**
	baz=217							
TNOU	**National Taiwa**	**1.02**	**4**	P	**Pb**	**13 37 05.8**	**+0.2**
	baz=3.0							
YM01	**YM01**	**1.02**	**353**	⇓P	**Pn**	**13 37 06.0**	**-0.3**
	baz=2.0							
YM01				S	**Sb**	**13 37 18.9**	**-0.1**
	baz=2.0							
ALS	**Alishan**	**1.03**	**233**	*e*P	**Pb**	**13 37 06.1**	**+0.1**
	baz=232							
WYL	**Yuanlin Townsh**	**1.04**	**261**	*e*P	**Pn**	**13 37 07.7**	**+1.2**
	baz=260							
WCHH	**Zhanghua**	**1.04**	**267**	*e*P	**Pn**	**13 37 07.5**	**+0.9**
	baz=267							
NTST	**Danshui**	**1.05**	**348**⇑	*e*P	**Pn**	**13 37 07.2**	**+0.6**
	baz=348							
NHW	**Xinwu Township**	**1.05**	**326**	*e*P	**Pn**	**13 37 07.5**	**+0.8**
	baz=326							
ANP	**Anpu**	**1.06**	**351**	*e*P	**Pn**	**13 37 06.7**	**-0.2**
	baz=352							
NWRT	**Kuosheng**	**1.07**	**358**	*e*P	**Pn**	**13 37 07.0**	**+0.2**
	baz=358							
CHKT	**Chengkung**	**1.07**	**197**	*e*P	**Pg**	**13 37 05.7**	**-0.9**
	baz=184							
CHN5	**Tsauling**	**1.08**	**241**	⇓*e*P	**Pn**	**13 37 07.7**	**+0.6**
	baz=240							
CHN5				S	**Sn**	**13 37 22.6**	**+0.5**
	baz=240							
EHD	**Haiduan**	**1.08**	**205**	*e*P	**Pg**	**13 37 05.7**	**-1.0**
	baz=217							
ECS	**Chishang**	**1.12**	**203**	*e*P	**Pn**	**13 37 08.0**	**+0.3**
	baz=215							
ELDTW	**Lidau**	**1.13**	**214**	*e*P	**Pb**	**13 37 06.5**	**-1.1**
	baz=215							
WGK	**Gukeng**	**1.13**	**247**	*e*P	**Pn**	**13 37 08.6**	**+0.8**
	baz=247							
TWY	**Chenhua**	**1.14**	**355**	*e*P	**Pn**	**13 37 08.7**	**+0.8**
	baz=341							
WDLH	**Douliu**	**1.15**	**248**	*e*P	**Pn**	**13 37 09.1**	**+1.1**
	baz=247							
NSM	**Shimen**	**1.16**	**355**	*e*P	**Pn**	**13 37 09.1**	**+1.0**
	baz=6.0							
JYNG	**Yonagunijimaku**	**1.18**	**74**	*e*P	**Pn**	**13 37 08.7**	**+0.3**
JYNG				*e*S	**Sg**	**13 37 24.6**	**+0.6**
WCKO	**Fanlu**	**1.22**	**236**	*e*P	**Pg**	**13 37 10.5**	**+1.1**
	baz=236							
WRL	**Guilierlin Hig**	**1.23**	**260**	*e*P	**Pg**	**13 37 10.6**	**+0.9**
	baz=259							
YOJ	**Yonaguni jima**	**1.24**	**74**	P	**Pg**	**13 37 10.0**	**+0.2**
YOJ	**Yonaguni jima**	**1.24**	**74**	P	**Pg**	**13 37 09.8**	**0.0**
YOJ	**Yonaguni jima**	**1.24**	**74**	*e*P	**Pb**	**13 37 09.6**	**+0.2**
	baz=70							
YOJ	**Yonaguni jima**	**1.24**	**74**	P	**Pg**	**13 37 09.8**	**0.0**
YOJ				*e*S	**Sn**	**13 37 27.2**	**+1.3**
RLNB	**Erlin**	**1.25**	**259**	*e*P	**Pg**	**13 37 10.7**	**+0.7**
	baz=259							
CHN2	**Minshiung**	**1.27**	**242**	*e*P	**Pg**	**13 37 10.9**	**+0.5**
	baz=242							
CHN4	**Tsaushan**	**1.28**	**233**	*e*P	**Pg**	**13 37 11.3**	**+0.7**
	baz=233							
STYH	**Taoyuan**	**1.28**	**222**	*e*P	**Pn**	**13 37 10.0**	**+0.2**
	baz=222							
WTK	**Tuku**	**1.28**	**250**	*e*P	**Pg**	**13 37 11.1**	**+0.6**
	baz=250							
TPUB	**Ta-pu**	**1.28**	**230**	P	**Pg**	**13 37 11.5**	**+0.8**
TPUB	**Ta-pu**	**1.28**	**230**	P	**Pg**	**13 37 10.7**	**0.0**
TPUB	**Ta-pu**	**1.28**	**230**	P	**Pg**	**13 37 11.2**	**+0.5**
	baz=217							
STYT	**Tauyuan**	**1.30**	**222**	*e*P	**Pb**	**13 37 10.7**	**+0.3**
	baz=222							
LONT	**Longtian**	**1.33**	**203**	*e*P	**Pn**	**13 37 09.1**	**-1.4**
	baz=214							
WTP	**Ta-pu**	**1.33**	**229**	*e*P	**Pg**	**13 37 11.7**	**+0.2**
	baz=229							
TWK	**Hsinying**	**1.41**	**232**	*e*P	**Pg**	**13 37 13.1**	**+0.2**
	baz=232							
TWG	**Pinlang**	**1.43**	**204**	*e*P	**Pn**	**13 37 10.1**	**-1.7**
	baz=207							
TWGBT	**Beinan**	**1.43**	**204**	P	**Pn**	**13 37 10.4**	**-1.4**
TWGBT	**Beinan**	**1.43**	**204**	*e*P	**Pn**	**13 37 10.0**	**-1.9**
	baz=207							
SNST	**Tainan City**	**1.43**	**231**	*e*P	**Pg**	**13 37 13.4**	**0.0**
	baz=231							
CHN1	**Nanshi**	**1.43**	**229**	*e*P	**Pg**	**13 37 13.5**	**0.0**
	baz=229							
WSF	**Szhu**	**1.44**	**250**	*e*P	**Pg**	**13 37 13.7**	**0.0**
	baz=250							
SGST	**Jiashian**	**1.46**	**225**⇑	*e*P	**Pb**	**13 37 13.0**	**-0.2**
	baz=224							
WSL	**Shuilin Townsh**	**1.48**	**246**	*e*P	**Pg**	**13 37 14.5**	**+0.1**
	baz=246							
SLGT	**Liugui**	**1.49**	**221**	*e*P	**Pg**	**13 37 14.4**	**-0.2**
	baz=221							
ICHU	**Yijhu**	**1.51**	**240**	*e*P	**Pg**	**13 37 14.6**	**-0.4**
	baz=240							
PCYT	**Pengchaiyu**	**1.53**	**13**	*e*P	**Pb**	**13 37 14.5**	**+0.2**
	baz=11							
CHN8	**Yiju**	**1.57**	**240**	*e*P	**Pb**	**13 37 15.0**	**-0.1**
	baz=241							
SHHT	**Tainan City**	**1.66**	**229**	*e*P	**Pg**	**13 37 17.6**	**-0.3**
	baz=230							
SCST	**Cishan**	**1.66**	**222**	*e*P	**Pb**	**13 37 16.9**	**+0.3**
	baz=223							
ECL	**Taimali**	**1.68**	**204**	*e*P	**Pn**	**13 37 15.4**	**+0.1**
	baz=193							
SCLT	**Jiali**	**1.68**	**236**	*e*P	**Pg**	**13 37 17.9**	**-0.2**
	baz=237							
SSD	**Sandimen**	**1.69**	**216**	*e*P	**Pn**	**13 37 15.9**	**+0.4**
	baz=216							
TSMG	**Majia**	**1.72**	**215**	*e*P	**Pb**	**13 37 17.4**	**-0.2**
	baz=216							
TWM1	**Shoushan**	**1.75**	**222**	*e*P	**Pg**	**13 37 19.5**	**-0.2**
	baz=223							
MASBT	**Mashibuluo**	**1.80**	**213**	*e*P	**Pb**	**13 37 18.6**	**-0.4**
	baz=214							
IRIF	**Iriomote-Funau**	**1.86**	**83**	*e*P	**Pn**	**13 37 18.9**	**+1.1**
IRIF				*e*S	**Sb**	**13 37 42.9**	**-0.5**
EAST	**Anshuo**	**1.91**	**204**	*e*P	**Pb**	**13 37 20.2**	**-0.6**
	baz=195							
HATJ	**Hateruma jima**	**1.93**	**92**	P	**Pn**	**13 37 17.8**	**-0.8**
HATJ				*e*S	**Sn**	**13 37 44.4**	**+1.5**
TAWH	**Dawu Township**	**1.93**	**203**	*e*P	**Pb**	**13 37 21.3**	**0.0**
	baz=194							
SCZT	**Fangliau**	**2.01**	**210**	*e*P	**Pn**	**13 37 21.1**	**+1.2**
	baz=211							
PNG	**Penghu**	**2.04**	**254**	*e*P	**Pb**	**13 37 21.8**	**-1.3**
	baz=256							
PHUB	**P'eng-hu**	**2.04**	**253**	*e*P	**Pn**	**13 37 21.4**	**+1.0**
	baz=254							
WDGT	**Dungji**	**2.06**	**246**	*e*P	**Pb**	**13 37 22.1**	**-1.3**
	baz=229							
JKRS	**Kuro-shima**	**2.11**	**87**	*e*P	**Pn**	**13 37 22.0**	**+0.8**
LYUB	**Lan-yu**	**2.12**	**183**	*e*P	**Pn**	**13 37 18.7**	**-2.7**
	baz=188							
VWUC	**VWUC**	**2.22**	**293**	*e*P	**Pn**	**13 37 23.1**	**+0.3**
	baz=293							
JIJ	**Ishigaki jima**	**2.24**	**84**	P	**Pn**	**13 37 23.2**	**+0.2**
JIJ				*e*S	**Sn**	**13 37 51.0**	**+0.3**
VCHM	**Qimei**	**2.28**	**247**	*e*P	**Pn**	**13 37 25.0**	**+1.5**
	baz=232							
TWKBT	**Hengchun**	**2.33**	**201**	*e*P	**Pn**	**13 37 24.8**	**+0.5**
	baz=192							
JISG	**Ishigakijimahi**	**2.42**	**79**	*e*P	**Pn**	**13 37 26.6**	**+1.1**
JISG				*e*S	**Sn**	**13 37 55.8**	**+0.6**
PTMZ	**Houxiangcun**	**2.52**	**292**	*e*P	**Pn**	**13 37 26.7**	**-0.1**
	baz=291							
MATB	**Ma-tsu**	**2.56**	**322**	*e*P	**Pn**	**13 37 27.6**	**+0.1**
	baz=321							
MSUT	**Lienchiang**	**2.59**	**322**	*e*P	**Pn**	**13 37 28.9**	**+1.0**
	baz=321							
JTJ	**Tarama**	**2.78**	**79**	*e*S	**Sb**	**13 38 07.8**	**-2.0**
LYJJ	**Jianjiangzhen**	**2.98**	**324**	*e*P	**Pn**	**13 37 33.6**	**+0.4**
	baz=324							
KNM	**Kinmen**	**3.00**	**276**	*e*P	**Pn**	**13 37 35.9**	**+2.5**
	baz=276							
KNMB	**Chin-men Tao**	**3.04**	**277**	*e*P	**Pn**	**13 37 34.6**	**+0.6**
	baz=277							
XPSS	**Dashiqiu**	**3.10**	**334**	*e*P	**Pn**	**13 37 35.0**	**+0.2**
	baz=333							
MHZQ	**Yeshan**	**3.11**	**310**	*e*P	**Pn**	**13 37 35.5**	**+0.5**
	baz=309							
AXDP	**Jialang**	**3.48**	**283**	*e*P	**Pn**	**13 37 40.6**	**+0.5**
	baz=283							
DSXP	**Dongshan**	**3.93**	**265**	*e*P	**Pn**	**13 37 46.9**	**+0.5**
	baz=265							
KSRS	**Korea Array**	**14.31**	**20**	Pn	**P**	**13 40 14.4**	**-1.2**
	0.2nm,0.3s,baz=201,slow=12,SNR=8.3							
SONM	**Songino Array**	**26.60**	**337**	P	**P**	**13 42 23.9**	**-0.5**
	0.4nm,0.7s,baz=158,slow=10,SNR=1.8							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**38.70**	**316**	P	**P**	**13 44 10.2**	**+0.2**
	0.5nm,0.7s,baz=100,slow=11,SNR=4.1							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**42.45**	**320**	P	**P**	**13 44 41.5**	**+0.7**
	0.5nm,0.9s,baz=108,slow=7.9,SNR=2.9							
	0.5nm,0.9s							
WRA	**Warramunga Arr**	**45.51**	**163**	P	**P**	**13 45 05.3**	**-0.3**
	0.6nm,1.0s,baz=345,slow=8.9,SNR=1.5							
	0.6nm,1.0s							
BVAR	**Borovoye Array**	**48.01**	**321**	P	**P**	**13 45 27.6**	**+2.6**
	0.4nm,0.5s,baz=97,slow=7.4,SNR=2.8							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**48.97**	**165**	P	**P**	**13 45 31.9**	**-0.7**
	0.2nm,0.5s,baz=340,slow=7.0,SNR=9.2							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**69.04**	**27**	P	**P**	**13 47 52.2**	**+0.7**
	0.2nm,0.6s,baz=283,slow=6.0,SNR=2.4							
	0.2nm,0.6s							
YKA	**Yellowknife Ar**	**82.83**	**23**	P	**P**	**13 49 09.1**	**-1.0**
	0.2nm,0.6s,baz=312,slow=5.1,SNR=4.6							
	0.2nm,0.6s							

IDC 06 13:39:10.9±14.0, 33°.29N×69°.08E, h0km, mb3.6/1, mbtmp3.4/4, ML3.1/3, MS3.8/2, Error ellipse: s-maj=233.5km s-min=45.6km az=168.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**10.05

BSO3	**Boso 3**	**2.10**	**12**	P		**Pn**	**13 40 59.3**	**0.0**
JIZS	**Izushimoda**	**2.17**	**335**	P		**Pn**	**13 41 00.0**	**-0.4**
JIZS				*e*S		**Sn**	**13 41 28.0**	**+0.3**
TK02	**Tokai 2**	**2.21**	**303**	*e*P		**Pn**	**13 41 01.7**	**+1.0**
JOD2	**Odawara 2**	**2.62**	**344**	P		**Pn**	**13 41 06.8**	**+0.7**
JOD2				*e*S		**Sn**	**13 41 38.5**	**+0.5**
JYN	**Shimob**	**2.99**	**337**	P		**Pn**	**13 41 12.5**	**+1.4**
MJAR	**Matsushiro Arr**	**4.06**	**339**	P		**Pn**	**13 41 25.2**	**+0.1**
	4.4nm,0.6s,baz=199,slow=24,SNR=22							
MJAR				S		**Sn**	**13 42 09.0**	**-2.9**
	2.6nm,0.4s,baz=175,slow=14,SNR=4.8							
JCJ	**Chichijima**	**5.95**	**161**	S		Sn	13 42 46.8	-11
	30nm,0.3s,baz=304,slow=23,SNR=1.1							
ZALV	**Zalesovo Beam**	**44.04**	**316**	P		**P**	**13 48 20.4**	**+0.2**
	0.3nm,0.4s,baz=82,slow=11,SNR=2.1							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**45.52**	**306**	P		**P**	**13 48 32.1**	**0.0**
	0.3nm,0.4s,baz=81,slow=8.3,SNR=4.5							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**47.81**	**311**	P		**P**	**13 48 48.9**	**-0.9**
	1.0nm,0.7s,baz=88,slow=6.8,SNR=14							
	1.0nm,0.7s							
AAK	**Ala-Archa**	**51.58**	**301**	LR		LR	14 13 56.2	
	comp=Z,81nm,19.9s,baz=308,slow=39							
BVAR	**Borovoye Array**	**52.66**	**315**	P		**P**	**13 49 26.1**	**-0.2**
	0.7nm,0.5s,baz=91,slow=7.6,SNR=4.8							
	0.7nm,0.5s							
WRA	**Warramunga Arr**	**52.67**	**187**	P		**P**	**13 49 25.5**	**-1.2**
	0.6nm,0.3s,baz=1.7,slow=7.7,SNR=9.0							
	0.6nm,0.3s							
ASAR	**Alice Springs**	**56.39**	**187**	P		**P**	**13 49 52.6**	**-0.9**
	0.5nm,0.6s,baz=0.4,slow=6.2,SNR=18							
	0.5nm,0.6s							
INK	**Inuvik**	**58.74**	**26**	P		**P**	**13 50 10.3**	**+0.9**
	0.5nm,0.7s,baz=186,slow=5.2,SNR=1.8							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**93.69**	**52**	P		**P**	**13 53 28.9**	**+0.8**
	0.2nm,0.7s,baz=328,slow=3.2,SNR=4.1							
	0.2nm,0.7s							

NEIC ***06*** *13:40:57.0±1.0,55.96N±0.08×149.5W±0.1, h9km±7km, ML3.5/38, ML3.3(AEIC), Error ellipse: s-maj=12.6km s-min=8.4km az=162.0*

IDC ***06*** *13:40:58.5±3.1,55.98N×149.44W, h0km, mb3.6/1, mbtmp3.3/6, ML3.0/5, MS3.6/2, Error ellipse: s-maj=43.1km s-min=28.2km az=4.0*

AEIC ***06*** *13:41:01.6±1.3,55.94N±0.09×149.5W±0.1, h11km±7km, Error ellipse: s-maj=13.3km s-min=8.4km az=166.0*

ISC 06 13:40:58.4±1.2,56.06N±0.08×149.56W±0.06, h10km, n158, σ0.98/160, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.37**	**301**		**Pn**	**13 41 36.6**	**-0.7**
OHAK					**Sn**	**13 42 04.1**	**-2.1**
OHAK	**Old Harbor**	**2.37**	**301**	P	**Pn**	**13 41 36.5**	**-0.7**
OHAK	**Old Harbor**	**2.37**	**301**	P	**Pn**	**13 41 36.6**	**-0.7**
	baz=120						
OHAK				S	**Sn**	**13 42 04.1**	**-2.1**
	baz=120						
KDAK	**Kodiak Island**	**2.39**	**317**		**Pn**	**13 41 37.6**	**0.0**
KDAK	**Kodiak Island**	**2.39**	**317**		**Sn**	**13 42 05.7**	**-1.3**
KDAK	**Kodiak Island**	**2.39**	**317**	S	**Sn**	**13 42 05.7**	**-1.3**
	baz=136						
KDAK	**Kodiak Island**	**2.39**	**317**	Pn	**Pn**	**13 41 37.1**	**-0.5**
	2.3nm,0.3s,baz=138,slow=7.7,SNR=100						
KDAK				Sn	**Sn**	**13 42 05.1**	**-1.9**
	2.6nm,0.3s,baz=171,slow=15,SNR=4.4						
	6.5nm,0.2s						
SII	**Sitkinak Islan**	**2.62**	**283**		**Pn**	**13 41 39.5**	**-1.3**
SII				IAML		13 42 17.3	
	comp=E,146nm,1.4s						
SII				IAML		13 43 03.4	
	comp=N,102nm,1.4s						
SII	**Sitkinak Islan**	**2.62**	**283**		**Sn**	**13 42 09.9**	**-2.8**
SII	**Sitkinak Islan**	**2.62**	**283**	P	**Pn**	**13 41 38.5**	**-2.3**
SII	**Sitkinak Islan**	**2.62**	**283**	P	**Pn**	**13 41 39.9**	**-1.0**
	baz=101						
SII				S	**Sn**	**13 42 09.9**	**-2.8**
	baz=101						
Q20K	**Shuyak Island**	**2.98**	**330**	P	**Pn**	**13 41 46.1**	**+0.4**
	baz=148						
Q20K				S	**Sn**	**13 42 21.4**	**0.0**
	baz=148						
SYI	**Shuyak Island**	**2.98**	**330**		**Pn**	**13 41 46.1**	**+0.4**
SYI					**Sn**	**13 42 21.4**	**0.0**
SYI	**Shuyak Island**	**2.98**	**330**	IAML		13 42 36.1	
	comp=E,68nm,1.3s						
SYI				IAML		13 42 42.8	
	comp=N,97nm,1.5s						
CNPM	**China Poot**	**3.59**	**346**		**Pn**	**13 41 54.2**	**+0.1**
CNPM					**Sn**	**13 42 35.8**	**-0.7**
CNPM	**China Poot**	**3.59**	**346**	IAML		13 42 37.6	
	comp=E,40nm,1.4s						
CNPM				IAML		13 42 37.9	
	comp=N,62nm,1.4s						
Q19K	**Cape Douglas,**	**3.62**	**324**	Pn	**Pn**	**13 41 54.7**	**+0.1**
Q19K				IAML		13 43 54.1	
	comp=N,131nm,1.2s						
BRSE	**Bradley Lake S**	**3.75**	**351**		**Pn**	**13 41 55.9**	**-0.3**
BRSE					**Sn**	**13 42 39.4**	**-1.0**
BRSE	**Bradley Lake S**	**3.75**	**351**	P	**Pn**	**13 41 55.9**	**-0.3**
	baz=169						
BRSE				S	**Sn**	**13 42 39.4**	**-1.0**
	baz=169						
HOM	**Homer**	**3.78**	**344**	Pn	**Pn**	**13 41 56.9**	**+0.3**
BRLK	**Bradley Lake**	**3.78**	**350**		**Pn**	**13 41 56.5**	**-0.3**
BRLK					**Sn**	**13 42 40.4**	**-0.9**
BRLK	**Bradley Lake**	**3.78**	**350**	IAML		13 42 54.5	
	comp=E,37nm,1.4s						
Q23K	**Middleton Isla**	**3.79**	**26**	Pn	**Pn**	**13 41 56.2**	**-0.6**
MID	**Middleton Isla**	**3.79**	**26**	Pn	**Pn**	**13 41 56.1**	**-0.7**
ACHA	**Angle Creek He**	**3.81**	**307**		**Pn**	**13 41 57.9**	**+0.7**
SEW	**Seward**	**4.06**	**1**		**Pn**	**13 41 59.9**	**-0.6**
SEW					**Sn**	**13 42 45.2**	**-2.7**
SEW	**Seward**	**4.06**	**1**	P	**Pn**	**13 41 59.8**	**-0.6**
	baz=180						
SEW				S	**Sn**	**13 42 45.2**	**-2.7**
	baz=180						
CNTC	**Contact Creek**	**4.09**	**305**		**Pn**	**13 42 01.6**	**+0.5**
Q17K	**Contact Creek**	**4.09**	**305**	P	**Pn**	**13 42 01.6**	**+0.5**
	baz=121						
P19K	**Oil Pt**	**4.10**	**333**	Pn	**Pn**	**13 42 00.6**	**-0.5**
P19K				IAML		13 42 54.0	
	comp=N,80nm,1.2s						
P19K				IAML		13 42 58.0	
	comp=E,64nm,1.2s						
P23K	**Montague Islan**	**4.11**	**15**		**Pn**	**13 42 00.8**	**-0.4**
P23K	**Montague Islan**	**4.11**	**15**	P	**Pn**	**13 42 00.8**	**-0.4**
	baz=196						
IVE	**Iliamna Volcan**	**4.37**	**337**		**Pn**	**13 42 04.3**	**-0.6**
SLKM	**Skilak Lake**	**4.47**	**356**		**Pn**	**13 42 05.9**	**-0.3**
P18K	**Big Mountain,**	**4.51**	**320**		**Pn**	**13 42 06.8**	**0.0**
P18K	**Big Mountain,**	**4.51**	**320**	P	**Pn**	**13 42 06.8**	**0.0**
	baz=136						
HIN	**Hinchinbrook I**	**4.64**	**19**		**Pn**	**13 42 08.2**	**-0.3**
HIN	**Hinchinbrook I**	**4.64**	**19**	IAML		13 43 46.4	
	comp=N,61nm,1.4s						
HIN				IAML		13 44 54.3	
	comp=E,67nm,1.5s						
RSO	**Redoubt South**	**4.72**	**340**	Pn	**Pn**	**13 42 09.7**	**-0.1**
KAIM	**Kayak Island**	**4.74**	**33**	Pn	**Pn**	**13 42 09.6**	**-0.3**
RDT	**Redoubt**	**4.77**	**343**		**Pn**	**13 42 10.3**	**-0.1**
O18K	**Koktuh Hills**	**4.85**	**324**		**Pn**	**13 42 11.3**	**-0.1**
O18K	**Koktuh Hills**	**4.85**	**324**	P	**Pn**	**13 42 11.3**	**-0.1**
	baz=140						
P17K	**Kvichak River**	**4.85**	**313**		**Pn**	**13 42 12.2**	**+0.8**
P17K	**Kvichak River**	**4.85**	**313**	P	**Pn**	**13 42 12.2**	**+0.8**
	baz=128						
O19K	**Port Alsworth**	**4.85**	**331**		**Pn**	**13 42 11.3**	**-0.1**
O19K	**Port Alsworth**	**4.85**	**331**	IAML		13 43 09.8	
	comp=E,59nm,0.4s						
O19K				IAML		13 43 11.1	
	comp=N,86nm,0.4s						
O19K	**Port Alsworth**	**4.85**	**331**	P	**Pn**	**13 42 11.3**	**-0.1**
	baz=147						
EYAK	**Cordova Ski Ar**	**4.93**	**22**		**Pn**	**13 42 12.1**	**-0.3**
EYAK	**Cordova Ski Ar**	**4.93**	**22**	P	**Pn**	**13 42 12.3**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.93**	**22**	P	**Pn**	**13 42 12.1**	**-0.3**
	baz=205						
CHGN	**Chignik**	**4.95**	**276**	Pn	**Pn**	**13 42 12.2**	**-0.5**
CHGN				IAML		13 43 30.3	
	comp=E,30nm,1.3s						
CHGN				IAML		13 45 22.2	
	comp=N,31nm,1.5s						
RC01	**Rabbit Creek A**	**5.04**	**359**		**Pn**	**13 42 13.7**	**-0.4**
RC01	**Rabbit Creek A**	**5.04**	**359**	IAML		13 43 14.1	
	comp=E,23nm,0.5s						
RC01				IAML		13 43 15.5	
	comp=N,18nm,1.2s						
RC01	**Rabbit Creek A**	**5.04**	**359**	P	**Pn**	**13 42 13.7**	**-0.4**
	baz=178						
RAGM	**Ragged Mountai**	**5.05**	**29**	Pn	**Pn**	**13 42 13.5**	**-0.6**
RAGM				IAML		13 43 28.8	
	comp=N,84nm,1.1s						
RAGM				IAML		13 44 08.8	
	comp=E,72nm,1.5s						
BERG	**Berg Lake**	**5.33**	**33**	Pn	**Pn**	**13 42 17.8**	**-0.3**
KNK	**Knik Glacier**	**5.40**	**6**	Pn	**Pn**	**13 42 18.8**	**-0.2**
N19K	**Bonanza Creek**	**5.42**	**334**		**Pn**	**13 42 18.7**	**-0.6**
N19K	**Bonanza Creek**	**5.42**	**334**	P	**Pn**	**13 42 18.7**	**-0.6**
	baz=150						
SNH	**Sunshine Point**	**5.45**	**38**	Pn	**Pn**	**13 42 19.5**	**-0.2**
SUA	**Susitna One**	**5.46**	**354**	Pn	**Pn**	**13 42 19.3**	**-0.5**
O17K	**Koliganek Bris**	**5.47**	**316**		**Pn**	**13 42 19.8**	**-0.1**
O17K	**Koliganek Bris**	**5.47**	**316**	P	**Pn**	**13 42 19.8**	**-0.1**
	baz=130						
WAX	**Waxell Ridge**	**5.65**	**36**	Pn	**Pn**	**13 42 21.9**	**-0.4**
N18K	**Kilae Creek**	**5.70**	**327**		**Pn**	**13 42 23.0**	**-0.1**
N18K	**Kilae Creek**	**5.70**	**327**	P	**Pn**	**13 42 23.0**	**-0.1**
	baz=142						
BARK	**Barkley Ridge**	**5.74**	**38**		**Pn**	**13 42 23.5**	**-0.1**
GHO	**Glory Hole Cre**	**5.74**	**3**	Pn	**Pn**	**13 42 24.0**	**+0.3**
KLU	**Klutina**	**5.77**	**18**		**Pn**	**13 42 24.2**	**+0.2**
KLU	**Klutina**	**5.77**	**18**	P	**Pn**	**13 42 24.2**	**+0.2**
	baz=200						
O16K	**Kokwok River B**	**5.77**	**311**		**Pn**	**13 42 23.8**	**-0.2**
O16K	**Kokwok River B**	**5.77**	**311**	P	**Pn**	**13 42 23.8**	**-0.2**
	baz=125						
CRQM	**Cirque**	**5.79**	**33**	Pn	**Pn**	**13 42 24.1**	**-0.4**
SML	**Sawmill**	**5.80**	**6**	Pn	**Pn**	**13 42 24.5**	**+0.1**
CNBA	**Chernabura Isl**	**5.84**	**262**	Pn	**Pn**	**13 42 23.6**	**-1.4**
SCM	**Sheep Creek Mo**	**5.91**	**10**	Pn	**Pn**	**13 42 25.7**	**-0.2**
ISLE	**Juniper Island**	**5.93**	**37**		**Pn**	**13 42 26.0**	**-0.3**
SVW2	**Sparrevohn**	**5.95**	**331**	Pn	**Pn**	**13 42 26.2**	**-0.3**
N17K	**Nushagak Hills**	**6.02**	**321**	Pn	**Pn**	**13 42 27.0**	**-0.3**
VRDI	**Verde Repeater**	**6.08**	**29**	Pn	**Pn**	**13 42 28.1**	**-0.4**
M20K	**Styx River**	**6.12**	**344**	Pn	**Pn**	**13 42 28.5**	**-0.4**
N25K	**Chitina, Valde**	**6.13**	**23**		**Pn**	**13 42 29.0**	**0.0**
N25K	**Chitina, Valde**	**6.13**	**23**	P	**Pn**	**13 42 29.0**	**0.0**
	baz=206						
KIAG	**Kiagna River**	**6.17**	**35**		**Pn**	**13 42 29.5**	**0.0**
GLB	**Gilahina Butte**	**6.17**	**27**		**Pn**	**13 42 28.2**	**-1.3**
SDPT	**Sand Point**	**6.21**	**268**		**Pn**	**13 42 29.1**	**-0.9**
SDPT	**Sand Point**	**6.21**	**268**	P	**Pn**	**13 42 29.1**	**-0.9**
	baz=80						
TABL	**Table Mountain**	**6.25**	**42**		**Pn**	**13 42 30.6**	**-0.1**
MCARA	**McCarthy VSAT**	**6.33**	**30**		**Pn**	**13 42 31.6**	**-0.1**
MCARA	**McCarthy VSAT**	**6.33**	**30**	P	**Pn**	**13 42 31.6**	**-0.1**
	baz=214						
PTPK	**Patty Peak**	**6.33**	**33**		**Pn**	**13 42 31.9**	**0.0**
O15K	**Ungalikthiuk R**	**6.34**	**304**		**Pn**	**13 42 32.1**	**+0.4**
O15K	**Ungalikthiuk R**	**6.34**	**304**	P	**Pn**	**13 42 32.1**	**+0.4**
	baz=116						
M18K	**Stony River**	**6.34**	**332**		**Pn**	**13 42 31.6**	**-0.2**
M18K	**Stony River**	**6.34**	**332**	P	**Pn**	**13 42 31.6**	**-0.2**
	baz=146						
M19K	**Big River Lodg**	**6.37**	**339**	Pn	**Pn**	**13 42 32.8**	**+0.5**
PCA	**Pinnacle**	**6.38**	**47**		**Pn**	**13 42 32.1**	**-0.4**
PINM	**Pinnacle**	**6.38**	**47**	P	**Pn**	**13 42 32.1**	**-0.4**
	baz=234						
BARN	**Barnard Glacie**	**6.50**	**36**		**Pn**	**13 42 34.0**	**-0.1**
PNL	**Peninsula**	**6.52**	**52**		**Pn**	**13 42 33.7**	**-0.5**
PNL	**Peninsula**	**6.52**	**52**	P	**Pn**	**13 42 34.2**	**-0.1**
PNL	**Peninsula**	**6.52**	**52**	P	**Pn**	**13 42 33.7**	**-0.5**
	baz=240						
CTGM	**Chitina Glacie**	**6.54**	**38**	Pn	**Pn**	**13 42 34.2**	**-0.4**
LOGN	**Logan Glacier**	**6.55**	**40**		**Pn**	**13 42 34.3**	**-0.6**
BCPM	**Bancas Point**	**6.56**	**49**		**Pn**	**13 42 34.7**	**-0.1**
N16K	**Nishlik Lake**	**6.57**	**316**		**Pn**	**13 42 35.5**	**+0.5**
N16K	**Nishlik Lake**	**6.57**	**316**	P	**Pn**	**13 42 35.5**	**+0.5**
	baz=129						
L19K	**White Mountain**	**6.71**	**338**		**Pn**	**13 42 37.1**	**+0.1**
L19K	**White Mountain**	**6.71**	**338**	P	**Pn**	**13 42 37.1**	**+0.1**
	baz=154						
M17K	**Holitna River**	**6.74**	**326**		**Pn**	**13 42 37.9**	**+0.5**
M17K	**Holitna River**	**6.74**	**326**	P	**Pn**	**13 42 37.9**	**+0.5**
	baz=139						
M16K	**Timber Creek**	**6.99**	**319**	Pn	**Pn**	**13 42 40.9**	**+0.2**
PN7A	**Pavlof North-7**	**7.05**	**270**		**Pn**	**13 42 40.8**	**-0.8**
DHY	**Denali Highway**	**7.12**	**8**	Pn	**Pn**	**13 42 42.5**	**-0.2**
M26K	**Nabesna, AK**	**7.19**	**25**	Pn	**Pn**	**13 42 44.1**	**+0.6**
O29M	**Mount Kennedy**	**7.20**	**49**		**Pn**	**13 42 43.7**	**+0.1**
O29M	**Mount Kennedy**	**7.20**	**49**	P	**Pn**	**13 42 43.7**	**+0.1**
	baz=238						
P29M	**Windy Craggy**	**7.25**	**56**		**Pn**	**13 42 43.4**	**-0.9**
P29M	**Windy Craggy**	**7.25**	**56**	P	**Pn**	**13 42 43.4**	**-0.9**
	baz=244						
RND	**Reindeer**	**7.38**	**2**	Pn	**Pn**	**13 42 45.6**	**-0.5**
TRF	**Thorofare Moun**	**7.42**	**357**	Pn	**Pn**	**13 42 45.5**	**-1.3**
M27K	**Edge Creek, AK**	**7.44**	**29**	Pn	**Pn**	**13 42 47.0**	**0.0**
S31K	**Pelican**	**7.52**	**70**		**Pn**	**13 42 45.3**	**-2.7**
S31K	**Pelican**	**7.52**	**70**	P	**Pn**	**13 42 45.3**	**-2.7**
	baz=260						
L16K	**Owhat River**	**7.64**	**322**	Pn	**Pn**	**13 42 49.3**	**-0.3**
P30M	**Million Dollar**	**7.82**	**53**		**Pn**	**13 42 51.4**	**-0.7**
P30M	**Million Dollar**	**7.82**	**53**	P	**Pn**	**13 42 51.4**	**-0.7**
	baz=243						
HYT	**Haines Junctio**	**7.92**	**48**	Pn	**Pn**	**13 42 53.1**	**-0.5**
SIT	**Sitka**	**7.93**	**77**	P	**Pn**	**13 42 51.7**	**-1.9**
K17K	**Iditarod**	**8.02**	**330**	Pn	**Pn**	**13 42 54.5**	**-0.3**
L27K	**Beaver Creek,**	**8.04**	**26**	Pn	**Pn**	**13 42 55.3**	**+0.1**
BCAR	**Beaver Creek A**	**8.05**	**26**	Pn	**Pn**	**13 42 55.8**	**+0.5**
SKAG	**Skagway**	**8.33**	**60**	P	**Pn**	**13 42 57.7**	**-1.4**
S32K	**Killisnoo**	**8.35**	**74**	Pn	**Pn**	**13 42 57.2**	**-2.2**
O30N	**Mendenhall**	**8.49**	**51**	Pn	**Pn**	**13 43 00.7**	**-0.7**
JIS	**Juneau Island**	**8.54**	**69**	Pn	**Pn**	**13 43 00.1**	**-1.8**
JIS	**Juneau Island**	**8.54**	**69**	P	**Pn**	**13 42 59.7**	**-2.2**
M29M	**Somme Creek**	**8.55**	**37**	Pn	**Pn**	**13 43 02.4**	**+0.2**
ILAR	**Eielson Array**	**8.84**	**7**	Pn	**Pn**	**13 43 06.0**	**0.0**
	comp=E,0.1nm,0.3s,baz=187,slow=14,SNR=8.3						
ILAR				Sn	**Sn**	**13 44 41.8**	**-3.8**
	comp=E,0.1nm,0.3s,baz=196,slow=22,SNR=2.9						
	comp=E,0.3nm,0.4s						
J26L	**Joseph Creek**	**8.97**	**17**	Pn	**Pn**	**13 43 08.4**	**+0.5**
N31M	**Braeburn, Yuko**	**8.98**	**47**	Pn	**Pn**	**13 43 08.1**	**+0.1**
WHY	**Whitehorse**	**8.98**	**53**	Pn	**Pn**	**13 43 07.8**	**-0.3**
L29M	**L29M**	**9.13**	**35**	Pn	**Pn**	**13 43 10.2**	**+0.1**
P32M	**Atlin**	**9.16**	**61**	Pn	**Pn**	**13 43 09.5**	**-1.0**
M30M	**Minto, Yukon**	**9.22**	**40**	Pn	**Pn**	**13 43 10.5**	**-0.8**
H21K	**Melozitna Rive**	**9.76**	**352**	Pn	**Pn**	**13 43 18.1**	**-0.5**
P33M	**Teslin, Yukon**	**9.77**	**58**	Pn	**Pn**	**13 43 17.7**	**-1.2**
R33M	**Jennings River**	**10.48**	**64**	Pn	**Pn**	**13 43 27.6**	**-1.0**
DLBC	**Dease Lake**	**10.84**	**69**	Pn	**Pn**	**13 43 33.7**	**+0.2**
	comp=E,0.2nm,0.3s,baz=243,slow=9.0,SNR=1.5						
	comp=E,1.2nm,0.6s						
INK	**Inuvik**	**14.31**	**25**	Pn	**Pn**	**13 44 22.6**	**+1.8**
	baz=224,slow=11,SNR=2.2						
	comp=E,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**18.79**	**56**	P	**P**	**13 45 18.6**	**+1.0**
	baz=265,slow=11,SNR=4.3						
	comp=E,0.3nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**49.78**	**239**	T	T	14 44 03.8	
	baz=28						
H11S2	**WAKE ISLAND Hy**	**49.79**	**239**	T	T	14 44 06.8	
	baz=28						
H11S3	**WAKE ISLAND Hy**	**49.79**	**239**	T	T	14 44 08.9	
	baz=28						
JMIC	**Jan Mayen**	**50.27**	**16**	LR	LR	14 16 14.4	
	comp=E,82nm,18.8s,baz=54,slow=42						
ZALV	**Zalesovo Beam**	**61.66**	**327**	P	**P**	**13 51 19.1**	**+3.2**
	comp=E,0.2nm,0.3s,baz=38,slow=5.7,SNR=1.8						
	comp=E,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**86.25**	**298**	LR	LR	14 36 49.0	
	comp=E,23nm,18.4s,baz=325,slow=39						

IDC ***06*** *13:57:00.5±1.1,36.60N×141.05E, h0km, mb3.6/8, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=24.4km s-min=19.3km az=147.0*

JMA ***06*** *13:57:07.3±0.1,36.6N±0.3×140.9E±0.7, h51km±1km, MD3.7/40, MV4.1/40, E OFF IBARAKI PREF*

JMA Felt III J1 at E OFF IBARAKI PREF .

NEIC ***06*** *13:57:09.3±2.0,36.75N±0.02×140.9E±0.1, h51km±9km, mb4.2/9, Error ellipse: s-maj=13.7km s-min=2.8km az=89.0*

ISC 06 13:57:07.2±0.9,36.64N±0.04×140.95E±0.07, h45km±7km, n59, σ0.89/56, mb4.0/14, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.31**	**265**	*i* P	**Pn**	**13 57 16.3**	**+0.4**
JHO				S	**Sn**	**13 57 22.3**	**+0.3**
JHO	**Hitachi**	**0.31**	**265**	A	A	13 57 16.3	
	comp=E,10.0nm,2.6s,comp=N,8.0nm,0.2s						
JHYU	**Hitachinakayam**	**0.42**	**224**	*i* P	**Pn**	**13 57 17.4**	**+0.3**
JHYU				S	**Sn**	**13 57 24.3**	**+0.2**
JHYU	**Hitachinakayam**	**0.42**	**224**	A	A	13 57 17.4	
	comp=E,12nm,0.8s,comp=N,11nm,0.2s						
ONAJ	**Iwakimizuishiy**	**0.48**	**345**	⇓*i* P	**Pn**	**13 57 18.0**	**+0.1**
ONAJ				⇓S	**Sn**	**13 57 25.3**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.48**	**345**	A	A	13 57 18.0	
	comp=E,11nm,0.3s,comp=N,10.0nm,0.2s						
JFFD	**Fukushimafurud**	**0.55**	**325**	⇓*i* P	**Pn**	**13 57 18.9**	**+0.2**
JFFD				⇓S	**Sn**	**13 57 26.6**	**-0.4**
JFFD	**Fukushimafurud**	**0.55**	**325**	A	A	13 57 18.9	
	comp=E,5.0nm,0.4s,comp=N,5.0nm,0.5s						
JFK	**Kawauchi**	**0.73**	**355**	⇓P	**Pn**	**13 57 20.9**	**-0.3**
JYT	**Yasato**	**0.73**	**236**	*i* P	**Pn**	**13 57 20.9**	**-0.2**
JYT				S	**Sn**	**13 57 30.5**	**-0.8**
JYT	**Yasato**	**0.73**	**236**	A	A	13 57 20.9	
	comp=E,9.0nm,0.3s,comp=N,14nm,0.3s						
JOTO	**OTAMA OYAMA**	**1.04**	**332**	P	**Pn**	**13 57 25.8**	**+0.4**
JOTO				S	**Sn**	**13 57 39.3**	**+0.5**
JOTO	**OTAMA OYAMA**	**1.04**	**332**	A	A	13 57 25.8	
	comp=E,12nm,0.4s,comp=N,11nm,0.3s						
JAG	**Ashikaga**	**1.22**	**260**	⇓P	**Pn**	**13 57 27.7**	**-0.1**
JAG				⇓S	**Sn**	**13 57 42.5**	**-0.7**
JMM	**Marumori**	**1.23**	**354**	Pn	**Pn**	**13 57 28.4**	**+0.5**
JMM				Sn	**Sn**	**13 57 42.7**	**-0.7**
JMM	**Marumori**	**1.23**	**354**	P	**Pn**	**13 57 28.1**	**+0.2**
JMM				*e*S	**Sn**	**13 57 43.4**	**+0.1**
JFY	**Yanaizu**	**1.25**	**308**	⇓P	**Pn**	**13 57 28.4**	**+0.1**
JKT	**Katashina**	**1.37**	**276**	P	**Pn**	**13 57 30.2**	**+0.3**
JKT				S	**Sn**	**13 57 46.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.21**	**268**	Pn	**Pn**	**13 57 41.3**	**0.0**
	comp=N,4.5nm,0.3s,baz=89,slow=15,SNR=218						
MJAR				Sn	**Sn**	**13 58 08.0**	**+0.6**
	comp=N,3.2nm,0.3s,baz=158,slow=20,SNR=3.7						
	comp=N,38nm,0.3s						
MAJO	**Matsushiro**	**2.21**	**268**	Pn	**Pn**	**13 57 42.1**	**+0.8**
MJB9	**Matsu-Tunnel**	**2.21**	**268**	Pn	**Pn**	**13 57 43.2**	**+1.8**
JHJ	**Hachijo jima 2**	**3.64**	**196**	Pn	**Pn**	**13 58 01.6**	**+0.6**
	comp=N,6.1nm,0.3s,baz=72,slow=20,SNR=1.2						
JHJ				Sn	**Sn**	**13 58 42.5**	**-0.2**
	comp=N,15nm,0.3s,baz=268,slow=23,SNR=1.3						
JTM	**Tenmabayashi**	**4.14**	**1**	Pn	**Pn**	**13 58 09.5**	**+1.7**
ERM	**Erimo**	**5.63**	**17**	Pn	**Pn**	**13 58 28.2**	**-0.1**
ASAJ	**Asahikawa**	**7.57**	**9**	Pn	**Pn**	**13 58 53.9**	**-1.1**
	comp=N,0.7nm,0.3s,baz=199,slow=14,SNR=8.9						
ASAJ				Sn	**Sn**	**14 00 18.4**	**-1.0**
	comp=N,0.2nm,0.3s,baz=270,slow=22,SNR=2.6						
	comp=N,1.8nm,0.3s						
JKA	**Kamikawa-asahi**	**7.57**	**9**	Pn	**Pn**	**13 58 54.1**	**-0.8**
PETK	**Petropavlovsk-**	**20.21**	**30**	P	**P**	**14 01 37.7**	**-0.5**
	comp=N,1.8nm,0.8s,baz=238,slow=10.0,SNR=1.8						
	comp=N,1.8nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.25**	**289**	*e*P	**P**	**14 02 10.7**	**+0.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
SONM	**Songino Array**	**27.70**	**305**	P	**P**	**14 02 51

BOSA		Sn	Sn	14 19 14.9	+0.6
	0.2nm,0.3s,baz=98,slow=13,SNR=2.0				
BOSA		Lg	Lg	14 19 26.6	
	0.3nm,0.3s,baz=145,slow=19,SNR=4.0				
	1.6nm,0.9s				
I47ZA	**BOSHOF INFRASO 3.37 212**	I	I	14 40 00.0	
	0.1nm,0.9s,baz=32,slow=312,SNR=3.1				
I35NA	**TSUMEB INFRASO11.08 304**	I	I	15 25 20.0	
	baz=129,slow=306,SNR=3.7				

*MDD **06** 14:26:33.9±0.1,39°.46N×2°.56W,h11km,mb_Lg3.3/51, Error ellipse: s-maj=1.0km s-min=0.9km az=100.0*
*INMG **06** 14:26:34.7±1.3,39°.46N×2°.56W,h18km±2km,ML2.9, Error ellipse: s-maj=1.3km s-min=1.1km az=101.0*
*SFS **06** 14:26:34.5,39°.49N×2°.53W,h22km,ML3.3/20,ML3.5/14, MLv3.2/20*

ISC 06 14:26:32.3±1.0,39°46N±0°.01×2°60W±0°.01,h13km±9km, n83,σ1s44/210,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCM	**Universidad Co**	**0.98**	**330**	Pg	**Pn**	**14 26 52.0**	**+0.2**
UCM				Sg	**Sb**	**14 27 04.4**	**+0.4**
ESDC	**Sonseca Array**	**1.07**	**282**	Pg	**Pn**	**14 26 54.0**	**+0.9**
ESDC				Sg	**Sn**	**14 27 08.5**	**+0.5**
ETOB	**Tobarra**	**1.16**	**135**	Sg	**Sg**	**14 27 08.6**	**-1.1**
ETOB				Pg	**Pg**	**14 26 54.0**	**-0.6**
ETOB	**Tobarra**	**1.16**	**135**	Pg	**Pg**	**14 26 54.2**	**-0.4**
ETOB				Sg	**Sg**	**14 27 08.8**	**-0.9**
ETOB				*i* Vmb_Lg		14 27 10.4	
EVIV	**Cofrentes, Val**	**1.17**	**99**	Pg	**Pg**	**14 26 54.5**	**-0.2**
EVIV				Sg	**Sg**	**14 27 09.9**	**0.0**
EVIV				*i* Vmb_Lg		14 27 10.8	
ECHE	**Chera**	**1.27**	**84**	Pn	**Pn**	**14 26 55.5**	**-0.3**
ECHE				Sn	**Sb**	**14 27 10.4**	**-2.0**
ECHE	**Chera**	**1.27**	**84**	Pg	**Pb**	**14 26 56.8**	**+0.7**
ECHE				Sg	**Sb**	**14 27 12.8**	**+0.4**
ECHE				*i* Vmb_Lg		14 27 14.8	
PAB	**San Pablo**	**1.35**	**274**	Pg	**Pg**	**14 26 59.3**	**+0.9**
PAB				Sg	**Sn**	**14 27 17.6**	**+2.6**
PAB				*i* Vmb_Lg		14 27 18.2	
ETOR	**Torete**	**1.42**	**17**	Pn	**Pn**	**14 26 58.5**	**+0.6**
ETOR				Pg	**Pg**	**14 26 59.9**	**+0.3**
ETOR				Sn	**Sn**	**14 27 16.6**	**+0.1**
ETOR				Sg	**Sb**	**14 27 18.3**	**+1.6**
E0901	**Celadas (Terue**	**1.52**	**48**	Pn	**Pn**	**14 27 00.2**	**+0.9**
E0901				Pg	**Pb**	**14 27 01.5**	**+1.1**
E0901				Sn	**Sn**	**14 27 18.9**	**-0.2**
E0901				Sg	**Sb**	**14 27 21.1**	**+1.4**
E0901				*i* Vmb_Lg		14 27 25.3	
E1002	**Yechar (Murcia**	**1.66**	**146**	Pn	**Pn**	**14 27 02.0**	**+0.8**
E1002				Pg	**Pg**	**14 27 03.6**	**-0.5**
E1002				Sn	**Sn**	**14 27 21.0**	**-1.3**
E1002				Sg	**Sg**	**14 27 25.1**	**-0.6**
GUD	**Guadarrama**	**1.68**	**315**	Pn	**Pn**	**14 27 02.5**	**+1.0**
GUD				Pg	**Pg**	**14 27 04.7**	**+0.2**
GUD				Sn	**Sn**	**14 27 21.9**	**-1.0**
GUD				Sg	**Sg**	**14 27 27.2**	**+0.9**
GUD				*i* Vmb_Lg		14 27 27.6	
EQES	**Quesada**	**1.70**	**193**	Pn	**Pn**	**14 27 02.3**	**+0.5**
EQES				Pg	**Pg**	**14 27 04.7**	**-0.2**
EQES				Sn	**Sn**	**14 27 23.1**	**-0.3**
EQES				Sg	**Sg**	**14 27 27.4**	**+0.4**
EQES				*i* Vmb_Lg		14 27 28.8	
E001A	**Albudeite (Mur**	**1.73**	**146**	Pn	**Pn**	**14 27 02.7**	**+0.6**
E001A				Sn	**Sn**	**14 27 21.8**	**-2.1**
E001A				Sg	**Sg**	**14 27 27.1**	**-0.7**
EZAR	**Zarzadilla de**	**1.74**	**156**	Pn	**Pn**	**14 27 03.0**	**+0.7**
EZAR				Pg	**Pg**	**14 27 05.4**	**-0.3**
EZAR				Sn	**Sn**	**14 27 23.2**	**-1.2**
EZAR				Sg	**Sg**	**14 27 27.7**	**-0.5**
EZAR				*i* Vmb_Lg		14 27 29.7	
AFON	**Font Roja**	**1.79**	**116**	Pn	**Pn**	**14 27 04.0**	**+0.9**
AFON				Pg	**Pg**	**14 27 06.4**	**-0.2**
AFON				Sn	**Sn**	**14 27 24.4**	**-1.3**
AFON				Sg	**Sg**	**14 27 29.4**	**-0.5**
AFON				*i* Vmb_Lg		14 27 32.4	
EMOS	**Mosqueruela**	**1.87**	**61**	Pn	**Pn**	**14 27 05.1**	**+1.0**
EMOS				Pg	**Pg**	**14 27 08.0**	**-0.1**
EMOS				Sn	**Sn**	**14 27 27.3**	**-0.4**
EMOS				Sg	**Sb**	**14 27 31.3**	**+1.6**
EMOS				*i* Vmb_Lg		14 27 33.1	
EMUR	**La Murta**	**1.94**	**146**	Pg	**Pb**	**14 27 08.0**	**+0.5**
EMUR				Sg	**Sg**	**14 27 33.1**	**-1.5**
EMUR	**La Murta**	**1.94**	**146**	Pn	**Pn**	**14 27 05.6**	**+0.6**
EMUR				Pg	**Pg**	**14 27 09.1**	**-0.4**
EMUR				Sn	**Sn**	**14 27 28.3**	**-0.9**
EMUR				Sg	**Sg**	**14 27 33.2**	**-1.4**
EMUR				*i* Vmb_Lg		14 27 35.9	
ELOR	**Lorca, Murcia**	**1.94**	**160**	Pn	**Pn**	**14 27 05.6**	**+0.6**
ELOR				Sn	**Sn**	**14 27 27.9**	**-1.4**
ELOR				Sg	**Sg**	**14 27 35.8**	**+1.1**
ELOR				*i* Vmb_Lg		14 27 37.1	
TLOR	**Lorca, Murcia**	**1.94**	**158**	Sg	**Sg**	**14 27 34.0**	**-0.7**
TLOR	**Lorca, Murcia**	**1.94**	**158**	Pn	**Pn**	**14 27 05.5**	**+0.5**
TLOR				Sn	**Sn**	**14 27 28.3**	**-1.0**
TLOR				Sg	**Sg**	**14 27 34.5**	**-0.2**
EADA	**Adamuz**	**2.02**	**231**	Pn	**Pn**	**14 27 07.0**	**+0.9**
EADA				Pg	**Pg**	**14 27 10.3**	**-0.7**
EADA				Sn	**Sn**	**14 27 30.6**	**-0.5**
EADA	**Adamuz**	**2.02**	**231**	Pn	**Pn**	**14 27 07.1**	**+1.0**
EADA				Pg	**Pg**	**14 27 10.5**	**-0.5**
EADA				Sn	**Sn**	**14 27 31.6**	**+0.4**
EADA				Sg	**Sg**	**14 27 36.6**	**-0.4**
EADA				*i* Vmb_Lg		14 27 39.1	
EBEN2	**Beniarda presa**	**2.03**	**112**	Pn	**Pn**	**14 27 06.9**	**+0.6**
EBEN2				Sn	**Sn**	**14 27 29.5**	**-2.1**
EBEN2				Sg	**Sg**	**14 27 37.6**	**-0.1**
EBEN2				*i* Vmb_Lg		14 27 40.6	
CART	**Cartagena**	**2.25**	**146**	Pg	**Pg**	**14 27 14.3**	**-1.2**
CART				Sg	**Sb**	**14 27 41.9**	**+1.2**
EQTA	**Presa de Quent**	**2.35**	**197**	Pn	**Pn**	**14 27 11.8**	**+1.1**
EQTA				Pg	**Pg**	**14 27 16.5**	**-0.8**
EQTA				Sg	**Sg**	**14 27 47.1**	**-0.6**
EQUE	**Quentar**	**2.35**	**197**	Pn	**Pn**	**14 27 11.8**	**+1.0**
EQUE				Pg	**Pg**	**14 27 16.2**	**-1.2**
EQUE				Sn	**Sn**	**14 27 39.7**	**+0.2**
EQUE				Sg	**Sg**	**14 27 48.4**	**+0.6**
EQUE				*i* Vmb_Lg		14 27 50.9	
ENIJ	**Nijar**	**2.51**	**173**	Pg	**Pg**	**14 27 18.7**	**-1.6**
ENIJ				Sg	**Sb**	**14 27 49.8**	**+1.8**
ENIJ	**Nijar**	**2.51**	**173**	Pn	**Pn**	**14 27 13.8**	**+1.0**
ENIJ				Sn	**Sn**	**14 27 42.2**	**-1.1**
ENIJ				Sg	**Sg**	**14 27 53.2**	**+0.3**
ENIJ				*i* Vmb_Lg		14 27 55.9	
EBER	**Berja**	**2.57**	**185**	Pn	**Pn**	**14 27 15.1**	**+1.3**
EBER				Sn	**Sn**	**14 27 44.9**	**-0.2**
EBER	**Berja**	**2.57**	**185**	Pn	**Pn**	**14 27 14.4**	**+0.5**
EBER				Pg	**Pg**	**14 27 19.6**	**-2.0**
EBER				Sn	**Sn**	**14 27 44.3**	**-0.8**
EBER				Sg	**Sg**	**14 27 55.2**	**+0.2**
EBER				*i* Vmb_Lg		14 27 59.7	
ECAB	**El Cabril**	**2.60**	**239**	Pn	**Pn**	**14 27 15.5**	**+1.4**
ECAB				Sg	**Sg**	**14 27 53.8**	**-2.1**
ECAB	**El Cabril**	**2.60**	**239**	Pn	**Pn**	**14 27 15.9**	**+1.8**
ECAB				Sn	**Sn**	**14 27 45.3**	**-0.4**
ECAB				Sg	**Sg**	**14 27 56.0**	**+0.1**
ECAB				*i* Vmb_Lg		14 28 00.7	
EGOR	**Sierra Gorda,**	**2.63**	**207**	Pn	**Pn**	**14 27 16.7**	**+2.0**
EGOR				Sg	**Sg**	**14 27 55.0**	**-1.9**
EGOR	**Sierra Gorda,**	**2.63**	**207**	Pn	**Pn**	**14 27 16.7**	**+2.0**
EGOR				Pg	**Pg**	**14 27 21.5**	**-1.3**
EGOR				Sn	**Sn**	**14 27 45.8**	**-0.7**
EGOR				Sg	**Sg**	**14 27 58.1**	**+1.2**
EGOR				*i* Vmb_Lg		14 28 05.5	
ELGU	**Los Guajares,**	**2.71**	**198**	Pn	**Pn**	**14 27 17.6**	**+1.9**
ELGU	**Los Guajares,**	**2.71**	**198**	Pn	**Pn**	**14 27 16.0**	**+1.3**
ELGU				Sn	**Sn**	**14 27 46.9**	**-1.6**
ELGU				Sg	**Sg**	**14 27 59.7**	**+0.2**
ELGU				*i* Vmb_Lg		14 28 07.5	
EPLA	**Plasencia**	**2.75**	**284**	Pn	**Pn**	**14 27 17.2**	**+1.1**
EPLA				Sn	**Sn**	**14 27 49.0**	**-0.2**
EPLA				Sg	**Sg**	**14 28 00.1**	**-0.4**
EPLA				*i* Vmb_Lg		14 28 03.2	
ESAC	**San Caprasio**	**2.78**	**35**	Pn	**Pn**	**14 27 17.2**	**+0.6**
ESAC				Pg	**Pb**	**14 27 23.6**	**+1.7**
ESAC				Sn	**Sn**	**14 27 48.6**	**-1.4**
ESAC				Sg	**Sb**	**14 27 59.7**	**+3.8**
ESAC				*i* Vmb_Lg		14 28 12.4	
EJUZ	**Juzbado, Salam**	**2.99**	**304**	Pn	**Pn**	**14 27 20.8**	**+1.2**
EJUZ				Sn	**Sn**	**14 27 54.0**	**-1.3**
EJUZ				Sg	**Sg**	**14 28 08.2**	**-0.2**
EPOB	**Poblet**	**3.38**	**55**	Pn	**Pn**	**14 27 25.0**	**+0.1**
EPOB				Sn	**Sn**	**14 28 03.1**	**-1.9**
EPOB				*i* Vmb_Lg		14 28 21.8	
EARA	**Aranguren**	**3.40**	**13**	Pn	**Pn**	**14 27 25.4**	**+0.4**
EARA				Sn	**Sn**	**14 28 03.2**	**-2.0**
EARA				Sg	**Sg**	**14 28 21.4**	**+0.1**
EARA				*i* Vmb_Lg		14 28 31.0	
EBAD	**Badajoz**	**3.50**	**260**	Pn	**Pn**	**14 27 27.0**	**+0.4**
EBAD				Sn	**Sn**	**14 28 06.9**	**-1.0**
EBAD	**Badajoz**	**3.50**	**260**	Pn	**Pn**	**14 27 26.9**	**+0.4**
EBAD				Sn	**Sn**	**14 28 06.8**	**-1.1**
EBAD				Sg	**Sg**	**14 28 24.3**	**-0.6**
EBAD				*i* Vmb_Lg		14 28 28.5	
EORO	**Oroz-Betelu**	**3.56**	**15**	Pn	**Pn**	**14 27 27.3**	**-0.1**
EORO				Sn	**Sn**	**14 28 08.2**	**-1.2**
EORO				Sg	**Sg**	**14 28 24.6**	**-2.0**
EORO				*i* Vmb_Lg		14 28 33.7	
EMIN	**Mina Concepcio**	**3.61**	**243**	Pn	**Pn**	**14 27 29.2**	**+1.2**
EMIN				Sn	**Sn**	**14 28 08.7**	**-1.8**
EMIN				Sg	**Sg**	**14 28 26.6**	**-1.6**
EMIN				*i* Vmb_Lg		14 28 31.7	
ESPR	**Espera**	**3.65**	**226**	Pn	**Pn**	**14 27 30.3**	**+1.9**
ESPR				Sn	**Sn**	**14 28 10.0**	**-1.4**
ESPR				Sg	**Sg**	**14 28 29.0**	**-0.4**
ESPR				*i* Vmb_Lg		14 28 39.0	
PBAR	**Barrancos**	**3.70**	**251**	*e*Pn	**Pn**	**14 27 30.5**	**+1.3**
PBAR				*e*Sn	**Sn**	**14 28 12.6**	**0.0**
PBAR				*e*Sg	**Sg**	**14 28 29.3**	**-1.7**
PBAR				A	A	14 28 33.6	
	34nm,0.4s						
PBAR	**Barrancos**	**3.70**	**251**	Pn	**Pn**	**14 27 29.6**	**+0.4**
PBAR				Sg	**Sg**	**14 28 27.7**	**-3.3**
PMRV	**Marv??o**	**3.71**	**271**	*e*Pn	**Pn**	**14 27 30.6**	**+1.3**
PMRV				*e*Sn	**Sn**	**14 28 13.9**	**+1.0**
PMRV				*e*Sg	**Sg**	**14 28 29.8**	**-1.6**
PMRV				A	A	14 28 37.7	
	40nm,0.5s						
PCBR	**Castelo Branco**	**3.78**	**277**	*e*Pn	**Pn**	**14 27 32.0**	**+1.7**
PCBR				*e*Sn	**Sn**	**14 28 14.4**	**-0.3**
PCBR				*e*Sg	**Sg**	**14 28 32.1**	**-1.7**
PCBR				A	A	14 28 34.3	
	22nm,0.3s						
MVO	**Moncorvo**	**3.79**	**298**	*e*Pn	**Pn**	**14 27 31.7**	**+1.2**
MVO				*e*Sg	**Sg**	**14 28 34.2**	**+0.3**
MVO				A	A	14 28 36.5	
	20nm,0.5s						
ELAN	**Lanestosa**	**3.82**	**351**	Pn	**Pn**	**14 27 31.3**	**+0.5**
ELAN				Sn	**Sn**	**14 28 12.8**	**-2.8**
ELAN				Sg	**Sg**	**14 28 32.0**	**-2.9**
ELAN				*i* Vmb_Lg		14 28 43.4	
ECHI	**Chisagues Biel**	**3.83**	**33**	Pn	**Pn**	**14 27 31.8**	**+0.6**
ECHI				Sn	**Sn**	**14 28 13.5**	**-2.6**
ECHI				Sg	**Sg**	**14 28 33.0**	**-2.4**
ECHI				*i* Vmb_Lg		14 28 42.6	
EALK	**Alkurruntz**	**3.84**	**12**	Pn	**Pn**	**14 27 32.6**	**+1.4**
EALK				Sn	**Sn**	**14 28 14.0**	**-2.3**
EALK				Sg	**Sg**	**14 28 33.4**	**-2.3**
EALK				*i* Vmb_Lg		14 28 44.7	
MTE	**Manteigas**	**3.91**	**285**	*e*Pn	**Pn**	**14 27 33.5**	**+1.3**
MTE				*e*Sn	**Sn**	**14 28 19.0**	**+0.9**
MTE				*e*Sg	**Sg**	**14 28 35.6**	**-2.4**
MTE				A	A	14 28 43.8	
	26nm,0.6s						
PBRG	**Braganca**	**3.92**	**308**	*e*Pn	**Pn**	**14 27 33.5**	**+1.2**
PBRG	**Braganca**	**3.92**	**308**	*e*Pg	**Pg**	**14 27 46.4**	**-1.0**
PBRG				*e*Sg	**Sg**	**14 28 37.4**	**-0.9**
PBRG				A	A	14 28 39.1	
	13nm,0.4s						
PESTR	**Estremoz**	**3.92**	**263**	*e*Pn	**Pn**	**14 27 33.8**	**+1.5**
PESTR				*e*Sg	**Sg**	**14 28 36.1**	**-2.2**
PESTR				A	A	14 28 43.5	
	26nm,0.6s						
PESTR	**Estremoz**	**3.92**	**263**	Pn	**Pn**	**14 27 33.3**	**+1.1**
PESTR				Sn	**Sn**	**14 28 15.5**	**-2.7**
EMIR	**Miracle**	**3.98**	**51**	Pn	**Pn**	**14 27 32.5**	**-0.6**
EMIR				Sn	**Sn**	**14 28 18.0**	**-1.7**
EMIR				*i* Vmb_Lg		14 28 59.3	
ECAL	**Calabor**	**4.00**	**310**	Pn	**Pn**	**14 27 34.3**	**+0.9**
ECAL	**Calabor**	**4.00**	**310**	Pn	**Pn**	**14 27 35.0**	**+1.5**
ECAL				Sn	**Sn**	**14 28 19.7**	**-0.6**
ECAL				Sg	**Sg**	**14 28 41.2**	**+0.4**
ECAL				*i* Vmb_Lg		14 28 43.5	
EVO	**Evora**	**4.32**	**259**	*e*Sn	**Sn**	**14 28 28.2**	**+0.3**
EVO				*e*Sg	**Sg**	**14 28 47.9**	**-3.0**
EVO				A	A	14 28 58.0	
	23nm,0.6s						
EVO	**Evora**	**4.32**	**259**	Sg	**Sg**	**14 28 45.9**	**-5.0**
EVO				Sn	**Sn**	**14 28 26.2**	**-1.7**
PBEJ	**Beja**	**4.36**	**252**	*e*Sg	**Sg**	**14 28 50.4**	**-1.9**
PBEJ				A	A	14 28 57.4	
	15nm,0.6s						
PMTG	**Montargil**	**4.38**	**267**	*e*Pn	**Pn**	**14 27 39.8**	**+1.2**
PMTG				*e*Sn	**Sn**	**14 28 29.3**	**-0.2**
PMTG				*e*Sg	**Sg**	**14 28 48.6**	**-4.4**
PMTG				A	A	14 28 55.8	
	20nm,0.4s						
POLO	**Lamas de Olo**	**4.40**	**297**	*e*Pn	**Pn**	**14 27 40.1**	**+1.2**
POLO				*e*Sg	**Sg**	**14 28 53.1**	**-0.4**
POLO				A	A	14 29 03.0	
	6.0nm,0.7s						
PVAQ	**Vaqueiros**	**4.51**	**244**	*e*Sg	**Sg**	**14 28 53.7**	**-3.5**
PCAS	**Casmilo, Conde**	**4.58**	**279**	*e*Pn	**Pn**	**14 27 42.8**	**+1.5**
PCAS				*e*Sg	**Sg**	**14 28 56.3**	**-3.1**
PCAS				A	A	14 29 06.9	
	15nm,0.6s						
PCVE	**Castro Verde**	**4.64**	**248**	*e*Pn	**Pn**	**14 27 43.8**	**+1.7**
PCVE				*e*Sg	**Sg**	**14 28 59.4**	**-1.8**
PCVE				A	A	14 29 11.2	
	11nm,0.5s						
PCVE	**Castro Verde**	**4.64**	**248**	Pn	**Pn**	**14 27 42.0**	**-0.1**
MESJ	**Messejana**	**4.69**	**252**	*e*Sn	**Sn**	**14 28 35.8**	**-1.3**
MESJ				*e*Sg	**Sg**	**14 29 00.5**	**-2.3**
MESJ				A	A	14 29 08.5	
	16nm,0.4s						
PCAB	**Cabril**	**4.70**	**300**	*e*Pn	**Pn**	**14 27 44.0**	**+1.0**
PCAB				*e*Sg	**Sg**	**14 29 01.8**	**-1.4**
PCAB				A	A	14 29 20.5	
	9.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.74**	**244**	*e*Sg	**Sg**	**14 29 02.5**	**-2.0**
PBDV				A	A	14 29 13.3	
	12nm,0.5s						
ELOB	**Lobios**	**4.80**	**302**	Pn	**Pn**	**14 27 45.1**	**+0.8**
ELOB				Sn	**Sn**	**14 28 38.8**	**-1.0**
ELOB				*i* Vmb_Lg		14 30 08.7	
PNCL	**Nicolau / Gran**	**4.83**	**256**	*e*Pn	**Pn**	**14 27 45.8**	**+1.2**
PNCL				*e*Sn	**Sn**	**14 28 40.0**	**-0.4**
PNCL				*e*Sg	**Sg**	**14 29 05.2**	**-2.0**
PNCL				A	A	14 29 13.5	
	12nm,0.4s						
PNCL	**Nicolau / Gran**	**4.83**	**256**	Pn	**Pn**	**14 27 45.4**	**+0.8**
PNCL				Sn	**Sn**	**14 28 37.8**	**-2.6**
PGAV	**Gavieira, Arco**	**4.98**	**302**	*e*Pn	**Pn**	**14 27 48.2**	**+1.3**
PGAV	**Gavieira, Arco**	**4.98**	**302**	*e*Pg	**Pg**	**14 28 06.9**	**-0.8**
PGAV				*e*Sg	**Sg**	**14 29 09.1**	**-3.0**
PGAV				A	A	14 29 23.9	
	10nm,0.5s						
PTEO	**Sao Teotonio**	**5.17**	**250**	*e*Sg	**Sg**	**14 29 15.1**	**-3.2**
PTEO				A	A	14 29 30.8	
	18nm,0.6s						
MAHO	**Mahon**	**5.32**	**83**	P	**Pg**	**14 28 16.8**	**+2.7**
MAHO				S	**Sn**	**14 28 53.2**	**+0.7**

*IDC **06** 14:27:20.7±0.9,36°.58N×5°.22E,h0km,mb3.7/12, mbtmp3.7/15,ML3.4/2,MS3.5/17,Error ellipse: s-maj=22.3km s-min=17.5km az=177.0*
*CRAAG **06** 14:27:20.0,36°.59N×5°.08E,Ml4.1,Algerie 11km SW Tichy*
*LDG **06** 14:27:21.9±0.2,36°.59N×5°.21E,h10km,Ml3.8/13,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*MDD **06** 14:27:25.3±0.4,36°.65N×5°.36E,h0km,Mb4.8/35, M_mb4.3/26,Error ellipse: s-maj=3.2km s-min=2.1km az=156.0*

ISC 06 14:27:23.3±0.6,36°64N±0°.05×5°21E±0°03,h13km,n111, σ2s54/144,mb3.8/12,MS3.5/13,26C,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	**Setif**	**0.46**	**161**	P	Pg	14 27 29.0	-3.4
CTCHA	**Tamokra**	**0.50**	**245**	P	**Pg**	**14 27 31.2**	**-1.9**
DFRA	**Djebel Bou Aff**	**0.54**	**100**	P	**Pg**	**14 27 35.0**	**+1.1**
CKHR	**Kef el Ahmar**	**0.67**	**159**	P	**Pg**	**14 27 35.7**	**-0.6**
CBHR	**Beni Haroun da**	**0.85**	**95**	P	**Pg**	**14 27 40.5**	**+0.7**
CBOS	**Bilal Ibnou Ra**	**0.90**	**80**	P	**Pg**	**14 27 41.3**	**+0.7**
ATKJ	**Tikjda**	**0.90**	**258**	P	**Pg**	**14 27 40.9**	**+0.2**
CJSR	**Ain Djasser**	**0.98**	**142**	P	**Pb**	**14 27 41.6**	**-0.5**
CASM	**Ain Smara**	**1.10**	**110**	P	**Pg**	**14 27 45.4**	**+1.0**
CTEI	**Djebel Teioual**	**1.12**	**120**	P	**Pb**	**14 27 45.8**	**+1.2**
CAEH	**`Ain El Ouahch**	**1.32**	**83**	P	**Pg**	**14 27 49.5**	**+0.8**
CKTS	**El Kantara**	**1.46**	**165**	P	**Pn**	**14 27 51.0**	**+1.6**
CBST	**Bordj Sabath**	**1.54**	**98**	P	**Pn**	**14 27 51.9**	**+1.4**
CMAH	**Djebel Manchou**	**1.77**	**90**	P	**Pn**	**14 27 54.9**	**+1.2**
TAMR	**Tamra**	**3.15**	**81**	P	**Pn**	**14 28 14.0**	**+1.4**
KEST	**Kesra**	**3.46**	**104**	Pn	**Pn**	**14 28 17.8**	**+0.8**
	24nm,0.3s,baz=235,slow=3.7,SNR=81						
KEST				Sn	**Sn**	**14 28 58.1**	**+0.2**
	3.3nm,0.3s,baz=219,slow=7.8,SNR=1.6						
KEST				LR	LR	14 29 29.8	
	comp=Z,139nm,21.3s,baz=170,slow=38						
	66nm,0.4s						
ETOS	**Mallorca**	**3.65**	**330**	P	**Pn**	**14 28 22.5**	**+3.1**
ETOS				S	**Sn**	**14 29 01.1**	**-1.3**
ETOS	**Mallorca**	**3.65**	**330**	Pn	**Pn**	**14 28 22.3**	**+2.9**
ETOS				↑*i*Vmb_V		14 28 23.6	
	2µm,SNR=2.4						
ETOS				Sn	**Sn**	**14 29 01.3**	**-1.1**
EIBI	**Ibiza**	**3.88**	**309**	P	**Pn**	**14 28 25.8**	**+3.2**
EIBI				S	**Sn**	**14 29 08.5**	**+0.5**
EIBI	**Ibiza**	**3.88**	**309**	Pn	**Pn**	**14 28 25.9**	**+3.2**
EIBI				↑*i*Vmb_V		14 28 29.2	
	1µm,SNR=1.9						
EIBI				Sn	**Sn**	**14 29 08.4**	**+0.3**
VSL	**Villasalto**	**4.35**	**48**	Pn	**Pn**	**14 28 31.0**	**+1.9**
VSL				Sn	**Sn**	**14 29 18.6**	**-1.1**
EBEN2	**Beniarda presa**	**4.75**	**297**	Pn	**Pn**	**14 28 36.6**	**+2.1**
EBEN2				↑*i*Vmb_V		14 28 38.9	
	2µm,SNR=2.0						
EBEN2				Sn	**Sn**	**14 29 31.5**	**+2.1**
AFON	**Font Roja**	**4.99**	**296**	Pn	**Pn**	**14 28 41.5**	**+3.5**
AFON				↑*i*Vmb_V		14 28 44.7	
	817nm,SNR=2.0						
AFON				Sn	**Sn**	**14 29 36.7**	**+1.0**
CART	**Cartagena**	**5.06**	**283**	P	**Pn**	**14 28 40.1**	**+1.4**
CART				S	**Sn**	**14 29 37.2**	**+0.2**
EMUR	**La Murta**	**5.29**	**285**	P	**Pn**	**14 28 44.0**	**+2.0**
EMUR				S	**Sn**	**14 29 43.2**	**+0.4**
EMUR	**La Murta**	**5.29**	**285**	Pn	**Pn**	**14 28 44.3**	**+2.3**
EMUR				↑*i*Vmb_V		14 28 45.2	
	206nm,SNR=1.2						
EMUR				Sn	**Sn**	**14 29 46.2**	**+3.4**
E001A	**Albudeite (Mur**	**5.44**	**287**	Pn	**Pn**	**14 28 48.4**	**+4.3**
E001A				Sn	**Sn**	**14 29 49.4**	**+2.9**
E1002	**Yechar (Murcia**	**5.49**	**287**	Pn	**Pn**	**14 28 47.0**	**+2.2**
E1002				Sn	**Sn**	**14 29 49.2**	**+1.5**
EZAR	**Zarzadilla de**	**5.65**	**285**	Pn	**Pn**	**14 28 49.4**	**+2.5**
EZAR				↑*i*Vmb_V		14 28 49.7	
	429nm,SNR=1.8						
EZAR				Sn	**Sn**	**14 29 53.4**	**+1.7**
EVIV	**Cofrentes, Val**	**5.65**	**300**	Pn	**Pn**	**14 28 50.4**	**+3.4**
EVIV				↑*i*Vmb_V		14 28 51.0	
	1µm,SNR=3.4						
EVIV				Sn	**Sn**	**14 29 51.2**	**-0.5**
ECHE	**Chera**	**5.70**	**303**	P	**Pn**	**14 28 50.8**	**+3.3**
ECHE	**Chera**	**5.70**	**303**	Pn	**Pn**	**14 28 51.0**	**+3.4**
ECHE				↑*i*Vmb_V		14 28 52.8	
	636nm,SNR=1.9						
EPOB	**Poblet**	**5.70**	**327**	Pn	**Pn**	**14 28 50.3**	**+2.6**
EPOB				↑*i*Vmb_V		14 28 52.9	
	781nm,SNR=0.8						
EPOB				Sn	**Sn**	**14 29 51.9**	**-1.2**
ETOB	**Tobarra**	**5.73**	**292**	P	**Pn**	**14 28 51.0**	**+3.0**
ETOB	**Tobarra**	**5.73**	**292**	Pn	**Pn**	**14 28 51.4**	**+3.4**
ETOB				↑*i*Vmb_V		14 28 53.4	
	405nm,SNR=1.5						
ETOB				Sn	**Sn**	**14 29 56.5**	**+2.9**
EMOS	**Mosqueruela**	**5.80**	**312**	Pn	**Pn**	**14 28 52.5**	**+3.3**
EMOS				↑*i*Vmb_V		14 28 54.3	
	278nm,SNR=0.7						
EMOS				Sn	**Sn**	**14 29 56.0**	**+0.2**
ENIJ	**Nijar**	**5.96**	**275**	P	**Pn**	**14 28 55.2**	**+4.0**
ENIJ	**Nijar**	**5.96**	**275**	Pn	**Pn**	**14 28 55.2**	**+4.0**
ENIJ

MBDF	**Montbardon**	**8.16**	**8**	*e*P	**Pn**	**14 29 24.3**	**+2.7**
MBDF				*e*Sn	**Sn**	**14 30 49.3**	**-4.5**
	12nm,0.4s						
VIVF	**Saint-Julien-l**	**8.22**	**357**	*e*P	**Pn**	**14 29 23.1**	**+0.9**
VIVF				*e*Sn	**Sn**	**14 30 51.4**	**-3.5**
	9.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.29**	**3**	*e*P	**Pn**	**14 29 27.2**	**+4.0**
ORIF				*e*Sn	**Sn**	**14 30 51.8**	**-4.8**
	7.9nm,0.6s						
EALK	**Alkurruntz**	**8.35**	**324**	Pn	**Pn**	**14 29 28.3**	**+4.2**
EALK				⇑*i*Vmb_V		14 29 29.1	
	709nm,SNR=2.6						
EALK				Sn	**Sn**	**14 30 57.7**	**-0.6**
BNI	**Bardonecchia**	**8.48**	**7**	Pn	**Pn**	**14 29 29.5**	**+3.6**
BNI				Sn	**Sn**	**14 30 59.2**	**-2.2**
CAF	**Calviac**	**8.62**	**345**	*e*P	**Pn**	**14 29 29.0**	**+1.4**
LPG	**La Plagne**	**8.93**	**7**	*e*P	**Pn**	**14 29 34.4**	**+2.3**
LPG				*e*Sn	**Sn**	**14 31 09.3**	**-3.3**
	33nm,1.0s						
MDT	**Midelt**	**8.94**	**248**	Pn	**Pn**	**14 29 30.6**	**-1.6**
	0.1nm,0.3s,baz=83,slow=22,SNR=1.8						
MDT				LR	LR	14 33 17.9	
	comp=Z,174nm,21.6s,baz=17,slow=40						
	1.5nm,0.7s						
LPL	**La Plagne**	**8.94**	**7**	*e*P	**Pn**	**14 29 35.6**	**+3.3**
LPL				*e*Sn	**Sn**	**14 31 09.5**	**-3.5**
	14nm,0.5s						
LFF	**La Frestale**	**8.96**	**339**	*e*P	**Pn**	**14 29 35.4**	**+3.1**
ELAN	**Lanestosa**	**9.35**	**317**	Pn	**Pn**	**14 29 41.3**	**+3.6**
ELAN				⇑*i*Vmb_V		14 29 43.3	
	280nm,SNR=1.0						
ELAN				Sn	**Sn**	**14 31 22.0**	**-0.7**
SENIN	**Lac Senin/Sane**	**9.84**	**8**	Pn	**Pn**	**14 29 47.8**	**+3.2**
SENIN				Sn	**Sn**	**14 31 28.9**	**-6.1**
CABF	**La Chapelle**	**9.98**	**3**	*e*P	**Pn**	**14 29 48.8**	**+2.4**
SMF	**Signal de Mont**	**10.05**	**355**	*e*P	**Pn**	**14 29 50.2**	**+2.9**
AVF	**Avril sur Loir**	**10.24**	**353**	*e*P	**Pn**	**14 29 52.9**	**+3.1**
SSF	**Saint Saulge**	**10.49**	**354**	*e*P	**Pn**	**14 29 56.1**	**+2.8**
MFF	**Saint Martin d**	**10.73**	**340**	*e*P	**Pn**	**14 30 00.4**	**+3.9**
HINF	**Hinteralfeld**	**11.23**	**6**	*e*Pn	Pn	14 30 00.2	-3.3
HINF				*e*Sn	**Sn**	**14 32 04.0**	**-4.9**
	0.9nm,0.3s						
HAU	**Haudompre**	**11.39**	**4**	*e*P	**Pn**	**14 30 06.3**	**+0.7**
HAU				*e*Sn	**Sn**	**14 32 06.8**	**-5.9**
	7.2nm,0.5s						
SFTF	**Sexfontaines**	**11.56**	**359**	*e*P	**Pn**	**14 30 08.5**	**+0.6**
CDF	**Champ du Feu**	**11.86**	**7**	*e*P	**Pn**	**14 30 12.9**	**+0.8**
PAGF	**Fort de Pagny**	**11.91**	**2**	*e*P	**Pn**	**14 30 15.1**	**+2.3**
	baz=180						
GERES	**GERESS Array B**	**13.69**	**24**	Pn	**Pn**	**14 30 40.8**	**+3.7**
	baz=230,slow=8.9,SNR=1.4						
AKASG	**Malin Array Be**	**22.21**	**43**	P	**P**	**14 32 19.5**	**+0.3**
	1.9nm,0.7s,baz=243,slow=10,SNR=4.8						
	1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**23.61**	**189**	P	**P**	**14 32 32.5**	**-1.4**
	2.2nm,0.6s,baz=5.4,slow=11,SNR=12						
TORD				LR	LR	14 41 36.8	
	comp=Z,94nm,18.2s,baz=243,slow=36						
	2.2nm,0.6s						
HFS	**Hagfors**	**24.14**	**10**	P	**P**	**14 32 38.1**	**-0.5**
	2.9nm,1.0s,baz=185,slow=14,SNR=2.0						
HFS				LR	LR	14 42 26.4	
	comp=Z,141nm,18.5s,baz=256,slow=37						
	2.9nm,1.0s						
NOA	**NORSAR Array B**	**24.72**	**7**	LR	LR	14 42 28.0	
	comp=Z,61nm,19.4s,baz=260,slow=37						
BORG	**Borgarnes**	**32.28**	**339**	LR	LR	14 47 08.2	
	comp=Z,104nm,21.0s,baz=148,slow=37						
ARCES	**ARCESS Array B**	**34.76**	**12**	LR	LR	14 47 34.6	
	comp=Z,41nm,18.7s,baz=355,slow=35						
AKTO	**Aktyubinsk**	**39.85**	**53**	LR	LR	14 53 09.3	
	comp=Z,60nm,18.5s,baz=18,slow=39						
SFJD	**Kangerlussuaq**	**43.62**	**332**	LR	LR	14 50 24.9	
	comp=Z,89nm,20.5s,baz=142,slow=32						
MBAR	**Mbarara**	**43.98**	**142**	LR	LR	14 55 17.0	
	comp=Z,63nm,18.9s,baz=326,slow=38						
BVAR	**Borovoye Array**	**47.35**	**48**	P	**P**	**14 35 57.9**	**+1.2**
	0.4nm,0.6s,baz=358,slow=4.3,SNR=2.1						
	0.4nm,0.6s						
FRB	**Frobisher Bay**	**50.78**	**327**	LR	LR	14 54 30.8	
	comp=Z,72nm,18.9s,baz=205,slow=32						
KURBB	**Kurchatov Arra**	**52.76**	**50**	P	**P**	**14 36 37.5**	**-0.2**
	0.9nm,0.2s,baz=284,slow=8.0,SNR=2.6						
	0.9nm,0.2s						
ZALV	**Zalesovo Beam**	**55.59**	**45**	P	**P**	**14 36 56.8**	**-1.5**
	0.7nm,0.6s,baz=258,slow=5.7,SNR=1.5						
	0.7nm,0.6s						
LSZ	**Lusaka**	**56.01**	**153**	LR	LR	15 04 51.2	
	comp=Z,86nm,18.3s,baz=328,slow=40						
MKAR	**Makanchi Array**	**56.27**	**54**	P	**P**	**14 37 01.8**	**-1.6**
	0.8nm,0.5s,baz=288,slow=5.9,SNR=3.2						
	0.8nm,0.5s						
TSUM	**Tsumeb**	**56.76**	**166**	LR	LR	15 01 55.3	
	comp=Z,75nm,18.7s,baz=327,slow=37						
SADO	**Sadowa**	**61.74**	**306**	LR	LR	15 00 14.9	
	comp=Z,62nm,20.8s,baz=142,slow=32						
BOSA	**Boshof**	**67.59**	**161**	LR	LR	15 09 21.2	
	comp=Z,90nm,20.6s,baz=19,slow=37						
YKA	**Yellowknife Ar**	**70.09**	**335**	P	**P**	**14 38 34.7**	**0.0**
	0.3nm,0.6s,baz=48,slow=6.0,SNR=4.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**76.57**	**348**	P	**P**	**14 39 12.6**	**-0.3**
	0.2nm,0.9s,baz=7.0,slow=8.2,SNR=1.6						
	0.2nm,0.9s						
PDAR	**Pinedale Array**	**81.15**	**317**	P	**P**	**14 39 39.0**	**+0.2**
	0.2nm,0.6s,baz=56,slow=5.6,SNR=2.6						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**82.11**	**73**	P	**P**	**14 39 44.1**	**+0.2**
	0.5nm,0.5s,baz=302,slow=6.3,SNR=4.8						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**86.43**	**304**	P	**P**	**14 40 05.8**	**-0.1**
	0.4nm,1.1s,baz=78,slow=4.2,SNR=2.8						
	0.4nm,1.1s						
ASAR	**Alice Springs**	**134.28**	**88**	PKP	**PKPdf**	**14 46 38.5**	**-2.7**
	0.8nm,1.1s,baz=321,slow=1.3,SNR=1.3						

*JMA **06** 14:46:02.7±0.1,24.1N±0.2×121.7E±0.3,h0km,MV2.8/11, TAIWAN REGION*
*TAP **06** 14:46:02.6,24.13N×121.72E,h6km,ML3.4,B*
ISC 06 14:46:03.3±0.8,24.12N±0.02×121.72E±0.02,h11km±5km, n108,σ0°70/158,8C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**297**	*i* P	Op	**Pg**	**14 46 05.8**	**-0.2**
	baz=287							
ETL				S		**Sg**	**14 46 07.8**	**-0.1**
	baz=287							
TWD	**Chiawan**	**0.12**	**253**	⇑*i*P		**Pg**	**14 46 05.8**	**-0.4**
	baz=243							
TWD				*i* S		**Sg**	**14 46 08.1**	**-0.2**
	baz=243							
NACB	**Ninganchiao**	**0.13**	**297**	P		**Pg**	**14 46 06.1**	**-0.2**
NACB	**Ninganchiao**	**0.13**	**297**	P		**Pg**	**14 46 06.2**	**-0.2**
NACB	**Ninganchiao**	**0.13**	**297**	⇑*i*P		**Pg**	**14 46 06.1**	**-0.2**
	baz=291							
NACB				*i* S		**Sg**	**14 46 08.5**	**-0.1**
	baz=291							
HWA	**Hwalien**	**0.17**	**217**	P		**Pg**	**14 46 07.2**	**+0.1**
	baz=210							
EHP	**Heping Village**	**0.20**	**6**	P		**Pg**	**14 46 07.3**	**-0.2**
	baz=10.0							
EHP				S		**Sg**	**14 46 11.0**	**+0.6**
	baz=10.0							
EAHA	**Aohua**	**0.21**	**5**	*i* P		**Pg**	**14 46 07.6**	**-0.3**
	baz=6.0							
EAHA				S		**Sg**	**14 46 11.2**	**+0.3**
	baz=6.0							
ETLH	**Xiulin Townshi**	**0.23**	**293**	*i* P		**Pg**	**14 46 08.1**	**-0.2**
	baz=289							
ETLH				*i* S		**Sg**	**14 46 12.2**	**+0.6**
	baz=289							
ETM	**Tongmen**	**0.25**	**234**	⇑*i*P		**Pg**	**14 46 08.2**	**-0.3**
	baz=230							
ETM				S		**Sg**	**14 46 12.2**	**+0.2**
	baz=230							
LXIB	**Xiulin Townshi**	**0.29**	**252**	⇑*i*P		**Pg**	**14 46 09.0**	**-0.3**
	baz=248							
LXIB				*i* S		**Sb**	**14 46 14.0**	**-1.7**
	baz=248							
ENA	**Nanau**	**0.31**	**4**	⇓*i*P		**Pg**	**14 46 09.5**	**-0.2**
	baz=6.0							
ENA				*i* S		**Sg**	**14 46 14.2**	**+0.4**
	baz=6.0							
EWUT	**Wuta**	**0.33**	**9**	⇓*i*P		**Pg**	**14 46 09.9**	**-0.1**
	baz=10.0							
EWUT				S		**Sg**	**14 46 14.9**	**+0.5**
	baz=10.0							
SHUL	**Shoufeng**	**0.36**	**204**	*i* P		**Pb**	**14 46 11.2**	**-0.5**
	baz=202							
ESL	**Shilin**	**0.40**	**221**	*i* P		**Pg**	**14 46 10.8**	**-0.4**
	baz=218							
ESL				S		**Sb**	**14 46 18.6**	**+0.1**
	baz=218							
WHF	**Hehuan Shan**	**0.41**	**274**	*i* P		**Pg**	**14 46 11.6**	**-0.1**
	baz=271							
WHF				*i* S		**Sg**	**14 46 17.8**	**+0.6**
	baz=271							
TEGC	**Jichi Village**	**0.44**	**202**	P		**Pb**	**14 46 12.6**	**-0.4**
	baz=199							
TEGC				S		**Sb**	**14 46 21.5**	**+1.9**
	baz=199							
NNSB	**Datong**	**0.44**	**316**	⇑*i*P		**Pb**	**14 46 12.2**	**-0.9**
	baz=314							
NNSB				*i* S		**Sg**	**14 46 18.6**	**+0.8**
	baz=314							
NNS	**Nan Shan**	**0.45**	**316**	*i* P		**Pb**	**14 46 12.5**	**-0.9**
	baz=315							
NNS				*i* S		**Sb**	**14 46 19.3**	**-0.9**
	baz=315							
FUSS	**Fushou**	**0.45**	**287**	P		**Pb**	**14 46 12.6**	**-1.0**
	baz=285							
LATG	**Datong**	**0.45**	**337**	⇓*i*P		**Pg**	**14 46 12.3**	**0.0**
	baz=336							
LATG				S		**Sg**	**14 46 18.5**	**+0.1**
	baz=336							
ESAO	**Su ao**	**0.47**	**14**	*e*P		**Pg**	**14 46 11.3**	**-1.3**
	baz=14							
ESAO				S		**Sg**	**14 46 19.1**	**+0.2**
	baz=14							
WARBT	**Fenglin Townsh**	**0.50**	**218**	*i* P		**Pg**	**14 46 12.7**	**-0.3**
	baz=216							
WARBT				*i* S		**Sb**	**14 46 22.0**	**+0.5**
	baz=216							
CHGB	**Renai**	**0.50**	**264**	⇑*i*P		**Pb**	**14 46 13.3**	**-1.0**
	baz=261							
CHGB				S		**Sb**	**14 46 20.5**	**-1.2**
	baz=261							
TWC	**Suao**	**0.51**	**14**	P		**Pg**	**14 46 13.2**	**0.0**
	baz=15							
TWC				S		**Sg**	**14 46 20.3**	**+0.4**
	baz=15							
TWT	**Tachien**	**0.52**	**286**	*i* P		**Pb**	**14 46 14.1**	**-0.4**
	baz=283							
TWT				S		**Sb**	**14 46 21.3**	**-0.8**
	baz=283							
NDS	**Dongshan**	**0.52**	**360**	*e*P		**Pb**	**14 46 13.8**	**-0.7**
NDS				*e*S		**Sb**	**14 46 21.5**	**-0.5**
EGFH	**Guangfu**	**0.52**	**211**	*e*P		**Pb**	**14 46 13.5**	**-1.0**
	baz=209							
EGFH				*e*S		**Sb**	**14 46 22.4**	**+0.3**
	baz=209							
NDT	**Datong Townshi**	**0.52**	**339**	*i* P		**Pb**	**14 46 13.9**	**-0.7**
	baz=338							
NDT				S		**Sb**	**14 46 21.6**	**-0.6**
	baz=338							
OWD	**Renai**	**0.52**	**252**	P		**Pb**	**14 46 13.5**	**-1.1**
	baz=250							
TDCB	**Techi**	**0.53**	**285**	⇑*i*P		**Pb**	**14 46 14.0**	**-0.8**
	baz=283							
TDCB				*i* S		**Sb**	**14 46 21.5**	**-1.1**
	baz=283							
ENTT	**Nioudou**	**0.54**	**345**	*i* P		**Pg**	**14 46 14.0**	**+0.1**
	baz=345							
ENTT				S		**Sb**	**14 46 22.5**	**-0.2**
	baz=345							
WUSB	**Renai**	**0.56**	**258**	⇑*i*P		**Pb**	**14 46 14.4**	**-0.9**
	baz=255							
WUSB				S		**Sb**	**14 46 23.4**	**0.0**
	baz=255							
TWE	**Neicheng**	**0.61**	**356**	*i* P		**Pg**	**14 46 15.3**	**+0.2**
	baz=357							
TWE				*i* S		**Sb**	**14 46 24.7**	**+0.2**
	baz=357							
YHNB	**Yeheng**	**0.64**	**331**	P		**Pb**	**14 46 16.3**	**-0.3**
YHNB	**Yeheng**	**0.64**	**331**	P		**Pb**	**14 46 16.4**	**-0.1**
YHNB	**Yeheng**	**0.64**	**331**	*i* P		**Pb**	**14 46 16.2**	**-0.3**
	baz=330							
YHNB				*i* S		**Sb**	**14 46 25.1**	**-0.4**
	baz=330							
VWDT	**VWDT**	**0.64**	**236**	P		**Pg**	**14 46 15.4**	**-0.3**
	baz=234							
VWDT				S		**Sb**	**14 46 26.1**	**+0.7**
	baz=234							
NSK	**Sanguang**	**0.65**	**330**	*i* P		**Pb**	**14 46 16.5**	**-0.3**
	baz=329							
NSK				*i* S		**Sg**	**14 46 24.9**	**+0.5**
	baz=329							
FUSB	**Fushanzhiwuyua**	**0.65**	**349**	*i* P		**Pb**	**14 46 16.5**	**-0.3**
	baz=349							
FUSB				*i* S		**Sb**	**14 46 25.5**	**-0.5**
	baz=349							
HGSD	**Ruisui**	**0.68**	**204**	*e*P		**Pb**	**14 46 16.9**	**-0.2**
	baz=202							
NWLT	**Wulai**	**0.69**	**343**	P		**Pb**	**14 46 17.1**	**-0.3**
	baz=343							
NWLT				S		**Sb**	**14 46 26.6**	**-0.4**
	baz=343							
EHY	**Hungye**	**0.71**	**211**	P		**Pg**	**14 46 16.4**	**-0.6**
	baz=209							
EHY				S		**Sb**	**14 46 28.7**	**+1.3**
	baz=209							
WHP	**Taichung City**	**0.72**	**283**	P		**Pb**	**14 46 17.9**	**-0.1**
	baz=281							
WHP				S		**Sb**	**14 46 29.4**	**+1.4**
	baz=281							
WCS	**Beigang Elemen**	**0.74**	**266**	P		**Pb**	**14 46 17.6**	**-0.7**
	baz=264							
WCS				*e*S		**Sn**	**14 46 30.4**	**-0.7**
	baz=264							
NFF	**Wufeng Townshi**	**0.75**	**313**	P		**Pb**	**14 46 18.8**	**-0.2**
	baz=312							
NFF				S		**Sb**	**14 46 29.8**	**+1.0**
	baz=312							
SSLB	**Suanglung**	**0.77**	**245**	P		**Pb**	**14 46 18.1**	**-0.7**
SSLB	**Suanglung**	**0.77**	**245**	P		**Pb**	**14 46 18.4**	**-0.4**
SSLB	**Suanglung**	**0.77**	**245**	P		**Pb**	**14 46 17.9**	**-0.9**
	baz=243							
SSLB				S		**Sb**	**14 46 30.5**	**+1.1**
	baz=243							
SMLT	**Sun Moon Lake**	**0.78**	**253**	*i* P		**Pb**	**14 46 18.8**	**-0.3**
	baz=251							
SMLT				S		**Sb**	**14 46 31.1**	**+1.3**
	baz=251							
TYC	**Yuchr**	**0.81**	**255**	P		**Pb**	**14 46 19.3**	**-0.2**
	baz=253							
TYC				S		**Sn**	**14 46 32.3**	**-0.6**
	baz=253							
YULB	**Yu-li**	**0.82**	**208**	P		**Pb**	**14 46 19.0**	**-0.6**
YULB	**Yu-li**	**0.82**	**208**	P		**Pb**	**14 46 18.8**	**-0.8**
YULB	**Yu-li**	**0.82**	**208**	*e*P		**Pg**	**14 46 18.5**	**-0.6**
	baz=207							
LIOB	**Emei**	**0.83**	**310**	P		**Pn**	**14 46 20.6**	**-0.5**
	baz=308							
LIOB				*e*S		**Sb**	**14 46 32.0**	**+0.9**
	baz=308							
NSTT	**Nanjuang**	**0.83**	**308**	*i* P		**Pb**	**14 46 20.1**	**+0.3**
	baz=307							
NSTT				S		**Sb**	**14 46 32.0**	**+0.9**
	baz=307							
EYUL	**Yuli**	**0.85**	**206**	*e*P		**Pb**	**14 46 20.2**	**+0.1**
	baz=204							
TWF1	**Yuli**	**0.85**	**207**	P		**Pb**	**14 46 19.7**	**-0.5**
	baz=205							
TWF1				S		**Sn**	**14 46 34.2**	**+0.4**
	baz=205							
TIPB	**Shuangxi**	**0.86**	**6**	P		**Pg**	**14 46 19.8**	**-0.1**
	baz=6.0							
NHDH	**Xindian Distri**	**0.86**	**348**	*e*P		**Pb**	**14 46 20.3**	**0.0**
	baz=348							
TWA	**Mucha**	**0.87**	**352**	*e*P		**Pb**	**14 46 20.3**	**-0.2**
	baz=352							
TWA				*e*S		**Sb**	**14 46 32.1**	**-0.1**
	baz=352							
TATO	**Taipei**	**0.88**	**346**	P		**Pb**	**14 46 21.2**	**+0.5**
WHYT	**Xinyi Township**	**0.90**	**242**	P		**Pn**	**14 46 21.3**	**-0.6**
	baz=241							
WHYT				*e*S		**Sn**	**14 46 35.2**	**+0.2**
	baz=241							
TWB1	**Santiao Chiao**	**0.92**	**15**	*e*P		**Pb**	**14 46 21.5**	**+0.1**
	baz=16							
NSY	**Sanyi**	**0.92**	**289**	*e*P		**Pn**	**14 46 22.8**	**+0.5**
	baz=288							
SBCB	**Hsinchu**	**0.95**	**315**	*e*P		**Pb**	**14 46 22.2**	**+0.3**
	baz=314							
WJS	**Zhushan**	**0.95**	**252**	*e*P		**Pn**	**14 46 22.6**	**-0.1**
	baz=251							
NWF	**Wu-fen Shan**	**0.95**	**3**	*e*P		**Pg**	**14 46 21.1**	**-0.7**
	baz=3.0							
NWF				S		**Sb**	**14 46 34.7**	**0.0**
	baz=3.0							
WFSB	**Wu-fen Shan**	**0.95**	**3**	*e*P		**Pg**	**14 46 20.1**	**-1.7**
	baz=3.0							
WFSB				*e*S		**Sb**	**14 46 35.2**	**+0.6**
	baz=3.0							
CHKH	**Chenggong**	**0.96**	**198**	*e*P		**Pb**	**14 46 22.1**	**0.0**
	baz=197							
WNT	**Mingjian**	**0.97**	**256**	*e*P		**Pn**	**14 46 22.8**	**-0.2**
	baz=254							
SXI1	**Grass Mountain**	**0.99**	**8**	*e*P		**Pg**	**14 46 22.2**	**-0.2**
	baz=8.0							
FULB	**Fuli**	**0.99**	**203**	*e*P		**Pn**	**14 46 23.0**	**-0.3**
	baz=202							
TWS1	**Kuangyinshan**	**1.02**	**344**	*e*P		**Pn**	**14 46 24.1**	**+0.5**
	baz=344							
ALS	**Alishan**	**1.03**	**234**	*e*P		**Pb**	**14 46 22.9**	**-0.5**
	baz=233							
YM01	**YM01**	**1.04**	**353**	*e*P		**Pn**	**14 46 24.2**	**+0.3**
	baz=352							
CHKT	**Chengkung**	**1.06**	**198**	*e*P		**Pb**	**14 46 23.6**	**-0.2**
	baz=196							
EHD	**Haiduan**	**1.07**	**206**	*e*P		**Pn**	**14 46 24.0**	**-0.3**
	baz=205							
ANP	**Anpu**	**1.08**	**350**	*e*P		**Pb**	**14 46 24.4**	**+0.2**
	baz=350							
CHN5	**Tsauling**	**1.08**	**242**	*e*P		**Pn**	**14 46 25.0**	**+0.4**
	baz=240							
ELDTW	**Lidau**	**1.12**	**215**	*e*P		**Pg**	**14 46 23.6**	**-1.3**
	baz=213							
WGK	**Gukeng**	**1.14**	**248**	*e*P		**Pn**	**14 46 26.7**	**+1.4**
	baz=246							
WDLH	**Douliu**	**1.16**	**249**	*e*P		**Pn**	**14 46 26.3**	**+0.8**
	baz=247							
JYNG	**Yonagunijimaku**	**1.17**	**73**	*e*P		**Pn**	**14 46 26.0**	**+0.4**
WCKO	**Fanlu**	**1.22**	**237**	*e*P		**Pn**	**14 46 27.8**	**+1.4**
	baz=235							
YOJ	**Yonaguni jima**	**1.23**	**73**	P		**Pb**	**14 46 26.7**	**+0.1**
YOJ	**Yonaguni jima**	**1.23**	**73**	*e*P		**Pg**	**14 46 26.3**	**-0.6**
	baz=74							
YOJ	**Yonaguni jima**	**1.23**	**73**	*e*P		**Pg**	**14 46 26.4**	**-0.6**
YOJ				*e*S		**Sn**	**14 46 43.6**	**+0.5**
WRL	**Guolierlin Hig**	**1.25**	**260**	*e*P		**Pn**	**14 46 27.4**	**+0.7**
	baz=259							
STYH	**Taoyuan**	**1.28**	**223**	*e*P		**Pb**	**14 46 27.1**	**-0.4**
	baz=222							
CHN2	**Minshiung**	**1.28**	**243**	*e*P		**Pn**	**14 46 29.1**	**+1.9**
	baz=242							
CHN4	**Tsaushan**	**1.28**	**234**	*e*P		**Pn**	**14 46 28.6**	**+1.4**
	baz=232							
TPUB	**Ta-pu**	**1.29**	**231**	P		**Pn**	**14 46 28.1**	**+0.8**
TPUB	**Ta-pu**	**1.29**	**231**	*e*P		**Pn**	**14 46 27.9**	**+0.6**
	baz=230							
WTK	**Tuku**	**1.29**	**251**	*e*P		**Pn**	**14 46 28.6**	**+1.3**
	baz=250							
LONT	**Longtian**	**1.32**	**204**	*e*P		**Pn**	**14 46 29.3**	**+1.1**
	baz=203							
WTP	**Ta-pu**	**1.33**	**230**	*e*P		**Pb**	**14 46 28.8**	**+0.4**
	baz=228							
TWK	**Hsinying**	**1.41**	**233**	*e*P		**Pg**	**14 46 30.6**	**+0.2**
	baz=232							
TWG	**Pinlang**	**1.42**	**205**	*e*P		**Pn**	**14 46 29.3**	**+0.1**
	baz=204							
TWGBT	**Beinan**	**1.42**	**205**	P		**Pg**	**14 46 30.2**	**-0.4**
TWGBT	**Beinan**	**1.42**	**205**	P		**Pn**	**14 46 26.7**	**-2.4**
TWGBT	**Beinan**	**1.42**	**205**	*e*P		**Pn**	**14 46 27.6**	**-1.5**
	baz=204							
CHN1	**Nanshi**	**1.43**	**230**	*e*P		**Pg**	**14 46 31.1**	**+0.3**
	baz=229							
SNST	**Tainan City**	**1.43**	**232**	*e*P		**Pg**	**14 46 30.1**	**-0.7**
	baz=230							
SGST	**Jiashian**	**1.46**	**226**	*e*P		**Pn**	**14 46 30.0**	**+0.3**
	baz=224							
SLGT	**Liugui**	**1.49**	**222**	*e*P		**Pn**	**14 46 30.1**	**0.0**
	baz=220							
JIJ	**Ishigaki jima**	**2.23**	**83**	*e*P		**Pn**	**14 46 40.8**	**+0.6**
JIJ				*e*S		**Sn**	**14 47 07.2**	**-0.5**
JISG	**Ishigakijimahi**	**2.41**	**78**	*e*P		**Pn**	**14 46 42.5**	**-0.3**
JISG				*e*S		**Sn**	**14 47 12.2**	**-0.1**

*IDC **06** 15:01:25.9±0.8,12.95N×122.54E,h0km,mb3.9/14, mbtmp3.9/14,MS3.4/14,Error ellipse: s-maj=27.3km s-min=15.9km az=57.0*
*NEIC **06** 15:01:32.6±1.7,13.0N±0.1×122.4E±0.2,h35km±9km, mb4.6/7,Error ellipse: s-maj=25.0km s-min=13.6km az=50.0*
ISC 06 15:01:28.8±0.7,13.0N±0.1×122.5E±0.1,h16km,n39, σ1§16/29,mb4.1/20,MS3.2/12,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.89**	**307**	Pn		**Pn**	**15 01 59.5**	**-0.9**
	447nm,0.3s,baz=152,slow=3.4,SNR=232							
TGY				Sn		**Sb**	**15 02 26.9**	**+0.6**
	414nm,0.3s,baz=131,slow=20,SNR=12							
DAV	**Davao City (W)**	**6.61**	**152**	LR		LR	15 06 13.5	
	comp=Z,291nm,21.1s,baz=338,slow=44							
JOW	**Kunigami**	**14.81**	**21**	LR		LR	15 10 37.5	
	comp=Z,101nm,18.8s,baz=324,slow=37							
JNU	**Nakatsue**	**21.46**	**20**	LR		LR	15 15 05.4	
	comp=Z,63nm,18.7s,baz=214,slow=38							
GUMO	**Guam**	**21.78**	**86**	LR		LR	15 12 51.3	
	comp=Z,100nm,21.9s,baz=274,slow=32							
CRAI	**Chiangrai**	**22.38**	**292**	P		**P**	**15 06 28.4**	**+1.8**
CRAI				IAmb		IAmb	15 06 32.1	
	comp=Z,6.7nm,1.0s							
JCJ	**Chichijima**	**23.18**	**50**	LR		LR	15 15 11.0	
	comp=Z,39nm,20.4s,baz=7.0,slow=36							
CMAR	**Chiang Mai Arr**	**23

comp=Z,0.8nm,0.7s,baz=46,slow=4.8,SNR=2.6
comp=Z,0.8nm,0.7s
AAK Ala-Archa 50.81 315 LR LR 15 33 48.9
comp=Z,52nm,20.5s,baz=70,slow=38
KURBB Kurchatov Arra 51.76 326 P **P 15 10 35.6 0.0**
comp=Z,3.4nm,1.0s,baz=120,slow=8.1,SNR=8.8
comp=Z,3.4nm,1.0s
KKAR Karatay Array 53.73 314 P **P 15 10 48.1 -2.2**
BVAR Borovoye Array 57.35 326 P **P 15 11 16.5 +0.3**
comp=Z,0.3nm,0.4s,baz=111,slow=6.5,SNR=4.1
comp=Z,0.3nm,0.4s
GEYT Alibeck 61.97 306 P **P 15 11 48.5 +0.1**
comp=Z,0.9nm,0.5s,baz=112,slow=1.6,SNR=4.2
comp=Z,0.9nm,0.5s
ABKAR Akbulak array 62.42 319 P **P 15 11 50.7 -0.4**
ILAR Eielson Array 78.63 26 P **P 15 13 28.8 -0.9**
comp=Z,0.2nm,0.6s,baz=248,slow=3.8,SNR=2.8
comp=Z,0.2nm,0.6s
BMAR Burnt Mountain 79.24 23 P **P 15 13 33.8 +0.7**
ARCES ARCESS Array B 80.38 339 P **P 15 13 40.2 +1.0**
comp=Z,4.0nm,1.0s,baz=62,slow=5.9,SNR=4.3
comp=Z,4.0nm,1.0s
FINES FINESS Array B 81.76 331 P **P 15 13 47.1 +0.5**
comp=Z,2.9nm,0.9s,baz=76,slow=5.9,SNR=2.5
comp=Z,2.9nm,0.9s
BURAR Bucovina Array 85.37 318 P **P 15 14 06.6 +1.0**
BURAR IAmb IAmb 15 14 09.4
comp=Z,2.8nm,0.8s

*THE **06** 15:05:16.6, 34.°63N×24.°61E, h24km±1km, ML2.8/4, Error ellipse: s-maj=2.8km s-min=0.9km az=156.0*
*ATH **06** 15:05:19.1, 34.°82N×24.°50E, h18km±2km, ML2.6/5, Error ellipse: s-maj=4.1km s-min=1.4km az=350.0*
ISC 06 15:05:19.3±1.3, 34.°83N±0.°08×24.°48E±0.°04, h31km±10km, n12, σ1839/18, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVDS	**Gavdos**	**0.32**	**273**	P	**Pb**	**15 05 26.4**	**-0.7**
GVDS				S	**Sn**	**15 05 34.3**	**+0.8**
	2μm,0.3s						
GVD	**Gavdhos**	**0.33**	**272**	P	**Pb**	**15 05 26.1**	**-1.0**
GVD				S	**Sn**	**15 05 33.6**	**+0.1**
	3μm,0.3s						
GVD	**Gavdhos**	**0.33**	**272**	P	**Pb**	**15 05 26.2**	**-1.0**
GVD				S	**Sn**	**15 05 31.4**	**-2.1**
GVD				AML	AML	15 05 37.8	
	comp=E,6890μm,0.3s						
GVD				AML	AML	15 05 40.6	
	comp=N,5792μm,0.3s						
TMBK	**Timbaki Herakl**	**0.34**	**44**	P	**Pb**	**15 05 26.4**	**-0.9**
TMBK				S	**Sn**	**15 05 33.3**	**-0.5**
TMBK	**Timbaki Herakl**	**0.34**	**44**	P	**Pb**	**15 05 26.4**	**-0.9**
IDI	**Anoyia**	**0.57**	**36**	P	**Pb**	**15 05 29.6**	**-1.3**
IDI				S	**Sb**	**15 05 39.0**	**+0.2**
	comp=N,288nm,0.4s						
IDI	**Anoyia**	**0.57**	**36**	P	**Pb**	**15 05 29.5**	**-1.3**
IDI				AML	AML	15 05 45.5	
	comp=N,792μm,0.6s						
IDI				AML	AML	15 05 49.7	
	comp=E,646μm,0.5s						
IMMV	**Iera Moni Meta**	**0.75**	**327**	P	**Pn**	**15 05 33.4**	**-0.3**
IMMV				S	**Sb**	**15 05 47.3**	**+3.4**
	comp=E,570nm,0.4s						
IMMV	**Iera Moni Meta**	**0.75**	**327**	P	**Pn**	**15 05 33.6**	**-0.2**
IMMV				AML	AML	15 05 52.7	
	comp=N,733μm,0.4s						
IMMV				AML	AML	15 05 56.2	
	comp=E,1528μm,0.6s						
FRMA	**Ierapetra Chan**	**1.04**	**79**	P	**Pn**	**15 05 38.9**	**+1.1**
FRMA				AML	AML	15 06 04.0	
	comp=N,475μm,0.7s						
FRMA				AML	AML	15 06 05.9	
	comp=E,568μm,0.6s						
ZKR	**Zakros**	**1.45**	**78**	P	**Pn**	**15 05 43.7**	**+0.3**
ZKR				AML	AML	15 06 13.8	
	comp=N,122μm,0.7s						
ZKR				AML	AML	15 06 22.4	
	comp=E,284μm,0.7s						
KARP	**Karpathos**	**2.31**	**71**	P	**Pn**	**15 05 55.9**	**+0.7**

TAP 06 15:06:29.1, 24.°11N×121.°68E, h7km, ML1.9, 5C-10D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.07**	**315**	*e*P	Pg	15 06 31.1	+0.1
ETL	baz=314			*i* S	Sg	15 06 32.6	+0.2
TWD	**Chiawan**	**0.08**	**249**	⇑P	Pg	15 06 31.1	0.0
TWD	baz=247			S	Sg	15 06 32.7	+0.1
NACB	**Ninganchiao**	**0.10**	**311**	⇓P	Pg	15 06 31.4	-0.1
NACB	baz=310			*i* S	Sg	15 06 33.1	0.0
HWA	**Hwalien**	**0.15**	**207**	⇓*e*P	Pg	15 06 32.7	+0.5
HWA	baz=203			*e*S	Sg	15 06 36.1	+1.8
ETLH	**Xiulin Townshi**	**0.20**	**299**	⇓P	Pg	15 06 33.2	-0.1
ETLH	baz=298			S	Sg	15 06 36.1	0.0
ETM	**Tongmen**	**0.22**	**230**	P	Pg	15 06 33.5	-0.1
ETM	baz=229			*e*S	Sg	15 06 36.4	-0.2
EAHA	**Aohua**	**0.23**	**15**	⇓P	Pg	15 06 33.5	-0.2
EAHA	baz=14			*e*S	Sg	15 06 36.9	+0.1
LXIB	**Xiulin Townshi**	**0.26**	**250**	⇑P	Pg	15 06 34.0	-0.3
LXIB	baz=250			*e*S	Sg	15 06 37.8	0.0
ENA	**Nanau**	**0.32**	**10**	⇓*i*P	Pg	15 06 35.4	-0.1
ENA	baz=11			*e*S	Sg	15 06 39.2	-0.6
SHUL	**Shoufeng**	**0.34**	**198**	*e*P	Pb	15 06 37.0	-0.4
ESL	**Shilin**	**0.37**	**217**	⇓*e*P	Pg	15 06 36.0	-0.3
ESL	baz=216			*e*S	Sg	15 06 41.2	-0.1
WHF	**Hehuan Shan**	**0.38**	**276**	*i* P	Pg	15 06 36.1	-0.5
WHF	baz=275			*e*S	Sg	15 06 41.5	-0.2
NNSB	**Datong**	**0.42**	**320**	⇓*e*P	Pg	15 06 37.4	+0.1
NNSB	baz=319			S	Sg	15 06 43.0	+0.2
FUSS	**Fushou**	**0.42**	**289**	*e*P	Pg	15 06 37.6	+0.2
FUSS	baz=289			*i* S	Sg	15 06 43.3	+0.4
NNS	**Nan Shan**	**0.43**	**320**	*e*P	Pg	15 06 37.5	0.0
NNS	baz=320			S	Sg	15 06 43.6	+0.4
LATG	**Datong**	**0.45**	**342**	*e*P	Pg	15 06 37.9	0.0
LATG	baz=342			*i* S	Sg	15 06 44.2	+0.5
CHGB	**Renai**	**0.46**	**264**	⇑*e*P	Pg	15 06 38.4	+0.2
CHGB	baz=263			S	Sg	15 06 44.5	+0.2
WARBT	**Fenglin Townsh**	**0.47**	**214**	*e*P	Pg	15 06 38.0	-0.3
WARBT	baz=214			*e*S	Sg	15 06 43.8	-0.7
OWD	**Renai**	**0.48**	**252**	⇑P	Pg	15 06 38.1	-0.5
ESAO	**Su ao**	**0.49**	**18**	*i* P	Pg	15 06 38.5	-0.1
ESAO	baz=18			*e*S	Sg	15 06 45.1	0.0
EGFH	**Guangfu**	**0.49**	**208**	P	Pg	15 06 39.1	+0.4
EGFH	baz=207			S	Sb	15 06 47.0	-0.5
TDCB	**Techi**	**0.49**	**287**	*i* P	Pg	15 06 38.2	-0.5
TDCB	baz=286			S	Sg	15 06 46.0	+0.8
NDT	**Datong Townshi**	**0.51**	**343**	⇓*e*P	Pg	15 06 39.2	+0.1
NDT	baz=343			*i* S	Sg	15 06 46.4	+0.5
TWC	**Suao**	**0.52**	**17**	⇓P	Pg	15 06 39.5	+0.3
TWC	baz=18			*e*S	Sg	15 06 45.9	-0.2
NDS	**Dongshan**	**0.52**	**4**	P	Pg	15 06 39.2	-0.1
NDS	baz=3.0			*i* S	Sg	15 06 46.9	+0.8
WUSB	**Renai**	**0.53**	**257**	*e*P	Pg	15 06 39.4	+0.1
WUSB	baz=257			S	Sg	15 06 46.7	+0.5
ENTT	**Nioudou**	**0.54**	**349**	*e*P	Pg	15 06 39.8	+0.2
ENTT	baz=349			S	Sg	15 06 47.0	+0.3
TWE	**Neicheng**	**0.61**	**359**	P	Pg	15 06 40.8	-0.1
TWE				S	Sg	15 06 49.3	+0.4
YHNB	**Yeheng**	**0.62**	**334**	⇓*e*P	Pg	15 06 41.5	+0.3
YHNB	baz=333			*i* S	Sg	15 06 49.8	+0.4
NSK	**Sanguang**	**0.64**	**333**	⇑*e*P	Pg	15 06 41.7	+0.3
NSK	baz=333			S	Sg	15 06 50.3	+0.5
FUSB	**Fushanzhiwuyua**	**0.65**	**353**	*i* P	Pg	15 06 41.4	-0.4
FUSB	baz=352			*e*S	Sb	15 06 51.5	-0.8
HGSD	**Ruisui**	**0.66**	**201**	*e*P	Pb	15 06 42.4	-0.5
EHY	**Hungye**	**0.68**	**209**	*i* P	Pg	15 06 42.2	-0.1
EHY	baz=207			*e*S	Sg	15 06 51.9	+0.7
NWLT	**Wulai**	**0.68**	**347**	*i* P	Pg	15 06 41.8	-0.6
NWLT	baz=346			S	Sg	15 06 51.6	+0.3
NFF	**Wufeng Townshi**	**0.73**	**316**	*e*P	Pg	15 06 43.7	+0.5
NFF	baz=315			*e*S	Sg	15 06 53.4	+0.7
SSLB	**Suanglung**	**0.73**	**244**	*e*S	Sg	15 06 52.2	-0.7

TAP 06 15:06:32.6, 23.°65N×120.°70E, h14km, ML1.7, 10C-12D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHN5	**Tsauling**	**0.05**	**201**	⇓*i*P	Pg	15 06 35.7	+0.4
CHN5	baz=201			S	Sg	15 06 38.0	+0.7
WGK	**Gukeng**	**0.13**	**288**	P	Pb	15 06 36.9	0.0
WGK	baz=288			*e*S	Sb	15 06 40.3	+0.6
WHYT	**Xinyi Township**	**0.15**	**71**	⇓*i*P	Pb	15 06 37.0	-0.3
WHYT	baz=70			S	Sb	15 06 39.9	-0.5
WDLH	**Douliu**	**0.15**	**286**	⇓*i*P	Pb	15 06 37.2	-0.1
WDLH	baz=285			*i* S	Sb	15 06 40.7	+0.3
ALS	**Alishan**	**0.17**	**144**	⇓P	Pb	15 06 37.6	-0.1
ALS	baz=143			S	Sb	15 06 41.1	+0.1
WJS	**Zhushan**	**0.18**	**9**	⇓*i*P	Pb	15 06 37.5	-0.2
WJS	baz=9.0			S	Sb	15 06 41.4	+0.3
WCKO	**Fanlu**	**0.22**	**203**	⇑P	Pb	15 06 38.2	-0.3
WCKO	baz=209			S	Sb	15 06 42.2	-0.2
WNT	**Mingjian**	**0.23**	**357**	⇑P	Pb	15 06 38.6	0.0
WNT	baz=359			S	Sb	15 06 43.0	+0.3
WNT1	**Nantou City**	**0.26**	**356**	P	Pb	15 06 39.2	0.0
WNT1	baz=357			*e*S	Sb	15 06 43.1	-0.4
SSLB	**Suanglung**	**0.27**	**59**	⇑P	Pb	15 06 39.0	-0.4
SSLB	baz=59			*e*S	Sb	15 06 43.4	-0.5
WTK	**Tuku**	**0.29**	**278**	P	Pb	15 06 39.4	-0.1
WTK	baz=279			S	Sb	15 06 44.3	+0.1
TYC	**Yuchr**	**0.29**	**30**	⇑*i*P	Pb	15 06 39.7	0.0
TYC	baz=31			S	Sb	15 06 45.1	+0.6
SMLT	**Sun Moon Lake**	**0.30**	**38**	⇑P	Pb	15 06 39.9	0.0
SMLT	baz=39			S	Sb	15 06 45.0	+0.3
CHN4	**Tsaushan**	**0.31**	**198**	⇑*i*P	Pb	15 06 39.9	-0.1
CHN4	baz=198			*e*S	Sb	15 06 45.8	+0.9
WYL	**Yuanlin Townsh**	**0.33**	**341**	P	Pb	15 06 40.0	-0.4
WYL	baz=341			*e*S	Sb	15 06 45.0	-0.5
TPUB	**Ta-pu**	**0.35**	**190**	⇓P	Pb	15 06 40.3	-0.3
TPUB	baz=190			*e*S	Sb	15 06 46.9	+0.8
WRL	**Guolierlin Hig**	**0.39**	**311**	⇑P	Pb	15 06 41.0	-0.3
WRL	baz=311			*e*S	Sb	15 06 47.0	-0.2
RLNB	**Erlin**	**0.40**	**308**	*i* S	Sb	15 06 47.8	+0.5
WWF	**Wufeng**	**0.40**	**0**	P	Pb	15 06 41.8	+0.3
WWF				*e*S	Sb	15 06 48.3	+0.9
WTP	**Ta-pu**	**0.41**	**191**	⇑P	Pb	15 06 41.3	-0.3
WTP	baz=190			S	Sb	15 06 48.5	+0.8
VWDT	**VWDT**	**0.42**	**75**	*e*P	Pb	15 06 41.9	0.0
VWDT	baz=234			*e*S	Sb	15 06 48.7	+0.7
VWDT	**VWDT**	**0.42**	**75**	P	Pb	15 06 41.9	0.0
VWDT	baz=74			S	Sb	15 06 48.7	+0.6
TWK	**Hsinying**	**0.42**	**207**	*i* P	Pb	15 06 41.8	-0.1
TWK	baz=205			S	Sb	15 06 48.9	+0.6
WSF	**Szhu**	**0.44**	**269**	P	Pb	15 06 41.7	-0.4
WSF	baz=269			*i* S	Sb	15 06 49.0	+0.4
WTCT	**Ta-ch'eng**	**0.44**	**300**	P	Pb	15 06 42.0	-0.2
WTCT	baz=300			S	Sb	15 06 48.9	+0.2
WCHH	**Zhanghua**	**0.45**	**344**	P	Pb	15 06 42.6	+0.3
WCHH	baz=343			*e*S	Sb	15 06 49.9	+1.0
WCS	**Beigang Elemen**	**0.45**	**26**	⇑*i*P	Pb	15 06 42.4	-0.1
WCS	baz=25			*i* S	Sb	15 06 49.4	+0.3
SNST	**Tainan City**	**0.46**	**204**	⇓P	Pb	15 06 42.4	-0.1
SNST	baz=203			*e*S	Sb	15 06 49.4	+0.1
ICHU	**Yijhu**	**0.48**	**234**	*i* P	Pb	15 06 43.0	+0.2
ICHU	baz=234			*i* S	Sb	15 06 50.4	+0.7
STYH	**Taoyuan**	**0.48**	**171**	⇓*i*P	Pb	15 06 42.6	-0.2
STYH	baz=167			S	Sb	15 06 49.4	-0.4
STYT	**Tauyuan**	**0.48**	**174**	⇓P	Pb	15 06 42.8	-0.1
STYT	baz=168			*i* S	Sb	15 06 50.5	+0.6
CHN1	**Nanshi**	**0.48**	**199**	⇑P	Pb	15 06 42.8	-0.2
CHN1	baz=199			S	Sb	15 06 50.9	+0.9
WUSB	**Renai**	**0.52**	**48**	*i* P	Pb	15 06 43.5	-0.1
WUSB	baz=47			*e*S	Sb	15 06 50.8	-0.2
OWD	**Renai**	**0.54**	**55**	P	Pb	15 06 44.1	+0.2
OWD	baz=53			*i* S	Sb	15 06 51.8	+0.2
CHN8	**Yiju**	**0.54**	**236**	*e*P	Pn	15 06 45.0	-0.8
CHN8	baz=236			*e*S	Sb	15 06 53.0	+1.6
ELDTW	**Lidau**	**0.54**	**147**	⇓*i*P	Pb	15 06 43.9	0.0
ELDTW	baz=148			*e*S	Sb	15 06 51.1	-0.5
SGST	**Jiashian**	**0.57**	**191**	⇓*e*P	Pg	15 06 43.6	-0.3
SGST	baz=190			S	Sb	15 06 52.9	+0.4
EHY	**Hungye**	**0.59**	**104**	S	Sb	15 06 54.0	+1.1
YULB	**Yu-li**	**0.60**	**115**	P	Pb	15 06 45.1	+0.1
YULB	baz=115			S	Sb	15 06 53.6	+0.2
TWF1	**Yuli**	**0.62**	**118**	P	Pb	15 06 45.1	-0.2
TWF1	baz=118			S	Sb	15 06 54.5	+0.6
EYUL	**Yuli**	**0.64**	**117**	*e*P	Pb	15 06 46.3	+0.7
EYUL	baz=118			*i* S	Sb	15 06 55.0	+0.5
SLGT	**Liugui**	**0.65**	**184**	*i* P	Pb	15 06 45.8	0.0
SLGT	baz=174			*e*S	Sb	15 06 56.1	+1.4
EHD	**Haiduan**	**0.68**	**137**	P	Pb	15 06 46.3	+0.1
EHD	baz=146			S	Sb	15 06 56.0	+0.4
TWQ1	**Liyutan**	**0.70**	**6**	⇓*e*P	Pb	15 06 47.2	+0.5
TWQ1	baz=6.0			*e*S	Sn	15 06 57.8	-1.1
TSCK	**Chigu Township**	**0.75**	**229**	*i* P	Pb	15 06 47.5	+0.1
TSCK	baz=244			S	Sb	15 06 58.8	+1.2
LXIB	**Xiulin Townshi**	**0.75**	**60**	*i* P	Pb	15 06 47.5	-0.1
SCST	**Cishan**	**0.78**	**194**	*e*P	Pn	15 06 48.9	-0.3
SCST	baz=194			*e*S	Sn	15 07 01.4	+0.7
	baz=194						

TAP 06 15:15:31.9, 24.°72N×122.°87E, h126km±1km, ML2.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.29**	**154**	*e*P	Pn	15 15 50.8	+1.4
EOS2	**EOS2**	**0.66**	**243**	*i* P	Pn	15 15 51.5	+0.2
EOS2	baz=242			*e*S	Sn	15 16 06.3	+0.4
EOS3	**EOS3**	**0.66**	**229**	P	Pn	15 15 51.3	0.0
EOS3	baz=229			*e*S	Sn	15 16 06.6	+0.5
EOS4	**EOS4**	**0.78**	**220**	*e*P	Pn	15 15 53.0	+1.0
EOS4	baz=220			*e*S	Sn	15 16 07.6	+0.4
TWB1	**Santiao Chiao**	**0.85**	**290**	*e*P	Pn	15 15 54.3	+1.3
TWC	**Suao**	**0.94**	**263**	*e*S	Sn	15 16 09.3	-1.0
TIPB	**Shuangxi**	**0.98**	**285**	*i* P	Pn	15 15 54.5	+0.3
TIPB	baz=284			*e*S	Sn	15 16 10.6	-0.6
NDS	**Dongshan**	**1.05**	**266**	P	Pn	15 15 54.9	0.0
NDS	baz=265			*e*S	Sn	15 16 11.1	-1.3
ENA	**Nanau**	**1.07**	**254**	*e*P	Pn	15 15 55.6	+0.5
TNOU	**National Taiwa**	**1.08**	**293**	*e*P	Pn	15 15 54.5	-0.7
TNOU	baz=293			*e*S	Sn	15 16 12.7	-0.2
EAHA	**Aohua**	**1.10**	**250**	P	Pn	15 15 55.4	0.0
FUSB	**Fushanzhiwuyua**	**1.17**	**272**	P	Pn	15 15 56.1	-0.1
FUSB	baz=271			*e*S	Sn	15 16 13.6	-0.9
ENTT	**Nioudou**	**1.19**	**266**	*e*P	Pn	15 15 56.9	+0.6
ENTT	baz=266			*e*S	Sn	15 16 15.0	+0.2
LATG	**Datong**	**1.24**	**262**	P	Pn	15 15 57.4	+0.5
LATG	baz=261			*e*S	Sn	15 16 15.4	-0.5
NDT	**Datong Townshi**	**1.24**	**265**	*e*P	Pn	15 15 57.8	+0.9
NDT	baz=264			*e*S	Sn	15 16 16.3	+0.5
NWLT	**Wulai**	**1.25**	**273**	P	Pn	15 15 57.1	+0.2
NWLT	baz=272			*e*S	Sn	15 16 15.2	-0.7
ETL	**Fush Village**	**1.27**	**244**	*e*P	Pn	15 15 56.0	-1.1
ETL	baz=243			S	Sn	15 16 16.4	+0.1
NACB	**Ninganchiao**	**1.28**	**245**	*e*P	Pn	15 15 58.5	+1.2
NACB	baz=244			*e*S	Sn	15 16 15.5	-1.1
YHNB	**Yeheng**	**1.36**	**268**	*i* P	Pn	15 15 58.4	+0.2
YHNB	baz=267			S	Sn	15 16 17.5	-0.7
ETLH	**Xiulin Townshi**	**1.37**	**248**	P	Pn	15 15 58.2	-0.1
ETLH	baz=247			*i* S	Sn	15 16 18.0	-0.3
NSK	**Sanguang**	**1.38**	**268**	*i* P	Pn	15 15 58.7	+0.3
NSK	baz=268			*i* S	Sn	15 16 18.2	-0.3
NNSB	**Datong**	**1.39**	**258**	*i* P	Pn	15 15 58.8	+0.3
NNS	**Nan Shan**	**1.39**	**259**	P	Pn	15 15 59.0	+0.4
LXIB	**Xiulin Townshi**	**1.50**	**243**	*e*S	Sn	15 16 20.2	-0.9
SHUL	**Shoufeng**	**1.51**	**232**	P	Pn	15 15 59.8	-0.1
SHUL	baz=232			S	Sn	15 16 20.7	-0.4
FUSS	**Fushou**	**1.56**	**253**	P	Pn	15 16 00.9	+0.4
FUSS	baz=252			*e*S	Sn	15 16 22.8	+0.4
WHF	**Hehuan Shan**	**1.57**	**249**	*i* P	Pn	15 16 00.9	0.0

	baz=248							
WHF				*e*S		Sn	15 16 23.2	+0.2
	baz=248							
NFF	**Wufeng Townshi**	**1.60**	**267**	P		Pn	15 16 01.1	+0.2
	baz=266							
NFF				S		Sn	15 16 22.4	-0.5
	baz=266							
CHGB	**Renai**	**1.68**	**247**	*i* P		Pn	15 16 02.1	+0.1
	baz=246							
CHGB				*e*S		Sn	15 16 25.0	0.0
	baz=246							
WARBT	**Fenglin Townsh**	**1.68**	**234**	*e*P		Pn	15 16 01.5	-0.4
	baz=233							
WARBT				*e*S		Sn	15 16 23.5	-1.1
	baz=233							
NSTT	**Nanjuang**	**1.70**	**267**	*e*P		Pn	15 16 02.1	0.0
	baz=266							
NSTT				S		Sn	15 16 24.5	-0.5
	baz=266							
OWD	**Renai**	**1.72**	**244**	P		Pn	15 16 03.0	+0.5
	baz=243							
OWD				*e*S		Sn	15 16 26.0	+0.3
	baz=243							
WUSB	**Renai**	**1.76**	**246**	P		Pn	15 16 03.3	+0.5
	baz=245							
WUSB				S		Sn	15 16 26.2	-0.2
	baz=245							
HGSD	**Ruisui**	**1.80**	**228**	*e*P		Pn	15 16 03.1	-0.1
	baz=227							
WHP	**Taichung City**	**1.81**	**256**	*e*P		Pn	15 16 05.1	+1.7
	baz=255							
WHP				*e*S		Sn	15 16 27.7	+0.3
	baz=255							
VWDT	**VWDT**	**1.85**	**239**	P		Pn	15 16 04.5	+0.7
	baz=238							
VWDT				S		Sn	15 16 27.6	-0.5
	baz=238							
EHY	**Hungye**	**1.86**	**230**	*i* P		Pn	15 16 04.4	+0.4
	baz=229							
WCS	**Beigang Elemen**	**1.91**	**250**	*e*P		Pn	15 16 05.5	+1.0
	baz=249							
WCS				*e*S		Sn	15 16 30.4	+1.0
	baz=249							
YULB	**Yu-li**	**1.95**	**228**	*e*P		Pn	15 16 05.1	0.0
	baz=227							
YULB				*e*S		Sn	15 16 29.6	-0.9
	baz=227							
EYUL	**Yuli**	**1.97**	**226**	*e*S		Sn	15 16 31.3	+0.5
	baz=226							
SSLB	**Suanglung**	**1.98**	**242**	*e*P		Pn	15 16 06.7	+1.3
	baz=242							
SSLB				S		Sn	15 16 31.0	-0.1
	baz=242							
TWF1	**Yuli**	**1.98**	**227**	*e*S		Sn	15 16 30.1	-1.0
	baz=226							
JMJ	**Miyako jima 2**	**2.20**	**87**	*e*P		Pn	15 16 07.8	-0.3
	baz=87							
ELDTW	**Lidau**	**2.28**	**228**	P		Pn	15 16 09.7	+0.5
	baz=227							
ELDTW				*i* S		Sn	15 16 37.2	-0.7
	baz=227							

IDC ***06*** *15:16:23.2±0.7,56˚.44N×148˚.25W,h0km,mb4.2/24, mbtmp4.3/30,ML4.3/6,MS3.9/27,Error ellipse: s-maj=19.6km s-min=10.5km az=26.0*

NEIC ***06*** *15:16:23.5±0.9,56˚.41N±0˚.07×148˚.4W±0˚.1,h10km±1km, mb4.8/244,ML4.9/70,Mwr4.6/67,ML4.7(AEIC),Error ellipse: s-maj=11.9km s-min=9.0km az=200.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.66; Mθθ=4.20; Mϕϕ5.86; Mrθ1.82; Mθϕ5.01; Mϕr-5.62; Fault plane solution: M₀9.35000×10¹⁵ NP1: ϕs246.15000°,δ48.99000°,λ-8.08000°. NP2:ϕs341.47000°, δ83.91000°,λ-138.70000°. Principal axes: T 9.8422, Plg23.0000°, Azm107.0000°; N -1.0854, Plg48.0000°, Azm348.0000°; P -8.7568, Plg33.0000°, Azm212.0000°;*

NEIC ***06*** *15:16:23.4,56˚.39N×148˚.40W,h10km*

GCMT ***06*** *15:16:26.5±0.4,56˚.38N±0˚.02×148˚.27W±0˚.03,h31km±1km, MW4.9/68,Moment Tensor Solution. s22,c25; s68,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.66±.18; Mθθ-2.32±.14; Mϕϕ1.65±.13; Mrθ0.43±.15; Mθϕ1.52±.09; Mϕr-1.14±.17; Best double couple: M₀2.82300×10¹⁶ NP1:ϕs151.00000°,δ80.00000°,λ152.00000°. NP2: ϕs246.00000°,δ62.00000°,λ11.00000°. Principal axes: T 2.6400, Plg27.0000°, Azm105.0000°; N 0.3570, Plg60.0000°, Azm314.0000°; P -3.0050, Plg12.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

AEIC ***06*** *15:16:28.2±1.2,56˚.38N±0˚.08×148˚.4W±0˚.1,h12km±5km Error ellipse: s-maj=10.9km s-min=8.2km az=187.0*

ISC 06 15:16:24.3±0.4,56˚.43N±0˚.05×148˚.21W±0˚.04,h10km, n704,σt^{2}47/572,mb4.7/125,MS3.8/21,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		ISC	h	m	s	ISC
KDAK	**Kodiak Island**	**2.74**	**301**			**Sn**	**15**	**17**	**35.7**	**-5.7**
KDAK	**Kodiak Island**	**2.74**	**301**	Pn		**Pn**	**15**	**17**	**06.4**	**-1.9**
KDAK	**Kodiak Island**	**2.74**	**301**	P		**Pn**	**15**	**17**	**06.6**	**-1.7**
	baz=121									
KDAK	**Kodiak Island**	**2.74**	**301**	Pn		**Pn**	**15**	**17**	**06.6**	**-1.7**
	74nm,0.3s,baz=106,slow=5.6,SNR=648									
KDAK				Sn		**Sn**	**15**	**17**	**36.2**	**-5.3**
	91nm,0.3s,baz=62,slow=19,SNR=17									
KDAK				LR		LR	15	18	21.3	
	comp=Z,3μm,20.4s,baz=36,slow=43									
	232nm,0.4s									
OHAK	**Old Harbor**	**2.90**	**288**			**Sn**	**15**	**17**	**38.9**	**-6.4**
OHAK	**Old Harbor**	**2.90**	**288**	Pn		**Pn**	**15**	**17**	**07.9**	**-2.6**
OHAK	**Old Harbor**	**2.90**	**288**	IAML			15	17	39.9	
	comp=N,2μm,0.7s									
OHAK				IAML			15	17	44.9	
	comp=E,1μm,0.5s									
OHAK	**Old Harbor**	**2.90**	**288**	P		**Pn**	**15**	**17**	**08.2**	**-2.3**
OHAK	**Old Harbor**	**2.90**	**288**	P		**Pn**	**15**	**17**	**08.2**	**-2.3**
	baz=107,SNR=41									
OHAK				S		**Sn**	**15**	**17**	**38.8**	**-6.6**
	baz=107									
SYI	**Shuyak Island**	**3.14**	**316**			**Sn**	**15**	**17**	**48.2**	**-3.0**
SYI	**Shuyak Island**	**3.14**	**316**	Pn		**Pn**	**15**	**17**	**12.4**	**-1.3**
SYI	**Shuyak Island**	**3.14**	**316**	IAML			15	17	52.8	
	comp=E,2μm,1.1s									
SYI				IAML			15	17	52.9	
	comp=N,2μm,0.8s									
Q20K	**Shuyak Island**	**3.14**	**316**	P		**Pn**	**15**	**17**	**12.8**	**-1.0**
	baz=135,SNR=17									
Q23K	**Middleton Isla**	**3.16**	**17**			**Sn**	**15**	**17**	**48.6**	**-3.2**
Q23K	**Middleton Isla**	**3.16**	**17**			**Pn**	**15**	**17**	**13.3**	**-0.7**
Q23K	**Middleton Isla**	**3.16**	**17**	IAML			15	17	50.4	
	comp=N,1μm,0.4s									
Q23K				IAML			15	17	50.5	
	comp=E,2μm,0.4s									
Q23K	**Middleton Isla**	**3.16**	**17**	P		**Pn**	**15**	**17**	**13.5**	**-0.5**
	baz=200,SNR=6.6									
Q23K				S		**Sn**	**15**	**17**	**48.3**	**-3.5**
	baz=200									
MID	**Middleton Isla**	**3.17**	**18**			**Pn**	**15**	**17**	**13.5**	**-0.6**
SII	**Sitkinak Islan**	**3.32**	**275**			**Sn**	**15**	**17**	**49.4**	**-6.2**
SII	**Sitkinak Islan**	**3.32**	**275**	Pn		**Pn**	**15**	**17**	**13.6**	**-2.6**
SII	**Sitkinak Islan**	**3.32**	**275**	IAML			15	17	57.4	
	comp=E,2μm,0.8s									
SII				IAML			15	18	01.0	
	comp=N,2μm,0.9s									
SII	**Sitkinak Islan**	**3.32**	**275**	P		**Pn**	**15**	**17**	**14.6**	**-1.6**
SII	**Sitkinak Islan**	**3.32**	**275**	P		**Pn**	**15**	**17**	**13.6**	**-2.6**
	baz=92,SNR=15									
CNPM	**China Poot**	**3.50**	**334**			**Sn**	**15**	**17**	**56.4**	**-3.7**
CNPM	**China Poot**	**3.50**	**334**			**Pn**	**15**	**17**	**17.4**	**-1.2**
CNPM	**China Poot**	**3.50**	**334**	IAML			15	18	04.3	
	comp=E,915nm,0.8s									
CNPM				IAML			15	18	04.6	
	comp=N,1μm,0.9s									
BRSE	**Bradley Lake S**	**3.58**	**339**			**Pn**	**15**	**17**	**18.8**	**-1.0**
BRSE	**Bradley Lake S**	**3.58**	**339**	P		**Pn**	**15**	**17**	**18.8**	**-1.0**
	baz=156,SNR=24									
P23K	**Montague Islan**	**3.60**	**6**			**Pn**	**15**	**17**	**19.6**	**-0.4**
P23K	**Montague Islan**	**3.60**	**6**	P		**Pn**	**15**	**17**	**19.7**	**-0.4**
	baz=188,SNR=15									
P23K				S		**Sn**	**15**	**17**	**59.3**	**-3.3**
	baz=188									
BRLK	**Bradley Lake**	**3.63**	**338**			**Pn**	**15**	**17**	**19.2**	**-1.3**
HOM	**Homer**	**3.71**	**332**	Pn		**Pn**	**15**	**17**	**21.3**	**-0.3**
HOM				IAML			15	18	07.7	
	comp=N,3μm,1.2s									
HOM				IAML			15	18	09.4	
	comp=E,4μm,0.9s									
HOM	**Homer**	**3.71**	**332**	P		**Pn**	**15**	**17**	**21.5**	**-0.1**
	baz=151,SNR=13									
SEW	**Seward**	**3.74**	**350**			**Pn**	**15**	**17**	**20.9**	**-1.1**
SEW	**Seward**	**3.74**	**350**	P		**Pn**	**15**	**17**	**20.9**	**-1.1**
	baz=171,SNR=21									
Q19K	**Cape Douglas,**	**3.84**	**313**			**Pn**	**15**	**17**	**22.4**	**-1.0**
Q19K	**Cape Douglas,**	**3.84**	**313**	P		**Pn**	**15**	**17**	**22.9**	**-0.6**
	baz=130,SNR=47									
KAIM	**Kayak Island**	**4.04**	**28**	Pn		**Pn**	**15**	**17**	**26.1**	**0.0**
KAIM				IAML			15	18	14.9	
	comp=N,2μm,0.6s									
KAIM				IAML			15	18	15.0	
	comp=E,2μm,0.4s									
KAIM	**Kayak Island**	**4.04**	**28**	P		**Pn**	**15**	**17**	**26.2**	**+0.1**
	baz=211,SNR=9.2									
AUCH	**Augustine Cone**	**4.05**	**319**			**Pn**	**15**	**17**	**26.0**	**-0.3**
HIN	**Hinchinbrook I**	**4.08**	**12**			**Sn**	**15**	**18**	**11.7**	**-2.6**
HIN	**Hinchinbrook I**	**4.08**	**12**			**Pn**	**15**	**17**	**26.5**	**-0.2**
HIN	**Hinchinbrook I**	**4.08**	**12**	IAML			15	18	12.8	
	comp=N,2μm,0.5s									
HIN				IAML			15	18	14.1	
	comp=E,1μm,0.4s									
O22K	**Cooper Landing**	**4.14**	**350**			**Pn**	**15**	**17**	**26.4**	**-1.0**
O22K	**Cooper Landing**	**4.14**	**350**	P		**Pn**	**15**	**17**	**26.5**	**-1.0**
	baz=169,SNR=35									
O22K				S		**Sn**	**15**	**18**	**14.3**	**-1.5**
	baz=169									
P19K	**Oil Pt**	**4.19**	**322**			**Sn**	**15**	**18**	**15.6**	**-1.5**
P19K	**Oil Pt**	**4.19**	**322**			**Pn**	**15**	**17**	**27.4**	**-0.7**
P19K	**Oil Pt**	**4.19**	**322**	IAML			15	18	18.1	
	comp=E,3μm,0.8s									
P19K				IAML			15	18	18.1	
	comp=N,3μm,0.8s									
P19K	**Oil Pt**	**4.19**	**322**	P		**Pn**	**15**	**17**	**27.6**	**-0.6**
	baz=140,SNR=22									
ACHA	**Angle Creek He**	**4.25**	**298**			**Pn**	**15**	**17**	**28.8**	**-0.3**
EYAK	**Cordova Ski Ar**	**4.33**	**16**	P		**Pn**	**15**	**17**	**30.1**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.33**	**16**	P		**Pn**	**15**	**17**	**30.2**	**+0.1**
	baz=199,SNR=114									
EYAK				S		**Sn**	**15**	**18**	**17.7**	**-2.7**
	baz=199									
ANCK	**Angle Creek**	**4.33**	**297**			**Pn**	**15**	**17**	**30.0**	**-0.2**
SUCK	**Suckling Hills**	**4.34**	**31**			**Pn**	**15**	**17**	**30.3**	**+0.1**
SUCK				IAML			15	18	20.0	
	comp=N,2μm,0.9s									
SUCK				IAML			15	18	21.5	
	comp=E,2μm,1.2s									
O20K	**Slope Mountain**	**4.34**	**329**	P		**Pn**	**15**	**17**	**29.6**	**-0.7**
	baz=147,SNR=11									
RAGM	**Ragged Mountai**	**4.38**	**24**			**Pn**	**15**	**17**	**30.7**	**-0.1**
RAGM				IAML			15	18	27.3	
	comp=E,2μm,0.5s									
HMT	**Hamilton**	**4.43**	**26**			**Pn**	**15**	**17**	**31.8**	**+0.3**
BGLC	**Bering Glacier**	**4.52**	**33**			**Pn**	**15**	**17**	**33.0**	**+0.3**
BGLC	**Bering Glacier**	**4.52**	**33**	P		**Pn**	**15**	**17**	**33.0**	**+0.3**
	baz=217									
BGLC				S		**Sn**	**15**	**18**	**23.5**	**-1.6**
	baz=217									
CNTC	**Contact Creek**	**4.54**	**297**			**Pn**	**15**	**17**	**32.4**	**-0.7**
CNTC						**Sn**	**15**	**18**	**24.1**	**-1.9**
Q17K	**Contact Creek**	**4.55**	**297**	P		**Pn**	**15**	**17**	**32.6**	**-0.6**
	baz=112,SNR=90									
PLK3	**Peulik 3**	**4.58**	**289**			**Pn**	**15**	**17**	**32.2**	**-1.3**
CAPN	**Captain Cook N**	**4.61**	**342**			**Pn**	**15**	**17**	**34.5**	**+0.5**
CAPN	**Captain Cook N**	**4.61**	**342**	P		**Pn**	**15**	**17**	**34.5**	**+0.5**
	baz=160,SNR=11									
BERG	**Berg Lake**	**4.62**	**29**	IAML			15	18	30.5	
	comp=E,2μm,0.5s									
SNH	**Sunshine Point**	**4.71**	**35**	IAML			15	18	28.3	
	comp=E,881nm,1.1s									
SNH				IAML			15	18	36.8	
	comp=N,822nm,1.1s									
RC01	**Rabbit Creek A**	**4.74**	**351**	Pn		**Pn**	**15**	**17**	**35.1**	**-0.6**
RC01				IAML			15	18	28.9	
	comp=N,811nm,0.8s									
RC01				IAML			15	18	29.8	
	comp=E,1μm,1.1s									
RC01	**Rabbit Creek A**	**4.74**	**351**	P		**Pn**	**15**	**17**	**35.4**	**-0.3**
	baz=171,SNR=26									
RC01				S		**Sn**	**15**	**18**	**27.1**	**-3.5**
	baz=171									
CYK	**Cape Yakataga**	**4.75**	**37**			**Pn**	**15**	**17**	**36.0**	**+0.3**
P18K	**Big Mountain,**	**4.78**	**311**	Pn		**Pn**	**15**	**17**	**34.6**	**-1.6**
P18K	**Big Mountain,**	**4.78**	**311**	P		**Pn**	**15**	**17**	**34.8**	**-1.5**
	baz=127,SNR=58									
PLK1	**Peulik 1**	**4.78**	**290**			**Pn**	**15**	**17**	**35.0**	**-1.3**
BMRM	**Bremner River**	**4.92**	**21**			**Pn**	**15**	**17**	**38.4**	**+0.2**
BMRM	**Bremner River**	**4.92**	**21**	P		**Pn**	**15**	**17**	**38.3**	**0.0**
	baz=204,SNR=38									
BMRM				S		**Sn**	**15**	**18**	**31.9**	**-3.3**
	baz=204									
O19K	**Port Alsworth**	**4.96**	**322**	P		**Pn**	**15**	**17**	**37.4**	**-1.3**
	baz=138,SNR=48									
KNK	**Knik Glacier**	**5.00**	**359**	Pn		**Pn**	**15**	**17**	**38.5**	**-0.8**
KNK				IAML			15	18	45.3	
	comp=E,497nm,0.7s									
KNK				IAML			15	18	46.8	
	comp=N,553nm,0.7s									
KNK	**Knik Glacier**	**5.00**	**359**	P		**Pn**	**15**	**17**	**39.0**	**-0.3**
	baz=179,SNR=18									
MESA	**MESA**	**5.00**	**39**	IAML			15	18	40.6	
	comp=N,1μm,0.3s									
MESA				IAML			15	18	49.8	
	comp=E,749nm,1.0s									
MESA	**MESA**	**5.00**	**39**	P		**Pn**	**15**	**17**	**39.7**	**+0.3**
	baz=224,SNR=17									
O18K	**Koktuh Hills**	**5.05**	**316**	IAML			15	18	52.7	
	comp=N,519nm,0.8s									
O18K	**Koktuh Hills**	**5.05**	**316**	P		**Pn**	**15**	**17**	**38.6**	**-1.4**
	baz=131,SNR=38									
Q16K	**King Salmon**	**5.08**	**300**			**Pn**	**15**	**17**	**39.7**	**-0.6**
Q16K	**King Salmon**	**5.08**	**300**	P		**Pn**	**15**	**17**	**39.5**	**-0.7**
	baz=114,SNR=69									
CRQM	**Cirque**	**5.08**	**29**			**Pn**	**15**	**17**	**40.8**	**+0.2**
CRQM	**Cirque**	**5.08**	**29**	IAML			15	18	42.2	
	comp=N,955nm,0.9s									
CRQM				IAML			15	18	43.0	
	comp=E,578nm,1.0s									
CRQE	**Cirque**	**5.09**	**30**	P		**Pn**	**15**	**17**	**40.8**	**+0.1**
	baz=214									
ISLE	**Juniper Island**	**5.19**	**34**	IAML			15	18	44.2	
	comp=E,835nm,1.1s									
ISLE				IAML			15	18	44.3	
	comp=N,907nm,1.1s									
PMR	**Palmer**	**5.20**	**355**	IAML			15	18	39.1	
	comp=E,730nm,0.7s									
PMR				IAML			15	18	39.4	
	comp=N,560nm,0.8s									
PMR	**Palmer**	**5.20**	**355**	P		**Pn**	**15**	**17**	**41.8**	**-0.2**
PMR	**Palmer**	**5.20**	**355**	P		**Pn**	**15**	**17**	**41.5**	**-0.5**
	baz=175,SNR=49									
P17K	**Kvichak River**	**5.20**	**306**	P		**Pn**	**15**	**17**	**41.3**	**-0.7**
	baz=120,SNR=163									
KLU	**Klutina**	**5.21**	**12**	IAML			15	18	40.9	
	comp=N,596nm,0.4s									
KLU				IAML			15	18	42.3	
	comp=E,724nm,0.5s									
KLU	**Klutina**	**5.21**	**12**	P		**Pn**	**15**	**17**	**42.7**	**+0.4**
	baz=194,SNR=168									
N20K	**Mount Spurr**	**5.21**	**338**	P		**Pn**	**15**	**17**	**41.2**	**-1.1**
	baz=156,SNR=19									
SPCR	**Spurr Chakacha**	**5.21**	**338**			**Pn**	**15**	**17**	**41.7**	**-0.6**
SUA	**Susitna One**	**5.21**	**346**	Pn		**Pn**	**15**	**17**	**41.4**	**-1.0**
SUA	**Susitna One**	**5.21**	**346**	P		**Pn**	**15**	**17**	**41.3**	**-1.0**
	baz=165,SNR=16									
R16K	**Pilot Point**	**5.25**	**286**			**Pn**	**15**	**17**	**41.0**	**-1.6**
R16K	**Pilot Point**	**5.25**	**286**	IAML			15	19	05.1	
	comp=N,444nm,0.9s									
R16K	**Pilot Point**	**5.25**	**286**	P		**Pn**	**15**	**17**	**41.2**	**-1.5**
	baz=100									
SPCP	**Crater Peak Br**	**5.26**	**339**			**Pn**	**15**	**17**	**42.3**	**-0.7**
GHO	**Glory Hole Cre**	**5.37**	**356**	IAML			15	18	45.0	
	comp=E,800nm,0.9s									
GHO				IAML			15	18	47.2	
	comp=N,912nm,0.7s									
M23K	**Glacier View**	**5.38**	**2**	P		**Pn**	**15**	**17**	**44.9**	**+0.3**
	baz=183,SNR=40									
SML	**Sawmill**	**5.39**	**359**	Pn		**Pn**	**15**	**17**	**44.9**	**+0.1**
SML	**Sawmill**	**5.39**	**359**	P		**Pn**	**15**	**17**	**44.8**	**+0.1**
	baz=180,SNR=43									
VRDI	**Verde Repeater**	**5.41**	**25**	Pn		**Pn**	**15**	**17**	**44.8**	**-0.2**
STLK	**Strandline Lak**	**5.42**	**341**			**Pn**	**15**	**17**	**44.4**	**-0.7**
SCM	**Sheep Creek Mo**	**5.44**	**4**	P		**Pn**	**15**	**17**	**45.8**	**+0.5**
	baz=186,SNR=67									
TABL	**Table Mountain**	**5.47**	**40**			**Pn**	**15**	**17**	**46.5**	**+0.6**
N19K	**Bonanza Creek**	**5.48**	**326**			**Pn**	**15**	**17**	**44.7**	**-1.3**
N19K	**Bonanza Creek**	**5.48**	**326**	P		**Pn**	**15**	**17**	**44.7**	**-1.3**
	baz=142									
YKU2	**Yakutat**	**5.49**	**52**	P		**Pn**	**15**	**17**	**44.7**	**-1.3**
N25K	**Chitina, Valde**	**5.51**	**18**	P		**Pn**	**15**	**17**	**46.8**	**+0.4**
	baz=202,SNR=137									
PCA	**Pinnacle**	**5.58**	**46**			**Pn**	**15**	**17**	**47.8**	**+0.6**
PINM	**Pinnacle**	**5.58**	**46**	P		**Pn**	**15**	**17**	**47.9**	**+0.5**
	baz=232,SNR=21									
MCARA	**McCarthy VSAT**	**5.64**	**26**			**Pn**	**15**	**17**	**48.3**	**+0.2**
MCARA	**McCarthy VSAT**	**5.64**	**26**	P		**Pn**	**15**	**17**	**48.3**	**+0.2**
	baz=211,SNR=46									
CHGN	**Chignik**	**5.68**	**273**			**Pn**	**15**	**17**	**46.5**	**-2.1**
CHGN	**Chignik**	**5.68**	**273**	P		**Pn**	**15**	**17**	**47.2**	**-1.4**
	baz=86,SNR=21									
PNL	**Peninsula**	**5.69**	**52**	P		**Pn**	**15**	**17**	**49.7**	**+0.9**
PNL	**Peninsula**	**5.69**	**52**	P		**Pn**	**15**	**17**	**49.6**	**+0.8**
	baz=238,SNR=63									
BCPM	**Bancas Point**	**5.74**	**49**			**Pn**	**15**	**17**	**50.4**	**+0.9**
O17K	**Koliganek Bris**	**5.78**	**309**	P		**Pn**	**15**	**17**	**48.8**	**-1.2**
	baz=123,SNR=41									
CTG	**Chitna Glacier**	**5.78**	**35**	P		**Pn**	**15**	**17**	**50.7**	**+0.6**
	baz=221,SNR=38									
CTGM	**Chitina Glacie**	**5.79**	**35**	Pn		**Pn**	**15**	**17**	**50.5**	**+0.2**
M24K	**Tolsona, Glenn**	**5.79**	**10**	P		**Pn**	**15**	**17**	**51.2**	**+1.1**
	baz=192,SNR=76									
SKT	**Skwentna**	**5.82**	**344**	P		**Pn**	**15**	**17**	**49.9**	**-0.7**
	baz=162,SNR=17									
P16K	**Nushagak River**	**5.85**	**300**			**Pn**	**15**	**17**	**50.2**	**-0.7**
P16K	**Nushagak River**	**5.85**	**300**	P		**Pn**	**15**	**17**	**50.5**	**-0.4**
	baz=114,SNR=65									
N18K	**Kilae Creek**	**5.86**	**320**			**Pn**	**15**	**17**	**49.6**	**-1.5**
N18K	**Kilae Creek**	**5.86**	**320**	P		**Pn**	**15**	**17**	**49.5**	**-1.5**
	baz=135									
WACK	**Wrangell Chich**	**5.92**	**18**			**Pn**	**15**	**17**	**52.2**	**+0.2**
M20K	**Styx River**	**6.02**	**337**			**Pn**	**15**	**17**	**52.6**	**-0.8**
M20K	**Styx River**	**6.02**	**337**	P		**Pn**	**15**	**17**	**52.4**	**-1.0**
	baz=154									
WAZA	**Wrangell Mount**	**6.03**	**18**			**Pn**	**15**	**17**	**54.0**	**+0.4**
SVW2	**Sparrevohn**	**6.05**	**324**	P		**Pn**	**15**	**17**	**52.0**	**-1.7**
CUT	**Chulitna**	**6.08**	**351**			**Pn**	**15**	**17**	**54.0**	**-0.1**
CUT	**Chulitna**	**6.08**	**351**	P		**Pn**	**15**	**17**	**54.0**	**-0.1**
	baz=170,SNR=14									
O16K	**Kokwok River B**	**6.13**	**305**			**Pn**	**15**	**17**	**53.9**	**-0.9**
O16K	**Kokwok River B**	**6.13**	**305**	P		**Pn**	**15**	**17**	**53.6**	**-1.2**
	baz=118									
WAT6	**Susitna Watana**	**6.17**	**2**	P		**Pn**	**15**	**17**	**55.7**	**+0.2**
	baz=183,SNR=41									
HARP	**HAARP**	**6.18**	**13**			**Pn**	**15**	**17**	**56.5**	**+0.9**
HARP	**HAARP**	**6.18**	**13**	P		**Pn**	**15**	**17**	**56.5**	**+0.9**
	baz=196,SNR=72									
VNKR	**Veniaminof 5**	**6.24**	**271**			**Pn**	**15**	**17**	**55.4**	**-0.9**
N17K	**Nushagak Hills**	**6.25**	**315**	P		**Pn**	**15**	**17**	**55.0**	**-1.4**
	baz=128,SNR=39									
S14K	**Fog Glacier**	**6.31**	**273**	P		**Pn**	**15**	**17**	**56.7**	**-0.7**
	baz=85									
VNFG	**Fog Glacier, M**	**6.31**	**273**			**Pn**	**15**	**17**	**56.3**	**-1.0**
M19K	**Big River Lodg**	**6.34**	**332**			**Pn**	**15**	**17**	**56.2**	**-1.4**
M19K	**Big River Lodg**	**6.34**	**332**	P		**Pn**	**15**	**17**	**56.3**	**-1.4**
	baz=148									
O29M	**Mount Kennedy**	**6.38**	**49**			**Pn**	**15**	**17**	**59.3**	**+0.9**
O29M	**Mount Kennedy**	**6.38**	**49**	P		**Pn**	**15**	**17**	**59.4**	**+1.1**
	baz=236									
P29M	**Windy Craggy**	**6.42**	**56**			**Pn**	**15**	**17**	**59.1**	**+0.4**
P29M	**Windy Craggy**	**6.42**	**56**	P		**Pn**	**15**	**17**	**59.5**	**+0.7**
	baz=244									
M18K	**Stony River**	**6.42**	**325**			**Pn**	**15**	**17**	**57.2**	**-1.5**
M18K	**Stony River**	**6.42**	**325**	P		**Pn**	**15**	**17**	**57.5**	**-1.3**
	baz=140									
WAT1	**Susitna Watana**	**6.42**	**359**	P		**Pn**	**15**	**17**	**59.0**	**+0.2**
	baz=179									
YUK8	**Steele Glacier**	**6.54**	**38**	P		**Pn**	**15**	**18**	**02.3**	**+1.6**
	baz=225,SNR=59									
M26K	**Nabesna, AK**	**6.55**	**22**			**Pn**	**15**	**18**	**00.8

RIDG Independent Ri 7.52 11 P Pn 15 18 14.8 +0.8
baz=195,SNR=36
S32K Killisnoo 7.53 76 Pn 15 18 12.5 -1.4
S32K Killisnoo 7.53 76 P Pn 15 18 12.6 -1.4
baz=267,SNR=7.4
K20K Telida 7.54 339 Pn 15 18 13.3 -0.9
K20K Telida 7.54 339 P Pn 15 18 13.4 -0.7
baz=155
TTA Tatalina 7.62 332 P Pn 15 18 13.6 -1.6
TTA Tatalina 7.62 332 P Pn 15 18 13.8 -1.4
baz=146,SNR=10
R32K Eaglecrest 7.63 70 P Pn 15 18 15.8 +0.4
baz=261
PS1A Pavlof South-1 7.67 268 Pn 15 18 14.2 -1.8
O30N Mendenhall 7.67 50 P Pn 15 18 16.9 +0.9
baz=240,SNR=19
L17K Donlin 7.70 322 Pn 15 18 14.6 -1.7
L17K Donlin 7.70 322 P Pn 15 18 14.9 -1.4
baz=134
JIS Juneau Island 7.70 70 P Pn 15 18 16.1 -0.2
CHUM Lake Minchumin 7.75 346 Pn 15 18 16.4 -0.6
CHUM Lake Minchumin 7.75 346 P Pn 15 18 16.5 -0.5
baz=164,SNR=42
M15K Kasigluk River 7.79 308 Pn 15 18 16.6 -1.0
M15K Kasigluk River 7.79 308 P Pn 15 18 16.4 -1.2
baz=119
M29M Somme Creek 7.80 35 Pn 15 18 18.9 +1.0
M29M Somme Creek 7.80 35 P Pn 15 18 18.9 +1.0
baz=224
L16K Owhat River 7.85 317 P Pn 15 18 17.0 -1.3
baz=128,SNR=25
SCRK Sand Creek 7.85 14 P Pn 15 18 18.6 +0.1
baz=198,SNR=17
N14K Kuskokwak Cree 7.93 302 Pn 15 18 18.5 -1.0
N14K Kuskokwak Cree 7.93 302 P Pn 15 18 18.7 -0.8
baz=111
HDA Harding Lake 8.03 4 Pn 15 18 21.2 +0.4
HDA Harding Lake 8.03 4 P Pn 15 18 21.4 +0.6
baz=185,SNR=23
K17K Iditarod 8.11 325 Pn 15 18 20.3 -1.7
K17K Iditarod 8.11 325 P Pn 15 18 20.3 -1.7
baz=137
WHY Whitehorse 8.15 53 Pn 15 18 23.7 +1.1
WHY Whitehorse 8.15 53 P Pn 15 18 23.9 +1.3
baz=244,SNR=57
N31M Braeburn, Yuko 8.17 47 P Pn 15 18 24.3 +1.5
baz=237,SNR=56
NEA2 Nenana 8.20 357 P Pn 15 18 22.8 -0.3
baz=177,SNR=6.4
K27K Chicken 8.20 19 Pn 15 18 23.3 +0.1
K27K Chicken 8.20 19 P Pn 15 18 23.4 +0.1
baz=205
J18K Innoko River 8.24 332 P Pn 15 18 22.9 -0.8
baz=146
J20K Nowinta River 8.30 342 Pn 15 18 23.5 -1.1
J20K Nowinta River 8.30 342 P Pn 15 18 24.4 -0.2
baz=157
P32M Atlin 8.32 62 Pn Pn 15 18 25.5 +0.6
P32M Atlin 8.32 62 P Pn 15 18 25.7 +0.8
baz=253,SNR=26
J25K Salcha River, 8.32 8 P Pn 15 18 24.6 -0.4
baz=191
M14K Bethel 8.38 307 P Pn 15 18 25.2 -0.4
baz=116,SNR=18
ILAR Eielson Array 8.39 4 Pn Pn 15 18 25.0 -0.8
comp=N,3.6nm,0.3s,baz=188,slow=13,SNR=95
ILAR Sn Sn 15 19 53.9 -6.6
comp=N,4.6nm,0.3s,baz=189,slow=23,SNR=10
ILAR LR LR 15 21 46.4
comp=N,233nm,21.8s,baz=184,slow=38
comp=N,6.0nm,0.4s
L29M L29M 8.40 33 Pn 15 18 26.9 +0.9
L29M L29M 8.40 33 P Pn 15 18 26.7 +0.8
baz=222
U33K Whale Pass 8.40 86 Pn Pn 15 18 22.7 -3.3
U33K Whale Pass 8.40 86 P Pn 15 18 23.0 -3.0
baz=278,SNR=6.7
J26L Joseph Creek 8.41 14 Pn 15 18 26.3 +0.2
J26L Joseph Creek 8.41 14 P Pn 15 18 26.4 +0.3
baz=198
J19K Poorman 8.43 337 P Pn 15 18 25.1 -1.2
baz=152,SNR=12
M30M Minto, Yukon 8.46 39 P Pn 15 18 27.5 +0.8
baz=228,SNR=33
COLA College 8.47 1 Pn 15 18 26.5 -0.3
COLA College 8.47 1 P Pn 15 18 27.1 +0.3
COLA College 8.47 1 P Pn 15 18 27.1 +0.3
baz=182
CRAG Craig 8.52 90 Pn 15 18 24.9 -2.7
CRAG Craig 8.52 90 P Pn 15 18 24.8 -2.7
CRAG Craig 8.52 90 P Pn 15 18 25.0 -2.6
baz=282
MDM Murphy Dome 8.56 360 Pn 15 18 28.2 +0.2
L15K Ungalak Mounta 8.62 313 Pn 15 18 28.1 -0.9
L15K Ungalak Mounta 8.62 313 P Pn 15 18 28.0 -0.9
baz=123
MLY Manley 8.71 353 P Pn 15 18 30.2 -0.1
baz=171,SNR=12
POKR Poker Plat Res 8.72 2 Pn 15 18 30.6 +0.3
POKR Poker Plat Res 8.72 2 P Pn 15 18 30.4 +0.1
baz=183,SNR=13
FALS False Pass 8.75 266 Pn 15 18 28.6 -2.1
FALS False Pass 8.75 266 P Pn 15 18 29.3 -1.4
FALS False Pass 8.75 266 P Pn 15 18 28.7 -2.0
baz=74,SNR=8.1
I23K Minto, Yukon-K 8.76 357 P Pn 15 18 30.7 -0.1
baz=176,SNR=26
WRAK Wrangell Islan 8.79 83 Pn 15 18 31.6 +0.3
DAWY Dawson 8.81 26 Pn 15 18 31.9 +0.3
DAWY Dawson 8.81 26 P Pn 15 18 32.2 +0.6
baz=214,SNR=20
M13K Dall Lake 8.88 303 Pn 15 18 32.2 -0.3
M13K Dall Lake 8.88 303 P Pn 15 18 31.5 -1.0
baz=111
Q32M Nakina River 8.90 67 Pn 15 18 33.5 +0.5
Q32M Nakina River 8.90 67 P Pn 15 18 33.8 +0.8
baz=260
I20K Naaghedeneel 8.93 342 P Pn 15 18 33.7 +0.5
baz=158
P33M Teslin, Yukon 8.93 59 P Pn 15 18 34.4 +1.1
baz=251,SNR=74
ISNN Isanotski Nort 8.95 266 Pn 15 18 31.8 -1.7
L14K Kuka Creek 8.96 309 Pn 15 18 32.9 -0.6
L14K Kuka Creek 8.96 309 P Pn 15 18 33.0 -0.5
baz=118
I21K Tanana 8.97 350 P Pn 15 18 34.1 +0.4
baz=167,SNR=11
K15K Wolf Creek Mou 8.98 316 Pn 15 18 32.6 -1.2
K15K Wolf Creek Mou 8.98 316 P Pn 15 18 33.0 -0.8
baz=126
BRPK Brown Peak 8.99 265 Pn 15 18 31.9 -2.1
EGAK Eagle 9.05 20 Pn 15 18 35.7 +0.9
EGAK Eagle 9.05 20 P Pn 15 18 35.6 +0.8
baz=206,SNR=12
M31M Drury Creek, Y 9.12 45 P Pn 15 18 37.5 +1.7
baz=236,SNR=85
K29M Barlow Dome 9.13 31 Pn 15 18 36.9 +0.8
K29M Barlow Dome 9.13 31 P Pn 15 18 37.1 +1.0
baz=220
N32M Quiet Lake 9.16 53 Pn 15 18 37.4 +1.0
N32M Quiet Lake 9.16 53 P Pn 15 18 37.5 +1.2
baz=245
PRP Porcupine Dome 9.21 7 Pn 15 18 36.4 -0.7
PRP Porcupine Dome 9.21 7 P Pn 15 18 36.4 -0.7
baz=190,SNR=7.7
I26K Coal Creek Min 9.23 13 Pn 15 18 37.4 +0.1
I26K Coal Creek Min 9.23 13 P Pn 15 18 37.8 +0.5
baz=198
J16K Anvik River 9.26 323 Pn 15 18 35.7 -2.0
J16K Anvik River 9.26 323 P Pn 15 18 36.0 -1.7
baz=133,SNR=15
GCSA Galena City Sc 9.36 337 P Pn 15 18 38.2 -0.8
baz=150
V35K Ketchikan 9.39 90 Pn Pn 15 18 37.1 -2.4
V35K Ketchikan 9.39 90 P Pn 15 18 37.7 -1.8
baz=283
J29N Klondike Camp 9.43 27 P Pn 15 18 40.6 +0.6
baz=216,SNR=20
H24K Noodor Dome 9.44 1 P Pn 15 18 40.9 +0.8
baz=182
WESE West Dahl East 9.51 265 Pn 15 18 39.5 -1.7
H21K Melozitna Rive 9.52 348 Pn 15 18 40.0 -1.2
H21K Melozitna Rive 9.52 348 P Pn 15 18 40.7 -0.6
baz=165
FARO Faro, Yukon 9.55 46 Pn Pn 15 18 43.3 +1.7
FARO Faro, Yukon 9.55 46 P Pn 15 18 43.4 +1.7
baz=239,SNR=44
WECS Westdahl Cape 9.60 265 Pn 15 18 40.6 -1.8
H22K Ishtalitna Cre 9.62 352 P Pn 15 18 42.3 -0.3
baz=170
R33M Jennings River 9.64 65 Pn 15 18 43.5 +0.6
R33M Jennings River 9.64 65 P Pn 15 18 43.7 +0.7
baz=259
H20K Anotleneega Mo 9.64 343 Pn 15 18 42.4 -0.6
H20K Anotleneega Mo 9.64 343 P Pn 15 18 42.4 -0.6
baz=158,SNR=10
I17K Unalakleet 9.71 325 Pn 15 18 41.9 -1.9
I17K Unalakleet 9.71 325 P Pn 15 18 42.4 -1.4
baz=135,SNR=16
I27K Kandik River 9.73 16 Pn 15 18 45.0 +0.8
I27K Kandik River 9.73 16 P Pn 15 18 44.8 +0.6
baz=202
I28M Miner Creek 9.89 20 Pn 15 18 47.2 +0.9
I28M Miner Creek 9.89 20 P Pn 15 18 47.1 +0.7
baz=208
T35M Bob Quinn 9.89 79 Pn Pn 15 18 46.3 -0.1
T35M Bob Quinn 9.89 79 P Pn 15 18 47.1 +0.7
baz=274
H19K Roundabout Mou 9.95 340 P Pn 15 18 46.7 -0.4
baz=153
DLBC Dease Lake 10.00 71 Pn Pn 15 18 48.1 +0.2
DLBC Dease Lake 10.00 71 P Pn 15 18 48.7 +0.8
baz=266,SNR=11
DLBC Dease Lake 10.00 71 Pn Pn 15 18 48.4 +0.4
comp=N,5.5nm,0.3s,baz=281,slow=7.9,SNR=139
DLBC Sn Sn 15 20 33.8 -6.4
comp=N,2.2nm,0.3s,baz=220,slow=11,SNR=1.6
DLBC LR LR 15 22 18.6
comp=N,844nm,18.2s,baz=275,slow=36
comp=N,15nm,0.4s
J14K Nanvaranak Lak 10.01 316 P Pn 15 18 47.1 -0.8
baz=123,SNR=9.0
J30M Hart River 10.03 31 Pn Pn 15 18 48.9 +0.5
J30M Hart River 10.03 31 P Pn 15 18 49.5 +1.2
baz=221,SNR=26
H18K Honhosa River 10.04 335 P Pn 15 18 47.3 -1.1
baz=146
M11K Mekoryuk 10.23 300 P Pn 15 18 49.7 -1.2
baz=106
H17K Granite Mounta 10.26 331 P Pn 15 18 50.2 -1.2
baz=141
G24K Hadweenzic Riv 10.31 2 P Pn 15 18 51.8 -0.3
baz=183
H27K Steamboat Moun 10.33 15 P Pn 15 18 52.7 +0.3
baz=201
G23K Bananza Creek 10.35 356 Pn 15 18 52.3 -0.3
G23K Bananza Creek 10.35 356 P Pn 15 18 52.3 -0.3
baz=175,SNR=22
G25K Bearman Lake 10.42 5 P Pn 15 18 53.4 0.0
baz=187
G21K Allakaket 10.43 348 P Pn 15 18 52.9 -0.8
baz=164,SNR=22
I30M Mount Dempster 10.52 28 P Pn 15 18 56.5 +1.5
baz=218,SNR=26
G19K Purcell Mounta 10.62 340 P Pn 15 18 55.2 -1.2
baz=153
G22K Bettles 10.64 353 P Pn 15 18 56.7 +0.1
baz=170,SNR=28
H16K Elim 10.72 326 P Pn 15 18 56.0 -1.6
baz=134,SNR=11
G18K Tagagawik 10.73 336 P Pn 15 18 57.3 -0.5
baz=148
G26K Porcupine Rive 10.76 9 P Pn 15 18 58.3 +0.2
baz=194
UNV Unalaska Valle 10.79 264 P Pn 15 18 55.6 -3.0
UNV Unalaska Valle 10.79 264 P Pn 15 18 55.6 -3.0
baz=69
WTLY Watson Lake, Y 10.85 62 Pn 15 19 00.3 +0.8
WTLY Watson Lake, Y 10.85 62 P Pn 15 19 00.5 +1.0
baz=258,SNR=5.6
COLD Coldfoot 10.87 356 P Pn 15 18 59.5 -0.2
baz=174,SNR=17
H29M Whitestone 10.88 22 P Pn 15 19 00.9 +1.0
baz=210
G17K Kiwalik Mounta 10.90 332 P Pn 15 18 59.4 -0.7
baz=141
F21K Alatna River 11.11 349 P Pn 15 19 02.5 -0.4
baz=165
F24K Squaw Lake 11.13 1 P Pn 15 19 03.5 +0.3
baz=181
F20K Avaraart Lake 11.22 345 P Pn 15 19 04.4 -0.1
baz=159
F25K Christian Rive 11.27 5 P Pn 15 19 04.5 -0.6
baz=188
G16K Koyuk River 11.29 328 P Pn 15 19 04.2 -1.2
baz=137
EPYK Eagle Plains 11.36 24 Pn 15 19 07.2 +0.7
EPYK Eagle Plains 11.36 24 P Pn 15 19 07.0 +0.5
baz=214,SNR=16
F19K Shaleruckik Mo 11.36 341 P Pn 15 19 06.1 -0.3
baz=153
F26K Sheenjek River 11.46 8 P Pn 15 19 07.8 0.0
baz=192
G15K Niukluk 11.53 325 P Pn 15 19 07.0 -1.7
baz=131
F18K Selawik 11.54 337 P Pn 15 19 08.9 0.0
baz=147,SNR=6.1
E23K Chandalar 11.69 357 P Pn 15 19 11.4 +0.4
baz=176
E24K Your Creek 11.69 359 P Pn 15 19 11.2 +0.3
baz=180
ANM Nome 11.71 321 Pn 15 19 10.7 -0.5
ANM Nome 11.71 321 P Pn 15 19 10.3 -0.9
baz=127,SNR=13
F17K Baldwin Pennin 11.79 334 P Pn 15 19 11.0 -1.2
baz=143,SNR=5.7
E25K Arctic Village 11.79 5 P Pn 15 19 12.2 -0.2
baz=187,SNR=22
E19K Redstone River 11.83 343 P Pn 15 19 11.8 -1.0
baz=155
E22K Anaktuvuk Pass 11.86 353 P Pn 15 19 13.1 -0.1
baz=171
F28M Old Crow 11.87 16 P Pn 15 19 13.5 +0.1
baz=203,SNR=22
G30M tAoh Zraii Nji 11.98 23 P Pn 15 19 16.8 +1.8
baz=214
SPIA Saint Paul Isl 12.09 283 P Pn 15 19 16.1 -0.3
SPIA Saint Paul Isl 12.09 283 P Pn 15 19 15.3 -1.1
baz=85
F15K North Star Dit 12.19 326 P Pn 15 19 16.7 -1.1
baz=132
TOLK Toolik Lake Re 12.27 358 Pn 15 19 19.2 +0.3
TOLK Toolik Lake Re 12.27 358 P Pn 15 19 19.0 +0.2
baz=177,SNR=14
E21K Killik River 12.34 350 P Pn 15 19 19.5 -0.2
baz=165
G31M Satah River 12.39 26 P Pn 15 19 21.2 +0.8
baz=219,SNR=30
E20K Nigu River 12.41 346 P Pn 15 19 20.8 -0.1
baz=159,SNR=32
NIKH Nikolski High 12.42 262 P Pn 15 19 18.5 -2.4
NIKH Nikolski High 12.42 262 P Pn 15 19 18.7 -2.3
baz=66
E17K Hotham Inlet 12.44 335 P Pn 15 19 20.9 -0.2
baz=143,SNR=8.4
E18K Tukpahlearik C 12.44 337 P Pn 15 19 21.0 -0.1
baz=147,SNR=6.6
BBB Bella Bella 12.47 102 Pn Pn 15 19 21.2 -0.3
comp=N,0.7nm,0.3s,baz=239,slow=5.0,SNR=9.2
BBB Sn Sn 15 21 33.1 -7.2
comp=N,0.8nm,0.3s,baz=204,slow=20,SNR=7.7
BBB LR LR 15 23 10.0
comp=N,760nm,19.0s,baz=318,slow=33
comp=N,14nm,0.8s
F14K Arctic Creek 12.58 323 P Pn 15 19 22.4 -0.7
baz=128
F30M Barrier River 12.60 22 P Pn 15 19 24.9 +1.5
baz=213
D22K Ayikyak River 12.66 353 P Pn 15 19 24.9 +0.8
baz=169
D24K Happy Valley 12.77 359 P Pn 15 19 26.9 +1.2
baz=179
E28M Babbage River 12.83 14 P Pn 15 19 28.2 +1.7
baz=202
E29M Blow River 12.88 17 P Pn 15 19 29.0 +1.8
baz=207
D20K Ettiluk River 12.90 346 P Pn 15 19 27.2 -0.2
baz=159
D19K Kuna River 12.92 344 P Pn 15 19 27.7 +0.1
baz=155
F31M Tsiigehtchic 12.92 26 P Pn 15 19 29.5 +1.8
baz=218,SNR=12
D25K Kavik River 12.96 3 P Pn 15 19 29.3 +1.0
baz=185
C21K Knifeblade Rid 13.11 350 P Pn 15 19 31.1 +0.8
baz=164
TNA Tin City 13.17 322 P Pn 15 19 31.0 0.0
baz=125
KOTAN Kotaneelee Air 13.21 64 P Pn 15 19 33.8 +2.2
baz=264,SNR=16
D27M Malcolm River 13.26 11 P Pn 15 19 35.3 +2.9
baz=198
C24K Franklin Bluff 13.34 359 P Pn 15 19 34.2 +0.8
baz=179
RDOG Red Dog Mine 13.46 336 P Pn 15 19 36.0 +0.9
baz=143
B21K Ikpikpuk River 13.54 350 P Pn 15 19 35.8 -0.3
baz=165
C18K Utukok River 13.60 340 P Pn 15 19 37.3 +0.4
baz=148
D28M Stokes Point 13.62 14 P Pn 15 19 40.5 +3.3
baz=203
INK Inuvik 13.66 24 P Pn 15 19 39.2 +1.4
baz=217,SNR=61
INK Inuvik 13.66 24 Pn Pn 15 19 38.7 +0.9
comp=N,0.5nm,0.3s,baz=208,slow=16,SNR=74
INK LR LR 15 24 29.0
comp=N,222nm,21.2s,baz=206,slow=36
comp=N,58nm,1.0s
C19K Lookout Ridge 13.70 343 P Pn 15 19 39.4 +1.0
baz=153
C17K DeLong Mountai 13.86 337 P Pn 15 19 40.8 +0.2
baz=144
WRGLY Wrigley 14.11 51 Pn Pn 15 19 44.4 +0.5
WRGLY Wrigley 14.11 51 P Pn 15 19 46.2 +2.3
baz=252,SNR=16
B22K Teshekpuk Lake 14.15 353 P Pn 15 19 44.5 +0.1
baz=168
C16K Lisburne Hills 14.22 333 P Pn 15 19 44.8 -0.6
baz=139
B18K Kokolik River 14.32 340 P Pn 15 19 47.0 +0.2
baz=149
CBB Campbell River 15.06 106 Pn Pn 15 19 57.1 +0.2
CBB IAmb IAmb 15 20 09.6
comp=Z,37nm,1.3s
A21K Barrow 15.37 350 P Pn 15 19 58.8 -2.1
baz=162,SNR=21
ATKA Atka Island 15.70 265 P Pn 15 20 02.4 -2.9
CLRS Cowichan Lake 16.42 107 P P 15 20 17.1 -0.2
C36M Paulatuk 16.81 30 P Pn 15 20 18.3 -1.0
baz=232,SNR=25
ADK Adak 17.22 267 P Pn 15 20 22.5 -2.1
BRLDA Berland Lookou 17.64 85 IAmb IAmb 15 20 35.5
comp=Z,64nm,1.1s
YKA Yellowknife Ar 17.96 56 P P 15 20 34.5 +0.3
comp=Z,0.8nm,0.3s,baz=263,slow=11,SNR=45
YKA S Sn 15 23 45.3 -8.5
comp=Z,0.2nm,0.5s,baz=308,slow=28,SNR=1.2
YKA LR LR 15 27 16.4
comp=Z,321nm,19.6s,baz=260,slow=36
comp=Z,3.3nm,0.7s
A36M Sachs Harbour 18.31 23 P P 15 20 38.0 0.0
A36M Sachs Harbour 18.31 23 P P 15 20 38.0 0.0
baz=224,SNR=74
F04A Amboy 19.16 112 IAmb IAmb 15 20 52.9
comp=Z,55nm,1.0s
LTY Liberty 19.21 107 IAmb IAmb 15 20 52.8
comp=Z,83nm,1.3s
B08A Colville Reser 19.27 103 P P 15 20 48.6 -0.2
B08A IAmb IAmb 15 20 53.5
comp=Z,78nm,1.4s
HOOD Mount Hood Mea 19.97 113 IAmb IAmb 15 21 02.3
comp=Z,67nm,1.3s
H04D Lebanon 19.98 116 IAmb IAmb 15 21 02.7
comp=Z,83nm,1.3s
E07A Sunnyside 20.09 107 P P 15 20 58.3 +0.5
E07A IAmb IAmb 15 21 03.0
comp=Z,55nm,1.0s
BUCK Buck Mountain 20.09 117 IAmb IAmb 15 21 04.1
comp=Z,58nm,1.2s
H04A Detroit Lake 20.14 115 IAmb IAmb 15 21 03.4
comp=Z,96nm,1.4s
C09A Chrisman Ranch 20.17 103 IAmb IAmb 15 21 04.2
comp=Z,84nm,1.5s
G05A Wamic 20.20 112 IAmb IAmb 15 21 05.4
comp=Z,99nm,1.4s
EDM Edmonton 20.20 84 IAmb IAmb 15 21 05.0
comp=Z,88nm,1.4s
D08A Wollman Farm, 20.27 105 P P 15 20 59.6 -0.2
I03D Drain, OR 20.28 118 IAmb IAmb 15 21 05.3
comp=Z,61nm,1.4s
J01E Myrtle Point 20.40 120 IAmb IAmb 15 21 06.7
comp=Z,71nm,1.1s
KEBM Edson Butte 20.43 122 Pn 15 21 03.6 0.0
F07A Phinny Hill Vi 20.48 109 IAmb IAmb 15 21 07.8
comp=Z,39nm,1.0s
NEW Newport 20.52 100 P P 15 21 03.2 +0.7
NEW Newport 20.52 100 P Pn 15 21 04.1 -0.6
baz=305,SNR=14
NEW Newport 20.52 100 P P 15 21 03.0 +0.5
comp=Z,11nm,1.0s,baz=309,slow=7.2,SNR=11
NEW LR LR 15 27 53.9
comp=Z,388nm,19.7s,baz=298,slow=34
comp=Z,11nm,1.0s
E08A Dider Farm, El 20.55 107 IAmb IAmb 15 21 08.1
comp=Z,36nm,1.1s
I04A Tendick Farm, 20.67 117 IAmb IAmb 15 21 07.0
comp=Z,61nm,1.4s
DBO Dodson Butte 20.76 119 IAmb IAmb 15 21 12.1
comp=Z,48nm,1.1s
K02D Willamette Mer 20.88 121 Pn 15 21 08.8 -0.1
K02D IAmb IAmb 15 21 09.9
comp=Z,60nm,1.1s
E09A Wood Farm, Sta 21.03 105 IAmb IAmb 15 21 13.4
comp=Z,55nm,1.4s
HUMO Hull Mountain 21.29 120 IAmb IAmb 15 21 14.3
comp=Z,47nm,0.9s
L02F Cave Junction 21.36 122 IAmb IAmb 15 21 24.3
comp=Z,48nm,1.2s
J05D Fort Rock, OR 21.63 116 IAmb IAmb 15 21 17.8
comp=Z,54nm,1.0s
KRMB Red Mountain 21.67 123 P P 15 21 14.6 -0.4
KRMB IAmb IAmb 15 21 18.2
comp=Z,77nm,1.3s
K04D Chiloquin, OR 21.86 118 IAmb IAmb 15 21 20.1
comp=Z,57nm,1.0s
L04D Klamath Falls 21.90 120 IAmb IAmb 15 21 20.4
comp=Z,50nm,1.1s
I07A Izee 21.93 112 IAmb IAmb 15 21 20.6
comp=Z,35nm,1.0s
SHEM Shemya Is, Ala 21.97 276 LR LR 15 30 32.2
comp=Z,206nm,18.1s,baz=33,slow=39
YBH Yreka Blue Hor 22.07 121 P P 15 21 20.5 +1.3
comp=Z,13nm,1.0s,baz=344,slow=4.6,SNR=20
YBH LR LR 15 27 50.2
comp=Z,408nm,19.5s,baz=318,slow=31
comp=Z,13nm,1.0s
K05A Summer Lake 22.21 117 IAmb IAmb 15 21 24.1
comp=Z,45nm,1.0s
KHMM Horse Mountain 22.27 124 IAmb IAmb 15 21 30.0
comp=Z,50nm,1.2s
BMO Blue Mountains 22.56 108 IAmb IAmb 15 21 27.0
comp=Z,30nm,1.2s
J08A Circle Bar Ran 22.98 112 IAmb IAmb 15 21 32.3
comp=Z,45nm,1.2s
BILL Bilibino 23.53 318 P P 15 21 33.2 -0.9
WVOR Wild Horse Val 23.55 114 IAmb IAmb 15 21 37.7
comp=Z,24nm,0.9s
EGMT Eagleton 24.72 93 P P 15 21 45.3 -0.3
baz=304
HLID Hailey 24.96 107 IAmb IAmb 15 21 51.5
comp=Z,17nm,1.1s
HLID Hailey 24.96 107 P P 15 21 49.0 +1.2
baz=313,SNR=22
AFDM Forest Hills D 25.08 123 IAmb IAmb 15 21 52.3
comp=Z,21nm,1.1s
BOZ Bozeman (W) 25.14 100 P P 15 21 49.8 +0.4
baz=309,SNR=6.4
PAHR Pah Rah Range 25.24 119 IAmb IAmb 15 21 52.9
comp=Z,30nm,1.3s
EMB Emerald Bay 25.47 121 IAmb IAmb 15 21 56.5
comp=Z,26nm,1.0s
FFC Flin Flon 25.81 74 P P 15 21 55.6 +0.4
FFC IAmb IAmb 15 21 60.0
comp=Z,33nm,1.4s
YERR Yerington 25.87 120 IAmb IAmb 15 22 00.9
comp=Z,32nm,1.2s
YNR Norris Junctio 26.21 101 IAmb IAmb 15 22 02.3
comp=Z,22nm,1.2s
KVN Kaiserville 26.37 118 IAmb IAmb 15 22 05.9
comp=Z,18nm,1.0s
H17A Grant Village 26.48 101 IAmb IAmb 15 22 05.6

comp=Z,18nm,1.2s
H17A **Grant Village** 26.48 101 P P 15 22 04.0 +2.4
baz=310,SNR=8.8
YMP **Mirror Lake Pl** 26.48 100 IAmb IAmb 15 22 04.4
comp=Z,26nm,1.5s
ELK **Elko** 26.53 112 IAmb IAmb 15 22 04.9
comp=Z,17nm,1.1s
ELK **Elko** 26.53 112 LR LR 15 31 06.7
comp=Z,148nm,19.1s,baz=327,slow=33
FLWY **Flagg Ranch** 26.61 102 IAmb IAmb 15 22 06.1
comp=Z,43nm,1.5s
RLMT **Red Lodge** 26.73 98 P P 15 22 05.5 +1.6
baz=309,SNR=7.6
NVAR **Mina Array Bea** 26.76 120 P P 15 22 05.5 +1.3
comp=Z,7.0nm,0.8s,baz=305,slow=9.0,SNR=39
NVAR PcP PcP 15 25 27.2 +0.1
comp=Z,0.8nm,0.6s,baz=285,slow=2.4,SNR=5.3
NVAR LR LR 15 30 48.2
comp=Z,267nm,19.1s,baz=300,slow=32
comp=Z,7.0nm,0.8s
LHV **Little Huntoon** 26.80 120 IAmb IAmb 15 22 10.3
comp=Z,23nm,1.2s
MDPB **Devils Postpil** 27.02 122 IAmb IAmb 15 22 09.6
comp=Z,17nm,1.1s
MLAC **Mammoth, Mammc** 27.14 121 P P 15 22 09.2 +1.5
baz=323
RES **Resolute Bay** 27.15 28 P P 15 22 06.8 -0.3
RES **Resolute Bay** 27.15 28 LR LR 15 33 26.7
comp=Z,138nm,19.0s,baz=248,slow=38
LAO **LASA Array** 27.45 93 P P 15 22 11.0 +0.8
baz=306
DGMT **Dagmar** 27.56 88 P P 15 22 12.0 +0.8
baz=303
DSP **Deep Springs** 27.76 121 IAmb IAmb 15 22 16.3
comp=Z,15nm,1.2s
Q12A **Willow Creek R** 28.01 114 IAmb IAmb 15 22 18.1
comp=Z,19nm,1.0s
BW06 **Boulder Array** 28.11 103 P P 15 22 16.7 +0.4
baz=312
PDAR **Pinedale Array** 28.11 103 P P 15 22 17.0 +0.7
comp=Z,1.8nm,0.7s,baz=339,slow=3.7,SNR=6.6
PDAR LR LR 15 33 26.3
comp=Z,92nm,18.1s,baz=326,slow=36
comp=Z,1.8nm,0.7s
R11B **Troy Canyon, C** 28.16 116 IAmb IAmb 15 22 19.1
comp=Z,14nm,1.0s
R11B **Troy Canyon, C** 28.16 116 P P 15 22 18.1 +1.3
baz=320,SNR=27
DUG **Dugway, Tooele** 28.19 110 P P 15 22 17.9 +1.0
baz=317,SNR=6.8
SPR3 **Spring Creek 3** 28.29 114 IAmb IAmb 15 22 21.6
comp=Z,18nm,1.1s
GRAC **Grapevine Rang** 28.35 120 IAmb IAmb 15 22 21.5
comp=Z,24nm,1.2s
GRAC **Grapevine Rang** 28.35 120 P P 15 22 19.4 +1.2
baz=323
FCC **Fort Churchill** 28.44 62 IAmb IAmb 15 22 21.4
comp=Z,22nm,1.4s
CWC **Cottonwood Cre** 28.46 122 P P 15 22 20.0 +0.7
baz=324
SMMC **Simmler** 28.50 126 P P 15 22 21.1 +1.5
baz=326
WCT **Wildcat Mounta** 28.87 119 IAmb IAmb 15 22 25.7
comp=Z,17nm,1.1s
ISA **Isabella, Lake** 28.91 123 P P 15 22 24.4 +1.2
baz=325,SNR=5.7
TPNV **Topopah Spring** 28.93 119 IAmb IAmb 15 22 26.2
comp=Z,18nm,1.2s
TPNV **Topopah Spring** 28.93 119 P P 15 22 25.0 +1.5
baz=322,SNR=12
PKM **Mcpherson Peak** 28.93 126 P P 15 22 25.6 +2.0
baz=327,SNR=5.9
FURC **Furnace Creek,** 29.01 120 P P 15 22 26.1 +2.1
baz=323
BSUT **Blindstream Ca** 29.02 107 IAmb IAmb 15 22 27.1
comp=Z,14nm,1.1s
MPMC **Manual Prospec** 29.04 122 P P 15 22 26.4 +1.8
baz=324,SNR=11
PRN **Pahroc Range** 29.16 117 IAmb IAmb 15 22 28.9
comp=Z,19nm,1.0s
GWY **Greenwater Val** 29.33 120 IAmb IAmb 15 22 29.7
comp=Z,12nm,1.0s
QSM **Queen of Sheba** 29.41 121 IAmb IAmb 15 22 30.5
comp=Z,22nm,1.1s
LRMC **Laurel Mtn Rad** 29.42 122 P P 15 22 29.3 +1.4
baz=325,SNR=11
SEY **Seymchan** 29.69 307 LR LR 15 35 22.9
comp=Z,312nm,19.4s,baz=88,slow=38
EDW2 **Edwards Air Fo** 29.77 124 P P 15 22 31.9 +1.0
baz=326
P17A **Butcher Ranch,** 29.80 109 IAmb IAmb 15 22 33.6
comp=Z,17nm,1.5s
GSC **Goldstone, Bar** 29.98 121 IAmb IAmb 15 22 35.5
comp=Z,12nm,1.1s
GSC **Goldstone, Bar** 29.98 121 P P 15 22 34.3 +1.5
baz=324,SNR=6.9
Q16A **Castle Valley** 29.98 110 IAmb IAmb 15 22 36.7
comp=Z,13nm,1.1s
SZCU **Shurtz Canyon** 30.00 114 IAmb IAmb 15 22 35.4
comp=Z,10nm,0.9s
MTPU **Mount Pierson** 30.12 112 IAmb IAmb 15 22 37.4
comp=Z,11nm,1.1s
RWWY **Rawlins** 30.12 102 IAmb IAmb 15 22 35.4
comp=Z,13nm,1.0s
RSSD **Black Hills** 30.25 95 P P 15 22 35.1 -0.2
RSSD IAmb IAmb 15 22 37.7
comp=Z,13nm,0.8s
RSSD **Black Hills** 30.25 95 P P 15 22 36.7 +1.4
baz=310
TUQ **Turquoise Moun** 30.29 120 P P 15 22 37.3 +1.7
baz=324
LCMT **Little Creek M** 30.37 115 IAmb IAmb 15 22 39.0
comp=Z,9.4nm,0.9s
BFSC **Mount Baldy Ra** 30.46 124 P P 15 22 38.3 +1.3
baz=326,SNR=9.8
PKCU **Pink Cliffs** 30.51 113 IAmb IAmb 15 22 40.9
comp=Z,22nm,1.1s
KNB **Kanab** 30.58 114 IAmb IAmb 15 22 41.0
comp=Z,18nm,1.2s
V12A **Nelson** 30.58 118 IAmb IAmb 15 22 41.2
comp=Z,20nm,1.0s
HEC **Hector,Ludlow** 30.59 121 P P 15 22 39.7 +1.6
baz=325,SNR=7.9
O20A **White River Ci** 30.65 105 IAmb IAmb 15 22 41.0
comp=Z,17nm,0.9s
O20A **White River Ci** 30.65 105 P P 15 22 39.6 +0.8
baz=315,SNR=9.8
PETK **Petropavlovsk-** 30.70 287 P P 15 22 39.3 +0.4
comp=Z,1.5nm,0.6s,baz=67,slow=14,SNR=2.0
PETK LR LR 15 34 32.7
comp=Z,117nm,21.2s,baz=86,slow=36
comp=Z,1.5nm,0.6s
GMRC **Granite Mounta** 30.95 121 P P 15 22 42.6 +1.2
baz=324,SNR=8.2
SCI2 **San Clemente I** 31.11 126 P P 15 22 44.1 +1.5
baz=328
ULM **Lac du Bonnet** 31.19 79 P P 15 22 43.6 +0.4
ULM IAmb IAmb 15 22 44.9
comp=Z,9.5nm,0.9s
ULM **Lac du Bonnet** 31.19 79 P P 15 22 44.0 +0.7
comp=Z,7.4nm,0.9s,baz=290,slow=9.1,SNR=9.9
ULM LR LR 15 35 14.5
comp=Z,343nm,18.3s,baz=292,slow=36
comp=Z,7.4nm,0.9s
U15A **North Rim** 31.30 114 IAmb IAmb 15 22 47.3
comp=Z,8.6nm,1.0s
N23A **Red Feather La** 31.36 102 P P 15 22 45.9 +0.8
baz=314
BELC **Belle Mtn. Jos** 31.43 122 P P 15 22 46.5 +0.9
baz=325,SNR=7.3
MA2 **Magadan** 31.49 302 LR LR 15 36 28.4
comp=Z,244nm,19.7s,baz=91,slow=38
PFO **Pinyon Flats O** 31.53 123 P P 15 22 47.5 +1.0
baz=326,SNR=5.2
PFO **Pinyon Flats O** 31.53 123 LR LR 15 33 07.4
comp=Z,312nm,19.1s,baz=330,slow=32
TPFO **Pinon Flats** 31.54 123 P P 15 22 47.4 +0.8
baz=326
W13A **Hualapai Mount** 31.55 118 IAmb IAmb 15 22 49.6
comp=Z,12nm,0.9s
IRM **Iron Mountain** 31.70 121 P P 15 22 49.7 +1.8
baz=325,SNR=24
109C **Camp Elliot, M** 31.83 125 P P 15 22 50.7 +1.7
baz=327
BC3 **Big Chuckawall** 31.97 122 P P 15 22 51.6 +1.2
baz=325,SNR=5.4
PDMCI **Parker Dam,Lak** 32.07 119 P P 15 22 52.4 +1.3
baz=324
MONP2 **Monument Peak** 32.15 124 P P 15 22 53.7 +1.6
baz=326,SNR=11
AGMN **Agassiz Nation** 32.27 82 P P 15 22 53.6 +0.9
baz=304
ISCO **Idaho Springs** 32.31 103 P P 15 22 54.9 +1.4
baz=315
SWSC **Sam W. Stewart** 32.39 123 P P 15 22 55.2 +1.3
baz=326
WUAZ **Wupatki** 32.48 114 P P 15 22 56.2 +1.3
baz=322,SNR=22
IKP **In-Ko-Pah, Jac** 32.49 123 P P 15 22 56.1 +1.2
baz=326,SNR=7.1
YUH **Yuha Desert** 32.58 123 IAmb IAmb 15 22 58.2
comp=Z,16nm,1.1s
MVCO **Mesa Verde** 32.66 109 IAmb IAmb 15 22 58.3
comp=Z,12nm,0.9s
MVCO **Mesa Verde** 32.66 109 P P 15 22 56.7 +0.2
baz=319,SNR=8.3
GLA **Glamis** 32.76 121 P P 15 22 58.8 +1.6
baz=326
S22A **4UR Ranch, Cre** 33.14 107 P P 15 23 01.9 +1.1
baz=318,SNR=5.3
Q24A **Divide** 33.16 103 P P 15 23 02.1 +1.1
baz=316
B35A **Bob, Littlefor** 33.40 80 IAmb IAmb 15 23 04.1
comp=Z,15nm,1.2s
OGNE **Ogallala** 33.47 98 P P 15 23 04.6 +1.2
baz=313,SNR=5.8
F33A **5 Mile Ranch,** 33.48 86 IAmb IAmb 15 23 05.2
comp=Z,10nm,1.1s
113A **Mohawk Valley,** 33.50 120 IAmb IAmb 15 23 06.0
comp=Z,18nm,1.3s
W18A **Petrified Fore** 33.62 113 IAmb IAmb 15 23 07.5
comp=Z,13nm,1.0s
W18A **Petrified Fore** 33.62 113 P P 15 23 06.0 +1.1
baz=321
SDCO **Great Sand Dun** 33.85 105 P P 15 23 08.1 +1.1
baz=317,SNR=14
KSCO **Kaye Shedlock'** 34.49 101 P P 15 23 14.0 +1.7
baz=315
214A **Organ Pipe Nat** 34.62 120 IAmb IAmb 15 23 16.2
comp=Z,18nm,1.1s
214A **Organ Pipe Nat** 34.62 120 P P 15 23 15.2 +1.8
baz=325,SNR=11
PIX **Pinacate** 34.64 121 IAmb IAmb 15 23 16.2
comp=Z,15nm,1.1s
EYMN **Ely** 34.86 79 P P 15 23 15.9 +0.5
EYMN **Ely** 34.86 79 P P 15 23 16.7 +1.4
baz=306,SNR=19
BGNE **Belgrade** 35.30 94 P P 15 23 20.5 +1.4
baz=312
TUC **Tucson** 35.33 117 P P 15 23 21.4 +1.8
baz=324
ANMO **Albuquerque** 35.45 109 P P 15 23 19.5 -1.3
ANMO **Albuquerque** 35.45 109 P P 15 23 22.4 +1.6
baz=320
ANMO **Albuquerque** 35.45 109 LR LR 15 37 54.2
comp=Z,105nm,18.4s,baz=48,slow=36
SPMN **Marine on St.** 35.79 84 P P 15 23 24.9 +1.6
baz=308
Y22D **IRIS PASSCAL I** 35.88 111 P P 15 23 25.9 +1.5
baz=321
Y22F **Passcal Instru** 35.88 111 P P 15 23 26.0 +1.6
baz=321
CBKS **Cedar Bluff** 36.22 98 P P 15 23 28.5 +1.4
baz=315
RTBA **Rita Blanca** 36.30 104 IAmb IAmb 15 23 30.3
comp=Z,13nm,1.0s
121A **Cookes Peak, D** 36.65 113 IAmb IAmb 15 23 34.1
comp=Z,16nm,0.9s
121A **Cookes Peak, D** 36.65 113 P P 15 23 33.0 +2.0
baz=323,SNR=12
G40A **Rib Lake** 37.20 82 IAmb IAmb 15 23 36.8
comp=Z,11nm,0.9s
KSU1 **Kansas State U** 37.74 95 IAmb IAmb 15 23 41.3
comp=Z,12nm,0.6s
KSU1 **Kansas State U** 37.74 95 P P 15 23 41.0 +1.0
baz=315
FRB **Frobisher Bay** 37.90 45 LR LR 15 38 40.9
comp=Z,272nm,18.1s,baz=252,slow=35
AMTX **Amarillo** 38.04 104 IAmb IAmb 15 23 45.0
comp=Z,23nm,1.0s
AMTX **Amarillo** 38.04 104 P P 15 23 44.0 +1.4
baz=319
MSTX **Muleshoe** 38.15 107 IAmb IAmb 15 23 45.6
comp=Z,18nm,1.0s
MSTX **Muleshoe** 38.15 107 P P 15 23 44.6 +1.0
baz=320,SNR=5.2
MNTX **Cornudas Mount** 38.55 112 P P 15 23 48.6 +1.7
baz=323,SNR=18
SMWD **Samnorwood** 38.65 103 IAmb IAmb 15 23 50.1
comp=Z,16nm,0.9s
JFWS **Jewell Farm** 38.68 85 IAmb IAmb 15 23 49.1
comp=Z,15nm,0.9s
JFWS **Jewell Farm** 38.68 85 P P 15 23 48.6 +0.7
baz=311
L40A **Anamosa** 38.70 87 IAmb IAmb 15 23 49.3
comp=Z,22nm,0.9s
I42A **Draeger Farm,** 38.78 83 IAmb IAmb 15 23 50.9
comp=Z,24nm,1.1s
P38A **Dawn** 39.08 92 IAmb IAmb 15 23 52.9
comp=Z,22nm,0.9s
OK048 **Pawnee Station** 39.48 98 IAmb IAmb 15 23 56.3
comp=Z,14nm,0.8s
POST **Post** 39.52 106 IAmb IAmb 15 23 56.9
comp=Z,16nm,1.0s
L42A **Oliver, Polo** 39.61 86 IAmb IAmb 15 23 56.6
comp=Z,18nm,0.9s
YAK **Yakutsk** 39.71 313 LR LR 15 41 18.9
comp=Z,122nm,18.0s,baz=76,slow=38
WMOK **Wichita Mounta** 39.72 102 IAmb IAmb 15 23 58.9
comp=Z,24nm,1.1s
WMOK **Wichita Mounta** 39.72 102 P P 15 23 57.9 +1.3
baz=319,SNR=17
P40A **Paris** 39.97 91 IAmb IAmb 15 24 00.1
comp=Z,14nm,0.9s
APMT **Aspermont** 40.06 105 P P 15 23 59.3 -0.2
R40A **Maddies Statio** 40.72 92 IAmb IAmb 15 24 05.4
comp=Z,11nm,0.8s
HDIL **Hopedale** 40.79 87 P P 15 24 05.8 +0.4
baz=313
P43A **Skaggs, Pawnee** 41.30 88 IAmb IAmb 15 24 11.0
comp=Z,24nm,0.9s
TXAR **Lajitas Array** 41.32 112 P P 15 24 10.8 +0.8
comp=Z,4.6nm,1.0s,baz=327,slow=6.0,SNR=35
TXAR PcP PcP 15 26 08.4 0.0
comp=Z,0.8nm,0.9s,baz=284,slow=0.5,SNR=2.9
TXAR LR LR 15 40 37.3
comp=Z,100nm,18.7s,baz=328,slow=35
comp=Z,4.6nm,1.0s
OZNA **Ozona** 41.39 108 IAmb IAmb 15 24 12.4
comp=Z,15nm,1.0s
CCM **Cathedral Cave** 41.45 91 P P 15 24 10.2 -0.7
CCM **Cathedral Cave** 41.45 91 P P 15 24 11.1 +0.2
baz=315
FVM **French Village** 41.96 91 IAmb IAmb 15 24 16.1
comp=Z,18nm,1.1s
SFIN **Lafayette** 42.13 86 P P 15 24 16.3 -0.1
baz=314
LPIG **La Paz** 42.42 124 LR LR 15 39 10.4
comp=Z,105nm,20.1s,baz=334,slow=32
JCT **Junction City** 42.44 107 P P 15 24 19.2 +0.2
JCT IAmb IAmb 15 24 21.0
comp=Z,27nm,0.9s
JCT **Junction City** 42.44 107 P P 15 24 20.0 +0.9
baz=322,SNR=9.7
WHTX **Lake Whitney,** 42.52 103 IAmb IAmb 15 24 21.7
comp=Z,13nm,0.8s
WHTX **Lake Whitney,** 42.52 103 P P 15 24 20.3 +0.7
baz=320
FCAR **Ozark Folk Cen** 42.52 94 IAmb IAmb 15 24 19.9
comp=Z,14nm,1.1s
SUMG **Summit** 42.58 25 P P 15 24 19.3 -0.9
SUMG IAmb IAmb 15 24 35.1
comp=Z,27nm,1.2s
SUMG **Summit** 42.58 25 *i* P P 15 24 20.9 +0.7
SFJD **Kangerlussuaq** 42.63 35 LR LR 15 40 23.0
comp=Z,189nm,19.6s,baz=294,slow=34
MIAR **Mount Ida** 42.71 97 P P 15 24 21.4 +0.2
baz=318
S44A **Carbondale** 42.81 90 IAmb IAmb 15 24 22.6
comp=Z,14nm,0.9s
SIUC **Southern Illin** 42.82 90 IAmb IAmb 15 24 23.2
comp=Z,18nm,1.0s
DRIO **Del Rio** 42.84 109 IAmb IAmb 15 24 23.6
comp=Z,14nm,0.8s
O48B **Farmland** 43.29 84 P P 15 24 26.1 +0.3
baz=314
435B **Jarrell** 43.39 104 P P 15 24 28.3 +1.6
baz=321
SCHQ **Schefferville** 43.41 56 P P 15 24 27.4 +0.7
comp=Z,6.9nm,1.0s,baz=304,slow=5.3,SNR=5.9
SCHQ LR LR 15 42 28.0
comp=Z,204nm,18.9s,baz=256,slow=36
comp=Z,6.9nm,1.0s
SADO **Sadowa** 43.53 75 LR LR 15 40 40.4
comp=Z,141nm,18.6s,baz=24,slow=34
WCI **Wyandotte Cave** 44.08 87 P P 15 24 33.2 +1.0
baz=315
833A **Chaparral WMA,** 44.36 108 P P 15 24 35.0 +0.4
baz=323
ACSO **Alum Creek Sta** 44.51 83 P P 15 24 35.9 +0.3
baz=314
WVT **Waverly** 44.73 91 P P 15 24 38.2 +0.7
baz=317
M53A **WI Miller and** 44.94 80 P P 15 24 39.6 +0.6
baz=313
OXF **Oxford** 45.04 93 P P 15 24 40.5 +0.6
baz=318,SNR=7.3
R50A **Paris** 45.13 86 IAmb IAmb 15 24 42.0
comp=Z,13nm,1.0s
P52A **Corning** 45.39 83 P P 15 24 43.0 +0.4
baz=314
SWET **Sewanee** 46.45 90 IAmb IAmb 15 24 51.9
comp=Z,16nm,1.2s
TZTN **Tazewell** 46.81 87 P P 15 24 54.7 +0.8
baz=316
BINY **Binghamton** 46.96 75 P P 15 24 55.7 +0.7
baz=314
SSPA **Standing Stone** 47.02 78 P P 15 24 56.4 +0.9
baz=314
Y49A **Blount Mountai** 47.19 91 IAmb IAmb 15 24 58.4
comp=Z,11nm,0.9s
LBNH **Lisbon** 47.72 71 P P 15 25 01.6 +0.7
baz=313
HEH **HeiHe** 47.74 300 *eP* P 15 25 02.9 +2.0
BLA **Blacksburg** 48.06 84 P P 15 25 04.2 +0.5
baz=316
NRIK **Noril'sk** 48.20 337 P P 15 25 04.1 -0.2
comp=Z,2.4nm,0.5s,baz=94,slow=7.2,SNR=2.3
comp=Z,2.4nm,0.5s
PKME **Peaks-Kenny Pk** 48.38 68 P P 15 25 06.3 +0.3
baz=313
V55A **Taylorsville** 48.60 85 IAmb IAmb 15 25 09.5
comp=Z,11nm,0.9s
BRAL **Brewton** 48.86 94 P P 15 25 11.1 +1.4
baz=320
PAL **Palisades** 48.91 75 P P 15 25 10.3 +0.3
baz=315
152A **Waverly Hall** 49.02 91 IAmb IAmb 15 25 11.6
comp=Z,11nm,0.8s
PAULI **Pauline** 49.03 87 IAmb IAmb 15 25 12.8
comp=Z,13nm,1.1s
KMSC **Kings Mountain** 49.06 86 P P 15 25 11.7 +0.4
baz=317
GOGA **Godfrey** 49.16 89 IAmb IAmb 15 25 13.6
comp=Z,12nm,1.0s
GOGA **Godfrey** 49.16 89 P P 15 25 12.8 +0.7
baz=318
H11N2 **WAKE ISLAND Hy** 49.48 241 T T 16 18 27.5
baz=31,slow=76,SNR=13
H11N3 **WAKE ISLAND Hy** 49.48 241 T T 16 18 32.9
baz=31,slow=76,SNR=13
H11N1 **WAKE ISLAND Hy** 49.49 241 T T 16 18 33.5
baz=31,slow=76,SNR=12
H11S1 **WAKE ISLAND Hy** 50.62 240 T T 16 20 41.7
baz=27,slow=74
H11S2 **WAKE ISLAND Hy** 50.63 240 T T 16 20 45.7
baz=27
H11S3 **WAKE ISLAND Hy** 50.63 240 T T 16 20 28.3
baz=27,slow=74
MJAR **Matsushiro Art** 51.73 280 P P 15 25 31.8 +0.3
comp=Z,1.9nm,0.8s,baz=354,slow=7.3,SNR=2.7
comp=Z,1.9nm,0.8s
CN2 **Changchun** 53.19 296 P P 15 25 46.0 +3.8
CN2 pP pwP 15 25 51.7 +2.2
CN2 pmax pmax
comp=Z,20nm,1.0s
ARCES **ARCESS Array B** 54.25 3 P P 15 25 49.3 -0.4
comp=Z,3.1nm,0.8s,baz=352,slow=6.1,SNR=5.0
comp=Z,3.1nm,0.8s
KSRS **Korea Array** 56.58 289 P P 15 26 07.3 +0.5
comp=Z,1.9nm,0.9s,baz=59,slow=5.7,SNR=1.9
comp=Z,1.9nm,0.9s
TEIG **Tepich** 56.83 104 LR LR 15 52 09.8
comp=Z,529nm,18.9s,baz=174,slow=38
SONM **Songino Array** 59.00 311 P P 15 26 24.7 +0.9
comp=Z,4.7nm,0.9s,baz=52,slow=3.6,SNR=14
comp=Z,4.7nm,0.9s
NOA **NORSAR Array B** 61.75 11 P P 15 26 43.0 +0.6
comp=Z,0.7nm,0.7s,baz=349,slow=6.3,SNR=2.4
comp=Z,0.7nm,0.7s
ZALV **Zalesovo Beam** 61.76 328 P P 15 26 43.0 +0.6
comp=Z,1.1nm,0.5s,baz=17,slow=6.2,SNR=9.2
comp=Z,1.1nm,0.5s
HHC **Hu-ho-hao-te** 62.16 302 *eP* P 15 26 47.8 +2.3
HHC pmax pmax
comp=Z,27nm,0.7s
HHC pmax pmax
comp=Z,140nm,4.4s
FINES **FINESS Array B** 62.38 3 P P 15 26 46.4 0.0
comp=Z,1.5nm,0.7s,baz=7.6,slow=10,SNR=7.1
comp=Z,1.5nm,0.7s
BVAR **Borovoye Array** 66.39 336 P P 15 27 13.3 +0.3
comp=Z,0.8nm,0.3s,baz=35,slow=8.1,SNR=5.3
comp=Z,0.8nm,0.3s
KURBB **Kurchatov Arra** 66.51 330 P P 15 27 13.8 +0.2
comp=Z,1.0nm,0.6s,baz=29,slow=6.3,SNR=6.6
comp=Z,1.0nm,0.6s
GTA **Gaotai** 68.61 310 P P 15 27 31.0 +3.7
GTA pP pwP 15 27 37.4 +2.8
GTA pmax pmax
comp=Z,5.0nm,1.3s
MKAR **Makanchi Array** 68.81 325 P P 15 27 28.6 +0.3
comp=Z,1.0nm,0.7s,baz=33,slow=4.7,SNR=11
MKAR PP PP 15 30 05.4 +5.8
comp=Z,0.6nm,0.7s,baz=50,slow=8.4,SNR=4.0
comp=Z,1.0nm,0.7s
WMQ **Urumqi** 69.61 320 *eP* P 15 27 36.9 +3.5
WMQ pP pwP 15 27 40.5 -0.2
WMQ sP sP 15 27 44.6 +8.6
WMQ pmax pmax
comp=Z,9.0nm,0.9s
AKASG **Malin Array Be** 73.21 2 P P 15 27 55.1 +0.2
comp=Z,1.2nm,0.6s,baz=0.7,slow=6.2,SNR=4.7
comp=Z,1.2nm,0.6s
GOMU **GeErMu** 73.44 311 P P 15 28 00.9 +4.0
GOMU pmax pmax
comp=Z,6.0nm,0.9s
BAUV **El Baul** 77.16 93 P P 15 28 17.3 -0.9
KSH **Kashi** 77.36 326 P P 15 28 25.1 +6.0
KSH sP PcP 15 28 32.5 +2.9
KSH pmax pmax
comp=Z,4.0nm,1.7s
PZH **PanZhiHua** 78.56 301 P P 15 28 29.0 +3.0
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.8s
ESDC **Sonseca Array** 79.58 27 P P 15 28 30.8 -0.5
comp=Z,1.1nm,0.8s,baz=329,slow=5.9,SNR=4.5
comp=Z,1.1nm,0.8s
KBZ **Khabaz** 79.77 352 P P 15 28 33.0 +0.9
comp=Z,1.1nm,0.8s,baz=24,slow=12,SNR=2.3
comp=Z,1.1nm,0.8s
MCRA **Macar, Loja** 81.82 111 P P 15 28 42.9 -0.6
GEYT **Alibeck** 83.38 339 P P 15 28 52.2 +0.8
comp=Z,2.5nm,0.9s,baz=90,slow=4.3,SNR=3.2
comp=Z,2.5nm,0.9s
CMAR **Chiang Mai Arr** 86.74 299 P P 15 29 09.1 +0.6
comp=Z,3.2nm,0.9s,baz=16,slow=4.9,SNR=18
comp=Z,3.2nm,0.9s

TAP 06 15:17:24.3,24.01N×121.57E,h1km,ML1.1,1C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=126	0.04	130	↓P	Pg	15 17 25.9	+0.8
HWA				*i* S	Sg	15 17 27.2	+1.4
TWD	**Chiawan** baz=23	0.08	191	*eP*	Pg	15 17 26.9	+1.1
TWD				*e*S	Sg	15 17 28.0	+1.1
ETM	**Tongmen**	0.08	240	P	Pg	15 17 27.0	+1.1

	baz=239								
ETM					*e*S	Sg	15 17 28.7	+1.8	
	baz=239								
LXIB	**Xiulin Townshi**	**0.14**	**276**	*i* P		Pg	15 17 28.7	+1.6	
	baz=276								
LXIB				*i* S		Sg	15 17 31.8	+2.8	
	baz=276								
ETL	**Fush Village**	**0.16**	**18**	*i* P		Pg	15 17 29.1	+1.7	
	baz=18								
NACB	**Ninganchiao**	**0.17**	**8**	⇓P		Pg	15 17 29.5	+1.9	
	baz=8.0								
ESL	**Shilin**	**0.23**	**213**	P		Pg	15 17 30.2	+1.6	
	baz=211								
WARBT	**Fenglin Townsh**	**0.33**	**210**	*e*P		Pb	15 17 32.8	-0.2	
	baz=210								
WARBT				*e*S		Sb	15 17 38.4	-0.4	
	baz=210								
NNS	**Nan Shan**	**0.47**	**338**	*e*P		Pg	15 17 34.3	+1.0	
	baz=338								
LATG	**Datong**	**0.53**	**356**	*i* P		Pb	15 17 36.5	+0.1	
	baz=355								

TAP 06 15:27:27.2, 23.63N×121.37E, h19km, ML1.6, 4C-8D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.07**	**52**	P	Pg	15 27 30.8	0.0
	baz=54						
EGFH				*i* S	Sg	15 27 33.3	+0.2
	baz=54						
WARBT	**Fenglin Townsh**	**0.09**	**9**	⇓P	Pg	15 27 31.1	+0.1
	baz=10.0						
WARBT				S	Sg	15 27 33.5	0.0
	baz=10.0						
EHY	**Hungye**	**0.13**	**200**	⇑P	Pg	15 27 31.3	0.0
	baz=196						
EHY				*e*S	Sg	15 27 33.9	-0.2
	baz=196						
HGSD	**Ruisui**	**0.14**	**160**	⇓*e*P	Pg	15 27 32.0	+0.5
	baz=159						
HGSD				*e*S	Sg	15 27 35.8	+1.4
	baz=159						
TEGC	**Jichi Village**	**0.18**	**62**	P	Pg	15 27 32.1	+0.2
	baz=60						
TEGC				S	Sg	15 27 36.1	+1.1
	baz=60						
ESL	**Shilin**	**0.20**	**17**	*i* P	Pg	15 27 32.3	+0.1
	baz=27						
ESL				*i* S	Sg	15 27 35.6	0.0
	baz=27						
SHUL	**Shoufeng**	**0.24**	**48**	*i* P	Pg	15 27 33.1	+0.3
	baz=44						
SHUL				S	Sg	15 27 37.9	+1.2
	baz=44						
YULB	**Yu-li**	**0.24**	**196**	⇓P	Pb	15 27 32.6	-0.2
	baz=190						
YULB				*i* S	Sg	15 27 36.6	-0.2
	baz=190						
VWDT	**VWDT**	**0.24**	**301**	⇑*e*P	Pg	15 27 33.5	+0.6
	baz=301						
VWDT				*e*S	Sg	15 27 37.5	+0.7
	baz=301						
EYUL	**Yuli**	**0.28**	**190**	P	Pg	15 27 33.2	-0.3
	baz=192						
EYUL				*i* S	Sb	15 27 38.0	+0.1
	baz=192						
TWF1	**Yuli**	**0.28**	**194**	⇓*e*P	Pg	15 27 33.1	-0.4
	baz=196						
TWF1				S	Sb	15 27 38.0	+0.1
	baz=196						
ETM	**Tongmen**	**0.35**	**18**	*i* P	Pg	15 27 34.8	0.0
	baz=20						
ETM				S	Sg	15 27 40.0	+0.1
	baz=20						
OWD	**Renai**	**0.37**	**331**	⇓P	Pb	15 27 35.4	-0.1
	baz=333						
OWD				*e*S	Sg	15 27 40.1	-0.4
	baz=333						
LXIB	**Xiulin Townshi**	**0.39**	**6**	⇑*i*P	Pb	15 27 35.8	0.0
	baz=14						
LXIB				*e*S	Sg	15 27 41.2	0.0
	baz=14						
SSLB	**Suanglung**	**0.41**	**293**	P	Pg	15 27 36.0	+0.1
	baz=292						
SSLB				*e*S	Sg	15 27 41.2	-0.4
	baz=292						
WUSB	**Renai**	**0.43**	**328**	*i* P	Pb	15 27 36.5	+0.1
	baz=329						
WUSB				*e*S	Sg	15 27 42.0	-0.2
	baz=329						
FULB	**Fuli**	**0.43**	**189**	*e*P	Pb	15 27 37.4	+1.0
	baz=196						
FULB				*e*S	Sn	15 27 44.3	-1.6
	baz=196						
CHGB	**Renai**	**0.47**	**337**	⇑P	Pb	15 27 37.3	+0.2
	baz=348						
CHGB				*e*S	Sg	15 27 43.3	0.0
	baz=348						
WHYT	**Xinyi Township**	**0.48**	**278**	⇓*e*P	Pg	15 27 36.4	-0.6
	baz=274						
WHYT				*e*S	Sb	15 27 43.8	-0.1
	baz=274						
EHD	**Haiduan**	**0.50**	**198**	⇓P	Pg	15 27 37.0	-0.4
	baz=195						
EHD				S	Sg	15 27 44.2	+0.1
	baz=195						
SMLT	**Sun Moon Lake**	**0.50**	**301**	*e*S	Sg	15 27 44.4	+0.1
	baz=307						
WHF	**Hehuan Shan**	**0.53**	**349**	*e*P	Pb	15 27 38.5	+0.4
	baz=353						
WHF				S	Sg	15 27 45.1	-0.2
	baz=353						
ALS	**Alishan**	**0.53**	**257**	P	Pb	15 27 38.6	+0.5
	baz=260						
ALS				*e*S	Sb	15 27 46.3	+0.8
	baz=260						
ELDTW	**Lidau**	**0.54**	**217**	P	Pb	15 27 37.5	-0.7
	baz=207						
ELDTW				*e*S	Sg	15 27 44.9	-0.7
	baz=207						
TYC	**Yuchr**	**0.55**	**301**	S	Sb	15 27 45.6	0.0
	baz=307						
NACB	**Ninganchiao**	**0.58**	**21**	*e*P	Pg	15 27 39.0	+0.1
	baz=22						
ETLH	**Xiulin Townshi**	**0.59**	**10**	P	Pb	15 27 38.8	-0.1
	baz=21						
WCS	**Beigang Elemen**	**0.60**	**316**	P	Pg	15 27 39.4	+0.2
	baz=321						
WCS				*e*S	Sb	15 27 46.7	-0.4
	baz=321						
FUSS	**Fushou**	**0.63**	**349**	⇓*i*P	Pg	15 27 40.0	+0.1
	baz=351						
FUSS				S	Sg	15 27 48.5	+0.1
	baz=351						
CHN5	**Tsauling**	**0.64**	**267**	*e*S	Sg	15 27 49.1	+0.7
	baz=261						
STYH	**Taoyuan**	**0.71**	**230**	*e*P	Pb	15 27 40.9	-0.1
	baz=228						
STYH				*e*S	Sg	15 27 50.8	0.0
	baz=228						
WCKO	**Fanlu**	**0.73**	**255**	*e*S	Sn	15 27 53.1	-0.1
	baz=253						
TPUB	**Ta-pu**	**0.75**	**245**	*e*P	Pn	15 27 43.2	+0.3
	baz=243						
TPUB				*e*S	Sn	15 27 54.1	+0.3
	baz=243						
WHP	**Taichung City**	**0.76**	**329**	*e*P	Pn	15 27 42.8	-0.2
	baz=335						
WHP				*e*S	Sn	15 27 54.4	+0.4
	baz=335						
WTP	**Ta-pu**	**0.79**	**242**	*e*P	Pb	15 27 42.2	-0.2
	baz=248						
WTP				*e*S	Sg	15 27 53.7	+0.4
	baz=248						
NNSB	**Datong**	**0.80**	**1**	*e*P	Pg	15 27 43.1	+0.2
	baz=14						
NNSB				S	Sb	15 27 53.2	+0.1
	baz=14						
NNS	**Nan Shan**	**0.81**	**0**	*e*P	Pb	15 27 42.2	-0.6
	baz=13						
NNS				*e*S	Sg	15 27 54.6	+0.7
	baz=13						
TWGBT	**Beinan**	**0.85**	**198**	*i* P	Pb	15 27 42.8	-0.6
	baz=185						
TWK	**Hsinying**	**0.89**	**246**	*e*P	Pb	15 27 42.6	-1.4
	baz=243						
TWK				*i* S	Sn	15 27 57.6	+0.4
	baz=243						
CHN1	**Nanshi**	**0.89**	**241**	*e*S	Sn	15 27 58.5	+1.2
	baz=238						
SGST	**Jiashian**	**0.90**	**233**	*i* P	Pn	15 27 45.1	+0.1
	baz=230						
SGST				*i* S	Sn	15 27 58.2	+0.7
	baz=230						
LATG	**Datong**	**0.92**	**9**	S	Sg	15 27 57.3	0.0
	baz=11						
LDUT	**Ludao**	**0.95**	**174**	*e*P	Pb	15 27 45.4	+0.2
	baz=171						
NDT	**Datong Townshi**	**0.98**	**8**	*e*P	Pg	15 27 46.3	-0.1
	baz=18						
NDT				*e*S	Sg	15 27 59.1	-0.2
	baz=18						
YHNB	**Yeheng**	**1.04**	**0**	P	Pb	15 27 46.6	-0.1
	baz=353						
YHNB				S	Sn	15 28 00.6	-0.3
	baz=353						
NSK	**Sanguang**	**1.04**	**359**	*e*P	Pb	15 27 46.6	-0.2
	baz=2.0						
NSK				S	Sn	15 28 00.9	-0.2
	baz=2.0						

IDC ***06*** *15:50:38.7±0.3, 24.22N×121.91E, h0km, mb5.0/34, mbtmp5.0/37, ML3.9/2, MS6.3/72, Error ellipse: s-maj=12.4km s-min=9.1km az=65.0*

MOS ***06*** *15:50:40.3±1.3, 24.14N×121.84E, h14km, mb5.9/83, MS6.5/73, Error ellipse: s-maj=5.8km s-min=3.4km az=114.9*

NEIC ***06*** *15:50:41.8, 23.95N×121.71E, h20km, Moment Tensor Solution. Duration: 7s9 Moment tensor: Scale 10¹⁸Nm; Mrr2.34; Mθθ-4.92; Mϕϕ2.58; Mrθ-0.04; Mθϕ-3.06; Mϕr-1.05; Fault plane solution: M₀5.11000×10¹⁸ NP1: ϕs209.29000°, δ72.60000°, λ22.47000°. NP2: ϕs112.24000°, δ68.61000°, λ161.27000°. Principal axes: T 4.1857, Plg28.0000°, Azm72.0000°; N 1.8408, Plg62.0000°, Azm245.0000°; P -6.0266, Plg3.0000°, Azm340.0000°;*

NEIC ***06*** *15:50:41.8, 24.15N×121.71E, h20km*

IPGP ***06*** *15:50:41.0, 24.16N×121.68E, h16km, Mw6.5, Fault plane solution: NP1:ϕs87.00000°, δ82.00000°, λ121.00000°. NP2:ϕs190.00000°, δ32.00000°, λ15.00000°.*

ASIES ***06*** *15:50:41.6, 24.10N×121.73E, h6km, ML6.3, Mw6.4, Moment Tensor Solution. Moment tensor: Scale 10²⁵Nm; Mrr0.48; Mθθ-4.06; Mϕϕ3.58; Mrθ0.69; Mθϕ-2.65; Mϕr-2.41; Fault plane solution: M₀5.29640×10²⁵ NP1: ϕs210.64000°, δ72.49000°, λ19.52000°. NP2: ϕs114.55000°, δ71.42000°, λ161.49000°. Principal axes: T Plg25.9820°, Azm72.7880°; N Plg64.0070°, Azm250.9670°; P Plg0.7170°, Azm342.4380°;*

TAP ***06*** *15:50:41.6, 24.10N×121.73E, h6km, ML6.3, B*

BJI ***06*** *15:50:41.6±0.0, 24.10N×121.65E, h10km, mb5.3/75, mB6.2/69, ML6.1/14, Ms6.8/97, Ms7 6.7/92*

NEIC ***06*** *15:50:42.5, 24.18N×121.65E, h11km*

JMA ***06*** *15:50:42.2±0.1, 24.1N±0.5×121.7E±1.0, h10km±1km, MD6.7/19, MW6.3/19, TAIWAN REGION*

JMA Felt II J1 at TAIWAN REGION .

NEIC ***06*** *15:50:42.4, 24.17N×121.65E, h11km*

NIED ***06*** *15:50:42.2, 24.09N×121.68E, h10km, MW6.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr0.12; Mθθ-2.47; Mϕϕ2.36; Mrθ0.74; Mθϕ-1.68; Mϕr-1.75; Fault plane solution: M₀3.42000×10¹⁸ NP1: ϕs115.00000°, δ74.00000°, λ157.00000°. NP2: ϕs211.00000°, δ68.00000°, λ17.00000°.*

NEIC ***06*** *15:50:43.3±1.9, 24.13N±0.03×121.66E±0.05, h17km±1km, mb6.1/356, Ms_20 6.3/828, Mwb6.3/56, Mwr6.4/13, Mww6.4/44 Error ellipse: s-maj=7.4km s-min=4.7km az=114.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.95; Mθθ-3.00; Mϕϕ2.05; Mrθ0.43; Mθϕ-2.55; Mϕr-0.01; Fault plane solution: M₀3.71000×10¹⁸ NP1:ϕs202.29000°, δ83.44000°, λ0.20000°. NP2: ϕs112.27000°, δ89.80000°, λ173.44000°. Principal axes: T 3.1320, Plg5.0000°, Azm67.0000°; N 0.9617, Plg83.0000°, Azm291.0000°; P -4.0937, Plg4.0000°, Azm157.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁸ Nm; Mrr0.55; Mθθ-3.21; Mϕϕ2.66; Mrθ-1.13; Mθϕ-2.10; Mϕr-3.12; Fault plane solution: M₀4.92000×10¹⁸ NP1:ϕs114.11000°, δ47.83000°, λ172.65000°. NP2:ϕs209.05000°, δ84.56000°, λ42.40000°. Principal axes: T 5.0398, Plg33.0000°, Azm81.0000°; N -0.2442, Plg47.0000°, Azm215.0000°; P -4.7956, Plg24.0000°, Azm334.0000°;*

BGR ***06*** *15:50:44.1, 24.12N×121.69E, h15km, mb5.7, Ms6.8*

GCMT ***06*** *15:50:48.3±0.0, 24.00N×121.54E, h14km, MW6.4/170, Moment Tensor Solution. s162, c386; s170, c717; Duration: 3s7 Moment tensor: Scale 10¹⁸Nm; Mrr2.45±.02; Mθθ-4.25±.02; Mϕϕ1.80±.02; Mrθ1.44±.05; Mθϕ-2.54±.02; Mϕr-0.59±.05; Best double couple: M₀4.53100×10¹⁸ NP1:ϕs105.00000°, δ68.00000°, λ141.00000°. NP2:ϕs212.00000°, δ54.00000°, λ28.00000°. Principal axes: T 3.7150, Plg43.0000°, Azm63.0000°; N 1.6330, Plg46.0000°, Azm260.0000°; P -5.3480, Plg9.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 15:50:43.0±0.3, 24.11N±0.01×121.73E±0.01, h13km±1km, h13km:pP-P, n2412, σ2=31/2257, mb6.0/404, MS6.3/542, 144C-168D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**295**	⇓*i*P	Pg	15 50 44.6	-1.5
	baz=300						
ETL				S	Sg	15 50 46.3	-2.0
	baz=300						
TWD	**Chiawan**	**0.12**	**254**	⇓*i*P	Pg	15 50 44.7	-1.6
	baz=270						
NACB	**Ninganchiao**	**0.14**	**296**		Pg	15 50 44.0	-2.5
NACB	**Ninganchiao**	**0.14**	**296**	P	Pg	15 50 45.0	-1.4
NACB	**Ninganchiao**	**0.14**	**296**	⇓*i*P	Pg	15 50 45.1	-1.4
	baz=300						
HWA	**Hwalien**	**0.18**	**219**	⇑P	Pg	15 50 46.6	-0.4
	baz=238						
EHP	**Heping Village**	**0.20**	**4**	P	Pg	15 50 46.5	-0.9
	baz=353						
EAHA	**Aohua**	**0.21**	**3**	P	Pg	15 50 46.7	-1.0
	baz=356						
EAHA				*e*S	Sb	15 50 51.9	-0.8
	baz=356						
ETLH	**Xiulin Townshi**	**0.24**	**292**	⇓P	Pg	15 50 46.9	-1.4
	baz=294						
ETM	**Tongmen**	**0.26**	**235**	⇓*i*P	Pg	15 50 47.1	-1.4
	baz=247						
LXIB	**Xiulin Townshi**	**0.30**	**252**	⇓*e*P	Pg	15 50 47.8	-1.5
	baz=257						
ENA	**Nanau**	**0.31**	**2**	⇓*i*P	Pg	15 50 48.5	-1.0
	baz=359						
ENA				*i* S	Sb	15 50 54.5	-1.1
	baz=359						
EWUT	**Wuta**	**0.33**	**8**	P	Pg	15 50 49.0	-0.8
	baz=350						
SHUL	**Shoufeng**	**0.36**	**205**	*e*P	Pg	15 50 50.3	0.0
	baz=219						
ESL	**Shilin**	**0.40**	**222**	⇓P	Pg	15 50 49.7	-1.4
	baz=238						
WHF	**Hehuan Shan**	**0.42**	**274**	⇓P	Pg	15 50 50.2	-1.4
	baz=277						
TEGC	**Jichi Village**	**0.44**	**203**	⇓*i*P	Pb	15 50 52.0	-0.6
	baz=212						
NNSB	**Datong**	**0.44**	**315**	⇓*i*P	Pg	15 50 51.0	-0.9
	baz=313						
NNSB				*i* S	Sg	15 50 57.8	-0.1
	baz=313						
LATG	**Datong**	**0.46**	**336**	⇓*i*P	Pg	15 50 51.2	-0.9
	baz=332						
LATG				S	Sb	15 50 58.8	-1.1
	baz=332						
NNS	**Nan Shan**	**0.46**	**315**	⇓*i*P	Pg	15 50 51.3	-0.9
	baz=314						
NNS				S	Sg	15 50 58.4	0.0
	baz=314						
FUSS	**Fushou**	**0.46**	**287**	⇓*i*P	Pg	15 50 51.4	-0.9
	baz=288						
ESAO	**Su ao**	**0.47**	**13**	⇓*i*P	Pg	15 50 51.5	-0.8
	baz=6.0						
ESAO				*e*S	Sb	15 50 59.7	-0.4
	baz=6.0						
WARBT	**Fenglin Townsh**	**0.50**	**218**	⇓P	Pg	15 50 51.7	-1.2
	baz=234						
TWC	**Suao**	**0.51**	**13**	⇓*i*P	Pg	15 50 52.3	-0.7
	baz=359						
CHGB	**Renai**	**0.51**	**264**	⇓*i*P	Pg	15 50 52.1	-1.0
	baz=267						
NDS	**Dongshan**	**0.52**	**359**	⇓*i*P	Pg	15 50 52.6	-0.6
	baz=353						
NDS				S	Sb	15 51 00.6	-0.8
	baz=353						
EGFH	**Guangfu**	**0.52**	**212**	*e*P	Pg	15 50 53.1	-0.1
	baz=231						
TWT	**Tachien**	**0.52**	**286**	⇓*i*P	Pg	15 50 52.8	-0.6
	baz=286						
NDT	**Datong Townshi**	**0.52**	**338**	⇓*i*P	Pg	15 50 52.8	-0.6
	baz=332						
OWD	**Renai**	**0.53**	**253**	P	Pg	15 50 52.2	-1.3
	baz=258						
TDCB	**Techi**	**0.54**	**285**	⇓*i*P	Pg	15 50 52.8	-0.8
	baz=286						
EOS4	**EOS4**	**0.54**	**89**	*e*P	Pb	15 50 54.8	+0.6
	baz=86						
ENTT	**Nioudou**	**0.54**	**344**	⇓*i*P	Pg	15 50 53.1	-0.6
	baz=340						
ENTT				S	Sb	15 51 01.6	-0.7
	baz=340						
EOS2	**EOS2**	**0.55**	**57**	⇓*e*P	Pb	15 50 55.0	+0.5
	baz=28						
EOS3	**EOS3**	**0.57**	**72**	*e*P	Pn	15 50 55.8	-0.9
	baz=41						
WUSB	**Renai**	**0.57**	**258**	⇓P	Pg	15 50 53.2	-1.1
	baz=262						
YHNB	**Yeheng**	**0.64**	**330**		Pg	15 50 54.5	-1.1
YHNB	**Yeheng**	**0.64**	**330**	P	Pg	15 50 55.1	-0.5
YHNB	**Yeheng**	**0.64**	**330**	⇓*i*P	Pg	15 50 54.9	-0.6
	baz=326						
VWDT	**VWDT**	**0.65**	**236**	⇓P	Pg	15 50 54.6	-1.0
	baz=241						
ILA	**Ilan**	**0.65**	**2**	⇓*i*P	Pg	15 50 55.3	-0.4
	baz=358						
ILA				S	Sb	15 51 05.2	-0.1
	baz=358						
NSK	**Sanguang**	**0.65**	**329**	⇓*i*P	Pg	15 50 55.0	-0.8
	baz=326						
FUSB	**Fushanzhiwuyua**	**0.66**	**349**	⇓*i*P	Pg	15 50 55.3	-0.6
	baz=335						
HGSD	**Ruisui**	**0.68**	**204**	⇓P	Pg	15 50 56.1	-0.1
	baz=198						
NWLT	**Wulai**	**0.69**	**343**	⇓*i*P	Pg	15 50 55.9	-0.6
	baz=339						
NWLT				S	Sb	15 51 06.0	-0.5
	baz=339						
EHY	**Hungye**	**0.71**	**212**	⇓P	Pg	15 50 55.7	-1.1
	baz=218						
WHP	**Taichung City**	**0.73**	**283**	⇓*i*P	Pg	15 50 56.8	-0.5
	baz=284						
WHP				S	Sg	15 51 06.7	-0.3
	baz=284						
NTC	**Toucheng**	**0.74**	**7**	*e*P	Pg	15 50 56.9	-0.6
WCS	**Beigang Elemen**	**0.75**	**266**	⇓*i*P	Pg	15 50 56.7	-0.8
	baz=268						
NFF	**Wufeng Townshi**	**0.76**	**313**	⇓P	Pg	15 50 57.1	-0.7
	baz=303						
SSLB	**Suanglung**	**0.78**	**245**		Pg	15 50 56.4	-1.7
SSLB					Sg	15 51 07.3	-1.1
SSLB	**Suanglung**	**0.78**	**245**	P	Pg	15 50 57.3	-0.8
SSLB	**Suanglung**	**0.78**	**245**	⇓*i*P	Pg	15 50 57.0	-1.1
	baz=250						
SMLT	**Sun Moon Lake**	**0.79**	**253**	⇓*i*P	Pg	15 50 57.4	-1.0
	baz=257						
SMLT				*e*S	Sb	15 51 09.9	+0.5
	baz=257						
YULB	**Yu-li**	**0.82**	**209**		Pg	15 50 57.7	-1.2
YULB					Sg	15 51 09.6	-0.5
YULB	**Yu-li**	**0.82**	**209**	P	Pg	15 50 58.1	-0.8
YULB	**Yu-li**	**0.82**	**209**	⇓*e*P	Pg	15 50 57.4	-1.6
	baz=229						
TYC	**Yuchr**	**0.82**	**255**	⇓*i*P	Pg	15 50 57.8	-1.2
	baz=259						
TYC				*e*S	Sb	15 51 10.3	+0.1
	baz=259						
ECBN	**Changbin**	**0.83**	**198**	⇓P	Pg	15 50 58.4	-0.8
	baz=192						
LIOB	**Emei**	**0.84**	**309**	⇓*i*P	Pg	15 50 58.9	-0.4
	baz=307						
NSTT	**Nanjuang**	**0.84**	**308**	⇓*i*P	Pg	15 50 58.8	-0.5
	baz=306						
EYUL	**Yuli**	**0.85**	**206**	⇓*e*P	Pg	15 50 58.1	-1.4
	baz=230						
TWF1	**Yuli**	**0.85**	**208**	*e*P	Pg	15 50 57.7	-1.9
	baz=227						
TIPB	**Shuangxi**	**0.86**	**6**	⇓*i*P	Pg	15 50 59.0	-0.6
TIPB					Sg	15 51 10.9	-0.1
NHDH	**Xindian Distri**	**0.86**	**348**	⇓P	Pg	15 50 59.2	-0.6
	baz=342						
TWA	**Mucha**	**0.87**	**351**	⇓*i*P	Pg	15 50 59.3	-0.7
	baz=345						
TATO	**Taipei**	**0.89**	**346**		Pg	15 50 59.2	-1.0
TATO	**Taipei**	**0.89**	**346**	P	Pb	15 51 00.0	-0.3
TATO	**Taipei**	**0.89**	**346**	P	Pb	15 50 59.9	-0.3
TWQ1	**Liyutan**	**0.90**	**285**	⇓*i*P	Pb	15 51 00.3	-0.3
	baz=286						
WHYT	**Xinyi Township**	**0.90**	**243**	⇓P	Pg	15 50 59.3	-1.2
	baz=256						
TWB1	**Santiao Chiao**	**0.92**	**15**	⇓*i*P	Pg	15 50 60.0	-0.9
	baz=360						
NSY	**Sanyi**	**0.93**	**289**	⇓*i*P	Pn	15 51 01.3	-0.6
	baz=290						
NSY				*e*S	Sn	15 51 14.8	-0.3
	baz=290						
NHY	**Taipei**	**0.93**	**351**	P	Pg	15 51 00.8	-0.3
	baz=347						
TAP	**Taipei**	**0.94**	**348**	⇓P	Pg	15 51 00.9	-0.4
	baz=343						
TAP				*e*S	Sn	15 51 14.9	-0.5
	baz=343						
NMLH	**Miaoli**	**0.95**	**296**	⇓P	Pn	15 51 01.7	-0.5
	baz=295						
NWF	**Wu-fen Shan**	**0.95**	**3**	⇓*i*P	Pg	15 51 01.1	-0.4
	baz=348						
NWF				S	Sb	15 51 13.9	-0.2
	baz=348						
WFSB	**Wu-fen Shan**	**0.95**	**3**	⇓*i*P	Pg	15 51 01.1	-0.4
	baz=349						
WFSB				*e*S	Sb	15 51 13.9	-0.2
	baz=349						
SBCB	**Hsinchu**	**0.95**	**315**	⇓*i*P	Pn	15 51 01.8	-0.4
	baz=311						
WJS	**Zhushan**	**0.96**	**253**	⇑P	Pb	15 51 01.4	-0.2
	baz=257						
CHKH	**Chenggong**	**0.97**	**198**	*e*P	Pb	15 51 00.5	-1.2
	baz=196						
HSN	**Hsinchu**	**0.97**	**315**	⇓P	Pn	15 51 01.8	-0.6
	baz=314						
WNT	**Mingjian**	**0.98**	**256**	⇑*i*P	Pn	15 51 02.3	-0.3
	baz=260						
WNT				*e*S	Sn	15 51 17.1	+0.7
	baz=260						
NCUH	**Zhongli**	**0.98**	**330**	*e*P	Pg	15 51 01.9	-0.1
	baz=326						
NCUH				S	Sn	15 51 17.0	+0.6
	baz=326						
SXI1	**Grass Mountain**	**0.98**	**8**	⇓*e*P	Pb	15 51 01.6	-0.5
	baz=345						
FULB	**Fuli**	**0.99**	**204**	⇓P	Pb	15 51 01.1	-1.0
	baz=227						
WDJ	**Dajia District**	**1.02**	**283**	*e*P	Pn	15 51 03.2	+0.1
	baz=284						
TWS1	**Kuangyinshan**	**1.02**	**344**	⇓*i*P	Pg	15 51 02.6	-0.2
	baz=339						
TWS1				*e*S	Sn	15 51 17.7	+0.4
	baz=339						
TNOU	**National Taiwa**	**1.03**	**2**	⇓*i*P	Pb	15 51 02.4	-0.4
	baz=355						
ALS	**Alishan**	**1.04**	**235**	⇓P	Pb	15 51 02.1	-0.9
	baz=249						
YM01	**YM01**	**1.04**	**352**	⇓*i*P	Pb	15 51 02.7	-0.2
	baz=345						
CHKT	**Chengkung**	**1.06**	**198**	⇓*i*P	Pb	15 51 01.4	-1.9
	baz=197						
WCHH	**Zhanghua**	**1.07**	**268**	P	Pn	15 51 03.7	0.0
	baz=271						
EHD	**Haiduan**	**1.07**	**207**	*e*P	Pb	15 51 00.9	-2.5
	baz=228						
NTST	**Danshui**	**1.08**	**346**	*e*P	Pn	15 51 03.6	-0.2

baz=339
ANP Anpu 1.08 350⇓*i*P Pb 15 51 03.3 -0.4
baz=343
CHN5 Tsauling 1.09 242⇑*i*P Pn 15 51 03.9 -0.2
baz=248
CHN5 *e*S **Sn 15 51 21.3 +2.2**
baz=248
ECS Chishang 1.12 205 *e*P Pb 15 51 02.1 -2.1
baz=216
ELDTW Lidau 1.13 215⇓*i*P Pb 15 51 02.2 -2.3
baz=224
WGK Gukeng 1.15 248⇑*i*P Pg 15 51 04.8 -0.3
baz=254
JYNG Yonagunijimaku 1.16 73 ⇓P Pb 15 51 04.8 -0.2
JYNG ⇓S **Sn 15 51 21.7 +0.9**
JYNG Yonagunijimaku 1.16 73 A 15 51 04.8
comp=E,2µm,8.8s,comp=N,2µm,5.2s
TWY Chenhua 1.16 354 P **Pn 15 51 04.9 -0.1**
baz=331
WDLH Douliu 1.17 249⇑*i*P Pg 15 51 05.2 -0.3
baz=255
YOJ Yonaguni jima 1.22 73 Pn **Pn 15 51 05.7 -0.2**
YOJ Yonaguni jima 1.22 73 P **Pg 15 51 06.2 -0.4**
YOJ Yonaguni jima 1.22 73 ⇑P Pn 15 51 05.5 -0.3
YOJ Yonaguni jima 1.22 73 ⇓P Pn 15 51 05.7 -0.2
baz=67
YOJ Yonaguni jima 1.22 73 P **Pn 15 51 05.7 -0.2**
YOJ Yonaguni jima 1.22 73 P **Pb 15 51 05.8 -0.2**
YOJ *e*S **Sg 15 51 23.3 +0.8**
YOJ Yonaguni jima 1.22 73 A A 15 51 05.8
comp=E,2µm,9.1s,comp=N,2µm,8.1s
WCKO Fanlu 1.23 237 ⇑P Pb 15 51 05.9 -0.2
baz=245
WCKO *e*S **Sg 15 51 24.6 +1.9**
baz=245
WRL Guolierlin Hig 1.25 261 ⇑P Pb 15 51 06.4 -0.1
baz=265
STYH Taoyuan 1.28 223⇓*e*P Pn 15 51 06.1 -0.6
baz=221
TPUB Ta-pu 1.29 231 Pn 15 51 06.4 -0.4
TPUB Ta-pu 1.29 231 P **Pg 15 51 07.5 -0.4**
TPUB Ta-pu 1.29 231⇑*e*P Pb 15 51 06.8 -0.4
baz=240
TPUB *e*S **Sg 15 51 26.4 +1.7**
baz=240
WTK Tuku 1.30 251 *e*P Pb 15 51 07.2 -0.1
baz=257
LONT Longtian 1.32 205 *e*P Pn 15 51 04.9 -2.3
baz=216
WTP Ta-pu 1.34 230 ⇓P Pb 15 51 07.8 -0.3
baz=238
WTP *e*S **Sg 15 51 27.9 +1.7**
baz=238
CHY Chiayi 1.34 243 *e*P Pg 15 51 09.1 +0.2
baz=250
CHY *e*S **Sg 15 51 28.6 +2.3**
baz=250
WTCT Ta-ch'eng 1.35 260 P **Pb 15 51 07.7 -0.4**
baz=264
WTCT *e*S **Sg 15 51 27.8 +1.4**
baz=264
TWK Hsinying 1.42 234 P **Pb 15 51 09.0 -0.4**
baz=242
TWK S **Sg 15 51 29.5 +0.9**
baz=242
TWG Pinlang 1.42 205 Pn 15 51 07.1 -1.5
TWG Pinlang 1.42 205 *e*P Pn 15 51 05.7 -2.9
baz=216
TWGBT Beinan 1.42 205 P **Pg 15 51 09.6 -0.8**
TWGBT Beinan 1.42 205 ⇓P Pn 15 51 05.8 -2.8
baz=216
SNST Tainan City 1.44 232 ⇓P Pb 15 51 09.6 -0.1
baz=241
CHN1 Nanshi 1.44 230⇓*i*P Pb 15 51 09.5 -0.2
baz=239
LDUT Ludao 1.45 189 *e*P Pn 15 51 05.8 -3.2
baz=202
TTN Taitung 1.46 202 *e*P Pn 15 51 07.1 -2.0
baz=214
WSF Szhu 1.46 251 ⇑P Pb 15 51 09.4 -0.6
baz=257
WSF *e*S **Sg 15 51 31.1 +1.1**
baz=257
SGST Jiashian 1.47 226⇓*e*P Pn 15 51 08.6 -0.7
baz=235
SLGT Liugui 1.49 222 ⇓P Pb 15 51 09.8 -0.8
baz=232
WSL Shuilin Townsh 1.49 247 ⇓P Pg 15 51 10.8 -0.9
baz=254
ICHU Yijhu 1.52 241 *e*P Pb 15 51 10.7 -0.5
baz=249
PCYT Pengchaiyu 1.54 12 ⇑P Pn 15 51 10.2 0.0
baz=344
PCYT *e*S **Sg 15 51 34.2 +1.5**
baz=344
CHN8 Yiju 1.59 241 ⇓P Pb 15 51 11.5 -0.7
baz=249
CHN8 *e*S **Sg 15 51 35.3 +1.2**
baz=249
CHN3 Shinhua 1.62 231 P **Pb 15 51 13.1 +0.2**
baz=240
SSHA Shanhua 1.64 234 P **Pb 15 51 12.7 -0.5**
baz=243
SCST Cishan 1.67 223 *e*P Pb 15 51 13.6 0.0
baz=233
ECL Taimali 1.67 205 *e*P Pn 15 51 09.1 -2.9
baz=203
SHHT Tainan City 1.67 230 *e*P Pb 15 51 13.9 +0.2
baz=239
SCLT Jiali 1.69 237 *e*P Pb 15 51 13.0 -1.0
baz=245
TSMG Majia 1.72 216 *e*P Pb 15 51 13.7 -0.8
baz=217
TAI1 Yung-k'ang 1.74 232 *e*P Pb 15 51 14.6 -0.3
baz=242
TWM1 Shoushan 1.76 223 ⇓P Pb 15 51 15.0 -0.1
baz=233
TSCK Chigu Township 1.79 238⇓*e*P Pb 15 51 14.9 -0.7
baz=246
SGLT Jiouru 1.79 220 *e*P Pb 15 51 15.7 0.0
baz=220
MASBT Mashibuluo 1.80 214⇓*e*P Pn 15 51 14.1 +0.2
baz=217
IRIF Iriomote-Funau 1.84 83 P **Pn 15 51 14.2 -0.2**
IRIF S **Sb 15 51 38.8 -0.8**
IRIF Iriomote-Funau 1.84 83 A A 15 51 14.2
comp=E,922nm,8.9s,comp=N,945nm,6.9s
SNJT Kaohsiung City 1.86 224 *e*P Pb 15 51 16.5 -0.4
baz=234
HATJ Hateruma jima 1.90 91 P **Pn 15 51 15.2 0.0**
HATJ *e*S **Sb 15 51 40.3 -1.0**
HATJ Hateruma jima 1.90 91 A A 15 51 15.2
comp=E,1µm,2.9s,comp=N,2µm,4.5s
EAST Anshuo 1.90 205 *e*P Pn 15 51 13.1 -2.2
baz=205
TAW Tawu 1.91 204 *e*P Pn 15 51 13.1 -2.1
baz=204
TAWH Dawu Township 1.93 204 *e*P Pn 15 51 13.6 -1.9
baz=206
WSSB Gushan 1.99 223 *e*P Pb 15 51 18.9 -0.3
baz=233
SCZT Fangliau 2.01 211⇓*e*P Pn 15 51 17.3 +0.6
baz=207
KAU Kaohsiung 2.02 221 *e*P Pb 15 51 20.2 +0.6
baz=249
PHUB P'eng-hu 2.06 254 *e*P Pn 15 51 16.8 -0.6
baz=260
PHUB *e*S **Sb 15 51 47.1 +1.2**
baz=260
PNG Penghu 2.06 255 *e*P Pn 15 51 17.2 -0.2
baz=262
LAY Lan-yu 2.07 185 *e*P Pn 15 51 14.5 -3.1
baz=200
SLIU Shizi 2.07 205 *e*P Pn 15 51 18.2 +0.6
baz=218
WDGT Dungji 2.08 246 *e*P Pn 15 51 17.8 +0.2
baz=254
JKRS Kuro-shima 2.09 86 ⇓P Pn 15 51 18.0 +0.3
JKRS ⇓*e*S **Sn 15 51 45.0 +1.4**
JKRS Kuro-shima 2.09 86 A A 15 51 18.0
comp=E,2µm,4.7s,comp=N,2µm,4.9s
LYUB Lan-yu 2.11 184 *e*P Pn 15 51 14.0 -4.1
baz=200
JIJ Ishigaki jima 2.22 83 ⇓P Pn 15 51 19.2 -0.4
JIJ ⇓*e*S **Sn 15 51 48.2 +1.3**
JIJ Ishigaki jima 2.22 83 A A 15 51 19.2
comp=E,375nm,8.2s,comp=N,1µm,5.6s

SMST Manzhou Townsh 2.24 202 *e*P Pn 15 51 20.7 +0.9
baz=204
VWUC VWUC 2.25 293⇑*e*P Pn 15 51 19.2 -0.8
baz=292
HEN Hengchun 2.29 204 *e*P Pn 15 51 20.9 +0.4
baz=206
VCHM Qimei 2.29 247 *e*P Pn 15 51 20.4 -0.2
baz=241
TWK1 Hengchun 2.32 202 *e*P Pn 15 51 19.9 -1.0
baz=204
TWKBT Hengchun 2.32 201 *e*P Pn 15 51 19.4 -1.6
baz=204
TSEB Hengchuen, Pin 2.33 199 *e*P Pn 15 51 20.3 -0.8
baz=204
JISG Ishigakijimahi 2.40 78 P **Pn 15 51 21.9 -0.2**
JISG S **Sn 15 51 51.8 +0.4**
JISG Ishigakijimahi 2.40 78 A A 15 51 21.9
comp=E,398nm,8.5s,comp=N,470nm,9.1s
PTMZ Houxiangcun 2.55 292⇑*e*P Pn 15 51 23.0 -1.1
baz=291
MATB Ma-tsu 2.59 322⇑*e*P Pn 15 51 23.6 -1.1
baz=315
JTJ Tarama 2.76 78 P **Pn 15 51 27.4 +0.3**
JTJ Tarama 2.76 78 A A 15 51 27.4
comp=E,670nm,13.6s,comp=N,746nm,10.0s
QZH Quanzhou 2.97 287⇑*i*Pn Pn 15 51 28.4 -1.5
QZH Sn **Sn 15 52 02.1 -3.4**
QZH smax smax
comp=N,35µm,1.3s
QZH smax smax
comp=N,30µm,1.1s
LYJJ Jianjiangzhen 3.01 324⇑*e*P Pn 15 51 29.2 -1.3
baz=317
KNM Kinmen 3.02 276⇑*e*P Pn 15 51 31.2 +0.6
baz=279
KNMB Chin-men Tao 3.07 277 Pn **Pn 15 51 28.9 -2.3**
KNMB Chin-men Tao 3.07 277⇑*e*P Pn 15 51 30.1 -1.2
baz=279
XPSS Dashiqiu 3.13 334 *e*P Pn 15 51 30.7 -1.4
baz=325
MHZQ Yeshan 3.14 310⇑*e*P Pn 15 51 31.5 -0.8
baz=305
JIRB Irabujima 3.22 77 P **Pn 15 51 33.7 +0.4**
JIRB Irabujima 3.22 77 A A 15 51 33.7
comp=E,767nm,7.2s,comp=N,709nm,9.7s
JIKM Ikemajima 3.31 75 P **Pn 15 51 35.4 +0.9**
JIKM Ikemajima 3.31 75 A A 15 51 35.4
comp=E,958nm,7.2s,comp=N,747nm,10.0s
JMJ Miyako jima 2 3.32 77 P **Pn 15 51 37.3 +2.5**
JMJ2 Miyako jima3 3.34 78 P **Pn 15 51 35.7 +0.7**
JMJ2 Miyako jima3 3.34 78 A A 15 51 35.7
comp=E,972nm,5.1s,comp=N,1µm,7.4s
JOGS Gusukube 3.42 78 *e*P Pn 15 51 37.0 +1.0
JOGS Gusukube 3.42 78 A A 15 51 37.0
comp=E,1µm,6.1s,comp=N,1µm,8.7s
AXDP Jialang 3.51 284⇑*e*P Pn 15 51 36.6 -0.7
baz=284
ZPLA Ao Xicun 3.64 268⇑*e*P Pn 15 51 38.7 -0.4
baz=272
DSXP Dongshan 3.96 265 *e*P Pn 15 51 42.9 -0.6
baz=269
SXFK Yanhouchang 4.34 302⇑*e*P Pn 15 51 48.0 -0.8
baz=300
JKE Kume jima 2 5.08 63 A A 15 52 01.3
comp=E,153nm,9.6s,comp=N,194nm,10.4s
JKE Kume jima 2 5.08 63 P **Pn 15 51 59.5 +0.5**
JAGN Aguni-jima 5.56 63 A A 15 52 08.0
comp=E,246nm,6.6s,comp=N,178nm,10.1s
JJT3 Tamagusuku3 5.85 69 A A 15 52 12.0
comp=E,376nm,9.4s,comp=N,442nm,6.8s
JNTH Nagotoyohara 6.18 66 A A 15 52 16.6
comp=E,125nm,11.9s,comp=N,159nm,10.3s
JIH Iheya 6.34 61 A A 15 52 18.9
comp=E,152nm,16.4s,comp=N,120nm,9.8s
JOW Kunigami 6.51 64 Pn **Pn 15 52 17.9 -0.7**
JOW Kunigami 6.51 64 P **Pn 15 52 19.9 +1.4**
JOW Kunigami 6.51 64 ⇑P Pn 15 52 17.9 -0.7
JOW Kunigami 6.51 64 A A 15 52 21.2
comp=E,119nm,8.2s,comp=N,128nm,8.6s
JOW Kunigami 6.51 64 P **Pn 15 52 17.8 -0.7**
JOW Kunigami 6.51 64 Pn **Pn 15 52 16.6 -2.0**
comp=N,60nm,0.3s,baz=151,slow=14,SNR=33
JYRO Yoronjima 6.73 63 A A 15 52 24.3
comp=E,126nm,9.5s,comp=N,152nm,8.2s
JOKE Okinoerabujima 6.97 61 A A 15 52 27.6
comp=E,127nm,10.9s,comp=N,97nm,9.6s
SSE Sheshan 6.97 356 Pn **Pn 15 52 25.4 +0.5**
SSE Sn **Sn 15 53 45.7 +1.6**
SSE smax smax
comp=N,3µm,1.2s
SSE smax smax
comp=N,3µm,1.4s
HKC Hong Kong Obse 7.18 257 ⇑P Pn 15 52 29.0 +1.2
HKPS Hong Kong Po S 7.21 257 P **Pn 15 52 28.8 +0.5**
JTK Tokunoshima 7.46 59 A A 15 52 34.5
comp=E,123nm,10.7s,comp=N,103nm,10.7s
JTK Tokunoshima 7.46 59 P **Pn 15 52 30.8 -0.8**
GZH Guangzhou 7.76 264 Pn **Pn 15 52 31.2 -4.5**
GZH Sn **Sn 15 53 54.6 -8.8**
GZH smax smax
comp=N,9µm,1.1s
GZH smax smax
comp=N,5µm,1.2s
GZH LR LR
comp=N,253µm,8.1s
GZH LR LR
comp=N,229µm,7.2s
MCO Taipa Grande 7.78 257 P **Pn 15 52 38.0 +2.0**
JAMN Amaminishikomi 7.85 57 A A 15 52 40.0
comp=E,66nm,9.5s,comp=N,77nm,11.1s
JAM Amami Oshima 8.27 A A 15 52 45.7
comp=E,73nm,11.7s,comp=N,88nm,16.6s
NJ2 Nanjing 8.30 343 ⇑P Pn 15 52 42.1 -1.1
NJ2 S **Sn 15 54 16.7 -0.2**
NJ2 pmax pmax
comp=N,350nm,0.6s
NJ2 smax smax
comp=N,3µm,1.2s
NJ2 smax smax
comp=N,3µm,1.2s
NJ2 LR LR
comp=N,204µm,10.0s
NJ2 LR LR
comp=N,490µm,14.2s
JTAJ Takarajima 8.36 52 A A 15 52 47.0
comp=E,131nm,15.5s,comp=N,96nm,8.8s
JTAJ Takarajima 8.36 52 P Pn 15 52 50.4 +6.4
JZK Kikaishima 8.50 59 A A 15 52 49.0
comp=E,272nm,7.9s,comp=N,291nm,7.9s
JMZ Minamidaito 2 8.78 77 Pn **Pn 15 52 48.2 -1.6**
JMZ Minamidaito 2 8.78 77 A A 15 52 52.8
comp=E,113nm,8.2s,comp=N,171nm,9.0s
JKDJ Kitadaitoujima 8.87 76 A A 15 52 54.0
comp=E,110nm,9.4s,comp=N,128nm,11.2s
CNSH ChangSha 8.88 299 ⇑P Pn 15 52 49.5 -1.6
CNSH S **Sn 15 54 29.9 -1.2**
CNSH smax smax
comp=N,11µm,1.4s
CNSH smax smax
comp=N,16µm,1.2s
CNSH LR LR
comp=N,362µm,12.5s
CNSH LR LR
comp=N,528µm,10.1s
WHN Wuhan 9.16 316⇓*i*P Pn 15 52 53.8 -1.2
WHN sP 15 53 02.0
WHN S **Sn 15 54 33.0 -5.0**
WHN LR LR
comp=N,2368µm,10.7s
WHN LR LR
comp=N,2250µm,11.8s
WHN LR LR
comp=N,1790µm,11.6s
JNN Nakanoshima 9.24 50 A A 15 52 59.1
comp=E,98nm,9.0s,comp=N,91nm,9.3s
JKC Kuchinoerabu 9.83 48 A A 15 53 07.3
comp=E,57nm,10.1s,comp=N,72nm,9.4s
JYAK Yakushimahirau 9.91 50 A A 15 53 08.4
comp=E,50nm,9.9s,comp=N,51nm,14.9s
JYAK Yakushimahirau 9.91 50 P Pn 15 53 12.5 +7.2
TGY Tagaytay City 9.99 184 Pn **Pn 15 53 08.7 +2.3**
comp=N,50nm,0.3s,baz=152,slow=0.4,SNR=2.7
TGY LR LR 15 57 43.5
comp=N,158µm,18.9s,baz=1.0,slow=42
JMTN Minamitane 10.28 51 A A 15 53 13.4
comp=E,54nm,10.7s,comp=N,71nm,17.6s

JSJ Shimokoshiki 10.33 41 A A 15 53 14.0
comp=E,55nm,14.6s,comp=N,54nm,12.4s
GULI GuiLin 10.40 279 ⇓P Pn 15 53 08.3 -3.6
GULI S **Sn 15 55 02.0 -6.4**
GULI pmax pmax
comp=N,160nm,1.4s
GULI LR LR
comp=N,1437µm,15.0s
GULI LR LR
comp=N,288µm,15.1s
GULI LR LR
comp=N,833µm,8.8s
JTN Tanegashima 3 10.49 50 A A 15 53 16.2
comp=E,69nm,11.6s,comp=N,51nm,11.5s
JFU Fukue jima 2 10.52 34 A A 15 53 16.6
comp=E,63nm,13.5s,comp=N,96nm,10.9s
JSU Suzuyama 10.67 44 A A 15 53 18.7
comp=E,41nm,9.3s,comp=N,51nm,11.0s
JTSR Tashiro 2 10.76 47 A A 15 53 19.9
comp=E,34nm,9.7s,comp=N,41nm,12.0s
NGSJ Nagasakinomoza 11.06 38 A A 15 53 24.0
comp=E,58nm,15.5s,comp=N,42nm,8.9s
JHD Hondo 11.14 40 A A 15 53 25.0
comp=E,54nm,10.1s,comp=N,79nm,13.0s
JZO Okuchi 11.19 42 A A 15 53 25.7
comp=E,45nm,9.3s,comp=N,46nm,9.6s
JNAR Kushima--Naru 11.21 47 A A 15 53 26.1
comp=E,67nm,8.7s,comp=N,61nm,11.7s
JTZ Takazaki 11.33 45 A A 15 53 27.7
comp=E,48nm,11.0s,comp=N,43nm,8.0s
JNKG Nichinankitago 11.37 46 A A 15 53 28.2
comp=E,61nm,8.0s,comp=N,62nm,10.8s
JUR Ureshino 11.49 37 A A 15 53 29.8
comp=E,61nm,11.2s,comp=N,70nm,9.3s
JIU3 Izumi3 11.60 42 A A 15 53 31.2
comp=E,40nm,10.9s,comp=N,75nm,10.6s
JTA Tamana 11.73 39 A A 15 53 33.0
comp=E,63nm,12.5s,comp=N,43nm,9.1s
JTSN Tsuno 11.83 45 A A 15 53 34.3
comp=E,47nm,6.8s,comp=N,37nm,11.6s
JII Iki 11.92 34 A A 15 53 35.5
comp=E,58nm,12.3s,comp=N,51nm,6.8s
JFI Itaya 11.99 37 A A 15 53 36.4
comp=E,56nm,11.6s,comp=N,64nm,11.8s
JHHC Hyugahichiya 12.04 44 A A 15 53 37.2
comp=E,45nm,7.3s,comp=N,38nm,12.1s
JNU Nakatsue 12.04 40 P **Pn 15 53 37.1 +2.6**
JNU Nakatsue 12.04 40 ⇑P Pn 15 53 37.8 +3.3
JNU Nakatsue 12.04 40 A A 15 53 37.2
comp=E,50nm,9.0s,comp=N,44nm,9.5s
JNU Nakatsue 12.04 40 Pn **Pn 15 53 35.5 +1.1**
comp=N,2.4nm,0.3s,baz=176,slow=4.4,SNR=14
JNU Sn **Sn 15 55 45.4 -3.3**
baz=299,slow=11
JKIT Kitakata 12.04 43 A A 15 53 37.2
comp=E,41nm,9.6s,comp=N,38nm,10.1s
QIZ Qiongzhong 12.16 248 P **Pn 15 53 36.6 +0.6**
QIZ sP P 15 53 42.1 -6.6
QIZ PP **PnPn 15 53 46.4 +2.5**
QIZ S **Sn 15 55 51.4 -0.1**
QIZ pmax pmax
comp=N,98nm,1.6s
QIZ pmax pmax
comp=N,3µm,5.5s
QIZ LR LR
comp=N,253µm,15.2s
QIZ LR LR
comp=N,248µm,16.0s
QIZ Qiongzhong 12.16 248 P **Pn 15 53 37.0 +1.0**
JTSM Tsushimamitsus 12.18 32 A A 15 53 39.0
comp=E,58nm,20.0s,comp=N,45nm,9.8s
JTU Tsushima 12.34 31 Pn **Pn 15 53 37.9 -0.6**
JTU Tsushima 12.34 31 P **Pn 15 53 42.4 +3.9**
JTU Tsushima 12.34 31 ⇑P Pn 15 53 42.9 +4.4
JTU Tsushima 12.34 31 A A 15 53 41.1
comp=E,59nm,11.8s,comp=N,70nm,11.8s
JFA Akaike 12.42 38 A A 15 53 42.3
comp=E,38nm,11.8s,comp=N,39nm,15.9s
JSKE Saikikamae 12.44 44 A A 15 53 42.5
comp=E,36nm,9.8s,comp=N,29nm,10.6s
ENH Enshi 12.50 302 Pn **Pn 15 53 39.7 -1.0**
ENH Enshi 12.50 302 P **Pn 15 53 41.6 +0.9**
JBEP Beppuamama 12.51 41 A A 15 53 43.4
comp=E,39nm,12.7s,comp=N,53nm,13.3s
JUS Usuki 12.53 42 A A 15 53 43.7
comp=E,37nm,9.5s,comp=N,46nm,12.1s
TIA Tai'an 12.69 343 *e*P Pn 15 53 43.6 +0.3
TIA pmax pmax
comp=N,50nm,1.4s
TIA LR LR
comp=N,126µm,14.5s
TIA LR LR
comp=N,162µm,10.8s
TIA LR LR
comp=N,195µm,16.7s
JKI Kunimi 12.81 40 A A 15 53 47.5
comp=E,41nm,12.1s,comp=N,34nm,14.3s
JTY Toyota 12.98 37 A A 15 53 49.7
comp=E,48nm,14.1s,comp=N,36nm,12.4s
JTO Tosashimizu 13.06 46 A A 15 53 50.8
comp=E,27nm,9.1s,comp=N,25nm,12.7s
TJN Taejon 13.15 20 Pn **Pn 15 53 47.5 -2.0**
TJN Taejon 13.15 20 P **Pn 15 53 52.2 +2.6**
TJN Taejon 13.15 20 P **Pn 15 53 47.6 -2.0**
LYN LuoYang 13.16 324 *e*P Pn 15 53 49.7 0.0
LYN pP P 15 53 51.8 -8.0
LYN sP 15 53 55.7
LYN PP **PnPn 15 53 58.6 +1.0**
LYN S **Sn 15 56 21.2 +5.3**
LYN SS **SnSn 15 56 33.1 +4.7**
LYN pmax pmax
comp=N,63nm,0.8s
LYN pmax pmax
comp=N,2µm,7.2s
LYN LR LR
comp=N,773µm,12.4s
LYN LR LR
comp=N,938µm,12.4s
LYN LR LR
comp=N,816µm,12.7s
UWA2 Uwa jima 2 13.17 44 A A 15 53 52.3
comp=E,21nm,9.0s,comp=N,31nm,11.5s
JKD Kudamatsu 13.29 40 A A 15 53 53.8
comp=E,33nm,11.2s,comp=N,28nm,11.1s
JNA Nagahama 13.31 43 A A 15 53 54.1
comp=E,26nm,11.7s,comp=N,40nm,11.4s
JHGM Hagimishima 13.42 35 A A 15 53 55.5
comp=E,76nm,11.1s,comp=N,63nm,12.1s
JKU Kubokawa 13.51 45 A A 15 53 56.8
comp=E,19nm,18.3s,comp=N,40nm,11.5s
JHIK Hikimi 13.66 38 A A 15 53 58.8
comp=E,38nm,9.4s,comp=N,38nm,10.7s
JHM Kurahashi 13.73 41 A A 15 53 59.7
comp=E,33nm,9.7s,comp=N,26nm,10.8s
JET Tanbara 13.81 43 A A 15 54 00.7
comp=E,20nm,10.1s,comp=N,30nm,17.5s
GYA Guiyang 13.83 283⇓*i*P Pn 15 53 59.7 +0.8
GYA S **Sn 15 56 32.4 -0.1**
GYA pmax pmax
comp=N,65nm,1.0s
GYA pmax pmax
comp=N,980nm,4.0s
GYA LR LR
comp=N,281µm,9.8s
GYA LR LR
comp=N,418µm,9.1s
GYA LR LR
comp=N,492µm,9.2s
JKHR Kochiharuno 13.92 45 A A 15 54 02.2
comp=E,27nm,11.4s,comp=N,38nm,11.9s
INCN Inchon 13.97 16 Pn **Pn 15 53 57.2 -3.6**
INCN Inchon 13.97 16 P **Pn 15 54 02.9 +2.1**
INCN Inchon 13.97 16 ⇓P P 15 54 05.2 -3.7
INCN Inchon 13.97 16 P **Pn 15 53 57.2 -3.6**
INCN Inchon 13.97 16 P **P 15 54 04.8 -4.0**
INCN P **P 15 54 04.8 -4.0**
JHT Toyohira 14.04 39 A A 15 54 03.7
comp=E,37nm,9.7s,comp=N,38nm,12.1s
MRT2 Murotomisaki 2 14.27 47 A A 15 54 06.7
comp=E,23nm,10.9s,comp=N,23nm,13.2s
KSAR Wonju Array Be 14.29 20 Pn **Pn 15 54 03.0 -2.2**
KSAR Wonju Array Be 14.29 20 P **Pn 15 54 03.0 -2.2**
JMN Monobe 14.31 45 Pn Pn 15 54 00.2 -5.2
JMN Monobe 14.31 45 P **Pn 15 54 06.4 +1.0**
JMN Monobe 14.31 45 ⇑P Pn 15 54 00.8 -4.6
JMN Monobe 14.31 45 A A 15 54 07.2

comp=E,27nm,11.2s,comp=N,46nm,13.3s
KSRS Korea Array 14.32 20 Pn **Pn 15 54 07.3 +1.8**
comp=N,1.9nm,0.3s,baz=199,slow=8.5,SNR=39
KSRS LR LR 16 00 53.6
comp=N,189µm,18.2s,baz=200,slow=44
KS19 Wonju Array Si 14.34 20 Pn **Pn 15 54 03.6 -2.3**
JGT2 ShimaneMisato 14.38 38 A A 15 54 08.1
comp=E,36nm,10.1s,comp=N,30nm,9.1s
HNS HongShan 14.54 337 ⇓P **Pn 15 54 08.1 -0.5**
HNS PP **PnPn 15 54 17.9 +1.2**
HNS *eS* **Sn 15 56 48.9 -0.8**
HNS SS **S 15 57 08.9 -0.2**
HNS pmax pmax
comp=N,89nm,1.1s
HNS LR LR
comp=N,191µm,11.2s
HNS LR LR
comp=N,303µm,17.5s
JHS Saijyo 14.68 40 A A 15 54 12.0
comp=E,28nm,15.3s,comp=N,35nm,10.9s
JMAF Mimaanabuki 14.68 45 A A 15 54 12.1
comp=E,20nm,9.9s,comp=N,22nm,12.3s
JAI Aioi 14.72 46 A A 15 54 12.6
comp=E,21nm,12.3s,comp=N,27nm,13.3s
DL2 Dalian 14.75 360 ⇓*iP* **P 15 54 14.4 -3.0**
DL2 S **Sn 15 57 01.6 +7.0**
DL2 pmax pmax
comp=N,630nm,1.4s
DL2 pmax pmax
comp=N,24µm,10.2s
DL2 LR LR
comp=N,174µm,14.9s
DL2 LR LR
comp=N,103µm,10.8s
DL2 LR LR
comp=N,215µm,14.7s
JJS Sakaide 14.75 43 A A 15 54 13.0
comp=E,20nm,9.7s,comp=N,28nm,10.4s
JISK Izumosakaura 14.88 38 A A 15 54 14.7
comp=E,34nm,10.5s,comp=N,43nm,12.4s
XAN Xi'an 14.92 314 ⇑P **Pn 15 54 13.9 +0.1**
XAN S **Sn 15 57 00.8 +1.7**
XAN pmax pmax
comp=N,510nm,1.4s
XAN pmax pmax
comp=N,16µm,8.8s
XAN LR LR
comp=N,971µm,14.7s
XAN LR LR
comp=N,697µm,15.5s
XAN LR LR
comp=N,476µm,16.5s
JNM Ikuma 14.98 38 A A 15 54 16.0
comp=E,27nm,10.4s,comp=N,35nm,8.6s
JKR Kurayoshi 15.36 40 A A 15 54 20.8
comp=E,26nm,13.8s,comp=N,33nm,10.2s
JWM Minabe 15.36 48 A A 15 54 20.9
comp=E,23nm,10.5s,comp=N,25nm,10.9s
JAWN Awajishima-nag 15.44 45 A A 15 54 21.9
comp=E,23nm,11.0s,comp=N,26nm,10.3s
JOI OKI 15.68 37 A A 15 54 25.0
comp=E,22nm,9.8s,comp=N,28nm,15.4s
TIY Taiyuan 15.71 332 ⇓P **P 15 54 26.6 -1.6**
TIY S **S 15 57 27.4 -5.8**
TIY pmax pmax
comp=N,48nm,0.6s
TIY pmax pmax
comp=N,25µm,9.3s
TIY LR LR
comp=N,306µm,12.6s
TIY LR LR
comp=N,264µm,10.4s
TIY LR LR
comp=N,224µm,13.1s
JKS Kasai 15.72 43 A A 15 54 25.5
comp=E,15nm,12.0s,comp=N,23nm,10.6s
JWY Kouya 15.73 47 A A 15 54 25.7
comp=E,19nm,9.1s,comp=N,18nm,17.2s
JMIK Miki 15.74 44 A A 15 54 25.8
comp=E,21nm,12.2s,comp=N,23nm,12.0s
JMMH Miemihama 15.80 49 A A 15 54 26.5
comp=E,14nm,10.8s,comp=N,16nm,11.3s
JNTK Naratenkawa 15.96 47 A A 15 54 28.6
comp=E,17nm,12.6s,comp=N,17nm,19.1s
JKSM Kasumi 16.00 41 A A 15 54 29.1
comp=E,29nm,12.3s,comp=N,28nm,7.2s
JHE Heguri 16.05 46 A A 15 54 29.8
comp=E,20nm,14.6s,comp=N,28nm,13.2s
TTO1 TONANKAI O.B.S 16.22 51 A A 15 54 32.0
comp=E,86nm,8.1s,comp=N,95nm,8.6s
JWT Wachi 16.26 44 A A 15 54 32.4
comp=E,15nm,13.3s,comp=N,16nm,15.3s
JKY Yasaka 16.30 42 A A 15 54 32.9
comp=E,25nm,10.8s,comp=N,30nm,10.4s
TTO2 TONANKAI O.B.S 16.45 51 A A 15 54 34.9
comp=E,116nm,12.2s,comp=N,108nm,11.4s
BJT Baijiatuau 16.54 345 **P 15 54 35.9 -1.3**
BJT Baijiatuau 16.54 345 P **P 15 54 37.4 +0.2**
BJT Baijiatuau 16.54 345 P **P 15 54 35.9 -1.3**
BJT pmax pmax
comp=Z,323nm,1.5s
BJI Beijing 16.55 345 P **Pn 15 54 35.9 +1.0**
BJI pP **pP 15 54 39.2 -1.8**
BJI PP **PnPn 15 54 49.7 +5.5**
BJI S **Sn 15 57 40.5 +2.0**
BJI pmax pmax
comp=Z,27nm,1.5s
BJI pmax pmax
comp=Z,2µm,6.8s
BJI LR LR
comp=Z,77µm,13.2s
BJI LR LR
comp=Z,60µm,10.7s
BJI LR LR
comp=Z,95µm,14.2s
JFM Mihama 16.78 44 A A 15 54 39.1
comp=E,18nm,9.6s,comp=N,26nm,11.9s
TTO3 TONANKAI O.B.S 16.78 51 A A 15 54 39.1
comp=E,95nm,7.4s,comp=N,99nm,9.5s
JEG Eigenji 16.81 46 A A 15 54 39.4
comp=E,17nm,10.5s,comp=N,22nm,13.8s
JAA Atsumi 17.02 48 A A 15 54 42.1
comp=E,16nm,13.2s,comp=N,17nm,11.3s
JICN Ichinomiyachia 17.20 46 A A 15 54 44.4
comp=E,21nm,10.0s,comp=N,22nm,14.6s
TTO5 TONANKAI O.B.S 17.21 50 A A 15 54 44.5
comp=E,39nm,5.4s,comp=N,71nm,8.7s
KMI Kunming 17.30 277 ⇑P **Pn 15 54 44.6 0.0**
KMI S **Sn 15 57 55.1 -2.0**
KMI pmax pmax
comp=N,120nm,2.0s
KMI pmax pmax
comp=N,3µm,5.2s
KMI LR LR
comp=N,229µm,10.7s
KMI LR LR
comp=N,275µm,13.3s
KMI LR LR
comp=N,291µm,13.2s
JYTA Yamagatataniai 17.31 45 A A 15 54 45.7
comp=E,17nm,9.7s,comp=N,16nm,10.5s
CD2 Chengdu 17.31 297 P **Pn 15 54 43.8 -0.7**
CD2 pP pP 15 54 49.5 -0.2
CD2 S **S 15 58 02.9 -2.9**
CD2 pmax pmax
comp=N,290nm,1.0s
CD2 pmax pmax
comp=N,7µm,8.2s
CD2 LR LR
comp=N,823nm,16.3s
CD2 LR LR
comp=N,414µm,10.6s
CD2 LR LR
comp=N,412µm,11.8s
DAV Davao City (W) 17.35 167 ⇓*eP* **Pn 15 54 45.0 0.0**
JSSY Shinshiroyabe 17.43 48 A A 15 54 47.2
comp=E,11nm,10.6s,comp=N,16nm,12.1s
DLV T Lat 17.45 228 P **Pn 15 54 46.2 -0.2**
DLV T Lat 17.45 228 P **P 15 54 48.9 +1.2**
DLV T Lat 17.45 228 ⇓P **P 15 54 50.0 +2.3**
JAO Obara 17.46 47 A A 15 54 47.6
comp=E,14nm,10.4s,comp=N,24nm,15.1s
JKG Kaga 17.48 43 A A 15 54 47.8
comp=E,23nm,10.2s,comp=N,32nm,12.9s
HMMJ Hamamatsu 2 17.54 49 A A 15 54 48.6
comp=E,9.0nm,15.8s,comp=N,16nm,13.1s
UBPT Khong Chiam 17.64 243 P **P 15 54 50.8 +1.2**
UBPT Khong Chiam 17.64 243 ⇑P **P 15 54 52.3 +2.8**
JKKS Kakegawashinom 17.67 49 A A 15 54 50.2
comp=E,29nm,10.6s,comp=N,32nm,9.2s
JGF Kuroka 17.72 46 ⇑P **P 15 54 52.9 +2.4**
JGF Kuroka 17.72 46 A A 15 54 50.8
comp=E,13nm,11.1s,comp=N,18nm,9.9s
SNY Shenyang 17.73 5 ⇑P **P 15 54 53.1 +2.7**
SNY S **Sn 15 58 06.9 -0.2**
SNY pmax pmax
comp=N,150nm,1.5s
SNY pmax pmax
comp=N,13µm,6.7s
SNY LR LR
comp=N,59µm,14.7s
SNY LR LR
comp=N,111µm,14.2s
SNY LR LR
comp=N,66µm,12.3s
JSG Sagara 17.76 50 A A 15 54 51.4
comp=E,31nm,8.5s,comp=N,31nm,16.6s
JAOM Aogashimamukai 17.91 58 A A 15 54 53.3
comp=E,41nm,6.8s,comp=N,44nm,6.2s
JNY Yasuok 17.91 48 A A 15 54 53.3
comp=E,12nm,10.2s,comp=N,21nm,11.7s
SHZ3 Shizuoka 3 17.99 49 A A 15 54 55.0
comp=E,16nm,11.9s,comp=N,17nm,9.7s
SHZ3 Shizuoka 3 17.99 49 P **P 15 54 57.6 +4.1**
JGN Niukaw 18.06 44 A A 15 54 55.5
comp=E,12nm,12.2s,comp=N,18nm,13.5s
JJH Hakui 18.17 42 A A 15 54 56.4
comp=E,25nm,11.1s,comp=N,34nm,12.0s
JHCJ Hachijojimakas 18.19 57 A A 15 54 56.6
comp=E,23nm,8.9s,comp=N,20nm,7.2s
JHJ Hachijo jima 2 18.20 56 P **Pn 15 54 49.5 -6.0**
comp=N,5.2nm,0.3s,baz=252,slow=20,SNR=1.5
JHJ LR LR 16 01 29.1
comp=N,63µm,21.8s,baz=262,slow=36
comp=N,158nm,0.9s
JHJ2 Mitsune 18.22 56 P **P 15 54 56.7 +0.8**
JHJ2 Mitsune 18.22 56 ⇑P **P 15 55 00.1 +4.2**
JHJ2 Mitsune 18.22 56 A A 15 54 56.9
comp=E,28nm,6.1s,comp=N,23nm,5.7s
PZH PanZhiHua 18.23 282 P **P 15 54 56.0 -0.2**
PZH sP **sP 15 55 04.7 +3.5**
PZH S **Sn 15 58 18.2 -1.3**
PZH SS **SnSn 15 58 37.6 +4.5**
PZH pmax pmax
comp=N,40nm,1.0s
PZH pmax pmax
comp=N,5µm,7.8s
PZH LR LR
comp=N,239µm,12.8s
PZH LR LR
comp=N,227µm,11.8s
JIZS Izushimoda 18.27 51 A A 15 54 57.5
comp=E,11nm,8.7s,comp=N,12nm,8.4s
JTT Ttatey 18.31 44 A A 15 54 57.8
comp=E,21nm,9.3s,comp=N,31nm,13.2s
JFNN Fujinakano 18.39 49 A A 15 54 59.9
comp=E,19nm,15.4s,comp=N,27nm,8.5s
JMKN Mikurajimanish 18.39 54 A A 15 54 60.0
comp=E,30nm,11.5s,comp=N,25nm,13.1s
JNT Takato 18.39 47 A A 15 54 59.9
comp=E,12nm,18.6s,comp=N,15nm,10.6s
JYN Shimob 18.45 48 A A 15 55 00.7
comp=E,17nm,11.7s,comp=N,23nm,10.9s
JHH2 Haha-jima-NKT2 18.65 78 A A 15 55 02.9
comp=E,35nm,8.3s,comp=N,22nm,9.0s
JIM2 Oshima 3 18.67 52 A A 15 55 03.2
comp=E,21nm,9.4s,comp=N,21nm,8.4s
JNG Nsakai 18.68 45 A A 15 55 03.3
comp=E,14nm,14.1s,comp=N,17nm,12.0s
CBIJ Chichi jima 18.69 77 A A 15 55 03.4
comp=E,28nm,7.3s,comp=N,18nm,7.6s
JCJ Chichijima 18.69 77 P **P 15 55 00.5 -0.6**
JCJ IAmb IAmb 15 55 10.5
comp=Z,882nm,1.0s
JCJ Chichijima 18.69 77 P **Pn 15 55 02.9 +1.4**
JCJ Chichijima 18.69 77 ⇑P **Pn 15 55 01.8 +0.3**
JCJ Chichijima 18.69 77 P **P 15 54 55.4 -5.7**
comp=Z,277nm,0.9s,baz=280,slow=8.0,SNR=6.6
JOD2 Odawara 2 18.70 50 A A 15 55 03.6
comp=E,18nm,12.6s,comp=N,20nm,10.6s
KKM Kota Kinabalu 18.73 197 **P 15 55 01.4 -0.4**
KKM IAmb IAmb 15 55 10.5
comp=Z,2µm,1.9s
KKM Kota Kinabalu 18.73 197 P **Pn 15 55 03.9 +1.7**
KKM Kota Kinabalu 18.73 197 ⇓P **Pn 15 55 02.6 +0.4**
HHC Hu-ho-hao-te 18.74 335 *eP* **Pn 15 55 04.2 +2.1**
HHC sP sP 15 55 11.2 +4.4
HHC SS **SnSn 15 58 54.1 +8.4**
HHC pmax pmax
comp=Z,160nm,1.5s
HHC pmax pmax
comp=Z,31µm,7.7s
HHC LR LR
comp=Z,189µm,14.1s
HHC LR LR
comp=Z,72µm,13.8s
HHC LR LR
comp=Z,218µm,15.4s
MAJO Matsushiro 18.83 45 P **P 15 54 59.6 -3.1**
MAJO Matsushiro 18.83 45 P **Pn 15 55 05.4 +2.2**
MAJO Matsushiro 18.83 45 ⇑P **P 15 55 01.5 -1.1**
MAJO Matsushiro 18.83 45 *i*P **P 15 55 01.2 -1.4**
MJAR Matsushiro Arr 18.83 45 P **P 15 54 58.5 -4.1**
comp=Z,0.1nm,0.3s,baz=233,slow=9.2,SNR=12
MJAR ScP **ScP 16 03 01.7 -3.2**
comp=Z,3.5nm,0.9s,baz=243,slow=4.5,SNR=3.3
MJAR LR LR 16 03 25.1
comp=Z,89µm,20.1s,baz=226,slow=41
comp=Z,4.5nm,0.6s
JHG Hegura jima 18.86 40 A A 15 55 05.4
comp=E,28nm,14.1s,comp=N,30nm,14.6s
JSZ Suzu 18.86 42 A A 15 55 05.4
comp=E,21nm,16.4s,comp=N,24nm,12.3s
JSGW Sagamiharawaka 18.97 49 A A 15 55 06.7
comp=E,13nm,14.5s,comp=N,21nm,11.0s
JRY Ryogami san 18.98 47 A A 15 55 06.9
comp=E,12nm,16.4s,comp=N,13nm,10.7s
MYLDM Lahad Datu 19.08 190 ⇓P **Pn 15 55 07.5 +1.2**
JGK Kuni 19.12 46 A A 15 55 08.4
comp=E,13nm,13.8s,comp=N,19nm,12.3s
JJN Nakama 19.14 44 A A 15 55 08.6
comp=E,20nm,14.5s,comp=N,35nm,14.2s
JHU Hanno 19.15 48 A A 15 55 08.8
comp=E,12nm,9.4s,comp=N,14nm,11.2s
BTO Baotou 19.16 332 ⇓*iP* **Pn 15 55 11.2 +4.0**
BTO pP **sP 15 55 15.0 +3.6**
BTO sP pP 15 55 18.1 +8.3
BTO PP **PnPn 15 55 29.0 +9.0**
BTO pmax pmax
comp=N,160nm,1.3s
BTO pmax pmax
comp=N,101µm,10.1s
BTO LR LR
comp=N,651µm,11.8s
BTO LR LR
comp=N,231µm,10.1s
BTO LR LR
comp=N,691µm,13.9s
TOK Tokyo 19.39 49 A A 15 55 11.6
comp=E,59nm,6.7s,comp=N,60nm,11.0s
JKUC kamogawauchiur 19.43 51 A A 15 55 12.1
comp=E,18nm,11.0s,comp=N,33nm,13.0s
LZH Lanzhou 19.50 312 ⇑P **Pn 15 55 12.0 +0.6**
LZH sP sP 15 55 18.9 +3.7
LZH S **Sn 15 58 46.5 -3.7**
LZH pmax pmax
comp=N,180nm,1.4s
LZH pmax pmax
comp=N,7µm,6.2s
LZH LR LR
comp=N,485µm,13.7s
LZH LR LR
comp=N,240µm,13.4s
LZH LR LR
comp=N,402µm,13.4s
JCN Nagara 19.56 51 A A 15 55 13.5
comp=E,70nm,8.9s,comp=N,80nm,9.6s
JAG Ashikaga 19.58 47 A A 15 55 13.7
comp=E,13nm,15.1s,comp=N,16nm,15.8s
JIZZ Izumozaki 19.75 43 A A 15 55 15.6
comp=E,36nm,13.4s,comp=N,39nm,14.6s
JUON Uonuma 19.77 45 A A 15 55 15.8
comp=E,9.0nm,16.2s,comp=N,18nm,11.7s
JSD Sado 19.79 42 A A 15 55 16.0
comp=E,22nm,15.9s,comp=N,29nm,12.5s
CN2 Changchun 19.88 8 P **P 15 55 13.6 -0.4**
CN2 sP sP 15 55 20.6 +1.4
CN2 S **S 15 58 52.0 -5.4**
CN2 pmax pmax
comp=N,170nm,1.4s
CN2 pmax pmax
comp=N,25µm,10.0s
CN2 LR LR
comp=N,130µm,13.0s
CN2 LR LR
comp=N,92µm,13.0s
CN2 LR LR
comp=N,136µm,13.0s
MSHR Mys Shultsa 20.01 21 *i*P **P 15 55 14.9 -0.5**
CRAI Chiangrai 20.15 263 IAMs_20 IAMs_20 16 03 44.9
comp=Z,90µm,20.0s
XLT XiLinHaoTe 20.27 348 *eP* Pn 15 55 20.0 -0.4
XLT sP sP 15 55 31.7 +8.1
XLT PP **PnPn 15 55 39.0 +3.8**
XLT S Sn 15 59 07.4 -1.2
XLT SS **SnSn 15 59 31.0 +7.7**
XLT pmax pmax
comp=Z,260nm,1.3s
XLT pmax pmax
comp=Z,26µm,11.4s
XLT LR LR
comp=Z,9µm,15.3s
XLT LR LR
comp=Z,88µm,11.1s
XLT LR LR
comp=Z,158µm,16.3s
SGSI Sangihe 20.64 169 P **P 15 55 19.2 -3.3**
comp=Z,405nm,1.8s,comp=Z,14µmcomp=Z,109µm
TNCH TengChong 21.12 277 ⇑P **P 15 55 29.6 +1.7**
TNCH pP sP 15 55 32.2 -0.8
TNCH sP pP 15 55 34.0 +2.3
TNCH PP **PnPn 15 55 52.4 +5.3**
TNCH pmax pmax
comp=Z,160nm,1.3s
TNCH pmax pmax
comp=Z,8µm,4.8s
TNCH LR LR
comp=Z,231µm,9.7s
TNCH LR LR
comp=Z,178µm,14.1s
TNCH LR LR
comp=Z,227µm,15.6s
JMM Marumori 21.28 45 P **P 15 55 29.2 0.0**
JMM Marumori 21.28 45 ⇑P **P 15 55 24.6 -4.7**
MDJ Mudanjiang 21.44 16 P **P 15 55 31.0 +0.1**
MDJ S **S 15 59 30.2 +1.8**
MDJ sS Sn 15 59 36.6 +0.2
MDJ SS **SnSn 15 59 55.3 +3.6**
MDJ PcS **PcS 16 03 10.5 -1.6**
MDJ pmax pmax
comp=Z,190nm,1.5s
MDJ pmax pmax
comp=Z,11µm,11.8s
MDJ LR LR
comp=Z,99µm,14.3s
MDJ LR LR
comp=Z,314µm,16.3s
MDJ LR LR
comp=Z,195µm,16.4s
MDJ Mudanjiang 21.44 16 IAMs_20 IAMs_20 16 04 59.0
comp=Z,142µm,18.0s
MDJ Mudanjiang 21.44 16 P **P 15 55 31.8 +0.9**
NAYO Nakonayok 21.57 247 P **P 15 55 34.8 +2.3**
USA0B Ussuriysk Arra 21.73 20 *i*P **P 15 55 33.8 -0.2**
USRK Ussuriysk Ar. 21.73 20 P **P 15 55 33.3 -0.7**
comp=Z,32nm,0.6s,baz=202,slow=8.8,SNR=52
USRK LR LR 16 05 04.5
comp=Z,56µm,20.2s,baz=198,slow=40
CHTO Chiang Mai 21.84 260 P **P 15 55 37.2 +1.8**
CHTO Chiang Mai 21.84 260 ⇑P **P 15 55 36.5 +1.1**
CHTO Chiang Mai 21.84 260 P **P 15 55 38.2 +2.7**
CHTO P **P 15 55 38.2 +2.7**
CHTO P **P 15 55 38.2 +2.7**
CM31 Chiang Mai Arr 21.95 260 P **P 15 55 39.5 +2.9**
SNR=147
CM31 P **P 15 55 39.5 +2.9**
SNR=147
CMAR Chiang Mai Arr 21.95 260 P **P 15 55 35.2 -1.4**
CMAR Chiang Mai Arr 21.95 260 P **P 15 55 37.3 +0.7**
comp=Z,17nm,1.0s,baz=61,slow=8.6,SNR=87
CMAR PcP **PcP 15 59 33.6 -1.8**
comp=Z,8.3nm,0.8s,baz=350,slow=0.7,SNR=8.0
CMAR LR LR 16 05 31.9
comp=Z,102µm,18.4s,baz=65,slow=40
comp=Z,17nm,1.0s
BNX BinXian 22.06 11 ⇑P **P 15 55 36.8 -0.8**
BNX pP **pP 15 55 41.2 -0.3**
BNX sP **sP 15 55 44.3 +1.5**
BNX PP **PnPn 15 56 02.8 +3.2**
BNX S **S 15 59 33.3 -7.2**
BNX sS **pS 15 59 41.7 -3.9**
BNX pmax pmax
comp=Z,100nm,1.5s
BNX pmax pmax
comp=Z,12µm,10.0s
BNX LR LR
comp=Z,123µm,15.3s
BNX LR LR
comp=Z,100µm,13.3s
BNX LR LR
comp=Z,149µm,13.5s
TOLI2 Tolitoli 22.89 182 P **P 15 55 46.7 +0.1**
TOLI2 IAMs_20 IAMs_20 16 04 19.4
comp=Z,79µm,22.0s
TOLI2 Tolitoli 22.89 182 P **P 15 55 48.5 +1.9**
JTM Tenmabayashi 23.21 40 P **P 15 55 51.1 +1.3**
JTM Tenmabayashi 23.21 40 ⇑P **P 15 55 48.3 -1.5**
SBUM Sibu 23.42 205 P **P 15 55 51.0 -1.0**
SBUM IAMs_20 IAMs_20 16 03 59.0
comp=Z,92µm,21.0s
SBUM Sibu 23.42 205 ⇑P **P 15 55 51.1 -1.0**
MRSI Marisa 23.50 179 P **P 15 55 50.9 -1.9**
comp=Z,541nm,1.5s,comp=Z,11µmcomp=Z,83µm
KMSI Cibinong 23.50 174 P **P 15 55 50.3 -2.5**
comp=Z,982nm,1.0s,comp=Z,25µmcomp=Z,78µm
MND Mandalay 23.65 270 P **P 15 55 56.1 +1.8**
MPSI Mapaga 23.70 185 P **P 15 55 53.2 -1.6**
comp=Z,347nm,1.6s,comp=Z,10µmcomp=Z,84µm
TNTI Ternate 23.84 166 IAmb IAmb 15 56 13.6
comp=Z,653nm,1.2s
TNTI Ternate 23.84 166 P **P 15 55 58.3 +2.2**
TNTI Ternate 23.84 166 ⇓P **P 15 55 53.4 -2.7**
TNTI Ternate 23.84 166 P **P 15 55 54.3 -1.8**
comp=Z,484nm,1.4s,comp=Z,10µmcomp=Z,40µm
GTA Gaotai 23.99 315 ⇑P **P 15 55 57.1 -0.4**
GTA pP sP 15 56 03.0 +0.2
GTA sP pP 15 56 06.8 +5.7
GTA S **S 16 00 18.3 +4.1**
GTA sS sS 16 00 25.6 +5.2
GTA pmax pmax
comp=Z,65nm,1.8s
GTA pmax pmax
comp=Z,2µm,5.3s
GTA LR LR
comp=Z,223µm,16.7s
GTA LR LR
comp=Z,142µm,17.5s
GTA LR LR
comp=Z,247µm,14.9s
TEY Ternei 24.12 26 ⇓*eP* **P 15 55 57.3 -1.3**
GUMO Guam 24.24 111 P **P 15 55 59.7 -0.2**
GUMO Guam 24.24 111 P **P 15 56 02.5 +2.6**
GUMO Guam 24.24 111 ⇓P **P 15 56 00.5 +0.6**
GUMO Guam 24.24 111 P **P 15 55 59.7 -0.2**
GUMO pmax pmax
comp=Z,2µm,1.2s
GUMO MLR MLR
comp=Z,62µm,20.0s
GUMO Guam 24.24 111 LR LR 16 04 11.4
comp=Z,40µm,21.6s,baz=298,slow=34
MOKO MOKOCHONG 24.70 281 *eP* **P 15 56 05.3 +1.1**
MOKO IAMs_20 IAMs_20 16 05 39.9
comp=Z,140µm,16.8s
JORH JORHAT 24.93 282 *eP* **P 15 56 07.0 +0.8**
LUWI Luwuk 25.03 178 IAMs_20 IAMs_20 16 05 57.7
comp=Z,109µm,21.0s
LUWI Luwuk 25.03 178 P **P 15 56 09.0 +2.0**
LUWI Luwuk 25.03 178 P **P 15 56 03.4 -3.5**
LUWI Luwuk 25.03 178 ⇑P **P 15 56 03.5 -3.5**

LUWI Luwuk 25.03 178 P P 15 56 07.1 +0.1
comp=Z,1µm,1.0s,comp=Z,19µmcomp=Z,61µm
KSM Kuching 25.07 208 P P 15 56 05.7 -1.8
KSM IAmb IAmb 15 56 11.8
comp=Z,897nm,1.1s
KSM IAMs_20 IAMs_20 16 05 08.1
comp=Z,93µm,21.0s
KSM Kuching 25.07 208 P P 15 56 07.8 +0.3
KSM Kuching 25.07 208 ⇑P P 15 56 06.8 -0.6
KOHI KOHIMA 25.08 279 *e*P P 15 56 07.4 -0.3
KOHI IAmb IAmb 15 56 18.4
comp=Z,531nm,1.6s
HIA Hailar 25.15 357 P P 15 56 06.8 -1.2
HIA Hailar 25.15 357 IAMs_20 IAMs_20 16 07 33.8
comp=Z,104µm,19.0s
HIA Hailar 25.15 357 P P 15 56 09.6 +1.7
HIA Hailar 25.15 357 *i* P P 15 56 07.1 -0.8
HIA pmax pmax
comp=Z,239nm,1.2s
HIA MLR MLR
comp=Z,103µm,16.0s
ERM Erimo 25.21 40 P P 15 56 05.1 -3.4
ERM Erimo 25.21 40 P P 15 56 10.9 +2.5
ERM Erimo 25.21 40 ⇑P P 15 56 06.8 -1.7
ERM Erimo 25.21 40 *ce*P P 15 56 08.1 -0.3
ERM pmax pmax
comp=Z,298nm,2.5s
ERM MLR MLR
comp=Z,93µm,19.0s
JEM Erimo 25.21 40 P P 15 56 11.0 +2.6
LBMI Labuha 25.23 166 P P 15 56 07.1 -1.8
comp=Z,704nm,1.0s,comp=Z,16µm
IMP Imphal 25.28 277 *e*P P 15 56 08.4 -1.0
IMP IAmb IAmb 15 56 21.2
comp=Z,259nm,1.3s
IMP IAMs_20 IAMs_20 16 05 18.2
comp=Z,184µm,18.2s
ZIRO ZIRO 25.30 284 *e*P P 15 56 12.3 +2.6
ZIRO IAmb IAmb 15 56 22.9
comp=Z,2µm,1.8s
ZIRO IAMs_20 IAMs_20 16 05 14.6
comp=Z,178µm,19.5s
ITAN ITANAGAR 25.41 283 *e*P P 15 56 12.9 +2.5
ITAN IAmb IAmb 15 56 29.8
comp=Z,2µm,1.1s
ITAN IAMs_20 IAMs_20 16 05 55.8
comp=Z,203µm,16.3s
BKB Balikpapan 25.66 191 P P 15 56 13.3 +0.6
MTKI Muara Teweh, K 25.77 196 P P 15 56 14.0 +0.2
comp=Z,551nm,0.9s,comp=Z,14µmcomp=Z,40µm
STKI Sintang 25.89 204 P P 15 56 16.5 +1.6
comp=Z,458nm,1.1s,comp=Z,13µm
GOMU GeErMu 26.11 304 P P 15 56 17.6 +0.4
GOMU pmax pmax
comp=Z,100nm,1.3s
GOMU LR LR
comp=Z,630µm,17.5s
GOMU LR LR
comp=Z,210µm,14.5s
GOMU LR LR
comp=Z,225µm,16.5s
ASAJ Asahikawa 26.26 35 P P 15 56 15.2 -2.8
ASAJ pmax pmax
comp=Z,643nm,2.0s
JKA Kamikawa-asahi 26.26 35 P P 15 56 15.2 -2.8
JKA IAmb IAmb 15 56 50.8
comp=Z,643nm,2.0s
KLR Kul'dur 26.28 15 *ce*P P 15 56 17.3 -0.8
KLR pmax pmax
comp=Z,420nm,1.7s
KLR MLR MLR
comp=Z,99µm,16.0s
KLR Kul'dur 26.28 15 LR LR 16 08 02.7
comp=Z,82µm,20.6s,baz=200,slow=40
SKLT Songkhla 26.33 234 P P 15 56 22.0 +3.1
SANI Sanana 26.34 170 P P 15 56 20.5 +1.6
SANI Sanana 26.34 170 P P 15 56 15.1 -3.8
SANI Sanana 26.34 170 ⇓P P 15 56 15.3 -3.5
SANI Sanana 26.34 170 P P 15 56 15.2 -3.7
comp=Z,205nm,0.9s,comp=Z,7µmcomp=Z,45µm
ULN Ulaanbaatar 26.42 337 P P 15 56 18.5 -1.1
ULN IAmb IAmb 15 56 35.3
comp=Z,728nm,1.4s
ULN Ulaanbaatar 26.42 337 ⇑P P 15 56 18.9 -0.6
ULN Ulaanbaatar 26.42 337 *i* P P 15 56 18.5 -1.1
ULN pmax pmax
comp=Z,730nm,1.6s
ULN MLR MLR
comp=Z,137µm,16.0s
ULN Ulaanbaatar 26.42 337 P P 15 56 20.1 +0.5
ULN P P 15 56 20.1 +0.5
ULN P P 15 56 20.1 +0.5
SAIH SAIHA 26.43 272 *e*P P 15 56 20.2 +0.3
SAIH IAmb IAmb 15 56 33.0
comp=Z,148nm,0.9s
SAIH IAMs_20 IAMs_20 16 07 07.8
comp=Z,84µm,15.9s
HEH HeiHe 26.47 8 *e*P P 15 56 18.8 -1.0
HEH pP pP 15 56 22.8 -1.1
HEH S S 16 00 58.4 +5.2
HEH pmax pmax
comp=Z,51nm,1.8s
HEH pmax pmax
comp=Z,19µm,8.5s
HEH LR LR
comp=Z,129µm,15.9s
HEH LR LR
comp=Z,89µm,13.7s
HEH LR LR
comp=Z,199µm,15.3s
SWI Sorong 26.50 158 P P 15 56 18.3 -2.0
comp=Z,193nm,1.4s,comp=Z,5µmcomp=Z,46µm
SONM Songino Array 26.63 337 P P 15 56 20.6 -0.8
SONM IAmb IAmb 15 56 36.9
comp=Z,1µm,1.9s
SONM Songino Array 26.63 337 P P 15 56 20.6 -0.8
comp=Z,75nm,1.1s,baz=158,slow=8.6,SNR=107
SONM LR LR 16 08 21.2
comp=Z,188µm,18.1s,baz=162,slow=40
comp=Z,75nm,1.1s
TTSI Tana Toraja 27.06 184 P P 15 56 24.3 -1.1
comp=Z,164nm,1.0s,comp=Z,7µmcomp=Z,38µm
SHL Shillong 27.10 279 P P 15 56 25.0 -1.0
SHL Shillong 27.10 279 P P 15 56 25.0 -1.0
SHL pmax pmax
comp=Z,2µm,1.9s
SHL Shillong 27.10 279 *e*P P 15 56 27.2 +1.2
SHL IAmb IAmb 15 56 39.6
comp=Z,2µm,2.0s
SHL Shillong 27.10 279 P P 15 56 29.2 +3.2
SNR=307
GUWA GUWAHATI 27.24 281 *e*P P 15 56 27.2 +0.2
GUWA IAmb IAmb 15 56 38.4
comp=Z,572nm,1.4s
KULM Kulim 27.59 231 ⇑P P 15 56 31.8 +1.6
BRDH Bariadhala 27.62 273 P P 15 56 31.6 +1.2
comp=Z,111nm,0.3s,baz=90,slow=20,SNR=1.2
BRDH LR LR 16 10 08.3
comp=Z,63µm,18.8s,baz=88,slow=42
NLAI Namlea 27.69 168 P P 15 56 31.4 +0.4
comp=Z,273nm,0.9s,comp=Z,6µm
LSA Lhasa 27.78 288 *i* P P 15 56 32.6 +0.2
SNR=43
LSA Lhasa 27.78 288 P P 15 56 33.7 +1.3
LSA P P 15 56 33.7 +1.3
IPM Ipoh 27.91 229 P P 15 56 31.9 -1.2
IPM Ipoh 27.91 229 P P 15 56 34.6 +1.5
IPM Ipoh 27.91 229 ⇓P P 15 56 33.1 0.0
YUK Yuzh-Kuril'sk 28.01 39 *e*P P 15 56 30.9 -2.8
YUK *i* 15 57 16.6
YUK *i* S S 16 01 13.8 -3.9
YUK *e*SS SnSn 16 02 32.6 +0.2
YUK pmax pmax
comp=Z,204nm,0.8s
YUK pmax pmax
comp=Z,545nm,2.3s
MYKOM Kota Tinggi 28.14 221 IAMs_20 IAMs_20 16 06 53.8
comp=Z,81µm,21.0s
MYKOM Kota Tinggi 28.14 221 ⇓P P 15 56 35.6 +0.5
YSS Yuzh-Sakhalins 28.33 31 IAMs_20 IAMs_20 16 09 29.9
comp=Z,75µm,20.0s
YSS Yuzh-Sakhalins 28.33 31 P P 15 56 39.7 +3.2
YSS Yuzh-Sakhalins 28.33 31 ⇑P P 15 56 38.8 +2.2
YSS Yuzh-Sakhalins 28.33 31 *ce*P P 15 56 36.5 0.0
YSS *e* 15 57 38.6
YSS *e*S S 16 01 21.8 -0.8
YSS pmax pmax
comp=Z,100nm,0.9s
YSS pmax pmax
comp=Z,5µm,9.0s
YSS pmax pmax
comp=N,2µm,7.9s
YSS pmax pmax
comp=E,2µm,9.7s
YSS smax smax
comp=E,14µm,15.5s
YSS MLR MLR
comp=N,49µm,15.0s
YSS MLR MLR
comp=Z,72µm,15.0s
YSS MLR MLR
comp=E,31µm,14.0s
TPRI Tanjung Pinang 28.45 218 P P 15 56 38.3 +0.4
comp=E,197nm,1.2s,comp=E,6µmcomp=E,10µm
CIT Chita 28.56 349 *e*P P 15 56 37.1 -1.5
CIT *e* 15 56 43.8
CIT *e* 15 57 36.4
CIT pmax pmax
comp=Z,444nm,1.8s
FAKI Fak Fak 28.75 158 P P 15 56 38.4 -2.2
FAKI IAMs_20 IAMs_20 16 06 49.8
comp=Z,52µm,19.0s
FAKI Fak Fak 28.75 158 P P 15 56 40.4 -0.2
FAKI Fak Fak 28.75 158 ⇑P P 15 56 39.4 -1.2
FAKI Fak Fak 28.75 158 P P 15 56 38.2 -2.4
comp=Z,179nm,1.2s,comp=Z,4µmcomp=Z,35µm
GRNR Gornyy 28.94 19 *i*P P 15 56 42.6 +0.6
GRNR *e*S S 16 01 37.6 +5.3
GRNR pmax pmax
comp=N,10.0nm,1.1s
GRNR pmax pmax
comp=E,6.0nm,1.1s
GRNR pmax pmax
comp=Z,30nm,0.8s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=E,52µm,13.0s
GRNR MLR MLR
comp=N,37µm,15.0s
GRNR MLR MLR
comp=Z,51µm,14.0s
KAPI Kappang 29.02 184 P P 15 56 42.0 -0.9
KAPI IAmb IAmb 15 56 59.3
comp=Z,525nm,1.6s
KAPI Kappang 29.02 184 IAMs_20 IAMs_20 16 08 08.9
comp=Z,99µm,21.0s
KAPI Kappang 29.02 184 P P 15 56 44.9 +2.0
KAPI Kappang 29.02 184 ⇓P P 15 56 41.1 -1.7
KAPI Kappang 29.02 184 *i* P P 15 56 40.3 -2.6
KAPI pmax pmax
comp=Z,484nm,2.6s
KAPI MLR MLR
comp=Z,141µm,24.0s
BKSI Bukumba 29.30 183 P P 15 56 44.8 -0.6
comp=Z,53nm,1.0s,comp=Z,2µmcomp=Z,31µm
DGPR DIGLIPUR 29.31 253 IAMs_20 IAMs_20 16 13 52.8
comp=Z,59µm,18.8s
UGL Uglegorsk 29.60 28 *e*P P 15 56 50.6 +2.8
UGL *e* 15 58 00.2
UGL pmax pmax
comp=Z,200nm,3.8s
UGL pmax pmax
comp=Z,6µm,15.0s
UGL MLR MLR
comp=E,59µm,12.0s
UGL MLR MLR
comp=N,49µm,15.0s
UGL MLR MLR
comp=Z,57µm,14.0s
ZEA Zeya 29.88 7 *e*P P 15 56 48.8 -1.4
ZEA *e*S S 16 01 40.8 -6.0
ZEA pmax pmax
comp=N,3µm,11.6s
ZEA pmax pmax
comp=Z,5µm,11.1s
ZEA pmax pmax
comp=N,120nm,1.5s
ZEA pmax pmax
comp=Z,210nm,1.0s
ZEA MLR MLR
comp=N,109µm,14.0s
ZEA MLR MLR
comp=Z,97µm,14.0s
KUR Kuril'sk 29.88 39 P P 15 56 48.2 -2.1
KUR PPP PPP 15 57 50.6
KUR 15 59 50.6
KUR MLR MLR
comp=E,39µm,20.0s
KUR MLR MLR
comp=Z,61µm,20.0s
ZAK Zakamensk 29.88 336 *e*P P 15 56 49.1 -1.3
ZAK pmax pmax
comp=Z,65nm,1.1s
GTK Tadong 29.97 283 *e*P P 15 56 53.8 +2.3
GTK IAmb IAmb 15 57 10.4
comp=Z,365nm,0.9s
GTK IAMs_20 IAMs_20 16 08 11.2
comp=Z,136µm,16.1s
PPBI Pangkal Pinang 30.20 212 P P 15 56 55.0 +1.6
comp=Z,198nm,1.2s,comp=Z,7µmcomp=Z,16µm
PSI Prapat 30.56 230 P P 15 56 59.3 +2.5
KCSI Kotacane, Aceh 30.88 232 P P 15 57 00.3 +0.9
comp=Z,75nm,1.8s,comp=Z,3µm
SHBG Sahibganj 30.93 279 *e*P P 15 56 59.2 -0.5
BKNI Bangkinang 31.00 223 P P 15 57 02.5 +2.0
BKNI Bangkinang 31.00 223 P P 15 57 01.1 +0.5
BKNI Bangkinang 31.00 223 P P 15 57 02.0 +1.5
comp=Z,262nm,1.2s,comp=Z,5µmcomp=Z,15µm
IRK Irkutsk 31.09 339 *e*P P 15 57 00.1 -0.8
IRK pmax pmax
comp=Z,666nm,2.2s
TYV Tymovskoe 31.23 26 *e*P P 15 57 08.0 +5.9
TYV pmax pmax
comp=Z,66nm,1.5s
TYV pmax pmax
comp=Z,3µm,9.9s
MLSI Meulaboh, Aceh 31.38 235 P P 15 57 02.3 -1.6
comp=Z,101nm,0.8s
EVN Everest 31.54 285 ⇑P P 15 57 06.3 +0.4
PMBI Palembang 31.54 214 P P 15 57 07.2 +2.0
PMBI Palembang 31.54 214 P P 15 57 07.5 +2.3
comp=Z,513nm,1.0s,comp=Z,12µmcomp=Z,9µm
MOY Mondy 31.78 335 *e*P P 15 57 06.3 -0.8
MOY pmax pmax
comp=Z,321nm,3.7s
GENI Genyem 32.04 143 P P 15 57 11.7 +2.1
GENI Genyem 32.04 143 P P 15 57 11.3 +1.7
comp=Z,273nm,1.6s,comp=Z,8µmcomp=Z,25µm
GRJI Gresik 32.13 197 P P 15 57 12.4 +2.0
comp=Z,376nm,1.0s,comp=Z,8µmcomp=Z,24µm
PDSI Padang 32.33 223 P P 15 57 12.7 +0.5
comp=Z,84nm,1.0s,comp=Z,4µmcomp=Z,15µm
NKL Nikolayevsk 32.35 21 *e*P P 15 57 15.4 +3.5
NKL pmax pmax
comp=N,145nm,1.7s
NKL pmax pmax
comp=E,73nm,1.2s
NKL pmax pmax
comp=Z,301nm,1.2s
NKL MLR MLR
comp=E,176µm,14.0s
NKL MLR MLR
comp=N,122µm,13.0s
NKL MLR MLR
comp=Z,216µm,13.0s
MMRI Maumere 32.55 179 P P 15 57 12.2 -1.9
MMRI Maumere 32.55 179 P P 15 57 16.2 +2.1
MMRI Maumere 32.55 179 ⇓P P 15 57 11.5 -2.6
MMRI Maumere 32.55 179 P P 15 57 13.4 -0.7
comp=Z,740nm,1.6s,comp=Z,9µmcomp=Z,28µm
GSI Gunungsitoli 32.57 229 P P 15 57 17.7 +3.4
GSI Gunungsitoli 32.57 229 ⇓P P 15 57 14.1 -0.2
GSI Gunungsitoli 32.57 229 P P 15 57 15.5 +1.2
comp=Z,118nm,1.5s,comp=Z,5µmcomp=Z,16µm
SRBI Singaraja 32.63 192 P P 15 57 15.2 +0.5
comp=Z,189nm,1.1s,comp=Z,4µmcomp=Z,23µm
BLJI Banyuglugur 32.65 195 P P 15 57 13.8 -1.1
comp=Z,381nm,0.7s,comp=Z,5µmcomp=Z,21µm
KRJI Kerinci 32.66 220 P P 15 57 16.5 +1.3
comp=Z,942nm,1.0s,comp=Z,17µmcomp=Z,15µm
EDFI Ende, Flores 32.66 180 P P 15 57 13.0 -2.2
comp=Z,345nm,1.2s,comp=Z,6µmcomp=Z,28µm
SNSI Sinabang, Aceh 32.68 233 P P 15 57 14.8 -0.5
comp=Z,234nm,1.1s,comp=Z,5µmcomp=Z,10µm
BOK Bokaro 32.70 277 *e*P P 15 57 16.3 +0.9
BOK IAmb IAmb 15 57 26.6
comp=Z,250nm,1.2s
NGJI Ngawi 32.85 199 P P 15 57 18.8 +2.1
comp=Z,644nm,1.2s,comp=Z,9µmcomp=Z,25µm
SMRI Semarang 32.87 201 IAMs_20 IAMs_20 16 11 58.8
comp=Z,52µm,21.0s
SMRI Semarang 32.87 201 P P 15 57 18.9 +2.0
SMRI Semarang 32.87 201 ⇓P P 15 57 20.1 +3.1
SMRI Semarang 32.87 201 P P 15 57 19.9 +3.0
comp=Z,334nm,1.2s,comp=Z,9µmcomp=Z,21µm
PLAI Plampang 32.97 187 P P 15 57 19.9 +2.2
PLAI Plampang 32.97 187 P P 15 57 18.0 +0.3
comp=Z,243nm,1.6s,comp=Z,5µmcomp=Z,26µm
TWSI Taliwang, Sumb 32.99 189 P P 15 57 18.5 +0.6
comp=Z,262nm,1.6s,comp=Z,7µmcomp=Z,25µm
PBSI Pulau Batu 33.08 227 P P 15 57 24.1 +5.3
comp=Z,156nm,2.4s,comp=Z,6µmcomp=Z,14µm
GMJI Gumukmas 33.19 195 P P 15 57 21.0 +1.3
comp=Z,119nm,2.6s,comp=Z,5µm
DNP Denpasar 33.21 192 P P 15 57 21.4 +1.6
comp=Z,952nm,1.9s,comp=Z,28µmcomp=Z,28µm
JAGI Jajag, Banyuwa 33.22 194 P P 15 57 19.0 -0.9
JAGI IAMs_20 IAMs_20 16 11 06.1
comp=Z,76µm,22.0s
JAGI Jajag, Banyuwa 33.22 194 P P 15 57 20.2 +0.3
JAGI Jajag, Banyuwa 33.22 194 ⇓P P 15 57 17.4 -2.6
JAGI Jajag, Banyuwa 33.22 194 P P 15 57 22.7 +2.8
comp=Z,97nm,1.0s,comp=Z,5µmcomp=Z,22µm
SAUI Saumlaki 33.24 163 IAMs_20 IAMs_20 16 12 42.6
comp=Z,38µm,18.0s
SAUI Saumlaki 33.24 163 P P 15 57 21.9 +1.8
SAUI Saumlaki 33.24 163 P P 15 57 19.7 -0.4
comp=Z,518nm,1.0s,comp=Z,7µmcomp=Z,29µm
KNTI KHUNTI 33.36 276 *e*P P 15 57 23.6 +2.3
SISI Saibi 33.51 224 P P 15 57 24.0 +1.5
comp=Z,306nm,1.3s,comp=Z,5µm
UGM Wanagama 33.66 200 IAMs_20 IAMs_20 16 11 33.6
comp=Z,57µm,20.0s
UGM Wanagama 33.66 200 P P 15 57 27.1 +3.3
UGM Wanagama 33.66 200 P P 15 57 26.0 +2.2
comp=Z,645nm,1.8s,comp=Z,13µmcomp=Z,21µm
KPJI Karang Pucung 33.66 203 P P 15 57 24.5 +0.7
comp=Z,371nm,1.5s,comp=Z,9µm
SBJI Serang 33.68 209 P P 15 57 20.8 -3.2
comp=Z,608nm,1.4s
LWLI Liwa 33.69 213 P P 15 57 25.4 +1.2
comp=Z,960nm,0.9s,comp=Z,9µmcomp=Z,9µm
SOEI Soe 33.75 175 IAmb IAmb 15 57 42.3
comp=Z,176nm,0.9s
SOEI IAMs_20 IAMs_20 16 10 35.4
comp=Z,41µm,20.0s
SOEI Soe 33.75 175 P P 15 57 26.7 +2.0
SOEI Soe 33.75 175 P P 15 57 20.1 -4.6
SOEI Soe 33.75 175 ⇓P P 15 57 21.9 -2.8
SOEI Soe 33.75 175 P P 15 57 22.6 -2.1
comp=Z,242nm,1.1s,comp=Z,3µmcomp=Z,26µm
DBJI Dramaga 33.80 207 P P 15 57 25.2 +0.1
comp=Z,449nm,1.2s,comp=Z,14µmcomp=Z,18µm
KASI Kota Agung 33.91 212 P P 15 57 27.2 +1.2
comp=Z,311nm,1.1s,comp=Z,4µmcomp=Z,10µm
PPSI Pulau Pagai 34.06 221 P P 15 57 25.7 -1.6
comp=Z,253nm,1.6s,comp=Z,7µm
WMQ Urumqi 34.06 314 *e*P P 15 57 27.5 +0.3
WMQ pP sP 15 57 32.0 -0.5
WMQ sP pP 15 57 38.1 +7.3
WMQ PcP **PcP** **16 00 05.9 +1.2**
WMQ S S **16 02 54.0 +1.5**
WMQ ScS **ScS** **16 07 45.2 -6.2**
WMQ pmax pmax
comp=Z,59nm,1.3s
WMQ pmax pmax
comp=Z,6µm,10.1s
WMQ LR LR
comp=Z,62µm,13.9s
WMQ LR LR
comp=Z,71µm,13.9s
WMQ LR LR
comp=Z,66µm,15.9s
BOD Bodaibo 34.13 353 *e*P P 15 57 26.1 -1.4
BOD pmax pmax
comp=Z,104nm,2.1s
BASI Baing, Sumba 34.14 182 P P 15 57 27.0 -0.9
comp=Z,480nm,1.4s,comp=Z,7µmcomp=Z,21µm
VLK Valmikinagar 34.17 284 *e*P P 15 57 27.4 -0.9
BBJI Bungbulang 34.26 205 P P 15 57 30.7 +1.6
SKJI Sukabumi 34.29 207 P P 15 57 31.7 +2.4
comp=Z,273nm,1.2s,comp=Z,10µmcomp=Z,13µm
CNJI Cibinong 34.33 206 P P 15 57 29.6 0.0
comp=Z,89nm,1.1s,comp=Z,2µmcomp=Z,5µm
JHSG JHARSUGUGA 34.96 274 *e*P P 15 57 36.8 +1.6
VAR Varanasi 35.11 280 *e*P P 15 57 36.5 +0.2
MANU Manus Island 36.01 133 P P 15 57 43.6 -0.6
MANU IAmb IAmb 15 58 05.2
comp=Z,831nm,1.9s
MANU IAMs_20 IAMs_20 16 11 28.0
comp=Z,40µm,19.0s
MANU Manus Island 36.01 133 P P 15 57 44.9 +0.7
VIS Vishakhapatnam 36.34 267 *e*P P 15 57 46.6 -0.4
VIS IAMs_20 IAMs_20 16 15 10.0
comp=Z,56µm,17.5s
BLSP Bilaspur 36.39 275 *e*P P 15 57 47.7 +0.3
DGZ Jazzator, Alta 36.95 323 *i* P P 15 57 49.6 -2.4
DGZ pmax pmax
comp=Z,68nm,1.3s
DGZ MLR MLR
comp=Z,71µm,17.0s
LGTI Lohaghat 37.27 287 *e*P P 15 57 56.2 +1.4
PTH Pithoragarh 37.29 288 *e*P P 15 57 54.6 -0.6
ZSN Zaisan 37.39 318 *i*/P P 15 57 54.9 -0.7
baz=318
ZSN *i* S S 16 03 44.4 +1.1
baz=318
ZSN *e*S S 16 03 45.5 +2.1
baz=318
ZSN Zaisan 37.39 318 *d*/P P 15 57 54.9 -0.7
ZSN *e*S S 16 03 45.5 +2.1
SKR Severo-Kuril's 37.52 36 *e*P P 15 58 03.1 +6.5
SKR *e*PPP PPP 16 00 16.4
SKR *e*SS ScS 16 07 59.1 -11
SKR pmax pmax
comp=Z,3µm,5.4s
XMI Christmas Isla 37.76 206 P P 15 58 01.1 +2.1
XMI Christmas Isla 37.76 206 ⇓P P 15 57 58.2 -0.8
XMIS Christmas Isla 37.80 206 P P 15 58 00.0 +0.7
KDU Kakadu 38.05 163 P P 15 58 01.0 -0.4
KDU Kakadu 38.05 163 ⇑P P 15 57 58.8 -2.7
YAK Yakutsk 38.29 6 P P 15 58 00.2 -2.7
YAK Yakutsk 38.29 6 IAMs_20 IAMs_20 16 16 27.2
comp=Z,45µm,18.0s
YAK Yakutsk 38.29 6 ⇑P P 15 58 00.5 -2.4
YAK Yakutsk 38.29 6 *e*P P 15 58 00.3 -2.6
YAK *e**PP **pP** 15 58 06.9 -0.2
YAK *e*S S 16 03 58.6 +2.1
YAK *e*S S 16 03 58.6 +2.1
YAK *e* 16 08 12.6
YAK pmax pmax
comp=Z,180nm,1.0s
YAK pmax pmax
comp=E,54nm,1.4s
YAK pmax pmax
comp=N,133nm,1.2s
YAK smax smax
comp=N,1µm,4.3s
YAK smax smax
comp=E,677nm,3.9s
YAK MLR MLR
comp=Z,101µm,15.0s
YAK MLR MLR
comp=N,76µm,16.0s
YAK MLR MLR
comp=E,41µm,19.0s
YAK Yakutsk 38.29 6 LR LR 16 15 12.9
comp=E,30µm,19.3s,baz=187,slow=39
MK31 Makanchi Array 38.73 316 P P 15 58 06.2 -0.7
MK31 Makanchi Array 38.73 316 *i* P P 15 58 06.4 -0.6
MK31 pmax pmax
comp=Z,229nm,0.9s
MKAR Makanchi Array 38.73 316 *ce*P P 15 58 06.5 -0.5
MKAR pmax pmax
comp=Z,30nm,0.7s

MKAR Makanchi Array 38.73 316 P **P** **15 58 06.0 -1.0**
comp=Z,30nm,0.7s,baz=101,slow=10,SNR=127
MKAR PcP **PcP** **16 00 18.0 -0.5**
comp=Z,24nm,1.0s,baz=101,slow=6.8,SNR=2.2
MKAR ScP **ScP** **16 04 05.1 -1.4**
comp=Z,4.2nm,0.7s,baz=96,slow=4.9,SNR=4.1
MKAR LR LR 16 13 16.7
comp=Z,62µm,19.2s,baz=124,slow=35
comp=Z,30nm,0.7s
KAVG Kavieng 38.78 129 P **P** **15 58 11.0 +3.4**
MAKZ Makanchi 38.94 316 P **P** **15 58 08.0 -0.7**
MAKZ IAmb IAmb 15 58 21.5
comp=Z,358nm,1.2s
MAKZ Makanchi 38.94 316 ⇑P **P** **15 58 08.5 -0.2**
MAKZ Makanchi 38.94 316 P **P** **15 58 08.0 -0.7**
MAKZ pmax pmax
comp=Z,358nm,1.3s
MAKZ MLR MLR
comp=Z,90µm,19.0s
KLP Kalpa 38.96 291 *e*P **P** **15 58 08.5 -0.9**
PATS Pohnpei 39.05 110 IAMs_20 IAMs_20 16 11 17.3
comp=Z,47µm,22.0s
PATS Pohnpei 39.05 110 P **P** **15 58 12.7 +2.8**
DDI Dehra Dun 39.14 289 *e*P **P** **15 58 12.0 +1.4**
DDI IAmb IAmb 15 58 23.9
comp=Z,440nm,1.0s
VJD Vijayawada 39.15 267 *e*P **P** **15 58 14.4 +3.7**
SHLS Shalkode 39.49 309 *e*P **P** **15 58 11.3 -2.2**
comp=Z,182nm,1.6s,baz=309
SHLS Shalkode 39.49 309 *e*P **P** **15 58 11.3 -2.2**
SHLS pmax pmax
comp=Z,182nm,1.6s
PDGK Podgornoye 39.52 310 P **P** **15 58 13.7 0.0**
PEA0B Petropavlovsk- 39.65 34 *i*P **P** **15 58 12.1 -2.4**
PETK Petropavlovsk- 39.65 34 P **P** **15 58 10.8 -3.7**
comp=Z,4.3nm,0.6s,baz=212,slow=7.8,SNR=19
PETK PcP **PcP** **16 00 20.4 -0.9**
comp=Z,7.4nm,0.8s,baz=174,slow=1.7,SNR=2.2
PETK LR LR 16 15 35.7
comp=Z,57µm,20.4s,baz=227,slow=38
UZB Uzynbulak 39.80 309 ⇓*i*P **P** **15 58 16.2 +0.1**
comp=Z,216nm,1.8s,baz=309
UZB *e*S **S** **16 04 22.0 +1.8**
baz=309
UZB Uzynbulak 39.80 309*d i*P **P** **15 58 16.2 +0.1**
UZB *e*S **S** **16 04 21.9 +1.8**
UZB pmax pmax
comp=Z,216nm,1.8s
SMLA Simla 39.89 290 *e*P **P** **15 58 17.2 +0.5**
SMLA IAmb IAmb 15 58 26.1
comp=Z,108nm,1.0s
SMLA IAMs_20 IAMs_20 16 15 20.3
comp=Z,83µm,15.5s
JMIU JAMIA UNIVERSI 39.90 286 *e*P **P** **15 58 15.1 -1.8**
NDI New Delhi 39.96 286 *e*P **P** **15 58 16.1 -1.3**
NPLP NPLP New Delhi 40.00 286 *e*P **P** **15 58 17.2 -0.6**
PET Petropavlovsk 40.09 34 P **P** **15 58 16.2 -1.9**
PET IAMs_20 IAMs_20 16 16 26.0
comp=Z,41µm,20.0s
PET Petropavlovsk 40.09 34 P **P** **15 58 19.5 +1.4**
PET Petropavlovsk 40.09 34 ⇓P **P** **15 58 18.7 +0.6**
PET Petropavlovsk 40.09 34 *e*P **P** **15 58 16.8 -1.3**
PET *e* 15 59 53.1
PET *e*S **S** **16 04 23.7 -0.2**
PET pmax pmax
comp=Z,94nm,1.2s
PET pmax pmax
comp=Z,2µm,18.4s
PET pmax pmax
comp=Z,3µm,12.1s
PET smax smax
comp=E,2µm,15.1s
PET smax smax
comp=N,2µm,7.5s
PET smax smax
comp=N,2µm,16.4s
PET smax smax
comp=E,5µm,18.0s
PET MLR MLR
comp=Z,40µm,17.0s
SONA Sohna 40.11 286 *e*P **P** **15 58 16.5 -2.1**
KPKS Kokpek 40.12 310 *e*P **P** **15 58 18.8 +0.1**
comp=Z,173nm,1.8s,baz=310
KPKS *e*S **S** **16 04 26.4 +1.5**
baz=310
KPKS Kokpek 40.12 310 *e*P **P** **15 58 18.8 +0.1**
KPKS *e*S **S** **16 04 26.3 +1.5**
KPKS pmax pmax
comp=Z,173nm,1.8s
KNRA Kununurra 40.14 169 P **P** **15 58 18.7 -0.2**
SATY Saty 40.22 309 *e*P **P** **15 58 19.8 +0.3**
comp=Z,256nm,2.3s,baz=309
SATY *e*S **S** **16 04 28.0 +1.6**
baz=309
SATY Saty 40.22 309 *e*P **P** **15 58 19.8 +0.3**
SATY *e*S **S** **16 04 27.9 +1.6**
SATY pmax pmax
comp=Z,256nm,2.3s
ZHN Zhinishke 40.22 309 *e*P **P** **15 58 19.7 +0.2**
baz=309
ZHN *e*S **S** **16 04 28.4 +1.9**
baz=309
ZHN Zhinishke 40.22 309 *e*P **P** **15 58 19.7 +0.2**
ZHN *e*S **S** **16 04 28.3 +1.9**
KKR Kurukshetra 40.23 288 *e*P **P** **15 58 20.1 +0.5**
BHK Bhakra 40.52 291 *e*P **P** **15 58 22.1 0.0**
BULU Kimbe 40.56 133 P **P** **15 58 24.9 +2.5**
ZALV Zalesovo Beam 40.57 327 P **P** **15 58 20.5 -1.7**
ZALV Zalesovo Beam 40.57 327 *i*P **P** **15 58 21.0 -1.1**
ZALV pmax pmax
comp=Z,28nm,0.6s
ZALV Zalesovo Beam 40.57 327 P **P** **15 58 19.8 -2.4**
comp=Z,32nm,0.7s,baz=111,slow=8.1,SNR=106
ZALV ScP **ScP** **16 04 10.8 -2.7**
comp=Z,4.0nm,0.9s,baz=108,slow=9.5,SNR=2.4
ZALV LR LR 16 16 25.9
comp=Z,60µm,19.7s,baz=125,slow=38
ZALV PKP2bc 16 30 58.2
comp=Z,0.4nm,0.4s,baz=9.5,slow=1.8,SNR=3.5
comp=Z,32nm,0.7s
DHRM DHARAMSHALA 40.61 292 *e*P **P** **15 58 23.4 +0.3**
DHRM IAmb IAmb 15 58 45.7
comp=Z,848nm,1.7s
DHRM IAMs_20 IAMs_20 16 15 34.6
comp=Z,94µm,20.4s
KUDL Kundal 40.64 286 *e*P **P** **15 58 20.9 -2.1**
TDK Taldyqorghan 40.72 312 *e*P **P** **15 58 24.0 +0.5**
comp=Z,196nm,1.2s,baz=312
TDK *e*S **S** **16 04 35.3 +1.7**
baz=312
TDK *i* S **S** **16 04 35.7 +2.2**
baz=312
TDK LR LR 16 15 20.7
comp=Z,27µm,12.3s,baz=312
TDK Taldyqorghan 40.72 312 *e*P **P** **15 58 24.0 +0.5**
TDK *e*S **S** **16 04 35.2 +1.7**
TDK pmax pmax
comp=Z,196nm,1.2s
TDK MLR MLR
comp=Z,27µm,12.0s
HYB Hyderabad 40.79 269 *e*P **P** **15 58 23.5 -1.0**
HYB *es*P **sP** **15 58 30.7 +0.8**
HYB *e*PP **PnPn** **16 00 07.5 +4.8**
HYB *e*PcP **PcP** **16 00 24.6 -1.1**
HYB *e*S **S** **16 04 34.4 -0.9**
HYB ⇑*e*SS **SS** **16 07 36.7 +0.3**
HYB IVMs_BB IVMs_BB 16 16 44.1
comp=Z,15µm,14.1s
MA2 Magadan 40.86 22 P **P** **15 58 23.6 -0.9**
MA2 IAMs_20 IAMs_20 16 16 55.9
comp=Z,51µm,19.0s
MA2 Magadan 40.86 22 P **P** **15 58 26.0 +1.6**
MA2 Magadan 40.86 22 ⇑P **P** **15 58 23.9 -0.6**
MA2 Magadan 40.86 22 *i*P **P** **15 58 23.2 -1.2**
MA2 pmax pmax
comp=Z,84nm,1.4s
MA2 MLR MLR
comp=Z,50µm,18.0s
MA2 Magadan 40.86 22 LR LR 16 17 15.9
comp=Z,49µm,18.4s,baz=218,slow=39
RABL Rabaul 40.87 129 P **P** **15 58 28.4 +3.4**
ARXS Arharly 40.91 310 *e*P **P** **15 58 25.3 +0.1**
THN Thein Dam 41.10 292 *e*P **P** **15 58 24.4 -2.4**
MDOK Medeo 41.21 309 *e*P **P** **15 58 26.9 -0.8**
baz=309
MDOK *e*S **S** **16 04 41.6 +0.4**
baz=309
MDOK LR LR 16 15 37.6
comp=Z,37µm,15.4s,baz=309
MDOK Medeo 41.21 309 *e*P **P** **15 58 26.9 -0.8**
MDOK *e*S **S** **16 04 41.6 +0.4**
MDOK MLR MLR
comp=Z,37µm,15.0s
AAA Alma-Ata 41.31 309 *e*P **P** **15 58 28.8 +0.3**
comp=Z,120nm,1.4s,baz=309
AAA LR LR 16 15 46.9
comp=Z,62µm,16.3s,baz=309
AAA Alma-Ata 41.31 309 *e*P **P** **15 58 28.8 +0.3**
AAA pmax pmax
comp=Z,120nm,1.4s
AAA MLR MLR
comp=Z,62µm,16.0s
AKL Akola 41.35 274 *e*P **P** **15 58 30.4 +1.4**
KSH Kashi 41.35 303 P **P** **15 58 31.9 +2.9**
KSH sP sP 15 58 39.3 +5.0
KSH PcP **PcP** **16 00 32.5 +5.3**
KSH S S 16 04 52.2 +8.8
KSH pmax pmax
comp=Z,25nm,1.1s
KSH pmax pmax
comp=Z,4µm,8.4s
KSH LR LR
comp=Z,300µm,20.6s
KSH LR LR
comp=Z,69µm,15.8s
KSH LR LR
comp=Z,120µm,16.5s
SEM Semipalatinsk 41.39 320 *e*P **P** **15 58 28.0 -1.2**
comp=Z,306nm,2.2s,baz=320
SEM LR LR 16 15 59.6
comp=Z,22µm,13.2s,baz=320
SEM Semipalatinsk 41.39 320 *e*P **P** **15 58 28.0 -1.2**
SEM pmax pmax
comp=Z,306nm,2.2s
SEM MLR MLR
comp=Z,22µm,13.0s
CHKK Chushkaly 41.41 310 *e*P **P** **15 58 28.8 -0.4**
baz=310
CHKK Chushkaly 41.41 310 *e*P **P** **15 58 28.8 -0.4**
PMG Port Moresby 41.56 140 P **P** **15 58 30.4 -0.3**
PMG IAmb IAmb 15 58 49.3
comp=Z,347nm,1.1s
PMG Port Moresby 41.56 140 IAMs_20 IAMs_20 16 18 39.9
comp=Z,31µm,18.0s
PMG Port Moresby 41.56 140 P **P** **15 58 31.8 +1.2**
PMG Port Moresby 41.56 140 P **P** **15 58 31.9 +1.3**
PMG Port Moresby 41.56 140 ⇓P **P** **15 58 30.1 -0.5**
PMG Port Moresby 41.56 140*d i*P **P** **15 58 29.4 -1.2**
PMG pmax pmax
comp=Z,260nm,1.1s
PMG Port Moresby 41.56 140 LR LR 16 15 10.7
comp=Z,25µm,19.0s,baz=312,slow=35
ULHL Ulahol 41.60 307 P P 15 58 37.5 +6.5
SNR=13
JMU Jammu 41.79 293 *e*P **P** **15 58 34.0 +1.5**
SRNI Srinagar 41.84 295 *e*P **P** **15 58 34.3 +1.5**
KUU Kurty 41.87 310 *e*P **P** **15 58 33.0 0.0**
comp=Z,153nm,1.3s,baz=310
KUU *e*S **S** **16 04 52.8 +2.0**
baz=310
KUU LR LR 16 16 36.8
comp=Z,29µm,10.8s,baz=310
KUU Kurty 41.87 310 *e*P **P** **15 58 33.0 0.0**
KUU *e*S **S** **16 04 52.8 +2.0**
KUU pmax pmax
comp=Z,153nm,1.3s
KUU MLR MLR
comp=Z,29µm,11.0s
FITZ Fitzroy Crossi 42.13 174 P **P** **15 58 34.4 -0.8**
TKM2 Tokmak 2 42.20 308 P **P** **15 58 36.6 +0.7**
SNR=13
TKM2 Tokmak 2 42.20 308 *i*P **P** **15 58 36.0 +0.1**
TKM2 pmax pmax
comp=Z,269nm,1.4s
MALK Mahakanadarawa 42.32 255 P **P** **15 58 39.0 +2.0**
MALK Mahakanadarawa 42.32 255 ⇓P P 15 58 42.4 +5.4
AJM Ajmer 42.45 283 *e*P **P** **15 58 37.8 -0.3**
KURK Kurchatov 42.46 320 P **P** **15 58 36.5 -1.2**
KURK Kurchatov 42.46 320 IAMs_20 IAMs_20 16 17 26.5
comp=Z,46µm,18.0s
KURK Kurchatov 42.46 320 ⇑P **P** **15 58 36.8 -0.9**
KURK Kurchatov 42.46 320*ce*P **P** **15 58 36.9 -0.8**
KURK pmax pmax
comp=Z,102nm,1.7s
KURK MLR MLR
comp=Z,26µm,14.0s
KURK Kurchatov 42.46 320 P **P** **15 58 37.3 -0.4**
KURK P **P** **15 58 37.3 -0.4**
KURK S **S** **16 04 57.2 -2.0**
KURK S **S** **16 04 57.2 -2.0**
KURBB Kurchatov Arra 42.48 320 P **P** **15 58 35.6 -2.2**
comp=Z,7.1nm,0.7s,baz=115,slow=7.4,SNR=75
KURBB ScP **ScP** **16 04 20.3 -0.8**
comp=Z,2.7nm,1.0s,baz=108,slow=4.0,SNR=2.7
KURBB LR LR 16 16 14.4
comp=Z,29µm,20.5s,baz=121,slow=36
comp=Z,7.1nm,0.7s
KBK Karagaybulak 42.62 307 P **P** **15 58 40.8 +1.5**
SNR=12
PALK Pallekele 42.70 254 IAMs_20 IAMs_20 16 16 59.8
comp=Z,42µm,20.0s
PALK Pallekele 42.70 254 *i*P **P** **15 58 39.1 -1.0**
PALK pmax pmax
comp=Z,148nm,1.5s
PALK Pallekele 42.70 254 P **P** **15 58 40.7 +0.6**
comp=Z,18nm,1.2s,baz=162,slow=6.3,SNR=2.2
PALK PcP **PcP** **16 00 29.7 -2.3**
comp=Z,7.2nm,0.9s,baz=127,slow=5.1,SNR=0.9
PALK LR LR 16 17 11.3
comp=Z,41µm,20.4s,baz=158,slow=37
comp=Z,18nm,1.2s
PALK Pallekele 42.70 254 P P 15 58 45.6 +5.5
PALK P P 15 58 45.6 +5.5
PALK P P 15 58 45.6 +5.5
PALK S **S** **16 05 07.1 +3.5**
PALK S **S** **16 05 07.1 +3.5**
PALK S **S** **16 05 07.1 +3.5**
SRGN SRI GANGA NAGA 42.77 289 *e*P **P** **15 58 39.3 -1.2**
CHMS Chumysh 42.82 308 P **P** **15 58 40.8 0.0**
SNR=11
UCH Uchtor 42.86 307 P **P** **15 58 42.7 +1.1**
SNR=18
AAK Ala-Archa 42.94 307 P P 15 58 48.4 +6.4
SNR=9.0
AAK Ala-Archa 42.94 307 *i*P **P** **15 58 43.1 +1.2**
SNR=13
AAK Ala-Archa 42.94 307 ⇑P **P** **15 58 42.6 +0.7**
AAK Ala-Archa 42.94 307*ce*P **P** **15 58 38.4 -3.5**
AAK pmax pmax
comp=Z,41nm,2.5s
AAK MLR MLR
comp=Z,57µm,14.0s
AAK Ala-Archa 42.94 307 P **P** **15 58 39.3 -2.6**
comp=Z,4.2nm,0.8s,baz=113,slow=5.4,SNR=16
AAK LR LR 16 17 01.1
comp=Z,123µm,21.9s,baz=92,slow=37
comp=Z,4.2nm,0.8s
AAK Ala-Archa 42.94 307 P **P** **15 58 42.7 +0.7**
AAK P **P** **15 58 42.7 +0.7**
AAK S **S** **16 05 07.1 +0.3**
AAK S **S** **16 05 07.1 +0.3**
SGDS Sogindy 42.99 309 *e*P **P** **15 58 41.7 -0.5**
baz=309
SGDS Sogindy 42.99 309 *e*P **P** **15 58 41.7 -0.5**
USP Ospenovka 43.05 308 P **P** **15 58 43.5 +0.9**
SNR=8.0
NIL Nilore 43.17 294 P **P** **15 58 42.5 -1.1**
NIL Nilore 43.17 294 P **P** **15 58 42.6 -1.1**
NIL pmax pmax
comp=Z,181nm,1.1s
NIL MLR MLR
comp=Z,90µm,20.0s
NIL Nilore 43.17 294 P **P** **15 58 44.2 +0.5**
NIL P **P** **15 58 44.2 +0.5**
COEN Coen 43.26 149 P **P** **15 58 43.7 -0.8**
COEN IAmb IAmb 15 59 02.9
comp=Z,495nm,1.1s
COEN Coen 43.26 149 P **P** **15 58 44.7 +0.2**
COEN Coen 43.26 149 ⇓P **P** **15 58 44.0 -0.4**
COCO West Island 43.52 217 IAMs_20 IAMs_20 16 19 05.6
comp=Z,37µm,19.0s
BTLS Baital 43.72 311 ⇑*i*P **P** **15 58 47.7 -0.3**
comp=Z,185nm,2.4s,baz=311
BTLS *e*S **S** **16 05 20.1 +2.1**
baz=311
BTLS Baital 43.72 311*c i*P **P** **15 58 47.7 -0.3**
BTLS *e*S **S** **16 05 20.0 +2.1**
BTLS pmax pmax
comp=Z,185nm,2.4s
SEY Seymchan 43.88 20 *i*P **P** **15 58 47.4 -1.5**
SEY pmax pmax
comp=Z,80nm,1.5s
SEY MLR MLR
comp=Z,30µm,19.0s
POO Poona 44.78 272 *e*P **P** **15 58 56.8 -0.1**
KAD Karad 44.82 271 *e*P **P** **15 58 56.8 -0.4**
DZA Taraz 45.28 307 *e*P **P** **15 59 00.8 +0.3**
baz=307
DZA Taraz 45.28 307 *e*P **P** **15 59 00.8 +0.3**
WB0 Warramunga Arr 45.33 163 IAmb IAmb 15 59 38.8
comp=Z,262nm,1.4s
PSA00 Pilbara Seismi 45.45 182 IAmb IAmb 15 59 17.8
comp=Z,219nm,1.1s
WRAB Tennant Creek 45.48 163 P **P** **15 59 00.1 -2.1**
WRAB Tennant Creek 45.48 163 P **P** **15 59 00.1 -2.1**
WRAB pmax pmax
comp=Z,137nm,1.1s
WRA Warramunga Arr 45.48 163 *i*P **P** **15 59 00.3 -1.9**
WRA pmax pmax
comp=Z,29nm,0.6s
WRA Warramunga Arr 45.48 163 P **P** **15 58 59.7 -2.5**
comp=Z,45nm,0.9s,baz=345,slow=8.8,SNR=80
WRA ScP **ScP** **16 04 31.7 -2.0**
comp=Z,1.7nm,1.0s,baz=341,slow=3.9,SNR=3.9
WRA S **S** **16 05 44.8 +1.1**
comp=Z,3.8nm,0.9s,baz=348,slow=14,SNR=6.6
WRA LR LR 16 19 48.6
comp=Z,16µm,19.8s,baz=340,slow=38
comp=Z,45nm,0.9s
WB2 Warramunga Arr 45.48 163 IAmb IAmb 15 59 11.9
comp=Z,306nm,1.4s
WR0 Warramunga Arr 45.55 163 IAmb IAmb 15 59 12.4
comp=Z,291nm,1.4s
OTUK Ortayu 45.59 315 P **P** **15 59 03.0 +0.1**
MNGI Mangalore 45.65 265 *e*P **P** **15 59 06.6 +2.9**
GOA Goa 45.70 268 *e*P **P** **15 59 06.3 +2.2**
BRZS Berezniki 45.82 317 ⇑*i*P **P** **15 59 04.2 -0.5**
comp=Z,147nm,1.8s,baz=317
BRZS *e*S **S** **16 05 49.7 +1.5**
baz=317
KK31 Karatay Array 45.91 307 P **P** **15 59 05.0 -0.5**
KKAR Karatay Array 45.91 307 P **P** **15 59 05.0 -0.4**
KKAR Karatay Array 45.91 307 ⇑P **P** **15 59 05.3 -0.1**
KKAR Karatay Array 45.91 307 P **P** **15 59 05.0 -0.4**
CHM Chimkent 46.48 306 *e*P **P** **15 59 10.3 +0.3**
baz=306
CHM LR LR 16 18 08.2
baz=306
CHM Chimkent 46.48 306 *e*P **P** **15 59 10.3 +0.3**
KBU Kabul Universi 46.57 295 P **P** **15 59 13.0 +2.0**
KBL Kabul 46.64 295 P **P** **15 59 12.2 +0.7**
SNR=209
KBL P **P** **15 59 12.2 +0.7**
SNR=209
KBL P **P** **15 59 12.2 +0.7**
SNR=209
KBL S **S** **16 06 01.7 +0.9**
KBL S **S** **16 06 01.7 +0.9**
KBL S **S** **16 06 01.7 +0.9**
GIRL Giralia 47.04 189 IAMs_20 IAMs_20 16 20 08.4
comp=Z,23µm,21.0s
GIRL Giralia 47.04 189 P **P** **15 59 17.2 +2.8**
GIRL Giralia 47.04 189 ⇑P **P** **15 59 14.4 0.0**
MTSU Mount Surprise 47.42 150 P **P** **15 59 18.6 +1.1**
QIS Mount Isa 47.69 157 P **P** **15 59 19.2 -0.4**
TIXI Tiksi 47.74 3 P **P** **15 59 16.8 -2.4**
TIXI Tiksi 47.74 3 ⇑P **P** **15 59 16.9 -2.4**
TIXI Tiksi 47.74 3*ce*P **P** **15 59 16.9 -2.4**
TIXI pmax pmax
comp=Z,746nm,1.7s
TIXI MLR MLR
comp=Z,118µm,16.0s
TIXI Tiksi 47.74 3 LR LR 16 22 12.4
comp=Z,72µm,19.0s,baz=202,slow=40
BVA0 Borovoye Array 48.04 321 *i*P **P** **15 59 20.5 -1.5**
BVAR Borovoye Array 48.04 321 P **P** **15 59 20.4 -1.6**
comp=Z,14nm,0.5s,baz=109,slow=9.0,SNR=65
BVAR ScP **ScP** **16 04 42.9 -1.2**
comp=Z,3.6nm,0.9s,baz=122,slow=5.4,SNR=2.8
BVAR LR LR 16 19 30.5
comp=Z,50µm,21.0s,baz=106,slow=36
comp=Z,14nm,0.5s
BRVK Borovoye 48.11 321 P **P** **15 59 21.5 -1.0**
BRVK IAmb IAmb 15 59 43.1
comp=Z,281nm,1.2s
BRVK Borovoye 48.11 321 ⇑P **P** **15 59 21.8 -0.7**
BRVK Borovoye 48.11 321*ce*P **P** **15 59 21.7 -0.8**
BRVK pmax pmax
comp=Z,45nm,0.8s
BRVK MLR MLR
comp=Z,43µm,15.0s
BRVK Borovoye 48.11 321 P **P** **15 59 22.5 0.0**
BRVK S **S** **16 06 17.0 -3.9**
ASAR Alice Springs 48.94 165 P **P** **15 59 27.5 -1.7**
comp=Z,33nm,0.9s,baz=344,slow=6.8,SNR=114
ASAR ScP **ScP** **16 04 45.8 -2.4**
comp=Z,1.1nm,0.9s,baz=352,slow=5.9,SNR=3.3
ASAR S **S** **16 06 33.8 +0.7**
comp=Z,2.6nm,1.0s,baz=350,slow=17,SNR=2.5
ASAR ScS **ScS** **16 09 20.0 -1.6**
comp=Z,1.6nm,1.0s,baz=343,slow=4.9,SNR=4.1
ASAR LR LR 16 21 38.8
comp=Z,21µm,19.6s,baz=350,slow=38
comp=Z,33nm,0.9s
AS01 Alice Springs 48.95 165 P **P** **15 59 29.5 +0.2**
WRKA Warakurna 49.27 172 P **P** **15 59 32.9 +1.2**
WRKA Warakurna 49.27 172 ⇑P **P** **15 59 30.1 -1.6**
TV1H Townsville Har 49.56 148 P **P** **15 59 35.8 +1.9**
NRIK Noril'sk 49.60 345 *i*P **P** **15 59 31.1 -2.5**
NRIK pmax pmax
comp=Z,88nm,1.0s
NRIK MLR MLR
comp=Z,44µm,15.0s
NRIK Noril'sk 49.60 345 P **P** **15 59 30.0 -3.6**
comp=Z,7.8nm,0.7s,baz=130,slow=7.3,SNR=27
NRIK LR LR 16 24 32.9
comp=Z,27µm,19.0s,baz=146,slow=41
comp=Z,7.8nm,0.7s
CTA Charters Tower 50.01 149 P **P** **15 59 38.1 +0.7**
CTA Charters Tower 50.01 149 LR LR 16 18 49.3
comp=Z,45µm,21.7s,baz=327,slow=34
CTAO Charters Tower 50.01 149 P **P** **15 59 37.1 -0.3**
CTAO IAmb IAmb 15 59 49.5
comp=Z,293nm,1.4s
CTAO Charters Tower 50.01 149 P **P** **15 59 38.3 +0.9**
CTAO Charters Tower 50.01 149 ⇑P **P** **15 59 37.7 +0.3**
CTAO Charters Tower 50.01 149 P **P** **15 59 37.1 -0.3**
CTAO pmax pmax
comp=Z,293nm,1.4s
HNR Honiara 50.05 127 IAMs_20 IAMs_20 16 21 19.0
comp=Z,20µm,19.0s
HNR Honiara 50.05 127 P **P** **15 59 41.1 +3.3**
HNR Honiara 50.05 127 LR LR 16 21 47.3
comp=Z,107µm,18.4s,baz=300,slow=37
AUAYR Ayr State High 50.13 148 P **P** **15 59 42.0 +3.8**
MEEK Meekatharra 50.54 184 P **P** **15 59 40.9 -0.4**
AMKA Amchitka 51.42 43 P **P** **15 59 45.9 -1.8**
BILL Bilibino 51.58 20 P **P** **15 59 46.9 -1.7**
BILL IAMs_20 IAMs_20 16 23 39.1
comp=Z,30µm,19.0s
BILL Bilibino 51.58 20 *i*P P 15 59 56.3 +7.6
MORW Morawa 53.16 186 P **P** **16 00 00.6 -0.2**
MORW Morawa 53.16 186 ⇑P **P** **15 59 59.6 -1.1**
OOD Oodnadatta 53.33 165 P **P** **16 00 02.1 0.0**
AB31 Akbulak array 53.84 314 *i*P **P** **16 00 04.6 -1.1**
ABKAR Akbulak array 53.84 314 P **P** **16 00 05.0 -0.7**
ABKAR Akbulak array 53.84 314 ⇑P **P** **16 00 05.3 -0.3**
ADK Adak 53.96 42 P **P** **16 00 05.5 -1.0**
ADK Adak 53.96 42 P **P** **16 00 09.3 +2.8**
ADK Adak 53.96 42 ⇓P **P** **16 00 06.2 -0.3**
ADK Adak 53.96 42 P **P** **16 00 05.5 -1.0**
ADK pmax pmax
comp=Z,121nm,1.0s
ADK MLR MLR
comp=Z,11µm,19.0s
GSTR Great Sitkin T 54.37 42 P **P** **16 00 08.3 -1.2**

SVE Sverdlovsk 54.39 324 *de*P **P** **16 00 08.8 -0.8**
SVE *e*S **S** **16 07 49.4 +1.9**
SVE pmax pmax
comp=Z,195nm,1.0s
SVE pmax pmax
comp=Z,3μm,14.7s
SVE MLR MLR
comp=N,40μm,14.0s
SVE MLR MLR
comp=Z,86μm,15.0s
SVE MLR MLR
comp=E,65μm,15.0s
TARA Tarawa 54.41 107 IAMs_20 IAMs_20 16 19 17.3
comp=Z,20μm,19.0s
TARA Tarawa 54.41 107 P **P** **16 00 11.1 +0.8**
NGCH Negor - Chabah 54.62 285 P **P** **16 00 13.6 +1.9**
NGCH S **S** **16 07 54.0 +2.6**
BLDU Ballidu 54.63 185 P **P** **16 00 11.2 -0.3**
INKA Innaminka 54.72 159 P **P** **16 00 14.4 +2.2**
RK1H Rockhampton Ha 54.86 147 P **P** **16 00 14.7 +1.4**
QLP Quilpie 54.89 155 P **P** **16 00 15.6 +2.1**
QLP Quilpie 54.89 155 ⇓P **P** **16 00 13.7 +0.2**
FORT Forrest 54.92 173 P **P** **16 00 12.4 -1.1**
FORT IAmb IAmb 16 00 26.2
comp=Z,242nm,0.8s
FORT IAMs_20 IAMs_20 16 27 30.1
comp=Z,16μm,20.0s
FORT Forrest 54.92 173 P **P** **16 00 13.8 +0.2**
FORT Forrest 54.92 173 ⇑P **P** **16 00 12.3 -1.3**
KMBL Kambalda 55.17 180 P **P** **16 00 15.6 +0.2**
AKTO Aktyubinsk 55.17 316 P **P** **16 00 13.3 -2.0**
AKTO Aktyubinsk 55.17 316 LR LR 16 23 54.8
comp=Z,61μm,19.4s,baz=102,slow=36
GEYT Alibeck 55.26 300 P **P** **16 00 15.2 -1.1**
comp=Z,20nm,0.8s,baz=95,slow=7.2,SNR=44
GEYT LR LR 16 26 43.4
comp=Z,54μm,19.2s,baz=102,slow=39
comp=Z,20nm,0.8s
GYA0 ALIBECK ARRAY 55.26 300 P **P** **16 00 16.8 +0.6**
MULG Mulgathing 55.37 167 P **P** **16 00 17.0 +0.2**
ARU Arti 55.46 323 P **P** **16 00 15.8 -1.5**
ARU IAmb IAmb 16 00 31.0
comp=Z,211nm,1.1s
ARU Arti 55.46 323 ⇑P **P** **16 00 16.0 -1.3**
ARU Arti 55.46 323 *c i*P **P** **16 00 16.1 -1.2**
ARU 16 01 13.7
ARU 16 02 15.9
ARU PPP PPP 16 03 37.2
ARU S **S** **16 08 04.5 +2.7**
ARU 16 10 01.3
ARU pmax pmax
comp=Z,164nm,1.8s
ARU MLR MLR
comp=Z,40μm,24.0s
ARU Arti 55.46 323 LR LR 16 25 05.5
comp=Z,24μm,20.8s,baz=96,slow=37
KLBR Kellerberrin 55.52 184 P **P** **16 00 17.8 -0.1**
ATKA Atka Island 55.52 42 P **P** **16 00 20.7 +2.9**
ATKA Atka Island 55.52 42 ⇓P **P** **16 00 18.1 +0.3**
GD1S Gladstone Soft 55.58 147 P **P** **16 00 20.6 +2.2**
MUN Mundaring 56.03 186 P **P** **16 00 22.8 +1.3**
LCRK Leigh Creek 56.51 163 P **P** **16 00 25.6 +0.6**
RMQ Roma 56.68 151 P **P** **16 00 28.5 +2.1**
EIDS Eidsvold 56.81 148 IAmb IAmb 16 00 38.8
comp=Z,547nm,1.9s
EIDS IAMs_20 IAMs_20 16 23 35.9
comp=Z,23μm,20.0s
EIDS Eidsvold 56.81 148 P **P** **16 00 29.4 +2.1**
EIDS Eidsvold 56.81 148 ⇑P **P** **16 00 29.1 +1.8**
NWAO Narrogin (SRO) 56.88 185 P **P** **16 00 25.9 -1.7**
NWAO IAmb IAmb 16 00 45.5
comp=Z,303nm,1.4s
NWAO Narrogin (SRO) 56.88 185 P **P** **16 00 26.9 -0.7**
NWAO Narrogin (SRO) 56.88 185 P **P** **16 00 27.1 -0.5**
NWAO Narrogin (SRO) 56.88 185 P **P** **16 00 25.9 -1.7**
NWAO pmax pmax
comp=Z,303nm,1.4s
NWAO MLR MLR
comp=Z,12μm,20.0s
NWAO Narrogin (SRO) 56.88 185 LR LR 16 26 29.4
comp=Z,10μm,21.1s,baz=356,slow=38
JLN Jalan Bani Buh 56.92 282 P **P** **16 00 31.2 +3.0**
SNR=12
JLN P **P** **16 00 31.2 +3.0**
SNR=12
JLN P **P** **16 00 31.2 +3.0**
SNR=12
JLN S **S** **16 08 23.7 +1.6**
JLN S **S** **16 08 23.7 +1.6**
JLN S **S** **16 08 23.7 +1.6**
WBK Wadi Bani Khal 57.19 282 P **P** **16 00 30.6 +0.4**
SNR=8.9
WBK P **P** **16 00 30.6 +0.4**
SNR=8.9
WBK P **P** **16 00 30.6 +0.4**
SNR=8.9
WBK S **S** **16 08 29.8 +4.0**
WBK S **S** **16 08 29.8 +4.0**
WBK S **S** **16 08 29.8 +4.0**
WSAR Wadi Sarin 57.34 283 P **P** **16 00 30.4 -0.8**
comp=Z,6.1nm,0.6s,baz=125,slow=9.0,SNR=6.6
WSAR LR LR 16 27 35.7
comp=Z,41μm,20.3s,baz=94,slow=39
comp=Z,6.1nm,0.6s
WSAR Wadi Sarin 57.34 283 P **P** **16 00 32.2 +1.0**
SNR=8.8
WSAR S **S** **16 08 28.3 +0.6**
JASK Jask - Hormozg 57.39 286 P **P** **16 00 32.9 +1.4**
BIDO Bidbid 57.71 283 P **P** **16 00 35.3 +1.4**
SNR=13
BIDO P **P** **16 00 35.3 +1.4**
SNR=13
SMDO Samad 57.90 283 P **P** **16 00 36.3 +1.0**
SNR=14
SMDO P **P** **16 00 36.3 +1.0**
SNR=14
SMDO P **P** **16 00 36.3 +1.0**
SNR=14
SMDO S **S** **16 08 36.8 +1.5**
SMDO S **S** **16 08 36.8 +1.5**
SMDO S **S** **16 08 36.8 +1.5**
JMDO Jabal Madar 58.03 282 P **P** **16 00 36.8 +0.6**
SNR=5.4
JMDO P **P** **16 00 36.8 +0.6**
SNR=5.4
JMDO P **P** **16 00 36.8 +0.6**
SNR=5.4
JMDO S **S** **16 08 41.6 +4.8**
JMDO S **S** **16 08 41.6 +4.8**
JMDO S **S** **16 08 41.6 +4.8**
CLES Cleveland East 58.18 42 IAMs_20 IAMs_20 16 28 59.3
comp=Z,18μm,20.0s
SPIA Saint Paul Isl 58.20 36 P **P** **16 00 35.9 -0.8**
baz=266
BBOO Buckleboo 58.23 166 IAmb IAmb 16 00 58.8
comp=Z,293nm,1.2s
BBOO IAMs_20 IAMs_20 16 26 28.2
comp=Z,16μm,21.0s
BBOO Buckleboo 58.23 166 P **P** **16 00 37.5 +0.3**
GAMB Gambell 58.30 29 P **P** **16 00 37.3 0.0**
baz=260
GAMB S **S** **16 08 42.3 +3.2**
baz=260
MHTO MHTO 58.52 281 P **P** **16 00 39.2 -0.3**
SNR=10
MHTO P **P** **16 00 39.2 -0.3**
SNR=10
MHTO P **P** **16 00 39.2 -0.3**
SNR=10
MHTO S **S** **16 08 46.4 +3.2**
MHTO S **S** **16 08 46.4 +3.2**
MHTO S **S** **16 08 46.4 +3.2**
P08K Saint George I 58.54 37 P **P** **16 00 38.5 -0.5**
baz=267
RKGY Rocky Gully 58.57 185 P **P** **16 00 40.7 +1.2**
BSY Bisya 58.74 283 P **P** **16 00 41.8 +0.7**
SNR=14
BSY P **P** **16 00 41.8 +0.7**
SNR=14
BSY S **S** **16 08 51.2 +5.1**
BSY S **S** **16 08 51.2 +5.1**
WHYH Whyalla 58.80 164 P **P** **16 00 43.3 +2.2**
NIKH Nikolski High 58.81 41 P **P** **16 00 41.4 +0.4**
baz=269
STKA Stephens Creek 58.83 160 P **P** **16 00 41.0 -0.3**
STKA Stephens Creek 58.83 160 *i*P **P** **16 00 39.5 -1.8**
STKA Stephens Creek 58.83 160 P **P** **16 00 40.2 -1.1**
comp=Z,28nm,0.8s,baz=340,slow=6.8,SNR=58
STKA LR LR 16 26 19.5
comp=Z,11μm,22.0s,baz=332,slow=36
comp=Z,28nm,0.8s
MDH Madha 58.90 286 P **P** **16 00 42.2 +0.1**
MDH P **P** **16 00 42.2 +0.1**
MDH S **S** **16 08 53.2 +5.2**
MDH S **S** **16 08 53.2 +5.2**
AUALB St Joseph's Co 58.90 184 P **P** **16 00 43.7 +2.0**
AULRC Lightning Ridg 58.92 153 P **P** **16 00 43.8 +1.8**
SOHO SOHO 58.97 285 *i*P **P** **16 00 42.3 -0.4**
SNR=8.2
SOHO SOHO 58.97 285 P **P** **16 00 43.1 +0.5**
SOHO P **P** **16 00 43.1 +0.5**
SOHO P **P** **16 00 43.1 +0.5**
SOHO S **S** **16 08 51.1 +2.1**
SOHO S **S** **16 08 51.1 +2.1**
SOHO S **S** **16 08 51.1 +2.1**
MASF Masafi 59.00 286 P **P** **16 00 43.7 +0.8**
MASF P **P** **16 00 43.7 +0.8**
MASF S **S** **16 08 50.8 +1.3**
MASF S **S** **16 08 50.8 +1.3**
MSFE Esma-Masafi 59.00 286 *i*P **P** **16 00 41.6 -1.3**
SNR=6.4
UOSS Minazif 59.06 286 *i*P **P** **16 00 42.9 -0.4**
SNR=12
UOSS **Minazif** 59.06 286 P **P** **16 00 44.9 +1.6**
UOSS P **P** **16 00 44.9 +1.6**
HATD Hatta, Dubai 59.16 285 *i*P **P** **16 00 43.9 -0.1**
SNR=16
HATD Hatta, Dubai 59.16 285 P **P** **16 00 45.3 +1.4**
SNR=15
HATD P **P** **16 00 45.3 +1.4**
SNR=15
HATD P **P** **16 00 45.3 +1.4**
SNR=15
HATD S **S** **16 08 54.4 +2.9**
HATD S **S** **16 08 54.4 +2.9**
HATD S **S** **16 08 54.4 +2.9**
ARQ Araqi 59.19 284 P **P** **16 00 45.9 +1.7**
SNR=16
ARQ P **P** **16 00 45.9 +1.7**
SNR=16
ARQ P **P** **16 00 45.9 +1.7**
SNR=16
ARQ S **S** **16 08 53.8 +1.9**
ARQ S **S** **16 08 53.8 +1.9**
ARQ S **S** **16 08 53.8 +1.9**
DQM DQM 59.20 280 S **S** **16 08 50.0 -2.1**
ASHO Ashiyiah 59.26 285 *i*P **P** **16 00 43.8 -0.9**
SNR=10
ASHO Ashiyiah 59.26 285 P **P** **16 00 45.6 +1.0**
SNR=29
ASHO P **P** **16 00 45.6 +1.0**
SNR=29
UMQ Umm Al-Quwin 59.40 286 *i*P **P** **16 00 47.8 +2.3**
SNR=5.2
HTT Hallett 59.52 163 P **P** **16 00 48.4 +2.2**
HTT Hallett 59.52 163 ⇑P **P** **16 00 45.8 -0.4**
NAZ Nazwa, Dubai 59.53 286 *i*P **P** **16 00 46.5 0.0**
SNR=9.9
NAZ Nazwa, Dubai 59.53 286 P **P** **16 00 47.7 +1.1**
NAZ P **P** **16 00 47.7 +1.1**
NAZ S **S** **16 08 58.6 +2.4**
NAZ S **S** **16 08 58.6 +2.4**
FAQ Al Faqa, Dubai 59.65 286 *i*P **P** **16 00 47.2 -0.2**
SNR=14
FAQ Al Faqa, Dubai 59.65 286 P **P** **16 00 49.0 +1.7**
SNR=11
FAQ P **P** **16 00 49.0 +1.7**
SNR=11
FAQ P **P** **16 00 49.0 +1.7**
SNR=11
FAQ S **S** **16 09 02.0 +4.2**
FAQ S **S** **16 09 02.0 +4.2**
FAQ S **S** **16 09 02.0 +4.2**
ALNE Al Ain 59.69 285 *i*P **P** **16 00 47.0 -0.6**
SNR=11
ALNE Al Ain 59.69 285 P **P** **16 00 48.4 +0.8**
SNR=26
ALNE P **P** **16 00 48.4 +0.8**
SNR=26
ALNE S **S** **16 08 55.9 -2.4**
ALNE S **S** **16 08 55.9 -2.4**
CMSA Cobar Meteorol 59.90 156 P **P** **16 00 51.2 +2.4**
ASUD Al Ashush, Dub 59.91 285 *i*P **P** **16 00 50.0 +0.9**
SNR=6.7
ASUD Al Ashush, Dub 59.91 285 P **P** **16 00 50.2 +1.1**
ASUD P **P** **16 00 50.2 +1.1**
ASUD S **S** **16 09 02.1 +0.9**
ASUD S **S** **16 09 02.1 +0.9**
TNA Tin City 60.18 27 P **P** **16 00 50.5 +0.3**
baz=263,SNR=31
TNA S **S** **16 09 08.3 +5.0**
baz=263
TNA Tin City 60.18 27 ⇑P **P** **16 00 50.5 +0.3**
UNV Unalaska Valle 60.22 40 P **P** **16 00 51.1 +0.4**
baz=271
AJN Ajban 60.23 285 P **P** **16 00 52.5 +1.2**
AJN P **P** **16 00 52.5 +1.2**
AJN S **S** **16 09 07.2 +1.9**
AJN S **S** **16 09 07.2 +1.9**
M11K Mekoryuk 60.51 33 P **P** **16 00 53.6 +1.1**
baz=267,SNR=16
M11K S **S** **16 09 15.0 +7.3**
baz=267
UMZA Um Al Zommool 60.56 283 P **P** **16 00 53.3 -0.3**
UMZA P **P** **16 00 53.3 -0.3**
UMZA P **P** **16 00 53.3 -0.3**
UMZA S **S** **16 09 07.8 -1.7**
UMZA S **S** **16 09 07.8 -1.7**
UMZA S **S** **16 09 07.8 -1.7**
KIRV Kirov 60.56 325 *i*P **P** **16 00 51.1 -1.9**
KIRV Kirov 60.56 325 LR LR 16 29 55.8
comp=Z,36μm,18.8s,baz=98,slow=39
KOUNC Koumac, New Ca 60.73 133 P **P** **16 00 54.8 +0.2**
KOUNC IAmb IAmb 16 01 12.9
comp=Z,285nm,1.2s
KOUNC IAMs_20 IAMs_20 16 21 59.9
comp=Z,16μm,21.0s
KOUNC Koumac, New Ca 60.73 133 P **P** **16 00 56.4 +1.8**
KOUNC Koumac, New Ca 60.73 133 ⇑P **P** **16 00 56.7 +2.1**
F14K Arctic Creek 60.83 27 P **P** **16 00 55.8 +1.1**
baz=264,SNR=50
F14K S **S** **16 09 12.8 +1.1**
baz=264
ANM Nome 61.15 28 P **P** **16 00 56.6 -0.4**
ANM IAmb IAmb 16 01 00.3
comp=Z,328nm,1.6s
ANM IAMs_20 IAMs_20 16 30 42.6
comp=Z,14μm,19.0s
ANM Nome 61.15 28 P **P** **16 00 57.9 +0.9**
baz=266,SNR=63
ANM S **S** **16 09 20.2 +4.4**
baz=266
ANM Nome 61.15 28 P **P** **16 00 56.6 -0.4**
ANM pmax pmax
comp=Z,328nm,1.6s
ANM MLR MLR
comp=Z,14μm,19.0s
ARMA Armidale 61.34 151 P **P** **16 01 01.4 +2.6**
ARMA Armidale 61.34 151 ⇓P **P** **16 01 00.7 +1.9**
MZWR Madinat Zayed 61.41 285 P **P** **16 00 59.8 +0.4**
MZWR P **P** **16 00 59.8 +0.4**
MZWR S **S** **16 09 16.6 -3.8**
MZWR S **S** **16 09 16.6 -3.8**
SHAO Shalim 61.50 278 P **P** **16 01 02.6 +2.6**
SHAO P **P** **16 01 02.6 +2.6**
SHAO P **P** **16 01 02.6 +2.6**
SHAO S **S** **16 09 20.5 -1.2**
SHAO S **S** **16 09 20.5 -1.2**
SHAO S **S** **16 09 20.5 -1.2**
C16K Lisburne Hills 61.52 24 P **P** **16 00 59.4 +0.1**
baz=264
F15K North Star Dit 61.55 27 IAmb IAmb 16 01 02.8
comp=Z,255nm,1.4s
F15K IAMs_20 IAMs_20 16 28 28.9
comp=Z,24μm,21.0s
F15K North Star Dit 61.55 27 P **P** **16 01 00.3 +0.7**
baz=266,SNR=58
F15K S **S** **16 09 23.7 +2.9**
baz=266
AUPHS Peel High Scho 61.60 152 P **P** **16 01 02.9 +2.5**
BELG Belogornoye 61.68 318 *i*P **P** **16 00 57.5 -3.2**
BELG pmax pmax
comp=Z,71nm,1.3s
BELG MLR MLR
comp=Z,5μm,20.0s
BELG Belogornoye 61.68 318 LR LR 16 28 38.9
comp=Z,29μm,21.6s,baz=83,slow=37
G15K Niukluk 61.75 28 P **P** **16 01 01.6 +0.6**
baz=267
G15K S **S** **16 09 28.6 +5.2**
baz=267
J14K Nanvaranak Lak 61.87 30 IAmb IAmb 16 01 10.4
comp=Z,87nm,0.9s
J14K IAMs_20 IAMs_20 16 31 31.9
comp=Z,15μm,19.0s
J14K Nanvaranak Lak 61.87 30 P **P** **16 01 02.8 +1.0**
baz=268
J14K S **S** **16 09 26.8 +1.9**
baz=268
M13K Dall Lake 61.92 33 P **P** **16 01 03.4 +1.2**
baz=270,SNR=9.9
FALS False Pass 62.00 39 P **P** **16 01 03.1 +0.4**
baz=273
JRN Qarnain Island 62.01 286 P **P** **16 01 02.7 -0.7**
SNR=19
JRN P **P** **16 01 02.7 -0.7**
SNR=19
JRN S **S** **16 09 30.2 +2.3**
JRN S **S** **16 09 30.2 +2.3**
DMTO DMTO 62.21 278 P **P** **16 01 07.5 +2.7**
DMTO P **P** **16 01 07.5 +2.7**
DMTO P **P** **16 01 07.5 +2.7**
DMTO S **S** **16 09 27.4 -3.2**
DMTO S **S** **16 09 27.4 -3.2**
DMTO S **S** **16 09 27.4 -3.2**
GHWR Ruwais 62.25 285 P **P** **16 01 05.0 0.0**
GHWR P **P** **16 01 05.0 0.0**
GHWR P **P** **16 01 05.0 0.0**
GHWR S **S** **16 09 30.6 -0.3**
GHWR S **S** **16 09 30.6 -0.3**
GHWR S **S** **16 09 30.6 -0.3**
L14K Kuka Creek 62.25 32 P **P** **16 01 05.2 +0.8**
baz=270
L14K S **S** **16 09 35.5 +5.7**
baz=270
C17K DeLong Mountai 62.33 24 P **P** **16 01 05.0 +0.2**
baz=266
C17K S **S** **16 09 32.5 +1.7**
baz=266
RDOG Red Dog Mine 62.40 24 P **P** **16 01 05.4 +0.1**
baz=266,SNR=13
RDOG S **S** **16 09 35.6 +4.0**
baz=266
LKRN Lenkeran, Azer 62.44 302 P **P** **16 01 04.5 -1.6**
G16K Koyuk River 62.48 27 IAmb IAmb 16 01 54.5
comp=Z,217nm,1.3s
G16K IAMs_20 IAMs_20 16 29 07.6
comp=Z,18μm,21.0s
G16K Koyuk River 62.48 27 P **P** **16 01 06.4 +0.6**
baz=268
G16K S **S** **16 09 38.7 +6.1**
baz=268
H16K Elim 62.51 28 P **P** **16 01 06.4 +0.3**
baz=268,SNR=57
H16K S **S** **16 09 38.0 +5.1**
baz=268
M14K Bethel 62.61 33 IAmb IAmb 16 01 21.0
comp=Z,88nm,0.8s
M14K Bethel 62.61 33 P **P** **16 01 07.5 +0.8**
baz=271,SNR=19
M14K S **S** **16 09 37.9 +3.6**
baz=271
DOK Doka 62.67 279 P **P** **16 01 07.9 0.0**
DOK P **P** **16 01 07.9 0.0**
DOK P **P** **16 01 07.9 0.0**
DOK S **S** **16 09 32.0 -4.3**
DOK S **S** **16 09 32.0 -4.3**
DOK S **S** **16 09 32.0 -4.3**
MAK Makhachkala 62.72 307 *e*P **P** **16 01 06.5 -1.4**
MAK *e* 16 03 25.5
MAK *e*S **S** **16 09 36.4 +0.1**
MAK *e*SS **SS** **16 13 42.7 +1.9**
MAK pmax pmax
comp=Z,226nm,1.1s
MAK pmax pmax
comp=Z,2μm,3.8s
MAK smax smax
comp=N,14μm,9.2s
MAK smax smax
comp=E,4μm,7.0s
MAK MLR MLR
comp=E,60μm,13.0s
MAK MLR MLR
comp=N,61μm,14.0s
MAK MLR MLR
comp=Z,43μm,15.0s
N14K Kuskokwak Cree 62.76 33 P **P** **16 01 08.7 +0.9**
baz=272,SNR=11
N14K S **S** **16 09 39.8 +3.5**
baz=272
E17K Hotham Inlet 62.76 25 P **P** **16 01 08.3 +0.6**
baz=268,SNR=87
E17K S **S** **16 09 36.2 +0.1**
baz=268
K15K Wolf Creek Mou 62.80 31 IAmb IAmb 16 01 20.4
comp=Z,257nm,1.4s
K15K IAMs_20 IAMs_20 16 28 18.6
comp=Z,16μm,22.0s
K15K Wolf Creek Mou 62.80 31 P **P** **16 01 08.6 +0.5**
baz=270
K15K S **S** **16 09 40.0 +3.3**
baz=270
L15K Ungalak Mounta 62.83 31 P **P** **16 01 08.7 +0.5**
baz=271,SNR=13
L15K S **S** **16 09 40.2 +3.1**
baz=271
B18K Kokolik River 62.89 23 P **P** **16 01 08.1 -0.5**
baz=266,SNR=113
B18K S **S** **16 09 42.3 +4.6**
baz=266
RBK Rabkut 62.95 278 P **P** **16 01 10.0 +0.1**
SNR=8.6
RBK P **P** **16 01 10.0 +0.1**
SNR=8.6
RBK S **S** **16 09 38.2 -1.8**
RBK S **S** **16 09 38.2 -1.8**
F17K Baldwin Pennin 62.97 26 IAmb IAmb 16 01 12.5
comp=Z,308nm,1.6s
F17K IAMs_20 IAMs_20 16 30 30.4
comp=Z,16μm,18.0s
F17K Baldwin Pennin 62.97 26 P **P** **16 01 09.4 +0.3**
baz=268
F17K S **S** **16 09 41.1 +2.4**
baz=268
O14K Tigyukauivet M 62.99 34 IAmb IAmb 16 01 46.8
comp=Z,296nm,1.8s
O14K Tigyukauivet M 62.99 34 P **P** **16 01 10.1 +0.8**
baz=272
O14K S **S** **16 09 43.1 +3.9**
baz=272
C18K Utukok River 63.07 24 IAmb IAmb 16 01 12.5
comp=Z,204nm,1.5s
C18K Utukok River 63.07 24 P **P** **16 01 09.9 0.0**
baz=267
C18K S **S** **16 09 40.9 +0.8**
baz=267
NOUC Port Laguerre 63.15 133 P **P** **16 01 13.2 +2.3**
I17K Unalakleet 63.17 29 IAmb IAmb 16 01 13.2
comp=Z,310nm,1.6s
I17K IAMs_20 IAMs_20 16 30 55.0
comp=Z,18μm,20.0s
I17K Unalakleet 63.17 29 P **P** **16 01 11.8 +1.3**
baz=270,SNR=43
I17K S **S** **16 09 46.8 +5.5**
baz=270
G17K Kiwalik Mounta 63.20 27 P **P** **16 01 11.3 +0.6**
baz=270
G17K S **S** **16 09 45.2 +3.6**
baz=270
WHFO Wadi Hawf 63.21 279 P **P** **16 01 11.8 +0.2**
WHFO P **P** **16 01 11.8 +0.2**
WHFO S **S** **16 09 41.4 -1.8**
WHFO S **S** **16 09 41.4 -1.8**
J16K Anvik River 63.22 30 IAmb IAmb 16 01 50.2
comp=Z,118nm,1.2s

J16K IAMs_20 IAMs_20 16 30 34.3
comp=Z,21µm,20.0s
J16K Anvik River 63.22 30 P P 16 01 11.7 +0.8
baz=271
J16K S S **16 09 45.4 +3.5**
baz=271
SEKA Sheki 63.22 305 P P 16 01 09.1 -2.2
DZM Mont Dzumac 63.22 133 IAMs_20 IAMs_20 16 23 27.1
comp=Z,19µm,22.0s
DZM Mont Dzumac 63.22 133 P P 16 01 14.1 +2.6
DZM Mont Dzumac 63.22 133 ⇑P **P 16 01 14.1 +2.6**
DZM Mont Dzumac 63.22 133 LR LR 16 24 00.2
comp=Z,13µm,21.5s,baz=323,slow=32
M15K Kasigluk River 63.23 33 P P 16 01 11.2 +0.3
baz=272,SNR=14
M15K S S **16 09 46.4 +4.2**
baz=272
E18K Tukpahlearik C 63.25 25 IAMs_20 IAMs_20 16 30 23.8
comp=Z,22µm,20.0s
E18K Tukpahlearik C 63.25 25 P P 16 01 11.7 +0.7
baz=269,SNR=51
E18K S S **16 09 43.8 +1.6**
baz=269
SLWR Sila 63.26 286 P P 16 01 11.5 -0.2
SLWR P **P 16 01 11.5 -0.2**
SLWR P **P 16 01 11.5 -0.2**
MNGR Mingechevir, A 63.38 305 P P 16 01 10.7 -1.6
YNG Young 63.38 155 P P 16 01 14.9 +2.7
ONTNC Ouen Toro 63.39 133 P P 16 01 16.2 +3.7
SHMA Al-Shehemyia 63.42 288 P P 16 01 13.1 +0.3
SHMA S S **16 09 44.6 -1.0**
ARPS Mount Arapiles 63.46 162 P P 16 01 14.9 +2.3
TRNA Turayna 63.50 287 P P 16 01 13.3 0.0
SNR=15
TRNA S S **16 09 46.9 +0.3**
H17K Granite Mounta 63.51 28 IAmb IAmb 16 01 33.7
comp=Z,176nm,1.1s
H17K IAMs_20 IAMs_20 16 32 36.8
comp=Z,16µm,18.0s
H17K Granite Mounta 63.51 28 P P 16 01 13.9 +1.2
baz=270
H17K S S **16 09 52.5 +7.0**
baz=270
YATNC Mamie plateau, 63.52 133 P P 16 01 16.0 +2.7
N15K Kwethluk River 63.55 33 IAMs_20 IAMs_20 16 31 29.6
comp=Z,13µm,19.0s
N15K Kwethluk River 63.55 33 P P 16 01 13.8 +0.7
baz=273
N15K S S **16 09 47.6 +1.4**
baz=273
ZKTA Zakatala 63.58 306 P P 16 01 12.0 -1.6
F18K Selawik 63.61 26 P P 16 01 14.2 +0.9
baz=270,SNR=99
F18K S S **16 09 49.7 +3.0**
baz=270
SDPT Sand Point 63.65 39 P P 16 01 11.9 -1.9
SDPT IAmb IAmb 16 02 14.4
comp=Z,353nm,1.4s
SDPT Sand Point 63.65 39 P P 16 01 13.6 -0.2
baz=275
C19K Lookout Ridge 63.67 23 IAmb IAmb 16 01 30.3
comp=Z,227nm,1.4s
C19K Lookout Ridge 63.67 23 P P 16 01 14.5 +0.7
baz=269,SNR=48
C19K S S **16 09 50.1 +2.5**
baz=269
AUMAG Moama Anglican 63.72 159 P P 16 01 18.1 +3.7
OUENC Ouen Island, N 63.73 133 IAMs_20 IAMs_20 16 23 41.4
comp=Z,21µm,22.0s
OUENC Ouen Island, N 63.73 133 P P 16 01 17.5 +2.8
O15K Ungalikthiuk R 63.74 34 P P 16 01 13.1 -1.2
baz=273,SNR=9.4
O15K S S **16 09 54.1 +5.6**
baz=273
SAKB Bahrain 63.76 288 P P 16 01 14.8 -0.2
SAKB S S **16 09 48.1 -1.7**
L16K Owhat River 63.78 31 IAmb IAmb 16 01 25.6
comp=Z,314nm,1.6s
L16K IAMs_20 IAMs_20 16 31 23.6
comp=Z,13µm,18.0s
L16K Owhat River 63.78 31 P P 16 01 14.1 -0.5
baz=272,SNR=31
L16K S S **16 09 56.1 +7.1**
baz=272
ABTO Aybut 63.81 278 P P 16 01 15.7 +0.1
ABTO P **P 16 01 15.7 +0.1**
ABTO S S **16 09 48.9 -2.0**
ABTO S S **16 09 48.9 -2.0**
SYDH Sydney Hard Ro 63.84 153 P P 16 01 18.2 +3.0
SMRA Abu-Samra 63.84 287 P P 16 01 15.3 -0.3
SNR=30
SMRA S S **16 09 50.8 0.0**
GANJ Ganja 63.97 305 P P 16 01 14.6 -1.7
G18K Tagagawik 64.02 27 IAmb IAmb 16 01 32.3
comp=Z,270nm,1.5s
G18K IAMs_20 IAMs_20 16 30 07.3
comp=Z,15µm,21.0s
G18K Tagagawik 64.02 27 P P 16 01 15.6 -0.5
baz=271
G18K S S **16 09 57.6 +5.7**
baz=271
M16K Timber Creek 64.06 32 IAmb IAmb 16 01 30.6
comp=Z,141nm,0.9s
M16K Timber Creek 64.06 32 P P 16 01 14.6 -1.8
baz=273
M16K S S **16 09 55.3 +2.8**
baz=273
S14K Fog Glacier 64.09 37 P P 16 01 14.7 -2.2
baz=275
H18K Honhosa River 64.16 28 IAmb IAmb 16 01 33.5
comp=Z,184nm,1.3s
H18K IAMs_20 IAMs_20 16 32 49.0
comp=Z,17µm,19.0s
H18K Honhosa River 64.16 28 P P 16 01 15.1 -2.0
baz=272
H18K S S **16 09 57.7 +4.0**
baz=272
N16K Nishlik Lake 64.19 33 P P 16 01 18.0 +0.7
baz=274
N16K S S **16 09 57.9 +3.7**
baz=274
D19K Kuna River 64.20 24 IAmb IAmb 16 01 27.2
comp=Z,239nm,0.9s
D19K Kuna River 64.20 24 P P 16 01 17.8 +0.5
baz=270
D19K S S **16 09 58.8 +4.7**
baz=270
CHNA Chernabura Isl 64.21 39 P P 16 01 18.1 +0.6
baz=276
CHNA S S **16 09 57.2 +2.8**
baz=276
CNBA Chernabura Isl 64.21 39 IAmb IAmb 16 01 34.5
comp=Z,182nm,1.0s
PINNC Pines Island, 64.27 133 IAMs_20 IAMs_20 16 27 12.7
comp=Z,18µm,19.0s
K17K Iditarod 64.29 30 IAmb IAmb 16 01 39.0
comp=Z,211nm,1.1s
K17K IAMs_20 IAMs_20 16 32 39.8
comp=Z,16µm,19.0s
K17K Iditarod 64.29 30 P P 16 01 18.4 +0.6
baz=273
K17K S S **16 10 00.3 +5.0**
baz=273
JOHN Johnston Islan 64.30 82 IAMs_20 IAMs_20 16 24 06.3
comp=Z,21µm,21.0s
JOHN Johnston Islan 64.30 82 P P 16 01 22.2 +3.5
L17K Donlin 64.32 31 P P 16 01 19.4 +1.3
baz=273
L17K S S **16 10 00.5 +4.8**
baz=273
F19K Shaleruckik Mo 64.36 26 IAmb IAmb 16 01 20.1
comp=Z,243nm,1.6s
F19K IAMs_20 IAMs_20 16 31 57.1
comp=Z,16µm,18.0s
F19K Shaleruckik Mo 64.36 26 P P 16 01 18.1 -0.1
baz=272
F19K S S **16 09 58.9 +3.0**
baz=272
CAN Canberra 64.51 155 IAMs_20 IAMs_20 16 29 35.6
comp=Z,26µm,20.0s
CAN Canberra 64.51 155 P P 16 01 22.0 +2.3
E19K Redstone River 64.55 25 IAmb IAmb 16 02 12.7
comp=Z,110nm,0.9s
E19K IAMs_20 IAMs_20 16 31 44.2
comp=Z,15µm,18.0s
E19K Redstone River 64.55 25 P P 16 01 19.9 +0.4
baz=272,SNR=60

E19K S **S 16 10 02.8 +4.4**
baz=272
O16K Kokwok River B 64.59 34 IAmb IAmb 16 01 33.9
comp=Z,129nm,1.1s
O16K Kokwok River B 64.59 34 P P 16 01 20.6 +0.7
baz=275,SNR=16
O16K S S **16 10 03.2 +4.1**
baz=275
CNB Canberra Magne 64.64 155 P P 16 01 24.0 +3.4
G19K Purcell Mounta 64.65 26 IAmb IAmb 16 02 03.6
comp=Z,220nm,1.2s
G19K IAMs_20 IAMs_20 16 32 03.0
comp=Z,13µm,21.0s
G19K Purcell Mounta 64.65 26 P P 16 01 20.3 0.0
baz=272
G19K S S **16 10 04.4 +4.7**
baz=272
P16K Nushagak River 64.69 34 P P 16 01 20.6 0.0
baz=275,SNR=7.3
A21K Barrow 64.70 21 P P 16 01 20.7 +0.3
baz=270,SNR=66
A21K S S **16 10 04.7 +4.6**
baz=270
CHGN Chignik 64.72 37 P P 16 01 18.7 -2.1
CHGN Chignik 64.72 37 P P 16 01 21.3 +0.6
baz=276
D20K Etivluk River 64.75 24 P P 16 01 21.4 +0.6
baz=272
D20K S S **16 10 02.4 +1.5**
baz=272
M17K Holitna River 64.78 32 IAmb IAmb 16 01 41.8
comp=Z,170nm,1.1s
M17K IAMs_20 IAMs_20 16 31 55.9
comp=Z,13µm,19.0s
M17K Holitna River 64.78 32 P P 16 01 22.2 +1.1
baz=274,SNR=28
M17K S S **16 10 05.2 +3.9**
baz=274
BRAT Ballarat 64.80 161 P P 16 01 22.7 +1.3
GCSA Galena City Sc 64.81 28 P P 16 01 21.5 +0.3
baz=273,SNR=18
GCSA S S **16 10 04.5 +3.0**
baz=273
AUHPC Hawkesdale P12 64.85 162 P P 16 01 24.4 +2.7
NAX Nakhchivan 64.87 304 P P 16 01 20.5 -1.7
E20K Nigu River 64.92 24 P P 16 01 22.9 +0.9
baz=272
E20K S S **16 10 04.3 +1.3**
baz=272
H19K Roundabout Mou 64.95 27 IAMs_20 IAMs_20 16 30 09.7
comp=Z,19µm,21.0s
H19K Roundabout Mou 64.95 27 P P 16 01 23.0 +0.9
baz=273
J18K Innoko River 64.96 29 IAmb IAmb 16 01 35.7
comp=Z,109nm,1.1s
J18K IAMs_20 IAMs_20 16 32 12.3
comp=Z,16µm,20.0s
J18K Innoko River 64.96 29 P P 16 01 23.0 +0.7
baz=274
J18K S S **16 10 06.4 +2.8**
baz=274
N17K Nushagak Hills 64.97 33 IAmb IAmb 16 01 25.9
comp=Z,270nm,1.4s
N17K Nushagak Hills 64.97 33 P P 16 01 23.4 +1.1
baz=275,SNR=26
N17K S S **16 10 08.2 +4.5**
baz=275
R16K Pilot Point 65.05 36 P P 16 01 22.4 -0.5
baz=276
L18K Granite Mounta 65.07 31 IAmb IAmb 16 01 26.5
comp=Z,221nm,1.4s
L18K Granite Mounta 65.07 31 P P 16 01 23.9 +0.9
baz=275
L18K S S **16 10 09.7 +4.9**
baz=275
O17K Koliganek Bris 65.08 33 P P 16 01 23.6 +0.6
baz=275,SNR=12
O17K S S **16 10 10.7 +5.6**
baz=275
F20K Avaraart Lake 65.15 25 P P 16 01 24.0 +0.6
baz=273
GNI Garni 65.25 305 ⇑P **P 16 01 26.3 +1.5**
GNI Garni 65.25 305 *i* P **P 16 01 24.7 -0.1**
GNI pmax pmax
comp=Z,209nm,1.4s
GNI MLR MLR
comp=Z,26µm,17.0s
GNI Garni 65.25 305 LR LR 16 34 06.4
comp=Z,30µm,19.2s,baz=84,slow=40
GNI Garni 65.25 305 P P 16 01 26.5 +1.7
GNI P **P 16 01 26.5 +1.7**
GNI S S **16 10 03.1 -5.1**
GNI S S **16 10 03.1 -5.1**
TOO Toolangi 65.30 159 P P 16 01 25.0 +0.3
TOO IAmb IAmb 16 01 48.1
comp=Z,327nm,1.6s
TOO IAMs_20 IAMs_20 16 31 10.5
comp=Z,20µm,20.0s
TOO Toolangi 65.30 159 P P 16 01 27.8 +3.0
TOO Toolangi 65.30 159 ⇑P **P 16 01 25.1 +0.3**
TOO Toolangi 65.30 159 P P 16 01 25.0 +0.3
TOO pmax pmax
comp=Z,327nm,1.6s
TOO MLR MLR
comp=Z,20µm,20.0s
TTA Tatalina 65.32 30 IAmb IAmb 16 01 41.2
comp=Z,224nm,1.4s
TTA IAMs_20 IAMs_20 16 31 48.1
comp=Z,16µm,20.0s
TTA Tatalina 65.32 30 P P 16 01 25.8 +1.1
TTA Tatalina 65.32 30 P P 16 01 25.3 +0.6
baz=275,SNR=49
TTA S S **16 10 14.0 +5.8**
baz=275
TTA Tatalina 65.32 30 ⇑P **P 16 01 24.1 -0.6**
AUSMG Snowy Mountain 65.34 156 P P 16 01 27.0 +1.9
ZEI Tsey 65.36 308 *eP* **P 16 01 23.7 -1.8**
ZEI pmax pmax
comp=Z,189nm,1.0s
C21K Knifeblade Rid 65.39 23 P P 16 01 25.2 +0.2
baz=273
J19K Poorman 65.41 29 IAmb IAmb 16 01 39.5
comp=Z,182nm,1.1s
J19K IAMs_20 IAMs_20 16 32 14.0
comp=Z,21µm,19.0s
J19K Poorman 65.41 29 P P 16 01 26.0 +0.9
baz=275,SNR=57
J19K S S **16 10 13.6 +4.7**
baz=275
Q16K King Salmon 65.42 35 P P 16 01 25.3 0.0
baz=276,SNR=10
Q16K S S **16 10 12.9 +3.7**
baz=276
B21K Ikpikpuk River 65.43 23 IAMs_20 IAMs_20 16 33 37.2
comp=Z,21µm,18.0s
B21K Ikpikpuk River 65.43 23 P P 16 01 25.8 +0.7
baz=273
VRH Novokhopyorsk 65.44 317 *eP* **P 16 01 24.0 -1.6**
VRH pmax pmax
comp=Z,96nm,0.9s
P17K Kvichak River 65.47 34 P P 16 01 26.0 +0.4
baz=276,SNR=14
P17K S S **16 10 15.9 +6.0**
baz=276
KLMR Klimovskoe 65.49 328 *eP* **P 16 01 22.1 -3.6**
KLMR S S **16 10 03.1 -6.9**
KLMR pmax pmax
comp=Z,373nm,1.3s
KLMR MLR MLR
comp=Z,57µm,14.0s
GEXS Deakin Univers 65.51 161 P P 16 01 28.5 +2.5
M18K Stony River 65.54 32 P P 16 01 27.3 +1.2
baz=276
M18K S S **16 10 14.5 +3.9**
baz=276
GOF Gofitskoye 65.56 310 *ceP* **P 16 01 27.4 +0.9**
N18K Kilae Creek 65.59 32 P P 16 01 27.2 +0.8
baz=276,SNR=10
N18K S S **16 10 14.9 +3.5**
baz=276
H20K Anotleneega Mo 65.60 27 P P 16 01 27.5 +1.0
baz=275
H20K S S **16 10 14.9 +3.5**
baz=275
SVW2 Sparrevohn 65.70 32 IAmb IAmb 16 01 40.9
comp=Z,111nm,1.1s
SVW2 Sparrevohn 65.70 32 P P 16 01 28.6 +1.5

E21K Killik River 65.73 24 IAMs_20 IAMs_20 16 31 29.2
comp=Z,25µm,22.0s
E21K Killik River 65.73 24 P P 16 01 27.6 +0.4
baz=274
B22K Teshekpuk Lake 65.79 22 IAMs_20 IAMs_20 16 32 01.8
comp=Z,20µm,18.0s
B22K Teshekpuk Lake 65.79 22 P P 16 01 26.1 -1.4
baz=274
I20K Naaghedeneel 65.83 28 IAMs_20 IAMs_20 16 34 01.2
comp=Z,17µm,18.0s
I20K Naaghedeneel 65.83 28 P P 16 01 29.0 +1.1
baz=275
I20K S S **16 10 19.0 +4.9**
baz=275
Q17K Contact Creek 65.87 35 P P 16 01 27.7 -0.7
baz=277,SNR=10
Q17K S S **16 10 20.2 +5.2**
baz=277
KBZ Khabaz 65.91 309 *i* P **P 16 01 26.7 -2.0**
KBZ pmax pmax
comp=Z,151nm,1.1s
KBZ MLR MLR
comp=Z,32µm,16.0s
KBZ Khabaz 65.91 309 P P 16 01 26.2 -2.5
comp=Z,16nm,0.8s,baz=104,slow=5.5,SNR=33
KBZ LR LR 16 33 37.8
comp=Z,29µm,18.1s,baz=75,slow=39
comp=Z,16nm,0.8s
L19K White Mountain 65.93 31 IAmb IAmb 16 01 48.9
comp=Z,210nm,1.1s
L19K White Mountain 65.93 31 P P 16 01 29.2 +0.7
baz=276,SNR=58
L19K S S **16 10 20.5 +5.0**
baz=276
F21K Alatna River 66.01 25 IAMs_20 IAMs_20 16 32 50.9
comp=Z,21µm,19.0s
F21K Alatna River 66.01 25 P P 16 01 29.2 +0.2
baz=275
F21K S S **16 10 21.9 +5.5**
baz=275
KIV Kislovodsk 66.02 309 ⇓P **P 16 01 30.5 +1.0**
KIV Kislovodsk 66.02 309 P **P 16 01 28.1 -1.5**
KIV Kislovodsk 66.02 309 *i* P **P 16 01 29.9 +0.3**
SNR=19
KIV Kislovodsk 66.02 309 *e*P **P 16 01 28.4 -1.2**
KIV *e* 16 01 59.1
KIV *e* 16 03 54.9
KIV *e*S **S 16 10 17.6 +0.3**
KIV *e*SS **SS 16 14 34.0 +1.7**
KIV pmax pmax
comp=Z,140nm,4.0s
KIV pmax pmax
comp=Z,231nm,1.0s
KIV MLR MLR
comp=Z,35µm,17.0s
KIV Kislovodsk 66.02 309 P P 16 01 29.7 +0.1
KIV P **P 16 01 29.7 +0.1**
KIV P **P 16 01 29.7 +0.1**
KIV S S **16 10 17.5 +0.2**
KIV S S **16 10 17.5 +0.2**
KIV S S **16 10 17.5 +0.2**
O18K Koktuh Hills 66.02 33 IAmb IAmb 16 01 43.5
comp=Z,126nm,0.8s
O18K Koktuh Hills 66.02 33 P P 16 01 29.2 -0.1
baz=277,SNR=19
O18K S S **16 10 20.3 +3.6**
baz=277
J20K Nowinta River 66.03 28 IAMs_20 IAMs_20 16 30 49.6
comp=Z,16µm,22.0s
J20K Nowinta River 66.03 28 P P 16 01 29.2 0.0
baz=276
J20K S S **16 10 19.4 +2.8**
baz=276
P18K Big Mountain, 66.07 34 IAmb IAmb 16 01 39.5
comp=Z,145nm,1.1s
P18K Big Mountain, 66.07 34 P P 16 01 29.8 +0.3
baz=277,SNR=16
P18K S S **16 10 21.4 +4.2**
baz=277
G21K Allakaket 66.07 26 IAMs_20 IAMs_20 16 35 39.4
comp=Z,12µm,18.0s
G21K Allakaket 66.07 26 P P 16 01 29.4 0.0
baz=276
G21K S S **16 10 23.1 +6.1**
baz=276
MILA Mila 66.11 156 P P 16 01 33.1 +3.1
K20K Telida 66.16 29 IAmb IAmb 16 01 33.7
comp=Z,190nm,1.2s
K20K IAMs_20 IAMs_20 16 32 58.9
comp=Z,20µm,18.0s
K20K Telida 66.16 29 P P 16 01 31.1 +1.0
baz=276
K20K S S **16 10 24.6 +6.4**
baz=276
D22K Ayikyak River 66.17 23 P P 16 01 31.2 +1.2
baz=275
D22K S S **16 10 21.1 +2.9**
baz=275
M19K Big River Lodg 66.17 31 IAmb IAmb 16 01 46.2
comp=Z,154nm,1.0s
M19K Big River Lodg 66.17 31 P P 16 01 31.2 +1.0
baz=277
M19K S S **16 10 22.1 +3.6**
baz=277
N19K Bonanza Creek 66.26 32 IAmb IAmb 16 01 44.5
comp=Z,141nm,1.1s
N19K Bonanza Creek 66.26 32 P P 16 01 31.4 +0.6
baz=277
N19K S S **16 10 25.3 +5.6**
baz=277
L20K Farewell, AK 66.34 30 P P 16 01 32.1 +0.8
baz=277
L20K S S **16 10 24.9 +4.4**
baz=277
O19K Port Alsworth 66.42 33 IAmb IAmb 16 01 45.8
comp=Z,225nm,1.1s
O19K Port Alsworth 66.42 33 P P 16 01 32.2 +0.6
baz=278,SNR=22
O19K S S **16 10 26.3 +4.9**
baz=278
H21K Melozitna Rive 66.44 27 P P 16 01 32.7 +0.9
baz=276
H21K S S **16 10 24.7 +3.0**
baz=276
E22K Anaktuvuk Pass 66.56 24 P P 16 01 32.9 +0.3
baz=276
M20K Styx River 66.77 31 IAMs_20 IAMs_20 16 34 58.2
comp=Z,15µm,19.0s
M20K Styx River 66.77 31 P P 16 01 35.2 +1.1
baz=278
LVZ Lovozero 66.81 336 *i* P **P 16 01 32.5 -1.7**
LVZ pmax pmax
comp=Z,118nm,1.8s
LVZ MLR MLR
comp=Z,27µm,16.0s
G22K Bettles 66.82 25 P P 16 01 34.8 +0.6
baz=277
I21K Tanana 66.84 27 P P 16 01 35.8 +1.4
baz=277,SNR=28
I21K S S **16 10 31.6 +5.2**
baz=277
CHUM Lake Minchumin 66.87 29 P P 16 01 35.6 +1.1
baz=278,SNR=46
CHUM S S **16 10 33.5 +6.7**
baz=278
VORR Voronezh 66.92 318 *eP* **P 16 01 33.8 -1.3**
VORR pmax pmax
comp=Z,200nm,1.0s
VORR MLR MLR
comp=Z,4µm,9.0s
LPSR Galich'ya Gora 66.93 319 *eP* **P 16 01 33.7 -1.4**
LPSR pmax pmax
comp=Z,220nm,1.0s
Q19K Cape Douglas, 66.94 34 P P 16 01 34.5 -0.6
baz=279
Q19K S S **16 10 34.0 +6.1**
baz=279
VORD Divnogorie 67.00 317 *eP* **P 16 01 33.4 -2.1**
VORD pmax pmax
comp=Z,110nm,1.0s
H22K Ishtalitna Cre 67.00 26 P P 16 01 36.4 +1.0
baz=278,SNR=121
H22K S S **16 10 34.3 +5.9**
baz=278
SII Sitkinak Islan 67.02 37 IAMs_20 IAMs_20 16 34 19.6
comp=Z,15µm,20.0s
SII Sitkinak Islan 67.02 37 P P 16 01 38.9 +3.2

SII	**Sitkinak Islan**	**67.02**	**37**	P	**P**	**16 01 36.1**	**+0.4**
	baz=279								
VSR	**Storozhevoye**	**67.03**	**317**	*e*P	**P**	**16 01 33.5**	**-2.3**
VSR				pmax	pmax				
	comp=Z,170nm,1.0s								
VSR				MLR	MLR				
	comp=Z,18µm,12.0s								
CAST	**Castle Rocks**	**67.03**	**29**	IAmb	IAmb	16 01 47.8			
	comp=Z,262nm,1.1s								
CAST				IAMs_20	IAMs_20	16 31 09.1			
	comp=Z,19µm,22.0s								
CAST	**Castle Rocks**	**67.03**	**29**	P	**P**	**16 01 36.6**	**+0.9**
	baz=278,SNR=64								
CAST				S	**S**	**16 10 37.2**	**+8.3**
	baz=278								
P19K	**Oil Pt**	**67.04**	**33**	IAmb	IAmb	16 01 48.1			
	comp=Z,152nm,0.8s								
P19K	**Oil Pt**	**67.04**	**33**	P	**P**	**16 01 35.5**	**-0.3**
	baz=279								
P19K				S	**S**	**16 10 34.6**	**+5.6**
	baz=279								
PPLA	**Purkeypile**	**67.06**	**30**	P	**P**	**16 01 36.3**	**+0.3**
	baz=278,SNR=36								
PPLA				S	**S**	**16 10 31.2**	**+1.8**
	baz=278								
MOS	**Moscow**	**67.16**	**322**	*e*P	**P**	**16 01 34.3**	**-2.2**
MOS				*e*S	**S**	**16 10 29.7**	**-0.8**
MOS				*e*SS	**SS**	**16 14 52.4**	**+3.2**
MOS				pmax	pmax				
	comp=Z,500nm,1.8s								
MOS				pmax	pmax				
	comp=Z,248nm,1.6s								
MOS				MLR	MLR				
	comp=N,14µm,15.0s								
MOS				MLR	MLR				
	comp=Z,32µm,15.0s								
MOS				MLR	MLR				
	comp=E,29µm,16.0s								
ERBR	**Yeremizino-Bor**	**67.21**	**311**	*e*P	**P**	**16 01 36.5**	**-0.5**
ERBR				*e**PP	**pP**	**16 01 39.8**	**-1.2**
ERBR				*e*		16 02 08.5			
ERBR				*e*PPP	PPP	16 05 48.3			
ERBR				*e*S	**S**	**16 10 32.1**	**+0.6**
ERBR				pmax	pmax				
	comp=E,149nm,1.4s								
ERBR				pmax	pmax				
	comp=N,113nm,1.1s								
ERBR				MLR	MLR				
	comp=N,54µm,14.0s								
ERBR				MLR	MLR				
	comp=E,66µm,15.0s								
ERBR				MLR	MLR				
	comp=Z,50µm,17.0s								
LABN	**Labinsk**	**67.26**	**310**	*e*P	**P**	**16 01 38.6**	**+1.2**
LABN				*e**PP	**sP**	**16 01 41.8**	**-1.2**
LABN				*e*S	**S**	**16 10 35.9**	**+3.7**
LABN				pmax	pmax				
	comp=E,39nm,1.2s								
LABN				pmax	pmax				
	comp=Z,150nm,1.6s								
LABN				pmax	pmax				
	comp=N,120nm,1.5s								
LABN				MLR	MLR				
	comp=N,81µm,14.0s								
LABN				MLR	MLR				
	comp=Z,40µm,16.0s								
LABN				MLR	MLR				
	comp=E,20µm,13.0s								
O20K	**Slope Mountain**	**67.28**	**33**	P	**P**	**16 01 37.4**	**+0.1**
	baz=279								
O20K				S	**S**	**16 10 37.0**	**+5.0**
	baz=279								
COLD	**Coldfoot**	**67.28**	**25**	P	**P**	**16 01 36.9**	**-0.3**
	baz=278,SNR=62								
COLD				S	**S**	**16 10 38.7**	**+7.0**
	baz=278								
BCA	**Borcka**	**67.30**	**307**	⇓P	**P**	**16 01 38.7**	**+1.0**
N20K	**Mount Spurr**	**67.31**	**32**	P	**P**	**16 01 37.9**	**+0.4**
	baz=279,SNR=39								
N20K				S	**S**	**16 10 38.0**	**+5.7**
	baz=279								
TOLK	**Toolik Lake Re**	**67.32**	**23**	IAmb	IAmb	16 01 48.5			
	comp=Z,291nm,1.3s								
TOLK	**Toolik Lake Re**	**67.32**	**23**	P	**P**	**16 01 37.9**	**+0.5**
	baz=278,SNR=72								
TOLK				S	**S**	**16 10 35.4**	**+3.2**
	baz=278								
APA	**Apatity**	**67.33**	**335**	*i*P	**P**	**16 01 34.5**	**-2.9**
APA				*i*		16 02 05.0			
APA				*i*		16 04 14.0			
APA				*i* S	**S**	**16 10 27.0**	**-5.2**
APA				*i* PS	**PnS**	**16 11 05.0**	**+11**
APA				*i*		16 11 25.0			
APA				pmax	pmax				
	comp=Z,61nm,0.9s								
APA				MLR	MLR				
	comp=Z,47µm,14.0s								
E23K	**Chandalar**	**67.39**	**24**	P	**P**	**16 01 38.6**	**+0.8**
	baz=278,SNR=90								
E23K				S	**S**	**16 10 39.3**	**+6.3**
	baz=278								
MLY	**Manley**	**67.39**	**27**	IAmb	IAmb	16 01 50.0			
	comp=Z,286nm,1.2s								
MLY				IAMs_20	IAMs_20	16 33 41.2			
	comp=Z,14µm,20.0s								
MLY	**Manley**	**67.39**	**27**	P	**P**	**16 01 38.3**	**+0.4**
	baz=279,SNR=43								
MLY				S	**S**	**16 10 39.4**	**+6.3**
	baz=279								
OHAK	**Old Harbor**	**67.40**	**36**	IAmb	IAmb	16 02 03.2			
	comp=Z,439nm,1.8s								
OHAK				IAMs_20	IAMs_20	16 35 23.5			
	comp=Z,12µm,19.0s								
OHAK	**Old Harbor**	**67.40**	**36**	P	**P**	**16 01 39.9**	**+1.9**
OHAK	**Old Harbor**	**67.40**	**36**	P	**P**	**16 01 38.0**	**0.0**
	baz=280,SNR=7.5								
OHAK				S	**S**	**16 10 39.5**	**+6.2**
	baz=280								
G23K	**Bananza Creek**	**67.43**	**25**	IAmb	IAmb	16 01 49.5			
	comp=Z,301nm,1.2s								
G23K				IAMs_20	IAMs_20	16 33 54.2			
	comp=Z,18µm,19.0s								
G23K	**Bananza Creek**	**67.43**	**25**	P	**P**	**16 01 38.7**	**+0.6**
	baz=279,SNR=65								
G23K				S	**S**	**16 10 40.5**	**+7.0**
	baz=279								
C24K	**Franklin Bluff**	**67.47**	**22**	P	**P**	**16 01 38.3**	**+0.1**
	baz=278,SNR=113								
C24K				S	**S**	**16 10 39.9**	**+6.1**
	baz=278								
SKT	**Skwentna**	**67.50**	**31**	IAmb	IAmb	16 02 02.7			
	comp=Z,226nm,1.4s								
SKT				IAMs_20	IAMs_20	16 34 50.9			
	comp=Z,14µm,18.0s								
SKT	**Skwentna**	**67.50**	**31**	P	**P**	**16 01 38.0**	**-0.6**
	baz=279,SNR=20								
SKT				S	**S**	**16 10 39.3**	**+4.7**
	baz=279								
D24K	**Happy Valley**	**67.51**	**23**	P	**P**	**16 01 38.6**	**0.0**
	baz=279,SNR=106								
D24K				S	**S**	**16 10 39.3**	**+4.9**
	baz=279								
KTH	**Kantishna Hill**	**67.53**	**29**	IAmb	IAmb	16 01 50.0			
	comp=Z,160nm,1.0s								
KTH				IAMs_20	IAMs_20	16 31 58.2			
	comp=Z,15µm,22.0s								
Q20K	**Shuyak Island**	**67.63**	**34**	P	**P**	**16 01 39.2**	**-0.2**
	baz=280								
Q20K				S	**S**	**16 10 40.1**	**+4.0**
	baz=280								
SYI	**Shuyak Island**	**67.63**	**34**	IAmb	IAmb	16 01 52.3			
	comp=Z,176nm,0.9s								
GURO	**Guroymak-BITLI**	**67.65**	**303**	IAMs_20	IAMs_20	16 34 26.9			
	comp=Z,22µm,19.0s								
KDAK	**Kodiak Island**	**67.68**	**35**	P	**P**	**16 01 38.4**	**-1.3**
KDAK				IAmb	IAmb	16 01 55.4			
	comp=Z,326nm,1.2s								
KDAK	**Kodiak Island**	**67.68**	**35**	IAMs_20	IAMs_20	16 28 37.8			
	comp=Z,15µm,21.0s								
KDAK	**Kodiak Island**	**67.68**	**35**	P	**P**	**16 01 39.7**	**0.0**
	baz=280								
KDAK				S	**S**	**16 10 38.7**	**+2.0**
	baz=280								
KDAK	**Kodiak Island**	**67.68**	**35**	*i* P	**P**	**16 01 38.0**	**-1.7**
KDAK				pmax	pmax				
	comp=Z,426nm,1.4s								
KDAK				MLR	MLR				
	comp=Z,16µm,19.0s								
KDAK	**Kodiak Island**	**67.68**	**35**	P	**P**	**16 01 36.6**	**-3.1**
	comp=Z,113nm,1.1s,baz=242,slow=2.2,SNR=18								
KDAK				LR	LR	16 29 22.3			
	comp=Z,8µm,21.9s,baz=293,slow=34								
	comp=Z,113nm,1.1s								
E24K	**Your Creek**	**67.80**	**24**	P	**P**	**16 01 40.9**	**+0.4**
	baz=279								
TRF	**Thorofare Moun**	**67.83**	**29**	IAmb	IAmb	16 01 54.6			
	comp=Z,96nm,0.9s								
TRF				IAMs_20	IAMs_20	16 31 33.1			
	comp=Z,16µm,22.0s								
TRF	**Thorofare Moun**	**67.83**	**29**	P	**P**	**16 01 41.0**	**+0.1**
	baz=280,SNR=19								
TRF				S	**S**	**16 10 43.9**	**+5.2**
	baz=280								
HOM	**Homer**	**67.83**	**33**	P	**P**	**16 01 40.0**	**-0.7**
	baz=280								
OBN	**Obninsk**	**67.86**	**322**	⇓P	**P**	**16 01 39.8**	**-1.2**
OBN	**Obninsk**	**67.86**	**322**	P	**P**	**16 01 39.7**	**-1.2**
OBN	**Obninsk**	**67.86**	**322**	*c* *i*P	**P**	**16 01 40.5**	**-0.4**
OBN				*e**PP	**pP**	**16 01 42.6**	**-2.3**
OBN				*e**SP	**sP**	**16 01 45.2**	**-1.3**
OBN				*i* S	**S**	**16 10 41.2**	**+2.3**
OBN				*e*		16 11 05.0			
OBN				pmax	pmax				
	comp=Z,199nm,1.7s								
OBN				MLR	MLR				
	comp=Z,26µm,13.0s								
OBN	**Obninsk**	**67.86**	**322**	LR	LR	16 34 02.1			
	comp=Z,31µm,18.5s,baz=74,slow=38								
CAPN	**Captain Cook N**	**67.88**	**32**	P	**P**	**16 01 41.9**	**+0.9**
	baz=280								
I23K	**Minto, Yukon-K**	**67.94**	**27**	IAmb	IAmb	16 01 52.8			
	comp=Z,395nm,1.6s								
I23K	**Minto, Yukon-K**	**67.94**	**27**	P	**P**	**16 01 42.2**	**+0.9**
	baz=280								
I23K				S	**S**	**16 10 43.8**	**+4.2**
	baz=280								
SUA	**Susitna One**	**67.96**	**31**	IAMs_20	IAMs_20	16 31 54.9			
	comp=Z,13µm,22.0s								
SUA	**Susitna One**	**67.96**	**31**	P	**P**	**16 01 40.9**	**-0.7**
	baz=280,SNR=74								
SUA				S	**S**	**16 10 41.3**	**+1.1**
	baz=280								
CUT	**Chulitna**	**68.02**	**30**	IAMs_20	IAMs_20	16 33 26.5			
	comp=Z,15µm,19.0s								
CUT	**Chulitna**	**68.02**	**30**	P	**P**	**16 01 41.5**	**-0.3**
	baz=280,SNR=15								
CUT				S	**S**	**16 10 42.5**	**+1.9**
	baz=280								
BWN	**Browne**	**68.07**	**28**	IAMs_20	IAMs_20	16 32 15.2			
	comp=Z,13µm,20.0s								
F24K	**Squaw Lake**	**68.12**	**24**	IAMs_20	IAMs_20	16 33 10.4			
	comp=Z,21µm,21.0s								
F24K	**Squaw Lake**	**68.12**	**24**	P	**P**	**16 01 42.6**	**+0.2**
	baz=280								
NEA2	**Nenana**	**68.16**	**28**	IAMs_20	IAMs_20	16 35 30.8			
	comp=Z,18µm,18.0s								
NEA2	**Nenana**	**68.16**	**28**	P	**P**	**16 01 43.0**	**+0.3**
	baz=280,SNR=53								
NEA2				S	**S**	**16 10 46.9**	**+4.6**
	baz=280								
BRLK	**Bradley Lake**	**68.19**	**33**	IAmb	IAmb	16 01 56.5			
	comp=Z,164nm,0.8s								
SOC	**Sochi**	**68.20**	**309**	*e*P	P	16 01 38.4	-4.9		
SOC				*e*		16 04 08.9			
SOC				*e*S	**S**	**16 10 37.8**	**-5.6**
SOC				*e*		16 15 13.2			
SOC				MLR	MLR				
	comp=Z,39µm,20.0s								
BRSE	**Bradley Lake S**	**68.27**	**33**	P	**P**	**16 01 42.9**	**-0.6**
	baz=281,SNR=10								
BRSE				S	**S**	**16 10 41.5**	**-2.3**
	baz=281								
HOPEN	**Hopen**	**68.30**	**345**	IVmB_BB		16 01 46.2			
	comp=Z,2µm,4.0s								
HOPEN				*e*S	**S**	**16 10 47.1**	**+3.6**
HOPEN				IVMs_BB	IVMs_BB	16 37 07.0			
	comp=Z,27µm,17.1s								
D25K	**Kavik River**	**68.34**	**22**	P	**P**	**16 01 44.4**	**+0.5**
	baz=281								
VADS	**Vadso**	**68.36**	**338**	*e*P	**P**	**16 01 45.4**	**+1.6**
VADS				*e*		16 02 36.6			
VADS				*e*S	**S**	**16 10 44.2**	**-0.1**
VADS				IVMs_BB	IVMs_BB	16 35 42.7			
	comp=Z,11µm,15.5s								
MCK	**McKinley**	**68.38**	**29**	P	**P**	**16 01 43.8**	**-0.3**
	baz=281,SNR=47								
MCK				S	**S**	**16 10 47.3**	**+2.4**
	baz=281								
G24K	**Hadweenzic Riv**	**68.43**	**25**	IAMs_20	IAMs_20	16 34 22.7			
	comp=Z,19µm,19.0s								
G24K	**Hadweenzic Riv**	**68.43**	**25**	P	**P**	**16 01 44.8**	**+0.4**
	baz=281								
H24K	**Noodor Dome**	**68.43**	**26**	IAMs_20	IAMs_20	16 31 20.8			
	comp=Z,13µm,22.0s								
H24K	**Noodor Dome**	**68.43**	**26**	P	**P**	**16 01 45.0**	**+0.6**
	baz=281								
H24K				S	**S**	**16 10 48.5**	**+3.0**
	baz=281								
MDM	**Murphy Dome**	**68.45**	**27**	IAMs_20	IAMs_20	16 34 23.3			
	comp=Z,12µm,20.0s								
RND	**Reindeer**	**68.47**	**29**	IAMs_20	IAMs_20	16 34 12.0			
	comp=Z,15µm,20.0s								
RC01	**Rabbit Creek A**	**68.50**	**31**	IAmb	IAmb	16 02 22.1			
	comp=Z,196nm,1.4s								
RC01				IAMs_20	IAMs_20	16 34 03.4			
	comp=Z,11µm,19.0s								
RC01	**Rabbit Creek A**	**68.50**	**31**	P	**P**	**16 01 44.3**	**-0.6**
	baz=281,SNR=11								
RC01				S	**S**	**16 10 49.9**	**+3.4**
	baz=281								
COLA	**College**	**68.62**	**27**	P	**P**	**16 01 44.4**	**-1.2**
COLA				IAmb	IAmb	16 02 15.7			
	comp=Z,139nm,1.1s								
COLA				IAMs_20	IAMs_20	16 34 27.8			
	comp=Z,16µm,20.0s								
COLA	**College**	**68.62**	**27**	P	**P**	**16 01 48.9**	**+3.4**
COLA	**College**	**68.62**	**27**	P	**P**	**16 01 45.4**	**-0.2**
	baz=281								
COLA				S	**S**	**16 10 50.6**	**+2.9**
	baz=281								
COLA	**College**	**68.62**	**27**	⇑P	**P**	**16 01 45.8**	**+0.2**
COLA	**College**	**68.62**	**27**	P	**P**	**16 01 44.4**	**-1.2**
COLA				pmax	pmax				
	comp=Z,139nm,1.1s								
COLA				MLR	MLR				
	comp=Z,16µm,20.0s								
O22K	**Cooper Landing**	**68.63**	**32**	IAMs_20	IAMs_20	16 32 54.8			
	comp=Z,12µm,20.0s								
O22K	**Cooper Landing**	**68.63**	**32**	P	**P**	**16 01 44.8**	**-0.9**
	baz=281,SNR=7.7								
CCB	**Clear Creek Bu**	**68.69**	**28**	IAmb	IAmb	16 01 56.3			
	comp=Z,121nm,1.2s								
CCB				IAMs_20	IAMs_20	16 36 51.7			
	comp=Z,17µm,18.0s								
PMR	**Palmer**	**68.69**	**31**	IAmb	IAmb	16 01 56.3			
	comp=Z,89nm,0.8s								
PMR				IAMs_20	IAMs_20	16 35 37.4			
	comp=Z,12µm,18.0s								
PMR	**Palmer**	**68.69**	**31**	P	**P**	**16 01 46.3**	**+0.3**
PMR	**Palmer**	**68.69**	**31**	P	**P**	**16 01 45.4**	**-0.6**
	baz=281,SNR=18								
PMR				S	**S**	**16 10 50.2**	**+1.6**
	baz=281								
WAT1	**Susitna Watana**	**68.72**	**30**	P	**P**	**16 01 45.8**	**-0.5**
	baz=281								
WAT1				S	**S**	**16 10 50.4**	**+1.3**
	baz=281								
POKR	**Poker Plat Res**	**68.75**	**27**	P	**P**	**16 01 46.2**	**-0.2**
	baz=282,SNR=93								
POKR				S	**S**	**16 10 51.4**	**+2.1**
	baz=282								
GHO	**Glory Hole Cre**	**68.75**	**31**	IAMs_20	IAMs_20	16 35 29.0			
	comp=Z,13µm,19.0s								
KTUT	**Trabzon**	**68.77**	**306**	⇓P	**P**	**16 01 47.1**	**+0.2**
SEW	**Seward**	**68.84**	**32**	P	**P**	**16 01 46.6**	**-0.4**
	baz=282								
SEW				S	**S**	**16 10 52.0**	**+1.6**
	baz=282								
RAYN	**Ar Rayn**	**68.84**	**287**	P	**P**	**16 01 46.1**	**-1.7**
RAYN				IAmb	IAmb	16 02 10.2			
	comp=Z,130nm,1.2s								
RAYN	**Ar Rayn**	**68.84**	**287**	*i* P	**P**	**16 01 46.4**	**-1.4**
	SNR=25								
RAYN	**Ar Rayn**	**68.84**	**287**	P	**P**	**16 01 46.1**	**-1.7**
RAYN				pmax	pmax				
	comp=Z,130nm,1.3s								
RAYN				MLR	MLR				
	comp=Z,36µm,22.0s								
RAYN	**Ar Rayn**	**68.84**	**287**	P	**P**	**16 01 47.9**	**+0.2**
RAYN				S	**S**	**16 10 51.4**	**-0.4**
E25K	**Arctic Village**	**68.87**	**24**	IAmb	IAmb	16 02 20.3			
	comp=Z,193nm,1.1s								
E25K	**Arctic Village**	**68.87**	**24**	P	**P**	**16 01 47.2**	**+0.1**
	baz=282,SNR=77								
E25K				S	**S**	**16 10 53.9**	**+3.2**
	baz=282								
G25K	**Bearman Lake**	**68.95**	**25**	P	**P**	**16 01 47.9**	**+0.4**
	baz=282								
F25K	**Christian Rive**	**68.95**	**24**	P	**P**	**16 01 47.9**	**+0.2**
	baz=282								
F25K				S	**S**	**16 10 57.0**	**+5.3**
	baz=282								
SML	**Sawmill**	**69.02**	**31**	IAMs_20	IAMs_20	16 36 09.1			
	comp=Z,13µm,20.0s								
SML	**Sawmill**	**69.02**	**31**	P	**P**	**16 01 47.6**	**-0.7**
	baz=282,SNR=20								
SML				S	**S**	**16 10 56.6**	**+3.9**
	baz=282								
KNK	**Knik Glacier**	**69.05**	**31**	IAMs_20	IAMs_20	16 34 53.7			
	comp=Z,12µm,19.0s								
KNK	**Knik Glacier**	**69.05**	**31**	P	**P**	**16 01 48.4**	**+0.1**
	baz=282,SNR=38								
KNK				S	**S**	**16 10 55.9**	**+2.9**
	baz=282								
ILAR	**Eielson Array**	**69.05**	**27**	P	**P**	**16 01 46.0**	**-2.3**
ILAR	**Eielson Array**	**69.05**	**27**	P	**P**	**16 01 46.0**	**-2.3**
	comp=Z,5.0nm,0.5s,baz=267,slow=4.8,SNR=72								
ILAR				PKP2bc		16 29 59.8			
	comp=Z,3.6nm,1.2s,baz=128,slow=4.0,SNR=3.7								
ILAR				LR	LR	16 34 51.7			
	comp=Z,12µm,18.0s,baz=271,slow=38								
	comp=Z,5.0nm,0.5s								
HDA	**Harding Lake**	**69.10**	**28**	IAmb	IAmb	16 01 58.2			
	comp=Z,303nm,1.4s								
HDA				IAMs_20	IAMs_20	16 36 08.5			
	comp=Z,18µm,19.0s								
HDA	**Harding Lake**	**69.10**	**28**	P	**P**	**16 01 47.8**	**-0.8**
	baz=282,SNR=48								
HDA				S	**S**	**16 10 57.1**	**+3.6**
	baz=282								
HDA				S	**S**	**16 10 57.1**	**+3.6**
	baz=282								
WAT6	**Susitna Watana**	**69.13**	**30**	P	**P**	**16 01 49.1**	**+0.1**
	baz=282,SNR=60								
WAT6				S	**S**	**16 10 57.3**	**+3.1**
	baz=282								
DHY	**Denali Highway**	**69.19**	**29**	IAMs_20	IAMs_20	16 33 12.2			
	comp=Z,21µm,21.0s								
DHY	**Denali Highway**	**69.19**	**29**	P	**P**	**16 01 49.5**	**+0.1**
	baz=282,SNR=21								
DHY				S	**S**	**16 10 59.4**	**+4.5**
	baz=282								
KEV	**Kevo**	**69.22**	**338**	P	**P**	**16 01 48.5**	**-0.7**
KEV				IAmb	IAmb	16 02 16.7			
	comp=Z,272nm,1.8s								
KEV	**Kevo**	**69.22**	**338**	P	**P**	**16 01 48.5**	**-0.7**
KEV				pmax	pmax				
	comp=Z,272nm,1.8s								
KEV				MLR	MLR				
	comp=Z,29µm,22.0s								
M23K	**Glacier View**	**69.31**	**31**	P	**P**	**16 01 49.8**	**-0.1**
	baz=282								
M23K				S	**S**	**16 10 58.4**	**+2.4**
	baz=282								
FYU	**Fort Yukon**	**69.33**	**25**	IAMs_20	IAMs_20	16 34 31.5			
	comp=Z,14µm,20.0s								
PRP	**Porcupine Dome**	**69.45**	**26**	IAmb	IAmb	16 02 02.6			
	comp=Z,290nm,1.3s								
PRP				IAMs_20	IAMs_20	16 36 04.7			
	comp=Z,12µm,19.0s								
PRP	**Porcupine Dome**	**69.45**	**26**	P	**P**	**16 01 51.2**	**+0.3**
	baz=283,SNR=26								
PRP				S	**S**	**16 11 04.5**	**+6.6**
	baz=283								
SCM	**Sheep Creek Mo**	**69.48**	**30**	IAMs_20	IAMs_20	16 32 35.2			
	comp=Z,13µm,22.0s								
SCM	**Sheep Creek Mo**	**69.48**	**30**	P	**P**	**16 01 51.1**	**0.0**
	baz=283,SNR=30								
SCM				S	**S**	**16 11 04.7**	**+6.5**
	baz=283								
F26K	**Sheenjek River**	**69.49**	**24**	P	**P**	**16 01 51.9**	**+1.0**
	baz=283								
F26K				S	**S**	**16 11 05.6**	**+7.5**
	baz=283								
ANN	**Anapa**	**69.51**	**311**	*e*P	**P**	**16 01 50.7**	**-0.8**
ANN				*e**PP	**pP**	**16 01 54.4**	**-1.0**
ANN				*e*		16 02 21.4			
ANN				*e*		16 04 32.2			
ANN				*e*PPP	PPP	16 06 13.8			
ANN				*e*S	**S**	**16 10 59.8**	**+0.9**
ANN				pmax	pmax				
	comp=N,76nm,1.0s								
ANN				pmax	pmax				
	comp=Z,415nm,1.3s								
ANN				pmax	pmax				
	comp=E,36nm,0.8s								
ANN				MLR	MLR				
	comp=E,26µm,17.0s								
ANN				MLR	MLR				
	comp=Z,25µm,15.0s								
ANN				MLR	MLR				
	comp=N,21µm,14.0s								
SPITS	**Spitsbergen Ar**	**69.66**	**348**	P	**P**	**16 01 49.3**	**-2.6**
	comp=N,4.8nm,0.6s,baz=83,slow=9.3,SNR=12								
SPITS				LR	LR	16 37 21.1			
	comp=N,47µm,18.1s,baz=48,slow=40								
	comp=N,4.8nm,0.6s								
J25K	**Salcha River,**	**69.72**	**27**	IAmb	IAmb	16 02 40.6			
	comp=Z,113nm,1.1s								
J25K				IAMs_20	IAMs_20	16 35 00.9			
	comp=Z,16µm,19.0s								
J25K	**Salcha River,**	**69.72**	**27**	P	**P**	**16 01 51.1**	**-1.4**
	baz=284								
J25K				S	**S**	**16 11 05.3**	**+4.4**
	baz=284								
K24K	**Donnelly Dome**	**69.73**	**28**	P	**P**	**16 01 52.3**	**-0.3**
	baz=283,SNR=79								
ARA0	**ARCESS Array S**	**69.79**	**338**	*e*P	**P**	**16 01 54.6**	**+1.8**
ARA0				IVmB_BB		16 02 04.5			
	comp=Z,2µm,4.2s								
ARA0				*e*S	**S**	**16 11 07.8**	**+6.4**
ARA0				IVMs_BB	IVMs_BB	16 36 20.1			
	comp=Z,12µm,15.5s								
ARCES	**ARCESS Array B**	**69.79**	**338**	IAmb	IAmb	16 02 16.9			
	comp=Z,193nm,1.6s								
ARCES	**ARCESS Array B**	**69.79**	**338**	P	**P**	**16 01 50.9**	**-1.9**
	comp=Z,13nm,0.9s,baz=64,slow=6.2,SNR=9.5								
ARCES				LR	LR	16 35 45.5			
	comp=Z,17µm,20.6s,baz=82,slow=39								
	comp=Z,13nm,0.9s								
G26K	**Porcupine Rive**	**69.80**	**25**	P	**P**	**16 01 52.8**	**0.0**
	baz=284								
P23K	**Montague Islan**	**69.86**	**32**	P	**P**	**16 01 53.1**	**-0.2**
	baz=283								
SGF	**Sodankyl**	**69.95**	**336**	P	**P**	**16 01 55.0**	**+1.3**
M24K	**Tolsona, Glenn**	**69.95**	**30**	IAMs_20	IAMs_20	16 33 34.6			
	comp=Z,11µm,21.0s								
M24K	**Tolsona, Glenn**	**69.95**	**30**	P	**P**	**16 01 54.5**	**+0.5**
	baz=284,SNR=21								
PAX	**Paxson**	**70.06**	**29**	P	**P**	**16 01 54.9**	**+0.2**
	baz=284,SNR=27								
PAX				S	**S**	**16 11 06.5**	**+1.5**
	baz=284				

HIN	**Hinchinbrook I**	**70.21**	**32**	IAmb	IAmb	16 02 14.5			
	comp=Z,342nm,1.3s								
HIN				IAMs_20	IAMs_20	16 36 27.4			
	comp=Z,11µm,19.0s								
KLU	**Klutina**	**70.22**	**31**	IAmb	IAmb	16 02 10.7			
	comp=Z,142nm,0.9s								
KLU				IAMs_20	IAMs_20	16 34 54.6			
	comp=Z,11µm,19.0s								
KLU	**Klutina**	**70.22**	**31**	P	**P**	**16 01 56.1**	**+0.5**		
	baz=284,SNR=15								
KLU				S	**S**	**16 11 14.4**	**+7.6**		
	baz=284								
MOO	**Moorlands**	**70.28**	**160**	P	**P**	**16 01 58.0**	**+2.0**		
BJO1	**Bjornoya**	**70.30**	**344**	*eP*	**P**	**16 01 55.5**	**-0.2**		
BJO1				*eS*	**S**	**16 11 10.2**	**+3.1**		
BJO1				IVMs_BB	IVMs_BB	16 38 20.7			
	comp=Z,17µm,19.0s								
HARP	**HAARP**	**70.34**	**30**	P	**P**	**16 01 56.2**	**-0.1**		
	baz=284,SNR=18								
SCRK	**Sand Creek**	**70.46**	**28**	IAmb	IAmb	16 02 08.2			
	comp=Z,461nm,1.6s								
SCRK				IAMs_20	IAMs_20	16 37 57.5			
	comp=Z,13µm,18.0s								
SCRK	**Sand Creek**	**70.46**	**28**	P	**P**	**16 01 56.5**	**-0.6**		
	baz=285,SNR=47								
SCRK				S	**S**	**16 11 15.9**	**+6.2**		
	baz=285								
I26K	**Coal Creek Min**	**70.46**	**26**	IAMs_20	IAMs_20	16 38 07.5			
	comp=Z,17µm,18.0s								
I26K	**Coal Creek Min**	**70.46**	**26**	P	**P**	**16 01 57.4**	**+0.4**		
	baz=285								
J26L	**Joseph Creek**	**70.50**	**27**	IAmb	IAmb	16 02 07.3			
	comp=Z,268nm,1.2s								
J26L				IAMs_20	IAMs_20	16 38 39.6			
	comp=Z,12µm,18.0s								
J26L	**Joseph Creek**	**70.50**	**27**	P	**P**	**16 01 57.1**	**-0.2**		
	baz=285								
J26L				S	**S**	**16 11 17.0**	**+6.9**		
	baz=285								
Q23K	**Middleton Isla**	**70.52**	**33**	IAMs_20	IAMs_20	16 35 35.9			
	comp=Z,10µm,19.0s								
Q23K	**Middleton Isla**	**70.52**	**33**	P	**P**	**16 01 57.8**	**+0.5**		
	baz=284								
EYAK	**Cordova Ski Ar**	**70.53**	**32**	P	**P**	**16 02 00.8**	**+3.4**		
EYAK	**Cordova Ski Ar**	**70.53**	**32**	P	**P**	**16 01 58.2**	**+0.8**		
	baz=285,SNR=8.4								
EYAK				S	**S**	**16 11 11.1**	**+0.8**		
	baz=285								
KTK1	**Kautokeino**	**70.71**	**338**	*eP*	**P**	**16 01 59.0**	**+0.6**		
KTK1				*eS*	**S**	**16 11 13.6**	**+1.5**		
KTK1				IVMs_BB	IVMs_BB	16 37 44.2			
	comp=Z,12µm,16.3s								
TAU	**Tasmania Unive**	**70.74**	**160**	IAMs_20	IAMs_20	16 33 21.4			
	comp=Z,21µm,22.0s								
TAU	**Tasmania Unive**	**70.74**	**160**	P	**P**	**16 02 02.0**	**+3.2**		
N25K	**Chitina, Valde**	**70.80**	**30**	IAmb	IAmb	16 02 11.1			
	comp=Z,143nm,1.1s								
N25K				IAMs_20	IAMs_20	16 36 56.0			
	comp=Z,11µm,20.0s								
N25K	**Chitina, Valde**	**70.80**	**30**	P	**P**	**16 01 59.5**	**+0.3**		
	baz=285,SNR=18								
N25K				S	**S**	**16 11 16.3**	**+2.6**		
	baz=285								
MENT	**Mentasta**	**70.85**	**29**	IAmb	IAmb	16 02 23.6			
	comp=Z,224nm,1.1s								
MENT	**Mentasta**	**70.85**	**29**	P	**P**	**16 02 01.6**	**+2.2**		
H27K	**Steamboat Moun**	**70.86**	**25**	P	**P**	**16 01 60.0**	**+0.6**		
	baz=286,SNR=78								
H27K				S	**S**	**16 11 20.1**	**+5.9**		
	baz=286								
E28M	**Babbage River**	**70.91**	**23**	P	**P**	**16 02 00.1**	**+0.4**		
	baz=287								
BMRM	**Bremner River**	**70.97**	**31**	P	**P**	**16 02 00.5**	**+0.4**		
	baz=285,SNR=21								
BMRM				S	**S**	**16 11 21.6**	**+6.1**		
	baz=285								
D28M	**Stokes Point**	**70.97**	**22**	P	**P**	**16 02 00.5**	**+0.6**		
	baz=288								
L26K	**Log Cabin Wild**	**70.99**	**29**	IAMs_20	IAMs_20	16 34 06.5			
	comp=Z,19µm,21.0s								
L26K	**Log Cabin Wild**	**70.99**	**29**	P	**P**	**16 02 00.6**	**+0.4**		
	baz=286,SNR=57								
L26K				S	**S**	**16 11 24.4**	**+8.7**		
	baz=286								
I27K	**Kandik River**	**71.00**	**26**	P	**P**	**16 02 00.8**	**+0.6**		
	baz=286								
I27K				S	**S**	**16 11 20.9**	**+5.1**		
	baz=286								
F28M	**Old Crow**	**71.09**	**24**	IAMs_20	IAMs_20	16 35 00.8			
	comp=Z,20µm,20.0s								
F28M	**Old Crow**	**71.09**	**24**	P	**P**	**16 02 01.2**	**+0.4**		
	baz=287,SNR=174								
F28M				S	**S**	**16 11 21.4**	**+4.7**		
	baz=287								
RAGM	**Ragged Mountai**	**71.09**	**32**	IAMs_20	IAMs_20	16 35 45.7			
	comp=Z,16µm,21.0s								
GLB	**Gilahina Butte**	**71.21**	**30**	IAmb	IAmb	16 02 13.2			
	comp=Z,310nm,1.2s								
GLB				IAMs_20	IAMs_20	16 35 25.8			
	comp=Z,12µm,22.0s								
K27K	**Chicken**	**71.26**	**28**	IAMs_20	IAMs_20	16 34 52.6			
	comp=Z,13µm,18.0s								
K27K	**Chicken**	**71.26**	**28**	P	**P**	**16 02 02.1**	**+0.3**		
	baz=286								
K27K				S	**S**	**16 11 23.4**	**+4.7**		
	baz=286								
HMT	**Hamilton**	**71.30**	**32**	IAMs_20	IAMs_20	16 36 26.3			
	comp=Z,15µm,21.0s								
M26K	**Nabesna, AK**	**71.31**	**29**	IAMs_20	IAMs_20	16 34 18.2			
	comp=Z,14µm,22.0s								
M26K	**Nabesna, AK**	**71.31**	**29**	P	**P**	**16 02 02.4**	**+0.2**		
	baz=286								
M26K				S	**S**	**16 11 24.6**	**+5.0**		
	baz=286								
KAIM	**Kayak Island**	**71.33**	**32**	IAMs_20	IAMs_20	16 31 39.3			
	comp=Z,17µm,22.0s								
KAIM	**Kayak Island**	**71.33**	**32**	P	**P**	**16 02 02.0**	**-0.3**		
	baz=286								
KEKH	**Kekaha**	**71.37**	**74**	IAMs_20	IAMs_20	16 28 00.2			
	comp=Z,14µm,22.0s								
EGAK	**Eagle**	**71.42**	**27**	IAmb	IAmb	16 02 21.3			
	comp=Z,156nm,0.9s								
EGAK				IAMs_20	IAMs_20	16 37 32.9			
	comp=Z,10µm,18.0s								
EGAK	**Eagle**	**71.42**	**27**	P	**P**	**16 02 02.2**	**-0.6**		
	baz=287,SNR=70								
EGAK				S	**S**	**16 11 23.5**	**+2.9**		
	baz=287								
EGAK	**Eagle**	**71.42**	**27**	⇓P	**P**	**16 02 01.8**	**-1.0**		
VRDI	**Verde Repeater**	**71.43**	**31**	IAmb	IAmb	16 02 14.6			
	comp=Z,244nm,1.4s								
VRDI				IAMs_20	IAMs_20	16 39 05.8			
	comp=Z,11µm,18.0s								
JETT	**Jettan, Norway**	**71.50**	**339**	*eP*	**P**	**16 02 04.9**	**+1.7**		
JETT				IVmB_BB		16 02 08.9			
	comp=Z,1µm,3.1s								
JETT				*eS*	**S**	**16 11 25.4**	**+4.0**		
JETT				IVMs_BB	IVMs_BB	16 40 42.0			
	comp=Z,15µm,18.1s								
BERG	**Berg Lake**	**71.55**	**31**	IAMs_20	IAMs_20	16 36 32.0			
	comp=Z,14µm,19.0s								
E29M	**Blow River**	**71.56**	**23**	IAmb	IAmb	16 02 14.2			
	comp=Z,286nm,1.4s								
E29M	**Blow River**	**71.56**	**23**	P	**P**	**16 02 03.8**	**+0.3**		
	baz=289								
E29M				S	**S**	**16 11 26.0**	**+4.0**		
	baz=289								
MCARA	**McCarthy VSAT**	**71.59**	**30**	IAmb	IAmb	16 02 28.6			
	comp=Z,328nm,1.1s								
MCARA	**McCarthy VSAT**	**71.59**	**30**	P	**P**	**16 02 04.4**	**+0.6**		
	baz=287,SNR=30								
MCARA				S	**S**	**16 11 22.8**	**+0.1**		
	baz=287								
SUCK	**Suckling Hills**	**71.60**	**32**	IAMs_20	IAMs_20	16 36 22.4			
	comp=Z,16µm,19.0s								
L27K	**Beaver Creek,**	**71.64**	**28**	IAMs_20	IAMs_20	16 34 03.8			
	comp=Z,18µm,22.0s								
L27K	**Beaver Creek,**	**71.64**	**28**	P	**P**	**16 02 04.0**	**-0.2**		
	baz=287,SNR=116								
L27K				S	**S**	**16 11 26.6**	**+3.3**		
	baz=287								
CRQM	**Cirque**	**71.71**	**31**	IAMs_20	IAMs_20	16 34 53.5			
	comp=Z,13µm,22.0s								
I28M	**Miner Creek**	**71.72**	**26**	IAMs_20	IAMs_20	16 39 04.6			
	comp=Z,19µm,19.0s								
I28M	**Miner Creek**	**71.72**	**26**	P	**P**	**16 02 05.0**	**+0.3**		
	baz=288								
I28M				S	**S**	**16 11 29.6**	**+5.4**		
	baz=288								
CRQE	**Cirque**	**71.74**	**31**	P	**P**	**16 02 04.5**	**-0.5**		
	baz=287								
SIM	**Simferopol'**	**71.75**	**312**	*eP*	**P**	**16 02 05.5**	**+0.4**		
SIM				*e*		16 04 46.1			
SIM				*eS*	**S**	**16 11 21.6**	**-3.5**		
SIM				*eSS*	**SS**	**16 15 58.1**	**-2.4**		
SIM				*eSSS*	SSS	16 19 07.3			
SIM				pmax	pmax				
	comp=Z,95nm,0.8s								
FINES	**FINESS Array B**	**71.76**	**330**	*i* P	**P**	**16 02 03.7**	**-1.1**		
FINES				pmax	pmax				
	comp=Z,26nm,0.8s								
FINES	**FINESS Array B**	**71.76**	**330**	P	**P**	**16 02 01.6**	**-3.2**		
	comp=Z,26nm,0.8s,baz=61,slow=5.3,SNR=57								
FINES				LR	LR	16 37 59.1			
	comp=Z,37µm,18.0s,baz=80,slow=40								
	comp=Z,26nm,0.8s								
M27K	**Edge Creek, AK**	**71.83**	**29**	IAmb	IAmb	16 02 35.2			
	comp=Z,105nm,0.9s								
M27K				IAMs_20	IAMs_20	16 34 43.8			
	comp=Z,15µm,19.0s								
M27K	**Edge Creek, AK**	**71.83**	**29**	P	**P**	**16 02 05.7**	**+0.2**		
	baz=287								
M27K				S	**S**	**16 11 29.4**	**+3.8**		
	baz=287								
DIKM	**Dikmen**	**71.87**	**308**	⇓P	**P**	**16 02 06.0**	**+0.1**		
WAX	**Waxell Ridge**	**71.94**	**31**	IAmb	IAmb	16 02 17.6			
	comp=Z,313nm,1.2s								
WAX				IAMs_20	IAMs_20	16 35 36.2			
	comp=Z,14µm,20.0s								
TRO	**Tromso**	**71.96**	**339**	*eP*	**P**	**16 02 08.1**	**+2.2**		
TRO				*eS*	**S**	**16 11 28.0**	**+1.4**		
TRO				IVMsBB		16 39 20.6			
	comp=Z,11µm,8.8s								
SNH	**Sunshine Point**	**72.02**	**32**	IAMs_20	IAMs_20	16 36 38.5			
	comp=Z,14µm,20.0s								
H29M	**Whitestone**	**72.08**	**25**	IAMs_20	IAMs_20	16 36 30.3			
	comp=Z,15µm,19.0s								
H29M	**Whitestone**	**72.08**	**25**	P	**P**	**16 02 05.5**	**-1.2**		
	baz=289								
ISLE	**Juniper Island**	**72.14**	**31**	IAmb	IAmb	16 02 18.5			
	comp=Z,385nm,1.4s								
ISLE				IAMs_20	IAMs_20	16 35 03.4			
	comp=Z,15µm,22.0s								
BNN	**Bunyan**	**72.24**	**305**	IAmb	IAmb	16 02 23.5			
	comp=Z,307nm,1.1s								
BVCY	**Beaver Creek**	**72.26**	**29**	P	**P**	**16 02 07.4**	**-0.5**		
	baz=288								
BVCY				S	**SKiKP**	**16 11 39.0**	**-4.8**		
	baz=288								
VSU	**Vasula**	**72.31**	**327**	⇓P	**P**	**16 02 07.6**	**-0.6**		
VSU	**Vasula**	**72.31**	**327**	*ceP*	**P**	**16 02 06.9**	**-1.3**		
VSU				pmax	pmax				
	comp=Z,187nm,1.7s								
VSU				MLR	MLR				
	comp=Z,46µm,17.0s								
VSU	**Vasula**	**72.31**	**327**	*eP*	**P**	**16 02 08.2**	**+0.1**		
BARN	**Barnard Glacie**	**72.31**	**30**	IAmb	IAmb	16 02 23.2			
	comp=Z,164nm,0.9s								
BARN				IAMs_20	IAMs_20	16 34 52.8			
	comp=Z,12µm,22.0s								
DAWY	**Dawson**	**72.37**	**27**	P	**P**	**16 02 07.7**	**-0.9**		
	baz=289,SNR=107								
DAWY				S	**S**	**16 11 35.3**	**+3.6**		
	baz=289								
MESA	**MESA**	**72.45**	**31**	IAMs_20	IAMs_20	16 37 11.7			
	comp=Z,13µm,19.0s								
MESA	**MESA**	**72.45**	**31**	P	**P**	**16 02 08.2**	**-1.1**		
	baz=288,SNR=5.1								
CTG	**Chitna Glacier**	**72.49**	**31**	P	**P**	**16 02 08.8**	**-0.7**		
	baz=288,SNR=39								
CTGM	**Chitina Glacie**	**72.50**	**31**	IAmb	IAmb	16 02 15.2			
	comp=Z,303nm,1.2s								
CTGM				IAMs_20	IAMs_20	16 33 37.8			
	comp=Z,12µm,22.0s								
F30M	**Barrier River**	**72.57**	**23**	P	**P**	**16 02 09.6**	**0.0**		
	baz=291								
G30M	**tAoh Zraii Nji**	**72.63**	**24**	IAMs_20	IAMs_20	16 35 59.7			
	comp=Z,15µm,20.0s								
G30M	**tAoh Zraii Nji**	**72.63**	**24**	P	**P**	**16 02 09.2**	**-0.9**		
	baz=291,SNR=134								
YUK3	**Moose Creek**	**72.64**	**30**	P	**P**	**16 02 09.7**	**-0.8**		
	baz=289,SNR=28								
EPYK	**Eagle Plains**	**72.66**	**24**	IAmb	IAmb	16 02 20.2			
	comp=Z,296nm,1.1s								
EPYK	**Eagle Plains**	**72.66**	**24**	IAMs_20	IAMs_20	16 36 12.5			
	comp=Z,19µm,20.0s								
EPYK	**Eagle Plains**	**72.66**	**24**	P	**P**	**16 02 09.0**	**-1.2**		
	baz=290,SNR=70								
LOGN	**Logan Glacier**	**72.69**	**31**	IAmb	IAmb	16 02 21.8			
	comp=Z,410nm,1.4s								
J29N	**Klondike Camp**	**72.73**	**27**	IAmb	IAmb	16 02 21.9			
	comp=Z,1µm,1.6s								
J29N				IAMs_20	IAMs_20	16 39 56.4			
	comp=Z,13µm,20.0s								
J29N	**Klondike Camp**	**72.73**	**27**	P	**P**	**16 02 10.5**	**-0.2**		
	baz=290,SNR=81								
VAF	**Ylistaro**	**72.78**	**332**	P	**P**	**16 02 11.8**	**+0.9**		
MNK	**Minsk**	**72.89**	**322**	*i* P	**P**	**16 02 12.2**	**+0.5**		
	comp=E,7.0nm,0.8s								
MNK				*i* P	**P**	**16 02 12.2**	**+0.5**		
	comp=N,7.0nm,0.8s								
MNK				*i* P	**P**	**16 02 12.2**	**+0.5**		
	comp=Z,39nm,0.8s,baz=72								
MNK				*i* PcP	**PcP**	**16 02 31.1**	**+2.3**		
MNK				*i* PP	**PP**	**16 04 48.9**	**-4.6**		
MNK				*i* PPP	PPP	16 06 33.9			
MNK				*i* S	**S**	**16 11 39.3**	**+1.6**		
MNK				*i* SS	**SS**	**16 16 11.8**	**-5.5**		
MNK				*i* LQ	LQ	16 28 24.4			
MNK				*i* LR	LR	16 34 18.9			
MNK				*i* LRM	MLR	16 37 00.3			
	comp=Z,24µm,17.0s								
MNK				*i* LRM	MLR	16 37 27.3			
	comp=E,9µm,17.7s								
MNK				*i* LRM	MLR	16 37 51.4			
	comp=N,34µm,17.9s								
MNK	**Minsk**	**72.89**	**322**	*c* P	**P**	**16 02 12.2**	**+0.5**		
MEF	**Metsahovi**	**72.91**	**329**	*eP*	**P**	**16 02 11.8**	**0.0**		
OPA	**Opana**	**72.96**	**73**	IAMs_20	IAMs_20	16 33 29.2			
	comp=Z,16µm,20.0s								
KIP	**Kipapa**	**73.05**	**74**	IAMs_20	IAMs_20	16 27 50.6			
	comp=Z,16µm,22.0s								
HON	**Honolulu**	**73.09**	**74**	IAMs_20	IAMs_20	16 29 10.8			
	comp=Z,16µm,21.0s								
INK	**Inuvik**	**73.10**	**22**	P	**P**	**16 02 12.1**	**-0.6**		
	baz=293,SNR=131								
INK	**Inuvik**	**73.10**	**22**	P	**P**	**16 02 09.6**	**-3.1**		
	comp=Z,56nm,0.9s,baz=290,slow=6.1,SNR=59								
INK				LR	LR	16 37 26.1			
	comp=Z,21µm,18.9s,baz=273,slow=38								
	comp=Z,56nm,0.9s								
YUK8	**Steele Glacier**	**73.11**	**30**	P	**P**	**16 02 13.4**	**+0.1**		
	baz=289,SNR=16								
I30M	**Mount Dempster**	**73.20**	**26**	IAMs_20	IAMs_20	16 35 23.8			
	comp=Z,12µm,18.0s								
I30M	**Mount Dempster**	**73.20**	**26**	P	**P**	**16 02 13.3**	**-0.3**		
	baz=291								
L29M	**L29M**	**73.22**	**28**	IAMs_20	IAMs_20	16 40 15.6			
	comp=Z,14µm,19.0s								
L29M	**L29M**	**73.22**	**28**	P	**P**	**16 02 13.7**	**0.0**		
	baz=290,SNR=127								
K29M	**Barlow Dome**	**73.22**	**27**	IAmb	IAmb	16 02 24.6			
	comp=Z,468nm,1.6s								
K29M				IAMs_20	IAMs_20	16 38 38.6			
	comp=Z,12µm,18.0s								
K29M	**Barlow Dome**	**73.22**	**27**	P	**P**	**16 02 13.3**	**-0.5**		
	baz=290								
AKASG	**Malin Array Be**	**73.25**	**318**	P	**P**	**16 02 11.0**	**-3.0**		
AKASG	**Malin Array Be**	**73.25**	**318**	P	**P**	**16 02 10.9**	**-3.0**		
	comp=Z,7.9nm,0.7s,baz=60,slow=6.1,SNR=32								
AKASG				LR	LR	16 33 46.9			
	comp=Z,31µm,21.2s,baz=78,slow=35								
	comp=Z,7.9nm,0.7s								
AKBB	**Malin Array Si**	**73.25**	**318**	IAmb	IAmb	16 02 33.0			
	comp=Z,356nm,1.8s								
AKBB	**Malin Array Si**	**73.25**	**318**	*ceP*	**P**	**16 02 11.8**	**-2.1**		
AKBB				pmax	pmax				
	comp=Z,120nm,1.3s								
KIEV	**Kiev**	**73.26**	**318**	⇑P	**P**	**16 02 13.2**	**-0.8**		
KIEV	**Kiev**	**73.26**	**318**	P	**P**	**16 02 12.5**	**-1.5**		
KIEV				IAmb	IAmb	16 02 33.0			
	comp=Z,354nm,1.8s								
KIEV	**Kiev**	**73.26**	**318**	*i* P	**P**	**16 02 11.5**	**-2.5**		
	SNR=9.7								
KIEV	**Kiev**	**73.26**	**318**	⇓P	**P**	**16 02 12.8**	**-1.2**		
KIEV	**Kiev**	**73.26**	**318**	P	**P**	**16 02 12.5**	**-1.5**		
KIEV				pmax	pmax				
	comp=Z,354nm,1.8s								
KIEV				MLR	MLR				
	comp=Z,30µm,19.0s								
IDID	**Didziasalis**	**73.27**	**324**	*eP*	**P**	**16 02 13.2**	**-0.8**		
PINM	**Pinnacle**	**73.28**	**31**	P	**P**	**16 02 13.5**	**-0.6**		
	baz=289,SNR=22								
M29M	**Somme Creek**	**73.31**	**29**	IAmb	IAmb	16 02 28.2			
	comp=Z,133nm,0.8s								
M29M				IAMs_20	IAMs_20	16 37 22.9			
	comp=Z,21µm,20.0s								
M29M	**Somme Creek**	**73.31**	**29**	P	**P**	**16 02 14.7**	**+0.4**		
	baz=290								
F31M	**Tsiigehtchic**	**73.36**	**23**	IAmb	IAmb	16 02 24.1			
	comp=Z,342nm,1.0s								
F31M				IAMs_20	IAMs_20	16 36 25.9			
	comp=Z,18µm,22.0s								
F31M	**Tsiigehtchic**	**73.36**	**23**	P	**P**	**16 02 12.7**	**-1.6**		
	baz=293,SNR=109								
G31M	**Satah River**	**73.37**	**24**	IAMs_20	IAMs_20	16 37 55.1			
	comp=Z,16µm,19.0s								
G31M	**Satah River**	**73.37**	**24**	P	**P**	**16 02 13.5**	**-0.8**		
	baz=292								
IZAR	**Zarasai**	**73.40**	**324**	*eP*	**P**	**16 02 15.2**	**+0.5**		
ASF	**Jabal al Asfar**	**73.43**	**298**	LR	LR	16 37 13.5			
	comp=Z,22µm,19.4s,baz=73,slow=38								
J30M	**Hart River**	**73.45**	**26**	IAMs_20	IAMs_20	16 37 20.5			
	comp=Z,16µm,22.0s								
J30M	**Hart River**	**73.45**	**26**	P	**P**	**16 02 14.6**	**-0.5**		
	baz=291,SNR=43								
ISAL	**Salakas**	**73.52**	**324**	*eP*	**P**	**16 02 16.0**	**+0.6**		
YUK4	**Talbot Arm**	**73.60**	**30**	P	**P**	**16 02 16.7**	**+0.6**		
	baz=290,SNR=19								
BR131	**Keskin Array S**	**73.61**	**307**	IAmb	IAmb	16 02 31.3			
	comp=Z,182nm,1.1s								
BR131	**Keskin Array S**	**73.61**	**307**	*i* P	**P**	**16 02 14.8**	**-1.7**		
BR131	**Keskin Array S**	**73.61**	**307**	P	**P**	**16 02 16.0**	**-0.5**		
	SNR=60								
BR131				P	**P**	**16 02 16.0**	**-0.5**		
	SNR=60								
BRTR	**Keskin Array B**	**73.61**	**307**	*ceP*	**P**	**16 02 16.1**	**-0.4**		
BRTR				pmax	pmax				
	comp=Z,13nm,0.7s								
BRTR	**Keskin Array B**	**73.61**	**307**	P	**P**	**16 02 14.8**	**-1.7**		
	comp=Z,7.5nm,0.8s,baz=101,slow=6.4,SNR=26								
BRTR				LR	LR	16 37 41.6			
	comp=Z,27µm,21.4s,baz=84,slow=38								
	comp=Z,7.5nm,0.8s								
BCPM	**Bancas Point**	**73.62**	**31**	IAMs_20	IAMs_20	16 37 58.6			
	comp=Z,14µm,18.0s								
MTSE	**Matsula**	**73.69**	**327**	*eP*	**P**	**16 02 16.3**	**0.0**		
PNL	**Peninsula**	**73.83**	**31**	P	**P**	**16 02 19.7**	**+2.5**		
PNL	**Peninsula**	**73.83**	**31**	P	**P**	**16 02 17.2**	**0.0**		
	baz=290,SNR=7.5								
STEI	**Steigen**	**73.85**	**338**	*eP*	**P**	**16 02 18.6**	**+1.5**		
STEI				*eS*	**S**	**16 11 55.0**	**+6.9**		
STEI				IVMs_BB	IVMs_BB	16 39 19.7			
	comp=Z,18µm,13.6s								
RAF	**Rauma**	**73.87**	**330**	*eP*	**P**	**16 02 17.3**	**-0.1**		
YUK6	**Outpost Mounta**	**73.87**	**30**	P	**P**	**16 02 17.6**	**-0.1**		
	baz=290,SNR=17								
M30M	**Minto, Yukon**	**73.98**	**28**	IAMs_20	IAMs_20	16 37 32.7			
	comp=Z,18µm,20.0s								
M30M	**Minto, Yukon**	**73.98**	**28**	P	**P**	**16 02 18.5**	**+0.4**		
	baz=291,SNR=92								
MAYO	**Mayo, Yukon**	**73.99**	**27**	P	**P**	**16 02 18.3**	**+0.2**		
	baz=292,SNR=12								
O29M	**Mount Kennedy**	**74.00**	**31**	IAMs_20	IAMs_20	16 38 50.6			
	comp=Z,16µm,20.0s								
O29M	**Mount Kennedy**	**74.00**	**31**	P	**P**	**16 02 18.4**	**0.0**		
	baz=290								
A36M	**Sachs Harbour**	**74.04**	**17**	IAmb	IAmb	16 02 27.0			
	comp=Z,154nm,0.9s								
A36M				IAMs_20	IAMs_20	16 37 47.6			
	comp=Z,14µm,20.0s								
A36M	**Sachs Harbour**	**74.04**	**17**	P	**P**	**16 02 17.4**	**-0.8**		
	baz=299,SNR=34								
FAUS	**Fauske**	**74.06**	**337**	*eP*	**P**	**16 02 19.9**	**+1.5**		
FAUS				IVmBBB		16 02 32.6			
	comp=Z,3µm,3.0s								
FAUS				IVMs_BB	IVMs_BB	16 39 20.4			
	comp=Z,14µm,11.1s								
PURM	**Purcari**	**74.13**	**314**	⇑P	**P**	**16 02 18.7**	**-0.5**		
ANTO	**Ankara**	**74.19**	**307**	⇑P	**P**	**16 02 19.4**	**-0.4**		
ANTO	**Ankara**	**74.19**	**307**	P	**P**	**16 02 18.3**	**-1.5**		
ANTO				IAmb	IAmb	16 02 34.7			
	comp=Z,227nm,1.2s								
ANTO	**Ankara**	**74.19**	**307**	IAMs_20	IAMs_20	16 38 47.6			
	comp=Z,22µm,22.0s								
ANTO	**Ankara**	**74.19**	**307**	⇑P	**P**	**16 02 19.1**	**-0.6**		
ANTO	**Ankara**	**74.19**	**307**	P	**P**	**16 02 18.3**	**-1.5**		
ANTO				pmax	pmax				
	comp=Z,227nm,1.2s								
ANTO	**Ankara**	**74.19**	**307**	P	**P**	**16 02 19.7**	**0.0**		
ANTO				P	**P**	**16 02 19.7**	**0.0**		
HYT	**Haines Junctio**	**74.31**	**30

TLCR 75.26 313 ⇑P P **16 02 26.5 +0.7**
TLCR 75.26 313 P P **16 02 26.4 +0.7**
ATD Arta Tunnel 75.32 276 IAms_20 IAms_20 16 35 59.1
comp=Z,12µm,22.0s
ATD Arta Tunnel 75.32 276 LR LR 16 36 28.7
comp=Z,516nm,18.8s,baz=54,slow=36
STOK Stokkvaagen 75.32 337 *e*S S **16 12 05.6 +1.0**
STOK IVMs_BB IVMs_BB 16 39 14.6
comp=Z,14µm,15.9s
PLBC Pleasant Camp 75.34 31 P P **16 02 26.4 +0.4**
baz=293,SNR=16
CSS Mathiatis 75.36 302 IAmb IAmb 16 02 37.7
comp=Z,113nm,0.8s
VLDR Vladesti 75.53 314 ⇓P P **16 02 26.5 -0.8**
KHLU Kahalu`u 75.54 75 IAms_20 IAms_20 16 29 53.7
comp=Z,12µm,22.0s
HPAH Hawaii Prepara 75.56 74 IAms_20 IAms_20 16 30 06.1
comp=Z,13µm,22.0s
HUH Hualalai 75.56 75 IAms_20 IAms_20 16 29 55.2
comp=Z,12µm,22.0s
WHY Whitehorse 75.56 30 P P **16 02 27.8 +0.4**
baz=294,SNR=36
PBUR Paburge 75.59 325 *e*P P **16 02 27.8 +0.4**
FARO Faro, Yukon 75.60 28 IAmb IAmb 16 02 38.1
comp=Z,445nm,1.5s
FARO Faro, Yukon 75.60 28 P P **16 02 27.9 +0.5**
baz=294,SNR=76
TATR Tatarca 75.63 314 ⇑P P **16 02 27.9 +0.1**
TPGR Topolog 75.64 313 ⇓P P **16 02 27.4 -0.5**
SUW Suwalki 75.65 323 *e*P P **16 02 27.0 -0.8**
SUW eL L 16 40 18.3
comp=Z,51µm,19.8s
SUW Suwalki 75.65 323 P P **16 02 27.1 -0.7**
SUW Suwalki 75.65 323 *e*P P **16 02 27.3 -0.5**
C36M Paulatuk 75.70 20 IAms_20 IAms_20 16 39 55.6
comp=Z,18µm,21.0s
C36M Paulatuk 75.70 20 P P **16 02 27.2 -0.6**
baz=301,SNR=49
CFR Carcaliu 75.72 313 ⇓P P **16 02 27.1 -1.3**
CFR Carcaliu 75.72 313 P P **16 02 27.1 -1.3**
NEGRR Negrea 75.77 314 ⇓P P **16 02 27.0 +0.4**
TIRR Tirgusor 75.77 312 ⇓P P **16 02 29.0 +0.3**
TIRR Tirgusor 75.77 312 IAmb IAmb 16 02 50.2
comp=Z,181nm,1.1s
TIRR Tirgusor 75.77 312 P P **16 02 29.0 +0.3**
POHA Pohakuloa 75.80 75 IAms_20 IAms_20 16 29 05.5
comp=Z,11µm,22.0s
POHA Pohakuloa 75.80 75 P P **16 02 31.4 +1.8**
POHA Pohakuloa 75.80 75 ⇓P P **16 02 31.9 +2.2**
EIL Elat 75.83 296 LR LR 16 38 23.5
comp=Z,28µm,18.3s,baz=78,slow=38
SKAG Skagway 75.83 31 IAms_20 IAms_20 16 37 56.1
comp=Z,15µm,20.0s
SKAG Skagway 75.83 31 P P **16 02 31.4 +2.7**
SKAG Skagway 75.83 31 P P **16 02 29.6 +0.8**
baz=293,SNR=24
MLOA Mauna Loa Obse 75.84 75 IAms_20 IAms_20 16 30 02.6
comp=Z,13µm,22.0s
MWH Moku'aweowe 75.84 75 IAms_20 IAms_20 16 30 01.6
comp=Z,13µm,22.0s
HMH Humu'ula Sheep 75.90 75 IAms_20 IAms_20 16 30 39.2
comp=Z,12µm,22.0s
KHU Kahuku 75.91 75 IAms_20 IAms_20 16 30 14.5
comp=Z,12µm,22.0s
S31K Pelican 75.99 33 P P **16 02 30.9 +1.3**
baz=293,SNR=8.9
HARR Harsova 76.02 313 ⇑P P **16 02 31.1 +0.9**
HARR Harsova 76.02 313 P P **16 02 31.0 +0.9**
MLH Mauna Loa 76.03 75 IAms_20 IAms_20 16 30 19.5
comp=Z,10µm,22.0s
R31K City Hall, Gus 76.05 32 P P **16 02 30.9 +0.9**
baz=293
PANC Panciu 76.13 314 ⇑P P **16 02 30.9 +0.2**
WRMHI West Rim 76.13 75 IAms_20 IAms_20 16 30 22.3
comp=Z,10µm,22.0s
OBL Observatory Le 76.14 75 IAms_20 IAms_20 16 30 14.6
comp=Z,11µm,22.0s
SDHHI Sand Hill 76.14 75 IAms_20 IAms_20 16 30 22.6
comp=Z,11µm,22.0s
UWB Uwekahuna B 76.14 75 IAms_20 IAms_20 16 30 13.6
comp=Z,11µm,22.0s
NPH North Pit 76.15 75 IAms_20 IAms_20 16 30 10.7
comp=Z,12µm,22.0s
RIM Rim 76.16 75 IAms_20 IAms_20 16 30 11.0
comp=Z,12µm,22.0s
N32M Quiet Lake 76.16 29 IAmb IAmb 16 02 45.8
comp=Z,345nm,1.2s
N32M IAms_20 IAms_20 16 40 07.4
comp=Z,14µm,18.0s
N32M Quiet Lake 76.16 29 P P **16 02 31.2 +0.5**
baz=295,SNR=33
KKO Keanakako`i 76.16 75 IAms_20 IAms_20 16 30 10.2
comp=Z,12µm,22.0s
PRAR RASCA 76.21 316 ⇑P P **16 02 30.8 -0.4**
ODBI Odobesti 76.23 314 ⇑P P **16 02 31.8 +0.5**
TESR Tescani 76.23 315 ⇑P P **16 02 31.1 -0.3**
PSN Preselentsi 76.24 312 *i*P P **16 02 31.3 -0.1**
ICOR Ion Corvin 76.30 312 ⇑P P **16 02 32.5 +0.8**
NPOC North of Pu'u 76.30 75 IAms_20 IAms_20 16 30 01.9
comp=Z,12µm,22.0s
VRI Vrincioaia 76.41 314 ⇑P P **16 02 32.0 -0.4**
VRI Vrincioaia 76.41 314 P P **16 02 31.9 -0.4**
PLOR Plostina 76.47 314 ⇓P P **16 02 33.1 +0.4**
PLOR Plostina 76.47 314 P P **16 02 33.1 +0.4**
ISK Istanbul-Kandi 76.48 309 P P **16 02 33.1 +0.3**
P32M Atlin 76.53 30 IAmb IAmb 16 02 47.7
comp=Z,486nm,1.9s
P32M IAms_20 IAms_20 16 38 48.5
comp=Z,16µm,20.0s
P32M Atlin 76.53 30 P P **16 02 33.3 +0.5**
baz=295,SNR=22
BISRR Bisoca 76.53 314 ⇑P P **16 02 34.1 +1.0**
ISP Isparta 76.53 306 *ce*P P **16 02 32.5 -0.8**
ISP pmax pmax
comp=Z,74nm,1.7s
ISP MLR MLR
comp=Z,20µm,21.0s
NSS Namsos 76.54 335 *e*P P **16 02 32.8 +0.1**
NSS *e*S S **16 12 24.1 +6.0**
NSS IVMs_BB IVMs_BB 16 40 27.9
comp=Z,14µm,11.8s
P33M Teslin, Yukon 76.68 30 IAms_20 IAms_20 16 39 31.1
comp=Z,10µm,20.0s
P33M Teslin, Yukon 76.68 30 P P **16 02 34.6 +0.9**
baz=295,SNR=51
LVV L'vov 76.69 319 *e*P P **16 02 32.7 -1.1**
LVV *e*S S **16 12 16.0 -4.3**
LVV *e*PS PnS 16 13 14.2 +16
LVV *e*SS SS **16 17 17.6 +2.3**
LVV pmax pmax
comp=Z,200nm,1.4s
R32K Eaglecrest 76.70 32 IAms_20 IAms_20 16 37 21.0
comp=Z,14µm,22.0s
R32K Eaglecrest 76.70 32 P P **16 02 34.1 +0.3**
baz=294,SNR=15
BURAR Bucovina Array 76.76 316 ⇓P P **16 02 34.1 -0.3**
BURAR Bucovina Array 76.76 316 P P **16 02 34.1 -0.3**
COVR Voineasa-Covas 76.76 314 ⇓P P **16 02 34.8 +0.4**
JIS Juneau Island 76.76 32 IAms_20 IAms_20 16 37 10.7
comp=Z,15µm,22.0s
JIS Juneau Island 76.76 32 P P **16 02 37.4 +3.4**
OUZ Omahuta 76.78 139 IAms_20 IAms_20 16 31 33.0
comp=Z,20µm,22.0s
SIT Sitka 76.80 33 P P **16 02 36.4 +2.1**
SIT Sitka 76.80 33 P P **16 02 35.0 +0.7**
baz=294,SNR=9.5
TURR Turia 76.81 315 ⇑P P **16 02 35.2 +0.5**
NEHR Nehoiu 76.85 314 ⇑P P **16 02 35.3 +0.5**
PRD Provadia 76.90 311 *i*P P **16 02 41.6 +6.4**
OZUR 76.94 315 ⇓P P **16 02 35.6 +0.2**
NEF NEVSHA 76.96 312 *i*P P **16 02 37.1 +1.6**
S32K Killisnoo 77.00 33 IAmb IAmb 16 02 50.3
comp=Z,162nm,1.2s
S32K IAms_20 IAms_20 16 41 36.1
comp=Z,10µm,19.0s
S32K Killisnoo 77.00 33 P P **16 02 36.3 +0.9**
baz=294,SNR=6.3
BOSR Bodos 77.03 315 ⇑P P **16 02 36.6 +0.8**
MLR Muntele Rosu 77.06 314 ⇑P P **16 02 35.7 -0.5**
MLR Muntele Rosu 77.06 314 P P **16 02 35.6 -0.5**
MLR Muntele Rosu 77.06 314 LR LR 16 42 17.8
comp=Z,22µm,18.5s,baz=52,slow=40
DOPR Dopca 77.25 315 ⇑P P **16 02 36.9 -0.2**
RAZG Razgrad 77.37 312 ⇑P P **16 02 38.0 +0.1**
LOZB Loznitsa 77.39 312 ⇑P P **16 02 38.0 +0.1**

Q32M Nakina River 77.47 31 IAms_20 IAms_20 16 39 28.4
comp=Z,11µm,20.0s
Q32M Nakina River 77.47 31 P P **16 02 39.8 +1.5**
baz=296
ARCR ARCALIA 77.50 316 ⇓P P **16 02 38.7 +0.2**
KWP Kalwaria Pacla 77.55 319 *e*P P **16 02 38.4 -0.4**
KWP *e*SKSac **SKSac** **16 12 44.4 -7.5**
KWP eL L 16 37 18.9
comp=Z,33µm,23.4s
KWP Kalwaria Pacla 77.55 319 IAmb IAmb 16 02 48.3
comp=Z,258nm,1.2s
VOIR 77.66 314 ⇓P P **16 02 38.9 -0.7**
VOIR 77.66 314 P P **16 02 38.8 -0.7**
KULA Kula-Manisa 77.67 307 P P **16 02 39.1 -0.6**
MTUR Matau 77.73 314 ⇑P P **16 02 40.4 +0.5**
MTUR Matau 77.73 314 P P **16 02 40.4 +0.5**
JMB Yambol 77.75 311 *i*P P 16 02 46.5 +6.6
TBLU Trondheim 77.82 334 *e*P P **16 02 40.0 +0.1**
TBLU *e*S S **16 12 38.2 +6.1**
TBLU IVMs_BB IVMs_BB 16 45 13.8
comp=Z,16µm,13.6s
EDRB Edirne 77.83 310 P P **16 02 37.4 -3.0**
SZH Strazhitsa 77.84 312 *i*P P 16 02 45.5 +5.0
HFS Hagfors 77.87 331 P P **16 02 37.3 -2.9**
comp=Z,12nm,0.7s,baz=70,slow=6.5,SNR=17
HFS LR LR 16 40 22.4
comp=Z,47µm,19.5s,baz=64,slow=38
comp=Z,12nm,0.7s
R33M Jennings River 77.88 30 IAmb IAmb 16 02 51.9
comp=Z,418nm,1.6s
R33M IAms_20 IAms_20 16 38 26.1
comp=Z,15µm,21.0s
R33M Jennings River 77.88 30 P P **16 02 41.4 +0.9**
baz=297
COPA Copaceanca 78.03 313 ⇓P P **16 02 42.3 +0.8**
ELND Elena 78.04 312 ⇓P P **16 02 40.9 -0.7**
HUMR Humele 78.05 313 ⇑P P **16 02 41.1 -0.4**
T33K Petersburg 78.08 33 P P **16 02 41.5 0.0**
baz=296
KOLS Kolonicke sedl 78.09 318 *e*P P **16 02 43.3 +1.6**
KOLS pmax pmax
comp=Z,15nm,0.7s
KOLS Kolonicke sedl 78.09 318 *e*P P **16 02 43.3 +1.6**
CBBR Cluj-Babes-Bol 78.13 316 ⇑P P **16 02 42.4 +0.4**
NC405 NORSAR Array S 78.27 332 IAmb IAmb 16 02 53.3
comp=Z,154nm,1.1s
U33K Whale Pass 78.30 34 IAmb IAmb 16 02 54.6
comp=Z,370nm,1.4s
U33K Whale Pass 78.30 34 P P **16 02 43.2 +0.5**
baz=296
NC303 NORSAR Array S 78.36 332 IAmb IAmb 16 02 58.3
comp=Z,210nm,1.6s
RER Riviere de l'E 78.38 241 ⇑P P **16 02 46.2 +2.4**
MARR Marisel-Cluj 78.44 316 ⇓P P **16 02 43.9 0.0**
YER Yerkesik 78.44 305 P P **16 02 40.5 -3.5**
S34M Telegraph Cree 78.47 31 IAmb IAmb 16 03 00.2
comp=Z,132nm,1.1s
S34M IAms_20 IAms_20 16 42 08.0
comp=Z,11µm,18.0s
S34M Telegraph Cree 78.47 31 P P **16 02 44.5 +0.9**
baz=297,SNR=22
LOT Lotru 78.49 315 ⇓P P **16 02 44.7 +0.5**
NB2 NORSAR Subarra 78.52 332 P P **16 02 42.0 -1.9**
comp=Z,102nm,1.2s,baz=62,slow=5.6
NB2 NORSAR Subarra 78.52 332 P P **16 02 42.0 -1.9**
baz=62,slow=5.6
NOA NORSAR Array B 78.52 332 P P **16 02 41.5 -2.3**
comp=Z,6.0nm,0.7s,baz=68,slow=4.8,SNR=20
NOA LR LR 16 40 00.7
comp=Z,37µm,18.1s,baz=65,slow=38
comp=Z,6.0nm,0.7s
WTLY Watson Lake, Y 78.52 29 IAmb IAmb 16 02 54.4
comp=Z,338nm,1.3s
WTLY Watson Lake, Y 78.52 29 P P **16 02 44.7 +0.8**
baz=299,SNR=60
NC602 NORSAR Array S 78.53 332 *e*P P **16 02 44.0 +0.1**
NC602 IVmB_BB 16 02 57.9
comp=Z,2µm,5.2s
NC602 *e*S S **16 12 41.4 +1.6**
NC602 *e*SS SS **16 17 48.9 +6.5**
NC602 IVMs_BB IVMs_BB 16 40 50.9
comp=Z,58µm,15.2s
WRAK Wrangell Islan 78.56 33 IAMs_20 IAMs_20 16 38 38.0
comp=Z,9µm,21.0s
WRAK Wrangell Islan 78.56 33 P P **16 02 45.0 +0.9**
baz=296
NEEM North Greenlan 78.57 358 *i*P P **16 02 44.6 +0.3**
NEEM IAmb IAmb 16 03 11.2
comp=Z,47nm,0.8s
CRAG Craig 78.58 34 IAMs_20 IAMs_20 16 41 50.1
comp=Z,10µm,20.0s
CRAG Craig 78.58 34 P P **16 02 46.2 +2.0**
CRAG Craig 78.58 34 P P **16 02 45.1 +0.9**
baz=296
CRVS Cervenica-Dubn 78.59 319 *e*P P **16 02 44.8 +0.3**
CRVS pmax pmax
comp=Z,209nm,1.9s
CRVS Cervenica-Dubn 78.59 319 *e*P P **16 02 44.8 +0.3**
RAO Raoul Island 78.61 129 LR LR 16 34 59.8
comp=Z,5µm,19.2s,baz=296,slow=34
ENEZ Enez 78.66 310 P P **16 02 46.2 +1.2**
ALN Alexandroupoli 78.67 310 P P **16 02 42.6 -2.5**
DLBC Dease Lake 78.75 31 IAmb IAmb 16 02 56.7
comp=Z,578nm,1.6s
DLBC IAMs_20 IAMs_20 16 38 32.3
comp=Z,12µm,22.0s
DLBC Dease Lake 78.75 31 P P **16 02 46.2 +0.9**
baz=298,SNR=27
DLBC Dease Lake 78.75 31 P P **16 02 43.1 -2.2**
comp=Z,95nm,1.2s,baz=302,slow=5.0,SNR=29
DLBC LR LR 16 38 43.6
comp=Z,8µm,21.4s,baz=313,slow=37
comp=Z,95nm,1.2s
DEV Deva 78.88 315 ⇓P P **16 02 46.1 -0.1**
DEV Deva 78.88 315 P P **16 02 46.0 -0.1**
KDZ Kurdzhali 78.89 311 *i*P P **16 02 45.5 -0.8**
BLCB Balcova 78.90 307 P P **16 02 43.7 -2.7**
DOMB Dombas 78.91 334 *e*P P **16 02 46.5 +0.5**
DOMB IVmB_BB 16 02 49.5
comp=Z,2µm,3.9s
DOMB *e*S S **16 12 44.6 +0.6**
DOMB *e*S S **16 12 46.0 +2.0**
DOMB *e*SS SS **16 17 43.0 -5.1**
DOMB IVMs_BB IVMs_BB 16 41 34.1
comp=Z,25µm,12.2s
JMIC Jan Mayen 79.02 345 LR LR 16 42 25.6
comp=Z,23µm,18.1s,baz=46,slow=39
OJC Ojcow 79.05 320 *e*P P **16 02 46.7 -0.2**
OJC *e*SKSac **SKSac** **16 12 56.5 -6.1**
OJC eL L 16 38 15.8
comp=Z,30µm,21.5s
OJC Ojcow 79.05 320 IAmb IAmb 16 03 11.3
comp=Z,322nm,1.8s
KUZ Kuaotunu 79.08 139 P P **16 02 49.6 +2.4**
NIE Niedzica 79.08 319 *e*P P **16 02 47.6 +0.3**
NIE *e*SKSac **SKSac** **16 13 00.0 -2.9**
NIE eL L 16 38 21.4
comp=Z,27µm,22.3s
PLD Plovdiv 79.10 311 *i*P P **16 02 47.2 -0.2**
WRGLY Wrigley 79.13 25 IAmb IAmb 16 02 56.5
comp=Z,313nm,1.3s
WRGLY Wrigley 79.13 25 P P **16 02 47.2 +0.1**
baz=302,SNR=32
PRK Paraskevi 79.13 308 P P **16 02 47.6 0.0**
GZR Gura Zlata 79.16 315 ⇑P P **16 02 47.7 -0.1**
GZR Gura Zlata 79.16 315 P P **16 02 47.6 -0.1**
BODT Bodrum 79.19 306 P P **16 02 46.2 -1.8**
GKP Gorka Klasztor 79.19 324 *e*P P **16 02 47.9 +0.2**
MOL Molde 79.24 335 *e*P P **16 02 49.0 +1.2**
MOL *e*S S **16 12 51.5 +4.2**
MOL *e*SS SS **16 17 50.1 -2.7**
MOL IVMs_BB IVMs_BB 16 42 11.4
comp=Z,14µm,10.4s
RZN Rozhen 79.28 311 *i*P P **16 02 48.5 -0.2**
SMG Samos 79.30 306 P P **16 02 47.8 -0.8**
MPEP Malo Peshtene 79.32 313 *i*P P **16 02 48.7 +0.1**
T35M Bob Quinn 79.33 32 IAMs_20 IAMs_20 16 38 41.6
comp=Z,11µm,21.0s
T35M Bob Quinn 79.33 32 P P **16 02 48.8 +0.4**
baz=298,SNR=6.4
KECS Kecovo 79.35 318 *e*P P **16 02 49.6 +0.9**
KECS pmax pmax
comp=Z,78nm,2.0s
KECS Kecovo 79.35 318 *e*P P **16 02 49.6 +0.9**
PGB Panagyurishte 79.35 312 *i*P P **16 02 48.7 -0.2**

TULEG Thule 79.37 3 IAMs_20 IAMs_20 16 43 12.6
comp=Z,17µm,19.0s
VALD Valchedram 79.39 313 *i*P P **16 02 48.5 -0.5**
V35K Ketchikan 79.41 34 P P **16 02 49.1 +0.3**
baz=297
SURR Surduc 79.43 315 ⇑P P **16 02 49.0 -0.2**
SIGR SIGRI 79.44 308 P P **16 02 47.0 -2.3**
PUNG Punghina 79.50 314 ⇓P P **16 02 49.6 +0.1**
STRU Stroemstad 79.52 331 *e*P P **16 02 48.4 -0.9**
SIRR Siria 79.53 316 ⇑P P **16 02 49.7 0.0**
BSD Bornholm Skovb 79.59 326 *e*P P **16 02 48.7 -1.1**
HERR Herculane 79.59 314 ⇑P P **16 02 50.0 -0.1**
TOZ Tahuroa Road 79.60 139 IAMs_20 IAMs_20 16 36 24.5
comp=Z,15µm,20.0s
CHOS Chios island 79.61 307 P P **16 02 47.6 -2.8**
LIA Limnos Island 79.66 309 P P 16 02 44.5 -6.0
AKN Aaknes 79.66 334 *e*P P **16 02 51.1 +1.0**
AKN IVmB_BB 16 02 59.9
comp=Z,3µm,3.1s
AKN *e*S S **16 12 53.2 +1.2**
AKN *e*SS SS **16 17 56.1 -3.2**
AKN IVMs_BB IVMs_BB 16 40 26.7
comp=Z,17µm,14.6s
LANS Liptovska Anna 79.69 319 *e*P P **16 02 51.5 +1.0**
LANS pmax pmax
comp=Z,29nm,1.9s
LANS Liptovska Anna 79.69 319 *e*P P **16 02 51.5 +1.0**
KAVA Kavala 79.71 310 P P **16 02 50.0 -0.7**
HIZ Hauiti 79.74 140 IAMs_20 IAMs_20 16 32 08.2
comp=Z,12µm,22.0s
BZS Buzias 79.81 315 ⇓P P **16 02 50.6 -0.6**
KARP Karpathos 79.87 304 P P **16 02 50.3 -1.5**
KONO Kongsberg 79.91 331 *e*P P **16 02 55.6 +4.1**
KONO IVmB_BB 16 03 03.1
comp=Z,2µm,4.1s
KONO *e*S S **16 12 56.5 +1.9**
KONO *e*SS SS **16 18 06.9 +3.8**
KONO IVMs_BB IVMs_BB 16 41 41.3
comp=Z,52µm,15.3s
BLKB Belogradchik 79.93 313 ⇓P P **16 02 51.7 -0.2**
DIB Dawson Inlet, 79.93 36 IAmb IAmb 16 03 02.2
comp=Z,426nm,1.6s
SKAR Skarslia 79.93 333 *e*S S **16 12 55.7 +0.8**
SKAR IVMs_BB IVMs_BB 16 41 44.3
comp=Z,35µm,16.6s
U35K Hyder 79.94 33 IAMs_20 IAMs_20 16 41 55.9
comp=Z,9µm,20.0s
U35K Hyder 79.94 33 P P **16 02 52.3 +0.7**
baz=298
PSZ Piszkesteto 79.94 318 ⇑P P **16 02 51.8 -0.2**
PSZ Piszkesteto 79.94 318 P P **16 02 51.8 -0.2**
VTS Vitosha 79.95 312 *i*P P **16 02 51.3 -0.9**
QRZ Quartz Range 80.00 143 IAMs_20 IAMs_20 16 38 45.0
comp=Z,11µm,20.0s
QRZ Quartz Range 80.00 143 P P **16 02 53.6 +1.5**
MMB Musomishta 80.02 311 *i*P P **16 02 50.2 -2.3**
NVR Nevrokopi 80.02 311 P P **16 02 49.4 -3.1**
BJUU Bjuv 80.09 327 *e*P P **16 02 53.6 +1.1**
LUNU Lund 80.09 327 *e*P P **16 02 52.2 -0.1**
MDVR Moldovita 80.09 315 ⇑P P **16 02 53.0 +0.2**
FURI Furi 80.11 275 IAMs_20 IAMs_20 16 41 27.9
comp=Z,17µm,20.0s
KOKK Kokkinochori, 80.14 310 P P **16 02 52.0 -1.1**
OKC Ostrava-Krasne 80.17 320 *e*P P 16 02 57.8 +4.7
OKC AMS AMS 16 41 40.0
comp=Z,27µm,14.5s
OKC Ostrava-Krasne 80.17 320 *e*P P 16 02 57.8 +4.7
OKC MLR MLR
comp=Z,27µm,14.5s
DSZ Denniston Nort 80.25 144 IAMs_20 IAMs_20 16 37 55.7
comp=Z,12µm,19.0s
SRS Serrai 80.30 311 P P **16 02 51.5 -2.5**
KKB Krupnik 80.33 311 *i*P P **16 02 54.2 +0.1**
FOZ Fox Glacier 80.50 147 IAMs_20 IAMs_20 16 36 46.1
comp=Z,14µm,21.0s
APE Apeiranthos 80.50 306 P P 16 03 00.3 +5.1
PEHC Pehcevo 80.52 311 *i*P P **16 02 55.6 +0.4**
HYA Hoyanger 80.54 334 IVmB_BB 16 03 03.8
comp=Z,3µm,5.0s
HYA *e*S S **16 13 00.1 -0.9**
HYA IVMs_BB IVMs_BB 16 42 24.4
comp=Z,22µm,18.1s
MORC Moravsky Berou 80.55 320 ⇓P P **16 02 54.8 -0.4**
MORC Moravsky Berou 80.55 320 *e*P P **16 02 54.7 -0.5**
MORC Moravsky Berou 80.55 320 *e*S **SKSac** **16 13 05.2 -8.0**
MORC Moravsky Berou 80.55 320 P P **16 02 54.8 -0.4**
KOTAN Kotaneelee Air 80.56 28 P P **16 02 55.5 +0.5**
baz=302,SNR=11
MAUC Maruska 80.56 320 *e*P P **16 02 59.7 +4.4**
MAUC *e*SKS S 16 13 15.8 +14
BOVS Bovan 80.57 314 ⇑P P **16 02 54.5 -0.9**
COVZ Chateau Observ 80.59 141 P P 16 03 01.8 +6.4
FWVZ Far West T-bar 80.64 141 P P **16 02 56.7 +0.8**
DCZ Deep Cove 80.64 149 IAMs_20 IAMs_20 16 37 36.7
comp=Z,14µm,20.0s
TRVZ Turoa 80.66 141 P P 16 03 02.6 +6.6
RGN Rugen 80.67 326 *e*P P **16 02 55.1 -0.5**
comp=Z,87nm,0.9s,baz=59,slow=5.1
PAIG Paliouri 80.71 310 P P **16 02 53.6 -2.6**
NNZ Nelson 80.73 143 IAMs_20 IAMs_20 16 38 12.5
comp=Z,10µm,20.0s
FLDN Fort Liard 80.74 27 P P **16 02 56.0 +0.1**
baz=303,SNR=5.3
DUWZ D'Urville Isla 80.75 143 P P **16 02 55.5 -0.6**
INZ Inchbonnie 80.75 145 IAMs_20 IAMs_20 16 36 48.9
comp=Z,17µm,21.0s
FOO Floro 80.76 334 IVmB_BB 16 03 06.6
comp=Z,2µm,4.6s
FOO *e*S **SKSac** **16 13 06.0 -8.0**
FOO *e*SS SS **16 18 19.0 +3.4**
FOO IVMs_BB IVMs_BB 16 42 44.2
comp=Z,19µm,13.4s
KNT Kendrikon 80.76 311 P P **16 02 53.8 -2.7**
KSP Ksiaz 80.79 322 *e*P P **16 02 56.3 -0.1**
KSP *e*S S **16 13 04.2 0.0**
KSP *e*SKSac **SKSac** **16 13 14.2 -0.5**
KSP eL L 16 43 48.5
comp=Z,29µm,19.4s
XMAS Kiritimati 80.80 92 IAMs_20 IAMs_20 16 40 25.1
comp=Z,10µm,20.0s
XMAS Kiritimati 80.80 92 P P **16 02 59.3 +2.3**
SANT Santorini 80.83 306 ⇓P P **16 02 57.3 +0.4**
SANT Santorini 80.83 306 IAmb IAmb 16 03 10.5
comp=Z,346nm,1.4s
SANT IAMs_20 IAMs_20 16 41 47.5
comp=Z,12µm,22.0s
HORT Hortiatis 80.85 310 P P **16 02 56.0 -1.0**
THZ Tophouse 80.85 144 IAMs_20 IAMs_20 16 37 07.6
comp=Z,12µm,20.0s
THZ Tophouse 80.85 144 P P **16 02 56.4 -0.3**
KRLC Kraliky 80.86 321 *e*P P **16 02 57.0 +0.2**
KRLC *e*SKS **SKSac** **16 13 09.7 -5.6**
KRLC AMS AMS 16 41 50.0
comp=Z,28µm,16.1s
KRLC Kraliky 80.86 321 *e*P P **16 02 57.0 +0.2**
KRLC *e* 16 13 09.7
KRLC MLR MLR
comp=Z,28µm,16.1s
JAVC Velka Javorina 80.88 320 *e*P P **16 02 55.8 -1.2**
JAVC Velka Javorina 80.88 320 *e*S **SKSac** **16 13 10.0 -5.5**
URZ Urewera 80.90 139 LR LR 16 38 32.6
comp=Z,11µm,19.0s,baz=40,slow=36
VAY Valandovo 80.93 311 *i*P P **16 02 56.5 -0.8**
KYMI Kymi, Euboea I 80.93 308 P P **16 02 54.9 -2.5**
PYZ Puysegur Point 80.95 150 IAMs_20 IAMs_20 16 37 15.9
comp=Z,12µm,22.0s
OSTC Ostas 80.97 322 *e*P P **16 02 58.1 +0.7**
OSTC *e*SKS S **16 13 08.0 +1.9**
OSTC AMS AMS 16 43 40.0
comp=Z,42µm,18.3s
OSTC Ostas 80.97 322 *e*P P **16 02 58.1 +0.7**
OSTC *e* 16 13 08.0
OSTC MLR MLR
comp=Z,42µm,18.3s
DPC Dobruska-Polom 81.00 321 *e*P P **16 02 58.0 +0.4**
DPC *e*SKS **SKSac** **16 13 09.6 -6.7**
DPC AMS AMS 16 43 40.0
comp=Z,33µm,18.1s
DPC Dobruska-Polom 81.00 321 *e*P P **16 02 58.0 +0.4**
DPC *e* 16 13 09.6
DPC MLR MLR
comp=Z,33µm,18.1s
MLZ Mavora Lakes 81.02 149 IAMs_20 IAMs_20 16 37 38.7
comp=Z,17µm,21.0s

CHVC **Chvalec** 81.04 322 *e*P **P** **16 02 57.7 -0.1**
CHVC AMS AMS 16 43 40.0
comp=Z,40µm,17.6s
CHVC **Chvalec** 81.04 322 *e*P **P** **16 02 57.7 -0.1**
CHVC MLR MLR
comp=Z,40µm,17.6s
WKZ **Wanaka** 81.05 148 IAMs_20 IAMs_20 16 37 19.6
comp=Z,12µm,21.0s
RTZ **Ruatahuna** 81.06 139 IAMs_20 IAMs_20 16 36 44.1
comp=Z,12µm,20.0s
UPC **Upice** 81.10 322 *e*P **P** **16 03 00.0 +1.9**
UPC AMS AMS 16 43 50.0
comp=Z,46µm,16.9s
UPC **Upice** 81.10 322 *e*P **P** **16 03 00.0 +1.9**
UPC MLR MLR
comp=Z,46µm,16.9s
HOMB **Homborsund** 81.11 331 *e*S **S** **16 13 07.1 0.0**
HOMB *e*SS **SS** **16 18 28.2 +7.2**
HOMB IVMs_BB IVMs_BB 16 41 22.6
comp=Z,20µm,15.1s
BKZ **Black Stump Fm** 81.13 140 P **P** **16 03 01.1 +2.8**
FRGS **Fruska Gora** 81.16 316 ⇑P **P** **16 02 58.5 -0.1**
FRGS **Fruska Gora** 81.16 316 *e*P **P** **16 02 56.8 -1.7**
SMOL **Smolenice** 81.18 319 *e*P **P** **16 02 59.4 +0.9**
SMOL pmax pmax
comp=Z,60nm,2.1s
MXZ **Matakaoa Point** 81.18 138 IAMs_20 IAMs_20 16 39 59.5
comp=Z,12µm,21.0s
GRG **Griva** 81.19 311 P **P** **16 02 56.1 -2.7**
LTZ **Lake Taylor** 81.22 145 IAMs_20 IAMs_20 16 41 33.4
comp=Z,13µm,19.0s
LTZ **Lake Taylor** 81.22 145 P **P** **16 03 00.2 +1.6**
RPZ **Rata Peaks** 81.25 146 P **P** **16 02 58.5 -0.3**
RPZ IAMs_20 IAMs_20 16 36 26.1
comp=Z,18µm,22.0s
RPZ **Rata Peaks** 81.25 146 LR LR 16 36 35.4
comp=Z,13µm,20.7s,baz=314,slow=34
DION **Dionisos Attik** 81.27 308 P P 16 03 04.0 +4.7
LBZ **Lake Benmore** 81.30 147 IAMs_20 IAMs_20 16 37 31.3
comp=Z,11µm,21.0s
VRAC **Vranov** 81.31 320 ⇑P **P** **16 02 58.9 -0.3**
VRAC **Vranov** 81.31 320 *e*P **P** **16 02 58.9 -0.3**
VRAC **Vranov** 81.31 320 P P **16 02 58.9 -0.3**
BER **Bergen** 81.32 333 *e*P P 16 03 03.8 +4.8
BER IVmB_BB 16 03 04.4
comp=Z,2µm,2.9s
BER *e*S **S** **16 13 08.1 -1.1**
BER IVMs_BB IVMs_BB 16 42 39.4
comp=Z,30µm,16.2s
WHZ **Wether Hill Ro** 81.33 149 IAMs_20 IAMs_20 16 37 58.0
comp=Z,16µm,20.0s
MODS **Modra-Piesok** 81.33 319 *e*P **P** **16 02 59.8 +0.5**
MODS pmax pmax
comp=Z,267nm,2.4s
MODS **Modra-Piesok** 81.33 319 *e*P **P** **16 02 59.8 +0.5**
BLS5 **Blasjo** 81.39 332 *e*P **P** **16 03 03.1 +3.7**
BLS5 IVmB_BB 16 03 10.1
comp=Z,3µm,7.5s
BLS5 IVMs_BB IVMs_BB 16 42 38.5
comp=Z,60µm,14.1s
RUE **Ruedersdorf** 81.42 324 *e*P **P** **16 02 59.2 -0.5**
baz=59,slow=5.1
SKO **Skopje** 81.43 312 *i*P **P** **16 02 59.6 -0.4**
MORH **Mrgy, Hungar** 81.45 317 ⇑P **P** **16 02 59.7 -0.2**
OXZ **Oxford** 81.48 145 IAMs_20 IAMs_20 16 37 21.3
comp=Z,16µm,20.0s
ZST **Bratislava** 81.51 319 *e*P **P** **16 03 01.9 +1.6**
ZST **Bratislava** 81.51 319 *e*P **P** **16 03 01.9 +1.6**
SNZO **South Karori** 81.53 143 IAMs_20 IAMs_20 16 46 33.5
comp=Z,14µm,18.0s
KRUC **Moravsky** 81.54 320 *e*P **P** **16 03 00.1 -0.3**
KRUC **Moravsky** 81.54 320 *e*S **SKSac** **16 13 14.2 -5.7**
MRZ **Mangatainoka R** 81.58 142 IAMs_20 IAMs_20 16 36 54.0
comp=Z,15µm,20.0s
TEKS **Tekeris** 81.61 315 *e*P **P** **16 02 58.9 -2.0**
KHZ **Kahutara** 81.64 144 IAMs_20 IAMs_20 16 41 22.6
comp=Z,16µm,19.0s
KHZ **Kahutara** 81.64 144 P **P** **16 03 00.5 -0.4**
SNART **Snartemo** 81.65 331 *i*P **P** **16 03 05.0 +4.2**
IDI **Anoyia** 81.68 305 P **P** **16 02 59.2 -2.3**
IDI **Anoyia** 81.68 305 P **P** **16 03 05.7 +4.2**
IDI **Anoyia** 81.68 305 LR LR 16 44 27.0
comp=Z,6µm,20.1s,baz=86,slow=40
PRWZ **Pori Road** 81.74 141 P **P** **16 03 02.3 +0.9**
GVZ **Greta Valley S** 81.76 145 IAmb IAmb 16 03 24.9
comp=Z,112nm,1.0s
GVZ IAMs_20 IAMs_20 16 43 15.5
comp=Z,15µm,19.0s
GVZ **Greta Valley S** 81.76 145 P **P** **16 03 02.7 +1.3**
MUD **Monsted U'grnd** 81.76 329 *i*P **P** **16 03 05.6 +4.2**
MUD *i*P **PcP** **16 03 06.9 -0.2**
MUD IAmb IAmb 16 03 34.5
comp=Z,22nm,0.9s
SJES **Sjenica** 81.87 314 *e*P **P** **16 03 01.5 -0.9**
PVCC **Panska Ves** 81.91 322 *e*P **P** **16 03 03.3 +1.0**
PVCC *e*P **PcP** **16 03 10.5 +2.6**
PVCC AMS AMS 16 40 00.0
comp=Z,21µm,17.8s
PVCC **Panska Ves** 81.91 322 *e*P **P** **16 03 03.3 +1.0**
PVCC *e* 16 03 10.5
PVCC MLR MLR
comp=Z,21µm,17.8s
TREC **Trest** 81.96 321 AMS AMS 16 42 20.0
comp=Z,34µm,15.2s
FNA **Florina** 81.97 311 P P 16 02 57.6 -5.3
BFZ **Birch Farm** 81.98 141 IAMs_20 IAMs_20 16 37 06.5
comp=Z,12µm,20.0s
BFZ **Birch Farm** 81.98 141 P **P** **16 03 05.3 +2.6**
BFZ **Birch Farm** 81.98 141 P **P** **16 03 03.6 +1.0**
BBLS **Lazići** 81.98 314 *e*P **P** **16 03 04.3 +1.4**
KMY **Karmoy** 82.02 332 *e*P **P** **16 03 06.8 +4.1**
KMY *e*S **SKSac** **16 13 20.2 -2.5**
KMY IVMs_BB IVMs_BB 16 42 58.9
comp=Z,56µm,14.2s
THL **Klokotos Trika** 82.03 310 P **P** **16 02 59.9 -3.3**
AGG **Agios Georgios** 82.04 309 P **P** **16 03 00.6 -2.7**
MQZ **McQueen's Vall** 82.07 145 IAMs_20 IAMs_20 16 37 38.8
comp=Z,9µm,22.0s
GOPC **GO Pecny, Ondr** 82.08 321 *e*P **P** **16 03 03.4 +0.1**
GOPC *e*SKS **S** **16 13 25.7 +8.1**
GOPC **GO Pecny, Ondr** 82.08 321 *e*P **P** **16 03 03.4 +0.1**
BRG **Berggiesshubel** 82.10 322 *e*P **P** **16 03 02.7 -0.6**
BRG Amp 16 03 12.0
comp=Z,25nm,1.0s
BRG **Berggiesshubel** 82.10 322 PP PP 16 06 11.0 +0.2
BRG **Berggiesshubel** 82.10 322 *e*P **P** **16 03 02.7 -0.6**
BRG 16 06 11.0
BRG pmax pmax
comp=Z,25nm,1.0s
BRG pmax pmax
comp=N,27µm,14.9s
BRG MLR MLR
comp=Z,38µm,16.3s
BRG MLR MLR
comp=E,31µm,17.8s
BRG **Berggiesshubel** 82.10 322 *e*P **P** **16 03 02.6 -0.6**
comp=E,26nm,1.0s,baz=59,slow=5.1
RUDO **Rudo** 82.11 314 *e*P **P** **16 03 00.0 -3.6**
RICC **Richard** 82.17 322 *e*P **P** **16 03 07.7 +4.0**
RICC AMS AMS 16 40 10.0
comp=E,21µm,16.1s
HAPS **Han Pijesak,Bl** 82.18 315 *e*P **P** **16 03 05.9 +1.9**
MAKR **Makrakomi, Fth** 82.18 309 P **P** **16 03 02.0 -2.0**
PRU **Pruhonice** 82.18 322 *e*P **P** **16 03 05.1 +1.3**
PRU *e*SKS **SKSac** **16 13 21.1 -3.1**
PRU AMS AMS 16 44 30.0
comp=E,38µm,18.6s
PRU **Pruhonice** 82.18 322 *e*P **P** **16 03 05.1 +1.3**
PRU *e* 16 13 21.1
PRU MLR MLR
comp=Z,38µm,18.6s
PRA **Prague** 82.20 322 *e*P P 16 03 09.8 +5.9
PRA AMS AMS 16 44 30.0
comp=Z,35µm,18.0s
PRA **Prague** 82.20 322 *e*P P 16 03 09.8 +5.9
PRA MLR MLR
comp=Z,35µm,18.0s
RONA **Rosalia, Austr** 82.22 319 *e*pP **P** **16 03 04.0 -0.1**
comp=Z,15nm,1.5s
OHR **Ohrid** 82.23 312 *i*P **P** **16 03 04.6 +0.3**
PHP **Peshkopia** 82.23 312 P **P** **16 03 00.3 -4.0**
KPRO **Kipourio** 82.33 310 P **P** **16 03 03.1 -1.7**
NEST **Nestorio** 82.35 311 P **P** **16 03 01.7 -3.3**
CONA **Conrad Observa** 82.38 319 *e*pP **P** **16 03 04.8 -0.2**
comp=Z,38nm,1.7s,SNR=11
CLL **Collm** 82.41 323 *e*P **P** **16 03 04.0 -0.9**
CLL *e* 16 03 11.0
CLL *e*S **SKSac** **16 13 22.0 -3.6**
CLL pmax pmax
comp=Z,66nm,1.1s
CLL MLR MLR
comp=Z,49µm,17.5s
CLL **Collm** 82.41 323 *e*P **P** **16 03 04.0 -0.9**
comp=Z,70nm,1.7s
CLL *e*pP **sP** **16 03 11.0 +0.5**
comp=Z,75nm,1.6s
CLL *i* x x 16 03 18.2
comp=Z,50nm,0.9s
CLL *i* Pmax 16 03 34.3
comp=Z,66nm,1.1s
CLL *e*x x 16 05 59.0
CLL *e*PP **PP** **16 06 12.0 -1.4**
CLL *e*PPmax 16 06 27.0
CLL *e*PPP PPP 16 08 06.0
CLL *e*S **SKSac** **16 13 22.0 -3.6**
CLL *e*x x 16 13 46.0
CLL *e*PS **PnS** **16 14 18.0 +7.9**
CLL *e*SS **SS** **16 18 45.0 +4.3**
CLL *e*(SSS) 16 22 48.0
CLL *e*PKPPKPdf P'P'df 16 29 30.0 -11
CLL *e*AMS AMS 16 43 41.0
CLL R2 18 04 00.0
CLL R2 18 14 00.0
comp=N,600nm,21.2s
CLL R2 18 14 00.0
comp=E,600nm,25.4s
CLL R2 18 15 00.0
comp=Z,1µm,21.3s
CLL **Collm** 82.41 323 *e*P **P** **16 03 03.9 -1.0**
comp=Z,44nm,0.9s,baz=59,slow=5.1
KBN **Korca** 82.44 311 IAmb IAmb 16 03 25.3
comp=Z,150nm,1.1s
EVR **Evrytania** 82.45 309 P **P** **16 03 05.0 -0.5**
GUR **Goura** 82.48 308 P **P** **16 03 02.3 -3.4**
ANX **Ano Chora** 82.50 309 P **P** **16 03 04.1 -1.7**
BSEG **Bad Segeberg** 82.51 326 *e*P **P** **16 03 04.9 -0.5**
comp=Z,37nm,1.0s,baz=59,slow=5.1
HSKC **Hora Svate Kat** 82.51 322 *e*P **P** **16 03 05.5 0.0**
HSKC AMS AMS 16 44 50.0
comp=Z,34µm,15.2s
VLI **Veliai** 82.55 307 P **P** **16 03 02.3 -3.7**
KLV **Kalavryta, Ach** 82.57 308 P **P** **16 03 04.2 -1.9**
EFP **Efpalio** 82.59 309 P **P** **16 03 10.6 +4.5**
SUMG **Summit** 82.62 354 P **P** **16 03 04.8 -1.4**
SUMG IAMs_20 IAMs_20 16 41 27.4
comp=Z,11µm,21.0s
SUMG **Summit** 82.62 354 P **P** **16 03 04.8 -1.4**
SUMG pmax pmax
comp=Z,98nm,1.4s
SUMG MLR MLR
comp=Z,11µm,21.0s
SUMG **Summit** 82.62 354 *i*P **P** **16 03 05.7 -0.4**
SUMG IAmb IAmb 16 03 30.1
comp=Z,16nm,0.7s
BBB **Bella Bella** 82.75 36 P **P** **16 03 03.9 -2.8**
comp=Z,13nm,0.8s,baz=296,slow=4.4,SNR=12
comp=Z,13nm,0.8s
TIR **Tirane** 82.76 312 ⇓P **P** **16 03 07.7 +0.7**
TIR **Tirane** 82.76 312 P **P** **16 03 08.8 -0.2**
TIR **Tirane** 82.76 312 P **P** **16 03 07.7 +0.7**
LESK **Leskovik** 82.78 311 P P 16 03 12.3 +5.1
PVO **Paravola** 82.78 309 P **P** **16 03 08.8 +1.7**
KOGS **Kog** 82.82 318 *e*P **P** **16 03 06.8 -0.4**
YKA **Yellowknife Ar** 82.84 23 *ce*P **P** **16 03 05.4 -1.5**
YKA pmax pmax
comp=Z,51nm,1.1s
YKA **Yellowknife Ar** 82.84 23 P **P** **16 03 04.3 -2.6**
comp=Z,49nm,1.1s,baz=314,slow=4.9,SNR=145
YKA PP **PP** **16 06 14.0 -2.6**
comp=Z,7.5nm,0.9s,baz=313,slow=4.7,SNR=4.2
YKA SoS **S** **16 13 26.8 +1.9**
comp=Z,1.2nm,1.1s,baz=23,slow=6.0,SNR=5.2
YKA PKKPbc **PKKPbc** **16 21 28.1 -3.4**
comp=Z,1.3nm,1.0s,baz=130,slow=1.6,SNR=4.6
YKA PKPPKP **P'P'df** **16 29 37.4 -2.9**
comp=Z,1.2nm,1.1s,baz=121,slow=2.6,SNR=5.7
YKA LR LR 16 44 04.0
comp=Z,9µm,18.6s,baz=320,slow=39
comp=Z,49nm,1.1s
FLTG **Flechtingen** 82.85 325 *e*P **P** **16 03 06.1 -1.0**
comp=Z,61nm,1.3s,baz=59,slow=5.1
DRME **Dracevica, Mon** 82.86 313 *e*P **P** **16 03 06.7 -0.8**
CKRC **Cesky Krumlov** 82.87 321 *e*P **P** **16 03 06.4 -1.0**
CKRC AMS AMS 16 43 00.0
comp=Z,29µm,16.5s
CKRC **Cesky Krumlov** 82.87 321 *e*P **P** **16 03 06.4 -1.0**
CKRC MLR MLR
comp=Z,29µm,16.5s
ARSA **Arzberg** 82.89 319 *e*P **P** **16 03 07.4 -0.2**
comp=Z,21nm,1.5s
BRY **Bratogost** 82.97 314 *e*P **P** **16 03 07.3 -0.9**
BLY **Banja Luka** 83.02 316 *e*P **P** **16 03 08.0 -0.2**
RLS **Riolos of Patr** 83.05 309 P **P** **16 03 08.1 -0.4**
A051A **Mrakovica** 83.07 316 *e*P **P** **16 03 06.8 -1.8**
NEUB **Neuenburg** 83.13 323 *e*P **P** **16 03 07.9 -0.7**
comp=Z,64nm,1.0s,baz=59,slow=5.1
KHC **Kasperske Hory** 83.14 321 *e*P **P** **16 03 08.3 -0.6**
KHC *e*SKS **S** **16 13 34.1 +5.5**
KHC AMS AMS 16 45 10.0
comp=Z,43µm,16.9s
KHC **Kasperske Hory** 83.14 321 *ce*P **P** **16 03 08.9 0.0**
KHC pmax pmax
comp=Z,90nm,1.7s
TANN **Tannenbergstha** 83.14 323 *e*P **P** **16 03 08.2 -0.7**
comp=Z,82nm,1.6s,baz=59,slow=5.1
GEC2 **GERESS Array S** 83.21 321 *e*P **P** **16 03 08.5 -0.8**
comp=Z,62nm,1.1s,baz=59,slow=5.1
GERES **GERESS Array B** 83.21 321 P **P** **16 03 07.0 -2.3**
GERES **GERESS Array B** 83.21 321 P **P** **16 03 07.0 -2.3**
comp=Z,4.3nm,0.8s,baz=54,slow=6.8,SNR=17
comp=Z,4.3nm,0.8s
MGRS **Mrkonjic Grad** 83.23 316 *e*P **P** **16 03 07.7 -1.7**
NKC **Novy Kostel** 83.24 322 *e*SKS **S** **16 13 34.1 +4.6**
NKC AMS AMS 16 48 00.0
comp=Z,32µm,14.9s
ASSE **Asse, Remlinge** 83.25 325 *e*P **P** **16 03 08.8 -0.3**
comp=Z,120nm,1.8s,baz=59,slow=5.1
PLN **Plauen** 83.28 323 *e*P **P** **16 03 08.8 -0.7**
comp=Z,32nm,1.1s,baz=59,slow=5.1
UPNV **Upernavik** 83.34 359 *i*P **P** **16 03 08.2 -1.2**
UPNV IAmb IAmb 16 03 34.1
comp=Z,23nm,1.0s
NRDL **Niedersach Rie** 83.36 325 *e*P **P** **16 03 09.7 0.0**
comp=Z,125nm,1.6s,baz=59,slow=5.1
MOA **Molln** 83.36 320 *e*pP **P** **16 03 10.1 +0.1**
comp=Z,32nm,1.1s,SNR=8.2
SOKA **Soboth** 83.46 318 *e*pP **P** **16 03 10.4 -0.2**
comp=Z,84nm,1.1s,SNR=12
MOX **Moxa** 83.50 323 *e*P **P** **16 03 10.0 -0.6**
comp=Z,79nm,1.5s,baz=59,slow=5.1
MOX *e*L L 16 45 39.6
comp=Z,48µm,18.4s
FSK **Fiskardo** 83.53 309 P **P** **16 03 12.9 +1.9**
STON **Ston** 83.53 314 *e*P P 16 03 16.3 +5.4
WET **Wettzell** 83.54 321 *e*P **P** **16 03 10.5 -0.4**
comp=Z,81nm,1.5s,baz=59,slow=5.1
A050A **Klekovaca** 83.56 316 *e*P **P** **16 03 12.7 +1.6**
MANZ **Manzenberg** 83.56 322 *e*P **P** **16 03 10.5 -0.5**
comp=Z,11nm,1.2s,baz=59,slow=5.1
CLZ **Clausthal** 83.56 324 *e*P **P** **16 03 10.7 -0.3**
comp=Z,76nm,1.2s,baz=59,slow=5.1
CRES **Cresnjev** 83.60 318 *i*P **P** **16 03 10.9 -0.3**
CRES **Cresnjev** 83.60 318 *e*P **P** **16 03 08.2 -3.1**
ROTZ **Rotzenmuhle** 83.61 322 *e*P **P** **16 03 10.9 -0.3**
comp=Z,17nm,1.2s,baz=59,slow=5.1
RETH **Rethem/Aller,** 83.62 326 *e*P **P** **16 03 10.9 -0.2**
comp=Z,244nm,2.2s,baz=59,slow=5.1
VLS **Valsamata** 83.63 309 P **P** **16 03 09.8 -1.8**
BIOA **Bad Ischl, Aus** 83.81 320 *e*pP **P** **16 03 13.0 +0.7**
comp=Z,54nm,1.4s,SNR=8.8
OBKA **Obir** 83.83 318 *e*P **P** **16 03 11.6 -0.9**
comp=Z,34nm,1.0s
OBKA **Obir** 83.83 318 *e*P **P** **16 03 10.1 -2.4**
BOJS **Bojanci** 83.88 317 *e*P **P** **16 03 08.6 -4.1**
GTTG **Gottingen** 83.93 324 *e*P **P** **16 03 12.3 -0.4**
comp=Z,54nm,1.0s,baz=59,slow=5.1
GRA1 **Grafenberg Arr** 84.20 322 IAmb IAmb 16 03 40.5
comp=Z,121nm,1.1s
GRF **Grafenberg Arr** 84.20 322 *e*P **P** **16 03 13.9 -0.3**
comp=Z,125nm,1.1s,baz=59,slow=5.1
GRF *e*L L 16 41 45.6
comp=Z,31µm,19.5s
CEY **Cerknica** 84.28 318 *e*P **P** **16 03 13.2 -1.5**
RJOB **Jochberg** 84.28 320 *e*P **P** **16 03 14.0 -0.8**
comp=Z,92nm,1.0s,baz=59,slow=5.1
KBA **Koelnbreinsper** 84.28 319 *e*P **P** **16 03 14.4 -0.5**
comp=Z,46nm,1.4s
UBBA **Unterbreizbach** 84.29 324 *e*P **P** **16 03 14.0 -0.5**
comp=Z,189nm,2.0s,baz=59,slow=5.1
MYKA **Terra Mystica** 84.32 319 *e*P **P** **16 03 13.8 -1.2**
comp=Z,18nm,1.2s
LESA **Schwarzleotal** 84.51 320 *e*P **P** **16 03 14.3 -1.6**
comp=Z,49nm,1.4s
MCQ **Macquarie Isla** 84.58 159 IAMs_20 IAMs_20 16 39 51.7
comp=Z,12µm,21.0s
SKDS **Skadanscina** 84.62 318 *e*P P 16 03 07.7 -8.8
IBBN **Ibbenburen** 84.68 326 *e*P **P** **16 03 16.0 -0.6**
comp=Z,209nm,1.7s,baz=59,slow=5.1
KASTN **Kahler Asten** 84.93 325 *e*P **P** **16 03 17.3 -0.6**
comp=Z,99nm,1.7s,baz=59,slow=5.1
ABTA **Abfaltersbach** 84.94 319 *e*P **P** **16 03 16.7 -1.5**
comp=Z,44nm,1.2s
FUR **Furstenfeldbru** 84.95 321 *e*P **P** **16 03 17.7 -0.3**
comp=Z,170nm,1.0s,baz=59,slow=5.1
STAL **STALIGIAL** 85.07 319 IAmb IAmb 16 03 48.1
comp=Z,120nm,1.4s
KIBK **Kibwezi** 85.18 265 P **P** **16 03 20.8 +0.9**
KIBK **Kibwezi** 85.18 265 P **P** **16 03 21.2 +1.3**
SNR=15
WATA **Walderalm** 85.20 320 *e*P **P** **16 03 18.4 -1.1**
comp=Z,47nm,1.2s
WTTA **Wattenberg** 85.20 320 *e*P **P** **16 03 17.8 -1.7**
comp=Z,54nm,1.3s,SNR=7.8
LODK **Lodwar** 85.30 272 P **P** **16 03 19.5 -1.0**
LODK **Lodwar** 85.30 272 P **P** **16 03 21.9 +1.4**
SNR=28
CBB **Campbell River** 85.35 37 IAmb IAmb 16 03 29.8
comp=Z,199nm,1.4s
BUG **Bochum--Univer** 85.41 325 *e*P **P** **16 03 19.5 -0.7**
comp=Z,120nm,1.3s,baz=59,slow=5.1
TNS **Taunus Mts** 85.45 324 *e*P **P** **16 03 19.9 -0.6**
comp=Z,117nm,1.8s,baz=59,slow=5.1
MOTA **Moosalm** 85.47 320 *e*P **P** **16 03 18.3 -2.6**
comp=Z,28nm,1.3s
SQTA **Sankt Quirin** 85.47 320 *e*P **P** **16 03 19.4 -1.4**
comp=Z,71nm,1.5s,SNR=6.7
RETA **Reutte** 85.59 321 *e*P **P** **16 03 19.5 -1.9**
comp=Z,16nm,1.4s
STU **Stuttgart** 85.81 322 *e*P **P** **16 03 21.3 -1.0**
comp=Z,108nm,1.1s,baz=59,slow=5.1
SOEG **Soedalen** 85.84 350 *i*P **P** **16 03 21.1 -1.0**
SOEG IAmb IAmb 16 03 46.8
comp=Z,16nm,0.8s
FETA **Feichten** 85.86 320 *e*P **P** **16 03 20.9 -1.8**
comp=Z,48nm,1.3s
TIP **Timpagrande** 85.86 311 IAMs_20 IAMs_20 16 45 49.3
comp=Z,16µm,21.0s
UBR **Ueberruh** 85.87 321 *e*P **P** **16 03 21.8 -1.0**
comp=Z,63nm,1.1s,baz=59,slow=5.1
VOI **Vohitsoka** 85.99 244 P **P** **16 03 27.1 +3.3**
VOI **Vohitsoka** 85.99 244 P **P** **16 03 26.9 +3.1**
AHRW **Bad Neuenahr-A** 86.01 324 *e*P **P** **16 03 22.7 -0.5**
comp=Z,120nm,1.6s,baz=59,slow=5.1
ICESG **Greenland Ices** 86.08 353 *i*P **P** **16 03 23.2 -0.5**
ICESG IAmb IAmb 16 03 48.6
comp=Z,16nm,0.8s
DAVA **Damuels** 86.21 321 *e*PcP **P** **16 03 24.4 -0.2**
comp=Z,13nm,1.1s
PAF **Port-aux-Franc** 86.30 211 IAMs_20 IAMs_20 16 47 28.7
comp=Z,11µm,20.0s
FUORN **Ofenpass-Fuorn** 86.34 320 P **P** **16 03 23.5 -1.8**
FDMO **Fiordimonte** 86.44 316 IAmb IAmb 16 03 40.5
comp=Z,154nm,0.9s
DAVOX **Davos/Dischmat** 86.48 320 LR LR 16 43 11.7
comp=Z,34µm,19.1s,baz=54,slow=36
BTNL **Ternell** 86.48 325 *d*P **P** **16 03 25.9 +0.3**
comp=Z,21nm,1.3s
NRCA **Norcia** 86.52 316 IAmb IAmb 16 03 40.9
comp=Z,264nm,1.4s
MEM **Membach** 86.53 325 *d*P **P** **16 03 26.1 +0.3**
comp=Z,25nm,1.1s
BFO **Black Forest** 86.53 322 P **P** **16 03 24.7 -1.2**
BFO **Black Forest** 86.53 322 P **P** **16 03 24.7 -1.2**
BFO pmax pmax
comp=Z,119nm,1.9s
BFO **Black Forest** 86.53 322 *e*P **P** **16 03 24.8 -1.2**
comp=Z,83nm,1.7s,baz=59,slow=5.1
BHOU **Houvegne** 86.68 325 *d*P **P** **16 03 27.8 +1.2**
comp=Z,20nm,1.2s
BSTI **Sart Tilman** 86.78 325 *d*P **P** **16 03 28.3 +1.3**
comp=Z,9.6nm,1.1s
CEL **Celeste** 86.89 311 IAMs_20 IAMs_20 16 46 37.5
comp=Z,14µm,21.0s
C03A **Quillayute Air** 86.92 38 IAMs_20 IAMs_20 16 46 36.0
comp=Z,7µm,18.0s
BORG **Borgarnes** 86.92 345 LR LR 16 45 29.8
comp=Z,20µm,20.5s,baz=27,slow=38
WLF **Walferdange** 86.99 324 IAmb IAmb 16 03 54.3
comp=Z,133nm,1.2s
WLF **Walferdange** 86.99 324 *d*P **P** **16 03 27.6 -0.5**
comp=Z,52nm,1.2s
WLF **Walferdange** 86.99 324 P **P** **16 03 29.4 +1.3**
WLF **Walferdange** 86.99 324 P **P** **16 03 29.4 +1.3**
WLF **Walferdange** 86.99 324 *e*P **P** **16 03 27.6 -0.5**
comp=Z,171nm,1.4s,baz=59,slow=5.1
BCLA **Clavier** 87.01 325 *d*P **P** **16 03 27.2 -1.0**
comp=Z,19nm,1.2s
BRLDA **Berland Lookou** 87.01 30 IAMs_20 IAMs_20 16 43 53.7
comp=Z,13µm,22.0s
BGES **Gesves** 87.14 325 *d*P **P** **16 03 29.3 +0.4**
PGC **Sidney** 87.15 37 IAmb IAmb 16 03 39.0
comp=Z,319nm,1.4s
RCHB **Rochefort** 87.20 325 *d*P **P** **16 03 28.6 -0.5**
comp=Z,28nm,1.1s
FOMA **Nahampoana Res** 87.27 241 P P 16 03 36.0 +6.2
BMRD **Maredsous** 87.36 325 *d*P **P** **16 03 30.4 +0.6**
comp=Z,23nm,1.1s
GDLE **Glaisdale, N Y** 87.57 330 *e*P **P** **16 03 30.1 -0.7**
GDLE IAMs_20 IAMs_20 16 48 27.6
comp=Z,40µm,12.8s
DOU **Dourbes** 87.57 325 *d*P **P** **16 03 31.4 +0.5**
comp=Z,24nm,1.0s
EKA **Eskdalemuir Ar** 88.01 332 P **P** **16 03 30.0 -2.8**
comp=Z,1.1nm,0.8s,baz=61,slow=5.9,SNR=1.3
CTZ **Chatham Island** 88.02 140 IAMs_20 IAMs_20 16 43 56.4
comp=Z,7µm,19.0s
ESK **Eskdalemuir** 88.04 332 *e*P P 16 03 27.1 -5.9
ESK IAMs_20 IAMs_20 16 47 17.9
comp=Z,69µm,16.6s
GNW **Green Mountain** 88.11 38 IAMs_20 IAMs_20 16 48 45.5
comp=Z,9µm,21.0s
VAE **Valguarnera** 88.29 311 LR LR 16 49 31.8
comp=Z,8µm,18.2s,baz=76,slow=40
NEWG **New Galloway** 88.61 332 *e*P **P** **16 03 38.8 +3.1**
NEWG IAMs_20 IAMs_20 16 47 34.8
comp=Z,82µm,15.8s
LON **Longmire** 89.14 38 IAmb IAmb 16 03 48.4
comp=Z,238nm,1.4s
LON IAMs_20 IAMs_20 16 45 51.8
comp=Z,7µm,19.0s
DY2G **Dye2** 89.24 355 *i*P **P** **16 03 36.1 -2.7**
DY2G IAmb IAmb 16 03 55.7
comp=Z,22nm,0.6s
HMNX **Herstmonceux** 89.27 327 *e*P **P** **16 03 35.7 -3.2**
HMNX IAMs_20 IAMs_20 16 49 19.5
comp=Z,39µm,13.9s
ISOG **Isortoq, Green** 89.40 352 *i*P **P** **16 03 38.9 -0.3**
ISOG IAmb IAmb 16 03 40.9
comp=Z,15nm,0.6s
CLGH **Cloghs, Cushen** 89.42 333 *e*P **P** **16 03 38.9 -0.6**
CLGH IAMs_20 IAMs_20 16 47 59.2
comp=Z,67µm,17.8s
LTY **Liberty** 89.48 37 IAmb IAmb 16 03 49.8
comp=Z,196nm,1.1s
B08A **Colville Reser** 89.55 36 IAmb IAmb 16 03 50.3
comp=Z,279nm,1.4s
G05A **Wamic** 90.29 39 IAMs_20 IAMs_20 16 50 14.4
comp=Z,7µm,20.0s
K02D **Willamette Mer** 90.34 42 IAmb IAmb 16 03 54.2
comp=Z,146nm,1.3s
CASY **Casey** 90.51 185 IAMs_20 IAMs_20 16 42 57.4
comp=Z,9µm,19.0s
VSL **Villasalto** 90.66 314 IAMs_20 IAMs_20 16 46 37.1
comp=Z,13µm,22.0s
NEW **Newport** 90.78 35 IAMs_20 IAMs_20 16 46 57.4
comp=Z,8µm,21.0s
NEW **Newport** 90.78 35 P **P** **16 03 46.5 +0.4**

baz=309,SNR=54
HUMO Hull Mountain 90.83 42 IAmb IAmb 16 04 03.0
comp=Z,205nm,1.4s
MBAR Mbarara 91.15 270 *i* P **P** **16 03 44.9 -3.7**
MBAR pmax pmax
comp=Z,22nm,1.4s
MBAR Mbarara 91.15 270 LR LR 16 44 24.6
comp=Z,10µm,20.9s,baz=36,slow=35
MBAR Mbarara 91.15 270 P **P** **16 03 51.4 +2.8**
MBAR P **P** **16 03 51.4 +2.8**
KMPM Mount Pierce 91.32 44 IAMs_20 IAMs_20 16 49 54.3
comp=Z,7µm,20.0s
YBH Yreka Blue Hor 91.47 42 P **P** **16 03 47.9 -1.6**
YBH IAmb IAmb 16 03 59.6
comp=Z,222nm,1.4s
YBH Yreka Blue Hor 91.47 42 P **P** **16 03 47.9 -1.6**
YBH pmax pmax
comp=Z,222nm,1.4s
YBH MLR MLR
comp=Z,4µm,22.0s
YBH Yreka Blue Hor 91.47 42 LR LR 16 49 50.3
comp=Z,2µm,18.2s,baz=326,slow=39
KMRM Mail Ridge 91.69 44 IAMs_20 IAMs_20 16 47 38.4
comp=Z,9µm,21.0s
I07A Izee 92.02 39 IAmb IAmb 16 04 08.7
comp=Z,149nm,1.2s
FRB Frobisher Bay 92.06 5 LR LR 16 49 36.1
comp=Z,15µm,18.3s,baz=352,slow=38
CCA1 Carnmenellis 92.40 329 *eP* **P** **16 03 52.4 -1.1**
CCA1 IAMs_20 IAMs_20 16 51 28.6
comp=Z,46µm,14.8s
KEST Kesra 92.69 311 IAmb IAmb 16 04 24.4
comp=Z,93nm,1.4s
KEST Kesra 92.69 311 P **P** **16 03 51.7 -3.5**
comp=Z,13nm,1.2s,baz=354,slow=9.2,SNR=5.2
KEST LR LR 16 52 02.9
comp=Z,10µm,18.4s,baz=352,slow=40
comp=Z,13nm,1.2s
HOPS Hopland Field 92.78 45 IAMs_20 IAMs_20 16 45 15.1
comp=Z,7µm,19.0s
BMO Blue Mountains 92.80 38 IAmb IAmb 16 04 05.2
comp=Z,161nm,1.4s
FFC Flin Flon 93.00 24 P **P** **16 03 54.9 -1.2**
FFC Flin Flon 93.00 24 P **P** **16 03 54.9 -1.2**
FFC pmax pmax
comp=Z,203nm,1.3s
GDXM Geysers 93.07 45 IAMs_20 IAMs_20 16 45 14.6
comp=Z,8µm,19.0s
WVOR Wild Horse Val 93.52 40 IAMs_20 IAMs_20 16 52 14.9
comp=Z,6µm,18.0s
AFDM Forest Hills D 94.16 44 IAmb IAmb 16 04 11.1
comp=Z,155nm,1.6s
MFID Camas Ranch 94.53 38 IAmb IAmb 16 04 12.9
comp=Z,178nm,1.4s
EGMT Eagleton 94.64 32 IAMs_20 IAMs_20 16 48 22.3
comp=Z,12µm,22.0s
EGMT Eagleton 94.64 32 P **P** **16 04 04.8 +0.8**
baz=314,SNR=12
PNTR Pine Nut 94.94 43 IAmb IAmb 16 04 24.4
comp=Z,79nm,1.0s
CMB Columbia Colle 95.06 44 IAmb IAmb 16 04 15.2
comp=Z,113nm,1.2s
YERR Yerington 95.22 43 IAmb IAmb 16 04 16.5
comp=Z,180nm,1.4s
HLID Hailey 95.23 37 IAmb IAmb 16 04 16.4
comp=Z,114nm,1.2s
HLID IAMs_20 IAMs_20 16 51 56.8
comp=Z,8µm,19.0s
HLID Hailey 95.23 37 P **P** **16 04 07.9 +1.0**
baz=310,SNR=100
BOZ Bozeman (W) 95.37 34 IAmb IAmb 16 04 16.8
comp=Z,129nm,1.4s
BOZ IAMs_20 IAMs_20 16 52 55.9
comp=Z,8µm,18.0s
BOZ Bozeman (W) 95.37 34 P **P** **16 04 07.6 +0.1**
baz=313,SNR=37
BMN Battle Mountai 95.58 41 IAmb IAmb 16 04 18.7
comp=Z,139nm,1.4s
PPT Papeete 95.86 107 LR LR 16 39 42.5
comp=Z,11µm,22.0s,baz=271,slow=31
RYN Ryan 95.89 43 IAmb IAmb 16 04 19.7
comp=Z,168nm,1.5s
KVN Kaiserville 95.89 43 IAmb IAmb 16 04 19.6
comp=Z,182nm,1.4s
MDPB Devils Postpil 96.13 44 IAMs_20 IAMs_20 16 51 48.6
comp=Z,8µm,20.0s
NVAR Mina Array Bea 96.14 43 P **P** **16 04 07.6 -3.7**
comp=Z,0.7nm,0.7s,baz=279,slow=7.5,SNR=4.2
NVAR LR LR 16 47 23.0
comp=Z,3µm,19.3s,baz=314,slow=35
comp=Z,0.7nm,0.7s
MLAC Mammoth, Mammo 96.29 44 P **P** **16 04 13.1 +1.2**
baz=307
YNM Yellowstone No 96.44 35 IAMs_20 IAMs_20 16 50 30.6
comp=Z,9µm,19.0s
YNR Norris Junctio 96.46 35 IAMs_20 IAMs_20 16 50 32.2
comp=Z,9µm,19.0s
ELK Elko 96.56 40 IAmb IAmb 16 04 30.5
comp=Z,57nm,1.4s
ELK IAMs_20 IAMs_20 16 55 13.5
comp=Z,7µm,19.0s
ELK Elko 96.56 40 LR LR 16 48 44.2
comp=Z,2µm,19.1s,baz=315,slow=36
VOG Valley Oaks Go 96.72 45 P **P** **16 04 14.1 +0.6**
baz=306
YMP Mirror Lake Pl 96.72 34 IAMs_20 IAMs_20 16 49 50.9
comp=Z,11µm,21.0s
H17A Grant Village 96.74 35 IAMs_20 IAMs_20 16 47 35.4
comp=Z,13µm,21.0s
H17A Grant Village 96.74 35 P **P** **16 04 15.1 +1.2**
baz=313,SNR=30
DGMT Dagmar 96.88 29 IAMs_20 IAMs_20 16 51 54.2
comp=Z,8µm,19.0s
DGMT Dagmar 96.88 29 P **P** **16 04 15.1 +1.0**
baz=319,SNR=13
FLWY Flagg Ranch 96.89 35 IAmb IAmb 16 04 34.0
comp=Z,113nm,1.4s
FLWY IAMs_20 IAMs_20 16 50 38.4
comp=Z,8µm,22.0s
SMMC Simmler 96.91 47 P **P** **16 04 15.2 +0.7**
baz=306
RLMT Red Lodge 96.91 34 IAMs_20 IAMs_20 16 54 25.4
comp=Z,9µm,20.0s
RLMT Red Lodge 96.91 34 P **P** **16 04 15.6 +1.1**
baz=314,SNR=23
DSP Deep Springs 97.00 44 P **P** **16 04 14.3 -0.5**
DSP IAmb IAmb 16 04 24.8
comp=Z,79nm,1.4s
TIN Tinemaha, Big 97.02 44 P Pdif 16 04 15.3 +0.1
baz=307
TPAW Teton Pass 97.16 36 IAMs_20 IAMs_20 16 57 05.6
comp=Z,8µm,19.0s
VES Vestal, Richgr 97.19 46 P Pdif 16 04 16.3 +0.5
baz=307
LAO LASA Array 97.28 31 IAmb IAmb 16 04 25.2
comp=Z,122nm,1.4s
LAO IAMs_20 IAMs_20 16 50 15.9
comp=Z,13µm,21.0s
LAO LASA Array 97.28 31 P **P** **16 04 15.6 -0.3**
baz=317
PKM Mcpherson Peak 97.28 47 P **P** **16 04 16.2 -0.2**
baz=306,SNR=7.2
SNOW Snow King Moun 97.28 36 IAMs_20 IAMs_20 16 50 17.0
comp=Z,7µm,20.0s
HVU Hansel Valley 97.31 38 IAMs_20 IAMs_20 16 52 19.9
comp=Z,9µm,21.0s
CWC Cottonwood Cre 97.49 45 P Pdif 16 04 17.2 -0.1
baz=307
BCW Bitter Crk WRg 97.51 47 IAMs_20 IAMs_20 16 46 44.4
comp=Z,8µm,20.0s
AHID Auburn Hatcher 97.57 36 IAMs_20 IAMs_20 16 53 51.6
comp=Z,8µm,19.0s
SBC Santa Barbara 97.60 47 P **P** **16 04 17.1 -0.5**
baz=306
GRAC Grapevine Rang 97.60 44 P Pdif 16 04 17.9 +0.2
baz=308
ISA Isabella, Lake 97.70 45 P **P** **16 04 17.1 -1.1**
ISA Isabella, Lake 97.70 45 P **P** **16 04 17.7 -0.5**
baz=307,SNR=14
ISA Isabella, Lake 97.70 45 P **P** **16 04 17.1 -1.1**
ISA pmax pmax
comp=Z,45nm,1.4s
ISA MLR MLR
comp=Z,5µm,20.0s
BGU Big Grassy Mou 97.72 39 IAmb IAmb 16 04 22.6
comp=Z,76nm,2.0s
BGU IAMs_20 IAMs_20 16 51 32.1
comp=Z,8µm,21.0s

ARVC Arvin 97.78 46 P Pdif 16 04 18.6 +0.1
baz=307
R11B Troy Canyon, C 97.87 42 P Pdif 16 04 19.6 +0.6
baz=309,SNR=23
HWUT Hardware Ranch 98.10 37 IAMs_20 IAMs_20 16 52 16.7
comp=Z,6µm,20.0s
MPMC Manual Prospec 98.10 45 P Pdif 16 04 20.7 +0.6
baz=308,SNR=18
OSI Osito Audit: C 98.16 46 P Pdif 16 04 20.8 +0.6
baz=307
FURC Furnace Creek, 98.25 44 P Pdif 16 04 21.1 +0.7
baz=308
CCAC Calif City Air 98.30 46 IAMs_20 IAMs_20 16 47 45.3
comp=Z,10µm,20.0s
LRMC Laurel Mtn Rad 98.32 45 P Pdif 16 04 21.3 +0.3
baz=308,SNR=13
DUG Dugway, Tooele 98.33 39 IAMs_20 IAMs_20 16 52 32.1
comp=Z,7µm,20.0s
DUG Dugway, Tooele 98.33 39 P Pdif 16 04 22.4 +1.4
baz=311,SNR=21
TPNV Topopah Spring 98.34 43 P Pdif 16 04 21.7 +0.6
baz=309,SNR=11
CART Cartagena 98.38 318 IAMs_20 IAMs_20 16 54 27.2
comp=Z,12µm,19.0s
BW06 Boulder Array 98.39 36 IAMs_20 IAMs_20 16 55 59.0
comp=Z,8µm,19.0s
BW06 Boulder Array 98.39 36 P Pdif 16 04 22.1 +0.7
baz=314,SNR=7.3
PDAR Pinedale Array 98.39 36 P **P** **16 04 16.8 -4.5**
comp=Z,0.4nm,0.8s,baz=329,slow=1.1,SNR=2.2
PDAR PKKPbc **PKKPbc** **16 20 52.0 -0.3**
comp=Z,0.7nm,0.9s,baz=131,slow=2.5,SNR=3.6
comp=Z,0.4nm,0.8s
EDW2 Edwards Air Fo 98.48 46 P Pdif 16 04 22.1 +0.4
baz=307,SNR=14
TCUT Toone Canyon 98.51 38 IAMs_20 IAMs_20 16 51 22.8
comp=Z,7µm,21.0s
GWY Greenwater Val 98.54 44 IAmb IAmb 16 04 47.3
comp=Z,43nm,1.2s
DECC Green Verdugo 98.63 47 Pdiff Pdif 16 04 23.3 +1.0
baz=307
PASC Pasadena Art C 98.78 47 IAMs_20 IAMs_20 16 48 02.0
comp=Z,9µm,20.0s
ESDC Sonseca Array 98.81 321 PP **PP** **16 08 23.3 -0.4**
comp=Z,3.5nm,0.9s,baz=75,slow=6.3,SNR=4.7
ESDC LR LR 16 51 31.2
comp=Z,15µm,18.4s,baz=49,slow=37
ULM Lac du Bonnet 98.82 23 IAmb IAmb 16 04 38.5
comp=Z,71nm,1.8s
ULM Lac du Bonnet 98.82 23 P **P** **16 04 18.5 -4.2**
comp=Z,4.3nm,1.0s,baz=328,slow=6.5,SNR=3.7
ULM PP **PP** **16 08 18.9 -4.3**
comp=Z,6.9nm,1.0s,baz=298,slow=9.9,SNR=3.7
ULM LR LR 16 54 43.0
comp=Z,10µm,18.8s,baz=345,slow=39
comp=Z,4.3nm,1.0s
NLU North Lily Min 98.91 39 IAMs_20 IAMs_20 16 52 16.5
comp=Z,7µm,22.0s
PBRG Braganca 98.93 324 *e*Pdif Pdif 16 04 37.0 +14
PBRG Braganca 98.93 324 *e*PP PKiKP 16 08 36.4 -18
SHOC Shoshone, Teco 98.97 44 Pdiff Pdif 16 04 25.8 +2.0
baz=308
FMP Fort Macarthur 98.98 47 Pdiff Pdif 16 04 25.7 +1.9
baz=307
GSC Goldstone, Bar 99.00 45 Pdiff **Pdif** **16 04 25.6 +1.6**
baz=308
CIS Catalina Islan 99.09 47 Pdiff **Pdif** **16 04 24.4 +0.1**
baz=307
BFSC Mount Baldy Ra 99.09 46 Pdiff **Pdif** **16 04 25.1 +0.6**
baz=307
MPU Maple Canyon 99.12 39 IAMs_20 IAMs_20 16 52 33.1
comp=Z,9µm,20.0s
RRX Edison Barstow 99.14 45 Pdiff **Pdif** **16 04 24.6 +0.1**
baz=308
SCI2 San Clemente I 99.25 48 Pdiff **Pdif** **16 04 25.0 -0.1**
baz=307
LSZ Lusaka 99.25 257 P **Pdif** **16 04 23.6 -1.8**
LSZ Lusaka 99.25 257 P **Pdif** **16 04 23.6 -1.8**
LSZ pmax pmax
comp=Z,14nm,1.0s
LSZ MLR MLR
comp=Z,33µm,21.0s
LSZ Lusaka 99.25 257 LR LR 16 46 51.7
comp=Z,28µm,21.2s,baz=65,slow=34
BSUT Blindstream Ca 99.27 38 IAmb IAmb 16 04 42.4
comp=Z,69nm,1.9s
BSUT IAMs_20 IAMs_20 16 54 03.8
comp=Z,7µm,21.0s
MDND Maddock 99.32 27 Pdiff **Pdif** **16 04 26.1 +1.0**
baz=322
TUQ Turquoise Moun 99.48 44 Pdiff **Pdif** **16 04 26.3 +0.1**
baz=309
MVO Moncorvo 99.53 323 *e*Pdif **Pdif** **16 04 32.5 +6.3**
MVO Moncorvo 99.53 323 *e*PP PKiKP 16 08 40.6 -15
MVO *e*S S 16 15 36.9 -22
MVO *e*SS SS 16 23 07.5 +20
MVO Moncorvo 99.53 323 *e*LQ LQ 16 36 59.7
MVO *e*LR LR 16 44 17.3
comp=Z,24µm,18.0s
BBRC Big Bear Solar 99.56 46 Pdiff **Pdif** **16 04 26.7 0.0**
baz=308
TCRU Three Creeks R 99.59 40 IAMs_20 IAMs_20 16 58 02.5
comp=Z,7µm,20.0s
HEC Hector,Ludlow 99.59 45 Pdiff **Pdif** **16 04 27.0 +0.3**
baz=308
ELS Elsinore Mount 99.60 47 IAMs_20 IAMs_20 16 47 27.7
comp=Z,7µm,20.0s
PGAV Gavieira, Arco 99.63 325 *e*Pdif **Pdif** **16 04 37.0 +10**
PGAV Gavieira, Arco 99.63 325 *e*PP PKiKP 16 08 39.6 -16
PGAV *e*S S 16 15 36.1 -24
PGAV *e*SS SS 16 23 12.8 +23
PGAV Gavieira, Arco 99.63 325 *e*LQ LQ 16 37 39.5
PGAV *e*LR LR 16 43 14.5
comp=Z,17µm,18.0s
MURC Murrieta 99.78 46 Pdiff **Pdif** **16 04 27.7 +0.2**
baz=308
POLO Lamas de Olo 99.79 324 *e*Pdif **Pdif** **16 04 36.4 +9.0**
POLO Lamas de Olo 99.79 324 *e*PP PKiKP 16 08 44.8 -11
RDMU Red Mountain 99.91 37 IAMs_20 IAMs_20 16 58 02.6
comp=Z,7µm,18.0s
P17A Butcher Ranch, 100.00 39 IAMs_20 IAMs_20 16 56 26.2
comp=Z,7µm,20.0s
GMRC Granite Mounta 100.06 45 Pdiff **Pdif** **16 04 28.8 +0.1**
baz=309
K22A Casper 100.06 34 IAMs_20 IAMs_20 16 54 17.2
comp=Z,8µm,20.0s
K22A Casper 100.06 34 Pdiff **Pdif** **16 04 28.6 -0.1**
baz=316
MTPU Mount Pierson 100.12 40 IAMs_20 IAMs_20 16 53 26.6
comp=Z,9µm,22.0s
Q16A Castle Valley 100.13 39 IAMs_20 IAMs_20 16 53 18.7
comp=Z,7µm,19.0s
RSSD Black Hills 100.21 32 IAMs_20 IAMs_20 16 54 04.9
comp=Z,11µm,19.0s
RSSD Black Hills 100.21 32 Pdiff **Pdif** **16 04 29.0 -0.3**
baz=318
PFO Pinyon Flats O 100.26 46 IAMs_20 IAMs_20 16 48 40.2
comp=Z,9µm,20.0s
PFO Pinyon Flats O 100.26 46 Pdiff **Pdif** **16 04 30.0 +0.3**
baz=308
TPFO Pinon Flats 100.27 46 Pdiff **Pdif** **16 04 30.2 +0.4**
baz=308
109C Camp Elliot, M 100.27 47 Pdiff **Pdif** **16 04 30.4 +0.8**
baz=308
PMD Palm Desert 100.29 46 IAMs_20 IAMs_20 16 48 42.0
comp=Z,9µm,20.0s
BELC Belle Mtn. Jos 100.32 46 Pdiff **Pdif** **16 04 30.0 +0.1**
baz=308
MTE Manteigas 100.34 323 *e*Pdif **Pdif** **16 04 39.7 +10**
MTE Manteigas 100.34 323 *e*PP PKiKP 16 08 46.4 -10
MTE *e*S 16 15 41.2
MTE *e*SS SS 16 23 19.6 +20
MTE Manteigas 100.34 323 *e*LQ LQ 16 36 07.8
MTE *e*LR LR 16 44 28.2
comp=Z,18µm,16.0s
SRU San Rafael Swe 100.37 39 IAMs_20 IAMs_20 16 55 47.0
comp=Z,7µm,19.0s
RWWY Rawlins 100.39 35 IAMs_20 IAMs_20 16 56 34.2
comp=Z,13µm,22.0s
KNB Kanab 100.41 42 IAMs_20 IAMs_20 16 55 53.4
comp=Z,6µm,20.0s
AGMN Agassiz Nation 100.43 24 IAMs_20 IAMs_20 16 59 09.8
comp=Z,11µm,19.0s
AGMN Agassiz Nation 100.43 24 Pdiff **Pdif** **16 04 30.3 +0.3**
baz=326
POGA Pongola 100.72 245 IAMs_20 IAMs_20 16 50 07.0
comp=Z,7µm,18.0s

MONP2 Monument Peak 100.73 47 Pdiff **Pdif** **16 04 32.2 +0.3**
baz=308
NEE2 Needles Airpor 100.73 44 Pdiff **Pdif** **16 04 31.7 0.0**
baz=310
IRM Iron Mountain 100.78 45 Pdiff **Pdif** **16 04 32.6 +0.7**
baz=309
BC3 Big Chuckawall 100.89 46 Pdiff **Pdif** **16 04 33.3 +0.8**
baz=309
PMRV Marv??o 100.92 322 *e*Pdif **Pdif** **16 04 46.3 +14**
PMRV Marv??o 100.92 322 *e*PP **PKiKP** **16 08 53.5 -4.4**
PMRV *e*S 16 15 45.2
PMRV *e*SS SS 16 23 41.3 +34
PMRV Marv??o 100.92 322 *e*LQ LQ 16 39 07.7
PMRV *e*LR LR 16 46 59.1
comp=Z,23µm,18.0s
O20A White River Ci 100.94 37 IAMs_20 IAMs_20 16 59 42.8
comp=Z,7µm,18.0s
O20A White River Ci 100.94 37 Pdiff **Pdif** **16 04 32.0 -0.6**
baz=315
TAOE Nuku Hiva Isla 100.94 95 IAMs_20 IAMs_20 16 42 57.1
comp=Z,7µm,21.0s
COI Coimbra 100.94 323 *e*Pdif **Pdif** **16 04 39.7 +7.3**
COI Coimbra 100.94 323 *e*PP **PKiKP** **16 08 53.0 -4.8**
IKP In-Ko-Pah, Jac 101.08 47 Pdiff **Pdif** **16 04 34.3 +1.0**
baz=308
PCAS Casmilo, Conde 101.10 323 *e*Pdif **Pdif** **16 04 43.6 +10**
PCAS Casmilo, Conde 101.10 323 *e*PP **PKiKP** **16 08 54.2 -3.9**
SWSC Sam W. Stewart 101.11 46 Pdiff **Pdif** **16 04 33.4 +0.1**
baz=308
RMX La Rumorosa 101.13 47 IAMs_20 IAMs_20 16 48 33.0
comp=Z,6µm,20.0s
MAW Mawson 101.20 200 Pdiff **Pdif** **16 04 34.0 +1.3**
comp=Z,4.0nm,0.9s,baz=310,slow=9.7,SNR=1.7
YUH Yuha Desert 101.21 47 IAMs_20 IAMs_20 16 47 07.3
comp=Z,6µm,21.0s
PDMCI Parker Dam,Lak 101.33 44 Pdiff **Pdif** **16 04 34.5 +0.2**
baz=310
PESTR Estremoz 101.42 322 *e*Pdif **Pdif** **16 04 45.1 +10**
PESTR Estremoz 101.42 322 *e*PP **PKiKP** **16 08 55.8 -3.0**
PHWY Pilot Hill 101.58 34 IAMs_20 IAMs_20 16 55 58.6
comp=Z,7µm,21.0s
PBAR Barrancos 101.59 321 *e*PP **PKiKP** **16 08 54.4 -4.7**
N23A Red Feather La 101.62 35 IAMs_20 IAMs_20 16 57 07.8
comp=Z,8µm,20.0s
N23A Red Feather La 101.62 35 Pdiff **Pdif** **16 04 35.4 -0.4**
baz=317
PMTG Montargil 101.64 322 *e*PP **PKiKP** **16 08 56.6 -2.5**
PSBE So Bento 101.64 323 *e*Pdif **Pdif** **16 04 45.0 +9.4**
PSBE So Bento 101.64 323 *e*PP **PKiKP** **16 08 56.5 -2.7**
EVO Evora 101.89 322 *e*Pdif **Pdif** **16 04 45.1 +8.4**
EVO Evora 101.89 322 *e*PP **PKiKP** **16 08 58.6 -1.0**
VTX Valle De La Tr 102.07 48 IAMs_20 IAMs_20 16 47 36.3
comp=Z,7µm,21.0s
PBEJ Beja 102.16 321 *e*PP **PKiKP** **16 09 00.6 +0.5**
WUAZ Wupatki 102.27 42 Pdiff **Pdif** **16 04 38.4 -0.2**
baz=312
SUSD Miller 102.29 29 Pdiff **Pdif** **16 04 38.0 -0.3**
baz=323
PMAFR Mafra 102.30 323 *e*PP **PKiKP** **16 09 03.5 +3.1**
SMCO Snowmass 102.31 37 IAMs_20 IAMs_20 16 59 02.0
comp=Z,7µm,19.0s
EYMN Ely 102.31 22 Pdiff **Pdif** **16 04 38.5 +0.2**
baz=329
LIS Lisbon 102.40 323 *e*Pdif **Pdif** **16 04 51.0 +12**
LIS Lisbon 102.40 323 *e*PP PKiKP 16 09 08.1 +7.6
LIS Lisbon 102.40 323 *e*PP **PP** **16 08 51.6 +0.9**
LIS IAMs_20 IAMs_20 16 47 12.0
comp=E,57µm,29.5s
PNCL Nicolau / Gran 102.48 322 *e*Pdif **Pdif** **16 04 47.6 +8.3**
PNCL Nicolau / Gran 102.48 322 *e*PP **PKiKP** **16 09 03.0 +2.3**
MESJ Messejana 102.49 322 *e*PP **PKiKP** **16 09 03.1 +2.4**
MESJ Messejana 102.49 322 *e*PP **PP** **16 08 52.1 +0.6**
MESJ IAMs_20 IAMs_20 16 58 15.5
comp=Z,46µm,25.3s
PVAQ Vaqueiros 102.51 321 *e*S 16 15 52.8
PVAQ *e*SS SS 16 23 50.9 +22
PCVE Castro Verde 102.53 321 *e*Pdif **Pdif** **16 04 49.2 +10**
PCVE Castro Verde 102.53 321 *e*PP **PKiKP** **16 09 01.7 +0.9**
113A Mohawk Valley, 102.55 45 IAMs_20 IAMs_20 16 50 24.6
comp=Z,8µm,20.0s
ISCO Idaho Springs 102.59 35 IAMs_20 IAMs_20 16 57 55.1
comp=Z,9µm,20.0s
ISCO Idaho Springs 102.59 35 Pdiff **Pdif** **16 04 40.4 +0.2**
baz=317
BRIGG Briggsdale 102.70 34 IAMs_20 IAMs_20 16 58 33.1
comp=Z,9µm,18.0s
PBDV Barranco-do-Ve 102.74 321 *e*PP **PKiKP** **16 09 02.9 +1.7**
MVCO Mesa Verde 102.83 39 Pdiff **Pdif** **16 04 41.1 -0.1**
baz=314
MORF Marmelete 103.11 321 *e*PP **PKiKP** **16 09 05.2 +3.3**
MORF Marmelete 103.11 321 *e*PP **PKiKP** **16 08 56.7 -5.2**
MORF IAMs_20 IAMs_20 16 47 54.2
comp=E,27µm,25.3s
PFVI Vila Bisbo 103.33 321 *e*PP **PKiKP** **16 09 08.8 +6.5**
S22A 4UR Ranch, Cre 103.40 38 IAMs_20 IAMs_20 17 01 01.2
comp=Z,8µm,18.0s
S22A 4UR Ranch, Cre 103.40 38 Pdiff **Pdif** **16 04 43.3 -0.5**
baz=315
Q24A Divide 103.44 36 IAMs_20 IAMs_20 16 58 35.1
comp=Z,7µm,20.0s
Q24A Divide 103.44 36 Pdiff **Pdif** **16 04 44.5 +0.6**
baz=317
W18A Petrified Fore 103.53 41 IAMs_20 IAMs_20 17 01 29.2
comp=Z,6µm,19.0s
W18A Petrified Fore 103.53 41 Pdiff **Pdif** **16 04 44.5 +0.2**
baz=313
OGNE Ogallala 103.57 33 IAMs_20 IAMs_20 16 58 06.8
comp=Z,7µm,20.0s
OGNE Ogallala 103.57 33 Pdiff **Pdif** **16 04 44.0 -0.2**
baz=320
214A Organ Pipe Nat 103.69 45 IAMs_20 IAMs_20 16 51 05.8
comp=Z,7µm,20.0s
214A Organ Pipe Nat 103.69 45 Pdiff **Pdif** **16 04 45.3 +0.5**
baz=310
ECSD EROS Data Cent 103.86 28 Pdif **Pdif** **16 04 44.4 -1.0**
ECSD IAMs_20 IAMs_20 17 00 51.9
comp=Z,9µm,18.0s
SDCO Great Sand Dun 104.14 37 IAMs_20 IAMs_20 16 54 48.5
comp=Z,10µm,22.0s
SDCO Great Sand Dun 104.14 37 Pdiff **Pdif** **16 04 47.1 0.0**
baz=316
VNDA Vanda 104.16 172 PKiKP **PKiKP** **16 08 58.4 -4.1**
comp=Z,2.3nm,0.9s,baz=316,slow=13,SNR=2.1
TUC Tucson 104.76 44 IAMs_20 IAMs_20 16 51 11.0
comp=Z,10µm,20.0s
TUC Tucson 104.76 44 Pdiff **Pdif** **16 04 50.1 +0.4**
baz=312
SBA Scott Base 105.08 171 IAMs_20 IAMs_20 16 49 51.0
comp=Z,7µm,21.0s
T25A Trinidad 105.17 37 IAMs_20 IAMs_20 16 51 19.9
comp=Z,6µm,22.0s
ANMO Albuquerque 105.59 39 IAMs_20 IAMs_20 16 58 15.5
comp=Z,8µm,20.0s
Y22D IRIS PASSCAL I 105.93 40 IAMs_20 IAMs_20 16 59 04.6
comp=Z,8µm,21.0s
319A Douglas 106.34 44 IAMs_20 IAMs_20 16 53 09.7
comp=Z,8µm,20.0s
CBKS Cedar Bluff 106.34 33 IAMs_20 IAMs_20 16 56 04.0
comp=Z,9µm,20.0s
121A Cookes Peak, D 106.48 42 IAMs_20 IAMs_20 17 00 11.3
comp=Z,7µm,22.0s
HSIG 106.81 47 IAMs_20 IAMs_20 16 52 10.6
comp=Z,6µm,22.0s
SRIG Santa Rosalia 107.02 49 IAMs_20 IAMs_20 16 44 28.6
comp=Z,6µm,22.0s
JFWS Jewell Farm 107.09 24 IAMs_20 IAMs_20 16 58 53.8
comp=Z,10µm,20.0s
R32A Long Quarter, 107.15 32 IAMs_20 IAMs_20 17 02 33.6
comp=Z,8µm,19.0s
KSU1 Kansas State U 107.61 30 IAMs_20 IAMs_20 16 58 45.3
comp=Z,11µm,20.0s
EPT El Paso 107.79 42 IAMs_20 IAMs_20 16 53 16.9
comp=Z,6µm,22.0s
AMTX Amarillo 108.33 37 IAMs_20 IAMs_20 16 58 56.4
comp=Z,7µm,21.0s
MSTX Muleshoe 108.40 38 IAMs_20 IAMs_20 16 57 29.6
comp=Z,11µm,21.0s
MNTX Cornudas Mount 108.52 41 IAMs_20 IAMs_20 16 58 55.5
comp=Z,5µm,20.0s
L44A Lake County Fo 108.58 23 IAMs_20 IAMs_20 16 58 38.1
comp=Z,11µm,21.0s
U32A Winter Ranch, 108.60 34 IAMs_20 IAMs_20 17 02 14.2
comp=Z,9µm,20.0s
ELIS Ellis County 108.63 34 IAMs_20 IAMs_20 16 53 32.0
comp=Z,9µm,21.0s
OK038 West end E0370 108.65 34 IAMs_20 IAMs_20 16 57 30.6

comp=Z,10µm,21.0s
OK032 Salt Plains WL 108.66 33 IAMs_20 IAMs_20 17 03 13.8
comp=Z,9µm,19.0s
CROK Carrier 109.01 33 IAMs_20 IAMs_20 16 59 27.0
comp=Z,6µm,19.0s
BLOK Blackwell 109.19 32 IAMs_20 IAMs_20 17 03 50.6
comp=Z,10µm,22.0s
HDIL Hopedale 109.48 25 IAMs_20 IAMs_20 16 57 38.3
comp=Z,10µm,21.0s
OK029 Liberty Lake 109.83 33 IAMs_20 IAMs_20 16 58 13.8
comp=Z,7µm,20.0s
OK033 Mehan 109.89 33 IAMs_20 IAMs_20 17 01 13.3
comp=Z,8µm,20.0s
WMOK Wichita Mounta 109.98 35 IAMs_20 IAMs_20 17 05 36.6
comp=Z,8µm,18.0s
OK052 Battle Ridge R 110.00 33 IAMs_20 IAMs_20 17 00 39.1
comp=Z,8µm,21.0s
OKCSW OKLAHOMA CITY 110.15 33 IAMs_20 IAMs_20 16 55 04.2
comp=Z,8µm,19.0s
FNO Franklin 110.28 33 IAMs_20 IAMs_20 17 04 55.7
comp=Z,10µm,20.0s
PMPST Porto Santo, M 110.48 323 *e*PP PP 16 10 04.6 +14
X34A Smith Ranch, M 110.58 34 IAMs_20 IAMs_20 17 01 44.7
comp=Z,9µm,18.0s
W35A Tecumseh 110.63 33 IAMs_20 IAMs_20 17 02 22.9
comp=Z,6µm,20.0s
TORD Torodi Ar. Bea 110.71 296 PKiKP **PKiKP 16 09 14.6 -2.0**
comp=Z,1.4nm,0.7s,baz=16,slow=3.1,SNR=4.9
TORD PKKPbc **PKKPbc 16 20 15.5 +1.1**
comp=Z,0.6nm,0.7s,baz=135,slow=0.6,SNR=2.8
SLBS Sierra La Lagu 110.93 50 IAMs_20 IAMs_20 16 57 41.3
comp=Z,7µm,19.0s
PMAR Madeira 111.07 323 *e*PP PP 16 10 06.4 +12
HHAR Hobbs 111.13 30 IAMs_20 IAMs_20 17 05 13.8
comp=Z,10µm,19.0s
PMOZ Porto Moniz, M 111.15 324 *e*PP PP 16 10 07.0 +12
PMOZ Porto Moniz, M 111.15 324 *e*LQ LQ 16 43 16.3
PMOZ *e*LR LR 16 49 48.4
comp=Z,13µm,18.0s
TXAR Lajitas Array 111.24 42 Pdiff **Pdif 16 05 19.6 +1.1**
comp=Z,0.3nm,0.9s,baz=338,slow=16,SNR=2.7
TXAR PKiKP **PKiKP 16 09 14.4 -2.9**
comp=Z,0.7nm,0.6s,baz=260,slow=0.5,SNR=6.1
TXAR PKKPbc **PKKPbc 16 20 12.1 -1.1**
comp=Z,0.5nm,1.0s,baz=138,slow=7.2,SNR=2.6
LOOK Love County 111.39 34 IAMs_20 IAMs_20 17 02 35.1
comp=Z,8µm,18.0s
HPIG 111.67 45 IAMs_20 IAMs_20 17 04 41.0
comp=Z,6µm,20.0s
FW03 Perrin-Whitt E 111.67 35 IAMs_20 IAMs_20 17 04 28.8
comp=Z,7µm,19.0s
FW06 Azle 111.99 35 IAMs_20 IAMs_20 17 05 47.2
comp=Z,8µm,18.0s
FW07 Weatherford 112.08 35 IAMs_20 IAMs_20 17 04 44.6
comp=Z,7µm,18.0s
JCT Junction City 112.67 38 IAMs_20 IAMs_20 17 07 02.8
comp=Z,8µm,20.0s
JCT Junction City 112.67 38 PKiKP **PKiKP 16 09 20.7 +0.7**
baz=319
MIAR Mount Ida 112.72 31 IAMs_20 IAMs_20 17 02 37.7
comp=Z,10µm,20.0s
WHTX Lake Whitney, 112.81 36 IAMs_20 IAMs_20 17 04 39.9
comp=Z,6µm,20.0s
X40A Basin Creek Fa 113.12 31 IAMs_20 IAMs_20 17 03 35.4
comp=Z,9µm,19.0s
435B Jarrell 113.67 37 IAMs_20 IAMs_20 17 03 56.0
comp=Z,7µm,20.0s
WVT Waverly 113.89 26 PKiKP **PKiKP 16 09 21.3 -0.8**
baz=331
EF01 Eagle Ford 01 114.50 38 IAMs_20 IAMs_20 17 04 06.2
comp=Z,8µm,20.0s
833A Chaparral WMA, 114.53 40 IAMs_20 IAMs_20 17 08 53.0
comp=Z,9µm,21.0s
833A Chaparral WMA, 114.53 40 PKiKP **PKiKP 16 09 22.4 -1.1**
baz=319
PLAL Pickwick Lake 114.78 27 IAMs_20 IAMs_20 17 02 45.9
comp=Z,9µm,20.0s
735A Kenedy 115.03 38 IAMs_20 IAMs_20 17 04 27.2
comp=Z,8µm,20.0s
ZAIG Zacatecas 116.57 46 IAMs_20 IAMs_20 17 04 10.2
comp=Z,7µm,22.0s
LRAL Lakeview Retre 116.92 27 PKiKP **PKPdf 16 09 27.1 -0.9**
baz=331
GOGA Godfrey 117.97 24 PKiKP **PKiKP 16 09 29.9 -0.1**
baz=334
BRAL Brewton 118.51 28 IAMs_20 IAMs_20 17 10 57.6
comp=Z,8µm,18.0s
DBIC Dimbokro 119.61 293 PKPdf **PKPdf 16 09 31.8 -1.8**
DBIC Dimbokro 119.61 293 PKP **PKPdf 16 09 30.4 -3.2**
comp=Z,6.1nm,0.7s,baz=76,slow=3.5,SNR=5.7
DBIC PKKPbc **PKKPbc 16 19 43.0 -0.6**
comp=Z,3.7nm,0.9s,baz=127,slow=5.1,SNR=1.9
MOIG Morelia 119.64 48 IAMs_20 IAMs_20 17 09 32.6
comp=Z,6µm,20.0s
KIC Kosan Boka 119.68 293⇑ *e*P **PKPdf 16 09 32.0 -1.7**
comp=Z,18nm,0.9s
TIC Toumodi 119.76 294⇑ *e*P **PKiKP 16 09 34.6 +0.6**
comp=Z,16nm,0.8s
LIC Lamto 119.99 293⇑ *e*P **PKPdf 16 09 33.2 -1.1**
comp=Z,32nm,0.9s
UNM Universidad Na 121.23 46 IAMs_20 IAMs_20 17 03 55.6
comp=Z,5µm,21.0s
TROLL Troll, Antarti 121.65 199 ⇑PKPdf **PKPdf 16 09 35.0 -1.0**
comp=Z,821nm,0.8s
TLIG Tlapa 122.89 47 IAMs_20 IAMs_20 17 10 42.7
comp=Z,5µm,19.0s
SNAA Sanae 123.33 198 IAMs_20 IAMs_20 16 59 17.3
comp=Z,9µm,21.0s
SNAA Sanae 123.33 198 PKP **PKPdf 16 09 36.7 -2.4**
comp=Z,2.6nm,0.9s,baz=77,slow=14,SNR=1.3
VNA2 Neumayer--Watz 124.98 198 ⇑PKPdf **PKPdf 16 09 40.8 -1.4**
comp=Z,25nm,0.6s,baz=122,slow=2.9
BELA Belgrano 2 125.03 186 PKPdf **PKPdf 16 09 41.9 -0.3**
BELA IAMs_20 IAMs_20 17 04 52.4
comp=Z,9µm,21.0s
VNA3 Neumayer Olymp 125.44 197 ⇓PKPdf **PKPdf 16 09 41.5 -1.6**
comp=Z,10.0nm,0.7s
TEIG Tepich 127.12 36 IAMs_20 IAMs_20 17 12 20.7
comp=Z,8µm,22.0s
CCIG Comitan 127.99 43 IAMs_20 IAMs_20 17 17 24.1
comp=Z,7µm,21.0s
PETF Flores 128.87 40 IAMs_20 IAMs_20 17 15 56.1
comp=Z,8µm,20.0s
RTAL Retalhuleu 129.59 44 IAMs_20 IAMs_20 17 11 29.8
comp=Z,4µm,20.0s
ESQI Esquipulas 131.02 41 IAMs_20 IAMs_20 17 12 03.3
comp=Z,7µm,22.0s
MTO3 Montecristo 131.14 42 IAMs_20 IAMs_20 17 18 36.4
comp=Z,6µm,20.0s
SNET Serv Nac Est T 131.77 42 IAMs_20 IAMs_20 17 18 09.1
comp=Z,7µm,22.0s
TGUH Tegucigalpa,Un 132.65 40 IAMs_20 IAMs_20 17 15 51.1
comp=Z,4µm,22.0s
MTDJ Mount Denham 133.91 26 IAMs_20 IAMs_20 17 18 01.4
comp=Z,8µm,20.0s
BOAB BOACO BROADBA 134.87 39 PKP **PKiKP 16 10 05.4 +1.3**
ASCN Ascension 135.05 283 IAMs_20 IAMs_20 17 14 05.4
comp=Z,7µm,21.0s
ACON Acoyapa 135.54 39 *e*P **PKiKP 16 10 06.7 +1.3**
ORTG Ortega, Santa 136.65 41 IAMs_20 IAMs_20 17 22 10.2
comp=Z,7µm,21.0s
COVE Coope Vega, Sa 136.98 39 IAMs_20 IAMs_20 17 22 08.0
comp=Z,4µm,21.0s
JTS Las Juntas de 137.00 40 IAMs_20 IAMs_20 17 18 35.6
comp=Z,5µm,20.0s
ARE1 Arenal 1 137.01 40 IAMs_20 IAMs_20 17 21 17.6
comp=Z,5µm,20.0s
LCR2 La Lucha 2 138.00 40 IAMs_20 IAMs_20 17 22 32.9
comp=Z,7µm,21.0s
SEUS St. Eustatius 138.39 7 IAMs_20 IAMs_20 17 18 51.4
comp=Z,7µm,20.0s
BRU2 Volcan 139.52 39 IAMs_20 IAMs_20 17 22 40.2
comp=Z,7µm,21.0s
CDITO Canoas 139.60 39 IAMs_20 IAMs_20 17 22 47.2
comp=Z,7µm,21.0s
GDSD La Dsirade Is 139.73 4 IAMs_20 IAMs_20 17 14 12.6
comp=Z,8µm,22.0s
BCIP Isla Barro Col 140.79 35 IAMs_20 IAMs_20 17 24 48.7
comp=Z,7µm,21.0s
PAYG Puerto Ayora 141.21 58 IAMs_20 IAMs_20 17 07 28.9
comp=Z,6µm,20.0s
MPOM Morne Pois Mar 141.59 4 IAMs_20 IAMs_20 17 14 57.0
comp=Z,7µm,22.0s
AZU Azuero 141.70 37 *e*P **PKPdf 16 10 15.2 0.0**
CACAO El Cacao, Vera 141.74 38 *e*P **PKPdf 16 10 15.2 -0.1**
CRJC Cerrejon, Guaj 142.28 24 *e*P **PKPdf 16 10 13.1 -3.3**
SJCC San Jacinto, C 142.38 28 *e*P **PKPdf 16 10 13.1 -3.4**
HATO Hato, Curacao 142.45 17 IAMs_20 IAMs_20 17 18 50.6
comp=Z,5µm,20.0s
ARGC Ariguani, Magd 142.80 27 *e*P **PKiKP 16 10 19.4 -0.9**
APAC Apartado, Choc 143.50 32 *e*P **PKiKP 16 10 21.6 -0.2**
PTAC Punta Ardita, 143.55 34 *e*P PKPab 16 10 11.0 -3.9
GRGR Grenville 143.82 6 IAMs_20 IAMs_20 17 20 04.3
comp=Z,5µm,20.0s
UREC San Jos de Ur 144.12 30 *e*P **PKPab 16 10 13.1 -4.0**
DBBC Dabeiba 144.45 32 *e*P **PKPab 16 10 15.2 -3.1**
OCAC Ocana 144.65 26 *e*P **PKPab 16 10 15.2 -3.9**
SDV Santo Domingo 145.05 22 **PKPbc 16 10 18.8 -1.9**
SDV IAMs_20 IAMs_20 17 17 54.1
comp=Z,7µm,22.0s
SDV Santo Domingo 145.05 22 *e*P **PKPbc 16 10 19.1 -1.6**
SDV Santo Domingo 145.05 22 *e*P **PKPbc 16 10 17.3 -3.3**
PCRV Puerto La Cruz 145.36 11 PKPbc **PKPbc 16 10 18.7 -2.8**
comp=Z,35nm,0.6s,baz=13,slow=4.8,SNR=12
CBOC Ciudad Bolivar 145.55 32 *e*P **PKPdf 16 10 21.6 -0.6**
PIZC Pizarro, Choco 145.63 35 *e*P **PKPdf 16 10 15.2 -6.9**
PTBC PUERTO BERRIO 145.69 29 *e*P **PKPdf 16 10 19.4 -2.8**
PAMC Pamplona, Colo 145.71 26 *e*P **PKPdf 16 10 21.6 -1.3**
BAUV El Baul 145.79 17 PKPdf **PKPdf 16 10 20.7 -1.7**
BARC Barichara 146.19 27 *e*P **PKPdf 16 10 21.6 -1.8**
PLMC San Jos del P 146.24 34 *e*P **PKPbc 16 10 23.7 -0.6**
GUY2C Guyana, Caldas 146.42 32 *e*P **PKPdf 16 10 21.6 -2.5**
MALC Bahia Malaga 146.44 36 *e*P **PKPdf 16 10 19.4 -4.1**
SPBC San Pablo de B 146.64 30 *e*P **PKPdf 16 10 19.4 -4.5**
SPBC *e*P **pPKPdf 16 10 27.9 -0.4**
GR1C Gorgona, Isla 146.82 38 *e*P **PKPbc 16 10 25.8 -0.1**
YOTC Yotoco, Valle 146.99 35 *e*P **PKPbc 16 10 25.8 -0.7**
ROSC El Rosal 147.25 31 PKPbc **PKPdf 16 10 24.2 -1.2**
comp=Z,41nm,0.7s,baz=350,slow=3.8,SNR=39
ROSC El Rosal 147.25 31 *e*P **PKPbc 16 10 27.9 +0.3**
JAMC Jamundi, Valle 147.47 36 *e*P **PKPbc 16 10 27.9 -0.1**
JAMC *e*P **PKPbc 16 10 27.9 -0.1**
ORTC Ortega, Tolima 147.61 33 *e*P **PKPdf 16 10 21.6 -4.0**
CVER Cruz Verde, Cu 147.64 30 *e*P **PKiKP 16 10 30.1 -0.8**
PRAC Prado 147.96 33 *e*P **PKiKP 16 10 30.1 -1.0**
POPC Popayan, Colom 148.03 37 *e*P **PKPdf 16 10 25.8 -0.7**
BBAC Balboa, Cauca 148.14 38 *e*P **PKPdf 16 10 27.9 +1.3**
VILC Villavicencio, 148.18 38 *e*P **PKPbc 16 10 30.1 +0.3**
BETC Betania 148.56 34 *e*P **PKiKP 16 10 32.2 -0.1**
PAC1 Pacto, Paraso 148.64 42 *e*P **PKPab 16 10 36.4 +1.9**
CRUC La Cruz 148.68 38 *e*P **PKPbc 16 10 30.1 -1.3**
CMBC Cumbal 148.69 40 *e*P **PKiKP 16 10 32.2 -0.8**
GCUF Volcan Galeras 148.73 39 *e*P **PKPbc 16 10 30.1 -1.7**
PTGC Puerto Gaitan, 148.79 27 *e*P **PKPdf 16 10 27.9 +0.5**
CUSE Cuicocha Este 148.85 42 *e*P **PKiKP 16 10 34.3 +0.9**
OTAV Otavalo 148.87 42 PKPab **PKiKP 16 10 33.9 +0.5**
OTAV Otavalo 148.87 42 IAMs_20 IAMs_20 17 32 11.3
comp=Z,6µm,21.0s
OTAV Otavalo 148.87 42 PKP2 **PKiKP 16 10 33.9 +0.5**
OTAV MLR MLR
comp=Z,6µm,21.0s
OTAV Otavalo 148.87 42 *e*P **PKPdf 16 10 27.5 -0.6**
OTAV Otavalo 148.87 42 *e*P **PKPbc 16 10 30.1 -2.0**
TULM Tulcn-Chalpat 148.89 40 IAMs_20 IAMs_20 17 22 35.6
comp=Z,5µm,21.0s
TULM Tulcn-Chalpat 148.89 40 *e*P **PKPdf 16 10 27.9 -0.3**
GARC Garzon, Huila 148.96 35 *e*P **PKPbc 16 10 30.1 -1.9**
SALI Salinas 149.05 49 IAMs_20 IAMs_20 17 28 55.3
comp=Z,4µm,20.0s
BONI La Bonita 149.25 40 *e*P **PKPdf 16 10 30.1 +1.6**
PIAT Ana Tenorio 149.95 43 *e*P **PKiKP 16 10 36.4 +0.8**
COHC Cochancay 150.43 46 *e*P **PKPdf 16 10 32.2 +2.2**
MDP Montagnes des 150.45 349 PKPbc **PKPbc 16 10 32.6 -2.7**
comp=Z,9.8nm,0.5s,baz=38,slow=1.3,SNR=7.7
ARNL Arenillas 150.67 49 IAMs_20 IAMs_20 17 25 24.2
comp=Z,4µm,21.0s
GO09 Cerro Castillo 150.80 162 **PKPbc 16 10 34.5 -0.5**
PTLC Puerto Leguiza 151.02 36 *e*P **PKPbc 16 10 36.4 -0.3**
MCRA Macar, Loja 151.33 50 **PKPbc 16 10 36.2 -1.3**
MCRA Macar, Loja 151.33 50 *e*P **PKPdf 16 10 30.1 -1.4**
BOSC San Juan Bosco 151.44 46 **PKPbc 16 10 35.9 -2.0**
RCBR Riachuelo 151.84 307 PKPbc **PKPbc 16 10 36.2 -2.4**
comp=Z,25nm,0.9s,baz=51,slow=4.8,SNR=6.1
RCBR PKPab **sPKPbc 16 10 45.3 +0.9**
comp=Z,43nm,0.8s,baz=348,slow=6.4,SNR=9.0
RCBR Riachuelo 151.84 307 *e*P **PKPdf 16 10 31.8 -0.4**
EFI East Falkland 152.48 180 IAMs_20 IAMs_20 17 14 38.1
comp=Z,5µm,22.0s
GO08 Villa O'Higgin 153.20 159 **PKPbc 16 10 39.9 -0.6**
BOAV Boa Vista 153.56 5 **PKPbc 16 10 40.8 -1.6**
BOAV Boa Vista 153.56 5 *e*P **PKPdf 16 10 34.5 -0.2**
BOAV Boa Vista 153.56 5 *e*P **PKiKP 16 10 42.8 +0.3**
MCPB Macapa, AP 155.63 345 *e*P **PKPdf 16 10 38.9 +1.3**
TBTG Tabatinga, AM 157.23 31 *e*P **PKPdf 16 10 39.0 -0.6**
MALB Monte Alegre 157.53 349 *e*P **PKPdf 16 10 41.6 +1.6**
LL06 Loncomilla 157.90 148 IAMs_20 IAMs_20 17 34 58.0
comp=Z,6µm,21.0s
TEFE Tefe 158.61 18 *e*P **PKPdf 16 10 41.4 +0.1**
CZSB Cruzeiro do Su 158.63 43 *e*P **PKPdf 16 10 41.1 -0.2**
NNA Nana 158.65 59 IAMs_20 IAMs_20 17 35 44.2
comp=Z,6µm,22.0s
MACA Manacapuru-AM 159.04 7 *e*P **PKPdf 16 10 40.5 -1.3**
VA04 Juan Fernndez 159.68 122 IAMs_20 IAMs_20 17 28 31.0
comp=Z,5µm,19.0s
ITTB Itaituba 160.22 353 *e*P **PKPdf 16 10 42.9 -0.3**
PLCA Paso Flores 160.49 151 PKP **PKPdf 16 10 39.0 -3.8**
comp=Z,3.2nm,1.1s,baz=357,slow=6.9,SNR=2.2
PLCA PKPab **PKPab 16 11 21.2 -2.7**
comp=Z,3.3nm,0.9s,baz=222,slow=4.9,SNR=3.3
GUA01 Guaratinga, BA 161.15 290 *e*P **PKPdf 16 10 44.1 +0.1**
RIB01 Linhares ES 162.72 283 *e*P **PKPdf 16 10 45.4 -0.3**
SDBA SAO DESIDERIO 162.79 310 *e*P **PKPdf 16 10 45.8 -0.1**
NPGB Novo Progresso 162.80 350 *e*P **PKPdf 16 10 44.8 -1.2**
ALF01 Guarapari-ES 163.40 279 *e*P **PKPdf 16 10 46.0 -0.3**
ETMB Extrema 163.89 29 *e*P **PKPdf 16 10 45.5 -1.4**
JANB Januaria 164.07 302 *e*P **PKPdf 16 10 46.3 -0.8**
SAML Samuel 164.21 18 *e*P **PKPdf 16 10 47.0 -0.2**
DIAM Diamantina, MG 165.21 290 *e*P **PKPdf 16 10 50.9 +2.8**
SNDB Serra Nova Dou 166.23 330 *e*P **PKPdf 16 10 48.1 -0.8**
CLDB Colider 166.62 349 *e*P **PKPdf 16 10 48.7 -0.5**
BDFB Brasilia 167.19 309 PKP **PKPdf 16 10 47.0 -2.7**
comp=Z,4.0nm,0.8s,baz=87,slow=4.3,SNR=2.4
BDFB PKPab **PKPab 16 11 51.4 -2.6**
comp=Z,4.4nm,0.6s,baz=35,slow=7.0,SNR=1.5
PDRB Porto dos Gac 167.48 353 *e*P **PKPdf 16 10 49.9 +0.1**
VILB Vilhena 168.75 10 *e*P **PKPdf 16 10 51.5 +0.9**
PB14 IPOC Station P 168.93 95 PKP **PKPdf 16 10 52.8 +1.9**
PB07 IPOC Station P 169.04 80 PKP **PKPdf 16 10 53.9 +3.0**
PB08 IPOC Station P 169.17 71 PKP **PKPdf 16 10 53.1 +1.8**
PET01 Itanhaem-SP 169.96 267 *e*P **PKPdf 16 10 50.5 -0.7**
LVC Limon Verde 170.11 83 *e*P **PKPdf 16 10 53.1 +1.3**
PLTB Pedras Altas 171.34 207 *e*P **PKPdf 16 10 50.9 -0.8**
PTLB Pontes e Lacer 171.34 6 *e*P **PKPdf 16 10 51.7 -0.4**
SALV Santo Antonio 171.48 343 *e*P **PKPdf 16 10 52.1 0.0**
CNLB Canela 171.59 230 *e*P **PKPdf 16 10 51.7 -0.3**
TBOT Tacuaremb 172.18 195 *e*P **PKPdf 16 10 52.6 +0.6**
CPSB Cacapava Do Su 172.40 213 *e*P **PKPdf 16 10 52.3 +0.1**
BBSD Serra de San D 172.77 18 *e*P **PKPdf 16 10 53.2 +0.5**
PP1B Ponte de Pedra 172.78 333 *e*P **PKPdf 16 10 52.3 -0.4**
PSAL Palomas, Salto 173.03 185 *e*P **PKPdf 16 10 52.9 +0.5**
PCMB Pacaembu 173.07 290 *e*P **PKPdf 16 10 53.2 +0.4**
RODS Rosario do Sul 173.21 203 *e*P **PKPdf 16 10 53.1 +0.7**
ALGR Alto Alegre (B 173.38 224 *e*P **PKPdf 16 10 53.5 +0.7**
LDASE Londrina, Braz 173.41 275 *e*P **PKPdf 16 10 53.5 +0.6**
ITAB Concordia 173.65 239 *e*P **PKPdf 16 10 54.7 +1.9**
BBRB Robore, Bolivi 174.02 14 *e*P **PKPdf 16 10 53.5 +0.3**
RVDE Rio Verde (Bra 174.06 328 *e*P **PKPdf 16 10 52.0 -1.2**
ITQB Itaqui 174.27 195 *e*P **PKPdf 16 10 52.3 -0.6**
UNIS Unistalda (Bra 174.29 209 *e*P **PKPdf 16 10 53.5 +0.5**
RPRD Ribas do Rio P 174.43 310 *e*P **PKPdf 16 10 53.1 -0.2**
FRBT Francisco Belt 174.92 248 *e*P **PKPdf 16 10 52.9 -0.4**
AQDB Aquidauana 175.67 326 *e*P **PKPdf 16 10 52.9 -0.7**
VACA Villa Angela C 175.86 149 *e*P **PKPdf 16 10 53.8 +0.4**
BDQN Bodoquena, MS 176.09 339 *e*P **PKPdf 16 10 53.5 -0.2**
ANTJ Antonio Joao (177.03 315 *e*P **PKPdf 16 10 53.5 -0.4**
TICA Tres Isletas 177.04 140 *e*P **PKPdf 16 10 53.5 -0.2**
CPUP Villa Florida 177.63 201 PKP **PKPdf 16 10 51.6 -2.2**
comp=Z,8.0nm,1.2s,baz=295,slow=2.5,SNR=3.7
CPUP PKPab **pPKPab 16 12 42.7 -1.3**
comp=Z,12nm,1.2s,baz=143,slow=6.4,SNR=3.4

TAP 06 15:52:32.8,24°03N×121°59E,h8km,ML4.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.05**	**7**	P	Pg	15 52 34.8	+0.4
	baz=15						
TWD				S	Sg	15 52 36.6	+1.0
	baz=15						
ETM	**Tongmen**	**0.11**	**233**	P	Pg	15 52 35.8	+0.5
	baz=232						
ETM				S	Sg	15 52 37.6	+0.6
	baz=232						
ETL	**Fush Village**	**0.13**	**14**	*e*P	Pg	15 52 36.3	+0.7
	baz=13						
ETL				*e*S	Sg	15 52 39.1	+1.6
	baz=13						
NACB	**Ninganchiao**	**0.14**	**2**	*e*P	Pg	15 52 35.6	-0.1
	baz=1.0						
NACB				*e*S	Sg	15 52 39.5	+1.7
	baz=1.0						
LXIB	**Xiulin Townshi**	**0.16**	**266**	*e*P	Pg	15 52 36.7	+0.5
	baz=265						
LXIB				S	Sg	15 52 40.5	+1.9
	baz=265						
SHUL	**Shoufeng**	**0.25**	**186**	*e*P	Pg	15 52 38.5	+0.9
	baz=185						
SHUL				*e*S	Sg	15 52 43.5	+2.6
	baz=185						
ESL	**Shilin**	**0.26**	**213**	*e*P	Pg	15 52 38.4	+0.4
	baz=211						
ESL				*e*S	Sg	15 52 41.9	+0.5
	baz=211						
WHF	**Hehuan Shan**	**0.32**	**291**	P	Pb	15 52 40.1	-0.9
	baz=290						
WHF				S	Sb	15 52 45.2	-1.2
	baz=290						
EAHA	**Aohua**	**0.33**	**25**	*e*P	Pg	15 52 39.7	+0.5
	baz=24						
TEGC	**Jichi Village**	**0.33**	**188**	P	Pb	15 52 40.5	-0.4
	baz=186						
TEGC				*e*S	Sb	15 52 46.1	-0.2
	baz=186						
WARBT	**Fenglin Townsh**	**0.36**	**211**	P	Pb	15 52 40.9	-0.7
	baz=210						
CHGB	**Renai**	**0.38**	**274**	P	Pb	15 52 41.4	-0.6
	baz=274						
CHGB				*e*S	Sb	15 52 47.8	-0.3
	baz=274						
FUSS	**Fushou**	**0.38**	**304**	*e*P	Pb	15 52 41.6	-0.3
	baz=304						
ENA	**Nanau**	**0.42**	**19**	*e*P	Pg	15 52 41.4	+0.5
	baz=20						
WUSB	**Renai**	**0.43**	**265**	P	Pb	15 52 42.4	-0.4
	baz=264						
WUSB				S	Sb	15 52 49.2	-0.3
	baz=264						
NNSB	**Datong**	**0.44**	**334**	P	Pb	15 52 42.6	-0.3
	baz=334						
NNSB				S	Sb	15 52 49.2	-0.4
	baz=334						
NNSH	**Datong**	**0.44**	**334**	*e*P	Pb	15 52 42.4	-0.5
	baz=334						
NNSH				S	Sb	15 52 49.2	-0.5
	baz=334						
EWUT	**Wuta**	**0.45**	**23**	*e*P	Pg	15 52 42.1	+0.7
	baz=22						
NNS	**Nan Shan**	**0.45**	**334**	P	Pb	15 52 43.0	-0.1
	baz=334						
NNS				*e*S	Sb	15 52 49.3	-0.8
	baz=334						

TAP 06 15:53:31.9,23°97N×121°58E,h7km,ML3.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	**Tongmen**	**0.08**	**266**	*i* P	Pg	15 53 34.7	+0.8
	baz=266						
ETM				*i* S	Sg	15 53 36.3	+1.0
	baz=266						
TWD	**Chiawan**	**0.11**	**6**	*e*P	Pg	15 53 35.2	+0.9
	baz=10.0						
TWD				*e*S	Sg	15 53 37.0	+1.0
	baz=10.0						
LXIB	**Xiulin Townshi**	**0.16**	**288**	P	Pg	15 53 36.2	+0.9
	baz=288						
LXIB				S	Sg	15 53 39.5	+1.8
	baz=288						
SHUL	**Shoufeng**	**0.18**	**186**	P	Pg	15 53 36.7	+1.1
	baz=185						
ETL	**Fush Village**	**0.19**	**11**	*e*P	Pg	15 53 36.9	+1.1
	baz=11						
ETL				*e*S	Sg	15 53 40.0	+1.6
	baz=11						
NACB	**Ninganchiao**	**0.20**	**3**	P	Pg	15 53 36.5	+0.6
	baz=3.0						
ESL	**Shilin**	**0.21**	**221**	P	Pg	15 53 36.5	+0.5
	baz=219						
ESL				*e*S	Sg	15 53 39.5	+0.7
	baz=219						
TEGC	**Jichi Village**	**0.26**	**189**	*e*P	Pb	15 53 38.6	-0.4
	baz=187						
WARBT	**Fenglin Townsh**	**0.31**	**216**	*e*P	Pg	15 53 38.4	+0.4
	baz=215						
WHF	**Hehuan Shan**	**0.34**	**301**	P	Pb	15 53 39.8	-0.7
	baz=301						
WHF				S	Sb	15 53 44.9	-1.4
	baz=301						
OWD	**Renai**	**0.37**	**268**	*e*P	Pb	15 53 40.7	-0.2
	baz=267						
CHGB	**Renai**	**0.38**	**283**	*e*P	Pb	15 53 40.8	-0.4
	baz=283						
FUSS	**Fushou**	**0.41**	**312**	*e*P	Pb	15 53 41.3	-0.4
	baz=311						
FUSS				*e*S	Sb	15 53 47.5	-0.8
	baz=311						
WUSB	**Renai**	**0.43**	**273**	*e*P	Pb	15 53 41.6	-0.2
	baz=272						
VWDT	**VWDT**	**0.46**	**242**	*e*P	Pb	15 53 42.1	-0.2
	baz=241						
VWDT				*e*S	Sb	15 53 48.7	-0.6
	baz=241						
TWT	**Tachien**	**0.47**	**307**	*e*P	Pb	15 53 42.6	+0.1
	baz=305						
TWT				*e*S	Sb	15 53 49.9	+0.1
	baz=305						
TDCB	**Techi**	**0.48**	**306**	*e*P	Pb	15 53 42.8	0.0
	baz=305						
NNSB	**Datong**	**0.49**	**338**	*e*P	Pb	15 53 43.1	+0.1
	baz=338						
NNSB				*e*S	Sg	15 53 48.9	+1.1
	baz=338						
NNS	**Nan Shan**	**0.51**	**338**	*e*P	Pb	15 53 42.9	-0.3
	baz=338						
LATG	**Datong**	**0.56**	**355**	*e*P	Pb	15 53 43.9	-0.3
	baz=354						

TAP 06 15:53:40.6,24°07N×121°59E,h7km,ML3.8,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.01**	**35**	*i* P	Pg	15 53 42.4	+0.5
	baz=55						
TWD				*i* S	Sg	15 53 43.6	+0.8
	baz=55						
ETL	**Fush Village**	**0.09**	**19**	P	Pg	15 53 43.3	+0.5
	baz=19						
ETL				S	Sg	15 53 45.2	+0.9
	baz=19						
NACB	**Ninganchiao**	**0.10**	**2**	*i* P	Pg	15 53 43.6	+0.7
	baz=2.0						
NACB				*i* S	Sg	15 53 45.6	+1.1
	baz=2.0						
ETM	**Tongmen**	**0.14**	**220**	P	Pg	15 53 44.0	+0.5
	baz=219						
ETM				S	Sg	15 53 46.4	+0.8
	baz=219						
LXIB	**Xiulin Townshi**	**0.17**	**253**	*e*P	Pg	15 53 45.2	+1.1
	baz=252						
LXIB				S	Sg	15 53 48.2	+1.7
	baz=252						
WHF	**Hehuan Shan**	**0.31**	**284**	*e*P	Pb	15 53 48.1	-0.5
	baz=283						
WHF				*e*S	Sb	15 53 52.8	-1.2
	baz=283						
TEGC	**Jichi Village**	**0.36**	**187**	*e*P	Pb	15 53 49.0	-0.4
	baz=186						
CHGB	**Renai**	**0.38**	**268**	*e*P	Pb	15 53 49.5	-0.3
	baz=268						
ENA	**Nanau**	**0.38**	**21**	*e*P	Pg	15 53 48.2	+0.2
	baz=22						
NNSB	**Dat

TDCB	**Techi** baz=305	**0.43**	**295**	*e*S	Pg	15 53 49.8 +0.7
LATG	**Datong** baz=352	**0.47**	**353**	*e*P	Pb	15 53 50.9 -0.3
NDT	**Datong Townshi** baz=352	**0.53**	**352**	P	Pb	15 53 52.1 -0.1

*JMA **06** 15:53:48.1±0.2,24.0°N±0.0°,3×12°2E±°, h0km, TAIWAN REGION*

TAP 06 15:53:48.0,23.96N×121.60E,h5km,ML5.0,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=270	**0.10**	**272**	P		Pg	Pg	15 53 50.4	+0.3
ETM	baz=270			S			Sg	15 53 52.4	+0.9
TWD	**Chiawan** baz=3.0	**0.12**	**359**	*e*P			Pg	15 53 51.3	+0.8
TWD	baz=3.0			*e*S			Sg	15 53 53.1	+1.0
SHUL	**Shoufeng** baz=191	**0.18**	**191**	*e*P			Pg	15 53 52.2	+0.7
SHUL	baz=191			*e*S			Sg	15 53 56.2	+2.3
LXIB	**Xiulin Townshi** baz=288	**0.18**	**289**	*e*P			Pg	15 53 52.2	+0.6
ETL	**Fush Village** baz=7.0	**0.20**	**6**	P			Pg	15 53 52.4	+0.5
ETL	baz=7.0			*e*S			Sg	15 53 55.6	+1.1
NACB	**Ninganchiao** baz=7.0	**0.21**	**359**	*e*P			Pg	15 53 52.5	+0.3
ESL	**Shilin** baz=224	**0.21**	**226**	P			Pg	15 53 52.4	+0.2
ESL	baz=224			*i* S			Sg	15 53 55.7	+0.7
TEGC	**Jichi Village** baz=191	**0.26**	**192**	*e*P			Pb	15 53 54.6	-0.4
TEGC	baz=191			*e*S			Sb	15 54 00.2	+0.4
WARBT	**Fenglin Townsh** baz=228	**0.31**	**219**	P			Pg	15 53 54.5	+0.5
WARBT	baz=228			S			Sg	15 53 58.6	+0.4
EGFH	**Guangfu** baz=215	**0.33**	**208**	*e*P			Pg	15 53 55.3	+0.9
WHF	**Hehuan Shan** baz=300	**0.36**	**301**	*e*P			Pg	15 53 55.7	+0.7
OWD	**Renai** baz=267	**0.39**	**269**	*e*P			Pg	15 53 55.8	+0.3
CHGB	**Renai** baz=283	**0.40**	**284**	*e*P			Pg	15 53 56.6	+0.8
FUSS	**Fushou** baz=324	**0.43**	**311**	*e*P			Pg	15 53 57.1	+0.7
FUSS	baz=324			*e*S			Sb	15 54 03.6	-1.4
WUSB	**Renai** baz=274	**0.44**	**274**	*e*P			Pb	15 53 57.5	-0.8
WUSB	baz=274			*e*S			Sg	15 54 03.7	+1.3
VWDT	**VWDT** baz=242	**0.47**	**244**	*e*P			Pb	15 53 58.0	-0.7
ENA	**Nanau** baz=20	**0.48**	**16**	*e*P			Pg	15 53 57.6	+0.3
TWT	**Tachien** baz=305	**0.48**	**307**	*e*P			Pb	15 53 58.3	-0.7
HGSD	**Ruisui** baz=205	**0.49**	**199**	*e*P			Pb	15 54 00.1	+1.0
TDCB	**Techi** baz=305	**0.50**	**306**	*e*P			Pg	15 53 58.3	+0.7
NNSB	**Datong** baz=351	**0.51**	**337**	P			Pg	15 53 58.2	+0.5
NNSH	**Datong** baz=350	**0.51**	**337**	P			Pg	15 53 58.3	+0.6
EWUT	**Wuta** baz=23	**0.51**	**19**	*e*P			Pg	15 53 58.0	+0.2
NNS	**Nan Shan** baz=351	**0.52**	**337**	P			Pg	15 53 58.5	+0.5
EHY	**Hungye** baz=206	**0.52**	**209**	*e*P			Pg	15 53 58.2	+0.2
LATG	**Datong** baz=342	**0.57**	**353**	*e*P			Pb	15 54 00.1	-0.5
WPL	**Puli Township** baz=274	**0.59**	**275**	*e*P			Pg	15 53 59.8	+0.4
SSLB	**Suanglung** baz=254	**0.61**	**254**	P			Pg	15 54 00.4	+0.5
SSLB	baz=254			*e*S			Sg	15 54 08.2	+0.4
DPDB	**Guoxing** baz=275	**0.62**	**277**	*e*P			Pb	15 54 00.8	-0.5
YULB	**Yu-li** baz=214	**0.63**	**206**	*e*P			Pb	15 54 01.0	-0.5
WCS	**Beigang Elemen** baz=278	**0.64**	**279**	*e*P			Pb	15 54 01.1	-0.4
NDT	**Datong Townshi** baz=343	**0.64**	**353**	*e*P			Pg	15 54 01.0	+0.7
NDT	baz=343			*e*S			Sb	15 54 10.0	-0.9
SMLT	**Sun Moon Lake** baz=263	**0.65**	**263**	P			Pg	15 54 00.8	+0.5
SMLT	baz=263			S			Sg	15 54 09.7	+0.9
ESAO	**Su ao** baz=23	**0.65**	**20**	*e*P			Pg	15 54 01.1	+0.6
ECBN	**Changbin** baz=176	**0.66**	**192**	*e*P			Pb	15 54 01.7	-0.2
EYUL	**Yuli** baz=210	**0.66**	**203**	*e*P			Pg	15 54 01.2	+0.5
TWF1	**Yuli** baz=211	**0.67**	**205**	*e*P			Pb	15 54 01.5	-0.6
WHP	**Taichung City** baz=289	**0.68**	**298**	P			Pb	15 54 01.9	-0.4
WHP	baz=289			*e*S			Sb	15 54 12.6	+0.6
ENTT	**Nioudou**	**0.68**	**357**	*e*P			Pb	15 54 01.7	-0.5
NDS	**Dongshan** baz=9.0	**0.68**	**9**	*e*P			Pg	15 54 01.3	+0.3
NDS	baz=9.0			*e*S			Sb	15 54 10.9	-1.0
TYC	**Yuchr** baz=266	**0.68**	**265**	*e*P			Pg	15 54 01.3	+0.3
TYC	baz=266			*e*S			Sg	15 54 10.5	+0.6
TWC	**Suao** baz=20	**0.68**	**19**	*e*P			Pb	15 54 01.9	-0.4
TWC	baz=20			*e*S			Sb	15 54 11.4	-0.7
WHYT	**Xinyi Township** baz=247	**0.73**	**249**	*e*P			Pb	15 54 02.6	-0.6
YHNB	**Yeheng** baz=344	**0.73**	**344**	*e*P			Pb	15 54 02.7	-0.6
YHNB	baz=344			*e*S			Sb	15 54 13.4	-0.2
NSK	**Sanguang** baz=344	**0.74**	**343**	P			Pb	15 54 03.0	-0.5
NSK	baz=344			*e*S			Sg	15 54 12.7	+0.7
TWE	**Neicheng** baz=6.0	**0.76**	**5**	*e*P			Pb	15 54 03.2	-0.5
TWE	baz=6.0			*e*S			Sg	15 54 13.2	+0.8
CHKH	**Chenggong** baz=180	**0.79**	**194**	*e*P			Pb	15 54 04.7	+0.5
FUSB	**Fushanzhiwuyua** baz=360	**0.79**	**359**	*e*P			Pb	15 54 04.2	0.0
FUSB	baz=360			*e*S			Sb	15 54 15.1	-0.3
NFF	**Wufeng Townshi** baz=327	**0.80**	**327**	*e*P			Pg	15 54 03.8	+0.5
WJS	**Zhushan** baz=250	**0.81**	**260**	*e*P			Pn	15 54 05.8	-0.2
NWLT	**Wulai** baz=344	**0.82**	**354**	*e*P			Pb	15 54 04.4	-0.2
WWF	**Wufeng** baz=274	**0.83**	**276**	*e*P			Pn	15 54 06.1	-0.2
WNT	**Mingjian** baz=252	**0.84**	**264**	*e*P			Pb	15 54 05.5	+0.4
WNT1	**Nantou City** baz=254	**0.84**	**266**	*e*P			Pn	15 54 06.4	-0.1
TWQ1	**Liyutan** baz=296	**0.85**	**297**	*e*P			Pn	15 54 06.8	+0.3
ALS	**Alishan** baz=235	**0.85**	**238**	*e*P			Pb	15 54 05.6	+0.2
NSTT	**Nanjuang** baz=321	**0.86**	**321**	*e*P			Pb	15 54 05.5	+0.1
LIOB	**Emei** baz=323	**0.86**	**322**	*e*P			Pb	15 54 06.1	+0.6
CHKT	**Chengkung** baz=180	**0.89**	**194**	*e*P			Pb	15 54 05.5	-0.2
EHD	**Haiduan** baz=204	**0.89**	**204**	*e*P			Pb	15 54 05.5	-0.3
NSY	**Sanyi** baz=301	**0.89**	**301**	*e*P			Pn	15 54 07.3	+0.2
CHN5	**Tsauling** baz=235	**0.92**	**247**	*e*P			Pn	15 54 07.3	-0.3
CHN5	baz=235			*e*S			Sn	15 54 20.9	-0.2
WYL	**Yuanlin Townsh** baz=268	**0.93**	**270**	*e*P			Pn	15 54 07.5	-0.1
ELDTW	**Lidau** baz=212	**0.94**	**215**	*e*P			Pg	15 54 06.1	+0.2
WDJ	**Dajia District** baz=292	**0.96**	**294**	*e*P			Pn	15 54 08.8	+0.8
WCHH	**Zhanghua** baz=275	**0.96**	**277**	*e*P			Pn	15 54 08.1	+0.1
HSN1	**Hsinchu** baz=328	**0.97**	**327**	*e*P			Pn	15 54 08.3	+0.1
NJN	**Zhunan** baz=328	**0.98**	**317**	*e*P			Pn	15 54 08.8	+0.5
SBCB	**Hsinchu** baz=327	**1.00**	**326**	*e*P			Pn	15 54 09.5	+0.9
WDLH	**Douliu** baz=253	**1.01**	**255**	*e*P			Pn	15 54 09.6	+0.9
HSN	**Hsinchu** baz=329	**1.01**	**326**	*e*P			Pn	15 54 09.4	+0.6
TATO	**Taipei** baz=355	**1.01**	**354**	*e*P			Pg	15 54 07.2	-0.3
TATO	baz=355			*e*S			Sb	15 54 21.5	-0.1
TWA	**Mucha** baz=349	**1.01**	**359**	*e*P			Pb	15 54 07.7	-0.3
TWA	baz=349			*e*S			Sg	15 54 20.3	-0.3
TIPB	**Shuangxi** baz=15	**1.03**	**12**	*e*P			Pg	15 54 07.7	0.0
WCKO	**Fanlu** baz=235	**1.05**	**240**	*e*P			Pn	15 54 09.4	0.0
WCKO	baz=235			*e*S			Sn	15 54 24.6	+0.3
TWB1	**Santiao Chiao** baz=15	**1.10**	**19**	*e*P			Pn	15 54 09.8	-0.2
CHN4	**Tsaushan** baz=235	**1.10**	**237**	*e*P			Pn	15 54 10.4	+0.4
TPUB	**Ta-pu** baz=232	**1.11**	**234**	*e*P			Pb	15 54 09.8	+0.3
STYT	**Tauyuan** baz=209	**1.11**	**224**	*e*P			Pn	15 54 10.2	0.0
NWF	**Wu-fen Shan** baz=11	**1.12**	**9**	*e*P			Pn	15 54 10.2	-0.2
WFSB	**Wu-fen Shan** baz=12	**1.12**	**9**	*e*P			Pb	15 54 09.7	0.0
LONT	**Longtian** baz=202	**1.14**	**202**	*e*P			Pg	15 54 08.6	-1.1
RLNB	**Erlin** baz=264	**1.14**	**267**	*e*P			Pn	15 54 11.3	+0.8
TWS1	**Kuangyinshan** baz=355	**1.15**	**352**	*e*P			Pn	15 54 11.3	+0.7
WTP	**Ta-pu** baz=230	**1.15**	**232**	*e*P			Pn	15 54 11.9	+1.1
SXI1	**Grass Mountain** baz=2.0	**1.16**	**13**	*e*P			Pb	15 54 10.3	-0.1
YM01	**YM01** baz=14	**1.18**	**359**	*e*P			Pn	15 54 11.8	+0.7
TWK	**Hsinying** baz=234	**1.23**	**236**	*e*P			Pn	15 54 12.9	+1.1
TWG	**Pinlang** baz=203	**1.23**	**203**	*e*P			Pg	15 54 11.1	-0.5
TWGBT	**Beinan** baz=203	**1.23**	**203**	*e*P			Pg	15 54 10.6	-1.1
CHN1	**Nanshi** baz=239	**1.25**	**232**	*e*P			Pn	15 54 13.4	+1.3
CHN1	baz=239			*e*S			Sn	15 54 31.3	+2.0
SNST	**Tainan City** baz=233	**1.25**	**234**	*e*P			Pn	15 54 13.1	+1.0
SGST	**Jiashian** baz=225	**1.28**	**227**	*e*P			Pn	15 54 12.4	0.0
ICHU	**Yijhu** baz=245	**1.35**	**244**	*e*P			Pg	15 54 14.8	+0.9
YOJ	**Yonaguni jima** baz=68	**1.38**	**69**	*e*P			Pb	15 54 14.1	-0.1
SSHA	**Shanhua** baz=239	**1.46**	**236**	*e*P			Pg	15 54 16.4	+0.5
SCST	**Cishan** baz=210	**1.48**	**224**	*e*P			Pg	15 54 17.6	+1.4
ECL	**Taimali** baz=183	**1.48**	**204**	*e*P			Pg	15 54 16.2	-0.2
SSD	**Sandimen** baz=206	**1.50**	**216**	*e*P			Pb	15 54 16.1	-0.2
TAI1	**Yung-k'ang** baz=237	**1.56**	**234**	*e*P			Pg	15 54 18.3	+0.5
MASBT	**Mashibuluo** baz=202	**1.61**	**214**	*e*P			Pb	15 54 17.9	-0.2
TWKBT	**Hengchun** baz=200	**2.14**	**200**	*e*P			Pb	15 54 26.6	-0.6

TAP 06 15:54:45.2,24.02N×121.60E,h8km,ML4.1,2D,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**353**	*i* P			Pg	15 54 47.8	+0.7
TWD				*i* S			Sg	15 54 49.6	+1.1
ETM	**Tongmen** baz=240	**0.12**	**241**	P			Pg	15 54 48.4	+0.5
ETM	baz=240			S			Sg	15 54 50.5	+0.7
ETL	**Fush Village** baz=7.0	**0.14**	**7**	P			Pg	15 54 49.0	+0.7
ETL	baz=7.0			*e*S			Sg	15 54 51.4	+1.0
NACB	**Ninganchiao** baz=356	**0.15**	**357**	*i* P			Pg	15 54 49.2	+0.7
NACB	baz=356			S			Sg	15 54 51.6	+0.8
LXIB	**Xiulin Townshi** baz=269	**0.17**	**270**	P			Pg	15 54 49.8	+0.8
LXIB	baz=269			*e*S			Sg	15 54 52.8	+1.3
SHUL	**Shoufeng** baz=189	**0.24**	**189**	P			Pg	15 54 51.0	+1.0
SHUL	baz=189			*e*S			Sg	15 54 55.8	+2.6
ESL	**Shilin** baz=215	**0.26**	**217**	P			Pg	15 54 50.6	+0.2
ESL	baz=215			*e*S			Sg	15 54 54.5	+0.5
TEGC	**Jichi Village** baz=189	**0.32**	**191**	P			Pb	15 54 52.8	-0.3
EAHA	**Aohua** baz=22	**0.33**	**22**	*e*P			Pb	15 54 52.6	-0.8
WHF	**Hehuan Shan** baz=291	**0.33**	**292**	P			Pb	15 54 53.0	-0.7
WHF	baz=291			*e*S			Sb	15 54 58.1	-1.2
WARBT	**Fenglin Townsh** baz=213	**0.36**	**213**	*e*P			Pg	15 54 52.8	+0.5
CHGB	**Renai** baz=275	**0.40**	**276**	P			Pb	15 54 54.1	-0.5
OWD	**Renai** baz=260	**0.40**	**260**	P			Pb	15 54 54.0	-0.6
FUSS	**Fushou** baz=304	**0.40**	**304**	P			Pb	15 54 54.4	-0.3
ENA	**Nanau** baz=18	**0.42**	**17**	P			Pg	15 54 54.2	+0.6
WUSB	**Renai** baz=266	**0.45**	**266**	*e*P			Pb	15 54 55.0	-0.4
EWUT	**Wuta** baz=20	**0.45**	**21**	*e*P			Pg	15 54 54.5	+0.5
NNSB	**Datong** baz=333	**0.45**	**334**	*e*P			Pb	15 54 54.8	-0.7
NNSH	**Datong** baz=333	**0.45**	**334**	*e*P			Pb	15 54 54.9	-0.6
TWT	**Tachien** baz=299	**0.45**	**301**	P			Pb	15 54 55.6	0.0
NNS	**Nan Shan** baz=333	**0.47**	**333**	P			Pb	15 54 55.3	-0.5
TDCB	**Techi** baz=299	**0.47**	**300**	P			Pb	15 54 55.6	-0.2
VWDT	**VWDT** baz=237	**0.50**	**238**	*e*P			Pb	15 54 56.3	+0.1
LATG	**Datong** baz=352	**0.52**	**352**	*e*P			Pb	15 54 56.1	-0.5
WPL	**Puli Township**	**0.59**	**269**	⇓P			Pb	15 54 58.1	+0.2
	baz=269								
ENTT	**Nioudou** baz=357	**0.62**	**357**	P			Pb	15 54 58.2	0.0
NDS	**Dongshan** baz=9.0	**0.62**	**9**	P			Pb	15 54 57.8	-0.4
TWC	**Suao** baz=21	**0.63**	**21**	*e*P			Pb	15 54 58.2	-0.2
SSLB	**Suanglung** baz=248	**0.64**	**249**	⇓*i*P			Pb	15 54 58.4	-0.2
YHNB	**Yeheng** baz=342	**0.68**	**342**	P			Pb	15 54 59.7	+0.4

TAP 06 15:54:52.9,24.00N×121.62E,h7km,ML4.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=349	**0.08**	**343**	*i* P			Pg	15 54 55.3	+0.4
TWD	baz=349			*i* S			Sg	15 54 57.0	+0.7
ETM	**Tongmen** baz=254	**0.12**	**254**	P			Pg	15 54 55.9	+0.4
ETM	baz=254			*i* S			Sg	15 54 58.1	+0.7
ETL	**Fush Village** baz=1.0	**0.16**	**0**	P			Pg	15 54 56.4	+0.2
ETL	baz=1.0			S			Sg	15 54 58.8	+0.4
NACB	**Ninganchiao** baz=353	**0.17**	**352**	P			Pg	15 54 56.6	+0.1
NACB	baz=353			S			Sg	15 54 59.2	+0.3
LXIB	**Xiulin Townshi** baz=271	**0.19**	**276**	P			Pg	15 54 57.5	+0.7
LXIB	baz=271			S			Sg	15 55 00.8	+1.3
SHUL	**Shoufeng** baz=192	**0.22**	**195**	P			Pg	15 54 58.5	+1.2
ESL	**Shilin** baz=232	**0.25**	**223**	*e*P			Pg	15 54 58.0	+0.1
ESL	baz=232			*e*S			Sg	15 55 02.7	+1.5
TEGC	**Jichi Village** baz=184	**0.30**	**195**	*e*P			Pb	15 55 00.7	+0.1
EHP	**Heping Village** baz=23	**0.33**	**19**	*e*P			Pg	15 54 59.9	+0.5
EAHA	**Aohua** baz=27	**0.34**	**18**	*e*P			Pb	15 55 01.1	-0.3
EAHA	baz=27			S			Sg	15 55 04.9	+0.7
WARBT	**Fenglin Townsh** baz=224	**0.35**	**218**	*e*P			Pg	15 55 00.4	+0.6
WHF	**Hehuan Shan** baz=295	**0.36**	**294**	*e*P			Pg	15 55 00.3	+0.3
WHF	baz=295			S			Sg	15 55 05.7	+0.9
CHGB	**Renai** baz=278	**0.41**	**278**	*e*P			Pg	15 55 01.8	+0.8
FUSS	**Fushou** baz=306	**0.42**	**306**	*e*P			Pb	15 55 02.1	-0.8
ENA	**Nanau** baz=26	**0.44**	**14**	P			Pg	15 55 01.6	+0.2
ENA	baz=26			*e*S			Sg	15 55 07.5	+0.3
WUSB	**Renai** baz=270	**0.46**	**269**	P			Pg	15 55 02.3	+0.4
WUSB	baz=270			S			Sg	15 55 09.1	+1.2
EWUT	**Wuta** baz=20	**0.47**	**18**	*e*P			Pg	15 55 02.2	+0.3
NNSB	**Datong** baz=334	**0.48**	**333**	*e*P			Pg	15 55 02.2	0.0
NNSB	baz=334			*e*S			Sg	15 55 09.4	+0.9
TWT	**Tachien** baz=301	**0.48**	**302**	P			Pb	15 55 03.1	-0.7
TWT	baz=301			S			Sb	15 55 10.2	-1.0
NNS	**Nan Shan** baz=335	**0.49**	**333**	*e*P			Pg	15 55 02.5	+0.1
NNS	**Nan Shan** baz=333	**0.49**	**333**	*e*S			Pg	15 55 02.2	-0.3
TDCB	**Techi** baz=302	**0.49**	**301**	*e*P			Pg	15 55 03.0	+0.6
TDCB	baz=302			S			Sb	15 55 10.3	-1.2
VWDT	**VWDT** baz=231	**0.51**	**241**	*e*P			Pg	15 55 03.2	+0.5
LATG	**Datong** baz=342	**0.54**	**351**	*e*P			Pg	15 55 03.8	+0.4
EHY	**Hungye** baz=215	**0.56**	**209**	*e*P			Pg	15 55 04.1	+0.3
ESAO	**Su ao** baz=20	**0.61**	**19**	*e*P			Pb	15 55 05.3	-0.5
NDT	**Datong Townshi** baz=342	**0.61**	**351**	*e*P			Pg	15 55 05.1	+0.5
WPL	**Puli Township** baz=272	**0.61**	**271**	P			Pb	15 55 05.6	-0.3
WPL	baz=272			S			Sb	15 55 13.9	-0.8
NDS	**Dongshan** baz=9.0	**0.64**	**8**	*e*P			Pg	15 55 05.3	+0.2
DPDB	**Guoxing** baz=273	**0.64**	**273**	*e*P			Pb	15 55 06.2	-0.2
ENTT	**Nioudou** baz=357	**0.64**	**355**	*e*P			Pg	15 55 05.6	+0.3
ENTT	baz=357			S			Sg	15 55 14.5	+0.9
TWC	**Suao** baz=14	**0.64**	**19**	*e*P			Pb	15 55 05.9	-0.5
SSLB	**Suanglung** baz=263	**0.65**	**251**	*e*P			Pg	15 55 05.6	+0.3
SSLB	baz=263			*e*S			Sg	15 55 14.4	+0.6
WCS	**Beigang Elemen** baz=275	**0.65**	**275**	*e*P			Pb	15 55 06.4	-0.2
SMLT	**Sun Moon Lake** baz=259	**0.67**	**260**	*e*P			Pg	15 55 05.8	0.0
YULB	**Yu-li** baz=206	**0.68**	**206**	*e*P			Pg	15 55 06.3	+0.4
WHP	**Taichung City** baz=294	**0.68**	**294**	*e*P			Pb	15 55 06.8	-0.4
YHNB	**Yeheng** baz=356	**0.70**	**341**	*e*P			Pb	15 55 07.0	-0.5
TYC	**Yuchr** baz=262	**0.71**	**262**	*e*P			Pb	15 55 07.0	-0.5
TWF1	**Yuli** baz=212	**0.71**	**205**	*e*P			Pb	15 55 07.4	-0.2
NSK	**Sanguang** baz=355	**0.71**	**340**	*e*P			Pg	15 55 06.6	0.0
TWE	**Neicheng** baz=357	**0.72**	**3**	*e*P			Pg	15 55 07.1	+0.3
FUSB	**Fushanzhiwuyua** baz=359	**0.76**	**358**	*e*P			Pb	15 55 08.3	-0.2
NWLT	**Wulai** baz=341	**0.78**	**352**	*e*P			Pg	15 55 08.4	+0.4
NSTT	**Nanjuang** baz=319	**0.85**	**318**	*e*P			Pb	15 55 09.9	0.0

TAP 06 15:55:58.6,24.07N×121.61E,h10km,ML3.4,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=344	**0.01**	**315**	*i* P			Pg	15 56 00.9	+0.5
TWD	baz=344			*i* S			Sg	15 56 02.3	+0.7
ETL	**Fush Village** baz=8.0	**0.09**	**9**	P			Pg	15 56 01.8	+0.7
ETL	baz=8.0			S			Sg	15 56 03.4	+0.5
NACB	**Ninganchiao** baz=353	**0.10**	**353**	P			Pg	15 56 02.0	+0.8
NACB	baz=353			*e*S			Sg	15 56 04.0	+0.8
ETM	**Tongmen** baz=225	**0.15**	**226**	*e*P			Pg	15 56 02.3	+0.4
ETM	baz=225			*e*S			Sg	15 56 04.4	+0.2
LXIB	**Xiulin Townshi** baz=254	**0.18**	**255**	P			Pg	15 56 03.5	+0.9
LXIB	baz=254			S			Sg	15 56 06.8	+1.4
ESL	**Shilin** baz=210	**0.30**	**212**	*e*P			Pb	15 56 05.6	-0.5
WHF	**Hehuan Shan** baz=283	**0.32**	**284**	*e*P			Pg	15 56 05.8	+0.5

FUSS	**Fushou** baz=298	**0.38**	**298**	*e*P	Pb	15 56 07.2	-0.4
OWD	**Renai** baz=253	**0.41**	**254**	*e*P	Pb	15 56 07.8	-0.3
LATG	**Datong** baz=350	**0.47**	**351**	*e*P	Pg	15 56 08.4	+0.5

TAP 06 15:56:03.9,24.02N×121.62E,h5km,ML3.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=345	**0.07**	**337**	P	Pg	15 56 05.9	+0.4
TWD	baz=345			*e*S	Sg	15 56 07.3	+0.6
ETM	**Tongmen** baz=246	**0.13**	**246**	P	Pg	15 56 07.2	+0.6
ETM	baz=246			*i* S	Sg	15 56 09.3	+0.9
ETL	**Fush Village** baz=1.0	**0.14**	**360**	*e*P	Pg	15 56 07.2	+0.4
ETL	baz=1.0			S	Sg	15 56 09.2	+0.5
NACB	**Ninganchiao** baz=352	**0.16**	**350**	P	Pg	15 56 07.9	+0.8
NACB	baz=352			S	Sg	15 56 09.7	+0.5
LXIB	**Xiulin Townshi** baz=270	**0.19**	**271**	*e*P	Pg	15 56 07.9	+0.1
ESL	**Shilin** baz=214	**0.27**	**221**	*e*P	Pg	15 56 09.6	+0.5
EHP	**Heping Village** baz=23	**0.31**	**20**	*e*P	Pg	15 56 10.3	+0.4
EHP	baz=23			*e*S	Sg	15 56 13.2	-0.8
TEGC	**Jichi Village** baz=190	**0.32**	**194**	*e*P	Pb	15 56 11.5	-0.5
EAHA	**Aohua** baz=31	**0.33**	**19**	*e*P	Pg	15 56 10.6	+0.3
WHF	**Hehuan Shan** baz=290	**0.35**	**291**	P	Pg	15 56 11.7	+0.8
WHF	**Hehuan Shan** baz=283	**0.35**	**291**	S	Pg	15 56 11.4	+0.6
WARBT	**Fenglin Townsh** baz=214	**0.37**	**216**	*e*P	Pb	15 56 12.4	-0.5
FUSS	**Fushou** baz=318	**0.42**	**303**	*e*P	Pg	15 56 12.9	+0.8
ENA	**Nanau** baz=20	**0.42**	**15**	*e*P	Pg	15 56 12.3	+0.3
EWUT	**Wuta** baz=23	**0.45**	**18**	*e*P	Pg	15 56 13.3	+0.7
NNSB	**Datong** baz=348	**0.46**	**332**	*e*P	Pg	15 56 13.5	+0.6
WUSB	**Renai** baz=264	**0.46**	**267**	P	Pg	15 56 13.6	+0.7
NNS	**Nan Shan** baz=348	**0.48**	**331**	*e*P	Pb	15 56 14.1	-0.7

TAP 06 15:56:50.7,24.09N×121.69E,h8km,ML3.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=268	**0.08**	**266**	P	Pg	15 56 53.3	+0.4
TWD	baz=268			*i* S	Sg	15 56 54.7	+0.3
ETL	**Fush Village** baz=318	**0.09**	**321**	*i* P	Pg	15 56 53.5	+0.4
ETL	baz=318			S	Sg	15 56 55.1	+0.4
NACB	**Ninganchiao** baz=314	**0.12**	**316**	P	Pg	15 56 53.8	+0.3
NACB	baz=314			S	Sg	15 56 55.5	+0.1
ETM	**Tongmen** baz=239	**0.21**	**236**	P	Pg	15 56 55.6	+0.6
ETM	baz=239			S	Sg	15 56 58.7	+0.7
EHP	**Heping Village** baz=10.0	**0.23**	**12**	P	Pg	15 56 55.7	+0.4
EHP	baz=10.0			S	Sg	15 56 59.2	+0.8
EAHA	**Aohua** baz=6.0	**0.25**	**11**	P	Pg	15 56 56.0	+0.3
EAHA	baz=6.0			S	Sg	15 56 59.8	+0.8
LXIB	**Xiulin Townshi** baz=249	**0.26**	**256**	P	Pg	15 56 56.6	+0.7
LXIB	baz=249			*e*S	Sg	15 57 00.1	+0.6
SHUL	**Shoufeng** baz=213	**0.32**	**201**	*e*P	Pb	15 56 59.0	+0.4
SHUL	baz=213			*e*S	Sb	15 57 05.7	+1.8
ENA	**Nanau** baz=6.0	**0.34**	**8**	P	Pg	15 56 57.9	+0.4
ENA	baz=6.0			S	Sg	15 57 02.6	+0.5
ESL	**Shilin** baz=234	**0.36**	**221**	*e*P	Pb	15 56 58.6	-0.6
EWUT	**Wuta** baz=9.0	**0.37**	**13**	P	Pg	15 56 58.4	+0.5
EWUT	baz=9.0			*e*S	Sg	15 57 03.2	+0.4
WHF	**Hehuan Shan** baz=279	**0.39**	**279**	*e*P	Pg	15 56 58.8	+0.3
TEGC	**Jichi Village** baz=202	**0.40**	**200**	*e*P	Pb	15 57 00.0	0.0
FUSS	**Fushou** baz=300	**0.44**	**292**	*e*P	Pb	15 57 00.2	-0.6
NNSB	**Datong** baz=319	**0.44**	**321**	P	Pg	15 57 00.0	+0.7
NNSB	baz=319			S	Sg	15 57 06.1	+0.9
NNSH	**Datong** baz=318	**0.44**	**321**	P	Pg	15 56 59.9	+0.6
NNSH	baz=318			S	Sg	15 57 06.0	+0.9
NNS	**Nan Shan** baz=319	**0.45**	**321**	P	Pg	15 57 00.2	+0.6
NNS	baz=319			*e*S	Sg	15 57 06.3	+0.7
WARBT	**Fenglin Townsh** baz=228	**0.46**	**217**	*e*P	Pb	15 57 00.8	-0.2
CHGB	**Renai** baz=259	**0.47**	**267**	*e*P	Pg	15 57 00.6	+0.7
CHGB	baz=259			*e*S	Sg	15 57 06.9	+0.8
LATG	**Datong** baz=327	**0.47**	**342**	*e*P	Pg	15 57 00.3	+0.4
ESAO	**Su ao** baz=12	**0.51**	**16**	*e*P	Pb	15 57 01.6	-0.2
ESAO	baz=12			*e*S	Sg	15 57 08.2	+0.9
WUSB	**Renai** baz=262	**0.53**	**260**	*e*P	Pb	15 57 01.6	-0.6
NDT	**Datong Townshi** baz=340	**0.54**	**343**	*e*P	Pg	15 57 01.7	+0.5
NDT	baz=340			*e*S	Sb	15 57 09.9	-0.4
TWC	**Suao** baz=7.0	**0.54**	**16**	P	Pb	15 57 02.3	-0.1
TWC	baz=7.0			S	Sg	15 57 09.2	+0.9
NDS	**Dongshan** baz=358	**0.55**	**3**	*e*P	Pg	15 57 01.8	+0.6
NDS	baz=358			S	Sb	15 57 10.1	-0.4
ENTT	**Nioudou** baz=345	**0.56**	**349**	P	Pg	15 57 02.1	+0.5
ENTT	baz=345			S	Sb	15 57 10.0	-1.0
VWDT	**VWDT** baz=232	**0.60**	**237**	*e*P	Pb	15 57 03.5	+0.1
VWDT	baz=232			*e*S	Sb	15 57 13.2	+1.3
TWE	**Neicheng** baz=357	**0.63**	**358**	P	Pg	15 57 02.5	-0.4
TWE	baz=357			S	Sg	15 57 12.1	+0.8
HGSD	**Ruisui** baz=192	**0.64**	**202**	*e*P	Pn	15 57 05.4	-0.6
HGSD	baz=192			*e*S	Sn	15 57 16.8	+0.5
YHNB	**Yeheng** baz=332	**0.65**	**334**	P	Pb	15 57 04.1	-0.2
YHNB	baz=332			S	Sb	15 57 12.7	-0.8
NSK	**Sanguang** baz=331	**0.66**	**333**	P	Pb	15 57 04.1	-0.4
NSK	baz=331			*e*S	Sb	15 57 13.4	-0.4
FUSB	**Fushanzhiwuyua** baz=349	**0.68**	**352**	P	Pg	15 57 04.3	+0.5
FUSB	baz=349			S	Sg	15 57 13.3	+0.7

*IDC **06** 15:57:49.6±10.0,43.44N×102.08E,h0km,mbtmp4.0/3, ML3.2/3,Error ellipse: s-maj=144.2km s-min=37.2km az=159.0*
*NEIC **06** 15:57:50.8±1.5,43.6N±0.2×102.1E±0.2,h15km±8km, mb4.4/2,Error ellipse: s-maj=29.5km s-min=11.7km az=203.0*
ISC 06 15:57:49.5±1.5,43.4N±0.1×102.08E±0.10,h10km,n10, σ1s80/11,Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**5.34**	**33**	Pn	**Pn**	**15 59 07.2**	**-2.3**
SONM	**Songino Array**	**5.34**	**33**	Pn	**Pn**	**15 59 11.7**	**+2.3**
	0.4nm,0.3s,baz=210,slow=17,SNR=5.2						
SONM				Sn	**Sn**	**16 00 12.4**	**+1.3**
	0.7nm,0.3s,baz=232,slow=31,SNR=1.1 10nm,1.0s						
BJT	**Baijiatuau**	**11.07**	**103**	Pn	**Pn**	**16 00 28.4**	**+0.6**
MKAR	**Makanchi Array**	**14.37**	**290**	Pn	**Pn**	**16 01 12.4**	**-0.5**
MKAR	**Makanchi Array**	**14.37**	**290**	Pn	**Pn**	**16 01 15.1**	**+2.1**
	0.2nm,0.3s,baz=101,slow=9.9,SNR=1.0 4.5nm,0.8s						
MAKZ	**Makanchi**	**14.59**	**290**	Pn	**Pn**	**16 01 15.8**	**0.0**
ZAA0	**Zalesovo Array**	**15.47**	**319**	Pn	**Pn**	**16 01 27.5**	**-0.1**
ZAA0	comp=Z,16nm,1.0s			IAmb	IAmb	16 01 35.5	
ZALV	**Zalesovo Beam**	**15.47**	**319**	Pn	**Pn**	**16 01 28.2**	**+0.6**
ZALV	**Zalesovo Beam**	**15.47**	**319**	Pn	**Pn**	**16 01 27.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=119,slow=7.4,SNR=0.9 comp=Z,2.9nm,0.5s						
YAK	**Yakutsk**	**24.70**	**32**	P	**P**	**16 03 07.6**	**-2.8**
YAK	comp=Z,9.7nm,0.7s			IAmb	IAmb	16 03 14.8	

TAP 06 15:58:08.5,24.05N×121.64E,h10km,ML3.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=314	**0.05**	**308**	*i* P	Pg	15 58 10.8	+0.3
TWD	baz=314			*i* S	Sg	15 58 12.1	+0.2
ETL	**Fush Village** baz=351	**0.11**	**352**	P	Pg	15 58 11.6	+0.3
ETL	baz=351			*i* S	Sg	15 58 13.4	+0.1
NACB	**Ninganchiao** baz=349	**0.13**	**341**	*i* P	Pg	15 58 11.9	+0.3
NACB	baz=349			*i* S	Sg	15 58 13.9	+0.2
ETM	**Tongmen** baz=238	**0.16**	**239**	P	Pg	15 58 12.4	+0.4
ETM	baz=238			*e*S	Sg	15 58 15.0	+0.6
LXIB	**Xiulin Townshi** baz=252	**0.21**	**263**	*i* P	Pg	15 58 13.3	+0.4
LXIB	baz=252			S	Sg	15 58 16.7	+0.7
SHUL	**Shoufeng** baz=202	**0.27**	**195**	*e*P	Pb	15 58 15.3	-0.1
EHP	**Heping Village** baz=20	**0.28**	**19**	*e*P	Pb	15 58 15.0	-0.6
EAHA	**Aohua** baz=27	**0.29**	**18**	*e*P	Pg	15 58 15.0	+0.6
EAHA	baz=27			*e*S	Sg	15 58 18.7	+0.3
ESL	**Shilin** baz=227	**0.30**	**219**	*e*P	Pg	15 58 14.8	+0.3
ESL	baz=227			S	Sg	15 58 19.0	+0.4
TEGC	**Jichi Village** baz=182	**0.35**	**195**	*e*P	Pb	15 58 17.1	+0.3
WHF	**Hehuan Shan** baz=285	**0.36**	**286**	P	Pg	15 58 16.4	+0.6
WHF	baz=285			*i* S	Sg	15 58 21.3	+0.8
ENA	**Nanau** baz=15	**0.39**	**14**	*i* P	Pg	15 58 16.5	+0.3
ENA	baz=15			*i* S	Sg	15 58 21.7	+0.4
FUSS	**Fushou** baz=305	**0.41**	**299**	*e*P	Pb	15 58 17.7	-0.3
EWUT	**Wuta** baz=18	**0.41**	**18**	*e*P	Pg	15 58 16.9	+0.3
EWUT	baz=18			S	Sg	15 58 22.4	+0.2
CHGB	**Renai** baz=265	**0.43**	**272**	P	Pb	15 58 17.8	-0.5
NNSB	**Datong** baz=328	**0.45**	**328**	P	Pg	15 58 17.8	+0.5
NNSB	baz=328			S	Sg	15 58 23.9	+0.7
NNS	**Nan Shan** baz=328	**0.46**	**328**	P	Pb	15 58 18.6	-0.2
NNS	baz=328			S	Sg	15 58 24.4	+0.8
TWT	**Tachien** baz=294	**0.47**	**296**	*e*P	Pn	15 58 20.4	-1.0
TWT	baz=294			S	Sb	15 58 25.6	-0.5
TDCB	**Techi** baz=294	**0.49**	**295**	*e*P	Pb	15 58 18.8	-0.4
TDCB	baz=294			S	Sb	15 58 25.6	-0.9
LATG	**Datong** baz=347	**0.50**	**348**	*e*P	Pb	15 58 19.3	0.0
LATG	baz=347			S	Sg	15 58 25.3	+0.5
NDT	**Datong Townshi** baz=340	**0.56**	**348**	*e*P	Pb	15 58 20.2	-0.2
NDS	**Dongshan** baz=14	**0.59**	**7**	*e*P	Pb	15 58 20.5	-0.4
TWC	**Suao** baz=14	**0.59**	**19**	*e*P	Pb	15 58 20.7	-0.2
ENTT	**Nioudou** baz=354	**0.59**	**353**	*e*P	Pb	15 58 20.9	-0.1
ENTT	baz=354			*e*S	Sg	15 58 28.6	+0.7
YHNB	**Yeheng** baz=338	**0.67**	**339**	*e*P	Pg	15 58 21.8	+0.4
YHNB	baz=338			S	Sg	15 58 30.6	+0.5
TWE	**Neicheng** baz=3.0	**0.67**	**2**	*e*P	Pb	15 58 22.5	+0.2
NWLT	**Wulai** baz=339	**0.74**	**350**	*e*P	Pb	15 58 23.5	0.0

*IDC **06** 15:59:16.4±1.0,24.28N×121.25E,h0km,mb3.9/8, mbtmp3.9/8,Error ellipse: s-maj=56.1km s-min=19.7km az=67.0*
*TAP **06** 15:59:19.8,24.10N×121.69E,h8km,ML4.1,C*
*JMA **06** 15:59:20.4±0.2,24.1N±0.4×121.7E±0.6,h0km±2km, TAIWAN REGION*
*NEIC **06** 15:59:20.9±0.8,24.10N±0.02×121.62E±0.04,h8km±3km, mb4.4/2,Error ellipse: s-maj=5.3km s-min=2.2km az=102.0*
ISC 06 15:59:19.5±0.8,24.10N±0.02×121.69E±0.02,h11km±4km, n107,σ1s17/144,mb4.0/10,2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=313	**0.08**	**316**	*i* P	**Pg**	**15 59 22.3**	**+0.3**
ETL	baz=313			*i* S	**Sg**	**15 59 23.9**	**+0.1**
TWD	**Chiawan** baz=259	**0.08**	**256**	*i* P	**Pg**	**15 59 22.2**	**+0.2**
TWD	baz=259			*i* S	**Sg**	**15 59 23.7**	**-0.1**
NACB	**Ninganchiao**	**0.11**	**312**	Pg	**Pg**	**15 59 22.2**	**-0.1**
NACB				Sg	**Sg**	**15 59 24.3**	**-0.1**
NACB	**Ninganchiao** baz=310	**0.11**	**312**	ǁ *i*P	**Pg**	**15 59 22.4**	**+0.1**
NACB	baz=310			*i* S	**Sg**	**15 59 24.3**	**-0.1**
EHP	**Heping Village** baz=11	**0.21**	**14**	P	**Pg**	**15 59 24.7**	**+0.6**
EHP	baz=11			*i* S	**Sg**	**15 59 28.1**	**+1.0**
ETM	**Tongmen** baz=236	**0.22**	**233**	P	**Pg**	**15 59 24.8**	**+0.6**
ETM	baz=236			S	**Sg**	**15 59 27.7**	**+0.4**
EAHA	**Aohua** baz=7.0	**0.23**	**12**	*i* P	**Pg**	**15 59 24.8**	**+0.5**
EAHA	baz=7.0			S	**Sg**	**15 59 28.6**	**+1.0**
LXIB	**Xiulin Townshi** baz=245	**0.26**	**253**	*e*P	**Pg**	**15 59 24.5**	**-0.4**
LXIB	baz=245			*e*S	**Sg**	**15 59 29.3**	**+0.7**
ENA	**Nanau** baz=7.0	**0.33**	**9**	*i* P	**Pg**	**15 59 26.7**	**+0.6**
ENA	baz=7.0			*i* S	**Sg**	**15 59 31.3**	**+0.7**
SHUL	**Shoufeng** baz=212	**0.33**	**200**	*e*P	**Pg**	**15 59 27.8**	**+1.7**
SHUL	baz=212			*e*S	**Sb**	**15 59 34.6**	**+1.9**
EWUT	**Wuta** baz=10.0	**0.35**	**14**	*i* P	**Pg**	**15 59 27.2**	**+0.6**
EWUT	baz=10.0			S	**Sg**	**15 59 32.2**	**+0.9**
ESL	**Shilin** baz=233	**0.37**	**219**	*e*P	**Pg**	**15 59 26.4**	**-0.4**
WHF	**Hehuan Shan** baz=277	**0.39**	**277**	*e*P	**Pg**	**15 59 27.7**	**+0.4**
WHF	baz=277			*e*S	**Sg**	**15 59 32.4**	**-0.1**
TEGC	**Jichi Village** baz=202	**0.41**	**199**	*e*P	**Pg**	**15 59 29.4**	**+1.8**
NNSB	**Datong** baz=318	**0.43**	**320**	*i* P	**Pg**	**15 59 28.6**	**+0.7**
NNSB	baz=318			*i* S	**Sg**	**15 59 34.6**	**+0.9**
NNSH	**Datong** baz=318	**0.43**	**320**	*i* P	**Pg**	**15 59 28.8**	**+0.8**
NNSH	baz=318			*i* S	**Sg**	**15 59 34.8**	**+1.1**
FUSS	**Fushou** baz=289	**0.43**	**290**	*e*P	**Pg**	**15 59 28.7**	**+0.7**
FUSS	baz=289			S	**Sg**	**15 59 35.2**	**+1.4**
NNS	**Nan Shan** baz=319	**0.44**	**320**	*i* P	**Pg**	**15 59 28.8**	**+0.6**
NNS	baz=319			*i* S	**Sg**	**15 59 35.2**	**+1.1**
LATG	**Datong** baz=327	**0.46**	**342**	*e*P	**Pg**	**15 59 29.6**	**+1.1**
CHGB	**Renai** baz=257	**0.47**	**265**	P	**Pg**	**15 59 29.2**	**+0.5**
CHGB	baz=257			*e*S	**Sg**	**15 59 35.7**	**+0.7**
WARBT	**Fenglin Townsh** baz=229	**0.47**	**216**	P	**Pg**	**15 59 29.5**	**+0.8**
WARBT	baz=229			*e*S	**Sg**	**15 59 36.0**	**+1.1**
OWD	**Renai** baz=254	**0.49**	**253**	*e*P	**Pg**	**15 59 29.8**	**+0.8**
OWD	baz=254			*e*S	**Sg**	**15 59 36.1**	**+0.5**
TWT	**Tachien** baz=287	**0.49**	**288**	P	**Pb**	**15 59 30.7**	**+0.5**
TWT	baz=287			*i* S	**Sg**	**15 59 37.3**	**+1.7**
ESAO	**Su ao** baz=11	**0.49**	**17**	*e*P	**Pb**	**15 59 30.7**	**+0.5**
TDCB	**Techi** baz=287	**0.51**	**288**	P	**Pg**	**15 59 30.8**	**+1.4**
TDCB	baz=287			S	**Sg**	**15 59 37.2**	**+1.1**
NDT	**Datong Townshi** baz=339	**0.53**	**343**	*i* P	**Pg**	**15 59 30.8**	**+1.0**
NDT	baz=339			*i* S	**Sg**	**15 59 38.0**	**+1.4**
TWC	**Suao** baz=5.0	**0.53**	**16**	P	**Pg**	**15 59 30.5**	**+0.7**
TWC	baz=5.0			*i* S	**Sg**	**15 59 37.9**	**+1.1**
WUSB	**Renai** baz=259	**0.53**	**258**	P	**Pg**	**15 59 30.5**	**+0.6**
WUSB	baz=259			S	**Sg**	**15 59 38.0**	**+1.1**
NDS	**Dongshan** baz=358	**0.53**	**3**	P	**Pg**	**15 59 30.5**	**+0.6**
NDS	baz=358			S	**Sg**	**15 59 37.9**	**+1.0**
ENTT	**Nioudou** baz=346	**0.55**	**349**	P	**Pg**	**15 59 31.1**	**+0.9**
ENTT	baz=346			S	**Sg**	**15 59 38.6**	**+1.2**
VWDT	**VWDT** baz=245	**0.61**	**235**	*e*P	**Pg**	**15 59 32.5**	**+1.2**
TWE	**Neicheng** baz=357	**0.62**	**358**	*i* P	**Pg**	**15 59 32.4**	**+0.8**
TWE	baz=357			*i* S	**Sg**	**15 59 41.0**	**+1.3**
YHNB	**Yeheng**	**0.63**	**334**	Pg	**Pg**	**15 59 32.8**	**+1.0**
YHNB				Sg	**Sg**	**15 59 41.0**	**+0.8**
YHNB	**Yeheng** baz=331	**0.63**	**334**	ǁ *i*P	**Pg**	**15 59 32.8**	**+1.0**
YHNB	baz=331			S	**Sg**	**15 59 40.4**	**+0.2**
NSK	**Sanguang** baz=331	**0.65**	**333**	*i* P	**Pg**	**15 59 33.1**	**+1.0**
NSK	baz=331			*i* S	**Sg**	**15 59 41.7**	**+1.1**
HGSD	**Ruisui** baz=222	**0.65**	**202**	*e*P	**Pb**	**15 59 33.8**	**+0.9**
FUSB	**Fushanzhiwuyua** baz=348	**0.66**	**352**	P	**Pg**	**15 59 33.1**	**+0.7**
ILA	**Ilan** baz=1.0	**0.67**	**5**	*e*P	**Pg**	**15 59 33.0**	**+0.6**
WPL	**Puli Township** baz=264	**0.67**	**263**	P	**Pg**	**15 59 33.0**	**+0.5**
EHY	**Hungye** baz=212	**0.68**	**209**	*e*P	**Pg**	**15 59 33.4**	**+0.8**
NWLT	**Wulai** baz=331	**0.69**	**346**	P	**Pg**	**15 59 33.7**	**+0.8**
NWLT	baz=331			S	**Sg**	**15 59 43.1**	**+1.1**
DPDB	**Guoxing** baz=266	**0.70**	**265**	*e*P	**Pg**	**15 59 34.3**	**+1.3**
WHP	**Taichung City** baz=284	**0.70**	**285**	*e*P	**Pb**	**15 59 34.4**	**+0.7**
WHP	baz=284			S	**Sb**	**15 59 44.1**	**+0.7**
WCS	**Beigang Elemen** baz=268	**0.71**	**267**	*e*P	**Pg**	**15 59 34.4**	**+1.2**
SSLB	**Suanglung**	**0.74**	**245**	Pg	**Pg**	**15 59 34.1**	**+0.3**
SSLB	**Suanglung** baz=257	**0.74**	**245**	P	**Pg**	**15 59 33.6**	**-0.2**
SSLB	baz=257			S	**Sg**	**15 59 43.4**	**-0.1**
NFF	**Wufeng Townshi** baz=314	**0.74**	**316**	P	**Pb**	**15 59 35.0**	**+0.5**
SMLT	**Sun Moon Lake** baz=254	**0.75**	**253**	P	**Pg**	**15 59 34.7**	**+0.7**
SMLT	baz=254			*i* S	**Sg**	**15 59 44.9**	**+1.0**
TYC	**Yuchr** baz=257	**0.78**	**256**	*e*P	**Pg**	**15 59 35.8**	**+1.2**
YULB	**Yu-li**	**0.79**	**207**	Pg	**Pg**	**15 59 36.0**	**+1.3**
YULB	**Yu-li** baz=225	**0.79**	**207**	*e*P	**Pg**	**15 59 35.5**	**+0.8**
ECBN	**Changbin** baz=188	**0.81**	**195**	P	**Pg**	**15 59 35.9**	**+0.8**
LIOB	**Emei** baz=310	**0.82**	**312**	*e*P	**Pg**	**15 59 36.2**	**+0.9**
NSTT	**Nanjuang** baz=309	**0.82**	**310**	*e*P	**Pb**	**15 59 36.5**	**+0.8**
EYUL	**Yuli** baz=222	**0.82**	**204**	*e*P	**Pb**	**15 59 37.2**	**+1.4**
TWF1	**Yuli** baz=223	**0.82**	**206**	*e*P	**Pg**	**15 59 35.6**	**+0.2**
WHYT	**Xinyi Township** baz=245	**0.86**	**242**	*e*P	**Pb**	**15 59 37.8**	**+1.3**
TWQ1	**Liyutan** baz=298	**0.87**	**287**	*e*P	**Pn**	**15 59 39.5**	**+1.9**
TWQ1	baz=298			*e*S	**Sn**	**15 59 51.1**	**+0.8**

NHDH	**Xindian Distri**	**0.87**	**350**	*eP*		**Pg**	**15 59 36.7**	**+0.4**
	baz=346							
TIPB	**Shuangxi**	**0.88**	**8**	*eP*		**Pg**	**15 59 36.9**	**+0.5**
	baz=348							
TWA	**Mucha**	**0.88**	**354**	*eP*		**Pb**	**15 59 37.6**	**+0.8**
	baz=350							
TATO	**Taipei**	**0.89**	**348**	Pg		**Pb**	**15 59 37.9**	**+1.0**
TATO	**Taipei**	**0.89**	**348**	P		**Pg**	**15 59 37.5**	**+0.9**
	baz=335							
TATO				S		**Sg**	**15 59 49.0**	**+0.8**
	baz=335							
NSY	**Sanyi**	**0.90**	**291**	*eP*		**Pn**	**15 59 38.9**	**+0.8**
	baz=290							
WWF	**Wufeng**	**0.90**	**267**	*eP*		**Pn**	**15 59 40.2**	**+2.0**
	baz=268							
HSN1	**Hsinchu**	**0.91**	**318**	*eP*		**Pn**	**15 59 39.4**	**+1.2**
	baz=316							
WJS	**Zhushan**	**0.92**	**253**	*eP*		**Pb**	**15 59 38.8**	**+1.4**
	baz=254							
NMLH	**Miaoli**	**0.93**	**298**	*eP*		**Pn**	**15 59 40.9**	**+2.5**
	baz=297							
SBCB	**Hsinchu**	**0.94**	**317**	*eP*		**Pn**	**15 59 39.7**	**+1.0**
	baz=315							
NHY	**Taipei**	**0.94**	**354**	*eP*		**Pn**	**15 59 39.8**	**+1.2**
	baz=356							
WNT	**Mingjian**	**0.94**	**257**	*eP*		**Pn**	**15 59 40.3**	**+1.7**
	baz=251							
TWB1	**Santiao Chiao**	**0.95**	**17**	*eP*		**Pg**	**15 59 37.9**	**+0.2**
	baz=3.0							
TAP	**Taipei**	**0.95**	**350**	*eP*		**Pn**	**15 59 39.5**	**+0.8**
	baz=337							
HSN	**Hsinchu**	**0.96**	**317**	*eP*		**Pn**	**15 59 40.1**	**+1.2**
	baz=318							
FULB	**Fuli**	**0.97**	**202**	*eP*		**Pb**	**15 59 39.5**	**+1.3**
	baz=222							
NWF	**Wu-fen Shan**	**0.97**	**5**	*eP*		**Pg**	**15 59 38.9**	**+0.7**
	baz=358							
WFSB	**Wu-fen Shan**	**0.97**	**5**	*eP*		**Pb**	**15 59 39.5**	**+1.2**
	baz=358							
WDJ	**Dajia District**	**0.99**	**285**	*eP*		**Pn**	**15 59 41.2**	**+1.9**
	baz=285							
ALS	**Alishan**	**1.00**	**234**	*eP*		**Pg**	**15 59 39.8**	**+1.0**
	baz=246							
SXI1	**Grass Mountain**	**1.00**	**10**	*eP*		**Pg**	**15 59 39.3**	**+0.5**
	baz=350							
WYL	**Yuanlin Townsh**	**1.02**	**262**	*eP*		**Pn**	**15 59 41.1**	**+1.4**
	baz=265							
TWS1	**Kuangyinshan**	**1.03**	**346**	*eP*		**Pn**	**15 59 41.0**	**+1.2**
	baz=344							
TWS1				*eS*		**Sn**	**15 59 55.4**	**+1.2**
	baz=344							
CHKT	**Chengkung**	**1.04**	**196**	*eP*		**Pg**	**15 59 38.3**	**-1.2**
	baz=186							
YM01	**YM01**	**1.05**	**354**	*eP*		**Pn**	**15 59 41.4**	**+1.3**
	baz=359							
CHN5	**Tsauling**	**1.05**	**242**	P		**Pn**	**15 59 41.5**	**+1.3**
	baz=234							
CHN5				S		**Sn**	**15 59 56.5**	**+1.6**
	baz=234							
ECS	**Chishang**	**1.09**	**203**	*eP*		**Pg**	**15 59 40.6**	**+0.2**
	baz=222							
ELDTW	**Lidau**	**1.09**	**214**	*eP*		**Pg**	**15 59 40.9**	**+0.3**
	baz=209							
TWY	**Chenhua**	**1.17**	**356**	*eP*		**Pn**	**15 59 43.9**	**+2.1**
	baz=338							
JYNG	**Yonagunijimaku**	**1.20**	**73**	*eP*		**Pn**	**15 59 44.0**	**+1.8**
CHN4	**Tsaushan**	**1.25**	**234**	*eP*		**Pg**	**15 59 44.8**	**+1.4**
	baz=238							
TPUB	**Ta-pu**	**1.25**	**231**			**Pn**	**15 59 44.0**	**+1.1**
TPUB	**Ta-pu**	**1.25**	**231**	*eP*		**Pn**	**15 59 42.6**	**-0.4**
	baz=224							
YOJ	**Yonaguni jima**	**1.26**	**73**	Pn		**Pg**	**15 59 44.9**	**+1.2**
YOJ	**Yonaguni jima**	**1.26**	**73**	*eP*		**Pg**	**15 59 45.0**	**+1.2**
STYT	**Tauyuan**	**1.26**	**223**	*eP*		**Pn**	**15 59 42.8**	**-0.3**
	baz=228							
WTP	**Ta-pu**	**1.30**	**229**	P		**Pn**	**15 59 45.0**	**+1.4**
	baz=234							
TWG	**Pinlang**	**1.39**	**204**	Pn		**Pn**	**15 59 44.6**	**-0.2**
SONM	**Songino Array**	**26.62**	**337**	P		**P**	**16 04 52.5**	**-5.6**
	4.3nm,1.2s,baz=130,slow=6.4,SNR=1.4							
	4.3nm,1.2s							
MKAR	**Makanchi Array**	**38.72**	**316**	P		P	16 06 37.7	-5.8
	0.7nm,0.8s,baz=110,slow=7.0,SNR=2.0							
	0.7nm,0.8s							
WRA	**Warramunga Arr**	**45.48**	**163**	P		**P**	**16 07 39.0**	**+0.1**
	1.1nm,0.8s,baz=344,slow=9.0,SNR=1.7							
	1.1nm,0.8s							
WR0	**Warramunga Arr**	**45.55**	**163**	P		**P**	**16 07 40.2**	**+0.7**
WR0				IAmb		IAmb	16 08 02.5	
	comp=Z,11nm,1.3s							
BVAR	**Borovoye Array**	**48.03**	**321**	P		**P**	**16 07 55.6**	**-2.9**
	comp=Z,1.4nm,0.8s,baz=118,slow=12,SNR=1.4							
	comp=Z,1.4nm,0.8s							
AS31	**Alice Springs**	**48.94**	**165**	P		**P**	**16 08 07.3**	**+1.4**
AS31				IAmb		IAmb	16 08 15.1	
	comp=Z,2.3nm,1.1s							
ASAR	**Alice Springs**	**48.94**	**165**	P		**P**	**16 08 06.0**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=344,slow=6.6,SNR=1.0							
	comp=Z,0.7nm,0.9s							
STKA	**Stephens Creek**	**58.83**	**160**	P		**P**	**16 09 19.6**	**+1.5**
	comp=Z,1.5nm,0.3s,baz=331,slow=13,SNR=3.3							
	comp=Z,1.5nm,0.3s							
ILAR	**Eielson Array**	**69.08**	**27**	P		**P**	**16 10 24.1**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=276,slow=5.3,SNR=4.9							
	comp=Z,0.4nm,0.8s							
FINES	**FINESS Array B**	**71.75**	**330**	P		**P**	**16 10 38.6**	**-2.9**
	comp=Z,2.2nm,1.0s,baz=67,slow=6.1,SNR=2.0							
	comp=Z,2.2nm,1.0s							

TAP 06 15:59:44.3,24.05N×121.64E,h9km,ML3.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**306**	*i* P	Pg	15 59 46.5	+0.4
TWD	baz=313			*i* S	Sg	15 59 47.7	+0.2
ETL	**Fush Village**	**0.11**	**351**	*i* P	Pg	15 59 47.2	+0.2
ETL	baz=352			*i* S	Sg	15 59 49.1	+0.3
NACB	**Ninganchiao**	**0.13**	**341**	*i* P	Pg	15 59 47.5	+0.2
NACB	baz=349			*i* S	Sg	15 59 49.7	+0.3
ETM	**Tongmen**	**0.16**	**239**	P	Pg	15 59 48.1	+0.4
ETM	baz=238			*i* S	Sg	15 59 50.5	+0.4
LXIB	**Xiulin Townshi**	**0.21**	**262**	P	Pg	15 59 49.1	+0.4
LXIB	baz=251			*i* S	Sg	15 59 52.2	+0.5
SHUL	**Shoufeng**	**0.27**	**196**	P	Pb	15 59 51.2	-0.2
SHUL	baz=195			*eS*	Sb	15 59 55.2	-0.9
EHP	**Heping Village**	**0.28**	**19**	P	Pg	15 59 50.1	+0.2
EHP	baz=22			S	Sg	15 59 54.1	+0.5
EAHA	**Aohua**	**0.29**	**18**	*eP*	Pg	15 59 50.4	+0.2
EAHA	baz=27			S	Sg	15 59 54.7	+0.6
ESL	**Shilin**	**0.30**	**219**	P	Pg	15 59 50.7	+0.4
ESL	baz=227			*eS*	Sg	15 59 54.4	0.0
TEGC	**Jichi Village**	**0.35**	**195**	P	Pb	15 59 52.6	-0.2
TEGC	baz=187			*eS*	Sb	15 59 58.8	+0.4
WHF	**Hehuan Shan**	**0.36**	**286**	P	Pg	15 59 52.0	+0.5
WHF	baz=285			*i* S	Sg	15 59 57.0	+0.7
ENA	**Nanau**	**0.39**	**13**	*i* P	Pg	15 59 52.2	+0.2
ENA	baz=15			*i* S	Sg	15 59 57.3	+0.2
WARBT	**Fenglin Townsh**	**0.40**	**215**	*eP*	Pg	15 59 52.6	+0.3
WARBT	baz=222			*eS*	Sg	15 59 57.4	-0.2
EWUT	**Wuta**	**0.41**	**17**	P	Pg	15 59 52.8	+0.4
EWUT	baz=18			S	Sg	15 59 58.2	+0.3
FUSS	**Fushou**	**0.41**	**299**	P	Pb	15 59 53.3	-0.7
FUSS	baz=298			*eS*	Sb	15 59 59.3	-1.2
CHGB	**Renai**	**0.43**	**272**	P	Pg	15 59 53.4	+0.6
CHGB	baz=261			*i* S	Sg	15 59 59.6	+1.2
OWD	**Renai**	**0.44**	**258**	P	Pg	15 59 53.5	+0.6
OWD	baz=266			*eS*	Sg	15 59 59.2	+0.6
NNSB	**Datong**	**0.45**	**328**	*i* P	Pg	15 59 53.6	+0.6
NNSB	baz=328			S	Sg	15 59 59.9	+1.0
NNSH	**Datong**	**0.45**	**328**	P	Pg	15 59 53.5	+0.5
NNSH	baz=327			S	Sg	15 59 59.9	+0.9
NNS	**Nan Shan**	**0.46**	**328**	P	Pg	15 59 53.7	+0.4
NNS	baz=328			S	Sg	16 00 00.0	+0.6
TWT	**Tachien**	**0.47**	**296**	*eP*	Pb	15 59 54.4	-0.6
TWT	baz=294			*eS*	Sb	16 00 01.6	-0.5
WUSB	**Renai**	**0.48**	**263**	*eP*	Pb	15 59 54.8	-0.4
WUSB	baz=262			*eS*	Sb	16 00 01.4	-1.0
TDCB	**Techi**	**0.49**	**295**	P	Pg	15 59 54.3	+0.5
TDCB	baz=294			S	Sb	16 00 01.5	-1.0
LATG	**Datong**	**0.49**	**348**	P	Pg	15 59 54.0	0.0
LATG	baz=348			S	Sg	16 00 01.4	+0.8
VWDT	**VWDT**	**0.55**	**237**	*eP*	Pg	15 59 54.2	-0.7
VWDT	baz=229			*eS*	Sg	16 00 02.5	+0.4
ESAO	**Su ao**	**0.56**	**19**	*eP*	Pg	15 59 55.1	-0.1
	baz=18						
NDT	**Datong Townshi**	**0.56**	**348**	*i* P	Pb	15 59 55.9	-0.5
NDT	baz=348			S	Sb	16 00 03.7	-0.9
NDS	**Dongshan**	**0.59**	**7**	P	Pg	15 59 56.1	+0.4
NDS	baz=7.0			*eS*	Sg	16 00 04.1	+0.7
TWC	**Suao**	**0.59**	**19**	*eP*	Pb	15 59 56.3	-0.5
	baz=19						
ENTT	**Nioudou**	**0.59**	**353**	P	Pb	15 59 56.5	-0.4
ENTT	baz=354			S	Sg	16 00 04.3	+0.7
EHY	**Hungye**	**0.61**	**209**	*eP*	Pg	15 59 56.5	+0.2
	baz=206						
WPL	**Puli Township**	**0.63**	**267**	*eP*	Pb	15 59 57.4	-0.1
	baz=267						
DPDB	**Guoxing**	**0.65**	**269**	*eP*	Pg	15 59 57.3	+0.3
	baz=269						
YHNB	**Yeheng**	**0.66**	**339**	P	Pb	15 59 58.0	-0.2
YHNB	baz=339			S	Sb	16 00 06.9	-0.6
WCS	**Beigang Elemen**	**0.67**	**271**	*eP*	Pb	15 59 58.2	0.0
	baz=271						
TWE	**Neicheng**	**0.67**	**2**	P	Pb	15 59 57.9	-0.4
TWE	baz=3.0			S	Sg	16 00 06.8	+0.8
WHP	**Taichung City**	**0.68**	**290**	*eP*	Pb	15 59 58.0	-0.4
	baz=289						
WHP				*eS*	Sb	16 00 07.8	-0.1
	baz=289						
NSK	**Sanguang**	**0.68**	**338**	P	Pg	15 59 57.7	+0.3
	baz=331						
NSK				S	Sb	16 00 07.2	-0.7
	baz=331						
SSLB	**Suanglung**	**0.68**	**248**	*eP*	Pg	15 59 57.8	+0.3
	baz=258						
SSLB				*eS*	Sg	16 00 06.5	+0.1
	baz=258						
SMLT	**Sun Moon Lake**	**0.70**	**256**	*eP*	Pg	15 59 58.1	+0.3
	baz=356						
FUSB	**Fushanzhiwuyua**	**0.71**	**356**	*eP*	Pb	15 59 58.6	-0.4
	baz=356						
FUSB				S	Sb	16 00 08.4	-0.4
	baz=356						
YULB	**Yu-li**	**0.73**	**206**	*eP*	Pb	15 59 58.8	-0.4
	baz=207						
NWLT	**Wulai**	**0.74**	**350**	P	Pb	15 59 59.1	-0.3
	baz=350						
NWLT				*eS*	Sg	16 00 08.4	+0.2
	baz=350						
ECBN	**Changbin**	**0.75**	**194**	*eP*	Pg	15 59 58.8	+0.1
	baz=185						
NFF	**Wufeng Townshi**	**0.75**	**321**	*eP*	Pg	15 59 58.9	0.0
	baz=320						
TWF1	**Yuli**	**0.76**	**205**	*eP*	Pb	15 59 59.8	0.0
	baz=219						
WHYT	**Xinyi Township**	**0.80**	**244**	*eP*	Pg	15 59 59.2	-0.6
	baz=245						
LIOB	**Emei**	**0.82**	**316**	*eP*	Pb	16 00 01.3	+0.4
	baz=316						
TATO	**Taipei**	**0.93**	**351**	*eP*	Pb	16 00 03.0	+0.3
	baz=351						
TATO				*eS*	Sb	16 00 15.0	-0.2
	baz=351						
TIPB	**Shuangxi**	**0.93**	**10**	*eP*	Pn	16 00 03.5	-0.2
	baz=355						

TAP 06 16:01:02.6,24.00N×121.59E,h6km,ML3.5,1D,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.08**	**7**	*i* P	Pg	16 01 05.0	+0.5
TWD	baz=13			*i* S	Sg	16 01 06.7	+0.9
ETM	**Tongmen**	**0.09**	**248**	*i* P	Pg	16 01 05.2	+0.5
ETM	baz=248			*i* S	Sg	16 01 06.9	+0.8
LXIB	**Xiulin Townshi**	**0.16**	**278**	↓ *i* P	Pg	16 01 06.6	+0.7
LXIB	baz=270			*i* S	Sg	16 01 09.7	+1.6
ETL	**Fush Village**	**0.16**	**12**	P	Pg	16 01 06.0	+0.1
ETL	baz=13			*i* S	Sg	16 01 08.9	+0.7
NACB	**Ninganchiao**	**0.17**	**3**	*i* P	Pg	16 01 06.5	+0.3
NACB	baz=4.0			*i* S	Sg	16 01 09.1	+0.6
SHUL	**Shoufeng**	**0.21**	**186**	P	Pg	16 01 07.5	+0.7
SHUL	baz=185			S	Sg	16 01 12.3	+2.7
ESL	**Shilin**	**0.23**	**217**	P	Pg	16 01 07.3	+0.1
ESL	baz=215			*eS*	Sg	16 01 10.8	+0.5
TEGC	**Jichi Village**	**0.29**	**188**	P	Pb	16 01 09.5	-0.8
TEGC	baz=186			S	Sb	16 01 15.1	-0.3
WHF	**Hehuan Shan**	**0.33**	**296**	P	Pg	16 01 09.9	+0.7
WHF	baz=297			S	Sg	16 01 14.6	+1.1
WARBT	**Fenglin Townsh**	**0.33**	**213**	P	Pg	16 01 09.3	+0.2
	baz=212						
EHP	**Heping Village**	**0.34**	**25**	*eP*	Pg	16 01 09.2	-0.1
	baz=30						
EAHA	**Aohua**	**0.36**	**23**	*eP*	Pg	16 01 09.7	+0.1
	baz=35						
EGFH	**Guangfu**	**0.36**	**204**	*eP*	Pg	16 01 09.9	+0.3
	baz=211						
OWD	**Renai**	**0.38**	**263**	*eP*	Pg	16 01 10.7	+0.7
OWD	baz=263			*eS*	Sg	16 01 16.1	+1.1
CHGB	**Renai**	**0.38**	**279**	P	Pg	16 01 11.0	+0.9
CHGB	baz=279			*eS*	Sb	16 01 16.7	-1.5
FUSS	**Fushou**	**0.40**	**309**	P	Pb	16 01 11.4	-0.9
FUSS	baz=308			S	Sb	16 01 17.5	-1.2
WUSB	**Renai**	**0.43**	**269**	*eP*	Pb	16 01 11.8	+0.9
	baz=266						
ENA	**Nanau**	**0.45**	**18**	P	Pg	16 01 11.5	+0.2
	baz=21						
ENA				S	Sg	16 01 17.6	+0.4
	baz=21						
TWT	**Tachien**	**0.45**	**304**	*eP*	Pb	16 01 12.4	-0.7
	baz=302						
TWT				*eS*	Sb	16 01 19.1	-1.1
	baz=302						
TDCB	**Techi**	**0.47**	**303**	*eP*	Pb	16 01 12.6	-0.7
	baz=301						
NNSB	**Datong**	**0.47**	**337**	P	Pg	16 01 12.4	+0.7
	baz=351						
NNSH	**Datong**	**0.47**	**337**	*eP*	Pg	16 01 12.2	+0.6
	baz=350						
VWDT	**VWDT**	**0.47**	**239**	*eP*	Pb	16 01 12.6	-0.8
	baz=230						
VWDT				*eS*	Sb	16 01 19.4	-1.2
	baz=230						
EWUT	**Wuta**	**0.48**	**22**	P	Pg	16 01 12.1	+0.2
	baz=23						
EWUT				*eS*	Sg	16 01 18.4	+0.2
	baz=23						
NNS	**Nan Shan**	**0.48**	**336**	P	Pg	16 01 12.8	+0.8
	baz=337						
NNS				*eS*	Sg	16 01 18.9	+0.7
	baz=337						
HGSD	**Ruisui**	**0.53**	**196**	*eP*	Pb	16 01 14.2	0.0
	baz=202						
LATG	**Datong**	**0.54**	**354**	*eP*	Pg	16 01 13.1	+0.1
	baz=346						
EHY	**Hungye**	**0.55**	**206**	*eP*	Pg	16 01 13.5	+0.4
	baz=210						
WPL	**Puli Township**	**0.57**	**271**	*eP*	Pb	16 01 14.5	-0.6
	baz=269						
DPDB	**Guoxing**	**0.60**	**273**	*eP*	Pb	16 01 15.4	-0.3
	baz=271						
NDT	**Datong Townshi**	**0.60**	**354**	*eP*	Pg	16 01 14.9	+0.6
	baz=345						
SSLB	**Suanglung**	**0.61**	**250**	P	Pg	16 01 14.8	+0.3
	baz=262						
SSLB				*eS*	Sg	16 01 23.0	+0.5
	baz=262						
WCS	**Beigang Elemen**	**0.62**	**276**	*eP*	Pb	16 01 15.6	-0.3
	baz=273						
ESAO	**Su ao**	**0.62**	**22**	*eP*	Pg	16 01 14.7	+0.1
	baz=26						
SMLT	**Sun Moon Lake**	**0.64**	**260**	P	Pg	16 01 15.6	+0.6
	baz=259						
SMLT				*eS*	Sb	16 01 25.1	-0.4
	baz=259						
ENTT	**Nioudou**	**0.64**	**358**	*eP*	Pg	16 01 15.6	+0.7
	baz=1.0						
NDS	**Dongshan**	**0.64**	**11**	*eP*	Pg	16 01 15.3	+0.3
	baz=12						
NDS				*eS*	Sg	16 01 24.1	+0.7
	baz=12						
WHP	**Taichung City**	**0.65**	**296**	*eP*	Pb	16 01 16.2	-0.2
	baz=294						
TWC	**Suao**	**0.65**	**22**	*eP*	Pg	16 01 15.2	0.0
	baz=26						
YULB	**Yu-li**	**0.66**	**204**	*eP*	Pg	16 01 15.2	-0.1
	baz=210						
TYC	**Yuchr**	**0.67**	**262**	*eP*	Pg	16 01 15.7	+0.1
	baz=259						
YHNB	**Yeheng**	**0.69**	**344**	*eP*	Pg	16 01 16.4	+0.3
	baz=355						
TWF1	**Yuli**	**0.70**	**202**	*eP*	Pb	16 01 16.6	-0.6
	baz=208						
NSK	**Sanguang**	**0.70**	**343**	*eP*	Pb	16 01 16.9	-0.6
	baz=355						
TWE	**Neicheng**	**0.72**	**6**	*eP*	Pg	16 01 16.9	+0.4
	baz=19						
TWE				*eS*	Sg	16 01 26.4	+0.5
	baz=19						
EOS3	**EOS3**	**0.73**	**67**	*eP*	Pg	16 01 14.8	-1.8
	baz=65						
WHYT	**Xinyi Township**	**0.73**	**246**	*eP*	Pb	16 01 17.8	-0.1
	baz=243						
FUSB	**Fushanzhiwuyua**	**0.76**	**0**	*eP*	Pg	16 01 17.4	+0.2
	baz=1.0						
FUSB				S	Sg	16 01 27.6	+0.5
	baz=1.0						
NFF	**Wufeng Townshi**	**0.76**	**326**	*eP*	Pb	16 01 18.1	-0.3
	baz=337						
NWLT	**Wulai**	**0.78**	**354**	*eP*	Pg	16 01 18.0	+0.4
	baz=355						
NWLT				*eS*	Sg	16 01 28.3	+0.5
	baz=355						
WWF	**Wufeng**	**0.81**	**273**	*eP*	Pn	16 01 20.2	-0.4
	baz=270						
TWQ1	**Liyutan**	**0.82**	**295**	*eP*	Pb	16 01 19.6	+0.3
	baz=293						
CHKH	**Chenggong**	**0.82**	**192**	*eP*	Pg	16 01 18.4	0.0
	baz=181						
CHKH				*eS*	Sn	16 01 32.8	-0.4
	baz=181						
NSTT	**Nanjuang**	**0.82**	**320**	*eP*	Pb	16 01 19.5	+0.1
	baz=320						
LIOB	**Emei**	**0.83**	**321**	*eP*	Pb	16 01 19.8	+0.3
	baz=321						
WNT	**Mingjian**	**0.83**	**262**	*eP*	Pb	16 01 20.0	+0.5
	baz=249						
WNT1	**Nantou City**	**0.83**	**264**	*eP*	Pn	16 01 20.8	-0.1
	baz=261						
NSY	**Sanyi**	**0.86**	**299**	*eP*	Pg	16 01 19.3	+0.2
	baz=297						
ALS	**Alishan**	**0.86**	**236**	*eP*	Pb	16 01 20.2	0.0
	baz=232						
EHD	**Haiduan**	**0.92**	**202**	*eP*	Pg	16 01 20.4	+0.2
	baz=202						
CHKT	**Chengkung**	**0.92**	**193**	*eP*	Pg	16 01 20.5	+0.2
	baz=191						
CHN5	**Tsauling**	**0.92**	**244**	*eP*	Pb	16 01 21.4	+0.3
	baz=233						
CHN5				*eS*	Sn	16 01 35.1	-0.7
	baz=233						
WDJ	**Dajia District**	**0.93**	**292**	*eP*	Pn	16 01 23.7	+1.4
	baz=290						
ELDTW	**Lidau**	**0.96**	**213**	*eP*	Pg	16 01 21.4	+0.3
	baz=210						
NHDH	**Xindian Distri**	**0.96**	**357**	*eP*	Pg	16 01 20.8	-0.3
	baz=360						
SBCB	**Hsinchu**	**0.96**	**325**	*eP*	Pn	16 01 23.0	+0.3
	baz=325						
TATO	**Taipei**	**0.98**	**355**	*eP*	Pb	16 01 22.2	+0.2
	baz=358						
TWA	**Mucha**	**0.98**	**360**	*eP*	Pg	16 01 21.6	+0.2
	baz=353						
WGK	**Gukeng**	**0.99**	**252**	*eP*	Pn	16 01 22.8	-0.2
	baz=249						
TIPB	**Shuangxi**	**0.99**	**13**	*eP*	Pg	16 01 21.0	-0.7
	baz=16						
TWB1	**Santiao Chiao**	**1.07**	**20**	*eP*	Pb	16 01 23.4	-0.1
	baz=16						
NWF	**Wu-fen Shan**	**1.08**	**9**	*eP*	Pg	16 01 23.3	-0.1
	baz=12						
TWS1	**Kuangyinshan**	**1.11**	**352**	*eP*	Pn	16 01 24.6	-0.1
	baz=355						
STYH	**Taoyuan**	**1.11**	**222**	*eP*	Pb	16 01 24.2	-0.1
	baz=214						
CHN4	**Tsaushan**	**1.11**	**235**	*eP*	Pn	16 01 24.8	-0.1
	baz=233						
TPUB	**Ta-pu**	**1.12**	**232**	*eP*	Pn	16 01 24.7	-0.2
	baz=228						
SXI1	**Grass Mountain**	**1.12**	**14**	*eP*	Pn	16 01 24.8	-0.2
	baz=16						
STYT	**Tauyuan**	**1.13**	**223**	*eP*	Pn	16 01 24.9	-0.2
	baz=220						
YM01	**YM01**	**1.14**	**359**	*eP*	Pg	16 01 24.2	-0.4
	baz=1.0						

*JMA **06** 16:03:01.6±0.2,24.0°0N±0.°3×12°2E±°, h3km±2km, TAIWAN REGION*

TAP 06 16:03:01.7,24.04N×121.63E,h8km,ML3.7,1C-3D,C,

Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=331	**0.05**	**323**	*i* P	Pg	16 03 03.5	+0.1
TWD	baz=331			*i* S	Sg	16 03 05.0	+0.4
ETL	**Fush Village** baz=357	**0.12**	**357**	P	Pg	16 03 04.6	+0.2
ETL	baz=357			*i* S	Sg	16 03 06.7	+0.4
NACB	**Ninganchiao** baz=355	**0.14**	**346**	⇓*i* P	Pg	16 03 04.8	+0.1
NACB	baz=355			*i* S	Sg	16 03 07.0	+0.2
ETM	**Tongmen** baz=239	**0.15**	**240**	P	Pg	16 03 04.9	+0.1
ETM	baz=239			*i* S	Sg	16 03 07.2	+0.3
LXIB	**Xiulin Townshi** baz=254	**0.20**	**265**	P	Pg	16 03 06.3	+0.5
LXIB	baz=254			*e*S	Sg	16 03 09.2	+0.5
SHUL	**Shoufeng** baz=193	**0.26**	**194**	P	Pg	16 03 07.7	+0.9
SHUL	baz=193			*e*S	Sb	16 03 12.9	-0.3
ESL	**Shilin** baz=217	**0.29**	**219**	*e*P	Pg	16 03 07.3	-0.1
EHP	**Heping Village** baz=23	**0.29**	**20**	*e*P	Pg	16 03 08.0	+0.6
EHP	baz=23			*e*S	Sg	16 03 12.0	+0.7
EAHA	**Aohua** baz=29	**0.31**	**19**	*e*P	Pg	16 03 08.1	+0.3
EAHA	baz=29			*e*S	Sg	16 03 12.3	+0.4
TEGC	**Jichi Village** baz=192	**0.34**	**194**	P	Pb	16 03 09.5	-0.6
TEGC	baz=192			S	Sb	16 03 16.2	+0.6
WHF	**Hehuan Shan** baz=287	**0.35**	**288**	*i* P	Pg	16 03 09.3	+0.5
WHF	baz=287			S	Sg	16 03 14.0	+0.5
WARBT	**Fenglin Townsh** baz=221	**0.39**	**215**	P	Pg	16 03 09.9	+0.6
ENA	**Nanau** baz=17	**0.40**	**14**	⇑P	Pg	16 03 09.7	+0.2
ENA	baz=17			S	Sg	16 03 15.1	+0.2
FUSS	**Fushou** baz=300	**0.41**	**301**	P	Pb	16 03 10.6	-0.8
FUSS	baz=300			*e*S	Sg	16 03 16.1	+0.8
EGFH	**Guangfu** baz=213	**0.41**	**207**	*e*P	Pg	16 03 10.3	+0.6
CHGB	**Renai** baz=262	**0.42**	**273**	P	Pg	16 03 10.6	+0.6
CHGB	baz=262			S	Sg	16 03 16.1	+0.7
OWD	**Renai** baz=268	**0.42**	**259**	*e*P	Pg	16 03 10.6	+0.6
OWD	baz=268			*e*S	Sg	16 03 16.3	+0.6
EWUT	**Wuta** baz=20	**0.43**	**18**	*e*P	Pg	16 03 10.2	+0.1
EWUT	baz=20			*e*S	Sg	16 03 16.2	+0.5
NNSB	**Datong** baz=330	**0.45**	**330**	P	Pg	16 03 11.1	+0.6
NNSB	baz=330			S	Sg	16 03 17.1	+0.7
NNSH	**Datong** baz=329	**0.45**	**330**	P	Pg	16 03 10.9	+0.4
NNSH	baz=329			S	Sg	16 03 17.0	+0.6
NNS	**Nan Shan** baz=330	**0.46**	**330**	*e*P	Pg	16 03 11.0	+0.2
NNS	baz=330			S	Sg	16 03 17.6	+0.7
TWT	**Tachien** baz=295	**0.47**	**297**	P	Pb	16 03 11.8	-0.5
TWT	baz=295			S	Sb	16 03 18.4	-1.1
WUSB	**Renai** baz=264	**0.47**	**265**	P	Pg	16 03 11.6	+0.7
WUSB	baz=264			S	Sg	16 03 18.3	+1.2
TDCB	**Techi** baz=296	**0.48**	**296**	P	Pg	16 03 11.8	+0.7
TDCB	baz=296			S	Sg	16 03 18.7	+1.2
LATG	**Datong** baz=350	**0.50**	**349**	*e*P	Pg	16 03 12.0	+0.5
LATG	baz=350			S	Sg	16 03 18.6	+0.4
VWDT	**VWDT** baz=229	**0.53**	**238**	*e*P	Pg	16 03 11.1	-0.9
VWDT	baz=229			*e*S	Sg	16 03 19.6	+0.7
ESAO	**Su ao** baz=20	**0.57**	**20**	*e*P	Pg	16 03 13.0	+0.2
NDT	**Datong Townshi** baz=350	**0.57**	**349**	P	Pg	16 03 13.4	+0.6
NDT	baz=350			*i* S	Sg	16 03 21.1	+0.8
HGSD	**Ruisui** baz=217	**0.58**	**199**	*e*P	Pb	16 03 14.5	+0.4
NDS	**Dongshan** baz=8.0	**0.60**	**7**	*e*P	Pg	16 03 13.5	+0.2
NDS	baz=8.0			*e*S	Sg	16 03 22.0	+0.9
EHY	**Hungye** baz=215	**0.60**	**208**	⇓P	Pb	16 03 14.0	-0.5
EHY	baz=215			*e*S	Sg	16 03 21.8	+0.6
ENTT	**Nioudou** baz=356	**0.60**	**354**	*i* P	Pb	16 03 14.0	-0.6
ENTT	baz=356			*i* S	Sg	16 03 22.0	+0.8
TWC	**Suao** baz=21	**0.60**	**19**	*e*P	Pg	16 03 13.9	+0.5
TWC	baz=21			*e*S	Sg	16 03 21.6	+0.3
WPL	**Puli Township** baz=267	**0.62**	**268**	P	Pb	16 03 14.4	-0.4
WPL	baz=267			S	Sg	16 03 22.6	+0.9
DPDB	**Guoxing** baz=270	**0.64**	**270**	*e*P	Pb	16 03 14.8	-0.5
WCS	**Beigang Elemen** baz=272	**0.66**	**272**	*e*P	Pb	16 03 15.1	-0.5
SSLB	**Suanglung** baz=259	**0.67**	**248**	P	Pg	16 03 15.1	+0.5
SSLB	baz=259			*e*S	Sg	16 03 22.8	-0.5
WHP	**Taichung City** baz=290	**0.67**	**291**	P	Pb	16 03 15.7	-0.1
WHP	baz=290			S	Sb	16 03 25.3	0.0
YHNB	**Yeheng** baz=347	**0.67**	**340**	*e*P	Pb	16 03 15.4	-0.4
TWE	**Neicheng** baz=5.0	**0.68**	**3**	*i* P	Pg	16 03 15.3	+0.4
TWE	baz=5.0			S	Sg	16 03 24.1	+0.3
NSK	**Sanguang** baz=330	**0.68**	**339**	P	Pb	16 03 15.5	-0.5
NSK	baz=330			S	Sg	16 03 24.5	+0.7
SMLT	**Sun Moon Lake** baz=256	**0.69**	**257**	P	Pb	16 03 15.7	-0.4
SMLT	baz=256			S	Sg	16 03 24.3	+0.4
YULB	**Yu-li** baz=206	**0.71**	**206**	*e*P	Pg	16 03 15.3	-0.1
FUSB	**Fushanzhiwuyua** baz=358	**0.72**	**357**	P	Pb	16 03 16.6	0.0
FUSB	baz=358			S	Sb	16 03 25.9	-0.8
TYC	**Yuchr** baz=259	**0.72**	**259**	*e*P	Pg	16 03 16.1	+0.5
TYC	baz=259			S	Sb	16 03 26.0	-0.6
ECBN	**Changbin** baz=182	**0.74**	**193**	*e*P	Pb	16 03 16.4	-0.4
ECBN	baz=182			*e*S	Sb	16 03 28.2	+1.1
EYUL	**Yuli** baz=217	**0.74**	**203**	*e*P	Pb	16 03 17.5	+0.5
NWLT	**Wulai** baz=352	**0.74**	**351**	*e*P	Pb	16 03 16.9	-0.2
NWLT	baz=352			*e*S	Sg	16 03 26.1	+0.3
TWF1	**Yuli** baz=216	**0.75**	**204**	*e*P	Pg	16 03 16.5	+0.4
NFF	**Wufeng Townshi** baz=322	**0.75**	**322**	*e*P	Pb	16 03 17.0	-0.2
WHYT	**Xinyi Township** baz=244	**0.79**	**245**	*e*P	Pb	16 03 17.8	0.0
NSTT	**Nanjuang** baz=316	**0.82**	**316**	P	Pb	16 03 18.3	0.0
NSTT	baz=316			S	Sb	16 03 29.7	+0.1
LIOB	**Emei** baz=317	**0.82**	**317**	*e*P	Pb	16 03 18.8	+0.4
LIOB	baz=317			*e*S	Sb	16 03 29.9	+0.2
TWQ1	**Liyutan** baz=302	**0.84**	**292**	*e*P	Pn	16 03 19.6	-0.3
TWQ1	baz=302			*e*S	Sn	16 03 31.7	-0.9
NJD	**Zhudong** baz=331	**0.85**	**325**	*e*P	Pb	16 03 19.4	+0.6
WWF	**Wufeng** baz=270	**0.85**	**271**	*e*P	Pn	16 03 20.2	+0.1
WJS	**Zhushan** baz=255	**0.85**	**256**	*e*P	Pn	16 03 19.9	-0.2
WJS	baz=255			*e*S	Sb	16 03 31.4	+0.9
CHKH	**Chenggong** baz=183	**0.87**	**194**	*e*P	Pb	16 03 18.8	-0.3
NSY	**Sanyi** baz=295	**0.88**	**296**	*e*P	Pn	16 03 20.2	-0.3
TCU	**Taichung** baz=270	**0.88**	**277**	*e*P	Pn	16 03 20.8	+0.4
WNT1	**Nantou City** baz=262	**0.88**	**262**	*e*P	Pn	16 03 20.4	-0.1
WNT	**Mingjian** baz=251	**0.88**	**260**	*e*P	Pb	16 03 19.6	+0.3
FULB	**Fuli** baz=216	**0.89**	**200**	*e*P	Pg	16 03 18.9	0.0
NMLH	**Miaoli** baz=303	**0.91**	**303**	*e*P	Pn	16 03 21.6	+0.6
ALS	**Alishan** baz=245	**0.92**	**235**	P	Pb	16 03 20.3	+0.2
HSN1	**Hsinchu** baz=323	**0.93**	**323**	*e*P	Pn	16 03 21.4	+0.4
NHDH	**Xindian Distri** baz=344	**0.93**	**354**	*e*P	Pb	16 03 20.4	+0.3
NHDH	baz=344			*e*S	Sg	16 03 31.9	+0.4
TWA	**Mucha** baz=347	**0.94**	**357**	*e*P	Pb	16 03 20.2	-0.1
TWA	baz=347			S	Sb	16 03 32.6	-0.4
TATO	**Taipei** baz=353	**0.94**	**352**	P	Pb	16 03 20.5	+0.2
TATO	baz=353			S	Sg	16 03 32.5	+0.4
NJN	**Zhunan** baz=321	**0.95**	**313**	P	Pn	16 03 21.5	+0.1
TIPB	**Shuangxi** baz=356	**0.95**	**11**	*e*P	Pb	16 03 20.7	+0.2
SBCB	**Hsinchu** baz=322	**0.95**	**322**	*e*P	Pn	16 03 22.1	+0.6
WDJ	**Dajia District** baz=289	**0.96**	**289**	*e*P	Pn	16 03 22.4	+0.9
WYL	**Yuanlin Townsh** baz=266	**0.96**	**266**	*e*P	Pn	16 03 21.9	+0.3
CHKT	**Chengkung** baz=193	**0.97**	**195**	P	Pg	16 03 20.0	-0.2
CHKT	baz=193			*e*S	Sb	16 03 34.6	+0.9
EHD	**Haiduan** baz=205	**0.97**	**204**	P	Pb	16 03 20.6	-0.2
HSN	**Hsinchu** baz=324	**0.97**	**322**	*e*P	Pn	16 03 21.8	+0.1
CHN5	**Tsauling** baz=232	**0.98**	**243**	P	Pn	16 03 21.5	-0.4
CHN5	baz=232			*e*S	Sb	16 03 35.0	+0.9
WCHH	**Zhanghua** baz=272	**0.98**	**273**	*e*P	Pn	16 03 22.3	+0.4
NHY	**Taipei** baz=6.0	**1.00**	**357**	*e*P	Pg	16 03 20.3	-0.6
TAP	**Taipei** baz=345	**1.00**	**354**	*e*P	Pb	16 03 21.6	+0.2
TAP	baz=345			S	Sb	16 03 35.4	+0.6
NTY	**Taoyuan** baz=337	**1.00**	**342**	*e*P	Pn	16 03 22.5	+0.3
NCUH	**Zhongli** baz=336	**1.01**	**336**	*e*P	Pn	16 03 22.8	+0.5
NCU	**National Centr** baz=336	**1.01**	**337**	*e*P	Pn	16 03 22.7	+0.4
ELDTW	**Lidu** baz=201	**1.02**	**214**	*e*P	Pg	16 03 20.6	-0.6
TWB1	**Santiao Chiao** baz=11	**1.02**	**19**	*e*P	Pg	16 03 21.1	-0.2
TWB1	baz=11			*e*S	Sg	16 03 34.4	-0.2
NWF	**Wu-fen Shan** baz=9.0	**1.04**	**8**	*e*P	Pn	16 03 22.4	-0.3
NWF	baz=9.0			*e*S	Sg	16 03 35.2	+0.1
WFSB	**Wu-fen Shan** baz=9.0	**1.04**	**8**	*e*P	Pn	16 03 24.2	+1.6
WFSB	baz=9.0			S	Sb	16 03 35.8	0.0
WGK	**Gukeng** baz=251	**1.04**	**251**	*e*P	Pn	16 03 23.3	+0.6
WDLH	**Douliu** baz=252	**1.06**	**251**	*e*P	Pn	16 03 23.3	+0.4
SXI1	**Grass Mountain** baz=357	**1.07**	**12**	*e*P	Pb	16 03 22.8	+0.1
TWS1	**Kuangyinshan** baz=351	**1.08**	**350**	P	Pn	16 03 23.4	+0.3
TWS1	baz=351			S	Sb	16 03 37.2	+0.4
NHW	**Xinwu Township** baz=330	**1.10**	**331**	*e*P	Pn	16 03 24.0	+0.5
YM01	**YM01** baz=8.0	**1.10**	**357**	P	Pn	16 03 23.4	-0.2
YM01	baz=8.0			*e*S	Sb	16 03 38.4	+0.6
WCKO	**Fanlu** baz=239	**1.11**	**238**	*e*P	Pn	16 03 24.3	+0.6
TNOU	**National Taiwa** baz=6.0	**1.11**	**7**	*e*P	Pg	16 03 22.7	-0.4
NTST	**Danshui** baz=351	**1.13**	**352**	*e*P	Pn	16 03 24.2	+0.2
ANP	**Anpu** baz=355	**1.15**	**355**	*e*P	Pn	16 03 24.4	+0.2
WRL	**Guolierlin Hig** baz=254	**1.16**	**263**	*e*P	Pn	16 03 24.9	+0.6
STYH	**Taoyuan** baz=222	**1.17**	**222**	*e*P	Pb	16 03 24.2	0.0
STYH	baz=222			*e*S	Sn	16 03 40.4	-0.2
CHN4	**Tsaushan** baz=221	**1.17**	**235**	*e*P	Pn	16 03 25.3	+0.8
CHN4	baz=221			*e*S	Sn	16 03 42.4	+1.7
RLNB	**Erlin** baz=249	**1.17**	**263**	*e*P	Pn	16 03 24.4	0.0
RLNB	baz=249			*e*S	Sn	16 03 42.3	+1.6
CHN2	**Minshiung** baz=246	**1.17**	**245**	*e*P	Pn	16 03 26.1	+1.6
TPUB	**Ta-pu** baz=218	**1.18**	**232**	P	Pn	16 03 24.9	+0.4
TPUB	baz=218			S	Sn	16 03 41.9	+1.1
STYT	**Tauyuan** baz=222	**1.18**	**223**	*e*P	Pg	16 03 24.0	-0.4
STYT	baz=222			*e*S	Sn	16 03 41.4	+0.3
WTK	**Tuku** baz=254	**1.19**	**253**	*e*P	Pn	16 03 25.1	+0.4
LONT	**Longtian** baz=204	**1.22**	**202**	*e*P	Pb	16 03 23.3	-1.7
WTP	**Ta-pu** baz=229	**1.22**	**230**	*e*P	Pn	16 03 25.6	+0.4
WTP	baz=229			*e*S	Sn	16 03 43.0	+1.0
WTCT	**Ta-ch'eng** baz=263	**1.25**	**262**	*e*P	Pn	16 03 24.7	-0.8
TWK	**Hsinying** baz=234	**1.30**	**234**	*e*P	Pg	16 03 26.8	+0.1
TWK	baz=234			*e*S	Sn	16 03 45.7	+1.8
TWG	**Pinlang** baz=204	**1.32**	**203**	*e*P	Pn	16 03 23.9	-2.6
TWGBT	**Beinan** baz=204	**1.32**	**203**	*e*P	Pn	16 03 24.6	-1.9
CHN1	**Nanshi** baz=220	**1.32**	**230**	*e*P	Pg	16 03 27.2	+0.2
CHN1	baz=220			*e*S	Sn	16 03 47.3	+2.9
SNST	**Tainan City** baz=233	**1.32**	**232**	*e*P	Pg	16 03 27.6	+0.5
SNST	baz=233			*e*S	Sn	16 03 45.8	+1.4
YOJ	**Yonaguni jima** baz=71	**1.33**	**71**	*e*P	Pn	16 03 25.7	-0.9
YOJ	baz=71			*e*S	Sb	16 03 43.8	-0.3
WSF	**Szhu** baz=253	**1.35**	**253**	*e*P	Pb	16 03 27.5	+0.2
WSF	baz=253			*e*S	Sg	16 03 48.4	+3.3
SGST	**Jiashian** baz=225	**1.35**	**226**	*e*P	Pn	16 03 26.8	-0.2
SGST	baz=225			*e*S	Sg	16 03 46.5	+1.2
LDUT	**Ludao** baz=172	**1.37**	**186**	*e*P	Pn	16 03 25.5	-1.7
SLGT	**Liugui** baz=223	**1.38**	**221**	*e*P	Pb	16 03 27.8	0.0
ICHU	**Yijhu** baz=243	**1.41**	**242**	*e*P	Pg	16 03 28.9	+0.1
CHN3	**Shinhua** baz=234	**1.51**	**231**	*e*P	Pb	16 03 29.9	0.0
SCST	**Cishan** baz=225	**1.55**	**223**	*e*P	Pg	16 03 31.6	+0.1
SHHT	**Tainan City** baz=233	**1.55**	**230**	*e*P	Pg	16 03 32.8	+1.3
ECL	**Taimali** baz=192	**1.56**	**204**	*e*P	Pn	16 03 28.7	-1.2
SSD	**Sandimen** baz=207	**1.58**	**216**	*e*P	Pn	16 03 29.9	-0.3
TSMG	**Majia** baz=206	**1.61**	**215**	*e*P	Pb	16 03 31.7	0.0
MASBT	**Mashibuluo** baz=204	**1.69**	**213**	*e*P	Pn	16 03 31.1	-0.6
TSPT	**Pingtung City** baz=209	**1.71**	**218**	*e*P	Pb	16 03 33.7	+0.3
EAST	**Anshuo** baz=192	**1.80**	**204**	*e*P	Pn	16 03 32.9	-0.2
PHUB	**P'eng-hu** baz=256	**1.96**	**255**	*e*P	Pn	16 03 36.2	+0.9
PHUB	baz=256			*e*S	Sb	16 04 02.0	-0.3
PNG	**Penghu** baz=258	**1.96**	**257**	*e*P	Pn	16 03 35.4	+0.1
SLIU	**Shizi** baz=190	**1.97**	**203**	*e*P	Pn	16 03 36.3	+0.9
LYUB	**Lan-yu** baz=181	**2.03**	**181**	*e*P	Pn	16 03 35.5	-0.7
VCHM	**Qimei** baz=235	**2.18**	**248**	*e*P	Pn	16 03 37.9	-0.5
TWKBT	**Hengchun** baz=203	**2.22**	**200**	*e*P	Pn	16 03 39.0	+0.1
PTMZ	**Houxiangcun** baz=293	**2.50**	**294**	*e*P	Pn	16 03 43.9	+1.2
KNMB	**Chin-men Tao** baz=279	**2.99**	**279**	*e*P	Pn	16 03 49.9	+0.4
DSXP	**Dongshan** baz=266	**3.86**	**266**	*e*P	Pn	16 04 02.3	+0.8

TAP 06 16:03:34.7, 24°01N × 121°60E, h7km, ML3.3, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=2.0	**0.07**	**355**	*i* P	Pg	16 03 37.3	+0.8
TWD	baz=2.0			*i* S	Sg	16 03 39.0	+1.2
ETM	**Tongmen** baz=244	**0.11**	**245**	⇓*i* P	Pg	16 03 37.8	+0.6
ETM	baz=244			S	Sg	16 03 39.7	+0.8
ETL	**Fush Village** baz=7.0	**0.15**	**8**	*e*P	Pg	16 03 38.6	+0.8
ETL	baz=7.0			*e*S	Sg	16 03 41.0	+1.1
NACB	**Ninganchiao** baz=357	**0.16**	**358**	*i* P	Pg	16 03 38.8	+0.7
NACB	baz=357			*i* S	Sg	16 03 41.4	+1.1
LXIB	**Xiulin Townshi** baz=272	**0.17**	**273**	P	Pg	16 03 39.2	+0.8
LXIB	baz=272			S	Sg	16 03 42.4	+1.6
SHUL	**Shoufeng** baz=189	**0.23**	**189**	P	Pg	16 03 40.4	+1.2
SHUL	baz=189			*e*S	Sg	16 03 44.9	+2.6
ESL	**Shilin** baz=216	**0.25**	**218**	P	Pg	16 03 40.2	+0.5
TEGC	**Jichi Village** baz=189	**0.31**	**191**	P	Pb	16 03 42.0	-0.5
TEGC	baz=189			*e*S	Sb	16 03 48.5	+0.6
WHF	**Hehuan Shan** baz=293	**0.34**	**293**	*i* P	Pb	16 03 42.5	-0.8
WHF	baz=293			S	Sb	16 03 47.6	-1.4
EAHA	**Aohua** baz=21	**0.34**	**22**	*e*P	Pg	16 03 42.1	+0.7
WARBT	**Fenglin Townsh** baz=213	**0.35**	**214**	*e*P	Pg	16 03 42.0	+0.3
CHGB	**Renai** baz=276	**0.39**	**277**	P	Pb	16 03 43.7	-0.5
CHGB	baz=276			S	Sb	16 03 50.2	-0.4
OWD	**Renai** baz=261	**0.39**	**262**	*e*P	Pb	16 03 43.4	-0.8
FUSS	**Fushou** baz=305	**0.40**	**306**	P	Pb	16 03 44.0	-0.3
ENA	**Nanau** baz=18	**0.43**	**17**	P	Pg	16 03 43.8	+0.7
WUSB	**Renai** baz=267	**0.44**	**267**	*e*P	Pb	16 03 44.5	-0.4
TWT	**Tachien** baz=300	**0.46**	**302**	P	Pb	16 03 45.1	-0.2
EWUT	**Wuta** baz=20	**0.46**	**20**	*e*P	Pg	16 03 44.4	+0.7
NNSB	**Datong** baz=334	**0.46**	**334**	*e*P	Pb	16 03 44.9	-0.4
NNSH	**Datong** baz=334	**0.46**	**334**	*e*P	Pb	16 03 45.0	-0.3
TDCB	**Techi** baz=300	**0.47**	**301**	P	Pb	16 03 45.2	-0.2
NNS	**Nan Shan** baz=334	**0.47**	**334**	P	Pb	16 03 45.2	-0.3
VWDT	**VWDT** baz=238	**0.49**	**239**	P	Pb	16 03 45.5	-0.2
LATG	**Datong** baz=352	**0.53**	**352**	*e*P	Pb	16 03 46.0	-0.4
EHY	**Hungye** baz=206	**0.57**	**207**	*e*P	Pg	16 03 45.7	0.0
NDT	**Datong Townshi** baz=352	**0.59**	**352**	P	Pb	16 03 47.1	-0.3
DPDB	**Guoxing** baz=271	**0.62**	**272**	*e*P	Pb	16 03 48.0	+0.1
ENTT	**Nioudou** baz=357	**0.62**	**357**	*e*P	Pb	16 03 47.8	-0.2
NDS	**Dongshan** baz=9.0	**0.63**	**10**	P	Pb	16 03 47.7	-0.4
WCS	**Beigang Elemen** baz=273	**0.63**	**274**	*e*P	Pb	16 03 48.0	-0.1
SSLB	**Suanglung** baz=249	**0.63**	**249**	P	Pb	16 03 47.9	-0.3
TWC	**Suao** baz=21	**0.64**	**21**	P	Pb	16 03 48.2	0.0
SMLT	**Sun Moon Lake** baz=258	**0.66**	**259**	P	Pb	16 03 48.3	-0.3
SMLT	baz=258			*e*S	Sb	16 03 57.3	-0.6
WHP	**Taichung City** baz=293	**0.66**	**294**	*e*P	Pb	16 03 48.8	+0.2

YULB	**Yu-li** baz=204	**0.68**	**204**	*eP*	Pg	16 03 48.0 +0.2
YHNB	**Yeheng** baz=342	**0.69**	**343**	*eP*	Pb	16 03 49.1 +0.1
TYC	**Yuchr** baz=260	**0.69**	**261**	*eP*	Pb	16 03 49.1 0.0
NSK	**Sanguang** baz=341	**0.70**	**341**	*eP*	Pb	16 03 49.1 -0.2
TWE	**Neicheng** baz=6.0	**0.71**	**5**	P	Pb	16 03 49.5 +0.1
TWE	baz=6.0			*eS*	Sb	16 03 59.1 -0.3
EYUL	**Yuli** baz=201	**0.71**	**201**	*eP*	Pb	16 03 49.3 -0.1
TWF1	**Yuli** baz=202	**0.71**	**203**	*eP*	Pb	16 03 49.2 -0.3
FUSB	**Fushanzhiwuyua** baz=358	**0.74**	**359**	*eP*	Pb	16 03 50.2 +0.1
WHYT	**Xinyi Township** baz=245	**0.76**	**245**	*eP*	Pb	16 03 50.8 +0.5
NFF	**Wufeng Townshi** baz=324	**0.76**	**324**	*eP*	Pb	16 03 50.7 +0.3
NWLT	**Wulai** baz=353	**0.77**	**353**	*eP*	Pb	16 03 50.5 0.0
WJS	**Zhushan** baz=256	**0.82**	**257**	*eP*	Pn	16 03 52.9 +0.1
NSTT	**Nanjuang** baz=316	**0.82**	**318**	*eP*	Pb	16 03 51.8 +0.4
LIOB	**Emei** baz=319	**0.83**	**320**	*eP*	Pn	16 03 52.1 -0.7
TWQ1	**Liyutan** baz=293	**0.83**	**294**	*eP*	Pn	16 03 53.1 +0.3
WWF	**Wufeng** baz=272	**0.83**	**272**	*eP*	Pn	16 03 53.4 +0.5
WNT	**Mingjian** baz=260	**0.85**	**261**	*eP*	Pn	16 03 53.2 +0.1
TCU	**Taichung** baz=278	**0.86**	**279**	*eP*	Pn	16 03 54.0 +0.8
NJD	**Zhudong** baz=326	**0.86**	**327**	*eP*	Pn	16 03 52.8 -0.5
ALS	**Alishan** baz=235	**0.89**	**236**	*eP*	Pg	16 03 52.0 +0.2
HSN1	**Hsinchu** baz=325	**0.93**	**325**	*eP*	Pn	16 03 55.0 +0.7
EHD	**Haiduan** baz=202	**0.93**	**203**	*eP*	Pn	16 03 53.9 -0.4
WDJ	**Dajia District** baz=290	**0.94**	**291**	*eP*	Pn	16 03 55.4 +1.0
CHN5	**Tsauling** baz=243	**0.94**	**244**	*eP*	Pn	16 03 54.8 +0.3
SBCB	**Hsinchu** baz=324	**0.96**	**324**	*eP*	Pn	16 03 55.4 +0.8
TIPB	**Shuangxi** baz=12	**0.98**	**12**	*eP*	Pn	16 03 54.6 -0.3
ELDTW	**Lidau** baz=212	**0.98**	**213**	*eP*	Pg	16 03 53.7 +0.2

TAP 06 16:03:42.9,24.°00N×121.°64E,h6km,ML3.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=341	**0.09**	**337**	*i* P	Pg	16 03 45.4	+0.4
TWD	baz=341			*i* S	Sg	16 03 47.1	+0.7
ETM	**Tongmen** baz=259	**0.13**	**257**	P	Pg	16 03 46.1	+0.5
ETM	baz=259			S	Sg	16 03 48.5	+0.9
ETL	**Fush Village** baz=354	**0.16**	**356**	*i* P	Pg	16 03 46.6	+0.4
ETL	baz=354			S	Sg	16 03 49.0	+0.5
NACB	**Ninganchiao** baz=347	**0.18**	**348**	P	Pg	16 03 46.9	+0.3
NACB	baz=347			*i* S	Sg	16 03 49.3	+0.3
LXIB	**Xiulin Townshi** baz=273	**0.20**	**277**	P	Pg	16 03 47.5	+0.5
LXIB	baz=273			S	Sg	16 03 50.7	+0.9
SHUL	**Shoufeng** baz=207	**0.22**	**198**	*eP*	Pg	16 03 48.7	+1.5
ESL	**Shilin** baz=226	**0.26**	**226**	*eP*	Pg	16 03 48.7	+0.7
TEGC	**Jichi Village** baz=189	**0.30**	**197**	*eP*	Pb	16 03 50.6	0.0
EHP	**Heping Village** baz=14	**0.33**	**17**	*eP*	Pg	16 03 50.0	+0.8
EHP	baz=14			S	Sg	16 03 55.0	+1.4
EAHA	**Aohua** baz=12	**0.35**	**16**	*eP*	Pg	16 03 50.3	+0.6
WARBT	**Fenglin Townsh** baz=229	**0.36**	**220**	*eP*	Pb	16 03 50.7	-0.9
WHF	**Hehuan Shan** baz=295	**0.37**	**294**	*eP*	Pg	16 03 50.8	+0.6
WHF	baz=295			*eS*	Sg	16 03 56.0	+0.8
OWD	**Renai** baz=265	**0.42**	**265**	*eP*	Pg	16 03 51.2	+0.1
CHGB	**Renai** baz=280	**0.43**	**279**	*eP*	Pg	16 03 50.8	-0.4
CHGB	baz=280			S	Sg	16 03 58.2	+1.4
FUSS	**Fushou** baz=305	**0.44**	**305**	*eP*	Pg	16 03 52.1	+0.7
ENA	**Nanau** baz=8.0	**0.44**	**13**	P	Pg	16 03 51.7	+0.3
ENA	baz=8.0			S	Sg	16 03 57.5	+0.3
EWUT	**Wuta** baz=11	**0.47**	**16**	*eP*	Pg	16 03 52.2	+0.3
WUSB	**Renai** baz=272	**0.47**	**270**	*eP*	Pg	16 03 51.4	-0.7
WUSB	baz=272			*eS*	Sg	16 03 59.5	+1.2
NNSH	**Datong** baz=332	**0.49**	**332**	*eP*	Pg	16 03 52.2	-0.1
NNSH	baz=332			*eS*	Sg	16 03 59.4	+0.6
NNSB	**Datong** baz=332	**0.49**	**332**	*eP*	Pg	16 03 52.1	-0.3
TWT	**Tachien** baz=300	**0.49**	**302**	*eP*	Pg	16 03 52.3	-0.1
NNS	**Nan Shan** baz=333	**0.50**	**332**	*eP*	Pg	16 03 52.6	0.0
NNS	baz=333			S	Sg	16 03 59.8	+0.6
NNS	**Nan Shan** baz=334	**0.50**	**332**	*eS*	Pg	16 03 52.7	0.0
TDCB	**Techi** baz=302	**0.51**	**301**	P	Pg	16 03 53.2	+0.6
TDCB	baz=302			*eS*	Sg	16 04 00.2	+0.9
TDCB	**Techi** baz=300	**0.51**	**301**	*eS*	Pg	16 03 52.9	+0.2
HGSD	**Ruisui** baz=224	**0.54**	**201**	*eP*	Pb	16 03 54.3	-0.3
LATG	**Datong** baz=339	**0.55**	**349**	*eP*	Pg	16 03 53.7	+0.3
EHY	**Hungye** baz=212	**0.56**	**211**	*eP*	Pg	16 03 54.4	+0.7
ESAO	**Su ao** baz=8.0	**0.61**	**18**	*eP*	Pb	16 03 55.3	-0.6
NDT	**Datong Townshi** baz=348	**0.61**	**349**	P	Pg	16 03 55.3	+0.6
NDT	baz=348			*eS*	Sg	16 04 03.5	+0.8
WPL	**Puli Township** baz=273	**0.62**	**272**	*eP*	Pb	16 03 56.1	0.0
WPL	baz=273			*eS*	Sg	16 04 03.8	+0.9
NDS	**Dongshan** baz=3.0	**0.64**	**7**	*eP*	Pg	16 03 55.5	+0.3
NDS	baz=3.0			*eS*	Sg	16 04 04.5	+1.0
TWC	**Suao** baz=8.0	**0.64**	**18**	*eP*	Pg	16 03 55.7	+0.5
ENTT	**Nioudou** baz=353	**0.65**	**354**	P	Pb	16 03 56.0	-0.5
ENTT	baz=353			*eS*	Sg	16 04 04.1	+0.4
SSLB	**Suanglung** baz=253	**0.66**	**252**	*eP*	Pb	16 03 56.2	-0.5
SSLB	**Suanglung** baz=249	**0.66**	**252**	*eS*	Pb	16 03 56.7	0.0
TYC	**Yuchr** baz=263	**0.72**	**263**	*eP*	Pg	16 03 57.2	+0.5
TWE	**Neicheng** baz=359	**0.72**	**2**	*eP*	Pg	16 03 57.0	+0.3
TWE	baz=359			*eS*	Sg	16 04 06.6	+0.4
NSK	**Sanguang** baz=351	**0.72**	**340**	*eP*	Pg	16 03 56.8	-0.1
FUSB	**Fushanzhiwuyua** baz=354	**0.76**	**357**	P	Pg	16 03 58.0	+0.5
FUSB	baz=354			S	Sb	16 04 08.6	-0.6
NWLT	**Wulai** baz=350	**0.79**	**351**	*eP*	Pg	16 03 58.4	+0.3
NWLT	baz=350			*eS*	Sg	16 04 08.7	+0.4
WWF	**Wufeng** baz=273	**0.86**	**273**	*eP*	Pn	16 04 01.1	-0.4
LIOB	**Emei** baz=319	**0.86**	**319**	*eP*	Pb	16 04 00.5	+0.3
TWQ1	**Liyutan** baz=294	**0.86**	**294**	*eP*	Pg	16 03 59.2	-0.3
WNT	**Mingjian** baz=255	**0.88**	**263**	*eP*	Pg	16 03 58.9	-0.8
NHDH	**Xindian Distri** baz=353	**0.97**	**354**	*eP*	Pb	16 04 02.0	0.0

TAP 06 16:03:52.6,24.°12N×121.°60E,h14km±1km,ML2.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=170	**0.04**	**183**	P	Pg	16 03 55.2	0.0
TWD	baz=170			S	Sg	16 03 57.0	0.0
ETL	**Fush Village** baz=31	**0.04**	**30**	P	Pg	16 03 55.0	-0.4
ETL	baz=31			S	Sg	16 03 57.0	-0.2
NACB	**Ninganchiao** baz=356	**0.05**	**357**	P	Pg	16 03 55.7	+0.3
NACB	baz=356			S	Sg	16 03 57.2	0.0
ETM	**Tongmen** baz=211	**0.18**	**212**	*eP*	Pg	16 03 56.8	-0.1
LXIB	**Xiulin Townshi** baz=239	**0.20**	**240**	*eP*	Pg	16 03 57.0	-0.3
NNSB	**Datong** baz=327	**0.36**	**327**	*eP*	Pg	16 03 59.8	-0.3
NNSB	**Datong** baz=332	**0.36**	**327**	S	Pg	16 03 59.4	-0.7

TAP 06 16:04:13.0,24.°16N×121.°69E,h8km,ML2.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=272	**0.06**	**273**	P	Pg	16 04 15.5	+0.7
ETL	baz=272			S	Sg	16 04 17.0	+0.9
NACB	**Ninganchiao** baz=282	**0.09**	**282**	P	Pg	16 04 15.7	+0.6
NACB	baz=282			*eS*	Sg	16 04 17.5	+0.9
TWD	**Chiawan** baz=224	**0.11**	**227**	P	Pg	16 04 16.0	+0.5
TWD	baz=224			S	Sg	16 04 17.8	+0.5
ENA	**Nanau** baz=12	**0.28**	**10**	P	Pb	16 04 19.5	-0.7
ENA	baz=12			S	Sb	16 04 23.8	-1.2
LXIB	**Xiulin Townshi** baz=241	**0.28**	**242**	*eP*	Pb	16 04 19.7	-0.7
EWUT	**Wuta** baz=16	**0.30**	**16**	P	Pb	16 04 19.9	-0.7
EWUT	baz=16			S	Sb	16 04 24.7	-1.0
NNSH	**Datong** baz=314	**0.39**	**314**	*eP*	Pb	16 04 21.4	-0.7
NNS	**Nan Shan** baz=315	**0.40**	**315**	*eP*	Pg	16 04 21.4	+0.5
LATG	**Datong** baz=338	**0.41**	**339**	*eP*	Pb	16 04 22.0	-0.4
FUSS	**Fushou** baz=282	**0.41**	**283**	*eP*	Pb	16 04 22.8	+0.1
ESAO	**Su ao** baz=19	**0.44**	**19**	*eP*	Pb	16 04 23.2	+0.1
NDT	**Datong Townshi** baz=340	**0.47**	**340**	P	Pb	16 04 23.4	-0.2
NDT	baz=340			*eS*	Sb	16 04 30.2	-0.4
TWC	**Suao** baz=19	**0.47**	**18**	*eP*	Pb	16 04 23.9	+0.3
NDS	**Dongshan** baz=3.0	**0.48**	**3**	*eP*	Pb	16 04 23.7	0.0
CHGB	**Renai** baz=258	**0.48**	**259**	*eP*	Pg	16 04 22.8	+0.5
ENTT	**Nioudou** baz=347	**0.49**	**347**	P	Pb	16 04 24.0	+0.1
YHNB	**Yeheng** baz=331	**0.58**	**331**	*eP*	Pb	16 04 25.5	-0.1

*TAP **06** 16:06:26.0,24.°11N×121.°65E,h9km,ML3.0,C*
*JMA **06** 16:06:26.5±0.4,24.°1N±0.°6×12.°2E±.°,h1km±3km, TAIWAN REGION*

ISC 06 16:06:26.2±1.0,24.°09N±0.°03×121.°68E±0.°04,h9km±6km, n25,σ0.°43/32,1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=242	**0.08**	**265**	*i* P	**Pg**	**16 06 28.4**	**0.0**
TWD	baz=242			S	**Sg**	**16 06 29.6**	**-0.3**
ETL	**Fush Village** baz=332	**0.09**	**324**	*i* P	**Pg**	**16 06 28.8**	**+0.2**
ETL	baz=332			*i* S	**Sg**	**16 06 30.4**	**+0.1**
NACB	**Ninganchiao** baz=321	**0.12**	**318**	*i* P	**Pg**	**16 06 29.1**	**+0.1**
NACB	baz=321			*i* S	**Sg**	**16 06 31.0**	**+0.1**
ETM	**Tongmen** baz=226	**0.21**	**235**	P	**Pg**	**16 06 30.8**	**+0.3**
EAHA	**Aohua** baz=19	**0.25**	**12**	*eP*	**Pg**	**16 06 31.6**	**+0.4**
LXIB	**Xiulin Townshi** baz=249	**0.25**	**255**	P	**Pg**	**16 06 31.5**	**+0.1**
LXIB	baz=249			*eS*	**Sg**	**16 06 35.1**	**+0.3**
SHUL	**Shoufeng** baz=194	**0.32**	**200**	P	**Pb**	**16 06 34.2**	**+0.2**
ENA	**Nanau** baz=15	**0.34**	**9**	P	**Pg**	**16 06 33.4**	**+0.4**
ENA	baz=15			S	**Sg**	**16 06 38.2**	**+0.6**
ESL	**Shilin** baz=213	**0.35**	**220**	*eP*	**Pg**	**16 06 33.2**	**0.0**
EWUT	**Wuta** baz=18	**0.37**	**14**	*eP*	**Pg**	**16 06 33.8**	**+0.3**
WHF	**Hehuan Shan** baz=276	**0.38**	**279**	*eP*	**Pg**	**16 06 33.8**	**-0.1**
TEGC	**Jichi Village** baz=193	**0.40**	**199**	*eP*	**Pb**	**16 06 35.5**	**+0.1**
FUSS	**Fushou** baz=290	**0.43**	**292**	*eP*	**Pb**	**16 06 35.4**	**-0.7**
NNSB	**Datong** baz=322	**0.44**	**321**	⇓P	**Pg**	**16 06 35.3**	**+0.6**
NNSB	baz=322			S	**Sg**	**16 06 41.1**	**+0.5**
NNSH	**Datong** baz=322	**0.44**	**321**	P	**Pg**	**16 06 35.2**	**+0.5**
NNS	**Nan Shan** baz=323	**0.45**	**322**	P	**Pg**	**16 06 35.5**	**+0.4**
WARBT	**Fenglin Townsh** baz=212	**0.46**	**216**	*eP*	**Pg**	**16 06 35.2**	**+0.1**
CHGB	**Renai** baz=264	**0.46**	**267**	P	**Pg**	**16 06 35.8**	**+0.5**
LATG	**Datong** baz=344	**0.47**	**343**	*eP*	**Pg**	**16 06 35.4**	**0.0**
OWD	**Renai** baz=251	**0.48**	**254**	*eP*	**Pg**	**16 06 35.9**	**+0.3**
TWT	**Tachien** baz=287	**0.49**	**290**	*eP*	**Pg**	**16 06 36.2**	**+0.5**
TDCB	**Techi** baz=287	**0.51**	**289**	*eP*	**Pg**	**16 06 36.4**	**+0.4**
WUSB	**Renai** baz=257	**0.52**	**260**	*eP*	**Pg**	**16 06 36.9**	**+0.5**
NDT	**Datong Townshi** baz=345	**0.54**	**343**	*eP*	**Pb**	**16 06 37.3**	**-0.5**
JISG	**Ishigakijimahi**	**2.45**	**78**	*eP*	**Pn**	**16 07 06.5**	**+0.2**
JISG				*eS*	**Sn**	**16 07 35.3**	**-1.1**

TAP 06 16:10:44.5,24.°05N×121.°60E,h10km,ML2.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=2.0	**0.03**	**347**	*i* P	Pg	16 10 46.9	+0.6
TWD	baz=2.0			*i* S	Sg	16 10 48.3	+0.7
ETL	**Fush Village** baz=9.0	**0.11**	**10**	*eP*	Pg	16 10 47.9	+0.7
NACB	**Ninganchiao** baz=356	**0.12**	**356**	*i* P	Pg	16 10 48.1	+0.7
NACB	baz=356			S	Sg	16 10 49.9	+0.5
ETM	**Tongmen** baz=229	**0.13**	**230**	P	Pg	16 10 48.2	+0.6
ETM	baz=229			*i* S	Sg	16 10 50.5	+0.8
LXIB	**Xiulin Townshi** baz=259	**0.18**	**260**	P	Pg	16 10 49.4	+1.1
LXIB	baz=259			*i* S	Sg	16 10 52.4	+1.4
SHUL	**Shoufeng** baz=188	**0.27**	**188**	*eP*	Pb	16 10 51.2	-0.3
ESL	**Shilin** baz=211	**0.28**	**213**	*eP*	Pg	16 10 50.7	+0.5
WHF	**Hehuan Shan** baz=286	**0.32**	**287**	P	Pb	16 10 52.4	-0.3
WHF	baz=286			*i* S	Sb	16 10 57.1	-1.0
FUSS	**Fushou** baz=300	**0.38**	**301**	P	Pb	16 10 53.5	0.0
FUSS	baz=300			S	Sb	16 10 59.8	+0.2
WARBT	**Fenglin Townsh** baz=210	**0.39**	**211**	*eP*	Pg	16 10 52.3	+0.2
CHGB	**Renai** baz=271	**0.39**	**271**	P	Pb	16 10 53.6	-0.1
CHGB	baz=271			*i* S	Sb	16 10 59.6	-0.4
ENA	**Nanau** baz=19	**0.40**	**19**	P	Pg	16 10 52.9	+0.6
NNSB	**Datong** baz=331	**0.42**	**332**	*eP*	Pb	16 10 53.8	-0.4
NNS	**Nan Shan** baz=332	**0.44**	**332**	*eP*	Pb	16 10 54.4	-0.1
LATG	**Datong** baz=351	**0.49**	**352**	P	Pb	16 10 55.0	-0.2
LATG	baz=351			S	Sb	16 11 02.2	-0.4
ENTT	**Nioudou** baz=357	**0.59**	**357**	P	Pb	16 10 57.0	0.0
ENTT	baz=357			*eS*	Sb	16 11 05.3	-0.1

*IDC **06** 16:13:46.5±1.0,23.°86N×121.°54E,h0km,mb3.6/6, mbtmp3.5/7,ML3.2/1,Error ellipse: s-maj=45.5km s-min=21.7km az=73.0*
*TAP **06** 16:13:47.8,23.°98N×121.°61E,h4km,ML3.8,C*
*JMA **06** 16:13:47.5±0.1,24.°0N±0.°3×12.°2E±.°,h0km,MV3.1/10, TAIWAN REGION*

ISC 06 16:13:48.3±0.8,23.°98N±0.°01×121.°62E±0.°02,h8km±5km, n163,σ0.°72/220,mb3.6/6,9C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=356	**0.11**	**350**	*eP*	**Pg**	**16 13 50.4**	**-0.4**
TWD	baz=356			*i* S	**Sg**	**16 13 52.3**	**-0.3**
ETM	**Tongmen** baz=260	**0.11**	**265**	*i* P	**Pg**	**16 13 50.6**	**-0.3**
ETM	baz=260			*i* S	**Sg**	**16 13 52.7**	**-0.1**
ETL	**Fush Village** baz=18	**0.18**	**2**	*eP*	**Pg**	**16 13 51.9**	**-0.3**
LXIB	**Xiulin Townshi** baz=281	**0.19**	**284**	P	**Pg**	**16 13 52.0**	**-0.3**
LXIB	baz=281			S	**Sg**	**16 13 55.4**	**+0.3**
SHUL	**Shoufeng** baz=193	**0.19**	**195**	P	**Pg**	**16 13 52.8**	**+0.5**
SHUL	baz=193			S	**Sg**	**16 13 57.0**	**+2.0**
NACB	**Ninganchiao** baz=355	**0.20**	**354**	*eP*	**Pg**	**16 13 52.1**	**-0.3**
NACB	baz=355			*i* S	**Sg**	**16 13 55.0**	**-0.1**
ESL	**Shilin** baz=223	**0.23**	**226**	⇑*i*P	**Pg**	**16 13 52.7**	**-0.3**
ESL	baz=223			*eS*	**Sg**	**16 13 56.0**	**-0.1**
TEGC	**Jichi Village** baz=192	**0.28**	**195**	*eP*	**Pb**	**16 13 54.8**	**-0.7**
TEGC	baz=192			*eS*	**Sb**	**16 14 00.9**	**+0.6**
WARBT	**Fenglin Townsh** baz=230	**0.33**	**219**	⇑*i*P	**Pg**	**16 13 54.5**	**-0.4**
WARBT	baz=230			*eS*	**Sg**	**16 13 59.1**	**-0.2**
EGFH	**Guangfu** baz=214	**0.35**	**210**	*eP*	**Pg**	**16 13 55.1**	**-0.2**
WHF	**Hehuan Shan** baz=297	**0.36**	**298**	P	**Pg**	**16 13 55.5**	**-0.1**
WHF	baz=297			S	**Sg**	**16 14 00.6**	**+0.1**
EAHA	**Aohua** baz=20	**0.37**	**18**	*eP*	**Pg**	**16 13 55.5**	**-0.2**
OWD	**Renai** baz=266	**0.40**	**267**	P	**Pg**	**16 13 56.4**	**+0.1**
OWD	baz=266			S	**Sg**	**16 14 02.0**	**+0.4**
CHGB	**Renai** baz=280	**0.41**	**282**	P	**Pg**	**16 13 56.7**	**+0.2**
CHGB	baz=280			*eS*	**Sb**	**16 14 02.8**	**-1.8**
FUSS	**Fushou** baz=308	**0.43**	**309**	P	**Pb**	**16 13 57.5**	**-1.0**
FUSS	baz=308			S	**Sg**	**16 14 03.3**	**+0.6**
WUSB	**Renai** baz=271	**0.46**	**272**	*i* P	**Pb**	**16 13 57.5**	**-1.2**
WUSB	baz=271			*i* S	**Sb**	**16 14 04.0**	**-1.7**
ENA	**Nanau** baz=17	**0.46**	**14**	*eP*	**Pg**	**16 13 57.4**	**0.0**
ENA	baz=17			*eS*	**Sg**	**16 14 03.9**	**+0.4**
VWDT	**VWDT** baz=242	**0.49**	**243**	P	**Pg**	**16 13 57.9**	**+0.1**
VWDT	baz=242			*eS*	**Sg**	**16 14 04.8**	**+0.6**
TWT	**Tachien** baz=302	**0.49**	**305**	P	**Pb**	**16 13 58.3**	**-0.9**
TWT	baz=302			S	**Sb**	**16 14 05.3**	**-1.4**
EWUT	**Wuta** baz=22	**0.49**	**17**	*eP*	**Pg**	**16 13 57.8**	**-0.1**
NNSB	**Datong** baz=335	**0.50**	**335**	P	**Pg**	**16 13 57.9**	**-0.1**
NNSB	baz=335			S	**Sg**	**16 14 05.0**	**+0.3**
NNSH	**Datong** baz=334	**0.50**	**335**	P	**Pg**	**16 13 57.7**	**-0.3**
NNSH	baz=334			S	**Sg**	**16 14 04.9**	**+0.2**
TDCB	**Techi** baz=302	**0.50**	**304**	P	**Pg**	**16 13 58.1**	**0.0**
HGSD	**Ruisui** baz=204	**0.51**	**200**	*eP*	**Pb**	**16 13 59.9**	**+0.3**
NNS	**Nan Shan** baz=335	**0.51**	**334**	*i* P	**Pg**	**16 13 58.2**	**-0.1**
NNS	baz=335			S	**Sg**	**16 14 05.5**	**+0.4**
EHY	**Hungye** baz=215	**0.54**	**210**	*eP*	**Pg**	**16 13 58.4**	**-0.4**
LATG	**Datong** baz=353	**0.56**	**352**	*eP*	**Pg**	**16 13 59.2**	**-0.1**

LATG *eS* **Sg** **16 14 06.6 -0.1**
baz=353
WPL **Puli Township** **0.60 274** *i* P **Pb** **16 14 00.6 -0.6**
baz=272
WPL *i* S **Sb** **16 14 08.8 -1.0**
baz=272
NDT **Datong Townshi** **0.63 351** P **Pg** **16 14 00.6 0.0**
baz=351
NDT S **Sb** **16 14 09.4 -1.2**
baz=351
ESAO **Su ao** **0.63 19** *eP* **Pg** **16 14 00.4 -0.2**
baz=21
DPDB **Guoxing** **0.63 275**⇑ *iP* **Pb** **16 14 01.2 -0.5**
baz=274
DPDB *eS* **Sb** **16 14 09.6 -1.1**
baz=274
SSLB **Suanglung** **0.64 253** P **Pb** **16 14 00.7 -1.0**
SSLB **Suanglung** **0.64 253**⇑ *iP* **Pb** **16 14 00.7 -1.0**
baz=252
SSLB *eS* **Sg** **16 14 08.6 -0.3**
baz=252
WCS **Beigang Elemen** **0.65 277** P **Pb** **16 14 01.3 -0.6**
baz=275
YULB **Yu-li** **0.65 207** P **Pg** **16 14 00.9 0.0**
YULB **Yu-li** **0.65 207** *eP* **Pg** **16 14 00.5 -0.4**
baz=213
NDS **Dongshan** **0.66 8** P **Pg** **16 14 00.8 -0.4**
baz=8.0
NDS *eS* **Sg** **16 14 09.9 +0.1**
baz=8.0
SMLT **Sun Moon Lake** **0.66 262**⇑ *iP* **Pb** **16 14 01.4 -0.8**
baz=260
SMLT *eS* **Sg** **16 14 09.9 0.0**
baz=260
ENTT **Nioudou** **0.66 356** P **Pg** **16 14 00.9 -0.2**
baz=357
ENTT S **Sg** **16 14 10.1 +0.3**
baz=357
TWC **Suao** **0.67 19** *eP* **Pg** **16 14 01.2 0.0**
baz=20
TWC *eS* **Sb** **16 14 10.8 -0.8**
baz=20
ECBN **Changbin** **0.67 193** *eP* **Pb** **16 14 01.7 -0.6**
baz=178
EYUL **Yuli** **0.68 204** *eP* **Pg** **16 14 01.6 +0.1**
baz=209
WHP **Taichung City** **0.68 296**⇓ *iP* **Pb** **16 14 02.0 -0.5**
baz=283
WHP S **Sb** **16 14 11.8 -0.3**
baz=283
TWF1 **Yuli** **0.69 205** *eP* **Pg** **16 14 01.3 -0.3**
baz=211
TYC **Yuchr** **0.70 264**⇑ *iP* **Pb** **16 14 02.0 -0.8**
baz=263
TYC *i* S **Sb** **16 14 11.2 -1.3**
baz=263
YHNB **Yeheng** **0.72 342** P **Pb** **16 14 02.4 -0.9**
YHNB **Yeheng** **0.72 342** P **Pg** **16 14 02.0 -0.3**
baz=352
NSK **Sanguang** **0.74 341**⇓ *iP* **Pg** **16 14 02.6 0.0**
baz=341
NSK S **Sg** **16 14 12.5 +0.3**
baz=341
TWE **Neicheng** **0.74 4** *i* P **Pg** **16 14 02.3 -0.4**
baz=5.0
TWE *i* S **Sb** **16 14 13.6 -0.2**
baz=5.0
WHYT **Xinyi Township** **0.75 248** P **Pb** **16 14 02.9 -0.8**
baz=245
FUSB **Fushanzhiwuyua** **0.78 358** *eP* **Pg** **16 14 03.0 -0.4**
NFF **Wufeng Townshi** **0.80 325** P **Pb** **16 14 03.6 -0.8**
baz=326
CHKH **Chenggong** **0.81 195** *eP* **Pg** **16 14 03.5 -0.4**
baz=181
FULB **Fuli** **0.83 201** *eP* **Pb** **16 14 05.1 +0.1**
baz=213
WWF **Wufeng** **0.84 275** *eP* **Pn** **16 14 06.3 -0.2**
baz=272
TWQ1 **Liyutan** **0.85 296** *eP* **Pb** **16 14 05.9 +0.4**
baz=295
TWQ1 *eS* **Sn** **16 14 19.0 -0.3**
baz=295
WNT **Mingjian** **0.86 264** *eP* **Pb** **16 14 06.0 +0.5**
baz=262
WNT *eS* **Sn** **16 14 18.8 -0.7**
baz=262
WNT1 **Nantou City** **0.86 266** *eP* **Pn** **16 14 06.3 -0.4**
baz=253
NSTT **Nanjuang** **0.86 319** ⇓P **Pb** **16 14 05.4 -0.2**
baz=319
NSTT *eS* **Sb** **16 14 17.8 +0.6**
baz=319
LIOB **Emei** **0.86 321** *eP* **Pb** **16 14 05.7 +0.1**
baz=320
LIOB *eS* **Sb** **16 14 17.2 -0.1**
baz=320
ALS **Alishan** **0.88 238** *eS* **Sb** **16 14 17.1 -0.8**
baz=237
TCU **Taichung** **0.88 281** *eP* **Pb** **16 14 05.6 -0.2**
baz=279
NSY **Sanyi** **0.90 299** *eP* **Pn** **16 14 06.9 -0.4**
baz=311
NSY *eS* **Sn** **16 14 20.4 0.0**
baz=311
CHKT **Chengkung** **0.90 195** *eP* **Pg** **16 14 05.5 -0.2**
baz=182
EHD **Haiduan** **0.91 205** *eP* **Pg** **16 14 04.7 -1.0**
baz=201
NMLH **Miaoli** **0.94 307** *eP* **Pn** **16 14 07.3 -0.5**
baz=306
CHN5 **Tsauling** **0.94 247**⇑ *iP* **Pb** **16 14 07.2 +0.3**
baz=233
CHN5 *eS* **Sn** **16 14 21.8 +0.3**
baz=233
WYL **Yuanlin Townsh** **0.95 269** *eP* **Pn** **16 14 07.9 0.0**
baz=265
ECS **Chishang** **0.95 203** *eP* **Pn** **16 14 07.8 -0.2**
baz=199
ELDTW **Lidau** **0.96 215** *eP* **Pg** **16 14 05.7 -1.0**
baz=210
WDJ **Dajia District** **0.97 293** *eP* **Pn** **16 14 08.2 0.0**
baz=290
WCHH **Zhanghua** **0.97 276** *eP* **Pn** **16 14 08.3 +0.1**
baz=272
NJN **Zhunan** **0.98 316** *eP* **Pg** **16 14 06.5 -0.7**
baz=316
NHDH **Xindian Distri** **0.99 355** P **Pg** **16 14 06.9 -0.4**
baz=358
SBCB **Hsinchu** **1.00 325** *eP* **Pb** **16 14 07.7 -0.1**
baz=325
TWA **Mucha** **1.00 358** P **Pg** **16 14 07.3 -0.3**
baz=347
TWA S **Sb** **16 14 21.0 -0.2**
baz=347
TATO **Taipei** **1.00 353** P **Pb** **16 14 07.8 -0.1**
TATO **Taipei** **1.00 353** P **Pg** **16 14 07.3 -0.3**
baz=354
TATO S **Sb** **16 14 21.4 +0.1**
baz=354
WGK **Gukeng** **1.01 254** *eP* **Pn** **16 14 08.5 -0.2**
baz=253
WGK *eS* **Sn** **16 14 23.2 +0.1**
baz=253
TIPB **Shuangxi** **1.01 11** *eP* **Pg** **16 14 07.0 -0.8**
baz=15
HSN **Hsinchu** **1.01 324** *eP* **Pb** **16 14 08.3 +0.2**
baz=328
WDLH **Douliu** **1.03 254** *eP* **Pb** **16 14 08.6 +0.2**
baz=250
BACT **New Taipei Cit** **1.03 351** *eP* **Pb** **16 14 08.5 +0.1**
baz=354
NTY **Taoyuan** **1.06 344** *eP* **Pb** **16 14 09.1 +0.2**
baz=347
NCUH **Zhongli** **1.06 338** *eP* **Pb** **16 14 09.2 +0.2**
baz=341
TAP **Taipei** **1.06 355** *eP* **Pg** **16 14 08.5 -0.3**
baz=356
TAP S **Sb** **16 14 23.1 0.0**
baz=356
NCU **National Centr** **1.06 339** *eP* **Pb** **16 14 08.9 -0.1**
baz=349
WCKO **Fanlu** **1.07 240** *eP* **Pn** **16 14 09.5 -0.1**
baz=233
WCKO *eS* **Sn** **16 14 25.5 +0.8**
baz=233
TWB1 **Santiao Chiao** **1.08 18** *eP* **Pg** **16 14 08.9 -0.2**
baz=14
NWF **Wu-fen Shan** **1.10 8** *eP* **Pg** **16 14 08.8 -0.7**
baz=13
WFSB **Wu-fen Shan** **1.10 8** *eP* **Pg** **16 14 09.1 -0.4**
baz=13
STYH **Taoyuan** **1.11 224** *eP* **Pg** **16 14 09.3 -0.4**
baz=219
CHN4 **Tsaushan** **1.13 237**⇑ *iP* **Pn** **16 14 10.4 +0.1**
baz=235
CHN4 *eS* **Sn** **16 14 27.4 +1.4**
baz=235
TPUB **Ta-pu** **1.13 234** P **Pn** **16 14 10.4 0.0**
TPUB **Ta-pu** **1.13 234** P **Pb** **16 14 10.1 0.0**
baz=232
TPUB *eS* **Sn** **16 14 26.8 +0.7**
baz=232
STYT **Tauyuan** **1.13 224** P **Pb** **16 14 10.0 -0.1**
baz=224
STYT S **Sn** **16 14 25.9 -0.3**
baz=224
CHN2 **Minshiung** **1.14 247** *eP* **Pn** **16 14 11.1 +0.6**
baz=243
TWS1 **Kuangyinshan** **1.14 351** *eP* **Pn** **16 14 10.7 +0.2**
baz=2.0
TWS1 *eS* **Sn** **16 14 26.9 +0.6**
baz=2.0
WRL **Guolierlin Hig** **1.14 267** *eP* **Pn** **16 14 10.6 +0.1**
baz=262
SXI1 **Grass Mountain** **1.14 12** *eP* **Pg** **16 14 09.8 -0.4**
baz=3.0
NHW **Xinwu Township** **1.15 333** *eP* **Pn** **16 14 10.9 +0.2**
baz=335
RLNB **Erlin** **1.15 266** *eP* **Pn** **16 14 10.7 0.0**
baz=262
LONT **Longtian** **1.15 203** *eP* **Pg** **16 14 09.0 -1.5**
baz=200
WTK **Tuku** **1.16 256** *eP* **Pn** **16 14 11.0 +0.1**
baz=256
WTK *eS* **Sn** **16 14 28.4 +1.6**
baz=256
YM01 **YM01** **1.17 358** P **Pb** **16 14 10.8 0.0**
baz=15
WTP **Ta-pu** **1.17 232**⇑ *iP* **Pn** **16 14 11.2 +0.2**
baz=237
WTP *i* S **Sn** **16 14 28.0 +0.8**
baz=237
TNOU **National Taiwa** **1.18 7** *eP* **Pg** **16 14 09.7 -1.3**
baz=12
NTST **Danshui** **1.19 353** *eP* **Pn** **16 14 11.7 +0.4**
baz=357
ANP **Anpu** **1.21 356** *eP* **Pb** **16 14 11.3 -0.2**
baz=1.0
TWK **Hsinying** **1.25 236** *eP* **Pn** **16 14 12.4 +0.3**
baz=236
TWK *eS* **Sn** **16 14 30.8 +1.6**
baz=236
TWG **Pinlang** **1.25 204** *eP* **Pg** **16 14 11.3 -1.1**
baz=200
TWGBT **Beinan** **1.25 203** P **Pn** **16 14 12.3 +0.2**
TWGBT **Beinan** **1.25 203** *eP* **Pg** **16 14 11.1 -1.3**
baz=200
CHN1 **Nanshi** **1.27 232** *eP* **Pn** **16 14 13.0 +0.6**
baz=236
CHN1 *eS* **Sn** **16 14 32.0 +2.4**
baz=236
SNST **Tainan City** **1.27 234** *eP* **Pn** **16 14 12.8 +0.4**
baz=234
SNST *eS* **Sn** **16 14 30.7 +1.0**
baz=234
TWY **Chenhua** **1.29 359** *eP* **Pn** **16 14 14.3 +1.6**
baz=350
SGST **Jiashian** **1.30 227** *eP* **Pg** **16 14 12.3 -1.0**
baz=227
SGST *eS* **Sb** **16 14 30.3 +0.4**
baz=227
JYNG **Yonagunijimaku** **1.30 68** *eP* **Pg** **16 14 12.9 -0.4**
LDUT **Ludao** **1.30 186** *eP* **Pg** **16 14 10.4 -2.9**
baz=173
WSF **Szhu** **1.32 256** *eP* **Pb** **16 14 13.3 0.0**
baz=251
SLGT **Liugui** **1.32 223** *eP* **Pb** **16 14 13.9 +0.5**
baz=203
WSL **Shuilin Townsh** **1.35 251** *eP* **Pb** **16 14 14.3 +0.5**
baz=261
YOJ **Yonaguni jima** **1.36 69** P **Pg** **16 14 14.8 +0.3**
YOJ **Yonaguni jima** **1.36 69** *eP* **Pn** **16 14 13.5 -0.1**
baz=64
YOJ **Yonaguni jima** **1.36 69** P **Pn** **16 14 13.4 -0.1**
YOJ S **Sg** **16 14 31.7 -0.4**
ICHU **Yijhu** **1.37 244** *eP* **Pb** **16 14 14.9 +0.7**
baz=241
CHN8 **Yiju** **1.43 244** *eP* **Pg** **16 14 15.2 -0.6**
baz=246
CHN8 *eS* **Sn** **16 14 36.2 +2.6**
baz=246
CHN3 **Shinhua** **1.46 232** *eP* **Pg** **16 14 16.1 -0.2**
baz=231
SSHA **Shanhua** **1.48 236** *eP* **Pg** **16 14 17.1 +0.4**
baz=234
SCST **Cishan** **1.50 224** *eP* **Pg** **16 14 17.5 +0.4**
baz=206
ECL **Taimali** **1.50 204** *eP* **Pn** **16 14 14.3 -1.2**
baz=184
SHHT **Tainan City** **1.50 231** *eP* **Pg** **16 14 17.8 +0.6**
baz=230
SSD **Sandimen** **1.52 217** *eP* **Pn** **16 14 15.4 -0.4**
baz=214
SCLT **Jiali** **1.53 239** *eP* **Pg** **16 14 17.5 -0.2**
baz=237
TSMG **Majia** **1.55 215** *eP* **Pn** **16 14 16.7 +0.5**
baz=202
TWM1 **Shoushan** **1.59 224** *eP* **Pg** **16 14 19.1 +0.3**
baz=222
TSCK **Chigu Township** **1.63 240** *eP* **Pg** **16 14 18.8 -0.8**
baz=239
MASBT **Mashibuluo** **1.63 214** *eP* **Pn** **16 14 17.1 -0.2**
baz=201
EAST **Anshuo** **1.74 204** *eP* **Pg** **16 14 21.0 -0.7**
baz=186
TAWH **Dawu Township** **1.76 203** *eP* **Pn** **16 14 20.1 +1.0**
baz=186
SCZT **Fangliau** **1.84 210** *eP* **Pn** **16 14 21.0 +0.8**
baz=191
VCHM **Qimei** **2.15 250** *eP* **Pn** **16 14 25.1 +0.6**
baz=238
VCHM *eS* **Sb** **16 14 53.2 -1.0**
baz=238
VWUC **VWUC** **2.22 298** *eP* **Pn** **16 14 24.3 -1.1**
baz=295
JIJ **Ishigaki jima** **2.34 80** P **Pn** **16 14 26.2 -0.9**
JIJ *eS* **Sn** **16 14 57.3 +1.4**
PTMZ **Houxiangcun** **2.51 295** *eP* **Pn** **16 14 29.3 -0.1**
baz=293
JISG **Ishigakijimahi** **2.53 76** P **Pn** **16 14 29.1 -0.6**
MATB **Ma-tsu** **2.64 325** *eP* **Pn** **16 14 31.0 -0.2**
baz=309
KNM **Kinmen** **2.94 279** *eP* **Pn** **16 14 37.6 +2.3**
baz=274
KNMB **Chin-men Tao** **2.99 280** *eP* **Pn** **16 14 36.5 +0.5**
baz=275
LYJJ **Jianjiangzhen** **3.06 327** *eP* **Pn** **16 14 37.5 +0.5**
baz=312
MHZQ **Yeshan** **3.16 313** *eP* **Pn** **16 14 38.9 +0.6**
baz=312
XPSS **Dashiqiu** **3.21 337** *eP* **Pn** **16 14 39.2 +0.1**
baz=339
AXDP **Jialang** **3.45 286** *eP* **Pn** **16 14 42.4 +0.1**
baz=282
ZPLA **Ao Xicun** **3.54 270** *eP* **Pn** **16 14 43.9 +0.3**
baz=265
DSXP **Dongshan** **3.85 267** *eP* **Pn** **16 14 48.5 +0.7**
baz=262
SXFK **Yanhouchang** **4.33 305** *eP* **Pn** **16 14 54.4 -0.1**
baz=302
KSRS **Korea Array** **14.48 20** Pn **Pn** **16 17 15.0 +1.5**
0.1nm,0.3s,baz=197,slow=12,SNR=1.8
0.8nm,0.8s
MKAR **Makanchi Array** **38.76 316** P **P** **16 21 13.3 +0.1**
0.4nm,0.5s,baz=100,slow=9.4,SNR=6.0
0.4nm,0.5s
ZALV **Zalesovo Beam** **40.63 327** P **P** **16 21 28.1 -0.6**
0.6nm,0.4s,baz=106,slow=7.5,SNR=4.1
0.6nm,0.4s
WRA **Warramunga Arr** **45.38 163** P **P** **16 22 05.8 -1.6**
0.3nm,0.5s,baz=344,slow=8.7,SNR=2.0
0.3nm,0.5s
ASAR **Alice Springs** **48.84 165** P **P** **16 22 33.3 -1.1**
0.6nm,0.8s,baz=342,slow=7.0,SNR=8.1
0.6nm,0.8s
ILAR **Eielson Array** **69.22 27** P **P** **16 24 56.4 +1.0**
0.2nm,0.5s,baz=276,slow=5.2,SNR=1.8
0.2nm,0.5s
YKA **Yellowknife Ar** **83.01 23** P **P** **16 26 13.6 -0.3**
0.5nm,0.6s,baz=315,slow=4.8,SNR=10
0.5nm,0.6s

TAP ***06*** *16:16:31.6,23.97N×121.58E,h7km,ML3.5,C*
JMA ***06*** *16:16:31.4±0.1,24.0N±0.3×12.2E±,h3km,TAIWAN REGION*
ISC 06 16:16:31.8±0.8,23.96N±0.01×121.61E±0.02,h8km±6km,
n130,σ0≤49/192,4C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.10**	**274**	*i*	P	**Pg**		**16 16 34.0**	**-0.3**
	baz=269								
ETM				*i*	S	**Sg**		**16 16 35.5**	**-0.5**
	baz=269								
TWD	**Chiawan**	**0.12**	**355**	⇓*i*	P	**Pg**		**16 16 34.7**	**+0.1**
	baz=10.0								
TWD				*i*	S	**Sg**		**16 16 36.6**	**+0.1**
	baz=10.0								
SHUL	**Shoufeng**	**0.17**	**193**	*i*	P	**Pg**		**16 16 36.0**	**+0.6**
	baz=187								
SHUL				*e*	S	**Sg**		**16 16 39.7**	**+1.8**
	baz=187								
LXIB	**Xiulin Townshi**	**0.19**	**289**⇓	*iP*		**Pg**		**16 16 35.5**	**-0.3**
	baz=283								
LXIB				*i*	S	**Sg**		**16 16 38.2**	**-0.2**
	baz=283								
ETL	**Fush Village**	**0.20**	**4**	*i*	P	**Pg**		**16 16 35.9**	**0.0**
	baz=11								
ETL				*i*	S	**Sg**		**16 16 38.9**	**+0.2**
	baz=11								
ESL	**Shilin**	**0.21**	**228**	*i*	P	**Pg**		**16 16 35.8**	**-0.4**
	baz=220								
ESL				*i*	S	**Sg**		**16 16 38.6**	**-0.5**
	baz=220								
NACB	**Ninganchiao**	**0.21**	**357**⇓	*iP*		**Pg**		**16 16 36.0**	**-0.2**
	baz=14								
NACB				*i*	S	**Sg**		**16 16 39.1**	**0.0**
	baz=14								
TEGC	**Jichi Village**	**0.26**	**194**	P		**Pb**		**16 16 37.8**	**-0.9**
	baz=194								
TEGC				*S*		**Sb**		**16 16 43.3**	**+0.1**
	baz=194								
WARBT	**Fenglin Townsh**	**0.31**	**220**⇑	*iP*		**Pg**		**16 16 37.6**	**-0.5**
	baz=226								
WARBT				*S*		**Sg**		**16 16 41.5**	**-0.7**
	baz=226								
EGFH	**Guangfu**	**0.33**	**210**	P		**Pg**		**16 16 38.3**	**-0.1**
	baz=214								
WHF	**Hehuan Shan**	**0.36**	**301**⇓	*iP*		**Pg**		**16 16 38.9**	**-0.3**
	baz=302								
WHF				*i*	S	**Sg**		**16 16 43.8**	**-0.2**
	baz=302								
EAHA	**Aohua**	**0.39**	**18**	*eP*		**Pg**		**16 16 39.4**	**-0.1**
	baz=23								
OWD	**Renai**	**0.40**	**270**⇓	*iP*		**Pg**		**16 16 39.5**	**-0.1**
	baz=269								
OWD				*S*		**Sg**		**16 16 44.5**	**-0.3**
	baz=269								
CHGB	**Renai**	**0.41**	**284**⇓	*iP*		**Pg**		**16 16 40.0**	**+0.1**
	baz=284								
CHGB				*S*		**Sg**		**16 16 45.4**	**0.0**
	baz=284								
FUSS	**Fushou**	**0.44**	**311**⇓	*iP*		**Pg**		**16 16 40.6**	**+0.1**
	baz=312								
FUSS				*i*	S	**Sg**		**16 16 46.8**	**+0.5**
	baz=312								
WUSB	**Renai**	**0.45**	**274**⇓	*iP*		**Pg**		**16 16 40.7**	**+0.1**
	baz=274								
WUSB				*S*		**Sg**		**16 16 46.5**	**0.0**
	baz=274								
VWDT	**VWDT**	**0.47**	**245**⇓	*iP*		**Pg**		**16 16 41.1**	**+0.1**
	baz=244								
VWDT				*eS*		**Sg**		**16 16 48.0**	**+0.8**
	baz=244								
ENA	**Nanau**	**0.48**	**15**⇓	*iP*		**Pg**		**16 16 41.2**	**0.0**
	baz=18								
ENA				*eS*		**Sg**		**16 16 47.8**	**+0.2**
	baz=18								
TWT	**Tachien**	**0.49**	**307**	P		**Pg**		**16 16 41.7**	**+0.3**
	baz=306								
TWT				*S*		**Sg**		**16 16 48.4**	**+0.5**
	baz=306								
HGSD	**Ruisui**	**0.49**	**200**	*eP*		**Pb**		**16 16 43.5**	**+0.7**
	baz=206								
TDCB	**Techi**	**0.50**	**306**	*i*	P	**Pg**		**16 16 41.8**	**+0.1**
	baz=306								
TDCB				*eS*		**Sg**		**16 16 48.5**	**+0.2**
	baz=306								
EWUT	**Wuta**	**0.51**	**18**⇓	*iP*		**Pg**		**16 16 41.7**	**0.0**
	baz=20								
EWUT				*eS*		**Sg**		**16 16 49.0**	**+0.6**
	baz=20								
NNSB	**Datong**	**0.51**	**336**⇓	*iP*		**Pg**		**16 16 41.9**	**+0.1**
	baz=338								
NNSB				*S*		**Sg**		**16 16 48.2**	**-0.3**
	baz=338								
NNSH	**Datong**	**0.51**	**336**	*i*	P	**Pg**		**16 16 41.9**	**+0.1**
	baz=337								
NNSH				*eS*		**Sg**		**16 16 48.1**	**-0.4**
	baz=337								
EHY	**Hungye**	**0.52**	**210**	P		**Pg**		**16 16 41.5**	**-0.4**
	baz=218								
EHY				*eS*		**Sg**		**16 16 49.0**	**+0.2**
	baz=218								
NNS	**Nan Shan**	**0.53**	**336**⇓	*iP*		**Pg**		**16 16 42.2**	**+0.1**
	baz=338								
NNS				*i*	S	**Sg**		**16 16 48.8**	**-0.2**
	baz=338								
LATG	**Datong**	**0.58**	**353**	⇓P		**Pg**		**16 16 43.0**	**-0.1**
	baz=344								
WPL	**Puli Township**	**0.60**	**275**	P		**Pb**		**16 16 43.7**	**-0.9**
	baz=275								
WPL				*S*		**Sg**		**16 16 51.3**	**+0.1**
	baz=275								
SSLB	**Suanglung**	**0.62**	**254**	*i*	P	**Pg**		**16 16 43.8**	**-0.1**
	baz=254								
SSLB				*i*	S	**Sg**		**16 16 51.1**	**-0.9**
	baz=254								
DPDB	**Guoxing**	**0.63**	**277**⇓	*iP*		**Pg**		**16 16 44.3**	**-0.8**
	baz=277								
DPDB				*eS*		**Sb**		**16 16 52.8**	**-1.2**
	baz=277								
YULB	**Yu-li**	**0.63**	**207**	*eP*		**Pg**		**16 16 43.6**	**-0.4**
	baz=216								
YULB				*eS*		**Sg**		**16 16 52.7**	**+0.4**
	baz=216								
WCS	**Beigang Elemen**	**0.64**	**279**	P		**Pb**		**16 16 44.6**	**-0.7**
	baz=279								
WCS				*eS*		**Sg**		**16 16 52.8**	**+0.2**
	baz=279								
NDT	**Datong Townshi**	**0.65**	**352**	P		**Pg**		**16 16 44.4**	**+0.1**
	baz=345								
ESAO	**Su ao**	**0.65**	**19**	*eP*		**Pg**		**16 16 44.3**	**-0.1**
	baz=22								
SMLT	**Sun Moon Lake**	**0.65**	**264**⇓	*iP*		**Pg**		**16 16 44.6**	**+0.2**
	baz=263								
SMLT				*S*		**Sg**		**16 16 53.3**	**+0.3**
	baz=263								
ECBN	**Changbin**	**0.66**	**193**	*eP*		**Pb**		**16 16 45.8**	**+0.3**
	baz=191								
EYUL	**Yuli**	**0.66**	**204**	*eP*		**Pg**		**16 16 44.8**	**+0.2**
	baz=211								
TWF1	**Yuli**	**0.67**	**205**	*eP*		**Pg**		**16 16 44.2**	**-0.5**
	baz=216								
TWF1				*eS*		**Sb**		**16 16 54.8**	**-0.3**
	baz=216								
ENTT	**Nioudou**	**0.68**	**357**⇓	*iP*		**Pg**		**16 16 45.0**	**0.0**
	baz=359								
ENTT				*S*		**Sb**		**16 16 54.7**	**-0.9**
	baz=359								
NDS	**Dongshan**	**0.68**	**8**⇓	*iP*		**Pg**		**16 16 45.0**	**0.0**
	baz=10.0								
NDS				*i*	S	**Sg**		**16 16 54.3**	**+0.4**
	baz=10.0								
WHP	**Taichung City**	**0.68**	**298**⇓	*iP*		**Pb**		**16 16 45.4**	**-0.6**
	baz=289								
WHP				*S*		**Sb**		**16 16 54.5**	**-1.1**
	baz=289								
TWC	**Suao**	**0.69**	**19**	*eP*		**Pg**		**16 16 45.0**	**0.0**
	baz=10.0								
TWC				*eS*		**Sg**		**16 16 54.7**	**+0.7**
	baz=10.0								
TYC	**Yuchr**	**0.69**	**266**	P		**Pg**		**16 16 45.1**	**0.0**

	baz=265								
TYC				S		Sg	16 16 53.6	-0.5	
	baz=265								
WHYT	**Xinyi Township**	**0.74**	**249**	*e*P		**Pg**	**16 16 46.0**	**0.0**	
	baz=247								
YHNB	**Yeheng**	**0.74**	**343**	⇓*i*P		**Pb**	**16 16 46.4**	**-0.6**	
	baz=345								
YHNB				*e*S		**Sg**	**16 16 55.6**	**-0.1**	
	baz=345								
NSK	**Sanguang**	**0.75**	**342**	⇓*i*P		**Pg**	**16 16 46.5**	**+0.2**	
	baz=344								
NSK				S		**Sg**	**16 16 56.5**	**+0.4**	
	baz=344								
TWE	**Neicheng**	**0.76**	**4**	*i* P		**Pg**	**16 16 46.6**	**+0.1**	
	baz=6.0								
TWE				S		**Sb**	**16 16 57.4**	**-0.4**	
	baz=6.0								
CHKH	**Chenggong**	**0.79**	**194**	*e*P		**Pb**	**16 16 47.5**	**-0.3**	
	baz=196								
CHKH				*e*S		**Sn**	**16 17 00.4**	**-0.8**	
	baz=196								
FUSB	**Fushanzhiwuyua**	**0.80**	**359**	P		**Pg**	**16 16 47.1**	**-0.1**	
	baz=1.0								
NFF	**Wufeng Townshi**	**0.81**	**326**	*e*P		**Pg**	**16 16 47.5**	**+0.1**	
	baz=327								
NFF				*e*S		**Sg**	**16 16 58.1**	**+0.3**	
	baz=327								
FULB	**Fuli**	**0.81**	**201**	*e*P		**Pb**	**16 16 48.1**	**0.0**	
	baz=216								
WJS	**Zhushan**	**0.82**	**261**	*e*P		**Pb**	**16 16 48.5**	**+0.2**	
	baz=260								
WJS				*e*S		**Sb**	**16 17 00.3**	**+0.9**	
	baz=260								
NWLT	**Wulai**	**0.82**	**353**	*e*P		**Pg**	**16 16 47.8**	**+0.2**	
	baz=354								
NWLT				*e*S		**Sb**	**16 16 58.9**	**-0.7**	
	baz=354								
WWF	**Wufeng**	**0.83**	**276**	*e*P		**Pb**	**16 16 49.0**	**+0.4**	
	baz=274								
WNT	**Mingjian**	**0.85**	**265**	*e*P		**Pn**	**16 16 49.4**	**-0.6**	
	baz=264								
WNT				*e*S		**Sb**	**16 17 01.1**	**+0.8**	
	baz=264								
WNT1	**Nantou City**	**0.85**	**267**	*e*P		**Pb**	**16 16 49.2**	**+0.3**	
	baz=265								
TWQ1	**Liyutan**	**0.85**	**297**	*e*P		**Pb**	**16 16 49.0**	**+0.1**	
	baz=297								
TWQ1				*e*S		**Sb**	**16 17 00.6**	**0.0**	
	baz=297								
ALS	**Alishan**	**0.86**	**239**	⇑*i*P		**Pb**	**16 16 48.6**	**-0.5**	
	baz=239								
ALS				S		**Sb**	**16 17 00.3**	**-0.6**	
	baz=239								
NSTT	**Nanjuang**	**0.87**	**321**	⇓P		**Pb**	**16 16 49.1**	**-0.1**	
	baz=321								
NSTT				S		**Sb**	**16 17 00.5**	**-0.5**	
	baz=321								
LIOB	**Emei**	**0.87**	**322**	*e*P		**Pb**	**16 16 49.1**	**-0.1**	
	baz=322								
TCU	**Taichung**	**0.87**	**283**	*e*P		**Pb**	**16 16 49.0**	**-0.2**	
	baz=281								
CHKT	**Chengkung**	**0.88**	**195**	*e*P		**Pg**	**16 16 48.2**	**-0.6**	
	baz=196								
CHKT				*e*S		**Sb**	**16 17 02.6**	**+1.2**	
	baz=196								
EHD	**Haiduan**	**0.89**	**205**	P		**Pg**	**16 16 48.6**	**-0.3**	
	baz=216								
EHD				*e*S		**Sb**	**16 17 01.9**	**+0.4**	
	baz=216								
NSY	**Sanyi**	**0.90**	**301**	*e*P		**Pb**	**16 16 49.8**	**+0.1**	
	baz=301								
NJD	**Zhudong**	**0.91**	**329**	*e*P		**Pb**	**16 16 49.7**	**-0.1**	
	baz=329								
CHN5	**Tsauling**	**0.92**	**247**	*e*P		**Pb**	**16 16 50.2**	**0.0**	
	baz=237								
CHN5				*e*S		**Sb**	**16 17 03.5**	**+0.8**	
	baz=237								
ELDTW	**Lidau**	**0.94**	**215**	*e*P		**Pg**	**16 16 48.6**	**-1.3**	
	baz=214								
WYL	**Yuanlin Townsh**	**0.94**	**270**	*e*P		**Pb**	**16 16 49.9**	**-0.4**	
	baz=269								
NMLH	**Miaoli**	**0.94**	**308**	*e*P		**Pb**	**16 16 50.8**	**+0.4**	
	baz=307								
WDJ	**Dajia District**	**0.96**	**294**	*e*P		**Pn**	**16 16 51.6**	**0.0**	
	baz=293								
WCHH	**Zhanghua**	**0.97**	**277**	*e*P		**Pb**	**16 16 50.7**	**-0.1**	
	baz=276								
HSN1	**Hsinchu**	**0.98**	**327**	*e*P		**Pb**	**16 16 50.8**	**-0.2**	
	baz=327								
WGK	**Gukeng**	**0.99**	**254**	*e*P		**Pn**	**16 16 51.9**	**-0.2**	
	baz=254								
NHDH	**Xindian Distri**	**1.00**	**356**	*e*P		**Pg**	**16 16 51.1**	**-0.1**	
	baz=357								
SBCB	**Hsinchu**	**1.01**	**326**	*e*P		**Pb**	**16 16 51.7**	**+0.2**	
	baz=326								
WDLH	**Douliu**	**1.01**	**255**	*e*P		**Pn**	**16 16 52.4**	**0.0**	
	baz=255								
TWA	**Mucha**	**1.02**	**359**	P		**Pb**	**16 16 51.5**	**-0.2**	
	baz=349								
TWA				*e*S		**Sb**	**16 17 05.9**	**+0.7**	
	baz=349								
TATO	**Taipei**	**1.02**	**354**	P		**Pb**	**16 16 51.8**	**+0.1**	
	baz=354								
TATO				*e*S		**Sn**	**16 17 06.7**	**-0.2**	
	baz=354								
TIPB	**Shuangxi**	**1.03**	**11**	P		**Pg**	**16 16 51.3**	**-0.3**	
	baz=13								
WCKO	**Fanlu**	**1.05**	**241**	*e*P		**Pb**	**16 16 52.5**	**+0.2**	
	baz=242								
NCU	**National Centr**	**1.08**	**339**	*e*P		**Pb**	**16 16 52.6**	**-0.2**	
	baz=347								
TAP	**Taipei**	**1.08**	**355**	*e*P		**Pb**	**16 16 52.6**	**-0.1**	
	baz=357								
STYH	**Taoyuan**	**1.09**	**224**	*e*P		**Pb**	**16 16 52.8**	**-0.2**	
	baz=218								
TWB1	**Santiao Chiao**	**1.10**	**18**	*e*P		**Pg**	**16 16 52.7**	**-0.3**	
	baz=12								
CHN4	**Tsaushan**	**1.11**	**237**	⇑*i*P		**Pn**	**16 16 53.7**	**0.0**	
	baz=238								
CHN4				*e*S		**Sn**	**16 17 09.4**	**+0.3**	
	baz=238								
TPUB	**Ta-pu**	**1.11**	**234**	⇑*i*P		**Pn**	**16 16 53.4**	**-0.2**	
	baz=235								
TPUB				*e*S		**Sb**	**16 17 08.2**	**+0.3**	
	baz=235								
STYT	**Tauyuan**	**1.11**	**225**	P		**Pb**	**16 16 53.2**	**-0.1**	
	baz=226								
STYT				S		**Sn**	**16 17 08.7**	**-0.5**	
	baz=226								
NWF	**Wu-fen Shan**	**1.12**	**8**	*e*P		**Pb**	**16 16 53.6**	**+0.1**	
	baz=8.0								
WFSB	**Wu-fen Shan**	**1.12**	**8**	*e*P		**Pb**	**16 16 53.6**	**+0.2**	
	baz=8.0								
CHN2	**Minshiung**	**1.12**	**248**	*e*P		**Pn**	**16 16 54.1**	**+0.3**	
	baz=249								
WRL	**Guolierlin Hig**	**1.13**	**267**	*e*P		**Pg**	**16 16 53.1**	**-0.4**	
	baz=266								
LONT	**Longtian**	**1.14**	**203**	*e*P		**Pg**	**16 16 53.2**	**-0.5**	
	baz=205								
RLNB	**Erlin**	**1.14**	**267**	*e*P		**Pn**	**16 16 53.9**	**-0.2**	
	baz=266								
WTK	**Tuku**	**1.15**	**257**	*e*P		**Pn**	**16 16 54.1**	**0.0**	
	baz=256								
TWS1	**Kuangyinshan**	**1.15**	**351**	*e*P		**Pn**	**16 16 54.2**	**0.0**	
	baz=2.0								
TWS1				*e*S		**Sn**	**16 17 11.8**	**+1.6**	
	baz=2.0								
WTP	**Ta-pu**	**1.15**	**232**	*e*P		**Pn**	**16 16 54.3**	**0.0**	
	baz=233								
WTP				*e*S		**Sn**	**16 17 10.6**	**+0.3**	
	baz=233								
SXI1	**Grass Mountain**	**1.16**	**12**	*e*P		**Pg**	**16 16 53.7**	**-0.4**	
	baz=359								
YM01	**YM01**	**1.18**	**358**	*e*P		**Pn**	**16 16 54.7**	**0.0**	
	baz=357								
NTST	**Danshui**	**1.21**	**353**	*e*P		**Pn**	**16 16 55.4**	**+0.3**	
	baz=352								
ANP	**Anpu**	**1.23**	**356**	*e*P		**Pg**	**16 16 54.8**	**-0.6**	
	baz=355								
TWG	**Pinlang**	**1.23**	**204**	*e*P		**Pg**	**16 16 55.1**	**-0.5**	
	baz=206								
TWGBT	**Beinan**	**1.23**	**203**	*e*P		**Pg**	**16 16 54.9**	**-0.7**	
	baz=206								
TWK	**Hsinying**	**1.24**	**236**	*e*P		**Pn**	**16 16 55.7**	**+0.3**	
	baz=226								
TWK				*e*S		**Sn**	**16 17 13.1**	**+0.8**	
	baz=226								
CHN1	**Nanshi**	**1.25**	**232**	*e*P		**Pn**	**16 16 56.1**	**+0.4**	
	baz=237								
CHN1				*e*S		**Sn**	**16 17 13.7**	**+1.0**	
	baz=237								
SNST	**Tainan City**	**1.26**	**234**	*e*P		**Pb**	**16 16 55.6**	**-0.2**	
	baz=235								
SGST	**Jiashian**	**1.28**	**227**	*e*P		**Pg**	**16 16 55.9**	**-0.6**	
	baz=230								
SGST				S		**Sn**	**16 17 14.4**	**+1.0**	
	baz=230								
SLGT	**Liugui**	**1.30**	**223**	*e*P		**Pb**	**16 16 57.3**	**+0.7**	
	baz=210								
WSF	**Szhu**	**1.31**	**256**	*e*P		**Pg**	**16 16 56.8**	**-0.1**	
	baz=256								
ICHU	**Yijhu**	**1.35**	**244**	*e*P		**Pg**	**16 16 58.0**	**+0.1**	
	baz=246								
YOJ	**Yonaguni jima**	**1.38**	**68**	*e*P		**Pg**	**16 16 58.0**	**-0.3**	
	baz=66								
CHN8	**Yiju**	**1.42**	**245**	*e*P		**Pb**	**16 16 58.4**	**-0.1**	
	baz=246								
ECL	**Taimali**	**1.48**	**204**	*e*P		**Pn**	**16 16 58.5**	**-0.3**	
	baz=193								
SSD	**Sandimen**	**1.50**	**217**	*e*P		**Pn**	**16 16 58.8**	**-0.3**	
	baz=208								
TSMG	**Majia**	**1.53**	**216**	*e*P		**Pb**	**16 17 00.0**	**-0.4**	
	baz=209								
TWM1	**Shoushan**	**1.57**	**224**	*e*P		**Pg**	**16 17 01.8**	**-0.2**	
	baz=229								
MASBT	**Mashibuluo**	**1.61**	**214**	*e*P		**Pb**	**16 17 01.2**	**-0.6**	
	baz=206								
EAST	**Anshuo**	**1.72**	**204**	*e*P		**Pn**	**16 17 02.7**	**+0.6**	
	baz=196								
SCZT	**Fangliau**	**1.82**	**210**	*e*P		**Pb**	**16 17 04.5**	**-0.9**	
	baz=216								
SLIU	**Shizi**	**1.89**	**203**	*e*P		**Pn**	**16 17 05.3**	**+0.9**	
	baz=197								
PHUB	**P'eng-hu**	**1.92**	**257**	*e*P		**Pn**	**16 17 04.7**	**0.0**	
	baz=257								
PHUB				S		**Sn**	**16 17 29.8**	**+0.8**	
	baz=257								
PNG	**Penghu**	**1.92**	**259**	*e*P		**Pn**	**16 17 04.8**	**0.0**	
	baz=258								
PNG				*e*S		**Sn**	**16 17 29.4**	**+0.3**	
	baz=258								
VCHM	**Qimei**	**2.13**	**250**	*e*P		**Pn**	**16 17 07.7**	**0.0**	
	baz=252								
JKRS	**Kuro-shima**	**2.21**	**82**	*e*P		**Pb**	**16 17 11.6**	**-0.5**	
VWUC	**VWUC**	**2.22**	**298**	*e*P		**Pn**	**16 17 07.6**	**-1.3**	
	baz=296								
JIJ	**Ishigaki jima**	**2.35**	**80**	*e*S		**Sn**	**16 17 38.9**	**-0.9**	
JISG	**Ishigakijimahi**	**2.54**	**75**	P		**Pn**	**16 17 12.8**	**-0.6**	
JISG				*e*S		**Sn**	**16 17 45.3**	**+0.7**	
KNMB	**Chin-men Tao**	**2.98**	**280**	*e*P		**Pn**	**16 17 19.3**	**-0.1**	
	baz=279								
XPSS	**Dashiqiu**	**3.23**	**337**	*e*P		**Pn**	**16 17 23.2**	**+0.5**	
	baz=334								
AXDP	**Jialang**	**3.44**	**287**	*e*P		**Pn**	**16 17 26.4**	**+0.6**	
	baz=285								
DSXP	**Dongshan**	**3.84**	**267**	*e*P		**Pn**	**16 17 31.4**	**+0.2**	
	baz=266								

TAP 06 16:17:47.1, 24.10N×121.64E, h12km±1km, ML2.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**245**	*i* P			Pg	16 17 49.4	+0.1
	baz=242								
TWD				S			Sg	16 17 50.9	-0.1
	baz=242								
ETL	**Fush Village**	**0.06**	**342**	*i* P			Pg	16 17 49.4	-0.1
	baz=341								
ETL				S			Sg	16 17 50.8	-0.4
	baz=341								
NACB	**Ninganchiao**	**0.09**	**328**	*i* P			Pg	16 17 49.8	+0.1
	baz=328								
NACB				S			Sg	16 17 51.5	-0.1
	baz=328								
LXIB	**Xiulin Townshi**	**0.23**	**249**	*e*P			Pg	16 17 52.1	+0.1
	baz=249								
LXIB				S			Sg	16 17 54.9	-0.3
	baz=249								
EAHA	**Aohua**	**0.24**	**21**	*e*P			Pg	16 17 51.6	-0.6
	baz=20								
EAHA				*e*S			Sg	16 17 54.7	-0.9
	baz=20								
ESL	**Shilin**	**0.34**	**214**	*e*P			Pg	16 17 53.4	-0.6
	baz=212								
NNSB	**Datong**	**0.40**	**324**	*e*P			Pb	16 17 55.8	-0.5
	baz=323								
NNSB				*e*S			Sg	16 18 01.4	+0.8
	baz=323								

*IDC **06** 16:17:55.5±0.6, 23.99N×121.79E, h0km, mb4.2/23, mbtmp4.2/24, ML4.1/1, Error ellipse: s-maj=20.5km s-min=12.8km az=62.0*
*TAP **06** 16:17:57.8, 23.99N×121.61E, h6km, ML4.9, C*
*NEIC **06** 16:17:57.9±1.4, 23.92N±0.05×121.66E±0.05, h10km±1km, mb5.1/108, Error ellipse: s-maj=8.4km s-min=6.7km az=332.0*
*JMA **06** 16:17:57.6±0.1, 24.0N±0.3×121.6E±0.9, h3km, MV4.4/17, TAIWAN REGION*
*BJI **06** 16:17:58.0±0.0, 23.99N×121.62E, h7km, mb4.3/38, ML4.6/12*

ISC 06 16:17:58.3±0.6, 23.97N±0.01×121.63E±0.02, h14km±3km, n383, σ1§11/494, mb5.0/81, 32C-50D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**343**	⇓*i*P			**Pg**	**16 18 00.4**	**-1.2**
	baz=357								
TWD				*i* S			**Sg**	**16 18 02.1**	**-1.8**
	baz=357								
ETM	**Tongmen**	**0.13**	**266**	⇓*i*P			**Pg**	**16 18 00.7**	**-1.1**
	baz=258								
ETM				*i* S			**Sg**	**16 18 02.5**	**-1.7**
	baz=258								
ETL	**Fush Village**	**0.18**	**357**	*i* P			**Pg**	**16 18 01.6**	**-1.1**
	baz=5.0								
ETL				*i* S			**Sg**	**16 18 04.2**	**-1.5**
	baz=5.0								
SHUL	**Shoufeng**	**0.20**	**199**	⇓*i*P			**Pg**	**16 18 03.0**	**+0.2**
	baz=192								
SHUL				*e*S			**Sg**	**16 18 07.8**	**+1.9**
	baz=192								
NACB	**Ninganchiao**	**0.20**	**350**				**Pg**	**16 18 01.7**	**-1.3**
NACB					Sg		**Sg**	**16 18 04.1**	**-2.0**
NACB	**Ninganchiao**	**0.20**	**350**		P		**Pg**	**16 18 02.1**	**-0.9**
NACB	**Ninganchiao**	**0.20**	**350**	⇓*i*P			**Pg**	**16 18 01.9**	**-1.1**
	baz=356								
NACB				*i* S			**Sg**	**16 18 04.6**	**-1.5**
	baz=356								
LXIB	**Xiulin Townshi**	**0.20**	**283**	⇓*i*P			**Pg**	**16 18 02.1**	**-1.0**
	baz=274								
LXIB				*i* S			**Sg**	**16 18 05.3**	**-1.1**
	baz=274								
ESL	**Shilin**	**0.24**	**229**	⇓*i*P			**Pg**	**16 18 02.8**	**-0.8**
	baz=232								
ESL				*i* S			**Sg**	**16 18 06.2**	**-1.0**
	baz=232								
TEGC	**Jichi Village**	**0.28**	**198**	P			**Pb**	**16 18 04.7**	**-0.4**
	baz=192								
TEGC				*e*S			**Sb**	**16 18 11.2**	**+1.6**
	baz=192								
WARBT	**Fenglin Townsh**	**0.34**	**221**	⇓*i*P			**Pg**	**16 18 04.6**	**-0.7**
	baz=226								
WARBT				*i* S			**Sg**	**16 18 09.2**	**-0.9**
	baz=226								
EHP	**Heping Village**	**0.35**	**17**	P			**Pg**	**16 18 05.0**	**-0.5**
	baz=22								
EHP				S			**Sg**	**16 18 09.7**	**-0.6**
	baz=22								
EGFH	**Guangfu**	**0.36**	**212**	P			**Pg**	**16 18 05.2**	**-0.4**
	baz=220								
EGFH				*e*S			**Sg**	**16 18 10.8**	**+0.3**
	baz=220								
EAHA	**Aohua**	**0.37**	**15**	⇓P			**Pg**	**16 18 04.9**	**-0.9**
	baz=28								
EAHA				S			**Sg**	**16 18 10.4**	**-0.5**
	baz=28								
WHF	**Hehuan Shan**	**0.38**	**297**	P			**Pg**	**16 18 05.3**	**-0.8**
	baz=297								
WHF				*i* S			**Sg**	**16 18 10.8**	**-0.6**
	baz=297								
OWD	**Renai**	**0.42**	**267**	⇓*i*P			**Pg**	**16 18 06.3**	**-0.5**
	baz=266								
OWD				*i* S			**Sg**	**16 18 11.9**	**-0.6**
	baz=266								
CHGB	**Renai**	**0.43**	**282**	⇓*i*P			**Pg**	**16 18 06.6**	**-0.4**
	baz=281								
CHGB				*i* S			**Sg**	**16 18 12.4**	**-0.5**
	baz=281								
FUSS	**Fushou**	**0.45**	**308**	⇓*i*P			**Pb**	**16 18 07.0**	**-1.2**
	baz=308								
FUSS				*i* S			**Sb**	**16 18 13.3**	**-1.5**
	baz=308								
ENA	**Nanau**	**0.46**	**12**	⇓*i*P			**Pg**	**16 18 06.9**	**-0.7**
	baz=27								
ENA				*i* S			**Sg**	**16 18 12.7**	**-1.1**
	baz=27								
WUSB	**Renai**	**0.47**	**272**	⇓*i*P			**Pg**	**16 18 07.5**	**-0.3**
	baz=271								
WUSB				*i* S			**Sg**	**16 18 13.6**	**-0.5**
	baz=271								
EWUT	**Wuta**	**0.49**	**16**	⇓*i*P			**Pg**	**16 18 07.4**	**-0.6**
	baz=29								
EWUT				S			**Sg**	**16 18 13.9**	**-0.7**
	baz=29								
VWDT	**VWDT**	**0.50**	**244**	⇓*i*P			**Pg**	**16 18 08.1**	**-0.2**
	baz=242								
VWDT				*i* S			**Sb**	**16 18 15.1**	**-0.9**
	baz=242								
TWT	**Tachien**	**0.50**	**304**	⇓*i*P			**Pb**	**16 18 08.2**	**-0.8**
	baz=303								
TWT				*i* S			**Sb**	**16 18 15.1**	**-1.1**
	baz=303								
NNSB	**Datong**	**0.51**	**333**	⇓*i*P			**Pg**	**16 18 07.9**	**-0.5**
	baz=336								
NNSB				*i* S			**Sg**	**16 18 14.2**	**-1.0**
	baz=336								
NNSH	**Datong**	**0.51**	**333**	⇓*i*P			**Pg**	**16 18 08.0**	**-0.5**
	baz=335								
NNSH				S			**Sg**	**16 18 14.2**	**-1.0**
	baz=335								
TDCB	**Techi**	**0.51**	**303**	⇓*i*P			**Pb**	**16 18 08.3**	**-1.0**
	baz=303								
TDCB				*i* S			**Sg**	**16 18 15.0**	**-0.5**
	baz=303								
HGSD	**Ruisui**	**0.52**	**202**	P			**Pb**	**16 18 09.3**	**+0.1**
	baz=211								
HGSD				*e*S			**Sn**	**16 18 19.4**	**-0.5**
	baz=211								
NNS	**Nan Shan**	**0.52**	**333**	⇓*i*P			**Pg**	**16 18 08.1**	**-0.6**
	baz=336								
NNS				*i* S			**Sg**	**16 18 15.0**	**-0.7**
	baz=336								
EHY	**Hungye**	**0.55**	**211**	⇓*i*P			**Pg**	**16 18 08.6**	**-0.5**
	baz=217								
EHY				S			**Sb**	**16 18 17.1**	**-0.3**
	baz=217								
LATG	**Datong**	**0.57**	**350**	⇓*i*P			**Pg**	**16 18 08.8**	**-0.7**
	baz=354								
LATG				*e*S			**Sg**	**16 18 15.7**	**-1.5**
	baz=354								
WPL	**Puli Township**	**0.62**	**274**	⇓*i*P			**Pb**	**16 18 10.4**	**-0.6**
	baz=273								
WPL				S			**Sb**	**16 18 18.4**	**-1.1**
	baz=273								
ESAO	**Su ao**	**0.63**	**18**	⇓P			**Pg**	**16 18 09.9**	**-0.8**
	baz=20								
ESAO				*e*S			**Sg**	**16 18 17.9**	**-1.2**
	baz=20								
NDT	**Datong Townshi**	**0.64**	**350**	⇓*i*P			**Pb**	**16 18 10.5**	**-0.8**
	baz=343								
NDT				S			**Sg**	**16 18 18.5**	**-0.7**
	baz=343								
EOS4	**EOS4**	**0.64**	**77**	*e*P			**Pb**	**16 18 11.9**	**+0.7**
	baz=90								
DPDB	**Guoxing**	**0.65**	**275**	⇓*i*P			**Pb**	**16 18 11.0**	**-0.4**
	baz=275								
DPDB				*e*S			**Sb**	**16 18 19.9**	**-0.5**
	baz=275								
SSLB	**Suanglung**	**0.65**	**253**				**Pg**	**16 18 10.5**	**-0.5**
SSLB	**Suanglung**	**0.65**	**253**		P		**Pb**	**16 18 10.9**	**-0.5**
SSLB	**Suanglung**	**0.65**	**253**		P		**Pb**	**16 18 11.0**	**-0.5**
SSLB	**Suanglung**	**0.65**	**253**	⇓*i*P			**Pg**	**16 18 10.7**	**-0.4**
	baz=264								
SSLB				*i* S			**Sg**	**16 18 18.6**	**-1.0**
	baz=264								
YULB	**Yu-li**	**0.66**	**208**				**Pg**	**16 18 09.6**	**-1.5**
YULB					Sg		**Sg**	**16 18 18.1**	**-1.7**
YULB	**Yu-li**	**0.66**	**208**		P		**Pb**	**16 18 11.2**	**-0.4**
YULB	**Yu-li**	**0.66**	**208**		P		**Pg**	**16 18 11.1**	**-0.1**
YULB	**Yu-li**	**0.66**	**208**		P		**Pg**	**16 18 10.5**	**-0.7**
	baz=216								
YULB				*e*S			**Sb**	**16 18 20.5**	**-0.1**
	baz=216								
NDS	**Dongshan**	**0.66**	**7**	⇓*i*P			**Pg**	**16 18 10.7**	**-0.5**
	baz=9.0								
NDS				*i* S			**Sg**	**16 18 19.6**	**-0.5**
	baz=9.0								
TWC	**Suao**	**0.66**	**17**	⇓*i*P			**Pg**	**16 18 10.6**	**-0.7**
	baz=20								
TWC				S			**Sg**	**16 18 19.6**	**-0.5**
	baz=20								
WCS	**Beigang Elemen**	**0.66**	**277**	⇓P			**Pb**	**16 18 11.2**	**-0.5**
	baz=277								
WCS				*e*S			**Sb**	**16 18 20.1**	**-0.7**
	baz=277								
ENTT	**Nioudou**	**0.67**	**355**	⇓*i*P			**Pg**	**16 18 11.0**	**-0.4**
	baz=358								
ENTT				S			**Sb**	**16 18 20.1**	**-0.7**
	baz=358								
ECBN	**Changbin**	**0.68**	**194**	*e*P			**Pb**	**16 18 11.8**	**-0.1**
	baz=177								
SMLT	**Sun Moon Lake**	**0.68**	**262**	P			**Pb**	**16 18 11.5**	**-0.5**
	baz=261								
SMLT				*i* S			**Sb**	**16 18 20.7**	**-0.6**
	baz=261								
EYUL	**Yuli**	**0.69**	**205**	*e*P			**Pb**	**16 18 11.8**	**-0.3**
	baz=210								
TWF1	**Yuli**	**0.69**	**206**	⇑*i*P			**Pg**	**16 18 11.1**	**-0.8**
	baz=215								
TWF1				*e*S			**Sb**	**16 18 21.6**	**0.0**
	baz=215								
WHP	**Taichung City**	**0.70**	**296**	⇓P			**Pb**	**16 18 12.1**	**-0.3**
	baz=287								
WHP				*e*S			**Sb**	**16 18 22.1**	**+0.2**
	baz=287								
EOS3	**EOS3**	**0.70**	**63**	*e*P			**Pb**	**16 18 13.2**	**+0.9**
	baz=63								
EOS2	**EOS2**	**0.70**	**51**	*e*P			**Pn**	**16 18 14.1**	**+0.3**
	baz=67								
TYC	**Yuchr**	**0.71**	**265**	⇑*i*P			**Pb**	**16 18 11.9**	**-0.6**
	baz=264								
TYC				S			**Sg**	**16 18 20.8**	**-0.9**
	baz=264								
YHNB	**Yeheng**	**0.73**	**341**				**Pb**	**16 18 12.2**	**-0.8**
YHNB					Sg		**Sg**	**16 18 21.0**	**-1.3**
YHNB	**Yeheng**	**0.73**	**341**		P		**Pb**	**16 18 12.4**	**-0.6**
YHNB	**Ye

FULB	**Fuli**	**0.83**	**202**	*e*P	**Pb**	**16 18 14.8**	**+0.2**
	baz=216								
WJS	**Zhushan**	**0.84**	**260**⇑	*e*P	**Pn**	**16 18 15.4**	**-0.4**
WJS	baz=259			*e*S	**Sb**	**16 18 27.1**	**+1.2**
TWQ1	**Liyutan**	**0.87**	**296**	⇓P	**Pn**	**16 18 15.7**	**-0.4**
TWQ1	baz=296			*e*S	**Sn**	**16 18 28.9**	**+0.3**
NSTT	**Nanjuang**	**0.87**	**319**	⇓*i*P	**Pb**	**16 18 15.3**	**+0.1**
NSTT	baz=320			S	**Sb**	**16 18 26.6**	**-0.2**
LIOB	**Emei**	**0.87**	**320**	⇓P	**Pb**	**16 18 15.6**	**+0.3**
LIOB	baz=321			S	**Sb**	**16 18 26.6**	**-0.3**
WNT	**Mingjian**	**0.87**	**264**⇑	*i*P	**Pn**	**16 18 16.2**	**0.0**
WNT	baz=263			S	**Sn**	**16 18 28.6**	**-0.1**
ALS	**Alishan**	**0.89**	**239**	⇓P	**Pb**	**16 18 15.4**	**-0.3**
ALS	baz=238			*e*S	**Sb**	**16 18 28.7**	**+1.2**
TCU	**Taichung**	**0.89**	**281**	⇑P	**Pn**	**16 18 16.7**	**+0.3**
TCU	baz=282			*e*S	**Sn**	**16 18 30.1**	**+0.9**
NTC	**Toucheng**	**0.90**	**12**	*e*P	**Pb**	**16 18 15.5**	**-0.2**
CHKT	baz=5.0 **Chengkung**	**0.91**	**196**	*e*P	**Pg**	**16 18 15.1**	**-0.8**
CHKT	baz=183			S	**Sn**	**16 18 29.6**	**+0.1**
NSY	**Sanyi**	**0.91**	**299**	P	**Pn**	**16 18 16.9**	**+0.2**
NSY	baz=312			*e*S	**Sn**	**16 18 30.6**	**+1.0**
EHD	**Haiduan**	**0.91**	**206**	*e*P	**Pg**	**16 18 15.1**	**-0.9**
NMLH	baz=204 **Miaoli**	**0.95**	**306**	*e*P	**Pn**	**16 18 17.8**	**+0.5**
CHN5	baz=306 **Tsauling**	**0.95**	**247**⇑	*i*P	**Pn**	**16 18 17.3**	**0.0**
ELDTW	baz=243 **Lidau**	**0.96**	**216**⇑	*e*P	**Pg**	**16 18 15.5**	**-1.6**
WDJ	baz=212 **Dajia District**	**0.98**	**293**⇑	*i*P	**Pn**	**16 18 18.5**	**+0.8**
WDJ	baz=293			*e*S	**Sn**	**16 18 32.0**	**+0.7**
WCHH	**Zhanghua**	**0.99**	**276**	⇑P	**Pn**	**16 18 18.3**	**+0.6**
NHDH	baz=274 **Xindian Distri**	**0.99**	**354**	⇓*i*P	**Pb**	**16 18 17.4**	**+0.1**
NHDH	baz=357			S	**Sg**	**16 18 29.0**	**-1.4**
TWA	**Mucha**	**1.00**	**357**	⇓*i*P	**Pb**	**16 18 17.6**	**+0.1**
TWA	baz=349			S	**Sg**	**16 18 29.7**	**-1.2**
SBCB	**Hsinchu**	**1.00**	**324**	⇑P	**Pn**	**16 18 18.7**	**+0.7**
SBCB	baz=326			*e*S	**Sb**	**16 18 30.2**	**-0.5**
TATO	**Taipei**	**1.00**	**353**		**Pb**	**16 18 17.5**	**0.0**
TATO	**Taipei**	**1.00**	**353**	P	**Pb**	**16 18 17.8**	**+0.3**
TATO	**Taipei**	**1.00**	**353**	P	**Pn**	**16 18 18.0**	**0.0**
TATO	**Taipei**	**1.00**	**353**	⇓*i*P	**Pb**	**16 18 17.6**	**0.0**
TATO	baz=355			*i* S	**Sg**	**16 18 29.8**	**-1.1**
TIPB	baz=355 **Shuangxi**	**1.01**	**10**	⇓*i*P	**Pg**	**16 18 17.1**	**-0.8**
WGK	baz=358 **Gukeng**	**1.02**	**254**⇑	*i*P	**Pn**	**16 18 18.7**	**+0.5**
HSN	baz=252 **Hsinchu**	**1.02**	**324**	*e*P	**Pn**	**16 18 18.8**	**+0.5**
WDLH	baz=328 **Douliu**	**1.04**	**254**⇑	*e*P	**Pn**	**16 18 19.0**	**+0.5**
TAP	baz=253 **Taipei**	**1.07**	**354**	P	**Pn**	**16 18 19.0**	**+0.1**
TAP	baz=357			S	**Sb**	**16 18 32.8**	**+0.4**
NCUH	baz=357 **Zhongli**	**1.07**	**338**	*e*P	**Pn**	**16 18 19.6**	**+0.7**
NCU	baz=340 **National Centr**	**1.07**	**338**	*e*P	**Pn**	**16 18 19.6**	**+0.7**
NCU	baz=340			*e*S	**Sn**	**16 18 34.0**	**+0.3**
TWB1	**Santiao Chiao**	**1.08**	**17**	⇑P	**Pb**	**16 18 18.6**	**-0.2**
WCKO	baz=14 **Fanlu**	**1.08**	**241**⇑	*i*P	**Pn**	**16 18 19.5**	**+0.4**
WCKO	baz=234			*e*S	**Sn**	**16 18 35.6**	**+1.7**
NWF	baz=234 **Wu-fen Shan**	**1.10**	**7**	P	**Pb**	**16 18 19.3**	**+0.1**
WFSB	baz=11 **Wu-fen Shan**	**1.10**	**7**	⇓*i*P	**Pn**	**16 18 19.4**	**+0.1**
WFSB	baz=10.0			S	**Sg**	**16 18 33.1**	**-0.9**
STYH	baz=10.0 **Taoyuan**	**1.12**	**225**	*e*P	**Pg**	**16 18 19.1**	**-0.8**
STYH	baz=225			S	**Sb**	**16 18 34.7**	**+0.7**
CHN4	baz=225 **Tsaushan**	**1.14**	**237**⇑	*i*P	**Pn**	**16 18 20.6**	**+0.8**
CHN4	baz=237			*e*S	**Sn**	**16 18 38.1**	**+2.9**
SXI1	baz=237 **Grass Mountain**	**1.14**	**11**	⇓*i*P	**Pb**	**16 18 19.6**	**-0.2**
SXI1	baz=354			*e*S	**Sn**	**16 18 37.9**	**+2.6**
TPUB	baz=354 **Ta-pu**	**1.14**	**234**		**Pn**	**16 18 20.1**	**+0.2**
TPUB	**Ta-pu**	**1.14**	**234**	P	**Pn**	**16 18 20.3**	**+0.4**
TPUB	**Ta-pu**	**1.14**	**234**	P	**Pn**	**16 18 20.7**	**+0.8**
TPUB	**Ta-pu**	**1.14**	**234**⇑	*i*P	**Pn**	**16 18 20.3**	**+0.4**
TPUB	baz=234			S	**Sn**	**16 18 36.1**	**+0.8**
TWS1	baz=234 **Kuangyinshan**	**1.14**	**350**	P	**Pn**	**16 18 20.7**	**+0.8**
TWS1	baz=3.0			*e*S	**Sn**	**16 18 36.7**	**+1.4**
STYT	baz=3.0 **Tauyuan**	**1.14**	**225**⇑	*i*P	**Pg**	**16 18 19.6**	**-0.7**
STYT	baz=225			S	**Sn**	**16 18 36.0**	**+0.7**
CHN2	baz=225 **Minshiung**	**1.15**	**248**⇑	*i*P	**Pn**	**16 18 20.7**	**+0.7**
WRL	baz=247 **Guolierlin Hig**	**1.15**	**267**	⇑P	**Pn**	**16 18 20.8**	**+0.8**
WRL	baz=267			*e*S	**Sn**	**16 18 36.8**	**+1.2**
NHW	baz=267 **Xinwu Township**	**1.16**	**333**	P	**Pn**	**16 18 21.2**	**+1.1**
NHW	baz=321			*e*S	**Sn**	**16 18 37.9**	**+2.1**
LONT	baz=321 **Longtian**	**1.16**	**204**	*e*P	**Pg**	**16 18 18.8**	**-1.9**
RLNB	baz=203 **Erlin**	**1.17**	**266**⇑	*i*P	**Pn**	**16 18 21.0**	**+0.7**
RLNB	baz=266			*i* S	**Sn**	**16 18 37.9**	**+2.0**
YM01	baz=266 **YM01**	**1.17**	**357**	P	**Pn**	**16 18 21.0**	**+0.7**
YM01	baz=349			*e*S	**Sn**	**16 18 36.8**	**+0.7**
WTK	baz=349 **Tuku**	**1.17**	**256**	*e*P	**Pb**	**16 18 20.2**	**-0.2**
WTP	baz=255 **Ta-pu**	**1.18**	**232**⇑	*i*P	**Pn**	**16 18 21.1**	**+0.6**
WTP	baz=233			S	**Sn**	**16 18 38.0**	**+1.5**
NTST	baz=233 **Danshui**	**1.20**	**352**	*e*P	**Pn**	**16 18 21.1**	**+0.4**
CHY	baz=355 **Chiayi**	**1.20**	**247**	*e*P	**Pn**	**16 18 21.6**	**+0.8**
CHY	baz=263			S	**Sn**	**16 18 38.4**	**+1.5**
ANP	baz=263 **Anpu**	**1.21**	**355**	*e*P	**Pn**	**16 18 21.2**	**+0.2**
WTCT	baz=358 **Ta-ch'eng**	**1.24**	**265**	*e*P	**Pn**	**16 18 21.7**	**+0.4**
WTCT	baz=265			*e*S	**Sn**	**16 18 39.3**	**+1.5**
	baz=265						

TWG	**Pinlang**	**1.26**	**204**		**Pn**	**16 18 19.4**	**-2.1**
TWG	**Pinlang**	**1.26**	**204**	*e*P	**Pn**	**16 18 19.4**	**-2.1**
	baz=204								
TWGBT	**Beinan**	**1.26**	**204**	P	**Pn**	**16 18 20.6**	**-0.9**
TWGBT	**Beinan**	**1.26**	**204**	P	**Pn**	**16 18 20.1**	**-1.4**
TWGBT	**Beinan**	**1.26**	**204**	*e*P	**Pn**	**16 18 19.6**	**-1.9**
	baz=204								
TWK	**Hsinying**	**1.26**	**236**⇑	*e*P	**Pn**	**16 18 22.2**	**+0.6**
	baz=236								
CHN1	**Nanshi**	**1.28**	**232**	⇑P	**Pg**	**16 18 22.7**	**-0.3**
CHN1	baz=233			*e*S	**Sn**	**16 18 42.2**	**+3.4**
	baz=233								
SNST	**Tainan City**	**1.28**	**234**⇑	*e*P	**Pg**	**16 18 22.6**	**-0.5**
SNST	baz=235			*e*S	**Sn**	**16 18 40.5**	**+1.7**
	baz=235								
JYNG	**Yonagunijimaku**	**1.29**	**68**	P	**Pn**	**16 18 21.7**	**-0.2**
JYNG				*e*S	**Sg**	**16 18 39.9**	**-0.1**
TTN	**Taitung**	**1.29**	**200**	*e*P	**Pn**	**16 18 21.2**	**-0.8**
	baz=200								
TWY	**Chenhua**	**1.30**	**359**⇑	*e*P	**Pg**	**16 18 23.0**	**-0.3**
	baz=348								
WMLT	**Mailiao**	**1.30**	**263**	*e*P	**Pg**	**16 18 23.1**	**-0.3**
	baz=261								
LDUT	**Ludao**	**1.30**	**187**	*e*P	**Pn**	**16 18 20.0**	**-2.1**
	baz=172								
SGST	**Jiashian**	**1.31**	**228**⇑	*e*P	**Pn**	**16 18 22.1**	**-0.1**
	baz=228								
SGST				*e*S	**Sn**	**16 18 41.1**	**+1.6**
	baz=228								
SLGT	**Liugui**	**1.33**	**223**	P	**Pb**	**16 18 23.2**	**+0.1**
	baz=224								
SLGT				S	**Sn**	**16 18 42.1**	**+2.1**
	baz=224								
WSF	**Szhu**	**1.33**	**256**	⇓P	**Pg**	**16 18 23.4**	**-0.7**
	baz=256								
WSF				*e*S	**Sn**	**16 18 43.1**	**+3.0**
	baz=256								
YOJ	**Yonaguni jima**	**1.35**	**69**		**Pn**	**16 18 22.0**	**-0.8**
YOJ	**Yonaguni jima**	**1.35**	**69**	P	**Pn**	**16 18 22.9**	**+0.1**
YOJ	**Yonaguni jima**	**1.35**	**69**	P	**Pn**	**16 18 22.5**	**-0.2**
	baz=68								
YOJ	**Yonaguni jima**	**1.35**	**69**	P	**Pn**	**16 18 22.6**	**-0.2**
WSL	**Shuilin Townsh**	**1.36**	**251**	P	**Pg**	**16 18 24.3**	**-0.3**
	baz=265								
WSL				S	**Sn**	**16 18 43.4**	**+2.6**
	baz=265								
ICHU	**Yijhu**	**1.38**	**244**	*e*P	**Pg**	**16 18 24.8**	**-0.2**
	baz=246								
ICHU				*e*S	**Sn**	**16 18 43.6**	**+2.3**
	baz=246								
CHN8	**Yiju**	**1.45**	**245**	P	**Pb**	**16 18 24.9**	**-0.1**
	baz=246								
CHN8				S	**Sg**	**16 18 45.9**	**+0.9**
	baz=246								
CHN3	**Shinhua**	**1.47**	**233**	*e*P	**Pg**	**16 18 26.3**	**-0.3**
	baz=235								
ECL	**Taimali**	**1.51**	**205**	*e*P	**Pn**	**16 18 24.3**	**-0.6**
	baz=189								
SCST	**Cishan**	**1.51**	**224**	*e*P	**Pg**	**16 18 27.3**	**0.0**
	baz=210								
SHHT	**Tainan City**	**1.51**	**231**	*e*P	**Pg**	**16 18 27.1**	**-0.3**
	baz=234								
SSD	**Sandimen**	**1.53**	**217**	*e*P	**Pn**	**16 18 24.5**	**-0.8**
	baz=220								
SSD				*e*S	**Sg**	**16 18 47.1**	**-0.6**
	baz=220								
SCLT	**Jiali**	**1.54**	**239**	*e*P	**Pb**	**16 18 26.8**	**+0.1**
	baz=241								
TSMG	**Majia**	**1.56**	**216**	*e*P	**Pb**	**16 18 26.8**	**-0.1**
	baz=204								
TAI1	**Yung-k'ang**	**1.59**	**234**	*e*P	**Pb**	**16 18 27.4**	**-0.1**
	baz=237								
TWM1	**Shoushan**	**1.60**	**224**	⇓P	**Pg**	**16 18 29.0**	**0.0**
	baz=225								
SGLT	**Jiouru**	**1.63**	**220**	*e*P	**Pg**	**16 18 29.1**	**-0.5**
	baz=208								
MASBT	**Mashibuluo**	**1.64**	**214**	*e*P	**Pn**	**16 18 26.9**	**+0.2**
	baz=203								
TSCK	**Chigu Township**	**1.64**	**240**	*e*P	**Pb**	**16 18 28.2**	**-0.2**
	baz=243								
PCYT	**Pengchaiyu**	**1.70**	**14**	*e*P	**Pb**	**16 18 28.8**	**-0.5**
	baz=15								
SNJT	**Kaohsiung City**	**1.70**	**225**	*e*P	**Pb**	**16 18 29.9**	**+0.5**
	baz=228								
EAST	**Anshuo**	**1.74**	**205**	*e*P	**Pn**	**16 18 27.1**	**-1.1**
	baz=184								
TAW	**Tawu**	**1.75**	**203**	*e*P	**Pn**	**16 18 27.1**	**-1.1**
	baz=182								
TAWH	**Dawu Township**	**1.77**	**203**	*e*P	**Pn**	**16 18 27.4**	**-1.0**
	baz=184								
SCZT	**Fangliau**	**1.85**	**210**	*e*P	**Pn**	**16 18 30.7**	**+1.1**
	baz=199								
SLIU	**Shizi**	**1.91**	**204**	*e*P	**Pn**	**16 18 31.1**	**+0.6**
	baz=193								
LAY	**Lan-yu**	**1.93**	**182**	*e*P	**Pn**	**16 18 28.0**	**-2.8**
	baz=165								
PHUB	**P'eng-hu**	**1.94**	**257**⇑	*i*P	**Pn**	**16 18 31.6**	**+0.7**
	baz=258								
PHUB				S	**Sb**	**16 18 57.0**	**-0.7**
	baz=258								
WDGT	**Dungji**	**1.94**	**249**	*e*P	**Pn**	**16 18 31.8**	**+0.8**
	baz=251								
PNG	**Penghu**	**1.94**	**258**	⇑P	**Pn**	**16 18 31.7**	**+0.7**
	baz=260								
PNG				*e*S	**Sn**	**16 18 56.1**	**+0.9**
	baz=260								
IRIF	**Iriomote-Funau**	**1.95**	**79**	P	**Pn**	**16 18 31.0**	**0.0**
LYUB	**Lan-yu**	**1.96**	**181**	*e*P	**Pn**	**16 18 28.2**	**-3.1**
	baz=167								
HATJ	**Hateruma jima**	**1.99**	**87**	P	**Pn**	**16 18 31.4**	**-0.2**
HATJ				*e*S	**Sn**	**16 18 56.7**	**+0.5**
TWP	**Hsiaoliuchiu**	**2.00**	**216**	*e*P	**Pb**	**16 18 33.7**	**-0.8**
	baz=221								
HEN	**Hengchun**	**2.13**	**203**	*e*P	**Pb**	**16 18 35.6**	**-1.1**
	baz=185								
VCHM	**Qimei**	**2.16**	**250**	*e*P	**Pn**	**16 18 34.4**	**+0.5**
	baz=252								
TWK1	**Hengchun**	**2.16**	**201**	*e*P	**Pn**	**16 18 35.0**	**+1.1**
	baz=203								
TWKBT	**Hengchun**	**2.16**	**201**	*e*P	**Pn**	**16 18 34.9**	**+1.0**
	baz=203								
TSEB	**Hengchuen, Pin**	**2.17**	**198**	*e*P	**Pn**	**16 18 34.9**	**+0.9**
	baz=180								
JKRS	**Kuro-shima**	**2.19**	**83**	P	**Pn**	**16 18 34.5**	**+0.2**
JKRS				S	**Sn**	**16 19 03.1**	**+2.0**
VWUC	**VWUC**	**2.23**	**297**	*e*P	**Pn**	**16 18 34.3**	**-0.6**
	baz=296								
JIJ	**Ishigaki jima**	**2.33**	**80**	P	**Pn**	**16 18 35.9**	**-0.3**
JIJ				*e*S	**Sn**	**16 19 04.3**	**-0.3**
JISG	**Ishigakijimahi**	**2.52**	**75**	P	**Pn**	**16 18 38.6**	**-0.3**
JISG				*e*S	**Sn**	**16 19 10.3**	**+0.9**
PTMZ	**Houxiangcun**	**2.52**	**295**	*e*P	**Pn**	**16 18 39.2**	**+0.4**
	baz=294								
MATB	**Ma-tsu**	**2.65**	**325**	*e*P	**Pn**	**16 18 41.3**	**+0.6**
	baz=308								
JTJ	**Tarama**	**2.88**	**76**	P	**Pn**	**16 18 44.0**	**+0.2**
JTJ				S	**Sn**	**16 19 18.5**	**+0.3**
QZH	**Quanzhou**	**2.93**	**290**	Pn	**Pn**	**16 18 44.7**	**+0.2**
QZH				Sn	**Sn**	**16 19 19.1**	**-0.5**
QZH				smax	smax		
	comp=N,1µm,0.6s								
QZH				smax	smax		
	comp=E,1µm,0.9s								
KNM	**Kinmen**	**2.95**	**279**	*e*P	**Pn**	**16 18 46.8**	**+2.0**
	baz=278								
KNMB	**Chin-men Tao**	**3.00**	**280**	Pn	**Pn**	**16 18 45.8**	**+0.3**
KNMB	**Chin-men Tao**	**3.00**	**280**	*e*P	**Pn**	**16 18 45.9**	**+0.4**
	baz=279								
LYJJ	**Jianjiangzhen**	**3.07**	**327**	*e*P	**Pn**	**16 18 47.1**	**+0.6**
	baz=311								
MHZQ	**Yeshan**	**3.17**	**312**	*e*P	**Pn**	**16 18 48.3**	**+0.5**
	baz=311								
XPSS	**Dashiqiu**	**3.22**	**336**	*e*P	**Pn**	**16 18 48.6**	**+0.1**
	baz=335								
JIRB	**Irabujima**	**3.34**	**75**	*e*P	**Pn**	**16 18 50.7**	**+0.6**
JMJ	**Miyako jima 2**	**3.44**	**75**	P	**Pn**	**16 18 52.9**	**+1.4**
JMJ	**Miyako jima 2**	**3.44**	**75**	*e*P	**Pn**	**16 18 52.7**	**+1.1**
	baz=89								
JMJ2	**Miyako jima3**	**3.46**	**76**	P	**Pn**	**16 18 52.7**	**+0.9**
JMJ2				*e*S	**Sn**	**16 19 33.2**	**+0.8**
AXDP	**Jialang**	**3.46**	**286**	*e*P	**Pn**	**16 18 52.3**	**+0.5**
	baz=284								
ZPLA	**Ao Xicun**	**3.55**	**270**⇑	*e*P	**Pn**	**16 18 53.5**	**+0.4**
	baz=269								
DSXP	**Dongshan**	**3.86**	**267**	*e*P	**Pn**	**16 18 57.8**	**+0.5**

	baz=264								
SXFK	**Yanhouchang**	**4.34**	**305**	*e*P	**Pn**	**16 19 04.5**	**+0.5**
	baz=303								
JOW	**Kunigami**	**6.65**	**63**	Pn	**Pn**	**16 19 34.3**	**-1.3**
JOW	**Kunigami**	**6.65**	**63**	P	**Pn**	**16 19 34.6**	**-1.0**
JOW	**Kunigami**	**6.65**	**63**	Pn	**Pn**	**16 19 32.7**	**-2.9**
	9.1nm,0.3s,baz=123,slow=23,SNR=5.7								
	23nm,0.4s								
HKPS	**Hong Kong Po S**	**7.10**	**258**	Pn	**Pn**	**16 19 42.5**	**+0.7**
SSE	**Sheshan**	**7.11**	**357**	Pn	**Pn**	**16 19 41.9**	**0.0**
SSE				Sn	**Sn**	**16 21 03.3**	**+0.9**
SSE				smax	smax		
	comp=N,66nm,0.9s								
SSE				smax	smax		
	comp=E,91nm,0.9s								
GZH	**Guangzhou**	**7.66**	**265**	Pn	Pn	16 19 44.7	-4.8
GZH				Sn	**Sn**	**16 21 09.1**	**-7.0**
GZH				smax	smax		
	comp=N,290nm,1.0s								
GZH				smax	smax		
	comp=E,170nm,0.7s								
NJ2	**Nanjing**	**8.41**	**344**	*e*P	**Pn**	**16 19 58.1**	**-1.7**
NJ2				S	**Sn**	**16 21 33.1**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,31nm,0.5s								
NJ2				smax	smax		
	comp=N,190nm,1.1s								
NJ2				smax	smax		
	comp=E,250nm,1.1s								
WHN	**Wuhan**	**9.21**	**317**	P	**Pn**	**16 20 11.0**	**+0.3**
WHN				S	**Sn**	**16 21 52.7**	**-1.4**
GULI	**GuiLin**	**10.33**	**280**	*e*P	**Pn**	**16 20 25.3**	**-0.9**
GULI				S	**Sn**	**16 22 18.2**	**-3.7**
LYN	**LuoYang**	**13.22**	**325**	⇑P	**Pn**	**16 21 02.8**	**-2.9**
LYN				pmax	pmax		
	comp=Z,27nm,0.4s								
LYN				pmax	pmax		
	comp=Z,8µm,8.9s								
GYA	**Guiyang**	**13.77**	**283**	P	**Pn**	**16 21 15.6**	**+2.2**
GYA				pmax	pmax		
	comp=Z,13nm,1.2s								
KSRS	**Korea Array**	**14.48**	**20**	Pn	**Pn**	**16 21 24.0**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=200,slow=11,SNR=28								
HNS	**HongShan**	**14.64**	**338**	*e*P	**P**	**16 21 30.1**	**-1.2**
DL2	**Dalian**	**14.89**	**360**	P	P	16 21 40.3	+6.2
DL2				pmax	pmax		
	comp=Z,19nm,0.7s								
XAN	**Xi'an**	**14.96**	**315**	P	**Pn**	**16 21 30.0**	**+0.5**
XAN				S	**Sn**	**16 24 17.9**	**+2.9**
SLVN	**Son La**	**16.57**	**264**	P	**P**	**16 21 53.5**	**+0.6**
CD2	**Chengdu**	**17.29**	**297**	*e*P	**P**	**16 22 01.0**	**+0.1**
JGF	**Kuroka**	**17.88**	**46**		**Pn**	**16 22 06.6**	**-0.1**
PZH	**PanZhiHua**	**18.17**	**282**	P	**Pn**	**16 22 10.5**	**+0.1**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s								
HHC	**Hu-ho-hao-te**	**18.83**	**336**	*e*P	**Pn**	**16 22 20.8**	**+2.5**
BTO	**Baotou**	**19.24**	**332**	*e*P	**Pn**	**16 22 24.8**	**+1.5**
BTO				sP	**sP**	**16 22 31.9**	**+3.8**
BTO				PP	**PnPn**	**16 22 42.1**	**+5.8**
BTO				S	**S**	**16 26 04.9**	**+4.9**
BTO				pmax	pmax		
	comp=Z,15nm,0.5s								
CN2	**Changchun**	**20.02**	**8**	P	Pn	16 22 34.8	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s								
XLT	**XiLinHaoTe**	**20.39**	**348**	*e*P	Pn	16 22 38.5	+1.6
XLT				pmax	pmax		
	comp=Z,14nm,0.9s								
TNCH	**TengChong**	**21.06**	**278**	*e*P	**P**	**16 22 45.2**	**+2.9**
TNCH				sP	sP	16 22 48.8	+0.5
TNCH				pmax	pmax		
	comp=Z,36nm,1.4s								
MDJ	**Mudanjiang**	**21.59**	**16**	P	**P**	**16 22 48.8**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s								
CHTO	**Chiang Mai**	**21.73**	**261**	P	**P**	**16 22 48.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**21.84**	**260**	P	**P**	**16 22 52.7**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=69,slow=8.6,SNR=16								
	comp=Z,1.6nm,0.7s								
USRK	**Ussuriysk Ar.**	**21.89**	**20**	P	**P**	**16 22 51.1**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=204,slow=7.2,SNR=9.3								
	comp=Z,2.0nm,0.5s								
BNX	**BinXian**	**22.21**	**11**	⇑P	**P**	**16 22 57.1**	**+2.8**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.7s								
TOLI2	**Tolitoli**	**22.74**	**182**	P	**P**	**16 22 58.9**	**-1.3**
SBUM	**Sibu**	**23.25**	**204**	P	**P**	**16 23 04.8**	**-0.7**
GTA	**Gaotai**	**24.02**	**315**	P	**P**	**16 23 16.8**	**+3.8**
GTA				sP	sP	16 23 24.4	+5.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s								
LUWI	**Luwuk**	**24.89**	**177**	P	**P**	**16 23 20.6**	**-0.3**
LUWI				IAmb	IAmb	16 23 31.4	
	comp=Z,23nm,0.8s								
KSM	**Kuching**	**24.91**	**208**	P	**P**	**16 23 21.4**	**+0.3**
KSM				IAmb	IAmb	16 23 36.8	
	comp=Z,52nm,1.2s								
HIA	**Hailar**	**25.29**	**357**	P	**P**	**16 23 24.3**	**+0.1**
JKA	**Kamikawa-asahi**	**26.43**	**35**	P	**P**	**16 23 32.4**	**-2.2**
JKA				IAmb	IAmb	16 23 55.8	
	comp=Z,68nm,2.0s								
ULN	**Ulaanbaatar**	**26.51**	**338**	P	**P**	**16 23 36.0**	**+0.4**
ULN				IAmb	IAmb	16 24 00.8	
	comp=Z,55nm,1.9s								
HEH	**HeiHe**	**26.62**	**8**	*e*P	**P**	**16 23 38.9**	**+2.7**
SONM	**Songino Array**	**26.72**	**337**	P	**P**	**16 23 37.8**	**+0.5**
	comp=Z,3.0nm,0.7s,baz=161,slow=9.9,SNR=14								
	comp=Z,3.0nm,0.7s								
LSA	**Lhasa**	**27.74**	**289**	P	**P**	**16 23 46.4**	**-0.7**
MTN	**Manton Dam**	**37.75**	**165**	P	**P**	**16 25 12.4**	**-1.6**
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**16 25 23.1**	**+0.7**
	comp=Z,4.4nm,0.6s,baz=100,slow=11,SNR=32								
MKAR				PcP	**PcP**	**16 27 33.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=118,slow=3.7,SNR=3.0								
MKAR				ScP	**S**	**16 31 20.6**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=99,slow=5.4,SNR=3.8								
	comp=Z,4.4nm,0.6s								
MAKZ	**Makanchi**	**38.98**	**316**	P	**P**	**16 25 24.8**	**+0.7**
KNRA	**Kununurra**	**40.02**	**169**	P	**P**	**16 25 31.6**	**-1.4**
KNRA				IAmb	IAmb	16 26 50.3	
	comp=Z,60nm,1.6s								
ZALV	**Zalesovo Beam**	**40.64**	**327**	P	**P**	**16 25 37.5**	**-0.4**
	comp=Z,6.1nm,0.6s,baz=109,slow=7.5,SNR=18								
ZALV				PcP	**PcP**	**16 27 38.2**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=130,slow=4.1,SNR=2.2								
	comp=Z,6.1nm,0.6s								
HYB	**Hyderabad**	**40.70**	**269**	*e*P	**P**	**16 25 38.6**	**-0.2**
NRN	**Naryn**	**41.64**	**306**	P	**P**	**16 25 47.4**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**42.22**	**89**	T	T	17 10 51.2	
	baz=284,slow=75,SNR=9.5								
H11S1	**WAKE ISLAND Hy**	**42.22**	**88**	T	T	17 10 50.6	
	baz=284,slow=75,SNR=11								
H11S2	**WAKE ISLAND Hy**	**42.23**	**89**	T	T	17 10 52.3	
	baz=284,slow=75,SNR=13								
KURK	**Kurchatov**	**42.51**	**320**	P	**P**	**16 25 54.3**

BVAR PcP **PcP** **16 28 04.2 -0.8**
comp=Z,2.1nm,0.8s,baz=115,slow=6.7,SNR=3.6
comp=Z,2.2nm,0.5s
BRVK Borovoye 48.16 321 P **P** **16 26 37.5 -0.5**
ASAR Alice Springs 48.83 165 P **P** **16 26 43.1 -0.3**
comp=Z,3.1nm,0.6s,baz=342,slow=6.5,SNR=26
ASAR PcP **PcP** **16 28 07.3 -0.8**
comp=Z,0.8nm,0.6s,baz=344,slow=3.5,SNR=2.5
comp=Z,3.1nm,0.6s
AS01 Alice Springs 48.84 165 P **P** **16 26 43.8 +0.3**
WRKA Warakurna 49.15 172 P **P** **16 26 46.6 +0.7**
BILL Bilibino 51.74 20 P **P** **16 27 04.0 -1.0**
MORW Morawa 53.01 186 P **P** **16 27 12.9 -1.9**
MORW IAmb IAmb 16 29 06.0
comp=Z,35nm,1.4s
OOD Oodnadatta 53.22 164 P **P** **16 27 16.6 +0.2**
ABKAR Akbulak array 53.88 314 P **P** **16 27 21.4 +0.3**
FORT Forrest 54.79 173 P **P** **16 27 25.5 -0.2**
FORT IAmb IAmb 16 27 31.7
comp=Z,18nm,0.8s
FORT Forrest 54.79 173 P **P** **16 27 27.9 +0.2**
AKTO Aktyubinsk 55.21 316 P **P** **16 27 32.2 +1.5**
comp=Z,1.7nm,0.5s,baz=72,slow=6.4,SNR=3.8
comp=Z,1.7nm,0.5s
MULG Mulgathing 55.25 167 P **P** **16 27 31.0 -0.1**
GEYT Alibeck 55.26 301 P **P** **16 27 32.8 +1.5**
comp=Z,2.6nm,0.7s,baz=144,slow=1.2,SNR=4.5
comp=Z,2.6nm,0.7s
ARU Arti 55.52 323 P **P** **16 27 32.6 -0.2**
ARU Arti 55.52 323 P **P** **16 27 32.2 -0.6**
comp=Z,4.7nm,0.5s,baz=94,slow=1.0,SNR=10
comp=Z,4.7nm,0.5s
LCRK Leigh Creek 56.40 163 P **P** **16 27 39.8 +0.4**
EIDS Eidsvold 56.74 148 P **P** **16 27 41.7 -0.2**
EIDS IAmb IAmb 16 27 42.9
comp=Z,50nm,1.7s
BBOO Buckleboo 58.12 166 P **P** **16 27 50.7 -0.8**
BBOO IAmb IAmb 16 27 54.9
comp=Z,13nm,0.8s
BBOO Buckleboo 58.12 166 P **P** **16 27 51.5 0.0**
STKA Stephens Creek 58.73 160 P **P** **16 27 55.1 -0.6**
comp=Z,3.3nm,0.5s,baz=335,slow=6.8,SNR=11
comp=Z,3.3nm,0.5s
HTT Hallett 59.41 163 P **P** **16 28 02.1 +1.6**
CMSA Cobar Meteorol 59.81 156 P **P** **16 28 04.0 +0.8**
J14K Nanvaranak Lak 62.03 30 P **P** **16 28 18.1 +0.1**
J14K IAmb IAmb 16 30 29.4
comp=Z,19nm,1.4s
I17K Unalakleet 63.34 29 P **P** **16 28 27.3 +0.6**
I17K IAmb IAmb 16 30 27.5
comp=Z,7.6nm,1.0s
ARPS Mount Arapiles 63.35 162 P **P** **16 28 28.2 +1.1**
L16K Owhat River 63.95 31 P **P** **16 28 30.8 +0.1**
L16K IAmb IAmb 16 28 37.3
comp=Z,21nm,1.3s
D19K Kuna River 64.36 24 P **P** **16 28 33.5 0.0**
D19K IAmb IAmb 16 30 45.9
comp=Z,27nm,1.4s
CAN Canberra 64.42 155 P **P** **16 28 34.8 +0.6**
CHGN Chignik 64.89 37 P **P** **16 28 36.0 -1.0**
TOO Toolangi 65.20 159 P **P** **16 28 39.3 0.0**
TOO Toolangi 65.20 159 P **P** **16 28 39.9 +0.7**
TTA Tatalina 65.48 30 P **P** **16 28 41.0 +0.1**
TTA IAmb IAmb 16 28 46.7
comp=Z,38nm,1.6s
TTA Tatalina 65.48 30 P **P** **16 28 43.1 +2.2**
SVW2 Sparrevohn 65.86 32 P **P** **16 28 43.7 +0.4**
SVW2 Sparrevohn 65.86 32 P **P** **16 28 44.2 +0.9**
KBZ Khabaz 65.93 309 P **P** **16 28 43.3 -0.6**
comp=Z,1.9nm,0.7s,baz=114,slow=7.9,SNR=6.3
comp=Z,1.9nm,0.7s
KIV Kislovodsk 66.04 309 P **P** **16 28 45.1 +0.3**
KIV IAmb IAmb 16 30 36.9
comp=Z,16nm,1.3s
F21K Alatna River 66.18 25 P **P** **16 28 45.5 +0.3**
F21K IAmb IAmb 16 30 33.1
comp=Z,21nm,1.6s
O18K Koktuh Hills 66.18 33 P **P** **16 28 46.0 +0.6**
P18K Big Mountain, 66.23 34 P **P** **16 28 45.8 +0.1**
G21K Allakaket 66.23 26 P **P** **16 28 46.0 +0.4**
G21K IAmb IAmb 16 28 52.7
comp=Z,33nm,1.6s
D22K Ayikyak River 66.33 23 P **P** **16 28 46.7 +0.6**
D22K IAmb IAmb 16 28 52.1
comp=Z,18nm,1.1s
M19K Big River Lodg 66.34 31 P **P** **16 28 46.8 +0.5**
Q19K Cape Douglas, 67.10 34 P **P** **16 28 51.1 -0.1**
CAST Castle Rocks 67.20 29 P **P** **16 28 52.2 +0.4**
CAST IAmb IAmb 16 28 57.2
comp=Z,19nm,1.2s
P19K Oil Pt 67.20 33 P **P** **16 28 52.1 +0.2**
RSO Redoubt South 67.32 32 P **P** **16 28 52.9 +0.1**
TOLK Toolik Lake Re 67.48 23 P **P** **16 28 53.9 +0.3**
SKT Skwentna 67.67 31 P **P** **16 28 54.4 -0.4**
D24K Happy Valley 67.67 23 P **P** **16 28 54.8 +0.1**
D24K IAmb IAmb 16 28 58.8
comp=Z,8.8nm,0.7s
KTH Kantishna Hill 67.69 29 P **P** **16 28 55.0 0.0**
KTH IAmb IAmb 16 30 45.6
comp=Z,38nm,1.5s
I23K Minto, Yukon-K 68.11 27 P **P** **16 28 57.6 +0.2**
I23K IAmb IAmb 16 29 02.3
comp=Z,32nm,1.6s
SUA Susitna One 68.12 31 P **P** **16 28 56.9 -0.9**
CUT Chulitna 68.18 30 P **P** **16 28 57.5 -0.4**
CNPM China Poot 68.22 33 P **P** **16 28 59.2 +0.9**
CNPM IAmb IAmb 16 29 38.0
comp=Z,265nm,1.9s
NEA2 Nenana 68.33 28 P **P** **16 28 59.3 +0.5**
NEA2 IAmb IAmb 16 29 04.3
comp=Z,28nm,1.2s
BRLK Bradley Lake 68.36 33 P **P** **16 28 59.7 +0.5**
H24K Noodor Dome 68.59 26 P **P** **16 29 00.9 +0.4**
H24K IAmb IAmb 16 29 06.2
comp=Z,9.7nm,1.1s
MDM Murphy Dome 68.61 27 P **P** **16 29 01.1 +0.4**
RND Reindeer 68.64 29 P **P** **16 29 00.5 -0.4**
RC01 Rabbit Creek A 68.67 31 P **P** **16 29 00.7 -0.4**
PMR Palmer 68.86 31 P **P** **16 29 01.9 -0.3**
POKR Poker Plat Res 68.91 27 P **P** **16 29 03.1 +0.6**
POKR IAmb IAmb 16 29 07.7
comp=Z,13nm,0.9s
GHO Glory Hole Cre 68.92 31 P **P** **16 29 02.4 -0.3**
GHO IAmb IAmb 16 29 26.1
comp=Z,36nm,1.4s
E25K Arctic Village 69.03 24 P **P** **16 29 03.6 +0.4**
E25K IAmb IAmb 16 31 16.6
comp=Z,31nm,1.9s
SML Sawmill 69.19 31 P **P** **16 29 04.0 -0.3**
ILAR Eielson Array 69.21 27 P **P** **16 29 03.4 -1.0**
comp=Z,1.0nm,0.5s,baz=277,slow=4.9,SNR=4.5
comp=Z,1.0nm,0.5s
SCM Sheep Creek Mo 69.65 30 P **P** **16 29 07.2 0.0**
J25K Salcha River, 69.88 27 P **P** **16 29 08.7 +0.1**
J25K IAmb IAmb 16 30 04.7
comp=Z,29nm,1.9s
M24K Tolsona, Glenn 70.12 30 P **P** **16 29 10.8 +0.8**
KLU Klutina 70.38 31 P **P** **16 29 11.9 +0.2**
SCRK Sand Creek 70.62 28 P **P** **16 29 13.3 +0.1**
SCRK IAmb IAmb 16 29 35.5
comp=Z,25nm,1.8s
N25K Chitina, Valde 70.97 30 P **P** **16 29 15.9 +0.6**
N25K IAmb IAmb 16 29 49.3
comp=Z,35nm,1.6s
L26K Log Cabin Wild 71.15 29 P **P** **16 29 17.2 +0.9**
L26K IAmb IAmb 16 30 27.0
comp=Z,38nm,1.9s
F28M Old Crow 71.25 24 P **P** **16 29 17.0 +0.2**
F28M IAmb IAmb 16 29 21.9
comp=Z,9.0nm,0.8s
GLB Gilahina Butte 71.37 30 P **P** **16 29 18.1 +0.4**
GLB IAmb IAmb 16 29 23.9
comp=Z,22nm,1.3s
K27K Chicken 71.42 27 P **P** **16 29 17.9 0.0**
K27K IAmb IAmb 16 29 23.1
comp=Z,12nm,0.8s
VRDI Verde Repeater 71.60 31 P **P** **16 29 19.1 -0.2**
VRDI IAmb IAmb 16 29 25.6
comp=Z,43nm,1.5s
E29M Blow River 71.72 23 P **P** **16 29 19.6 0.0**
MCARA McCarthy VSAT 71.75 30 P **P** **16 29 20.1 +0.2**
FINES FINESS Array B 71.83 330 P **P** **16 29 19.7 -0.6**
comp=Z,1.3nm,0.6s,baz=51,slow=7.6,SNR=8.5
comp=Z,1.3nm,0.6s
I28M Miner Creek 71.88 26 P **P** **16 29 21.1 +0.3**
WAX Waxell Ridge 72.10 31 P **P** **16 29 22.5 +0.4**
BARN Barnard Glacie 72.48 30 P **P** **16 29 25.1 +0.5**
DAWY Dawson 72.53 27 P **P** **16 29 25.1 +0.5**
DAWY IAmb IAmb 16 29 29.6
comp=Z,16nm,1.1s
CTGM Chitina Glacie 72.66 30 P **P** **16 29 26.2 +0.6**
CTGM IAmb IAmb 16 29 27.9
comp=Z,16nm,0.5s
G30M tAoh Zraii Nji 72.79 24 P **P** **16 29 25.8 -0.3**
G30M IAmb IAmb 16 29 31.5
comp=Z,29nm,1.2s
INK Inuvik 73.26 22 P **P** **16 29 28.3 -0.5**
AKASG Malin Array Be 73.30 318 P **P** **16 29 27.6 -1.7**
comp=Z,0.9nm,0.5s,baz=65,slow=5.6,SNR=2.5
comp=Z,0.9nm,0.5s
I30M Mount Dempster 73.36 25 P **P** **16 29 29.0 -0.6**
I30M IAmb IAmb 16 29 35.1
comp=Z,23nm,1.4s
K29M Barlow Dome 73.39 27 P **P** **16 29 29.8 0.0**
K29M IAmb IAmb 16 29 35.9
comp=Z,15nm,1.2s
F31M Tsiigehtchic 73.52 23 P **P** **16 29 29.4 -0.9**
F31M IAmb IAmb 16 29 34.1
comp=Z,14nm,0.7s
BRTR Keskin Array B 73.63 307 P **P** **16 29 31.4 -0.3**
comp=Z,1.4nm,0.5s,baz=90,slow=7.7,SNR=3.8
comp=Z,1.4nm,0.5s
M30M Minto, Yukon 74.15 28 P **P** **16 29 35.4 +1.2**
M30M IAmb IAmb 16 29 40.5
comp=Z,13nm,1.1s
HYT Haines Junctio 74.47 30 P **P** **16 29 37.5 +1.3**
N31M Braeburn, Yuko 75.00 29 P **P** **16 29 40.1 +1.0**
N31M IAmb IAmb 16 29 45.7
comp=Z,49nm,1.8s
O30N Mendenhall 75.13 30 P **P** **16 29 40.6 +0.7**
O30N IAmb IAmb 16 29 46.3
comp=Z,11nm,1.0s
M31M Drury Creek, Y 75.33 28 P **P** **16 29 41.6 +0.6**
M31M IAmb IAmb 16 30 06.9
comp=Z,41nm,1.9s
CSS Mathiatis 75.36 302 P **P** **16 29 42.0 +0.3**
CSS IAmb IAmb 16 30 23.7
comp=Z,44nm,1.9s
WHY Whitehorse 75.72 30 P **P** **16 29 44.2 +0.8**
WHY IAmb IAmb 16 30 19.9
comp=Z,33nm,1.8s
C36M Paulatuk 75.86 19 P **P** **16 29 43.1 -0.7**
C36M IAmb IAmb 16 29 48.3
comp=Z,12nm,0.9s
P32M Atlin 76.69 30 P **P** **16 29 49.9 +1.1**
P32M IAmb IAmb 16 30 18.6
comp=Z,20nm,1.4s
P33M Teslin, Yukon 76.84 30 P **P** **16 29 50.5 +0.8**
P33M IAmb IAmb 16 30 47.7
comp=Z,30nm,1.7s
ELL Elmali 77.37 305 P **P** **16 29 53.3 0.0**
HFS Hagfors 77.95 331 P **P** **16 29 54.7 -1.1**
comp=Z,2.0nm,0.7s,baz=74,slow=11,SNR=2.5
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 78.60 332 P **P** **16 29 58.3 -1.2**
comp=Z,0.8nm,0.6s,baz=58,slow=5.6,SNR=3.6
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 83.00 23 P **P** **16 30 22.5 -0.4**
comp=Z,4.4nm,0.7s,baz=313,slow=4.8,SNR=54
comp=Z,4.4nm,0.7s
GERES GERESS Array B 83.26 321 P **P** **16 30 24.2 -0.5**
comp=Z,0.3nm,0.4s,baz=81,slow=6.1,SNR=2.4
comp=Z,0.3nm,0.4s
FUORN Ofenpass-Fuorn 86.39 320 P **P** **16 30 40.6 0.0**
FUORN IAmb IAmb 16 33 12.0
comp=Z,38nm,1.9s
ILULI Ilulissat 86.93 357 P **P** **16 30 43.5 +1.0**
J05D Fort Rock, OR 91.64 41 P **P** **16 31 04.7 -0.7**
J05D IAmb IAmb 16 31 10.5
comp=Z,15nm,1.4s
NVAR Mina Array Bea 96.31 43 P **P** **16 31 25.7 -1.4**
comp=Z,0.5nm,0.8s,baz=305,slow=3.2,SNR=4.5
comp=Z,0.5nm,0.8s
TORD Torodi Ar. Bea 110.69 296 Pdiff **Pdif** **16 32 32.8 +1.5**
comp=Z,0.5nm,1.0s,baz=347,slow=1.9,SNR=3.7
SDV Santo Domingo 145.21 22 **PKPbc** **16 37 35.1 -1.2**
BAUV El Baul 145.95 17 PKPbc **PKPdf** **16 37 38.0 +0.3**

TAP 06 16:18:41.7, 24.01N × 121.62E, h7km, ML3.7, 2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=352	**0.08**	**345**	*i* P		Pg	16 18 44.0	+0.4
TWD				*i* S		Sg	16 18 45.6	+0.7
ETM	**Tongmen** baz=251	**0.12**	**251**	*i* P		Pg	16 18 44.8	+0.5
ETM				*i* S		Sg	16 18 46.8	+0.7
ETL	**Fush Village** baz=3.0	**0.15**	**2**	*i* P		Pg	16 18 45.1	+0.3
ETL				*i* S		Sg	16 18 47.4	+0.3
NACB	**Ninganchiao** baz=353	**0.17**	**353**	⇓*i* P		Pg	16 18 45.4	+0.2
NACB				*i* S		Sg	16 18 47.6	+0.2
LXIB	**Xiulin Townshi** baz=269	**0.19**	**275**	*i* P		Pg	16 18 46.1	+0.6
LXIB				S		Sg	16 18 49.2	+1.1
SHUL	**Shoufeng** baz=193	**0.22**	**193**	P		Pg	16 18 47.8	+1.6
SHUL				*e*S		Sg	16 18 51.6	+2.5
ESL	**Shilin** baz=230	**0.26**	**222**	P		Pg	16 18 47.1	+0.4
ESL				*e*S		Sg	16 18 50.5	+0.3
TEGC	**Jichi Village** baz=192	**0.30**	**194**	*e*P		Pb	16 18 49.4	-0.1
TEGC				*e*S		Sb	16 18 55.3	+0.6
EAHA	**Aohua** baz=29	**0.34**	**19**	*e*P		Pg	16 18 49.0	+0.6
WHF	**Hehuan Shan** baz=294	**0.35**	**293**	P		Pg	16 18 49.4	+0.7
WHF				S		Sg	16 18 54.5	+1.0
WARBT	**Fenglin Townsh** baz=223	**0.36**	**217**	*e*P		Pg	16 18 49.3	+0.6
OWD	**Renai** baz=263	**0.41**	**263**	*e*P		Pg	16 18 50.3	+0.6
OWD				*e*S		Sg	16 18 55.9	+0.8
CHGB	**Renai** baz=277	**0.41**	**278**	*e*P		Pg	16 18 50.5	+0.7
FUSS	**Fushou** baz=306	**0.42**	**305**	P		Pg	16 18 50.8	+0.8
FUSS				S		Sb	16 18 57.3	-1.0
ENA	**Nanau** baz=27	**0.43**	**15**	P		Pg	16 18 50.3	+0.1
ENA				S		Sg	16 18 56.2	+0.3
WUSB	**Renai** baz=267	**0.46**	**268**	P		Pb	16 18 51.6	-0.6
EWUT	**Wuta** baz=20	**0.46**	**18**	P		Pg	16 18 50.8	+0.2
EWUT				S		Sg	16 18 57.0	+0.2
NNSB	**Datong** baz=334	**0.47**	**333**	P		Pg	16 18 51.6	+0.7
NNSB				*e*S		Sg	16 18 57.6	+0.5
NNSH	**Datong** baz=334	**0.47**	**333**	P		Pg	16 18 51.5	+0.7
NNSH				S		Sg	16 18 57.5	+0.4
TWT	**Tachien** baz=300	**0.47**	**301**	*e*P		Pb	16 18 52.2	-0.3
NNS	**Nan Shan** baz=335	**0.49**	**333**	P		Pg	16 18 51.9	+0.7
NNS				*e*S		Sg	16 18 58.1	+0.5
TDCB	**Techi** baz=300	**0.49**	**300**	*e*P		Pb	16 18 52.2	-0.5
EHY	**Hungye** baz=214	**0.57**	**209**	*e*P		Pg	16 18 53.3	+0.6
NDT	**Datong Townshi** baz=342	**0.60**	**351**	P		Pg	16 18 53.8	+0.5
NDT				*e*S		Sg	16 19 01.2	0.0
ESAO	**Su ao** baz=342	**0.60**	**20**	*e*P		Pg	16 18 53.3	-0.1
WPL	**Puli Township** baz=21	**0.60**	**271**	P		Pb	16 18 54.4	-0.3
NDS	**Dongshan** baz=270	**0.63**	**8**	*e*P		Pg	16 18 54.2	+0.3
DPDB	**Guoxing** baz=10.0	**0.63**	**273**	*e*P		Pb	16 18 55.3	+0.1
ENTT	**Nioudou** baz=272	**0.63**	**356**	P		Pg	16 18 54.5	+0.6
ENTT				S		Sg	16 19 02.8	+0.6
TWC	**Suao** baz=357	**0.64**	**19**	*e*P		Pg	16 18 54.4	+0.4
SSLB	**Suanglung** baz=21	**0.65**	**250**	*e*P		Pb	16 18 55.0	-0.4
WCS	**Beigang Elemen** baz=249	**0.65**	**275**	*e*P		Pb	16 18 55.4	0.0
YULB	**Yu-li** baz=274	**0.68**	**206**	*e*P		Pb	16 18 55.5	-0.5
YHNB	**Yeheng** baz=205	**0.70**	**342**	*e*P		Pb	16 18 55.8	-0.5
NSK	**Sanguang** baz=350	**0.71**	**340**	*e*P		Pb	16 18 56.3	-0.1
TWE	**Neicheng** baz=355	**0.71**	**4**	P		Pb	16 18 56.0	-0.5
FUSB	**Fushanzhiwuyua** baz=358	**0.75**	**358**	*e*P		Pb	16 18 57.1	-0.1
NFF	**Wufeng Townshi** baz=360	**0.77**	**324**	*e*P		Pb	16 18 57.8	+0.2
NWLT	**Wulai** baz=325	**0.78**	**352**	P		Pb	16 18 57.4	-0.2
LIOB	**Emei** baz=342	**0.84**	**319**	P		Pb	16 18 59.4	+0.7
	baz=320							

IDC 06 16:20:30.6±2.3, 2.52N × 127.96E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=152.7km s-min=27.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=344,slow=11,SNR=13 0.4nm,0.3s	**23.19**	**165**	P		P	16 25 39.1	-0.1
ASAR	**Alice Springs** 0.5nm,0.6s,baz=353,slow=7.8,SNR=14 0.5nm,0.6s	**26.67**	**168**	P		P	16 26 11.4	-0.1
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=110,slow=8.3,SNR=3.6 0.4nm,0.8s	**59.24**	**325**	P		P	16 30 34.1	+0.2

TAP 06 16:20:37.5, 24.01N × 121.57E, h6km±1km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=24	**0.07**	**18**	*i* P		Pg	16 20 39.8	+0.5
ETM	**Tongmen** baz=237	**0.09**	**238**	*i* P		Pg	16 20 40.0	+0.5
LXIB	**Xiulin Townshi** baz=274	**0.14**	**274**	*e*P		Pg	16 20 41.4	+0.8
ETL	**Fush Village** baz=19	**0.15**	**18**	P		Pg	16 20 41.0	+0.3
NACB	**Ninganchiao** baz=16	**0.16**	**8**	P		Pg	16 20 41.2	+0.3
WHF	**Hehuan Shan** baz=294	**0.31**	**296**	*e*P		Pg	16 20 44.5	+0.8
WARBT	**Fenglin Townsh** baz=208	**0.34**	**210**	*e*P		Pg	16 20 44.8	+0.7
CHGB	**Renai** baz=275	**0.37**	**278**	*e*P		Pb	16 20 45.8	-0.8

*TAP **06** 16:26:01.8, 24.05N × 121.65E, h9km, ML3.3, C*
*JMA **06** 16:26:02.0±0.2, 24.0N±0.2 × 12.2E±, h2km±2km, TAIWAN REGION*
ISC 06 16:26:01.8±0.9, 24.03N±0.02 × 121.67E±0.02, h6km±6km, n93, σ0.51/143, 6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=307	**0.09**	**308**	⇓*i* P		**Pg**	**16 26 04.0**	**+0.2**
TWD				*i* S		**Sg**	**16 26 05.2**	**+0.1**
ETL	**Fush Village** baz=348	**0.14**	**342**	*i* P		**Pg**	**16 26 04.8**	**0.0**
ETL				*i* S		**Sg**	**16 26 06.7**	**0.0**
NACB	**Ninganchiao** baz=346	**0.16**	**335**	⇓*i* P		**Pg**	**16 26 05.0**	**-0.1**
NACB				*i* S		**Sg**	**16 26 07.1**	**-0.2**
ETM	**Tongmen** baz=239	**0.17**	**249**	*i* P		**Pg**	**16 26 05.4**	**+0.1**
ETM				*e*S		**Sg**	**16 26 07.8**	**+0.2**
LXIB	**Xiulin Townshi** baz=251	**0.23**	**269**	P		**Pg**	**16 26 06.5**	**0.0**
LXIB				*e*S		**Sg**	**16 26 09.4**	**-0.2**
SHUL	**Shoufeng** baz=205	**0.26**	**202**	*i* P		**Pb**	**16 26 08.5**	**-0.3**
SHUL				*e*S		**Sb**	**16 26 14.2**	**+0.7**
EHP	**Heping Village** baz=15	**0.29**	**13**	*e*P		**Pg**	**16 26 07.5**	**0.0**
EHP				*e*S		**Sg**	**16 26 11.8**	**+0.5**
ESL	**Shilin** baz=228	**0.30**	**226**	*e*P		**Pg**	**16 26 07.7**	**0.0**
ESL				*e*S		**Sg**	**16 26 11.5**	**-0.2**
EAHA	**Aohua** baz=14	**0.31**	**12**	*i* P		**Pg**	**16 26 07.7**	**-0.1**
EAHA				*e*S		**Sg**	**16 26 12.3**	**+0.3**
TEGC	**Jichi Village** baz=192	**0.34**	**200**	P		**Pb**	**16 26 10.1**	**-0.1**
TEGC				*e*S		**Sb**	**16 26 16.9**	**+1.1**
WHF	**Hehuan Shan** baz=284	**0.39**	**288**	*i* P		**Pg**	**16 26 09.6**	**+0.1**
WHF				*i* S		**Sg**	**16 26 14.4**	**-0.3**
WARBT	**Fenglin Townsh** baz=224	**0.40**	**220**	*e*P		**Pg**	**16 26 09.4**	**-0.2**
ENA	**Nanau** baz=12	**0.41**	**9**	⇓*i* P		**Pg**	**16 26 09.7**	**+0.1**
ENA				*i* S		**Sg**	**16 26 15.1**	**+0.1**
EGFH	**Guangfu** baz=216	**0.42**	**212**	*e*P		**Pg**	**16 26 10.2**	**+0.3**
EWUT	**Wuta** baz=14	**0.43**	**13**	P		**Pg**	**16 26 10.2**	**0.0**
FUSS	**Fushou** baz=297	**0.45**	**300**	*e*P		**Pg**	**16 26 10.6**	**+0.1**
FUSS				*e*S		**Sg**	**16 26 17.0**	**+0.6**
CHGB	**Renai** baz=261	**0.45**	**274**	*i* P		**Pg**	**16 26 10.9**	**+0.2**
CHGB				*i* S		**Sg**	**16 26 16.4**	**-0.2**
OWD	**Renai** baz=266	**0.46**	**261**	*e*P		**Pb**	**16 26 11.8**	**-0.5**
OWD				*e*S		**Sg**	**16 26 16.5**	**-0.2**
NNSB	**Datong** baz=327	**0.48**	**327**	P		**Pg**	**16 26 11.1**	**0.0**
NNSB				S		**Sg**	**16 26 17.3**	**0.0**
NNSH	**Datong** baz=335	**0.48**	**327**	*e*P		**Pg**	**16 26 11.3**	**+0.2**
NNS	**Nan Shan** baz=327	**0.49**	**327**	P		**Pg**	**16 26 11.4**	**0.0**
NNS				S		**Sg**	**16 26 17.6**	**-0.2**
TWT	**Tachien** baz=293	**0.50**	**297**	P		**Pg**	**16 26 12.0**	**+0.4**
TWT				S		**Sg**	**16 26 18.6**	**+0.5**
WUSB	**Renai** baz=262	**0.51**	**266**	*e*P		**Pg**	**16 26 11.5**	**-0.1**

WUSB				*e*S	**Sg**	**16 26 18.1**	**-0.1**
	baz=262								
TDCB	**Techi**	**0.52**	**296**	*i* P	**Pg**	**16 26 11.8**	**0.0**
	baz=294								
TDCB				*i* S	**Sg**	**16 26 18.8**	**+0.2**
	baz=294								
LATG	**Datong**	**0.52**	**346**	⇓*i* P	**Pg**	**16 26 11.8**	**-0.1**
	baz=347								
LATG				*i* S	**Sg**	**16 26 19.1**	**+0.3**
	baz=347								
VWDT	**VWDT**	**0.55**	**241**	*e*P	**Pg**	**16 26 11.1**	**-1.4**
	baz=239								
ESAO	**Su ao**	**0.57**	**16**	*e*P	**Pg**	**16 26 12.4**	**-0.4**
	baz=15								
ESAO				*e*S	**Sg**	**16 26 20.4**	**+0.1**
	baz=15								
HGSD	**Ruisui**	**0.58**	**203**	*e*P	**Pg**	**16 26 13.9**	**+0.9**
	baz=218								
NDT	**Datong Townshi**	**0.59**	**346**	⇓*i* P	**Pg**	**16 26 13.6**	**+0.3**
	baz=347								
NDT				*i* S	**Sg**	**16 26 20.9**	**0.0**
	baz=347								
TWC	**Suao**	**0.60**	**16**	*e*P	**Pg**	**16 26 13.5**	**0.0**
	baz=17								
TWC				S	**Sg**	**16 26 21.9**	**+0.6**
	baz=17								
NDS	**Dongshan**	**0.61**	**4**	*i* P	**Pg**	**16 26 13.6**	**+0.2**
	baz=5.0								
NDS				S	**Sg**	**16 26 21.7**	**+0.3**
	baz=5.0								
EHY	**Hungye**	**0.61**	**212**	*e*P	**Pg**	**16 26 12.9**	**-0.6**
	baz=209								
ENTT	**Nioudou**	**0.62**	**351**	⇓*i* P	**Pg**	**16 26 14.0**	**+0.3**
	baz=353								
ENTT				*i* S	**Sg**	**16 26 21.9**	**+0.1**
	baz=353								
WPL	**Puli Township**	**0.65**	**269**	*e*P	**Pg**	**16 26 14.2**	**-0.2**
	baz=267								
DPDB	**Guoxing**	**0.68**	**271**	P	**Pg**	**16 26 15.3**	**+0.4**
	baz=269								
TWE	**Neicheng**	**0.69**	**360**	*i* P	**Pg**	**16 26 15.2**	**+0.1**
	baz=3.0								
TWE				*e*S	**Sg**	**16 26 23.3**	**-0.8**
	baz=3.0								
WCS	**Beigang Elemen**	**0.69**	**273**	*e*P	**Pg**	**16 26 15.2**	**+0.1**
	baz=271								
YHNB	**Yeheng**	**0.69**	**337**	*i* P	**Pg**	**16 26 15.4**	**+0.2**
	baz=338								
YHNB				*i* S	**Sg**	**16 26 24.2**	**0.0**
	baz=338								
SSLB	**Suanglung**	**0.70**	**250**	P	**Pg**	**16 26 15.1**	**-0.1**
	baz=258								
SSLB				*e*S	**Sg**	**16 26 23.3**	**-1.0**
	baz=258								
NSK	**Sanguang**	**0.71**	**336**	*i* P	**Pg**	**16 26 15.4**	**0.0**
	baz=330								
NSK				S	**Sg**	**16 26 24.6**	**-0.1**
	baz=330								
WHP	**Taichung City**	**0.71**	**291**	*i* P	**Pb**	**16 26 15.8**	**-0.7**
	baz=289								
WHP				S	**Sb**	**16 26 25.6**	**-0.9**
	baz=289								
SMLT	**Sun Moon Lake**	**0.72**	**259**	*i* P	**Pg**	**16 26 15.9**	**+0.3**
	baz=255								
SMLT				*i* S	**Sg**	**16 26 24.9**	**-0.1**
	baz=255								
YULB	**Yu-li**	**0.72**	**208**	*e*P	**Pg**	**16 26 15.2**	**-0.4**
	baz=208								
FUSB	**Fushanzhiwuyua**	**0.73**	**354**	P	**Pg**	**16 26 16.0**	**+0.1**
	baz=356								
FUSB				*e*S	**Sg**	**16 26 25.7**	**+0.2**
	baz=356								
TWF1	**Yuli**	**0.75**	**207**	*e*P	**Pg**	**16 26 15.8**	**-0.4**
	baz=219								
TYC	**Yuchr**	**0.75**	**261**	*e*P	**Pg**	**16 26 16.2**	**0.0**
	baz=258								
TYC				*e*S	**Sg**	**16 26 25.1**	**-0.9**
	baz=258								
NWLT	**Wulai**	**0.76**	**349**	P	**Pg**	**16 26 16.7**	**+0.3**
	baz=350								
NWLT				S	**Sg**	**16 26 25.8**	**-0.7**
	baz=350								
NFF	**Wufeng Townshi**	**0.79**	**320**	*e*P	**Pb**	**16 26 17.3**	**-0.6**
	baz=320								
WHYT	**Xinyi Township**	**0.82**	**246**	*e*P	**Pb**	**16 26 18.7**	**+0.3**
	baz=245								
NSTT	**Nanjuang**	**0.86**	**315**	*e*P	**Pb**	**16 26 18.6**	**-0.5**
	baz=314								
NSTT				*e*S	**Sg**	**16 26 29.1**	**-0.3**
	baz=314								
LIOB	**Emei**	**0.86**	**316**	*e*P	**Pb**	**16 26 19.1**	**+0.1**
	baz=315								
CHKH	**Chenggong**	**0.87**	**197**	*e*P	**Pg**	**16 26 18.7**	**+0.2**
	baz=188								
TWQ1	**Liyutan**	**0.88**	**292**	*e*P	**Pb**	**16 26 19.6**	**+0.2**
	baz=283								
WJS	**Zhushan**	**0.89**	**257**	*e*P	**Pn**	**16 26 20.5**	**-0.2**
	baz=256								
WWF	**Wufeng**	**0.89**	**271**	*e*P	**Pn**	**16 26 20.8**	**0.0**
	baz=270								
FULB	**Fuli**	**0.89**	**203**	*e*P	**Pb**	**16 26 19.7**	**0.0**
	baz=217								
WNT	**Mingjian**	**0.91**	**261**	P	**Pn**	**16 26 20.8**	**-0.3**
	baz=258								
WNT				*e*S	**Sn**	**16 26 33.6**	**-1.0**
	baz=258								
NSY	**Sanyi**	**0.92**	**295**	*e*P	**Pb**	**16 26 20.3**	**+0.2**
	baz=294								
NHDH	**Xindian Distri**	**0.94**	**352**	*e*P	**Pg**	**16 26 19.9**	**0.0**
	baz=344								
ALS	**Alishan**	**0.94**	**237**	P	**Pg**	**16 26 19.6**	**-0.4**
	baz=234								
ALS				S	**Sb**	**16 26 33.1**	**-0.5**
	baz=234								
NMLH	**Miaoli**	**0.95**	**303**	*e*P	**Pn**	**16 26 21.7**	**+0.1**
	baz=301								
TIPB	**Shuangxi**	**0.95**	**9**	P	**Pg**	**16 26 19.9**	**-0.2**
	baz=354								
TWA	**Mucha**	**0.95**	**355**	P	**Pb**	**16 26 20.6**	**-0.2**
	baz=347								
TWA				*e*S	**Sg**	**16 26 32.6**	**+0.1**
	baz=347								
TATO	**Taipei**	**0.96**	**350**	*e*P	**Pg**	**16 26 20.3**	**+0.1**
	baz=351								
TATO				*e*S	**Sg**	**16 26 32.8**	**+0.1**
	baz=351								
EHD	**Haiduan**	**0.97**	**206**	*e*P	**Pg**	**16 26 20.3**	**-0.2**
	baz=207								
SBCB	**Hsinchu**	**0.98**	**321**	*e*P	**Pn**	**16 26 21.8**	**-0.3**
	baz=320								
HSN	**Hsinchu**	**1.00**	**321**	*e*P	**Pn**	**16 26 22.0**	**-0.4**
	baz=323								
CHN5	**Tsauling**	**1.00**	**245**	*e*P	**Pn**	**16 26 22.6**	**+0.2**
	baz=243								
CHN5				*e*S	**Sn**	**16 26 36.3**	**-0.6**
	baz=243								
ECS	**Chishang**	**1.01**	**204**	*e*P	**Pn**	**16 26 22.6**	**+0.1**
	baz=217								
WCHH	**Zhanghua**	**1.02**	**273**	*e*P	**Pn**	**16 26 22.3**	**-0.2**
	baz=272								
TWB1	**Santiao Chiao**	**1.02**	**17**	*e*P	**Pg**	**16 26 21.1**	**-0.2**
	baz=11								
TWB1				*e*S	**Sg**	**16 26 34.5**	**-0.2**
	baz=11								
ELDTW	**Lidau**	**1.03**	**216**	*e*P	**Pg**	**16 26 21.2**	**-0.3**
	baz=205								
NWF	**Wu-fen Shan**	**1.04**	**6**	*e*P	**Pg**	**16 26 21.4**	**-0.5**
	baz=5.0								
WFSB	**Wu-fen Shan**	**1.04**	**6**	*e*P	**Pg**	**16 26 21.6**	**-0.2**
	baz=5.0								
WGK	**Gukeng**	**1.07**	**252**	*e*P	**Pn**	**16 26 23.3**	**+0.1**
	baz=249								
WGK				*e*S	**Sn**	**16 26 38.4**	**0.0**
	baz=249								
SXI1	**Grass Mountain**	**1.08**	**10**	P	**Pb**	**16 26 23.0**	**+0.1**
	baz=351								
TWS1	**Kuangyinshan**	**1.09**	**348**	*e*P	**Pn**	**16 26 23.4**	**-0.2**
	baz=349								
TWS1				*e*S	**Sb**	**16 26 37.3**	**-0.3**
	baz=349								
YM01	**YM01**	**1.12**	**355**	*e*P	**Pn**	**16 26 23.8**	**-0.2**
	baz=6.0								
WCKO	**Fanlu**	**1.14**	**239**	*e*P	**Pn**	**16 26 24.5**	**+0.3**
	baz=239								
WRL	**Guolierlin Hig**	**1.19**	**264**	*e*P	**Pn**	**16 26 24.9**	**0.0**
	baz=264								
CHN4	**Tsaushan**	**1.19**	**236**	*e*P	**Pg**	**16 26 24.8**	**+0.1**
	baz=221								
CHN4				*e*S	**Sn**	**16 26 42.1**	**+0.6**
	baz=221								
TPUB	**Ta-pu**	**1.20**	**233**	*e*P	**Pg**	**16 26 24.6**	**-0.1**
	baz=233								
STYT	**Tauyuan**	**1.20**	**224**	*e*P	**Pg**	**16 26 24.8**	**-0.1**
	baz=222								
STYT				*e*S	**Sb**	**16 26 41.1**	**+0.4**
	baz=222								
RLNB	**Erlin**	**1.21**	**264**	*e*P	**Pn**	**16 26 25.9**	**+0.8**
	baz=263								
WTP	**Ta-pu**	**1.24**	**231**	P	**Pn**	**16 26 26.0**	**+0.3**
	baz=230								
WTP				S	**Sn**	**16 26 44.2**	**+1.5**
	baz=230								
TWG	**Pinlang**	**1.32**	**205**	*e*P	**Pn**	**16 26 25.6**	**-1.1**
	baz=206								
TWGBT	**Beinan**	**1.32**	**204**	*e*P	**Pn**	**16 26 23.9**	**-2.8**
	baz=206								
TWK	**Hsinying**	**1.32**	**235**	*e*P	**Pg**	**16 26 27.8**	**+0.6**
	baz=234								
TWK				*e*S	**Sn**	**16 26 45.8**	**+1.1**
	baz=234								
CHN1	**Nanshi**	**1.34**	**232**	*e*P	**Pg**	**16 26 28.5**	**+1.0**
	baz=232								
SNST	**Tainan City**	**1.34**	**233**	*e*P	**Pg**	**16 26 27.8**	**+0.2**
	baz=232								
SNST				*e*S	**Sn**	**16 26 46.5**	**+1.4**
	baz=232								
SGST	**Jiashian**	**1.37**	**227**	*e*P	**Pn**	**16 26 27.0**	**-0.4**
	baz=225								
SGST				*e*S	**Sn**	**16 26 47.3**	**+1.4**
	baz=225								
WSF	**Szhu**	**1.38**	**254**	*e*P	**Pg**	**16 26 28.3**	**+0.1**
	baz=254								
JISG	**Ishigakijimahi**	**2.47**	**76**	P	**Pn**	**16 26 42.3**	**-0.3**

IDC ***06*** *16:26:43.2±0.7, 23°.98N×121°.72E, h0km, mb3.8/15, mbtmp3.8/16, ML3.4/1, Error ellipse: s-maj=25.4km s-min=15.0km az=70.0*

NEIC ***06*** *16:26:44.8±0.9, 23°.95N±0°.02×121°.67E±0°.05, h4km±1km, mb4.5/22, Error ellipse: s-maj=6.6km s-min=3.0km az=104.0*

JMA ***06*** *16:26:45.3±0.3, 24°.00N±0°.3×121°.7E±0°.9, h0km±2km, MV3.8/15, TAIWAN REGION*

TAP ***06*** *16:26:45.6, 24°.00N×121°.61E, h7km, ML4.4, C*

ISC 06 16:26:45.2±0.8, 23°.99N±0°.01×121°.67E±0°.01, h10km±5km, n235, σ0≤69/344, mb4.2/28, 1C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**322**	⇓*i* P		**Pg**	**16 26 48.1**	**+0.2**
	baz=358							
TWD				*i* S		**Sg**	**16 26 49.8**	**-0.1**
	baz=358							
ETM	**Tongmen**	**0.17**	**262**	*i* P		**Pg**	**16 26 48.4**	**-0.4**
	baz=255							
ETM				*i* S		**Sg**	**16 26 50.3**	**-0.9**
	baz=255							
ETL	**Fush Village**	**0.17**	**345**	P		**Pg**	**16 26 49.2**	**+0.2**
	baz=5.0							
ETL				*i* S		**Sg**	**16 26 51.9**	**+0.3**
	baz=5.0							
NACB	**Ninganchiao**	**0.20**	**339**	Pg		**Pg**	**16 26 49.4**	**0.0**
NACB				Sg		**Sg**	**16 26 51.8**	**-0.4**
NACB	**Ninganchiao**	**0.20**	**339**	⇓*i* P		**Pg**	**16 26 49.5**	**+0.2**
	baz=356							
NACB				*i* S		**Sg**	**16 26 52.2**	**0.0**
	baz=356							
SHUL	**Shoufeng**	**0.23**	**207**	*i* P		**Pg**	**16 26 50.8**	**+1.0**
	baz=192							
SHUL				*e*S		**Sg**	**16 26 56.0**	**+3.1**
	baz=192							
LXIB	**Xiulin Townshi**	**0.24**	**278**	⇓*i* P		**Pg**	**16 26 49.7**	**-0.4**
	baz=272							
LXIB				*i* S		**Sg**	**16 26 53.0**	**-0.5**
	baz=272							
ESL	**Shilin**	**0.28**	**232**	⇓*e*P		**Pg**	**16 26 50.3**	**-0.5**
	baz=231							
ESL				*e*S		**Sg**	**16 26 53.7**	**-0.9**
	baz=231							
TEGC	**Jichi Village**	**0.30**	**204**	*i* P		**Pb**	**16 26 52.5**	**-0.3**
	baz=196							
TEGC				S		**Sb**	**16 26 58.4**	**+0.6**
	baz=196							
EHP	**Heping Village**	**0.33**	**11**	*e*P		**Pb**	**16 26 52.9**	**-0.3**
	baz=23							
EHP				S		**Sb**	**16 26 57.3**	**-1.2**
	baz=23							
EAHA	**Aohua**	**0.34**	**10**	P		**Pg**	**16 26 52.5**	**+0.5**
	baz=28							
EAHA				S		**Sb**	**16 26 57.8**	**-1.3**
	baz=28							
WARBT	**Fenglin Townsh**	**0.38**	**224**	*e*P		**Pg**	**16 26 52.2**	**-0.4**
	baz=225							
WARBT				*e*S		**Sg**	**16 26 56.9**	**-0.8**
	baz=225							
EGFH	**Guangfu**	**0.39**	**215**	*e*P		**Pg**	**16 26 53.0**	**+0.2**
	baz=214							
WHF	**Hehuan Shan**	**0.40**	**293**	⇓*i* P		**Pg**	**16 26 53.0**	**-0.3**
	baz=296							
WHF				*i* S		**Sg**	**16 26 58.1**	**-0.5**
	baz=296							
ENA	**Nanau**	**0.44**	**8**	⇓*i* P		**Pg**	**16 26 54.5**	**+0.7**
	baz=27							
ENA				*i* S		**Sb**	**16 27 00.7**	**-1.2**
	baz=27							
OWD	**Renai**	**0.46**	**266**	P		**Pg**	**16 26 54.2**	**+0.1**
	baz=275							
OWD				*e*S		**Sg**	**16 26 59.6**	**-0.5**
	baz=275							
CHGB	**Renai**	**0.46**	**279**	⇓*i* P		**Pg**	**16 26 54.2**	**0.0**
	baz=280							
CHGB				*i* S		**Sg**	**16 27 00.1**	**-0.3**
	baz=280							
EWUT	**Wuta**	**0.46**	**12**	*i* P		**Pb**	**16 26 55.0**	**-0.5**
	baz=29							
EWUT				S		**Sb**	**16 27 01.5**	**-0.9**
	baz=29							
FUSS	**Fushou**	**0.47**	**303**	⇓*i* P		**Pg**	**16 26 54.6**	**+0.1**
	baz=308							
FUSS				*i* S		**Sg**	**16 27 00.7**	**+0.1**
	baz=308							
WUSB	**Renai**	**0.51**	**270**	P		**Pg**	**16 26 55.1**	**0.0**
	baz=270							
WUSB				*i* S		**Sg**	**16 27 01.5**	**-0.3**
	baz=270							
NNSB	**Datong**	**0.51**	**329**	⇓*i* P		**Pg**	**16 26 55.4**	**+0.3**
	baz=335							
NNSB				*i* S		**Sg**	**16 27 01.6**	**-0.3**
	baz=335							
NNSH	**Datong**	**0.51**	**329**	*i* P		**Pg**	**16 26 55.5**	**+0.3**
	baz=335							
NNSH				*i* S		**Sg**	**16 27 01.9**	**0.0**
	baz=335							
TWT	**Tachien**	**0.53**	**300**	⇓*i* P		**Pg**	**16 26 55.8**	**+0.3**
	baz=302							
TWT				*i* S		**Sg**	**16 27 02.4**	**0.0**
	baz=302							
NNS	**Nan Shan**	**0.53**	**329**	*i* P		**Pg**	**16 26 55.6**	**+0.2**
	baz=336							
NNS				*i* S		**Sg**	**16 27 02.3**	**-0.1**
	baz=336							
TDCB	**Techi**	**0.54**	**299**	⇓*i* P		**Pg**	**16 26 55.8**	**+0.1**
	baz=302							
TDCB				*i* S		**Sg**	**16 27 02.6**	**-0.2**
	baz=302							
VWDT	**VWDT**	**0.54**	**244**	P		**Pg**	**16 26 55.9**	**+0.2**
	baz=233							
VWDT				*e*S		**Sg**	**16 27 02.8**	**0.0**
	baz=233							
HGSD	**Ruisui**	**0.55**	**205**	*e*P		**Pb**	**16 26 57.9**	**+1.0**
	baz=219							
LATG	**Datong**	**0.56**	**346**	P		**Pg**	**16 26 56.4**	**+0.3**
	baz=353							
LATG				S		**Sg**	**16 27 04.0**	**+0.4**
	baz=353							
EHY	**Hungye**	**0.58**	**214**	P		**Pg**	**16 26 56.4**	**0.0**
	baz=217							
EHY				*e*S		**Sg**	**16 27 04.4**	**+0.3**
	baz=217							
ESAO	**Su ao**	**0.60**	**15**	P		**Pb**	**16 26 57.8**	**-0.1**
	baz=20							
ESAO				S		**Sb**	**16 27 06.2**	**-0.3**
	baz=20							
NDT	**Datong Townshi**	**0.63**	**347**	*i* P		**Pb**	**16 26 58.0**	**-0.4**
	baz=342							
NDT				S		**Sg**	**16 27 05.7**	**+0.1**
	baz=342							
TWC	**Suao**	**0.64**	**15**	P		**Pb**	**16 26 58.4**	**-0.1**
	baz=21							
TWC				*e*S		**Sb**	**16 27 06.8**	**-0.7**
	baz=21							
NDS	**Dongshan**	**0.64**	**4**	P		**Pb**	**16 26 58.3**	**-0.2**
	baz=9.0							
NDS				S		**Sg**	**16 27 06.7**	**+0.6**
	baz=9.0							
ENTT	**Nioudou**	**0.66**	**351**	P		**Pb**	**16 26 58.4**	**-0.3**
	baz=358							
ENTT				S		**Sg**	**16 27 07.2**	**+0.7**
	baz=358							
WPL	**Puli Township**	**0.66**	**272**	P		**Pg**	**16 26 57.9**	**+0.1**
	baz=272							
WPL				*e*S		**Sg**	**16 27 05.9**	**-0.6**
	baz=272							
DPDB	**Guoxing**	**0.68**	**274**	P		**Pg**	**16 26 58.5**	**+0.1**
	baz=274							
DPDB				*e*S		**Sg**	**16 27 07.6**	**+0.2**
	baz=274							
YULB	**Yu-li**	**0.69**	**210**	Pg		**Pg**	**16 26 57.3**	**-1.2**
YULB	**Yu-li**	**0.69**	**210**	*e*P		**Pg**	**16 26 58.5**	**0.0**
	baz=206							
SSLB	**Suanglung**	**0.69**	**253**	Pg		**Pg**	**16 26 58.0**	**-0.5**
SSLB	**Suanglung**	**0.69**	**253**	*i* P		**Pg**	**16 26 58.4**	**-0.1**
	baz=264							
SSLB				*e*S		**Sg**	**16 27 06.0**	**-1.5**
	baz=264							
WCS	**Beigang Elemen**	**0.70**	**276**	*i* P		**Pg**	**16 26 58.9**	**+0.2**
	baz=276							
WCS				S		**Sg**	**16 27 07.4**	**-0.5**
	baz=276							
ECBN	**Changbin**	**0.70**	**197**	P		**Pb**	**16 26 59.5**	**0.0**
	baz=181							
ECBN				S		**Sb**	**16 27 10.7**	**+1.5**
	baz=181							
SMLT	**Sun Moon Lake**	**0.71**	**262**	P		**Pg**	**16 26 59.0**	**0.0**
	baz=261							
SMLT				S		**Sg**	**16 27 08.3**	**-0.1**
	baz=261							
EYUL	**Yuli**	**0.72**	**207**	*e*P		**Pb**	**16 27 00.1**	**+0.3**
	baz=213							
TWF1	**Yuli**	**0.72**	**209**	P		**Pg**	**16 26 59.3**	**+0.2**
	baz=215							
TWF1				*e*S		**Sg**	**16 27 08.6**	**+0.1**
	baz=215							
WHP	**Taichung City**	**0.72**	**294**	P		**Pg**	**16 26 59.6**	**+0.4**
	baz=286							
WHP				S		**Sg**	**16 27 09.3**	**+0.6**
	baz=286							
TWE	**Neicheng**	**0.73**	**360**	*i* P		**Pb**	**16 26 59.9**	**-0.1**
	baz=6.0							
TWE				*i* S		**Sb**	**16 27 09.6**	**-0.5**
	baz=6.0							
YHNB	**Yeheng**	**0.73**	**338**	Pg		**Pb**	**16 26 59.8**	**-0.3**
YHNB				Sg		**Sb**	**16 27 09.5**	**-0.7**
YHNB	**Yeheng**	**0.73**	**338**	P		**Pb**	**16 26 59.8**	**-0.3**
	baz=343							
YHNB				S		**Sg**	**16 27 08.9**	**0.0**
	baz=343							
TYC	**Yuchr**	**0.75**	**264**	*i* P		**Pg**	**16 26 59.6**	**-0.1**
	baz=263							
TYC				*e*S		**Sg**	**16 27 08.5**	**-1.0**
	baz=263							
FUSB	**Fushanzhiwuyua**	**0.77**	**354**	P		**Pb**	**16 27 00.7**	**-0.1**
	baz=359							
FUSB				*e*S		**Sg**	**16 27 10.2**	**0.0**
	baz=359							
ILA	**Ilan**	**0.78**	**5**	*e*P		**Pb**	**16 27 00.9**	**+0.1**
	baz=11							
NWLT	**Wulai**	**0.80**	**349**	P		**Pb**	**16 27 01.3**	**0.0**
	baz=354							
NWLT				*e*S		**Sg**	**16 27 11.0**	**0.0**
	baz=354							
WHYT	**Xinyi Township**	**0.81**	**249**	P		**Pg**	**16 27 00.7**	**-0.1**
	baz=256							
WHYT				*e*S		**Sb**	**16 27 12.3**	**0.0**
	baz=256							
NFF	**Wufeng Townshi**	**0.82**	**322**	*i* P		**Pb**	**16 27 01.5**	**0.0**
	baz=325							
NFF				*i* S		**Sg**	**16 27 11.9**	**+0.3**
	baz=325							
CHKH	**Chenggong**	**0.83**	**198**	P		**Pg**	**16 27 01.8**	**+0.5**
	baz=183							
CHKH				S		**Sn**	**16 27 15.4**	**0.0**
	baz=183							
FULB	**Fuli**	**0.86**	**204**	P		**Pg**	**16 27 02.4**	**+0.6**
	baz=216							
WJS	**Zhushan**	**0.88**	**259**	*e*P		**Pb**	**16 27 03.1**	**+0.5**
	baz=259							
WJS				*e*S		**Sn**	**16 27 16.0**	**-0.6**
	baz=259							
NSTT	**Nanjuang**	**0.89**	**316**	*e*P		**Pb**	**16 27 02.9**	**+0.2**
	baz=320							
NSTT				*i* S		**Sg**	**16 27 13.9**	**+0.1**
	baz=320							
LIOB	**Emei**	**0.89**	**318**	*e*P		**Pb**	**16 27 03.1**	**+0.4**
	baz=321							
LIOB				S		**Sb**	**16 27 14.3**	**-0.4**
	baz=321							
WWF	**Wufeng**	**0.89**	**274**	⇑*e*P		**Pn**	**16 27 03.8**	**0.0**
	baz=274							
WWF				*e*S		**Sn**	**16 27 17.1**	**+0.2**
	baz=274							
TWQ1	**Liyutan**	**0.90**	**294**	*e*P		**Pb**	**16 27 03.5**	**+0.6**
	baz=295							
WNT	**Mingjian**	**0.91**	**263**	*e*P		**Pb**	**16 27 03.6**	**+0.5**
	baz=263							
WNT				*e*S		**Sb**	**16 27 15.4**	**+0.1**
	baz=263							
WNT1	**Nantou City**	**0.91**	**265**	*e*P		**Pn**	**16 27 04.0**	**-0.2**
	baz=265							
WNT1				*e*S		**Sb**	**16 27 15.7**	**+0.3**
	baz=265							
NJD	**Zhudong**	**0.92**	**324**	*e*P		**Pn**	**16 27 04.1**	**0.0**
	baz=335							
TCU	**Taichung**	**0.92**	**280**	*e*P		**Pn**	**16 27 04.4**	**+0.1**
	baz=275							
TCU				*e*S		**Sn**	**16 27 16.9**	**-0.8**
	baz=275							
ALS	**Alishan**	**0.93**	**239**	P		**Pg**	**16 27 03.1**	**0.0**
	baz=238							
ALS				S		**Sg**	**16 27 15.7**	**+0.6**
	baz=238							
CHKT	**Chengkung**	**0.93**	**198**	*i* P		**Pg**	**16 27 03.3**	**+0.2**
	baz=195							
CHKT				*i* S		**Sn**	**16 27 17.2**	**-0.5**
	baz=195							
NSY	**Sanyi**	**0.94**	**297**	*e*P		**Pn**	**16 27 04.4**	**0.0**
	baz=310							
NSY				*e*S		**Sb**	**16 27 16.9**	**+0.8**
	baz=310							
EHD	**Haiduan**	**0.94**	**207**	*e*P		**Pg**	**16 27 03.0**	**-0.3**
	baz=206							
NMLH	**Miaoli**	**0.97**	**304**	*e*P		**Pn**	**16 27 05.7**	**+0.7**
	baz=306							
NMLH				*e*S		**Sb**	**16 27 17.8**	**+0.7**
	baz=306							
NHDH	**Xindian Distri**	**0.98**	**352**	*e*P		**Pb**	**16 27 04.2**	**-0.1**
	baz=356							
NHDH				S		**Sb**	**16 27 17.0**	**-0.3**
	baz=356							
ECS	**Chishang**	**0.98**	**205**	*e*P		**Pg**	**16 27 04.6**	**+0.5**
	baz=205							
HSN1	**Hsinchu**	**0.99**	**323**	*e*P		**Pn**	**16 27 05.5**	**+0.4**
	baz=325							
TIPB	**Shuangxi**	**0.99**	**8**	*e*P		**Pg**	**16 27 04.3**	**+0.1**
	baz=3.0							
TIPB				*e*S		**Sg**	**16 27 17.2**	**+0.1**
	baz=3.0							
TWA	**Mucha**	**0.99**	**355**	P		**Pn**	**16 27 05.0**	**-0.2**
	baz=349							
TWA				S		**Sb**	**16 27 17.3**	**-0.4**
	baz=349							
CHN5	**Tsauling**	**0.99**	**247**	*i* P		**Pb**	**16 27

baz=255
WYL eS Sb 16 27 18.1 +0.2
baz=255
NJN Zhunan 1.01 314 eP Pn 16 27 05.4 0.0
baz=324
WDJ Dajia District 1.01 291 eP Pn 16 27 05.3 -0.1
baz=292
SBCB Hsinchu 1.02 322 eP Pn 16 27 06.4 +0.9
baz=325
SBCB eS Sn 16 27 19.7 -0.2
baz=325
WCHH Zhanghua 1.02 275 eP Pn 16 27 06.0 +0.3
baz=275
BACT New Taipei Cit 1.03 348 eP Pb 16 27 05.3 +0.2
baz=352
HSN Hsinchu 1.03 322 eP Pn 16 27 06.7 +0.9
baz=328
HSN eS Sn 16 27 20.0 -0.3
baz=328
NHY Taipei 1.05 355 eP Pn 16 27 05.8 -0.2
baz=10.0
TWB1 Santiao Chiao 1.05 16 P Pb 16 27 05.8 +0.2
baz=12
TWB1 S Sb 16 27 19.7 +0.2
baz=12
TAP Taipei 1.06 352 eP Pb 16 27 05.7 +0.1
baz=356
TAP S Sn 16 27 20.1 -0.8
baz=356
WGK Gukeng 1.06 254 eP Pb 16 27 05.8 +0.1
baz=254
WGK eS Sn 16 27 20.9 -0.1
baz=254
NTY Taoyuan 1.06 341 eP Pn 16 27 06.9 +0.7
baz=339
NCUH Zhongli 1.07 336 eP Pn 16 27 07.2 +0.8
baz=339
NCUH eS Sn 16 27 22.3 +1.0
baz=339
NCU National Centr 1.07 336 eP Pn 16 27 06.6 +0.3
baz=339
NCU eS Sn 16 27 21.6 +0.3
baz=339
NWF Wu-fen Shan 1.08 5 eP Pn 16 27 06.8 +0.2
baz=9.0
NWF S Sb 16 27 20.3 -0.1
baz=9.0
WDLH Douliu 1.08 254 eP Pn 16 27 06.7 +0.3
baz=254
WFSB Wu-fen Shan 1.08 5 eP Pn 16 27 06.4 0.0
baz=9.0
WFSB eS Sg 16 27 19.7 -0.4
baz=9.0
SXI1 Grass Mountain 1.11 9 P Pn 16 27 07.5 +0.4
baz=353
SXI1 eS Sn 16 27 22.9 +0.4
baz=353
WCKO Fanlu 1.12 241 P Pb 16 27 06.9 +0.2
baz=241
WCKO eS Sn 16 27 23.2 +0.6
baz=241
TWS1 Kuangyinshan 1.13 348 eP Pn 16 27 08.3 +1.1
baz=1.0
TWS1 eS Sn 16 27 24.1 +1.3
baz=1.0
YM01 YM01 1.16 355 eP Pn 16 27 08.0 +0.4
baz=359
YM01 S Sn 16 27 23.0 -0.5
baz=359
STYH Taoyuan 1.16 225 eP Pb 16 27 07.3 0.0
baz=212
TNOU National Taiwa 1.16 5 eP Pb 16 27 07.3 -0.1
baz=8.0
TNOU eS Sg 16 27 22.7 +0.2
baz=8.0
NHW Xinwu Township 1.16 331 eP Pg 16 27 08.4 +0.9
baz=320
NHW eS Sn 16 27 24.3 +0.8
baz=320
CHN4 Tsaushan 1.18 238 P Pb 16 27 07.9 +0.2
baz=224
CHN4 eS Sn 16 27 25.3 +1.4
baz=224
STYT Tauyuan 1.18 226 eP Pb 16 27 07.5 -0.2
baz=225
STYT S Sg 16 27 23.9 +0.8
baz=225
TPUB Ta-pu 1.18 235 Pg Pb 16 27 07.3 -0.4
TPUB Ta-pu 1.18 235 P Pb 16 27 07.7 0.0
baz=221
TPUB S Sg 16 27 23.8 +0.6
baz=221
NTST Danshui 1.19 350 eP Pg 16 27 09.2 +1.2
baz=354
NTST eS Sn 16 27 25.6 +1.5
baz=354
CHN2 Minshiung 1.19 248 eP Pb 16 27 08.0 +0.2
baz=262
CHN2 S Sn 16 27 24.6 +0.5
baz=262
LONT Longtian 1.19 205 eP Pb 16 27 07.3 -0.6
baz=205
WRL Guolierlin Hig 1.19 266 eP Pb 16 27 07.9 0.0
baz=266
WRL eS Sn 16 27 24.6 +0.5
baz=266
ANP Anpu 1.20 353 eP Pg 16 27 08.5 +0.2
baz=356
RLNB Erlin 1.21 266 eP Pg 16 27 08.8 +0.5
baz=266
RLNB eS Sg 16 27 24.4 +0.4
baz=266
WTK Tuku 1.21 256 eP Pn 16 27 08.3 +0.1
baz=257
WTK eS Sn 16 27 25.4 +0.6
baz=257
WTP Ta-pu 1.22 233 eP Pn 16 27 08.6 +0.2
baz=233
WTP eS Sg 16 27 24.9 +0.3
baz=233
CHY Chiayi 1.24 247 eP Pb 16 27 09.1 +0.3
baz=262
CHY eS Sn 16 27 26.6 +1.1
baz=262
JYNG Yonagunijimaku 1.25 68 eP Pg 16 27 09.4 +0.2
JYNG S Sn 16 27 27.6 +1.9
WTCT Ta-ch'eng 1.28 265 P Pn 16 27 09.2 +0.1
baz=265
WTCT eS Sg 16 27 26.8 +0.4
baz=265
TWY Chenhua 1.28 357 eP Pg 16 27 10.6 +0.8
baz=346
TWG Pinlang 1.29 205 Pn Pn 16 27 07.1 -2.2
TWG Pinlang 1.29 205 eP Pn 16 27 07.5 -1.8
baz=206
TWGBT Beinan 1.29 205 P Pn 16 27 09.4 +0.1
baz=206
TWK Hsinying 1.30 237 eP Pb 16 27 10.1 +0.2
baz=237
TWK S Sg 16 27 27.7 +0.6
baz=237
YOJ Yonaguni jima 1.31 69 Pb 16 27 10.0 +0.1
YOJ Yonaguni jima 1.31 69 eP Pn 16 27 09.5 -0.1
baz=67
YOJ Yonaguni jima 1.31 69 P Pb 16 27 10.0 +0.1
CHN1 Nanshi 1.32 233 P Pb 16 27 10.2 +0.1
baz=233
CHN1 eS Sg 16 27 28.8 +1.1
baz=233
TTN Taitung 1.32 202 eP Pn 16 27 09.6 -0.1
baz=202
SNST Tainan City 1.32 235 eP Pn 16 27 09.8 +0.1
baz=236
SNST eS Sg 16 27 28.2 +0.5
baz=236
LDUT Ludao 1.32 188 eP Pn 16 27 08.7 -1.1
baz=169
WMLT Mailiao 1.34 262 eP Pb 16 27 10.6 +0.1
baz=263
WMLT eS Sb 16 27 27.9 +0.2
baz=263
SGST Jiashian 1.35 228 eP Pn 16 27 09.9 -0.3
baz=228
SGST eS Sg 16 27 29.4 +0.8
baz=228
SLGT Liugui 1.37 224 eP Pb 16 27 11.0 +0.1
baz=224
SLGT eS Sg 16 27 30.1 +0.8
baz=224
WSF Szhu 1.37 256 eP Pn 16 27 10.6 +0.1
baz=256
WSF eS Sg 16 27 29.6 +0.2
baz=256
WSL Shuilin Townsh 1.40 251 eP Pb 16 27 11.5 0.0
baz=264
ICHU Yijhu 1.42 244 eP Pb 16 27 12.2 +0.4
baz=246
CHN8 Yiju 1.48 245 P Pb 16 27 12.8 -0.1
baz=247
CHN8 eS Sg 16 27 33.4 +0.4
baz=247
CHN3 Shinhua 1.51 233 eP Pg 16 27 14.6 +0.5
baz=236
SSHA Shanhua 1.53 237 eP Pb 16 27 14.1 +0.5
baz=238
SSHA eS Sg 16 27 35.1 +0.7
baz=238
ECL Taimali 1.54 206 eP Pn 16 27 11.9 -0.8
baz=194
SCST Cishan 1.54 225 eP Pb 16 27 14.0 +0.1
baz=228
SCST eS Sg 16 27 34.7 -0.1
baz=228
SHHT Tainan City 1.55 232 eP Pb 16 27 14.6 +0.5
baz=235
SSD Sandimen 1.56 218 eP Pn 16 27 13.0 -0.1
baz=220
SSD eS Sn 16 27 33.8 +0.4
baz=220
SCLT Jiali 1.58 239 eP Pn 16 27 13.2 -0.1
baz=242
TSMG Majia 1.59 217 eP Pb 16 27 14.7 0.0
baz=207
TWM1 Shoushan 1.63 225 eP Pb 16 27 16.1 +0.6
baz=228
SGLT Jiouru 1.66 221 eP Pb 16 27 15.8 -0.1
baz=224
MASBT Mashibuluo 1.67 215 eP Pn 16 27 15.1 +0.5
baz=219
MASBT eS Sg 16 27 38.7 -0.3
baz=219
PCYT Pengchaiyu 1.67 12 eP Pb 16 27 16.3 +0.2
baz=12
TSCK Chigu Township 1.68 240 eP Pn 16 27 15.5 +0.8
baz=243
TSPT Pingtung City 1.70 220 eP Pb 16 27 17.0 +0.5
baz=223
EAST Anshuo 1.77 206 eP Pb 16 27 17.7 -0.1
baz=194
TAWH Dawu Township 1.79 204 eP Pb 16 27 18.1 0.0
baz=195
WSSB Gushan 1.87 224 eP Pn 16 27 18.5 +1.2
baz=229
SCZT Fangliau 1.88 211 eP Pn 16 27 18.6 +1.2
baz=214
IRIF Iriomote-Funau 1.91 79 eP Pb 16 27 19.6 -0.5
IRIF S Sb 16 27 44.7 +0.6
SLIU Shizi 1.94 205 eP Pn 16 27 19.7 +1.4
baz=198
LAY Lan-yu 1.94 183 eP Pn 16 27 16.8 -1.6
baz=166
HATJ Hateruma jima 1.95 88 S Sb 16 27 44.7 -0.6
LYUB Lan-yu 1.98 182 eP Pn 16 27 15.6 -3.2
baz=165
PHUB P'eng-hu 1.98 257 P Pn 16 27 19.2 +0.4
baz=258
PHUB S Sn 16 27 44.3 +0.5
baz=258
WDGT Dungji 1.98 249 eP Pn 16 27 18.6 -0.3
baz=251
PNG Penghu 1.98 258 eP Pn 16 27 18.8 -0.1
baz=260
PNG eS Sn 16 27 44.1 +0.3
baz=260
TWP Hsiaoliuchiu 2.03 217 eP Pb 16 27 21.9 -0.3
baz=240
JKRS Kuro-shima 2.15 83 eP Pb 16 27 23.9 -0.3
JKRS S Sb 16 27 51.0 0.0
TWK1 Hengchun 2.19 202 eP Pn 16 27 23.1 +1.4
baz=206
TWKBT Hengchun 2.19 201 eP Pn 16 27 20.6 -1.1
baz=206
VCHM Qimei 2.20 250 P Pn 16 27 22.1 +0.3
baz=238
VCHM S Sn 16 27 49.9 +0.7
baz=238
VWUC VWUC 2.26 297 eP Pn 16 27 21.4 -1.2
baz=297
VWUC eS Sn 16 27 48.2 -2.4
baz=297
JIJ Ishigaki jima 2.29 80 P Pn 16 27 23.2 +0.2
JIJ S Sn 16 27 51.8 +0.5
JISG Ishigakijimahi 2.48 76 P Pn 16 27 26.2 +0.5
JISG eS Sn 16 27 56.8 +0.7
PTMZ Houxiangcun 2.55 295 eP Pn 16 27 25.9 -0.8
baz=295
MATB Ma-tsu 2.66 324 eP Pn 16 27 28.5 +0.3
baz=309
JTJ Tarama 2.84 76 eP Pn 16 27 32.3 +1.6
JTJ S Sb 16 28 08.0 -2.9
KNM Kinmen 2.99 279 eP Pn 16 27 34.4 +1.7
baz=279
KNMB Chin-men Tao 3.04 280 Pn 16 27 33.1 -0.3
KNMB Chin-men Tao 3.04 280 eP Pn 16 27 32.9 -0.4
baz=280
LYJJ Jianjiangzhen 3.08 326 eP Pn 16 27 34.4 +0.5
baz=311
MHZQ Yeshan 3.19 312 eP Pn 16 27 35.5 +0.1
baz=311
XPSS Dashiqiu 3.22 336 eP Pn 16 27 35.4 -0.5
baz=335
JMJ Miyako jima 2 3.40 75 eP Pn 16 27 39.3 +0.9
baz=88
AXDP Jialang 3.49 286 eP Pn 16 27 39.6 -0.1
baz=286
ZPLA Ao Xicun 3.59 270 eP Pn 16 27 40.9 -0.1
baz=269
DSXP Dongshan 3.90 267 eP Pn 16 27 45.4 +0.2
baz=267
SXFK Yanhouchang 4.37 304 eP Pn 16 27 51.2 -0.5
baz=304
JOW Kunigami 6.61 63 Pn Pn 16 28 22.1 -0.3
TJN Taejon 13.29 20 Pn Pn 16 29 55.4 +1.4
KSRS Korea Array 14.45 20 Pn Pn 16 30 10.6 +0.8
0.2nm,0.3s,baz=197,slow=12,SNR=1.8
0.6nm,0.8s
KS19 Wonju Array Si 14.48 20 P P 16 30 17.9 +0.8
DAV Davao City (W) 17.24 167 Pn Pn 16 30 44.1 -2.1
USRK Ussuriysk Ar. 21.86 20 P P 16 31 38.6 +0.5
1.0nm,0.7s,baz=208,slow=9.1,SNR=2.7
1.0nm,0.7s
CMAR Chiang Mai Arr 21.88 260 P P 16 31 39.9 +1.4
0.9nm,1.0s,baz=61,slow=9.8,SNR=1.4
0.9nm,1.0s
GTA Gaotai 24.04 315 P P 16 32 08.5 +7.8
GTA pP sP 16 32 12.4 +7.5
GTA pmax pmax
comp=Z,2.0nm,1.1s
SONM Songino Array 26.72 337 P P 16 32 24.6 -0.3
comp=Z,1.6nm,0.7s,baz=163,slow=11,SNR=5.8
comp=Z,1.6nm,0.7s
MK31 Makanchi Array 38.79 316 P P 16 34 10.6 +0.5
MKAR Makanchi Array 38.79 316 P P 16 34 10.5 +0.4
MKAR Makanchi Array 38.79 316 P P 16 34 09.7 -0.4
comp=Z,1.0nm,0.6s,baz=100,slow=11,SNR=14
MKAR PcP PcP 16 36 20.1 -1.4
comp=Z,0.5nm,0.9s,baz=94,slow=5.9,SNR=2.8
comp=Z,1.0nm,0.6s
MAKZ Makanchi 38.99 316 P P 16 34 11.9 +0.1
ZALV Zalesovo Beam 40.65 327 P P 16 34 24.6 -0.8
comp=Z,0.9nm,0.5s,baz=109,slow=8.3,SNR=6.4
comp=Z,0.9nm,0.5s
H11N1 WAKE ISLAND Hy 42.05 87 T T 17 19 47.8
baz=280,slow=74
H11N2 WAKE ISLAND Hy 42.05 87 T T 17 19 47.2
baz=280,slow=74
H11N3 WAKE ISLAND Hy 42.07 87 T T 17 19 45.5
baz=280
H11S3 WAKE ISLAND Hy 42.18 89 T T 17 19 42.4
baz=283,slow=74,SNR=7.7
H11S1 WAKE ISLAND Hy 42.19 89 T T 17 19 42.4
baz=283,slow=74,SNR=6.5
H11S2 WAKE ISLAND Hy 42.20 89 T T 17 19 42.4
baz=283,slow=74,SNR=3.7
KURBB Kurchatov Arra 42.54 320 P P 16 34 40.7 -0.3
comp=Z,0.3nm,0.4s,baz=103,slow=9.7,SNR=2.2
comp=Z,0.3nm,0.4s
COEN Coen 43.17 149 P P 16 34 46.4 0.0
COEN lAmb lAmb 16 35 21.0
comp=Z,15nm,1.4s
WRA Warramunga Arr 45.38 163 P P 16 35 02.1 -1.9
comp=Z,0.7nm,0.5s,baz=345,slow=8.6,SNR=6.5
comp=Z,0.7nm,0.5s
BVAR Borovoye Array 48.11 321 P P 16 35 25.0 -0.2
comp=Z,1.0nm,0.4s,baz=100,slow=8.9,SNR=10
BVAR PcP PcP 16 36 51.2 -1.4
comp=Z,0.5nm,0.7s,baz=90,slow=7.2,SNR=2.4
comp=Z,1.0nm,0.4s
ASAR Alice Springs 48.84 165 P P 16 35 30.6 -0.5
comp=Z,0.6nm,0.8s,baz=339,slow=6.8,SNR=11
comp=Z,0.6nm,0.8s
ABKAR Akbulak array 53.90 314 P P 16 36 08.9 +0.2
ABKAR lAmb lAmb 16 36 17.8
comp=Z,5.1nm,1.4s
ARU Arti 55.53 323 P P 16 36 20.6 +0.1
comp=Z,1.6nm,0.5s,baz=111,slow=8.6,SNR=2.5
comp=Z,1.6nm,0.5s
STKA Stephens Creek 58.73 160 P P 16 36 44.3 +1.0
STKA Stephens Creek 58.73 160 P P 16 36 43.5 +0.2
comp=Z,3.0nm,0.7s,baz=330,slow=6.8,SNR=7.1
comp=Z,3.0nm,0.7s
D19K Kuna River 64.33 24 P P 16 37 21.1 +0.3
D19K lAmb lAmb 16 37 27.2
comp=Z,7.5nm,1.4s
L18K Granite Mounta 65.20 31 P P 16 37 27.1 +0.6
L18K lAmb lAmb 16 38 02.1
comp=Z,5.2nm,1.2s
TTA Tatalina 65.45 30 P P 16 37 28.4 +0.1
TTA lAmb lAmb 16 37 51.3
comp=Z,4.7nm,1.4s
P18K Big Mountain, 66.20 34 P P 16 37 33.5 +0.5
G21K Allakaket 66.20 26 P P 16 37 33.5 +0.5
G21K lAmb lAmb 16 37 39.0
comp=Z,1.9nm,0.8s
H21K Melozitna Rive 66.58 27 P P 16 37 35.9 +0.5
H21K lAmb lAmb 16 37 41.8
comp=Z,2.8nm,0.8s
TOLK Toolik Lake Re 67.45 23 P P 16 37 41.5 +0.6
TOLK lAmb lAmb 16 37 44.7
comp=Z,2.0nm,0.7s
D24K Happy Valley 67.65 23 P P 16 37 42.9 +0.8
D24K lAmb lAmb 16 37 45.8
comp=Z,2.1nm,0.5s
SUA Susitna One 68.09 31 P P 16 37 45.3 +0.1
ILAR Eielson Array 69.18 27 P P 16 37 50.5 -1.2
comp=Z,0.3nm,0.5s,baz=282,slow=5.7,SNR=3.0
comp=Z,0.3nm,0.5s
SCM Sheep Creek Mo 69.62 30 P P 16 37 55.1 +0.5
SCRK Sand Creek 70.59 28 P P 16 38 01.1 +0.5
SCRK lAmb lAmb 16 38 07.1
comp=Z,2.5nm,1.0s
E28M Babbage River 71.05 23 P P 16 38 04.0 +0.8
GLB Gilahina Butte 71.34 30 P P 16 38 05.5 +0.3
M26K Nabesna, AK 71.45 29 P P 16 38 07.3 +1.5
M26K lAmb lAmb 16 38 42.3
comp=Z,11nm,1.4s
L27K Beaver Creek, 71.77 28 P P 16 38 08.2 +0.5
L27K lAmb lAmb 16 38 21.0
comp=Z,10nm,1.4s
FINES FINESS Array B 71.84 330 P P 16 38 07.6 -0.4
comp=Z,1.1nm,0.7s,baz=46,slow=5.5,SNR=4.1
comp=Z,1.1nm,0.7s
INK Inuvik 73.24 22 P P 16 38 15.8 -0.4
comp=Z,1.3nm,0.7s,baz=330,slow=5.7,SNR=5.8
comp=Z,1.3nm,0.7s
C36M Paulatuk 75.84 19 P P 16 38 30.7 -0.5
YKA Yellowknife Ar 82.97 23 P P 16 39 10.3 0.0
comp=Z,1.0nm,0.8s,baz=313,slow=4.9,SNR=15
comp=Z,1.0nm,0.8s

TAP 06 16:27:45.0, 24.06N × 121.64E, h8km, ML3.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**295**	*i* P		Pg		16 27 46.5	-0.1
	baz=302								
TWD				*i* S		Sg		16 27 47.9	+0.1
	baz=302								
ETL	**Fush Village**	**0.10**	**350**	*i* P		Pg		16 27 47.3	-0.1
	baz=350								
ETL				*i* S		Sg		16 27 49.1	+0.1
	baz=350								
NACB	**Ninganchiao**	**0.12**	**339**	*i* P		Pg		16 27 47.6	-0.1
	baz=339								
NACB				*i* S		Sg		16 27 49.3	-0.2
	baz=339								
ETM	**Tongmen**	**0.17**	**235**	P		Pg		16 27 48.2	-0.2
	baz=235								
ETM				eS		Sg		16 27 50.8	0.0
	baz=235								
LXIB	**Xiulin Townshi**	**0.21**	**259**	P		Pg		16 27 48.5	-0.8
	baz=259								
LXIB				*i* S		Sg		16 27 53.1	+0.8
	baz=259								
EHP	**Heping Village**	**0.26**	**20**	eP		Pg		16 27 50.7	+0.4
	baz=21								
EHP				eS		Sg		16 27 54.1	+0.3
	baz=21								
EAHA	**Aohua**	**0.28**	**19**	P		Pg		16 27 50.3	-0.3
	baz=18								
EAHA				eS		Sg		16 27 54.6	+0.2
	baz=18								
SHUL	**Shoufeng**	**0.28**	**195**	eP		Pg		16 27 51.4	+0.8
	baz=194								
ESL	**Shilin**	**0.31**	**218**	eP		Pg		16 27 50.6	-0.5
	baz=216								
ESL				eS		Sg		16 27 54.9	-0.3
	baz=216								
WHF	**Hehuan Shan**	**0.35**	**284**	eP		Pg		16 27 52.2	+0.1
	baz=283								
WHF				eS		Sg		16 27 56.5	-0.2
	baz=283								
TEGC	**Jichi Village**	**0.36**	**195**	eP		Pb		16 27 52.9	-0.7
	baz=193								
TEGC				eS		Sb		16 27 59.9	+0.4
	baz=193								
ENA	**Nanau**	**0.38**	**14**	P		Pg		16 27 52.4	0.0
	baz=15								
ENA				S		Sg		16 27 57.4	0.0
	baz=15								
EWUT	**Wuta**	**0.40**	**18**	P		Pg		16 27 52.7	-0.1
	baz=18								
EWUT				S		Sg		16 27 58.2	+0.1
	baz=18								
FUSS	**Fushou**	**0.41**	**297**	eP		Pg		16 27 53.5	+0.5
	baz=297								
FUSS				eS		Sg		16 27 59.0	+0.6
	baz=297								
WARBT	**Fenglin Townsh**	**0.41**	**214**	eP		Pg		16 27 52.1	-0.9
	baz=214								
WARBT				eS		Sg		16 27 58.1	-0.3
	baz=214								
CHGB	**Renai**	**0.43**	**270**	P		Pg		16 27 53.5	+0.2
	baz=269								
CHGB				S		Sg		16 27 59.1	+0.1
	baz=269								
NNSB	**Datong**	**0.43**	**327**	P		Pg		16 27 53.4	-0.1
	baz=327								
NNSB				S		Sg		16 27 59.6	+0.3
	baz=327								
NNSH	**Datong**	**0.43**	**327**	P		Pg		16 27 53.7	+0.2
	baz=327								
NNSH				S		Sg		16 27 59.3	+0.1
	baz=327								
EGFH	**Guangfu**	**0.44**	**207**	eP		Pg		16 27 53.2	-0.3
	baz=206								
OWD	**Renai**	**0.44**	**256**	eP		Pg		16 27 53.2	-0.3
	baz=256								
NNS	**Nan Shan**	**0.45**	**327**	*i* P		Pg		16 27 53.6	-0.1
	baz=327								
NNS				*i* S		Sg		16 28 00.1	+0.4
	baz=327								
TWT	**Tachien**	**0.47**	**294**	eP		Pg		16 27 53.2	-0.8
	baz=293								
TWT				eS		Sg		16 28 00.9	+0.7
	baz=293								
TDCB	**Techi**	**0.48**	**294**	eP		Pg		16 27 54.3	0.0
	baz=293								
LATG	**Datong**	**0.48**	**348**	P		Pg		16 27 53.9	-0.5
	baz=347								
LATG				*i* S		Sg		16 28 00.9	+0.1
	baz=347								
WUSB	**Renai**	**0.48**	**262**	eP		Pg		16 27 54.1	-0.2

	baz=261								
WUSB				*e*S		Sg	16 28 00.3	-0.4	
	baz=261								
ESAO	**Su ao**	**0.55**	**20**	*e*P		Pg	16 27 54.9	-0.6	
	baz=19								
ESAO				*e*S		Sg	16 28 02.3	-0.4	
	baz=19								
VWDT	**VWDT**	**0.55**	**236**	*e*P		Pg	16 27 55.8	+0.2	
	baz=236								
NDT	**Datong Townshi**	**0.55**	**348**	P		Pg	16 27 55.9	+0.2	
	baz=347								
NDT				S		Sg	16 28 03.2	+0.3	
	baz=347								
NDS	**Dongshan**	**0.57**	**7**	*i* P		Pg	16 27 56.3	+0.2	
	baz=6.0								
NDS				S		Sg	16 28 04.5	+0.9	
	baz=6.0								
TWC	**Suao**	**0.58**	**19**	*e*P		Pg	16 27 56.4	+0.3	
	baz=20								
TWC				*e*S		Sg	16 28 03.6	-0.1	
	baz=20								
ENTT	**Nioudou**	**0.58**	**353**	*i* P		Pg	16 27 56.5	+0.3	
	baz=353								
ENTT				*i* S		Sg	16 28 04.7	+0.9	
	baz=353								
EHY	**Hungye**	**0.62**	**208**	*e*P		Pg	16 27 57.1	0.0	
	baz=207								
WPL	**Puli Township**	**0.63**	**266**	*e*P		Pg	16 27 57.2	+0.1	
	baz=265								
YHNB	**Yeheng**	**0.65**	**338**	P		Pg	16 27 57.8	+0.2	
	baz=338								
YHNB				*i* S		Sg	16 28 06.6	+0.4	
	baz=338								
DPDB	**Guoxing**	**0.65**	**268**	*e*P		Pg	16 27 57.7	+0.1	
	baz=267								
TWE	**Neicheng**	**0.66**	**2**	P		Pg	16 27 57.9	+0.2	
	baz=3.0								
TWE				*i* S		Sg	16 28 06.2	-0.1	
	baz=3.0								
NSK	**Sanguang**	**0.66**	**337**	P		Pg	16 27 57.9	+0.1	
	baz=337								
NSK				*i* S		Sg	16 28 06.7	+0.1	
	baz=337								
WCS	**Beigang Elemen**	**0.67**	**270**	*e*P		Pg	16 27 57.9	0.0	
	baz=269								
WHP	**Taichung City**	**0.67**	**289**	P		Pg	16 27 57.6	-0.4	
	baz=288								
WHP				*e*S		Sb	16 28 08.2	-0.2	
	baz=288								
SSLB	**Suanglung**	**0.69**	**247**	P		Pg	16 27 57.8	-0.4	
	baz=246								
SSLB				*e*S		Sg	16 28 06.3	-0.8	
	baz=246								
FUSB	**Fushanzhiwuyua**	**0.70**	**356**	*i* P		Pg	16 27 58.8	+0.4	
	baz=356								
FUSB				*i* S		Sg	16 28 07.9	+0.3	
	baz=356								
SMLT	**Sun Moon Lake**	**0.70**	**256**	*e*P		Pg	16 27 56.8	-1.7	
	baz=255								
NWLT	**Wulai**	**0.72**	**350**	*e*P		Pg	16 27 59.4	+0.5	
	baz=349								
NWLT				S		Sg	16 28 08.3	-0.1	
	baz=349								
TYC	**Yuchr**	**0.73**	**258**	*e*P		Pg	16 27 57.9	-1.2	
	baz=257								
YULB	**Yu-li**	**0.74**	**205**	*e*P		Pg	16 27 58.8	-0.3	
	baz=205								
NFF	**Wufeng Townshi**	**0.74**	**320**	*e*P		Pg	16 27 59.1	-0.1	
	baz=320								
NSTT	**Nanjuang**	**0.81**	**314**	*e*P		Pb	16 28 01.1	-0.2	
	baz=314								
LIOB	**Emei**	**0.81**	**316**	*e*P		Pg	16 28 00.7	+0.1	
	baz=315								
NHDH	**Xindian Distri**	**0.90**	**353**	*e*P		Pg	16 28 02.6	+0.3	
	baz=353								
TWA	**Mucha**	**0.92**	**357**	*e*P		Pb	16 28 03.6	+0.4	
	baz=357								
TIPB	**Shuangxi**	**0.92**	**10**	*e*P		Pb	16 28 03.0	-0.3	
	baz=10.0								
TIPB				*e*S		Sg	16 28 13.9	-0.8	
	baz=10.0								
TWB1	**Santiao Chiao**	**0.99**	**18**	*e*P		Pg	16 28 03.4	-0.7	
	baz=19								
SXI1	**Grass Mountain**	**1.05**	**12**	*e*P		Pg	16 28 04.6	-0.5	
	baz=11								
TWS1	**Kuangyinshan**	**1.05**	**349**	*e*P		Pg	16 28 05.0	-0.2	
	baz=349								
TPUB	**Ta-pu**	**1.20**	**231**	*e*P		Pb	16 28 05.0	-3.0	
	baz=230								

TAP 06 16:28:09.2,23.94N×121.53E,h9km,ML2.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.04**	**312**	*i* P	Pg	16 28 11.4	+0.5
	baz=311						
ETM				*i* S	Sg	16 28 12.8	+0.7
	baz=311						
LXIB	**Xiulin Townshi**	**0.13**	**309**	P	Pg	16 28 12.9	+0.7
	baz=308						
ESL	**Shilin**	**0.15**	**214**	P	Pg	16 28 13.2	+0.8
	baz=211						
ESL				S	Sg	16 28 16.6	+2.0
	baz=211						
SHUL	**Shoufeng**	**0.15**	**167**	P	Pg	16 28 13.3	+0.8
	baz=167						
TEGC	**Jichi Village**	**0.23**	**177**	*e*P	Pg	16 28 15.4	+1.5
	baz=174						
WARBT	**Fenglin Townsh**	**0.25**	**210**	P	Pg	16 28 15.0	+0.7
	baz=210						
WARBT				S	Sg	16 28 19.0	+1.3
	baz=210						
EGFH	**Guangfu**	**0.28**	**198**	*e*P	Pg	16 28 15.6	+0.8
	baz=198						
WHF	**Hehuan Shan**	**0.31**	**311**	*e*P	Pg	16 28 16.3	+0.7
	baz=311						
OWD	**Renai**	**0.32**	**273**	*e*P	Pg	16 28 16.4	+0.8
	baz=272						
WUSB	**Renai**	**0.38**	**278**	*e*P	Pb	16 28 18.2	0.0
	baz=278						
VWDT	**VWDT**	**0.40**	**242**	*e*P	Pb	16 28 18.4	-0.1
	baz=242						
VWDT				*e*S	Sb	16 28 24.7	+0.1
	baz=242						
FUSS	**Fushou**	**0.40**	**320**	*e*P	Pb	16 28 18.4	-0.3
	baz=320						
TWT	**Tachien**	**0.45**	**315**	*e*P	Pb	16 28 19.2	-0.2
	baz=312						
EHY	**Hungye**	**0.47**	**203**	*e*P	Pg	16 28 18.6	+0.3
	baz=202						
SSLB	**Suanglung**	**0.54**	**254**	P	Pb	16 28 20.7	-0.2
	baz=253						

TAP 06 16:28:10.3,24.08N×121.62E,h11km,ML3.0,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.02**	**270**	*i* P	Pg	16 28 12.7	+0.5
	baz=275						
TWD				*i* S	Sg	16 28 13.9	+0.4
	baz=275						
ETL	**Fush Village**	**0.08**	**3**	*i* P	Pg	16 28 13.6	+0.8
	baz=3.0						
ETL				*i* S	Sg	16 28 15.4	+0.9
	baz=3.0						
NACB	**Ninganchiao**	**0.10**	**347**	P	Pg	16 28 13.8	+0.8
	baz=346						
NACB				S	Sg	16 28 15.8	+0.9
	baz=346						
ETM	**Tongmen**	**0.16**	**225**	*e*P	Pg	16 28 14.4	+0.5
	baz=225						
ETM				*e*S	Sg	16 28 16.8	+0.4
	baz=225						
LXIB	**Xiulin Townshi**	**0.20**	**253**	P	Pg	16 28 15.1	+0.5
	baz=252						
LXIB				*e*S	Sg	16 28 18.5	+1.0
	baz=252						
EAHA	**Aohua**	**0.27**	**24**	*e*P	Pb	16 28 17.1	-0.2
	baz=23						
SHUL	**Shoufeng**	**0.30**	**190**	*e*P	Pb	16 28 17.6	0.0
	baz=189						
ESL	**Shilin**	**0.31**	**213**	*e*P	Pb	16 28 17.7	-0.3
	baz=211						
WHF	**Hehuan Shan**	**0.33**	**281**	P	Pb	16 28 18.1	-0.3
	baz=281						
WHF				S	Sb	16 28 23.0	-0.9
	baz=281						
ENA	**Nanau**	**0.36**	**18**	P	Pb	16 28 18.5	-0.3
	baz=19						
ENA				S	Sb	16 28 23.7	-0.8
	baz=19						
EWUT	**Wuta**	**0.39**	**22**	*e*P	Pb	16 28 19.0	-0.3
	baz=21						
EWUT				S	Sb	16 28 24.4	-0.9
	baz=21						
CHGB	**Renai**	**0.41**	**267**	P	Pb	16 28 19.6	-0.1
	baz=267						
CHGB				S	Sb	16 28 25.8	-0.1
	baz=267						
NNSB	**Datong**	**0.41**	**328**	*e*P	Pb	16 28 19.1	-0.5
	baz=328						
NNSB				*e*S	Sb	16 28 25.6	-0.3
	baz=328						
NNSH	**Datong**	**0.41**	**328**	*e*P	Pb	16 28 19.2	-0.5
	baz=328						
NNSH				*e*S	Sb	16 28 25.6	-0.4
	baz=328						
NNS	**Nan Shan**	**0.42**	**328**	P	Pb	16 28 19.6	-0.4
	baz=328						
NNS				S	Sb	16 28 26.3	-0.1
	baz=328						
TDCB	**Techi**	**0.45**	**292**	*e*P	Pg	16 28 19.3	+0.1
	baz=292						
LATG	**Datong**	**0.46**	**350**	P	Pb	16 28 20.3	-0.3
	baz=349						
LATG				*e*S	Sb	16 28 26.9	-0.5
	baz=349						
ENTT	**Nioudou**	**0.56**	**355**	P	Pb	16 28 22.6	+0.5
	baz=355						
ENTT				S	Sb	16 28 30.5	+0.3
	baz=355						
YHNB	**Yeheng**	**0.63**	**339**	*e*P	Pb	16 28 24.0	+0.6
	baz=339						
YHNB				*e*S	Sb	16 28 32.9	+0.7
	baz=339						

TAP 06 16:30:05.0,24.12N×121.72E,h9km±1km,ML2.0,2D,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**296**	*i* P	Pg	16 30 08.3	+0.9
	baz=295						
ETL				*i* S	Sg	16 30 10.4	+1.2
	baz=295						
TWD	**Chiawan**	**0.12**	**251**	⇓*i* P	Pg	16 30 08.4	+0.7
	baz=250						
TWD				*i* S	Sg	16 30 10.5	+0.9
	baz=250						
NACB	**Ninganchiao**	**0.12**	**297**	⇓*i* P	Pg	16 30 08.7	+0.8
	baz=297						
NACB				*i* S	Sg	16 30 11.1	+1.3
	baz=297						
EAHA	**Aohua**	**0.21**	**6**	*e*P	Pg	16 30 10.1	+0.8
	baz=5.0						
ETM	**Tongmen**	**0.25**	**234**	*e*P	Pg	16 30 10.7	+0.6
	baz=233						
LXIB	**Xiulin Townshi**	**0.29**	**251**	*e*P	Pg	16 30 11.6	+0.7
	baz=251						
ENA	**Nanau**	**0.31**	**4**	*i* P	Pb	16 30 12.1	-0.6
	baz=5.0						
ENA				*i* S	Sb	16 30 16.8	-1.1
	baz=5.0						
EWUT	**Wuta**	**0.33**	**10**	*e*P	Pb	16 30 12.5	-0.5
	baz=9.0						
SHUL	**Shoufeng**	**0.36**	**203**	*e*P	Pb	16 30 13.6	+0.1
	baz=203						
WHF	**Hehuan Shan**	**0.41**	**274**	*e*P	Pb	16 30 14.0	-0.7
	baz=273						
NNSB	**Datong**	**0.43**	**316**	*e*P	Pb	16 30 14.5	-0.4
	baz=315						
NNS	**Nan Shan**	**0.45**	**316**	*e*P	Pb	16 30 14.8	-0.3
	baz=316						
FUSS	**Fushou**	**0.45**	**287**	*e*P	Pb	16 30 14.9	-0.3
	baz=286						
LATG	**Datong**	**0.45**	**337**	P	Pb	16 30 14.8	-0.4
	baz=337						
CHGB	**Renai**	**0.50**	**264**	*e*P	Pb	16 30 15.5	-0.5
	baz=263						
WARBT	**Fenglin Townsh**	**0.50**	**217**	*e*P	Pg	16 30 15.2	+0.6
	baz=217						
TWC	**Suao**	**0.51**	**14**	*e*P	Pb	16 30 15.8	-0.1
	baz=14						
NDT	**Datong Townshi**	**0.52**	**339**	*e*P	Pb	16 30 16.4	+0.2
	baz=338						
ENTT	**Nioudou**	**0.54**	**345**	*e*P	Pb	16 30 16.7	+0.1
	baz=345						
WUSB	**Renai**	**0.56**	**257**	*e*P	Pb	16 30 17.0	0.0
	baz=257						
TWE	**Neicheng**	**0.60**	**356**	*e*P	Pb	16 30 17.7	0.0
	baz=357						
YHNB	**Yeheng**	**0.63**	**331**	P	Pb	16 30 18.6	+0.4
	baz=330						
NSK	**Sanguang**	**0.65**	**330**	*e*P	Pb	16 30 18.7	+0.3
	baz=330						

*JMA **06** 16:31:08.1±0.5,24.0N±0.5×12.2E±°,h1km±4km,TAIWAN REGION*
*TAP **06** 16:31:08.2,24.05N×121.64E,h9km,ML3.2,C*
ISC 06 16:31:08.0±0.9,24.04N±0.02×121.68E±0.02,h8km±6km, n107,σ0.50/150,9D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**301**	⇓*i* P	**Pg**	**16 31 10.4**	**+0.2**
	baz=312						
TWD				*i* S	**Sg**	**16 31 11.6**	**-0.2**
	baz=312						
ETL	**Fush Village**	**0.13**	**338**	⇓*i* P	**Pg**	**16 31 11.1**	**+0.1**
	baz=351						
ETL				*i* S	**Sg**	**16 31 12.9**	**-0.1**
	baz=351						
NACB	**Ninganchiao**	**0.16**	**331**	⇓*i* P	**Pg**	**16 31 11.4**	**+0.1**
	baz=349						
NACB				*i* S	**Sg**	**16 31 13.4**	**-0.2**
	baz=349						
ETM	**Tongmen**	**0.18**	**247**	*i* P	**Pg**	**16 31 12.2**	**+0.5**
	baz=238						
ETM				*i* S	**Sg**	**16 31 14.6**	**+0.3**
	baz=238						
LXIB	**Xiulin Townshi**	**0.24**	**267**	*i* P	**Pg**	**16 31 13.1**	**+0.2**
	baz=251						
LXIB				*i* S	**Sg**	**16 31 16.3**	**+0.1**
	baz=251						
SHUL	**Shoufeng**	**0.27**	**203**	*e*P	**Pb**	**16 31 15.2**	**+0.2**
	baz=195						
SHUL				*e*S	**Sb**	**16 31 19.7**	**0.0**
	baz=195						
EAHA	**Aohua**	**0.30**	**11**	*e*P	**Pg**	**16 31 13.7**	**-0.2**
	baz=27						
EAHA				*e*S	**Sg**	**16 31 18.3**	**+0.4**
	baz=27						
ESL	**Shilin**	**0.31**	**225**	*i* P	**Pg**	**16 31 14.6**	**+0.4**
	baz=227						
ESL				*i* S	**Sg**	**16 31 18.6**	**+0.2**
	baz=227						
TEGC	**Jichi Village**	**0.35**	**201**	*e*P	**Pb**	**16 31 16.6**	**+0.2**
	baz=183						
WHF	**Hehuan Shan**	**0.39**	**286**	*i* P	**Pg**	**16 31 16.0**	**+0.2**
	baz=285						
WHF				*i* S	**Sg**	**16 31 21.1**	**+0.1**
	baz=285						
ENA	**Nanau**	**0.40**	**9**	*i* P	**Pg**	**16 31 15.8**	**+0.1**
	baz=15						
ENA				S	**Sg**	**16 31 21.2**	**+0.2**
	baz=15						
WARBT	**Fenglin Townsh**	**0.41**	**220**	P	**Pg**	**16 31 16.3**	**+0.2**
	baz=222						
WARBT				S	**Sg**	**16 31 21.5**	**0.0**
	baz=222						
EWUT	**Wuta**	**0.42**	**13**	P	**Pg**	**16 31 16.4**	**+0.2**
	baz=18						
EWUT				S	**Sg**	**16 31 21.9**	**+0.2**
	baz=18						
FUSS	**Fushou**	**0.45**	**298**	⇓*i* P	**Pg**	**16 31 17.2**	**+0.5**
	baz=298						
FUSS				*e*S	**Sg**	**16 31 23.1**	**+0.4**
	baz=298						
CHGB	**Renai**	**0.46**	**273**	⇓*i* P	**Pg**	**16 31 17.6**	**+0.5**
	baz=261						
CHGB				*i* S	**Sg**	**16 31 23.6**	**+0.6**
	baz=261						
OWD	**Renai**	**0.47**	**260**	*e*P	**Pg**	**16 31 17.4**	**+0.3**
	baz=258						
NNSB	**Datong**	**0.47**	**326**	⇓*i* P	**Pg**	**16 31 17.6**	**+0.3**
	baz=328						
NNSB				*i* S	**Sg**	**16 31 23.5**	**0.0**
	baz=328						
NNSH	**Datong**	**0.47**	**326**	*i* P	**Pg**	**16 31 17.5**	**+0.3**
	baz=327						
NNSH				*i* S	**Sg**	**16 31 23.5**	**0.0**
	baz=327						
NNS	**Nan Shan**	**0.49**	**326**	⇓*i* P	**Pg**	**16 31 17.8**	**+0.3**
	baz=328						
NNS				*i* S	**Sg**	**16 31 24.0**	**0.0**
	baz=328						
TWT	**Tachien**	**0.51**	**295**	P	**Pg**	**16 31 18.4**	**+0.6**
	baz=294						
TWT				*i* S	**Sg**	**16 31 25.1**	**+0.5**
	baz=294						
WUSB	**Renai**	**0.51**	**265**	*i* P	**Pb**	**16 31 18.6**	**-0.7**
	baz=262						
WUSB				*i* S	**Sg**	**16 31 25.3**	**+0.5**
	baz=262						
LATG	**Datong**	**0.52**	**345**	⇓*i* P	**Pg**	**16 31 18.3**	**+0.2**
	baz=348						
LATG				*e*S	**Sg**	**16 31 24.6**	**-0.2**
	baz=348						
TDCB	**Techi**	**0.52**	**295**	P	**Pg**	**16 31 18.5**	**+0.4**
	baz=294						
TDCB				S	**Sg**	**16 31 25.2**	**+0.2**
	baz=294						
ESAO	**Su ao**	**0.56**	**16**	*e*P	**Pg**	**16 31 19.0**	**+0.2**
	baz=18						
VWDT	**VWDT**	**0.56**	**240**	P	**Pg**	**16 31 19.4**	**+0.4**
	baz=229						
VWDT				*i* S	**Sg**	**16 31 26.9**	**+0.5**
	baz=229						
NDT	**Datong Townshi**	**0.58**	**345**	*i* P	**Pg**	**16 31 19.8**	**+0.5**
	baz=348						
NDT				S	**Sg**	**16 31 27.0**	**0.0**
	baz=348						
HGSD	**Ruisui**	**0.59**	**203**	*e*P	**Pb**	**16 31 20.4**	**-0.1**
	baz=218						
TWC	**Suao**	**0.59**	**15**	*e*P	**Pg**	**16 31 19.8**	**+0.4**
	baz=19						
NDS	**Dongshan**	**0.60**	**3**	P	**Pg**	**16 31 19.7**	**+0.1**
	baz=7.0						
NDS				S	**Sg**	**16 31 27.8**	**+0.4**
	baz=7.0						
ENTT	**Nioudou**	**0.61**	**351**	*i* P	**Pg**	**16 31 20.2**	**+0.4**
	baz=354						
ENTT				*i* S	**Sg**	**16 31 28.3**	**+0.5**
	baz=354						
EHY	**Hungye**	**0.62**	**212**	P	**Pg**	**16 31 20.0**	**+0.1**
	baz=208						
WPL	**Puli Township**	**0.66**	**268**	*e*P	**Pg**	**16 31 20.9**	**+0.2**
	baz=267						
TWE	**Neicheng**	**0.68**	**359**	*e*P	**Pg**	**16 31 21.6**	**+0.5**
	baz=3.0						
TWE				*e*S	**Sg**	**16 31 30.6**	**+0.5**
	baz=3.0						
DPDB	**Guoxing**	**0.69**	**270**	*e*P	**Pb**	**16 31 22.0**	**-0.2**
	baz=259						
DPDB				*e*S	**Sb**	**16 31 31.1**	**-0.8**
	baz=259						
YHNB	**Yeheng**	**0.69**	**337**	*i* P	**Pb**	**16 31 21.9**	**-0.3**
	baz=331						
YHNB				S	**Sg**	**16 31 29.9**	**-0.4**
	baz=331						
WCS	**Beigang Elemen**	**0.70**	**272**	*e*P	**Pg**	**16 31 21.7**	**+0.2**
	baz=271						
NSK	**Sanguang**	**0.70**	**336**	*e*P	**Pb**	**16 31 22.1**	**-0.4**
	baz=331						
NSK				*e*S	**Sg**	**16 31 30.9**	**+0.2**
	baz=331						
SSLB	**Suanglung**	**0.71**	**250**	⇓*i* P	**Pg**	**16 31 22.0**	**+0.4**
	baz=258						
SSLB				*i* S	**Sg**	**16 31 30.4**	**-0.4**
	baz=258						
WHP	**Taichung City**	**0.71**	**290**	*i* P	**Pb**	**16 31 22.6**	**0.0**
	baz=289						
WHP				*e*S	**Sb**	**16 31 31.9**	**-0.7**
	baz=289						
FUSB	**Fushanzhiwuyua**	**0.72**	**354**	*e*P	**Pb**	**16 31 22.7**	**-0.2**
	baz=356						
FUSB				S	**Sg**	**16 31 31.3**	**-0.1**
	baz=356						
SMLT	**Sun Moon Lake**	**0.73**	**258**	*i* P	**Pb**	**16 31 22.5**	**-0.4**
	baz=255						
SMLT				S	**Sg**	**16 31 31.4**	**-0.1**
	baz=255						
YULB	**Yu-li**	**0.73**	**209**	*e*P	**Pg**	**16 31 21.8**	**-0.3**
	baz=216						
YULB				*e*S	**Sb**	**16 31 32.6**	**-0.4**
	baz=216						
NWLT	**Wulai**	**0.76**	**348**	P	**Pg**	**16 31 22.7**	**+0.1**
	baz=350						
NWLT				S	**Sg**	**16 31 32.2**	**-0.3**
	baz=350						
TYC	**Yuchr**	**0.76**	**260**	*e*P	**Pg**	**16 31 22.9**	**+0.3**
	baz=258						
TYC				*e*S	**Sb**	**16 31 33.7**	**-0.3**
	baz=258						
TWF1	**Yuli**	**0.76**	**207**	P	**Pg**	**16 31 23.1**	**+0.4**
	baz=215						
TWF1				*e*S	**Sb**	**16 31 34.3**	**+0.3**
	baz=215						
NFF	**Wufeng Townshi**	**0.78**	**319**	*e*P	**Pg**	**16 31 23.3**	**+0.2**
	baz=320						
WHYT	**Xinyi Township**	**0.83**	**246**	*e*P	**Pb**	**16 31 25.1**	**+0.5**
	baz=245						
NSTT	**Nanjuang**	**0.85**	**314**	P	**Pb**	**16 31 25.3**	**+0.3**
	baz=315						
NSTT				*e*S	**Sg**	**16 31 35.3**	**-0.3**
	baz=315						
LIOB	**Emei**	**0.86**	**315**	*e*P	**Pb**	**16 31 25.2**	**+0.1**
	baz=316						
CHKH	**Chenggong**	**0.88**	**197**	*e*P	**Pg**	**16 31 25.1**	**+0.2**
	baz=186						
TWQ1	**Liyutan**	**0.88**	**291**	*e*P	**Pb**	**16 31 25.8**	**+0.3**
	baz=283						
WJS	**Zhushan**	**0.89**	**256**	*e*P	**Pn**	**16 31 26.9**	**+0.1**
	baz=255						
WWF	**Wufeng**	**0.89**	**271**	*e*P	**Pn**	**16 31 26.9**	**+0.1**
	baz=270						
FULB	**Fuli**	**0.90**	**203**	*e*P	**Pg**	**16 31 25.6**	**+0.2**
	baz=217						
NSY	**Sanyi**	**0.92**	**295**	*e*P	**Pb**	**16 31 26.4**	**+0.3**
	baz=294						
WNT	**Mingjian**	**0.92**	**260**	*e*P	**Pn**	**16 31 26.9**	**-0.3**
	baz=252						
WNT1	**Nantou City**	**0.92**	**262**	*e*P	**Pn**	**16 31 26.9**	**-0.2**
	baz=261						
NHDH	**Xindian Distri**	**0.93**	**352**	*e*P	**Pg**	**16 31 25.9**	**0.0**
	baz=344						
TIPB	**Shuangxi**	**0.94**	**8**	*e*P	**Pb**	**16 31 26.4**	**-0.1**
	baz=355						
TWA	**Mucha**	**0.94**	**355**	*e*P	**Pb**	**16 31 26.9**	**+0.3**
	baz=356						
NMLH	**Miaoli**	**0.95**	**302**	*e*P	**Pn**	**16 31 27.7**	**+0.1**
	baz=301						
TATO	**Taipei**	**0.95**	**350**	*e*P	**Pg**	**16 31 26.0**	**-0.3**
	baz=350						
ALS	**Alishan**	**0.95**	**237**	*e*P	**Pg**	**16 31 26.4**	**0.0**
	baz=234						
ALS				*e*S	**Sb**	**16 31 40.4**	**+0.7**
	baz=234						
ALS	**Alishan**	**0.95**	**237**	*e*P	**Sb**	**16 31 40.5**	**+0.7**
	baz=232						
CHKT	**Chengkung**	**0.97**	**197**	*e*P	**Pb**	**16 31 27.0**	**-0.1**
	baz=196						
NJN	**Zhunan**	**0.98**	**311**	*e*P	**Pb**	**16 31 27.3**	**+0.2**
	baz=319						
EHD	**Haiduan**	**0.98**	**206**	*e*P	**Pg**	**16 31 27.0**	**+0.1**
	baz=206						
TWB1	**Santiao Chiao**	**1.01**	**16**	*e*P	**Pb**	**16 31 27.8**	**+0.1**
	baz=10.0						
CHN5	**Tsauling**	**1.01**	**245**	*e*P	**Pn**	**16 31 28.6**	**0.0**
	baz=243						
CHN5				*e*S	**Sb**	**16 31 42.1**	**+0.8**
	baz=243						
CHN5	**Tsauling**	**1.01**	**245**	*e*P	**Sn**	**16 31 42.0**	**-1.0**
	baz=241						
NCUH	**Zhongli**	**1.03**	**334**	*e*P	**Pn**	**16 31 28.5**	**-0.2**
	baz=334						
NWF	**Wu-fen Shan**	**1.03**	**5**	*e*P	**Pg**	**16 31 27.8**	**-0.1**
	baz=5.0						
WFSB	**Wu-fen Shan**	**1.03**	**5**	*e*P	**Pb**	**16 31 28.4**	**+0.2**
	baz=5.0						
ELDTW	**Lidau**	**1.04**	**216**	*e*P	**Pg**	**16 31 27.5**	**-0.5**
	baz=203						

SXI1	**Grass Mountain**	**1.07**	**10**	*eP*	**Pn**	**16 31 29.9**	**+0.6**
	baz=5.0								
SXI1				*eS*	**Sn**	**16 31 44.4**	**0.0**
	baz=5.0								
WGK	**Gukeng**	**1.08**	**251**	*eP*	**Pn**	**16 31 29.2**	**-0.1**
	baz=251								
TWS1	**Kuangyinshan**	**1.09**	**348**	*eP*	**Pn**	**16 31 30.3**	**+0.8**
	baz=349								
TWS1				*eS*	**Sb**	**16 31 43.4**	**0.0**
	baz=349								
TWS1	**Kuangyinshan**	**1.09**	**348**	*eP*	**Sb**	**16 31 43.4**	**0.0**
	baz=349								
YM01	**YM01**	**1.11**	**355**	*eP*	**Pg**	**16 31 29.2**	**-0.1**
	baz=355								
WCKO	**Fanlu**	**1.15**	**239**	*eP*	**Pb**	**16 31 30.2**	**+0.1**
	baz=239								
STYH	**Taoyuan**	**1.19**	**224**	*eP*	**Pb**	**16 31 30.4**	**-0.4**
	baz=224								
WRL	**Guolierlin Hig**	**1.20**	**264**	*eP*	**Pn**	**16 31 31.0**	**0.0**
	baz=264								
CHN4	**Tsaushan**	**1.21**	**236**	*eP*	**Pg**	**16 31 31.7**	**+0.6**
	baz=236								
TPUB	**Ta-pu**	**1.21**	**233**	*eP*	**Pg**	**16 31 31.5**	**+0.3**
	baz=233								
STYT	**Tauyuan**	**1.21**	**224**	*eP*	**Pb**	**16 31 30.6**	**-0.6**
	baz=224								
RLNB	**Erlin**	**1.21**	**263**	*eP*	**Pg**	**16 31 32.0**	**+0.7**
	baz=262								
RLNB				*eS*	**Sn**	**16 31 49.4**	**+1.6**
	baz=262								
WTP	**Ta-pu**	**1.25**	**231**	*eP*	**Pg**	**16 31 32.2**	**+0.2**
	baz=231								
YOJ	**Yonaguni jima**	**1.29**	**71**	*eP*	**Pb**	**16 31 32.5**	**+0.1**
	baz=70								
TWGBT	**Beinan**	**1.33**	**204**	P	**Pn**	**16 31 30.9**	**-1.9**
	baz=205								
TWG	**Pinlang**	**1.33**	**205**	*eP*	**Pn**	**16 31 32.0**	**-0.9**
	baz=205								
TWK	**Hsinying**	**1.33**	**235**	*eP*	**Pb**	**16 31 33.3**	**+0.1**
	baz=235								
CHN1	**Nanshi**	**1.35**	**231**	*eP*	**Pg**	**16 31 34.3**	**+0.4**
	baz=232								
SGST	**Jiashian**	**1.38**	**227**	*eP*	**Pn**	**16 31 33.6**	**0.0**
	baz=227								
WSF	**Szhu**	**1.39**	**254**	*eP*	**Pb**	**16 31 34.0**	**-0.2**
	baz=254								
SLGT	**Liugui**	**1.40**	**223**	*eP*	**Pg**	**16 31 34.8**	**-0.1**
	baz=223								
ECL	**Taimali**	**1.58**	**205**	*eP*	**Pn**	**16 31 35.6**	**-0.6**
	baz=187								
TWM1	**Shoushan**	**1.67**	**224**	*eP*	**Pg**	**16 31 40.8**	**+0.8**
	baz=225								
MASBT	**Mashibuluo**	**1.71**	**214**	*eP*	**Pn**	**16 31 37.8**	**-0.3**
	baz=205								
EAST	**Anshuo**	**1.81**	**205**	*eP*	**Pb**	**16 31 41.0**	**-0.4**
	baz=188								
SCZT	**Fangliau**	**1.92**	**211**	*eP*	**Pn**	**16 31 41.6**	**+0.7**
	baz=212								
PHUB	**P'eng-hu**	**2.00**	**255**	*eP*	**Pn**	**16 31 42.4**	**+0.4**
	baz=256								
VWUC	**VWUC**	**2.24**	**296**	*eP*	**Pn**	**16 31 44.1**	**-1.2**
	baz=295								
JISG	**Ishigakijimahi**	**2.46**	**77**	P	**Pn**	**16 31 48.7**	**+0.3**
PTMZ	**Houxiangcun**	**2.53**	**294**	*eP*	**Pn**	**16 31 49.0**	**-0.3**
	baz=293								
MATB	**Ma-tsu**	**2.63**	**324**	*eP*	**Pn**	**16 31 48.6**	**-2.1**
	baz=322								
KNMB	**Chin-men Tao**	**3.03**	**279**	*eP*	**Pn**	**16 31 53.8**	**-2.5**
	baz=278								
AXDP	**Jialang**	**3.48**	**285**	*eP*	**Pn**	**16 32 02.4**	**-0.1**
	baz=284								

TAP 06 16:31:21.5,24°.08N×121°.63E,h8km,ML3.3,2D,C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TWD	**Chiawan**	**0.03**	**272**	*iP*		Pg	16 31 23.5	+0.4
TWD	baz=276			*i*	S	Sg	16 31 25.0	+0.8
	baz=276							
ETL	**Fush Village**	**0.08**	**357**	P		Pg	16 31 24.1	+0.4
	baz=357							
ETL				*i*	S	Sg	16 31 26.3	+1.0
	baz=357							
NACB	**Ninganchiao**	**0.10**	**343**	*iP*		Pg	16 31 24.5	+0.6
	baz=342							
NACB				*i*	S	Sg	16 31 26.5	+0.9
	baz=342							
ETM	**Tongmen**	**0.17**	**227**	P		Pg	16 31 25.2	+0.2
	baz=227							
ETM				*e*	S	Sg	16 31 28.1	+0.7
	baz=227							
LXIB	**Xiulin Townshi**	**0.20**	**254**	*eP*		Pg	16 31 26.2	+0.5
	baz=253							
LXIB					S	Sg	16 31 30.3	+1.7
	baz=253							
EHP	**Heping Village**	**0.25**	**24**	*eP*		Pg	16 31 27.4	+0.8
	baz=26							
EAHA	**Aohua**	**0.27**	**22**	*eP*		Pg	16 31 27.4	+0.5
	baz=22							
SHUL	**Shoufeng**	**0.30**	**191**	P		Pb	16 31 28.2	-0.8
	baz=191							
SHUL				*e*	S	Sb	16 31 34.4	+0.3
	baz=191							
ESL	**Shilin**	**0.32**	**214**	*eP*		Pg	16 31 28.5	+0.7
	baz=212							
WHF	**Hehuan Shan**	**0.34**	**281**	P		Pb	16 31 29.4	-0.7
	baz=281							
WHF				*i*	S	Sb	16 31 34.6	-1.1
	baz=281							
ENA	**Nanau**	**0.36**	**17**	P		Pg	16 31 28.9	+0.2
	baz=17							
ENA				*e*	S	Sg	16 31 34.5	+1.1
	baz=17							
TEGC	**Jichi Village**	**0.38**	**192**	*eP*		Pb	16 31 29.9	-0.5
	baz=191							
TEGC				*e*	S	Sb	16 31 37.0	+0.6
	baz=191							
FUSS	**Fushou**	**0.39**	**296**	P		Pb	16 31 30.5	-0.3
	baz=295							
NNSB	**Datong**	**0.41**	**327**	*i*	P	Pb	16 31 30.5	-0.6
	baz=327							
NNSB					S	Sb	16 31 36.9	-0.7
	baz=327							
NNSH	**Datong**	**0.41**	**327**	*i*	P	Pb	16 31 30.7	-0.4
	baz=327							
NNSH					S	Sb	16 31 37.3	-0.4
	baz=327							
CHGB	**Renai**	**0.41**	**268**	P		Pb	16 31 30.7	-0.5
	baz=267							
CHGB					S	Sb	16 31 37.1	-0.6
	baz=267							
WARBT	**Fenglin Townsh**	**0.42**	**212**	*eP*		Pg	16 31 29.9	+0.1
	baz=211							
NNS	**Nan Shan**	**0.43**	**327**	P		Pb	16 31 30.9	-0.4
	baz=327							
NNS					S	Sb	16 31 37.7	-0.4
	baz=327							
OWD	**Renai**	**0.43**	**253**	*eP*		Pb	16 31 31.4	0.0
	baz=253							
TWT	**Tachien**	**0.45**	**293**	*eP*		Pb	16 31 31.9	+0.2
	baz=291							
TWT				*e*	S	Sb	16 31 38.7	+0.1
	baz=291							
TDCB	**Techi**	**0.46**	**292**	*eP*		Pb	16 31 31.7	-0.2
	baz=291							
TDCB				*e*	S	Sb	16 31 39.1	+0.1
	baz=291							
LATG	**Datong**	**0.46**	**349**	P		Pg	16 31 31.1	+0.5
	baz=348							
WUSB	**Renai**	**0.47**	**260**	*eP*		Pb	16 31 31.7	-0.5
	baz=259							
WUSB				*e*	S	Sb	16 31 38.4	-0.9
	baz=259							
NDT	**Datong Townshi**	**0.53**	**349**	*i*	P	Pb	16 31 32.8	-0.3
	baz=348							
NDT				*e*	S	Sb	16 31 41.2	+0.3
	baz=348							
ESAO	**Su ao**	**0.53**	**22**	*eP*		Pb	16 31 33.0	-0.1
	baz=21							
VWDT	**VWDT**	**0.55**	**234**	*eP*		Pb	16 31 33.2	-0.2
	baz=233							
VWDT				*e*	S	Sb	16 31 41.2	-0.2
	baz=233							
NDS	**Dongshan**	**0.56**	**8**	P		Pb	16 31 33.8	+0.3
	baz=8.0							
NDS				*e*	S	Sb	16 31 42.1	+0.4
	baz=8.0							
ENTT	**Nioudou**	**0.56**	**354**	*eP*		Pb	16 31 33.6	0.0
	baz=355							
TWC	**Suao**	**0.56**	**21**	*eP*		Pb	16 31 33.2	-0.4
	baz=21							
TWC				*e*	S	Sb	16 31 42.3	+0.5
	baz=21							
YHNB	**Yeheng**	**0.63**	**339**	*eP*		Pb	16 31 35.0	+0.1
	baz=338							
YHNB					S	Sb	16 31 43.5	-0.4
	baz=338							
EHY	**Hungye**	**0.64**	**206**	*eP*		Pb	16 31 34.5	-0.3
	baz=205							
TWE	**Neicheng**	**0.64**	**3**	*eP*		Pb	16 31 35.0	+0.1
	baz=4.0							
NSK	**Sanguang**	**0.64**	**338**	*eP*		Pb	16 31 35.1	0.0
	baz=338							
NSK				*e*	S	Sb	16 31 44.1	-0.1
	baz=338							
WHP	**Taichung City**	**0.65**	**288**	*eP*		Pb	16 31 35.6	+0.4
	baz=287							
WCS	**Beigang Elemen**	**0.65**	**268**	*eP*		Pb	16 31 36.1	+0.9
	baz=268							
FUSB	**Fushanzhiwuyua**	**0.68**	**357**	*eP*		Pb	16 31 36.1	+0.4
	baz=356							
FUSB					S	Sb	16 31 46.2	+1.0
	baz=356							
SSLB	**Suanglung**	**0.68**	**245**	*eP*		Pg	16 31 35.1	+0.5
	baz=244							
SSLB				*e*	S	Sb	16 31 44.4	-0.8
	baz=244							
SMLT	**Sun Moon Lake**	**0.69**	**254**	*eP*		Pb	16 31 36.5	+0.6
	baz=253							
SMLT				*e*	S	Sb	16 31 46.1	+0.5
	baz=253							
NWLT	**Wulai**	**0.70**	**351**	*eP*		Pb	16 31 36.2	+0.1
	baz=350							
NFF	**Wufeng Townshi**	**0.72**	**320**	*eP*		Pb	16 31 36.8	+0.5
	baz=319							
TYC	**Yuchr**	**0.72**	**256**	*eP*		Pb	16 31 36.9	+0.5
	baz=255							
YULB	**Yu-li**	**0.75**	**204**	*eP*		Pg	16 31 36.3	+0.4
	baz=203							
ECBN	**Changbin**	**0.78**	**192**	*eP*		Pb	16 31 37.5	+0.2
	baz=191							
LIOB	**Emei**	**0.79**	**315**	*eP*		Pg	16 31 37.0	+0.2
	baz=315							
WWF	**Wufeng**	**0.85**	**268**	*eP*		Pn	16 31 41.0	+1.2
	baz=267							
NSY	**Sanyi**	**0.86**	**293**	*eP*		Pn	16 31 39.9	0.0
	baz=293							
WNT	**Mingjian**	**0.89**	**257**	*eP*		Pn	16 31 40.3	+0.1
	baz=256							
NMLH	**Miaoli**	**0.89**	**301**	*eP*		Pn	16 31 41.3	+1.0
	baz=300							
HSN1	**Hsinchu**	**0.89**	**322**	*eP*		Pn	16 31 42.1	+1.8
	baz=321							
TWA	**Mucha**	**0.90**	**357**	*eP*		Pb	16 31 39.2	-0.2
	baz=357							
TATO	**Taipei**	**0.90**	**352**	*eP*		Pg	16 31 39.1	+0.2
	baz=352							
TATO				*e*	S	Sn	16 31 53.6	-0.1
	baz=352							
TIPB	**Shuangxi**	**0.91**	**11**	*eP*		Pn	16 31 40.3	-0.3
	baz=11							
WYL	**Yuanlin Townsh**	**0.96**	**263**	*eP*		Pn	16 31 41.7	+0.4
	baz=262							
NCUH	**Zhongli**	**0.97**	**336**	*eP*		Pn	16 31 41.6	+0.2
	baz=335							
SXI1	**Grass Mountain**	**1.04**	**13**	*eP*		Pn	16 31 42.5	+0.1
	baz=12							
YM01	**YM01**	**1.06**	**357**	*eP*		Pn	16 31 43.3	+0.5
	baz=357							

*IDC **06** 16:31:54.0±3.5,56°.06N×149°.19W,h0km,mb3.0/1,*
mbtmp3.3/6,ML3.1/5,Error ellipse: s-maj=56.8km
s-min=28.6km az=2.0
*NEIC **06** 16:31:57.0±0.9,56°.43N±0°.08×149°.3W±0°.1,h10km±2km,*
ML3.4/52,ML3.3(AEIC),Error ellipse: s-maj=12.9km
s-min=9.3km az=167.0
*AEIC **06** 16:32:01.2±0.9,56°.37N±0°.09×149°.2W±0°.1,h12km±7km,*
Error ellipse: s-maj=13.0km s-min=8.0km az=163.0
ISC 06 16:31:57.1±1.3,56°.46N±0°.08×149°.29W±0°.06,h10km,
n190,σ0°.74/192,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KDAK	**Kodiak Island**	**2.24**	**308**			**Pn**	**16 32 34.9**	**+0.7**
KDAK						**Sn**	**16 33 00.2**	**-1.5**
KDAK	**Kodiak Island**	**2.24**	**308**	P		**Pn**	**16 32 34.9**	**+0.7**
	baz=126							
KDAK					S	**Sn**	**16 33 00.3**	**-1.5**
	baz=126							
KDAK	**Kodiak Island**	**2.24**	**308**	Pn		**Pn**	**16 32 34.6**	**+0.5**
	3.2nm,0.3s,baz=126,slow=6.2,SNR=48							
KDAK					Sn	**Sn**	**16 33 00.6**	**-1.1**
	11nm,0.3s,baz=63,slow=23,SNR=29							
	6.4nm,0.2s							
OHAK	**Old Harbor**	**2.33**	**291**			**Pn**	**16 32 35.3**	**-0.2**
OHAK						**Sn**	**16 33 01.7**	**-2.4**
OHAK	**Old Harbor**	**2.33**	**291**	P		**Pn**	**16 32 35.2**	**-0.2**
OHAK	**Old Harbor**	**2.33**	**291**	P		**Pn**	**16 32 35.3**	**-0.2**
	baz=109							
OHAK					S	**Sn**	**16 33 01.7**	**-2.4**
	baz=109							
SII	**Sitkinak Islan**	**2.72**	**274**			**Pn**	**16 32 40.0**	**-0.8**
SII					IAML		16 33 46.4	
	comp=E,81nm,1.5s							
SII	**Sitkinak Islan**	**2.72**	**274**	P		**Pn**	**16 32 41.3**	**+0.5**
SII	**Sitkinak Islan**	**2.72**	**274**	P		**Pn**	**16 32 40.7**	**-0.1**
	baz=92							
SYI	**Shuyak Island**	**2.73**	**323**			**Pn**	**16 32 41.6**	**+0.6**
SYI						**Sn**	**16 33 13.7**	**-0.4**
SYI	**Shuyak Island**	**2.73**	**323**		IAML		16 33 15.8	
	comp=E,94nm,0.5s							
SYI					IAML		16 33 17.1	
	comp=N,84nm,1.3s							
Q20K	**Shuyak Island**	**2.73**	**323**	P		**Pn**	**16 32 41.6**	**+0.6**
	baz=141							
Q20K					S	**Sn**	**16 33 13.7**	**-0.4**
	baz=141							
CNPM	**China Poot**	**3.25**	**342**			**Pn**	**16 32 48.7**	**+0.6**
CNPM						**Sn**	**16 33 25.9**	**-0.9**
CNPM	**China Poot**	**3.25**	**342**		IAML		16 33 37.1	
	comp=N,52nm,1.3s							
Q23K	**Middleton Isla**	**3.37**	**26**			**Pn**	**16 32 49.3**	**-0.4**
Q23K	**Middleton Isla**	**3.37**	**26**	P		**Pn**	**16 32 49.3**	**-0.4**
	baz=208							
MID	**Middleton Isla**	**3.37**	**27**			**Pn**	**16 32 49.3**	**-0.4**
BRSE	**Bradley Lake S**	**3.38**	**347**			**Pn**	**16 32 50.0**	**0.0**
BRSE						**Sn**	**16 33 30.0**	**-0.1**
BRSE	**Bradley Lake S**	**3.38**	**347**	P		**Pn**	**16 32 50.0**	**0.0**
	baz=166							
BRSE					S	**Sn**	**16 33 30.0**	**-0.1**
	baz=166							
Q19K	**Cape Douglas,**	**3.41**	**318**	Pn		**Pn**	**16 32 50.8**	**+0.5**
Q19K					IAML		16 33 30.0	
	comp=N,130nm,1.5s							
BRLK	**Bradley Lake**	**3.42**	**346**			**Pn**	**16 32 50.5**	**0.0**
BRLK						**Sn**	**16 33 31.0**	**-0.2**
BRLK	**Bradley Lake**	**3.42**	**346**		IAML		16 33 38.6	
	comp=E,50nm,1.4s							
KAHG	**Katmai Hook Gl**	**3.50**	**308**			**Pn**	**16 32 52.4**	**+0.8**
SEW	**Seward**	**3.66**	**359**			**Pn**	**16 32 53.5**	**-0.1**
SEW	**Seward**	**3.66**	**359**	P		**Pn**	**16 32 53.5**	**-0.1**
	baz=178							
P23K	**Montague Islan**	**3.69**	**15**			**Pn**	**16 32 54.1**	**0.0**
P23K	**Montague Islan**	**3.69**	**15**	P		**Pn**	**16 32 54.1**	**0.0**
	baz=196							
P19K	**Oil Pt**	**3.83**	**328**			**Pn**	**16 32 57.1**	**+1.1**
P19K	**Oil Pt**	**3.83**	**328**		IAML		16 33 43.7	
	comp=E,65nm,0.6s							
P19K					IAML		16 33 44.6	
	comp=N,74nm,0.3s							
P19K	**Oil Pt**	**3.83**	**328**	P		**Pn**	**16 32 57.1**	**+1.1**
	baz=145							
CNTC	**Contact Creek**	**4.01**	**300**			**Pn**	**16 32 59.0**	**+0.5**
Q17K	**Contact Creek**	**4.01**	**300**	P		**Pn**	**16 32 59.0**	**+0.4**
	baz=115							
O20K	**Slope Mountain**	**4.04**	**336**			**Pn**	**16 32 59.5**	**+0.5**
O20K	**Slope Mountain**	**4.04**	**336**	P		**Pn**	**16 32 59.5**	**+0.5**
	baz=153							
IVE	**Iliamna Volcan**	**4.08**	**333**			**Pn**	**16 33 00.1**	**+0.6**
SLKM	**Skilak Lake**	**4.09**	**354**			**Pn**	**16 33 00.0**	**+0.3**
HIN	**Hinchinbrook I**	**4.21**	**19**			**Pn**	**16 33 01.3**	**0.0**
	comp=E,76nm,1.4s							
P18K	**Big Mountain,**	**4.32**	**315**			**Pn**	**16 33 03.2**	**+0.3**
P18K	**Big Mountain,**	**4.32**	**315**	P		**Pn**	**16 33 03.2**	**+0.3**
	baz=131							
RED	**Redoubt Volcan**	**4.38**	**337**			**Pn**	**16 33 03.8**	**+0.2**
RDSO	**Redoubt South**	**4.40**	**337**			**Pn**	**16 33 04.1**	**+0.1**
RSO	**Redoubt South**	**4.41**	**337**			**Pn**	**16 33 04.0**	**-0.3**
RDT	**Redoubt**	**4.44**	**340**			**Pn**	**16 33 05.0**	**+0.5**
RDWB	**Redoubt West**	**4.45**	**337**			**Pn**	**16 33 05.0**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.50**	**23**			**Pn**	**16 33 05.4**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.50**	**23**	P		**Pn**	**16 33 05.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.50**	**23**	P		**Pn**	**16 33 05.4**	**+0.2**
	baz=205							
DFR	**Drift River**	**4.51**	**338**			**Pn**	**16 33 06.0**	**+0.4**
NCT	**North Crescent**	**4.54**	**337**			**Pn**	**16 33 06.4**	**+0.5**
O19K	**Port Alsworth**	**4.59**	**327**	Pn		**Pn**	**16 33 06.7**	**+0.2**
O19K					IAML		16 34 00.3	
	comp=N,62nm,0.4s							
O18K	**Koktuh Hills**	**4.63**	**320**			**Pn**	**16 33 07.7**	**+0.6**
O18K	**Koktuh Hills**	**4.63**	**320**		IAML		16 34 21.9	
	comp=N,18nm,1.4s							
O18K	**Koktuh Hills**	**4.63**	**320**	P		**Pn**	**16 33 07.7**	**+0.6**
	baz=135							
RC01	**Rabbit Creek A**	**4.65**	**357**			**Pn**	**16 33 07.0**	**-0.3**
RC01					IAML		16 34 01.8	
	comp=E,30nm,0.5s							
RC01					IAML		16 34 28.6	
	comp=N,19nm,1.4s							
RC01	**Rabbit Creek A**	**4.65**	**357**	P		**Pn**	**16 33 07.8**	**+0.4**
	baz=176							
GOAT	**Goat Mountain**	**4.78**	**28**			**Pn**	**16 33 09.4**	**+0.3**
BERG	**Berg Lake**	**4.92**	**34**	Pn		Pn	16 33 08.6	-2.4
GRIN	**Grindle Hills**	**4.96**	**37**			**Pn**	**16 33 11.5**	**-0.1**
KNK	**Knik Glacier**	**4.99**	**5**	Pn		**Pn**	**16 33 11.3**	**-0.8**
KNK					IAML		16 34 23.4	
	comp=E,25nm,1.5s							
KNK					IAML		16 34 24.4	
	comp=N,21nm,1.5s							
N20K	**Mount Spurr**	**4.99**	**344**	P		**Pn**	**16 33 12.6**	**+0.5**
	baz=161							
SPCR	**Spurr Chakacha**	**4.99**	**344**			**Pn**	**16 33 12.6**	**+0.5**
SPCN	**Chakachatna No**	**5.01**	**344**			**Pn**	**16 33 13.0**	**+0.6**
SNH	**Sunshine Point**	**5.05**	**40**	Pn		**Pn**	**16 33 12.9**	**+0.1**
SNH					IAML		16 34 15.7	
	comp=E,50nm,1.4s							
SPCP	**Crater Peak Br**	**5.05**	**344**			**Pn**	**16 33 13.5**	**+0.6**
SPCG	**Spurr Capps Gl**	**5.05**	**345**			**Pn**	**16 33 13.4**	**+0.4**
CHGN	**Chignik**	**5.08**	**272**	Pn		**Pn**	**16 33 13.2**	**+0.1**
CHGN					IAML		16 34 18.0	
	comp=N,31nm,1.3s							
CHGN					IAML		16 34 24.0	
	comp=E,28nm,1.4s							
SUA	**Susitna One**	**5.08**	**352**			**Pn**	**16 33 13.3**	**0.0**
SUA	**Susitna One**	**5.08**	**352**		IAML		16 36 38.3	
	comp=E,16nm,0.4s							
SUA	**Susitna One**	**5.08**	**352**	P		**Pn**	**16 33 13.3**	**0.0**
	baz=170							
KHIT	**Khitrov Hills**	**5.10**	**36**			**Pn**	**16 33 13.3**	**-0.3**
BMRM	**Bremner River**	**5.14**	**26**			**Pn**	**16 33 14.3**	**+0.2**
BMRM	**Bremner River**	**5.14**	**26**	P		**Pn**	**16 33 14.3**	**+0.2**
	baz=210							
N19K	**Bonanza Creek**	**5.14**	**330**			**Pn**	**16 33 14.5**	**+0.3**
N19K	**Bonanza Creek**	**5.14**	**330**	P		**Pn**	**16 33 14.5**	**+0.3**
	baz=146							
PMR	**Palmer**	**5.15**	**1**	Pn		**Pn**	**16 33 14.3**	**+0.1**
PMR					IAML		16 34 20.6	
	comp=E,18nm,1.5s							
PMR					IAML		16 34 53.4	
	comp=N,13nm,1.4s							
PMR	**Palmer**	**5.15**	**1**	P		**Pn**	**16 33 15.7**	**+1.5**
STLK	**Strandline Lak**	**5.23**	**346**			**Pn**	**16 33 15.7**	**+0.4**
SPNN	**North Nagishla**	**5.23**	**342**			**Pn**	**16 33 16.1**	**+0.6**
WAX	**Waxell Ridge**	**5.24**	**37**			**Pn**	**16 33 15.3**	**-0.1**
GHO	**Glory Hole Cre**	**5.33**	**2**			**Pn**	**16 33 17.1**	**+0.3**
GHO					IAML		16 34 22.1	
	comp=E,20nm,1.2s							
GHO					IAML		16 34 27.6	
	comp=N,36nm,0.5s							
KLU	**Klutina**	**5.34**	**18**			**Pn**	**16 33 17.1**	**+0.2**
KLU					IAML		16 34 21.7	
	comp=N,30nm,0.4s							
KLU					IAML		16 34 23.1	
	comp=E,21nm,0.4s							
KLU	**Klutina**	**5.34**	**18**	P		**Pn**	**16 33 17.2**	**+0.3**
	baz=200							
MESA	**MESA**	**5.37**	**43**	Pn		**Pn**	**16 33 17.7**	**+0.3**
MESA					IAML		16 34 27.9	
	comp=E,40nm,1.3s							
CRQM	**Cirque**	**5.38**	**34**	Pn		**Pn**	**16 33 17.6**	**+0.1**
SML	**Sawmill**	**5.39**	**5**			**Pn**	**16 33 18.0**	**+0.5**
SML	**Sawmill**	**5.39**	**5**	P		**Pn**	**16 33 18.0**	**+0.5**
	baz=185							
N18K	**Kilae Creek**	**5.46**	**324**			**Pn**	**16 33 18.8**	**+0.3**
N18K	**Kilae Creek**	**5.46**	**324**	P		**Pn**	**16 33 18.8**	**+0.3**
	baz=138							
SCM	**Sheep Creek Mo**	**5.49**	**10**	Pn		**Pn**	**16 33 19.2**	**+0.3**
ISLE	**Juniper Island**	**5.52**	**38**	Pn		**Pn**	**16 33 19.5**	**+0.1**
BAGL	**Bagley Icefiel**	**5.53**	**40**			**Pn**	**16 33 19.2**	**-0.2**
SKT	**Skwentna**	**5.66**	**349**			**Pn**	**16 33 21.7**	**+0.5**
SKT	**Skwentna**	**5.66**	**349**	P		**Pn**	**16 33 21.7**	**+0.5**
	baz=167							
VRDI	**Verde Repeater**	**5.66**	**30**			**Pn**	**16 33 21.1**	**-0.2**
SVW2	**Sparrevohn**	**5.69**	**327**	Pn		**Pn**	**16 33 21.5**	**-0.1**
SVW2	**Sparrevohn**	**5.69**	**327**	P		**Pn**	**16 33 21.9**	**+0.3**
N25K	**Chitina, Valde**	**5.70**	**23**			**Pn**	**16 33 21.9**	**+0.1**
N25K	**Chitina, Valde**	**5.70**	**23**	P		**Pn**	**16 33 21.9**	**+0.1**
	baz=206							
S14K	**Fog Glacier**	**5.71**	**273**	P		**Pn**	**16 33 21.7**	**-0.3**
	baz=85							
VNFG	**Fog Glacier, M**	**5.71**	**273**			**Pn**	**16 33 21.7**	**-0.3**
GLB	**Gilahina Butte**	**5.75**	**27**			**Pn**	**16 33 22.4**	**0.0**
KIAG	**Kiagna River**	**5.75**	**36**			**Pn**	**16 33 22.5**	**-0.1**
M20K	**Styx River**	**5.79**	**342**			**Pn**	**16 33 23.5**	**+0.4**
M20K	**Styx River**	**5.79**	**342**	P		**Pn**	**16 33 23.5**	**+0.4**
	baz=158							
N17K	**Nushagak Hills**	**5.81**	**318**			**Pn**	**16 33 23.9**	**+0.6**
N17K	**Nush

	baz=240							
P29M	**Windy Craggy**	**6.90**	**58**		**Pn**	**Pn**	**16 33 38.0**	**-0.3**
P29M	**Windy Craggy** baz=247	**6.90**	**58**	P	**Pn**	**Pn**	**16 33 38.0**	**-0.3**
L18K	**Granite Mounta**	**6.91**	**330**	Pn	**Pn**	**Pn**	**16 33 37.9**	**-0.4**
TRF	**Thorofare Moun**	**7.03**	**356**		**Pn**	**Pn**	**16 33 40.9**	**+0.7**
TRF	**Thorofare Moun** baz=175	**7.03**	**356**	P	**Pn**	**Pn**	**16 33 40.9**	**+0.7**
CAST	**Castle Rocks**	**7.12**	**350**	Pn	**Pn**	**Pn**	**16 33 41.8**	**+0.5**
KTH	**Kantishna Hill**	**7.17**	**354**	Pn	**Pn**	**Pn**	**16 33 42.8**	**+0.9**
S31K	**Pelican**	**7.25**	**73**		**Pn**	**Pn**	**16 33 41.1**	**-1.8**
S31K	**Pelican** baz=263	**7.25**	**73**	P	**Pn**	**Pn**	**16 33 41.1**	**-1.8**
K20K	**Telida**	**7.33**	**343**	Pn	**Pn**	**Pn**	**16 33 44.2**	**+0.2**
TTA	**Tatalina**	**7.33**	**335**	Pn	**Pn**	**Pn**	**16 33 44.0**	**-0.1**
TTA	**Tatalina**	**7.33**	**335**	P	**Pn**	**Pn**	**16 33 46.3**	**+2.2**
L16K	**Owhat River**	**7.43**	**319**	Pn	**Pn**	**Pn**	**16 33 46.0**	**+0.6**
L27K	**Beaver Creek,**	**7.62**	**26**	Pn	**Pn**	**Pn**	**16 33 48.9**	**+0.9**
SIT	**Sitka**	**7.70**	**80**	P	Pn	16 33 46.2		**-2.9**
K17K	**Iditarod**	**7.76**	**328**	Pn	**Pn**	**Pn**	**16 33 50.0**	**0.0**
J18K	**Innoko River**	**7.95**	**335**	Pn	**Pn**	**Pn**	**16 33 52.9**	**+0.3**
J20K	**Nowinta River**	**8.11**	**345**	Pn	**Pn**	**Pn**	**16 33 54.9**	**+0.2**
O30N	**Mendenhall**	**8.13**	**52**	Pn	**Pn**	**Pn**	**16 33 55.2**	**+0.2**
M29M	**Somme Creek**	**8.14**	**38**		**Pn**	**Pn**	**16 33 56.3**	**+1.0**
M29M	**Somme Creek** baz=227	**8.14**	**38**	P	**Pn**	**Pn**	**16 33 56.9**	**+1.5**
J19K	**Poorman**	**8.19**	**340**	Pn	**Pn**	**Pn**	**16 33 55.6**	**-0.2**
R32K	**Eaglecrest**	**8.19**	**71**	Pn	**Pn**	**Pn**	**16 33 55.2**	**-0.6**
JIS	**Juneau Island**	**8.26**	**71**	Pn	**Pn**	**Pn**	**16 33 56.0**	**-0.8**
JIS	**Juneau Island**	**8.26**	**71**	P	**Pn**	**Pn**	**16 33 56.0**	**-0.8**
K27K	**Chicken**	**8.39**	**22**	Pn	**Pn**	**Pn**	**16 33 59.2**	**+0.6**
J25K	**Salcha River,**	**8.41**	**12**	Pn	**Pn**	**Pn**	**16 33 58.8**	**0.0**
IL31		**8.43**	**7**	Pn	**Pn**	**Pn**	**16 33 59.6**	**+0.6**
ILAR	**Eielson Array** comp=E,0.4nm,0.3s,baz=188,slow=13,SNR=20	**8.43**	**7**	Pn	**Pn**	**Pn**	**16 33 59.9**	**+0.8**
ILAR	comp=E,0.2nm,0.3s,baz=184,slow=24,SNR=2.6 comp=E,0.9nm,0.4s			Sn	**Sn**	**Sn**	**16 35 29.3**	**-4.8**
L14K	**Kuka Creek**	**8.48**	**311**	Pn	Pn	16 33 58.1		-1.7
J26L	**Joseph Creek**	**8.55**	**17**	Pn	**Pn**	**Pn**	**16 34 01.4**	**+0.6**
MDM	**Murphy Dome**	**8.55**	**3**	Pn	**Pn**	**Pn**	**16 34 01.3**	**+0.6**
N31M	**Braeburn, Yuko**	**8.60**	**49**	Pn	**Pn**	**Pn**	**16 34 02.3**	**+0.7**
WHY	**Whitehorse**	**8.62**	**55**	Pn	**Pn**	**Pn**	**16 34 02.6**	**+0.7**
L29M	**L29M**	**8.71**	**35**	Pn	**Pn**	**Pn**	**16 34 04.0**	**+0.8**
P32M	**Atlin**	**8.84**	**63**	Pn	**Pn**	**Pn**	**16 34 04.3**	**-0.4**
DAWY	**Dawson**	**9.07**	**29**	Pn	**Pn**	**Pn**	**16 34 08.2**	**+0.3**
H21K	**Melozitna Rive**	**9.39**	**351**	Pn	**Pn**	**Pn**	**16 34 12.2**	**-0.1**
K29M	**Barlow Dome**	**9.43**	**33**	Pn	**Pn**	**Pn**	**16 34 13.9**	**+0.9**
P33M	**Teslin, Yukon**	**9.44**	**60**	Pn	**Pn**	**Pn**	**16 34 13.1**	**+0.1**
H18K	**Honhosa River**	**9.77**	**337**	Pn	**Pn**	**Pn**	**16 34 17.8**	**+0.3**
R33M	**Jennings River**	**10.17**	**66**	Pn	**Pn**	**Pn**	**16 34 22.9**	**-0.2**
J30M	**Hart River**	**10.32**	**33**	Pn	**Pn**	**Pn**	**16 34 26.0**	**+0.8**
DLBC	**Dease Lake** comp=E,0.4nm,0.3s,baz=322,slow=22,SNR=2.1 comp=E,1.2nm,0.4s	**10.56**	**71**	Pn	**Pn**	**Pn**	**16 34 27.0**	**-1.4**
F20K	**Avaraart Lake**	**11.05**	**347**	Pn	**Pn**	**Pn**	**16 34 35.8**	**+0.8**
INK	**Inuvik** baz=142,slow=27,SNR=2.3 comp=E,1.9nm,1.1s	**13.89**	**25**	Pn	**Pn**	**Pn**	**16 35 15.8**	**+2.1**
YKA	**Yellowknife Ar** baz=272,slow=10,SNR=3.9 comp=E,0.3nm,0.9s	**18.45**	**57**	P	**P**	**P**	**16 36 13.6**	**+1.1**
MKAR	**Makanchi Array** comp=E,0.1nm,0.5s,baz=30,slow=6.2,SNR=1.0 comp=E,0.1nm,0.5s	**68.45**	**325**	P	**P**	**P**	**16 42 59.6**	**+0.7**

TAP 06 16:32:49.6,24.16N×121.70E,h8km,ML2.8,3D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=269	**0.07**	**270**	P	Pg	16 32 52.5	+0.9
NACB	**Ninganchiao** baz=278	**0.10**	**278**	⇓*i*P	Pg	16 32 52.8	+0.8
TWD	**Chiawan** baz=229	**0.12**	**231**	⇓*i*P	Pg	16 32 52.9	+0.5
EHP	**Heping Village** baz=15	**0.15**	**13**	*e*P	Pg	16 32 53.8	+0.8
EAHA	**Aohua** baz=11	**0.17**	**11**	P	Pg	16 32 54.1	+0.9
EAHA	baz=11			S	Sg	16 32 57.0	+1.3
ENA	**Nanau** baz=9.0	**0.27**	**7**	*e*P	Pb	16 32 55.9	-0.9
EWUT	**Wuta** baz=13	**0.29**	**14**	*e*P	Pb	16 32 56.4	-0.8
NNSB	**Datong** baz=312	**0.40**	**313**	⇓P	Pb	16 32 58.5	-0.6
NNSH	**Datong** baz=312	**0.40**	**313**	*e*P	Pb	16 32 58.5	-0.6
WHF	**Hehuan Shan** baz=267	**0.40**	**268**	*e*P	Pg	16 32 58.2	+0.6
LATG	**Datong** baz=336	**0.41**	**337**	*e*P	Pb	16 32 59.0	-0.3
NNS	**Nan Shan** baz=313	**0.41**	**313**	*e*P	Pb	16 32 58.7	-0.6
FUSS	**Fushou** baz=281	**0.43**	**282**	*e*P	Pb	16 32 59.1	-0.5
TWC	**Suao** baz=17	**0.47**	**17**	*e*P	Pb	16 33 00.0	-0.2
NDS	**Dongshan** baz=1.0	**0.47**	**1**	*e*P	Pb	16 33 00.0	-0.2
NDT	**Datong Townshi** baz=338	**0.47**	**339**	P	Pb	16 33 00.1	-0.2
ENTT	**Nioudou** baz=346	**0.49**	**345**	*e*P	Pb	16 33 00.5	-0.2
TWE	**Neicheng** baz=358	**0.56**	**357**	P	Pb	16 33 01.8	0.0
YHNB	**Yeheng** baz=329	**0.59**	**330**	*e*P	Pb	16 33 02.4	+0.1
NSK	**Sanguang** baz=329	**0.60**	**329**	*e*P	Pb	16 33 02.4	-0.1
FUSB	**Fushanzhiwuyua** baz=350	**0.61**	**350**	*e*P	Pb	16 33 02.5	-0.1
NWLT	**Wulai** baz=343	**0.64**	**344**	*e*P	Pb	16 33 03.2	0.0

TAP 06 16:32:52.4,24.05N×121.56E,h4km,ML3.1,1C-1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=56	**0.04**	**51**	P	Pg	16 32 53.7	+0.2
TWD	baz=56			*i* S	Sg	16 32 54.9	+0.7
ETM	**Tongmen** baz=214	**0.11**	**215**	⇑*i*P	Pg	16 32 55.1	+0.5
ETM	baz=214			S	Sg	16 32 57.4	+1.3
ETL	**Fush Village** baz=30	**0.12**	**28**	*e*P	Pg	16 32 54.5	-0.3
ETL	baz=30			S	Sg	16 32 56.8	+0.3
NACB	**Ninganchiao** baz=24	**0.12**	**14**	*i* P	Pg	16 32 55.0	0.0
NACB	baz=24			*i* S	Sg	16 32 57.3	+0.7
LXIB	**Xiulin Townshi** baz=247	**0.14**	**256**	*i* P	Pg	16 32 56.0	+0.8
LXIB	baz=247			*i* S	Sg	16 32 59.2	+2.1
SHUL	**Shoufeng** baz=178	**0.27**	**180**	*e*P	Pg	16 32 58.0	+0.5
SHUL	baz=178			S	Sb	16 33 03.1	-1.5
ESL	**Shilin** baz=203	**0.27**	**206**	*e*P	Pg	16 32 58.0	+0.4
WHF	**Hehuan Shan** baz=290	**0.28**	**289**	*e*P	Pb	16 32 59.5	-0.9
WHF	baz=290			*e*S	Sb	16 33 04.1	-1.6
EAHA	**Aohua** baz=33	**0.32**	**31**	*e*P	Pg	16 32 58.4	-0.3
TEGC	**Jichi Village** baz=196	**0.34**	**183**	*e*P	Pg	16 32 59.8	+0.7
FUSS	**Fushou** baz=304	**0.35**	**304**	*e*P	Pb	16 33 00.5	-0.8
CHGB	**Renai** baz=258	**0.35**	**271**	P	Pg	16 33 00.0	+0.7
CHGB	baz=258			*e*S	Sb	16 33 06.2	-1.2
CHGB	**Renai** baz=269	**0.35**	**271**	P	Pg	16 33 00.1	+0.7
CHGB	baz=269			S	Sb	16 33 06.2	-1.2
OWD	**Renai** baz=252	**0.37**	**254**	*e*P	Pb	16 33 01.0	-0.6
OWD	baz=252			*e*S	Sb	16 33 06.1	-1.6
WARBT	**Fenglin Townsh** baz=204	**0.37**	**206**	*e*P	Pg	16 33 00.0	+0.4
TWT	**Tachien** baz=300	**0.40**	**299**	*e*P	Pb	16 33 02.0	-0.2
TWT	baz=300			*e*S	Sb	16 33 08.4	-0.5
ENA	**Nanau** baz=27	**0.41**	**24**	P	Pg	16 32 60.0	-0.3
ENA	baz=27			*e*S	Sg	16 33 05.5	-0.2
NNSB	**Datong** baz=339	**0.41**	**336**	P	Pg	16 33 01.1	+0.8
NNSB	baz=339			S	Sg	16 33 07.2	+1.5
NNSH	**Datong** baz=352	**0.41**	**336**	*e*P	Pg	16 33 01.2	+0.8
WUSB	**Renai** baz=259	**0.41**	**261**	*e*P	Pb	16 33 01.6	-0.8
WUSB	baz=259			*e*S	Sb	16 33 08.1	-0.9
TDCB	**Techi** baz=300	**0.42**	**298**	*e*P	Pb	16 33 01.8	-0.6
TDCB	baz=300			S	Sb	16 33 08.3	-0.9
NNS	**Nan Shan** baz=339	**0.42**	**336**	P	Pg	16 33 01.2	+0.6
NNS	baz=339			S	Sb	16 33 07.8	-1.5
EWUT	**Wuta** baz=29	**0.44**	**27**	*e*P	Pg	16 33 00.7	-0.2
EWUT	baz=29			*e*S	Sg	16 33 06.0	-0.5
LATG	**Datong** baz=359	**0.48**	**356**	*e*P	Pg	16 33 01.7	0.0
LATG	baz=359			S	Sg	16 33 09.2	+1.2
VWDT	**VWDT** baz=240	**0.49**	**232**	*e*P	Pb	16 33 02.8	-0.8
NDT	**Datong Townshi** baz=358	**0.55**	**355**	P	Pg	16 33 03.6	+0.6
NDT	baz=358			*e*S	Sg	16 33 11.4	+1.3
WPL	**Puli Township** baz=265	**0.55**	**266**	*e*P	Pg	16 33 03.7	+0.6
ESAO	**Su ao** baz=27	**0.58**	**26**	*e*P	Pg	16 33 04.1	+0.5
ESAO	baz=27			*e*S	Sg	16 33 10.4	-0.8
DPDB	**Guoxing** baz=268	**0.58**	**268**	*e*P	Pb	16 33 04.6	-0.6
ENTT	**Nioudou** baz=3.0	**0.58**	**0**	⇓*i*P	Pg	16 33 04.0	+0.4
ENTT	baz=3.0			*e*S	Sg	16 33 12.3	+1.1
EHY	**Hungye** baz=199	**0.59**	**202**	*e*P	Pg	16 33 03.9	+0.1
NDS	**Dongshan** baz=15	**0.59**	**14**	P	Pg	16 33 03.7	-0.2
NDS	baz=15			*e*S	Sg	16 33 12.2	+0.6
WCS	**Beigang Elemen** baz=270	**0.59**	**270**	*e*P	Pg	16 33 04.6	+0.8
WHP	**Taichung City** baz=292	**0.60**	**292**	*e*P	Pg	16 33 04.4	+0.4
TWC	**Suao** baz=27	**0.61**	**25**	*e*P	Pg	16 33 04.3	+0.1
TWC	baz=27			*e*S	Sg	16 33 12.1	-0.1
SSLB	**Suanglung** baz=257	**0.62**	**245**	P	Pb	16 33 05.1	-0.7
SSLB	baz=257			*e*S	Sg	16 33 13.2	+0.9
SMLT	**Sun Moon Lake** baz=252	**0.63**	**254**	P	Pb	16 33 05.7	-0.3
SMLT	baz=252			*e*S	Sb	16 33 14.6	-0.6
YHNB	**Yeheng** baz=347	**0.64**	**345**	P	Pg	16 33 05.4	+0.7
YHNB	baz=347			S	Sb	16 33 14.6	-0.8
NSK	**Sanguang** baz=346	**0.65**	**343**	*e*P	Pb	16 33 05.7	-0.6
NSK	baz=346			*e*S	Sb	16 33 14.7	-1.1
TYC	**Yuchr** baz=255	**0.66**	**257**	*e*P	Pb	16 33 06.2	-0.3
TYC	baz=255			*e*S	Sg	16 33 14.8	+1.1
TWE	**Neicheng** baz=10.0	**0.67**	**8**	P	Pg	16 33 05.5	+0.2
TWE	baz=10.0			*e*S	Sg	16 33 14.5	+0.5
YULB	**Yu-li** baz=198	**0.70**	**200**	*e*P	Pg	16 33 06.4	+0.5
FUSB	**Fushanzhiwuyua** baz=4.0	**0.70**	**2**	P	Pg	16 33 06.4	+0.5
FUSB	baz=4.0			S	Sb	16 33 16.8	-0.6
NFF	**Wufeng Townshi** baz=338	**0.70**	**325**	*e*P	Pb	16 33 07.2	-0.1
NWLT	**Wulai** baz=358	**0.72**	**356**	*e*P	Pg	16 33 06.7	+0.4
NWLT	baz=358			*e*S	Sg	16 33 16.7	+1.0
TWF1	**Yuli** baz=205	**0.74**	**199**	*e*P	Pg	16 33 06.5	-0.1
NSTT	**Nanjuang** baz=321	**0.77**	**318**	*e*P	Pb	16 33 08.3	-0.1
LIOB	**Emei** baz=322	**0.77**	**320**	*e*P	Pb	16 33 08.3	-0.1
TWQ1	**Liyutan** baz=294	**0.78**	**292**	*e*P	Pn	16 33 09.5	-0.7
WWF	**Wufeng** baz=269	**0.79**	**269**	*e*P	Pn	16 33 09.6	-0.8
NSY	**Sanyi** baz=298	**0.81**	**296**	*e*P	Pb	16 33 09.2	0.0
TCU	**Taichung** baz=268	**0.81**	**277**	*e*P	Pn	16 33 10.1	-0.6
WNT	**Mingjian** baz=247	**0.82**	**258**	*e*P	Pb	16 33 09.8	+0.5
ALS	**Alishan** baz=239	**0.88**	**232**	*e*P	Pb	16 33 10.2	-0.2
SBCB	**Hsinchu** baz=327	**0.90**	**325**	*e*P	Pg	16 33 10.2	+0.4
TATO	**Taipei** baz=359	**0.92**	**356**	P	Pg	16 33 10.3	+0.2
TATO	baz=359			S	Sg	16 33 22.5	+0.5
TWA	**Mucha** baz=353	**0.92**	**1**	*e*P	Pb	16 33 10.6	-0.4
TWA	baz=353			*e*S	Sg	16 33 22.6	+0.5
TIPB	**Shuangxi** baz=18	**0.94**	**15**	*e*P	Pg	16 33 09.4	-1.2
EHD	**Haiduan** baz=200	**0.96**	**200**	*e*P	Pb	16 33 11.2	-0.4
CHKT	**Chengkung** baz=190	**0.97**	**191**	*e*P	Pg	16 33 10.8	-0.2
TAP	**Taipei** baz=1.0	**0.98**	**357**	*e*P	Pg	16 33 11.3	0.0
ELDTW	**Lidau** baz=207	**0.99**	**210**	*e*P	Pg	16 33 11.9	+0.4
TWB1	**Santiao Chiao** baz=17	**1.03**	**22**	*e*P	Pn	16 33 13.4	-0.2
NWF	**Wu-fen Shan** baz=24	**1.03**	**11**	*e*P	Pg	16 33 11.9	-0.3
WFSB	**Wu-fen Shan** baz=14	**1.03**	**11**	*e*P	Pg	16 33 11.8	-0.4
WFSB	baz=14			*e*S	Sg	16 33 25.6	-0.1
TWS1	**Kuangyinshan** baz=5.0	**1.05**	**353**	*e*P	Pn	16 33 13.6	-0.3
TWS1	baz=5.0			*e*S	Sb	16 33 27.7	+0.3
SXI1	**Grass Mountain** baz=10.0	**1.07**	**15**	*e*P	Pn	16 33 14.0	-0.3
YM01	**YM01** baz=3.0	**1.09**	**0**	*e*P	Pb	16 33 14.0	+0.1
CHN4	**Tsaushan** baz=230	**1.13**	**232**	*e*P	Pn	16 33 15.3	+0.2
TPUB	**Ta-pu** baz=227	**1.14**	**229**	*e*P	Pn	16 33 15.5	+0.4
STYT	**Tauyuan** baz=211	**1.15**	**220**	*e*P	Pb	16 33 14.9	-0.1
TWY	**Chenhua** baz=355	**1.22**	**2**	*e*P	Pg	16 33 15.6	-0.2
TWK	**Hsinying** baz=222	**1.26**	**232**	*e*P	Pn	16 33 17.4	+0.6
CHN1	**Nanshi** baz=232	**1.28**	**228**	*e*P	Pn	16 33 17.9	+0.8
SGST	**Jiashian** baz=214	**1.32**	**223**	*e*P	Pg	16 33 17.8	0.0
SLGT	**Liugui** baz=218	**1.35**	**219**	*e*P	Pg	16 33 19.0	+0.7

*JMA **06** 16:34:35.9±0.2,24.0N±0.2×121.7E±0.8,h1km±2km, MV3.1/11,TAIWAN REGION*
*TAP **06** 16:34:36.1,24.02N×121.64E,h7km,ML3.7,C*
ISC 06 16:34:36.3±0.8,24.01N±0.01×121.66E±0.02,h8km±6km, n154,σ0.65/231,29C-14D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=332	**0.09**	**319**	⇓*i*P	**Pg**	**16 34 38.4**	**-0.1**
TWD	baz=332			*i* S	**Sg**	**16 34 39.7**	**-0.3**
ETL	**Fush Village** baz=353	**0.15**	**347**	*i* P	**Pg**	**16 34 39.4**	**-0.1**
ETL	baz=353			*i* S	**Sg**	**16 34 41.4**	**-0.3**
ETM	**Tongmen** baz=247	**0.16**	**253**	*i* P	**Pg**	**16 34 39.5**	**-0.2**
ETM	baz=247			*i* S	**Sg**	**16 34 41.6**	**-0.3**
NACB	**Ninganchiao** baz=345	**0.17**	**339**	⇓*i*P	**Pg**	**16 34 39.7**	**-0.2**
NACB	baz=345			*i* S	**Sg**	**16 34 41.9**	**-0.4**
LXIB	**Xiulin Townshi** baz=259	**0.23**	**272**	⇑*i*P	**Pg**	**16 34 40.7**	**-0.2**
LXIB	baz=259			*i* S	**Sg**	**16 34 44.0**	**0.0**
SHUL	**Shoufeng** baz=202	**0.24**	**202**	*i* P	**Pg**	**16 34 42.2**	**+1.1**
SHUL	baz=202			*e*S	**Sg**	**16 34 47.1**	**+2.7**
ESL	**Shilin** baz=230	**0.29**	**226**	⇑*i*P	**Pg**	**16 34 41.8**	**-0.2**
ESL	baz=230			S	**Sg**	**16 34 45.6**	**-0.3**
EHP	**Heping Village** baz=15	**0.30**	**14**	P	**Pg**	**16 34 42.4**	**+0.1**
EHP	baz=15			*e*S	**Sg**	**16 34 47.0**	**+0.6**
TEGC	**Jichi Village** baz=203	**0.32**	**200**	*i* P	**Pb**	**16 34 43.9**	**-0.3**
TEGC	baz=203			S	**Sb**	**16 34 50.3**	**+0.7**
EAHA	**Aohua** baz=12	**0.32**	**13**	⇓*i*P	**Pg**	**16 34 42.6**	**-0.1**
EAHA	baz=12			*i* S	**Sg**	**16 34 47.4**	**+0.5**
WHF	**Hehuan Shan** baz=291	**0.38**	**290**	⇑P	**Pg**	**16 34 43.8**	**-0.2**
WHF	baz=291			S	**Sg**	**16 34 48.7**	**-0.3**
WARBT	**Fenglin Townsh** baz=228	**0.39**	**221**	⇑P	**Pg**	**16 34 43.6**	**-0.2**
WARBT	baz=228			*e*S	**Sg**	**16 34 49.2**	**+0.3**
EGFH	**Guangfu** baz=216	**0.40**	**212**	*e*P	**Pg**	**16 34 44.6**	**+0.4**
ENA	**Nanau** baz=11	**0.42**	**10**	⇓*i*P	**Pg**	**16 34 44.5**	**0.0**
ENA	baz=11			*i* S	**Sg**	**16 34 50.3**	**+0.3**
EWUT	**Wuta** baz=12	**0.44**	**14**	*i* P	**Pg**	**16 34 44.9**	**-0.1**
EWUT	baz=12			*i* S	**Sg**	**16 34 51.2**	**+0.4**
FUSS	**Fushou** baz=302	**0.45**	**302**	⇑*i*P	**Pg**	**16 34 45.1**	**+0.1**
FUSS	baz=302			*i* S	**Sg**	**16 34 51.0**	**+0.1**
CHGB	**Renai** baz=276	**0.45**	**276**	⇑*i*P	**Pg**	**16 34 45.1**	**+0.1**
CHGB	baz=276			*i* S	**Sg**	**16 34 50.8**	**-0.1**
OWD	**Renai** baz=271	**0.45**	**263**	⇑*i*P	**Pg**	**16 34 45.0**	**0.0**
OWD	baz=271			S	**Sg**	**16 34 51.2**	**+0.3**
NNSB	**Datong** baz=330	**0.48**	**329**	⇓*i*P	**Pg**	**16 34 45.7**	**0.0**
NNSB	baz=330			*i* S	**Sg**	**16 34 51.8**	**-0.3**
NNSH	**Datong** baz=330	**0.48**	**329**	P	**Pg**	**16 34 45.6**	**-0.1**
NNSH	baz=330			S	**Sg**	**16 34 51.8**	**-0.3**
WUSB	**Renai** baz=267	**0.50**	**268**	⇑*i*P	**Pg**	**16 34 46.1**	**+0.2**
WUSB	baz=267			*i* S	**Sb**	**16 34 53.1**	**-1.7**
NNS	**Nan Shan** baz=331	**0.50**	**328**	⇓*i*P	**Pg**	**16 34 46.0**	**0.0**
NNS	baz=331			S	**Sg**	**16 34 52.3**	**-0.3**
TWT	**Tachien** baz=298	**0.50**	**298**	⇑*i*P	**Pb**	**16 34 46.6**	**-0.9**
TWT	baz=298			*i* S	**Sg**	**16 34 53.2**	**+0.5**
TDCB	**Techi** baz=298	**0.52**	**298**	⇑*i*P	**Pg**	**16 34 46.6**	**+0.3**
TDCB	baz=298			*i* S	**Sg**	**16 34 53.0**	**-0.2**
LATG	**Datong** baz=349	**0.53**	**347**	⇓P	**Pg**	**16 34 46.7**	**0.0**
LATG	baz=349			*e*S	**Sg**	**16 34 53.4**	**-0.3**
VWDT	**VWDT** baz=232	**0.54**	**242**	⇑*i*P	**Pg**	**16 34 47.0**	**+0.3**
VWDT	baz=232			*e*S	**Sb**	**16 34 54.8**	**-1.1**
HGSD	**Ruisui** baz=189	**0.56**	**203**	P	**Pb**	**16 34 48.3**	**-0.1**
ESAO	**Su ao** baz=15	**0.58**	**17**	P	**Pg**	**16 34 47.7**	**+0.1**
ESAO	baz=15			*e*S	**Sg**	**16 34 55.1**	**-0.2**
EHY	**Hungye** baz=218	**0.59**	**212**	⇑P	**Pg**	**16 34 47.4**	**-0.4**
EHY	baz=218			S	**Sb**	**16 34 56.8**	**-0.6**
NDT	**Datong Townshi** baz=349	**0.60**	**347**	⇓*i*P	**Pg**	**16 34 48.2**	**+0.2**
NDT	baz=349			S	**Sg**	**16 34 55.9**	**+0.1**
TWC	**Suao** baz=15	**0.62**	**16**	P	**Pg**	**16 34 48.2**	**0.0**
TWC	baz=15			*i* S	**Sg**	**16 34 56.6**	**+0.3**
NDS	**Dongshan** baz=6.0	**0.62**	**5**	⇓*i*P	**Pg**	**16 34 48.4**	**+0.1**
NDS	baz=6.0			*i* S	**Sg**	**16 34 57.0**	**+0.6**
ENTT	**Nioudou** baz=353	**0.63**	**352**	⇓*i*P	**Pg**	**16 34 48.7**	**+0.2**
ENTT	baz=353			*i* S	**Sg**	**16 34 56.8**	**+0.1**
WPL	**Puli Township** baz=270	**0.64**	**270**	⇑*i*P	**Pb**	**16 34 48.9**	**-0.9**
WPL	baz=270			*i* S	**Sg**	**16 34 57.4**	**+0.3**
DPDB	**Guoxing** baz=272	**0.67**	**272**	⇑*i*P	**Pb**	**16 34 49.5**	**-0.8**
DPDB	baz=272			*e*S	**Sb**	**16 34 58.8**	**-1.0**
SSLB	**Suanglung** baz=261	**0.68**	**251**	⇑*i*P	**Pg**	**16 34 49.4**	**-0.1**
SSLB	baz=261			*i* S	**Sg**	**16 34 57.4**	**-1.0**
WCS	**Beigang Elemen** baz=274	**0.69**	**274**	⇑*i*P	**Pb**	**16 34 49.8**	**-0.7**
WCS	baz=274			S	**Sg**	**16 34 58.6**	**+0.2**
YULB	**Yu-li** baz=219	**0.70**	**208**	*e*P	**Pg**	**16 34 49.7**	**-0.1**

YULB	baz=219			eS	Sb	16 35 00.3	-0.2
YHNB	Yeheng baz=331	0.70	338	⇓iP	Pb	16 34 50.1	-0.7
YHNB	baz=331			S	Sg	16 34 59.5	+0.4
WHP	Taichung City baz=284	0.70	292	⇑iP	Pb	16 34 50.4	-0.4
WHP	baz=284			iS	Sb	16 34 59.6	-1.1
TWE	Neicheng baz=2.0	0.70	0	⇓iP	Pg	16 34 50.1	+0.3
TWE	baz=2.0			iS	Sg	16 34 59.7	+0.6
SMLT	Sun Moon Lake baz=259	0.71	260	⇑iP	Pb	16 34 50.2	-0.7
SMLT	baz=259			iS	Sg	16 34 59.4	+0.2
NSK	Sanguang baz=330	0.71	337	P	Pg	16 34 50.2	+0.1
NSK	baz=330			S	Sg	16 34 59.6	+0.2
ECBN	Changbin baz=184	0.72	195	P	Pb	16 34 51.2	+0.1
EYUL	Yuli baz=220	0.73	205	eP	Pb	16 34 51.0	-0.3
TWF1	Yuli baz=221	0.74	207	eP	Pg	16 34 50.1	-0.4
TYC	Yuchr baz=261	0.74	262	⇑iP	Pg	16 34 50.6	0.0
TYC	baz=261			eS	Sb	16 35 01.3	-0.4
FUSB	Fushanzhiwuyua baz=357	0.75	355	⇓iP	Pg	16 34 50.7	0.0
FUSB	baz=357			S	Sg	16 35 00.3	-0.1
ILA	Ilan baz=7.0	0.75	6	eP	Pb	16 34 51.2	-0.5
NWLT	Wulai baz=351	0.77	349	eP	Pb	16 34 51.4	-0.6
NWLT	baz=351			eS	Sg	16 35 00.8	-0.5
NFF	Wufeng Townshi baz=322	0.79	321	P	Pb	16 34 51.8	-0.5
NFF	baz=322			S	Sb	16 35 02.3	-0.9
WHYT	Xinyi Township baz=254	0.80	247	eP	Pg	16 34 51.5	-0.2
WHYT	baz=254			eS	Sb	16 35 03.1	-0.4
CHKH	Chenggong baz=189	0.85	197	P	Pb	16 34 53.2	-0.1
CHKH	baz=189			eS	Sn	16 35 07.2	-0.1
NSTT	Nanjuang baz=316	0.86	316	⇑iP	Pb	16 34 53.4	-0.1
NSTT	baz=316			iS	Sg	16 35 03.8	-0.2
LIOB	Emei baz=317	0.86	317	⇑P	Pb	16 34 53.7	+0.2
LIOB	baz=317			eS	Sb	16 35 04.9	-0.3
WJS	Zhushan baz=257	0.87	258	P	Pb	16 34 53.7	0.0
WJS	baz=257			eS	Sb	16 35 06.5	+1.0
TWQ1	Liyutan baz=293	0.88	293	P	Pb	16 34 53.6	-0.1
FULB	Fuli baz=218	0.88	203	eP	Pb	16 34 53.8	+0.1
WWF	Wufeng baz=271	0.88	272	eP	Pb	16 34 54.3	+0.5
NJD	Zhudong baz=333	0.89	324	eP	Pb	16 34 54.4	+0.4
WNT	Mingjian baz=261	0.90	262	eP	Pn	16 34 54.8	-0.5
WNT	baz=261			eS	Sn	16 35 08.0	-0.5
WNT1	Nantou City baz=263	0.90	263	P	Pn	16 34 54.8	-0.5
WNT1	baz=263			eS	Sn	16 35 08.3	-0.2
TCU	Taichung baz=271	0.91	279	eP	Pn	16 34 55.3	0.0
ALS	Alishan baz=236	0.93	238	P	Pb	16 34 54.2	-0.6
ALS	baz=236			eS	Sb	16 35 07.5	0.0
CHKT	Chengkung baz=190	0.95	197	P	Pb	16 34 54.7	-0.3
CHKT	baz=190			eS	Sb	16 35 08.7	+1.0
NMLH	Miaoli baz=304	0.95	304	eP	Pn	16 34 55.6	-0.3
NHDH	Xindian Distri baz=346	0.95	353	eP	Pb	16 34 55.3	+0.2
EHD	Haiduan baz=209	0.96	206	eP	Pb	16 34 54.9	-0.2
HSN1	Hsinchu baz=324	0.96	323	eP	Pn	16 34 56.0	0.0
TWA	Mucha baz=347	0.96	356	P	Pb	16 34 55.1	-0.2
TWA	baz=347			S	Sb	16 35 07.8	-0.4
TIPB	Shuangxi baz=2.0	0.97	9	eP	Pg	16 34 54.8	0.0
TIPB	baz=2.0			eS	Sg	16 35 07.1	-0.4
TATO	Taipei baz=353	0.97	351	P	Pb	16 34 55.2	-0.2
TATO	baz=353			S	Sb	16 35 07.8	-0.5
WDJ	Dajia District baz=290	0.99	290	⇑eP	Pn	16 34 56.2	-0.2
WYL	Yuanlin Townsh baz=268	0.99	267	eP	Pn	16 34 56.2	-0.2
SBCB	Hsinchu baz=323	0.99	322	eP	Pn	16 34 56.5	0.0
CHN5	Tsauling baz=234	0.99	245	⇑iP	Pb	16 34 56.0	+0.2
CHN5	baz=234			S	Sn	16 35 10.4	-0.4
BACT	New Taipei Cit baz=350	1.00	349	eP	Pb	16 34 56.1	+0.3
HSN	Hsinchu baz=325	1.01	321	eP	Pn	16 34 56.8	+0.1
WCHH	Zhanghua baz=274	1.01	274	P	Pn	16 34 56.9	+0.2
ELDTW	Lidau baz=204	1.01	216	eP	Pg	16 34 54.6	-1.1
TAP	Taipei baz=344	1.03	352	eP	Pg	16 34 55.7	-0.4
TAP	baz=344			eS	Sg	16 35 09.6	+0.1
TWB1	Santiao Chiao baz=8.0	1.03	17	P	Pg	16 34 56.1	-0.1
TWB1	baz=8.0			eS	Sg	16 35 09.0	-0.7
NCUH	Zhongli baz=336	1.04	336	eP	Pn	16 34 57.4	+0.2
NCU	National Centr baz=337	1.05	336	eP	Pn	16 34 58.0	+0.7
WGK	Gukeng baz=253	1.06	252	⇑P	Pn	16 34 57.4	+0.1
NWF	Wu-fen Shan baz=348	1.06	6	⇑P	Pb	16 34 56.8	-0.1
NWF	baz=348			eS	Sg	16 35 10.0	-0.4
WFSB	Wu-fen Shan baz=348	1.06	6	eP	Pb	16 34 57.0	+0.1
WFSB	baz=348			eS	Sg	16 35 10.1	-0.3
WDLH	Douliu baz=253	1.08	253	eP	Pn	16 34 57.9	+0.2
SXI1	Grass Mountain baz=352	1.09	10	eP	Pb	16 34 57.8	+0.3
TWS1	Kuangyinshan baz=351	1.10	349	⇑P	Pn	16 34 58.7	+0.7
TWS1	baz=351			eS	Sn	16 35 13.1	-0.4
WCKO	Fanlu baz=240	1.12	240	eP	Pb	16 34 58.1	+0.1
WCKO	baz=240			eS	Sn	16 35 15.4	+1.5
YM01	YM01 baz=357	1.13	356	P	Pn	16 34 58.5	0.0
YM01	baz=357			eS	Sb	16 35 13.4	+0.4
NHW	Xinwu Township baz=331	1.14	331	eP	Pn	16 34 58.9	+0.4
TNOU	National Taiwa baz=5.0	1.14	5	eP	Pg	16 34 57.9	-0.2
NTST	Danshui baz=351	1.16	351	eP	Pn	16 34 59.3	+0.5
STYH	Taoyuan baz=214	1.17	224	eP	Pn	16 34 58.9	+0.1
ANP	Anpu baz=355	1.18	354	eP	Pb	16 34 58.9	0.0
WRL	Guollerlin Hig baz=265	1.18	265	eP	Pn	16 34 59.2	+0.2
CHN4	Tsaushan baz=223	1.18	236	P	Pn	16 34 59.1	+0.1
CHN4	baz=223			eS	Sn	16 35 17.3	+2.0
TPUB	Ta-pu baz=234	1.18	233	⇑P	Pn	16 34 59.3	+0.1
STYT	Tauyuan baz=224	1.19	225	⇑iP	Pb	16 34 59.0	0.0
STYT	baz=224			S	Sb	16 35 15.0	+0.5
CHN2	Minshiung baz=247	1.19	246	eP	Pn	16 35 00.0	+0.8
RLNB	Erlin baz=265	1.20	264	P	Pn	16 34 59.8	+0.5
LONT	Longtian baz=207	1.21	204	eP	Pg	16 34 57.6	-1.8
WTK	Tuku baz=255	1.21	255	eP	Pn	16 35 00.1	+0.6
WTP	Ta-pu baz=232	1.23	232	eP	Pn	16 35 00.1	+0.3
JYNG	Yonagunijimaku	1.25	69	eP	Pg	16 34 59.9	-0.4
TWY	Chenhua baz=345	1.26	357	eP	Pn	16 35 00.6	+0.4
WTCT	Ta-ch'eng baz=264	1.27	264	eP	Pb	16 35 00.3	-0.2
TWG	Pinlang baz=208	1.30	205	eP	Pg	16 34 58.4	-2.9
TWGBT	Beinan baz=208	1.30	204	⇓eP	Pg	16 34 58.4	-2.9
TWK	Hsinying baz=236	1.31	236	P	Pb	16 35 01.9	+0.7
TWK	baz=236			eS	Sn	16 35 20.1	+1.6
YOJ	Yonaguni jima baz=67	1.31	70	eP	Pn	16 35 00.5	-0.3
YOJ	Yonaguni jima	1.31	70	eP	Pn	16 35 00.9	0.0
YOJ				eS	Sn	16 35 19.3	+0.7
CHN1	Nanshi baz=232	1.33	232	eP	Pb	16 35 02.1	+0.7
CHN1	baz=232			eS	Sn	16 35 21.8	+2.9
SNST	Tainan City baz=235	1.33	234	eP	Pb	16 35 01.9	+0.5
SNST	baz=235			eS	Sn	16 35 19.9	+0.9
LDUT	Ludao baz=176	1.34	188	eP	Pn	16 35 00.9	-0.4
SGST	Jiashian baz=227	1.35	227	eP	Pn	16 35 01.2	-0.3
SGST	baz=227			S	Sn	16 35 20.8	+1.1
WSF	Szhu baz=255	1.37	254	eP	Pg	16 35 02.0	-0.5
SLGT	Liugui baz=225	1.38	223	eP	Pb	16 35 02.1	-0.1
WSL	Shuilin Townsh baz=264	1.40	250	eP	Pg	16 35 03.0	-0.2
ICHU	Yijhu baz=245	1.42	243	eP	Pg	16 35 03.6	0.0
CHN8	Yiju baz=246	1.48	244	eP	Pb	16 35 03.8	-0.3
CHN3	Shinhua baz=235	1.51	232	eP	Pg	16 35 05.2	-0.1
ECL	Taimali baz=190	1.55	205	eP	Pn	16 35 03.0	-1.2
SCST	Cishan baz=212	1.55	224	eP	Pg	16 35 05.5	-0.5
SHHT	Tainan City baz=234	1.56	231	eP	Pg	16 35 06.0	-0.2
SSD	Sandimen baz=218	1.58	217	eP	Pn	16 35 03.7	-0.8
SSD	baz=218			eS	Sg	16 35 26.3	-0.6
TSMG	Majia baz=208	1.60	216	eP	Pn	16 35 05.1	+0.2
TWM1	Shoushan baz=226	1.64	224	⇑P	Pg	16 35 08.0	+0.3
SGLT	Jiouru baz=210	1.67	220	eP	Pg	16 35 07.8	-0.5
MASBT	Mashibuluo baz=204	1.69	214	eP	Pn	16 35 05.5	-0.5
EAST	Anshuo baz=191	1.79	205	eP	Pb	16 35 08.6	-0.7
TAWH	Dawu Township baz=190	1.81	203	eP	Pb	16 35 09.8	+0.1
SCZT	Fangliau baz=200	1.89	211	eP	Pn	16 35 09.7	+0.9
PHUB	P'eng-hu baz=256	1.98	256	eP	Pn	16 35 10.9	+0.9
PHUB	baz=256			eS	Sn	16 35 36.1	+1.1
PNG	Penghu baz=259	1.98	257	eP	Pn	16 35 10.3	+0.3
VCHM	Qimei baz=250	2.20	249	eP	Pn	16 35 12.8	-0.2
VCHM	baz=250			eS	Sn	16 35 41.5	+1.0
TWKBT	Hengchun baz=202	2.21	201	eP	Pn	16 35 12.7	-0.5
VWUC	VWUC baz=296	2.24	296	eP	Pn	16 35 13.4	-0.2
JIJ	Ishigaki jima	2.29	81	eP	Pn	16 35 14.3	-0.1
JIJ				S	Sn	16 35 43.0	+0.1
JISG	Ishigakijimahi	2.48	76	P	Pn	16 35 17.0	0.0
JISG				S	Sn	16 35 47.7	+0.2
PTMZ	Houxiangcun baz=294	2.53	294	eP	Pn	16 35 17.4	-0.2
MATB	Ma-tsu baz=323	2.64	324	eP	Pn	16 35 19.8	+0.7
KNM	Kinmen baz=279	2.97	278	eP	Pn	16 35 25.9	+2.1
KNMB	Chin-men Tao baz=280	3.02	279	eP	Pn	16 35 24.2	-0.2
LYJJ	Jianjiangzhen baz=325	3.06	326	eP	Pn	16 35 25.0	+0.1
MHZQ	Yeshan baz=310	3.16	312	eP	Pn	16 35 26.9	+0.5
XPSS	Dashiqiu baz=334	3.19	336	eP	Pn	16 35 26.8	0.0
JMJ	Miyako jima 2 baz=78	3.41	76	eP	Pn	16 35 30.0	+0.3
AXDP	Jialang baz=286	3.48	285	eP	Pn	16 35 30.6	-0.1
ZPLA	Ao Xicun baz=271	3.58	269	eP	Pn	16 35 32.0	-0.1
DSXP	Dongshan baz=268	3.89	266	eP	Pn	16 35 36.2	-0.1
SXFK	Yanhouchang baz=302	4.34	304	eP	Pn	16 35 42.7	+0.1

*IDC **06** 16:35:45.3±1.4, 23.°79N±121.°23E, h0km, mb3.4/6, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=45.7km s-min=22.7km az=65.0*

*JMA **06** 16:35:47.0±0.2, 24.°0N±0.°3×12°2E±°, h0km, MV3.3/10, TAIWAN REGION*

*TAP **06** 16:35:46.9, 24.°04N×121.°65E, h6km, ML3.9, C*

ISC 06 16:35:46.6±0.8, 24.°03N±0.°01×121.°68E±0.°02, h9km±5km, n147, σ1.01/206, mb3.5/6, 13C-23D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan baz=310	0.09	305	⇓iP	Pg	16 35 48.9	-0.1
TWD	baz=310			iS	Sg	16 35 50.2	-0.5
ETL	Fush Village baz=345	0.14	339	⇓iP	Pg	16 35 49.9	+0.1
ETL	baz=345			iS	Sg	16 35 51.9	-0.2
NACB	Ninganchiao baz=336	0.16	333	⇓iP	Pg	16 35 50.2	0.0
NACB	baz=336			iS	Sg	16 35 52.5	-0.2
ETM	Tongmen baz=244	0.18	250	P	Pg	16 35 50.5	+0.1
ETM	baz=244			iS	Sg	16 35 53.2	+0.2
LXIB	Xiulin Townshi baz=254	0.24	269	⇑iP	Pg	16 35 51.8	+0.2
LXIB	baz=254			eS	Sg	16 35 54.9	0.0
SHUL	Shoufeng baz=205	0.26	204	P	Pb	16 35 53.2	-0.3
SHUL	baz=205			eS	Sb	16 36 00.1	+2.0
EHP	Heping Village baz=10.0	0.29	12	P	Pg	16 35 52.9	+0.5
EHP	baz=10.0			iS	Sg	16 35 57.0	+0.7
EAHA	Aohua baz=11	0.31	11	⇓P	Pg	16 35 53.0	+0.3
EAHA	baz=11			S	Sg	16 35 57.6	+0.8
ESL	Shilin baz=232	0.31	227	⇑iP	Pg	16 35 53.1	+0.3
ESL	baz=232			iS	Sg	16 35 57.4	+0.5
TEGC	Jichi Village baz=205	0.34	202	P	Pb	16 35 55.2	+0.3
TEGC	baz=205			eS	Sb	16 36 03.7	+3.3
WHF	Hehuan Shan baz=286	0.39	287	⇑iP	Pg	16 35 54.8	+0.3
WHF	baz=286			iS	Sg	16 35 60.0	+0.2
ENA	Nanau baz=7.0	0.40	8	⇓iP	Pg	16 35 55.0	+0.4
ENA	baz=7.0			iS	Sg	16 36 00.3	+0.4
WARBT	Fenglin Townsh baz=220	0.41	221	⇑iP	Pg	16 35 55.0	+0.3
EGFH	Guangfu baz=219	0.42	213	eP	Pg	16 35 55.5	+0.5
EWUT	Wuta baz=10.0	0.43	13	⇓iP	Pg	16 35 55.4	+0.4
EWUT	baz=10.0			S	Sg	16 36 01.3	+0.6
FUSS	Fushou baz=298	0.45	299	⇓iP	Pg	16 35 56.2	+0.6
FUSS	baz=298			S	Sg	16 36 02.3	+0.8
CHGB	Renai baz=272	0.46	274	P	Pg	16 35 56.2	+0.5
CHGB	baz=272			S	Sg	16 36 02.0	+0.2
OWD	Renai baz=258	0.46	261	⇑iP	Pg	16 35 56.2	+0.5
NNSB	Datong baz=326	0.48	326	⇓iP	Pg	16 35 56.5	+0.4
NNSB	baz=326			iS	Sg	16 36 02.6	+0.2
NNSH	Datong baz=326	0.48	326	⇓iP	Pg	16 35 56.5	+0.5
NNSH	baz=326			iS	Sg	16 36 02.8	+0.4
NNS	Nan Shan baz=327	0.50	326	⇓iP	Pg	16 35 56.8	+0.4
NNS	baz=327			iS	Sg	16 36 03.1	+0.2
TWT	Tachien baz=294	0.51	296	⇓iP	Pb	16 35 57.5	-0.4
TWT	baz=294			iS	Sb	16 36 04.4	-1.1
WUSB	Renai baz=264	0.51	266	⇑iP	Pb	16 35 57.3	-0.6
WUSB	baz=264			iS	Sg	16 36 03.9	+0.5
LATG	Datong baz=345	0.52	345	⇓P	Pg	16 35 57.2	+0.4
LATG	baz=345			iS	Sg	16 36 04.0	+0.1
TDCB	Techi baz=294	0.53	296	⇓P	Pb	16 35 57.5	-0.5
TDCB	baz=294			iS	Sb	16 36 04.7	-1.2
VWDT	VWDT baz=239	0.56	241	P	Pb	16 35 58.2	-0.4
VWDT	baz=239			eS	Sg	16 36 05.3	+0.4
ESAO	Su ao baz=4.0	0.57	16	eP	Pg	16 35 57.8	+0.1
HGSD	Ruisui baz=189	0.58	204	eP	Pb	16 36 00.8	+1.8
NDT	Datong Townshi baz=344	0.59	345	⇓iP	Pg	16 35 58.8	+0.7
NDT	baz=344			S	Sg	16 36 06.5	+0.6
TWC	Suao baz=7.0	0.60	15	⇓iP	Pg	16 35 58.7	+0.4
TWC	baz=7.0			S	Sg	16 36 06.2	0.0
NDS	Dongshan baz=2.0	0.60	3	⇓iP	Pg	16 35 58.9	+0.5
EHY	Hungye baz=211	0.61	212	P	Pg	16 35 58.8	+0.3
ENTT	Nioudou baz=350	0.62	351	⇓iP	Pg	16 35 59.3	+0.6
ENTT	baz=350			S	Sg	16 36 06.6	-0.2
WPL	Puli Township baz=267	0.66	269	P	Pb	16 35 60.0	-0.3
WPL	baz=267			S	Sg	16 36 08.5	+0.5
DPDB	Guoxing baz=269	0.69	271	⇑iP	Pb	16 36 00.9	+0.1
DPDB	baz=269			eS	Sg	16 36 09.4	+0.5
TWE	Neicheng baz=358	0.69	359	⇓iP	Pg	16 36 00.6	+0.6
TWE	baz=358			S	Sg	16 36 10.0	+0.9
YHNB	Yeheng baz=327	0.70	337	⇓iP	Pb	16 36 00.9	-0.1
YHNB	baz=327			iS	Sg	16 36 09.9	+0.6
WCS	Beigang Elemen baz=271	0.70	273	⇑P	Pb	16 36 01.0	0.0
SSLB	Suanglung baz=261	0.70	250	⇑iP	Pb	16 36 00.8	-0.3
SSLB	baz=261			S	Sg	16 36 08.9	-0.5
NSK	Sanguang baz=327	0.71	336	⇓iP	Pb	16 36 01.1	-0.1
NSK	baz=327			iS	Sg	16 36 10.1	+0.4
WHP	Taichung City baz=289	0.71	291	⇑iP	Pb	16 36 01.5	+0.2
WHP	baz=289			iS	Sb	16 36 11.2	-0.1
YULB	Yu-li baz=212	0.72	209	eP	Pg	16 36 00.7	+0.2
SMLT	Sun Moon Lake baz=257	0.72	259	⇑iP	Pb	16 36 01.4	-0.1
SMLT	baz=257			S	Sg	16 36 10.6	+0.5
FUSB	Fushanzhiwuyua baz=352	0.73	354	⇓iP	Pg	16 36 01.4	+0.6
FUSB	baz=352			S	Sb	16 36 12.1	+0.3
ECBN	Changbin baz=185	0.74	196	eP	Pb	16 36 02.6	+0.9
ILA	Ilan baz=3.0	0.74	5	eP	Pg	16 36 01.6	+0.7
EYUL	Yuli baz=223	0.75	206	eP	Pg	16 36 01.5	+0.4
TWF1	Yuli baz=222	0.76	207	eP	Pg	16 36 01.7	+0.4
TYC	Yuchr baz=259	0.76	261	⇑iP	Pb	16 36 01.9	-0.2
TYC	baz=259			S	Sg	16 36 11.3	+0.1
NWLT	Wulai baz=347	0.76	348	⇓P	Pg	16 36 02.1	+0.7
NWLT	baz=347			eS	Sg	16 36 11.9	+0.6
NFF	Wufeng Townshi baz=320	0.79	320	eP	Pb	16 36 02.7	+0.1
WHYT	Xinyi Township baz=245	0.82	247	eP	Pb	16 36 03.1	0.0
NSTT	Nanjuang baz=314	0.86	314	P	Pb	16 36 04.3	+0.6
NSTT	baz=314			S	Sb	16 36 15.3	-0.1

LIOB	Emei	0.86	316	eP	Pb	16 36 04.5 +0.7
	baz=316					
CHKH	Chenggong	0.87	197	eP	Pb	16 36 04.9 +1.0
	baz=188					
TWQ1	Liyutan	0.89	291	eP	Pb	16 36 05.2 +1.0
	baz=291					
NJD	Zhudong	0.89	323	eP	Pb	16 36 05.2 +1.0
	baz=330					
WJS	Zhushan	0.89	257	eP	Pb	16 36 05.3 +1.0
	baz=255					
WWF	Wufeng	0.90	271	eP	Pn	16 36 06.1 +0.7
	baz=270					
FULB	Fuli	0.90	203	eP	Pb	16 36 05.6 +1.2
	baz=221					
WNT	Mingjian	0.92	261	eP	Pb	16 36 05.8 +1.1
	baz=259					
WNT				eS	Sn	16 36 19.3 +0.3
	baz=259					
WNT1	Nantou City	0.92	263	eP	Pn	16 36 06.0 +0.3
	baz=261					
WNT1				eS	Sn	16 36 20.0 +0.9
	baz=261					
TCU	Taichung	0.92	278	eP	Pn	16 36 06.3 +0.6
	baz=277					
NHDH	Xindian Distri	0.94	352	eP	Pg	16 36 04.0 -0.8
	baz=351					
ALS	Alishan	0.95	237	⇑P	Pb	16 36 05.5 0.0
	baz=245					
TIPB	Shuangxi	0.95	8	eP	Pg	16 36 05.3 +0.4
	baz=355					
TIPB				S	Sg	16 36 17.2 -0.1
	baz=355					
TWA	Mucha	0.95	355	P	Pg	16 36 05.2 +0.3
	baz=354					
NMLH	Miaoli	0.95	302	eP	Pn	16 36 07.1 +0.8
	baz=302					
HSN1	Hsinchu	0.96	321	eP	Pn	16 36 06.9 +0.6
	baz=322					
TATO	Taipei	0.96	350	⇓P	Pb	16 36 05.9 +0.4
	baz=348					
CHKT	Chengkung	0.97	197	P	Pb	16 36 06.0 +0.4
	baz=193					
CHKT				eS	Sn	16 36 21.9 +1.7
	baz=193					
EHD	Haiduan	0.97	206	eP	Pg	16 36 05.5 +0.1
	baz=211					
SBCB	Hsinchu	0.99	321	eP	Pn	16 36 08.8 +2.1
	baz=321					
WDJ	Dajia District	1.00	289	eP	Pn	16 36 08.1 +1.3
	baz=297					
WDJ				eS	Sn	16 36 21.6 +0.6
	baz=297					
WYL	Yuanlin Townsh	1.00	266	eP	Pb	16 36 07.2 +1.0
	baz=253					
HSN	Hsinchu	1.01	320	eP	Pn	16 36 08.1 +1.2
	baz=322					
HSN				eS	Sn	16 36 22.2 +1.0
	baz=322					
CHN5	Tsauling	1.01	245	P	Pb	16 36 07.2 +0.8
	baz=234					
CHN5				eS	Sn	16 36 22.4 +1.0
	baz=234					
TWB1	Santiao Chiao	1.02	16	eP	Pg	16 36 06.3 +0.1
	baz=2.0					
TWB1				eS	Sg	16 36 20.0 +0.5
	baz=2.0					
ECS	Chishang	1.02	204	eP	Pb	16 36 07.4 +0.9
	baz=223					
TAP	Taipei	1.02	351	eP	Pb	16 36 07.3 +0.9
	baz=340					
TAP				eS	Sg	16 36 20.1 +0.5
	baz=340					
WCHH	Zhanghua	1.02	273	eP	Pn	16 36 07.9 +0.7
	baz=271					
WCHH				eS	Sn	16 36 23.9 +2.3
	baz=271					
ELDTW	Lidau	1.03	216	eP	Pg	16 36 05.9 -0.6
	baz=219					
NCUH	Zhongli	1.04	335	eP	Pb	16 36 07.8 +1.0
	baz=334					
NCU	National Centr	1.04	335	eP	Pn	16 36 08.2 +0.8
	baz=334					
NCU				eS	Sn	16 36 23.7 +1.6
	baz=334					
NWF	Wu-fen Shan	1.04	5	eP	Pg	16 36 07.3 +0.6
NWF				eS	Sg	16 36 20.4 +0.1
WFSB	Wu-fen Shan	1.04	5	P	Pg	16 36 07.1 +0.4
	baz=1.0					
WFSB				S	Sg	16 36 20.5 +0.2
	baz=1.0					
WGK	Gukeng	1.08	252	P	Pn	16 36 08.6 +0.8
	baz=251					
WGK				eS	Sn	16 36 23.2 +0.3
	baz=251					
SXI1	Grass Mountain	1.08	10	eP	Pb	16 36 08.2 +0.7
	baz=353					
TWS1	Kuangyinshan	1.09	348	P	Pb	16 36 08.8 +1.1
	baz=347					
TWS1				S	Sb	16 36 23.4 +1.3
	baz=347					
WDLH	Douliu	1.10	252	eP	Pn	16 36 09.3 +1.1
	baz=252					
YM01	YM01	1.12	355	P	Pb	16 36 08.9 +0.7
	baz=2.0					
TNOU	National Taiwa	1.12	4	eP	Pg	16 36 08.0 -0.2
NHW	Xinwu Township	1.13	330	eP	Pn	16 36 09.7 +1.1
	baz=328					
WCKO	Fanlu	1.14	239	P	Pn	16 36 09.6 +0.8
	baz=240					
WCKO				eS	Sn	16 36 25.6 +0.9
	baz=240					
NTST	Danshui	1.15	350	eP	Pn	16 36 10.4 +1.5
	baz=348					
ANP	Anpu	1.16	353	P	Pb	16 36 09.9 +0.9
	baz=350					
STYH	Taoyuan	1.19	224	P	Pn	16 36 10.6 +1.2
	baz=216					
WRL	Guolierlin Hig	1.20	264	eP	Pn	16 36 10.6 +1.1
	baz=264					
CHN4	Tsaushan	1.20	236	P	Pn	16 36 10.9 +1.3
	baz=237					
TPUB	Ta-pu	1.20	233	P	Pn	16 36 10.6 +0.9
	baz=233					
STYT	Tauyuan	1.21	225	P	Pb	16 36 10.5 +0.9
	baz=227					
STYT				eS	Sn	16 36 28.3 +2.1
	baz=227					
CHN2	Minshiung	1.21	246	eP	Pn	16 36 11.3 +1.7
	baz=247					
RLNB	Erlin	1.21	264	eP	Pn	16 36 11.2 +1.4
	baz=264					
LONT	Longtian	1.22	204	eP	Pn	16 36 11.3 +1.4
	baz=209					
WTK	Tuku	1.23	254	eP	Pb	16 36 10.7 +0.7
	baz=254					
TWY	Chenhua	1.25	357	eP	Pn	16 36 12.5 +2.3
	baz=342					
WTP	Ta-pu	1.25	232	eP	Pn	16 36 11.3 +1.1
	baz=232					
WTCT	Ta-ch'eng	1.29	263	eP	Pn	16 36 12.6 +1.9
	baz=263					
YOJ	Yonaguni jima	1.29	70	eP	Pg	16 36 10.9 -0.6
	baz=65					
YOJ	Yonaguni jima	1.29	70	eP	Pg	16 36 12.0 +0.5
TWG	Pinlang	1.32	205	eP	Pg	16 36 09.8 -2.2
	baz=210					
TWGBT	Beinan	1.32	205	eP	Pg	16 36 10.1 -2.0
	baz=210					
TWK	Hsinying	1.33	235	P	Pn	16 36 12.8 +1.5
	baz=237					
TWK				S	Sn	16 36 31.9 +2.7
	baz=237					
CHN1	Nanshi	1.35	232	P	Pn	16 36 13.4 +1.7
	baz=233					
CHN1				eS	Sn	16 36 32.5 +2.9
	baz=233					
SNST	Tainan City	1.35	234	eP	Pn	16 36 13.2 +1.6
	baz=234					
SGST	Jiashian	1.38	227	P	Pn	16 36 13.1 +1.0
	baz=228					
WSF	Szhu	1.39	254	eP	Pb	16 36 13.6 +0.9
	baz=254					
WSF				eS	Sn	16 36 33.0 +2.4
	baz=254					
SLGT	Liugui	1.40	223	eP	Pb	16 36 14.2 +1.3
	baz=226					
ICHU	Yijhu	1.44	243	eP	Pb	16 36 14.7 +1.1
	baz=246					
CHN8	Yiju	1.50	244	eP	Pg	16 36 15.2 -0.3
	baz=246					
CHN3	Shinhua	1.53	232	eP	Pg	16 36 17.1 +1.1
	baz=237					
ECL	Taimali	1.57	205	eP	Pn	16 36 14.3 -0.3
	baz=195					
SCST	Cishan	1.57	224	eP	Pg	16 36 17.7 +0.9
	baz=216					
SHHT	Tainan City	1.58	231	eP	Pg	16 36 18.0 +1.1
	baz=236					
SSD	Sandimen	1.60	217	eP	Pn	16 36 15.9 +0.9
	baz=211					
TWM1	Shoushan	1.66	224	eP	Pg	16 36 19.2 +0.7
	baz=228					
SGLT	Jiouru	1.69	220	eP	Pn	16 36 17.3 +1.0
	baz=214					
TSCK	Chigu Township	1.70	239	eP	Pb	16 36 18.4 +0.3
MASBT	Mashibuluo	1.71	214	eP	Pn	16 36 16.9 +0.4
	baz=208					
TSPT	Pingtung City	1.73	219	eP	Pg	16 36 20.3 +0.6
	baz=212					
EAST	Anshuo	1.81	205	eP	Pn	16 36 17.6 -0.4
	baz=195					
SCZT	Fangliau	1.91	211	eP	Pb	16 36 22.6 +0.9
	baz=204					
PHUB	P'eng-hu	2.00	256	eP	Pn	16 36 22.0 +1.5
	baz=254					
PHUB				eS	Sb	16 36 49.3 +1.3
	baz=254					
WDGT	Dungji	2.00	248	eP	Pn	16 36 22.2 +1.6
	baz=248					
LYUB	Lan-yu	2.02	182	eP	Pn	16 36 18.9 -1.9
	baz=189					
VCHM	Qimei	2.22	249	eP	Pn	16 36 25.4 +1.8
	baz=233					
VWUC	VWUC	2.25	296	eP	Pn	16 36 23.4 -0.5
	baz=295					
JIJ	Ishigaki jima	2.28	81	P	Pn	16 36 25.2 +0.8
JISG	Ishigakijimahi	2.47	76	eP	Pn	16 36 28.1 +1.1
PTMZ	Houxiangcun	2.54	294	eP	Pn	16 36 29.4 +1.4
	baz=293					
KSRS	Korea Array	14.41	20	Pn	P	16 39 16.9 -0.8
	0.1nm,0.3s,baz=203,slow=14,SNR=3.8					
	1.7nm,0.7s					
CMAR	Chiang Mai Arr	21.89	260	P	P	16 40 36.2 -3.9
	0.2nm,0.3s,baz=63,slow=6.5,SNR=1.6					
	0.2nm,0.3s					
MKAR	Makanchi Array	38.76	316	P	P	16 43 09.1 -2.3
	0.1nm,0.4s,baz=99,slow=9.7,SNR=4.1					
	0.1nm,0.4s					
ZALV	Zalesovo Beam	40.62	327	P	P	16 43 26.1 -0.5
	0.5nm,0.4s,baz=107,slow=7.7,SNR=2.6					
	0.5nm,0.4s					
WRA	Warramunga Arr	45.41	163	P	P	16 44 04.4 -1.4
	0.6nm,0.8s,baz=344,slow=8.7,SNR=2.9					
	0.6nm,0.8s					
BVAR	Borovoye Array	48.08	321	P	P	16 44 26.8 +0.4
	0.3nm,0.5s,baz=106,slow=11,SNR=2.7					
	0.3nm,0.5s					
ASAR	Alice Springs	48.87	165	P	P	16 44 32.2 -0.6
	0.3nm,0.6s,baz=346,slow=7.0,SNR=3.3					
	0.3nm,0.6s					

TAP 06 16:36:41.6, 24.10N × 121.70E, h6km ± 1km, ML2.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.09	310	*i* P	Pg	16 36 43.5	-0.1
	baz=310						
ETL				S	Sg	16 36 45.2	+0.2
	baz=310						
TWD	Chiawan	0.10	257	*i* P	Pg	16 36 43.5	-0.2
	baz=257						
TWD				*i* S	Sg	16 36 45.1	0.0
	baz=257						
NACB	Ninganchiao	0.12	308	P	Pg	16 36 43.9	-0.2
	baz=307						
NACB				S	Sg	16 36 45.9	+0.1
	baz=307						
EAHA	Aohua	0.23	9	eP	Pg	16 36 45.9	-0.2
	baz=9.0						
ETM	Tongmen	0.23	234	eP	Pg	16 36 45.7	-0.4
	baz=234						
ETM				eS	Sg	16 36 48.4	-0.8
	baz=234						
LXIB	Xiulin Townshi	0.27	253	eP	Pg	16 36 46.6	-0.4
	baz=253						
LXIB				eS	Sg	16 36 50.5	-0.1
	baz=253						
ENA	Nanau	0.33	7	P	Pg	16 36 47.9	-0.1
	baz=8.0						
ENA				eS	Sg	16 36 52.4	0.0
	baz=8.0						
SHUL	Shoufeng	0.34	202	eP	Pb	16 36 49.2	-0.8
	baz=201						
ESL	Shilin	0.38	220	eP	Pg	16 36 48.8	-0.1
	baz=219						
WHF	Hehuan Shan	0.40	276	eP	Pg	16 36 49.3	-0.2
	baz=276						
NNSB	Datong	0.43	319	eP	Pg	16 36 50.1	+0.1
	baz=318						
FUSS	Fushou	0.44	289	eP	Pg	16 36 50.1	-0.1
	baz=289						
NNS	Nan Shan	0.45	319	eP	Pg	16 36 50.2	-0.1
	baz=319						
WARBT	Fenglin Townsh	0.48	217	eP	Pg	16 36 50.9	+0.1
	baz=216						
TWC	Suao	0.52	15	eP	Pg	16 36 52.0	+0.3
	baz=16						
NDT	Datong Townshi	0.53	341	eP	Pg	16 36 52.1	+0.3
	baz=341						
ENTT	Nioudou	0.55	347	P	Pg	16 36 52.8	+0.6
	baz=348						
YHNB	Yeheng	0.64	333	eP	Pg	16 36 54.1	+0.2
	baz=332						

*IDC **06** 16:37:12.3±0.9, 56.05N × 150.06W, h0km, mb4.0/14, mbtmp4.0/19, ML3.9/5, Error ellipse: s-maj=23.8km s-min=14.0km az=34.0*
*NEIC **06** 16:37:14.8±1.2, 56.14N±0.08 × 150.0W±0.1, h10km ± 1km, mb4.4/7, ML4.2/50, ML4.0(AEIC), Error ellipse: s-maj=13.7km s-min=9.2km az=162.0*
*AEIC **06** 16:37:18.8±1.8, 56.08N±0.09 × 149.9W±0.1, h9km ± 5km, Error ellipse: s-maj=13.8km s-min=8.6km az=176.0*

ISC 06 16:37:14.3±0.6, 56.18N±0.06 × 149.91W±0.04, h10km, n253, σ1§26/263, mb4.1/19, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.14	301		Pn	16 37 50.0	0.0
OHAK					Sn	16 38 14.3	-2.3
OHAK				IAML		16 38 14.7	
	comp=N,1μm,0.4s						
OHAK	Old Harbor	2.14	301	P	Pn	16 37 50.1	+0.1
OHAK	Old Harbor	2.14	301	P	Pn	16 37 50.2	+0.1
	baz=120						
OHAK				S	Sn	16 38 14.4	-2.1
	baz=120						
KDAK	Kodiak Island	2.18	319		Sn	16 38 16.3	-1.3
KDAK	Kodiak Island	2.18	319	Pn	Pn	16 37 51.0	+0.5
KDAK	Kodiak Island	2.18	319	Pn	Pn	16 37 50.5	0.0
	comp=N,14nm,0.3s,baz=132,slow=5.8,SNR=131						
KDAK				Sn	Sn	16 38 15.9	-1.6
	comp=N,52nm,0.3s,baz=127,slow=20,SNR=8.4						
	comp=N,36nm,0.3s						
SII	Sitkinak Islan	2.41	281	Pn	Pn	16 37 53.6	-0.1
SII					Sn	16 38 20.5	-2.8
SII				IAML		16 38 21.7	
	comp=N,1μm,0.7s						
SII				IAML		16 38 21.7	
	comp=E,2μm,0.7s						
SII	Sitkinak Islan	2.41	281	P	Pn	16 37 53.6	-0.1
SII	Sitkinak Islan	2.41	281	P	Pn	16 37 53.7	-0.1
	baz=100						
SII				S	Sn	16 38 20.6	-2.8
	baz=100						
SYI	Shuyak Island	2.79	332	Pn	Pn	16 37 59.6	+0.6
SYI					Sn	16 38 32.5	-0.1
SYI				IAML		16 38 34.2	
	comp=E,475nm,0.5s						
Q20K	Shuyak Island	2.79	332	P	Pn	16 37 59.8	+0.9
	baz=151						
Q20K				S	Sn	16 38 32.5	-0.1
	baz=151						
Q19K	Cape Douglas,	3.42	325		Pn	16 38 08.3	+0.7
Q19K					Sn	16 38 48.0	-0.2
Q19K				IAML		16 38 53.2	
	comp=N,852nm,0.7s						
Q19K	Cape Douglas,	3.42	325	P	Pn	16 38 08.9	+1.3
	baz=143						
Q19K				S	Sn	16 38 47.8	-0.4
	baz=143						
KAHG	Katmai Hook Gl	3.42	315		Pn	16 38 09.6	+1.8
CNPM	China Poot	3.43	349		Pn	16 38 08.2	+0.3
CNPM					Sn	16 38 47.7	-0.9
CNPM				IAML		16 38 48.9	
	comp=E,477nm,0.3s						
CNPM				IAML		16 38 49.9	
	comp=N,324nm,0.5s						
ACHA	Angle Creek He	3.58	307		Pn	16 38 11.2	+1.2
BRSE	Bradley Lake S	3.60	353		Pn	16 38 10.4	+0.2
BRSE					Sn	16 38 50.6	-2.1
BRSE	Bradley Lake S	3.60	353	P	Pn	16 38 10.4	+0.2
	baz=173						
BRSE				S	Sn	16 38 50.6	-2.1
	baz=173						
HOM	Homer	3.61	346	Pn	Pn	16 38 11.1	+0.8
HOM				IAML		16 38 53.9	
	comp=E,450nm,1.2s						
HOM				IAML		16 38 55.4	
	comp=N,720nm,0.4s						
BRLK	Bradley Lake	3.64	352		Pn	16 38 10.8	+0.2
BRLK	Bradley Lake	3.64	352		Sn	16 38 52.3	-1.3
AUCH	Augustine Cone	3.71	331		Pn	16 38 13.1	+1.3
AUL	Augustine Lava	3.73	331		Pn	16 38 13.4	+1.6
Q23K	Middleton Isla	3.78	29	Pn	Pn	16 38 13.6	+1.1
Q23K				IAML		16 39 05.9	
	comp=N,316nm,1.4s						
Q23K				IAML		16 40 14.3	
	comp=E,387nm,1.4s						
Q23K	Middleton Isla	3.78	29	P	Pn	16 38 13.3	+0.8
	baz=211						
MID	Middleton Isla	3.78	29	Pn	Pn	16 38 13.7	+1.1
MID				IAML		16 39 06.6	
	comp=N,287nm,1.3s						
MID				IAML		16 40 14.3	
	comp=E,372nm,1.4s						
PLK3	Peulik 3	3.80	296		Pn	16 38 14.0	+1.1
CNTC	Contact Creek	3.86	305		Pn	16 38 14.8	+1.0
CNTC					Sn	16 38 59.1	-0.2
Q17K	Contact Creek	3.86	305	P	Pn	16 38 14.9	+1.0
	baz=122						
Q17K				S	Sn	16 38 59.1	-0.2
	baz=122						
P19K	Oil Pt	3.91	334		Pn	16 38 15.2	+0.8
P19K				IAML		16 39 05.1	
	comp=E,629nm,0.4s						
P19K	Oil Pt	3.91	334	P	Pn	16 38 15.8	+1.4
	baz=152						
SEW	Seward	3.95	3	P	Pn	16 38 14.9	0.0
	baz=184						
PLK1	Peulik 1	4.01	297		Pn	16 38 16.6	+0.8
P23K	Montague Islan	4.06	18	P	Pn	16 38 17.2	+0.8
	baz=200						
O20K	Slope Mountain	4.17	341		Pn	16 38 18.5	+0.4
O20K					Sn	16 39 06.6	-0.3
O20K	Slope Mountain	4.17	341	P	Pn	16 38 18.5	+0.4
	baz=159						
O20K				S	Sn	16 39 06.6	-0.3
	baz=159						
IVE	Iliamna Volcan	4.19	338		Pn	16 38 18.6	+0.2
P18K	Big Mountain,	4.30	321	Pn	Pn	16 38 20.2	+0.4
P18K	Big Mountain,	4.30	321	P	Pn	16 38 20.2	+0.4
	baz=137						
O22K	Cooper Landing	4.32	1		Pn	16 38 20.1	+0.1
O22K	Cooper Landing	4.32	1	P	Pn	16 38 20.3	+0.3
	baz=181						
SLKM	Skilak Lake	4.35	358		Pn	16 38 20.6	+0.2
RSO	Redoubt South	4.55	342		Pn	16 38 23.1	-0.3
HIN	Hinchinbrook I	4.60	22		Pn	16 38 25.1	+1.3
HIN				IAML		16 39 17.5	
	comp=E,365nm,0.7s						
HIN				IAML		16 39 17.6	
	comp=N,216nm,0.5s						
P17K	Kvichak River	4.63	314		Pn	16 38 25.3	+1.1
P17K	Kvichak River	4.63	314	P	Pn	16 38 25.3	+1.1
	baz=129						
O18K	Koktuh Hills	4.64	325	Pn	Pn	16 38 24.9	+0.5
O18K				IAML		16 39 20.2	
	comp=N,127nm,0.9s						
O18K	Koktuh Hills	4.64	325	P	Pn	16 38 24.9	+0.5
	baz=141						
O19K	Port Alsworth	4.66	332		Pn	16 38 25.0	+0.4
O19K				IAML		16 39 26.0	
	comp=N,366nm,0.4s						
CHGN	Chignik	4.75	275		Pn	16 38 25.9	0.0
CHGN	Chignik	4.75	275	IAML		16 39 20.4	
	comp=E,252nm,0.4s						
CHGN				IAML		16 39 20.6	
	comp=N,190nm,0.4s						
CHGN	Chignik	4.75	275	P	Pn	16 38 25.9	0.0
	baz=89						
KAIM	Kayak Island	4.76	36		Pn	16 38 27.6	+1.5
KAIM	Kayak Island	4.76	36	P	Pn	16 38 27.5	+1.5
	baz=220						
EYAK	Cordova Ski Ar	4.90	25	P	Pn	16 38 29.3	+1.3
EYAK	Cordova Ski Ar	4.90	25	P	Pn	16 38 29.2	+1.3
	baz=208						
RC01	Rabbit Creek A	4.93	1	Pn	Pn	16 38 28.5	+0.1
RC01				IAML		16 39 26.9	
	comp=N,165nm,0.5s						
RC01				IAML		16 39 26.9	
	comp=E,185nm,0.4s						
RC01	Rabbit Creek A	4.93	1	P	Pn	16 38 28.8	+0.4
	baz=181						
RAGM	Ragged Mountai	5.05	31		Pn	16 38 31.5	+1.5
SUCK	Suckling Hills	5.08	37		Pn	16 38 31.9	+1.4
SUCK				IAML		16 39 34.5	
	comp=E,216nm,0.7s						
N20K	Mount Spurr	5.18	348	P	Pn	16 38 31.7	-0.2
	baz=166						
P16K	Nushagak River	5.20	307	P	Pn	16 38 33.4	+1.3
	baz=121						
O17K	Koliganek Bris	5.25	316		Pn	16 38 33.6	+0.7
O17K	Koliganek Bris	5.25	316	P	Pn	16 38 33.6	+0.7
	baz=131						
KNK	Knik Glacier	5.31	8	Pn	Pn	16 38 34.1	+0.5
KNK				IAML		16 39 34.8	
	comp=N,65nm,0.6s						
KNK				IAML		16 39 37.3	
	comp=E,81nm,0.5s						
KNK	Knik Glacier	5.31	8	P	Pn	16 38 34.1	+0.5
	baz=189						
SUA	Susitna One	5.32	356	Pn	Pn	16 38 33.9	0.0
SUA				IAML		16 39 36.5	
	comp=N,78nm,0.9s						
SUA	Susitna One	5.32	356	P	Pn	16 38 33.8	0.0
	baz=175						
DIV	Divide	5.42	22		Pn	16 38 36.4	+1.2
STLK	Strandline Lak	5.43	350		Pn	16 38 35.8	+0.4
PMR	Palmer	5.45	4	P	Pn	16 38 36.8	+1.3
PMR	Palmer	5.45	4	P	Pn	16 38 36.7	+1.3
	baz=185						
SNH	Sunshine Point	5.49	40		Pn	16 38 37.6	+1.5
N18K	Kilae Creek	5.50	328		Pn	16 38 36.7	+0.4
N18K	Kilae Creek	5.50	328	P	Pn	16 38 36.7	+0.4
	baz=143						
O16K	Kokwok River B	5.55	312		Pn	16 38 38.0	+1.2
O16K	Kokwok River B	5.55	312	P	Pn	16 38 38.0	+1.2
	baz=125						
BMRM	Bremner River	5.55	28		Pn	16 38 38.2	+1.3
BMRM	Bremner River	5.55	28	P	Pn	16 38 38.2	+1.3
	baz=212						
CYK	Cape Yakataga	5.55	42		Pn	16 38 38.3	+1.4
CHNA	Chernabura Isl	5.66	260	P	Pn	16 38 38.0	-0.4
	baz=73						
CNBA	Chernabura Isl	5.67	260		Pn	16 38 37.7	-0.8
SML	Sawmill	5.71	8	Pn	Pn	16 38 40.0	+0.9
SML	Sawmill	5.71	8	P	Pn	16 38 40.5	+1.4
	baz=189						
KLU	Klutina	5.72	20	P	Pn	16 38 40.7	+1.4
	baz=203						
M23K	Glacier View	5.75	10	P	Pn	16 38 41.1	+1.5
	baz=192						
SVW2	Sparrevohn	5.75	331	P	Pn	16 38 40.1	+0.4
N17K	Nushagak Hills	5.80	322		Pn	16 38 40.9	+0.5
N17K	Nushagak Hills	5.80	322	P	Pn	16 38 40.9	+0.5
	baz=136						

MESA	MESA baz=229	5.82	43	P		Pn	16 38 42.1	+1.4
SCM	Sheep Creek Mo	5.83	12			Pn	16 38 42.2	+1.4
SCM	Sheep Creek Mo baz=194	5.83	12	P		Pn	16 38 42.2	+1.4
SKT	Skwentna	5.88	353	Pn		Pn	16 38 41.9	+0.5
SKT	Skwentna baz=171	5.88	353	P		Pn	16 38 42.3	+0.9
M20K	Styx River	5.96	345			Pn	16 38 42.6	0.0
M20K	Styx River baz=163	5.96	345	P		Pn	16 38 42.6	0.0
SDPT	Sand Point	6.02	266			Pn	16 38 43.1	-0.2
SDPT	Sand Point	6.02	266	P		Pn	16 38 43.7	+0.3
SDPT	Sand Point baz=79	6.02	266	P		Pn	16 38 43.1	-0.2
VRDI	Verde Repeater	6.08	31	Pn		Pn	16 38 45.6	+1.2
N25K	Chitina, Valde baz=209	6.10	25	P		Pn	16 38 46.1	+1.5
O15K	Ungalikthiuk R	6.11	304			Pn	16 38 45.6	+1.0
O15K	Ungalikthiuk R baz=116	6.11	304	P		Pn	16 38 45.6	+1.0
M18K	Stony River	6.15	333			Pn	16 38 45.3	+0.2
M18K	Stony River baz=148	6.15	333	P		Pn	16 38 45.3	+0.2
M19K	Big River Lodg	6.19	340			Pn	16 38 45.8	+0.1
M19K	Big River Lodg baz=156	6.19	340	P		Pn	16 38 45.8	+0.1
SAMH	Samovar Hills	6.25	47			Pn	16 38 48.6	+2.0
M24K	Tolsona, Glenn	6.25	16			Pn	16 38 48.6	+2.0
M24K	Tolsona, Glenn baz=199	6.25	16	P		Pn	16 38 48.6	+2.0
MCARA	McCarthy VSAT baz=217	6.33	32	P		Pn	16 38 49.2	+1.6
N16K	Nishlik Lake	6.35	316			Pn	16 38 49.1	+1.2
N16K	Nishlik Lake baz=130	6.35	316	P		Pn	16 38 49.1	+1.2
PINM	Pinnacle baz=236	6.45	48	P		Pn	16 38 51.1	+1.8
WACK	Wrangell Chich	6.50	24			Pn	16 38 51.8	+1.7
WAT6	Susitna Watana baz=191	6.52	9	P		Pn	16 38 51.6	+1.2
L19K	White Mountain	6.54	339			Pn	16 38 50.1	-0.4
L19K	White Mountain baz=155	6.54	339	P		Pn	16 38 50.1	-0.4
M17K	Holitna River	6.54	326			Pn	16 38 50.8	+0.4
M17K	Holitna River baz=140	6.54	326	P		Pn	16 38 50.8	+0.4
CTG	Chitna Glacier baz=226	6.57	39	P		Pn	16 38 52.6	+1.6
CTGM	Chitina Glacie	6.57	40	Pn		Pn	16 38 52.7	+1.6
LOGN	Logan Glacier	6.59	41			Pn	16 38 52.8	+1.5
PNL	Peninsula	6.60	54	P		Pn	16 38 53.5	+2.1
PNL	Peninsula baz=242	6.60	54	P		Pn	16 38 53.5	+2.1
L20K	Farewell, AK	6.64	344			Pn	16 38 51.7	-0.1
L20K	Farewell, AK baz=161	6.64	344	P		Pn	16 38 51.7	-0.1
HARP	HAARP	6.70	19			Pn	16 38 54.6	+2.0
HARP	HAARP baz=203	6.70	19	P		Pn	16 38 54.6	+2.0
N15K	Kwethluk River	6.71	311			Pn	16 38 54.4	+1.6
N15K	Kwethluk River baz=123	6.71	311	P		Pn	16 38 54.4	+1.6
WAT1	Susitna Watana baz=186	6.71	5	P		Pn	16 38 54.3	+1.4
M16K	Timber Creek	6.78	320			Pn	16 38 54.6	+0.8
M16K	Timber Creek baz=132	6.78	320	P		Pn	16 38 54.6	+0.8
PPLA	Purkeypile	6.84	351			Pn	16 38 55.8	+1.1
PPLA	Purkeypile baz=169	6.84	351	P		Pn	16 38 55.8	+1.1
L18K	Granite Mounta	6.99	333			Pn	16 38 56.7	+0.1
L18K	Granite Mounta baz=148	6.99	333	P		Pn	16 38 56.7	+0.1
DHY	Denali Highway baz=192	7.04	9	P		Pn	16 38 58.8	+1.4
M26K	Nabesna, AK	7.17	27			Pn	16 39 00.7	+1.5
M26K	Nabesna, AK baz=212	7.17	27	P		Pn	16 39 00.7	+1.5
PAX	Paxson	7.18	16			Pn	16 39 00.7	+1.4
PAX	Paxson baz=200	7.18	16	P		Pn	16 39 00.7	+1.4
RND	Reindeer	7.27	4			Pn	16 39 01.6	+1.0
TRF	Thorofare Moun	7.30	359			Pn	16 39 01.6	+0.5
TRF	Thorofare Moun baz=178	7.30	359	P		Pn	16 39 01.6	+0.5
CAST	Castle Rocks	7.35	352			Pn	16 39 02.4	+0.8
CAST	Castle Rocks baz=171	7.35	352	P		Pn	16 39 02.4	+0.8
P29M	Windy Craggy	7.35	57			Pn	16 39 03.0	+1.4
P29M	Windy Craggy baz=247	7.35	57	P		Pn	16 39 03.1	+1.4
L17K	Donlin	7.36	328			Pn	16 39 02.3	+0.6
L17K	Donlin baz=141	7.36	328	P		Pn	16 39 02.3	+0.6
KTH	Kantishna Hill	7.42	356			Pn	16 39 03.4	+0.8
L16K	Owhat River baz=135	7.43	322	P		Pn	16 39 03.7	+1.1
TTA	Tatalina	7.45	338	P		Pn	16 39 02.5	-0.5
MENT	Mentasta	7.47	22	P		Pn	16 39 06.0	+2.7
K20K	Telida baz=162	7.50	345	P		Pn	16 39 03.6	-0.1
MCK	McKinley	7.60	3			Pn	16 39 06.5	+1.5
MCK	McKinley baz=184	7.60	3	P		Pn	16 39 06.5	+1.5
S31K	Pelican	7.67	71			Pn	16 39 05.0	-1.0
S31K	Pelican baz=262	7.67	71	P		Pn	16 39 04.9	-1.0
BVCY	Beaver Creek	7.78	33			Pn	16 39 09.6	+2.1
BVCY	Beaver Creek baz=220	7.78	33	P		Pn	16 39 09.6	+2.1
FALS	False Pass	7.78	266	P		Pn	16 39 08.4	+0.9
YUK4	Talbot Arm baz=233	7.81	44	P		Pn	16 39 11.6	+3.5
K17K	Iditarod	7.82	330			Pn	16 39 08.3	+0.3
K17K	Iditarod baz=144	7.82	330	P		Pn	16 39 08.3	+0.3
P30M	Million Dollar	7.91	55			Pn	16 39 11.3	+2.0
P30M	Million Dollar baz=245	7.91	55	P		Pn	16 39 11.3	+2.0
K24K	Donnelly Dome	7.93	13			Pn	16 39 11.0	+1.5
K24K	Donnelly Dome baz=197	7.93	13	P		Pn	16 39 11.0	+1.5
PLBC	Pleasant Camp baz=251	7.94	60	P		Pn	16 39 11.5	+1.8
HYT	Haines Junctio	7.99	49	Pn		Pn	16 39 12.5	+2.0
HYT	Haines Junctio baz=239	7.99	49	P		Pn	16 39 12.8	+2.3
J18K	Innoko River	8.07	338			Pn	16 39 11.7	+0.3
J18K	Innoko River baz=152	8.07	338	P		Pn	16 39 11.7	+0.3
SIT	Sitka	8.10	78			Pn	16 39 10.7	-1.1
SIT	Sitka baz=269	8.10	78	P		Pn	16 39 10.7	-1.1
J20K	Nowinta River	8.30	347			Pn	16 39 14.7	+0.1
J20K	Nowinta River baz=164	8.30	347	P		Pn	16 39 14.7	+0.1
J19K	Poorman	8.34	342			Pn	16 39 15.0	-0.2
J19K	Poorman baz=158	8.34	342	P		Pn	16 39 15.0	-0.2
SCRK	Sand Creek	8.36	18			Pn	16 39 16.7	+1.1
SCRK	Sand Creek baz=203	8.36	18	P		Pn	16 39 16.7	+1.1
SKAG	Skagway	8.45	61	P		Pn	16 39 18.9	+2.3
BESE	Bessie Mountai	8.48	67			Pn	16 39 17.6	+0.4
S32K	Killisnoo	8.51	75			Pn	16 39 16.9	-0.6
S32K	Killisnoo baz=267	8.51	75	P		Pn	16 39 16.8	-0.6
WESE	West Dahl East	8.54	265			Pn	16 39 17.6	-0.4
O30N	Mendenhall	8.57	52			Pn	16 39 19.6	+1.2
O30N	Mendenhall baz=243	8.57	52	P		Pn	16 39 19.6	+1.2
M29M	Somme Creek	8.58	38			Pn	16 39 20.6	+2.1
M29M	Somme Creek baz=228	8.58	38	P		Pn	16 39 20.6	+2.1
JIS	Juneau Island	8.68	70			Pn	16 39 20.3	+0.5
JIS	Juneau Island	8.68	70	P		Pn	16 39 21.0	+1.2
IL31		8.75	9			Pn	16 39 21.7	+1.0
ILAR	Eielson Array comp=N,1.9nm,0.3s,baz=188,slow=14,SNR=58	8.75	9	Pn		Pn	16 39 19.9	-0.8
ILAR	comp=N,0.8nm,0.3s,baz=198,slow=22,SNR=3.0 comp=N,4.2nm,0.5s			Sn		Sn	16 40 54.0	-5.3
J25K	Salcha River,	8.76	13			Pn	16 39 21.7	+0.8
J25K	Salcha River, baz=197	8.76	13	P		Pn	16 39 21.7	+0.8
COLA	College	8.79	6			Pn	16 39 22.1	+0.9
COLA	College	8.79	6	P		Pn	16 39 22.9	+1.7
K27K	Chicken	8.79	23			Pn	16 39 21.9	+0.7
K27K	Chicken baz=210	8.79	23	P		Pn	16 39 22.0	+0.7
I23K	Minto, Yukon-K baz=182	9.01	1	P		Pn	16 39 26.5	+2.3
N31M	Braeburn, Yuko baz=240	9.05	48	P		Pn	16 39 27.2	+2.3
POKR	Poker Plat Res baz=189	9.05	7	P		Pn	16 39 27.6	+2.7
M30M	Minto, Yukon baz=232	9.26	41	P		Pn	16 39 29.7	+1.9
P32M	Atlin baz=255	9.28	62	P		Pn	16 39 29.5	+1.5
AKUT	Akutan	9.31	264	P		Pn	16 39 28.5	+0.1
U33K	Whale Pass	9.37	83			Pn	16 39 27.4	-1.9
U33K	Whale Pass baz=277	9.37	83	P		Pn	16 39 27.4	-1.9
UNV	Unalaska Valle	9.81	263	P		Pn	16 39 34.4	-0.9
Q32M	Nakina River baz=261	9.88	66	P		Pn	16 39 38.1	+1.7
P33M	Teslin, Yukon baz=253	9.88	59	P		Pn	16 39 37.9	+1.6
M31M	Drury Creek, Y	9.98	46			Pn	16 39 40.3	+2.7
FARO	Faro, Yukon	10.42	48	Pn		Pn	16 39 46.0	+2.4
R33M	Jennings River	10.61	64	Pn		Pn	16 39 47.7	+1.4
DLBC	Dease Lake comp=N,1.0nm,0.3s,baz=265,slow=8.5,SNR=20	10.98	70	Pn		Pn	16 39 52.8	+1.3
DLBC	comp=N,0.6nm,0.3s,baz=210,slow=20,SNR=2.2 comp=N,3.0nm,0.4s			Sn		Sn	16 41 50.3	-3.9
F21K	Alatna River	11.21	353			Pn	16 39 55.5	+1.0
E19K	Redstone River	11.82	346			Pn	16 40 03.6	+0.8
F28M	Old Crow	12.39	18			Pn	16 40 12.5	+2.0
F31M	Tsiigehtchic	13.58	27	Pn		Pn	16 40 28.0	+1.3
INK	Inuvik	14.29	25	Pn		Pn	16 40 37.8	+1.4
INK	Inuvik comp=N,0.4nm,0.3s,baz=203,slow=14,SNR=28 comp=N,9.6nm,0.9s	14.29	25	Pn		Pn	16 40 37.5	+1.1
ADK	Adak	16.25	266	P		Pn	16 41 01.2	-1.3
YKA	Yellowknife Ar comp=N,0.3nm,0.3s,baz=265,slow=9.7,SNR=45 comp=N,1.7nm,0.7s	18.89	56	P		P	16 41 35.0	+0.4
A36M	Sachs Harbour A36M	18.92	24		IAmb	P IAmb	16 41 36.1 16 41 46.2	+1.3
	comp=Z,17nm,0.7s							
LYMT	Lyon Mountain	24.84	96	P		P	16 42 36.9	0.0
NVAR	Mina Array Bea comp=Z,0.9nm,0.5s,baz=313,slow=8.8,SNR=8.3 comp=Z,0.9nm,0.5s	27.48	117	P		P	16 43 00.5	-0.3
PDAR	Pinedale Array comp=Z,0.7nm,0.5s,baz=320,slow=4.3,SNR=10 comp=Z,0.7nm,0.5s	28.99	100	P		P	16 43 14.5	+0.3
EYMN	Ely EYMN	35.84	78	P	IAmb	P IAmb	16 44 14.4 16 44 31.4	+0.6
	comp=Z,5.6nm,1.2s							
N41A	Harden Midland	40.78	87	P		P	16 44 55.2	-0.2
TXAR	Lajitas Array comp=Z,1.0nm,0.9s,baz=318,slow=5.4,SNR=10 comp=Z,1.0nm,0.9s	42.12	110	P		P	16 45 06.6	0.0
H11N2	WAKE ISLAND Hy SNR=12	48.53	239	T		T	17 37 23.3	
H11N3	WAKE ISLAND Hy baz=120,slow=74,SNR=7.6	48.53	239	T		T	17 37 56.4	
H11N1	WAKE ISLAND Hy baz=33,slow=74,SNR=8.0	48.54	239	T		T	17 38 09.6	
H11S1	WAKE ISLAND Hy baz=40,slow=74,SNR=2.5	49.67	239	T		T	17 40 11.1	
H11S3	WAKE ISLAND Hy baz=45,slow=74,SNR=5.6	49.69	239	T		T	17 40 01.1	
SONM	Songino Array comp=Z,1.2nm,0.7s,baz=57,slow=4.7,SNR=5.2 comp=Z,1.2nm,0.7s	58.44	310	P		P	16 47 09.7	-0.3
ZALV	Zalesovo Beam comp=Z,1.1nm,0.6s,baz=39,slow=7.4,SNR=5.6 comp=Z,1.1nm,0.6s	61.46	327	P		P	16 47 30.3	-0.2
HHC	Hu-ho-hao-te HHC	61.49	301	eP	pmax	P pmax	16 47 33.9	+2.8
	comp=Z,15nm,0.7s							
HHC	comp=Z,6μm,8.5s				pmax	pmax		
NOA	NORSAR Array B comp=Z,1.4nm,0.8s,baz=347,slow=6.4,SNR=3.7 comp=Z,1.4nm,0.8s	62.18	10	P		P	16 47 35.1	-0.2
FINES	FINESS Array B comp=Z,1.6nm,0.9s,baz=12,slow=10,SNR=4.3 comp=Z,1.6nm,0.9s	62.68	2	P		P	16 47 38.4	-0.1
BVAR	Borovoye Array comp=Z,1.6nm,0.7s,baz=45,slow=8.6,SNR=11 comp=Z,1.6nm,0.7s	66.23	335	P		P	16 48 01.8	-0.1
KURBB	Kurchatov Arra comp=Z,0.5nm,0.4s,baz=29,slow=6.6,SNR=2.1 comp=Z,0.5nm,0.4s	66.25	329	P		P	16 48 01.6	-0.4
MK31	Makanchi Array MK31	68.48	324	P	IAmb	P IAmb	16 48 15.4 16 48 31.9	-0.9
	comp=Z,1.7nm,1.1s							
MKAR	Makanchi Array comp=Z,0.7nm,0.5s,baz=32,slow=6.2,SNR=13 comp=Z,0.7nm,0.5s	68.48	324	P		P	16 48 15.8	-0.5
MAKZ	Makanchi MAKZ	68.57	325	P	IAmb	P IAmb	16 48 16.6 16 48 17.6	-0.3
	comp=Z,5.5nm,1.4s							
ABKAR	Akbulak array ABKAR	72.03	340	P	IAmb	P IAmb	16 48 38.0 16 48 38.9	0.0
	comp=Z,4.0nm,0.7s							
GERES	GERESS Array B comp=Z,1.0nm,0.6s,baz=349,slow=5.4,SNR=4.4 comp=Z,1.0nm,0.6s	74.46	11	P		P	16 48 52.8	+0.4
ESDC	Sonseca Array comp=Z,1.8nm,1.0s,baz=316,slow=4.1,SNR=4.5 comp=Z,1.8nm,1.0s	80.24	26	P		P	16 49 25.3	+0.4
GEYT	Alibeck comp=Z,1.9nm,0.7s,baz=22,slow=3.3,SNR=5.1 comp=Z,1.9nm,0.7s	83.28	338	P		P	16 49 41.5	+0.6
CMAR	Chiang Mai Arr comp=Z,0.3nm,0.3s,baz=5.6,slow=4.6,SNR=2.0 comp=Z,0.3nm,0.3s	86.02	297	P		P	16 49 54.5	-0.5

TAP 06 16:38:19.0,23°.99N×121°.59E,h8km,ML2.5,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	Tongmen baz=256	0.09	256	P	Pg	16 38 21.6	+0.4
ETM	baz=256			*i* S	Sg	16 38 23.2	+0.5
TWD	Chiawan baz=11	0.09	6	⇓*i* P	Pg	16 38 21.9	+0.6
TWD	baz=11			*i* S	Sg	16 38 23.5	+0.6
LXIB	Xiulin Townshi baz=275	0.16	282	P	Pg	16 38 23.1	+0.6
LXIB	baz=275			S	Sg	16 38 26.2	+1.3
ETL	Fush Village baz=11	0.17	11	*e*P	Pg	16 38 23.2	+0.5
ETL	baz=11			S	Sg	16 38 25.6	+0.5
NACB	Ninganchiao baz=10.0	0.19	3	P	Pg	16 38 23.3	+0.4
NACB	baz=10.0			S	Sg	16 38 25.9	+0.4
SHUL	Shoufeng baz=181	0.20	186	*e*P	Pg	16 38 23.8	+0.7
ESL	Shilin baz=224	0.22	219	P	Pg	16 38 23.5	0.0
ESL	baz=224			*e*S	Sg	16 38 26.5	0.0
WARBT	Fenglin Townsh baz=224	0.32	214	*e*P	Pg	16 38 25.3	-0.1
WHF	Hehuan Shan baz=298	0.33	298	P	Pg	16 38 26.5	+0.7
WHF	baz=298			S	Sg	16 38 31.1	+0.9
CHGB	Renai baz=281	0.38	281	P	Pg	16 38 27.3	+0.7
FUSS	Fushou baz=319	0.41	310	*e*P	Pb	16 38 27.9	-0.7
WUSB	Renai baz=280	0.43	271	*e*P	Pb	16 38 28.5	-0.4
ENA	Nanau baz=18	0.46	18	*e*P	Pg	16 38 28.2	+0.2
VWDT	VWDT baz=241	0.47	240	*e*P	Pb	16 38 29.0	-0.5
TDCB	Techi baz=313	0.47	304	*e*P	Pb	16 38 29.1	-0.6
TDCB	baz=313			*e*S	Sg	16 38 35.5	+1.1
NNSB	Datong baz=337	0.48	337	P	Pg	16 38 28.8	+0.5
NNSH	Datong baz=335	0.48	337	*e*P	Pb	16 38 29.1	-0.6
NNS	Nan Shan baz=345	0.49	337	*e*P	Pg	16 38 29.2	+0.6
HGSD	Ruisui baz=205	0.51	197	*e*P	Pb	16 38 30.4	0.0
LATG	Datong baz=342	0.55	354	*e*P	Pg	16 38 30.3	+0.6
WPL	Puli Township baz=273	0.57	273	*e*P	Pb	16 38 31.1	-0.3
DPDB	Guoxing baz=274	0.60	275	*e*P	Pb	16 38 31.9	0.0
SSLB	Suanglung baz=252	0.61	251	*e*P	Pg	16 38 31.2	+0.4
NDT	Datong Townshi baz=346	0.62	354	*e*P	Pb	16 38 32.6	+0.5
WCS	Beigang Elemen baz=277	0.62	277	*e*P	Pb	16 38 32.1	-0.1
SMLT	Sun Moon Lake baz=261	0.64	261	*e*P	Pb	16 38 32.3	-0.2
NDS	Dongshan baz=10.0	0.66	10	*e*P	Pb	16 38 32.4	-0.3
TYC	Yuchr baz=264	0.67	263	*e*P	Pb	16 38 32.5	-0.5
NSK	Sanguang baz=349	0.72	343	*e*P	Pb	16 38 33.6	-0.2
WWF	Wufeng baz=274	0.81	274	*e*P	Pn	16 38 37.1	+0.3
TWQ1	Liyutan baz=296	0.82	296	*e*P	Pn	16 38 36.6	-0.4
NSTT	Nanjuang baz=320	0.83	320	*e*P	Pn	16 38 36.8	-0.3
ALS	Alishan baz=247	0.86	237	*e*P	Pb	16 38 36.0	-0.3
CHN5	Tsauling baz=246	0.92	245	*e*P	Pb	16 38 37.8	+0.5

*TAP **06** 16:39:58.9,24°.06N×121°.66E,h8km,ML3.2,C*
*JMA **06** 16:39:59.2±0.2,24°.1N±0°.3×12°2E±°,h0km,TAIWAN REGION*

ISC 06 16:39:58.9±1.0,24°.04N±0°.02×121°.69E±0°.02,h5km±7km, n106,σ0°54/150,2C-16D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	Chiawan baz=299	0.09	293	*i* P	Pg	16 40 01.0	+0.1
TWD	baz=299			*i* S	Sg	16 40 02.2	-0.1
ETL	Fush Village baz=343	0.13	332	⇓*i* P	Pg	16 40 01.7	+0.2
ETL	baz=343			*i* S	Sg	16 40 03.5	+0.1
NACB	Ninganchiao baz=334	0.16	326	⇓*i* P	Pg	16 40 02.0	0.0
NACB	baz=334			*i* S	Sg	16 40 04.0	-0.2
ETM	Tongmen baz=239	0.20	247	*i* P	Pg	16 40 02.8	+0.1
ETM	baz=239			S	Sg	16 40 05.2	-0.1
LXIB	Xiulin Townshi baz=250	0.25	265	⇑*i* P	Pg	16 40 03.8	-0.1
LXIB	baz=250			*e*S	Sg	16 40 07.0	-0.2
SHUL	Shoufeng baz=209	0.28	205	P	Pb	16 40 06.0	-0.3
SHUL	baz=209			*e*S	Sb	16 40 12.2	+0.9
EAHA	Aohua baz=12	0.29	9	P	Pg	16 40 04.7	+0.2
EAHA	baz=12			S	Sg	16 40 08.8	+0.5
ESL	Shilin baz=230	0.33	226	P	Pg	16 40 05.2	-0.1
ESL	baz=230			S	Sg	16 40 09.8	+0.3
TEGC	Jichi Village baz=204	0.36	203	P	Pb	16 40 07.7	-0.1
TEGC	baz=204			*e*S	Sb	16 40 14.9	+1.2
ENA	Nanau baz=8.0	0.39	7	⇓*i* P	Pg	16 40 06.6	+0.3
ENA	baz=8.0			*i* S	Sg	16 40 11.8	+0.4
WHF	Hehuan Shan baz=283	0.40	285	*i* P	Pg	16 40 06.7	0.0
WHF	baz=283			S	Sg	16 40 11.8	-0.3
EWUT	Wuta baz=11	0.41	11	⇓P	Pg	16 40 07.1	+0.3
EWUT	baz=11			S	Sg	16 40 12.5	+0.3
WARBT	Fenglin Townsh baz=224	0.43	221	P	Pg	16 40 07.1	0.0
EGFH	Guangfu baz=217	0.44	213	*e*P	Pg	16 40 08.1	+0.7
FUSS	Fushou baz=297	0.46	297	⇓*i* P	Pg	16 40 08.0	+0.2
FUSS	baz=297			S	Sg	16 40 13.9	+0.2
CHGB	Renai baz=260	0.47	272	P	Pg	16 40 08.3	+0.3
CHGB	baz=260			*i* S	Sg	16 40 14.1	-0.1
NNSB	Datong baz=326	0.48	324	⇓*i* P	Pg	16 40 08.3	+0.2
NNSB	baz=326			*i* S	Sg	16 40 14.4	+0.1
NNSH	Datong baz=326	0.48	324	*i* P	Pg	16 40 08.3	+0.2
NNSH	baz=326			S	Sg	16 40 14.2	-0.1
OWD	Renai baz=256	0.48	260	*e*P	Pg	16 40 08.2	+0.1
OWD	baz=256			*e*S	Sg	16 40 14.0	-0.3
NNS	Nan Shan baz=327	0.49	324	⇓*i* P	Pg	16 40 08.5	+0.2
NNS	baz=327			*i* S	Sg	16 40 14.6	-0.2
LATG	Datong baz=345	0.51	343	⇓*i* P	Pg	16 40 08.8	+0.1
LATG	baz=345			S	Sg	16 40 15.7	+0.2
TWT	Tachien baz=293	0.52	294	P	Pg	16 40 09.2	+0.4
TWT	baz=293			S	Sg	16 40 16.0	+0.5
WUSB	Renai baz=261	0.53	265	P	Pg	16 40 09.3	+0.3
WUSB	baz=261			S	Sg	16 40 15.8	-0.1
TDCB	Techi baz=293	0.53	293	P	Pg	16 40 09.3	+0.3
TDCB	baz=293			S	Sg	16 40 16.0	0.0
ESAO	Su ao baz=6.0	0.55	15	*e*P	Pg	16 40 09.5	+0.1
VWDT	VWDT baz=231	0.58	240	P	Pg	16 40 10.5	+0.5
VWDT	baz=231			*e*S	Sg	16 40 18.3	+0.8
NDT	Datong Townshi baz=345	0.58	344	⇓*i* P	Pg	16 40 10.6	+0.5
NDT	baz=345			S	Sg	16 40 17.9	+0.3
TWC	Suao baz=8.0	0.58	14	⇓P	Pg	16 40 10.4	+0.3
TWC	baz=8.0			*e*S	Sg	16 40 15.9	-1.7
NDS	Dongshan baz=2.0	0.59	2	⇓*i* P	Pg	16 40 10.6	+0.3
NDS	baz=2.0			*e*S	Sg	16 40 18.2	+0.3
HGSD	Ruisui baz=218	0.60	204	*e*P	Pb	16 40 12.1	+0.3
HGSD	baz=218			*e*S	Sn	16 40 23.7	-0.4
ENTT	Nioudou baz=351	0.60	349	⇓*i* P	Pg	16 40 10.9	+0.4

ENTT				S		Sg	16 40 19.0	+0.6
	baz=351							
EOS2	**EOS2**	**0.62**	**53**	*e*P		Pn	16 40 14.0	-0.2
	baz=33							
EHY	**Hungye**	**0.63**	**212**	*e*P		Pg	16 40 11.0	0.0
	baz=210							
WPL	**Puli Township**	**0.67**	**268**	*e*P		Pb	16 40 12.2	-0.9
	baz=266							
WPL				*e*S		Sg	16 40 20.1	-0.4
	baz=266							
TWE	**Neicheng**	**0.68**	**358**	⇓*i*P		Pg	16 40 12.2	+0.4
	baz=359							
TWE				*e*S		Sg	16 40 20.9	+0.2
	baz=359							
YHNB	**Yeheng**	**0.69**	**335**	⇓*i*P		Pb	16 40 12.6	-0.8
	baz=327							
YHNB				*i* S		Sg	16 40 21.1	+0.1
	baz=327							
DPDB	**Guoxing**	**0.70**	**269**	P		Pb	16 40 12.7	-0.8
	baz=269							
NSK	**Sanguang**	**0.70**	**334**	⇓*i*P		Pb	16 40 12.7	-0.8
	baz=327							
NSK				S		Sg	16 40 21.0	-0.4
	baz=327							
WCS	**Beigang Elemen**	**0.71**	**271**	*e*P		Pg	16 40 12.9	+0.3
	baz=271							
WHP	**Taichung City**	**0.72**	**289**	P		Pb	16 40 13.4	-0.5
	baz=288							
WHP				*e*S		Sb	16 40 22.8	-1.3
	baz=288							
FUSB	**Fushanzhiwuyua**	**0.72**	**353**	⇓P		Pg	16 40 13.0	+0.3
	baz=353							
SSLB	**Suanglung**	**0.72**	**249**	⇑*i*P		Pg	16 40 12.8	+0.1
	baz=258							
SSLB				*e*S		Sg	16 40 21.4	-0.6
	baz=258							
SMLT	**Sun Moon Lake**	**0.74**	**258**	P		Pg	16 40 13.3	+0.2
	baz=256							
SMLT				*e*S		Sg	16 40 22.4	-0.3
	baz=256							
YULB	**Yu-li**	**0.74**	**209**	*e*P		Pg	16 40 13.0	-0.1
	baz=211							
NWLT	**Wulai**	**0.75**	**347**	P		Pg	16 40 13.7	+0.4
	baz=335							
ECBN	**Changbin**	**0.76**	**197**	*e*P		Pb	16 40 14.3	-0.1
	baz=186							
EYUL	**Yuli**	**0.77**	**206**	*e*P		Pg	16 40 14.4	+0.8
	baz=220							
TYC	**Yuchr**	**0.78**	**260**	*e*P		Pg	16 40 13.9	+0.1
	baz=258							
TYC				*e*S		Sg	16 40 23.5	-0.3
	baz=258							
TWF1	**Yuli**	**0.78**	**208**	*e*P		Pg	16 40 13.7	0.0
	baz=221							
NFF	**Wufeng Townshi**	**0.79**	**318**	P		Pb	16 40 14.3	-0.7
	baz=319							
WHYT	**Xinyi Township**	**0.84**	**246**	*e*P		Pb	16 40 16.0	+0.1
	baz=245							
NSTT	**Nanjuang**	**0.86**	**313**	P		Pb	16 40 15.9	-0.3
	baz=314							
NSTT				S		Sg	16 40 26.6	+0.1
	baz=314							
LIOB	**Emei**	**0.86**	**314**	*e*P		Pb	16 40 16.1	-0.2
	baz=315							
TWQ1	**Liyutan**	**0.89**	**290**	*e*P		Pn	16 40 18.2	+0.1
	baz=302							
TWQ1				*e*S		Sn	16 40 30.2	-1.1
	baz=302							
WWF	**Wufeng**	**0.91**	**270**	*e*P		Pn	16 40 18.5	+0.2
	baz=269							
WJS	**Zhushan**	**0.91**	**256**	*e*P		Pb	16 40 16.8	-0.3
	baz=255							
TCU	**Taichung**	**0.93**	**277**	*e*P		Pn	16 40 18.9	+0.3
	baz=269							
TIPB	**Shuangxi**	**0.93**	**8**	*e*P		Pg	16 40 16.8	0.0
	baz=358							
WNT1	**Nantou City**	**0.93**	**262**	*e*P		Pn	16 40 18.4	-0.2
	baz=261							
WNT	**Mingjian**	**0.94**	**260**	*e*P		Pb	16 40 18.0	+0.5
	baz=250							
TWA	**Mucha**	**0.94**	**354**	*e*P		Pg	16 40 17.1	+0.2
	baz=355							
TATO	**Taipei**	**0.95**	**349**	P		Pg	16 40 17.2	+0.2
	baz=349							
NMLH	**Miaoli**	**0.96**	**301**	*e*P		Pn	16 40 18.4	-0.5
	baz=301							
ALS	**Alishan**	**0.97**	**237**	*e*P		Pg	16 40 17.5	+0.1
	baz=245							
CHKT	**Chengkung**	**0.98**	**198**	*e*P		Pg	16 40 18.3	+0.5
	baz=182							
EHD	**Haiduan**	**0.99**	**207**	*e*P		Pg	16 40 17.6	-0.4
	baz=210							
TWB1	**Santiao Chiao**	**1.00**	**16**	*e*P		Pg	16 40 18.1	0.0
	baz=6.0							
WYL	**Yuanlin Townsh**	**1.02**	**266**	*e*P		Pb	16 40 18.9	-0.1
	baz=265							
NWF	**Wu-fen Shan**	**1.03**	**5**	*e*P		Pb	16 40 19.2	0.0
	baz=1.0							
WFSB	**Wu-fen Shan**	**1.03**	**5**	*e*P		Pn	16 40 20.6	+0.7
	baz=2.0							
CHN5	**Tsauling**	**1.03**	**245**	P		Pb	16 40 19.6	+0.4
	baz=242							
CHN5				*e*S		Sn	16 40 34.8	0.0
	baz=242							
ELDTW	**Lidau**	**1.05**	**216**	*e*P		Pg	16 40 17.7	-1.3
	baz=206							
SXI1	**Grass Mountain**	**1.06**	**9**	*e*P		Pg	16 40 19.3	+0.1
	baz=348							
TWS1	**Kuangyinshan**	**1.08**	**347**	*e*P		Pn	16 40 20.6	0.0
	baz=346							
WGK	**Gukeng**	**1.09**	**251**	*e*P		Pn	16 40 20.6	-0.2
	baz=250							
YM01	**YM01**	**1.10**	**354**	*e*P		Pb	16 40 20.7	+0.2
	baz=343							
WDLH	**Douliu**	**1.11**	**252**	*e*P		Pn	16 40 21.2	+0.1
	baz=251							
ANP	**Anpu**	**1.15**	**352**	*e*P		Pg	16 40 20.8	-0.2
	baz=351							
WCKO	**Fanlu**	**1.16**	**239**	*e*P		Pb	16 40 21.6	+0.2
	baz=238							
STYH	**Taoyuan**	**1.21**	**224**	*e*P		Pg	16 40 21.7	-0.3
	baz=226							
CHN4	**Tsaushan**	**1.22**	**236**	*e*P		Pn	16 40 23.2	+0.6
	baz=235							
TPUB	**Ta-pu**	**1.22**	**233**	*e*P		Pb	16 40 22.6	+0.2
	baz=233							
STYT	**Tauyuan**	**1.23**	**225**	P		Pg	16 40 22.3	-0.1
	baz=224							
STYT				*e*S		Sn	16 40 39.5	-0.1
	baz=224							
RLNB	**Erlin**	**1.23**	**263**	*e*P		Pn	16 40 23.4	+0.8
	baz=261							
RLNB				S		Sn	16 40 40.5	+1.0
	baz=261							
LONT	**Longtian**	**1.24**	**205**	*e*P		Pg	16 40 20.9	-1.8
	baz=208							
WTK	**Tuku**	**1.24**	**254**	*e*P		Pn	16 40 23.9	+1.0
	baz=253							
WTP	**Ta-pu**	**1.27**	**231**	*e*P		Pb	16 40 23.3	+0.1
	baz=231							
WTP				S		Sn	16 40 41.3	+0.7
	baz=231							
TWGBT	**Beinan**	**1.34**	**205**	*e*P		Pn	16 40 23.1	-1.1
	baz=209							
TWG	**Pinlang**	**1.34**	**205**	*e*P		Pn	16 40 22.7	-1.5
	baz=208							
TWK	**Hsinying**	**1.35**	**235**	*e*P		Pb	16 40 24.9	+0.3
	baz=233							
TWK				*e*S		Sn	16 40 43.3	+0.6
	baz=233							
CHN1	**Nanshi**	**1.37**	**232**	*e*P		Pn	16 40 24.9	+0.3
	baz=231							
SNST	**Tainan City**	**1.37**	**233**	*e*P		Pb	16 40 24.9	0.0
	baz=234							
SGST	**Jiashian**	**1.40**	**227**	*e*P		Pn	16 40 24.5	-0.5
	baz=227							
SGST				*e*S		Sn	16 40 46.1	+2.3
	baz=227							
WSF	**Szhu**	**1.40**	**254**	*e*P		Pn	16 40 25.3	+0.2
	baz=253							
ICHU	**Yijhu**	**1.46**	**243**	*e*P		Pb	16 40 26.3	-0.2
	baz=243							
ECL	**Taimali**	**1.59**	**205**	*e*P		Pn	16 40 26.6	-1.0
	baz=192							
TWM1	**Shoushan**	**1.68**	**224**	*e*P		Pg	16 40 30.9	-0.2
	baz=225							
MASBT	**Mashibuluo**	**1.72**	**215**	*e*P		Pn	16 40 28.9	-0.6
	baz=208							
SCZT	**Fangliau**	**1.93**	**211**	*e*P		Pn	16 40 32.8	+0.4
	baz=215							
PHUB	**P'eng-hu**	**2.01**	**255**	*e*P		Pn	16 40 34.1	+0.7
	baz=256							
JISG	**Ishigakijimahi**	**2.45**	**77**	S		Sn	16 41 09.4	-0.4
PTMZ	**Houxiangcun**	**2.54**	**294**	*e*P		Pn	16 40 40.5	-0.3
	baz=293							
KNMB	**Chin-men Tao**	**3.04**	**279**	*e*P		Pn	16 40 46.8	-0.8
	baz=278							
MHZQ	**Yeshan**	**3.17**	**311**	*e*P		Pn	16 40 48.6	-0.7
	baz=296							
XPSS	**Dashiqiu**	**3.18**	**335**	*e*P		Pn	16 40 49.2	-0.2
	baz=334							
AXDP	**Jialang**	**3.50**	**285**	*e*P		Pn	16 40 53.7	-0.1
	baz=284							

JMA ***06*** *16:44:58.0±0.5,24°.0N±0°.4×122°.2E±°, h0km±3km, MV3.0/10, TAIWAN REGION*
TAP ***06*** *16:44:58.4,23°.99N×121°.59E, h6km, ML3.7, C*
ISC 06 16:44:58.6±0.8, 23°.98N±0°.01×121°.61E±0°.02, h9km±5km, n139, ⌀0°66/200, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
TWD	**Chiawan**	**0.10**	**351**	*i* P		**Pg**	**16 45 00.9**	**-0.2**
	baz=9.0							
TWD				S		**Sg**	**16 45 02.6**	**-0.2**
	baz=9.0							
ETM	**Tongmen**	**0.11**	**264**	*e*P		**Pg**	**16 45 01.1**	**-0.1**
	baz=254							
ETM				*i* S		**Sg**	**16 45 03.0**	**0.0**
	baz=254							
ETL	**Fush Village**	**0.18**	**3**	*e*P		**Pg**	**16 45 02.2**	**-0.1**
	baz=11							
LXIB	**Xiulin Townshi**	**0.19**	**283**	*i* P		**Pg**	**16 45 02.6**	**0.0**
	baz=274							
LXIB				*i* S		**Sg**	**16 45 05.5**	**+0.3**
	baz=274							
NACB	**Ninganchiao**	**0.20**	**355**	P		**Pg**	**16 45 02.3**	**-0.3**
	baz=14							
NACB				*e*S		**Sg**	**16 45 05.3**	**-0.1**
	baz=14							
SHUL	**Shoufeng**	**0.20**	**194**	*e*P		**Pg**	**16 45 03.4**	**+0.9**
	baz=179							
ESL	**Shilin**	**0.23**	**225**	*e*P		**Pg**	**16 45 03.2**	**-0.1**
	baz=228							
ESL				*i* S		**Sg**	**16 45 06.4**	**0.0**
	baz=228							
TEGC	**Jichi Village**	**0.28**	**194**	*e*P		**Pb**	**16 45 05.4**	**-0.4**
	baz=188							
TEGC				*e*S		**Sb**	**16 45 10.5**	**0.0**
	baz=188							
WARBT	**Fenglin Townsh**	**0.33**	**219**	P		**Pg**	**16 45 05.0**	**-0.2**
	baz=223							
WARBT				S		**Sg**	**16 45 09.2**	**-0.4**
	baz=223							
EGFH	**Guangfu**	**0.35**	**209**	*e*P		**Pg**	**16 45 05.7**	**+0.2**
	baz=218							
EGFH				*e*S		**Sg**	**16 45 10.9**	**+0.8**
	baz=218							
WHF	**Hehuan Shan**	**0.36**	**298**	P		**Pg**	**16 45 05.9**	**+0.1**
	baz=298							
WHF				*i* S		**Sg**	**16 45 10.9**	**+0.3**
	baz=298							
OWD	**Renai**	**0.40**	**267**	*e*P		**Pb**	**16 45 07.1**	**-0.9**
	baz=265							
OWD				*e*S		**Sb**	**16 45 12.6**	**-1.7**
	baz=265							
CHGB	**Renai**	**0.41**	**282**	P		**Pg**	**16 45 06.9**	**+0.3**
	baz=280							
CHGB				S		**Sb**	**16 45 13.0**	**-1.7**
	baz=280							
FUSS	**Fushou**	**0.43**	**308**	P		**Pg**	**16 45 07.3**	**+0.2**
	baz=309							
FUSS				S		**Sb**	**16 45 13.8**	**-1.5**
	baz=309							
WUSB	**Renai**	**0.45**	**272**	P		**Pb**	**16 45 08.1**	**-0.7**
	baz=270							
WUSB				*i* S		**Sb**	**16 45 14.2**	**-1.6**
	baz=270							
ENA	**Nanau**	**0.46**	**14**	*e*P		**Pg**	**16 45 07.6**	**0.0**
	baz=23							
TWT	**Tachien**	**0.48**	**304**	P		**Pb**	**16 45 08.5**	**-0.9**
	baz=303							
TWT				*e*S		**Sb**	**16 45 15.6**	**-1.1**
	baz=303							
VWDT	**VWDT**	**0.49**	**243**	P		**Pb**	**16 45 08.5**	**-0.8**
	baz=240							
VWDT				*e*S		**Sb**	**16 45 15.4**	**-1.2**
	baz=240							
NNSB	**Datong**	**0.49**	**335**	*e*P		**Pg**	**16 45 08.5**	**+0.2**
	baz=337							
NNSB				*e*S		**Sg**	**16 45 14.9**	**+0.1**
	baz=337							
NNSH	**Datong**	**0.49**	**335**	*e*P		**Pb**	**16 45 08.6**	**-1.0**
	baz=336							
NNSH				*e*S		**Sg**	**16 45 15.3**	**+0.5**
	baz=336							
TDCB	**Techi**	**0.50**	**303**	*e*P		**Pb**	**16 45 08.5**	**-1.1**
	baz=302							
NNS	**Nan Shan**	**0.51**	**334**	P		**Pg**	**16 45 08.6**	**+0.1**
	baz=338							
NNS				*e*S		**Sg**	**16 45 15.6**	**+0.4**
	baz=338							
HGSD	**Ruisui**	**0.51**	**200**	*e*P		**Pb**	**16 45 09.8**	**0.0**
	baz=202							
EHY	**Hungye**	**0.54**	**210**	P		**Pg**	**16 45 09.0**	**-0.1**
	baz=215							
EHY				S		**Sg**	**16 45 16.8**	**+0.7**
	baz=215							
LATG	**Datong**	**0.56**	**352**	P		**Pg**	**16 45 09.2**	**-0.2**
	baz=342							
LATG				*e*S		**Sg**	**16 45 17.2**	**+0.4**
	baz=342							
WPL	**Puli Township**	**0.60**	**273**	*e*P		**Pb**	**16 45 10.9**	**-0.4**
	baz=272							
WPL				*e*S		**Sb**	**16 45 18.6**	**-1.3**
	baz=272							
NDT	**Datong Townshi**	**0.63**	**352**	*e*P		**Pg**	**16 45 10.7**	**0.0**
	baz=345							
DPDB	**Guoxing**	**0.63**	**275**	*e*P		**Pb**	**16 45 11.3**	**-0.5**
	baz=274							
DPDB				*e*S		**Sb**	**16 45 20.1**	**-0.8**
	baz=274							
ESAO	**Su ao**	**0.63**	**19**	*e*P		**Pg**	**16 45 10.8**	**0.0**
	baz=25							
SSLB	**Suanglung**	**0.63**	**253**	P		**Pg**	**16 45 10.9**	**+0.1**
	baz=263							
SSLB				S		**Sg**	**16 45 18.9**	**-0.3**
	baz=263							
WCS	**Beigang Elemen**	**0.65**	**277**	*e*P		**Pb**	**16 45 11.7**	**-0.4**
	baz=276							
WCS				*e*S		**Sb**	**16 45 20.5**	**-0.7**
	baz=276							
YULB	**Yu-li**	**0.65**	**207**	*e*P		**Pg**	**16 45 11.4**	**+0.2**
	baz=211							
NDS	**Dongshan**	**0.66**	**8**	*e*P		**Pg**	**16 45 11.3**	**0.0**
	baz=13							
ENTT	**Nioudou**	**0.66**	**356**	*e*P		**Pg**	**16 45 11.3**	**-0.1**
	baz=359							
ENTT				S		**Sg**	**16 45 20.4**	**+0.5**
	baz=359							
SMLT	**Sun Moon Lake**	**0.66**	**262**	P		**Pb**	**16 45 11.7**	**-0.7**
	baz=260							
SMLT				S		**Sb**	**16 45 20.7**	**-1.0**
	baz=260							
TWC	**Suao**	**0.66**	**19**	*e*P		**Pb**	**16 45 11.9**	**-0.4**
	baz=25							
ECBN	**Changbin**	**0.68**	**193**	*e*P		**Pb**	**16 45 12.6**	**0.0**
	baz=175							
WHP	**Taichung City**	**0.68**	**296**	*e*P		**Pb**	**16 45 12.2**	**-0.5**
	baz=286							
WHP				*e*S		**Sb**	**16 45 22.2**	**0.0**
	baz=286							
EYUL	**Yuli**	**0.68**	**203**	*e*P		**Pg**	**16 45 11.8**	**+0.1**
	baz=209							
TWF1	**Yuli**	**0.69**	**205**	*e*P		**Pb**	**16 45 12.3**	**-0.5**
	baz=214							
TWF1				*e*S		**Sb**	**16 45 21.5**	**-0.9**
	baz=214							
TYC	**Yuchr**	**0.70**	**264**	P		**Pb**	**16 45 12.1**	**-0.8**
	baz=263							
TYC				S		**Sg**	**16 45 21.1**	**0.0**
	baz=263							
YHNB	**Yeheng**	**0.72**	**343**	P		**Pb**	**16 45 12.7**	**-0.7**
	baz=344							
YHNB				*e*S		**Sb**	**16 45 22.9**	**-0.6**
	baz=344							
NSK	**Sanguang**	**0.73**	**341**	P		**Pb**	**16 45 12.9**	**-0.7**
	baz=344							
NSK				*e*S		**Sg**	**16 45 22.2**	**-0.1**
	baz=344							
TWE	**Neicheng**	**0.74**	**4**	P		**Pg**	**16 45 12.9**	**+0.1**
	baz=18							
TWE				S		**Sg**	**16 45 22.6**	**+0.1**
	baz=18							
WHYT	**Xinyi Township**	**0.75**	**248**	*e*P		**Pb**	**16 45 13.5**	**-0.4**
	baz=244							
FUSB	**Fushanzhiwuyua**	**0.78**	**358**	P		**Pb**	**16 45 13.8**	**-0.6**
	baz=3.0							
NFF	**Wufeng Townshi**	**0.79**	**325**	*e*P		**Pb**	**16 45 14.1**	**-0.5**
	baz=338							
NWLT	**Wulai**	**0.80**	**353**	*e*P		**Pg**	**16 45 14.0**	**0.0**
	baz=344							
CHKH	**Chenggong**	**0.81**	**194**	*e*P		**Pg**	**16 45 13.9**	**-0.2**
	baz=191							
WJS	**Zhushan**	**0.83**	**259**	*e*P		**Pn**	**16 45 16.0**	**-0.4**
	baz=247							
FULB	**Fuli**	**0.83**	**201**	*e*P		**Pn**	**16 45 16.0**	**-0.5**
	baz=211							
WWF	**Wufeng**	**0.84**	**275**	*e*P		**Pb**	**16 45 15.8**	**+0.4**
	baz=271							
TWQ1	**Liyutan**	**0.85**	**296**	*e*P		**Pn**	**16 45 16.8**	**0.0**
	baz=294							
NSTT	**Nanjuang**	**0.86**	**319**	P		**Pb**	**16 45 15.7**	**0.0**
	baz=320							
NSTT				*e*S		**Sb**	**16 45 27.7**	**+0.4**
	baz=320							
WNT	**Mingjian**	**0.86**	**264**	*e*P		**Pn**	**16 45 16.4**	**-0.4**
	baz=262							
WNT				*e*S		**Sn**	**16 45 28.8**	**-0.7**
	baz=262							
WNT1	**Nantou City**	**0.86**	**265**	*e*P		**Pn**	**16 45 16.4**	**-0.4**
	baz=261							
TCU	**Taichung**	**0.87**	**281**	*e*P		**Pn**	**16 45 16.9**	**-0.2**
	baz=278							
ALS	**Alishan**	**0.88**	**238**	P		**Pb**	**16 45 15.9**	**-0.2**
	baz=236							
ALS				*e*S		**Sb**	**16 45 28.1**	**0.0**
	baz=236							
NJD	**Zhudong**	**0.89**	**328**	*e*P		**Pb**	**16 45 16.9**	**+0.6**
	baz=329							
CHKT	**Chengkung**	**0.90**	**195**	*e*P		**Pg**	**16 45 15.4**	**-0.6**
	baz=191							
EHD	**Haiduan**	**0.91**	**204**	*e*P		**Pg**	**16 45 15.5**	**-0.5**
	baz=214							
EHD				*e*S		**Sb**	**16 45 29.6**	**+0.9**
	baz=214							
NMLH	**Miaoli**	**0.94**	**307**	*e*P		**Pn**	**16 45 17.9**	**0.0**
	baz=305							
CHN5	**Tsauling**	**0.94**	**246**	*e*P		**Pb**	**16 45 17.5**	**+0.4**
	baz=232							
CHN5				*e*S		**Sn**	**16 45 32.3**	**+0.6**
	baz=232							
WYL	**Yuanlin Townsh**	**0.95**	**269**	*e*P		**Pn**	**16 45 17.9**	**-0.2**
	baz=265							
ECS	**Chishang**	**0.95**	**202**	*e*P		**Pg**	**16 45 16.7**	**-0.2**
	baz=200							
ELDTW	**Lidau**	**0.96**	**215**	*e*P		**Pg**	**16 45 15.7**	**-1.2**
	baz=210							
WDJ	**Dajia District**	**0.96**	**293**	*e*P		**Pn**	**16 45 18.6**	**+0.3**
	baz=290							
HSN1	**Hsinchu**	**0.96**	**326**	*e*P		**Pn**	**16 45 18.5**	**+0.2**
	baz=327							
WCHH	**Zhanghua**	**0.97**	**276**	*e*P		**Pn**	**16 45 18.4**	**0.0**
	baz=272							
NHDH	**Xindian Distri**	**0.98**	**355**	*e*P		**Pg**	**16 45 16.7**	**-0.8**
SBCB	**Hsinchu**	**0.99**	**325**	P		**Pn**	**16 45 18.8**	**+0.1**
	baz=326							
TWA	**Mucha**	**1.00**	**358**	*e*P		**Pg**	**16 45 17.5**	**-0.2**
	baz=350							
TWA				*e*S		**Sg**	**16 45 30.3**	**-0.5**
	baz=350							
TATO	**Taipei**	**1.00**	**353**	P		**Pb**	**16 45 17.8**	**-0.3**
	baz=356							
TATO				S		**Sb**	**16 45 31.4**	**+0.1**
	baz=356							
WGK	**Gukeng**	**1.01**	**253**	*e*P		**Pb**	**16 45 18.0**	**-0.2**
	baz=249							
TIPB	**Shuangxi**	**1.01**	**11**	*e*P		**Pb**	**16 45 18.6**	**+0.4**
	baz=17							
HSN	**Hsinchu**	**1.01**	**325**	*e*P		**Pb**	**16 45 18.3**	**+0.1**
	baz=329							
WDLH	**Douliu**	**1.03**	**254**	*e*P		**Pn**	**16 45 19.1**	**-0.1**
	baz=250							
BACT	**New Taipei Cit**	**1.03**	**351**	*e*P		**Pb**	**16 45 18.4**	**-0.1**
	baz=356							
NTY	**Taoyuan**	**1.06**	**344**	*e*P		**Pb**	**16 45 19.4**	**+0.3**
	baz=349							
NCUH	**Zhongli**	**1.06**	**338**	*e*P		**Pn**	**16 45 19.6**	**0.0**
	baz=341							
NCU	**National Centr**	**1.06**	**339**	*e*P		**Pn**	**16 45 19.5**	**-0.1**
	baz=353							
NCU				*e*S		**Sn**	**16 45 35.8**	**+1.2**
	baz=353							
TAP	**Taipei**	**1.06**	**355**	*e*P		**Pg**	**16 45 18.8**	**-0.2**
	baz=357							
TAP				*e*S		**Sb**	**16 45 33.6**	**+0.4**
	baz=357							
WCKO	**Fanlu**	**1.07**	**240**	*e*P		**Pn**	**16 45 19.7**	**-0.1**
	baz=233							
WCKO				*e*S		**Sn**	**16 45 35.5**	**+0.7**
	baz=233							
TWB1	**Santiao Chiao**	**1.08**	**18**	*e*P		**Pn**	**16 45 20.2**	**+0.3**
	baz=16							
NWF	**Wu-fen Shan**	**1.10**	**8**	*e*P		**Pb**	**16 45 19.7**	**-0.1**
	baz=11							
NWF				*e*S		**Sg**	**16 45 33.8**	**-0.2**
	baz=11							
WFSB	**Wu-fen Shan**	**1.10**	**8**	*e*P		**Pn**	**16 45 20.2**	**+0.1**
	baz=13							
STYH	**Taoyuan**	**1.11**	**224**	*e*P		**Pg**	**16 45 19.3**	**-0.6**
	baz=221							
CHN4	**Tsaushan**	**1.12**	**237**	P		**Pn**	**16 45 20.6**	**0.0**
	baz=233							
TPUB	**Ta-pu**	**1.13**	**233**	P		**Pb**	**16 45 20.4**	**+0.2**
	baz=226							
TPUB				*e*S		**Sn**	**16 45 36.5**	**+0.3**
	baz=226							
STYT	**Tauyuan**	**1.13**	**224**	*e*P		**Pg**	**16 45 20.0**	**-0.3**
	baz=224							
STYT				*e*S		**Sb**	**16 45 35.8**	**+0.6**
	baz=224							
TWS1	**Kuangyinshan**	**1.13**	**351**	*e*P		**Pn**	**16 45 20.7**	**+0.1**
	baz=4.0							
TWS1				*e*S		**Sn**	**16 45 37.6**	**+1.2**
	baz=4.0							
CHN2	**Minshiung**	**1.13**	**247**	*e*P		**Pn**	**16 45 20.8**	**+0.2**
	baz=244							
WRL	**Guolierlin Hig**	**1.13**	**266**	*e*P		**Pn**	**16 45 21.2**	**+0.5**
	baz=262							
SXI1	**Grass Mountain**	**1.14**	**12**	*e*P		**Pg**	**16 45 20.1**	**-0.3**
	baz=17							
NHW	**Xinwu Township**	**1.15**	**333**	*e*P		**Pn**	**16 45 20.9**	**+0.1**
	baz=335							
RLNB	**Erlin**	**1.15**	**266**	*e*P		**Pn**	**16 45 21.2**	**+0.3**
	baz=265							
RLNB				*e*S		**Sn**	**16 45 37.5**	**+0.7**
	baz=265							
LONT	**Longtian**	**1.16**	**203**	*e*P		**Pg**	**16 45 20.4**	**-0.3**
	baz=201							
WTK	**Tuku**	**1.16**	**256**	*e*P		**Pn**	**16 45 21.0**	**0.0**
	baz=252							
YM01	**YM01**	**1.16**	**358**	*e*P		**Pn**	**16 45 21.3**	**+0.2**
	baz=1.0							
WTP	**Ta-pu**	**1.17**	**232**	*e*P		**Pn**	**16 45 21.3**	**0.0**
	baz=231							
WTP				*e*S		**Sn**	**16 45 37.4**	**

TWG	**Pinlang**	**1.25**	**203**	*eP*		**Pg**	**16 45 20.9**	**-1.8**
	baz=201								
TWGBT	**Beinan**	**1.25**	**203**	*eP*		**Pg**	**16 45 21.2**	**-1.4**
	baz=201								
CHN1	**Nanshi**	**1.27**	**232**	*eP*		**Pn**	**16 45 22.8**	**+0.2**
	baz=232								
CHN1				*eS*		**Sn**	**16 45 42.0**	**+2.2**
	baz=232								
SNST	**Tainan City**	**1.27**	**234**	*eP*		**Pn**	**16 45 23.0**	**+0.4**
	baz=222								
SNST				*eS*		**Sn**	**16 45 41.7**	**+1.9**
	baz=222								
SGST	**Jiashian**	**1.30**	**227**	*eP*		**Pb**	**16 45 23.1**	**-0.1**
	baz=227								
SGST				*eS*		**Sn**	**16 45 41.6**	**+1.1**
	baz=227								
WSF	**Szhu**	**1.32**	**255**	*eP*		**Pb**	**16 45 23.5**	**0.0**
	baz=251								
SLGT	**Liugui**	**1.32**	**222**	*eP*		**Pb**	**16 45 24.5**	**+0.9**
	baz=205								
WSL	**Shuilin Townsh**	**1.35**	**251**	*eP*		**Pb**	**16 45 25.1**	**+1.1**
	baz=260								
YOJ	**Yonaguni jima**	**1.36**	**69**	*eP*		**Pn**	**16 45 24.2**	**+0.4**
	baz=70								
YOJ	**Yonaguni jima**	**1.36**	**69**	*eP*		**Pb**	**16 45 25.1**	**+0.8**
ICHU	**Yijhu**	**1.37**	**244**	*eP*		**Pb**	**16 45 25.3**	**+0.9**
	baz=241								
CHN8	**Yiju**	**1.43**	**244**	*eP*		**Pn**	**16 45 24.1**	**-0.6**
	baz=244								
CHN8				*eS*		**Sn**	**16 45 45.2**	**+1.5**
	baz=244								
CHN3	**Shinhua**	**1.46**	**232**	*eP*		**Pg**	**16 45 26.5**	**0.0**
	baz=233								
SCST	**Cishan**	**1.50**	**224**	*eP*		**Pg**	**16 45 26.8**	**-0.5**
	baz=224								
ECL	**Taimali**	**1.50**	**204**	*eP*		**Pn**	**16 45 25.9**	**+0.2**
	baz=188								
SHHT	**Tainan City**	**1.50**	**231**	*eP*		**Pg**	**16 45 27.4**	**0.0**
	baz=232								
SSD	**Sandimen**	**1.52**	**217**	*eP*		**Pn**	**16 45 25.9**	**-0.1**
	baz=219								
SSD				*eS*		**Sg**	**16 45 46.8**	**-0.7**
	baz=219								
TSMG	**Majia**	**1.55**	**215**	*eP*		**Pn**	**16 45 26.2**	**-0.1**
	baz=218								
TSMG				*eS*		**Sg**	**16 45 49.1**	**+0.7**
	baz=218								
TWM1	**Shoushan**	**1.59**	**224**	*eP*		**Pg**	**16 45 28.6**	**-0.4**
	baz=224								
SGLT	**Jiouru**	**1.62**	**220**	*eP*		**Pg**	**16 45 30.1**	**+0.5**
	baz=206								
MASBT	**Mashibuluo**	**1.63**	**214**	*eP*		**Pn**	**16 45 27.9**	**+0.4**
	baz=217								
MASBT				*eS*		**Sg**	**16 45 50.4**	**-0.7**
	baz=217								
EAST	**Anshuo**	**1.74**	**204**	*eP*		**Pn**	**16 45 28.7**	**-0.3**
	baz=191								
TAWH	**Dawu Township**	**1.76**	**202**	*eP*		**Pb**	**16 45 30.7**	**-0.4**
	baz=189								
SCZT	**Fangliau**	**1.84**	**210**	*eP*		**Pb**	**16 45 31.6**	**-0.8**
	baz=212								
PHUB	**P'eng-hu**	**1.93**	**257**	*eP*		**Pn**	**16 45 31.9**	**+0.3**
	baz=255								
PHUB				*eS*		**Sn**	**16 45 57.2**	**+1.3**
	baz=255								
PNG	**Penghu**	**1.93**	**258**	*eP*		**Pn**	**16 45 32.1**	**+0.5**
	baz=255								
VCHM	**Qimei**	**2.15**	**250**	*eP*		**Pn**	**16 45 35.1**	**+0.5**
	baz=236								
VCHM				*eS*		**Sn**	**16 46 02.9**	**+1.6**
	baz=236								
VWUC	**VWUC**	**2.21**	**298**	*eP*		**Pn**	**16 45 35.0**	**-0.5**
	baz=295								
JIJ	**Ishigaki jima**	**2.34**	**80**	S		**Sn**	**16 46 05.2**	**-1.0**
PTMZ	**Houxiangcun**	**2.51**	**295**	*eP*		**Pn**	**16 45 39.6**	**+0.1**
	baz=293								
JISG	**Ishigakijimahi**	**2.53**	**76**	P		**Pn**	**16 45 39.2**	**-0.7**
JISG				S		**Sn**	**16 46 09.6**	**-1.4**
MATB	**Ma-tsu**	**2.64**	**325**	*eP*		**Pn**	**16 45 41.5**	**+0.1**
	baz=308								
KNMB	**Chin-men Tao**	**2.98**	**280**	*eP*		**Pn**	**16 45 46.1**	**0.0**
	baz=276								
MHZQ	**Yeshan**	**3.15**	**313**	*eP*		**Pn**	**16 45 48.6**	**+0.2**
	baz=312								

*IDC **06** 16:45:41.5±2.5,7°.59S×118°.44E,h0km,mb3.3/2, mbtmp3.3/3,ML3.3/1,Error ellipse: s-maj=235.0km s-min=25.1km az=52.0*

ISC 06 16:45:41.6±1.7,8°.2S±0°.2×118°.0E±0°.2,h10km,n6,σ2≥43/7,
Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**4.23**	**97**	P	**Pg**	**16 47 04.9**	**+2.2**
SOEI	**Soe**	**6.40**	**105**	P	**Pb**	**16 47 31.0**	**-2.3**
MTN	**Manton Dam**	**13.73**	**111**	P	**P**	**16 49 04.9**	**-0.4**
WRA	**Warramunga Arr**	**19.70**	**128**	P	**P**	**16 50 12.5**	**+1.1**
	0.1nm,0.3s,baz=305,slow=12,SNR=4.6						
WRA				S	**S**	**16 53 51.5**	**-2.2**
	0.6nm,0.8s,baz=312,slow=27,SNR=1.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**21.69**	**137**	P	**P**	**16 50 35.6**	**+2.6**
	0.2nm,0.4s,baz=315,slow=8.6,SNR=12						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**63.25**	**333**	P	**P**	**16 56 10.0**	**-0.5**
	0.4nm,0.4s,baz=143,slow=7.9,SNR=13						
	0.4nm,0.4s						

*JMA **06** 16:46:27.4±0.1,24°.1N±0°.3×121°.7E±0°.5,h0km,MV3.2/10, TAIWAN REGION*
*TAP **06** 16:46:27.1,24°.09N×121°.68E,h9km,ML3.7,C*

ISC 06 16:46:27.1±0.9,24°.08N±0°.01×121°.71E±0°.02,h6km±7km, n143,σ0≤60/206,3C-26D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.11**	**271**	⇓*iP*	**Pg**	**16 46 29.5**	**+0.1**
	baz=261						
TWD				*i* S	**Sg**	**16 46 31.0**	**0.0**
	baz=261						
ETL	**Fush Village**	**0.12**	**314**	⇓*iP*	**Pg**	**16 46 29.7**	**+0.1**
	baz=319						
ETL				*i* S	**Sg**	**16 46 31.4**	**+0.1**
	baz=319						
NACB	**Ninganchiao**	**0.14**	**311**	⇓*iP*	**Pg**	**16 46 30.1**	**0.0**
	baz=314						
NACB				*i* S	**Sg**	**16 46 31.7**	**-0.4**
	baz=314						
ETM	**Tongmen**	**0.23**	**241**	P	**Pg**	**16 46 31.8**	**+0.1**
	baz=235						
ETM				S	**Sg**	**16 46 34.8**	**0.0**
	baz=235						
EHP	**Heping Village**	**0.23**	**6**	P	**Pg**	**16 46 32.0**	**+0.2**
	baz=13						
EHP				S	**Sg**	**16 46 35.4**	**+0.5**
	baz=13						
EAHA	**Aohua**	**0.25**	**5**	*iP*	**Pg**	**16 46 32.3**	**+0.2**
	baz=9.0						
EAHA				*i* S	**Sg**	**16 46 35.7**	**+0.2**
	baz=9.0						
LXIB	**Xiulin Townshi**	**0.28**	**258**	⇓*iP*	**Pg**	**16 46 32.6**	**-0.1**
	baz=245						
LXIB				*eS*	**Sg**	**16 46 36.1**	**-0.3**
	baz=245						
SHUL	**Shoufeng**	**0.32**	**205**	P	**Pb**	**16 46 34.7**	**-0.6**
	baz=207						
SHUL				*eS*	**Sb**	**16 46 41.2**	**+0.5**
	baz=207						
ENA	**Nanau**	**0.35**	**4**	⇓*iP*	**Pg**	**16 46 34.2**	**+0.2**
	baz=8.0						
ENA				*i* S	**Sg**	**16 46 38.6**	**0.0**
	baz=8.0						
ESL	**Shilin**	**0.37**	**224**	⇓P	**Pg**	**16 46 34.3**	**0.0**
	baz=228						
ESL				*eS*	**Sg**	**16 46 39.0**	**-0.1**
	baz=228						
EWUT	**Wuta**	**0.37**	**9**	P	**Pg**	**16 46 34.6**	**+0.3**
	baz=11						
EWUT				S	**Sg**	**16 46 39.4**	**+0.2**
	baz=11						
TEGC	**Jichi Village**	**0.40**	**203**	*eP*	**Pb**	**16 46 36.2**	**-0.4**
	baz=191						
TEGC				*eS*	**Sb**	**16 46 44.2**	**+1.2**
	baz=191						
WHF	**Hehuan Shan**	**0.41**	**279**	⇓P	**Pg**	**16 46 35.1**	**-0.2**
	baz=277						
WHF				*i* S	**Sg**	**16 46 40.5**	**-0.3**
	baz=277						
FUSS	**Fushou**	**0.46**	**292**	⇓*iP*	**Pg**	**16 46 36.2**	**+0.1**
	baz=291						
FUSS				*eS*	**Sg**	**16 46 42.3**	**+0.1**
	baz=291						
NNSB	**Datong**	**0.46**	**319**	⇓*iP*	**Pg**	**16 46 36.2**	**+0.1**
	baz=319						
NNSB				*i* S	**Sg**	**16 46 42.0**	**-0.2**
	baz=319						
NNSH	**Datong**	**0.46**	**319**	⇓*iP*	**Pg**	**16 46 36.2**	**+0.1**
	baz=319						
NNSH				*i* S	**Sg**	**16 46 42.0**	**-0.1**
	baz=319						
WARBT	**Fenglin Townsh**	**0.47**	**220**	P	**Pg**	**16 46 36.3**	**+0.1**
	baz=225						
WARBT				*eS*	**Sg**	**16 46 43.1**	**+0.8**
	baz=225						
NNS	**Nan Shan**	**0.47**	**319**	⇓*iP*	**Pg**	**16 46 36.4**	**0.0**
	baz=321						
NNS				*i* S	**Sg**	**16 46 42.5**	**-0.1**
	baz=321						
LATG	**Datong**	**0.49**	**339**	⇓*iP*	**Pg**	**16 46 36.6**	**+0.1**
	baz=340						
LATG				*i* S	**Sg**	**16 46 42.7**	**-0.2**
	baz=340						
CHGB	**Renai**	**0.49**	**268**	⇓*iP*	**Pg**	**16 46 36.9**	**+0.2**
	baz=257						
CHGB				*i* S	**Sg**	**16 46 42.9**	**-0.2**
	baz=257						
OWD	**Renai**	**0.51**	**256**	⇓P	**Pg**	**16 46 37.0**	**0.0**
	baz=253						
OWD				S	**Sg**	**16 46 42.9**	**-0.7**
	baz=253						
ESAO	**Su ao**	**0.51**	**14**	⇓P	**Pg**	**16 46 37.1**	**+0.2**
	baz=14						
ESAO				*eS*	**Sg**	**16 46 43.7**	**+0.1**
	baz=14						
TWT	**Tachien**	**0.52**	**290**	P	**Pg**	**16 46 37.6**	**+0.4**
	baz=288						
TWT				S	**Sg**	**16 46 44.5**	**+0.4**
	baz=288						
TDCB	**Techi**	**0.54**	**289**	P	**Pg**	**16 46 37.5**	**0.0**
	baz=288						
TDCB				S	**Sg**	**16 46 44.3**	**-0.3**
	baz=288						
TWC	**Suao**	**0.54**	**13**	P	**Pg**	**16 46 37.8**	**+0.2**
	baz=6.0						
TWC				S	**Sg**	**16 46 45.1**	**+0.4**
	baz=6.0						
WUSB	**Renai**	**0.55**	**261**	⇓P	**Pg**	**16 46 37.9**	**+0.1**
	baz=259						
WUSB				S	**Sg**	**16 46 44.6**	**-0.4**
	baz=259						
NDS	**Dongshan**	**0.55**	**0**	⇓P	**Pg**	**16 46 38.0**	**+0.2**
	baz=360						
NDS				S	**Sg**	**16 46 45.2**	**+0.2**
	baz=360						
NDT	**Datong Townshi**	**0.55**	**341**	⇓*iP*	**Pg**	**16 46 38.2**	**+0.4**
	baz=341						
NDT				S	**Sg**	**16 46 45.3**	**+0.2**
	baz=341						
ENTT	**Nioudou**	**0.57**	**347**	⇓*iP*	**Pg**	**16 46 38.5**	**+0.3**
	baz=347						
ENTT				*i* S	**Sg**	**16 46 45.8**	**+0.1**
	baz=347						
VWDT	**VWDT**	**0.61**	**238**	⇑P	**Pg**	**16 46 38.9**	**-0.1**
	baz=245						
HGSD	**Ruisui**	**0.64**	**204**	*eP*	**Pb**	**16 46 41.0**	**+0.2**
	baz=211						
TWE	**Neicheng**	**0.64**	**356**	⇓P	**Pg**	**16 46 39.8**	**+0.3**
	baz=358						
TWE				S	**Sg**	**16 46 47.3**	**-0.6**
	baz=358						
YHNB	**Yeheng**	**0.66**	**332**	⇓*iP*	**Pb**	**16 46 40.4**	**-0.9**
	baz=332						
YHNB				S	**Sg**	**16 46 48.1**	**-0.5**
	baz=332						
EHY	**Hungye**	**0.67**	**212**	P	**Pg**	**16 46 40.2**	**+0.1**
	baz=210						
NSK	**Sanguang**	**0.68**	**331**	⇑P	**Pg**	**16 46 40.4**	**+0.2**
	baz=332						
NSK				*i* S	**Sg**	**16 46 48.9**	**-0.1**
	baz=332						
FUSB	**Fushanzhiwuyua**	**0.69**	**350**	⇓P	**Pg**	**16 46 40.5**	**+0.1**
	baz=350						
FUSB				S	**Sg**	**16 46 49.1**	**-0.3**
	baz=350						
WPL	**Puli Township**	**0.69**	**265**	P	**Pg**	**16 46 40.7**	**+0.2**
	baz=254						
WPL				S	**Sg**	**16 46 49.0**	**-0.6**
	baz=254						
DPDB	**Guoxing**	**0.72**	**267**	⇑P	**Pb**	**16 46 41.4**	**-0.7**
	baz=266						
NWLT	**Wulai**	**0.72**	**345**	*eP*	**Pg**	**16 46 41.1**	**+0.1**
	baz=332						
NWLT				*eS*	**Sg**	**16 46 49.9**	**-0.6**
	baz=332						
WHP	**Taichung City**	**0.73**	**286**	P	**Pb**	**16 46 41.6**	**-0.7**
	baz=285						
WHP				S	**Sg**	**16 46 50.9**	**+0.2**
	baz=285						
WCS	**Beigang Elemen**	**0.73**	**268**	*eP*	**Pg**	**16 46 41.4**	**+0.2**
	baz=259						
WCS				*eS*	**Sg**	**16 46 51.0**	**+0.2**
	baz=259						
SSLB	**Suanglung**	**0.75**	**248**	⇓*iP*	**Pg**	**16 46 41.6**	**0.0**
	baz=256						
SSLB				S	**Sg**	**16 46 50.2**	**-1.2**
	baz=256						
SMLT	**Sun Moon Lake**	**0.77**	**255**	⇓P	**Pg**	**16 46 42.1**	**+0.2**
	baz=254						
SMLT				*eS*	**Sg**	**16 46 51.7**	**-0.3**
	baz=254						
NFF	**Wufeng Townshi**	**0.77**	**316**	*eP*	**Pb**	**16 46 42.3**	**-0.8**
	baz=315						
NFF				*eS*	**Sg**	**16 46 51.8**	**-0.3**
	baz=315						
YULB	**Yu-li**	**0.78**	**209**	*eP*	**Pg**	**16 46 42.2**	**0.0**
	baz=210						
ECBN	**Changbin**	**0.80**	**198**	P	**Pg**	**16 46 43.2**	**+0.8**
	baz=185						
TYC	**Yuchr**	**0.80**	**258**	*eP*	**Pg**	**16 46 42.3**	**-0.3**
	baz=256						
TYC				S	**Sg**	**16 46 51.6**	**-1.4**
	baz=256						
EYUL	**Yuli**	**0.81**	**206**	*eP*	**Pg**	**16 46 43.3**	**+0.6**
	baz=220						
TWF1	**Yuli**	**0.82**	**208**	*eP*	**Pg**	**16 46 42.5**	**-0.3**
	baz=220						
LIOB	**Emei**	**0.85**	**312**	*eP*	**Pb**	**16 46 44.2**	**-0.1**
	baz=311						
LIOB				*eS*	**Sb**	**16 46 55.9**	**-0.1**
	baz=311						
NSTT	**Nanjuang**	**0.85**	**310**	*eP*	**Pb**	**16 46 43.8**	**-0.5**
	baz=310						
NSTT				S	**Sg**	**16 46 53.7**	**-0.9**
	baz=310						
NJD	**Zhudong**	**0.87**	**319**	*eP*	**Pb**	**16 46 44.7**	**+0.1**
	baz=319						
WHYT	**Xinyi Township**	**0.88**	**244**	*eP*	**Pb**	**16 46 44.4**	**-0.4**
	baz=244						
TIPB	**Shuangxi**	**0.90**	**7**	⇓P	**Pg**	**16 46 44.5**	**+0.2**
	baz=350						
NHDH	**Xindian Distri**	**0.90**	**349**	*eP*	**Pb**	**16 46 45.6**	**+0.5**
	baz=340						
TWQ1	**Liyutan**	**0.90**	**288**	P	**Pb**	**16 46 45.5**	**+0.4**
	baz=299						
TWQ1				S	**Sb**	**16 46 57.3**	**-0.2**
	baz=299						
TWA	**Mucha**	**0.91**	**353**	*eP*	**Pb**	**16 46 44.9**	**-0.4**
	baz=352						
TWA				S	**Sg**	**16 46 56.2**	**-0.1**
	baz=352						
TATO	**Taipei**	**0.92**	**347**	*eP*	**Pb**	**16 46 45.0**	**-0.5**
	baz=337						
TATO				*eS*	**Sb**	**16 46 57.1**	**-0.8**
	baz=337						
WWF	**Wufeng**	**0.93**	**268**	P	**Pn**	**16 46 46.6**	**-0.2**
	baz=263						
CHKH	**Chenggong**	**0.93**	**198**	*eP*	**Pg**	**16 46 45.3**	**+0.3**
	baz=190						
WJS	**Zhushan**	**0.94**	**254**	*eP*	**Pb**	**16 46 45.6**	**-0.2**
	baz=253						
WJS				*eS*	**Sb**	**16 46 59.2**	**+0.7**
	baz=253						
HSN1	**Hsinchu**	**0.94**	**318**	*eP*	**Pn**	**16 46 46.4**	**-0.5**
	baz=318						
TCU	**Taichung**	**0.95**	**274**	*eP*	**Pn**	**16 46 46.9**	**-0.1**
	baz=269						
FULB	**Fuli**	**0.96**	**204**	*eP*	**Pg**	**16 46 45.7**	**+0.2**
	baz=219						
NMLH	**Miaoli**	**0.96**	**299**	*eP*	**Pn**	**16 46 47.5**	**+0.4**
	baz=298						
TWB1	**Santiao Chiao**	**0.96**	**15**	*eP*	**Pg**	**16 46 45.2**	**-0.3**
	baz=6.0						
TWB1				S	**Sg**	**16 46 57.4**	**-0.7**
	baz=6.0						
WNT1	**Nantou City**	**0.96**	**260**	*eP*	**Pb**	**16 46 46.3**	**+0.1**
	baz=260						
WNT	**Mingjian**	**0.96**	**258**	P	**Pb**	**16 46 46.6**	**+0.4**
	baz=252						
WNT				*eS*	**Sb**	**16 46 59.5**	**+0.3**
	baz=252						
SBCB	**Hsinchu**	**0.97**	**317**	*eP*	**Pn**	**16 46 47.6**	**+0.2**
	baz=317						
TAP	**Taipei**	**0.97**	**349**	*eP*	**Pg**	**16 46 45.7**	**-0.2**
	baz=340						
NJN	**Zhunan**	**0.98**	**308**	*eP*	**Pn**	**16 46 46.9**	**-0.5**
	baz=308						
HSN	**Hsinchu**	**0.99**	**317**	*eP*	**Pb**	**16 46 46.4**	**-0.3**
	baz=319						
NWF	**Wu-fen Shan**	**0.99**	**4**	*eP*	**Pb**	**16 46 46.5**	**-0.3**
	baz=353						
NWF				*eS*	**Sg**	**16 46 58.8**	**-0.3**
	baz=353						
WFSB	**Wu-fen Shan**	**0.99**	**4**	P	**Pb**	**16 46 46.6**	**-0.1**
	baz=354						
WFSB				S	**Sg**	**16 46 58.4**	**-0.7**
	baz=354						
NTY	**Taoyuan**	**0.99**	**338**	*eP*	**Pn**	**16 46 47.2**	**-0.4**
	baz=331						
ALS	**Alishan**	**1.01**	**236**	*eP*	**Pb**	**16 46 46.9**	**-0.2**
	baz=226						
ALS				*eS*	**Sb**	**16 47 00.2**	**-0.6**
	baz=226						
NCUH	**Zhongli**	**1.01**	**332**	*eP*	**Pn**	**16 46 47.5**	**-0.3**
	baz=330						
NCU	**National Centr**	**1.01**	**332**	*eP*	**Pn**	**16 46 47.4**	**-0.4**
	baz=331						
WDJ	**Dajia District**	**1.02**	**286**	*eP*	**Pn**	**16 46 48.2**	**+0.3**
	baz=285						
SXI1	**Grass Mountain**	**1.02**	**8**	P	**Pg**	**16 46 46.9**	**+0.1**
	baz=353						
CHKT	**Chengkung**	**1.03**	**198**	*eP*	**Pg**	**16 46 46.6**	**-0.3**
	baz=191						
CHKT				*eS*	**Sb**	**16 47 02.2**	**+1.2**
	baz=191						
EHD	**Haiduan**	**1.04**	**207**	*eP*	**Pg**	**16 46 46.3**	**-0.7**
	baz=220						
WYL	**Yuanlin Townsh**	**1.04**	**264**	*eP*	**Pn**	**16 46 48.3**	**0.0**
	baz=264						
TWS1	**Kuangyinshan**	**1.05**	**345**	*eP*	**Pn**	**16 46 48.4**	**0.0**
	baz=345						
TWS1				*eS*	**Sn**	**16 47 02.6**	**-0.9**
	baz=345						
WCHH	**Zhanghua**	**1.06**	**270**	*eP*	**Pn**	**16 46 48.4**	**0.0**
	baz=270						
CHN5	**Tsauling**	**1.06**	**243**	P	**Pb**	**16 46 48.3**	**+0.3**
	baz=233						
CHN5				S	**Sn**	**16 47 03.6**	**-0.2**
	baz=233						
TNOU	**National Taiwa**	**1.07**	**3**	*eP*	**Pg**	**16 46 47.7**	**0.0**
	baz=359						
YM01	**YM01**	**1.07**	**353**	⇓*eP*	**Pb**	**16 46 48.0**	**-0.1**
	baz=1.0						
ELDTW	**Lidau**	**1.09**	**216**	*eP*	**Pg**	**16 46 47.5**	**-0.6**
	baz=206						
NHW	**Xinwu Township**	**1.10**	**327**	*eP*	**Pn**	**16 46 49.4**	**+0.2**
	baz=326						
NTST	**Danshui**	**1.11**	**348**	*eP*	**Pb**	**16 46 48.8**	**+0.1**
	baz=346						
ANP	**Anpu**	**1.12**	**351**	*eP*	**Pn**	**16 46 49.1**	**-0.3**
	baz=349						
WGK	**Gukeng**	**1.12**	**250**	*eP*	**Pn**	**16 46 49.6**	**+0.2**
	baz=250						
WDLH	**Douliu**	**1.14**	**250**	*eP*	**Pn**	**16 46 49.8**	**+0.1**
	baz=251						
TWY	**Chenhua**	**1.20**	**355**	*eP*	**Pn**	**16 46 51.9**	**+1.4**
	baz=340						
WCKO	**Fanlu**	**1.20**	**238**	*eP*	**Pb**	**16 46 50.3**	**0.0**
	baz=240						
WRL	**Guolierlin Hig**	**1.23**	**262**	*eP*	**Pb**	**16 46 50.7**	**-0.1**
	baz=262						
YOJ	**Yonaguni jima**	**1.24**	**72**	*eP*	**Pg**	**16 46 50.4**	**-0.6**
	baz=71						
YOJ	**Yonaguni jima**	**1.24**	**72**	*eP*	**Pg**	**16 46 51.2**	**+0.2**
STYH	**Taoyuan**	**1.25**	**224**	*eP*	**Pg**	**16 46 50.3**	**-0.8**
	baz=226						
RLNB	**Erlin**	**1.25**	**262**	*eP*	**Pn**	**16 46 51.5**	**+0.3**
	baz=261						
RLNB				*eS*	**Sn**	**16 47 07.9**	**-0.4**
	baz=261						
CHN4	**Tsaushan**	**1.26**	**235**	*eP*	**Pn**	**16 46 51.7**	**+0.4**
	baz=237						
CHN2	**Minshiung**	**1.26**	**245**	*eP*	**Pn**	**16 46 52.1**	**+0.8**
	baz=246						
TPUB	**Ta-pu**	**1.26**	**232**	*eP*	**Pb**	**16 46 51.4**	**+0.1**
	baz=222						
TPUB				*eS*	**Sn**	**16 47 08.4**	**-0.2**
	baz=222						
STYT	**Tauyuan**	**1.27**	**224**	P	**Pg**	**16 46 51.0**	**-0.4**
	baz=226						
WTK	**Tuku**	**1.27**	**252**	*eP*	**Pn**	**16 46 52.1**	**+0.7**
	baz=253						
WTP	**Ta-pu**	**1.30**	**231**	*eP*	**Pb**	**16 46 52.3**	**+0.2**
	baz=232						
WTCT	**Ta-ch'eng**	**1.33**	**261**	*eP*	**Pn**	**16 46 51.9**	**-0.3**
	baz=261						
TWGBT	**Beinan**	**1.38**	**205**	*eP*	**Pn**	**16 46 50.7**	**-2.3**
	baz=207						
TWG	**Pinlang**	**1.38**	**205**	*eP*	**Pn**	**16 46 51.6**	**-1.4**
	baz=207						
TWK	**Hsinying**	**1.38**	**235**	*eP*	**Pn**	**16 46 53.3**	**+0.3**
	baz=236						
TWK				*eS*	**Sn**	**16 47 13.9**	**+2.3**
	baz=236						
CHN1	**Nanshi**	**1.41**	**231**	*eP*	**Pg**	**16 46 54.2**	**+0.1**
	baz=223						
CHN1				*eS*	**Sn**	**16 47 14.0**	**+1.9**
	baz=223						
SNST	**Tainan City**	**1.41**	**233**	*eP*	**Pn**	**16 46 53.5**	**+0.2**
	baz=224						
LDUT	**Ludao**	**1.42**	**189**	*eP*	**Pn**	**16 46 50.4**	**-3.0**
	baz=191						
WSF	**Szhu**	**1.43**	**252**	*eP*	**Pb**	**16 46 54.1**	**-0.2**
	baz=252						
WSF				*eS*	**Sg**	**16 47 13.9**	**+0.6**
	baz=252						
SGST	**Jiashian**	**1.44**	**226**	*eP*	**Pn**	**16 46 53.5**	**-0.2**
	baz=228						
SGST				*eS*	**Sg**	**16 47 13.6**	**+0.3**
	baz=228						
SLGT	**Liugui**	**1.46**	**222**	*eP*	**Pn**	**16 46 54.4**	**+0.4**
	baz=225						
ICHU	**Yijhu**	**1.50**	**242**	*eP*	**Pn**	**16 46 54.9**	**+0.3**
	baz=243						
CHN8	**Yiju**	**1.56**	**242**	*eP*	**Pn**	**16 46 55.8**	**+0.4**
	baz=244						
ECL	**Taimali**	**1.63**	**205**	*eP*	**Pn**	**16 46 55.3**	**-1.1**
	baz=191						
SCST	**Cishan**	**1.63**	**224**	*eP*	**Pb**	**16 46 58.1**	**+0.4**
	baz=226						
SHHT	**Tainan City**	**1.64**	**230**	*eP*	**Pb**	**16 46 58.1**	**+0.4**
	baz=233						
SSD	**Sandimen**	**1.66**	**217**	*eP*	**Pn**	**16 46 56.8**	**0.0**
	baz=232						
TSMG	**Majia**	**1.68**	**216**	*eP*	**Pn**	**16 46 57.9**	**+0.8**
	baz=231						
TWM1	**Shoushan**	**1.72**	**224**	*eP*	**Pg**	**16 47 00.2**	**0.0**
	baz=226						
MASBT	**Mashibuluo**	**1.77**	**214**	*

JIJ				*e*S	Sn	16 47 34.4	+1.7
VWUC	**VWUC** baz=294	**2.25**	**294**	*e*P	**Pn**	**16 47 04.0**	**-1.0**
VCHM	**Qimei** baz=234	**2.27**	**248**	*e*P	**Pn**	**16 47 05.0**	**-0.1**
JISG	**Ishigakijimahi**	**2.42**	**77**	P	**Pn**	**16 47 07.2**	**0.0**
PTMZ	**Houxiangcun** baz=293	**2.55**	**293**	*e*P	**Pn**	**16 47 08.2**	**-0.8**
MATB	**Ma-tsu** baz=321	**2.61**	**323**	*e*P	**Pn**	**16 47 09.8**	**-0.1**
KNMB	**Chin-men Tao** baz=278	**3.06**	**278**	*e*P	**Pn**	**16 47 16.0**	**-0.1**
XPSS	**Dashiqiu** baz=332	**3.15**	**334**	*e*P	**Pn**	**16 47 17.1**	**-0.2**
AXDP	**Jialang** baz=284	**3.51**	**284**	*e*P	**Pn**	**16 47 22.1**	**-0.1**
ZPLA	**Ao Xicun** baz=269	**3.63**	**268**	*e*P	**Pn**	**16 47 23.9**	**0.0**
DSXP	**Dongshan** baz=267	**3.94**	**265**	*e*P	**Pn**	**16 47 28.1**	**-0.1**
SXFK	**Yanhouchang** baz=303	**4.35**	**303**	*e*P	**Pn**	**16 47 33.7**	**-0.1**

TAP 06 16:47:43.2, 24.08N×121.60E, h9km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=30	**0.01**	**317**	P		Pg	16 47 45.3	+0.5
TWD				*i* S		Sg	16 47 46.6	+0.7
ETL	**Fush Village** baz=13	**0.09**	**14**	P		Pg	16 47 46.2	+0.6
ETL				S		Sg	16 47 48.1	+0.9
NACB	**Ninganchiao** baz=356	**0.10**	**357**	P		Pg	16 47 46.3	+0.6
NACB				*i* S		Sg	16 47 48.5	+1.1
ETM	**Tongmen** baz=222	**0.15**	**222**	*e*P		Pg	16 47 47.0	+0.6
LXIB	**Xiulin Townshi** baz=252	**0.18**	**253**	P		Pg	16 47 48.0	+0.9
SHUL	**Shoufeng** baz=186	**0.29**	**187**	*e*P		Pg	16 47 49.7	+0.8
ESL	**Shilin** baz=209	**0.30**	**211**	*e*P		Pb	16 47 50.2	-0.6
WHF	**Hehuan Shan** baz=282	**0.32**	**283**	*e*P		Pg	16 47 50.1	+0.4

TAP 06 16:48:11.5, 24.01N×121.66E, h11km±1km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=325	**0.09**	**322**	*i* P		Pg	16 48 14.5	+0.4
TWD				*i* S		Sg	16 48 15.8	-0.1
ETL	**Fush Village** baz=351	**0.15**	**349**	P		Pg	16 48 15.1	+0.1
ETL				*e*S		Sg	16 48 17.4	0.0
ETM	**Tongmen** baz=248	**0.15**	**253**	*i* P		Pb	16 48 15.8	-0.6
NACB	**Ninganchiao** baz=349	**0.17**	**341**	P		Pg	16 48 14.6	-0.8
NACB				S		Sg	16 48 18.5	+0.5
LXIB	**Xiulin Townshi** baz=269	**0.22**	**273**	*e*P		Pb	16 48 17.0	-0.7
SHUL	**Shoufeng** baz=192	**0.24**	**201**	P		Pg	16 48 17.1	+0.7
ESL	**Shilin** baz=226	**0.28**	**226**	P		Pg	16 48 16.9	-0.4

TAP 06 16:48:42.4, 24.05N×121.63E, h8km, ML2.8, 2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=326	**0.05**	**317**	⇓*i* P		Pg	16 48 44.4	+0.4
TWD				*i* S		Sg	16 48 45.5	+0.3
ETL	**Fush Village** baz=357	**0.11**	**356**	*i* P		Pg	16 48 45.2	+0.2
ETL				*i* S		Sg	16 48 47.3	+0.4
NACB	**Ninganchiao** baz=354	**0.13**	**345**	⇓*i* P		Pg	16 48 45.4	+0.2
NACB				*i* S		Sg	16 48 47.5	+0.2
ETM	**Tongmen** baz=238	**0.15**	**238**	*i* P		Pg	16 48 46.0	+0.5
ETM				*i* S		Sg	16 48 48.3	+0.6
LXIB	**Xiulin Townshi** baz=251	**0.20**	**263**	*i* P		Pg	16 48 47.2	+0.7
LXIB				*i* S		Sg	16 48 49.9	+0.6
SHUL	**Shoufeng** baz=193	**0.26**	**194**	*e*P		Pb	16 48 48.5	-0.9
ESL	**Shilin** baz=226	**0.29**	**218**	*i* P		Pg	16 48 48.5	+0.3
ESL				*i* S		Sb	16 48 53.6	-1.4
EAHA	**Aohua** baz=29	**0.30**	**19**	*e*P		Pg	16 48 48.3	0.0
EAHA				*e*S		Sg	16 48 52.5	+0.2
TEGC	**Jichi Village** baz=180	**0.34**	**194**	P		Pb	16 48 50.5	-0.3
WHF	**Hehuan Shan** baz=286	**0.35**	**287**	P		Pg	16 48 49.9	+0.5
WHF				*i* S		Sg	16 48 54.2	+0.2
ENA	**Nanau** baz=16	**0.39**	**15**	*i* P		Pg	16 48 50.2	+0.1
WARBT	**Fenglin Townsh** baz=222	**0.40**	**215**	P		Pg	16 48 50.4	+0.3
FUSS	**Fushou** baz=299	**0.41**	**300**	P		Pg	16 48 51.2	+0.8
FUSS				*e*S		Sg	16 48 57.1	+1.3
CHGB	**Renai** baz=261	**0.42**	**272**	*i* P		Pb	16 48 51.5	-0.7
CHGB				*i* S		Sg	16 48 57.3	+1.1
EGFH	**Guangfu** baz=213	**0.42**	**207**	*e*P		Pb	16 48 51.6	-0.4
EWUT	**Wuta** baz=18	**0.42**	**18**	*i* P		Pg	16 48 50.8	+0.2
OWD	**Renai** baz=267	**0.43**	**258**	*e*P		Pb	16 48 52.3	+0.1
OWD				S		Sg	16 48 56.8	+0.4
NNSB	**Datong** baz=329	**0.44**	**329**	*i* P		Pg	16 48 51.7	+0.6
NNSB				*i* S		Sg	16 48 57.5	+0.6
NNS	**Nan Shan** baz=330	**0.46**	**329**	*i* P		Pg	16 48 51.9	+0.6
NNS				*i* S		Sg	16 48 58.2	+0.9
TWT	**Tachien** baz=295	**0.47**	**297**	*i* P		Pb	16 48 53.0	0.0
TWT				*i* S		Sb	16 48 59.2	-0.8
WUSB	**Renai** baz=264	**0.47**	**264**	*e*P		Pb	16 48 52.6	-0.5
TDCB	**Techi** baz=295	**0.48**	**296**	P		Pb	16 48 52.7	-0.5
TDCB				S		Sg	16 48 59.1	+1.1
LATG	**Datong** baz=349	**0.50**	**349**	*i* P		Pg	16 48 52.4	+0.3
LATG				S		Sg	16 48 59.4	+0.7
VWDT	**VWDT** baz=229	**0.54**	**237**	*e*P		Pb	16 48 53.6	-0.4
VWDT				*e*S		Sg	16 49 00.7	+1.0
ESAO	**Su ao** baz=20	**0.56**	**20**	*e*P		Pg	16 48 53.2	-0.1
NDT	**Datong Townshi** baz=349	**0.57**	**349**	P		Pb	16 48 54.0	-0.6
NDT				*e*S		Sg	16 49 01.3	+0.6
NDS	**Dongshan** baz=8.0	**0.59**	**7**	P		Pg	16 48 54.2	+0.4
NDS				S		Sg	16 49 02.2	+0.6
ENTT	**Nioudou** baz=355	**0.59**	**354**	*i* P		Pg	16 48 54.4	+0.5
ENTT				S		Sg	16 49 02.5	+0.8
TWC	**Suao** baz=20	**0.60**	**19**	*e*P		Pg	16 48 54.0	+0.1
EHY	**Hungye** baz=215	**0.61**	**208**	*e*P		Pg	16 48 53.9	-0.2
WCS	**Beigang Elemen** baz=271	**0.66**	**271**	*e*P		Pb	16 48 57.0	+0.9
YHNB	**Yeheng** baz=346	**0.66**	**339**	P		Pb	16 48 55.9	-0.4
WHP	**Taichung City** baz=283	**0.67**	**290**	*e*P		Pb	16 48 56.6	+0.3
SSLB	**Suanglung** baz=248	**0.67**	**248**	*e*P		Pb	16 48 55.9	-0.5
TWE	**Neicheng** baz=355	**0.67**	**3**	*i* P		Pg	16 48 55.6	+0.2
NSK	**Sanguang** baz=346	**0.68**	**338**	*i* P		Pb	16 48 56.2	-0.3
SMLT	**Sun Moon Lake** baz=256	**0.69**	**257**	*e*P		Pb	16 48 57.6	+0.9
FUSB	**Fushanzhiwuyua** baz=356	**0.71**	**357**	*e*P		Pb	16 48 56.7	-0.4
YULB	**Yu-li** baz=206	**0.72**	**205**	*e*P		Pb	16 48 57.1	-0.1
NWLT	**Wulai** baz=338	**0.74**	**351**	P		Pb	16 48 57.2	-0.3
NFF	**Wufeng Townshi** baz=321	**0.75**	**321**	*e*P		Pb	16 48 57.6	-0.1
NSTT	**Nanjuang** baz=315	**0.82**	**316**	*e*P		Pn	16 48 59.6	-0.6
LIOB	**Emei** baz=317	**0.82**	**317**	*e*P		Pb	16 48 59.6	+0.7
TIPB	**Shuangxi** baz=2.0	**0.94**	**11**	*e*P		Pg	16 49 00.4	-0.1

*TAP **06** 16:48:53.1, 24.13N×121.71E, h8km, ML3.3, C*
*JMA **06** 16:48:53.2±0.1, 24.1N±0.4×121.7E±0.5, h0km, TAIWAN REGION*
ISC 06 16:48:53.5±0.8, 24.12N±0.02×121.73E±0.02, h10km±5km, n87, σ0.53/131, 4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=288	**0.10**	**290**	*i* P		**Pg**	**16 48 56.1**	**-0.1**
ETL				*i* S		**Sg**	**16 48 58.0**	**-0.1**
TWD	**Chiawan** baz=242	**0.13**	**250**	*i* P		**Pg**	**16 48 56.2**	**-0.3**
TWD				*i* S		**Sg**	**16 48 58.5**	**-0.1**
NACB	**Ninganchiao** baz=292	**0.13**	**293**	⇓*i* P		**Pg**	**16 48 56.4**	**-0.2**
NACB				*i* S		**Sg**	**16 48 58.8**	**+0.1**
EHP	**Heping Village** baz=11	**0.19**	**4**	*i* P		**Pg**	**16 48 57.6**	**+0.1**
EHP				*i* S		**Sg**	**16 49 01.4**	**+1.1**
EAHA	**Aohua** baz=8.0	**0.20**	**3**	⇓*i* P		**Pg**	**16 48 57.9**	**+0.1**
EAHA				*i* S		**Sg**	**16 49 01.8**	**+1.1**
ETM	**Tongmen** baz=230	**0.27**	**234**	*i* P		**Pg**	**16 48 58.5**	**-0.4**
ETM				*i* S		**Sg**	**16 49 02.7**	**+0.2**
ENA	**Nanau** baz=7.0	**0.30**	**3**	⇓*i* P		**Pg**	**16 48 59.8**	**+0.2**
ENA				*i* S		**Sg**	**16 49 04.8**	**+1.1**
LXIB	**Xiulin Townshi** baz=247	**0.30**	**250**	*i* P		**Pg**	**16 48 59.5**	**-0.2**
LXIB				S		**Sg**	**16 49 03.8**	**0.0**
EWUT	**Wuta** baz=11	**0.32**	**9**	P		**Pg**	**16 49 00.1**	**0.0**
EWUT				S		**Sg**	**16 49 04.9**	**+0.6**
SHUL	**Shoufeng** baz=201	**0.37**	**204**	*e*S		**Sb**	**16 49 09.1**	**+1.2**
ESL	**Shilin** baz=217	**0.41**	**221**	P		**Pg**	**16 49 01.4**	**-0.1**
ESL				S		**Sg**	**16 49 06.7**	**-0.3**
WHF	**Hehuan Shan** baz=271	**0.42**	**273**	*i* P		**Pg**	**16 49 01.9**	**-0.1**
WHF				*i* S		**Sb**	**16 49 08.9**	**-1.0**
NNSB	**Datong** baz=314	**0.44**	**314**	*i* P		**Pg**	**16 49 02.4**	**+0.2**
NNSB				*i* S		**Sg**	**16 49 08.7**	**+0.8**
TEGC	**Jichi Village** baz=199	**0.45**	**202**	*e*S		**Sb**	**16 49 11.6**	**+1.4**
LATG	**Datong** baz=337	**0.45**	**336**	P		**Pg**	**16 49 02.1**	**-0.2**
LATG				S		**Sb**	**16 49 09.7**	**-0.7**
NNS	**Nan Shan** baz=315	**0.45**	**314**	P		**Pg**	**16 49 02.1**	**-0.2**
NNS				*i* S		**Sg**	**16 49 08.8**	**+0.4**
FUSS	**Fushou** baz=285	**0.46**	**286**	P		**Pg**	**16 49 03.0**	**+0.5**
FUSS				S		**Sg**	**16 49 09.7**	**+1.1**
ESAO	**Su ao** baz=15	**0.46**	**13**	*e*P		**Pg**	**16 49 03.1**	**+0.5**
ESAO				*e*S		**Sb**	**16 49 10.1**	**-0.6**
TWC	**Suao** baz=16	**0.50**	**13**	*i* P		**Pg**	**16 49 03.4**	**+0.2**
TWC				S		**Sb**	**16 49 11.1**	**-0.6**
TWC	**Suao** baz=20	**0.50**	**13**	*e*S		**Pg**	**16 49 03.1**	**-0.1**
CHGB	**Renai** baz=261	**0.51**	**263**	P		**Pg**	**16 49 03.4**	**-0.1**
NDS	**Dongshan**	**0.51**	**359**	P		**Pg**	**16 49 03.9**	**+0.5**
NDS				*i* S		**Sb**	**16 49 11.6**	**-0.4**
WARBT	**Fenglin Townsh** baz=215	**0.51**	**218**	*e*S		**Sb**	**16 49 12.5**	**+0.5**
NDT	**Datong Townshi** baz=339	**0.52**	**338**	*i* P		**Pb**	**16 49 04.2**	**-0.4**
NDT				*i* S		**Sb**	**16 49 12.1**	**-0.1**
TWT	**Tachien** baz=283	**0.52**	**284**	P		**Pb**	**16 49 04.6**	**-0.2**
TWT				*i* S		**Sb**	**16 49 12.0**	**-0.5**
EGFH	**Guangfu** baz=209	**0.53**	**211**	*e*P		**Pg**	**16 49 04.1**	**+0.3**
EGFH				*e*S		**Sb**	**16 49 12.7**	**+0.2**
OWD	**Renai** baz=250	**0.53**	**252**	P		**Pb**	**16 49 04.6**	**-0.4**
OWD				S		**Sg**	**16 49 11.8**	**+0.8**
ENTT	**Nioudou** baz=346	**0.53**	**344**	*i* P		**Pg**	**16 49 04.5**	**+0.6**
ENTT				*i* S		**Sb**	**16 49 12.5**	**-0.2**
TDCB	**Techi** baz=283	**0.53**	**284**	P		**Pb**	**16 49 05.0**	**-0.1**
TDCB				S		**Sg**	**16 49 11.9**	**+0.8**
WUSB	**Renai** baz=255	**0.57**	**257**	P		**Pg**	**16 49 05.2**	**+0.5**
WUSB				S		**Sb**	**16 49 13.2**	**-0.8**
TWE	**Neicheng** baz=357	**0.60**	**355**	⇓*i* P		**Pg**	**16 49 05.6**	**+0.4**
TWE				*i* S		**Sb**	**16 49 14.6**	**+0.1**
YHNB	**Yeheng** baz=330	**0.63**	**330**	P		**Pg**	**16 49 06.1**	**+0.3**
YHNB				S		**Sb**	**16 49 15.4**	**-0.2**
NSK	**Sanguang** baz=329	**0.64**	**329**	*i* P		**Pg**	**16 49 06.2**	**+0.1**
NSK				S		**Sb**	**16 49 15.7**	**-0.3**
FUSB	**Fushanzhiwuyua** baz=350	**0.65**	**349**	P		**Pg**	**16 49 06.6**	**+0.5**
FUSB				S		**Sb**	**16 49 16.0**	**-0.1**
VWDT	**VWDT** baz=234	**0.65**	**236**	*e*S		**Sb**	**16 49 16.7**	**+0.7**
NWLT	**Wulai** baz=343	**0.68**	**343**	P		**Pb**	**16 49 07.2**	**-0.3**
NWLT				S		**Sb**	**16 49 16.6**	**-0.5**
EHY	**Hungye** baz=209	**0.72**	**211**	P		**Pg**	**16 49 07.4**	**0.0**
EHY				*e*S		**Sb**	**16 49 19.3**	**+1.3**
WHP	**Taichung City** baz=281	**0.73**	**282**	*e*P		**Pg**	**16 49 06.8**	**-0.9**
WCS	**Beigang Elemen** baz=264	**0.75**	**265**	*i* P		**Pb**	**16 49 08.8**	**+0.2**
NFF	**Wufeng Townshi** baz=312	**0.75**	**312**	*e*P		**Pg**	**16 49 08.5**	**+0.4**
NFF				*e*S		**Sn**	**16 49 20.5**	**-1.2**
SSLB	**Suanglung** baz=243	**0.78**	**245**	*e*P		**Pg**	**16 49 07.7**	**-0.9**
SSLB				*e*S		**Sg**	**16 49 18.6**	**-0.2**
SMLT	**Sun Moon Lake** baz=251	**0.79**	**253**	*i* P		**Pb**	**16 49 09.6**	**+0.1**
SMLT				*i* S		**Sb**	**16 49 21.0**	**+0.8**
TYC	**Yuchr** baz=253	**0.82**	**255**	P		**Pg**	**16 49 09.2**	**-0.2**
TYC				*e*S		**Sb**	**16 49 20.8**	**-0.3**
YULB	**Yu-li** baz=207	**0.83**	**208**	*e*P		**Pg**	**16 49 08.2**	**-1.3**
LIOB	**Emei** baz=309	**0.83**	**309**	P		**Pb**	**16 49 10.3**	**+0.3**
NSTT	**Nanjuang** baz=307	**0.83**	**308**	*i* P		**Pb**	**16 49 10.0**	**0.0**
NSTT				*i* S		**Sn**	**16 49 22.8**	**-0.8**
TIPB	**Shuangxi** baz=7.0	**0.85**	**6**	*e*P		**Pb**	**16 49 10.3**	**0.0**
NHDH	**Xindian Distri** baz=348	**0.85**	**348**	*e*P		**Pn**	**16 49 11.1**	**-0.5**
EYUL	**Yuli** baz=204	**0.86**	**206**	*e*P		**Pg**	**16 49 10.2**	**+0.2**
TWA	**Mucha** baz=352	**0.86**	**351**	P		**Pn**	**16 49 11.6**	**-0.1**
TWF1	**Yuli** baz=205	**0.86**	**207**	P		**Pb**	**16 49 10.6**	**0.0**
TWF1				S		**Sn**	**16 49 24.4**	**+0.1**
WHYT	**Xinyi Township** baz=241	**0.91**	**242**	*e*P		**Pg**	**16 49 11.0**	**0.0**
WHYT				*e*S		**Sn**	**16 49 24.8**	**-0.7**
TWB1	**Santiao Chiao** baz=16	**0.91**	**15**	*e*P		**Pb**	**16 49 11.4**	**-0.1**
NWF	**Wu-fen Shan** baz=4.0	**0.94**	**3**	P		**Pb**	**16 49 12.2**	**+0.1**
NWF				S		**Sn**	**16 49 25.7**	**-0.8**
WFSB	**Wu-fen Shan** baz=4.0	**0.94**	**3**	*e*P		**Pg**	**16 49 11.8**	**+0.1**
WFSB				*e*S		**Sn**	**16 49 26.4**	**0.0**
SBCB	**Hsinchu** baz=314	**0.95**	**315**	*e*P		**Pg**	**16 49 11.8**	**0.0**
WJS	**Zhushan** baz=251	**0.96**	**252**	*e*P		**Pb**	**16 49 12.4**	**+0.1**
NCUH	**Zhongli** baz=330	**0.97**	**330**	*e*P		**Pn**	**16 49 13.9**	**+0.6**
CHKH	**Chenggong** baz=197	**0.98**	**198**	*e*P		**Pb**	**16 49 12.5**	**0.0**
SXI1	**Grass Mountain** baz=9.0	**0.98**	**8**	*e*P		**Pg**	**16 49 12.4**	**+0.1**
WNT	**Mingjian** baz=254	**0.98**	**256**	*e*P		**Pn**	**16 49 13.6**	**+0.3**
TWS1	**Kuangyinshan** baz=344	**1.01**	**344**	*e*P		**Pn**	**16 49 13.6**	**-0.1**
TWS1				*e*S		**Sg**	**16 49 26.0**	**-0.2**
YM01	**YM01** baz=352	**1.03**	**352**	P		**Pn**	**16 49 14.0**	**0.0**
YM01				S		**Sn**	**16 49 29.4**	**+0.8**
ALS	**Alishan** baz=232	**1.04**	**234**	*e*P		**Pb**	**16 49 13.8**	**0.0**
ALS				*e*S		**Sn**	**16 49 28.9**	**-0.3**
NTST	**Danshui** baz=347	**1.07**	**346**	*e*P		**Pn**	**16 49 15.0**	**+0.5**
ANP	**Anpu** baz=351	**1.07**	**350**	*e*P		**Pn**	**16 49 14.9**	**+0.2**
EHD	**Haiduan** baz=205	**1.08**	**206**	*e*P		**Pb**	**16 49 13.5**	**-0.8**
CHN5	**Tsauling** baz=240	**1.09**	**242**	P		**Pn**	**16 49 15.5**	**+0.5**
ELDTW	**Lidau** baz=213	**1.14**	**215**	*e*P		**Pb**	**16 49 15.2**	**-0.1**
WGK	**Gukeng** baz=246	**1.15**	**248**	*e*P		**Pg**	**16 49 16.1**	**+0.5**
WDLH	**Douliu** baz=247	**1.17**	**249**	*e*P		**Pg**	**16 49 16.6**	**+0.6**
WCKO	**Fanlu** baz=235	**1.23**	**237**	*e*P		**Pg**	**16 49 18.3**	**+1.1**
WRL	**Guolierlin Hig** baz=259	**1.25**	**260**	*e*P		**Pg**	**16 49 18.1**	**+0.5**
STYH	**Taoyuan** baz=221	**1.29**	**223**	*e*P		**Pg**	**16 49 18.6**	**+0.4**
CHN4	**Tsaushan** baz=232	**1.29**	**234**	*e*P		**Pg**	**16 49 18.9**	**+0.5**
TPUB	**Ta-pu** baz=230	**1.30**	**231**	*e*P		**Pg**	**16 49 18.8**	**+0.3**
WTK	**Tuku** baz=249	**1.30**	**251**	*e*P		**Pg**	**16 49 18.4**	**0.0**
WTP	**Ta-pu** baz=228	**1.34**	**230**	*e*P		**Pg**	**16 49 19.6**	**+0.3**
TWK	**Hsinying** baz=232	**1.42**	**233**	*e*P		**Pn**	**16 49 19.8**	**+0.4**
CHN1	**Nanshi** baz=228	**1.44**	**230**	*e*P		**Pg**	**16 49 21.2**	**0.0**
SNST	**Tainan City** baz=230	**1.44**	**232**	*e*P		**Pb**	**16 49 20.1**	**-0.3**
WSF	**Szhu** baz=249	**1.46**	**251**	*e*P		**Pb**	**16 49 20.7**	**-0.1**
SGST	**Jiashian** baz=224	**1.48**	**226**	*e*P		**Pn**	**16 49 20.2**	**+0.1**
SLGT	**Liugui** baz=220	**1.50**	**222**	*e*P		**Pn**	**16 49 19.6**	**-0.8**
ICHU	**Yijhu** baz=239	**1.53**	**240**	*e*P		**Pb**	**16 49 21.8**	**-0.1**
JIJ	**Ishigaki jima**	**2.22**	**83**	S		**Sn**	**16 49 56.8**	**-1.1**
JISG	**Ishigakijimahi**	**2.40**	**78**	*e*P		**Pn**	**16 49 32.6**	**-0.2**
JISG				*e*S		**Sn**	**16 50 01.4**	**-0.9**

TAP 06 16:56:54.6, 24.02N×121.59E, h7km, ML2.5, 4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=12	**0.06**	**5**	P		Pg	16 56 57.0	+0.8
TWD				*i* S		Sg	16 56 58.5	+1.1
ETM	**Tongmen** baz=237	**0.10**	**238**	P		Pg	16 56 57.6	+0.7
ETM				*i* S		Sg	16 56 59.4	+0.9
ETL	**Fush Village** baz=12	**0.14**	**12**	*i* P		Pg	16 56 58.4	+0.8
ETL				S		Sg	16 57 01.0	+1.5
NACB	**Ninganchiao** baz=1.0	**0.15**	**2**	⇓*i* P		Pg	16 56 58.5	+0.8
NACB				*i* S		Sg	16 57 01.0	+1.2
LXIB	**Xiulin Townshi** baz=269	**0.16**	**270**	P		Pg	16 56 58.9	+1.0
LXIB				*i* S		Sg	16 57 01.8	+1.6

SHUL	**Shoufeng** baz=186	**0.23**	**186**	P	Pg	16 57 00.3	+1.1
SHUL	baz=186			*e*S	Sg	16 57 05.2	+2.8
ESL	**Shilin** baz=213	**0.25**	**215**	*e*P	Pg	16 56 59.9	+0.4
ESL	baz=213			*e*S	Sg	16 57 03.0	+0.1
TEGC	**Jichi Village** baz=187	**0.32**	**188**	*e*P	Pb	16 57 02.3	-0.3
WHF	**Hehuan Shan** baz=292	**0.32**	**292**	*e*P	Pb	16 57 02.3	-0.7
WHF	baz=292			*e*S	Sb	16 57 07.0	-1.5
EAHA	**Aohua** baz=24	**0.34**	**24**	*e*P	Pg	16 57 01.7	+0.5
WARBT	**Fenglin Townsh** baz=211	**0.36**	**212**	*e*P	Pg	16 57 02.3	+0.8
CHGB	**Renai** baz=275	**0.38**	**276**	*i* P	Pb	16 57 03.4	-0.4
OWD	**Renai** baz=259	**0.39**	**260**	*e*P	Pb	16 57 03.0	-0.8
FUSS	**Fushou** baz=305	**0.39**	**305**	*e*P	Pb	16 57 03.7	-0.3
ENA	**Nanau** baz=19	**0.43**	**19**	P	Pg	16 57 03.5	+0.6
WUSB	**Renai** baz=266	**0.43**	**266**	*e*P	Pb	16 57 04.2	-0.5
TWT	**Tachien** baz=300	**0.44**	**301**	*e*P	Pb	16 57 04.7	-0.1
NNSB	**Datong** baz=334	**0.45**	**335**	P	Pb	16 57 04.3	-0.6
NNSH	**Datong** baz=334	**0.45**	**335**	*e*P	Pb	16 57 04.5	-0.4
EWUT	**Wuta** baz=22	**0.46**	**22**	*e*P	Pg	16 57 04.1	+0.7
TDCB	**Techi** baz=300	**0.46**	**300**	*e*P	Pb	16 57 04.9	-0.2
NNS	**Nan Shan** baz=335	**0.46**	**335**	P	Pb	16 57 04.8	-0.3
VWDT	**VWDT** baz=236	**0.49**	**237**	*e*P	Pb	16 57 04.9	-0.6
LATG	**Datong** baz=353	**0.51**	**354**	*e*P	Pb	16 57 05.5	-0.6
HGSD	**Ruisui** baz=196	**0.55**	**196**	*e*P	Pb	16 57 06.5	0.0
EHY	**Hungye** baz=204	**0.57**	**206**	*e*P	Pg	16 57 06.2	+0.7
WPL	**Puli Township** baz=269	**0.58**	**269**	*e*P	Pb	16 57 06.7	-0.4
NDT	**Datong Townshi** baz=353	**0.58**	**353**	*e*P	Pb	16 57 07.0	-0.2
ESAO	**Su ao** baz=22	**0.60**	**23**	*e*P	Pb	16 57 07.2	-0.2
DPDB	**Guoxing** baz=271	**0.61**	**271**	*e*P	Pb	16 57 07.8	+0.2
ENTT	**Nioudou** baz=358	**0.62**	**358**	*e*P	Pb	16 57 07.5	-0.2
NDS	**Dongshan** baz=10.0	**0.62**	**11**	*e*P	Pb	16 57 07.3	-0.5
WCS	**Beigang Elemen** baz=273	**0.62**	**273**	*e*P	Pb	16 57 08.2	+0.4
SSLB	**Suanglung** baz=248	**0.63**	**248**	⇓*i*P	Pb	16 57 07.5	-0.4
TWC	**Suao** baz=22	**0.63**	**22**	*e*P	Pb	16 57 07.8	-0.2
WHP	**Taichung City** baz=293	**0.64**	**294**	*e*P	Pb	16 57 08.7	+0.5
SMLT	**Sun Moon Lake** baz=257	**0.65**	**258**	⇓P	Pb	16 57 08.4	+0.1
YHNB	**Yeheng** baz=343	**0.67**	**343**	⇓P	Pb	16 57 09.0	+0.2
TYC	**Yuchr** baz=259	**0.68**	**260**	P	Pb	16 57 08.7	-0.1
YULB	**Yu-li** baz=203	**0.68**	**203**	*e*P	Pb	16 57 08.6	-0.3
NSK	**Sanguang** baz=342	**0.69**	**342**	P	Pb	16 57 09.1	+0.2
TWE	**Neicheng** baz=6.0	**0.70**	**6**	*e*P	Pb	16 57 09.0	-0.1
TWF1	**Yuli** baz=201	**0.72**	**202**	*e*P	Pb	16 57 09.0	-0.4
FUSB	**Fushanzhiwuyua** baz=359	**0.73**	**360**	*e*P	Pb	16 57 09.8	0.0

TAP ***06*** *16:57:00.9,24.°04N×121.°66E,h8km,ML3.4,C*
JMA ***06*** *16:57:01.0±0.2,24.°1N±0.°6×121.°7E±0.°9,h0km,TAIWAN REGION*

ISC 06 16:57:01.3±0.9,**24.°05N**±0.°01×**121.°67E**±0.°02,**h6**km±6km,
n140,σ0**45**/193,**4D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=307	**0.07**	**292**	*i* P	**Pg**	**16 57 03.1**	**0.0**
TWD	baz=307			*i* S	**Sg**	**16 57 04.5**	**+0.1**
ETL	**Fush Village** baz=341	**0.12**	**337**	*i* P	**Pg**	**16 57 03.8**	**0.0**
ETL	baz=341			*i* S	**Sg**	**16 57 06.0**	**+0.4**
NACB	**Ninganchiao** baz=334	**0.14**	**330**	⇓*i*P	**Pg**	**16 57 04.1**	**-0.2**
NACB	baz=334			*i* S	**Sg**	**16 57 06.3**	**+0.1**
ETM	**Tongmen** baz=245	**0.18**	**242**	*i* P	**Pg**	**16 57 04.9**	**-0.2**
ETM	baz=245			*i* S	**Sg**	**16 57 07.8**	**+0.2**
LXIB	**Xiulin Townshi** baz=255	**0.24**	**263**	*i* P	**Pg**	**16 57 06.1**	**0.0**
LXIB	baz=255			*i* S	**Sg**	**16 57 09.9**	**+0.6**
SHUL	**Shoufeng** baz=210	**0.28**	**201**	P	**Pb**	**16 57 08.1**	**-0.7**
SHUL	baz=210			*e*S	**Sb**	**16 57 13.9**	**+0.1**
EAHA	**Aohua** baz=10.0	**0.28**	**13**	*e*P	**Pg**	**16 57 06.7**	**-0.2**
EAHA	baz=10.0			*e*S	**Sg**	**16 57 11.2**	**+0.5**
ESL	**Shilin** baz=224	**0.32**	**223**	P	**Pg**	**16 57 07.8**	**+0.1**
TEGC	**Jichi Village** baz=202	**0.36**	**200**	P	**Pg**	**16 57 09.1**	**+0.7**
TEGC	baz=202			*e*S	**Sb**	**16 57 16.8**	**+0.7**
ENA	**Nanau** baz=8.0	**0.38**	**10**	*e*P	**Pg**	**16 57 08.6**	**-0.2**
WHF	**Hehuan Shan** baz=285	**0.38**	**284**	P	**Pg**	**16 57 09.1**	**+0.2**
WHF	baz=285			*i* S	**Sg**	**16 57 14.2**	**+0.2**
EWUT	**Wuta** baz=1.0	**0.40**	**14**	*e*P	**Pg**	**16 57 09.2**	**0.0**
WARBT	**Fenglin Townsh** baz=229	**0.42**	**218**	P	**Pg**	**16 57 09.9**	**+0.4**
WARBT	baz=229			*e*S	**Sg**	**16 57 16.1**	**+0.9**
FUSS	**Fushou** baz=308	**0.44**	**297**	P	**Pg**	**16 57 10.0**	**+0.1**
EGFH	**Guangfu** baz=220	**0.44**	**210**	*e*P	**Pb**	**16 57 10.8**	**-0.8**
CHGB	**Renai** baz=272	**0.46**	**271**	P	**Pg**	**16 57 10.5**	**+0.3**
CHGB	baz=272			*i* S	**Sg**	**16 57 16.6**	**+0.4**
NNSB	**Datong** baz=326	**0.46**	**325**	P	**Pg**	**16 57 10.2**	**-0.1**
NNSB	baz=326			*e*S	**Sg**	**16 57 16.2**	**-0.1**
NNSB	**Datong** baz=334	**0.46**	**325**	*e*S	**Pg**	**16 57 10.1**	**-0.1**
NNSH	**Datong** baz=333	**0.46**	**325**	*e*P	**Pg**	**16 57 10.4**	**+0.1**
OWD	**Renai** baz=260	**0.46**	**258**	*e*P	**Pg**	**16 57 10.8**	**+0.4**
NNS	**Nan Shan** baz=326	**0.47**	**325**	P	**Pg**	**16 57 10.4**	**-0.1**
NNS	baz=326			*e*S	**Sg**	**16 57 17.2**	**+0.5**
NNS	**Nan Shan** baz=335	**0.47**	**325**	*e*S	**Pg**	**16 57 10.2**	**-0.3**
TWT	**Tachien** baz=294	**0.50**	**294**	*e*P	**Pg**	**16 57 11.5**	**+0.5**
TWT	baz=294			S	**Sg**	**16 57 18.4**	**+1.0**
LATG	**Datong** baz=343	**0.50**	**345**	⇓P	**Pg**	**16 57 11.0**	**0.0**
LATG	baz=343			S	**Sg**	**16 57 18.3**	**+0.7**
TDCB	**Techi** baz=294	**0.51**	**293**	P	**Pg**	**16 57 11.5**	**+0.3**
TDCB	baz=294			S	**Sg**	**16 57 18.5**	**+0.6**
WUSB	**Renai** baz=264	**0.51**	**263**	*e*P	**Pb**	**16 57 12.4**	**-0.4**
WUSB	baz=264			S	**Sg**	**16 57 18.4**	**+0.5**
ESAO	**Su ao** baz=4.0	**0.54**	**17**	*e*P	**Pb**	**16 57 12.8**	**-0.5**
NDT	**Datong Townshi** baz=344	**0.57**	**345**	P	**Pg**	**16 57 12.6**	**+0.3**
NDT	baz=344			*e*S	**Sg**	**16 57 20.3**	**+0.6**
VWDT	**VWDT** baz=234	**0.57**	**239**	*e*P	**Pg**	**16 57 12.4**	**+0.1**
VWDT	baz=234			*e*S	**Sg**	**16 57 20.1**	**+0.3**
TWC	**Suao** baz=8.0	**0.58**	**16**	*e*P	**Pb**	**16 57 13.8**	**-0.1**
NDS	**Dongshan** baz=2.0	**0.58**	**4**	*e*P	**Pg**	**16 57 12.9**	**+0.4**
ENTT	**Nioudou** baz=349	**0.59**	**351**	*e*P	**Pg**	**16 57 13.2**	**+0.4**
HGSD	**Ruisui** baz=221	**0.60**	**202**	*e*P	**Pb**	**16 57 14.6**	**+0.3**
EHY	**Hungye** baz=222	**0.63**	**211**	*e*P	**Pg**	**16 57 13.2**	**-0.3**
WPL	**Puli Township** baz=268	**0.66**	**267**	*e*P	**Pg**	**16 57 14.2**	**+0.2**
WPL	baz=268			*e*S	**Sg**	**16 57 22.8**	**+0.3**
TWE	**Neicheng** baz=350	**0.67**	**360**	P	**Pb**	**16 57 14.7**	**-0.6**
YHNB	**Yeheng** baz=327	**0.67**	**336**	⇓P	**Pg**	**16 57 14.7**	**+0.4**
YHNB	baz=327			S	**Sg**	**16 57 23.0**	**0.0**
DPDB	**Guoxing** baz=270	**0.68**	**269**	*e*P	**Pb**	**16 57 15.2**	**-0.5**
NSK	**Sanguang** baz=326	**0.68**	**335**	P	**Pg**	**16 57 14.8**	**+0.3**
NSK	baz=326			S	**Sg**	**16 57 23.5**	**0.0**
WCS	**Beigang Elemen** baz=263	**0.69**	**271**	P	**Pb**	**16 57 15.6**	**-0.3**
WCS	baz=263			*e*S	**Sg**	**16 57 24.1**	**+0.3**
WHP	**Taichung City** baz=289	**0.70**	**289**	*e*P	**Pb**	**16 57 15.6**	**-0.5**
WHP	baz=289			*e*S	**Sb**	**16 57 25.3**	**-0.7**
SSLB	**Suanglung** baz=260	**0.71**	**248**	*e*P	**Pg**	**16 57 15.2**	**+0.2**
SSLB	baz=260			*e*S	**Sg**	**16 57 23.5**	**-0.7**
FUSB	**Fushanzhiwuyua** baz=351	**0.71**	**354**	*e*P	**Pb**	**16 57 15.6**	**-0.5**
FUSB	baz=351			*e*S	**Sb**	**16 57 26.0**	**-0.2**
SMLT	**Sun Moon Lake** baz=258	**0.73**	**257**	*e*P	**Pg**	**16 57 15.8**	**+0.5**
SMLT	baz=258			*e*S	**Sg**	**16 57 25.0**	**+0.3**
NWLT	**Wulai** baz=335	**0.74**	**348**	*e*P	**Pg**	**16 57 16.0**	**+0.5**
YULB	**Yu-li** baz=211	**0.74**	**208**	*e*P	**Pg**	**16 57 15.9**	**+0.3**
ECBN	**Changbin** baz=185	**0.76**	**195**	*e*P	**Pg**	**16 57 16.1**	**+0.1**
TYC	**Yuchr** baz=260	**0.76**	**259**	*e*P	**Pg**	**16 57 16.2**	**+0.3**
TYC	baz=260			S	**Sg**	**16 57 25.4**	**-0.4**
NFF	**Wufeng Townshi** baz=319	**0.77**	**319**	*e*P	**Pg**	**16 57 16.6**	**+0.5**
EYUL	**Yuli** baz=222	**0.77**	**205**	*e*P	**Pb**	**16 57 16.8**	**-0.4**
TWF1	**Yuli** baz=222	**0.78**	**206**	*e*P	**Pg**	**16 57 16.4**	**+0.1**
WHYT	**Xinyi Township** baz=247	**0.83**	**245**	*e*P	**Pb**	**16 57 17.8**	**-0.4**
LIOB	**Emei** baz=315	**0.84**	**315**	*e*P	**Pb**	**16 57 18.3**	**-0.1**
NSTT	**Nanjuang** baz=314	**0.84**	**313**	*e*P	**Pb**	**16 57 18.2**	**-0.2**
NSTT	baz=314			*e*S	**Sg**	**16 57 28.8**	**+0.4**
NJD	**Zhudong** baz=327	**0.86**	**322**	*e*P	**Pb**	**16 57 19.3**	**+0.6**
TWQ1	**Liyutan** baz=291	**0.87**	**290**	*e*P	**Pb**	**16 57 19.1**	**+0.2**
WWF	**Wufeng** baz=270	**0.89**	**270**	*e*P	**Pn**	**16 57 20.2**	**-0.2**
WWF	baz=270			*e*S	**Sn**	**16 57 33.4**	**-0.2**
CHKH	**Chenggong** baz=189	**0.89**	**197**	*e*P	**Pg**	**16 57 18.7**	**+0.2**
WJS	**Zhushan** baz=257	**0.89**	**255**	*e*P	**Pn**	**16 57 19.8**	**-0.6**
TCU	**Taichung** baz=272	**0.92**	**276**	*e*P	**Pn**	**16 57 20.5**	**-0.2**
NHDH	**Xindian Distri** baz=342	**0.92**	**352**	*e*P	**Pn**	**16 57 20.2**	**-0.6**
FULB	**Fuli** baz=219	**0.92**	**202**	*e*P	**Pg**	**16 57 19.2**	**+0.2**
WNT1	**Nantou City** baz=261	**0.92**	**261**	*e*P	**Pb**	**16 57 20.1**	**+0.4**
WNT1	baz=261			*e*S	**Sn**	**16 57 33.4**	**-0.9**
WNT	**Mingjian** baz=259	**0.92**	**259**	⇓*i*P	**Pn**	**16 57 20.4**	**-0.4**
WNT	baz=259			*e*S	**Sn**	**16 57 33.4**	**-1.0**
TIPB	**Shuangxi** baz=351	**0.93**	**9**	*e*P	**Pb**	**16 57 19.6**	**-0.3**
TWA	**Mucha** baz=353	**0.93**	**355**	*e*P	**Pb**	**16 57 19.6**	**-0.3**
TATO	**Taipei** baz=347	**0.93**	**350**	*e*P	**Pg**	**16 57 19.6**	**+0.3**
NMLH	**Miaoli** baz=301	**0.94**	**301**	*e*P	**Pn**	**16 57 21.2**	**+0.1**
ALS	**Alishan** baz=248	**0.96**	**236**	*e*P	**Pg**	**16 57 19.8**	**0.0**
NJN	**Zhunan** baz=319	**0.96**	**311**	*e*P	**Pn**	**16 57 21.2**	**-0.2**
HSN	**Hsinchu** baz=322	**0.98**	**320**	*e*P	**Pn**	**16 57 22.0**	**+0.3**
WDJ	**Dajia District** baz=288	**0.99**	**288**	*e*P	**Pn**	**16 57 22.1**	**+0.4**
CHKT	**Chengkung** baz=200	**0.99**	**197**	*e*P	**Pg**	**16 57 19.8**	**-0.6**
EHD	**Haiduan** baz=210	**0.99**	**206**	*e*P	**Pg**	**16 57 20.1**	**-0.4**
TWB1	**Santiao Chiao** baz=4.0	**0.99**	**17**	*e*P	**Pg**	**16 57 20.6**	**+0.1**
NTY	**Taoyuan** baz=333	**1.00**	**340**	*e*P	**Pb**	**16 57 21.4**	**+0.2**
WYL	**Yuanlin Townsh** baz=266	**1.00**	**265**	*e*P	**Pn**	**16 57 21.8**	**-0.1**
WYL	baz=266			*e*S	**Sn**	**16 57 36.8**	**+0.4**
NCUH	**Zhongli** baz=332	**1.01**	**334**	*e*P	**Pn**	**16 57 21.7**	**-0.4**
CHN5	**Tsauling** baz=236	**1.02**	**244**	P	**Pb**	**16 57 21.7**	**+0.3**
CHN5	baz=236			S	**Sn**	**16 57 36.5**	**-0.3**
WCHH	**Zhanghua** baz=273	**1.02**	**272**	*e*P	**Pb**	**16 57 21.6**	**+0.2**
NWF	**Wu-fen Shan**	**1.02**	**6**	*e*P	**Pb**	**16 57 21.6**	**+0.2**
WFSB	**Wu-fen Shan**	**1.02**	**6**	*e*P	**Pb**	**16 57 21.7**	**+0.3**
ECS	**Chishang** baz=221	**1.04**	**204**	*e*P	**Pb**	**16 57 21.9**	**+0.2**
ELDTW	**Lidau** baz=221	**1.05**	**215**	*e*P	**Pg**	**16 57 21.1**	**-0.4**
ELDTW	baz=221			*e*S	**Sb**	**16 57 36.3**	**+0.3**
SXI1	**Grass Mountain** baz=358	**1.05**	**10**	P	**Pn**	**16 57 23.3**	**+0.6**
SXI1	baz=358			S	**Sn**	**16 57 37.6**	**-0.2**
TWS1	**Kuangyinshan** baz=345	**1.07**	**348**	*e*P	**Pn**	**16 57 22.8**	**-0.1**
TWS1	baz=345			*e*S	**Sn**	**16 57 38.4**	**+0.4**
WGK	**Gukeng** baz=252	**1.08**	**250**	*e*P	**Pb**	**16 57 22.5**	**+0.1**
WGK	baz=252			*e*S	**Sn**	**16 57 38.1**	**-0.2**
YM01	**YM01** baz=359	**1.09**	**355**	*e*P	**Pn**	**16 57 23.1**	**-0.1**
YM01	baz=359			*e*S	**Sn**	**16 57 39.2**	**+0.5**
TNOU	**National Taiwa** baz=360	**1.10**	**5**	*e*P	**Pn**	**16 57 23.2**	**-0.1**
WDLH	**Douliu** baz=253	**1.10**	**251**	*e*P	**Pn**	**16 57 23.7**	**+0.5**
NTST	**Danshui** baz=346	**1.13**	**350**	*e*P	**Pb**	**16 57 23.3**	**+0.1**
ANP	**Anpu** baz=350	**1.14**	**353**	*e*P	**Pb**	**16 57 23.4**	**0.0**
WCKO	**Fanlu** baz=236	**1.15**	**238**	*e*P	**Pn**	**16 57 24.1**	**+0.1**
WCKO	baz=236			*e*S	**Sn**	**16 57 40.4**	**+0.3**
WRL	**Guolierlin Hig** baz=256	**1.19**	**263**	*e*P	**Pg**	**16 57 24.1**	**-0.1**
STYH	**Taoyuan** baz=228	**1.20**	**223**	*e*P	**Pg**	**16 57 23.9**	**-0.6**
STYH	baz=228			*e*S	**Sb**	**16 57 40.4**	**+0.1**
CHN4	**Tsaushan** baz=228	**1.21**	**235**	*e*P	**Pn**	**16 57 24.7**	**-0.1**
CHN4	baz=228			S	**Sn**	**16 57 41.9**	**+0.4**
RLNB	**Erlin** baz=263	**1.21**	**263**	*e*P	**Pn**	**16 57 24.8**	**0.0**
RLNB	baz=263			*e*S	**Sn**	**16 57 42.0**	**+0.5**
CHN2	**Minshiung** baz=248	**1.21**	**245**	*e*P	**Pg**	**16 57 24.3**	**-0.3**
TPUB	**Ta-pu** baz=226	**1.21**	**232**	P	**Pg**	**16 57 24.2**	**-0.4**
TPUB	baz=226			*e*S	**Sn**	**16 57 42.4**	**+0.7**
STYT	**Tauyuan** baz=228	**1.22**	**224**	*e*P	**Pg**	**16 57 24.0**	**-0.8**
STYT	baz=228			*e*S	**Sn**	**16 57 41.8**	**-0.1**
TWY	**Chenhua** baz=341	**1.22**	**357**	*e*P	**Pg**	**16 57 24.7**	**0.0**
WTK	**Tuku** baz=255	**1.23**	**253**	*e*P	**Pn**	**16 57 25.7**	**+0.7**
LONT	**Longtian** baz=208	**1.24**	**204**	*e*P	**Pb**	**16 57 24.8**	**-0.5**
WTP	**Ta-pu** baz=235	**1.26**	**231**	*e*P	**Pn**	**16 57 25.4**	**-0.1**
WTCT	**Ta-ch'eng** baz=264	**1.29**	**262**	*e*P	**Pn**	**16 57 25.5**	**-0.4**
YOJ	**Yonaguni jima** baz=68	**1.29**	**71**	*e*P	**Pb**	**16 57 25.9**	**-0.1**
TWK	**Hsinying** baz=228	**1.34**	**234**	*e*P	**Pb**	**16 57 26.8**	**-0.1**
TWK	baz=228			*e*S	**Sb**	**16 57 44.0**	**-0.3**
TWG	**Pinlang** baz=208	**1.34**	**204**	*e*P	**Pn**	**16 57 26.5**	**-0.2**
TWGBT	**Beinan** baz=208	**1.34**	**204**	*e*P	**Pn**	**16 57 26.5**	**-0.2**
CHN1	**Nanshi** baz=235	**1.36**	**231**	*e*P	**Pb**	**16 57 27.0**	**-0.2**
CHN1	baz=235			*e*S	**Sn**	**16 57 45.8**	**+0.6**
SNST	**Tainan City** baz=236	**1.36**	**233**	*e*P	**Pn**	**16 57 26.4**	**-0.4**
SGST	**Jiashian** baz=231	**1.39**	**226**	*e*P	**Pn**	**16 57 26.5**	**-0.8**
SGST	baz=231			*e*S	**Sg**	**16 57 46.8**	**+0.8**
WSF	**Szhu** baz=254	**1.39**	**253**	*e*P	**Pb**	**16 57 27.5**	**-0.2**
WSF	baz=254			*e*S	**Sg**	**16 57 47.7**	**+1.6**
SLGT	**Liugui** baz=227	**1.41**	**222**	*e*P	**Pn**	**16 57 27.5**	**-0.1**
ICHU	**Yijhu** baz=246	**1.45**	**242**	*e*P	**Pn**	**16 57 28.1**	**0.0**
CHN8	**Yiju** baz=246	**1.51**	**243**	*e*P	**Pb**	**16 57 29.4**	**-0.4**
CHN8	baz=246			*e*S	**Sg**	**16 57 51.5**	**+1.5**
SHHT	**Tainan City** baz=235	**1.59**	**230**	*e*P	**Pb**	**16 57 30.9**	**-0.2**
ECL	**Taimali** baz=192	**1.59**	**205**	*e*P	**Pb**	**16 57 30.7**	**-0.4**
SCLT	**Jiali** baz=241	**1.61**	**238**	*e*P	**Pn**	**16 57 29.6**	**-0.7**
SSD	**Sandimen** baz=210	**1.61**	**217**	*e*P	**Pn**	**16 57 30.1**	**-0.2**
TSMG	**Majia** baz=209	**1.64**	**215**	*e*P	**Pb**	**16 57 31.3**	**-0.7**
TWM1	**Shoushan** baz=229	**1.68**	**223**	*e*P	**Pb**	**16 57 32.7**	**+0.1**
MASBT	**Mashibuluo** baz=222	**1.72**	**214**	*e*P	**Pb**	**16 57 33.0**	**-0.4**
MASBT	baz=222			*e*S	**Sb**	**16 57 55.2**	**-0.1**
EAST	**Anshuo** baz=193	**1.83**	**205**	*e*P	**Pb**	**16 57 34.6**	**-0.5**
SCZT	**Fangliau** baz=203	**1.93**	**210**	*e*P	**Pn**	**16 57 35.2**	**+0.5**
PHUB	**P'eng-hu** baz=254	**2.00**	**255**	P	**Pn**	**16 57 35.0**	**-0.6**
PHUB	baz=254			S	**Sn**	**16 58 01.1**	**+0.2**
PNG	**Penghu** baz=255	**2.00**	**256**	*e*P	**Pn**	**16 57 35.7**	**0.0**
PNG	baz=255			*e*S	**Sn**	**16 58 01.2**	**+0.2**
VCHM	**Qimei** baz=237	**2.22**	**248**	*e*P	**Pn**	**16 57 38.5**	**-0.2**
VWUC	**VWUC** baz=295	**2.23**	**295**	*e*P	**Pn**	**16 57 37.5**	**-1.3**
JISG	**Ishigakijimahi**	**2.46**	**77**	*e*P	**Pn**	**16 57 41.8**	**-0.3**
PTMZ	**Houxiangcun** baz=293	**2.52**	**293**	*e*P	**Pn**	**16 57 41.9**	**-1.0**
MATB	**Ma-tsu** baz=322	**2.61**	**324**	*e*P	**Pn**	**16 57 43.6**	**-0.4**
KNMB	**Chin-men Tao** baz=279	**3.02**	**278**	*e*P	**Pn**	**16 57 49.5**	**-0.3**
LYJJ	**Jianjiangzhen** baz=325	**3.03**	**326**	*e*P	**Pn**	**16 57 48.9**	**-0.9**
MHZQ	**Yeshan** baz=297	**3.15**	**311**	*e*P	**Pn**	**16 57 50.8**	**-0.7**
XPSS	**Dashiqiu** baz=334	**3.16**	**335**	*e*P	**Pn**	**16 57 50.7**	**-0.9**
AXDP	**Jialang** baz=284	**3.48**	**285**	*e*P	**Pn**	**16 57 55.5**	**-0.5**
ZPLA	**Ao Xicun** baz=269	**3.59**	**269**	*e*P	**Pn**	**16 57 57.2**	**-0.3**
DSXP	**Dongshan** baz=266	**3.90**	**266**	*e*P	**Pn**	**16 58 01.1**	**-0.7**
SXFK	**Yanhouchang** baz=302	**4.33**	**303**	*e*P	**Pn**	**16 58 07.5**	**-0.2**

IDC ***06*** *17:02:05.1±1.1,24.°06N×121.°80E,h0km,mb3.5/8, mbtmp3.5/9,ML3.2/1,Error ellipse: s-maj=52.6km s-min=20.0km az=67.0*
TAP ***06*** *17:02:07.7,24.°21N×121.°78E,h8km,ML3.9,B*
JMA ***06*** *17:02:07.6±0.1,24.°2N±0.°3×121.°8E±0.°2,h0km,MV3.4/15, TAIWAN REGION*

ISC 06 17:02:06.9±0.9,**24.°17N**±0.°01×**121.°85E**±0.°01,**h7**km±7km,
n177,σ0**70**/257,**mb3.5**/8,**1C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=345	**0.17**	**324**	⇓*i*P	**Pg**	**17 02 10.6**	**+0.1**
EHP	baz=345			*i* S	**Sg**	**17 02 12.7**	**-0.2**
EAHA	**Aohua** baz=344	**0.19**	**327**	⇓*i*P	**Pg**	**17 02 10.8**	**+0.1**
EAHA	baz=344			S	**Sg**	**17 02 13.2**	**-0.1**
ETL	**Fush Village** baz=252	**0.21**	**267**	⇓*i*P	**Pg**	**17 02 11.2**	**+0.1**
ETL	baz=252			*i* S	**Sg**	**17 02 13.7**	**-0.2**
NACB	**Ninganchiao**	**0.24**	**271**	P	**Pg**	**17 02 11.5**	**-0.1**

NACB	**Ninganchiao**	**0.24**	**271**	⇓*i*P	**Pg**	**17 02 11.5**	**-0.1**
	baz=260							
NACB				*i* S	**Sg**	**17 02 14.1**	**-0.6**
	baz=260							
TWD	**Chiawan**	**0.25**	**249**	P	**Pg**	**17 02 12.0**	**+0.2**
	baz=239							
TWD				*i* S	**Sg**	**17 02 15.3**	**+0.1**
	baz=239							
ENA	**Nanau**	**0.28**	**338**	⇓*i*P	**Pg**	**17 02 12.5**	**+0.1**
	baz=353							
ENA				*i* S	**Sg**	**17 02 16.0**	**-0.1**
	baz=353							
EWUT	**Wuta**	**0.28**	**346**	⇓*i*P	**Pg**	**17 02 12.9**	**+0.4**
	baz=360							
EWUT				*i* S	**Sg**	**17 02 16.6**	**+0.4**
	baz=360							
ETM	**Tongmen**	**0.39**	**238**	*e*P	**Pg**	**17 02 14.8**	**+0.4**
	baz=229							
ETM				*e*S	**Sg**	**17 02 20.2**	**+0.7**
	baz=229							
ESAO	**Su ao**	**0.40**	**359**	*i* P	**Pg**	**17 02 15.2**	**+0.4**
	baz=5.0							
ESAO				*e*S	**Sg**	**17 02 20.4**	**+0.3**
	baz=5.0							
EOS2	**EOS2**	**0.43**	**54**	*e*P	**Pn**	**17 02 17.7**	**-1.6**
	baz=51							
EOS4	**EOS4**	**0.43**	**96**	*e*P	**Pn**	**17 02 18.9**	**-0.2**
	baz=83							
LXIB	**Xiulin Townshi**	**0.43**	**250**	*e*P	**Pg**	**17 02 15.2**	**0.0**
	baz=243							
LXIB				*e*S	**Sg**	**17 02 21.1**	**+0.2**
	baz=243							
TWC	**Suao**	**0.44**	**360**	⇓*i*P	**Pg**	**17 02 15.8**	**+0.5**
	baz=7.0							
TWC				S	**Sg**	**17 02 21.5**	**+0.3**
	baz=7.0							
EOS3	**EOS3**	**0.44**	**75**	*e*P	**Pn**	**17 02 17.9**	**-1.6**
	baz=77							
SHUL	**Shoufeng**	**0.46**	**215**	⇓P	**Pb**	**17 02 18.1**	**+0.7**
	baz=207							
LATG	**Datong**	**0.47**	**321**	⇓*i*P	**Pg**	**17 02 16.0**	**0.0**
	baz=326							
LATG				*i* S	**Sg**	**17 02 21.4**	**-0.8**
	baz=326							
NDS	**Dongshan**	**0.48**	**345**	⇓*i*P	**Pg**	**17 02 16.5**	**+0.4**
	baz=353							
NDS				S	**Sg**	**17 02 22.6**	**+0.1**
	baz=353							
NNSB	**Datong**	**0.50**	**301**	⇓P	**Pg**	**17 02 16.5**	**-0.1**
	baz=303							
NNSB				S	**Sg**	**17 02 22.3**	**-0.9**
	baz=303							
NNSH	**Datong**	**0.50**	**301**	*e*P	**Pg**	**17 02 16.5**	**-0.1**
	baz=302							
NNSH				*e*S	**Sg**	**17 02 22.4**	**-0.8**
	baz=302							
NNS	**Nan Shan**	**0.51**	**302**	P	**Pg**	**17 02 16.8**	**-0.1**
	baz=304							
NNS				*i* S	**Sg**	**17 02 22.7**	**-0.9**
	baz=304							
ESL	**Shilin**	**0.52**	**227**	P	**Pb**	**17 02 17.9**	**-0.5**
	baz=228							
ESL				*e*S	**Sb**	**17 02 26.4**	**+0.2**
	baz=228							
NDT	**Datong Townshi**	**0.53**	**324**	⇓P	**Pg**	**17 02 17.4**	**+0.2**
	baz=329							
NDT				*i* S	**Sg**	**17 02 24.0**	**-0.1**
	baz=329							
ENTT	**Nioudou**	**0.54**	**331**	⇓*e*P	**Pg**	**17 02 17.5**	**+0.2**
	baz=337							
ENTT				*e*S	**Sg**	**17 02 24.2**	**0.0**
	baz=337							
WHF	**Hehuan Shan**	**0.54**	**267**	P	**Pg**	**17 02 17.2**	**-0.1**
	baz=264							
WHF				S	**Sg**	**17 02 24.4**	**-0.1**
	baz=264							
TEGC	**Jichi Village**	**0.54**	**212**	*e*P	**Pb**	**17 02 19.3**	**+0.6**
	baz=204							
TEGC				*e*S	**Sn**	**17 02 28.4**	**-1.9**
	baz=204							
FUSS	**Fushou**	**0.56**	**278**	*e*P	**Pg**	**17 02 18.0**	**+0.3**
	baz=276							
FUSS				*e*S	**Sg**	**17 02 24.8**	**-0.4**
	baz=276							
TWE	**Neicheng**	**0.57**	**343**	⇓*i*P	**Pg**	**17 02 18.3**	**+0.3**
	baz=350							
TWE				S	**Sg**	**17 02 25.6**	**+0.1**
	baz=350							
ILA	**Ilan**	**0.60**	**351**	*e*P	**Pg**	**17 02 19.0**	**+0.5**
	baz=348							
WARBT	**Fenglin Townsh**	**0.62**	**224**	P	**Pb**	**17 02 19.8**	**-0.3**
	baz=225							
WARBT				S	**Sb**	**17 02 28.4**	**-0.6**
	baz=225							
TWT	**Tachien**	**0.62**	**278**	*e*P	**Pg**	**17 02 19.5**	**+0.5**
	baz=277							
CHGB	**Renai**	**0.63**	**260**	*i* P	**Pg**	**17 02 19.3**	**+0.2**
	baz=246							
CHGB				S	**Sg**	**17 02 27.0**	**-0.4**
	baz=246							
EGFH	**Guangfu**	**0.63**	**218**	*e*P	**Pb**	**17 02 20.6**	**+0.3**
	baz=222							
FUSB	**Fushanzhiwuyua**	**0.64**	**338**	⇓*i*P	**Pg**	**17 02 19.5**	**+0.4**
	baz=343							
FUSB				*i* S	**Sg**	**17 02 27.4**	**-0.1**
	baz=343							
TDCB	**Techi**	**0.64**	**278**	*e*P	**Pg**	**17 02 19.6**	**+0.3**
	baz=276							
TDCB				S	**Sg**	**17 02 26.9**	**-0.7**
	baz=276							
OWD	**Renai**	**0.66**	**251**	*e*P	**Pg**	**17 02 19.6**	**+0.1**
	baz=247							
YHNB	**Yeheng**	**0.66**	**319**	P	**Pg**	**17 02 20.0**	**+0.3**
YHNB	**Yeheng**	**0.66**	**319**	⇓*i*P	**Pg**	**17 02 19.9**	**+0.3**
	baz=322							
YHNB				S	**Sg**	**17 02 27.8**	**-0.5**
	baz=322							
NSK	**Sanguang**	**0.68**	**318**	⇓*i*P	**Pg**	**17 02 20.0**	**+0.1**
	baz=322							
NSK				*e*S	**Sg**	**17 02 28.3**	**-0.5**
	baz=322							
NWLT	**Wulai**	**0.68**	**332**	⇓P	**Pg**	**17 02 20.3**	**+0.3**
	baz=337							
NWLT				S	**Sg**	**17 02 28.5**	**-0.5**
	baz=337							
WUSB	**Renai**	**0.69**	**255**	P	**Pg**	**17 02 20.5**	**+0.2**
	baz=252							
WUSB				*e*S	**Sg**	**17 02 29.6**	**+0.3**
	baz=252							
VWDT	**VWDT**	**0.77**	**238**	P	**Pb**	**17 02 22.5**	**-0.1**
	baz=234							
VWDT				*e*S	**Sg**	**17 02 32.7**	**+0.9**
	baz=234							
HGSD	**Ruisui**	**0.78**	**210**	P	**Pb**	**17 02 23.1**	**+0.3**
	baz=194							
TIPB	**Shuangxi**	**0.80**	**358**	*e*P	**Pg**	**17 02 22.7**	**+0.4**
	baz=3.0							
TIPB				*e*S	**Sg**	**17 02 32.0**	**-0.6**
	baz=3.0							
NFF	**Wufeng Townshi**	**0.81**	**305**	*e*P	**Pg**	**17 02 22.8**	**+0.2**
	baz=306							
NFF				*e*S	**Sg**	**17 02 31.6**	**-1.5**
	baz=306							
EHY	**Hungye**	**0.82**	**216**	*e*P	**Pg**	**17 02 22.9**	**+0.2**
	baz=226							
WPL	**Puli Township**	**0.83**	**259**	*e*P	**Pg**	**17 02 23.3**	**+0.4**
	baz=247							
WPL				*e*S	**Sg**	**17 02 33.6**	**-0.1**
	baz=247							
WHP	**Taichung City**	**0.83**	**278**	*i* P	**Pg**	**17 02 23.2**	**+0.3**
	baz=277							
WHP				*i* S	**Sg**	**17 02 33.6**	**-0.3**
	baz=277							
TWA	**Mucha**	**0.84**	**343**	*e*P	**Pb**	**17 02 23.6**	**-0.3**
	baz=339							
NHDH	**Xindian Distri**	**0.84**	**339**	*e*P	**Pb**	**17 02 23.6**	**-0.3**
	baz=344							
TWB1	**Santiao Chiao**	**0.84**	**8**	*e*P	**Pg**	**17 02 23.2**	**+0.1**
	baz=7.0							
DPDB	**Guoxing**	**0.86**	**261**	*e*P	**Pg**	**17 02 23.6**	**+0.2**
	baz=260							
WCS	**Beigang Elemen**	**0.87**	**263**	*e*P	**Pg**	**17 02 23.7**	**+0.1**
	baz=251							
WCS				*e*S	**Sg**	**17 02 34.6**	**-0.2**
	baz=251							
TATO	**Taipei**	**0.87**	**338**	P	**Pb**	**17 02 24.2**	**-0.1**
TATO	**Taipei**	**0.87**	**338**	P	**Pg**	**17 02 23.9**	**+0.4**
	baz=341							
TATO				S	**Sg**	**17 02 34.0**	**-0.9**
	baz=341							
NJD	**Zhudong**	**0.90**	**309**	*e*P	**Pb**	**17 02 24.9**	**+0.2**
	baz=311							
NJD				S	**Sb**	**17 02 37.0**	**0.0**
	baz=311							
LIOB	**Emei**	**0.90**	**302**	*e*P	**Pg**	**17 02 24.6**	**+0.4**
	baz=304							
LIOB				*e*S	**Sg**	**17 02 35.7**	**-0.1**
	baz=304							
NWF	**Wu-fen Shan**	**0.90**	**356**	P	**Pb**	**17 02 24.7**	**-0.2**
	baz=351							
NWF				S	**Sg**	**17 02 36.0**	**+0.1**
	baz=351							
WFSB	**Wu-fen Shan**	**0.90**	**356**	P	**Pb**	**17 02 24.8**	**0.0**
	baz=351							
WFSB				*i* S	**Sg**	**17 02 36.0**	**+0.1**
	baz=351							
NSTT	**Nanjuang**	**0.90**	**301**	P	**Pg**	**17 02 24.5**	**+0.3**
	baz=302							
NSTT				S	**Sg**	**17 02 35.1**	**-0.9**
	baz=302							
BACT	**New Taipei Cit**	**0.91**	**336**	*e*P	**Pb**	**17 02 24.7**	**-0.2**
	baz=340							
SSLB	**Suanglung**	**0.91**	**245**	P	**Pb**	**17 02 25.3**	**+0.3**
SSLB	**Suanglung**	**0.91**	**245**	P	**Pg**	**17 02 24.3**	**0.0**
	baz=253							
SSLB				*e*S	**Sg**	**17 02 35.0**	**-1.0**
	baz=253							
SMLT	**Sun Moon Lake**	**0.92**	**252**	*e*P	**Pg**	**17 02 24.8**	**+0.3**
	baz=251							
SXI1	**Grass Mountain**	**0.92**	**1**	*e*P	**Pb**	**17 02 25.2**	**0.0**
	baz=13							
SXI1				S	**Sb**	**17 02 37.3**	**-0.4**
	baz=13							
TAP	**Taipei**	**0.92**	**340**	*e*P	**Pg**	**17 02 24.8**	**+0.2**
	baz=345							
ECBN	**Changbin**	**0.93**	**204**	*e*P	**Pb**	**17 02 24.9**	**-0.3**
	baz=200							
YULB	**Yu-li**	**0.93**	**213**	P	**Pn**	**17 02 25.9**	**-0.4**
YULB	**Yu-li**	**0.93**	**213**	*e*P	**Pb**	**17 02 25.3**	**0.0**
	baz=222							
YULB				*e*S	**Sb**	**17 02 38.3**	**+0.5**
	baz=222							
TYC	**Yuchr**	**0.95**	**254**	P	**Pg**	**17 02 25.4**	**+0.3**
	baz=243							
TYC				*e*S	**Sg**	**17 02 37.8**	**+0.3**
	baz=243							
EYUL	**Yuli**	**0.95**	**211**	*e*P	**Pn**	**17 02 26.5**	**-0.2**
	baz=225							
TWF1	**Yuli**	**0.96**	**212**	*e*P	**Pg**	**17 02 25.1**	**-0.2**
	baz=220							
TWF1				*e*S	**Sn**	**17 02 39.8**	**-0.9**
	baz=220							
NTY	**Taoyuan**	**0.97**	**329**	*e*P	**Pb**	**17 02 26.4**	**+0.4**
	baz=332							
HSN1	**Hsinchu**	**0.97**	**309**	*e*P	**Pb**	**17 02 26.3**	**+0.3**
	baz=318							
TNOU	**National Taiwa**	**0.98**	**356**	P	**Pb**	**17 02 26.4**	**+0.2**
	baz=360							
TNOU				S	**Sg**	**17 02 38.1**	**-0.3**
	baz=360							
NCU	**National Centr**	**1.00**	**323**	*e*P	**Pb**	**17 02 26.6**	**0.0**
	baz=320							
NCUH	**Zhongli**	**1.00**	**323**	*e*P	**Pn**	**17 02 27.0**	**-0.4**
	baz=319							
TWQ1	**Liyutan**	**1.00**	**280**	P	**Pn**	**17 02 27.2**	**-0.2**
	baz=281							
SBCB	**Hsinchu**	**1.00**	**308**	*e*P	**Pb**	**17 02 26.8**	**+0.2**
	baz=310							
SBCB				*e*S	**Sb**	**17 02 40.3**	**+0.2**
	baz=310							
YM01	**YM01**	**1.01**	**345**	P	**Pb**	**17 02 26.8**	**+0.1**
	baz=349							
YM01				*e*S	**Sg**	**17 02 39.5**	**+0.2**
	baz=349							
TWS1	**Kuangyinshan**	**1.01**	**337**	*e*P	**Pn**	**17 02 27.2**	**-0.3**
	baz=340							
TWS1				*e*S	**Sb**	**17 02 40.2**	**+0.1**
	baz=340							
HSN	**Hsinchu**	**1.02**	**308**	*e*P	**Pb**	**17 02 26.9**	**0.0**
	baz=302							
WHYT	**Linyi Township**	**1.03**	**243**	*e*P	**Pb**	**17 02 27.4**	**+0.3**
	baz=249							
WHYT				*e*S	**Sb**	**17 02 41.1**	**+0.3**
	baz=249							
NJN	**Zhunan**	**1.03**	**300**	*e*P	**Pb**	**17 02 27.1**	**0.0**
	baz=294							
JYNG	**Yonagunijimaku**	**1.03**	**74**	P	**Pn**	**17 02 29.0**	**+1.2**
JYNG				*e*S	**Sn**	**17 02 44.1**	**+1.6**
NMLH	**Miaoli**	**1.03**	**291**	*e*P	**Pn**	**17 02 28.6**	**+0.7**
	baz=300							
ANP	**Anpu**	**1.06**	**343**	*e*P	**Pg**	**17 02 27.4**	**+0.2**
	baz=347							
NTST	**Danshui**	**1.06**	**340**	*e*P	**Pn**	**17 02 28.2**	**+0.1**
	baz=344							
CHKH	**Chenggong**	**1.06**	**203**	*e*P	**Pn**	**17 02 28.0**	**-0.1**
	baz=190							
WWF	**Wufeng**	**1.06**	**263**	P	**Pn**	**17 02 28.5**	**+0.3**
	baz=256							
WWF				*e*S	**Sn**	**17 02 43.0**	**-0.2**
	baz=256							
TCU	**Taichung**	**1.07**	**269**	*e*P	**Pn**	**17 02 28.9**	**+0.5**
	baz=269							
WJS	**Zhushan**	**1.09**	**252**	*e*P	**Pn**	**17 02 28.7**	**+0.2**
	baz=244							
FULB	**Fuli**	**1.09**	**208**	*e*P	**Pb**	**17 02 28.2**	**+0.1**
	baz=223							
YOJ	**Yonaguni jima**	**1.10**	**74**	P	**Pn**	**17 02 30.1**	**+1.4**
YOJ	**Yonaguni jima**	**1.10**	**74**	P	**Pn**	**17 02 29.8**	**+1.1**
	baz=60							
YOJ				*e*S	**Sn**	**17 02 46.9**	**+2.8**
	baz=60							
YOJ	**Yonaguni jima**	**1.10**	**74**	P	**Pn**	**17 02 30.0**	**+1.4**
YOJ				*e*S	**Sn**	**17 02 46.2**	**+2.2**
WNT1	**Nantou City**	**1.10**	**257**	*e*P	**Pn**	**17 02 29.1**	**+0.3**
	baz=251							
WNT1				*e*S	**Sn**	**17 02 44.8**	**+0.5**
	baz=251							
WNT	**Mingjian**	**1.11**	**255**	*e*P	**Pn**	**17 02 29.2**	**+0.4**
	baz=246							
NHW	**Xinwu Township**	**1.11**	**319**	*e*P	**Pb**	**17 02 28.4**	**0.0**
	baz=322							
WDJ	**Dajia District**	**1.12**	**279**	*e*P	**Pn**	**17 02 29.8**	**+0.8**
	baz=279							
WDJ				*e*S	**Sn**	**17 02 44.2**	**-0.4**
	baz=279							
TWY	**Chenhua**	**1.12**	**348**	*e*P	**Pn**	**17 02 29.2**	**+0.2**
	baz=352							
CHKT	**Chengkung**	**1.16**	**203**	*e*P	**Pg**	**17 02 28.8**	**-0.2**
	baz=200							
CHKT				*e*S	**Sn**	**17 02 46.3**	**+0.8**
	baz=200							
ALS	**Alishan**	**1.16**	**236**	P	**Pb**	**17 02 29.6**	**+0.2**
	baz=234							
ALS				*e*S	**Sb**	**17 02 45.5**	**+0.6**
	baz=234							
EHD	**Haiduan**	**1.18**	**210**	*e*P	**Pb**	**17 02 29.3**	**-0.3**
	baz=222							
WYL	**Yuanlin Townsh**	**1.18**	**260**	*e*P	**Pn**	**17 02 30.4**	**+0.6**
	baz=260							
WYL				*e*S	**Sn**	**17 02 46.5**	**+0.4**
	baz=260							
WCHH	**Zhanghua**	**1.19**	**266**	*e*P	**Pg**	**17 02 30.5**	**+0.8**
	baz=267							
CHN5	**Tsauling**	**1.22**	**242**	*e*P	**Pg**	**17 02 31.0**	**+0.7**
	baz=241							
CHN5				*e*S	**Sn**	**17 02 47.5**	**+0.3**
	baz=241							
ECS	**Chishang**	**1.22**	**209**	*e*P	**Pb**	**17 02 30.0**	**-0.2**
	baz=208							
ELDTW	**Lidau**	**1.24**	**218**	*e*P	**Pn**	**17 02 29.4**	**-1.4**
	baz=218							
WGK	**Gukeng**	**1.28**	**248**	*e*P	**Pg**	**17 02 32.1**	**+0.8**
	baz=249							
WDLH	**Douliu**	**1.29**	**249**	*e*P	**Pg**	**17 02 32.4**	**+0.7**
	baz=250							
WCKO	**Fanlu**	**1.35**	**238**	*e*P	**Pg**	**17 02 33.3**	**+0.4**
	baz=239							
WRL	**Guolierlin Hig**	**1.38**	**259**	*e*P	**Pg**	**17 02 33.5**	**+0.2**
	baz=261							
RLNB	**Erlin**	**1.39**	**259**	*e*P	**Pg**	**17 02 33.8**	**+0.2**
	baz=259							
RLNB				S	**Sg**	**17 02 52.8**	**+1.1**
	baz=259							
STYH	**Taoyuan**	**1.40**	**225**	*e*P	**Pb**	**17 02 33.0**	**-0.3**
	baz=226							
CHN2	**Minshiung**	**1.41**	**244**	*e*P	**Pg**	**17 02 34.5**	**+0.5**
	baz=245							
CHN4	**Tsaushan**	**1.41**	**235**	*e*P	**Pg**	**17 02 34.2**	**+0.2**
	baz=235							
CHN4				*e*S	**Sg**	**17 02 54.0**	**+1.7**
	baz=235							
TPUB	**Ta-pu**	**1.42**	**233**	P	**Pg**	**17 02 34.5**	**+0.4**
TPUB	**Ta-pu**	**1.42**	**233**	*e*P	**Pg**	**17 02 34.1**	**0.0**
	baz=220							
TPUB				*e*S	**Sg**	**17 02 53.2**	**+0.8**
	baz=220							
STYT	**Tauyuan**	**1.42**	**225**	P	**Pb**	**17 02 33.6**	**-0.1**
	baz=225							
STYT				*e*S	**Sg**	**17 02 52.6**	**+0.1**
	baz=225							
LONT	**Longtian**	**1.42**	**208**	*e*P	**Pn**	**17 02 32.1**	**-1.0**
	baz=209							
WTK	**Tuku**	**1.42**	**251**	*e*P	**Pg**	**17 02 34.3**	**+0.1**
	baz=237							
WTP	**Ta-pu**	**1.46**	**231**	P	**Pb**	**17 02 34.5**	**+0.1**
	baz=231							
WTP				*e*S	**Sg**	**17 02 53.9**	**0.0**
	baz=231							
PCYT	**Pengchaiyu**	**1.47**	**8**	*e*P	**Pb**	**17 02 34.3**	**-0.2**
	baz=11							
WTCT	**Ta-ch'eng**	**1.47**	**258**	*e*P	**Pb**	**17 02 34.3**	**-0.3**
	baz=260							
TWG	**Pinlang**	**1.52**	**208**	*e*P	**Pn**	**17 02 33.0**	**-1.5**
	baz=190							
TWGBT	**Beinan**	**1.52**	**208**	*e*P	**Pn**	**17 02 33.2**	**-1.3**
	baz=190							
TWK	**Hsinying**	**1.54**	**235**	P	**Pb**	**17 02 35.9**	**+0.1**
	baz=235							
TWK				S	**Sg**	**17 02 56.4**	**-0.1**
	baz=235							
CHN1	**Nanshi**	**1.56**	**231**	*e*P	**Pb**	**17 02 36.0**	**-0.2**
	baz=232							
CHN1				*e*S	**Sg**	**17 02 58.0**	**+0.9**
	baz=232							
SNST	**Tainan City**	**1.56**	**233**	*e*P	**Pb**	**17 02 35.7**	**-0.4**
	baz=235							
WSF	**Szhu**	**1.58**	**251**	*e*P	**Pb**	**17 02 36.5**	**0.0**
	baz=263							
WSF				*e*S	**Sg**	**17 02 58.4**	**+0.6**
	baz=263							
SGST	**Jiashian**	**1.59**	**227**	⇑*e*P	**Pb**	**17 02 36.0**	**-0.6**
	baz=227							
SGST				S	**Sg**	**17 02 58.2**	**+0.2**
	baz=227							
SLGT	**Liugui**	**1.61**	**224**	*e*P	**Pb**	**17 02 37.2**	**+0.3**
	baz=224							
SLGT				*e*S	**Sg**	**17 02 59.1**	**+0.4**
	baz=224							
ICHU	**Yijhu**	**1.65**	**241**	*e*P	**Pb**	**17 02 37.4**	**-0.2**
	baz=244							
CHN8	**Yiju**	**1.71**	**242**	*e*P	**Pb**	**17 02 38.1**	**-0.5**
	baz=243							
CHN8				*e*S	**Sg**	**17 03 01.6**	**-0.4**
	baz=243							
IRIF	**Iriomote-Funau**	**1.72**	**84**	*e*P	**Pg**	**17 02 40.3**	**+0.4**
IRIF				*e*S	**Sg**	**17 03 03.2**	**+1.0**
CHN3	**Shinhua**	**1.75**	**232**	*e*P	**Pb**	**17 02 39.4**	**+0.2**
	baz=235							
SSHA	**Shanhua**	**1.77**	**235**	*e*P	**Pn**	**17 02 38.4**	**+0.6**
	baz=238							
ECL	**Taimali**	**1.77**	**208**	*e*P	**Pn**	**17 02 37.0**	**-0.9**
	baz=194							
SCST	**Cishan**	**1.79**	**225**	*e*P	**Pb**	**17 02 40.3**	**+0.3**
	baz=228							
HATJ	**Hateruma jima**	**1.79**	**93**	*e*S	**Sg**	**17 03 04.2**	**-0.2**
SHHT	**Tainan City**	**1.79**	**231**	*e*P	**Pb**	**17 02 40.0**	**0.0**
	baz=234							
SSD	**Sandimen**	**1.81**	**219**	*e*P	**Pn**	**17 02 39.0**	**+0.5**
	baz=233							
SSD				*e*S	**Sb**	**17 03 02.9**	**-0.3**
	baz=233							
TSMG	**Majia**	**1.83**	**218**	*e*P	**Pb**	**17 02 39.7**	**-1.1**
	baz=234							
TWM1	**Shoushan**	**1.88**	**225**	P	**Pg**	**17 02 42.3**	**-0.6**
	baz=225							
MASBT	**Mashibuluo**	**1.91**	**216**	*e*P	**Pn**	**17 02 40.2**	**+0.3**
	baz=220							
TSCK	**Chigu Township**	**1.91**	**238**	*e*P	**Pn**	**17 02 40.9**	**+1.0**
	baz=242							
JKRS	**Kuro-shima**	**1.97**	**88**	P	**Pb**	**17 02 43.0**	**-0.1**
JKRS				S	**Sg**	**17 03 10.0**	**-0.2**
EAST	**Anshuo**	**2.00**	**208**	*e*P	**Pb**	**17 02 42.8**	**-0.9**
	baz=196							
TAWH	**Dawu Township**	**2.03**	**206**	*e*P	**Pb**	**17 02 43.7**	**-0.4**
	baz=195							
JIJ	**Ishigaki jima**	**2.10**	**84**	*e*P	**Pb**	**17 02 43.8**	**-1.5**
JIJ				*e*S	**Sb**	**17 03 11.3**	**-0.3**
SCZT	**Fangliau**	**2.12**	**213**	*e*P	**Pn**	**17 02 44.0**	**+1.3**
	baz=199							
PHUB	**P'eng-hu**	**2.19**	**253**	P	**Pn**	**17 02 44.1**	**+0.4**
	baz=256							
PHUB				*e*S	**Sn**	**17 03 12.1**	**+1.0**
	baz=256							
JISG	**Ishigakijimahi**	**2.28**	**79**	P	**Pb**	**17 02 46.8**	**-1.5**
JISG				*e*S	**Sg**	**17 03 17.9**	**-2.2**
VWUC	**VWUC**	**2.34**	**291**	*e*P	**Pn**	**17 02 45.2**	**-0.6**
	baz=280							
TWKBT	**Hengchun**	**2.42**	**204**	*e*P	**Pn**	**17 02 48.3**	**+1.5**
	baz=195							
VCHM	**Qimei**	**2.42**	**247**	*e*P	**Pn**	**17 02 47.2**	**+0.3**
	baz=236							
MATB	**Ma-tsu**	**2.62**	**319**	*e*P	**Pn**	**17 02 49.4**	**-0.3**
	baz=320							
PTMZ	**Houxiangcun**	**2.63**	**290**	*e*P	**Pn**	**17 02 49.5**	**-0.3**
	baz=292							
JTJ	**Tarama**	**2.64**	**79**	*e*P	**Pb**	**17 02 52.2**	**-2.3**
LYJJ	**Jianjiangzhen**	**3.03**	**322**	*e*P	**Pn**	**17 02 54.9**	**-0.4**
	baz=324							
XPSS	**Dashiqiu**	**3.13**	**332**	*e*P	**Pn**	**17 02 56.5**	**-0.2**
	baz=331							
KNMB	**Chin-men Tao**	**3.17**	**276**	*e*P	**Pn**	**17 02 57.5**	**+0.2**
	baz=278							
JMJ	**Miyako jima 2**	**3.20**	**78**	*e*P	**Pn**	**17 02 59.9**	**+2.3**
	baz=70							
MHZQ	**Yeshan**	**3.20**	**308**	*e*P	**Pn**	**17 02 56.5**	**-1.0**
	baz=309							
AXDP	**Jialang**	**3.61**	**282**	*e*P	**Pn**	**17 03 03.5**	**+0.2**
	baz=284							
ZPLA	**Ao Xicun**	**3.76**	**267**	*e*P	**Pn**	**17 03 05.2**	**0.0**
	baz=270							
SXFK	**Yanhouchang**	**4.41**	**301**	*e*P	**Pn**	**17 03 13.4**	**-0.8**
	baz=303							
KSRS	**Korea Array**	**14.22**	**20**	Pn	**Pn**	**17 05 31.0**	**+2.2**
	0.1nm,0.3s,baz=195,slow=12,SNR=1.3							
	0.5nm,0.6s							
SONM	**Songino Array**	**26.62**	**336**	P	**P**	**17 07 47.7**	**+1.6**
	0.5nm,0.7s,baz=156,slow=11,SNR=2.5							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**17 09 31.4**	**-0.6**
	0.2nm,0.6s,baz=110,slow=7.8,SNR=3.5							
	0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**40.59**	**327**	P	**P**	**17 09 46.4**	**-0.6**
	0.2nm,0.4s,baz=123,slow=10,SNR=1.9							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**42.51**	**320**	P	**P**	**17 10 01.4**	**-1.5**
	0.4nm,0.2s,baz=115,slow=8.3,SNR=2.1					

	baz=7.0							
ETL				S	Sg	17 06 20.9	+0.2	
	baz=7.0							
NACB	**Ninganchiao**	**0.16**	**357**	⇓*i*P	Pg	17 06 18.9	+0.1	
	baz=5.0							
NACB				*i* S	Sg	17 06 21.3	+0.3	
	baz=5.0							
LXIB	**Xiulin Townshi**	**0.18**	**274**	P	Pg	17 06 19.6	+0.6	
	baz=267							
LXIB				S	Sg	17 06 22.4	+0.9	
	baz=267							
SHUL	**Shoufeng**	**0.22**	**190**	P	Pg	17 06 20.9	+1.2	
	baz=190							
SHUL				*e*S	Sg	17 06 26.0	+3.2	
	baz=190							
ESL	**Shilin**	**0.25**	**219**	⇓*i*P	Pg	17 06 20.5	+0.3	
	baz=227							
ESL				*i* S	Sg	17 06 24.1	+0.4	
	baz=227							
TEGC	**Jichi Village**	**0.30**	**191**	*e*P	Pb	17 06 22.6	-0.5	
	baz=180							
WHF	**Hehuan Shan**	**0.34**	**294**	P	Pg	17 06 22.8	+0.7	
	baz=294							
WHF				*i* S	Sg	17 06 27.6	+0.9	
	baz=294							
WARBT	**Fenglin Townsh**	**0.35**	**215**	P	Pg	17 06 22.4	+0.1	
	baz=222							
EGFH	**Guangfu**	**0.38**	**206**	*e*P	Pg	17 06 23.1	+0.5	
	baz=212							
OWD	**Renai**	**0.40**	**262**	P	Pg	17 06 23.9	+0.7	
	baz=273							
OWD				*e*S	Sb	17 06 29.7	-1.4	
	baz=273							
CHGB	**Renai**	**0.40**	**277**	P	Pb	17 06 24.0	-0.8	
	baz=278							
CHGB				S	Sg	17 06 29.4	+1.1	
	baz=278							
FUSS	**Fushou**	**0.41**	**306**	P	Pb	17 06 24.2	-0.8	
	baz=306							
ENA	**Nanau**	**0.43**	**17**	P	Pg	17 06 23.8	-0.1	
	baz=19							
WUSB	**Renai**	**0.45**	**268**	*e*P	Pb	17 06 25.0	-0.6	
	baz=268							
TWT	**Tachien**	**0.46**	**302**	*e*P	Pb	17 06 25.4	-0.5	
	baz=301							
NNSB	**Datong**	**0.46**	**334**	*e*P	Pg	17 06 24.8	+0.4	
	baz=344							
TDCB	**Techi**	**0.47**	**301**	P	Pb	17 06 25.6	-0.6	
	baz=300							
NNS	**Nan Shan**	**0.48**	**334**	*e*P	Pg	17 06 25.2	+0.6	
	baz=344							
VWDT	**VWDT**	**0.49**	**239**	*e*P	Pb	17 06 25.8	-0.5	
	baz=231							
VWDT				*e*S	Sb	17 06 32.6	-1.2	
	baz=231							
LATG	**Datong**	**0.53**	**352**	*e*P	Pg	17 06 26.1	+0.5	
	baz=342							
HGSD	**Ruisui**	**0.54**	**198**	*e*P	Pb	17 06 27.6	+0.4	
	baz=206							
EHY	**Hungye**	**0.56**	**207**	*e*P	Pg	17 06 26.3	0.0	
	baz=215							
NDT	**Datong Townshi**	**0.60**	**352**	*e*P	Pb	17 06 27.6	-0.5	
	baz=342							
ENTT	**Nioudou**	**0.63**	**357**	*e*P	Pg	17 06 27.9	+0.5	
	baz=358							
SSLB	**Suanglung**	**0.64**	**250**	⇓P	Pb	17 06 28.3	-0.5	
	baz=262							
WCS	**Beigang Elemen**	**0.64**	**274**	*e*P	Pb	17 06 28.7	-0.1	
	baz=274							
SMLT	**Sun Moon Lake**	**0.66**	**259**	*e*P	Pb	17 06 28.9	-0.3	
	baz=258							
WHP	**Taichung City**	**0.66**	**294**	*e*P	Pb	17 06 29.2	0.0	
	baz=294							
YULB	**Yu-li**	**0.68**	**205**	*e*P	Pg	17 06 28.5	+0.1	
	baz=211							
EYUL	**Yuli**	**0.71**	**202**	*e*P	Pb	17 06 29.8	-0.2	
	baz=210							
TWF1	**Yuli**	**0.71**	**203**	*e*P	Pg	17 06 28.8	-0.2	
	baz=211							
WHYT	**Xinyi Township**	**0.76**	**246**	*e*P	Pb	17 06 31.1	+0.2	
	baz=245							
WJS	**Zhushan**	**0.82**	**257**	*e*P	Pn	17 06 33.6	+0.2	
	baz=249							
LIOB	**Emei**	**0.83**	**320**	*e*P	Pb	17 06 32.4	+0.3	
	baz=320							
CHKH	**Chenggong**	**0.84**	**193**	*e*P	Pb	17 06 31.9	-0.3	
	baz=195							
WNT	**Mingjian**	**0.85**	**261**	*e*P	Pb	17 06 33.1	+0.6	
	baz=260							
FULB	**Fuli**	**0.86**	**200**	*e*P	Pb	17 06 32.7	+0.2	
	baz=215							
ALS	**Alishan**	**0.89**	**236**	*e*P	Pb	17 06 33.0	-0.1	
	baz=235							
EHD	**Haiduan**	**0.93**	**203**	*e*P	Pg	17 06 33.2	0.0	
	baz=205							
CHKT	**Chengkung**	**0.93**	**194**	*e*P	Pg	17 06 33.4	+0.1	
	baz=195							
CHN5	**Tsauling**	**0.94**	**244**	*e*P	Pn	17 06 34.9	-0.2	
	baz=244							
ELDTW	**Lidau**	**0.98**	**214**	*e*P	Pg	17 06 33.4	-0.7	
	baz=201							
WCKO	**Fanlu**	**1.08**	**238**	*e*P	Pn	17 06 36.9	+0.1	
	baz=240							
STYH	**Taoyuan**	**1.13**	**223**	*e*P	Pb	17 06 37.3	+0.1	
	baz=217							
CHN4	**Tsaushan**	**1.14**	**235**	*e*P	Pn	17 06 38.2	+0.5	
	baz=237							
TPUB	**Ta-pu**	**1.14**	**232**	*e*P	Pb	17 06 37.4	+0.1	
	baz=234							
WTP	**Ta-pu**	**1.18**	**230**	*e*P	Pn	17 06 39.1	+0.7	
	baz=232							
TWK	**Hsinying**	**1.26**	**234**	*e*P	Pg	17 06 40.7	+1.1	
	baz=236							
CHN1	**Nanshi**	**1.28**	**231**	*e*P	Pg	17 06 40.8	+0.8	
	baz=232							
SNST	**Tainan City**	**1.28**	**233**	*e*P	Pg	17 06 40.5	+0.6	
	baz=234							
SGST	**Jiashian**	**1.32**	**226**	*e*P	Pb	17 06 40.3	0.0	
	baz=227							
SLGT	**Liugui**	**1.34**	**221**	*e*P	Pg	17 06 41.1	0.0	
	baz=225							

*UPA **06** 17:09:21.2±0.7,8°.87N×82°.82W,h18km±1km,ML3.3, MW3.1*
*CATAC **06** 17:09:21.0±0.3,8°.88N×82°.87W,h9km±2km,ML2.9*
ISC 06 17:09:21.4±1.0,**8°.89N**±0°.03×**82°.86W**±0°.02,**h18**km±3km, **n24**,σ0**82**/45,**5C**,**Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLIR3	**Monte Lirio, C**	**0.10**	**160**	⇑*i*P	**Pg**	**17 09 25.3**	**0.0**
MLIR3				AMP		17 09 25.4	
	comp=Z,6μm,0.1s						
MLIR3				*e*S	**Sg**	**17 09 27.4**	**-0.4**
BRU2	**Volcan**	**0.19**	**119**	⇑*i*P	**Pg**	**17 09 26.3**	**-0.1**
BRU2				*i* S	**Sg**	**17 09 30.3**	**+0.6**
BRU2	**Volcan**	**0.19**	**119**	*i* P	**Pg**	**17 09 26.2**	**-0.1**
BRU2				*i* S	**Sg**	**17 09 30.0**	**+0.3**
BRU2				IAML		17 09 31.0	
	comp=Z,5μm,1.0s						
BC3P	**Paso Ancho**	**0.25**	**106**	⇑*i*P	**Pg**	**17 09 27.2**	**-0.2**
BC3P				AMP		17 09 27.4	
	comp=Z,2μm,0.1s						
BC3P				*e*S	**Sg**	**17 09 31.3**	**-0.1**
POTG	**Potrero Grande**	**0.31**	**303**	*i* P	**Pg**	**17 09 28.0**	**-0.2**
POTG				*i* S	**Sg**	**17 09 33.1**	**+0.3**
POTG				IAML		17 09 35.0	
	comp=Z,1μm,1.0s						
CDITO	**Canoas**	**0.31**	**183**	*i* P	**Pg**	**17 09 27.3**	**-0.9**
CDITO				*i* S	**Sb**	**17 09 32.9**	**-0.3**
CDITO				IAML		17 09 36.6	
	comp=Z,2μm,1.0s						
BCO2	**Palmira**	**0.36**	**117**	⇑*i*P	**Pg**	**17 09 29.0**	**-0.2**
BCO2				AMP		17 09 29.1	
	comp=Z,18μm,0.1s						
BCO2				*i* S	**Sb**	**17 09 35.0**	**0.0**
PTAR3	**Potrerillos Ar**	**0.41**	**118**	⇑*i*P	**Pg**	**17 09 29.6**	**-0.3**
PTAR3				AMP		17 09 29.7	
	comp=Z,4μm,0.1s						
PTAR3				*e*S	**Sb**	**17 09 35.9**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.42**	**103**	*e*P	**Pg**	**17 09 29.5**	**-0.7**
LNBQ3				AMP		17 09 29.8	
	comp=Z,1μm,0.1s						
LNBQ3				*e*S	**Sg**	**17 09 35.7**	**-0.4**
CCOL	**Caracol de Cor**	**0.49**	**194**	*i* P	**Pg**	**17 09 30.2**	**-1.1**
CCOL				*i* S	**Sg**	**17 09 38.0**	**0.0**
CCOL				IAML		17 09 42.6	
	comp=Z,2μm,1.0s						
PSOM3	**Paja de Sombre**	**0.57**	**111**	*e*P	**Pg**	**17 09 31.8**	**-1.0**
PSOM3				AMP		17 09 33.1	
	comp=Z,955nm,0.1s						
PSOM3				*e*S	**Sg**	**17 09 39.4**	**-1.0**
DVD	**David**	**0.60**	**138**	*e*P	**Pg**	**17 09 32.5**	**-0.9**
DVD				*e*S	**Sg**	**17 09 41.3**	**-0.2**
SRBA	**San Rafael, Bu**	**0.60**	**305**	*i* P	**Pg**	**17 09 32.8**	**-0.7**
SRBA				IAML		17 09 33.4	
	comp=Z,620nm,1.0s						
SRBA				*i* S	**Sg**	**17 09 41.6**	**-0.1**
PIRO	**Carate, Puerto**	**0.67**	**225**	*i* P	**Pg**	**17 09 34.1**	**-0.6**
PIRO				IAML		17 09 34.5	
	comp=Z,350nm,1.0s						
PIRO				*i* S	**Sb**	**17 09 44.7**	**+1.1**
PTPM	**Petroterminale**	**0.68**	**182**	*e*P	**Pg**	**17 09 33.8**	**-1.1**
PTPM				*e*S	**Sg**	**17 09 43.6**	**-0.2**
CHGR2	**Aguacate**	**0.71**	**86**	*e*P	**Pg**	**17 09 34.2**	**-1.2**
CHGR2				AMP		17 09 34.8	
	comp=Z,2μm,0.1s						
CHGR2				*e*S	**Sg**	**17 09 44.0**	**-0.8**
PLAN	**Los Planes de**	**0.84**	**255**	*i* P	**Pg**	**17 09 36.7**	**-1.2**
PLAN				*i* S	**Sb**	**17 09 49.5**	**+1.0**
PLAN				IAML		17 09 51.1	
	comp=Z,750nm,1.0s						
PEZE	**Perez Zeledon,**	**0.95**	**301**	*i* S	**Sg**	**17 09 51.5**	**-1.0**
CDM	**Cerro de Muert**	**1.11**	**307**	*i* P	**Pg**	**17 09 41.3**	**-1.9**
CDM				*i* S	**Sg**	**17 09 56.6**	**-1.3**
CDM				IAML		17 09 59.5	
	comp=Z,110nm,1.0s						
VTCV	**VTCV, Calle Va**	**1.39**	**322**	*i* P	**Pn**	**17 09 46.7**	**+0.6**
VTCV				*i* S	**Sn**	**17 10 06.0**	**+1.9**
VTCV				IAML		17 10 08.2	
	comp=Z,370nm,1.0s						
LCR2	**La Lucha 2**	**1.42**	**307**	*i* P	**Pn**	**17 09 46.0**	**-0.5**
LCR2				IAML		17 09 46.7	
	comp=Z,67nm,1.0s						
LCR2				*i* S	**Sn**	**17 10 05.2**	**+0.4**
OCM	**Ochomogo**	**1.48**	**313**	*i* S	**Sn**	**17 10 07.0**	**+0.6**
VIRE	**VIRE**	**1.49**	**316**	*i* P	**Pn**	**17 09 48.0**	**+0.4**
VIRE				*i* S	**Sn**	**17 10 08.0**	**+1.3**
VIRE				IAML		17 10 11.8	
	comp=Z,340nm,1.0s						
JACO	**JACO, Garabito**	**1.94**	**294**	*i* P	**Pn**	**17 09 54.1**	**+0.6**
JACO				IAML		17 12 05.9	
	comp=Z,88nm,1.0s						

*IDC **06** 17:11:01.9±1.4,23°.71N×121°.11E,h0km,mb3.3/4, mbtmp3.4/5,ML3.2/1,Error ellipse: s-maj=72.7km s-min=22.6km az=65.0*
*TAP **06** 17:11:02.4,24°.12N×121°.70E,h10km,ML3.5,B*
*JMA **06** 17:11:02.5±0.1,24°.1N±0°.3×121°.7E±0°.8,h9km±1km, MV2.9/12,TAIWAN REGION*
ISC 06 17:11:02.2±0.8,**24°.09N**±0°.01×**121°.72E**±0°.02,**h9**km±5km, **n150**,σ0**°75**/223,**mb3.2**/4,**3C-20D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**306**	*i* P	**Pg**	**17 11 05.0**	**+0.1**
	baz=297						
ETL				*i* S	**Sg**	**17 11 06.7**	**-0.1**
	baz=297						
TWD	**Chiawan**	**0.11**	**263**	⇓*i*P	**Pg**	**17 11 05.3**	**+0.4**
	baz=250						
TWD				*i* S	**Sg**	**17 11 07.1**	**+0.4**
	baz=250						
NACB	**Ninganchiao**	**0.14**	**305**	⇓*i*P	**Pg**	**17 11 05.4**	**+0.1**
	baz=298						
NACB				*i* S	**Sg**	**17 11 07.2**	**-0.2**
	baz=298						
EHP	**Heping Village**	**0.22**	**5**	*i* P	**Pg**	**17 11 06.9**	**+0.2**
	baz=10.0						
EHP				S	**Sg**	**17 11 10.2**	**+0.5**
	baz=10.0						
EAHA	**Aohua**	**0.23**	**5**	⇓P	**Pg**	**17 11 07.0**	**0.0**
	baz=7.0						
EAHA				S	**Sg**	**17 11 10.4**	**+0.2**
	baz=7.0						
ETM	**Tongmen**	**0.24**	**238**	*i* P	**Pg**	**17 11 07.7**	**+0.6**
	baz=234						
ETM				S	**Sg**	**17 11 11.2**	**+0.8**
	baz=234						
LXIB	**Xiulin Townshi**	**0.29**	**255**	⇓*i*P	**Pg**	**17 11 08.4**	**+0.3**
	baz=251						
LXIB				*e*S	**Sb**	**17 11 12.6**	**-2.1**
	baz=251						
ENA	**Nanau**	**0.33**	**3**	⇓*i*P	**Pg**	**17 11 08.9**	**0.0**
	baz=6.0						
ENA				*i* S	**Sg**	**17 11 13.3**	**+0.1**
	baz=6.0						
SHUL	**Shoufeng**	**0.34**	**205**	⇓P	**Pb**	**17 11 11.0**	**+0.5**
	baz=211						
SHUL				*e*S	**Sb**	**17 11 17.8**	**+1.8**
	baz=211						
EWUT	**Wuta**	**0.35**	**9**	⇓P	**Pg**	**17 11 09.3**	**+0.1**
	baz=10.0						
EWUT				*e*S	**Sg**	**17 11 13.9**	**0.0**
	baz=10.0						
ESL	**Shilin**	**0.38**	**223**	P	**Pb**	**17 11 10.2**	**-1.0**
	baz=227						
ESL				S	**Sb**	**17 11 15.9**	**-1.3**
	baz=227						
TEGC	**Jichi Village**	**0.42**	**203**	*e*P	**Pb**	**17 11 11.8**	**0.0**
	baz=189						
WHF	**Hehuan Shan**	**0.42**	**277**	*e*P	**Pg**	**17 11 10.7**	**+0.1**
	baz=274						
WHF				S	**Sg**	**17 11 16.0**	**-0.1**
	baz=274						
NNSB	**Datong**	**0.45**	**317**	⇓*i*P	**Pg**	**17 11 11.4**	**+0.3**
	baz=315						
NNSB				*i* S	**Sg**	**17 11 16.8**	**-0.3**
	baz=315						
NNSH	**Datong**	**0.45**	**317**	⇓*i*P	**Pg**	**17 11 11.4**	**+0.3**
	baz=315						
NNSH				S	**Sg**	**17 11 17.0**	**-0.1**
	baz=315						
FUSS	**Fushou**	**0.46**	**289**	⇓P	**Pg**	**17 11 11.7**	**+0.4**
	baz=287						
NNS	**Nan Shan**	**0.47**	**318**	⇓*i*P	**Pg**	**17 11 11.5**	**+0.1**
	baz=316						
NNS				*i* S	**Sg**	**17 11 17.5**	**-0.1**
	baz=316						
LATG	**Datong**	**0.47**	**338**	⇓*i*P	**Pg**	**17 11 11.6**	**+0.1**
	baz=337						
LATG				*i* S	**Sg**	**17 11 18.1**	**+0.3**
	baz=337						
WARBT	**Fenglin Townsh**	**0.48**	**219**	P	**Pb**	**17 11 12.0**	**-1.0**
	baz=225						
WARBT				S	**Sb**	**17 11 19.6**	**-0.5**
	baz=225						
ESAO	**Su ao**	**0.49**	**13**	⇓*e*P	**Pg**	**17 11 11.7**	**-0.2**
	baz=13						
ESAO				*e*S	**Sg**	**17 11 18.4**	**+0.1**
	baz=13						
CHGB	**Renai**	**0.50**	**266**	⇑*i*P	**Pb**	**17 11 12.6**	**-0.7**
	baz=256						
CHGB				S	**Sg**	**17 11 18.6**	**0.0**
	baz=256						
OWD	**Renai**	**0.52**	**254**	*e*P	**Pb**	**17 11 12.8**	**-0.8**
	baz=252						
OWD				*e*S	**Sb**	**17 11 19.7**	**-1.5**
	baz=252						
TWT	**Tachien**	**0.52**	**288**	P	**Pb**	**17 11 13.3**	**-0.4**
	baz=284						
TWT				S	**Sb**	**17 11 20.1**	**-1.4**
	baz=284						
TWC	**Suao**	**0.53**	**13**	⇓*i*P	**Pg**	**17 11 12.6**	**+0.1**
	baz=14						
TWC				S	**Sg**	**17 11 19.6**	**+0.2**
	baz=14						
TDCB	**Techi**	**0.54**	**287**	P	**Pb**	**17 11 13.2**	**-0.7**
	baz=285						
TDCB				S	**Sg**	**17 11 19.9**	**+0.1**
	baz=285						
NDS	**Dongshan**	**0.54**	**360**	*e*P	**Pg**	**17 11 12.7**	**0.0**
	baz=358						
NDS				*e*S	**Sg**	**17 11 19.9**	**+0.1**
	baz=358						
NDT	**Datong Townshi**	**0.54**	**340**	⇓P	**Pg**	**17 11 13.1**	**+0.3**
	baz=338						
NDT				S	**Sg**	**17 11 19.9**	**+0.1**
	baz=338						
EOS4	**EOS4**	**0.55**	**87**	*e*P	**Pb**	**17 11 14.9**	**+1.1**
	baz=88						
WUSB	**Renai**	**0.56**	**260**	P	**Pb**	**17 11 13.6**	**-0.7**
	baz=257						
WUSB				*e*S	**Sg**	**17 11 20.4**	**-0.1**
	baz=257						
ENTT	**Nioudou**	**0.56**	**346**	⇓*i*P	**Pg**	**17 11 13.4**	**+0.2**
	baz=345						
ENTT				S	**Sg**	**17 11 20.7**	**+0.2**
	baz=345						
TWE	**Neicheng**	**0.63**	**356**	⇓*i*P	**Pg**	**17 11 14.6**	**+0.3**
	baz=356						
TWE				S	**Sg**	**17 11 22.7**	**+0.1**
	baz=356						
VWDT	**VWDT**	**0.63**	**237**	*e*P	**Pb**	**17 11 14.9**	**-0.4**
	baz=236						
VWDT				*e*S	**Sb**	**17 11 23.9**	**-0.4**
	baz=236						
YHNB	**Yeheng**	**0.65**	**331**	⇓*i*P	**Pg**	**17 11 15.2**	**+0.3**
	baz=330						
YHNB				S	**Sg**	**17 11 22.8**	**-0.6**
	baz=330						
HGSD	**Ruisui**	**0.66**	**204**	*e*P	**Pb**	**17 11 16.2**	**+0.3**
	baz=192						
HGSD				*e*S	**Sn**	**17 11 28.1**	**-0.2**
	baz=192						
NSK	**Sanguang**	**0.67**	**330**	⇓*i*P	**Pg**	**17 11 15.5**	**+0.3**
	baz=329						
NSK				S	**Sg**	**17 11 23.6**	**-0.3**
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.67**	**350**	⇓*i*P	**Pg**	**17 11 15.5**	**+0.2**
	baz=348						
FUSB				S	**Sg**	**17 11 23.9**	**-0.2**
	baz=348						
EHY	**Hungye**	**0.69**	**212**	P	**Pb**	**17 11 16.0**	**-0.5**
	baz=222						
EHY				*e*S	**Sb**	**17 11 26.1**	**0.0**
	baz=222						
WPL	**Puli Township**	**0.70**	**263**	*e*P	**Pg**	**17 11 15.7**	**-0.1**
	baz=262						
NWLT	**Wulai**	**0.71**	**344**	*e*P	**Pg**	**17 11 16.1**	**+0.2**
	baz=329						
NWLT				*e*S	**Sg**	**17 11 24.8**	**-0.4**
	baz=329						
DPDB	**Guoxing**	**0.73**	**265**	*e*P	**Pb**	**17 11 16.9**	**-0.3**
	baz=264						
WHP	**Taichung City**	**0.73**	**285**	*e*P	**Pb**	**17 11 17.2**	**0.0**
	baz=283						
WHP				*e*S	**Sb**	**17 11 26.7**	**-0.7**
	baz=283						
WCS	**Beigang Elemen**	**0.74**	**267**	*e*P	**Pb**	**17 11 16.9**	**-0.4**
	baz=266						
SSLB	**Suanglung**	**0.76**	**247**	⇑P	**Pb**	**17 11 17.3**	**-0.4**
	baz=255						
SSLB				S	**Sb**	**17 11 27.0**	**-1.3**
	baz=255						
NFF	**Wufeng Townshi**	**0.77**	**314**	*e*P	**Pb**	**17 11 17.6**	**-0.3**
	baz=313						
NFF				*e*S	**Sg**	**17 11 27.1**	**+0.1**
	baz=313						
SMLT	**Sun Moon Lake**	**0.78**	**254**	*e*P	**Pb**	**17 11 17.9**	**-0.2**
	baz=253						
SMLT				*e*S	**Sb**	**17 11 28.1**	**-0.7**
	baz=253						
YULB	**Yu-li**	**0.80**	**209**	*e*P	**Pg**	**17 11 17.7**	**+0.1**
	baz=221						
YULB				*e*S	**Sb**	**17 11 30.0**	**+0.7**
	baz=221						
TYC	**Yuchr**	**0.81**	**257**	*e*P	**Pb**	**17 11 18.0**	**-0.6**
	baz=255						
TYC				*e*S	**Sb**	**17 11 28.6**	**-0.9**
	baz=255						
ECBN	**Changbin**	**0.81**	**198**	*e*P	**Pb**	**17 11 19.0**	**+0.4**
	baz=188						
EYUL	**Yuli**	**0.83**	**206**	*e*P	**Pn**	**17 11 19.6**	**-0.5**
	baz=220						
TWF1	**Yuli**	**0.83**	**208**	*e*P	**Pb**	**17 11 19.0**	**+0.1**
	baz=221						
LIOB	**Emei**	**0.84**	**311**	*e*P	**Pb**	**17 11 19.3**	**+0.2**
	baz=309						
NSTT	**Nanjuang**	**0.84**	**309**	*e*P	**Pb**	**17 11 19.1**	**0.0**
	baz=308						
NSTT				*e*S	**Sg**	**17 11 28.3**	**-1.2**
	baz=308						
NJD	**Zhudong**	**0.86**	**318**	*e*P	**Pn**	**17 11 19.9**	**-0.6**
	baz=321						
TIPB	**Shuangxi**	**0.88**	**6**	P	**Pg**	**17 11 19.2**	**+0.1**
	baz=348						
NHDH	**Xindian Distri**	**0.88**	**348**	*e*P	**Pg**	**17 11 19.2**	**-0.1**
	baz=347						
WHYT	**Xinyi Township**	**0.89**	**244**	*e*P	**Pn**	**17 11 20.2**	**-0.8**
	baz=244						
TWA	**Mucha**	**0.89**	**352**	P	**Pb**	**17 11 20.0**	**+0.1**
	baz=350						
TWA				*e*S	**Sg**	**17 11 30.9**	**-0.1**
	baz=350						
TWQ1	**Liyutan**	**0.90**	**287**	*e*P	**Pn**	**17 11 21.2**	**0.0**
	baz=285						
TATO	**Taipei**	**0.90**	**347**	*e*P	**Pg**	**17 11 19.6**	**-0.1**
	baz=336						
TATO				*e*S	**Sg**	**17 11 31.9**	**+0.5**
	baz=336						
HSN1	**Hsinchu**	**0.93**	**317**	*e*P	**Pn**	**17 11 21.6**	**0.0**
	baz=315						
WWF	**Wufeng**	**0.93**	**267**	*e*P	**Pn**	**17 11 21.9**	**+0.3**
	baz=261						
WWF				*e*S	**Sn**	**17 11 35.3**	**+0.2**
	baz=261						
TWB1	**Santiao Chiao**	**0.94**	**15**	*e*P	**Pg**	**17 11 20.5**	**+0.1**
	baz=6.0						
CHKH	**Chenggong**	**0.95**	**198**	*e*P	**Pb**	**17 11 20.6**	**-0.2**
	baz=190						
WJS	**Zhushan**	**0.95**	**254**	*e*P	**Pn**	**17 11 21.5**	**-0.3**
	baz=253						
WJS				*e*S	**Sn**	**17 11 36.7**	**+1.3**
	baz=253						
TCU	**Taichung**	**0.95**	**273**	*e*P	**Pn**	**17 11 22.3**	**+0.4**
	baz=273						
NMLH	**Miaoli**	**0.95**	**298**	*e*P	**Pn**	**17 11 23.1**	**+1.2**
	baz=296						
TAP	**Taipei**	**0.96**	**348**	*e*P	**Pb**	**17 11 21.3**	**+0.2**
	baz=346						
SBCB	**Hsinchu**	**0.96**	**316**	*e*P	**Pn**	**17 11 23.0**	**+1.0**
	baz=314						
WNT1	**Nantou City**	**0.97**	**259**	*e*P	**Pn**	**17 11 22.1**	**0.0**
	baz=259						
WNT	**Mingjian**	**0.97**	**257**	P	**Pn**	**17 11 22.4**	**+0.3**
	baz=252						
WNT				*e*S	**Sn**	**17 11 36.3**	**+0.3**
	baz=252						
FULB	**Fuli**	**0.97**	**204**	*e*P	**Pn**	**17 11 21.5**	**-0.6**
	baz=220						
NWF	**Wu-fen Shan**	**0.97**	**3**	P	**Pg**	**17 11 21.2**	**+0.2**
	baz=339						
NWF				*e*S	**Sg**	**17 11 33.4**	**-0.3**
	baz=339						
WFSB	**Wu-fen Shan**	**0.97**	**3**	P	**Pg**	**17 11 21.2**	**+0.2**
	baz=353						
WFSB				*e*S	**Sg**	**17 11 33.4**	**-0.3**
	baz=353						
NTY	**Taoyuan**	**0.98**	**337**	*e*P	**Pg**	**17 11 19.8**	**-1.3**
	baz=329						
HSN	**Hsinchu**	**0.98**	**316**	*e*P	**Pn**	**17 11 22.9**	**+0.6**
	baz=317						
NCUH	**Zhongli**	**1.00**	**331**	*e*P	**Pn**	**17 11 22.8**	**+0.4**
	baz=328						
NCU	**National Centr**	**1.00**	**331**	*e*P	**Pn**	**17 11 22.9**	**+0.5**
	baz=336						
NCU				*e*S	**Sn**	**17 11 37.6**	**+0.9**
	baz=336						
SXI1	**Grass Mountain**	**1.01**	**8**	P	**Pb**	**17 11 22.1**	**+0.2**
	baz=351						
WDJ	**Dajia District**	**1.02**	**285**	*e*P	**Pn**	**17 11 24.0**	**+1.3**
	baz=284						
ALS	**Alishan**	**1.02**	**235**	P	**Pn**	**17 11 22.9**	**-0.1**
	baz=226						
ALS				*e*S

EHD	Haiduan	1.05	207	eP		Pb	17 11 22.6	-0.1
	baz=221							
TNOU	National Taiwa	1.05	3	eP		Pg	17 11 22.4	-0.1
	baz=359							
YM01	YM01	1.06	353	eP		Pb	17 11 23.1	+0.3
	baz=336							
YM01				eS		Sg	17 11 36.4	0.0
	baz=336							
WCHH	Zhanghua	1.06	269	eP		Pn	17 11 23.3	0.0
	baz=269							
CHN5	Tsauling	1.07	243	i P		Pn	17 11 24.2	+0.6
	baz=243							
CHN5				S		Sn	17 11 39.6	+0.9
	baz=243							
NTST	Danshui	1.09	347	eP		Pb	17 11 23.6	+0.3
	baz=343							
ANP	Anpu	1.10	351	eP		Pb	17 11 23.7	+0.1
	baz=347							
ELDTW	Lidau	1.11	216	eP		Pg	17 11 23.1	-0.4
	baz=203							
ELDTW				eS		Sn	17 11 39.0	-0.5
	baz=203							
WGK	Gukeng	1.13	249	eP		Pn	17 11 24.7	+0.3
	baz=250							
WDLH	Douliu	1.15	250	eP		Pn	17 11 25.6	+1.0
	baz=251							
JYNG	Yonaguni jima	1.17	72	eP		Pb	17 11 24.5	-0.2
TWY	Chenhua	1.18	355	eP		Pg	17 11 25.4	+0.5
	baz=338							
WCKO	Fanlu	1.21	238	eP		Pg	17 11 26.2	+0.7
	baz=239							
WCKO				eS		Sn	17 11 43.8	+1.9
	baz=239							
YOJ	Yonaguni jima	1.23	72	eP		Pn	17 11 24.5	-1.2
	baz=68							
YOJ	Yonaguni jima	1.23	72	eS		Sn	17 11 43.4	+0.9
WRL	Guolierlin Hig	1.24	261	eP		Pg	17 11 26.1	0.0
	baz=262							
RLNB	Erlin	1.26	261	eP		Pg	17 11 27.2	+0.7
	baz=261							
RLNB				eS		Sn	17 11 45.2	+2.1
	baz=261							
STYH	Taoyuan	1.26	223	eP		Pg	17 11 26.1	-0.3
	baz=225							
STYH				eS		Sn	17 11 43.0	-0.2
	baz=225							
CHN2	Minshiung	1.27	244	eP		Pg	17 11 27.7	+1.1
	baz=246							
CHN4	Tsaushan	1.27	235	eP		Pg	17 11 27.5	+0.9
	baz=223							
CHN4				eS		Sn	17 11 46.0	+2.6
	baz=223							
TPUB	Ta-pu	1.27	232	eP		Pg	17 11 27.1	+0.4
	baz=222							
TPUB				eS		Sn	17 11 44.8	+1.2
	baz=222							
STYT	Tauyuan	1.28	224	P		Pg	17 11 26.6	-0.2
	baz=225							
STYT				eS		Sn	17 11 43.7	0.0
	baz=225							
WTK	Tuku	1.28	252	eP		Pg	17 11 27.5	+0.6
	baz=253							
LONT	Longtian	1.30	205	eP		Pn	17 11 25.6	-1.1
	baz=208							
WTP	Ta-pu	1.32	230	eP		Pg	17 11 27.7	+0.2
	baz=232							
WTP				eS		Sn	17 11 46.7	+2.0
	baz=232							
TWK	Hsinying	1.40	234	eP		Pg	17 11 29.3	+0.2
	baz=236							
TWK				eS		Sg	17 11 48.8	+1.6
	baz=236							
TWGBT	Beinan	1.40	205	eP		Pn	17 11 26.4	-1.6
	baz=208							
CHN1	Nanshi	1.42	231	eP		Pg	17 11 29.8	+0.3
	baz=233							
CHN1				eS		Sg	17 11 49.4	+1.5
	baz=233							
SNST	Tainan City	1.42	232	eP		Pg	17 11 29.6	+0.1
	baz=235							
WSF	Szhu	1.44	252	eP		Pg	17 11 29.5	-0.5
	baz=253							
SGST	Jiashian	1.45	226	P		Pb	17 11 29.2	-0.2
	baz=228							
SGST				eS		Sg	17 11 50.2	+1.4
	baz=228							
SLGT	Liugui	1.47	222	eP		Pg	17 11 29.9	-0.6
	baz=224							
SLGT				eS		Sg	17 11 51.7	+2.1
	baz=224							
WSL	Shuilin Townsh	1.48	248	eP		Pg	17 11 30.8	+0.2
	baz=249							
WSL				eS		Sg	17 11 53.0	+3.1
	baz=249							
ICHU	Yijhu	1.51	241	eP		Pg	17 11 30.7	-0.5
	baz=244							
PCYT	Pengchaiyu	1.56	12	eP		Pb	17 11 31.1	-0.3
	baz=6.0							
CHN8	Yiju	1.57	242	eP		Pb	17 11 31.1	-0.4
	baz=244							
SCST	Cishan	1.65	223	eP		Pg	17 11 33.3	-0.5
	baz=226							
ECL	Taimali	1.65	205	eP		Pn	17 11 30.7	-0.7
	baz=194							
SHHT	Tainan City	1.65	230	eP		Pn	17 11 31.1	-0.3
	baz=233							
SSD	Sandimen	1.67	217	eP		Pn	17 11 31.6	-0.2
	baz=233							
TSMG	Majia	1.70	216	eP		Pb	17 11 32.8	-0.8
	baz=218							
TWM1	Shoushan	1.74	224	eP		Pg	17 11 35.6	+0.1
	baz=226							
MASBT	Mashibuluo	1.78	214	eP		Pn	17 11 33.8	+0.6
	baz=215							
MASBT				eS		Sg	17 11 58.8	-0.7
	baz=215							
IRIF	Iriomote-Funau	1.85	82	eS		Sn	17 11 59.1	+1.4
EAST	Anshuo	1.88	205	eP		Pn	17 11 35.2	+0.5
	baz=195							
SCZT	Fangliau	1.99	211	eP		Pb	17 11 37.6	-1.1
	baz=197							
PHUB	P'eng-hu	2.05	254	eP		Pn	17 11 37.4	+0.4
	baz=257							
PHUB				eS		Sb	17 12 03.4	-1.9
	baz=257							
PNG	Penghu	2.05	256	eP		Pn	17 11 36.8	-0.1
	baz=258							
SLIU	Shizi	2.05	205	eP		Pb	17 11 38.5	-1.2
	baz=195							
LYUB	Lan-yu	2.09	183	eP		Pn	17 11 34.7	-2.7
	baz=188							
JIJ	Ishigaki jima	2.23	83	eP		Pn	17 11 39.1	-0.3
JIJ				eS		Sn	17 12 07.2	+0.1
VWUC	VWUC	2.25	294	eP		Pn	17 11 39.5	-0.2
	baz=293							
VCHM	Qimei	2.28	248	eP		Pn	17 11 39.8	-0.3
	baz=235							
JISG	Ishigakijimahi	2.41	78	eP		Pn	17 11 42.1	+0.2
JISG				eS		Sn	17 12 12.0	+0.3
PTMZ	Houxiangcun	2.55	292	eP		Pn	17 11 43.8	0.0
	baz=292							
LYJJ	Jianjiangzhen	3.02	324	eP		Pn	17 11 49.5	-0.8
	baz=321							
KNMB	Chin-men Tao	3.06	278	eP		Pn	17 11 50.5	-0.3
	baz=278							
XPSS	Dashiqiu	3.14	334	eP		Pn	17 11 51.8	-0.2
	baz=330							
MHZQ	Yeshan	3.15	310	eP		Pn	17 11 51.0	-1.1
	baz=309							
AXDP	Jialang	3.51	284	eP		Pn	17 11 57.2	+0.2
	baz=284							
ZPLA	Ao Xicun	3.63	268	eP		Pn	17 11 58.8	+0.1
	baz=269							
DSXP	Dongshan	3.95	265	eP		Pn	17 12 03.1	+0.1
	baz=266							
KSRS	Korea Array	14.34	20	Pn		P	17 14 33.5	+0.9
	0.1nm,0.3s,baz=203,slow=11,SNR=5.2 1.0nm,0.7s							
MKAR	Makanchi Array	38.74	316	P		P	17 18 27.2	+0.3
	0.4nm,0.7s,baz=108,slow=9.6,SNR=6.0 0.4nm,0.7s							
KURBB	Kurchatov Arra	42.49	320	P		P	17 18 57.4	-0.3
	0.1nm,0.2s,baz=116,slow=8.3,SNR=2.0 0.1nm,0.2s							
WRA	Warramunga Arr	45.47	163	P		P	17 19 20.6	-1.4
	0.3nm,0.5s,baz=344,slow=8.7,SNR=10 0.3nm,0.5s							
ASAR	Alice Springs	48.93	165	P		P	17 19 49.2	+0.3
	0.2nm,0.9s,baz=341,slow=6.9,SNR=1.7 0.2nm,0.9s							

*IDC **06** 17:18:25.0±1.1,23.91N×121.27E,h0km,mb3.4/8, mbtmp3.4/9,ML3.2/1,Error ellipse: s-maj=38.0km s-min=21.0km az=69.0*
*TAP **06** 17:18:28.2,24.05N×121.67E,h8km,ML4.0,C*
*JMA **06** 17:18:28.2±0.1,24.1N±0.3×121.7E±0.6,h9km±1km, MV3.4/15,TAIWAN REGION*

ISC 06 17:18:27.6±0.8,24.05N±0.01×121.70E±0.02,h11km±5km, n156,σ1s09/199,mb3.5/8,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	Chiawan	0.10	291	i	P		Pg	17 18 30.3	0.0
	baz=300								
TWD					S		Sg	17 18 31.9	-0.4
	baz=300								
ETL	Fush Village	0.13	330	eP			Pg	17 18 31.0	+0.1
	baz=336								
ETL					S		Sg	17 18 32.9	-0.3
	baz=336								
NACB	Ninganchiao	0.16	324	i	P		Pg	17 18 31.3	+0.1
	baz=330								
NACB				i	S		Sg	17 18 33.5	-0.3
	baz=330								
ETM	Tongmen	0.20	247	eP			Pg	17 18 32.1	+0.1
	baz=245								
LXIB	Xiulin Townshi	0.26	265	P			Pg	17 18 33.0	-0.1
	baz=256								
LXIB					S		Sg	17 18 37.0	+0.3
	baz=256								
EHP	Heping Village	0.27	9	eP			Pg	17 18 33.7	+0.6
	baz=5.0								
SHUL	Shoufeng	0.28	205	eP			Pb	17 18 35.0	+0.3
	baz=212								
SHUL					eS		Sb	17 18 40.7	+1.2
	baz=212								
EAHA	Aohua	0.29	8	eP			Pg	17 18 34.2	+0.7
	baz=9.0								
EAHA					eS		Sg	17 18 38.4	+1.0
	baz=9.0								
ESL	Shilin	0.33	226	eP			Pg	17 18 35.0	+0.6
	baz=233								
TEGC	Jichi Village	0.36	203	eP			Pb	17 18 36.1	+0.1
	baz=189								
ENA	Nanau	0.38	6	P			Pg	17 18 35.9	+0.6
	baz=6.0								
ENA					S		Sg	17 18 41.1	+0.7
	baz=6.0								
EWUT	Wuta	0.41	11	eP			Pg	17 18 36.3	+0.6
	baz=359								
WHF	Hehuan Shan	0.41	284	eP			Pg	17 18 36.0	+0.2
	baz=285								
WHF					S		Sg	17 18 42.0	+0.6
	baz=285								
WARBT	Fenglin Townsh	0.43	221	eP			Pg	17 18 36.6	+0.5
	baz=230								
WARBT					eS		Sb	17 18 43.8	0.0
	baz=230								
EGFH	Guangfu	0.45	213	eP			Pg	17 18 37.4	+0.9
	baz=221								
FUSS	Fushou	0.46	296	P			Pg	17 18 37.5	+0.7
	baz=306								
CHGB	Renai	0.48	272	P			Pg	17 18 37.6	+0.5
	baz=272								
CHGB					eS		Sb	17 18 44.3	-1.0
	baz=272								
NNSB	Datong	0.48	323	i	P		Pg	17 18 37.6	+0.6
	baz=324								
NNSB					S		Sg	17 18 43.7	+0.3
	baz=324								
NNSH	Datong	0.48	323	P			Pg	17 18 37.5	+0.5
	baz=323								
NNSH					eS		Sg	17 18 44.0	+0.6
	baz=323								
OWD	Renai	0.48	259	eP			Pg	17 18 37.5	+0.4
	baz=260								
NNS	Nan Shan	0.49	323	P			Pg	17 18 37.9	+0.6
	baz=324								
NNS					S		Sg	17 18 44.3	+0.4
	baz=324								
LATG	Datong	0.51	342	i	P		Pg	17 18 38.0	+0.3
	baz=341								
LATG					eS		Sg	17 18 45.2	+0.7
	baz=341								
TWT	Tachien	0.52	294	eP			Pg	17 18 38.5	+0.7
	baz=293								
WUSB	Renai	0.53	264	eP			Pg	17 18 38.7	+0.6
	baz=265								
TDCB	Techi	0.53	293	eP			Pg	17 18 38.8	+0.7
	baz=294								
ESAO	Su ao	0.55	14	eP			Pb	17 18 40.4	+1.1
	baz=3.0								
TWC	Suao	0.58	14	eP			Pb	17 18 40.9	+1.1
	baz=7.0								
NDT	Datong Townshi	0.58	343	P			Pg	17 18 39.7	+0.7
	baz=333								
VWDT	VWDT	0.58	240	P			Pg	17 18 39.7	+0.7
	baz=243								
VWDT					S		Sb	17 18 48.5	+0.4
	baz=243								
NDS	Dongshan	0.59	2	eP			Pg	17 18 39.7	+0.6
	baz=1.0								
ENTT	Nioudou	0.60	349	eP			Pg	17 18 40.0	+0.6
	baz=348								
HGSD	Ruisui	0.60	204	eP			Pb	17 18 41.3	+1.1
	baz=224								
HGSD					eS		Sn	17 18 52.7	+0.9
	baz=224								
EHY	Hungye	0.64	213	eP			Pb	17 18 40.9	+0.2
	baz=211								
TWE	Neicheng	0.67	358	eP			Pg	17 18 41.4	+0.6
	baz=357								
TWE					eS		Sg	17 18 50.8	+1.2
	baz=357								
WPL	Puli Township	0.68	267	eP			Pb	17 18 41.4	0.0
	baz=268								
YHNB	Yeheng	0.69	335	P			Pg	17 18 41.7	+0.7
	baz=325								
YHNB					eS		Sg	17 18 50.2	+0.2
	baz=325								
NSK	Sanguang	0.70	334	P			Pb	17 18 42.1	+0.2
	baz=325								
NSK					eS		Sg	17 18 51.3	+0.9
	baz=325								
DPDB	Guoxing	0.70	269	eP			Pb	17 18 41.9	0.0
	baz=270								
WCS	Beigang Elemen	0.72	271	eP			Pb	17 18 43.2	+1.0
	baz=272								
FUSB	Fushanzhiwuyua	0.72	352	eP			Pg	17 18 42.2	+0.6
	baz=350								
FUSB					eS		Sg	17 18 52.2	+1.1
	baz=350								
WHP	Taichung City	0.72	289	eP			Pb	17 18 42.6	+0.4
	baz=283								
SSLB	Suanglung	0.72	249	P			Pg	17 18 42.1	+0.4
	baz=261								
SSLB					eS		Sg	17 18 51.3	+0.1
	baz=261								
SMLT	Sun Moon Lake	0.74	258	eP			Pb	17 18 42.8	+0.1
	baz=258								
SMLT					eS		Sb	17 18 53.5	+0.6
	baz=258								
YULB	Yu-li	0.74	209	eP			Pg	17 18 42.5	+0.5
	baz=212								
NWLT	Wulai	0.75	346	eP			Pg	17 18 42.7	+0.5
	baz=333								
ECBN	Changbin	0.76	197	eP			Pb	17 18 43.2	+0.3
	baz=186								
EYUL	Yuli	0.78	206	eP			Pg	17 18 43.2	+0.6
	baz=224								
TWF1	Yuli	0.78	208	eP			Pb	17 18 43.7	+0.5
	baz=223								
TYC	Yuchr	0.78	260	eP			Pg	17 18 42.8	+0.1
	baz=261								
NFF	Wufeng Townshi	0.79	318	eP			Pb	17 18 43.9	+0.5
	baz=317								
NFF					eS		Sb	17 18 54.1	+0.1
	baz=317								
WHYT	Xinyi Township	0.85	246	eP			Pn	17 18 45.7	+0.2
	baz=247								
NSTT	Nanjuang	0.86	313	eP			Pb	17 18 45.1	+0.5
	baz=312								
LIOB	Emei	0.86	314	eP			Pb	17 18 45.4	+0.8
	baz=313								
NJD	Zhudong	0.88	321	eP			Pn	17 18 46.3	+0.3
	baz=326								
CHKH	Chenggong	0.89	198	eP			Pg	17 18 45.3	+0.4
	baz=190								
TWQ1	Liyutan	0.90	290	eP			Pn	17 18 48.2	+2.1
	baz=301								
TWQ1				eS			Sn	17 19 00.8	+1.7
	baz=301								
WWF	Wufeng	0.91	270	eP			Pn	17 18 47.2	+0.8
	baz=271								
WJS	Zhushan	0.91	256	eP			Pn	17 18 47.0	+0.6
	baz=257								
FULB	Fuli	0.92	204	eP			Pb	17 18 46.7	+1.1
	baz=222								
NHDH	Xindian Distri	0.93	350	eP			Pn	17 18 47.7	+1.1
	baz=340								
TIPB	Shuangxi	0.93	7	eP			Pb	17 18 46.5	+0.7
	baz=349								
TWA	Mucha	0.94	354	eP			Pn	17 18 47.7	+1.0
	baz=340								
TWA				eS			Sn	17 19 00.6	+0.4
	baz=340								
WNT1	Nantou City	0.94	262	eP			Pn	17 18 47.0	+0.3
	baz=262								
WNT1				eS			Sn	17 19 01.6	+1.4
	baz=262								
WNT	Mingjian	0.94	260	eP			Pn	17 18 47.6	+0.9
	baz=261								
WNT				eS			Sn	17 19 01.8	+1.6
	baz=261								
TATO	Taipei	0.95	349	P			Pb	17 18 47.0	+1.0
	baz=345								
TATO				S			Sg	17 18 58.9	+0.6
	baz=345								
HSN1	Hsinchu	0.96	320	eP			Pn	17 18 48.1	+1.2
	baz=319								
NMLH	Miaoli	0.96	301	eP			Pn	17 18 48.8	+1.8
	baz=301								
ALS	Alishan	0.97	237	eP			Pb	17 18 47.2	+0.5
	baz=240								
ALS				eS			Sb	17 19 00.6	+1.0
	baz=240								
SBCB	Hsinchu	0.99	319	eP			Pn	17 18 49.0	+1.6
	baz=318								
CHKT	Chengkung	0.99	198	eP			Pb	17 18 47.3	+0.6
	baz=191								
TWB1	Santiao Chiao	1.00	15	eP			Pg	17 18 47.2	+0.4
	baz=3.0								
TWB1				eS			Sg	17 19 00.2	+0.4
	baz=3.0								
EHD	Haiduan	1.00	207	eP			Pb	17 18 47.7	+0.8
	baz=224								
HSN	Hsinchu	1.00	319	eP			Pn	17 18 48.7	+1.1
	baz=321								
WDJ	Daijia District	1.01	288	eP			Pn	17 18 49.0	+1.3
	baz=288								
WYL	Yuanlin Townsh	1.02	266	eP			Pn	17 18 49.1	+1.2
	baz=252								
NWF	Wu-fen Shan	1.02	4	eP			Pg	17 18 48.0	+0.6
	baz=359								
WFSB	Wu-fen Shan	1.02	4	eP			Pg	17 18 48.0	+0.6
	baz=359								
NCUH	Zhongli	1.03	333	eP			Pn	17 18 48.7	+0.7
	baz=331								
CHN5	Tsauling	1.03	245	eP			Pb	17 18 48.4	+0.8
	baz=238								
CHN5				eS			Sn	17 19 03.7	+1.1
	baz=238								
WCHH	Zhanghua	1.04	272	eP			Pn	17 18 49.7	+1.6
	baz=273								
ECS	Chishang	1.04	205	eP			Pn	17 18 49.8	+1.6
	baz=223								
ELDTW	Lidau	1.05	216	eP			Pg	17 18 47.8	-0.2
	baz=219								
SXI1	Grass Mountain	1.06	9	eP			Pg	17 18 48.8	+0.7
	baz=350								
TWS1	Kuangyinshan	1.08	347	eP			Pn	17 18 49.9	+1.2
	baz=343								
TWS1				eS			Sn	17 19 05.1	+1.4
	baz=343								
WGK	Gukeng	1.10	251	eP			Pn	17 18 49.7	+0.8
	baz=253								
TNOU	National Taiwa	1.10	4	eP			Pg	17 18 49.2	+0.3
	baz=358								
YM01	YM01	1.10	354	eP			Pg	17 18 49.3	+0.4
	baz=337								
WDLH	Douliu	1.12	252	eP			Pn	17 18 50.1	+1.0
	baz=254								
NHW	Xinwu Township	1.12	328	eP			Pn	17 18 50.5	+1.1
	baz=327								
NTST	Danshui	1.14	349	eP			Pn	17 18 50.8	+1.4
	baz=345								
ANP	Anpu	1.15	352	eP			Pb	17 18 50.4	+0.9
	baz=348								
WCKO	Fanlu	1.17	239	eP			Pn	17 18 50.9	+1.0
	baz=244								
WCKO				eS			Sn	17 19 08.5	+2.6
	baz=244								
JYNG	Yonaguni jima	1.21	70	eP			Pb	17 18 51.3	+0.7
JYNG	Yonaguni jima	1.21	70	A			A	17 18 51.3	
	comp=Z,5.0nm,9.0s,comp=E,5.0nm,4.4s								
STYH	Taoyuan	1.21	224	eP			Pb	17 18 50.8	+0.2
	baz=215								
WRL	Guolierlin Hig	1.21	264	eP			Pn	17 18 51.9	+1.4
	baz=265								
CHN4	Tsaushan	1.22	236	eP			Pn	17 18 51.5	+0.8
	baz=232								
CHN4				eS			Sn	17 19 09.9	+2.7
	baz=232								
TPUB	Ta-pu	1.23	233	P			Pn	17 18 52.2	+1.4
	baz=227								
TPUB				S			Sn	17 19 08.8	+1.5
	baz=227								
CHN2	Minshiung	1.23	246	eP			Pn	17 18 52.1	+1.4
	baz=249								
TWY	Chenhua	1.23	356	eP			Pg	17 18 53.2	+1.9
	baz=339								
RLNB	Erlin	1.23	263	eP			Pn	17 18 51.8	+1.0
	baz=265								
WTK	Tuku	1.25	254	eP			Pg	17 18 52.6	+0.9
	baz=256								
YOJ	Yonaguni jima	1.27	71	eP			Pn	17 18 52.0	+0.7
	baz=68								
YOJ	Yonaguni jima	1.27	71	P			Pn	17 18 51.8	+0.5
YOJ	Yonaguni jima	1.27	71	A			A	17 18 51.8	
	comp=E,4.0nm,6.0s,comp=N,4.0nm,2.8s								
WTP	Ta-pu	1.27	231	eP			Pg	17 18 52.3	+0.2
	baz=236								
WTP				S			Sn	17 19 09.7	+1.3
	baz=236								
TWG	Pinlang	1.35	205	eP			Pn	17 18 52.6	+0.2
	baz=209								
TWGBT	Beinan	1.35	205	eP			Pn	17 18 52.7	+0.3
	baz=209								
TWK	Hsinying	1.35	235	eP			Pg	17 18 54.0	+0.4
	baz=240								
TWK				eS			Sn	17 19 13.2	+2.8
	baz=240								
CHN1	Nanshi	1.37	232	eP			Pg	17 18 54.4	+0.5
	baz=237								
CHN1				eS			Sg	17 19 13.4	+1.6
	baz=237								
SNST	Tainan City	1.37	233	eP			Pg	17 18 54.6	+0.6
	baz=238								
SGST	Jiashian	1.40	227	eP			Pn	17 18 53.9	+0.7
	baz=233								
SGST				eS			Sg	17 19 13.7	+1.0
	baz=233								
WSF	Szhu	1.41	254	eP			Pg	17 18 54.8	+0.1
	baz=256								
SLGT	Liugui	1.42	223	eP			Pb	17 18 54.9	+0.8
	baz=229								
SLGT				eS			Sg	17 19 15.5	+2.0
	baz=229								
ICHU	Yijhu	1.47	243	eP			Pg	17 18 56.3	+0.5
	baz=246								
CHN8	Yiju	1.53	243	eP			Pb	17 18 56.4	+0.5
	baz=247								
ECL	Taimali	1.59	205	eP			Pb	17 18 57.9	+0.8
	baz=210								
SCST	Cishan	1.60	224	eP			Pg	17 18 59.0	+0.8
	baz=214								
SHHT	Tainan City	1.60	231	eP			Pg	17 18 58.9	+0.5
	baz=235								
PCYT	Pengchaiyu	1.61	12	eP			Pb	17 18 58.1	+0.6
	baz=348								
SCLT	Jiali	1.63	238	eP			Pn	17 18 57.3	+1.1
	baz=242								
TSMG	Majia	1.65	216	eP			Pb	17 18 58.0	0.0

	baz=210								
TWM1	**Shoushan**	**1.69**	**224**	*e*P		**Pb**	**17 18 59.6**	**+1.0**
	baz=228								
MASBT	**Mashibuluo**	**1.73**	**215**	*e*P		**Pn**	**17 18 58.8**	**+1.1**
	baz=208								
EAST	**Anshuo**	**1.83**	**205**	*e*P		**Pb**	**17 19 01.9**	**+0.8**
	baz=198								
TAWH	**Dawu Township**	**1.85**	**204**	*e*P		**Pg**	**17 19 02.9**	**-0.3**
	baz=208								
IRIF	**Iriomote-Funau**	**1.88**	**81**	*e*S		**Sb**	**17 19 27.1**	**+1.6**
HATJ	**Hateruma jima**	**1.93**	**89**	*e*P		**Pn**	**17 19 00.8**	**+0.5**
HATJ				*e*S		**Sn**	**17 19 26.0**	**+1.5**
SCZT	**Fangliau**	**1.94**	**211**	*e*P		**Pb**	**17 19 02.7**	**-0.2**
	baz=204								
PHUB	**P'eng-hu**	**2.02**	**255**	*e*P		**Pn**	**17 19 02.5**	**+1.0**
	baz=258								
PNG	**Penghu**	**2.02**	**257**	*e*P		**Pn**	**17 19 03.2**	**+1.6**
	baz=259								
JKRS	**Kuro-shima**	**2.12**	**84**	P		**Pn**	**17 19 04.0**	**+1.0**
JKRS				S		**Sn**	**17 19 30.5**	**+1.1**
VCHM	**Qimei**	**2.24**	**249**	*e*P		**Pn**	**17 19 06.1**	**+1.5**
	baz=237								
TWKBT	**Hengchun**	**2.25**	**201**	*e*P		**Pn**	**17 19 07.2**	**+2.5**
	baz=206								
VWUC	**VWUC**	**2.25**	**295**	*e*P		**Pn**	**17 19 05.5**	**+0.7**
	baz=295								
JIJ	**Ishigaki jima**	**2.26**	**81**	P		**Pn**	**17 19 05.3**	**+0.4**
JIJ				S		**Sn**	**17 19 32.1**	**-0.6**
JISG	**Ishigakijimahi**	**2.45**	**77**	P		**Pn**	**17 19 08.0**	**+0.5**
JISG				S		**Sn**	**17 19 35.7**	**-1.7**
PTMZ	**Houxiangcun**	**2.55**	**293**	*e*P		**Pn**	**17 19 09.4**	**+0.6**
	baz=293								
MATB	**Ma-tsu**	**2.63**	**323**	*e*P		**Pn**	**17 19 10.3**	**+0.3**
	baz=320								
JTJ	**Tarama**	**2.81**	**77**	P		**Pn**	**17 19 14.1**	**+1.7**
JTJ				*e*S		**Sn**	**17 19 47.1**	**+0.9**
KNM	**Kinmen**	**3.00**	**278**	*e*P		**Pn**	**17 19 17.6**	**+2.5**
	baz=277								
KNMB	**Chin-men Tao**	**3.05**	**279**	*e*P		**Pn**	**17 19 16.4**	**+0.6**
	baz=279								
LYJJ	**Jianjiangzhen**	**3.05**	**325**	*e*P		**Pn**	**17 19 16.2**	**+0.4**
	baz=324								
MHZQ	**Yeshan**	**3.17**	**311**	*e*P		**Pn**	**17 19 18.4**	**+1.0**
	baz=297								
XPSS	**Dashiqiu**	**3.18**	**335**	*e*P		**Pn**	**17 19 17.9**	**+0.4**
	baz=331								
AXDP	**Jialang**	**3.50**	**285**	*e*P		**Pn**	**17 19 22.4**	**+0.4**
	baz=284								
ZPLA	**Ao Xicun**	**3.61**	**269**	*e*P		**Pn**	**17 19 23.9**	**+0.4**
	baz=269								
KSRS	**Korea Array**	**14.39**	**20**	Pn		**Pn**	**17 21 53.9**	**+2.6**
	comp=N,0.1nm,0.3s,baz=199,slow=11,SNR=1.2 comp=N,0.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**21.91**	**260**	P		**P**	**17 23 15.0**	**-6.1**
	comp=N,0.3nm,0.7s,baz=68,slow=7.9,SNR=1.8 comp=N,0.3nm,0.7s								
SONM	**Songino Array**	**26.68**	**337**	P		**P**	**17 24 06.2**	**-0.6**
	comp=N,0.6nm,0.8s,baz=147,slow=8.6,SNR=2.9 comp=N,0.6nm,0.8s								
MKAR	**Makanchi Array**	**38.76**	**316**	P		**P**	**17 25 51.1**	**-0.9**
	comp=N,0.3nm,0.7s,baz=109,slow=11,SNR=3.7 comp=N,0.3nm,0.7s								
ZALV	**Zalesovo Beam**	**40.62**	**327**	P		**P**	**17 26 05.0**	**-2.3**
	comp=N,0.5nm,0.6s,baz=78,slow=5.8,SNR=3.8 comp=N,0.5nm,0.6s								
WRA	**Warramunga Arr**	**45.42**	**163**	P		**P**	**17 26 45.7**	**-0.9**
	comp=N,0.4nm,0.7s,baz=343,slow=8.9,SNR=2.5 comp=N,0.4nm,0.7s								
BVAR	**Borovoye Array**	**48.08**	**321**	P		**P**	**17 27 03.8**	**-3.2**
	comp=N,0.3nm,0.5s,baz=130,slow=5.8,SNR=1.5 comp=N,0.3nm,0.5s								
ASAR	**Alice Springs**	**48.88**	**165**	P		**P**	**17 27 12.6**	**-1.0**
	comp=N,0.8nm,1.1s,baz=346,slow=6.8,SNR=4.4 comp=N,0.8nm,1.1s								
YKA	**Yellowknife Ar**	**82.92**	**23**	P		**P**	**17 30 52.0**	**-0.2**
	comp=N,0.2nm,0.5s,baz=314,slow=4.9,SNR=2.5 comp=N,0.2nm,0.5s								

*IDC **06** 17:19:24.2±1.1,23°.79N×121°.20E,h0km,mb3.7/6, mbtmp3.7/7,ML3.3/1,Error ellipse: s-maj=55.9km s-min=23.1km az=69.0*
*TAP **06** 17:19:25.4,24°.08N×121°.75E,h10km,ML4.2,C*
*JMA **06** 17:19:26.6±0.2,24°.1N±0°.6×121°.7E±0°.8,h0km,MV3.7/10, TAIWAN REGION*
ISC 06 17:19:26.2±0.9,24°.08N±0°.02×121°.76E±0°.02,h9km±6km, n127,σ0ᵗ74/172,mb3.6/6,1C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**303**	*i*	P		**Pg**	**17 19 29.0**	**-0.3**
	baz=303								
ETL				*i*	S		**Sg**	**17 19 31.4**	**-0.2**
	baz=303								
TWD	**Chiawan**	**0.14**	**269**	⇓*i*	P		**Pg**	**17 19 29.1**	**-0.2**
	baz=278								
TWD				*i*	S		**Sg**	**17 19 31.4**	**-0.1**
	baz=278								
NACB	**Ninganchiao**	**0.17**	**302**	⇓*i*	P		**Pg**	**17 19 29.4**	**-0.4**
	baz=303								
NACB				*i*	S		**Sg**	**17 19 32.0**	**-0.4**
	baz=303								
EHP	**Heping Village**	**0.23**	**357**	P			**Pg**	**17 19 30.8**	**-0.1**
	baz=357								
EHP				S			**Sg**	**17 19 34.9**	**+0.9**
	baz=357								
EAHA	**Aohua**	**0.25**	**357**	*i*	P		**Pg**	**17 19 31.0**	**-0.2**
	baz=355								
EAHA				*i*	S		**Sg**	**17 19 35.0**	**+0.5**
	baz=355								
ETM	**Tongmen**	**0.27**	**244**	⇑*i*	P		**Pg**	**17 19 31.5**	**-0.1**
	baz=246								
ETM				*i*	S		**Sg**	**17 19 35.0**	**-0.1**
	baz=246								
LXIB	**Xiulin Townshi**	**0.32**	**259**	*i*	P		**Pg**	**17 19 32.1**	**-0.5**
	baz=252								
LXIB				*i*	S		**Sg**	**17 19 37.0**	**+0.1**
	baz=252								
SHUL	**Shoufeng**	**0.34**	**211**	P			**Pg**	**17 19 34.0**	**+1.1**
	baz=211								
ENA	**Nanau**	**0.34**	**358**	⇓*i*	P		**Pg**	**17 19 32.9**	**-0.1**
	baz=357								
ENA				*e*	S		**Sg**	**17 19 37.8**	**+0.2**
	baz=357								
EWUT	**Wuta**	**0.36**	**3**	P			**Pg**	**17 19 33.2**	**-0.1**
	baz=10								
ESL	**Shilin**	**0.40**	**228**	P			**Pg**	**17 19 33.9**	**0.0**
	baz=235								
ESL				*e*	S		**Sg**	**17 19 39.4**	**+0.2**
	baz=235								
TEGC	**Jichi Village**	**0.42**	**208**	*e*	P		**Pg**	**17 19 35.3**	**+0.9**
	baz=208								
WHF	**Hehuan Shan**	**0.45**	**278**	*e*	P		**Pg**	**17 19 35.0**	**-0.1**
	baz=278								
WHF				*e*	S		**Sg**	**17 19 40.8**	**-0.4**
	baz=278								
NNSB	**Datong**	**0.48**	**316**	*i*	P		**Pg**	**17 19 35.4**	**-0.2**
	baz=314								
NNSB				S			**Sg**	**17 19 41.7**	**-0.4**
	baz=314								
NNSH	**Datong**	**0.48**	**316**	P			**Pg**	**17 19 35.4**	**-0.2**
	baz=313								
NNSH				S			**Sg**	**17 19 42.1**	**0.0**
	baz=313								
FUSS	**Fushou**	**0.49**	**290**	*e*	P		**Pg**	**17 19 36.0**	**+0.2**
	baz=289								
FUSS				*e*	S		**Sg**	**17 19 42.0**	**-0.4**
	baz=289								
WARBT	**Fenglin Townsh**	**0.49**	**223**	*e*	P		**Pg**	**17 19 35.9**	**0.0**
	baz=233								
WARBT				*e*	S		**Sg**	**17 19 43.5**	**+1.2**
	baz=233								
LATG	**Datong**	**0.50**	**335**	*e*	P		**Pg**	**17 19 35.7**	**-0.2**
	baz=331								
ESAO	**Su ao**	**0.50**	**9**	*e*	P		**Pg**	**17 19 35.9**	**0.0**
	baz=359								
NNS	**Nan Shan**	**0.50**	**316**	*i*	P		**Pg**	**17 19 35.4**	**-0.5**
	baz=314								
NNS				S			**Sg**	**17 19 42.5**	**0.0**
	baz=314								
EGFH	**Guangfu**	**0.51**	**216**	*e*	P		**Pg**	**17 19 36.4**	**+0.3**
	baz=206								
CHGB	**Renai**	**0.53**	**268**	*i*	P		**Pg**	**17 19 36.5**	**0.0**
	baz=261								
CHGB				*i*	S		**Sg**	**17 19 43.9**	**+0.4**
	baz=261								
TWC	**Suao**	**0.53**	**9**	P			**Pg**	**17 19 36.6**	**+0.1**
OWD	**Renai**	**0.54**	**257**	*e*	P		**Pg**	**17 19 36.6**	**-0.1**
	baz=258								
OWD				*e*	S		**Sg**	**17 19 44.5**	**+0.5**
	baz=258								
NDS	**Dongshan**	**0.55**	**356**	P			**Pg**	**17 19 36.9**	**0.0**
	baz=353								
NDS				S			**Sg**	**17 19 44.2**	**+0.1**
	baz=353								
TWT	**Tachien**	**0.56**	**288**	*e*	P		**Pg**	**17 19 37.7**	**+0.6**
	baz=287								
TWT				*e*	S		**Sg**	**17 19 45.3**	**+1.0**
	baz=287								
NDT	**Datong Townshi**	**0.56**	**337**	*i*	P		**Pg**	**17 19 37.0**	**-0.2**
	baz=334								
NDT				S			**Sg**	**17 19 44.9**	**+0.4**
	baz=334								
TDCB	**Techi**	**0.57**	**288**	P			**Pg**	**17 19 37.3**	**0.0**
	baz=287								
TDCB				S			**Sg**	**17 19 44.8**	**-0.1**
	baz=287								
ENTT	**Nioudou**	**0.58**	**343**	P			**Pg**	**17 19 37.4**	**-0.1**
	baz=331								
ENTT				S			**Sg**	**17 19 45.5**	**+0.3**
	baz=331								
WUSB	**Renai**	**0.59**	**261**	P			**Pg**	**17 19 37.7**	**+0.1**
	baz=262								
WUSB				S			**Sg**	**17 19 45.2**	**-0.2**
	baz=262								
TWE	**Neicheng**	**0.64**	**353**	*i*	P		**Pg**	**17 19 38.5**	**-0.1**
	baz=352								
TWE				S			**Sg**	**17 19 47.6**	**+0.6**
	baz=352								
VWDT	**VWDT**	**0.65**	**240**	*e*	P		**Pg**	**17 19 38.6**	**-0.1**
	baz=241								
VWDT				*e*	S		**Sg**	**17 19 47.7**	**+0.5**
	baz=241								
HGSD	**Ruisui**	**0.66**	**207**	*e*	P		**Pg**	**17 19 39.9**	**+1.0**
	baz=196								
YHNB	**Yeheng**	**0.68**	**330**	P			**Pg**	**17 19 39.6**	**+0.3**
	baz=326								
FUSB	**Fushanzhiwuyua**	**0.69**	**347**	P			**Pg**	**17 19 39.6**	**0.0**
	baz=336								
FUSB				S			**Sg**	**17 19 48.6**	**0.0**
	baz=336								
NSK	**Sanguang**	**0.69**	**329**	P			**Pg**	**17 19 39.7**	**0.0**
	baz=319								
NSK				*e*	S		**Sg**	**17 19 49.1**	**+0.4**
	baz=319								
EHY	**Hungye**	**0.70**	**215**	*e*	P		**Pg**	**17 19 39.6**	**-0.1**
	baz=216								
NWLT	**Wulai**	**0.73**	**342**	P			**Pg**	**17 19 40.2**	**-0.1**
	baz=339								
NWLT				*e*	S		**Sg**	**17 19 49.8**	**-0.1**
	baz=339								
WPL	**Puli Township**	**0.73**	**265**	*e*	P		**Pg**	**17 19 40.4**	**+0.1**
	baz=265								
WPL				*e*	S		**Sg**	**17 19 49.6**	**-0.3**
	baz=265								
DPDB	**Guoxing**	**0.76**	**267**	*e*	P		**Pg**	**17 19 40.7**	**-0.1**
	baz=266								
WHP	**Taichung City**	**0.76**	**285**	*e*	P		**Pg**	**17 19 40.9**	**0.0**
	baz=285								
WCS	**Beigang Elemen**	**0.77**	**268**	*e*	P		**Pg**	**17 19 41.0**	**-0.1**
	baz=268								
SSLB	**Suanglung**	**0.79**	**248**	P			**Pg**	**17 19 40.9**	**-0.5**
	baz=258								
SSLB				S			**Sg**	**17 19 50.9**	**-0.8**
	baz=258								
NFF	**Wufeng Townshi**	**0.80**	**313**	*e*	P		**Pg**	**17 19 41.4**	**-0.2**
	baz=311								
YULB	**Yu-li**	**0.80**	**212**	*e*	P		**Pg**	**17 19 41.7**	**0.0**
	baz=224								
SMLT	**Sun Moon Lake**	**0.81**	**256**	*e*	P		**Pg**	**17 19 41.5**	**-0.2**
	baz=256								
SMLT				*e*	S		**Sg**	**17 19 52.5**	**+0.2**
	baz=256								
ECBN	**Changbin**	**0.81**	**200**	*e*	P		**Pg**	**17 19 41.9**	**0.0**
	baz=188								
EYUL	**Yuli**	**0.83**	**209**	*e*	P		**Pg**	**17 19 42.5**	**+0.3**
	baz=221								
TWF1	**Yuli**	**0.84**	**210**	*e*	P		**Pg**	**17 19 42.3**	**0.0**
	baz=222								
TYC	**Yuchr**	**0.84**	**258**	*e*	P		**Pg**	**17 19 41.4**	**-0.9**
	baz=258								
LIOB	**Emei**	**0.88**	**310**	*e*	P		**Pb**	**17 19 43.7**	**0.0**
	baz=307								
NSTT	**Nanjuang**	**0.88**	**309**	*e*	P		**Pg**	**17 19 43.6**	**+0.5**
	baz=306								
TIPB	**Shuangxi**	**0.89**	**4**	*e*	P		**Pg**	**17 19 43.2**	**-0.2**
	baz=344								
NHDH	**Xindian Distri**	**0.90**	**347**	*e*	P		**Pg**	**17 19 43.4**	**-0.2**
	baz=345								
TWA	**Mucha**	**0.91**	**350**	*e*	P		**Pg**	**17 19 43.5**	**-0.2**
	baz=345								
WHYT	**Xinyi Township**	**0.91**	**245**	*e*	P		**Pg**	**17 19 44.1**	**+0.4**
	baz=246								
TATO	**Taipei**	**0.92**	**345**	*e*	P		**Pg**	**17 19 44.0**	**0.0**
	baz=333								
TATO				*e*	S		**Sb**	**17 19 57.2**	**+0.4**
	baz=333								
TWQ1	**Liyutan**	**0.94**	**287**	*e*	P		**Pb**	**17 19 45.6**	**+1.0**
	baz=285								
CHKH	**Chenggong**	**0.94**	**200**	*e*	P		**Pg**	**17 19 44.9**	**+0.5**
	baz=191								
TWB1	**Santiao Chiao**	**0.95**	**13**	*e*	P		**Pg**	**17 19 44.0**	**-0.4**
	baz=2.0								
BACT	**New Taipei Cit**	**0.95**	**343**	*e*	P		**Pg**	**17 19 45.0**	**+0.4**
	baz=338								
HSN1	**Hsinchu**	**0.96**	**316**	*e*	P		**Pg**	**17 19 44.5**	**-0.3**
	baz=313								
WWF	**Wufeng**	**0.97**	**268**	*e*	P		**Pb**	**17 19 45.8**	**+0.6**
	baz=264								
WWF				*e*	S		**Sn**	**17 20 00.7**	**+0.8**
	baz=264								
WJS	**Zhushan**	**0.97**	**255**	*e*	P		**Pb**	**17 19 46.2**	**+0.9**
	baz=255								
FULB	**Fuli**	**0.97**	**206**	*e*	P		**Pb**	**17 19 46.0**	**+0.7**
	baz=223								
NWF	**Wu-fen Shan**	**0.98**	**1**	*e*	P		**Pg**	**17 19 45.5**	**+0.3**
	baz=342								
WFSB	**Wu-fen Shan**	**0.98**	**1**	*e*	P		**Pb**	**17 19 46.0**	**+0.5**
	baz=343								
NMLH	**Miaoli**	**0.99**	**297**	*e*	P		**Pn**	**17 19 47.3**	**+1.0**
	baz=295								
SBCB	**Hsinchu**	**1.00**	**315**	*e*	P		**Pb**	**17 19 46.5**	**+0.9**
	baz=311								
WNT1	**Nantou City**	**1.00**	**260**	*e*	P		**Pb**	**17 19 46.5**	**+0.8**
	baz=260								
WNT	**Mingjian**	**1.00**	**259**	P			**Pb**	**17 19 46.5**	**+0.8**
	baz=259								
WNT				*e*	S		**Sn**	**17 20 01.0**	**+0.3**
	baz=259								
NTY	**Taoyuan**	**1.00**	**336**	*e*	P		**Pb**	**17 19 46.2**	**+0.4**
	baz=325								
NJN	**Zhunan**	**1.00**	**307**	*e*	P		**Pb**	**17 19 46.6**	**+0.8**
	baz=304								
HSN	**Hsinchu**	**1.01**	**315**	*e*	P		**Pb**	**17 19 46.8**	**+0.9**
	baz=314								
SXI1	**Grass Mountain**	**1.01**	**6**	*e*	P		**Pb**	**17 19 46.9**	**+0.8**
	baz=347								
NCUH	**Zhongli**	**1.02**	**330**	*e*	P		**Pb**	**17 19 47.3**	**+1.1**
	baz=333								
NCUH				*e*	S		**Sn**	**17 20 02.6**	**+1.4**
	baz=333								
ALS	**Alishan**	**1.04**	**237**	*e*	P		**Pg**	**17 19 46.3**	**+0.1**
	baz=228								
ALS				*e*	S		**Sb**	**17 20 01.2**	**+0.7**
	baz=228								
CHKT	**Chengkung**	**1.04**	**200**	*e*	P		**Pg**	**17 19 45.9**	**-0.4**
	baz=192								
WDJ	**Dajia District**	**1.05**	**285**	*e*	P		**Pb**	**17 19 47.6**	**+1.0**
	baz=292								
WDJ				*e*	S		**Sn**	**17 20 03.1**	**+1.2**
	baz=292								
EHD	**Haiduan**	**1.06**	**209**	*e*	P		**Pg**	**17 19 45.7**	**-0.8**
	baz=222								
TWS1	**Kuangyinshan**	**1.06**	**343**	*e*	P		**Pb**	**17 19 47.3**	**+0.5**
	baz=340								
TWS1				*e*	S		**Sn**	**17 20 03.3**	**+1.1**
	baz=340								
TNOU	**National Taiwa**	**1.06**	**1**	*e*	P		**Pg**	**17 19 46.7**	**+0.1**
	baz=343								
YM01	**YM01**	**1.07**	**351**	P			**Pg**	**17 19 47.3**	**+0.5**
	baz=345								
WYL	**Yuanlin Townsh**	**1.08**	**264**	*e*	P		**Pb**	**17 19 47.6**	**+0.6**
	baz=247								
WCHH	**Zhanghua**	**1.09**	**270**	*e*	P		**Pn**	**17 19 48.3**	**+0.6**
	baz=269								
WCHH				*e*	S		**Sn**	**17 20 05.3**	**+2.3**
	baz=269								
CHN5	**Tsauling**	**1.10**	**244**	*e*	P		**Pg**	**17 19 47.7**	**+0.4**
	baz=236								
CHN5				S			**Sn**	**17 20 04.4**	**+1.2**
	baz=236								
ECS	**Chishang**	**1.10**	**207**	*e*	P		**Pg**	**17 19 46.0**	**-1.3**
	baz=207								
NTST	**Danshui**	**1.11**	**346**	*e*	P		**Pb**	**17 19 48.1**	**+0.5**
	baz=339								
ELDTW	**Lidau**	**1.12**	**217**	*e*	P		**Pg**	**17 19 46.8**	**-0.9**
	baz=203								
ANP	**Anpu**	**1.12**	**349**	*e*	P		**Pg**	**17 19 47.7**	**-0.1**
	baz=342								
NHW	**Xinwu Township**	**1.12**	**325**	*e*	P		**Pb**	**17 19 48.5**	**+0.7**
	baz=319								
WGK	**Gukeng**	**1.16**	**250**	*e*	P		**Pn**	**17 19 49.5**	**+0.9**
	baz=249								
WDLH	**Douliu**	**1.18**	**251**	*e*	P		**Pg**	**17 19 49.1**	**+0.3**
	baz=250								
TWY	**Chenhua**	**1.20**	**353**	*e*	P		**Pg**	**17 19 49.3**	**+0.1**
	baz=347								
YOJ	**Yonaguni jima**	**1.21**	**71**	*e*	P		**Pg**	**17 19 49.3**	**-0.1**
	baz=74								
YOJ	**Yonaguni jima**	**1.21**	**71**	*e*	P		**Pg**	**17 19 50.3**	**+0.9**
YOJ				*e*	S		**Sg**	**17 20 06.4**	**+1.3**
WCKO	**Fanlu**	**1.23**	**239**	*e*	P		**Pg**	**17 19 49.5**	**-0.4**
	baz=239								
WRL	**Guolierlin Hig**	**1.27**	**262**	*e*	P		**Pg**	**17 19 50.4**	**-0.2**
	baz=261								
STYH	**Taoyuan**	**1.28**	**225**	*e*	P		**Pg**	**17 19 49.8**	**-0.9**
	baz=210								
CHN4	**Tsaushan**	**1.29**	**236**	*e*	P		**Pg**	**17 19 50.9**	**-0.1**
	baz=236								
RLNB	**Erlin**	**1.29**	**262**	*e*	P		**Pb**	**17 19 51.3**	**+0.7**
	baz=261								
RLNB				*e*	S		**Sn**	**17 20 09.7**	**+1.8**
	baz=261								
TPUB	**Ta-pu**	**1.29**	**233**	*e*	P		**Pg**	**17 19 51.3**	**+0.3**
	baz=233								
TPUB				*e*	S		**Sg**	**17 20 07.3**	**-0.5**
	baz=233								
LONT	**Longtian**	**1.30**	**206**	*e*	P		**Pg**	**17 19 50.2**	**-1.0**
	baz=206								
WTK	**Tuku**	**1.31**	**253**	*e*	P		**Pg**	**17 19 51.0**	**-0.4**
	baz=252								
WTP	**Ta-pu**	**1.34**	**232**	*e*	P		**Pg**	**17 19 51.5**	**-0.3**
	baz=232								
TWGBT	**Beinan**	**1.40**	**206**	*e*	P		**Pn**	**17 19 50.4**	**-1.6**
	baz=206								
TWK	**Hsinying**	**1.42**	**235**	*e*	P		**Pb**	**17 19 53.9**	**+1.0**
	baz=235								
TWK				*e*	S		**Sn**	**17 20 13.8**	**+2.7**
	baz=235								
CHN1	**Nanshi**	**1.44**	**232**	*e*	P		**Pn**	**17 19 52.1**	**-0.4**
	baz=231								
SNST	**Tainan City**	**1.44**	**234**	*e*	P		**Pn**	**17 19 52.2**	**-0.3**
	baz=233								
SGST	**Jiashian**	**1.47**	**227**	*e*	P		**Pn**	**17 19 53.0**	**+0.1**
	baz=219								
WSF	**Szhu**	**1.47**	**253**	*e*	P		**Pn**	**17 19 53.4**	**+0.5**
	baz=252								
WSF				*e*	S		**Sn**	**17 20 14.5**	**+2.2**
	baz=252								
SLGT	**Liugui**	**1.49**	**223**	*e*	P		**Pn**	**17 19 53.5**	**+0.4**
	baz=211								
ICHU	**Yijhu**	**1.53**	**242**	*e*	P		**Pn**	**17 19 54.5**	**+0.8**
	baz=241								
CHN8	**Yiju**	**1.59**	**243**	*e*	P		**Pn**	**17 19 53.5**	**-1.1**
	baz=242								
MASBT	**Mashibuluo**	**1.79**	**215**	*e*	P		**Pn**	**17 19 59.0**	**+1.7**
	baz=204								
SCZT	**Fangliau**	**2.00**	**212**	*e*	P		**Pn**	**17 20 00.2**	**0.0**
	baz=200								
JKRS	**Kuro-shima**	**2.06**	**85**	*e*	S		**Sn**	**17 20 29.0**	**+2.1**
PHUB	**P'eng-hu**	**2.08**	**255**	*e*	P		**Pn**	**17 20 01.1**	**-0.2**
	baz=252								
JIJ	**Ishigaki jima**	**2.20**	**82**	*e*	S		**Sn**	**17 20 29.6**	**-0.7**
JISG	**Ishigakijimahi**	**2.38**	**77**	*e*	S		**Sn**	**17 20 34.9**	**0.0**
KSRS	**Korea Array**	**14.34**	**20**	Pn			**P**	**17 22 55.5**	**-1.0**
	0.1nm,0.3s,baz=200,slow=12,SNR=2.9 1.2nm,0.6s								
MKAR	**Makanchi Array**	**38.77**	**316**	P			**P**	**17 26 48.9**	**-2.2**
	0.5nm,0.7s,baz=98,slow=12,SNR=2.9 0.5nm,0.7s								
ZALV	**Zalesovo Beam**	**40.61**	**327**	P			**P**	**17 27 05.4**	**-0.9**
	1.6nm,0.9s,baz=122,slow=5.6,SNR=4.2 1.6nm,0.9s								
WRA	**Warramunga Arr**	**45.44**	**163**	P			**P**	**17 27 43.7**	**-2.0**
	0.4nm,0.7s,baz=346,slow=8.8,SNR=1.7 0.4nm,0.7s								
ASAR	**Alice Springs**	**48.91**	**165**	P			**P**	**17 28 11.4**	**-1.3**
	0.2nm,0.6s,baz=351,slow=10,SNR=1.3 0.2nm,0.6s								
FINES	**FINESS Array B**	**71.80**	**330**	P			**P**	**17 30 48.6**	**-0.3**
	2.3nm,0.9s,baz=36,slow=5.5,SNR=1.6 2.3nm,0.9s								
YKA	**Yellowknife Ar**	**82.86**	**23**	P			**P**	**17 31 52.4**	**+1.5**
	0.4nm,0.7s,baz=312,slow=5.2,SNR=6.1 0.4nm,0.7s								

*JMA **06** 17:23:03.0±0.2,24°.0N±0°.3×12°.2E±°,h0km,TAIWAN REGION*
*TAP **06** 17:23:03.0,24°.05N×121°.68E,h7km,ML3.2,C*
ISC 06 17:23:03.4±0.9,24°.05N±0°.01×121°.67E±0°.02,h7km±6km, n104,σ0ᵗ77/164,5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.07**	**294**	⇓*i*	P		**Pg**	**17 23 05.3**	**0.0**
	baz=293								
TWD					S		**Sg**	**17 23 06.8**	**+0.1**
	baz=293								
ETL	**Fush Village**	**0.12**	**339**	⇓*i*	P		**Pg**	**17 23 06.0**	**-0.1**
	baz=331								
ETL					S		**Sg**	**17 23 08.0**	**+0.1**
	baz=331								
NACB	**Ninganchiao**	**0.14**	**331**	⇓*i*	P		**Pg**	**17 23 06.3**	**-0.1**
	baz=326								
NACB					S		**Sg**	**17

NNSB	**Datong** baz=321	**0.46**	**325**	*i* P	**Pg**	**17 23 12.5**	**+0.2**
NNSB	baz=321			S	**Sg**	**17 23 19.0**	**+0.6**
NNSH	**Datong** baz=321	**0.46**	**325**	*i* P	**Pg**	**17 23 12.6**	**+0.2**
NNSH	baz=321			S	**Sg**	**17 23 19.0**	**+0.5**
OWD	**Renai** baz=260	**0.46**	**258**	*i* P	**Pb**	**17 23 12.7**	**-1.3**
OWD	baz=260			*e*S	**Sg**	**17 23 19.0**	**+0.6**
NNS	**Nan Shan** baz=322	**0.47**	**325**	*i* P	**Pg**	**17 23 12.7**	**+0.1**
NNS	baz=322			S	**Sg**	**17 23 19.4**	**+0.5**
TWT	**Tachien** baz=292	**0.49**	**294**	P	**Pb**	**17 23 13.7**	**-0.9**
LATG	**Datong** baz=339	**0.50**	**345**	P	**Pg**	**17 23 13.1**	**0.0**
LATG	baz=339			*e*S	**Sb**	**17 23 21.0**	**-1.2**
WUSB	**Renai** baz=265	**0.51**	**264**	P	**Pb**	**17 23 13.8**	**-1.0**
WUSB	baz=265			*e*S	**Sb**	**17 23 21.4**	**-1.0**
TDCB	**Techi** baz=292	**0.51**	**294**	P	**Pb**	**17 23 13.8**	**-0.9**
TDCB	baz=292			*e*S	**Sb**	**17 23 21.0**	**-1.5**
ESAO	**Su ao** baz=2.0	**0.55**	**17**	P	**Pg**	**17 23 13.6**	**-0.4**
VWDT	**VWDT** baz=242	**0.57**	**239**	*e*P	**Pb**	**17 23 14.9**	**-0.7**
VWDT	baz=242			*e*S	**Sb**	**17 23 22.9**	**-1.0**
NDT	**Datong Townshi** baz=339	**0.57**	**345**	P	**Pg**	**17 23 14.7**	**+0.2**
NDT	baz=339			S	**Sg**	**17 23 22.5**	**+0.6**
TWC	**Suao** baz=6.0	**0.58**	**16**	*e*P	**Pg**	**17 23 14.1**	**-0.5**
NDS	**Dongshan** baz=359	**0.58**	**4**	P	**Pb**	**17 23 14.8**	**0.0**
NDS	baz=359			S	**Sb**	**17 23 24.2**	**-0.3**
ENTT	**Nioudou** baz=347	**0.60**	**351**	P	**Pg**	**17 23 15.1**	**+0.1**
ENTT	baz=347			*e*S	**Sg**	**17 23 23.3**	**+0.6**
HGSD	**Ruisui** baz=194	**0.60**	**202**	*e*P	**Pb**	**17 23 16.5**	**+0.3**
EHY	**Hungye** baz=224	**0.63**	**211**	P	**Pg**	**17 23 15.5**	**0.0**
EHY	baz=224			*e*S	**Sb**	**17 23 25.2**	**-0.5**
EOS3	**EOS3** baz=60	**0.64**	**68**	*e*P	**Pg**	**17 23 14.0**	**-1.7**
TWE	**Neicheng** baz=356	**0.67**	**360**	P	**Pg**	**17 23 16.4**	**+0.1**
TWE	baz=356			*e*S	**Sb**	**17 23 26.7**	**-0.2**
YHNB	**Yeheng** baz=333	**0.67**	**337**	P	**Pb**	**17 23 16.8**	**-0.7**
NSK	**Sanguang** baz=324	**0.69**	**336**	P	**Pb**	**17 23 16.9**	**-0.8**
NSK	baz=324			*e*S	**Sg**	**17 23 26.0**	**+0.4**
WCS	**Beigang Elemen** baz=271	**0.69**	**271**	P	**Pb**	**17 23 17.4**	**-0.4**
WHP	**Taichung City** baz=288	**0.70**	**289**	*i* P	**Pb**	**17 23 17.7**	**-0.3**
WHP	baz=288			*e*S	**Sb**	**17 23 26.7**	**-1.2**
SSLB	**Suanglung** baz=261	**0.70**	**248**	*i* P	**Pb**	**17 23 17.0**	**-1.0**
SSLB	baz=261			S	**Sb**	**17 23 27.2**	**-0.8**
FUSB	**Fushanzhiwuyua** baz=349	**0.71**	**354**	P	**Pg**	**17 23 17.2**	**+0.1**
FUSB	baz=349			*e*S	**Sb**	**17 23 27.6**	**-0.6**
SMLT	**Sun Moon Lake** baz=259	**0.72**	**257**	P	**Pb**	**17 23 17.8**	**-0.6**
SMLT	baz=259			*e*S	**Sb**	**17 23 28.6**	**0.0**
YULB	**Yu-li** baz=226	**0.74**	**208**	P	**Pg**	**17 23 17.2**	**-0.5**
YULB	baz=226			*e*S	**Sb**	**17 23 28.9**	**0.0**
NWLT	**Wulai** baz=330	**0.74**	**348**	*e*P	**Pb**	**17 23 17.9**	**-0.7**
NWLT	baz=330			*e*S	**Sg**	**17 23 27.7**	**+0.4**
TYC	**Yuchr** baz=261	**0.76**	**259**	P	**Pb**	**17 23 18.2**	**-0.7**
TYC	baz=261			*e*S	**Sb**	**17 23 28.8**	**-0.6**
NFF	**Wufeng Townshi** baz=316	**0.77**	**319**	P	**Pb**	**17 23 18.8**	**-0.4**
NFF	baz=316			*e*S	**Sb**	**17 23 29.1**	**-0.8**
EYUL	**Yuli** baz=224	**0.77**	**205**	*e*P	**Pb**	**17 23 18.4**	**-0.7**
TWF1	**Yuli** baz=223	**0.77**	**206**	*e*P	**Pg**	**17 23 17.7**	**-0.6**
WHYT	**Xinyi Township** baz=248	**0.83**	**245**	*e*P	**Pb**	**17 23 20.5**	**+0.3**
NSTT	**Nanjuang** baz=311	**0.84**	**314**	*e*P	**Pb**	**17 23 20.2**	**-0.1**
LIOB	**Emei** baz=312	**0.84**	**315**	*e*P	**Pb**	**17 23 20.6**	**+0.2**
TWQ1	**Liyutan** baz=290	**0.87**	**290**	*e*P	**Pn**	**17 23 21.5**	**-0.6**
CHKH	**Chenggong** baz=193	**0.89**	**196**	*e*P	**Pb**	**17 23 21.0**	**-0.2**
CHKH	baz=193			*e*S	**Sn**	**17 23 34.7**	**-0.8**
WJS	**Zhushan** baz=257	**0.89**	**255**	*e*P	**Pb**	**17 23 21.5**	**+0.3**
FULB	**Fuli** baz=222	**0.91**	**202**	*e*P	**Pb**	**17 23 21.4**	**-0.2**
WNT1	**Nantou City** baz=263	**0.92**	**261**	*e*P	**Pn**	**17 23 22.5**	**-0.2**
WNT	**Mingjian** baz=261	**0.92**	**260**	*e*P	**Pn**	**17 23 22.7**	**0.0**
NHDH	**Xindian Distri** baz=346	**0.92**	**352**	*e*P	**Pb**	**17 23 21.4**	**-0.3**
TIPB	**Shuangxi** baz=355	**0.93**	**9**	P	**Pg**	**17 23 21.2**	**-0.1**
TWA	**Mucha** baz=350	**0.93**	**355**	*e*P	**Pb**	**17 23 21.6**	**-0.2**
TATO	**Taipei** baz=335	**0.94**	**350**	P	**Pb**	**17 23 21.6**	**-0.4**
TATO	baz=335			*e*S	**Sb**	**17 23 35.4**	**+0.8**
NMLH	**Miaoli** baz=300	**0.94**	**301**	*e*P	**Pn**	**17 23 22.9**	**-0.2**
ALS	**Alishan** baz=241	**0.96**	**236**	*e*P	**Pb**	**17 23 22.3**	**-0.2**
ALS	baz=241			*e*S	**Sn**	**17 23 36.6**	**-1.0**
SBCB	**Hsinchu** baz=310	**0.97**	**320**	*e*P	**Pn**	**17 23 23.9**	**+0.4**
CHKT	**Chengkung** baz=192	**0.99**	**197**	*e*P	**Pg**	**17 23 21.9**	**-0.4**
EHD	**Haiduan** baz=225	**0.99**	**205**	*e*P	**Pg**	**17 23 21.2**	**-1.2**
EHD	baz=225			*e*S	**Sn**	**17 23 37.4**	**-0.7**
TWB1	**Santiao Chiao** baz=3.0	**1.00**	**17**	*e*P	**Pg**	**17 23 22.5**	**-0.1**
CHN5	**Tsauling** baz=239	**1.01**	**244**	*e*P	**Pn**	**17 23 24.3**	**+0.2**
CHN5	baz=239			*e*S	**Sn**	**17 23 39.6**	**+0.9**
NWF	**Wu-fen Shan** baz=358	**1.02**	**6**	*e*P	**Pb**	**17 23 23.5**	**0.0**
WFSB	**Wu-fen Shan** baz=350	**1.02**	**6**	*e*P	**Pb**	**17 23 23.7**	**+0.2**
WFSB	baz=350			*e*S	**Sb**	**17 23 37.3**	**+0.3**
ELDTW	**Lidau** baz=210	**1.04**	**215**	*e*P	**Pg**	**17 23 22.1**	**-1.4**
ELDTW	baz=210			*e*S	**Sb**	**17 23 37.9**	**+0.1**
SXI1	**Grass Mountain** baz=349	**1.06**	**10**	*e*P	**Pb**	**17 23 23.9**	**-0.2**
TWS1	**Kuangyinshan** baz=342	**1.07**	**348**	*e*P	**Pn**	**17 23 24.8**	**-0.1**
WGK	**Gukeng** baz=254	**1.08**	**251**	*e*P	**Pn**	**17 23 25.6**	**+0.7**
WGK	baz=254			*e*S	**Sn**	**17 23 42.3**	**+2.2**
YM01	**YM01** baz=335	**1.10**	**355**	*e*P	**Pb**	**17 23 24.7**	**0.0**
WDLH	**Douliu** baz=254	**1.10**	**251**	*e*P	**Pn**	**17 23 25.6**	**+0.4**
ANP	**Anpu** baz=346	**1.14**	**353**	*e*P	**Pb**	**17 23 25.6**	**+0.1**
WCKO	**Fanlu** baz=244	**1.15**	**238**	*e*P	**Pn**	**17 23 26.4**	**+0.5**
WCKO	baz=244			*e*S	**Sn**	**17 23 43.2**	**+1.3**
WRL	**Guolierlin Hig** baz=254	**1.19**	**263**	P	**Pn**	**17 23 26.9**	**+0.4**
WRL	baz=254			*e*S	**Sn**	**17 23 44.9**	**+2.0**
STYH	**Taoyuan** baz=231	**1.20**	**223**	P	**Pb**	**17 23 25.9**	**-0.5**
STYH	baz=231			S	**Sn**	**17 23 42.7**	**-0.3**
TPUB	**Ta-pu** baz=239	**1.21**	**232**	*e*P	**Pn**	**17 23 27.1**	**+0.3**
TPUB	baz=239			*e*S	**Sn**	**17 23 43.7**	**+0.3**
JYNG	**Yonagunijimaku**	**1.23**	**71**	*e*P	**Pn**	**17 23 28.1**	**+1.1**
JYNG				*e*S	**Sn**	**17 23 45.6**	**+1.7**
LONT	**Longtian** baz=210	**1.24**	**204**	*e*P	**Pg**	**17 23 26.1**	**-1.1**
WTP	**Ta-pu** baz=237	**1.26**	**231**	*e*P	**Pn**	**17 23 27.7**	**+0.2**
WTP	baz=237			*e*S	**Sn**	**17 23 45.7**	**+1.1**
TWK	**Hsinying** baz=241	**1.33**	**235**	*e*P	**Pb**	**17 23 29.4**	**+0.6**
TWK	baz=241			*e*S	**Sn**	**17 23 48.6**	**+2.0**
CHN1	**Nanshi** baz=238	**1.35**	**231**	*e*P	**Pb**	**17 23 29.9**	**+0.8**
CHN1	baz=238			*e*S	**Sn**	**17 23 49.5**	**+2.5**
SNST	**Tainan City** baz=240	**1.36**	**233**	*e*P	**Pb**	**17 23 29.3**	**+0.2**
SNST	baz=240			*e*S	**Sn**	**17 23 48.4**	**+1.5**
SGST	**Jiashian** baz=234	**1.39**	**226**	P	**Pn**	**17 23 28.9**	**-0.3**
SGST	baz=234			*e*S	**Sn**	**17 23 49.4**	**+1.6**
WSF	**Szhu** baz=256	**1.39**	**253**	*e*P	**Pg**	**17 23 30.1**	**+0.1**
WSF	baz=256			*e*S	**Sn**	**17 23 49.3**	**+1.5**
SLGT	**Liugui** baz=230	**1.41**	**222**	*e*P	**Pg**	**17 23 29.8**	**-0.7**
SLGT	baz=230			*e*S	**Sn**	**17 23 49.7**	**+1.4**
ICHU	**Yijhu** baz=247	**1.45**	**242**	*e*P	**Pg**	**17 23 31.1**	**-0.1**
SCST	**Cishan** baz=215	**1.58**	**223**	*e*P	**Pg**	**17 23 33.4**	**-0.4**
TSMG	**Majia** baz=237	**1.64**	**215**	*e*P	**Pb**	**17 23 33.7**	**-0.2**
TSMG	baz=237			*e*S	**Sg**	**17 23 56.2**	**+0.2**
TWM1	**Shoushan** baz=228	**1.67**	**223**	*e*P	**Pg**	**17 23 35.3**	**-0.2**
TSCK	**Chigu Township** baz=245	**1.71**	**239**	*e*P	**Pb**	**17 23 34.4**	**-0.8**
TSCK	baz=245			*e*S	**Sg**	**17 23 57.6**	**-0.8**
MASBT	**Mashibuluo** baz=210	**1.72**	**214**	*e*P	**Pb**	**17 23 35.0**	**-0.3**
PHUB	**P'eng-hu** baz=258	**2.00**	**255**	*e*P	**Pn**	**17 23 38.0**	**+0.5**
PHUB	baz=258			*e*S	**Sb**	**17 24 04.4**	**-0.6**
PNG	**Penghu** baz=259	**2.00**	**257**	*e*P	**Pn**	**17 23 38.3**	**+0.8**
VWUC	**VWUC** baz=294	**2.23**	**295**	*e*P	**Pn**	**17 23 40.8**	**0.0**
VWUC	baz=294			*e*S	**Sn**	**17 24 08.2**	**-0.4**
PTMZ	**Houxiangcun** baz=292	**2.52**	**294**	*e*P	**Pn**	**17 23 44.4**	**-0.4**
PTMZ	baz=292			*e*S	**Sn**	**17 24 14.1**	**-1.7**
KNM	**Kinmen** baz=279	**2.98**	**278**	*e*P	**Pn**	**17 23 53.0**	**+1.9**
MHZQ	**Yeshan** baz=297	**3.15**	**311**	*e*P	**Pn**	**17 23 52.8**	**-0.6**
AXDP	**Jialang** baz=285	**3.48**	**285**	*e*P	**Pn**	**17 23 57.9**	**0.0**
DSXP	**Dongshan** baz=266	**3.90**	**266**	*e*P	**Pn**	**17 24 03.5**	**-0.3**
SXFK	**Yanhouchang** baz=302	**4.33**	**304**	*e*P	**Pn**	**17 24 09.4**	**-0.3**

IDC ***06*** *17:23:55.4±0.9,24.˙08N×121.˙99E,h0km,mb3.6/10, mbtmp3.6/11,ML3.3/1,MS4.1/1,Error ellipse: s-maj=34.4km s-min=18.5km az=68.0*

ASIES ***06*** *17:23:57.0,24.˙11N×121.˙71E,h8km,ML4.2,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; Mrr0.50; Mθθ-1.23; Mφφ0.73; Mrθ0.69; Mθφ-0.15; Mφr-0.55; Fault plane solution: $M_0$1.39761×10^{22} NP1: ϕs121.85000°,δ76.11000°,λ132.91000°. NP2: ϕs226.33000°,δ44.68000°,λ19.96000°. Principal axes: T Plg42.2610°, Azm72.4280°; N Plg41.3690°, Azm289.2730°; P Plg19.4550°, Azm181.1500°;*

JMA ***06*** *17:23:57.6±0.2,24.˙1N±0.˙3×121.˙7E±0.˙3,h1km±1km, MD4.3/15,MV4.0/15,TAIWAN REGION*

TAP ***06*** *17:23:57.0,24.˙11N×121.˙71E,h8km,ML4.2,C*

ISC 06 17:23:57.2±0.9, 24.˙10N±0.˙01×121.˙73E±0.˙02, h7km±6km, n179, σ0ś65/246, mb3.6/10, 11C-34D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=298	**0.11**	**301**	*i*	P		**Pg**	**17 23 59.8**	**0.0**
ETL	baz=298			*i*	S		**Sg**	**17 24 01.5**	**+0.1**
TWD	**Chiawan** baz=262	**0.12**	**260**	⇑ *i*	P		**Pg**	**17 23 60.0**	**+0.1**
TWD	baz=262			*i*	S		**Sg**	**17 24 01.7**	**+0.1**
NACB	**Ninganchiao** baz=290	**0.14**	**301**	⇓ *i*	P		**Pg**	**17 24 00.1**	**-0.1**
NACB	baz=290			*i*	S		**Sg**	**17 24 02.0**	**-0.2**
EHP	**Heping Village** baz=6.0	**0.21**	**4**	*i*	P		**Pg**	**17 24 01.6**	**+0.2**
EHP	baz=6.0				S		**Sg**	**17 24 04.7**	**+0.5**
EAHA	**Aohua** baz=3.0	**0.23**	**3**	⇓ *i*	P		**Pg**	**17 24 01.8**	**0.0**
EAHA	baz=3.0			*e*	S		**Sg**	**17 24 05.3**	**+0.5**
ETM	**Tongmen** baz=238	**0.25**	**238**	⇑ *i*	P		**Pg**	**17 24 02.5**	**+0.2**
ETM	baz=238			*i*	S		**Sg**	**17 24 06.0**	**+0.4**
LXIB	**Xiulin Townshi** baz=254	**0.30**	**254**	⇑ *i*	P		**Pg**	**17 24 03.2**	**+0.1**
LXIB	baz=254			*e*	S		**Sg**	**17 24 07.4**	**+0.3**
ENA	**Nanau** baz=3.0	**0.33**	**2**	⇓ *i*	P		**Pg**	**17 24 03.7**	**+0.1**
ENA	baz=3.0				S		**Sg**	**17 24 07.9**	**-0.1**
EWUT	**Wuta** baz=7.0	**0.34**	**8**	⇓ *i*	P		**Pg**	**17 24 04.1**	**+0.1**
EWUT	baz=7.0			*i*	S		**Sg**	**17 24 08.6**	**0.0**
SHUL	**Shoufeng** baz=212	**0.35**	**206**	⇓	P		**Pb**	**17 24 05.8**	**+0.1**
ESL	**Shilin** baz=230	**0.39**	**223**	⇑ *i*	P		**Pg**	**17 24 05.1**	**+0.2**
ESL	baz=230			*e*	S		**Sg**	**17 24 10.5**	**+0.5**
WHF	**Hehuan Shan** baz=275	**0.42**	**276**	P			**Pg**	**17 24 05.6**	**0.0**
WHF	baz=275				S		**Sg**	**17 24 10.9**	**-0.3**
TEGC	**Jichi Village** baz=206	**0.43**	**204**	P			**Pb**	**17 24 07.1**	**0.0**
NNSB	**Datong** baz=315	**0.45**	**316**	⇓ *i*	P		**Pg**	**17 24 06.2**	**+0.2**
NNSB	baz=315				S		**Sg**	**17 24 11.7**	**-0.3**
NNSH	**Datong** baz=314	**0.45**	**316**	⇓ *i*	P		**Pg**	**17 24 06.2**	**+0.2**
NNSH	baz=314				S		**Sg**	**17 24 12.0**	**0.0**
FUSS	**Fushou** baz=287	**0.46**	**288**	P			**Pg**	**17 24 06.6**	**+0.3**
FUSS	baz=287			*e*	S		**Sg**	**17 24 12.8**	**+0.4**
NNS	**Nan Shan** baz=315	**0.47**	**316**	⇓ *i*	P		**Pg**	**17 24 06.4**	**+0.1**
NNS	baz=315				S		**Sg**	**17 24 12.6**	**+0.1**
LATG	**Datong** baz=335	**0.47**	**337**	⇓ *i*	P		**Pg**	**17 24 06.4**	**+0.1**
LATG	baz=335			*e*	S		**Sg**	**17 24 12.1**	**-0.4**
ESAO	**Su ao** baz=10.0	**0.48**	**13**	⇓ *e*	P		**Pg**	**17 24 06.6**	**0.0**
WARBT	**Fenglin Townsh** baz=231	**0.49**	**219**	⇑ *i*	P		**Pg**	**17 24 06.9**	**+0.2**
CHGB	**Renai** baz=258	**0.51**	**265**	⇑ *i*	P		**Pg**	**17 24 07.4**	**+0.3**
CHGB	baz=258			*i*	S		**Sg**	**17 24 13.7**	**-0.1**
EGFH	**Guangfu** baz=225	**0.51**	**212**	*e*	P		**Pg**	**17 24 07.5**	**+0.4**
TWC	**Suao** baz=4.0	**0.52**	**12**	⇓ *i*	P		**Pg**	**17 24 07.4**	**+0.1**
OWD	**Renai** baz=256	**0.52**	**254**	*e*	P		**Pg**	**17 24 07.5**	**+0.1**
TWT	**Tachien** baz=285	**0.53**	**287**	P			**Pb**	**17 24 08.1**	**-0.8**
TWT	baz=285			*e*	S		**Sg**	**17 24 15.2**	**+0.9**
NDS	**Dongshan** baz=357	**0.53**	**359**	⇓ *i*	P		**Pg**	**17 24 07.7**	**+0.2**
NDS	baz=357			*e*	S		**Sg**	**17 24 14.8**	**+0.3**
NDT	**Datong Townshi** baz=337	**0.54**	**339**	⇓ *i*	P		**Pg**	**17 24 07.9**	**+0.3**
NDT	baz=337				S		**Sg**	**17 24 14.7**	**+0.1**
TDCB	**Techi** baz=285	**0.54**	**286**	P			**Pg**	**17 24 08.2**	**+0.5**
TDCB	baz=285			*i*	S		**Sg**	**17 24 15.0**	**+0.2**
EOS4	**EOS4** baz=87	**0.54**	**88**	*e*	P		**Pn**	**17 24 11.3**	**+0.3**
ENTT	**Nioudou** baz=343	**0.56**	**345**	⇓ *i*	P		**Pg**	**17 24 08.2**	**+0.3**
ENTT	baz=343				S		**Sg**	**17 24 15.8**	**+0.5**
WUSB	**Renai** baz=260	**0.57**	**259**	⇑ *i*	P		**Pg**	**17 24 08.6**	**+0.4**
WUSB	baz=260			*e*	S		**Sg**	**17 24 14.8**	**-0.8**
EOS3	**EOS3** baz=48	**0.57**	**71**	*e*	P		**Pn**	**17 24 11.1**	**-0.6**
TWE	**Neicheng** baz=355	**0.62**	**355**	⇓ *i*	P		**Pg**	**17 24 09.5**	**+0.3**
TWE	baz=355				S		**Sg**	**17 24 17.6**	**+0.3**
VWDT	**VWDT** baz=246	**0.64**	**237**	⇑	P		**Pg**	**17 24 09.6**	**+0.1**
YHNB	**Yeheng** baz=329	**0.65**	**331**	⇓ *i*	P		**Pg**	**17 24 10.2**	**+0.4**
YHNB	baz=329			*i*	S		**Sg**	**17 24 18.6**	**+0.4**
ILA	**Ilan** baz=348	**0.66**	**2**	*e*	P		**Pg**	**17 24 10.4**	**+0.4**
NSK	**Sanguang** baz=329	**0.66**	**330**	⇓ *i*	P		**Pg**	**17 24 10.4**	**+0.3**
NSK	baz=329			*i*	S		**Sg**	**17 24 18.8**	**0.0**
FUSB	**Fushanzhiwuyua** baz=348	**0.67**	**349**	⇓ *i*	P		**Pg**	**17 24 10.4**	**+0.3**
FUSB	baz=348			*i*	S		**Sg**	**17 24 19.0**	**+0.1**
HGSD	**Ruisui** baz=194	**0.67**	**205**	⇓ *e*	P		**Pb**	**17 24 11.4**	**+0.2**
HGSD	baz=194			*e*	S		**Sn**	**17 24 22.6**	**-1.2**
EHY	**Hungye** baz=214	**0.70**	**212**	⇓ *i*	P		**Pg**	**17 24 11.0**	**+0.3**
NWLT	**Wulai** baz=342	**0.70**	**343**	⇓ *i*	P		**Pg**	**17 24 11.1**	**+0.3**
NWLT	baz=342			*e*	S		**Sg**	**17 24 20.1**	**+0.1**
WPL	**Puli Township** baz=255	**0.71**	**263**	P			**Pg**	**17 24 11.3**	**+0.4**
WPL	baz=255			S			**Sg**	**17 24 20.0**	**-0.1**
DPDB	**Guoxing** baz=266	**0.73**	**265**	*e*	P		**Pg**	**17 24 11.7**	**+0.3**
WHP	**Taichung City** baz=284	**0.73**	**284**	⇓ *i*	P		**Pb**	**17 24 12.2**	**-0.3**
WHP	baz=284				S		**Sg**	**17 24 21.5**	**+0.6**
WCS	**Beigang Elemen** baz=259	**0.75**	**267**	*e*	P		**Pg**	**17 24 11.9**	**+0.3**
WCS	baz=259			*e*	S		**Sg**	**17 24 21.3**	**0.0**
NTC	**Toucheng** baz=3.0	**0.76**	**7**	*e*	P		**Pb**	**17 24 12.2**	**-0.6**
NFF	**Wufeng Townshi** baz=312	**0.77**	**314**	⇓	P		**Pb**	**17 24 12.4**	**-0.6**
NFF	baz=312				S		**Sg**	**17 24 22.2**	**+0.3**
SSLB	**Suanglung** baz=257	**0.77**	**246**	⇑ *i*	P		**Pg**	**17 24 12.3**	**+0.2**
SSLB	baz=257			*e*	S		**Sg**	**17 24 20.6**	**-1.5**
SMLT	**Sun Moon Lake** baz=255	**0.79**	**254**	⇑ *i*	P		**Pb**	**17 24 12.7**	**-0.6**
SMLT	baz=255			*i*	S		**Sg**	**17 24 22.6**	**0.0**
YULB	**Yu-li** baz=226	**0.81**	**209**	*e*	P		**Pg**	**17 24 12.8**	**0.0**
TYC	**Yuchr** baz=257	**0.82**	**256**	⇑ *e*	P		**Pg**	**17 24 12.7**	**-0.3**
TYC	baz=257			*i*	S		**Sg**	**17 24 22.9**	**-0.7**
ECBN	**Changbin** baz=190	**0.82**	**198**	*e*	P		**Pb**	**17 24 13.6**	**-0.3**
EYUL	**Yuli** baz=225	**0.84**	**206**	*e*	P		**Pb**	**17 24 13.9**	**-0.2**
TWF1	**Yuli** baz=224	**0.84**	**208**	*e*	P		**Pg**	**17 24 13.4**	**-0.1**
LIOB	**Emei** baz=308	**0.84**	**310**	⇓ *i*	P		**Pb**	**17 24 14.3**	**0.0**
NSTT	**Nanjuang** baz=307	**0.85**	**309**	⇓ *i*	P		**Pb**	**17 24 14.2**	**-0.1**
NSTT	baz=307				S		**Sg**	**17 24 24.6**	**+0.1**
NJD	**Zhudong** baz=316	**0.86**	**317**	P			**Pn**	**17 24 15.2**	**-0.5**
NJD	baz=316				S		**Sb**	**17 24 26.5**	**+0.3**
TIPB	**Shuangxi** baz=355	**0.87**	**6**	⇓ *i*	P		**Pg**	**17 24 14.2**	**+0.2**
TIPB	baz=355			*e*	S		**Sg**	**17 24 24.9**	**-0.5**
NHDH	**Xindian Distri** baz=337	**0.88**	**348**	*e*	P		**Pb**	**17 24 14.4**	**-0.4**
NHDH	baz=337				S		**Sg**	**17 24 24.7**	**-0.8**
TWA	**Mucha** baz=350	**0.88**	**352**	⇓ *i*	P		**Pb**	**17 24 14.8**	**-0.2**
TWA	baz=350			*e*	S		**Sg**	**17 24 25.4**	**-0.4**
WHYT	**Xinyi Township** baz=246	**0.90**	**243**	*e*	P		**Pb**	**17 24 15.5**	**+0.4**
TATO	**Taipei** baz=334	**0.90**	**346**	⇓ *i*	P		**Pb**	**17 24 14.9**	**-0.2**
TATO	baz=334			*e*	S		**Sg**	**17 24 25.4**	**-0.7**
TWQ1	**Liyutan** baz=286	**0.90**	**286**	*e*	P		**Pn**	**17 24 16.2**	**-0.2**
BACT	**New Taipei Cit** baz=339	**0.93**	**344**	*e*	P		**Pb**	**17 24 15.7**	**0.0**
HSN1	**Hsinchu** baz=314	**0.93**	**316**	*e*	P		**Pn**	**17 24 16.3**	**-0.5**

TWB1	**Santiao Chiao** baz=4.0	**0.93**	**15**	P	**Pg**	**17 24 15.2**	**0.0**
TWB1	baz=4.0			S	**Sg**	**17 24 26.9**	**-0.4**
WWF	**Wufeng** baz=261	**0.94**	**267**	*e*P	**Pn**	**17 24 17.0**	**+0.1**
WWF	baz=261			*e*S	**Sn**	**17 24 30.9**	**+0.3**
NHY	**Taipei** baz=348	**0.94**	**351**	*e*P	**Pb**	**17 24 15.9**	**-0.1**
CHKH	**Chenggong** baz=193	**0.95**	**199**	*e*P	**Pg**	**17 24 15.6**	**0.0**
WJS	**Zhushan** baz=255	**0.95**	**253**	*e*P	**Pn**	**17 24 17.3**	**+0.2**
WJS	baz=255			*e*S	**Sn**	**17 24 30.8**	**-0.1**
NMLH	**Miaoli** baz=296	**0.96**	**297**	*e*P	**Pn**	**17 24 16.8**	**-0.3**
SBCB	**Hsinchu** baz=313	**0.96**	**316**	*e*P	**Pn**	**17 24 17.4**	**+0.2**
NWF	**Wu-fen Shan** baz=351	**0.97**	**3**⇓*i*	P	**Pb**	**17 24 16.0**	**-0.4**
NWF	baz=351			*i* S	**Sg**	**17 24 28.5**	**+0.1**
WFSB	**Wu-fen Shan** baz=352	**0.97**	**3**⇓*i*	P	**Pb**	**17 24 16.2**	**-0.2**
WFSB	baz=352			*i* S	**Sg**	**17 24 28.0**	**-0.4**
NJN	**Zhunan** baz=305	**0.97**	**307**	*e*P	**Pn**	**17 24 17.1**	**-0.2**
NTY	**Taoyuan** baz=325	**0.97**	**337**	*e*P	**Pn**	**17 24 16.9**	**-0.4**
WNT1	**Nantou City** baz=255	**0.98**	**259**	*e*P	**Pn**	**17 24 17.6**	**+0.2**
WNT1	baz=255			*e*S	**Sn**	**17 24 30.9**	**-0.6**
WNT	**Mingjian** baz=253	**0.98**	**257**	*e*P	**Pn**	**17 24 17.5**	**+0.1**
WNT	baz=253			S	**Sb**	**17 24 30.3**	**+0.6**
HSN	**Hsinchu** baz=316	**0.98**	**315**	P	**Pn**	**17 24 17.5**	**0.0**
HSN	baz=316			*e*S	**Sn**	**17 24 30.4**	**-1.2**
FULB	**Fuli** baz=223	**0.98**	**204**	*e*P	**Pb**	**17 24 16.6**	**0.0**
NCUH	**Zhongli** baz=327	**0.99**	**330**	*e*P	**Pn**	**17 24 17.9**	**+0.2**
SXI1	**Grass Mountain** baz=5.0	**1.00**	**8**⇓*i*	P	**Pb**	**17 24 16.6**	**-0.3**
SXI1	baz=5.0			*e*S	**Sg**	**17 24 29.5**	**+0.1**
WDJ	**Dajia District** baz=284	**1.02**	**284**	*e*P	**Pn**	**17 24 18.4**	**+0.3**
ALS	**Alishan** baz=238	**1.03**	**235**	P	**Pb**	**17 24 17.8**	**+0.2**
ALS	baz=238			*e*S	**Sn**	**17 24 32.8**	**-0.5**
TWS1	**Kuangyinshan** baz=342	**1.03**	**344**	P	**Pn**	**17 24 17.8**	**-0.3**
TWS1	baz=342			S	**Sb**	**17 24 31.8**	**+0.5**
TNOU	**National Taiwa** baz=360	**1.04**	**2**⇓*i*	P	**Pg**	**17 24 17.2**	**-0.1**
TNOU	baz=360			*e*S	**Sg**	**17 24 30.7**	**-0.2**
YM01	**YM01** baz=350	**1.05**	**352**	⇓P	**Pb**	**17 24 17.7**	**-0.1**
YM01	baz=350			S	**Sb**	**17 24 31.8**	**0.0**
CHKT	**Chengkung** baz=192	**1.05**	**198**	*i* P	**Pg**	**17 24 17.2**	**-0.3**
CHKT	baz=192			S	**Sn**	**17 24 33.4**	**+0.1**
WYL	**Yuanlin Townsh** baz=264	**1.06**	**263**	*e*P	**Pn**	**17 24 18.5**	**+0.1**
WYL	baz=264			S	**Sn**	**17 24 34.1**	**+0.6**
EHD	**Haiduan** baz=224	**1.06**	**207**	*e*P	**Pg**	**17 24 17.0**	**-0.6**
WCHH	**Zhanghua** baz=270	**1.07**	**269**	*e*P	**Pn**	**17 24 19.3**	**+0.6**
CHN5	**Tsauling** baz=245	**1.08**	**243**	P	**Pn**	**17 24 18.9**	**0.0**
CHN5	baz=245			S	**Sn**	**17 24 34.9**	**+0.6**
NTST	**Danshui** baz=342	**1.09**	**347**	*e*P	**Pn**	**17 24 19.1**	**+0.2**
NHW	**Xinwu Township** baz=322	**1.09**	**326**	*e*P	**Pn**	**17 24 19.1**	**+0.1**
ANP	**Anpu** baz=345	**1.10**	**350**⇓*i*	P	**Pb**	**17 24 18.4**	**-0.2**
NWRT	**Kuosheng** baz=351	**1.10**	**357**	*e*P	**Pb**	**17 24 18.6**	**0.0**
ECS	**Chishang** baz=223	**1.10**	**205**	*e*P	**Pn**	**17 24 18.9**	**-0.2**
ELDTW	**Lidau** baz=221	**1.12**	**216**	*e*P	**Pg**	**17 24 17.8**	**-0.9**
WGK	**Gukeng** baz=253	**1.14**	**249**	*e*P	**Pn**	**17 24 20.9**	**+1.2**
WDLH	**Douliu** baz=253	**1.16**	**250**	*e*P	**Pn**	**17 24 20.9**	**+0.9**
JYNG	**Yonagunijimaku**	**1.17**	**72**	P	**Pn**	**17 24 20.2**	**+0.2**
JYNG				S	**Sn**	**17 24 36.4**	**+0.2**
JYNG	**Yonagunijimaku** comp=E,6.0nm,2.4s,comp=N,8.0nm,1.9s	**1.17**	**72**	A	A	17 24 20.2	
TWY	**Chenhua** baz=349	**1.18**	**354**	*e*P	**Pn**	**17 24 20.4**	**+0.3**
WCKO	**Fanlu** baz=243	**1.22**	**238**	*e*P	**Pn**	**17 24 21.3**	**+0.5**
YOJ	**Yonaguni jima** baz=65	**1.23**	**73**	P	**Pb**	**17 24 20.7**	**0.0**
YOJ	**Yonaguni jima**	**1.23**	**73**	P	**Pb**	**17 24 20.8**	**0.0**
YOJ				*e*S	**Sn**	**17 24 38.9**	**+1.3**
YOJ	**Yonaguni jima** comp=E,7.0nm,1.3s,comp=N,6.0nm,1.3s	**1.23**	**73**	A	A	17 24 20.8	
WRL	**Guolierlin Hig** baz=255	**1.25**	**261**	*e*P	**Pg**	**17 24 22.4**	**+1.2**
RLNB	**Erlin** baz=263	**1.27**	**261**	*e*P	**Pg**	**17 24 22.8**	**+1.2**
STYH	**Taoyuan** baz=229	**1.27**	**223**	*e*P	**Pn**	**17 24 21.1**	**-0.3**
CHN2	**Minshiung** baz=249	**1.28**	**244**	*e*P	**Pg**	**17 24 23.3**	**+1.5**
TPUB	**Ta-pu** baz=236	**1.28**	**232**	P	**Pg**	**17 24 22.5**	**+0.6**
TPUB	baz=236			S	**Sn**	**17 24 39.4**	**+0.2**
WTK	**Tuku** baz=255	**1.29**	**252**	*e*P	**Pg**	**17 24 23.0**	**+1.0**
LONT	**Longtian** baz=212	**1.31**	**205**	*e*P	**Pn**	**17 24 21.8**	**-0.1**
WTP	**Ta-pu** baz=236	**1.33**	**230**	P	**Pg**	**17 24 23.1**	**+0.3**
TWK	**Hsinying** baz=238	**1.41**	**234**	*e*P	**Pg**	**17 24 24.2**	**-0.1**
TWK	baz=238			S	**Sg**	**17 24 44.1**	**+1.6**
TWGBT	**Beinan** baz=212	**1.41**	**205**	*e*P	**Pn**	**17 24 21.1**	**-2.3**
TWG	**Pinlang** baz=212	**1.41**	**205**	*e*P	**Pn**	**17 24 21.4**	**-1.9**
CHN1	**Nanshi** baz=235	**1.43**	**231**	P	**Pg**	**17 24 25.1**	**+0.5**
CHN1	baz=235			S	**Sg**	**17 24 45.9**	**+2.7**
SNST	**Tainan City** baz=238	**1.43**	**232**	*e*P	**Pg**	**17 24 24.8**	**+0.2**
WSF	**Szhu** baz=254	**1.45**	**252**	*e*P	**Pg**	**17 24 25.1**	**0.0**
WSF	baz=254			*e*S	**Sg**	**17 24 45.0**	**+1.0**
SGST	**Jiashian** baz=231	**1.46**	**226**	P	**Pn**	**17 24 24.2**	**+0.1**
SGST	baz=231			S	**Sg**	**17 24 45.8**	**+1.7**
SLGT	**Liugui** baz=228	**1.48**	**222**	*e*P	**Pg**	**17 24 25.5**	**-0.2**
WSL	**Shuilin Townsh** baz=252	**1.49**	**248**	*e*P	**Pg**	**17 24 25.5**	**-0.3**
ICHU	**Yijhu** baz=256	**1.52**	**241**	*e*P	**Pb**	**17 24 25.7**	**0.0**
ICHU	baz=256			*e*S	**Sg**	**17 24 47.0**	**+0.9**
PCYT	**Pengchaiyu** baz=3.0	**1.55**	**12**	*e*P	**Pb**	**17 24 26.2**	**-0.2**
CHN8	**Yiju** baz=246	**1.58**	**242**	*e*P	**Pb**	**17 24 26.8**	**0.0**
CHN8	baz=246			*e*S	**Sg**	**17 24 48.6**	**+0.5**
CHN3	**Shinhua** baz=237	**1.61**	**231**	*e*P	**Pg**	**17 24 28.1**	**-0.1**
SSHA	**Shanhua** baz=240	**1.63**	**234**	*e*P	**Pg**	**17 24 28.7**	**+0.2**
ECL	**Taimali** baz=198	**1.66**	**206**	*e*P	**Pn**	**17 24 25.7**	**-1.0**
SCST	**Cishan** baz=230	**1.66**	**223**	*e*P	**Pg**	**17 24 29.2**	**+0.2**
SHHT	**Tainan City** baz=236	**1.66**	**230**	*e*P	**Pg**	**17 24 29.6**	**+0.5**
SCLT	**Jiali** baz=241	**1.68**	**237**	*e*P	**Pn**	**17 24 26.2**	**-0.9**
SCLT	baz=241			S	**Sg**	**17 24 51.3**	**0.0**
TSMG	**Majia** baz=236	**1.71**	**216**	*e*P	**Pb**	**17 24 29.3**	**+0.3**
TWM1	**Shoushan** baz=229	**1.75**	**224**	*e*P	**Pg**	**17 24 30.2**	**-0.6**
SGLT	**Jiouru** baz=216	**1.78**	**220**	*e*P	**Pb**	**17 24 30.6**	**+0.5**
MASBT	**Mashibuluo** baz=214	**1.79**	**214**	*e*P	**Pn**	**17 24 29.3**	**+0.7**
IRIF	**Iriomote-Funau**	**1.84**	**82**	P	**Pn**	**17 24 30.0**	**+0.7**
IRIF	**Iriomote-Funau** comp=E,5.0nm,2.6s,comp=N,6.0nm,5.7s	**1.84**	**82**	A	A	17 24 30.0	
EAST	**Anshuo** baz=199	**1.89**	**205**	*e*P	**Pb**	**17 24 31.4**	**-0.8**
HATJ	**Hateruma jima**	**1.90**	**91**	S	**Sb**	**17 24 56.0**	**-0.2**
HATJ	**Hateruma jima** comp=E,8.0nm,4.8s,comp=N,6.0nm,4.5s	**1.90**	**91**	A	A	17 24 56.0	
TAWH	**Dawu Township** baz=212	**1.92**	**204**	*e*P	**Pn**	**17 24 31.2**	**+0.9**
SCZT	**Fangliau** baz=201	**2.00**	**211**	*e*P	**Pn**	**17 24 31.8**	**+0.4**
PHUB	**P'eng-hu** baz=248	**2.06**	**254**	*e*P	**Pb**	**17 24 33.8**	**-1.1**
PHUB	baz=248			S	**Sb**	**17 25 00.0**	**-0.7**
PNG	**Penghu** baz=260	**2.06**	**255**	*e*P	**Pb**	**17 24 34.0**	**-0.9**
SLIU	**Shizi** baz=200	**2.06**	**205**	*e*P	**Pb**	**17 24 34.3**	**-0.8**
WDGT	**Dungji** baz=252	**2.07**	**247**	*e*P	**Pb**	**17 24 33.7**	**-1.5**
JKRS	**Kuro-shima**	**2.09**	**86**	P	**Pn**	**17 24 33.4**	**+0.7**
JKRS				*e*S	**Sn**	**17 25 00.0**	**+1.1**
JKRS	**Kuro-shima** comp=E,8.0nm,3.9s,comp=N,8.0nm,4.9s	**2.09**	**86**	A	A	17 24 33.4	
LYUB	**Lan-yu** baz=193	**2.09**	**184**	*e*P	**Pn**	**17 24 30.1**	**-2.6**
JIJ	**Ishigaki jima**	**2.22**	**83**	*e*P	**Pn**	**17 24 34.5**	**0.0**
JIJ				*e*S	**Sn**	**17 25 03.0**	**+0.7**
VWUC	**VWUC** baz=293	**2.25**	**294**	*e*P	**Pn**	**17 24 34.5**	**-0.4**
VCHM	**Qimei** baz=238	**2.29**	**248**	*e*P	**Pn**	**17 24 35.9**	**+0.5**
TWK1	**Hengchun** baz=210	**2.31**	**202**	*e*P	**Pn**	**17 24 36.5**	**+0.7**
TWKBT	**Hengchun** baz=196	**2.31**	**202**	*e*P	**Pn**	**17 24 35.4**	**-0.4**
JISG	**Ishigakijimahi**	**2.41**	**78**	P	**Pn**	**17 24 37.2**	**+0.2**
JISG				*e*S	**Sn**	**17 25 06.8**	**0.0**
PTMZ	**Houxiangcun** baz=292	**2.55**	**292**	*e*P	**Pn**	**17 24 38.9**	**-0.1**
MATB	**Ma-tsu** baz=318	**2.60**	**322**	*e*P	**Pn**	**17 24 40.2**	**+0.5**
JTJ	**Tarama**	**2.77**	**78**	P	**Pn**	**17 24 42.4**	**+0.4**
JTJ				*e*S	**Sn**	**17 25 18.1**	**+2.5**
LYJJ	**Jianjiangzhen** baz=320	**3.02**	**324**	*e*P	**Pn**	**17 24 45.9**	**+0.4**
KNMB	**Chin-men Tao** baz=279	**3.07**	**277**	*e*P	**Pn**	**17 24 46.0**	**-0.2**
XPSS	**Dashiqiu** baz=330	**3.14**	**334**	*e*P	**Pn**	**17 24 46.9**	**-0.3**
JMJ	**Miyako jima 2** baz=66	**3.33**	**77**	*e*P	**Pn**	**17 24 50.1**	**+0.4**
AXDP	**Jialang** baz=284	**3.51**	**284**	*e*P	**Pn**	**17 24 52.9**	**+0.7**
DSXP	**Dongshan** baz=269	**3.96**	**265**	*e*P	**Pn**	**17 24 58.9**	**+0.6**
SXFK	**Yanhouchang** baz=300	**4.35**	**303**	*e*P	**Pn**	**17 25 04.0**	**+0.2**
TGY	**Tagaytay City** comp=N,1µm,19.3s,baz=230,slow=43	**9.97**	**184**	LR	LR	17 31 08.3	
KSRS	**Korea Array** comp=N,0.2nm,0.3s,baz=199,slow=12,SNR=2.5 comp=N,0.5nm,0.4s	**14.33**	**20**	Pn	**Pn**	**17 27 20.4**	**-0.2**
CMAR	**Chiang Mai Arr** comp=N,0.2nm,0.3s,baz=64,slow=6.1,SNR=2.0 comp=N,0.2nm,0.3s	**21.95**	**260**	P	**P**	**17 28 53.5**	**+1.8**
SONM	**Songino Array** comp=N,1.4nm,0.9s,baz=150,slow=8.9,SNR=5.8 comp=N,1.4nm,0.9s	**26.64**	**337**	P	**P**	**17 29 36.7**	**+0.1**
MKAR	**Makanchi Array** comp=N,0.6nm,0.6s,baz=104,slow=11,SNR=12 comp=N,0.6nm,0.6s	**38.74**	**316**	P	**P**	**17 31 22.8**	**+0.6**
ZALV	**Zalesovo Beam** comp=N,0.9nm,0.5s,baz=115,slow=7.0,SNR=5.1 comp=N,0.9nm,0.5s	**40.58**	**327**	P	**P**	**17 31 37.0**	**-0.3**
KURBB	**Kurchatov Arra** comp=N,0.2nm,0.4s,baz=111,slow=9.9,SNR=2.0 comp=N,0.2nm,0.4s	**42.49**	**320**	P	**P**	**17 31 53.1**	**+0.1**
WRA	**Warramunga Arr** comp=N,0.3nm,0.5s,baz=344,slow=8.7,SNR=5.3 comp=N,0.3nm,0.5s	**45.47**	**163**	P	**P**	**17 32 15.4**	**-1.8**
BVAR	**Borovoye Array** comp=N,0.4nm,0.5s,baz=117,slow=8.6,SNR=2.2 comp=N,0.4nm,0.5s	**48.05**	**321**	P	**P**	**17 32 37.5**	**+0.4**
ASAR	**Alice Springs** comp=N,0.2nm,0.5s,baz=341,slow=6.9,SNR=7.0 comp=N,0.2nm,0.5s	**48.93**	**165**	P	**P**	**17 32 42.8**	**-1.4**
FINES	**FINESS Array B** comp=N,3.6nm,1.0s,baz=132,slow=2.8,SNR=3.5 comp=N,3.6nm,1.0s	**71.77**	**330**	P	**P**	**17 35 21.6**	**+1.5**
YKA	**Yellowknife Ar** comp=N,0.5nm,0.7s,baz=312,slow=4.8,SNR=12 comp=N,0.5nm,0.7s	**82.85**	**23**	P	**P**	**17 36 20.6**	**-1.6**

TAP 06 17:34:11.3,24.00N×121.59E,h5km,ML1.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=12	**0.08**	**7**	*i* P	Pg		17 34 13.6	+0.5
TWD	baz=12			*i* S	Sg		17 34 15.2	+0.9
ETM	**Tongmen** baz=245	**0.09**	**246**	*i* P	Pg		17 34 13.8	+0.4
ETM	baz=245			*i* S	Sg		17 34 15.9	+1.2
LXIB	**Xiulin Townshi** baz=269	**0.16**	**277**	*i* P	Pg		17 34 15.3	+0.8
LXIB	baz=269			S	Sg		17 34 18.2	+1.5
ETL	**Fush Village** baz=14	**0.16**	**13**	*e*P	Pg		17 34 14.9	+0.3
ETL	baz=14			*e*S	Sg		17 34 17.2	+0.5
NACB	**Ninganchiao** baz=17	**0.17**	**3**	P	Pg		17 34 15.0	+0.3
NACB	baz=17			S	Sg		17 34 17.5	+0.5
SHUL	**Shoufeng** baz=172	**0.21**	**185**	*e*P	Pg		17 34 16.6	+1.1
ESL	**Shilin** baz=214	**0.23**	**217**	P	Pg		17 34 16.3	+0.4
ESL	baz=214			S	Sg		17 34 19.5	+0.5
WHF	**Hehuan Shan** baz=296	**0.33**	**296**	P	Pg		17 34 18.6	+0.8
WHF	baz=296			S	Sg		17 34 23.5	+1.3
WARBT	**Fenglin Townsh** baz=225	**0.34**	**213**	*e*P	Pg		17 34 18.1	+0.2
WARBT	baz=225			*e*S	Sg		17 34 22.4	0.0
OWD	**Renai** baz=262	**0.38**	**263**	P	Pb		17 34 20.0	-0.6
OWD	baz=262			*e*S	Sg		17 34 24.6	+1.0
CHGB	**Renai** baz=278	**0.38**	**279**	P	Pb		17 34 19.8	-0.9
CHGB	baz=278			*e*S	Sb		17 34 25.5	-1.5
FUSS	**Fushou** baz=308	**0.40**	**308**	P	Pb		17 34 20.1	-0.9
WUSB	**Renai** baz=267	**0.43**	**269**	*e*P	Pb		17 34 20.8	-0.6
WUSB	baz=267			*e*S	Sb		17 34 27.1	-1.1
NNSB	**Datong** baz=337	**0.46**	**336**	P	Pg		17 34 21.1	+0.9
EWUT	**Wuta** baz=24	**0.47**	**22**	*e*P	Pg		17 34 20.6	+0.1
EWUT	baz=24			*e*S	Sg		17 34 26.8	+0.2
NNS	**Nan Shan** baz=337	**0.48**	**336**	P	Pb		17 34 21.6	-0.7
NNS	baz=337			*e*S	Sg		17 34 27.8	+1.0
VWDT	**VWDT** baz=226	**0.48**	**239**	*e*P	Pg		17 34 21.1	+0.6
VWDT	baz=226			*e*S	Sb		17 34 28.4	-1.1
EHY	**Hungye** baz=211	**0.55**	**206**	*e*P	Pg		17 34 22.1	+0.1
NDT	**Datong Townshi** baz=344	**0.60**	**354**	*e*P	Pb		17 34 23.8	-0.6
NDT	baz=344			*e*S	Sb		17 34 32.0	-1.1
SSLB	**Suanglung** baz=261	**0.62**	**250**	P	Pb		17 34 23.9	-0.7
SSLB	baz=261			*e*S	Sg		17 34 31.7	+0.5
SMLT	**Sun Moon Lake** baz=258	**0.64**	**259**	*e*P	Pg		17 34 24.3	+0.7
SMLT	baz=258			*e*S	Sb		17 34 33.5	-0.7
TYC	**Yuchr** baz=261	**0.67**	**262**	*e*P	Pb		17 34 25.2	-0.3
TYC	baz=261			*e*S	Sb		17 34 34.3	-0.9
NWLT	**Wulai** baz=356	**0.77**	**354**	*e*P	Pb		17 34 26.9	-0.4
NWLT	baz=356			*e*S	Sb		17 34 38.0	-0.2

IDC 06 17:35:31.7±644.0,23.00S×70.40W,h0km,Error ellipse: s-maj=303.9km s-min=171.0km az=77.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I14CL	**ROBINSON CRUSO** 0.1nm,0.5s,baz=38,slow=328,SNR=0.9	**2.93**	**213**	I	I		18 54 10.0	
I20EC	**Galapagos** baz=142,slow=316,SNR=1.9	**29.54**	**316**	I	I		20 36 20.0	
I13CL	**EASTER ISLAND** baz=90,slow=316,SNR=0.8	**35.44**	**255**	I	I		21 11 10.0	

*JMA **06** 17:44:59.5±0.3,24.0N±0.7×12.2E±,h0km,MV2.8/10, TAIWAN REGION*
*TAP **06** 17:45:00.0,24.08N×121.66E,h11km±1km,ML2.5,C*
ISC 06 17:45:00.4±1.3,24.05N±0.08×121.7E±0.1,h9km±16km, n13,σ0°77/14,3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=276	**0.11**	**289**	*i* P	Pg		**17 45 02.8**	**-0.2**
ETL	**Fush Village** baz=338	**0.14**	**326**	P	Pg		**17 45 03.3**	**-0.2**
NACB	**Ninganchiao** baz=329	**0.17**	**321**⇓*i*	P	Pg		**17 45 03.7**	**-0.2**
ETM	**Tongmen** baz=234	**0.21**	**248**	P	Pg		**17 45 04.7**	**0.0**
LXIB	**Xiulin Townshi** baz=256	**0.27**	**265**⇓*i*	P	Pg		**17 45 05.7**	**-0.2**
EAHA	**Aohua** baz=16	**0.28**	**6**	*e*P	Pg		**17 45 06.0**	**-0.1**
SHUL	**Shoufeng** baz=196	**0.29**	**207**	*e*P	Pb		**17 45 07.8**	**+0.1**
ESL	**Shilin** baz=217	**0.34**	**228**	P	Pg		**17 45 07.0**	**-0.1**
ENA	**Nanau** baz=13	**0.38**	**5**⇓*i*	P	Pg		**17 45 08.1**	**+0.1**
WHF	**Hehuan Shan** baz=280	**0.42**	**284**	P	Pg		**17 45 08.6**	**0.0**
JKRS	**Kuro-shima**	**2.11**	**84**	*e*P	Pn		**17 45 36.3**	**+0.4**
JIJ	**Ishigaki jima**	**2.25**	**81**	*e*S	Sn		**17 46 05.4**	**-0.1**
JISG	**Ishigakijimahi**	**2.44**	**77**	*e*P	Pn		**17 45 41.4**	**+1.1**
JISG				S	Sn		**17 46 08.2**	**-2.1**

TAP 06 17:45:02.8,24.05N×121.64E,h8km,ML3.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=314	**0.06**	**307**	P	Pg		17 45 04.8	+0.2
TWD	baz=314			*i* S	Sg		17 45 06.1	+0.3
TWD	**Chiawan** baz=276	**0.06**	**307**	*i* S	Pg		17 45 04.4	-0.1
ETL	**Fush Village** baz=351	**0.11**	**350**	P	Pg		17 45 05.7	+0.3
ETL	baz=351			*i* S	Sg		17 45 07.6	+0.4
ETL	**Fush Village** baz=338	**0.11**	**350**	S	Pg		17 45 05.4	0.0
NACB	**Ninganchiao** baz=349	**0.13**	**340**	P	Pg		17 45 05.9	+0.2
NACB	baz=349			S	Sg		17 45 08.0	+0.3
NACB	**Ninganchiao** baz=329	**0.13**	**340**	*i* S	Pg		17 45 05.8	+0.1
ETM	**Tongmen** baz=239	**0.16**	**240**	P	Pg		17 45 06.2	+0.1
ETM	baz=239			S	Sg		17 45 08.4	0.0
LXIB	**Xiulin Townshi** baz=263	**0.21**	**263**	P	Pg		17 45 07.2	+0.1
SHUL	**Shoufeng** baz=199	**0.27**	**196**	*e*P	Pb		17 45 09.1	-0.8
EAHA	**Aohua** baz=18	**0.29**	**17**	*e*P	Pg		17 45 08.8	+0.2
EAHA	baz=18			*e*S	Sg		17 45 13.4	+0.9
ESL	**Shilin** baz=218	**0.30**	**220**	*e*P	Pg		17 45 08.5	-0.3
TEGC	**Jichi Village** baz=183	**0.35**	**196**	*e*P	Pb		17 45 10.8	-0.4
WHF	**Hehuan Shan** baz=285	**0.36**	**286**	*e*P	Pg		17 45 10.3	+0.3
WHF	baz=285			S	Sg		17 45 15.2	+0.5
ENA	**Nanau** baz=15	**0.39**	**13**	P	Pg		17 45 10.7	+0.3
ENA	baz=15			*e*S	Sg		17 45 16.0	+0.5
WARBT	**Fenglin Townsh** baz=222	**0.40**	**216**	*e*P	Pg		17 45 10.0	-0.6
EWUT	**Wuta** baz=17	**0.41**	**17**	*e*P	Pg		17 45 11.2	+0.3
FUSS	**Fushou** baz=308	**0.42**	**299**	*e*P	Pg		17 45 11.7	+0.7
EGFH	**Guangfu** baz=214	**0.43**	**208**	*e*P	Pg		17 45 11.2	+0.1
CHGB	**Renai** baz=261	**0.43**	**272**	*i* P	Pg		17 45 11.7	+0.5
CHGB	baz=261			*i* S	Sg		17 45 17.6	+0.7
OWD	**Renai** baz=258	**0.44**	**258**	*e*P	Pg		17 45 11.7	+0.4
NNSB	**Datong** baz=328	**0.45**	**328**	*e*P	Pb		17 45 12.4	-0.6
NNSB	baz=328			S	Sg		17 45 18.2	+0.7
NNSH	**Datong** baz=336	**0.45**	**328**	*e*P	Pb		17 45 12.3	-0.7
NNS	**Nan Shan** baz=328	**0.46**	**328**	P	Pb		17 45 12.7	-0.6
NNS	baz=328			S	Sg		17 45 18.5	+0.6
TWT	**Tachien** baz=294	**0.47**	**296**	P	Pb		17 45 13.0	-0.5
TWT	baz=294			*i* S	Sb		17 45 19.7	-1.1
WUSB	**Renai** baz=264	**0.48**	**264**	P	Pg		17 45 12.6	+0.4
TDCB	**Techi** baz=294	**0.49**	**295**	*i* P	Pb		17 45 13.0	-0.7

TDCB				*i* S	Sg	17 45 19.5	+0.8		
	baz=294								
LATG	**Datong**	**0.50**	**348**	P	Pb	17 45 13.2	-0.7		
	baz=348								
LATG				*e*S	Sg	17 45 19.3	+0.3		
	baz=348								
VWDT	**VWDT**	**0.55**	**238**	P	Pg	17 45 13.4	+0.1		
	baz=229								
VWDT				*e*S	Sb	17 45 21.5	-1.0		
	baz=229								
ESAO	**Su ao**	**0.56**	**19**	*e*P	Pb	17 45 14.5	-0.3		
	baz=19								
NDT	**Datong Townshi**	**0.57**	**348**	*i* P	Pb	17 45 14.6	-0.4		
	baz=348								
NDT				S	Sg	17 45 21.9	+0.8		
	baz=348								
HGSD	**Ruisui**	**0.59**	**200**	*e*P	Pb	17 45 15.6	+0.3		
	baz=218								
NDS	**Dongshan**	**0.59**	**6**	*e*P	Pg	17 45 14.7	+0.5		
	baz=14								
TWC	**Suao**	**0.59**	**18**	*e*P	Pb	17 45 15.0	-0.3		
	baz=19								
ENTT	**Nioudou**	**0.59**	**353**	P	Pb	17 45 14.9	-0.5		
	baz=354								
ENTT				*e*S	Sg	17 45 22.6	+0.6		
	baz=354								
EHY	**Hungye**	**0.61**	**209**	*e*P	Pg	17 45 14.1	-0.5		
	baz=208								
WPL	**Puli Township**	**0.63**	**267**	*e*P	Pb	17 45 15.6	-0.4		
	baz=267								
DPDB	**Guoxing**	**0.66**	**269**	*e*P	Pb	17 45 16.1	-0.4		
	baz=269								
YHNB	**Yeheng**	**0.67**	**339**	*e*P	Pb	17 45 17.0	+0.2		
	baz=339								
YHNB				*e*S	Sg	17 45 24.9	+0.5		
	baz=339								
WCS	**Beigang Elemen**	**0.67**	**271**	*e*P	Pb	17 45 16.5	-0.2		
	baz=271								
TWE	**Neicheng**	**0.67**	**2**	P	Pb	17 45 16.4	-0.3		
	baz=354								
NSK	**Sanguang**	**0.68**	**337**	*e*P	Pb	17 45 16.7	-0.2		
	baz=351								
WHP	**Taichung City**	**0.68**	**290**	*e*P	Pb	17 45 16.8	-0.1		
	baz=289								
WHP				*e*S	Sb	17 45 26.2	-0.3		
	baz=289								
SSLB	**Suanglung**	**0.68**	**248**	P	Pg	17 45 16.1	+0.1		
	baz=248								
SMLT	**Sun Moon Lake**	**0.70**	**257**	P	Pb	17 45 16.9	-0.4		
	baz=265								
FUSB	**Fushanzhiwuyua**	**0.71**	**356**	P	Pb	17 45 17.5	+0.1		
	baz=356								
FUSB				*e*S	Sb	17 45 26.7	-0.8		
	baz=356								
YULB	**Yu-li**	**0.72**	**206**	*e*P	Pg	17 45 16.6	-0.1		
	baz=207								
TYC	**Yuchr**	**0.73**	**259**	*e*P	Pg	17 45 17.3	+0.4		
	baz=259								
NWLT	**Wulai**	**0.74**	**350**	P	Pb	17 45 18.0	+0.1		
	baz=350								
NWLT				S	Sg	17 45 26.9	+0.3		
	baz=350								
NFF	**Wufeng Townshi**	**0.76**	**321**	*e*P	Pb	17 45 18.4	+0.1		
	baz=320								
TWF1	**Yuli**	**0.76**	**205**	*e*P	Pg	17 45 17.3	-0.2		
	baz=219								
WHYT	**Xinyi Township**	**0.80**	**244**	*e*P	Pg	17 45 18.3	0.0		
	baz=244								
NSTT	**Nanjuang**	**0.83**	**315**	*e*P	Pb	17 45 19.7	+0.3		
	baz=315								
LIOB	**Emei**	**0.83**	**316**	*e*P	Pb	17 45 19.6	+0.2		
	baz=316								
TWQ1	**Liyutan**	**0.85**	**291**	*e*P	Pb	17 45 20.2	+0.4		
	baz=283								
WWF	**Wufeng**	**0.86**	**270**	*e*P	Pb	17 45 20.4	+0.4		
	baz=270								
WJS	**Zhushan**	**0.87**	**255**	*e*P	Pb	17 45 20.1	0.0		
	baz=255								
CHKH	**Chenggong**	**0.88**	**195**	*e*P	Pg	17 45 19.7	-0.1		
	baz=187								
TCU	**Taichung**	**0.89**	**277**	*e*P	Pg	17 45 20.1	+0.2		
	baz=271								
WNT1	**Nantou City**	**0.89**	**261**	*e*P	Pb	17 45 20.4	-0.2		
	baz=261								
WNT	**Mingjian**	**0.89**	**259**	*e*P	Pg	17 45 20.0	0.0		
	baz=252								
FULB	**Fuli**	**0.90**	**201**	*e*P	Pb	17 45 20.7	0.0		
	baz=217								
NHDH	**Xindian Distri**	**0.92**	**353**	*e*P	Pb	17 45 21.2	+0.2		
	baz=344								
NMLH	**Miaoli**	**0.92**	**302**	*e*P	Pb	17 45 21.4	+0.4		
	baz=302								
TWA	**Mucha**	**0.93**	**357**	*e*P	Pb	17 45 21.1	-0.1		
	baz=357								
TATO	**Taipei**	**0.94**	**351**	*e*P	Pg	17 45 20.4	-0.4		
	baz=351								
ALS	**Alishan**	**0.94**	**235**	*e*P	Pg	17 45 19.6	-1.2		
	baz=245								
TIPB	**Shuangxi**	**0.94**	**10**	*e*P	Pg	17 45 19.5	-1.3		
	baz=355								
SBCB	**Hsinchu**	**0.95**	**321**	*e*P	Pg	17 45 21.1	0.0		
	baz=321								
WDJ	**Dajia District**	**0.96**	**288**	*e*P	Pn	17 45 22.4	-0.3		
	baz=288								
CHKT	**Chengkung**	**0.98**	**195**	*e*P	Pg	17 45 20.1	-1.5		
	baz=196								
WYL	**Yuanlin Townsh**	**0.98**	**265**	*e*P	Pg	17 45 21.4	-0.1		
	baz=266								
EHD	**Haiduan**	**0.98**	**204**	*e*P	Pg	17 45 20.5	-1.1		
	baz=206								
CHN5	**Tsauling**	**0.99**	**243**	*e*P	Pg	17 45 21.3	-0.6		
	baz=242								
CHN5				S	Sn	17 45 36.9	-0.4		
	baz=242								
WCHH	**Zhanghua**	**0.99**	**272**	*e*P	Pb	17 45 22.5	+0.3		
	baz=272								
TAP	**Taipei**	**1.00**	**353**	*e*P	Pn	17 45 22.8	-0.3		
	baz=345								
TWB1	**Santiao Chiao**	**1.01**	**18**	*e*P	Pg	17 45 22.1	-0.1		
	baz=10.0								
NCUH	**Zhongli**	**1.01**	**336**	*e*P	Pg	17 45 21.4	-0.7		
	baz=335								
NCU	**National Centr**	**1.01**	**336**	*e*P	Pn	17 45 23.0	-0.3		
	baz=335								
NWF	**Wu-fen Shan**	**1.03**	**7**	*e*P	Pg	17 45 22.3	-0.2		
	baz=6.0								
WFSB	**Wu-fen Shan**	**1.03**	**7**	*e*P	Pg	17 45 22.2	-0.3		
	baz=6.0								
ELDTW	**Lidau**	**1.03**	**214**	*e*P	Pg	17 45 21.1	-1.5		
	baz=202								
WGK	**Gukeng**	**1.05**	**250**	*e*P	Pg	17 45 22.8	-0.2		
	baz=251								
SXI1	**Grass Mountain**	**1.06**	**11**	*e*P	Pg	17 45 22.5	-0.7		
	baz=358								
TWS1	**Kuangyinshan**	**1.07**	**349**	*e*P	Pg	17 45 22.9	-0.4		
	baz=350								
TWS1				*e*S	Sn	17 45 38.8	-0.3		
	baz=350								
WDLH	**Douliu**	**1.07**	**251**	*e*P	Pg	17 45 23.3	-0.1		
	baz=252								
YM01	**YM01**	**1.10**	**356**	*e*P	Pg	17 45 22.5	-1.3		
	baz=344								
TNOU	**National Taiwa**	**1.10**	**6**	*e*P	Pn	17 45 24.6	0.0		
	baz=5.0								
NTST	**Danshui**	**1.13**	**351**	*e*P	Pg	17 45 24.0	-0.4		
	baz=351								
NTST				*e*S	Sn	17 45 41.3	+0.7		
	baz=351								
WCKO	**Fanlu**	**1.13**	**238**	*e*P	Pg	17 45 23.6	-0.8		
	baz=239								
ANP	**Anpu**	**1.14**	**354**	*e*P	Pg	17 45 24.3	-0.4		
	baz=354								
WRL	**Guolierlin Hig**	**1.17**	**263**	*e*P	Pg	17 45 24.4	-0.8		
	baz=254								
STYH	**Taoyuan**	**1.18**	**223**	*e*P	Pb	17 45 23.8	-1.6		
	baz=224								
RLNB	**Erlin**	**1.19**	**263**	*e*P	Pn	17 45 25.6	0.0		
	baz=262								
RLNB				*e*S	Sn	17 45 43.8	+1.8		
	baz=262								
CHN4	**Tsaushan**	**1.19**	**234**	*e*P	Pb	17 45 24.7	-0.8		
	baz=236								
TPUB	**Ta-pu**	**1.19**	**232**	*e*P	Pb	17 45 24.7	-0.9		
	baz=233								
STYT	**Tauyuan**	**1.20**	**223**	*e*P	Pb	17 45 24.0	-1.8		
	baz=224								
WTK	**Tuku**	**1.20**	**253**	*e*P	Pb	17 45 25.7	-0.1		
	baz=254								
TWY	**Chenhua**	**1.22**	**358**	*e*P	Pg	17 45 26.6	+0.3		
	baz=344								
LONT	**Longtian**	**1.23**	**203**	*e*P	Pb	17 45 25.1	-1.2		
	baz=204								
WTP	**Ta-pu**	**1.24**	**230**	*e*P	Pb	17 45 25.5	-0.9		
	baz=231								
TWK	**Hsinying**	**1.31**	**234**	*e*P	Pn	17 45 27.0	-0.5		
	baz=235								
YOJ	**Yonaguni jima**	**1.31**	**71**	P	Pn	17 45 26.7	-0.7		
	baz=68								
TWG	**Pinlang**	**1.33**	**203**	*e*P	Pn	17 45 26.8	-0.8		
	baz=204								
TWGBT	**Beinan**	**1.33**	**203**	*e*P	Pn	17 45 26.5	-1.2		
	baz=205								
CHN1	**Nanshi**	**1.34**	**230**	*e*P	Pn	17 45 27.4	-0.3		
	baz=232								
SNST	**Tainan City**	**1.34**	**232**	*e*P	Pn	17 45 27.6	-0.1		
	baz=234								
WSF	**Szhu**	**1.36**	**253**	*e*P	Pn	17 45 28.0	-0.1		
	baz=254								
SGST	**Jiashian**	**1.37**	**226**	*e*P	Pn	17 45 27.9	-0.3		
	baz=226								
SLGT	**Liugui**	**1.39**	**221**	*e*P	Pn	17 45 27.9	-0.6		
	baz=223								
ICHU	**Yijhu**	**1.43**	**242**	*e*P	Pn	17 45 28.3	-0.7		
	baz=243								
CHN8	**Yiju**	**1.49**	**242**	*e*P	Pb	17 45 30.7	0.0		
	baz=244								
CHN3	**Shinhua**	**1.52**	**231**	*e*P	Pn	17 45 30.3	0.0		
	baz=233								
SCST	**Cishan**	**1.57**	**223**	*e*P	Pn	17 45 30.9	0.0		
	baz=225								
ECL	**Taimali**	**1.58**	**204**	*e*P	Pn	17 45 29.9	-1.1		
	baz=190								
SSD	**Sandimen**	**1.59**	**216**	*e*P	Pn	17 45 30.9	-0.4		
	baz=207								
TSMG	**Majia**	**1.62**	**215**	*e*P	Pn	17 45 30.8	-0.8		
	baz=206								
TWM1	**Shoushan**	**1.66**	**223**	*e*P	Pb	17 45 33.0	-0.6		
	baz=225								
MASBT	**Mashibuluo**	**1.70**	**213**	*e*P	Pn	17 45 32.1	-0.7		
	baz=216								
EAST	**Anshuo**	**1.81**	**204**	*e*P	Pn	17 45 35.1	+0.8		
	baz=192								
SCZT	**Fangliau**	**1.92**	**210**	*e*P	Pn	17 45 35.8	+0.1		
	baz=199								
PHUB	**P'eng-hu**	**1.97**	**255**	*e*P	Pn	17 45 36.5	+0.1		
	baz=255								
PHUB				*e*S	Sb	17 46 02.7	-0.9		
	baz=255								
PNG	**Penghu**	**1.97**	**256**	*e*P	Pn	17 45 36.6	+0.2		
	baz=257								
SLIU	**Shizi**	**1.98**	**203**	*e*P	Pn	17 45 37.0	+0.4		
	baz=193								
LYUB	**Lan-yu**	**2.04**	**182**	*e*P	Pn	17 45 36.6	-0.8		
	baz=185								
VCHM	**Qimei**	**2.20**	**248**	*e*P	Pn	17 45 39.0	-0.6		
	baz=234								
VWUC	**VWUC**	**2.21**	**296**	*e*P	Pn	17 45 39.6	-0.2		
	baz=295								
TWKBT	**Hengchun**	**2.23**	**200**	*e*P	Pn	17 45 38.4	-1.6		
	baz=189								
PTMZ	**Houxiangcun**	**2.50**	**294**	*e*P	Pn	17 45 43.4	-0.4		
	baz=293								
MATB	**Ma-tsu**	**2.60**	**324**	*e*P	Pn	17 45 45.8	+0.6		
	baz=322								
KNMB	**Chin-men Tao**	**3.00**	**279**	*e*P	Pn	17 45 50.6	0.0		
	baz=278								
LYJJ	**Jianjiangzhen**	**3.02**	**326**	*e*P	Pn	17 45 51.3	+0.4		
	baz=324								
MHZQ	**Yeshan**	**3.13**	**311**	*e*P	Pn	17 45 52.7	+0.3		
	baz=296								
XPSS	**Dashiqiu**	**3.16**	**336**	*e*P	Pn	17 45 52.2	-0.6		
	baz=334								
AXDP	**Jialang**	**3.45**	**285**	*e*P	Pn	17 45 56.4	-0.5		
	baz=284								
DSXP	**Dongshan**	**3.88**	**266**	*e*P	Pn	17 46 03.4	+0.7		
	baz=266								
SXFK	**Yanhouchang**	**4.31**	**304**	*e*P	Pn	17 46 09.0	+0.2		
	baz=302								

NEIC ***06*** *17:48:08.3±1.1, 39.°95N±0.°04×115.°56W±0.°05, h0km±1km, Error ellipse: s-maj=7.9km s-min=3.9km az=40.0*

REN 06 17:48:10.1±1.6, **39.°94N**±0.°05×**115.°56W**±0.°06, **h0**km±2km, **ML2.0**/2, **ML2.5**/88(NEIC), **Error ellipse: s-maj=7.2km s-min=6.2km az=183.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**0.84**	**17**		Pg	17 48 26.3	+0.1
Q12A	**Willow Creek R**	**1.06**	**148**		Pg	17 48 29.5	-0.9
Q12A					Sb	17 48 45.8	-0.1
Q12A	**Willow Creek R**	**1.06**	**148**	IAML		17 48 49.9	
	comp=E,152nm,0.5s						
SPR3	**Spring Creek 3**	**1.33**	**134**		Pg	17 48 35.3	-0.4
BMN	**Battle Mountai**	**1.37**	**292**		Pg	17 48 35.8	-0.5
BMN	**Battle Mountai**	**1.37**	**292**	IAML		17 48 58.4	
	comp=N,87nm,0.5s						
BMN				IAML		17 48 60.0	
	comp=E,48nm,0.6s						
R11B	**Troy Canyon, C**	**1.59**	**181**		Pn	17 48 38.2	-1.4
Q09A	**Carvers**	**1.67**	**229**		Pn	17 48 40.2	-0.6
DUG	**Dugway, Tooele**	**2.12**	**82**		Pn	17 48 46.3	-0.6
DUG				IAML		17 49 27.1	
	comp=E,23nm,0.6s						
KVN	**Kaiserville**	**2.16**	**247**		Pn	17 48 47.4	-0.1
BGU	**Big Grassy Mou**	**2.17**	**62**		Pn	17 48 47.1	-0.5
TPH	**Tonopah**	**2.27**	**215**		Pn	17 48 49.1	+0.1
S11A	**Rachel**	**2.29**	**184**		Pn	17 48 48.2	-1.1
NV11	**Mina Array Sit**	**2.52**	**234**	Pn	Pn	17 48 51.8	-0.6
NV11				IAML		17 49 42.0	
	comp=E,12nm,4.1s						
PRN	**Pahroc Range**	**2.56**	**171**		Pn	17 48 51.8	-1.1
RYN	**Ryan**	**2.65**	**241**		Pn	17 48 53.2	-1.0
RYN				IAML		17 49 44.7	
	comp=N,16nm,0.7s						
RYN				IAML		17 49 45.2	
	comp=E,23nm,0.7s						
NLU	**North Lily Min**	**2.68**	**89**		Pn	17 48 53.7	-1.0
SPUT	**South Promonto**	**2.73**	**59**		Pn	17 48 54.6	-0.8
SPUT				IAML		17 49 44.4	
	comp=N,14nm,1.5s						
TCRU	**Three Creeks R**	**2.75**	**118**	Pn	Pn	17 48 55.1	-0.6
TCRU				IAML		17 49 13.5	
	comp=N,14nm,2.9s						
TCRU				IAML		17 49 42.6	
	comp=E,17nm,5.0s						
HVU	**Hansel Valley**	**2.80**	**48**		Pn	17 48 55.5	-0.8
HVU				IAML		17 49 45.0	
	comp=N,26nm,0.8s						
HVU				IAML		17 49 45.1	
	comp=E,18nm,0.8s						
LHV	**Little Huntoon**	**2.84**	**235**		Pn	17 48 57.2	+0.5
LHV				IAML		17 49 51.7	
	comp=E,27nm,1.4s						
LHV				IAML		17 49 51.9	
	comp=N,22nm,1.0s						
PAHR	**Pah Rah Range**	**2.96**	**267**	Pn	Pn	17 48 58.2	-0.2
PAHR				IAML		17 50 01.1	
	comp=N,8.2nm,4.8s						
MVU	**Marysvale**	**2.97**	**118**	Pn	Pn	17 48 58.1	-0.6
MSU	**Marysvale**	**2.99**	**117**	Pn	Pn	17 48 58.1	-0.9
TPNV	**Topopah Spring**	**3.03**	**191**		Pn	17 48 59.2	-0.4
TPNV				IAML		17 49 49.2	
	comp=N,20nm,0.5s						
TPNV				IAML		17 49 50.7	
	comp=N,16nm,0.5s						
DSP	**Deep Springs**	**3.18**	**217**		Pn	17 49 01.0	-0.4
DSP				IAML		17 50 06.7	
	comp=N,8.3nm,3.7s						
DSP				IAML		17 50 13.8	
	comp=E,8.3nm,4.9s						
PNTR	**Pine Nut**	**3.24**	**256**		Pn	17 49 02.3	0.0
PNTR				IAML		17 49 23.1	
	comp=E,16nm,4.9s						
PNTR				IAML		17 50 05.0	
	comp=N,14nm,1.0s						
MTPU	**Mount Pierson**	**3.24**	**125**		Pn	17 49 01.3	-1.3
MTPU				IAML		17 49 57.1	
	comp=N,11nm,4.7s						
MTPU				IAML		17 50 51.3	
	comp=E,14nm,4.9s						
WCT	**Wildcat Mounta**	**3.25**	**195**		Pn	17 49 03.0	+0.5
WCT				IAML		17 50 07.2	
	comp=N,7.1nm,3.1s						
WCT				IAML		17 50 15.5	
	comp=E,12nm,2.9s						
WAKR	**Walker**	**3.33**	**246**	Pn	Pn	17 49 03.1	-0.6
WAKR				IAML		17 50 17.7	
	comp=E,8.8nm,3.5s						
WAKR				IAML		17 50 19.6	
	comp=N,6.9nm,4.4s						
WVOR	**Wild Horse Val**	**3.41**	**318**		Pn	17 49 04.1	-0.5
WVOR				IAML		17 50 07.3	
	comp=N,7.4nm,3.8s						
WVOR				IAML		17 50 11.5	
	comp=N,15nm,3.0s						
LCMT	**Little Creek M**	**3.44**	**147**		Pn	17 49 05.0	-0.1
LCMT				IAML		17 50 04.8	
	comp=E,8.7nm,3.7s						
LCMT				IAML		17 50 38.2	
	comp=N,8.3nm,4.8s						
SHPR	**Sheep Range**	**3.44**	**175**	Pn	Pn	17 49 04.7	-0.5
MFID	**Camas Ranch**	**3.48**	**357**		Pn	17 49 05.2	-0.4
MFID				IAML		17 50 05.3	
	comp=N,12nm,3.2s						
MPK	**Martis Peak**	**3.51**	**261**	Pn	Pn	17 49 06.0	-0.3
MPK				IAML		17 49 46.1	
	comp=E,14nm,4.1s						
MPK				IAML		17 50 59.5	
	comp=N,12nm,4.6s						
EMB	**Emerald Bay**	**3.65**	**256**	Pn	Pn	17 49 05.2	-2.9
EMB				IAML		17 50 41.8	
	comp=N,14nm,0.1s						
HLID	**Hailey**	**3.72**	**13**		Pn	17 49 06.4	-2.5
HLID				IAML		17 50 30.4	
	comp=N,9.8nm,5.0s						
HLID				IAML		17 50 51.9	
	comp=N,7.6nm,4.3s						
GWY	**Greenwater Val**	**3.85**	**194**		Pn	17 49 09.3	-1.4
GWY				IAML		17 50 54.2	
	comp=N,8.6nm,4.6s						
J08A	**Circle Bar Ran**	**4.05**	**328**		Pn	17 49 13.1	-0.4
QSM	**Queen of Sheba**	**4.10**	**195**	Pn	Pn	17 49 13.7	-0.3
QSM				IAML		17 50 26.3	
	comp=E,7.4nm,3.6s						
QSM				IAML		17 51 08.1	
	comp=N,6.3nm,4.3s						
V12A	**Nelson**	**4.24**	**172**	Pn	Pn	17 49 14.6	-1.4
V12A				IAML		17 50 33.7	
	comp=N,6.7nm,2.9s						
V12A				IAML		17 51 47.9	
	comp=E,5.4nm,4.8s						
U15A	**North Rim**	**4.35**	**143**		Pn	17 49 16.3	-1.4
GSC	**Goldstone, Bar**	**4.73**	**192**		Pn	17 49 21.5	-1.3

CATAC ***06*** *17:50:19.3±0.6, 12.°13N×89.°12W, h10km, ML3.5*
SNET ***06*** *17:50:22.0±0.6, 12.°13N×89.°17W, h45km±86km, ML3.4*

ISC 06 17:50:18.9±3.8, **12.°06N**±0.°08×**89.°15W**±0.°08, **h17**km±26km, **n30**, **σ1°08/38, 13C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJTE	**Alcalde de S**	**1.56**	**5**	*e*P	Pn	17 50 46.4	+0.5
SJTE				*e*S	Sn	17 51 05.9	+0.2
SJTE	**Alcalde de S**	**1.56**	**5**	⇑*i*P	Pn	17 50 46.3	+0.5
SJTE				*i* S	Sn	17 51 05.8	+0.1
SJTE				IAML		17 51 07.7	
	comp=Z,370nm,1.0s						
LOMA	**Loma Larga**	**1.58**	**359**	⇑*i*P	Pn	17 50 46.7	+0.5
LOMA				*i* S	Sn	17 51 05.4	-0.9
LOMA				IAML		17 51 08.4	
	comp=Z,410nm,1.0s						
JAYA	**Jayaque - finc**	**1.61**	**350**	*e*P	Pn	17 50 47.1	+0.4
JAYA				IAML		17 51 08.3	
	comp=Z,560nm,0.1s						
JAYA	**Jayaque - finc**	**1.61**	**350**	⇑*i*P	Pn	17 50 47.0	+0.2
JAYA				*i* S	Sn	17 51 06.3	-1.0
JAYA				IAML		17 51 08.1	
	comp=Z,1μm,1.0s						
PACA	**Pacayal**	**1.62**	**30**	*e*P	Pb	17 50 47.9	-0.5
PACA	**Pacayal**	**1.62**	**30**	*i* P	Pn	17 50 47.5	+0.7
PACA				IAML		17 50 51.3	
	comp=Z,2μm,1.0s						
BLLM	**Bellamira**	**1.64**	**33**	*e*P	Pb	17 50 48.2	-0.6
PMON	**Piamonte**	**1.65**	**355**	⇑*i*P	Pn	17 50 47.9	+0.6
PMON				IAML		17 51 09.9	
	comp=Z,480nm,1.0s						
SCLA	**Alcaldia de Sa**	**1.69**	**14**	*e*P	Pn	17 50 48.5	+0.9
SCLA	**Alcaldia de Sa**	**1.69**	**14**	⇑*i*P	Pn	17 50 48.3	+0.6
SCLA				IAML		17 50 50.3	
	comp=Z,110nm,1.0s						
LCND	**La Caada**	**1.75**	**45**	*e*P	Pn	17 50 49.2	+0.7
CNCH	**Conchagua**	**1.77**	**47**	*e*P	Pn	17 50 49.8	+0.9
CNCH				IAML		17 50 52.2	
	comp=Z,499nm,0.2s						
CNCH	**Conchagua**	**1.77**	**47**	⇑*i*P	Pn	17 50 49.3	+0.5
CNCH				IAML		17 50 51.4	
	comp=Z,550nm,1.0s						
CEVE	**Cerro Verde**	**1.82**	**345**	*e*P	Pn	17 50 50.6	+1.0
CEVE	**Cerro Verde**	**1.82**	**345**	⇑*i*P	Pn	17 50 50.5	+0.8
CEVE				IAML		17 51 17.4	
	comp=Z,370nm,1.0s						
AMPH	**Amapala**	**1.90**	**50**	*e*P	Pn	17 50 51.7	+1.2
NUBE	**Las Nubes**	**1.93**	**342**	*e*P	Pn	17 50 51.5	+0.3
NUBE				*e*S	Sn	17 51 14.2	-0.9
NUBE				IAML		17 51 15.0	
	comp=Z,180nm,0.3s						
NUBE	**Las Nubes**	**1.93**	**342**	⇑*i*P	Pn	17 50 51.4	+0.3
NUBE				*i* S	Sn	17 51 14.0	-1.1
NUBE				IAML		17 51 15.9	
	comp=Z,440nm,1.0s						
CRIN	**San Cristobal**	**2.15**	**72**	⇑*i*P	Pn	17 50 55.1	+1.0
CRIN				IAML		17 51 34.3	
	comp=Z,490nm,1.0s						
MTO3	**Montecristo**	**2.34**	**355**	*e*P	Pn	17 50 58.3	+1.5
MTO3				*e*S	Sn	17 51 25.7	+0.5
MTO3	**Montecristo**	**2.34**	**355**	⇑*i*P	Pn	17 50 58.1	+1.3
MTO3				*i* S	Sn	17 51 25.7	+0.5
MTO3				IAML		17 51 27.6	
	comp=Z,110nm,1.0s						
MACN	**El Madrono**	**2.46**	**80**	*i* P	Pn	17 50 59.1	+0.9
MACN				IAML		17 51 38.2	
	comp=Z,130nm,1.0s						
COPN	**Copaltepe**	**2.51**	**87**	⇑*i*P	Pn	17 50 59.7	+0.8
COPN				IAML		17 51 34.6	
	comp=Z,190nm,1.0s						
LIMN	**Finca el Limon**	**2.90**	**70**	⇑*i*P	Pn	17 51 04.9	+0.5
LIMN				IAML		17 51 08.3	
	comp=Z,97nm,1.0s						
YUSH	**Yuscaran**	**2.94**	**50**	*e*P	Pn	17 51 06.4	+1.5
RCPN	**Sur Rio San Ju**	**3.32**	**64**	⇑*i*P	Pn	17 51 10.6	+0.4
RCPN				IAML		17 51 16.0	
	comp=Z,0.6nm,1.0s						
OMEN	**Al SSO del Vol**	**3.50**	**99**	*i* P	Pn	17 51

JRY	**Ryogami san**	**7.00**	**357**	P	**P**	**17 52 05.6**	**+1.1**
JRY				S	**S**	**17 53 29.1**	**-0.3**
JYT	**Yasato**	**7.24**	**5**	P	**P**	**17 52 07.5**	**+0.7**
JYT				S	**S**	**17 53 31.6**	**-2.3**
MJAR	**Matsushiro Arr**	**7.58**	**353**	P	**P**	**17 52 09.0**	**-1.7**
	1.9nm,0.5s,baz=172,slow=11,SNR=6.9						
JHO	**Hitachi**	**7.65**	**7**	P	**P**	**17 52 12.2**	**+0.8**
KSRS	**Korea Array**	**12.76**	**314**	P	**P**	**17 53 07.7**	**+0.3**
	0.7nm,0.5s,baz=129,slow=11,SNR=2.3						
SONM	**Songino Array**	**31.62**	**316**	P	**P**	**17 56 06.1**	**-0.1**
	0.5nm,0.8s,baz=111,slow=6.3,SNR=2.9						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**48.90**	**186**	P	**P**	**17 58 26.1**	**+0.4**
	0.1nm,0.3s,baz=1.3,slow=7.5,SNR=5.5						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**49.93**	**313**	P	**P**	**17 58 32.8**	**-0.3**
	1.0nm,0.5s,baz=91,slow=8.2,SNR=21						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**52.63**	**186**	P	**P**	**17 58 53.5**	**+0.3**
	0.1nm,0.5s,baz=359,slow=5.4,SNR=4.9						
	0.1nm,0.5s						
BVAR	**Borovoye Array**	**54.96**	**316**	P	**P**	**17 59 09.3**	**-0.1**
	0.8nm,0.6s,baz=98,slow=9.1,SNR=5.8						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**57.25**	**29**	P	**P**	**17 59 24.6**	**-0.5**
	0.2nm,0.4s,baz=256,slow=5.9,SNR=6.2						
	0.2nm,0.4s						
ARCES	**ARCESS Array B**	**70.92**	**340**	P	**P**	**18 00 52.6**	**-0.1**
	4.0nm,1.0s,baz=35,slow=6.5,SNR=4.0						
	4.0nm,1.0s						
KBZ	**Khabaz**	**74.89**	**312**	P	**P**	**18 01 16.2**	**+0.1**
	1.2nm,0.7s,baz=136,slow=5.4,SNR=3.9						
	1.2nm,0.7s						
FINES	**FINESS Array B**	**75.13**	**333**	P	**P**	**18 01 16.5**	**-0.7**
	6.5nm,1.2s,baz=66,slow=4.8,SNR=7.9						
	6.5nm,1.2s						

TAP 06 17:50:46.7,24.12N×121.68E,h8km±1km, ML1.9,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.06**	**303**	P	Pg	17 50 49.5	+0.8
	baz=301						
ETL				S	Sg	17 50 51.3	+1.1
	baz=301						
TWD	**Chiawan**	**0.09**	**241**	*i* P	Pg	17 50 49.5	+0.5
	baz=238						
TWD				*i* S	Sg	17 50 51.0	+0.4
	baz=238						
NACB	**Ninganchiao**	**0.09**	**302**	⇓*i* P	Pg	17 50 49.9	+0.8
	baz=301						
NACB				*i* S	Sg	17 50 51.6	+0.9
	baz=301						
EAHA	**Aohua**	**0.21**	**14**	*e*P	Pg	17 50 52.0	+1.0
	baz=14						
EAHA				*e*S	Sg	17 50 55.3	+1.4
	baz=14						
ETM	**Tongmen**	**0.23**	**228**	*e*P	Pg	17 50 52.3	+0.8
	baz=227						
LXIB	**Xiulin Townshi**	**0.27**	**247**	*e*P	Pg	17 50 52.7	+0.6
	baz=247						
ENA	**Nanau**	**0.31**	**10**	*i* P	Pb	17 50 53.9	-0.6
	baz=11						
ENA				S	Sg	17 50 58.3	+1.3
	baz=11						
EWUT	**Wuta**	**0.33**	**15**	P	Pb	17 50 54.3	-0.6
	baz=15						
EWUT				*e*S	Sb	17 50 59.1	-1.2
	baz=15						
NNSB	**Datong**	**0.41**	**318**	P	Pb	17 50 55.9	-0.3
	baz=317						
FUSS	**Fushou**	**0.42**	**287**	*e*P	Pb	17 50 55.9	-0.7
	baz=287						
NNS	**Nan Shan**	**0.42**	**318**	P	Pb	17 50 56.1	-0.4
	baz=318						
LATG	**Datong**	**0.43**	**341**	*e*P	Pb	17 50 56.2	-0.5
	baz=340						

*IDC **06** 17:50:49.0±0.8,23.99N×121.74E,h0km,mb3.7/12, mbtmp3.8/14,ML3.8/2,Error ellipse: s-maj=23.0km s-min=17.4km az=74.0*

*ASIES **06** 17:50:51.5,23.98N×121.59E,h7km,ML4.3,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; Mrr0.72; Mθθ-0.05; Mφφ-0.14; Mrθ0.48; Mrφ-0.14; Mθφ1.08; Fault plane solution: M₀1.30012×10^{22} NP1:ϕs25.18000°, δ79.04000°,λ87.29000°. NP2:ϕs219.18000°,δ11.28000°, λ103.73000°. Principal axes: T Plg55.8740°, Azm291.7730°; N Plg2.6610°, Azm25.7050°; P Plg33.9930°, Azm117.5010°;*

*JMA **06** 17:50:51.6±0.1,24.0N±0.5×12.2E±°,h9km±2km,MV3.8/14, TAIWAN REGION*

*TAP **06** 17:50:51.5,23.98N×121.59E,h7km,ML4.3,C*

ISC 06 17:50:51.1±0.8,23.96N±0.01×121.63E±0.01,h10km±5km, n198,σ0.83/286,mb3.6/12,19C-20D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.13**	**344**	*i* P	**Pg**	**17 50 54.4**	**+0.3**
	baz=7.0						
TWD				*i* S	**Sg**	**17 50 56.1**	**0.0**
	baz=7.0						
ETM	**Tongmen**	**0.13**	**273**	*i* P	**Pg**	**17 50 54.1**	**-0.1**
	baz=262						
ETM				*i* S	**Sg**	**17 50 55.7**	**-0.5**
	baz=262						
SHUL	**Shoufeng**	**0.18**	**201**	⇓*i* P	**Pg**	**17 50 56.2**	**+1.3**
	baz=181						
ETL	**Fush Village**	**0.20**	**357**	*e*P	**Pg**	**17 50 55.8**	**+0.4**
	baz=9.0						
ETL				S	**Sg**	**17 50 58.2**	**0.0**
	baz=9.0						
LXIB	**Xiulin Townshi**	**0.21**	**287**	⇓*i* P	**Pg**	**17 50 55.5**	**-0.1**
	baz=278						
LXIB				*i* S	**Sg**	**17 50 58.5**	**-0.1**
	baz=278						
NACB	**Ninganchiao**	**0.22**	**350**	⇓*i* P	**Pg**	**17 50 55.8**	**+0.2**
	baz=1.0						
NACB				*i* S	**Sg**	**17 50 58.5**	**-0.2**
	baz=1.0						
ESL	**Shilin**	**0.23**	**232**	⇓*i* P	**Pg**	**17 50 56.0**	**+0.1**
	baz=220						
ESL				S	**Sg**	**17 50 59.0**	**-0.1**
	baz=220						
TEGC	**Jichi Village**	**0.26**	**199**	*e*P	**Pb**	**17 50 58.0**	**0.0**
	baz=195						
TEGC				*e*S	**Sb**	**17 51 04.2**	**+1.7**
	baz=195						
WARBT	**Fenglin Townsh**	**0.33**	**224**	⇓*i* P	**Pg**	**17 50 57.8**	**+0.1**
	baz=226						
WARBT				S	**Sg**	**17 51 01.7**	**-0.4**
	baz=226						
EGFH	**Guangfu**	**0.34**	**213**	⇓P	**Pg**	**17 50 58.4**	**+0.4**
	baz=214						
EHP	**Heping Village**	**0.36**	**16**	*e*P	**Pg**	**17 50 57.1**	**-1.2**
	baz=31						
EHP				*e*S	**Sg**	**17 51 04.1**	**+0.9**
	baz=31						
EAHA	**Aohua**	**0.38**	**15**	P	**Pg**	**17 50 59.0**	**+0.4**
	baz=32						
EAHA				*i* S	**Sg**	**17 51 04.5**	**+0.8**
	baz=32						
WHF	**Hehuan Shan**	**0.39**	**299**	P	**Pg**	**17 50 58.8**	**-0.1**
	baz=300						
WHF				*i* S	**Sg**	**17 51 04.0**	**0.0**
	baz=300						
OWD	**Renai**	**0.42**	**270**	⇓*i* P	**Pg**	**17 50 59.5**	**+0.1**
	baz=266						
CHGB	**Renai**	**0.43**	**284**	*i* P	**Pg**	**17 50 59.9**	**+0.2**
	baz=282						
CHGB				S	**Sg**	**17 51 05.3**	**-0.2**
	baz=282						
FUSS	**Fushou**	**0.46**	**309**	⇑P	**Pg**	**17 51 00.4**	**+0.3**
	baz=310						
FUSS				*i* S	**Sg**	**17 51 06.7**	**+0.4**
	baz=310						
WUSB	**Renai**	**0.47**	**274**	⇓P	**Pg**	**17 51 00.8**	**+0.4**
	baz=272						
WUSB				*i* S	**Sg**	**17 51 06.7**	**0.0**
	baz=272						
ENA	**Nanau**	**0.48**	**12**	⇓*i* P	**Pg**	**17 51 00.9**	**+0.5**
	baz=18						
ENA				*i* S	**Sg**	**17 51 07.3**	**+0.5**
	baz=18						
VWDT	**VWDT**	**0.49**	**246**	⇓*i* P	**Pg**	**17 51 01.2**	**+0.5**
	baz=243						
VWDT				*i* S	**Sg**	**17 51 07.4**	**+0.1**
	baz=243						
EWUT	**Wuta**	**0.50**	**15**	⇓P	**Pg**	**17 51 01.5**	**+0.6**
	baz=29						
EWUT				S	**Sg**	**17 51 08.3**	**+0.8**
	baz=29						
HGSD	**Ruisui**	**0.50**	**203**	*e*P	**Pb**	**17 51 02.2**	**+0.1**
	baz=206						
TWT	**Tachien**	**0.51**	**305**	P	**Pg**	**17 51 01.8**	**+0.7**
	baz=304						
TWT				*i* S	**Sg**	**17 51 08.3**	**+0.4**
	baz=304						
NNSB	**Datong**	**0.52**	**334**	⇓*i* P	**Pg**	**17 51 01.8**	**+0.4**
	baz=337						
NNSB				*i* S	**Sg**	**17 51 07.8**	**-0.5**
	baz=337						
NNSH	**Datong**	**0.52**	**334**	⇓P	**Pg**	**17 51 01.7**	**+0.4**
	baz=336						
NNSH				*e*S	**Sg**	**17 51 07.9**	**-0.3**
	baz=336						
TDCB	**Techi**	**0.53**	**304**	P	**Pg**	**17 51 01.7**	**+0.4**
	baz=305						
TDCB				*i* S	**Sg**	**17 51 08.5**	**+0.2**
	baz=305						
EHY	**Hungye**	**0.53**	**212**	⇓P	**Pg**	**17 51 01.7**	**+0.2**
	baz=215						
NNS	**Nan Shan**	**0.54**	**334**	P	**Pg**	**17 51 01.9**	**+0.3**
	baz=337						
NNS				*i* S	**Sg**	**17 51 08.6**	**-0.1**
	baz=337						
LATG	**Datong**	**0.58**	**350**	⇓P	**Pg**	**17 51 02.8**	**+0.3**
	baz=344						
LATG				S	**Sg**	**17 51 10.2**	**+0.1**
	baz=344						
WPL	**Puli Township**	**0.62**	**275**	⇑*i* P	**Pb**	**17 51 03.8**	**-0.3**
	baz=274						
WPL				*i* S	**Sg**	**17 51 11.4**	**+0.1**
	baz=274						
YULB	**Yu-li**	**0.64**	**209**	P	**Pg**	**17 51 04.2**	**+0.6**
YULB	**Yu-li**	**0.64**	**209**	*e*P	**Pg**	**17 51 03.6**	**+0.1**
	baz=205						
ESAO	**Su ao**	**0.64**	**17**	*e*P	**Pg**	**17 51 03.7**	**+0.1**
	baz=22						
EOS4	**EOS4**	**0.65**	**75**	*e*P	**Pb**	**17 51 05.6**	**+1.4**
	baz=89						
SSLB	**Suanglung**	**0.65**	**255**	P	**Pg**	**17 51 04.1**	**+0.5**
SSLB	**Suanglung**	**0.65**	**255**	⇓P	**Pg**	**17 51 03.8**	**+0.2**
	baz=265						
SSLB				*e*S	**Sg**	**17 51 10.8**	**-1.4**
	baz=265						
NDT	**Datong Townshi**	**0.65**	**350**	P	**Pg**	**17 51 04.2**	**+0.5**
	baz=344						
NDT				S	**Sg**	**17 51 12.5**	**+0.2**
	baz=344						
DPDB	**Guoxing**	**0.65**	**277**	⇑*i* P	**Pb**	**17 51 04.5**	**-0.2**
	baz=276						
DPDB				*e*S	**Sb**	**17 51 13.0**	**-0.8**
	baz=276						
ECBN	**Changbin**	**0.66**	**195**	*e*P	**Pg**	**17 51 04.5**	**+0.6**
	baz=192						
WCS	**Beigang Elemen**	**0.67**	**279**	⇑P	**Pb**	**17 51 04.7**	**-0.2**
	baz=278						
WCS				S	**Sg**	**17 51 13.1**	**+0.3**
	baz=278						
EYUL	**Yuli**	**0.67**	**205**	*e*P	**Pg**	**17 51 04.5**	**+0.4**
	baz=210						
NDS	**Dongshan**	**0.68**	**6**	⇓*i* P	**Pg**	**17 51 04.7**	**+0.5**
	baz=10.0						
NDS				S	**Sg**	**17 51 13.1**	**0.0**
	baz=10.0						
SMLT	**Sun Moon Lake**	**0.68**	**264**	⇑*i* P	**Pb**	**17 51 04.8**	**-0.2**
	baz=262						
SMLT				*e*S	**Sg**	**17 51 13.1**	**0.0**
	baz=262						
TWC	**Suao**	**0.68**	**17**	⇓*i* P	**Pg**	**17 51 04.7**	**+0.5**
	baz=9.0						
TWC				S	**Sg**	**17 51 13.0**	**-0.1**
	baz=9.0						
TWF1	**Yuli**	**0.68**	**207**	⇑*e*P	**Pg**	**17 51 04.3**	**0.0**
	baz=212						
ENTT	**Nioudou**	**0.68**	**355**	P	**Pg**	**17 51 04.9**	**+0.6**
	baz=358						
ENTT				S	**Sg**	**17 51 13.5**	**+0.2**
	baz=358						
EOS3	**EOS3**	**0.70**	**62**	*e*P	**Pn**	**17 51 07.5**	**+0.4**
	baz=63						
WHP	**Taichung City**	**0.70**	**297**	⇑*i* P	**Pb**	**17 51 05.5**	**-0.1**
	baz=288						
WHP				*i* S	**Sg**	**17 51 14.4**	**+0.4**
	baz=288						
EOS2	**EOS2**	**0.71**	**50**	*e*P	**Pn**	**17 51 08.1**	**+1.0**
	baz=67						
TYC	**Yuchr**	**0.71**	**266**	⇑*i* P	**Pg**	**17 51 05.2**	**+0.3**
	baz=264						
TYC				S	**Sg**	**17 51 13.3**	**-0.9**
	baz=264						
YHNB	**Yeheng**	**0.75**	**342**	P	**Pb**	**17 51 06.5**	**+0.2**
YHNB	**Yeheng**	**0.75**	**342**	P	**Pg**	**17 51 06.1**	**+0.5**
	baz=344						
YHNB				S	**Sg**	**17 51 14.9**	**-0.4**
	baz=344						
NSK	**Sanguang**	**0.76**	**341**	P	**Pg**	**17 51 06.2**	**+0.5**
	baz=344						
NSK				S	**Sg**	**17 51 15.3**	**-0.3**
	baz=344						
TWE	**Neicheng**	**0.76**	**2**	*i* P	**Pg**	**17 51 06.4**	**+0.6**
	baz=6.0						
TWE				*i* S	**Sg**	**17 51 16.1**	**+0.3**
	baz=6.0						
WHYT	**Xinyi Township**	**0.76**	**250**	*e*P	**Pg**	**17 51 06.1**	**+0.2**
	baz=247						
CHKH	**Chenggong**	**0.79**	**196**	*e*P	**Pb**	**17 51 07.7**	**+0.7**
	baz=182						
FUSB	**Fushanzhiwuyua**	**0.80**	**357**	⇑P	**Pg**	**17 51 06.9**	**+0.3**
	baz=360						
FUSB				*e*S	**Sg**	**17 51 16.8**	**-0.2**
	baz=360						
ILA	**Ilan**	**0.81**	**7**	*e*P	**Pb**	**17 51 07.4**	**+0.1**
	baz=11						
FULB	**Fuli**	**0.82**	**202**	*e*P	**Pb**	**17 51 08.2**	**+0.7**
	baz=215						
NFF	**Wufeng Townshi**	**0.82**	**325**	⇑P	**Pb**	**17 51 07.6**	**+0.1**
	baz=326						
NFF				S	**Sb**	**17 51 18.2**	**-0.5**
	baz=326						
NWLT	**Wulai**	**0.82**	**352**	P	**Pb**	**17 51 07.6**	**0.0**
	baz=354						
NWLT				*e*S	**Sg**	**17 51 17.7**	**-0.1**
	baz=354						
WJS	**Zhushan**	**0.84**	**261**	*e*P	**Pb**	**17 51 08.6**	**+0.8**
	baz=260						
WJS				*e*S	**Sb**	**17 51 20.3**	**+1.1**
	baz=260						
WWF	**Wufeng**	**0.86**	**276**	*e*P	**Pn**	**17 51 09.5**	**+0.2**
	baz=273						
WNT	**Mingjian**	**0.87**	**265**	P	**Pn**	**17 51 09.5**	**0.0**
	baz=264						
WNT				S	**Sb**	**17 51 20.8**	**+0.6**
	baz=264						
WNT1	**Nantou City**	**0.88**	**267**	P	**Pn**	**17 51 09.9**	**+0.4**
	baz=266						
WNT1				S	**Sn**	**17 51 21.8**	**-0.6**
	baz=266						
TWQ1	**Liyutan**	**0.88**	**296**	⇑*e*P	**Pb**	**17 51 09.1**	**+0.6**
	baz=295						
ALS	**Alishan**	**0.88**	**240**	⇓*i* P	**Pg**	**17 51 08.7**	**+0.5**
	baz=238						
ALS				*e*S	**Sb**	**17 51 20.8**	**+0.1**
	baz=238						
NSTT	**Nanjuang**	**0.88**	**319**	⇑P	**Pb**	**17 51 09.0**	**+0.4**
	baz=321						
NSTT				S	**Sb**	**17 51 20.2**	**-0.3**
	baz=321						
LIOB	**Emei**	**0.89**	**321**	P	**Pb**	**17 51 09.2**	**+0.6**
	baz=322						
LIOB				S	**Sb**	**17 51 20.6**	**0.0**
	baz=322						
CHKT	**Chengkung**	**0.89**	**196**	*e*P	**Pg**	**17 51 08.6**	**+0.3**
	baz=195						
CHKT				*e*S	**Sn**	**17 51 22.7**	**0.0**
	baz=195						
TCU	**Taichung**	**0.90**	**282**	*e*P	**Pn**	**17 51 09.7**	**-0.1**
	baz=280						
EHD	**Haiduan**	**0.90**	**206**	*e*P	**Pg**	**17 51 08.3**	**-0.1**
	baz=206						
NJD	**Zhudong**	**0.92**	**327**	*e*P	**Pb**	**17 51 10.0**	**+0.8**
	baz=329						
NJD				*e*S	**Sb**	**17 51 22.2**	**+0.6**
	baz=329						
ECS	**Chishang**	**0.94**	**204**	*e*P	**Pb**	**17 51 09.9**	**+0.4**
	baz=204						
CHN5	**Tsauling**	**0.95**	**248**	⇑P	**Pb**	**17 51 10.5**	**+0.8**
	baz=236						
CHN5				S	**Sn**	**17 51 24.3**	**+0.1**
	baz=236						
ELDTW	**Lidau**	**0.95**	**217**	P	**Pg**	**17 51 08.8**	**-0.6**
	baz=214						
NMLH	**Miaoli**	**0.96**	**307**	*e*P	**Pn**	**17 51 11.8**	**+1.1**
	baz=306						
WYL	**Yuanlin Townsh**	**0.96**	**270**	⇑P	**Pb**	**17 51 10.1**	**+0.2**
	baz=256						
WYL				*e*S	**Sb**	**17 51 23.7**	**+0.9**
	baz=256						
WDJ	**Dajia District**	**0.99**	**293**	P	**Pn**	**17 51 12.1**	**+1.0**
	baz=293						
WDJ				*e*S	**Sn**	**17 51 25.2**	**+0.1**
	baz=293						
HSN1	**Hsinchu**	**0.99**	**326**	*e*P	**Pn**	**17 51 11.5**	**+0.3**
	baz=327						
HSN1				*e*S	**Sn**	**17 51 24.7**	**-0.5**
	baz=327						
WCHH	**Zhanghua**	**0.99**	**277**	*e*P	**Pn**	**17 51 11.6**	**+0.5**
	baz=276						
NJN	**Zhunan**	**1.00**	**316**	*e*P	**Pn**	**17 51 11.9**	**+0.6**
	baz=325						
NJN				*e*S	**Sn**	**17 51 25.8**	**+0.3**
	baz=325						
NHDH	**Xindian Distri**	**1.00**	**354**	*e*P	**Pb**	**17 51 11.2**	**+0.6**
	baz=357						
TWA	**Mucha**	**1.02**	**357**	P	**Pn**	**17 51 11.7**	**+0.2**
	baz=349						
TWA				S	**Sg**	**17 51 24.1**	**+0.1**
	baz=349						
SBCB	**Hsinchu**	**1.02**	**325**	*e*P	**Pn**	**17 51 12.6**	**+1.1**
	baz=326						
SBCB				*e*S	**Sn**	**17 51 27.0**	**+1.1**
	baz=326						
WGK	**Gukeng**	**1.02**	**255**	*e*P	**Pn**	**17 51 11.9**	**+0.4**
	baz=254						
TATO	**Taipei**	**1.02**	**353**	P	**Pn**	**17 51 11.9**	**+0.4**
TATO	**Taipei**	**1.02**	**353**	*e*P	**Pn**	**17 51 11.8**	**+0.2**
	baz=355						
TATO				S	**Sg**	**17 51 23.4**	**-0.7**
	baz=355						
TIPB	**Shuangxi**	**1.02**	**10**	P	**Pg**	**17 51 11.2**	**+0.4**
	baz=13						
HSN	**Hsinchu**	**1.04**	**324**	*e*P	**Pn**	**17 51 12.9**	**+1.2**
	baz=328						
HSN				*e*S	**Sn**	**17 51 26.5**	**+0.2**
	baz=328						
WDLH	**Douliu**	**1.04**	**255**	*e*P	**Pn**	**17 51 12.4**	**+0.6**
	baz=254						
BACT	**New Taipei Cit**	**1.05**	**350**	*e*P	**Pn**	**17 51 12.8**	**+0.9**
	baz=352						
BACT				*e*S	**Sb**	**17 51 26.3**	**+1.1**
	baz=352						
WCKO	**Fanlu**	**1.08**	**241**	⇑P	**Pn**	**17 51 12.8**	**+0.5**
	baz=235						
WCKO				*e*S	**Sn**	**17 51 28.3**	**+1.0**
	baz=235						
NHY	**Taipei**	**1.08**	**357**	*e*P	**Pn**	**17 51 13.0**	**+0.7**
	baz=11						
NTY	**Taoyuan**	**1.08**	**344**	*e*P	**Pn**	**17 51 13.2**	**+0.8**
	baz=346						
TAP	**Taipei**	**1.08**	**354**	*e*P	**Pn**	**17 51 12.9**	**+0.5**
	baz=356						
TAP				S	**Sb**	**17 51 26.9**	**+0.7**
	baz=356						
NCUH	**Zhongli**	**1.08**	**338**	*e*P	**Pn**	**17 51 13.3**	**+0.9**
	baz=338						
NCU	**National Centr**	**1.09**	**338**	*e*P	**Pn**	**17 51 13.4**	**+1.0**
	baz=352						
NCU				S	**Sn**	**17 51 28.9**	**+1.3**
	baz=352						
TWB1	**Santiao Chiao**	**1.09**	**17**	*e*P	**Pg**	**17 51 12.5**	**+0.4**
	baz=11						
TWB1				*e*S	**Sg**	**17 51 25.8**	**-0.6**
	baz=11						
STYH	**Taoyuan**	**1.11**	**225**	*e*P	**Pn**	**17 51 13.2**	**+0.4**
	baz=218						
NWF	**Wu-fen Shan**	**1.12**	**7**	*e*P	**Pn**	**17 51 13.3**	**+0.4**
	baz=9.0						
NWF				*e*S	**Sg**	**17 51 26.4**	**-0.7**
	baz=9.0						
WFSB	**Wu-fen Shan**	**1.12**	**7**	⇑P	**Pn**	**17 51 13.4**	**+0.5**
	baz=9.0						
WFSB				S	**Sg**	**17 51 26.4**	**-0.7**
	baz=9.0						
STYT	**Tauyuan**	**1.13**	**226**	P	**Pb**	**17 51 13.2**	**+0.4**
	baz=226						
STYT				*e*S	**Sn**	**17 51 29.6**	**+0.9**
	baz=226						
CHN4	**Tsaushan**	**1.13**	**238**	⇑*i* P	**Pn**	**17 51 13.8**	**+0.8**
	baz=238						
TPUB	**Ta-pu**	**1.13**	**235**	P	**Pn**	**17 51 13.7**	**+0.6**
TPUB	**Ta-pu**	**1.13**	**235**	⇑*i* P	**Pn**	**17 51 13.7**	**+0.6**
	baz=234						
TPUB				S	**Sg**	**17 51 27.8**	**+0.2**
	baz=234						
CHN2	**Minshiung**	**1.14**	**248**	P	**Pn**	**17 51 13.9**	**+0.7**
	baz=263						
CHN2				*e*S	**Sn**	**17 51 30.0**	**+1.0**
	baz=263						
LONT	**Longtian**	**1.15**	**204**	*e*P	**Pg**	**17 51 12.3**	**-0.8**
	baz=205						
SXI1	**Grass Mountain**	**1.15**	**11**	P	**Pn**	**17 51 13.9**	**+0.5**
	baz=359						
WRL	**Guolierlin Hig**	**1.15**	**267**	*e*P	**Pn**	**17 51 14.3**	**+1.0**
	baz=266						
TWS1	**Kuangyinshan**	**1.15**	**350**	*e*P	**Pn**	**17 51 14.7**	**+1.3**
	baz=1.0						
TWS1				*e*S	**Sn**	**17 51 30.3**	**+1.1**
	baz=1.0						
RLNB	**Erlin**	**1.17**	**267**	*e*P	**Pn**	**17 51 14.6**	**+1.1**
	baz=266						
RLNB				*e*S	**Sn**	**17 51 30.0**	**+0.4**
	baz=266						
NHW	**Xinwu Township**	**1.17**	**333**	*e*P	**Pn**	**17 51 14.8**	**+1.2**
	baz=334						
NHW				*e*S	**Sn**	**17 51 30.9**	**+1.1**
	baz=334						
WTK	**Tuku**	**1.17**	**257**	*e*P	**Pn**	**17 51 14.2**	**+0.6**
	baz=256						
WTP	**Ta-pu**	**1.17**	**233**	⇑P	**Pn**	**17 51 14.2**	**+0.5**
	baz=234						
WTP				*e*S	**Sn**	**17 51 30.9**	**+1.1**
	baz=234						
YM01	**YM01**	**1.18**	**357**	P	**Pn**	**17 51 14.6**	**+0.8**
	baz=350						
YM01				S	**Sn**	**17 51 30.2**	**+0.1**
	baz=350						
TNOU	**National Taiwa**	**1.19**	**6**	*e*P	**Pb**	**17 51 13.9**	**+0.1**
	baz=8.0						
TNOU				*e*S	**Sn**	**17 51 30.8**	**+0.6**
	baz=8.0						
NTST	**Danshui**	**1.21**	**352**	*e*P	**Pn**	**17 51 15.3**	**+1.2**
	baz=3.0						
NTST				*e*S	**Sn**	**17 51 33.1**	**+2.4**
	baz=3.0						
ANP	**Anpu**	**1.23**	**355**	*e*P	**Pn**	**17 51 15.2**	**+0.8**
	baz=356						
WTCT	**Ta-ch'eng**	**1.24**	**266**	*e*P	**Pg**	**17 51 17.2**	**+2.2**
	baz=265						
WTCT				*e*S	**Sn**	**17 51 32.9**	**+1.5**
	baz=265						
TWG	**Pinlang**	**1.25**	**205**	*e*P	**Pn**	**17 51 12.9**	**-1.7**
	baz=206						
TWGBT	**Beinan**	**1.25**	**204**	P	**Pn**	**17 51 13.2**	**-1.4**
TWGBT	**Beinan**	**1.25**	**204**	*e*P	**Pn**	**17 51 13.1**	**-1.4**
	baz=206						
TWK	**Hsinying**	**1.26**	**237**	*e*P	**Pg**	**17 51 15.9**	**+0.7**
	baz=236						
CHN1	**Nanshi**	**1.27**	**233**	P	**Pg**	**17 51 16.1**	**+0.5**
	baz=234						
CHN1				S	**Sn**	**17 51 34.3**	**+2.1**
	baz=234						
SNST	**Tainan City**	**1.28**	**235**	*e*P	**Pg**	**17 51 16.5**	**+0.8**
	baz=237						
TTN	**Taitung**	**1.28**	**201**	*e*P	**Pg**	**17 51 16.9**	**+1.2**
	baz=202						
LDUT

baz=229
SGST eS Sn 17 51 34.8 +1.9
baz=229
TWY Chenhua 1.31 359 eP Pg 17 51 17.1 +0.8
baz=346
SLGT Liugui 1.32 224 eP Pg 17 51 17.0 +0.5
baz=210
NSM Shimen 1.32 358 eP Pg 17 51 18.4 +1.8
baz=358
WSF Szhu 1.33 256 eP Pg 17 51 16.8 +0.1
baz=256
WSF eS Sn 17 51 35.4 +1.8
baz=256
YOJ Yonaguni jima 1.35 68 P Pn 17 51 16.7 +0.6
YOJ Yonaguni jima 1.35 68 P Pn 17 51 16.4 +0.3
baz=67
YOJ Yonaguni jima 1.35 68 P Pn 17 51 16.6 +0.6
YOJ S Sb 17 51 35.1 +1.1
WSL Shuilin Townsh 1.36 252 P Pg 17 51 18.0 +0.7
baz=265
WSL eS Sg 17 51 36.3 +1.4
baz=265
ICHU Yijhu 1.38 245 eP Pg 17 51 18.1 +0.6
baz=246
ICHU eS Sg 17 51 36.6 +1.1
baz=246
CHN8 Yiju 1.44 245 P Pg 17 51 19.1 +0.3
baz=247
CHN8 S Sg 17 51 38.7 +1.2
baz=247
CHN3 Shinhua 1.46 233 eP Pg 17 51 19.9 +0.8
baz=236
SSHA Shanhua 1.48 237 eP Pg 17 51 20.1 +0.5
baz=240
ECL Taimali 1.49 205 eP Pn 17 51 18.4 +0.4
baz=194
SCST Cishan 1.50 225 eP Pg 17 51 21.3 +1.4
baz=213
SHHT Tainan City 1.50 232 eP Pg 17 51 21.6 +1.5
baz=235
SSD Sandimen 1.52 218 eP Pn 17 51 18.7 +0.4
baz=208
SCLT Jiali 1.53 240 eP Pg 17 51 20.8 +0.2
baz=243
SCLT eS Sg 17 51 42.2 +1.7
baz=243
TSMG Majia 1.54 216 eP Pb 17 51 20.6 +0.8
baz=208
TWM1 Shoushan 1.59 225⇓eP Pg 17 51 22.2 +0.6
baz=228
SGLT Jiouru 1.62 221 eP Pg 17 51 22.6 +0.5
baz=211
MASBT Mashibuluo 1.63 215 eP Pn 17 51 20.9 +1.1
baz=219
MASBT eS Sb 17 51 42.3 +0.5
baz=219
SNJT Kaohsiung City 1.69 225 eP Pb 17 51 23.0 +0.7
baz=229
PCYT Pengchaiyu 1.71 13 eP Pb 17 51 22.7 0.0
baz=12
EAST Anshuo 1.73 205 eP Pb 17 51 23.2 +0.3
baz=195
TAW Tawu 1.73 203 eP Pn 17 51 22.7 +1.4
baz=192
TAWH Dawu Township 1.75 203 eP Pb 17 51 23.9 +0.5
baz=192
SCZT Fangliau 1.83 211 eP Pb 17 51 24.4 -0.3
baz=215
SLIU Shizi 1.90 204 eP Pb 17 51 26.4 +0.5
baz=198
PHUB P'eng-hu 1.94 257 eP Pn 17 51 25.2 +1.1
baz=259
PNG Penghu 1.94 259 eP Pn 17 51 25.1 +0.9
baz=260
PNG eS Sn 17 51 49.9 +1.2
baz=260
LYUB Lan-yu 1.95 181 eP Pn 17 51 21.8 -2.5
baz=166
IRIF Iriomote-Funau 1.95 79 P Pn 17 51 25.0 +0.7
IRIF S Sn 17 51 50.6 +1.7
HATJ Hateruma jima 1.99 87 P Pb 17 51 27.2 -0.2
HATJ eS Sb 17 51 52.6 +0.3
TWKBT Hengchun 2.15 201 eP Pn 17 51 28.7 +1.7
baz=206
VCHM Qimei 2.16 250 eP Pn 17 51 28.3 +1.1
baz=252
JKRS Kuro-shima 2.19 82 eP Pn 17 51 28.6 +1.0
JKRS eS Sn 17 51 56.7 +2.0
JIJ Ishigaki jima 2.33 80 P Pn 17 51 29.7 +0.2
JIJ S Sn 17 51 58.7 +0.6
JISG Ishigakijimahi 2.52 75 P Pn 17 51 32.3 +0.1
JISG eS Sn 17 52 03.6 +0.6
PTMZ Houxiangcun 2.53 296 eP Pn 17 51 32.6 +0.3
baz=294
MATB Ma-tsu 2.67 325 eP Pn 17 51 34.3 +0.1
baz=309
JTJ Tarama 2.88 76 P Pn 17 51 38.5 +1.4
KNM Kinmen 2.96 280 eP Pn 17 51 40.5 +2.3
baz=278
KNMB Chin-men Tao 3.01 280 eP Pn 17 51 39.1 +0.3
baz=279
LYJJ Jianjiangzhen 3.09 327 eP Pn 17 51 40.2 +0.3
baz=312
MHZQ Yeshan 3.18 313 eP Pn 17 51 42.0 +0.7
baz=312
XPSS Dashiqiu 3.23 336 eP Pn 17 51 41.5 -0.4
baz=334
JMJ Miyako jima 2 3.44 75 P Pn 17 51 46.3 +1.4
JMJ Miyako jima 2 3.44 75 eP Pn 17 51 46.6 +1.8
baz=87
AXDP Jialang 3.47 286 eP Pn 17 51 45.4 +0.2
baz=285
ZPLA Ao Xicun 3.55 270 eP Pn 17 51 47.0 +0.6
baz=269
DSXP Dongshan 3.86 267 eP Pn 17 51 51.4 +0.8
baz=266
SXFK Yanhouchang 4.36 305 eP Pn 17 51 57.5 0.0
baz=303
JOW Kunigami 6.65 63 Pn Pn 17 52 27.5 -1.4
6.9nm,0.3s,baz=156,slow=12,SNR=6.7
13nm,0.3s
KSRS Korea Array 14.49 20 Pn Pn 17 54 16.2 -0.1
0.1nm,0.3s,baz=202,slow=11,SNR=1.6
0.4nm,0.5s
CMAR Chiang Mai Arr 21.84 260 P P 17 55 45.2 +1.2
1.4nm,0.3s,baz=61,slow=8.3,SNR=2.4
1.4nm,0.3s
USRK Ussuriysk Ar. 21.90 20 P P 17 55 42.7 -1.7
1.9nm,0.8s,baz=214,slow=15,SNR=2.6
1.9nm,0.8s
KLR Kul'dur 26.45 15 P P 17 56 26.4 -1.8
0.5nm,0.4s,baz=253,slow=17,SNR=2.4
0.5nm,0.4s
SONM Songino Array 26.73 337 P P 17 56 31.9 +0.9
1.4nm,0.8s,baz=152,slow=9.0,SNR=6.6
1.4nm,0.8s
MKAR Makanchi Array 38.78 316 P P 17 58 13.8 -2.2
0.7nm,0.6s,baz=99,slow=12,SNR=8.6
0.7nm,0.6s
ZALV Zalesovo Beam 40.66 327 P P 17 58 30.7 -0.7
0.7nm,0.5s,baz=118,slow=8.3,SNR=5.2
0.7nm,0.5s
H11S3 WAKE ISLAND Hy 42.21 88 T T 18 43 46.9
baz=284,slow=74,SNR=27
H11S1 WAKE ISLAND Hy 42.22 88 T T 18 43 49.0
baz=284,slow=74,SNR=10
H11S2 WAKE ISLAND Hy 42.23 88 T T 18 43 49.0
baz=284,slow=74,SNR=13
KURBB Kurchatov Arra 42.55 320 P P 17 58 47.7 +0.8
0.7nm,0.8s,baz=110,slow=7.5,SNR=5.3
0.7nm,0.8s
WRA Warramunga Arr 45.36 163 P P 17 59 09.1 -0.8
1.0nm,0.6s,baz=344,slow=8.8,SNR=6.7
1.0nm,0.6s
BVAR Borovoye Array 48.11 321 P P 17 59 30.3 -0.7
0.9nm,0.6s,baz=98,slow=9.4,SNR=6.8
0.9nm,0.6s
ASAR Alice Springs 48.82 165 P P 17 59 36.2 -0.6
1.3nm,0.8s,baz=342,slow=6.1,SNR=9.9
1.3nm,0.8s
ILAR Eielson Array 69.22 27 P P 18 01 55.7 -2.2
0.2nm,0.6s,baz=293,slow=5.8,SNR=2.8
0.2nm,0.6s
YKA Yellowknife Ar 83.02 23 P P 18 03 15.9 -0.5
1.0nm,0.8s,baz=315,slow=4.9,SNR=19
1.0nm,0.8s

*IDC **06** 17:56:08.8±1.4,23.˝70N×121.˝55E,h0km,mb3.3/4, mbtmp3.3/5,ML3.3/1,Error ellipse: s-maj=76.6km s-min=24.0km az=69.0*
*JMA **06** 17:56:10.2±0.1,24.˝0N±0.˝2×121.˝7E±0.˝6,h2km,MV3.2/12, TAIWAN REGION*
*ASIES **06** 17:56:10.0,24.˝05N×121.˝66E,h7km,ML3.8,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.12; $M_{\theta\theta}$-1.55; $M_{\phi\phi}$0.41; $M_{r\theta}$1.23; $M_{\theta\phi}$0.14; $M_{r\phi}$-1.54; Fault plane solution: M_o2.41289×10^{21} NP1: ϕ_s129.17000°,δ75.63000°,λ114.82000°. NP2: ϕ_s247.39000°,δ28.45000°,λ31.39000°. Principal axes: T Plg52.8610°, Azm68.6270°; N Plg23.9960°, Azm302.6300°; P Plg26.5040°, Azm199.8050°;*
*TAP **06** 17:56:10.0,24.˝05N×121.˝66E,h7km,ML3.8,C*
ISC 06 17:56:09.9±0.8,24.˝04N±0.˝01×121.˝69E±0.˝02,h8km±5km, n173,σ0^{s}79/242,mb3.3/4,34C-16D,Taiwan

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

TWD Chiawan 0.09 296⇑*i*P Pg 17 56 12.3 +0.2
baz=300
TWD *i* S Sg 17 56 13.5 -0.2
baz=300
ETL Fush Village 0.13 334 *i* P Pg 17 56 13.1 +0.3
baz=338
ETL *i* S Sg 17 56 14.8 +0.1
baz=338
NACB Ninganchiao 0.16 328 P Pg 17 56 13.6 +0.4
NACB Ninganchiao 0.16 328⇓*i*P Pg 17 56 13.4 +0.2
baz=331
NACB *i* S Sg 17 56 15.5 +0.1
baz=331
ETM Tongmen 0.19 247⇑*i*P Pg 17 56 14.1 +0.3
baz=244
ETM *i* S Sg 17 56 16.7 +0.3
baz=244
LXIB Xiulin Townshi 0.25 266⇑*i*P Pg 17 56 15.2 +0.3
baz=255
LXIB *i* S Sg 17 56 18.9 +0.6
baz=255
EHP Heping Village 0.27 10 *e*P Pg 17 56 15.7 +0.3
baz=10.0
EHP *e*S Sg 17 56 19.9 +0.9
baz=10.0
SHUL Shoufeng 0.28 204 P Pb 17 56 16.6 -0.5
baz=211
SHUL *e*S Sb 17 56 23.3 +1.4
baz=211
EAHA Aohua 0.29 9 *i* P Pg 17 56 15.9 +0.3
baz=10.0
EAHA *i* S Sg 17 56 20.5 +0.9
baz=10.0
ESL Shilin 0.32 226⇑*i*P Pg 17 56 16.5 +0.3
baz=233
ESL S Sg 17 56 20.6 0.0
baz=233
TEGC Jichi Village 0.36 202 P Pb 17 56 18.6 +0.2
baz=202
TEGC *e*S Sb 17 56 26.6 +2.4
baz=202
ENA Nanau 0.39 7⇓*i*P Pg 17 56 17.9 +0.4
baz=6.0
ENA S Sg 17 56 23.1 +0.4
baz=6.0
WHF Hehuan Shan 0.40 285⇑*i*P Pg 17 56 18.1 +0.3
baz=285
WHF *i* S Sg 17 56 23.3 +0.2
baz=285
EWUT Wuta 0.41 12⇓*i*P Pg 17 56 18.4 +0.5
baz=9.0
EWUT *i* S Sg 17 56 24.0 +0.6
baz=9.0
WARBT Fenglin Townsh 0.42 221⇑P Pg 17 56 18.3 +0.2
baz=232
WARBT *e*S Sb 17 56 25.5 -0.7
baz=232
EGFH Guangfu 0.44 213 *e*P Pg 17 56 19.0 +0.6
baz=220
FUSS Fushou 0.45 297⇑*i*P Pb 17 56 19.4 -0.9
baz=296
FUSS S Sg 17 56 25.6 +0.8
baz=296
CHGB Renai 0.47 273⇑*i*P Pb 17 56 19.6 -0.9
baz=272
CHGB *i* S Sg 17 56 25.4 +0.2
baz=272
OWD Renai 0.47 260⇑P Pg 17 56 19.5 +0.4
baz=259
OWD *e*S Sg 17 56 25.9 +0.5
baz=259
NNSB Datong 0.48 324⇑*i*P Pg 17 56 19.7 +0.5
baz=323
NNSB *i* S Sg 17 56 25.6 +0.2
baz=323
NNSH Datong 0.48 324⇑P Pg 17 56 19.7 +0.6
baz=323
NNSH S Sg 17 56 25.6 +0.2
baz=323
NNS Nan Shan 0.49 324⇑*i*P Pg 17 56 19.9 +0.5
baz=324
NNS *i* S Sg 17 56 26.5 +0.6
baz=324
TWT Tachien 0.51 295⇑*i*P Pb 17 56 20.8 -0.5
baz=293
TWT *i* S Sb 17 56 27.7 -1.2
baz=293
LATG Datong 0.51 344⇓*i*P Pg 17 56 20.2 +0.4
baz=341
LATG *i* S Sg 17 56 27.3 +0.7
baz=341
WUSB Renai 0.52 265⇑*i*P Pb 17 56 20.6 -0.8
baz=264
WUSB S Sb 17 56 28.1 -1.1
baz=264
TDCB Techi 0.53 294⇑*i*P Pb 17 56 20.8 -0.7
baz=293
TDCB *i* S Sg 17 56 27.5 +0.4
baz=293
ESAO Su ao 0.55 15⇓P Pg 17 56 20.8 +0.2
baz=11
ESAO S Sg 17 56 27.9 0.0
baz=11
VWDT VWDT 0.57 240⇑*i*P Pb 17 56 21.6 -0.6
baz=235
VWDT *e*S Sb 17 56 30.2 -0.3
baz=235
EOS4 EOS4 0.58 82 *e*P Pn 17 56 24.0 -0.1
baz=93
NDT Datong Townshi 0.58 344⇓*i*P Pb 17 56 21.9 -0.4
baz=343
NDT *i* S Sg 17 56 29.4 +0.6
baz=343
TWC Suao 0.59 15⇓*i*P Pg 17 56 21.6 +0.4
baz=7.0
TWC *e*S Sg 17 56 27.3 -1.6
baz=7.0
NDS Dongshan 0.59 3⇓*i*P Pg 17 56 21.9 +0.5
NDS *e*S Sg 17 56 29.3 +0.2
HGSD Ruisui 0.60 204 P Pb 17 56 23.1 +0.5
baz=190
ENTT Nioudou 0.61 350⇓*i*P Pb 17 56 22.2 -0.6
baz=348
ENTT *i* S Sg 17 56 30.2 +0.7
baz=348
EOS2 EOS2 0.62 53 *e*P Pn 17 56 25.6 +0.7
baz=61
EOS3 EOS3 0.63 67 *e*P Pb 17 56 24.2 +1.3
baz=60
EHY Hungye 0.63 212⇑P Pg 17 56 22.3 +0.3
baz=221
EHY S Sg 17 56 30.9 +0.7
baz=221
WPL Puli Township 0.67 268⇑P Pb 17 56 23.5 -0.3
baz=268
WPL S Sg 17 56 31.9 +0.4
baz=268
TWE Neicheng 0.68 358⇓P Pb 17 56 23.5 -0.4
baz=357
TWE S Sg 17 56 31.7 -0.1
baz=357
YHNB Yeheng 0.69 336 P Pb 17 56 24.2 0.0
YHNB Yeheng 0.69 336⇓*i*P Pb 17 56 23.9 -0.3
baz=326
YHNB S Sg 17 56 32.4 +0.2
baz=326
DPDB Guoxing 0.69 270⇑*i*P Pb 17 56 24.0 -0.3
baz=269
DPDB *e*S Sb 17 56 33.4 -0.6
baz=269
NSK Sanguang 0.70 335⇓*i*P Pb 17 56 24.1 -0.3
baz=325
NSK S Sg 17 56 32.9 +0.3
baz=325
WCS Beigang Elemen 0.71 272⇑*i*P Pb 17 56 24.1 -0.3
baz=271
SSLB Suanglung 0.72 250 P Pb 17 56 24.1 -0.5
SSLB Suanglung 0.72 250⇑*i*P Pb 17 56 24.1 -0.5
baz=260
SSLB S Sg 17 56 32.1 -0.9
baz=260
WHP Taichung City 0.72 289⇑*i*P Pb 17 56 24.7 0.0
baz=289
WHP *i* S Sb 17 56 34.4 -0.4
baz=289
FUSB Fushanzhiwuyua 0.72 353⇓P Pg 17 56 24.3 +0.5
baz=350
FUSB *e*S Sg 17 56 32.9 -0.3
baz=350
SMLT Sun Moon Lake 0.74 258⇑*i*P Pb 17 56 24.7 -0.3
baz=258
SMLT *e*S Sb 17 56 34.9 -0.4
baz=258
YULB Yu-li 0.74 209 P Pg 17 56 24.6 +0.5
YULB Yu-li 0.74 209 *e*P Pg 17 56 24.2 +0.1
baz=212
ECBN Changbin 0.75 197 P Pb 17 56 25.6 +0.4
baz=189
ECBN *e*S Sn 17 56 38.1 -0.3
baz=189
NWLT Wulai 0.75 347 P Pb 17 56 25.0 -0.3
baz=344
NWLT S Sg 17 56 34.3 0.0
baz=344
EYUL Yuli 0.77 206 *e*P Pb 17 56 25.4 -0.1
baz=224
TYC Yuchr 0.77 260⇑*i*P Pb 17 56 25.1 -0.4
baz=260
TYC *i* S Sb 17 56 35.2 -0.9
baz=260
TWF1 Yuli 0.77 208 *e*P Pg 17 56 25.2 +0.5
baz=223
NFF Wufeng Townshi 0.79 319 *e*P Pb 17 56 25.4 -0.4
baz=318
NFF S Sb 17 56 35.6 -1.1
baz=318
WHYT Xinyi Township 0.84 246 *e*P Pb 17 56 26.3 -0.4
baz=253
WHYT *e*S Sb 17 56 38.1 0.0
baz=253
LIOB Emei 0.86 315⇑*i*P Pb 17 56 27.6 +0.5
baz=314
NSTT Nanjuang 0.86 313⇑*i*P Pb 17 56 27.4 +0.4
baz=312
NSTT S Sb 17 56 38.2 -0.5
baz=312
NJD Zhudong 0.88 322 *e*P Pn 17 56 28.1 -0.5
baz=327
CHKH Chenggong 0.89 198 *e*P Pb 17 56 27.5 0.0
baz=190
TWQ1 Liyutan 0.89 290 P Pn 17 56 28.2 -0.5
baz=301
TWQ1 *e*S Sb 17 56 39.9 +0.3
baz=301
WJS Zhushan 0.90 256 *e*P Pb 17 56 27.8 0.0
baz=256
WWF Wufeng 0.90 270⇑*e*P Pn 17 56 28.6 -0.3
baz=270
FULB Fuli 0.91 203 *e*P Pb 17 56 28.2 +0.3
baz=222
TCU Taichung 0.93 277 *e*P Pn 17 56 29.5 +0.2
baz=270
NHDH Xindian Distri 0.93 351 *e*P Pb 17 56 28.5 +0.2
baz=348
WNT Mingjian 0.93 260 *e*P Pn 17 56 29.1 -0.1
baz=260
WNT *e*S Sn 17 56 42.2 -0.6
baz=260
WNT1 Nantou City 0.93 262 *e*P Pn 17 56 28.9 -0.3
baz=262
TIPB Shuangxi 0.94 8 P Pb 17 56 28.4 0.0
baz=354
TIPB *e*S Sg 17 56 39.8 -0.2
baz=354
TWA Mucha 0.94 354 *e*P Pb 17 56 28.6 +0.1
baz=352
TATO Taipei 0.95 349 P Pb 17 56 29.1 +0.5
TATO Taipei 0.95 349⇓*i*P Pb 17 56 28.9 +0.3
baz=346
TATO S Sg 17 56 40.7 +0.2
baz=346
HSN1 Hsinchu 0.95 320 *e*P Pb 17 56 28.6 -0.1
baz=319
NMLH Miaoli 0.96 301 *e*P Pn 17 56 29.9 +0.3
baz=301
ALS Alishan 0.96 237⇑*i*P Pb 17 56 29.1 +0.1
baz=247
CHKT Chengkung 0.98 198 *e*P Pg 17 56 29.0 +0.3
baz=193
CHKT *e*S Sn 17 56 44.8 +0.8
baz=193
SBCB Hsinchu 0.98 320 *e*P Pn 17 56 30.1 +0.1
baz=319
EHD Haiduan 0.99 207 *e*P Pb 17 56 29.4 +0.1
baz=224
HSN Hsinchu 1.00 319 *e*P Pb 17 56 29.8 +0.3
baz=321
TWB1 Santiao Chiao 1.00 16 *e*P Pg 17 56 29.1 -0.1
baz=4.0
WDJ Dajia District 1.00 288 P Pn 17 56 30.9 +0.6
baz=296
WDJ *e*S Sn 17 56 45.5 +0.9
baz=296
TAP Taipei 1.01 351 *e*P Pg 17 56 28.8 -0.4
baz=340
WYL Yuanlin Townsh 1.01 266 *e*P Pn 17 56 30.1 -0.3
baz=251
NTY Taoyuan 1.02 340 *e*P Pn 17 56 31.3 +0.8
baz=333
CHN5 Tsauling 1.02 245⇑*i*P Pn 17 56 30.8 +0.1
baz=237
CHN5 *e*S Sn 17 56 45.8 +0.6
baz=237
NWF Wu-fen Shan 1.03 5 *e*P Pg 17 56 29.5 -0.2
baz=359
WFSB Wu-fen Shan 1.03 5 *e*P Pg 17 56 29.8 +0.2
baz=359
NCUH Zhongli 1.03 334 *e*P Pn 17 56 30.9 +0.3
baz=332
NCU National Centr 1.03 334 *e*P Pb 17 56 29.9 -0.1
baz=332
WCHH Zhanghua 1.03 272 *e*P Pn 17 56 31.1 +0.4
baz=272
ECS Chishang 1.03 205 *e*P Pb 17 56 30.2 +0.2
baz=223
ELDTW Lidau 1.05 216 P Pg 17 56 29.6 -0.4
baz=220
SXI1 Grass Mountain 1.06 9 *e*P Pb 17 56 30.9 +0.3
baz=351
TWS1 Kuangyinshan 1.08 347 *e*P Pn 17 56 31.9 +0.5
baz=344
TWS1 *e*S Sn 17 56 47.4 +0.8
baz=344
WGK Gukeng 1.09 251 *e*P Pn 17 56 32.1 +0.7
baz=253
YM01 YM01 1.11 355⇓*i*P Pn 17 56 32.2 +0.5
baz=339
TNOU National Taiwa 1.11 4 *e*P Pb 17 56 31.3 0.0
baz=358
WDLH Douliu 1.11 252 *e*P Pn 17 56 31.7 0.0
baz=254
NTST Danshui 1.14 349 *e*P Pn 17 56 32.7 +0.6
baz=345
NTST *e*S Sn 17 56 49.2 +1.2
baz=345
WCKO Fanlu 1.16 239 *e*P Pn 17 56 33.3 +0.9
baz=242
STYH Taoyuan 1.20 224 *e*P Pb 17 56 33.0 +0.1
baz=216
WRL Guolierlin Hig 1.21 264 *e*P Pn 17 56 33.6 +0.6
baz=255
CHN4 Tsaushan 1.22 236⇑*i*P Pn 17 56 34.1 +0.9
baz=231
CHN4 *e*S Sn 17 56 52.4 +2.6
baz=231

TPUB	**Ta-pu**	**1.22 233**	P	**Pn**	**17 56 34.0 +0.8**
TPUB	**Ta-pu**	**1.22 233**⇑	*i*P	**Pn**	**17 56 33.7 +0.5**
	baz=235				
TPUB			S	**Sn**	**17 56 50.6 +0.7**
	baz=235				
CHN2	**Minshiung**	**1.22 246**	*e*P	**Pn**	**17 56 34.2 +1.0**
	baz=249				
JYNG	**Yonagunijimaku**	**1.22 70**	*e*P	**Pb**	**17 56 33.6 +0.4**
JYNG			S	**Sn**	**17 56 50.3 +0.3**
STYT	**Tauyuan**	**1.22 225**	*i* P	**Pn**	**17 56 33.7 +0.4**
	baz=229				
STYT			*e*S	**Sn**	**17 56 50.1 +0.1**
	baz=229				
RLNB	**Erlin**	**1.22 263**	*e*P	**Pn**	**17 56 33.9 +0.7**
	baz=251				
RLNB			S	**Sn**	**17 56 51.5 +1.5**
	baz=251				
TWY	**Chenhua**	**1.23 356**	*e*P	**Pg**	**17 56 33.7 +0.1**
	baz=340				
LONT	**Longtian**	**1.24 204**	*e*P	**Pb**	**17 56 31.6 -1.9**
	baz=209				
WTK	**Tuku**	**1.24 254**	*e*P	**Pn**	**17 56 34.0 +0.5**
	baz=255				
WTP	**Ta-pu**	**1.26 231**	⇑P	**Pg**	**17 56 34.6 +0.5**
	baz=234				
YOJ	**Yonaguni jima**	**1.28 71**	P	**Pb**	**17 56 34.8 +0.6**
YOJ	**Yonaguni jima**	**1.28 71**	*e*P	**Pn**	**17 56 33.7 -0.4**
	baz=67				
YOJ	**Yonaguni jima**	**1.28 71**	*e*P	**Pn**	**17 56 34.5 +0.4**
TWGBT	**Beinan**	**1.34 205**	*e*P	**Pn**	**17 56 33.1 -1.8**
	baz=209				
TWG	**Pinlang**	**1.34 205**	*e*P	**Pn**	**17 56 32.7 -2.2**
	baz=210				
TWK	**Hsinying**	**1.34 235**⇑	*i*P	**Pg**	**17 56 36.4 +0.8**
	baz=239				
TWK			S	**Sn**	**17 56 55.1 +2.0**
	baz=239				
CHN1	**Nanshi**	**1.36 232**	⇑P	**Pg**	**17 56 36.5 +0.5**
	baz=235				
CHN1			*e*S	**Sg**	**17 56 56.3 +2.6**
	baz=235				
SNST	**Tainan City**	**1.36 233**	*e*P	**Pg**	**17 56 36.3 +0.3**
	baz=238				
SNST			*e*S	**Sg**	**17 56 54.5 +0.8**
	baz=238				
TTN	**Taitung**	**1.37 201**	*e*P	**Pn**	**17 56 34.7 -0.7**
	baz=206				
LDUT	**Ludao**	**1.38 188**	*e*P	**Pn**	**17 56 33.5 -1.9**
	baz=193				
SGST	**Jiashian**	**1.39 227**	*i* P	**Pn**	**17 56 35.8 +0.2**
	baz=231				
SGST			*e*S	**Sg**	**17 56 56.6 +2.0**
	baz=231				
WSF	**Szhu**	**1.40 254**	*e*P	**Pg**	**17 56 36.8 +0.1**
	baz=254				
WSF			*e*S	**Sg**	**17 56 57.0 +2.1**
	baz=254				
SLGT	**Liugui**	**1.41 223**	*e*P	**Pg**	**17 56 37.1 +0.1**
	baz=228				
WSL	**Shuilin Townsh**	**1.43 249**	*e*P	**Pg**	**17 56 37.5 +0.2**
	baz=251				
ICHU	**Yijhu**	**1.46 243**	*e*P	**Pg**	**17 56 38.1 +0.3**
	baz=245				
CHN8	**Yiju**	**1.52 243**⇓	*e*P	**Pg**	**17 56 39.4 +0.4**
	baz=245				
CHN8			S	**Sg**	**17 56 59.5 +0.7**
	baz=245				
CHN3	**Shinhua**	**1.55 232**	*e*P	**Pg**	**17 56 39.8 +0.2**
	baz=237				
SSHA	**Shanhua**	**1.57 235**	*e*P	**Pn**	**17 56 37.5 -0.5**
	baz=238				
ECL	**Taimali**	**1.59 205**	*e*P	**Pn**	**17 56 37.3 -1.0**
	baz=210				
SCST	**Cishan**	**1.59 224**	*e*P	**Pg**	**17 56 40.0 -0.3**
	baz=215				
SHHT	**Tainan City**	**1.59 231**	*e*P	**Pg**	**17 56 40.5 +0.1**
	baz=236				
SSD	**Sandimen**	**1.61 217**	*e*P	**Pn**	**17 56 38.6 0.0**
	baz=211				
SCLT	**Jiali**	**1.62 238**	*e*P	**Pb**	**17 56 40.0 0.0**
	baz=242				
PCYT	**Pengchaiyu**	**1.62 12**	*e*P	**Pn**	**17 56 39.4 +0.7**
	baz=4.0				
TSMG	**Majia**	**1.64 216**	*e*P	**Pb**	**17 56 40.5 +0.1**
	baz=211				
TWM1	**Shoushan**	**1.68 224**	*e*P	**Pg**	**17 56 42.5 +0.4**
	baz=229				
SGLT	**Jiouru**	**1.71 220**	*e*P	**Pg**	**17 56 43.1 +0.5**
	baz=213				
TSCK	**Chigu Township**	**1.72 239**	*e*P	**Pb**	**17 56 41.0 -0.7**
	baz=243				
MASBT	**Mashibuluo**	**1.72 214**	*e*P	**Pn**	**17 56 40.5 +0.3**
	baz=222				
MASBT			*e*S	**Sg**	**17 57 04.7 -0.5**
	baz=222				
EAST	**Anshuo**	**1.82 205**	*e*P	**Pn**	**17 56 41.2 -0.3**
	baz=194				
TAWH	**Dawu Township**	**1.84 204**	*e*P	**Pn**	**17 56 41.9 +0.1**
	baz=209				
SCZT	**Fangliau**	**1.93 211**	*e*P	**Pn**	**17 56 43.9 +0.9**
	baz=203				
SLIU	**Shizi**	**1.99 204**	*e*P	**Pn**	**17 56 44.1 +0.3**
	baz=200				
PHUB	**P'eng-hu**	**2.01 255**	P	**Pn**	**17 56 44.9 +0.8**
	baz=258				
PHUB			*e*S	**Sn**	**17 57 10.3 +1.0**
	baz=258				
PNG	**Penghu**	**2.01 257**	*e*P	**Pn**	**17 56 43.9 -0.1**
	baz=259				
WDGT	**Dungji**	**2.01 248**	*e*P	**Pn**	**17 56 44.9 +0.8**
	baz=251				
LYUB	**Lanyu**	**2.03 183**	*e*P	**Pn**	**17 56 41.6 -2.8**
	baz=188				
JKRS	**Kuro-shima**	**2.13 84**	*e*P	**Pn**	**17 56 47.5 +1.7**
VCHM	**Qimei**	**2.23 249**	P	**Pn**	**17 56 47.9 +0.7**
	baz=251				
VCHM			*e*S	**Sn**	**17 57 16.3 +1.4**
	baz=251				
TWKBT	**Hengchun**	**2.24 201**	*e*P	**Pn**	**17 56 47.2 0.0**
	baz=207				
VWUC	**VWUC**	**2.25 295**	*e*P	**Pn**	**17 56 47.3 -0.1**
	baz=295				
JIJ	**Ishigaki jima**	**2.27 81**	*e*P	**Pn**	**17 56 46.7 -0.9**
JISG	**Ishigakijimahi**	**2.46 77**	*e*P	**Pn**	**17 56 50.4 +0.2**
PTMZ	**Houxiangcun**	**2.54 294**	*e*P	**Pn**	**17 56 51.3 -0.1**
	baz=293				
MATB	**Ma-tsu**	**2.63 323**	*e*P	**Pn**	**17 56 52.8 +0.2**
	baz=322				
KNM	**Kinmen**	**2.99 278**	*e*P	**Pn**	**17 56 59.9 +2.3**
	baz=277				
KNMB	**Chin-men Tao**	**3.04 279**	*e*P	**Pn**	**17 56 58.4 +0.2**
	baz=279				
MHZQ	**Yeshan**	**3.16 311**	*e*P	**Pn**	**17 57 00.0 0.0**
	baz=296				
XPSS	**Dashiqiu**	**3.18 335**	*e*P	**Pn**	**17 57 00.0 -0.2**
	baz=334				
AXDP	**Jialang**	**3.49 285**	*e*P	**Pn**	**17 57 04.9 +0.4**
	baz=284				
ZPLA	**Ao Xicun**	**3.60 269**	*e*P	**Pn**	**17 57 05.6 -0.4**
	baz=269				
DSXP	**Dongshan**	**3.91 266**	*e*P	**Pn**	**17 57 10.8 +0.5**
	baz=266				
SXFK	**Yanhouchang**	**4.35 304**	*e*P	**Pn**	**17 57 16.3 0.0**
	baz=302				
KSRS	**Korea Array**	**14.40 20**	Pn	**P**	**17 59 38.5 -2.5**
	0.1nm,0.3s,baz=199,slow=12,SNR=1.5				
	1.3nm,0.8s				
SONM	**Songino Array**	**26.68 337**	P	**P**	**18 01 52.1 +2.7**
	0.2nm,0.3s,baz=152,slow=8.3,SNR=2.3				
	0.2nm,0.3s				
MKAR	**Makanchi Array**	**38.76 316**	P	**P**	**18 03 36.1 +1.3**
	0.4nm,0.9s,baz=110,slow=9.8,SNR=3.8				
	0.4nm,0.9s				
WRA	**Warramunga Arr**	**45.42 163**	P	**P**	**18 04 27.0 -2.3**
	0.3nm,0.8s,baz=345,slow=8.7,SNR=2.1				
	0.3nm,0.8s				
ASAR	**Alice Springs**	**48.88 165**	P	**P**	**18 04 54.3 -2.0**
	0.3nm,1.0s,baz=344,slow=6.8,SNR=2.7				
	0.3nm,1.0s				

TAP 06 18:00:00.6,24.09N×121.78E,h8km,ML2.4,2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.16**	**296**	P	Pg	18 00 04.7	+0.6
	baz=296						
ETL				*e*S	Sg	18 00 07.5	+1.0
	baz=296						
TWD	**Chiawan**	**0.17**	**268**⇓	*i*P	Pg	18 00 05.0	+0.8
	baz=276						
TWD				*i* S	Sg	18 00 07.9	+1.3
	baz=276						
NACB	**Ninganchiao**	**0.19**	**297**⇓	*i*P	Pg	18 00 05.2	+0.5
	baz=297						
NACB				*i* S	Sg	18 00 08.0	+0.7
	baz=297						
EAHA	**Aohua**	**0.24**	**350**	P	Pg	18 00 06.2	+0.7
	baz=351						
ETM	**Tongmen**	**0.29**	**246**	P	Pb	18 00 07.4	-0.7
	baz=256						
ETM				*e*S	Sb	18 00 12.2	-0.9
	baz=256						
ENA	**Nanau**	**0.34**	**353**	P	Pg	18 00 08.0	+0.7
	baz=355						
LXIB	**Xiulin Townshi**	**0.34**	**259**	P	Pg	18 00 08.2	+0.7
	baz=260						
LXIB				*e*S	Sg	18 00 13.1	+1.0
	baz=260						
EWUT	**Wuta**	**0.36**	**359**	*e*P	Pg	18 00 08.4	+0.7
	baz=360						
SHUL	**Shoufeng**	**0.36**	**214**	*e*P	Pb	18 00 10.6	+1.3
	baz=213						
ESL	**Shilin**	**0.42**	**230**	P	Pb	18 00 10.1	-0.2
	baz=228						
WHF	**Hehuan Shan**	**0.48**	**277**	*e*P	Pg	18 00 10.7	+0.7
	baz=276						
NNSB	**Datong**	**0.50**	**313**	P	Pg	18 00 10.9	+0.5
	baz=313						
LATG	**Datong**	**0.50**	**332**	*e*P	Pb	18 00 11.2	-0.6
	baz=342						
NNS	**Nan Shan**	**0.51**	**313**	P	Pb	18 00 11.3	-0.7
	baz=313						
NNS				S	Sb	18 00 18.8	-0.9
	baz=313						
WARBT	**Fenglin Townsh**	**0.52**	**225**	*e*P	Pb	18 00 12.0	0.0
	baz=223						
FUSS	**Fushou**	**0.52**	**288**	*e*P	Pb	18 00 11.7	-0.4
	baz=287						
TWC	**Suao**	**0.52**	**6**	*e*P	Pb	18 00 12.5	+0.5
	baz=3.0						
CHGB	**Renai**	**0.56**	**267**	P	Pb	18 00 12.5	-0.3
	baz=269						
CHGB				S	Sb	18 00 20.1	-0.8
	baz=269						
NDT	**Datong Townshi**	**0.57**	**334**	*e*P	Pb	18 00 12.7	-0.2
	baz=334						
NDT				S	Sb	18 00 20.7	-0.5
	baz=334						
OWD	**Renai**	**0.57**	**257**	*e*P	Pb	18 00 13.1	+0.2
	baz=256						
ENTT	**Nioudou**	**0.58**	**340**	*e*P	Pb	18 00 13.0	-0.1
	baz=340						
ENTT				*e*S	Sb	18 00 21.2	-0.4
	baz=340						
WUSB	**Renai**	**0.62**	**261**	*e*P	Pb	18 00 13.4	-0.3
	baz=260						
TWE	**Neicheng**	**0.64**	**350**	P	Pb	18 00 14.0	0.0
	baz=351						
TWE				S	Sb	18 00 23.3	+0.2
	baz=351						
YHNB	**Yeheng**	**0.69**	**327**	P	Pb	18 00 14.9	-0.1
	baz=327						
YHNB				*e*S	Sg	18 00 23.7	+0.7
	baz=327						
FUSB	**Fushanzhiwuyua**	**0.69**	**345**	*e*P	Pb	18 00 15.3	+0.3
	baz=346						
NSK	**Sanguang**	**0.70**	**327**	*e*P	Pb	18 00 14.9	-0.2
	baz=327						
NSK				*e*S	Sg	18 00 24.2	+0.8
	baz=327						

*MOS **06** 18:00:11.6±0.9,24.09N×121.87E,h10km,mb5.3/53, MS5.2/18,Error ellipse: s-maj=7.0km s-min=4.5km az=107.0*

*IDC **06** 18:00:11.9±0.5,24.09N×121.89E,h0km,mb4.4/31, mbtmp4.4/36,ML3.5/4,MS5.1/50,Error ellipse: s-maj=13.7km s-min=11.6km az=54.0*

*NEIC **06** 18:00:12.9±1.8,24.11N±0.05×121.78E±0.05,h5km±3km, mb5.4/215,Mwr5.3/26,Mww5.2/9,Error ellipse: s-maj=7.9km s-min=6.3km az=160.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.36; Mθθ-1.01; Mϕϕ0.65; Mrθ0.58; Mθϕ-0.10; Mϕr-0.67; Fault plane solution: M₀1.26000×10¹⁷ NP1:φs228.58000°, δ43.38000°,λ.17.19000°. NP2:φs125.91000°,δ78.29000°, λ132.08000°. Principal axes: T 1.2841, Plg41.0000°, Azm75.0000°; N -0.0488, Plg41.0000°, Azm296.0000°; P -1.2353, Plg22.0000°, Azm185.0000°;*

*GCMT **06** 18:00:12.9±0.2,24.11N±0.01×121.66E±0.02,h12km, MW5.3/118,Moment Tensor Solution. s28,c37; s118,c185; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.37±.03; Mθθ-1.01±.03; Mϕϕ0.63±.03; Mrθ0.48±.08; Mθϕ-0.52±.03; Mϕr0.16±.09; Best double couple: M₀1.04900×10¹⁷ NP1:φs208.00000°,δ82.00000°, λ-15.00000°. NP2:φs301.00000°,δ75.00000°, λ-171.00000°. Principal axes: T 0.7870, Plg5.0000°, Azm255.0000°; N 0.5220, Plg73.0000°, Azm1.0000°; P -1.3100, Plg17.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ASIES **06** 18:00:13.4,24.12N×121.73E,h7km,ML5.4,Mw5.2, Moment Tensor Solution. Moment tensor: Scale 10²³Nm; Mrr1.11; Mθθ-5.99; Mϕϕ4.80; Mrθ-0.00; Mθϕ-3.27; Mϕr-1.66; Fault plane solution: M₀6.59650×10²³ NP1: φs210.77000°,δ80.15000°,λ14.83000°. NP2: φs118.17000°,δ75.39000°,λ169.82000°. Principal axes: T Plg17.4150°, Azm75.0070°; N Plg72.2570°, Azm243.6170°; P Plg3.2920°, Azm343.9730°;*

*NEIC **06** 18:00:13.4,24.04N×121.54E,h12km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.08; Mθθ-7.74; Mϕϕ6.66; Mrθ-1.09; Mθϕ-2.23; Mϕr-2.45; Fault plane solution: M₀8.04000×10¹⁶ NP1: φs217.81000°,δ83.16000°,λ20.11000°. NP2: φs125.31000°,δ70.04000°,λ172.73000°. Principal axes: T 7.7776, Plg19.0000°, Azm83.0000°; N 0.5336, Plg69.0000°, Azm236.0000°; P -8.3111, Plg9.0000°, Azm350.0000°;*

*NIED **06** 18:00:13.6,24.08N×121.70E,h1km,MW5.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-0.62; Mθθ-6.63; Mϕϕ7.24; Mrθ-2.76; Mθϕ-4.59; Mϕr-2.57; Fault plane solution: M₀9.14000×10¹⁶ NP1: φs27.00000°,δ83.00000°,λ-23.00000°. NP2:φs120.00000°, δ67.00000°,λ-172.00000°.*

*JMA **06** 18:00:13.6±0.2,24.1N±0.3×121.7E±0.5,h1km±1km, MD5.9/18,MW5.3/18,TAIWAN REGION*

*TAP **06** 18:00:13.4,24.12N×121.73E,h7km,ML5.4,C*

*NEIC **06** 18:00:13.4,24.04N×121.76E,h12km*

*BJI **06** 18:00:14.6±0.0,24.15N×121.70E,h10km,mb4.7/74, mB5.4/49,ML5.3/13,Ms5.6/94,Ms7 5.4/89*

*NEIC **06** 18:00:14.6,24.08N×121.71E,h6km*

ISC 06 18:00:14.4±0.4,24.10N±0.01×121.78E±0.01,h10km±2km, h14km:pP-P,n1003,σ1957/1065,mb5.2/216,MS5.2/70, 52C-71D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.16**	**292**	P	Pg	18 00 16.2	-1.7
	baz=293						
ETL				*e*S	Sg	18 00 17.7	-2.7
	baz=293						
TWD	**Chiawan**	**0.17**	**263**⇑	*i*P	Pg	18 00 16.5	-1.6
	baz=263						
TWD				*i* S	Sg	18 00 18.5	-2.2
	baz=263						
NACB	**Ninganchiao**	**0.19**	**293**	Pg	Pg	18 00 16.3	-2.1
NACB				Sg	Sg	18 00 18.4	-2.7
NACB	**Ninganchiao**	**0.19**	**293**⇓	*i*P	Pg	18 00 16.6	-1.8
	baz=285						
NACB				*e*S	Sg	18 00 18.5	-2.6
	baz=285						
EHP	**Heping Village**	**0.21**	**350**⇓	*i*P	Pg	18 00 17.8	-1.0
	baz=1.0						
EHP				S	Sg	18 00 20.6	-1.3
	baz=1.0						
EAHA	**Aohua**	**0.23**	**350**⇓	*i*P	Pg	18 00 18.1	-1.1
	baz=358						
EAHA				S	Sg	18 00 21.7	-0.7
	baz=358						
ETM	**Tongmen**	**0.30**	**243**⇑	*i*P	Pg	18 00 19.1	-1.3
	baz=241						
ETM				*i* S	Sg	18 00 22.9	-1.5
	baz=241						
ENA	**Nanau**	**0.33**	**353**⇓	*i*P	Pg	18 00 20.0	-1.0
	baz=360						
ENA				*i* S	Sg	18 00 24.4	-1.0
	baz=360						
EWUT	**Wuta**	**0.34**	**359**⇓	*i*P	Pg	18 00 20.4	-0.9
	baz=4.0						
EWUT				S	Sg	18 00 25.2	-0.6
	baz=4.0						
LXIB	**Xiulin Townshi**	**0.35**	**257**⇑	*i*P	Pg	18 00 19.7	-1.6
	baz=243						
LXIB				*e*S	Sg	18 00 24.2	-1.7
	baz=243						
SHUL	**Shoufeng**	**0.37**	**213**	⇑P	Pg	18 00 22.3	+0.5
	baz=218						
SHUL				*e*S	Sb	18 00 30.5	+1.6
	baz=218						
ESL	**Shilin**	**0.43**	**228**⇑	*i*P	Pg	18 00 21.7	-1.1
	baz=236						
TEGC	**Jichi Village**	**0.45**	**210**⇓	*i*P	Pb	18 00 23.8	-0.5
	baz=209						
TEGC				*e*S	Sb	18 00 32.6	+1.5
	baz=209						
WHF	**Hehuan Shan**	**0.47**	**276**	⇑P	Pg	18 00 22.3	-1.5
	baz=275						
WHF				S	Sg	18 00 28.1	-2.0
	baz=275						
ESAO	**Su ao**	**0.48**	**7**⇓	*i*P	Pg	18 00 22.9	-0.8
	baz=9.0						
ESAO				*e*S	Sg	18 00 29.5	-0.5
	baz=9.0						
EOS4	**EOS4**	**0.49**	**87**⇓	*e*P	Pn	18 00 27.0	-0.1
	baz=89						
NNSB	**Datong**	**0.49**	**312**⇓	*i*P	Pg	18 00 22.7	-1.3
	baz=313						
NNSB				S	Sg	18 00 28.8	-1.7
	baz=313						
NNSH	**Datong**	**0.49**	**312**⇓	*i*P	Pg	18 00 22.7	-1.3
	baz=313						
NNSH				*i* S	Sg	18 00 29.0	-1.5
	baz=313						
LATG	**Datong**	**0.49**	**332**⇓	*i*P	Pg	18 00 22.8	-1.2
	baz=342						
NNS	**Nan Shan**	**0.51**	**312**⇓	*i*P	Pg	18 00 23.0	-1.3
	baz=314						
NNS				*i* S	Sg	18 00 29.6	-1.4
	baz=314						
TWC	**Suao**	**0.51**	**7**⇓	*i*P	Pg	18 00 23.6	-0.7
	baz=4.0						
TWC				S	Sg	18 00 30.2	-0.9
	baz=4.0						
FUSS	**Fushou**	**0.51**	**287**⇑	*i*P	Pg	18 00 23.2	-1.2
	baz=287						
FUSS				*i* S	Sg	18 00 29.9	-1.4
	baz=287						
EOS2	**EOS2**	**0.52**	**52**	*e*P	Pb	18 00 25.6	+0.1
	baz=31						
EOS3	**EOS3**	**0.52**	**69**⇑	*e*P	Pn	18 00 27.4	-0.4
	baz=46						
WARBT	**Fenglin Townsh**	**0.53**	**224**⇑	*i*P	Pg	18 00 23.5	-1.1
	baz=233						
NDS	**Dongshan**	**0.54**	**353**⇓	*i*P	Pg	18 00 24.1	-0.8
	baz=355						
NDS				S	Sg	18 00 31.4	-0.5
	baz=355						
EGFH	**Guangfu**	**0.54**	**217**⇑	*e*P	Pg	18 00 24.5	-0.4
	baz=229						
EGFH				S	Sb	18 00 34.0	+0.3
	baz=229						
CHGB	**Renai**	**0.56**	**266**⇑	*i*P	Pg	18 00 24.0	-1.3
	baz=266						
CHGB				*i* S	Sg	18 00 30.8	-1.9
	baz=266						
NDT	**Datong Townshi**	**0.56**	**334**⇓	*i*P	Pg	18 00 24.4	-0.9
	baz=335						
NDT				*i* S	Sg	18 00 31.9	-0.7
	baz=335						
ENTT	**Nioudou**	**0.57**	**340**⇓	*i*P	Pg	18 00 24.6	-0.9
	baz=341						
ENTT				*i* S	Sg	18 00 32.3	-0.8
	baz=341						
OWD	**Renai**	**0.57**	**255**⇑	*i*P	Pg	18 00 24.2	-1.3
	baz=256						
OWD				S	Sg	18 00 31.4	-1.7
	baz=256						
TWT	**Tachien**	**0.57**	**286**	⇑P	Pg	18 00 24.6	-1.0
	baz=285						
TWT				S	Sg	18 00 31.6	-1.6
	baz=285						
TDCB	**Techi**	**0.59**	**285**⇑	*i*P	Pg	18 00 24.7	-1.2
	baz=285						
TDCB				*e*S	Sg	18 00 31.9	-1.8
	baz=285						
WUSB	**Renai**	**0.62**	**260**⇑	*i*P	Pg	18 00 25.1	-1.3
	baz=259						
WUSB				*i* S	Sg	18 00 32.0	-2.6
	baz=259						
TWE	**Neicheng**	**0.63**	**350**⇓	*i*P	Pg	18 00 25.8	-0.8
	baz=353						
TWE				*i* S	Sg	18 00 34.5	-0.3
	baz=353						
ILA	**Ilan**	**0.66**	**357**	*e*P	Pg	18 00 26.9	-0.3
	baz=358						
YHNB	**Yeheng**	**0.68**	**327**	Pg	Pg	18 00 26.2	-1.4
YHNB				Sg	Sg	18 00 34.4	-2.0
YHNB	**Yeheng**	**0.68**	**327**⇓	*i*P	Pg	18 00 26.7	-0.8
	baz=327						
FUSB	**Fushanzhiwuyua**	**0.68**	**345**⇓	*i*P	Pg	18 00 26.8	-0.8
	baz=337						
FUSB				S	Sg	18 00 36.2	-0.4
	baz=337						
VWDT	**VWDT**	**0.68**	**240**⇑	*i*P	Pg	18 00 26.4	-1.2
	baz=240						
VWDT				S	Sg	18 00 34.7	-1.8
	baz=240						
HGSD	**Ruisui**	**0.69**	**209**⇓	*i*P	Pb	18 00 28.1	-0.3
	baz=197						
NSK	**Sanguang**	**0.69**	**326**⇓	*i*P	Pg	18 00 26.9	-0.9
	baz=327						
NSK				*i* S	Sg	18 00 35.5	-1.3
	baz=327						
NWLT	**Wulai**	**0.72**	**339**	⇓P	Pg	18 00 27.5	-0.8
	baz=340						
NWLT				S	Sg	18 00 36.6	-1.2
	baz=340						
EHY	**Hungye**	**0.73**	**216**	*e*P	Pg	18 00 27.6	-0.8
	baz=218						
NTC	**Toucheng**	**0.75**	**3**	*e*P	Pg	18 00 28.5	-0.4
	baz=2.0						
WPL	**Puli Township**	**0.76**	**264**⇑	*i*P	Pg	18 00 27.9	-1.2
	baz=254						
WPL				*i* S	Sg	18 00 37.0	-2.1
	baz=254						
WHP	**Taichung City**	**0.79**	**283**⇑	*i*P	Pg	18 00 28.7	-0.8
	baz=283						
WHP				S	Sg	18 00 38.7	-1.1
	baz=283						
DPDB	**Guoxing**	**0.79**	**265**⇑	*i*P	Pg	18 00 28.5	-1.1
	baz=256						
DPDB				S	Sg	18 00 38.1	-1.8
	baz=256						
WCS	**Beigang Elemen**	**0.80**	**267**⇑	*i*P	Pg	18 00 28.6	-1.1
	baz=260						
WCS				S	Sg	18 00 38.1	-2.0
	baz=260						
NFF	**Wufeng Township**	**0.81**	**311**⇓	*i*P	Pg	18 00 29.2	-0.8
	baz=311						
NFF				S	Sg	18 00 38.6	-1.9
	baz=311						
SSLB	**Suanglung**	**0.82**	**248**		Pg	18 00 28.7	-1.5
SSLB				Sg	Sg	18 00 38.2	-2.7
SSLB	**Suanglung**	**0.82**	**248**⇑	*i*P	Pg	18 00 28.9	-1.3
	baz=260						
SSLB				*e*S	Sg	18 00 37.5	-3.4
	baz=260						
YULB	**Yu-li**	**0.83**	**212**		Pg	18 00 29.1	-1.3
YULB				Sg	Sg	18 00 41.0	-0.3
YULB	**Yu-li**	**0.83**	**212**	P	Pg	18 00 29.8	-0.7
YULB	**Yu-li**	**0.83**	**212**⇓	*i*P	Pg	18 00 29.3	-1.2
	baz=228						
SMLT	**Sun Moon Lake**	**0.84**	**255**⇑	*i*P	Pg	18 00 29.4	-1.1

baz=256
SMLT *i* S **Sg** 18 00 39.7 -1.7
baz=256
ECBN Changbin 0.84 201 ⇓P **Pg** 18 00 30.4 -0.1
baz=191
EYUL Yuli 0.86 210 *e*P **Pg** 18 00 30.5 -0.5
baz=229
TWF1 Yuli 0.87 211 *e*P **Pg** 18 00 30.1 -1.0
baz=228
TIPB Shuangxi 0.87 3 ⇓P **Pg** 18 00 30.3 -0.9
baz=2.0
TIPB S **Sg** 18 00 41.2 -1.3
baz=2.0
TYC Yuchr 0.87 257 ⇑P **Pg** 18 00 29.6 -1.6
baz=258
TYC *i* S **Sg** 18 00 39.9 -2.6
baz=258
LIOB Emei 0.89 308 ⇓*i*P **Pg** 18 00 30.9 -0.6
baz=307
NSTT Nanjuang 0.89 307 ⇓*i*P **Pg** 18 00 30.8 -0.7
baz=307
NSTT *e*S **Sg** 18 00 41.3 -1.7
baz=307
NHDH Xindian Distri 0.89 345 ⇓P **Pg** 18 00 31.0 -0.5
baz=344
TWA Mucha 0.90 348 ⇓*i*P **Pg** 18 00 31.0 -0.6
baz=348
TWA S **Sg** 18 00 42.2 -1.1
baz=348
NJD Zhudong 0.90 315 ⇓P **Pg** 18 00 31.6 -0.1
baz=315
NJD S **Sg** 18 00 43.3 0.0
baz=315
TATO Taipei 0.91 343 **Pg** 18 00 31.2 -0.8
TATO Sg **Sg** 18 00 42.2 -1.6
TATO Taipei 0.91 343 ⇓*i*P **Pg** 18 00 31.4 -0.6
baz=343
TATO S **Sg** 18 00 43.3 -0.6
baz=343
TATO Taipei 0.91 343 P **Pg** 18 00 31.4 -0.6
TATO S **Sg** 18 00 43.9 +0.1
TWB1 Santiao Chiao 0.92 12 ⇓P **Pg** 18 00 31.6 -0.5
baz=3.0
TWB1 *e*S **Sg** 18 00 43.4 -0.8
baz=3.0
WHYT Xinyi Township 0.94 245 ⇑P **Pg** 18 00 31.1 -1.4
baz=247
BACT New Taipei Cit 0.95 341 *e*P **Pg** 18 00 32.3 -0.3
baz=340
BACT S **Sg** 18 00 44.9 0.0
baz=340
NHY Taipei 0.95 348 *e*P **Pg** 18 00 32.4 -0.4
baz=347
TWQ1 Liyutan 0.95 285 *e*P **Pb** 18 00 33.1 +0.1
baz=296
TWQ1 *e*S **Sb** 18 00 46.4 +0.6
baz=296
NWF Wu-fen Shan 0.97 360 ⇓*i*P **Pg** 18 00 32.5 -0.5
baz=357
WFSB Wu-fen Shan 0.97 360 ⇓*i*P **Pg** 18 00 32.5 -0.5
baz=351
WFSB S **Sg** 18 00 44.9 -0.7
baz=351
TAP Taipei 0.97 345 ⇓P **Pg** 18 00 32.4 -0.6
baz=345
TAP *i* S **Sg** 18 00 45.6 -0.1
baz=345
HSN1 Hsinchu 0.97 314 ⇓P **Pg** 18 00 32.9 -0.2
baz=314
HSN1 S **Sb** 18 00 45.8 -0.4
baz=314
CHKH Chenggong 0.97 202 *e*P **Pg** 18 00 32.8 -0.3
baz=205
CHKH *e*S **Sn** 18 00 48.1 +0.3
baz=205
NSY Sanyi 0.98 289 ⇑*i*P **Pb** 18 00 33.4 -0.1
baz=289
NSY *e*S **Sb** 18 00 46.5 -0.1
baz=289
SXI1 Grass Mountain 0.99 5 ⇓*i*P **Pg** 18 00 33.0 -0.6
baz=350
SXI1 S **Sg** 18 00 45.7 -0.8
baz=350
WWF Wufeng 0.99 267 ⇑P **Pg** 18 00 33.3 -0.2
baz=262
WWF *e*S **Sb** 18 00 46.9 0.0
baz=262
NTY Taoyuan 1.00 334 ⇓*e*P **Pb** 18 00 33.6 -0.2
baz=335
NTY *e*S **Sb** 18 00 47.3 +0.3
baz=335
SBCB Hsinchu 1.00 314 ⇓*i*P **Pb** 18 00 33.8 -0.1
baz=313
SBCB *i* S **Sb** 18 00 46.8 -0.3
baz=313
FULB Fuli 1.00 207 ⇓P **Pg** 18 00 32.7 -1.0
baz=227
NMLH Miaoli 1.00 296 *e*P **Pb** 18 00 33.8 -0.1
baz=295
WJS Zhushan 1.00 254 ⇑P **Pg** 18 00 33.1 -0.6
baz=256
WJS S **Sg** 18 00 46.7 0.0
baz=256
TCU Taichung 1.01 273 ⇑*i*P **Pg** 18 00 33.5 -0.3
baz=269
TCU *i* S **Sb** 18 00 47.4 0.0
baz=269
NJN Zhunan 1.01 305 ⇓*e*P **Pg** 18 00 33.7 -0.2
baz=305
NJN S **Sg** 18 00 46.3 -0.8
baz=305
HSN Hsinchu 1.02 313 ⇓P **Pg** 18 00 33.8 -0.3
baz=316
HSN *e*S **Sb** 18 00 47.3 -0.3
baz=316
NCUH Zhongli 1.02 328 ⇓P **Pg** 18 00 34.0 -0.1
baz=327
NCUH *e*S **Sn** 18 00 50.5 +1.3
baz=327
NCU National Centr 1.02 328 ⇓P **Pg** 18 00 34.0 -0.1
baz=327
NCU *e*S **Sn** 18 00 49.1 -0.1
baz=327
WNT1 Nantou City 1.03 259 ⇑*i*P **Pb** 18 00 34.2 -0.1
baz=261
WNT1 *i* S **Sb** 18 00 47.6 -0.2
baz=261
WNT Mingjian 1.03 258 ⇑P **Pg** 18 00 33.6 -0.6
baz=259
WNT *e*S **Sb** 18 00 47.8 0.0
baz=259
TNOU National Taiwa 1.04 360 ⇓*i*P **Pg** 18 00 33.7 -0.8
baz=358
TNOU S **Sg** 18 00 47.1 -1.1
baz=358
TWS1 Kuangyinshan 1.05 342 ⇓*i*P **Pg** 18 00 34.5 -0.2
baz=341
TWS1 *i* S **Sn** 18 00 49.3 -0.6
baz=341
YM01 YM01 1.06 350 ⇓*i*P **Pg** 18 00 34.4 -0.4
baz=348
YM01 S **Sb** 18 00 48.8 0.0
baz=348
CHKT Chengkung 1.07 201 ⇓P **Pg** 18 00 33.1 -1.8
baz=195
CHKT *e*S **Sn** 18 00 51.6 +1.3
baz=195
ALS Alishan 1.07 237 ⇑P **Pg** 18 00 34.0 -1.0
baz=240
ALS *i* S **Sn** 18 00 50.2 -0.6
baz=240
WDJ Dajia District 1.07 284 ⇑P **Pn** 18 00 35.3 -0.1
baz=293
WDJ *e*S **Sn** 18 00 49.8 -0.6
baz=293
EHD Haiduan 1.08 209 *e*P **Pg** 18 00 34.2 -1.0
baz=227
NTST Danshui 1.10 344 *e*P **Pg** 18 00 35.6 0.0
baz=351
NTST *e*S **Sn** 18 00 51.9 +0.8
baz=351
NWRT Kuosheng 1.10 354 *e*P **Pb** 18 00 35.2 -0.4
baz=351
ANP Anpu 1.11 348 ⇓*i*P **Pg** 18 00 34.9 -0.8
baz=347
ANP *e*S **Sn** 18 00 50.9 -0.5
baz=347
WYL Yuanlin Townsh 1.11 263 ⇑*i*P **Pg** 18 00 35.6 -0.1
baz=265
WYL S **Sb** 18 00 50.4 +0.2
baz=265
JYNG Yonagunijimaku 1.12 72 P **Pn** 18 00 36.6 +0.5
JYNG S **Sn** 18 00 51.9 +0.4
JYNG Yonagunijimaku 1.12 72 A **A** 18 00 36.6
comp=E,293nm,5.1s,comp=N,285nm,7.0s
WCHH Zhanghua 1.12 269 ⇑*i*P **Pn** 18 00 35.9 -0.2
baz=271
NHW Xinwu Township 1.12 324 ⇓P **Pb** 18 00 35.3 -0.6
baz=322
NHW *e*S **Sn** 18 00 51.1 -0.6
baz=322
ECS Chishang 1.13 207 P **Pb** 18 00 35.3 -0.6
baz=216
CHN5 Tsauling 1.13 244 P **Pn** 18 00 36.2 -0.1
baz=247
CHN5 S **Sn** 18 00 51.7 -0.2
baz=247
ELDTW Lidau 1.15 218 ⇓P **Pb** 18 00 34.0 -2.3
baz=207
ELDTW *e*S **Sg** 18 00 50.4 -1.0
baz=207
YOJ Yonaguni jima 1.18 72 Pg **Pg** 18 00 37.4 +0.4
YOJ Yonaguni jima 1.18 72 ⇑*i*P **Pg** 18 00 37.4 +0.4
baz=51
YOJ Yonaguni jima 1.18 72 P **Pg** 18 00 37.4 +0.4
YOJ Yonaguni jima 1.18 72 P **Pg** 18 00 37.4 +0.4
YOJ S **Sn** 18 00 54.5 +1.5
YOJ Yonaguni jima 1.18 72 A **A** 18 00 37.4
comp=E,359nm,4.4s,comp=N,300nm,4.4s
TWY Chenhua 1.18 352 ⇓P **Pb** 18 00 36.5 -0.4
baz=334
WGK Gukeng 1.19 250 *e*P **Pg** 18 00 37.2 0.0
baz=253
WGK *e*S **Sn** 18 00 53.2 -0.2
baz=253
NSM Shimen 1.20 352 *e*P **Pb** 18 00 36.4 -0.7
baz=336
WDLH Douliu 1.21 250 *e*P **Pn** 18 00 37.2 -0.1
baz=254
WCKO Fanlu 1.27 239 ⇑P **Pg** 18 00 38.5 -0.2
baz=243
WCKO S **Sn** 18 00 55.6 +0.4
baz=243
WRL Guolierlin Hig 1.30 262 ⇑P **Pn** 18 00 38.5 -0.1
baz=264
WRL *i* S **Sg** 18 00 56.1 -0.1
baz=264
STYH Taoyuan 1.31 225 ⇓P **Pn** 18 00 37.8 -0.9
baz=230
STYH *e*S **Sb** 18 00 56.0 +0.1
baz=230
RLNB Erlin 1.32 261 ⇑*i*P **Pb** 18 00 39.0 -0.2
baz=263
RLNB *e*S **Sb** 18 00 56.1 -0.1
baz=263
CHN4 Tsaushan 1.32 236 ⇓P **Pb** 18 00 39.1 -0.1
baz=241
CHN4 S **Sg** 18 00 58.0 +1.1
baz=241
TPUB Ta-pu 1.32 233 Pn **Pn** 18 00 38.9 -0.1
TPUB **Sg** 18 00 57.8 +0.8
TPUB Ta-pu 1.32 233 P **Pb** 18 00 39.5 +0.2
TPUB Ta-pu 1.32 233 ⇓*i*P **Pn** 18 00 39.0 +0.1
baz=238
TPUB *e*S **Sg** 18 00 57.9 +0.8
baz=238
STYT Tauyuan 1.32 225 ⇓*i*P **Pn** 18 00 38.4 -0.6
baz=230
STYT S **Sb** 18 00 56.5 +0.1
baz=230
LONT Longtian 1.33 207 *e*P **Pn** 18 00 37.1 -1.9
baz=215
WTK Tuku 1.34 252 ⇑P **Pn** 18 00 39.0 -0.1
baz=256
WTK *e*S **Sn** 18 00 56.9 -0.2
baz=256
WTP Ta-pu 1.37 232 ⇓P **Pn** 18 00 39.7 +0.1
baz=237
WTP S **Sg** 18 00 58.8 +0.4
baz=237
CHY Chiayi 1.38 245 *e*P **Pb** 18 00 40.1 -0.2
baz=250
WTCT Ta-ch'eng 1.39 261 P **Pn** 18 00 40.0 +0.1
baz=263
WTCT S **Sg** 18 00 58.8 -0.5
baz=263
TWG Pinlang 1.43 207 **Pn** 18 00 37.7 -2.7
TWG Pinlang 1.43 207 *e*P **Pn** 18 00 40.3 -0.1
baz=216
TWGBT Beinan 1.43 207 P **Pn** 18 00 38.7 -1.7
TWGBT Beinan 1.43 207 *e*P **Pn** 18 00 37.6 -2.8
baz=216
TWK Hsinying 1.45 235 ⇑*i*P **Pb** 18 00 41.5 +0.1
baz=240
TWK *i* S **Sg** 18 01 01.5 +0.5
baz=240
LDUT Ludao 1.45 192 *e*P **Pn** 18 00 38.6 -2.1
baz=202
TTN Taitung 1.46 204 *e*P **Pn** 18 00 39.4 -1.4
baz=213
CHN1 Nanshi 1.47 232 ⇓*i*P **Pn** 18 00 41.1 +0.2
baz=238
CHN1 S **Sg** 18 01 01.8 +0.1
baz=238
SNST Tainan City 1.47 234 ⇓P **Pn** 18 00 41.0 +0.1
baz=239
SNST *e*S **Sg** 18 01 02.6 +0.9
baz=239
SGST Jiashian 1.50 228 ⇓*e*P **Pn** 18 00 40.6 -0.7
baz=233
SGST S **Sb** 18 01 01.8 +0.4
baz=233
WSF Szhu 1.50 252 P **Pb** 18 00 41.8 -0.5
baz=256
WSF *e*S **Sg** 18 01 02.6 -0.1
baz=256
SLGT Liugui 1.52 224 *e*P **Pn** 18 00 41.7 +0.1
baz=230
SLGT *e*S **Sg** 18 01 04.1 +0.9
baz=230
WSL Shuilin Townsh 1.54 248 *e*P **Pn** 18 00 42.2 +0.4
baz=253
PCYT Pengchaiyu 1.54 10 *e*P **Pn** 18 00 42.4 +0.4
baz=3.0
ICHU Yijhu 1.56 242 *e*P **Pb** 18 00 42.8 -0.6
baz=247
ICHU S **Sg** 18 01 04.3 -0.4
baz=247
CHN8 Yiju 1.62 243 P **Pn** 18 00 43.3 +0.2
baz=248
CHN8 S **Sb** 18 01 05.3 +0.3
baz=248
CHN3 Shinhua 1.65 232 ⇓*i*P **Pb** 18 00 44.7 -0.2
baz=238
CHN3 *e*S **Sg** 18 01 09.4 +1.9
baz=238
SSHA Shanhua 1.67 235 *e*P **Pn** 18 00 43.8 +0.1
baz=241
SSHA *e*S **Sg** 18 01 07.9 -0.3
baz=241
ECL Taimali 1.68 207 *e*P **Pb** 18 00 45.0 -0.4
baz=203
SCST Cishan 1.69 225 *e*P **Pb** 18 00 45.5 -0.1
baz=231
SCST *e*S **Sg** 18 01 10.2 +1.4
baz=231
SHHT Tainan City 1.70 231 ⇓P **Pb** 18 00 45.3 -0.4
baz=239
SCLT Jiali 1.72 238 *e*P **Pn** 18 00 44.8 +0.4
baz=244
SCLT S **Sb** 18 01 08.7 +0.8
baz=244
TSMG Majia 1.74 217 *e*P **Pn** 18 00 44.7 +0.1
baz=237
TSMG S **Sb** 18 01 08.8 +0.6
baz=237
TAI1 Yung-k'ang 1.77 234 *e*P **Pn** 18 00 45.4 +0.3
baz=242
TWM1 Shoushan 1.78 225 *e*P **Pb** 18 00 47.3 +0.2
baz=232
IRIF Iriomote-Funau 1.79 82 P **Pn** 18 00 45.9 +0.6
IRIF S **Sb** 18 01 10.5 +0.7
IRIF Iriomote-Funau 1.79 82 A **A** 18 00 45.9
comp=E,146nm,2.3s,comp=N,203nm,5.7s
SGLT Jiouru 1.81 221 P **Pb** 18 00 47.3 -0.3
baz=213
SGLT *e*S **Sg** 18 01 14.1 +1.4
baz=213
MASBT Mashibuluo 1.82 216 ⇓P **Pn** 18 00 46.1 +0.4
baz=223
MASBT *i* S **Sb** 18 01 11.7 +1.1
baz=223
TSCK Chigu Township 1.82 239 *e*P **Pb** 18 00 47.2 -0.7
baz=247
TAI Tainan 1.82 233 *e*P **Pb** 18 00 47.9 0.0
baz=241
TSPT Pingtung City 1.84 220 *e*P **Pb** 18 00 47.4 -0.8
baz=212
TSPT S **Sg** 18 01 13.7 -0.1
baz=212
HATJ Hateruma jima 1.85 91 P **Pb** 18 00 47.3 -0.9
HATJ Hateruma jima 1.85 91 A **A** 18 00 47.3
comp=E,334nm,3.1s,comp=N,358nm,5.7s
SNJT Kaohsiung City 1.89 225 *e*P **Pb** 18 00 48.7 -0.2
baz=234
EAST Anshuo 1.91 207 *e*P **Pn** 18 00 46.8 -0.3
baz=217
TAW Tawu 1.92 205 *e*P **Pb** 18 00 48.7 -0.8
baz=204
TAWH Dawu Township 1.94 205 *e*P **Pb** 18 00 49.1 -0.6
baz=216
WSSB Gushan 2.02 224 *e*P **Pb** 18 00 50.8 -0.3
baz=233
SCZT Fangliau 2.03 212 *e*P **Pn** 18 00 49.7 +1.1
baz=207
JKRS Kuro-shima 2.04 86 P **Pn** 18 00 50.0 +1.3
JKRS *e*S **Sb** 18 01 18.0 +1.1
JKRS Kuro-shima 2.04 86 A **A** 18 00 50.0
comp=E,483nm,3.9s,comp=N,494nm,3.3s
KAU Kaohsiung 2.04 222 *e*P **Pb** 18 00 51.4 -0.2
baz=249
LAY Lan-yu 2.06 186 *e*P **Pn** 18 00 47.0 -2.1
baz=200
SLIU Shizi 2.08 206 *e*P **Pb** 18 00 50.9 -1.3
baz=217
LYUB Lan-yu 2.10 185 *e*P **Pn** 18 00 45.2 -4.4
baz=199
PHUB P'eng-hu 2.11 254 P **Pn** 18 00 50.3 +0.6
baz=259
PHUB S **Sn** 18 01 16.6 +0.6
baz=259
PNG Penghu 2.11 256 ⇓P **Pn** 18 00 50.4 +0.7
baz=260
PNG S **Sb** 18 01 17.4 -1.5
baz=260
WDGT Dungji 2.12 247 *e*P **Pn** 18 00 49.8 0.0
baz=254
JIJ Ishigaki jima 2.17 83 P **Pn** 18 00 51.2 +0.6
JIJ Ishigaki jima 2.17 83 A **A** 18 00 51.2
comp=E,63nm,4.7s,comp=N,114nm,4.0s
TWP Hsiaoliuchiu 2.18 217 *e*P **Pb** 18 00 53.5 -0.5
baz=226
HEN Hengchun 2.30 205 *e*P **Pn** 18 00 53.7 +1.4
baz=206
VWUC VWUC 2.30 293 *e*P **Pn** 18 00 51.5 -0.8
baz=292
TWK1 Hengchun 2.33 203 *e*P **Pn** 18 00 53.0 +0.3
baz=203
TWKBT Hengchun 2.33 203 *e*P **Pn** 18 00 52.6 -0.1
baz=203
VCHM Qimei 2.33 248 *e*P **Pn** 18 00 51.5 -1.3
baz=240
VCHM *e*S **Sn** 18 01 21.1 -0.4
baz=240
TSEB Hengchuen, Pin 2.34 201 *e*P **Pn** 18 00 54.7 +1.9
baz=203
JISG Ishigakijimahi 2.36 78 P **Pn** 18 00 53.5 +0.3
JISG *e*S **Sb** 18 01 25.0 -1.1
JISG Ishigakijimahi 2.36 78 A **A** 18 00 53.5
comp=E,51nm,3.0s,comp=N,72nm,5.5s
PTMZ Houxiangcun 2.60 292 *e*P **Pn** 18 00 55.5 -0.9
baz=291
MATB Ma-tsu 2.64 321 *e*P **Pn** 18 00 55.1 -1.8
baz=318
MSUT Lienchiang 2.66 321 *e*P **Pn** 18 00 56.9 -0.4
baz=318
JTJ Tarama 2.72 78 P **Pb** 18 01 01.2 -1.8
JTJ S **Sb** 18 01 35.2 -1.2
JTJ Tarama 2.72 78 A **A** 18 01 01.2
comp=E,110nm,3.2s,comp=N,130nm,3.7s
QZH Quanzhou 3.02 287 ⇓*i*Pn **Pn** 18 01 01.6 -0.7
QZH Sn **Sn** 18 01 38.4 -0.2
QZH smax smax
comp=N,9μm,1.4s
QZH smax smax
comp=N,7μm,1.3s
LYJJ Jianjiangzhen 3.05 324 *e*P **Pn** 18 01 01.7 -1.0
baz=320
KNM Kinmen 3.07 277 *e*P **Pn** 18 01 03.6 +0.6
baz=278
KNMB Chin-men Tao 3.12 277 Pn **Pn** 18 01 03.2 -0.4
KNMB Chin-men Tao 3.12 277 *e*P **Pn** 18 01 03.2 -0.4
baz=279
XPSS Dashiqiu 3.16 333 *e*P **Pn** 18 01 03.6 -0.6
baz=328
JIRB Irabujima 3.17 76 A **A** 18 01 07.1
comp=E,78nm,7.7s,comp=N,96nm,3.6s
MHZQ Yeshan 3.19 309 *e*P **Pn** 18 01 05.1 +0.4
baz=308
JIKM Ikemajima 3.26 75 A **A** 18 01 08.3
comp=E,80nm,5.9s,comp=N,107nm,5.9s
JMJ Miyako jima 2 3.28 77 P **Pb** 18 01 13.4 +0.8
JMJ Miyako jima 2 3.28 77 *e*P **Pn** 18 01 08.7 +2.9
baz=61
JMJ2 Miyako jima3 3.29 78 P **Pn** 18 01 08.0 +2.0
JMJ2 *e*S **Sn** 18 01 47.7 +2.4
JMJ2 Miyako jima3 3.29 78 A **A** 18 01 08.0
comp=E,146nm,6.2s,comp=N,190nm,5.6s
JOGS Gusukube 3.37 78 A **A** 18 01 09.8
comp=E,119nm,5.6s,comp=N,162nm,8.7s
AXDP Jialang 3.56 284 *e*P **Pn** 18 01 08.9 -0.9
baz=284
ZPLA Ao Xicun 3.69 268 *e*P **Pn** 18 01 10.1 -1.4
baz=271
DSXP Dongshan 4.01 265 *e*P **Pn** 18 01 15.0 -0.8
baz=269
SXFK Yanhouchang 4.39 302 *e*P **Pn** 18 01 20.9 -0.2
baz=302
JKE Kume jima 2 5.04 63 *e*P **Pn** 18 01 31.3 +1.2
JKE Kume jima 2 5.04 63 A **A** 18 01 31.3
comp=E,9.0nm,4.0s,comp=N,12nm,9.4s
JAGN Aguni-jima 5.53 62 A **A** 18 01 40.2
comp=E,17nm,7.1s,comp=N,20nm,5.5s
JJT3 Tamagusuku3 5.81 68 A **A** 18 01 44.1
comp=E,48nm,4.4s,comp=N,43nm,5.4s
JNTH Nagotoyohara 6.14 66 *e*P **Pn** 18 01 45.9 +0.8
JNTH Nagotoyohara 6.14 66 A **A** 18 01 45.9
comp=E,10.0nm,10.1s,comp=N,9.0nm,7.7s
JIH Iheya 6.30 61 A **A** 18 01 51.0
comp=E,12nm,9.1s,comp=N,9.0nm,11.1s
JOW Kunigami 6.47 64 Pn **Pn** 18 01 48.9 -0.7
JOW Kunigami 6.47 64 P **Pn** 18 01 54.0 +4.3
JOW Kunigami 6.47 64 *e*P **Pn** 18 01 50.0 +0.3
baz=59
JOW Kunigami 6.47 64 A **A** 18 01 53.3
comp=E,20nm,5.1s,comp=N,15nm,6.0s
JOW Kunigami 6.47 64 Pn **Pn** 18 01 48.2 -1.4
comp=N,7.7nm,0.3s,baz=246,slow=10.0,SNR=8.2
comp=N,19nm,0.3s
SZP Santa 6.63 191 P **Pn** 18 01 54.5 +2.5
JYRO Yoronjima 6.69 63 A **A** 18 01 56.4
comp=E,12nm,5.0s,comp=N,8.0nm,8.1s
JOKE Okinoerabujima 6.93 61 A **A** 18 01 59.8
comp=E,10.0nm,9.8s,comp=N,7.0nm,8.2s
SSE Sheshan 6.99 356 Pn **Pn** 18 01 55.3 -1.5
SSE Sn **Sn** 18 03 15.4 -0.9
SSE smax smax
comp=N,220nm,1.4s
SSE smax smax
comp=N,340nm,2.0s
SSE LR LR
comp=N,4μm,10.5s
SSE LR LR
comp=N,8μm,10.2s
HKPS Hong Kong Po S 7.26 257 **Pn** 18 02 00.5 -0.1
HKPS Hong Kong Po S 7.26 257 P **Pn** 18 02 01.7 +1.1
HKPS Hong Kong Po S 7.26 257 *e*P **Pn** 18 02 01.2 +0.6
baz=263
JTK Tokunoshima 7.42 59 A **A** 18 02 06.7
comp=E,5.0nm,10.2s,comp=N,6.0nm,7.2s
GZH Guangzhou 7.81 264 Pn **Pn** 18 02 02.0 -6.0
GZH Sn **Sn** 18 03 26.4 -10
GZH smax smax

GZH smax smax
comp=N,2μm,1.6s
comp=N,890nm,1.3s
MCO Taipa Grande 7.82 257 P Sb 18 03 51.0 -12
NJ2 Nanjing 8.33 343 ⇑P **Pn 18 02 14.9 -0.3**
NJ2 S **Sn 18 03 50.2 +0.8**
NJ2 pmax pmax
comp=N,44nm,0.8s
NJ2 smax smax
comp=N,1μm,1.3s
NJ2 smax smax
comp=N,800nm,1.6s
NJ2 LR LR
comp=N,27μm,13.7s
JMZ Minamidaito 2 8.74 77 Pn **Pn 18 02 20.1 -0.7**
CNSH ChangSha 8.93 299 ⇓P **Pn 18 02 23.6 +0.1**
CNSH S **Sn 18 04 04.9 +0.7**
CNSH smax smax
comp=N,3μm,1.9s
CNSH smax smax
comp=N,2μm,1.6s
CNSH LR LR
comp=N,17μm,8.7s
CNSH LR LR
comp=N,15μm,9.8s
WHN Wuhan 9.21 316 P **Pn 18 02 28.1 +0.8**
WHN pP 18 02 32.5
WHN S **Sn 18 04 15.2 +4.2**
WHN LR LR
comp=N,127μm,8.0s
WHN LR LR
comp=N,126μm,9.9s
WHN LR LR
comp=N,42μm,11.8s
TGY Tagaytay City 9.98 185 LR LR 18 06 33.4
comp=N,9μm,21.9s,baz=15,slow=38
GULI GuiLin 10.45 279 ⇑P **Pn 18 02 44.5 +0.2**
GULI S **Sn 18 04 45.0 +3.5**
GULI pmax pmax
comp=N,30nm,1.6s
GULI LR LR
comp=N,17μm,8.5s
GULI LR LR
comp=N,18μm,8.2s
JNU Nakatsue 12.02 40 P Pn 18 03 14.0 +8.2
JNU Nakatsue 12.02 40 Pn **Pn 18 03 05.0 -0.9**
comp=N,0.1nm,0.3s,baz=210,slow=20,SNR=2.0
JNU LR LR 18 08 28.5
comp=N,7μm,18.2s,baz=222,slow=42
comp=N,20nm,1.1s
QIZ Qiongzhong 12.20 248 P **Pn 18 03 09.0 +0.7**
QIZ S **Sn 18 05 25.0 +0.6**
QIZ pmax pmax
comp=N,55nm,2.0s
QIZ pmax pmax
comp=N,660nm,3.5s
QIZ LR LR
comp=N,21μm,17.3s
QIZ LR LR
comp=N,10μm,11.8s
QIZ LR LR
comp=N,10μm,15.8s
QIZ Qiongzhong 12.20 248 P **Pn 18 03 10.1 +1.8**
JTU Tsushima 12.32 31 Pn **Pn 18 03 10.4 +0.5**
ENH Enshi 12.55 302 P Pn 18 03 18.4 +5.3
TIA Tai'an 12.72 343 *e*P **Pn 18 03 16.0 +0.6**
TIA pmax pmax
comp=N,8.0nm,1.8s
TIA LR LR
comp=N,7μm,12.6s
TIA LR LR
comp=N,10μm,9.6s
TIA LR LR
comp=N,11μm,13.2s
TJN Taejon 13.15 20 **Pn 18 03 20.4 -0.8**
TJN Taejon 13.15 20 P **P 18 03 29.8 -1.6**
TJN Taejon 13.15 20 P **Pn 18 03 20.4 -0.8**
LYN LuoYang 13.20 324 ⇑P **Pn 18 03 19.8 -2.1**
LYN sP P 18 03 26.8 -5.2
LYN PP **PnPn 18 03 30.6 +0.7**
LYN S **Sn 18 05 41.4 -7.4**
LYN SS **SnSn 18 06 06.1 +4.8**
LYN pmax pmax
comp=N,23nm,0.5s
LYN pmax pmax
comp=N,950nm,8.8s
LYN LR LR
comp=N,41μm,13.4s
LYN LR LR
comp=N,53μm,13.1s
LYN LR LR
comp=N,31μm,12.0s
GYA Guiyang 13.88 283 P **Pn 18 03 31.5 +0.2**
GYA S **Sn 18 06 02.4 -3.2**
GYA pmax pmax
comp=N,21nm,1.1s
GYA LR LR
comp=N,20μm,6.4s
GYA LR LR
comp=N,12μm,8.8s
GYA LR LR
comp=N,16μm,9.1s
INCN Inchon 13.97 16 Pn **Pn 18 03 32.9 +0.5**
INCN Inchon 13.97 16 P **P 18 03 40.8 +0.2**
INCN Inchon 13.97 16 P **Pn 18 03 32.9 +0.5**
INCN Inchon 13.97 16 P **P 18 03 36.9 -3.6**
KSRS Korea Array 14.31 20 Pn **Pn 18 03 36.5 -0.5**
comp=N,0.4nm,0.3s,baz=206,slow=14,SNR=7.0
KSRS LR LR 18 09 53.4
comp=N,11μm,18.1s,baz=200,slow=41
comp=N,1.1nm,0.5s
HNS HongShan 14.58 337 *e*P **Pn 18 03 40.5 -0.2**
HNS *e*S **Sn 18 06 21.8 -0.5**
HNS SS **SnSn 18 06 37.5 +2.3**
HNS LR LR
comp=N,12μm,12.3s
HNS LR LR
comp=N,20μm,15.5s
DL2 Dalian 14.76 360 P **P 18 03 47.8 -1.5**
DL2 S **S 18 06 37.0 -8.5**
DL2 pmax pmax
comp=N,75nm,1.5s
DL2 pmax pmax
comp=N,1μm,5.1s
DL2 LR LR
comp=N,14μm,15.4s
DL2 LR LR
comp=N,5μm,12.5s
DL2 LR LR
comp=N,16μm,14.1s
XAN Xi'an 14.97 314 P **Pn 18 03 46.4 +0.3**
XAN S **Sn 18 06 34.4 +2.3**
XAN pmax pmax
comp=N,120nm,1.5s
XAN LR LR
comp=N,53μm,11.7s
XAN LR LR
comp=N,34μm,11.8s
XAN LR LR
comp=N,24μm,11.6s
TIY Taiyuan 15.75 332 P **P 18 04 01.1 +0.7**
TIY PP **PnPn 18 04 12.7 +7.8**
TIY S **S 18 07 00.0 -5.9**
TIY pmax pmax
comp=N,52nm,1.2s
TIY pmax pmax
comp=N,680nm,4.1s
TIY LR LR
comp=N,16μm,13.4s
TIY LR LR
comp=N,10μm,14.6s
BJT Baijiatuau 16.56 345 **P 18 04 08.8 -0.5**
BJT Baijiatuau 16.56 345 P **P 18 04 10.7 +1.4**
BJT Baijiatuau 16.56 345 P **P 18 04 08.8 -0.5**
BJT pmax pmax
comp=Z,76nm,1.7s
BJI Beijing 16.58 345 P **P 18 04 10.0 +0.5**
BJI pP **sP 18 04 13.5 +0.6**
BJI sP **pwP 18 04 17.3 +3.2**
BJI S **Sn 18 07 12.0 +0.9**
BJI pmax pmax
comp=Z,9.0nm,1.7s
BJI pmax pmax
comp=Z,650nm,8.4s
BJI LR LR
comp=Z,5μm,13.1s
BJI LR LR
comp=Z,4μm,11.8s
BJI LR LR
comp=Z,6μm,14.0s
SLVN Son La 16.72 264 P **Pn 18 04 09.1 +0.2**
DAV Davao City (W) 17.32 167 LR LR 18 11 34.7
comp=Z,4μm,18.7s,baz=352,slow=40
KMI Kunming 17.35 277 ⇑P **P 18 04 19.5 +1.2**
KMI pmax pmax
comp=Z,34nm,1.7s
KMI pmax pmax
comp=Z,800nm,4.0s
KMI LR LR
comp=Z,12μm,6.5s
KMI LR LR
comp=Z,20μm,8.2s
KMI LR LR
comp=Z,18μm,10.8s
CD2 Chengdu 17.36 297 P **P 18 04 20.2 +2.0**
CD2 pmax pmax
comp=Z,90nm,1.0s
CD2 LR LR
comp=Z,17μm,6.1s
CD2 LR LR
comp=Z,19μm,7.6s
CD2 LR LR
comp=Z,15μm,6.9s
DLV T Lat 17.48 229 P **P 18 04 19.5 -0.3**
DLV T Lat 17.48 229 P **P 18 04 20.9 +1.2**
UBPT Khong Chiam 17.68 243 P **P 18 04 22.2 +0.5**
UBPT Khong Chiam 17.68 243 P **P 18 04 24.3 +2.6**
JGF Kuroka 17.69 46 P **P 18 04 21.9 +0.1**
SNY Shenyang 17.74 4 ⇓P **P 18 04 24.1 +1.8**
SNY pmax pmax
comp=Z,17nm,1.8s
SNY pmax pmax
comp=Z,2μm,4.9s
SNY LR LR
comp=Z,5μm,8.8s
SNY LR LR
comp=Z,3μm,9.0s
SNY LR LR
comp=Z,17μm,13.7s
PZH PanZhiHua 18.28 282 P **P 18 04 29.4 +0.9**
PZH S **S 18 07 56.4 -1.3**
PZH SS **SnSn 18 08 07.4 +1.1**
PZH pmax pmax
comp=Z,20nm,1.4s
PZH pmax pmax
comp=Z,620nm,4.8s
PZH LR LR
comp=Z,5μm,10.6s
PZH LR LR
comp=Z,6μm,16.1s
JCJ Chichijima 18.64 76 P **P 18 04 31.4 -0.9**
comp=Z,134nm,1.0s,baz=281,slow=19,SNR=2.7
KKM Kota Kinabalu 18.73 197 P **P 18 04 31.9 -1.6**
KKM IAmb IAmb 18 04 38.3
comp=Z,415nm,1.6s
KKM Kota Kinabalu 18.73 197 P **Pn 18 04 37.0 +3.1**
HHC Hu-ho-hao-te 18.77 335 *e*P **Pn 18 04 37.4 +3.2**
HHC pP sP 18 04 40.9 +3.7
HHC SS **SnSn 18 08 29.0 +11**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,2μm,4.8s
HHC LR LR
comp=Z,10μm,13.0s
HHC LR LR
comp=Z,4μm,12.2s
HHC LR LR
comp=Z,11μm,15.2s
MAJO Matsushiro 18.80 45 P **Pn 18 04 34.8 +0.3**
MAJO Matsushiro 18.80 45 P **Pn 18 04 34.8 +0.3**
MAJO pmax pmax
comp=Z,58nm,1.6s
MJAR Matsushiro Arr 18.80 45 P **P 18 04 31.9 -2.2**
baz=230,slow=9.7,SNR=2.3
MJAR LR LR 18 12 32.3
comp=Z,4μm,19.4s,baz=228,slow=40
comp=Z,2.7nm,0.8s
MYLDM Lahad Datu 19.07 190 P **P 18 04 35.6 -1.5**
MYLDM IAmb IAmb 18 04 48.1
comp=Z,212nm,1.3s
BTO Baotou 19.19 332 *e*P **Pn 18 04 40.0 +0.7**
BTO pP **sP 18 04 43.5 +1.0**
BTO sP **pP 18 04 46.9 +5.7**
BTO PP **PnPn 18 04 56.2 +4.0**
BTO pmax pmax
comp=Z,6.0nm,0.5s
BTO pmax pmax
comp=Z,4μm,7.3s
BTO LR LR
comp=Z,25μm,12.9s
BTO LR LR
comp=Z,18μm,14.7s
BTO LR LR
comp=Z,32μm,13.0s
LZH Lanzhou 19.55 312 ⇑P **Pn 18 04 46.1 +2.4**
LZH sP sP 18 04 53.2 +6.7
LZH S **Sn 18 08 20.1 -3.1**
LZH sS sS 18 08 27.2 -0.1
LZH pmax pmax
comp=Z,31nm,1.3s
LZH pmax pmax
comp=Z,1μm,5.5s
LZH LR LR
comp=Z,23μm,13.1s
LZH LR LR
comp=Z,15μm,13.7s
LZH LR LR
comp=Z,17μm,13.1s
CN2 Changchun 19.88 8 P **P 18 04 46.4 +0.6**
CN2 S **S 18 08 24.4 -5.1**
CN2 pmax pmax
comp=Z,50nm,1.4s
CN2 pmax pmax
comp=Z,1μm,6.0s
CN2 LR LR
comp=Z,10μm,13.0s
CN2 LR LR
comp=Z,6μm,13.0s
CN2 LR LR
comp=Z,12μm,15.0s
CRAI Chiangrai 20.20 263 P **P 18 04 48.0 -1.5**
CRAI IAmb IAmb 18 05 00.0
comp=Z,288nm,1.8s
XLT XiLinHaoTe 20.30 348 *e*P Pn 18 04 51.8 -0.6
XLT PP **PnPn 18 05 10.8 +3.6**
XLT S **S 18 08 38.6 +0.6**
XLT sS pS 18 08 45.2 -3.4
XLT pmax pmax
comp=Z,29nm,1.7s
XLT pmax pmax
comp=Z,1μm,5.4s
XLT LR LR
comp=Z,8μm,12.2s
XLT LR LR
comp=Z,9μm,16.7s
TNCH TengChong 21.18 277 P **P 18 05 00.4 +0.2**
TNCH pP pP 18 05 02.3 -0.7
TNCH PP **PnPn 18 05 22.3 +2.8**
TNCH S S 18 08 44.9 -11
TNCH PcP **PcP 18 09 04.6 -1.3**
TNCH pmax pmax
comp=Z,76nm,1.5s
TNCH pmax pmax
comp=Z,2μm,3.3s
TNCH LR LR
comp=Z,7μm,10.1s
TNCH LR LR
comp=Z,11μm,12.6s
MDJ Mudanjiang 21.44 15 P **P 18 05 04.1 +1.5**
MDJ PP **PnPn 18 05 26.4 +3.7**
MDJ S **S 18 09 04.0 +3.6**
MDJ sS Sn 18 09 10.6 +2.4
MDJ ScP **ScP 18 12 41.4 -1.6**
MDJ ScS **ScS 18 16 26.0 -0.9**
MDJ pmax pmax
comp=Z,39nm,1.7s
MDJ pmax pmax
comp=Z,400nm,3.6s
MDJ LR LR
comp=Z,8μm,14.8s
MDJ LR LR
comp=Z,14μm,14.3s
MDJ Mudanjiang 21.44 15 P **P 18 05 01.3 -1.3**
MDJ Mudanjiang 21.44 15 P **P 18 05 06.0 +3.4**
NAYO Nakonayok 21.61 247 P **P 18 05 08.4 +3.7**
USA0B Ussuriysk Arra 21.72 20 *i*P **P 18 05 03.6 -2.1**
USRK Ussuriysk Ar. 21.72 20 P **P 18 05 04.1 -1.6**
comp=Z,4.4nm,0.8s,baz=198,slow=9.1,SNR=5.6
USRK LR LR 18 14 12.9
comp=Z,5μm,18.1s,baz=194,slow=39
comp=Z,4.4nm,0.8s
CHTO Chiang Mai 21.89 260 P **P 18 05 06.6 -1.1**
CHTO Chiang Mai 21.89 260 P **P 18 05 10.0 +2.3**
CHTO Chiang Mai 21.89 260 P **P 18 05 06.6 -1.1**
CHTO pmax pmax
comp=Z,38nm,1.1s
CHTO Chiang Mai 21.89 260 P **P 18 05 08.9 +1.2**
CHTO P **P 18 05 08.9 +1.2**
CM31 Chiang Mai Arr 22.00 260 P **P 18 05 10.6 +1.7**
SNR=20
CMAR Chiang Mai Arr 22.00 260 *i*P **P 18 05 10.8 +1.9**
CMAR pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 22.00 260 P **P 18 05 10.3 +1.4**
comp=Z,7.3nm,0.9s,baz=62,slow=9.0,SNR=30
CMAR PcP **PcP 18 09 06.5 -0.9**
comp=Z,1.9nm,0.9s,baz=20,slow=0.7,SNR=2.2
CMAR LR LR 18 15 06.8
comp=Z,4μm,18.8s,baz=65,slow=40
comp=Z,7.3nm,0.9s
BNX BinXian 22.06 11 ⇑P **P 18 05 09.0 -0.3**
BNX pP **sP 18 05 13.2 +0.3**
BNX sP **pwP 18 05 16.3 +4.5**
BNX PP **PnPn 18 05 36.1 +4.8**
BNX S **S 18 09 05.3 -7.3**
BNX sS **sS 18 09 13.8 -2.8**
BNX pmax pmax
comp=Z,30nm,1.6s
BNX pmax pmax
comp=Z,480nm,4.1s
BNX LR LR
comp=Z,9μm,16.8s
BNX LR LR
comp=Z,3μm,14.2s
BNX LR LR
comp=Z,12μm,17.1s
TOLI2 Tolitoli 22.87 183 P **P 18 05 16.9 -1.3**
TOLI2 IAmb IAmb 18 05 26.3
comp=Z,103nm,1.3s
TOLI2 Tolitoli 22.87 183 P **P 18 05 19.3 +1.1**
SBUM Sibu 23.43 205 P **P 18 05 20.9 -3.0**
SRDT SRDT 23.46 250 P **P 18 05 29.2 +5.0**
MRSI Marisa 23.48 180 P **P 18 05 25.0 +0.6**
comp=Z,51nm,1.4s,comp=Z,1μm
MPSI Mapaga 23.69 185 P **P 18 05 26.1 -0.3**
comp=Z,40nm,1.8s
MND Mandalay 23.70 270 P **P 18 05 30.5 +4.0**
TNTI Ternate 23.81 166 P **P 18 05 26.8 -0.8**
TNTI IAmb IAmb 18 05 49.1
comp=Z,129nm,1.3s
TNTI Ternate 23.81 166 P **P 18 05 31.6 +4.0**
TNTI Ternate 23.81 166 P **P 18 05 31.8 +4.2**
comp=Z,81nm,1.7s,comp=Z,1μm
GTA Gaotai 24.03 315 P **P 18 05 30.7 +1.0**
GTA pP sP 18 05 39.9 +5.9
GTA S **S 18 09 51.6 +4.6**
GTA sS sS 18 09 57.3 +5.5
GTA pmax pmax
comp=Z,6.0nm,1.3s
GTA pmax pmax
comp=Z,270nm,4.6s
GTA LR LR
comp=Z,9μm,14.9s
GTA LR LR
comp=Z,8μm,16.4s
GTA LR LR
comp=Z,7μm,13.8s
GUMO Guam 24.18 111 P **P 18 05 29.8 -1.4**
GUMO Guam 24.18 111 P **P** 18 05 39.1 +8.0
GUMO Guam 24.18 111 P **P 18 05 29.8 -1.4**
GUMO pmax pmax
comp=Z,374nm,1.4s
GUMO Guam 24.18 111 P **P 18 05 31.4 +0.2**
comp=Z,52nm,0.8s,baz=8.8,slow=13,SNR=2.2
comp=Z,52nm,0.8s
LUWI Luwuk 25.01 178 P **P 18 05 36.0 -2.6**
LUWI Luwuk 25.01 178 P **P 18 05 41.9 +3.3**
LUWI Luwuk 25.01 178 P **P 18 05 39.2 +0.6**
comp=Z,145nm,1.2s
KSM Kuching 25.09 208 P **P 18 05 37.0 -2.3**
KSM Kuching 25.09 208 P **P 18 05 39.7 +0.4**
HIA Hailar 25.17 357 P **P 18 05 39.4 -0.4**
HIA Hailar 25.17 357 P **P 18 05 39.4 -0.4**
HIA pmax pmax
comp=Z,27nm,1.1s
ERM Erimo 25.19 40 P **P 18 05 40.0 0.0**
ERM Erimo 25.19 40 P **P 18 05 40.0 0.0**
ERM pmax pmax
comp=Z,292nm,2.0s
LBMI Labuha 25.21 166 P **P 18 05 44.6 +4.2**
comp=Z,114nm,1.5s,comp=Z,4μm
BKB Balikpapan 25.65 191 P **P 18 05 42.5 -1.9**
MTKI Muara Teweh, K 25.77 196 P **P 18 05 45.2 -0.4**
comp=Z,65nm,1.0s,comp=Z,2μm
STKI Sintang 25.90 204 P **P 18 05 47.6 +0.9**
comp=Z,104nm,1.4s,comp=Z,2μm
GOMU GeErMu 26.16 304 P **P 18 05 52.2 +2.8**
GOMU S **S 18 10 28.2 +6.7**
GOMU pmax pmax
comp=Z,25nm,1.4s
GOMU LR LR
comp=Z,23μm,13.5s
GOMU LR LR
comp=Z,10μm,14.6s
GOMU LR LR
comp=Z,11μm,15.6s
ASAJ Asahikawa 26.24 35 P **P 18 05 48.9 -0.7**
ASAJ pmax pmax
comp=Z,80nm,1.8s
ASAJ Asahikawa 26.24 35 LR LR 18 16 32.0
comp=Z,5μm,19.2s,baz=244,slow=37
JKA Kamikawa-asahi 26.24 35 P **P 18 05 48.9 -0.7**
KLR Kul'dur 26.28 15*ce*P **P 18 05 49.0 -0.8**
KLR pmax pmax
comp=Z,58nm,1.7s
KLR Kul'dur 26.28 15 P **P 18 05 49.7 -0.2**
comp=Z,14nm,1.0s,baz=223,slow=7.5,SNR=23
KLR LR LR 18 16 59.9
comp=Z,6μm,19.5s,baz=195,slow=38
comp=Z,14nm,1.0s
ULN Ulaanbaatar 26.45 337 P **P 18 05 51.0 -0.6**
ULN Ulaanbaatar 26.45 337 *i*P **P 18 05 51.3 -0.3**
ULN pmax pmax
comp=Z,47nm,1.3s
ULN Ulaanbaatar 26.45 337 P **P 18 05 52.1 +0.4**
ULN S **S 18 10 30.3 +4.9**
SWI Sorong 26.46 158 P **P 18 05 52.3 +0.5**
SWI Sorong 26.46 158 P **P 18 05 51.2 -0.6**
comp=Z,31nm,1.8s
HEH HeiHe 26.47 8 *e*P **P 18 05 50.8 -0.8**
HEH S **S 18 10 24.5 -0.9**
HEH pmax pmax
comp=Z,11nm,1.4s
HEH pmax pmax
comp=Z,1μm,9.0s
HEH LR LR
comp=Z,9μm,15.7s
HEH LR LR
comp=Z,2μm,16.8s
HEH LR LR
comp=Z,15μm,16.7s
SONM Songino Array 26.66 337 P **P 18 05 54.3 +0.8**
comp=Z,6.7nm,1.0s,baz=156,slow=9.4,SNR=26
SONM ScP **ScP 18 12 55.3 -2.1**
comp=Z,2.8nm,1.2s,baz=146,slow=2.8,SNR=4.7
SONM LR LR 18 17 39.6
comp=Z,10μm,18.3s,baz=153,slow=39
comp=Z,6.7nm,1.0s
TTSI Tana Toraja 27.05 184 P **P 18 05 59.6 +2.5**
comp=Z,26nm,1.2s,comp=Z,752nm
SHL Shillong 27.15 279 P **P 18 05 56.7 -1.5**
SHL IAmb IAmb 18 06 07.9
comp=Z,134nm,1.3s
SHL Shillong 27.15 279 P **P 18 05 56.7 -1.5**
SHL pmax pmax
comp=Z,134nm,1.3s
SHL Shillong 27.15 279 P **P 18 06 01.0 +2.8**

SNR=44
KULM Kulim 27.63 231 P **P** **18 06 00.6 -1.7**
KULM IAmb IAmb 18 06 08.6
comp=Z,76nm,1.5s
NLAI Namlea 27.66 169 P **P** **18 06 03.0 +0.4**
comp=Z,40nm,1.2s
IPM Ipoh 27.94 229 P **P** **18 06 03.4 -1.7**
IPM IAmb IAmb 18 06 09.8
comp=Z,77nm,1.3s
IPM Ipoh 27.94 229 P **P** **18 06 06.2 +1.1**
MYKOM Kota Tinggi 28.16 221 P **P** **18 06 06.8 -0.3**
MYKOM IAmb IAmb 18 06 11.8
comp=Z,80nm,1.3s
YSS Yuzh-Sakhalins 28.31 31 P **P** **18 06 07.4 -0.8**
YSS IAmb IAmb 18 06 35.8
comp=Z,60nm,1.3s
YSS Yuzh-Sakhalins 28.31 31 P P 18 06 14.0 +5.9
YSS Yuzh-Sakhalins 28.31 31 *eP* **P** **18 06 07.9 -0.2**
YSS *e* 18 07 05.9
YSS *eS* **S** **18 10 53.1 -1.3**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=N,2μm,15.0s
TPRI Tanjung Pinang 28.47 218 P **P** **18 06 09.5 -0.3**
comp=N,60nm,1.4s
CIT Chita 28.58 349 *eP* **P** **18 06 09.8 -0.7**
CIT *e* 18 06 57.4
CIT *e* 18 07 17.2
CIT *e* 18 09 24.8
CIT pmax pmax
comp=Z,84nm,1.9s
FAKI Fak Fak 28.72 158 P **P** **18 06 10.1 -2.0**
FAKI IAmb IAmb 18 06 18.5
comp=Z,78nm,1.4s
FAKI Fak Fak 28.72 158 P P 18 06 17.4 +5.3
FAKI Fak Fak 28.72 158 P **P** **18 06 10.7 -1.4**
comp=Z,36nm,1.0s
ZEA Zeya 29.88 7 *eP* **P** **18 06 21.5 -0.5**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.2s
ZEA MLR MLR
comp=N,6μm,16.0s
ZEA MLR MLR
comp=Z,6μm,16.0s
ZAK Zakamensk 29.92 336 *eP* **P** **18 06 21.8 -0.7**
ZAK pmax pmax
comp=Z,9.0nm,2.0s
PSI Prapat 30.59 230 P **P** **18 06 31.9 +3.1**
PSI Prapat 30.59 230 P **P** **18 06 27.9 -0.9**
PSI pmax pmax
comp=Z,34nm,1.1s
RPSI Rantau Prapat 30.67 230 P **P** **18 06 27.9 -1.4**
BKNI Bangkinang 31.03 223 P **P** **18 06 32.0 -0.5**
IRK Irkutsk 31.12 339 *eP* **P** **18 06 32.6 -0.4**
IRK pmax pmax
comp=Z,79nm,2.5s
TYV Tymovskoe 31.21 26 *eP* P 18 06 41.9 +8.1
TYV pmax pmax
comp=Z,17nm,1.5s
TYV pmax pmax
comp=Z,500nm,6.6s
TYV MLR MLR
comp=N,3μm,14.0s
TYV MLR MLR
comp=Z,4μm,13.0s
MOY Mondy 31.81 335 *eP* **P** **18 06 39.2 0.0**
MOY pmax pmax
comp=Z,42nm,2.1s
GENI Genyem 32.00 144 P P 18 06 45.9 +4.9
PDSI Padang 32.35 223 P **P** **18 06 44.6 +0.4**
comp=Z,23nm,1.4s
MMRI Maumere 32.54 179 P **P** **18 06 43.8 -1.9**
MMRI Maumere 32.54 179 P **P** **18 06 45.0 -0.7**
comp=Z,59nm,1.6s,comp=Z,1μm
GSI Gunungsitoli 32.60 230 P **P** **18 06 44.1 -2.2**
BLJI Banyuglugur 32.65 195 P **P** **18 06 46.3 -0.3**
comp=Z,45nm,0.9s
EDFI Ende, Flores 32.65 180 P **P** **18 06 44.8 -2.0**
comp=Z,35nm,0.9s,comp=Z,815nm
KRJI Kerinci 32.68 220 P **P** **18 06 48.5 +1.4**
comp=Z,170nm,1.3s
NGJI Ngawi 32.86 199 P **P** **18 06 49.7 +1.2**
comp=Z,71nm,0.9s
SMRI Semarang 32.88 201 P **P** **18 06 47.6 -1.1**
TWSI Taliwang, Sumb 32.99 189 P **P** **18 06 49.3 -0.3**
comp=Z,40nm,1.8s,comp=Z,874nm
SISI Saibi 33.54 224 P **P** **18 06 51.3 -3.2**
comp=Z,75nm,1.3s
KPJI Karang Pucung 33.67 203 P **P** **18 06 56.4 +0.8**
comp=Z,80nm,1.5s,comp=Z,1μm
LWLI Liwa 33.70 213 P **P** **18 06 56.1 0.0**
comp=Z,119nm,0.8s
SOEI Soe 33.74 176 P **P** **18 06 55.8 -0.6**
SOEI IAmb IAmb 18 07 10.5
comp=Z,37nm,1.0s
DBJI Dramaga 33.81 208 P **P** **18 06 58.0 +1.1**
comp=Z,103nm,1.1s,comp=Z,9μm
KASI Kota Agung 33.93 212 P **P** **18 06 59.1 +1.2**
comp=Z,60nm,1.4s
WMQ Urumqi 34.11 314 *eP* **P** **18 07 02.0 +2.7**
WMQ pP sP 18 07 05.5 +1.8
WMQ sP pP 18 07 10.6 +8.2
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ LR LR
comp=Z,4μm,11.7s
WMQ LR LR
comp=Z,4μm,12.5s
WMQ LR LR
comp=Z,2μm,12.5s
BOD Bodaibo 34.15 353 *eP* **P** **18 06 58.1 -1.3**
BOD pmax pmax
comp=Z,15nm,1.5s
BBJI Bungbulang 34.27 205 P P 18 07 06.4 +5.5
MANU Manus Island 35.97 133 P **P** **18 07 14.8 -0.7**
MANU IAmb IAmb 18 08 25.9
comp=Z,100nm,1.3s
DGZ Jazzator, Alta 36.99 322 *i* P **P** **18 07 21.9 -2.3**
DGZ pmax pmax
comp=Z,13nm,1.4s
ZSN Zaisan 37.43 318 *eP* **P** **18 07 27.8 0.0**
comp=Z,21nm,1.7s,baz=318
ZSN *eS* **S** **18 13 17.8 +1.7**
baz=318
ZSN Zaisan 37.43 318 *eP* **P** **18 07 27.7 0.0**
ZSN *eS* **S** **18 13 17.7 +1.7**
ZSN pmax pmax
comp=Z,21nm,1.7s
XMIS Christmas Isla 37.81 206 P **P** **18 07 29.8 -1.4**
XMIS IAmb IAmb 18 07 56.4
comp=Z,105nm,1.7s
MTN Manton Dam 37.84 165 P **P** **18 07 30.1 -1.3**
MTN IAmb IAmb 18 07 36.9
comp=Z,89nm,1.6s
MTN Manton Dam 37.84 165 P **P** **18 07 33.7 +2.3**
KDU Kakadu 38.02 163 P **P** **18 07 36.6 +3.7**
comp=Z,28nm,1.1s
YAK Yakutsk 38.29 6 P **P** **18 07 33.0 -1.7**
YAK Yakutsk 38.29 6 *c iP* **P** **18 07 30.0 -4.7**
YAK *e**PP **pP** **18 07 35.5 -1.9**
YAK *e* 18 09 10.6
YAK *eS* **S** **18 13 32.6 +3.9**
YAK *e**SS **ScP** **18 13 37.4 +0.8**
YAK *e* 18 17 44.6
YAK pmax pmax
comp=Z,18nm,1.1s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,70nm,2.2s
YAK pmax pmax
comp=E,31nm,1.7s
YAK pmax pmax
comp=N,62nm,1.9s
YAK smax smax
comp=N,32nm,2.2s
YAK smax smax
comp=E,37nm,2.8s
YAK MLR MLR
comp=Z,9μm,15.0s
YAK MLR MLR
comp=N,5μm,14.0s
YAK MLR MLR
comp=E,2μm,14.0s
YAK Yakutsk 38.29 6 LR LR 18 25 02.9
comp=E,4μm,18.9s,baz=182,slow=39
MK31 Makanchi Array 38.78 316 *i* P **P** **18 07 38.2 -0.9**
MKAR Makanchi Array 38.78 316 P **P** **18 07 39.2 +0.1**
comp=E,3.2nm,0.8s,baz=107,slow=9.6,SNR=24
MKAR PcP **PcP** **18 09 50.2 -0.3**
comp=E,4.1nm,1.1s,baz=103,slow=5.0,SNR=2.8
MKAR ScP **ScP** **18 13 37.9 -1.0**
comp=E,1.2nm,0.9s,baz=132,slow=1.8,SNR=5.6
comp=E,3.2nm,0.8s
MAKZ Makanchi 38.98 316 P **P** **18 07 38.8 -2.0**
MAKZ **S** **18 13 38.8 -0.8**
MAKZ Makanchi 38.98 316 P **P** **18 07 38.8 -2.0**
MAKZ S **S** **18 13 38.8 -0.8**
MAKZ pmax pmax
comp=Z,29nm,1.1s
SHLS Shalkode 39.54 309 *eP* **P** **18 07 43.3 -2.3**
baz=309
SHLS Shalkode 39.54 309 *eP* **P** **18 07 43.3 -2.3**
PETK Petropavlovsk- 39.63 34 P **P** **18 07 45.1 -1.0**
comp=Z,2.8nm,0.9s,baz=260,slow=8.6,SNR=2.5
PETK LR LR 18 24 33.8
comp=Z,3μm,20.0s,baz=222,slow=37
comp=Z,2.8nm,0.9s
UZB Uzynbulak 39.85 309 *eP* **P** **18 07 48.6 +0.3**
baz=309
UZB Uzynbulak 39.85 309 *eP* **P** **18 07 48.6 +0.3**
PET Petropavlovsk 40.07 34 P **P** **18 07 48.4 -1.4**
KNRA Kununurra 40.12 170 P **P** **18 07 49.0 -1.4**
KNRA IAmb IAmb 18 07 55.8
comp=Z,114nm,1.8s
KPKS Kokpek 40.17 310 *eP* **P** **18 07 50.5 -0.3**
baz=309
KPKS Kokpek 40.17 310 *eP* **P** **18 07 50.5 -0.3**
SATY Saty 40.26 309 *eP* **P** **18 07 51.9 +0.2**
baz=309
SATY *eS* **S** **18 14 00.5 +1.3**
baz=309
SATY Saty 40.26 309 *eP* **P** **18 07 51.9 +0.2**
SATY *eS* **S** **18 14 00.4 +1.3**
ZALV Zalesovo Beam 40.61 327 *i* P **P** **18 07 54.4 +0.2**
ZALV pmax pmax
comp=Z,6.0nm,0.8s
ZALV Zalesovo Beam 40.61 327 P **P** **18 07 53.2 -1.0**
comp=Z,5.6nm,0.8s,baz=111,slow=8.1,SNR=22
ZALV ScP **ScP** **18 13 44.1 -1.7**
comp=Z,1.5nm,0.9s,baz=100,slow=3.5,SNR=4.6
ZALV LR LR 18 25 55.1
comp=Z,3μm,18.8s,baz=121,slow=38
comp=Z,5.6nm,0.8s
TDK Taldyqorghan 40.76 312 *eP* **P** **18 07 55.6 -0.1**
comp=Z,13nm,1.0s,baz=312
TDK LR LR 18 22 30.5
comp=Z,1μm,11.9s,baz=312
TDK Taldyqorghan 40.76 312 *eP* **P** **18 07 55.5 -0.1**
TDK pmax pmax
comp=Z,13nm,1.0s
TDK MLR MLR
comp=Z,1μm,12.0s
RABL Rabaul 40.82 129 P **P** **18 07 54.2 -2.2**
RABL IAmb IAmb 18 08 04.5
comp=Z,96nm,1.0s
RABL Rabaul 40.82 129 P P 18 08 03.1 +6.7
HYB Hyderabad 40.84 269 *eP* **P** **18 07 55.5 -1.1**
HYB *es*P **pP** **18 07 57.6 -2.2**
HYB *eS* **S** **18 14 08.2 +0.1**
MA2 Magadan 40.85 22 P **P** **18 07 55.8 -0.4**
MA2 Magadan 40.85 22 P **P** **18 07 55.8 -0.4**
MA2 pmax pmax
comp=Z,61nm,2.0s
MDOK Medeo 41.26 309 *eP* **P** **18 08 00.2 +0.3**
baz=308
MDOK LR LR 18 22 35.5
comp=Z,1μm,19.8s,baz=308
MDOK Medeo 41.26 309 *eP* **P** **18 08 00.2 +0.3**
MDOK MLR MLR
comp=Z,1μm,20.0s
KSH Kashi 41.40 303 P P 18 08 06.6 +5.5
KSH S S 18 14 26.1 +10
KSH pmax pmax
comp=Z,15nm,1.5s
KSH LR LR
comp=Z,14μm,19.2s
KSH LR LR
comp=Z,4μm,16.2s
KSH LR LR
comp=Z,5μm,16.5s
SEM Semipalatinsk 41.43 320 *eP* **P** **18 07 59.1 -2.2**
comp=Z,22nm,1.6s,baz=320
SEM LR LR 18 22 34.3
baz=320
SEM Semipalatinsk 41.43 320 *eP* **P** **18 08 00.0 -1.3**
SEM pmax pmax
comp=Z,22nm,1.6s
CHKK Chushkaly 41.45 310 *eP* **P** **18 08 01.3 -0.1**
baz=310
CHKK Chushkaly 41.45 310 *eP* **P** **18 08 01.3 -0.1**
PMG Port Moresby 41.51 140 P **P** **18 08 00.2 -1.9**
PMG IAmb IAmb 18 08 09.5
comp=Z,94nm,1.6s
PMG Port Moresby 41.51 140 P **P** **18 08 05.3 +3.2**
PMG Port Moresby 41.51 140 P **P** **18 08 05.4 +3.3**
PMG Port Moresby 41.51 140 *i* P **P** **18 08 00.7 -1.4**
PMG pmax pmax
comp=Z,57nm,1.4s
NRN Naryn 41.68 306 P **P** **18 08 02.6 -1.0**
NRN Naryn 41.68 306 P **P** **18 08 02.6 -1.0**
NRN pmax pmax
comp=Z,64nm,1.5s
WAKE Wake Island 41.84 88 P **P** **18 08 05.4 +0.6**
KUU Kurty 41.92 310 *eP* **P** **18 08 05.7 +0.5**
baz=309
KUU LR LR 18 24 30.5
comp=Z,2μm,14.4s,baz=309
KUU Kurty 41.92 310 *eP* **P** **18 08 05.7 +0.5**
KUU MLR MLR
comp=Z,2μm,14.0s
H11N1 WAKE ISLAND Hy 41.95 87 T T 18 53 14.9
baz=283
H11N2 WAKE ISLAND Hy 41.95 87 T T 18 53 23.4
baz=283
H11N3 WAKE ISLAND Hy 41.96 87 T T 18 53 22.7
baz=283
FITZ Fitzroy Crossi 42.11 175 P **P** **18 08 06.1 -0.7**
FITZ Fitzroy Crossi 42.11 175 P P 18 08 11.7 +4.9
KURK Kurchatov 42.51 320 P **P** **18 08 08.9 -0.9**
KURK Kurchatov 42.51 320 *ce*P **P** **18 08 08.3 -1.5**
KURK pmax pmax
comp=Z,51nm,1.7s
KURK Kurchatov 42.51 320 P **P** **18 08 10.5 +0.7**
KURK S **S** **18 14 32.4 +0.5**
KURBB Kurchatov Arra 42.52 320 P **P** **18 08 09.6 -0.4**
comp=Z,2.9nm,1.1s,baz=114,slow=7.2,SNR=22
KURBB PcP **PcP** **18 10 01.6 -0.9**
comp=Z,3.0nm,1.1s,baz=118,slow=4.2,SNR=4.8
KURBB LR LR 18 25 47.2
comp=Z,1μm,19.3s,baz=72,slow=36
comp=Z,2.9nm,1.1s
PALK Pallekele 42.74 254 P **P** **18 08 15.3 +3.1**
AAK Ala-Archa 42.99 307 P **P** **18 08 13.4 -0.7**
AAK Ala-Archa 42.99 307 *i* P **P** **18 08 15.7 +1.6**
AAK pmax pmax
comp=Z,12nm,1.4s
AAK Ala-Archa 42.99 307 LR LR 18 28 18.8
comp=Z,3μm,20.4s,baz=90,slow=39
AAK Ala-Archa 42.99 307 P P 18 08 19.0 +4.9
AAK P P 18 08 19.0 +4.9
COEN Coen 43.22 149 P **P** **18 08 15.6 -0.3**
COEN IAmb IAmb 18 08 24.0
comp=Z,73nm,1.1s
COEN Coen 43.22 149 P **P** **18 08 16.6 +0.7**
NIL Nilore 43.22 294 P **P** **18 08 16.4 +0.5**
COCO West Island 43.54 217 P **P** **18 08 17.2 -1.3**
COCO West Island 43.54 217 P **P** **18 08 17.2 -1.3**
COCO pmax pmax
comp=Z,274nm,1.6s
BTLS Baital 43.77 311 *eP* **P** **18 08 19.9 -0.3**
baz=311
BTLS Baital 43.77 311 *eP* **P** **18 08 19.8 -0.3**
SEY Seymchan 43.87 20 *i* P **P** **18 08 17.9 -2.7**
SEY pmax pmax
comp=Z,10.0nm,1.4s
DZA Taraz 45.33 307 *eP* **P** **18 08 32.8 +0.1**
baz=307
DZA Taraz 45.33 307 *eP* **P** **18 08 32.8 +0.1**
PSA00 Pilbara Seismi 45.44 183 P **P** **18 08 32.4 -1.2**
PSA00 Pilbara Seismi 45.44 183 P **P** **18 08 31.1 -2.5**
PSA00 IAmb IAmb 18 08 38.9
comp=Z,57nm,1.4s
WRAB Tennant Creek 45.45 163 P **P** **18 08 32.0 -1.7**
WRAB Tennant Creek 45.45 163 P **P** **18 08 32.0 -1.7**
WRAB pmax pmax
comp=Z,31nm,1.2s
WRA Warramunga Arr 45.45 163 *i* P **P** **18 08 32.5 -1.3**
WRA pmax pmax
comp=Z,9.0nm,0.8s
WRA Warramunga Arr 45.45 163 P **P** **18 08 31.8 -2.0**
comp=Z,2.5nm,0.5s,baz=345,slow=8.7,SNR=24
WRA PcP **PcP** **18 10 11.5 -1.3**
comp=Z,0.9nm,0.8s,baz=329,slow=3.4,SNR=0.7
comp=Z,2.5nm,0.5s
BRZS Berezniki 45.87 317 *eP* **P** **18 08 36.5 -0.4**
comp=Z,8.2nm,1.6s,baz=317
KKAR Karatay Array 45.96 307 P **P** **18 08 36.1 -1.5**
KKAR PcP **PcP** **18 10 16.3 +1.9**
MTSU Mount Surprise 47.39 150 P P 18 08 55.8 +6.8
QIS Mount Isa 47.66 157 P **P** **18 08 52.6 +1.5**
TIXI Tiksi 47.75 3 P **P** **18 08 49.1 -2.1**
TIXI Tiksi 47.75 3 *ce*P **P** **18 08 48.9 -2.2**
TIXI pmax pmax
comp=Z,103nm,1.7s
TIXI Tiksi 47.75 3 LR LR 18 31 28.7
comp=Z,7μm,18.1s,baz=200,slow=39
BVAR Borovoye Array 48.09 321 P **P** **18 08 53.0 -1.0**
comp=Z,1.8nm,0.5s,baz=112,slow=7.1,SNR=17
BVAR PcP **PcP** **18 10 21.1 -0.6**
comp=Z,1.7nm,0.7s,baz=114,slow=3.7,SNR=1.7
BVAR ScP **ScP** **18 14 15.2 -1.2**
comp=Z,4.0nm,1.1s,baz=103,slow=3.2,SNR=6.3
BVAR LR LR 18 28 42.7
comp=Z,2μm,20.6s,baz=5.7,slow=36
comp=Z,1.8nm,0.5s
BRVK Borovoye 48.16 321 P **P** **18 08 52.4 -2.2**
BRVK Borovoye 48.16 321 *ce*P **P** **18 08 53.5 -1.1**
BRVK pmax pmax
comp=Z,19nm,1.7s
BRVK Borovoye 48.16 321 P **P** **18 08 55.2 +0.6**
BRVK P **P** **18 08 55.2 +0.6**
ASAR Alice Springs 48.92 165 P **P** **18 08 59.5 -1.2**
comp=Z,4.1nm,0.7s,baz=341,slow=7.2,SNR=21
comp=Z,4.1nm,0.7s
AS01 Alice Springs 48.93 165 P **P** **18 09 04.6 +3.7**
WRKA Warakurna 49.25 172 P **P** **18 09 06.9 +3.6**
NRIK Noril'sk 49.63 345 *i* P **P** **18 09 04.4 -1.2**
NRIK pmax pmax
comp=Z,19nm,1.1s
NRIK Noril'sk 49.63 345 P **P** **18 09 03.9 -1.8**
comp=Z,7.7nm,1.1s,baz=138,slow=7.5,SNR=8.8
NRIK LR LR 18 31 22.4
comp=Z,2μm,20.2s,baz=114,slow=38
comp=Z,7.7nm,1.1s
HMDM Hanimaadhoo 49.63 258 P P 18 09 13.7 +7.3
CTA Charters Tower 49.97 149 P **P** **18 09 13.5 +4.6**
CTA Charters Tower 49.97 149 P **P** **18 09 07.1 -1.8**
comp=Z,5.4nm,0.8s,baz=3.4,slow=3.3,SNR=1.5
comp=Z,5.4nm,0.8s
CTAO Charters Tower 49.97 149 P **P** **18 09 08.6 -0.3**
CTAO IAmb IAmb 18 09 16.5
comp=Z,84nm,1.4s
CTAO Charters Tower 49.97 149 P **P** **18 09 08.6 -0.3**
CTAO pmax pmax
comp=Z,84nm,1.5s
MEEK Meekatharra 50.53 184 P **P** **18 09 15.2 +2.2**
BILL Bilibino 51.58 20 P **P** **18 09 19.2 -1.2**
BILL **PcP** **18 10 33.3 -0.9**
BILL Bilibino 51.58 20 *i* P **P** **18 09 19.2 -1.2**
OOD Oodnadatta 53.31 165 P **P** **18 09 36.1 +2.5**
comp=Z,25nm,1.6s
ABKAR Akbulak array 53.89 314 P **P** **18 09 35.9 -1.9**
ABKAR IAmb IAmb 18 09 48.8
comp=Z,26nm,1.1s
SVE Sverdlovsk 54.44 324 *eP* **P** **18 09 42.5 +0.9**
SVE pmax pmax
comp=Z,32nm,1.5s
RK1H Rockhampton Ha 54.82 147 P P 18 09 50.2 +5.4
QLP Quilpie 54.86 155 P **P** **18 09 49.8 +4.8**
FORT Forrest 54.90 173 P **P** **18 09 43.0 -2.2**
FORT IAmb IAmb 18 09 51.5
comp=Z,35nm,0.9s
FORT Forrest 54.90 173 P **P** **18 09 46.2 +1.0**
KMBL Kambalda 55.15 180 P **P** **18 09 48.4 +1.3**
GEYT Alibeck 55.31 300 P **P** **18 09 48.8 +0.4**
comp=Z,3.6nm,0.8s,baz=211,slow=2.6,SNR=11
GEYT LR LR 18 35 57.5
comp=Z,2μm,18.7s,baz=98,slow=39
comp=Z,3.6nm,0.8s
MULG Mulgathing 55.34 167 P **P** **18 09 52.5 +4.1**
ARU Arti 55.50 323 P **P** **18 09 47.2 -2.2**
ARU IAmb IAmb 18 09 59.6
comp=Z,30nm,1.1s
ARU Arti 55.50 323 *d iP* **P** **18 09 49.4 0.0**
ARU 18 10 48.6
ARU S **S** **18 17 36.8 +2.4**
ARU SS **SS** **18 21 13.9 -5.1**
ARU pmax pmax
comp=Z,32nm,1.6s
ARU MLR MLR
comp=Z,2μm,19.0s
ARU Arti 55.50 323 LR LR 18 33 53.7
comp=Z,2μm,19.8s,baz=122,slow=36
LCRK Leigh Creek 56.48 163 P **PKiKP** **18 17 25.3 +3.0**
LCRK Leigh Creek 56.48 163 P **P** **18 09 58.9 +2.3**
BBOO Buckleboo 58.21 166 P **P** **18 10 07.3 -1.5**
BBOO IAmb IAmb 18 10 44.9
comp=Z,87nm,1.9s
BBOO Buckleboo 58.21 166 P **P** **18 10 09.2 +0.4**
P08K Saint George I 58.52 37 P **P** **18 10 10.2 -0.6**
baz=266
MHTO MHTO 58.57 281 P P 18 10 16.5 +4.8
MHTO P P 18 10 16.5 +4.8
MHTO S **S** **18 18 15.8 -0.2**
MHTO S **S** **18 18 15.8 -0.2**
NIKH Nikolski High 58.79 41 P **P** **18 10 11.7 -1.0**
baz=269
STKA Stephens Creek 58.80 160 P **P** **18 10 15.3 +2.4**
STKA Stephens Creek 58.80 160 *i* P **P** **18 10 12.7 -0.2**
STKA Stephens Creek 58.80 160 P **P** **18 10 11.8 -1.1**
comp=Z,3.6nm,0.8s,baz=333,slow=7.6,SNR=8.2
comp=Z,3.6nm,0.8s
SOHO SOHO 59.03 285 P **P** **18 10 14.3 -0.5**
SOHO P **P** **18 10 14.3 -0.5**
HATD Hatta, Dubai 59.21 285 P **P** **18 10 17.1 +1.0**
HATD P **P** **18 10 17.1 +1.0**
ARQ Araqi 59.24 284 P P 18 10 22.5 +6.2
SNR=5.2
ARQ P P 18 10 22.5 +6.2
SNR=5.2
ASHO Ashiyiah 59.31 285 P **P** **18 10 19.8 +3.0**
SNR=5.5
ASHO P **P** **18 10 19.8 +3.0**
SNR=5.5
HTT Hallett 59.49 163 P P 18 10 24.0 +6.2
ALNE Al Ain 59.74 285 P P 18 10 27.4 +7.7
SNR=8.2
ALNE P P 18 10 27.4 +7.7
SNR=8.2
CMSA Cobar Meteorol 59.87 156 P P 18 10 26.1 +5.8
TNA Tin City 60.17 27 P **P** **18 10 21.7 -0.3**
baz=263
UNV Unalaska Valle 60.20 40 P **P** **18 10 22.2 -0.2**
baz=271
M11K Mekoryuk 60.49 33 P **P** **18 10 24.9 +0.6**
baz=267
KIRV Kirov 60.60 325 LR LR 18 37 09.8
comp=Z,3μm,19.0s,baz=109,slow=36
F14K Arctic Creek 60.82 27 P **P** **18 10 26.0 -0.5**
baz=264
ANM Nome 61.14 28 P **P** **18 10 27.2 -1.4**
ANM IAmb IAmb 18 10 42.2
comp=Z,28nm,1.2s
ANM Nome 61.14 28 P **P** **18 10 28.3 -0.4**
baz=266,SNR=8.2
ANM Nome 61.14 28 P **P** **18 10 27.2 -1.4**
ANM pmax pmax
comp=Z,29nm,1.2s
C16K Lisburne Hills 61.51 24 P **P** **18 10 29.6 -1.5**
C16K IAmb IAmb 18 10 36.8
comp=Z,24nm,1.3s

C16K **Lisburne Hills** 61.51 24 P P 18 10 29.9 -1.2
baz=264
F15K **North Star Dit** 61.54 27 P P 18 10 29.7 -1.6
F15K IAmb IAmb 18 10 37.0
comp=Z,42nm,1.5s
F15K **North Star Dit** 61.54 27 P P 18 10 31.5 +0.2
baz=266,SNR=8.2
BELG **Belogornoye** 61.72 318 LR LR 18 39 02.9
comp=Z,1µm,18.0s,baz=11,slow=38
G15K **Niukluk** 61.74 28 P P 18 10 31.8 -0.9
baz=267
J14K **Nanvaranak Lak** 61.85 30 IAmb IAmb 18 10 39.1
comp=Z,49nm,1.6s
J14K **Nanvaranak Lak** 61.85 30 P P 18 10 33.7 +0.2
baz=268
M13K **Dall Lake** 61.91 33 P P 18 10 33.9 +0.1
baz=270
L14K **Kuka Creek** 62.24 32 P P 18 10 34.0 -2.0
L14K **Kuka Creek** 62.24 32 P P 18 10 35.9 -0.2
baz=270
C17K **DeLong Mountai** 62.33 24 P P 18 10 35.7 -0.9
baz=266
RDOG **Red Dog Mine** 62.39 24 P P 18 10 36.2 -0.8
baz=266
G16K **Koyuk River** 62.47 27 IAmb IAmb 18 10 43.0
comp=Z,63nm,1.8s
G16K **Koyuk River** 62.47 27 P P 18 10 37.1 -0.5
baz=268
LKRN **Lenkeran, Azer** 62.49 302 P P 18 10 37.6 -0.6
H16K **Elim** 62.49 28 P P 18 10 37.1 -0.6
baz=268,SNR=14
M14K **Bethel** 62.59 33 P P 18 10 38.2 -0.2
baz=271
N14K **Kuskokwak Cree** 62.74 33 P P 18 10 39.3 -0.2
baz=271
E17K **Hotham Inlet** 62.75 25 P P 18 10 39.7 +0.3
baz=268,SNR=10
K15K **Wolf Creek Mou** 62.78 31 P P 18 10 38.8 -0.9
baz=270
L15K **Ungalak Mounta** 62.81 31 P P 18 10 39.1 -0.8
baz=271
B18K **Kokolik River** 62.88 23 P P 18 10 40.7 +0.4
baz=266,SNR=17
F17K **Baldwin Pennin** 62.96 26 P P 18 10 41.2 +0.4
baz=268
O14K **Tigyukauivet M** 62.98 34 P P 18 10 40.4 -0.7
baz=272
C18K **Utukok River** 63.06 24 IAmb IAmb 18 10 43.8
comp=Z,33nm,1.6s
C18K **Utukok River** 63.06 24 P P 18 10 41.4 -0.2
baz=267
I17K **Unalakleet** 63.16 29 P P 18 10 41.4 -0.8
I17K IAmb IAmb 18 10 47.5
comp=Z,45nm,1.3s
I17K **Unalakleet** 63.16 29 P P 18 10 42.0 -0.1
baz=270
G17K **Kiwalik Mounta** 63.19 27 P P 18 10 42.2 -0.1
baz=269,SNR=13
J16K **Anvik River** 63.20 30 P P 18 10 43.1 +0.6
baz=271
M15K **Kasigluk River** 63.22 33 P P 18 10 42.2 -0.4
baz=272
E18K **Tukpahlearik C** 63.24 25 IAmb IAmb 18 10 55.6
comp=Z,25nm,1.4s
E18K **Tukpahlearik C** 63.24 25 P P 18 10 42.5 -0.2
baz=268,SNR=9.3
SEKA **Sheki** 63.27 305 P P 18 10 42.3 -1.2
MNGR **Mingechevir, A** 63.43 305 P P 18 10 43.9 -0.5
H17K **Granite Mounta** 63.49 28 IAmb IAmb 18 10 49.6
comp=Z,21nm,1.0s
H17K **Granite Mounta** 63.49 28 P P 18 10 44.6 +0.2
baz=270
N15K **Kwethluk River** 63.53 33 P P 18 10 44.5 -0.3
baz=273
F18K **Selawik** 63.60 26 P P 18 10 45.2 +0.2
baz=270,SNR=12
ZKTA **Zakatala** 63.63 306 P P 18 10 45.1 -0.6
SDPT **Sand Point** 63.63 39 P P 18 10 44.8 -0.7
baz=275
C19K **Lookout Ridge** 63.66 23 P P 18 10 44.6 -0.9
baz=269
O15K **Ungalikthiuk R** 63.72 34 P P 18 10 44.5 -1.5
baz=273
L16K **Owhat River** 63.77 31 P P 18 10 43.8 -2.4
baz=272
SMRA **Abu-Samra** 63.89 287 P P 18 10 50.5 +2.8
SNR=6.9
G18K **Tagagawik** 64.01 27 P P 18 10 46.6 -1.2
G18K **Tagagawik** 64.01 27 P P 18 10 47.1 -0.7
baz=271
GANJ **Ganja** 64.02 305 P P 18 10 47.7 -0.7
M16K **Timber Creek** 64.05 32 P P 18 10 47.0 -1.2
baz=273
S14K **Fog Glacier** 64.07 37 P P 18 10 48.1 -0.4
baz=275
H18K **Honhosa River** 64.15 28 IAmb IAmb 18 10 58.6
comp=Z,61nm,1.8s
H18K **Honhosa River** 64.15 28 P P 18 10 48.0 -0.8
baz=272
N16K **Nishlik Lake** 64.17 33 P P 18 10 48.3 -0.7
baz=274
CHNA **Chernabura Isl** 64.19 39 P P 18 10 47.8 -1.3
baz=276
D19K **Kuna River** 64.19 24 IAmb IAmb 18 10 55.3
comp=Z,25nm,0.8s
D19K **Kuna River** 64.19 24 P P 18 10 48.1 -0.9
baz=270
K17K **Iditarod** 64.27 30 P P 18 10 49.7 +0.1
baz=273
L17K **Donlin** 64.30 31 P P 18 10 49.3 -0.5
baz=273
F19K **Shaleruckik Mo** 64.35 26 IAmb IAmb 18 10 55.1
comp=Z,64nm,1.8s
F19K **Shaleruckik Mo** 64.35 26 P P 18 10 49.3 -0.6
baz=271
E19K **Redstone River** 64.54 25 P P 18 10 50.6 -0.6
baz=272
O16K **Kokwok River B** 64.58 34 P P 18 10 49.9 -1.7
baz=275
G19K **Purcell Mounta** 64.64 26 P P 18 10 50.8 -1.2
G19K **Purcell Mounta** 64.64 26 P P 18 10 50.6 -1.3
baz=272
P16K **Nushagak River** 64.67 34 P P 18 10 51.7 -0.5
baz=275
A21K **Barrow** 64.70 21 P P 18 10 52.1 0.0
baz=270
CHGN **Chignik** 64.70 37 P P 18 10 52.4 0.0
baz=276
D20K **Etivluk River** 64.74 24 P P 18 10 52.4 -0.2
baz=272
M17K **Holitna River** 64.76 32 P P 18 10 52.9 +0.1
baz=274
GCSA **Galena City Sc** 64.80 28 P P 18 10 51.8 -1.1
baz=273
E20K **Nigu River** 64.91 24 P P 18 10 53.5 -0.2
baz=272
NAX **Nakhchivan** 64.92 304 P P 18 10 53.7 -0.7
H19K **Roundabout Mou** 64.94 27 P P 18 10 53.7 -0.2
baz=273
J18K **Innoko River** 64.95 29 IAmb IAmb 18 11 36.4
comp=Z,41nm,1.6s
J18K **Innoko River** 64.95 29 P P 18 10 53.4 -0.6
baz=274
N17K **Nushagak Hills** 64.95 33 P P 18 10 54.1 +0.1
baz=275
R16K **Pilot Point** 65.03 36 P P 18 10 54.1 -0.5
baz=276
L18K **Granite Mounta** 65.05 31 IAmb IAmb 18 11 09.3
comp=Z,59nm,1.6s
L18K **Granite Mounta** 65.05 31 P P 18 10 54.4 -0.2
baz=274
F20K **Avaraart Lake** 65.14 25 IAmb IAmb 18 11 00.9
comp=Z,64nm,1.9s
F20K **Avaraart Lake** 65.14 25 P P 18 10 54.3 -0.9
baz=273
GNI **Garni** 65.30 305 LR LR 18 42 09.8
comp=Z,1µm,20.2s,baz=66,slow=38
TTA **Tatalina** 65.31 30 P P 18 10 54.9 -1.5
TTA IAmb IAmb 18 11 04.8
comp=Z,20nm,1.2s
TTA **Tatalina** 65.31 30 P P 18 10 56.1 -0.3
baz=275
TTA **Tatalina** 65.31 30 P P 18 10 54.9 -1.5
TTA pmax pmax
comp=Z,20nm,1.2s
C21K **Knifeblade Rid** 65.38 23 P P 18 10 55.8 -0.9
baz=273
J19K **Poorman** 65.39 29 IAmb IAmb 18 11 21.5
comp=Z,25nm,1.2s
J19K **Poorman** 65.39 29 P P 18 10 55.6 -1.3
baz=275,SNR=8.4
ZEI **Tsey** 65.41 308 eP P 18 10 57.5 -0.1
ZEI pmax pmax
comp=Z,18nm,1.4s
B21K **Ikpikpuk River** 65.42 23 IAmb IAmb 18 11 04.7
comp=Z,30nm,0.9s
B21K **Ikpikpuk River** 65.42 23 P P 18 10 56.5 -0.3
baz=273
P17K **Kvichak River** 65.45 34 P P 18 10 56.1 -1.2
baz=276
VRH **Novokhopyorsk** 65.49 317 eP P 18 10 54.4 -3.3
VRH pmax pmax
comp=Z,16nm,0.4s
M18K **Stony River** 65.52 32 P P 18 10 57.0 -0.7
baz=276
KLMR **Klimovskoe** 65.53 328 eP P 18 10 54.9 -2.8
KLMR pmax pmax
comp=Z,67nm,1.4s
N18K **Kilae Creek** 65.57 32 P P 18 10 57.8 -0.3
baz=276
H20K **Anotleneega Mo** 65.59 27 P P 18 10 57.2 -1.0
baz=275
GOF **Gofitskoye** 65.61 310 ceP P 18 10 59.9 +1.3
E21K **Killik River** 65.72 24 P P 18 10 58.5 -0.5
baz=274
B22K **Teshekpuk Lake** 65.79 22 IAmb IAmb 18 11 06.9
comp=Z,26nm,0.9s
B22K **Teshekpuk Lake** 65.79 22 P P 18 10 59.4 +0.2
baz=274
I20K **Naaghedeneel** 65.82 28 P P 18 10 59.9 +0.3
baz=275
Q17K **Contact Creek** 65.85 35 P P 18 11 00.4 +0.3
baz=277
L19K **White Mountain** 65.91 31 P P 18 11 01.1 +0.8
baz=276
KBZ **Khabaz** 65.96 309 P P 18 11 01.3 +0.5
comp=Z,2.9nm,0.8s,baz=85,slow=13,SNR=4.1
KBZ LR LR 18 41 38.9
comp=Z,2µm,18.0s,baz=74,slow=38
comp=Z,2.9nm,0.8s
O18K **Koktuh Hills** 66.00 33 P P 18 11 01.7 +0.8
baz=277
F21K **Alatna River** 66.00 25 IAmb IAmb 18 11 19.3
comp=Z,34nm,1.9s
F21K **Alatna River** 66.00 25 P P 18 11 01.3 +0.5
baz=275
J20K **Nowinta River** 66.02 28 P P 18 11 01.4 +0.5
baz=276
P18K **Big Mountain,** 66.05 34 P P 18 11 00.5 -0.7
baz=277
G21K **Allakaket** 66.06 26 IAmb IAmb 18 11 06.9
comp=Z,56nm,1.6s
G21K **Allakaket** 66.06 26 P P 18 11 00.2 -1.0
baz=275
KIV **Kislovodsk** 66.06 309 P P 18 11 00.8 -0.9
KIV **Kislovodsk** 66.06 309 eP P 18 11 02.7 +1.0
KIV pmax pmax
comp=Z,26nm,1.0s
KIV MLR MLR
comp=Z,1µm,17.0s
K20K **Telida** 66.14 29 P P 18 11 01.1 -0.6
baz=276
D22K **Ayikyak River** 66.16 23 P P 18 11 01.5 -0.2
baz=275
M19K **Big River Lodg** 66.16 31 P P 18 11 01.4 -0.4
baz=277
N19K **Bonanza Creek** 66.25 32 P P 18 11 02.3 -0.2
baz=277
L20K **Farewell, AK** 66.33 30 P P 18 11 02.2 -0.8
baz=277
O19K **Port Alsworth** 66.40 33 P P 18 11 02.6 -0.7
baz=276
H21K **Melozitna Rive** 66.43 27 IAmb IAmb 18 11 12.9
comp=Z,33nm,1.2s
H21K **Melozitna Rive** 66.43 27 P P 18 11 03.3 -0.3
baz=276
E22K **Anaktuvuk Pass** 66.55 24 IAmb IAmb 18 11 21.7
comp=Z,31nm,1.1s
E22K **Anaktuvuk Pass** 66.55 24 P P 18 11 04.0 -0.2
baz=276
M20K **Styx River** 66.75 31 P P 18 11 05.7 0.0
baz=278
G22K **Bettles** 66.81 25 P P 18 11 05.4 -0.4
baz=277
I21K **Tanana** 66.83 27 IAmb IAmb 18 11 15.5
comp=Z,26nm,1.1s
I21K **Tanana** 66.83 27 P P 18 11 06.6 +0.5
baz=277
CHUM **Lake Minchumin** 66.86 29 P P 18 11 06.3 0.0
baz=278
D23K **Nanushuk River** 66.87 23 P P 18 11 05.8 -0.4
baz=277
Q19K **Cape Douglas,** 66.92 34 P P 18 11 05.9 -0.9
baz=279
VORR **Voronezh** 66.97 318 eP P 18 11 06.6 -0.6
VORR pmax pmax
comp=Z,60nm,0.3s
LPSR **Galich'ya Gora** 66.98 319 eP P 18 11 06.7 -0.5
LPSR pmax pmax
comp=Z,40nm,1.4s
H22K **Ishtalitna Cre** 66.99 26 P P 18 11 06.6 -0.5
baz=278
SII **Sitkinak Islan** 67.00 37 P P 18 11 06.9 -0.4
baz=279
P19K **Oil Pt** 67.02 33 P P 18 11 07.8 +0.4
baz=279
CAST **Castle Rocks** 67.02 29 P P 18 11 05.8 -1.5
CAST **Castle Rocks** 67.02 29 P P 18 11 06.9 -0.4
baz=278,SNR=10
VORD **Divnogorie** 67.04 317 eP P 18 11 08.9 +1.3
VORD pmax pmax
comp=Z,20nm,1.1s
PPLA **Purkeypile** 67.05 30 P P 18 11 07.3 -0.3
baz=278
VSR **Storozhevoye** 67.07 317 eP P 18 11 07.3 -0.5
VSR pmax pmax
comp=Z,30nm,1.7s
MOS **Moscow** 67.20 322 eP P 18 11 06.7 -1.9
MOS e 18 13 34.5
MOS MLR MLR
comp=Z,1µm,16.0s
ERBR **Yeremizino-Bor** 67.26 311 eP P 18 11 13.2 +4.1
ERBR pmax pmax
comp=Z,42nm,1.2s
ERBR MLR MLR
comp=Z,2µm,15.0s
ERBR MLR MLR
comp=N,3µm,13.0s
ERBR MLR MLR
comp=E,3µm,11.0s
O20K **Slope Mountain** 67.26 33 P P 18 11 08.7 -0.3
baz=279
COLD **Coldfoot** 67.27 25 P P 18 11 09.2 +0.3
baz=278,SNR=7.2
N20K **Mount Spurr** 67.29 32 P P 18 11 08.8 -0.4
baz=279
TOLK **Toolik Lake Re** 67.31 23 IAmb IAmb 18 11 48.2
comp=Z,23nm,1.3s
TOLK **Toolik Lake Re** 67.31 23 P P 18 11 08.7 -0.4
baz=278,SNR=11
APA **Apatity** 67.36 335 iP P 18 11 12.1 +2.7
APA pmax pmax
comp=Z,10.0nm,1.0s
MLY **Manley** 67.37 27 P P 18 11 08.8 -0.8
MLY IAmb IAmb 18 11 18.8
comp=Z,26nm,1.1s
MLY **Manley** 67.37 27 P P 18 11 09.3 -0.3
baz=278
E23K **Chandalar** 67.38 24 P P 18 11 09.5 -0.1
baz=278
OHAK **Old Harbor** 67.38 36 P P 18 11 09.4 -0.2
baz=280
G23K **Bananza Creek** 67.42 25 P P 18 11 09.4 -0.4
baz=278,SNR=6.7
C24K **Franklin Bluff** 67.46 22 P P 18 11 09.8 -0.2
baz=278
SKT **Skwentna** 67.49 31 P P 18 11 09.2 -1.2
SKT **Skwentna** 67.49 31 P P 18 11 10.5 +0.2
baz=279
D24K **Happy Valley** 67.50 23 P P 18 11 10.2 -0.1
baz=278
KTH **Kantishna Hill** 67.52 29 P P 18 11 09.6 -1.0
KTH IAmb IAmb 18 11 31.8
comp=Z,39nm,1.4s
KDAK **Kodiak Island** 67.66 35 P P 18 11 11.1 -0.3
baz=280
KDAK **Kodiak Island** 67.66 35 P P 18 11 10.5 -0.9
comp=Z,28nm,1.1s,baz=189,slow=4.8,SNR=3.6
comp=Z,28nm,1.1s
E24K **Your Creek** 67.79 24 IAmb IAmb 18 11 13.5
comp=Z,21nm,1.2s
E24K **Your Creek** 67.79 24 P P 18 11 11.8 -0.4
baz=279
TRF **Thorofare Moun** 67.81 29 P P 18 11 12.4 -0.2
baz=280
CAPN **Captain Cook N** 67.87 32 P P 18 11 12.9 +0.2
baz=280
OBN **Obninsk** 67.91 322 ieP P 18 11 11.6 -1.4
OBN i *PP pP 18 11 14.6 -1.2
OBN e*SP sP 18 11 16.9 +0.1
OBN i 18 11 34.4
OBN pmax pmax
comp=Z,46nm,1.6s
OBN MLR MLR
comp=Z,1µm,19.0s
OBN **Obninsk** 67.91 322 LR LR 18 43 23.6
comp=Z,2µm,18.8s,baz=30,slow=38
I23K **Minto, Yukon-K** 67.93 27 IAmb IAmb 18 11 48.9
comp=Z,34nm,1.4s
I23K **Minto, Yukon-K** 67.93 27 P P 18 11 12.5 -0.5
baz=280,SNR=8.0
SUA **Susitna One** 67.94 31 IAmb IAmb 18 11 21.3
comp=Z,31nm,0.8s
SUA **Susitna One** 67.94 31 P P 18 11 12.5 -0.9
baz=280
CUT **Chulitna** 68.00 30 P P 18 11 13.6 +0.1
baz=280
F24K **Squaw Lake** 68.11 24 IAmb IAmb 18 11 19.8
comp=Z,17nm,0.9s
F24K **Squaw Lake** 68.11 24 P P 18 11 14.7 +0.5
baz=280
NEA2 **Nenana** 68.15 28 IAmb IAmb 18 11 30.3
comp=Z,23nm,1.0s
NEA2 **Nenana** 68.15 28 P P 18 11 14.9 +0.5
baz=280
SOC **Sochi** 68.25 309 eP P 18 11 13.1 -2.3
SOC eS S 18 20 15.1 -1.0
SOC pmax pmax
comp=Z,18nm,1.0s
SOC MLR MLR
comp=Z,1µm,18.0s
BRSE **Bradley Lake S** 68.25 33 P P 18 11 15.5 +0.4
baz=281
D25K **Kavik River** 68.34 22 IAmb IAmb 18 11 24.6
comp=Z,22nm,0.9s
D25K **Kavik River** 68.34 22 P P 18 11 15.4 -0.2
baz=281
MCK **McKinley** 68.36 29 P P 18 11 15.5 -0.3
baz=281,SNR=5.7
G24K **Hadweenzic Riv** 68.42 25 IAmb IAmb 18 11 32.6
comp=Z,33nm,1.2s
G24K **Hadweenzic Riv** 68.42 25 P P 18 11 15.8 -0.3
baz=281
H24K **Noodor Dome** 68.42 26 P P 18 11 16.2 0.0
baz=281
MDM **Murphy Dome** 68.44 27 P P 18 11 15.0 -1.3
MDM IAmb IAmb 18 11 32.3
comp=Z,35nm,1.1s
RND **Reindeer** 68.46 29 P P 18 11 14.4 -2.1
RND **Reindeer** 68.46 29 P P 18 11 14.4 -2.1
RND pmax pmax
comp=Z,42nm,0.9s
RC01 **Rabbit Creek A** 68.49 31 P P 18 11 16.5 -0.1
baz=281
COLA **College** 68.61 27 P P 18 11 22.3 +5.0
PMR **Palmer** 68.68 31 P P 18 11 15.7 -2.1
PMR **Palmer** 68.68 31 P P 18 11 17.8 +0.1
baz=281
PMR **Palmer** 68.68 31 P P 18 11 15.7 -2.1
PMR pmax pmax
comp=Z,118nm,2.0s
WAT1 **Susitna Watana** 68.70 30 P P 18 11 17.6 -0.4
baz=281
POKR **Poker Plat Res** 68.74 27 IAmb IAmb 18 11 39.5
comp=Z,26nm,1.1s
POKR **Poker Plat Res** 68.74 27 P P 18 11 17.5 -0.6
baz=281,SNR=10
SEW **Seward** 68.82 32 P P 18 11 18.7 +0.1
baz=282
E25K **Arctic Village** 68.86 24 IAmb IAmb 18 11 27.6
comp=Z,31nm,1.5s
E25K **Arctic Village** 68.86 24 P P 18 11 18.6 -0.3
baz=282,SNR=11
RAYN **Ar Rayn** 68.89 287 P P 18 11 23.1 +3.3
G25K **Bearman Lake** 68.94 25 P P 18 11 19.6 +0.3
baz=282
F25K **Christian Rive** 68.94 24 P P 18 11 19.1 -0.3
baz=282
SML **Sawmill** 69.01 31 P P 18 11 18.3 -1.6
baz=282
KNK **Knik Glacier** 69.03 31 P P 18 11 18.9 -1.1
baz=282
ILAR **Eielson Array** 69.04 27 P P 18 11 18.3 -1.7
comp=Z,1.1nm,0.8s,baz=249,slow=6.3,SNR=11
comp=Z,1.1nm,0.8s
HDA **Harding Lake** 69.09 28 P P 18 11 17.9 -2.3
HDA IAmb IAmb 18 11 34.8
comp=Z,20nm,1.2s
HDA **Harding Lake** 69.09 28 P P 18 11 19.6 -0.7
baz=282
WAT6 **Susitna Watana** 69.12 30 P P 18 11 20.9 +0.2
baz=282
DHY **Denali Highway** 69.18 29 P P 18 11 20.1 -1.0
baz=282
M23K **Glacier View** 69.29 31 P P 18 11 21.3 -0.4
baz=282
PRP **Porcupine Dome** 69.44 26 P P 18 11 22.2 -0.5
baz=283
SCM **Sheep Creek Mo** 69.47 30 P P 18 11 22.4 -0.4
baz=283
F26K **Sheenjek River** 69.48 24 P P 18 11 21.9 -0.8
baz=283
ANN **Anapa** 69.56 311 eP P 18 11 29.0 +5.5
ANN pmax pmax
comp=Z,63nm,1.3s
ANN MLR MLR
comp=E,2µm,19.0s
ANN MLR MLR
comp=Z,1µm,14.0s
ANN MLR MLR
comp=N,880nm,16.0s
SPITS **Spitsbergen Ar** 69.68 348 LR LR 18 46 29.8
comp=N,3µm,18.1s,baz=27,slow=40
J25K **Salcha River,** 69.71 27 P P 18 11 23.8 -0.4
baz=283
K24K **Donnelly Dome** 69.72 28 P P 18 11 23.9 -0.4
baz=283
G26K **Porcupine Rive** 69.79 25 P P 18 11 24.8 +0.3
baz=284
ARCES **ARCESS Array B** 69.82 338 LR LR 18 46 15.0
comp=N,634nm,18.7s,baz=88,slow=40
P23K **Montague Islan** 69.85 32 P P 18 11 24.6 -0.5
baz=283
M24K **Tolsona, Glenn** 69.94 30 P P 18 11 26.0 +0.3
baz=284
PAX **Paxson** 70.05 29 P P 18 11 26.2 -0.2
baz=284
RIDG **Independent Ri** 70.14 28 P P 18 11 26.0 -0.9
baz=284
KLU **Klutina** 70.20 31 P P 18 11 26.6 -0.7
baz=284
D27M **Malcolm River** 70.23 22 IAmb IAmb 18 11 38.8
comp=Z,37nm,1.2s
D27M **Malcolm River** 70.23 22 P P 18 11 27.5 +0.2
baz=286
HARP **HAARP** 70.33 30 P P 18 11 27.6 -0.4
baz=284
SCRK **Sand Creek** 70.45 28 IAmb IAmb 18 11 30.0
comp=Z,39nm,1.6s
SCRK **Sand Creek** 70.45 28 P P 18 11 28.4 -0.5
baz=285,SNR=8.0
I26K **Coal Creek Min** 70.45 26 P P 18 11 28.3 -0.3
baz=285
J26L **Joseph Creek** 70.49 27 P P 18 11 27.5 -1.5
J26L **Joseph Creek** 70.49 27 P P 18 11 28.0 -1.1
baz=285,SNR=13
Q23K **Middleton Isla** 70.50 33 P P 18 11 28.6 -0.4
baz=284
EYAK **Cordova Ski Ar** 70.52 32 P P 18 11 28.9 -0.2
baz=284
N25K **Chitina, Valde** 70.79 30 P P 18 11 30.5 -0.4
baz=285
MENT **Mentasta** 70.83 29 P P 18 11 37.3 +6.2
H27K **Steamboat Moun** 70.85 25 P P 18 11 30.4 -0.7

baz=286,SNR=9.9
E28M Babbage River 70.91 23 P P 18 11 31.1 -0.3
baz=287
BMRM Bremner River 70.95 31 P P 18 11 31.4 -0.5
baz=285
D28M Stokes Point 70.97 22 P P 18 11 31.5 -0.2
baz=288
L26K Log Cabin Wild 70.97 29 P P 18 11 31.8 -0.1
baz=286
I27K Kandik River 70.99 26 P P 18 11 31.9 -0.1
baz=286
F28M Old Crow 71.08 24 P P 18 11 31.3 -1.2
F28M IAmb IAmb 18 11 40.2
comp=Z,34nm,1.2s
F28M Old Crow 71.08 24 P P 18 11 32.8 +0.3
baz=287,SNR=12
GLB Gilahina Butte 71.19 30 IAmb IAmb 18 11 42.5
comp=Z,27nm,1.0s
K27K Chicken 71.25 28 IAmb IAmb 18 11 41.2
comp=Z,16nm,0.8s
K27K Chicken 71.25 28 P P 18 11 33.4 -0.1
baz=286
M26K Nabesna, AK 71.30 29 P P 18 11 32.8 -1.2
M26K IAmb IAmb 18 11 40.2
comp=Z,34nm,0.9s
M26K Nabesna, AK 71.30 29 P P 18 11 33.6 -0.3
baz=286
EGAK Eagle 71.41 27 P P 18 11 32.5 -1.9
EGAK Eagle 71.41 27 P P 18 11 34.1 -0.4
baz=287
VRDI Verde Repeater 71.42 31 IAmb IAmb 18 11 40.8
comp=Z,20nm,0.9s
E29M Blow River 71.55 23 P P 18 11 34.9 -0.4
baz=289
MCARA McCarthy VSAT 71.57 30 P P 18 11 35.7 +0.1
baz=286
L27K Beaver Creek, 71.63 28 IAmb IAmb 18 11 42.7
comp=Z,19nm,0.8s
L27K Beaver Creek, 71.63 28 P P 18 11 36.2 +0.3
baz=287
I28M Miner Creek 71.70 26 IAmb IAmb 18 11 44.3
comp=Z,20nm,1.1s
I28M Miner Creek 71.70 26 P P 18 11 36.3 -0.1
baz=288
FINES FINESS Array B 71.79 330 P P 18 11 35.1 -1.8
comp=Z,4.4nm,0.8s,baz=107,slow=8.9,SNR=4.3
FINES LR LR 18 46 10.0
comp=Z,3μm,19.9s,baz=76,slow=38
comp=Z,4.4nm,0.8s
SIM Simferopol' 71.80 312 eP P 18 11 41.3 +4.1
SIM e 18 14 21.0
SIM eS S 18 21 01.5 +3.8
SIM pmax pmax
comp=Z,33nm,1.2s
M27K Edge Creek, AK 71.81 29 P P 18 11 36.6 -0.6
baz=287
H29M Whitestone 72.07 25 P P 18 11 37.7 -0.8
H29M Whitestone 72.07 25 P P 18 11 38.2 -0.3
baz=289
BVCY Beaver Creek 72.25 29 P P 18 11 39.2 -0.5
baz=288
DAWY Dawson 72.36 27 IAmb IAmb 18 11 47.1
comp=Z,19nm,0.8s
DAWY Dawson 72.36 27 P P 18 11 40.1 -0.2
baz=289,SNR=14
CTG Chitna Glacier 72.48 31 P P 18 11 40.3 -0.8
baz=288
CTGM Chitina Glacie 72.48 31 IAmb IAmb 18 11 47.6
comp=Z,33nm,0.8s
F30M Barrier River 72.56 23 P P 18 11 41.5 +0.2
baz=291
G30M tAoh Zraii Nji 72.62 24 IAmb IAmb 18 11 48.5
comp=Z,54nm,1.2s
G30M tAoh Zraii Nji 72.62 24 P P 18 11 40.9 -0.9
baz=290,SNR=10
YUK3 Moose Creek 72.63 30 P P 18 11 41.1 -1.1
baz=288
EPYK Eagle Plains 72.65 24 P P 18 11 40.5 -1.5
EPYK IAmb IAmb 18 11 48.2
comp=Z,17nm,0.8s
EPYK Eagle Plains 72.65 24 P P 18 11 41.3 -0.7
baz=290,SNR=10
J29N Klondike Camp 72.72 27 IAmb IAmb 18 11 49.9
comp=Z,21nm,0.9s
J29N Klondike Camp 72.72 27 P P 18 11 41.7 -0.7
baz=290
INK Inuvik 73.10 22 IAmb IAmb 18 11 50.8
comp=Z,19nm,0.9s
INK Inuvik 73.10 22 P P 18 11 43.5 -1.0
baz=292,SNR=10
INK Inuvik 73.10 22 P P 18 11 42.0 -2.5
INK Inuvik 73.10 22 P P 18 11 42.0 -2.5
comp=Z,6.5nm,0.8s,baz=280,slow=5.5,SNR=21
comp=Z,6.5nm,0.8s
YUK8 Steele Glacier 73.10 30 P P 18 11 43.8 -1.2
baz=289
I30M Mount Dempster 73.19 26 IAmb IAmb 18 11 52.7
comp=Z,30nm,1.2s
I30M Mount Dempster 73.19 26 P P 18 11 45.0 -0.3
baz=291
L29M L29M 73.21 28 IAmb IAmb 18 11 53.1
comp=Z,34nm,0.9s
L29M L29M 73.21 28 P P 18 11 44.2 -1.2
baz=290
K29M Barlow Dome 73.21 27 P P 18 11 45.3 -0.2
baz=290
PINM Pinnacle 73.27 31 P P 18 11 44.8 -0.9
baz=289
M29M Somme Creek 73.29 29 IAmb IAmb 18 11 53.7
comp=Z,27nm,0.9s
M29M Somme Creek 73.29 29 P P 18 11 44.9 -1.0
baz=290
AKASG Malin Array Be 73.30 318 P P 18 11 45.2 -0.8
comp=Z,1.1nm,0.6s,baz=61,slow=5.5,SNR=7.5
AKASG LR LR 18 46 28.0
comp=Z,1μm,18.8s,baz=72,slow=38
comp=Z,1.1nm,0.6s
IDID Didziasalis 73.31 324 eP P 18 11 45.4 -0.6
F31M Tsiigehtchic 73.35 23 P P 18 11 44.1 -1.9
F31M IAmb IAmb 18 11 52.1
comp=Z,24nm,0.8s
F31M Tsiigehtchic 73.35 23 P P 18 11 44.2 -1.8
baz=293,SNR=10
G31M Satah River 73.36 24 P P 18 11 44.5 -1.5
baz=292
J30M Hart River 73.44 26 P P 18 11 45.1 -1.7
baz=291
ASF Jabal al Asfar 73.49 298 LR LR 18 50 10.4
comp=Z,595nm,18.3s,baz=152,slow=41
IIGN Ignalina 73.58 324 eP P 18 11 47.8 +0.2
YUK4 Talbot Arm 73.59 30 P P 18 11 46.8 -1.0
baz=290
BR131 Keskin Array S 73.66 307 P P 18 11 53.2 +4.6
SNR=7.8
BRTR Keskin Array B 73.66 307 P P 18 11 48.8 +0.2
comp=Z,5.2nm,1.1s,baz=116,slow=5.6,SNR=10
BRTR LR LR 18 47 04.6
comp=Z,1μm,20.4s,baz=76,slow=38
comp=Z,5.2nm,1.1s
YUK6 Outpost Mounta 73.86 30 P P 18 11 49.0 -0.5
baz=290
M30M Minto, Yukon 73.97 28 IAmb IAmb 18 11 56.9
comp=Z,26nm,0.9s
M30M Minto, Yukon 73.97 28 P P 18 11 49.4 -0.5
baz=291,SNR=18
O29M Mount Kennedy 73.98 31 P P 18 11 50.5 +0.5
baz=290
A36M Sachs Harbour 74.04 17 P P 18 11 50.1 +0.1
baz=299
ANTO Ankara 74.24 307 P P 18 11 53.3 +1.5
ANTO P P 18 11 53.3 +1.5
HYT Haines Junctio 74.29 30 P P 18 11 50.9 -0.9
HYT IAmb IAmb 18 12 03.2
comp=Z,35nm,1.2s
HYT Haines Junctio 74.29 30 P P 18 11 52.2 +0.4
baz=291,SNR=6.4
MMAI Mount Meron Ar 74.42 299 P P 18 11 54.0 +1.0
comp=Z,0.3nm,0.3s,baz=76,slow=11,SNR=5.3
MMAI LR LR 18 49 14.6
comp=Z,936nm,18.4s,baz=15,slow=40
comp=Z,0.3nm,0.3s
P29M Windy Craggy 74.62 31 P P 18 11 53.5 -0.1
baz=291
PABE Paberze 74.74 324 eP P 18 11 53.2 -1.1
P30M Million Dollar 74.80 31 P P 18 11 53.6 -1.1
baz=292
N31M Braeburn, Yuko 74.82 29 IAmb IAmb 18 12 10.4
comp=Z,37nm,1.1s
N31M Braeburn, Yuko 74.82 29 P P 18 11 54.8 0.0
baz=292
O30N Mendenhall 74.96 30 P P 18 11 55.3 -0.3
baz=292,SNR=5.7
M31M Drury Creek, Y 75.15 28 P P 18 11 55.6 -1.0
M31M Drury Creek, Y 75.15 28 P P 18 11 57.3 +0.6
baz=293
PLBC Pleasant Camp 75.33 31 P P 18 11 58.0 +0.3
baz=292
ATD Arta Tunnel 75.37 276 LR LR 18 44 17.8
comp=Z,30nm,19.3s,baz=118,slow=35
WHY Whitehorse 75.55 30 P P 18 11 58.2 -0.9
baz=293
FARO Faro, Yukon 75.59 28 P P 18 11 57.6 -1.5
FARO Faro, Yukon 75.59 28 P P 18 11 58.7 -0.5
baz=294,SNR=11
SUW Suwalki 75.69 323 P P 18 11 58.9 -1.0
SUW Suwalki 75.69 323 P P 18 11 58.9 -1.0
SUW pmax pmax
comp=Z,59nm,1.1s
SUW Suwalki 75.69 323 eP P 18 11 59.1 -0.7
C36M Paulatuk 75.70 20 IAmb IAmb 18 12 04.4
comp=Z,57nm,1.5s
C36M Paulatuk 75.70 20 P P 18 11 58.2 -1.4
baz=301,SNR=13
SKAG Skagway 75.82 31 IAmb IAmb 18 12 08.4
comp=Z,30nm,0.8s
SKAG Skagway 75.82 31 P P 18 12 07.2 +6.7
SKAG Skagway 75.82 31 P P 18 12 00.4 -0.1
baz=293
EIL Elat 75.88 296 LR LR 18 50 05.3
comp=Z,952nm,18.1s,baz=287,slow=39
S31K Pelican 75.97 33 P P 18 12 01.3 -0.1
baz=293
N32M Quiet Lake 76.15 29 IAmb IAmb 18 12 24.7
comp=Z,51nm,1.4s
N32M Quiet Lake 76.15 29 P P 18 12 01.8 -0.6
baz=295
P32M Atlin 76.52 30 P P 18 12 03.4 -1.1
P32M IAmb IAmb 18 13 21.7
comp=Z,41nm,1.6s
P32M Atlin 76.52 30 P P 18 12 05.1 +0.6
baz=295
P33M Teslin, Yukon 76.67 30 P P 18 12 05.9 +0.5
baz=295
R32K Eaglecrest 76.68 32 P P 18 12 06.4 +1.0
baz=294
S32K Killisnoo 76.98 33 P P 18 12 07.1 0.0
baz=294
MLR Muntele Rosu 77.10 314 LR LR 18 48 32.1
comp=Z,1μm,21.7s,baz=49,slow=38
Q32M Nakina River 77.46 31 P P 18 12 09.3 -0.8
baz=296
R33M Jennings River 77.86 30 P P 18 12 11.9 -0.3
baz=297
HFS Hagfors 77.91 331 P P 18 12 12.0 -0.2
comp=Z,3.6nm,0.9s,baz=11,slow=9.1,SNR=3.2
HFS LR LR 18 50 08.1
comp=Z,4μm,18.2s,baz=63,slow=38
comp=Z,3.6nm,0.9s
TGTN Hyland Airport 78.05 27 P P 18 12 12.2 -1.0
baz=299
U33K Whale Pass 78.28 34 P P 18 12 14.0 -0.3
baz=296
S34M Telegraph Cree 78.46 31 P P 18 12 14.3 -1.0
baz=297
WTLY Watson Lake, Y 78.50 29 IAmb IAmb 18 12 21.0
comp=Z,22nm,1.0s
WTLY Watson Lake, Y 78.50 29 P P 18 12 15.8 +0.2
baz=298
NB2 NORSAR Subarra 78.55 332 P P 18 12 15.3 -0.6
comp=Z,27nm,1.7s,baz=58,slow=5.3
NB2 NORSAR Subarra 78.55 332 P P 18 12 15.3 -0.6
baz=58,slow=5.3
NOA NORSAR Array B 78.55 332 P P 18 12 15.2 -0.7
comp=Z,4.4nm,0.9s,baz=58,slow=5.6,SNR=6.6
NOA LR LR 18 49 13.4
comp=Z,2μm,18.8s,baz=45,slow=37
comp=Z,4.4nm,0.9s
CRAG Craig 78.56 34 P P 18 12 15.2 -0.7
baz=296
RES Resolute Bay 78.66 9 LR LR 18 50 38.8
comp=Z,1μm,19.3s,baz=339,slow=38
DLBC Dease Lake 78.74 31 P P 18 12 16.9 -0.1
baz=298
DLBC Dease Lake 78.74 31 P P 18 12 16.9 -0.1
comp=Z,3.9nm,0.4s,baz=272,slow=3.8,SNR=8.4
DLBC LR LR 18 48 12.1
comp=Z,670nm,20.5s,baz=12,slow=37
comp=Z,3.9nm,0.4s
JMIC Jan Mayen 79.05 345 LR LR 18 51 25.9
comp=Z,2μm,18.2s,baz=24,slow=39
OJC Ojcow 79.09 320 eP P 18 12 21.6 +2.6
WRGLY Wrigley 79.12 25 IAmb IAmb 18 14 55.5
comp=Z,20nm,0.4s
NIE Niedzica 79.12 319 eP P 18 12 21.2 +2.0
LANS Liptovska Anna 79.73 319 eP P 18 12 25.5 +2.9
LANS Liptovska Anna 79.73 319 eP P 18 12 25.5 +2.9
MORC Moravsky Berou 80.59 320 eP P 18 12 28.0 +0.8
KSP Ksiaz 80.83 322 eP P 18 12 27.1 -1.4
JAVC Velka Javorina 80.92 320 eP P 18 12 30.5 +1.5
OSTC Ostas 81.01 322 AMS AMS 18 52 00.0
comp=Z,2μm,18.4s
VRAC Vranov 81.36 320 eP P 18 12 31.9 +0.6
KRUC Moravsky 81.58 320 eP P 18 12 33.3 +0.8
BRG Berggiesshubel 82.14 322 eP P 18 12 37.6 +2.2
BRG Amp 18 12 45.0
comp=Z,16nm,1.5s
BRG Berggiesshubel 82.14 322 eP P 18 12 37.5 +2.2
BRG pmax pmax
comp=Z,16nm,1.5s
BRG pmax pmax
comp=Z,14nm,1.5s
BRG MLR MLR
comp=E,2μm,9.7s
BRG MLR MLR
comp=N,904nm,9.9s
BRG MLR MLR
comp=Z,2μm,9.6s
PRU Pruhonice 82.22 322 AMS AMS 18 52 50.0
comp=Z,2μm,21.4s
RONA Rosalia, Austr 82.27 319 ePcP PcP 18 12 39.2 -2.2
comp=Z,13nm,1.6s
CONA Conrad Observa 82.42 319 epP pP 18 12 38.3 -1.5
comp=Z,5.3nm,1.4s
CLL Collm 82.45 323 eP P 18 12 37.0 +0.1
CLL i 18 12 45.7
CLL MLR MLR
comp=Z,2μm,19.2s
CLL Collm 82.45 323 eP P 18 12 37.0 +0.1
CLL i x x 18 12 45.7
comp=Z,65nm,2.2s
CLL ex x 18 12 56.0
CLL ePP PP 18 15 48.0 +2.5
CLL AMS AMS 18 53 00.0
comp=N,1μm,19.0s
CLL AMS AMS 18 53 00.0
comp=E,1μm,18.2s
CLL AMS AMS 18 53 00.0
comp=Z,2μm,19.2s
ZVC Zvikov 82.69 321 eP P 18 12 41.7 +3.5
YKA Yellowknife Ar 82.83 23 i P P 18 12 38.4 -0.3
YKA pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 82.83 23 P P 18 12 38.0 -0.7
comp=Z,4.1nm,0.8s,baz=313,slow=4.9,SNR=43
YKA LR LR 18 52 32.7
comp=Z,799nm,19.6s,baz=324,slow=38
comp=Z,4.1nm,0.8s
CKRC Cesky Krumlov 82.91 321 eP P 18 12 43.3 +3.8
CKRC Cesky Krumlov 82.91 321 eP P 18 12 43.3 +3.8
ARSA Arzberg 82.94 319 ePcP PcP 18 12 42.3 -2.1
comp=Z,3.3nm,0.9s
KHC Kasperske Hory 83.19 321 eP P 18 12 44.6 +3.7
KHC AMS AMS 18 54 10.0
comp=Z,2μm,23.0s
KHC Kasperske Hory 83.19 321 eP P 18 12 44.6 +3.7
KHC MLR MLR
comp=Z,2μm,23.0s
GERES GERESS Array B 83.25 321 P P 18 12 40.6 -0.7
comp=Z,1.1nm,0.7s,baz=46,slow=4.1,SNR=9.0
GERES LR LR 18 53 41.2
comp=Z,1μm,19.7s,baz=50,slow=38
comp=Z,1.1nm,0.7s
MOA Molln 83.41 320 ePcP P 18 12 44.0 +2.0
comp=Z,10nm,1.2s
SOKA Soboth 83.50 318 eP P 18 12 42.1 -0.5
comp=Z,11nm,1.5s
BIOA Bad Ischl, Aus 83.85 320 epP P 18 12 45.4 +1.1
comp=Z,9.4nm,1.4s
KBA Koelnbreinsper 84.33 319 epP P 18 12 47.8 +0.9
comp=Z,18nm,1.8s
HILA High Level 84.40 27 P P 18 12 45.6 -1.2
LESA Schwarzleotal 84.55 320 epP P 18 12 48.4 +0.4
comp=Z,12nm,1.3s
WTTA Wattenberg 85.24 320 ePcP PcP 18 12 53.4 -1.3
comp=Z,13nm,1.3s
LODK Lodwar 85.35 272 P P 18 12 54.5 +1.9
SQTA Sankt Quirin 85.52 320 epP P 18 12 52.9 0.0
comp=Z,18nm,1.6s
FETA Feichten 85.90 320 ePcP PcP 18 12 56.9 -0.7
comp=Z,9.6nm,1.3s
DAVOX Davos/Dischmat 86.52 320 LR LR 18 53 58.1
comp=Z,918nm,18.2s,baz=48,slow=37
BORG Borgarnes 86.95 345 LR LR 18 54 37.0
comp=Z,1μm,19.9s,baz=18,slow=38
GNW Green Mountain 88.09 38 IAmb IAmb 18 13 12.2
comp=Z,20nm,1.2s
LON Longmire 89.12 38 P P 18 13 08.0 -2.2
LON IAmb IAmb 18 13 33.3
comp=Z,34nm,1.6s
LON Longmire 89.12 38 P P 18 13 08.0 -2.2
LON pmax pmax
comp=Z,34nm,1.6s
LTY Liberty 89.46 37 P P 18 13 09.9 -1.9
LTY IAmb IAmb 18 13 18.0
comp=Z,29nm,1.4s
HAWA Hanford 90.60 37 P P 18 13 16.4 -0.7
NEW Newport 90.76 35 P P 18 13 18.3 +0.5
baz=309
J05D Fort Rock, OR 91.45 41 IAmb IAmb 18 13 28.1
comp=Z,21nm,1.1s
I07A Izee 92.00 39 P P 18 13 23.0 -0.7
FRB Frobisher Bay 92.07 5 LR LR 18 59 03.3
comp=Z,856nm,19.0s,baz=345,slow=38
F10A Beach Ranch, E 92.13 37 IAmb IAmb 18 13 44.0
comp=Z,33nm,1.6s
KEST Kesra 92.73 311 LR LR 19 01 24.9
comp=Z,467nm,18.2s,baz=269,slow=40
FFC Flin Flon 92.99 24 P P 18 13 25.6 -2.3
FFC IAmb IAmb 18 13 34.2
comp=Z,29nm,1.3s
FFC Flin Flon 92.99 24 P P 18 13 25.6 -2.3
FFC pmax pmax
comp=Z,29nm,1.3s
ORV Oroville 93.44 44 P P 18 13 28.0 -2.4
ORV IAmb IAmb 18 13 34.1
comp=Z,44nm,2.0s
ORV Oroville 93.44 44 P P 18 13 28.0 -2.4
ORV pmax pmax
comp=Z,44nm,2.0s
AFDM Forest Hills D 94.13 44 IAmb IAmb 18 13 37.5
comp=Z,15nm,1.3s
MFID Camas Ranch 94.51 38 IAmb IAmb 18 13 58.1
comp=Z,36nm,1.8s
EMB Emerald Bay 94.66 44 IAmb IAmb 18 13 45.5
comp=Z,12nm,1.1s
CMB Columbia Colle 95.03 45 P P 18 13 35.2 -2.5
CMB IAmb IAmb 18 13 46.5
comp=Z,13nm,1.4s
CMB Columbia Colle 95.03 45 P P 18 13 35.3 -2.5
CMB pmax pmax
comp=Z,13nm,1.4s
HLID Hailey 95.21 37 P P 18 13 38.2 -0.4
baz=310
BOZ Bozeman (W) 95.35 34 IAmb IAmb 18 13 49.2
comp=Z,24nm,1.7s
BOZ Bozeman (W) 95.35 34 P P 18 13 38.2 -0.9
baz=313
KVN Kaiserville 95.87 43 IAmb IAmb 18 13 50.3
comp=Z,15nm,1.4s
NVAR Mina Array Bea 96.12 43 P P 18 13 42.2 -0.7
comp=Z,0.8nm,0.8s,baz=287,slow=3.7,SNR=2.6
comp=Z,0.8nm,0.8s
ELK Elko 96.54 40 LR LR 18 52 28.6
comp=Z,159nm,21.3s,baz=311,slow=32
H17A Grant Village 96.72 35 P P 18 13 44.8 -0.8
baz=313
DGMT Dagmar 96.87 29 P P 18 13 45.3 -0.5
baz=319
SMMC Simmler 96.88 47 P P 18 13 45.6 -0.6
baz=306
RLMT Red Lodge 96.89 34 P P 18 13 45.6 -0.7
baz=314
DSP Deep Springs 96.97 44 IAmb IAmb 18 13 56.3
comp=Z,16nm,1.5s
R11B Troy Canyon, C 97.85 42 P P 18 13 47.8 -2.9
R11B Troy Canyon, C 97.85 42 P Pdif 18 13 51.1 +0.4
baz=309
MPMC Manual Prospec 98.07 45 P P 18 13 51.5 -0.2
baz=308
LRMC Laurel Mtn Rad 98.30 45 P Pdif 18 13 53.5 +0.8
baz=307
TPNV Topopah Spring 98.31 43 P Pdif 18 13 53.2 +0.4
baz=308
PDAR Pinedale Array 98.38 36 P P 18 13 52.0 -1.0
comp=Z,0.2nm,0.6s,baz=72,slow=2.9,SNR=2.3
PDAR LR LR 18 59 42.1
comp=Z,245nm,20.4s,baz=341,slow=36
comp=Z,0.2nm,0.6s
ULM Lac du Bonnet 98.81 23 LR LR 19 05 30.4
comp=Z,416nm,18.9s,baz=355,slow=40
ESDC Sonseca Array 98.85 321 LR LR 19 01 43.7
comp=Z,635nm,18.9s,baz=44,slow=37
LSZ Lusaka 99.30 257 LR LR 18 56 29.3
comp=Z,547nm,21.1s,baz=125,slow=34
DBBC Dabeiba 144.44 32 eP PKPdf 18 19 51.4 -0.6
SDV Santo Domingo 145.04 22 PKPbc 18 19 51.0 -1.4
SDV Santo Domingo 145.04 22 PKPbc PKPbc 18 19 51.1 -1.3
comp=Z,21nm,0.9s,baz=318,slow=3.8,SNR=24
SDV Santo Domingo 145.04 22 eP PKPbc 18 19 52.3 -0.1
CBOC Ciudad Bolivar 145.53 32 eP PKPdf 18 19 53.5 -0.5
PTBC PUERTO BERRIO 145.67 30 eP PKPdf 18 19 52.7 -1.4
PAMC Pamplona, Colo 145.70 26 eP PKPdf 18 19 54.1 -0.6
BAUV El Baul 145.78 17 PKPdf PKPdf 18 19 52.8 -1.4
BARC Barichara 146.18 27 eP PKPab 18 19 56.8 0.0
GUY2C Guyana, Caldas 146.40 32 eP PKPdf 18 19 56.0 +0.2
SPBC San Pablo de B 146.63 30 eP PKPab 18 19 58.7 +0.5
YOTC Yotoco, Valle 146.97 35 eP PKPbc 18 19 57.5 -0.8
ANIL Santa Ana 147.02 33 eP PKPdf 18 19 51.9 -4.7
ROSC El Rosal 147.23 31 PKPbc PKPdf 18 19 57.5 +0.4
comp=Z,6.4nm,0.3s,baz=23,slow=4.4,SNR=7.8
JAMC Jamundi, Valle 147.45 36 eP PKPbc 18 19 59.6 -0.1
ORTC Ortega, Tolima 147.59 33 eP PKPdf 18 19 58.5 +1.2
POPC Popayan, Colom 148.01 37 eP PKPdf 18 19 59.8 +1.5
BBAC Balboa, Cauca 148.12 38 eP PKPbc 18 20 01.3 -0.3
VILC Villavicencio, 148.16 30 eP PKPbc 18 20 01.4 -0.1
BETC Betania 148.55 35 eP PKiKP 18 20 03.8 -0.3
GCUF Volcan Galeras 148.71 39 eP PKPab 18 20 07.5 +0.5
OTAV Otavalo 148.85 42 eP PKPab 18 20 10.7 +3.1
TULM Tulcn-Chalpat 148.87 40 PKPdf 18 19 56.9 -3.0
BONI La Bonita 149.23 40 eP PKPdf 18 19 59.6 -0.7
PIAT Ana Tenorio 149.93 43 eP PKPab 18 20 09.7 -2.1
PTLC Puerto Leguiza 151.00 36 eP PKiKP 18 20 09.2 +0.1
MCRA Macar, Loja 151.30 50 eP PKPbc 18 20 08.7 -0.5
ETMB Extrema 163.88 30 PKPdf PKPdf 18 20 15.4 -3.2
ETMB PKPab PKPab 18 21 08.7 -2.3

TAP 06 18:01:24.6,24.08N×121.59E,h8km±1km,ML3.0,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.01**	**68**	*i* P	Pg	18 01 26.1	+0.1
TWD	baz=72			*e*S	Sg	18 01 27.1	+0.2
ETL	**Fush Village**	**0.09**	**23**	P	Pg	18 01 26.8	-0.1
ETL	baz=22			*i* S	Sg	18 01 28.1	-0.3
NACB	**Ninganchiao**	**0.10**	**5**	P	Pg	18 01 27.1	+0.1
NACB	baz=5.0			*i* S	Sg	18 01 28.7	+0.1
ETM	**Tongmen**	**0.14**	**217**	P	Pg	18 01 27.5	-0.1
ETM	baz=217			*e*S	Sg	18 01 29.7	0.0
	baz=217						

TAP 06 18:02:10.0,24.11N×121.70E,h10km,ML3.6,1D,C,

Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
ETL	**Fush Village** baz=305	**0.08**	**307**	⇓*i*	P	Pg	18 02 12.7	+0.2
ETL	baz=305			*i*	S	Sg	18 02 14.2	0.0
TWD	**Chiawan** baz=255	**0.10**	**253**		P	Pg	18 02 12.9	+0.3
TWD	baz=255			*i*	S	Sg	18 02 14.6	+0.2
NACB	**Ninganchiao** baz=305	**0.11**	**305**	*i*	P	Pg	18 02 13.1	+0.3
NACB	baz=305			*i*	S	Sg	18 02 14.9	+0.1
EAHA	**Aohua** baz=7.0	**0.22**	**10**	*i*	P	Pg	18 02 14.9	+0.3
EAHA	baz=7.0				S	Sg	18 02 18.1	+0.3
ETM	**Tongmen** baz=235	**0.23**	**233**		P	Pg	18 02 15.4	+0.6
ETM	baz=235				S	Sg	18 02 18.8	+0.7
LXIB	**Xiulin Townshi** baz=243	**0.27**	**252**		P	Pg	18 02 15.9	+0.3
LXIB	baz=243			*i*	S	Sg	18 02 20.1	+0.7
SHUL	**Shoufeng** baz=208	**0.34**	**201**	*e*	P	Pb	18 02 18.8	+0.7
EWUT	**Wuta** baz=10.0	**0.34**	**13**		P	Pg	18 02 17.1	+0.2
EWUT	baz=10.0				S	Sg	18 02 21.9	+0.4
ESL	**Shilin** baz=228	**0.38**	**219**	*e*	P	Pg	18 02 18.0	+0.5
ESL	baz=228			*e*	S	Sb	18 02 23.7	-1.1
WHF	**Hehuan Shan** baz=276	**0.40**	**275**	*e*	P	Pb	18 02 19.0	-0.4
TEGC	**Jichi Village** baz=189	**0.42**	**200**	*e*	P	Pn	18 02 20.9	-1.1
NNSB	**Datong** baz=317	**0.43**	**318**		P	Pb	18 02 19.2	-0.5
NNSB	baz=317			*e*	S	Sg	18 02 24.7	+0.5
NNSH	**Datong** baz=316	**0.43**	**318**		P	Pg	18 02 18.8	+0.3
NNSH	baz=316			*i*	S	Sg	18 02 24.9	+0.7
FUSS	**Fushou** baz=288	**0.44**	**289**		P	Pb	18 02 19.3	-0.6
FUSS	baz=288				S	Sg	18 02 25.4	+1.0
NNS	**Nan Shan** baz=317	**0.44**	**318**		P	Pb	18 02 19.5	-0.5
NNS	baz=317			*i*	S	Sg	18 02 25.1	+0.5
LATG	**Datong** baz=326	**0.45**	**340**	*e*	P	Pb	18 02 19.6	-0.6
CHGB	**Renai** baz=257	**0.48**	**264**	*e*	P	Pg	18 02 19.8	+0.4
CHGB	baz=257				S	Sg	18 02 26.4	+0.6
WARBT	**Fenglin Townsh** baz=225	**0.48**	**216**	*e*	P	Pg	18 02 19.9	+0.5
ESAO	**Su ao** baz=7.0	**0.48**	**16**	*e*	P	Pn	18 02 21.9	-1.1
TWT	**Tachien** baz=286	**0.50**	**287**		P	Pb	18 02 20.5	-0.4
TWT	baz=286				S	Sb	18 02 27.8	-0.5
OWD	**Renai** baz=254	**0.50**	**252**	*e*	P	Pg	18 02 20.2	+0.4
TDCB	**Techi** baz=286	**0.51**	**287**	*e*	P	Pb	18 02 21.4	+0.3
TDCB	baz=286			*i*	S	Sb	18 02 28.0	-0.7
TWC	**Suao** baz=8.0	**0.52**	**16**	*e*	P	Pb	18 02 20.9	-0.3
TWC	baz=8.0			*e*	S	Sg	18 02 27.5	+0.5
NDT	**Datong Townshi** baz=339	**0.52**	**341**		P	Pb	18 02 20.9	-0.3
NDT	baz=339				S	Sb	18 02 27.9	-0.9
NDS	**Dongshan** baz=358	**0.52**	**2**		P	Pb	18 02 20.8	-0.5
NDS	baz=358				S	Sg	18 02 27.8	+0.7
WUSB	**Renai** baz=259	**0.54**	**258**		P	Pg	18 02 20.1	-0.5
WUSB	baz=259				S	Sg	18 02 28.5	+0.7
ENTT	**Nioudou** baz=345	**0.54**	**347**	*e*	P	Pb	18 02 21.3	-0.3
ENTT	baz=345			*e*	S	Sg	18 02 28.5	+0.7
TWE	**Neicheng** baz=357	**0.61**	**358**		P	Pb	18 02 22.6	-0.1
TWE	baz=357				S	Sg	18 02 30.4	+0.5
VWDT	**VWDT** baz=244	**0.62**	**235**	*e*	P	Pb	18 02 22.8	0.0
NSK	**Sanguang** baz=330	**0.64**	**331**	*e*	P	Pb	18 02 23.3	-0.1
FUSB	**Fushanzhiwuyua** baz=349	**0.66**	**351**		P	Pb	18 02 23.7	+0.1
FUSB	baz=349				S	Sb	18 02 32.1	-0.7
NWLT	**Wulai** baz=330	**0.69**	**345**	*e*	P	Pb	18 02 24.2	+0.1
NWLT	baz=330				S	Sg	18 02 33.0	+0.6
EHY	**Hungye** baz=212	**0.69**	**210**	*e*	P	Pg	18 02 23.6	+0.2
DPDB	**Guoxing** baz=256	**0.71**	**264**	*e*	P	Pb	18 02 24.9	+0.5
DPDB	baz=256			*e*	S	Sb	18 02 34.6	+0.3
NFF	**Wufeng Townshi** baz=313	**0.74**	**315**	*e*	P	Pb	18 02 24.7	-0.3
SSLB	**Suanglung** baz=256	**0.75**	**245**		P	Pb	18 02 25.1	-0.1
SSLB	baz=256				S	Sb	18 02 35.1	-0.3

TAP 06 18:02:55.8, 24.°04N×121.°64E, *h*8km, ML3.6, 4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
TWD	**Chiawan** baz=326	**0.05**	**317**	*i*	P	Pg	18 02 57.9	+0.4
TWD	baz=326			*i*	S	Sg	18 02 59.0	+0.3
ETL	**Fush Village** baz=356	**0.12**	**355**	*i*	P	Pg	18 02 58.7	+0.2
ETL	baz=356			*i*	S	Sg	18 03 00.5	+0.1
NACB	**Ninganchiao** baz=354	**0.14**	**344**	*i*	P	Pg	18 02 58.9	+0.1
NACB	baz=354			*i*	S	Sg	18 03 00.9	+0.1
ETM	**Tongmen** baz=239	**0.15**	**240**	*i*	P	Pg	18 02 59.5	+0.5
ETM	baz=239			*i*	S	Sg	18 03 01.7	+0.6
LXIB	**Xiulin Townshi** baz=253	**0.20**	**264**		P	Pg	18 03 00.5	+0.5
LXIB	baz=253			*e*	S	Sg	18 03 03.4	+0.6
SHUL	**Shoufeng** baz=193	**0.26**	**195**	*e*	P	Pb	18 03 02.3	-0.4
SHUL	baz=193			*e*	S	Sb	18 03 06.7	-0.6
ESL	**Shilin** baz=227	**0.29**	**219**	*e*	P	Pg	18 03 02.0	+0.4
ESL	baz=227				S	Sg	18 03 05.8	+0.4
EAHA	**Aohua** baz=19	**0.30**	**18**	*e*	P	Pg	18 03 01.8	0.0
TEGC	**Jichi Village** baz=192	**0.34**	**195**	*e*	P	Pb	18 03 04.0	-0.1
TEGC	baz=192			*e*	S	Sb	18 03 10.5	+0.8
WHF	**Hehuan Shan** baz=287	**0.35**	**287**		P	Pg	18 03 03.4	+0.5
WHF	baz=287				S	Sg	18 03 08.2	+0.6
WARBT	**Fenglin Townsh** baz=222	**0.39**	**215**	*e*	P	Pg	18 03 03.9	+0.4
ENA	**Nanau** baz=16	**0.40**	**14**	⇓*i*	P	Pg	18 03 03.5	0.0
ENA	baz=16			*e*	S	Sg	18 03 08.6	-0.2
FUSS	**Fushou** baz=299	**0.41**	**300**		P	Pg	18 03 04.6	+0.7
FUSS	baz=299			*e*	S	Sg	18 03 10.5	+1.2
EGFH	**Guangfu** baz=214	**0.42**	**207**	*e*	P	Pb	18 03 04.8	-0.6
CHGB	**Renai** baz=262	**0.42**	**273**		P	Pg	18 03 04.8	+0.8
CHGB	baz=262				S	Sg	18 03 10.7	+1.0
EWUT	**Wuta** baz=19	**0.42**	**18**		P	Pg	18 03 04.0	-0.1
EWUT	baz=19			*e*	S	Sg	18 03 09.6	0.0
OWD	**Renai** baz=267	**0.43**	**259**		P	Pg	18 03 04.7	+0.6
OWD	baz=267			*e*	S	Sg	18 03 10.3	+0.5
NNSB	**Datong** baz=329	**0.45**	**329**		P	Pg	18 03 05.0	+0.4
NNSB	baz=329			*e*	S	Sg	18 03 10.8	+0.4
NNSH	**Datong** baz=329	**0.45**	**329**		P	Pg	18 03 04.9	+0.4
NNSH	baz=329			*e*	S	Sg	18 03 10.8	+0.3
NNS	**Nan Shan** baz=330	**0.46**	**329**	⇓	P	Pg	18 03 05.1	+0.3
NNS	baz=330			*e*	S	Sg	18 03 11.8	+0.8
TWT	**Tachien** baz=295	**0.47**	**297**	*e*	P	Pb	18 03 06.0	-0.5
TWT	baz=295			*e*	S	Sb	18 03 12.5	-1.1
WUSB	**Renai** baz=263	**0.48**	**264**	*e*	P	Pb	18 03 05.9	-0.6
WUSB	baz=263				S	Sg	18 03 11.8	+0.4
TDCB	**Techi** baz=295	**0.48**	**296**	*e*	P	Pb	18 03 06.0	-0.7
TDCB	baz=295				S	Sg	18 03 12.6	+1.0
LATG	**Datong** baz=337	**0.50**	**349**	*e*	P	Pg	18 03 05.9	+0.3
VWDT	**VWDT** baz=229	**0.54**	**238**	*e*	P	Pb	18 03 07.4	0.0
VWDT	baz=229			*e*	S	Sg	18 03 13.9	+0.7
ESAO	**Su ao** baz=20	**0.56**	**20**	*e*	P	Pg	18 03 07.2	+0.5
NDT	**Datong Townshi** baz=349	**0.57**	**349**	⇓*i*	P	Pg	18 03 07.3	+0.5
NDT	baz=349			*e*	S	Sg	18 03 14.7	+0.4
HGSD	**Ruisui** baz=217	**0.58**	**200**	*e*	P	Pn	18 03 09.4	-1.0
NDS	**Dongshan** baz=15	**0.59**	**7**	*e*	P	Pg	18 03 07.5	+0.2
TWC	**Suao** baz=20	**0.60**	**19**	*e*	P	Pg	18 03 07.8	+0.4
ENTT	**Nioudou** baz=355	**0.60**	**354**	⇓	P	Pg	18 03 07.8	+0.4
ENTT	baz=355			*e*	S	Sg	18 03 15.2	0.0
EHY	**Hungye** baz=208	**0.60**	**208**	*e*	P	Pb	18 03 08.2	-0.5
WPL	**Puli Township** baz=267	**0.62**	**267**	*e*	P	Pb	18 03 08.5	-0.4
DPDB	**Guoxing** baz=269	**0.65**	**269**	*e*	P	Pb	18 03 09.1	-0.3
WCS	**Beigang Elemen** baz=271	**0.66**	**272**	*e*	P	Pb	18 03 09.5	-0.1
YHNB	**Yeheng** baz=340	**0.67**	**339**		P	Pb	18 03 09.4	-0.4
YHNB	baz=340				S	Sg	18 03 18.0	+0.5
SSLB	**Suanglung** baz=258	**0.67**	**248**		P	Pb	18 03 09.3	-0.5
SSLB	baz=258				S	Sg	18 03 17.8	+0.2
WHP	**Taichung City** baz=284	**0.67**	**291**	*e*	P	Pb	18 03 09.8	0.0
TWE	**Neicheng** baz=354	**0.68**	**2**	*e*	P	Pg	18 03 09.2	+0.3
NSK	**Sanguang** baz=332	**0.68**	**338**		P	Pb	18 03 09.5	-0.4
NSK	baz=332			*e*	S	Sg	18 03 18.6	+0.8
SMLT	**Sun Moon Lake** baz=256	**0.69**	**257**	*e*	P	Pb	18 03 10.2	0.0
SMLT	baz=256			*e*	S	Sg	18 03 18.9	+0.7
YULB	**Yu-li** baz=213	**0.72**	**206**	*e*	P	Pg	18 03 09.6	0.0
YULB	baz=213			*e*	S	Sb	18 03 19.9	-0.6
FUSB	**Fushanzhiwuyua** baz=357	**0.72**	**357**		P	Pg	18 03 09.6	0.0
FUSB	baz=357				S	Sg	18 03 19.8	+0.8
TYC	**Yuchr** baz=258	**0.72**	**259**	*e*	P	Pb	18 03 10.6	-0.1
TYC	baz=258				S	Sg	18 03 19.6	+0.4
NWLT	**Wulai** baz=351	**0.74**	**351**		P	Pg	18 03 10.5	+0.4
NWLT	baz=351			*e*	S	Sg	18 03 19.4	-0.4
TWF1	**Yuli** baz=218	**0.75**	**204**	*e*	P	Pb	18 03 10.8	-0.4
NFF	**Wufeng Townshi** baz=321	**0.75**	**321**	*e*	P	Pb	18 03 11.3	+0.1
WHYT	**Xinyi Township** baz=245	**0.79**	**245**	*e*	P	Pb	18 03 11.8	-0.1
NSTT	**Nanjuang** baz=316	**0.82**	**316**		P	Pb	18 03 12.7	+0.3
NSTT	baz=316			*e*	S	Sb	18 03 23.9	+0.2
LIOB	**Emei** baz=317	**0.83**	**317**		P	Pb	18 03 12.8	+0.4
TWQ1	**Liyutan** baz=284	**0.84**	**291**	*e*	P	Pb	18 03 13.3	+0.6
NJD	**Zhudong** baz=330	**0.85**	**324**	*e*	P	Pn	18 03 13.6	-0.5
WWF	**Wufeng** baz=270	**0.86**	**270**	*e*	P	Pn	18 03 14.1	-0.1
NSY	**Sanyi** baz=295	**0.88**	**295**	*e*	P	Pn	18 03 14.4	-0.1
TCU	**Taichung** baz=272	**0.88**	**277**	*e*	P	Pn	18 03 14.4	-0.1
WNT1	**Nantou City** baz=262	**0.88**	**262**	*e*	P	Pn	18 03 14.1	-0.4
WNT	**Mingjian** baz=252	**0.89**	**260**	*e*	P	Pn	18 03 14.6	+0.1
NMLH	**Miaoli** baz=302	**0.92**	**303**	*e*	P	Pn	18 03 15.3	+0.4
ALS	**Alishan** baz=246	**0.93**	**235**	*e*	P	Pn	18 03 15.3	-0.1
TWA	**Mucha** baz=357	**0.94**	**357**	*e*	P	Pn	18 03 15.0	-0.3
TATO	**Taipei** baz=351	**0.94**	**352**	*e*	P	Pb	18 03 14.6	+0.2
TIPB	**Shuangxi** baz=355	**0.94**	**11**	*e*	P	Pn	18 03 14.6	+0.1
EHD	**Haiduan** baz=206	**0.97**	**204**	*e*	P	Pn	18 03 15.6	-0.2
CHN5	**Tsauling** baz=230	**0.98**	**243**	*e*	P	Pn	18 03 16.3	+0.3
NCUH	**Zhongli** baz=335	**1.01**	**336**	*e*	P	Pn	18 03 16.5	+0.3
ELDTW	**Lidau** baz=201	**1.02**	**214**	*e*	P	Pn	18 03 16.2	-0.3
NWF	**Wu-fen Shan** baz=6.0	**1.03**	**7**	*e*	P	Pn	18 03 16.6	-0.1
WFSB	**Wu-fen Shan** baz=6.0	**1.03**	**7**	*e*	P	Pb	18 03 16.2	+0.3
SXI1	**Grass Mountain** baz=358	**1.07**	**12**	*e*	P	Pn	18 03 18.2	+1.0
TWS1	**Kuangyinshan** baz=349	**1.07**	**349**	*e*	P	Pn	18 03 17.7	+0.6
YM01	**YM01** baz=345	**1.10**	**357**	*e*	P	Pb	18 03 17.3	+0.2
ANP	**Anpu** baz=354	**1.15**	**355**	*e*	P	Pn	18 03 18.3	+0.1

*JMA **06** 18:06:20.5±0.2, 24.°1N±0.°6×12.°2E±.°, h0km, TAIWAN REGION*

*TAP **06** 18:06:20.1, 24.°06N×121.°67E, h8km, ML3.7, C*

ISC 06 18:06:20.3±0.9, 24.°06N±0.°01×121.°69E±0.°02, h6km±7km, n143, g0s56/195, 16C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
TWD	**Chiawan** baz=293	**0.09**	**283**	⇑*i*	P	**Pg**	**18 06 22.4**	**+0.1**
TWD	baz=293			*i*	S	**Sg**	**18 06 23.7**	**-0.1**
ETL	**Fush Village** baz=335	**0.12**	**327**	*i*	P	**Pg**	**18 06 23.0**	**+0.1**
ETL	baz=335			*i*	S	**Sg**	**18 06 24.7**	**+0.1**
NACB	**Ninganchiao** baz=328	**0.15**	**321**	⇓*i*	P	**Pg**	**18 06 23.4**	**+0.1**
NACB	baz=328			*i*	S	**Sg**	**18 06 25.4**	**0.0**
ETM	**Tongmen** baz=244	**0.21**	**243**	*i*	P	**Pg**	**18 06 24.4**	**0.0**
ETM	baz=244			*i*	S	**Sg**	**18 06 27.2**	**0.0**
EHP	**Heping Village** baz=5.0	**0.25**	**10**	*e*	P	**Pg**	**18 06 25.7**	**+0.4**
LXIB	**Xiulin Townshi** baz=254	**0.26**	**262**	⇑*i*	P	**Pg**	**18 06 25.3**	**-0.2**
LXIB	baz=254			*i*	S	**Sg**	**18 06 29.1**	**+0.1**
EAHA	**Aohua** baz=9.0	**0.27**	**9**	*i*	P	**Pg**	**18 06 25.8**	**+0.2**
EAHA	baz=9.0				S	**Sg**	**18 06 29.6**	**+0.3**
SHUL	**Shoufeng** baz=208	**0.30**	**204**	*e*	P	**Pg**	**18 06 26.9**	**+0.9**
ESL	**Shilin** baz=233	**0.34**	**224**	⇑*i*	P	**Pg**	**18 06 26.7**	**-0.2**
ESL	baz=233			*e*	S	**Sg**	**18 06 31.1**	**-0.4**
ENA	**Nanau** baz=6.0	**0.37**	**7**	⇓*i*	P	**Pg**	**18 06 27.7**	**+0.2**
ENA	baz=6.0			*e*	S	**Sg**	**18 06 32.7**	**+0.3**
TEGC	**Jichi Village** baz=203	**0.38**	**202**	*e*	P	**Pb**	**18 06 28.9**	**-0.5**
TEGC	baz=203			*e*	S	**Sb**	**18 06 35.6**	**+0.2**
EWUT	**Wuta** baz=9.0	**0.39**	**11**	⇓*i*	P	**Pg**	**18 06 28.3**	**+0.4**
EWUT	baz=9.0			*e*	S	**Sg**	**18 06 33.6**	**+0.5**
WHF	**Hehuan Shan** baz=283	**0.40**	**282**	*e*	P	**Pg**	**18 06 28.2**	**-0.1**
WHF	baz=283				S	**Sg**	**18 06 33.5**	**-0.1**
WARBT	**Fenglin Townsh** baz=228	**0.44**	**220**		P	**Pg**	**18 06 28.7**	**-0.2**
FUSS	**Fushou** baz=295	**0.45**	**295**	⇑*i*	P	**Pg**	**18 06 29.4**	**+0.3**
FUSS	baz=295			*e*	S	**Sg**	**18 06 35.4**	**+0.3**
NNSB	**Datong** baz=323	**0.47**	**322**	⇓*i*	P	**Pg**	**18 06 29.6**	**+0.3**
NNSB	baz=323			*i*	S	**Sg**	**18 06 35.7**	**+0.3**
NNSH	**Datong** baz=322	**0.47**	**322**	*i*	P	**Pg**	**18 06 29.6**	**+0.3**
NNSH	baz=322			*i*	S	**Sg**	**18 06 35.6**	**+0.2**
CHGB	**Renai** baz=271	**0.48**	**270**	*i*	P	**Pg**	**18 06 29.7**	**+0.2**
CHGB	baz=271			*i*	S	**Sg**	**18 06 35.7**	**-0.1**
NNS	**Nan Shan** baz=323	**0.48**	**322**	⇓*i*	P	**Pg**	**18 06 29.9**	**+0.3**
NNS	baz=323				S	**Sg**	**18 06 36.2**	**+0.4**
OWD	**Renai** baz=259	**0.48**	**258**	⇑	P	**Pg**	**18 06 29.6**	**-0.1**
OWD	baz=259				S	**Sg**	**18 06 36.3**	**+0.3**
LATG	**Datong** baz=341	**0.50**	**342**	⇓*i*	P	**Pg**	**18 06 30.2**	**+0.3**
LATG	baz=341				S	**Sb**	**18 06 37.7**	**-1.5**
TWT	**Tachien** baz=292	**0.51**	**292**	⇑	P	**Pb**	**18 06 30.7**	**-1.1**
TWT	baz=292				S	**Sg**	**18 06 37.6**	**+0.7**
TDCB	**Techi** baz=292	**0.53**	**292**	⇑	P	**Pg**	**18 06 30.9**	**+0.4**
TDCB	baz=292				S	**Sg**	**18 06 37.5**	**+0.1**
ESAO	**Su ao** baz=3.0	**0.53**	**15**	*e*	P	**Pg**	**18 06 30.8**	**+0.2**
WUSB	**Renai** baz=264	**0.53**	**263**		P	**Pg**	**18 06 30.7**	**+0.2**
WUSB	baz=264				S	**Sg**	**18 06 37.9**	**+0.4**
NDT	**Datong Townshi** baz=341	**0.57**	**343**	⇓*i*	P	**Pb**	**18 06 31.8**	**-0.9**
NDT	baz=341				S	**Sg**	**18 06 39.4**	**+0.8**
TWC	**Suao** baz=7.0	**0.57**	**14**	⇓*i*	P	**Pg**	**18 06 31.5**	**+0.3**
TWC	baz=7.0				S	**Sg**	**18 06 39.5**	**+0.9**
NDS	**Dongshan**	**0.57**	**2**	⇓*i*	P	**Pg**	**18 06 31.8**	**+0.4**
NDS				*e*	S	**Sb**	**18 06 40.0**	**-1.1**
EOS4	**EOS4** baz=94	**0.57**	**84**	*e*	P	**Pn**	**18 06 34.1**	**-0.5**
ENTT	**Nioudou** baz=348	**0.59**	**349**	⇓*i*	P	**Pg**	**18 06 32.2**	**+0.5**
ENTT	baz=348				S	**Sg**	**18 06 40.2**	**+0.9**
VWDT	**VWDT** baz=235	**0.59**	**239**		P	**Pg**	**18 06 31.7**	**0.0**
VWDT	baz=235				S	**Sb**	**18 06 40.6**	**-1.0**
EOS3	**EOS3** baz=61	**0.61**	**68**	*e*	P	**Pn**	**18 06 35.1**	**-0.3**
HGSD	**Ruisui** baz=213	**0.62**	**204**	*e*	P	**Pb**	**18 06 33.2**	**-0.3**
EHY	**Hungye** baz=221	**0.65**	**212**	⇑	P	**Pg**	**18 06 32.6**	**-0.2**
EHY	baz=221			*e*	S	**Sb**	**18 06 42.9**	**-0.4**
TWE	**Neicheng** baz=357	**0.66**	**358**	⇓*i*	P	**Pg**	**18 06 33.4**	**+0.4**
TWE	baz=357				S	**Sg**	**18 06 41.8**	**+0.2**
YHNB	**Yeheng** baz=333	**0.67**	**335**	⇓*i*	P	**Pb**	**18 06 33.9**	**-0.7**
YHNB	baz=333				S	**Sg**	**18 06 42.7**	**+0.6**
WPL	**Puli Township** baz=267	**0.68**	**266**	⇑	P	**Pg**	**18 06 33.6**	**+0.3**
WPL	baz=267				S	**Sg**	**18 06 42.2**	**+0.1**
NSK	**Sanguang** baz=325	**0.69**	**334**	⇓*i*	P	**Pb**	**18 06 34.0**	**-0.7**
NSK	baz=325			*i*	S	**Sg**	**18 06 43.1**	**+0.6**
DPDB	**Guoxing** baz=269	**0.70**	**268**	⇑*i*	P	**Pb**	**18 06 34.2**	**-0.8**
FUSB	**Fushanzhiwuyua** baz=350	**0.70**	**352**	*e*	P	**Pg**	**18 06 34.3**	**+0.4**
FUSB	baz=350				S	**Sb**	**18 06 44.0**	**-1.1**
WCS	**Beigang Elemen** baz=271	**0.72**	**270**	⇑	P	**Pb**	**18 06 34.4**	**-0.8**
WHP	**Taichung City** baz=288	**0.72**	**288**	⇑*i*	P	**Pb**	**18 06 34.8**	**-0.4**
WHP	baz=288				S	**Sb**	**18 06 44.5**	**-0.9**
SSLB	**Suanglung** baz=260	**0.73**	**248**	⇑*i*	P	**Pg**	**18 06 34.3**	**0.0**
SSLB	baz=260				S	**Sg**	**18 06 43.5**	**-0.3**
NWLT	**Wulai** baz=331	**0.74**	**346**		P	**Pg**	**18 06 34.7**	**+0.3**

NWLT				S	Sg	18 06 44.4	+0.3	
	baz=331							
SMLT	**Sun Moon Lake**	**0.75**	**257**	⇑*i*P	Pg	18 06 34.9	+0.2	
	baz=258							
SMLT				*e*S	Sg	18 06 44.3	-0.1	
	baz=258							
YULB	**Yu-li**	**0.76**	**209**	*e*P	Pg	18 06 34.8	0.0	
	baz=212							
ECBN	**Changbin**	**0.77**	**197**	*e*P	Pg	18 06 35.6	+0.5	
	baz=186							
NFF	**Wufeng Townshi**	**0.78**	**317**	P	Pb	18 06 35.7	-0.6	
	baz=317							
NFF				*e*S	Sg	18 06 45.5	+0.1	
	baz=317							
TYC	**Yuchr**	**0.78**	**259**	⇑*i*P	Pg	18 06 35.3	-0.1	
	baz=260							
TYC				S	Sg	18 06 45.0	-0.5	
	baz=260							
EYUL	**Yuli**	**0.79**	**206**	*e*P	Pg	18 06 35.8	+0.4	
	baz=224							
TWF1	**Yuli**	**0.79**	**207**	*e*P	Pg	18 06 35.3	-0.2	
	baz=223							
LIOB	**Emei**	**0.85**	**313**	*e*P	Pb	18 06 37.3	-0.2	
	baz=313							
NSTT	**Nanjuang**	**0.85**	**312**	*e*P	Pb	18 06 37.1	-0.4	
	baz=312							
NSTT				*e*S	Sg	18 06 47.9	+0.2	
	baz=312							
WHYT	**Xinyi Township**	**0.85**	**245**	*e*P	Pg	18 06 36.6	-0.1	
	baz=247							
NJD	**Zhudong**	**0.87**	**321**	*e*P	Pb	18 06 37.7	-0.2	
	baz=325							
TWQ1	**Liyutan**	**0.89**	**289**	*e*P	Pb	18 06 38.2	+0.1	
	baz=290							
CHKH	**Chenggong**	**0.91**	**198**	*e*P	Pg	18 06 37.7	0.0	
	baz=191							
WWF	**Wufeng**	**0.91**	**269**	*e*P	Pn	18 06 39.3	-0.4	
	baz=270							
NHDH	**Xindian Distri**	**0.91**	**350**	*e*P	Pg	18 06 37.9	0.0	
	baz=348							
WJS	**Zhushan**	**0.92**	**255**	*e*P	Pb	18 06 38.1	-0.4	
	baz=257							
TIPB	**Shuangxi**	**0.92**	**7**	*e*P	Pg	18 06 38.0	0.0	
	baz=355							
TWA	**Mucha**	**0.92**	**354**	*e*P	Pg	18 06 38.0	0.0	
	baz=351							
TATO	**Taipei**	**0.93**	**348**	*e*P	Pb	18 06 38.8	0.0	
	baz=338							
FULB	**Fuli**	**0.93**	**203**	*e*P	Pb	18 06 38.8	-0.1	
	baz=222							
WNT1	**Nantou City**	**0.94**	**261**	*e*P	Pb	18 06 39.3	+0.3	
	baz=262							
WNT	**Mingjian**	**0.94**	**259**	*e*P	Pb	18 06 39.4	+0.3	
	baz=252							
HSN1	**Hsinchu**	**0.94**	**319**	*e*P	Pn	18 06 39.6	-0.5	
	baz=319							
NMLH	**Miaoli**	**0.95**	**300**	*e*P	Pb	18 06 39.4	+0.1	
	baz=300							
BACT	**New Taipei Cit**	**0.96**	**346**	*e*P	Pn	18 06 40.4	0.0	
	baz=343							
SBCB	**Hsinchu**	**0.97**	**319**	*e*P	Pn	18 06 40.5	0.0	
	baz=318							
ALS	**Alishan**	**0.98**	**236**	*e*P	Pg	18 06 38.9	-0.3	
	baz=248							
TWB1	**Santiao Chiao**	**0.98**	**16**	*e*P	Pg	18 06 39.4	+0.3	
	baz=4.0							
HSN	**Hsinchu**	**0.99**	**318**	*e*P	Pg	18 06 38.7	-0.7	
	baz=320							
CHKT	**Chengkung**	**1.00**	**198**	*e*P	Pb	18 06 39.5	0.0	
	baz=194							
CHKT				*e*S	Sb	18 06 54.4	+0.9	
	baz=194							
NTY	**Taoyuan**	**1.00**	**339**	*e*P	Pn	18 06 40.9	0.0	
	baz=331							
WDJ	**Dajia District**	**1.00**	**287**	*e*P	Pn	18 06 41.4	+0.5	
	baz=287							
EHD	**Haiduan**	**1.01**	**206**	*e*P	Pg	18 06 39.6	-0.1	
	baz=224							
NWF	**Wu-fen Shan**	**1.01**	**4**	*e*P	Pb	18 06 40.3	0.0	
	baz=359							
WFSB	**Wu-fen Shan**	**1.01**	**4**	P	Pb	18 06 40.0	-0.2	
	baz=351							
WFSB				*e*S	Sg	18 06 52.5	-0.4	
	baz=351							
NCUH	**Zhongli**	**1.02**	**333**	*e*P	Pb	18 06 40.2	-0.2	
	baz=331							
WYL	**Yuanlin Townsh**	**1.02**	**265**	*e*P	Pb	18 06 40.5	0.0	
	baz=251							
CHN5	**Tsauling**	**1.04**	**244**	P	Pb	18 06 41.0	+0.3	
	baz=237							
CHN5				*e*S	Sn	18 06 57.0	+0.6	
	baz=237							
WCHH	**Zhanghua**	**1.04**	**271**	*e*P	Pn	18 06 41.5	+0.1	
	baz=273							
SXI1	**Grass Mountain**	**1.04**	**9**	*e*P	Pb	18 06 40.6	-0.2	
	baz=350							
ECS	**Chishang**	**1.05**	**205**	*e*P	Pb	18 06 41.1	+0.2	
	baz=223							
ELDTW	**Lidau**	**1.07**	**216**	*e*P	Pg	18 06 39.6	-1.2	
	baz=220							
TWS1	**Kuangyinshan**	**1.07**	**346**	*e*P	Pn	18 06 42.2	+0.4	
	baz=344							
YM01	**YM01**	**1.09**	**354**	*e*P	Pb	18 06 41.8	+0.2	
	baz=360							
TNOU	**National Taiwa**	**1.09**	**4**	*e*P	Pn	18 06 42.1	0.0	
	baz=358							
WGK	**Gukeng**	**1.10**	**251**	*e*P	Pn	18 06 42.1	-0.2	
	baz=253							
NHW	**Xinwu Township**	**1.11**	**328**	*e*P	Pn	18 06 43.1	+0.7	
	baz=326							
WDLH	**Douliu**	**1.12**	**251**	*e*P	Pn	18 06 42.4	-0.2	
	baz=254							
NTST	**Danshui**	**1.12**	**349**	*e*P	Pn	18 06 42.5	-0.1	
	baz=345							
ANP	**Anpu**	**1.13**	**352**	*e*P	Pg	18 06 41.7	-0.4	
	baz=348							
WCKO	**Fanlu**	**1.17**	**238**	*e*P	Pb	18 06 43.2	+0.2	
	baz=242							
WCKO				*e*S	Sn	18 07 00.2	+0.6	
	baz=242							
WRL	**Guolierlin Hig**	**1.22**	**263**	*e*P	Pb	18 06 43.5	-0.2	
	baz=265							
STYH	**Taoyuan**	**1.22**	**224**	*e*P	Pg	18 06 43.6	-0.2	
	baz=216							
CHN4	**Tsaushan**	**1.23**	**235**	*e*P	Pb	18 06 44.1	+0.1	
	baz=229							
CHN4				*e*S	Sn	18 07 02.4	+1.4	
	baz=229							
RLNB	**Erlin**	**1.23**	**262**	*e*P	Pn	18 06 44.0	0.0	
	baz=264							
RLNB				*e*S	Sn	18 07 01.7	+0.7	
	baz=264							
CHN2	**Minshiung**	**1.23**	**245**	*e*P	Pn	18 06 44.4	+0.4	
	baz=248							
TPUB	**Ta-pu**	**1.23**	**232**	⇑P	Pb	18 06 44.1	+0.1	
	baz=227							
TPUB				*e*S	Sn	18 07 01.7	+0.6	
	baz=227							
STYT	**Tauyuan**	**1.24**	**224**	P	Pg	18 06 43.9	-0.2	
	baz=229							
STYT				*e*S	Sb	18 07 00.8	+0.5	
	baz=229							
WTK	**Tuku**	**1.25**	**253**	*e*P	Pg	18 06 44.0	-0.3	
	baz=256							
YOJ	**Yonaguni jima**	**1.27**	**71**	*e*P	Pg	18 06 44.5	-0.1	
	baz=67							
WTP	**Ta-pu**	**1.28**	**231**	*e*P	Pg	18 06 44.7	-0.1	
	baz=236							
WTP				*e*S	Sn	18 07 04.0	+1.7	
	baz=236							
TWG	**Pinlang**	**1.36**	**205**	*e*P	Pn	18 06 43.6	-2.2	
	baz=210							
TWGBT	**Beinan**	**1.36**	**205**	*e*P	Pn	18 06 43.0	-2.8	
	baz=210							
TWK	**Hsinying**	**1.36**	**235**	*e*P	Pb	18 06 46.2	+0.1	
	baz=238							
CHN1	**Nanshi**	**1.38**	**231**	*e*P	Pg	18 06 46.8	+0.1	
	baz=235							
SNST	**Tainan City**	**1.38**	**233**	*e*P	Pg	18 06 46.6	-0.1	
	baz=237							
SGST	**Jiashian**	**1.41**	**227**	*e*P	Pn	18 06 46.4	-0.1	
	baz=232							
SGST				*e*S	Sn	18 07 06.6	+1.2	
	baz=232							
WSF	**Szhu**	**1.41**	**253**	*e*P	Pg	18 06 47.1	-0.3	
	baz=255							
SLGT	**Liugui**	**1.43**	**222**	*e*P	Pb	18 06 47.6	+0.2	
	baz=228							
SLGT				*e*S	Sn	18 07 07.9	+1.9	
	baz=228							
WSL	**Shuilin Townsh**	**1.45**	**249**	*e*P	Pg	18 06 47.9	-0.1	
	baz=251							
ICHU	**Yijhu**	**1.47**	**242**	*e*P	Pg	18 06 48.5	0.0	
	baz=246							
CHN8	**Yiju**	**1.53**	**243**	*e*P	Pn	18 06 48.7	+0.5	
	baz=247							
CHN3	**Shinhua**	**1.56**	**232**	*e*P	Pn	18 06 49.2	+0.6	
	baz=236							
SCST	**Cishan**	**1.61**	**224**	*e*P	Pg	18 06 51.4	+0.3	
	baz=229							
ECL	**Taimali**	**1.61**	**205**	*e*P	Pn	18 06 48.0	-1.3	
	baz=193							
SHHT	**Tainan City**	**1.61**	**230**	*e*P	Pg	18 06 51.0	-0.2	
	baz=235							
SCLT	**Jiali**	**1.63**	**238**	*e*P	Pg	18 06 51.6	-0.1	
	baz=242							
TSMG	**Majia**	**1.66**	**216**	*e*P	Pn	18 06 50.5	+0.6	
	baz=211							
TWM1	**Shoushan**	**1.70**	**224**	*e*P	Pg	18 06 52.5	-0.3	
	baz=229							
MASBT	**Mashibuluo**	**1.74**	**214**	*e*P	Pn	18 06 50.7	-0.4	
	baz=209							
EAST	**Anshuo**	**1.84**	**205**	*e*P	Pn	18 06 53.5	+1.0	
	baz=195							
TAWH	**Dawu Township**	**1.86**	**204**	*e*P	Pb	18 06 54.2	-0.6	
	baz=209							
SCZT	**Fangliau**	**1.95**	**211**	*e*P	Pn	18 06 54.7	+0.8	
	baz=204							
PHUB	**P'eng-hu**	**2.02**	**255**	*e*P	Pn	18 06 55.6	+0.7	
	baz=258							
PHUB				*e*S	Sb	18 07 21.6	-1.2	
	baz=258							
PNG	**Penghu**	**2.02**	**256**	*e*P	Pn	18 06 55.3	+0.4	
	baz=259							
WDGT	**Dungji**	**2.03**	**247**	*e*P	Pn	18 06 55.4	+0.4	
	baz=251							
VCHM	**Qimei**	**2.24**	**248**	*e*P	Pn	18 06 57.8	-0.1	
	baz=237							
VWUC	**VWUC**	**2.25**	**295**	*e*P	Pn	18 06 57.5	-0.5	
	baz=295							
JIJ	**Ishigaki jima**	**2.26**	**82**	*e*S	Sn	18 07 25.9	-0.4	
JISG	**Ishigakijimahi**	**2.44**	**77**	*e*P	Pn	18 07 01.0	+0.2	
JISG				*e*S	Sn	18 07 30.7	-0.3	
PTMZ	**Houxiangcun**	**2.54**	**293**	*e*P	Pn	18 07 01.6	-0.4	
	baz=293							
MATB	**Ma-tsu**	**2.62**	**323**	*e*P	Pn	18 07 02.8	-0.4	
	baz=320							
KNMB	**Chin-men Tao**	**3.04**	**278**	*e*P	Pn	18 07 08.4	-0.6	
	baz=279							
MHZQ	**Yeshan**	**3.16**	**311**	*e*P	Pn	18 07 10.3	-0.2	
	baz=296							
XPSS	**Dashiqiu**	**3.17**	**335**	*e*P	Pn	18 07 11.0	+0.3	
	baz=333							
AXDP	**Jialang**	**3.50**	**285**	*e*P	Pn	18 07 15.4	+0.2	
	baz=284							
ZPLA	**Ao Xicun**	**3.61**	**269**	*e*P	Pn	18 07 16.9	+0.2	
	baz=269							
DSXP	**Dongshan**	**3.92**	**266**	*e*P	Pn	18 07 20.8	-0.3	
	baz=266							
SXFK	**Yanhouchang**	**4.34**	**303**	*e*P	Pn	18 07 26.7	-0.2	
	baz=302							

TAP 06 18:06:55.0, 24.02N×121.61E, h7km±1km, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**352**	*i*	P		Pg	18 06 57.5	+0.8
TWD					S		Sg	18 06 58.9	+1.0
ETM	**Tongmen**	**0.12**	**242**	*i*	P		Pg	18 06 58.2	+0.7
	baz=241								
ETM				*i*	S		Sg	18 07 00.1	+0.9
	baz=241								
ETL	**Fush Village**	**0.14**	**7**	P			Pg	18 06 58.6	+0.6
	baz=7.0								
ETL				*e*S			Sg	18 07 01.1	+1.1
	baz=7.0								
NACB	**Ninganchiao**	**0.15**	**356**	P			Pg	18 06 58.9	+0.7
	baz=356								
NACB				S			Sg	18 07 01.4	+1.1
	baz=356								
LXIB	**Xiulin Townshi**	**0.17**	**270**	P			Pg	18 06 59.9	+1.2
	baz=270								
SHUL	**Shoufeng**	**0.23**	**190**	*e*P			Pg	18 07 01.0	+1.4
	baz=189								
ESL	**Shilin**	**0.26**	**218**	*e*P			Pg	18 07 00.8	+0.7
	baz=215								
ESL				*e*S			Sg	18 07 03.9	+0.4
	baz=215								
WHF	**Hehuan Shan**	**0.34**	**292**	*e*P			Pb	18 07 02.9	-0.7
	baz=291								
WARBT	**Fenglin Townsh**	**0.36**	**214**	*e*P			Pb	18 07 03.2	-0.6
	baz=213								

MOS ***06*** *18:07:36.8±1.0, 23.98N×121.78E, h11km, mb5.2/61, MS5.0/5, Error ellipse: s-maj=7.1km s-min=4.5km az=114.6*

IDC ***06*** *18:07:37.8±0.5, 24.06N×121.70E, h0km, mb4.6/27, mbtmp4.5/30, ML3.7/3, MS4.8/2, Error ellipse: s-maj=14.7km s-min=12.0km az=61.0*

NEIC ***06*** *18:07:38.5, 23.84N×121.76E, h12km, Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08; $M_{\theta\theta}$-1.87; $M_{\phi\phi}$-1.22; $M_{r\theta}$5.50; $M_{\theta\phi}$-1.28; $M_{\phi r}$2.92; Fault plane solution: M_o6.90000×10^{16} NP1:ϕ_s60.96000°, δ77.37000°, λ,93.45000°. NP2:ϕ_s225.56000°, δ13.09000°, λ,74.99000°. Principal axes: T 7.0448, Plg58.0000°, Azm335.0000°; N -0.2867, Plg3.0000°, Azm240.0000°; P -6.7582, Plg32.0000°, Azm148.0000°;*

NEIC ***06*** *18:07:38.7±1.7, 24.05N±0.07×121.78E±0.05, h9km±3km, mb5.3/194, Mwr5.1/17, Mww5.2/6 Error ellipse: s-maj=9.8km s-min=6.3km az=179.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.25; $M_{\theta\theta}$-1.70; $M_{\phi\phi}$-1.55; $M_{r\theta}$1.75; $M_{\theta\phi}$-1.42; $M_{\phi r}$3.46; Fault plane solution: M_o5.00000×10^{16} NP1:ϕ_s237.35000°, δ21.14000°, λ,113.97000°. NP2:ϕ_s31.86000°, δ70.76000°, λ81.07000°. Principal axes: T 5.1843, Plg63.0000°, Azm288.0000°; N -0.3995, Plg8.0000°, Azm35.0000°; P -4.7849, Plg25.0000°, Azm129.0000°;*

NEIC ***06*** *18:07:38.9, 24.03N×121.76E, h9km*

NEIC ***06*** *18:07:38.5, 24.04N×121.76E, h12km*

ASIES ***06*** *18:07:39, 24.04N×121.71E, h4km, ML5.4, Mw5.0, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-0.45; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.83; $M_{\phi r}$3.65; Fault plane solution: M_o4.01604×10^{23} NP1:ϕ_s19.25000°, δ82.86000°, λ,80.29000°. NP2:ϕ_s253.25000°, δ12.03000°, λ,143.39000°. Principal axes: T Plg51.2120°, Azm278.2810°; N Plg9.6310°, Azm20.4710°; P Plg37.1340°, Azm117.8540°;*

NIED ***06*** *18:07:39.8, 24.07N×121.70E, h0km, MW5.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}3.54; $M_{\theta\theta}$-2.00; $M_{\phi\phi}$-1.54; $M_{r\theta}$1.88; $M_{\theta\phi}$-1.66; $M_{\phi r}$2.52; Fault plane solution: M_o4.70000×10^{16} NP1:ϕ_s41.00000°, δ66.00000°, λ,84.00000°. NP2:ϕ_s236.00000°, δ25.00000°, λ,104.00000°.*

JMA ***06*** *18:07:39.8±0.1, 24.1N±0.4×121.7E±0.7, h0km, MD5.4/18, MV4.7/18, TAIWAN REGION*

TAP ***06*** *18:07:39.0, 24.04N×121.71E, h4km, ML5.4, C*

BJI ***06*** *18:07:40.8±0.0, 24.10N×121.75E, h10km, mb4.6/54, mB5.6/20, ML5.2/13, Ms5.5/46, Ms7 5.3/42*

ISC 06 18:07:40.0±0.4, 24.04N±0.01×121.73E±0.01, h12km±2km, h12km:pP-P, n914, σ1§68/1017, mb5.2/193, MS5.1/7, 27C-53D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.13**	**289**	⇓*i*	P		Pg	18 07 41.9	-1.5
	baz=295								
TWD				*i*	S		Sg	18 07 43.6	-2.2
	baz=295								
ETL	**Fush Village**	**0.16**	**320**	⇓*i*	P		Pg	18 07 42.5	-1.2
	baz=326								
ETL				*e*S			Sg	18 07 44.4	-2.0
	baz=326								
NACB	**Ninganchiao**	**0.19**	**317**				Pg	18 07 42.3	-1.9
NACB					Sg		Sg	18 07 45.5	-1.6
NACB	**Ninganchiao**	**0.19**	**317**	P			Pg	18 07 42.9	-1.3
	baz=330								
ETM	**Tongmen**	**0.23**	**252**	P			Pg	18 07 43.7	-1.3
	baz=252								
EHP	**Heping Village**	**0.27**	**1**	P			Pg	18 07 45.1	-0.5
	baz=348								
EHP				S			Sg	18 07 49.4	-0.1
	baz=348								
EAHA	**Aohua**	**0.29**	**1**	⇓*i*P			Pg	18 07 45.4	-0.6
	baz=349								
EAHA				S			Sb	18 07 51.3	-0.7
	baz=349								
LXIB	**Xiulin Townshi**	**0.29**	**267**	⇓*i*P			Pg	18 07 44.8	-1.4
	baz=270								
LXIB				S			Sg	18 07 50.0	-0.2
	baz=270								
SHUL	**Shoufeng**	**0.29**	**212**	*e*P			Pg	18 07 46.5	+0.4
	baz=221								
ESL	**Shilin**	**0.35**	**231**	P			Pg	18 07 46.0	-1.1
	baz=244								
ESL				S			Sg	18 07 51.7	-0.3
	baz=244								
TEGC	**Jichi Village**	**0.37**	**209**	P			Pb	18 07 48.0	-0.5
	baz=209								
TEGC				*e*S			Sb	18 07 55.9	+1.7
	baz=209								
ENA	**Nanau**	**0.39**	**1**	⇓*i*P			Pg	18 07 47.3	-0.5
	baz=1.0								
ENA				*e*S			Sb	18 07 54.4	-0.4
	baz=1.0								
EWUT	**Wuta**	**0.41**	**6**	⇓*i*P			Pg	18 07 47.8	-0.4
	baz=351								
WHF	**Hehuan Shan**	**0.44**	**284**	⇓*i*P			Pg	18 07 47.7	-1.2
	baz=286								
WHF				S			Sg	18 07 54.0	-0.9
	baz=286								
WARBT	**Fenglin Townsh**	**0.45**	**225**	*e*P			Pg	18 07 47.9	-1.0
	baz=238								
WARBT				*e*S			Sg	18 07 54.3	-0.6
	baz=238								
EGFH	**Guangfu**	**0.46**	**217**	*e*P			Pg	18 07 48.8	-0.3
	baz=228								
FUSS	**Fushou**	**0.49**	**295**	⇓*i*P			Pg	18 07 48.9	-0.9
	baz=296								
FUSS				S			Sg	18 07 56.5	0.0
	baz=296								
NNSB	**Datong**	**0.50**	**321**	⇓*i*P			Pg	18 07 49.1	-0.9
	baz=319								
NNSB				S			Sg	18 07 56.5	-0.2
	baz=319								
NNSH	**Datong**	**0.50**	**321**	⇓*i*P			Pg	18 07 49.1	-0.8
	baz=319								
NNSH				S			Sg	18 07 56.8	+0.1
	baz=319								
CHGB	**Renai**	**0.51**	**273**	⇓*i*P			Pg	18 07 49.2	-0.9
	baz=275								
CHGB				S			Sg	18 07 56.4	-0.6
	baz=275								
OWD	**Renai**	**0.52**	**261**	⇓P			Pg	18 07 49.1	-1.1
	baz=264								
OWD				*e*S			Sg	18 07 56.6	-0.5
	baz=264								
NNS	**Nan Shan**	**0.52**	**321**	⇓*i*P			Pg	18 07 49.4	-0.9
	baz=320								
NNS				*e*S			Sg	18 07 57.0	-0.2
	baz=320								
LATG	**Datong**	**0.53**	**339**	⇓*i*P			Pg	18 07 49.8	-0.7
	baz=335								
LATG				S			Sg	18 07 58.1	+0.6
	baz=335								
EOS4	**EOS4**	**0.54**	**81**	*e*P			Pn	18 07 53.7	+0.6
	baz=92								
ESAO	**Su ao**	**0.55**	**11**	*e*P			Pg	18 07 50.4	-0.4
	baz=357								
TWT	**Tachien**	**0.55**	**293**	⇓*i*P			Pg	18 07 50.3	-0.6
	baz=293								
TWT				S			Sg	18 07 58.8	+0.5
	baz=293								
WUSB	**Renai**	**0.56**	**266**	⇓*i*P			Pg	18 07 50.2	-0.9
	baz=269								
WUSB				S			Sg	18 07 58.0	-0.6
	baz=269								
TDCB	**Techi**	**0.57**	**292**	⇓*i*P			Pg	18 07 50.3	-0.8
	baz=293								
TDCB				S			Sg	18 07 58.4	-0.4
	baz=293								
TWC	**Suao**	**0.58**	**10**	⇓*i*P			Pg	18 07 51.1	-0.3
	baz=1.0								
TWC				*e*S			Sb	18 08 01.0	+0.7
	baz=1.0								
EOS3	**EOS3**	**0.59**	**65**	*e*P			Pn	18 07 53.7	-0.3
	baz=72								
EOS2	**EOS2**	**0.59**	**50**	*e*P			Pn	18 07 53.9	-0.2
	baz=60								
NDS	**Dongshan**	**0.59**	**358**	⇓*i*P			Pg	18 07 51.2	-0.4
	baz=348								
NDT	**Datong Townshi**	**0.60**	**340**	⇓*i*P			Pg	18 07 51.3	-0.4
	baz=340								
NDT				*e*S			Sb	18 08 00.6	-0.2
	baz=340								
VWDT	**VWDT**	**0.61**	**243**	*e*P			Pg	18 07 51.2	-0.7
	baz=244								
VWDT				*i*	S		Sg	18 08 00.0	0.0
	baz=244								
HGSD	**Ruisui**	**0.61**	**208**	P			Pb	18 07 52.9	+0.3
	baz=194								
ENTT	**Nioudou**	**0.62**	**346**	⇓*i*P			Pg	18 07 51.6	-0.5
	baz=346								
ENTT				S			Sb	18 08 01.4	-0.1
	baz=346								
EHY	**Hungye**	**0.65**	**216**	P			Pg	18 07 52.0	-0.7
	baz=226								
EHY				*e*S			Sb	18 08 02.7	+0.4
	baz=226								
TWE	**Neicheng**	**0.68**	**355**	⇓*i*P			Pg	18 07 53.0	-0.3
	baz=355								
TWE				*e*S			Sb	18 08 03.7	+0.4
	baz=355								
YHNB	**Yeheng**	**0.71**	**333**				Pg	18 07 53.2	-0.6
YHNB					Sg		Sg	18 08 00.3	-2.9
YHNB	**Yeheng**	**0.71**	**333**	P			Pg	18 07 53.5	-0.4
YHNB	**Yeheng**	**0.71**	**333**	⇓*i*P			Pg	18 07 53.4	-0.4
	baz=333								
YHNB				S			Sg	18 08 03.3	+0.1
	baz=333								
WPL	**Puli Township**	**0.71**	**268**	P			Pg	18 07 53.2	-0.6
	baz=270								
WPL				S			Sg	18 08 02.2	-1.0
	baz=270								
NSK	**Sanguang**	**0.72**	**332**	⇓*i*P			Pg	18 07 53.6	-0.5
	baz=321								
NSK				S			Sg	18 08 03.6	+0.1
	baz=321								
ILA	**Ilan**	**0.72**	**1**	*e*P			Pg	18 07 53.9	-0.2
	baz=347								
FUSB	**Fushanzhiwuyua**	**0.73**	**350**	⇓*i*P			Pg	18 07 53.9	-0.3
	baz=348								
FUSB				*e*S			Sb	18 08 05.2	+0.5
	baz=348								
DPDB	**Guoxing**	**0.74**	**270**	⇓P			Pg	18 07 53.7	-0.7
	baz=272								
DPDB				S			Sg	18 08 03.8	-0.3
	baz=272								
WCS	**Beigang Elemen**	**0.75**	**272**	P			Pg	18 07 54.0	-0.7
	baz=264								
WCS				S			Sg	18 08 04.2	-0.3
	baz=264								
SSLB	**Suanglung**	**0.76**	**251**				Pg	18 07 53.6	-1.0
SSLB					Sg		Sg	18 08 03.4	-1.2
SSLB	**Suanglung**	**0.76**	**251**	P			Pb	18 07 55.0	-0.1
SSLB	**Suanglung**	**0.76**	**251**	*e*P			Pg	18 07 53.9	-0.

		baz=328									
SMLT	**Sun Moon Lake**	**0.78**	**259**	⇓	P		**Pg**	**18 07 54.4**	**-0.8**
	baz=261										
SMLT				*i*	S		**Sg**	**18 08 05.4**	**+0.1**
	baz=261										
EYUL	**Yuli**	**0.79**	**209**	*e*	P		**Pg**	**18 07 55.2**	**0.0**
	baz=229										
TWF1	**Yuli**	**0.79**	**211**	*e*	P		**Pg**	**18 07 54.2**	**-1.1**
	baz=231										
TWF1					S		**Sb**	**18 08 06.6**	**+0.3**
	baz=231										
TYC	**Yuchr**	**0.81**	**261**	⇓	P		**Pg**	**18 07 54.8**	**-1.0**
	baz=263										
TYC					S		**Sg**	**18 08 05.6**	**-0.8**
	baz=263										
NFF	**Wufeng Townshi**	**0.82**	**317**	⇓	*i* P		**Pg**	**18 07 55.4**	**-0.5**
	baz=316										
NFF					eS		**Sg**	**18 08 06.7**	**+0.2**
	baz=316										
NTC	**Toucheng**	**0.82**	**6**	*e*	P		**Pg**	**18 07 54.8**	**-1.1**
	baz=350										
WHYT	**Xinyi Township**	**0.88**	**247**	*e*	P		**Pg**	**18 07 56.7**	**-0.2**
	baz=259										
WHYT					eS		**Sb**	**18 08 09.4**	**+0.6**
	baz=259										
LIOB	**Emei**	**0.89**	**313**	⇓	*i* P		**Pg**	**18 07 57.1**	**-0.2**
	baz=312										
LIOB					eS		**Sb**	**18 08 09.5**	**+0.2**
	baz=312										
NSTT	**Nanjuang**	**0.89**	**312**		P		**Pg**	**18 07 56.9**	**-0.4**
	baz=311										
NSTT					S		**Sg**	**18 08 09.0**	**0.0**
	baz=311										
CHKH	**Chenggong**	**0.90**	**200**	*e*	P		**Pg**	**18 07 57.0**	**-0.4**
	baz=205										
CHKH					eS		**Sn**	**18 08 11.6**	**+0.4**
	baz=205										
NJD	**Zhudong**	**0.91**	**320**	⇓	*e* P		**Pb**	**18 07 57.9**	**+0.2**
	baz=318										
NJD					eS		**Sn**	**18 08 11.3**	**-0.4**
	baz=318										
FULB	**Fuli**	**0.93**	**206**	*e*	P		**Pg**	**18 07 57.8**	**-0.1**
	baz=227										
TWQ1	**Liyutan**	**0.93**	**290**	⇓	*e* P		**Pg**	**18 07 57.8**	**-0.2**
	baz=303										
TWQ1					eS		**Sn**	**18 08 12.1**	**-0.1**
	baz=303										
TIPB	**Shuangxi**	**0.93**	**5**	⇓	P		**Pg**	**18 07 57.7**	**-0.4**
	baz=352										
NHDH	**Xindian Distri**	**0.94**	**348**	⇓	P		**Pg**	**18 07 57.9**	**-0.3**
	baz=346										
WJS	**Zhushan**	**0.94**	**257**	*e*	P		**Pg**	**18 07 58.2**	**-0.1**
	baz=260										
WJS					eS		**Sn**	**18 08 12.9**	**+0.4**
	baz=260										
WWF	**Wufeng**	**0.95**	**271**	⇑	*e* P		**Pn**	**18 07 59.1**	**0.0**
	baz=272										
TWA	**Mucha**	**0.95**	**352**	⇓	P		**Pg**	**18 07 58.0**	**-0.3**
	baz=349										
TATO	**Taipei**	**0.96**	**347**				**Pg**	**18 07 58.3**	**-0.3**
TATO	**Taipei**	**0.96**	**347**		P		**Pb**	**18 07 58.7**	**+0.1**
TATO	**Taipei**	**0.96**	**347**	⇓	*e* P		**Pg**	**18 07 58.5**	**0.0**
	baz=332										
TATO					eS		**Sn**	**18 08 12.2**	**-0.7**
	baz=332										
NSY	**Sanyi**	**0.96**	**293**	⇓	P		**Pb**	**18 07 58.9**	**+0.3**
	baz=306										
NSY					S		**Sn**	**18 08 12.4**	**-0.6**
	baz=306										
TCU	**Taichung**	**0.97**	**277**	*e*	P		**Pn**	**18 07 59.6**	**+0.2**
	baz=271										
TCU					eS		**Sn**	**18 08 14.1**	**+1.0**
	baz=271										
WNT	**Mingjian**	**0.97**	**261**	⇑	*i* P		**Pn**	**18 07 59.2**	**-0.3**
	baz=264										
WNT					eS		**Sn**	**18 08 13.1**	**-0.1**
	baz=264										
WNT1	**Nantou City**	**0.97**	**263**		P		**Pn**	**18 07 59.3**	**-0.1**
	baz=266										
WNT1					eS		**Sn**	**18 08 13.6**	**+0.4**
	baz=266										
HSN1	**Hsinchu**	**0.98**	**319**	⇓	P		**Pn**	**18 07 59.4**	**-0.3**
	baz=317										
HSN1					S		**Sn**	**18 08 13.0**	**-0.4**
	baz=317										
BACT	**New Taipei Cit**	**0.99**	**345**	*e*	P		**Pb**	**18 07 59.2**	**0.0**
	baz=333										
CHKT	**Chengkung**	**0.99**	**200**		P		**Pg**	**18 07 58.5**	**-0.6**
	baz=205										
CHKT					S		**Sn**	**18 08 14.7**	**+1.0**
	baz=205										
NMLH	**Miaoli**	**0.99**	**300**	*e*	P		**Pn**	**18 07 60.0**	**+0.2**
	baz=300										
TWB1	**Santiao Chiao**	**0.99**	**13**	⇓	*e* P		**Pg**	**18 07 58.9**	**-0.3**
	baz=1.0										
ALS	**Alishan**	**1.00**	**239**	*e*	P		**Pg**	**18 07 58.9**	**-0.5**
	baz=244										
ALS					eS		**Sn**	**18 08 14.2**	**0.0**
	baz=244										
EHD	**Haiduan**	**1.01**	**209**	*e*	P		**Pb**	**18 07 57.8**	**-1.6**
	baz=215										
NHY	**Taipei**	**1.01**	**351**	*e*	P		**Pg**	**18 07 59.6**	**+0.1**
	baz=349										
SBCB	**Hsinchu**	**1.01**	**318**		P		**Pn**	**18 08 00.2**	**+0.1**
	baz=316										
SBCB					eS		**Sn**	**18 08 15.4**	**+1.2**
	baz=316										
NJN	**Zhunan**	**1.02**	**309**	*e*	P		**Pn**	**18 07 59.9**	**-0.2**
	baz=309										
NJN					eS		**Sn**	**18 08 15.5**	**+1.3**
	baz=309										
TAP	**Taipei**	**1.02**	**348**	*e*	P		**Pn**	**18 07 59.9**	**-0.2**
	baz=334										
TAP					eS		**Sn**	**18 08 14.0**	**-0.3**
	baz=334										
NWF	**Wu-fen Shan**	**1.03**	**2**		P		**Pb**	**18 07 59.7**	**-0.1**
	baz=342										
WFSB	**Wu-fen Shan**	**1.03**	**2**	⇓	P		**Pb**	**18 07 59.7**	**-0.1**
	baz=342										
HSN	**Hsinchu**	**1.03**	**318**	*e*	P		**Pn**	**18 08 00.4**	**+0.2**
	baz=318										
HSN					eS		**Sn**	**18 08 15.9**	**+1.3**
	baz=318										
NTY	**Taoyuan**	**1.04**	**338**	*e*	P		**Pn**	**18 08 00.4**	**+0.1**
	baz=334										
NTY					eS		**Sn**	**18 08 15.9**	**+1.1**
	baz=334										
WDJ	**Dajia District**	**1.04**	**287**	⇑	*e* P		**Pn**	**18 08 00.7**	**+0.2**
	baz=288										
ECS	**Chishang**	**1.05**	**207**	*e*	P		**Pb**	**18 07 59.5**	**-0.6**
	baz=228										
NCUH	**Zhongli**	**1.05**	**332**	*e*	P		**Pn**	**18 08 01.0**	**+0.4**
	baz=328										
NCUH					eS		**Sn**	**18 08 16.9**	**+1.7**
	baz=328										
NCU	**National Centr**	**1.05**	**332**	*e*	P		**Pn**	**18 08 00.9**	**+0.3**
	baz=328										
NCU					eS		**Sn**	**18 08 16.8**	**+1.6**
	baz=328										
WYL	**Yuanlin Townsh**	**1.06**	**266**	*e*	P		**Pn**	**18 08 00.7**	**+0.1**
	baz=270										
WYL					S		**Sn**	**18 08 17.4**	**+2.1**
	baz=270										
SXI1	**Grass Mountain**	**1.06**	**7**	⇓	*i* P		**Pb**	**18 08 00.3**	**0.0**
	baz=345										
CHN5	**Tsauling**	**1.06**	**246**	⇑	*i* P		**Pg**	**18 08 00.6**	**+0.1**
	baz=251										
CHN5					eS		**Sn**	**18 08 16.8**	**+1.3**
	baz=251										
ELDTW	**Lidau**	**1.07**	**218**	*e*	P		**Pb**	**18 07 58.5**	**-2.0**
	baz=211										
ELDTW					eS		**Sb**	**18 08 14.0**	**-0.5**
	baz=211										
WCHH	**Zhanghua**	**1.07**	**272**	⇑	P		**Pn**	**18 08 00.9**	**+0.1**
	baz=275										
WCHH					S		**Sn**	**18 08 17.0**	**+1.3**
	baz=275										
TWS1	**Kuangyinshan**	**1.10**	**345**	⇑	P		**Pn**	**18 08 01.7**	**+0.5**
	baz=341										
TWS1					eS		**Sn**	**18 08 17.9**	**+1.6**
	baz=341										
TNOU	**National Taiwa**	**1.11**	**2**	⇓	P		**Pb**	**18 08 01.1**	**0.0**
	baz=344										
YM01	**YM01**	**1.11**	**352**	⇓	*e* P		**Pn**	**18 08 01.6**	**+0.1**
	baz=347										
YM01					eS		**Sn**	**18 08 17.6**	**+0.9**
	baz=347										
WGK	**Gukeng**	**1.13**	**252**	⇑	P		**Pn**	**18 08 01.6**	**0.0**
	baz=258										
WGK					S		**Sn**	**18 08 18.5**	**+1.5**
	baz=258										
WDLH	**Douliu**	**1.15**	**253**	*e*	P		**Pb**	**18 08 01.9**	**+0.1**
	baz=259										
WDLH					S		**Sn**	**18 08 19.4**	**+1.9**
	baz=259										
NHW	**Xinwu Township**	**1.15**	**327**	*e*	P		**Pg**	**18 08 02.1**	**-0.1**
	baz=321										
NHW					eS		**Sn**	**18 08 19.2**	**+1.6**
	baz=321										
NTST	**Danshui**	**1.15**	**347**	*e*	P		**Pg**	**18 08 03.1**	**+0.9**
	baz=343										
NTST					eS		**Sn**	**18 08 19.5**	**+1.9**
	baz=343										
ANP	**Anpu**	**1.16**	**350**	*e*	P		**Pn**	**18 08 02.1**	**0.0**
	baz=346										
NWRT	**Kuosheng**	**1.16**	**357**	*e*	P		**Pg**	**18 08 02.5**	**+0.1**
	baz=351										
JYNG	**Yonagunijimaku**	**1.18**	**69**	*e*	P		**Pg**	**18 08 02.5**	**-0.2**
JYNG					eS		**Sb**	**18 08 16.7**	**-0.8**
JYNG	**Yonagunijimaku**	**1.18**	**69**		A		A	18 08 02.5	
	comp=E,55nm,8.5s,comp=N,63nm,2.8s										
WCKO	**Fanlu**	**1.19**	**240**	⇑	P		**Pb**	**18 08 02.6**	**+0.1**
	baz=249										
WCKO					eS		**Sn**	**18 08 20.9**	**+2.3**
	baz=249										
STYH	**Taoyuan**	**1.23**	**226**	⇓	P		**Pn**	**18 08 02.6**	**-0.4**
	baz=239										
STYH					S		**Sb**	**18 08 19.0**	**0.0**
	baz=239										
TWY	**Chenhua**	**1.24**	**354**	*e*	P		**Pg**	**18 08 04.2**	**+0.3**
	baz=335										
YOJ	**Yonaguni jima**	**1.24**	**70**				**Pn**	**18 08 02.9**	**-0.2**
YOJ	**Yonaguni jima**	**1.24**	**70**		P		**Pg**	**18 08 04.9**	**+1.0**
YOJ	**Yonaguni jima**	**1.24**	**70**	*e*	P		**Pn**	**18 08 03.0**	**-0.1**
	baz=66										
YOJ	**Yonaguni jima**	**1.24**	**70**		P		**Pn**	**18 08 02.9**	**-0.2**
YOJ	**Yonaguni jima**	**1.24**	**70**		P		**Pb**	**18 08 03.5**	**+0.1**
YOJ					eS		**Sg**	**18 08 20.0**	**-0.1**
YOJ	**Yonaguni jima**	**1.24**	**70**		A		A	18 08 03.5	
	comp=E,53nm,4.3s,comp=N,57nm,4.0s										
WRL	**Guolierlin Hig**	**1.25**	**264**	⇑	*e* P		**Pb**	**18 08 03.5**	**0.0**
	baz=269										
WRL					S		**Sg**	**18 08 21.5**	**+1.2**
	baz=269										
CHN4	**Tsaushan**	**1.25**	**237**	⇑	*i* P		**Pb**	**18 08 03.5**	**0.0**
	baz=246										
CHN4					S		**Sg**	**18 08 22.2**	**+1.9**
	baz=246										
STYT	**Tauyuan**	**1.25**	**226**		P		**Pn**	**18 08 03.0**	**-0.4**
	baz=239										
STYT					S		**Sn**	**18 08 20.1**	**0.0**
	baz=239										
TPUB	**Ta-pu**	**1.25**	**234**				**Pn**	**18 08 03.3**	**0.0**
TPUB	**Ta-pu**	**1.25**	**234**		P		**Pg**	**18 08 04.5**	**+0.4**
TPUB	**Ta-pu**	**1.25**	**234**	⇑	P		**Pn**	**18 08 03.4**	**+0.1**
	baz=243										
TPUB				*i*	S		**Sg**	**18 08 21.7**	**+1.4**
	baz=243										
NSM	**Shimen**	**1.25**	**354**	*e*	P		**Pg**	**18 08 04.8**	**+0.7**
	baz=333										
LONT	**Longtian**	**1.25**	**206**	*e*	P		**Pn**	**18 08 01.9**	**-1.5**
	baz=214										
CHN2	**Minshiung**	**1.26**	**247**	*e*	P		**Pg**	**18 08 04.0**	**-0.2**
	baz=266										
CHN2					S		**Sg**	**18 08 22.6**	**+2.0**
	baz=266										
RLNB	**Erlin**	**1.27**	**264**	*e*	P		**Pb**	**18 08 03.9**	**+0.1**
	baz=268										
RLNB					S		**Sg**	**18 08 22.2**	**+1.4**
	baz=268										
WTK	**Tuku**	**1.28**	**255**	*e*	P		**Pb**	**18 08 04.3**	**+0.3**
	baz=261										
WTK					eS		**Sg**	**18 08 22.6**	**+1.3**
	baz=261										
WTP	**Ta-pu**	**1.29**	**233**	⇑	P		**Pn**	**18 08 04.0**	**+0.1**
	baz=241										
WTP					S		**Sg**	**18 08 22.8**	**+1.0**
	baz=241										
CHY	**Chiayi**	**1.31**	**246**		P		**Pg**	**18 08 05.5**	**+0.2**
	baz=265										
CHY					S		**Sg**	**18 08 23.8**	**+1.4**
	baz=265										
WTCT	**Ta-ch'eng**	**1.34**	**263**		P		**Pn**	**18 08 04.7**	**+0.2**
	baz=268										
WTCT				*i*	S		**Sg**	**18 08 24.7**	**+1.5**
	baz=268										
TWGBT	**Beinan**	**1.35**	**206**		P		**Pg**	**18 08 06.3**	**+0.2**
TWGBT	**Beinan**	**1.35**	**206**	*e*	P		**Pn**	**18 08 02.9**	**-1.8**
	baz=214										
TWG	**Pinlang**	**1.35**	**207**		Pn		**Pn**	**18 08 03.3**	**-1.4**
TWG	**Pinlang**	**1.35**	**207**	*e*	P		**Pn**	**18 08 02.4**	**-2.3**
	baz=214										
TWK	**Hsinying**	**1.38**	**236**	*e*	P		**Pb**	**18 08 05.5**	**-0.2**
	baz=246										
TWK				*i*	S		**Sg**	**18 08 25.9**	**+1.5**
	baz=246										
LDUT	**Ludao**	**1.38**	**190**	*e*	P		**Pn**	**18 08 02.7**	**-2.3**
	baz=200										
TTN	**Taitung**	**1.39**	**203**	*e*	P		**Pn**	**18 08 04.3**	**-0.8**
	baz=213										
CHN1	**Nanshi**	**1.39**	**233**	*e*	P		**Pn**	**18 08 05.6**	**+0.3**
	baz=243										
CHN1					S		**Sg**	**18 08 26.6**	**+1.6**
	baz=243										
SNST	**Tainan City**	**1.40**	**235**	*e*	P		**Pb**	**18 08 06.2**	**+0.1**
	baz=245										
SNST				*i*	S		**Sg**	**18 08 26.8**	**+1.8**
	baz=245										
WMLT	**Mailiao**	**1.40**	**261**	*e*	P		**Pg**	**18 08 06.7**	**-0.3**
	baz=265										
WMLT					eS		**Sg**	**18 08 25.2**	**0.0**
	baz=265										
SGST	**Jiashian**	**1.42**	**228**	⇑	P		**Pn**	**18 08 05.2**	**-0.5**
	baz=237										
SGST					S		**Sg**	**18 08 26.4**	**+0.6**
	baz=237										
WSF	**Szhu**	**1.44**	**254**	⇓	*i* P		**Pb**	**18 08 06.5**	**-0.2**
	baz=261										
WSF					eS		**Sg**	**18 08 27.9**	**+1.5**
	baz=261										
SLGT	**Liugui**	**1.44**	**224**	*e*	P		**Pn**	**18 08 06.3**	**+0.4**
	baz=244										
SLGT					S		**Sg**	**18 08 27.5**	**+1.0**
	baz=244										
WSL	**Shuilin Townsh**	**1.47**	**250**	*e*	P		**Pb**	**18 08 07.4**	**+0.1**
	baz=256										
ICHU	**Yijhu**	**1.49**	**243**	*e*	P		**Pb**	**18 08 07.7**	**0.0**
	baz=254										
ICHU					eS		**Sg**	**18 08 28.4**	**+0.3**
	baz=254										
CHN8	**Yiju**	**1.56**	**244**	⇑	*e* P		**Pb**	**18 08 08.2**	**-0.5**
	baz=254										
CHN8					S		**Sg**	**18 08 30.7**	**+0.6**
	baz=254										
CHN3	**Shinhua**	**1.58**	**233**	*e*	P		**Pb**	**18 08 09.7**	**+0.6**
	baz=244										
CHN3					S		**Sg**	**18 08 32.8**	**+2.0**
	baz=244										
SSHA	**Shanhua**	**1.60**	**236**	*e*	P		**Pb**	**18 08 09.5**	**0.0**
	baz=249										
SSHA					eS		**Sg**	**18 08 33.0**	**+1.4**
	baz=249										
ECL	**Taimali**	**1.60**	**207**	*e*	P		**Pn**	**18 08 06.4**	**-1.7**
	baz=215										
PCYT	**Pengchaiyu**	**1.61**	**11**	*e*	P		**Pn**	**18 08 08.0**	**-0.3**
	baz=340										
SCST	**Cishan**	**1.62**	**225**	*e*	P		**Pb**	**18 08 10.4**	**+0.6**
	baz=237										
SCST					eS		**Sg**	**18 08 34.8**	**+2.8**
	baz=237										
SHHT	**Tainan City**	**1.62**	**232**	*e*	P		**Pb**	**18 08 10.3**	**+0.4**
	baz=260										
SHHT					eS		**Sg**	**18 08 35.6**	**+3.3**
	baz=260										
SSD	**Sandimen**	**1.64**	**218**	*e*	P		**Pn**	**18 08 08.6**	**0.0**
	baz=219										
SSD					eS		**Sb**	**18 08 31.3**	**+0.6**
	baz=219										
SCLT	**Jiali**	**1.65**	**239**	*e*	P		**Pb**	**18 08 09.9**	**-0.5**
	baz=251										
SCLT					eS		**Sg**	**18 08 32.8**	**-0.5**
	baz=251										
TSMG	**Majia**	**1.66**	**217**	*e*	P		**Pb**	**18 08 10.8**	**+0.3**
	baz=234										
TSMG					eS		**Sg**	**18 08 32.6**	**-0.8**
	baz=234										
TAI1	**Yung-k'ang**	**1.70**	**235**	*e*	P		**Pb**	**18 08 11.6**	**+0.4**
	baz=243										
TWM1	**Shoushan**	**1.71**	**225**	*e*	P		**Pb**	**18 08 12.0**	**+0.6**
	baz=234										
SGLT	**Jiouru**	**1.73**	**221**	*e*	P		**Pg**	**18 08 12.9**	**-0.5**
	baz=221										
SGLT					eS		**Sg**	**18 08 38.4**	**+2.6**
	baz=221										
MASBT	**Mashibuluo**	**1.74**	**216**	*e*	P		**Pn**	**18 08 09.8**	**-0.3**
	baz=212										
TAI	**Tainan**	**1.75**	**234**	*e*	P		**Pb**	**18 08 11.7**	**-0.4**
	baz=242										
TSCK	**Chigu Township**	**1.75**	**240**	*e*	P		**Pn**	**18 08 10.9**	**+0.8**
	baz=248										
TSPT	**Pingtung City**	**1.77**	**220**	*e*	P		**Pb**	**18 08 12.8**	**+0.4**
	baz=238										
TSPT					eS		**Sg**	**18 08 38.5**	**+1.6**
	baz=238										
SNJT	**Kaohsiung City**	**1.81**	**225**	*e*	P		**Pb**	**18 08 13.7**	**+0.6**
	baz=235										
EAST	**Anshuo**	**1.84**	**207**	⇑	*e* P		**Pn**	**18 08 10.4**	**-1.0**
	baz=202										
TAW	**Tawu**	**1.84**	**205**	*e*	P		**Pn**	**18 08 11.6**	**+0.2**
	baz=214										
IRIF	**Iriomote-Funau**	**1.85**	**80**		P		**Pb**	**18 08 13.8**	**+0.1**
IRIF					eS		**Sg**	**18 08 38.2**	**-1.2**
IRIF	**Iriomote-Funau**	**1.85**	**80**		A		A	18 08 13.8	
	comp=E,38nm,7.1s,comp=N,51nm,3.4s										
TAWH	**Dawu Township**	**1.86**	**205**	*e*	P		**Pn**	**18 08 11.2**	**-0.5**
	baz=214										
HATJ	**Hateruma jima**	**1.89**	**89**		P		**Pb**	**18 08 14.6**	**+0.1**
HATJ	**Hateruma jima**	**1.89**	**89**		A		A	18 08 14.6	
	comp=E,116nm,3.3s,comp=N,75nm,3.2s										
WSSB	**Gushan**	**1.94**	**225**	*e*	P		**Pb**	**18 08 14.5**	**-0.8**
	baz=235										
SCZT	**Fangliau**	**1.95**	**212**	*e*	P		**Pb**	**18 08 14.5**	**-1.0**
	baz=207										
KAU	**Kaohsiung**	**1.96**	**222**	*e*	P		**Pb**	**18 08 16.3**	**+0.6**
	baz=251										
LAY	**Lan-yu**	**2.00**	**185**	*e*	P		**Pn**	**18 08 11.9**	**-1.6**
	baz=196										
SLIU	**Shizi**	**2.01**	**206**	*e*	P		**Pn**	**18 08 13.1**	**-0.6**
	baz=215										
LYUB	**Lan-yu**	**2.03**	**184**	*e*	P		**Pn**	**18 08 11.2**	**-2.9**
	baz=195										
PHUB	**P'eng-hu**	**2.05**	**256**	*e*	P		**Pn**	**18 08 15.0**	**+0.8**
	baz=265										
PHUB					S		**Sb**	**18 08 41.4**	**-1.1**
	baz=265										
PNG	**Penghu**	**2.05**	**257**	*e*	P		**Pn**	**18 08 14.2**	**0.0**
	baz=265										
PNG					eS		**Sb**	**18 08 42.3**	**-0.3**
	baz=265										
WDGT	**Dungji**	**2.05**	**248**	*e*	P		**Pn**	**18 08 14.7**	**+0.4**
	baz=255										
JKRS	**Kuro-shima**	**2.09**	**84**		P		**Pn**	**18 08 15.9**	**+1.1**
JKRS					eS		**Sb**	**18 08 43.0**	**-0.7**
TWP	**Hsiaoliuchiu**	**2.10**	**217**	*e*	P		**Pb**	**18 08 18.5**	**+0.5**
	baz=229										
SMST	**Manzhou Townsh**	**2.17**	**203**	*e*	P		**Pn**	**18 08 17.1**	**+1.1**
	baz=201										
HEN	**Hengchun**	**2.22**	**205**	*e*	P		**Pb**	**18 08 19.5**	**-0.6**
	baz=203										
JIJ	**Ishigaki jima**	**2.22**	**81**		P		**Pb**	**18 08 18.5**	**-1.6**
JIJ					S		**Sb**	**18 08 47.7**	**+0.1**
JIJ	**Ishigaki jima**	**2.22**	**81**		A		A	18 08 18.5	
	comp=E,16nm,11.2s,comp=N,22nm,5.3s										
TWK1	**Hengchun**	**2.25**	**203**	*e*	P		**Pn**	**18 08 18.7**	**+1.6**
	baz=202										
TWKBT	**Hengchun**	**2.25**	**202**	*e*	P		**Pn**	**18 08 17.7**	**+0.7**
	baz=202										
TSEB	**Hengchuen, Pin**	**2.26**	**200**	*e*	P		**Pn**	**18 08 18.2**	**+1.0**
	baz=201										
VCHM	**Qimei**	**2.27**	**249**	*e*	P		**Pn**	**18 08 17.6**	**+0.3**
	baz=260										
VCHM					S		**Sn**	**18 08 46.7**	**+1.5**
	baz=260										
VWUC	**VWUC**	**2.29**	**295**	*e*	P		**Pn**	**18 08 16.6**	**-0.9**
	baz=293										
JISG	**Ishigakijimahi**	**2.41**	**76**		P		**Pn**	**18 08 19.6**	**+0.3**
JISG					S		**Sn**	**18 08 50.3**	**+1.6**
JISG	**Ishigakijimahi**	**2.41**	**76**		A		A	18 08 19.6	
	comp=E,17nm,8.7s,comp=N,17nm,3.6s										
PTMZ	**Houxiangcun**	**2.58**	**293**	*e*	P		**Pn**	**18 08 20.9**	**-0.7**
	baz=292										
MATB	**Ma-tsu**	**2.66**	**323**	*e*	P		**Pn**	**18 08 22.1**	**-0.6**
	baz=314										
MSUT	**Lienchiang**	**2.68**	**323**	*e*	P		**Pn**	**18 08 23.8**	**+0.8**
	baz=315										
JTJ	**Tarama**	**2.77**	**77**		P		**Pb**	**18 08 27.0**	**-2.5**
JTJ	**Tarama**	**2.77**	**77**		A		A	18 08 27.0	
	comp=E,31nm,3.5s,comp=N,31nm,1.9s										
QZH	**Quanzhou**	**3.00**	**288**	⇓	*i* Pn		**Pn**	**18 08 27.8**	**+0.4**
QZH					Sn		**Sn**	**18 09 03.0**	**-0.2**
QZH					smax	smax			
	comp=N,4μm,1.3s										
QZH					smax	smax			
	comp=N,3μm,0.9s										
KNM	**Kinmen**	**3.04**	**278**	*e*	P		**Pn**	**18 08 30.5**	**+2.6**
	baz=279										
LYJJ	**Jianjiangzhen**	**3.08**	**325**	*e*	P		**Pn**	**18 08 27.7**	**-0.7**
	baz=317										
KNMB	**Chin-men Tao**	**3.08**	**279**		Pn		**Pn**	**18 08 27.9**	**-0.6**
KNMB	**Chin-men Tao**	**3.08**	**279**	*e*	P		**Pn**	**18 08 28.3**	**-0.2**
	baz=280										
MHZQ	**Yeshan**	**3.20**	**311**	*e*	P		**Pn**	**18 08 30.1**	**+0.

GZH Guangzhou 7.75 265 Pn Pn 18 09 28.9 -3.8
GZH Sn Sn 18 10 53.2 -7.3
GZH smax smax
comp=N,1µm,0.9s
GZH smax smax
comp=N,1µm,1.0s
NJ2 Nanjing 8.38 343 ⇑P Pn 18 09 42.0 +0.7
NJ2 S Sn 18 11 16.7 +0.9
NJ2 pmax pmax
comp=N,97nm,0.9s
NJ2 smax smax
comp=N,530nm,1.9s
NJ2 smax smax
comp=N,720nm,1.2s
NJ2 LR LR
comp=N,5µm,8.3s
NJ2 LR LR
comp=N,8µm,8.7s
NJ2 LR LR
comp=N,18µm,9.9s
CNSH ChangSha 8.92 299 ⇑P Pn 18 09 51.8 +3.1
CNSH S Sn 18 11 37.5 +8.3
CNSH smax smax
comp=N,2µm,1.5s
CNSH smax smax
comp=N,2µm,1.3s
CNSH LR LR
comp=N,14µm,9.8s
CNSH LR LR
comp=N,15µm,9.6s
CNSH LR LR
comp=N,18µm,10.2s
WHN Wuhan 9.22 316 P Pn 18 09 54.2 +1.4
WHN S Sn 18 11 31.7 -4.9
WHN LR LR
comp=N,51µm,10.6s
WHN LR LR
comp=N,42µm,8.9s
WHN LR LR
comp=N,78µm,9.4s
GULI GuiLin 10.41 279 eP Pn 18 10 21.5 +12
JNU Nakatsue 12.10 40 Pn Pn 18 10 30.2 -2.0
JNU Nakatsue 12.10 40 Pn Pn 18 10 33.0 +0.8
comp=N,0.2nm,0.3s,baz=195,slow=12,SNR=3.9
comp=N,14nm,0.9s
QIZ Qiongzhong 12.13 248 P Pn 18 10 33.4 +0.6
QIZ S Sn 18 12 47.8 -0.3
QIZ LR LR
comp=N,4µm,13.5s
QIZ LR LR
comp=N,3µm,12.6s
QIZ LR LR
comp=N,6µm,11.8s
QIZ Qiongzhong 12.13 248 Pn Pn 18 10 32.0 -0.8
QIZ Qiongzhong 12.13 248 P Pn 18 10 35.7 +2.9
JTU Tsushima 12.40 31 Pn Pn 18 10 35.7 -0.6
ENH Enshi 12.54 302 Pn Pn 18 10 35.6 -2.8
GYA Guiyang 13.85 283 P Pn 18 10 58.4 +2.1
GYA S Sn 18 13 33.1 +3.0
GYA LR LR
comp=N,8µm,8.4s
GYA LR LR
comp=N,26µm,9.1s
GYA LR LR
comp=N,30µm,9.5s
INCN Inchon 14.04 16 Pn 18 10 57.3 -1.5
INCN Inchon 14.04 16 P Pn 18 10 57.3 -1.5
JMN Monobe 14.36 45 Pn Pn 18 10 59.9 -3.2
KSRS Korea Array 14.39 20 Pn Pn 18 11 06.4 +2.9
comp=N,0.7nm,0.3s,baz=199,slow=12,SNR=25
KS19 Wonju Array Si 14.41 20 Pn 18 11 03.5 -0.3
HNS HongShan 14.62 337 eP P 18 11 14.2 +1.2
HNS eS S 18 13 59.8 -7.9
HNS LR LR
comp=N,9µm,13.1s
HNS LR LR
comp=N,5µm,12.0s
HNS LR LR
comp=N,12µm,12.0s
DL2 Dalian 14.82 360 P P 18 11 17.2 +1.9
DL2 pmax pmax
comp=Z,69nm,1.0s
XAN Xi'an 14.98 315 P Pn 18 11 12.5 +0.8
XAN S Sn 18 14 01.4 +3.8
XAN pmax pmax
comp=Z,100nm,1.0s
XAN LR LR
comp=Z,6µm,7.2s
XAN LR LR
comp=Z,27µm,10.2s
XAN LR LR
comp=Z,21µm,10.8s
SLVN Son La 16.67 264 Pn Pn 18 11 34.5 +0.8
SLVN IAmb IAmb 18 11 37.1
comp=Z,405nm,1.7s
CD2 Chengdu 17.35 297 P P 18 11 43.0 -0.4
CD2 S Sn 18 14 55.6 +0.5
CD2 LR LR
comp=Z,13µm,6.8s
CD2 LR LR
comp=Z,12µm,6.6s
CD2 LR LR
comp=Z,11µm,8.8s
DLV T Lat 17.40 229 Pn 18 11 42.6 -0.3
UBPT Khong Chiam 17.61 243 Pn 18 11 44.1 -1.2
JGF Kuroka 17.77 46 Pn Pn 18 11 42.9 -4.3
JSG Sagara 17.81 50 Pn 18 11 45.8 -1.9
PZH PanZhiHua 18.25 282 P Pn 18 11 53.3 0.0
PZH S Sn 18 15 16.9 -0.2
PZH pmax pmax
comp=Z,30nm,1.8s
PZH pmax pmax
comp=Z,4µm,9.6s
PZH LR LR
comp=Z,7µm,9.4s
PZH LR LR
comp=Z,13µm,11.0s
PZH LR LR
comp=Z,14µm,10.7s
KKM Kota Kinabalu 18.66 197 P P 18 11 55.0 -3.0
KKM IAmb IAmb 18 12 08.3
comp=Z,322nm,1.7s
JCJ Chichijima 18.70 76 P P 18 11 55.9 -2.4
JCJ IAmb IAmb 18 12 03.9
comp=Z,121nm,0.9s
JCJ Chichijima 18.70 76 P Pn 18 12 01.5 +2.8
JCJ Chichijima 18.70 76 LR LR 18 18 20.6
comp=Z,1µm,18.8s,baz=276,slow=34
HHC Hu-ho-hao-te 18.81 335 eP Pn 18 12 00.0 0.0
MAJO Matsushiro 18.88 45 P P 18 11 56.9 -3.3
MAJO Matsushiro 18.88 45 P P 18 11 56.9 -3.3
MAJO pmax pmax
comp=Z,43nm,1.5s
MJAR Matsushiro Arr 18.88 45 P P 18 11 59.1 -1.1
comp=Z,0.1nm,0.3s,baz=229,slow=8.9,SNR=11
comp=Z,2.8nm,0.7s
MYLDM Lahad Datu 19.01 190 P P 18 11 56.6 -5.1
MYLDM IAmb IAmb 18 12 11.0
comp=Z,288nm,2.0s
BTO Baotou 19.23 332 eP Pn 18 12 08.0 +2.9
BTO sP sP 18 12 14.8 +6.0
BTO PP PnPn 18 12 25.9 +7.9
BTO pmax pmax
comp=Z,50nm,1.1s
BTO pmax pmax
comp=Z,12µm,8.4s
BTO LR LR
comp=Z,16µm,12.0s
BTO LR LR
comp=Z,7µm,8.2s
BTO LR LR
comp=Z,27µm,10.0s
JSD Sado 19.84 41 P P 18 12 06.8 -3.9
CN2 Changchun 19.95 8 P Pn 18 12 17.7 +4.2
CN2 pmax pmax
comp=Z,30nm,1.0s
MSHR Mys Shultsa 20.07 21 iP P 18 12 13.1 -0.1
XLT XiLinHaoTe 20.35 348 eP Pn 18 12 21.1 +2.8
XLT pP sP 18 12 25.0 +3.9
XLT PP PnPn 18 12 40.6 +7.3
XLT SS PcP 18 16 32.5 +3.4
XLT PcP PcP 18 16 36.9 +7.8
XLT pmax pmax
comp=Z,21nm,1.5s
TNCH TengChong 21.14 277 P P 18 12 28.7 +3.6
TNCH sP sP 18 12 32.5 +2.7
TNCH PP PnPn 18 12 46.0 +1.7
TNCH S S 18 16 09.7 -11
TNCH SS SnSn 18 16 54.3 +12
TNCH pmax pmax
comp=Z,62nm,1.9s
TNCH pmax pmax
comp=Z,4µm,9.9s
TNCH LR LR
comp=Z,4µm,9.3s
TNCH LR LR
comp=Z,12µm,8.6s
TNCH LR LR
comp=Z,13µm,9.2s
JMM Marumori 21.33 45 P P 18 12 25.3 -1.4
JMM Marumori 21.33 45 P P 18 12 29.3 +2.5
MDJ Mudanjiang 21.51 15 P P 18 12 29.6 +0.9
MDJ S S 18 16 26.8 -0.1
MDJ ScP ScP 18 20 11.0 +2.9
MDJ pmax pmax
comp=Z,16nm,1.4s
MDJ pmax pmax
comp=Z,2µm,5.4s
MDJ Mudanjiang 21.51 15 P P 18 12 27.0 -1.7
USA0B Ussuriysk Arra 21.80 20 iP P 18 12 30.9 -0.9
USRK Ussuriysk Ar. 21.80 20 P P 18 12 32.1 +0.3
comp=Z,10nm,0.8s,baz=209,slow=12,SNR=13
comp=Z,10nm,0.8s
CHTO Chiang Mai 21.83 261 P P 18 12 30.5 -1.9
CHTO IAmb IAmb 18 12 41.6
comp=Z,157nm,1.4s
CHTO Chiang Mai 21.83 261 P P 18 12 35.4 +3.0
CHTO Chiang Mai 21.83 261 P P 18 12 30.5 -1.9
CHTO pmax pmax
comp=Z,157nm,1.5s
CMAR Chiang Mai Arr 21.94 260 P P 18 12 34.1 +0.5
comp=Z,7.1nm,0.8s,baz=62,slow=8.3,SNR=31
CMAR PcP PcP 18 16 31.9 -0.6
comp=Z,1.7nm,0.9s,baz=97,slow=1.0,SNR=5.5
comp=Z,7.1nm,0.8s
BNX BinXian 22.13 11 ⇓P P 18 12 33.8 -1.6
BNX pmax pmax
comp=Z,10.0nm,2.0s
BNX pmax pmax
comp=Z,2µm,7.4s
TOLI2 Tolitoli 22.81 182 P P 18 12 40.0 -2.8
TOLI2 IAmb IAmb 18 12 49.4
comp=Z,136nm,1.5s
JTM Tenmabayashi 23.27 40 P P 18 12 44.6 -2.8
JTM IAmb IAmb 18 12 48.9
comp=Z,93nm,1.2s
JTM Tenmabayashi 23.27 40 P P 18 12 48.7 +1.3
SBUM Sibu 23.35 205 P P 18 12 45.4 -3.0
MRSI Marisa 23.42 179 P P 18 12 49.4 +0.3
comp=Z,54nm,1.5s
MPSI Mapaga 23.63 185 P P 18 12 50.9 -0.2
comp=Z,71nm,1.6s
TNTI Ternate 23.76 166 P P 18 12 48.7 -3.8
TNTI Ternate 23.76 166 P P 18 12 57.8 +5.4
comp=Z,55nm,1.5s
GTA Gaotai 24.05 315 P P 18 13 00.5 +5.4
GTA pP pwP 18 13 07.9 +7.4
GTA sP sP 18 13 11.4 +11
GTA pmax pmax
comp=Z,28nm,1.8s
GTA LR LR
comp=Z,2µm,14.2s
GTA LR LR
comp=Z,6µm,13.1s
GTA LR LR
comp=Z,6µm,12.4s
GUMO Guam 24.20 111 P P 18 12 53.0 -3.6
GUMO Guam 24.20 111 P P 18 12 53.0 -3.6
GUMO pmax pmax
comp=Z,419nm,1.7s
LUWI Luwuk 24.95 178 P P 18 13 01.3 -2.0
LUWI Luwuk 24.95 178 P P 18 13 01.5 -1.8
KSM Kuching 25.01 208 P P 18 13 02.2 -1.7
LBMI Labuha 25.16 166 P P 18 13 09.0 +3.7
comp=Z,79nm,0.9s,comp=Z,2µm
HIA Hailar 25.23 357 P P 18 13 03.5 -2.2
HIA Hailar 25.23 357 iP P 18 13 06.7 +1.0
HIA pmax pmax
comp=Z,30nm,1.3s
ERM Erimo 25.26 40 P P 18 13 02.7 -3.3
ERM Erimo 25.26 40 P P 18 13 02.7 -3.3
ERM pmax pmax
comp=Z,318nm,2.0s
BKB Balikpapan 25.58 191 P P 18 13 05.2 -3.9
BKB Balikpapan 25.58 191 P P 18 13 12.7 +3.6
comp=Z,150nm,1.2s
MTKI Muara Teweh, K 25.70 196 P P 18 13 10.7 +0.5
comp=Z,100nm,1.4s
STKI Sintang 25.82 204 P P 18 13 13.1 +1.8
comp=Z,90nm,1.1s
GOMU GeErMu 26.16 304 P P 18 13 17.1 +2.4
GOMU pmax pmax
comp=Z,29nm,1.2s
GOMU LR LR
comp=Z,1µm,9.6s
GOMU LR LR
comp=Z,2µm,8.6s
GOMU LR LR
comp=Z,5µm,9.0s
KLR Kul'dur 26.35 15ceP P 18 13 17.7 +1.9
KLR pmax pmax
comp=Z,33nm,1.0s
ULN Ulaanbaatar 26.49 338 P P 18 13 16.3 -1.0
ULN IAmb IAmb 18 13 36.1
comp=Z,62nm,1.3s
ULN Ulaanbaatar 26.49 338 iP P 18 13 17.7 +0.4
ULN pmax pmax
comp=Z,48nm,1.6s
HEH HeiHe 26.54 8 eP P 18 13 20.5 +3.0
HEH pmax pmax
comp=Z,28nm,1.3s
SONM Songino Array 26.70 337 P P 18 13 19.2 +0.1
comp=Z,13nm,0.8s,baz=160,slow=7.6,SNR=35
comp=Z,13nm,0.8s
SHL Shillong 27.12 279 P P 18 13 22.0 -1.2
SHL IAmb IAmb 18 13 31.8
comp=Z,72nm,1.1s
SHL Shillong 27.12 279 P P 18 13 22.0 -1.2
SHL pmax pmax
comp=Z,72nm,1.1s
NLAI Namlea 27.61 168 P P 18 13 27.5 +0.1
comp=Z,48nm,1.2s,comp=Z,3µm
LSA Lhasa 27.81 288 P P 18 13 27.5 -2.2
LSA Lhasa 27.81 288 P P 18 13 27.5 -2.2
LSA pmax pmax
comp=Z,21nm,0.8s
IPM Ipoh 27.86 229 P P 18 13 28.2 -1.5
MYKOM Kota Tinggi 28.08 221 P P 18 13 30.6 -1.1
MYKOM IAmb IAmb 18 13 53.2
comp=Z,45nm,1.2s
YSS Yuzh-Sakhalins 28.39 31 P P 18 13 33.5 -0.6
YSS Yuzh-Sakhalins 28.39 31 iP P 18 13 33.2 -0.9
YSS pmax pmax
comp=Z,39nm,1.1s
FAKI Fak Fak 28.68 158 P P 18 13 35.3 -1.7
FAKI Fak Fak 28.68 158 P P 18 13 40.0 +3.0
KAPI Kappang 28.94 184 P P 18 13 37.7 -1.5
KAPI IAmb IAmb 18 13 43.7
comp=Z,63nm,1.6s
KAPI Kappang 28.94 184 P P 18 13 37.7 -1.5
KAPI pmax pmax
comp=Z,63nm,1.6s
ZEA Zeya 29.95 7 eP P 18 13 50.3 +2.4
ZEA pmax pmax
comp=Z,20nm,0.9s
ZAK Zakamensk 29.96 336 eP P 18 13 47.2 -0.9
ZAK pmax pmax
comp=Z,9.0nm,1.2s
LHMI Lhok Sumawe 30.31 236 P P 18 13 50.0 -1.4
PSI Prapat 30.52 230 P P 18 13 52.6 -0.8
PSI pmax pmax
comp=Z,12nm,0.9s
RPSI Rantau Prapat 30.59 230 P P 18 13 52.6 -1.3
IRK Irkutsk 31.16 339 eP P 18 13 59.5 +0.9
IRK pmax pmax
comp=Z,60nm,3.1s
TYV Tymovskoe 31.29 26 eP P 18 14 05.6 +5.9
TYV pmax pmax
comp=Z,9.0nm,1.0s
TYV pmax pmax
comp=Z,200nm,4.7s
MOY Mondy 31.85 335 eP P 18 14 09.7 +4.9
MOY pmax pmax
comp=Z,44nm,3.1s
MMRI Maumere 32.48 179 P P 18 14 10.1 -0.4
BLJI Banyuglugur 32.57 195 P P 18 14 13.0 +1.7
comp=Z,39nm,0.7s
EDFI Ende, Flores 32.59 180 P P 18 14 09.7 -1.9
comp=Z,66nm,1.0s
NGJI Ngawi 32.78 199 P P 18 14 19.6 +6.4
TWSI Taliwang, Sumb 32.92 189 P P 18 14 19.0 +4.7
comp=Z,28nm,1.3s
SAUI Saumlaki 33.17 162 P P 18 14 15.5 -1.1
SISI Saibi 33.46 224 P P 18 14 22.9 +3.8
comp=Z,34nm,1.0s
KPJI Karang Pucung 33.59 203 P P 18 14 24.7 +4.5
comp=Z,73nm,1.6s
LWLI Liwa 33.63 213 P P 18 14 26.6 +5.9
SOEI Soe 33.68 175 P P 18 14 19.4 -1.7
SOEI IAmb IAmb 18 14 38.8
comp=Z,33nm,1.0s
SOEI Soe 33.68 175 P P 18 14 23.9 +2.8
DBJI Dramaga 33.74 208 P P 18 14 25.7 +4.2
comp=Z,87nm,0.8s,comp=Z,6µm
KASI Kota Agung 33.85 212 P P 18 14 32.8 +10
WMQ Urumqi 34.12 314 eP P 18 14 25.6 +0.9
WMQ sP sP 18 14 32.1 +2.4
WMQ PP PnPn 18 15 37.9 -0.4
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ LR LR
comp=Z,3µm,11.9s
WMQ LR LR
comp=Z,5µm,11.9s
WMQ LR LR
comp=Z,870nm,12.7s
BBJI Bungbulang 34.19 205 P P 18 14 29.2 +3.6
DGZ Jazzator, Alta 37.02 323 iP P 18 14 47.7 -1.9
DGZ pmax pmax
comp=Z,16nm,1.6s
ZSN Zaisan 37.45 318 eP P 18 14 52.8 -0.3
baz=318
ZSN Zaisan 37.45 318 eP P 18 14 52.8 -0.3
XMIS Christmas Isla 37.73 206 P P 18 14 55.5 -0.4
XMIS IAmb IAmb 18 15 36.9
comp=Z,58nm,1.4s
MTN Manton Dam 37.79 165 P P 18 14 55.0 -1.3
MTN IAmb IAmb 18 15 01.1
comp=Z,42nm,1.1s
YAK Yakutsk 38.36 6 P P 18 15 00.0 -0.6
YAK Yakutsk 38.36 6 eP P 18 15 02.0 +1.4
YAK e*PP sP 18 15 06.0 +0.3
YAK e 18 16 27.5
YAK e 18 17 14.6
YAK pmax pmax
comp=Z,26nm,1.1s
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK pmax pmax
comp=Z,212nm,4.9s
YAK pmax pmax
comp=N,58nm,2.9s
YAK pmax pmax
comp=E,51nm,3.0s
MK31 Makanchi Array 38.79 316 iP P 18 15 04.2 -0.3
MKAR Makanchi Array 38.79 316 P P 18 15 04.3 -0.2
comp=Z,8.2nm,0.9s,baz=104,slow=9.0,SNR=31
MKAR PcP PcP 18 17 14.9 -0.9
comp=E,3.3nm,0.8s,baz=91,slow=5.3,SNR=3.4
MKAR ScP ScP 18 21 03.8 -0.1
comp=E,1.3nm,0.8s,baz=104,slow=4.3,SNR=7.2
comp=E,8.2nm,0.9s
MAKZ Makanchi 39.00 316 P P 18 15 04.9 -1.3
MAKZ Makanchi 39.00 316 P P 18 15 04.9 -1.3
MAKZ pmax pmax
comp=Z,31nm,1.1s
SHLS Shalkode 39.54 309 eP P 18 15 08.1 -3.0
baz=310
SHLS Shalkode 39.54 309 eP P 18 15 08.0 -3.0
UZB Uzynbulak 39.85 309 eP P 18 15 13.5 -0.1
baz=309
UZB Uzynbulak 39.85 309 eP P 18 15 13.5 -0.1
KNRA Kununurra 40.06 169 P P 18 15 13.6 -1.7
KNRA Kununurra 40.06 169 P P 18 15 16.4 +1.1
KPKS Kokpek 40.17 310 eP P 18 15 16.4 +0.2
baz=310
KPKS Kokpek 40.17 310 eP P 18 15 16.3 +0.2
SATY Saty 40.27 309 eP P 18 15 16.7 -0.3
baz=309
SATY Saty 40.27 309 eP P 18 15 16.7 -0.3
ZALV Zalesovo Beam 40.64 327 P P 18 15 19.0 -0.8
comp=Z,12nm,0.7s,baz=118,slow=7.1,SNR=37
ZALV PcP PcP 18 17 21.0 -0.4
comp=Z,1.7nm,0.7s,baz=95,slow=4.9,SNR=2.0
ZALV ScP ScP 18 21 10.4 -0.4
comp=Z,0.3nm,0.3s,baz=73,slow=4.8,SNR=2.4
comp=Z,12nm,0.7s
TDK Taldyqorghan 40.77 312 eP P 18 15 20.9 -0.2
baz=312
TDK Taldyqorghan 40.77 312 eP P 18 15 20.8 -0.2
HYB Hyderabad 40.80 269 eP P 18 15 20.5 -1.1
HYB epP pP 18 15 23.4 -1.6
HYB eS S 18 21 32.5 0.0
RABL Rabaul 40.81 129 P P 18 15 20.8 -0.8
RABL IAmb IAmb 18 15 30.4
comp=Z,50nm,0.8s
KSH Kashi 41.40 303 P P 18 15 30.2 +3.8
KSH sP sP 18 15 40.2 +8.8
KSH pmax pmax
comp=Z,12nm,0.9s
KSH pmax pmax
comp=Z,850nm,9.1s
KSH LR LR
comp=Z,3µm,13.4s
KSH LR LR
comp=Z,2µm,13.7s
KSH LR LR
comp=Z,3µm,12.7s
SEM Semipalatinsk 41.45 320 eP P 18 15 25.4 -1.4
baz=320
SEM Semipalatinsk 41.45 320 eP P 18 15 25.3 -1.4
CHKK Chushkaly 41.46 310 eP P 18 15 26.7 -0.1
baz=310
CHKK Chushkaly 41.46 310 eP P 18 15 26.6 -0.1
PMG Port Moresby 41.49 140 P P 18 15 25.3 -1.9
PMG Port Moresby 41.49 140 iP P 18 15 27.6 +0.4
PMG pmax pmax
comp=Z,29nm,1.1s
NRN Naryn 41.68 306 P P 18 15 28.0 -0.9
NRN Naryn 41.68 306 P P 18 15 28.0 -0.9
NRN pmax pmax
comp=Z,15nm,0.8s
KUU Kurty 41.93 310 eP P 18 15 30.4 -0.2
comp=Z,26nm,1.3s,baz=310
KUU Kurty 41.93 310 eP P 18 15 30.3 -0.2
KUU pmax pmax
comp=Z,26nm,1.3s
H11N1 WAKE ISLAND Hy 41.99 87 T T 19 00 57.5
baz=276
H11N2 WAKE ISLAND Hy 41.99 87 T T 19 00 51.9
baz=276
H11N3 WAKE ISLAND Hy 42.01 87 T T 19 00 58.9
baz=276
FITZ Fitzroy Crossi 42.05 174 P P 18 15 31.4 -0.2
H11S3 WAKE ISLAND Hy 42.12 89 T T 19 00 46.5
baz=284,slow=75
H11S1 WAKE ISLAND Hy 42.13 89 T T 19 00 50.1
baz=284,slow=75
H11S2 WAKE ISLAND Hy 42.14 89 T T 19 00 41.7
baz=284,slow=75
KURK Kurchatov 42.53 320 P P 18 15 34.6 -0.6
KURK Kurchatov 42.53 320ceP P 18 15 34.6 -0.6
KURK pmax pmax
comp=Z,65nm,2.5s
KURBB Kurchatov Arra 42.54 320 P P 18 15 34.8 -0.6
comp=Z,6.0nm,1.1s,baz=110,slow=7.7,SNR=19
KURBB PcP PcP 18 17 27.1 -0.6
comp=Z,1.6nm,1.0s,baz=104,slow=3.5,SNR=2.3
KURBB ScP ScP 18 21 17.6 -0.9
comp=Z,0.8nm,0.9s,baz=112,slow=4.2,SNR=4.3
comp=Z,6.0nm,1.1s
PALK Pallekele 42.68 254 P P 18 15 36.7 -0.3
PALK Pallekele 42.68 254 P P 18 15 36.7 -0.3
PALK pmax pmax

comp=Z,36nm,1.6s
FRU1 Bishkek 42.93 308 P **P** 18 15 38.2 -0.5
FRU1 Bishkek 42.93 308 P **P** 18 15 38.2 -0.5
FRU1 pmax pmax
comp=Z,16nm,1.1s
AAK Ala-Archa 42.99 307 P **P** 18 15 38.4 -1.0
AAK Ala-Archa 42.99 307 *ce*P **P** 18 15 39.7 +0.3
AAK pmax pmax
comp=Z,5.0nm,0.8s
COEN Coen 43.19 149 P **P** 18 15 40.0 -0.9
COEN lAmb lAmb 18 15 43.7
comp=Z,53nm,1.1s
COEN Coen 43.19 149 P **P** 18 15 43.6 +2.6
COCO West Island 43.46 217 P **P** 18 15 42.5 -0.6
COCO lAmb lAmb 18 16 17.8
comp=Z,63nm,1.0s
COCO West Island 43.46 217 P **P** 18 15 42.5 -0.6
COCO pmax pmax
comp=Z,63nm,1.0s
BTLS Baital 43.78 311 *e*P **P** 18 15 45.6 0.0
baz=311
BTLS Baital 43.78 311 *e*P **P** 18 15 45.5 0.0
ARSB Arslanbob 43.91 305 P **P** 18 15 45.6 -1.2
ARSB Arslanbob 43.91 305 P **P** 18 15 45.6 -1.2
ARSB pmax pmax
comp=Z,12nm,1.8s
SEY Seymchan 43.95 20 P **P** 18 15 46.7 +0.2
SEY pmax pmax
comp=Z,9.0nm,1.1s
PSA00 Pilbara Seismi 45.37 182 P **P** 18 15 56.8 -1.6
PSA00 lAmb lAmb 18 16 02.3
comp=Z,34nm,1.2s
PSA00 Pilbara Seismi 45.37 182 P **P** 18 15 56.8 -1.6
PSA00 Pilbara Seismi 45.37 182 P **P** 18 15 59.7 +1.3
WRAB Tennant Creek 45.40 163 P **P** 18 15 57.2 -1.4
WRAB lAmb lAmb 18 16 04.2
comp=Z,66nm,1.6s
WRAB Tennant Creek 45.40 163 P **P** 18 15 57.2 -1.4
WRAB pmax pmax
comp=Z,66nm,1.6s
BTK Batken 45.41 303 P **P** 18 15 58.1 -0.6
BTK Batken 45.41 303 P **P** 18 15 58.1 -0.6
BTK pmax pmax
comp=Z,13nm,1.2s
WRA Warramunga Arr 45.41 163 P **P** 18 15 58.1 -0.5
comp=Z,13nm,0.9s,baz=344,slow=8.6,SNR=32
WRA PcP **PcP** 18 17 38.5 +0.5
comp=Z,2.3nm,0.7s,baz=342,slow=3.6,SNR=2.9
WRA ScP **ScP** 18 21 31.6 +1.1
comp=Z,1.1nm,0.9s,baz=338,slow=4.2,SNR=3.4
comp=Z,13nm,0.9s
BRZS Berezniki 45.88 317 *e*P **P** 18 16 02.2 0.0
comp=Z,18nm,1.9s,baz=317
KKAR Karatay Array 45.96 307 P **P** 18 16 02.2 -0.7
KKAR Karatay Array 45.96 307 P **P** 18 16 02.2 -0.7
KKAR pmax pmax
comp=Z,6.0nm,0.8s
GIRL Giralia 46.97 189 P **P** 18 16 14.0 +3.1
MTSU Mount Surprise 47.35 150 P **P** 18 16 17.0 +3.0
QIS Mount Isa 47.62 157 P **P** 18 16 18.6 +2.5
TIXI Tiksi 47.81 3 P **P** 18 16 16.1 -0.8
TIXI lAmb lAmb 18 16 23.8
comp=Z,34nm,0.9s
TIXI Tiksi 47.81 3 *ce*P **P** 18 16 15.0 -1.9
TIXI pmax pmax
comp=Z,83nm,2.5s
BVAR Borovoye Array 48.10 321 P **P** 18 16 18.8 -0.8
comp=Z,5.7nm,0.6s,baz=107,slow=8.9,SNR=17
BVAR PcP **PcP** 18 17 47.9 +0.9
comp=Z,6.7nm,0.8s,baz=98,slow=4.5,SNR=6.1
comp=Z,5.7nm,0.6s
BRVK Borovoye 48.17 321 P **P** 18 16 18.9 -1.2
BRVK lAmb lAmb 18 16 37.9
comp=Z,18nm,1.0s
BRVK Borovoye 48.17 321 *ce*P **P** 18 16 18.4 -1.6
BRVK pmax pmax
comp=Z,29nm,1.7s
ASAR Alice Springs 48.87 165 P **P** 18 16 25.0 -0.7
comp=Z,7.5nm,0.9s,baz=343,slow=6.6,SNR=33
ASAR PcP **PcP** 18 17 49.7 -0.5
comp=Z,1.7nm,0.6s,baz=346,slow=3.1,SNR=4.3
ASAR ScP **ScP** 18 21 45.1 +0.1
comp=Z,1.7nm,0.8s,baz=357,slow=4.9,SNR=8.8
comp=Z,7.5nm,0.9s
AS01 Alice Springs 48.88 165 P **P** 18 16 28.6 +2.8
WRKA Warakurna 49.20 172 P **P** 18 16 29.6 +1.4
NRIK Noril'sk 49.67 345 *i* P **P** 18 16 29.2 -2.1
NRIK pmax pmax
comp=Z,9.0nm,1.1s
NRIK Noril'sk 49.67 345 P **P** 18 16 29.7 -1.6
comp=Z,5.3nm,0.8s,baz=131,slow=10,SNR=8.0
comp=Z,5.3nm,0.8s
CTA Charters Tower 49.94 149 P **P** 18 16 36.8 +2.9
CTAO Charters Tower 49.94 149 P **P** 18 16 31.6 -2.3
CTAO lAmb lAmb 18 17 55.4
comp=Z,89nm,1.7s
CTAO Charters Tower 49.94 149 P **P** 18 16 37.2 +3.3
CTAO Charters Tower 49.94 149 P **P** 18 16 31.6 -2.3
CTAO pmax pmax
comp=Z,89nm,1.7s
MEEK Meekatharra 50.47 184 P **P** 18 16 39.9 +2.1
AMKA Amchitka 51.47 43 P **P** 18 16 42.8 -2.3
AMKA PcP **PcP** 18 17 59.6 +0.2
BILL Bilibino 51.65 20 P **P** 18 16 44.8 -1.5
BILL Bilibino 51.65 20 *i* P **P** 18 16 46.4 +0.2
MORW Morawa 53.08 186 P **P** 18 16 55.5 -1.8
MORW lAmb lAmb 18 17 01.4
comp=Z,39nm,1.3s
OOD Oodnadatta 53.26 165 P **P** 18 17 00.3 +1.7
ABKAR Akbulak array 53.90 314 P **P** 18 17 02.6 -0.5
ABKAR PcP **PcP** 18 18 07.5 -1.1
ADK Adak 54.02 42 P **P** 18 17 04.4 +0.5
ADK Adak 54.02 42 P **P** 18 17 04.4 +0.5
ADK pmax pmax
comp=Z,77nm,1.4s
GSTR Great Sitkin T 54.42 42 P **P** 18 17 05.8 -1.2
SVE Sverdlovsk 54.46 324 *e*P **P** 18 17 07.5 +0.4
SVE pmax pmax
comp=Z,18nm,0.9s
FORT Forrest 54.84 173 P **P** 18 17 09.3 -0.8
FORT PcP **PcP** 18 18 13.4 +1.1
FORT Forrest 54.84 173 P **P** 18 17 12.0 +1.9
MULG Mulgathing 55.29 167 P **P** 18 17 15.5 +2.2
GEYT Alibeck 55.30 301 P **P** 18 17 13.8 +0.2
comp=Z,16nm,0.8s,baz=85,slow=3.1,SNR=23
comp=Z,16nm,0.8s
ARU Arti 55.53 323 P **P** 18 17 14.1 -0.7
ARU Arti 55.53 323 *d* iP **P** 18 17 14.7 -0.1
ARU S **S** 18 25 03.2 +3.4
ARU SS **SS** 18 28 45.6 +1.2
ARU pmax pmax
comp=Z,16nm,1.1s
NWAO Narrogin (SRO) 56.81 185 P **P** 18 17 21.7 -2.5
NWAO Narrogin (SRO) 56.81 185 P **P** 18 17 22.0 -2.1
NWAO lAmb lAmb 18 17 29.0
comp=Z,508nm,1.8s
NWAO Narrogin (SRO) 56.81 185 P **P** 18 17 28.1 +3.9
NWAO Narrogin (SRO) 56.81 185 P **P** 18 17 21.7 -2.5
NWAO pmax pmax
comp=Z,166nm,1.9s
BBOO Buckleboo 58.16 166 P **P** 18 17 31.5 -2.2
BBOO lAmb lAmb 18 17 39.7
comp=Z,50nm,1.3s
BBOO Buckleboo 58.16 166 P **P** 18 17 35.7 +2.0
STKA Stephens Creek 58.75 160 P **P** 18 17 40.7 +2.8
STKA Stephens Creek 58.75 160 *i* P **P** 18 17 38.1 +0.2
STKA Stephens Creek 58.75 160 P **P** 18 17 38.4 +0.6
comp=Z,9.5nm,0.6s,baz=332,slow=7.7,SNR=20
comp=Z,9.5nm,0.6s
CMSA Cobar Meteorol 59.83 156 P **P** 18 17 49.5 +4.2
TNA Tin City 60.24 27 P **P** 18 17 48.7 +0.9
baz=263
UNV Unalaska Valle 60.27 40 P **P** 18 17 48.9 +0.8
baz=271
KIRV Kirov 60.63 325 *i* P **P** 18 17 47.6 -2.9
F14K Arctic Creek 60.90 27 P **P** 18 17 53.3 +1.1
baz=264,SNR=11
ANM Nome 61.22 28 P **P** 18 17 53.4 -1.0
ANM lAmb lAmb 18 18 02.0
comp=Z,62nm,1.8s
ANM Nome 61.22 28 P **P** 18 17 55.8 +1.4
baz=266
ANM Nome 61.22 28 P **P** 18 17 53.4 -1.0
ANM pmax pmax
comp=Z,62nm,1.8s
C16K Lisburne Hills 61.58 24 P **P** 18 17 55.0 -1.8
C16K lAmb lAmb 18 18 04.7
comp=Z,20nm,1.2s
C16K Lisburne Hills 61.58 24 P **P** 18 17 58.1 +1.3
baz=264
F15K North Star Dit 61.61 27 lAmb lAmb 18 18 05.2
comp=Z,34nm,1.4s
F15K North Star Dit 61.61 27 P **P** 18 17 57.9 +0.8
baz=266
BELG Belogornoye 61.74 318 *i* P **P** 18 17 55.8 -2.3
BELG pmax pmax
comp=Z,7.0nm,1.1s
G15K Niukluk 61.82 28 P **P** 18 17 59.3 +0.8
baz=266
J14K Nanvaranak Lak 61.93 30 P **P** 18 18 00.1 +0.8
baz=268
L14K Kuka Creek 62.31 32 P **P** 18 18 02.6 +0.8
baz=270
C17K DeLong Mountai 62.40 24 P **P** 18 18 03.5 +1.1
baz=266
G16K Koyuk River 62.55 27 P **P** 18 18 04.4 +1.1
baz=268
H16K Elim 62.57 28 P **P** 18 18 04.5 +0.9
baz=268,SNR=12
M14K Bethel 62.67 32 P **P** 18 18 05.8 +1.6
baz=271
N14K Kuskokwak Cree 62.82 33 P **P** 18 18 06.8 +1.6
baz=271
E17K Hotham Inlet 62.83 25 P **P** 18 18 06.5 +1.3
baz=268,SNR=12
K15K Wolf Creek Mou 62.86 31 P **P** 18 18 07.0 +1.4
baz=270
L15K Ungalak Mounta 62.89 31 P **P** 18 18 07.0 +1.3
baz=271
B18K Kokolik River 62.96 23 P **P** 18 18 07.8 +1.7
baz=266,SNR=20
F17K Baiwis Pennin 63.03 26 P **P** 18 18 07.8 +1.2
baz=268
C18K Utukok River 63.14 24 P **P** 18 18 06.0 -1.3
C18K lAmb lAmb 18 18 14.8
comp=Z,18nm,1.1s
C18K Utukok River 63.14 24 P **P** 18 18 08.2 +0.9
baz=267
DZM Mont Dzumac 63.17 133 LR LR 18 41 04.5
comp=Z,2µm,18.8s,baz=22,slow=32
I17K Unalakleet 63.24 29 P **P** 18 18 06.0 -2.0
I17K Unalakleet 63.24 29 P **P** 18 18 09.2 +1.3
baz=270
G17K Kiwalik Mounta 63.26 27 P **P** 18 18 09.3 +1.1
baz=269
J16K Anvik River 63.28 30 P **P** 18 18 09.9 +1.6
baz=270
M15K Kasigluk River 63.30 33 P **P** 18 18 09.3 +0.8
baz=272
E18K Tukpahlearik C 63.32 25 lAmb lAmb 18 18 16.6
comp=Z,14nm,1.1s
E18K Tukpahlearik C 63.32 25 P **P** 18 18 09.6 +1.2
baz=268,SNR=14
ARPS Mount Arapiles 63.38 162 P **P** 18 18 10.9 +1.7
H17K Granite Mounta 63.57 28 P **P** 18 18 11.7 +1.5
baz=270
N15K Kwethluk River 63.61 33 P **P** 18 18 11.9 +1.4
baz=273
F18K Selawik 63.68 26 P **P** 18 18 12.2 +1.4
baz=270,SNR=17
C19K Lookout Ridge 63.74 23 P **P** 18 18 12.7 +1.4
baz=269
O15K Ungalikthiuk R 63.80 34 P **P** 18 18 12.5 +0.7
baz=273
L16K Owhat River 63.84 31 P **P** 18 18 10.7 -1.3
L16K lAmb lAmb 18 18 20.9
comp=Z,33nm,1.4s
L16K Owhat River 63.84 31 P **P** 18 18 13.2 +1.2
baz=272
G18K Tagagawik 64.09 27 P **P** 18 18 14.5 +0.9
baz=271
M16K Timber Creek 64.13 32 P **P** 18 18 15.3 +1.4
baz=273
H18K Honhosa River 64.22 28 lAmb lAmb 18 18 21.7
comp=Z,56nm,1.8s
H18K Honhosa River 64.22 28 P **P** 18 18 15.7 +1.2
baz=272
N16K Nishlik Lake 64.25 33 P **P** 18 18 15.9 +1.1
baz=274
D19K Kuna River 64.27 24 P **P** 18 18 13.8 -0.9
D19K Kuna River 64.27 24 P **P** 18 18 16.0 +1.2
baz=270
K17K Iditarod 64.35 30 P **P** 18 18 16.9 +1.5
baz=273
L17K Donlin 64.38 31 P **P** 18 18 16.9 +1.3
baz=273
F19K Shaleruckik Mo 64.42 26 P **P** 18 18 17.1 +1.4
baz=271
E19K Redstone River 64.62 25 P **P** 18 18 15.5 -1.5
E19K lAmb lAmb 18 18 38.3
comp=Z,22nm,1.2s
E19K Redstone River 64.62 25 P **P** 18 18 18.3 +1.3
baz=272
O16K Kokwok River B 64.65 34 P **P** 18 18 19.0 +1.6
baz=274
G19K Purcell Mounta 64.72 26 lAmb lAmb 18 18 25.4
comp=Z,21nm,1.4s
G19K Purcell Mounta 64.72 26 P **P** 18 18 19.1 +1.4
baz=272
A21K Barrow 64.77 21 P **P** 18 18 19.9 +1.9
baz=270
D20K Etivluk River 64.81 24 P **P** 18 18 20.0 +1.7
baz=272
M17K Holitna River 64.84 32 P **P** 18 18 19.3 +0.7
M17K Holitna River 64.84 32 P **P** 18 18 20.2 +1.6
baz=274
GCSA Galena City Sc 64.87 28 P **P** 18 18 20.4 +1.7
baz=273
E20K Nigu River 64.99 24 P **P** 18 18 21.1 +1.6
baz=272
H19K Roundabout Mou 65.01 27 P **P** 18 18 21.3 +1.7
baz=273
J18K Innoko River 65.02 29 P **P** 18 18 19.4 -0.4
J18K Innoko River 65.02 29 P **P** 18 18 21.4 +1.6
baz=274
N17K Nushagak Hills 65.03 33 P **P** 18 18 19.9 +0.1
N17K Nushagak Hills 65.03 33 P **P** 18 18 21.4 +1.6
baz=275
R16K Pilot Point 65.11 36 P **P** 18 18 21.9 +1.6
baz=276
L18K Granite Mounta 65.13 31 P **P** 18 18 22.3 +1.9
baz=274
O17K Koliganek Bris 65.14 33 P **P** 18 18 22.4 +1.8
baz=275
F20K Avaraart Lake 65.22 25 P **P** 18 18 22.2 +1.3
baz=273
TOO Toolangi 65.23 159 P **P** 18 18 24.1 +2.7
GNI Garni 65.30 305 *i* P **P** 18 18 21.6 -0.6
GNI pmax pmax
comp=Z,36nm,1.4s
TTA Tatalina 65.38 30 P **P** 18 18 20.3 -1.9
TTA lAmb lAmb 18 18 31.4
comp=Z,48nm,1.7s
TTA Tatalina 65.38 30 P **P** 18 18 24.2 +2.0
TTA Tatalina 65.38 30 P **P** 18 18 23.1 +1.0
baz=275,SNR=6.7
TTA Tatalina 65.38 30 P **P** 18 18 20.3 -1.9
TTA pmax pmax
comp=Z,48nm,1.7s
ZEI Tsey 65.42 308 *e*P **P** 18 18 22.0 -0.9
ZEI pmax pmax
comp=Z,30nm,1.4s
C21K Knifeblade Rid 65.46 23 P **P** 18 18 23.7 +1.3
baz=273
J19K Poorman 65.47 29 P **P** 18 18 20.8 -1.8
J19K lAmb lAmb 18 18 26.4
comp=Z,23nm,1.0s
J19K Poorman 65.47 29 P **P** 18 18 23.8 +1.2
baz=275,SNR=13
B21K Ikpikpuk River 65.49 22 P **P** 18 18 23.9 +1.2
baz=273
VRH Novokhopyorsk 65.50 317 *e*P **P** 18 18 22.1 -0.9
VRH pmax pmax
comp=Z,20nm,0.6s
P17K Kvichak River 65.53 34 P **P** 18 18 24.0 +0.9
baz=276
KLMR Klimovskoe 65.56 328 *e*P **P** 18 18 21.3 -1.9
KLMR pmax pmax
comp=Z,52nm,1.5s
M18K Stony River 65.60 31 P **P** 18 18 24.7 +1.2
baz=276
GOF Gofitskoye 65.62 310 *ce*P **P** 18 18 26.4 +2.5
N18K Kilae Creek 65.65 32 P **P** 18 18 24.6 +0.8
baz=276
H20K Anotleneega Mo 65.67 27 P **P** 18 18 24.7 +0.8
baz=275
SVW2 Sparrevohn 65.76 32 P **P** 18 18 23.6 -0.9
SVW2 lAmb lAmb 18 18 30.6
comp=Z,19nm,1.0s
SVW2 Sparrevohn 65.76 32 P **P** 18 18 27.6 +3.0
ONI Oni 65.78 308 P **P** 18 18 24.5 -0.6
ONI lAmb lAmb 18 18 48.1
comp=Z,22nm,1.1s
ONI Oni 65.78 308 P **P** 18 18 24.5 -0.6
ONI pmax pmax
comp=Z,22nm,1.1s
E21K Killik River 65.80 24 P **P** 18 18 25.9 +1.2
baz=274
B22K Teshekpuk Lake 65.86 22 P **P** 18 18 26.2 +1.2
baz=274
I20K Naaghedeneel 65.89 28 P **P** 18 18 26.8 +1.5
baz=275
Q17K Contact Creek 65.92 35 P **P** 18 18 26.9 +1.1
baz=277
KBZ Khabaz 65.96 309 *i* P **P** 18 18 26.1 0.0
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 65.96 309 P **P** 18 18 26.7 +0.6
comp=Z,7.4nm,0.8s,baz=120,slow=4.1,SNR=22
comp=Z,7.4nm,0.8s
L19K White Mountain 65.99 31 P **P** 18 18 24.9 -1.1
L19K lAmb lAmb 18 18 30.1
comp=Z,21nm,1.0s
L19K White Mountain 65.99 31 P **P** 18 18 26.9 +0.9
baz=276,SNR=6.3
KIV Kislovodsk 66.07 309 P **P** 18 18 25.0 -2.0
KIV Kislovodsk 66.07 309 *e*P **P** 18 18 24.6 -2.4
KIV pmax pmax
comp=Z,14nm,1.0s
F21K Alatna River 66.08 25 lAmb lAmb 18 18 34.1
comp=Z,56nm,1.9s
F21K Alatna River 66.08 25 P **P** 18 18 28.1 +1.5
baz=275
O18K Koktuh Hills 66.08 33 P **P** 18 18 26.6 -0.1
O18K Koktuh Hills 66.08 33 P **P** 18 18 28.3 +1.6
baz=277
J20K Nowinta River 66.10 28 lAmb lAmb 18 18 35.9
comp=Z,33nm,1.1s
J20K Nowinta River 66.10 28 P **P** 18 18 28.3 +1.6
baz=276
P18K Big Mountain, 66.13 34 P **P** 18 18 25.7 -1.3
P18K Big Mountain, 66.13 34 P **P** 18 18 28.1 +1.2
baz=277
G21K Allakaket 66.14 26 P **P** 18 18 25.2 -1.7
G21K lAmb lAmb 18 18 35.5
comp=Z,24nm,1.1s
G21K Allakaket 66.14 26 P **P** 18 18 28.3 +1.4
baz=275
K20K Telida 66.22 29 P **P** 18 18 25.9 -1.6
K20K lAmb lAmb 18 18 36.7
comp=Z,24nm,1.0s
K20K Telida 66.22 29 P **P** 18 18 29.3 +1.8
baz=276
D22K Ayikyak River 66.23 23 P **P** 18 18 28.8 +1.3
baz=275
M19K Big River Lodg 66.24 31 P **P** 18 18 28.8 +1.2
baz=277
N19K Bonanza Creek 66.32 32 P **P** 18 18 30.0 +1.7
baz=277
L20K Farewell, AK 66.41 30 P **P** 18 18 30.5 +1.8
baz=277
O19K Port Alsworth 66.48 33 P **P** 18 18 30.9 +1.7
baz=277
H21K Melozitna Rive 66.51 27 lAmb lAmb 18 18 38.2
comp=Z,32nm,1.1s
H21K Melozitna Rive 66.51 27 P **P** 18 18 30.8 +1.5
baz=276
E22K Anaktuvuk Pass 66.62 24 P **P** 18 18 31.6 +1.5
baz=276
M20K Styx River 66.83 31 P **P** 18 18 32.8 +1.2
baz=278
G22K Bettles 66.88 25 P **P** 18 18 33.1 +1.5
baz=277
I21K Tanana 66.91 27 P **P** 18 18 33.4 +1.5
baz=277
CHUM Lake Minchumin 66.93 29 P **P** 18 18 33.4 +1.4
baz=278,SNR=7.6
D23K Nanushuk River 66.94 23 P **P** 18 18 33.5 +1.5
baz=277
VORD Divnogorie 67.06 317 *e*P **P** 18 18 32.5 -0.5
VORD pmax pmax
comp=Z,10.0nm,1.0s
H22K Ishtalitna Cre 67.06 26 P **P** 18 18 34.7 +1.8
baz=278
VSR Storozhevoye 67.09 317 *e*P **P** 18 18 31.4 -1.8
VSR pmax pmax
comp=Z,10.0nm,0.8s
CAST Castle Rocks 67.10 29 P **P** 18 18 32.3 -0.8
CAST Castle Rocks 67.10 29 P **P** 18 18 34.8 +1.7
baz=278,SNR=16
P19K Oil Pt 67.10 33 P **P** 18 18 34.6 +1.4
baz=279
PPLA Purkeypile 67.12 30 P **P** 18 18 34.7 +1.3
baz=278
ERBR Yeremizino-Bor 67.27 311 *e*P **P** 18 18 35.0 +0.5
ERBR pmax pmax
comp=Z,25nm,0.8s
LABN Labinsk 67.32 310 *e*P **P** 18 18 34.9 +0.1
LABN pmax pmax
comp=Z,25nm,0.5s
O20K Slope Mountain 67.34 33 P **P** 18 18 36.2 +1.5
baz=279
COLD Coldfoot 67.35 25 P **P** 18 18 36.4 +1.8
baz=278,SNR=7.2
N20K Mount Spurr 67.37 32 P **P** 18 18 36.5 +1.6
baz=279,SNR=9.5
TOLK Toolik Lake Re 67.39 23 P **P** 18 18 33.7 -1.1
TOLK lAmb lAmb 18 18 42.7
comp=Z,18nm,0.8s
TOLK Toolik Lake Re 67.39 23 P **P** 18 18 36.8 +2.0
baz=278,SNR=15
APA Apatity 67.40 335 ǁ *i* P **P** 18 18 38.6 +3.7
APA pmax pmax
comp=Z,7.0nm,0.9s
MLY Manley 67.45 27 P **P** 18 18 34.7 -0.6
MLY lAmb lAmb 18 18 44.1
comp=Z,30nm,1.0s
MLY Manley 67.45 27 P **P** 18 18 36.5 +1.2
baz=278,SNR=11
E23K Chandalar 67.45 24 P **P** 18 18 36.9 +1.6
baz=278
OHAK Old Harbor 67.45 36 P **P** 18 18 38.6 +3.2
G23K Bananza Creek 67.49 25 P **P** 18 18 34.7 -0.9
G23K lAmb lAmb 18 18 43.7
comp=Z,16nm,1.0s
G23K Bananza Creek 67.49 25 P **P** 18 18 37.2 +1.6
baz=278,SNR=10
C24K Franklin Bluff 67.54 22 P **P** 18 18 37.2 +1.5
baz=278
SKT Skwentna 67.56 31 P **P** 18 18 34.7 -1.3
SKT lAmb lAmb 18 19 08.5
comp=Z,33nm,1.2s
SKT Skwentna 67.56 31 P **P** 18 18 36.9 +0.9
baz=279
D24K Happy Valley 67.58 23 P **P** 18 18 37.3 +1.2
baz=278
KTH Kantishna Hill 67.59 29 P **P** 18 18 35.4 -0.9
KTH lAmb lAmb 18 18 45.9
comp=Z,19nm,0.8s
E24K Your Creek 67.87 24 lAmb lAmb 18 18 46.0
comp=Z,17nm,0.8s
E24K Your Creek 67.87 24 P **P** 18 18 39.0 +1.0
baz=279
TRF Thorofare Moun 67.89 29 P **P** 18 18 36.3 -2.0
TRF lAmb lAmb 18 18 44.3
comp=Z,21nm,0.8s
TRF Thorofare Moun 67.89 29 P **P** 18 18 39.1 +0.8
baz=280
OBN Obninsk 67.93 322 ǁ *e*P **P** 18 18 39.1 +0.7
OBN *PP **pP** 18 18 42.0 -0.1
OBN *SP **sP** 18 18 43.0 -0.6
OBN 18 19 04.0
OBN SS SS 18 31 53.0 -5.2
OBN pmax pmax
comp=Z,14nm,1.2s
OBN MLR MLR
comp=Z,989nm,17.0s
I23K Minto, Yukon-K 68.01 27 P **P** 18 18 37.8 -1.0
I23K lAmb lAmb 18 18 49.4

comp=Z,16nm,0.8s
I23K Minto, Yukon-K 68.01 27 P P 18 18 40.2 +1.4
baz=280
SUA Susitna One 68.02 31 P P 18 18 38.3 -0.7
SUA Susitna One 68.02 31 P P 18 18 40.4 +1.3
baz=280,SNR=22
CUT Chulitna 68.08 30 P P 18 18 39.0 -0.3
CUT Chulitna 68.08 30 P P 18 18 40.6 +1.4
baz=280
F24K Squaw Lake 68.19 24 IAmb IAmb 18 18 48.5
comp=Z,18nm,0.7s
F24K Squaw Lake 68.19 24 P P 18 18 41.2 +1.3
baz=280
NEA2 Nenana 68.23 28 P P 18 18 39.6 -0.5
NEA2 Nenana 68.23 28 P P 18 18 41.2 +1.0
baz=280
SOC Sochi 68.25 309 *e*P P 18 18 35.7 -5.0
SOC *e*S S **18 27 34.6 -6.5**
SOC *e*SSS SSS 18 35 07.9
BRLK Bradley Lake 68.25 33 P P 18 18 40.8 +0.3
BRSE Bradley Lake S 68.33 33 P P 18 18 42.1 +1.2
baz=281
D25K Kavik River 68.41 22 IAmb IAmb 18 18 45.2
comp=Z,24nm,0.9s
D25K Kavik River 68.41 22 P P 18 18 42.7 +1.4
baz=281
MCK McKinley 68.44 29 P P 18 18 43.0 +1.4
baz=281
G24K Hadweenzic Riv 68.49 25 P P 18 18 43.3 +1.5
baz=281
H24K Noodor Dome 68.49 26 P P 18 18 43.6 +1.7
baz=281
MDM Murphy Dome 68.51 27 P P 18 18 41.3 -0.7
RC01 Rabbit Creek A 68.57 31 P P 18 18 43.6 +1.2
baz=281
O22K Cooper Landing 68.69 32 P P 18 18 43.8 +0.7
baz=281
CCB Clear Creek Bu 68.75 28 P P 18 18 42.6 -0.8
PMR Palmer 68.76 31 P P 18 18 42.5 -1.0
PMR IAmb IAmb 18 18 50.4
comp=Z,24nm,0.8s
PMR Palmer 68.76 31 P P 18 18 44.6 +1.1
baz=281
PMR Palmer 68.76 31 P P 18 18 42.5 -1.0
PMR pmax pmax
comp=Z,24nm,0.8s
WAT1 Susitna Watana 68.78 30 P P 18 18 44.8 +1.1
baz=281
POKR Poker Plat Res 68.81 27 P P 18 18 43.1 -0.8
POKR Poker Plat Res 68.81 27 P P 18 18 45.2 +1.4
baz=281
GHO Glory Hole Cre 68.82 31 P P 18 18 43.8 -0.3
RAYN Ar Rayn 68.87 287 P P 18 18 43.6 -1.4
RAYN Ar Rayn 68.87 287 P P 18 18 43.6 -1.4
RAYN pmax pmax
comp=Z,14nm,1.1s
SEW Seward 68.90 32 P P 18 18 45.6 +1.2
baz=282
E25K Arctic Village 68.94 24 P P 18 18 44.0 -0.6
E25K Arctic Village 68.94 24 P P 18 18 45.8 +1.1
baz=282,SNR=14
G25K Bearman Lake 69.02 25 P P 18 18 46.2 +1.2
baz=282
F25K Christian Rive 69.02 24 P P 18 18 46.3 +1.1
baz=282
SML Sawmill 69.09 31 P P 18 18 43.9 -1.8
SML Sawmill 69.09 31 P P 18 18 46.7 +1.0
baz=282
KNK Knik Glacier 69.11 31 P P 18 18 45.6 -0.1
KNK Knik Glacier 69.11 31 P P 18 18 46.5 +0.7
baz=282
ILAR Eielson Array 69.11 27 P P 18 18 45.9 +0.2
comp=Z,1.6nm,0.5s,baz=285,slow=6.9,SNR=20
comp=Z,1.6nm,0.5s
HDA Harding Lake 69.16 28 P P 18 18 45.2 -0.8
HDA IAmb IAmb 18 18 51.0
comp=Z,17nm,1.1s
HDA Harding Lake 69.16 28 P P 18 18 46.7 +0.7
baz=282
WAT6 Susitna Watana 69.20 30 P P 18 18 47.6 +1.1
baz=282
DHY Denali Highway 69.26 29 P P 18 18 46.4 -0.4
DHY IAmb IAmb 18 18 52.7
comp=Z,11nm,0.8s
DHY Denali Highway 69.26 29 P P 18 18 48.1 +1.3
baz=282
M23K Glacier View 69.37 31 P P 18 18 48.7 +1.3
baz=282
PRP Porcupine Dome 69.51 26 P P 18 18 49.2 +0.9
baz=283
SCM Sheep Creek Mo 69.55 30 P P 18 18 46.5 -2.0
SCM Sheep Creek Mo 69.55 30 P P 18 18 49.6 +1.1
baz=283
SCM Sheep Creek Mo 69.55 30 P P 18 18 46.5 -2.0
SCM pmax pmax
comp=Z,53nm,0.9s
F26K Sheenjek River 69.56 24 P P 18 18 49.7 +1.2
baz=283
ANN Anapa 69.57 311 *e*P P 18 18 49.6 +0.8
ANN pmax pmax
comp=Z,30nm,1.0s
ANN MLR MLR
comp=Z,621nm,13.0s
J25K Salcha River, 69.78 27 IAmb IAmb 18 19 06.8
comp=Z,37nm,1.8s
J25K Salcha River, 69.78 27 P P 18 18 50.5 +0.6
baz=283
K24K Donnelly Dome 69.80 28 P P 18 18 51.1 +1.1
baz=283,SNR=16
ARCES ARCESS Array B 69.86 338 P P 18 18 50.0 -0.3
ARCES ARCESS Array B 69.86 338 P P 18 18 50.0 -0.3
comp=Z,5.6nm,0.9s,baz=27,slow=8.1,SNR=4.6
comp=Z,5.6nm,0.9s
G26K Porcupine Rive 69.87 25 P P 18 18 51.8 +1.5
baz=284
M24K Tolsona, Glenn 70.02 30 P P 18 18 51.4 -0.1
M24K Tolsona, Glenn 70.02 30 P P 18 18 53.3 +1.9
baz=284
PAX Paxson 70.13 29 P P 18 18 53.3 +1.2
baz=284
KLU Klutina 70.28 31 P P 18 18 52.7 -0.4
KLU IAmb IAmb 18 19 01.1
comp=Z,22nm,1.0s
KLU Klutina 70.28 31 P P 18 18 53.9 +0.9
baz=284
D27M Malcolm River 70.31 22 IAmb IAmb 18 19 02.1
comp=Z,20nm,0.9s
D27M Malcolm River 70.31 22 P P 18 18 54.2 +1.1
baz=286
SCRK Sand Creek 70.52 28 P P 18 18 53.2 -1.3
SCRK Sand Creek 70.52 28 P P 18 18 56.0 +1.4
baz=285,SNR=7.3
I26K Coal Creek Min 70.53 26 IAmb IAmb 18 19 02.5
comp=Z,17nm,0.8s
I26K Coal Creek Min 70.53 26 P P 18 18 56.0 +1.6
baz=285
J26L Joseph Creek 70.57 27 P P 18 18 53.5 -1.3
J26L IAmb IAmb 18 19 02.0
comp=Z,16nm,0.8s
N25K Chitina, Valde 70.86 30 P P 18 18 56.5 -0.1
N25K Chitina, Valde 70.86 30 P P 18 18 58.0 +1.4
baz=285
MENT Mentasta 70.91 29 P P 18 18 59.5 +2.7
H27K Steamboat Moun 70.93 25 P P 18 18 58.4 +1.5
baz=286
E28M Babbage River 70.98 23 P P 18 18 57.0 -0.2
E28M IAmb IAmb 18 19 01.6
comp=Z,15nm,0.9s
E28M Babbage River 70.98 23 P P 18 18 58.4 +1.3
baz=287
BMRM Bremner River 71.03 31 P P 18 18 58.8 +1.2
baz=285
D28M Stokes Point 71.04 22 P P 18 18 58.9 +1.5
baz=288
L26K Log Cabin Wild 71.05 29 P P 18 18 56.8 -0.8
L26K IAmb IAmb 18 19 06.0
comp=Z,12nm,0.8s
L26K Log Cabin Wild 71.05 29 P P 18 18 58.9 +1.3
baz=286
I27K Kandik River 71.07 26 P P 18 18 58.8 +1.0
baz=286
F28M Old Crow 71.15 24 P P 18 18 57.2 -1.0
F28M IAmb IAmb 18 19 02.8
comp=Z,26nm,1.0s
F28M Old Crow 71.15 24 P P 18 18 59.3 +1.1
baz=287,SNR=25
GLB Gilahina Butte 71.27 30 P P 18 18 57.9 -1.2
GLB IAmb IAmb 18 19 06.8
comp=Z,24nm,0.8s
K27K Chicken 71.32 28 P P 18 19 00.3 +1.1
baz=286
M26K Nabesna, AK 71.38 29 P P 18 18 58.4 -1.3
M26K IAmb IAmb 18 19 07.9
comp=Z,29nm,0.8s
M26K Nabesna, AK 71.38 29 P P 18 19 00.7 +1.0
baz=286
EGAK Eagle 71.49 27 P P 18 18 58.9 -1.4
EGAK IAmb IAmb 18 19 07.8
comp=Z,15nm,0.7s
EGAK Eagle 71.49 27 P P 18 19 01.1 +0.9
baz=287,SNR=12
E29M Blow River 71.62 23 P P 18 19 02.3 +1.3
baz=289
MCARA McCarthy VSAT 71.65 30 P P 18 19 02.4 +1.1
MCARA IAmb IAmb 18 19 10.8
comp=Z,25nm,0.8s
MCARA McCarthy VSAT 71.65 30 P P 18 19 02.3 +1.1
baz=286
L27K Beaver Creek, 71.70 28 IAmb IAmb 18 19 10.4
comp=Z,21nm,0.8s
L27K Beaver Creek, 71.70 28 P P 18 19 03.2 +1.6
baz=287
I28M Miner Creek 71.78 26 P P 18 19 03.6 +1.4
baz=288
SIM Simferopol' 71.81 312 *e*P P 18 19 01.5 -1.0
SIM *e* 18 19 21.0
SIM pmax pmax
comp=Z,35nm,0.8s
SIM pmax pmax
comp=Z,29nm,1.2s
FINES FINESS Array B 71.83 330 P P 18 19 01.2 -1.0
comp=Z,4.9nm,0.8s,baz=77,slow=12,SNR=10
comp=Z,4.9nm,0.8s
M27K Edge Creek, AK 71.89 29 P P 18 19 04.1 +1.2
baz=287
H29M Whitestone 72.15 25 IAmb IAmb 18 19 15.2
comp=Z,27nm,1.1s
H29M Whitestone 72.15 25 P P 18 19 05.9 +1.7
baz=289
BNN Bunyan 72.29 305 P P 18 19 04.6 -1.1
BNN IAmb IAmb 18 19 16.3
comp=Z,27nm,1.0s
BVCY Beaver Creek 72.33 29 P P 18 19 06.4 +1.0
baz=288
BARN Barnard Glacie 72.38 30 P P 18 19 05.5 -0.4
VSU Vasula 72.38 327 *ce*P P 18 19 06.1 +0.5
VSU pmax pmax
comp=Z,24nm,1.0s
VSU Vasula 72.38 327 *e*P P 18 19 05.1 -0.5
DAWY Dawson 72.44 27 P P 18 19 04.9 -1.2
DAWY IAmb IAmb 18 19 14.3
comp=Z,19nm,1.0s
DAWY Dawson 72.44 27 P P 18 19 06.8 +0.8
baz=289,SNR=15
CTG Chitna Glacier 72.56 31 P P 18 19 08.1 +1.2
baz=288
CTGM Chitina Glacie 72.56 31 P P 18 19 05.5 -1.4
CTGM IAmb IAmb 18 19 15.3
comp=Z,24nm,0.8s
F30M Barrier River 72.64 23 P P 18 19 08.1 +1.0
baz=291
G30M tAoh Zraii Nji 72.70 24 IAmb IAmb 18 19 11.0
comp=Z,27nm,0.9s
G30M tAoh Zraii Nji 72.70 24 P P 18 19 08.6 +1.1
baz=290
YUK3 Moose Creek 72.70 30 P P 18 19 08.7 +0.9
baz=288
EPYK Eagle Plains 72.73 24 P P 18 19 05.9 -1.8
EPYK IAmb IAmb 18 19 11.3
comp=Z,25nm,1.0s
EPYK Eagle Plains 72.73 24 P P 18 19 08.6 +0.9
baz=290,SNR=9.1
J29N Klondike Camp 72.79 27 P P 18 19 07.2 -1.0
J29N IAmb IAmb 18 19 16.7
comp=Z,26nm,0.6s
J29N Klondike Camp 72.79 27 P P 18 19 08.7 +0.5
baz=290
MNK Minsk 72.95 323 *i* P P 18 19 10.9 +1.8
MNK comp=E,1.0nm,0.8s *i* P P 18 19 10.9 +1.8
MNK comp=N,12nm,0.8s *i* P P 18 19 10.9 +1.8
MNK comp=Z,6.0nm,0.8s,baz=72 *i* PcP **PcP** **18 19 27.7 +1.6**
MNK *i* PP **PP** **18 21 52.9 +1.7**
MNK *i* PPP PPP 18 23 37.4
MNK *i* S **S** **18 28 38.1 +2.5**
MNK *i* SS **SS** **18 33 19.2 +3.8**
MNK *i* LQ LQ 18 45 58.4
MNK *i* LR LR 18 51 52.4
MNK *i* LRM MLR 18 53 40.7
MNK comp=E,516nm,18.2s *i* LRM MLR 18 53 40.7
MNK comp=N,693nm,18.2s *i* LRM MLR 18 53 40.7
MNK comp=Z,436nm,18.2s
MNK Minsk 72.95 323 *i* P P **18 19 10.9 +1.8**
MNK *i* 18 19 27.7
MNK *i* 18 21 52.9
MNK *i* PPP PPP 18 23 37.3
MNK *i* S **S** **18 28 38.0 +2.5**
MNK *i* SS **SS** **18 33 19.2 +3.8**
MNK pmax pmax
comp=Z,6.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=N,13nm,0.8s
MNK MLR MLR
comp=N,693nm,18.0s
MNK MLR MLR
comp=E,516nm,18.0s
MNK MLR MLR
comp=Z,436nm,18.0s
INK Inuvik 73.17 22 P P 18 19 09.0 -1.2
INK Inuvik 73.17 22 P P 18 19 10.2 0.0
baz=292,SNR=18
INK Inuvik 73.17 22 P P 18 19 09.0 -1.2
INK pmax pmax
comp=Z,17nm,1.0s
INK Inuvik 73.17 22 P P 18 19 09.9 -0.3
comp=Z,12nm,0.9s,baz=286,slow=8.5,SNR=19
comp=Z,12nm,0.9s
I30M Mount Dempster 73.27 26 IAmb IAmb 18 19 22.8
comp=Z,40nm,1.4s
I30M Mount Dempster 73.27 26 P P 18 19 12.0 +1.0
baz=291
L29M L29M 73.29 28 P P 18 19 09.8 -1.3
L29M IAmb IAmb 18 19 20.4
comp=Z,29nm,1.1s
L29M L29M 73.29 28 P P 18 19 12.2 +1.1
baz=290
K29M Barlow Dome 73.29 27 P P 18 19 12.5 +1.4
baz=290
AKASG Malin Array Be 73.31 318 P P 18 19 10.6 -0.8
comp=Z,2.4nm,0.8s,baz=58,slow=5.9,SNR=6.4
comp=Z,2.4nm,0.8s
AKBB Malin Array Si 73.31 318 *ce*P P 18 19 11.3 -0.1
AKBB pmax pmax
comp=Z,6.0nm,1.0s
KIEV Kiev 73.33 318 P P 18 19 09.5 -1.9
KIEV Kiev 73.33 318 P P 18 19 09.5 -1.9
KIEV pmax pmax
comp=Z,13nm,1.3s
IDID Didziasalis 73.33 324 *e*P P 18 19 11.2 -0.2
M29M Somme Creek 73.37 29 IAmb IAmb 18 19 20.5
comp=Z,19nm,0.8s
M29M Somme Creek 73.37 29 P P 18 19 13.5 +1.8
baz=290
F31M Tsiigehtchic 73.43 23 P P 18 19 13.0 +1.3
baz=293
G31M Satah River 73.44 24 P P 18 19 12.9 +1.2
baz=292
J30M Hart River 73.52 26 P P 18 19 11.4 -1.1
J30M Hart River 73.52 26 P P 18 19 13.4 +0.9
baz=291
BR131 Keskin Array S 73.66 307 *i* P P 18 19 13.0 -0.9
BRTR Keskin Array B 73.66 307 *ci* P P 18 19 14.1 +0.2
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 73.66 307 P P 18 19 13.7 -0.2
comp=Z,6.7nm,0.9s,baz=142,slow=6.2,SNR=14
comp=Z,6.7nm,0.9s
YUK6 Outpost Mounta 73.93 30 P P 18 19 16.2 +1.1
baz=290
M30M Minto, Yukon 74.05 28 P P 18 19 14.3 -1.3
M30M IAmb IAmb 18 19 25.4
comp=Z,48nm,1.4s
M30M Minto, Yukon 74.05 28 P P 18 19 17.2 +1.7
baz=291,SNR=8.3
A36M Sachs Harbour 74.11 17 P P 18 19 14.0 -1.7
ANTO Ankara 74.24 307 P P 18 19 15.4 -1.7
ANTO IAmb IAmb 18 19 19.3
comp=Z,17nm,0.8s
ANTO Ankara 74.24 307 P P 18 19 15.5 -1.7
ANTO pmax pmax
comp=Z,17nm,0.9s
N30M Aishikik Lake 74.33 29 P P 18 19 19.3 +2.1
baz=291
HYT Haines Junctio 74.37 30 P P 18 19 19.3 +1.8
baz=291
MMAI Mount Meron Ar 74.41 299 P P 18 19 18.1 -0.1
comp=Z,1.9nm,0.7s,baz=48,slow=5.0,SNR=6.9
comp=Z,1.9nm,0.7s
P29M Windy Craggy 74.69 31 P P 18 19 20.7 +1.4
baz=291
PABE Paberze 74.76 324 P P 18 19 19.9 +0.2
PABE IAmb IAmb 18 19 37.3
comp=Z,55nm,1.2s
PABE Paberze 74.76 324 *e*P P 18 19 19.8 +0.1
P30M Million Dollar 74.88 31 P P 18 19 22.5 +2.1
baz=292
N31M Braeburn, Yuko 74.90 29 P P 18 19 22.6 +2.1
baz=292
O30N Mendenhall 75.03 30 P P 18 19 19.7 -1.6
O30N Mendenhall 75.03 30 P P 18 19 23.4 +2.1
baz=292
M31M Drury Creek, Y 75.23 28 P P 18 19 23.9 +1.5
baz=293,SNR=6.4
CSS Mathiatis 75.41 302 P P 18 19 21.6 -2.3
CSS IAmb IAmb 18 19 26.2
comp=Z,16nm,0.7s
PLBC Pleasant Camp 75.41 31 P P 18 19 25.0 +1.6
baz=292
WHY Whitehorse 75.62 30 P P 18 19 23.5 -1.3
WHY IAmb IAmb 18 19 28.4
comp=Z,26nm,1.3s
WHY Whitehorse 75.62 30 P P 18 19 26.3 +1.5
baz=293,SNR=5.1
FARO Faro, Yukon 75.66 28 P P 18 19 24.0 -0.9
FARO Faro, Yukon 75.66 28 P P 18 19 26.4 +1.5
baz=294,SNR=7.7
SUW Suwalki 75.72 323 *e*P P 18 19 25.4 +0.1
SUW Suwalki 75.72 323 *e*P P 18 19 25.1 -0.2
C36M Paulatuk 75.77 20 P P 18 19 23.5 -1.8
C36M IAmb IAmb 18 19 31.6
comp=Z,20nm,0.8s
C36M Paulatuk 75.77 20 P P 18 19 26.3 +1.1
baz=301
S31K Pelican 76.05 32 P P 18 19 28.8 +1.7
baz=293
ISP Isparta 76.58 306 *ce*P P 18 19 30.3 -0.4
ISP pmax pmax
comp=Z,9.0nm,0.7s
P32M Atlin 76.59 30 P P 18 19 29.6 -0.6
P32M IAmb IAmb 18 19 37.0
comp=Z,59nm,1.8s
P32M Atlin 76.59 30 P P 18 19 31.6 +1.4
baz=294
P33M Teslin, Yukon 76.74 30 P P 18 19 32.7 +1.5
baz=295
R32K Eaglecrest 76.76 32 P P 18 19 32.6 +1.5
baz=294
SIT Sitka 76.86 33 P P 18 19 33.3 +1.7
baz=294
S32K Killisnoo 77.06 33 P P 18 19 34.1 +1.3
baz=294
MLR Muntele Rosu 77.11 314 P P 18 19 31.8 -1.8
MLR IAmb IAmb 18 19 57.7
comp=Z,37nm,1.7s
MLR Muntele Rosu 77.11 314 P P 18 19 31.8 -1.8
MLR pmax pmax
comp=Z,37nm,1.7s
KWP Kalwaria Pacla 77.62 319 *e*P P 18 19 34.7 -1.4
HFS Hagfors 77.94 331 P P 18 19 36.7 -1.0
comp=Z,4.4nm,0.9s,baz=79,slow=7.7,SNR=5.1
comp=Z,4.4nm,0.9s
R33M Jennings River 77.94 30 P P 18 19 38.7 +0.8
baz=297
TGTN Hyland Airport 78.13 27 P P 18 19 39.9 +1.1
baz=299
S34M Telegraph Cree 78.54 31 P P 18 19 42.2 +1.2
baz=297
WTLY Watson Lake, Y 78.58 29 P P 18 19 42.2 +0.9
baz=298
NB2 NORSAR Subarra 78.59 332 P P 18 19 42.2 +0.9
comp=Z,6.6nm,0.9s,baz=60,slow=5.9
NOA NORSAR Array B 78.59 332 P P 18 19 40.2 -1.2
comp=Z,2.1nm,0.8s,baz=60,slow=5.6,SNR=7.9
comp=Z,2.1nm,0.8s
RES Resolute Bay 78.73 9 P P 18 19 40.5 -1.3
RES Resolute Bay 78.73 9 P P 18 19 40.5 -1.3
RES pmax pmax
comp=Z,32nm,2.0s
DLBC Dease Lake 78.81 31 P P 18 19 44.2 +1.5
baz=298
DLBC Dease Lake 78.81 31 P P 18 19 42.9 +0.2
comp=Z,11nm,0.9s,baz=305,slow=7.9,SNR=9.3
comp=Z,11nm,0.9s
OJC Ojcow 79.11 320 *e*P P 18 19 43.6 -0.8
NIE Niedzica 79.14 319 *e*P P 18 19 39.5 -5.1
T35M Bob Quinn 79.39 32 P P 18 19 47.8 +2.0
baz=296
LANS Liptovska Anna 79.75 319 *e*P P 18 19 48.7 +0.8
LANS Liptovska Anna 79.75 319 *e*P P 18 19 48.7 +0.8
MORC Moravsky Berou 80.61 320 *e*P P 18 19 54.0 +1.4
JAVC Velka Javorina 80.94 320 *e*P P 18 19 56.3 +1.9
DPC Dobruska-Polom 81.06 321 *e*P P 18 20 00.8 +5.8
DPC Dobruska-Polom 81.06 321 *e*P P 18 20 00.8 +5.8
VRAC Vranov 81.38 320 *e*P P 18 19 57.9 +1.3
KRUC Moravsky 81.60 320 *e*P P 18 19 58.3 +0.5
CONA Conrad Observa 82.44 319 *ep*P pP 18 20 04.3 -1.8
comp=Z,7.8nm,1.2s
CLL Collm 82.47 323 *e*P P 18 20 04.0 +1.7
CLL *e* 18 20 09.0
CLL Collm 82.47 323 *e*P P 18 20 04.0 +1.7
CLL *ex* x 18 20 09.0
CLL *ex* x 18 20 14.0
ZVC Zvikov 82.71 321 *e*P P 18 20 06.7 +3.1
ZVC *ex* x 18 20 15.9
YKA Yellowknife Ar 82.91 23 P P 18 20 03.8 -0.6
comp=Z,4.0nm,0.7s,baz=314,slow=4.9,SNR=29
comp=Z,4.0nm,0.7s
CKRC Cesky Krumlov 82.93 321 *e*P P 18 20 08.2 +3.4
CKRC Cesky Krumlov 82.93 321 *e*P P 18 20 08.2 +3.4
KHC Kasperske Hory 83.21 321 *e*P P 18 20 08.7 +2.4
KHC *ex* x 18 20 23.2
KHC Kasperske Hory 83.21 321 *e*P P 18 20 08.7 +2.4
GERES GERESS Array B 83.27 321 P P 18 20 05.7 -1.0
comp=Z,2.7nm,0.9s,baz=64,slow=6.1,SNR=8.8
comp=Z,2.7nm,0.9s
MOA Molln 83.42 320 *ep*P P 18 20 08.5 +1.1
comp=Z,6.0nm,0.9s
SOKA Soboth 83.52 318 *ep*P P 18 20 08.1 +0.1
comp=Z,5.6nm,1.2s
KBA Koelnbreinsper 84.34 319 PcP P 18 20 13.6 +1.3
comp=Z,4.2nm,0.9s
LESA Schwarzleotal 84.57 320 *e*PcP P 18 20 14.9 +1.6
comp=Z,5.5nm,1.1s
ABTA Abfaltersbach 85.00 319 *e*PcP P 18 20 15.6 +0.1
comp=Z,7.4nm,1.0s
WATA Walderalm 85.26 320 *e*PcP P 18 20 18.2 +1.4
comp=Z,2.5nm,0.8s
WTTA Wattenberg 85.26 320 *e*PcP P 18 20 17.8 +0.9
comp=Z,10nm,1.3s
SQTA Sankt Quirin 85.53 320 *e*PcP P 18 20 18.7 +0.5
comp=Z,5.9nm,0.9s
LON Longmire 89.20 38 P P 18 20 34.3 -1.5
LON IAmb IAmb 18 20 45.1
comp=Z,16nm,1.0s
LON Longmire 89.20 38 P P 18 20 34.3 -1.5
LON pmax pmax
comp=Z,16nm,1.0s
B08A Colville Reser 89.61 36 P P 18 20 36.5 -1.2
B08A IAmb IAmb 18 20 45.6
comp=Z,18nm,1.1s
H04A Detroit Lake 90.17 40 P P 18 20 39.7 -0.7
E07A Sunnyside 90.40 37 P P 18 20 39.6 -1.8
HAWA Hanford 90.68 37 P P 18 20 41.5 -1.2
G06A Carlson Farm, 90.74 39 P P 18 20 43.0 -0.1

NEW	**Newport**	**90.84**	**35**	P	**P**	**18 20 45.6**	**+2.1**
	baz=309							
YBH	**Yreka Blue Hor**	**91.52**	**42**	P	**P**	**18 20 43.7**	**-3.1**
YBH				IAmb	IAmb	18 20 59.8		
	comp=Z,19nm,1.4s							
YBH	**Yreka Blue Hor**	**91.52**	**42**	P	**P**	**18 20 43.7**	**-3.1**
YBH				pmax	pmax			
	comp=Z,19nm,1.4s							
I07A	**Izee**	**92.08**	**39**	P	**P**	**18 20 47.0**	**-2.4**
FCC	**Fort Churchill**	**92.33**	**18**	P	**P**	**18 20 49.1**	**-0.9**
FCC	**Fort Churchill**	**92.33**	**18**	P	**P**	**18 20 49.1**	**-0.9**
FCC				pmax	pmax			
	comp=Z,30nm,1.5s							
FFC	**Flin Flon**	**93.06**	**24**	P	**P**	**18 20 51.7**	**-1.8**
FFC				IAmb	IAmb	18 21 00.9		
	comp=Z,12nm,1.0s							
FFC	**Flin Flon**	**93.06**	**24**	P	**P**	**18 20 51.7**	**-1.8**
FFC				pmax	pmax			
	comp=Z,13nm,1.0s							
PLID	**Pearl Lake**	**93.43**	**37**	P	**P**	**18 20 53.4**	**-2.4**
MPK	**Martis Peak**	**94.60**	**43**	P	**P**	**18 20 58.1**	**-3.2**
MPK				IAmb	IAmb	18 21 08.1		
	comp=Z,22nm,1.3s							
EGMT	**Eagleton**	**94.70**	**32**	P	**P**	**18 21 02.6**	**+1.3**
	baz=314							
HLID	**Hailey**	**95.28**	**37**	P	**P**	**18 21 05.7**	**+1.5**
	baz=310							
BOZ	**Bozeman (W)**	**95.43**	**34**	P	**P**	**18 21 05.7**	**+0.9**
	baz=313							
LHV	**Little Huntoon**	**96.18**	**43**	P	**P**	**18 21 05.5**	**-2.5**
LHV				IAmb	IAmb	18 21 15.7		
	comp=Z,13nm,1.2s							
NVAR	**Mina Array Bea**	**96.19**	**43**	P	**P**	**18 21 09.1**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=301,slow=4.4,SNR=8.1							
	comp=Z,1.3nm,0.7s							
RLMT	**Red Lodge**	**96.97**	**34**	P	**P**	**18 21 13.1**	**+1.2**
	baz=314							
CWC	**Cottonwood Cre**	**97.54**	**45**	P	Pdif	18 21 15.0	+0.4
	baz=307							
PDAR	**Pinedale Array**	**98.45**	**36**	P	Pdif	18 21 19.2	+0.6
	comp=Z,0.2nm,0.6s,baz=45,slow=1.8,SNR=2.2							
	comp=Z,0.2nm,0.6s							
UREC	**San Jos de Ur**	**144.19**	**30**	*e*P	PKPpre	18 27 08.0		
DBBC	**Dabeiba**	**144.51**	**32**	*e*P	PKPpre	18 27 10.2		
SDV	**Santo Domingo**	**145.12**	**22**		**PKPbc**	**18 27 14.3**	**-3.6**
SDV	**Santo Domingo**	**145.12**	**22**	PKPbc	**PKPbc**	**18 27 17.1**	**-0.8**
	comp=Z,26nm,0.8s,baz=329,slow=4.0,SNR=9.8							
CBOC	**Ciudad Bolivar**	**145.61**	**32**	*e*P	**PKPdf**	**18 27 16.8**	**-2.6**
PAMC	**Pamplona, Colo**	**145.78**	**26**	*e*P	**PKPdf**	**18 27 18.9**	**-1.1**
BAUV	**El Baul**	**145.86**	**17**		**PKPdf**	**18 27 16.0**	**-3.5**
BARC	**Barichara**	**146.26**	**27**	*e*P	**PKPbc**	**18 27 21.8**	**+0.2**
GUY2C	**Guyana, Caldas**	**146.48**	**32**	*e*P	**PKPdf**	**18 27 21.1**	**-0.1**
YOTC	**Yotoco, Valle**	**147.05**	**35**	*e*P	**PKPbc**	**18 27 23.3**	**-0.4**
JAMC	**Jamundi, Valle**	**147.52**	**36**	*e*P	**PKPdf**	**18 27 23.3**	**+0.7**
ORTC	**Ortega, Tolima**	**147.67**	**33**	*e*P	**PKPbc**	**18 27 24.3**	**-1.1**
POPC	**Popayan, Colom**	**148.09**	**37**	*e*P	**PKPbc**	**18 27 26.5**	**-0.2**
BBAC	**Balboa, Cauca**	**148.20**	**38**	*e*P	**PKPdf**	**18 27 23.3**	**-0.5**
VILC	**Villavicencio,**	**148.24**	**30**	*e*P	**PKPbc**	**18 27 25.5**	**-1.5**
BETC	**Betania**	**148.62**	**35**	*e*P	**PKPbc**	**18 27 27.7**	**-0.2**
PAC1	**Pacto, Paraso**	**148.69**	**42**	*e*P	**PKPbc**	**18 27 27.7**	**-0.5**
GCUF	**Volcan Galeras**	**148.79**	**39**	*e*P	**PKPdf**	**18 27 25.5**	**+0.4**
OTAV	**Otavalo**	**148.92**	**42**		PKPpre	18 27 20.7		
OTAV	**Otavalo**	**148.92**	**42**	PKHKP	PKPpre	18 27 20.7		
OTAV	**Otavalo**	**148.92**	**42**	*e*P	**PKPab**	**18 27 32.1**	**-1.0**
TULM	**Tulcn-Chalpat**	**148.94**	**40**	PKPdf	**PKPdf**	**18 27 22.1**	**-3.2**
GARC	**Garzon, Huila**	**149.01**	**35**	*e*P	**PKPbc**	**18 27 27.7**	**-1.5**
PULU	**Pululahua**	**149.06**	**42**	PKPdf	**PKPdf**	**18 27 21.9**	**-3.5**
BONI	**La Bonita**	**149.31**	**40**	*e*P	**PKiKP**	**18 27 32.1**	**+0.9**
SLOR	**San Lorenzo -**	**149.65**	**43**	PKPdf	PKPpre	18 27 22.0		
CHSH	**Refugio Sur-Vo**	**150.00**	**45**	PKPdf	PKPpre	18 27 21.8		
PIAT	**Ana Tenorio**	**150.00**	**43**	*e*P	**PKiKP**	**18 27 34.0**	**+1.3**
MCRA	**Macar, Loja**	**151.38**	**50**	*e*P	**PKPdf**	**18 27 27.7**	**-0.9**
BOSC	**San Juan Bosco**	**151.49**	**46**	PKPdf	PKPpre	18 27 23.0		

ASIES **06** *18:07:52.6,24.04N×121.64E,h11km,ML4.3,Mw5.0, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}-0.94; $M_{\theta\theta}$0.50; $M_{\phi\phi}$0.44; $M_{r\theta}$0.00; $M_{r\phi}$0.41; $M_{\theta\phi}$-3.33; Fault plane solution: M_o3.45063×10^{23} NP1:φ$_s$2.24000°, δ83.97000°,λ-97.13000°. NP2:φ$_s$232.20000°,δ9.32000°, λ-40.42000°. Principal axes: T Plg38.5740°, Azm98.6830°; N Plg7.0820°, Azm2.9960°; P Plg50.5360°, Azm264.3170°;*

TAP 06 18:07:52.6,24.04N×121.64E,h11km,ML4.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**315**	P		Pg	18 07 55.2	+0.3
	baz=319							
TWD				S		Sg	18 07 56.8	+0.2
	baz=319							
ETL	**Fush Village**	**0.12**	**354**	P		Pg	18 07 56.1	+0.4
	baz=349							
ETL				S		Sg	18 07 57.6	-0.2
	baz=349							
NACB	**Ninganchiao**	**0.14**	**343**	*e*P		Pg	18 07 56.5	+0.6
	baz=347							
NACB				*e*S		Sg	18 07 58.7	+0.5
	baz=347							
ETM	**Tongmen**	**0.15**	**240**	P		Pg	18 07 56.5	+0.3
	baz=245							
ETM				*i* S		Sg	18 07 59.0	+0.4
	baz=245							
LXIB	**Xiulin Townshi**	**0.21**	**264**	*e*P		Pb	18 07 58.0	-0.5
	baz=261							
LXIB				*e*S		Sg	18 08 01.6	+1.3
	baz=261							
ESL	**Shilin**	**0.29**	**219**	*e*P		Pb	18 08 00.4	+0.5
	baz=230							
WHF	**Hehuan Shan**	**0.35**	**287**	*e*P		Pg	18 08 00.3	+0.4
	baz=288							

TAP 06 18:08:43.5,24.03N×121.63E,h7km,ML4.0,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**332**	⇓*i*P		Pg	18 08 45.5	+0.3
	baz=340							
TWD				*i* S		Sg	18 08 46.9	+0.4
	baz=340							
ETL	**Fush Village**	**0.13**	**359**	P		Pg	18 08 46.4	+0.1
	baz=359							
ETL				S		Sg	18 08 48.6	+0.4
	baz=359							
ETM	**Tongmen**	**0.14**	**243**	*i* P		Pg	18 08 46.8	+0.4
	baz=242							
ETM				*e*S		Sg	18 08 49.4	+1.0
	baz=242							
NACB	**Ninganchiao**	**0.15**	**349**	*i* P		Pg	18 08 46.6	0.0
	baz=358							
NACB				*i* S		Sg	18 08 49.1	+0.4
	baz=358							
LXIB	**Xiulin Townshi**	**0.20**	**268**	P		Pg	18 08 48.0	+0.5
	baz=262							
LXIB				*i* S		Sg	18 08 51.7	+1.4
	baz=262							
SHUL	**Shoufeng**	**0.25**	**194**	P		Pg	18 08 49.6	+1.2
	baz=192							
SHUL				*e*S		Sg	18 08 54.9	+3.2
	baz=192							
ESL	**Shilin**	**0.28**	**220**	P		Pg	18 08 49.3	+0.3
	baz=218							
EHP	**Heping Village**	**0.30**	**21**	*e*P		Pg	18 08 49.1	-0.3
	baz=23							
EHP				*e*S		Sg	18 08 53.5	+0.1
	baz=23							
EAHA	**Aohua**	**0.32**	**19**	*e*P		Pg	18 08 49.9	+0.1
	baz=29							
EAHA				*e*S		Sg	18 08 54.1	+0.2
	baz=29							
TEGC	**Jichi Village**	**0.33**	**194**	*e*P		Pb	18 08 51.5	-0.1
	baz=192							
TEGC				*e*S		Sb	18 08 58.1	+1.1
	baz=192							
WHF	**Hehuan Shan**	**0.35**	**289**	P		Pg	18 08 51.0	+0.5
	baz=290							
WHF				S		Sg	18 08 55.5	+0.4
	baz=290							
WARBT	**Fenglin Townsh**	**0.38**	**215**	*e*P		Pb	18 08 51.7	-0.8
	baz=222							
WARBT				*e*S		Sb	18 08 57.5	-1.1
	baz=222							
ENA	**Nanau**	**0.41**	**15**	P		Pg	18 08 51.4	-0.1
	baz=17							
ENA				*e*S		Sg	18 08 56.9	0.0
	baz=17							
FUSS	**Fushou**	**0.41**	**302**	P		Pg	18 08 52.1	+0.5
	baz=302							
FUSS				*e*S		Sg	18 08 57.7	+0.6
	baz=302							
CHGB	**Renai**	**0.41**	**274**	P		Pg	18 08 52.2	+0.6
	baz=275							
CHGB				S		Sb	18 08 58.5	-1.3
	baz=275							
OWD	**Renai**	**0.42**	**260**	*e*P		Pg	18 08 52.1	+0.4
	baz=270							
OWD				*e*S		Sg	18 08 58.4	+1.2
	baz=270							
EWUT	**Wuta**	**0.44**	**19**	P		Pg	18 08 51.9	-0.1
	baz=20							
EWUT				S		Sg	18 08 57.6	-0.1
	baz=20							
NNSB	**Datong**	**0.46**	**331**	P		Pg	18 08 52.7	+0.3
	baz=331							
NNSB				*e*S		Sg	18 08 58.8	+0.5
	baz=331							
NNSH	**Datong**	**0.46**	**331**	*e*P		Pg	18 08 52.7	+0.3
	baz=330							
NNSH				S		Sg	18 08 59.0	+0.6
	baz=330							
WUSB	**Renai**	**0.47**	**266**	P		Pb	18 08 53.4	-0.7
	baz=266							
WUSB				S		Sb	18 09 00.1	-1.2
	baz=266							
TWT	**Tachien**	**0.47**	**299**	*e*P		Pb	18 08 53.8	-0.4
	baz=297							
TWT				S		Sb	18 09 00.6	-0.7
	baz=297							
NNS	**Nan Shan**	**0.47**	**331**	P		Pg	18 08 53.0	+0.3
	baz=332							
NNS				S		Sg	18 08 59.8	+0.9
	baz=332							
TDCB	**Techi**	**0.48**	**298**	*e*P		Pb	18 08 53.9	-0.4
	baz=298							
TDCB				S		Sb	18 09 00.6	-1.1
	baz=298							
LATG	**Datong**	**0.51**	**350**	P		Pg	18 08 54.0	+0.5
	baz=351							
LATG				*e*S		Sg	18 09 00.6	+0.4
	baz=351							
VWDT	**VWDT**	**0.52**	**238**	*e*P		Pb	18 08 54.5	-0.4
	baz=230							
ESAO	**Su ao**	**0.58**	**20**	*e*P		Pg	18 08 54.6	-0.1
	baz=20							
NDT	**Datong Townshi**	**0.58**	**350**	P		Pg	18 08 55.1	+0.4
	baz=350							
NDT				S		Sg	18 09 02.9	+0.6
	baz=350							
EHY	**Hungye**	**0.59**	**208**	*e*P		Pg	18 08 55.5	+0.6
	baz=207							
NDS	**Dongshan**	**0.61**	**8**	P		Pg	18 08 55.3	+0.1
	baz=9.0							
NDS				S		Sg	18 09 04.1	+0.9
	baz=9.0							
ENTT	**Nioudou**	**0.61**	**355**	P		Pg	18 08 55.7	+0.4
	baz=356							
ENTT				S		Sg	18 09 04.1	+0.8
	baz=356							
TWC	**Suao**	**0.61**	**19**	*e*P		Pb	18 08 56.0	-0.5
	baz=13							
WPL	**Puli Township**	**0.61**	**269**	*e*P		Pb	18 08 56.0	-0.5
	baz=269							
WPL				*e*S		Sb	18 09 04.7	-0.6
	baz=269							
DPDB	**Guoxing**	**0.64**	**271**	*e*P		Pb	18 08 56.7	-0.3
	baz=270							
WCS	**Beigang Elemen**	**0.65**	**273**	*e*P		Pb	18 08 57.2	0.0
	baz=272							
SSLB	**Suanglung**	**0.66**	**249**	*e*P		Pg	18 08 56.8	+0.5
	baz=249							
WHP	**Taichung City**	**0.67**	**292**	P		Pb	18 08 57.5	0.0
	baz=292							
WHP				S		Sb	18 09 07.0	0.0
	baz=292							
YHNB	**Yeheng**	**0.68**	**340**	*e*P		Pb	18 08 57.3	-0.3
	baz=341							
YHNB				*e*S		Sg	18 09 06.3	+0.9
	baz=341							
SMLT	**Sun Moon Lake**	**0.68**	**258**	*e*P		Pb	18 08 57.5	-0.2
	baz=258							
SMLT				*e*S		Sb	18 09 07.2	-0.1
	baz=258							
NSK	**Sanguang**	**0.69**	**339**	*e*P		Pb	18 08 57.4	-0.4
	baz=331							
NSK				S		Sg	18 09 06.5	+0.7
	baz=331							
TWE	**Neicheng**	**0.69**	**3**	*e*P		Pg	18 08 57.1	+0.4
	baz=5.0							
TWE				*e*S		Sg	18 09 06.1	+0.3
	baz=5.0							
TYC	**Yuchr**	**0.71**	**260**	*e*P		Pb	18 08 58.2	-0.1
	baz=260							
FUSB	**Fushanzhiwuyua**	**0.73**	**357**	*e*P		Pb	18 08 58.2	-0.4
	baz=358							
FUSB				S		Sg	18 09 07.4	+0.3
	baz=358							
NWLT	**Wulai**	**0.75**	**351**	*e*P		Pg	18 08 58.3	+0.3
	baz=352							
NWLT				*e*S		Sg	18 09 07.7	-0.1
	baz=352							
NFF	**Wufeng Townshi**	**0.76**	**322**	*e*P		Pb	18 08 58.8	-0.3
	baz=323							
LIOB	**Emei**	**0.83**	**318**	*e*P		Pb	18 09 00.6	+0.4
	baz=318							

TAP 06 18:09:23.6,24.03N×121.63E,h9km,ML4.5,1C-3D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**328**	*i* P		Pg	18 09 25.9	+0.4
	baz=336							
TWD				*i* S		Sg	18 09 27.2	+0.4
	baz=336							
ETL	**Fush Village**	**0.13**	**357**	*i* P		Pg	18 09 26.8	+0.3
	baz=357							
ETL				*i* S		Sg	18 09 28.8	+0.3
	baz=357							
ETM	**Tongmen**	**0.14**	**243**	⇓*i*P		Pg	18 09 27.1	+0.4
	baz=243							
ETM				*i* S		Sg	18 09 29.2	+0.4
	baz=243							
NACB	**Ninganchiao**	**0.15**	**347**	P		Pg	18 09 26.9	+0.2
	baz=356							
NACB				*i* S		Sg	18 09 29.2	+0.3
	baz=356							
LXIB	**Xiulin Townshi**	**0.20**	**267**	*i* P		Pg	18 09 28.3	+0.6
	baz=262							
LXIB				*i* S		Sg	18 09 31.1	+0.5
	baz=262							
SHUL	**Shoufeng**	**0.25**	**194**	P		Pg	18 09 29.9	+1.3
	baz=194							
SHUL				*e*S		Sg	18 09 36.0	+4.0
	baz=194							
ESL	**Shilin**	**0.28**	**220**	*i* P		Pg	18 09 29.4	+0.2
	baz=228							
ESL				*i* S		Sg	18 09 33.4	+0.4
	baz=228							
EHP	**Heping Village**	**0.30**	**20**	P		Pg	18 09 29.9	+0.4
	baz=22							
EHP				S		Sg	18 09 34.0	+0.5
	baz=22							
EAHA	**Aohua**	**0.31**	**18**	P		Pg	18 09 30.0	+0.2
	baz=28							
EAHA				*i* S		Sg	18 09 34.6	+0.5
	baz=28							
TEGC	**Jichi Village**	**0.33**	**194**	P		Pb	18 09 31.5	-0.2
	baz=184							
TEGC				*e*S		Sb	18 09 38.4	+1.4
	baz=184							
WHF	**Hehuan Shan**	**0.35**	**289**	P		Pg	18 09 31.2	+0.5
	baz=289							
WHF				*i* S		Sg	18 09 36.2	+0.8
	baz=289							
WARBT	**Fenglin Townsh**	**0.38**	**216**	P		Pg	18 09 31.2	+0.1
	baz=223							
WARBT				*e*S		Sg	18 09 37.4	+1.2
	baz=223							
EGFH	**Guangfu**	**0.41**	**207**	*e*P		Pg	18 09 32.0	+0.5
	baz=216							
ENA	**Nanau**	**0.41**	**14**	P		Pg	18 09 31.8	+0.2
	baz=16							
ENA				S		Sg	18 09 37.0	0.0
	baz=16							
FUSS	**Fushou**	**0.41**	**302**	P		Pb	18 09 32.5	-0.7
	baz=301							
FUSS				S		Sg	18 09 38.5	+1.3
	baz=301							
CHGB	**Renai**	**0.42**	**274**	*i* P		Pb	18 09 32.7	-0.7
	baz=265							
CHGB				*i* S		Sg	18 09 38.3	+1.0
	baz=265							
OWD	**Renai**	**0.42**	**260**	P		Pg	18 09 32.5	+0.7
	baz=270							
OWD				*e*S		Sg	18 09 38.0	+0.5
	baz=270							
EWUT	**Wuta**	**0.43**	**18**	P		Pg	18 09 32.3	+0.2
	baz=19							
EWUT				S		Sg	18 09 37.9	+0.1
	baz=19							
NNSB	**Datong**	**0.46**	**330**	P		Pg	18 09 33.1	+0.6
	baz=330							
NNSB				S		Sg	18 09 38.8	+0.3
	baz=330							
NNSH	**Datong**	**0.46**	**330**	P		Pg	18 09 32.9	+0.4
	baz=329							
NNSH				S		Sg	18 09 39.0	+0.4
	baz=329							
WUSB	**Renai**	**0.47**	**265**	P		Pb	18 09 33.6	-0.5
	baz=266							
WUSB				S		Sg	18 09 39.5	+0.5
	baz=266							
NNS	**Nan Shan**	**0.47**	**330**	P		Pg	18 09 33.4	+0.6
	baz=331							
NNS				*i* S		Sg	18 09 39.7	+0.7
	baz=331							
TWT	**Tachien**	**0.47**	**298**	P		Pb	18 09 33.9	-0.3
	baz=296							
TWT				*i* S		Sb	18 09 40.6	-0.7
	baz=296							
TDCB	**Techi**	**0.48**	**297**	*e*P		Pb	18 09 34.0	-0.4
	baz=297							
TDCB				S		Sb	18 09 40.6	-1.1
	baz=297							
LATG	**Datong**	**0.51**	**349**	P		Pb	18 09 34.2	-0.6
	baz=349							
LATG				S		Sg	18 09 40.8	+0.5
	baz=349							
VWDT	**VWDT**	**0.53**	**239**	P		Pb	18 09 34.6	-0.4
	baz=231							
VWDT				S		Sb	18 09 42.0	-0.7
	baz=231							
HGSD	**Ruisui**	**0.57**	**199**	*e*P		Pb	18 09 36.4	+0.7
	baz=218							
ESAO	**Su ao**	**0.58**	**20**	*e*P		Pg	18 09 35.0	+0.2
	baz=26							
ESAO				*e*S		Sg	18 09 41.9	-0.4
	baz=26							
NDT	**Datong Townshi**	**0.58**	**349**	*e*P		Pb	18 09 35.6	-0.4
	baz=349							
NDT				S		Sg	18 09 43.3	+0.9
	baz=349							
EHY	**Hungye**	**0.59**	**208**	P		Pg	18 09 35.3	+0.2
	baz=208							
NDS	**Dongshan**	**0.61**	**7**	P		Pg	18 09 35.8	+0.5
	baz=8.0							
NDS				S		Sg	18 09 43.8	+0.5
	baz=8.0							
ENTT	**Nioudou**	**0.61**	**355**	P		Pb	18 09 36.1	-0.4
	baz=355							
ENTT				*i* S		Sg	18 09 44.2	+0.8
	baz=355							
TWC	**Suao**	**0.61**	**19**	*e*P		Pg	18 09 35.8	+0.4
	baz=10.0							
TWC				S		Sg	18 09 43.5	+0.1
	baz=10.0							
WPL	**Puli Township**	**0.62**	**268**	P		Pb	18 09 36.5	-0.1
	baz=269							
WPL				S		Sg	18 09 44.1	+0.5
	baz=269							
DPDB	**Guoxing**	**0.64**	**270**	*e*P		Pb	18 09 37.4	+0.3
	baz=271							
DPDB				S		Sb	18 09 45.5	-0.6
	baz=271							
WCS	**Beigang Elemen**	**0.66**	**272**	*e*P		Pb	18 09 37.6	+0.4
	baz=264							
WCS				S		Sb	18 09 45.8	-0.7
	baz=264							
SSLB	**Suanglung**	**0.66**	**249**	⇓*i*P		Pb	18 09 37.0	-0.4
	baz=261							
SSLB				*i* S		Sg	18 09 44.9	-0.2
	baz=261							
WHP	**Taichung City**	**0.67**	**292**	*e*P		Pb	18 09 37.7	+0.1
	baz=291							
WHP				S		Sb	18 09 46.8	-0.3
	baz=291							
YHNB	**Yeheng**	**0.68**	**340**	P		Pb	18 09 37.4	-0.3
	baz=340							
YHNB				S		Sg	18 09 46.4	+0.8
	baz=340							
SMLT	**Sun Moon Lake**	**0.68**	**258**	⇑P		Pb	18 09 37.9	+0.1
	baz=258							
SMLT				*i* S		Sb	18 09 46.8	-0.6
	baz=258							
NSK	**Sanguang**	**0.69**	**339**	P		Pb	18 09 37.7	-0.2
	baz=333							
NSK				*i* S		Sg	18 09 46.4	+0.5
	baz=333							
TWE	**Neicheng**	**0.69**	**3**	P		Pb	18 09 37.5	-0.3
	baz=4.0							
TWE				S		Sg	18 09 46.3	+0.4
	baz=4.0							
YULB	**Yu-li**	**0.70**	**206**	*e*P		Pb	18 09 37.6	-0.4
	baz=207							
TYC	**Yuchr**	**0.72**	**260**	*e*P		Pb	18 09 38.4	+0.1
	baz=260							
TYC				S		Sg	18 09 47.2	+0.4
	baz=260							
FUSB	**Fushanzhiwuyua**	**0.73**	**357**	*e*P		Pb	18 09 38.3	-0.2
	baz=357							
FUSB				S		Sb	18 09 48.0	-0.6
	baz=357							
ECBN	**Changbin**	**0.73**	**193**	*e*P		Pb	18 09 38.7	+0.3
	baz=194							
EYUL	**Yuli**	**0.74**	**203**	*e*P		Pg	18 09 38.0	+0.2
	baz=219							
ILA	**Ilan**	**0.74**	**8**	*e*P		Pb	18 09 38.6	-0.1
	baz=8.0							
TWF1	**Yuli**	**0.74**	**204**	*e*P		Pg	18 09 38.1	+0.2
	baz=218							
NWLT	**Wulai**	**0.75**	**351**	P		Pb	18 09 38.9	0.0
	baz=351							
NWLT				*i* S		Sg	18 09 48.1	+0.2
	baz=351							
NFF	**Wufeng Townshi**	**0.76**	**322**	⇓P		Pb	18 09 39.4	+0.3
	baz=322							
NFF				*e*S		Sb	18 09 49.6	0.0
	baz=322							
WHYT	**Xinyi Township**	**0.79**	**245**	*e*P		Pn	18 09 40.8	-0.2
	baz=253							
WHYT				*e*S		Sb	18 09 49.9	-0.3
	baz=253							
NSTT	**Nanjuang**	**0.83**	**316**	*e*P		Pb	18 09 40.8	+0.6
	baz=316							
NSTT				*e*S		Sb	18 09 51.3	-0.2
	baz=316							
LIOB	**Emei**	**0.83**	**318**	P		Pn	18 09 41.1	-0.5
	baz=317							
LIOB				S		Sb	18 09 52.3	+0.7
	baz=317							
NTC	**Toucheng**	**0.84**	**12**	*e*P		Pg	18 09 39.2	-0.6
TWQ1	**Liyutan**	**0.84**	**292**	*e*P		Pn	18 09 41.8	+0.1
	baz=304							
TWQ1				S		Sn	18 09 54.1	-0.1
	baz=304							
WJS	**Zhushan**	**0.85**	**256**	*e*P		Pn	18 09 41.9	+0.1
	baz=256							
WJS				*e*S		Sn	18 09 53.6	-0.8
	baz=256							
WWF	**Wufeng**	**0.85**	**271**	P		Pn	18 09 42.8	+1.0
	baz=271							
WWF				S		Sn	18 09 55.4	+1.0
	baz=271							
NJD	**Zhudong**	**0.86**	**325**	*e*P		Pn	18 09 42.1	+0.2
	baz=325							
NJD				*e*S		Sb	18 09 52.9	+0.5
	baz=325							
CHKH	**Chenggong**

WNT1	**Nantou City** baz=262	**0.88 262**	*e*P	Pn	18 09 42.1	-0.1
WNT1			*e*S	Sn	18 09 54.9	-0.1
WNT	**Mingjian** baz=260	**0.88 260**	*e*P	Pn	18 09 42.7	+0.6
WNT			*e*S	Sn	18 09 54.8	-0.3
TCU	**Taichung** baz=273	**0.88 278**	*e*P	Pn	18 09 42.7	+0.6
NSY	**Sanyi** baz=296	**0.88 296**	*e*P	Pn	18 09 42.7	+0.5
FULB	**Fuli** baz=216	**0.88 200**	*e*P	Pn	18 09 41.8	-0.4
ALS	**Alishan** baz=246	**0.92 236**	*e*P	Pb	18 09 42.3	+0.4
NMLH	**Miaoli** baz=303	**0.92 304**	*e*P	Pn	18 09 44.0	+1.2
HSN1	**Hsinchu** baz=322	**0.93 323**	*e*P	Pn	18 09 43.7	+0.8
NHDH	**Xindian Distri** baz=344	**0.93 354**	P	Pn	18 09 42.5	-0.4
NHDH			S	Sg	18 09 54.1	+0.3
TWA	**Mucha** baz=348	**0.95 357**	*e*P	Pn	18 09 42.9	-0.3
TWA			S	Sg	18 09 54.3	+0.1
TATO	**Taipei** baz=352	**0.95 352**	*e*P	Pn	18 09 42.8	-0.4
TATO			*e*S	Sb	18 09 54.7	-0.3
NJN	**Zhunan** baz=321	**0.95 313**	*e*P	Pn	18 09 43.6	+0.4
TIPB	**Shuangxi** baz=1.0	**0.95 11**	*e*P	Pb	18 09 42.6	+0.2
TIPB			*e*S	Sg	18 09 53.6	-0.8
CHKT	**Chengkung** baz=184	**0.96 195**	*e*P	Pb	18 09 42.2	-0.1
CHKT			*e*S	Sn	18 09 56.9	-0.1
WDJ	**Dajia District** baz=289	**0.96 289**	*e*P	Pn	18 09 44.6	+1.3
EHD	**Haiduan** baz=206	**0.96 204**	P	Pg	18 09 42.2	+0.1
SBCB	**Hsinchu** baz=321	**0.96 322**	*e*P	Pn	18 09 43.8	+0.5
WYL	**Yuanlin Townsh** baz=267	**0.96 266**	*e*P	Pn	18 09 44.4	+1.1
CHN5	**Tsauling** baz=234	**0.97 244**	*e*P	Pn	18 09 43.8	+0.2
CHN5			S	Sn	18 09 58.1	+0.6
HSN	**Hsinchu** baz=324	**0.98 322**	*e*P	Pn	18 09 44.5	+0.9
BACT	**New Taipei Cit** baz=350	**0.98 350**	*e*P	Pn	18 09 44.0	+0.5
BACT			S	Sn	18 09 56.7	-0.8
WCHH	**Zhanghua** baz=274	**0.98 273**	*e*P	Pn	18 09 44.4	+0.8
ECS	**Chishang** baz=218	**1.00 202**	*e*P	Pn	18 09 44.6	+0.7
NHY	**Taipei** baz=6.0	**1.01 357**	*e*P	Pn	18 09 43.9	-0.1
ELDTW	**Lidau** baz=225	**1.01 214**	*e*P	Pb	18 09 43.4	+0.1
ELDTW			S	Sn	18 09 57.7	-0.7
TAP	**Taipei** baz=345	**1.01 354**	*e*P	Pn	18 09 44.1	+0.1
TAP			*e*S	Sb	18 09 57.2	+0.5
NTY	**Taoyuan** baz=343	**1.01 343**	*e*P	Pn	18 09 44.3	+0.3
NTY			*e*S	Sn	18 09 58.4	0.0
NCUH	**Zhongli** baz=335	**1.02 337**	*e*P	Pn	18 09 44.3	+0.2
NCU	**National Centr** baz=336	**1.02 337**	*e*P	Pn	18 09 44.8	+0.7
TWB1	**Santiao Chiao** baz=12	**1.03 18**	*e*P	Pb	18 09 43.5	0.0
TWB1			*e*S	Sg	18 09 56.0	-0.7
WGK	**Gukeng** baz=253	**1.04 251**	*e*P	Pn	18 09 45.5	+1.1
NWF	**Wu-fen Shan** baz=8.0	**1.05 8**	*e*P	Pn	18 09 44.8	+0.2
NWF			S	Sg	18 09 57.4	+0.1
WFSB	**Wu-fen Shan** baz=8.0	**1.05 8**	*e*P	Pn	18 09 45.3	+0.8
WFSB			S	Sb	18 09 57.6	-0.1
WDLH	**Douliu** baz=253	**1.06 251**	*e*P	Pn	18 09 46.1	+1.5
WDLH			*e*S	Sn	18 09 59.9	+0.4
SXI1	**Grass Mountain** baz=358	**1.08 12**	P	Pn	18 09 45.6	+0.5
TWS1	**Kuangyinshan** baz=350	**1.08 350**	*e*P	Pn	18 09 45.8	+0.8
TWS1			S	Sn	18 10 00.5	+0.3
NHW	**Xinwu Township** baz=331	**1.11 332**	*e*P	Pn	18 09 46.3	+0.9
NHW			*e*S	Sn	18 10 03.0	+2.2
WCKO	**Fanlu** baz=240	**1.11 238**	*e*P	Pn	18 09 46.2	+0.9
YM01	**YM01** baz=347	**1.11 357**	P	Pn	18 09 46.0	+0.6
YM01			S	Sn	18 10 01.5	+0.5
TNOU	**National Taiwa** baz=5.0	**1.12 7**	*e*P	Pn	18 09 45.9	+0.3
NTST	**Danshui** baz=352	**1.14 352**	*e*P	Pn	18 09 46.8	+1.0
NTST			S	Sn	18 10 02.8	+1.2
WRL	**Guolierlin Hig** baz=252	**1.15 264**	*e*P	Pn	18 09 47.6	+1.7
WRL			*e*S	Sn	18 10 03.7	+1.8
ANP	**Anpu** baz=354	**1.16 355**	*e*P	Pn	18 09 46.6	+0.5
STYH	**Taoyuan** baz=225	**1.16 223**	*e*P	Pn	18 09 46.6	+0.6
CHN4	**Tsaushan** baz=237	**1.17 235**	*e*P	Pn	18 09 47.0	+0.9
CHN2	**Minshiung** baz=247	**1.17 245**	*e*P	Pn	18 09 48.3	+2.1
NWRT	**Kuosheng** baz=2.0	**1.17 1**	*e*P	Pn	18 09 47.3	+1.1
NWRT			*e*S	Sn	18 10 03.2	+0.9
TPUB	**Ta-pu** baz=220	**1.17 232**	P	Pn	18 09 46.7	+0.5
TPUB			*e*S	Sn	18 10 04.9	+2.6
RLNB	**Erlin** baz=265	**1.17 263**	*e*P	Pn	18 09 47.7	+1.5
RLNB			S	Sn	18 10 04.4	+2.1
STYT	**Tauyuan** baz=223	**1.18 223**	*e*P	Pn	18 09 47.0	+0.7
STYT			*e*S	Sn	18 10 04.1	+1.6
WTK	**Tuku** baz=255	**1.19 254**	*e*P	Pn	18 09 48.3	+1.9
WTK			*e*S	Sn	18 10 05.2	+2.5
LONT	**Longtian** baz=205	**1.21 202**	*e*P	Pb	18 09 46.5	-0.1
WTP	**Ta-pu** baz=232	**1.22 230**	*e*P	Pg	18 09 47.5	+0.6
TWY	**Chenhua** baz=345	**1.24 359**	*e*P	Pg	18 09 49.1	+1.7
TWK	**Hsinying** baz=236	**1.29 234**	*e*P	Pg	18 09 49.5	+1.1
TWK			*e*S	Sn	18 10 09.2	+3.8
WMLT	**Mailiao** baz=262	**1.31 260**	*e*P	Pg	18 09 49.4	+0.7
TWG	**Pinlang** baz=205	**1.31 203**	*e*P	Pg	18 09 48.7	0.0
TWGBT	**Beinan** baz=205	**1.31 203**	*e*P	Pg	18 09 48.7	0.0
CHN1	**Nanshi** baz=231	**1.31 230**	*e*P	Pg	18 09 49.9	+1.1
CHN1			*e*S	Sg	18 10 08.2	+2.2
SNST	**Tainan City** baz=235	**1.31 232**	*e*P	Pg	18 09 49.5	+0.6
SGST	**Jiashian** baz=227	**1.35 226**	P	Pg	18 09 49.4	-0.1
SGST			*e*S	Sg	18 10 09.9	+3.0
WSF	**Szhu** baz=255	**1.35 253**	*e*P	Pg	18 09 50.2	+0.8
WSF			*e*S	Sg	18 10 09.5	+2.6
SLGT	**Liugui** baz=224	**1.37 221**	*e*P	Pg	18 09 50.9	+1.0
WSL	**Shuilin Townsh** baz=251	**1.38 249**	*e*P	Pg	18 09 51.1	+1.0
ICHU	**Yijhu** baz=244	**1.41 242**	*e*P	Pg	18 09 50.9	+0.3
ICHU			*e*S	Sg	18 10 10.6	+1.8
CHN8	**Yiju** baz=245	**1.47 243**	*e*P	Pg	18 09 51.7	0.0
SSHA	**Shanhua** baz=236	**1.52 234**	*e*P	Pg	18 09 52.9	+0.2
SCST	**Cishan** baz=225	**1.54 223**	*e*P	Pb	18 09 52.5	+0.1
ECL	**Taimali** baz=192	**1.56 204**	*e*P	Pb	18 09 52.8	+0.2
SSD	**Sandimen** baz=208	**1.57 216**	*e*P	Pb	18 09 52.8	0.0
TSMG	**Majia** baz=207	**1.60 215**	*e*P	Pb	18 09 53.3	0.0
SGLT	**Jiouru** baz=210	**1.67 219**	*e*P	Pg	18 09 55.0	-0.5
MASBT	**Mashibuluo** baz=205	**1.68 213**	*e*P	Pb	18 09 54.1	-0.6
EAST	**Anshuo** baz=193	**1.79 204**	*e*P	Pb	18 09 57.0	+0.4
TAWH	**Dawu Township** baz=189	**1.82 202**	*e*P	Pb	18 09 56.5	-0.5
WDGT	**Dungji** baz=249	**1.96 247**	*e*P	Pb	18 09 59.0	-0.5

TAP 06 18:09:58.2,24°04N×121°63E,h9km,ML3.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=329	**0.05**	**320**	*i*	P		Pg	18 10 00.3	+0.3
TWD				*i*	S		Sg	18 10 01.6	+0.2
ETL	**Fush Village** baz=357	**0.12**	**356**		P		Pg	18 10 01.3	+0.3
ETL				*i*	S		Sg	18 10 03.1	+0.3
NACB	**Ninganchiao** baz=354	**0.14**	**346**		P		Pg	18 10 01.7	+0.4
NACB				*i*	S		Sg	18 10 03.5	+0.2
ETM	**Tongmen** baz=239	**0.15**	**240**		P		Pg	18 10 01.7	+0.3
ETM				*i*	S		Sg	18 10 04.1	+0.6
LXIB	**Xiulin Townshi** baz=265	**0.20**	**265**	*e*	P		Pg	18 10 02.0	-0.4
SHUL	**Shoufeng** baz=195	**0.26**	**194**		P		Pb	18 10 04.9	-0.2
ESL	**Shilin** baz=227	**0.29**	**219**		P		Pg	18 10 04.0	+0.1
ESL				*e*	S		Sg	18 10 08.3	+0.5
EAHA	**Aohua** baz=28	**0.30**	**19**	*e*	P		Pg	18 10 04.5	+0.3
EAHA					S		Sg	18 10 08.6	+0.3
TEGC	**Jichi Village** baz=181	**0.34**	**194**	*e*	P		Pb	18 10 06.6	+0.2
WHF	**Hehuan Shan** baz=287	**0.35**	**287**	*e*	P		Pb	18 10 06.1	-0.8
WHF					S		Sg	18 10 10.5	+0.6
WARBT	**Fenglin Townsh** baz=223	**0.39**	**215**	*e*	P		Pg	18 10 06.0	+0.1
ENA	**Nanau** baz=16	**0.40**	**14**		P		Pg	18 10 06.3	+0.3
ENA					S		Sg	18 10 11.7	+0.4
FUSS	**Fushou** baz=300	**0.41**	**300**	*e*	P		Pb	18 10 07.2	-0.6
FUSS				*e*	S		Sg	18 10 13.0	+1.2
CHGB	**Renai** baz=262	**0.42**	**273**		P		Pg	18 10 07.0	+0.5
CHGB					S		Sg	18 10 13.0	+1.0
EWUT	**Wuta** baz=19	**0.42**	**18**		P		Pg	18 10 06.6	+0.1
EWUT					S		Sg	18 10 12.3	+0.2
OWD	**Renai** baz=259	**0.43**	**259**		P		Pg	18 10 07.0	+0.4
NNSB	**Datong** baz=329	**0.45**	**330**	*e*	P		Pb	18 10 07.7	-0.7
NNSB					S		Sg	18 10 13.3	+0.4
NNSH	**Datong** baz=329	**0.45**	**330**	*e*	P		Pb	18 10 07.9	-0.5
NNSH				*e*	S		Sg	18 10 13.5	+0.6
NNS	**Nan Shan** baz=330	**0.46**	**329**	*e*	P		Pb	18 10 08.1	-0.6
NNS					S		Sg	18 10 14.0	+0.6
TWT	**Tachien** baz=295	**0.47**	**297**	*e*	P		Pb	18 10 08.4	-0.3
TWT				*e*	S		Sb	18 10 15.0	-0.8
WUSB	**Renai** baz=263	**0.47**	**264**	*e*	P		Pg	18 10 07.8	+0.4
WUSB					S		Sg	18 10 14.5	+0.9
TDCB	**Techi** baz=295	**0.48**	**296**	*e*	P		Pg	18 10 08.2	+0.6
TDCB				*e*	S		Sg	18 10 14.8	+0.8
LATG	**Datong** baz=337	**0.50**	**349**	*e*	P		Pb	18 10 08.7	-0.6
ESAO	**Su ao** baz=19	**0.57**	**20**	*e*	P		Pg	18 10 09.5	+0.3
NDT	**Datong Townshi** baz=349	**0.57**	**349**		P		Pg	18 10 09.8	-0.6
NDT					S		Sg	18 10 17.1	+0.4
NDS	**Dongshan** baz=8.0	**0.60**	**7**		P		Pg	18 10 09.9	+0.2
NDS					S		Sg	18 10 18.1	+0.5
ENTT	**Nioudou** baz=355	**0.60**	**354**		P		Pb	18 10 10.5	-0.4
ENTT					S		Sg	18 10 17.9	+0.2
TWC	**Suao** baz=10.0	**0.60**	**19**	*e*	P		Pb	18 10 11.2	+0.3
TWC					S		Sg	18 10 18.2	+0.5
WPL	**Puli Township** baz=268	**0.62**	**268**	*e*	P		Pb	18 10 10.7	-0.5
SSLB	**Suanglung** baz=259	**0.67**	**248**		P		Pg	18 10 11.6	+0.5
SSLB					S		Sg	18 10 19.5	-0.4
YHNB	**Yeheng** baz=340	**0.67**	**340**	*e*	P		Pb	18 10 12.8	+0.7
YHNB				*e*	S		Sb	18 10 20.8	-0.8
WHP	**Taichung City** baz=291	**0.67**	**291**	*e*	P		Pb	18 10 12.4	+0.3
TWE	**Neicheng** baz=354	**0.68**	**3**	*e*	P		Pb	18 10 12.1	-0.2
NSK	**Sanguang** baz=332	**0.68**	**339**	*e*	P		Pb	18 10 12.7	+0.4
NSK				*e*	S		Sb	18 10 21.8	-0.1
FUSB	**Fushanzhiwuyua** baz=357	**0.72**	**357**	*e*	P		Pb	18 10 13.1	+0.1
FUSB				*e*	S		Sg	18 10 21.2	-0.3
NWLT	**Wulai** baz=351	**0.74**	**351**	*e*	P		Pb	18 10 13.4	+0.1
NWLT					S		Sg	18 10 22.3	0.0
LIOB	**Emei** baz=316	**0.82**	**317**	*e*	P		Pb	18 10 15.1	+0.4

TAP 06 18:10:37.2,24°02N×121°64E,h8km,ML3.8,2C-11D,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=332	**0.07**	**325**	⇓*i*	P		Pg	18 10 39.4	+0.3
TWD				*i*	S		Sg	18 10 40.8	+0.4
ETL	**Fush Village** baz=354	**0.14**	**354**	⇓*i*	P		Pg	18 10 40.5	+0.3
ETL				*i*	S		Sg	18 10 42.5	+0.4
ETM	**Tongmen** baz=246	**0.14**	**246**	⇓*i*	P		Pg	18 10 40.7	+0.5
ETM				*i*	S		Sg	18 10 42.9	+0.5
NACB	**Ninganchiao** baz=345	**0.15**	**345**	⇓*i*	P		Pg	18 10 40.7	+0.3
NACB				*i*	S		Sg	18 10 42.9	+0.2
LXIB	**Xiulin Townshi** baz=264	**0.20**	**269**	*i*	P		Pg	18 10 42.1	+0.7
LXIB				*e*	S		Sg	18 10 45.3	+1.0
SHUL	**Shoufeng** baz=201	**0.24**	**196**		P		Pg	18 10 43.7	+1.6
SHUL				*e*	S		Sg	18 10 48.7	+3.3
ESL	**Shilin** baz=221	**0.28**	**222**		P		Pg	18 10 43.1	+0.4
EHP	**Heping Village** baz=16	**0.30**	**18**	*e*	P		Pg	18 10 43.6	+0.5
EHP				*e*	S		Sg	18 10 47.6	+0.5
EAHA	**Aohua** baz=16	**0.32**	**17**		P		Pg	18 10 43.4	0.0
EAHA				*e*	S		Sg	18 10 48.2	+0.5
TEGC	**Jichi Village** baz=198	**0.33**	**196**		P		Pb	18 10 45.1	-0.2
TEGC				*e*	S		Sb	18 10 52.1	+1.4
WHF	**Hehuan Shan** baz=291	**0.36**	**290**		P		Pg	18 10 45.0	+0.6
WHF				*i*	S		Sg	18 10 50.1	+0.9
WARBT	**Fenglin Townsh** baz=224	**0.38**	**217**	*e*	P		Pg	18 10 45.0	+0.3
EGFH	**Guangfu** baz=215	**0.40**	**209**	*e*	P		Pb	18 10 46.0	-0.6
ENA	**Nanau** baz=14	**0.41**	**13**	⇓*i*	P		Pg	18 10 45.4	+0.2
ENA					S		Sg	18 10 50.9	+0.1
FUSS	**Fushou** baz=302	**0.42**	**302**		P		Pb	18 10 46.4	-0.7
FUSS					S		Sg	18 10 52.5	+1.3
CHGB	**Renai** baz=276	**0.43**	**275**	⇑*i*	P		Pb	18 10 46.4	-0.8
CHGB					S		Sg	18 10 52.1	+0.9
OWD	**Renai** baz=271	**0.43**	**261**		P		Pg	18 10 46.2	+0.6
OWD				*e*	S		Sg	18 10 52.4	+1.1
EWUT	**Wuta** baz=16	**0.44**	**17**		P		Pg	18 10 45.9	+0.1
EWUT					S		Sg	18 10 51.8	+0.3
NNSB	**Datong** baz=330	**0.47**	**330**	⇓*i*	P		Pg	18 10 46.8	+0.6
NNSB					S		Sg	18 10 53.1	+0.7
NNSH	**Datong** baz=329	**0.47**	**330**	⇓*i*	P		Pg	18 10 46.9	+0.6
NNSH					S		Sg	18 10 52.8	+0.4
WUSB	**Renai** baz=267	**0.48**	**266**		P		Pg	18 10 47.1	+0.6
WUSB					S		Sb	18 10 54.2	-1.0
NNS	**Nan Shan** baz=331	**0.48**	**330**		P		Pg	18 10 47.0	+0.5
NNS				*i*	S		Sg	18 10 53.2	+0.4
TWT	**Tachien** baz=298	**0.48**	**298**		P		Pb	18 10 47.8	-0.3
TWT					S		Sb	18 10 54.2	-1.2
TDCB	**Techi** baz=298	**0.49**	**298**		P		Pb	18 10 47.7	-0.6
TDCB					S		Sg	18 10 54.2	+0.9
LATG	**Datong** baz=349	**0.52**	**349**		P		Pg	18 10 47.6	+0.3
LATG					S		Sg	18 10 54.3	+0.2
VWDT	**VWDT** baz=232	**0.53**	**239**	*e*	P		Pb	18 10 48.4	-0.4
HGSD	**Ruisui** baz=220	**0.56**	**200**	*e*	P		Pb	18 10 49.9	+0.5
ESAO	**Su ao** baz=16	**0.58**	**19**	*e*	P		Pg	18 10 48.9	+0.5
ESAO				*e*	S		Sg	18 10 56.0	0.0
NDT	**Datong Townshi** baz=349	**0.59**	**349**	⇓*i*	P		Pg	18 10 49.1	+0.6
NDT					S		Sg	18 10 56.9	+0.6
EHY	**Hungye** baz=209	**0.59**	**209**		P		Pb	18 10 49.7	-0.1
NDS	**Dongshan** baz=7.0	**0.61**	**7**	⇓*i*	P		Pg	18 10 49.4	+0.3
NDS					S		Sg	18 10 57.4	+0.4
TWC	**Suao** baz=17	**0.61**	**18**	*e*	P		Pg	18 10 49.3	+0.2
TWC				*e*	S		Sg	18 10 57.6	+0.5
ENTT	**Nioudou** baz=355	**0.62**	**354**	⇓*i*	P		Pg	18 10 49.7	+0.6
ENTT					S		Sg	18 10 57.6	+0.5
WPL	**Puli Township** baz=270	**0.62**	**269**		P		Pb	18 10 50.0	-0.4
WPL					S		Sg	18 10 57.9	+0.5
EOS4	**EOS4** baz=90	**0.63**	**81**	*e*	P		Pg	18 10 49.0	-0.2
DPDB	**Guoxing** baz=271	**0.65**	**271**	*e*	P		Pb	18 10 50.4	-0.4
WCS	**Beigang Elemen** baz=273	**0.67**	**273**	*e*	P		Pb	18 10 50.9	-0.2
SSLB	**Suanglung** baz=261	**0.67**	**250**		P		Pb	18 10 50.9	-0.3
SSLB					S		Sg	18 10 59.1	+0.3
WHP	**Taichung City** baz=293	**0.68**	**292**		P		Pb	18 10 51.2	-0.2
WHP					S		Sb	18 11 00.9	-0.1
YHNB	**Yeheng** baz=331	**0.69**	**340**		P		Pb	18 10 51.1	-0.4
YHNB				*e*	S		Sb	18 11 00.9	-0.3
SMLT	**Sun Moon Lake** baz=259	**0.69**	**258**	*e*	P		Pb	18 10 51.5	-0.1
SMLT					S		Sg	18 11 00.3	+0.8
TWE	**Neicheng** baz=4.0	**0.69**	**2**	⇓*i*	P		Pb	18 10 51.1	-0.5
TWE					S		Sg	18 11 00.0	+0.3
NSK	**Sanguang** baz=330	**0.70**	**339**	⇑*i*	P		Pb	18 10 51.4	-0.3
NSK				*i*	S		Sg	18 11 00.2	+0.4

	baz=330							
YULB	**Yu-li**	**0.70**	**206**	*e*P		Pb	18 10 52.0	+0.3
	baz=207							
TYC	**Yuchr**	**0.72**	**261**	*e*P		Pb	18 10 52.0	-0.1
	baz=261							
ECBN	**Changbin**	**0.72**	**194**	*e*P		Pg	18 10 51.3	+0.2
	baz=187							
ECBN				*e*S		Sn	18 11 04.1	-1.0
	baz=187							
EYUL	**Yuli**	**0.73**	**204**	*e*P		Pn	18 10 53.4	-0.5
	baz=219							
FUSB	**Fushanzhiwuyua**	**0.73**	**356**	*e*P		Pb	18 10 52.1	-0.2
	baz=357							
FUSB				*e*S		Sb	18 11 02.1	-0.5
	baz=357							
TWF1	**Yuli**	**0.74**	**205**	*e*P		Pb	18 10 52.0	-0.4
	baz=220							
ILA	**Ilan**	**0.74**	**8**	*e*P		Pg	18 10 51.9	+0.3
	baz=8.0							
NWLT	**Wulai**	**0.76**	**351**	*e*P		Pb	18 10 52.3	-0.4
	baz=351							
NWLT				*e*S		Sg	18 11 01.9	+0.1
	baz=351							
NFF	**Wufeng Townshi**	**0.77**	**322**	*e*P		Pb	18 10 52.7	-0.2
	baz=322							
WHYT	**Xinyi Township**	**0.79**	**246**	*e*P		Pb	18 10 53.4	+0.2
	baz=246							
NSTT	**Nanjuang**	**0.84**	**316**	*e*P		Pb	18 10 53.9	-0.2
	baz=316							
LIOB	**Emei**	**0.84**	**318**	*e*P		Pb	18 10 54.5	+0.4
	baz=317							
TWQ1	**Liyutan**	**0.85**	**292**	*e*P		Pn	18 10 55.7	+0.2
	baz=293							
WJS	**Zhushan**	**0.86**	**257**	*e*P		Pn	18 10 55.0	-0.6
	baz=250							
WWF	**Wufeng**	**0.86**	**271**	*e*P		Pn	18 10 55.6	-0.1
	baz=272							
NJD	**Zhudong**	**0.87**	**325**	*e*P		Pn	18 10 55.8	0.0
	baz=331							
FULB	**Fuli**	**0.88**	**201**	*e*P		Pb	18 10 55.2	+0.4
	baz=218							
WNT1	**Nantou City**	**0.88**	**263**	*e*P		Pb	18 10 55.1	+0.3
	baz=263							
WNT1				*e*S		Sn	18 11 08.9	-0.1
	baz=263							
WNT	**Mingjian**	**0.89**	**261**	*e*P		Pn	18 10 56.0	+0.1
	baz=261							
WNT				*e*S		Sn	18 11 08.9	-0.1
	baz=261							
ALS	**Alishan**	**0.92**	**236**	*e*P		Pb	18 10 55.8	+0.2
	baz=237							
ALS				*e*S		Sb	18 11 09.0	+0.9
	baz=237							
NMLH	**Miaoli**	**0.93**	**304**	*e*P		Pn	18 10 57.6	+1.0
	baz=303							
HSN1	**Hsinchu**	**0.94**	**323**	*e*P		Pn	18 10 56.9	+0.1
	baz=323							
NHDH	**Xindian Distri**	**0.94**	**354**	*e*P		Pb	18 10 55.6	-0.1
	baz=344							
NHDH				S		Sb	18 11 08.0	-0.4
	baz=344							
TWA	**Mucha**	**0.95**	**357**	*e*P		Pb	18 10 55.8	-0.2
	baz=347							
TWA				S		Sb	18 11 08.5	-0.3
	baz=347							
CHKT	**Chengkung**	**0.95**	**195**	P		Pg	18 10 55.8	+0.2
	baz=198							
EHD	**Haiduan**	**0.96**	**205**	*e*P		Pb	18 10 56.1	0.0
	baz=206							
TATO	**Taipei**	**0.96**	**352**	*e*P		Pb	18 10 56.4	+0.3
	baz=352							
TATO				*i* S		Sg	18 11 08.2	+0.1
	baz=352							
TIPB	**Shuangxi**	**0.96**	**10**	*e*P		Pg	18 10 55.7	0.0
	baz=355							
NJN	**Zhunan**	**0.96**	**313**	*e*P		Pn	18 10 57.4	+0.4
	baz=321							
WDJ	**Dajia District**	**0.97**	**290**	*e*P		Pn	18 10 57.3	+0.2
	baz=291							
SBCB	**Hsinchu**	**0.97**	**322**	*e*P		Pn	18 10 57.4	+0.2
	baz=322							
CHN5	**Tsauling**	**0.98**	**244**	*e*P		Pn	18 10 57.3	0.0
	baz=234							
CHN5				*e*S		Sn	18 11 12.0	+0.5
	baz=234							
BACT	**New Taipei Cit**	**0.99**	**350**	P		Pn	18 10 57.3	0.0
	baz=350							
BACT				S		Sb	18 11 10.0	+0.3
	baz=350							
HSN	**Hsinchu**	**0.99**	**322**	*e*P		Pn	18 10 58.5	+1.1
	baz=324							
WCHH	**Zhanghua**	**0.99**	**273**	*e*P		Pn	18 10 58.2	+0.8
	baz=274							
ECS	**Chishang**	**1.00**	**203**	*e*P		Pn	18 10 57.3	-0.3
	baz=218							
ELDTW	**Lidau**	**1.01**	**215**	*e*P		Pg	18 10 56.5	-0.1
	baz=203							
NHY	**Taipei**	**1.01**	**356**	*e*P		Pg	18 10 55.0	-1.6
	baz=8.0							
TAP	**Taipei**	**1.02**	**353**	*e*P		Pb	18 10 57.1	0.0
	baz=345							
TAP				*e*S		Sb	18 11 11.1	+0.4
	baz=345							
NTY	**Taoyuan**	**1.02**	**342**	*e*P		Pn	18 10 57.6	-0.3
	baz=337							
NCU	**National Centr**	**1.03**	**337**	*e*P		Pn	18 10 57.7	-0.3
	baz=336							
TWB1	**Santiao Chiao**	**1.03**	**18**	*e*P		Pb	18 10 57.2	-0.1
	baz=10.0							
TWB1				*e*S		Sg	18 11 10.2	-0.2
	baz=10.0							
WGK	**Gukeng**	**1.04**	**251**	*e*P		Pn	18 10 59.3	+1.2
	baz=253							
NWF	**Wu-fen Shan**	**1.05**	**7**	*e*P		Pn	18 10 58.1	-0.3
	baz=8.0							
NWF				*e*S		Sg	18 11 11.1	+0.1
	baz=8.0							
WFSB	**Wu-fen Shan**	**1.05**	**7**	*e*P		Pb	18 10 57.9	+0.2
	baz=8.0							
WFSB				S		Sb	18 11 11.4	-0.2
	baz=8.0							
SXI1	**Grass Mountain**	**1.09**	**11**	*e*P		Pn	18 10 59.3	+0.4
	baz=357							
TWS1	**Kuangyinshan**	**1.09**	**349**	*e*P		Pn	18 10 59.4	+0.6
	baz=350							
TWS1				*e*S		Sn	18 11 13.7	-0.4
	baz=350							
WCKO	**Fanlu**	**1.11**	**239**	*e*P		Pn	18 10 59.6	+0.5
	baz=241							
NHW	**Xinwu Township**	**1.12**	**331**	*e*P		Pn	18 10 59.7	+0.5
	baz=330							
YM01	**YM01**	**1.12**	**357**	P		Pn	18 10 59.6	+0.3
	baz=8.0							
YM01				*e*S		Sn	18 11 14.5	-0.5
	baz=8.0							
TNOU	**National Taiwa**	**1.13**	**6**	*e*P		Pn	18 11 00.6	+1.2
	baz=5.0							
NTST	**Danshui**	**1.15**	**351**	*e*P		Pn	18 11 00.2	+0.5
	baz=352							
NTST				*e*S		Sn	18 11 16.1	+0.5
	baz=352							
WRL	**Guolierlin Hig**	**1.16**	**264**	*e*P		Pn	18 11 00.9	+1.1
	baz=256							
STYH	**Taoyuan**	**1.16**	**223**	*e*P		Pn	18 10 59.9	+0.1
	baz=212							
ANP	**Anpu**	**1.16**	**355**	*e*P		Pn	18 10 59.9	0.0
	baz=354							
CHN4	**Tsaushan**	**1.17**	**235**	*e*P		Pn	18 11 00.7	+0.8
	baz=223							
CHN4				*e*S		Sn	18 11 18.3	+2.2
	baz=223							
TPUB	**Ta-pu**	**1.17**	**232**	*e*P		Pn	18 11 00.5	+0.5
	baz=220							
TPUB				*e*S		Sn	18 11 16.8	+0.6
	baz=220							
RLNB	**Erlin**	**1.18**	**264**	*e*P		Pn	18 11 00.6	+0.6
	baz=265							
STYT	**Tauyuan**	**1.18**	**223**	*e*P		Pn	18 11 00.4	+0.3
	baz=224							
STYT				*e*S		Sn	18 11 16.8	+0.4
	baz=224							
WTK	**Tuku**	**1.19**	**254**	*e*P		Pn	18 11 01.9	+1.7
	baz=256							
TWY	**Chenhua**	**1.25**	**358**	*e*P		Pg	18 11 01.7	+0.5
	baz=344							
TWK	**Hsinying**	**1.30**	**235**	*e*P		Pg	18 11 02.6	+0.5
	baz=237							
CHN1	**Nanshi**	**1.32**	**231**	*e*P		Pg	18 11 03.2	+0.7
	baz=233							
SNST	**Tainan City**	**1.32**	**233**	*e*P		Pg	18 11 02.5	0.0
	baz=236							
YOJ	**Yonaguni jima**	**1.33**	**71**	*e*P		Pn	18 11 01.9	-0.2
	baz=68							
SGST	**Jiashian**	**1.35**	**226**	*e*P		Pn	18 11 02.1	-0.3
	baz=227							
SGST				*e*S		Sg	18 11 22.9	+2.3
	baz=227							
WSF	**Szhu**	**1.35**	**254**	*e*P		Pg	18 11 03.4	+0.2
	baz=255							
WSF				*e*S		Sg	18 11 23.2	+2.5
	baz=255							
SLGT	**Liugui**	**1.37**	**222**	*e*P		Pb	18 11 03.1	0.0
	baz=225							
WSL	**Shuilin Townsh**	**1.39**	**249**	*e*P		Pg	18 11 04.7	+1.0
	baz=251							
ICHU	**Yijhu**	**1.41**	**242**	*e*P		Pg	18 11 04.3	+0.1
	baz=245							
SSD	**Sandimen**	**1.57**	**216**	*e*P		Pn	18 11 05.3	-0.1
	baz=208							
TSMG	**Majia**	**1.60**	**215**	*e*P		Pg	18 11 07.6	-0.3
	baz=207							
MASBT	**Mashibuluo**	**1.68**	**214**	*e*P		Pn	18 11 07.1	+0.1
	baz=206							

SDD ***06*** *18:15:10.3±1.7, 17°.90N×68°.72W, h160km±34km, MD2.9, ML2.5, MW2.8*

NEIC ***06*** *18:15:10.7±0.9, 18°.1N±0°.3×68°.6W±0°.1, h148km±13km, ML2.6/12, Md2.7/7(RSPR), Error ellipse: s-maj=50.2km s-min=9.2km az=196.0*

RSPR ***06*** *18:15:11.0, 18°.17N×68°.48W, h148km±2km, MD2.7/7*

ISC 06 18:15:10.1±1.6, 18°.1N±0°.2×68°.58W±0°.07, h150km, n22, σ1§10/27, 6C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SADR	**Isla Saona**	**0.23**	**305**	⇑*e*Pg		**Pn**	**18 15 31.0**	**+0.6**
SADR				IAML			18 16 18.3	
	comp=N,77nm,1.1s							
PCDR	**Punta Cana, DR**	**0.49**	**23**	⇑*e*P		**Pn**	**18 15 31.5**	**+0.1**
PCDR	**Punta Cana, DR**	**0.49**	**23**	*e*S		**Sn**	**18 15 47.4**	**-0.3**
PCDR	**Punta Cana, DR**	**0.49**	**23**			**Pn**	**18 15 31.5**	**+0.1**
PCDR						**Sn**	**18 15 47.4**	**-0.3**
PCDR	**Punta Cana, DR**	**0.49**	**23**	IAML			18 15 57.3	
	comp=E,121nm,1.8s							
PCDR	**Punta Cana, DR**	**0.49**	**23**	*e*Pg		**Pn**	**18 15 32.1**	**+0.7**
PCDR				IAML			18 16 20.7	
	comp=N,120nm,2.0s							
MIDR	**Miches**	**1.02**	**334**	⇑*e*Pg		**Pn**	**18 15 35.2**	**+0.2**
MIDR				⇑*e*Sg		**Sn**	**18 15 54.5**	**+0.4**
MIDR				IAML			18 15 55.9	
	comp=E,26nm,0.0s							
MIDR				IAML			18 15 57.6	
	comp=N,36nm,2.4s							
HATOM	**Hato Mayor del**	**1.05**	**314**	⇑*e*Pg		**Pn**	**18 15 35.3**	**0.0**
HATOM				*e*Sg		**Sn**	**18 15 53.2**	**-1.4**
HATOM				IAML			18 15 55.9	
	comp=N,22nm,0.9s							
HATOM				IAML			18 15 56.7	
	comp=E,17nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.40**	**92**	⇓*e*P		**Pn**	**18 15 41.8**	**+3.2**
CRPR	**Cabo Rojo, PR**	**1.40**	**92**	*e*S		**Sn**	**18 15 59.3**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.40**	**92**			**Pn**	**18 15 40.3**	**+1.7**
CRPR				IAML			18 16 23.0	
	comp=N,46nm,2.0s							
CRPR				IAML			18 16 23.2	
	comp=E,44nm,2.5s							
CRPR	**Cabo Rojo, PR**	**1.40**	**92**			**Sn**	**18 15 59.3**	**-1.1**
MLPR	**Magueyes Islan**	**1.47**	**93**	⇑*e*P		**Pn**	**18 15 39.4**	**+0.1**
MLPR	**Magueyes Islan**	**1.47**	**93**	*e*S		**Sn**	**18 16 00.1**	**-1.5**
MLPR	**Magueyes Islan**	**1.47**	**93**			**Pn**	**18 15 39.4**	**+0.1**
MLPR						**Sn**	**18 16 00.1**	**-1.5**
DR08	**Loma La Naviza**	**1.63**	**304**	*e*Sg		**Sn**	**18 16 04.3**	**-0.6**
DR08				IAML			18 16 09.3	
	comp=N,112nm,0.1s							
AOPR	**Arecibo Observ**	**1.76**	**80**	⇓*e*P		**Pn**	**18 15 42.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.76**	**80**	*e*S		**Sn**	**18 16 07.4**	**0.0**
AOPR	**Arecibo Observ**	**1.76**	**80**			**Pn**	**18 15 42.8**	**+0.3**
AOPR						**Sn**	**18 16 07.4**	**0.0**
AOPR	**Arecibo Observ**	**1.76**	**80**	*e*Sg		**Sn**	**18 16 08.9**	**+1.5**
AOPR				IAML			18 16 09.4	
	comp=N,60nm,0.2s							
CELP	**Cerrillos**	**1.91**	**89**	Pn		**Pn**	**18 15 42.7**	**-1.4**
CELP				Sn		**Sn**	**18 16 09.9**	**-0.4**
CELP				IAML			18 16 12.3	
	comp=N,27nm,3.2s							
SDDR	**Presa de Saban**	**2.72**	**290**	Pn		**Pn**	**18 15 54.8**	**+0.8**
SDDR				IAML			18 16 54.5	
	comp=N,24nm,3.2s							
SDDR				IAML			18 17 50.0	
	comp=N,17nm,2.8s							

TAP 06 18:21:59.0, 23°.85N×121°.54E, h22km, ML1.6, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SHUL	**Shoufeng**	**0.07**	**158**	*i* P		Pb	18 22 03.3	+0.3
SHUL	baz=158			S		Sb	18 22 06.6	+0.9
	baz=158							
ESL	**Shilin**	**0.10**	**248**	⇓*i* P		Pb	18 22 03.7	-1.2
ESL	baz=245			*i* S		Sb	18 22 06.8	-2.2
	baz=245							
ETM	**Tongmen**	**0.12**	**341**	*i* P		Pb	18 22 03.9	-0.9
ETM	baz=341			S		Sb	18 22 06.6	-2.2
	baz=341							
WARBT	**Fenglin Townsh**	**0.19**	**226**	*i* P		Pb	18 22 04.5	-0.2
WARBT	baz=225			*i* S		Sb	18 22 08.6	-0.1
	baz=225							
LXIB	**Xiulin Townshi**	**0.20**	**327**	*i* S		Sb	18 22 09.3	+0.2
	baz=326							
EGFH	**Guangfu**	**0.21**	**208**	P		Pb	18 22 05.0	+0.2
	baz=208							
EGFH				*e*S		Sb	18 22 09.6	+0.8
	baz=208							
TWD	**Chiawan**	**0.23**	**14**	*e*P		Pb	18 22 05.3	+0.2
	baz=15							
TWD				*e*S		Sb	18 22 09.8	+0.6
	baz=15							
ETL	**Fush Village**	**0.32**	**15**	*e*S		Pb	18 22 12.2	+1.3
	baz=14							
OWD	**Renai**	**0.34**	**287**	*e*P		Pb	18 22 07.2	+0.6
	baz=287							
OWD				S		Sb	18 22 13.1	+1.3
	baz=287							
HGSD	**Ruisui**	**0.37**	**196**	*e*P		Pb	18 22 08.0	+1.1
	baz=195							
VWDT	**VWDT**	**0.37**	**255**	*e*P		Pb	18 22 07.8	+0.9
	baz=254							
VWDT				*e*S		Sb	18 22 13.9	+1.6
	baz=254							
CHGB	**Renai**	**0.39**	**302**	P		Pb	18 22 08.0	+0.6
	baz=302							
CHGB				S		Sb	18 22 14.2	+1.2
	baz=302							
EHY	**Hungye**	**0.40**	**210**	*e*P		Pb	18 22 07.9	+0.6
	baz=208							
EHY				*e*S		Sb	18 22 13.7	+0.7
	baz=208							
WUSB	**Renai**	**0.41**	**290**	P		Pb	18 22 08.5	+0.9
	baz=290							
WUSB				*e*S		Sb	18 22 14.8	+1.3
	baz=290							
YULB	**Yu-li**	**0.51**	**206**	*e*P		Pb	18 22 09.5	+0.2
	baz=205							
SSLB	**Suanglung**	**0.54**	**263**	*e*P		Pb	18 22 10.2	+0.4
	baz=263							
EYUL	**Yuli**	**0.54**	**202**	*e*P		Pb	18 22 09.8	-0.1
	baz=201							
TWF1	**Yuli**	**0.54**	**204**	*e*P		Pb	18 22 10.6	+0.6
	baz=202							
SMLT	**Sun Moon Lake**	**0.58**	**273**	*e*P		Pb	18 22 10.8	+0.1
	baz=272							
DPDB	**Guoxing**	**0.58**	**288**	*e*P		Pb	18 22 11.1	+0.4
	baz=287							
NNSB	**Datong**	**0.59**	**346**	*e*P		Pb	18 22 11.0	+0.1
	baz=346							
NNS	**Nan Shan**	**0.60**	**346**	*e*P		Pb	18 22 11.3	+0.2
	baz=346							
WCS	**Beigang Elemen**	**0.61**	**290**	*e*P		Pb	18 22 11.4	+0.3
	baz=289							

TAP 06 18:22:00.5, 24°.07N×121°.61E, h9km, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.02**	**311**	*i* P		Pg	18 22 02.5	+0.5
	baz=339							
TWD				*i* S		Sg	18 22 03.8	+0.7
	baz=339							
ETL	**Fush Village**	**0.09**	**8**	*i* P		Pg	18 22 03.6	+0.7
	baz=7.0							
ETL				S		Sg	18 22 05.5	+0.9
	baz=7.0							
NACB	**Ninganchiao**	**0.10**	**352**	*i* P		Pg	18 22 03.8	+0.8
	baz=352							
NACB				*i* S		Sg	18 22 05.7	+0.9
	baz=352							
LXIB	**Xiulin Townshi**	**0.19**	**255**	*i* P		Pg	18 22 05.0	+0.6
	baz=255							
LXIB				S		Sg	18 22 08.4	+1.2
	baz=255							
WHF	**Hehuan Shan**	**0.32**	**284**	*e*P		Pg	18 22 07.8	+0.7
	baz=320							
WHF				*e*S		Sg	18 22 12.8	+1.3
	baz=320							
WHF	**Hehuan Shan**	**0.32**	**284**	P		Pg	18 22 07.7	+0.6
	baz=283							
WHF				S		Sb	18 22 13.1	-1.2
	baz=283							
ENA	**Nanau**	**0.38**	**18**	*e*P		Pg	18 22 08.6	+0.7
	baz=19							
FUSS	**Fushou**	**0.38**	**298**	*e*P		Pb	18 22 09.5	-0.1
	baz=325							
FUSS				*e*S		Sb	18 22 16.2	+0.5
	baz=325							
FUSS	**Fushou**	**0.38**	**298**	P		Pb	18 22 09.3	-0.3
	baz=298							
FUSS				*e*S		Sb	18 22 16.2	+0.5
	baz=298							
EWUT	**Wuta**	**0.41**	**22**	*e*P		Pb	18 22 09.3	-0.6
	baz=22							
NNSB	**Datong**	**0.41**	**330**	*e*P		Pb	18 22 09.8	-0.3
	baz=329							
NNS	**Nan Shan**	**0.43**	**330**	*e*P		Pb	18 22 09.8	-0.5
	baz=330							
LATG	**Datong**	**0.47**	**351**	*e*P		Pg	18 22 10.2	+0.5
	baz=350							
NDT	**Datong Townshi**	**0.54**	**351**	*e*P		Pb	18 22 11.9	-0.2
	baz=350							
NDT				*e*S		Sb	18 22 19.8	-0.2
	baz=350							
ENTT	**Nioudou**	**0.57**	**356**	*e*P		Pb	18 22 12.5	-0.2
	baz=356							
ENTT				*e*S		Sb	18 22 21.4	+0.4
	baz=356							
TWC	**Suao**	**0.58**	**22**	*e*P		Pb	18 22 12.8	-0.1
	baz=22							

IDC 06 18:23:10.9±8.5, 4°.64S×145°.37E, h107km±103km, mb2.8/2, mbtmp3.3/4, ML3.4/1, Error ellipse: s-maj=83.9km s-min=41.3km az=117.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.06**	**160**	P		Pn	18 24 25.8	+1.2
	5.3nm,0.3s,baz=342,slow=9.6,SNR=5.6							
PMG				S		Sn	18 25 21.8	0.0
	12nm,0.5s,baz=344,slow=24,SNR=10							
WRA	**Warramunga Arr**	**18.62**	**214**	P		P	18 27 20.4	+0.1
	0.1nm,0.3s,baz=29,slow=11,SNR=10							
	0.7nm,0.8s							
ASAR	**Alice Springs**	**21.91**	**209**	P		P	18 27 55.7	0.0
	0.4nm,0.8s,baz=37,slow=9.5,SNR=8.4							
	0.4nm,0.8s							
MKAR	**Makanchi Array**	**75.42**	**321**	P		P	18 34 43.0	-0.1
	0.3nm,0.9s,baz=124,slow=7.2,SNR=1.9							
	0.3nm,0.9s							

BJI ***06*** *18:37:58.1±0.0, 18°.60S×169°.33E, h232km, mb4.9/64, mB5.3/29*

NEIC ***06*** *18:37:59.0±1.7, 18°.96S±0°.07×169°.47E±0°.08, h243km±4km, mb5.3/403, Mww5.6/24, Error ellipse: s-maj=11.3km s-min=10.2km az=129.0*

MOS ***06*** *18:37:58.6±1.1, 18°.98S×169°.43E, h257km, mb5.2/32, Error ellipse: s-maj=7.8km s-min=6.9km az=113.4*

NEIC ***06*** *18:37:58.9, 19°.05S×169°.36E, h240km, Moment Tensor Solution. Duration: 3§1 Moment tensor: Scale 10¹⁷Nm; Mrr1.69; Mθθ-1.12; Mϕϕ-0.57; Mrθ0.69; Mϕϕ-1.69; Mϕr-1.38; Fault plane solution: M₀2.73000×10¹⁷ NP1: ϕs198.01000°, δ60.54000°, λ46.71000°. NP2:ϕs80.44000°, δ50.68000°, λ140.52000°. Principal axes: T 2.8535, Plg53.0000°, Azm55.0000°; N -0.2551, Plg37.0000°, Azm223.0000°; P -2.5984, Plg6.0000°, Azm317.0000°;*

NEIC ***06*** *18:37:58.9, 18°.95S×169°.47E, h240km*

IDC ***06*** *18:37:59.8±0.9, 19°.04S×169°.44E, h255km±7km, mb4.7/26, mbtmp5.3/27, Error ellipse: s-maj=9.2km s-min=7.8km az=81.0*

BGR ***06*** *18:37:59.9, 19°.36S×170°.41E, h252km*

NOU ***06*** *18:38:00.4, 18°.90S×169°.34E, h243km, mb5.2/115, Vanuatu Islands*

GCMT ***06*** *18:38:02.0±0.2, 18°.97S±0°.02×169°.33E±0°.02, h256km±1km, MW5.6/145, Moment Tensor Solution. s87,c99; s145,c218; Duration: 1§5 Moment tensor: Scale 10¹⁷ Nm; Mrr1.96±.06; Mθθ-1.11±.07; Mϕϕ-0.84±.07; Mrθ0.56±.06; Mθϕ-1.68±.06; Mϕr-1.88±.06; Best double couple: M₀3.06900×10¹⁷ NP1:ϕs196.00000°, δ65.00000°, λ54.00000°. NP2:ϕs75.00000°, δ43.00000°, λ141.00000°. Principal axes: T 3.2850, Plg55.0000°, Azm59.0000°; N -0.4260, Plg32.0000°, Azm213.0000°; P -2.8530, Plg12.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 18:37:58.5±0.3, 19°.02S±0°.03×169°.47E±0°.04, h246km±2km, h246km:pP-P, n1268, σ1§30/1211, mb5.2/285, 71C-28D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YATNC	**Mamie plateau,**	**3.88**	**218**	P		**Pn**	**18 39 00.6**	**0.0**
PINNC	**Pines Island,**	**4.05**	**208**			**Pn**	**18 39 03.6**	**+1.0**
PINNC					Sn	**S**	**18 39 54.1**	**+0.4**
PINNC	**Pines Island,**	**4.05**	**208**	P		**Pn**	**18 39 03.9**	**+1.2**
DZM	**Mont Dzumac**	**4.16**	**223**			**Pn**	**18 39 05.4**	**+1.3**
DZM					Sn	**S**	**18 39 57.4**	**+1.2**
DZM	**Mont Dzumac**	**4.16**	**223**	P		**Pn**	**18 39 05.2**	**+1.1**
DZM	**Mont Dzumac**	**4.16**	**223**	P		**Pn**	**18 39 05.4**	**+1.3**
	1μm,1.0s,baz=91,slow=16,SNR=429							
DZM					S	**S**	**18 39 56.9**	**+0.7**
	644nm,0.9s,baz=229,slow=13,SNR=5.6							
OUENC	**Ouen Island, N**	**4.19**	**216**			**Pn**	**18 39 05.8**	**+1.6**
OUENC					Sn	**S**	**18 39 58.3**	**+1.7**
OUENC	**Ouen Island, N**	**4.19**	**216**	P		**Pn**	**18 39 05.6**	**+1.3**
NOUC	**Port Laguerre**	**4.27**	**224**	P		**Pn**	**18 39 06.8**	**+1.5**
ONTNC	**Ouen Toro**	**4.33**	**220**			**Pn**	**18 39 07.6**	**+1.7**
ONTNC					Sn	**S**	**18 40 02.2**	**+2.6**
ONTNC	**Ouen Toro**	**4.33**	**220**	P		**Pn**	**18 39 07.5**	**+1.5**
KOUNC	**Koumac, New Ca**	**5.12**	**252**			**Pn**	**18 39 17.2**	**+1.6**
KOUNC	**Koumac, New Ca**	**5.12**	**252**	P		**Pn**	**18 39 17.6**	**+2.0**
YSA	**Yasawairara**	**8.05**	**75**	P		**Pn**	**18 39 56.5**	**+4.0**
NFK	**Norfolk Island**	**10.08**	**188**	P		**P**	**18 40 23.1**	**-0.9**
	baz=10,SNR=7.4							
NFK	**Norfolk Island**	**10

GRZ **Great Barrier** 17.96 164 P Pn 18 41 54.5 +0.8
EIDS **Eidsvold** 18.16 246 P Pn 18 41 55.5 -0.7
baz=18,SNR=15
EIDS **Eidsvold** 18.16 246 P P 18 41 53.8 +0.6
EIDS **Eidsvold** 18.16 246 P Pn 18 41 55.9 -0.3
RK1H **Rockhampton Ha** 18.22 253 P Pn 18 41 56.2 -0.7
WIAZ **Waiheke Island** 18.40 165 P Pn 18 41 58.8 0.0
KUZ **Kuaotunu** 18.50 164 P Pn 18 42 01.5 +1.5
KUZ **Kuaotunu** 18.50 164 P Pn 18 41 59.8 -0.2
AFI **Afiamalu** 18.68 77 P P 18 42 00.2 +1.3
AFI **Afiamalu** 18.68 77 P P 18 42 00.2 +1.3
MKAZ **Moumakai** 18.70 166 P Pn 18 42 02.1 -0.3
TOZ **Tahuroa Road** 19.38 165 P P 18 42 08.1 +2.0
NIUE **Niue** 19.47 94 P P 18 42 06.2 -1.1
baz=19,SNR=8.4
NIUE **Niue** 19.47 94 P P 18 42 05.2 -2.1
NIUE **Niue** 19.47 94 P Pn 18 42 10.1 -1.6
ARMA **Armidale** 19.76 232 P Pn 18 42 13.0 -2.1
baz=20,SNR=27
ARMA **Armidale** 19.76 232 P P 18 42 11.4 +1.0
ARMA pP pP 18 42 48.6 -0.3
ARMA **Armidale** 19.76 232 P Pn 18 42 13.8 -1.3
HIZ **Hauiti** 19.98 168 P P 18 42 13.7 +1.1
MXZ **Matakaoa Point** 20.03 159 P P 18 42 13.9 +0.9
MXZ **Matakaoa Point** 20.03 159 P Pn 18 42 16.1 -1.9
HAZ **Te Kaha** 20.03 160 P Pn 18 42 16.2 -1.9
RUGZ **Raukumara Rang** 20.19 161 P P 18 42 17.8 +2.9
PKGZ **Pakihiroa** 20.25 160 P P 18 42 18.2 +2.8
URZ **Urewera** 20.30 162 P Pn 18 42 19.6 -1.6
URZ **Urewera** 20.30 162 P P 18 42 17.4 +1.5
32nm,0.5s,baz=42,slow=5.8,SNR=20
URZ S S 18 45 49.5 +0.4
13nm,0.9s,baz=162,slow=20,SNR=2.3
32nm,0.5s
URZ **Urewera** 20.30 162 P Pn 18 42 19.4 -1.8
WMGZ **Waiomatatini S** 20.30 159 P P 18 42 18.3 +2.4
MUGZ **Murupara** 20.41 163 P Pn 18 42 21.7 -0.8
PUZ **Puketiti** 20.48 160 P P 18 42 19.8 +2.0
TWGZ **Tauwhareparae** 20.48 161 P P 18 42 20.5 +2.5
RMQ **Roma** 20.48 245 P P 18 42 20.6 +2.5
MWZ **Matawai** 20.49 162 P P 18 42 20.8 +2.8
TARA **Tarawa** 20.52 10 P P 18 42 17.2 -1.3
TARA **Tarawa** 20.52 10 P P 18 42 19.1 +0.6
RTZ **Ruatahuna** 20.59 163 P P 18 42 20.0 +0.8
RTZ S 18 45 55.8 +1.3
RTZ **Ruatahuna** 20.59 163 P P 18 42 21.6 +2.4
MRHZ **Matea Rd** 20.65 164 P Pn 18 42 23.0 -2.4
AUPHS **Peel High Scho** 20.66 231 P P 18 42 22.4 +2.5
TKGZ **Te Karaka** 20.68 161 P P 18 42 22.4 +2.4
OTVZ **Oturere** 20.78 166 P Pn 18 42 26.1 -1.1
AUAYR **Ayr State High** 20.83 265 P P 18 42 23.6 +1.8
SNGZ **Shannon Statio** 20.85 163 P P 18 42 24.5 +2.7
BKZ **Black Stump Fm** 20.98 165 P P 18 42 23.3 +0.2
BKZ S 18 45 59.6 -1.4
BKZ **Black Stump Fm** 20.98 165 P P 18 42 26.5 +3.4
TV1H **Townsville Har** 21.43 266 P P 18 42 29.0 +1.4
MGCD **Mangrove Creek** 21.67 226 P P 18 42 31.8 +2.0
baz=22,SNR=12
MGCD **Mangrove Creek** 21.67 226 P P 18 42 32.6 +2.8
QRZ **Quartz Range** 21.90 174 P P 18 42 34.2 +2.4
QRZ **Quartz Range** 21.90 174 P P 18 42 35.4 +3.6
CTA **Charters Tower** 21.91 263 P P 18 42 33.5 +1.4
CTA **Charters Tower** 21.91 263 P P 18 42 32.5 +0.4
40nm,0.5s,baz=87,slow=9.7,SNR=44
CTA S S 18 46 16.6 +0.2
16nm,0.8s,baz=200,slow=16,SNR=7.8
40nm,0.5s
CTAO **Charters Tower** 21.91 263 P P 18 42 31.9 -0.3
CTAO **Charters Tower** 21.91 263 P P 18 42 33.6 +1.4
CTAO **Charters Tower** 21.91 263 P P 18 42 31.9 -0.3
AULRC **Lightning Ridg** 22.14 238 P P 18 42 35.9 +1.8
TKNZ **Takaka Hill** 22.15 173 P P 18 42 35.6 +1.5
MRZ **Mangatainoka R** 22.20 168 P P 18 42 35.1 +0.6
SYDH **Sydney Hard Ro** 22.25 225 P P 18 42 37.8 +2.8
BFZ **Birch Farm** 22.36 166 P P 18 42 37.1 +1.0
BFZ **Birch Farm** 22.36 166 P P 18 42 40.8 +4.7
NNZ **Nelson** 22.38 172 P P 18 42 38.0 +1.8
RABL **Rabaul** 22.42 309 P P 18 42 36.2 -0.7
RABL **Rabaul** 22.42 309 P P 18 42 38.9 +2.0
MRNZ **Matariki Terra** 22.49 174 P P 18 42 38.7 +1.5
TCW **Tory Channel** 22.50 170 P P 18 42 38.4 +1.1
WOLH **Wollongong Har** 22.55 223 P P 18 42 40.0 +2.2
TUWZ **Tuamarina** 22.67 171 P P 18 42 39.7 +1.0
SNZO **South Karori** 22.67 170 P P 18 42 38.6 -0.1
SNZO **South Karori** 22.67 170 P P 18 42 42.8 +4.0
DSZ **Denniston Nort** 22.74 175 P P 18 42 40.4 +0.9
BHW **Baring Head** 22.79 169 P P 18 42 40.1 +0.2
THZ **Tophouse** 22.86 173 P P 18 42 41.5 +0.9
AUDCS **Dubbo College** 22.89 231 P P 18 42 43.1 +2.1
BSWZ **Blackbirch Sta** 22.94 172 P P 18 42 42.9 +1.7
PLWZ **Palliser** 23.02 169 P P 18 42 42.0 -0.1
CMWZ **Cape Campbell** 23.02 171 P P 18 42 42.7 +0.7
KHZ **Kahutara** 23.58 172 P P 18 42 48.3 +1.2
PMG **Port Moresby** 23.62 291 P P 18 42 48.1 +0.4
PMG **Port Moresby** 23.62 291 P P 18 42 48.7 +1.0
PMG **Port Moresby** 23.62 291 P P 18 42 48.8 +1.0
PMG **Port Moresby** 23.62 291 *d iP P 18 42 48.5 +0.7
PMG **Port Moresby** 23.62 291 P P 18 42 48.3 +0.5
201nm,0.7s,baz=91,slow=5.4,SNR=127
201nm,0.7s
INZ **Inchbonnie** 23.70 176 P P 18 42 49.1 +1.0
LTZ **Lake Taylor** 23.81 175 P P 18 42 50.2 +1.0
MTSU **Mount Surprise** 23.86 268 P P 18 42 51.5 +1.6
baz=24,SNR=194
MTSU **Mount Surprise** 23.86 268 P P 18 42 51.5 +1.6
GVZ **Greta Valley S** 24.07 174 P P 18 42 51.6 +0.1
CNB **Canberra Magne** 24.09 224 P P 18 42 54.1 +2.2
baz=24,SNR=35
CNB **Canberra Magne** 24.09 224 P P 18 42 54.1 +2.2
YNG **Young** 24.14 227 P P 18 42 55.6 +3.2
AMCZ **Amberley** 24.24 174 P P 18 42 53.7 +0.7
CAN **Canberra** 24.33 224 P P 18 42 55.7 +1.7
CAN pP 18 43 38.6 -0.7
OXZ **Oxford** 24.33 175 P P 18 42 54.2 +0.3
QLP **Quilpie** 24.43 247 P P 18 42 56.0 +1.1
baz=24,SNR=13
QLP **Quilpie** 24.43 247 P P 18 42 56.7 +1.7
FOZ **Fox Glacier** 24.45 179 P P 18 42 55.8 +0.9
FOZ pP pP 18 43 38.2 -0.8
KAVG **Kavieng** 24.50 310 P P 18 42 55.6 -0.2
RPZ **Rata Peaks** 24.66 177 P P 18 42 58.2 +1.3
CMSA **Cobar Meteorol** 24.80 235 P P 18 42 59.3 +1.1
baz=25,SNR=51
CMSA **Cobar Meteorol** 24.80 235 P P 18 42 59.3 +1.1
MILA **Mila** 25.30 221 P P 18 43 04.8 +2.0
baz=25,SNR=5.4
LBZ **Lake Benmore** 25.30 179 P P 18 43 03.4 +0.8
COEN **Coen** 25.70 277 P P 18 43 07.3 +0.7
baz=26,SNR=18
COEN **Coen** 25.70 277 P P 18 43 06.4 -0.2
COEN pP pP 18 43 53.6 +0.8
COEN lAmb lAmb 18 44 05.0
comp=Z,60nm,1.1s
COEN **Coen** 25.70 277 P P 18 43 07.4 +0.8
ODZ **Otahua Downs** 25.97 178 P P 18 43 10.1 +1.4
ODZ lAmb lAmb 18 43 26.6
comp=Z,78nm,1.5s
MLZ **Mavora Lakes** 26.30 182 P P 18 43 12.7 +1.1
MLZ lAmb lAmb 18 43 55.4
comp=Z,96nm,1.6s
DCZ **Deep Cove** 26.45 184 P P 18 43 13.6 +0.8
DCZ lAmb lAmb 18 43 53.0
comp=Z,159nm,1.9s
INKA **Innaminka** 27.71 246 P P 18 43 25.8 +1.5
TOO **Toolangi** 27.93 224 P P 18 43 28.1 +1.9
baz=28,SNR=12
TOO **Toolangi** 27.93 224 P P 18 43 27.6 +1.3
TOO pP pwP 18 44 16.9 -1.9
TOO **Toolangi** 27.93 224 P P 18 43 27.6 +1.3
TOO *PP pwP 18 44 16.9 -1.9
TOO pmax pmax
comp=Z,60nm,1.3s
PATS **Pohnpei** 27.95 336 P P 18 43 26.1 -0.4
PATS pP 18 44 16.9 +2.2
QIS **Mount Isa** 28.13 262 P P 18 43 28.7 +0.5
baz=28,SNR=21
QIS **Mount Isa** 28.13 262 P P 18 43 29.6 +1.4
STKA **Stephens Creek** 28.15 237 P P 18 43 30.0 +1.8
baz=28,SNR=37
STKA **Stephens Creek** 28.15 237 P P 18 43 29.8 +1.6
STKA **Stephens Creek** 28.15 237 P P 18 43 29.1 +0.9
comp=Z,41nm,0.6s,baz=67,slow=8.9,SNR=123
STKA PcP PcP 18 46 35.5 -0.1
comp=Z,9.1nm,0.5s,baz=67,slow=4.5,SNR=7.5
STKA ScP ScP 18 49 51.1 -2.0
comp=Z,11nm,0.9s,baz=50,slow=3.9,SNR=11
STKA PKiKP PKiKP 18 54 09.8 -1.2
comp=Z,1.2nm,0.5s,baz=97,slow=1.8,SNR=4.7
comp=Z,41nm,0.6s
GLAD **Gladstone** 28.58 215 P P 18 43 34.6 +2.8
ARPS **Mount Arapiles** 30.00 228 P P 18 43 46.8 +2.4
baz=30,SNR=9.6
ARPS **Mount Arapiles** 30.00 228 P P 18 43 47.1 +2.7
MOO **Moorlands** 30.03 214 P P 18 43 46.6 +2.0
baz=30,SNR=16
TAU **Tasmania Unive** 30.29 213 P P 18 43 47.6 +0.7
TAU lAmb lAmb 18 44 51.3
comp=Z,84nm,1.6s
TAU **Tasmania Unive** 30.29 213 P P 18 43 47.6 +0.7
TAU pmax pmax
comp=Z,84nm,1.6s
LCRK **Leigh Creek** 30.49 242 P P 18 43 49.8 +1.0
HTT **Hallett** 30.80 236 P P 18 43 52.7 +1.1
baz=31,SNR=20
HTT **Hallett** 30.80 236 P P 18 43 53.0 +1.4
WHYH **Whyalla** 31.74 238 P P 18 44 01.1 +1.4
OOD **Oodnadatta** 32.13 248 P P 18 44 04.5 +1.3
BBOO **Buckleboo** 32.89 239 P P 18 44 10.6 +0.8
baz=33,SNR=22
BBOO **Buckleboo** 32.89 239 P P 18 44 10.1 +0.4
BBOO pP pP 18 44 57.4 -0.1
BBOO **Buckleboo** 32.89 239 P P 18 44 10.6 +0.8
GENI **Genyem** 32.99 296 P P 18 44 11.9 +1.1
GENI **Genyem** 32.99 296 P P 18 44 11.0 +0.2
comp=Z,540nm,0.6s,comp=Z,7μm
WRAB **Tennant Creek** 33.09 262 P P 18 44 10.7 -1.0
WRAB lAmb lAmb 18 44 11.5
comp=Z,30nm,0.6s
WRAB **Tennant Creek** 33.09 262 P P 18 44 10.7 -1.0
WRAB pmax pmax
comp=Z,30nm,0.6s
WRA **Warramunga Arr** 33.10 262 P P 18 44 10.8 -1.0
comp=Z,33nm,0.5s,baz=82,slow=6.1,SNR=386
WRA PcP PcP 18 46 49.0 0.0
comp=Z,4.2nm,0.5s,baz=90,slow=3.3,SNR=4.6
WRA S S 18 49 07.0 -5.6
comp=Z,14nm,1.0s,baz=90,slow=14,SNR=15
WRA ScP ScP 18 50 09.1 -0.7
comp=Z,3.4nm,1.0s,baz=93,slow=3.9,SNR=3.9
WRA PKiKP PKiKP 18 54 13.4 -1.3
comp=Z,1.9nm,0.6s,baz=24,slow=0.3,SNR=22
WRA P3KPbc 19 15 23.8
comp=Z,1.5nm,0.9s,baz=291,slow=2.9,SNR=6.5
comp=Z,33nm,0.5s
AS01 **Alice Springs** 33.35 256 P P 18 44 14.2 +0.3
AS31 **Alice Springs** 33.40 256 P P 18 44 14.1 -0.2
ASAR **Alice Springs** 33.40 256 P P 18 44 14.3 0.0
comp=Z,191nm,0.6s,baz=83,slow=8.9,SNR=4132
ASAR PcP PcP 18 46 49.3 -0.5
comp=Z,3.1nm,0.6s,baz=88,slow=3.2,SNR=2.7
ASAR S S 18 49 11.9 -5.1
comp=Z,6.6nm,0.6s,baz=84,slow=17,SNR=9.1
ASAR ScP ScP 18 50 09.9 -0.8
comp=Z,6.2nm,0.8s,baz=104,slow=3.3,SNR=11
ASAR PKiKP PKiKP 18 54 13.7 -1.2
comp=Z,1.3nm,0.5s,baz=105,slow=1.5,SNR=24
ASAR P3KPbc 19 15 22.9
comp=Z,1.2nm,0.6s,baz=278,slow=4.3,SNR=23
comp=Z,191nm,0.6s
MULG **Mulgathing** 33.96 244 P P 18 44 19.6 +0.6
KDU **Kakadu** 36.09 274 P P 18 44 37.3 -0.1
baz=36,SNR=13
KDU **Kakadu** 36.09 274 P P 18 44 37.3 -0.1
MTN **Manton Dam** 37.32 274 P P 18 44 47.5 -0.2
baz=37,SNR=49
MTN **Manton Dam** 37.32 274 P P 18 44 46.8 -0.9
MTN **Manton Dam** 37.32 274 P P 18 44 47.6 -0.1
WRKA **Warakurna** 38.53 253 P P 18 44 57.9 +0.2
baz=39,SNR=54
WRKA **Warakurna** 38.53 253 P P 18 44 58.0 +0.2
XMAS **Kiritimati** 38.67 61 P P 18 44 58.7 -0.2
XMAS **Kiritimati** 38.67 61 P P 18 45 00.6 +1.7
XMAS **Kiritimati** 38.67 61 P P 18 44 59.9 +1.0
PPT **Papeete** 38.85 95 P P 18 45 01.1 +0.7
comp=Z,39nm,0.6s,baz=154,slow=2.8,SNR=5.1
comp=Z,39nm,0.6s
PPTF **Pamatai, Papee** 38.85 95 P P 18 45 01.0 +0.5
PPTF lAmb lAmb 18 45 31.8
comp=Z,215nm,1.6s
PPTF **Pamatai, Papee** 38.85 95 P P 18 45 01.2 +0.7
KNRA **Kununurra** 38.94 268 P P 18 45 00.9 -0.2
baz=39,SNR=94
KNRA **Kununurra** 38.94 268 P P 18 44 60.0 -1.2
KNRA **Kununurra** 38.94 268 P P 18 45 01.1 -0.1
FORT **Forrest** 39.14 244 P P 18 45 02.8 +0.2
baz=39,SNR=12
FORT **Forrest** 39.14 244 P P 18 45 02.3 -0.4
FORT pP 18 45 50.5 -1.1
FORT lAmb lAmb 18 45 59.6
comp=Z,60nm,0.8s
FORT **Forrest** 39.14 244 P P 18 45 03.4 +0.7
FAKI **Fak Fak** 39.76 289 P P 18 45 07.0 -0.9
FAKI lAmb lAmb 18 45 08.0
comp=Z,45nm,0.6s
FAKI **Fak Fak** 39.76 289 P P 18 45 07.7 -0.2
FAKI **Fak Fak** 39.76 289 P P 18 45 07.4 -0.5
comp=Z,68nm,0.9s,comp=Z,1μm
GUMO **Guam** 40.46 321 P P 18 45 13.1 -0.5
GUMO lAmb lAmb 18 46 30.7
comp=Z,224nm,1.5s
GUMO **Guam** 40.46 321 P P 18 45 13.1 -0.5
GUMO pmax pmax
comp=Z,224nm,1.5s
JOHN **Johnston Islan** 41.09 31 P P 18 45 18.2 -0.4
FITZ **Fitzroy Crossi** 41.48 264 P P 18 45 22.6 +0.7
baz=42,SNR=77
FITZ **Fitzroy Crossi** 41.48 264 P P 18 45 22.1 +0.2
FITZ **Fitzroy Crossi** 41.48 264 P P 18 45 23.0 +1.0
SWI **Sorong** 41.57 291 P P 18 45 22.1 -0.6
comp=Z,112nm,0.8s,comp=Z,2μm
NLAI **Namlea** 44.27 285 P P 18 45 44.9 +0.6
comp=Z,25nm,0.5s,comp=Z,10μm
SOEI **Soe** 44.64 275 P P 18 45 46.9 -0.4
SOEI **Soe** 44.64 275 P P 18 45 48.6 +1.3
SOEI **Soe** 44.64 275 P P 18 45 48.1 +0.8
comp=Z,73nm,0.8s
TNTI **Ternate** 45.77 291 P P 18 45 56.6 +0.5
PSA00 **Pilbara Seismi** 46.46 258 P P 18 46 01.1 -0.3
PSA00 pP pP 18 46 50.0 -1.8
PSA00 **Pilbara Seismi** 46.46 258 P P 18 46 00.7 -0.7
PSA00 pP pP 18 46 50.4 -1.5
PSA00 lAmb lAmb 18 46 59.2
comp=Z,67nm,1.4s
PSA00 PcP PcP 18 47 31.9 +0.1
PSA00 **Pilbara Seismi** 46.46 258 P P 18 46 02.0 +0.6
MMRI **Maumere** 46.88 276 P P 18 46 03.3 -1.4
MMRI PcP PcP 18 47 34.2 +0.9
MMRI **Maumere** 46.88 276 P P 18 46 05.1 +0.4
MMRI **Maumere** 46.88 276 P P 18 46 04.4 -0.3
comp=Z,87nm,0.9s
MEEK **Meekatharra** 47.24 251 P P 18 46 07.6 +0.2
baz=47,SNR=74
MEEK **Meekatharra** 47.24 251 P P 18 46 07.8 +0.4
EDFI **Ende, Flores** 47.36 276 P P 18 46 08.9 +0.4
comp=Z,31nm,0.7s
KLBR **Kellerberrin** 48.01 244 P P 18 46 12.9 -0.3
baz=48,SNR=20
KLBR **Kellerberrin** 48.01 244 P P 18 46 13.2 0.0
NWAO **Narrogin (SRO)** 48.51 243 P P 18 46 17.2 +0.2
baz=49,SNR=4.6
NWAO P P 18 46 17.2 +0.2
baz=49,SNR=4.6
NWAO **Narrogin (SRO)** 48.51 243 P P 18 46 16.6 -0.4
NWAO pP pP 18 47 06.5 -1.3
NWAO **Narrogin (SRO)** 48.51 243 P P 18 46 16.5 -0.5
NWAO pP pP 18 47 06.8 -1.1
NWAO lAmb lAmb 18 47 18.5
comp=Z,104nm,0.9s
NWAO **Narrogin (SRO)** 48.51 243 P P 18 46 16.6 -0.4
NWAO pmax pmax
comp=Z,35nm,1.0s
KMSI **Cibinong** 48.70 288 P P 18 46 19.9 +1.2
comp=Z,124nm,0.8s
SGSI **Sangihe** 48.77 293 P P 18 46 19.4 +0.3
comp=Z,253nm,0.8s
RKGY **Rocky Gully** 48.84 240 P P 18 46 20.1 +0.7
baz=49,SNR=14
LUWI **Luwuk** 49.11 286 P P 18 46 21.3 -0.4
LUWI lAmb lAmb 18 46 23.6
comp=Z,250nm,1.8s
LUWI **Luwuk** 49.11 286 P P 18 46 23.0 +1.2
LUWI **Luwuk** 49.11 286 P P 18 46 22.3 +0.5
comp=Z,69nm,1.0s,comp=Z,1μm
MUN **Mundaring** 49.34 244 P P 18 46 24.2 +0.9
baz=49,SNR=3.1
MORW **Morawa** 49.46 248 P P 18 46 24.3 0.0
baz=50,SNR=7.5
MORW **Morawa** 49.46 248 P P 18 46 24.1 -0.1
MORW pP pP 18 47 13.6 -1.8
TAOE **Nuku Hiva Isla** 49.78 86 P P 18 46 26.8 -0.1
TAOE lAmb lAmb 18 46 28.5
comp=Z,81nm,0.7s
TAOE **Nuku Hiva Isla** 49.78 86 P P 18 46 28.2 +1.3
KAPI **Kappang** 50.40 279 P P 18 46 30.4 -1.0
KAPI **Kappang** 50.40 279 P P 18 46 32.5 +1.1
KAPI **Kappang** 50.40 279 P P 18 46 30.4 -1.0
KAPI pmax pmax
comp=Z,29nm,0.8s
KEKH **Kekaha** 50.68 38 P P 18 46 32.2 -1.1
PLAI **Plampang** 51.03 274 P P 18 46 36.6 +0.5
comp=Z,25nm,0.6s
TTSI **Tana Toraja** 51.04 282 P P 18 46 36.1 -0.1
comp=Z,20nm,0.7s
KHU **Kahuku** 51.18 44 P P 18 46 37.0 -0.4
KHU lAmb lAmb 18 46 38.5
comp=Z,92nm,0.7s
KHU PcP PcP 18 47 50.2 +1.1
KHU **Kahuku** 51.18 44 P P 18 46 37.0 -0.4
KHU 18 47 50.2
KHU pmax pmax
comp=Z,91nm,0.7s
KIP **Kipapa** 51.26 40 P P 18 46 38.2 +0.5
MWH **Moku'aweowe** 51.36 44 P P 18 46 38.1 -1.0
MWH lAmb lAmb 18 46 42.9
comp=Z,85nm,0.7s
MLOA **Mauna Loa Obse** 51.41 44 P P 18 46 38.5 -0.9
MLOA lAmb lAmb 18 46 42.0
comp=Z,134nm,0.9s
OPA **Opana** 51.46 40 P P 18 46 38.9 -0.2
OPA lAmb lAmb 18 46 41.9
comp=Z,117nm,0.8s
OPA **Opana** 51.46 40 P P 18 46 38.9 -0.2
OPA pmax pmax
comp=Z,117nm,0.8s
MLH **Mauna Loa** 51.51 44 P P 18 46 38.9 -0.9
MLH lAmb lAmb 18 46 42.6
comp=Z,100nm,0.8s
GIRL **Giralia** 51.52 256 P P 18 46 41.0 +1.4
baz=52,SNR=5.0
GIRL **Giralia** 51.52 256 P P 18 46 40.5 +0.8
HMH **Humu'ula Sheep** 51.52 44 P P 18 46 39.2 -0.7
MHA **Mahukona** 51.67 43 P P 18 46 40.3 -0.3
MHA **Mahukona** 51.67 43 P P 18 46 40.3 -0.3
HPAH **Hawaii Prepara** 51.69 43 P P 18 46 41.1 +0.2
TOLI2 **Tolitoli** 51.82 287 P P 18 46 41.1 -0.9
TOLI2 lAmb lAmb 18 46 42.7
comp=Z,70nm,0.8s
TOLI2 **Tolitoli** 51.82 287 P P 18 46 42.2 +0.3
KHLH **Kahului Airpor** 51.85 42 P P 18 46 41.8 -0.2
KHLH lAmb lAmb 18 46 45.2
comp=Z,211nm,1.2s
TWSI **Taliwang, Sumb** 51.90 274 P P 18 46 43.1 +0.5
comp=Z,53nm,1.5s,comp=Z,672nm
MPSI **Mapaga** 52.30 286 P P 18 46 45.5 0.0
comp=Z,2nm,1.0s
JCJ **Chichijima** 52.93 329 P P 18 46 45.4 -4.4
comp=Z,67nm,0.5s,baz=228,slow=12,SNR=2.6
TGY **Tagaytay City** 58.03 301 P P 18 47 27.2 +0.8
comp=Z,178nm,0.9s,baz=252,slow=3.2,SNR=3.6
comp=Z,178nm,0.9s
VNDA **Vanda** 58.66 182 P P 18 47 30.2 +0.5
comp=Z,5.5nm,0.4s,baz=357,slow=8.8,SNR=63
comp=Z,5.5nm,0.4s
VNDA **Vanda** 58.66 182 P P 18 47 30.7 +1.0
SBA **Scott Base** 58.89 181 P P 18 47 32.0 +0.8
SBA lAmb lAmb 18 47 34.6
comp=Z,135nm,1.4s
SBA **Scott Base** 58.89 181 P P 18 47 32.0 +0.8
SBA pmax pmax
comp=Z,135nm,1.4s
SBA **Scott Base** 58.89 181 P P 18 47 33.4 +2.1
KPJI **Karang Pucung** 59.83 273 P P 18 47 39.4 +0.7
comp=Z,43nm,0.8s
STKI **Sintang** 59.93 282 P P 18 47 40.5 +1.1
comp=Z,37nm,1.3s
JOW **Kunigami** 60.61 318 P P 18 47 44.4 +0.7
comp=Z,40nm,0.8s,baz=190,slow=27,SNR=3.8
comp=Z,40nm,0.8s
BBJI **Bungbulang** 61.00 272 P P 18 47 47.6 +0.9
CCD **Concordia, Ant** 61.16 192 P P 18 47 47.6 +0.4
CCD pP pP 18 48 43.0 +0.9
LEM **Lembang** 61.22 273 P P 18 47 49.2 +0.9
comp=Z,118nm,0.9s
CNJI **Cibinong** 61.54 272 P P 18 47 49.8 -0.4
comp=Z,55nm,0.8s,comp=Z,486nm
KSM **Kuching** 61.54 282 P P 18 47 49.1 -1.2
KSM lAmb lAmb 18 47 51.7
comp=Z,57nm,0.8s
KSM **Kuching** 61.54 282 P P 18 47 51.4 +1.2
XMI **Christmas Isla** 62.00 268 P P 18 47 54.4 +1.1
XMIS **Christmas Isla** 62.03 268 P P 18 47 53.3 -0.1
XMIS lAmb lAmb 18 47 55.0
comp=Z,45nm,0.9s
XMIS **Christmas Isla** 62.03 268 P P 18 47 54.4 +0.9
CBJI **Citeko** 62.07 273 P P 18 47 53.5 -0.3
comp=Z,152nm,0.8s
DBJI **Dramaga** 62.13 273 P P 18 47 54.8 +0.6
comp=Z,205nm,1.2s
MJAR **Matsushiro Arr** 62.66 332 P P 18 47 57.1 -0.1
comp=Z,11nm,0.5s,baz=286,slow=32,SNR=40
comp=Z,11nm,0.5s
MAJO **Matsushiro** 62.66 332 P P 18 47 56.6 -0.6
MAJO lAmb lAmb 18 47 58.6
comp=Z,59nm,1.3s
MAJO **Matsushiro** 62.66 332 P P 18 47 58.4 +1.2
MAJO **Matsushiro** 62.66 332 P P 18 47 56.6 -0.6
MAJO pmax pmax
comp=Z,59nm,1.3s
MAJO **Matsushiro** 62.66 332 P P 18 47 57.4 +0.2
JMM **Marumori** 62.68 335 P P 18 47 56.8 -0.5
JMM lAmb lAmb 18 47 59.9
comp=Z,104nm,1.2s
JMM **Marumori** 62.68 335 P P 18 47 58.9 +1.7
NACB **Ninganchiao** 63.41 311 P P 18 48 01.4 -0.9
TPUB **Ta-pu** 63.57 309 P P 18 48 02.3 -1.1
JNU **Nakatsue** 63.62 324 P P 18 48 03.5 0.0
comp=Z,9.8nm,0.5s,baz=141,slow=1.8,SNR=16
comp=Z,9.8nm,0.5s
SSLB **Suanglung** 63.63 310 lAmb lAmb 18 48 04.1
comp=Z,37nm,0.6s
YHNB **Yeheng** 63.87 311 lAmb lAmb 18 48 10.4
comp=Z,75nm,1.1s
YHNB **Yeheng** 63.87 311 P P 18 48 06.8 +1.4
KASI **Kota Agung** 64.58 273 P P 18 48 09.3 -0.8
comp=Z,176nm,0.9s,comp=Z,2μm
JTM **Tenmabayashi** 65.09 337 P P 18 48 13.3 +0.4
LWLI **Liwa** 65.15 273 P P 18 48 13.6 -0.4
comp=Z,170nm,0.7s,comp=Z,2μm
JKA **Kamikawa-asahi** 67.47 339 P P 18 48 27.9 0.0
JKA lAmb lAmb 18 48 31.4
comp=Z,51nm,0.8s
ASAJ **Asahikawa** 67.47 339 P P 18 48 27.9 +0.1
ASAJ pmax pmax
comp=Z,51nm,0.8s
ASAJ **Asahikawa** 67.47 339 P P 18 48 29.1 +1.3
comp=Z,30nm,0.6s,baz=244,slow=4.0,SNR=18
comp=Z,30nm,0.6s
KSRS **Korea Array** 68.45 325 P P 18 48 34.4 +0.3
comp=Z,5.3nm,1.1s,baz=146,slow=6.3,SNR=10
comp=Z,5.3nm,1.1s
QIZ **Qiongzhong** 69.66 299 P P 18 48 43.0 +1.1
QIZ pP pP 18 49 40.3 +1.7
QIZ sP sP 18 50 04.3 -0.7
QIZ S S 18 57 32.3 +1.8
QIZ LR LR
comp=Z,590nm,15.9s
QIZ LR LR
comp=Z,420nm,13.7s
QIZ LR LR
comp=Z,740nm,19.7s
YSS **Yuzh-Sakhalins** 69.94 341 P P 18 48 43.8 +0.8
YSS lAmb lAmb 18 48 46.5
comp=Z,70nm,1.1s

YSS Yuzh-Sakhalins 69.94 341 P P 18 48 45.4 +2.4
YSS Yuzh-Sakhalins 69.94 341 *ce* P **P 18 48 41.1 -1.9**
YSS pmax pmax
comp=Z,62nm,1.0s
YSS Yuzh-Sakhalins 69.94 341 P P 18 48 45.4 +2.4
NJ2 Nanjing 70.20 316 *eP* **P 18 48 46.5 +1.6**
NJ2 pmax pmax
comp=Z,16nm,0.9s
NJ2 pmax pmax
comp=Z,340nm,4.5s
SKR Severo-Kuril's 70.38 351 *ce* P **P 18 48 46.9 +1.3**
MSHR Mys Shultsa 70.73 331 *i* P **P 18 48 47.8 -0.1**
QSPA South Pole Qui 71.04 180 P P 18 48 50.4 +0.7
QSPA IAmb IAmb 18 48 50.9
comp=Z,33nm,0.6s
QSPA South Pole Qui 71.04 180 ⇑ P **P 18 48 50.3 +0.7**
QSPA pP **pP 18 49 46.9 +0.8**
IPM Ipoh 71.25 282 P P 18 48 52.1 +0.4
ADK Adak 71.62 9 P P 18 48 52.8 -0.2
ADK IAmb IAmb 18 48 56.0
comp=Z,101nm,1.4s
ADK Adak 71.62 9 P P 18 48 52.8 -0.2
ADK pmax pmax
comp=Z,101nm,1.4s
ADK Adak 71.62 9 P P 18 48 53.3 +0.3
USA0B Ussuriysk Arra 71.64 333 *i* P **P 18 48 51.2 -2.1**
USRK Ussuriysk Ar. 71.64 333 P P 18 48 53.5 +0.2
comp=Z,30nm,1.0s,baz=151,slow=4.0,SNR=19
comp=Z,30nm,1.0s
GSTR Great Sitkin T 71.92 9 P P 18 48 54.5 -0.3
ATKA Atka Island 72.33 10 P P 18 48 57.3 +0.1
ATKA pP **pP 18 49 52.6 -1.4**
ATKA Atka Island 72.33 10 P P 18 48 58.8 +1.6
PET Petropavlovsk 72.35 353 P P 18 48 57.2 -0.1
PET IAmb IAmb 18 49 00.2
comp=Z,39nm,0.6s
PET Petropavlovsk 72.35 353 P P 18 48 58.7 +1.5
PET Petropavlovsk 72.35 353 *ce* P **P 18 48 56.5 -0.7**
PET pmax pmax
comp=Z,62nm,1.3s
GULI GuiLin 72.41 305 ⇓ *i* P **P 18 48 56.7 -1.6**
PEA0B Petropavlovsk- 72.54 353 *ce* P **P 18 48 58.5 +0.1**
PETK Petropavlovsk- 72.54 353 P P 18 48 59.2 +0.8
comp=Z,51nm,0.8s,baz=140,slow=5.5,SNR=100
comp=Z,51nm,0.8s
RPSI Rantau Prapat 72.57 279 P P 18 48 58.8 -0.7
PSI Prapat 72.61 279 P P 18 48 59.7 -0.2
PSI Prapat 72.61 279 P P 18 48 58.8 -1.1
PSI pmax pmax
comp=Z,25nm,1.0s
DL2 Dalian 72.97 323 P P 18 49 02.2 +0.9
DL2 pP **pP 18 49 54.8 -3.4**
DL2 sP **sP 18 50 18.3 -6.0**
DL2 PP **PP 18 51 45.1 -2.5**
DL2 S **SKiKP 18 58 09.3 +1.1**
DL2 ScS **ScS 18 58 44.2 -1.4**
DL2 pmax pmax
comp=Z,67nm,1.2s
DL2 pmax pmax
comp=Z,640nm,5.7s
MDJ Mudanjiang 73.03 331 IAmb IAmb 18 49 04.4
comp=Z,55nm,1.1s
MDJ Mudanjiang 73.03 331 P P 18 49 03.1 +1.6
GSI Gunungsitoli 73.35 277 P P 18 49 04.0 -0.1
GSI Gunungsitoli 73.35 277 P P 18 49 04.9 +0.8
comp=Z,51nm,0.9s
TYV Tymovskoe 73.47 343 *eP* **P 18 49 06.2 +2.3**
TYV *eS* **S 18 58 15.6 +3.0**
TYV pmax pmax
comp=Z,25nm,1.1s
TYV pmax pmax
comp=Z,400nm,3.5s
TYV smax smax
comp=N,400nm,9.0s
TYV smax smax
comp=E,600nm,9.0s
TIA Tai'an 73.92 318 ⇓ **P P 18 49 07.1 +0.2**
TIA pmax pmax
comp=E,16nm,1.3s
KCSI Kotacane, Aceh 73.94 280 P P 18 49 06.6 -0.9
comp=E,20nm,1.1s
NIKH Nikolski High 74.11 13 P P 18 49 08.5 +1.0
NIKH Nikolski High 74.11 13 P P 18 49 07.7 +0.2
baz=201,SNR=14
CN2 Changchun 74.38 328 P P 18 49 10.4 +1.0
CN2 pmax pmax
comp=E,50nm,0.8s
NONG Nongkai 74.84 295 P P 18 49 13.8 +1.3
BNX BinXian 74.89 331 ⇓ **P P 18 49 13.1 +0.9**
BNX pmax pmax
comp=E,26nm,0.9s
BNX pmax pmax
comp=E,520nm,4.6s
GRNR Gornyy 75.32 339 ⇑ *i* P **P 18 49 17.1 +2.5**
GRNR pmax pmax
comp=N,9.0nm,1.1s
GRNR pmax pmax
comp=E,7.0nm,1.1s
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR MLR MLR
comp=E,140nm,11.0s
GRNR MLR MLR
comp=N,250nm,13.0s
GRNR MLR MLR
comp=Z,460nm,13.0s
UNV Unalaska Valle 75.45 14 P P 18 49 17.0 +1.8
UNV Unalaska Valle 75.45 14 P P 18 49 15.3 +0.1
baz=203
SLVN Son La 75.66 299 P P 18 49 17.0 -0.2
ENH Enshi 75.70 309 P P 18 49 17.9 +0.7
KLR Kul'dur 75.76 336 *ce* P **P 18 49 17.3 +0.2**
KLR pmax pmax
comp=Z,66nm,1.7s
KLR Kul'dur 75.76 336 P P 18 49 18.7 +1.7
comp=Z,20nm,0.9s,baz=112,slow=3.0,SNR=32
comp=Z,20nm,0.9s
GYA Guiyang 75.88 305 ⇑ *i* P **P 18 49 19.3 +0.9**
GYA pP pP 18 50 16.7 +0.6
GYA pmax pmax
comp=Z,24nm,1.2s
LYN LuoYang 75.97 314 ⇑ P **P 18 49 20.0 +1.4**
LYN pP pP 18 50 17.3 +1.3
LYN sP sP 18 50 43.4 +1.4
LYN pmax pmax
comp=Z,56nm,1.1s
LYN pmax pmax
comp=Z,700nm,9.5s
HNS HongShan 76.18 318 ⇑ P **P 18 49 21.2 +1.5**
HNS pP **pP 18 50 20.6 +3.4**
HNS pmax pmax
comp=Z,19nm,1.5s
SRDT SRDT 76.79 290 P P 18 49 25.6 +2.0
BJT Baijiatuau 76.89 321 P P 18 49 25.0 +1.3
BJI Beijing 76.91 321 P P 18 49 25.0 +1.3
BJI PcP **PcP 18 49 35.5 +1.8**
BJI pP **pP 18 50 24.7 +3.5**
BJI S **S 18 58 51.6 +0.7**
BJI pmax pmax
comp=Z,12nm,1.1s
BJI pmax pmax
comp=Z,210nm,10.2s
BJI LR LR
comp=Z,230nm,23.1s
BJI LR LR
comp=Z,170nm,22.6s
BJI LR LR
comp=Z,250nm,19.8s
TIY Taiyuan 77.82 317 P P 18 49 31.0 +2.0
TIY S **S 18 59 07.4 +6.4**
TIY pmax pmax
comp=Z,20nm,0.7s
XAN Xi'an 78.12 312 P P 18 49 31.7 +1.0
XAN pmax pmax
comp=Z,49nm,1.2s
CRAI Chiangrai 78.13 296 P P 18 49 30.2 -0.8
CRAI pP **pP 18 50 28.1 -0.8**
CHNA Chernabura Isl 78.15 18 P P 18 49 31.0 +0.8
baz=210
HEH HeiHe 78.31 334 *eP* **P 18 49 31.9 +0.7**
HEH S **S 18 59 11.3 +5.8**
HEH pmax pmax
comp=Z,30nm,0.9s
KMI Kunming 78.34 302 ⇓ **P P 18 49 34.0 +1.7**
KMI pP pP 18 50 32.1 +1.8
KMI S **S 18 59 12.5 +5.1**
KMI pmax pmax
comp=Z,52nm,1.1s
SDPT Sand Point 78.35 17 P P 18 49 30.9 -0.4
SDPT Sand Point 78.35 17 P P 18 49 31.9 +0.6
baz=209
CMAR Chiang Mai Arr 78.61 294 P P 18 49 35.3 +1.7
comp=Z,13nm,0.9s,baz=133,slow=4.2,SNR=76
CMAR PKKPbc **PKKPbc 19 08 27.6 +0.2**
comp=Z,0.6nm,0.6s,baz=271,slow=3.4,SNR=4.5
comp=Z,13nm,0.9s
MAW Mawson 78.72 202 P P 18 49 34.5 +1.2
comp=Z,7.7nm,0.5s,baz=153,slow=4.6,SNR=13
comp=Z,7.7nm,0.5s
CHTO Chiang Mai 78.76 294 P P 18 49 34.8 +0.4
CHTO **pP 18 50 31.6 -0.8**
CHTO Chiang Mai 78.76 294 P P 18 49 36.4 +2.0
XLT XiLinHaoTe 79.39 324 ⇑ *i* P **P 18 49 38.4 +1.0**
XLT PcP **PcP 18 49 44.6 0.0**
XLT pP pP 18 50 39.4 +4.1
XLT pmax pmax
comp=Z,25nm,0.9s
XLT pmax pmax
comp=Z,250nm,7.0s
S14K Fog Glacier 79.42 17 P P 18 49 37.5 +0.3
baz=210
CHGN Chignik 79.76 18 IAmb IAmb 18 49 42.9
comp=Z,87nm,1.3s
CHGN Chignik 79.76 18 P P 18 49 39.3 +0.5
baz=211
PZH PanZhiHua 79.77 303 P P 18 49 40.0 +0.1
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,520nm,10.0s
HHC Hu-ho-hao-te 80.20 319 *eP* **P 18 49 43.3 +1.5**
HHC S **S 18 59 27.0 +1.0**
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,300nm,4.5s
CD2 Chengdu 80.28 307 P P 18 49 43.0 +0.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
BTO Baotou 81.02 318 *eP* **P 18 49 48.7 +2.6**
BTO pP **pP 18 50 48.4 +4.2**
BTO PP **PP 18 52 55.3 +0.3**
BTO S **S 18 59 34.1 -0.4**
BTO pmax pmax
comp=Z,22nm,1.0s
BTO pmax pmax
comp=Z,1μm,8.9s
BTO LR LR
comp=Z,7μm,7.2s
BTO LR LR
comp=Z,5μm,7.1s
BTO LR LR
comp=Z,12μm,8.0s
HIA Hailar 81.03 330 P P 18 49 47.4 +1.5
HIA Hailar 81.03 330 *eP* **P 18 49 45.1 -0.8**
HIA pmax pmax
comp=Z,23nm,1.3s
ZEA Zeya 81.04 336 *eP* **P 18 49 47.2 +1.4**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.2s
R16K Pilot Point 81.08 17 P P 18 49 47.0 +1.1
baz=211
SII Sitkinak Islan 81.24 19 P P 18 49 47.3 +0.5
SII Sitkinak Islan 81.24 19 P P 18 49 49.4 +2.6
SII Sitkinak Islan 81.24 19 P P 18 49 47.8 +1.0
baz=214,SNR=6.3
M11K Mekoryuk 81.54 12 P P 18 49 49.8 +1.6
baz=203
O14K Tigyukauivet M 81.59 15 IAmb IAmb 18 49 52.5
comp=Z,54nm,0.7s
O14K Tigyukauivet M 81.59 15 P P 18 49 49.4 +0.9
baz=208
TNCH TengChong 81.73 300 ⇑ P **P 18 49 51.6 +1.3**
TNCH pP pP 18 50 49.1 +0.5
TNCH PP **PP 18 53 05.0 +3.8**
TNCH S **S 18 59 43.1 +0.5**
TNCH sS sS 19 01 18.6 -4.2
TNCH pmax pmax
comp=Z,22nm,1.1s
TNCH pmax pmax
comp=Z,190nm,4.8s
O15K Ungalikthiuk R 81.88 15 P P 18 49 50.9 +0.9
baz=209
R18K Karluk 81.99 19 P P 18 49 51.3 +0.7
baz=214
OHAK Old Harbor 82.07 19 P P 18 49 51.4 +0.4
OHAK Old Harbor 82.07 19 P P 18 49 53.1 +2.1
OHAK Old Harbor 82.07 19 P P 18 49 52.0 +0.9
baz=215,SNR=11
N14K Kuskokwak Cree 82.09 14 P P 18 49 52.0 +0.9
baz=207
M13K Dall Lake 82.15 13 P P 18 49 52.5 +1.1
baz=206
Q17K Contact Creek 82.15 18 P P 18 49 52.2 +0.6
baz=213,SNR=25
P16K Nushagak River 82.23 16 P P 18 49 52.5 +0.6
baz=211,SNR=6.8
Q16K King Salmon 82.29 17 P P 18 49 52.8 +0.6
baz=212
BELA Belgrano 2 82.30 175 pP pP 18 50 51.1 +0.7
MND Mandalay 82.49 296 P P 18 49 55.2 +1.1
N15K Kwethluk River 82.68 15 P P 18 49 55.1 +0.9
baz=209
O16K Kokwok River B 82.68 16 IAmb IAmb 18 49 56.6
comp=Z,82nm,1.4s
O16K Kokwok River B 82.68 16 P P 18 49 54.7 +0.5
baz=211
LZH Lanzhou 82.74 312 *eP* **P 18 49 57.3 +2.0**
LZH pP pP 18 50 57.1 +3.4
LZH pmax pmax
comp=Z,42nm,1.5s
KDAK Kodiak Island 82.75 19 P P 18 49 55.1 +0.6
KDAK Kodiak Island 82.75 19 P P 18 49 55.9 +1.3
baz=216
KDAK Kodiak Island 82.75 19 *i* P **P 18 49 52.7 -1.8**
KDAK pmax pmax
comp=Z,164nm,0.9s
M14K Bethel 82.76 14 P P 18 49 55.1 +0.5
M14K Bethel 82.76 14 P P 18 49 55.4 +0.9
baz=207,SNR=16
SEY Seymchan 82.78 352 *i* P **P 18 49 55.0 +0.4**
SEY pmax pmax
comp=Z,22nm,1.3s
P17K Kvichak River 82.79 17 P P 18 49 55.2 +0.5
baz=212
M15K Kasigluk River 83.00 14 P P 18 49 56.3 +0.5
baz=208
O17K Koliganek Bris 83.10 16 P P 18 49 56.6 +0.3
baz=212,SNR=9.7
L14K Kuka Creek 83.13 13 IAmb IAmb 18 49 59.4
comp=Z,58nm,0.8s
L14K Kuka Creek 83.13 13 P P 18 49 57.6 +1.1
baz=206
N16K Nishlik Lake 83.27 15 P P 18 49 58.5 +1.3
baz=210
P18K Big Mountain, 83.29 17 P P 18 49 57.7 +0.4
baz=213,SNR=84
Q19K Cape Douglas, 83.36 18 P P 18 49 58.3 +0.5
baz=215,SNR=13
Q20K Shuyak Island 83.48 19 P P 18 49 59.5 +1.2
baz=216,SNR=6.1
SYI Shuyak Island 83.48 19 P P 18 49 58.5 +0.2
O18K Koktuh Hills 83.68 17 P P 18 49 59.3 0.0
O18K Koktuh Hills 83.68 17 P P 18 49 60.0 +0.7
baz=213,SNR=23
L15K Ungalak Mounta 83.69 13 P P 18 50 00.5 +1.2
baz=208
M16K Timber Creek 83.70 15 P P 18 50 00.8 +1.4
baz=210
N17K Nushagak Hills 83.72 16 IAmb IAmb 18 50 03.3
comp=Z,80nm,1.1s
N17K Nushagak Hills 83.72 16 P P 18 50 00.8 +1.4
baz=212
GAMB Gambell 83.82 8 P P 18 50 01.1 +1.3
baz=198
P19K Oil Pt 84.08 18 P P 18 50 02.0 +0.7
baz=215,SNR=17
L16K Owhat River 84.18 14 P P 18 50 03.2 +1.5
baz=209,SNR=43
N18K Kilae Creek 84.19 16 IAmb IAmb 18 50 06.0
comp=Z,76nm,1.3s
N18K Kilae Creek 84.19 16 P P 18 50 02.5 +0.6
baz=213
O19K Port Alsworth 84.21 17 P P 18 50 02.4 +0.5
baz=214,SNR=25
J14K Nanvaranak Lak 84.22 12 P P 18 50 03.4 +1.5
baz=206
K15K Wolf Creek Mou 84.23 13 P P 18 50 03.4 +1.4
baz=207
M17K Holitna River 84.41 15 P P 18 50 04.4 +1.5
baz=211
HOM Homer 84.56 19 P P 18 50 05.0 +1.3
baz=217
CNPM China Poot 84.57 19 P P 18 50 04.0 +0.2
O20K Slope Mountain 84.61 18 P P 18 50 04.5 +0.5
baz=216,SNR=5.7
SVW2 Sparrevohn 84.62 16 P P 18 50 06.1 +2.1
N19K Bonanza Creek 84.68 17 IAmb IAmb 18 50 06.4
comp=Z,32nm,0.8s
N19K Bonanza Creek 84.68 17 P P 18 50 04.8 +0.4
baz=214,SNR=12
L17K Donlin 84.83 15 P P 18 50 06.2 +1.2
baz=210
BRLK Bradley Lake 84.87 19 P P 18 50 06.0 +0.7
M18K Stony River 84.89 16 P P 18 50 06.3 +1.0
baz=213,SNR=57
BRSE Bradley Lake S 84.90 19 P P 18 50 06.4 +1.0
baz=217
L18K Granite Mounta 85.29 15 IAmb IAmb 18 50 10.4
comp=Z,38nm,0.6s
L18K Granite Mounta 85.29 15 P P 18 50 08.8 +1.5
baz=212,SNR=24
J16K Anvik River 85.31 13 P P 18 50 08.9 +1.6
baz=208
K17K Iditarod 85.33 14 P P 18 50 08.8 +1.3
baz=210,SNR=31
KMPM Mount Pierce 85.41 45 IAmb IAmb 18 50 12.2
comp=Z,78nm,1.1s
HOPS Hopland Field 85.43 46 P P 18 50 09.0 +0.5
HOPS IAmb IAmb 18 50 12.4
comp=Z,37nm,0.8s
SAO San Andreas Ge 85.51 49 P P 18 50 08.9 -0.1
SAO IAmb IAmb 18 50 12.9
comp=Z,42nm,0.9s
SAO San Andreas Ge 85.51 49 P P 18 50 08.9 -0.1
SAO pmax pmax
comp=Z,42nm,0.9s
GDXM Geysers 85.53 46 IAmb IAmb 18 50 12.9
comp=Z,104nm,1.6s
ANM Nome 85.54 11 IAmb IAmb 18 50 11.7
comp=Z,55nm,1.1s
ANM Nome 85.54 11 P P 18 50 10.1 +1.6
baz=204,SNR=25
SEW Seward 85.58 19 P P 18 50 09.9 +1.2
baz=218
KMRM Mail Ridge 85.59 45 P P 18 50 09.8 +0.4
CAPN Captain Cook N 85.59 18 P P 18 50 10.3 +1.6
baz=217
M19K Big River Lodg 85.61 16 IAmb IAmb 18 50 13.5
comp=Z,25nm,0.6s
M19K Big River Lodg 85.61 16 P P 18 50 09.8 +0.9
baz=214
N20K Mount Spurr 85.64 18 P P 18 50 10.7 +1.6
baz=216
BBGB Big Mountain B 85.72 49 P P 18 50 10.2 +0.1
BBGB IAmb IAmb 18 50 18.9
comp=Z,58nm,0.8s
SBC Santa Barbara 85.72 52 P P 18 50 10.6 +0.6
baz=244
L19K White Mountain 85.72 16 P P 18 50 10.6 +1.1
baz=214
I17K Unalakleet 85.83 13 IAmb IAmb 18 50 13.4
comp=Z,64nm,1.4s
I17K Unalakleet 85.83 13 P P 18 50 11.7 +1.9
baz=208,SNR=12
PKM Mcpherson Peak 85.84 51 P P 18 50 12.2 +1.3
baz=244,SNR=9.2
KHMM Horse Mountain 85.90 44 P P 18 50 10.4 -0.5
SMMC Simmler 85.90 51 P P 18 50 12.6 +1.6
baz=243
M20K Styx River 85.94 17 P P 18 50 12.9 +2.3
baz=215
SCI2 San Clemente I 85.95 53 P P 18 50 12.4 +1.1
baz=244,SNR=6.3
TNA Tin City 86.05 9 P P 18 50 11.9 +1.1
baz=201,SNR=21
TTA Tatalina 86.06 15 IAmb IAmb 18 50 14.2
comp=Z,25nm,0.8s
TTA Tatalina 86.06 15 P P 18 50 12.8 +1.6
TTA Tatalina 86.06 15 P P 18 50 12.4 +1.2
baz=212,SNR=21
KRMB Red Mountain 86.10 44 P P 18 50 11.6 -0.3
KRMB IAmb IAmb 18 50 14.6
comp=Z,29nm,0.8s
G15K Niukluk 86.17 11 P P 18 50 12.3 +0.8
baz=205,SNR=29
H16K Elim 86.19 12 P P 18 50 12.7 +1.2
baz=207,SNR=45
F14K Arctic Creek 86.22 10 P P 18 50 12.9 +1.2
baz=203
L20K Farewell, AK 86.23 16 P P 18 50 12.1 +0.2
baz=214
CIS Catalina Islan 86.24 53 P P 18 50 12.8 +0.2
baz=244,SNR=6.2
KSXB Camp Six Broad 86.27 43 P P 18 50 13.1 +0.4
SUA Susitna One 86.27 18 IAmb IAmb 18 50 14.2
comp=Z,39nm,1.0s
SUA Susitna One 86.27 18 P P 18 50 12.0 -0.3
baz=217,SNR=9.8
RC01 Rabbit Creek A 86.27 19 P P 18 50 11.3 -0.9
RC01 IAmb IAmb 18 50 14.5
comp=Z,28nm,0.8s
RC01 Rabbit Creek A 86.27 19 P P 18 50 12.6 +0.5
baz=218
J18K Innoko River 86.35 15 P P 18 50 13.2 +0.8
baz=212
ELIB Princess Elisa 86.40 190 *d* P **P 18 50 12.9 0.0**
ELIB *d* pP **pP 18 51 12.1 +0.4**
FMP Fort Macarthur 86.46 53 P P 18 50 13.8 +0.2
baz=244
KEBM Edson Butte 86.49 42 P P 18 50 13.3 -0.4
KEBM IAmb IAmb 18 50 18.6
comp=Z,63nm,1.1s
OSI Osito Audit: C 86.53 52 P P 18 50 14.9 +0.8
baz=244
DECC Green Verdugo 86.66 52 P P 18 50 15.1 +0.4
baz=244
ARVC Arvin 86.67 51 P P 18 50 15.2 +0.5
baz=244
F15K North Star Dit 86.72 10 P P 18 50 15.4 +1.2
baz=204
YAK Yakutsk 86.73 342 P P 18 50 13.7 -0.5
YAK IAmb IAmb 18 50 18.7
comp=Z,37nm,0.8s
YAK **pP 18 51 12.6 -0.5**
YAK Yakutsk 86.73 342 *eP* **P 18 50 13.1 -1.1**
YAK *e**PP **pP 18 51 14.4 +1.3**
YAK *e* 18 53 39.3
YAK *eS* **SKSac 19 00 15.3 -1.5**
YAK *e**SS sS 19 02 06.1 -7.4
YAK *eSS* **SS 19 06 19.2 +0.9**
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=Z,33nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=Z,129nm,3.5s
YAK pmax pmax
comp=N,62nm,3.7s
YAK pmax pmax
comp=E,58nm,2.9s
YAK smax smax
comp=N,126nm,5.6s
YAK smax smax
comp=E,113nm,4.3s
PASC Pasadena Art C 86.74 52 IAmb IAmb 18 50 16.8
comp=Z,36nm,0.7s
ORV Oroville 86.77 46 IAmb IAmb 18 50 18.6
comp=Z,29nm,0.7s
VOG Valley Oaks Go 86.79 50 P P 18 50 15.7 +0.5
baz=244
VES Vestal, Richgr 86.80 50 P P 18 50 15.9 +0.6
baz=244,SNR=5.7
ULN Ulaanbaatar 86.82 323 P P 18 50 14.8 -0.5

ULN IAmb IAmb 18 50 17.8
comp=Z,64nm,1.1s
ULN pP 18 51 14.8 +0.6
ULN Ulaanbaatar 86.82 323 *i* P P 18 50 14.3 -1.0
ULN pmax pmax
comp=Z,62nm,1.1s
K02D Willamette Mer 86.83 43 P P 18 50 15.4 +0.1
BILL Bilibino 86.83 359 P P 18 50 14.6 -0.1
BILL IAmb IAmb 18 50 16.8
comp=Z,46nm,0.8s
BILL Bilibino 86.83 359 *i* P P 18 50 14.9 +0.2
G16K Koyuk River 86.84 11 IAmb IAmb 18 50 18.6
comp=Z,44nm,0.7s
G16K Koyuk River 86.84 11 P P 18 50 16.0 +1.2
baz=207,SNR=56
CMB Columbia Colle 86.84 48 P P 18 50 15.4 -0.1
CMB IAmb IAmb 18 50 19.0
comp=Z,38nm,0.8s
CMB Columbia Colle 86.84 48 P P 18 50 15.4 -0.1
CMB pmax pmax
comp=Z,38nm,0.8s
PMR Palmer 86.85 18 P P 18 50 16.9 +2.1
PMR Palmer 86.85 18 P P 18 50 15.6 +0.8
baz=219
AFDM Forest Hills D 86.85 47 IAmb IAmb 18 50 19.1
comp=Z,43nm,0.9s
K20K Telida 86.91 16 P P 18 50 15.8 +0.6
baz=214
KNK Knik Glacier 86.91 19 P P 18 50 14.4 -0.8
KNK IAmb IAmb 18 50 17.6
comp=Z,98nm,1.7s
KNK Knik Glacier 86.91 19 P P 18 50 15.7 +0.4
baz=219
H17K Granite Mounta 86.92 13 IAmb IAmb 18 50 18.3
comp=Z,45nm,0.9s
H17K Granite Mounta 86.92 13 P P 18 50 15.9 +0.8
baz=209,SNR=19
CCX Cicese 86.93 55 P P 18 50 15.8 -0.1
CCX IAmb IAmb 18 50 19.7
comp=Z,32nm,0.7s
YBH Yreka Blue Hor 86.98 44 IAmb IAmb 18 50 20.3
comp=Z,35nm,0.8s
109C Camp Elliot, M 87.01 54 IAmb IAmb 18 50 20.9
comp=Z,66nm,1.1s
109C Camp Elliot, M 87.01 54 P P 18 50 16.8 +0.5
baz=245
PPLA Purkeypile 87.02 17 P P 18 50 15.8 -0.1
baz=216
GHO Glory Hole Cre 87.05 18 IAmb IAmb 18 50 18.1
comp=Z,46nm,1.3s
J19K Poorman 87.06 15 IAmb IAmb 18 50 19.1
comp=Z,51nm,1.5s
J19K Poorman 87.06 15 P P 18 50 16.6 +0.7
baz=213
ELS Elsinore Mount 87.09 53 P P 18 50 16.9 +0.1
CBX Cerro Bola 87.11 55 P P 18 50 17.8 +0.8
CBX IAmb IAmb 18 50 20.6
comp=Z,53nm,0.8s
EYAK Cordova Ski Ar 87.11 20 P P 18 50 17.8 +1.7
baz=222
GTA Gaotai 87.14 313 ⇑P P 18 50 18.1 +1.1
GTA pP pP 18 51 16.3 +0.4
GTA sP sP 18 51 37.0 -4.5
GTA pmax pmax
comp=Z,24nm,1.1s
CUT Chulitna 87.16 18 IAmb IAmb 18 50 21.0
comp=Z,30nm,0.6s
CUT Chulitna 87.16 18 P P 18 50 16.2 -0.1
baz=218
BFSC Mount Baldy Ra 87.16 52 P P 18 50 17.8 +0.6
baz=245,SNR=20
ISA Isabella, Lake 87.17 51 IAmb IAmb 18 50 20.4
comp=Z,55nm,0.9s
ISA Isabella, Lake 87.17 51 P P 18 50 18.1 +1.0
baz=244,SNR=39
SONM Songino Array 87.17 323 P P 18 50 17.8 +0.8
comp=Z,26nm,0.9s,baz=139,slow=5.1,SNR=108
SONM PKKPbc **PKKPbc** 19 08 07.5 -1.8
comp=Z,0.8nm,0.5s,baz=268,slow=2.7,SNR=5.2
comp=Z,26nm,0.9s
EDW2 Edwards Air Fo 87.19 52 P P 18 50 18.0 +0.7
baz=245,SNR=30
MURC Murrieta 87.24 53 P P 18 50 18.0 +0.5
baz=245,SNR=12
HUMO Hull Mountain 87.25 43 P P 18 50 18.3 +1.0
HUMO IAmb IAmb 18 50 21.6
comp=Z,48nm,0.9s
SML Sawmill 87.26 19 IAmb IAmb 18 52 07.8
comp=Z,123nm,1.8s
SML Sawmill 87.26 19 P P 18 50 18.2 +1.3
baz=220
G17K Kiwalik Mounta 87.26 12 P P 18 50 17.8 +1.0
baz=208
CCAC Calif City Air 87.28 51 IAmb IAmb 18 50 24.2
comp=Z,30nm,0.7s
DBO Dodson Butte 87.31 43 IAmb IAmb 18 50 21.1
comp=Z,28nm,0.9s
GCSA Galena City Sc 87.40 14 P P 18 50 18.4 +1.0
baz=212,SNR=8.5
VTX Valle De La Tr 87.42 56 P P 18 50 19.8 +1.4
H18K Honhosa River 87.43 13 P P 18 50 18.2 +0.6
baz=210,SNR=11
M23K Glacier View 87.43 19 P P 18 50 18.1 +0.5
baz=220
SHL Shillong 87.44 298 P P 18 50 18.7 -0.1
SHL pP pP 18 51 17.1 -0.7
SHL Shillong 87.44 298 P P 18 50 18.7 -0.1
SHL *PP pP 18 51 17.1 -0.7
SHL pmax pmax
comp=Z,29nm,1.3s
EMB Emerald Bay 87.47 47 IAmb IAmb 18 50 21.8
comp=Z,62nm,1.3s
CAST Castle Rocks 87.47 16 P P 18 50 16.1 -1.8
CAST IAmb IAmb 18 50 20.9
comp=Z,42nm,0.7s
CAST Castle Rocks 87.47 16 P P 18 50 16.8 -1.0
baz=216,SNR=33
MONP2 Monument Peak 87.54 54 P P 18 50 19.8 +0.6
baz=246,SNR=53
ESJX Sierra Juarez 87.54 55 IAmb IAmb 18 50 22.7
comp=Z,50nm,1.4s
J20K Nowinta River 87.57 15 P P 18 50 18.1 -0.1
J20K Nowinta River 87.57 15 P P 18 50 18.8 +0.5
baz=214,SNR=21
SCM Sheep Creek Mo 87.58 19 IAmb IAmb 18 50 20.5
comp=Z,86nm,1.5s
SCM Sheep Creek Mo 87.58 19 P P 18 50 18.7 +0.2
baz=220
LRMC Laurel Mtn Rad 87.67 51 P P 18 50 21.4 +1.8
baz=245,SNR=12
IKP In-Ko-Pah, Jac 87.68 54 P P 18 50 21.3 +1.6
baz=246,SNR=22
RMX La Rumorosa 87.68 54 P P 18 50 20.8 +1.0
RMX IAmb IAmb 18 50 24.6
comp=Z,44nm,0.9s
WAKR Walker 87.72 48 IAmb IAmb 18 50 23.4
comp=Z,96nm,1.3s
MLAC Mammoth, Mammo 87.76 49 P P 18 50 21.1 +1.0
baz=244
KLU Klutina 87.76 20 IAmb IAmb 18 50 21.9
comp=Z,85nm,1.7s
KLU Klutina 87.76 20 P P 18 50 19.8 +0.4
baz=222
CHUM Lake Minchumin 87.79 16 P P 18 50 20.3 +1.0
baz=216,SNR=8.8
CWC Cottonwood Cre 87.79 50 P P 18 50 21.6 +1.4
baz=244
BMRM Bremner River 87.80 21 P P 18 50 20.4 +0.8
baz=223
PFO Pinyon Flats O 87.81 53 P P 18 50 20.7 +0.4
PFO Pinyon Flats O 87.81 53 P P 18 50 21.6 +1.3
baz=246,SNR=16
PFO Pinyon Flats O 87.81 53 P P 18 50 20.7 +0.4
PFO pmax pmax
comp=Z,19nm,0.9s
TPFO Pinon Flats 87.81 53 P P 18 50 21.6 +1.4
baz=246,SNR=21
PNTR Pine Nut 87.87 47 P P 18 50 21.5 +1.0
PNTR IAmb IAmb 18 50 23.9
comp=Z,47nm,0.9s
PMD Palm Desert 87.88 53 IAmb IAmb 18 50 24.1
comp=Z,34nm,1.0s
KTH Kantishna Hill 87.89 17 IAmb IAmb 18 50 20.9
comp=Z,28nm,0.8s
RRX Edison Barstow 87.92 52 P P 18 50 21.7 +1.0
baz=245
TIN Tinemaha, Big 87.94 50 P P 18 50 21.9 +1.0
baz=244
TRF Thorofare Moun 87.98 17 IAmb IAmb 18 50 25.4
comp=Z,33nm,0.8s
TRF Thorofare Moun 87.98 17 P P 18 50 20.5 +0.1
baz=218,SNR=12
WAT1 Susitna Watana 87.98 18 P P 18 50 20.2 -0.1
baz=219
COR Corvallis 87.98 41 P P 18 50 21.7 +1.0
COR Corvallis 87.98 41 P P 18 50 21.7 +1.0
COR pmax pmax
comp=Z,260nm,1.8s
F17K Baldwin Pennin 87.98 11 P P 18 50 21.4 +1.3
baz=208
BUCK Buck Mountain 88.00 42 IAmb IAmb 18 50 25.0
comp=Z,42nm,0.8s
I20K Naaghedeneel 88.00 15 P P 18 50 20.7 +0.4
I20K IAmb IAmb 18 50 24.2
comp=Z,47nm,0.8s
I20K Naaghedeneel 88.00 15 P P 18 50 21.1 +0.8
baz=214
SFX San Felipe 88.01 56 P P 18 50 22.0 +0.9
G18K Tagagawik 88.01 13 IAmb IAmb 18 50 23.9
comp=Z,61nm,1.2s
G18K Tagagawik 88.01 13 P P 18 50 21.1 +0.7
baz=210,SNR=8.5
WAT6 Susitna Watana 88.03 18 P P 18 50 21.0 +0.4
baz=220
SWSC Sam W Stewart 88.04 54 P P 18 50 22.6 +1.4
baz=246,SNR=15
MPMC Manual Prospec 88.06 51 P P 18 50 22.6 +1.1
baz=245,SNR=42
MESA MESA 88.14 22 P P 18 50 21.4 +0.1
baz=225
M24K Tolsona, Glenn 88.15 19 P P 18 50 21.9 +0.8
baz=221
H19K Roundabout Mou 88.17 14 P P 18 50 21.9 +0.9
baz=212
I04A Tendick Farm, 88.17 42 P P 18 50 22.5 +0.9
GSC Goldstone, Bar 88.25 52 P P 18 50 23.1 +0.8
baz=245,SNR=20
DSP Deep Springs 88.27 50 P P 18 50 23.8 +1.6
DSP IAmb IAmb 18 50 25.6
comp=Z,100nm,1.4s
LHV Little Huntoon 88.27 49 IAmb IAmb 18 51 55.8
comp=Z,47nm,1.0s
N25K Chitina, Valde 88.28 20 P P 18 50 21.9 +0.2
baz=223,SNR=6.0
BELC Belle Mtn. Jos 88.31 53 P P 18 50 24.2 +1.5
baz=246,SNR=26
RND Reindeer 88.35 17 P P 18 50 21.1 -1.0
RND IAmb IAmb 18 50 24.8
comp=Z,28nm,0.6s
RND Reindeer 88.35 17 P P 18 50 21.1 -1.0
RND pmax pmax
comp=Z,28nm,0.6s
HEC Hector,Ludlow 88.40 52 P P 18 50 23.8 +0.8
baz=246,SNR=22
RYN Ryan 88.42 48 IAmb IAmb 18 50 26.3
comp=Z,33nm,0.9s
F18K Selawik 88.43 12 P P 18 50 22.9 +0.7
baz=209,SNR=32
E17K Hotham Inlet 88.45 11 P P 18 50 23.1 +0.8
baz=207,SNR=60
QSM Queen of Sheba 88.48 51 IAmb IAmb 18 50 28.0
comp=Z,39nm,0.9s
NVAR Mina Array Bea 88.49 48 P P 18 50 25.1 +1.6
comp=Z,11nm,0.6s,baz=227,slow=8.5,SNR=56
comp=Z,11nm,0.6s
H20K Anotleneega Mo 88.49 14 P P 18 50 23.5 +1.0
baz=213
DHY Denali Highway 88.52 18 P P 18 50 22.1 -0.8
DHY Denali Highway 88.52 18 P P 18 50 22.9 0.0
baz=220
GRAC Grapevine Rang 88.55 50 P P 18 50 24.7 +1.1
GRAC Grapevine Rang 88.55 50 P P 18 50 24.9 +1.3
baz=245,SNR=5.5
G19K Purcell Mounta 88.55 13 P P 18 50 23.4 +0.5
G19K IAmb IAmb 18 50 27.4
comp=Z,23nm,0.8s
G19K Purcell Mounta 88.55 13 P P 18 50 23.8 +1.0
baz=211
MCK McKinley 88.58 17 P P 18 50 23.7 +0.6
baz=219,SNR=7.5
BC3 Big Chuckawall 88.59 54 P P 18 50 25.4 +1.4
baz=246,SNR=30
MCARA McCarthy VSAT 88.63 21 P P 18 50 24.1 +0.7
baz=224
K05A Summer Lake 88.64 44 P P 18 50 25.6 +1.6
SRIG Santa Rosalia 88.68 61 IAmb IAmb 18 50 28.2
comp=Z,34nm,0.8s
HARP HAARP 88.68 19 P P 18 50 24.2 +0.7
baz=222
FURC Furnace Creek, 88.69 51 P P 18 50 25.7 +1.5
baz=245,SNR=16
PINM Pinnacle 88.70 23 P P 18 50 23.6 -0.2
baz=227
GWY Greenwater Val 88.72 51 P P 18 50 25.4 +0.9
GWY IAmb IAmb 18 50 28.6
comp=Z,42nm,0.9s
PNL Peninsula 88.72 23 P P 18 50 23.5 -0.4
baz=227
TROLL Troll, Antarti 88.77 184 ⇑P P 18 50 24.3 +0.1
comp=Z,1μm,0.5s
TROLL ⇑pP pP 18 51 23.5 +0.2
comp=Z,1μm,1.0s
BWN Browne 88.78 17 P P 18 50 23.2 -0.8
GLA Glamis 88.83 54 P P 18 50 26.5 +1.5
baz=246
S31K Pelican 88.84 26 P P 18 50 25.9 +1.6
baz=230
BARN Barnard Glacie 88.87 21 P P 18 50 24.3 -0.4
BARN IAmb IAmb 18 50 26.3
comp=Z,28nm,0.7s
OZB Mount Ozzard 88.88 37 P P 18 50 26.9 +2.1
OZB IAmb IAmb 18 50 28.1
comp=Z,37nm,0.8s
SHOC Shoshone, Teco 88.89 51 P P 18 50 26.2 +1.0
baz=246
GMRC Granite Mounta 88.89 53 P P 18 50 26.8 +1.5
baz=246,SNR=29
KVN Kaiserville 88.90 48 IAmb IAmb 18 50 28.4
comp=Z,60nm,1.1s
CTG Chitna Glacier 88.91 22 P P 18 50 25.5 +0.7
baz=226,SNR=5.9
CTGM Chitina Glacie 88.92 22 P P 18 50 24.6 -0.3
CTGM IAmb IAmb 18 50 26.4
comp=Z,28nm,0.7s
I21K Tanana 88.93 15 IAmb IAmb 18 50 28.3
comp=Z,30nm,0.7s
I21K Tanana 88.93 15 P P 18 50 25.6 +1.0
baz=216
LOGN Logan Glacier 88.93 22 IAmb IAmb 18 50 26.4
comp=Z,20nm,0.6s
TUQ Turquoise Moun 88.96 52 P P 18 50 26.6 +0.9
baz=246,SNR=6.8
C16K Lisburne Hills 88.96 9 P P 18 50 24.9 +0.2
C16K IAmb IAmb 18 50 28.6
comp=Z,23nm,0.9s
C16K Lisburne Hills 88.96 9 P P 18 50 25.7 +1.0
baz=204
E18K Tukpahlearik C 88.97 11 P P 18 50 24.9 +0.1
E18K IAmb IAmb 18 50 28.9
comp=Z,34nm,0.8s
E18K Tukpahlearik C 88.97 11 P P 18 50 25.6 +0.8
baz=208
WCT Wildcat Mounta 89.00 50 P P 18 50 26.2 +0.5
WCT IAmb IAmb 18 50 29.5
comp=Z,35nm,0.7s
F19K Shaleruckik Mo 89.00 12 IAmb IAmb 18 50 28.7
comp=Z,67nm,1.6s
F19K Shaleruckik Mo 89.00 12 P P 18 50 25.9 +1.0
baz=211
PAX Paxson 89.01 19 P P 18 50 25.7 +0.5
baz=222
IRM Iron Mountain 89.03 53 P P 18 50 27.3 +1.4
baz=246,SNR=46
I05D Terrebonne, OR 89.10 42 P P 18 50 26.9 +0.9
H21K Melozitna Rive 89.11 15 P P 18 50 25.5 0.0
H21K Melozitna Rive 89.11 15 P P 18 50 26.0 +0.5
baz=215
MLY Manley 89.12 16 P P 18 50 25.4 -0.2
baz=217,SNR=7.5
RDOG Red Dog Mine 89.14 10 P P 18 50 26.4 +0.8
RDOG IAmb IAmb 18 50 29.6
comp=Z,27nm,0.9s
RDOG Red Dog Mine 89.14 10 P P 18 50 26.4 +0.8
baz=206
GRNB Grenville Isla 89.17 31 P P 18 50 27.0 +1.0
GRNB IAmb IAmb 18 50 30.0
comp=Z,42nm,1.0s
BBB Bella Bella 89.17 33 IAmb IAmb 18 50 29.2
comp=Z,41nm,0.9s
F04A Amboy 89.18 40 P P 18 50 27.1 +0.8
NEA2 Nenana 89.21 17 P P 18 50 26.3 +0.3
baz=219
S32K Killisnoo 89.21 27 P P 18 50 27.0 +0.9
baz=232
BOD Bodaibo 89.23 334 *e*P P 18 50 26.1 -0.1
BOD pmax pmax
comp=Z,15nm,1.2s
V35K Ketchikan 89.23 29 P P 18 50 25.8 -0.5
V35K Ketchikan 89.23 29 P P 18 50 26.6 +0.4
baz=234
SLBS Sierra La Lagu 89.28 65 P P 18 50 28.3 +0.9
PIX Pinacate 89.31 56 IAmb IAmb 18 50 30.8
comp=Z,28nm,0.8s
GOMU GeErMu 89.31 309 P P 18 50 28.8 +1.2
GOMU pmax pmax
comp=Z,6.0nm,1.4s
P29M Windy Craggy 89.33 24 IAmb IAmb 18 50 29.4
comp=Z,61nm,1.4s
P29M Windy Craggy 89.33 24 P P 18 50 26.8 +0.2
baz=229
BLYC Blythe 89.34 54 P P 18 50 28.8 +1.5
TPNV Topopah Spring 89.34 50 P P 18 50 28.4 +0.9
baz=246,SNR=69
M26K Nabesna, AK 89.37 20 P P 18 50 27.1 +0.2
baz=224
SNAA Sanae 89.39 182 P P 18 50 26.2 -0.8
SNAA IAmb IAmb 18 50 28.9
comp=Z,41nm,1.3s
SNAA pP pP 18 51 25.5 -0.6
SNAA Sanae 89.39 182 ⇑P P 18 50 26.7 -0.4
comp=Z,294nm,0.5s
SNAA ⇑pP pP 18 51 26.5 +0.3
comp=Z,148nm,0.8s
SNAA Sanae 89.39 182 *i* P P 18 50 24.7 -2.3
SNAA pmax pmax
comp=Z,21nm,1.0s
SNAA Sanae 89.39 182 P P 18 50 26.5 -0.6
comp=Z,12nm,0.5s,baz=212,slow=6.4,SNR=58
comp=Z,12nm,0.5s
C17K DeLong Mountai 89.48 10 P P 18 50 28.3 +1.2
baz=206,SNR=19
CBB Campbell River 89.50 36 IAmb IAmb 18 50 31.6
comp=Z,56nm,1.0s
MENT Mentasta 89.53 19 IAmb IAmb 18 50 29.8
comp=Z,19nm,0.8s
MENT Mentasta 89.53 19 P P 18 50 29.9 +2.4
113A Mohawk Valley, 89.53 55 IAmb IAmb 18 50 32.4
comp=Z,50nm,1.3s
G05A Wamic 89.54 41 P P 18 50 28.7 +0.7
K24K Donnelly Dome 89.54 18 P P 18 50 27.1 -0.5
baz=222,SNR=8.0
WRAK Wrangell Islan 89.55 28 P P 18 50 27.3 -0.3
baz=234
I23K Minto, Yukon-K 89.57 16 P P 18 50 27.8 +0.2
baz=218
CLRS Cowichan Lake 89.58 37 P P 18 50 28.8 +0.7
CLRS IAmb IAmb 18 50 31.9
comp=Z,46nm,0.9s
CCB Clear Creek Bu 89.60 17 P P 18 50 26.2 -1.6
CCB IAmb IAmb 18 50 29.3
comp=Z,20nm,0.8s
F20K Avaraart Lake 89.61 13 P P 18 50 28.4 +0.7
baz=213
E19K Redstone River 89.65 12 P P 18 50 28.3 +0.3
E19K IAmb IAmb 18 50 31.6
comp=Z,28nm,0.7s
E19K Redstone River 89.65 12 P P 18 50 28.6 +0.6
baz=211
H22K Ishtalitna Cre 89.65 15 P P 18 50 28.4 +0.3
baz=217
G21K Allakaket 89.66 14 IAmb IAmb 18 50 30.6
comp=Z,30nm,0.7s
G21K Allakaket 89.66 14 P P 18 50 28.5 +0.5
baz=215
HDA Harding Lake 89.66 17 P P 18 50 27.1 -1.0
HDA IAmb IAmb 18 50 30.5
comp=Z,28nm,0.6s
HDA Harding Lake 89.66 17 P P 18 50 27.9 -0.1
baz=221,SNR=19
NEE2 Needles Airpor 89.67 53 P P 18 50 30.1 +1.3
baz=246,SNR=8.3
YUK8 Steele Glacier 89.69 22 P P 18 50 28.6 0.0
baz=227,SNR=13
M27K Edge Creek, AK 89.71 20 P P 18 50 28.7 +0.2
baz=225,SNR=7.4
L26K Log Cabin Wild 89.71 20 IAmb IAmb 18 50 30.3
comp=Z,16nm,0.6s
L26K Log Cabin Wild 89.71 20 P P 18 50 28.3 -0.1
baz=224,SNR=14
MDM Murphy Dome 89.73 17 IAmb IAmb 18 50 29.8
comp=Z,25nm,0.7s
PLBC Pleasant Camp 89.74 24 P P 18 50 28.9 +0.4
baz=230,SNR=7.7
COLA College 89.76 17 P P 18 50 27.1 -1.4
COLA College 89.76 17 P P 18 50 30.4 +1.9
COLA College 89.76 17 P P 18 50 28.3 -0.1
baz=220
COLA College 89.76 17 ⇑P P 18 50 28.4 -0.1
RIDG Independent Ri 89.77 19 IAmb IAmb 18 50 31.7
comp=Z,34nm,0.8s
RIDG Independent Ri 89.77 19 P P 18 50 28.7 +0.1
baz=223,SNR=6.1
YUK3 Moose Creek 89.78 21 P P 18 50 29.1 +0.1
baz=226,SNR=8.9
PDMCI Parker Dam,Lak 89.85 54 P P 18 50 30.9 +1.3
baz=247,SNR=22
V12A Nelson 89.87 52 IAmb IAmb 18 50 33.7
comp=Z,30nm,1.0s
PGC Sidney 89.89 38 P P 18 50 29.7 +0.3
LON Longmire 89.94 40 IAmb IAmb 18 50 32.5
comp=Z,32nm,1.1s
P30M Million Dollar 89.94 24 P P 18 50 30.4 +0.8
baz=230
ILAR Eielson Array 89.95 17 P P 18 50 28.4 -1.0
comp=Z,19nm,0.8s,baz=235,slow=4.7,SNR=140
ILAR PKKPbc **PKKPdf** 19 07 59.4 +0.7
comp=Z,0.3nm,0.5s,baz=344,slow=2.3,SNR=7.7
comp=Z,19nm,0.8s
C18K Utukok River 89.96 10 P P 18 50 29.9 +0.4
baz=208,SNR=28
YUK6 Outpost Mounta 89.96 23 P P 18 50 30.0 +0.1
baz=228
G06A Carlson Farm, 89.96 42 P P 18 50 30.7 +0.7
214A Organ Pipe Nat 89.97 56 IAmb IAmb 18 50 34.6
comp=Z,63nm,1.2s
214A Organ Pipe Nat 89.97 56 P P 18 50 32.2 +1.9
baz=248
VNA3 Neumayer Olymp 89.98 180 ⇑P P 18 50 29.3 -0.4
comp=Z,40nm,0.6s
VNA3 ⇑pP pP 18 51 29.6 +0.8
comp=Z,24nm,0.8s
WVOR Wild Horse Val 90.00 45 P P 18 50 30.9 +0.5
WVOR IAmb IAmb 18 50 34.3
comp=Z,49nm,0.9s
WVOR Wild Horse Val 90.00 45 P P 18 50 30.9 +0.5
WVOR pmax pmax
comp=Z,49nm,1.0s
D05A Enumclaw 90.04 39 P P 18 50 30.6 +0.3
POKR Poker Flat Res 90.06 17 P P 18 50 28.9 -1.1
baz=220,SNR=8.4
BVCY Beaver Creek 90.09 21 P P 18 50 30.4 +0.2
baz=226,SNR=5.6
BMN Battle Mountai 90.10 47 IAmb IAmb 18 50 34.7
comp=Z,37nm,0.9s
YUK4 Talbot Arm 90.13 22 P P 18 50 30.9 +0.3
baz=228,SNR=9.4
SKAG Skagway 90.15 25 IAmb IAmb 18 50 36.4
comp=Z,55nm,0.9s
SKAG Skagway 90.15 25 P P 18 50 32.5 +2.1
SKAG Skagway 90.15 25 P P 18 50 30.9 +0.5
baz=231,SNR=6.5
I07A Izee 90.16 43 P P 18 50 31.9 +0.8
HYT Haines Junctio 90.20 23 P P 18 50 31.0 +0.2
baz=229,SNR=9.6
SCRK Sand Creek 90.20 19 P P 18 50 30.4 -0.4
SCRK IAmb IAmb 18 50 33.5
comp=Z,34nm,1.0s
SCRK Sand Creek 90.20 19 P P 18 50 31.0 +0.3
baz=223,SNR=26
L27K Beaver Creek, 90.22 20 P P 18 50 31.0 +0.2
baz=225

F21K Alatna River 90.24 14 P P 18 50 30.6 -0.1
F21K IAmb IAmb 18 50 33.4
comp=Z,22nm,0.8s
F21K Alatna River 90.24 14 P P 18 50 31.6 +0.9
baz=215
ZAK Zakamensk 90.25 324 eP P 18 50 31.0 -0.3
ZAK e 18 51 29.2
ZAK pmax pmax
comp=Z,21nm,1.2s
ZAK pmax pmax
comp=Z,7.0nm,1.6s
J25K Salcha River, 90.27 18 IAmb IAmb 18 50 32.6
comp=Z,15nm,0.6s
J25K Salcha River, 90.27 18 P P 18 50 31.0 0.0
baz=222
VNA2 Neumayer--Watz 90.27 181 ⇑P P 18 50 30.8 -0.2
comp=Z,28nm,0.5s,baz=180,slow=5.0
VNA2 ⇑pP pP 18 51 30.5 +0.1
comp=Z,12nm,0.9s,baz=190,slow=2.8
W13A Hualapai Mount 90.35 53 IAmb IAmb 18 50 36.2
comp=Z,33nm,1.0s
HSIG 90.37 59 IAmb IAmb 18 50 36.1
comp=Z,64nm,1.1s
D19K Kuna River 90.37 11 IAmb IAmb 18 50 35.7
comp=Z,38nm,0.8s
D19K Kuna River 90.37 11 P P 18 50 31.9 +0.5
baz=210
R11B Troy Canyon, C 90.39 49 P P 18 50 32.6 +0.2
R11B Troy Canyon, C 90.39 49 P P 18 50 33.2 +0.9
baz=246,SNR=33
G22K Bettles 90.45 14 P P 18 50 32.5 +0.8
baz=216
B18K Kokolik River 90.50 10 P P 18 50 32.7 +0.9
baz=207
H24K Noodor Dome 90.50 16 P P 18 50 32.2 +0.2
baz=220,SNR=7.8
E20K Nigu River 90.54 12 P P 18 50 33.1 +0.9
baz=212,SNR=44
VNA1 Neumayer--Stat 90.56 181 ⇑P P 18 50 32.5 +0.2
comp=Z,2.1nm,0.4s
Y14A Wickenburg 90.57 54 P P 18 50 34.2 +1.1
Y14A IAmb IAmb 18 50 36.3
comp=Z,29nm,1.1s
G23K Bananza Creek 90.64 15 P P 18 50 33.0 +0.4
baz=218
C19K Lookout Ridge 90.64 11 IAmb IAmb 18 50 35.4
comp=Z,21nm,0.8s
C19K Lookout Ridge 90.64 11 P P 18 50 33.5 +0.9
baz=209,SNR=13
O30N Mendenhall 90.69 24 IAmb IAmb 18 50 35.3
comp=Z,28nm,0.8s
O30N Mendenhall 90.69 24 P P 18 50 33.3 +0.3
baz=230,SNR=13
J26L Joseph Creek 90.71 18 P P 18 50 33.0 -0.1
J26L IAmb IAmb 18 50 36.2
comp=Z,23nm,0.8s
J26L Joseph Creek 90.71 18 P P 18 50 33.1 0.0
baz=224
N30M Aishikik Lake 90.77 23 P P 18 50 33.4 0.0
baz=229
MXC Moxie City 90.79 40 IAmb IAmb 18 50 37.4
comp=Z,29nm,0.9s
T35M Bob Quinn 90.81 28 P P 18 50 34.3 +0.6
baz=235
K27K Chicken 90.83 19 P P 18 50 34.1 +0.6
K27K Chicken 90.83 19 P P 18 50 34.0 +0.5
baz=225
D20K Etivluk River 90.85 12 P P 18 50 34.4 +0.9
baz=212
LTY Liberty 90.87 40 IAmb IAmb 18 50 37.6
comp=Z,38nm,1.1s
P32M Atlin 90.88 25 IAmb IAmb 18 50 36.8
comp=Z,39nm,0.9s
P32M Atlin 90.88 25 P P 18 50 34.4 +0.5
baz=232,SNR=11
PRP Porcupine Dome 90.89 17 P P 18 50 34.2 +0.2
PRP Porcupine Dome 90.89 17 P P 18 50 34.5 +0.6
baz=222
M29M Somme Creek 90.93 22 P P 18 50 34.7 +0.5
baz=228
S34M Telegraph Cree 90.96 27 IAmb IAmb 18 50 37.8
comp=Z,46nm,0.9s
S34M Telegraph Cree 90.96 27 P P 18 50 35.2 +1.0
baz=234,SNR=11
COLD Coldfoot 91.00 15 P P 18 50 35.3 +1.1
baz=218,SNR=34
E07A Sunnyside 91.05 41 P P 18 50 36.5 +1.5
WHY Whitehorse 91.08 24 IAmb IAmb 18 50 36.7
comp=Z,36nm,1.1s
WHY Whitehorse 91.08 24 P P 18 50 35.3 +0.4
baz=231,SNR=13
Q32M Nakina River 91.09 26 IAmb IAmb 18 50 38.4
comp=Z,28nm,0.8s
Q32M Nakina River 91.09 26 P P 18 50 35.7 +0.6
baz=234
E21K Killik River 91.15 13 P P 18 50 35.3 +0.4
baz=214
Q12A Willow Creek R 91.21 49 P P 18 50 37.1 +1.0
Q12A IAmb IAmb 18 50 39.3
comp=Z,39nm,0.9s
N31M Braeburn, Yuko 91.27 23 IAmb IAmb 18 50 38.1
comp=Z,43nm,0.8s
N31M Braeburn, Yuko 91.27 23 P P 18 50 35.5 -0.2
baz=231,SNR=16
G24K Hadweenzic Riv 91.27 16 P P 18 50 35.8 +0.3
baz=220
E22K Anaktuvuk Pass 91.36 14 IAmb IAmb 18 50 38.3
comp=Z,27nm,0.9s
E22K Anaktuvuk Pass 91.36 14 P P 18 50 36.5 +0.6
baz=216
I26K Coal Creek Min 91.42 18 P P 18 50 36.2 0.0
I26K IAmb IAmb 18 50 39.6
comp=Z,28nm,0.8s
I26K Coal Creek Min 91.42 18 P P 18 50 36.9 +0.7
baz=224
L29M L29M 91.49 21 IAmb IAmb 18 50 39.8
comp=Z,19nm,0.8s
L29M L29M 91.49 21 P P 18 50 36.9 +0.2
baz=229
SPR3 Spring Creek 3 91.55 49 IAmb IAmb 18 50 40.6
comp=Z,29nm,1.2s
LCMT Little Creek M 91.57 51 IAmb IAmb 18 50 41.6
comp=Z,43nm,1.0s
C21K Knifeblade Rid 91.58 12 P P 18 50 38.1 +1.2
baz=214
M30M Minto, Yukon 91.60 22 P P 18 50 36.8 -0.3
M30M IAmb IAmb 18 50 39.5
comp=Z,50nm,1.1s
M30M Minto, Yukon 91.60 22 P P 18 50 37.4 +0.3
baz=230,SNR=16
P33M Teslin, Yukon 91.62 25 IAmb IAmb 18 50 40.2
comp=Z,22nm,0.8s
P33M Teslin, Yukon 91.62 25 P P 18 50 37.8 +0.4
baz=233,SNR=10
EGAK Eagle 91.64 19 P P 18 50 37.4 +0.2
baz=226,SNR=34
G25K Bearman Lake 91.67 16 P P 18 50 38.5 +1.1
baz=222
TUC Tucson 91.70 56 P P 18 50 40.1 +1.7
TUC IAmb IAmb 18 50 42.6
comp=Z,42nm,1.0s
TUC Tucson 91.70 56 P P 18 50 40.2 +1.7
baz=249
TUC Tucson 91.70 56 P P 18 50 40.1 +1.7
TUC pmax pmax
comp=Z,42nm,1.0s
DAWY Dawson 91.71 20 P P 18 50 38.3 +0.7
baz=227,SNR=7.8
DLBC Dease Lake 91.74 27 IAmb IAmb 18 50 41.2
comp=Z,47nm,1.0s
DLBC Dease Lake 91.74 27 P P 18 50 38.8 +0.8
baz=235,SNR=14
FYU Fort Yukon 91.76 17 IAmb IAmb 18 52 49.1
comp=Z,34nm,1.2s
D22K Ayikyak River 91.78 13 P P 18 50 38.5 +0.6
baz=216,SNR=50
F24K Squaw Lake 91.79 15 P P 18 50 38.0 0.0
F24K IAmb IAmb 18 50 40.5
comp=Z,26nm,1.2s
F24K Squaw Lake 91.79 15 P P 18 50 38.7 +0.7
baz=220
E23K Chandalar 91.80 14 P P 18 50 38.7 +0.7
baz=218
D08A Wollman Farm, 91.85 40 P P 18 50 39.3 +0.7
KNB Kanab 91.88 51 IAmb IAmb 18 50 43.4
comp=Z,38nm,1.0s
R33M Jennings River 91.89 26 IAmb IAmb 18 50 41.9
comp=Z,35nm,0.9s
R33M Jennings River 91.89 26 P P 18 50 39.1 +0.4
baz=235
BMO Blue Mountains 91.91 43 P P 18 50 37.5 -1.6
BMO Blue Mountains 91.91 43 P P 18 50 37.5 -1.6
BMO pmax pmax
comp=Z,16nm,1.1s
B21K Ikpikpuk River 92.00 12 IAmb IAmb 18 50 41.6
comp=Z,31nm,0.9s
B21K Ikpikpuk River 92.00 12 P P 18 50 39.6 +0.8
baz=214
E24K Your Creek 92.08 15 P P 18 50 39.9 +0.6
baz=219
N32M Quiet Lake 92.08 24 P P 18 50 39.8 +0.4
baz=233
I27K Kandik River 92.08 18 P P 18 50 39.9 +0.5
baz=226
MOY Mondy 92.13 325 eP P 18 50 40.3 +0.3
MOY pmax pmax
comp=Z,44nm,2.5s
K29M Barlow Dome 92.18 21 P P 18 50 40.3 +0.4
baz=229
M31M Drury Creek, Y 92.23 23 P P 18 50 39.0 -1.1
M31M IAmb IAmb 18 50 41.7
comp=Z,23nm,0.8s
M31M Drury Creek, Y 92.23 23 P P 18 50 40.0 0.0
baz=232,SNR=17
TOLK Toolik Lake Re 92.27 14 IAmb IAmb 18 50 42.6
comp=Z,45nm,1.4s
TOLK Toolik Lake Re 92.27 14 P P 18 50 41.0 +0.9
baz=218,SNR=18
D23K Nanushuk River 92.28 13 P P 18 50 41.1 +1.0
baz=217
MFID Camas Ranch 92.28 45 IAmb IAmb 18 50 44.3
comp=Z,18nm,0.8s
J29N Klondike Camp 92.35 20 IAmb IAmb 18 50 42.5
comp=Z,21nm,0.6s
J29N Klondike Camp 92.35 20 P P 18 50 41.0 +0.4
baz=228,SNR=14
WUAZ Wupatki 92.41 53 P P 18 50 43.0 +1.3
WUAZ IAmb IAmb 18 50 45.8
comp=Z,41nm,1.1s
WUAZ Wupatki 92.41 53 P P 18 50 43.3 +1.6
baz=248
F25K Christian Rive 92.41 16 P P 18 50 41.1 +0.3
baz=222,SNR=9.2
PKCU Pink Cliffs 92.42 51 IAmb IAmb 18 50 49.8
comp=Z,52nm,1.3s
G26K Porcupine Rive 92.43 17 P P 18 50 41.6 +0.8
baz=224
I28M Miner Creek 92.48 19 IAmb IAmb 18 50 43.5
comp=Z,17nm,0.8s
I28M Miner Creek 92.48 19 P P 18 50 41.3 +0.1
baz=227
H27K Steamboat Moun 92.55 18 P P 18 50 42.2 +0.7
baz=226
MAYO Mayo, Yukon 92.57 21 P P 18 50 42.4 +0.8
baz=230
FARO Faro, Yukon 92.63 23 P P 18 50 41.6 -0.3
baz=233,SNR=9.0
MTPU Mount Pierson 92.74 51 IAmb IAmb 18 50 47.2
comp=Z,20nm,0.8s
E25K Arctic Village 92.83 15 P P 18 50 42.4 -0.4
E25K Arctic Village 92.83 15 P P 18 50 43.6 +0.9
baz=222,SNR=9.6
B22K Teshekpuk Lake 92.83 12 P P 18 50 43.1 +0.5
B22K IAmb IAmb 18 50 45.2
comp=Z,48nm,1.2s
B22K Teshekpuk Lake 92.83 12 P P 18 50 43.3 +0.7
baz=215
D24K Happy Valley 92.84 14 IAmb IAmb 18 50 45.4
comp=Z,30nm,1.1s
D24K Happy Valley 92.84 14 P P 18 50 43.5 +0.8
baz=219
F26K Sheenjek River 92.88 16 P P 18 50 44.1 +1.1
baz=223
MSU Marysvale 92.92 50 P P 18 50 45.9 +1.8
MSU Marysvale 92.92 50 P P 18 50 45.9 +1.8
J30M Hart River 93.05 21 IAmb IAmb 18 50 45.8
comp=Z,33nm,1.7s
J30M Hart River 93.05 21 P P 18 50 44.5 +0.6
baz=230
A21K Barrow 93.07 10 P P 18 50 44.4 +0.7
baz=212
DUG Dugway, Tooele 93.09 49 P P 18 50 45.5 +0.7
baz=248,SNR=7.1
X18A Snowflake 93.14 55 IAmb IAmb 18 50 49.1
comp=Z,22nm,0.9s
WTLY Watson Lake, Y 93.20 26 P P 18 50 45.9 +1.3
baz=236,SNR=6.3
BGU Big Grassy Mou 93.22 48 P P 18 50 45.4 +0.1
HLID Hailey 93.29 45 P P 18 50 46.7 +1.1
baz=247,SNR=20
C24K Franklin Bluff 93.31 13 P P 18 50 45.7 +0.9
baz=219
I30M Mount Dempster 93.45 20 IAmb IAmb 18 50 48.8
comp=Z,19nm,0.9s
I30M Mount Dempster 93.45 20 P P 18 50 46.3 +0.6
baz=230
NEW Newport 93.46 40 P P 18 50 47.1 +1.0
baz=245,SNR=8.4
H29M Whitestone 93.48 19 P P 18 50 46.1 +0.4
H29M IAmb IAmb 18 50 48.3
comp=Z,24nm,1.1s
H29M Whitestone 93.48 19 P P 18 50 45.8 +0.1
baz=228
W18A Petrified Fore 93.52 54 IAmb IAmb 18 50 50.6
comp=Z,16nm,0.9s
W18A Petrified Fore 93.52 54 P P 18 50 48.3 +1.5
baz=249
D25K Kavik River 93.53 14 P P 18 50 46.6 +0.6
baz=221
MMPY Sheldon Lake, 93.65 23 P P 18 50 46.8 +0.2
MMPY IAmb IAmb 18 50 49.2
comp=Z,21nm,0.9s
MMPY Sheldon Lake, 93.65 23 P P 18 50 47.2 +0.5
baz=235,SNR=12
HVU Hansel Valley 93.72 47 IAmb IAmb 18 50 50.4
comp=Z,15nm,0.9s
HMU Henry Mountain 93.76 51 IAmb IAmb 18 50 50.6
comp=Z,14nm,0.8s
Q16A Castle Valley 93.80 50 P P 18 50 49.0 +0.9
Q16A IAmb IAmb 18 50 52.2
comp=Z,24nm,1.1s
TMUT Trail Mountain 93.91 50 IAmb IAmb 18 50 56.9
comp=Z,15nm,0.7s
F28M Old Crow 93.98 17 P P 18 50 48.5 +0.5
baz=227
CTU Camp Tracy 94.03 48 P P 18 50 49.1 0.0
EPYK Eagle Plains 94.08 19 IAmb IAmb 18 50 50.9
comp=Z,34nm,0.9s
EPYK Eagle Plains 94.08 19 P P 18 50 48.9 +0.4
baz=230,SNR=20
121A Cookes Peak, D 94.15 57 P P 18 50 51.4 +1.6
baz=250
TGTN Hyland Airport 94.20 25 P P 18 50 50.0 +0.8
baz=237,SNR=7.1
SRU San Rafael Swe 94.34 50 P P 18 50 50.4 -0.2
SRU San Rafael Swe 94.34 50 P P 18 50 50.4 -0.2
SRU pmax pmax
comp=Z,10.0nm,0.9s
TCUT Toone Canyon 94.43 48 IAmb IAmb 18 50 59.2
comp=Z,25nm,0.8s
TIXI Tiksi 94.57 348 P P 18 50 49.9 -0.7
TIXI Tiksi 94.57 348 eP P 18 50 51.1 +0.6
TIXI pmax pmax
comp=Z,3.0nm,0.9s
G30M tAoh Zraii Nji 94.63 19 P P 18 50 50.4 -0.6
G30M tAoh Zraii Nji 94.63 19 P P 18 50 51.6 +0.7
baz=230
BSUT Blindstream Ca 94.68 49 IAmb IAmb 18 50 55.4
comp=Z,12nm,0.9s
E28M Babbage River 94.75 17 P P 18 50 51.3 -0.2
E28M Babbage River 94.75 17 P P 18 50 52.2 +0.7
baz=228
D27M Malcolm River 94.81 16 IAmb IAmb 18 50 55.1
comp=Z,27nm,0.9s
D27M Malcolm River 94.81 16 P P 18 50 52.9 +1.1
baz=226
E29M Blow River 95.05 17 P P 18 50 53.2 +0.4
baz=229
F30M Barrier River 95.16 18 P P 18 50 53.6 +0.3
baz=231
G31M Satah River 95.19 19 P P 18 50 52.9 -0.6
G31M Satah River 95.19 19 P P 18 50 54.1 +0.6
baz=232
KOTAN Kotaneelee Air 95.24 27 P P 18 50 55.1 +1.2
baz=241
D28M Stokes Point 95.45 16 P P 18 50 55.1 +0.5
baz=228
F31M Tsiigehtchic 95.67 19 P P 18 50 56.5 +0.8
baz=233
MNTX Cornudas Mount 95.80 59 P P 18 50 58.0 +0.9
baz=251
MOOW Moose Ponds 95.83 46 P P 18 50 57.3 0.0
LOHW Long Hollow 95.88 46 P P 18 50 57.1 -0.4
BOZ Bozeman (W) 95.89 44 IAmb IAmb 18 51 00.1
comp=Z,27nm,1.9s
BOZ Bozeman (W) 95.89 44 P P 18 50 58.2 +0.8
baz=249,SNR=7.2
YHL Hebgen Lake 95.92 45 IAmb IAmb 18 51 00.8
comp=Z,32nm,1.9s
ANMO Albuquerque 95.99 55 P P 18 50 58.2 0.0
ANMO Albuquerque 95.99 55 P P 18 50 59.0 +0.9
baz=251
ANMO Albuquerque 95.99 55 i P P 18 50 57.9 -0.3
ANMO pmax pmax
comp=Z,8.0nm,0.9s
H17A Grant Village 96.17 45 P P 18 50 59.9 +1.1
baz=250
INK Inuvik 96.26 18 P P 18 50 58.0 -0.3
INK IAmb IAmb 18 51 00.2
comp=Z,18nm,0.8s
INK Inuvik 96.26 18 P P 18 50 58.4 +0.1
baz=233
INK Inuvik 96.26 18 P P 18 50 58.0 -0.3
INK pmax pmax
comp=Z,18nm,0.8s
BW06 Boulder Array 96.30 47 P P 18 50 59.7 +0.3
baz=250
PDAR Pinedale Array 96.30 47 P P 18 50 59.6 +0.2
comp=Z,2.2nm,0.8s,baz=208,slow=4.7,SNR=14
PDAR PKKPbc PKKPbc 19 07 44.8 -1.0
comp=Z,0.2nm,0.3s,baz=71,slow=5.0,SNR=4.6
comp=Z,2.2nm,0.8s
O20A White River Ci 96.35 50 P P 18 51 00.2 +0.6
baz=251
TXAR Lajitas Array 96.46 61 P P 18 51 01.7 +1.4
comp=Z,3.9nm,0.6s,baz=223,slow=5.0,SNR=45
TXAR PKKPbc PKKPbc 19 07 43.3 -1.1
comp=Z,0.7nm,0.7s,baz=85,slow=3.4,SNR=8.1
comp=Z,3.9nm,0.6s
S22A 4UR Ranch, Cre 96.61 52 P P 18 51 01.8 +0.7
baz=251
ALPN Alpine 96.81 60 IAmb IAmb 18 51 04.7
comp=Z,34nm,1.7s
SMCO Snowmass 96.96 51 P P 18 51 02.3 -0.4
SMCO IAmb IAmb 18 51 09.5
comp=Z,28nm,1.9s
WRGLY Wrigley 97.00 25 P P 18 51 03.5 +1.8
baz=241
WMQ Urumqi 97.21 314 eP Pdif 18 51 04.5 +1.2
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ LR LR
comp=Z,15μm,11.3s
WMQ LR LR
comp=Z,26μm,11.3s
WMQ LR LR
comp=Z,7μm,16.1s
RLMT Red Lodge 97.29 45 IAmb IAmb 18 51 54.2
comp=Z,25nm,1.9s
RLMT Red Lodge 97.29 45 P Pdif 18 51 04.7 +0.8
baz=250
SDCO Great Sand Dun 97.61 53 P Pdif 18 51 06.7 +1.2
baz=252
SAND Sanderson 97.93 61 P Pdif 18 51 07.2 +0.3
EGMT Eagleton 97.94 42 P Pdif 18 51 08.4 +1.9
baz=250
ISCO Idaho Springs 98.16 51 P Pdif 18 51 09.3 +1.3
baz=252
Q24A Divide 98.24 52 P Pdif 18 51 09.3 +0.9
baz=252
N23A Red Feather La 98.25 50 IAmb IAmb 18 51 38.3
comp=Z,18nm,1.6s
N23A Red Feather La 98.25 50 P Pdif 18 51 08.8 +0.5
baz=252
K22A Casper 98.38 48 P P 18 51 09.5 +0.8
baz=252
PLCA Paso Flores 98.55 138 P P 18 51 10.0 +0.4
PLCA Paso Flores 98.55 138 P P 18 51 09.9 +0.4
comp=Z,2.0nm,0.8s,baz=234,slow=10,SNR=3.1
comp=Z,2.0nm,0.8s
MSTX Muleshoe 98.59 57 IAmb IAmb 18 51 15.0
comp=Z,7.4nm,0.8s
MSTX Muleshoe 98.59 57 P P 18 51 10.3 +0.6
baz=253
AMTX Amarillo 99.71 57 P Pdif 18 51 15.3 +0.6
baz=254
C36M Paulatuk 99.71 19 P Pdif 18 51 14.0 +0.3
baz=242
YKA Yellowknife Ar 100.37 27 P Pdif 18 51 17.0 +0.2
YKA Yellowknife Ar 100.37 27 P Pdif 18 51 17.0 +0.2
comp=Z,5.0nm,0.6s,baz=256,slow=4.7,SNR=65
YKA PP PP 18 55 21.5 -5.3
comp=Z,0.4nm,0.7s,baz=244,slow=8.0,SNR=4.1
YKA PKKPbc PKKPbc 19 07 31.1 -3.8
comp=Z,0.2nm,0.6s,baz=60,slow=2.9,SNR=4.1
A36M Sachs Harbour 100.64 17 P Pdif 18 51 18.7 +0.9
baz=241
MKAR Makanchi Array 101.73 316 P Pdif 18 51 24.4 +1.0
comp=Z,2.6nm,0.5s,baz=98,slow=7.0,SNR=30
MKAR PP PP 18 55 34.0 -3.5
comp=Z,0.8nm,0.8s,baz=112,slow=6.7,SNR=3.7
MKAR PKiKP PKiKP 18 55 45.1 -0.2
comp=Z,1.6nm,0.8s,baz=138,slow=2.1,SNR=7.4
MKAR PKKPbc PKKPbc 19 07 27.4 -2.9
comp=Z,0.8nm,0.5s,baz=268,slow=3.6,SNR=18
MAKZ Makanchi 101.95 315 P Pdif 18 51 26.7 +2.4
ZALV Zalesovo Beam 102.07 323 P Pdif 18 51 24.1 -0.5
comp=Z,1.0nm,0.5s,baz=107,slow=5.0,SNR=8.9
ZALV PKiKP PKiKP 18 55 45.2 -0.4
comp=Z,1.0nm,0.6s,baz=335,slow=2.1,SNR=4.6
ZALV PKKPbc PKKPbc 19 07 27.1 -2.5
comp=Z,0.8nm,0.5s,baz=290,slow=4.9,SNR=5.1
KURBB Kurchatov Arra 105.05 319 Pdiff Pdif 18 51 38.1 +0.2
comp=Z,0.7nm,0.6s,baz=105,slow=3.1,SNR=7.6
KURBB PKiKP PKiKP 18 55 51.1 -0.1
comp=Z,0.9nm,0.5s,baz=120,slow=1.8,SNR=13
KURBB PKKPbc PKKPbc 19 07 18.6 -2.0
comp=Z,0.8nm,0.6s,baz=280,slow=3.6,SNR=8.1
KURBB PKKPab PKKPab 19 07 36.6 +0.5
comp=Z,0.4nm,0.6s,baz=275,slow=5.1,SNR=4.0
ULM Lac du Bonnet 107.31 42 PKKPbc PKKPbc 19 07 11.3 -2.2
comp=Z,1.3nm,0.5s,baz=140,slow=4.0,SNR=3.0
OXF Oxford 109.47 59 P PKiKP 18 55 60.0 0.0
baz=260
BVAR Borovoye Array 110.39 320 Pdiff Pdif 18 52 01.4 -0.2
comp=Z,0.8nm,0.7s,baz=94,slow=2.2,SNR=2.8
BVAR PKiKP PKiKP 18 56 00.6 -0.5
comp=Z,2.6nm,0.5s,baz=121,slow=1.9,SNR=24
BVAR PKKPbc PKKPbc 19 07 03.0 -0.9
comp=Z,0.7nm,0.5s,baz=297,slow=1.9,SNR=8.3
BRVK Borovoye 110.45 321 c i PKiKP PKiKP 18 56 02.4 +1.1
BRVK pmax pmax
comp=Z,3.0nm,1.3s
P49A Miami Univ. Ec 113.87 54 P PKiKP 18 56 07.3 -0.9
baz=265
GOGA Godfrey 114.18 61 P PKPdf 18 56 08.2 -0.8
baz=262
TZTN Tazewell 114.49 58 P PKPdf 18 56 08.7 -0.8
baz=264
ACSO Alum Creek Sta 115.26 54 P PKPdf 18 56 09.8 -1.0
baz=266
KMSC Kings Mountain 116.14 60 P PKPdf 18 56 12.5 -0.2
baz=264
O53A New Philadelph 116.61 54 P PKPdf 18 56 13.3 -0.1
baz=267
ABKAR Akbulak array 116.86 316 PKPdf PKPdf 18 56 12.5 -1.1
BLA Blacksburg 117.04 57 P PKPdf 18 56 14.1 -0.3
baz=266
M53A WI Miller and 117.07 53 P PKPdf 18 56 14.0 -0.3
baz=268
ARU Arti 117.19 324 PKPdf PKPdf 18 56 13.1 -0.9
ARU Arti 117.19 324 i PKiKP PKPdf 18 56 13.4 -0.6
ARU 18 57 32.0
ARU 19 03 01.0
ARU SS SS 19 13 09.5 -8.3
ERPA Erie 117.60 52 P PKPdf 18 56 14.8 -0.6
baz=269
GEYT Alibeck 118.08 303 PKP PKPdf 18 56 15.7 -0.8
comp=Z,9.4nm,0.7s,baz=106,slow=3.8,SNR=18
UOSS Minazif 118.37 289 PKPdf PKPdf 18 56 15.5 -1.8
SSPA Standing Stone 119.16 54 PKPdf 18 56 17.3 -1.0
SSPA Standing Stone 119.16 54 P PKPdf 18 56 17.7 -0.7

baz=269
SPA0 **Spitsbergen Ar** 119.40 354 *e*PKPdf **PKPdf** 18 56 17.2 -0.5
SPITS **Spitsbergen Ar** 119.40 354 PKP **PKPdf** 18 56 16.6 -1.2
comp=Z,9.1nm,0.6s,baz=99,slow=5.2,SNR=21
CBN **Corbin Frederi** 119.51 56 P **PKPdf** 18 56 18.4 -0.7
baz=268
BINY **Binghamton** 120.58 52 P **PKPdf** 18 56 20.7 -0.4
baz=272
FRB **Frobisher Bay** 120.86 26 PKP **PKPdf** 18 56 19.7 -1.2
comp=Z,5.2nm,0.7s,baz=353,slow=5.1,SNR=5.0
SDV **Santo Domingo** 121.04 91 PKPdf **PKPdf** 18 56 21.7 -1.3
SAML **Samuel** 121.13 113 PKPdf **PKPdf** 18 56 21.6 -1.3
SAML **Samuel** 121.13 113 PKIKP **PKPdf** 18 56 21.6 -1.3
PTLB **Pontes e Lacer** 121.16 122 PKPdf **PKPdf** 18 56 21.3 -1.6
BOSA **Boshof** 121.37 217 PKP **PKPdf** 18 56 22.3 -0.9
comp=Z,8.1nm,1.0s,baz=141,slow=2.0,SNR=26
BOSA PKKPbc **PKKPbc** 19 06 24.2 -1.2
comp=Z,2.2nm,0.7s,baz=293,slow=2.1,SNR=8.2
LONY **Lake Ozonia** 121.49 49 P **PKPdf** 18 56 22.3 -0.5
baz=274
BRNJ **Basking Ridge** 121.69 53 **PKPdf** 18 56 22.1 -1.0
PAL **Palisades** 121.72 53 P **PKPdf** 18 56 23.2 -0.9
baz=272
L61B **Northampton** 123.02 51 P **PKPdf** 18 56 25.2 -0.5
baz=274
LBNH **Lisbon** 123.41 49 P **PKPdf** 18 56 25.9 -0.5
baz=276
BAUV **El Baul** 123.51 92 PKPdf **PKPdf** 18 56 26.2 -1.2
LVZ **Lovozero** 123.52 341 PKIKP **PKPdf** 18 56 25.7 -0.3
LMQ **La Malbaie** 124.10 45 PKPdf **PKPdf** 18 56 26.0 -1.6
SCHQ **Schefferville** 124.60 36 PKP **PKPdf** 18 56 27.3 -1.1
comp=Z,7.4nm,0.7s,baz=218,slow=4.6,SNR=13
ARA0 **ARCESS Array S** 124.91 345 *e*P **PKPdf** 18 56 27.9 -0.7
ARCES **ARCESS Array B** 124.91 345 PKP **PKPdf** 18 56 27.5 -1.0
comp=Z,5.0nm,0.3s,baz=76,slow=2.5,SNR=113
KLMR **Klimovskoe** 125.44 333 *e*PKIKP **PKPdf** 18 56 28.3 -1.4
KLMR *e* 18 57 31.1
KLMR pmax pmax
comp=Z,21nm,1.3s
KTK1 **Kautokeino** 125.84 346 *e*P **PKPdf** 18 56 29.4 -0.9
JETT **Jettan, Norway** 126.04 347 *e*P **PKiKP** 18 56 31.1 -0.1
TRO **Tromso** 126.28 348 *e*P **PKPdf** 18 56 30.8 -0.3
SJG **San Juan** 127.45 81 **PKPdf** 18 56 33.5 -1.4
SJG **San Juan** 127.45 81 PKIKP **PKPdf** 18 56 33.5 -1.4
HUMP **Col San Antoni** 127.74 81 **PKPdf** 18 56 33.8 -1.6
RAYN **Ar Rayn** 127.86 285 PKPdf **PKPdf** 18 56 35.4 -0.2
RAYN **Ar Rayn** 127.86 285 PKIKP **PKPdf** 18 56 35.4 -0.2
STEI **Steigen** 128.45 348 *e*P **PKPdf** 18 56 34.9 -0.4
ZEI **Tsey** 128.63 310 *e*PKIKP **PKiKP** 18 56 37.4 0.0
ZEI pmax pmax
comp=Z,8.0nm,1.0s
LSZ **Lusaka** 128.88 231 PKPdf **PKPdf** 18 56 36.0 -1.9
LSZ **Lusaka** 128.88 231 PKIKP **PKPdf** 18 56 36.0 -1.9
KBZ **Khabaz** 129.18 311 PKP **PKPdf** 18 56 37.1 -0.3
comp=Z,2.9nm,0.9s,baz=23,slow=3.4,SNR=6.1
KIV **Kislovodsk** 129.29 312 *e*PKIKP **PKPdf** 18 56 36.9 -0.9
KIV pmax pmax
comp=Z,7.0nm,1.1s
OBN **Obninsk** 129.43 327 ⇓*i*PKIKP **PKiKP** 18 56 39.5 +1.2
OBN *e* 18 57 40.2
OBN *e* 19 10 06.7
OBN pmax pmax
comp=Z,14nm,1.0s
BDFB **Brasilia** 129.53 131 PKP **PKPdf** 18 56 38.5 -0.6
comp=Z,6.4nm,0.7s,baz=105,slow=4.1,SNR=6.8
STOK **Stokkvaagen** 130.27 348 *e*P **PKPdf** 18 56 38.2 -0.6
FINES **FINESS Array B** 130.46 338 PKhKP PKPpre 18 56 29.2
comp=Z,0.7nm,0.5s,baz=66,slow=2.3,SNR=4.5
FINES PKP **PKPdf** 18 56 38.3 -1.0
comp=Z,2.3nm,0.6s,baz=29,slow=3.5,SNR=6.6
FINES SKPbc **SKPbc** 18 59 38.6 -0.9
comp=Z,10nm,0.6s,baz=76,slow=5.9,SNR=21
BCA **Borcka** 130.54 309 ⇑P **PKPdf** 18 56 40.6 +0.4
TSUM **Tsumeb** 133.06 218 **PKPdf** 18 56 44.9 -0.9
MNK **Minsk** 134.06 330 *i* PKIKP **PKPdf** 18 56 45.0 -1.3
MNK *i* 18 57 49.6
MNK *i* 18 58 15.2
MNK *i* PPP PPP 19 02 15.8
MNK *i* SS SS 19 16 48.5 +0.7
MNK *i* SSS SSS 19 21 50.1
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.8s
NB2 **NORSAR Subarra** 135.29 345 PKPdf **PKPdf** 18 56 49.2 +0.7
comp=Z,2.5nm,0.6s,baz=31,slow=1.9
NB2 **NORSAR Subarra** 135.29 345 PKPdf **PKPdf** 18 56 49.2 +0.7
baz=31,slow=1.9
NOA **NORSAR Array B** 135.29 345 PKhKP PKPpre 18 56 37.5
comp=Z,0.2nm,0.5s,baz=47,slow=2.1,SNR=1.4
NOA PKP **PKPdf** 18 56 48.9 +0.4
comp=Z,0.6nm,0.6s,baz=32,slow=4.5,SNR=11
HFS **Hagfors** 135.42 343 PKhKP PKPpre 18 56 35.9
comp=Z,2.2nm,0.8s,baz=174,slow=31,SNR=2.2
HFS PKP **PKPdf** 18 56 48.9 +0.2
comp=Z,2.5nm,0.6s,baz=132,slow=2.2,SNR=7.2
AKASG **Malin Array Be** 135.44 325 PKhKP PKPpre 18 56 39.0
comp=Z,0.6nm,0.5s,baz=225,slow=0.1,SNR=4.6
AKASG PKP **PKPdf** 18 56 49.1 +0.1
comp=Z,3.1nm,0.6s,baz=44,slow=2.7,SNR=9.0
AKASG SKPbc **SKPbc** 18 59 55.4 -1.4
comp=Z,3.9nm,0.5s,baz=47,slow=3.9,SNR=17
KIEV **Kiev** 135.45 325 ⇑P **PKPdf** 18 56 48.4 -0.5
KIEV **Kiev** 135.45 325 **PKPdf** 18 56 48.5 -0.5
KIEV **Kiev** 135.45 325 PKIKP **PKPdf** 18 56 48.5 -0.5
MMAI **Mount Meron Ar** 136.76 298 PKP **PKPdf** 18 56 52.3 +0.1
comp=Z,5.6nm,0.5s,baz=79,slow=8.6,SNR=20
MMAI SKP 19 00 02.4
comp=Z,11nm,0.9s,baz=70,slow=3.6,SNR=14
BRTR **Keskin Array B** 136.85 308 PKhKP PKPpre 18 56 43.2
comp=Z,0.5nm,0.5s,baz=342,slow=6.6,SNR=3.6
BRTR PKP **PKPdf** 18 56 52.9 +0.7
comp=Z,3.0nm,0.7s,baz=142,slow=3.6,SNR=9.8
BRTR SKP 19 00 01.7
comp=Z,2.1nm,0.9s,baz=144,slow=3.2,SNR=5.0
PURM **Purcari** 137.03 319 ⇓P **PKiKP** 18 56 54.0 +0.1
SORM **Soroca** 137.21 322 ⇑P **PKPdf** 18 56 53.0 +0.6
SORM **Soroca** 137.21 322 ⇑PKIKP **PKPdf** 18 56 53.0 +0.6
MILM **Milestii Mici** 137.51 320 *e*P **PKPdf** 18 56 53.0 0.0
MILM *e*L L 20 01 20.0
MILM LRM MLR 20 04 18.0
comp=Z,2μm,13.4s
MILM **Milestii Mici** 137.51 320 ⇑P **PKPdf** 18 56 51.0 -2.0
MILM **Milestii Mici** 137.51 320 *e*PKIKP **PKPdf** 18 56 53.0 0.0
MILM MLR MLR
comp=Z,2μm,13.4s
MILM MLR MLR
comp=N,2μm,12.4s
CFR **Carcaliu** 138.72 318 ⇑P **PKPdf** 18 56 53.7 -1.5
CFR **Carcaliu** 138.72 318 ⇑PKIKP **PKPdf** 18 56 53.7 -1.5
TESR **Tescani** 139.01 320 ⇑P **PKPdf** 18 56 52.4 -3.3
VRI **Vrincioaia** 139.28 320 ⇑P **PKPdf** 18 56 52.7 -3.6
VRI **Vrincioaia** 139.28 320 ⇑PKIKP **PKPdf** 18 56 52.7 -3.6
BURAR **Bucovina Array** 139.29 323 ⇑P **PKPdf** 18 56 54.2 -2.2
BURAR **Bucovina Array** 139.29 323 ⇑PKIKP **PKPdf** 18 56 54.2 -2.2
NEHR **Nehoiu** 139.75 319 ⇓P **PKPdf** 18 56 54.4 -2.8
MLR **Muntele Rosu** 139.94 319 ⇑P **PKPdf** 18 56 54.9 -2.8
MLR **Muntele Rosu** 139.94 319 ⇑PKIKP **PKPdf** 18 56 54.9 -2.8
DOPR **Dopca** 140.04 320 ⇑P **PKPdf** 18 56 56.2 -1.5
KOLS **Kolonicke sedl** 140.16 326 *e*PKIKP **PKPdf** 18 56 53.8 -4.0
KOLS **Kolonicke sedl** 140.16 326 *e*PKP **PKPdf** 18 56 53.8 -4.0
ARR **Arges** 140.80 320 ⇑P **PKPdf** 18 56 55.3 -3.8
MARR **Marisel-Cluj** 141.00 323 ⇑P **PKPdf** 18 56 54.6 -4.9
ELND **Elena** 141.18 316 ⇑P **PKPdf** 18 56 56.2 -3.6
LANS **Liptovska Anna** 141.47 328 *e*PKIKP **PKPdf** 18 56 59.3 -0.9
LANS **Liptovska Anna** 141.47 328 *e*PKP **PKPdf** 18 56 59.3 -0.9
BSEG **Bad Segeberg** 141.63 340 *e*PKPbc **PKPdf** 18 56 56.3 -3.9
baz=36,slow=3.1
GZR **Gura Zlata** 141.90 321 ⇑P **PKPdf** 18 56 58.8 -2.3
GZR **Gura Zlata** 141.90 321 ⇑PKHKP PKPpre 18 56 58.8
MORC **Moravsky Berou** 141.98 330 ⇑P **PKPdf** 18 57 00.6 -0.5
MORC **Moravsky Berou** 141.98 330 *e*PKP **PKPdf** 18 56 57.0 -4.1
MORC **Moravsky Berou** 141.98 330 ⇑PKIKP **PKPdf** 18 57 00.6 -0.5
PSZ **Piszkesteto** 142.04 326 PKPdf **PKPdf** 18 56 59.2 -2.1
PSZ **Piszkesteto** 142.04 326 PKIKP **PKPdf** 18 56 59.2 -2.1
SIRR **Siria** 142.07 323 ⇑P **PKPdf** 18 56 58.2 -3.1
SURR **Surduc** 142.09 322 ⇑P **PKPdf** 18 56 57.7 -3.6
MAUC **Maruska** 142.13 330 *e*PKP **PKPdf** 18 56 59.0 -2.3
DPC **Dobruska-Polom** 142.13 332 *e*PKP **PKPdf** 18 56 57.9 -3.4
DPC **Dobruska-Polom** 142.13 332 *e*PKIKP **PKPdf** 18 56 57.9 -3.4
RDO **Rodhopi** 142.17 314 PKPdf **PKPdf** 18 56 58.4 -3.2
MPEP **Malo Peshtene** 142.36 318 *i* P **PKPdf** 18 56 59.3 -2.6
VALD **Valchedram** 142.39 318 *i* P **PKPdf** 18 56 59.3 -2.6
HERR **Herculane** 142.40 321 ⇑P **PKPdf** 18 56 56.9 -5.0
BZS **Buzias** 142.46 322 ⇑P **PKPdf** 18 56 58.8 -3.2
BZS **Buzias** 142.46 322 ⇑PKIKP **PKPdf** 18 56 58.8 -3.2
PGB **Panagyurishte** 142.48 316 *i* P **PKPdf** 18 56 58.5 -3.7
JAVC **Velka Javorina** 142.55 329 *e*PKP **PKPdf** 18 56 59.9 -2.2
LAWE **Loch Awe, Argy** 142.62 355 *e*P **PKPdf** 18 56 57.4 -4.5
FLTG **Flechtingen** 142.65 338 *e*PKPbc **PKPdf** 18 56 59.3 -2.8
baz=36,slow=3.1
VRAC **Vranov** 142.75 330 *e*PKP **PKPdf** 18 56 58.8 -3.6
BRG **Berggiesshubel** 142.76 334 *e*PKP **PKPdf** 18 57 00.4 -2.0
BRG Amp 18 57 02.1
comp=Z,11nm,0.8s
BRG Amp 19 00 29.0
comp=E,1.6nm,9.7s
BRG Amp 19 00 30.0
comp=N,0.9nm,9.9s
BRG Amp 19 00 34.0
comp=Z,2.0nm,9.6s
BRG **Berggiesshubel** 142.76 334 *e*PKIKP **PKPdf** 18 57 00.3 -2.0
BRG pmax pmax
comp=Z,11nm,0.8s
BRG **Berggiesshubel** 142.76 334 *e*PKPbc **PKPdf** 18 57 00.5 -1.8
baz=36,slow=3.1
CLL **Collm** 142.81 336 *e*PKIKP **PKPdf** 18 56 59.0 -3.4
CLL *e* 18 58 04.0
CLL pmax pmax
comp=Z,10.0nm,0.6s
CLL **Collm** 142.81 336 *e*PKPbc **PKPdf** 18 56 59.2 -3.2
baz=36,slow=3.1
BLKB **Belogradchik** 142.90 319 ⇑P **PKPdf** 18 57 00.8 -2.1
KRUC **Moravsky** 143.02 330 *e*PKP PKPab 18 56 59.1 +0.3
VTS **Vitosha** 143.04 317 *i* P PKPbc 18 57 01.0 +0.1
MODS **Modra-Piesok** 143.07 329 *e*PKIKP **PKPdf** 18 57 03.0 0.0
MODS **Modra-Piesok** 143.07 329 *e*PKP **PKPdf** 18 57 03.0 0.0
GOPC **GO Pecny, Ondr** 143.13 333 *e*PKP PKPbc 18 57 01.8 +1.1
GOPC **GO Pecny, Ondr** 143.13 333 *e*PKIKP PKPbc 18 57 01.8 +1.1
HSKC **Hora Svate Kat** 143.18 334 *e*PKP PKPbc 18 57 01.9 +1.0
PRU **Pruhonice** 143.18 333 *e*PKP PKPbc 18 57 01.8 +1.0
PRU **Pruhonice** 143.18 333 *e*PKIKP PKPbc 18 57 01.8 +1.0
MMB **Musomishta** 143.21 315 *i* P PKPbc 18 57 00.9 -0.4
NVR **Nevrokopi** 143.22 315 P PKPab 18 57 00.5 +0.6
TREC **Trest** 143.27 331 *e*PKP PKPbc 18 57 01.3 +0.2
TREC **Trest** 143.27 331 *e*PKIKP PKPbc 18 57 01.3 +0.2
EKA **Eskdalemuir Ar** 143.31 353 PKhKP PKPpre 18 57 00.0
comp=Z,3.2nm,0.5s,baz=359,slow=2.2,SNR=22
CLZ **Clausthal** 143.35 338 *e*PKPbc PKPbc 18 57 01.6 +0.3
baz=36,slow=3.1
NEUB **Neuenburg** 143.36 336 *e*PKPbc PKPbc 18 57 01.2 -0.1
baz=36,slow=3.1
KOKK **Kokkinochori,** 143.37 314 P PKPab 18 57 00.8 +0.4
KKB **Krupnik** 143.48 316 *i* P PKPbc 18 57 02.2 +0.2
BOVS **Bovan** 143.49 319 ⇑P PKPbc 18 57 02.1 +0.2
SRS **Serrai** 143.51 315 P PKPab 18 57 01.4 +0.4
OUR **Ouranopolis** 143.59 313 P PKPbc 18 57 01.8 -0.4
NEWG **New Galloway** 143.64 354 *e*P PKPbc 18 57 01.9 0.0
EDMD **Edmundbyers** 143.65 352 *e*P PKPbc 18 57 01.9 -0.1
PEHC **Pehcevo** 143.66 316 *i* P PKPbc 18 57 02.6 +0.1
TANN **Tannenbergstha** 143.72 335 *e*PKPbc PKPbc 18 57 02.6 +0.2
baz=36,slow=3.1
ZVC **Zvikov** 143.74 333 *e*PKP PKPbc 18 57 02.7 +0.3
FRGS **Fruska Gora** 143.77 323 ⇑P PKPbc 18 57 03.2 +0.6
FRGS **Fruska Gora** 143.77 323 ⇑*i*P PKPbc 18 57 02.9 +0.2
MORH **Mrgy, Hungar** 143.77 325 ⇑P PKPbc 18 57 02.8 +0.2
IBBN **Ibbenburen** 143.82 341 *e*PKPbc PKPbc 18 57 02.9 +0.4
baz=36,slow=3.1
MOX **Moxa** 143.87 336 *e*PKPbc PKPbc 18 57 02.9 +0.2
baz=36,slow=3.1
GAL1 **Galloway** 143.94 354 *e*P **PKPdf** 18 57 03.5 -0.7
KNT **Kendrikon** 143.96 315 P PKPab 18 57 02.7 -0.1
PAIG **Paliouri** 143.97 313 P PKPab 18 57 02.0 -0.8
RONA **Rosalia, Austr** 144.01 329 *e*PKP **PKPdf** 18 57 04.1 -0.6
comp=Z,20nm,0.6s,SNR=20
RONA *e*PKP **pPKPdf** 18 58 06.5 -1.0
comp=Z,12nm,1.4s
THR3 **Thira Island,** 144.04 306 P **PKPab** 18 57 03.0 -0.2
CONA **Conrad Observa** 144.06 329 *e*PKP **PKPdf** 18 57 04.3 -0.6
comp=Z,10nm,0.6s,SNR=10
CONA *e*PKP **pPKPdf** 18 58 06.4 -1.3
comp=Z,19nm,1.4s
VAY **Valandovo** 144.10 315 *i* P **PKPab** 18 57 03.4 +0.2
CKRC **Cesky Krumlov** 144.15 332 *e*PKP PKPbc 18 57 04.2 +0.5
CKRC **Cesky Krumlov** 144.15 332 *e*PKIKP PKPbc 18 57 04.2 +0.5
STIP **Stip** 144.17 316 *i* P **PKPab** 18 57 03.0 -0.6
MANZ **Manzenberg** 144.20 335 *e*PKPbc PKPbc 18 57 04.3 +0.5
baz=36,slow=3.1
KHC **Kasperske Hory** 144.24 333 *e*PKP PKPbc 18 57 04.4 +0.4
KHC **Kasperske Hory** 144.24 333 *e*PKIKP PKPbc 18 57 04.4 +0.4
TEKS **Tekeris** 144.28 322 ⇑*i*P PKPbc 18 57 04.2 0.0
ROTZ **Rotzenmuhle** 144.33 335 *e*PKPbc PKPbc 18 57 04.6 +0.4
baz=36,slow=3.1
UBBA **Unterbreizbach** 144.33 338 *e*PKPbc PKPbc 18 57 04.3 +0.3
baz=36,slow=3.1
GRG **Griva** 144.38 315 P **PKPab** 18 57 04.0 -0.4
GEC2 **GERESS Array S** 144.40 332 *e*PKPbc PKPbc 18 57 04.6 +0.1
baz=36,slow=3.1
GERES **GERESS Array B** 144.40 332 PKP PKPbc 18 57 04.6 +0.1
comp=Z,19nm,0.6s,baz=31,slow=5.0,SNR=61
GERES PP **PP** 19 00 19.0 -4.2
comp=Z,1.5nm,0.7s,baz=12,slow=6.8,SNR=4.1
HPK **Haverah Park** 144.45 351 *e*P **PKPab** 18 57 03.9 -0.3
SKO **Skopje** 144.52 317 *i* P **PKPdf** 18 57 05.8 +0.1
IOMK **Kirk Michael** 144.52 354 *e*P **PKPab** 18 57 04.0 -0.5
WET **Wettzell** 144.53 333 *e*PKPbc **PKPdf** 18 57 05.3 -0.2
baz=36,slow=3.1
DION **Dionisos Attik** 144.54 310 P PKPbc 18 57 05.2 0.0
KASTN **Kahler Asten** 144.56 339 *e*PKPbc PKPbc 18 57 05.2 +0.3
baz=36,slow=3.1
ATHU **Athens Univers** 144.69 310 P PKPbc 18 57 05.0 -0.7
ARSA **Arzberg** 144.70 329 *i* PKP **PKPdf** 18 57 05.8 -0.1
comp=Z,13nm,0.7s,SNR=18
ARSA *e*PKP **pPKPdf** 18 58 07.7 -1.0
comp=Z,11nm,1.2s
BUG **Bochum--Univer** 144.73 341 *e*PKPbc **PKPab** 18 57 05.5 +0.2
baz=36,slow=3.1
VLY **Voula,Athens** 144.73 309 P PKPbc 18 57 05.0 -0.8
ATH **Athens Observa** 144.74 310 P PKPbc 18 57 04.9 -0.9
BBLS **Lazići** 144.75 321 ⇑*i*P **PKPdf** 18 57 06.1 -0.1
SJES **Sjenica** 144.75 320 ⇑*i*P **PKPdf** 18 57 06.5 +0.3
GRF **Grafenberg Arr** 144.78 335 *e*PKPbc **PKPdf** 18 57 07.4 +1.4
baz=36,slow=3.1
IDI **Anoyia** 144.79 305 P PKPbc 18 57 05.9 -0.2
MOA **Molln** 144.88 331 *e*PKP **PKPdf** 18 57 06.5 +0.3
comp=Z,24nm,0.6s,SNR=17
MOA *e*PKP **pPKPdf** 18 58 09.8 +0.7
comp=Z,18nm,1.2s
KOGS **Kog** 144.88 327 *e*PKPbc PKPbc 18 57 06.0 0.0
HAPS **Han Pijesak,Bl** 144.89 322 ⇑*i*P **PKPdf** 18 57 06.9 +0.4
ILTH **Belurgan, Co L** 144.90 356 *e*P PKPbc 18 57 05.5 -0.2
RUDO **Rudo** 144.92 321 *e*P PKPbc 18 57 06.0 -0.2
VILL **Villia** 144.96 310 P PKPab 18 57 06.9 +0.2
KALN **Kalnik** 144.99 327 *i* P PKPbc 18 57 06.3 -0.1
LBWR **Ladybower, Pea** 145.01 351 *e*P PKPbc 18 57 06.0 -0.2
FNA **Florina** 145.15 315 PKPdf **PKPdf** 18 57 06.3 -0.6
FNA **Florina** 145.15 315 P **PKPdf** 18 57 06.5 -0.4
FNA **Florina** 145.15 315 PKP2 **PKPdf** 18 57 06.3 -0.6
MOSL **Moslavina** 145.17 326 *i* P **PKPab** 18 57 07.2 -0.1
LOBO **Lobor** 145.18 327 *i* P **PKPbc** 18 57 06.9 0.0
WACR **West Acre** 145.25 348 *e*P **PKPdf** 18 57 06.5 -0.1
LOUT **Loutraki** 145.27 310 P **PKPab** 18 57 08.4 +0.5
BIOA **Bad Ischl, Aus** 145.28 331 *e*PKP **PKPdf** 18 57 06.9 0.0
comp=Z,4.8nm,0.3s,SNR=7.0
BIOA *e*PKP pPKPbc 18 58 09.3 +0.5
comp=Z,28nm,2.0s
AGG **Agios Georgios** 145.30 312 P **PKPdf** 18 57 05.9 -1.3
PHP **Peshkopia** 145.31 317 P **PKPbc** 18 57 07.7 +0.2
SOKA **Soboth** 145.34 329 *i* PKP **PKPbc** 18 57 07.4 -0.1
comp=Z,37nm,0.9s,SNR=11
SOKA *e*PKP pPKPbc 18 58 09.6 +0.5
comp=Z,25nm,1.4s
OHR **Ohrid** 145.37 316 *i* P **PKPab** 18 57 08.5 +0.3
TNS **Taunus Mts** 145.38 338 *e*PKPbc **PKPab** 18 57 08.0 +0.1
baz=36,slow=3.1
TNS *e*PKPbc pPKPbc 18 58 09.4 +0.6
STNC **Stoke** 145.38 351 *e*P **PKPab** 18 57 07.6 -0.2
KRND **KRANIDI** 145.38 309 P **PKPdf** 18 57 06.8 -0.5
PTJ **Puntijarka** 145.39 327 P **PKPab** 18 57 08.1 -0.1
IMMV **Iera Moni Meta** 145.44 305 P **PKPbc** 18 57 07.8 -0.2
MAKR **Makrakomi, Fth** 145.45 312 P **PKPab** 18 57 09.3 +0.8
WLF1 **Llynfaes** 145.46 354 *e*P **PKPdf** 18 57 06.8 -0.1
PUK **Puka** 145.47 318 PKPdf **PKPdf** 18 57 07.2 -0.3
A051A **Mrakovica** 145.48 325 ⇑*i*P **PKPab** 18 57 08.4 -0.1
BLY **Banja Luka** 145.49 324 ⇑*i*P **PKPab** 18 57 08.5 0.0
KPRO **Kipourio** 145.55 314 P **PKPab** 18 57 08.7 -0.3
AHRW **Bad Neuenahr-A** 145.57 340 *e*PKPbc **PKPab** 18 57 08.8 +0.3
baz=36,slow=3.1
KBN **Korca** 145.62 316 **PKPbc** 18 57 08.3 -0.2
KBN **Korca** 145.62 316 PKP2 **PKPbc** 18 57 08.3 -0.2
RJOB **Jochberg** 145.63 332 *e*PKPbc **PKPbc** 18 57 08.6 +0.3
baz=36,slow=3.1
RJOB *e*PKPbc **pPKPdf** 18 58 12.6 +2.5
OBKA **Obir** 145.70 329 *i* PKP **PKPdf** 18 57 08.2 +0.4
comp=Z,9.1nm,0.7s
OBKA *e*PKP pPKPab 18 58 10.4 +0.5
comp=Z,15nm,1.1s
OBKA **Obir** 145.70 329 *e*P **PKPdf** 18 57 07.3 -0.4
SBD1 **Bryn Du** 145.71 352 *e*P **PKiKP** 18 57 14.9 +3.3
CRES **Cresnjev** 145.71 327 ⇑*i*P **PKPbc** 18 57 08.9 +0.4
FOEL **Foel Wylfa** 145.71 352 *e*P **PKPbc** 18 57 08.4 +0.1
EVR **Evrytania** 145.71 312 P **PKPab** 18 57 09.8 +0.2
GUR **Goura** 145.75 310 P **PKPdf** 18 57 08.2 +0.1
MGRS **Mrkonjic Grad** 145.76 324 ⇑*i*P **PKPbc** 18 57 08.8 +0.1
ELMS **Elmsett, Ipswi** 145.77 347 *e*P **PKPbc** 18 57 08.6 +0.1
BEBN **Eben Emael** 145.78 342 *d*PKP **PKPab** 18 57 09.9 +0.6
VLI **Veliai** 145.79 308 P **PKPdf** 18 57 08.2 +0.1
LLW **Llanuwychllyn** 145.81 353 *e*P **PKPbc** 18 57 08.2 -0.4
BRY **Bratogost** 145.82 321 *e*P **PKPbc** 18 57 08.9 -0.2
BTNL **Ternell** 145.82 341 *d*PKP **PKPab** 18 57 09.5 0.0
BTNL *dp*PKP pPKPbc 18 58 10.3 0.0
DRME **Dracevica, Mon** 145.83 319 ⇑*i*P **PKPbc** 18 57 09.0 0.0
MEM **Membach** 145.84 341 *d*PKP **PKPbc** 18 57 08.7 0.0
MEM *dp*PKP pPKPbc 18 58 10.2 -0.1
KLV **Kalavryta, Ach** 145.84 311 P **PKPdf** 18 57 08.5 +0.3
OZLJ **Ozalj** 145.85 327 *i* P **PKPab** 18 57 09.4 -0.3
NEVS **Nevesinje** 145.85 321 *e*P **PKPdf** 18 57 08.0 -0.1
TIR **Tirane** 145.85 317 ⇑P **PKPab** 18 57 10.4 +0.4
TIR **Tirane** 145.85 317 ⇑PKP2 **PKPab** 18 57 10.4 +0.4
EFP **Efpalio** 145.86 311 P **PKPab** 18 57 09.8 -0.3
KBA **Koelnbreinsper** 145.87 330 *i* PKP **PKPbc** 18 57 08.8 -0.4
comp=Z,14nm,0.5s,SNR=9.4
KBA *e*PKP pPKPab 18 58 11.0 +0.2
comp=Z,21nm,1.0s
LESA **Schwarzleotal** 145.92 331 *i* PKP **PKPbc** 18 57 09.1 -0.1
comp=Z,46nm,0.6s
LESA *e*PKP **pPKPdf** 18 58 11.6 +0.7
comp=Z,40nm,1.0s
FUR **Furstenfeldbru** 145.96 334 *e*PKPbc **PKPbc** 18 57 09.7 +0.5
baz=36,slow=3.1
FUR *e*PKPbc **pPKPdf** 18 58 12.7 +2.1
LSK **Leskovik** 145.97 315 P **PKPbc** 18 57 09.9 +0.3
BSTI **Sart Tilman** 146.00 342 *d*PKP **PKPbc** 18 57 09.2 0.0
A050A **Klekovaca** 146.02 324 ⇑*i*P **PKPbc** 18 57 09.6 0.0
HLM1 **Long Mynd** 146.03 352 *e*P **PKPbc** 18 57 09.0 -0.3
LJU **Ljubljana** 146.03 328 *i* PKPbc **PKPbc** 18 57 09.7 +0.2
BOJS **Bojanci** 146.03 327 ⇑*i*P **PKPab** 18 57 10.1 -0.4
TREB **Trebinje** 146.04 320 *e*P **PKPbc** 18 57 09.4 -0.2
PVO **Paravola** 146.04 312 P **PKPab** 18 57 10.5 -0.3
MYKA **Terra Mystica** 146.05 330 *e*PKPbc **PKPbc** 18 57 09.1 -0.5
comp=Z,10nm,0.5s,SNR=5.3
MYKA *e*PKP **pPKPdf** 18 58 11.1 0.0
comp=Z,27nm,1.5s
BHOU **Houvegnez** 146.07 341 *d*PKP **PKPbc** 18 57 09.9 +0.5
BHOU *d*PKiKP **PKPab** 18 57 11.3 +0.8
BHOU *dp*PKP pPKPab 18 58 12.4 +1.3
HCY **Herceg Novi** 146.11 320 *e*P **PKPbc** 18 57 09.4 -0.4
DRO **Drossia** 146.20 311 P **PKPbc** 18 57 10.1 -0.1
BCLA **Clavier** 146.22 342 *d*PKP **PKPbc** 18 57 09.8 -0.1
PLIT **Plitvice** 146.26 326 *i* P **PKPbc** 18 57 10.1 -0.1
CEY **Cerknica** 146.30 328 *e*P **PKPbc** 18 57 09.7 -0.6
RICI **Ricice** 146.30 322 *i* P **PKPbc** 18 57 10.1 -0.2
STU **Stuttgart** 146.31 336 **PKPbc** 18 57 09.8 -0.4
STU **Stuttgart** 146.31 336 PKP2 **PKPbc** 18 57 09.8 -0.4
STU **Stuttgart** 146.31 336 *e*PKPbc **PKPbc** 18 57 10.8 +0.6
baz=36,slow=3.1
STU *e*PKPbc pPKPab 18 58 13.6 +1.5
BGES **Gesves** 146.32 342 *d*PKP **PKPbc** 18 57 09.8 -0.3
RLS **Riolos of Patr** 146.33 311 P **PKPbc** 18 57 11.2 +0.6
STON **Ston** 146.34 321 *i* P **PKPdf** 18 57 09.6 +0.8
STON **Ston** 146.34 321 *e*P **PKPdf** 18 57 09.1 +0.3
VOJS **Vojsko** 146.36 329 *i* PKPbc **PKPbc** 18 57 10.2 -0.4
KIJV **Kijevo** 146.40 324 *i* P **PKPbc** 18 57 10.4 -0.2
UDBI **Udbina** 146.41 325 *i* P **PKPbc** 18 57 10.6 -0.1
IGT **Igoumenitsa** 146.45 314 P **PKPbc** 18 57 10.6 -0.3
WATA **Walderalm** 146.47 332 *i* PKP **PKPbc** 18 57 10.8 -0.1
comp=Z,30nm,0.8s,SNR=8.6
WATA *e*PKP pPKPbc 18 58 13.1 +0.5
comp=Z,30nm,1.2s
RCHB **Rochefort** 146.48 342 *d*PKP **PKPbc** 18 57 11.0 +0.4
RCHB *dp*PKP **pPKPdf** 18 58 12.0 +0.5
BMRD **Maredsous** 146.48 342 *d*PKP **PKPbc** 18 57 10.2 -0.5
ABTA **Abfaltersbach** 146.50 331 *i* PKP **PKPdf** 18 57 09.3 +0.3
comp=Z,32nm,0.6s,SNR=8.3
ABTA *e*PKP **pPKPdf** 18 58 12.7 +0.7
comp=Z,17nm,1.0s
WTTA **Wattenberg** 146.50 332 *e*PKP **PKPbc** 18 57 11.1 0.0
comp=Z,30nm,0.7s,SNR=12
WTTA *e*PKP **pPKPdf** 18 58 12.8 +1.1
comp=Z,56nm,1.7s
MCH1 **Michaelchurch** 146.56 352 *e*P **PKPbc** 18 57 10.3 -0.4
TSLK **Tsoukalades, L** 146.56 313 P **PKPbc** 18 57 11.6 +0.4
LKD2 **Lefkada island** 146.57 313 P **PKPbc** 18 57 11.7 +0.4
NYDR **Nydri-Lefkada** 146.58 313 P **PKPbc** 18 57 11.4 +0.2
PYL **PYLOS** 146.61 309 P **PKPdf** 18 57 10.0 +0.6
WLF **Walferdange** 146.62 340 *d*PKP **PKPbc** 18 57 11.8 +0.8
WLF *dp*PKP pPKPab 18 58 14.5 +1.3
WLF **Walferdange** 146.62 340 *e*PKPbc **PKPab** 18 57 12.0 -0.6
baz=36,slow=3.1
WLF *e*PKPbc pPKPab 18 58 14.5 +1.4
EVGI **Lefkada island** 146.65 312 P **PKPbc** 18 57 11.6 +0.1
MOTA **Moosalm** 146.67 333 *i* PKP **PKPbc** 18 57 11.4 -0.1
comp=Z,54nm,0.9s,SNR=19
MOTA *e*PKP **pPKPdf** 18 58 12.8 +0.9
comp=Z,38nm,1.5s
MONM **Monmouth** 146.69 351 *e*P **PKPbc** 18 57 11.0 -0.1
RETA **Reutte** 146.71 333 *i* PKP **PKPbc** 18 57 11.5 0.0
comp=Z,8.3nm,0.6s
RETA *e*PKP **pPKPdf** 18 58 11.6 -0.3
comp=Z,21nm,1.4s
DOU **Dourbes** 146.72 342 *d*PKP **PKPbc** 18 57 11.6 +0.3
DOU *dp*PKP pPKPbc 18 58 13.8 +0.8
SQTA **Sankt Quirin** 146.72 333 *i* PKP **PKPbc** 18 57 11.7 +0.1
comp=Z,35nm,0.5s,SNR=14
SQTA *e*PKP pPKPbc 18 58 13.9 +0.6
comp=Z,36nm,1.5s
KEK **Kerkira** 146.72 315 PKPdf **PKPdf** 18 57 09.2 -0.4
FSK **Fiskardo** 146.79 312 P **PKPdf** 18 57 10.6 +0.9
RSBS **Rosebush, Pemb** 146.82 353 *e*P **PKPbc** 18 57 10.8 -0.7
UBR **Ueberruh** 146.83 334 *e*PKPbc **PKPbc** 18 57 12.1 +0.4
baz=36,slow=3.1
UBR *e*PKPbc pPKPab 18 58 15.5 +1.

KEST	**Kesra**	**155.81**	**318**	PKPab	**PKPab**	**18 57 51.5**	**0.0**
	comp=Z,17nm,0.9s,baz=329,slow=3.9,SNR=9.6						
ESDC	**Sonseca Array**	**158.65**	**346**	PKPab	**PKPab**	**18 58 02.9**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=12,slow=3.9,SNR=8.0						
TAM	**Tamanrasset**	**164.54**	**287**		**PKPdf**	**18 57 32.0**	**-1.6**
TAM				PKPab	**PKPab**	**18 58 27.9**	**-2.2**
TAM	**Tamanrasset**	**164.54**	**287**	PKIKP	**PKPdf**	**18 57 32.0**	**-1.6**
TAM						18 58 27.9	
DBIC	**Dimbokro**	**166.55**	**205**	PKP	**PKPdf**	**18 57 34.7**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=218,slow=1.4,SNR=4.9						
DBIC				PKPab	**PKPab**	**18 58 38.0**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=149,slow=5.3,SNR=6.9						
TORD	**Torodi Ar. Bea**	**166.89**	**245**	PKP	**PKPdf**	**18 57 35.3**	**-0.3**
	comp=Z,9.7nm,0.8s,baz=29,slow=3.3,SNR=4.0						
TORD				PKPab	**PKPab**	**18 58 40.3**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=93,slow=3.5,SNR=4.7						

ASIES ***06*** *18:38:13.2,24.′08N×121.′76E,h7km,ML3.7,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}4.71; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-4.44; $M_{r\theta}$5.27; $M_{r\phi}$-3.41; $M_{\theta\phi}$9.67; Fault plane solution: $M_0$12.40390×10^{20} NP1: ϕ_s28.60000°,δ76.67000°,λ89.56000°. NP2:ϕ_s210.50000°, δ13.34000°,λ91.85000°. Principal axes: T Plg58.3310°, Azm298.0080°; N Plg0.4270°, Azm28.7000°; P Plg31.6660°, Azm118.9630°;*

TAP ***06*** *18:38:13.2,24.′08N×121.′76E,h7km,ML3.7,C*

JMA ***06*** *18:38:14.1±0.2,24.′1N±0.′6×121.′7E±0.′6,h0km,MV3.1/8, TAIWAN REGION*

ISC 06 18:38:14.0±1.0,24.′09N±0.′02×121.′76E±0.′02,h7km±7km, n109,σ0°88/162,2C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**298**	*i* P	**Pg**	**18 38 17.0**	**+0.1**
	baz=301						
ETL				*i* S	**Sg**	**18 38 19.5**	**+0.6**
	baz=301						
TWD	**Chiawan**	**0.15**	**264**	*i* P	**Pg**	**18 38 17.1**	**+0.1**
	baz=277						
TWD				*i* S	**Sg**	**18 38 19.7**	**+0.6**
	baz=277						
NACB	**Ninganchiao**	**0.17**	**298**	⇓*i* P	**Pg**	**18 38 17.4**	**0.0**
	baz=301						
NACB				*i* S	**Sg**	**18 38 20.1**	**+0.3**
	baz=301						
EHP	**Heping Village**	**0.21**	**357**	*i* P	**Pg**	**18 38 18.4**	**+0.1**
	baz=357						
EHP				*i* S	**Sg**	**18 38 22.9**	**+1.6**
	baz=357						
EAHA	**Aohua**	**0.23**	**357**	*i* P	**Pg**	**18 38 18.9**	**+0.2**
	baz=355						
EAHA				*i* S	**Sg**	**18 38 23.3**	**+1.4**
	baz=355						
ETM	**Tongmen**	**0.27**	**242**	*i* P	**Pg**	**18 38 19.3**	**0.0**
	baz=257						
ETM				*i* S	**Sg**	**18 38 23.7**	**+0.7**
	baz=257						
LXIB	**Xiulin Townshi**	**0.32**	**257**	*i* P	**Pg**	**18 38 20.2**	**-0.1**
	baz=261						
LXIB				*e*S	**Sg**	**18 38 25.1**	**+0.5**
	baz=261						
ENA	**Nanau**	**0.33**	**358**	*i* P	**Pg**	**18 38 20.7**	**+0.2**
	baz=358						
ENA				*i* S	**Sb**	**18 38 26.2**	**-1.6**
	baz=358						
EWUT	**Wuta**	**0.35**	**4**	P	**Pg**	**18 38 21.0**	**+0.2**
	baz=2.0						
EWUT				S	**Sg**	**18 38 26.0**	**+0.5**
	baz=2.0						
SHUL	**Shoufeng**	**0.35**	**210**	P	**Pb**	**18 38 21.9**	**-0.6**
	baz=212						
SHUL				*i* S	**Sb**	**18 38 28.6**	**+0.3**
	baz=212						
ESL	**Shilin**	**0.41**	**227**	*e*P	**Pb**	**18 38 22.0**	**-1.5**
	baz=240						
ESL				*e*S	**Sb**	**18 38 28.1**	**-1.7**
	baz=240						
TEGC	**Jichi Village**	**0.43**	**207**	*e*P	**Pb**	**18 38 23.5**	**-0.4**
	baz=208						
TEGC				*e*S	**Sb**	**18 38 31.8**	**+1.2**
	baz=208						
WHF	**Hehuan Shan**	**0.45**	**277**	*e*P	**Pb**	**18 38 23.1**	**-1.4**
	baz=279						
WHF				S	**Sg**	**18 38 29.0**	**+0.2**
	baz=279						
NNSB	**Datong**	**0.47**	**314**	⇓*i* P	**Pg**	**18 38 23.4**	**+0.2**
	baz=314						
NNSB				*i* S	**Sg**	**18 38 30.2**	**+0.7**
	baz=314						
NNSH	**Datong**	**0.47**	**314**	P	**Pg**	**18 38 23.4**	**+0.2**
	baz=313						
NNSH				S	**Sg**	**18 38 30.2**	**+0.7**
	baz=313						
ESAO	**Su ao**	**0.49**	**10**	*e*P	**Pb**	**18 38 23.7**	**-1.1**
	baz=8.0						
LATG	**Datong**	**0.49**	**335**	*i* P	**Pg**	**18 38 23.6**	**+0.2**
	baz=333						
LATG				*e*S	**Sg**	**18 38 29.7**	**-0.1**
	baz=333						
NNS	**Nan Shan**	**0.49**	**315**	P	**Pg**	**18 38 23.6**	**+0.1**
	baz=314						
NNS				S	**Sg**	**18 38 30.5**	**+0.6**
	baz=314						
FUSS	**Fushou**	**0.49**	**288**	*e*P	**Pb**	**18 38 24.1**	**-1.0**
	baz=288						
WARBT	**Fenglin Townsh**	**0.50**	**222**	P	**Pb**	**18 38 24.1**	**-1.1**
	baz=238						
WARBT				S	**Sb**	**18 38 30.9**	**-1.8**
	baz=238						
TWC	**Suao**	**0.52**	**10**	*e*P	**Pb**	**18 38 24.7**	**-0.7**
	baz=9.0						
CHGB	**Renai**	**0.53**	**266**	*i* P	**Pb**	**18 38 24.6**	**-1.2**
	baz=270						
CHGB				*i* S	**Sg**	**18 38 31.9**	**+0.5**
	baz=270						
NDS	**Dongshan**	**0.54**	**356**	P	**Pb**	**18 38 25.0**	**-0.8**
	baz=354						
NDS				S	**Sb**	**18 38 32.8**	**-0.9**
	baz=354						
OWD	**Renai**	**0.55**	**255**	*i* P	**Pb**	**18 38 24.7**	**-1.3**
	baz=270						
OWD				S	**Sg**	**18 38 31.9**	**+0.1**
	baz=270						
NDT	**Datong Townshi**	**0.55**	**336**	⇓*i* P	**Pb**	**18 38 25.0**	**-1.0**
	baz=334						
NDT				*i* S	**Sb**	**18 38 33.3**	**-0.9**
	baz=334						
TWT	**Tachien**	**0.55**	**287**	*e*P	**Pb**	**18 38 25.5**	**-0.6**
	baz=287						
TWT				S	**Sb**	**18 38 33.3**	**-1.0**
	baz=287						
TDCB	**Techi**	**0.57**	**286**	P	**Pb**	**18 38 25.6**	**-0.7**
	baz=287						
TDCB				*i* S	**Sb**	**18 38 33.2**	**-1.5**
	baz=287						
ENTT	**Nioudou**	**0.57**	**342**	*i* P	**Pb**	**18 38 25.5**	**-0.8**
	baz=342						
ENTT				*i* S	**Sb**	**18 38 33.7**	**-0.9**
	baz=342						
WUSB	**Renai**	**0.59**	**260**	*i* P	**Pb**	**18 38 25.9**	**-0.8**
	baz=263						
WUSB				*i* S	**Sb**	**18 38 34.0**	**-1.3**
	baz=263						
TWE	**Neicheng**	**0.63**	**353**	⇑*i* P	**Pb**	**18 38 26.7**	**-0.6**
	baz=353						
TWE				S	**Sb**	**18 38 35.0**	**-1.3**
	baz=353						
VWDT	**VWDT**	**0.66**	**239**	*e*P	**Pb**	**18 38 27.1**	**-0.6**
	baz=241						
VWDT				*i* S	**Sb**	**18 38 36.3**	**-0.8**
	baz=241						
YHNB	**Yeheng**	**0.67**	**329**	*i* P	**Pb**	**18 38 27.5**	**-0.6**
	baz=328						
YHNB				*i* S	**Sb**	**18 38 36.7**	**-0.9**
	baz=328						
HGSD	**Ruisui**	**0.67**	**207**	*e*P	**Pn**	**18 38 28.4**	**-1.5**
	baz=194						
FUSB	**Fushanzhiwuyua**	**0.68**	**347**	P	**Pb**	**18 38 27.9**	**-0.4**
	baz=346						
FUSB				*i* S	**Sb**	**18 38 36.7**	**-1.1**
	baz=346						
NSK	**Sanguang**	**0.68**	**328**	*i* P	**Pb**	**18 38 27.7**	**-0.6**
	baz=327						
NSK				*i* S	**Sb**	**18 38 37.1**	**-0.8**
	baz=327						
EHY	**Hungye**	**0.71**	**214**	*e*P	**Pb**	**18 38 28.1**	**-0.5**
	baz=214						
NWLT	**Wulai**	**0.72**	**341**	*i* P	**Pb**	**18 38 28.4**	**-0.4**
	baz=340						
NWLT				*i* S	**Sb**	**18 38 38.2**	**-0.7**
	baz=340						
WPL	**Puli Township**	**0.73**	**264**	P	**Pb**	**18 38 28.5**	**-0.6**
	baz=266						
WPL				S	**Sb**	**18 38 38.1**	**-1.2**
	baz=266						
DPDB	**Guoxing**	**0.76**	**266**	*i* P	**Pb**	**18 38 28.8**	**-0.7**
	baz=258						
DPDB				S	**Sb**	**18 38 39.4**	**-0.7**
	baz=258						
WHP	**Taichung City**	**0.76**	**284**	P	**Pb**	**18 38 29.5**	**-0.1**
	baz=285						
WHP				S	**Sb**	**18 38 40.1**	**-0.1**
	baz=285						
WCS	**Beigang Elemen**	**0.77**	**267**	P	**Pb**	**18 38 28.9**	**-0.8**
	baz=268						
NFF	**Wufeng Townshi**	**0.79**	**313**	P	**Pb**	**18 38 29.7**	**-0.4**
	baz=303						
SSLB	**Suanglung**	**0.79**	**248**	⇑*i* P	**Pb**	**18 38 29.2**	**-0.9**
	baz=262						
SSLB				*i* S	**Sb**	**18 38 39.6**	**-1.5**
	baz=262						
SMLT	**Sun Moon Lake**	**0.81**	**255**	P	**Pb**	**18 38 29.5**	**-0.9**
	baz=258						
SMLT				S	**Sb**	**18 38 40.6**	**-1.0**
	baz=258						
YULB	**Yu-li**	**0.81**	**211**	*e*P	**Pb**	**18 38 29.9**	**-0.5**
	baz=225						
TYC	**Yuchr**	**0.84**	**257**	*e*P	**Pb**	**18 38 29.9**	**-1.0**
	baz=260						
TYC				*i* S	**Sg**	**18 38 41.0**	**-0.1**
	baz=260						
EYUL	**Yuli**	**0.84**	**208**	*e*P	**Pb**	**18 38 30.5**	**-0.5**
	baz=224						
TWF1	**Yuli**	**0.85**	**210**	*e*P	**Pb**	**18 38 30.8**	**-0.3**
	baz=225						
LIOB	**Emei**	**0.87**	**309**	*e*P	**Pn**	**18 38 31.6**	**-1.0**
	baz=306						
NSTT	**Nanjuang**	**0.87**	**308**	*e*P	**Pn**	**18 38 31.6**	**-1.0**
	baz=308						
NSTT				*e*S	**Sb**	**18 38 43.6**	**+0.3**
	baz=308						
TIPB	**Shuangxi**	**0.88**	**4**	*e*P	**Pb**	**18 38 31.2**	**-0.3**
	baz=12						
NJD	**Zhudong**	**0.88**	**317**	*e*P	**Pn**	**18 38 32.3**	**-0.5**
	baz=313						
TWA	**Mucha**	**0.90**	**350**	*e*P	**Pn**	**18 38 32.6**	**-0.4**
	baz=348						
TATO	**Taipei**	**0.91**	**345**	*e*P	**Pg**	**18 38 31.2**	**-0.3**
	baz=341						
WHYT	**Xinyi Township**	**0.92**	**245**	*e*P	**Pn**	**18 38 32.2**	**-1.1**
	baz=255						
TWQ1	**Liyutan**	**0.93**	**286**	*i* P	**Pn**	**18 38 33.6**	**+0.1**
	baz=298						
TWQ1				*e*S	**Sn**	**18 38 48.4**	**+1.3**
	baz=298						
TWB1	**Santiao Chiao**	**0.93**	**13**	*e*P	**Pn**	**18 38 34.0**	**+0.4**
	baz=4.0						
HSN1	**Hsinchu**	**0.96**	**316**	*e*P	**Pn**	**18 38 34.0**	**+0.2**
	baz=314						
HSN1				*e*S	**Sn**	**18 38 48.9**	**+1.2**
	baz=314						
CHKH	**Chenggong**	**0.96**	**200**	*e*P	**Pn**	**18 38 33.0**	**-0.8**
	baz=190						
NSY	**Sanyi**	**0.96**	**290**	*e*P	**Pn**	**18 38 33.7**	**-0.2**
	baz=291						
NSY				*e*S	**Sn**	**18 38 48.7**	**+0.8**
	baz=291						
WWF	**Wufeng**	**0.97**	**267**	*e*P	**Pn**	**18 38 34.4**	**+0.5**
	baz=264						
WWF				*e*S	**Sn**	**18 38 49.3**	**+1.4**
	baz=264						
NWF	**Wu-fen Shan**	**0.97**	**1**	*e*P	**Pn**	**18 38 33.8**	**-0.3**
	baz=342						
WFSB	**Wu-fen Shan**	**0.97**	**1**	*e*P	**Pn**	**18 38 34.3**	**+0.2**
	baz=360						
WJS	**Zhushan**	**0.98**	**254**	*e*P	**Pn**	**18 38 33.6**	**-0.5**
	baz=257						
NMLH	**Miaoli**	**0.98**	**297**	*e*P	**Pn**	**18 38 34.8**	**+0.6**
	baz=295						
SBCB	**Hsinchu**	**0.99**	**315**	P	**Pn**	**18 38 34.2**	**0.0**
	baz=314						
SBCB				*e*S	**Sn**	**18 38 50.3**	**+1.8**
	baz=314						
TCU	**Taichung**	**0.99**	**273**	P	**Pn**	**18 38 34.5**	**+0.2**
	baz=270						
TCU				*e*S	**Sn**	**18 38 49.3**	**+0.8**
	baz=270						
NTY	**Taoyuan**	**0.99**	**335**	*e*P	**Pn**	**18 38 34.5**	**+0.2**
	baz=323						
SXI1	**Grass Mountain**	**1.00**	**6**	*e*P	**Pn**	**18 38 34.4**	**-0.2**
	baz=347						
WNT1	**Nantou City**	**1.00**	**259**	P	**Pn**	**18 38 34.6**	**+0.2**
	baz=262						
WNT	**Mingjian**	**1.00**	**258**	P	**Pn**	**18 38 34.4**	**-0.1**
	baz=261						
WNT				S	**Sn**	**18 38 48.4**	**-0.4**
	baz=261						
HSN	**Hsinchu**	**1.00**	**315**	*e*P	**Pn**	**18 38 34.7**	**+0.2**
	baz=316						
HSN				*e*S	**Sn**	**18 38 50.1**	**+1.3**
	baz=316						
NCUH	**Zhongli**	**1.01**	**329**	*e*P	**Pn**	**18 38 34.4**	**-0.2**
	baz=322						
NCU	**National Centr**	**1.01**	**329**	*e*P	**Pn**	**18 38 34.0**	**-0.6**
	baz=327						
NCU				*e*S	**Sn**	**18 38 50.4**	**+1.3**
	baz=327						
ALS	**Alishan**	**1.05**	**236**	*e*P	**Pn**	**18 38 35.1**	**-0.2**
	baz=239						
TWS1	**Kuangyinshan**	**1.05**	**343**	*e*P	**Pn**	**18 38 35.5**	**+0.5**
	baz=340						
WDJ	**Dajia District**	**1.05**	**284**	*e*P	**Pn**	**18 38 35.4**	**+0.3**
	baz=284						
TNOU	**National Taiwa**	**1.05**	**1**	*e*P	**Pn**	**18 38 35.0**	**-0.1**
	baz=340						
CHKT	**Chengkung**	**1.05**	**200**	*e*P	**Pn**	**18 38 34.3**	**-0.8**
	baz=182						
YM01	**YM01**	**1.06**	**351**	P	**Pn**	**18 38 34.6**	**-0.7**
	baz=347						
EHD	**Haiduan**	**1.07**	**208**	*e*P	**Pn**	**18 38 34.4**	**-0.9**
	baz=208						
WCHH	**Zhanghua**	**1.09**	**269**	*e*P	**Pn**	**18 38 36.6**	**+0.9**
	baz=270						
NTST	**Danshui**	**1.10**	**345**	*e*P	**Pn**	**18 38 35.5**	**-0.3**
	baz=341						
CHN5	**Tsauling**	**1.10**	**244**	P	**Pn**	**18 38 36.6**	**+0.7**
	baz=250						
CHN5				S	**Sn**	**18 38 52.3**	**+0.8**
	baz=250						
ELDTW	**Lidau**	**1.13**	**217**	*e*P	**Pn**	**18 38 35.6**	**-0.7**
	baz=201						
JYNG	**Yonaguni jima**	**1.20**	**72**	S	**Sn**	**18 38 52.6**	**+0.4**
WGK	**Gukeng**	**1.17**	**250**	*e*P	**Pn**	**18 38 36.5**	**-0.2**
	baz=253						
YOJ	**Yonaguni jima**	**1.20**	**72**	S	**Sn**	**18 38 54.0**	**+0.2**
WRL	**Guolierlin Hig**	**1.27**	**262**	*e*P	**Pg**	**18 38 38.6**	**+0.2**
	baz=264						
STYH	**Taoyuan**	**1.28**	**225**	*e*P	**Pg**	**18 38 38.4**	**-0.3**
	baz=208						
RLNB	**Erlin**	**1.29**	**261**	*e*P	**Pg**	**18 38 39.1**	**+0.3**
	baz=266						
RLNB				*e*S	**Sn**	**18 38 57.9**	**+1.9**
	baz=266						
CHN4	**Tsaushan**	**1.30**	**235**	*e*P	**Pg**	**18 38 39.8**	**+0.9**
	baz=242						
CHN4				*e*S	**Sn**	**18 38 59.1**	**+3.0**
	baz=242						
CHN2	**Minshiung**	**1.30**	**245**	*e*P	**Pn**	**18 38 37.8**	**-0.7**
	baz=249						
TPUB	**Ta-pu**	**1.30**	**233**	*e*P	**Pg**	**18 38 40.7**	**+1.8**
	baz=238						
TPUB				*e*S	**Sn**	**18 38 57.6**	**+1.4**
	baz=238						
STYT	**Tauyuan**	**1.30**	**225**	*e*P	**Pg**	**18 38 39.9**	**+0.9**
	baz=207						
WTK	**Tuku**	**1.31**	**252**	*e*P	**Pg**	**18 38 39.6**	**+0.4**
	baz=256						
WTP	**Ta-pu**	**1.34**	**231**	*e*P	**Pg**	**18 38 41.8**	**+2.0**
	baz=232						
TWK	**Hsinying**	**1.42**	**235**	*e*P	**Pg**	**18 38 43.1**	**+1.8**
	baz=239						
WSF	**Szhu**	**1.48**	**252**	*e*P	**Pn**	**18 38 40.2**	**-0.7**
	baz=256						
WSL	**Shuilin Townsh**	**1.51**	**248**	*e*P	**Pb**	**18 38 41.7**	**-0.6**
	baz=254						
WSL				*e*S	**Sg**	**18 39 03.8**	**+1.2**
	baz=254						
ICHU	**Yijhu**	**1.54**	**242**	*e*P	**Pg**	**18 38 43.7**	**+0.2**
	baz=245						
CHN8	**Yiju**	**1.60**	**243**	*e*P	**Pn**	**18 38 42.1**	**-0.5**
	baz=246						
CHN3	**Shinhua**	**1.63**	**232**	*e*P	**Pb**	**18 38 43.6**	**-0.7**
	baz=235						
IRIF	**Iriomote-Funau**	**1.82**	**82**	S	**Sg**	**18 39 13.4**	**+0.9**
SCZT	**Fangliau**	**2.01**	**212**	*e*P	**Pb**	**18 38 49.5**	**-1.3**
	baz=198						
PHUB	**P'eng-hu**	**2.08**	**254**	*e*P	**Pn**	**18 38 48.6**	**-0.6**
	baz=259						
VCHM	**Qimei**	**2.31**	**248**	*e*P	**Pn**	**18 38 51.9**	**-0.5**
	baz=232						
PTMZ	**Houxiangcun**	**2.58**	**292**	*e*P	**Pn**	**18 38 55.1**	**-0.9**
	baz=290						
AXDP	**Jialang**	**3.54**	**284**	*e*P	**Pn**	**18 39 08.3**	**-1.0**
	baz=284						

IDC 06 18:39:01.4±1.8,4.′20S×127.′44E,h0km,mb4.0/3, mbtmp3.8/4,ML3.2/1,Error ellipse: s-maj=202.3km s-min=25.9km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.03**	**157**	P	P	18 43 02.3	-0.7
	0.1nm,0.3s,baz=336,slow=13,SNR=7.0						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**20.33**	**163**	P	P	18 43 38.5	-0.9
	0.3nm,0.8s,baz=346,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**64.51**	**327**	P	P	18 49 39.0	-1.1
	1.5nm,0.4s,baz=121,slow=7.9,SNR=43						
	1.5nm,0.4s						
KURBB	**Kurchatov Arra**	**68.81**	**329**	P	P	18 50 07.7	+0.2
	1.1nm,0.6s,baz=131,slow=6.6,SNR=21						
	1.1nm,0.6s						
BVAR	**Borovoye Array**	**74.36**	**328**	P	P	18 50 42.7	+1.8
	0.4nm,0.6s,baz=117,slow=6.3,SNR=3.6						
	0.4nm,0.6s						

NEIC ***06*** *18:45:02.8±1.6,56.′19N±0.′09×149.′3W±0.′1,h22km±10km, ML3.6/38,ML3.3(AEIC),Error ellipse: s-maj=13.1km s-min=8.5km az=162.0*

AEIC ***06*** *18:45:05.8±1.7,56.′14N±0.′05×149.′3W±0.′1,h10km±8km, Error ellipse: s-maj=11.4km s-min=4.0km az=120.0*

ISC 06 18:45:00.7±1.8,56.′18N±0.′10×149.′35W±0.′06,h10km, n121,σ1°08/124,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.39**	**314**		**Pn**	**18 45 41.0**	**+1.3**
KDAK	**Kodiak Island**	**2.39**	**314**		**Sn**	**18 46 08.1**	**-1.0**
KDAK	**Kodiak Island**	**2.39**	**314**	S	**Sn**	**18 46 08.5**	**-0.6**
	baz=131						
OHAK	**Old Harbor**	**2.41**	**297**		**Pn**	**18 45 40.7**	**+0.7**
OHAK					**Sn**	**18 46 08.3**	**-1.2**
OHAK	**Old Harbor**	**2.41**	**297**	P	**Pn**	**18 45 41.0**	**+0.9**
	baz=115						
OHAK				S	**Sn**	**18 46 08.3**	**-1.2**
	baz=115						
SII	**Sitkinak Islan**	**2.71**	**280**	IAML		18 46 25.3	
	comp=E,238nm,3.8s						
SII				IAML		18 47 32.6	
	comp=N,246nm,3.2s						
SII	**Sitkinak Islan**	**2.71**	**280**		**Pn**	**18 45 45.3**	**+1.0**
SII					**Sn**	**18 46 16.2**	**-1.0**
SII	**Sitkinak Islan**	**2.71**	**280**	S	**Sn**	**18 46 17.2**	**+0.1**
	baz=98						
Q20K	**Shuyak Island**	**2.94**	**327**	P	**Pn**	**18 45 49.0**	**+1.6**
	baz=144						
Q20K				S	**Sn**	**18 46 22.8**	**+0.1**
	baz=144						
SYI	**Shuyak Island**	**2.94**	**327**		**Pn**	**18 45 48.4**	**+1.0**
SYI					**Sn**	**18 46 21.7**	**-0.9**
R18K	**Karluk**	**3.12**	**298**		**Pn**	**18 45 50.5**	**+0.6**
R18K	**Karluk**	**3.12**	**298**	P	**Pn**	**18 45 50.7**	**+0.8**
	baz=115						
CNPM	**China Poot**	**3.50**	**344**		**Pn**	**18 45 56.0**	**+0.9**
CNPM					**Sn**	**18 46 36.1**	**-0.4**
CNPM	**China Poot**	**3.50**	**344**	IAML		18 47 58.1	
	comp=N,82nm,3.0s						
Q19K	**Cape Douglas,**	**3.59**	**322**		**Pn**	**18 45 58.4**	**+1.9**
Q19K				IAML		18 48 15.1	
	comp=N,130nm,3.6s						
BRSE	**Bradley Lake S**	**3.65**	**349**		**Pn**	**18 45 57.8**	**+0.7**
BRSE					**Sn**	**18 46 39.6**	**-0.5**
BRSE	**Bradley Lake S**	**3.65**	**349**	P	**Pn**	**18 45 57.8**	**+0.7**
	baz=167						
BRSE				S	**Sn**	**18 46 39.6**	**-0.5**
	baz=167						
BRLK	**Bradley Lake**	**3.68**	**348**		**Pn**	**18 45 58.0**	**+0.3**
BRLK					**Sn**	**18 46 41.5**	**+0.5**
BRLK	**Bradley Lake**	**3.68**	**348**	IAML		18 47 37.8	
	comp=N,72nm,3.4s						
BRLK				IAML		18 48 32.8	
	comp=E,85nm,3.5s						
SEW	**Seward**	**3.93**	**359**		**Pn**	**18 46 01.5**	**+0.5**
SEW	**Seward**	**3.93**	**359**	P	**Pn**	**18 46 01.6**	**+0.6**
	baz=178						
P23K	**Montague Islan**	**3.96**	**14**		**Pn**	**18 46 02.1**	**+0.7**
P19K	**Oil Pt**	**4.05**	**331**		**Pn**	**18 46 04.1**	**+1.5**
P19K	**Oil Pt**	**4.05**	**331**	IAML		18 47 44.3	
	comp=N,97nm,3.9s						
P19K				IAML		18 48 21.1	
	comp=E,83nm,3.8s						
P19K	**Oil Pt**	**4.05**	**331**	P	**Pn**	**18 46 04.1**	**+1.5**
	baz=147						
CNTC	**Contact Creek**	**4.12**	**303**		**Pn**	**18 46 05.8**	**+2.1**
O20K	**Slope Mountain**	**4.28**	**337**		**Pn**	**18 46 07.0**	**+1.1**
O20K	**Slope Mountain**	**4.28**	**337**	P	**Pn**	**18 46 07.0**	**+1.1**
	baz=154						
IVE	**Iliamna Volcan**	**4.31**	**335**		**Pn**	**18 46 07.5**	**+1.2**
SLKM	**Skilak Lake**	**4.36**	**354**		**Pn**	**18 46 07.7**	**+0.7**
HIN	**Hinchinbrook I**	**4.49**	**18**	Pn	**Pn**	**18 46 09.2**	**+0.5**
P18K	**Big Mountain,**	**4.50**	**318**		**Pn**	**18 46 10.0**	**+1.2**
P18K				IAML		18 47 52.2	
	comp=E,43nm,3.6s						
P18K				IAML		18 49 13.4	
	comp=N,41nm,3.7s						
P18K	**Big Mountain,**	**4.50**	**318**	P	**Pn**	**18 46 10.3**	**+1.4**
	baz=133						
RSO	**Redoubt South**	**4.65**	**339**	Pn	**Pn**	**18 46 11.3**	**+0.3**
RDT	**Redoubt**	**4.69**	**341**		**Pn**	**18 46 12.2**	**+0.8**
O18K	**Koktuh Hills**	**4.82**	**322**		**Pn**	**18 46 14.7**	**+1.5**
O18K	**Koktuh Hills**	**4.82**	**322**	IAML		18 48 56.7	
	comp=E,39nm,3.6s						
O18K				IAML		18 49 35.2	
	comp=N,38nm,3.5s						
O18K	**Koktuh Hills**	**4.82**	**322**	P	**Pn**	**18 46 14.7**	**+1.5**
	baz=137						
RC01	**Rabbit Creek A**	**4.92**	**358**	Pn	**Pn**	**18 46 15.3**	**+0.7**
RC01				IAML		18 47 13.7	
	comp=N,48nm,4.1s						
RC01				IAML		18 48 41.6	
	comp=E,48nm,3.7s						
CHGN	**Chignik**	**5.06**	**275**	Pn	**Pn**	**18 46 17.4**	**+0.9**
CHGN				IAML		18 47 56.2	
	comp=E,64nm,3.8s						
CHGN				IAML		18 48 43.4	
	comp=N,58nm,3.4s						
BERG	**Berg Lake**	**5.17**	**33**	Pn	**Pn**	**18 46 18.4**	**+0.4**

KLU	Klutina	5.62	17	Pn	Pn	18 46 25.7	+1.5
CRQM	Cirque	5.63	33	Pn	Pn	18 46 25.4	+0.9
N18K	Kilae Creek	5.67	325		Pn	18 46 25.6	+0.8
N18K	Kilae Creek baz=140	5.67	325	P	Pn	18 46 26.5	+1.7
SML	Sawmill	5.67	5	Pn	Pn	18 46 26.3	+1.4
SCM	Sheep Creek Mo	5.76	10	Pn	Pn	18 46 27.7	+1.5
ISLE	Juniper Island	5.76	37	Pn	Pn	18 46 26.4	+0.2
BAGL	Bagley Icefiel	5.77	39		Pn	18 46 27.2	+1.0
O16K	Kokwok River B	5.78	310		Pn	18 46 28.2	+1.8
O16K	Kokwok River B baz=123	5.78	310	P	Pn	18 46 28.2	+1.8
SVW2	Sparrevohn	5.90	329	Pn	Pn	18 46 27.5	-0.6
VRDI	Verde Repeater	5.92	29	Pn	Pn	18 46 29.7	+1.2
SKT	Skwentna	5.92	350		Pn	18 46 29.8	+1.5
SKT	Skwentna baz=168	5.92	350	P	Pn	18 46 29.8	+1.5
N25K	Chitina, Valde	5.97	22		Pn	18 46 30.2	+1.2
N25K	Chitina, Valde baz=206	5.97	22	P	Pn	18 46 30.2	+1.2
CNBA	Chernabura Isl	5.97	261	Pn	Pn	18 46 30.1	+1.1
N17K	Nushagak Hills	6.00	320	Pn	Pn	18 46 28.9	-0.4
KIAG	Kiagna River	6.00	35		Pn	18 46 30.3	+0.8
GLB	Gilahina Butte	6.01	26	Pn	Pn	18 46 30.0	+0.4
M20K	Styx River	6.04	343	Pn	Pn	18 46 28.7	-1.3
TABL	Table Mountain	6.08	42	Pn	Pn	18 46 30.9	+0.2
YKU2	Yakutat	6.15	53	Pn	Pn	18 46 28.6	-2.9
M24K	Tolsona, Glenn	6.16	14	Pn	Pn	18 46 32.3	+0.6
MCARA	McCarthy VSAT	6.17	30	Pn	Pn	18 46 32.6	+0.9
CUT	Chulitna	6.26	356	Pn	Pn	18 46 32.9	0.0
M18K	Stony River	6.29	330		Pn	18 46 34.2	+0.8
M18K	Stony River baz=145	6.29	330	P	Pn	18 46 34.2	+0.8
M19K	Big River Lodg	6.30	338	Pn	Pn	18 46 34.0	+0.5
BARN	Barnard Glacie	6.33	36	Pn	Pn	18 46 34.5	+0.5
O15K	Ungalikthiuk R	6.37	302		Pn	18 46 36.2	+1.8
O15K	Ungalikthiuk R baz=114	6.37	302	P	Pn	18 46 36.2	+1.8
LOGN	Logan Glacier	6.39	40		Pn	18 46 34.8	0.0
BCPM	Bancas Point	6.39	50	Pn	Pn	18 46 36.3	+1.6
L19K	White Mountain	6.64	337		Pn	18 46 37.7	-0.6
L19K	White Mountain baz=152	6.64	337	P	Pn	18 46 40.0	+1.7
M17K	Holitna River	6.71	325		Pn	18 46 39.4	+0.3
M17K	Holitna River baz=138	6.71	325	P	Pn	18 46 40.9	+1.8
N15K	Kwethluk River	6.94	310	Pn	Pn	18 46 43.2	+0.9
M16K	Timber Creek	6.98	318	Pn	Pn	18 46 41.8	-1.0
DHY	Denali Highway	6.99	7	Pn	Pn	18 46 41.7	-1.4
O29M	Mount Kennedy	7.03	50	Pn	Pn	18 46 43.7	+0.1
P29M	Windy Craggy	7.09	56		Pn	18 46 44.9	+0.6
P29M	Windy Craggy baz=245	7.09	56	P	Pn	18 46 44.9	+0.6
L18K	Granite Mounta	7.13	331	Pn	Pn	18 46 44.9	0.0
RND	Reindeer	7.25	2	Pn	Pn	18 46 45.6	-1.1
M27K	Edge Creek, AK	7.28	29	Pn	Pn	18 46 45.8	-1.2
TRF	Thorofare Moun	7.31	357	Pn	Pn	18 46 46.9	-0.6
S31K	Pelican	7.37	71		Pn	18 46 46.6	-1.6
S31K	Pelican baz=261	7.37	71	P	Pn	18 46 47.5	-0.7
CAST	Castle Rocks	7.39	350	Pn	Pn	18 46 46.9	-1.5
KTH	Kantishna Hill	7.44	355	Pn	Pn	18 46 48.5	-0.6
TTA	Tatalina	7.56	336	Pn	Pn	18 46 51.2	+0.3
L16K	Owhat River	7.62	321	Pn	Pn	18 46 51.6	0.0
HYT	Haines Junctio	7.75	48	Pn	Pn	18 46 53.3	-0.2
K17K	Iditarod	7.97	329	Pn	Pn	18 46 56.2	-0.2
J20K	Nowinka River	8.37	345	Pn	Pn	18 47 04.0	+2.2
M29M	Somme Creek	8.38	37	Pn	Pn	18 47 03.2	+1.1
J19K	Poorman	8.43	341	Pn	Pn	18 47 04.1	+1.4
IL31		8.70	7	Pn	Pn	18 47 06.6	+0.2
N31M	Braeburn, Yuko	8.81	47	Pn	Pn	18 47 07.0	-1.0
WHY	Whitehorse	8.81	53	Pn	Pn	18 47 07.5	-0.6
J26L	Joseph Creek	8.82	17	Pn	Pn	18 47 07.4	-0.7
MDM	Murphy Dome	8.82	3	Pn	Pn	18 47 09.2	+1.1
L29M	L29M	8.96	35	Pn	Pn	18 47 10.3	+0.2
P32M	Atlin	9.00	61	Pn	Pn	18 47 10.6	0.0
H21K	Melozitna Rive	9.65	351	Pn	Pn	18 47 20.3	+0.8
K29M	Barlow Dome	9.68	33	Pn	Pn	18 47 20.6	+0.6
N32M	Quiet Lake	9.82	53	Pn	Pn	18 47 20.8	-0.9

*IDC **06** 19:01:06.2±2.8, 23.˙90N×122.˙06E, h0km, mb3.3/4, mbtmp3.3/5, Error ellipse: s-maj=73.5km s-min=33.2km az=149.0*
*TAP **06** 19:01:09.8, 24.˙04N×121.˙68E, h8km, ML4.0, C*
*JMA **06** 19:01:10.2±0.1, 24.˙1N±0.˙3×121.˙7E±0.˙7, h0km, MV3.4/13, TAIWAN REGION*
ISC 06 19:01:09.2±0.8, 24.˙04N±0.˙01×121.˙72E±0.˙02, h9km±5km, n177, σ0§97/259, mb3.4/10, 5C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
TWD	Chiawan baz=299	0.12	290	⇓*i*P	Pg	19 01 12.2	+0.2
TWD				*i* S	Sg	19 01 13.8	-0.1
ETL	Fush Village baz=335	0.15	324	⇓*i*P	Pg	19 01 12.9	+0.4
ETL				*i* S	Sg	19 01 15.1	+0.4
NACB	Ninganchiao	0.17	320	P	Pg	19 01 13.3	+0.3
NACB	Ninganchiao baz=329	0.17	320	⇓*i*P	Pg	19 01 13.3	+0.3
NACB				*i* S	Sg	19 01 15.6	+0.1
ETM	Tongmen baz=248	0.22	250	⇓*i*P	Pg	19 01 14.0	+0.3
ETM				*i* S	Sg	19 01 16.9	+0.1
EHP	Heping Village baz=360	0.27	4	*e*P	Pg	19 01 15.3	+0.6
EHP				S	Sb	19 01 20.0	-1.1
LXIB	Xiulin Townshi baz=257	0.28	266	⇓*i*P	Pg	19 01 15.1	+0.2
LXIB				*i* S	Sg	19 01 19.0	+0.3
EAHA	Aohua baz=8.0	0.29	4	⇓*i*P	Pg	19 01 15.8	+0.8
EAHA				*i* S	Sb	19 01 20.4	-1.2
SHUL	Shoufeng baz=211	0.29	210	⇓*e*P	Pb	19 01 17.1	+0.5
ESL	Shilin baz=234	0.34	229	P	Pg	19 01 16.4	+0.4
TEGC	Jichi Village baz=204	0.37	206	P	Pb	19 01 18.5	+0.6
TEGC				*e*S	Sb	19 01 25.6	+1.8
ENA	Nanau baz=355	0.39	3	⇓*i*P	Pb	19 01 17.8	-0.5
EWUT	Wuta baz=8.0	0.41	8	⇓*i*P	Pb	19 01 18.2	-0.5
EWUT				S	Sg	19 01 23.8	+1.2
WHF	Hehuan Shan baz=285	0.43	284	P	Pg	19 01 17.9	+0.2
WHF				*i* S	Sg	19 01 23.6	+0.1
WARBT	Fenglin Townsh baz=231	0.44	224	P	Pg	19 01 18.3	+0.4
WARBT				*e*S	Sb	19 01 25.7	-0.3
EGFH	Guangfu baz=226	0.46	216	*e*P	Pb	19 01 18.9	-0.6
EGFH				*e*S	Sb	19 01 26.2	-0.1
FUSS	Fushou baz=296	0.48	296	⇓P	Pg	19 01 19.2	+0.5
FUSS				*e*S	Sg	19 01 25.0	0.0
NNSB	Datong baz=322	0.49	322	⇓*i*P	Pg	19 01 19.5	+0.6
NNSB				*i* S	Sg	19 01 25.6	+0.1
NNSH	Datong baz=322	0.49	322	⇓*i*P	Pg	19 01 19.5	+0.6
NNSH				*i* S	Sg	19 01 25.8	+0.4
CHGB	Renai baz=265	0.50	272	⇓*i*P	Pg	19 01 19.5	+0.5
CHGB				*i* S	Sg	19 01 25.6	0.0
OWD	Renai baz=269	0.50	260	P	Pg	19 01 19.5	+0.4
OWD				*e*S	Sg	19 01 25.9	+0.1
NNS	Nan Shan baz=323	0.51	322	⇓*i*P	Pg	19 01 19.8	+0.6
NNS				*i* S	Sg	19 01 26.0	+0.1
LATG	Datong baz=340	0.52	340	⇓*i*P	Pb	19 01 20.2	-0.5
LATG				*i* S	Sg	19 01 26.9	+0.6
TWT	Tachien baz=293	0.54	293	P	Pb	19 01 20.5	-0.5
TWT				*i* S	Sg	19 01 27.4	+0.5
ESAO	Su ao baz=2.0	0.55	12	*e*P	Pb	19 01 20.5	-0.5
WUSB	Renai baz=266	0.55	265	⇓*i*P	Pg	19 01 20.5	+0.5
WUSB				*i* S	Sg	19 01 27.2	-0.1
TDCB	Techi baz=293	0.55	293	⇓P	Pb	19 01 20.7	-0.6
TDCB				*i* S	Sg	19 01 27.5	+0.1
TWC	Suao baz=6.0	0.58	12	*e*P	Pb	19 01 21.5	-0.1
NDS	Dongshan baz=360	0.59	360	⇓P	Pb	19 01 21.7	-0.1
NDS				S	Sb	19 01 29.9	-0.4
NDT	Datong Townshi baz=342	0.59	341	⇓*i*P	Pb	19 01 21.7	-0.1
NDT				S	Sb	19 01 29.5	-0.8
VWDT	VWDT baz=244	0.60	242	P	Pb	19 01 21.6	-0.3
VWDT				*e*S	Sb	19 01 29.9	-0.6
HGSD	Ruisui baz=193	0.61	206	*e*P	Pb	19 01 22.7	+0.6
HGSD				*e*S	Sn	19 01 33.3	-0.7
ENTT	Nioudou baz=348	0.61	347	⇓*i*P	Pb	19 01 22.1	-0.1
ENTT				S	Sb	19 01 30.5	-0.5
EHY	Hungye baz=212	0.64	214	*e*P	Pb	19 01 22.4	-0.3
TWE	Neicheng baz=357	0.68	356	⇓P	Pb	19 01 23.4	+0.1
TWE				S	Sb	19 01 32.9	0.0
WPL	Puli Township baz=269	0.70	268	P	Pb	19 01 23.6	0.0
WPL				*i* S	Sg	19 01 32.1	+0.3
YHNB	Yeheng baz=269	0.70	334	P	Pb	19 01 23.9	+0.2
YHNB	Yeheng baz=333	0.70	334	⇓*i*P	Pb	19 01 23.8	0.0
YHNB				*i* S	Sg	19 01 32.4	+0.4
DPDB	Guoxing baz=270	0.72	270	P	Pb	19 01 24.1	0.0
DPDB				*e*S	Sg	19 01 33.1	+0.4
FUSB	Fushanzhiwuyua baz=350	0.73	351	⇓*i*P	Pb	19 01 24.4	+0.3
FUSB				*i* S	Sb	19 01 33.8	-0.5
WCS	Beigang Elemen baz=264	0.74	272	P	Pb	19 01 24.3	0.0
WCS				S	Sg	19 01 33.4	+0.2
SSLB	Suanglung	0.74	250	P	Pb	19 01 24.2	-0.2
SSLB	Suanglung baz=262	0.74	250	P	Pb	19 01 24.0	-0.4
SSLB				S	Sg	19 01 32.1	-1.2
WHP	Taichung City baz=289	0.74	289	*e*P	Pb	19 01 24.6	+0.1
WHP				S	Sb	19 01 34.4	-0.4
YULB	Yu-li baz=224	0.75	211	*e*P	Pb	19 01 25.2	+0.7
NWLT	Wulai baz=332	0.76	345	⇓*e*P	Pb	19 01 24.9	+0.2
NWLT				S	Sb	19 01 35.0	-0.2
ECBN	Changbin baz=187	0.76	199	*e*P	Pb	19 01 25.3	+0.7
ECBN				*e*S	Sn	19 01 37.4	-0.4
SMLT	Sun Moon Lake baz=259	0.77	258	⇓*i*P	Pb	19 01 24.7	-0.1
SMLT				*i* S	Sg	19 01 34.2	+0.2
EYUL	Yuli baz=223	0.78	208	*e*P	Pn	19 01 26.2	-0.2
TYC	Yuchr baz=261	0.80	260	⇓*i*P	Pb	19 01 25.2	-0.1
TYC				S	Sg	19 01 34.9	-0.2
NFF	Wufeng Townshi baz=317	0.81	317	*i* P	Pb	19 01 25.8	+0.3
NFF				S	Sg	19 01 35.8	+0.5
WHYT	Xinyi Township baz=255	0.86	247	*e*P	Pb	19 01 26.9	+0.4
WHYT				*e*S	Sb	19 01 38.2	0.0
LIOB	Emei baz=313	0.88	313	*e*P	Pn	19 01 27.6	-0.3
LIOB				*e*S	Sb	19 01 38.5	-0.1
NSTT	Nanjuang baz=312	0.88	312	*e*P	Pb	19 01 27.1	+0.4
NSTT				S	Sg	19 01 37.9	+0.2
CHKH	Chenggong baz=190	0.90	199	*e*P	Pb	19 01 27.5	+0.5
NJD	Zhudong baz=325	0.90	320	*e*P	Pn	19 01 28.5	+0.4
FULB	Fuli baz=221	0.92	205	*e*P	Pn	19 01 28.1	-0.3
WJS	Zhushan baz=258	0.93	257	*e*P	Pn	19 01 28.6	0.0
WJS				*e*S	Sn	19 01 41.9	-0.2
TIPB	Shuangxi baz=349	0.93	6	*e*P	Pn	19 01 28.2	-0.4
WWF	Wufeng baz=271	0.93	270	*e*P	Pn	19 01 29.2	+0.7
WWF				*e*S	Sn	19 01 41.6	-0.4
NHDH	Xindian Distri baz=339	0.94	349	*e*P	Pn	19 01 28.6	0.0
TWA	Mucha baz=351	0.94	353	*e*P	Pn	19 01 28.6	-0.1
TATO	Taipei	0.95	347	P	Pn	19 01 29.2	+0.3
TATO	Taipei baz=336	0.95	347	P	Pn	19 01 29.1	+0.2
TATO				*e*S	Sb	19 01 40.8	0.0
TCU	Taichung baz=272	0.96	277	⇑*e*P	Pn	19 01 29.6	+0.6
TCU				*e*S	Sn	19 01 43.4	+0.7
WNT	Mingjian baz=262	0.96	261	⇑*i*P	Pn	19 01 29.5	+0.5
WNT				S	Sn	19 01 42.3	-0.4
WNT1	Nantou City baz=263	0.96	262	*e*P	Pn	19 01 29.5	+0.6
WNT1				*e*S	Sn	19 01 43.3	+0.6
HSN1	Hsinchu baz=319	0.97	319	*e*P	Pn	19 01 29.9	+0.8
NMLH	Miaoli baz=300	0.98	301	*e*P	Pn	19 01 30.7	+1.5
BACT	New Taipei Cit baz=343	0.99	345	*e*P	Pn	19 01 30.1	+0.8
ALS	Alishan baz=241	0.99	238	P	Pb	19 01 29.1	+0.4
ALS				*e*S	Sn	19 01 43.8	0.0
CHKT	Chengkung baz=193	0.99	199	*e*P	Pb	19 01 28.9	+0.3
CHKT				*e*S	Sn	19 01 43.8	+0.4
EHD	Haiduan baz=222	1.00	208	*e*P	Pb	19 01 28.7	-0.1
SBCB	Hsinchu baz=317	1.00	318	*e*P	Pn	19 01 30.5	+0.9
SBCB				*e*S	Sn	19 01 43.5	-0.3
NHY	Taipei baz=1.0	1.00	352	*e*P	Pn	19 01 30.2	+0.7
NJN	Zhunan baz=317	1.00	310	*e*P	Pn	19 01 30.5	+0.9
TAP	Taipei baz=340	1.01	349	*e*P	Pn	19 01 30.4	+0.7
NWF	Wu-fen Shan baz=360	1.03	3	*e*P	Pn	19 01 30.3	+0.3
WFSB	Wu-fen Shan baz=360	1.03	3	*e*P	Pn	19 01 30.3	+0.4
NTY	Taoyuan baz=331	1.03	338	*e*P	Pn	19 01 31.4	+1.5
WDJ	Dajia District baz=288	1.03	288	*e*P	Pn	19 01 30.9	+1.0
NCUH	Zhongli baz=331	1.04	332	*e*P	Pn	19 01 31.1	+1.0
NCU	National Centr baz=331	1.04	332	*e*P	Pn	19 01 31.2	+1.1
NCU				*e*S	Sn	19 01 47.5	+2.7
WYL	Yuanlin Townsh baz=267	1.04	266	P	Pb	19 01 29.6	+0.1
WYL				*e*S	Sb	19 01 43.3	0.0
ECS	Chishang baz=221	1.05	206	*e*P	Pn	19 01 30.2	+0.1
CHN5	Tsauling baz=239	1.05	245	⇑*i*P	Pn	19 01 30.8	+0.6
CHN5				*e*S	Sn	19 01 46.0	+0.9
SXI1	Grass Mountain baz=352	1.06	8	⇑P	Pn	19 01 31.1	+0.8
WCHH	Zhanghua baz=273	1.06	272	*e*P	Pn	19 01 31.1	+0.8
ELDTW	Lidau baz=219	1.06	217	*e*P	Pg	19 01 29.8	0.0
TWS1	Kuangyinshan baz=343	1.09	346	*e*P	Pn	19 01 31.9	+1.2
TWS1				*e*S	Sn	19 01 48.1	+2.1
TNOU	National Taiwa baz=359	1.11	3	*e*P	Pn	19 01 32.0	+1.1
YM01	YM01 baz=336	1.11	353	*e*P	Pn	19 01 32.2	+1.1
WGK	Gukeng baz=254	1.12	252	⇑P	Pn	19 01 31.9	+0.9
WGK				*e*S	Sn	19 01 47.9	+1.3
WDLH	Douliu baz=254	1.14	252	*e*P	Pn	19 01 32.6	+1.3
NHW	Xinwu Township baz=326	1.14	328	*e*P	Pn	19 01 33.3	+1.9
NTST	Danshui baz=345	1.15	348	*e*P	Pn	19 01 33.2	+1.7
ANP	Anpu baz=348	1.16	351	*e*P	Pn	19 01 33.1	+1.4
WCKO	Fanlu baz=243	1.18	240	*e*P	Pn	19 01 32.8	+0.8
WCKO				*e*S	Sn	19 01 50.5	+2.3
JYNG	Yonagunijimaku	1.19	70	S	Sn	19 01 50.6	+2.1
TWY	Chenhua baz=339	1.23	355	*e*P	Pg	19 01 34.6	+1.6
WRL	Guolierlin Hig baz=265	1.23	264	*e*P	Pg	19 01 34.9	+2.0
CHN4	Tsaushan baz=229	1.24	237	P	Pg	19 01 34.0	+1.0
CHN4				*e*S	Sn	19 01 52.4	+2.7
TPUB	Ta-pu	1.24	234	P	Pg	19 01 34.2	+1.1
TPUB	Ta-pu baz=238	1.24	234	P	Pg	19 01 33.8	+0.7
TPUB				*e*S	Sn	19 01 50.8	+1.1
STYT	Tauyuan baz=230	1.24	226	*i* P	Pg	19 01 33.0	-0.1
STYT				*i* S	Sn	19 01 49.8	0.0
CHN2	Minshiung baz=261	1.25	246	*e*P	Pg	19 01 34.6	+1.4
CHN2				*e*S	Sn	19 01 51.3	+1.5
LONT	Longtian baz=208	1.25	206	*e*P	Pn	19 01 32.9	-0.1
RLNB	Erlin baz=265	1.25	263	*e*P	Pg	19 01 33.9	+0.6
RLNB				*e*S	Sn	19 01 52.9	+3.0
YOJ	Yonaguni jima	1.25	70	P	Pg	19 01 36.3	+3.0
YOJ	Yonaguni jima baz=70	1.25	70	*e*P	Pg	19 01 34.1	+0.8
YOJ	Yonaguni jima	1.25	70	P	Pg	19 01 34.0	+0.8
WTK	Tuku baz=257	1.27	254	*e*P	Pg	19 01 35.0	+1.4
WTK				*e*S	Sn	19 01 52.5	+2.2
WTP	Ta-pu baz=236	1.28	232	P	Pg	19 01 34.6	+0.7
WTP				S	Sn	19 01 51.8	+1.0
WTCT	Ta-ch'eng baz=264	1.33	263	P	Pg	19 01 35.3	+0.5
WTCT				S	Sg	19 01 53.7	+1.7
TWG	Pinlang baz=208	1.35	206	*e*P	Pn	19 01 33.9	-0.4
TWGBT	Beinan	1.35	206	P	Pg	19 01 36.4	+1.2
TWGBT	Beinan baz=208	1.35	206	*e*P	Pg	19 01 36.2	+1.1
TWK	Hsinying baz=239	1.37	236	*e*P	Pg	19 01 36.2	+0.7
TWK				*e*S	Sg	19 01 54.9	+1.6
LDUT	Ludao baz=191	1.38	190	*e*P	Pn	19 01 33.1	-1.6
CHN1	Nanshi baz=236	1.39	232	*e*P	Pg	19 01 36.4	+0.5
CHN1				*e*S	Sg	19 01 55.6	+1.8
SNST	Tainan City baz=237	1.39	234	*e*P	Pg	19 01 36.6	+0.8
SGST	Jiashian baz=233	1.41	228	*e*P	Pn	19 01 35.5	+0.3
SGST				*e*S	Sg	19 01 56.9	+2.2
WSF	Szhu baz=256	1.43	254	*e*P	Pg	19 01 36.9	+0.2
WSF				*e*S	Sg	19 01 57.3	+2.1
SLGT	Liugui baz=229	1.43	224	*e*P	Pg	19 01 36.7	-0.1
SLGT				*e*S	Sg	19 01 57.0	+1.6
WSL	Shuilin Townsh baz=252	1.46	250	*e*P	Pg	19 01 37.6	+0.4
ICHU	Yijhu baz=245	1.48	243	*e*P	Pg	19 01 37.7	0.0
CHN8	Yiju baz=247	1.54	244	P	Pg	19 01 38.6	-0.3
CHN8				S	Sg	19 02 00.4	+1.5
CHN3	Shinhua baz=238	1.57	233	*e*P	Pg	19 01 39.5	+0.2
CHN3				*e*S	Sg	19 02 03.0	+3.3
SSHA	Shanhua baz=237	1.59	236	*e*P	Pg	19 01 40.1	+0.3
ECL	Taimali baz=191	1.60	206	*e*P	Pn	19 01 37.8	0.0
SCST	Cishan baz=229	1.61	225	*e*P	Pg	19 01 40.8	+0.7
SCST				*e*S	Sg	19 02 04.0	+3.0
PCYT	Pengchaiyu baz=348	1.61	11	*e*P	Pb	19 01 39.0	-0.3
SHHT	Tainan City baz=233	1.62	231	*e*P	Pg	19 01 40.3	0.0
SSD	Sandimen baz=237	1.63	218	*e*P	Pn	19 01 38.8	+0.7
SSD				S	Sg	19 02 01.4	-0.2

	baz=237							
SCLT	**Jiali**	**1.64**	**239**	*e*P		**Pg**	**19 01 40.3**	**-0.5**
	baz=243							
SCLT				S		**Sg**	**19 02 02.8**	**+0.7**
	baz=243							
TSMG	**Majia**	**1.66**	**217**	*e*P		**Pg**	**19 01 40.5**	**-0.4**
	baz=236							
TSMG				S		**Sg**	**19 02 02.8**	**+0.4**
	baz=236							
TWM1	**Shoushan**	**1.70**	**225**	*e*P		**Pg**	**19 01 42.3**	**+0.5**
	baz=225							
MASBT	**Mashibuluo**	**1.74**	**215**	*e*P		**Pb**	**19 01 41.7**	**+0.4**
	baz=215							
MASBT				*e*S		**Sg**	**19 02 04.3**	**-0.8**
	baz=215							
TSPT	**Pingtung City**	**1.76**	**220**	*e*P		**Pg**	**19 01 42.7**	**-0.3**
	baz=211							
EAST	**Anshuo**	**1.83**	**206**	*e*P		**Pb**	**19 01 43.0**	**0.0**
	baz=193							
TAWH	**Dawu Township**	**1.86**	**204**	*e*P		**Pb**	**19 01 43.0**	**-0.3**
	baz=207							
IRIF	**Iriomote-Funau**	**1.86**	**81**	S		**Sb**	**19 02 07.8**	**+1.0**
HATJ	**Hateruma jima**	**1.91**	**89**	S		**Sn**	**19 02 06.7**	**+0.6**
WSSB	**Gushan**	**1.93**	**224**	*e*P		**Pn**	**19 01 43.0**	**+0.7**
	baz=223							
SCZT	**Fangliau**	**1.94**	**212**	*e*P		**Pb**	**19 01 44.7**	**-0.2**
	baz=202							
LYUB	**Lan-yu**	**2.03**	**184**	*e*P		**Pn**	**19 01 41.0**	**-2.7**
	baz=185							
PHUB	**P'eng-hu**	**2.04**	**256**	*e*P		**Pn**	**19 01 44.9**	**+1.2**
	baz=257							
PHUB				*e*S		**Sb**	**19 02 11.0**	**-0.9**
	baz=257							
PNG	**Penghu**	**2.04**	**257**	*e*P		**Pn**	**19 01 44.6**	**+0.9**
	baz=258							
WDGT	**Dungji**	**2.04**	**248**	*e*P		**Pn**	**19 01 44.9**	**+1.1**
	baz=249							
JKRS	**Kuro-shima**	**2.10**	**84**	P		**Pb**	**19 01 46.6**	**-1.0**
JKRS				S		**Sb**	**19 02 13.8**	**0.0**
JIJ	**Ishigaki jima**	**2.24**	**81**	P		**Pn**	**19 01 47.2**	**+0.8**
JIJ				*e*S		**Sn**	**19 02 14.9**	**+0.7**
TWKBT	**Hengchun**	**2.25**	**202**	*e*P		**Pn**	**19 01 48.2**	**+1.6**
	baz=204							
VCHM	**Qimei**	**2.26**	**249**	*e*P		**Pn**	**19 01 48.2**	**+1.4**
	baz=236							
VWUC	**VWUC**	**2.27**	**295**	*e*P		**Pn**	**19 01 46.8**	**-0.2**
	baz=295							
JISG	**Ishigakijimahi**	**2.43**	**76**	P		**Pn**	**19 01 50.0**	**+0.9**
JISG				S		**Sn**	**19 02 19.9**	**+0.9**
PTMZ	**Houxiangcun**	**2.57**	**293**	*e*P		**Pn**	**19 01 51.1**	**+0.1**
	baz=293							
MATB	**Ma-tsu**	**2.65**	**323**	*e*P		**Pn**	**19 01 52.2**	**+0.1**
	baz=320							
KNM	**Kinmen**	**3.02**	**278**	*e*P		**Pn**	**19 01 59.3**	**+2.0**
	baz=278							
LYJJ	**Jianjiangzhen**	**3.06**	**325**	*e*P		**Pn**	**19 01 57.9**	**0.0**
	baz=323							
KNMB	**Chin-men Tao**	**3.07**	**279**	*e*P		**Pn**	**19 01 58.4**	**+0.4**
	baz=280							
MHZQ	**Yeshan**	**3.19**	**311**	*e*P		**Pn**	**19 01 59.9**	**+0.3**
	baz=297							
XPSS	**Dashiqiu**	**3.19**	**335**	*e*P		**Pn**	**19 01 59.5**	**-0.1**
	baz=331							
AXDP	**Jialang**	**3.52**	**285**	*e*P		**Pn**	**19 02 04.8**	**+0.6**
	baz=285							
ZPLA	**Ao Xicun**	**3.63**	**269**	*e*P		**Pn**	**19 02 06.2**	**+0.5**
	baz=268							
DSXP	**Dongshan**	**3.94**	**266**	*e*P		**Pn**	**19 02 10.1**	**+0.1**
	baz=265							
SXFK	**Yanhouchang**	**4.37**	**303**	*e*P		**Pn**	**19 02 17.0**	**+1.1**
	baz=303							
KSRS	**Korea Array**	**14.39**	**20**	Pn		**Pn**	**19 04 32.6**	**-0.6**
	0.3nm,0.3s,baz=199,slow=11,SNR=1.8							
CMAR	**Chiang Mai Arr**	**21.93**	**260**	P		**P**	**19 06 04.6**	**+1.4**
	0.3nm,0.5s,baz=55,slow=8.7,SNR=4.6							
	0.3nm,0.5s							
SONM	**Songino Array**	**26.69**	**337**	P		**P**	**19 06 49.2**	**+0.4**
	0.5nm,0.6s,baz=165,slow=8.4,SNR=5.0							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**38.78**	**316**	P		**P**	**19 08 35.2**	**+1.0**
	0.3nm,0.4s,baz=106,slow=7.7,SNR=7.1							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**40.63**	**327**	P		**P**	**19 08 45.1**	**-4.3**
	0.5nm,0.5s,baz=107,slow=7.8,SNR=2.6							
	0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**42.53**	**320**	P		**P**	**19 09 04.9**	**-0.2**
	0.1nm,0.3s,baz=108,slow=8.8,SNR=2.5							
	0.1nm,0.3s							
WRA	**Warramunga Arr**	**45.41**	**163**	P		**P**	**19 09 27.8**	**-0.7**
	0.8nm,0.9s,baz=344,slow=8.6,SNR=2.0							
	0.8nm,0.9s							
BVAR	**Borovoye Array**	**48.09**	**321**	P		**P**	**19 09 48.8**	**-0.5**
	0.5nm,0.5s,baz=114,slow=8.9,SNR=4.5							
	0.5nm,0.5s							
ASAR	**Alice Springs**	**48.88**	**165**	P		**P**	**19 09 56.5**	**+1.0**
	0.1nm,0.4s,baz=340,slow=6.5,SNR=6.2							
	0.1nm,0.4s							
ILAR	**Eielson Array**	**69.12**	**27**	P		**P**	**19 12 13.2**	**-2.3**
	0.2nm,0.7s,baz=284,slow=6.1,SNR=1.7							
	0.2nm,0.7s							
YKA	**Yellowknife Ar**	**82.91**	**23**	P		**P**	**19 13 33.2**	**-0.9**
	0.2nm,0.6s,baz=312,slow=5.0,SNR=4.3							
	0.2nm,0.6s							

*JMA **06** 19:01:10.2±0.2,28.1°N±0.3×128.1°E±0.4,h16km±1km, MV2.7/9,NW OFF OKINAWAJIMA IS*

ISC 06 19:01:12.8±2.6,28.1N±0.1×128.2E±0.1,h35km,n9, σ0s87/16,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.74**	**112**	*i* P	**Pn**	**19 01 25.9**	**-0.9**
JTK				*e*S	**Sn**	**19 01 37.0**	**+0.2**
JOKE	**Okinoerabujima**	**0.78**	**153**	*e*P	**Pn**	**19 01 26.5**	**-0.9**
JOKE				*e*S	**Sn**	**19 01 38.0**	**+0.1**
JAMN	**Amaminishikomi**	**0.90**	**78**	*e*P	**Pn**	**19 01 28.6**	**-0.4**
JAMN				*e*S	**Sn**	**19 01 41.9**	**+1.2**
JIH	**Iheya**	**1.04**	**190**	P	**Pn**	**19 01 29.7**	**-1.2**
JIH				*e*S	**Sn**	**19 01 43.7**	**-0.5**
JYRO	**Yoronjima**	**1.06**	**167**	P	**Pn**	**19 01 30.9**	**-0.4**
JYRO				*e*S	**Sn**	**19 01 45.5**	**+0.7**
JOW	**Kunigami**	**1.23**	**176**	*e*P	**Pn**	**19 01 33.2**	**-0.3**
JOW				*e*S	**Sn**	**19 01 49.9**	**+0.9**
JOW	**Kunigami**	**1.23**	**176**	Sn	**Sn**	**19 01 49.3**	**+0.3**
	20nm,0.3s,baz=189,slow=19,SNR=13						
JOW	**Kunigami**	**1.23**	**176**	Pn	**Pn**	**19 01 33.0**	**-0.5**
	12nm,0.3s,baz=192,slow=19,SNR=19						
JNTH	**Nagotoyohara**	**1.55**	**185**	*e*P	**Pn**	**19 01 38.3**	**+0.4**
JNTH				*e*S	**Sn**	**19 01 58.4**	**+1.7**

TAP 06 19:01:17.2,23.58N×121.26E,h8km±1km,ML1.3,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHY	**Hungye**	**0.09**	**142**	*i* P	Pg	19 01 19.4	-0.1
	baz=138						
EHY				S	Sg	19 01 21.2	+0.2
	baz=138						
HGSD	**Ruisui**	**0.17**	**120**	P	Pg	19 01 21.0	+0.2
	baz=119						
YULB	**Yu-li**	**0.19**	**169**	P	Sg	19 01 24.2	+0.5
YULB	**Yu-li**	**0.19**	**169**	P	Pg	19 01 21.0	0.0
	baz=169						
YULB				S	Sg	19 01 23.9	+0.3
	baz=169						
TWF1	**Yuli**	**0.23**	**171**	*i* P	Pg	19 01 21.8	0.0
	baz=169						
EYUL	**Yuli**	**0.24**	**167**	*e*P	Pg	19 01 21.9	-0.1
	baz=166						
ECBN	**Changbin**	**0.31**	**146**	*e*P	Pg	19 01 23.1	-0.3
	baz=145						
FULB	**Fuli**	**0.38**	**175**	*e*P	Pg	19 01 24.8	+0.2
	baz=175						
ALS	**Alishan**	**0.42**	**261**	*e*P	Pg	19 01 25.4	-0.1
	baz=260						
EHD	**Haiduan**	**0.43**	**187**	*e*P	Pg	19 01 25.5	-0.1
	baz=186						
ELDTW	**Lidau**	**0.45**	**210**	*e*P	Pg	19 01 25.8	-0.1
	baz=208						

TAP 06 19:01:25.8,24.05N×121.56E,h8km±1km,ML3.1,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**43**	*i* P	Pg	19 01 28.2	+0.6
	baz=48						
TWD				*i* S	Sg	19 01 29.7	+0.9
	baz=48						
ETM	**Tongmen**	**0.10**	**218**	*i* P	Pg	19 01 29.1	+0.8
	baz=218						
ETM				*i* S	Sg	19 01 31.1	+1.0
	baz=218						
ETL	**Fush Village**	**0.12**	**26**	*i* P	Pg	19 01 29.3	+0.7
	baz=26						
ETL				*i* S	Sg	19 01 31.7	+1.1
	baz=26						
NACB	**Ninganchiao**	**0.13**	**13**	P	Pg	19 01 29.7	+0.9
	baz=12						
NACB				*i* S	Sg	19 01 32.0	+1.3
	baz=12						
LXIB	**Xiulin Townshi**	**0.14**	**259**	*e*P	Pg	19 01 30.6	+1.6
	baz=258						
ESL	**Shilin**	**0.26**	**207**	*e*P	Pg	19 01 31.6	+0.5
	baz=205						
FUSS	**Fushou**	**0.35**	**304**	*e*P	Pb	19 01 34.7	+0.2
	baz=304						
WARBT	**Fenglin Townsh**	**0.37**	**206**	*e*P	Pb	19 01 34.1	-0.5
	baz=206						

*IDC **06** 19:03:10.5±1.0,23.98N×121.65E,h0km,mb3.5/9, mbtmp3.6/11,ML3.4/2,Error ellipse: s-maj=33.4km s-min=20.9km az=64.0*

*JMA **06** 19:03:12.9±0.1,24.1N±0.3×121.7E±0.6,h0km,MV3.3/10, TAIWAN REGION*

*TAP **06** 19:03:12.3,24.03N×121.66E,h7km,ML3.9,C*

*ASIES **06** 19:03:12.3,24.03N×121.66E,h7km,ML3.9,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.23; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$-1.30; $M_{r\theta}$4.92; $M_{r\phi}$-1.17; $M_{\theta\phi}$4.34; Fault plane solution: M_o6.93916×10^{21} NP1:ϕ_s48.14000°, δ80.56000°, λ92.60000°. NP2:ϕ_p212.64000°, δ9.79000°, λ74.72000°. Principal axes: T Plg54.3700°, Azm321.2960°; N Plg2.5680°, Azm227.7080°; P Plg35.5090°, Azm135.8740°;*

ISC 06 19:03:12.5±0.8,24.01N±0.01×121.69E±0.02,h9km±5km, n180,σ0s71/251,mb3.5/9,3C-29D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**306**	⇓*i* P	**Pg**	**19 03 14.7**	**-0.4**
	baz=313						
TWD				*i* S	**Sg**	**19 03 15.8**	**-1.2**
	baz=313						
ETL	**Fush Village**	**0.16**	**336**	⇓*i* P	**Pg**	**19 03 15.6**	**-0.3**
	baz=342						
ETL				*e*S	**Sg**	**19 03 18.7**	**+0.4**
	baz=342						
NACB	**Ninganchiao**	**0.18**	**330**	⇓*i* P	**Pg**	**19 03 15.9**	**-0.5**
	baz=334						
NACB				*i* S	**Sg**	**19 03 17.9**	**-1.0**
	baz=334						
ETM	**Tongmen**	**0.19**	**256**	*i* P	**Pg**	**19 03 16.1**	**-0.3**
	baz=252						
ETM				*e*S	**Sg**	**19 03 19.3**	**+0.2**
	baz=252						
SHUL	**Shoufeng**	**0.26**	**208**	P	**Pg**	**19 03 18.9**	**+1.3**
	baz=213						
SHUL				*e*S	**Sg**	**19 03 25.4**	**+4.3**
	baz=213						
LXIB	**Xiulin Townshi**	**0.26**	**272**	⇓*i* P	**Pg**	**19 03 17.3**	**-0.5**
	baz=262						
LXIB				S	**Sg**	**19 03 21.1**	**-0.2**
	baz=262						
EHP	**Heping Village**	**0.30**	**8**	P	**Pg**	**19 03 19.1**	**+0.6**
	baz=2.0						
EHP				S	**Sg**	**19 03 23.2**	**+0.8**
	baz=2.0						
ESL	**Shilin**	**0.31**	**230**	⇓*i* P	**Pg**	**19 03 18.4**	**-0.2**
	baz=226						
EAHA	**Aohua**	**0.32**	**7**	P	**Pg**	**19 03 18.7**	**-0.1**
	baz=1.0						
TEGC	**Jichi Village**	**0.33**	**205**	*e*P	**Pb**	**19 03 20.7**	**0.0**
	baz=203						
TEGC				*e*S	**Sb**	**19 03 28.0**	**+1.8**
	baz=203						
WARBT	**Fenglin Townsh**	**0.41**	**224**	⇓P	**Pg**	**19 03 20.3**	**-0.2**
	baz=235						
WARBT				*e*S	**Sg**	**19 03 26.6**	**+0.8**
	baz=235						
WHF	**Hehuan Shan**	**0.41**	**289**	⇓P	**Pg**	**19 03 20.3**	**-0.5**
	baz=288						
WHF				*i* S	**Sg**	**19 03 26.6**	**+0.3**
	baz=288						
ENA	**Nanau**	**0.41**	**6**	⇓*i* P	**Pg**	**19 03 20.5**	**-0.1**
	baz=356						
EGFH	**Guangfu**	**0.42**	**216**	*e*P	**Pb**	**19 03 21.6**	**-0.6**
	baz=222						
EWUT	**Wuta**	**0.44**	**10**	⇓P	**Pg**	**19 03 21.0**	**-0.1**
	baz=8.0						
EWUT				*e*S	**Sg**	**19 03 28.1**	**+1.2**
	baz=8.0						
FUSS	**Fushou**	**0.47**	**300**	⇓P	**Pg**	**19 03 21.6**	**-0.2**
	baz=299						
FUSS				*i* S	**Sg**	**19 03 28.1**	**+0.1**
	baz=299						
CHGB	**Renai**	**0.48**	**276**	⇓*i* P	**Pg**	**19 03 21.8**	**-0.1**
	baz=275						
CHGB				*i* S	**Sg**	**19 03 27.9**	**-0.3**
	baz=275						
OWD	**Renai**	**0.48**	**263**	P	**Pg**	**19 03 21.5**	**-0.3**
	baz=262						
NNSB	**Datong**	**0.50**	**326**	⇓*i* P	**Pg**	**19 03 22.1**	**-0.2**
	baz=324						
NNSB				*i* S	**Sg**	**19 03 28.1**	**-0.8**
	baz=324						
NNSH	**Datong**	**0.50**	**326**	⇓*i* P	**Pg**	**19 03 22.1**	**-0.2**
	baz=323						
NNSH				S	**Sg**	**19 03 28.5**	**-0.4**
	baz=323						
NNS	**Nan Shan**	**0.52**	**325**	⇓*i* P	**Pg**	**19 03 22.3**	**-0.3**
	baz=324						
NNS				*i* S	**Sg**	**19 03 28.9**	**-0.5**
	baz=324						
WUSB	**Renai**	**0.53**	**268**	⇓*i* P	**Pg**	**19 03 22.8**	**0.0**
	baz=268						
WUSB				S	**Sg**	**19 03 30.0**	**+0.2**
	baz=268						
TWT	**Tachien**	**0.53**	**297**	P	**Pg**	**19 03 22.9**	**0.0**
	baz=295						
TWT				*e*S	**Sg**	**19 03 29.9**	**+0.1**
	baz=295						
LATG	**Datong**	**0.54**	**344**	⇓*i* P	**Pg**	**19 03 22.9**	**-0.2**
	baz=340						
LATG				*i* S	**Sg**	**19 03 30.0**	**-0.2**
	baz=340						
TDCB	**Techi**	**0.55**	**296**	⇓*i* P	**Pg**	**19 03 23.0**	**-0.1**
	baz=295						
TDCB				S	**Sg**	**19 03 29.9**	**-0.4**
	baz=295						
VWDT	**VWDT**	**0.57**	**243**	P	**Pg**	**19 03 23.6**	**+0.1**
	baz=245						
VWDT				*e*S	**Sg**	**19 03 31.7**	**+0.7**
	baz=245						
HGSD	**Ruisui**	**0.57**	**206**	*e*P	**Pb**	**19 03 25.1**	**+0.3**
	baz=223						
ESAO	**Su ao**	**0.58**	**14**	*e*P	**Pg**	**19 03 24.1**	**+0.4**
	baz=3.0						
NDT	**Datong Townshi**	**0.61**	**344**	⇓*i* P	**Pg**	**19 03 24.4**	**+0.1**
	baz=342						
NDT				S	**Sg**	**19 03 32.0**	**-0.4**
	baz=342						
EHY	**Hungye**	**0.61**	**214**	P	**Pg**	**19 03 24.4**	**0.0**
	baz=222						
EHY				*e*S	**Sb**	**19 03 34.3**	**+0.2**
	baz=222						
TWC	**Suao**	**0.61**	**13**	P	**Pg**	**19 03 24.3**	**0.0**
	baz=6.0						
NDS	**Dongshan**	**0.62**	**2**	P	**Pg**	**19 03 24.5**	**0.0**
	baz=360						
NDS				*e*S	**Sg**	**19 03 33.2**	**+0.6**
	baz=360						
EOS3	**EOS3**	**0.63**	**64**	*e*P	**Pn**	**19 03 27.6**	**+0.1**
	baz=62						
ENTT	**Nioudou**	**0.64**	**349**	⇓*i* P	**Pg**	**19 03 24.9**	**0.0**
	baz=348						
ENTT				S	**Sg**	**19 03 33.2**	**+0.1**
	baz=348						
EOS2	**EOS2**	**0.64**	**50**	*e*P	**Pn**	**19 03 27.6**	**-0.1**
	baz=64						
WPL	**Puli Township**	**0.67**	**270**	P	**Pg**	**19 03 25.6**	**0.0**
	baz=270						
WPL				*e*S	**Sg**	**19 03 34.8**	**+0.4**
	baz=270						
DPDB	**Guoxing**	**0.70**	**272**	⇓P	**Pg**	**19 03 26.2**	**+0.2**
	baz=271						
TWE	**Neicheng**	**0.70**	**358**	⇓*i* P	**Pg**	**19 03 26.3**	**+0.1**
	baz=356						
TWE				S	**Sg**	**19 03 35.5**	**+0.2**
	baz=356						
SSLB	**Suanglung**	**0.71**	**252**	⇓*i* P	**Pg**	**19 03 26.1**	**-0.2**
	baz=263						
SSLB				S	**Sg**	**19 03 34.8**	**-0.8**
	baz=263						
YHNB	**Yeheng**	**0.71**	**336**	⇓*i* P	**Pg**	**19 03 26.4**	**+0.1**
	baz=326						
YHNB				S	**Sg**	**19 03 35.4**	**-0.3**
	baz=326						
WCS	**Beigang Elemen**	**0.72**	**274**	*e*P	**Pg**	**19 03 26.3**	**0.0**
	baz=274						
WCS				*e*S	**Sg**	**19 03 36.3**	**+0.6**
	baz=274						
YULB	**Yu-li**	**0.72**	**211**	⇓*e*P	**Pg**	**19 03 26.1**	**-0.2**
	baz=226						
YULB				*e*S	**Sb**	**19 03 37.6**	**+0.3**
	baz=226						
NSK	**Sanguang**	**0.73**	**335**	⇓*i* P	**Pg**	**19 03 26.6**	**+0.1**
	baz=325						
NSK				S	**Sg**	**19 03 35.4**	**-0.7**
	baz=325						
ECBN	**Changbin**	**0.73**	**198**	*e*P	**Pb**	**19 03 27.6**	**+0.2**
	baz=189						
ECBN				*e*S	**Sb**	**19 03 38.9**	**+1.4**
	baz=189						
WHP	**Taichung City**	**0.73**	**291**	⇓*i* P	**Pg**	**19 03 26.9**	**+0.2**
	baz=282						
WHP				*i* S	**Sg**	**19 03 36.6**	**+0.3**
	baz=282						
SMLT	**Sun Moon Lake**	**0.74**	**260**	⇓*i* P	**Pg**	**19 03 26.8**	**0.0**
	baz=261						
SMLT				S	**Sg**	**19 03 36.3**	**-0.1**
	baz=261						
EYUL	**Yuli**	**0.75**	**207**	*e*P	**Pb**	**19 03 27.5**	**-0.2**
	baz=225						
FUSB	**Fushanzhiwuyua**	**0.75**	**353**	⇓*i* P	**Pg**	**19 03 27.1**	**+0.1**
	baz=349						
FUSB				S	**Sg**	**19 03 37.2**	**+0.4**
	baz=349						
ILA	**Ilan**	**0.75**	**4**	*e*P	**Pb**	**19 03 27.9**	**+0.1**
	baz=2.0						
TWF1	**Yuli**	**0.75**	**209**	*e*P	**Pg**	**19 03 26.7**	**-0.3**
	baz=224						
TYC	**Yuchr**	**0.77**	**262**	⇓*i* P	**Pg**	**19 03 27.2**	**-0.3**
	baz=263						
TYC				S	**Sg**	**19 03 36.9**	**-0.6**
	baz=263						
NWLT	**Wulai**	**0.78**	**347**	P	**Pg**	**19 03 27.7**	**+0.1**
	baz=344						
NWLT				S	**Sg**	**19 03 37.3**	**-0.4**
	baz=344						
NFF	**Wufeng Townshi**	**0.81**	**320**	*e*P	**Pg**	**19 03 28.2**	**+0.1**
	baz=318						
NFF				S	**Sg**	**19 03 38.4**	**-0.3**
	baz=318						
WHYT	**Xinyi Township**	**0.83**	**248**	*e*P	**Pg**	**19 03 28.7**	**+0.2**
	baz=257						
WHYT				*e*S	**Sg**	**19 03 39.7**	**+0.3**
	baz=257						
CHKH	**Chenggong**	**0.86**	**199**	*e*P	**Pb**	**19 03 29.7**	**0.0**
	baz=190						
NSTT	**Nanjuang**	**0.88**	**314**	P	**Pg**	**19 03 29.7**	**+0.2**
	baz=313						
NSTT				S	**Sg**	**19 03 41.1**	**+0.1**
	baz=313						
LIOB	**Emei**	**0.88**	**316**	*e*P	**Pg**	**19 03 29.9**	**+0.4**
	baz=314						
FULB	**Fuli**	**0.89**	**204**	*e*P	**Pb**	**19 03 30.6**	**+0.4**
	baz=222						
TWQ1	**Liyutan**	**0.91**	**292**	⇑P	**Pb**	**19 03 30.6**	**+0.1**
	baz=302						
TWQ1				*e*S	**Sb**	**19 03 43.7**	**+1.0**
	baz=302						
WJS	**Zhushan**	**0.91**	**258**	*e*P	**Pb**	**19 03 30.9**	**+0.5**
	baz=266						
WJS				*e*S	**Sb**	**19 03 44.0**	**+1.4**
	baz=266						
NJD	**Zhudong**	**0.91**	**323**	*e*P	**Pb**	**19 03 30.6**	**+0.1**
	baz=327						
WWF	**Wufeng**	**0.91**	**272**	*e*P	**Pn**	**19 03 31.6**	**0.0**
	baz=272						
WWF				*e*S	**Sn**	**19 03 45.4**	**+0.6**
	baz=272						
WNT	**Mingjian**	**0.93**	**262**	*e*P	**Pb**	**19 03 31.6**	**+0.7**
	baz=263						
WNT				*e*S	**Sb**	**19 03 44.5**	**+1.0**
	baz=263						
WNT1	**Nantou City**	**0.93**	**264**	P	**Pb**	**19 03 31.7**	**+0.7**
	baz=265						
WNT1				*e*S	**Sn**	**19 03 46.1**	**+0.6**
	baz=265						
TCU	**Taichung**	**0.94**	**278**	*e*P	**Pn**	**19 03 32.1**	**+0.1**
	baz=271						
NSY	**Sanyi**	**0.94**	**295**	⇑P	**Pb**	**19 03 31.9**	**+0.8**
	baz=295						
ALS	**Alishan**	**0.96**	**239**	P	**Pg**	**19 03 31.1**	**+0.2**
	baz=242						
ALS				*e*S	**Sb**	**19 03 45.6**	**+1.2**
	baz=242						
NHDH	**Xindian Distri**	**0.96**	**351**	*e*P	**Pg**	**19 03 31.2**	**+0.2**
	baz=348						
CHKT	**Chengkung**	**0.96**	**198**	P	**Pg**	**19 03 30.6**	**-0.3**
	baz=193						
CHKT				*e*S	**Sn**	**19 03 46.4**	**+0.4**
	baz=193						
TIPB	**Shuangxi**	**0.96**	**7**	*e*P	**Pg**	**19 03 31.1**	**0.0**
	baz=354						
TWA	**Mucha**	**0.97**	**354**	*e*P	**Pg**	**19 03 31.4**	**+0.3**
	baz=339						
TWA				*e*S	**Sg**	**19 03 44.2**	**+0.4**
	baz=339						
EHD	**Haiduan**	**0.97**	**208**	*e*P	**Pg**	**19 03 31.0**	**-0.2**
	baz=210						
NMLH	**Miaoli**	**0.97**	**302**	*e*P	**Pb**	**19 03 32.4**	**+0.7**
	baz=302						
TATO	**Taipei**	**0.98**	**349**	⇑P	**Pg**	**19 03 31.8**	**+0.5**
	baz=345						
TATO				S	**Sg**	**19 03 43.0**	**-1.1**
	baz=345						
HSN1	**Hsinchu**	**0.98**	**321**	*e*P	**Pg**	**19 03 31.4**	**0.0**
	baz=320						
NJN	**Zhunan**	**1.00**	**312**	*e*P	**Pg**	**19 03 32.2**	**+0.4**
	baz=311						
BACT	**New Taipei Cit**	**1.01**	**347**	*e*P	**Pb**	**19 03 32.8**	**+0.6**
	baz=344						
SBCB	**Hsinchu**	**1.01**	**320**	*e*P	**Pb**	**19 03 33.0**	**+0.8**
	baz=319						
ECS	**Chishang**	**1.01**	**206**	*e*P	**Pb**	**19 03 32.8**	**+0.5**
	baz=223						
WDJ	**Dajia District**	**1.02**	**289**	*e*P	**Pb**	**19 03 33.1**	**+0.8**
	baz=297						
WDJ				*e*S	**Sn**	**19 03 47.7**	**+0.2**
	baz=297						
CHN5	**Tsauling**	**1.02**	**246**	*i* P	**Pb**	**19 03 32.7**	**+0.3**
	baz=240						
CHN5				S	**Sn**	**19 03 48.4**	**+0.8**
	baz=240						
WYL	**Yuanlin Townsh**	**1.02**	**267**	*e*P	**Pg**	**19 03 31.9**	**-0.2**
	baz=269						
WYL				*e*S	**Sb**	**19 03 46.3**	**+0.3**
	baz=269						
HSN	**Hsinchu**	**1.03**	**320**	*e*P	**Pb**	**19 03 32.9**	**+0.4**
	baz=320						
HSN				*e*S	**Sb**	**19 03 47.5**	**+1.4**
	baz=320						
**

NWF	Wu-fen Shan	1.06	4	eP	Pg	19 03 33.1	+0.3
	baz=359						
WFSB	Wu-fen Shan	1.06	4	eP	Pb	19 03 33.6	+0.5
	baz=359						
NCUH	Zhongli	1.06	334	eP	Pb	19 03 33.7	+0.6
	baz=331						
NCU	National Centr	1.06	334	eP	Pb	19 03 33.4	+0.3
	baz=332						
WGK	Gukeng	1.09	253	eP	Pb	19 03 34.0	+0.5
	baz=255						
SXI1	Grass Mountain	1.09	9	eP	Pb	19 03 34.1	+0.4
	baz=356						
SXI1				eS	Sn	19 03 50.8	+1.4
	baz=356						
WDLH	Douliu	1.11	253	eP	Pb	19 03 34.3	+0.4
	baz=257						
WDLH				eS	Sb	19 03 49.4	+0.9
	baz=257						
TWS1	Kuangyinshan	1.11	347	eP	Pn	19 03 34.9	+0.6
	baz=343						
TWS1				eS	Sn	19 03 50.5	+0.7
	baz=343						
TNOU	National Taiwa	1.13	4	eP	Pb	19 03 34.9	+0.6
	baz=358						
YM01	YM01	1.13	354	eP	Pg	19 03 34.8	+0.4
	baz=358						
YM01				eS	Sg	19 03 49.3	+0.2
	baz=358						
WCKO	Fanlu	1.15	240	eP	Pb	19 03 34.8	+0.1
	baz=239						
WCKO				eS	Sn	19 03 51.9	+1.1
	baz=239						
NTST	Danshui	1.17	349	eP	Pb	19 03 35.6	+0.7
	baz=344						
NTST				eS	Sb	19 03 51.4	+1.2
	baz=344						
ANP	Anpu	1.18	352	eP	Pg	19 03 35.0	-0.2
	baz=347						
STYH	Taoyuan	1.19	225	eP	Pg	19 03 34.7	-0.7
	baz=231						
STYH				eS	Sn	19 03 51.6	-0.1
	baz=231						
CHN4	Tsaushan	1.21	237	P	Pn	19 03 36.4	+0.7
	baz=234						
CHN4				S	Sn	19 03 52.9	+0.7
	baz=234						
STYT	Tauyuan	1.21	226	P	Pg	19 03 35.6	-0.2
	baz=231						
STYT				eS	Sn	19 03 52.2	0.0
	baz=231						
TPUB	Ta-pu	1.21	234	eP	Pb	19 03 35.9	+0.3
	baz=239						
TPUB				eS	Sn	19 03 53.0	+0.8
	baz=239						
WRL	Guolierlin Hig	1.21	265	eP	Pb	19 03 35.9	+0.3
	baz=266						
LONT	Longtian	1.22	205	eP	Pg	19 03 35.5	-0.5
	baz=209						
JYNG	Yonagunijimaku	1.22	69	S	Sb	19 03 52.6	+0.8
RLNB	Erlin	1.23	265	P	Pn	19 03 36.6	+0.7
	baz=267						
RLNB				eS	Sn	19 03 53.0	+0.4
	baz=267						
WTK	Tuku	1.24	255	eP	Pn	19 03 37.1	+1.0
	baz=258						
WTP	Ta-pu	1.25	233	P	Pn	19 03 36.7	+0.4
	baz=238						
WTP				eS	Sn	19 03 54.5	+1.2
	baz=238						
TWY	Chenhua	1.26	356	eP	Pb	19 03 37.2	+0.7
	baz=339						
YOJ	Yonaguni jima	1.28	69	P	Pn	19 03 36.9	+0.2
	baz=63						
YOJ				eS	Sg	19 03 53.8	0.0
	baz=63						
YOJ	Yonaguni jima	1.28	69	eP	Pn	19 03 37.0	+0.3
YOJ				eS	Sn	19 03 54.9	+0.9
WTCT	Ta-ch'eng	1.30	264	eP	Pb	19 03 37.6	+0.4
	baz=266						
TWGBT	Beinan	1.32	205	eP	Pn	19 03 36.1	-1.1
	baz=209						
TWG	Pinlang	1.32	206	eP	Pn	19 03 36.3	-0.9
	baz=205						
TWK	Hsinying	1.33	236	eP	Pb	19 03 38.1	+0.4
	baz=240						
LDUT	Ludao	1.35	189	eP	Pn	19 03 37.4	-0.2
	baz=180						
CHN1	Nanshi	1.35	233	P	Pg	19 03 38.5	0.0
	baz=238						
CHN1				eS	Sn	19 03 58.5	+2.7
	baz=238						
SNST	Tainan City	1.35	234	eP	Pg	19 03 38.3	-0.2
	baz=239						
SGST	Jiashian	1.38	228	eP	Pn	19 03 37.7	-0.3
	baz=234						
SGST				eS	Sn	19 03 58.4	+2.0
	baz=234						
SLGT	Liugui	1.40	224	eP	Pg	19 03 39.2	-0.2
	baz=213						
WSF	Szhu	1.40	255	eP	Pg	19 03 39.5	+0.1
	baz=258						
WSF				eS	Sn	19 03 58.8	+1.9
	baz=258						
WSL	Shuilin Townsh	1.43	250	eP	Pb	19 03 39.7	+0.3
	baz=266						
ICHU	Yijhu	1.45	244	eP	Pb	19 03 39.9	+0.1
	baz=247						
CHN8	Yiju	1.51	244	eP	Pn	19 03 40.3	+0.5
	baz=251						
CHN8				eS	Sg	19 04 02.0	+0.8
	baz=251						
CHN3	Shinhua	1.54	233	eP	Pn	19 03 40.5	+0.4
	baz=237						
SSHA	Shanhua	1.56	236	eP	Pg	19 03 42.1	-0.4
	baz=241						
ECL	Taimali	1.57	206	eP	Pn	19 03 40.5	-0.1
	baz=209						
SHHT	Tainan City	1.58	232	eP	Pg	19 03 43.1	+0.2
	baz=236						
SSD	Sandimen	1.59	218	eP	Pn	19 03 40.9	-0.1
	baz=239						
SSD				eS	Sb	19 04 03.0	+0.5
	baz=239						
SCLT	Jiali	1.61	239	eP	Pb	19 03 42.6	+0.2
	baz=244						
TSMG	Majia	1.62	217	eP	Pn	19 03 42.0	+0.7
	baz=209						
TWM1	Shoushan	1.66	225	eP	Pb	19 03 43.6	+0.3
	baz=229						
SGLT	Jiouru	1.69	221	eP	Pb	19 03 44.2	+0.3
	baz=212						
MASBT	Mashibuluo	1.70	215	eP	Pn	19 03 42.5	0.0
	baz=221						
MASBT				eS	Sg	19 04 06.9	-0.4
	baz=221						
TSCK	Chigu Township	1.71	240	eP	Pn	19 03 43.4	+0.8
	baz=244						
TSPT	Pingtung City	1.73	220	eP	Pb	19 03 44.5	+0.1
	baz=212						
EAST	Anshuo	1.80	206	eP	Pn	19 03 42.9	-0.9
	baz=198						
TAWH	Dawu Township	1.82	204	eP	Pb	19 03 45.9	-0.3
	baz=208						
IRIF	Iriomote-Funau	1.89	80	S	Sn	19 04 09.8	+0.9
SCZT	Fangliau	1.91	211	eP	Pn	19 03 46.2	+0.9
	baz=202						
HATJ	Hateruma jima	1.93	88	eS	Sn	19 04 11.2	+1.2
SLIU	Shizi	1.97	205	eP	Pn	19 03 47.0	+0.9
	baz=198						
PHUB	P'eng-hu	2.01	256	eP	Pn	19 03 47.4	+0.7
	baz=259						
PHUB				eS	Sn	19 04 12.5	+0.6
	baz=259						
PNG	Penghu	2.01	258	eP	Pn	19 03 47.8	+1.1
	baz=261						
JKRS	Kuro-shima	2.13	84	eS	Sn	19 04 16.9	+2.0
TWK1	Hengchun	2.22	202	eP	Pb	19 03 52.0	-0.8
	baz=205						
TWKBT	Hengchun	2.22	202	eP	Pn	19 03 50.2	+0.7
	baz=205						
VCHM	Qimei	2.23	249	eP	Pn	19 03 50.3	+0.6
	baz=239						
VWUC	VWUC	2.27	296	eP	Pn	19 03 49.5	-0.7
	baz=295						
PTMZ	Houxiangcun	2.56	294	eP	Pn	19 03 54.1	-0.1
	baz=293						
MATB	Ma-tsu	2.65	324	eP	Pn	19 03 55.7	+0.2
	baz=320						
KNMB	Chin-men Tao	3.05	279	eP	Pn	19 04 00.6	-0.5
	baz=279						
LYJJ	Jianjiangzhen	3.07	326	eP	Pn	19 04 03.0	+1.7
	baz=322						
MHZQ	Yeshan	3.19	311	eP	Pn	19 04 03.3	+0.4
	baz=297						
XPSS	Dashiqiu	3.21	335	eP	Pn	19 04 02.4	-0.8
	baz=331						
JMJ	Miyako jima 2	3.38	76	eP	Pn	19 04 04.5	-1.0
	baz=77						
AXDP	Jialang	3.51	285	eP	Pn	19 04 07.0	-0.3
	baz=285						
ZPLA	Ao Xicun	3.61	269	eP	Pn	19 04 08.6	0.0
	baz=272						
DSXP	Dongshan	3.92	266	eP	Pn	19 04 12.9	-0.1
	baz=269						
SXFK	Yanhouchang	4.37	304	eP	Pn	19 04 19.3	+0.1
	baz=302						
JOW	Kunigami	6.58	63	Pn	Pn	19 04 49.2	-0.3
	2.0nm,0.3s,baz=152,slow=18,SNR=1.1						
	6.5nm,0.4s						
KSRS	Korea Array	14.42	20	Pn	Pn	19 06 37.7	+0.8
	0.1nm,0.3s,baz=198,slow=11,SNR=1.5						
	0.7nm,0.8s						
SONM	Songjno Array	26.71	337	P	P	19 08 52.6	+0.3
	0.7nm,0.7s,baz=149,slow=8.2,SNR=3.9						
	0.7nm,0.7s						
MKAR	Makanchi Array	38.78	316	P	P	19 10 36.3	-1.2
	0.2nm,0.4s,baz=99,slow=10.0,SNR=7.2						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	40.64	327	P	P	19 10 51.6	-1.2
	0.7nm,0.5s,baz=106,slow=9.7,SNR=4.0						
	0.7nm,0.5s						
H11N1	WAKE ISLAND Hy	42.03	87	T	T	19 56 22.1	
	baz=276,slow=74						
H11N2	WAKE ISLAND Hy	42.03	87	T	T	19 56 22.2	
	baz=276,slow=74						
H11N3	WAKE ISLAND Hy	42.05	87	T	T	19 56 23.2	
	baz=276						
H11S3	WAKE ISLAND Hy	42.16	89	T	T	19 56 13.8	
	baz=284						
H11S1	WAKE ISLAND Hy	42.16	89	T	T	19 56 15.8	
	baz=284						
H11S2	WAKE ISLAND Hy	42.17	89	T	T	19 56 16.1	
	baz=284						
WRA	Warramunga Arr	45.40	163	P	P	19 11 31.4	-0.2
	0.4nm,0.6s,baz=345,slow=8.7,SNR=2.4						
	0.4nm,0.6s						
BVAR	Borovoye Array	48.10	321	P	P	19 11 52.6	0.0
	0.3nm,0.4s,baz=92,slow=9.5,SNR=3.2						
	0.3nm,0.4s						
ASAR	Alice Springs	48.85	165	P	P	19 11 57.4	-1.3
	0.3nm,0.7s,baz=335,slow=6.3,SNR=2.1						
	0.3nm,0.7s						
ILAR	Eielson Array	69.15	27	P	P	19 14 19.4	+0.3
	0.2nm,0.7s,baz=292,slow=8.3,SNR=2.8						
	0.2nm,0.7s						
FINES	FINESS Array B	71.83	330	P	P	19 14 34.8	-0.6
	2.7nm,1.6s,baz=53,slow=9.2,SNR=2.3						
	2.7nm,1.0s						
YKA	Yellowknife Ar	82.94	23	P	P	19 15 35.6	-2.1
	0.1nm,0.5s,baz=316,slow=4.7,SNR=3.3						
	0.1nm,0.5s						

*IDC **06** 19:10:56.6±1.4,23.95N×121.66E,h0km,mb3.3/6,*
mbtmp3.3/6,Error ellipse: s-maj=74.5km s-min=27.9km
az=62.0
*TAP **06** 19:10:59.0,24.01N×121.60E,h6km,ML3.3,B*
ISC 06 19:10:58.7±0.8,24.00N±0.02×121.62E±0.02,h12km±5km,
n143,σ0s80/174,mb3.3/6,3C-31D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	Chiawan	0.09	343	⇓iP		Pg		19 11 01.2	-0.2
	baz=7.0								
TWD				i	S	Sg		19 11 02.7	-0.6
	baz=7.0								
ETM	Tongmen	0.12	256	i	P	Pg		19 11 01.7	-0.2
	baz=246								
ETM				i	S	Sg		19 11 03.5	-0.6
	baz=246								
ETL	Fush Village	0.16	360	i	P	Pg		19 11 02.3	-0.2
	baz=11								
ETL				i	S	Sg		19 11 04.8	-0.3
	baz=11								
NACB	Ninganchiao	0.18	351	⇓iP		Pg		19 11 02.7	0.0
	baz=1.0								
NACB				i	S	Sg		19 11 05.2	-0.4
	baz=1.0								
LXIB	Xiulin Townshi	0.20	278	⇓iP		Pg		19 11 03.1	0.0
	baz=268								
LXIB				i	S	Sg		19 11 06.3	+0.3
	baz=268								
SHUL	Shoufeng	0.21	195	P		Pg		19 11 04.2	+0.9
	baz=187								
SHUL				S		Sg		19 11 08.2	+1.8
	baz=187								
ESL	Shilin	0.25	224	P		Pg		19 11 03.9	-0.1
	baz=216								
ESL				eS		Sg		19 11 07.3	-0.2
	baz=216								
TEGC	Jichi Village	0.29	195	P		Pb		19 11 06.0	+0.1
	baz=188								
TEGC				eS		Sb		19 11 11.8	+1.0
	baz=188								
EAHA	Aohua	0.35	17	eP		Pg		19 11 05.4	-0.3
	baz=34								
WARBT	Fenglin Townsh	0.35	218	P		Pb		19 11 05.6	-1.3
	baz=225								
WARBT				eS		Sb		19 11 10.7	-1.8
	baz=225								
WHF	Hehuan Shan	0.36	295	⇓iP		Pb		19 11 06.3	-1.1
	baz=295								
WHF				S		Sg		19 11 11.1	0.0
	baz=295								
OWD	Renai	0.41	265	⇓iP		Pb		19 11 07.2	-0.8
	baz=262								
OWD				eS		Sg		19 11 12.7	+0.2
	baz=262								
CHGB	Renai	0.42	279	⇓iP		Pb		19 11 07.5	-0.6
	baz=277								
CHGB				S		Sb		19 11 13.3	-1.3
	baz=277								
FUSS	Fushou	0.43	306	⇓iP		Pb		19 11 07.8	-0.6
	baz=307								
FUSS				S		Sg		19 11 13.7	+0.7
	baz=307								
ENA	Nanau	0.44	14	P		Pg		19 11 07.3	-0.1
	baz=20								
ENA				S		Sg		19 11 13.6	+0.2
	baz=20								
WUSB	Renai	0.46	270	⇓iP		Pb		19 11 08.4	-0.5
	baz=268								
WUSB				i	S	Sg		19 11 14.3	+0.3
	baz=268								
EWUT	Wuta	0.47	17	P		Pb		19 11 08.2	-0.8
	baz=32								
EWUT				eS		Sg		19 11 14.6	+0.4
	baz=32								
TWT	Tachien	0.48	302	⇓iP		Pb		19 11 09.0	-0.3
	baz=301								
TWT				S		Sb		19 11 16.0	-0.5
	baz=301								
NNSB	Datong	0.48	333	⇓iP		Pb		19 11 08.6	-0.6
	baz=336								
NNSB				i	S	Sg		19 11 14.7	-0.1
	baz=336								
NNSH	Datong	0.48	333	⇓iP		Pb		19 11 08.6	-0.7
	baz=336								
NNSH				eS		Sg		19 11 14.8	+0.1
	baz=336								
TDCB	Techi	0.50	301	⇓iP		Pb		19 11 09.1	-0.4
	baz=301								
TDCB				S		Sg		19 11 15.5	+0.4
	baz=301								
NNS	Nan Shan	0.50	333	⇓iP		Pb		19 11 08.9	-0.6
	baz=337								
NNS				S		Sg		19 11 15.1	-0.1
	baz=337								
VWDT	VWDT	0.50	242	⇓P		Pb		19 11 09.0	-0.5
	baz=238								
VWDT				S		Sb		19 11 15.4	-1.4
	baz=238								
HGSD	Ruisui	0.53	200	eP		Pb		19 11 10.7	+0.7
	baz=201								
LATG	Datong	0.55	351	⇓iP		Pb		19 11 09.7	-0.7
	baz=344								
LATG				eS		Sg		19 11 16.6	-0.1
	baz=344								
EHY	Hungye	0.56	210	⇑P		Pb		19 11 09.7	-0.7
	baz=214								
EHY				S		Sb		19 11 17.3	-1.1
	baz=214								
WPL	Puli Township	0.61	272	eP		Pb		19 11 11.2	-0.2
	baz=270								
WPL				eS		Sb		19 11 19.4	-0.6
	baz=270								
ESAO	Su ao	0.61	19	eP		Pb		19 11 10.9	-0.5
	baz=25								
NDT	Datong Townshi	0.61	350	⇓iP		Pb		19 11 11.2	-0.3
	baz=343								
NDT				eS		Sg		19 11 19.1	+0.3
	baz=343								
DPDB	Guoxing	0.64	274	⇓iP		Pb		19 11 11.9	0.0
	baz=272								
DPDB				eS		Sb		19 11 20.4	-0.4
	baz=272								
NDS	Dongshan	0.64	7	P		Pb		19 11 11.5	-0.4
	baz=23								
ENTT	Nioudou	0.65	355	⇓iP		Pb		19 11 11.8	-0.2
	baz=359								
ENTT				S		Sg		19 11 19.9	+0.2
	baz=359								
TWC	Suao	0.65	18	eP		Pb		19 11 11.4	-0.5
	baz=25								
EOS4	EOS4	0.65	79	eP		Pb		19 11 12.2	+0.4
	baz=93								
SSLB	Suanglung	0.65	252	⇓iP		Pb		19 11 11.7	-0.3
	baz=261								
SSLB				S		Sg		19 11 19.4	-0.4
	baz=261								
WCS	Beigang Elemen	0.66	276	⇓P		Pb		19 11 12.2	+0.1
	baz=272								
YULB	Yu-li	0.67	207	eP		Pb		19 11 11.7	-0.7
	baz=201								
SMLT	Sun Moon Lake	0.67	261	⇓iP		Pb		19 11 12.4	-0.1
	baz=259								
SMLT				S		Sb		19 11 21.0	-0.8
	baz=259								
WHP	Taichung City	0.68	295	⇓iP		Pb		19 11 12.8	+0.2
	baz=293								
ECBN	Changbin	0.69	193	eP		Pb		19 11 13.1	+0.3
	baz=188								
EYUL	Yuli	0.70	204	eP		Pb		19 11 13.2	+0.3
	baz=207								
TWF1	Yuli	0.71	205	eP		Pb		19 11 12.3	-0.6
	baz=208								
TYC	Yuchr	0.71	263	⇓P		Pb		19 11 12.9	-0.1
	baz=258								
YHNB	Yeheng	0.71	341	⇓iP		Pb		19 11 13.1	0.0
	baz=355								
NSK	Sanguang	0.72	340	⇓iP		Pb		19 11 13.2	-0.1
	baz=354								
TWE	Neicheng	0.72	3	⇓iP		Pb		19 11 13.2	-0.1
	baz=359								
FUSB	Fushanzhiwuyua	0.76	357	⇓iP		Pb		19 11 14.0	0.0
	baz=1.0								
FUSB				eS		Sg		19 11 22.8	-0.8
	baz=1.0								
WHYT	Xinyi Township	0.77	247	eP		Pb		19 11 14.2	+0.2
	baz=242								
NFF	Wufeng Townshi	0.79	324	⇓eP		Pb		19 11 14.7	+0.4
	baz=337								
NWLT	Wulai	0.79	352	eP		Pb		19 11 14.4	0.0
	baz=344								
CHKH	Chenggong	0.83	195	eP		Pn		19 11 15.5	-0.7
	baz=177								
WJS	Zhushan	0.84	258	eP		Pn		19 11 16.4	0.0
	baz=245								
FULB	Fuli	0.85	201	eP		Pn		19 11 16.0	-0.6
	baz=210								
WWF	Wufeng	0.85	273	eP		Pn		19 11 16.9	+0.4
	baz=269								
NSTT	Nanjuang	0.85	318	⇓iP		Pn		19 11 16.2	-0.3
	baz=319								
LIOB	Emei	0.85	320	⇓iP		Pn		19 11 16.4	-0.2
	baz=321								
TWQ1	Liyutan	0.85	295	eP		Pn		19 11 16.6	0.0
	baz=293								
WNT	Mingjian	0.87	263	eP		Pn		19 11 16.7	-0.1
	baz=248								
TCU	Taichung	0.88	280	eP		Pn		19 11 17.7	+0.8
	baz=277								
NJD	Zhudong	0.89	327	eP		Pn		19 11 17.1	+0.1
	baz=339								
ALS	Alishan	0.89	237	eP		Pb		19 11 16.4	+0.1
	baz=232								
NSY	Sanyi	0.89	298	eP		Pn		19 11 17.4	+0.3
	baz=297								
CHKT	Chengkung	0.92	195	eP		Pb		19 11 16.7	+0.1
	baz=190								
EHD	Haiduan	0.93	205	eP		Pb		19 11 16.6	-0.1
	baz=201								
NMLH	Miaoli	0.93	306	eP		Pn		19 11 18.1	+0.5
	baz=304								
CHN5	Tsauling	0.95	246	eP		Pn		19 11 18.1	+0.1
	baz=240								
HSN1	Hsinchu	0.96	325	eP		Pn		19 11 18.1	+0.1
	baz=326								
WYL	Yuanlin Townsh	0.96	268	eP		Pn		19 11 17.9	0.0
	baz=264								
WDJ	Dajia District	0.96	292	eP		Pn		19 11 19.8	+1.6
	baz=289								
NHDH	Xindian Distri	0.97	355	eP		Pb		19 11 17.7	+0.2
ECS	Chishang	0.97	203	eP		Pn		19 11 18.6	+0.4
	baz=199								
NJN	Zhunan	0.97	315	eP		Pn		19 11 18.0	-0.2
	baz=326								
ELDTW	Lidau	0.98	215	eP		Pb		19 11 17.8	+0.1
	baz=196								
WCHH	Zhanghua	0.98	275	eP		Pn		19 11 18.7	+0.5
	baz=271								
TWA	Mucha	0.98	358	⇑P		Pn		19 11 18.5	+0.1
	baz=354								
TATO	Taipei	0.98	353	⇓P		Pn		19 11 18.3	-0.1
	baz=358								
SBCB	Hsinchu	0.98	324	eP		Pn		19 11 18.8	+0.4
	baz=325								
TIPB	Shuangxi	0.99	11	P		Pb		19 11 18.1	+0.2
	baz=17								
WGK	Gukeng	1.02	253	eP		Pn		19 11 20.0	+1.1
	baz=248								
WDLH	Douliu	1.04	253	eP		Pn		19 11 20.2	+1.1
	baz=248								
TAP	Taipei	1.05	354	eP		Pn		19 11 19.9	+0.7
NCUH	Zhongli	1.05	338	eP		Pn		19 11 19.9	+0.6
	baz=341								
NCU	National Centr	1.05	338	eP		Pn		19 11 20.2	+0.9
	baz=341								
TWB1	Santiao Chiao	1.06	18	eP		Pn		19 11 19.6	+0.1
	baz=17								
NWF	Wu-fen Shan	1.08	8	eP		Pn		19 11 20.2	+0.4
	baz=13								
WFSB	Wu-fen Shan	1.08	8	eP		Pn		19 11 20.2	+0.5
	baz=13								
WCKO	Fanlu	1.09	240	eP		Pn		19 11 20.8	+1.0
	baz=235								
TWS1	Kuangyinshan	1.12	350	eP		Pn		19 11 21.8	+1.6
	baz=356								
SXI1	Grass Mountain	1.12	12	eP		Pn		19 11 21.0	+0.7
	baz=18								
STYH	Taoyuan	1.13	224	eP		Pn		19 11 20.7	+0.3
	baz=220								
CHN4	Tsaushan	1.14	236	eP		Pn		19 11 21.5	+1.0
	baz=232								
TPUB	Ta-pu	1.14	233	⇑P		Pn		19 11 21.5	+0.9
	baz=229								
WRL	Guolierlin Hig	1.15	266	eP		Pn		19 11 21.7	+1.1
	baz=261								
STYT	Tauyuan	1.15	224	eP		Pn		19 11 21.3	+0.6
	baz=220								
YM01	YM01	1.15	358	eP		Pn		19 11 21.8	+1.1
	baz=15								
CHN2	Minshiung	1.15	247	eP		Pn		19 11 22.8	+2.2
	baz=243								
RLNB	Erlin	1.16	265	eP		Pn		19 11 22.0	+1.2
	baz=260								
WTK	Tuku	1.17	255	eP		Pn		19 11 22.7	+1.7
	baz=250								
LONT	Longtian	1.18	203	eP		Pn		19 11 21.2	+0.2
	baz=200								
NTST	Danshui	1.18	352	eP		Pn		19 11 22.0	+1.0
	baz=356								
WTP	Ta-pu	1.19	231	eP		Pn		19 11 22.2	+1.0
	baz=227								
ANP	Anpu	1.19	355	eP		Pn		19 11 22.2	+0.9

TWK	Hsinying	1.27	235	*e*P		Pn	19 11 23.8	+1.4	
	baz=231								
TWG	Pinlang	1.27	204	*e*P		Pb	19 11 22.2	-0.4	
	baz=200								
TWGBT	Beinan	1.27	203	*e*P		Pg	19 11 21.8	-1.4	
	baz=200								
TWY	Chenhua	1.28	359	*e*P		Pn	19 11 25.2	+2.8	
	baz=350								
CHN1	Nanshi	1.29	232	*e*P		Pn	19 11 24.2	+1.6	
	baz=227								
SNST	Tainan City	1.29	233	*e*P		Pn	19 11 24.0	+1.4	
	baz=229								
SGST	Jiashian	1.32	227	*e*P		Pb	19 11 24.1	+0.6	
	baz=222								
WSF	Szhu	1.33	255	*e*P		Pb	19 11 25.0	+1.3	
	baz=250								
SLGT	Liugui	1.34	222	*e*P		Pb	19 11 25.2	+1.3	
	baz=220								
YOJ	Yonaguni jima	1.35	70	*e*P		Pb	19 11 24.0	+0.1	
	baz=71								
WSL	Shuilin Townsh	1.36	250	*e*P		Pb	19 11 25.3	+1.1	
	baz=259								
ICHU	Yijhu	1.39	243	*e*P		Pg	19 11 25.8	+0.4	
	baz=239								
CHN8	Yiju	1.45	244	*e*P		Pg	19 11 25.8	-0.7	
	baz=240								
CHN3	Shinhua	1.47	232	*e*P		Pg	19 11 26.1	-1.0	
	baz=231								
SCST	Cishan	1.52	223	*e*P		Pg	19 11 28.0	+0.2	
	baz=223								
SHHT	Tainan City	1.52	231	*e*P		Pg	19 11 28.7	+0.8	
	baz=230								
ECL	Taimali	1.52	204	*e*P		Pn	19 11 26.0	+0.2	
	baz=187								
SSD	Sandimen	1.54	216	*e*P		Pb	19 11 26.9	-0.3	
	baz=202								
TSMG	Majia	1.57	215	*e*P		Pg	19 11 28.0	-0.8	
	baz=201								
TWM1	Shoushan	1.61	224	*e*P		Pg	19 11 29.9	+0.4	
	baz=222								
SGLT	Jiouru	1.64	220	*e*P		Pg	19 11 29.9	-0.2	
	baz=205								
MASBT	Mashibuluo	1.65	214	*e*P		Pb	19 11 28.4	-0.7	
	baz=200								
EAST	Anshuo	1.76	204	*e*P		Pb	19 11 30.7	-0.2	
	baz=190								
SCZT	Fangliau	1.86	210	*e*P		Pb	19 11 32.2	-0.5	
	baz=210								
PHUB	P'eng-hu	1.94	256	*e*P		Pn	19 11 32.6	+1.1	
	baz=253								
PNG	Penghu	1.94	258	*e*P		Pb	19 11 32.9	-1.1	
	baz=254								
LYUB	Lan-yu	1.98	181	*e*P		Pn	19 11 32.0	-0.1	
	baz=165								
PTMZ	Houxiangcun	2.51	295	*e*P		Pn	19 11 40.5	+1.1	
	baz=293								
MATB	Ma-tsu	2.63	325	*e*P		Pn	19 11 42.8	+1.8	
	baz=308								
KNMB	Chin-men Tao	2.99	280	*e*P		Pn	19 11 47.0	+1.0	
	baz=276								
XPSS	Dashiqiu	3.20	336	*e*P		Pn	19 11 50.4	+1.6	
	baz=336								
AXDP	Jialang	3.45	286	*e*P		Pn	19 11 53.8	+1.5	
	baz=283								
ZPLA	Ao Xicun	3.54	270	*e*P		Pn	19 11 54.8	+1.2	
	baz=266								
DSXP	Dongshan	3.85	267	*e*P		Pn	19 11 59.1	+1.3	
	baz=262								
SXFK	Yanhouchang	4.33	304	*e*P		Pn	19 12 05.9	+1.5	
	baz=302								
SONM	Songino Array	26.70	337	P		P	19 16 38.3	+0.4	
	0.1nm,0.3s,baz=142,slow=13,SNR=1.5								
	0.1nm,0.3s								
MKAR	Makanchi Array	38.75	316	P		P	19 18 24.0	+1.1	
	0.2nm,0.7s,baz=117,slow=10,SNR=2.8								
	0.2nm,0.7s								
ZALV	Zalesovo Beam	40.62	327	P		P	19 18 36.9	-1.4	
	0.3nm,0.5s,baz=123,slow=10,SNR=1.5								
	0.3nm,0.5s								
WRA	Warramunga Arr	45.40	163	P		P	19 19 16.5	-0.9	
	0.2nm,0.5s,baz=346,slow=9.0,SNR=1.4								
	0.2nm,0.5s								
BVAR	Borovoye Array	48.07	321	P		P	19 19 38.0	0.0	
	0.2nm,0.7s,baz=98,slow=5.0,SNR=1.4								
	0.2nm,0.7s								
YKA	Yellowknife Ar	82.99	23	P		P	19 23 23.8	+0.3	
	0.2nm,0.6s,baz=311,slow=5.3,SNR=2.9								
	0.2nm,0.6s								

IDC ***06*** *19:11:08.4±1.1,24.˚18N×121.˚86E,h0km,mb3.6/8, mbtmp3.6/9,ML3.3/1,Error ellipse: s-maj=47.6km s-min=20.6km az=65.0*

JMA ***06*** *19:11:10.5±0.3,24.˚1N±0.˚4×121.˚7E±0.˚6,h0km±2km, MV3.6/12,TAIWAN REGION*

ASIES ***06*** *19:11:10.5,24.˚12N×121.˚72E,h8km,ML4.1,Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr4.25; Mθθ-4.61; Mϕϕ-2.06; Mrθ6.12; Mrϕ-3.07; Mθϕ5.33; Fault plane solution: M0 9.85251×10^21 NP1:ϕs49.90000°, δ73.16000°,λ.85.65000°. NP2:ϕs244.61000°,δ17.37000°, λ104.06000°. Principal axes: T Plg61.5990°, Azm313.4390°; N Plg4.1590°, Azm51.1670°; P Plg28.0400°, Azm143.3870°;*

TAP ***06*** *19:11:10.5,24.˚13N×121.˚72E,h8km,ML4.1,C*

ISC 06 19:11:10.4±0.8,24.˚13N±0.˚01×121.˚74E±0.˚02,h10km±5km, n154,σθ°71/215,mb3.5/8,1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	Fush Village	0.11	285	*i*	P		Pg	19 11 13.1	-0.1
	baz=291								
ETL				*i*	S		Sg	19 11 15.0	-0.1
	baz=291								
NACB	Ninganchiao	0.14	288	*i*	P		Pg	19 11 13.5	-0.1
	baz=283								
NACB				*i*	S		Sg	19 11 15.6	-0.2
	baz=283								
TWD	Chiawan	0.14	249	*i*	P		Pg	19 11 13.6	0.0
	baz=258								
TWD				*i*	S		Sg	19 11 15.6	-0.2
	baz=258								
EHP	Heping Village	0.18	0	*i*	P		Pg	19 11 14.8	+0.5
	baz=4.0								
EHP				*i*	S		Sg	19 11 18.2	+1.2
	baz=4.0								
EAHA	Aohua	0.20	360	*i*	P		Pg	19 11 15.2	+0.5
	baz=1.0								
EAHA				*i*	S		Sg	19 11 18.4	+1.0
	baz=1.0								
ETM	Tongmen	0.28	234	P			Pg	19 11 16.0	-0.1
	baz=237								
ETM				S			Sg	19 11 19.9	+0.1
	baz=237								
ENA	Nanau	0.30	0	*i*	P		Pg	19 11 16.9	+0.5
	baz=3.0								
ENA				*i*	S		Sg	19 11 21.3	+0.8
	baz=3.0								
EWUT	Wuta	0.32	6	*i*	P		Pg	19 11 17.5	+0.7
	baz=7.0								
EWUT				*i*	S		Sg	19 11 22.0	+1.0
	baz=7.0								
LXIB	Xiulin Townshi	0.32	250	*i*	P		Pg	19 11 16.9	+0.1
	baz=252								
LXIB				*e*	S		Sg	19 11 21.4	+0.4
	baz=252								
SHUL	Shoufeng	0.38	205	P			Pb	19 11 19.3	+0.1
	baz=215								
SHUL				*e*	S		Sb	19 11 26.6	+1.5
	baz=215								
ESL	Shilin	0.42	222	P			Pg	19 11 18.8	+0.1
	baz=235								
WHF	Hehuan Shan	0.43	272	P			Pg	19 11 19.4	+0.3
	baz=274								
WHF				S			Sg	19 11 24.6	-0.2
	baz=274								
NNSB	Datong	0.44	312	*i*	P		Pg	19 11 19.5	+0.4
	baz=314								
NNSB				*i*	S		Sg	19 11 25.6	+0.7
	baz=314								
NNSH	Datong	0.44	312	P			Pg	19 11 19.6	+0.5
	baz=313								
NNSH				*i*	S		Sg	19 11 25.6	+0.6
	baz=313								
LATG	Datong	0.45	334	*i*	P		Pg	19 11 19.7	+0.5
	baz=335								
LATG				*i*	S		Sg	19 11 25.9	+0.7
	baz=335								
ESAO	Su ao	0.45	12	P			Pg	19 11 19.9	+0.6
	baz=12								
ESAO				*e*	S		Sg	19 11 26.6	+1.2
	baz=12								
NNS	Nan Shan	0.46	313	*i*	P		Pg	19 11 19.9	+0.5
	baz=314								
NNS				*i*	S		Sg	19 11 26.1	+0.7
	baz=314								
TEGC	Jichi Village	0.46	204	P			Pb	19 11 20.7	+0.2
	baz=191								
TEGC				*e*	S		Sb	19 11 29.4	+2.0
	baz=191								
FUSS	Fushou	0.47	285	P			Pg	19 11 19.9	+0.3
	baz=286								
FUSS				S			Sg	19 11 26.5	+0.6
	baz=286								
TWC	Suao	0.49	12	*i*	P		Pg	19 11 20.6	+0.7
	baz=6.0								
TWC				*i*	S		Sb	19 11 27.8	-0.5
	baz=6.0								
NDS	Dongshan	0.50	358	*i*	P		Pb	19 11 21.1	-0.3
	baz=356								
NDS				*i*	S		Sb	19 11 28.3	-0.4
	baz=356								
NDT	Datong Townshi	0.51	336	P			Pg	19 11 21.0	+0.6
	baz=336								
NDT				*i*	S		Sb	19 11 28.7	-0.4
	baz=336								
CHGB	Renai	0.52	262	*i*	P		Pg	19 11 21.0	+0.3
	baz=257								
CHGB				*i*	S		Sg	19 11 28.0	+0.4
	baz=257								
WARBT	Fenglin Townsh	0.52	218	P			Pg	19 11 21.0	+0.4
	baz=230								
WARBT				*e*	S		Sb	19 11 29.5	+0.2
	baz=230								
TWT	Tachien	0.53	284	*e*	P		Pb	19 11 21.7	-0.2
	baz=284								
TWT				*i*	S		Sb	19 11 29.0	-0.7
	baz=284								
ENTT	Nioudou	0.53	343	*i*	P		Pb	19 11 21.7	-0.2
	baz=343								
ENTT				*i*	S		Sb	19 11 29.0	-0.6
	baz=343								
OWD	Renai	0.54	251	*e*	P		Pb	19 11 21.7	-0.4
	baz=255								
TDCB	Techi	0.55	283	*e*	P		Pb	19 11 21.9	-0.3
	baz=284								
TDCB				*i*	S		Sg	19 11 28.8	+0.5
	baz=284								
WUSB	Renai	0.58	257	*e*	P		Pb	19 11 23.1	+0.3
	baz=259								
WUSB				S			Sg	19 11 29.5	0.0
	baz=259								
TWE	Neicheng	0.59	354	*i*	P		Pb	19 11 22.9	-0.1
	baz=355								
TWE				*i*	S		Sb	19 11 31.1	-0.3
	baz=355								
YHNB	Yeheng	0.63	328	P			Pb	19 11 23.6	0.0
	baz=329								
YHNB				S			Sg	19 11 31.3	+0.3
	baz=329								
FUSB	Fushanzhiwuyua	0.64	348	⇓*i*	P		Pb	19 11 23.8	0.0
	baz=338								
FUSB				*i*	S		Sg	19 11 32.0	+0.6
	baz=338								
NSK	Sanguang	0.65	327	P			Pb	19 11 23.8	-0.1
	baz=328								
NSK				*i*	S		Sb	19 11 32.6	-0.4
	baz=328								
VWDT	VWDT	0.66	236	*e*	P		Pb	19 11 23.9	-0.2
	baz=246								
NWLT	Wulai	0.68	342	P			Pb	19 11 24.5	+0.1
	baz=341								
NWLT				S			Sb	19 11 33.6	-0.3
	baz=341								
WPL	Puli Township	0.72	261	P			Pb	19 11 25.1	-0.1
	baz=254								
WPL				S			Sg	19 11 34.1	+0.2
	baz=254								
EHY	Hungye	0.73	212	P			Pg	19 11 24.7	+0.2
	baz=214								
WHP	Taichung City	0.74	282	*e*	P		Pb	19 11 25.7	+0.2
	baz=283								
WHP				S			Sb	19 11 35.7	0.0
	baz=283								
DPDB	Guoxing	0.75	263	*e*	P		Pb	19 11 25.6	0.0
	baz=265								
NFF	Wufeng Townshi	0.76	312	P			Pb	19 11 26.0	+0.3
	baz=312								
NFF				S			Sb	19 11 36.0	-0.1
	baz=312								
WCS	Beigang Elemen	0.76	265	*e*	P		Pb	19 11 25.7	0.0
	baz=267								
SSLB	Suanglung	0.80	245	P			Pg	19 11 25.7	-0.1
	baz=258								
SSLB				*e*	S		Sg	19 11 36.1	-0.1
	baz=258								
SMLT	Sun Moon Lake	0.81	252	*e*	P		Pb	19 11 26.8	+0.2
	baz=254								
SMLT				*e*	S		Sb	19 11 37.6	0.0
	baz=254								
LIOB	Emei	0.84	308	*e*	P		Pb	19 11 27.5	+0.5
	baz=308								
NSTT	Nanjuang	0.84	307	*e*	P		Pb	19 11 27.7	+0.6
	baz=307								
NSTT				S			Sb	19 11 38.5	+0.1
	baz=307								
TIPB	Shuangxi	0.84	5	P			Pb	19 11 27.4	+0.2
	baz=355								
TIPB				S			Sg	19 11 37.6	0.0
	baz=355								
NJD	Zhudong	0.85	316	*e*	P		Pn	19 11 28.2	-0.3
	baz=315								
NHDH	Xindian Distri	0.85	347	*e*	P		Pb	19 11 27.6	+0.3
	baz=345								
TWA	Mucha	0.86	351	*e*	P		Pb	19 11 27.7	+0.3
	baz=350								
TWA				S			Sb	19 11 39.2	+0.2
	baz=350								
EYUL	Yuli	0.87	206	*e*	P		Pg	19 11 27.2	0.0
	baz=225								
TATO	Taipei	0.87	345	P			Pb	19 11 28.5	+0.8
	baz=344								
TATO				S			Sg	19 11 39.2	+0.6
	baz=344								
TWF1	Yuli	0.87	208	*e*	P		Pg	19 11 26.9	-0.4
	baz=223								
TWB1	Santiao Chiao	0.90	14	*e*	P		Pb	19 11 28.4	+0.2
	baz=4.0								
TWB1				*e*	S		Sg	19 11 40.2	+0.6
	baz=4.0								
BACT	New Taipei Cit	0.91	343	*e*	P		Pn	19 11 29.2	0.0
	baz=341								
TWQ1	Liyutan	0.91	284	*e*	P		Pn	19 11 30.8	+1.5
	baz=286								
NHY	Taipei	0.92	350	*e*	P		Pn	19 11 29.6	+0.2
	baz=349								
NHY				*e*	S		Sn	19 11 42.2	-0.5
	baz=349								
WHYT	Xinyi Township	0.92	242	*e*	P		Pb	19 11 28.4	-0.1
	baz=253								
WHYT				*e*	S		Sb	19 11 41.8	+1.0
	baz=253								
HSN1	Hsinchu	0.92	315	*e*	P		Pn	19 11 30.7	+1.2
	baz=315								
TAP	Taipei	0.93	347	P			Pn	19 11 29.7	+0.1
	baz=346								
TAP				*e*	S		Sg	19 11 40.6	+0.1
	baz=346								
NSY	Sanyi	0.94	288	*e*	P		Pn	19 11 30.4	+0.7
	baz=290								
NWF	Wu-fen Shan	0.94	2	*e*	P		Pb	19 11 29.3	+0.4
	baz=358								
WFSB	Wu-fen Shan	0.94	2	P			Pb	19 11 29.2	+0.4
	baz=352								
WFSB				S			Sg	19 11 40.4	-0.3
	baz=352								
SBCB	Hsinchu	0.95	314	*e*	P		Pn	19 11 31.0	+1.1
	baz=314								
NMLH	Miaoli	0.95	295	*e*	P		Pn	19 11 31.2	+1.2
	baz=296								
NTY	Taoyuan	0.95	335	*e*	P		Pn	19 11 30.8	+0.8
	baz=326								
WWF	Wufeng	0.95	265	*e*	P		Pn	19 11 30.9	+1.0
	baz=267								
NJN	Zhunan	0.96	305	*e*	P		Pn	19 11 30.6	+0.6
	baz=305								
SXI1	Grass Mountain	0.97	7	*i*	P		Pb	19 11 30.0	+0.6
	baz=350								
HSN	Hsinchu	0.97	314	*e*	P		Pn	19 11 30.6	+0.5
	baz=316								
TCU	Taichung	0.97	271	*e*	P		Pn	19 11 30.8	+0.7
	baz=267								
NCUH	Zhongli	0.97	329	*e*	P		Pn	19 11 31.3	+1.1
	baz=327								
WJS	Zhushan	0.97	252	*e*	P		Pn	19 11 30.8	+0.7
	baz=255								
NCU	National Centr	0.98	329	*e*	P		Pn	19 11 31.3	+1.1
	baz=329								
NCU				*e*	S		Sn	19 11 45.6	+1.5
	baz=329								
WNT1	Nantou City	0.99	257	*e*	P		Pn	19 11 31.2	+0.8
	baz=255								
WNT1				*e*	S		Sn	19 11 46.2	+1.6
	baz=255								
WNT	Mingjian	1.00	256	*e*	P		Pn	19 11 31.5	+1.0
	baz=253								
WNT				*e*	S		Sn	19 11 46.0	+1.3
	baz=253								
TWS1	Kuangyinshan	1.01	343	P			Pn	19 11 31.3	+0.6
	baz=342								
TWS1				S			Sn	19 11 45.6	+0.6
	baz=342								
FULB	Fuli	1.01	204	*e*	P		Pb	19 11 30.5	+0.4
	baz=225								
TNOU	National Taiwa	1.02	2	*e*	P		Pb	19 11 30.8	+0.7
	baz=360								
TNOU				*e*	S		Sb	19 11 44.3	+0.8
	baz=360								
YM01	YM01	1.02	351	*e*	P		Pn	19 11 31.4	+0.4
	baz=348								
WDJ	Dajia District	1.03	282	*e*	P		Pn	19 11 32.3	+1.4
	baz=283								
ALS	Alishan	1.05	234	*e*	P		Pb	19 11 31.2	+0.3
	baz=247								
NTST	Danshui	1.06	346	*e*	P		Pn	19 11 31.6	+0.2
	baz=343								
ANP	Anpu	1.07	349	P			Pn	19 11 32.1	+0.5
	baz=348								
ANP				*e*	S		Sn	19 11 46.6	0.0
	baz=348								
WYL	Yuanlin Townsh	1.07	261	*e*	P		Pg	19 11 30.5	-0.6
	baz=265								
NHW	Xinwu Township	1.08	324	*e*	P		Pn	19 11 32.0	+0.4
	baz=323								
WCHH	Zhanghua	1.08	268	*e*	P		Pn	19 11 32.9	+1.3
	baz=270								
CHKT	Chengkung	1.08	199	*e*	P		Pg	19 11 30.8	-0.5
	baz=195								
EHD	Haiduan	1.09	207	*e*	P		Pg	19 11 31.1	-0.4
	baz=225								
CHN5	Tsauling	1.11	242	P			Pn	19 11 32.6	+0.6
	baz=245								
CHN5				*i*	S		Sn	19 11 48.5	+1.1
	baz=245								
JYNG	Yonagunijimaku	1.15	74	*e*	P		Pn	19 11 33.1	+0.5
ELDTW	Lidau	1.15	215	*e*	P		Pg	19 11 31.5	-1.0
	baz=205								
ELDTW				*e*	S		Sb	19 11 47.4	0.0
	baz=205								
TWY	Chenhua	1.15	354	*e*	P		Pn	19 11 33.5	+0.9
	baz=336								
WGK	Gukeng	1.17	248	*e*	P		Pn	19 11 33.9	+1.1
	baz=253								
WDLH	Douliu	1.18	248	*e*	P		Pn	19 11 34.2	+1.1
	baz=253								
YOJ	Yonaguni jima	1.21	74	*e*	P		Pb	19 11 33.5	+0.1
	baz=53								
YOJ	Yonaguni jima	1.21	74	P			Pb	19 11 33.6	+0.3
YOJ				*e*	S		Sn	19 11 50.8	+1.0
WCKO	Fanlu	1.25	237	*e*	P		Pg	19 11 35.0	+0.6
	baz=243								
WRL	Guolierlin Hig	1.27	260	*e*	P		Pg	19 11 35.3	+0.6
	baz=264								
RLNB	Erlin	1.28	260	*e*	P		Pg	19 11 36.1	+1.0
	baz=262								
RLNB				S			Sn	19 11 54.3	+2.6
	baz=262								
STYH	Taoyuan	1.30	223	*e*	P		Pg	19 11 35.7	+0.3
	baz=230								
CHN2	Minshiung	1.30	243	*e*	P		Pg	19 11 36.1	+0.7
	baz=249								
CHN4	Tsaushan	1.31	234	*e*	P		Pg	19 11 36.1	+0.6
	baz=241								
TPUB	Ta-pu	1.31	231	*e*	P		Pg	19 11 36.2	+0.6
	baz=236								
TPUB				*e*	S		Sn	19 11 54.2	+1.8
	baz=236								
WTK	Tuku	1.31	251	*e*	P		Pg	19 11 36.8	+1.2
	baz=255								
STYT	Tauyuan	1.32	223	*e*	P		Pg	19 11 36.4	+0.7
	baz=230								
WTP	Ta-pu	1.36	230	*e*	P		Pg	19 11 37.0	+0.5
	baz=236								
WTCT	Ta-ch'eng	1.36	259	*e*	P		Pg	19 11 36.9	+0.4
	baz=263								
TWK	Hsinying	1.43	233	*e*	P		Pg	19 11 37.8	-0.1
	baz=240								
SNST	Tainan City	1.46	232	*e*	P		Pg	19 11 38.7	+0.4
	baz=239								
CHN1	Nanshi	1.46	230	*e*	P		Pg	19 11 38.0	-0.3
	baz=237								
WSF	Szhu	1.47	251	*e*	P		Pg	19 11 38.7	0.0
	baz=254								
WSF				*e*	S		Sg	19 12 00.0	+2.2
	baz=254								
SGST	Jiashian	1.49	226	*e*	P		Pg	19 11 38.8	-0.2
	baz=233								
WSL	Shuilin Townsh	1.51	247	*e*	P		Pg	19 11 38.9	-0.5
	baz=252								
SLGT	Liugui	1.51	222	*e*	P		Pg	19 11 39.8	+0.4
	baz=230								
PCYT	Pengchaiyu	1.52	11	*e*	P		Pb	19 11 38.9	+0.1
	baz=5.0								
ICHU	Yijhu	1.54	241	*e*	P		Pg	19 11 39.5	-0.5
	baz=247								
CHN8	Yiju	1.60	241	*e*	P		Pg	19 11 40.7	-0.5
	baz=248								
CHN3	Shinhua	1.64	231	*e*	P		Pg	19 11 41.8	-0.1
	baz=238								
SCST	Cishan	1.69	223	*e*	P		Pg	19 11 43.4	+0.7
	baz=231								
ECL	Taimali	1.69	205	*e*	P		Pb	19 11 41.2	-0.3
	baz=201								
SCLT	Jiali	1.71	236	*e*	P		Pg	19 11 42.9	-0.2
	baz=244								
SSD	Sandimen	1.71	217	*e*	P		Pb	19 11 42.4	+0.4
	baz=238								
TSMG	Majia	1.74	216	*e*	P		Pb	19 11 42.0	-0.5
	baz=237								
TWM1	Shoushan	1.78	223	*e*	P		Pg	19 11 45.1	+0.6
	baz=231								
TSCK	Chigu Township	1.81	237	*e*	P		Pb	19 11 42.9	-0.7
	baz=245								
MASBT	Mashibuluo	1.82	214	*e*	P		Pb	19 11 43.4	-0.4
	baz=215								
IRIF	Iriomote-Funau	1.83	83	*e*	P		Pb	19 11 43.9	0.0
IRIF					S		Sb	19 12 07.2	+0.2
HATJ	Hateruma jima	1.89	92	*e*	S		Sb	19 12 08.8	+0.2
EAST	Anshuo	1.92	205	*e*	P		Pn	19 11 43.5	+0.2
	baz=202								
SCZT	Fangliau	2.03	211	*e*	P		Pb	19 11 47.0	-0.4
	baz=204								
JKRS	Kuro-shima	2.08	87	*e*	P		Pn	19 11 46.0	+0.7
PNG	Penghu	2.08	255	*e*	P		Pn	19 11 46.6	+1.3
	baz=260								
PHUB	P'eng-hu	2.08	253	*e*	P		Pn	19 11 46.3	+0.9
	baz=257								
PHUB				S			Sb	19 12 13.8	-0.3
	baz=257								
WDGT	Dungji	2.09	246	*e*	P		Pn	19 11 46.8	+1.2
	baz=253								
JIJ	Ishigaki jima	2.21	83	P			Pn	19 11 47.7	+0.6
JISG	Ishigakijimahi	2.39	78	P			Pn	19 11 51.0	+1.3
JISG				S			Sn	19 12 20.8	+1.8
PTMZ	Houxiangcun	2.55	291	*e*	P		Pn	19 11 52.9	+1.1
	baz=293								
LYJJ	Jianjiangzhen	3.00	324	*e*	P

AXDP	**Jialang** baz=284	**3.52**	**283**	*e*P	**Pn**	**19 12 06.0**	**+0.8**
ZPLA	**Ao Xicun** baz=271	**3.65**	**268**	*e*P	**Pn**	**19 12 08.0**	**+1.0**
DSXP	**Dongshan** baz=269	**3.97**	**265**	*e*P	**Pn**	**19 12 11.8**	**+0.4**
SXFK	**Yanhouchang** baz=301	**4.34**	**302**	*e*P	**Pn**	**19 12 17.4**	**+0.9**
KSRS	**Korea Array** 0.1nm,0.3s,baz=197,slow=11,SNR=2.0 0.8nm,0.7s	**14.30**	**20**	Pn	**Pn**	**19 14 31.0**	**-1.9**
SONM	**Songino Array** 0.9nm,0.8s,baz=165,slow=8.9,SNR=4.1 0.9nm,0.8s	**26.62**	**337**	P	**P**	**19 16 48.2**	**-0.9**
MKAR	**Makanchi Array** 1.2nm,0.7s,baz=97,slow=9.9,SNR=9.6 1.2nm,0.7s	**38.73**	**316**	P	**P**	**19 18 35.1**	**+0.4**
ZALV	**Zalesovo Beam** 0.9nm,0.7s,baz=106,slow=7.9,SNR=5.8 0.9nm,0.7s	**40.57**	**327**	P	**P**	**19 18 48.5**	**-1.4**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=106,slow=6.0,SNR=2.4 0.3nm,0.5s	**42.48**	**320**	P	**P**	**19 19 05.3**	**-0.4**
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=345,slow=8.7,SNR=1.6 0.2nm,0.5s	**45.49**	**163**	P	**P**	**19 19 29.3**	**-0.9**
BVAR	**Borovoye Array** 0.6nm,0.7s,baz=91,slow=5.9,SNR=4.2 0.6nm,0.7s	**48.04**	**321**	P	**P**	**19 19 49.8**	**+0.1**
ASAR	**Alice Springs** 0.2nm,0.6s,baz=348,slow=7.8,SNR=2.0 0.2nm,0.6s	**48.96**	**165**	P	**P**	**19 19 57.1**	**-0.1**
YKA	**Yellowknife Ar** 0.5nm,0.8s,baz=313,slow=4.6,SNR=9.9 0.5nm,0.8s	**82.82**	**23**	P	**P**	**19 23 34.1**	**-0.7**

TAP 06 19:11:40.7, 24.12N×121.73E, *h*8km, ML3.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village** baz=291	**0.10**	**290**	*i* P	Pg	19 11 43.5	+0.4
ETL				*i* S	Sg	19 11 45.4	+0.5
TWD	**Chiawan** baz=259	**0.13**	**250**	*i* P	Pg	19 11 43.9	+0.4
TWD				*i* S	Sg	19 11 45.9	+0.5
NACB	**Ninganchiao** baz=283	**0.13**	**292**	⇓*i* P	Pg	19 11 43.9	+0.4
NACB				*i* S	Sg	19 11 46.0	+0.5
EHP	**Heping Village** baz=4.0	**0.19**	**4**	P	Pg	19 11 44.9	+0.4
EHP				*i* S	Sg	19 11 48.2	+1.1
EAHA	**Aohua** baz=1.0	**0.20**	**3**	*i* P	Pg	19 11 45.3	+0.5
EAHA				*i* S	Sg	19 11 48.7	+1.0
ETM	**Tongmen** baz=238	**0.27**	**234**	P	Pg	19 11 46.3	+0.3
ETM				*e*S	Sg	19 11 50.2	+0.7
ENA	**Nanau** baz=2.0	**0.30**	**3**	*i* P	Pg	19 11 47.1	+0.4
ENA				*i* S	Sg	19 11 51.6	+0.8
LXIB	**Xiulin Townshi** baz=252	**0.30**	**250**	*i* P	Pg	19 11 47.3	+0.5
LXIB				*e*S	Sg	19 11 51.4	+0.6
EWUT	**Wuta** baz=6.0	**0.32**	**8**	*i* P	Pg	19 11 47.7	+0.7
EWUT				*i* S	Sg	19 11 52.4	+1.0
SHUL	**Shoufeng** baz=215	**0.37**	**204**	P	Pb	19 11 49.5	+0.1
SHUL				*e*S	Sb	19 11 55.9	+0.6
ESL	**Shilin** baz=233	**0.41**	**221**	P	Pg	19 11 49.0	+0.3
ESL				*e*S	Sg	19 11 54.4	+0.4
WHF	**Hehuan Shan** baz=274	**0.42**	**273**	*e*P	Pg	19 11 49.4	+0.4
WHF				*e*S	Sg	19 11 54.6	0.0
NNSB	**Datong** baz=314	**0.44**	**314**	P	Pg	19 11 49.8	+0.6
NNSB				S	Sg	19 11 55.6	+0.6
NNSH	**Datong** baz=313	**0.44**	**314**	*e*P	Pg	19 11 49.8	+0.6
NNSH				*e*S	Sg	19 11 55.9	+0.9
TEGC	**Jichi Village** baz=208	**0.45**	**202**	*e*P	Pb	19 11 50.7	-0.1
LATG	**Datong** baz=335	**0.45**	**336**	*e*P	Pg	19 11 49.7	+0.2
LATG				*e*S	Sg	19 11 56.4	+1.0
NNS	**Nan Shan** baz=314	**0.45**	**314**	P	Pg	19 11 50.0	+0.6
NNS				*i* S	Sg	19 11 56.4	+1.0
FUSS	**Fushou** baz=286	**0.46**	**286**	*e*P	Pg	19 11 50.1	+0.5
FUSS				*e*S	Sg	19 11 56.7	+1.0
ESAO	**Su ao** baz=10.0	**0.46**	**13**	*e*P	Pg	19 11 49.8	+0.1
TWC	**Suao** baz=6.0	**0.50**	**13**	*e*P	Pg	19 11 50.9	+0.5
TWC				S	Sg	19 11 57.9	+1.1
NDS	**Dongshan** baz=356	**0.51**	**359**	*e*P	Pg	19 11 51.0	+0.5
NDS				S	Sb	19 11 58.5	-0.9
CHGB	**Renai** baz=257	**0.51**	**263**	*e*P	Pg	19 11 51.0	+0.4
CHGB				*e*S	Sg	19 11 57.8	+0.5
WARBT	**Fenglin Townsh** baz=232	**0.51**	**218**	*e*P	Pg	19 11 51.0	+0.4
NDT	**Datong Townshi** baz=336	**0.52**	**338**	P	Pb	19 11 51.5	-0.5
NDT				S	Sb	19 11 58.6	-1.0
TWT	**Tachien** baz=284	**0.52**	**284**	*e*P	Pg	19 11 51.3	+0.5
EGFH	**Guangfu** baz=226	**0.53**	**211**	*e*P	Pb	19 11 51.7	-0.5
OWD	**Renai** baz=256	**0.53**	**252**	*e*P	Pg	19 11 51.4	+0.4
ENTT	**Nioudou** baz=343	**0.53**	**344**	P	Pg	19 11 51.5	+0.4
ENTT				S	Sb	19 11 59.2	-1.0
TDCB	**Techi** baz=284	**0.53**	**284**	*e*P	Pb	19 11 51.9	-0.5
TDCB				*e*S	Sg	19 11 59.0	+0.9
WUSB	**Renai** baz=258	**0.57**	**257**	*e*P	Pb	19 11 52.7	-0.3
WUSB				*e*S	Sg	19 12 00.1	+0.8
TWE	**Neicheng** baz=355	**0.60**	**355**	P	Pb	19 11 53.0	-0.4
TWE				S	Sb	19 12 01.6	-0.4
YHNB	**Yeheng** baz=328	**0.63**	**330**	*e*P	Pb	19 11 53.5	-0.4
NSK	**Sanguang** baz=328	**0.64**	**329**	*e*P	Pg	19 11 53.6	+0.5
NSK				*e*S	Sg	19 12 01.5	-0.1
FUSB	**Fushanzhiwuyua** baz=338	**0.65**	**349**	*e*P	Pb	19 11 54.3	+0.1
FUSB				S	Sg	19 12 02.5	+0.9
VWDT	**VWDT** baz=238	**0.65**	**236**	*e*P	Pb	19 11 53.8	-0.5
VWDT				*e*S	Sb	19 12 04.3	+0.8
NWLT	**Wulai** baz=341	**0.68**	**343**	P	Pb	19 11 54.6	-0.3
NWLT				*e*S	Sg	19 12 03.6	+0.8
WPL	**Puli Township** baz=263	**0.71**	**261**	*e*P	Pb	19 11 55.0	-0.3
EHY	**Hungye** baz=216	**0.72**	**211**	*e*P	Pb	19 11 55.0	-0.4
WHP	**Taichung City** baz=277	**0.73**	**282**	*e*P	Pb	19 11 55.9	+0.2
DPDB	**Guoxing** baz=265	**0.74**	**263**	*e*P	Pb	19 11 56.1	+0.3
NFF	**Wufeng Townshi** baz=312	**0.75**	**312**	*e*P	Pg	19 11 55.1	0.0
SSLB	**Suanglung** baz=249	**0.78**	**245**	*e*P	Pb	19 11 56.5	-0.1
YULB	**Yu-li** baz=227	**0.83**	**208**	*e*P	Pb	19 11 57.6	+0.3
LIOB	**Emei** baz=309	**0.83**	**309**	*e*P	Pn	19 11 58.4	-0.3
TIPB	**Shuangxi** baz=347	**0.85**	**6**	*e*P	Pg	19 11 57.3	+0.2
WHYT	**Xinyi Township** baz=246	**0.91**	**242**	*e*P	Pb	19 11 58.9	+0.2
TWB1	**Santiao Chiao** baz=3.0	**0.91**	**15**	*e*P	Pn	19 11 59.8	0.0
WWF	**Wufeng** baz=267	**0.94**	**265**	*e*P	Pn	19 12 00.8	+0.6
NWF	**Wu-fen Shan** baz=345	**0.94**	**3**	*e*P	Pn	19 12 00.9	+0.5
WFSB	**Wu-fen Shan** baz=358	**0.94**	**3**	*e*P	Pn	19 12 00.7	+0.4
TCU	**Taichung** baz=268	**0.96**	**272**	*e*P	Pn	19 12 01.1	+0.7
TWS1	**Kuangyinshan** baz=341	**1.01**	**344**	*e*P	Pn	19 12 01.7	+0.6
TNOU	**National Taiwa** baz=358	**1.02**	**2**	*e*P	Pb	19 12 00.5	-0.1
YM01	**YM01** baz=348	**1.03**	**352**	*e*P	Pn	19 12 01.6	+0.1

TAP 06 19:15:06.6, 23.96N×121.54E, *h*10km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	**Tongmen** baz=278	**0.04**	**279**	*i* P	Pg	19 15 09.1	+0.5
ETM				*i* S	Sg	19 15 10.6	+0.7
LXIB	**Xiulin Townshi** baz=298	**0.13**	**298**	P	Pg	19 15 10.4	+0.6
LXIB				*e*S	Sg	19 15 12.9	+0.9
SHUL	**Shoufeng** baz=172	**0.17**	**173**	*e*P	Pg	19 15 11.2	+0.8
ESL	**Shilin** baz=211	**0.17**	**214**	*e*P	Pg	19 15 11.4	+1.0
ESL				*e*S	Sg	19 15 14.4	+1.5
WARBT	**Fenglin Townsh** baz=210	**0.28**	**210**	*e*P	Pg	19 15 12.7	+0.5
WHF	**Hehuan Shan** baz=306	**0.31**	**307**	*e*P	Pg	19 15 13.7	+0.6
CHGB	**Renai** baz=286	**0.35**	**287**	*e*P	Pb	19 15 14.8	-0.3
WUSB	**Renai** baz=274	**0.39**	**275**	*e*P	Pb	19 15 15.6	-0.1

TAP 06 19:15:08.7, 24.13N×121.71E, *h*9km±1km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village** baz=291	**0.09**	**291**	P	Pg	19 15 11.1	0.0
ETL				*i* S	Sg	19 15 12.6	-0.1
NACB	**Ninganchiao** baz=293	**0.12**	**293**	*i* P	Pg	19 15 11.4	0.0
NACB				*i* S	Sg	19 15 13.3	0.0
TWD	**Chiawan** baz=26	**0.12**	**245**	*e*P	Pg	19 15 11.2	-0.2
TWD				*i* S	Sg	19 15 13.2	-0.1
TWD	**Chiawan** baz=244	**0.12**	**245**	P	Pg	19 15 11.2	-0.2
TWD				*i* S	Sg	19 15 13.2	0.0
EAHA	**Aohua** baz=7.0	**0.20**	**8**	*e*P	Pg	19 15 12.9	0.0
EAHA				*e*S	Sg	19 15 16.4	+0.7
EWUT	**Wuta** baz=11	**0.32**	**11**	*e*P	Pg	19 15 14.2	-0.9
NNSB	**Datong** baz=315	**0.42**	**315**	*e*P	Pg	19 15 17.0	0.0
NNSB				*e*S	Sg	19 15 23.1	+0.5
MCO	**Taipa Grande**	**7.76**	**257**	P	Pb	19 17 26.0	+2.5

IDC ***06*** *19:15:26.7±0.5, 24.00N×121.74E, h0km, mb4.5/25, mbtmp4.5/27, ML4.0/2, MS5.1/77, Error ellipse: s-maj=16.0km s-min=12.3km az=51.0*

MOS ***06*** *19:15:26.8±1.3, 23.89N×121.84E, h13km, mb5.4/69, MS5.6/21, Error ellipse: s-maj=6.0km s-min=3.8km az=114.8*

ASIES ***06*** *19:15:28.7, 24.01N×121.73E, h6km, ML5.5, Mw5.4, Moment Tensor Solution. Moment tensor: Scale 10^{24}Nm; M_{rr}0.97; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.27; $M_{r\theta}$0.79; $M_{\theta\phi}$-0.50; $M_{\phi r}$1.23; Fault plane solution: $M_0$1.77361×10^{24} NP1:ϕ_s37.21000°, δ73.55000°, λ78.30000°. NP2:ϕ_s253.39000°, δ20.10000°, λ124.48000°. Principal axes: T Plg59.8090°, Azm290.6380°; N Plg11.2190°, Azm40.5700°; P Plg27.6280°, Azm136.5290°;*

NIED ***06*** *19:15:28.4, 23.99N×121.73E, h0km, MW5.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.12; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-0.40; $M_{r\theta}$3.15; $M_{\theta\phi}$-0.69; $M_{\phi r}$1.45; Fault plane solution: $M_0$3.67000×10^{17} NP1:ϕ_s65.00000°, δ81.00000°, λ95.00000°. NP2:ϕ_s217.00000°, δ10.00000°, λ62.00000°.*

JMA ***06*** *19:15:28.4±0.1, 24.00N±0.3×121.75E±0.7, h0km, MD6.1/19, MW5.5/19, TAIWAN REGION*

NEIC ***06*** *19:15:28.4, 23.91N×121.79E, h8km*

TAP ***06*** *19:15:28.7, 24.01N×121.73E, h6km, ML5.5, C*

NEIC ***06*** *19:15:28.4, 23.94N×121.76E, h18km*

NEIC ***06*** *19:15:28.4, 23.84N×121.65E, h18km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.99; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$-0.24; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.42; $M_{\phi r}$1.10; Fault plane solution: $M_0$1.65000×10^{17} NP1:ϕ_s40.39000°, δ72.26000°, λ77.62000°. NP2:ϕ_s256.15000°, δ21.52000°, λ123.83000°. Principal axes: T 1.7162, Plg61.0000°, Azm292.0000°; N -0.1381, Plg12.0000°, Azm44.0000°; P -1.5781, Plg26.0000°, Azm140.0000°;*

NEIC ***06*** *19:15:29.1±1.5, 23.99N±0.04×121.76E±0.04, h14km±1km, mb5.5/209, Mwr5.5/18, Mww5.4/10 Error ellipse: s-maj=7.6km s-min=5.8km az=131.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.64; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.43; $M_{r\theta}$2.03; $M_{\theta\phi}$-0.02; $M_{\phi r}$1.12; Fault plane solution: $M_0$2.50000×10^{17} NP1:ϕ_s62.07000°, δ81.74000°, λ76.02000°. NP2:ϕ_s302.08000°, δ16.20000°, λ149.00000°. Principal axes: T 2.4309, Plg51.0000°, Azm316.0000°; N 0.1298, Plg14.0000°, Azm64.0000°; P -2.5607, Plg35.0000°, Azm164.0000°;*

BJI ***06*** *19:15:30.4±0.0, 24.15N×121.70E, h10km, mb4.8/70, mB5.7/64, ML5.6/13, Ms6.2/96, Ms7 6.1/91*

GCMT ***06*** *19:15:32.1±0.2, 23.94N±0.01×121.83E±0.02, h18km, MW5.5/131, Moment Tensor Solution. s71,c98; s131,c232; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.37±.06; $M_{\theta\theta}$-0.93±.04; $M_{\phi\phi}$-0.44±.03; $M_{r\theta}$1.24±.10; $M_{\theta\phi}$-0.70±.02; $M_{\phi r}$0.91±.09; Best double couple: $M_0$2.08000×10^{17} NP1:ϕ_s54.00000°, δ69.00000°, λ90.00000°. NP2:ϕ_s235.00000°, δ21.00000°, λ91.00000°. Principal axes: T 2.0520, Plg66.0000°, Azm323.0000°; N 0.0630, Plg0.0000°, Azm54.0000°; P -2.1090, Plg24.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 19:15:29.3±0.4, 23.98N±0.01×121.77E±0.01, *h*10km, *h*10km:pP-P, n1115, σ1.79/1203, mb5.3/214, MS5.4/110, 119C-27D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan** baz=300	**0.19**	**303**	⇑*i* P	Pg	**19 15 32.2**	**-1.1**
TWD				S	Sg	**19 15 34.9**	**-1.1**
ETL	**Fush Village** baz=312	**0.22**	**324**	⇑P	Pg	**19 15 33.0**	**-1.0**
ETL				*e*S	Sg	**19 15 35.1**	**-2.0**
ETM	**Tongmen** baz=271	**0.25**	**267**	⇑*i* P	Pg	**19 15 33.6**	**-0.9**
ETM				S	Sg	**19 15 37.0**	**-0.9**
NACB	**Ninganchiao**	**0.25**	**321**		Pg	**19 15 32.5**	**-2.0**
NACB				Sg	Sg	**19 15 36.7**	**-1.2**
NACB	**Ninganchiao**	**0.25**	**321**	P	Pg	**19 15 33.3**	**-1.1**
NACB	**Ninganchiao** baz=310	**0.25**	**321**	⇑*i* P	Pg	**19 15 33.3**	**-1.1**
NACB				S	Sg	**19 15 35.9**	**-2.0**
SHUL	**Shoufeng** baz=215	**0.27**	**225**	⇓*i* P	Pb	**19 15 35.5**	**-0.7**
SHUL				*e*S	Sb	**19 15 40.9**	**+0.1**
LXIB	**Xiulin Townshi** baz=273	**0.33**	**278**	⇑*i* P	Pg	**19 15 34.8**	**-1.1**
LXIB				S	Sg	**19 15 39.9**	**-0.4**
EHP	**Heping Village** baz=349	**0.33**	**356**	*e*P	Pb	**19 15 35.7**	**-1.7**
EHP				S	Sb	**19 15 41.1**	**-1.7**
TEGC	**Jichi Village** baz=208	**0.34**	**218**	⇓P	Pb	**19 15 36.9**	**-0.5**
TEGC				S	Sb	**19 15 43.7**	**+0.8**
ESL	**Shilin** baz=243	**0.35**	**242**	⇑*i* P	Pg	**19 15 35.6**	**-0.6**
ESL				*e*S	Sg	**19 15 40.6**	**-0.2**
EAHA	**Aohua** baz=347	**0.35**	**356**	⇑P	Pg	**19 15 35.8**	**-0.5**
EAHA				*e*S	Sb	**19 15 41.6**	**-1.7**
WARBT	**Fenglin Townsh** baz=239	**0.43**	**234**	⇑*i* P	Pg	**19 15 37.4**	**-0.4**
WARBT				*e*S	Sb	**19 15 44.7**	**-1.0**
EGFH	**Guangfu** baz=221	**0.44**	**225**	*e*P	Pb	**19 15 37.9**	**-1.2**
ENA	**Nanau** baz=2.0	**0.45**	**357**	⇑*i* P	Pb	**19 15 37.8**	**-1.6**
ENA				S	Sb	**19 15 44.3**	**-1.8**
EWUT	**Wuta** baz=5.0	**0.47**	**1**	⇑*i* P	Pb	**19 15 38.2**	**-1.5**
EWUT				*e*S	Sb	**19 15 44.5**	**-2.1**
WHF	**Hehuan Shan** baz=288	**0.49**	**290**	⇑*i* P	Pg	**19 15 37.9**	**-1.0**
WHF				*e*S	Sb	**19 15 45.4**	**-2.3**
EOS4	**EOS4** baz=78	**0.52**	**74**	P	Pn	**19 15 41.5**	**-1.1**
OWD	**Renai** baz=276	**0.54**	**268**	⇑*i* P	Pg	**19 15 39.2**	**-0.7**
OWD				*e*S	Sb	**19 15 47.1**	**-1.8**
CHGB	**Renai** baz=277	**0.55**	**279**	⇑*i* P	Pg	**19 15 39.4**	**-0.7**
CHGB				*e*S	Sb	**19 15 46.8**	**-2.4**
FUSS	**Fushou** baz=306	**0.55**	**300**	⇑*i* P	Pg	**19 15 39.3**	**-0.8**
NNSB	**Datong** baz=318	**0.57**	**322**	⇑*i* P	Pg	**19 15 39.6**	**-0.8**
NNSH	**Datong** baz=318	**0.57**	**322**	⇑*i* P	Pg	**19 15 39.7**	**-0.8**
NNSH				*e*S	Sg	**19 15 47.2**	**-0.8**
HGSD	**Ruisui** baz=194	**0.58**	**213**	⇓P	Pb	**19 15 41.2**	**-0.3**
NNS	**Nan Shan** baz=319	**0.58**	**322**	⇑*i* P	Pg	**19 15 39.9**	**-0.8**
NNS				*e*S	Sg	**19 15 46.8**	**-1.7**
EOS3	**EOS3** baz=69	**0.59**	**58**	*e*P	Pn	**19 15 43.0**	**-0.6**
WUSB	**Renai** baz=280	**0.59**	**272**	⇑*i* P	Pg	**19 15 40.3**	**-0.6**
WUSB				S	Sb	**19 15 48.7**	**-1.7**
LATG	**Datong** baz=335	**0.60**	**339**	⇑*i* P	Pg	**19 15 40.2**	**-0.7**
LATG				S	Sb	**19 15 48.2**	**-2.4**
ESAO	**Su ao** baz=358	**0.60**	**7**	⇑*e*P	Pb	**19 15 40.8**	**-1.2**
TWT	**Tachien** baz=294	**0.61**	**297**	⇑*i* P	Pb	**19 15 40.6**	**-1.5**
TWT				S	Sb	**19 15 49.0**	**-1.8**
EOS2	**EOS2** baz=59	**0.61**	**44**	*e*P	Pn	**19 15 44.1**	**+0.1**
VWDT	**VWDT** baz=245	**0.61**	**249**	⇑*i* P	Pb	**19 15 41.0**	**-1.2**
VWDT				S	Sb	**19 15 49.5**	**-1.3**
TDCB	**Techi** baz=294	**0.62**	**296**	⇑*i* P	Pb	**19 15 40.7**	**-1.7**
TDCB				*e*S	Sg	**19 15 48.7**	**-0.9**
EHY	**Hungye** baz=217	**0.62**	**221**	⇓*i* P	Pg	**19 15 41.0**	**-0.4**
TWC	**Suao** baz=359	**0.63**	**7**	⇑*i* P	Pb	**19 15 41.5**	**-1.0**
NDS	**Dongshan** baz=347	**0.66**	**356**	⇑*i* P	Pb	**19 15 41.8**	**-1.2**
NDS				S	Sb	**19 15 50.8**	**-1.3**
NDT	**Datong Townshi** baz=340	**0.66**	**340**	⇑*i* P	Pb	**19 15 41.8**	**-1.3**
NDT				S	Sb	**19 15 50.7**	**-1.6**
ENTT	**Nioudou** baz=333	**0.69**	**345**	⇑*i* P	Pb	**19 15 42.1**	**-1.3**
ENTT				*e*S	Sb	**19 15 51.6**	**-1.4**
ECBN	**Changbin** baz=186	**0.72**	**204**	⇓P	Pb	**19 15 43.4**	**-0.6**
YULB	**Yu-li**	**0.72**	**217**		Pg	**19 15 42.5**	**-0.8**
YULB				Sg	Sg	**19 15 52.3**	**-0.5**
YULB	**Yu-li**	**0.72**	**217**	P	Pg	**19 15 43.1**	**-0.2**
YULB	**Yu-li** baz=231	**0.72**	**217**	⇓P	Pg	**19 15 42.7**	**-0.7**
WPL	**Puli Township** baz=272	**0.74**	**273**	⇑*i* P	Pb	**19 15 43.2**	**-1.2**
WPL				S	Sb	**19 15 53.5**	**-1.1**
TWE	**Neicheng** baz=346	**0.75**	**353**	⇑*i* P	Pb	**19 15 43.5**	**-1.0**
TWE				S	Sb	**19 15 53.8**	**-0.9**
EYUL	**Yuli** baz=229	**0.75**	**213**	*e*P	Pb	**19 15 44.0**	**-0.5**
TWF1	**Yuli** baz=229	**0.76**	**215**	⇓*e*P	Pg	**19 15 43.2**	**-0.7**
SSLB	**Suanglung**	**0.77**	**256**		Pg	**19 15 43.0**	**-1.1**
SSLB				Sg	Sg	**19 15 53.5**	**-0.7**
SSLB	**Suanglung**	**0.77**	**256**	P	Pg	**19 15 43.5**	**-0.6**
SSLB	**Suanglung** baz=267	**0.77**	**256**	⇑*i* P	Pg	**19 15 43.6**	**-0.6**
SSLB				S	Sb	**19 15 54.3**	**-1.1**
DPDB	**Guoxing** baz=273	**0.77**	**274**	⇑*i* P	Pb	**19 15 43.8**	**-1.1**
DPDB				*e*S	Sn	**19 15 55.6**	**-2.4**
YHNB	**Yeheng**	**0.78**	**333**		Pg	**19 15 42.9**	**-1.4**
YHNB				Sg	Sb	**19 15 53.8**	**-1.9**
YHNB	**Yeheng**	**0.78**	**333**	P	Pb	**19 15 43.9**	**-1.1**
YHNB	**Yeheng**	**0.78**	**333**	⇑*i* P	Pb	**19 15 43.9**	**-1.1**

baz=323
YHNB eS Sb 19 15 54.1 -1.6
baz=323
ILA Ilan 0.79 359 eP Pb 19 15 44.7 -0.4
baz=346
WCS Beigang Elemen 0.79 276 iP Pb 19 15 44.0 -1.1
baz=275
WCS eS Sb 19 15 55.1 -0.7
baz=275
NSK Sanguang 0.79 332⇑iP Pb 19 15 44.1 -1.2
baz=323
NSK S Sb 19 15 54.7 -1.3
baz=323
FUSB Fushanzhiwuyua 0.80 348⇑iP Pb 19 15 44.4 -1.0
baz=337
FUSB eS Sn 19 15 56.2 -2.5
baz=337
SMLT Sun Moon Lake 0.80 263⇑iP Pb 19 15 44.3 -1.1
baz=272
SMLT S Sb 19 15 55.4 -0.9
baz=272
WHP Taichung City 0.81 292⇑iP Pb 19 15 44.6 -1.0
baz=290
WHP eS Sn 19 15 56.3 -2.7
baz=290
NWLT Wulai 0.83 343⇑iP Pb 19 15 45.0 -1.0
baz=329
NWLT eS Sb 19 15 56.9 -0.4
baz=329
TYC Yuchr 0.84 265⇑iP Pb 19 15 44.8 -1.2
baz=274
TYC eS Sb 19 15 56.3 -1.0
baz=274
CHKH Chenggong 0.85 204 ⇓P Pg 19 15 45.3 -0.5
baz=200
CHKH eS Sn 19 16 00.1 +0.1
baz=200
NTC Toucheng 0.88 4 eP Pn 19 15 46.4 -1.3
baz=349
NFF Wufeng Townshi 0.88 318⇑iP Pb 19 15 45.8 -1.0
baz=315
WHYT Xinyi Township 0.88 252 ⇑P Pb 19 15 45.8 -1.0
baz=259
WHYT eS Sn 19 15 58.7 -2.1
baz=259
FULB Fuli 0.89 209 ⇓P Pg 19 15 46.1 -0.3
baz=225
CHKT Chengkung 0.95 203 eP Pg 19 15 46.5 -1.1
baz=199
CHKT S Sn 19 16 02.7 +0.3
baz=199
LIOB Emei 0.95 314⇑iP Pn 19 15 47.6 -1.3
baz=311
LIOB eS Sn 19 16 00.7 -1.9
baz=311
NSTT Nanjuang 0.95 313⇑iP Pn 19 15 47.3 -1.5
baz=311
NSTT eS Sn 19 16 01.0 -1.6
baz=311
WJS Zhushan 0.96 261 P Pn 19 15 47.9 -1.1
baz=267
WJS eS Sn 19 16 02.3 -0.4
baz=267
EHD Haiduan 0.97 212 eP Pg 19 15 46.5 -1.5
baz=225
NJD Zhudong 0.98 321 ⇑P Pn 19 15 48.3 -0.9
baz=317
NJD eS Sn 19 16 02.3 -0.8
baz=317
WWF Wufeng 0.98 274 ⇑P Pn 19 15 48.6 -0.6
baz=273
TWQ1 Liyuan 0.98 292⇑iP Pn 19 15 48.1 -1.1
baz=303
TWQ1 eS Sn 19 16 03.1 -0.1
baz=303
TIPB Shuangxi 0.99 3 iP Pn 19 15 48.1 -1.3
baz=352
TIPB eS Sn 19 16 02.2 -1.3
baz=352
ALS Alishan 1.00 242⇑iP Pb 19 15 48.4 -0.5
baz=243
ALS S Sn 19 16 03.2 -0.8
baz=243
WNT Mingjian 1.00 265⇑iP Pn 19 15 48.9 -0.5
baz=271
WNT S Sn 19 16 03.2 -0.4
baz=271
WNT1 Nantou City 1.00 266⇑iP Pn 19 15 49.1 -0.3
baz=272
WNT1 eS Sn 19 16 04.2 +0.6
baz=272
NHDH Xindian Distri 1.01 347 ⇑P Pn 19 15 48.5 -1.1
baz=334
ECS Chishang 1.01 210 eP Pg 19 15 48.0 -0.8
baz=224
TCU Taichung 1.01 280 ⇑P Pn 19 15 49.4 -0.3
baz=278
TWA Mucha 1.01 351⇑iP Pn 19 15 48.5 -1.2
baz=340
TWA eS Sn 19 16 02.9 -1.1
baz=340
NSY Sanyi 1.02 296 P Pn 19 15 49.1 -0.6
baz=305
NSY eS Sn 19 16 03.5 -0.6
baz=305
TATO Taipei 1.03 346 Pn 19 15 48.6 -1.3
TATO Sn 19 16 02.4 -1.9
TATO Taipei 1.03 346 P Pn 19 15 49.2 -0.6
TATO Taipei 1.03 346 ⇑P Pn 19 15 48.8 -1.0
baz=332
TATO Taipei 1.03 346 P Pn 19 15 48.9 -0.9
ELDTW Lidau 1.04 221⇓eP Pg 19 15 47.5 -1.9
baz=203
ELDTW eS Sn 19 16 04.5 -0.4
baz=203
TWB1 Santiao Chiao 1.05 11 ⇑P Pn 19 15 49.4 -0.7
baz=1.0
HSN1 Hsinchu 1.05 320 ⇑P Pn 19 15 49.7 -0.4
baz=316
HSN1 eS Sn 19 16 05.5 +0.6
baz=316
NMLH Miaoli 1.05 302 ⇑P Pn 19 15 49.9 -0.2
baz=300
NMLH eS Sn 19 16 05.7 +0.8
baz=300
BACT New Taipei Cit 1.06 344 eP Pn 19 15 49.4 -0.9
baz=330
CHN5 Tsauling 1.07 249⇑iP Pn 19 15 50.1 -0.4
baz=238
CHN5 S Sn 19 16 05.9 +0.5
baz=238
NHY Taipei 1.07 350 eP Pn 19 15 50.2 -0.2
baz=346
NJN Zhunan 1.08 311⇑eP Pn 19 15 50.4 -0.2
baz=307
SBCB Hsinchu 1.08 319⇑iP Pn 19 15 50.4 -0.2
baz=315
SBCB eS Sn 19 16 05.7 +0.1
baz=315
TAP Taipei 1.08 347⇑eP Pn 19 15 50.0 -0.6
baz=333
TAP eS Sn 19 16 04.7 -1.0
baz=333
WYL Yuanlin Townsh 1.09 269⇑eP Pg 19 15 49.0 -1.2
baz=270
WYL eS Sn 19 16 06.5 +0.7
baz=270
NWF Wu-fen Shan 1.09 1⇑iP Pn 19 15 50.2 -0.6
baz=341
WFSB Wu-fen Shan 1.09 1⇑iP Pn 19 15 50.3 -0.4
baz=341
WDJ Dajia District 1.09 290 ⇑P Pn 19 15 51.0 +0.3
baz=298
WDJ eS Sn 19 16 06.6 +0.6
baz=298
HSN Hsinchu 1.10 319 ⇑P Pn 19 15 50.6 -0.2
baz=318
HSN eS Sn 19 16 06.1 +0.1
baz=318
NTY Taoyuan 1.10 337 ⇑P Pn 19 15 50.8 -0.1
baz=324
NTY eS Sn 19 16 06.7 +0.5
baz=324
WCHH Zhanghua 1.11 276 ⇑P Pn 19 15 51.0 +0.1
baz=274
SXI1 Grass Mountain 1.12 5 ⇑P Pn 19 15 50.8 -0.4
baz=6.0
SXI1 eS Sn 19 16 07.3 +0.7
baz=6.0
NCUH Zhongli 1.12 332 ⇑P Pn 19 15 51.0 -0.1
baz=328
NCUH eS Sn 19 16 05.9 -0.7
baz=328
NCU National Centr 1.12 332 ⇑P Pn 19 15 51.3 +0.1
baz=328
NCU eS Sn 19 16 08.0 +1.4
baz=328
WGK Gukeng 1.14 256 ⇑P Pn 19 15 51.2 -0.2
baz=255
WDLH Douliu 1.16 256 eP Pn 19 15 51.6 -0.1
baz=255
TWS1 Kuangyinshan 1.16 344 P Pn 19 15 51.9 +0.2
baz=340
TWS1 eS Sn 19 16 09.1 +1.4
baz=340
TNOU National Taiwa 1.17 0⇑eP Pn 19 15 51.4 -0.3
baz=349
TNOU S Sn 19 16 08.1 +0.3
baz=349
JYNG Yonagunijimaku 1.18 66 P Pg 19 15 51.8 -0.1
JYNG S Sb 19 16 05.9 -1.1
JYNG Yonagunijimaku 1.18 66 A A 19 15 51.8
comp=E,450nm,8.6s,comp=N,685nm,7.9s
YM01 YM01 1.18 351 ⇑P Pn 19 15 51.8 -0.1
baz=345
WCKO Fanlu 1.19 244 ⇑P Pg 19 15 52.1 -0.1
baz=245
WCKO eS Sn 19 16 09.9 +1.5
baz=245
STYH Taoyuan 1.21 229 eP Pg 19 15 51.9 -0.7
baz=214
LONT Longtian 1.22 209 eP Pn 19 15 51.6 -0.9
baz=208
NHW Xinwu Township 1.22 328 eP Pg 19 15 52.2 -0.6
baz=323
NHW eS Sn 19 16 09.8 +0.8
baz=323
NTST Danshui 1.22 346 eP Pg 19 15 52.7 0.0
baz=341
NTST eS Sn 19 16 11.6 +2.6
baz=341
NWRT Kuosheng 1.22 355 eP Pg 19 15 53.5 +0.6
baz=350
ANP Anpu 1.23 349 ⇑P Pg 19 15 52.4 -0.5
baz=345
STYT Tauyuan 1.23 229⇓eP Pn 19 15 51.8 -0.9
baz=212
STYT eS Sn 19 16 11.2 +1.8
baz=212
YOJ Yonaguni jima 1.23 67 Pb 19 15 52.3 -0.5
YOJ Yonaguni jima 1.23 67 P Pg 19 15 52.8 -0.3
YOJ Yonaguni jima 1.23 67⇓iP Pg 19 15 52.6 -0.4
baz=69
YOJ Yonaguni jima 1.23 67 P Pb 19 15 52.3 -0.5
YOJ Yonaguni jima 1.23 67 P Pg 19 15 52.7 -0.3
YOJ S Sn 19 16 11.7 +2.3
YOJ Yonaguni jima 1.23 67 A A 19 15 52.7
comp=E,498nm,4.8s,comp=N,668nm,7.3s
TPUB Ta-pu 1.24 237 Pn Pg 19 15 52.5 -0.7
TPUB Sg 19 16 08.5 -0.8
TPUB Ta-pu 1.24 237 P Pg 19 15 53.0 -0.2
TPUB Ta-pu 1.24 237 ⇓P Pg 19 15 52.6 -0.6
baz=238
CHN4 Tsaushan 1.24 240⇓iP Pg 19 15 52.9 -0.4
baz=242
CHN4 eS Sn 19 16 11.5 +1.8
baz=242
CHN2 Minshiung 1.26 250 eP Pg 19 15 53.4 -0.2
baz=265
CHN2 eS Sn 19 16 11.6 +1.5
baz=265
WRL Guolierlin Hig 1.27 267⇑eP Pg 19 15 53.4 -0.4
baz=269
WRL eS Sn 19 16 11.8 +1.5
baz=269
WTP Ta-pu 1.28 236⇓iP Pg 19 15 53.2 -0.8
baz=238
WTP eS Sn 19 16 13.2 +2.5
baz=238
RLNB Erlin 1.29 266 eP Pg 19 15 53.8 -0.4
baz=268
RLNB eS Sn 19 16 11.7 +1.0
baz=268
WTK Tuku 1.29 257 eP Pg 19 15 53.6 -0.6
baz=257
TWY Chenhua 1.30 353 P Pg 19 15 54.6 +0.2
baz=332
NSM Shimen 1.31 353 eP Pg 19 15 55.1 +0.5
baz=332
TWGBT Beinan 1.31 209 P Pb 19 15 53.7 -0.5
TWGBT Beinan 1.31 209⇓eP Pn 19 15 51.3 -2.5
baz=209
TWG Pinlang 1.32 209 Pn 19 15 51.0 -2.8
TWG Pinlang 1.32 209 eP Pn 19 15 51.1 -2.7
baz=209
CHY Chiayi 1.32 249 eP Pg 19 15 54.2 -0.5
baz=249
LDUT Ludao 1.33 192 eP Pn 19 15 51.7 -2.2
baz=179
TTN Taitung 1.34 205 eP Pn 19 15 52.6 -1.5
baz=218
WTCT Ta-ch'eng 1.36 266 eP Pg 19 15 54.9 -0.7
baz=267
WTCT eS Sg 19 16 13.4 +0.1
baz=267
TWK Hsinying 1.37 239 eP Pg 19 15 55.0 -0.7
baz=239
CHN1 Nanshi 1.38 235⇓eP Pg 19 15 54.9 -1.0
baz=236
SNST Tainan City 1.39 237 eP Pg 19 15 55.3 -0.7
baz=238
SGST Jiashian 1.41 231⇓eP Pn 19 15 54.4 -0.7
baz=244
SGST eS Sg 19 16 15.4 +0.8
baz=244
SLGT Liugui 1.42 227 ⇓P Pb 19 15 55.4 -0.5
baz=212
WMLT Mailiao 1.42 263 eP Pg 19 15 55.9 -0.8
baz=263
WSF Szhu 1.46 257 eP Pg 19 15 56.1 -1.2
baz=259
WSF eS Sg 19 16 17.7 +1.6
baz=259
WSL Shuilin Townsh 1.48 253 eP Pg 19 15 57.0 -0.8
baz=252
ICHU Yijhu 1.50 246 eP Pg 19 15 57.0 -1.0
baz=246
CHN8 Yiju 1.56 247 eP Pb 19 15 57.4 -0.9
baz=246
ECL Taimali 1.56 209 eP Pn 19 15 54.7 -2.5
baz=194
CHN3 Shinhua 1.57 235⇓eP Pg 19 15 58.2 -1.2
baz=236
SSHA Shanhua 1.59 239 eP Pg 19 15 59.0 -1.0
baz=239
SCST Cishan 1.60 227 eP Pb 19 15 58.5 -0.4
baz=213
SSD Sandimen 1.61 221 eP Pn 19 15 56.4 -1.5
baz=210
SHHT Tainan City 1.61 234 eP Pg 19 15 59.5 -0.8
baz=254
TSMG Majia 1.63 219 eP Pb 19 15 59.1 -0.4
baz=209
SCLT Jiali 1.65 241 eP Pg 19 15 59.8 -1.1
baz=241
PCYT Pengchaiyu 1.67 9 eP Pb 19 15 58.8 -1.4
baz=340
TWM1 Shoushan 1.69 227 eP Pg 19 16 00.8 -1.0
baz=227
TAI1 Yung-k'ang 1.69 237 eP Pb 19 16 00.1 -0.5
baz=236
SGLT Jiouru 1.71 224 eP Pg 19 16 01.1 -1.1
baz=206
MASBT Mashibuluo 1.71 218 eP Pn 19 15 58.8 -0.5
baz=216
TAI Tainan 1.74 236 eP Pb 19 16 01.1 -0.4
baz=235
TSPT Pingtung City 1.74 222 eP Pb 19 16 01.4 -0.1
baz=206
TSCK Chigu Township 1.75 242 eP Pb 19 16 00.3 -1.3
baz=242
SNJT Kaohsiung City 1.79 227 eP Pb 19 16 02.3 0.0
baz=227
EAST Anshuo 1.80 208 eP Pn 19 15 58.6 -1.9
baz=198
TAW Tawu 1.80 207 eP Pn 19 16 00.3 -0.2
baz=193
TAWH Dawu Township 1.82 207 eP Pn 19 16 00.9 +0.2
baz=207
IRIF Iriomote-Funau 1.83 78 P Pn 19 16 01.1 +0.2
IRIF eS Sb 19 16 25.4 -0.4
IRIF Iriomote-Funau 1.83 78 A A 19 16 01.1
comp=E,226nm,4.8s,comp=N,403nm,2.4s
HATJ Hateruma jima 1.87 87 P Pn 19 16 01.8 +0.4
HATJ eS Sb 19 16 27.2 +0.3
HATJ Hateruma jima 1.87 87 A A 19 16 01.8
comp=E,435nm,2.8s,comp=N,649nm,3.7s
SCZT Fangliau 1.92 214 eP Pn 19 16 02.5 +0.4
baz=199
WSSB Gushan 1.92 226 eP Pb 19 16 02.7 -1.8
baz=225
LAY Lan-yu 1.94 186 eP Pn 19 16 00.6 -1.8
baz=189
KAU Kaohsiung 1.94 224 eP Pb 19 16 04.3 -0.5
baz=222
SLIU Shizi 1.97 207 eP Pn 19 16 02.3 -0.5
baz=208
LYUB Lan-yu 1.97 185 eP Pn 19 16 00.2 -2.6
baz=188
WDGT Dungji 2.06 250 eP Pb 19 16 04.6 -2.3
baz=251
PHUB P'eng-hu 2.06 258 eP Pn 19 16 04.2 +0.1
baz=263
PHUB eS Sb 19 16 30.3 -2.3
baz=263
JKRS Kuro-shima 2.06 82 P Pn 19 16 04.6 +0.5
JKRS Kuro-shima 2.06 82 A A 19 16 04.6
comp=E,471nm,5.5s,comp=N,486nm,3.8s
PNG Penghu 2.07 259 eP Pn 19 16 04.2 0.0
baz=259
TWP Hsiaoliuchiu 2.08 219 eP Pg 19 16 08.1 -1.1
baz=216
SMST Manzhou Townsh 2.13 204 eP Pn 19 16 05.9 +1.0
baz=193
HEN Hengchun 2.18 206 eP Pb 19 16 07.1 -1.8
baz=193
JIJ Ishigaki jima 2.20 79 P Pn 19 16 05.9 -0.2
JIJ eS Sb 19 16 35.7 -1.0
JIJ Ishigaki jima 2.20 79 A A 19 16 05.9
comp=E,126nm,10.9s,comp=N,146nm,8.5s
TWK1 Hengchun 2.21 204 eP Pn 19 16 05.8 -0.3
baz=193
TWKBT Hengchun 2.21 204 eP Pn 19 16 05.3 -0.8
baz=193
TSEB Hengchuen, Pin 2.22 201 eP Pb 19 16 07.9 -1.6
baz=193
VCHM Qimei 2.28 251 eP Pn 19 16 07.6 +0.6
baz=252
VWUC VWUC 2.34 296 eP Pn 19 16 06.8 -1.1
baz=292
JISG Ishigakijimahi 2.40 75 P Pn 19 16 08.7 -0.1
JISG eS Sn 19 16 39.9 +1.7
JISG Ishigakijimahi 2.40 75 A A 19 16 08.7
comp=E,143nm,9.9s,comp=N,154nm,5.9s
PTMZ Houxiangcun 2.63 294⇑eP Pn 19 16 10.9 -1.0
baz=291
MATB Ma-tsu 2.72 323 eP Pn 19 16 12.1 -1.0
baz=313
MSUT Lienchiang 2.75 323 eP Pn 19 16 12.6 -0.9
baz=313
JTJ Tarama 2.76 76 P Pn 19 16 14.1 +0.4
JTJ Tarama 2.76 76 A A 19 16 14.1
comp=E,224nm,9.4s,comp=N,208nm,12.6s
QZH Quanzhou 3.05 289⇓iPn Pn 19 16 17.2 -0.4
QZH Sn Sn 19 16 53.0 -1.2
QZH smax smax
comp=N,5μm,1.4s
QZH smax smax
comp=N,7μm,1.4s
KNM Kinmen 3.08 279 eP Pn 19 16 19.3 +1.3
baz=278
KNMB Chin-men Tao 3.12 280 Pn Pn 19 16 17.1 -1.5
KNMB Chin-men Tao 3.12 280 eP Pn 19 16 17.8 -0.8
baz=279
LYJJ Jianjiangzhen 3.14 325 eP Pn 19 16 17.9 -1.0
baz=315
JIRB Irabujima 3.22 74 P Pn 19 16 20.8 +0.8
JIRB eS Sn 19 17 00.6 +2.2
JIRB Irabujima 3.22 74 A A 19 16 20.8
comp=E,168nm,7.4s,comp=N,181nm,5.0s
MHZQ Yeshan 3.26 311⇑eP Pn 19 16 20.8 +0.3
baz=294
XPSS Dashiqiu 3.27 334 eP Pn 19 16 20.0 -0.6
baz=321
JIKM Ikemajima 3.31 73 eP Pn 19 16 22.0 +0.8
JIKM Ikemajima 3.31 73 A A 19 16 22.0
comp=E,190nm,6.9s,comp=N,235nm,7.2s
JMJ Miyako jima 2 3.32 75 P Pn 19 16 23.3 +1.9
JMJ Miyako jima 2 3.32 75 eP Pn 19 16 22.7 +1.3
baz=80
JMJ2 Miyako jima3 3.33 76 P Pn 19 16 23.2 +1.6
JMJ2 eS Sn 19 17 02.9 +1.6
JMJ2 Miyako jima3 3.33 76 A A 19 16 23.2
comp=E,284nm,7.1s,comp=N,301nm,7.9s
JOGS Gusukube 3.41 76 eP Pn 19 16 24.9 +2.3
JOGS Gusukube 3.41 76 A A 19 16 24.9
comp=E,308nm,11.2s,comp=N,282nm,5.9s
AXDP Jialang 3.58 286 eP Pn 19 16 24.3 -0.6
baz=284
ZPLA Ao Xicun 3.67 270 eP Pn 19 16 25.9 -0.4
baz=270
DSXP Dongshan 3.98 267 eP Pn 19 16 29.9 -0.6
baz=267
SXFK Yanhouchang 4.45 304 eP Pn 19 16 36.0 -0.9
baz=298
JKE Kume jima 2 5.11 62 A A 19 16 48.8
comp=E,22nm,8.3s,comp=N,42nm,8.3s
JAGN Aguni-jima 5.60 61 A A 19 16 55.6
comp=E,47nm,9.7s,comp=N,41nm,8.4s
VDOS Pratas Island 5.69 236 eP Pn 19 16 55.4 +1.5
baz=237
JJT3 Tamagusuku3 5.87 67 A A 19 16 59.4
comp=E,100nm,10.3s,comp=N,69nm,8.9s
JNTH Nagotoyohara 6.20 65 A A 19 17 04.1
comp=E,19nm,9.1s,comp=N,18nm,7.8s
JIH Iheya 6.38 60 A A 19 17 06.5
comp=E,38nm,10.1s,comp=N,19nm,9.9s
JOW Kunigami 6.54 63 Pn Pn 19 17 04.4 -1.1
JOW Kunigami 6.54 63 P Pn 19 17 04.9 -0.7
JOW Kunigami 6.54 63 eP Pn 19 17 04.5 -1.1
baz=66
JOW Kunigami 6.54 63 A A 19 17 08.7
comp=E,21nm,10.3s,comp=N,35nm,7.3s
JOW Kunigami 6.54 63 Pn Pn 19 17 04.6 -1.0
comp=N,16nm,0.3s,baz=135,slow=16.5,NR=22
JOW Sn Sn 19 18 18.9 -1.3
baz=128,slow=19
comp=N,35nm,0.3s
JYRO Yoronjima 6.76 62 A A 19 17 11.8
comp=E,26nm,10.1s,comp=N,30nm,9.6s
JOKE Okinoerabujima 7.00 60 A A 19 17 15.2
comp=E,27nm,10.6s,comp=N,21nm,11.1s
SSE Sheshan 7.11 356 Pn Pn 19 17 12.0 -1.4
SSE Sn Sn 19 18 34.4 +0.1
SSE smax smax
comp=N,420nm,1.1s
SSE smax smax
comp=N,600nm,1.1s
SSE LR LR
comp=N,5μm,10.9s
HKPS Hong Kong Po S 7.22 258 Pn Pn 19 17 14.8 -0.2
HKPS Hong Kong Po S 7.22 258 P Pn 19 17 15.8 +0.8
JTK Tokunoshima 7.50 58 A A 19 17 22.1
comp=E,17nm,10.3s,comp=N,16nm,10.9s
GZH Guangzhou 7.78 265 Pn Pn 19 17 18.4 -4.3
GZH Sn Sn 19 18 43.1 -7.8
GZH smax smax
comp=N,2μm,1.1s
GZH smax smax
comp=N,1μm,1.2s
JAMN Amaminishikomi 7.90 56 A A 19 17 27.7
comp=E,10.0nm,8.7s,comp=N,10.0nm,11.4s
JAM Amami Oshima 8.31 56 A A 19 17 33.4
comp=E,11nm,8.2s,comp=N,14nm,8.7s
JTAJ Takarajima 8.42 51 A A 19 17 34.8
comp=E,23nm,10.1s,comp=N,18nm,7.3s
NJ2 Nanjing 8.45 343 eP Pn 19 17 30.8 -1.0
NJ2 S Sn 19 19 06.3 -0.9
NJ2 pmax pmax
comp=N,98nm,0.7s
NJ2 smax smax
comp=N,2μm,1.8s
NJ2 smax smax

comp=N,1µm,1.4s
NJ2 LR LR
comp=N,71µm,6.6s
NJ2 LR LR
comp=N,36µm,7.1s
NJ2 LR LR
comp=N,112µm,10.4s
JZK Kikaishima 8.54 58 A A 19 17 36.6
comp=E,52nm,7.9s,comp=N,57nm,7.9s
JMZ Minamidaito 2 8.78 76 A A 19 17 40.0
comp=E,29nm,8.4s,comp=N,30nm,10.2s
JKDJ Kitadaitoujima 8.87 75 A A 19 17 41.2
comp=E,37nm,8.1s,comp=N,20nm,6.3s
CNSH ChangSha 8.98 300 ⇑P **Pn** **19 17 38.2 -0.9**
CNSH S **Sn** **19 19 20.2 -0.1**
CNSH smax smax
comp=N,3µm,1.4s
CNSH smax smax
comp=N,3µm,1.3s
CNSH LR LR
comp=N,86µm,7.6s
CNSH LR LR
comp=N,103µm,8.5s
CNSH LR LR
comp=N,114µm,9.3s
WHN Wuhan 9.29 316 P **Pn** **19 17 43.0 -0.4**
WHN sP 19 17 49.1
WHN S **Sn** **19 19 24.9 -3.0**
WHN pmax pmax
comp=N,260nm,1.1s
WHN LR LR
comp=N,352µm,8.4s
WHN LR LR
comp=N,342µm,7.7s
WHN LR LR
comp=N,527µm,9.3s
JNN Nakanoshima 9.30 49 A A 19 17 47.0
comp=E,19nm,8.4s,comp=N,15nm,9.2s
TGY Tagaytay City 9.85 185 Pn Pn 19 17 59.1 +7.9
comp=N,58nm,0.3s,baz=300,slow=11,SNR=4.2
TGY LR LR 19 22 23.8
comp=N,5µm,18.9s,baz=360,slow=42
JKC Kuchinoerabu 9.90 47 A A 19 17 55.2
comp=E,17nm,10.4s,comp=N,12nm,7.9s
JSJ Shimokoshiki 10.40 41 A A 19 18 02.1
comp=E,10.0nm,10.8s,comp=N,13nm,9.7s
GULI GuiLin 10.45 280 *e*P Pn 19 18 06.3 +6.9
JTN Tanegashima 3 10.55 49 A A 19 18 04.1
comp=E,10.0nm,8.0s,comp=N,8.0nm,8.7s
JFU Fukue jima 2 10.61 34 A A 19 18 04.8
comp=E,7.0nm,10.9s,comp=N,11nm,14.3s
JTSR Tashiro 2 10.82 47 A A 19 18 07.9
comp=E,5.0nm,9.2s,comp=N,6.0nm,12.5s
JHD Hondo 11.22 39 A A 19 18 13.1
comp=E,11nm,9.2s,comp=N,10.0nm,12.3s
JNAR Kushima–Naru 11.28 46 A A 19 18 14.1
comp=E,9.0nm,10.0s,comp=N,9.0nm,7.8s
JTA Tamana 11.81 39 A A 19 18 21.1
comp=E,5.0nm,11.5s,comp=N,8.0nm,10.9s
JNU Nakatsue 12.12 39 **Pn** **19 18 21.1 -1.1**
JNU Nakatsue 12.12 39 P **Pn** **19 18 24.9 +2.7**
JNU Nakatsue 12.12 39 Pn **Pn** **19 18 24.5 +2.2**
comp=N,0.3nm,0.3s,baz=226,slow=12,SNR=2.7
JNU LR LR 19 23 59.8
comp=N,18µm,18.4s,baz=218,slow=42
QIZ Qiongzhong 12.14 248 P **Pn** **19 18 22.1 -0.4**
QIZ S **Sn** **19 20 36.7 -1.3**
QIZ pmax pmax
comp=N,43nm,1.9s
QIZ pmax pmax
comp=N,1µm,6.9s
QIZ LR LR
comp=N,25µm,10.9s
QIZ LR LR
comp=N,12µm,9.3s
QIZ LR LR
comp=N,21µm,9.3s
QIZ Qiongzhong 12.14 248 Pn **Pn** **19 18 20.8 -1.7**
JTU Tsushima 12.44 31 **Pn** **19 18 24.8 -1.6**
JTU Tsushima 12.44 31 A A 19 18 29.4
comp=E,7.0nm,12.8s,comp=N,9.0nm,10.7s
ENH Enshi 12.60 302 Pn **Pn** **19 18 26.6 -2.1**
TIA Tai'an 12.84 343 *e*P Pn 19 18 38.5 +6.6
TIA pmax pmax
comp=Z,15nm,2.0s
TIA LR LR
comp=N,34µm,9.6s
TIA LR LR
comp=E,20µm,8.0s
TIA LR LR
comp=Z,53µm,9.8s
TJN Taejon 13.27 20 **Pn** **19 18 38.6 +0.8**
TJN Taejon 13.27 20 *i* P **Pn** **19 18 40.1 +2.3**
LYN LuoYang 13.29 325 ⇓P **Pn** **19 18 40.1 +2.0**
LYN PP P 19 18 51.9 +3.9
LYN SS **S** **19 21 25.5 -5.0**
LYN pmax pmax
comp=Z,21nm,0.5s
LYN pmax pmax
comp=Z,3µm,9.4s
LYN LR LR
comp=Z,293µm,8.5s
LYN LR LR
comp=Z,128µm,8.2s
LYN LR LR
comp=Z,316µm,8.9s
GYA Guiyang 13.89 283 P **Pn** **19 18 45.6 -0.9**
GYA S **Sn** **19 21 18.8 -2.2**
GYA pmax pmax
comp=Z,68nm,1.8s
GYA pmax pmax
comp=Z,3µm,9.3s
GYA LR LR
comp=Z,38µm,7.6s
GYA LR LR
comp=Z,115µm,9.8s
GYA LR LR
comp=Z,141µm,9.2s
INCN Inchon 14.09 16 **Pn** **19 18 45.3 -3.8**
INCN Inchon 14.09 16 P **Pn** **19 18 45.3 -3.8**
INCN Inchon 14.09 16 P **Pn** **19 18 48.5 -0.6**
INCN P **Pn** **19 18 48.5 -0.6**
JMN Monobe 14.38 45 **Pn** **19 18 48.6 -4.4**
JMN Monobe 14.38 45 P **Pn** **19 18 53.0 0.0**
KSRS Korea Array 14.43 20 Pn **Pn** **19 18 55.5 +1.7**
comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=5.9
KSRS LR LR 19 25 05.6
comp=Z,10µm,18.1s,baz=195,slow=40
HNS HongShan 14.68 337 ⇑P **Pn** **19 18 56.5 -0.7**
HNS PP **PnPn** **19 19 06.4 +1.2**
HNS *e*S **Sn** **19 21 41.1 +1.1**
HNS SS **S** **19 21 54.7 -4.3**
HNS pmax pmax
comp=Z,19nm,1.1s
HNS LR LR
comp=Z,52µm,11.2s
HNS LR LR
comp=Z,51µm,10.8s
HNS LR LR
comp=Z,65µm,10.8s
DL2 Dalian 14.88 360 P **Pn** **19 19 01.4 +1.5**
DL2 S **Sn** **19 21 49.8 +5.0**
DL2 pmax pmax
comp=Z,130nm,1.3s
DL2 pmax pmax
comp=Z,2µm,8.6s
DL2 LR LR
comp=Z,24µm,12.6s
DL2 LR LR
comp=Z,10µm,12.2s
DL2 LR LR
comp=Z,31µm,13.1s
XAN Xi'an 15.05 315 ⇑P **Pn** **19 19 02.7 +0.6**
XAN S **Sn** **19 21 50.2 +1.3**
XAN pmax pmax
comp=Z,260nm,1.5s
XAN LR LR
comp=Z,31µm,6.5s
XAN LR LR
comp=Z,160µm,9.2s
XAN LR LR
comp=Z,169µm,9.9s
TIY Taiyuan 15.85 332 P **P** **19 19 17.2 +0.7**
TIY pmax pmax
comp=Z,78nm,2.3s
TIY pmax pmax
comp=Z,4µm,8.0s
TIY LR LR
comp=Z,67µm,9.7s
TIY LR LR
comp=Z,36µm,10.3s
TIY LR LR
comp=Z,58µm,10.3s
BJT Baijiatuau 16.68 345 P **P** **19 19 23.4 -2.1**
BJT Baijiatuau 16.68 345 P **P** **19 19 23.4 -2.1**
BJT pmax pmax
comp=Z,169nm,1.7s
BJI Beijing 16.70 345 P **P** **19 19 25.8 +0.1**
BJI S **Sn** **19 22 29.0 +0.2**
BJI PcP **PcP** **19 24 16.4 +3.8**
BJI pmax pmax
comp=Z,26nm,2.0s
BJI pmax pmax
comp=Z,2µm,8.5s
BJI LR LR
comp=Z,14µm,12.2s
BJI LR LR
comp=Z,7µm,12.6s
BJI LR LR
comp=Z,15µm,12.1s
SLVN Son La 16.70 264 **Pn** **19 19 21.6 -2.0**
DAV Davao City (W) 17.20 167 LR LR 19 26 21.4
comp=Z,3µm,18.8s,baz=349,slow=38
KMI Kunming 17.35 278 ⇑P **P** **19 19 33.4 +0.1**
KMI S **S** **19 22 52.7 -1.4**
KMI pmax pmax
comp=Z,62nm,1.8s
KMI pmax pmax
comp=Z,2µm,11.2s
KMI LR LR
comp=Z,28µm,7.9s
KMI LR LR
comp=Z,90µm,10.3s
KMI LR LR
comp=Z,101µm,9.9s
CD2 Chengdu 17.40 297 P **P** **19 19 34.0 +0.3**
CD2 sP sP 19 19 40.2 +2.7
CD2 S **S** **19 22 53.8 -0.9**
CD2 pmax pmax
comp=Z,130nm,1.4s
CD2 pmax pmax
comp=Z,4µm,8.2s
CD2 LR LR
comp=Z,52µm,6.9s
CD2 LR LR
comp=Z,67µm,7.4s
CD2 LR LR
comp=Z,73µm,8.0s
UBPT Khong Chiam 17.61 244 P **Pn** **19 19 31.6 -3.4**
JGF Kuroka 17.79 46 P **Pn** **19 19 36.5 -0.6**
JSG Sagara 17.82 50 **Pn** **19 19 36.9 -0.7**
SNY Shenyang 17.87 4 ⇓P **P** **19 19 41.5 +2.9**
SNY pmax pmax
comp=Z,19µm,10.0s
SNY LR LR
comp=Z,7µm,9.3s
SNY LR LR
comp=Z,13µm,11.8s
SNY LR LR
comp=Z,28µm,9.8s
JHJ Hachijo jima 2 18.24 56 LR LR 19 26 45.5
comp=Z,3µm,19.2s,baz=286,slow=37
JHJ2 Mitsune 18.26 56 P **Pn** **19 19 41.0 -1.9**
JHJ2 IAmb IAmb 19 19 53.0
comp=Z,420nm,1.0s
PZH PanZhiHua 18.29 282 P **P** **19 19 44.4 +0.8**
PZH S **S** **19 23 13.7 +0.7**
PZH SS **SnSn** **19 23 31.8 +10**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,4µm,9.6s
PZH LR LR
comp=Z,28µm,9.0s
PZH LR LR
comp=Z,60µm,9.8s
PZH LR LR
comp=Z,55µm,11.6s
KKM Kota Kinabalu 18.61 198 P **P** **19 19 45.4 -1.8**
KKM IAmb IAmb 19 19 55.2
comp=Z,596nm,2.0s
JCJ Chichijima 18.68 76 P **P** **19 19 46.1 -1.7**
JCJ Chichijima 18.68 76 LR LR 19 25 49.5
comp=Z,2µm,20.9s,baz=252,slow=33
HHC Hu-ho-hao-te 18.88 335 *e*P **Pn** **19 19 53.7 +3.2**
HHC PP **PnPn** **19 20 10.4 +7.6**
HHC S **S** **19 23 25.9 +1.3**
HHC SS **SnSn** **19 23 41.0 +5.0**
HHC pmax pmax
comp=Z,74nm,1.6s
HHC pmax pmax
comp=Z,5µm,6.3s
HHC LR LR
comp=Z,42µm,8.8s
HHC LR LR
comp=Z,12µm,9.9s
HHC LR LR
comp=Z,32µm,10.7s
MAJO Matsushiro 18.90 45 P **P** **19 19 49.3 -0.8**
MAJO Matsushiro 18.90 45 P **P** **19 19 49.3 -0.8**
MAJO pmax pmax
comp=Z,21nm,1.0s
MJAR Matsushiro Arr 18.90 45 P **P** **19 19 49.6 -0.5**
comp=Z,0.1nm,0.3s,baz=224,slow=8.9,SNR=8.5
MJAR LR LR 19 28 12.5
comp=Z,11µm,19.0s,baz=232,slow=40
comp=Z,4.1nm,0.9s
MJB9 Matsu-Tunnel 18.90 45 P **P** **19 19 48.3 -1.8**
MYLDM Lahad Datu 18.95 190 **P** **19 19 49.3 -1.5**
MYLDM IAmb IAmb 19 20 00.9
comp=Z,454nm,2.0s
BTO Baotou 19.29 332 *e*P **Pn** **19 19 57.4 +1.9**
BTO pP **sP** **19 20 01.2 +2.8**
BTO sP pP 19 20 04.4 +7.2
BTO PP **PnPn** **19 20 15.6 +7.1**
BTO pmax pmax
comp=Z,10.0nm,0.7s
BTO pmax pmax
comp=Z,12µm,7.3s
BTO LR LR
comp=Z,135µm,10.8s
BTO LR LR
comp=Z,56µm,8.1s
BTO LR LR
comp=Z,178µm,10.1s
LZH Lanzhou 19.62 312 ⇑P **Pn** **19 20 01.4 +1.9**
LZH sP sP 19 20 07.3 +5.3
LZH S **Sn** **19 23 38.6 -1.4**
LZH sS sS 19 23 46.2 +3.6
LZH pmax pmax
comp=Z,36nm,1.4s
LZH pmax pmax
comp=Z,7µm,5.2s
LZH LR LR
comp=Z,35µm,12.4s
LZH LR LR
comp=Z,72µm,13.1s
LZH LR LR
comp=Z,84µm,13.1s
CN2 Changchun 20.00 8 P **Pn** **19 20 04.0 +0.2**
CN2 PP **PnPn** **19 20 23.7 +5.6**
CN2 S **S** **19 23 44.0 -3.0**
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 pmax pmax
comp=Z,2µm,8.0s
CN2 LR LR
comp=Z,30µm,12.0s
CN2 LR LR
comp=Z,14µm,12.0s
CN2 LR LR
comp=Z,31µm,12.0s
MSHR Mys Shultsa 20.12 21 *i* P Pn 19 20 04.1 -1.1
CRAI Chiangrai 20.17 264 **P** **19 20 01.7 -2.4**
XLT XiLinHaoTe 20.41 348 *e*P Pn 19 20 09.4 +0.6
XLT pP sP 19 20 12.9 +3.1
XLT PP **PnPn** **19 20 26.6 +2.8**
XLT S Sn 19 23 57.3 -1.5
XLT pmax pmax
comp=Z,70nm,1.9s
XLT pmax pmax
comp=Z,2µm,7.0s
XLT LR LR
comp=Z,2µm,13.3s
XLT LR LR
comp=Z,13µm,12.4s
XLT LR LR
comp=Z,21µm,15.9s
TNCH TengChong 21.18 278 ⇓P **P** **19 20 17.3 +2.1**
TNCH PP **PnPn** **19 20 38.5 +4.0**
TNCH S **S** **19 24 11.4 +0.4**
TNCH PcP **PcP** **19 24 20.9 0.0**
TNCH pmax pmax
comp=Z,70nm,2.0s
TNCH pmax pmax
comp=Z,4µm,10.6s
TNCH LR LR
comp=Z,30µm,7.9s
TNCH LR LR
comp=Z,52µm,9.0s
TNCH LR LR
comp=Z,60µm,9.3s
JMM Marumori 21.35 45 P **P** **19 20 14.5 -2.2**
JMM Marumori 21.35 45 P **P** **19 20 17.2 +0.5**
MDJ Mudanjiang 21.56 15 P **P** **19 20 20.8 +1.9**
MDJ pP pwP 19 20 23.8 0.0
MDJ sP sP 19 20 24.9 +2.7
MDJ S **S** **19 24 18.8 +1.0**
MDJ sS Sn 19 24 23.9 -2.3
MDJ SS **SnSn** **19 24 43.5 +2.0**
MDJ pmax pmax
comp=Z,27nm,1.9s
MDJ pmax pmax
comp=Z,540nm,3.8s
MDJ LR LR
comp=Z,27µm,12.3s
MDJ LR LR
comp=Z,24µm,13.3s
MDJ LR LR
comp=Z,31µm,11.2s
MDJ Mudanjiang 21.56 15 P **P** **19 20 17.0 -1.9**
USA0B Ussuriysk Arra 21.84 20 P **P** **19 20 19.7 -2.3**
USA0B Ussuriysk Arra 21.84 20 *i* P **P** **19 20 19.1 -2.9**
USRK Ussuriysk Ar. 21.84 20 P **P** **19 20 21.4 -0.6**
comp=Z,6.2nm,0.8s,baz=197,slow=6.9,SNR=9.7
USRK LR LR 19 29 42.9
comp=Z,8µm,18.8s,baz=192,slow=39
comp=Z,6.2nm,0.8s
CHTO Chiang Mai 21.85 261 P **P** **19 20 19.4 -2.9**
CHTO Chiang Mai 21.85 261 P **P** **19 20 24.8 +2.4**
CHTO Chiang Mai 21.85 261 P **P** **19 20 19.4 -2.9**
CHTO pmax pmax
comp=Z,47nm,1.1s
CHTO Chiang Mai 21.85 261 P **P** **19 20 24.7 +2.4**
CHTO S **S** **19 24 27.1 +3.1**
CM31 Chiang Mai Arr 21.96 260 P **P** **19 20 22.3 -1.2**
CM31 Chiang Mai Arr 21.96 260 P **P** **19 20 26.9 +3.4**
SNR=26
CM31 S Sn 19 24 30.8 -5.6
CMAR Chiang Mai Arr 21.96 260 P **P** **19 20 23.4 -0.2**
comp=Z,3.0nm,0.8s,baz=65,slow=7.5,SNR=3.2
CMAR PcP **PcP** **19 24 21.2 -1.1**
comp=Z,0.6nm,0.4s,baz=46,slow=1.0,SNR=2.1
CMAR LR LR 19 29 28.8
comp=Z,6µm,18.4s,baz=85,slow=38
BNX BinXian 22.19 10 ⇓P **P** **19 20 25.4 -0.3**
BNX pP **pwP** **19 20 30.1 -0.5**
BNX sP **sP** **19 20 33.1 +4.2**
BNX PP **PnPn** **19 20 52.7 +4.7**
BNX S **S** **19 24 27.6 -2.4**
BNX sS **pS** **19 24 31.5 -2.4**
BNX pmax pmax
comp=Z,270nm,3.7s
BNX LR LR
comp=Z,24µm,10.6s
BNX LR LR
comp=Z,13µm,16.3s
BNX LR LR
comp=Z,30µm,9.9s
TOLI2 Tolitoli 22.75 183 P **P** **19 20 31.4 -0.5**
TOLI2 IAmb IAmb 19 20 37.2
comp=Z,291nm,2.0s
TOLI2 Tolitoli 22.75 183 P **P** **19 20 32.6 +0.7**
JTM Tenmabayashi 23.30 39 P **P** **19 20 36.0 -1.4**
JTM IAmb IAmb 19 20 45.8
comp=Z,177nm,1.3s
JTM Tenmabayashi 23.30 39 P **P** **19 20 38.9 +1.6**
SBUM Sibu 23.31 205 P **P** **19 20 35.6 -2.0**
MRSI Marisa 23.36 180 P P 19 20 47.3 +9.1
MPSI Mapaga 23.57 185 P P 19 20 47.9 +7.7
comp=Z,35nm,1.3s,comp=Z,1µm
TNTI Ternate 23.70 166 P **P** **19 20 39.5 -2.0**
TNTI IAmb IAmb 19 21 06.1
comp=Z,152nm,1.4s
TNTI Ternate 23.70 166 P **P** **19 20 45.8 +4.3**
comp=Z,84nm,1.7s,comp=Z,2µm
GTA Gaotai 24.11 315 P **P** **19 20 46.6 +1.2**
GTA pP sP 19 20 57.0 +7.5
GTA S **S** **19 25 05.0 +1.8**
GTA sS sS 19 25 14.8 +6.6
GTA pmax pmax
comp=Z,52nm,2.3s
GTA pmax pmax
comp=Z,2µm,6.2s
GTA LR LR
comp=Z,15µm,10.7s
GTA LR LR
comp=Z,42µm,11.6s
GTA LR LR
comp=Z,41µm,12.4s
GUMO Guam 24.15 111 P **P** **19 20 44.2 -1.6**
GUMO Guam 24.15 111 P **P** **19 20 44.2 -1.6**
GUMO pmax pmax
comp=Z,479nm,1.4s
GUMO Guam 24.15 111 P **P** **19 20 45.6 -0.3**
comp=Z,98nm,1.0s,baz=212,slow=9.5,SNR=3.6
GUMO LR LR 19 31 09.5
comp=Z,2µm,18.1s,baz=298,slow=39
comp=Z,98nm,1.0s
LUWI Luwuk 24.89 178 P **P** **19 20 51.5 -1.0**
LUWI IAmb IAmb 19 21 07.1
comp=Z,180nm,1.2s
LUWI Luwuk 24.89 178 P **P** **19 20 46.5 -6.0**
KSM Kuching 24.97 208 P **P** **19 20 51.8 -1.5**
KSM IAmb IAmb 19 21 00.3
comp=Z,192nm,1.3s
LBMI Labuha 25.09 166 P **P** **19 20 58.8 +4.4**
comp=Z,147nm,1.5s,comp=Z,4µm
ERM Erimo 25.29 40 P **P** **19 20 54.5 -1.4**
ERM Erimo 25.29 40 P **P** **19 20 56.5 +0.6**
ERM Erimo 25.29 40 P **P** **19 20 54.5 -1.4**
ERM pmax pmax
comp=Z,384nm,1.8s
HIA Hailar 25.29 357 P **P** **19 20 54.4 -1.5**
HIA Hailar 25.29 357 P **P** **19 20 54.4 -1.5**
HIA pmax pmax
comp=Z,62nm,1.2s
BKB Balikpapan 25.53 191 P **P** **19 20 56.1 -2.2**
MTKI Muara Teweh, K 25.65 196 P **P** **19 21 02.3 +2.8**
comp=Z,71nm,1.5s,comp=Z,2µm
STKI Sintang 25.78 204 P **P** **19 21 05.9 +5.3**
comp=Z,92nm,1.6s
GOMU GeErMu 26.22 304 P **P** **19 21 05.9 +1.0**
GOMU S **S** **19 25 40.1 +2.7**
GOMU pmax pmax
comp=Z,32nm,1.2s
GOMU LR LR
comp=Z,13µm,9.0s
GOMU LR LR
comp=Z,18µm,8.8s
GOMU LR LR
comp=Z,21µm,9.6s
ASAJ Asahikawa 26.35 35 P **P** **19 21 05.0 -0.6**
ASAJ pmax pmax
comp=Z,77nm,1.5s
ASAJ Asahikawa 26.35 35 LR LR 19 31 44.4
comp=Z,4µm,18.6s,baz=242,slow=37
JKA Kamikawa-asahi 26.35 35 P **P** **19 21 05.0 -0.6**
SWI Sorong 26.36 158 P **P** **19 21 07.2 +1.4**
SWI Sorong 26.36 158 P **P** **19 21 10.3 +4.5**
comp=Z,30nm,1.4s,comp=Z,1µm
KLR Kul'dur 26.40 15 *c**e*P **P** **19 21 04.9 -1.0**
KLR pmax pmax
comp=Z,88nm,2.5s
KLR Kul'dur 26.40 15 LR LR 19 31 36.3
comp=Z,6µm,19.3s,baz=200,slow=37
ULN Ulaanbaatar 26.56 338 P **P** **19 21 06.5 -1.1**

ULN IAmb IAmb 19 21 32.1
comp=Z,91nm,1.2s
ULN Ulaanbaatar 26.56 338 *i* P **P** **19 21 06.7 -0.9**
ULN pmax pmax
comp=Z,143nm,2.0s
ULN Ulaanbaatar 26.56 338 P **P** **19 21 07.8 +0.2**
ULN S **S** **19 25 47.8 +5.6**
HEH HeiHe 26.60 8 *eP* **P** **19 21 10.2 +2.5**
HEH pP **sP** **19 21 13.5 +2.4**
HEH S **S** **19 25 44.4 +2.1**
HEH pmax pmax
comp=Z,1μm,11.5s
HEH LR LR
comp=Z,5μm,11.4s
HEH LR LR
comp=Z,20μm,11.7s
HEH LR LR
comp=Z,26μm,13.3s
SONM Songino Array 26.77 337 P **P** **19 21 07.9 -1.5**
comp=Z,9.4nm,0.8s,baz=157,slow=8.0,SNR=56
SONM LR LR 19 32 57.3
comp=Z,15μm,18.9s,baz=146,slow=39
comp=Z,9.4nm,0.8s
SHL Shillong 27.16 280 P **P** **19 21 12.9 -0.3**
SHL IAmb IAmb 19 21 29.2
comp=Z,176nm,1.5s
SHL Shillong 27.16 280 P **P** **19 21 12.9 -0.3**
SHL pmax pmax
comp=Z,176nm,1.5s
SHL Shillong 27.16 280 P **P** **19 21 14.9 +1.7**
SNR=45
SHL S **S** **19 25 55.2 +3.1**
NLAI Namlea 27.55 168 P **P** **19 21 21.0 +4.5**
comp=Z,43nm,1.2s
BRDH Bariadhala 27.67 273 LR LR 19 34 30.7
comp=Z,4μm,18.4s,baz=130,slow=41
IPM Ipoh 27.85 229 P **P** **19 21 16.1 -3.2**
LSA Lhasa 27.86 289 P **P** **19 21 18.9 -0.9**
LSA IAmb IAmb 19 22 01.0
comp=Z,196nm,1.8s
LSA Lhasa 27.86 289 P **P** **19 21 18.9 -0.9**
LSA pmax pmax
comp=Z,196nm,1.8s
LSA Lhasa 27.86 289 P **P** **19 21 21.6 +1.8**
MYKOM Kota Tinggi 28.06 221 P **P** **19 21 19.9 -1.3**
YSS Yuzh-Sakhalins 28.43 31 P **P** **19 21 23.4 -0.7**
YSS Yuzh-Sakhalins 28.43 31 *eP* **P** **19 21 22.7 -1.4**
YSS *e* 19 22 20.6
YSS *e* 19 24 36.2
YSS *eS* **S** **19 26 05.4 -5.8**
YSS *eSS* SnSn 19 27 45.9 +17
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,400nm,3.1s
YSS smax smax
comp=N,300nm,4.8s
YSS MLR MLR
comp=Z,8μm,14.0s
YSS MLR MLR
comp=N,5μm,13.0s
YSS MLR MLR
comp=E,3μm,13.0s
FAKI Fak Fak 28.61 158 P **P** **19 21 24.3 -1.8**
FAKI IAmb IAmb 19 21 50.4
comp=Z,197nm,1.8s
FAKI Fak Fak 28.61 158 P **P** **19 21 28.3 +2.2**
KAPI Kappang 28.88 184 P **P** **19 21 26.7 -1.7**
KAPI Kappang 28.88 184 P **P** **19 21 26.7 -1.7**
KAPI pmax pmax
comp=Z,50nm,1.3s
KAPI Kappang 28.88 184 P **P** **19 21 31.3 +2.8**
KAPI P **P** **19 21 31.3 +2.8**
UGL Uglegorsk 29.71 27 *eP* **P** **19 21 36.3 +0.8**
UGL *eS* **S** **19 26 32.6 +1.3**
UGL smax smax
comp=E,4μm,15.0s
UGL MLR MLR
comp=E,12μm,13.0s
UGL MLR MLR
comp=N,4μm,15.0s
UGL MLR MLR
comp=Z,8μm,12.0s
ZEA Zeya 30.01 7 *eP* **P** **19 21 38.0 -0.1**
ZEA *eS* **S** **19 26 31.8 -4.1**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,40nm,1.4s
ZEA smax smax
comp=E,700nm,14.5s
ZEA MLR MLR
comp=E,4μm,14.0s
ZEA MLR MLR
comp=N,12μm,13.0s
ZEA MLR MLR
comp=Z,12μm,12.0s
ZAK Zakamensk 30.02 336 *eP* **P** **19 21 38.2 -0.2**
ZAK pmax pmax
comp=Z,13nm,1.6s
LHMI Lhok Sumawe 30.30 236 P **P** **19 21 39.3 -1.7**
PSI Prapat 30.50 230 P **P** **19 21 42.8 -0.2**
PSI pmax pmax
comp=Z,33nm,1.4s
RPSI Rantau Prapat 30.58 230 P **P** **19 21 42.8 -0.7**
BKNI Bangkinang 30.93 224 P **P** **19 21 45.6 -1.1**
BKNI Bangkinang 30.93 224 P **P** **19 21 48.6 +2.0**
BKNI Bangkinang 30.93 224 P **P** **19 21 49.6 +3.0**
comp=Z,135nm,0.4s,comp=Z,μm
IRK Irkutsk 31.23 339 *eP* **P** **19 21 48.5 -0.4**
IRK *eS* **S** **19 26 53.8 -1.4**
IRK pmax pmax
comp=Z,136nm,2.5s
TYV Tymovskoe 31.33 26 *eP* P 19 21 54.6 +4.8
TYV pmax pmax
comp=Z,300nm,3.7s
TYV pmax pmax
comp=Z,11nm,1.3s
TYV MLR MLR
comp=E,8μm,11.0s
TYV MLR MLR
comp=Z,6μm,12.0s
PMBI Palembang 31.44 214 P **P** **19 21 50.9 -0.3**
MOY Mondy 31.92 335 *eP* **P** **19 21 55.4 +0.3**
MOY pmax pmax
comp=Z,73nm,2.8s
NKL Nikolayevsk 32.46 21 *eP* **P** **19 21 56.9 -2.8**
NKL *e* 19 24 41.8
NKL *eS* **S** **19 27 06.5 -7.8**
NKL pmax pmax
comp=E,55nm,1.6s
NKL pmax pmax
comp=N,52nm,1.1s
NKL pmax pmax
comp=Z,72nm,1.1s
NKL pmax pmax
comp=Z,362nm,13.0s
NKL smax smax
comp=E,217nm,7.8s
NKL smax smax
comp=N,435nm,8.6s
NKL MLR MLR
comp=E,15μm,10.0s
NKL MLR MLR
comp=N,37μm,12.0s
NKL MLR MLR
comp=Z,38μm,13.0s
GSI Gunungsitoli 32.51 230 P **P** **19 21 59.0 -1.5**
GSI IAmb IAmb 19 23 02.3
comp=Z,59nm,1.6s
GSI Gunungsitoli 32.51 230 P **P** **19 22 02.9 +2.4**
EDFI Ende, Flores 32.53 180 P **P** **19 22 03.5 +2.8**
comp=Z,46nm,1.2s,comp=Z,1μm
JAGI Jajag, Banyuwa 33.10 194 P **P** **19 22 03.3 -2.3**
JAGI IAmb IAmb 19 22 14.5
comp=Z,158nm,1.9s
SAUI Saumlaki 33.10 163 P **P** **19 22 03.9 -1.8**
UGM Wanagama 33.54 200 P **P** **19 22 07.4 -2.1**
UGM Wanagama 33.54 200 P **P** **19 22 10.1 +0.5**
KPJI Karang Pucung 33.55 204 P P 19 22 15.0 +5.4
comp=Z,79nm,1.5s
LWLI Liwa 33.59 213 P P 19 22 14.4 +4.3
comp=Z,146nm,0.7s
DBJI Dramaga 33.70 208 P P 19 22 18.3 +7.4
comp=Z,99nm,1.6s,comp=Z,2μm
WMQ Urumqi 34.18 314 *eP* **P** **19 22 16.4 +1.4**

WMQ sP sP 19 22 22.4 +3.4
WMQ PP **PnPn** **19 23 27.9 -0.8**
WMQ S **S** **19 27 44.3 +2.8**
WMQ ScP **ScP** **19 28 37.0 0.0**
WMQ pmax pmax
comp=Z,19nm,1.5s
WMQ pmax pmax
comp=Z,620nm,8.5s
WMQ LR LR
comp=Z,15μm,12.1s
WMQ LR LR
comp=Z,30μm,11.3s
WMQ LR LR
comp=Z,7μm,13.9s
BOD Bodaibo 34.27 353 *eP* **P** **19 22 14.7 -0.7**
BOD pmax pmax
comp=Z,30nm,1.9s
MANU Manus Island 35.90 133 P **P** **19 22 28.4 -1.5**
DGZ Jazzator, Alta 37.08 323 *i* P **P** **19 22 38.4 -1.5**
DGZ pmax pmax
comp=Z,26nm,1.6s
ZSN Zaisan 37.51 318 *eP* **P** **19 22 43.8 +0.3**
comp=Z,26nm,1.7s,baz=318
ZSN *eS* **S** **19 28 34.8 +2.4**
baz=318
ZSN Zaisan 37.51 318 *eP* **P** **19 22 43.7 +0.3**
ZSN *eS* **S** **19 28 34.7 +2.4**
ZSN pmax pmax
comp=Z,26nm,1.7s
XMIS Christmas Isla 37.70 207 P **P** **19 22 43.1 -2.1**
MTN Manton Dam 37.72 165 P **P** **19 22 43.3 -2.1**
MTN IAmb IAmb 19 22 48.9
comp=Z,151nm,1.9s
YAK Yakutsk 38.42 6 P **P** **19 22 49.1 -1.7**
YAK Yakutsk 38.42 6 *eP* **P** **19 22 49.7 -1.1**
YAK *e**PP **sP** **19 22 56.5 +2.3**
YAK *e* 19 24 29.7
YAK *e*PPP PPP 19 24 38.1
YAK *eS* **S** **19 28 48.7 +3.2**
YAK *e* 19 32 59.0
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,13nm,1.6s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK pmax pmax
comp=Z,359nm,4.3s
YAK smax smax
comp=N,213nm,4.6s
YAK smax smax
comp=E,129nm,3.3s
YAK MLR MLR
comp=Z,20μm,15.0s
YAK MLR MLR
comp=N,10μm,11.0s
YAK MLR MLR
comp=E,7μm,12.0s
YAK Yakutsk 38.42 6 LR LR 19 40 23.1
comp=E,8μm,18.5s,baz=186,slow=39
MK31 Makanchi Array 38.86 316 *c i* P **P** **19 22 55.1 +0.3**
MKAR Makanchi Array 38.86 316 P **P** **19 22 54.1 -0.7**
comp=E,7.7nm,0.6s,baz=102,slow=9.1,SNR=42
MKAR PcP **PcP** **19 25 06.3 +0.5**
comp=E,1.6nm,0.7s,baz=119,slow=3.4,SNR=1.9
MKAR LR LR 19 39 21.9
comp=E,2μm,21.3s,baz=111,slow=37
comp=E,7.7nm,0.6s
MAKZ Makanchi 39.06 316 P **P** **19 22 55.2 -1.3**
MAKZ IAmb IAmb 19 23 05.4
comp=Z,76nm,1.2s
MAKZ Makanchi 39.06 316 P **P** **19 22 55.2 -1.3**
MAKZ pmax pmax
comp=Z,76nm,1.2s
SHLS Shalkode 39.60 309 *eP* **P** **19 22 59.4 -1.9**
comp=Z,77nm,2.7s,baz=310
SHLS Shalkode 39.60 309 *eP* **P** **19 22 59.3 -1.9**
SHLS pmax pmax
comp=Z,77nm,2.7s
PETK Petropavlovsk- 39.74 34 P **P** **19 23 00.9 -1.2**
comp=Z,2.2nm,0.9s,baz=174,slow=1.4,SNR=1.5
PETK LR LR 19 38 33.6
comp=Z,1μm,21.8s,baz=230,slow=35
comp=Z,2.2nm,0.9s
UZB Uzynbulak 39.91 309 *eP* **P** **19 23 04.5 +0.7**
comp=Z,62nm,2.2s,baz=309
UZB *eS* **S** **19 29 11.1 +2.1**
baz=309
UZB Uzynbulak 39.91 309 *eP* **P** **19 23 04.5 +0.7**
UZB *eS* **S** **19 29 11.0 +2.1**
UZB pmax pmax
comp=Z,62nm,2.2s
KNRA Kununurra 40.00 169 P **P** **19 23 01.7 -2.8**
KNRA Kununurra 40.00 169 P **P** **19 23 04.9 +0.4**
PET Petropavlovsk 40.18 34 P **P** **19 23 04.3 -1.3**
PET Petropavlovsk 40.18 34 *i* P **P** **19 23 05.4 -0.3**
PET pmax pmax
comp=Z,30nm,1.2s
KPKS Kokpek 40.23 310 *eP* **P** **19 23 07.0 +0.6**
comp=Z,43nm,2.2s,baz=310
KPKS *eS* **S** **19 29 15.9 +2.3**
baz=310
KPKS Kokpek 40.23 310 *eP* **P** **19 23 06.9 +0.6**
KPKS *eS* **S** **19 29 15.9 +2.3**
KPKS pmax pmax
comp=Z,43nm,2.2s
SATY Saty 40.33 309 *eP* **P** **19 23 08.1 +0.8**
comp=Z,85nm,2.7s,baz=309
SATY *eS* **S** **19 29 17.6 +2.4**
baz=309
SATY Saty 40.33 309 *eP* **P** **19 23 08.0 +0.8**
SATY *eS* **S** **19 29 17.5 +2.4**
SATY pmax pmax
comp=Z,85nm,2.7s
ZHN Zhinishke 40.34 309 *eP* **P** **19 23 08.2 +0.9**
comp=Z,51nm,2.4s,baz=309
ZHN Zhinishke 40.34 309 *eP* **P** **19 23 08.1 +0.8**
ZHN pmax pmax
comp=Z,51nm,2.4s
ZALV Zalesovo Beam 40.71 327 *i* P **P** **19 23 08.6 -1.4**
ZALV pmax pmax
comp=Z,14nm,0.8s
ZALV Zalesovo Beam 40.71 327 P **P** **19 23 08.1 -2.0**
comp=Z,14nm,0.8s,baz=118,slow=7.0,SNR=50
ZALV LR LR 19 42 31.7
comp=Z,2μm,18.9s,baz=124,slow=40
comp=Z,14nm,0.8s
RABL Rabaul 40.75 129 P **P** **19 23 08.5 -2.4**
TDK Taldyqorghan 40.83 312 *eP* **P** **19 23 12.2 +1.0**
comp=Z,32nm,1.4s,baz=312
TDK *eS* **S** **19 29 25.5 +3.1**
baz=312
TDK LR LR 19 40 23.4
baz=312
TDK Taldyqorghan 40.83 312 *eP* **P** **19 23 12.2 +1.0**
TDK *eS* **S** **19 29 25.5 +3.1**
TDK pmax pmax
comp=Z,32nm,1.4s
MA2 Magadan 40.97 22 P **P** **19 23 10.9 -1.2**
MA2 Magadan 40.97 22 P **P** **19 23 10.9 -1.2**
MA2 pmax pmax
comp=Z,64nm,1.8s
MA2 Magadan 40.97 22 LR LR 19 41 58.2
comp=Z,2μm,18.8s,baz=224,slow=39
ARXS Arharly 41.02 311 *eP* **P** **19 23 14.4 +1.5**
MDOK Medeo 41.32 309 *eP* **P** **19 23 16.3 +0.8**
baz=309
MDOK *eS* **S** **19 29 32.6 +2.6**
baz=309
MDOK LR LR 19 40 38.4
baz=309
MDOK Medeo 41.32 309 *eP* **P** **19 23 16.2 +0.8**
MDOK *eS* **S** **19 29 32.5 +2.6**
AAA Alma-Ata 41.43 309 *eP* **P** **19 23 17.3 +1.0**
baz=309
AAA LR LR 19 40 49.2
baz=309
AAA Alma-Ata 41.43 309 *eP* **P** **19 23 17.2 +1.0**
PMG Port Moresby 41.43 140 P **P** **19 23 14.0 -2.4**
PMG IAmb IAmb 19 23 22.9
comp=Z,82nm,1.3s
PMG Port Moresby 41.43 140 P **P** **19 23 14.0 -2.4**
PMG pmax pmax
comp=Z,82nm,1.3s
PMG Port Moresby 41.43 140 LR LR 19 39 12.2
comp=Z,611nm,18.7s,baz=314,slow=34

KSH Kashi 41.46 303 P **P** **19 23 19.8 +3.2**
KSH sP sP 19 23 24.7 +4.5
KSH PcP **PcP** **19 25 17.3 +2.9**
KSH S **S** **19 29 34.1 +2.1**
KSH pmax pmax
comp=Z,14nm,1.8s
KSH pmax pmax
comp=Z,1μm,9.3s
KSH LR LR
comp=Z,15μm,13.4s
KSH LR LR
comp=Z,8μm,14.1s
KSH LR LR
comp=Z,12μm,15.8s
SEM Semipalatinsk 41.52 320 *eP* **P** **19 23 16.8 -0.3**
comp=Z,21nm,1.4s,baz=320
SEM LR LR 19 40 45.0
baz=320
SEM Semipalatinsk 41.52 320 *eP* **P** **19 23 16.7 -0.3**
SEM pmax pmax
comp=Z,21nm,1.4s
CHKK Chushkaly 41.52 310 *eP* **P** **19 23 17.4 +0.4**
baz=310
CHKK Chushkaly 41.52 310 *eP* **P** **19 23 17.3 +0.4**
NRN Naryn 41.74 306 P **P** **19 23 17.2 -1.8**
NRN Naryn 41.74 306 P **P** **19 23 17.3 -1.8**
NRN pmax pmax
comp=Z,27nm,1.0s
H11N1 WAKE ISLAND Hy 41.97 87 T T 20 08 27.5
baz=280
H11N2 WAKE ISLAND Hy 41.97 87 T T 20 08 25.2
baz=280
H11N3 WAKE ISLAND Hy 41.98 87 T T 20 08 22.4
baz=280
KUU Kurty 41.99 310 *eP* **P** **19 23 21.5 +0.8**
comp=Z,53nm,2.0s,baz=310
KUU LR LR 19 41 34.1
baz=310
KUU Kurty 41.99 310 *eP* **P** **19 23 21.5 +0.8**
KUU pmax pmax
comp=Z,53nm,2.0s
H11S3 WAKE ISLAND Hy 42.09 89 T T 20 08 30.6
baz=286,slow=74,SNR=103
H11S1 WAKE ISLAND Hy 42.10 89 T T 20 08 30.2
baz=286,slow=74,SNR=7.4
H11S2 WAKE ISLAND Hy 42.11 89 T T 20 08 30.3
baz=286
TKM2 Tokmak 2 42.31 308 P P 19 23 27.6 +4.0
SNR=19
KURK Kurchatov 42.59 320 P **P** **19 23 24.7 -0.8**
KURK Kurchatov 42.59 320 *ce*P **P** **19 23 22.0 -3.5**
KURK pmax pmax
comp=Z,107nm,2.5s
KURK Kurchatov 42.59 320 P **P** **19 23 25.6 +0.2**
KURK P **P** **19 23 25.6 +0.2**
KURK S **S** **19 29 49.1 +0.9**
KURK S **S** **19 29 49.1 +0.9**
KURBB Kurchatov Arra 42.61 320 P **P** **19 23 22.8 -2.8**
comp=Z,1.8nm,0.2s,baz=106,slow=8.8,SNR=50
KURBB LR LR 19 43 22.1
comp=Z,2μm,18.7s,baz=129,slow=39
comp=Z,1.8nm,0.2s
PALK Pallekele 42.69 254 P **P** **19 23 25.1 -1.7**
PALK Pallekele 42.69 254 P **P** **19 23 25.1 -1.7**
PALK pmax pmax
comp=Z,19nm,1.1s
PALK Pallekele 42.69 254 LR LR 19 42 13.2
comp=Z,2μm,19.9s,baz=162,slow=38
PALK Pallekele 42.69 254 P **P** **19 23 29.6 +2.7**
PALK S **S** **19 29 55.9 +5.3**
KBK Karagaybulak 42.73 308 P **P** **19 23 30.0 +3.1**
SNR=12
CHMS Chumysh 42.93 308 P **P** **19 23 31.1 +2.6**
SNR=10
UCH Uchtor 42.97 307 P **P** **19 23 32.8 +3.5**
SNR=15
AAK Ala-Archa 43.05 307 *i* P **P** **19 23 28.8 -0.8**
AAK pmax pmax
comp=Z,34nm,2.4s
AAK Ala-Archa 43.05 307 LR LR 19 43 37.5
comp=Z,3μm,21.0s,baz=86,slow=39
AAK Ala-Archa 43.05 307 P **P** **19 23 32.0 +2.3**
SGDS Sogindy 43.11 309 *eP* **P** **19 23 30.6 +0.6**
baz=309
SGDS Sogindy 43.11 309 *eP* **P** **19 23 30.5 +0.6**
COEN Coen 43.12 149 P **P** **19 23 27.8 -2.3**
COEN IAmb IAmb 19 23 34.2
comp=Z,72nm,0.9s
COEN Coen 43.12 149 P **P** **19 23 30.8 +0.7**
USP Ospenovka 43.16 308 P **P** **19 23 32.9 +2.5**
SNR=7.2
NIL Nilore 43.26 294 P **P** **19 23 32.8 +1.6**
EKS2 Erkin-Say 43.58 307 P **P** **19 23 37.6 +3.8**
SNR=7.0
BTLS Baital 43.84 311 *eP* **P** **19 23 35.5 -0.2**
comp=Z,50nm,2.4s,baz=311
BTLS *eS* **S** **19 30 08.3 +1.6**
baz=311
BTLS Baital 43.84 311 *eP* **P** **19 23 35.5 -0.2**
BTLS *eS* **S** **19 30 08.3 +1.6**
BTLS pmax pmax
comp=Z,50nm,2.4s
SEY Seymchan 43.99 20 *i* P **P** **19 23 35.6 -1.0**
SEY pmax pmax
comp=Z,28nm,3.3s
SEY Seymchan 43.99 20 LR LR 19 41 52.0
comp=Z,3μm,20.3s,baz=218,slow=36
PSA00 Pilbara Seismi 45.31 183 P **P** **19 23 44.0 -3.6**
PSA00 IAmb IAmb 19 24 00.6
comp=Z,40nm,1.1s
PSA00 Pilbara Seismi 45.31 183 P **P** **19 23 44.0 -3.6**
WRAB Tennant Creek 45.34 163 P **P** **19 23 45.5 -2.3**
WRAB IAmb IAmb 19 24 20.9
comp=Z,84nm,1.6s
WRAB Tennant Creek 45.34 163 P **P** **19 23 45.5 -2.3**
WRAB pmax pmax
comp=Z,84nm,1.7s
WRA Warramunga Arr 45.34 163 *i* P **P** **19 23 46.2 -1.7**
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 45.34 163 P **P** **19 23 45.5 -2.4**
comp=Z,4.4nm,0.9s,baz=344,slow=8.7,SNR=23
comp=Z,4.4nm,0.9s
DZA Taraz 45.40 307 *i* P **P** **19 23 48.8 +0.5**
baz=307
DZA Taraz 45.40 307 *i* P **P** **19 23 48.7 +0.5**
BRZS Berezniki 45.95 317 *eP* **P** **19 23 52.2 -0.3**
comp=Z,43nm,1.9s,baz=317
KKAR Karatay Array 46.02 307 P **P** **19 23 51.9 -1.2**
KKAR IAmb IAmb 19 23 56.8
comp=Z,78nm,2.0s
KKAR Karatay Array 46.02 307 P **P** **19 23 51.9 -1.2**
KKAR pmax pmax
comp=Z,78nm,2.0s
CHM Chimkent 46.59 306 *eP* **P** **19 23 58.3 +0.6**
baz=306
CHM LR LR 19 43 38.0
comp=Z,1μm,12.8s,baz=306
CHM Chimkent 46.59 306 *eP* **P** **19 23 58.2 +0.6**
CHM MLR MLR
comp=Z,1μm,13.0s
GIRL Giralia 46.92 190 P **P** **19 24 01.9 +1.7**
QIS Mount Isa 47.55 157 P **P** **19 24 06.5 +1.2**
TIXI Tiksi 47.87 3 P **P** **19 24 05.0 -2.1**
TIXI Tiksi 47.87 3 *ce*P **P** **19 24 05.7 -1.4**
TIXI pmax pmax
comp=Z,135nm,1.7s
TIXI Tiksi 47.87 3 LR LR 19 46 49.2
comp=Z,10μm,18.2s,baz=198,slow=39
BVAR Borovoye Array 48.17 321 P **P** **19 24 08.7 -1.1**
comp=Z,3.7nm,0.6s,baz=100,slow=8.4,SNR=20
BVAR LR LR 19 43 57.9
comp=Z,1μm,19.9s,baz=100,slow=36
comp=Z,3.7nm,0.6s
BRVK Borovoye 48.24 321 P **P** **19 24 08.8 -1.4**
BRVK IAmb IAmb 19 24 29.7
comp=Z,34nm,1.1s
BRVK Borovoye 48.24 321 *ce*P **P** **19 24 08.0 -2.3**
BRVK pmax pmax
comp=Z,83nm,2.5s
BRVK Borovoye 48.24 321 P **P** **19 24 10.4 +0.1**
BRVK P **P** **19 24 10.4 +0.1**
BRVK S **S** **19 31 10.7 +1.0**
BRVK S **S** **19 31 10.7 +1.0**
SHEM Shemya Is, Ala 48.65 40 LR LR 19 45 13.5
comp=Z,665nm,20.6s,baz=258,slow=37

ASAR Alice Springs 48.80 165 P **P** **19 24 13.8 -1.1**
comp=Z,2.3nm,0.6s,baz=339,slow=7.1,SNR=34
ASAR LR LR 19 46 08.8
comp=Z,390nm,19.7s,baz=351,slow=38
comp=Z,2.3nm,0.6s
AS01 Alice Springs 48.81 165 P **P** **19 24 16.1 +1.1**
WRKA Warakurna 49.13 172 P **P** **19 24 17.8 +0.4**
NRIK Noril'sk 49.74 345 *i* P **P** **19 24 19.6 -1.9**
NRIK pmax pmax
comp=Z,36nm,1.4s
NRIK Noril'sk 49.74 345 P **P** **19 24 18.8 -2.7**
comp=Z,8.8nm,0.7s,baz=129,slow=5.3,SNR=10
NRIK LR LR 19 46 31.2
comp=Z,3μm,21.2s,baz=142,slow=38
comp=Z,8.8nm,0.7s
CTA Charters Tower 49.88 149 LR LR 19 43 41.5
comp=Z,1μm,21.1s,baz=332,slow=34
CTAO Charters Tower 49.88 149 P **P** **19 24 20.5 -2.6**
CTAO IAmb IAmb 19 24 48.0
comp=Z,39nm,1.1s
CTAO Charters Tower 49.88 149 P **P** **19 24 20.5 -2.6**
CTAO pmax pmax
comp=Z,39nm,1.1s
HNR Honiara 49.94 127 LR LR 19 43 36.4
comp=Z,9μm,21.7s,baz=302,slow=34
MEEK Meekatharra 50.41 184 P **P** **19 24 26.6 -0.5**
BILL Bilibino 51.70 20 P **P** **19 24 35.5 -0.8**
BILL Bilibino 51.70 20 *i* P **P** **19 24 36.7 +0.4**
OOD Oodnadatta 53.19 165 P **P** **19 24 50.0 +2.2**
ABKAR Akbulak array 53.97 314 P **P** **19 24 52.0 -1.4**
SVE Sverdlovsk 54.52 324 *de* P **P** **19 24 58.2 +0.9**
SVE *e* S **S** **19 32 41.9 +5.6**
SVE *e* SS **SS** **19 36 24.4 +5.8**
SVE pmax pmax
comp=Z,58nm,1.5s
SVE MLR MLR
comp=Z,7μm,14.0s
NGCH Negor - Chabah 54.69 285 P **P** **19 25 02.1 +3.1**
NGCH S S 19 32 48.1 +8.7
FORT Forrest 54.78 173 P **P** **19 24 57.7 -1.6**
FORT IAmb IAmb 19 25 14.5
comp=Z,42nm,0.9s
FORT Forrest 54.78 173 P **P** **19 24 59.7 +0.4**
MULG Mulgathing 55.22 167 P **P** **19 25 04.0 +1.4**
AKTO Aktyubinsk 55.29 316 LR LR 19 47 51.9
comp=Z,2μm,20.8s,baz=70,slow=35
GEYT Alibeck 55.36 301 P **P** **19 25 03.0 -0.7**
comp=Z,9.0nm,1.0s,baz=90,slow=3.6,SNR=20
GEYT LR LR 19 52 45.6
comp=Z,3μm,18.4s,baz=95,slow=40
comp=Z,9.0nm,1.0s
ARU Arti 55.59 323 P **P** **19 25 04.1 -0.9**
ARU IAmb IAmb 19 25 14.9
comp=Z,106nm,1.6s
ARU Arti 55.59 323 *c i* P **P** **19 25 05.4 +0.4**
ARU 19 25 57.2
ARU 19 27 06.8
ARU S **S** **19 32 52.9 +2.2**
ARU SS **SS** **19 36 29.8 -5.6**
ARU pmax pmax
comp=Z,69nm,1.9s
ARU MLR MLR
comp=Z,2μm,12.0s
ARU Arti 55.59 323 LR LR 19 49 24.2
comp=Z,3μm,20.9s,baz=89,slow=37
LCRK Leigh Creek 56.37 163 P **P** **19 25 11.4 +0.6**
EIDS Eidsvold 56.68 148 P **P** **19 25 14.7 +1.6**
NWAO Narrogin (SRO) 56.75 185 LR LR 19 50 13.3
comp=Z,336nm,21.7s,baz=338,slow=37
NWAO Narrogin (SRO) 56.75 185 P **P** **19 25 13.5 0.0**
JLN Jalan Bani Buh 56.98 282 P **P** **19 25 10.7 -4.7**
JLN S **S** **19 33 11.5 +1.4**
WBK Wadi Bani Khal 57.26 282 P **P** **19 25 19.1 +1.6**
WBK P **P** **19 25 19.1 +1.6**
WBK S **S** **19 33 21.1 +7.3**
WBK S **S** **19 33 21.1 +7.3**
WSAR Wadi Sarin 57.40 283 P **P** **19 25 19.0 +0.5**
WSAR S **S** **19 33 18.2 +2.6**
JASK Jask - Hormozg 57.46 286 P **P** **19 25 22.0 +3.2**
JASK S **S** **19 33 19.0 +2.7**
BIDO Bidbid 57.78 284 P **P** **19 25 23.4 +2.3**
SMDO Samad 57.97 283 P **P** **19 25 24.7 +2.1**
SMDO P **P** **19 25 24.7 +2.1**
SMDO S **S** **19 33 24.1 +0.9**
SMDO S **S** **19 33 24.1 +0.9**
BBOO Buckleboo 58.09 166 P **P** **19 25 20.6 -2.4**
BBOO IAmb IAmb 19 25 53.0
comp=Z,43nm,1.1s
BBOO Buckleboo 58.09 166 P **P** **19 25 23.5 +0.5**
JMDO Jabal Madar 58.09 282 P **P** **19 25 25.2 +1.8**
JMDO S **S** **19 33 27.6 +2.9**
MHTO MHTO 58.58 281 P **P** **19 25 27.5 +0.7**
MHTO P **P** **19 25 27.5 +0.7**
MHTO S **S** **19 33 31.1 0.0**
MHTO S **S** **19 33 31.1 0.0**
STKA Stephens Creek 58.69 160 P **P** **19 25 26.9 -0.2**
STKA Stephens Creek 58.69 160 *i* P **P** **19 25 24.0 -3.1**
STKA Stephens Creek 58.69 160 P **P** **19 25 26.1 -1.0**
comp=Z,4.2nm,0.6s,baz=341,slow=7.0,SNR=13
STKA LR LR 19 50 49.5
comp=Z,325nm,21.9s,baz=336,slow=36
comp=Z,4.2nm,0.6s
MDH Madha 58.97 286 P **P** **19 25 29.5 +0.1**
MDH S **S** **19 33 37.3 +1.3**
SOHO SOHO 59.04 285 P **P** **19 25 29.4 -0.5**
SOHO P **P** **19 25 29.4 -0.5**
SOHO P **P** **19 25 29.4 -0.5**
SOHO S **S** **19 33 40.9 +3.8**
SOHO S **S** **19 33 40.9 +3.8**
SOHO S **S** **19 33 40.9 +3.8**
MASF Masafi 59.07 286 P **P** **19 25 30.2 0.0**
MASF P **P** **19 25 30.2 0.0**
MASF S **S** **19 33 35.5 -2.0**
MASF S **S** **19 33 35.5 -2.0**
UOSS Minazif 59.13 286 P **P** **19 25 30.2 -0.4**
UOSS S **S** **19 33 41.9 +3.6**
HATD Hatta, Dubai 59.23 286 P **P** **19 25 33.4 +2.2**
HATD P **P** **19 25 33.4 +2.2**
HATD S **S** **19 33 39.6 +0.1**
HATD S **S** **19 33 39.6 +0.1**
ARQ Araqi 59.25 284 P **P** **19 25 33.2 +1.8**
ARQ P **P** **19 25 33.2 +1.8**
ARQ S **S** **19 33 46.0 +6.1**
ARQ S **S** **19 33 46.0 +6.1**
HTT Hallett 59.38 163 P **P** **19 25 34.2 +2.2**
NAZ Nazwa, Dubai 59.60 286 S **S** **19 33 50.8 +6.6**
FAQ Al Faqa, Dubai 59.72 286 P **P** **19 25 35.6 +0.9**
FAQ P **P** **19 25 35.6 +0.9**
FAQ S **S** **19 33 47.6 +1.8**
FAQ S **S** **19 33 47.6 +1.8**
ALNE Al Ain 59.76 285 P **P** **19 25 36.3 +1.5**
SNR=5.8
ALNE P **P** **19 25 36.3 +1.5**
SNR=5.8
ALNE S **S** **19 33 47.4 +1.1**
ALNE S **S** **19 33 47.4 +1.1**
TNA Tin City 60.28 27 P **P** **19 25 39.0 +1.2**
baz=263,SNR=5.3
AJN Ajban 60.30 286 P **P** **19 25 38.7 +0.1**
AJN S **S** **19 33 54.1 +0.8**
M11K Mekoryuk 60.60 33 P **P** **19 25 40.7 +0.7**
baz=267
KIRV Kirov 60.69 325 *i* P **P** **19 25 39.7 -1.0**
KIRV Kirov 60.69 325 LR LR 19 55 48.9
comp=Z,3μm,18.6s,baz=92,slow=40
F14K Arctic Creek 60.94 27 P **P** **19 25 42.9 +0.6**
baz=264
ANM Nome 61.26 28 P **P** **19 25 42.6 -1.8**
ANM IAmb IAmb 19 25 55.6
comp=Z,70nm,1.6s
ANM Nome 61.26 28 P **P** **19 25 44.7 +0.3**
baz=266,SNR=8.4
ANM Nome 61.26 28 P **P** **19 25 42.6 -1.8**
ANM pmax pmax
comp=Z,70nm,1.6s
C16K Lisburne Hills 61.62 24 P **P** **19 25 45.3 -1.5**
C16K IAmb IAmb 19 25 53.1
comp=Z,33nm,1.2s
C16K Lisburne Hills 61.62 24 P **P** **19 25 47.3 +0.5**
baz=264
F15K North Star Dit 61.65 27 P **P** **19 25 46.0 -1.1**
F15K IAmb IAmb 19 25 54.2
comp=Z,30nm,1.2s

F15K North Star Dit 61.65 27 P **P** **19 25 47.9 +0.8**
baz=266
BELG Belogornoye 61.80 318 *i* P **P** **19 25 48.3 0.0**
BELG pmax pmax
comp=Z,11nm,1.0s
BELG Belogornoye 61.80 318 LR LR 19 52 53.7
comp=Z,2μm,21.9s,baz=89,slow=36
G15K Niukluk 61.86 28 P **P** **19 25 49.4 +1.0**
baz=266
J14K Nanvaranak Lak 61.97 30 P **P** **19 25 50.2 +1.0**
baz=268
M13K Dall Lake 62.02 33 P **P** **19 25 50.6 +1.0**
baz=270
DMTO DMTO 62.26 278 P **P** **19 25 49.5 -2.5**
DMTO S **S** **19 34 19.2 +0.8**
L14K Kuka Creek 62.35 32 P **P** **19 25 50.6 -1.2**
L14K Kuka Creek 62.35 32 P **P** **19 25 53.0 +1.1**
baz=270
C17K DeLong Mountai 62.44 24 P **P** **19 25 53.4 +1.0**
baz=266
RDOG Red Dog Mine 62.51 24 P **P** **19 25 53.9 +1.1**
baz=266
LKRN Lenkeran, Azer 62.55 303 P **P** **19 25 52.0 -1.5**
G16K Koyuk River 62.59 27 IAmb IAmb 19 26 39.9
comp=Z,41nm,1.3s
G16K Koyuk River 62.59 27 P **P** **19 25 52.7 -0.6**
baz=268
H16K Elim 62.61 28 P **P** **19 25 53.7 +0.1**
baz=268,SNR=9.6
M14K Bethel 62.70 32 P **P** **19 25 53.3 -0.9**
M14K IAmb IAmb 19 25 58.8
comp=Z,68nm,1.6s
M14K Bethel 62.70 32 P **P** **19 25 54.1 -0.1**
baz=271
MAK Makhachkala 62.84 307 *e* P **P** **19 25 53.8 -1.6**
MAK *e* 19 28 08.9
MAK *e* PPP PPP 19 29 39.8
MAK *e* S **S** **19 34 24.2 -0.7**
MAK *e* SS **SS** **19 38 30.8 +1.2**
MAK *e* SSS SSS 19 41 22.1
MAK pmax pmax
comp=Z,128nm,1.0s
MAK MLR MLR
comp=Z,3μm,12.0s
N14K Kuskokwak Cree 62.85 33 P **P** **19 25 55.7 +0.5**
baz=271
E17K Hotham Inlet 62.87 25 P **P** **19 25 56.0 +0.7**
baz=267,SNR=16
K15K Wolf Creek Mou 62.90 31 P **P** **19 25 54.0 -1.5**
K15K Wolf Creek Mou 62.90 31 P **P** **19 25 56.3 +0.8**
baz=270
L15K Ungalak Mounta 62.92 31 P **P** **19 25 56.9 +1.3**
baz=270
B18K Kokolik River 63.00 23 P **P** **19 25 56.7 +0.7**
baz=266,SNR=20
F17K Baldwin Pennin 63.08 26 P **P** **19 25 57.0 +0.4**
baz=268,SNR=11
DZM Mont Dzumac 63.10 133 LR LR 19 48 51.3
comp=Z,760nm,21.2s,baz=296,slow=32
C18K Utukok River 63.18 24 P **P** **19 25 55.6 -1.8**
C18K IAmb IAmb 19 26 03.8
comp=Z,44nm,1.5s
C18K Utukok River 63.18 24 P **P** **19 25 58.2 +0.8**
baz=267
I17K Unalakleet 63.27 29 P **P** **19 25 57.6 -0.4**
I17K IAmb IAmb 19 26 08.4
comp=Z,70nm,1.6s
I17K Unalakleet 63.27 29 P **P** **19 25 58.3 +0.4**
baz=270
G17K Kiwalik Mounta 63.30 27 P **P** **19 25 58.6 +0.5**
baz=269
ARPS Mount Arapiles 63.32 162 P **P** **19 26 00.9 +2.4**
J16K Anvik River 63.32 30 P **P** **19 25 56.9 -1.4**
J16K Anvik River 63.32 30 P **P** **19 25 59.5 +1.2**
baz=270
M15K Kasigluk River 63.33 33 P **P** **19 25 59.8 +1.4**
baz=272
SEKA Sheki 63.33 306 P **P** **19 25 56.6 -2.2**
E18K Tukpahlearik C 63.36 25 P **P** **19 25 59.7 +1.2**
baz=268
MNGR Mingechevir, A 63.49 305 P **P** **19 25 58.2 -1.6**
TRNA Turayna 63.57 287 P **P** **19 26 01.6 +1.0**
TRNA S **S** **19 34 34.7 0.0**
H17K Granite Mounta 63.61 28 P **P** **19 25 59.5 -0.6**
H17K IAmb IAmb 19 26 09.8
comp=Z,34nm,1.0s
H17K Granite Mounta 63.61 28 P **P** **19 26 01.5 +1.4**
baz=270
N15K Kwethluk River 63.64 33 P **P** **19 26 01.9 +1.4**
baz=272
ZKTA Zakatala 63.69 306 P **P** **19 25 59.5 -1.6**
F18K Selawik 63.72 26 P **P** **19 26 01.6 +0.8**
baz=270,SNR=30
C19K Lookout Ridge 63.78 23 P **P** **19 26 02.0 +0.7**
baz=268
O15K Ungalikthiuk R 63.83 34 P **P** **19 26 02.8 +1.0**
baz=273
SAKB Bahrain 63.83 288 P **P** **19 26 02.8 +0.5**
SAKB S **S** **19 34 38.4 +0.6**
L16K Owhat River 63.88 31 P **P** **19 26 02.1 +0.1**
L16K IAmb IAmb 19 26 06.6
comp=Z,37nm,1.4s
L16K Owhat River 63.88 31 P **P** **19 26 02.7 +0.8**
baz=272
SMRA Abu-Samra 63.91 287 P **P** **19 26 06.0 +3.2**
SNR=7.4
SMRA S **S** **19 34 42.0 +3.1**
GANJ Ganja 64.08 305 P **P** **19 26 02.0 -1.8**
G18K Tagagawik 64.13 27 P **P** **19 26 04.9 +1.3**
baz=271
M16K Timber Creek 64.16 32 P **P** **19 26 02.4 -1.4**
M16K Timber Creek 64.16 32 P **P** **19 26 05.0 +1.2**
baz=273
H18K Honhosa River 64.26 28 P **P** **19 26 03.8 -0.7**
H18K IAmb IAmb 19 26 12.2
comp=Z,77nm,1.7s
H18K Honhosa River 64.26 28 P **P** **19 26 04.8 +0.3**
baz=272
N16K Nishlik Lake 64.28 33 P **P** **19 26 04.8 +0.1**
baz=274
D19K Kuna River 64.31 24 P **P** **19 26 04.4 -0.4**
D19K Kuna River 64.31 24 P **P** **19 26 06.0 +1.2**
baz=270
K17K Idlitarod 64.39 30 P **P** **19 26 05.6 +0.3**
baz=273
L17K Donlin 64.42 31 P **P** **19 26 06.5 +1.0**
baz=273
F19K Shaleruckik Mo 64.46 26 P **P** **19 26 07.0 +1.3**
baz=271
E19K Redstone River 64.66 25 IAmb IAmb 19 26 13.9
comp=Z,28nm,1.0s
E19K Redstone River 64.66 25 P **P** **19 26 08.1 +1.1**
baz=272
O16K Kokwok River B 64.69 34 P **P** **19 26 06.9 -0.4**
O16K IAmb IAmb 19 26 15.1
comp=Z,31nm,1.2s
O16K Kokwok River B 64.69 34 P **P** **19 26 08.7 +1.4**
baz=274
G19K Purcell Mounta 64.76 26 P **P** **19 26 09.0 +1.3**
baz=272
A21K Barrow 64.82 21 P **P** **19 26 08.1 +0.2**
baz=270
D20K Etivluk River 64.86 24 P **P** **19 26 08.2 -0.2**
baz=272
M17K Holitna River 64.87 32 P **P** **19 26 10.1 +1.6**
baz=274
GCSA Galena City Sc 64.91 28 P **P** **19 26 10.2 +1.5**
baz=273
NAX Nakhchivan 64.98 304 P **P** **19 26 08.0 -1.7**
E20K Nigu River 65.03 24 P **P** **19 26 11.6 +2.1**
baz=272
H19K Roundabout Mou 65.05 27 P **P** **19 26 12.2 +2.6**
baz=273
J18K Innoko River 65.06 29 P **P** **19 26 11.3 +1.6**
baz=274
N17K Nushagak Hills 65.06 33 P **P** **19 26 09.2 -0.5**
N17K IAmb IAmb 19 26 21.2
comp=Z,71nm,1.6s
N17K Nushagak Hills 65.06 33 P **P** **19 26 10.7 +1.0**
baz=275
L18K Granite Mounta 65.17 31 P **P** **19 26 10.5 +0.1**
L18K IAmb IAmb 19 26 18.7
comp=Z,58nm,1.4s
L18K Granite Mounta 65.17 31 P **P** **19 26 12.5 +2.1**
baz=274
O17K Koliganek Bris 65.17 33 P **P** **19 26 12.1 +1.6**
baz=275

F20K Avaraart Lake 65.26 25 P **P** **19 26 13.0 +2.1**
baz=273
GNI Garni 65.36 305 *i* P **P** **19 26 11.7 -0.6**
GNI pmax pmax
comp=Z,38nm,1.3s
GNI Garni 65.36 305 LR LR 19 58 19.5
comp=Z,1μm,20.8s,baz=80,slow=39
TTA Tatalina 65.42 30 P **P** **19 26 11.0 -1.1**
TTA IAmb IAmb 19 26 20.0
comp=Z,58nm,1.6s
TTA Tatalina 65.42 30 P **P** **19 26 13.4 +1.3**
TTA Tatalina 65.42 30 P **P** **19 26 13.9 +1.7**
baz=275,SNR=10
TTA Tatalina 65.42 30 P **P** **19 26 11.0 -1.1**
TTA pmax pmax
comp=Z,58nm,1.6s
ZEI Tsey 65.48 308 *e* P **P** **19 26 12.0 -1.1**
ZEI pmax pmax
comp=Z,34nm,1.4s
C21K Knifeblade Rid 65.50 23 P **P** **19 26 14.2 +1.7**
baz=273
J19K Poorman 65.51 29 P **P** **19 26 11.2 -1.4**
J19K IAmb IAmb 19 26 20.5
comp=Z,39nm,1.1s
J19K Poorman 65.51 29 P **P** **19 26 14.2 +1.6**
baz=275,SNR=14
B21K Ikpikpuk River 65.54 22 P **P** **19 26 11.0 -1.6**
B21K IAmb IAmb 19 26 24.3
comp=Z,42nm,0.9s
B21K Ikpikpuk River 65.54 22 P **P** **19 26 13.2 +0.5**
baz=273
P17K Kvichak River 65.56 34 P **P** **19 26 15.7 +2.7**
baz=276
VRH Novokhopyorsk 65.57 317 *e* P **P** **19 26 13.6 +0.4**
VRH pmax pmax
comp=Z,34nm,0.6s
KLMR Klimovskoe 65.62 328 *e* P **P** **19 26 10.9 -2.5**
KLMR *e* 19 28 34.6
KLMR pmax pmax
comp=Z,126nm,1.5s
KLMR MLR MLR
comp=Z,5μm,12.0s
M18K Stony River 65.64 31 P **P** **19 26 15.3 +1.9**
baz=276
GOF Gofitskoye 65.68 310 *ce* P **P** **19 26 15.3 +1.2**
N18K Kilae Creek 65.69 32 P **P** **19 26 15.8 +1.9**
baz=276
H20K Anotleneega Mo 65.70 27 P **P** **19 26 14.9 +1.0**
baz=275,SNR=9.2
SVW2 Sparrevohn 65.79 32 P **P** **19 26 15.7 +1.2**
E21K Killik River 65.84 24 P **P** **19 26 15.5 +0.8**
baz=274
ONI Oni 65.84 308 P **P** **19 26 13.6 -1.6**
ONI IAmb IAmb 19 26 45.1
comp=Z,49nm,1.2s
ONI Oni 65.84 308 P **P** **19 26 13.6 -1.6**
ONI pmax pmax
comp=Z,49nm,1.2s
B22K Teshekpuk Lake 65.91 22 IAmb IAmb 19 26 26.3
comp=Z,38nm,0.9s
B22K Teshekpuk Lake 65.91 22 P **P** **19 26 15.8 +0.7**
baz=274
I20K Naaghedeneel 65.93 28 P **P** **19 26 17.4 +2.1**
baz=275
Q17K Contact Creek 65.96 35 P **P** **19 26 17.6 +1.9**
baz=277
KBZ Khabaz 66.02 309 *i* P **P** **19 26 14.5 -1.7**
KBZ pmax pmax
comp=Z,29nm,1.4s
KBZ Khabaz 66.02 309 P **P** **19 26 15.2 -1.0**
comp=Z,6.5nm,0.8s,baz=101,slow=4.5,SNR=15
KBZ LR LR 19 59 18.6
comp=Z,1μm,18.1s,baz=75,slow=40
comp=Z,6.5nm,0.8s
L19K White Mountain 66.02 31 P **P** **19 26 18.4 +2.4**
baz=276
O18K Koktuh Hills 66.11 33 P **P** **19 26 15.3 -1.4**
O18K Koktuh Hills 66.11 33 P **P** **19 26 17.1 +0.5**
baz=277
F21K Alatna River 66.12 25 IAmb IAmb 19 26 23.2
comp=Z,38nm,1.6s
F21K Alatna River 66.12 25 P **P** **19 26 17.6 +1.0**
baz=275
KIV Kislovodsk 66.13 309 ⇑P **P** **19 26 17.7 +0.6**
KIV Kislovodsk 66.13 309 P **P** **19 26 15.4 -1.7**
KIV Kislovodsk 66.13 309 *e* P **P** **19 26 18.5 +1.4**
KIV *e* S **S** **19 35 08.6 +2.8**
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,859nm,17.0s
J20K Nowinta River 66.14 28 P **P** **19 26 19.4 +2.7**
baz=276
P18K Big Mountain, 66.16 34 P **P** **19 26 15.9 -1.0**
P18K Big Mountain, 66.16 34 P **P** **19 26 19.1 +2.2**
baz=277
G21K Allakaket 66.18 26 IAmb IAmb 19 26 24.8
comp=Z,55nm,1.2s
G21K Allakaket 66.18 26 P **P** **19 26 17.9 +1.0**
baz=275,SNR=24
K20K Telida 66.26 29 P **P** **19 26 19.9 +2.5**
baz=276
M19K Big River Lodg 66.27 31 P **P** **19 26 16.1 -1.5**
M19K IAmb IAmb 19 26 28.9
comp=Z,39nm,1.1s
M19K Big River Lodg 66.27 31 P **P** **19 26 18.7 +1.1**
baz=277
D22K Ayikyak River 66.28 23 P **P** **19 26 17.7 +0.2**
baz=275
N19K Bonanza Creek 66.36 32 P **P** **19 26 17.3 -0.9**
N19K IAmb IAmb 19 26 55.1
comp=Z,70nm,1.5s
N19K Bonanza Creek 66.36 32 P **P** **19 26 19.9 +1.6**
baz=277
L20K Farewell, AK 66.44 30 P **P** **19 26 20.0 +1.3**
baz=277
H21K Melozitna Rive 66.55 27 P **P** **19 26 18.2 -1.1**
H21K IAmb IAmb 19 26 26.7
comp=Z,37nm,1.1s
H21K Melozitna Rive 66.55 27 P **P** **19 26 21.1 +1.8**
baz=276
E22K Anaktuvuk Pass 66.67 24 P **P** **19 26 23.2 +3.1**
baz=276
M20K Styx River 66.87 31 P **P** **19 26 24.0 +2.5**
baz=278
G22K Bettles 66.92 25 P **P** **19 26 22.7 +1.1**
baz=277
I21K Tanana 66.95 27 P **P** **19 26 23.2 +1.4**
baz=277
CHUM Lake Minchumin 66.97 29 P **P** **19 26 24.8 +2.9**
baz=278,SNR=8.8
D23K Nanushuk River 66.99 23 P **P** **19 26 24.4 +2.3**
baz=277
Q19K Cape Douglas, 67.03 34 P **P** **19 26 24.4 +1.9**
baz=278
VORR Voronezh 67.05 318 *e* P **P** **19 26 23.3 +0.6**
VORR pmax pmax
comp=Z,52nm,0.4s
LPSR Galich'ya Gora 67.06 319 *e* P **P** **19 26 21.0 -1.7**
LPSR pmax pmax
comp=Z,60nm,1.1s
LPSR MLR MLR
comp=Z,2μm,10.0s
H22K Ishtalitna Cre 67.11 26 P **P** **19 26 24.4 +1.6**
baz=278
SII Sitkinak Islan 67.11 37 P **P** **19 26 24.7 +1.7**
baz=279
CAST Castle Rocks 67.14 29 P **P** **19 26 22.4 -0.7**
CAST Castle Rocks 67.14 29 P **P** **19 26 25.3 +2.2**
baz=278,SNR=9.4
VSR Storozhevoye 67.15 317 *e* P **P** **19 26 21.0 -2.4**
VSR pmax pmax
comp=Z,30nm,1.2s
VSR MLR MLR
comp=Z,2μm,10.0s
PPLA Purkeypile 67.16 30 P **P** **19 26 26.1 +2.7**
baz=278
MOS Moscow 67.29 322 *e* P **P** **19 26 22.4 -1.7**
MOS *e* 19 26 48.2
MOS *e* 19 28 49.3
MOS *e* S **S** **19 35 17.3 -1.9**
MOS pmax pmax
comp=Z,88nm,1.5s
MOS MLR MLR
comp=Z,4μm,15.0s
MOS MLR MLR

comp=E,2µm,14.0s
ERBR Yeremizino-Bor 67.33 311 *e*P **P** **19 26 24.2 -0.4**
ERBR *e*S **S** **19 35 21.7 +1.7**
ERBR pmax pmax
comp=Z,48nm,0.9s
ERBR MLR MLR
comp=Z,2µm,13.0s
ERBR MLR MLR
comp=N,2µm,12.0s
ERBR MLR MLR
comp=E,4µm,11.0s
O20K Slope Mountain 67.37 33 P **P** **19 26 26.1 +1.4**
baz=279
LABN Labinsk 67.38 310 *e*P **P** **19 26 26.0 +1.1**
LABN *e*S **S** **19 35 27.4 +6.7**
LABN pmax pmax
comp=Z,50nm,1.6s
LABN MLR MLR
comp=Z,2µm,10.0s
LABN MLR MLR
comp=E,3µm,11.0s
LABN MLR MLR
comp=N,3µm,13.0s
COLD Coldfoot 67.39 25 P **P** **19 26 26.2 +1.6**
baz=278,SNR=5.5
N20K Mount Spurr 67.40 32 P **P** **19 26 26.8 +1.9**
baz=279,SNR=10
TOLK Toolik Lake Re 67.43 23 P **P** **19 26 23.8 -1.1**
TOLK IAmb IAmb 19 26 31.9
comp=Z,75nm,1.6s
TOLK Toolik Lake Re 67.43 23 P **P** **19 26 25.2 +0.3**
baz=278,SNR=19
APA Apatity 67.47 335 ⇓ *i*P **P** **19 26 27.0 +1.9**
APA pmax pmax
comp=Z,13nm,1.3s
OHAK Old Harbor 67.48 36 P **P** **19 26 26.8 +1.5**
OHAK Old Harbor 67.48 36 P **P** **19 26 26.4 +1.1**
baz=280
MLY Manley 67.49 27 P **P** **19 26 26.0 +0.7**
baz=278,SNR=9.3
E23K Chandalar 67.50 24 P **P** **19 26 26.3 +0.9**
baz=278
G23K Bananza Creek 67.53 25 IAmb IAmb 19 26 32.8
comp=Z,42nm,1.3s
G23K Bananza Creek 67.53 25 P **P** **19 26 27.0 +1.4**
baz=278
C24K Franklin Bluff 67.58 22 P **P** **19 26 26.6 +0.9**
baz=278
SKT Skwentna 67.60 31 P **P** **19 26 24.7 -1.4**
SKT Skwentna 67.60 31 P **P** **19 26 26.8 +0.7**
baz=279
D24K Happy Valley 67.62 23 IAmb IAmb 19 26 36.9
comp=Z,37nm,1.0s
D24K Happy Valley 67.62 23 P **P** **19 26 28.2 +2.1**
baz=278
KTH Kantishna Hill 67.63 29 P **P** **19 26 25.3 -1.0**
KTH IAmb IAmb 19 26 34.0
comp=Z,58nm,1.5s
KDAK Kodiak Island 67.77 35 P **P** **19 26 29.0 +1.9**
baz=280
KDAK Kodiak Island 67.77 35 LR LR 19 56 46.2
comp=Z,845nm,20.7s,baz=304,slow=37
E24K Your Creek 67.91 24 IAmb IAmb 19 26 41.7
comp=Z,28nm,1.1s
E24K Your Creek 67.91 24 P **P** **19 26 28.9 +0.9**
baz=279
TRF Thorofare Moun 67.93 29 P **P** **19 26 29.2 +0.9**
baz=280
CAPN Captain Cook N 67.98 32 P **P** **19 26 31.2 +2.9**
baz=280
OBN Obninsk 67.99 322 *ce*P **P** **19 26 28.8 +0.3**
OBN *i* *PP **sP** **19 26 32.3 -0.2**
OBN *i* *SP **pP** **19 26 34.2 +2.8**
OBN *i* 19 26 53.1
OBN *i* S **S** **19 35 27.9 +0.3**
OBN *e* 19 36 16.5
OBN pmax pmax
comp=Z,68nm,1.7s
OBN MLR MLR
comp=Z,2µm,18.0s
OBN Obninsk 67.99 322 LR LR 19 58 40.8
comp=Z,2µm,19.1s,baz=54,slow=38
I23K Minto, Yukon-K 68.05 27 IAmb IAmb 19 26 42.6
comp=Z,38nm,1.3s
I23K Minto, Yukon-K 68.05 27 P **P** **19 26 31.0 +2.3**
baz=280
SUA Susitna One 68.06 31 P **P** **19 26 30.6 +1.6**
baz=280,SNR=18
CUT Chulitna 68.11 30 P **P** **19 26 31.3 +2.1**
baz=280
F24K Squaw Lake 68.23 24 P **P** **19 26 29.3 -0.6**
F24K IAmb IAmb 19 26 36.2
comp=Z,26nm,0.8s
F24K Squaw Lake 68.23 24 P **P** **19 26 32.0 +2.0**
baz=280
NEA2 Nenana 68.27 28 P **P** **19 26 29.6 -0.5**
NEA2 Nenana 68.27 28 P **P** **19 26 32.0 +1.8**
baz=280
SOC Sochi 68.31 309 *e*P **P** **19 26 29.6 -1.2**
SOC *e* 19 28 59.4
SOC *e*PPP PPP 19 30 35.6
SOC *e*S **S** **19 35 32.3 +0.4**
SOC *e*SS **SS** **19 39 59.1 +4.4**
SOC pmax pmax
comp=Z,30nm,1.0s
SOC MLR MLR
comp=Z,2µm,13.0s
BRSE Bradley Lake S 68.36 33 P **P** **19 26 32.6 +1.7**
baz=281
D25K Kavik River 68.46 22 IAmb IAmb 19 26 38.2
comp=Z,36nm,1.0s
D25K Kavik River 68.46 22 P **P** **19 26 32.3 +1.0**
baz=281
MCK McKinley 68.48 29 P **P** **19 26 33.5 +2.0**
baz=280
G24K Hadweenzic Riv 68.53 25 P **P** **19 26 30.5 -1.3**
G24K IAmb IAmb 19 26 39.2
comp=Z,58nm,1.4s
G24K Hadweenzic Riv 68.53 25 P **P** **19 26 33.9 +2.0**
baz=281
H24K Noodor Dome 68.53 26 IAmb IAmb 19 26 39.4
comp=Z,38nm,1.2s
H24K Noodor Dome 68.53 26 P **P** **19 26 34.1 +2.2**
baz=281
RND Reindeer 68.57 29 P **P** **19 26 30.9 -1.3**
RND Reindeer 68.57 29 P **P** **19 26 30.9 -1.3**
RND pmax pmax
comp=Z,48nm,0.8s
RC01 Rabbit Creek A 68.60 31 P **P** **19 26 34.1 +1.8**
baz=281
O22K Cooper Landing 68.72 32 P **P** **19 26 33.2 +0.1**
baz=281
COLA College 68.73 27 P **P** **19 26 34.8 +1.8**
PMR Palmer 68.79 31 P **P** **19 26 32.6 -0.9**
baz=281
WAT1 Susitna Watana 68.82 29 P **P** **19 26 33.3 -0.3**
baz=281
POKR Poker Flat Res 68.85 27 P **P** **19 26 33.0 -0.8**
baz=281,SNR=12
RAYN Ar Rayn 68.92 287 P **P** **19 26 33.8 -1.2**
RAYN IAmb IAmb 19 27 15.5
comp=Z,55nm,1.5s
RAYN Ar Rayn 68.92 287 P **P** **19 26 33.8 -1.2**
RAYN pmax pmax
comp=Z,55nm,1.5s
SEW Seward 68.93 32 P **P** **19 26 35.1 +0.7**
baz=282
E25K Arctic Village 68.98 24 IAmb IAmb 19 26 42.7
comp=Z,46nm,1.4s
E25K Arctic Village 68.98 24 P **P** **19 26 35.6 +1.0**
baz=282,SNR=8.0
G25K Bearman Lake 69.06 25 P **P** **19 26 36.9 +1.9**
baz=282
F25K Christian Rive 69.06 24 P **P** **19 26 37.4 +2.2**
baz=282
SML Sawmill 69.12 31 P **P** **19 26 35.5 -0.2**
SML IAmb IAmb 19 26 42.7
comp=Z,44nm,1.0s
SML Sawmill 69.12 31 P **P** **19 26 35.8 +0.2**
baz=282
KNK Knik Glacier 69.14 31 P **P** **19 26 36.0 +0.3**
baz=282
ILAR Eielson Array 69.15 27 P **P** **19 26 34.0 -1.6**
comp=Z,1.4nm,0.6s,baz=293,slow=6.1,SNR=31
ILAR LR LR 20 01 41.2
comp=Z,844nm,18.1s,baz=278,slow=40
comp=Z,1.4nm,0.6s

HDA Harding Lake 69.20 28 IAmb IAmb 19 26 42.2
comp=Z,35nm,1.2s
HDA Harding Lake 69.20 28 P **P** **19 26 35.9 -0.1**
baz=282,SNR=9.0
WAT6 Susitna Watana 69.23 30 P **P** **19 26 36.5 +0.1**
baz=282
DHY Denali Highway 69.30 29 IAmb IAmb 19 28 05.2
comp=Z,39nm,1.7s
DHY Denali Highway 69.30 29 P **P** **19 26 37.3 +0.6**
baz=282
M23K Glacier View 69.41 30 P **P** **19 26 38.7 +1.3**
baz=282
PRP Porcupine Dome 69.55 26 P **P** **19 26 37.6 -0.7**
PRP IAmb IAmb 19 26 46.0
comp=Z,51nm,1.6s
SCM Sheep Creek Mo 69.58 30 P **P** **19 26 39.3 +0.8**
baz=283
F26K Sheenjek River 69.60 24 P **P** **19 26 39.4 +1.0**
baz=283,SNR=28
ANN Anapa 69.63 311 *e*P **P** **19 26 39.2 +0.2**
ANN *e**PP **sP** **19 26 42.5 -0.4**
ANN *e*S **S** **19 35 48.4 +1.0**
ANN pmax pmax
comp=Z,63nm,1.0s
ANN MLR MLR
comp=N,854nm,14.0s
ANN MLR MLR
comp=Z,2µm,16.0s
ANN MLR MLR
comp=E,2µm,12.0s
SPITS Spitsbergen Ar 69.80 348 LR LR 20 01 13.1
comp=E,4µm,18.5s,baz=19,slow=39
J25K Salcha River, 69.82 27 P **P** **19 26 39.5 -0.4**
baz=283
K24K Donnelly Dome 69.83 28 P **P** **19 26 41.0 +1.0**
baz=283,SNR=13
G26K Porcupine Rive 69.91 25 P **P** **19 26 41.7 +1.5**
baz=284
ARCES ARCESS Array B 69.93 338 P **P** **19 26 38.6 -1.8**
comp=E,2.3nm,0.8s,baz=56,slow=6.6,SNR=1.4
ARCES LR LR 20 02 30.6
comp=E,1µm,18.1s,baz=72,slow=40
comp=E,2.3nm,0.8s
M24K Tolsona, Glenn 70.05 30 P **P** **19 26 40.8 -0.5**
M24K Tolsona, Glenn 70.05 30 P **P** **19 26 42.6 +1.3**
baz=284
PAX Paxson 70.17 29 P **P** **19 26 43.7 +1.7**
baz=284
RIDG Independent Ri 70.25 28 P **P** **19 26 41.9 -0.6**
RIDG IAmb IAmb 19 26 55.2
comp=Z,76nm,1.5s
RIDG Independent Ri 70.25 28 P **P** **19 26 43.4 +0.8**
baz=284
KLU Klutina 70.31 31 P **P** **19 26 44.7 +1.6**
baz=284
D27M Malcolm River 70.35 22 IAmb IAmb 19 26 50.2
comp=Z,36nm,1.1s
D27M Malcolm River 70.35 22 P **P** **19 26 43.6 +0.5**
baz=286
HARP HAARP 70.44 30 P **P** **19 26 44.6 +0.9**
baz=284
SCRK Sand Creek 70.56 28 P **P** **19 26 44.2 -0.3**
SCRK IAmb IAmb 19 26 51.5
comp=Z,94nm,1.8s
SCRK Sand Creek 70.56 28 P **P** **19 26 46.0 +1.5**
baz=285,SNR=7.7
I26K Coal Creek Min 70.57 26 IAmb IAmb 19 26 57.2
comp=Z,34nm,1.2s
I26K Coal Creek Min 70.57 26 P **P** **19 26 46.4 +2.0**
baz=285
J26L Joseph Creek 70.61 27 P **P** **19 26 45.4 +0.6**
baz=285
N25K Chitina, Valde 70.90 30 P **P** **19 26 47.3 +0.8**
baz=285
H27K Steamboat Moun 70.97 25 P **P** **19 26 48.2 +1.3**
baz=286
E28M Babbage River 71.03 23 IAmb IAmb 19 26 54.2
comp=Z,27nm,1.1s
E28M Babbage River 71.03 23 P **P** **19 26 48.5 +1.4**
baz=287
BMRM Bremner River 71.06 31 P **P** **19 26 48.1 +0.6**
baz=285
D28M Stokes Point 71.08 22 P **P** **19 26 48.2 +0.8**
baz=288
L26K Log Cabin Wild 71.09 29 P **P** **19 26 49.1 +1.5**
baz=286
I27K Kandik River 71.11 26 P **P** **19 26 49.2 +1.5**
baz=286
F28M Old Crow 71.20 24 P **P** **19 26 48.0 -0.2**
F28M IAmb IAmb 19 26 55.3
comp=Z,41nm,1.1s
F28M Old Crow 71.20 24 P **P** **19 26 49.6 +1.4**
baz=287,SNR=26
K27K Chicken 71.36 28 IAmb IAmb 19 26 56.4
comp=Z,30nm,1.1s
K27K Chicken 71.36 28 P **P** **19 26 50.6 +1.4**
baz=286
M26K Nabesna, AK 71.42 29 IAmb IAmb 19 26 57.1
comp=Z,66nm,1.4s
M26K Nabesna, AK 71.42 29 P **P** **19 26 50.5 +0.8**
baz=286
EGAK Eagle 71.53 27 P **P** **19 26 50.3 +0.1**
baz=287
E29M Blow River 71.67 23 P **P** **19 26 51.1 +0.1**
baz=289
MCARA McCarthy VSAT 71.69 30 P **P** **19 26 51.1 -0.1**
MCARA IAmb IAmb 19 27 17.8
comp=Z,59nm,1.1s
MCARA McCarthy VSAT 71.69 30 P **P** **19 26 51.9 +0.7**
baz=286
L27K Beaver Creek, 71.74 28 IAmb IAmb 19 27 06.2
comp=Z,32nm,1.1s
L27K Beaver Creek, 71.74 28 P **P** **19 26 52.4 +0.8**
baz=287
I28M Miner Creek 71.82 26 IAmb IAmb 19 27 25.5
comp=Z,62nm,1.6s
I28M Miner Creek 71.82 26 P **P** **19 26 53.8 +1.6**
baz=288
SIM Simferopol' 71.87 312 *e*P **P** **19 26 53.5 +0.9**
SIM *e* 19 29 33.2
SIM *e*S **S** **19 36 10.1 -3.5**
SIM pmax pmax
comp=Z,26nm,0.8s
SIM pmax pmax
comp=Z,59nm,13.6s
FINES FINESS Array B 71.89 330 *i*P **P** **19 26 52.5 +0.1**
FINES pmax pmax
comp=Z,7.0nm,0.7s
FINES FINESS Array B 71.89 330 P **P** **19 26 50.6 -1.8**
comp=Z,3.3nm,0.7s,baz=46,slow=5.4,SNR=12
FINES LR LR 20 01 18.0
comp=Z,6µm,19.2s,baz=73,slow=38
comp=Z,3.3nm,0.7s
M27K Edge Creek, AK 71.93 29 P **P** **19 26 54.2 +1.3**
baz=287
H29M Whitestone 72.19 25 P **P** **19 26 55.8 +1.6**
baz=289
BVCY Beaver Creek 72.36 29 P **P** **19 26 56.8 +1.5**
baz=288
BARN Barnard Glacie 72.41 30 P **P** **19 26 54.2 -1.7**
BARN IAmb IAmb 19 27 08.8
comp=Z,58nm,1.4s
VSU Vasula 72.45 327 *i*P **P** **19 26 51.3 -4.5**
VSU pmax pmax
comp=Z,65nm,1.3s
VSU Vasula 72.45 327 *e*P **P** **19 26 56.3 +0.5**
DAWY Dawson 72.48 27 P **P** **19 26 54.7 -1.3**
DAWY IAmb IAmb 19 27 03.1
comp=Z,28nm,1.1s
DAWY Dawson 72.48 27 P **P** **19 26 56.8 +0.8**
baz=289,SNR=13
CTG Chitna Glacier 72.59 31 P **P** **19 26 57.7 +0.9**
baz=288
F30M Barrier River 72.68 23 P **P** **19 26 57.6 +0.5**
baz=291
YUK3 Moose Creek 72.74 30 P **P** **19 26 59.0 +1.2**
baz=288
G30M tAoh Zraii Nji 72.74 24 IAmb IAmb 19 27 03.5
comp=Z,44nm,1.1s
G30M tAoh Zraii Nji 72.74 24 P **P** **19 26 58.6 +1.1**
baz=290
EPYK Eagle Plains 72.77 24 IAmb IAmb 19 27 10.7
comp=Z,27nm,1.1s
EPYK Eagle Plains 72.77 24 P **P** **19 26 58.7 +1.0**
baz=290,SNR=15
J29N Klondike Camp 72.83 27 IAmb IAmb 19 29 11.2
comp=Z,542nm,0.3s
MNK Minsk 73.02 323 *i*P **P** **19 27 00.5 +1.2**
comp=E,5.0nm,0.9s
MNK *i*P **P** **19 27 00.5 +1.2**
comp=N,4.0nm,0.9s
MNK *i*P **P** **19 27 00.5 +1.2**
comp=Z,15nm,0.9s,baz=73
MNK *i*PcP **PcP** **19 27 19.6 +3.5**
MNK *i*PP **PP** **19 29 42.5 +1.1**
MNK *i*PPP PPP 19 31 27.0
MNK *i*S **S** **19 36 27.8 +1.5**
MNK *i*SS SS 19 40 51.7 -15
MNK *i*LQ LQ 19 54 08.0
MNK *i*LR LR 19 58 58.0
MNK *i*LRM MLR 20 01 27.1
comp=Z,2µm,17.4s
MNK *i*LRM MLR 20 01 31.0
comp=E,682nm,17.4s
MNK *i*LRM MLR 20 01 31.0
comp=N,592nm,17.4s
MNK Minsk 73.02 323 *i*P **P** **19 27 00.5 +1.2**
YUK8 Steele Glacier 73.21 30 P **P** **19 27 00.8 +0.1**
baz=289
INK Inuvik 73.22 22 P **P** **19 27 00.0 -0.2**
baz=292,SNR=19
INK Inuvik 73.22 22 LR LR 20 01 43.7
comp=N,1µm,18.1s,baz=346,slow=38
I30M Mount Dempster 73.31 26 P **P** **19 26 59.8 -1.2**
I30M IAmb IAmb 19 27 19.0
comp=Z,42nm,1.1s
I30M Mount Dempster 73.31 26 P **P** **19 27 02.6 +1.6**
baz=291
L29M L29M 73.33 28 P **P** **19 27 02.5 +1.4**
baz=290
K29M Barlow Dome 73.33 27 P **P** **19 27 02.3 +1.2**
baz=290
PINM Pinnacle 73.38 31 P **P** **19 27 01.3 -0.1**
baz=289
AKASG Malin Array Be 73.38 318 P **P** **19 27 00.6 -0.9**
comp=Z,0.7nm,0.4s,baz=59,slow=5.4,SNR=11
AKASG LR LR 20 01 45.2
comp=Z,1µm,21.1s,baz=55,slow=38
comp=Z,0.7nm,0.4s
KIEV Kiev 73.39 318 P **P** **19 27 00.2 -1.3**
KIEV Kiev 73.39 318 P **P** **19 27 00.2 -1.3**
KIEV pmax pmax
comp=Z,33nm,1.4s
IDID Didziasalis 73.40 324 *e*P **P** **19 27 01.2 -0.3**
M29M Somme Creek 73.41 29 P **P** **19 27 01.9 +0.3**
baz=290
F31M Tsiigehtchic 73.47 23 IAmb IAmb 19 27 07.1
comp=Z,55nm,1.4s
F31M Tsiigehtchic 73.47 23 P **P** **19 27 01.2 -0.5**
baz=292,SNR=18
G31M Satah River 73.48 24 P **P** **19 27 01.9 +0.1**
baz=292
ASF Jabal al Asfar 73.53 298 LR LR 20 04 15.2
comp=Z,726nm,20.3s,baz=304,slow=40
J30M Hart River 73.56 26 P **P** **19 27 03.2 +0.7**
baz=291
IIGN Ignalina 73.67 324 *e*P **P** **19 27 02.6 -0.5**
YUK4 Talbot Arm 73.70 30 P **P** **19 27 04.3 +0.8**
baz=290
BR131 Keskin Array S 73.72 307 *i*P **P** **19 27 03.7 -0.2**
BR131 Keskin Array S 73.72 307 P **P** **19 27 04.9 +0.9**
SNR=8.5
BR131 S **S** **19 36 35.1 -0.1**
BRTR Keskin Array B 73.72 307 *i*P **P** **19 27 04.6 +0.7**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 73.72 307 P **P** **19 27 02.2 -1.8**
comp=Z,3.8nm,0.8s,baz=111,slow=5.8,SNR=9.7
BRTR LR LR 20 03 57.8
comp=Z,916nm,18.7s,baz=80,slow=40
comp=Z,3.8nm,0.8s
MTSE Matsula 73.82 327 *e*P **P** **19 27 03.6 -0.3**
PNL Peninsula 73.93 31 P **P** **19 27 06.0 +1.4**
baz=290
YUK6 Outpost Mounta 73.97 30 P **P** **19 27 05.6 +0.5**
baz=290
M30M Minto, Yukon 74.09 28 IAmb IAmb 19 27 27.8
comp=Z,38nm,1.2s
M30M Minto, Yukon 74.09 28 P **P** **19 27 06.9 +1.4**
baz=291
A36M Sachs Harbour 74.16 17 P **P** **19 27 06.1 +0.4**
baz=299
ANTO Ankara 74.30 307 P **P** **19 27 06.5 -0.7**
ANTO P **P** **19 27 06.5 -0.7**
ANTO S **S** **19 36 42.2 +0.7**
ANTO S **S** **19 36 42.2 +0.7**
N30M Aishikik Lake 74.36 29 P **P** **19 27 06.9 -0.3**
baz=291
HYT Haines Junctio 74.41 30 P **P** **19 27 07.1 -0.4**
baz=291
MMAI Mount Meron Ar 74.46 300 P **P** **19 27 07.6 -0.7**
comp=Z,1.3nm,0.6s,baz=109,slow=9.9,SNR=5.7
MMAI LR LR 20 04 38.7
comp=Z,981nm,19.2s,baz=26,slow=40
comp=Z,1.3nm,0.6s
SORM Soroca 74.72 316 ⇑P **P** **19 27 10.0 +0.6**
SORM Soroca 74.72 316 P **P** **19 27 10.0 +0.6**
P29M Windy Craggy 74.73 31 P **P** **19 27 08.4 -0.9**
P29M Windy Craggy 74.73 31 P **P** **19 27 09.0 -0.3**
baz=291
PABE Paberze 74.83 324 P **P** **19 27 09.2 -0.6**
PABE Paberze 74.83 324 *e*P **P** **19 27 09.5 -0.3**
P30M Million Dollar 74.91 31 P **P** **19 27 10.3 -0.1**
baz=292
N31M Braeburn, Yuko 74.94 29 P **P** **19 27 11.9 +1.4**
baz=292
O30N Mendenhall 75.07 30 P **P** **19 27 12.2 +1.0**
baz=292
M31M Drury Creek, Y 75.27 28 P **P** **19 27 10.4 -1.9**
M31M Drury Creek, Y 75.27 28 P **P** **19 27 12.7 +0.4**
baz=293
ATD Arta Tunnel 75.37 276 LR LR 19 58 53.2
comp=Z,22nm,22.0s,baz=65,slow=35
PLBC Pleasant Camp 75.44 31 P **P** **19 27 12.9 -0.4**
baz=292
WHY Whitehorse 75.66 30 P **P** **19 27 14.3 -0.4**
WHY Whitehorse 75.66 30 P **P** **19 27 15.0 +0.2**
baz=293
FARO Faro, Yukon 75.70 28 P **P** **19 27 16.2 +1.4**
baz=294,SNR=8.2
TPGR Topolog 75.75 313 ⇑P **P** **19 27 16.2 +0.7**
SUW Suwalki 75.78 323 P **P** **19 27 14.1 -1.3**
SUW Suwalki 75.78 323 P **P** **19 27 14.1 -1.3**
SUW pmax pmax
comp=Z,88nm,1.0s
SUW Suwalki 75.78 323 *e*P **P** **19 27 15.5 +0.2**
C36M Paulatuk 75.82 20 P **P** **19 27 15.4 +0.1**
baz=301,SNR=16
CFR Carcaliu 75.84 313 ⇑P **P** **19 27 17.4 +1.5**
CFR Carcaliu 75.84 313 P **P** **19 27 17.3 +1.5**
EIL Eliat 75.92 296 LR LR 20 02 52.5
comp=Z,723nm,19.0s,baz=78,slow=38
SKAG Skagway 75.93 31 P **P** **19 27 16.7 +0.6**
baz=293
HARR Harsova 76.14 313 ⇑P **P** **19 27 19.2 +1.6**
HARR Harsova 76.14 313 P **P** **19 27 19.1 +1.6**
TESR Tescani 76.36 315 ⇑P **P** **19 27 20.0 +1.2**
MMPY Sheldon Lake, 76.42 27 P **P** **19 27 18.6 -0.3**
baz=296
VRI Vrincioaia 76.53 314 ⇑P **P** **19 27 21.0 +1.1**
VRI Vrincioaia 76.53 314 P **P** **19 27 20.9 +1.1**
PLOR Plostina 76.59 314 ⇑P **P** **19 27 21.6 +1.4**
PLOR Plostina 76.59 314 P **P** **19 27 21.6 +1.4**
P32M Atlin 76.63 30 P **P** **19 27 21.7 +1.5**
baz=294
ISP Isparta 76.64 306 *ce*P **P** **19 27 20.8 0.0**
ISP pmax pmax
comp=Z,35nm,1.7s
BISRR Bisoca 76.65 314 ⇑P **P** **19 27 21.6 +1.0**
P33M Teslin, Yukon 76.78 30 P **P** **19 27 21.1 0.0**
baz=295
R32K Eaglecrest 76.79 32 P **P** **19 27 22.0 +0.9**
baz=294
LVV L'vov 76.81 319 *e*P **P** **19 27 20.6 -0.7**
LVV *e* 19 30 16.6
LVV *e*S **S** **19 37 02.8 -6.0**
LVV *e*PS **PnS** **19 37 44.2 -2.4**
LVV *e*SS **SS** **19 42 11.2 +7.0**
LVV pmax pmax
comp=Z,40nm,1.9s
LVV MLR MLR
comp=E,2µm,14.0s
LVV MLR MLR
comp=N,1µm,13.0s

LVV MLR MLR
comp=Z,2µm,13.0s
COVR Voineasa-Covas 76.88 314 ⇑P P 19 27 23.6 +1.7
BURAR Bucovina Array 76.88 316 ⇑P P 19 27 23.4 +1.4
BURAR Bucovina Array 76.88 316 P P 19 27 23.3 +1.4
SIT Sitka 76.89 33 P P 19 27 22.2 +0.6
baz=294
TURR Turia 76.93 315 ⇑P P 19 27 23.7 +1.6
NEHR Nehoiu 76.97 314 ⇑P P 19 27 23.8 +1.5
OZUR 77.06 315 ⇑P P 19 27 23.9 +1.0
MLR Muntele Rosu 77.18 314 ⇑P P 19 27 24.3 +0.6
MLR Muntele Rosu 77.18 314 lAmb lAmb 19 27 59.0
comp=Z,46nm,1.6s
MLR Muntele Rosu 77.18 314 P P 19 27 24.2 +0.6
MLR Muntele Rosu 77.18 314 LR LR 20 06 44.3
comp=Z,1µm,18.9s,baz=54,slow=40
Q32M Nakina River 77.57 31 P P 19 27 25.9 +0.3
baz=296
KWP Kalwaria Pacla 77.68 319 *e*P **P 19 27 27.6 +1.4**
KWP Kalwaria Pacla 77.68 319 P P 19 27 24.6 -1.7
KWP Kalwaria Pacla 77.68 319 P P 19 27 24.6 -1.7
KWP pmax pmax
comp=Z,214nm,1.6s
VOIR 77.78 314 ⇑P P 19 27 28.8 +1.8
VOIR 77.78 314 P P 19 27 28.8 +1.8
R33M Jennings River 77.98 30 P P 19 27 26.6 -1.2
R33M Jennings River 77.98 30 P P 19 27 29.3 +1.4
baz=297
HFS Hagfors 78.00 331 P P 19 27 25.8 -2.0
comp=Z,3.4nm,0.8s,baz=91,slow=6.2,SNR=4.9
HFS LR LR 20 04 58.5
comp=Z,6µm,21.2s,baz=62,slow=38
comp=Z,3.4nm,0.8s
ELND Elena 78.16 312 ⇑P P 19 27 29.4 +0.4
HUMR Humele 78.17 313 ⇑P P 19 27 30.5 +1.5
TGTN Hyland Airport 78.17 27 P P 19 27 30.1 +1.3
baz=299
KOLS Kolonicke sedl 78.21 318 *e*P **P 19 27 31.8 +2.6**
KOLS Kolonicke sedl 78.21 318 *e*P **P 19 27 31.8 +2.6**
MARR Marisel-Cluj 78.56 316 ⇑P P 19 27 32.3 +1.0
S34M Telegraph Cree 78.57 31 P P 19 27 32.3 +1.3
baz=297
WTLY Watson Lake, Y 78.62 29 P P 19 27 33.6 +2.3
baz=298
WRAK Wrangell Islan 78.65 33 P P 19 27 33.4 +1.9
baz=296
NB2 NORSAR Subarra 78.66 332 P P 19 27 30.1 -1.4
comp=Z,52nm,1.4s,baz=61,slow=5.6
NB2 NORSAR Subarra 78.66 332 P P 19 27 30.1 -1.4
baz=61,slow=5.6
NOA NORSAR Array B 78.66 332 P P 19 27 29.5 -2.0
comp=Z,2.4nm,0.7s,baz=58,slow=5.5,SNR=8.1
NOA LR LR 20 04 31.6
comp=Z,3µm,21.4s,baz=60,slow=38
comp=Z,2.4nm,0.7s
CRAG Craig 78.67 34 P P 19 27 33.3 +1.7
baz=296
CRVS Cervenica-Dubn 78.72 319 *e*P **P 19 27 34.0 +2.0**
CRVS Cervenica-Dubn 78.72 319 *e*P **P 19 27 34.0 +2.0**
RES Resolute Bay 78.78 9 lAmb lAmb 19 27 36.6
comp=Z,55nm,1.8s
RES Resolute Bay 78.78 9 LR LR 20 06 47.7
comp=Z,2µm,18.1s,baz=340,slow=39
DLBC Dease Lake 78.85 31 P P 19 27 34.1 +1.5
baz=298,SNR=5.7
DLBC Dease Lake 78.85 31 LR LR 20 03 00.9
comp=Z,762nm,21.4s,baz=324,slow=36
DEV Deva 79.01 315 ⇑P P 19 27 34.8 +1.1
DEV Deva 79.01 315 P P 19 27 34.7 +1.1
JMIC Jan Mayen 79.17 345 LR LR 20 07 32.3
comp=Z,2µm,18.3s,baz=40,slow=40
OJC Ojcow 79.17 320 *e*P **P 19 27 36.0 +1.5**
OJC Ojcow 79.17 320 P P 19 27 33.8 -0.7
OJC lAmb lAmb 19 27 57.0
comp=Z,50nm,1.3s
OJC Ojcow 79.17 320 P P 19 27 33.8 -0.7
OJC pmax pmax
comp=Z,50nm,1.3s
NIE Niedzica 79.21 319 *e*P **P 19 27 33.2 -1.5**
PLD Plovdiv 79.22 311 *e*P **P 19 27 35.0 +0.1**
GZR Gura Zlata 79.28 315 ⇑P P 19 27 35.8 +0.5
GZR Gura Zlata 79.28 315 P P 19 27 35.7 +0.5
RZN Rozhen 79.40 311 *e*P **P 19 27 36.0 -0.1**
MPEP Malo Peshtene 79.44 313 *e*P **P 19 27 37.0 +0.9**
PGB Panagyurishte 79.47 312 *e*P **P 19 27 37.0 +0.7**
VALD Valchedram 79.51 313 *e*P **P 19 27 37.0 +0.6**
SURR Surduc 79.56 315 ⇑P P 19 27 38.3 +1.6
HERR Herculane 79.72 315 ⇑P P 19 27 37.7 +0.2
BLKB Belogradchik 80.05 313 ⇑P P 19 27 40.8 +1.4
VTS Vitosha 80.07 312 *e*P **P 19 27 40.0 +0.3**
KKB Krupnik 80.45 311 *e*P **P 19 27 41.0 -0.6**
MORC Moravsky Berou 80.68 320 *e*P **P 19 27 42.2 -0.5**
URZ Urewera 80.78 139 LR LR 20 01 21.2
comp=Z,434nm,20.3s,baz=120,slow=34
KSP Ksiaz 80.92 322 *e*P **P 19 27 44.4 +0.5**
KRLC Kraliky 80.99 321 AMS AMS 20 06 30.0
comp=Z,4µm,14.3s
JAVC Velka Javorina 81.01 320 *e*P **P 19 27 43.6 -0.9**
RPZ Rata Peaks 81.12 146 LR LR 20 01 27.3
comp=Z,363nm,20.6s,baz=316,slow=34
DPC Dobruska-Polom 81.13 321 *e*P **P 19 27 45.9 +0.8**
DPC AMS AMS 20 06 40.0
comp=Z,4µm,13.0s
DPC Dobruska-Polom 81.13 321 *e*P **P 19 27 45.9 +0.8**
DPC MLR MLR
comp=Z,4µm,13.0s
CHVC Chvalec 81.17 322 AMS AMS 20 06 50.0
comp=Z,3µm,17.3s
UPC Upice 81.23 322 AMS AMS 20 08 30.0
comp=Z,3µm,13.1s
FRGS Fruska Gora 81.29 316 ⇑P P 19 27 47.5 +1.5
VRAC Vranov 81.44 320 *e*P **P 19 27 45.1 -1.6**
VRAC Vranov 81.44 320 LR LR 20 07 43.4
comp=Z,2µm,19.8s,baz=50,slow=38
MODS Modra-Piesok 81.46 319 *e*P **P 19 27 46.1 -0.7**
MODS Modra-Piesok 81.46 319 *e*P **P 19 27 46.1 -0.7**
MORH Mrgy, Hungar 81.57 317 ⇑P P 19 27 48.8 +1.4
KRUC Moravsky 81.67 320 *e*P **P 19 27 50.1 +2.2**
IDI Anoyia 81.79 305 LR LR 20 10 29.7
comp=Z,298nm,18.5s,baz=46,slow=40
PVCC Panska Ves 82.04 322 AMS AMS 20 08 20.0
comp=Z,3µm,13.2s
TREC Trest 82.09 321 AMS AMS 20 07 40.0
comp=Z,3µm,13.6s
BRG Berggiesshubel 82.23 322 *e*P **P 19 27 53.0 +2.1**
BRG Amp 19 27 58.0
comp=Z,7.6nm,1.2s
BRG Berggiesshubel 82.23 322 *e*P **P 19 27 52.9 +2.1**
BRG pmax pmax
comp=Z,8.0nm,1.2s
BRG pmax pmax
comp=Z,32nm,1.7s
BRG MLR MLR
comp=N,2µm,12.1s
BRG MLR MLR
comp=Z,7µm,11.1s
BRG MLR MLR
comp=E,4µm,13.4s
RICC Richard 82.30 322 AMS AMS 20 08 10.0
comp=E,4µm,13.9s
PRU Pruhonice 82.31 322 AMS AMS 20 08 50.0
comp=E,3µm,21.6s
RONA Rosalia, Austr 82.35 319 *e*pP pP 19 27 52.4 -1.2
comp=E,5.1nm,1.3s
CONA Conrad Observa 82.50 319 *e*pP pP 19 27 54.4 0.0
comp=E,19nm,1.8s
CLL Collm 82.54 323 *i* P **P 19 27 53.0 +0.6**
CLL *e*S **S 19 38 09.0 -0.3**
CLL pmax pmax
comp=Z,51nm,1.9s
CLL Collm 82.54 323 *i* P **P 19 27 53.0 +0.6**
comp=Z,51nm,1.9s
CLL *i* x x 19 28 07.9
comp=Z,48nm,1.8s
CLL *i* x x 19 28 19.8
CLL *e*PP **PP 19 31 00.0 -1.2**
CLL *es*PP 19 31 09.0
CLL *e*S **S 19 38 09.0 -0.3**
CLL *es*S SS 19 43 42.0 +12
CLL *e*(SSS) 19 47 42.0
CLL AMS AMS 20 08 00.0
HSKC Hora Svate Kat 82.64 322 AMS AMS 20 08 20.0
comp=Z,7µm,12.4s
SUMG Summit 82.76 354 P **P 19 27 53.4 -0.3**
SUMG Summit 82.76 354 P **P 19 27 53.4 -0.3**
SUMG pmax pmax
comp=Z,26nm,1.2s
SUMG Summit 82.76 354 *i* P **P 19 27 56.0 +2.3**
ZVC Zvikov 82.77 321 *e*P **P 19 27 55.4 +1.7**
YKA Yellowknife Ar 82.95 23 *i* P **P 19 27 53.5 -0.8**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 82.95 23 P **P 19 27 53.6 -0.7**
comp=Z,2.4nm,0.6s,baz=314,slow=5.0,SNR=40
YKA LR LR 20 10 30.8
comp=Z,760nm,18.6s,baz=314,slow=40
comp=Z,2.4nm,0.6s
CKRC Cesky Krumlov 83.00 321 *e*P **P 19 27 56.7 +1.8**
CKRC AMS AMS 20 08 10.0
comp=Z,3µm,14.8s
CKRC Cesky Krumlov 83.00 321 *e*P **P 19 27 56.7 +1.8**
CKRC MLR MLR
comp=Z,3µm,14.8s
ARSA Arzberg 83.02 319 *e*pP pP 19 27 56.7 -0.3
comp=Z,4.1nm,1.3s
KHC Kasperske Hory 83.27 321 *e*P P 19 28 02.1 +5.8
KHC *ex* x 19 28 13.9
KHC AMS AMS 20 08 00.0
comp=Z,3µm,16.5s
KHC Kasperske Hory 83.27 321 *ce*P **P 19 27 55.7 -0.6**
KHC pmax pmax
comp=Z,49nm,1.7s
GERES GERESS Array B 83.34 321 P **P 19 27 56.6 -0.1**
comp=Z,2.0nm,0.8s,baz=46,slow=3.9,SNR=9.1
GERES LR LR 20 08 58.2
comp=Z,2µm,19.3s,baz=49,slow=39
comp=Z,2.0nm,0.8s
MOA Molln 83.49 320 *e*pP pP 19 27 58.3 -1.1
comp=Z,12nm,1.3s
SOKA Soboth 83.59 318 *e*pP pP 19 27 59.6 -0.4
comp=Z,15nm,1.6s
BIOA Bad Ischl, Aus 83.94 320 *e*PcP **PcP 19 28 03.4 -0.4**
comp=Z,9.3nm,1.2s
OBKA Obir 83.96 318 *e*PcP **PcP 19 28 03.3 -0.6**
comp=Z,17nm,1.6s
KBA Koelnbreinsper 84.41 319 *e*PcP **PcP 19 28 06.3 +0.3**
comp=Z,12nm,1.7s
MYKA Terra Mystica 84.45 319 *e*pP pP 19 28 03.6 -0.8
comp=Z,13nm,1.2s
LESA Schwarzleotal 84.63 320 *e*PcP **PcP 19 28 06.3 -0.6**
comp=Z,14nm,1.4s
ABTA Abfaltersbach 85.07 319 *e*PcP **PcP 19 28 07.6 -1.2**
comp=Z,9.8nm,1.5s
WATA Walderalm 85.33 320 *e*PcP **PcP 19 28 09.4 -0.7**
comp=Z,16nm,1.5s
WTTA Wattenberg 85.33 320 *e*PcP **PcP 19 28 10.5 +0.4**
comp=Z,9.4nm,0.9s
LODK Lodwar 85.34 272 P **P 19 28 10.2 +2.7**
SNR=7.4
MOTA Moosalm 85.60 320 *e*pP pP 19 28 12.7 +2.4
comp=Z,5.9nm,1.1s
SQTA Sankt Quirin 85.60 320 *e*pP pP 19 28 11.0 +0.7
comp=Z,9.4nm,1.0s
FETA Feichten 85.98 320 *e*pP pP 19 28 12.5 +0.3
comp=Z,9.6nm,1.4s
DAVA Damuels 86.34 321 pP pP 19 28 16.5 +2.5
comp=Z,7.2nm,1.1s
FUORN Ofenpass-Fuorn 86.47 320 P **P 19 28 11.5 -1.2**
FUORN lAmb lAmb 19 28 34.1
comp=Z,25nm,1.3s
DAVOX Davos/Dischmat 86.61 320 LR LR 20 11 15.7
comp=Z,2µm,21.0s,baz=37,slow=39
BORG Borgarnes 87.06 345 LR LR 20 09 56.0
comp=Z,2µm,20.2s,baz=27,slow=38
GNW Green Mountain 88.19 38 P **P 19 28 19.1 -1.6**
GNW lAmb lAmb 19 28 28.8
comp=Z,30nm,1.2s
VAE Valguarnera 88.41 311 LR LR 20 13 22.7
comp=Z,376nm,21.6s,baz=93,slow=39
RAR Rarotonga 88.55 114 LR LR 20 05 01.4
comp=Z,76nm,20.1s,baz=286,slow=34
D05A Emunclaw 88.88 38 P **P 19 28 21.8 -2.1**
SFJD Kangerlussuaq 89.13 357 LR LR 20 09 47.7
comp=Z,1µm,19.2s,baz=349,slow=37
B08A Colville Reser 89.64 36 P **P 19 28 25.5 -2.1**
B08A lAmb lAmb 19 28 35.0
comp=Z,28nm,1.2s
H04A Detroit Lake 90.19 40 lAmb lAmb 19 28 38.4
comp=Z,42nm,1.3s
E07A Sunnyside 90.43 37 P **P 19 28 29.7 -1.6**
I04A Tendick Farm, 90.56 41 P **P 19 28 30.8 -1.2**
D08A Wollman Farm, 90.65 37 P **P 19 28 31.0 -1.2**
G06A Carlson Farm, 90.77 39 P **P 19 28 31.9 -1.1**
NEW Newport 90.87 35 P **P 19 28 35.4 +2.1**
baz=308,SNR=16
HUMO Hull Mountain 90.91 42 lAmb lAmb 19 28 44.5
comp=Z,60nm,1.8s
E08A Dider Farm, El 90.91 37 P **P 19 28 31.6 -1.9**
E08A lAmb lAmb 19 28 41.3
comp=Z,49nm,1.5s
MBAR Mbarara 91.18 270 LR LR 20 11 23.2
comp=Z,490nm,18.6s,baz=47,slow=37
PINE Pine Mountain 91.44 40 P **P 19 28 34.1 -2.1**
YBH Yreka Blue Hor 91.55 43 lAmb lAmb 19 28 46.0
comp=Z,50nm,1.7s
J05D Fort Rock, OR 91.56 41 P **P 19 28 35.0 -1.7**
K05A Summer Lake 92.08 41 P **P 19 28 37.0 -2.3**
I07A Izee 92.10 39 lAmb lAmb 19 29 10.9
comp=Z,43nm,1.6s
FRB Frobisher Bay 92.19 5 LR LR 20 13 59.3
comp=Z,2µm,19.4s,baz=350,slow=38
FFC Flin Flon 93.11 24 P **P 19 28 41.8 -1.7**
FFC Flin Flon 93.11 24 P **P 19 28 41.8 -1.7**
FFC pmax pmax
comp=Z,46nm,1.2s
J08A Circle Bar Ran 93.14 39 P **P 19 28 41.7 -2.3**
J08A lAmb lAmb 19 28 55.4
comp=Z,20nm,1.0s
ORV Oroville 93.54 44 P **P 19 28 44.4 -1.4**
ORV Oroville 93.54 44 P **P 19 28 44.4 -1.4**
ORV pmax pmax
comp=Z,10.0nm,1.1s
AFDM Forest Hills D 94.23 44 lAmb lAmb 19 28 57.4
comp=Z,39nm,1.9s
CMB Columbia Colle 95.13 45 P **P 19 28 51.5 -1.7**
CMB lAmb lAmb 19 29 01.5
comp=Z,35nm,1.8s
CMB Columbia Colle 95.13 45 P **P 19 28 51.5 -1.7**
CMB pmax pmax
comp=Z,35nm,1.8s
HLID Hailey 95.31 37 P **P 19 28 57.5 +3.4**
baz=310,SNR=17
BOZ Bozeman (W) 95.46 34 P **P 19 28 56.9 +2.2**
baz=313,SNR=5.1
PPT Papeete 95.78 107 LR LR 20 02 51.6
comp=Z,570nm,21.5s,baz=248,slow=30
NVAR Mina Array Bea 96.22 43 P **P 19 28 58.9 +0.5**
comp=Z,1.3nm,0.7s,baz=296,slow=5.0,SNR=9.8
NVAR LR LR 20 11 46.7
comp=Z,159nm,20.1s,baz=321,slow=35
comp=Z,1.3nm,0.7s
ELK Elko 96.65 40 lAmb lAmb 19 29 07.3
comp=Z,35nm,1.9s
H17A Grant Village 96.83 35 P **P 19 29 04.2 +3.1**
baz=313,SNR=6.5
DGMT Dagmar 96.98 29 P **P 19 29 05.0 +3.7**
baz=319
RLMT Red Lodge 97.00 34 P **P 19 29 05.0 +3.2**
baz=314
MZP Montezuma Peak 97.24 43 P **P 19 28 59.2 -3.8**
MZP lAmb lAmb 19 29 01.1
comp=Z,5.2nm,0.6s
CWC Cottonwood Cre 97.56 45 P Pdif 19 29 06.9 +2.4
baz=307
R11B Troy Canyon, C 97.95 42 P Pdif 19 29 08.8 +2.6
baz=309
MPMC Manual Prospec 98.17 45 P Pdif 19 29 10.4 +3.1
baz=308
LRMC Laurel Mtn Rad 98.39 45 P Pdif 19 29 12.0 +3.8
baz=307
DUG Dugway, Tooele 98.41 39 P Pdif 19 29 11.4 +3.3
baz=311
PDAR Pinedale Array 98.48 36 LR LR 20 15 18.1
comp=Z,129nm,19.3s,baz=351,slow=36
ULM Lac du Bonnet 98.93 23 LR LR 20 17 16.8
comp=Z,2µm,18.1s,baz=346,slow=38
LSZ Lusaka 99.26 257 LR LR 20 14 30.3
comp=Z,808nm,18.0s,baz=80,slow=36
ROSC El Rosal 147.34 31 PKPbc **PKPbc 19 35 14.4 -0.3**
comp=Z,15nm,0.6s,baz=0.0,slow=4.0,SNR=1.6
OTAV Otavalo 148.95 42 PKPdf **PKPdf 19 35 11.4 -3.6**
OTAV Otavalo 148.95 42 PKHKP PKPpre 19 35 11.4
TULM Tulcn-Chalpat 148.97 40 PKPdf 19 35 10.7 -4.5
CHSH Refugio Sur-Vo 150.02 45 PKPdf 19 35 13.5 -3.5
COHC Cochancay 150.50 47 PKPdf 19 35 13.5 -3.4
BOSC San Juan Bosco 151.51 46 PKPdf 19 35 14.7 -4.0

TAP 06 19:16:49.2, 24.06N×121.67E, h8km, ML4.3, 2C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
TWD	**Chiawan**	**0.07**	**285**	⇑*i*	P	g 19 16 51.5	+0.4
TWD	baz=288			*i*	S	Sg 19 16 52.9	+0.3
ETL	**Fush Village**	**0.11**	**335**	P	P	g 19 16 52.0	+0.3
ETL	baz=333			*i*	S	Sg 19 16 53.8	+0.3
NACB	**Ninganchiao**	**0.13**	**328**	P	P	g 19 16 52.4	+0.3
NACB	baz=326			*i*	S	Sg 19 16 54.6	+0.5
ETM	**Tongmen**	**0.19**	**240**	⇑*i*	P	g 19 16 53.6	+0.5
ETM	baz=242			*i*	S	Sg 19 16 56.3	+0.6
LXIB	**Xiulin Townshi**	**0.24**	**261**	P	P	g 19 16 54.5	+0.5
LXIB	baz=252			*e*	S	Sg 19 16 58.1	+0.8
EHP	**Heping Village**	**0.26**	**14**	P	P	g 19 16 54.7	+0.3
EHP	baz=10.0			S		Sg 19 16 58.5	+0.7
EAHA	**Aohua**	**0.27**	**13**	P	P	g 19 16 54.9	+0.3
EAHA	baz=7.0			S		Sg 19 16 59.1	+0.7
SHUL	**Shoufeng**	**0.29**	**200**	*e*P	P	b 19 16 56.4	-0.2
ESL	baz=208 **Shilin** baz=232	**0.33**	**222**	P	P	g 19 16 56.0	+0.4
ESL	baz=232			S		Sg 19 17 00.4	+0.3
ENA	**Nanau**	**0.37**	**10**	*i*	P	g 19 16 56.9	+0.4
ENA	baz=7.0			*i*	S	Sg 19 17 01.8	+0.4
TEGC	**Jichi Village**	**0.37**	**199**	*e*P	P	b 19 16 58.1	+0.1
TEGC	baz=203			*e*	S	Sb 19 17 05.6	+1.6
WHF	**Hehuan Shan**	**0.38**	**283**	P	P	g 19 16 57.4	+0.6
WHF	baz=282			S		Sg 19 17 02.6	+0.8
EWUT	**Wuta**	**0.40**	**14**	P	P	g 19 16 57.3	+0.4
EWUT	baz=10.0			S		Sg 19 17 02.4	+0.3
WARBT	**Fenglin Townsh**	**0.43**	**217**	*e*P	P	b 19 16 58.4	-0.6
FUSS	baz=228 **Fushou** baz=295	**0.43**	**295**	P	P	b 19 16 58.6	-0.7
FUSS	baz=295			S		Sb 19 17 05.0	-1.0
EGFH	**Guangfu**	**0.45**	**210**	*e*P	P	b 19 16 58.8	-0.6
NNSB	baz=223 **Datong** baz=322	**0.45**	**324**	P	P	g 19 16 58.7	+0.7
NNSB	baz=322			S		Sg 19 17 04.8	+0.9
NNSH	**Datong** baz=322	**0.45**	**324**	P	P	g 19 16 58.7	+0.7
NNSH	baz=322			S		Sg 19 17 04.8	+0.8
CHGB	**Renai** baz=262	**0.46**	**270**	*i*	P	b 19 16 59.0	-0.7
CHGB	baz=262			S		Sg 19 17 05.0	+0.9
NNS	**Nan Shan** baz=323	**0.47**	**324**	P	P	g 19 16 59.0	+0.7
NNS	baz=323			S		Sg 19 17 05.0	+0.6
OWD	**Renai** baz=258	**0.47**	**257**	P	P	g 19 16 58.9	+0.6
OWD	baz=258			*e*	S	Sg 19 17 04.9	+0.5
LATG	**Datong** baz=341	**0.49**	**344**	*e*P	P	g 19 16 59.3	+0.5
LATG	baz=341			*e*	S	Sg 19 17 05.7	+0.5
TWT	**Tachien** baz=291	**0.49**	**293**	*e*P	P	b 19 17 00.0	-0.2
TWT	baz=291			*e*	S	Sg 19 17 06.2	+1.0
TDCB	**Techi** baz=291	**0.51**	**292**	*e*P	P	b 19 17 00.0	-0.4
TDCB	baz=291			S		Sg 19 17 06.6	+0.9
WUSB	**Renai** baz=263	**0.51**	**262**	*e*P	P	b 19 16 59.9	-0.6
WUSB	baz=263			*e*	S	Sg 19 17 07.0	+1.1
ESAO	**Su ao** baz=3.0	**0.54**	**17**	*e*P	P	g 19 16 60.0	+0.4
NDT	**Datong Townshi** baz=341	**0.56**	**345**	P	P	b 19 17 00.8	-0.5
NDT	baz=341			S		Sg 19 17 08.3	+0.9
TWC	**Suao** baz=4.0	**0.57**	**16**	*e*P	P	b 19 17 01.5	+0.1
TWC	baz=4.0			*e*	S	Sg 19 17 08.3	+0.6
NDS	**Dongshan**	**0.57**	**4**	P	P	g 19 17 00.9	+0.6
NDS				S		Sg 19 17 08.5	+0.7
VWDT	**VWDT** baz=233	**0.57**	**238**	*e*P	P	b 19 17 01.2	-0.3
VWDT	baz=233			S		Sg 19 17 08.7	+0.9
ENTT	**Nioudou** baz=348	**0.58**	**351**	*e*P	P	b 19 17 01.3	-0.4
ENTT	baz=348			S		Sb 19 17 09.5	-0.7
EHY	**Hungye** baz=221	**0.64**	**210**	*e*P	P	b 19 17 02.1	-0.5
EHY	baz=221			*e*	S	Sb 19 17 12.1	+0.4
WPL	**Puli Township** baz=267	**0.66**	**266**	P	P	b 19 17 02.6	-0.3
WPL	baz=267			*e*	S	Sg 19 17 11.2	+0.8
TWE	**Neicheng** baz=357	**0.66**	**360**	*e*P	P	b 19 17 02.5	-0.5
TWE	baz=357			*e*	S	Sb 19 17 11.4	-0.8
YHNB	**Yeheng** baz=333	**0.66**	**336**	P	P	b 19 17 02.9	-0.2
YHNB	baz=333			S		Sb 19 17 11.6	-0.9
NSK	**Sanguang** baz=324	**0.68**	**335**	P	P	b 19 17 03.2	-0.1
NSK	baz=324			S		Sb 19 17 12.1	-0.8
DPDB	**Guoxing** baz=269	**0.68**	**268**	*e*P	P	b 19 17 03.0	-0.4
WCS	**Beigang Elemen** baz=271	**0.69**	**270**	P	P	b 19 17 03.4	-0.2
WHP	**Taichung City** baz=288	**0.70**	**288**	P	P	b 19 17 03.7	0.0
WHP	baz=288			S		Sb 19 17 13.7	+0.2
FUSB	**Fushanzhiwuyua** baz=350	**0.70**	**354**	*e*P	P	g 19 17 03.1	+0.4
FUSB	baz=350			S		Sb 19 17 13.2	-0.4
ILA	**Ilan** baz=2.0	**0.70**	**6**	*e*P	P	b 19 17 03.5	-0.2
SSLB	**Suanglung** baz=259	**0.71**	**248**	P	P	b 19 17 03.5	-0.4
SSLB	baz=259			S		Sg 19 17 12.6	+0.4
SMLT	**Sun Moon Lake** baz=263	**0.73**	**256**	P	P	b 19 17 04.1	-0.1
NWLT	**Wulai** baz=333	**0.73**	**348**	*e*P	P	b 19 17 04.1	-0.1
NWLT				*e*	S	Sb 19 17 13.6	-0.8

	baz=333							
YULB	**Yu-li**	**0.75**	**207**	*e*P		Pb	19 17 04.5	0.0
	baz=225							
NFF	**Wufeng Townshi**	**0.76**	**318**	*e*P		Pb	19 17 05.0	+0.2
	baz=317							
TWF1	**Yuli**	**0.79**	**206**	*e*P		Pb	19 17 05.8	+0.7
	baz=223							
WHYT	**Xinyi Township**	**0.83**	**244**	*e*P		Pb	19 17 06.5	+0.6
	baz=246							
LIOB	**Emei**	**0.83**	**314**	*e*P		Pb	19 17 06.6	+0.6
	baz=313							
NJD	**Zhudong**	**0.86**	**322**	*e*P		Pn	19 17 07.2	-0.4
	baz=325							
WWF	**Wufeng**	**0.89**	**269**	*e*P		Pn	19 17 08.8	+0.8
	baz=270							
TIPB	**Shuangxi**	**0.92**	**9**	*e*P		Pn	19 17 08.1	-0.4
	baz=349							
TWA	**Mucha**	**0.92**	**355**	*e*P		Pn	19 17 09.3	+0.9
	baz=351							
WNT1	**Nantou City**	**0.92**	**261**	*e*P		Pn	19 17 08.5	+0.1
	baz=262							
WNT	**Mingjian**	**0.92**	**259**	*e*P		Pn	19 17 08.4	-0.1
	baz=252							
NJN	**Zhunan**	**0.96**	**310**	*e*P		Pn	19 17 08.8	-0.2
	baz=317							
TWB1	**Santiao Chiao**	**0.99**	**17**	*e*P		Pb	19 17 08.5	-0.1
	baz=4.0							
NTY	**Taoyuan**	**0.99**	**340**	*e*P		Pn	19 17 09.7	+0.2
	baz=332							
NWF	**Wu-fen Shan**	**1.01**	**6**	*e*P		Pn	19 17 09.7	-0.1
	baz=359							
WFSB	**Wu-fen Shan**	**1.01**	**6**	*e*P		Pb	19 17 09.1	+0.1
	baz=359							
CHN5	**Tsauling**	**1.02**	**243**	P		Pn	19 17 10.3	+0.4
	baz=233							
SXI1	**Grass Mountain**	**1.04**	**10**	*e*P		Pn	19 17 09.9	-0.3
	baz=352							
TWS1	**Kuangyinshan**	**1.06**	**347**	*e*P		Pn	19 17 11.1	+0.8
	baz=344							
YM01	**YM01**	**1.08**	**355**	*e*P		Pn	19 17 10.8	0.0
	baz=338							
TNOU	**National Taiwa**	**1.09**	**5**	*e*P		Pn	19 17 11.3	+0.5
	baz=359							
STYH	**Taoyuan**	**1.21**	**223**	*e*P		Pg	19 17 12.8	+0.4
	baz=228							
RLNB	**Erlin**	**1.21**	**262**	*e*P		Pg	19 17 13.4	+0.9
	baz=264							
STYT	**Tauyuan**	**1.23**	**223**	*e*P		Pg	19 17 13.3	+0.6
	baz=228							

TAP 06 19:17:23.1, 23.98N×121.60E, h7km, ML4.3, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETM	**Tongmen**	**0.10**	**262**	*i* P		Pg	19 17 25.9	+0.5
	baz=263							
ETM				*i* S		Sg	19 17 27.4	+0.5
	baz=263							
TWD	**Chiawan**	**0.10**	**358**	*i* P		Pg	19 17 26.0	+0.6
	baz=4.0							
TWD				*i* S		Sg	19 17 27.7	+0.7
	baz=4.0							
LXIB	**Xiulin Townshi**	**0.17**	**284**	P		Pg	19 17 27.2	+0.4
	baz=278							
LXIB				S		Sg	19 17 29.7	+0.5
	baz=278							
ETL	**Fush Village**	**0.18**	**7**	*i* P		Pg	19 17 27.4	+0.6
	baz=8.0							
ETL				*i* S		Sg	19 17 30.0	+0.7
	baz=8.0							
NACB	**Ninganchiao**	**0.19**	**359**	P		Pg	19 17 27.5	+0.4
	baz=359							
NACB				*i* S		Sg	19 17 30.3	+0.6
	baz=359							
SHUL	**Shoufeng**	**0.19**	**190**	*e*P		Pg	19 17 28.2	+1.2
	baz=182							
ESL	**Shilin**	**0.22**	**223**	*i* P		Pg	19 17 27.8	+0.2
	baz=222							
ESL				S		Sg	19 17 30.7	+0.1
	baz=222							
TEGC	**Jichi Village**	**0.27**	**191**	P		Pg	19 17 29.5	+0.9
	baz=196							
TEGC				S		Sb	19 17 35.6	+0.3
	baz=196							
WARBT	**Fenglin Townsh**	**0.33**	**217**	P		Pg	19 17 29.5	-0.1
	baz=226							
WARBT				S		Sg	19 17 33.9	+0.1
	baz=226							
EGFH	**Guangfu**	**0.35**	**207**	*e*P		Pg	19 17 30.2	+0.3
	baz=214							
WHF	**Hehuan Shan**	**0.35**	**298**	P		Pg	19 17 30.7	+0.6
	baz=299							
WHF				S		Sg	19 17 35.2	+0.5
	baz=299							
EAHA	**Aohua**	**0.37**	**20**	*e*P		Pg	19 17 30.9	+0.4
	baz=28							
EAHA				S		Sg	19 17 35.7	+0.4
	baz=28							
OWD	**Renai**	**0.39**	**266**	P		Pg	19 17 31.3	+0.5
	baz=267							
OWD				S		Sg	19 17 36.4	+0.5
	baz=267							
CHGB	**Renai**	**0.40**	**282**	*i* P		Pg	19 17 31.6	+0.6
	baz=282							
CHGB				*i* S		Sg	19 17 37.1	+0.9
	baz=282							
FUSS	**Fushou**	**0.42**	**310**	*e*P		Pg	19 17 32.1	+0.7
	baz=310							
FUSS				S		Sg	19 17 38.1	+1.2
	baz=310							
WUSB	**Renai**	**0.44**	**272**	*e*P		Pg	19 17 31.1	-0.6
	baz=272							
WUSB				S		Sg	19 17 38.2	+0.6
	baz=272							
ENA	**Nanau**	**0.47**	**16**	*e*P		Pg	19 17 32.6	+0.4
	baz=17							
ENA				*e*S		Sg	19 17 38.2	-0.1
	baz=17							
TWT	**Tachien**	**0.47**	**305**	P		Pb	19 17 33.4	-0.6
	baz=304							
TWT				S		Sb	19 17 40.3	-0.9
	baz=304							
VWDT	**VWDT**	**0.47**	**242**	P		Pg	19 17 32.9	+0.5
	baz=243							
VWDT				S		Sg	19 17 38.8	+0.2
	baz=243							
TDCB	**Techi**	**0.49**	**304**	P		Pg	19 17 33.4	+0.8
	baz=304							
TDCB				S		Sb	19 17 40.6	-1.0
	baz=304							
NNSB	**Datong**	**0.49**	**336**	*i* P		Pg	19 17 33.3	+0.7
	baz=337							
NNSB				*i* S		Sg	19 17 39.7	+0.6
	baz=337							
NNSH	**Datong**	**0.49**	**336**	*i* P		Pg	19 17 33.1	+0.5
	baz=336							
NNSH				*e*S		Sg	19 17 39.2	+0.1
	baz=336							
EWUT	**Wuta**	**0.49**	**19**	*e*P		Pg	19 17 33.3	+0.6
	baz=21							
NNS	**Nan Shan**	**0.50**	**336**	P		Pg	19 17 33.5	+0.6
	baz=337							
NNS				S		Sg	19 17 40.2	+0.7
	baz=337							
EHY	**Hungye**	**0.54**	**208**	*e*P		Pg	19 17 33.5	0.0
	baz=216							
LATG	**Datong**	**0.56**	**353**	*e*P		Pg	19 17 34.4	+0.4
	baz=343							
WPL	**Puli Township**	**0.59**	**273**	⇓P		Pb	19 17 35.4	-0.5
	baz=274							
WPL				S		Sg	19 17 43.2	+1.0
	baz=274							
DPDB	**Guoxing**	**0.62**	**275**	P		Pb	19 17 36.0	-0.3
	baz=276							
DPDB				*e*S		Sb	19 17 44.7	-0.6
	baz=276							
SSLB	**Suanglung**	**0.62**	**252**	P		Pg	19 17 35.7	+0.6
	baz=265							
SSLB				S		Sg	19 17 43.1	-0.2
	baz=265							
NDT	**Datong Townshi**	**0.63**	**353**	*e*P		Pg	19 17 35.4	+0.1
	baz=343							
WCS	**Beigang Elemen**	**0.63**	**277**	P		Pb	19 17 36.2	-0.3
	baz=278							
WCS				*e*S		Sb	19 17 44.7	-1.0
	baz=278							
YULB	**Yu-li**	**0.65**	**205**	*e*P		Pg	19 17 35.5	-0.1
	baz=212							
SMLT	**Sun Moon Lake**	**0.65**	**262**	P		Pg	19 17 36.2	+0.6
	baz=262							
SMLT				*i* S		Sb	19 17 45.5	-0.7
	baz=262							
ENTT	**Nioudou**	**0.66**	**357**	*e*P		Pb	19 17 36.5	-0.5
	baz=358							
NDS	**Dongshan**	**0.66**	**9**	*e*P		Pg	19 17 36.0	+0.1
	baz=9.0							
NDS				S		Sg	19 17 45.1	+0.6
	baz=9.0							
WHP	**Taichung City**	**0.67**	**297**	P		Pb	19 17 37.1	-0.1
	baz=288							
WHP				*e*S		Sb	19 17 46.0	-0.7
	baz=288							
TWC	**Suao**	**0.67**	**20**	*e*P		Pb	19 17 37.5	+0.3
	baz=22							
ECBN	**Changbin**	**0.67**	**192**	*e*P		Pb	19 17 37.3	+0.1
	baz=192							
EYUL	**Yuli**	**0.68**	**202**	*e*P		Pg	19 17 36.6	+0.3
	baz=213							
TWF1	**Yuli**	**0.68**	**204**	*e*P		Pb	19 17 37.5	+0.1
	baz=216							
TWF1				S		Sb	19 17 46.8	-0.3
	baz=216							
YHNB	**Yeheng**	**0.72**	**344**	P		Pb	19 17 37.8	-0.3
	baz=344							
YHNB				*e*S		Sg	19 17 46.8	+0.4
	baz=344							
NSK	**Sanguang**	**0.73**	**342**	P		Pg	19 17 37.7	+0.5
	baz=343							
NSK				S		Sg	19 17 46.7	0.0
	baz=343							
WHYT	**Xinyi Township**	**0.74**	**248**	*e*P		Pb	19 17 38.4	0.0
	baz=247							
TWE	**Neicheng**	**0.74**	**5**	*e*P		Pg	19 17 37.8	+0.4
	baz=356							
FUSB	**Fushanzhiwuyua**	**0.78**	**359**	*e*P		Pn	19 17 40.2	-0.5
NFF	**Wufeng Townshi**	**0.78**	**326**	P		Pb	19 17 39.3	+0.1
	baz=326							
ILA	**Ilan**	**0.80**	**10**	*e*P		Pb	19 17 39.1	-0.2
	baz=11							
NWLT	**Wulai**	**0.80**	**354**	*e*P		Pb	19 17 39.1	-0.3
	baz=342							
CHKH	**Chenggong**	**0.81**	**193**	*e*P		Pb	19 17 39.3	-0.2
	baz=182							
WJS	**Zhushan**	**0.81**	**259**	*e*P		Pn	19 17 40.8	-0.3
	baz=260							
WJS				*e*S		Sn	19 17 52.7	-0.7
	baz=260							
FULB	**Fuli**	**0.83**	**200**	*e*P		Pn	19 17 40.8	-0.5
	baz=216							
WWF	**Wufeng**	**0.83**	**275**	*e*P		Pn	19 17 41.0	-0.2
	baz=274							
TWQ1	**Liyutan**	**0.84**	**296**	*e*P		Pn	19 17 41.5	0.0
	baz=296							
TWQ1				*e*S		Sn	19 17 52.9	-1.2
	baz=296							
WNT	**Mingjian**	**0.84**	**263**	P		Pn	19 17 41.2	-0.3
	baz=264							
WNT				S		Sn	19 17 53.1	-1.1
	baz=264							
WNT1	**Nantou City**	**0.84**	**265**	P		Pn	19 17 41.6	+0.1
	baz=266							
WNT1				S		Sn	19 17 53.8	-0.3
	baz=266							
NSTT	**Nanjuang**	**0.85**	**320**	*e*P		Pb	19 17 40.3	0.0
	baz=320							
LIOB	**Emei**	**0.85**	**321**	*e*P		Pb	19 17 40.8	+0.5
	baz=322							
LIOB				*e*S		Sb	19 17 52.7	+0.8
	baz=322							
ALS	**Alishan**	**0.86**	**237**	P		Pb	19 17 41.0	+0.3
	baz=238							
ALS				S		Sb	19 17 53.5	+0.9
	baz=238							
NJD	**Zhudong**	**0.89**	**328**	*e*P		Pb	19 17 41.3	+0.4
	baz=336							
CHKT	**Chengkung**	**0.90**	**194**	*e*P		Pg	19 17 40.1	-0.4
	baz=196							
EHD	**Haiduan**	**0.90**	**204**	*e*P		Pg	19 17 40.4	0.0
	baz=206							
NMLH	**Miaoli**	**0.92**	**307**	*e*P		Pn	19 17 43.2	+0.6
	baz=306							
CHN5	**Tsauling**	**0.93**	**246**	P		Pn	19 17 42.3	-0.4
	baz=236							
CHN5				*e*S		Sn	19 17 56.4	+0.1
	baz=236							
WYL	**Yuanlin Townsh**	**0.93**	**269**	*e*P		Pb	19 17 41.5	-0.2
	baz=269							
ECS	**Chishang**	**0.95**	**202**	*e*P		Pn	19 17 43.3	+0.4
	baz=205							
WDJ	**Dajia District**	**0.95**	**293**	P		Pn	19 17 43.6	+0.7
	baz=292							
ELDTW	**Lidau**	**0.95**	**214**	*e*P		Pb	19 17 42.1	+0.1
	baz=214							
HSN1	**Hsinchu**	**0.96**	**326**	*e*P		Pb	19 17 42.5	+0.4
	baz=326							
WCHH	**Zhanghua**	**0.96**	**276**	*e*P		Pn	19 17 43.1	+0.1
	baz=277							
WCHH				*e*S		Sn	19 17 58.7	+1.7
	baz=277							
NJN	**Zhunan**	**0.97**	**317**	*e*P		Pn	19 17 42.9	-0.2
	baz=325							
WGK	**Gukeng**	**0.99**	**253**	P		Pn	19 17 44.0	+0.5
	baz=255							
WGK				*e*S		Sn	19 17 58.0	+0.2
	baz=255							
HSN	**Hsinchu**	**1.00**	**325**	*e*P		Pn	19 17 44.8	+1.1
	baz=327							
TIPB	**Shuangxi**	**1.01**	**12**	*e*P		Pn	19 17 44.0	+0.2
	baz=358							
WDLH	**Douliu**	**1.01**	**254**	*e*P		Pn	19 17 44.0	+0.2
	baz=255							
NTY	**Taoyuan**	**1.05**	**345**	*e*P		Pn	19 17 44.5	+0.1
	baz=346							
NHY	**Taipei**	**1.06**	**359**	*e*P		Pn	19 17 44.6	+0.1
	baz=10.0							
WCKO	**Fanlu**	**1.06**	**240**	*e*P		Pn	19 17 45.0	+0.5
	baz=242							
TAP	**Taipei**	**1.06**	**355**	*e*P		Pn	19 17 45.5	+1.0
	baz=356							
TWB1	**Santiao Chiao**	**1.08**	**19**	*e*P		Pn	19 17 45.6	+0.8
	baz=12							
NWF	**Wu-fen Shan**	**1.10**	**9**	*e*P		Pn	19 17 45.7	+0.6
	baz=9.0							
NWF				*e*S		Sg	19 17 58.9	+0.3
	baz=9.0							
WFSB	**Wu-fen Shan**	**1.10**	**9**	*e*P		Pn	19 17 45.5	+0.5
	baz=8.0							
STYH	**Taoyuan**	**1.10**	**223**	*e*P		Pb	19 17 44.5	0.0
	baz=212							
CHN4	**Tsaushan**	**1.11**	**236**	*e*P		Pn	19 17 45.6	+0.3
	baz=225							
CHN4				*e*S		Sn	19 18 00.8	-0.1
	baz=225							
TPUB	**Ta-pu**	**1.12**	**233**	*e*P		Pn	19 17 45.4	+0.1
	baz=235							
TPUB				S		Sn	19 18 00.5	-0.4
	baz=235							
STYT	**Tauyuan**	**1.12**	**224**	*e*P		Pn	19 17 45.5	+0.2
	baz=212							
WRL	**Guolierlin Hig**	**1.12**	**266**	*e*P		Pn	19 17 45.9	+0.6
	baz=266							
RLNB	**Erlin**	**1.14**	**266**	*e*P		Pn	19 17 46.3	+0.8
	baz=266							
SXI1	**Grass Mountain**	**1.14**	**13**	*e*P		Pn	19 17 46.7	+1.0
	baz=359							
NHW	**Xinwu Township**	**1.14**	**334**	*e*P		Pn	19 17 46.8	+1.2
	baz=333							
WTK	**Tuku**	**1.15**	**256**	*e*P		Pn	19 17 46.9	+1.2
	baz=257							
YM01	**YM01**	**1.16**	**359**	*e*P		Pn	19 17 46.4	+0.4
	baz=10.0							
TNOU	**National Taiwa**	**1.18**	**8**	*e*P		Pn	19 17 47.4	+1.3
	baz=7.0							
TWG	**Pinlang**	**1.25**	**203**	*e*P		Pg	19 17 48.2	+1.0
	baz=206							
TWGBT	**Beinan**	**1.25**	**203**	*e*P		Pn	19 17 46.8	-0.3
	baz=206							
CHN1	**Nanshi**	**1.26**	**231**	*e*P		Pg	19 17 47.4	0.0
	baz=234							
SGST	**Jiashian**	**1.29**	**226**	*e*P		Pn	19 17 47.4	-0.3
	baz=229							
WSF	**Szhu**	**1.31**	**255**	*e*P		Pg	19 17 49.2	+1.0
	baz=256							

TAP 06 19:21:10.3, 24.01N×121.75E, h6km, ML3.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWD	**Chiawan**	**0.16**	**298**	*i* P		Pg	19 21 14.2	+0.7
	baz=299							
TWD				*i* S		Sg	19 21 17.6	+1.9
	baz=299							
ETL	**Fush Village**	**0.19**	**323**	*i* P		Pg	19 21 14.7	+0.6
	baz=323							
NACB	**Ninganchiao**	**0.22**	**320**	*i* P		Pg	19 21 15.0	+0.3
	baz=320							
NACB				*i* S		Sg	19 21 19.4	+1.9
	baz=320							
ETM	**Tongmen**	**0.24**	**260**	*i* P		Pg	19 21 15.6	+0.7
	baz=260							
ETM				*i* S		Sg	19 21 20.0	+1.8
	baz=260							
SHUL	**Shoufeng**	**0.28**	**218**	*i* P		Pb	19 21 17.2	-0.4
	baz=217							
SHUL				*e*S		Sb	19 21 24.2	+1.7
	baz=217							
LXIB	**Xiulin Townshi**	**0.31**	**273**	*i* P		Pg	19 21 16.8	+0.4
	baz=272							
EAHA	**Aohua**	**0.32**	**359**	*i* P		Pg	19 21 17.2	+0.6
	baz=358							
EAHA				*i* S		Sb	19 21 24.2	+0.3
	baz=358							
ESL	**Shilin**	**0.35**	**237**	*i* P		Pg	19 21 17.1	+0.1
	baz=235							
TEGC	**Jichi Village**	**0.35**	**213**	*i* P		Pb	19 21 18.4	-0.5
	baz=211							
TEGC				*e*S		Sb	19 21 27.3	+2.6
	baz=211							
ENA	**Nanau**	**0.42**	**359**	*i* P		Pg	19 21 19.1	+0.6
ENA				*i* S		Sb	19 21 26.4	-0.3
EWUT	**Wuta**	**0.44**	**4**	*i* P		Pb	19 21 19.6	-0.8
	baz=3.0							
EWUT				*i* S		Sb	19 21 27.6	+0.3
	baz=3.0							
WARBT	**Fenglin Townsh**	**0.44**	**229**	*i* P		Pg	19 21 19.0	+0.2
	baz=229							
WARBT				*i* S		Sb	19 21 28.8	+1.5
	baz=229							
EGFH	**Guangfu**	**0.45**	**221**	*i* P		Pb	19 21 20.2	-0.4
	baz=221							
EGFH				*i* S		Sb	19 21 28.8	+1.4
	baz=221							
WHF	**Hehuan Shan**	**0.46**	**288**	*i* P		Pg	19 21 20.1	+0.7
	baz=287							
WHF				*i* S		Sb	19 21 27.3	-1.0
	baz=287							
FUSS	**Fushou**	**0.52**	**298**	*i* P		Pb	19 21 21.4	-0.6
	baz=297							
OWD	**Renai**	**0.53**	**265**	*i* P		Pg	19 21 21.1	+0.6
	baz=264							
CHGB	**Renai**	**0.53**	**276**	*i* P		Pg	19 21 21.1	+0.6
	baz=275							
CHGB				*i* S		Sb	19 21 30.0	0.0
	baz=275							
NNSB	**Datong**	**0.54**	**322**	*i* P		Pg	19 21 21.4	+0.7
	baz=321							
NNSB				*i* S		Sb	19 21 29.9	-0.3
	baz=321							
NNS	**Nan Shan**	**0.55**	**322**	*i* P		Pg	19 21 21.5	+0.6
	baz=322							
LATG	**Datong**	**0.56**	**339**	*i* P		Pb	19 21 22.2	-0.4
	baz=339							
LATG				*i* S		Sb	19 21 32.2	+1.3
	baz=339							
ESAO	**Su ao**	**0.57**	**9**	*i* P		Pb	19 21 22.2	-0.5
	baz=8.0							
ESAO				*i* S		Sb	19 21 31.7	+0.6
	baz=8.0							
WUSB	**Renai**	**0.58**	**269**	*i* P		Pg	19 21 22.0	+0.6
	baz=268							
WUSB				*i* S		Sb	19 21 31.6	+0.2
	baz=268							
TWT	**Tachien**	**0.58**	**295**	*i* P		Pb	19 21 22.8	-0.1
	baz=294							
TWT				*i* S		Sb	19 21 31.6	+0.2
	baz=294							
HGSD	**Ruisui**	**0.59**	**210**	*e*P		Pb	19 21 24.0	+1.0
	baz=210							
HGSD				*e*S		Sn	19 21 35.1	0.0
	baz=210							
TDCB	**Techi**	**0.59**	**295**	*i* P		Pb	19 21 22.9	-0.2
	baz=294							
TDCB				*i* S		Sb	19 21 31.7	-0.1
	baz=294							
TWC	**Suao**	**0.61**	**9**	*i* P		Pb	19 21 23.0	-0.3
	baz=9.0							
TWC				*i* S		Sb	19 21 33.3	+1.2
	baz=9.0							
VWDT	**VWDT**	**0.61**	**246**	*i* P		Pb	19 21 22.7	-0.6
	baz=245							
VWDT				*i* S		Sb	19 21 33.3	+1.2
	baz=245							
NDS	**Dongshan**	**0.62**	**357**	*i* P		Pb	19 21 23.4	-0.2
	baz=357							
NDS				*i* S		Sb	19 21 33.8	+1.2
	baz=357							
NDT	**Datong Townshi**	**0.63**	**340**	*i* P		Pb	19 21 23.6	-0.1
	baz=340							
NDT				*i* S		Sb	19 21 33.5	+0.7
	baz=340							
EHY	**Hungye**	**0.63**	**218**	P		Pb	19 21 23.4	-0.3
	baz=217							
EHY				*e*S		Sn	19 21 36.1	-0.1
	baz=217							
ENTT	**Nioudou**	**0.65**	**345**	*i* P		Pb	19 21 23.8	-0.3
	baz=345							
ENTT				*i* S		Sb	19 21 34.5	+1.0
	baz=345							
TWE	**Neicheng**	**0.72**	**354**	*i* P		Pb	19 21 25.3	+0.1
	baz=355							
TWE				*i* S		Sn	19 21 37.1	-1.1
	baz=355							
YULB	**Yu-li**	**0.74**	**214**	*e*P		Pb	19 21 25.6	+0.1
	baz=214							
YULB				S		Sn	19 21 37.6	-1.1
	baz=214							
YHNB	**Yeheng**	**0.74**	**333**	*i* P		Pb	19 21 25.8	+0.1
	baz=332							
YHNB				*i* S		Sn	19 21 37.6	-1.4
	baz=332							
NSK	**Sanguang**	**0.76**	**332**	*i* P		Pb	19 21 25.8	-0.1
	baz=332							
NSK				*i* S		Sb	19 21 37.1	+0.7
	baz=332							
SSLB	**Suanglung**	**0.76**	**253**	*i* P		Pg	19 21 25.2	+0.3
	baz=253							
SSLB				*i* S		Sg	19 21 35.6	+0.8
	baz=253							
EYUL	**Yuli**	**0.77**	**211**	*e*P		Pb	19 21 26.1	+0.2
	baz=210							
FUSB	**Fushanzhiwuyua**	**0.77**	**349**	*i* P		Pb	19 21 25.9	-0.2
	baz=348							
FUSB				*i* S		Sn	19 21 38.1	-1.4
	baz=348							
WCS	**Beigang Elemen**	**0.77**	**274**	*e*P		Pb	19 21 26.1	+0.1
	baz=273							
TWF1	**Yuli**	**0.77**	**213**	P		Pb	19 21 25.8	-0.3
	baz=211							
WHP	**Taichung City**	**0.78**	**290**	*i* P		Pb	19 21 26.5	+0.2
	baz=290							
WHP				S		Sn	19 21 39.4	-0.5
	baz=290							
SMLT	**Sun Moon Lake**	**0.79**	**261**	*i* P		Pb	19 21 26.6	+0.2
	baz=260							
SMLT				*i* S		Sb	19 21 37.7	+0.4
	baz=260							
NWLT	**Wulai**	**0.80**	**344**	*i* P		Pb	19 21 26.4	-0.2
	baz=343							
NWLT				*i* S		Sb	19 21 38.0	+0.4
	baz=343							
CHKH	**Chenggong**	**0.87**	**202**	*e*P		Pb	19 21 27.6	-0.2
	baz=201							
WHYT	**Xinyi Township**	**0.88**	**250**	*e*P		Pb	19 21 27.8	-0.1
	baz=249							
FULB	**Fuli**	**0.91**	**207**	*e*P		Pn	19 21 29.7	+0.2
	baz=207							
LIOB	**Emei**	**0.92**	**314**	P		Pn	19 21 29.3	-0.5
	baz=313							
NSTT	**Nanjuang**	**0.92**	**313**	P		Pb	19 21 29.2	+0.5
	baz=312							
WJS	**Zhushan**	**0.95**	**259**	*e*P		Pn	19 21 29.9	-0.2
	baz=258							
WJS				S		Sn	19 21 44.7	+0.7

	baz=258								
TIPB	**Shuangxi**	**0.96**	**4**	*eP*		**Pn**	19 21 30.0	-0.3	
	baz=4.0								
TIPB				*eS*		Sn	19 21 44.2	-0.1	
	baz=4.0								
WNT	**Mingjian**	**0.98**	**263**	*eP*		**Pn**	19 21 30.2	-0.3	
	baz=262								
WNT				S		Sn	19 21 45.4	+0.6	
	baz=262								
EHD	**Haiduan**	**0.99**	**210**	*eP*		**Pb**	19 21 30.2	+0.4	
	baz=210								
EHD				*eS*		Sn	19 21 45.9	+1.0	
	baz=210								
NSY	**Sanyi**	**0.99**	**295**	*eP*		**Pn**	19 21 31.4	+0.7	
	baz=294								
ALS	**Alishan**	**0.99**	**240**	*eP*		**Pb**	19 21 29.9	-0.1	
	baz=239								
NMLH	**Miaoli**	**1.02**	**301**	*eP*		**Pn**	19 21 31.7	+0.6	
	baz=301								
ECS	**Chishang**	**1.03**	**208**	*eP*		**Pn**	19 21 31.2	0.0	
	baz=208								
ELDTW	**Lidau**	**1.05**	**220**	*eP*		**Pg**	19 21 30.2	-0.3	
	baz=219								
CHN5	**Tsauling**	**1.06**	**248**	*eP*		**Pn**	19 21 31.8	+0.1	
	baz=247								
CHN5				*eS*		Sn	19 21 49.4	+2.6	
	baz=247								
WFSB	**Wu-fen Shan**	**1.06**	**2**	P		**Pb**	19 21 31.1	+0.1	
	baz=1.0								
WFSB				S		Sn	19 21 47.0	+0.3	
	baz=1.0								
SXI1	**Grass Mountain**	**1.09**	**6**	P		**Pn**	19 21 32.5	+0.4	
	baz=6.0								
SXI1				S		Sn	19 21 50.0	+2.5	
	baz=6.0								
TWS1	**Kuangyinshan**	**1.13**	**345**	*eP*		**Pn**	19 21 33.5	+0.9	
	baz=344								
TWS1				*eS*		Sn	19 21 51.4	+3.0	
	baz=344								
TNOU	**National Taiwa**	**1.14**	**1**	*eP*		**Pn**	19 21 34.3	+1.6	
	baz=1.0								
TNOU				*eS*		Sn	19 21 52.6	+3.9	
	baz=1.0								
YM01	**YM01**	**1.15**	**352**	P		**Pn**	19 21 33.1	+0.2	
	baz=351								
YM01				S		Sn	19 21 51.6	+2.7	
	baz=351								
STYH	**Taoyuan**	**1.22**	**227**	*eP*		**Pg**	19 21 33.4	-0.2	
	baz=227								
STYH				*eS*		Sn	19 21 50.8	+0.2	
	baz=227								
TPUB	**Ta-pu**	**1.24**	**236**	*eP*		**Pn**	19 21 34.9	+0.7	
	baz=235								
TPUB				*eS*		Sn	19 21 53.2	+1.9	
	baz=235								
TWG	**Pinlang**	**1.33**	**208**	*eP*		**Pn**	19 21 34.5	-0.9	
	baz=207								
TWGBT	**Beinan**	**1.33**	**208**	P		**Pn**	19 21 34.8	-0.6	
	baz=207								
SGST	**Jiashian**	**1.41**	**230**	*eP*		**Pn**	19 21 36.7	+0.2	
	baz=229								
SGST				*eS*		Sg	19 21 58.4	+2.7	
	baz=229								
SLGT	**Liugui**	**1.43**	**225**	*eP*		**Pb**	19 21 37.1	-0.2	
	baz=225								
SLGT				*eS*		Sg	19 21 57.8	+1.6	
	baz=225								
SCST	**Cishan**	**1.60**	**226**	*eP*		**Pg**	19 21 40.7	-0.4	
	baz=225								
SCST				*eS*		Sg	19 22 04.7	+2.8	
	baz=225								
SHHT	**Tainan City**	**1.62**	**233**	*eP*		**Pb**	19 21 40.2	-0.2	
	baz=232								
TSMG	**Majia**	**1.64**	**218**	*eP*		**Pb**	19 21 40.9	-0.1	
	baz=218								
TSMG				*eS*		Sg	19 22 04.2	+1.0	
	baz=218								
MASBT	**Mashibuluo**	**1.73**	**217**	*eP*		**Pn**	19 21 40.7	-0.1	
	baz=216								
MASBT				*eS*		Sb	19 22 04.5	+0.2	
	baz=216								
TSCK	**Chigu Township**	**1.75**	**241**	*eP*		**Pn**	19 21 40.7	-0.4	
	baz=240								
TSCK				*eS*		Sg	19 22 06.0	-0.5	
	baz=240								
EAST	**Anshuo**	**1.81**	**207**	*eP*		**Pg**	19 21 44.9	-0.3	
	baz=206								
EAST				*eS*		Sg	19 22 08.8	+0.1	
	baz=206								
SCZT	**Fangliau**	**1.93**	**213**	*eP*		**Pb**	19 21 44.8	-1.1	
	baz=212								
SCZT				*eS*		Sb	19 22 10.4	+0.2	
	baz=212								
PHUB	**P'eng-hu**	**2.05**	**257**	*eS*		**Sb**	19 22 13.4	-0.3	
	baz=256								
PNG	**Penghu**	**2.06**	**258**	*eP*		**Pb**	19 21 47.4	-0.6	
	baz=257								
PNG				*eS*		Sb	19 22 12.9	-0.9	
	baz=257								

*IDC **06** 19:34:29.0±3.2, 37°.42N×72°.16E, h85km±26km, mb3.5/8, mbtmp4.0/14, Error ellipse: s-maj=30.0km s-min=21.0km az=167.0*
*MOS **06** 19:34:32.9±1.1, 37°.76N×72°.16E, h131km, mb3.8/4, Error ellipse: s-maj=11.3km s-min=5.8km az=84.3*
*NEIC **06** 19:34:34.1±2.4, 37°.79N±0°.03×72°.14E±0°.09, h127km±11km, mb4.0/9, Error ellipse: s-maj=9.8km s-min=4.5km az=96.0*
*NNC **06** 19:34:36.0±2.1, 38°.00N×71°.89E, h149km±43km, mb3.3, mpv4.0, Error ellipse: s-maj=20.5km s-min=13.3km az=167.0*
*SOME **06** 19:34:40.6, 39°.22N×72°.03E, h0km*
ISC 06 19:34:34.0±0.5, 37°.82N±0°.05×72°.04E±0°.04, h150km, n87, σ2s33/108, mb3.7/13, 4C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BTK	**Batken**	**2.43**	**337**				**Pn**	**19 35 15.3**	**+1.0**
BTK					Sn		**Sn**	**19 35 45.5**	**+0.1**
BTK	**Batken**	**2.43**	**337**		PN		**Pn**	**19 35 15.3**	**+1.0**
BTK					SN		**Sn**	**19 35 45.5**	**+0.1**
KSH	**Kashi**	**3.51**	**60**		Pn		Pn	19 35 23.6	-4.4
KSH					Sn		Sn	19 35 59.9	-10
KSH					smax		smax		
	comp=N,440nm,0.5s								
KSH					smax		smax		
	comp=E,230nm,0.5s								
ARSB	**Arslanbob**	**3.57**	**11**				**Pn**	**19 35 27.9**	**-0.9**
ARSB					Sn		**Sn**	**19 36 06.7**	**-4.7**
ARSB	**Arslanbob**	**3.57**	**11**		PN		**Pn**	**19 35 27.9**	**-0.9**
KBL	**Kabul**	**4.07**	**217**		Pn		**Pn**	**19 35 35.1**	**-0.4**
KBL					Sn		**Sn**	**19 36 21.7**	**-1.4**
KBL	**Kabul**	**4.07**	**217**		PN		**Pn**	**19 35 35.1**	**-0.4**
KBL								19 36 21.7	
NIL	**Nilore**	**4.28**	**166**				**Pn**	**19 35 37.5**	**-0.5**
NIL					Sn		**Sn**	**19 36 22.3**	**-5.3**
NIL	**Nilore**	**4.28**	**166**		PN		**Pn**	**19 35 37.2**	**-0.7**
NRN	**Naryn**	**4.73**	**39**		Pn		**Pn**	**19 35 43.0**	**-1.0**
NRN	**Naryn**	**4.73**	**39**		PN		**Pn**	**19 35 43.0**	**-1.0**
UCH	**Uchtor**	**4.79**	**23**		P		**Pn**	**19 35 45.6**	**+0.6**
	SNR=18								
CHM	**Chimkent**	**4.87**	**338**	*eP*			**Pn**	**19 35 47.2**	**+1.6**
	comp=E,108nm,0.2s								
CHM				*eS*			**Sn**	**19 36 40.9**	**-0.6**
	comp=E,222nm,0.3s								
MRKS	**Merke**	**5.00**	**10**	*eP*			**Pn**	**19 35 48.4**	**+1.0**
	comp=E,18nm,0.3s								
MRKS				*eS*			**Sn**	**19 36 42.8**	**-2.0**
	comp=E,194nm,0.4s								
EKS2	**Erkin-Say**	**5.01**	**15**	P			**Pn**	**19 35 48.7**	**+1.0**
	SNR=106								
DZA	**Taraz**	**5.09**	**354**	*eP*			**Pn**	**19 35 50.1**	**+1.5**
	comp=E,100nm,0.1s								
DZA				*eS*			**Sn**	**19 36 46.0**	**-1.0**
	comp=E,220nm,0.3s								
AAK	**Ala-Archa**	**5.16**	**21**	P			**Pn**	**19 35 50.9**	**+1.2**
	SNR=14								
AAK	**Ala-Archa**	**5.16**	**21**				**Pn**	**19 35 49.9**	**+0.3**
AAK					Sn		**Sn**	**19 36 47.6**	**-1.1**
AAK	**Ala-Archa**	**5.16**	**21**	*i*	PN		**Pn**	**19 35 50.0**	**+0.3**
AAK	**Ala-Archa**	**5.16**	**21**	P			**Pn**	**19 35 50.3**	**+0.6**
	comp=E,9.2nm,0.3s,baz=186,slow=6.0,SNR=89								
AAK					S		**Sn**	**19 36 47.1**	**-1.7**
	comp=E,18nm,0.3s,baz=342,slow=24,SNR=16								
KBK	**Karagaybulak**	**5.32**	**24**	P			**Pn**	**19 35 52.7**	**+1.0**
	SNR=12								
FRU1	**Bishkek**	**5.36**	**21**	Pn			**Pn**	**19 35 50.6**	**-1.6**
FRU1	**Bishkek**	**5.36**	**21**	PN			**Pn**	**19 35 50.6**	**-1.6**
KK31	**Karatay Array**	**5.41**	**348**	⇓P			**Pn**	**19 35 53.5**	**+0.8**
	comp=E,21nm,0.3s,baz=159,slow=12,SNR=5.4								
KK31				⇓S			**Sn**	**19 36 52.3**	**-2.0**
	comp=E,47nm,0.7s,baz=167,slow=22,SNR=19								
KK31	**Karatay Array**	**5.41**	**348**	Pn			**Pn**	**19 35 53.2**	**+0.5**
KK31	**Karatay Array**	**5.41**	**348**	PN			**Pn**	**19 35 53.2**	**+0.5**
KKAR	**Karatay Array**	**5.41**	**348**	Pn			**Pn**	**19 35 53.4**	**+0.7**
KKAR				Sn			**Sn**	**19 36 51.2**	**-3.0**
ULHL	**Ulahol**	**5.47**	**35**	P			**Pn**	**19 35 55.6**	**+1.8**
	SNR=9.0								
CHMS	**Chumysh**	**5.57**	**21**	P			**Pn**	**19 35 56.0**	**+1.0**
	SNR=9.4								
CHMS	**Chumysh**	**5.57**	**21**	⇑P			**Pn**	**19 35 55.5**	**+0.6**
	comp=E,5.9nm,0.4s								
CHMS				⇓S			**Sn**	**19 36 56.7**	**-1.5**
	comp=E,34nm,0.7s								
CHMS	**Chumysh**	**5.57**	**21**	PN			**Pn**	**19 35 55.5**	**+0.6**
USP	**Ospenovka**	**5.75**	**18**	P			**Pn**	**19 35 57.9**	**+0.5**
	SNR=7.7								
TKM2	**Tokmak 2**	**5.77**	**27**	P			**Pn**	**19 35 58.6**	**+0.7**
	SNR=6.2								
TKM2	**Tokmak 2**	**5.77**	**27**	⇓P			**Pn**	**19 35 58.5**	**+0.7**
	comp=E,2.1nm,0.3s								
TKM2				⇑S			**Sn**	**19 37 03.0**	**-0.4**
	comp=E,13nm,0.6s								
TKM2	**Tokmak 2**	**5.77**	**27**	Pn			**Pn**	**19 35 58.4**	**+0.6**
TKM2				S			**Sn**	**19 37 02.9**	**-0.4**
TARG	**Taragay, Kyrgy**	**5.91**	**47**	Pn			**Pn**	**19 35 60.0**	**+0.2**
TARG	**Taragay, Kyrgy**	**5.91**	**47**	PN			**Pn**	**19 36 00.0**	**+0.2**
KRBS	**Karabastau**	**6.48**	**24**	*eP*			Pn	19 36 18.5	+11
	comp=E,2.3nm,0.2s								
KRBS				*eS*			Sn	19 37 36.7	+17
	comp=E,11nm,0.8s								
DHRM	**DHARAMSHALA**	**6.56**	**147**	*eP*			**Pn**	**19 36 05.2**	**-3.3**
DHRM				*eS*			Sn	19 37 12.8	-10
DHRM				IAML				19 37 15.2	
	comp=E,191nm,0.5s								
PRZ	**Przheval'sk**	**6.74**	**44**	Pn			**Pn**	**19 36 10.7**	**+0.1**
PRZ	**Przheval'sk**	**6.74**	**44**	PN			**Pn**	**19 36 10.7**	**+0.1**
BTLS	**Baital**	**7.37**	**11**	*eP*			Pn	19 36 30.1	+11
	comp=E,1.2nm,0.1s								
BTLS				*eS*			Sn	19 37 57.5	+16
	comp=E,14nm,0.4s								
SMLA	**Simla**	**7.90**	**146**	*eP*			**Pn**	**19 36 22.3**	**-3.8**
SMLA				*eS*			Sn	19 37 42.0	-12
SMLA				IAML				19 37 46.0	
	comp=E,447nm,0.6s								
GEYT	**Alibeck**	**11.01**	**275**	P			**Pn**	**19 37 04.2**	**-3.1**
	comp=E,2.4nm,0.3s,baz=110,slow=11,SNR=16								
GEYT				S			**Sn**	**19 39 01.7**	**-7.4**
	comp=E,3.6nm,0.5s,baz=150,slow=18,SNR=7.2								
GYA0	**ALIBECK ARRAY**	**11.01**	**275**	P			**Pn**	**19 37 05.3**	**-2.0**
GYA0				S			**Sn**	**19 39 07.7**	**-1.4**
GYA0B	**ALIBECK ARRAY**	**11.01**	**275**	⇑P			**Pn**	**19 37 05.4**	**-2.0**
GYA0B				⇑S			**Sn**	**19 39 07.7**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**11.01**	**275**	Pn			**Pn**	**19 37 04.6**	**-2.8**
MK31	**Makanchi Array**	**11.73**	**37**	Pn			**Pn**	**19 37 15.5**	**-1.2**
MK31	**Makanchi Array**	**11.73**	**37**	*i* P			**Pn**	**19 37 16.7**	**0.0**
MKAR	**Makanchi Array**	**11.73**	**37**	P			**Pn**	**19 37 15.6**	**-1.1**
	comp=E,0.4nm,0.7s,baz=221,slow=14,SNR=5.1								
KURBB	**Kurchatov Arra**	**13.61**	**18**	P			**P**	**19 37 44.1**	**-0.4**
	comp=E,2.6nm,0.2s,baz=208,slow=10,SNR=9.4								
KURK	**Kurchatov**	**13.72**	**18**	Pn			**Pn**	**19 37 42.5**	**+0.3**
KURK	**Kurchatov**	**13.72**	**18**	*i* P			**Pn**	**19 37 43.4**	**+1.3**
AB31	**Akbulak array**	**14.39**	**326**	P			**Pn**	**19 37 50.2**	**-0.4**
	comp=E,1.1nm,0.3s,baz=132,slow=13,SNR=84								
AB31				S			**Sn**	**19 40 26.5**	**-3.6**
	comp=E,4.2nm,0.6s,baz=138,slow=24,SNR=13								
AB31	**Akbulak array**	**14.39**	**326**	P			**Pn**	**19 37 50.2**	**-0.4**
AB31				S			**Sn**	**19 40 26.4**	**-3.6**
ABKAR	**Akbulak array**	**14.39**	**326**				**Pn**	**19 37 50.4**	**-0.2**
BVAR	**Borovoye Array**	**15.25**	**356**	P			**Pn**	**19 38 01.9**	**+0.7**
	comp=E,5.5nm,0.3s,baz=165,slow=12,SNR=44								
BVAR				S			**Sn**	**19 40 45.5**	**-5.2**
	comp=E,3.1nm,0.6s,baz=164,slow=23,SNR=12								
BRVK	**Borovoye**	**15.29**	**356**	Pn			**Pn**	**19 38 01.9**	**+0.1**
BRVK	**Borovoye**	**15.29**	**356**	*i* P			**Pn**	**19 38 01.4**	**-0.3**
AKTO	**Aktyubinsk**	**16.10**	**326**	⇓P			**P**	**19 38 14.3**	**+2.1**
	comp=E,2.2nm,0.3s								
AKTO				⇓S			**S**	**19 41 05.7**	**-5.0**
	comp=E,5.1nm,0.8s								
AKTO	**Aktyubinsk**	**16.10**	**326**	P			**P**	**19 38 14.9**	**+2.7**
	comp=E,4.9nm,0.3s,baz=157,slow=7.1,SNR=24								
AKTO				S			**S**	**19 41 03.5**	**-7.3**
	comp=E,3.8nm,0.5s,baz=273,slow=19,SNR=4.3								
DGZ	**Jazzator, Alta**	**16.23**	**38**	*i* P			**Pn**	**19 38 11.2**	**-2.3**
LSA	**Lhasa**	**17.81**	**111**				**P**	**19 38 30.5**	**-1.2**
LSA	**Lhasa**	**17.81**	**111**	P			**P**	**19 38 30.5**	**-1.2**
LSA				pmax			pmax		
	comp=E,7.0nm,1.4s								
ZAA0	**Zalesovo Array**	**18.37**	**25**	P			**Pn**	**19 38 38.5**	**-0.3**
ZALV	**Zalesovo Beam**	**18.37**	**25**	*i* P			**Pn**	**19 38 39.7**	**+0.8**
ZALV				pmax			pmax		
	comp=E,1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**18.37**	**25**	P			**Pn**	**19 38 39.4**	**+0.5**
	comp=E,1.3nm,0.4s,baz=209,slow=9.4,SNR=12								
ARU	**Arti**	**20.68**	**338**	P			**P**	**19 39 03.5**	**+1.6**
ARU				IAmb			IAmb	19 39 08.8	
	comp=E,6.0nm,1.0s								
ARU	**Arti**	**20.68**	**338**	*d* *i* P			**P**	**19 39 01.0**	**-0.9**
ARU								19 39 34.3	
ARU				S			**S**	**19 42 43.1**	**-1.4**
ARU				pmax			pmax		
	comp=E,8.0nm,2.2s								
GNI	**Garni**	**21.32**	**285**	*i* P			**P**	**19 39 10.7**	**+1.5**
ZEI	**Tsey**	**21.98**	**292**	*e* P			**P**	**19 39 21.2**	**+5.1**
ZEI				pmax			pmax		
	comp=E,4.0nm,1.2s								
ONI	**Oni**	**22.30**	**291**	P			**P**	**19 39 19.4**	**+0.4**
ONI				IAmb			IAmb	19 39 26.6	
	comp=E,6.4nm,1.3s								
ONI	**Oni**	**22.30**	**291**	P			**P**	**19 39 19.5**	**+0.4**
ONI				pmax			pmax		
	comp=E,6.0nm,1.3s								
BELG	**Belogornoye**	**22.42**	**318**	*i* P			**P**	**19 39 21.4**	**+1.4**
BELG				pmax			pmax		
	comp=E,3.0nm,0.9s								
KBZ	**Khabaz**	**22.78**	**294**	P			**P**	**19 39 27.0**	**+3.5**
	comp=E,1.3nm,0.8s,baz=117,slow=11,SNR=3.0								
	comp=E,1.3nm,0.8s								
KIV	**Kislovodsk**	**22.95**	**295**	P			**P**	**19 39 27.6**	**+2.4**
KIV				IAmb			IAmb	19 40 01.6	
	comp=E,7.7nm,1.0s								
PZH	**PanZhiHua**	**27.45**	**106**	P			**P**	**19 40 06.4**	**+0.4**
HHC	**Hu-ho-hao-te**	**30.54**	**72**	*e* P			**P**	**19 40 34.6**	**+1.3**
HHC				pmax			pmax		
	comp=E,23nm,0.6s								
HHC				pmax			pmax		
	comp=Z,2μm,5.7s								
FINES	**FINESS Array B**	**36.87**	**325**	P			**P**	**19 41 32.0**	**+4.5**
FINES	**FINESS Array B**	**36.87**	**325**	P			**P**	**19 41 32.0**	**+4.5**
	comp=Z,0.7nm,0.3s,baz=114,slow=9.5,SNR=12								
	comp=Z,0.7nm,0.3s								
ARCES	**ARCESS Array B**	**40.25**	**337**	P			**P**	**19 42 00.2**	**+4.5**
	comp=E,1.0nm,0.4s,baz=108,slow=7.8,SNR=8.4								
	comp=Z,1.0nm,0.4s								
HFS	**Hagfors**	**42.56**	**321**	P			**P**	**19 42 18.7**	**+4.2**
	comp=Z,2.2nm,0.4s,baz=104,slow=12,SNR=9.9								
	comp=Z,2.2nm,0.4s								
NB2	**NORSAR Subarra**	**43.84**	**322**	P			**P**	**19 42 28.8**	**+3.9**
	comp=Z,0.6nm,0.5s,baz=95,slow=7.9								
NOA	**NORSAR Array B**	**43.84**	**322**	P			**P**	**19 42 29.1**	**+4.3**
	comp=Z,0.8nm,0.5s,baz=106,slow=7.2,SNR=4.6								
	comp=Z,0.8nm,0.5s								
TORD	**Tordi Ar. Bea**	**66.58**	**269**	P			**P**	**19 45 11.5**	**+3.2**
	comp=Z,1.2nm,1.0s,baz=40,slow=5.1,SNR=5.6								
	comp=Z,1.2nm,1.0s								
YKA	**Yellowknife Ar**	**79.89**	**3**	P			**P**	**19 46 30.0**	**+4.5**
	comp=Z,0.4nm,0.6s,baz=348,slow=5.8,SNR=9.4								
	comp=Z,0.4nm,0.6s								
WRA	**Warramunga Arr**	**81.99**	**123**	P			**P**	**19 46 38.2**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=335,slow=3.7,SNR=1.9								
	comp=Z,0.5nm,0.9s								

*IDC **06** 19:36:34.0±0.6, 23°.89N×121°.87E, h0km, mb4.0/18, mbtmp4.0/21, ML3.5/3, Error ellipse: s-maj=19.5km s-min=14.5km az=66.0*
*NEIC **06** 19:36:35.4±1.6, 23°.94N±0°.02×121°.78E±0°.04, h8km±3km, mb4.9/93, Error ellipse: s-maj=5.5km s-min=2.9km az=97.0*

*JMA **06** 19:36:35.7±0.1, 24°.0N±0°.3×121°.7E±0°.8, h0km, MD4.6/18, MV4.2/18, TAIWAN REGION*
*ASIES **06** 19:36:36.2, 24°.00N×121°.72E, h7km, ML4.8, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.53; $M_{\theta\theta}$-1.25; $M_{\phi\phi}$0.72; $M_{r\theta}$0.90; $M_{r\phi}$-1.05; $M_{\theta\phi}$2.87; Fault plane solution: $M_0$3.36416×10^{22} NP1:ϕ_{s}22.75000°, δ85.55000°, λ64.35000°. NP2:ϕ_{s}283.57000°, δ26.00000°, λ169.80000°. Principal axes: T Plg43.6650°, Azm267.7320°; N Plg25.5590°, Azm24.8900°; P Plg35.4960°, Azm134.8330°;*
*TAP **06** 19:36:36.2, 24°.00N×121°.72E, h7km, ML4.8, C*
*BJI **06** 19:36:37.0±0.0, 24°.01N×121°.71E, h11km, mb4.3/46, mB5.5/13, ML4.6/13, Ms4.9/13, Ms7 4.8/12*
ISC 06 19:36:36.7±0.6, 23°.98N±0°.01×121°.75E±0°.02, h15km±3km, n340, σ1s29/438, mb4.8/69, 72C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.17**	**307**	⇑*i*P			**Pg**	**19 36 39.7**	**-1.1**
	baz=306								
TWD				*i* S			**Sg**	**19 36 42.3**	**-1.3**
	baz=306								
ETL	**Fush Village**	**0.21**	**329**	⇑*i*P			**Pg**	**19 36 40.5**	**-1.0**
	baz=316								
ETL				*i* S			**Sg**	**19 36 43.7**	**-1.1**
	baz=316								
ETM	**Tongmen**	**0.23**	**268**	⇑*i*P			**Pg**	**19 36 41.0**	**-0.8**
	baz=262								
ETM				*i* S			**Sg**	**19 36 44.6**	**-0.6**
	baz=262								
NACB	**Ninganchiao**	**0.24**	**325**				**Pg**	**19 36 40.2**	**-1.7**
NACB					Sg		**Sg**	**19 36 44.2**	**-1.3**
NACB	**Ninganchiao**	**0.24**	**325**	P			**Pg**	**19 36 40.5**	**-1.4**
NACB	**Ninganchiao**	**0.24**	**325**	⇑*i*P			**Pg**	**19 36 40.9**	**-1.0**
	baz=322								
NACB				*i* S			**Sg**	**19 36 44.2**	**-1.3**
	baz=322								
SHUL	**Shoufeng**	**0.25**	**222**	⇓*i*P			**Pb**	**19 36 42.6**	**-0.3**
	baz=213								
SHUL				*i* S			**Sb**	**19 36 48.2**	**+1.1**
	baz=213								
LXIB	**Xiulin Townshi**	**0.31**	**279**	⇑*i*P			**Pg**	**19 36 42.2**	**-0.9**
	baz=274								
TEGC	**Jichi Village**	**0.33**	**215**	⇓*i*P			**Pb**	**19 36 44.1**	**-0.1**
	baz=207								
TEGC				*e*S			**Sb**	**19 36 51.5**	**+2.2**
	baz=207								
ESL	**Shilin**	**0.33**	**241**	⇑*i*P			**Pg**	**19 36 42.9**	**-0.5**
	baz=243								
ESL				S			**Sg**	**19 36 47.6**	**-0.4**
	baz=243								
EHP	**Heping Village**	**0.33**	**359**	*e*P			**Pg**	**19 36 42.8**	**-0.7**
	baz=349								
EHP				S			**Sb**	**19 36 48.8**	**-0.8**
	baz=349								
EAHA	**Aohua**	**0.35**	**359**	P			**Pg**	**19 36 43.4**	**-0.5**
	baz=347								
EAHA				S			**Sg**	**19 36 48.3**	**-0.5**
	baz=347								
WARBT	**Fenglin Townsh**	**0.42**	**232**	⇑*i*P			**Pg**	**19 36 44.7**	**-0.4**
	baz=241								
WARBT				*e*S			**Sg**	**19 36 50.6**	**-0.1**
	baz=241								
EGFH	**Guangfu**	**0.42**	**224**	⇓*i*P			**Pg**	**19 36 45.1**	**-0.1**
	baz=221								
ENA	**Nanau**	**0.45**	**360**	⇑*i*P			**Pg**	**19 36 45.3**	**-0.4**
	baz=349								
ENA				S			**Sb**	**19 36 51.6**	**-1.3**
	baz=349								
EWUT	**Wuta**	**0.47**	**4**	⇑*i*P			**Pb**	**19 36 45.8**	**-0.9**
	baz=353								
EWUT				*e*S			**Sb**	**19 36 52.1**	**-1.4**
	baz=353								
WHF	**Hehuan Shan**	**0.47**	**291**	⇑*i*P			**Pg**	**19 36 45.4**	**-0.7**
	baz=290								
WHF				S			**Sg**	**19 36 51.7**	**-0.8**
	baz=290								
OWD	**Renai**	**0.52**	**268**	⇑*i*P			**Pg**	**19 36 46.5**	**-0.5**
	baz=273								
CHGB	**Renai**	**0.53**	**279**	⇑*i*P			**Pg**	**19 36 46.7**	**-0.4**
	baz=276								
CHGB				S			**Sb**	**19 36 54.7**	**-0.6**
	baz=276								
FUSS	**Fushou**	**0.53**	**301**	⇑*i*P			**Pg**	**19 36 46.8**	**-0.5**
	baz=298								
FUSS				*e*S			**Sb**	**19 36 55.9**	**+0.4**
	baz=298								
EOS4	**EOS4**	**0.54**	**74**	⇑*e*P			**Pb**	**19 36 48.8**	**+1.1**
	baz=89								
NNSB	**Datong**	**0.56**	**324**	⇑*i*P			**Pg**	**19 36 47.2**	**-0.6**
	baz=319								
NNSB				S			**Sg**	**19 36 54.6**	**-0.6**
	baz=319								
NNSH	**Datong**	**0.56**	**324**	⇑*i*P			**Pg**	**19 36 47.1**	**-0.6**
	baz=319								
HGSD	**Ruisui**	**0.56**	**211**	⇓*i*P			**Pb**	**19 36 48.4**	**+0.1**
	baz=196								
NNS	**Nan Shan**	**0.57**

baz=264
SSLB eS Sg 19 37 00.3 -0.8
baz=264
DPDB Guoxing 0.75 275⇑iP Pb 19 36 51.2 -0.3
baz=272
DPDB eS Sb 19 37 01.6 0.0
baz=272
WCS Beigang Elemen 0.77 276⇑iP Pb 19 36 51.3 -0.4
baz=274
WCS eS Sb 19 37 02.8 +0.8
baz=274
YHNB Yeheng 0.77 334 Pg 19 36 50.9 -0.8
YHNB Sg Sb 19 37 01.7 -0.4
YHNB Yeheng 0.77 334 P Pb 19 36 51.5 -0.3
YHNB Yeheng 0.77 334⇑iP Pb 19 36 51.4 -0.5
baz=323
YHNB S Sb 19 37 02.0 -0.1
baz=323
SMLT Sun Moon Lake 0.78 263⇑iP Pb 19 36 51.6 -0.4
baz=271
SMLT iS Sg 19 37 01.7 -0.4
baz=271
NSK Sanguang 0.78 333⇑iP Pb 19 36 51.6 -0.4
baz=322
NSK S Sb 19 37 02.2 -0.3
baz=322
ILA Ilan 0.79 0 eP Pb 19 36 51.7 -0.4
baz=346
WHP Taichung City 0.79 293⇑iP Pb 19 36 52.1 -0.1
baz=283
WHP eS Sb 19 37 03.5 +0.8
baz=283
FUSB Fushanzhiwuyua 0.79 350⇑iP Pb 19 36 52.0 -0.3
baz=336
FUSB iS Sb 19 37 02.8 -0.1
baz=336
TYC Yuchr 0.81 265⇑iP Pb 19 36 52.1 -0.4
baz=273
TYC S Sg 19 37 02.1 -1.1
baz=273
NWLT Wulai 0.83 345⇑iP Pb 19 36 52.5 -0.4
baz=327
NWLT eS Sb 19 37 04.6 +0.8
baz=327
CHKH Chenggong 0.84 202 eP Pg 19 36 52.6 -0.4
baz=200
CHKH eS Sn 19 37 06.7 +0.5
baz=200
WHYT Xinyi Township 0.86 251 ⇑P Pg 19 36 53.1 -0.3
baz=258
WHYT eS Sb 19 37 05.2 +0.4
baz=258
NFF Wufeng Townshi 0.87 319⇑iP Pb 19 36 53.3 -0.2
baz=316
NFF S Sb 19 37 05.3 +0.3
baz=316
FULB Fuli 0.88 208⇓eP Pg 19 36 53.2 -0.4
baz=225
FULB eS Sn 19 37 10.6 +3.5
baz=225
CHKT Chengkung 0.94 202 eP Pg 19 36 53.5 -1.3
baz=199
CHKT eS Sn 19 37 09.7 +1.1
baz=199
NSTT Nanjuang 0.94 314⇑iP Pb 19 36 54.9 +0.2
baz=311
NSTT iS Sb 19 37 07.8 +0.7
baz=311
LIOB Emei 0.94 315⇑iP Pn 19 36 55.1 -0.4
baz=312
LIOB eS Sn 19 37 08.0 -0.7
baz=312
WJS Zhushan 0.94 261 ⇑P Pn 19 36 55.3 -0.2
baz=267
WJS eS Sn 19 37 09.6 +0.9
baz=267
WWF Wufeng 0.96 274 ⇑P Pn 19 36 55.8 +0.2
baz=273
WWF eS Sn 19 37 09.6 +0.5
baz=273
EHD Haiduan 0.96 211 eP Pg 19 36 53.2 -2.0
baz=225
TWQ1 Liyutan 0.96 293⇑iP Pn 19 36 55.7 0.0
baz=291
NJD Zhudong 0.96 322⇑iP Pn 19 36 55.7 0.0
baz=318
WNT Mingjian 0.97 264⇑iP Pn 19 36 56.3 +0.5
baz=268
WNT S Sn 19 37 10.0 +0.5
baz=268
WNT1 Nantou City 0.98 266⇑iP Pn 19 36 56.4 +0.5
baz=270
WNT1 eS Sn 19 37 11.1 +1.6
baz=270
ALS Alishan 0.98 242⇓iP Pb 19 36 55.5 0.0
baz=243
ALS eS Sb 19 37 08.8 +0.5
baz=243
TCU Taichung 0.99 280 ⇑P Pn 19 36 56.9 +0.8
baz=271
TCU eS Sn 19 37 12.4 +2.6
baz=271
TIPB Shuangxi 0.99 4⇑iP Pb 19 36 55.6 0.0
baz=351
NSY Sanyi 1.00 296⇑iP Pn 19 36 56.8 +0.5
baz=305
NSY S Sn 19 37 09.8 -0.3
baz=305
ECS Chishang 1.00 209 eP Pg 19 36 55.4 -0.6
baz=223
NHDH Xindian Distri 1.00 349⇑eP Pb 19 36 55.6 -0.2
baz=334
TWA Mucha 1.01 352⇑iP Pb 19 36 55.9 0.0
baz=335
TWA eS Sn 19 37 10.0 -0.4
baz=335
TATO Taipei 1.02 347 Pb 19 36 56.0 -0.1
TATO Sg Sb 19 37 09.6 +0.2
TATO Taipei 1.02 347 P Pn 19 36 56.6 +0.1
TATO Taipei 1.02 347⇑iP Pb 19 36 56.2 +0.1
baz=332
TATO S Sb 19 37 09.5 +0.1
baz=332
ELDTW Lidau 1.03 221 eP Pg 19 36 55.2 -1.4
baz=220
NMLH Miaoli 1.03 303 ⇑P Pn 19 36 57.4 +0.7
baz=300
HSN1 Hsinchu 1.04 320 ⇑P Pn 19 36 57.3 +0.6
baz=316
HSN1 eS Sn 19 37 12.4 +1.4
baz=316
CHN5 Tsauling 1.05 249⇑iP Pn 19 36 57.5 +0.6
baz=240
CHN5 S Sn 19 37 12.9 +1.6
baz=240
TWB1 Santiao Chiao 1.05 12 P Pb 19 36 56.8 +0.2
baz=359
BACT New Taipei Cit 1.05 345 P Pn 19 36 57.5 +0.6
baz=339
NJN Zhunan 1.06 312⇑eP Pn 19 36 57.9 +0.8
baz=308
WYL Yuanlin Townsh 1.06 269⇑eP Pg 19 36 56.4 -0.8
baz=268
WYL eS Sn 19 37 12.0 +0.4
baz=268
SBCB Hsinchu 1.07 320 ⇑P Pn 19 36 57.9 +0.8
baz=316
SBCB S Sn 19 37 12.7 +0.9
baz=316
NHY Taipei 1.07 351 eP Pn 19 36 57.7 +0.5
baz=344
NHY eS Sn 19 37 13.4 +1.6
baz=344
WDJ Dajia District 1.07 290 ⇑P Pn 19 36 58.3 +1.0
baz=299
WDJ iS Sn 19 37 13.5 +1.6
baz=299
TAP Taipei 1.08 348 eP Pn 19 36 57.1 -0.2
baz=340
TAP eS Sn 19 37 12.5 +0.4
baz=340
HSN Hsinchu 1.08 320⇑iP Pn 19 36 58.0 +0.7
baz=318
HSN S Sn 19 37 15.0 +2.8
baz=318
WCHH Zhanghua 1.09 276 eP Pn 19 36 58.2 +0.8
baz=273
NWF Wu-fen Shan 1.09 2⇑iP Pn 19 36 57.7 +0.1
baz=344
NWF eS Sn 19 37 13.4 +1.0
baz=344
WFSB Wu-fen Shan 1.09 2⇑iP Pb 19 36 57.7 +0.2
baz=346
WFSB eS Sn 19 37 12.6 +0.3
baz=346
NTY Taoyuan 1.10 338 P Pn 19 36 58.4 +0.8
baz=324
NTY eS Sn 19 37 13.9 +1.4
baz=324
NCUH Zhongli 1.11 333 eP Pn 19 36 58.4 +0.7
baz=326
NCU National Centr 1.11 333 P Pn 19 36 58.8 +1.0
baz=327
NCU eS Sn 19 37 15.8 +2.9
baz=327
SXI1 Grass Mountain 1.12 6⇑iP Pn 19 36 58.3 +0.3
baz=354
SXI1 iS Sn 19 37 14.2 +1.0
baz=354
WGK Gukeng 1.12 255 eP Pn 19 36 58.8 +1.0
baz=253
WDLH Douliu 1.14 256 eP Pn 19 36 58.9 +0.8
baz=254
TWS1 Kuangyinshan 1.16 345 ⇑P Pn 19 36 59.4 +1.0
baz=338
TWS1 S Sn 19 37 16.4 +2.4
baz=338
TNOU National Taiwa 1.17 1 ⇑P Pn 19 36 59.0 +0.5
baz=347
TNOU eS Sn 19 37 15.3 +1.1
baz=347
WCKO Fanlu 1.17 243 ⇓P Pn 19 36 59.2 +0.6
baz=245
WCKO S Sn 19 37 16.6 +2.3
baz=245
YM01 YM01 1.18 352⇑iP Pn 19 36 59.2 +0.5
baz=330
YM01 iS Sn 19 37 15.2 +0.7
baz=330
JYNG Yonagunijimaku 1.19 66 P Pg 19 36 59.0 -0.7
JYNG Yonagunijimaku 1.19 66 A A 19 36 59.0
comp=E,12nm,3.2s,comp=N,16nm,4.3s
STYH Taoyuan 1.20 228 eP Pg 19 36 58.4 -1.3
baz=215
LONT Longtian 1.21 208 eP Pb 19 36 56.9 -2.3
baz=206
NHW Xinwu Township 1.21 328 eP Pn 19 36 59.7 +0.6
baz=322
NHW eS Sn 19 37 17.8 +2.6
baz=322
NTST Danshui 1.21 347 eP Pn 19 36 59.7 +0.6
baz=348
NTST eS Sn 19 37 17.1 +1.8
baz=348
STYT Tauyuan 1.22 228⇓eP Pg 19 36 59.0 -1.1
baz=215
ANP Anpu 1.22 350 eP Pn 19 36 59.7 +0.3
baz=341
ANP eS Sn 19 37 18.9 +3.2
baz=341
TPUB Ta-pu 1.22 237 Pn Pb 19 36 59.6 +0.1
TPUB Ta-pu 1.22 237 P Pn 19 36 59.9 +0.6
TPUB Ta-pu 1.22 237⇓iP Pn 19 36 59.9 +0.6
baz=240
TPUB eS Sn 19 37 16.7 +1.1
baz=240
CHN4 Tsaushan 1.23 240⇓iP Pn 19 37 00.0 +0.7
baz=240
CHN2 Minshiung 1.24 249 eP Pg 19 37 00.4 -0.2
baz=248
WRL Guolierlin Hig 1.25 267 eP Pg 19 37 00.4 -0.4
baz=266
WRL S Sn 19 37 19.0 +2.7
baz=266
YOJ Yonaguni jima 1.25 67 Pn Pn 19 36 59.7 0.0
YOJ Yonaguni jima 1.25 67 P Pn 19 36 59.9 +0.2
YOJ Yonaguni jima 1.25 67 eP Pn 19 36 59.5 -0.2
baz=68
YOJ Yonaguni jima 1.25 67 P Pn 19 36 59.8 +0.2
YOJ eS Sn 19 37 18.6 +2.2
YOJ Yonaguni jima 1.25 67 A A 19 36 59.8
comp=E,12nm,1.7s,comp=N,10.0nm,4.5s
WTP Ta-pu 1.27 235 eP Pn 19 37 00.3 +0.4
baz=238
WTP eS Sn 19 37 18.5 +1.8
baz=238
RLNB Erlin 1.27 266⇑eP Pg 19 37 01.1 0.0
baz=266
RLNB S Sn 19 37 18.9 +2.2
baz=266
WTK Tuku 1.27 257 eP Pg 19 37 00.8 -0.4
baz=256
CHY Chiayi 1.30 249 eP Pg 19 37 02.2 +0.4
baz=248
TWY Chenhua 1.30 354 eP Pg 19 37 01.6 -0.1
baz=345
TWG Pinlang 1.30 208 Pn 19 36 58.3 -2.1
TWG Pinlang 1.30 208 eP Pn 19 36 58.7 -1.7
baz=206
TWGBT Beinan 1.30 208 eP Pn 19 36 58.3 -2.1
baz=206
LDUT Ludao 1.32 191 eP Pn 19 36 58.2 -2.4
baz=179
TTN Taitung 1.33 204 eP Pn 19 37 01.3 +0.5
baz=203
WTCT Ta-ch'eng 1.34 266 eP Pn 19 37 00.9 0.0
baz=264
TWK Hsinying 1.35 239⇑eP Pg 19 37 02.2 -0.5
baz=241
TWK S Sn 19 37 21.6 +2.7
baz=241
CHN1 Nanshi 1.37 235 eP Pb 19 37 02.0 +0.1
baz=238
CHN1 eS Sg 19 37 22.5 +1.8
baz=238
SNST Tainan City 1.37 237 eP Pb 19 37 02.4 +0.3
baz=237
SGST Jiashian 1.39 230 eP Pn 19 37 02.0 +0.4
baz=243
SGST eS Sg 19 37 22.3 +0.8
baz=243
SLGT Liugui 1.41 226 eP Pn 19 37 02.3 +0.5
baz=214
SLGT eS Sg 19 37 24.0 +2.0
baz=214
WSF Szhu 1.43 257 eP Pn 19 37 03.5 -0.8
baz=257
WSF eS Sg 19 37 24.1 +1.2
baz=257
WSL Shuilin Townsh 1.46 252 eP Pb 19 37 03.7 +0.1
baz=250
ICHU Yijhu 1.48 246 eP Pb 19 37 03.9 +0.1
baz=244
CHN8 Yiju 1.54 246 eP Pn 19 37 04.0 +0.4
baz=248
CHN8 eS Sg 19 37 26.1 -0.1
baz=248
CHN3 Shinhua 1.55 235 eP Pg 19 37 05.7 -0.8
baz=235
ECL Taimali 1.55 208 eP Pn 19 37 02.3 -1.5
baz=193
SSHA Shanhua 1.58 238 eP Pb 19 37 05.9 +0.3
baz=237
SCST Cishan 1.58 227 eP Pb 19 37 05.6 0.0
baz=227
SSD Sandimen 1.59 220 eP Pn 19 37 04.2 -0.2
baz=205
SSD eS Sb 19 37 26.6 +0.8
baz=205
SHHT Tainan City 1.60 234 eP Pg 19 37 06.6 -0.7
baz=250
TSMG Majia 1.62 219 eP Pn 19 37 05.7 +1.0
baz=207
SCLT Jiali 1.63 241 eP Pb 19 37 06.6 +0.1
baz=240
TWM1 Shoushan 1.67 227 eP Pg 19 37 08.0 -0.8
baz=226
PCYT Pengchaiyu 1.67 10 eP Pb 19 37 06.5 -0.8
baz=341
TAI1 Yung-k'ang 1.68 237 eP Pb 19 37 07.9 +0.7
baz=235
SGLT Jiouru 1.70 223 eP Pb 19 37 08.2 +0.6
baz=205
MASBT Mashibuluo 1.70 217 eP Pn 19 37 05.4 -0.4
baz=213
MASBT eS Sb 19 37 29.8 +0.9
baz=213
TSPT Pingtung City 1.73 222 eP Pg 19 37 09.4 -0.5
baz=204
SNJT Kaohsiung City 1.78 227 eP Pb 19 37 09.3 +0.3
baz=226
EAST Anshuo 1.79 208 eP Pn 19 37 06.3 -0.8
baz=196
TAW Tawu 1.79 206 eP Pn 19 37 08.1 +1.0
baz=204
TAWH Dawu Township 1.81 206 eP Pn 19 37 08.6 +1.3
baz=205
IRIF Iriomote-Funau 1.85 78 P Pn 19 37 08.6 +0.7
IRIF eS Sb 19 37 33.2 0.0
IRIF Iriomote-Funau 1.85 78 A A 19 37 08.6
comp=E,12nm,2.0s,comp=N,11nm,9.4s
HATJ Hateruma jima 1.89 87 eP Pn 19 37 08.6 +0.2
SCZT Fangliau 1.90 213 eP Pb 19 37 10.5 -0.6
baz=197
WSSB Gushan 1.90 226 eP Pn 19 37 09.4 +0.8
baz=225
SLIU Shizi 1.96 207 eP Pn 19 37 07.8 -1.6
baz=205
LYUB Lan-yu 1.97 184 eP Pn 19 37 05.5 -4.1
baz=186
WDGT Dungji 2.04 250 eP Pn 19 37 11.8 +1.2
baz=247
PHUB P'eng-hu 2.04 257 eP Pn 19 37 11.5 +0.9
baz=258
PHUB eS Sn 19 37 37.0 +1.1
baz=258
PNG Penghu 2.05 259 eP Pn 19 37 11.6 +1.0
baz=259
PNG eS Sn 19 37 37.5 +1.5
baz=259
TWP Hsiaoliuchiu 2.06 218 eP Pb 19 37 14.7 +0.9
baz=215
JKRS Kuro-shima 2.09 82 P Pn 19 37 11.9 +0.7
JKRS Kuro-shima 2.09 82 A A 19 37 11.9
comp=E,13nm,2.3s,comp=N,17nm,2.2s
HEN Hengchun 2.17 206 eP Pn 19 37 14.2 +1.9
baz=194
TWK1 Hengchun 2.20 203 eP Pn 19 37 13.7 +1.0
baz=194
TWKBT Hengchun 2.20 203 eP Pn 19 37 12.8 +0.1
baz=194
JIJ Ishigaki jima 2.22 80 P Pn 19 37 13.1 +0.1
JIJ eS Sn 19 37 39.4 -0.9
VCHM Qimei 2.26 251 eP Pn 19 37 13.8 +0.3
baz=251
VCHM eS Sn 19 37 42.5 +1.4
baz=251
VWUC VWUC 2.32 296 eP Pn 19 37 13.5 -0.9
baz=293
JISG Ishigakijimahi 2.42 75 P Pn 19 37 15.8 0.0
JISG S Sn 19 37 45.4 +0.2
PTMZ Houxiangcun 2.62 294 eP Pn 19 37 18.3 -0.1
baz=292
MATB Ma-tsu 2.71 323 eP Pn 19 37 19.6 -0.1
baz=316
JTJ Tarama 2.78 76 P Pn 19 37 21.3 +0.6
QZH Quanzhou 3.03 289⇑iPn Pn 19 37 23.9 -0.2
QZH Sn Sn 19 37 59.4 -0.8
QZH smax smax
comp=N,1μm,1.1s
QZH smax smax
comp=N,1μm,1.1s
KNMB Chin-men Tao 3.10 280 Pn Pn 19 37 25.3 +0.2
KNMB Chin-men Tao 3.10 280 eP Pn 19 37 25.0 -0.1
baz=274
LYJJ Jianjiangzhen 3.13 325 eP Pn 19 37 25.0 -0.5
baz=318
JIRB Irabujima 3.24 74 P Pn 19 37 29.7 +2.7
MHZQ Yeshan 3.25 311 eP Pn 19 37 27.3 +0.2
baz=296
XPSS Dashiqiu 3.26 335 eP Pn 19 37 26.8 -0.5
baz=325
JIKM Ikemajima 3.33 73 eS Sn 19 38 09.8 +2.3
JMJ2 Miyako jima3 3.35 76 eP Pn 19 37 30.6 +2.0
JMJ2 eS Sn 19 38 09.4 +1.1
AXDP Jialang 3.56 286 eP Pn 19 37 31.5 +0.1
baz=281
ZPLA Ao Xicun 3.66 270 eP Pn 19 37 33.1 +0.3
baz=264
DSXP Dongshan 3.96 267 eP Pn 19 37 37.0 0.0
baz=262
SXFK Yanhouchang 4.43 304 eP Pn 19 37 43.1 -0.3
baz=300
JOW Kunigami 6.55 63 Pn Pn 19 38 11.6 -1.0
comp=N,6.1nm,0.3s,baz=141,slow=17,SNR=11
comp=N,15nm,0.2s
SSE Sheshan 7.11 356 Pn Pn 19 38 20.4 +0.2
SSE Sn Sn 19 39 44.8 +4.0
SSE smax smax
comp=N,66nm,1.2s
SSE smax smax
comp=N,75nm,1.1s
HKPS Hong Kong Po S 7.20 258 Pn Pn 19 38 21.1 -0.3
GZH Guangzhou 7.76 265 Pn Pn 19 38 25.2 -3.9
GZH Sn Sn 19 39 49.9 -6.9
GZH smax smax
comp=N,410nm,1.4s
GZH smax smax
comp=N,310nm,1.3s
NJ2 Nanjing 8.44 343 ⇓P Pn 19 38 38.5 0.0
NJ2 S Sn 19 40 12.3 -1.2
NJ2 pmax pmax
comp=N,29nm,0.5s
NJ2 smax smax
comp=N,220nm,1.0s
NJ2 smax smax
comp=N,170nm,1.2s
NJ2 LR LR
comp=N,5μm,10.4s
NJ2 LR LR
comp=N,3μm,8.1s
NJ2 LR LR
comp=N,4μm,10.9s
WHN Wuhan 9.28 316 P Pn 19 38 50.9 +1.0
LYN LuoYang 13.28 325 eP Pn 19 39 45.7 +1.0
LYN PP P 19 39 56.5 +2.0
LYN pmax pmax
comp=N,11nm,0.7s
GYA Guiyang 13.87 283 P Pn 19 39 55.3 +2.3
GYA S Sn 19 42 32.1 +5.2
GYA pmax pmax
comp=N,11nm,1.2s
KSRS Korea Array 14.44 20 Pn Pn 19 40 01.2 +0.7
comp=N,0.2nm,0.3s,baz=204,slow=12,SNR=4.1
comp=N,2.9nm,1.0s
HNS HongShan 14.68 337 eP P 19 40 08.6 -1.4
DL2 Dalian 14.88 360 P P 19 40 15.1 +2.8
DL2 pmax pmax
comp=Z,16nm,1.0s
XAN Xi'an 15.03 315 P Pn 19 40 09.3 +0.6
XAN S Sn 19 43 00.3 +5.3
XAN pmax pmax
comp=Z,26nm,1.0s
PZH PanZhiHua 18.27 282 P Pn 19 40 45.3 -4.6
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.8s
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,2μm,7.4s
HHC Hu-ho-hao-te 18.87 336 eP Pn 19 40 58.2 +1.1
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,3μm,5.4s
MJAR Matsushiro Arr 18.92 45 P P 19 40 57.2 +0.2
baz=240,slow=7.7,SNR=4.2
comp=Z,2.1nm,0.8s
BTO Baotou 19.29 332 eP Pn 19 41 05.0 +2.9
BTO pP sP 19 41 08.9 +2.3
BTO sP pP 19 41 11.8 +7.0
BTO PP PnPn 19 41 23.8 +8.6
BTO pmax pmax
comp=Z,6.0nm,0.7s
BTO LR LR
comp=Z,3μm,9.0s
BTO LR LR
comp=Z,4μm,9.4s
BTO LR LR
comp=Z,6μm,9.8s

LZH	Lanzhou	19.61	312	⇑P		Pn	19 41 10.3 +4.3
LZH				pP		sP	19 41 17.2 +7.1
LZH				sP		pP	19 41 21.1 +13
LZH				pmax		pmax	
	comp=Z,23nm,1.3s						
CN2	Changchun	20.01	8	P		Pn	19 41 10.2 -0.4
CN2				pmax		pmax	
	comp=Z,20nm,0.7s						
CRAI	Chiangrai	20.15	264	P		P	19 41 09.6 -0.9
XLT	XiLinHaoTe	20.41	348	eP		Pn	19 41 15.8 +0.4
XLT				sP		sP	19 41 23.2 +4.2
XLT				pmax		pmax	
	comp=Z,5.0nm,0.8s						
XLT				pmax		pmax	
	comp=Z,2μm,9.4s						
TNCH	TengChong	21.16	278	⇓P		P	19 41 23.0 +1.4
TNCH				pP		sP	19 41 25.1 -2.6
TNCH				S		S	19 45 14.6 -2.2
TNCH				sS		sS	19 45 21.7 -1.4
TNCH				pmax		pmax	
	comp=Z,17nm,2.2s						
TNCH				LR		LR	
	comp=Z,2μm,8.4s						
TNCH				LR		LR	
	comp=Z,2μm,10.3s						
CHTO	Chiang Mai	21.83	261	P		P	19 41 27.7 -1.0
USRK	Ussuriysk Ar.	21.85	20	P		P	19 41 29.0 +0.4
	comp=Z,2.9nm,0.8s,baz=212,slow=13,SNR=3.8						
	comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	21.94	260	P		P	19 41 32.0 +2.0
	comp=Z,2.2nm,0.8s,baz=63,slow=8.6,SNR=13						
	comp=Z,2.2nm,0.8s						
SBUM	Sibu	23.30	205	P		P	19 41 43.6 -0.5
GTA	Gaotai	24.09	315	P		P	19 41 56.8 +4.9
GTA				pP		sP	19 42 04.3 +6.5
GTA				pmax		pmax	
	comp=Z,6.0nm,1.4s						
LUWI	Luwuk	24.89	178	P		P	19 41 58.4 -0.7
MTKI	Muara Teweh, K	25.65	196	P		P	19 42 05.8 -0.2
	comp=Z,35nm,1.4s						
GOMU	GeErMu	26.20	304	P		P	19 42 13.9 +2.6
GOMU				pmax		pmax	
	comp=Z,6.0nm,1.3s						
ULN	Ulaanbaatar	26.55	338	P		P	19 42 13.5 -0.6
HEH	HeiHe	26.60	8	eP		P	19 42 16.8 +2.5
SONM	Songino Array	26.76	337	P		P	19 42 17.0 +1.0
	comp=Z,2.3nm,0.7s,baz=154,slow=9.5,SNR=10						
	comp=Z,2.3nm,0.7s						
SHL	Shillong	27.14	280			P	19 42 19.6 0.0
SHL				IAmb		IAmb	19 42 28.7
	comp=Z,19nm,1.1s						
IPM	Ipoh	27.83	229	P		P	19 42 24.4 -1.3
IPM				IAmb		IAmb	19 43 08.6
	comp=Z,29nm,1.6s						
LSA	Lhasa	27.84	289	P		P	19 42 27.8 +1.5
LHMI	Lhok Sumawe	30.28	236	P		P	19 42 44.7 -2.8
WMQ	Urumqi	34.17	314	eP		P	19 43 21.6 +0.2
WMQ				pP		sP	19 43 27.7 +0.3
WMQ				pmax		pmax	
	comp=Z,5.0nm,0.7s						
MTN	Manton Dam	37.73	165	P		P	19 43 49.0 -3.0
MTN				IAmb		IAmb	19 44 12.8
	comp=Z,30nm,1.6s						
YAK	Yakutsk	38.42	6	P		P	19 43 56.3 -1.1
MK31	Makanchi Array	38.84	316	P		P	19 43 60.0 -1.3
MKAR	Makanchi Array	38.84	316	P		P	19 44 01.9 +0.7
	comp=Z,2.7nm,0.8s,baz=106,slow=10,SNR=25						
	comp=Z,2.7nm,0.6s						
MAKZ	Makanchi	39.05	316	P		P	19 44 03.3 +0.3
ZAA0	Zalesovo Array	40.70	327	P		P	19 44 15.1 -1.4
ZALV	Zalesovo Beam	40.70	327	P		P	19 44 15.8 -0.7
	comp=Z,1.0nm,0.4s,baz=111,slow=8.1,SNR=9.2						
	comp=Z,1.0nm,0.4s						
PMG	Port Moresby	41.44	140	P		P	19 44 20.4 -2.6
PMG				IAmb		IAmb	19 44 25.4
	comp=Z,16nm,1.0s						
NRN	Naryn	41.72	306	P		P	19 44 24.8 -0.7
H11N1	WAKE ISLAND Hy	41.99	87	T		T	20 29 40.4
	baz=276						
H11N2	WAKE ISLAND Hy	41.99	87	T		T	20 29 36.4
	baz=276						
H11N3	WAKE ISLAND Hy	42.00	87	T		T	20 29 37.5
	baz=276						
H11S3	WAKE ISLAND Hy	42.11	89	T		T	20 29 34.8
	baz=284,slow=74						
H11S1	WAKE ISLAND Hy	42.12	89	T		T	20 29 35.2
	baz=284,slow=74						
H11S2	WAKE ISLAND Hy	42.13	89	T		T	20 29 35.7
	baz=284						
KURK	Kurchatov	42.58	320	P		P	19 44 30.8 -1.2
KURBB	Kurchatov Arra	42.60	320	P		P	19 44 33.0 +0.9
	comp=Z,2.3nm,0.2s,baz=105,slow=9.1,SNR=1.2						
	comp=Z,2.3nm,0.2s						
AAK	Ala-Archa	43.04	307	P		P	19 44 36.4 +0.3
COEN	Coen	43.13	149	P		P	19 44 35.7 -1.1
COEN				IAmb		IAmb	19 44 39.0
	comp=Z,35nm,1.0s						
NIL	Nilore	43.24	294	P		P	19 44 37.9 +0.3
NIL				IAmb		IAmb	19 44 50.0
	comp=Z,21nm,1.6s						
ARSB	Arslanbob	43.95	305	P		P	19 44 42.8 -0.6
PSA00	Pilbara Seismi	45.31	182	P		P	19 44 53.0 -1.1
WRAB	Tennant Creek	45.34	163	P		P	19 44 53.8 -0.7
WRAB				IAmb		IAmb	19 45 04.3
	comp=Z,22nm,1.5s						
WRA	Warramunga Arr	45.34	163	P		P	19 44 52.2 -2.3
	comp=Z,2.0nm,0.7s,baz=346,slow=8.5,SNR=8.3						
	comp=Z,2.0nm,0.7s						
WB2	Warramunga Arr	45.35	163	P		P	19 44 53.1 -1.4
WB2				IAmb		IAmb	19 45 01.1
	comp=Z,16nm,1.2s						
WR0	Warramunga Arr	45.41	163	P		P	19 44 53.9 -1.1
WR0				IAmb		IAmb	19 45 07.4
	comp=Z,23nm,1.7s						
KK31	Karatay Array	46.00	307	P		P	19 44 59.7 +0.1
KK31				PcP		PcP	19 46 34.2 -1.9
KKAR	Karatay Array	46.00	307	P		P	19 44 59.5 -0.1
KBL	Kabul	46.72	296	P		P	19 45 04.9 -0.6
KBL				IAmb		IAmb	19 45 10.7
	comp=Z,8.9nm,1.1s						
TIXI	Tiksi	47.87	3	P		P	19 45 12.2 -1.5
TIXI				IAmb		IAmb	19 45 17.7
	comp=Z,16nm,1.2s						
BVAR	Borovoye Array	48.16	321	P		P	19 45 16.4 +0.2
	comp=Z,1.0nm,0.6s,baz=110,slow=12,SNR=5.4						
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	48.23	321	P		P	19 45 15.3 -1.4
AS31	Alice Springs	48.81	165			P	19 45 20.6 -0.9
ASAR	Alice Springs	48.81	165	P		P	19 45 20.0 -1.5
	comp=Z,1.2nm,0.8s,baz=333,slow=7.5,SNR=11						
ASAR				PcP		PcP	19 46 46.6 +0.4
	comp=Z,0.6nm,0.9s,baz=344,slow=2.7,SNR=1.2						
	comp=Z,1.2nm,0.8s						
MNCI	Minicoy	49.04	260	P		P	19 45 22.7 -0.8
HMDM	Hanimaadhoo	49.57	258	P		P	19 45 26.8 -0.8
KAAM	Kaadhehdhoo	52.66	251	P		P	19 45 48.9 -1.9
MORW	Morawa	53.02	186	P		P	19 45 51.4 -1.7
MORW				IAmb		IAmb	19 45 53.5
	comp=Z,34nm,1.2s						
KIWB	Kanaga Island	53.76	42	P		P	19 45 58.6 +0.2
ABKAR	Akbulak array	53.95	314	P		P	19 46 00.2 +0.4
ABKAR				IAmb		IAmb	19 46 21.2
	comp=Z,17nm,1.6s						
FORT	Forrest	54.78	173			P	19 46 04.6 -1.3
FORT				IAmb		IAmb	19 46 11.2
	comp=Z,18nm,0.9s						
GEYT	Alibeck	55.34	301	P		P	19 46 12.4 +2.2
	comp=Z,2.4nm,0.8s,baz=48,slow=2.2,SNR=5.4						
	comp=Z,2.4nm,0.8s						
GYA0B	ALIBECK ARRAY	55.34	301	P		P	19 46 10.1 0.0
GYA0B				IAmb		IAmb	19 46 17.8
	comp=Z,6.0nm,0.8s						
ARU	Arti	55.58	323	P		P	19 46 11.3 -0.2
ARU				IAmb		IAmb	19 46 29.1
	comp=Z,17nm,1.4s						
EIDS	Eidsvold	56.69	148	P		P	19 46 18.4 -1.3
BBOO	Buckleboo	58.10	166	P		P	19 46 29.1 -0.4
BBOO				IAmb		IAmb	19 46 39.8
	comp=Z,7.6nm,0.9s						
STKA	Stephens Creek	58.69	160	P		P	19 46 32.7 -1.1
	comp=Z,1.7nm,0.6s,baz=342,slow=8.2,SNR=4.8						
	comp=Z,1.7nm,0.6s						
M14K	Bethel	62.72	32	P		P	19 47 00.8 0.0
F17K	Baldwin Pennin	63.09	26	P		P	19 47 03.7 +0.5
C18K	Utukok River	63.19	24	P		P	19 47 03.6 -0.4
C18K				IAmb		IAmb	19 48 01.1
	comp=Z,19nm,1.8s						
J16K	Anvik River	63.33	30	P		P	19 47 04.0 -0.9
J16K				IAmb		IAmb	19 49 03.3
	comp=Z,22nm,1.6s						
N15K	Kwethluk River	63.66	33	P		P	19 47 06.0 -1.1
M16K	Timber Creek	64.17	32	P		P	19 47 10.3 -0.2
H18K	Honhosa River	64.27	27	P		P	19 47 09.6 -1.5
D19K	Kuna River	64.32	24	P		P	19 47 11.0 -0.4
D19K				IAmb		IAmb	19 47 20.4
	comp=Z,7.4nm,0.9s						
K17K	Iditarod	64.40	30	P		P	19 47 12.3 +0.4
E19K	Redstone River	64.67	25	P		P	19 47 13.4 -0.2
E19K				IAmb		IAmb	19 49 09.6
	comp=Z,16nm,1.8s						
O16K	Kokwok River B	64.70	34	P		P	19 47 12.7 -1.2
M17K	Holitna River	64.88	32	P		P	19 47 13.8 -1.3
H19K	Roundabout Mou	65.06	27	P		P	19 47 15.2 -1.0
H19K				IAmb		IAmb	19 47 28.4
	comp=Z,11nm,1.2s						
L18K	Granite Mounta	65.18	31	P		P	19 47 17.6 +0.5
TTA	Tatalina	65.43	30	P		P	19 47 18.6 -0.2
TTA				IAmb		IAmb	19 49 25.6
	comp=Z,17nm,1.7s						
J19K	Poorman	65.52	29	P		P	19 47 19.4 +0.2
J19K				IAmb		IAmb	19 47 29.2
	comp=Z,19nm,1.6s						
B21K	Ikpikpuk River	65.55	22	P		P	19 47 19.6 +0.3
B21K				IAmb		IAmb	19 47 28.6
	comp=Z,5.6nm,0.8s						
B22K	Teshekpuk Lake	65.92	22	P		P	19 47 21.7 +0.1
B22K				IAmb		IAmb	19 48 00.9
	comp=Z,15nm,1.2s						
KBZ	Khabaz	66.01	309	P		P	19 47 23.0 +0.3
	comp=Z,2.0nm,1.0s,baz=114,slow=10.0,SNR=3.1						
	comp=Z,2.0nm,1.0s						
F21K	Alatna River	66.13	25	P		P	19 47 23.6 +0.5
J20K	Nowinta River	66.15	28	P		P	19 47 23.8 +0.6
J20K				IAmb		IAmb	19 48 01.1
	comp=Z,23nm,1.8s						
K20K	Telida	66.27	29	P		P	19 47 23.6 -0.5
K20K				IAmb		IAmb	19 47 36.4
	comp=Z,23nm,1.6s						
D22K	Ayikyak River	66.28	23	P		P	19 47 23.5 -0.6
D22K				IAmb		IAmb	19 47 33.4
	comp=Z,5.9nm,0.8s						
H21K	Melozitna Rive	66.56	27	P		P	19 47 25.7 -0.2
H21K				IAmb		IAmb	19 47 35.5
	comp=Z,4.5nm,0.9s						
CAST	Castle Rocks	67.15	29	P		P	19 47 30.0 +0.3
TOLK	Toolik Lake Re	67.44	23	P		P	19 47 31.0 -0.5
TOLK				IAmb		IAmb	19 48 04.5
	comp=Z,21nm,1.8s						
D24K	Happy Valley	67.63	23	P		P	19 47 32.6 -0.1
E24K	Your Creek	67.92	24	P		P	19 47 34.8 +0.2
E24K				IAmb		IAmb	19 47 43.2
	comp=Z,6.2nm,1.2s						
F24K	Squaw Lake	68.24	24	P		P	19 47 36.0 -0.6
F24K				IAmb		IAmb	19 47 45.8
	comp=Z,4.6nm,0.9s						
MDM	Murphy Dome	68.56	27	P		P	19 47 38.2 -0.4
MDM				IAmb		IAmb	19 48 03.5
	comp=Z,22nm,1.5s						
RND	Reindeer	68.58	29	P		P	19 47 37.4 -1.4
RND				IAmb		IAmb	19 47 47.5
	comp=Z,12nm,0.8s						
KNK	Knik Glacier	69.16	31	P		P	19 47 43.8 +1.4
ILAR	Eielson Array	69.16	27	P		P	19 47 42.5 +0.2
	comp=Z,0.4nm,0.6s,baz=295,slow=6.1,SNR=4.1						
	comp=Z,0.4nm,0.6s						
SCM	Sheep Creek Mo	69.59	30	P		P	19 47 44.8 -0.3
M24K	Tolsona, Glenn	70.06	30			P	19 47 48.4 +0.4
D27M	Malcolm River	70.36	22	P		P	19 47 48.8 -0.9
D27M				IAmb		IAmb	19 48 00.1
	comp=Z,7.6nm,1.4s						
J26L	Joseph Creek	70.62	27	P		P	19 47 50.6 -0.8
J26L				IAmb		IAmb	19 47 59.5
	comp=Z,8.7nm,1.2s						
E28M	Babbage River	71.03	23	P		P	19 47 53.6 -0.1
E28M				IAmb		IAmb	19 48 42.8
	comp=Z,21nm,2.0s						
K27K	Chicken	71.37	28	P		P	19 47 55.9 +0.1
K27K				IAmb		IAmb	19 49 05.5
	comp=Z,33nm,2.0s						
I28M	Miner Creek	71.83	26	P		P	19 47 58.5 -0.2
I28M				IAmb		IAmb	19 48 06.3
	comp=Z,31nm,2.0s						
FINES	FINESS Array B	71.88	330	P		P	19 47 58.3 -0.6
	comp=Z,4.2nm,1.1s,baz=72,slow=6.2,SNR=4.6						
	comp=Z,4.2nm,1.1s						
H29M	Whitestone	72.20	25	P		P	19 48 00.4 -0.4
DAWY	Dawson	72.49	27	P		P	19 48 02.5 -0.1
DAWY				IAmb		IAmb	19 48 11.3
	comp=Z,22nm,1.7s						
INK	Inuvik	73.22	22	P		P	19 48 06.0 -0.8
INK				IAmb		IAmb	19 48 24.2
	comp=Z,8.7nm,1.4s						
F31M	Tsiigehtchic	73.48	23	P		P	19 48 07.3 -1.0
F31M				IAmb		IAmb	19 48 18.9
	comp=Z,28nm,1.9s						
BRTR	Keskin Array B	73.71	307	P		P	19 48 10.8 +0.5
	comp=Z,1.6nm,0.8s,baz=88,slow=8.9,SNR=4.4						
	comp=Z,1.6nm,0.8s						
M31M	Drury Creek, Y	75.28	28	P		P	19 48 18.8 -0.1
M31M				IAmb		IAmb	19 50 05.2
	comp=Z,34nm,2.0s						
CSS	Mathiatis	75.45	302	P		P	19 48 19.8 -0.6
CSS				IAmb		IAmb	19 49 45.4
	comp=Z,18nm,1.4s						
C36M	Paulatuk	75.83	19	P		P	19 48 20.6 -1.2
C36M				IAmb		IAmb	19 48 29.6
	comp=Z,26nm,1.8s						
NOA	NORSAR Array B	78.65	332	P		P	19 48 39.0 +1.1
	comp=Z,1.1nm,0.8s,baz=60,slow=5.6,SNR=3.2						
	comp=Z,1.1nm,0.8s						
YKA	Yellowknife Ar	82.96	23	P		P	19 49 00.6 -0.3
	comp=Z,1.4nm,0.7s,baz=314,slow=4.9,SNR=18						
	comp=Z,1.4nm,0.7s						
GERES	GERESS Array B	83.33	321	P		P	19 49 02.9 -0.3
	comp=Z,0.4nm,0.6s,baz=55,slow=8.5,SNR=2.0						
	comp=Z,0.4nm,0.6s						

ASIES ***06*** *19:36:50.8, 24.13N×121.70E, h11km, ML4.0, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}1.33; $M_{\theta\theta}$0.69; $M_{\phi\phi}$ -1.61; $M_{r\theta}$-0.80; $M_{r\phi}$1.58; $M_{\theta\phi}$-2.04; Fault plane solution: $M_0$3.11876×10^{22} NP1: ϕ_s188.97000°, δ75.43000°, λ127.97000°. NP2: ϕ_s296.84000°, δ40.27000°, λ22.90000°. Principal axes: T Plg45.8390°, Azm137.6160°; N Plg36.5440°, Azm357.8700°; P Plg21.2030°, Azm251.1610°;*

TAP 06 19:36:50.8, 24.13N×121.70E, h11km, ML4.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.08	292	*i* P	Pg		19 36 53.2	-0.2
	baz=291							
ETL				*i* S	Sg		19 36 55.1	-0.2
	baz=291							
NACB	Ninganchiao	0.11	294	P	Pg		19 36 53.7	0.0
	baz=294							
NACB				S	Sg		19 36 55.7	-0.1
	baz=294							
TWD	Chiawan	0.11	243	P	Pg		19 36 53.5	-0.2
	baz=241							
TWD				*e*S	Sg		19 36 55.6	-0.1
	baz=241							
ETM	Tongmen	0.25	230	*e*P	Pg		19 36 56.5	+0.4
	baz=229							
ETM				*e*S	Sg		19 36 59.8	+0.3
	baz=229							
EWUT	Wuta	0.32	12	*e*P	Pg		19 36 57.3	0.0
	baz=12							

IDC ***06*** *19:47:09.7±3.3, 32.50S×70.01W, h90km±28km, mb3.9/9, mbtmp4.2/12, Error ellipse: s-maj=23.7km s-min=18.7km az=79.0*
SJA ***06*** *19:47:09.9±0.7, 32.47S×70.24W, h113km±4km, ML4.3, MW4.1*
GUC ***06*** *19:47:10.6±0.9, 32.47S×70.31W, h104km±3km, ML4.4*
NEIC ***06*** *19:47:11.6±1.2, 32.47S±0.03×70.34W±0.08, h105km±4km, mb4.5/19, Error ellipse: s-maj=9.4km s-min=4.3km*

az=81.0
ISC 06 19:47:11.2±0.6, 32.46S±0.03×70.25W±0.03, h108km±5km, n158, σ1907/194, mb4.4/17, 17C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VA03	San Esteban	0.39	220			Pn	19 47 26.9	-0.3
VA03					Sn	Sn	19 47 39.1	-0.3
VA03	San Esteban	0.39	220	eP		Pn	19 47 26.9	-0.3
VA03				eS		Sn	19 47 39.6	+0.3
VA03				IAML			19 47 42.6	
	comp=Z,20μm,0.3s							
VA03	San Esteban	0.39	220	⇓*i*P		Pn	19 47 27.0	-0.2
VA03				eS		Sn	19 47 39.2	-0.1
PEL	Peldehue	0.77	208			Pn	19 47 29.1	-1.0
PEL					Sn	Sn	19 47 43.7	-0.5
PEL	Peldehue	0.77	208	eP		Pn	19 47 29.9	-0.2
PEL				eS		Sn	19 47 44.5	+0.3
PEL	Peldehue	0.77	208	eP		Pn	19 47 28.9	-1.1
PEL				eS		Sn	19 47 43.5	-0.8
PEL				IAML			19 47 45.0	
	comp=E,15μm,0.2s							
ROCH	El Roble	0.82	231	⇑*i*P		Pn	19 47 30.5	-0.2
ROCH				eS		Sn	19 47 45.2	-0.1
ROC1	El Roble	0.82	231	eP		Pn	19 47 29.7	-1.0
ROC1				eS		Sn	19 47 45.9	+0.5
MT10	Hacienda Santa	0.85	196	⇑*i*P		Pn	19 47 31.0	+0.2
MT10				eS		Sn	19 47 45.7	+0.1
FCH	Farellones	0.87	182	⇑*i*P		Pn	19 47 31.4	+0.2
FCH				eS		Sn	19 47 47.0	+0.7
FCH				IAML			19 47 47.7	
	comp=E,11μm,0.3s							
VA06	Catapilco	0.89	263			Pn	19 47 30.4	-0.5
VA06					Sn	Sn	19 47 45.2	-0.7
VA06	Catapilco	0.89	263	⇑*i*P		Pn	19 47 30.6	-0.4
VA06				eS		Sn	19 47 45.4	-0.6
VA06				IAML			19 47 46.4	
	comp=E,17μm,0.4s							
MT04	Ro Olivares	0.95	174	eP		Pn	19 47 31.9	0.0
MT04				eS		Sn	19 47 48.5	+0.9
MT14	Cerro Cal¡n	0.96	194	⇑*i*P		Pn	19 47 32.1	+0.2
MT14				eS		Sn	19 47 48.0	+0.5
MT14				IAML			19 47 48.8	
	comp=E,17μm,0.4s							
MT16	CCHEN	0.99	193			Pn	19 47 32.4	+0.2
MT16					Sn	Sn	19 47 48.3	+0.3
MT16	CCHEN	0.99	193	⇑*i*P		Pn	19 47 32.4	+0.2
MT16				eS		Sn	19 47 48.4	+0.4
MT16				IAML			19 47 49.4	
	comp=E,6μm,0.4s							
MT05	Renca	1.01	204			Pn	19 47 32.4	0.0
MT05					Sn	Sn	19 47 49.0	+0.6
MT05	Renca	1.01	204	eP		Pn	19 47 32.5	+0.1
MT05				eS		Sn	19 47 49.5	+1.1
MT05				IAML			19 47 50.2	
	comp=Z,5μm,0.5s							
MT05	Renca	1.01	204	⇑*i*P		Pn	19 47 32.5	0.0
MT05				eS		Sn	19 47 48.8	+0.4
MT05				IAML			19 47 50.6	
	comp=E,28μm,0.5s							
RTLS	Leoncito	1.04	51	eP		Pn	19 47 33.0	+0.1
RTLS				eS		Sn	19 47 49.6	+0.2
MT03	Universidad Ad	1.05	192			Pn	19 47 33.0	+0.1
MT03					Sn	Sn	19 47 49.6	+0.4
MT03	Universidad Ad	1.05	192	eP		Pn	19 47 33.1	+0.3
MT03				eS		Sn	19 47 50.5	+1.2
MT03				IAML			19 47 53.4	
	comp=Z,9μm,0.7s							
MT03	Universidad Ad	1.05	192	⇑*i*P		Pn	19 47 33.0	+0.1
MT03				eS		Sn	19 47 49.9	+0.6
MT03				IAML			19 47 51.9	
	comp=E,27μm,0.3s							
MT02	Curacav	1.09	223			Pn	19 47 32.5	-0.6
MT02					Sn	Sn	19 47 49.0	-0.8
MT02	Curacav	1.09	223	eP		Pn	19 47 32.5	-0.6
MT02				eS		Sn	19 47 49.6	-0.2
MT02				IAML			19 47 54.8	
	comp=Z,2μm,0.5s							
MT02	Curacav	1.09	223	⇑*i*P		Pn	19 47 32.6	-0.6
MT02				eS		Sn	19 47 49.2	-0.5
MT15	Las Vizcachas	1.16	191	*i* P		Pn	19 47 34.0	+0.1
MT15				eS		Sn	19 47 51.7	+0.5
MT15				IAML			19 47 53.0	
	comp=N,20μm,0.3s							
ARCO	CERRO ARCO	1.18	109	eP		Pn	19 47 35.0	+0.7
ARCO				IAML			19 47 56.2	
	comp=Z,5μm,0.5s							
ASAL	Salagasta	1.21	97	eP		Pn	19 47 34.9	+0.4
MT13	San Alfonso	1.28	181			Pn	19 47 35.7	+0.3
MT13					Sn	Sn	19 47 54.5	+0.8
MT13	San Alfonso	1.28	181	⇑*i*P		Pn	19 47 35.7	+0.3
MT13				eS		Sn	19 47 54.6	+0.8
MT13				IAML			19 47 56.7	
	comp=N,6μm,0.3s							
MT12	Pirque	1.29	191	⇑*i*P		Pn	19 47 35.6	+0.2
MT12				eS		Sn	19 47 54.0	+0.1
MT12				IAML			19 47 56.2	
	comp=E,10μm,0.5s							
VA01	Torpederas	1.30	244			Pn	19 47 34.8	-0.7
VA01					Sn	Sn	19 47 53.7	-0.1
VA01	Torpederas	1.30	244	eP		Pn	19 47 34.5	-0.9
VA01				IAML			19 47 57.4	
	comp=Z,2μm,0.7s							
VA01	Torpederas	1.30	244	eP		Pn	19 47 34.5	-0.9
VA01				eS		Sn	19 47 53.8	-0.1
AAGR	Agrelo	1.35	118	eP		Pn	19 47 36.9	+0.7
LMEL	Las Melosas	1.39	178			Pn	19 47 37.0	+0.4
LMEL	Las Melosas	1.39	178	⇑*i*P		Pn	19 47 37.1	+0.4
LMEL				eS		Sn	19 47 57.3	+1.3
LMEL				IAML			19 48 02.3	
	comp=N,5μm,0.2s							
CO02	Combarbal	1.40	333			Pn	19 47 37.0	+0.2
CO02	Combarbal	1.40	333	eP		Pn	19 47 37.2	+0.4
CO02				eS		Sn	19 47 57.6	+1.4
CO02				IAML			19 47 58.4	
	comp=Z,5μm,0.5s							
CO02	Combarbal	1.40	333	eP		Pn	19 47 37.0	+0.2
CO02				eS		Sn	19 47 56.8	+0.6
MT09	Talagante	1.45	205			Pn	19 47 36.7	-0.7
MT09	Talagante	1.45	205	⇑*i*P		Pn	19 47 36.9	-0.5
MT09				eS		Sn	19 47 57.1	-0.2
MT09				IAML			19 48 02.0	
	comp=N,4μm,0.2s							
BO04	La Punta	1.55	191			Pn	19 47 38.5	-0.1
BO04	La Punta	1.55	191	⇑*i*P		Pn	19 47 38.7	+0.1
BO04				eS		Sn	19 47 59.4	+0.1
BO04				IAML			19 48 01.4	
	comp=E,4μm,0.2s							
RTCV	Cerro Valdivia	1.57

GO04	**Tololo Observa**	**2.33**	**348**			**Pn**	**19 47 48.7**	**+0.2**
GO04	**Tololo Observa**	**2.33**	**348**	*eP*		**Pn**	**19 47 48.8**	**+0.2**
GO04				*eS*		**Sn**	**19 48 18.3**	**+1.2**
GO04	**Tololo Observa**	**2.33**	**348**	*eP*		**Pn**	**19 47 48.4**	**-0.1**
BO02	**Sierra Bellavi**	**2.37**	**191**			**Pn**	**19 47 48.8**	**0.0**
BO02	**Sierra Bellavi**	**2.37**	**191**	*eP*		**Pn**	**19 47 48.8**	**0.0**
BO02				IAML			19 48 20.9	
	comp=Z,982nm,0.4s							
BO02	**Sierra Bellavi**	**2.37**	**191**	⇑*iP*		**Pn**	**19 47 48.8**	**0.0**
CO01	**Juntas del Tor**	**2.48**	**3**			**Pn**	**19 47 51.6**	**+1.1**
CO01	**Juntas del Tor**	**2.48**	**3**	*eP*		**Pn**	**19 47 51.2**	**+0.7**
CO01	**Juntas del Tor**	**2.48**	**3**	*eP*		**Pn**	**19 47 51.7**	**+1.1**
BO03	**Pichilemu**	**2.48**	**215**	*eP*		**Pn**	**19 47 48.4**	**-1.8**
CO05	**La Serena**	**2.67**	**341**			**Pn**	**19 47 52.4**	**-0.3**
CO05	**La Serena**	**2.67**	**341**	*eP*		**Pn**	**19 47 52.0**	**-0.7**
CO05				IAML			19 48 30.9	
	comp=E,1μm,0.2s							
RFA	**San Rafael**	**2.75**	**148**	*eP*		**Pn**	**19 47 53.5**	**-0.3**
GO05	**Huala**	**2.90**	**208**			**Pn**	**19 47 54.0**	**-1.8**
GO05	**Huala**	**2.90**	**208**	*eP*		**Pn**	**19 47 54.3**	**-1.5**
GO05	**Huala**	**2.90**	**208**	*eP*		**Pn**	**19 47 54.0**	**-1.8**
AVFE	**Valle Fertil**	**2.99**	**54**	*eP*		**Pn**	**19 47 56.4**	**-0.7**
AVFE				*eS*		**Sn**	**19 48 32.1**	**-0.2**
AVFE				IAML			19 48 58.8	
	comp=Z,416nm,0.8s							
ML02	**Panimavida**	**3.43**	**196**			**Pn**	**19 48 01.9**	**-1.0**
ML02	**Panimavida**	**3.43**	**196**	*eP*		**Pn**	**19 48 01.8**	**-1.0**
LCO	**Las Campanas**	**3.46**	**353**	Pn		**Pn**	**19 48 02.9**	**-0.6**
LCO	**Las Campanas**	**3.46**	**353**	*eP*		**Pn**	**19 48 02.9**	**-0.6**
LCO				*eS*		**Sn**	**19 48 43.3**	**-0.5**
LCO				IAML			19 48 46.1	
	comp=Z,2μm,0.4s							
LCO	**Las Campanas**	**3.46**	**353**	*eP*		**Pn**	**19 48 02.9**	**-0.6**
AC05	**El Transito**	**3.61**	**360**			**Pn**	**19 48 05.6**	**+0.2**
VCA	**Vinchina**	**4.11**	**26**	*eP*		**Pn**	**19 48 11.9**	**-0.2**
ACLC	**CERRO LA CRUZ**	**4.15**	**44**	*eP*		**Pn**	**19 48 11.3**	**-1.3**
ACLC				IAML			19 49 01.9	
	comp=Z,367nm,0.3s							
AC04	**Llanos de Chal**	**4.30**	**350**	Pn		**Pn**	**19 48 14.0**	**-0.5**
AC04	**Llanos de Chal**	**4.30**	**350**	*eP*		**Pn**	**19 48 13.6**	**-0.9**
AC04				IAML			19 49 19.7	
	comp=Z,236nm,0.5s							
AC04	**Llanos de Chal**	**4.30**	**350**	*eP*		**Pn**	**19 48 14.1**	**-0.4**
GO03	**Copiap**	**4.85**	**0**	Pn		**Pn**	**19 48 21.0**	**-1.1**
GO03	**Copiap**	**4.85**	**0**	*eP*		**Pn**	**19 48 21.2**	**-0.8**
GO03	**Copiap**	**4.85**	**0**	*eP*		**Pn**	**19 48 20.7**	**-1.3**
BI05	**Punta Hualpn**	**4.92**	**209**	Pn		**Pn**	**19 48 19.7**	**-3.0**
BI05	**Punta Hualpn**	**4.92**	**209**	*eP*		**Pn**	**19 48 19.4**	**-3.3**
TCA	**Tanti**	**4.94**	**78**	*eP*		**Pn**	**19 48 21.5**	**-1.8**
TCA				*eS*		**Sn**	**19 49 14.4**	**-4.9**
TCA				IAML			19 49 53.7	
	comp=Z,157nm,0.8s							
AC02	**Maricunga**	**5.69**	**10**	Pn		**Pn**	**19 48 32.8**	**-1.0**
AC01	**Pan de Azucar**	**6.39**	**357**	Pn		**Pn**	**19 48 38.6**	**-2.9**
LC02	**Puerto Saavedr**	**6.81**	**201**	Pn		**Pn**	**19 48 44.2**	**-4.2**
GO06	**Curarrehue**	**7.18**	**188**	Pn		**Pn**	**19 48 51.9**	**-1.6**
GO02	**Mina Guanaco**	**7.29**	**5**	Pn		**Pn**	**19 48 52.0**	**-3.3**
VA04	**Juan Fernndez**	**7.30**	**258**	Pn		**Pn**	**19 48 54.6**	**-0.4**
PB14	**IPOC Station P**	**7.81**	**359**	Pn		**Pn**	**19 48 58.5**	**-3.8**
PLCA	**Paso Flores**	**8.26**	**182**	Pn		Pn	19 49 02.3	-5.9
PLCA	**Paso Flores**	**8.26**	**182**	P		**Pn**	**19 49 06.8**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=356,slow=15,SNR=2.3							
TRQA	**Tornquist**	**8.77**	**132**	Pn		**Pn**	**19 49 13.7**	**-1.4**
PB05	**IPOC Station P**	**9.57**	**0**	Pn		Pn	19 49 19.9	-6.2
PB06	**IPOC Station P**	**9.73**	**4**	Pn		Pn	19 49 20.2	-8.1
LVC	**Limon Verde**	**9.88**	**7**	Pn		Pn	19 49 22.4	-8.1
LVC	**Limon Verde**	**9.88**	**7**	P		Pn	19 49 25.9	-4.7
	comp=Z,2.3nm,0.3s,baz=197,slow=9.2,SNR=2.5							
LVC				S		Sn	19 51 08.3	-12
	comp=Z,3.2nm,0.4s,baz=108,slow=20,SNR=1.5							
PB04	**IPOC Station P**	**10.09**	**1**	Pn		Pn	19 49 25.9	-7.2
PB07	**IPOC Station P**	**10.70**	**2**	Pn		Pn	19 49 33.2	-8.2
PB02	**IPOC Station P**	**11.10**	**2**	Pn		Pn	19 49 38.0	-8.8
PB01	**IPOC Station P**	**11.39**	**4**	Pn		Pn	19 49 44.4	-6.3
ITQB	**Itaqui**	**12.01**	**80**	Pn		Pn	19 49 51.6	-7.2
CPUP	**Villa Florida**	**12.81**	**65**	Pn		Pn	19 50 04.0	-5.4
CPUP	**Villa Florida**	**12.81**	**65**	P		Pn	19 50 04.9	-4.4
	comp=Z,2.0nm,0.5s,baz=236,slow=14,SNR=4.2							
PB16	**IPOC Station P**	**14.08**	**3**	Pn		**Pn**	**19 50 24.3**	**-2.1**
PLTB	**Pedras Altas**	**14.13**	**92**	Pn		Pn	19 50 21.5	-5.0
LPAZ	**La Paz**	**16.22**	**7**			**P**	**19 50 54.4**	**-0.1**
ITAB	**Concordia**	**16.56**	**76**			**Pn**	**19 50 57.5**	**+0.6**
ITAB				IAmb		IAmb	19 50 59.9	
	comp=Z,9.7nm,0.7s							
SIV	**San Ignacio**	**18.39**	**29**	P		**P**	**19 51 17.2**	**-0.7**
	comp=Z,7.7nm,0.8s,baz=206,slow=9.4,SNR=32							
PTLB	**Pontes e Lacer**	**19.72**	**33**	P		**P**	**19 51 32.4**	**+0.1**
ETMB	**Extrema**	**22.84**	**10**	P		**P**	**19 52 05.3**	**0.0**
SAML	**Samuel**	**24.30**	**17**	P		**P**	**19 52 19.3**	**+0.7**
BDFB	**Brasilia**	**26.23**	**56**	P		**P**	**19 52 35.0**	**-1.3**
	comp=Z,3.1nm,0.7s,baz=194,slow=7.7,SNR=3.2							
	comp=Z,3.1nm,0.7s							
BAUV	**El Baul**	**41.22**	**3**	P		**P**	**19 54 45.2**	**-0.3**
BELA	**Belgrano 2**	**48.14**	**170**	P		**P**	**19 55 40.8**	**+1.1**
BELA				IAmb		IAmb	19 56 16.2	
	comp=Z,10.0nm,1.2s							
BELA				PcP		**PcP**	**19 57 03.4**	**-2.1**
SNAA	**Sanae**	**52.45**	**158**	P		**P**	**19 56 13.5**	**+1.2**
SNAA				IAmb		IAmb	19 56 48.7	
	comp=Z,5.0nm,1.0s							
SNAA	**Sanae**	**52.45**	**158**	P		**P**	**19 56 12.3**	**0.0**
	comp=Z,3.4nm,0.7s,baz=115,slow=0.9,SNR=8.8							
	comp=Z,3.4nm,0.7s							
TEIG	**Tepich**	**55.15**	**339**	P		**P**	**19 56 33.5**	**+1.0**
TEIG						**PcP**	**19 57 31.0**	**-1.4**
W50A	**Signal Mountai**	**68.77**	**347**	P		**P**	**19 58 04.4**	**+0.9**
W50A				IAmb		IAmb	19 58 05.0	
	comp=Z,4.5nm,0.6s							
CPCT	**Cooper Cave**	**68.87**	**348**	P		**P**	**19 58 03.9**	**-0.1**
CPCT				IAmb		IAmb	19 58 14.0	
	comp=Z,7.2nm,1.3s							
SAND	**Sanderson**	**69.04**	**331**	P		**P**	**19 58 05.6**	**+0.3**
SAND				IAmb		IAmb	19 58 08.1	
	comp=Z,12nm,1.4s							
TXAR	**Lajitas Array**	**69.16**	**329**	P		**P**	**19 58 07.7**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=155,slow=8.7,SNR=16							
	comp=Z,0.9nm,0.6s							
OZNA	**Ozona**	**69.48**	**332**	P		**P**	**19 58 09.5**	**+1.5**
OZNA				IAmb		IAmb	19 58 10.2	
	comp=Z,3.8nm,0.7s							
WVT	**Waverly**	**70.19**	**345**	P		**P**	**19 58 12.5**	**+0.4**
LCAR	**Lake Charles**	**70.93**	**342**	P		**P**	**19 58 17.0**	**+0.4**
LCAR				IAmb		IAmb	19 58 18.0	
	comp=Z,4.1nm,0.5s							
R40A	**Maddies Statio**	**73.31**	**342**	P		**P**	**19 58 31.4**	**+0.6**
O48B	**Farmland**	**73.66**	**348**	P		**P**	**19 58 32.4**	**-0.3**
O48B				IAmb		IAmb	19 58 33.5	
	comp=Z,5.2nm,0.6s							
M55A	**Ridgway**	**73.98**	**353**	P		**P**	**19 58 35.8**	**+1.2**
P40A	**Paris**	**74.43**	**343**	P		**P**	**19 58 37.8**	**+0.6**
P40A				IAmb		IAmb	19 58 38.7	
	comp=Z,6.7nm,0.7s							
X16A	**Lo Mia Camp, P**	**76.97**	**326**	P		**P**	**19 58 54.1**	**+2.0**
SDCO	**Great Sand Dun**	**77.19**	**332**	P		**P**	**19 58 55.2**	**+1.8**
BOSA	**Boshof**	**79.45**	**117**	P		**P**	**19 59 05.7**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=233,slow=5.1,SNR=2.1							
	comp=Z,1.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**82.27**	**69**	P		**P**	**19 59 20.1**	**-0.8**
	comp=Z,6.2nm,0.4s,baz=287,slow=5.1,SNR=15							
	comp=Z,6.2nm,0.4s							
PDAR	**Pinedale Array**	**83.09**	**332**	P		**P**	**19 59 25.6**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=116,slow=6.8,SNR=6.8							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**83.50**	**324**	P		**P**	**19 59 28.7**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=159,slow=5.5,SNR=7.8							
	comp=Z,1.2nm,0.7s							
ELK	**Elko**	**83.86**	**327**	P		**P**	**19 59 30.4**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=200,slow=1.8,SNR=5.9							
	comp=Z,1.2nm,0.7s							
SCHQ	**Schefferville**	**86.99**	**2**	P		**P**	**19 59 45.0**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=90,slow=12,SNR=5.8							
	comp=Z,1.0nm,0.3s							
ASAR	**Alice Springs**	**119.61**	**206**	PKP		**PKPdf**	**20 05 48.5**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=133,slow=1.8,SNR=2.7							
WRA	**Warramunga Arr**	**122.83**	**208**	PKP		**PKPdf**	**20 05 54.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=156,slow=1.6,SNR=13							
BVAR	**Borovoye Array**	**145.14**	**42**	PKPbc		**PKPab**	**20 06 36.3**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=297,slow=2.9,SNR=10							
YAK	**Yakutsk**	**147.75**	**342**	PKPbc		**PKPbc**	**20 06 41.3**	**-1.2**
	comp=Z,2.9nm,0.4s,baz=342,slow=1.1,SNR=6.9							
KURBB	**Kurchatov Arra**	**150.73**	**42**	PKPbc		**PKiKP**	**20 06 50.7**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=295,slow=3.0,SNR=7.7							
ASAJ	**Asahikawa**	**151.89**	**304**	PKPbc		**PKiKP**	**20 06 54.5**	**+1.0**
	comp=Z,3.7nm,0.9s,baz=284,slow=20,SNR=1.6							
ZALV	**Zalesovo Beam**	**152.13**	**32**	PKPbc		**PKiKP**	**20 06 54.2**	**+0.5**
	comp=Z,5.6nm,0.5s,baz=304,slow=3.3,SNR=30							
ZALV				pPKPbc		**pPKPbc**	**20 07 23.3**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=286,slow=2.7,SNR=6.0							
MKAR	**Makanchi Array**	**154.62**	**48**	PKPbc		**PKiKP**	**20 06 59.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=357,slow=2.4,SNR=3.8							

*IDC **06** 19:51:31.9±1.0,24.˙12N×121.˙92E,h0km,mb3.6/8, mbtmp3.6/9,ML3.3/1,Error ellipse: s-maj=37.1km s-min=20.7km az=71.0*

*NIED **06** 19:51:32.0,23.˙99N×121.˙75E,h0km,MW4.5,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$-0.09; $M_{r\theta}$6.08; $M_{\theta\phi}$-0.50; $M_{\phi r}$2.42; Fault plane solution: $M_0$6.61000×10^{15} NP1:ϕ_s68.00000°, δ86.00000°, λ.91.00000°. NP2:ϕ_s234.00000°,δ4.00000°, λ.75.00000°.*

*JMA **06** 19:51:32.0±0.2,24.˙02N±0.˙4×121.˙8E±0.˙8,h0km,MV3.5/13, TAIWAN REGION*

*TAP **06** 19:51:32.3,24.˙02N×121.˙74E,h7km,ML4.0,C*

*ASIES **06** 19:51:32.3,24.˙02N×121.˙74E,h7km,ML4.0,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-1.81; $M_{\theta\theta}$-3.00; $M_{\phi\phi}$4.81; $M_{r\theta}$2.40; $M_{\theta\phi}$-6.46; $M_{\phi r}$8.67; Fault plane solution: $M_0$11.84970×10^{21} NP1: ϕ_s191.81000°,δ84.36000°,λ-50.69000°. NP2: ϕ_s288.65000°,δ39.64000°,λ-171.15000°. Principal axes: T Plg28.3670°, Azm251.2140°; N Plg39.0770°, Azm7.2190°; P Plg37.8740°, Azm136.3830°;*

ISC 06 19:51:32.4±1.0,24.˙00N±0.˙01×121.˙77E±0.˙02,h7km±7km, n182,σ0s92/254,mb3.5/8,4C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.17**	**297**	⇓*iP*			**Pg**	**19 51 36.0**	**0.0**
	baz=297								
TWD				*i*	S		**Sg**	**19 51 39.0**	**+0.7**
	baz=297								
ETL	**Fush Village**	**0.20**	**320**	*i*	P		**Pg**	**19 51 36.8**	**+0.3**
	baz=321								
ETL				*i*	S		**Sg**	**19 51 39.8**	**+0.5**
	baz=321								
NACB	**Ninganchiao**	**0.23**	**318**	P			**Pg**	**19 51 37.4**	**+0.4**
NACB	**Ninganchiao**	**0.23**	**318**	⇓*iP*			**Pg**	**19 51 37.1**	**+0.1**
	baz=318								
NACB				*i*	S		**Sg**	**19 51 40.3**	**+0.2**
	baz=318								
ETM	**Tongmen**	**0.25**	**262**	P			**Pg**	**19 51 37.5**	**+0.2**
	baz=269								
ETM				S			**Sg**	**19 51 41.6**	**+0.8**
	baz=269								
SHUL	**Shoufeng**	**0.28**	**221**	P			**Pb**	**19 51 39.5**	**-0.4**
	baz=216								
SHUL				*e*S			**Sb**	**19 51 45.6**	**+0.9**
	baz=216								
EHP	**Heping Village**	**0.31**	**356**	*e*P			**Pg**	**19 51 38.8**	**+0.3**
	baz=350								
LXIB	**Xiulin Townshi**	**0.32**	**274**	*i*	P		**Pg**	**19 51 39.1**	**+0.3**
	baz=271								
LXIB				*i*	S		**Sg**	**19 51 43.9**	**+0.8**
	baz=271								
EAHA	**Aohua**	**0.33**	**356**	*i*	P		**Pb**	**19 51 39.5**	**-1.1**
	baz=347								
EAHA				S			**Sb**	**19 51 44.6**	**-1.5**
	baz=347								
TEGC	**Jichi Village**	**0.36**	**216**	*e*P			**Pb**	**19 51 41.1**	**0.0**
	baz=210								
TEGC				S			**Sb**	**19 51 48.3**	**+1.4**
	baz=210								
ESL	**Shilin**	**0.36**	**239**	*e*P			**Pg**	**19 51 39.4**	**0.0**
	baz=242								
ESL				*e*S			**Sg**	**19 51 44.5**	**+0.4**
	baz=242								
ENA	**Nanau**	**0.43**	**357**	P			**Pb**	**19 51 41.4**	**-0.9**
	baz=1.0								
ENA				*e*S			**Sb**	**19 51 47.0**	**-1.9**
	baz=1.0								
EWUT	**Wuta**	**0.44**	**1**	*e*P			**Pb**	**19 51 41.8**	**-0.7**
	baz=353								
WARBT	**Fenglin Townsh**	**0.45**	**231**	P			**Pg**	**19 51 41.0**	**0.0**
	baz=238								
WARBT				*e*S			**Sb**	**19 51 48.8**	**-0.8**
	baz=238								
WHF	**Hehuan Shan**	**0.48**	**287**	*e*P			**Pg**	**19 51 42.0**	**+0.2**
	baz=288								
WHF				S			**Sg**	**19 51 48.6**	**+0.5**
	baz=288								
EOS4	**EOS4**	**0.52**	**77**	*e*P			**Pn**	**19 51 45.4**	**-0.5**
	baz=88								
FUSS	**Fushou**	**0.54**	**297**	*e*P			**Pb**	**19 51 43.2**	**-1.2**
	baz=297								
FUSS				*e*S			**Sb**	**19 51 51.5**	**-0.9**
	baz=297								
OWD	**Renai**	**0.54**	**265**	*e*P			**Pg**	**19 51 43.1**	**+0.2**
	baz=271								
CHGB	**Renai**	**0.55**	**276**	*i*	P		**Pg**	**19 51 43.2**	**+0.2**
	baz=277								
CHGB				*i*	S		**Sb**	**19 51 50.9**	**-1.7**
	baz=277								
NNSB	**Datong**	**0.55**	**321**	*i*	P		**Pb**	**19 51 43.4**	**-1.1**
	baz=320								
NNSB				S			**Sg**	**19 51 50.5**	**+0.2**
	baz=320								
NNSH	**Datong**	**0.55**	**321**	*e*P			**Pb**	**19 51 43.4**	**-1.1**
	baz=320								
NNSH				*e*S			**Sb**	**19 51 51.0**	**-1.7**
	baz=320								
NNS	**Nan Shan**	**0.57**	**321**	*e*P			**Pb**	**19 51 43.7**	**-1.1**
	baz=321								
NNS				*e*S			**Sg**	**19 51 51.0**	**+0.3**
	baz=321								
LATG	**Datong**	**0.57**	**338**	⇓*iP*			**Pb**	**19 51 44.1**	**-0.8**
	baz=338								
LATG				*e*S			**Sg**	**19 51 50.5**	**-0.6**
	baz=338								
ESAO	**Su ao**	**0.58**	**7**	*e*P			**Pb**	**19 51 44.9**	**0.0**
	baz=1.0								
ESAO				*e*S			**Sb**	**19 51 54.0**	**+0.8**
	baz=1.0								
EOS3	**EOS3**	**0.58**	**60**	*e*P			**Pn**	**19 51 45.8**	**-1.1**
	baz=67								
WUSB	**Renai**	**0.59**	**269**	P			**Pg**	**19 51 44.1**	**+0.2**
	baz=276								
WUSB				S			**Sb**	**19 51 53.0**	**-0.9**
	baz=276								
EOS2	**EOS2**	**0.59**	**45**	*e*P			**Pn**	**19 51 47.5**	**+0.3**
	baz=57								
HGSD	**Ruisui**	**0.60**	**212**	*e*P			**Pb**	**19 51 45.3**	**+0.2**
	baz=197								
TWT	**Tachien**	**0.60**	**295**	*e*P			**Pb**	**19 51 44.7**	**-0.6**
	baz=294								
TWT				S			**Sb**	**19 51 53.7**	**-0.3**
	baz=294								
TDCB	**Techi**	**0.61**	**294**	P			**Pb**	**19 51 44.8**	**-0.7**
	baz=294								
TDCB				S			**Sg**	**19 51 52.4**	**+0.2**
	baz=294								
TWC	**Suao**	**0.61**	**7**	P			**Pb**	**19 51 45.2**	**-0.2**
	baz=2.0								
TWC				*e*S			**Sb**	**19 51 55.0**	**+0.7**
	baz=2.0								
VWDT	**VWDT**	**0.62**	**247**	*i*	P		**Pb**	**19 51 44.9**	**-0.8**
	baz=245								
VWDT				*i*	S		**Sb**	**19 51 53.8**	**-0.8**
	baz=245								
NDS	**Dongshan**	**0.63**	**356**	P			**Pb**	**19 51 45.5**	**-0.3**
	baz=348								
NDS				S			**Sb**	**19 51 55.0**	**+0.1**
	baz=348								
EHY	**Hungye**	**0.64**	**220**	*e*P			**Pg**	**19 51 44.8**	**+0.1**
	baz=217								
NDT	**Datong Townshi**	**0.64**	**339**	*i*	P		**Pb**	**19 51 45.6**	**-0.4**
	baz=340								
NDT				S			**Sb**	**19 51 54.4**	**-0.8**
	baz=340								
ENTT	**Nioudou**	**0.66**	**344**	*e*P			**Pb**	**19 51 45.9**	**-0.5**
	baz=334								
ENTT				S			**Sb**	**19 51 55.3**	**-0.5**
	baz=334								
TWE	**Neicheng**	**0.72**	**353**	*e*P			**Pb**	**19 51 47.2**	**-0.2**
	baz=355								
TWE				S			**Sb**	**19 51 57.6**	**+0.1**
	baz=355								
ECBN	**Changbin**	**0.74**	**203**	P			**Pb**	**19 51 47.4**	**-0.2**
	baz=200								
ECBN				S			**Sb**	**19 51 58.9**	**+1.0**
	baz=200								
WPL	**Puli Township**	**0.74**	**271**	*i*	P		**Pb**	**19 51 47.0**	**-0.6**
	baz=271								
WPL					S		**Sb**	**19 51 57.4**	**-0.6**
	baz=271								
YULB	**Yu-li**	**0.74**	**215**		P		**Pb**	**19 51 47.4**	**-0.3**
YULB	**Yu-li**	**0.74**	**215**	*e*P			**Pg**	**19 51 46.6**	**0.0**
	baz=227								
YHNB	**Yeheng**	**0.76**	**332**		P		**Pb**	**19 51 48.0**	**0.0**
YHNB	**Yeheng**	**0.76**	**332**	*i*	P		**Pb**	**19 51 47.8**	**-0.2**
	baz=333								
YHNB				*i*	S		**Sb**	**19 51 57.4**	**-1.2**
	baz=333								
DPDB	**Guoxing**	**0.77**	**273**	*i*	P		**Pb**	**19 51 47.6**	**-0.5**
	baz=273								
DPDB					S		**Sb**	**19 51 57.6**	**-1.3**
	baz=273								
EYUL	**Yuli**	**0.77**	**212**	*e*P			**Pb**	**19 51 48.4**	**+0.2**
	baz=226								
NSK	**Sanguang**	**0.77**	**331**	*i*	P		**Pb**	**19 51 47.9**	**-0.3**
	baz=332								
NSK				*i*	S		**Sb**	**19 51 58.3**	**-0.6**
	baz=332								
FUSB	**Fushanzhiwuyua**	**0.77**	**348**	*i*	P		**Pb**	**19 51 48.0**	**-0.2**
	baz=339								
FUSB				*i*	S		**Sb**	**19 51 58.5**	**-0.5**
	baz=339								
SSLB	**Suanglung**	**0.77**	**254**		P		**Pb**	**19 51 47.6**	**-0.6**
SSLB	**Suanglung**	**0.77**	**254**	⇑*iP*			**Pg**	**19 51 47.4**	**+0.1**
	baz=266								
SSLB				*e*S			**Sg**	**19 51 57.1**	**-0.2**
	baz=266								
TWF1	**Yuli**	**0.78**	**214**	*e*P			**Pg**	**19 51 47.7**	**+0.3**
	baz=227								
WCS	**Beigang Elemen**	**0.78**	**274**	P			**Pb**	**19 51 48.0**	**-0.4**
	baz=273								
WHP	**Taichung City**	**0.80**	**290**	*i*	P		**Pb**	**19 51 48.7**	**0.0**
	baz=290								
WHP				*i*	S		**Sb**	**19 51 59.8**	**0.0**
	baz=290								
SMLT	**Sun Moon Lake**	**0.80**	**262**	⇑*iP*			**Pb**	**19 51 48.1**	**-0.6**
	baz=271								
SMLT				*i*	S		**Sb**	**19 51 59.5**	**-0.4**
	baz=271								
NWLT	**Wulai**	**0.81**	**343**	*e*P			**Pb**	**19 51 48.8**	**-0.1**
	baz=330								
NWLT				*e*S			**Sb**	**19 52 00.2**	**+0.2**
	baz=330								
TYC	**Yuchr**	**0.84**	**264**	⇑P			**Pb**	**19 51 48.6**	**-0.7**
	baz=273								
TYC				*e*S			**Sb**	**19 51 59.6**	**-1.2**
	baz=273								
NFF	**Wufeng Townshi**	**0.86**	**317**	P			**Pb**	**19 51 49.7**	**-0.1**
	baz=317								
NFF				*e*S			**Sb**	**19 52 01.0**	**-0.6**
	baz=317								
CHKH	**Chenggong**	**0.87**	**203**	*e*P			**Pg**	**19 51 49.1**	**-0.1**
	baz=201								
CHKH				*e*S			**Sn**	**19 52 03.5**	**-0.6**
	baz=201								
WHYT	**Xinyi Township**	**0.89**	**250**	*e*P			**Pb**	**19 51 49.9**	**-0.4**
	baz=258								
WHYT				*e*S			**Sb**	**19 52 02.1**	**-0.2**
	baz=258								
FULB	**Fuli**	**0.91**	**209**	*e*P			**Pb**	**19 51 50.3**	**-0.2**
	baz=223								
LIOB	**Emei**	**0.94**	**313**	*e*P			**Pn**	**19 51 51.3**	**-0.8**
	baz=314								
LIOB				*e*S			**Sn**	**19 52 04.3**	**-1.5**
	baz=314								
NSTT	**Nanjuang**	**0.94**	**312**	⇑P			**Pb**	**19 51 50.8**	**-0.2**
	baz=313								
NSTT				S			**Sb**	**19 52 03.1**	**-0.6**
	baz=313								
NJD	**Zhudong**	**0.96**	**320**	*e*P			**Pn**	**19 51 52.5**	**+0.2**
	baz=318								
WJS	**Zhushan**	**0.97**	**260**	P			**Pn**	**19 51 52.0**	**-0.4**
	baz=267								
WJS				S			**Sn**	**19 52 06.3**	**-0.2**
	baz=267								
TIPB	**Shuangxi**	**0.97**	**3**	*e*P			**Pb**	**19 51 51.6**	**+0.1**
	baz=355								
TIPB				*e*S			**Sn**	**19 52 05.5**	**-1.1**
	baz=355								
CHKT	**Chengkung**	**0.97**	**202**	*

baz=249
SXI1 Grass Mountain 1.09 5 P Pn 19 51 54.5 +0.2
baz=359
SXI1 *i* S Sn 19 52 09.9 +0.2
baz=359
NCUH Zhongli 1.10 331 *e*P Pn 19 51 54.7 +0.4
baz=329
WCHH Zhanghua 1.11 274 *e*P Pn 19 51 54.2 -0.2
baz=272
TWS1 Kuangyinshan 1.14 344 P Pn 19 51 55.0 +0.2
baz=344
TWS1 S Sn 19 52 12.8 +2.0
baz=344
TNOU National Taiwa 1.14 0 *e*P Pn 19 51 55.2 +0.4
baz=340
TNOU *e*S Sn 19 52 10.8 0.0
baz=340
WGK Gukeng 1.15 254 *e*P Pn 19 51 55.5 +0.6
baz=254
WGK *e*S Sn 19 52 11.2 +0.3
baz=254
YM01 YM01 1.15 351 *e*P Pn 19 51 55.6 +0.5
baz=349
JYNG Yonagunijimaku 1.17 67 *e*P Pg 19 51 54.5 -0.2
WDLH Douliu 1.17 255 *e*P Pn 19 51 55.4 +0.3
baz=252
NTST Danshui 1.19 346 *e*P Pn 19 51 56.6 +1.1
baz=343
NHW Xinwu Township 1.20 327 *e*P Pn 19 51 56.4 +0.8
baz=324
ANP Anpu 1.20 349 *e*P Pn 19 51 55.7 0.0
baz=347
WCKO Fanlu 1.20 243 *e*P Pn 19 51 56.4 +0.7
baz=242
WCKO *e*S Sn 19 52 14.4 +2.1
baz=242
YOJ Yonaguni jima 1.23 68 P Pg 19 51 57.9 +2.0
YOJ Yonaguni jima 1.23 68 *e*P Pg 19 51 56.6 +0.7
baz=69
YOJ Yonaguni jima 1.23 68 *e*P Pg 19 51 56.1 +0.2
STYH Taoyuan 1.23 228 *e*P Pb 19 51 55.6 -0.3
baz=214
LONT Longtian 1.24 208 *e*P Pn 19 51 53.7 -2.4
baz=208
STYT Tauyuan 1.25 228 *e*P Pn 19 51 55.7 -0.7
baz=212
STYT S Sn 19 52 13.3 -0.1
baz=212
TPUB Ta-pu 1.25 236 *e*P Pg 19 51 56.4 0.0
baz=235
TPUB *e*S Sb 19 52 12.3 -0.5
baz=235
CHN4 Tsaushan 1.26 239 *e*P Pg 19 51 56.3 -0.2
baz=237
WRL Guolierlin Hig 1.27 266 *e*P Pg 19 51 57.2 +0.3
baz=250
TWY Chenhua 1.28 353 *e*P Pg 19 51 58.1 +1.2
baz=351
RLNB Erlin 1.29 265 *e*P Pg 19 51 58.1 +1.0
baz=267
RLNB *e*S Sn 19 52 14.8 +0.3
baz=267
WTP Ta-pu 1.30 235 *e*P Pg 19 51 57.1 -0.2
baz=232
WTP *e*S Sg 19 52 14.1 -0.1
baz=232
WTK Tuku 1.30 256 *e*P Pg 19 51 57.9 +0.5
baz=254
TWGBT Beinan 1.34 208 *e*P Pn 19 51 54.8 -2.8
baz=208
TWG Pinlang 1.34 209 *e*P Pn 19 51 54.9 -2.7
baz=208
LDUT Ludao 1.35 192 *e*P Pn 19 51 54.8 -2.9
baz=179
TWK Hsinying 1.38 238 *e*P Pg 19 51 58.7 -0.2
baz=237
TWK *e*S Sg 19 52 18.3 +1.5
baz=237
CHN1 Nanshi 1.40 235 *e*P Pg 19 51 59.5 +0.3
baz=233
SNST Tainan City 1.40 237 *e*P Pb 19 51 58.5 -0.4
baz=234
SGST Jiashian 1.42 230 *e*P Pn 19 51 58.5 -0.2
baz=229
SGST *e*S Sg 19 52 18.9 +0.8
baz=229
SLGT Liugui 1.44 226 *e*P Pb 19 51 59.4 -0.1
baz=212
WSF Szhu 1.46 256 *e*P Pg 19 52 00.2 -0.2
baz=257
WSF *e*S Sg 19 52 21.2 +1.9
baz=257
WSL Shuilin Townsh 1.49 252 *e*P Pb 19 52 00.3 0.0
baz=249
ICHU Yijhu 1.50 245 *e*P Pg 19 52 01.4 +0.1
baz=243
CHN8 Yiju 1.57 246 *e*P Pb 19 52 01.2 -0.6
baz=245
CHN8 *e*S Sg 19 52 23.3 +0.5
baz=245
CHN3 Shinhua 1.58 235 *e*P Pn 19 52 00.1 -0.8
baz=233
ECL Taimali 1.58 208 *e*P Pn 19 51 58.2 -2.7
baz=195
SSHA Shanhua 1.61 238 *e*P Pn 19 52 01.3 +0.1
baz=236
SCST Cishan 1.61 227 *e*P Pg 19 52 02.9 -0.4
baz=228
SCST *e*S Sg 19 52 28.8 +4.6
baz=228
SHHT Tainan City 1.63 233 *e*P Pb 19 52 02.5 -0.3
baz=249
PCYT Pengchaiyu 1.65 10 *e*P Pn 19 52 01.1 -0.7
baz=8.0
TSMG Majia 1.65 219 *e*P Pb 19 52 02.9 -0.3
baz=208
SCLT Jiali 1.66 241 *e*P Pg 19 52 04.5 +0.2
baz=238
TWM1 Shoushan 1.70 227 *e*P Pb 19 52 04.1 +0.1
baz=226
MASBT Mashibuluo 1.73 217 *e*P Pn 19 52 02.1 -0.8
baz=219
TSPT Pingtung City 1.76 222 *e*P Pb 19 52 04.9 -0.2
baz=207
EAST Anshuo 1.82 208 *e*P Pn 19 52 04.7 +0.6
baz=196
TAW Tawu 1.82 206 *e*P Pb 19 52 06.2 +0.2
baz=206
IRIF Iriomote-Funau 1.82 79 *e*S Sb 19 52 29.4 +0.2
HATJ Hateruma jima 1.86 88 *e*S Sn 19 52 28.7 +0.2
SCZT Fangliau 1.93 213 *e*P Pn 19 52 06.2 +0.5
baz=199
SLIU Shizi 1.99 207 *e*P Pn 19 52 07.5 +1.0
baz=195
LYUB Lan-yu 2.00 185 *e*P Pn 19 52 03.1 -3.5
baz=188
JKRS Kuro-shima 2.06 83 *e*P Pn 19 52 08.8 +1.4
WDGT Dungji 2.07 250 *e*P Pb 19 52 09.2 -1.1
baz=246
PHUB P'eng-hu 2.07 257 *e*P Pn 19 52 07.2 -0.4
baz=253
PNG Penghu 2.07 258 *e*P Pn 19 52 08.1 +0.5
baz=254
JIJ Ishigaki jima 2.20 80 *e*P Pn 19 52 09.3 0.0
JIJ *e*S Sn 19 52 36.5 -0.4
TWKBT Hengchun 2.23 203 *e*P Pn 19 52 09.1 -0.8
baz=194
VCHM Qimei 2.28 250 *e*P Pn 19 52 09.7 -0.8
baz=246
JISG Ishigakijimahi 2.39 75 P Pn 19 52 12.1 0.0
JISG *e*S Sn 19 52 40.9 -0.8
PTMZ Houxiangcun 2.62 294 *e*P Pn 19 52 14.7 -0.5
baz=290
MATB Ma-tsu 2.70 323 *e*P Pg 19 52 24.9 +0.6
baz=316
KNM Kinmen 3.07 278 *e*P Pg 19 52 32.8 +1.5
baz=270
KNMB Chin-men Tao 3.12 279 *e*P Pn 19 52 21.2 -0.8
baz=272
LYJJ Jianjiangzhen 3.12 325 *e*P Pn 19 52 22.2 +0.1
baz=318
MHZQ Yeshan 3.25 311 *e*P Pn 19 52 23.4 -0.4
baz=305
XPSS Dashiqiu 3.25 334 *e*P Pn 19 52 22.7 -1.1
baz=327
JMJ Miyako jima 2 3.32 75 *e*P Pn 19 52 25.7 +0.9
baz=81
AXDP Jialang 3.57 285 *e*P Pn 19 52 28.6 +0.3
baz=280
ZPLA Ao Xicun 3.67 270 *e*P Pn 19 52 29.8 +0.2
baz=262
DSXP Dongshan 3.98 267 *e*P Pn 19 52 33.3 -0.7
baz=261
SXFK Yanhouchang 4.43 303 *e*P Pn 19 52 40.0 -0.1
baz=297
KSRS Korea Array 14.41 20 Pn Pn 19 54 53.3 -3.6
0.1nm,0.3s,baz=199,slow=12,SNR=2.0
0.9nm,0.8s
CMAR Chiang Mai Arr 21.97 260 P P 19 56 29.2 +2.2
0.3nm,0.3s,baz=5.7,slow=22,SNR=2.7
0.3nm,0.3s
SONM Songino Array 26.74 337 P P 19 57 12.5 -0.3
0.6nm,0.9s,baz=147,slow=7.9,SNR=4.4
0.6nm,0.9s
MKAR Makanchi Array 38.84 316 P P 19 58 57.9 -0.2
0.4nm,0.7s,baz=96,slow=11,SNR=5.9
0.4nm,0.7s
ZALV Zalesovo Beam 40.69 327 P P 19 59 12.3 -1.0
1.0nm,0.7s,baz=110,slow=6.3,SNR=2.9
1.0nm,0.7s
H11N1 WAKE ISLAND Hy 41.97 87 T T 20 44 30.3
baz=276,slow=74
H11N2 WAKE ISLAND Hy 41.97 87 T T 20 44 32.5
baz=276,slow=74
H11N3 WAKE ISLAND Hy 41.98 87 T T 20 44 34.2
baz=276
H11S3 WAKE ISLAND Hy 42.09 89 T T 20 44 32.3
baz=285,slow=75
H11S1 WAKE ISLAND Hy 42.10 89 T T 20 44 36.2
baz=285,slow=75
H11S2 WAKE ISLAND Hy 42.11 89 T T 20 44 34.0
baz=285,slow=75
WRA Warramunga Arr 45.36 163 P P 19 59 51.8 +0.2
0.7nm,0.8s,baz=343,slow=8.7,SNR=2.6
0.7nm,0.8s
ASAR Alice Springs 48.83 165 P P 20 00 19.8 +1.1
1.1nm,1.1s,baz=341,slow=7.2,SNR=5.0
1.1nm,1.1s
HFS Hagfors 77.98 331 P P 20 03 33.4 +2.2
0.8nm,0.8s,baz=64,slow=3.4,SNR=9.7
0.8nm,0.3s
YKA Yellowknife Ar 82.93 23 P P 20 03 57.6 -0.2
0.2nm,0.7s,baz=314,slow=5.2,SNR=3.7
0.2nm,0.7s

*IDC **06** 19:56:48.7±3.9, 11°.43S×166°.33E, h59km±32km, mb3.9/8, mbtmp4.1/9, ML3.8/1, MS4.6/3, Error ellipse: s-maj=33.2km s-min=25.8km az=114.0*
*NEIC **06** 19:56:49.9±0.9, 11°.4S±0°.1×166°.4E±0°.1, h63km±8km, mb4.5/27, Error ellipse: s-maj=19.0km s-min=15.3km az=65.0*

ISC 06 19:56:49.0±0.7, 11°.45S±0°.08×166°.3E±0°.1, h59km, n46, σ0991/47, mb4.4/24, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.55**	**287**			**Pn**	**19 58 23.4**	**+0.6**
HNR	**Honiara**	**6.55**	**287**	P		**Pn**	**19 58 23.0**	**+0.3**
	3μm,0.7s,baz=38,slow=1.1,SNR=6.4							
HNR				S		**Sn**	**19 59 34.2**	**-1.9**
	736nm,0.6s,baz=180,slow=18,SNR=0.9							
HNR				LR		LR	20 01 13.4	
	comp=Z,3μm,21.1s,baz=159,slow=40							
KOUNC	**Koumac, New Ca**	**9.26**	**192**	Pn		**Pn**	**19 59 01.4**	**+1.6**
DZM	**Mont Dzumac**	**10.57**	**179**	Pn		**Pn**	**19 59 19.1**	**+1.3**
DZM	**Mont Dzumac**	**10.57**	**179**	P		**Pn**	**19 59 18.1**	**+0.3**
	0.7nm,0.3s,baz=142,slow=9.2,SNR=14							
DZM				S		**Sn**	**20 01 11.6**	**-3.1**
	15nm,1.1s,baz=311,slow=20,SNR=2.5							
	2.4nm,0.2s							
ARMA	**Armidale**	**23.27**	**214**	P		**P**	**20 01 54.2**	**+2.4**
ARMA				IAmb		IAmb	20 02 26.1	
	comp=Z,23nm,1.3s							
STKA	**Stephens Creek**	**30.52**	**224**	P		**P**	**20 02 57.0**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=49,slow=11,SNR=3.6							
	comp=Z,1.3nm,0.8s							
LTZ	**Lake Taylor**	**31.65**	**172**	P		**P**	**20 03 07.7**	**+1.0**
LTZ				IAmb		IAmb	20 03 08.8	
	comp=Z,20nm,1.2s							
WB0	**Warramunga Arr**	**31.77**	**251**	P		**P**	**20 03 08.1**	**+0.2**
WB0				IAmb		IAmb	20 03 08.5	
	comp=Z,5.2nm,0.7s							
WRAB	**Tennant Creek**	**31.84**	**251**	P		**P**	**20 03 08.6**	**+0.1**
WRAB				IAmb		IAmb	20 03 09.9	
	comp=Z,6.0nm,1.1s							
WRA	**Warramunga Arr**	**31.85**	**251**	P		**P**	**20 03 08.4**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=81,slow=9.3,SNR=13							
	comp=Z,2.6nm,0.8s							
RPZ	**Rata Peaks**	**32.41**	**174**	P		**P**	**20 03 11.7**	**-1.6**
AS31	**Alice Springs**	**33.09**	**244**	P		**P**	**20 03 18.2**	**-1.4**
ASAR	**Alice Springs**	**33.09**	**244**	P		**P**	**20 03 19.1**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=67,slow=10.0,SNR=38							
ASAR				PcP		**PcP**	**20 06 02.0**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=77,slow=2.6,SNR=7.8							
	comp=Z,3.2nm,0.8s							
KNRA	**Kununurra**	**36.69**	**259**	P		**P**	**20 03 50.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**39.79**	**255**	P		**P**	**20 04 16.6**	**-0.1**
NWAO	**Narrogin (SRO)**	**49.68**	**236**	P		**P**	**20 05 36.1**	**+0.9**
NJ2	**Nanjing**	**62.68**	**315**	*e*P		**P**	**20 07 07.9**	**+0.1**
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.5s							
VNDA	**Vanda**	**66.10**	**181**	LR		LR	20 31 34.6	
	comp=Z,314nm,19.3s,baz=146,slow=32							
GSI	**Gunungsitoli**	**69.43**	**276**	P		**P**	**20 07 51.9**	**+0.3**
GSI				IAmb		IAmb	20 07 52.8	
	comp=Z,7.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**72.76**	**293**	P		**P**	**20 08 11.7**	**0.0**
CMAR	**Chiang Mai Arr**	**72.76**	**293**	P		**P**	**20 08 12.2**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=121,slow=4.4,SNR=7.1							
	comp=Z,1.3nm,0.9s							
M16K	**Timber Creek**	**77.29**	**17**	P		**P**	**20 08 37.0**	**+0.2**
K15K	**Wolf Creek Mou**	**77.67**	**15**	P		**P**	**20 08 38.5**	**-0.4**
QSPA	**South Pole Qui**	**78.56**	**180**	P		**P**	**20 08 44.1**	**0.0**
QSPA				IAmb		IAmb	20 08 45.8	
	comp=Z,7.8nm,1.1s							
L18K	**Granite Mounta**	**78.90**	**17**	P		**P**	**20 08 45.5**	**-0.2**
L18K				IAmb		IAmb	20 08 47.3	
	comp=Z,6.7nm,1.1s							
SONM	**Songino Array**	**79.30**	**324**	P		**P**	**20 08 48.2**	**-0.2**
SONM	**Songino Array**	**79.30**	**324**	P		**P**	**20 08 48.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=144,slow=5.9,SNR=5.0							
	comp=Z,0.7nm,0.6s							
M19K	**Big River Lodg**	**79.32**	**18**	P		**P**	**20 08 47.3**	**-0.7**
M19K				IAmb		IAmb	20 08 55.2	
	comp=Z,10nm,1.4s							
L19K	**White Mountain**	**79.40**	**17**	P		**P**	**20 08 48.5**	**0.0**
L19K				IAmb		IAmb	20 08 53.9	
	comp=Z,7.3nm,1.4s							
SUA	**Susitna One**	**80.12**	**19**	P		**P**	**20 08 51.9**	**-0.6**
SUA				IAmb		IAmb	20 09 26.7	
	comp=Z,11nm,1.3s							
G16K	**Koyuk River**	**80.13**	**13**			**P**	**20 08 52.4**	**+0.1**
G16K				IAmb		IAmb	20 09 34.4	
	comp=Z,5.1nm,1.3s							
CAST	**Castle Rocks**	**81.17**	**18**	P		**P**	**20 08 56.8**	**-1.1**
CAST				IAmb		IAmb	20 09 00.7	
	comp=Z,4.5nm,1.2s							
N25K	**Chitina, Valde**	**82.33**	**21**	P		**P**	**20 09 04.3**	**+0.1**
E19K	**Redstone River**	**82.99**	**13**	P		**P**	**20 09 07.8**	**+0.4**
C18K	**Utukok River**	**83.15**	**11**	P		**P**	**20 09 07.9**	**-0.4**
HDA	**Harding Lake**	**83.45**	**19**	P		**P**	**20 09 09.7**	**-0.2**
HDA				IAmb		IAmb	20 09 12.9	
	comp=Z,4.1nm,0.6s							
D19K	**Kuna River**	**83.65**	**12**	P		**P**	**20 09 11.0**	**+0.2**
ILAR	**Eielson Array**	**83.72**	**18**	P		**P**	**20 09 10.6**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=260,slow=5.1,SNR=12							
	comp=Z,0.6nm,0.6s							
J25K	**Salcha River,**	**84.09**	**19**	P		**P**	**20 09 13.2**	**0.0**
J25K				IAmb		IAmb	20 09 16.2	
	comp=Z,2.8nm,0.7s							
SCRK	**Sand Creek**	**84.11**	**20**	P		**P**	**20 09 13.4**	**+0.1**
SCRK				IAmb		IAmb	20 09 15.1	
	comp=Z,4.9nm,1.2s							
MAW	**Mawson**	**84.55**	**202**	LR		LR	20 41 07.2	
	comp=Z,506nm,19.3s,baz=213,slow=31							
MKAR	**Makanchi Array**	**94.18**	**317**	P		**P**	**20 10 01.4**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=86,slow=6.0,SNR=22							
	comp=Z,2.2nm,0.7s							
ZALV	**Zalesovo Beam**	**94.19**	**324**	P		**P**	**20 10 00.6**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=121,slow=4.6,SNR=4.0							
	comp=Z,0.7nm,0.5s							
ARCES	**ARCESS Array B**	**116.85**	**346**	PKP		**PKPdf**	**20 15 25.7**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=64,slow=4.1,SNR=3.5							
FINES	**FINESS Array B**	**122.34**	**339**	PKP		**PKPdf**	**20 15 36.5**	**-0.6**
	comp=Z,2.8nm,1.1s,baz=38,slow=5.6,SNR=3.9							

TAP 06 19:57:22.9, 24°.09N×121°.62E, h9km, ML1.6, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.02**	**239**	*i* P		Pg	19 57 25.2	+0.6
	baz=229							
TWD				*i* S		Sg	19 57 26.5	+0.7
	baz=229							
ETL	**Fush Village**	**0.07**	**4**	*i* P		Pg	19 57 25.6	+0.6
	baz=3.0							
ETL				*i* S		Sg	19 57 27.2	+0.5
	baz=3.0							
NACB	**Ninganchiao**	**0.08**	**345**	⇓*i* P		Pg	19 57 26.0	+0.8
	baz=345							
NACB				*i* S		Sg	19 57 27.8	+0.9
	baz=345							
ETM	**Tongmen**	**0.17**	**222**	P		Pg	19 57 27.3	+0.8
	baz=222							
ETM				S		Sg	19 57 30.1	+1.1
	baz=222							
LXIB	**Xiulin Townshi**	**0.20**	**249**	P		Pg	19 57 28.5	+1.3
	baz=249							
LXIB				*e*S		Sg	19 57 31.7	+1.6
	baz=249							
EAHA	**Aohua**	**0.26**	**25**	*e*P		Pg	19 57 28.3	+0.1
	baz=25							
ESL	**Shilin**	**0.32**	**211**	*e*P		Pg	19 57 29.9	+0.5
	baz=210							
WHF	**Hehuan Shan**	**0.33**	**279**	*e*P		Pb	19 57 31.0	-0.1
	baz=279							
ENA	**Nanau**	**0.35**	**19**	*e*P		Pg	19 57 30.3	+0.4
	baz=19							
LATG	**Datong**	**0.45**	**349**	*e*P		Pb	19 57 32.8	-0.3
	baz=349							
ENTT	**Nioudou**	**0.55**	**355**	*e*P		Pb	19 57 34.3	-0.4
	baz=355							

*IDC **06** 19:57:26.6±4.6, 23°.16N×121°.69E, h0km, mb3.6/4, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=100.2km s-min=52.9km az=7.0*
*TAP **06** 19:57:34.4, 24°.14N×121°.70E, h10km, ML3.9, C*
*JMA **06** 19:57:34.7±0.1, 24°.1N±0°.2×121°.7E±0°.5, h8km, MV3.4/13, TAIWAN REGION*
*ASIES **06** 19:57:34.4, 24°.14N×121°.70E, h10km, ML3.9, Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr-4.19; Mθθ1.92; Mϕϕ2.27; Mrθ-1.41; Mθϕ-2.36; Mϕr2.65; Fault plane solution: M05.27172×10²¹ NP1: ϕs145.84000°, δ62.48000°, λ-81.51000°. NP2: ϕs307.94000°, δ28.70000°, λ-105.82000°. Principal axes: T Plg17.0690°, Azm229.5740°; N Plg7.5230°, Azm321.8970°; P Plg71.2520°, Azm74.7940°;*

ISC 06 19:57:34.4±0.8, 24°.13N±0°.01×121°.71E±0°.02, h10km±5km, n175, σ0968/273, mb3.5/4, 5C-47D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**289**	P		**Pg**	**19 57 37.0**	**+0.1**
	baz=283							
ETL				*i* S		**Sg**	**19 57 38.6**	**0.0**
	baz=283							
NACB	**Ninganchiao**	**0.12**	**292**	⇓*i* P		**Pg**	**19 57 37.3**	**+0.1**
	baz=288							
NACB				*i* S		**Sg**	**19 57 39.0**	**-0.2**
	baz=288							
TWD	**Chiawan**	**0.12**	**245**	⇑*i* P		**Pg**	**19 57 37.3**	**0.0**
	baz=237							
TWD				*i* S		**Sg**	**19 57 39.3**	**+0.1**
	baz=237							
EHP	**Heping Village**	**0.18**	**8**	*i* P		**Pg**	**19 57 38.6**	**+0.3**
	baz=14							
EHP				*i* S		**Sg**	**19 57 41.4**	**+0.5**
	baz=14							
EAHA	**Aohua**	**0.20**	**7**	⇓*i* P		**Pg**	**19 57 38.8**	**+0.2**
	baz=9.0							
EAHA				*i* S		**Sg**	**19 57 41.9**	**+0.5**
	baz=9.0							
ETM	**Tongmen**	**0.26**	**231**	P		**Pg**	**19 57 39.8**	**+0.1**
	baz=221							
ETM				S		**Sg**	**19 57 43.3**	**+0.1**
	baz=221							
LXIB	**Xiulin Townshi**	**0.30**	**249**	⇓*i* P		**Pg**	**19 57 40.3**	**-0.1**
	baz=246							
LXIB				*e*S		**Sg**	**19 57 44.4**	**0.0**
	baz=246							
ENA	**Nanau**	**0.30**	**5**	⇓*i* P		**Pg**	**19 57 40.6**	**+0.2**
	baz=8.0							
ENA				*i* S		**Sg**	**19 57 44.6**	**+0.3**
	baz=8.0							
EWUT	**Wuta**	**0.32**	**11**	⇓P		**Pg**	**19 57 40.9**	**+0.2**
	baz=12							
EWUT				S		**Sg**	**19 57 45.4**	**+0.3**
	baz=12							
SHUL	**Shoufeng**	**0.37**	**202**	*e*P		**Pb**	**19 57 42.8**	**-0.2**
	baz=209							
SHUL				*e*S		**Sb**	**19 57 49.7**	**+0.8**
	baz=209							
ESL	**Shilin**	**0.41**	**219**	⇓*i* P		**Pg**	**19 57 42.4**	**0.0**
	baz=229							
WHF	**Hehuan Shan**	**0.41**	**272**	⇓P		**Pg**	**19 57 42.6**	**0.0**
	baz=270							
WHF				*e*S		**Sg**	**19 57 47.8**	**-0.3**
	baz=270							
NNSB	**Datong**	**0.42**	**315**	⇓*i* P		**Pg**	**19 57 43.0**	**+0.2**
	baz=314							
NNSB				*i* S		**Sg**	**19 57 48.4**	**0.0**
	baz=314							
NNSH	**Datong**	**0.42**	**315**	⇓*i* P		**Pg**	**19 57 43.0**	**+0.2**
	baz=314							
NNSH				*i* S		**Sg**	**19 57 48.4**	**0.0**
	baz=314							
LATG	**Datong**	**0.44**	**337**	⇓*i* P		**Pg**	**19 57 43.1**	**+0.1**
	baz=337							
LATG				S		**Sg**	**19 57 48.8**	**0.0**
	baz=337							
NNS	**Nan Shan**	**0.44**	**315**	⇓*i* P		**Pg**	**19 57 43.2**	**+0.1**
	baz=315							
NNS				*i* S		**Sg**	**19 57 48.9**	**0.0**
	baz=315							
FUSS	**Fushou**	**0.45**	**285**	⇓*i* P		**Pg**	**19 57 43.5**	**+0.3**
	baz=284							
FUSS				S		**Sg**	**19 57 49.8**	**+0.7**
	baz=284							
TEGC	**Jichi Village**	**0.45**	**201**	*e*P		**Pb**	**19 57 44.5**	**+0.1**
	baz=190							
ESAO	**Su ao**	**0.46**	**15**	*e*P		**Pg**	**19 57 43.5**	**+0.1**
	baz=15							
ESAO				S		**Sg**	**19 57 49.5**	**+0.1**
	baz=15							
TWC	**Suao**	**0.49**	**14**	⇓P		**Pg**	**19 57 44.2**	**+0.2**
	baz=10.0							
TWC				S		**Sg**	**19 57 51.0**	**+0.5**
	baz=10.0							
CHGB	**Renai**	**0.50**	**262**	⇓*i* P		**Pg**	**19 57 44.5**	**+0.3**
	baz=252							
CHGB				*i* S		**Sg**	**19 57 51.0**	**+0.2**
	baz=252							
NDS	**Dongshan**	**0.50**	**0**	⇓P		**Pg**	**19 57 44.5**	**+0.3**
	baz=360							
NDS				S		**Sg**	**19 57 51.2**	**+0.4**
	baz=360							
NDT	**Datong Townshi**	**0.51**	**339**	⇓*i* P		**Pg**	**19 57 44.6**	**+0.4**
	baz=338							
NDT				*i* S		**Sg**	**19 57 51.5**	**+0.6**
	baz=338							
TWT	**Tachien**	**0.51**	**284**	⇓*i* P		**Pb**	**19 57 44.9**	**-0.6**
	baz=282							
TWT				S		**Sg**	**19 57 51.5**	**+0.5**
	baz=282							
WARBT	**Fenglin Townsh**	**0.51**	**216**	P		**Pg**	**19 57 44.3**	**0.0**
	baz=222							
WARBT				S		**Sb**	**19 57 52.5**	**-0.5**
	baz=222							
OWD	**Renai**	**0.52**	**251**	P		**Pg**	**19 57 44.7**	**+0.1**
	baz=250							
TDCB	**Techi**	**0.52**	**284**	⇓*i* P		**Pg**	**19 57 45.0**	**+0.5**
	baz=283							
TDCB				S		**Sg**	**19 57 51.3**	**-0.2**
	baz=283							
ENTT	**Nioudou**	**0.53**	**345**	⇓*i* P		**Pg**	**19 57 45.0**	**+0.4**
	baz=345							
ENTT				S		**Sg**	**19 57 52.1**	**+0.5**

	baz=345								
EGFH	**Guangfu**	**0.53**	**210**	*e*P		**Pg**	**19 57 44.9**	**+0.3**
	baz=219								
EGFH				*e*S		**Sb**	**19 57 54.3**	**+0.8**
	baz=219								
EOS4	**EOS4**	**0.55**	**91**	*e*P		**Pn**	**19 57 48.1**	**+0.1**
	baz=90								
EOS2	**EOS2**	**0.55**	**59**	*e*P		**Pb**	**19 57 46.7**	**+0.5**
	baz=48								
WUSB	**Renai**	**0.56**	**256**	⇓*i*P		**Pg**	**19 57 45.6**	**+0.2**
	baz=247								
WUSB				*i* S		**Sg**	**19 57 52.4**	**-0.4**
	baz=247								
TWE	**Neicheng**	**0.59**	**356**	⇓*i*P		**Pg**	**19 57 46.3**	**+0.4**
	baz=357								
TWE				S		**Sg**	**19 57 53.7**	**+0.1**
	baz=357								
YHNB	**Yeheng**	**0.62**	**330**	⇓*i*P		**Pg**	**19 57 46.7**	**+0.3**
	baz=330								
YHNB				*i* S		**Sg**	**19 57 55.1**	**+0.5**
	baz=330								
NSK	**Sanguang**	**0.63**	**329**	⇓*i*P		**Pg**	**19 57 46.9**	**+0.2**
	baz=329								
NSK				S		**Sg**	**19 57 55.1**	**+0.1**
	baz=329								
ILA	**Ilan**	**0.63**	**3**	*e*P		**Pg**	**19 57 47.0**	**+0.4**
	baz=2.0								
FUSB	**Fushanzhiwuyua**	**0.64**	**350**	⇓*i*P		**Pg**	**19 57 47.2**	**+0.4**
	baz=349								
FUSB				*i* S		**Sg**	**19 57 55.0**	**-0.2**
	baz=349								
VWDT	**VWDT**	**0.64**	**235**	⇓P		**Pg**	**19 57 47.1**	**+0.2**
	baz=234								
VWDT				S		**Sb**	**19 57 56.2**	**-0.6**
	baz=234								
NWLT	**Wulai**	**0.67**	**343**	⇓*i*P		**Pg**	**19 57 47.8**	**+0.3**
	baz=330								
NWLT				S		**Sg**	**19 57 56.3**	**+0.1**
	baz=330								
HGSD	**Ruisui**	**0.69**	**203**	P		**Pb**	**19 57 48.9**	**+0.4**
	baz=217								
HGSD				*e*S		**Sn**	**19 58 00.1**	**-1.0**
	baz=217								
WPL	**Puli Township**	**0.70**	**261**	P		**Pg**	**19 57 48.3**	**+0.4**
	baz=251								
WPL				S		**Sg**	**19 57 56.8**	**-0.4**
	baz=251								
EHY	**Hungye**	**0.72**	**210**	⇓P		**Pg**	**19 57 48.0**	**-0.2**
	baz=221								
EHY				*e*S		**Sb**	**19 57 59.2**	**+0.3**
	baz=221								
WHP	**Taichung City**	**0.72**	**282**	⇓P		**Pb**	**19 57 48.8**	**-0.3**
	baz=281								
WHP				S		**Sb**	**19 57 58.6**	**-0.5**
	baz=281								
DPDB	**Guoxing**	**0.73**	**263**	⇓*i*P		**Pg**	**19 57 48.8**	**+0.4**
	baz=253								
DPDB				*e*S		**Sb**	**19 57 58.9**	**-0.4**
	baz=253								
WCS	**Beigang Elemen**	**0.74**	**265**	P		**Pg**	**19 57 48.9**	**+0.3**
	baz=255								
WCS				*e*S		**Sb**	**19 57 59.0**	**-0.5**
	baz=255								
NFF	**Wufeng Townshi**	**0.74**	**313**	P		**Pb**	**19 57 49.1**	**-0.3**
	baz=312								
NFF				*e*S		**Sb**	**19 57 59.1**	**-0.5**
	baz=312								
SSLB	**Suanglung**	**0.78**	**244**	⇓*i*P		**Pg**	**19 57 49.4**	**0.0**
	baz=253								
SSLB				*i* S		**Sg**	**19 57 58.6**	**-0.9**
	baz=253								
SMLT	**Sun Moon Lake**	**0.78**	**252**	⇓*i*P		**Pg**	**19 57 49.7**	**+0.1**
	baz=251								
SMLT				*i* S		**Sg**	**19 57 59.7**	**-0.1**
	baz=251								
TYC	**Yuchr**	**0.81**	**254**	⇓*i*P		**Pg**	**19 57 50.1**	**0.0**
	baz=244								
TYC				S		**Sg**	**19 57 60.0**	**-0.8**
	baz=244								
LIOB	**Emei**	**0.82**	**309**	⇓*i*P		**Pb**	**19 57 50.8**	**+0.1**
	baz=309								
LIOB				*e*S		**Sb**	**19 58 01.8**	**-0.1**
	baz=309								
NSTT	**Nanjuang**	**0.82**	**308**	⇓*i*P		**Pb**	**19 57 50.7**	**-0.1**
	baz=307								
NSTT				S		**Sg**	**19 58 01.2**	**+0.3**
	baz=307								
YULB	**Yu-li**	**0.83**	**208**	*e*P		**Pg**	**19 57 49.7**	**-0.7**
	baz=220								
YULB				*e*S		**Sg**	**19 58 01.8**	**+0.6**
	baz=220								
NJD	**Zhudong**	**0.83**	**317**	*e*P		**Pb**	**19 57 51.4**	**+0.4**
	baz=322								
TIPB	**Shuangxi**	**0.84**	**7**	⇓*i*P		**Pg**	**19 57 50.9**	**+0.2**
	baz=357								
TIPB				S		**Sg**	**19 58 01.1**	**-0.6**
	baz=357								
ECBN	**Changbin**	**0.84**	**197**	*e*P		**Pb**	**19 57 51.3**	**+0.2**
	baz=189								
ECBN				*e*S		**Sn**	**19 58 04.0**	**-0.8**
	baz=189								
NHDH	**Xindian Distri**	**0.85**	**348**	⇓P		**Pb**	**19 57 51.0**	**-0.2**
	baz=339								
NHDH				*e*S		**Sg**	**19 58 01.3**	**-0.5**
	baz=339								
TWA	**Mucha**	**0.85**	**352**	P		**Pb**	**19 57 51.2**	**-0.2**
	baz=351								
TWA				S		**Sb**	**19 58 02.4**	**-0.5**
	baz=351								
EYUL	**Yuli**	**0.86**	**205**	*e*P		**Pb**	**19 57 51.4**	**0.0**
	baz=220								
TWF1	**Yuli**	**0.86**	**206**	*e*P		**Pg**	**19 57 50.2**	**-0.8**
	baz=218								
TWF1				*e*S		**Sb**	**19 58 03.9**	**+0.8**
	baz=218								
TATO	**Taipei**	**0.87**	**346**	⇓*i*P		**Pb**	**19 57 51.5**	**-0.1**
	baz=337								
TATO				S		**Sg**	**19 58 01.8**	**-0.6**
	baz=337								
TWQ1	**Liyutan**	**0.89**	**284**	*e*P		**Pb**	**19 57 52.2**	**+0.3**
	baz=284								
BACT	**New Taipei Cit**	**0.90**	**344**	*e*P		**Pn**	**19 57 53.0**	**-0.1**
	baz=343								
BACT				*e*S		**Sb**	**19 58 05.0**	**+0.8**
	baz=343								
WHYT	**Xinyi Township**	**0.90**	**241**	*e*P		**Pg**	**19 57 51.7**	**0.0**
	baz=242								
HSN1	**Hsinchu**	**0.91**	**316**	*e*P		**Pb**	**19 57 52.1**	**-0.2**
	baz=315								
TWB1	**Santiao Chiao**	**0.91**	**16**	*e*P		**Pb**	**19 57 52.2**	**-0.1**
	baz=8.0								
TWB1				*e*S		**Sg**	**19 58 03.8**	**+0.1**
	baz=8.0								
NHY	**Taipei**	**0.92**	**352**	*e*P		**Pb**	**19 57 52.3**	**-0.1**
	baz=2.0								
NSY	**Sanyi**	**0.92**	**288**	*e*P		**Pn**	**19 57 52.9**	**-0.5**
	baz=288								
TAP	**Taipei**	**0.93**	**348**	*e*P		**Pb**	**19 57 52.8**	**+0.2**
	baz=339								
TAP				S		**Sb**	**19 58 04.9**	**0.0**
	baz=339								
WWF	**Wufeng**	**0.93**	**265**	*e*P		**Pn**	**19 57 54.0**	**+0.4**
	baz=259								
WWF				*e*S		**Sn**	**19 58 08.0**	**+1.0**
	baz=259								
NMLH	**Miaoli**	**0.94**	**296**	*e*P		**Pn**	**19 57 53.4**	**-0.3**
	baz=295								
SBCB	**Hsinchu**	**0.94**	**315**	*e*P		**Pn**	**19 57 53.6**	**-0.1**
	baz=314								
NWF	**Wu-fen Shan**	**0.94**	**4**	*i* P		**Pb**	**19 57 52.8**	**-0.1**
	baz=354								
NWF				*i* S		**Sg**	**19 58 04.5**	**-0.3**
	baz=354								
WFSB	**Wu-fen Shan**	**0.94**	**4**	⇓P		**Pb**	**19 57 52.9**	**+0.1**
	baz=354								
WFSB				S		**Sg**	**19 58 04.4**	**-0.3**
	baz=354								
NTY	**Taoyuan**	**0.94**	**336**	*e*P		**Pn**	**19 57 53.4**	**-0.4**
	baz=329								
NJN	**Zhunan**	**0.95**	**306**	*e*P		**Pn**	**19 57 53.5**	**-0.2**
	baz=305								
TCU	**Taichung**	**0.95**	**271**	*e*P		**Pn**	**19 57 54.0**	**+0.2**
	baz=271								
HSN	**Hsinchu**	**0.95**	**315**	*e*P		**Pn**	**19 57 53.7**	**-0.2**
	baz=317								
WJS	**Zhushan**	**0.95**	**251**	*e*P		**Pn**	**19 57 53.8**	**-0.1**
	baz=251								
WJS				*e*S		**Sn**	**19 58 07.4**	**-0.2**
	baz=251								
NCU	**National Centr**	**0.96**	**330**	*e*P		**Pb**	**19 57 53.3**	**+0.1**
	baz=336								
NCU				*e*S		**Sn**	**19 58 07.7**	**-0.1**
	baz=336								
NCUH	**Zhongli**	**0.96**	**330**	*e*P		**Pn**	**19 57 53.7**	**-0.3**
	baz=329								
SXI1	**Grass Mountain**	**0.97**	**9**	⇓*i*P		**Pb**	**19 57 53.5**	**+0.1**
	baz=355								
SXI1				*e*S		**Sg**	**19 58 05.8**	**0.0**
	baz=355								
WNT1	**Nantou City**	**0.97**	**257**	P		**Pn**	**19 57 54.5**	**+0.3**
	baz=248								
WNT	**Mingjian**	**0.97**	**255**	⇑*i*P		**Pn**	**19 57 54.6**	**+0.4**
	baz=250								
WNT				*e*S		**Sn**	**19 58 07.3**	**-0.8**
	baz=250								
CHKH	**Chenggong**	**0.98**	**197**	*e*P		**Pg**	**19 57 53.2**	**-0.1**
	baz=190								
FULB	**Fuli**	**1.00**	**203**	*e*P		**Pg**	**19 57 53.8**	**0.0**
	baz=218								
TWS1	**Kuangyinshan**	**1.00**	**344**	⇑P		**Pn**	**19 57 54.6**	**0.0**
	baz=351								
TWS1				*e*S		**Sn**	**19 58 08.0**	**-0.8**
	baz=351								
WDJ	**Dajia District**	**1.00**	**283**	*e*P		**Pn**	**19 57 55.0**	**+0.4**
	baz=282								
WDJ				*e*S		**Sn**	**19 58 09.8**	**+1.0**
	baz=282								
TNOU	**National Taiwa**	**1.02**	**3**	P		**Pb**	**19 57 54.4**	**+0.3**
YM01	**YM01**	**1.02**	**353**	*e*P		**Pb**	**19 57 54.3**	**+0.1**
YM01				*e*S		**Sb**	**19 58 08.0**	**+0.2**
ALS	**Alishan**	**1.04**	**234**	⇓*i*P		**Pg**	**19 57 54.5**	**+0.2**
	baz=224								
ALS				*e*S		**Sb**	**19 58 09.2**	**+0.8**
	baz=224								
WYL	**Yuanlin Townsh**	**1.05**	**261**	*e*P		**Pn**	**19 57 55.7**	**+0.5**
	baz=262								
WCHH	**Zhanghua**	**1.06**	**268**	*e*P		**Pn**	**19 57 55.2**	**-0.1**
	baz=268								
NTST	**Danshui**	**1.06**	**347**	*e*P		**Pn**	**19 57 55.2**	**-0.1**
	baz=354								
NTST				*e*S		**Sn**	**19 58 10.7**	**+0.5**
	baz=354								
NHW	**Xinwu Township**	**1.06**	**325**	*e*P		**Pg**	**19 57 54.8**	**-0.1**
	baz=325								
ANP	**Anpu**	**1.07**	**351**	*e*P		**Pb**	**19 57 55.0**	**0.0**
	baz=358								
ANP				*e*S		**Sn**	**19 58 09.9**	**-0.7**
	baz=358								
CHKT	**Chengkung**	**1.07**	**197**	*e*P		**Pg**	**19 57 54.0**	**-1.1**
	baz=191								
CHKT				S		**Sb**	**19 58 09.8**	**+0.6**
	baz=191								
EHD	**Haiduan**	**1.08**	**206**	*e*P		**Pg**	**19 57 54.5**	**-0.7**
	baz=220								
CHN5	**Tsauling**	**1.09**	**241**	⇓*e*P		**Pn**	**19 57 56.1**	**+0.3**
	baz=242								
CHN5				S		**Sn**	**19 58 11.4**	**+0.4**
	baz=242								
ECS	**Chishang**	**1.13**	**204**	*e*P		**Pn**	**19 57 56.3**	**0.0**
	baz=220								
ELDTW	**Lidau**	**1.13**	**214**	*e*P		**Pb**	**19 57 54.6**	**-1.6**
	baz=225								
ELDTW				*e*S		**Sg**	**19 58 10.5**	**-0.4**
	baz=225								
WGK	**Gukeng**	**1.14**	**247**	⇓P		**Pn**	**19 57 57.3**	**+0.8**
	baz=248								
TWY	**Chenhua**	**1.15**	**355**	*e*P		**Pn**	**19 57 57.0**	**+0.4**
	baz=339								
WDLH	**Douliu**	**1.16**	**248**	*e*P		**Pn**	**19 57 57.4**	**+0.6**
	baz=249								
JYNG	**Yonagunijimaku**	**1.17**	**74**	P		**Pg**	**19 57 57.0**	**+0.1**
WCKO	**Fanlu**	**1.23**	**236**	*e*P		**Pg**	**19 57 58.2**	**+0.2**
	baz=238								
WCKO				*e*S		**Sn**	**19 58 15.9**	**+1.5**
	baz=238								
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P		**Pb**	**19 57 57.9**	**+0.2**
	baz=69								
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P		**Pb**	**19 57 58.0**	**+0.2**
YOJ				*e*S		**Sn**	**19 58 14.9**	**+0.5**
WRL	**Guolierlin Hig**	**1.24**	**260**	*e*P		**Pg**	**19 57 58.4**	**+0.1**
	baz=261								
RLNB	**Erlin**	**1.26**	**259**	P		**Pg**	**19 57 59.4**	**+0.8**
	baz=260								
RLNB				*e*S		**Sn**	**19 58 17.0**	**+1.8**
	baz=260								
CHN2	**Minshiung**	**1.28**	**243**	*e*P		**Pg**	**19 57 59.6**	**+0.6**
	baz=243								
CHN2				*e*S		**Sg**	**19 58 17.7**	**+2.1**
	baz=243								
STYH	**Taoyuan**	**1.29**	**222**	*e*P		**Pn**	**19 57 58.4**	**-0.1**
	baz=226								
CHN4	**Tsaushan**	**1.29**	**233**	⇓*e*P		**Pg**	**19 57 59.5**	**+0.4**
	baz=223								
CHN4				*e*S		**Sg**	**19 58 17.3**	**+1.5**
	baz=223								
WTK	**Tuku**	**1.29**	**250**	*e*P		**Pg**	**19 57 59.5**	**+0.3**
	baz=251								
TPUB	**Ta-pu**	**1.29**	**231**	⇑P		**Pb**	**19 57 59.0**	**+0.1**
	baz=221								
TPUB				*e*S		**Sg**	**19 58 17.1**	**+1.1**
	baz=221								
STYT	**Tauyuan**	**1.30**	**223**	⇓P		**Pn**	**19 57 58.8**	**+0.1**
	baz=225								
STYT				*e*S		**Sg**	**19 58 16.9**	**+0.5**
	baz=225								
LONT	**Longtian**	**1.33**	**204**	*e*P		**Pn**	**19 57 57.1**	**-2.0**
	baz=209								
WTP	**Ta-pu**	**1.34**	**229**	⇑P		**Pb**	**19 57 59.6**	**0.0**
	baz=231								
WTP				*e*S		**Sg**	**19 58 19.2**	**+1.7**
	baz=231								
TWK	**Hsinying**	**1.42**	**233**	⇓*i*P		**Pg**	**19 58 01.7**	**+0.1**
	baz=234								
TWK				S		**Sg**	**19 58 21.9**	**+2.0**
	baz=234								
TWG	**Pinlang**	**1.43**	**204**	*e*P		**Pn**	**19 57 58.2**	**-2.2**
	baz=193								
TWGBT	**Beinan**	**1.43**	**204**	*e*P		**Pn**	**19 57 58.2**	**-2.2**
	baz=193								
SNST	**Tainan City**	**1.44**	**231**	*e*P		**Pb**	**19 58 01.6**	**+0.4**
	baz=233								
SNST				*e*S		**Sg**	**19 58 21.9**	**+1.3**
	baz=233								
CHN1	**Nanshi**	**1.44**	**229**	*e*P		**Pg**	**19 58 01.9**	**-0.2**
	baz=222								
CHN1				*e*S		**Sg**	**19 58 22.4**	**+1.7**
	baz=222								
WSF	**Szhu**	**1.45**	**251**	*e*P		**Pb**	**19 58 01.8**	**+0.3**
	baz=251								
WSF				*e*S		**Sg**	**19 58 22.9**	**+1.8**
	baz=251								
LDUT	**Ludao**	**1.47**	**189**	*e*P		**Pn**	**19 58 01.5**	**+0.6**
	baz=194								
SGST	**Jiashian**	**1.47**	**225**	⇓*i*P		**Pn**	**19 58 01.2**	**+0.2**
	baz=227								
SGST				*e*S		**Sg**	**19 58 22.4**	**+0.7**
	baz=227								
WSL	**Shuilin Townsh**	**1.49**	**246**	⇓*i*P		**Pb**	**19 58 02.5**	**+0.3**
	baz=247								
WSL				*e*S		**Sg**	**19 58 24.3**	**+2.0**
	baz=247								
SLGT	**Liugui**	**1.50**	**221**	*e*P		**Pb**	**19 58 02.3**	**0.0**
	baz=225								
SLGT				*e*S		**Sg**	**19 58 24.3**	**+1.7**
	baz=225								
ICHU	**Yijhu**	**1.52**	**240**	*e*P		**Pb**	**19 58 02.8**	**0.0**
	baz=242								
ICHU				*e*S		**Sg**	**19 58 25.0**	**+1.7**
	baz=242								
CHN8	**Yiju**	**1.58**	**241**	*e*P		**Pb**	**19 58 03.5**	**-0.3**
	baz=228								
CHN8				*e*S		**Sg**	**19 58 26.1**	**+0.8**
	baz=228								
CHN3	**Shinhua**	**1.62**	**230**	*e*P		**Pb**	**19 58 05.0**	**+0.6**
	baz=234								
SSHA	**Shanhua**	**1.64**	**233**	*e*P		**Pb**	**19 58 05.0**	**+0.3**
	baz=237								
SCST	**Cishan**	**1.67**	**222**	*e*P		**Pb**	**19 58 05.5**	**+0.3**
	baz=227								
SHHT	**Tainan City**	**1.67**	**229**	*e*P		**Pg**	**19 58 05.9**	**-0.5**
	baz=233								
ECL	**Taimali**	**1.68**	**205**	*e*P		**Pn**	**19 58 03.4**	**-0.5**
	baz=194								
SCLT	**Jiali**	**1.69**	**236**	*e*P		**Pb**	**19 58 05.0**	**-0.6**
	baz=239								
SCLT				*e*S		**Sg**	**19 58 28.2**	**-0.5**
	baz=239								
SSD	**Sandimen**	**1.70**	**216**	*e*P		**Pn**	**19 58 04.3**	**+0.2**
	baz=220								
SSD				*e*S		**Sb**	**19 58 27.1**	**-0.1**
	baz=220								
TSMG	**Majia**	**1.73**	**215**	*e*P		**Pb**	**19 58 05.5**	**-0.7**
	baz=230								
TSMG				*e*S		**Sg**	**19 58 29.1**	**-0.8**
	baz=230								
TWM1	**Shoushan**	**1.76**	**223**	*e*P		**Pb**	**19 58 07.2**	**+0.4**
	baz=227								
TSCK	**Chigu Township**	**1.79**	**237**	*e*P		**Pn**	**19 58 06.1**	**+0.7**
	baz=241								
MASBT	**Mashibuluo**	**1.81**	**214**	P		**Pb**	**19 58 07.2**	**-0.4**
	baz=220								
MASBT				*e*S		**Sb**	**19 58 31.0**	**+0.7**
	baz=220								
IRIF	**Iriomote-Funau**	**1.85**	**83**	*e*P		**Pn**	**19 58 07.3**	**+1.0**
HATJ	**Hateruma jima**	**1.91**	**92**	*e*S		**Sn**	**19 58 31.9**	**+0.7**
EAST	**Anshuo**	**1.91**	**205**	*e*P		**Pn**	**19 58 08.3**	**+1.2**
	baz=196								
TAW	**Tawu**	**1.92**	**203**	*e*P		**Pb**	**19 58 08.8**	**-0.7**
	baz=195								
TAWH	**Dawu Township**	**1.94**	**203**	*e*P		**Pn**	**19 58 08.4**	**+1.0**
	baz=195								
SCZT	**Fangliau**	**2.02**	**210**	*e*P		**Pn**	**19 58 09.8**	**+1.2**
	baz=198								
PNG	**Penghu**	**2.06**	**255**	*e*P		**Pn**	**19 58 09.9**	**+0.9**
	baz=257								
PNG				*e*S		**Sb**	**19 58 36.2**	**-1.3**
	baz=257								
PHUB	**P'eng-hu**	**2.06**	**253**	*e*P		**Pn**	**19 58 09.5**	**+0.4**
	baz=255								
PHUB				*e*S		**Sb**	**19 58 36.2**	**-1.2**
	baz=255								
WDGT	**Dungji**	**2.07**	**246**	*e*P		**Pn**	**19 58 10.0**	**+0.7**
	baz=250								
SLIU	**Shizi**	**2.08**	**204**	*e*P		**Pn**	**19 58 10.7**	**+1.2**
	baz=197								
JKRS	**Kuro-shima**	**2.10**	**87**	*e*P		**Pn**	**19 58 10.7**	**+1.1**
JKRS				*e*S		**Sb**	**19 58 38.0**	**-0.8**
LYUB	**Lan-yu**	**2.12**	**183**	*e*P		**Pn**	**19 58 07.0**	**-3.0**
	baz=189								
JIJ	**Ishigaki jima**	**2.23**	**84**	*e*P		**Pn**	**19 58 11.4**	**-0.1**
JIJ				*e*S		**Sn**	**19 58 39.2**	**+0.2**
VWUC	**VWUC**	**2.23**	**293**	*e*P		**Pn**	**19 58 11.2**	**-0.3**
	baz=293								
VCHM	**Qimei**	**2.29**	**247**	*e*P		**Pn**	**19 58 13.2**	**+0.9**
	baz=235								
TWKBT	**Hengchun**	**2.33**	**201**	*e*P		**Pn**	**19 58 13.0**	**+0.2**
	baz=194								
JISG	**Ishigakijimahi**	**2.41**	**79**	*e*P		**Pn**	**19 58 14.2**	**+0.3**
JISG				*e*S		**Sn**	**19 58 43.5**	**0.0**
PTMZ	**Houxiangcun**	**2.53**	**292**	*e*P		**Pn**	**19 58 15.4**	**-0.2**
	baz=290								
PTMZ				*e*S		**Sn**	**19 58 45.3**	**-1.2**
	baz=290								
MATB	**Ma-tsu**	**2.57**	**322**	*e*P		**Pn**	**19 58 16.8**	**+0.6**
	baz=321								
MSUT	**Lienchiang**	**2.60**	**322**	*e*P		**Pn**	**19 58 17.2**	**+0.6**
	baz=321								
LYJJ	**Jianjiangzhen**	**2.99**	**324**	*e*P		**Pn**	**19 58 21.6**	**-0.3**
	baz=324								
KNM	**Kinmen**	**3.01**	**276**	*e*P		**Pn**	**19 58 23.8**	**+1.6**
	baz=276								
KNMB	**Chin-men Tao**	**3.05**	**277**	*e*P		**Pn**	**19 58 22.4**	**-0.3**
	baz=277								
XPSS	**Dashiqiu**	**3.11**	**334**	*e*P		**Pn**	**19 58 23.6**	**+0.1**
	baz=333								
MHZQ	**Yeshan**	**3.12**	**309**	*e*P		**Pn**	**19 58 23.7**	**0.0**
	baz=309								
JMJ	**Miyako jima 2**	**3.33**	**77**	*e*P		**Pn**	**19 58 28.1**	**+1.5**
	baz=73								
AXDP	**Jialang**	**3.50**	**283**	*e*P		**Pn**	**19 58 29.0**	**+0.1**
	baz=283								
ZPLA	**Ao Xicun**	**3.63**	**268**	*e*P		**Pn**	**19 58 30.9**	**+0.2**
	baz=268								
DSXP	**Dongshan**	**3.95**	**265**	*e*P		**Pn**	**19 58 35.1**	**+0.1**
	baz=265								
SXFK	**Yanhouchang**	**4.32**	**302**	*e*P		**Pn**	**19 58 40.9**	**+0.6**
	baz=302								
KSRS	**Korea Array**	**14.31**	**20**	Pn		**P**	**20 01 04.1**	**-0.2**
	0.3nm,0.3s,baz=199,slow=11,SNR=6.7								
	1.4nm,0.6s								
SONM	**Songino Array**	**26.61**	**337**	P		**P**	**20 03 13.0**	**0.0**
	0.5nm,0.8s,baz=141,slow=6.8,SNR=3.1								
	0.5nm,0.8s								
MKAR	**Makanchi Array**	**38.71**	**316**	P		**P**	**20 04 58.1**	**-0.5**
	0.6nm,0.7s,baz=116,slow=10.0,SNR=3.0								
	0.6nm,0.7s								
ZALV	**Zalesovo Beam**	**40.55**	**327**	P		**P**	**20 05 15.2**	**+1.3**
	0.7nm,0.6s,baz=116,slow=6.6,SNR=4.2								
	0.7nm,0.6s								
YKA	**Yellowknife Ar**	**82.83**	**23**	P		**P**	**20 09 57.2**	**-1.6**
	0.4nm,0.8s,baz=313,slow=5.1,SNR=7.8								
	0.4nm,0.8s								

*NDI **06** 19:58:04.8±1.7,22.°79N×93.°98E,h10km,ML3.1,MW3.2*
*IDC **06** 19:58:07.5±2.9,22.°93N×94.°44E,h45km±33km,mb3.5/5,*
mbtmp3.7/7,ML3.8/2,Error ellipse: s-maj=48.4km
s-min=18.1km az=51.0

ISC 06 19:58:02.7±0.9,22°.82N±0.°07×94°.08E±0.°06,h10km,n13,
σ1s81/19,mb3.9/5,Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.06**	**252**	*e*P		**Pb**	**19 58 23.6**	**+0.3**
SAIH				*e*S		**Sb**	**19 58 36.6**	**-0.7**
SAIH				IAML			19 58 45.8	
	comp=E,931nm,0.8s							
IMP	**Imphal**	**2.01**	**356**	*e*P		**Pn**	**19 58 39.5**	**+2.7**
IMP				IAML			19 59 19.9	
	comp=E,73nm,0.6s							
BRDH	**Bariadhala**	**2.26**	**267**	P		**Pg**	**19 58 47.4**	**+1.4**
	comp=E,70nm,0.3s,baz=90,slow=12,SNR=8.1							
BRDH				S		**Sb**	**19 59 11.3**	**-0.3**
	comp=E,134nm,0.3s,baz=0.0,slow=20,SNR=12							
	comp=E,130nm,0.3s							
KOHI	**KOHIMA**	**2.89**	**0**	*e*P		**Pn**	**19 58 51.9**	**+2.9**
SHL	**Shillong**	**3.40**	**324**	*e*P		**Pn**	**19 58 57.2**	**+1.2**
SHL				*e*S		**Sn**	**19 59 35.0**	**-1.4**
SHL				*e*S		**Sn**	**19 59 35.1**	**-1.4**
MOKO	**MOKOCHONG**	**3.51**	**6**	*ex*		**Pb**	**19 59 05.1**	**0.0**
MOKO				IAML			20 00 02.4	
	comp=N,54nm,0.6s							
CMAR	**Chiang Mai Arr**	**6.29**	**133**	P

KST				*e*S		Sg	20 15 58.5	-0.8
	8.3nm,0.6s							
MTBS	**Maitube**	**4.56**	**358**	Pg		Pg	20 14 59.2	-2.9
	0.8nm,0.1s							
MTBS				Lg		Lg	20 15 59.7	
	5.4nm,0.3s							
MTBS	**Maitube**	**4.56**	**358**	*e*P		Pg	20 14 59.0	-3.1
	0.8nm,0.1s							
MTBS				*e*S		Sg	20 15 59.7	-1.6
	5.4nm,0.3s							
MDOK	**Medeo**	**4.60**	**3**	Pg		Pg	20 15 00.5	-2.3
	2.6nm,0.5s							
MDOK				Lg		Lg	20 16 02.3	
	11nm,0.6s							
MDOK	**Medeo**	**4.60**	**3**	*e*P		Pg	20 15 00.5	-2.3
	2.6nm,0.5s							
MDOK				*e*S		Sg	20 16 02.3	-0.1
	11nm,0.6s							
KOTS	**Kotyrbulak**	**4.67**	**4**	Pg		Pg	20 15 02.2	-2.1
	4.8nm,0.4s							
KOTS				Lg		Lg	20 16 05.3	
	18nm,0.8s							
KOTS	**Kotyrbulak**	**4.67**	**4**	*e*P		Pg	20 15 02.2	-2.1
	4.8nm,0.4s							
KOTS				*e*S		Sg	20 16 05.3	+0.5
	18nm,0.8s							
SATY	**Saty**	**4.67**	**16**	*e*P		Pg	20 15 01.5	-2.7
	9.2nm,0.5s							
SATY				*e*S		Sg	20 16 03.9	-0.9
	9.3nm,0.3s							
DGS	**Degeres**	**4.72**	**352**	Pg		Pg	20 15 02.2	-2.9
	3.0nm,0.7s							
DGS				Lg		Lg	20 16 05.4	
	6.1nm,0.5s							
DGS	**Degeres**	**4.72**	**352**	*e*P		Pg	20 15 02.2	-2.9
	3.0nm,0.7s							
DGS				*e*S		Sg	20 16 05.4	-0.9
	6.1nm,0.5s							
UZB	**Uzynbulak**	**4.91**	**20**	*e*P		Pb	20 15 03.7	+2.5
	3.9nm,0.2s							
UZB				*e*S		Sg	20 16 07.8	-4.4
	6.0nm,0.7s							
MRKS	**Merke**	**4.93**	**329**	Pg		Pg	20 15 06.1	-3.1
	1.4nm,0.3s							
MRKS				Lg		Lg	20 16 12.0	
	5.1nm,0.6s							
MRKS	**Merke**	**4.93**	**329**	*e*P		Pg	20 15 06.1	-3.1
	1.4nm,0.3s							
MRKS				*e*S		Sg	20 16 12.0	-1.1
	5.1nm,0.6s							
KPKS	**Kokpek**	**5.12**	**17**	Pg		Pg	20 15 09.1	-3.7
	3.5nm,0.4s							
KPKS				Lg		Lg	20 16 17.0	
	10.0nm,0.6s							
KPKS	**Kokpek**	**5.12**	**17**	*e*P		Pg	20 15 09.1	-3.7
	3.5nm,0.4s							
KPKS				*e*S		Sg	20 16 17.0	-2.2
	10.0nm,0.6s							
KTBS	**Karatobe**	**5.14**	**360**	Pg		Pg	20 15 09.6	-3.5
	2.1nm,0.8s							
KTBS				Lg		Lg	20 16 18.0	
	6.7nm,0.6s							
KTBS	**Karatobe**	**5.14**	**360**	*e*P		Pg	20 15 09.6	-3.5
	2.1nm,0.8s							
KTBS				*e*S		Sg	20 16 18.0	-1.8
	6.7nm,0.6s							
KRBS	**Karabastau**	**5.18**	**352**	Pg		Pb	20 15 09.7	+3.9
	1.8nm,0.5s							
KRBS				Lg		Lg	20 16 18.2	
	6.7nm,0.8s							
KRBS	**Karabastau**	**5.18**	**352**	*e*P		Pb	20 15 09.7	+3.9
	1.8nm,0.5s							
KRBS				*e*S		Sg	20 16 18.2	-2.9
	6.7nm,0.8s							
PDGK	**Podgornoye**	**5.21**	**23**	Pg		Pg	20 15 11.4	-3.1
	1.7nm,0.5s							
PDGK				Lg		Lg	20 16 20.6	
	2.4nm,0.8s							
CHKK	**Chushkaly**	**5.29**	**2**	Pg		Pg	20 15 12.1	-3.9
	1.2nm,0.2s							
CHKK				Lg		Lg	20 16 22.3	
	5.3nm,0.4s							
CHKK	**Chushkaly**	**5.29**	**2**	*e*P		Pg	20 15 12.1	-3.9
	1.2nm,0.2s							
CHKK				*e*S		Sg	20 16 22.3	-2.2
	5.3nm,0.4s							
ARXS	**Arharly**	**5.71**	**8**	Pg		Pg	20 15 20.5	-3.5
	2.9nm,0.7s							
ARXS				Lg		Lg	20 16 36.7	
	4.5nm,0.5s							
ARXS	**Arharly**	**5.71**	**8**	*e*P		Pg	20 15 20.5	-3.5
	2.9nm,0.7s							
ARXS				*e*S		Sg	20 16 36.7	-1.2
	4.5nm,0.5s							

TAP 06 20:13:42.8, 23.93N×121.57E, h6km, ML2.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	**Tongmen**	**0.08**	**299**	*i* P	Pg	20 13 45.7	+1.1
	baz=299						
ETM				*i* S	Sg	20 13 47.0	+1.1
	baz=299						
SHUL	**Shoufeng**	**0.14**	**182**	*i* P	Pg	20 13 47.0	+1.4
	baz=181						
SHUL				*e*S	Sg	20 13 49.5	+1.9
	baz=181						
TWD	**Chiawan**	**0.15**	**10**	*i* P	Pg	20 13 46.9	+0.9
	baz=12						
TWD				S	Sg	20 13 49.1	+1.0
	baz=12						
ESL	**Shilin**	**0.17**	**228**	*i* P	Pg	20 13 46.9	+0.8
	baz=225						
ESL				*i* S	Sg	20 13 49.3	+0.8
	baz=225						
LXIB	**Xiulin Townshi**	**0.17**	**304**	P	Pg	20 13 47.2	+0.9
	baz=303						
LXIB				S	Sg	20 13 50.5	+1.9
	baz=303						
ETL	**Fush Village**	**0.24**	**12**	*e*P	Pg	20 13 48.3	+0.8
	baz=12						
NACB	**Ninganchiao**	**0.25**	**6**	*e*P	Pg	20 13 48.3	+0.6
	baz=5.0						
WARBT	**Fenglin Townsh**	**0.27**	**219**	*e*P	Pg	20 13 48.7	+0.6
	baz=218						
WHF	**Hehuan Shan**	**0.35**	**308**	*e*P	Pb	20 13 50.8	-0.9
	baz=308						
OWD	**Renai**	**0.36**	**274**	P	Pb	20 13 51.0	-0.7
	baz=274						
OWD				*e*S	Sb	20 13 56.2	-1.4
	baz=274						
CHGB	**Renai**	**0.38**	**290**	⇓*i*P	Pb	20 13 51.6	-0.6
	baz=290						
WUSB	**Renai**	**0.42**	**279**	P	Pb	20 13 52.3	-0.3
	baz=278						
VWDT	**VWDT**	**0.43**	**246**	*e*P	Pb	20 13 52.4	-0.3
	baz=246						
FUSS	**Fushou**	**0.43**	**317**	*e*P	Pb	20 13 52.6	-0.5
	baz=317						
HGSD	**Ruisui**	**0.45**	**197**	*e*P	Pb	20 13 53.7	+0.5
	baz=196						
EHY	**Hungye**	**0.47**	**208**	*e*P	Pb	20 13 52.8	-0.7
	baz=207						
NNSB	**Datong**	**0.53**	**341**	*e*P	Pb	20 13 54.1	-0.4
	baz=341						
NNS	**Nan Shan**	**0.54**	**341**	*e*P	Pb	20 13 54.3	-0.5
	baz=341						
WPL	**Puli Township**	**0.56**	**279**	*e*P	Pb	20 13 55.4	+0.3
	baz=278						
SSLB	**Suanglung**	**0.58**	**256**	*e*P	Pb	20 13 55.2	-0.1
	baz=256						
YULB	**Yu-li**	**0.59**	**205**	*e*P	Pb	20 13 54.9	-0.5
	baz=204						
DPDB	**Guoxing**	**0.59**	**280**	*e*P	Pb	20 13 56.0	+0.3
	baz=280						
SMLT	**Sun Moon Lake**	**0.61**	**266**	P	Pb	20 13 56.2	+0.3
	baz=265						
WCS	**Beigang Elemen**	**0.61**	**282**	*e*P	Pb	20 13 56.3	+0.4
	baz=282						
TYC	**Yuchr**	**0.65**	**268**	*e*P	Pb	20 13 56.7	+0.2
	baz=268						

*IDC **06** 20:25:09.3±1.2, 23.83N×121.06E, h0km, mb3.3/7, mbtmp3.4/8, ML3.4/1, MS3.7/1, Error ellipse: s-maj=69.8km s-min=20.1km az=66.0*

*JMA **06** 20:25:09.4±0.1, 24.11N±0.4×121.8E±0.4, h0km, MV3.4/12, TAIWAN REGION*

*TAP **06** 20:25:09.4, 24.11N×121.75E, h9km, ML3.9, B*

*ASIES **06** 20:25:09.4, 24.11N×121.75E, h9km, ML3.9, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr0.30; Mθθ-0.16; Mφφ-0.12; Mrθ0.83; Mθφ-0.75; Mφr2.24; Fault plane solution: M0 2.51584×10^{21} NP1:φs18.84000°, δ84.95000°, λ76.16000°. NP2:φs269.20000°, δ14.71000°, λ159.74000°. Principal axes: T Plg48.2540°, Azm274.1350°; N Plg13.7810°, Azm20.0880°; P Plg38.4440°, Azm121.3160°;*

ISC 06 20:25:09.7±0.8, 24.13N±0.01×121.77E±0.02, h10km±5km, n177, s0967/259, mb3.4/7, 2C-43D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.14**	**283**	⇓*i*P	Pg	20 25 12.8	-0.1
	baz=292						
ETL				*i* S	Sg	20 25 14.8	-0.4
	baz=292						
TWD	**Chiawan**	**0.17**	**254**	⇓*i*P	Pg	20 25 13.1	-0.2
	baz=266						
TWD				*i* S	Sg	20 25 15.5	-0.3
	baz=266						
NACB	**Ninganchiao**	**0.17**	**286**	⇓*i*P	Pg	20 25 13.2	-0.2
	baz=285						
NACB				*i* S	Sg	20 25 15.4	-0.5
	baz=285						
EHP	**Heping Village**	**0.18**	**351**	*i* P	Pg	20 25 14.1	+0.4
	baz=358						
EHP				*i* S	Sg	20 25 17.4	+1.0
	baz=358						
EAHA	**Aohua**	**0.20**	**351**	⇓*i*P	Pg	20 25 14.4	+0.4
	baz=356						
EAHA				*i* S	Sg	20 25 18.1	+1.2
	baz=356						
ENA	**Nanau**	**0.30**	**354**	⇓*i*P	Pb	20 25 16.3	-1.0
	baz=358						
ENA				*i* S	Sb	20 25 20.8	-1.5
	baz=358						
ETM	**Tongmen**	**0.30**	**238**	⇓*i*P	Pg	20 25 15.5	-0.3
	baz=243						
ETM				*i* S	Sg	20 25 19.8	-0.1
	baz=243						
EWUT	**Wuta**	**0.32**	**1**	⇓*i*P	Pb	20 25 16.6	-0.9
	baz=3.0						
EWUT				*e*S	Sb	20 25 20.9	-1.9
	baz=3.0						
LXIB	**Xiulin Townshi**	**0.35**	**252**	⇓*i*P	Pg	20 25 16.2	-0.4
	baz=256						
LXIB				*i* S	Sg	20 25 21.4	+0.1
	baz=256						
SHUL	**Shoufeng**	**0.39**	**210**	⇓*e*P	Pb	20 25 18.3	-0.4
	baz=213						
ESL	**Shilin**	**0.44**	**225**	⇓*i*P	Pg	20 25 18.1	-0.2
	baz=237						
ESL				*e*S	Sg	20 25 24.4	+0.2
	baz=237						
ESAO	**Su ao**	**0.45**	**8**	⇓P	Pb	20 25 19.1	-0.7
	baz=2.0						
ESAO				*e*S	Sb	20 25 25.7	-0.9
	baz=2.0						
LATG	**Datong**	**0.47**	**331**	⇓*i*P	Pb	20 25 19.2	-0.9
	baz=333						
LATG				S	Sb	20 25 25.8	-1.4
	baz=333						
WHF	**Hehuan Shan**	**0.47**	**272**	⇓P	Pg	20 25 18.6	-0.3
	baz=275						
NNSB	**Datong**	**0.47**	**310**	⇓*i*P	Pb	20 25 19.0	-1.1
	baz=313						
NNSB				*i* S	Sg	20 25 25.4	+0.3
	baz=313						
NNSH	**Datong**	**0.47**	**310**	⇓*i*P	Pb	20 25 19.0	-1.1
	baz=313						
NNSH				S	Sb	20 25 25.6	-1.6
	baz=313						
TEGC	**Jichi Village**	**0.47**	**207**	*e*P	Pb	20 25 19.7	-0.4
	baz=212						
NNS	**Nan Shan**	**0.48**	**311**	⇓*i*P	Pb	20 25 19.3	-1.1
	baz=314						
NNS				*i* S	Sg	20 25 25.7	+0.2
	baz=314						
TWC	**Suao**	**0.48**	**8**	⇓*i*P	Pb	20 25 19.9	-0.5
	baz=3.0						
TWC				S	Sb	20 25 27.1	-0.5
	baz=3.0						
EOS4	**EOS4**	**0.50**	**91**	*e*P	Pn	20 25 22.6	0.0
	baz=84						
FUSS	**Fushou**	**0.50**	**284**	⇓P	Pg	20 25 19.6	+0.1
	baz=295						
NDS	**Dongshan**	**0.51**	**354**	⇓P	Pb	20 25 20.2	-0.5
	baz=354						
NDS				*e*S	Sb	20 25 27.5	-0.7
	baz=354						
EOS2	**EOS2**	**0.51**	**55**	*e*P	Pn	20 25 22.4	-0.6
	baz=32						
EOS3	**EOS3**	**0.52**	**72**	*e*P	Pn	20 25 23.2	+0.1
	baz=49						
NDT	**Datong Townshi**	**0.53**	**333**	⇓*i*P	Pb	20 25 20.7	-0.5
	baz=335						
NDT				S	Sb	20 25 28.3	-0.6
	baz=335						
WARBT	**Fenglin Townsh**	**0.54**	**221**	⇓*i*P	Pg	20 25 19.9	-0.3
	baz=233						
WARBT				S	Sg	20 25 27.4	+0.1
	baz=233						
ENTT	**Nioudou**	**0.55**	**340**	⇓*i*P	Pb	20 25 20.9	-0.5
	baz=341						
ENTT				*e*S	Sb	20 25 28.6	-0.7
	baz=341						
CHGB	**Renai**	**0.55**	**263**	⇓*i*P	Pg	20 25 20.4	-0.1
	baz=267						
CHGB				S	Sg	20 25 28.2	+0.4
	baz=267						
EGFH	**Guangfu**	**0.56**	**215**	*e*P	Pg	20 25 20.4	-0.1
	baz=231						
TWT	**Tachien**	**0.56**	**283**	P	Pb	20 25 20.9	-0.8
	baz=285						
TWT				*e*S	Sb	20 25 29.8	-0.1
	baz=285						
OWD	**Renai**	**0.57**	**253**	⇓*i*P	Pg	20 25 20.6	-0.3
	baz=257						
TDCB	**Techi**	**0.58**	**283**	⇓*i*P	Pb	20 25 21.1	-0.9
	baz=286						
TDCB				S	Sg	20 25 28.9	+0.4
	baz=286						
TWE	**Neicheng**	**0.60**	**351**	⇓*i*P	Pb	20 25 22.1	-0.3
	baz=353						
TWE				S	Sb	20 25 30.3	-0.6
	baz=353						
WUSB	**Renai**	**0.61**	**258**	⇓*i*P	Pg	20 25 21.6	0.0
	baz=260						
WUSB				S	Sg	20 25 29.6	-0.1
	baz=260						
YHNB	**Yeheng**	**0.65**	**326**	⇓*i*P	Pb	20 25 23.0	-0.3
	baz=328						
YHNB				*i* S	Sb	20 25 31.8	-0.7
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.65**	**345**	⇓*i*P	Pb	20 25 23.1	-0.2
	baz=337						
FUSB				S	Sb	20 25 32.1	-0.4
	baz=337						
NSK	**Sanguang**	**0.67**	**325**	⇓*i*P	Pb	20 25 23.1	-0.4
	baz=328						
NSK				*i* S	Sb	20 25 31.9	-0.9
	baz=328						
VWDT	**VWDT**	**0.69**	**237**	⇓*i*P	Pg	20 25 22.9	-0.1
	baz=240						
VWDT				*e*S	Sb	20 25 33.2	-0.2
	baz=240						
NWLT	**Wulai**	**0.69**	**339**	⇓*i*P	Pb	20 25 23.8	-0.2
	baz=340						
NWLT				*i* S	Sb	20 25 32.9	-0.7
	baz=340						
HGSD	**Ruisui**	**0.71**	**207**	*e*P	Pb	20 25 24.1	-0.1
	baz=196						
HGSD				*e*S	Sb	20 25 35.2	+1.2
	baz=196						
EHY	**Hungye**	**0.74**	**214**	P	Pg	20 25 23.4	-0.7
	baz=218						
WPL	**Puli Township**	**0.76**	**261**	*e*P	Pb	20 25 24.3	-0.7
	baz=254						
WPL				*e*S	Sb	20 25 34.8	-0.6
	baz=254						
WHP	**Taichung City**	**0.77**	**281**	⇓*i*P	Pb	20 25 24.9	-0.4
	baz=284						
WHP				*e*S	Sb	20 25 35.5	-0.4
	baz=284						
DPDB	**Guoxing**	**0.78**	**263**	*e*P	Pg	20 25 24.7	-0.1
	baz=258						
DPDB				*e*S	Sb	20 25 35.9	-0.2
	baz=258						
NFF	**Wufeng Townshi**	**0.78**	**310**	⇓P	Pb	20 25 25.2	-0.3
	baz=312						
NFF				S	Sb	20 25 36.1	-0.1
	baz=312						
WCS	**Beigang Elemen**	**0.79**	**265**	*e*P	Pg	20 25 24.9	-0.1
	baz=260						
WCS				*e*S	Sb	20 25 36.1	-0.3
	baz=260						
SSLB	**Suanglung**	**0.82**	**246**	⇓*i*P	Pg	20 25 25.3	-0.3
	baz=258						
SSLB				S	Sg	20 25 35.8	-0.5
	baz=258						
SMLT	**Sun Moon Lake**	**0.83**	**253**	⇓*i*P	Pg	20 25 25.7	-0.1
	baz=256						
SMLT				*e*S	Sb	20 25 37.4	-0.4
	baz=256						
TIPB	**Shuangxi**	**0.84**	**3**	⇓P	Pn	20 25 26.7	-1.0
	baz=2.0						
TIPB				S	Sb	20 25 37.5	-0.5
	baz=2.0						
YULB	**Yu-li**	**0.85**	**211**	*e*P	Pg	20 25 25.6	-0.6
	baz=227						
YULB				*e*S	Sb	20 25 38.7	+0.5
	baz=227						
ECBN	**Changbin**	**0.86**	**200**	*e*P	Pg	20 25 25.7	-0.5
	baz=193						
LIOB	**Emei**	**0.86**	**307**	*e*P	Pb	20 25 26.9	0.0
	baz=309						
LIOB				*e*S	Sb	20 25 38.9	+0.4
	baz=309						
NHDH	**Xindian Distri**	**0.86**	**345**	⇓*e*P	Pn	20 25 27.2	-0.7
	baz=344						
NSTT	**Nanjuang**	**0.86**	**306**	⇓P	Pb	20 25 26.9	0.0
	baz=308						
NSTT				S	Sb	20 25 37.8	-0.7
	baz=308						
TWA	**Mucha**	**0.87**	**349**	P	Pn	20 25 27.2	-0.8
	baz=349						
TWA				S	Sb	20 25 38.5	-0.1
	baz=349						
TYC	**Yuchr**	**0.87**	**255**	⇓*i*P	Pg	20 25 26.1	-0.3
	baz=258						
TYC				S	Sg	20 25 37.4	-0.4
	baz=258						
NJD	**Zhudong**	**0.87**	**314**	*e*P	Pn	20 25 27.4	-0.7
	baz=316						
EYUL	**Yuli**	**0.88**	**208**	*e*P	Pb	20 25 26.8	-0.3
	baz=226						
TATO	**Taipei**	**0.88**	**343**	⇑*i*P	Pn	20 25 27.7	-0.6
	baz=343						
TATO				*i* S	Sb	20 25 38.8	-0.3
	baz=343						
TWF1	**Yuli**	**0.89**	**210**	*e*P	Pg	20 25 25.9	-0.9
	baz=227						
TWB1	**Santiao Chiao**	**0.90**	**13**	*e*P	Pb	20 25 27.3	-0.1
	baz=1.0						
BACT	**New Taipei Cit**	**0.92**	**341**	*e*P	Pg	20 25 26.8	-0.6
	baz=340						
NHY	**Taipei**	**0.93**	**348**	*e*P	Pn	20 25 29.6	+0.7
	baz=347						
NWF	**Wu-fen Shan**	**0.94**	**0**	⇓*i*P	Pn	20 25 28.3	-0.8
	baz=352						
NWF				*i* S	Sb	20 25 40.5	-0.3
	baz=352						
TWQ1	**Liyutan**	**0.94**	**284**	P	Pn	20 25 28.6	-0.5
	baz=284						
WFSB	**Wu-fen Shan**	**0.94**	**0**	P	Pn	20 25 28.6	-0.4
	baz=352						
WFSB				S	Sb	20 25 40.9	+0.2
	baz=352						
TAP	**Taipei**	**0.94**	**345**	P	Pn	20 25 28.8	-0.2
	baz=345						
TAP				*i* S	Sn	20 25 41.3	-1.3
	baz=345						
WHYT	**Xinyi Township**	**0.94**	**243**	*e*P	Pb	20 25 28.1	-0.1
	baz=255						
WHYT				*e*S	Sb	20 25 40.9	0.0
	baz=255						
HSN1	**Hsinchu**	**0.95**	**313**	*e*P	Pn	20 25 28.8	-0.3
	baz=315						
NSY	**Sanyi**	**0.97**	**288**	*e*P	Pn	20 25 29.6	+0.2
	baz=288						
SXI1	**Grass Mountain**	**0.97**	**5**	⇓*i*P	Pn	20 25 29.2	-0.3
	baz=4.0						
SXI1				*e*S	Sb	20 25 41.8	+0.3
	baz=4.0						
NTY	**Taoyuan**	**0.97**	**334**	*e*P	Pn	20 25 29.8	+0.4
	baz=326						
SBCB	**Hsinchu**	**0.98**	**313**	*e*P	Pn	20 25 30.1	+0.5
	baz=314						
SBCB				*e*S	Sn	20 25 43.6	+0.1
	baz=314						
NMLH	**Miaoli**	**0.98**	**295**	*e*P	Pn	20 25 30.5	+0.8
	baz=295						
WWF	**Wufeng**	**0.99**	**265**	*e*P	Pn	20 25 29.7	0.0
	baz=268						
CHKH	**Chenggong**	**0.99**	**200**	*e*P	Pn	20 25 27.7	-1.1
	baz=196						
NJN	**Zhunan**	**0.99**	**304**	*e*P	Pn	20 25 30.1	+0.3
	baz=307						
NCUH	**Zhongli**	**0.99**	**328**	*e*P	Pn	20 25 30.0	+0.2
	baz=328						
HSN	**Hsinchu**	**0.99**	**313**	*e*P	Pn	20 25 29.7	-0.1
	baz=317						
NCU	**National Centr**	**0.99**	**328**	*e*P	Pn	20 25 30.3	+0.5
	baz=329						
NCU				*e*S	Sn	20 25 44.0	+0.1
	baz=329						
TCU	**Taichung**	**1.00**	**271**	*e*P	Pn	20 25 30.1	+0.3
	baz=273						
WJS	**Zhushan**	**1.00**	**253**	*e*P	Pn	20 25 29.6	-0.3
	baz=256						
WJS				*e*S	Sn	20 25 44.0	-0.1
	baz=256						
TNOU	**National Taiwa**	**1.02**	**360**	*e*P	Pn	20 25 29.8	-0.3
	baz=5.0						
FULB	**Fuli**	**1.02**	**206**	*e*P	Pg	20 25 28.9	-0.5
	baz=201						
TWS1	**Kuangyinshan**	**1.02**	**342**	P	Pn	20 25 30.3	+0.1
	baz=350						
TWS1				*e*S	Sn	20 25 45.7	+1.1
	baz=350						
WNT1	**Nantou City**	**1.02**	**258**	*e*P	Pn	20 25 30.4	+0.2
	baz=257						
WNT1				*e*S	Sn	20 25 45.6	+1.0
	baz=257						
WNT	**Mingjian**	**1.03**	**256**	*e*P	Pn	20 25 30.4	+0.2
	baz=259						
WNT				*e*S	Sn	20 25 44.9	+0.2
	baz=259						
YM01	**YM01**	**1.03**	**350**	*e*P	Pn	20 25 30.8	+0.4
	baz=349						
YM01				*e*S	Sn	20 25 44.9	0.0
	baz=349						
WDJ	**Dajia District**	**1.06**	**282**	*e*P	Pn	20 25 31.2	+0.5
	baz=294						
WDJ				*e*S	Sn	20 25 45.6	+0.2
	baz=294						
NTST	**Danshui**	**1.07**	**344**	*e*P	Pn	20 25 31.1	+0.2
	baz=352						
NTST				*e*S	Sn	20 25 47.0	+1.1
	baz=352						
ALS	**Alishan**	**1.08**	**236**	*e*P	Pb	20 25 30.6	-0.1
	baz=240						
ANP	**Anpu**	**1.08**	**348**	*e*P	Pn	20 25 31.0	-0.1
	baz=346						
CHKT	**Chengkung**	**1.09**	**200**	*e*P	Pg	20 25 30.0	-0.6
	baz=196						
NHW	**Xinwu Township**	**1.10**	**323**	*e*P	Pn	20 25 31.5	+0.3
	baz=324						
NHW				*e*S	Sn	20 25 48.1	+1.6
	baz=324						
EHD	**Haiduan**	**1.10**	**208**	*e*P	Pg	20 25 30.1	-0.9
	baz=226						
WYL	**Yuanlin Townsh**	**1.10**	**262**	*e*P	Pn	20 25 31.0	-0.3
	baz=264						
WYL				*e*S	Sn	20 25 47.0	+0.4
	baz=264						
WCHH	**Zhanghua**	**1.11**	**268**	*e*P	Pn	20 25 31.6	+0.2
	baz=270						
JYNG	**Yonagunijimaku**	**1.12**	**73**	P	Pn	20 25 31.7	+0.3
JYNG				S	Sn	20 25 47.4	+0.5
CHN5	**Tsauling**	**1.13**	**242**	⇑P	Pn	20 25 31.7	-0.1

	baz=246						
CHN5			S		Sn	20 25 48.2	+0.8
	baz=246						
ECS	**Chishang**	1.15	206	*e*P	Pb	20 25 31.5	-0.2
	baz=214						
TWY	**Chenhua**	1.16	352	*e*P	Pn	20 25 33.5	+1.5
	baz=337						
ELDTW	**Lidau**	1.16	217	*e*P	Pg	20 25 30.4	-1.7
	baz=208						
ELDTW				*e*S	Sg	20 25 46.9	-0.3
	baz=208						
YOJ	**Yonaguni jima**	1.18	73	*e*P	Pn	20 25 32.2	-0.1
	baz=68						
YOJ	**Yonaguni jima**	1.18	73	P	Pn	20 25 32.5	+0.2
YOJ				*e*S	Sn	20 25 49.1	+0.6
WGK	**Gukeng**	1.19	249	*e*P	Pn	20 25 32.5	0.0
	baz=252						
WGK				*e*S	Sn	20 25 49.6	+0.9
	baz=252						
WDLH	**Douliu**	1.21	249	*e*P	Pg	20 25 33.0	0.0
	baz=253						
WCKO	**Fanlu**	1.27	238	*e*P	Pg	20 25 34.1	-0.1
	baz=242						
WCKO				*e*S	Sn	20 25 52.3	+1.5
	baz=242						
WRL	**Guolierlin Hig**	1.30	260	*e*P	Pg	20 25 34.6	0.0
	baz=263						
RLNB	**Erlin**	1.31	260	*e*P	Pg	20 25 34.8	-0.1
	baz=263						
STYH	**Taoyuan**	1.32	224	*e*P	Pn	20 25 34.2	-0.1
	baz=216						
CHN2	**Minshiung**	1.33	244	*e*P	Pg	20 25 35.6	+0.4
	baz=248						
CHN4	**Tsaushan**	1.33	235	P	Pg	20 25 35.1	-0.1
	baz=227						
CHN4				S	Sn	20 25 54.3	+2.1
	baz=227						
TPUB	**Ta-pu**	1.33	232	*e*P	Pg	20 25 35.1	-0.3
	baz=237						
TPUB				*e*S	Sn	20 25 53.0	+0.7
	baz=237						
STYT	**Tauyuan**	1.34	224	*e*P	Pn	20 25 34.2	-0.3
	baz=216						
WTK	**Tuku**	1.34	251	*e*P	Pb	20 25 34.6	-0.3
	baz=255						
LONT	**Longtian**	1.35	206	*e*P	Pn	20 25 34.4	-0.3
	baz=214						
WTP	**Ta-pu**	1.38	231	*e*P	Pg	20 25 35.8	-0.4
	baz=236						
WTCT	**Ta-ch'eng**	1.39	259	*e*P	Pb	20 25 35.7	-0.1
	baz=262						
TWGBT	**Beinan**	1.45	206	*e*P	Pn	20 25 33.4	-2.7
	baz=214						
TWG	**Pinlang**	1.45	206	*e*P	Pn	20 25 35.5	-0.6
	baz=214						
TWK	**Hsinying**	1.46	234	*e*P	Pb	20 25 37.0	0.0
	baz=238						
TWK				*e*S	Sn	20 25 55.1	-0.3
	baz=238						
LDUT	**Ludao**	1.47	191	*e*P	Pn	20 25 36.2	-0.2
	baz=183						
CHN1	**Nanshi**	1.48	231	*e*P	Pb	20 25 37.3	-0.1
	baz=235						
CHN1				*e*S	Sg	20 25 57.5	+0.2
	baz=235						
SNST	**Tainan City**	1.48	233	*e*P	Pg	20 25 37.5	-0.6
	baz=238						
TTN	**Taitung**	1.48	203	*e*P	Pg	20 25 37.6	-0.6
	baz=204						
WSF	**Szhu**	1.50	251	⇓*i*P	Pb	20 25 37.4	-0.3
	baz=255						
WSF				*e*S	Sg	20 25 58.3	+0.3
	baz=255						
SGST	**Jiashian**	1.51	227	*e*P	Pn	20 25 36.7	-0.2
	baz=232						
SGST				*e*S	Sg	20 25 58.0	-0.3
	baz=232						
SLGT	**Liugui**	1.53	223	*e*P	Pg	20 25 38.5	-0.6
	baz=227						
SLGT				*e*S	Sg	20 25 59.1	+0.1
	baz=227						
WSL	**Shuilin Townsh**	1.54	247	P	Pg	20 25 38.6	-0.6
	baz=251						
WSL				*e*S	Sg	20 26 00.9	+1.7
	baz=251						
ICHU	**Yijhu**	1.57	241	*e*P	Pb	20 25 38.5	-0.3
	baz=246						
CHN8	**Yiju**	1.63	242	*e*P	Pb	20 25 39.7	-0.2
	baz=245						
CHN8				*e*S	Sg	20 26 01.9	-0.3
	baz=245						
CHN3	**Shinhua**	1.66	231	*e*P	Pb	20 25 40.0	-0.5
	baz=237						
SSHA	**Shanhua**	1.68	234	*e*P	Pb	20 25 41.0	+0.2
	baz=240						
ECL	**Taimali**	1.70	206	*e*P	Pn	20 25 38.9	-0.6
	baz=202						
SCST	**Cishan**	1.71	224	*e*P	Pb	20 25 41.5	+0.3
	baz=230						
SHHT	**Tainan City**	1.71	230	*e*P	Pn	20 25 39.8	+0.2
	baz=235						
SSD	**Sandimen**	1.73	218	*e*P	Pn	20 25 39.8	-0.1
	baz=216						
TSMG	**Majia**	1.75	216	*e*P	Pb	20 25 41.2	-0.8
	baz=215						
TWM1	**Shoushan**	1.79	224	*e*P	Pg	20 25 43.3	-0.9
	baz=227						
TSCK	**Chigu Township**	1.83	238	*e*P	Pn	20 25 41.2	0.0
	baz=242						
MASBT	**Mashibuluo**	1.84	215	*e*P	Pn	20 25 41.4	0.0
	baz=212						
EAST	**Anshuo**	1.93	206	*e*P	Pn	20 25 43.1	+0.4
	baz=204						
TAWH	**Dawu Township**	1.96	205	*e*P	Pn	20 25 44.0	+1.0
	baz=203						
SCZT	**Fangliau**	2.04	212	*e*P	Pn	20 25 44.9	+0.7
	baz=205						
JKRS	**Kuro-shima**	2.04	86	*e*P	Pn	20 25 45.1	+0.9
JKRS				*e*S	Sn	20 26 10.8	+1.0
SLIU	**Shizi**	2.10	205	*e*P	Pb	20 25 46.7	-1.3
	baz=204						
PNG	**Penghu**	2.11	255	*e*P	Pn	20 25 45.7	+0.7
	baz=258						
PHUB	**P'eng-hu**	2.11	254	*e*P	Pn	20 25 45.4	+0.3
	baz=257						
PHUB				*e*S	Sn	20 26 12.1	+0.7
	baz=257						
WDGT	**Dungji**	2.12	246	*e*P	Pn	20 25 45.9	+0.6
	baz=250						
LYUB	**Lan-yu**	2.12	185	*e*P	Pn	20 25 43.2	-2.1
	baz=195						
JIJ	**Ishigaki jima**	2.18	83	P	Pn	20 25 46.2	+0.2
JIJ				S	Sn	20 26 12.8	-0.3
VWUC	**VWUC**	2.29	293	*e*P	Pn	20 25 47.6	+0.1
	baz=292						
VWUC				*e*S	Sn	20 26 14.9	-0.8
	baz=292						
VCHM	**Qimei**	2.33	247	P	Pn	20 25 49.1	+0.8
	baz=235						
VCHM				*e*S	Sn	20 26 18.1	+1.1
	baz=235						
TWKBT	**Hengchun**	2.35	202	*e*P	Pn	20 25 48.9	+0.5
	baz=202						
JISG	**Ishigakijimahi**	2.36	78	P	Pn	20 25 49.1	+0.5
JISG				*e*S	Sn	20 26 17.9	+0.3
PTMZ	**Houxiangcun**	2.58	291	*e*P	Pn	20 25 51.6	0.0
	baz=291						
PTMZ				*e*S	Sn	20 26 22.3	-0.8
	baz=291						
MATB	**Ma-tsu**	2.61	321	*e*P	Pn	20 25 52.3	+0.3
	baz=319						
JTJ	**Tarama**	2.72	79	*e*S	Sn	20 26 26.9	+0.4
LYJJ	**Jianjiangzhen**	3.02	323	*e*P	Pn	20 25 57.4	-0.3
	baz=321						
KNM	**Kinmen**	3.06	276	*e*P	Pn	20 26 00.5	+2.2
	baz=277						
KNMB	**Chin-men Tao**	3.11	277	*e*P	Pn	20 25 58.8	0.0
	baz=278						
XPSS	**Dashigiu**	3.14	333	*e*P	Pn	20 25 58.5	-0.7
	baz=330						
MHZQ	**Yeshan**	3.17	309	*e*P	Pn	20 26 00.1	+0.4
	baz=309						
JMJ	**Miyako jima 2**	3.28	77	*e*P	Pn	20 26 02.5	+1.3
	baz=72						
AXDP	**Jialang**	3.55	283	*e*P	Pn	20 26 05.3	+0.4
	baz=284						
ZPLA	**Ao Xicun**	3.68	268	*e*P	Pn	20 26 06.9	+0.1
	baz=270						
DSXP	**Dongshan**	4.00	265	*e*P	Pn	20 26 11.0	-0.1
	baz=268						
SXFK	**Yanhouchang**	4.37	302	*e*P	Pn	20 26 16.5	+0.3
	baz=303						
KSRS	**Korea Array**	14.29	20	Pn	P	20 28 40.1	+0.7
	0.2nm,0.3s,baz=197,slow=11,SNR=5.1						
	1.1nm,0.6s						
SONM	**Songino Array**	26.63	337	P	P	20 30 49.4	+0.8
	0.3nm,0.4s,baz=143,slow=5.9,SNR=3.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	38.75	316	P	P	20 32 33.5	-0.8
	0.4nm,0.8s,baz=106,slow=9.1,SNR=5.3						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	40.59	327	P	P	20 32 49.7	+0.3
	0.4nm,0.3s,baz=142,slow=7.3,SNR=3.6						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	42.50	320	P	P	20 33 04.9	-0.2
	0.1nm,0.5s,baz=111,slow=9.9,SNR=1.9						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	45.48	163	P	P	20 33 28.5	-0.9
	0.3nm,0.5s,baz=346,slow=8.8,SNR=0.9						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	48.06	321	P	P	20 33 48.4	-0.9
	0.3nm,0.5s,baz=122,slow=10,SNR=4.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	48.95	165	P	P	20 33 57.5	+1.1
	0.2nm,0.6s,baz=341,slow=7.1,SNR=4.9						
	0.2nm,0.6s						
NWAO	**Narrogin (SRO)**	56.90	185	LR	LR	21 00 33.7	
	comp=Z,72nm,22.0s,baz=244,slow=38						

TAP ***06*** *20:33:35.0,24˚.01N×121˚.75E,h7km,ML3.9,C*
ASIES ***06*** *20:33:35.0,24˚.01N×121˚.75E,h7km,ML3.9,Mw3.8,*
Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm;
M_{rr}5.88; $M_{\theta\theta}$-4.02; $M_{\phi\phi}$-1.86; $M_{r\theta}$-0.78; $M_{\theta\phi}$-3.17; $M_{\phi r}$3.16;
Fault plane solution: M_o6.90731×10^{21} NP1:ϕ_s31.76000°,
δ55.36000°,λ61.44000°. NP2:ϕ_s255.51000°,δ43.73000°,
λ124.67000°. Principal axes: T Plg65.9180°,
Azm245.8370°; N Plg23.1550°, Azm48.9540°; P
Plg6.2550°, Azm141.6410°;
JMA ***06*** *20:33:35.2±0.2,24˚.0N±0˚.6×12˚2E±˚,h0km,TAIWAN*
REGION
ISC 06 20:33:35.3±0.9,24˚.00N±0˚.02×121˚.77E±0˚.02,h9km±7km,
n164,σ0°74/225,12C-30D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	0.18	297	⇓*i*P			Pg	20 33 39.1	0.0
	baz=298								
TWD				*i* S			Sg	20 33 41.9	+0.2
	baz=298								
ETL	**Fush Village**	0.21	320	⇓*i*P			Pg	20 33 39.6	0.0
	baz=311								
ETL				S			Sg	20 33 43.2	+0.7
	baz=311								
NACB	**Ninganchiao**	0.24	317	⇓*i*P			Pg	20 33 40.0	-0.1
	baz=319								
NACB				*i* S			Sg	20 33 43.5	+0.1
	baz=319								
ETM	**Tongmen**	0.26	262	⇑*i*P			Pg	20 33 40.6	+0.2
	baz=270								
ETM				*i* S			Sg	20 33 44.6	+0.6
	baz=270								
SHUL	**Shoufeng**	0.28	222	*e*P			Pb	20 33 42.1	-0.4
	baz=218								
EHP	**Heping Village**	0.31	355	P			Pb	20 33 42.0	-1.0
	baz=347								
EHP				*e*S			Sb	20 33 46.9	-1.3
	baz=347								
LXIB	**Xiulin Townshi**	0.33	274	⇓P			Pg	20 33 41.9	0.0
	baz=272								
LXIB				*i* S			Sb	20 33 46.8	-1.9
	baz=272								
EAHA	**Aohua**	0.33	355	⇓P			Pb	20 33 42.3	-1.0
	baz=346								
EAHA				S			Sb	20 33 47.8	-1.0
	baz=346								
TEGC	**Jichi Village**	0.36	216	*e*P			Pb	20 33 43.4	-0.4
	baz=211								
TEGC				*e*S			Sb	20 33 51.2	+1.7
	baz=211								
ESL	**Shilin**	0.36	239	⇑*i*P			Pg	20 33 42.5	+0.1
	baz=243								
ENA	**Nanau**	0.43	356	⇓*i*P			Pb	20 33 44.2	-0.8
ENA				S			Sb	20 33 50.6	-0.9
EWUT	**Wuta**	0.44	1	⇓P			Pb	20 33 44.6	-0.7
	baz=4.0								
EWUT				S			Sb	20 33 51.3	-0.7
	baz=4.0								
WARBT	**Fenglin Townsh**	0.45	231	⇑*i*P			Pg	20 33 44.3	+0.2
	baz=237								
WARBT				S			Sb	20 33 50.8	-1.3
	baz=237								
EGFH	**Guangfu**	0.45	224	*e*P			Pb	20 33 44.6	-0.8
	baz=221								
WHF	**Hehuan Shan**	0.48	288	⇓P			Pg	20 33 44.9	+0.1
	baz=288								
WHF				*i* S			Sg	20 33 51.5	+0.3
	baz=288								
EOS4	**EOS4**	0.52	76	*e*P			Pn	20 33 47.8	-0.7
	baz=78								
FUSS	**Fushou**	0.54	297	⇓*i*P			Pb	20 33 46.2	-0.9
	baz=298								
FUSS				*e*S			Sb	20 33 54.6	-0.4
	baz=298								
OWD	**Renai**	0.55	265	P			Pb	20 33 46.2	-0.9
	baz=276								
OWD				S			Sb	20 33 53.7	-1.3
	baz=276								
CHGB	**Renai**	0.55	276	⇓*i*P			Pb	20 33 46.4	-0.8
	baz=277								
CHGB				S			Sb	20 33 53.9	-1.3
	baz=277								
NNSB	**Datong**	0.55	320	⇓*i*P			Pb	20 33 46.4	-0.9
	baz=321								
NNSB				*i* S			Sb	20 33 53.8	-1.5
	baz=321								
NNSH	**Datong**	0.55	320	⇓*i*P			Pb	20 33 46.3	-0.9
	baz=320								
NNSH				*e*S			Sg	20 33 53.5	+0.1
	baz=320								
NNS	**Nan Shan**	0.57	321	⇓*i*P			Pb	20 33 46.6	-0.9
	baz=321								
NNS				S			Sb	20 33 54.4	-1.4
	baz=321								
EOS3	**EOS3**	0.58	60	*e*P			Pn	20 33 49.2	-0.3
	baz=66								
ESAO	**Su ao**	0.58	7	*e*P			Pb	20 33 47.5	0.0
	baz=8.0								
LATG	**Datong**	0.58	337	⇓*i*P			Pb	20 33 46.9	-0.8
	baz=339								
LATG				S			Sb	20 33 55.8	-0.2
	baz=339								
EOS2	**EOS2**	0.59	45	*e*P			Pn	20 33 50.2	+0.5
	baz=56								
HGSD	**Ruisui**	0.60	212	*e*P			Pb	20 33 48.3	+0.5
	baz=195								
WUSB	**Renai**	0.60	269	⇑P			Pb	20 33 47.3	-0.7
	baz=279								
WUSB				S			Sb	20 33 55.8	-0.7
	baz=279								
TWT	**Tachien**	0.60	295	⇓P			Pb	20 33 47.5	-0.5
	baz=294								
TWT				S			Sb	20 33 56.6	0.0
	baz=294								
TWC	**Suao**	0.61	7	⇓*i*P			Pb	20 33 47.9	-0.3
	baz=2.0								
TWC				S			Sb	20 33 58.1	+1.3
	baz=2.0								
TDCB	**Techi**	0.61	294	⇓*i*P			Pb	20 33 47.6	-0.6
	baz=294								
TDCB				S			Sb	20 33 55.7	-1.4
	baz=294								
VWDT	**VWDT**	0.62	247	⇑*i*P			Pb	20 33 48.0	-0.3
	baz=253								
VWDT				*i* S			Sb	20 33 57.0	-0.2
	baz=253								
NDS	**Dongshan**	0.63	356	⇓P			Pb	20 33 48.2	-0.3
	baz=357								
NDS				S			Sb	20 33 57.4	-0.1
	baz=357								
EHY	**Hungye**	0.64	220	*e*P			Pg	20 33 47.8	+0.1
	baz=218								
NDT	**Datong Townshi**	0.64	339	⇓*i*P			Pb	20 33 48.4	-0.3
	baz=340								
NDT				S			Sb	20 33 57.1	-0.7
	baz=340								
ENTT	**Nioudou**	0.66	344	⇓*i*P			Pb	20 33 48.8	-0.3
	baz=334								
ENTT				S			Sb	20 33 58.0	-0.4
	baz=334								
TWE	**Neicheng**	0.72	353	⇓*i*P			Pb	20 33 50.0	0.0
	baz=355								
TWE				*i* S			Sb	20 34 00.1	0.0
	baz=355								
ECBN	**Changbin**	0.74	203	*e*P			Pb	20 33 50.3	-0.1
	baz=189								
WPL	**Puli Township**	0.74	271	*e*P			Pb	20 33 50.1	-0.3
	baz=270								
WPL				S			Sb	20 34 00.2	-0.4
	baz=270								
YULB	**Yu-li**	0.74	216	*e*P			Pg	20 33 49.4	-0.2
	baz=203								
YULB				*e*S			Sb	20 34 01.0	+0.3
	baz=203								
YHNB	**Yeheng**	0.76	332	⇓*i*P			Pb	20 33 50.6	-0.1
	baz=333								
YHNB				S			Sb	20 34 01.1	0.0
	baz=333								
ILA	**Ilan**	0.76	359	*e*P			Pb	20 33 50.9	+0.2
	baz=347								
EYUL	**Yuli**	0.77	213	*e*P			Pn	20 33 51.5	-0.8
	baz=202								
NSK	**Sanguang**	0.77	331	⇓*i*P			Pb	20 33 50.7	-0.2
	baz=332								
NSK				S			Sb	20 34 00.4	-1.1
	baz=332								
DPDB	**Guoxing**	0.77	273	⇑P			Pb	20 33 50.7	-0.2
	baz=272								
DPDB				*e*S			Sb	20 34 01.1	-0.4
	baz=272								
FUSB	**Fushanzhiwuyua**	0.78	348	⇓*i*P			Pb	20 33 50.9	-0.1
	baz=339								
FUSB				S			Sb	20 34 02.1	+0.5
	baz=339								
SSLB	**Suanglung**	0.78	254	⇑*i*P			Pb	20 33 50.5	-0.5
	baz=266								
SSLB				*i* S			Sg	20 34 00.3	-0.1
	baz=266								
TWF1	**Yuli**	0.78	214	*e*P			Pg	20 33 50.3	0.0
	baz=203								
WCS	**Beigang Elemen**	0.79	274	⇑P			Pb	20 33 50.7	-0.4
	baz=273								
WHP	**Taichung City**	0.80	290	⇓P			Pb	20 33 51.6	+0.1
	baz=290								
WHP				*e*S			Sb	20 34 02.8	+0.3
	baz=290								
SMLT	**Sun Moon Lake**	0.80	262	⇑*i*P			Pb	20 33 51.2	-0.3
	baz=271								
SMLT				*e*S			Sb	20 34 01.9	-0.6
	baz=271								
NWLT	**Wulai**	0.81	343	P			Pb	20 33 51.4	-0.2
	baz=331								
NWLT				S			Sb	20 34 03.0	+0.4
	baz=331								
TYC	**Yuchr**	0.84	264	⇑*i*P			Pb	20 33 51.7	-0.4
	baz=273								
TYC				S			Sb	20 34 02.6	-0.8
	baz=273								
NFF	**Wufeng Townshi**	0.87	317	*e*P			Pb	20 33 52.2	-0.3
	baz=317								
NFF				*e*S			Sb	20 34 03.9	-0.4
	baz=317								
CHKH	**Chenggong**	0.87	203	*e*P			Pg	20 33 52.2	+0.1
	baz=191								
WHYT	**Xinyi Township**	0.89	250	*e*P			Pb	20 33 53.0	+0.1
	baz=249								
FULB	**Fuli**	0.91	209	*e*P			Pb	20 33 53.5	+0.3
	baz=195								
LIOB	**Emei**	0.94	313	⇓*e*P			Pn	20 33 54.3	-0.4
	baz=314								
LIOB				*e*S			Sn	20 34 07.1	-1.1
	baz=314								
NSTT	**Nanjuang**	0.94	312	⇓*e*P			Pn	20 33 54.2	-0.5
	baz=311								
NJD	**Zhudong**	0.96	320	*e*P			Pn	20 33 55.0	+0.1
	baz=318								
CHKT	**Chengkung**	0.97	203	*e*P			Pg	20 33 53.5	-0.4
	baz=200								
CHKT				*e*S			Sn	20 34 09.2	+0.3
	baz=200								
TIPB	**Shuangxi**	0.97	3	*e*P			Pn	20 33 54.8	-0.3
	baz=353								
WJS	**Zhushan**	0.97	260	*e*P			Pn	20 33 54.5	-0.6
	baz=267								
WJS				*e*S			Sn	20 34 09.6	+0.6
	baz=267								
TWQ1	**Liyutan**	0.97	291	*e*P			Pn	20 33 55.0	-0.1
	baz=303								
TWQ1				*e*S			Sn	20 34 09.1	+0.1
	baz=303								
WWF	**Wufeng**	0.98	273	*e*P			Pn	20 33 56.0	+0.8
	baz=272								
NHDH	**Xindian Distri**	0.98	347	*e*P			Pn	20 33 55.3	0.0
	baz=336								
TWA	**Mucha**	0.99	350	*e*P			Pn	20 33 55.2	-0.2
	baz=352								
TWA				*e*S			Sn	20 34 08.6	-0.9
	baz=352								
EHD	**Haiduan**	0.99	212	*e*P			Pg	20 33 53.9	-0.5
	baz=224								
WNT	**Mingjian**	1.00	263	⇑*e*P			Pn	20 33 55.2	-0.3
	baz=269								
WNT				*e*S			Sn	20 34 10.0	+0.3
	baz=269								
WNT1	**Nantou City**	1.00	265	*e*P			Pn	20 33 56.0	+0.5
	baz=272								
WNT1				*e*S			Sn	20 34 10.7	+1.0
	baz=272								
TATO	**Taipei**	1.00	345	⇓P			Pn	20 33 55.4	-0.2
	baz=336								
TATO				*e*S			Sn	20 34 08.8	-0.9
	baz=336								
ALS	**Alishan**	1.01	241	*e*P			Pb	20 33 55.0	-0.1
	baz=239								
ALS				*e*S			Sn	20 34 09.2	-1.1
	baz=239								
NSY	**Sanyi**	1.01	294	*e*P			Pn	20 33 56.2	+0.6
	baz=306								
NSY				*e*S			Sn	20 34 10.9	+1.0
	baz=306								
TCU	**Taichung**	1.01	279	*e*P			Pn	20 33 56.4	+0.8
	baz=273								
TWB1	**Santiao Chiao**	1.02	11	*e*P			Pn	20 33 55.9	+0.1
	baz=4.0								
ECS	**Chishang**	1.03	209	*e*P			Pg	20 33 54.9	-0.3
	baz=197								
HSN1	**Hsinchu**	1.03	319	*e*P			Pn	20 33 56.8	+0.8
	baz=316								
BACT	**New Taipei Cit**	1.04	343	*e*P			Pn	20 33 56.5	+0.5
	baz=342								
NMLH	**Miaoli**	1.04	301	*e*P			Pn	20 33 56.8	+0.7
	baz=299								
NHY	**Taipei**	1.05	350	*e*P			Pn	20 33 56.0	-0.2
	baz=350								
ELDTW	**Lidau**	1.06	221	*e*P			Pg	20 33 54.5	-1.2
	baz=219								
TAP	**Taipei**	1.06	347	*e*P			Pn	20 33 56.3	0.0
	baz=334								
SBCB	**Hsinchu**	1.06	318	*e*P			Pn	20 33 57.0	+0.7
	baz=316								
NJN	**Zhunan**	1.07	310	*e*P			Pn	20 33 57.0	+0.6
	baz=308								
NWF	**Wu-fen Shan**	1.07	1	*e*P			Pn	20 33 56.5	0.0
	baz=345								
WFSB	**Wu-fen Shan**	1.07	1	*e*P			Pn	20 33 56.5	+0.1
	baz=345								
CHN5

NCU				*e*S	Sn	20 34 14.4	+2.2
	baz=332						
NCUH	**Zhongli**	**1.10**	**331**	*e*P	Pn	20 33 57.4	+0.5
	baz=329						
WCHH	**Zhanghua**	**1.11**	**274**	*e*P	Pn	20 33 57.6	+0.6
	baz=272						
TWS1	**Kuangyinshan**	**1.14**	**344**	*e*P	Pn	20 33 58.1	+0.7
	baz=345						
TWS1				*e*S	Sn	20 34 15.0	+1.9
	baz=345						
TNOU	**National Taiwa**	**1.15**	**0**	*e*P	Pn	20 33 58.0	+0.5
	baz=347						
WGK	**Gukeng**	**1.15**	**254**	*e*P	Pn	20 33 58.1	+0.6
	baz=252						
YM01	**YM01**	**1.16**	**351**	*e*P	Pn	20 33 58.2	+0.5
	baz=350						
WDLH	**Douliu**	**1.17**	**255**	*e*P	Pn	20 33 57.8	0.0
	baz=253						
NTST	**Danshui**	**1.20**	**346**	*e*P	Pn	20 33 58.5	+0.4
	baz=343						
NHW	**Xinwu Township**	**1.20**	**327**	*e*P	Pn	20 33 58.6	+0.4
	baz=324						
ANP	**Anpu**	**1.20**	**349**	*e*P	Pn	20 33 58.9	+0.5
	baz=336						
WCKO	**Fanlu**	**1.21**	**243**	*e*P	Pn	20 33 58.8	+0.5
	baz=240						
YOJ	**Yonaguni jima**	**1.22**	**68**	*e*P	Pg	20 33 59.1	+0.3
	baz=69						
YOJ	**Yonaguni jima**	**1.22**	**68**	*e*P	Pg	20 33 59.3	+0.5
STYH	**Taoyuan**	**1.23**	**228**	*e*P	Pb	20 33 58.3	-0.4
	baz=214						
LONT	**Longtian**	**1.24**	**208**	*e*P	Pb	20 33 57.4	-1.4
	baz=208						
STYT	**Tauyuan**	**1.25**	**228**	*e*P	Pb	20 33 58.8	-0.3
	baz=211						
STYT				*e*S	Sn	20 34 18.0	+2.1
	baz=211						
TPUB	**Ta-pu**	**1.26**	**237**	*e*P	Pg	20 33 59.5	+0.1
	baz=234						
TPUB				*e*S	Sn	20 34 17.5	+1.5
	baz=234						
CHN4	**Tsaushan**	**1.26**	**239**	*e*P	Pg	20 33 59.9	+0.5
	baz=237						
CHN4				*e*S	Sn	20 34 18.1	+2.1
	baz=237						
CHN2	**Minshiung**	**1.27**	**249**	*e*P	Pg	20 34 00.3	+0.5
	baz=246						
WRL	**Guolierlin Hig**	**1.28**	**266**	*e*P	Pg	20 34 00.3	+0.5
	baz=264						
TWY	**Chenhua**	**1.28**	**353**	*e*P	Pg	20 33 59.9	0.0
	baz=335						
RLNB	**Erlin**	**1.29**	**266**	*e*P	Pg	20 34 00.1	-0.1
	baz=264						
WTP	**Ta-pu**	**1.30**	**235**	P	Pg	20 34 00.6	+0.4
	baz=232						
WTP				*e*S	Sn	20 34 18.6	+1.5
	baz=232						
WTK	**Tuku**	**1.30**	**256**	*e*P	Pg	20 34 00.9	+0.6
	baz=254						
TWGBT	**Beinan**	**1.34**	**208**	*e*P	Pn	20 33 58.0	-2.1
	baz=200						
TWG	**Pinlang**	**1.34**	**209**	*e*P	Pn	20 33 58.1	-2.0
	baz=200						
LDUT	**Ludao**	**1.35**	**192**	*e*P	Pn	20 34 00.5	+0.2
	baz=180						
WTCT	**Ta-ch'eng**	**1.37**	**265**	*e*P	Pg	20 34 01.3	-0.3
	baz=262						
TWK	**Hsinying**	**1.38**	**238**	ǁ*e*P	Pg	20 34 01.9	0.0
	baz=236						
CHN1	**Nanshi**	**1.40**	**235**	*e*P	Pg	20 34 02.2	+0.1
	baz=233						
SNST	**Tainan City**	**1.40**	**237**	*e*P	Pg	20 34 02.1	-0.1
	baz=235						
SGST	**Jiashian**	**1.42**	**230**	*e*P	Pn	20 34 01.3	+0.1
	baz=218						
SLGT	**Liugui**	**1.44**	**226**	*e*P	Pg	20 34 02.6	-0.3
	baz=212						
WSF	**Szhu**	**1.46**	**256**	*e*P	Pg	20 34 03.0	-0.3
	baz=253						
WSL	**Shuilin Townsh**	**1.49**	**252**	*e*P	Pg	20 34 03.5	-0.4
	baz=249						
ICHU	**Yijhu**	**1.51**	**245**	*e*P	Pg	20 34 03.5	-0.7
	baz=243						
CHN8	**Yiju**	**1.57**	**246**	*e*P	Pn	20 34 04.9	-0.5
	baz=243						
ECL	**Taimali**	**1.58**	**208**	*e*P	Pn	20 34 03.4	-0.1
	baz=195						
SCST	**Cishan**	**1.61**	**227**	*e*P	Pb	20 34 05.2	0.0
	baz=213						
SHHT	**Tainan City**	**1.63**	**234**	*e*P	Pg	20 34 07.3	+0.8
	baz=249						
SSD	**Sandimen**	**1.63**	**220**	*e*P	Pn	20 34 04.2	+0.1
	baz=209						
PCYT	**Pengchaiyu**	**1.65**	**10**	*e*P	Pb	20 34 05.3	-0.5
	baz=8.0						
TSMG	**Majia**	**1.65**	**219**	*e*P	Pb	20 34 05.2	-0.6
	baz=209						
TWM1	**Shoushan**	**1.70**	**227**	*e*P	Pg	20 34 07.4	-0.6
	baz=214						
MASBT	**Mashibuluo**	**1.73**	**217**	*e*P	Pn	20 34 05.9	+0.4
	baz=205						
TSCK	**Chigu Township**	**1.76**	**242**	*e*P	Pb	20 34 06.9	-0.8
	baz=238						
EAST	**Anshuo**	**1.82**	**208**	*e*P	Pb	20 34 08.5	-0.2
	baz=195						
TAWH	**Dawu Township**	**1.84**	**206**	*e*P	Pb	20 34 08.8	-0.3
	baz=193						
SCZT	**Fangliau**	**1.94**	**213**	*e*P	Pb	20 34 09.5	-1.2
	baz=199						
WSSB	**Gushan**	**1.94**	**226**	*e*P	Pb	20 34 10.7	-0.1
	baz=227						
SLIU	**Shizi**	**1.99**	**207**	*e*P	Pn	20 34 09.7	+0.6
	baz=196						
LYUB	**Lan-yu**	**2.00**	**185**	*e*P	Pn	20 34 08.9	-0.3
	baz=187						
JKRS	**Kuro-shima**	**2.06**	**83**	*e*P	Pb	20 34 12.3	-0.5
WDGT	**Dungji**	**2.07**	**250**	*e*P	Pn	20 34 10.8	+0.6
	baz=246						
PHUB	**P'eng-hu**	**2.07**	**257**	*e*P	Pn	20 34 10.6	+0.4
	baz=256						
PHUB				*e*S	Sb	20 34 37.5	-1.3
	baz=256						
PNG	**Penghu**	**2.07**	**258**	*e*P	Pb	20 34 11.7	-1.3
	baz=255						
JIJ	**Ishigaki jima**	**2.20**	**80**	*e*P	Pn	20 34 12.1	+0.2
JIJ				S	Sn	20 34 39.6	+0.3
VCHM	**Qimei**	**2.29**	**250**	*e*P	Pn	20 34 13.8	+0.7
	baz=246						
VWUC	**VWUC**	**2.33**	**296**	*e*P	Pn	20 34 14.3	+0.5
	baz=291						
JISG	**Ishigakijimahi**	**2.39**	**75**	*e*P	Pn	20 34 14.9	+0.3
JISG				*e*S	Sn	20 34 44.5	+0.6
PTMZ	**Houxiangcun**	**2.63**	**294**	*e*P	Pn	20 34 17.8	0.0
	baz=290						
MATB	**Ma-tsu**	**2.71**	**323**	*e*P	Pn	20 34 18.4	-0.5
	baz=316						
KNM	**Kinmen**	**3.07**	**278**	*e*P	Pn	20 34 26.6	+2.6
	baz=271						
KNMB	**Chin-men Tao**	**3.12**	**279**	*e*P	Pn	20 34 25.0	+0.4
	baz=272						
LYJJ	**Jianjiangzhen**	**3.12**	**325**	*e*P	Pn	20 34 24.1	-0.6
	baz=318						
MHZQ	**Yeshan**	**3.25**	**311**	*e*P	Pn	20 34 26.8	+0.5
	baz=305						
XPSS	**Dashiqiu**	**3.25**	**334**	*e*P	Pn	20 34 26.3	-0.1
	baz=326						
AXDP	**Jialang**	**3.58**	**285**	*e*P	Pn	20 34 31.0	+0.1
	baz=280						
ZPLA	**Ao Xicun**	**3.68**	**270**	*e*P	Pn	20 34 32.4	+0.1
	baz=264						
DSXP	**Dongshan**	**3.99**	**267**	*e*P	Pn	20 34 36.8	+0.2
	baz=261						
SXFK	**Yanhouchang**	**4.43**	**303**	*e*P	Pn	20 34 42.7	0.0
	baz=298						

TAP 06 20:42:31.9,23.11N×120.77E,h4km,ML1.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.06**	**349**	*i* P	Pg	20 42 33.6	+0.4
STYT				*e*S	Sg	20 42 34.7	+0.4
STYH	**Taoyuan**	**0.06**	**7**	*i* P	Pg	20 42 33.8	+0.5
	baz=9.0						
STYH				*i* S	Sg	20 42 34.8	+0.5
	baz=9.0						
SLGT	**Liugui**	**0.16**	**224**	*i* P	Pg	20 42 36.4	+1.2
	baz=223						
SLGT				*e*S	Sg	20 42 39.5	+2.3
	baz=223						
SGST	**Jiashian**	**0.17**	**261**	*e*P	Pg	20 42 35.7	+0.4
	baz=259						
SGST				*e*S	Sg	20 42 38.9	+1.2
	baz=259						
WTP	**Ta-pu**	**0.20**	**314**	*i* P	Pg	20 42 36.9	+1.0
	baz=317						
WTP				*i* S	Sg	20 42 40.2	+1.8
	baz=317						
TPUB	**Ta-pu**	**0.23**	**326**	*i* P	Pg	20 42 37.3	+0.9
	baz=331						
CHN1	**Nanshi**	**0.23**	**289**	*i* P	Pg	20 42 38.0	+1.5
	baz=289						
CHN1				*e*S	Sg	20 42 42.1	+2.6
	baz=289						
TWK	**Hsinying**	**0.30**	**301**	*e*P	Pb	20 42 39.4	-0.6
	baz=303						

IDC 06 20:43:51.1,598.0,30.38N×81.64W,h0km,Error ellipse: s-maj=322.2km s-min=180.1km az=128.0, Florida-Georgia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I51GB	**BERMUDA INFRAS**	**4.61**	**78**	I	I	22 09 30.0	
	0.2nm,1.2s,baz=265,slow=316,SNR=4.6						
I20EC	**Galapagos**	**31.91**	**197**	I	I	23 57 20.0	
	baz=16,slow=321,SNR=1.2						
I08BO	**LAS PENAS INFR**	**48.03**	**163**	I	I	01 41 40.0	
	baz=343,slow=325,SNR=2.2						

*ASIES **06** 20:48:15.6,23.98N×121.72E,h6km,ML3.8,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.16; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$0.75; $M_{r\theta}$1.48; $M_{\theta\phi}$-0.68; $M_{\phi r}$1.94; Fault plane solution: $M_0$2.67374×10^{21} NP1:ϕ_s34.54000°, δ87.01000°,λ67.55000°. NP2:ϕ_s297.35000°,δ22.64000°, λ172.21000°. Principal axes: T Plg43.5920°, Azm282.6540°; N Plg22.4200°, Azm35.7810°; P Plg38.0050°, Azm144.5890°;*
*TAP **06** 20:48:15.6,23.98N×121.72E,h6km,ML3.8,C*
*JMA **06** 20:48:15.7±0.4,24.0N±0.8×12.2E±, h0km,TAIWAN REGION*

ISC 06 20:48:16.2±0.9,23.98N±0.01×121.73E±0.02,h10km±6km, n156,$_{s}$0$_{f}$87/218,43C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.16**	**310**	⇑*i*P	Pg	20 48 19.5	-0.3
	baz=309						
TWD				*i* S	Sg	20 48 22.2	-0.1
	baz=309						
ETL	**Fush Village**	**0.21**	**331**	⇑*i*P	Pg	20 48 20.4	-0.3
	baz=329						
ETM	**Tongmen**	**0.22**	**267**	⇑*i*P	Pg	20 48 20.5	-0.3
	baz=264						
ETM				S	Sg	20 48 23.9	+0.1
	baz=264						
NACB	**Ninganchiao**	**0.23**	**328**	⇑*i*P	Pg	20 48 20.7	-0.4
	baz=314						
NACB				*i* S	Sg	20 48 24.2	-0.2
	baz=314						
SHUL	**Shoufeng**	**0.24**	**219**	*i* P	Pg	20 48 22.2	+1.0
	baz=216						
SHUL				*e*S	Sg	20 48 27.4	+2.8
	baz=216						
LXIB	**Xiulin Townshi**	**0.29**	**279**	⇑*i*P	Pg	20 48 21.9	-0.3
	baz=276						
LXIB				*e*S	Sb	20 48 27.4	-1.2
	baz=276						
ESL	**Shilin**	**0.32**	**239**	⇑*i*P	Pg	20 48 22.3	-0.3
	baz=246						
TEGC	**Jichi Village**	**0.32**	**213**	P	Pb	20 48 23.6	-0.4
	baz=210						
TEGC				*e*S	Sb	20 48 30.3	+1.1
	baz=210						
EHP	**Heping Village**	**0.33**	**1**	*e*P	Pb	20 48 22.9	-1.3
	baz=351						
EHP				*e*S	Sb	20 48 28.6	-1.0
	baz=351						
EAHA	**Aohua**	**0.35**	**1**	P	Pb	20 48 23.3	-1.2
	baz=350						
EAHA				*e*S	Sb	20 48 28.9	-1.2
	baz=350						
WARBT	**Fenglin Townsh**	**0.41**	**231**	⇑*i*P	Pg	20 48 24.1	-0.2
	baz=239						
WARBT				S	Sb	20 48 30.4	-1.4
	baz=239						
EGFH	**Guangfu**	**0.41**	**222**	*e*P	Pg	20 48 24.5	+0.1
	baz=221						
ENA	**Nanau**	**0.45**	**1**	⇑*i*P	Pb	20 48 25.1	-1.1
	baz=347						
WHF	**Hehuan Shan**	**0.46**	**292**	⇑*i*P	Pg	20 48 25.1	-0.2
	baz=288						
WHF				S	Sg	20 48 31.6	+0.1
	baz=288						
EWUT	**Wuta**	**0.47**	**5**	⇑P	Pb	20 48 25.5	-1.0
	baz=351						
OWD	**Renai**	**0.51**	**268**	⇑*i*P	Pg	20 48 26.1	-0.1
	baz=276						
OWD				S	Sb	20 48 33.8	-1.0
	baz=276						
CHGB	**Renai**	**0.52**	**279**	⇑*i*P	Pb	20 48 26.4	-1.1
	baz=277						
CHGB				S	Sb	20 48 34.1	-1.0
	baz=277						
FUSS	**Fushou**	**0.52**	**301**	⇑*i*P	Pb	20 48 26.4	-1.2
	baz=299						
FUSS				*e*S	Sb	20 48 35.0	-0.3
	baz=299						
NNSB	**Datong**	**0.55**	**325**	⇑*i*P	Pb	20 48 26.9	-1.1
	baz=309						
NNSB				*e*S	Sb	20 48 34.5	-1.6
	baz=309						
NNSH	**Datong**	**0.55**	**325**	⇑P	Pb	20 48 26.9	-1.2
	baz=320						
EOS4	**EOS4**	**0.56**	**75**	*e*P	Pb	20 48 28.2	+0.4
	baz=88						
HGSD	**Ruisui**	**0.56**	**210**	*e*P	Pb	20 48 27.6	-0.4
	baz=196						
WUSB	**Renai**	**0.56**	**272**	⇑*i*P	Pb	20 48 27.3	-0.9
	baz=279						
WUSB				*i* S	Sb	20 48 35.0	-1.3
	baz=279						
NNS	**Nan Shan**	**0.57**	**325**	⇑*i*P	Pb	20 48 27.2	-1.1
	baz=321						
NNS				S	Sb	20 48 35.7	-0.8
	baz=321						
TWT	**Tachien**	**0.58**	**299**	⇑*i*P	Pb	20 48 27.8	-0.7
	baz=296						
TWT				S	Sb	20 48 36.2	-0.6
	baz=296						
VWDT	**VWDT**	**0.58**	**248**	⇑*i*P	Pb	20 48 27.8	-0.7
	baz=254						
VWDT				*i* S	Sb	20 48 35.9	-0.9
	baz=254						
LATG	**Datong**	**0.59**	**341**	⇑*i*P	Pb	20 48 27.6	-1.0
	baz=341						
LATG				S	Sb	20 48 36.2	-0.9
	baz=341						
TDCB	**Techi**	**0.59**	**298**	⇑*i*P	Pb	20 48 27.9	-0.8
	baz=296						
TDCB				S	Sb	20 48 35.9	-1.3
	baz=296						
EHY	**Hungye**	**0.60**	**219**	⇑*e*P	Pb	20 48 27.9	-0.9
	baz=202						
EHY				*e*S	Sb	20 48 37.6	+0.3
	baz=202						
ESAO	**Su ao**	**0.60**	**10**	*e*P	Pb	20 48 28.5	-0.4
	baz=359						
EOS3	**EOS3**	**0.62**	**60**	*e*P	Pn	20 48 30.0	-0.9
	baz=65						
TWC	**Suao**	**0.64**	**10**	*e*P	Pb	20 48 29.0	-0.4
	baz=360						
NDS	**Dongshan**	**0.66**	**359**	*e*P	Pb	20 48 28.9	-0.8
	baz=348						
NDT	**Datong Townshi**	**0.66**	**342**	⇑*i*P	Pb	20 48 29.1	-0.6
	baz=329						
NDT				*i* S	Sb	20 48 38.7	-0.2
	baz=329						
ENTT	**Nioudou**	**0.68**	**347**	⇑*i*P	Pb	20 48 29.5	-0.6
	baz=335						
ENTT				*e*S	Sb	20 48 39.6	+0.1
	baz=335						
YULB	**Yu-li**	**0.70**	**214**	*e*P	Pg	20 48 29.4	-0.4
	baz=213						
YULB				S	Sb	20 48 40.5	+0.2
	baz=213						
ECBN	**Changbin**	**0.71**	**201**	*e*P	Pg	20 48 29.5	-0.4
	baz=188						
WPL	**Puli Township**	**0.71**	**273**	P	Pb	20 48 29.9	-0.7
	baz=271						
WPL				S	Sb	20 48 39.8	-0.7
	baz=271						
EYUL	**Yuli**	**0.73**	**211**	*e*P	Pb	20 48 31.6	+0.5
	baz=199						
SSLB	**Suanglung**	**0.74**	**255**	⇑*i*P	Pb	20 48 30.4	-0.7
	baz=264						
SSLB				*e*S	Sg	20 48 39.6	-0.5
	baz=264						
TWF1	**Yuli**	**0.74**	**213**	*e*P	Pg	20 48 30.2	-0.2
	baz=229						
DPDB	**Guoxing**	**0.74**	**275**	⇑*i*P	Pb	20 48 30.8	-0.4
	baz=273						
DPDB				S	Sb	20 48 40.8	-0.5
	baz=273						
TWE	**Neicheng**	**0.74**	**355**	⇑*i*P	Pb	20 48 30.8	-0.4
	baz=348						
TWE				*i* S	Sb	20 48 41.9	+0.4
	baz=348						
WCS	**Beigang Elemen**	**0.75**	**276**	⇑*i*P	Pb	20 48 31.0	-0.4
	baz=274						
WCS				*e*S	Sb	20 48 41.5	-0.3
	baz=274						
YHNB	**Yeheng**	**0.76**	**335**	⇑*i*P	Pb	20 48 31.2	-0.4
	baz=324						
YHNB				*i* S	Sb	20 48 41.8	-0.3
	baz=324						
SMLT	**Sun Moon Lake**	**0.77**	**263**	⇑*i*P	Pb	20 48 31.2	-0.5
	baz=272						
SMLT				*i* S	Sb	20 48 41.2	-1.0
	baz=272						
NSK	**Sanguang**	**0.78**	**334**	⇑*i*P	Pb	20 48 31.4	-0.5
	baz=324						
NSK				*i* S	Sb	20 48 42.1	-0.3
	baz=324						
WHP	**Taichung City**	**0.78**	**293**	⇑*i*P	Pb	20 48 31.7	-0.2
	baz=283						
WHP				S	Sb	20 48 42.5	0.0
	baz=283						
ILA	**Ilan**	**0.79**	**1**	*e*P	Pb	20 48 31.7	-0.2
	baz=348						
FUSB	**Fushanzhiwuyua**	**0.79**	**350**	⇑*i*P	Pb	20 48 31.7	-0.4
	baz=339						
FUSB				*i* S	Sb	20 48 42.8	-0.1
	baz=339						
TYC	**Yuchr**	**0.80**	**265**	⇑*i*P	Pb	20 48 31.6	-0.7
	baz=273						
TYC				*i* S	Sb	20 48 42.3	-0.9
	baz=273						
NWLT	**Wulai**	**0.82**	**345**	*e*P	Pb	20 48 32.4	-0.3
	baz=330						
NWLT				*e*S	Sb	20 48 43.3	-0.5
	baz=330						
CHKH	**Chenggong**	**0.84**	**202**	*e*P	Pg	20 48 32.0	-0.4
	baz=190						
WHYT	**Xinyi Township**	**0.85**	**251**	*e*P	Pb	20 48 32.5	-0.6
	baz=250						
NFF	**Wufeng Townshi**	**0.86**	**319**	⇑*i*P	Pb	20 48 33.0	-0.3
	baz=316						
NFF				*e*S	Sb	20 48 45.1	+0.2
	baz=316						
FULB	**Fuli**	**0.87**	**208**	*e*P	Pb	20 48 33.0	-0.5
	baz=194						
WJS	**Zhushan**	**0.93**	**261**	*e*P	Pn	20 48 34.6	-0.7
	baz=266						
WJS				*e*S	Sn	20 48 48.4	-0.4
	baz=266						
NSTT	**Nanjuang**	**0.93**	**315**	⇑*i*P	Pn	20 48 34.6	-0.7
	baz=310						
NSTT				*i* S	Sb	20 48 47.0	+0.2
	baz=310						
LIOB	**Emei**	**0.93**	**316**	P	Pn	20 48 34.8	-0.6
	baz=312						
CHKT	**Chengkung**	**0.94**	**201**	*e*P	Pg	20 48 33.6	-0.7
	baz=190						
WWF	**Wufeng**	**0.95**	**274**	⇑P	Pn	20 48 35.7	+0.1
	baz=279						
TWQ1	**Liyutan**	**0.95**	**293**	⇑P	Pn	20 48 35.0	-0.6
	baz=291						
EHD	**Haiduan**	**0.95**	**210**	*e*P	Pg	20 48 34.1	-0.5
	baz=224						
NJD	**Zhudong**	**0.96**	**322**	*e*P	Pn	20 48 35.1	-0.6
	baz=319						
WNT	**Mingjian**	**0.96**	**264**	⇑*i*P	Pn	20 48 35.6	-0.2
	baz=269						
WNT				*i* S	Sn	20 48 49.9	+0.4
	baz=269						
WNT1	**Nantou City**	**0.96**	**266**	P	Pn	20 48 35.7	-0.1
	baz=271						
WNT1				*i* S	Sn	20 48 50.7	+1.1
	baz=271						
ALS	**Alishan**	**0.97**	**242**	⇑*i*P	Pb	20 48 35.1	-0.1
	baz=239						
ALS				S	Sb	20 48 48.7	+0.5
	baz=239						
TCU	**Taichung**	**0.98**	**280**	P	Pn	20 48 36.4	+0.4
	baz=273						
NSY	**Sanyi**	**0.99**	**296**	P	Pn	20 48 36.2	+0.1
	baz=304						
NSY				S	Sn	20 48 50.7	+0.5
	baz=304						
ECS	**Chishang**	**0.99**	**208**	*e*P	Pg	20 48 34.9	-0.5
	baz=224						
TIPB	**Shuangxi**	**0.99**	**5**	*e*P	Pn	20 48 35.6	-0.6
	baz=353						
NHDH	**Xindian Distri**	**1.00**	**349**	*e*P	Pn	20 48 36.1	-0.2
	baz=336						
TWA	**Mucha**	**1.01**	**352**	*e*P	Pb	20 48 35.3	-0.4
	baz=350						
TATO	**Taipei**	**1.02**	**347**	P	Pn	20 48 36.0	-0.5
	baz=332						
TATO				S	Sb	20 48 49.8	+0.4
	baz=332						
ELDTW	**Lidau**	**1.02**	**220**	*e*P	Pg	20 48 34.8	-1.1
	baz=219						
NMLH	**Miaoli**	**1.02**	**303**	*e*P	Pn	20 48 37.2	+0.6
	baz=300						
HSN1	**Hsinchu**	**1.03**	**321**	*e*P	Pn	20 48 36.8	+0.1
	baz=317						
CHN5	**Tsauling**	**1.04**	**249**	⇑*i*P	Pn	20 48 36.9	0.0
	baz=235						
CHN5				*e*S	Sn	20 48 52.3	+0.9
	baz=235						
TWB1	**Santiao Chiao**	**1.05**	**13**	*e*P	Pg	20 48 35.5	-1.1
	baz=2.0						
WYL	**Yuanlin Townsh**	**1.05**	**269**	P	Pn	20 48 37.3	+0.3
	baz=265						
WYL				S	Sn	20 48 53.1	+1.4
	baz=265						
SBCB	**Hsinchu**	**1.06**	**320**	*e*P	Pn	20 48 38.1	+1.0
	baz=308						
WDJ	**Dajia District**	**1.06**	**291**	*e*P	Pn	20 48 38.4	+1.2
	baz=288						
EDH	**Donghe**	**1.07**	**202**	*e*P	Pg	20 48 34.5	-2.4
	baz=202						
HSN	**Hsinchu**	**1.08**	**320**	P	Pn	20 48 38.1	+0.8
	baz=318						
HSN				*e*S	Sn	20 48 51.8	-0.5
	baz=318						
TAP	**Taipei**	**1.08**	**349**	*e*P	Pg	20 48 36.3	-0.7
	baz=333						
WCHH	**Zhanghua**	**1.08**	**276**	*e*P	Pn	20 48 37.9	+0.5
	baz=272						
NWF	**Wu-fen Shan**	**1.09**	**2**	*e*P	Pn	20 48 37.4	-0.2
	baz=344						
WFSB	**Wu-fen Shan**	**1.09**	**2**	*e*P	Pn	20 48 37.5	0.0
	baz=344						
NTY	**Taoyuan**	**1.09**	**339**	*e*P	Pn	20 48 37.9	+0.4
	baz=328						
NCUH	**Zhongli**	**1.11**	**333**	P	Pn	20 48 38.5	+0.8
	baz=328						
NCU	**National Centr**	**1.11**	**333**	*e*P	Pn	20 48 38.7	+1.0
	baz=329						
WGK	**Gukeng**	**1.11**	**255**	*e*P	Pn	20 48 37.9	+0.1
	baz=251						
SXI1	**Grass Mountain**	**1.12**	**7**	*e*P	Pn	20 48 38.1	+0.1
	baz=359						
SXI1				S	Sn	20 48 54.3	+0.8
	baz=359						
WDLH	**Douliu**	**1.13**	**256**	*e*P	Pb	20 48 37.5	-0.3
	baz=252						
TWS1	**Kuangyinshan**	**1.16**	**346**	⇓*i*P	Pn	20 48 39.5	+1.1
	baz=344						

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res	ISC
TWS1	baz=344			S		Sn	20 48 56.0	+1.7	
WCKO	**Fanlu** baz=241	1.16	243	*eP*		Pb	20 48 38.0	-0.4	
TNOU	**National Taiwa** baz=345	1.17	2	*eP*		Pn	20 48 39.0	+0.4	
YM01	**YM01** baz=348	1.17	353	⇑P		Pn	20 48 39.0	+0.3	
STYH	**Taoyuan** baz=213	1.19	228	*eP*		Pb	20 48 38.6	-0.2	
LONT	**Longtian** baz=208	1.20	208	*eP*		Pg	20 48 38.5	-0.8	
NHW	**Xinwu Township** baz=324	1.20	329	*eP*		Pn	20 48 39.5	+0.5	
STYT	**Tauyuan** baz=211	1.21	228	⇑P		Pg	20 48 38.8	-0.6	
STYT	baz=211			*eS*		Sn	20 48 55.2	-0.3	
NTST	**Danshui** baz=343	1.21	348	*eP*		Pn	20 48 39.8	+0.6	
TPUB	**Ta-pu** baz=236	1.21	237	P		Pn	20 48 39.7	+0.5	
TPUB	baz=236			S		Sn	20 48 57.6	+1.9	
CHN4	**Tsaushan** baz=238	1.22	239	*eP*		Pn	20 48 39.3	0.0	
ANP	**Anpu** baz=334	1.22	351	*eP*		Pn	20 48 39.6	+0.2	
CHN2	**Minshiung** baz=246	1.23	249	*eP*		Pn	20 48 40.4	+0.9	
WRL	**Guolierlin Hig** baz=265	1.24	267	*eP*		Pn	20 48 40.5	+1.0	
WTP	**Ta-pu** baz=242	1.26	235	*eP*		Pn	20 48 40.0	+0.2	
WTP	baz=242			*eS*		Sn	20 48 58.9	+2.1	
RLNB	**Erlin** baz=264	1.26	266	P		Pg	20 48 40.5	+0.1	
RLNB	baz=264			*i* S		Sn	20 48 59.1	+2.3	
WTK	**Tuku** baz=254	1.26	257	*eP*		Pg	20 48 40.8	+0.3	
YOJ	**Yonaguni jima** baz=68	1.26	67	*eP*		Pn	20 48 39.5	-0.4	
YOJ	**Yonaguni jima**	1.26	67	*eP*		Pg	20 48 41.0	+0.5	
YOJ				*eS*		Sn	20 48 59.5	+2.6	
TWY	**Chenhua** baz=335	1.30	355	*eP*		Pg	20 48 42.0	+0.8	
TWG	**Pinlang** baz=208	1.30	208	*eP*		Pn	20 48 38.2	-2.2	
TWGBT	**Beinan** baz=208	1.30	208	*eP*		Pn	20 48 38.6	-1.8	
TWK	**Hsinying** baz=236	1.34	238	*eP*		Pg	20 48 41.8	-0.2	
TWK	baz=236			*eS*		Sn	20 49 01.1	+2.2	
CHN1	**Nanshi** baz=234	1.36	235	*eP*		Pg	20 48 42.2	-0.1	
CHN1	baz=234			*eS*		Sn	20 49 01.2	+1.9	
SNST	**Tainan City** baz=223	1.36	237	*eP*		Pg	20 48 41.7	-0.7	
SGST	**Jiashian** baz=239	1.38	230	*eP*		Pn	20 48 41.4	-0.1	
SGST	baz=239			*eS*		Sg	20 49 02.0	+1.4	
SLGT	**Liugui** baz=212	1.40	226	*eP*		Pg	20 48 42.9	-0.1	
WSF	**Szhu** baz=254	1.42	257	*eP*		Pg	20 48 42.6	-0.9	
WSF	baz=254			*eS*		Sg	20 49 04.0	+2.0	
WSL	**Shuilin Townsh** baz=248	1.45	252	*eP*		Pn	20 48 42.5	0.0	
ICHU	**Yijhu** baz=242	1.47	246	*eP*		Pg	20 48 43.8	-0.5	
CHN8	**Yiju** baz=241	1.53	246	*eP*		Pb	20 48 44.4	-0.2	
CHN8	baz=241			*eS*		Sg	20 49 05.7	+0.3	
CHN3	**Shinhua** baz=231	1.54	235	*eP*		Pg	20 48 45.6	-0.2	
ECL	**Taimali** baz=194	1.55	208	*eP*		Pn	20 48 43.0	-0.8	
SCST	**Cishan** baz=213	1.57	227	*eP*		Pg	20 48 45.5	-0.9	
SHHT	**Tainan City** baz=230	1.59	233	*eP*		Pg	20 48 46.7	0.0	
SSD	**Sandimen** baz=206	1.59	220	*eP*		Pn	20 48 43.9	-0.5	
SSD	baz=206			*eS*		Sn	20 49 05.4	+0.5	
TSMG	**Majia** baz=208	1.61	219	*eP*		Pb	20 48 45.8	-0.2	
TWM1	**Shoushan** baz=213	1.66	227	*eP*		Pg	20 48 47.2	-0.9	
MASBT	**Mashibuluo** baz=203	1.69	217	*eP*		Pn	20 48 45.1	-0.7	
MASBT	baz=203			S		Sg	20 49 09.9	-0.8	
TSCK	**Chigu Township** baz=238	1.72	242	*eP*		Pb	20 48 47.1	-0.8	
EAST	**Anshuo** baz=194	1.78	207	*eP*		Pn	20 48 47.7	+0.7	
TAWH	**Dawu Township** baz=192	1.81	206	*eP*		Pb	20 48 49.4	0.0	
SCZT	**Fangliau** baz=212	1.90	213	*eP*		Pb	20 48 49.8	-1.1	
LYUB	**Lan-yu** baz=187	1.97	184	*eP*		Pn	20 48 45.9	-3.7	
WDGT	**Dungji** baz=244	2.03	250	*eP*		Pn	20 48 51.3	+0.9	
PHUB	**P'eng-hu** baz=252	2.03	257	*eP*		Pn	20 48 50.5	0.0	
PNG	**Penghu** baz=253	2.04	259	*eP*		Pn	20 48 50.9	+0.4	
PNG	baz=253			*eS*		Sb	20 49 17.7	-0.9	
TWKBT	**Hengchun** baz=192	2.20	203	*eP*		Pn	20 48 52.5	-0.2	
VCHM	**Qimei** baz=245	2.25	251	*eP*		Pn	20 48 53.4	0.0	
VWUC	**VWUC** baz=290	2.31	296	*eP*		Pn	20 48 53.5	-0.8	
JISG	**Ishigakijimahi**	2.43	75	P		Pn	20 48 55.7	-0.3	
PTMZ	**Houxiangcun** baz=288	2.60	295	*eP*		Pn	20 48 57.9	-0.4	
MATB	**Ma-tsu** baz=312	2.70	324	*eP*		Pn	20 48 59.8	+0.1	
KNM	**Kinmen** baz=271	3.04	279	*eP*		Pn	20 49 06.0	+1.6	
KNMB	**Chin-men Tao** baz=273	3.09	280	*eP*		Pn	20 49 04.6	-0.4	
LYJJ	**Jianjiangzhen** baz=314	3.12	326	*eP*		Pn	20 49 05.8	+0.4	
MHZQ	**Yeshan** baz=292	3.24	311	*eP*		Pn	20 49 06.7	-0.3	
XPSS	**Dashiqiu** baz=323	3.25	335	*eP*		Pn	20 49 06.8	-0.5	
AXDP	**Jialang** baz=279	3.55	286	*eP*		Pn	20 49 10.8	-0.5	
ZPLA	**Ao Xicun** baz=263	3.64	270	*eP*		Pn	20 49 12.2	-0.4	
DSXP	**Dongshan** baz=260	3.95	267	*eP*		Pn	20 49 17.3	+0.4	
SXFK	**Yanhouchang** baz=298	4.42	304	*eP*		Pn	20 49 24.1	+0.7	
ETL	**Fush Village** baz=311	0.11	306	⇓*iP*		Pg	20 51 27.5	+0.3	
ETL	baz=311			*i* S		Sg	20 51 29.1	+0.1	
TWD	**Chiawan** baz=259	0.11	262	⇓*iP*		Pg	20 51 27.4	+0.1	
TWD	baz=259			*i* S		Sg	20 51 29.0	-0.2	
NACB	**Ninganchiao** baz=308	0.14	305	⇓*iP*		Pg	20 51 27.8	+0.2	
NACB	baz=308			S		Sg	20 51 29.8	0.0	
EHP	**Heping Village** baz=5.0	0.21	6	P		Pg	20 51 29.9	+0.8	
EHP	baz=5.0			S		Sg	20 51 33.0	+1.0	
EAHA	**Aohua** baz=7.0	0.23	5	*eP*		Pg	20 51 30.1	+0.7	
EAHA	baz=7.0			*i* S		Sg	20 51 33.6	+1.0	
ETM	**Tongmen** baz=236	0.24	238	P		Pg	20 51 29.6	+0.1	
ETM	baz=236			S		Sg	20 51 32.9	+0.1	
LXIB	**Xiulin Townshi** baz=246	0.29	255	*eP*		Pg	20 51 30.5	0.0	
LXIB	baz=246			*i* S		Sg	20 51 34.3	0.0	
ENA	**Nanau** baz=6.0	0.33	4	*eP*		Pg	20 51 32.0	+0.8	
ENA	baz=6.0			*eS*		Sg	20 51 36.5	+0.8	
SHUL	**Shoufeng** baz=209	0.34	205	*eP*		Pb	20 51 33.1	+0.4	
EWUT	**Wuta** baz=10.0	0.35	9	*eP*		Pg	20 51 32.3	+0.7	
EWUT	baz=10.0			*eS*		Sg	20 51 37.3	+1.0	
ESL	**Shilin** baz=229	0.38	223	*eP*		Pg	20 51 32.4	+0.3	
ESL	baz=229			*eS*		Sg	20 51 37.0	-0.2	
WHF	**Hehuan Shan** baz=276	0.42	277	*eP*		Pg	20 51 33.2	+0.3	
WHF	baz=276			*eS*		Sg	20 51 38.5	+0.1	
TEGC	**Jichi Village** baz=203	0.42	203	*eP*		Pb	20 51 34.4	+0.2	
TEGC	baz=203			*eS*		Sb	20 51 42.7	+2.1	
NNSB	**Datong** baz=318	0.45	317	P		Pg	20 51 34.0	+0.5	
NNSB	baz=318			*eS*		Sg	20 51 39.8	+0.4	
FUSS	**Fushou** baz=289	0.46	289	*eP*		Pg	20 51 34.2	+0.5	
FUSS	baz=289			S		Sg	20 51 40.6	+0.9	
NNS	**Nan Shan** baz=318	0.47	318	P		Pg	20 51 34.1	+0.3	
NNS	baz=318			*i* S		Sg	20 51 40.3	+0.4	
LATG	**Datong** baz=338	0.47	338	*eP*		Pg	20 51 34.3	+0.5	
LATG	baz=338			S		Sb	20 51 41.1	-1.1	
WARBT	**Fenglin Townsh** baz=226	0.48	219	*eP*		Pg	20 51 34.5	+0.5	
WARBT	baz=226			*eS*		Sg	20 51 40.3	-0.1	
ESAO	**Su ao** baz=13	0.49	13	*eP*		Pb	20 51 36.0	+0.6	
ESAO	baz=13			*eS*		Sg	20 51 41.6	+1.0	
CHGB	**Renai** baz=257	0.50	266	P		Pg	20 51 34.3	0.0	
CHGB	baz=257			*eS*		Sg	20 51 39.8	-1.1	
EGFH	**Guangfu** baz=222	0.50	212	*eP*		Pg	20 51 35.1	+0.8	
EGFH	baz=222			*eS*		Sg	20 51 41.6	+0.7	
OWD	**Renai** baz=254	0.52	254	*eP*		Pg	20 51 35.2	+0.6	
OWD	baz=254			S		Sg	20 51 41.7	+0.2	
TWT	**Tachien** baz=287	0.52	288	P		Pb	20 51 35.7	-0.3	
TWT	baz=287			*eS*		Sb	20 51 42.6	-1.1	
TWC	**Suao** baz=8.0	0.53	13	*eP*		Pg	20 51 35.4	+0.6	
TWC	baz=8.0			*eS*		Sb	20 51 43.0	-0.7	
TDCB	**Techi** baz=287	0.54	287	*eP*		Pb	20 51 35.8	-0.4	
TDCB	baz=287			*eS*		Sg	20 51 42.4	+0.3	
NDS	**Dongshan** baz=358	0.54	360	P		Pb	20 51 35.8	-0.4	
NDS	baz=358			*eS*		Sg	20 51 43.0	+1.0	
NDT	**Datong Townshi** baz=339	0.54	340	*eP*		Pg	20 51 35.7	+0.6	
NDT	baz=339			*eS*		Sb	20 51 43.2	-0.9	
ENTT	**Nioudou** baz=345	0.56	346	*eP*		Pb	20 51 37.0	+0.3	
ENTT	baz=345			*eS*		Sg	20 51 43.7	+0.9	
WUSB	**Renai** baz=259	0.56	259	*eP*		Pg	20 51 36.0	+0.5	
WUSB	baz=259			*eS*		Sb	20 51 43.9	-0.9	
TWE	**Neicheng** baz=357	0.62	356	*eP*		Pb	20 51 37.6	-0.1	
TWE	baz=357			*eS*		Sg	20 51 45.3	+0.4	
VWDT	**VWDT** baz=230	0.63	237	*eP*		Pb	20 51 37.5	-0.2	
VWDT	baz=230			*eS*		Sg	20 51 44.8	-0.2	
YHNB	**Yeheng** baz=331	0.65	331	*eP*		Pg	20 51 37.1	-0.2	
YHNB	baz=331			*eS*		Sg	20 51 46.1	+0.3	
NSK	**Sanguang** baz=331	0.67	330	*eP*		Pb	20 51 38.3	-0.1	
NSK	baz=331			*i* S		Sg	20 51 46.7	+0.5	
ILA	**Ilan** baz=2.0	0.67	2	*eP*		Pg	20 51 38.0	+0.5	
ILA	baz=2.0			*eS*		Sb	20 51 47.7	-0.1	
FUSB	**Fushanzhiwuyua** baz=349	0.67	350	*eP*		Pb	20 51 38.7	+0.2	
FUSB	baz=349			*eS*		Sg	20 51 47.2	+0.8	
NWLT	**Wulai** baz=331	0.71	344	*eP*		Pb	20 51 39.0	-0.2	
NWLT	baz=331			*eS*		Sg	20 51 48.2	+0.7	
WHP	**Taichung City** baz=284	0.73	285	*eP*		Pb	20 51 39.5	0.0	
WHP	baz=284			*eS*		Sb	20 51 49.0	-0.7	
WCS	**Beigang Elemen** baz=259	0.74	267	*eP*		Pb	20 51 39.9	+0.2	
WCS	baz=259			*eS*		Sg	20 51 48.2	-0.3	
SSLB	**Suanglung** baz=257	0.76	246	*eP*		Pb	20 51 39.9	-0.2	
SSLB	baz=257			*eS*		Sg	20 51 49.6	+0.4	
NFF	**Wufeng Townshi** baz=314	0.77	314	*eP*		Pb	20 51 39.9	-0.2	
NFF	baz=314			S		Sg	20 51 49.8	+0.4	
SMLT	**Sun Moon Lake** baz=255	0.78	254	*eP*		Pb	20 51 40.5	+0.1	
SMLT	baz=255			S		Sb	20 51 50.9	-0.2	
YULB	**Yu-li** baz=222	0.80	209	*eP*		Pg	20 51 39.6	-0.4	
YULB	baz=222			*eS*		Sb	20 51 52.6	+1.0	
TYC	**Yuchr** baz=257	0.81	257	*eP*		Pb	20 51 41.2	+0.4	
TYC	baz=257			*eS*		Sg	20 51 50.9	+0.1	
ECBN	**Changbin** baz=187	0.81	198	*eP*		Pb	20 51 41.5	+0.6	
ECBN	baz=187			*eS*		Sn	20 51 53.8	-0.6	
EYUL	**Yuli** baz=221	0.83	206	*eP*		Pb	20 51 41.9	+0.7	
TWF1	**Yuli** baz=223	0.83	208	*eP*		Pb	20 51 41.4	+0.1	
LIOB	**Emei** baz=310	0.84	311	*eP*		Pg	20 51 41.1	+0.3	
LIOB	baz=310			*eS*		Sb	20 51 52.2	-0.6	
NSTT	**Nanjuang** baz=309	0.84	309	*eP*		Pb	20 51 41.4	0.0	
NSTT	baz=309			*eS*		Sg	20 51 51.9	0.0	
TIPB	**Shuangxi** baz=356	0.88	6	*eP*		Pb	20 51 42.6	+0.5	
TIPB	baz=356			*eS*		Sb	20 51 55.0	+1.0	
NHDH	**Xindian Distri** baz=337	0.88	349	*eP*		Pb	20 51 42.7	+0.6	
NHDH	baz=337			S		Sb	20 51 53.9	0.0	
WHYT	**Xinyi Township** baz=251	0.89	243	*eP*		Pb	20 51 42.4	+0.2	
WHYT	baz=251			*eS*		Sb	20 51 53.8	-0.3	
TWA	**Mucha** baz=351	0.89	352	*eP*		Pn	20 51 43.0	-0.3	
TWA	baz=351			S		Sb	20 51 54.1	-0.1	
TWQ1	**Liyutan** baz=298	0.90	286	*eP*		Pn	20 51 44.2	+0.8	
TWQ1	baz=298			*eS*		Sb	20 51 55.1	+0.6	
NSY	**Sanyi** baz=290	0.93	290	*eP*		Pn	20 51 43.8	-0.1	
NSY	baz=290			*eS*		Sb	20 51 56.1	+0.8	
TWB1	**Santiao Chiao** baz=5.0	0.94	15	*eP*		Pb	20 51 43.2	+0.1	
TWB1	baz=5.0			*i* S		Sg	20 51 55.5	+0.5	
WJS	**Zhushan** baz=254	0.95	253	*eP*		Pn	20 51 44.4	+0.3	
WJS	baz=254			*eS*		Sn	20 51 57.1	-0.6	
CHKH	**Chenggong** baz=191	0.95	198	P		Pb	20 51 43.4	+0.2	
CHKH	baz=191			*eS*		Sn	20 51 57.1	-0.6	
NHY	**Taipei** baz=348	0.95	352	*eP*		Pn	20 51 45.6	+1.5	
NMLH	**Miaoli** baz=297	0.95	298	*eP*		Pn	20 51 46.0	+1.8	
SBCB	**Hsinchu** baz=316	0.96	316	*eP*		Pn	20 51 44.9	+0.6	
SBCB	baz=316			*eS*		Sb	20 51 56.9	+0.6	
WNT	**Mingjian** baz=253	0.97	257	*eP*		Pn	20 51 45.0	+0.6	
WNT	baz=253			*eS*		Sn	20 51 58.0	-0.3	
NWF	**Wu-fen Shan** baz=352	0.97	3	*eP*		Pn	20 51 44.5	0.0	
NWF	baz=352			S		Sb	20 51 56.8	+0.1	
WFSB	**Wu-fen Shan** baz=353	0.97	3	*eP*		Pn	20 51 44.5	+0.1	
WFSB	baz=353			*eS*		Sg	20 51 56.4	+0.4	
FULB	**Fuli** baz=223	0.97	204	*eP*		Pg	20 51 43.7	+0.4	
FULB	baz=223			*eS*		Sn	20 51 58.7	+0.2	
HSN	**Hsinchu** baz=318	0.98	316	*eP*		Pn	20 51 44.6	+0.1	
NCUH	**Zhongli** baz=330	0.99	331	*eP*		Pn	20 51 45.8	+1.0	
NCUH	baz=330			*eS*		Sn	20 51 58.2	-0.8	
SXI1	**Grass Mountain** baz=345	1.00	8	*eP*		Pg	20 51 44.0	0.0	
WDJ	**Dajia District** baz=295	1.01	285	*eP*		Pn	20 51 46.6	+1.6	
WDJ	baz=295			*eS*		Sn	20 52 00.0	+0.6	
ALS	**Alishan** baz=237	1.02	235	*eP*		Pn	20 51 45.5	+0.1	
ALS	baz=237			*eS*		Sn	20 51 59.6	-0.3	
TWS1	**Kuangyinshan** baz=343	1.04	345	*eP*		Pn	20 51 46.4	+1.0	
TWS1	baz=343			*eS*		Sb	20 51 59.2	+0.7	
CHKT	**Chengkung** baz=192	1.04	198	*eP*		Pg	20 51 45.0	+0.3	
CHKT	baz=192			*eS*		Sn	20 52 00.5	+0.4	
TNOU	**National Taiwa** baz=342	1.05	3	*eP*		Pb	20 51 45.4	+0.4	
TNOU	baz=342			*eS*		Sn	20 52 00.4	+0.1	
EHD	**Haiduan** baz=220	1.05	207	*eP*		Pg	20 51 45.0	+0.2	
EHD	baz=220			*eS*		Sb	20 51 59.6	+0.7	
YM01	**YM01** baz=336	1.05	353	*eP*		Pn	20 51 46.6	+0.9	
YM01	baz=336			*eS*		Sb	20 51 59.5	+0.4	
WCHH	**Zhanghua** baz=270	1.06	269	*eP*		Pn	20 51 47.1	+1.5	
CHN5	**Tsauling** baz=235	1.07	243	*eP*		Pn	20 51 46.0	+0.1	
CHN5	baz=235			*eS*		Sn	20 52 01.0	0.0	
NTST	**Danshui** baz=353	1.09	347	*eP*		Pn	20 51 47.2	+1.2	
NTST	baz=353			*eS*		Sb	20 52 00.6	+0.6	
ECS	**Chishang** baz=219	1.10	205	*eP*		Pn	20 51 46.5	+0.4	
ECS	baz=219			*eS*		Sn	20 52 02.1	+0.7	
ANP	**Anpu** baz=358	1.10	351	*eP*		Pn	20 51 46.8	+0.5	
ANP	baz=358			*eS*		Sb	20 52 00.9	+0.5	
ELDTW	**Lidau** baz=229	1.11	216	*eP*		Pg	20 51 45.9	0.0	
ELDTW	baz=229			*eS*		Sb	20 52 01.2	+0.6	
WGK	**Gukeng** baz=250	1.13	249	*eP*		Pn	20 51 47.2	+0.6	
WGK	baz=250			*eS*		Sn	20 52 02.7	+0.4	
WDLH	**Douliu** baz=251	1.15	250	*eP*		Pn	20 51 48.0	+1.1	
WDLH	baz=251			*eS*		Sn	20 52 03.3	+0.5	
JYNG	**Yonagunijimaku**	1.18	72	*eP*		Pn	20 51 47.9	+0.7	
TWY	**Chenhua** baz=337	1.18	355	*eP*		Pn	20 51 48.4	+1.1	
EDH	**Donghe** baz=187	1.18	199	*eP*		Pb	20 51 46.3	-0.9	
EDH	baz=187			*eS*		Sb	20 52 03.0	+0.5	
WCKO	**Fanlu** baz=240	1.21	238	P		Pg	20 51 49.4	+1.5	
WCKO	baz=240			*eS*		Sn	20 52 06.2	+1.9	
YOJ	**Yonaguni jima** baz=71	1.23	73	*eP*		Pn	20 51 47.6	-0.4	
YOJ	baz=71			*eS*		Sn	20 52 06.2	+1.3	
YOJ	**Yonaguni jima**	1.23	73	*eP*		Pn	20 51 48.0	0.0	
YOJ	**Yonaguni jima** comp=E,3.0nm,1.7s,comp=N,3.0nm,5.3s	1.23	73	A		A	20 51 48.0		
WRL	**Guolierlin Hig** baz=262	1.24	261	*eP*		Pg	20 51 48.8	+0.3	
WRL	baz=262			*eS*		Sn	20 52 06.7	+1.7	

IDC **06** *20:51:22.9±0.8,24˚.15N×121˚.94E, h0km, mb3.5/12, mbtmp3.5/14, ML3.1/2, Error ellipse: s-maj=26.1km s-min=17.5km az=65.0*
TAP **06** *20:51:24.8,24˚.10N×121˚.69E, h9km, ML4.0, C*
ASIES **06** *20:51:24.8,24˚.10N×121˚.69E, h9km, ML4.0, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.69; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-0.26; $M_{r\theta}$8.98; $M_{r\phi}$-0.64; $M_{\theta\phi}$9.69; Fault plane solution: $M_0$13.23810×10^{21} NP1: ϕ_s42.83000°,δ88.20000°,λ89.49000°. NP2:ϕ_s238.59000°, δ1.87000°,λ105.75000°. Principal axes: T Plg46.7970°, Azm312.3080°; N Plg0.5080°, Azm42.8480°; P Plg43.1980°, Azm133.3250°;*
JMA **06** *20:51:25.2±0.3,24˚.1N±0˚.7×121˚.7E±0˚.6, h0km±2km, MV3.5/13, TAIWAN REGION*
ISC 06 20:51:24.6±0.8,**24˚.10N**±0˚.01×**121˚.72E**±0˚.02,**h9**km±5km, **n154**,σ0≥**82**/253,**mb3.5**/12,**3D**,**Taiwan**

STYH	**Taoyuan**	**1.26**	**223**	*eP*	**Pg**	**20 51 49.2 +0.3**
	baz=227					
STYH				*eS*	**Sn**	**20 52 06.3 +0.8**
	baz=227					
CHN2	**Minshiung**	**1.27**	**244**	*eP*	**Pg**	**20 51 50.6 +1.7**
	baz=245					
CHN2				*eS*	**Sn**	**20 52 07.7 +2.0**
	baz=245					
TPUB	**Ta-pu**	**1.27**	**232**	*eP*	**Pg**	**20 51 49.1 0.0**
	baz=223					
TPUB				*eS*	**Sn**	**20 52 06.0 +0.2**
	baz=223					
WTK	**Tuku**	**1.28**	**252**	*eP*	**Pg**	**20 51 49.8 +0.5**
	baz=253					
WTK				*eS*	**Sn**	**20 52 07.2 +1.2**
	baz=253					
WTP	**Ta-pu**	**1.32**	**230**	*eP*	**Pg**	**20 51 50.1 +0.1**
	baz=233					
WTP				*eS*	**Sn**	**20 52 08.3 +1.4**
	baz=233					
TWK	**Hsinying**	**1.40**	**234**	*eP*	**Pg**	**20 51 52.5 +1.0**
	baz=238					
TWG	**Pinlang**	**1.40**	**205**	*eP*	**Pn**	**20 51 49.5 -0.9**
	baz=191					
TWGBT	**Beinan**	**1.40**	**205**	*eP*	**Pn**	**20 51 49.6 -0.7**
	baz=208					
TWGBT				*eS*	**Sn**	**20 52 09.5 +0.6**
	baz=208					
CHN1	**Nanshi**	**1.42**	**231**	*eP*	**Pg**	**20 51 52.6 +0.8**
	baz=234					
CHN1				*eS*	**Sg**	**20 52 12.1 +1.8**
	baz=234					
SNST	**Tainan City**	**1.42**	**232**	*eP*	**Pg**	**20 51 52.1 +0.3**
	baz=236					
SNST				*eS*	**Sg**	**20 52 11.0 +0.8**
	baz=236					
TTN	**Taitung**	**1.44**	**202**	*eP*	**Pb**	**20 51 51.6 +0.1**
	baz=205					
WSF	**Szhu**	**1.44**	**252**	*eP*	**Pg**	**20 51 52.3 0.0**
	baz=253					
WSF				*i* S	**Sg**	**20 52 12.4 +1.4**
	baz=253					
SGST	**Jiashian**	**1.45**	**226**	*eP*	**Pb**	**20 51 51.8 0.0**
	baz=229					
SGST				*eS*	**Sg**	**20 52 12.1 +0.9**
	baz=229					
SLGT	**Liugui**	**1.47**	**222**	*eP*	**Pg**	**20 51 53.4 +0.5**
	baz=226					
SLGT				*eS*	**Sg**	**20 52 11.9 -0.1**
	baz=226					
WSL	**Shuilin Townsh**	**1.48**	**248**	*eP*	**Pb**	**20 51 52.4 +0.2**
	baz=250					
ICHU	**Yijhu**	**1.51**	**241**	*eP*	**Pg**	**20 51 53.3 -0.3**
	baz=244					
ICHU				*eS*	**Sg**	**20 52 15.9 +2.8**
	baz=244					
PCYT	**Pengchaiyu**	**1.56**	**12**	*eP*	**Pb**	**20 51 53.7 0.0**
	baz=4.0					
CHN8	**Yiju**	**1.57**	**242**	*eP*	**Pg**	**20 51 54.4 -0.4**
	baz=245					
CHN8				*eS*	**Sg**	**20 52 16.7 +1.6**
	baz=245					
SCST	**Cishan**	**1.65**	**223**	*eP*	**Pg**	**20 51 56.4 +0.1**
	baz=228					
SCST				*eS*	**Sg**	**20 52 19.7 +2.1**
	baz=228					
ECL	**Taimali**	**1.65**	**205**	*eP*	**Pn**	**20 51 54.1 +0.3**
	baz=194					
TSMG	**Majia**	**1.70**	**216**	*eP*	**Pb**	**20 51 56.1 +0.1**
	baz=233					
TWM1	**Shoushan**	**1.74**	**223**	*eP*	**Pg**	**20 51 59.2 +1.2**
	baz=228					
TSCK	**Chigu Township**	**1.77**	**238**	*eP*	**Pb**	**20 51 56.9 -0.4**
	baz=241					
TSCK				*i* S	**Sg**	**20 52 21.5 0.0**
	baz=241					
MASBT	**Mashibuluo**	**1.78**	**214**	*eP*	**Pb**	**20 51 56.9 -0.5**
	baz=216					
MASBT				*eS*	**Sg**	**20 52 22.0 +0.1**
	baz=216					
EAST	**Anshuo**	**1.88**	**205**	*eP*	**Pn**	**20 51 58.2 +1.2**
	baz=195					
TAWH	**Dawu Township**	**1.91**	**204**	*eP*	**Pn**	**20 51 57.0 -0.3**
	baz=194					
HATJ	**Hateruma jima**	**1.91**	**91**	*eS*	**Sg**	**20 52 25.8 -0.2**
SCZT	**Fangliau**	**1.99**	**211**	*eP*	**Pb**	**20 52 00.6 -0.4**
	baz=211					
SCZT				*eS*	**Sb**	**20 52 26.7 +0.8**
	baz=211					
PHUB	**P'eng-hu**	**2.05**	**254**	*eP*	**Pn**	**20 51 59.8 +0.6**
	baz=257					
PNG	**Penghu**	**2.05**	**256**	*eP*	**Pn**	**20 52 00.4 +1.2**
	baz=258					
PNG				*eS*	**Sb**	**20 52 27.6 0.0**
	baz=258					
LAY	**Lan-yu**	**2.05**	**184**	*eP*	**Pn**	**20 51 58.2 -1.1**
	baz=189					
SLIU	**Shizi**	**2.05**	**205**	*eP*	**Pn**	**20 52 00.6 +1.2**
	baz=196					
WDGT	**Dungji**	**2.06**	**247**	*eP*	**Pn**	**20 52 00.8 +1.3**
	baz=250					
JKRS	**Kuro-shima**	**2.10**	**86**	P	**Pn**	**20 52 01.2 +1.3**
JIJ	**Ishigaki jima**	**2.23**	**83**	P	**Pn**	**20 52 02.4 +0.6**
VWUC	**VWUC**	**2.25**	**294**	*eP*	**Pn**	**20 52 02.1 +0.1**
	baz=293					
VWUC				*eS*	**Sn**	**20 52 29.0 -0.9**
	baz=293					
HEN	**Hengchun**	**2.27**	**204**	*eP*	**Pn**	**20 52 03.2 +0.9**
	baz=196					
VCHM	**Qimei**	**2.28**	**248**	*eP*	**Pn**	**20 52 03.4 +1.0**
	baz=236					
JISG	**Ishigakijimahi**	**2.42**	**78**	P	**Pn**	**20 52 05.0 +0.7**
PTMZ	**Houxiangcun**	**2.54**	**292**	*eP*	**Pn**	**20 52 06.3 +0.2**
	baz=292					
MATB	**Ma-tsu**	**2.60**	**322**	*eP*	**Pn**	**20 52 07.0 +0.2**
	baz=318					
MATB				*eS*	**Sn**	**20 52 39.5 +0.9**
	baz=318					
JTJ	**Tarama**	**2.77**	**78**	*eP*	**Pn**	**20 52 10.7 +1.4**
LYJJ	**Jianjiangzhen**	**3.02**	**324**	*eP*	**Pn**	**20 52 12.7 +0.1**
	baz=320					
LYJJ				*eS*	**Sn**	**20 52 51.1 +2.2**
	baz=320					
KNMB	**Chin-men Tao**	**3.06**	**278**	*eP*	**Pn**	**20 52 13.2 0.0**
	baz=277					
KNMB				S	**Sn**	**20 52 51.9 +2.0**
	baz=277					
XPSS	**Dashiqiu**	**3.14**	**334**	*eP*	**Pn**	**20 52 15.0 +0.7**
	baz=329					
MHZQ	**Yeshan**	**3.15**	**310**	*eP*	**Pn**	**20 52 14.1 -0.2**
	baz=309					
AXDP	**Jialang**	**3.51**	**284**	*eP*	**Pn**	**20 52 19.8 +0.5**
	baz=284					
ZPLA	**Ao Xicun**	**3.63**	**268**	*eP*	**Pn**	**20 52 21.7 +0.7**
	baz=269					
DSXP	**Dongshan**	**3.95**	**265**	*eP*	**Pn**	**20 52 25.9 +0.6**
	baz=266					
SXFK	**Yanhouchang**	**4.34**	**303**	*eP*	**Pn**	**20 52 31.4 +0.5**
	baz=303					
JOW	**Kunigami**	**6.52**	**64**	Pn	**Pn**	**20 52 57.7 -3.1**
	comp=N,1.0nm,0.3s,baz=7.5,slow=13,SNR=1.5					
	comp=N,28nm,0.9s					
KSRS	**Korea Array**	**14.34**	**20**	Pn	**Pn**	**20 54 44.9 -2.9**
	comp=N,0.1nm,0.3s,baz=200,slow=11,SNR=2.1					
	comp=N,1.0nm,0.8s					
CMAR	**Chiang Mai Arr**	**21.94**	**260**	P	**P**	**20 56 20.6 +2.0**
	comp=N,0.3nm,0.3s,baz=35,slow=3.6,SNR=1.8					
	comp=N,0.3nm,0.3s					
SONM	**Songino Array**	**26.64**	**337**	P	**P**	**20 57 04.1 +0.4**
	comp=N,0.6nm,0.8s,baz=146,slow=10,SNR=2.0					
	comp=N,0.6nm,0.8s					
MKAR	**Makanchi Array**	**38.74**	**316**	P	**P**	**20 58 49.7 +0.5**
	comp=N,0.3nm,0.5s,baz=101,slow=10.0,SNR=8.8					
	comp=N,0.3nm,0.5s					
ZALV	**Zalesovo Beam**	**40.58**	**327**	P	**P**	**20 59 04.4 0.0**
	comp=N,0.3nm,0.3s,baz=112,slow=11,SNR=2.6					
	comp=N,0.3nm,0.3s					
KURBB	**Kurchatov Arra**	**42.49**	**320**	P	**P**	**20 59 19.7 -0.4**
	comp=N,0.2nm,0.5s,baz=108,slow=9.5,SNR=2.2					
	comp=N,0.2nm,0.5s					
WRA	**Warramunga Arr**	**45.47**	**163**	P	**P**	**20 59 42.6 -1.7**
	comp=N,0.6nm,0.7s,baz=345,slow=8.9,SNR=3.5					
	comp=N,0.6nm,0.7s					
BVAR	**Borovoye Array**	**48.05**	**321**	P	**P**	**21 00 04.5 +0.3**
	comp=N,0.4nm,0.5s,baz=91,slow=8.6,SNR=2.8					
	comp=N,0.4nm,0.5s					
ASAR	**Alice Springs**	**48.93**	**165**	P	**P**	**21 00 11.2 0.0**
	comp=N,0.2nm,0.6s,baz=336,slow=7.2,SNR=4.0					
	comp=N,0.2nm,0.6s					

STKA	**Stephens Creek**	**58.81**	**160**	P	**P**	**21 01 23.6 +0.2**
	comp=N,1.2nm,0.8s,baz=337,slow=5.2,SNR=3.0					
	comp=N,1.2nm,0.8s					
ILAR	**Eielson Array**	**69.07**	**27**	P	**P**	**21 02 28.2 -2.3**
	comp=N,0.2nm,0.5s,baz=205,slow=4.0,SNR=2.5					
	comp=N,0.2nm,0.5s					
FINES	**FINESS Array B**	**71.77**	**330**	P	**P**	**21 02 47.6 +0.5**
	comp=N,0.6nm,0.7s,baz=60,slow=8.2,SNR=3.7					
	comp=N,0.6nm,0.7s					
YKA	**Yellowknife Ar**	**82.86**	**23**	P	**P**	**21 03 49.2 0.0**
	comp=N,0.3nm,0.7s,baz=322,slow=4.2,SNR=6.2					
	comp=N,0.3nm,0.7s					

TAP 06 20:55:52.5, 24.02N×121.61E, h11km, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.07**	**346**	*i* P		Pg	20 55 55.5	+0.7
	baz=352							
TWD				*i* S		Sg	20 55 57.5	+1.0
	baz=352							
ETM	**Tongmen**	**0.12**	**246**	*i* P		Pb	20 55 56.6	-0.2
	baz=245							
ETM				*i* S		Sg	20 55 58.4	+0.7
	baz=245							
ETL	**Fush Village**	**0.14**	**3**	P		Pg	20 55 55.6	-0.3
	baz=3.0							
ETL				S		Sg	20 55 59.5	+1.3
	baz=3.0							
NACB	**Ninganchiao**	**0.16**	**354**	*i* P		Pg	20 55 55.9	-0.2
	baz=353							
NACB				*i* S		Sg	20 55 59.8	+1.2
	baz=353							
LXIB	**Xiulin Townshi**	**0.18**	**272**	P		Pb	20 55 57.3	-0.7
	baz=271							
LXIB				*i* S		Sg	20 56 00.8	+1.3
	baz=271							
ESL	**Shilin**	**0.26**	**220**	*i* P		Pb	20 55 58.8	-0.3
	baz=217							
ESL				*i* S		Sg	20 56 02.2	+0.8
	baz=217							
WHF	**Hehuan Shan**	**0.34**	**292**	*eP*		Pg	20 56 00.0	+0.5
	baz=292							
WHF				S		Sb	20 56 05.9	-0.6
	baz=292							
WARBT	**Fenglin Townsh**	**0.36**	**215**	*eP*		Pb	20 56 01.0	+0.1
	baz=215							
WARBT				*eS*		Sb	20 56 08.2	+1.5
	baz=215							
CHGB	**Renai**	**0.41**	**276**	*eP*		Pg	20 56 01.1	+0.6
	baz=276							
OWD	**Renai**	**0.41**	**261**	*eP*		Pb	20 56 01.4	-0.4
	baz=261							
ENA	**Nanau**	**0.43**	**16**	*eP*		Pb	20 56 01.5	-0.5
	baz=16							
WUSB	**Renai**	**0.46**	**267**	*eP*		Pb	20 56 02.4	-0.2
	baz=266							
WUSB				*eS*		Sb	20 56 09.7	+0.3
	baz=266							
NNSB	**Datong**	**0.46**	**333**	*eP*		Pb	20 56 02.1	-0.6
	baz=332							
NNSB				*eS*		Sb	20 56 09.9	+0.3
	baz=332							
NNS	**Nan Shan**	**0.48**	**333**	*eP*		Pb	20 56 02.4	-0.5
	baz=333							

*IDC **06** 20:56:20.6±0.5, 23.95N×121.71E, h0km, mb4.3/27, mbtmp4.3/31, ML3.5/4, MS4.1/31, Error ellipse: s-maj=14.7km s-min=12.4km az=73.0*

*NEIC **06** 20:56:22.5, 24.05N×122.07E, h30km, Moment Tensor Solution. Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr0.04; Mθθ-1.38; Mϕϕ 1.34; Mrθ 0.02; Mθϕ 0.20; Mϕr-0.49; Fault plane solution: M0 1.45000×10^16 NP1: ϕs137.76000°, δ78.82000°, λ165.04000°. NP2: ϕs230.73000°, δ75.33000°, λ11.56000°. Principal axes: T 1.5143, Plg18.0000°, Azm94.0000°; N -0.1204, Plg71.0000°, Azm282.0000°; P -1.3939, Plg2.0000°, Azm185.0000°;*

*TAP **06** 20:56:22.9, 24.06N×121.68E, h7km, ML4.9, C*

*NEIC **06** 20:56:22.4±1.9, 24.05N±0.02×121.75E±0.04, h8km±2km, mb4.8/124, Mww4.7/9, Error ellipse: s-maj=5.8km s-min=2.9km az=102.0*

*ASIES **06** 20:56:22.9, 24.06N×121.68E, h7km, ML4.9, Mw4.6, Moment Tensor Solution. Moment tensor: Scale 10^22 Nm; Mrr-5.45; Mθθ-4.14; Mϕϕ 9.58; Mrθ 4.26; Mθϕ-0.72; Mϕr 2.19; Fault plane solution: M0 9.63015×10^22 NP1: ϕs209.73000°, δ63.88000°, λ-45.15000°. NP2: ϕs323.61000°, δ50.46000°, λ-145.19000°. Principal axes: T Plg7.9820°, Azm269.5010°; N Plg39.2850°, Azm6.0880°; P Plg49.5920°, Azm170.0210°;*

*NEIC **06** 20:56:22.5, 24.05N×121.74E, h30km*

*JMA **06** 20:56:23.1±0.3, 24.1N±0.4×121.7E±0.8, h2km±2km, MD4.8/18, MW4.7/18, TAIWAN REGION*

*NIED **06** 20:56:23.1, 24.06N×121.69E, h2km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr-8.13; Mθθ-2.01; Mϕϕ 10.14; Mrθ-0.80; Mθϕ 0.67; Mϕr-2.96; Fault plane solution: M0 9.66000×10^15 NP1: ϕs8.00000°, δ54.00000°, λ-84.00000°. NP2: ϕs177.00000°, δ36.00000°, λ-99.00000°.*

*BJI **06** 20:56:23.7±0.0, 24.07N×121.66E, h8km, mb4.3/55, mB4.7/32, ML4.6/12, Ms4.8/68, Ms7 4.7/62*

ISC 06 20:56:23.3±0.5, 24.05N±0.01×121.71E±0.02, h13km±2km, n415, σ1§60/531, mb4.7/104, MS4.3/33, 57C-34D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**289**	⇑*i*P		**Pg**	**20 56 25.1**	**-1.2**
	baz=287							
TWD				*i* S		**Sg**	**20 56 26.5**	**-2.0**
	baz=287							
ETL	**Fush Village**	**0.14**	**326**	⇓*i*P		**Pg**	**20 56 25.7**	**-1.1**
	baz=329							
ETL				*i* S		**Sg**	**20 56 27.7**	**-1.6**
	baz=329							
NACB	**Ninganchiao**	**0.16**	**322**			**Pg**	**20 56 25.4**	**-1.8**
NACB					Sg	**Sg**	**20 56 28.1**	**-1.8**
NACB	**Ninganchiao**	**0.16**	**322**		P	**Pg**	**20 56 25.9**	**-1.3**
NACB	**Ninganchiao**	**0.16**	**322**	⇑*i*P		**Pg**	**20 56 26.2**	**-1.0**
	baz=324							
NACB				*i* S		**Sg**	**20 56 28.1**	**-1.8**
	baz=324							
ETM	**Tongmen**	**0.21**	**248**	⇑*i*P		**Pg**	**20 56 27.2**	**-0.8**
	baz=245							
ETM				S		**Sg**	**20 56 29.8**	**-1.3**
	baz=245							
EHP	**Heping Village**	**0.27**	**7**	P		**Pg**	**20 56 28.3**	**-0.6**
	baz=359							
EHP				S		**Sg**	**20 56 32.1**	**-0.6**
	baz=359							
LXIB	**Xiulin Townshi**	**0.27**	**265**	⇑*i*P		**Pg**	**20 56 28.1**	**-1.0**
	baz=254							
LXIB				S		**Sg**	**20 56 31.8**	**-1.1**
	baz=254							
EAHA	**Aohua**	**0.28**	**6**	⇓*i*P		**Pg**	**20 56 28.6**	**-0.6**
	baz=5.0							
EAHA				S		**Sg**	**20 56 32.4**	**-0.8**
	baz=5.0							
SHUL	**Shoufeng**	**0.29**	**207**	⇑*i*P		**Pb**	**20 56 29.8**	**-0.5**
	baz=210							
SHUL				S		**Sb**	**20 56 34.5**	**-0.5**
	baz=210							
ESL	**Shilin**	**0.34**	**227**	⇑*i*P		**Pg**	**20 56 29.6**	**-0.6**
	baz=234							
ESL				*eS*		**Sg**	**20 56 33.7**	**-1.1**
	baz=234							
TEGC	**Jichi Village**	**0.37**	**204**	⇓*i*P		**Pb**	**20 56 31.8**	**+0.1**
	baz=204							
TEGC				*eS*		**Sb**	**20 56 39.7**	**+2.4**
	baz=204							
ENA	**Nanau**	**0.38**	**5**	⇓*i*P		**Pg**	**20 56 30.5**	**-0.5**
	baz=5.0							
ENA				S		**Sg**	**20 56 35.5**	**-0.7**
	baz=5.0							
EWUT	**Wuta**	**0.40**	**9**	⇓*i*P		**Pg**	**20 56 30.9**	**-0.4**
	baz=8.0							
EWUT				*eS*		**Sg**	**20 56 36.1**	**-0.7**
	baz=8.0							
WHF	**Hehuan Shan**	**0.41**	**284**	⇑P		**Pg**	**20 56 30.9**	**-0.8**
	baz=283							
WHF				S		**Sg**	**20 56 36.2**	**-1.2**
	baz=283							

WARBT	**Fenglin Townsh**	**0.44**	**222**	⇑*i*P	**Pg**	**20 56 31.4 -0.6**
	baz=233					
WARBT				*eS*	**Sg**	**20 56 36.8 -1.0**
	baz=233					
EGFH	**Guangfu**	**0.45**	**214**	⇑*i*P	**Pg**	**20 56 32.0 -0.2**
	baz=226					
EGFH				*eS*	**Sb**	**20 56 38.8 -0.9**
	baz=226					
FUSS	**Fushou**	**0.47**	**296**	⇑*i*P	**Pg**	**20 56 32.1 -0.5**
	baz=294					
FUSS				*eS*	**Sg**	**20 56 37.1 -1.9**
	baz=294					
NNSB	**Datong**	**0.48**	**322**	⇑*i*P	**Pg**	**20 56 32.3 -0.6**
	baz=321					
NNSB				S	**Sg**	**20 56 38.4 -0.9**
	baz=321					
CHGB	**Renai**	**0.49**	**272**	⇑*i*P	**Pg**	**20 56 32.5 -0.5**
	baz=271					
CHGB				S	**Sg**	**20 56 38.9 -0.6**
	baz=271					
OWD	**Renai**	**0.49**	**260**	⇑*i*P	**Pg**	**20 56 32.5 -0.6**
	baz=259					
OWD				*eS*	**Sg**	**20 56 38.6 -1.1**
	baz=259					
NNS	**Nan Shan**	**0.50**	**322**	⇑*i*P	**Pg**	**20 56 32.5 -0.6**
	baz=321					
NNS				S	**Sg**	**20 56 38.8 -1.0**
	baz=321					
LATG	**Datong**	**0.51**	**342**	⇓*i*P	**Pg**	**20 56 33.0 -0.5**
	baz=339					
LATG				S	**Sg**	**20 56 39.5 -0.9**
	baz=339					
TWT	**Tachien**	**0.53**	**293**	⇑*i*P	**Pb**	**20 56 33.5 -1.0**
	baz=291					
TWT				*eS*	**Sb**	**20 56 40.4 -1.7**
	baz=291					
WUSB	**Renai**	**0.54**	**264**	⇑*i*P	**Pg**	**20 56 33.5 -0.4**
	baz=264					
WUSB				S	**Sg**	**20 56 39.9 -1.2**
	baz=264					
TDCB	**Techi**	**0.54**	**293**	⇑*i*P	**Pg**	**20 56 33.6 -0.4**
	baz=291					
TDCB				S	**Sg**	**20 56 40.5 -0.7**
	baz=291					
ESAO	**Su ao**	**0.54**	**13**	⇓P	**Pg**	**20 56 33.5 -0.5**
	baz=10.0					
ESAO				S	**Sg**	**20 56 40.4 -0.8**
	baz=10.0					
EOS4	**EOS4**	**0.56**	**82**	*eP*	**Pn**	**20 56 37.3 +0.7**
	baz=92					
TWC	**Suao**	**0.58**	**13**	⇓*i*P	**Pg**	**20 56 34.2 -0.4**
	baz=2.0					
TWC				*eS*	**Sg**	**20 56 42.0 -0.3**
	baz=2.0					
NDT	**Datong Townshi**	**0.58**	**342**	⇑P	**Pb**	**20 56 34.4 -0.9**
	baz=339					
NDT				*i* S	**Sb**	**20 56 42.3 -1.3**
	baz=339					
NDS	**Dongshan**	**0.59**	**1**	⇓*i*P	**Pg**	**20 56 34.4 -0.3**
	baz=359					
NDS				*eS*	**Sg**	**20 56 42.3 -0.2**
	baz=359					
VWDT	**VWDT**	**0.59**	**241**	⇑*i*P	**Pg**	**20 56 34.5 -0.3**
	baz=241					
VWDT				*eS*	**Sb**	**20 56 42.8 -1.0**
	baz=241					
ENTT	**Nioudou**	**0.60**	**348**	⇓*i*P	**Pg**	**20 56 34.8 -0.3**
	baz=347					
ENTT				*eS*	**Sg**	**20 56 42.7 -0.5**
	baz=347					
HGSD	**Ruisui**	**0.61**	**205**	⇑*e*P	**Pb**	**20 56 35.8 +0.1**
	baz=193					
HGSD				*eS*	**Sn**	**20 56 47.2 -0.1**
	baz=193					
EHY	**Hungye**	**0.64**	**213**	⇑*i*P	**Pb**	**20 56 35.3 -0.5**
	baz=224					
EHY				*eS*	**Sb**	**20 56 45.4 +0.2**
	baz=224					
TWE	**Neicheng**	**0.67**	**357**	⇓*i*P	**Pg**	**20 56 36.1 -0.3**
	baz=356					
TWE				*eS*	**Sg**	**20 56 45.0 -0.4**
	baz=356					
YHNB	**Yeheng**	**0.69**	**334**		**Pg**	**20 56 35.8 -1.0**
YHNB					Sg	**Sg**	**20 56 45.0 -0.9**
YHNB	**Yeheng**	**0.69**	**334**		P	**Pb**	**20 56 36.6 -0.7**
YHNB	**Yeheng**	**0.69**	**334**	⇑*i*P		**Pb**	**20 56 36.5 -0.7**
	baz=332							
YHNB				S		**Sg**	**20 56 45.1 -0.8**
	baz=332							
NSK	**Sanguang**	**0.70**	**333**	⇑*i*P		**Pb**	**20 56 36.6 -0.8**
	baz=323							
NSK				*eS*		**Sg**	**20 56 45.3 -1.0**
	baz=323							
ILA	**Ilan**	**0.72**	**3**	*eP*		**Pb**	**20 56 37.4 -0.2**
	baz=352							
ILA				*eS*		**Sb**	**20 56 47.3 -0.1**
	baz=352							
FUSB	**Fushanzhiwuyua**	**0.72**	**351**	⇓*i*P		**Pb**	**20 56 37.0 -0.7**
	baz=349							
FUSB				S		**Sg**	**20 56 46.0 -0.8**
	baz=349							
WCS	**Beigang Elemen**	**0.73**	**271**	⇑*i*P		**Pb**	**20 56 37.1 -0.7**
	baz=263							
WCS				*eS*		**Sb**	**20 56 46.4 -1.2**
	baz=263							
WHP	**Taichung City**	**0.73**	**289**	⇑*i*P		**Pb**	**20 56 37.5 -0.5**
	baz=288							
WHP				*eS*		**Sg**	**20 56 46.5 -0.6**
	baz=288							
SSLB	**Suanglung**	**0.73**	**250**			**Pg**	**20 56 36.4 -1.1**
SSLB					Sg	**Sg**	**20 56 45.3 -1.9**
SSLB	**Suanglung**	**0.73**	**250**		P	**Pg**	**20 56 36.9 -0.7**
SSLB	**Suanglung**	**0.73**	**250**	⇑*i*P		**Pg**	**20 56 37.1 -0.5**
	baz=260							
SSLB				*eS*		**Sg**	**20 56 45.5 -1.7**
	baz=260							
YULB	**Yu-li**	**0.75**	**210**			**Pg**	**20 56 37.0 -0.8**
YULB					Sg	**Sb**	**20 56 49.2 +0.8**
YULB	**Yu-li**	**0.75**	**210**		P	**Pg**	**20 56 37.2 -0.7**
YULB	**Yu-li**	**0.75**	**210**	⇓P		**Pg**	**20 56 37.1 -0.8**
	baz=225							
YULB				*eS*		**Sb**	**20 56 48.6 +0.3**
	baz=225							
NWLT	**Wulai**	**0.75**	**346**	⇑P		**Pb**	**20 56 37.7 -0.6**
	baz=329							
NWLT				*eS*		**Sg**	**20 56 46.9 -1.0**
	baz=329							
SMLT	**Sun Moon Lake**	**0.75**	**258**	⇑*i*P		**Pb**	**20 56 37.6 -0.8**
	baz=258							
SMLT				*eS*		**Sg**	**20 56 47.3 -0.6**
	baz=258							
ECBN	**Changbin**	**0.76**	**198**	⇓*e*P		**Pb**	**20 56 38.4 0.0**
	baz=188							
ECBN				*eS*		**Sb**	**20 56 48.9 +0.2**
	baz=188							
EYUL	**Yuli**	**0.78**	**207**	⇑P		**Pg**	**20 56 38.2 -0.2**
	baz=224							
EYUL				*eS*		**Sb**	**20 56 49.0 -0.2**
	baz=224							
TWF1	**Yuli**	**0.79**	**209**	⇓*i*P		**Pg**	**20 56 37.7 -0.8**
	baz=223							
TWF1				*eS*		**Sb**	**20 56 49.3 0.0**
	baz=223							
NFF	**Wufeng Townshi**	**0.79**	**318**	⇑*i*P		**Pb**	**20 56 38.5 -0.5**
	baz=316							
NFF				S		**Sb**	**20 56 48.5 -1.1**
	baz=316							
WHYT	**Xinyi Township**	**0.85**	**246**	⇑P		**Pg**	**20 56 39.4 -0.5**
	baz=254							
WHYT				*eS*		**Sg**	**20 56 50.5 -0.5**
	baz=254							
LIOB	**Emei**	**0.87**	**314**	⇑*i*P		**Pb**	**20 56 40.2 0.0**
	baz=312							
LIOB				*eS*		**Sb**	**20 56 51.4 -0.4**
	baz=312							
NSTT	**Nanjuang**	**0.87**	**312**	⇑*i*P		**Pb**	**20 56 40.1 -0.1**
	baz=311							
NSTT				*eS*		**Sb**	**20 56 50.8 -0.9**
	baz=311							
CHKH	**Chenggong**	**0.90**	**199**	⇓P		**Pg**	**20 56 40.2 -0.4**
	baz=193							
CHKH				*eS*		**Sn**	**20 56 54.5 +0.1**

WJS		baz=257			*e*S	**Sg**	**20 56 52.3 -0.9**	**WTP**	**Ta-pu**		**1.28 232**	⇓*i*P	**Pg**	**20 56 47.6 -0.3**	**PTMZ**	**Houxiangcun**		**2.55 293**	*e*P	**Pn**	**20 57 03.9 -0.5**
FULB	**Fuli**	baz=257	**0.92 204**	⇓*e*P	**Pg**	**20 56 40.7 -0.4**	WTP		baz=237		*e*S	**Sn**	**20 57 06.4 +2.5**	**MATB**	**Ma-tsu**	baz=292	**2.63 323**	*e*P	**Pn**	**20 57 05.3 -0.2**
FULB		baz=226		*e*S	**Sn**	**20 56 56.8 +1.7**	**CHY**	**Chiayi**	baz=237	**1.29 245**	*e*P	**Pg**	**20 56 48.3 +0.1**	**JTJ**	**Tarama**	baz=319	**2.80 77**	*e*P	**Pn**	**20 57 08.1 +0.4**
NHDH	**Xindian Distri**	baz=226	**0.93 350**	⇓P	**Pb**	**20 56 41.2 0.0**	CHY		baz=260		*e*S	**Sn**	**20 57 07.0 +2.8**	**JTJ**	**Tarama**	comp=E,14nm,4.0s,comp=N,16nm,4.9s	**2.80 77**	A	A	20 57 08.1		
NHDH		baz=336		*i* S	**Sg**	**20 56 52.7 -0.7**	**WTCT**	**Ta-ch'eng**	baz=260	**1.32 262**	*i* P	**Pg**	**20 56 48.3 -0.3**	**QZH**	**Quanzhou**		**2.97 288**	⇑*i*Pn	**Pn**	**20 57 09.4 -0.8**
TIPB	**Shuangxi**	baz=336	**0.93 7**	⇓P	**Pg**	**20 56 40.8 -0.5**	WTCT		baz=263		*e*S	**Sn**	**20 57 06.0 +1.2**	QZH				Sn	**Sn**	**20 57 44.5 -1.2**
TIPB		baz=353		*e*S	**Sg**	**20 56 52.7 -0.8**	**TWGBT**	**Beinan**	baz=263	**1.35 205**	P	**Pn**	**20 56 46.0 -1.8**	QZH		comp=N,1μm,1.3s		smax	smax		
TWA	**Mucha**	baz=353	**0.94 353**	⇓P	**Pb**	**20 56 41.4 -0.1**	**TWGBT**	**Beinan**	baz=213	**1.35 205**	⇓P	**Pn**	**20 56 45.8 -2.1**	QZH		comp=N,880nm,0.8s		smax	smax		
TWA		baz=349		*e*S	**Sb**	**20 56 53.4 -0.4**	TWGBT		baz=213		*e*S	**Sb**	**20 57 04.1 -1.5**	**KNM**	**Kinmen**	baz=277	**3.01 278**	*e*P	**Pn**	**20 57 12.7 +2.0**
NSY	**Sanyi**	baz=349	**0.94 293**	⇑*i*P	**Pn**	**20 56 42.1 -0.1**	**TWG**	**Pinlang**		**1.35 206**		**Pn**	**20 56 45.5 -2.4**	**LYJJ**	**Jianjiangzhen**	baz=321	**3.05 325**	*e*P	**Pn**	**20 57 10.9 -0.3**
TATO	**Taipei**	baz=293	**0.95 348**		**Pb**	**20 56 41.5 0.0**	**TWG**	**Pinlang**	baz=211	**1.35 206**	⇓*e*P	**Pn**	**20 56 45.6 -2.2**	**KNMB**	**Chin-men Tao**		**3.06 279**		**Pn**	**20 57 10.5 -0.7**
TATO				Sg	**Sg**	**20 56 53.2 -0.7**	**TWK**	**Hsinying**	baz=241	**1.36 235**	⇑P	**Pg**	**20 56 49.3 -0.2**	**KNMB**	**Chin-men Tao**	baz=279	**3.06 279**	*e*P	**Pn**	**20 57 11.4 +0.1**
TATO	**Taipei**		**0.95 348**	P	**Pb**	**20 56 41.8 +0.2**	TWK				*i* S	**Sn**	**20 57 08.3 +2.4**	**MHZQ**	**Yeshan**	baz=296	**3.17 311**	*e*P	**Pn**	**20 57 12.5 -0.4**
WNT	**Mingjian**	baz=253	**0.95 260**	⇑*i*P	**Pn**	**20 56 42.0 -0.3**			baz=241					**XPSS**	**Dashiqiu**	baz=329	**3.18 335**	*e*P	**Pn**	**20 57 12.5 -0.5**
NMLH	**Miaoli**	baz=299	**0.97 301**	⇑P	**Pn**	**20 56 42.8 +0.2**	**CHN1**	**Nanshi**	baz=238	**1.38 232**	⇓P	**Pg**	**20 56 49.1 -0.7**	**JIRB**	**Irabujima**		**3.25 75**	*e*P	**Pn**	**20 57 15.2 +1.2**
NMLH		baz=299		S	**Sn**	**20 56 56.3 +0.1**	CHN1				*e*S	**Sg**	**20 57 07.8 +0.1**	JIRB				*e*S	**Sn**	**20 57 55.6 +3.0**
ALS	**Alishan**	baz=240	**0.98 237**	⇑*i*P	**Pb**	**20 56 42.0 -0.3**	**SNST**	**Tainan City**	baz=238	**1.38 234**	⇑*i*P	**Pg**	**20 56 49.8 -0.1**	**JIRB**	**Irabujima**	comp=E,8.0nm,4.6s,comp=N,10.0nm,4.8s	**3.25 75**	A	A	20 57 15.2		
ALS		baz=240		*e*S	**Sb**	**20 56 55.4 +0.1**	SNST		baz=239		*e*S	**Sg**	**20 57 08.6 +0.8**	**JIKM**	**Ikemajima**		**3.34 74**	*e*P	**Pn**	**20 57 16.1 +0.8**
CHKT	**Chengkung**	baz=194	**0.99 198**	*e*P	**Pg**	**20 56 41.5 -1.0**	**LDUT**	**Ludao**	baz=239	**1.38 189**	*e*P	**Pn**	**20 56 46.2 -2.0**	JIKM				*e*S	**Sn**	**20 57 57.7 +2.9**
CHKT		baz=194		*e*S	**Sn**	**20 56 57.5 +0.8**	LDUT		baz=184		*e*S	**Sb**	**20 57 05.2 -1.3**	**JMJ**	**Miyako jima 2**		**3.36 76**	P	**Pn**	**20 57 18.7 +3.2**
SBCB	**Hsinchu**	baz=316	**0.99 319**	⇑*i*P	**Pn**	**20 56 43.0 +0.1**	**TTN**	**Taitung**	baz=184	**1.38 202**	*e*P	**Pn**	**20 56 47.1 -1.2**	**JMJ2**	**Miyako jima3**		**3.37 77**	P	**Pn**	**20 57 17.4 +1.7**
SBCB		baz=316		*e*S	**Sn**	**20 56 56.3 -0.4**	**SGST**	**Jiashian**	baz=207	**1.41 227**	⇓*i*P	**Pn**	**20 56 48.6 0.0**	JMJ2				*e*S	**Sn**	**20 57 57.4 +1.8**
TWB1	**Santiao Chiao**	baz=3.0	**0.99 15**	*e*P	**Pb**	**20 56 42.2 -0.2**	SGST		baz=233		*e*S	**Sg**	**20 57 09.0 +0.3**	**AXDP**	**Jialang**	baz=284	**3.51 285**	*e*P	**Pn**	**20 57 17.2 -0.3**
TWB1		baz=3.0		*e*S	**Sg**	**20 56 54.7 -0.7**	**WSF**	**Szhu**	baz=233	**1.42 254**	*e*P	**Pg**	**20 56 49.5 -1.0**	**ZPLA**	**Ao Xicun**	baz=270	**3.62 269**	*e*P	**Pn**	**20 57 19.0 -0.1**
NHY	**Taipei**	baz=3.0	**1.00 353**	*e*P	**Pn**	**20 56 42.8 -0.2**	WSF		baz=255		*e*S	**Sg**	**20 57 09.2 +0.2**	**DSXP**	**Dongshan**	baz=266	**3.93 266**	*e*P	**Pn**	**20 57 23.0 -0.4**
NHY		baz=349		*e*S	**Sb**	**20 56 56.2 +0.7**	**SLGT**	**Liugui**	baz=255	**1.43 223**	⇓P	**Pb**	**20 56 49.8 0.0**	**SXFK**	**Yanhouchang**	baz=302	**4.36 303**	*e*P	**Pn**	**20 57 29.2 -0.1**
EHD	**Haiduan**	baz=349	**1.00 207**	*e*P	**Pg**	**20 56 41.2 -1.4**	SLGT		baz=230		*e*S	**Sg**	**20 57 10.4 +1.1**	**JOW**	**Kunigami**		**6.55 64**	Pn	**Pn**	**20 57 58.8 -0.6**
TAP	**Taipei**	baz=225	**1.01 350**	*e*P	**Pb**	**20 56 42.7 +0.2**	**WSL**	**Shuilin Townsh**	baz=251	**1.45 249**	*e*P	**Pg**	**20 56 50.8 -0.3**	**JOW**	**Kunigami**		**6.55 64**	P	**Pn**	**20 57 59.8 +0.4**
TAP		baz=337		*i* S	**Sb**	**20 56 55.7 0.0**	WSL		baz=251		*e*S	**Sg**	**20 57 10.9 +0.9**	**JOW**	**Kunigami**		**6.55 64**	Pn	**Pn**	**20 57 59.3 -0.1**
HSN	**Hsinchu**	baz=319	**1.01 318**	*e*P	**Pn**	**20 56 43.4 +0.3**	**ICHU**	**Yijhu**	baz=247	**1.47 243**	*e*P	**Pg**	**20 56 51.1 -0.6**	JOW		comp=N,6.8nm,0.3s,baz=131,slow=20,SNR=9.2		Sn	**Sn**	**20 59 17.0 +2.9**
HSN		baz=319		*e*S	**Sb**	**20 56 55.7 -0.1**	ICHU		baz=247		*e*S	**Sg**	**20 57 11.2 +0.5**	JOW		baz=120,slow=29 comp=N,15nm,0.3s				
WDJ	**Dajia District**	baz=297	**1.02 287**	⇑P	**Pn**	**20 56 43.9 +0.6**	**CHN8**	**Yiju**	baz=247	**1.54 243**	P	**Pb**	**20 56 51.5 -0.1**	**SSE**	**Sheshan**		**7.04 356**	Pn	**Pn**	**20 58 05.3 -0.7**
WDJ		baz=297		*e*S	**Sn**	**20 56 57.7 +0.3**	CHN8		baz=247		*i* S	**Sg**	**20 57 13.9 +1.1**	SSE				Sn	**Sn**	**20 59 27.5 +1.6**
NWF	**Wu-fen Shan**	baz=297	**1.02 4**	⇓*e*P	**Pb**	**20 56 42.9 0.0**	**CHN3**	**Shinhua**	baz=238	**1.56 232**	*e*P	**Pg**	**20 56 53.0 -0.3**	SSE		comp=N,80nm,1.3s		smax	smax		
NWF		baz=350		*i* S	**Sb**	**20 56 56.1 -0.2**	CHN3		baz=238		S	**Sg**	**20 57 16.4 +2.7**	SSE		comp=N,110nm,1.0s		smax	smax		
WFSB	**Wu-fen Shan**	baz=350	**1.02 4**	⇓*i*P	**Pb**	**20 56 43.0 +0.1**	**SSHA**	**Shanhua**	baz=242	**1.58 235**	*e*P	**Pg**	**20 56 53.1 -0.6**	SSE		comp=N,2μm,12.1s		LR	LR		
WFSB		baz=350		S	**Sg**	**20 56 55.8 -0.6**	SSHA		baz=242		*e*S	**Sg**	**20 57 16.3 +2.0**	SSE		comp=N,810nm,12.1s		LR	LR		
NCUH	**Zhongli**	baz=329	**1.03 333**	*e*P	**Pn**	**20 56 43.7 +0.2**	**ECL**	**Taimali**	baz=212	**1.60 206**	*e*P	**Pn**	**20 56 50.0 -1.3**	**HKPS**	**Hong Kong Po S**		**7.18 257**	Pn	**Pn**	**20 58 09.1 +1.1**
CHN5	**Tsauling**	baz=238	**1.04 245**	⇑*i*P	**Pn**	**20 56 43.6 0.0**	**SCST**	**Cishan**	baz=232	**1.60 224**	⇓*e*P	**Pg**	**20 56 53.5 -0.5**	HKPS				Sn	**Sn**	**20 59 27.8 -1.6**
CHN5		baz=238		*e*S	**Sn**	**20 56 58.4 +0.3**	SCST		baz=232		S	**Sg**	**20 57 17.0 +2.1**	**GZH**	**Guangzhou**		**7.73 265**	Pn	**Pn**	**20 58 11.9 -3.6**
ECS	**Chishang**	baz=224	**1.05 205**	*e*P	**Pg**	**20 56 42.5 -1.0**	**SHHT**	**Tainan City**	baz=238	**1.61 231**	*e*P	**Pg**	**20 56 54.0 -0.3**	GZH				Sn	**Sn**	**20 59 37.1 -5.9**
WCHH	**Zhanghua**	baz=272	**1.05 272**	⇑*i*P	**Pn**	**20 56 44.3 +0.6**	SHHT		baz=238		*e*S	**Sg**	**20 57 15.6 +0.4**	GZH		comp=N,360nm,1.1s		smax	smax		
WCHH		baz=272		*e*S	**Sn**	**20 57 00.3 +2.1**	**PCYT**	**Pengchaiyu**	baz=238	**1.61 12**	*e*P	**Pb**	**20 56 52.5 -0.4**	GZH		comp=N,260nm,1.2s		smax	smax		
SXI1	**Grass Mountain**	baz=356	**1.06 8**	*e*P	**Pb**	**20 56 43.5 +0.1**	PCYT		baz=345		*e*S	**Sb**	**20 57 13.3 +0.1**	**NJ2**	**Nanjing**		**8.36 343**	*e*P	**Pn**	**20 58 23.8 -0.4**
SXI1		baz=356		*e*S	**Sb**	**20 56 57.5 +0.2**	**SCLT**	**Jiali**	baz=243	**1.64 238**	*e*P	**Pb**	**20 56 53.0 -0.3**	NJ2				S	**Sn**	**21 00 00.5 +2.0**
ELDTW	**Lidau**	baz=210	**1.06 217**	⇓P	**Pg**	**20 56 42.0 -1.7**	SCLT		baz=243		*e*S	**Sg**	**20 57 16.4 +0.5**	NJ2		comp=N,41nm,0.6s		pmax	pmax		
ELDTW		baz=210		*e*S	**Sg**	**20 56 57.1 -0.6**	**TSMG**	**Majia**	baz=237	**1.65 216**	*e*P	**Pb**	**20 56 53.3 -0.3**	NJ2				smax	smax		
TWS1	**Kuangyinshan**	baz=342	**1.08 346**	*e*P	**Pn**	**20 56 44.5 +0.3**	TSMG		baz=237		*e*S	**Sg**	**20 57 15.9 -0.6**	NJ2		comp=N,340nm,1.1s		smax	smax		
TWS1		baz=342		*i* S	**Sn**	**20 56 59.7 +0.7**	**TWM1**	**Shoushan**	baz=229	**1.69 224**	⇓*e*P	**Pg**	**20 56 54.9 -0.9**	NJ2		comp=N,310nm,1.3s		LR	LR		
TNOU	**National Taiwa**	baz=339	**1.10 3**	*e*P	**Pb**	**20 56 44.3 +0.1**	**SGLT**	**Jiouru**	baz=242	**1.72 221**	*e*P	**Pg**	**20 56 55.8 -0.6**	NJ2		comp=N,2μm,6.4s		LR	LR		
TNOU		baz=339		*e*S	**Sg**	**20 56 57.8 -1.1**	**MASBT**	**Mashibuluo**	baz=220	**1.73 215**	*e*P	**Pn**	**20 56 53.2 +0.1**	NJ2		comp=N,2μm,6.2s		LR	LR		
YM01	**YM01**	baz=358	**1.10 354**	*e*P	**Pn**	**20 56 44.7 +0.2**	MASBT		baz=220		S	**Sg**	**20 57 18.8 -0.3**	NJ2		comp=N,4μm,9.0s		LR	LR		
YM01		baz=358		*e*S	**Sg**	**20 56 56.7 -2.3**	**TSCK**	**Chigu Township**	baz=244	**1.73 239**	*e*P	**Pb**	**20 56 54.3 -0.7**	**JMZ**	**Minamidaito 2**		**8.82 76**	Pn	**Pn**	**20 58 29.1 -1.3**
WGK	**Gukeng**	baz=253	**1.11 251**	⇑*i*P	**Pn**	**20 56 45.0 +0.6**	TSCK		baz=244		*e*S	**Sb**	**20 57 16.9 +0.2**	**CNSH**	**ChangSha**		**8.90 299**	⇑P	**Pn**	**20 58 31.2 -0.3**
WGK		baz=253		*e*S	**Sn**	**20 56 60.0 +0.4**	**SNJT**	**Kaohsiung City**	baz=229	**1.80 225**	*e*P	**Pb**	**20 56 56.4 +0.3**	CNSH				LR	LR		
WDLH	**Douliu**	baz=254	**1.13 252**	⇑P	**Pn**	**20 56 45.4 +0.7**	**EAST**	**Anshuo**	baz=197	**1.83 206**	*e*P	**Pn**	**20 56 52.9 -1.6**	CNSH		comp=N,4μm,8.0s		LR	LR		
WDLH		baz=254		*e*S	**Sn**	**20 57 01.9 +1.8**	**TAW**	**Tawu**	baz=210	**1.84 204**	*e*P	**Pn**	**20 56 53.1 -1.4**	CNSH		comp=N,3μm,7.1s		LR	LR		
EDH	**Donghe**	baz=191	**1.13 199**	⇓*e*P	**Pg**	**20 56 42.9 -2.2**	**TAWH**	**Dawu Township**	baz=210	**1.86 204**	*e*P	**Pn**	**20 56 53.5 -1.3**	**WHN**	**Wuhan**	comp=N,4μm,9.6s	**9.20 316**	P	**Pn**	**20 58 36.6 +0.9**
EDH		baz=191		*e*S	**Sb**	**20 56 59.6 +0.3**	**IRIF**	**Iriomote-Funau**	baz=229	**1.87 81**	P	**Pn**	**20 56 55.7 +0.8**	WHN				LR	LR		
NTST	**Danshui**	baz=351	**1.14 348**	*e*P	**Pn**	**20 56 45.5 +0.6**	IRIF		baz=242		*e*S	**Sn**	**20 57 19.9 +1.4**	WHN		comp=N,13μm,10.3s		LR	LR		
NTST		baz=351		*e*S	**Sn**	**20 57 01.1 +0.7**	**IRIF**	**Iriomote-Funau**	comp=E,15nm,2.2s,comp=N,20nm,3.1s	**1.87 81**	A	A	20 56 55.7	WHN		comp=N,12μm,8.4s		LR	LR		
ANP	**Anpu**	baz=356	**1.15 352**	⇓P	**Pn**	**20 56 45.4 +0.2**	**HATJ**	**Hateruma jima**		**1.92 89**	P	**Pn**	**20 56 56.2 +0.6**	WHN		comp=N,16μm,9.8s		LR	LR		
ANP		baz=356		*e*S	**Sn**	**20 57 00.6 -0.2**	HATJ				S	**Sn**	**20 57 19.0 -0.7**	**TGY**	**Tagaytay City**		**9.92 184**	LR	LR	21 03 05.3	
WCKO	**Fanlu**	baz=244	**1.18 239**	⇑*i*P	**Pn**	**20 56 46.1 +0.7**	**HATJ**	**Hateruma jima**	comp=E,27nm,3.4s,comp=N,38nm,4.1s	**1.92 89**	A	A	20 56 56.2	**GULI**	**GuiLin**	comp=N,207nm,18.9s,baz=102,slow=41	**10.39 279**	⇑P	**Pn**	**20 58 51.3 -0.7**
WCKO		baz=244		*e*S	**Sn**	**20 57 01.3 -0.1**	**WSSB**	**Gushan**	baz=228	**1.93 224**	*e*P	**Pb**	**20 56 57.8 -0.5**	GULI				S	**Sn**	**21 00 50.8 +2.5**
JYNG	**Yonagunijimaku**		**1.20 70**	P	**Pn**	**20 56 46.3 +0.5**	**SCZT**	**Fangliau**	baz=216	**1.94 211**	*e*P	**Pn**	**20 56 56.9 +0.9**	GULI		comp=N,2μm,9.7s		LR	LR		
JYNG	**Yonagunijimaku**	comp=E,25nm,3.4s,comp=N,25nm,2.1s	**1.20 70**	A	A	20 56 46.3	SCZT		baz=216		*e*S	**Sg**	**20 57 24.3 -1.5**	GULI		comp=N,5μm,8.7s		LR	LR		
STYH	**Taoyuan**	baz=231	**1.22 225**	*e*P	**Pb**	**20 56 46.0 -0.2**	**LAY**	**Lan-yu**	baz=191	**2.00 184**	*e*P	**Pn**	**20 56 54.5 -2.3**	GULI		comp=N,6μm,8.9s		LR	LR		
STYH		baz=231		*e*S	**Sn**	**20 57 02.6 +0.3**	**SLIU**	**Shizi**	baz=212	**2.00 205**	*e*P	**Pn**	**20 56 55.2 -1.6**	**JNU**	**Nakatsue**		**12.11 40**	Pn	**Pn**	**20 59 14.0 -1.6**
WRL	**Guolierlin Hig**	baz=253	**1.22 264**	⇑*e*P	**Pn**	**20 56 46.6 +0.5**	**PHUB**	**P'eng-hu**	baz=257	**2.02 255**	*e*P	**Pn**	**20 56 57.6 +0.5**	**JNU**	**Nakatsue**	comp=N,0.1nm,0.3s,baz=257,slow=15,SNR=2.3	**12.11 40**	Pn	**Pn**	**20 59 15.4 -0.1**
WRL		baz=253		*i* S	**Sn**	**20 57 04.6 +2.1**	PHUB		baz=257		*e*S	**Sb**	**20 57 24.7 -0.3**	JNU		comp=N,651nm,18.6s,baz=217,slow=41 comp=N,17nm,1.2s		LR	LR	21 04 42.0	
TWY	**Chenhua**	baz=338	**1.23 356**	*e*P	**Pn**	**20 56 47.4 +1.3**	**PNG**	**Penghu**	baz=259	**2.03 257**	*e*P	**Pn**	**20 56 58.0 +0.9**	**QIZ**	**Qiongzhong**		**12.11 248**	P	**Pn**	**20 59 17.0 +1.4**
TPUB	**Ta-pu**		**1.23 233**		**Pn**	**20 56 46.8 +0.6**	PNG		baz=259		*e*S	**Sb**	**20 57 24.3 -0.8**	QIZ				S	**Sn**	**21 01 33.9 +3.2**
TPUB					**Sn**	**20 57 03.8 +1.0**	**WDGT**	**Dungji**	baz=239	**2.03 248**	*e*P	**Pn**	**20 56 58.2 +1.0**	QIZ		comp=N,2μm,15.3s		LR	LR		
TPUB	**Ta-pu**		**1.23 233**	P	**Pn**	**20 56 47.0 +0.8**	WDGT		baz=239		S	**Sb**	**20 57 24.9 -0.3**	QIZ		comp=N,1μm,12.6s		LR	LR		
TPUB	**Ta-pu**	baz=238	**1.23 233**	⇑*i*P	**Pn**	**20 56 47.1 +0.8**	**LYUB**	**Lan-yu**	baz=190	**2.04 183**	*e*P	**Pn**	**20 56 54.3 -2.9**	QIZ		comp=N,880nm,9.0s		LR	LR		
TPUB		baz=238		*e*S	**Sn**	**20 57 03.2 +0.4**	**JKRS**	**Kuro-shima**		**2.11 84**	P	**Pn**	**20 56 59.2 +0.9**	**QIZ**	**Qiongzhong**		**12.11 248**	Pn	**Pn**	**20 59 14.2 -1.5**
CHN2	**Minshiung**	baz=249	**1.24 246**	*e*P	**Pn**	**20 56 47.4 +1.1**	**JKRS**	**Kuro-shima**	comp=E,26nm,4.3s,comp=N,44nm,3.2s	**2.11 84**	A	A	20 56 59.2	**ENH**	**Enshi**		**12.52 302**	Pn	**Pn**	**20 59 21.7 +0.6**
CHN2		baz=249		*e*S	**Sn**	**20 57 04.3 +1.5**	**SMST**	**Manzhou Townsh**	baz=209	**2.17 202**	*e*P	**Pn**	**20 56 58.6 -0.5**	**GYA**	**Guiyang**		**13.82 283**	P	**Pn**	**20 59 41.0 +1.9**
LONT	**Longtian**	baz=210	**1.25 205**	*e*P	**Pn**	**20 56 44.5 -1.9**	**VCHM**	**Qimei**	baz=241	**2.25 249**	*e*P	**Pn**	**20 57 00.9 +0.8**	GYA				S	**Sn**	**21 02 15.1 +2.5**
WTK	**Tuku**	baz=255	**1.26 254**	⇑P	**Pg**	**20 56 47.3 -0.2**	VCHM		baz=241		*e*S	**Sb**	**20 57 31.0 -0.4**	GYA		comp=N,13nm,1.3s		pmax	pmax		
WTK		baz=255		*e*S	**Sn**	**20 57 05.0 +1.7**	**JIJ**	**Ishigaki jima**		**2.25 81**	P	**Pn**	**20 57 00.4 +0.2**	GYA		comp=N,160nm,4.2s		pmax	pmax		
YOJ	**Yonaguni jima**	baz=255	**1.26 71**		**Pn**	**20 56 46.9 +0.3**	**JIJ**	**Ishigaki jima**	comp=E,4.0nm,8.3s,comp=N,9.0nm,4.1s	**2.25 81**	A	A	20 57 00.4	GYA		comp=N,1μm,7.1s		LR	LR		
YOJ	**Yonaguni jima**		**1.26 71**	P	**Pb**	**20 56 47.2 +0.3**	**TWK1**	**Hengchun**	baz=208	**2.25 202**	*e*P	**Pn**	**20 57 00.4 +0.2**	GYA		comp=N,3μm,8.8s		LR	LR		
YOJ	**Yonaguni jima**	baz=66	**1.26 71**	⇑*e*P	**Pn**	**20 56 46.8 +0.2**	**TWKBT**	**Hengchun**	baz=208	**2.25 202**	*e*P	**Pn**	**20 56 59.9 -0.4**	GYA		comp=N,3μm,8.7s		LR	LR		
YOJ		baz=66		*e*S	**Sn**	**20 57 05.2 +1.8**	**VWUC**	**VWUC**	baz=294	**2.26 295**	*e*P	**Pn**	**20 56 59.6 -0.8**	**KSAR**	**Wonju Array Be**		**14.37 20**		**Pn**	**20 59 43.1 -3.2**
YOJ	**Yonaguni jima**		**1.26 71**	P	**Pn**	**20 56 46.9 +0.3**	**TSEB**	**Hengchuen, Pin**	baz=193	**2.26 199**	*e*P	**Pb**	**20 57 02.4 -1.5**	**KSRS**	**Korea Array**		**14.39 20**	Pn	**Pn**	**20 59 46.6 -0.1**
YOJ				*e*S	**Sb**	**20 57 02.9 -0.2**	**JISG**	**Ishigakijimahi**		**2.44 77**	P	**Pn**	**20 57 03.2 +0.4**	KSRS		comp=N,0.1nm,0.3s,baz=205,slow=15,SNR=4.5		LR	LR	21 06 05.2	
YOJ	**Yonaguni jima**	comp=E,25nm,3.2s,comp=N,23nm,2.2s	**1.26 71**	A	A	20 56 46.9	JISG				*e*S	**Sn**	**20 57 32.9 +0.5**			comp=N,921nm,18.5s,baz=210,slow=40 comp=N,0.8nm,0.6s					
							JISG	**Ishigakijimahi**	comp=E,6.0nm,4.0s,comp=N,10.0nm,3.7s	**2.44 77**	A	A	20 57 03.2	**KS19**	**Wonju Array Si**		**14.41 20**	Pn	**Pn**	**20 59 44.4 -2.6**
														HNS	**HongShan**		**14.60 337**	*e*P	**Pn**	**20 59 50.0 +0.5**
														HNS				*e*S	**Sn**	**21 02 32.3 +1.1**
														HNS		comp=N,2μm,12.3s		LR	LR		
														HNS		comp=N,1μm,12.3s		LR	LR		
														HNS		comp=N,2μm,12.8s		LR	LR		
														XAN	**Xi'an**		**14.96 315**	P	**Pn**	**20 59 54.3 -0.2**
														XAN				S	**Sn**	**21 02 41.1 +1.0**
														XAN		comp=N,27nm,1.1s		pmax	pmax		
														XAN		comp=N,2μm,9.0s		LR	LR		
														XAN		comp=N,5μm,10.0s		LR	LR		
														XAN		comp=N,4μm,10.4s		LR	LR		
														TIY	**Taiyuan**		**15.76 332**	P	**Pn**	**21 00 00.9 -4.2**
														TIY				S	**Sn**	**21 02 51.2 -8.5**
														TIY		comp=Z,240nm,3.7s		pmax	pmax		
														TIY		comp=N,3μm,9.1s		LR	LR		
														TIY		comp=E,1μm,9.1s		LR	LR		

TIY LR LR
comp=Z,2µm,10.9s
BJT Baijiatuau 16.60 345 Pn **Pn** **21 00 14.4 -1.2**
BJI Beijing 16.62 345 P **P** **21 00 19.5 +1.2**
BJI PP **PnPn** **21 00 33.5 +8.2**
BJI S **Sn** **21 03 16.8 -3.4**
BJI pmax pmax
comp=Z,130nm,12.0s
BJI LR LR
comp=Z,640nm,11.4s
BJI LR LR
comp=Z,420nm,11.6s
BJI LR LR
comp=Z,630nm,12.7s
SLVN Son La 16.65 264 **Pn** **21 00 16.3 -0.1**
KMI Kunming 17.29 277 ⇑P **P** **21 00 29.9 +3.8**
KMI S **Sn** **21 03 40.8 +3.8**
KMI pmax pmax
comp=Z,6.0nm,1.3s
KMI LR LR
comp=Z,960nm,6.6s
KMI LR LR
comp=Z,4µm,8.7s
KMI LR LR
comp=Z,4µm,9.4s
CD2 Chengdu 17.32 297 P **P** **21 00 26.8 +0.5**
CD2 S **Sn** **21 03 41.0 +3.4**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=Z,2µm,6.4s
CD2 LR LR
comp=Z,2µm,6.2s
CD2 LR LR
comp=Z,2µm,6.6s
JGF Kuroka 17.78 46 Pn **Pn** **21 00 28.1 -2.4**
PZH PanZhiHua 18.22 282 P **P** **21 00 38.6 +2.3**
PZH S **Sn** **21 04 00.5 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,180nm,5.9s
PZH LR LR
comp=Z,2µm,11.7s
PZH LR LR
comp=Z,1µm,10.6s
PZH LR LR
comp=Z,1µm,11.5s
KKM Kota Kinabalu 18.66 197 **P** **21 00 39.9 -1.3**
KKM IAmb IAmb 21 00 45.5
comp=Z,50nm,1.0s
JCJ Chichijima 18.72 76 LR LR 21 07 12.9
comp=Z,250nm,18.9s,baz=278,slow=35
HHC Hu-ho-hao-te 18.79 336 *eP* **Pn** **21 00 43.3 +0.4**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.4s
HHC LR LR
comp=Z,1µm,12.2s
HHC LR LR
comp=Z,420nm,11.8s
HHC LR LR
comp=Z,1µm,13.0s
MJAR Matsushiro Arr 18.89 45 P **P** **21 00 44.2 +0.7**
comp=Z,0.1nm,0.3s,baz=228,slow=8.1,SNR=6.8
MJAR LR LR 21 08 45.0
comp=Z,555nm,20.0s,baz=228,slow=39
comp=Z,1.9nm,0.7s
BTO Baotou 19.21 332 *eP* **Pn** **21 00 50.0 +2.0**
BTO pP **pP** **21 00 53.8 +2.8**
BTO sP **sP** **21 00 57.0 +4.8**
BTO PP **PnPn** **21 01 07.5 +6.6**
BTO pmax pmax
comp=Z,11nm,0.5s
BTO pmax pmax
comp=Z,420nm,5.8s
BTO LR LR
comp=Z,5µm,10.1s
BTO LR LR
comp=Z,2µm,7.3s
BTO LR LR
comp=Z,7µm,10.7s
LZH Lanzhou 19.53 312 ⇓P **Pn** **21 00 55.4 +3.4**
LZH sP sP 21 01 04.2 +8.8
LZH sS sS 21 04 39.6 +2.1
LZH pmax pmax
comp=Z,32nm,1.2s
LZH LR LR
comp=Z,2µm,12.7s
LZH LR LR
comp=Z,2µm,12.4s
LZH LR LR
comp=Z,3µm,12.4s
CN2 Changchun 19.95 8 P **Pn** **21 00 58.0 +1.4**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 LR LR
comp=Z,1µm,14.0s
CN2 LR LR
comp=Z,1µm,14.0s
CN2 LR LR
comp=Z,1µm,12.0s
CRAI Chiangrai 20.12 263 Pn Pn 21 00 59.0 +0.1
XLT XiLinHaoTe 20.34 348 *eP* Pn 21 01 01.2 -0.1
XLT pP sP 21 01 06.0 +1.4
XLT sP pP 21 01 08.5 +5.7
XLT PP **PnPn** **21 01 18.7 +2.4**
XLT pmax pmax
comp=Z,16nm,1.2s
XLT pmax pmax
comp=Z,150nm,4.9s
XLT LR LR
comp=Z,990nm,11.2s
XLT LR LR
comp=Z,1µm,14.0s
TNCH TengChong 21.11 277 P **P** **21 01 08.3 +0.3**
TNCH PP **PnPn** **21 01 28.2 +1.1**
TNCH S **S** **21 04 56.8 -6.1**
TNCH SS **SnSn** **21 05 37.4 +13**
TNCH pmax pmax
comp=Z,23nm,1.1s
TNCH pmax pmax
comp=Z,270nm,4.3s
TNCH LR LR
comp=Z,1µm,8.0s
TNCH LR LR
comp=Z,2µm,8.9s
TNCH LR LR
comp=Z,2µm,9.5s
MDJ Mudanjiang 21.51 16 P **P** **21 01 14.1 +2.3**
MDJ pP sP 21 01 17.3 +0.1
MDJ PcP **PcP** **21 05 14.8 +0.5**
MDJ ScP **ScP** **21 08 53.4 +2.2**
MDJ ScS **ScS** **21 12 38.3 +3.1**
MDJ pmax pmax
comp=Z,11nm,1.4s
MDJ pmax pmax
comp=Z,130nm,3.9s
MDJ LR LR
comp=Z,1µm,11.3s
MDJ LR LR
comp=Z,830nm,12.0s
MDJ LR LR
comp=Z,2µm,13.7s
MDJ Mudanjiang 21.51 16 P **P** **21 01 12.8 +1.0**
USRK Ussuriysk Ar. 21.80 20 P **P** **21 01 15.4 +0.5**
comp=Z,2.0nm,0.7s,baz=204,slow=13,SNR=3.6
USRK LR LR 21 10 15.3
comp=Z,418nm,18.7s,baz=186,slow=38
comp=Z,2.0nm,0.7s
CHTO Chiang Mai 21.81 261 P **P** **21 01 15.8 +0.5**
CM31 Chiang Mai Arr 21.92 260 P **P** **21 01 17.9 +1.4**
CMAR Chiang Mai Arr 21.92 260 P **P** **21 01 16.9 +0.4**
comp=Z,2.9nm,0.7s,baz=62,slow=8.1,SNR=25
CMAR LR LR 21 11 23.2
comp=Z,231nm,18.2s,baz=145,slow=41
comp=Z,2.9nm,0.7s
BNX BinXian 22.13 11 ⇑P **P** **21 01 21.0 +2.5**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,280nm,4.5s
TOLI2 Tolitoli 22.82 182 P **P** **21 01 25.5 -0.6**
TOLI2 IAmb IAmb 21 01 28.8
comp=Z,23nm,1.0s

SBUM Sibu 23.35 205 P **P** **21 01 30.1 -1.4**
SBUM IAmb IAmb 21 01 32.9
comp=Z,18nm,0.9s
KMSI Cibinong 23.44 174 P **P** **21 01 37.5 +5.1**
comp=Z,76nm,0.9s
GTA Gaotai 24.02 315 P **P** **21 01 39.3 +1.3**
GTA pP pP 21 01 43.5 +1.2
GTA sP sP 21 01 47.1 +4.1
GTA sS sS 21 06 07.1 +5.4
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA LR LR
comp=Z,1µm,15.6s
GTA LR LR
comp=Z,860nm,17.5s
GTA LR LR
comp=Z,830nm,14.5s
GUMO Guam 24.23 111 LR LR 21 09 24.5
comp=Z,196nm,20.9s,baz=292,slow=32
LUWI Luwuk 24.96 177 P **P** **21 01 45.1 -1.5**
LUWI Luwuk 24.96 177 P **P** **21 01 52.4 +5.8**
comp=Z,53nm,1.1s
KSM Kuching 25.01 208 P **P** **21 01 46.4 -0.6**
HIA Hailar 25.22 357 P **P** **21 01 49.3 +0.6**
BKB Balikpapan 25.59 191 P **P** **21 01 50.8 -1.4**
BKB Balikpapan 25.59 191 P **P** **21 01 52.4 +0.2**
comp=Z,98nm,1.4s
STKI Sintang 25.82 204 P **P** **21 01 55.6 +1.2**
comp=Z,55nm,1.0s,comp=Z,4µm
GOMU GeErMu 26.13 304 P **P** **21 01 59.2 +1.6**
GOMU S **S** **21 06 32.5 +3.3**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU LR LR
comp=Z,2µm,13.9s
GOMU LR LR
comp=Z,940nm,13.2s
GOMU LR LR
comp=Z,1µm,17.3s
SANI Sanana 26.27 170 P **P** **21 02 01.4 +2.9**
comp=Z,19nm,1.0s
ASAJ Asahikawa 26.33 35 LR LR 21 12 43.7
comp=Z,564nm,19.0s,baz=224,slow=37
KLR Kul'dur 26.35 15 LR LR 21 13 10.0
comp=Z,587nm,19.0s,baz=198,slow=38
ULN Ulaanbaatar 26.47 338 P **P** **21 01 59.8 -0.5**
ULN IAmb IAmb 21 02 17.5
comp=Z,19nm,1.1s
HEH HeiHe 26.54 8 *eP* **P** **21 02 03.2 +2.6**
HEH pP **sP** **21 02 05.2 -0.6**
HEH S **S** **21 06 40.9 +6.4**
HEH pmax pmax
comp=Z,5.0nm,0.9s
HEH LR LR
comp=Z,480nm,12.7s
HEH LR LR
comp=Z,820nm,10.8s
HEH LR LR
comp=Z,1µm,12.6s
SONM Songino Array 26.68 337 P **P** **21 02 02.3 +0.2**
SONM IAmb IAmb 21 02 19.3
comp=Z,21nm,1.2s
SONM Songino Array 26.68 337 P **P** **21 02 03.4 +1.3**
comp=Z,7.3nm,0.9s,baz=156,slow=6.6,SNR=28
SONM LR LR 21 13 39.3
comp=Z,833nm,18.3s,baz=157,slow=39
comp=Z,7.3nm,0.9s
NLAI Namlea 27.62 168 P **P** **21 02 13.7 +3.1**
comp=Z,22nm,1.0s,comp=Z,2µm
LSA Lhasa 27.78 288 P **P** **21 02 13.5 +0.9**
LSA IAmb IAmb 21 02 22.0
comp=Z,7.8nm,0.7s
BKSI Bulukumba 29.23 183 P **P** **21 02 27.7 +2.7**
comp=Z,19nm,1.2s
BBSI Bau Bau 29.37 178 P **P** **21 02 29.0 +2.8**
comp=Z,247nm,1.1s
RPSI Rantau Prapat 30.58 229 P **P** **21 02 36.9 0.0**
RPSI IAmb IAmb 21 02 38.9
comp=Z,10nm,1.0s
EDFI Ende, Flores 32.59 180 P **P** **21 02 53.0 -1.8**
comp=Z,18nm,1.4s
NGJI Ngawi 32.78 199 P **P** **21 02 58.0 +1.7**
comp=Z,45nm,0.9s
TWSI Taliwang, Sumb 32.92 189 P **P** **21 03 01.8 +4.3**
comp=Z,15nm,1.5s,comp=Z,554nm
LWLI Liwa 33.62 213 P **P** **21 03 03.7 -0.1**
comp=Z,81nm,0.8s
LEM Lembang 33.62 206 P **P** **21 03 02.9 -0.9**
comp=Z,17nm,0.8s,baz=284,slow=22,SNR=2.1
comp=Z,17nm,0.8s
LEM Lembang 33.62 206 P P 21 03 08.9 +5.1
comp=Z,20nm,1.1s
SOEI Soe 33.69 175 P **P** **21 03 05.0 +0.7**
KASI Kota Agung 33.84 212 P **P** **21 03 05.9 +0.3**
comp=Z,39nm,1.1s
WMQ Urumqi 34.09 314 *eP* **P** **21 03 05.6 -2.0**
WMQ pP sP 21 03 12.2 -0.5
WMQ PP **PnPn** **21 04 22.6 +1.5**
WMQ PcP **PcP** **21 05 46.7 +1.7**
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ LR LR
comp=N,600nm,10.5s
WMQ LR LR
comp=E,950nm,10.1s
WMQ LR LR
comp=Z,240nm,11.1s
YAK Yakutsk 38.36 6 P **P** **21 03 42.3 -1.4**
YAK IAmb IAmb 21 03 45.7
comp=Z,28nm,1.4s
YAK Yakutsk 38.36 6 LR LR 21 21 47.3
comp=Z,409nm,19.0s,baz=144,slow=40
MK31 Makanchi Array 38.77 316 P **P** **21 03 47.5 0.0**
MKAR Makanchi Array 38.77 316 P **P** **21 03 47.1 -0.3**
MKAR Makanchi Array 38.77 316 P **P** **21 03 48.2 +0.8**
comp=Z,7.0nm,1.0s,baz=106,slow=9.7,SNR=25
MKAR PcP **PcP** **21 05 58.4 -0.5**
comp=Z,2.4nm,0.9s,baz=104,slow=3.6,SNR=4.3
comp=Z,7.0nm,1.0s
MAKZ Makanchi 38.97 316 P **P** **21 03 49.4 +0.2**
PATS Pohnpei 39.04 110 P **P** **21 03 48.9 -1.2**
PETK Petropavlovsk- 39.72 34 P **P** **21 03 56.3 +1.0**
comp=Z,2.0nm,1.0s,baz=229,slow=10,SNR=1.6
PETK LR LR 21 20 54.6
comp=Z,294nm,19.4s,baz=207,slow=37
comp=Z,2.0nm,1.0s
PET Petropavlovsk 40.16 34 P **P** **21 03 57.7 -1.2**
PET IAmb IAmb 21 04 41.5
comp=Z,31nm,1.4s
ZAA0 Zalesovo Array 40.62 327 P **P** **21 04 01.8 -0.9**
ZALV Zalesovo Beam 40.62 327 P **P** **21 04 01.7 -1.0**
ZALV Zalesovo Beam 40.62 327 P **P** **21 04 02.5 -0.2**
comp=Z,9.2nm,1.0s,baz=116,slow=6.8,SNR=23
comp=Z,9.2nm,1.0s
MA2 Magadan 40.93 22 LR LR 21 22 36.0
comp=Z,270nm,18.8s,baz=188,slow=38
KSH Kashi 41.37 303 P **P** **21 04 13.4 +4.1**
KSH pP sP 21 04 19.0 +4.6
KSH pmax pmax
comp=Z,4.0nm,1.0s
KSH LR LR
comp=Z,1µm,18.2s
KSH LR LR
comp=Z,480nm,12.7s
KSH LR LR
comp=Z,360nm,15.5s
PMG Port Moresby 41.52 140 P **P** **21 04 09.0 -1.5**
PMG Port Moresby 41.52 140 LR LR 21 18 48.9
comp=Z,119nm,21.4s,baz=285,slow=32
NRN Naryn 41.65 306 P **P** **21 04 10.4 -1.4**
H11S3 WAKE ISLAND Hy 42.15 89 T T 21 49 26.1
baz=285,slow=75
H11S1 WAKE ISLAND Hy 42.15 89 T T 21 49 31.2
baz=285,slow=75
H11S2 WAKE ISLAND Hy 42.16 89 T T 21 49 27.5
baz=285,slow=75
KURK Kurchatov 42.50 320 P **P** **21 04 17.4 -0.8**
KURBB Kurchatov Arra 42.52 320 P **P** **21 04 18.6 +0.2**
comp=Z,2.4nm,0.8s,baz=110,slow=8.0,SNR=23
comp=Z,2.4nm,0.8s
PALK Palikeke 42.66 254 LR LR 21 21 54.7
comp=Z,185nm,21.0s,baz=166,slow=36
AAK Ala-Archa 42.97 307 P **P** **21 04 22.5 +0.2**
COEN Coen 43.21 149 P **P** **21 04 24.1 -0.1**
WB0 Warramunga Arr 45.27 163 P **P** **21 04 38.7 -2.0**
WB0 IAmb IAmb 21 05 04.5
comp=Z,17nm,1.4s

PSA00 Pilbara Seismi 45.38 182 P **P** **21 04 39.1 -2.4**
PSA00 IAmb IAmb 21 04 43.7
comp=Z,12nm,1.3s
PSA00 Pilbara Seismi 45.38 182 P **P** **21 04 38.9 -2.6**
PSA00 IAmb IAmb 21 04 40.3
comp=Z,28nm,1.2s
BTK Batken 45.38 303 P **P** **21 04 40.4 -1.2**
WRAB Tennant Creek 45.42 163 P **P** **21 04 39.4 -2.5**
WRAB IAmb IAmb 21 05 05.8
comp=Z,16nm,1.3s
WRA Warramunga Arr 45.42 163 P **P** **21 04 40.2 -1.7**
WRA Warramunga Arr 45.42 163 P **P** **21 04 40.2 -1.7**
comp=Z,5.3nm,1.0s,baz=350,slow=8.1,SNR=14
WRA PcP **PcP** **21 06 19.4 -1.7**
comp=Z,0.7nm,0.9s,baz=324,slow=3.5,SNR=0.7
comp=Z,5.3nm,1.0s
WB2 Warramunga Arr 45.43 163 P **P** **21 04 39.5 -2.5**
WB2 IAmb IAmb 21 05 05.8
comp=Z,19nm,1.4s
WR0 Warramunga Arr 45.49 163 P **P** **21 04 40.5 -2.0**
KKAR Karatay Array 45.93 307 P **P** **21 04 45.1 -0.7**
KKAR **PcP** **21 06 21.6 -1.1**
KBL Kabul 46.65 296 P **P** **21 04 51.1 -0.8**
KBL IAmb IAmb 21 04 59.9
comp=Z,15nm,1.1s
KBL PcP **PcP** **21 06 24.8 -0.9**
TIXI Tiksi 47.81 3 P **P** **21 04 58.2 -1.8**
TIXI Tiksi 47.81 3 LR LR 21 27 39.9
comp=Z,603nm,18.4s,baz=201,slow=39
BVAR Borovoye Array 48.08 321 P **P** **21 05 02.2 -0.3**
comp=Z,2.0nm,0.6s,baz=112,slow=8.3,SNR=9.9
BVAR PcP **PcP** **21 06 29.7 -0.4**
comp=Z,3.0nm,0.9s,baz=108,slow=4.8,SNR=4.6
comp=Z,2.0nm,0.6s
BRVK Borovoye 48.15 321 P **P** **21 05 00.9 -2.1**
BRVK IAmb IAmb 21 05 10.2
comp=Z,8.7nm,0.9s
SHEM Shemya Is, Ala 48.63 40 LR LR 21 24 57.8
comp=Z,55nm,21.3s,baz=88,slow=35
AS31 Alice Springs 48.88 165 P **P** **21 05 06.2 -2.7**
ASAR Alice Springs 48.88 165 P **P** **21 05 07.8 -1.1**
comp=Z,3.6nm,0.9s,baz=340,slow=6.4,SNR=18
ASAR PcP **PcP** **21 06 31.7 -1.7**
comp=Z,0.3nm,0.5s,baz=342,slow=5.3,SNR=1.1
comp=Z,3.6nm,0.9s
NRIK Noril'sk 49.66 345 P **P** **21 05 13.1 -1.2**
NRIK Noril'sk 49.66 345 P **P** **21 05 13.2 -1.2**
comp=Z,3.6nm,0.8s,baz=129,slow=9.4,SNR=7.3
comp=Z,3.6nm,0.8s
ABKAR Akbulak array 53.88 314 P **P** **21 05 45.5 -0.6**
ABKAR IAmb IAmb 21 05 53.4
comp=Z,8.3nm,1.1s
ABKAR PcP **PcP** **21 06 50.0 -1.6**
ABKAR Akbulak array 53.88 314 P **P** **21 05 45.5 -0.6**
ABKAR PcP **PcP** **21 06 50.1 -1.5**
GEYT Alibeck 55.28 300 P **P** **21 05 55.2 -1.3**
GEYT IAmb IAmb 21 06 03.0
comp=Z,8.5nm,1.1s
GEYT PcP **PcP** **21 06 54.7 -2.6**
GEYT Alibeck 55.28 300 P **P** **21 05 57.0 +0.5**
comp=Z,3.3nm,0.8s,baz=97,slow=4.8,SNR=8.1
comp=Z,3.3nm,0.8s
ARU Arti 55.50 323 P **P** **21 05 56.5 -1.3**
ARU IAmb IAmb 21 06 05.8
comp=Z,7.2nm,1.1s
STKA Stephens Creek 58.77 160 P **P** **21 06 19.7 -1.4**
STKA Stephens Creek 58.77 160 P **P** **21 06 19.8 -1.4**
comp=Z,3.3nm,0.9s,baz=323,slow=9.4,SNR=7.1
comp=Z,3.3nm,0.9s
C16K Lisburne Hills 61.59 24 P **P** **21 06 40.4 +0.4**
C16K IAmb IAmb 21 06 43.7
comp=Z,11nm,1.1s
F15K North Star Dit 61.62 27 P **P** **21 06 40.4 +0.2**
F15K IAmb IAmb 21 06 44.2
comp=Z,6.6nm,1.1s
L14K Kuka Creek 62.32 32 P **P** **21 06 44.6 -0.5**
L14K IAmb IAmb 21 06 49.0
comp=Z,7.3nm,0.8s
C18K Utukok River 63.14 24 P **P** **21 06 49.7 -0.8**
C18K IAmb IAmb 21 06 53.8
comp=Z,7.1nm,1.1s
DZM Mont Dzumac 63.19 133 LR LR 21 31 26.5
comp=Z,108nm,18.4s,baz=252,slow=33
C19K Lookout Ridge 63.74 23 P **P** **21 06 54.9 +0.4**
C19K IAmb IAmb 21 06 57.8
comp=Z,6.5nm,1.0s
K17K Iditarod 64.35 30 P **P** **21 06 56.3 -2.2**
B20K Meade River 64.60 22 P **P** **21 06 58.8 -1.2**
G19K Purcell Mounta 64.72 26 P **P** **21 07 00.8 -0.1**
G19K IAmb IAmb 21 07 41.0
comp=Z,5.2nm,1.0s
J18K Innoko River 65.03 29 IAmb IAmb 21 07 07.3
comp=Z,6.5nm,0.9s
F20K Avaraart Lake 65.22 25 P **P** **21 07 03.6 -0.5**
F20K IAmb IAmb 21 07 12.0
comp=Z,6.2nm,1.2s
TTA Tatalina 65.39 30 P **P** **21 07 04.8 -0.6**
TTA IAmb IAmb 21 07 09.8
comp=Z,8.0nm,1.0s
J19K Poorman 65.48 29 P **P** **21 07 04.2 -1.6**
J19K IAmb IAmb 21 07 10.6
comp=Z,9.3nm,0.9s
ONI Oni 65.75 308 P **P** **21 07 08.3 +0.3**
ONI IAmb IAmb 21 07 21.6
comp=Z,7.1nm,1.0s
KBZ Khabaz 65.94 309 P **P** **21 07 08.3 -0.8**
comp=Z,2.3nm,0.8s,baz=83,slow=8.5,SNR=6.9
KBZ LR LR 21 37 49.4
comp=Z,170nm,18.1s,baz=82,slow=38
comp=Z,2.3nm,0.8s
L19K White Mountain 66.00 31 P **P** **21 07 09.0 -0.2**
O18K Koktuh Hills 66.09 33 P **P** **21 07 09.3 -0.6**
IMAR Indian Mountai 66.09 26 P **P** **21 07 09.7 -0.1**
J20K Nowinta River 66.10 28 P **P** **21 07 09.4 -0.5**
K20K Telida 66.22 29 IAmb IAmb 21 07 16.6
comp=Z,7.4nm,0.8s
M20K Styx River 66.84 31 P **P** **21 07 14.4 -0.3**
C23K Itkillik River 66.87 22 P **P** **21 07 14.5 -0.1**
C23K IAmb IAmb 21 07 20.6
comp=Z,5.7nm,0.9s
TOLK Toolik Lake Re 67.39 23 IAmb IAmb 21 07 22.5
comp=Z,9.0nm,1.1s
MLY Manley 67.45 27 P **P** **21 07 18.2 -0.3**
G23K Bananza Creek 67.50 25 P **P** **21 07 18.6 -0.1**
G23K IAmb IAmb 21 07 24.3
comp=Z,13nm,1.2s
GURO Guroymak-BITLI 67.67 303 P **P** **21 07 19.9 -0.5**
E24K Your Creek 67.87 24 IAmb IAmb 21 07 26.2
comp=Z,7.8nm,0.8s
SUA Susitna One 68.03 31 P **P** **21 07 21.8 -0.4**
F24K Squaw Lake 68.19 24 P **P** **21 07 23.2 +0.2**
F24K IAmb IAmb 21 07 28.2
comp=Z,9.0nm,0.9s
G24K Hadweenzic Riv 68.50 25 P **P** **21 07 25.5 +0.5**
G24K IAmb IAmb 21 07 31.3
comp=Z,8.7nm,1.0s
H24K Noodor Dome 68.50 26 P **P** **21 07 24.6 -0.5**
H24K IAmb IAmb 21 07 28.7
comp=Z,11nm,1.1s
POKR Poker Plat Res 68.82 27 P **P** **21 07 26.3 -0.7**
RAYN Ar Rayn 68.84 287 P **P** **21 07 27.2 -0.7**
E25K Arctic Village 68.94 24 IAmb IAmb 21 07 52.4
comp=Z,8.5nm,1.3s
ILAR Eielson Array 69.12 27 P **P** **21 07 28.5 -0.3**
comp=Z,1.4nm,0.7s,baz=295,slow=8.6,SNR=23
comp=Z,1.4nm,0.7s
SPITS Spitsbergen Ar 69.72 348 LR LR 21 42 03.7
comp=Z,268nm,18.6s,baz=32,slow=39
SCRK Sand Creek 70.53 28 P **P** **21 07 37.6 -0.1**
SCRK IAmb IAmb 21 07 41.4
comp=Z,4.8nm,0.7s
I26K Coal Creek Min 70.53 26 IAmb IAmb 21 07 40.0
comp=Z,9.5nm,1.0s
J26L Joseph Creek 70.57 27 IAmb IAmb 21 07 40.0
comp=Z,8.1nm,0.8s
E28M Babbage River 70.98 23 IAmb IAmb 21 07 48.9
comp=Z,6.2nm,0.9s
F28M Old Crow 71.16 24 IAmb IAmb 21 08 01.2
comp=Z,7.9nm,1.1s
K27K Chicken 71.33 28 IAmb IAmb 21 07 46.2
comp=Z,8.5nm,0.8s
EGAK Eagle 71.49 27 P **P** **21 07 43.6 +0.2**
EGAK IAmb IAmb 21 07 50.8
comp=Z,13nm,1.1s
L27K Beaver Creek, 71.71 28 IAmb IAmb 21 07 48.3
comp=Z,10nm,0.8s

BCAR	Beaver Creek A	71.73	28	P	P	21 07 45.5	+0.6	
I28M	Miner Creek	71.78	26	IAmb	IAmb	21 07 57.1		
	comp=Z,12nm,1.1s							
FINES	FINESS Array B	71.81	330	P	P	21 07 44.5	-0.8	
	comp=Z,3.7nm,0.9s,baz=59,slow=6.2,SNR=7.5							
FINES				LR	LR	21 42 01.8		
	comp=Z,273nm,19.1s,baz=72,slow=38							
	comp=Z,3.7nm,0.9s							
DAWY	Dawson	72.44	27	P	P	21 07 48.8	-0.4	
DAWY				IAmb	IAmb	21 07 56.5		
	comp=Z,12nm,1.0s							
G30M	tAoh Zraii Nji	72.70	24	IAmb	IAmb	21 07 58.8		
	comp=Z,14nm,1.2s							
EPYK	Eagle Plains	72.73	24	IAmb	IAmb	21 07 55.0		
	comp=Z,7.2nm,0.8s							
J29N	Klondike Camp	72.80	27	IAmb	IAmb	21 07 58.8		
	comp=Z,12nm,0.7s							
INK	Inuvik	73.17	22	P	P	21 07 52.4	-0.9	
INK				IAmb	IAmb	21 08 01.1		
	comp=Z,5.6nm,0.9s							
I30M	Mount Dempster	73.27	26	IAmb	IAmb	21 08 05.6		
	comp=Z,7.3nm,1.0s							
AKASG	Malin Array Be	73.29	318	P	P	21 07 53.5	-0.9	
	comp=Z,1.7nm,0.7s,baz=58,slow=5.8,SNR=4.1							
AKASG				LR	LR	21 40 37.7		
	comp=Z,171nm,18.7s,baz=332,slow=36							
	comp=Z,1.7nm,0.7s							
L29M	L29M	73.29	28	IAmb	IAmb	21 07 57.9		
	comp=Z,12nm,0.9s							
K29M	Barlow Dome	73.29	27	IAmb	IAmb	21 08 02.0		
	comp=Z,8.9nm,1.1s							
BRTR	Keskin Array B	73.64	307	P	P	21 07 56.1	-0.8	
BRTR	Keskin Array B	73.64	307	P	P	21 07 56.8	-0.1	
	comp=Z,2.4nm,0.8s,baz=95,slow=7.6,SNR=6.6							
BRTR				LR	LR	21 46 39.7		
	comp=Z,92nm,19.6s,baz=22,slow=41							
	comp=Z,2.4nm,0.8s							
A36M	Sachs Harbour	74.11	17	IAmb	IAmb	21 08 00.6		
	comp=Z,5.5nm,0.8s							
MMAI	Mount Meron Ar	74.38	299	P	P	21 08 01.1	-0.1	
	comp=Z,0.3nm,0.3s,baz=102,slow=12,SNR=4.4							
	comp=Z,0.3nm,0.3s							
FARO	Faro, Yukon	75.67	28	P	P	21 08 07.6	-0.4	
FARO				IAmb	IAmb	21 08 15.5		
	comp=Z,8.6nm,1.1s							
MLR	Muntele Rosu	77.09	314	P	P	21 08 16.8	+0.2	
HFS	Hagfors	77.92	331	P	P	21 08 20.5	-0.2	
	comp=Z,2.7nm,0.8s,baz=116,slow=6.9,SNR=3.8							
HFS				LR	LR	21 45 56.8		
	comp=Z,426nm,21.2s,baz=57,slow=38							
	comp=Z,2.7nm,0.8s							
NB2	NORSAR Subarra	78.57	332	P	P	21 08 24.0	-0.4	
	comp=Z,0.7nm,0.7s,baz=59,slow=5.6							
NOA	NORSAR Array B	78.57	332	P	P	21 08 23.7	-0.6	
	comp=Z,1.4nm,0.8s,baz=59,slow=5.6,SNR=4.9							
NOA				LR	LR	21 45 32.0		
	comp=Z,226nm,18.3s,baz=260,slow=38							
	comp=Z,1.4nm,0.8s							
RES	Resolute Bay	78.72	9	LR	LR	21 47 30.1		
	comp=Z,112nm,18.6s,baz=7.0,slow=39							
CLL	Collm	82.45	323	eP	P	21 08 45.0	-0.3	
YKA	Yellowknife Ar	82.91	23	P	P	21 08 47.2	-0.3	
	comp=Z,3.3nm,0.8s,baz=315,slow=4.7,SNR=32							
	comp=Z,3.3nm,0.8s							
GERES	GERESS Array B	83.25	321	P	P	21 08 50.1	+0.4	
	comp=Z,1.7nm,0.8s,baz=72,slow=4.3,SNR=6.5							
	comp=Z,1.7nm,0.8s							
BORG	Borgarnes	86.98	345	LR	LR	21 50 25.8		
	comp=Z,121nm,20.6s,baz=63,slow=37							
RAR	Rarotonga	88.62	114	LR	LR	21 41 15.1		
	comp=Z,49nm,20.9s,baz=165,slow=30							
NEW	Newport	90.84	35	P	P	21 09 26.9	+0.3	
NEW	Newport	90.84	35	P	P	21 09 27.2	+0.6	
	comp=Z,5.2nm,0.9s,baz=298,slow=4.3,SNR=5.8							
	comp=Z,5.2nm,0.9s							
L04D	Klamath Falls	91.51	42	P	P	21 09 30.5	+0.5	
YBH	Yreka Blue Hor	91.54	42	P	P	21 09 30.4	+0.4	
	comp=Z,2.1nm,0.9s,baz=272,slow=19,SNR=4.3							
	comp=Z,2.1nm,0.9s							
J05D	Fort Rock, OR	91.54	41	P	P	21 09 28.8	-1.3	
J05D				IAmb	IAmb	21 09 36.2		
	comp=Z,6.7nm,1.1s							
FRB	Frobisher Bay	92.13	5	LR	LR	21 54 50.8		
	comp=Z,121nm,19.1s,baz=7.5,slow=38							
FCC	Fort Churchill	92.33	18	IAmb	IAmb	21 09 38.0		
	comp=Z,6.5nm,1.1s							
FFC	Flin Flon	93.07	24	P	P	21 09 35.7	-1.0	
FFC				IAmb	IAmb	21 09 41.9		
	comp=Z,5.1nm,0.9s							
PPT	Papeete	95.86	107	LR	LR	21 45 56.9		
	comp=Z,70nm,19.8s,baz=186,slow=31							
NVAR	Mina Array Bea	96.21	43	P	P	21 09 52.4	+0.7	
	comp=Z,0.4nm,0.6s,baz=286,slow=4.6,SNR=2.6							
	comp=Z,0.4nm,0.6s							
SDV	Santo Domingo	145.12	22	eP	PKPbc	21 16 00.1	-1.0	
PTBC	PUERTO BERRIO	145.75	29	eP	PKPdf	21 16 01.5	-1.1	
PAMC	Pamplona, Colo	145.78	26	eP	PKPdf	21 16 03.0	-0.1	
BARC	Barichara	146.26	27	eP	PKPdf	21 16 04.5	+0.8	
GUY2C	Guyana, Caldas	146.48	32	eP	PKPdf	21 16 04.7	+0.4	
YOTC	Yotoco, Valle	147.06	35	eP	PKPdf	21 16 06.3	+1.4	
JAMC	Jamundi, Valle	147.53	36	eP	PKPdf	21 16 06.9	+1.1	
ORTC	Ortega, Tolima	147.68	33	eP	PKPdf	21 16 07.6	+1.8	
POPC	Popayan, Colom	148.09	37	eP	PKPbc	21 16 09.4	-0.5	

JMA ***06*** *20:58:02.6±0.3,24.°2N±0.°6×12°2E±°, h7km±4km, TAIWAN REGION*

TAP 06 20:58:02.1,24.°24N×121.°72E,h13km,ML4.1,1C-13D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.07	19	*i*	P		Pg	20 58 05.1	+0.2
	baz=23								
EHP				*i*	S		Sg	20 58 07.2	+0.5
	baz=23								
EAHA	Aohua	0.09	14	⇓*i*	P		Pg	20 58 05.2	+0.2
	baz=13								
EAHA					S		Sg	20 58 07.4	+0.3
	baz=13								
ETL	Fush Village	0.12	226		P		Pg	20 58 05.6	+0.2
	baz=226								
ETL				*i*	S		Sg	20 58 07.8	+0.1
	baz=226								
NACB	Ninganchiao	0.13	239	*i*	P		Pg	20 58 05.4	-0.1
	baz=231								
NACB				*i*	S		Sg	20 58 07.9	+0.1
	baz=231								
ENA	Nanau	0.19	7	⇓*i*	P		Pg	20 58 06.6	+0.2
	baz=9.0								
ENA				*i*	S		Sg	20 58 09.5	+0.2
	baz=9.0								
TWD	Chiawan	0.20	214	⇓*i*	P		Pg	20 58 06.5	+0.1
	baz=213								
TWD				*i*	S		Sg	20 58 09.7	+0.2
	baz=213								
EWUT	Wuta	0.21	16	⇓*i*	P		Pg	20 58 07.0	+0.3
	baz=15								
EWUT				*i*	S		Sg	20 58 10.2	+0.3
	baz=15								
LATG	Datong	0.34	329	⇓*i*	P		Pg	20 58 09.4	+0.4
	baz=329								
LATG				*i*	S		Sg	20 58 14.4	+0.6
	baz=329								
ETM	Tongmen	0.34	217		P		Pg	20 58 09.1	0.0
	baz=218								
ETM					S		Sg	20 58 13.6	-0.2
	baz=218								
ESAO	Su ao	0.35	19	⇓*i*	P		Pg	20 58 09.4	+0.2
	baz=19								
ESAO					S		Sg	20 58 14.2	+0.2
	baz=19								
LXIB	Xiulin Townshi	0.35	232		P		Pg	20 58 09.2	-0.1
	baz=232								
LXIB					eS		Sg	20 58 14.5	+0.3
	baz=232								
NNSB	Datong	0.36	301	⇓*i*	P		Pg	20 58 09.7	+0.3
	baz=301								
NNSB				*i*	S		Sg	20 58 14.7	+0.4
	baz=301								
NNSH	Datong	0.36	301	*e*	P		Pg	20 58 09.7	+0.3
	baz=301								
NNSH					S		Sg	20 58 14.9	+0.6
	baz=301								
NNS	Nan Shan	0.37	302	⇓*i*	P		Pg	20 58 10.0	+0.3
	baz=302								
NNS				*i*	S		Sg	20 58 15.2	+0.5
	baz=302								
TWC	Suao	0.39	18	⇓*i*	P		Pg	20 58 10.1	+0.3
	baz=12								
TWC					S		Sg	20 58 15.2	+0.1
	baz=12								
NDS	Dongshan	0.39	360	⇓*i*	P		Pg	20 58 10.4	+0.4
	baz=359								
NDS				*i*	S		Sg	20 58 16.0	+0.8
	baz=359								
NDT	Datong Townshi	0.40	333	⇓*i*	P		Pb	20 58 10.8	-0.4
	baz=332								
NDT				*i*	S		Sb	20 58 16.7	-0.6
	baz=332								
ENTT	Nioudou	0.42	341	⇑	P		Pg	20 58 10.9	+0.4
	baz=341								
ENTT					S		Sg	20 58 16.7	+0.5
	baz=341								
WHF	Hehuan Shan	0.42	257		P		Pg	20 58 10.7	0.0
	baz=257								
WHF					S		Sg	20 58 16.5	0.0
	baz=257								
FUSS	Fushou	0.43	271		P		Pg	20 58 11.1	+0.4
	baz=271								
FUSS					S		Sg	20 58 17.0	+0.4
	baz=271								
SHUL	Shoufeng	0.47	197		P		Pb	20 58 12.5	+0.2
	baz=205								
SHUL					eS		Sb	20 58 21.0	+1.8
	baz=205								
TWE	Neicheng	0.48	355	⇓*i*	P		Pb	20 58 12.1	-0.3
	baz=1.0								
TWE					S		Sg	20 58 18.1	+0.1
	baz=1.0								
TWT	Tachien	0.49	271		P		Pb	20 58 12.6	-0.2
	baz=271								
TWT					S		Sg	20 58 19.0	+0.5
	baz=271								
ESL	Shilin	0.50	211		P		Pg	20 58 11.7	-0.3
	baz=212								
ESL					eS		Sg	20 58 18.1	-0.4
	baz=212								
EOS2	EOS2	0.50	69	*e*	P		Pb	20 58 12.7	0.0
	baz=65								
TDCB	Techi	0.51	271		P		Pg	20 58 12.5	+0.3
	baz=271								
TDCB					S		Sg	20 58 19.1	+0.1
	baz=271								
ILA	Ilan	0.52	3	*e*	P		Pb	20 58 13.3	+0.1
	baz=356								
CHGB	Renai	0.53	250	⇓*i*	P		Pg	20 58 12.8	+0.2
	baz=246								
CHGB				*i*	S		Sg	20 58 19.4	-0.2
	baz=246								
YHNB	Yeheng	0.53	324	*i*	P		Pb	20 58 13.1	-0.2
	baz=323								
YHNB				*i*	S		Sg	20 58 19.5	-0.1
	baz=323								
FUSB	Fushanzhiwuyua	0.53	347		P		Pb	20 58 13.2	-0.2
	baz=346								
FUSB					S		Sg	20 58 19.7	+0.1
	baz=346								
NSK	Sanguang	0.54	323		P		Pb	20 58 13.3	-0.3
	baz=323								
NSK					S		Sg	20 58 20.3	+0.3
	baz=323								
EOS3	EOS3	0.55	85	*e*	P		Pn	20 58 14.6	-0.9
	baz=84								
TEGC	Jichi Village	0.55	197	*e*	P		Pb	20 58 13.4	-0.3
	baz=187								
EOS4	EOS4	0.56	102	*e*	P		Pb	20 58 14.3	+0.7
	baz=95								
NWLT	Wulai	0.57	340		P		Pb	20 58 13.8	-0.1
	baz=345								
NWLT					S		Sg	20 58 20.7	-0.1
	baz=345								
OWD	Renai	0.57	240	*e*	P		Pb	20 58 13.3	-0.1
	baz=235								
WUSB	Renai	0.60	246		P		Pg	20 58 14.0	+0.1
	baz=239								
WUSB					eS		Sg	20 58 21.3	-0.6
	baz=239								
WARBT	Fenglin Townsh	0.60	210	*e*	P		Pg	20 58 13.6	-0.3
NFF	Wufeng Townshi	0.67	306	*e*	P		Pb	20 58 15.7	0.0
	baz=305								
NFF					eS		Sb	20 58 24.6	-0.4
	baz=305								
WHP	Taichung City	0.70	273	*e*	P		Pg	20 58 16.0	+0.2
	baz=273								
WHP					eS		Sg	20 58 25.3	+0.2
	baz=273								
VWDT	VWDT	0.72	227		P		Pg	20 58 16.1	+0.1
	baz=228								
VWDT					eS		Sg	20 58 25.6	+0.1
	baz=228								
WPL	Puli Township	0.73	252	*e*	P		Pg	20 58 16.4	+0.1
	baz=252								
WPL					eS		Sg	20 58 25.9	0.0
	baz=252								
TIPB	Shuangxi	0.73	8	*e*	P		Pb	20 58 17.0	+0.2
	baz=359								
TIPB					S		Sg	20 58 25.4	-0.7
	baz=359								
NHDH	Xindian Distri	0.74	346	*e*	P		Pn	20 58 17.9	-0.3
	baz=346								
TWA	Mucha	0.74	351	*e*	P		Pn	20 58 18.2	-0.2
	baz=351								
DPDB	Guoxing	0.75	254	*e*	P		Pb	20 58 17.3	+0.2
	baz=255								
DPDB					eS		Sg	20 58 26.7	+0.1
	baz=255								
LIOB	Emei	0.75	302	*e*	P		Pb	20 58 17.7	+0.6
	baz=302								
NJD	Zhudong	0.75	311	*e*	P		Pn	20 58 18.2	-0.3
	baz=310								
NJD					S		Sn	20 58 28.7	-1.1
	baz=310								
NSTT	Nanjuang	0.76	301	*e*	P		Pb	20 58 17.7	+0.5
	baz=301								
NSTT					eS		Sg	20 58 27.1	+0.2
	baz=301								
WCS	Beigang Elemen	0.76	256	*e*	P		Pb	20 58 17.2	0.0
	baz=256								
TATO	Taipei	0.76	344	*i*	P		Pb	20 58 17.7	+0.5
	baz=343								
TATO				*i*	S		Sb	20 58 27.2	-0.2
	baz=343								
BACT	New Taipei Cit	0.79	342	*e*	P		Pn	20 58 18.6	-0.4
	baz=341								
HGSD	Ruisui	0.79	200	*e*	P		Pn	20 58 18.5	-0.5
	baz=216								
TWB1	Santiao Chiao	0.80	18		P		Pb	20 58 17.9	-0.1
	baz=17								
TWB1					eS		Sg	20 58 27.4	-0.8
	baz=17								
NHY	Taipei	0.81	350	*e*	P		Pn	20 58 19.0	-0.2
	baz=350								
TAP	Taipei	0.82	347	*e*	P		Pn	20 58 19.1	-0.2
	baz=346								
TAP					eS		Sb	20 58 29.4	+0.3
	baz=346								
EHY	Hungye	0.82	206	*e*	P		Pg	20 58 17.4	-0.6
	baz=206								
NWF	Wu-fen Shan	0.83	4		P		Pn	20 58 19.9	+0.4
	baz=356								
NWF					S		Sg	20 58 28.7	-0.4
	baz=356								
SMLT	Sun Moon Lake	0.83	245	*e*	P		Pb	20 58 18.6	+0.2
	baz=244								
WFSB	Wu-fen Shan	0.83	4	*e*	P		Pn	20 58 19.6	+0.1
	baz=356								
WFSB					S		Sg	20 58 29.2	+0.1
	baz=356								
HSN1	Hsinchu	0.83	310		P		Pn	20 58 19.6	0.0
	baz=310								
HSN1					eS		Sn	20 58 30.8	-0.8
	baz=310								
SSLB	Suanglung	0.83	237	*e*	P		Pg	20 58 17.9	-0.3
	baz=238								
SSLB					eS		Sg	20 58 27.7	-1.4
	baz=238								
NTY	Taoyuan	0.84	333	*e*	P		Pn	20 58 20.0	+0.3
	baz=333								
SXI1	Grass Mountain	0.86	10	*e*	P		Pn	20 58 19.7	-0.4
	baz=356								
SBCB	Hsinchu	0.86	310		P		Pn	20 58 20.5	+0.5
	baz=309								
SBCB					S		Sn	20 58 32.8	+0.3
	baz=309								
TWQ1	Liyutan	0.87	277	*e*	P		Pn	20 58 20.9	+0.9
	baz=277								
NCUH	Zhongli	0.87	326	*e*	P		Pn	20 58 20.5	+0.4
	baz=326								
NCUH					eS		Sn	20 58 32.5	-0.1
	baz=326								
HSN	Hsinchu	0.88	310		P		Pn	20 58 20.4	+0.2
	baz=303								
HSN					eS		Sn	20 58 33.8	+1.0
	baz=303								
NJN	Zhunan	0.89	300	*e*	P		Pn	20 58 20.8	+0.5
	baz=292								
NSY	Sanyi	0.89	281	*e*	P		Pn	20 58 20.9	+0.5
	baz=281								
NMLH	Miaoli	0.89	289	*e*	P		Pn	20 58 21.1	+0.8
	baz=289								
TWS1	Kuangyinshan	0.90	342	*e*	P		Pn	20 58 20.8	+0.4
	baz=350								
TWS1					eS		Sn	20 58 32.9	-0.4
	baz=350								
TNOU	National Taiwa	0.91	3	P	P		Pn	20 58 20.2	-0.3
	baz=3.0								
YM01	YM01	0.91	352	P	P		Pn	20 58 20.7	0.0
	baz=351								
YM01					eS		Sb	20 58 32.4	+0.5
	baz=351								
YULB	Yu-li	0.93	204	*e*	P		Pg	20 58 19.1	-0.9
	baz=216								
NTST	Danshui	0.95	345	*e*	P		Pn	20 58 21.5	+0.3
	baz=345								
WWF	Wufeng	0.95	258	*e*	P		Pn	20 58 21.9	+0.7
	baz=254								
WWF					eS		Sn	20 58 35.5	+0.9
	baz=254								
ECBN	Changbin	0.95	195	*e*	P		Pg	20 58 20.8	+0.3
	baz=180								
ANP	Anpu	0.96	349	*e*	P		Pn	20 58 21.5	+0.1
	baz=349								
WHYT	Xinyi Township	0.96	236	*e*	P		Pn	20 58 21.7	+0.3
	baz=236								
EYUL	Yuli	0.96	202	*e*	P		Pg	20 58 20.8	0.0
	baz=215								
TWF1	Yuli	0.96	204	*e*	P		Pb	20 58 20.6	-0.1
	baz=214								
NHW	Xinwu Township	0.97	322	*e*	P		Pn	20 58 21.9	+0.3
	baz=321								
NHW					eS		Sn	20 58 36.1	+0.9
	baz=321								
WDJ	Dajia District	0.99	276	*e*	P		Pn	20 58 22.7	+1.1
	baz=276								
WJS	Zhushan	1.00	245	*e*	P		Pn	20 58 22.5	+0.7
	baz=238								
WNT1	Nantou City	1.00	251	*e*	P		Pn	20 58 22.7	+0.8
	baz=248								
WNT1					eS		Sn	20 58 37.4	+1.4
	baz=248								
WNT	Mingjian	1.01	249	*e*	P		Pn	20 58 23.0	+1.0
	baz=240								
TWY	Chenhua	1.03	354	*e*	P		Pn	20 58 23.5	+1.2
	baz=354								
WCHH	Zhanghua	1.07	262	*e*	P		Pn	20 58 24.0	+1.2
	baz=262								
WCHH					eS		Sn	20 58 39.2	+1.6
	baz=262								
WYL	Yuanlin Townsh	1.07	255	*e*	P		Pn	20 58 24.0	+1.1
	baz=256								
WYL					eS		Sn	20 58 39.1	+1.5
	baz=256								
CHKH	Chenggong	1.09	196	*e*	P		Pb	20 58 21.5	-1.3
	baz=186								
ALS	Alishan	1.11	229	*e*	P		Pn	20 58 23.6	0.0
	baz=215								
CHN5	Tsauling	1.15	236	*e*	P		Pg	20 58 25.4	+1.2
	baz=228								
CHN5					eS		Sn	20 58 40.7	+1.1
	baz=228								
CHKT	Chengkung	1.18	196	*e*	P		Pn	20 58 23.2	-1.1
	baz=179								
EHD	Haiduan	1.18	203	*e*	P		Pn	20 58 24.1	-0.4
	baz=214								
WGK	Gukeng	1.19	243	*e*	P		Pg	20 58 25.8	+0.8
	baz=243								
YOJ	Yonaguni jima	1.20	79	*e*	P		Pn	20 58 24.6	0.0
	baz=68								
ELDTW	Lidau	1.23	212	*e*	P		Pn	20 58 25.0	-0.1
	baz=212								
ECS	Chishang	1.23	202	*e*	P		Pg	20 58 25.9	+0.1
	baz=214								
WRL	Guolierlin Hig	1.27	255	*e*	P		Pg	20 58 26.5	0.0
	baz=255								
WRL					eS		Sg	20 58 45.2	+2.1
	baz=255								
RLNB	Erlin	1.29	255	*e*	P		Pn	20 58 27.1	+0.2
	baz=255								
WCKO	Fanlu	1.29	232	*e*	P		Pn	20 58 27.8	+0.7
	baz=233								
EDH	Donghe	1.32	197	*e*	P		Pn	20 58 25.2	-1.1
	baz=182								
WTK	Tuku	1.33	246	*e*	P		Pg	20 58 28.3	+0.6
	baz=233								
CHN2	Minshiung	1.34	238	*e*	P		Pg	20 58 28.1	+0.2
	baz=240								
CHN2					eS		Sg	20 58 46.8	+1.5
	baz=240								
TPUB	Ta-pu	1.37	227	*e*	P		Pg	20 58 28.3	-0.1
	baz=214								
STYH	Taoyuan	1.37	219	*e*	P		Pb	20 58 27.9	+0.2
	baz=220								
STYT	Taoyuan	1.39	219	*e*	P		Pg	20 58 28.7	-0.2
	baz=220								
WTP	Ta-pu	1.42	226	*e*	P		Pg	20 58 29.2	-0.2
	baz=213								
PCYT	Pengchaiyu	1.42	13	*e*	P		Pg	20 58 28.9	-0.5
	baz=13								
LONT	Longtian	1.43	202	*e*	P		Pn	20 58 28.1	+0.3
	baz=203								
WSF	Szhu	1.49	247	*e*	P		Pb	20 58 30.0	+0.3
	baz=257								
WSF					eS		Sg	20 58 50.8	+0.5
	baz=257								
SNST	Tainan City	1.51	228	*e*	P		Pg	20 58 30.7	-0.4
	baz=214								
CHN1	Nanshi	1.51	226	*e*	P		Pb	20 58 30.6	+0.5
	baz=227								
TWG	Pinlang	1.53	203	*e*	P		Pg	20 58 31.4	-0.2
	baz=203								
TWGBT	Beinan	1.53	203	*e*	P		Pn	20 58 29.7	+0.5
	baz=203								
SGST	Jiashian	1.55	222	*e*	P		Pb	20 58 31.0	+0.2
	baz=223								
ICHU	Yijhu	1.58	237	*e*	P		Pb	20 58 31.7	+0.5
	baz=237								
CHN8	Yiju	1.64	237	*e*	P		Pb	20 58 32.3	+0.1
	baz=222								
SHHT	Tainan City	1.75	226	*e*	P		Pg	20 58 35.6	0.0
	baz=228								
ECL	Taimali	1.78	203	*e*	P		Pb	20 58 34.7	0.0
	baz=190								
MASBT	Mashibuluo	1.90	212	*e*	P		Pb	20 58 36.3	-0.5
	baz=214								
EAST	Anshuo	2.02	204	*e*	P		Pb	20 58 37.6	-1.0
	baz=192								
PNG	Penghu	2.09	252	*e*	P		Pn	20 58 38.0	+1.2
	baz=252								
PHUB	P'eng-hu	2.09	250	*e*	P		Pn	20 58 38.1	+1.2
	baz=250								
SCZT	Fangliau	2.12	209	*e*	P		Pb	20 58 39.2	-1.1
	baz=201								
VCHM	Qimei	2.33	244	*e*	P		Pn	20 58 41.1	+0.9
	baz=230								
PTMZ	Houxiangcun	2.49	289	*e*	P		Pn	20 58 42.6	+0.2
	baz=288								
XPSS	Dashiqiu	3.01	333	*e*	P		Pn	20 58 49.6	+0.1
	baz=332				

	baz=336								
NACB				S		Sg	21 02 49.0	+0.2	
	baz=336								
ETM	**Tongmen**	**0.17**	**242**	*e*P		Pg	21 02 48.0	+0.6	
	baz=243								
ETM				*e*S		Sg	21 02 50.7	+1.1	
	baz=243								

NEIC **06** *21:02:49.8±1.3,23.°94N±0.°02×121.°62E±0.°04, h8km±5km, mb4.2/12, Error ellipse: s-maj=5.3km s-min=2.0km az=113.0*

NIED **06** *21:02:49.6,23.°95N×121.°63E, h2km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.43; Mθθ0.22; Mϕϕ-0.64; Mrθ0.65; Mθϕ-0.40; Mϕr1.17; Fault plane solution: M₀1.48000×10¹⁵ NP1:φ₁30.00000°, δ78.00000°, λ97.00000°. NP2:φ₂182.00000°, δ14.00000°, λ62.00000°.*

JMA **06** *21:02:49.6±0.1,24.°0N±0.°2×121.°6E±0.°9, h2km, MV3.8/15, TAIWAN REGION*

IDC **06** *21:02:49.2±1.2,24.°10N×121.°70E, h0km, mb3.7/8, mbtmp3.8/10, ML4.1/2, Error ellipse: s-maj=27.0km s-min=22.0km az=177.0*

TAP **06** *21:02:50.1,23.°97N×121.°59E, h6km, ML4.3, C*

ASIES **06** *21:02:50.1,23.°97N×121.°59E, h6km, ML4.3, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr0.45; Mθθ-0.41; Mϕϕ-0.72; Mrθ0.42; Mθϕ-0.39; Mϕr1.18; Fault plane solution: M₀1.46813×10²² NP1:φ₁21.47000°, δ75.41000°, λ82.49000°. NP2:φ₂229.09000°, δ16.37000°, λ116.66000°. Principal axes: T Plg58.9310°, Azm281.1530°; N Plg7.2650°, Azm23.3690°; P Plg30.0220°, Azm117.5940°;*

ISC 06 21:02:49.9±0.8, 23.°95N±0.°01×121.°64E±0.°01, h9km±5km, n204, σθ99/325, mb3.9/15, 4C-29D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.13**	**341**		*i*P		**Pg**	**21 02 53.0**	**+0.1**
	baz=7.0								
TWD					*i* S		**Sg**	**21 02 55.0**	**0.0**
	baz=7.0								
ETM	**Tongmen**	**0.14**	**275**	⇓	*i*P		**Pg**	**21 02 52.6**	**-0.4**
	baz=267								
ETM					*i* S		**Sg**	**21 02 54.2**	**-0.9**
	baz=267								
SHUL	**Shoufeng**	**0.18**	**204**	⇓	*i*P		**Pg**	**21 02 54.7**	**+1.0**
	baz=189								
SHUL					S		**Sg**	**21 02 57.6**	**+1.4**
	baz=189								
ETL	**Fush Village**	**0.21**	**355**	*e*	P		**Pg**	**21 02 54.3**	**+0.1**
	baz=9.0								
ETL					*i* S		**Sg**	**21 02 57.0**	**0.0**
	baz=9.0								
LXIB	**Xiulin Townshi**	**0.22**	**288**	⇓	*i*P		**Pg**	**21 02 54.0**	**-0.4**
	baz=281								
LXIB					*i* S		**Sg**	**21 02 57.3**	**-0.3**
	baz=281								
NACB	**Ninganchiao**	**0.22**	**349**		Pg		**Pg**	**21 02 54.3**	**-0.2**
NACB					Sg		**Sg**	**21 02 57.1**	**-0.5**
NACB	**Ninganchiao**	**0.22**	**349**	⇓	*i*P		**Pg**	**21 02 54.4**	**-0.1**
	baz=12								
NACB					*i* S		**Sg**	**21 02 57.2**	**-0.3**
	baz=12								
ESL	**Shilin**	**0.24**	**234**	⇓	*i*P		**Pg**	**21 02 54.4**	**-0.3**
	baz=222								
ESL					S		**Sg**	**21 02 57.2**	**-0.8**
	baz=222								
TEGC	**Jichi Village**	**0.26**	**201**	*e*	P		**Pb**	**21 02 56.6**	**-0.2**
	baz=195								
TEGC					*e*S		**Sb**	**21 03 01.1**	**-0.4**
	baz=195								
WARBT	**Fenglin Townsh**	**0.33**	**225**	⇓	*i*P		**Pg**	**21 02 56.3**	**-0.2**
	baz=227								
WARBT					*e*S		**Sg**	**21 03 00.4**	**-0.5**
	baz=227								
EGFH	**Guangfu**	**0.34**	**215**	⇓	P		**Pg**	**21 02 57.0**	**+0.2**
	baz=220								
EGFH					*e*S		**Sg**	**21 03 01.7**	**+0.4**
	baz=220								
EHP	**Heping Village**	**0.37**	**14**	*e*	P		**Pg**	**21 02 57.4**	**+0.3**
	baz=23								
EHP					*e*S		**Sg**	**21 03 02.4**	**+0.4**
	baz=23								
EAHA	**Aohua**	**0.38**	**13**	*e*	P		**Pg**	**21 02 57.7**	**+0.3**
	baz=31								
EAHA					*e*S		**Sg**	**21 03 03.4**	**+0.8**
	baz=31								
WHF	**Hehuan Shan**	**0.40**	**299**	⇓	P		**Pg**	**21 02 57.3**	**-0.5**
	baz=301								
WHF					*e*S		**Sg**	**21 03 02.8**	**-0.2**
	baz=301								
OWD	**Renai**	**0.43**	**270**	⇓	P		**Pg**	**21 02 58.0**	**-0.3**
	baz=268								
OWD					*e*S		**Sg**	**21 03 03.6**	**-0.3**
	baz=268								
CHGB	**Renai**	**0.44**	**284**	⇓	*i*P		**Pg**	**21 02 58.5**	**-0.1**
	baz=284								
CHGB					*e*S		**Sg**	**21 03 04.3**	**-0.2**
	baz=284								
FUSS	**Fushou**	**0.47**	**309**	⇓	*i*P		**Pg**	**21 02 59.0**	**-0.1**
	baz=311								
FUSS					*e*S		**Sg**	**21 03 04.2**	**-1.1**
	baz=311								
ENA	**Nanau**	**0.48**	**11**	⇓	P		**Pg**	**21 02 59.5**	**+0.2**
	baz=17								
ENA					*e*S		**Sg**	**21 03 05.3**	**-0.3**
	baz=17								
WUSB	**Renai**	**0.48**	**275**	⇓	*i*P		**Pg**	**21 02 59.3**	**-0.1**
	baz=273								
WUSB					*e*S		**Sg**	**21 03 04.6**	**-1.1**
	baz=273								
HGSD	**Ruisui**	**0.50**	**204**	*e*	P		**Pb**	**21 03 00.8**	**-0.1**
	baz=206								
VWDT	**VWDT**	**0.50**	**247**	⇓	*i*P		**Pg**	**21 02 59.7**	**+0.1**
	baz=244								
VWDT					*e*S		**Sg**	**21 03 05.7**	**-0.5**
	baz=244								
EWUT	**Wuta**	**0.51**	**14**	⇓	P		**Pg**	**21 03 00.0**	**+0.3**
	baz=28								
EWUT					*e*S		**Sg**	**21 03 06.7**	**+0.3**
	baz=28								
TWT	**Tachien**	**0.52**	**305**	⇓	*i*P		**Pg**	**21 03 00.3**	**+0.2**
	baz=305								
TWT					*e*S		**Sg**	**21 03 07.4**	**+0.4**
	baz=305								
NNSB	**Datong**	**0.53**	**333**	*e*	P		**Pg**	**21 03 00.1**	**-0.2**
	baz=337								
NNSB					*e*S		**Sg**	**21 03 06.7**	**-0.6**
	baz=337								
EHY	**Hungye**	**0.53**	**214**	⇓	*i*P		**Pg**	**21 03 00.1**	**-0.1**
	baz=218								
EHY					*e*S		**Sg**	**21 03 08.1**	**+0.9**
	baz=218								
TDCB	**Techi**	**0.53**	**304**	⇓	*i*P		**Pg**	**21 03 00.2**	**-0.1**
	baz=305								
TDCB					*e*S		**Sg**	**21 03 07.0**	**-0.4**
	baz=305								
NNS	**Nan Shan**	**0.54**	**333**	*e*	P		**Pg**	**21 03 00.2**	**-0.3**
	baz=338								
NNS					*e*S		**Sg**	**21 03 07.4**	**-0.3**
	baz=338								
LATG	**Datong**	**0.59**	**350**	⇓	*i*P		**Pg**	**21 03 01.3**	**-0.1**
	baz=344								
LATG					*e*S		**Sg**	**21 03 09.2**	**+0.1**
	baz=344								
EOS4	**EOS4**	**0.64**	**75**	*e*	P		**Pn**	**21 03 04.6**	**-0.3**
	baz=97								
EOS4					*e*S		**Sn**	**21 03 14.4**	**-0.6**
	baz=97								
YULB	**Yu-li**	**0.64**	**210**				**Pg**	**21 03 02.2**	**-0.2**
YULB	**Yu-li**	**0.64**	**210**		P		**Pg**	**21 03 02.6**	**+0.3**
YULB	**Yu-li**	**0.64**	**210**	*e*	P		**Pg**	**21 03 02.2**	**-0.2**
	baz=216								
YULB					*e*S		**Sg**	**21 03 10.8**	**0.0**
	baz=216								
ESAO	**Su ao**	**0.65**	**16**	*e*	P		**Pg**	**21 03 02.5**	**+0.1**
	baz=28								
ESAO					*e*S		**Sg**	**21 03 11.6**	**+0.7**
	baz=28								
SSLB	**Suanglung**	**0.65**	**255**				**Pg**	**21 03 02.3**	**-0.2**
SSLB					Sg		**Sg**	**21 03 09.8**	**-1.3**
SSLB	**Suanglung**	**0.65**	**255**		P		**Pg**	**21 03 02.6**	**+0.1**
SSLB	**Suanglung**	**0.65**	**255**	⇓	*i*P		**Pg**	**21 03 02.3**	**-0.2**
	baz=254								
SSLB					S		**Sg**	**21 03 09.9**	**-1.2**
	baz=254								
NDT	**Datong Townshi**	**0.66**	**350**		P		**Pb**	**21 03 03.4**	**-0.2**
	baz=344								
NDT					*e*S		**Sg**	**21 03 11.0**	**-0.2**
	baz=344								
ECBN	**Changbin**	**0.66**	**196**	*e*	P		**Pb**	**21 03 03.9**	**+0.3**
	baz=178								
ECBN					*e*S		**Sn**	**21 03 14.6**	**-1.3**
	baz=178								
EYUL	**Yuli**	**0.67**	**206**	*e*	P		**Pg**	**21 03 03.5**	**+0.6**
	baz=215								
EYUL					*e*S		**Sb**	**21 03 12.9**	**-0.4**
	baz=215								
TWF1	**Yuli**	**0.68**	**208**	*e*	P		**Pg**	**21 03 02.9**	**-0.1**
	baz=216								
TWF1					*e*S		**Sg**	**21 03 12.6**	**+0.7**
	baz=216								
WCS	**Beigang Elemen**	**0.68**	**279**	⇓	P		**Pg**	**21 03 03.1**	**+0.2**
	baz=278								
WCS					S		**Sg**	**21 03 11.3**	**-0.6**
	baz=278								
TWC	**Suao**	**0.68**	**16**	*e*	P		**Pg**	**21 03 03.4**	**+0.4**
	baz=9.0								
TWC					*e*S		**Sg**	**21 03 12.1**	**+0.2**
	baz=9.0								
NDS	**Dongshan**	**0.68**	**6**	*e*	P		**Pg**	**21 03 03.3**	**+0.2**
	baz=9.0								
NDS					*e*S		**Sg**	**21 03 12.6**	**+0.6**
	baz=9.0								
SMLT	**Sun Moon Lake**	**0.68**	**264**	⇓	*i*P		**Pg**	**21 03 03.1**	**-0.1**
	baz=263								
SMLT					*e*S		**Sg**	**21 03 11.9**	**-0.2**
	baz=263								
ENTT	**Nioudou**	**0.69**	**354**	*e*	P		**Pg**	**21 03 03.6**	**+0.4**
	baz=358								
ENTT					*e*S		**Sg**	**21 03 12.3**	**+0.1**
	baz=358								
EOS3	**EOS3**	**0.70**	**62**	*e*	P		**Pn**	**21 03 05.7**	**-0.2**
	baz=62								
EOS2	**EOS2**	**0.71**	**49**	*e*	P		**Pn**	**21 03 07.0**	**+0.9**
	baz=66								
WHP	**Taichung City**	**0.71**	**297**	⇓	*i*P		**Pg**	**21 03 04.0**	**+0.3**
	baz=288								
WHP					*e*S		**Sg**	**21 03 13.3**	**+0.2**
	baz=288								
YHNB	**Yeheng**	**0.75**	**341**				**Pb**	**21 03 04.9**	**-0.4**
YHNB	**Yeheng**	**0.75**	**341**		P		**Pb**	**21 03 05.1**	**-0.2**
YHNB	**Yeheng**	**0.75**	**341**	⇓	*i*P		**Pg**	**21 03 04.7**	**+0.2**
	baz=344								
YHNB					*e*S		**Sg**	**21 03 13.8**	**-0.5**
	baz=344								
NSK	**Sanguang**	**0.77**	**340**	⇑	*i*P		**Pb**	**21 03 05.0**	**-0.5**
	baz=344								
NSK					*e*S		**Sg**	**21 03 14.5**	**-0.2**
	baz=344								
TWE	**Neicheng**	**0.77**	**2**	⇓	*i*P		**Pg**	**21 03 04.8**	**+0.2**
	baz=6.0								
TWE					*e*S		**Sb**	**21 03 15.4**	**-0.5**
	baz=6.0								
WHYT	**Xinyi Township**	**0.77**	**251**	*e*	P		**Pg**	**21 03 04.8**	**+0.1**
	baz=257								
WHYT					*e*S		**Sg**	**21 03 14.7**	**0.0**
	baz=257								
CHKH	**Chenggong**	**0.79**	**197**	*e*	P		**Pb**	**21 03 05.9**	**0.0**
	baz=183								
CHKH					*e*S		**Sn**	**21 03 18.6**	**-0.7**
	baz=183								
FUSB	**Fushanzhiwuyua**	**0.80**	**356**	⇓	P		**Pg**	**21 03 05.7**	**+0.2**
	baz=359								
FUSB					*e*S		**Sg**	**21 03 15.4**	**-0.5**
	baz=359								
ILA	**Ilan**	**0.81**	**7**	*e*	P		**Pb**	**21 03 06.3**	**0.0**
	baz=11								
ILA					*e*S		**Sb**	**21 03 17.6**	**+0.2**
	baz=11								
FULB	**Fuli**	**0.82**	**203**	*e*	P		**Pg**	**21 03 06.1**	**+0.4**
	baz=217								
FULB					*e*S		**Sn**	**21 03 19.3**	**-0.7**
	baz=217								
NFF	**Wufeng Townshi**	**0.83**	**325**	⇑	*i*P		**Pb**	**21 03 06.3**	**-0.3**
	baz=327								
NFF					*e*S		**Sg**	**21 03 16.8**	**0.0**
	baz=327								
NWLT	**Wulai**	**0.83**	**351**	*e*	P		**Pb**	**21 03 06.3**	**-0.2**
	baz=354								
NWLT					*e*S		**Sg**	**21 03 16.7**	**0.0**
	baz=354								
WJS	**Zhushan**	**0.85**	**261**	*e*	P		**Pb**	**21 03 07.0**	**+0.2**
	baz=260								
WJS					*e*S		**Sb**	**21 03 18.9**	**+0.5**
	baz=260								
WNT	**Mingjian**	**0.88**	**265**	*e*	P		**Pb**	**21 03 07.9**	**+0.5**
	baz=264								
WNT					*e*S		**Sb**	**21 03 19.4**	**+0.1**
	baz=264								
ALS	**Alishan**	**0.89**	**240**		P		**Pg**	**21 03 07.2**	**+0.1**
	baz=239								
ALS					*e*S		**Sg**	**21 03 18.8**	**+0.2**
	baz=239								
TWQ1	**Liyutan**	**0.89**	**296**	*e*	P		**Pb**	**21 03 07.8**	**+0.3**
	baz=297								
TWQ1					*e*S		**Sb**	**21 03 20.0**	**+0.5**
	baz=297								
CHKT	**Chengkung**	**0.89**	**197**	*e*	P		**Pg**	**21 03 07.2**	**+0.2**
	baz=196								
CHKT					*e*S		**Sn**	**21 03 21.7**	**+0.1**
	baz=196								
NSTT	**Nanjuang**	**0.89**	**319**	⇓	P		**Pb**	**21 03 07.4**	**-0.2**
	baz=321								
NSTT					*e*S		**Sg**	**21 03 19.0**	**+0.2**
	baz=321								
EHD	**Haiduan**	**0.90**	**207**	*e*	P		**Pg**	**21 03 07.3**	**+0.1**
	baz=216								
EHD					*e*S		**Sb**	**21 03 19.6**	**-0.1**
	baz=216								
LIOB	**Emei**	**0.90**	**320**	*e*	P		**Pb**	**21 03 07.8**	**+0.1**
	baz=322								
LIOB					*e*S		**Sb**	**21 03 19.4**	**-0.4**
	baz=322								
NSY	**Sanyi**	**0.93**	**300**	*e*	P		**Pn**	**21 03 09.0**	**-0.2**
	baz=301								
NSY					*e*S		**Sb**	**21 03 21.3**	**+0.6**
	baz=301								
ECS	**Chishang**	**0.94**	**205**	*e*	P		**Pb**	**21 03 08.6**	**+0.2**
	baz=205								
CHN5	**Tsauling**	**0.95**	**248**	⇓	P		**Pb**	**21 03 08.8**	**+0.2**
	baz=237								
CHN5					*e*S		**Sn**	**21 03 22.4**	**-0.9**
	baz=237								
ELDTW	**Lidau**	**0.95**	**217**	*e*	P		**Pg**	**21 03 07.5**	**-0.8**
	baz=207								
ELDTW					*e*S		**Sg**	**21 03 20.9**	**+0.3**
	baz=207								
NMLH	**Miaoli**	**0.97**	**307**	*e*	P		**Pn**	**21 03 10.0**	**+0.2**
	baz=307								
NMLH					S		**Sn**	**21 03 23.1**	**-0.7**
	baz=307								
WDJ	**Dajia District**	**1.00**	**293**	*e*	P		**Pn**	**21 03 10.6**	**+0.5**
	baz=294								
WDJ					*e*S		**Sn**	**21 03 24.1**	**-0.2**
	baz=294								
WCHH	**Zhanghua**	**1.00**	**277**	*e*	P		**Pn**	**21 03 10.1**	**0.0**
	baz=277								
WCHH					*e*S		**Sn**	**21 03 25.3**	**+0.9**
	baz=277								
NHDH	**Xindian Distri**	**1.01**	**354**	*e*	P		**Pn**	**21 03 10.1**	**-0.2**
	baz=356								
NHDH					*e*S		**Sg**	**21 03 21.9**	**-0.7**
	baz=356								
TWA	**Mucha**	**1.02**	**357**	*e*	P		**Pb**	**21 03 10.1**	**+0.2**
	baz=349								
TWA					S		**Sg**	**21 03 23.0**	**0.0**
	baz=349								
EDH	**Donghe**	**1.02**	**198**	*e*	P		**Pg**	**21 03 09.2**	**-0.4**
	baz=199								
EDH					*e*S		**Sn**	**21 03 25.6**	**+0.6**
	baz=199								
WGK	**Gukeng**	**1.02**	**255**	*e*	P		**Pn**	**21 03 10.7**	**+0.2**
	baz=255								
WGK					*e*S		**Sn**	**21 03 24.6**	**-0.4**
	baz=255								
TATO	**Taipei**	**1.03**	**352**				**Pn**	**21 03 10.2**	**-0.4**
TATO	**Taipei**	**1.03**	**352**		P		**Pn**	**21 03 10.6**	**0.0**
SBCB	**Hsinchu**	**1.03**	**324**	*e*	P		**Pn**	**21 03 11.1**	**+0.5**
	baz=326								
SBCB					*e*S		**Sn**	**21 03 24.9**	**-0.3**
	baz=326								
TIPB	**Shuangxi**	**1.03**	**9**	*e*	P		**Pb**	**21 03 09.9**	**0.0**
	baz=12								
HSN	**Hsinchu**	**1.04**	**324**	*e*	P		**Pn**	**21 03 11.2**	**+0.4**
	baz=328								
HSN					*e*S		**Sn**	**21 03 25.2**	**-0.3**
	baz=328								
WDLH	**Douliu**	**1.05**	**256**	*e*	P		**Pn**	**21 03 11.2**	**+0.4**
	baz=256								
WDLH					*e*S		**Sn**	**21 03 26.4**	**+0.8**
	baz=256								
WCKO	**Fanlu**	**1.08**	**242**		P		**Pn**	**21 03 11.5**	**+0.2**
	baz=236								
WCKO					*e*S		**Sb**	**21 03 25.3**	**+0.2**
	baz=236								
NHY	**Taipei**	**1.08**	**356**	*e*	P		**Pn**	**21 03 11.8**	**+0.5**
	baz=11								
TAP	**Taipei**	**1.09**	**353**	*e*	P		**Pn**	**21 03 11.2**	**-0.2**
	baz=356								
TAP					*e*S		**Sb**	**21 03 25.7**	**+0.4**
	baz=356								
NCUH	**Zhongli**	**1.09**	**338**	*e*	P		**Pn**	**21 03 12.3**	**+0.9**
	baz=351								
NCUH					*e*S		**Sn**	**21 03 27.2**	**+0.4**
	baz=351								
TWB1	**Santiao Chiao**	**1.10**	**17**	*e*	P		**Pg**	**21 03 10.8**	**-0.2**
	baz=11								
TWB1					*e*S		**Sg**	**21 03 25.2**	**0.0**
	baz=11								
STYH	**Taoyuan**	**1.11**	**226**	*e*	P		**Pg**	**21 03 11.3**	**0.0**
	baz=226								
STYH					*e*S		**Sb**	**21 03 26.3**	**+0.3**
	baz=226								
NWF	**Wu-fen Shan**	**1.12**	**6**	*e*	P		**Pn**	**21 03 12.0**	**+0.1**
	baz=8.0								
NWF					*e*S		**Sn**	**21 03 27.2**	**-0.3**
	baz=8.0								
WFSB	**Wu-fen Shan**	**1.12**	**6**	*e*	P		**Pn**	**21 03 12.0**	**+0.2**
	baz=8.0								
WFSB					*e*S		**Sg**	**21 03 25.9**	**-0.1**
	baz=8.0								
TPUB	**Ta-pu**	**1.13**	**235**				**Pn**	**21 03 12.2**	**+0.1**
TPUB	**Ta-pu**	**1.13**	**235**		P		**Pn**	**21 03 12.3**	**+0.3**
TPUB	**Ta-pu**	**1.13**	**235**	⇑	*i*P		**Pn**	**21 03 12.2**	**+0.1**
	baz=235								
TPUB					*e*S		**Sb**	**21 03 26.5**	**-0.1**
	baz=235								
LONT	**Longtian**	**1.14**	**204**	*e*	P		**Pb**	**21 03 10.8**	**-1.0**
	baz=205								
CHN2	**Minshiung**	**1.15**	**249**	*e*	P		**Pn**	**21 03 13.2**	**+1.0**
	baz=265								
CHN2					*i* S		**Sn**	**21 03 29.4**	**+1.3**
	baz=265								
SXI1	**Grass Mountain**	**1.16**	**11**		P		**Pn**	**21 03 12.4**	**0.0**
	baz=353								
SXI1					S		**Sn**	**21 03 28.1**	**-0.3**
	baz=353								
WRL	**Guolierlin Hig**	**1.16**	**268**	*i*	P		**Pn**	**21 03 12.7**	**+0.3**
	baz=268								
WRL					*i* S		**Sn**	**21 03 29.0**	**+0.6**
	baz=268								
TWS1	**Kuangyinshan**	**1.16**	**350**	*e*	P		**Pn**	**21 03 12.8**	**+0.4**
	baz=2.0								
TWS1					*e*S		**Sn**	**21 03 28.6**	**+0.2**
	baz=2.0								
WTP	**Ta-pu**	**1.18**	**233**	⇑	P		**Pn**	**21 03 12.8**	**+0.2**
	baz=234								
WTP					*e*S		**Sn**	**21 03 28.6**	**-0.3**
	baz=234								
WTK	**Tuku**	**1.18**	**257**	*e*	P		**Pn**	**21 03 13.1**	**+0.4**
	baz=258								
WTK					*e*S		**Sn**	**21 03 29.5**	**+0.7**
	baz=258								
YM01	**YM01**	**1.19**	**357**	*e*	P		**Pn**	**21 03 13.2**	**+0.4**
	baz=358								
YM01					*e*S		**Sn**	**21 03 28.7**	**-0.5**
	baz=358								
TNOU	**National Taiwa**	**1.20**	**6**	*e*	P		**Pg**	**21 03 13.6**	**+0.7**
	baz=6.0								
CHY	**Chiayi**	**1.21**	**248**	*e*	P		**Pg**	**21 03 13.7**	**+0.7**
	baz=263								
CHY					*e*S		**Sn**	**21 03 30.6**	**+1.1**
	baz=263								
NTST	**Danshui**	**1.22**	**352**	*e*	P		**Pg**	**21 03 14.2**	**+0.9**
	baz=10.0								
NTST					*e*S		**Sn**	**21 03 30.9**	**+1.0**
	baz=10.0								
ANP	**Anpu**	**1.23**	**355**	*e*	P		**Pg**	**21 03 13.7**	**+0.1**
	baz=356								
TWGBT	**Beinan**	**1.24**	**205**		P		**Pn**	**21 03 12.7**	**-0.8**
TWGBT	**Beinan**	**1.24**	**205**	*e*	P		**Pn**	**21 03 11.2**	**-2.3**
	baz=206								
TWG	**Pinlang**	**1.24**	**205**				**Pn**	**21 03 11.3**	**-2.2**
TWG	**Pinlang**	**1.24**	**205**	*e*	P		**Pn**	**21 03 11.3**	**-2.2**
	baz=206								
WTCT	**Ta-ch'eng**	**1.25**	**266**	*e*	P		**Pg**	**21 03 13.9**	**0.0**
	baz=266								
WTCT					S		**Sn**	**21 03 31.7**	**+1.1**
	baz=266								
TWK	**Hsinying**	**1.26**	**237**	*e*	P		**Pg**	**21 03 14.6**	**+0.4**
	baz=226								
TWK					*e*S		**Sn**	**21 03 31.9**	**+1.0**
	baz=226								
CHN1	**Nanshi**	**1.28**	**233**		P		**Pg**	**21 03 14.9**	**+0.5**
	baz=235								
CHN1					*e*S		**Sn**	**21 03 31.8**	**+0.5**
	baz=235								
TTN	**Taitung**	**1.28**	**201**	*e*	P		**Pn**	**21 03 13.5**	**-0.5**
	baz=203								
SNST	**Tainan City**	**1.28**	**235**	*e*	P		**Pg**	**21 03 14.9**	**+0.4**
	baz=237								
SNST					S		**Sn**	**21 03 32.4**	**+1.1**
	baz=237								
LDUT	**Ludao**	**1.28**	**187**	*e*	P		**Pn**	**21 03 11.9**	**-2.2**
	baz=173								
LDUT					*e*S		**Sb**	**21 03 29.0**	**-1.9**
	baz=173								
JYNG	**Yonagunijimaku**	**1.29**	**67**	*e*	P		**Pn**	**21 03 14.2**	**0.0**
JYNG					*e*S		**Sn**	**21 03 32.5**	**+1.0**
SGST	**Jiashian**	**1.30**	**229**	*e*	P		**Pn**	**21 03 14.2**	**-0.2**
	baz=230								
SGST					*i* S		**Sg**	**21 03 33.4**	**+1.6**
	baz=230								
TWY	**Chenhua**	**1.32**	**358**	*e*	P		**Pg**	**21 03 16.4**	**+1.2**
	baz=346								
SLGT	**Liugui**	**1.32**	**224**	*e*	P		**Pb**	**21 03 15.2**	**+0.2**
	baz=225								
SLGT					*e*S		**Sg**	**21 03 33.6**	**+1.1**
	baz=225								
WSF	**Szhu**	**1.34**	**257**	*e*	P		**Pg**	**21 03 15.4**	**-0.2**
	baz=257								
WSF					*e*S		**Sg**	**21 03 33.7**	**+0.7**
	baz=257								
YOJ	**Yonaguni jima**	**1.35**	**68**				**Pn**	**21 03 15.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.35**	**68**		P		**Pb**	**21 03 15.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.35**	**68**	*e*	P		**Pn**	**21 03 14.6**	**-0.3**
	baz=67								
YOJ	**Yonaguni jima**	**1.35**	**68**		P		**Pn**	**21 03 15.1**	**+0.2**
WSL	**Shuilin Townsh**	**1.37**	**252**	*e*	P		**Pg**	**21 03 16.4**	**+0.2**
	baz=266								
WSL					*

	baz=221							
TWM1	**Shoushan**	**1.59**	**225**	*e*P		**Pg**	**21 03 21.5**	**+1.1**
	baz=227							
SGLT	**Jiouru**	**1.62**	**221**	*e*P		**Pg**	**21 03 21.7**	**+0.8**
	baz=208							
MASBT	**Mashibuluo**	**1.63**	**215**	*e*P		**Pn**	**21 03 18.3**	**-0.5**
MASBT	baz=221			*e*S		**Sg**	**21 03 43.8**	**+1.5**
	baz=221							
TSCK	**Chigu Township**	**1.64**	**241**	*e*P		**Pb**	**21 03 20.2**	**-0.1**
	baz=244							
TSCK				S		**Sg**	**21 03 43.6**	**+1.0**
	baz=244							
SNJT	**Kaohsiung City**	**1.69**	**225**	*e*P		**Pg**	**21 03 22.2**	**-0.2**
	baz=230							
PCYT	**Pengchaiyu**	**1.71**	**13**	*e*P		**Pb**	**21 03 21.4**	**-0.2**
	baz=12							
EAST	**Anshuo**	**1.73**	**205**	*e*P		**Pn**	**21 03 19.1**	**-1.0**
	baz=196							
TAWH	**Dawu Township**	**1.75**	**204**	*e*P		**Pn**	**21 03 20.5**	**0.0**
	baz=194							
WSSB	**Gushan**	**1.82**	**224**	*e*P		**Pb**	**21 03 23.0**	**-0.5**
	baz=230							
SCZT	**Fangliau**	**1.83**	**211**	*e*P		**Pb**	**21 03 23.9**	**+0.2**
	baz=216							
KAU	**Kaohsiung**	**1.85**	**222**	*e*P		**Pb**	**21 03 23.7**	**-0.2**
	baz=247							
SLIU	**Shizi**	**1.90**	**204**	*e*P		**Pb**	**21 03 24.1**	**-0.6**
	baz=194							
LAY	**Lan-yu**	**1.91**	**183**	*e*P		**Pn**	**21 03 21.8**	**-0.9**
	baz=165							
LYUB	**Lan-yu**	**1.94**	**182**	*e*P		**Pn**	**21 03 20.2**	**-2.9**
	baz=166							
IRIF	**Iriomote-Funau**	**1.94**	**78**	P		**Pn**	**21 03 23.9**	**+0.7**
IRIF				*e*S		**Sb**	**21 03 49.8**	**-0.1**
WDGT	**Dungji**	**1.95**	**250**	*e*P		**Pb**	**21 03 24.5**	**-1.1**
	baz=239							
WDGT				*e*S		**Sb**	**21 03 49.1**	**-0.8**
	baz=239							
PHUB	**P'eng-hu**	**1.95**	**257**	*e*P		**Pn**	**21 03 23.5**	**+0.3**
	baz=258							
PHUB				S		**Sb**	**21 03 49.8**	**-0.2**
	baz=258							
PNG	**Penghu**	**1.95**	**259**	*e*P		**Pn**	**21 03 23.7**	**+0.4**
	baz=260							
PNG				*e*S		**Sb**	**21 03 49.3**	**-0.8**
	baz=260							
HATJ	**Hateruma jima**	**1.98**	**87**	P		**Pn**	**21 03 24.7**	**+1.1**
HATJ				*e*S		**Sn**	**21 03 49.2**	**+0.6**
TWKBT	**Hengchun**	**2.15**	**201**	*e*P		**Pn**	**21 03 26.8**	**+0.9**
	baz=205							
VCHM	**Qimei**	**2.16**	**250**	*e*P		**Pn**	**21 03 26.6**	**+0.4**
	baz=253							
JKRS	**Kuro-shima**	**2.18**	**82**	P		**Pn**	**21 03 27.0**	**+0.6**
JKRS				S		**Sb**	**21 03 55.4**	**-1.4**
VWUC	**VWUC**	**2.25**	**298**	*e*P		**Pn**	**21 03 26.7**	**-0.7**
	baz=297							
JIJ	**Ishigaki jima**	**2.32**	**79**	P		**Pn**	**21 03 28.0**	**-0.3**
JIJ				S		**Sn**	**21 03 57.7**	**+0.7**
JISG	**Ishigakijimahi**	**2.52**	**75**	*e*P		**Pn**	**21 03 30.5**	**-0.5**
JISG				*e*S		**Sn**	**21 04 02.4**	**+0.6**
PTMZ	**Houxiangcun**	**2.54**	**296**	*e*P		**Pn**	**21 03 31.0**	**-0.4**
	baz=294							
MATB	**Ma-tsu**	**2.68**	**325**	*e*P		**Pn**	**21 03 32.8**	**-0.4**
	baz=308							
JTJ	**Tarama**	**2.87**	**76**	*e*P		**Pn**	**21 03 36.5**	**+0.5**
JTJ				*e*S		**Sn**	**21 04 13.0**	**+2.4**
KNM	**Kinmen**	**2.97**	**280**	*e*P		**Pn**	**21 03 38.5**	**+1.3**
	baz=278							
KNMB	**Chin-men Tao**	**3.02**	**280**			**Pn**	**21 03 37.9**	**0.0**
KNMB	**Chin-men Tao**	**3.02**	**280**	*e*P		**Pn**	**21 03 37.6**	**-0.3**
	baz=279							
LYJJ	**Jianjiangzhen**	**3.10**	**327**	*e*P		**Pn**	**21 03 39.0**	**0.0**
	baz=312							
MHZQ	**Yeshan**	**3.19**	**313**	*e*P		**Pn**	**21 03 40.4**	**+0.1**
	baz=312							
XPSS	**Dashiqiu**	**3.24**	**336**	*e*P		**Pn**	**21 03 40.3**	**-0.7**
	baz=334							
AXDP	**Jialang**	**3.48**	**286**	*e*P		**Pn**	**21 03 43.3**	**-0.9**
	baz=285							
ZPLA	**Ao Xicun**	**3.56**	**270**	*e*P		**Pn**	**21 03 45.1**	**-0.3**
	baz=269							
DSXP	**Dongshan**	**3.87**	**267**	*e*P		**Pn**	**21 03 49.2**	**-0.4**
	baz=266							
SXFK	**Yanhouchang**	**4.37**	**305**	*e*P		**Pn**	**21 03 56.2**	**-0.3**
	baz=303							
JOW	**Kunigami**	**6.65**	**63**	P		**Pn**	**21 04 27.5**	**-0.3**
JOW	**Kunigami**	**6.65**	**63**	Pn		**Pn**	**21 04 27.2**	**-0.6**
	18nm,0.3s,baz=163,slow=13,SNR=30							
JOW				Sn		**Sn**	**21 05 42.0**	**-1.8**
	baz=306,slow=26							
	34nm,0.2s							
KSRS	**Korea Array**	**14.49**	**20**	Pn		**Pn**	**21 06 14.6**	**-0.7**
	0.2nm,0.3s,baz=200,slow=12,SNR=1.9							
	0.5nm,0.6s							
TNCH	**TengChong**	**21.07**	**278**	P		**P**	**21 07 34.7**	**-0.1**
TNCH				pP		pP	21 07 37.0	-0.1
TNCH				sP		sP	21 07 39.8	+1.6
TNCH				PP		**PnPn**	**21 07 58.6**	**+4.9**
TNCH				S		**S**	**21 11 22.4**	**-7.3**
TNCH				sS		sS	21 11 26.7	-6.8
TNCH				SS		**SnSn**	**21 11 58.1**	**+7.3**
TNCH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
TNCH				pmax		pmax		
	comp=Z,220nm,6.5s							
TNCH				LR		LR		
	comp=N,330nm,6.7s							
TNCH				LR		LR		
	comp=E,500nm,9.7s							
TNCH				LR		LR		
	comp=Z,440nm,9.9s							
CMAR	**Chiang Mai Arr**	**21.85**	**260**	P		**P**	**21 07 43.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=62,slow=7.6,SNR=6.4							
	comp=Z,0.4nm,0.3s							
GTA	**Gaotai**	**24.05**	**315**	P		**P**	**21 08 10.2**	**+4.6**
GTA				pP		sP	21 08 17.0	+7.9
GTA				pmax		pmax		
	comp=Z,2.0nm,1.5s							
SONM	**Songino Array**	**26.74**	**337**	P		**P**	**21 08 29.3**	**-0.7**
SONM				IAmb		IAmb	21 08 55.8	
	comp=Z,5.3nm,1.4s							
SONM	**Songino Array**	**26.74**	**337**	P		**P**	**21 08 30.8**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=145,slow=3.6,SNR=4.4							
	comp=Z,0.8nm,0.8s							
MK31	**Makanchi Array**	**38.80**	**316**	P		**P**	**21 10 14.8**	**-0.3**
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**	**21 10 14.5**	**-0.5**
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**	**21 10 15.3**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=105,slow=9.2,SNR=8.3							
	comp=Z,1.0nm,0.7s							
ZAA0	**Zalesovo Array**	**40.66**	**327**	P		**P**	**21 10 29.4**	**-1.0**
ZAA0				IAmb		IAmb	21 10 37.8	
	comp=Z,2.5nm,0.9s							
ZALV	**Zalesovo Beam**	**40.66**	**327**	P		**P**	**21 10 29.3**	**-1.1**
ZALV	**Zalesovo Beam**	**40.66**	**327**	P		**P**	**21 10 29.8**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=107,slow=9.5,SNR=5.9							
	comp=Z,1.1nm,0.7s							
KURBB	**Kurchatov Arra**	**42.55**	**320**	P		**P**	**21 10 45.6**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=108,slow=8.4,SNR=5.8							
	comp=Z,0.9nm,0.9s							
WB0	**Warramunga Arr**	**45.20**	**163**	P		**P**	**21 11 05.5**	**-2.0**
WB0				IAmb		IAmb	21 11 07.3	
	comp=Z,3.4nm,0.9s							
KBL	**Kabul**	**46.64**	**296**	P		**P**	**21 11 18.6**	**-0.5**
KBL				IAmb		IAmb	21 11 26.5	
	comp=Z,5.0nm,1.2s							
ASAR	**Alice Springs**	**48.81**	**165**	P		**P**	**21 11 35.7**	**0.0**
ABKAR	**Akbulak array**	**53.90**	**314**	P		**P**	**21 12 12.3**	**-1.3**
ABKAR	**Akbulak array**	**53.90**	**314**	P		**P**	**21 12 12.3**	**-1.3**
ABKAR				IAmb		IAmb	21 12 28.1	
	comp=Z,1.7nm,0.8s							
BBOO	**Buckleboo**	**58.10**	**166**	P		**P**	**21 12 42.7**	**-1.1**
STKA	**Stephens Creek**	**58.70**	**160**	P		**P**	**21 12 50.1**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=304,slow=7.3,SNR=1.4							
	comp=Z,0.5nm,0.4s							
TTA	**Tatalina**	**65.50**	**30**	P		**P**	**21 13 33.3**	**-0.1**
D22K	**Ayikyak River**	**66.34**	**23**	P		**P**	**21 13 38.6**	**0.0**
F24K	**Squaw Lake**	**68.30**	**24**	P		**P**	**21 13 51.6**	**+0.5**
F24K				IAmb		IAmb	21 13 55.7	
	comp=Z,3.8nm,0.9s							
ILAR	**Eielson Array**	**69.22**	**27**	P		**P**	**21 13 56.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=275,slow=6.6,SNR=4.3							
	comp=Z,0.3nm,0.6s							
BMAR	**Burnt Mountain**	**69.56**	**24**	P		**P**	**21 13 59.4**	**+0.4**
I26K	**Coal Creek Min**	**70.64**	**26**	P		**P**	**21 14 06.2**	**+0.7**
BCAR	**Beaver Creek A**	**71.84**	**28**	P		**P**	**21 14 13.6**	**+0.7**
YKA	**Yellowknife Ar**	**83.02**	**23**	P		**P**	**21 15 14.6**	**-0.8**

comp=Z,1.2nm,0.8s,baz=313,slow=4.8,SNR=14
comp=Z,1.2nm,0.8s

TAP 06 21:05:19.2, 24.07N×121.60E, h10km, ML1.3, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.01**	**338**	*i* P	Pg	21 05 21.3	+0.4
	baz=24						
TWD				*i* S	Sg	21 05 22.8	+0.7
	baz=24						
ETL	**Fush Village**	**0.09**	**13**	*e*P	Pg	21 05 22.1	+0.5
	baz=13						
ETL				*e*S	Sg	21 05 24.2	+0.8
	baz=13						
NACB	**Ninganchiao**	**0.10**	**357**	⇓*i*P	Pg	21 05 22.4	+0.7
	baz=357						
ETM	**Tongmen**	**0.14**	**223**	*e*P	Pg	21 05 23.1	+0.7
	baz=222						

TAP ***06*** *21:05:21.8, 24.05N×121.69E, h6km, ML3.9, C*
ASIES ***06*** *21:05:21.8, 24.05N×121.69E, h6km, ML3.9, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.69; $M_{\theta\theta}$-0.99; $M_{\phi\phi}$-0.75; $M_{r\theta}$1.59; $M_{\theta\phi}$-0.96; $M_{\phi r}$2.78; Fault plane solution: M_o3.65414×10^{21} NP1:ϕ_s32.27000°, δ76.06000°, λ81.52000°. NP2:ϕ_s244.03000°, δ16.27000°, λ120.73000°. Principal axes: T Plg58.1110°, Azm290.8740°; N Plg8.2310°, Azm34.3180°; P Plg30.5640°, Azm129.2190°;*
JMA ***06*** *21:05:22.2, 24.1N, 121.5×12*˚*2E, h1km, MV3.2/12, TAIWAN REGION*

ISC 06 21:05:22.1±0.9, 24.05N±0.01×121.70E±0.02, h6km±7km, n159, s063/232, 2C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.10**	**290**	*i* P	**Pg**	**21 05 24.3**	**0.0**
	baz=293						
TWD				*i* S	**Sg**	**21 05 25.9**	**0.0**
	baz=293						
ETL	**Fush Village**	**0.13**	**328**	*i* P	**Pg**	**21 05 24.9**	**0.0**
	baz=326						
ETL				S	**Sg**	**21 05 27.1**	**+0.3**
	baz=326						
NACB	**Ninganchiao**	**0.16**	**323**	*i* P	**Pg**	**21 05 25.0**	**-0.4**
	baz=324						
NACB				*i* S	**Sg**	**21 05 27.7**	**+0.1**
	baz=324						
NACB	**Ninganchiao**	**0.16**	**323**	*i* S	**Pg**	**21 05 24.8**	**-0.6**
	baz=357						
ETM	**Tongmen**	**0.21**	**247**	P	**Pg**	**21 05 26.2**	**0.0**
	baz=251						
ETM				S	**Sg**	**21 05 29.4**	**+0.4**
	baz=251						
LXIB	**Xiulin Townshi**	**0.26**	**265**	⇓*i*P	**Pg**	**21 05 27.2**	**-0.1**
	baz=259						
LXIB				*i* S	**Sg**	**21 05 31.3**	**+0.4**
	baz=259						
EHP	**Heping Village**	**0.27**	**8**	P	**Pg**	**21 05 27.6**	**+0.2**
	baz=355						
EHP				S	**Sg**	**21 05 32.1**	**+1.2**
	baz=355						
EAHA	**Aohua**	**0.28**	**7**	P	**Pg**	**21 05 27.8**	**0.0**
	baz=355						
EAHA				*e*S	**Sg**	**21 05 32.2**	**+0.7**
	baz=355						
SHUL	**Shoufeng**	**0.29**	**206**	P	**Pb**	**21 05 29.2**	**-0.4**
	baz=219						
SHUL				*e*S	**Sb**	**21 05 35.6**	**+0.9**
	baz=219						
ESL	**Shilin**	**0.34**	**227**	P	**Pg**	**21 05 28.7**	**0.0**
	baz=228						
TEGC	**Jichi Village**	**0.37**	**204**	*e*P	**Pb**	**21 05 30.7**	**-0.3**
	baz=208						
TEGC				*e*S	**Sb**	**21 05 38.1**	**+1.1**
	baz=208						
ENA	**Nanau**	**0.38**	**6**	*i* P	**Pg**	**21 05 29.6**	**0.0**
	baz=1.0						
ENA				*e*S	**Sg**	**21 05 35.1**	**+0.4**
	baz=1.0						
EWUT	**Wuta**	**0.40**	**10**	⇓*i*P	**Pg**	**21 05 30.1**	**+0.1**
	baz=355						
WHF	**Hehuan Shan**	**0.41**	**284**	⇓*i*P	**Pg**	**21 05 30.1**	**-0.1**
	baz=284						
WHF				*i* S	**Sg**	**21 05 35.7**	**+0.1**
	baz=284						
WARBT	**Fenglin Townsh**	**0.43**	**221**	⇓P	**Pg**	**21 05 30.4**	**-0.1**
	baz=236						
WARBT				*e*S	**Sb**	**21 05 37.8**	**-1.2**
	baz=236						
EGFH	**Guangfu**	**0.45**	**214**	*e*P	**Pg**	**21 05 31.3**	**+0.5**
	baz=229						
EGFH				*e*S	**Sb**	**21 05 39.2**	**-0.2**
	baz=229						
FUSS	**Fushou**	**0.46**	**296**	⇓P	**Pg**	**21 05 31.4**	**+0.2**
	baz=295						
NNSB	**Datong**	**0.48**	**323**	⇓*i*P	**Pg**	**21 05 31.4**	**0.0**
	baz=319						
NNSB				S	**Sg**	**21 05 37.7**	**0.0**
	baz=319						
NNSH	**Datong**	**0.48**	**323**	P	**Pg**	**21 05 31.5**	**+0.1**
	baz=319						
NNSH				S	**Sg**	**21 05 38.1**	**+0.4**
	baz=319						
CHGB	**Renai**	**0.48**	**272**	⇓*i*P	**Pg**	**21 05 31.7**	**+0.2**
	baz=273						
CHGB				*i* S	**Sg**	**21 05 38.9**	**+1.1**
	baz=273						
OWD	**Renai**	**0.49**	**259**	P	**Pg**	**21 05 31.6**	**+0.1**
	baz=261						
NNS	**Nan Shan**	**0.49**	**323**	⇓*i*P	**Pg**	**21 05 31.7**	**0.0**
	baz=320						
NNS				*i* S	**Sg**	**21 05 38.8**	**+0.6**
	baz=320						
LATG	**Datong**	**0.51**	**342**	⇓*i*P	**Pg**	**21 05 32.1**	**0.0**
	baz=336						
LATG				*e*S	**Sg**	**21 05 39.0**	**+0.2**
	baz=336						
TWT	**Tachien**	**0.52**	**293**	⇓*i*P	**Pg**	**21 05 32.7**	**+0.5**
	baz=292						
TWT				S	**Sb**	**21 05 40.3**	**-1.4**
	baz=292						
WUSB	**Renai**	**0.54**	**264**	⇓*i*P	**Pg**	**21 05 32.6**	**+0.1**
	baz=267						
WUSB				S	**Sg**	**21 05 40.3**	**+0.8**
	baz=267						
TDCB	**Techi**	**0.54**	**293**	⇓*i*P	**Pg**	**21 05 32.8**	**+0.3**
	baz=292						
TDCB				S	**Sg**	**21 05 39.8**	**+0.3**
	baz=292						
ESAO	**Su ao**	**0.54**	**14**	*e*P	**Pg**	**21 05 32.6**	**0.0**
	baz=359						
EOS4	**EOS4**	**0.57**	**82**	*e*P	**Pn**	**21 05 35.5**	**-1.0**
	baz=91						
TWC	**Suao**	**0.58**	**14**	P	**Pg**	**21 05 33.3**	**0.0**
	baz=3.0						
TWC				*e*S	**Sg**	**21 05 41.4**	**+0.6**
	baz=3.0						
NDT	**Datong Townshi**	**0.58**	**343**	⇓*i*P	**Pg**	**21 05 33.6**	**+0.3**
	baz=339						
NDT				*e*S	**Sg**	**21 05 41.8**	**+0.9**
	baz=339						
NDS	**Dongshan**	**0.58**	**1**	⇓*i*P	**Pg**	**21 05 33.5**	**+0.1**
	baz=347						
NDS				*e*S	**Sb**	**21 05 42.4**	**-1.0**
	baz=347						
VWDT	**VWDT**	**0.59**	**240**	⇓*i*P	**Pg**	**21 05 33.6**	**+0.2**
	baz=243						
VWDT				*e*S	**Sb**	**21 05 42.2**	**-1.1**
	baz=243						
ENTT	**Nioudou**	**0.60**	**348**	⇓*i*P	**Pg**	**21 05 34.0**	**+0.2**
	baz=345						
ENTT				*e*S	**Sg**	**21 05 42.6**	**+0.9**
	baz=345						
HGSD	**Ruisui**	**0.61**	**205**	*e*P	**Pb**	**21 05 35.2**	**0.0**
	baz=196						
HGSD				*e*S	**Sn**	**21 05 46.5**	**-0.9**
	baz=196						
EOS2	**EOS2**	**0.61**	**52**	*e*P	**Pn**	**21 05 36.9**	**-0.3**
	baz=58						
EOS3	**EOS3**	**0.61**	**67**	*e*P	**Pb**	**21 05 35.7**	**+0.5**
	baz=58						
EHY	**Hungye**	**0.64**	**213**	P	**Pg**	**21 05 34.6**	**+0.2**
	baz=226						
EHY				S	**Sg**	**21 05 43.6**	**+0.8**
	baz=226						
TWE	**Neicheng**	**0.67**	**357**	⇓*i*P	**Pg**	**21 05 35.3**	**+0.2**
	baz=354						
TWE				S	**Sg**	**21 05 44.4**	**+0.5**
	baz=354						
WPL	**Puli Township**	**0.68**	**267**	P	**Pb**	**21 05 35.8**	**-0.7**
	baz=269						
WPL				S	**Sg**	**21 05 44.6**	**+0.5**
	baz=269						
YHNB	**Yeheng**	**0.69**	**335**	⇓*i*P	**Pg**	**21 05 35.8**	**+0.4**
	baz=323						
YHNB				*i* S	**Sg**	**21 05 44.8**	**+0.5**
	baz=323						
NSK	**Sanguang**	**0.70**	**334**	⇓*i*P	**Pg**	**21 05 35.9**	**+0.3**
	baz=322						
NSK				*e*S	**Sg**	**21 05 44.4**	**-0.4**
	baz=322						
DPDB	**Guoxing**	**0.71**	**269**	⇓P	**Pg**	**21 05 36.1**	**+0.3**
	baz=271						
DPDB				*e*S	**Sb**	**21 05 46.6**	**-0.3**
	baz=271						
FUSB	**Fushanzhiwuyua**	**0.72**	**352**	⇓*i*P	**Pg**	**21 05 36.3**	**+0.3**
	baz=347						
FUSB				S	**Sb**	**21 05 46.9**	**-0.4**
	baz=347						
WCS	**Beigang Elemen**	**0.72**	**271**	*e*P	**Pb**	**21 05 36.9**	**-0.2**
	baz=272						
WHP	**Taichung City**	**0.73**	**289**	⇓*i*P	**Pb**	**21 05 36.8**	**-0.5**
	baz=288						
WHP				S	**Sb**	**21 05 46.8**	**-0.7**
	baz=288						
SSLB	**Suanglung**	**0.73**	**250**	⇓*i*P	**Pg**	**21 05 36.2**	**0.0**
	baz=264						
SSLB				*i* S	**Sg**	**21 05 45.1**	**-0.5**
	baz=264						
YULB	**Yu-li**	**0.75**	**210**	*e*P	**Pg**	**21 05 36.3**	**-0.2**
	baz=230						
YULB				*e*S	**Sb**	**21 05 48.0**	**0.0**
	baz=230						
NWLT	**Wulai**	**0.75**	**346**	P	**Pg**	**21 05 36.8**	**+0.2**
	baz=328						
NWLT				S	**Sg**	**21 05 46.9**	**+0.5**
	baz=328						
SMLT	**Sun Moon Lake**	**0.75**	**258**	⇓*i*P	**Pg**	**21 05 36.8**	**+0.2**
	baz=260						
SMLT				*e*S	**Sb**	**21 05 47.7**	**-0.4**
	baz=260						
ECBN	**Changbin**	**0.76**	**197**	*e*P	**Pb**	**21 05 37.5**	**-0.3**
	baz=189						
EYUL	**Yuli**	**0.78**	**207**	*e*P	**Pb**	**21 05 37.8**	**-0.3**
	baz=226						
TWF1	**Yuli**	**0.78**	**208**	*e*P	**Pg**	**21 05 36.9**	**-0.3**
	baz=227						
TWF1				*e*S	**Sb**	**21 05 48.4**	**-0.7**
	baz=227						
TYC	**Yuchr**	**0.78**	**260**	*e*P	**Pg**	**21 05 37.4**	**+0.2**
	baz=261						
NFF	**Wufeng Townshi**	**0.79**	**318**	⇓*i*P	**Pb**	**21 05 37.8**	**-0.6**
	baz=315						
NFF				*e*S	**Sg**	**21 05 47.4**	**-0.2**
	baz=315						
WHYT	**Xinyi Township**	**0.85**	**246**	*e*P	**Pb**	**21 05 39.5**	**+0.2**
	baz=258						
WHYT				*e*S	**Sb**	**21 05 50.6**	**-0.4**
	baz=258						
LIOB	**Emei**	**0.86**	**314**	P	**Pb**	**21 05 39.4**	**-0.2**
	baz=311						
NSTT	**Nanjuang**	**0.86**	**313**	P	**Pb**	**21 05 39.3**	**-0.3**
	baz=310						
NSTT				*e*S	**Sg**	**21 05 50.1**	**+0.1**
	baz=310						
NJD	**Zhudong**	**0.89**	**321**	*e*P	**Pb**	**21 05 40.2**	**+0.3**
	baz=318						
CHKH	**Chenggong**	**0.90**	**198**	*e*P	**Pg**	**21 05 39.5**	**+0.2**
	baz=192						
TWQ1	**Liyutan**	**0.90**	**290**	*e*P	**Pn**	**21 05 40.5**	**-0.8**
	baz=289						
WWF	**Wufeng**	**0.92**	**270**	*e*P	**Pn**	**21 05 41.2**	**-0.3**
	baz=265						
WWF				*e*S	**Sn**	**21 05 55.1**	**+0.1**
	baz=265						
WJS	**Zhushan**	**0.92**	**256**	*e*P	**Pb**	**21 05 40.8**	**+0.3**
	baz=258						
FULB	**Fuli**	**0.92**	**204**	*e*P	**Pb**	**21 05 40.3**	**-0.2**
	baz=226						
NHDH	**Xindian Distri**	**0.93**	**350**	*e*P	**Pb**	**21 05 40.9**	**+0.2**
	baz=345						
TIPB	**Shuangxi**	**0.93**	**7**	⇓P	**Pg**	**21 05 40.1**	**+0.1**
	baz=351						
TIPB				*e*S	**Sb**	**21 05 53.3**	**0.0**
	baz=351						
NSY	**Sanyi**	**0.93**	**293**	P	**Pn**	**21 05 41.3**	**-0.5**
	baz=303						
NSY				*e*S	**Sn**	**21 05 54.8**	**-0.7**
	baz=303						
TWA	**Mucha**	**0.94**	**354**	*e*P	**Pb**	**21 05 40.4**	**-0.4**
	baz=348						
TWA				S	**Sb**	**21 05 53.9**	**+0.4**
	baz=348						
TCU	**Taichung**	**0.94**	**276**	*e*P	**Pn**	**21 05 41.9**	**0.0**
	baz=277						
WNT1	**Nantou City**	**0.94**	**262**	*i* P	**Pn**	**21 05 41.6**	**-0.3**
	baz=264						
WNT1				*e*S	**Sn**	**21 05 56.4**	**+0.7**
	baz=264						
WNT	**Mingjian**	**0.94**	**260**	⇑*i*P	**Pn**	**21 05 41.7**	**-0.2**
	baz=261						
WNT				*e*S	**Sn**	**21 05 55.1**	**-0.6**
	baz=261						
TATO	**Taipei**	**0.94**	**348**	*i* P	**Pg**	**21 05 40.4**	**0.0**
	baz=333						
TATO				S	**Sg**	**21 05 52.2**	**-0.4**
	baz=333						
HSN1	**Hsinchu**	**0.96**	**320**	*e*P	**Pb**	**21 05 41.1**	**0.0**
	baz=316						
NMLH	**Miaoli**	**0.96**	**301**	*e*P	**Pn**	**21 05 42.0**	**-0.1**
	baz=299						
ALS	**Alishan**	**0.98**	**237**	P	**Pb**	**21 05 41.2**	**-0.5**
	baz=243						
ALS				S	**Sb**	**21 05 55.3**	**+0.4**
	baz=243						
NJN	**Zhunan**	**0.99**	**310**	*e*P	**Pb**	**21 05 41.3**	**-0.3**
	baz=308						
SBCB	**Hsinchu**	**0.99**	**319**	*e*P	**Pb**	**21 05 41.9**	**+0.2**
	baz=309						
CHKT	**Chengkung**	**0.99**	**198**	P	**Pg**	**21 05 41.0**	**-0.2**
	baz=195						
CHKT				S	**Sn**	**21 05 56.0**	**-0.9**
	baz=195						
TWB1	**Santiao Chiao**	**0.99**	**15**	*e*P	**Pg**	**21 05 41.1**	**-0.2**
	baz=1.0						
EHD	**Haiduan**	**1.00**	**207**	*e*P	**Pg**	**21 05 40.9**	**-0.5**
	baz=226						
HSN	**Hsinchu**	**1.00**	**319**	*e*P	**Pn**	**21 05 42.8**	**0.0**
	baz=318						
TAP	**Taipei**	**1.00**	**350**	*e*P	**Pb**	**21 05 41.8**	**-0.2**
	baz=336						
WDJ	**Dajia District**	**1.01**	**287**	*e*P	**Pn**	**21 05 42.3**	**-0.5**
	baz=287						
NTY	**Taoyuan**	**1.02**	**339**	*e*P	**Pb**	**21 05 42.1**	**-0.1**
	baz=327						
NWF	**Wu-fen Shan**	**1.02**	**4**	*e*P	**Pg

ELDTW	**Lidau** baz=222	**1.06 216**	*e*P	**Pg**	**21 05 41.7**	**-0.8**
TWS1	**Kuangyinshan** baz=340	**1.08 346**	*e*P	**Pn**	**21 05 44.2**	**+0.4**
TWS1	baz=340		*e*S	**Sn**	**21 05 58.7**	**-0.4**
TNOU	**National Taiwa** baz=354	**1.10 3**	*e*P	**Pg**	**21 05 43.3**	**0.0**
WGK	**Gukeng** baz=255	**1.10 251**	*e*P	**Pn**	**21 05 44.4**	**+0.3**
YM01	**YM01** baz=332	**1.10 354**	*e*P	**Pb**	**21 05 43.6**	**0.0**
WDLH	**Douliu** baz=256	**1.12 252**	*e*P	**Pn**	**21 05 44.5**	**+0.2**
EDH	**Donghe** baz=205	**1.13 199**	*e*P	**Pg**	**21 05 43.0**	**-0.8**
NTST	**Danshui** baz=341	**1.14 348**	*e*P	**Pn**	**21 05 44.6**	**+0.1**
ANP	**Anpu** baz=344	**1.15 352**	*e*P	**Pn**	**21 05 44.6**	**-0.2**
WCKO	**Fanlu** baz=244	**1.17 239**	*e*P	**Pn**	**21 05 45.1**	**0.0**
JYNG	**Yonagunijimaku**	**1.21 70**	P	**Pn**	**21 05 45.9**	**+0.4**
JYNG			*e*S	**Sn**	**21 06 02.9**	**+0.7**
STYH	**Taoyuan** baz=218	**1.22 224**	*e*P	**Pb**	**21 05 45.1**	**-0.4**
WRL	**Guolierlin Hig** baz=266	**1.22 263**	*e*P	**Pn**	**21 05 45.5**	**-0.2**
CHN4	**Tsaushan** baz=244	**1.23 236**	*e*P	**Pn**	**21 05 46.2**	**+0.4**
CHN4	baz=244		*e*S	**Sn**	**21 06 04.3**	**+1.5**
TWY	**Chenhua** baz=335	**1.23 356**	*e*P	**Pn**	**21 05 45.8**	**0.0**
TPUB	**Ta-pu** baz=241	**1.23 233**	P	**Pn**	**21 05 46.1**	**+0.2**
TPUB	baz=241		S	**Sn**	**21 06 02.5**	**-0.3**
CHN2	**Minshiung** baz=251	**1.23 246**	*e*P	**Pg**	**21 05 46.6**	**+0.8**
STYT	**Tauyuan** baz=233	**1.23 225**	P	**Pb**	**21 05 45.4**	**-0.5**
STYT	baz=233		S	**Sn**	**21 06 02.4**	**-0.5**
RLNB	**Erlin** baz=267	**1.24 263**	P	**Pg**	**21 05 46.3**	**+0.4**
RLNB	baz=267		*e*S	**Sn**	**21 06 03.9**	**+1.0**
LONT	**Longtian** baz=212	**1.25 205**	*e*P	**Pn**	**21 05 45.1**	**-1.1**
WTK	**Tuku** baz=257	**1.25 254**	*e*P	**Pg**	**21 05 46.8**	**+0.6**
YOJ	**Yonaguni jima** baz=65	**1.27 71**	*e*P	**Pn**	**21 05 44.9**	**-1.5**
YOJ	**Yonaguni jima**	**1.27 71**	*e*S	**Sn**	**21 06 03.6**	**0.0**
WTP	**Ta-pu** baz=240	**1.27 232**	P	**Pb**	**21 05 46.4**	**-0.2**
WTP	baz=240		S	**Sn**	**21 06 03.9**	**-0.1**
TWG	**Pinlang** baz=213	**1.35 205**	*e*P	**Pn**	**21 05 45.1**	**-2.4**
TWGBT	**Beinan** baz=213	**1.35 205**	*e*P	**Pn**	**21 05 45.0**	**-2.5**
TWK	**Hsinying** baz=244	**1.35 235**	P	**Pg**	**21 05 48.6**	**+0.5**
TWK	baz=244		S	**Sn**	**21 06 06.9**	**+1.0**
CHN1	**Nanshi** baz=241	**1.38 232**	*e*P	**Pn**	**21 05 47.8**	**-0.1**
CHN1	baz=241		*e*S	**Sg**	**21 06 07.4**	**+1.1**
SNST	**Tainan City** baz=243	**1.38 234**	*e*P	**Pn**	**21 05 47.9**	**0.0**
SNST	baz=243		*e*S	**Sg**	**21 06 09.4**	**+3.0**
SGST	**Jiashian** baz=236	**1.40 227**	P	**Pn**	**21 05 48.0**	**-0.3**
SGST	baz=236		S	**Sg**	**21 06 08.1**	**+0.8**
WSF	**Szhu** baz=258	**1.41 254**	*e*P	**Pg**	**21 05 49.2**	**-0.1**
WSF	baz=258		*e*S	**Sg**	**21 06 09.3**	**+1.7**
SLGT	**Liugui** baz=216	**1.43 223**	*e*P	**Pn**	**21 05 48.2**	**-0.3**
WSL	**Shuilin Townsh** baz=254	**1.45 249**	*e*P	**Pg**	**21 05 49.5**	**-0.4**
ICHU	**Yijhu** baz=248	**1.47 243**	*e*P	**Pb**	**21 05 49.7**	**-0.1**
CHN8	**Yiju** baz=251	**1.53 243**	*e*P	**Pb**	**21 05 50.4**	**-0.5**
CHN8	baz=251		*e*S	**Sg**	**21 06 11.6**	**+0.2**
CHN3	**Shinhua** baz=238	**1.56 232**	*e*P	**Pb**	**21 05 51.5**	**+0.1**
ECL	**Taimali** baz=213	**1.60 206**	*e*P	**Pn**	**21 05 49.5**	**-1.4**
SCST	**Cishan** baz=218	**1.60 224**	*e*P	**Pb**	**21 05 51.9**	**-0.2**
SHHT	**Tainan City** baz=237	**1.61 231**	*e*P	**Pb**	**21 05 52.4**	**+0.2**
PCYT	**Pengchaiyu** baz=343	**1.61 12**	*e*P	**Pn**	**21 05 50.3**	**-0.8**
SSD	**Sandimen** baz=242	**1.62 217**	*e*P	**Pn**	**21 05 51.1**	**-0.2**
SSD	baz=242		*e*S	**Sn**	**21 06 12.5**	**0.0**
TSMG	**Majia** baz=213	**1.65 216**	*e*P	**Pn**	**21 05 52.0**	**+0.4**
TWM1	**Shoushan** baz=231	**1.69 224**	*e*P	**Pn**	**21 05 52.1**	**-0.1**
TSCK	**Chigu Township** baz=245	**1.73 239**	*e*P	**Pn**	**21 05 52.5**	**-0.2**
MASBT	**Mashibuluo** baz=225	**1.73 215**	*e*P	**Pn**	**21 05 52.3**	**-0.5**
MASBT	baz=225		*e*S	**Sg**	**21 06 17.5**	**-0.3**
EAST	**Anshuo** baz=213	**1.83 206**	*e*P	**Pn**	**21 05 54.6**	**+0.4**
TAWH	**Dawu Township** baz=212	**1.85 204**	*e*P	**Pb**	**21 05 55.5**	**-1.0**
SCZT	**Fangliau** baz=202	**1.94 211**	*e*P	**Pn**	**21 05 56.0**	**+0.4**
SLIU	**Shizi** baz=213	**2.00 205**	*e*P	**Pn**	**21 05 57.6**	**+1.1**
PHUB	**P'eng-hu** baz=261	**2.02 255**	*e*P	**Pn**	**21 05 56.4**	**-0.4**
PHUB	baz=261		*e*S	**Sn**	**21 06 22.8**	**+0.5**
PNG	**Penghu** baz=261	**2.02 257**	*e*P	**Pn**	**21 05 57.0**	**+0.3**
WDGT	**Dungji** baz=253	**2.03 248**	*e*P	**Pn**	**21 05 56.9**	**0.0**
JKRS	**Kuro-shima**	**2.12 84**	*e*P	**Pn**	**21 05 58.4**	**+0.4**
VCHM	**Qimei** baz=239	**2.24 249**	*e*P	**Pn**	**21 05 59.6**	**-0.2**
JIJ	**Ishigaki jima**	**2.25 81**	P	**Pn**	**21 05 59.3**	**-0.6**
JISG	**Ishigakijimahi**	**2.44 77**	P	**Pn**	**21 06 01.8**	**-0.7**
PTMZ	**Houxiangcun** baz=292	**2.55 293**	*e*P	**Pn**	**21 06 03.8**	**-0.2**
PTMZ	baz=292		*e*S	**Sn**	**21 06 33.5**	**-1.9**
MATB	**Ma-tsu** baz=317	**2.63 323**	*e*P	**Pn**	**21 06 04.5**	**-0.6**
KNM	**Kinmen** baz=279	**3.00 278**	*e*P	**Pn**	**21 06 12.1**	**+1.8**
LYJJ	**Jianjiangzhen** baz=320	**3.05 325**	*e*P	**Pn**	**21 06 10.4**	**-0.5**
KNMB	**Chin-men Tao** baz=280	**3.05 279**	*e*P	**Pn**	**21 06 10.6**	**-0.3**
MHZQ	**Yeshan** baz=296	**3.17 311**	*e*P	**Pn**	**21 06 12.3**	**-0.2**
XPSS	**Dashiqiu** baz=326	**3.18 335**	*e*P	**Pn**	**21 06 12.3**	**-0.3**
JMJ	**Miyako jima 2** baz=74	**3.36 76**	*e*P	**Pn**	**21 06 17.3**	**+2.1**
AXDP	**Jialang** baz=285	**3.50 285**	*e*P	**Pn**	**21 06 17.2**	**0.0**
ZPLA	**Ao Xicun** baz=271	**3.61 269**	*e*P	**Pn**	**21 06 18.8**	**+0.1**
DSXP	**Dongshan** baz=268	**3.93 266**	*e*P	**Pn**	**21 06 23.1**	**+0.2**

IDC 06 21:05:47.4±1.2, 1°92N×123°44E, h0km, mb3.5/4, mbtmp3.5/4, MS3.6/2, Error ellipse: s-maj=46.8km s-min=21.8km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 36nm,0.5s,baz=49,slow=16,SNR=2.3	**24.15**	**60**	P	P	21 11 05.6	+0.2
WRA	**Warramunga Arr** 1.4nm,0.8s,baz=333,slow=11,SNR=10	**24.22**	**154**	P	P	21 11 06.7	+0.7
WRA	comp=Z,187nm,20.9s,baz=266,slow=40 1.4nm,0.8s			LR	LR	21 21 52.6	
WRA	**Warramunga Arr**	**24.22**	**154**	P	P	21 11 06.5	+0.5
ASAR	**Alice Springs** 1.0nm,0.8s,baz=344,slow=6.8,SNR=7.1 1.0nm,0.8s	**27.40**	**159**	P	P	21 11 34.5	-0.2
JNU	**Nakatsue** comp=Z,78nm,20.7s,baz=178,slow=38	**31.81**	**12**	LR	LR	21 26 10.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=117,slow=6.6,SNR=4.0 0.1nm,0.3s	**57.23**	**327**	P	P	21 15 37.2	+0.6
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=130,slow=6.2,SNR=6.0 0.3nm,0.6s	**61.54**	**329**	P	P	21 16 05.2	-1.0

*NEIC **06** 21:11:07.0±1.3, 40.°61N±0.°05×116.°05W±0.°04, h0km±1km, ML1.7/34, Error ellipse: s-maj=8.3km s-min=5.1km az=176.0*

*IDC **06** 21:11:08.0±1.6, 40.°79N×116.°11W, h0km, mbtmp2.3/2, ML2.9/2, Error ellipse: s-maj=20.7km s-min=4.8km az=160.0*

ISC 06 21:11:08.3±1.1, 40.°61N±0.°06×116.°03W±0.°05, h0km, n20, σ0885/21, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**0.62**	**77**	Pg	**Pg**	**21 11 20.1**	**0.0**
ELK	**Elko** 1.4nm,0.3s,baz=281,slow=18,SNR=30	**0.62**	**77**	Pg	**Pg**	**21 11 20.1**	**0.0**
ELK	4.2nm,0.3s,baz=50,slow=19,SNR=16			Lg	Lg	21 11 28.9	
BMN	**Battle Mountai**	**0.92**	**259**		**Pn**	**21 11 28.2**	**-0.5**
BMN	comp=N,48nm,0.5s			IAML		21 11 47.0	
Q12A	**Willow Creek R**	**1.82**	**149**		**Pb**	**21 11 42.4**	**-0.2**
KVN	**Kaiserville**	**2.23**	**226**		**Pn**	**21 11 47.0**	**+0.4**
KVN	comp=N,5.0nm,0.7s			IAML		21 11 59.9	
R11B	**Troy Canyon, C**	**2.29**	**171**		**Pn**	**21 11 47.8**	**+0.4**
R11B	comp=E,3.4nm,0.9s			IAML		21 12 30.6	
BGU	**Big Grassy Mou**	**2.30**	**81**		**Pn**	**21 11 47.7**	**+0.1**
BGU	comp=E,6.4nm,0.8s			IAML		21 12 23.9	
DUG	**Dugway, Tooele**	**2.49**	**99**	Pn	**Pn**	**21 11 50.8**	**+0.5**
DUG	comp=E,5.2nm,0.6s			IAML		21 12 35.9	
DUG	comp=E,7.6nm,0.9s			IAML		21 12 39.7	
HVU	**Hansel Valley**	**2.72**	**64**		**Pn**	**21 11 52.0**	**-1.4**
NV11	**Mina Array Sit**	**2.73**	**218**		**Pn**	**21 11 52.6**	**-0.9**
NV11	comp=E,2.0nm,1.3s			IAML		21 12 54.0	
NVAR	**Mina Array Bea**	**2.80**	**220**		**Pn**	**21 11 53.2**	**-1.4**
NVAR	**Mina Array Bea** comp=E,0.5nm,0.3s,baz=32,slow=14,SNR=21	**2.80**	**220**	Pn	**Pn**	**21 11 55.4**	**+0.8**
NVAR	comp=E,1.3nm,0.3s,baz=43,slow=18,SNR=16			Pg	**Pg**	**21 12 02.0**	**+0.1**
NVAR	comp=E,0.2nm,0.3s,baz=231,slow=28,SNR=1.0			Sn	**Sn**	**21 12 29.4**	**+0.3**
NVAR	comp=E,0.8nm,0.3s,baz=37,slow=32,SNR=2.1 comp=E,2.3nm,0.6s			Lg	Lg	21 12 38.9	
SPUT	**South Promonto**	**2.80**	**74**		**Pn**	**21 11 52.8**	**-1.7**
MFID	**Camas Ranch**	**2.81**	**3**		**Pn**	**21 11 54.3**	**-0.3**
LHV	**Little Huntoon**	**3.04**	**220**		**Pn**	**21 11 57.6**	**0.0**
LHV	comp=E,4.6nm,1.3s			IAML		21 12 37.5	
LHV	comp=N,4.7nm,0.7s			IAML		21 12 57.0	
HLID	**Hailey**	**3.19**	**22**	Pn	**Pn**	**21 12 00.8**	**+0.9**
HLID	comp=N,1.4nm,1.1s			IAML		21 13 06.1	
WAKR	**Walker**	**3.37**	**232**	Pn	**Pn**	**21 12 02.5**	**+0.1**
WAKR	comp=E,1.8nm,1.5s			IAML		21 12 41.4	
WAKR	comp=N,1.2nm,0.9s			IAML		21 13 27.1	
HWUT	**Hardware Ranch**	**3.52**	**72**	Pn	**Pn**	**21 12 03.7**	**-0.7**
HWUT	comp=N,1.5nm,1.0s			IAML		21 12 34.2	
HWUT	comp=N,1.4nm,1.2s			IAML		21 14 19.3	
PDAR	**Pinedale Array** comp=N,0.1nm,0.3s,baz=251,slow=8.5,SNR=2.1 comp=N,0.2nm,0.5s	**5.30**	**64**	Pn	**Pn**	**21 12 30.6**	**+1.6**
I56US	**NEWPORT INFRAS** baz=175,slow=321,SNR=1.1	**7.69**	**355**	I	I	21 56 35.0	

TAP 06 21:11:49.5, 24.°06N×121.°53E, h5km, ML0.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=71	**0.06**	**70**	*i* P	Pg	21 11 51.6	+0.5
TWD	baz=71			S	Sg	21 11 53.1	+1.0
ETM	**Tongmen** baz=200	**0.10**	**202**	P	Pg	21 11 52.2	+0.5
ETM	baz=200			*i* S	Sg	21 11 54.1	+1.0
LXIB	**Xiulin Townshi** baz=250	**0.12**	**251**	*e*P	Pg	21 11 52.6	+0.6
NACB	**Ninganchiao** baz=30	**0.13**	**26**	*e*P	Pg	21 11 51.6	-0.6
ETL	**Fush Village** baz=40	**0.13**	**40**	*i* P	Pg	21 11 52.9	+0.7
ETL	baz=40			S	Sg	21 11 55.1	+1.1
EAHA	**Aohua** baz=36	**0.33**	**35**	*e*P	Pg	21 11 56.5	+0.6

TAP 06 21:14:13.1, 23.°98N×121.°59E, h11km±1km, ML1.6, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=258	**0.09**	**258**	⇓*i* P	Pg	21 14 16.6	+0.8
ETM	baz=258			*i* S	Sg	21 14 18.6	+0.9
TWD	**Chiawan** baz=7.0	**0.10**	**3**	P	Pg	21 14 16.7	+0.8
TWD	baz=7.0			*e*S	Sg	21 14 18.9	+1.1
LXIB	**Xiulin Townshi** baz=282	**0.17**	**283**	P	Pb	21 14 17.8	-0.5
LXIB	baz=282			S	Sg	21 14 20.6	+0.9
ETL	**Fush Village** baz=9.0	**0.18**	**10**	*e*P	Pb	21 14 18.1	-0.3
NACB	**Ninganchiao** baz=1.0	**0.19**	**1**	P	Pg	21 14 17.9	+0.6
ESL	**Shilin** baz=218	**0.22**	**221**	P	Pg	21 14 18.4	+0.5
WARBT	**Fenglin Townsh** baz=215	**0.33**	**215**	P	Pg	21 14 20.0	+0.3
WHF	**Hehuan Shan** baz=298	**0.34**	**298**	*e*P	Pb	21 14 20.9	-0.5
OWD	**Renai** baz=265	**0.38**	**266**	*e*P	Pb	21 14 21.8	-0.2
CHGB	**Renai** baz=281	**0.39**	**281**	*e*P	Pb	21 14 22.0	-0.2
WUSB	**Renai** baz=271	**0.43**	**271**	*e*P	Pb	21 14 22.8	0.0

*ASIES **06** 21:14:16.5, 24.°03N×121.°76E, h5km, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.38; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.69; $M_{r\theta}$-0.35; $M_{\theta\phi}$-1.22; $M_{\phi r}$1.00; Fault plane solution: $M_0$1.86439×10^{21} NP1:ϕ_s22.53000°, δ70.87000°, λ28.00000°. NP2:ϕ_s282.64000°, δ63.67000°, λ158.55000°. Principal axes: T Plg33.0510°, Azm244.3780°; N Plg56.5300°, Azm54.1760°; P Plg4.6960°, Azm151.3140°;*

TAP 06 21:14:16.5, 24.°03N×121.°76E, h5km, ML3.6, 6C-8D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=291	**0.16**	**290**	⇓*i* P	Pg	21 14 20.6	+0.9
TWD	baz=291			S	Sg	21 14 23.5	+1.7
ETL	**Fush Village** baz=322	**0.18**	**317**	P	Pg	21 14 21.0	+0.9
NACB	**Ninganchiao** baz=314	**0.21**	**314**	P	Pg	21 14 21.0	+0.3
NACB	baz=314			*e*S	Sg	21 14 24.8	+1.3
NACB	**Ninganchiao** baz=1.0	**0.21**	**314**	S	Pg	21 14 20.9	+0.2
ETM	**Tongmen** baz=257	**0.25**	**256**	P	Pg	21 14 22.4	+1.0
ETM	baz=257			S	Sb	21 14 26.7	-1.6
SHUL	**Shoufeng** baz=217	**0.30**	**217**	*e*P	Pb	21 14 24.0	-0.4
SHUL	baz=217			*e*S	Sb	21 14 30.6	+1.0
EAHA	**Aohua** baz=356	**0.30**	**356**	*e*P	Pb	21 14 23.7	-0.8
EAHA	baz=356			*e*S	Sb	21 14 29.2	-0.6
LXIB	**Xiulin Townshi** baz=269	**0.32**	**269**	P	Pg	21 14 23.5	+0.7
LXIB	baz=269			*e*S	Sb	21 14 28.9	-1.4
ESL	**Shilin** baz=242	**0.37**	**235**	*e*P	Pg	21 14 24.0	+0.4
TEGC	**Jichi Village** baz=211	**0.37**	**213**	P	Pb	21 14 25.8	+0.1
TEGC	baz=211			*e*S	Sb	21 14 32.9	+1.2
ENA	**Nanau** baz=358	**0.40**	**358**	*e*P	Pb	21 14 25.5	-0.7
ENA	baz=358			*e*S	Sb	21 14 32.5	-0.2
EWUT	**Wuta** baz=2.0	**0.42**	**2**	P	Pb	21 14 25.9	-0.6
EWUT	baz=2.0			*e*S	Sb	21 14 33.0	-0.1
WARBT	**Fenglin Townsh** baz=237	**0.46**	**228**	*e*P	Pg	21 14 25.8	+0.5
WARBT	baz=237			*e*S	Sb	21 14 33.7	-0.6
EGFH	**Guangfu** baz=222	**0.47**	**221**	*e*P	Pg	21 14 26.3	+0.8
WHF	**Hehuan Shan** baz=285	**0.47**	**285**	*e*P	Pg	21 14 26.5	+0.9
WHF	baz=285			*e*S	Sb	21 14 33.8	-1.2
FUSS	**Fushou** baz=295	**0.52**	**295**	*e*P	Pb	21 14 27.7	-0.6
FUSS	baz=295			S	Sb	21 14 36.5	+0.2
NNSB	**Datong** baz=318	**0.53**	**319**	P	Pb	21 14 27.6	-0.8
NNSB	baz=318			S	Sb	21 14 35.8	-0.6
NNSH	**Datong** baz=318	**0.53**	**319**	*e*P	Pb	21 14 27.9	-0.5
NNSH	baz=318			S	Sb	21 14 36.1	-0.3
CHGB	**Renai** baz=274	**0.54**	**274**	P	Pb	21 14 28.1	-0.5
CHGB	baz=274			*e*S	Sb	21 14 35.8	-1.0
OWD	**Renai** baz=274	**0.54**	**263**	*e*P	Pb	21 14 27.9	-0.6
OWD	baz=274			*e*S	Sb	21 14 35.9	-0.8
NNS	**Nan Shan** baz=319	**0.54**	**320**	P	Pb	21 14 28.1	-0.6
NNS	baz=319			S	Sb	21 14 36.4	-0.5
LATG	**Datong** baz=336	**0.55**	**337**	⇓*i* P	Pb	21 14 28.2	-0.6
LATG	baz=336			S	Sb	21 14 36.8	-0.3
ESAO	**Su ao** baz=357	**0.55**	**8**	*e*P	Pb	21 14 28.6	-0.2
ESAO	baz=357			S	Sb	21 14 37.6	+0.6
TWT	**Tachien** baz=292	**0.58**	**293**	P	Pb	21 14 29.3	0.0
TWT	baz=292			S	Sb	21 14 38.0	0.0
TWC	**Suao** baz=358	**0.59**	**8**	*e*P	Pb	21 14 29.1	-0.3
TWC	baz=358			S	Sb	21 14 39.5	+1.5
WUSB	**Renai** baz=277	**0.59**	**267**	⇑*i* P	Pb	21 14 29.0	-0.5
WUSB	baz=277			S	Sb	21 14 38.1	0.0
TDCB	**Techi** baz=292	**0.59**	**293**	*e*P	Pb	21 14 28.9	-0.6
TDCB	baz=292			S	Sb	21 14 38.2	-0.1
NDS	**Dongshan** baz=356	**0.61**	**356**	P	Pb	21 14 29.7	0.0
NDS	baz=356			S	Sb	21 14 39.1	+0.6
HGSD	**Ruisui** baz=195	**0.61**	**210**	*e*P	Pb	21 14 30.1	+0.3
HGSD	baz=195			*e*S	Sn	21 14 41.2	-1.0
NDT	**Datong Townshi** baz=338	**0.62**	**339**	P	Pb	21 14 29.8	-0.1
NDT	baz=338			S	Sb	21 14 39.4	+0.5
VWDT	**VWDT** baz=254	**0.63**	**245**	⇑*i* P	Pb	21 14 29.6	-0.4
VWDT	baz=254			*e*S	Sb	21 14 40.0	+0.8
ENTT	**Nioudou** baz=332	**0.64**	**344**	⇓*i* P	Pb	21 14 30.1	-0.1
ENTT	baz=332			S	Sb	21 14 40.3	+0.8
EHY	**Hungye** baz=203	**0.65**	**218**	*e*P	Pg	21 14 29.4	+0.4
EHY	baz=203			*e*S	Sn	21 14 42.2	-1.1
TWE	**Neicheng** baz=354	**0.70**	**353**	⇓*i* P	Pb	21 14 31.4	+0.1
TWE	baz=354			S	Sb	21 14 41.5	+0.3
YHNB	**Yeheng** baz=320	**0.73**	**331**	⇓*i* P	Pb	21 14 31.9	0.0
YHNB	baz=320			S	Sb	21 14 42.3	+0.1
WPL	**Puli Township** baz=269	**0.73**	**269**	*e*P	Pb	21 14 31.7	-0.2
NSK	**Sanguang** baz=320	**0.74**	**331**	⇓*i* P	Pb	21 14 32.0	0.0
NSK	baz=320			S	Sb	21 14 42.9	+0.3
FUSB	**Fushanzhiwuyua** baz=337	**0.75**	**348**	⇓*i* P	Pb	21 14 32.4	+0.3
FUSB	baz=337			S	Sb	21 14 43.4	+0.7
YULB	**Yu-li** baz=201	**0.76**	**214**	*e*P	Pg	21 14 31.4	+0.3
YULB	baz=201			*e*S	Sb	21 14 43.9	+1.0
DPDB	**Guoxing** baz=271	**0.76**	**271**	*e*P	Pb	21 14 32.3	-0.1
SSLB	**Suanglung** baz=264	**0.78**	**252**	⇑P	Pb	21 14 32.0	-0.5
SSLB	baz=264			*e*S	Sg	21 14 42.3	+0.8
WCS	**Beigang Elemen** baz=272	**0.78**	**273**	*e*P	Pb	21 14 32.7	+0.2
WCS	baz=272			*e*S	Sn	21 14 45.3	-0.9
NWLT	**Wulai** baz=342	**0.79**	**343**	*e*P	Pb	21 14 33.2	+0.5
NWLT	baz=342			*e*S	Sb	21 14 43.9	+0.2
WHP	**Taichung City** baz=289	**0.79**	**289**	P	Pb	21 14 33.2	+0.4
WHP	baz=289			*e*S	Sn	21 14 45.2	-1.4

EYUL	**Yuli**	**0.79**	**211**	*e*P	Pn	21 14 33.8	-0.5
	baz=230								
TWF1	**Yuli**	**0.79**	**212**	*e*P	Pg	21 14 31.9	+0.2
TWF1	baz=211			*e*S	Sn	21 14 46.6	-0.1
SMLT	**Sun Moon Lake**	**0.80**	**260**	⇑*i*P	Pb	21 14 32.8	-0.2
SMLT	baz=271			*e*S	Sb	21 14 44.2	0.0
TYC	**Yuchr**	**0.83**	**262**	⇑P	Pb	21 14 33.3	-0.2
TYC	baz=271			*e*S	Sb	21 14 45.4	+0.3
NFF	**Wufeng Townshi**	**0.84**	**316**	⇓P	Pb	21 14 34.0	+0.2
WHYT	baz=314 **Xinyi Township** baz=257	**0.89**	**249**	P	Pb	21 14 34.8	+0.2
WHYT	baz=257			S	Sn	21 14 49.4	+0.2
CHKH	**Chenggong**	**0.89**	**202**	*e*P	Pg	21 14 34.0	+0.3
CHKH	baz=182			*e*S	Sn	21 14 48.7	-0.4
LIOB	**Emei**	**0.92**	**312**	*e*P	Pn	21 14 36.0	-0.2
LIOB	baz=312			S	Sn	21 14 49.6	-0.2
NSTT	**Nanjuang**	**0.92**	**311**	P	Pn	21 14 35.9	-0.3
NSTT	baz=311			S	Sn	21 14 49.3	-0.5
FULB	**Fuli**	**0.93**	**208**	*e*P	Pb	21 14 35.3	+0.1
FULB	baz=225			*e*S	Sn	21 14 50.6	+0.6
TIPB	**Shuangxi**	**0.94**	**4**	P	Pn	21 14 36.3	-0.3
TIPB	baz=3.0			*e*S	Sb	21 14 49.0	+0.7
TWQ1	**Liyutan**	**0.96**	**290**	*e*P	Pn	21 14 36.8	+0.1
TWQ1	baz=302			*e*S	Sn	21 14 50.7	0.0
NHDH	**Xindian Distri**	**0.96**	**347**	*e*P	Pn	21 14 36.6	-0.1
NHDH	baz=335			*e*S	Sn	21 14 50.2	-0.5
TWA	**Mucha**	**0.96**	**350**	*e*P	Pn	21 14 36.8	0.0
TWA	baz=350			*e*S	Sn	21 14 50.8	-0.1
WJS	**Zhushan**	**0.97**	**258**	*e*P	Pn	21 14 36.6	-0.2
WJS	baz=267			*e*S	Sn	21 14 52.0	+1.0
CHKT	**Chengkung**	**0.99**	**202**	*e*P	Pg	21 14 35.6	+0.1
CHKT	baz=179			S	Sn	21 14 51.3	-0.2
NSY	**Sanyi**	**0.99**	**293**	*e*P	Pn	21 14 37.7	+0.6
NSY	baz=305			*e*S	Sn	21 14 53.1	+1.4
WNT	**Mingjian**	**0.99**	**262**	P	Pn	21 14 37.4	+0.2
WNT	baz=270			S	Sn	21 14 53.1	+1.4
TWB1	**Santiao Chiao**	**1.00**	**12**	*e*P	Pn	21 14 37.8	+0.5
TWB1	baz=11			*e*S	Sn	21 14 54.1	+2.3
EHD	**Haiduan**	**1.01**	**210**	*e*P	Pg	21 14 35.4	-0.5
ALS	baz=213 **Alishan** baz=239	**1.01**	**240**	P	Pb	21 14 36.7	-0.1
ALS	baz=239			S	Sn	21 14 52.3	-0.3
NMLH	**Miaoli**	**1.02**	**300**	*e*P	Pn	21 14 38.8	+1.2
NMLH	baz=299			*e*S	Sn	21 14 54.2	+1.9
TAP	**Taipei**	**1.04**	**347**	*e*P	Pn	21 14 38.7	+0.9
TAP	baz=347			*e*S	Sn	21 14 53.3	+0.6
SBCB	**Hsinchu**	**1.04**	**317**	*e*P	Pn	21 14 39.5	+1.7
SBCB	baz=316			*e*S	Sn	21 14 55.5	+2.7
NWF	**Wu-fen Shan**	**1.04**	**1**	*e*P	Pn	21 14 38.4	+0.5
NWF	baz=351			*e*S	Sn	21 14 53.0	+0.1
WFSB	**Wu-fen Shan**	**1.04**	**1**	P	Pn	21 14 38.1	+0.2
WFSB	baz=351			S	Sn	21 14 52.7	-0.1
ECS	**Chishang**	**1.05**	**208**	*e*P	Pn	21 14 37.6	-0.3
HSN	baz=226 **Hsinchu**	**1.06**	**317**	*e*S	Sn	21 14 56.3	+3.1
SXI1	baz=319 **Grass Mountain**	**1.07**	**6**	P	Pn	21 14 38.6	+0.3
SXI1	baz=343			S	Sn	21 14 56.3	+2.7
WDJ	**Dajia District**	**1.07**	**288**	*e*P	Pn	21 14 40.2	+1.9
WDJ	baz=299			*e*S	Sn	21 14 56.3	+2.7
NCUH	**Zhongli**	**1.07**	**331**	*e*P	Pn	21 14 39.8	+1.5
NCUH	baz=330			*e*S	Sn	21 14 56.8	+3.2
ELDTW	**Lidau**	**1.08**	**219**	*e*P	Pg	21 14 36.1	-1.0
CHN5	baz=221 **Tsauling**	**1.08**	**247**	⇑P	Pn	21 14 38.1	-0.3
CHN5	baz=247			S	Sn	21 14 55.3	+1.5
TWS1	**Kuangyinshan**	**1.12**	**344**	*e*P	Pn	21 14 40.5	+1.6
TWS1	baz=356			*e*S	Sn	21 14 56.9	+2.2
EDH	**Donghe**	**1.13**	**202**	*e*P	Pg	21 14 36.5	-1.7
YM01	baz=190 **YM01**	**1.13**	**351**	*e*P	Pn	21 14 40.1	+1.0
WGK	baz=348 **Gukeng**	**1.15**	**253**	*e*P	Pn	21 14 40.4	+1.1
WDLH	baz=253 **Douliu**	**1.17**	**254**	*e*P	Pn	21 14 40.9	+1.3
NTST	baz=254 **Danshui**	**1.17**	**346**	*e*P	Pn	21 14 41.0	+1.4
NTST	baz=357			*e*S	Sn	21 14 59.0	+3.1
WCKO	baz=357 **Fanlu**	**1.21**	**241**	*e*P	Pn	21 14 41.0	+0.8
WCKO	baz=241			S	Sn	21 15 00.2	+3.2
STYH	baz=241 **Taoyuan**	**1.24**	**227**	P	Pg	21 14 40.0	-0.3
LONT	baz=215 **Longtian**	**1.25**	**208**	*e*P	Pg	21 14 40.4	-0.2
TPUB	baz=210 **Ta-pu**	**1.26**	**235**	*e*P	Pn	21 14 41.1	+0.2
TPUB	baz=235			*e*S	Sn	21 15 00.5	+2.2
WRL	**Guolierlin Hig**	**1.27**	**265**	P	Pn	21 14 41.9	+0.9
WRL	baz=266			S	Sn	21 15 00.6	+2.1
CHN2	baz=266 **Minshiung**	**1.27**	**248**	*e*P	Pb	21 14 43.0	+1.9
WTK	baz=249 **Tuku**	**1.30**	**255**	*e*P	Pb	21 14 43.5	+2.0
WTK	baz=258			*e*S	Sn	21 15 01.6	+2.4
WTP	baz=258 **Ta-pu**	**1.31**	**234**	*e*P	Pn	21 14 41.5	-0.1
WTP	baz=233			*e*S	Sn	21 15 01.6	+2.1
TWG	baz=233 **Pinlang**	**1.35**	**208**	*e*P	Pn	21 14 39.9	-2.3
TWGBT	baz=194 **Beinan**	**1.35**	**208**	*e*P	Pn	21 14 40.3	-1.9
WTCT	baz=194 **Ta-ch'eng**	**1.36**	**264**	*e*S	Sn	21 15 04.3	+3.6
	baz=265						
TWK	**Hsinying**	**1.39**	**237**	*e*P	Pg	21 14 43.5	+0.3
TWK	baz=236			*e*S	Sn	21 15 04.1	+2.7
CHN1	baz=236 **Nanshi**	**1.41**	**234**	P	Pg	21 14 43.8	+0.3
CHN1	baz=232			S	Sn	21 15 06.2	+4.3
SNST	baz=232 **Tainan City**	**1.41**	**236**	*e*P	Pg	21 14 44.3	+0.7
SGST	baz=237 **Jiashian** baz=211	**1.43**	**229**	P	Pb	21 14 43.7	0.0
SGST	baz=211			*e*S	Sg	21 15 05.6	+3.0
SLGT	**Liugui**	**1.45**	**225**	*e*P	Pg	21 14 44.3	-0.1
WSF	baz=214 **Szhu**	**1.46**	**255**	*e*P	Pg	21 14 46.3	+1.8
WSF	baz=257			*e*S	Sg	21 15 06.9	+3.5
ICHU	baz=257 **Yijhu**	**1.51**	**244**	*e*P	Pg	21 14 45.9	+0.4
ICHU	baz=244			*e*S	Sg	21 15 08.5	+3.4
ECL	baz=244 **Taimali**	**1.60**	**208**	*e*P	Pn	21 14 45.3	-0.3
TSMG	baz=197 **Majia**	**1.67**	**218**	*e*P	Pb	21 14 47.8	0.0
MASBT	baz=221 **Mashibuluo**	**1.75**	**217**	*e*P	Pn	21 14 46.8	-0.7
TSCK	baz=209 **Chigu Township**	**1.77**	**241**	*e*P	Pn	21 14 48.1	+0.3
EAST	baz=241 **Anshuo**	**1.84**	**207**	*e*P	Pb	21 14 51.0	+0.3
SCZT	baz=200 **Fangliau**	**1.95**	**213**	*e*P	Pn	21 14 51.5	+1.1
PHUB	baz=201 **P'eng-hu**	**2.07**	**256**	*e*P	Pn	21 14 51.1	-0.9
	baz=257						

*IDC **06** 21:14:50.4±1.2,55.°94N×149.°32W,h0km,mb3.9/15, mbtmp3.9/19,ML3.6/4,MS3.5/6,Error ellipse: s-maj=30.9km s-min=14.5km az=30.0*
*NEIC **06** 21:14:54.5±1.5,55.°83N±0.°05×149.°4W±0.°1,h30km±5km, mb4.1/3,ML4.3/44,ML4.0(AEIC),Error ellipse: s-maj=8.6km s-min=6.8km az=116.0*
*AEIC **06** 21:14:57.6±1.8,55.°87N±0.°07×149.°33W±0.°10,h11km±5km, Error ellipse: s-maj=11.0km s-min=7.5km az=161.0*

ISC 06 21:14:51.7±0.7,55.°91N±0.°07×149.°29W±0.°05,h10km, n300,σ1§60/305,mb4.0/17,MS4.0/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
OHAK	**Old Harbor**	**2.57**	**302**		**Pn**	**21 15 34.1**	**+0.8**
OHAK					**Sn**	**21 16 03.2**	**-1.4**
OHAK	**Old Harbor**	**2.57**	**302**	P	**Pn**	**21 15 34.1**	**+0.8**
OHAK	**Old Harbor**	**2.57**	**302**	P	**Pn**	**21 15 34.2**	**+0.8**
	baz=120						
OHAK				S	**Sn**	**21 16 03.2**	**-1.4**
	baz=120						
KDAK	**Kodiak Island**	**2.60**	**317**		**Pn**	**21 15 35.1**	**+1.3**
KDAK					**Sn**	**21 16 04.2**	**-1.2**
KDAK	**Kodiak Island**	**2.60**	**317**	S	**Sn**	**21 16 04.1**	**-1.4**
	baz=136						
KDAK	**Kodiak Island**	**2.60**	**317**	Pn	**Pn**	**21 15 32.3**	**-1.6**
	4.8nm,0.3s,baz=144,slow=4.6,SNR=104						
KDAK				Sn	**Sn**	**21 16 01.1**	**-4.4**
	83nm,0.3s,baz=21,slow=21,SNR=86						
	15nm,0.2s						
SII	**Sitkinak Islan**	**2.81**	**285**		**Pn**	**21 15 37.2**	**+0.6**
SII				IAML		21 16 09.9	
	comp=E,940nm,0.8s						
SII				IAML		21 16 10.5	
	comp=N,947nm,0.6s						
SII	**Sitkinak Islan**	**2.81**	**285**	P	**Pn**	**21 15 37.2**	**+0.6**
	baz=102						
SYI	**Shuyak Island**	**3.19**	**329**	Pn	**Pn**	**21 15 43.1**	**+1.3**
SYI					**Sn**	**21 16 20.1**	**+0.3**
SYI				IAML		21 16 21.6	
	comp=N,347nm,0.5s						
Q20K	**Shuyak Island**	**3.19**	**329**	P	**Pn**	**21 15 43.3**	**+1.4**
	baz=148						
Q20K				S	**Sn**	**21 16 20.3**	**+0.5**
	baz=148						
R18K	**Karluk**	**3.29**	**302**		**Pn**	**21 15 44.7**	**+1.4**
R18K				IAML		21 16 26.2	
	comp=E,383nm,0.4s						
R18K				IAML		21 16 31.4	
	comp=N,465nm,0.5s						
R18K	**Karluk**	**3.29**	**302**	P	**Pn**	**21 15 44.7**	**+1.4**
	baz=119						
CNPM	**China Poot**	**3.77**	**345**		**Pn**	**21 15 51.0**	**+1.1**
CNPM					**Sn**	**21 16 33.4**	**-0.9**
Q19K	**Cape Douglas,**	**3.83**	**324**		**Pn**	**21 15 52.2**	**+1.4**
Q19K				IAML		21 16 39.9	
	comp=N,661nm,0.6s						
Q19K	**Cape Douglas,**	**3.83**	**324**	P	**Pn**	**21 15 52.4**	**+1.6**
	baz=141						
KAHG	**Katmai Hook Gl**	**3.85**	**314**		**Pn**	**21 15 52.6**	**+1.5**
Q23K	**Middleton Isla**	**3.87**	**23**		**Pn**	**21 15 51.8**	**+0.6**
Q23K				IAML		21 17 16.6	
	comp=N,500nm,2.8s						
Q23K	**Middleton Isla**	**3.87**	**23**	P	**Pn**	**21 15 52.0**	**+0.9**
	baz=206						
MID	**Middleton Isla**	**3.87**	**23**		**Pn**	**21 15 51.9**	**+0.7**
MID				IAML		21 16 36.7	
	comp=N,508nm,1.4s						
MID				IAML		21 18 12.3	
	comp=E,620nm,1.9s						
MID	**Middleton Isla**	**3.87**	**23**	P	**Pn**	**21 15 52.7**	**+1.5**
BRSE	**Bradley Lake S**	**3.92**	**349**		**Pn**	**21 15 52.6**	**+0.7**
BRSE					**Sn**	**21 16 36.2**	**-1.7**
BRSE	**Bradley Lake S**	**3.92**	**349**	P	**Pn**	**21 15 52.6**	**+0.7**
	baz=168						
BRSE				S	**Sn**	**21 16 36.2**	**-1.7**
	baz=168						
BRLK	**Bradley Lake**	**3.96**	**348**		**Pn**	**21 15 53.2**	**+0.7**
BRLK					**Sn**	**21 16 37.2**	**-1.6**
BRLK				IAML		21 16 41.0	
	comp=E,194nm,0.6s						
HOM	**Homer**	**3.96**	**342**	Pn	**Pn**	**21 15 54.8**	**+2.3**
HOM				IAML		21 16 41.1	
	comp=N,328nm,0.6s						
HOM				IAML		21 16 41.6	
	comp=E,298nm,0.7s						
AU22	**Augustine Moun**	**4.10**	**329**		**Pn**	**21 15 55.6**	**+1.3**
SEW	**Seward**	**4.21**	**359**		**Pn**	**21 15 56.5**	**+0.7**
SEW	**Seward**	**4.21**	**359**	P	**Pn**	**21 15 56.6**	**+0.7**
	baz=179						
P23K	**Montague Islan**	**4.22**	**13**		**Pn**	**21 15 57.3**	**+1.2**
P23K	**Montague Islan**	**4.22**	**13**	P	**Pn**	**21 15 57.3**	**+1.2**
	baz=195						
CNTC	**Contact Creek**	**4.30**	**306**		**Pn**	**21 15 58.1**	**+0.9**
Q17K	**Contact Creek**	**4.30**	**306**	P	**Pn**	**21 15 58.1**	**+0.9**
	baz=121						
P19K	**Oil Pt**	**4.30**	**332**		**Pn**	**21 15 58.6**	**+1.4**
P19K				IAML		21 16 50.5	
	comp=N,421nm,0.5s						
P19K	**Oil Pt**	**4.30**	**332**	P	**Pn**	**21 15 58.5**	**+1.2**
	baz=150						
O20K	**Slope Mountain**	**4.54**	**338**		**Pn**	**21 16 01.5**	**+1.0**
O20K	**Slope Mountain**	**4.54**	**338**	P	**Pn**	**21 16 01.5**	**+1.0**
	baz=156						
IVE	**Iliamna Volcan**	**4.57**	**336**		**Pn**	**21 16 01.6**	**+0.7**
O22K	**Cooper Landing**	**4.59**	**357**		**Pn**	**21 16 01.9**	**+0.8**
O22K	**Cooper Landing**	**4.59**	**357**	P	**Pn**	**21 16 02.1**	**+1.0**
	baz=177						
SLKM	**Skilak Lake**	**4.63**	**354**		**Pn**	**21 16 02.7**	**+0.9**
P18K	**Big Mountain,**	**4.72**	**320**	Pn	**Pn**	**21 16 04.1**	**+1.0**
P18K	**Big Mountain,**	**4.72**	**320**	P	**Pn**	**21 16 03.9**	**+0.9**
	baz=136						
HIN	**Hinchinbrook I**	**4.73**	**17**		**Pn**	**21 16 04.3**	**+1.1**
HIN				IAML		21 16 56.1	
	comp=N,240nm,2.0s						
HIN				IAML		21 17 00.1	
	comp=E,198nm,0.4s						
KAIM	**Kayak Island**	**4.79**	**31**	Pn	**Pn**	**21 16 05.0**	**+1.2**
RED	**Redoubt Volcan**	**4.88**	**339**		**Pn**	**21 16 05.8**	**+0.6**
RDSO	**Redoubt South**	**4.91**	**340**		**Pn**	**21 16 06.3**	**+0.6**
RSO	**Redoubt South**	**4.92**	**340**		**Pn**	**21 16 06.3**	**+0.5**
RDT	**Redoubt**	**4.96**	**342**		**Pn**	**21 16 06.8**	**+0.5**
RDWB	**Redoubt West**	**4.96**	**339**		**Pn**	**21 16 07.0**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.01**	**20**		**Pn**	**21 16 08.4**	**+1.5**
EYAK	**Cordova Ski Ar**	**5.01**	**20**	P	**Pn**	**21 16 08.8**	**+1.9**
EYAK	**Cordova Ski Ar**	**5.01**	**20**	P	**Pn**	**21 16 08.6**	**+1.7**
	baz=204						
DFR	**Drift River**	**5.02**	**341**		**Pn**	**21 16 08.0**	**+0.8**
NCT	**North Crescent**	**5.04**	**339**		**Pn**	**21 16 08.2**	**+0.8**
O19K	**Port Alsworth**	**5.06**	**330**	Pn	**Pn**	**21 16 07.6**	**+0.1**
O19K	**Port Alsworth**	**5.06**	**330**	P	**Pn**	**21 16 08.2**	**+0.7**
	baz=146						
O18K	**Koktub Hills**	**5.06**	**324**	Pn	**Pn**	**21 16 08.2**	**+0.6**
O18K				IAML		21 17 06.5	
	comp=N,108nm,0.7s						
O18K	**Koktub Hills**	**5.06**	**324**	P	**Pn**	**21 16 08.5**	**+1.0**
	baz=139						
SUCK	**Suckling Hills**	**5.10**	**33**		**Pn**	**21 16 09.8**	**+1.7**
SUCK				IAML		21 17 09.8	
	comp=E,187nm,1.0s						
SUCK				IAML		21 17 10.6	
	comp=N,241nm,1.0s						
CHGN	**Chignik**	**5.12**	**278**		**Pn**	**21 16 08.8**	**+0.4**
CHGN				IAML		21 17 06.2	
	comp=N,197nm,0.2s						
CHGN				IAML		21 17 07.7	
	comp=E,201nm,0.1s						
CHGN	**Chignik**	**5.12**	**278**	P	**Pn**	**21 16 08.9**	**+0.5**
	baz=91						
HMT	**Hamilton**	**5.18**	**29**		**Pn**	**21 16 10.8**	**+1.6**
NICHA	**Nichawak Mount**	**5.18**	**31**		**Pn**	**21 16 11.1**	**+1.9**
RC01	**Rabbit Creek A**	**5.20**	**358**		**Pn**	**21 16 10.4**	**+0.9**
RC01				IAML		21 17 09.8	
	comp=N,109nm,0.4s						
RC01				IAML		21 17 12.1	
	comp=E,148nm,0.6s						
RC01	**Rabbit Creek A**	**5.20**	**358**	P	**Pn**	**21 16 10.6**	**+1.1**
	baz=178						
GOAT	**Goat Mountain**	**5.27**	**25**		**Pn**	**21 16 12.3**	**+1.8**
BERG	**Berg Lake**	**5.38**	**31**		**Pn**	**21 16 13.5**	**+1.5**
GRIN	**Grindle Hills**	**5.41**	**33**		**Pn**	**21 16 14.4**	**+2.0**
SNH	**Sunshine Point**	**5.48**	**36**	Pn	**Pn**	**21 16 15.3**	**+1.8**
N20K	**Mount Spurr**	**5.52**	**345**	P	**Pn**	**21 16 14.7**	**+0.8**
	baz=163						
SPCR	**Spurr Chakacha**	**5.52**	**345**		**Pn**	**21 16 14.7**	**+0.8**
CKL	**Chakachamna La**	**5.53**	**345**		**Pn**	**21 16 15.4**	**+1.2**
KNK	**Knik Glacier**	**5.54**	**4**		**Pn**	**21 16 15.6**	**+1.4**
KNK	**Knik Glacier**	**5.54**	**4**	P	**Pn**	**21 16 15.4**	**+1.2**
	baz=185						
DIV	**Divide**	**5.55**	**18**		**Pn**	**21 16 16.1**	**+1.8**
SPCP	**Crater Peak Br**	**5.57**	**346**		**Pn**	**21 16 15.8**	**+1.1**
SPCG	**Spurr Capps Gl**	**5.58**	**346**		**Pn**	**21 16 16.1**	**+1.2**
SUA	**Susitna One**	**5.62**	**353**		**Pn**	**21 16 15.9**	**+0.5**
SUA	**Susitna One**	**5.62**	**353**	P	**Pn**	**21 16 16.4**	**+1.0**
	baz=172						
N19K	**Bonanza Creek**	**5.62**	**333**		**Pn**	**21 16 15.8**	**+0.5**
N19K	**Bonanza Creek**	**5.62**	**333**	P	**Pn**	**21 16 16.0**	**+0.6**
	baz=149						
BMRM	**Bremner River**	**5.64**	**24**		**Pn**	**21 16 17.2**	**+1.7**
BMRM	**Bremner River**	**5.64**	**24**	P	**Pn**	**21 16 16.9**	**+1.4**
	baz=208						
P16K	**Nushagak River**	**5.64**	**307**	P	**Pn**	**21 16 17.4**	**+1.9**
	baz=120						
WAX	**Waxell Ridge**	**5.68**	**34**		**Pn**	**21 16 17.8**	**+1.6**
O17K	**Koliganek Bris**	**5.69**	**316**		**Pn**	**21 16 16.8**	**+0.7**
O17K	**Koliganek Bris**	**5.69**	**316**	P	**Pn**	**21 16 16.8**	**+0.7**
	baz=130						
PMR	**Palmer**	**5.70**	**1**		**Pn**	**21 16 18.2**	**+1.9**
PMR	**Palmer**	**5.70**	**1**	P	**Pn**	**21 16 18.8**	**+2.5**
SPNN	**North Nagishla**	**5.75**	**343**		**Pn**	**21 16 18.3**	**+1.0**
STLK	**Strandline Lak**	**5.76**	**348**		**Pn**	**21 16 18.2**	**+1.0**
MESA	**MESA**	**5.79**	**39**		**Pn**	**21 16 19.9**	**+2.2**
MESA	**MESA**	**5.79**	**39**	P	**Pn**	**21 16 19.6**	**+1.9**
	baz=225						
CRQM	**Cirque**	**5.84**	**31**		**Pn**	**21 16 20.2**	**+1.7**
KLU	**Klutina**	**5.87**	**16**		**Pn**	**21 16 20.6**	**+1.9**
KLU	**Klutina**	**5.87**	**16**	P	**Pn**	**21 16 20.6**	**+1.9**
	baz=199						
GHO	**Glory Hole Cre**	**5.88**	**2**		**Pn**	**21 16 20.7**	**+1.8**
N18K	**Kilae Creek**	**5.91**	**327**	Pn	**Pn**	**21 16 19.9**	**+0.7**
N18K	**Kilae Creek**	**5.91**	**327**	P	**Pn**	**21 16 20.0**	**+0.7**
	baz=142						
SML	**Sawmill**	**5.93**	**4**	Pn	**Pn**	**21 16 21.5**	**+1.9**
SML	**Sawmill**	**5.93**	**4**	P	**Pn**	**21 16 21.2**	**+1.6**
	baz=185						
ISLE	**Juniper Island**	**5.96**	**35**		**Pn**	**21 16 22.0**	**+1.9**
CHNA	**Chernabura Isl**	**5.97**	**264**	P	**Pn**	**21 16 19.8**	**-0.3**
	baz=76						
CNBA	**Chernabura Isl**	**5.97**	**264**		**Pn**	**21 16 19.3**	**-0.8**
O16K	**Kokwok River B**	**5.98**	**312**		**Pn**	**21 16 21.8**	**+1.6**
SCM	**Sheep Creek Mo**	**6.03**	**9**		**Pn**	**21 16 22.5**	**+1.6**
SCM	**Sheep Creek Mo**	**6.03**	**9**	P	**Pn**	**21 16 22.6**	**+1.6**
	baz=191						
VRDI	**Verde Repeater**	**6.14**	**27**	Pn	**Pn**	**21 16 24.1**	**+1.5**
SVW2	**Sparrevohn**	**6.15**	**330**		**Pn**	**21 16 23.1**	**+0.5**
SVW2	**Sparrevohn**	**6.15**	**330**	P	**Pn**	**21 16 23.3**	**+0.7**
SAMH	**Samovar Hills**	**6.19**	**43**		**Pn**	**21 16 25.1**	**+1.9**
SKT	**Skwentna**	**6.20**	**350**		**Pn**	**21 16 24.3**	**+1.1**
SKT	**Skwentna**	**6.20**	**350**	P	**Pn**	**21 16 24.7**	**+1.5**
	baz=168						
KIAG	**Kiagna River**	**6.21**	**33**		**Pn**	**21 16 25.2**	**+1.7**
N25K	**Chitina, Valde**	**6.21**	**21**	Pn	**Pn**	**21 16 25.0**	**+1.6**
N25K	**Chitina, Valde**	**6.21**	**21**	P	**Pn**	**21 16 25.3**	**+1.9**
	baz=205						
N17K	**Nushagak Hills**	**6.23**	**321**	Pn	**Pn**	**21 16 24.9**	**+1.3**
GLB	**Gilahina Butte**	**6.24**	**25**	Pn	**Pn**	**21 16 25.6**	**+1.8**
TABL	**Table Mountain**	**6.26**	**40**		**Pn**	**21 16 26.3**	**+2.1**
M20K	**Styx River**	**6.31**	**343**		**Pn**	**21 16 25.3**	**+0.5**
M20K	**Styx River**	**6.31**	**343**	P	**Pn**	**21 16 25.5**	**+0.7**
	baz=160						
SDPT	**Sand Point**	**6.36**	**270**	Pn	**Pn**	**21 16 25.7**	**+0.3**
SDPT	**Sand Point**	**6.36**	**270**	P	**Pn**	**21 16 26.2**	**+0.8**
SDPT	**Sand Point**	**6.36**	**270**	P	**Pn**	**21 16 25.8**	**+0.3**
	baz=81						
PCA	**Pinnacle**	**6.38**	**45**		**Pn**	**21 16 27.6**	**+1.9**
PINM	**Pinnacle**	**6.38**	**45**	P	**Pn**	**21 16 27.6**	**+1.9**
	baz=233						
PTPK	**Patty Peak**	**6.38**	**31**		**Pn**	**21 16 27.8**	**+1.9**
MCARA	**McCarthy VSAT**	**6.39**	**28**		**Pn**	**21 16 27.4**	**+1.6**
MCARA	**McCarthy VSAT**	**6.39**	**28**	P	**Pn**	**21 16 28.4**	**+2.6**
	baz=214						
M24K	**Tolsona, Glenn**	**6.42**	**13**		**Pn**	**21 16 28.6**	**+2.4**
M24K	**Tolsona, Glenn**	**6.42**	**13**	P	**Pn**	**21 16 28.7**	**+2.4**
	baz=196						
PNL	**Peninsula**	**6.49**	**50**		**Pn**	**21 16 29.6**	**+2.3**
PNL	**Peninsula**	**6.49**	**50**	P	**Pn**	**21 16 29.7**	**+2.4**
PNL	**Peninsula**	**6.49**	**50**	P	**Pn**	**21 16 29.6**	**+2.3**
	baz=239						
BARN	**Barnard Glacie**	**6.53**	**35**		**Pn**	**21 16 29.7**	**+1.7**
CUT	**Chulitna**	**6.53**	**356**	Pn	**Pn**	**21 16 29.3**	**+1.5**
O15K	**Ungalikthiuk R**	**6.54**	**304**		**Pn**	**21 16 29.7**	**+1.8**
O15K	**Ungalikthiuk R**	**6.54**	**304**	P	**Pn**	**21 16 29.7**	**+1.8**
	baz=116						
BCPM	**Bancas Point**	**6.54**	**48**		**Pn**	**21 16 30.4**	**+2.4**
M18K	**Stony River**	**6.54**	**331**		**Pn**	**21 16 28.7**	**+0.7**
M18K	**Stony River**	**6.54**	**331**	P	**Pn**	**21 16 28.7**	**+0.7**
	baz=146						
M19K	**Big River Lodg**	**6.56**	**338**		**Pn**	**21 16 28.7**	**+0.5**
M19K	**Big River Lodg**	**6.56**	**338**	P	**Pn**	**21 16 29.0**	**+0.8**
	baz=154						
CTG	**Chitna Glacier**	**6.56**	**36**	P	**Pn**	**21 16 29.9**	**+1.6**
	baz=223						
CTGM	**Chitina Glacie**	**6.56**	**36**	Pn	**Pn**	**21 16 30.2**	**+1.8**
LOGN	**Logan Glacier**	**6.58**	**38**		**Pn**	**21 16 29.6**	**+1.0**
WASW	**Wrangell South**	**6.59**	**22**		**Pn**	**21 16 29.5**	**+0.7**
WAT6	**Susitna Watana**	**6.74**	**6**		**Pn**	**21 16 32.4**	**+1.6**
WAT6	**Susitna Watana**	**6.74**	**6**	P	**Pn**	**21 16 32.4**	**+1.6**
	baz=188						
N16K	**Nishlik Lake**	**6.78**	**316**		**Pn**	**21 16 32.2**	**+1.1**
N16K	**Nishlik Lake**	**6.78**	**316**	P	**Pn**	**21 16 32.3**	**+1.1**
	baz=129						
L19K	**White Mountain**	**6.91**	**338**		**Pn**	**21 16 33.6**	**+0.6**
L19K	**White Mountain**	**6.91**	**338**	P	**Pn**	**21 16 33.8**	**+0.8**
	baz=153						
WAT7	**Susitna Watana**	**6.95**	**2**		**Pn**	**21 16 35.6**	**+2.0**
M17K	**Holitna River**	**6.95**	**326**		**Pn**	**21 16 34.8**	**+1.3**
M17K	**Holitna River**	**6.95**	**326**	P	**Pn**	**21 16 34.9**	**+1.4**
	baz=139						

PN7A	Pavlof North-7	7.20	271			Pn	21 16 37.7	+0.6
P29M	Windy Craggy	7.21	54			Pn	21 16 38.8	+1.6
P29M	Windy Craggy baz=244	7.21	54	P		Pn	21 16 38.9	+1.7
DHY	Denali Highway	7.25	7			Pn	21 16 39.6	+1.8
DHY	Denali Highway baz=189	7.25	7	P		Pn	21 16 39.5	+1.8
O14K	Tigyukauivet M	7.25	302	Pn		Pn	21 16 39.4	+1.8
S31K	Pelican	7.44	69			Pn	21 16 39.6	-0.6
S31K	Pelican baz=259	7.44	69	P		Pn	21 16 40.4	+0.3
M27K	Edge Creek, AK	7.50	27	Pn		Pn	21 16 43.7	+2.5
RND	Reindeer	7.52	2	Pn		Pn	21 16 43.8	+2.4
TRF	Thorofare Moun	7.58	357	Pn		Pn	21 16 43.5	+1.2
TRF	Thorofare Moun baz=176	7.58	357	P		Pn	21 16 43.5	+1.2
CAST	Castle Rocks	7.66	351	Pn		Pn	21 16 45.0	+1.8
KTH	Kantishna Hill	7.71	355	Pn		Pn	21 16 45.8	+1.8
L26K	Log Cabin Wild	7.75	21			Pn	21 16 48.1	+3.6
PLBC	Pleasant Camp	7.78	58			Pn	21 16 46.5	+1.6
PLBC	Pleasant Camp baz=248	7.78	58	P		Pn	21 16 46.5	+1.6
P30M	Million Dollar	7.79	52			Pn	21 16 47.4	+2.3
P30M	Million Dollar baz=242	7.79	52	P		Pn	21 16 47.0	+1.9
SIT	Sitka	7.82	76	Pn		Pn	21 16 44.0	-1.4
BVCY	Beaver Creek	7.82	30			Pn	21 16 47.9	+2.4
BVCY	Beaver Creek baz=217	7.82	30	P		Pn	21 16 47.9	+2.4
TTA	Tatalina	7.82	337	P		Pn	21 16 47.2	+1.6
K20K	Telida	7.85	344			Pn	21 16 46.9	+1.0
K20K	Telida baz=160	7.85	344	P		Pn	21 16 46.5	+0.7
MCK	McKinley	7.85	1			Pn	21 16 48.1	+2.3
MCK	McKinley baz=182	7.85	1	P		Pn	21 16 47.9	+2.0
L16K	Owhat River	7.85	322	Pn		Pn	21 16 47.4	+1.5
HYT	Haines Junctio	7.91	47	Pn		Pn	21 16 48.3	+1.5
HYT	Haines Junctio baz=237	7.91	47	P		Pn	21 16 48.2	+1.4
L27K	Beaver Creek,	8.11	25			Pn	21 16 51.5	+2.1
K24K	Donnelly Dome	8.11	11			Pn	21 16 52.0	+2.6
K24K	Donnelly Dome baz=194	8.11	11	P		Pn	21 16 52.0	+2.6
FALS	False Pass	8.11	268	P		Pn	21 16 50.1	+0.7
K17K	Iditarod	8.23	330	Pn		Pn	21 16 51.5	+0.5
S32K	Killisnoo	8.25	73	Pn		Pn	21 16 50.9	-0.5
S32K	Killisnoo baz=265	8.25	73	P		Pn	21 16 51.7	+0.4
BESE	Bessie Mountai	8.27	65			Pn	21 16 52.6	+0.9
SKAG	Skagway	8.28	59			Pn	21 16 54.1	+2.4
SKAG	Skagway	8.28	59	P		Pn	21 16 54.9	+3.2
ISLZ	Isanotski Laza	8.31	268			Pn	21 16 52.5	+0.3
R32K	Eaglecrest	8.39	68	Pn		Pn	21 16 53.5	+0.3
N30M	Aishikik Lake	8.44	44			Pn	21 16 56.4	+2.5
JIS	Juneau Island	8.46	68	Pn		Pn	21 16 55.2	+1.1
O30N	Mendenhall baz=241	8.47	50	P		Pn	21 16 56.3	+1.9
SCRK	Sand Creek	8.51	16			Pn	21 16 57.3	+2.3
M29M	Somme Creek	8.58	36			Pn	21 16 58.5	+2.5
HDA	Harding Lake	8.61	7			Pn	21 16 58.8	+2.6
J20K	Nowinta River	8.64	346			Pn	21 16 57.7	+1.1
J20K	Nowinta River baz=162	8.64	346	P		Pn	21 16 57.4	+0.8
M13K	Dall Lake	8.69	307	Pn		Pn	21 16 59.2	+2.0
J19K	Poorman	8.70	341			Pn	21 16 58.7	+1.2
K27K	Chicken	8.90	21			Pn	21 17 02.6	+2.3
J25K	Salcha River,	8.94	11			Pn	21 17 02.2	+1.3
WHY	Whitehorse	8.95	52	Pn		Pn	21 17 03.2	+2.2
IL31		8.97	7			Pn	21 17 02.5	+1.4
ILAR	Eielson Array	8.97	7	Pn		Pn	21 17 02.7	+1.6
ILAR	Eielson Array comp=E,1.2nm,0.3s,baz=190,slow=13,SNR=44	8.97	7	Pn		Pn	21 17 01.6	+0.5
ILAR				Sn		Sn	21 18 39.5	-2.6
	comp=E,1.0nm,0.3s,baz=182,slow=20,SNR=14							
ILAR				LR		LR	21 20 43.6	
	comp=E,124nm,21.2s,baz=120,slow=40							
N31M	Braeburn, Yuko	8.97	46	Pn		Pn	21 17 03.3	+2.0
COLA	College	9.02	4	P		Pn	21 17 05.4	+3.6
U33K	Whale Pass	9.06	82	Pn		Pn	21 17 00.9	-1.5
J26L	Joseph Creek	9.07	16			Pn	21 17 04.2	+1.6
J26L	Joseph Creek baz=201	9.07	16	P		Pn	21 17 04.7	+2.0
MDM	Murphy Dome	9.09	3	Pn		Pn	21 17 05.0	+2.1
P32M	Atlin	9.10	60	Pn		Pn	21 17 05.0	+1.9
P32M	Atlin baz=253	9.10	60	P		Pn	21 17 05.2	+2.1
CRAG	Craig	9.15	86	Pn		Pn	21 17 01.8	-1.8
L29M	L29M	9.17	34			Pn	21 17 06.6	+2.6
MLY	Manley	9.18	356	Pn		Pn	21 17 05.8	+1.8
M30M	Minto, Yukon	9.24	39	Pn		Pn	21 17 07.2	+2.3
M30M	Minto, Yukon baz=229	9.24	39	P		Pn	21 17 07.4	+2.4
I23K	Minto, Yukon-K	9.27	360			Pn	21 17 07.7	+2.5
I21K	Tanana	9.39	353			Pn	21 17 09.0	+2.1
DAWY	Dawson	9.55	27	Pn		Pn	21 17 11.8	+2.6
AKUT	Akutan	9.63	266	Pn		Pn	21 17 10.2	0.0
Q32M	Nakina River	9.67	65	Pn		Pn	21 17 13.1	+2.2
P33M	Teslin, Yukon	9.73	57	Pn		Pn	21 17 13.4	+1.8
P33M	Teslin, Yukon baz=251	9.73	57	P		Pn	21 17 13.8	+2.2
EGAK	Eagle	9.75	21	Pn		Pn	21 17 14.6	+2.7
I26K	Coal Creek Min	9.89	15			Pn	21 17 16.7	+3.0
K29M	Barlow Dome baz=222	9.90	32	P		Pn	21 17 16.2	+2.3
N32M	Quiet Lake	9.96	52			Pn	21 17 17.2	+2.4
UNV	Unalaska Valle	10.13	265	Pn		Pn	21 17 16.2	-0.9
IMAR	Indian Mountai	10.33	350	Pn		Pn	21 17 21.6	+1.8
R33M	Jennings River	10.41	63	Pn		Pn	21 17 22.6	+1.5
T35M	Bob Quinn	10.60	76	Pn		Pn	21 17 25.1	+1.6
DLBC	Dease Lake	10.75	68			Pn	21 17 26.9	+1.2
DLBC	Dease Lake comp=E,0.8nm,0.3s,baz=240,slow=12,SNR=11	10.75	68	Pn		Pn	21 17 26.3	+0.6
DLBC				Sn		Sn	21 19 23.5	-2.5
	comp=E,0.6nm,0.3s,baz=186,slow=26,SNR=5.8							
DLBC				LR		LR	21 20 47.2	
	comp=E,162nm,21.9s,baz=286,slow=33 comp=E,6.1nm,0.8s							
G21K	Allakaket	10.83	351			Pn	21 17 28.0	+1.4
I30M	Mount Dempster	11.27	29	Pn		Pn	21 17 35.7	+3.0
MMPY	Sheldon Lake,	11.38	46	Pn		Pn	21 17 37.3	+3.0
H29M	Whitestone	11.59	22	Pn		Pn	21 17 39.9	+2.8
F24K	Squaw Lake	11.67	3			Pn	21 17 41.1	+3.0
BMAR	Burnt Mountain	11.77	9	Pn		Pn	21 17 41.4	+2.0
E24K	Your Creek	12.21	1			Pn	21 17 48.1	+2.6
G30M	tAoh Zrali Nji	12.70	24	Pn		Pn	21 17 54.6	+2.4
TOLK	Toolik Lake Re	12.78	360			Pn	21 17 56.2	+3.0
BBB	Bella Bella comp=E,47nm,18.0s,baz=149,slow=28	12.98	98	LR		LR	21 20 59.0	
G31M	Satah River	13.13	27			Pn	21 17 59.6	+1.7
E29M	Blow River	13.57	18			Pn	21 18 07.0	+3.1
C18K	Utukok River	13.88	342	Pn		Pn	21 18 08.9	+0.5
D27M	Malcolm River	13.90	12			Pn	21 18 10.6	+2.0
C23K	Itkillik River	13.99	358			Pn	21 18 11.1	+1.4
INK	Inuvik	14.39	24	Pn		Pn	21 18 15.5	+0.4
INK	Inuvik comp=E,0.1nm,0.3s,baz=201,slow=14,SNR=16 comp=E,6.6nm,1.0s	14.39	24	Pn		Pn	21 18 15.4	+0.2
YKA	Yellowknife Ar	18.75	55	P		P	21 19 09.9	-0.6
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=262,slow=11,SNR=19 comp=E,2.0nm,0.8s	18.75	55	P		Pn	21 19 11.0	+0.1
A36M	Sachs Harbour comp=Z,12nm,0.8s	19.02	23			Pn	21 19 14.8	+0.7
A36M				IAmb		IAmb	21 19 31.6	
NEW	Newport comp=Z,4.8nm,0.5s,baz=91,slow=21,SNR=4.2 comp=Z,4.8nm,0.5s	21.04	98	P		P	21 19 36.8	+1.2
NVAR	Mina Array Bea comp=Z,0.9nm,0.7s,baz=307,slow=9.1,SNR=4.8 comp=Z,0.9nm,0.7s	27.05	117	P		P	21 20 33.8	-0.5
PDAR	Pinedale Array	28.60	100	P		P	21 20 46.9	-1.2
PDAR	Pinedale Array comp=Z,0.3nm,0.6s,baz=336,slow=3.3,SNR=2.7 comp=Z,0.3nm,0.6s	28.60	100	P		P	21 20 48.1	0.0
TXAR	Lajitas Array	41.70	110	P		P	21 22 39.5	-1.1
TXAR	Lajitas Array comp=Z,0.6nm,0.8s,baz=318,slow=5.0,SNR=5.3 comp=Z,0.6nm,0.8s	41.70	110	P		P	21 22 41.4	+0.8
H11N2	WAKE ISLAND Hy baz=32,slow=76,SNR=15	48.69	240	T		T	22 15 02.9	
H11N3	WAKE ISLAND Hy baz=32,slow=76,SNR=17	48.70	240	T		T	22 15 04.4	
H11N1	WAKE ISLAND Hy baz=32,slow=76,SNR=11	48.71	240	T		T	22 15 04.2	
JMIC	Jan Mayen comp=Z,137nm,18.1s,baz=282,slow=38	50.37	16	LR		LR	21 46 58.9	
ARCES	ARCESS Array B comp=Z,3.8nm,0.9s,baz=357,slow=8.5,SNR=5.2 comp=Z,3.8nm,0.9s	54.80	2	P		P	21 24 21.0	-0.1
CMIG	Mas Romero comp=Z,157nm,19.9s,baz=140,slow=35	56.30	111	LR		LR	21 47 32.4	
ZALV	Zalesovo Beam comp=Z,1.0nm,0.8s,baz=50,slow=9.5,SNR=2.8 comp=Z,1.0nm,0.8s	61.87	327	P		P	21 25 10.7	0.0
FINES	FINESS Array B	62.93	2	P		P	21 25 17.2	-0.4
FINES	FINESS Array B comp=Z,1.3nm,0.5s,baz=359,slow=6.7,SNR=12 comp=Z,1.3nm,0.5s	62.93	2	P		P	21 25 17.6	-0.1
HFS	Hagfors comp=Z,5.0nm,1.2s,baz=96,slow=4.5,SNR=1.8 comp=Z,5.0nm,1.2s	63.51	9	P		P	21 25 22.0	+0.4
EKA	Eskdalemuir Ar comp=Z,2.2nm,0.8s,baz=312,slow=5.1,SNR=2.2 comp=Z,2.2nm,0.8s	65.73	20	P		P	21 25 35.9	-0.1
BVAR	Borovoye Array comp=Z,0.6nm,0.6s,baz=27,slow=10.0,SNR=4.4 comp=Z,0.6nm,0.6s	66.62	335	P		P	21 25 42.1	+0.3
KURBB	Kurchatov Arra comp=Z,0.4nm,0.6s,baz=30,slow=6.1,SNR=4.5 comp=Z,0.4nm,0.6s	66.65	329	P		P	21 25 42.4	+0.3
MK31	Makanchi Array comp=Z,1.2nm,0.8s	68.89	325	P		P	21 25 56.5	+0.1
MK31				IAmb		IAmb	21 26 03.5	
MKAR	Makanchi Array	68.89	325	P		P	21 25 56.0	-0.3
MKAR	Makanchi Array comp=Z,0.3nm,0.8s,baz=47,slow=5.5,SNR=4.3 comp=Z,0.3nm,0.6s	68.89	325	P		P	21 25 56.5	+0.2
ABKAR	Akbulak array	72.40	340	P		P	21 26 17.8	+0.3
ABKAR	Akbulak array comp=Z,2.8nm,1.2s	72.40	340	P		P	21 26 17.6	+0.1
ABKAR				IAmb		IAmb	21 26 18.8	
AKASG	Malin Array Be comp=Z,1.4nm,0.6s,baz=359,slow=5.9,SNR=4.7 comp=Z,1.4nm,0.6s	73.75	1	P		P	21 26 25.1	-0.5
GERES	GERESS Array B comp=Z,0.7nm,0.6s,baz=344,slow=14,SNR=3.4 comp=Z,0.7nm,0.6s	74.65	12	P		P	21 26 31.2	+0.3
ESDC	Sonseca Array comp=Z,1.0nm,0.9s,baz=335,slow=7.0,SNR=5.0 comp=Z,1.0nm,0.9s	80.32	26	P		P	21 27 03.1	+0.4
CMAR	Chiang Mai Arr comp=Z,32nm,21.9s,baz=325,slow=37	86.45	298	LR		LR	22 08 37.1	

*JMA **06** 21:17:26.2±0.8,32°N±3°×14°2E±°, h29km, MV3.9/21, FAR E OFF IZU ISLANDS*
*IDC **06** 21:17:27.7±1.4,32.20N×142.02E, h0km, mb3.8/8, mbtmp3.8/11, ML3.3/3, Error ellipse: s-maj=48.1km s-min=18.8km az=73.0*
ISC 06 21:17:29.9±0.8, 32.11N±0.06×142.1E±0.1, h29km, n22, σ2s41/27, mb3.9/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.17	298	eP		Pn	21 18 03.7	-0.4
JHJ	Hachijo jima 2 36nm,0.3s,baz=283,slow=24,SNR=11	2.20	298	Pn		Pn	21 18 03.2	-1.4
JHJ				Sn		Sn	21 18 25.3	-5.5
	21nm,0.3s,baz=48,slow=22,SNR=1.8 67nm,0.3s							
BSO1	Boso 1	2.71	340	P		Pn	21 18 11.6	+0.6
BSO1				eS		Sn	21 18 44.5	+2.0
BSO3	Boso 3	3.00	334	P		Pn	21 18 15.9	+0.7
JHU	Hanno	4.41	329	P		Pn	21 18 35.8	+0.9
JHO	Hitachi	4.67	345	eP		Pn	21 18 38.5	+0.1
JHO				S		Sn	21 19 29.5	-2.1
JRY	Ryogami san	4.72	327	P		Pn	21 18 40.5	+1.4
JAG	Ashikaga	4.83	334	P		Pn	21 18 41.9	+1.2
JCJ	Chichijima 7.5nm,0.3s,baz=225,slow=20,SNR=2.3	5.00	179	Pn		Pn	21 18 40.3	-2.8
JCJ				Sn		Sn	21 19 36.9	-2.9
	7.2nm,0.3s,baz=283,slow=21,SNR=1.8							
JFK	Kawauchi	5.34	349	P		Pn	21 18 47.0	-0.7
MJAR	Matsushiro Arr 0.3nm,0.3s,baz=60,slow=26,SNR=14 2.3nm,0.3s	5.47	325	Pn		Pn	21 18 48.6	-0.9
JMK	Ichinoseki	6.86	354	P		Pn	21 19 08.4	-0.2
JCH	Churui	10.53	5	eP		Pn	21 19 58.2	-0.6
JCH				S		Sn	21 21 49.0	-6.9
ASAJ	Asahikawa 0.4nm,0.3s,baz=265,slow=4.9,SNR=2.1 1.4nm,0.3s	11.99	2	Pn		Pn	21 20 18.7	-0.2
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=110,slow=11,SNR=2.4 0.5nm,0.4s	45.75	316	P		P	21 25 49.9	+1.4
MKAR	Makanchi Array 0.9nm,0.5s,baz=88,slow=9.4,SNR=16 0.9nm,0.5s	47.35	306	P		P	21 26 02.5	+1.4
KURBB	Kurchatov Arra 1.7nm,0.5s,baz=88,slow=7.1,SNR=23 1.7nm,0.5s	49.58	311	P		P	21 26 19.7	+1.4
WRA	Warramunga Arr 0.5nm,0.5s,baz=3.0,slow=7.6,SNR=11 0.5nm,0.5s	52.29	189	P		P	21 26 41.1	+2.2
BVAR	Borovoye Array 0.5nm,0.4s,baz=85,slow=8.3,SNR=4.8 0.5nm,0.4s	54.38	315	P		P	21 26 55.6	+1.6
ASAR	Alice Springs 0.2nm,0.7s,baz=13,slow=15,SNR=4.8 0.2nm,0.7s	56.02	189	P		P	21 27 09.3	+3.3
FINES	FINESS Array B 0.4nm,0.4s,baz=61,slow=5.2,SNR=9.3 0.4nm,0.4s	73.44	333	P		P	21 29 00.6	+1.4
HFS	Hagfors 0.8nm,0.5s,baz=60,slow=8.8,SNR=4.6 0.8nm,0.5s	78.81	336	P		P	21 29 31.6	+1.9

*DNK **06** 21:19:44.0±0.4,51.26N×15.85E, h38km±21km, ML2.6*
*VIE **06** 21:19:45.9±0.6,51.48N×16.08E, h0km, mb2.7/3, ml2.6/6, Error ellipse: s-maj=6.8km s-min=2.6km az=51.0, Suspected Mining induced.*
*PRU **06** 21:19:47.2,51.44N×16.13E, h0km*
ISC 06 21:19:44.4±0.8, 51.60N±0.03×16.15E±0.03, h0km, n35, σ1s23/62, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	173	ePg		Pg	21 19 58.5	-0.4
KSP				eSg		Sg	21 20 07.5	-1.3
CHVC	Chvalec	1.01	184	ePG		Pg	21 20 03.4	-0.4
CHVC				eSG		Sg	21 20 15.8	-1.1
OSTC	Ostas	1.04	178	ePG		Pg	21 20 04.3	-0.1
OSTC				eSG		Sg	21 20 16.8	-1.1
UPC	Upice	1.09	185	ePG		Pg	21 20 04.7	-0.7
DPC	Dobruska-Polom	1.25	175	ePG		Pg	21 20 07.3	-1.1
DPC				eSG		Sg	21 20 22.6	-2.0
PVCC	Panska Ves	1.46	224	ePG		Pn	21 20 11.9	-0.2
PVCC				eSG		Sg	21 20 30.5	-0.9
	comp=Z,56nm,0.2s							
BRG	Berggiesshubel	1.57	243	Pg		Pb	21 20 14.3	0.0
BRG				Sg		Sb	21 20 34.5	-0.1
BRG				Amp			21 20 36.5	
	comp=Z,40nm,0.4s							
KRLC	Kraliky	1.57	165	ePG		Pn	21 20 13.0	-0.7
KRLC				eSG		Sn	21 20 32.6	-2.1
	comp=Z,19nm,0.3s							
RICC	Richard	1.67	232	eSG		Sn	21 20 36.9	-0.2
PRU	Pruhonice comp=Z,30nm,0.5s	1.91	213	eSG		Sn	21 20 43.1	+0.2
HSKC	Hora Svate Kat comp=Z,20nm,0.3s	1.98	241	eSG		Sb	21 20 46.3	-0.3
CLL	Collm	1.99	263	ePn		Pn	21 20 19.0	-0.3
CLL				ePg		Pg	21 20 22.0	-0.6
CLL				i x		x	21 20 25.1	
CLL				eSg		Sg	21 20 49.0	+0.6
	comp=Z,12nm,0.6s							
MORC	Moravsky Berou	2.02	154	ePN		Pn	21 20 18.7	-1.1
MORC				eSG		Sn	21 20 46.2	+0.3
OKC	Ostrava-Krasne	2.17	143	eSG		Sb	21 20 51.8	-0.2
VRAC	Vranov	2.31	173	ePN		Pn	21 20 23.3	-0.4
VRAC				eSG		Sb	21 20 55.1	-0.9
TREC	Trest	2.34	191	eSG		Sb	21 20 56.5	-0.5
KRUC	Moravsky	2.54	176	ePN		Pn	21 20 27.0	+0.1
KRUC				eSG		Sb	21 21 02.7	0.0
OJC	Ojcow	2.69	119	ePg		Pg	21 20 36.3	+0.4
OJC				eSg		Sg	21 21 11.4	+0.7
NKC	Novy Kostel	2.71	241	ePN		Pn	21 20 30.5	+1.2
NKC				ePG		Pg	21 20 35.8	-0.6
NKC				eSG		Sg	21 21 10.6	-1.0
	comp=Z,16nm,0.5s							
KHC	Kasperske Hory	2.97	215	ePN		Pn	21 20 32.5	-0.3
KHC				ePG		Pb	21 20 38.3	+0.1
KHC				eSG		Sb	21 21 16.2	+1.2
	comp=Z,7.6nm,0.4s							
CKRC	Cesky Krumlov	3.02	204	ePN		Pn	21 20 33.9	+0.4
CKRC				ePG		Pb	21 20 39.7	+0.6
CKRC				eSG		Sb	21 21 17.1	+0.6
LANS	Liptovska Anna	3.24	138	ePN		Pn	21 20 37.5	+1.0
LANS				ePG		Pg	21 20 48.6	+2.1
LANS				eSG		Sg	21 21 27.5	-0.9
MODS	Modra-Piesok	3.31	167	e		Pg	21 20 46.4	-1.4
MODS	Modra-Piesok	3.31	167	eSG		Sg	21 21 30.8	+0.2
BSD	Bornholm Skovb	3.60	349	i P		Pn	21 20 41.8	+0.4
BSD				i S		Sn	21 21 24.2	-0.4
BSD				IAML			21 21 33.0	
	comp=Z,5.7nm,0.7s							
CONA	Conrad Observa comp=Z,0.3nm,0.2s	3.68	183	ePn		Pn	21 20 42.9	+0.3
CONA				Sg		Sg	21 21 41.8	-0.7
	comp=Z,16nm,0.7s							
RONA	Rosalia, Austr comp=Z,7.1nm,0.5s	3.90	179	Sg		Sg	21 21 49.6	-0.1
MOA	Molln comp=Z,0.4nm,0.2s	3.95	199	i Pn		Pn	21 20 46.3	+0.1
MOA				Sg		Sg	21 21 52.3	+1.1
	comp=Z,7.6nm,0.5s							
BIOA	Bad Ischl, Aus comp=Z,1.5nm,0.3s	4.24	204	ePn		Pn	21 20 50.7	+0.5
BIOA				Sg		Sg	21 22 04.5	+4.0
	comp=Z,17nm,0.8s							
LUNU	Lund	4.35	339	eP		Pn	21 20 51.8	+0.1
LUNU				eS		Sn	21 21 41.4	-1.7
ARSA	Arzberg comp=Z,6.9nm,0.6s	4.37	186	Sg		Sg	21 22 08.5	+3.7
BLEU	Blekinge	4.72	358	eP		Pn	21 20 58.0	+1.2
BLEU				i S		Sn	21 21 51.4	-0.8
BJUU	Bjuv	4.85	339	eP		Pn	21 20 58.4	-0.3
KBA	Koelnbreinsper comp=Z,7.6nm,0.7s	4.88	203	Sg		Sg	21 22 25.4	+4.2
DEL	Delary	5.07	345	i P		Pn	21 21 01.4	-0.1

*JMA **06** 21:27:30.6±0.2,24.1N±0.4×12.2E±°, h0km, TAIWAN REGION*
*TAP **06** 21:27:30.5,24.06N×121.67E, h8km, ML3.4, C*
ISC 06 21:27:30.5±0.9, 24.05N±0.01×121.70E±0.02, h6km±7km, n133, σ0s66/189, 12C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TWD	Chiawan baz=287	0.10	288	i P		Pg	21 27 32.8	+0.2
TWD				i S		Sg	21 27 34.2	+0.2
	baz=287							
ETL	Fush Village baz=331	0.13	329	i P		Pg	21 27 33.4	+0.1
ETL				S		Sg	21 27 35.1	+0.2
	baz=331							
NACB	Ninganchiao baz=325	0.15	323	⇓i P		Pg	21 27 33.7	+0.1
NACB				i S		Sg	21 27 35.7	0.0
	baz=325							
ETM	Tongmen baz=243	0.20	245	P		Pg	21 27 34.7	+0.2
ETM				i S		Sg	21 27 37.5	+0.2
	baz=243							
LXIB	Xiulin Townshi baz=252	0.26	264	⇑i P		Pg	21 27 35.8	+0.1
LXIB				eS		Sg	21 27 39.1	0.0
	baz=252							
EHP	Heping Village baz=5.0	0.26	9	eP		Pg	21 27 35.9	+0.2
EAHA	Aohua baz=7.0	0.28	8	i P		Pg	21 27 36.2	+0.2
EAHA				S		Sg	21 27 40.2	+0.4
	baz=7.0							
SHUL	Shoufeng baz=209	0.29	205	eP		Pb	21 27 38.2	+0.1
SHUL				eS		Sb	21 27 42.7	-0.5
	baz=209							
ESL	Shilin baz=232	0.34	226	⇑i P		Pg	21 27 37.3	+0.2
ESL				S		Sg	21 27 41.2	-0.3
	baz=232							
TEGC	Jichi Village baz=203	0.37	203	P		Pb	21 27 39.4	-0.1
TEGC				eS		Sb	21 27 45.6	+0.1
	baz=203							
ENA	Nanau baz=6.0	0.38	6	i P		Pg	21 27 38.0	+0.2
ENA				i S		Sg	21 27 42.7	-0.1
	baz=6.0							
EWUT	Wuta baz=10.0	0.40	11	⇓i P		Pg	21 27 38.5	+0.2
EWUT				eS		Sg	21 27 43.8	+0.3
	baz=10.0							
WHF	Hehuan Shan baz=282	0.40	284	P		Pg	21 27 38.5	0.0
WHF				i S		Sg	21 27 44.0	+0.2
	baz=282							
WARBT	Fenglin Townsh baz=229	0.44	221	P		Pg	21 27 39.0	+0.1
WARBT				eS		Sg	21 27 45.6	+0.9
	baz=229							
FUSS	Fushou baz=294	0.46	296	⇑i P		Pg	21 27 39.6	+0.2
FUSS				S		Sg	21 27 45.9	+0.5
	baz=294							
NNSB	Datong baz=322	0.47	323	i P		Pg	21 27 39.7	+0.1
NNSB				i S		Sg	21 27 46.0	+0.1
	baz=322							
NNSH	Datong baz=321	0.47	323	P		Pg	21 27 39.9	+0.2
NNSH				i S		Sg	21 27 46.0	+0.1
	baz=321							
CHGB	Renai baz=262	0.48	271	⇑i P		Pg	21 27 40.2	+0.4
CHGB				i S		Sg	21 27 46.7	+0.7
	baz=262							
OWD	Renai baz=259	0.48	259	i P		Pg	21 27 40.0	+0.1
NNS	Nan Shan baz=322	0.49	323	i P		Pg	21 27 40.1	+0.2
NNS				i S		Sg	21 27 46.4	+0.1
	baz=322							
LATG	Datong baz=340	0.51	342	P		Pg	21 27 40.5	+0.2
LAT

	baz=357							
TWE				S		Sg	21 27 51.9	-0.2
	baz=357							
WPL	**Puli Township**	**0.68**	**267**	P		Pb	21 27 44.0	-0.8
	baz=267							
WPL				S		Sg	21 27 52.7	+0.3
	baz=267							
YHNB	**Yeheng**	**0.68**	**335**	*i* P		Pb	21 27 44.1	-0.8
	baz=333							
YHNB				S		Sg	21 27 52.5	-0.1
	baz=333							
NSK	**Sanguang**	**0.69**	**334**	⇑*i* P		Pb	21 27 44.5	-0.6
	baz=333							
NSK				*i* S		Sg	21 27 53.4	+0.4
	baz=333							
DPDB	**Guoxing**	**0.70**	**269**	P		Pb	21 27 44.5	-0.8
	baz=269							
FUSB	**Fushanzhiwuyua**	**0.71**	**352**	*e*P		Pg	21 27 44.6	+0.3
	baz=350							
FUSB				*e*S		Sg	21 27 53.9	+0.3
	baz=350							
WCS	**Beigang Elemen**	**0.72**	**271**	P		Pg	21 27 44.5	+0.2
	baz=271							
WHP	**Taichung City**	**0.72**	**288**	⇑*i* P		Pb	21 27 45.1	-0.5
	baz=288							
WHP				S		Sb	21 27 54.9	-0.9
	baz=288							
SSLB	**Suanglung**	**0.73**	**249**	*i* P		Pg	21 27 44.8	+0.2
	baz=260							
SSLB				S		Sg	21 27 53.0	-1.0
	baz=260							
NWLT	**Wulai**	**0.74**	**346**	P		Pg	21 27 45.1	+0.2
	baz=332							
NWLT				S		Sg	21 27 54.5	-0.1
	baz=332							
SMLT	**Sun Moon Lake**	**0.75**	**257**	⇑*i* P		Pb	21 27 45.2	-0.8
	baz=257							
SMLT				*e*S		Sg	21 27 54.4	-0.2
	baz=257							
YULB	**Yu-li**	**0.75**	**209**	*e*P		Pg	21 27 44.6	-0.4
	baz=224							
YULB				*e*S		Sb	21 27 56.8	+0.2
	baz=224							
ECBN	**Changbin**	**0.77**	**197**	*e*P		Pb	21 27 45.9	-0.4
	baz=186							
EYUL	**Yuli**	**0.78**	**206**	*e*P		Pg	21 27 45.7	+0.2
	baz=221							
TYC	**Yuchr**	**0.78**	**259**	⇑*i* P		Pg	21 27 45.6	+0.1
	baz=259							
TYC				S		Sg	21 27 54.9	-0.8
	baz=259							
NFF	**Wufeng Townshi**	**0.78**	**318**	P		Pb	21 27 45.8	-0.8
	baz=316							
NFF				*e*S		Sb	21 27 56.3	-1.3
	baz=316							
TWF1	**Yuli**	**0.79**	**208**	*e*P		Pg	21 27 45.7	0.0
	baz=222							
WHYT	**Xinyi Township**	**0.85**	**246**	*e*P		Pb	21 27 48.3	+0.6
	baz=247							
LIOB	**Emei**	**0.86**	**314**	P		Pb	21 27 47.7	-0.2
	baz=313							
LIOB				*e*S		Sb	21 27 58.9	-0.8
	baz=313							
NSTT	**Nanjuang**	**0.86**	**313**	P		Pb	21 27 47.4	-0.5
	baz=312							
NSTT				*i* S		Sb	21 27 59.0	-0.6
	baz=312							
NJD	**Zhudong**	**0.88**	**321**	*e*P		Pb	21 27 48.6	+0.3
	baz=319							
NJD				*e*S		Sb	21 28 00.3	+0.1
	baz=319							
TWQ1	**Liyutan**	**0.89**	**290**	*e*P		Pb	21 27 48.7	+0.2
	baz=289							
CHKH	**Chenggong**	**0.90**	**198**	*e*P		Pg	21 27 48.2	+0.4
	baz=191							
WWF	**Wufeng**	**0.91**	**270**	P		Pn	21 27 49.5	-0.4
	baz=270							
WJS	**Zhushan**	**0.91**	**256**	*e*P		Pb	21 27 48.6	-0.2
	baz=257							
FULB	**Fuli**	**0.93**	**204**	*e*P		Pb	21 27 48.8	-0.3
	baz=221							
TIPB	**Shuangxi**	**0.93**	**7**	*e*P		Pg	21 27 48.2	-0.1
	baz=349							
NSY	**Sanyi**	**0.93**	**293**	*e*P		Pb	21 27 49.0	-0.1
	baz=293							
TWA	**Mucha**	**0.93**	**354**	*e*P		Pg	21 27 47.8	-0.6
	baz=351							
TCU	**Taichung**	**0.94**	**276**	*e*P		Pn	21 27 49.9	-0.4
	baz=271							
TATO	**Taipei**	**0.94**	**348**	*e*P		Pg	21 27 48.3	-0.3
	baz=338							
WNT1	**Nantou City**	**0.94**	**261**	*e*P		Pn	21 27 49.8	-0.5
	baz=261							
WNT1				*e*S		Sn	21 28 05.1	+1.0
	baz=261							
WNT	**Mingjian**	**0.94**	**260**	*e*P		Pb	21 27 49.4	+0.2
	baz=252							
HSN1	**Hsinchu**	**0.95**	**320**	*e*P		Pb	21 27 49.2	-0.3
	baz=318							
NMLH	**Miaoli**	**0.96**	**301**	*e*P		Pn	21 27 50.3	-0.3
	baz=300							
ALS	**Alishan**	**0.98**	**237**	⇑*i*P		Pb	21 27 49.6	-0.4
	baz=239							
ALS				S		Sb	21 28 03.0	-0.4
	baz=239							
SBCB	**Hsinchu**	**0.98**	**319**	*e*P		Pn	21 27 51.6	+0.7
	baz=318							
TWB1	**Santiao Chiao**	**0.99**	**16**	*e*P		Pg	21 27 49.7	+0.1
	baz=4.0							
CHKT	**Chengkung**	**0.99**	**198**	*e*P		Pg	21 27 49.4	-0.2
	baz=193							
CHKT				*e*S		Sn	21 28 06.0	+0.6
	baz=193							
HSN	**Hsinchu**	**1.00**	**319**	*e*P		Pb	21 27 50.5	+0.2
	baz=320							
TAP	**Taipei**	**1.00**	**350**	*e*P		Pg	21 27 49.8	+0.1
	baz=340							
EHD	**Haiduan**	**1.00**	**207**	*e*P		Pg	21 27 49.5	-0.3
	baz=222							
WDJ	**Dajia District**	**1.01**	**287**	*e*P		Pn	21 27 51.4	+0.2
	baz=287							
NWF	**Wu-fen Shan**	**1.02**	**4**	*e*P		Pb	21 27 50.4	-0.3
	baz=359							
WFSB	**Wu-fen Shan**	**1.02**	**4**	*e*P		Pg	21 27 50.1	0.0
	baz=351							
WFSB				*e*S		Sb	21 28 03.8	-0.5
	baz=351							
CHN5	**Tsauling**	**1.03**	**244**	*i* P		Pn	21 27 51.4	-0.4
	baz=236							
CHN5				*e*S		Sn	21 28 06.7	+0.1
	baz=236							
ECS	**Chishang**	**1.05**	**205**	*e*P		Pg	21 27 50.5	-0.1
	baz=221							
SXI1	**Grass Mountain**	**1.05**	**9**	*e*P		Pn	21 27 51.9	0.0
	baz=351							
ELDTW	**Lidau**	**1.06**	**216**	*e*P		Pg	21 27 49.9	-1.0
	baz=208							
TWS1	**Kuangyinshan**	**1.08**	**346**	*e*P		Pn	21 27 52.5	+0.3
	baz=344							
TWS1				*e*S		Sn	21 28 07.2	-0.2
	baz=344							
TNOU	**National Taiwa**	**1.10**	**4**	*e*P		Pb	21 27 52.0	+0.1
	baz=359							
YM01	**YM01**	**1.10**	**354**	*e*P		Pn	21 27 52.4	-0.1
WGK	**Gukeng**	**1.10**	**251**	*e*P		Pn	21 27 52.5	0.0
	baz=252							
WGK				*e*S		Sn	21 28 09.0	+0.9
	baz=252							
WDLH	**Douliu**	**1.12**	**251**	*e*P		Pn	21 27 52.8	0.0
	baz=253							
EDH	**Donghe**	**1.13**	**199**	*e*P		Pg	21 27 51.9	-0.3
	baz=190							
ANP	**Anpu**	**1.14**	**352**	*e*P		Pn	21 27 53.1	-0.1
	baz=348							
WCKO	**Fanlu**	**1.17**	**239**	*e*P		Pn	21 27 53.5	-0.1
	baz=242							
STYH	**Taoyuan**	**1.22**	**224**	⇑*e*P		Pb	21 27 53.9	-0.1
	baz=228							
CHN4	**Tsaushan**	**1.23**	**236**	P		Pn	21 27 55.0	+0.7
	baz=231							
CHN4				S		Sn	21 28 11.8	+0.6
	baz=231							
TPUB	**Ta-pu**	**1.23**	**233**	⇑P		Pn	21 27 54.4	+0.1
	baz=225							
TPUB				*e*S		Sn	21 28 13.0	+1.7
	baz=225							
CHN2	**Minshiung**	**1.23**	**245**	*e*P		Pn	21 27 54.7	+0.4
	baz=248							
RLNB	**Erlin**	**1.23**	**263**	*e*P		Pn	21 27 54.9	+0.6
	baz=264							
STYT	**Tauyuan**	**1.23**	**224**	P		Pb	21 27 54.2	-0.1
	baz=229							
STYT				*e*S		Sb	21 28 10.7	+0.1
	baz=229							
WTK	**Tuku**	**1.25**	**253**	*e*P		Pn	21 27 54.6	+0.1
	baz=255							
YOJ	**Yonaguni jima**	**1.27**	**71**	*e*P		Pg	21 27 54.7	-0.2
	baz=69							
WTP	**Ta-pu**	**1.27**	**231**	P		Pn	21 27 55.1	+0.1
	baz=235							
WTP				*e*S		Sn	21 28 14.8	+2.3
	baz=235							
TWGBT	**Beinan**	**1.35**	**205**	*e*P		Pn	21 27 53.3	-2.7
	baz=209							
TWG	**Pinlang**	**1.35**	**205**	*e*P		Pn	21 27 53.7	-2.3
	baz=209							
TWK	**Hsinying**	**1.35**	**235**	P		Pb	21 27 57.0	+0.6
	baz=238							
TWK				S		Sn	21 28 16.1	+1.7
	baz=238							
CHN1	**Nanshi**	**1.37**	**231**	P		Pg	21 27 57.6	+0.7
	baz=236							
CHN1				*e*S		Sn	21 28 16.6	+1.8
	baz=236							
SNST	**Tainan City**	**1.38**	**233**	*e*P		Pg	21 27 56.8	-0.1
	baz=237							
SGST	**Jiashian**	**1.40**	**227**	P		Pn	21 27 56.1	-0.6
	baz=230							
SLGT	**Liugui**	**1.43**	**223**	*e*P		Pg	21 27 57.6	-0.3
	baz=226							
ICHU	**Yijhu**	**1.47**	**242**	*e*P		Pg	21 27 58.6	-0.1
	baz=246							
CHN8	**Yiju**	**1.53**	**243**	*e*P		Pb	21 27 58.9	-0.5
	baz=246							
ECL	**Taimali**	**1.60**	**205**	*e*P		Pn	21 27 57.9	-1.5
	baz=192							
SHHT	**Tainan City**	**1.61**	**231**	*e*P		Pg	21 28 01.7	+0.3
	baz=234							
SSD	**Sandimen**	**1.62**	**217**	*e*P		Pn	21 27 59.1	-0.7
	baz=221							
TSMG	**Majia**	**1.65**	**216**	*e*P		Pn	21 28 00.5	+0.4
	baz=210							
TWM1	**Shouhan**	**1.69**	**224**	*e*P		Pg	21 28 03.5	+0.6
	baz=228							
MASBT	**Mashibuluo**	**1.73**	**215**	*e*P		Pn	21 28 00.6	-0.7
	baz=209							
EAST	**Anshuo**	**1.83**	**205**	*e*P		Pb	21 28 03.9	-0.7
	baz=194							
WSSB	**Gushan**	**1.92**	**223**	*e*P		Pn	21 28 04.8	+0.9
	baz=226							
SCZT	**Fangliau**	**1.94**	**211**	*e*P		Pn	21 28 05.2	+1.1
	baz=203							
LAY	**Lan-yu**	**2.01**	**184**	*e*P		Pn	21 28 03.5	-1.5
	baz=188							
PHUB	**P'eng-hu**	**2.02**	**255**	*e*P		Pn	21 28 05.4	+0.2
	baz=257							
PNG	**Penghu**	**2.02**	**257**	*e*P		Pn	21 28 05.3	+0.1
	baz=258							
WDGT	**Dungji**	**2.02**	**248**	*e*P		Pn	21 28 05.4	+0.2
	baz=250							
LYUB	**Lan-yu**	**2.04**	**183**	*e*P		Pn	21 28 02.7	-2.7
	baz=187							
JKRS	**Kuro-shima**	**2.12**	**85**	*e*P		Pn	21 28 07.7	+1.1
VCHM	**Qimei**	**2.24**	**248**	*e*P		Pn	21 28 08.3	+0.1
	baz=236							
TWKBT	**Hengchun**	**2.25**	**201**	*e*P		Pn	21 28 08.4	0.0
	baz=190							
JIJ	**Ishigaki jima**	**2.26**	**82**	*e*P		Pn	21 28 09.4	+1.0
JIJ				*e*S		Sn	21 28 36.7	+0.1
JISG	**Ishigakijimahi**	**2.44**	**77**	P		Pn	21 28 11.1	+0.1
JISG				*e*S		Sn	21 28 42.5	+1.2
PTMZ	**Houxiangcun**	**2.54**	**293**	*e*P		Pn	21 28 10.7	-1.6
	baz=293							
KNMB	**Chin-men Tao**	**3.05**	**278**	*e*P		Pn	21 28 19.3	0.0
	baz=279							
MHZQ	**Yeshan**	**3.16**	**311**	*e*P		Pn	21 28 19.7	-1.2
	baz=297							
XPSS	**Dashiqiu**	**3.17**	**335**	*e*P		Pn	21 28 20.1	-0.9
	baz=331							
AXDP	**Jialang**	**3.50**	**285**	*e*P		Pn	21 28 25.1	-0.4
	baz=284							
DSXP	**Dongshan**	**3.92**	**266**	*e*P		Pn	21 28 31.1	-0.3
	baz=266							
SXFK	**Yanhouchang**	**4.35**	**303**	*e*P		Pn	21 28 37.3	+0.1
	baz=302							

*IDC **06** 21:27:30.4±1.6, 0°.14S×122°.09E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=147.2km s-min=25.8km az=59.0*
*DJA **06** 21:27:32.7±1.9, 1°.S±3°×12°.0E±°, h20km±19km, M3.7/7, MLv3.7/7*
ISC 06 21:27:33.0±1.0, **1°.23S**±0°.07×**120°.46E**±0°.08, **h10**km, **n8, σ2§09/9, mb3.6/4, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.65**	**340**	P	Pn	**21 28 00.4**	**-1.7**
TTSI	**Tana Toraja**	**1.91**	**199**	P	Pn	**21 28 04.7**	**-1.0**
MRSI	**Marisa**	**2.25**	**41**	P	Pn	**21 28 10.0**	**-0.4**
MRSI				S	Sn	**21 28 39.0**	**+0.8**
LUWI	**Luwuk**	**2.32**	**85**	P	Pn	**21 28 09.9**	**-1.4**
ASAR	**Alice Springs**	**25.84**	**151**	P	P	**21 33 05.7**	**+0.9**
	0.5nm,0.8s,baz=342,slow=15,SNR=6.2 0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.82**	**314**	P	P	**21 33 34.9**	**+3.3**
	0.6nm,0.5s,baz=139,slow=7.7,SNR=5.8 0.6nm,0.5s						
MKAR	**Makanchi Array**	**58.36**	**330**	P	P	**21 37 27.4**	**-1.1**
	0.3nm,0.6s,baz=126,slow=8.2,SNR=3.7 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**62.78**	**331**	P	P	**21 37 56.0**	**-2.6**
	0.3nm,0.6s,baz=138,slow=6.4,SNR=5.3 0.3nm,0.6s						

IDC 06 21:37:13.4±3.9, **3°.86S×155°.75E, h0**km, **mb3.9**/5, **mbtmp3.9**/5, **Error ellipse: s-maj=102.1km s-min=30.8km az=95.0, North of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.29**	**231**	P	P	21 42 51.5	+0.5
	2.5nm,0.5s,baz=56,slow=9.3,SNR=40 2.5nm,0.5s						
ASAR	**Alice Springs**	**28.86**	**225**	P	P	21 43 13.6	-0.4
	1.8nm,0.5s,baz=56,slow=8.7,SNR=34 1.8nm,0.5s						
STKA	**Stephens Creek**	**30.88**	**204**	P	P	21 43 31.5	-0.2
	0.5nm,0.3s,baz=5.7,slow=10,SNR=3.1 0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**60.16**	**294**	P	P	21 47 23.5	0.0
	0.5nm,0.8s,baz=121,slow=4.3,SNR=4.4 0.5nm,0.8s						
MKAR	**Makanchi Array**	**81.56**	**318**	P	P	21 49 33.2	0.0
	0.3nm,0.8s,baz=90,slow=7.2,SNR=6.4 0.3nm,0.8s						

*IDC **06** 21:37:31.3±2.7, 25°.54N×142°.55E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=107.2km s-min=21.6km az=83.0*
ISC 06 21:37:34.9±2.7, **25°.6N**±0°.2×**143°.0E**±0°.8, **h35**km, **n6, σ1§51/7, mb3.7/5, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.67**	**334**	Pn	Pn	**21 37 59.8**	**-1.8**
	15nm,0.3s,baz=321,slow=22,SNR=2.0						
JCJ				Sn	Sn	**21 38 23.6**	**+1.9**
	21nm,0.3s,baz=282,slow=23,SNR=5.7						
WRA	**Warramunga Arr**	**46.04**	**191**	P	P	**21 45 55.6**	**+0.4**
	0.3nm,0.3s,baz=9.0,slow=8.7,SNR=7.9 0.3nm,0.3s						
MKAR	**Makanchi Array**	**52.00**	**310**	P	P	**21 46 39.7**	**-1.1**
	0.1nm,0.4s,baz=82,slow=8.0,SNR=1.1 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**54.62**	**315**	P	P	**21 47 00.2**	**+0.4**
	0.4nm,0.5s,baz=92,slow=8.7,SNR=5.3 0.4nm,0.5s						
BVAR	**Borovoye Array**	**59.64**	**318**	P	P	**21 47 36.1**	**+0.7**
	0.5nm,0.5s,baz=86,slow=6.6,SNR=8.7 0.5nm,0.5s						
FINES	**FINESS Array B**	**79.61**	**334**	P	P	**21 49 38.9**	**+0.7**
	1.9nm,0.9s,baz=75,slow=5.9,SNR=2.4 1.9nm,0.9s						

*UPA **06** 21:39:20.7±2.7, 9°.45N×84°.77W, h9km±23km, MD4.8, MW4.9*
*CATAC **06** 21:39:21.3±0.2, 9°.47N×84°.57W, h3km±1km, ML4.4*
*UCR **06** 21:39:21.4±1.0, 9°.49N×84°.60W, h10km±3km, MW4.6, MB4.4(NEIC)*
*NEIC **06** 21:39:21.2±1.8, 9°.48N±0°.03×84°.60W±0°.02, h10km±1km, mb4.4/13, Error ellipse: s-maj=5.9km s-min=3.0km az=24.0*
*IDC **06** 21:39:22.5±1.4, 9°.77N×84°.65W, h0km, mb3.9/9, mbtmp4.0/11, ML2.9/2, MS3.6/7, Error ellipse: s-maj=45.0km s-min=14.5km az=41.0*
ISC 06 21:39:20.6±1.1, **9°.46N**±0°.02×**84°.60W**±0°.02, **h2**km±7km, **n225, σ1§18/264, mb4.3/17, 15C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BITO	**Garabito Jaco**	**0.16**	**353**	*e*P	Pg	**21 39 24.7**	**+1.0**
BITO				*e*S	Sg	**21 39 27.5**	**+1.6**
JACO	**JACO, Garabito**	**0.21**	**344**		Pg	**21 39 25.4**	**+0.8**
JACO				Sg	Sg	**21 39 28.9**	**+1.5**
JACO	**JACO, Garabito**	**0.21**	**344**	*e*P	Pg	**21 39 25.5**	**+0.8**
JACO				*e*S	Sg	**21 39 29.2**	**+1.7**
JACO	**JACO, Garabito**	**0.21**	**344**	⇑*i*P	Pg	**21 39 25.5**	**+0.8**
JACO				*i* S	Sg	**21 39 29.1**	**+1.7**
JACO				IAML		21 39 31.1	
	comp=Z,84μm,1.0s						
SVQ2	**Quepos**	**0.43**	**94**	*e*P	Pg	**21 39 30.0**	**+1.1**
LAFE	**Finca La Fe, P**	**0.46**	**319**	*e*P	Pb	**21 39 30.9**	**-0.6**
LAFE	**Finca La Fe, P**	**0.46**	**319**	⇑*i*P	Pb	**21 39 30.8**	**-0.7**
LAFE				*i* S	Sb	**21 39 38.7**	**-0.1**
LAFE				IAML		21 39 39.4	
	comp=Z,320nm,1.0s						
TRB2	**Turrubares**	**0.48**	**18**	*e*P	Pg	**21 39 30.1**	**+0.3**
LLNJ	**Naranjito**	**0.49**	**88**	*e*P	Pg	**21 39 30.9**	**+0.8**
CBL1	**Cabuya**	**0.50**	**285**	*e*P	Pg	**21 39 31.5**	**+1.2**
ARZA	**Esparza**	**0.53**	**353**	*e*P	Pb	**21 39 32.2**	**-0.5**
ACOS	**Acosta**	**0.55**	**52**	*e*P	Pg	**21 39 31.4**	**+0.2**
SANTA	**Santa Ana**	**0.62**	**41**	*e*P	Pg	**21 39 32.7**	**+0.1**
SRA1	**San Ramn**	**0.63**	**11**	*e*P	Pg	**21 39 33.0**	**+0.2**
RAMO	**San Ramon**	**0.64**	**12**	*e*P	Pb	**21 39 34.2**	**-0.4**
LCR2	**La Lucha 2**	**0.65**	**64**	Pg	Pg	**21 39 33.1**	**0.0**
LCR2				Sg	Sg	**21 39 42.1**	**+0.5**
LCR2	**La Lucha 2**	**0.65**	**64**	*e*P	Pg	**21 39 33.1**	**0.0**
LCR2	**La Lucha 2**	**0.65**	**64**	⇓*i*P	Pg	**21 39 33.1**	**0.0**
LCR2				*i* S	Sg	**21 39 42.1**	**+0.5**
LCR2				IAML		21 39 47.4	
	comp=Z,13μm,1.0s						
TCS1	**Tacares**	**0.65**	**27**	*e*P	Pg	**21 39 33.5**	**+0.4**
TCS1	**Tacares**	**0.65**	**27**	⇓*i*P	Pg	**21 39 33.4**	**+0.3**
TCS1				IAML		21 39 57.0	
	comp=Z,130μm,1.0s						
BELE	**Belen**	**0.66**	**38**	*e*P	Pb	**21 39 34.3**	**-0.6**
NARAN	**Naranjo de Ala**	**0.67**	**19**	*e*P	Pg	**21 39 34.3**	**+0.8**
SARCI	**Sarchí**	**0.68**	**22**	*e*P	Pg	**21 39 34.3**	**+0.7**
AMPA	**Desamparados**	**0.69**	**51**	*e*P	Pg	**21 39 33.7**	**-0.1**
LUJA	**Lujan**	**0.70**	**48**	*e*P	Pb	**21 39 35.1**	**-0.6**
MEXI	**Barrio Mexico**	**0.70**	**47**	*e*P	Pg	**21 39 34.2**	**+0.2**
SJS3	**Mercedes San J**	**0.72**	**49**	*e*P	Pg	**21 39 34.7**	**+0.2**
HDC	**Heredia**	**0.72**	**42**		Pg	**21 39 34.3**	**-0.2**
HDC				Sg	Sg	**21 39 44.4**	**+0.5**
HDC3	**Heredia 3**	**0.72**	**42**	*e*P	Pg	**21 39 34.7**	**+0.1**
HDC3	**Heredia 3**	**0.72**	**42**	⇓*i*P	Pg	**21 39 34.4**	**-0.1**
HDC3				*i* S	Sg	**21 39 44.0**	**+0.1**
HDC3				IAML		21 39 51.4	
	comp=Z,14μm,1.0s						
LUPE	**Guadalupe**	**0.72**	**48**	*e*P	Pg	**21 39 34.7**	**+0.1**
TRIO	**Tres Rios**	**0.74**	**53**	*e*P	Pg	**21 39 34.8**	**-0.1**
ZARE	**Zarcero**	**0.75**	**16**	*e*P	Pb	**21 39 37.1**	**+0.5**
OCM	**Ochomogo**	**0.77**	**55**	*e*P	Pg	**21 39 34.9**	**-0.5**
OCM	**Ochomogo**	**0.77**	**55**	⇓*i*P	Pg	**21 39 34.8**	**-0.5**
OCM				*i* S	Sg	**21 39 45.1**	**-0.2**
OCM				IAML		21 39 49.3	
	comp=Z,8μm,1.0s						
CORON	**Coronado**	**0.78**	**49**	*e*P	Pg	**21 39 35.8**	**+0.2**
TAGO	**Cartago**	**0.78**	**59**	*e*P	Pg	**21 39 35.7**	**+0.1**
RIMA	**Rio Macho**	**0.79**	**67**		Pg	**21 39 35.4**	**-0.4**
REPA	**Paraso**	**0.81**	**63**	*e*P	Pb	**21 39 37.3**	**-0.3**
POA5	**Crater Von Fra**	**0.83**	**26**	*e*P	Pg	**21 39 36.3**	**-0.2**
CDM	**Cerro de Muert**	**0.83**	**83**	*e*P	Pg	**21 39 36.6**	**-0.1**
CDM	**Cerro de Muert**	**0.83**	**83**	⇑*i*P	Pg	**21 39 36.5**	**-0.1**
CDM				*i* S	Sb	**21 39 49.3**	**-0.6**
CDM				IAML		21 39 55.2	
	comp=Z,10μm,1.0s						
NYURE	**Nandayure**	**0.83**	**310**	*e*P	Pg	**21 39 36.9**	**+0.2**
CPMI	**Catarata Coope**	**0.85**	**15**	*e*P	Pg	**21 39 36.9**	**0.0**
CPMI	**Catarata Coope**	**0.85**	**15**	⇓*i*P	Pg	**21 39 36.9**	**0.0**
CPMI				*i* S	Sb	**21 39 48.9**	**-1.2**
CPMI				IAML		21 39 51.2	
	comp=Z,14μm,1.0s						
BUS1	**Rivas**	**0.85**	**84**	*e*P	Pg	**21 39 36.7**	**-0.2**
VIRE	**VIRE**	**0.86**	**54**	⇓*i*P	Pg	**21 39 36.9**	**-0.2**
VIRE				*i* S	Sg	**21 39 49.2**	**+0.9**
VIRE				IAML		21 39 55.9	
	comp=Z,16μm,1.0s						
CVIMO	**Finca Echandi**	**0.86**	**49**	*e*P	Pg	**21 39 37.2**	**+0.1**
JUNT	**Juntas**	**0.89**	**337**	*e*P	Pg	**21 39 37.3**	**-0.4**
JTS	**Las Juntas de**	**0.90**	**337**	⇑*i*P	Pg	**21 39 37.2**	**-0.6**
JTS				*i* S	Sg	**21 39 49.6**	**+0.1**
JTS	**Las Juntas de**	**0.90**	**337**	Pn	Pg	**21 39 37.2**	**-0.6**
	comp=Z,383nm,0.3s,baz=338,slow=7.9,SNR=657						
JTS				Sn	Sg	**21 39 49.8**	**+0.3**
	comp=Z,1μm,0.3s,baz=305,slow=21,SNR=17						
JTS	**Las Juntas de**	**0.90**	**337**	*e*P	Pg	**21 39 37.2**	**-0.6**
PCAYA	**Pacayas**	**0.90**	**60**	*e*P	Pg	**21 39 38.2**	**+0.2**
VICA	**Volcano Irazu**	**0.91**	**55**	*e*P	Pg	**21 39 38.0**	**-0.2**
PEZE	**Perez Zeledon,**	**0.91**	**95**		Pg	**21 39 37.6**	**-0.5**
PEZE	**Perez Zeledon,**	**0.91**	**95**	⇑*i*P	Pg	**21 39 37.7**	**-0.5**
PEZE				IAML		21 39 56.3	
	comp=Z,7μm,1.0s						
ICR3	**Volcano Irazu**	**0.92**	**56**	*e*P	Pg	**21 39 38.2**	**-0.1**
SOCE	**Pocosol**	**0.92**	**359**		Pg	**21 39 38.1**	**-0.2**
SOCE	**Pocosol**	**0.92**	**359**	*e*P	Pg	**21 39 38.2**	**-0.1**
SOCE	**Pocosol**	**0.92**	**359**	⇑*i*P	Pg	**21 39 38.2**	**-0.1**
SOCE				*i* S	Sb	**21 39 51.5**	**-0.6**
SOCE				IAML		21 39 55.4	
	comp=Z,23μm,1.0s						
RAFA	**San Farael, Vo**	**0.92**	**57**	*e*P	Pg	**21 39 38.1**	**-0.3**
VTRT	**Volcan Turrial**	**0.96**	**56**

RIFO	Rio Frio, Sara	1.08	38	⇓	*i* P		Pg	21 39 40.7	-0.7
RIFO					*i* S		Sb	21 39 56.2	-0.6
RIFO						IAML		21 40 00.4	
	comp=Z,11μm,1.0s								
PLVR	Palo Verde	1.15	320		*e*P		Pg	21 39 41.9	-0.9
PLAN	Los Planes de	1.20	131		*i* P		Pb	21 39 42.7	-1.4
PLAN						IAML		21 40 08.2	
	comp=Z,6μm,1.0s								
LCOCO	El Coco	1.20	59		*e*P		Pb	21 39 43.3	-0.9
ORTG	Ortega, Santa	1.23	317				Pb	21 39 43.3	-1.5
ORTG	Ortega, Santa	1.23	317		*e*P		Pb	21 39 43.2	-1.5
ORTG	Ortega, Santa	1.23	317	⇑	*i*P		Pb	21 39 43.2	-1.5
ORTG					*i* S		Sn	21 40 01.1	-1.2
ORTG						IAML		21 40 08.0	
	comp=Z,7μm,1.0s								
BAGA	Bagaces	1.25	329		*e*P		Pn	21 39 43.4	-1.7
SRBA	San Rafael, Bu	1.25	100				Pn	21 39 43.0	-2.2
SRBA	San Rafael, Bu	1.25	100		*e*P		Pn	21 39 43.4	-1.8
SRBA	San Rafael, Bu	1.25	100	⇓	*i*P		Pn	21 39 43.5	-1.7
SRBA					*i* S		Sb	21 40 00.5	-1.0
SRBA						IAML		21 40 06.7	
	comp=Z,3μm,1.0s								
SAJU	San Juanillo,	1.25	299	⇑	*i*P		Pn	21 39 43.4	-1.8
SAJU					*i* S		Sn	21 40 03.2	+0.6
SAJU						IAML		21 40 13.9	
	comp=Z,4μm,1.0s								
IRES	Siquirres	1.25	60		*e*P		Pn	21 39 44.6	-0.6
COVE	Coope Vega, Sa	1.27	9				Pn	21 39 43.7	-1.8
COVE	Coope Vega, Sa	1.27	9		*e*P		Pn	21 39 43.6	-1.8
COVE	Coope Vega, Sa	1.27	9	⇑	*i*P		Pn	21 39 43.6	-1.8
COVE					*i* S		Sn	21 40 01.9	-1.2
COVE						IAML		21 40 13.7	
	comp=Z,15μm,1.0s								
CUI	Cuipilapa	1.31	335		*e*P		Pn	21 39 44.6	-1.5
COLC	Colonia	1.34	334		*e*P		Pn	21 39 44.9	-1.6
DRK0	Durika	1.35	98				Pn	21 39 45.1	-1.7
DRK0	Durika	1.35	98		*e*P		Pn	21 39 45.4	-1.4
VERA	Finca Concepci	1.41	349		*e*P		Pn	21 39 46.2	-1.2
VMAR	Armenia, Volca	1.44	339		*e*P		Pn	21 39 46.8	-1.1
TRT1	Tortuguero	1.44	38		*e*P		Pn	21 39 46.4	-1.4
ELI1	Hacienda Flor	1.51	322		*e*P		Pn	21 39 47.9	-0.8
POTG	Potrero Grande	1.52	105		*e*P		Pn	21 39 48.4	-0.5
POTG	Potrero Grande	1.52	105		*i* P		Pn	21 39 48.2	-0.7
POTG					*i* S		Sg	21 40 10.4	+0.9
POTG						IAML		21 40 16.2	
	comp=Z,9μm,1.0s								
VRLE	La Escondida,	1.52	330		*e*P		Pn	21 39 47.8	-1.2
GB1A	Boringuen Arri	1.56	330		*e*P		Pn	21 39 48.9	-0.7
LCHIL	Los Chiles	1.57	356		*e*P		Pn	21 39 49.6	0.0
HZTE	Horizontes, Gu	1.58	322				Pn	21 39 48.9	-0.9
HZTE	Horizontes, Gu	1.58	322		*e*P		Pn	21 39 49.1	-0.7
HZTE	Horizontes, Gu	1.58	322	⇑	*i*P		Pn	21 39 49.1	-0.7
HZTE					*i* S		Sg	21 40 12.7	+1.1
HZTE						IAML		21 40 20.0	
	comp=Z,6μm,1.0s								
PIRO	Carate, Puerto	1.63	130		*i* P		Pb	21 39 51.5	0.0
PIRO						IAML		21 40 23.2	
	comp=Z,3μm,1.0s								
MLIR3	Monte Lirio, C	1.88	111		*i* P		Pn	21 39 54.4	+0.5
LCRUZ	La Cruz	1.90	328		*e*P		Pb	21 39 55.4	-0.7
CDITO	Canoas	1.92	117				Pn	21 39 53.8	-0.6
CDITO	Canoas	1.92	117		*i* P		Pn	21 39 53.9	-0.5
CDITO					*e*S		Sg	21 40 22.2	-0.2
CDITO	Canoas	1.92	117		*i* P		Pn	21 39 52.1	-2.3
CDITO						IAML		21 40 59.3	
	comp=Z,3μm,1.0s								
RGM0	Gandoca	1.97	86				Pn	21 39 54.5	-0.6
BRU2	Volcan	2.00	109		Pn		Pn	21 39 55.0	-0.6
BRU2	Volcan	2.00	109		*i* P		Pn	21 39 55.6	0.0
BRU2					*i* S		Sb	21 40 22.8	-0.5
BRU2	Volcan	2.00	109		*e*P		Pn	21 39 55.0	-0.6
BRU2	Volcan	2.00	109		*i* P		Pn	21 39 55.0	-0.6
BRU2					*i* S		Sg	21 40 25.6	+0.7
BRU2						IAML		21 40 34.0	
	comp=Z,2μm,1.0s								
BC3P	Paso Ancho	2.07	108		*i* P		Pn	21 39 57.0	+0.4
BC3P					*i* S		Sb	21 40 25.1	-0.2
CNI2	El Empalme, Bo	2.10	91		*e*P		Pn	21 39 57.6	+0.7
CNI2					*i* S		Sb	21 40 25.6	-0.5
PTPM	Petroterminale	2.11	126		*i* P		Pn	21 39 56.8	-0.2
PTPM					*i* S		Sb	21 40 27.4	+1.1
PTPM					*i* S		Sg	21 40 29.1	+0.6
BCO2	Palmira	2.17	110		*i* P		Pn	21 39 58.1	0.0
BCO2					*i* S		Sb	21 40 28.6	+0.2
LIMO3	Limones	2.18	128		*e*P		Pn	21 39 57.4	-0.6
PTAR3	Potrerillos Ar	2.21	110		*e*P		Pn	21 39 59.8	+1.3
PTAR3					*i* S		Sb	21 40 28.8	-0.7
LNBQ3	Los Naranjos,	2.23	107		*e*P		Pn	21 39 59.4	+0.5
LNBQ3					*i* S		Sb	21 40 30.5	+0.4
OMEN	Al SSO del Vol	2.27	334	⇑	*i*P		Pn	21 40 00.4	+1.1
OMEN						IAML		21 40 07.6	
	comp=Z,1μm,1.0s								
JAPN	Al SSO del Vol	2.31	333		*i* P		Pb	21 40 01.3	-1.8
JAPN						IAML		21 40 13.1	
	comp=Z,1μm,1.0s								
MORN	Al O del Volca	2.32	334	⇓	*i*P		Pn	21 40 00.8	+0.9
MORN						IAML		21 40 08.6	
	comp=Z,3μm,1.0s								
CONN	Concepcion	2.32	334		*i* P		Pn	21 40 00.8	+0.8
CONN						IAML		21 40 08.5	
	comp=Z,11μm,1.0s								
CONN					*i* S		Sb	21 40 32.4	-0.1
DVD	David	2.35	115		*e*P		Pn	21 40 01.2	+0.8
LOCO3	Loma Colorada,	2.40	116		*e*P		Pn	21 40 02.5	+1.5
PEDE3	Pedregal, Chir	2.40	116		*e*P		Pb	21 40 03.7	-0.9
GUAL3	Gualaca, Chiri	2.45	112		*i* P		Pn	21 40 02.7	+0.9
GUAL3					*i* S		Sb	21 40 36.9	+0.6
CHGR2	Aguacate	2.48	102		*i* P		Pn	21 40 02.4	+0.3
CHGR2					*i* S		Sn	21 40 33.6	+0.5
ACON	Acoyapa	2.56	347				Pn	21 40 02.5	-0.7
ACON	Acoyapa	2.56	347		*e*P		Pn	21 40 02.8	-0.3
ACON	Acoyapa	2.56	347		*i* P		Pn	21 40 02.8	-0.3
ACON					*i* S		Sn	21 40 35.4	+0.5
ACON						IAML		21 40 50.1	
	comp=Z,1μm,1.0s								
BLUN	Bluefields	2.66	18		*i* P		Pn	21 40 00.5	-4.0
BLUN					*i* S		Sn	21 40 37.7	+0.3
BLUN						IAML		21 40 43.8	
	comp=Z,2μm,1.0s								
ESPN	Las Esperanzas	2.73	6				Pn	21 40 05.4	-0.2
ESPN	Las Esperanzas	2.73	6		*e*P		Pn	21 40 05.7	+0.1
ESPN	Las Esperanzas	2.73	6		*i* P		Pn	21 40 05.4	-0.2
ESPN					*i* S		Sn	21 40 39.3	0.0
ESPN						IAML		21 40 55.4	
	comp=Z,2μm,1.0s								
NANN	Nandasmo	2.88	329		*i* P		Pb	21 40 10.6	-2.3
NANN						IAML		21 41 11.8	
	comp=Z,14μm,1.0s								
NANC3	Nancito, Chiri	3.08	113		*i* P		Pb	21 40 13.8	-2.5
BOAB	BOACO BROADBAN	3.15	341				Pn	21 40 10.9	-0.4
BOAB	BOACO BROADBAN	3.15	341		*i* P		Pn	21 40 10.9	-0.4
BOAB					*i* S		Sb	21 40 54.3	-2.0
BOAB						IAML		21 40 59.2	
	comp=Z,730nm,1.0s								
SAPS	Ciudad Sandino	3.22	327		*i* P		Pn	21 40 10.9	-1.5
SAPS						IAML		21 41 03.5	
	comp=Z,580nm,1.0s								
COPN	Copaltepe	3.34	324		*i* P		Pn	21 40 15.6	+1.7
COPN						IAML		21 41 30.6	
	comp=Z,740nm,1.0s								
MOMN	Momotombo	3.50	327		*i* P		Pn	21 40 18.8	+2.7
MOMN						IAML		21 41 24.7	
	comp=Z,11nm,1.0s								
MACN	El Madrono	3.62	326		*i* P		Pn	21 40 19.7	+1.9
MACN						IAML		21 40 23.9	
	comp=Z,280nm,1.0s								
MESA3	La Mesa, Verag	3.62	111		*e*P		Pn	21 40 21.4	+3.6
CNGA	Al SSO del Vol	3.65	326		*i* P		Pn	21 40 20.8	+2.5
CNGA						IAML		21 40 24.7	
	comp=Z,200nm,1.0s								
CNGN	Cerro Negro	3.66	326				Pn	21 40 18.2	-0.2
MATN	Matagalpa	3.69	339				Pn	21 40 19.1	+0.3
MATN	Matagalpa	3.69	339		*e*P		Pn	21 40 19.7	+0.9
MATN	Matagalpa	3.69	339		*i* P		Pn	21 40 19.4	+0.6
MATN						IAML		21 41 27.5	
	comp=Z,250nm,1.0s								
RSUS3	Rio de Jesus,	3.70	113		*e*P		Pn	21 40 19.4	+0.4
GMAL	Guarumal, Vera	3.73	117		*i* P		Pn	21 40 20.0	+0.6
CALO3	Calobre, Verag	3.88	107		*e*P		Pb	21 40 26.9	-3.0
LIMN	Finca el Limon	3.98	334		*i* P		Pn	21 40 22.9	+0.1
LIMN						IAML		21 41 46.4	
	comp=Z,470nm,1.0s								

CRIN	San Cristobal	4.02	323				Pn	21 40 23.8	+0.4
CRIN	San Cristobal	4.02	323		*i* P		Pn	21 40 25.2	+1.8
CRIN						IAML		21 40 38.7	
	comp=Z,620nm,1.0s								
PESE3	Pese, Herrera	4.23	111		*e*P		Pn	21 40 22.0	-4.2
CACAO	El Cacao, Vera	4.25	119		*e*P		Pn	21 40 29.6	+3.0
RCPN	Sur Rio San Ju	4.30	340		*i* P		Pn	21 40 27.7	+0.4
RCPN						IAML		21 41 36.7	
	comp=Z,0.7nm,1.0s								
CHIT3	Chitre	4.40	110		*e*P		Pn	21 40 30.8	+2.3
AZU	Azuero	4.59	111		*e*P		Pn	21 40 36.1	+5.0
TOSI3	Tonosi	4.59	116		*e*P		Pn	21 40 21.7	-9.4
ZANG	Zanguenga, Cho	4.70	96		*e*P		Pn	21 40 35.2	+2.6
BCIP	Isla Barro Col	4.71	93		Pn		Pn	21 40 32.2	-0.6
BCIP	Isla Barro Col	4.71	93		*e*P		Pn	21 40 34.2	+1.4
BCIP	Isla Barro Col	4.71	93		*i* P		Pn	21 40 34.0	+1.2
BCIP					*i* S		Sn	21 41 27.8	-0.3
BCIP						IAML		21 41 40.6	
	comp=Z,140nm,1.0s								
FRIJ	El Hiral	4.82	92		*e*P		Pn	21 40 35.5	+1.3
UPA	Univ. de Panam	5.03	95		*e*P		Pn	21 40 40.0	+2.9
TGUH	Tegucigalpa,Un	5.26	330				Pn	21 40 39.6	-0.9
MTO3	Montecristo	6.77	317		Pn		Pn	21 40 59.3	-2.0
IZABA	Izabal, Puerto	7.34	328		*i* P		Pn	21 41 11.1	+2.1
ROSC	El Rosal	11.18	114		Pn		Pn	21 41 60.0	-2.1
ROSC	El Rosal	11.18	114		Pn		Pn	21 42 05.7	+3.6
	comp=Z,2.0nm,0.3s,baz=226,slow=22,SNR=2.1								
ROSC						LR	LR	21 46 14.6	
	comp=Z,186nm,19.1s,baz=264,slow=36								
	comp=Z,8.4nm,0.5s								
TEIG	Tepich	11.28	342		LR		LR	21 46 04.5	
	comp=Z,1μm,21.0s,baz=20,slow=37								
SLOR	San Lorenzo -	11.81	149		Pn		Pn	21 42 09.6	-1.1
CMIG	Matias Romero	12.55	308		Pn		Pn	21 42 24.0	+3.6
	comp=Z,0.7nm,0.3s,baz=134,slow=11,SNR=7.1								
COHC	Cochancay	12.99	156		Pn		Pn	21 42 26.4	0.0
SDV	Santo Domingo	13.80	91		Pn		Pn	21 42 41.3	+3.6
	comp=Z,0.5nm,0.3s,baz=253,slow=9.8,SNR=4.5								
SDV						LR	LR	21 49 55.5	
	comp=Z,116nm,19.9s,baz=322,slow=46								
	comp=Z,5.0nm,0.9s								
BOSC	San Juan Bosco	13.93	154		Pn		Pn	21 42 36.8	-2.6
TLIG	Tlapa	15.78	302		Pn		Pn	21 43 02.0	-2.2
ATAH	Atahualpa	17.61	159		LR		LR	21 49 29.3	
	comp=Z,179nm,20.2s,baz=327,slow=34								
PCRV	Puerto La Cruz	19.69	86		LR		LR	21 53 43.6	
	comp=Z,146nm,18.3s,slow=44								
152A	Waverly Hall	23.10	360		P		P	21 44 26.1	-1.8
152A						IAmb	IAmb	21 44 31.7	
	comp=Z,9.9nm,0.7s								
833A	Chaparral WMA,	23.36	325		P		P	21 44 28.7	-2.0
LRAL	Lakeview Retre	23.57	355		P		P	21 44 31.7	-0.9
LRAL						IAmb	IAmb	21 44 36.7	
	comp=Z,8.2nm,0.9s								
GOGA	Godfrey	23.86	2		P		P	21 44 35.0	-0.5
GOGA						IAmb	IAmb	21 44 43.8	
	comp=Z,20nm,1.4s								
Y52A	Lilburn	24.29	1		P		P	21 44 38.5	-1.1
Y52A						IAmb	IAmb	21 44 42.5	
	comp=Z,12nm,1.2s								
HODGE	Hodges	24.75	5		P		P	21 44 43.3	-0.4
HODGE						IAmb	IAmb	21 44 46.9	
	comp=Z,12nm,1.2s								
DRIO	Del Rio	24.89	325		P		P	21 44 44.4	-0.7
BRDY	Brady	25.51	330		P		P	21 44 49.5	-1.2
BRDY						IAmb	IAmb	21 44 54.6	
	comp=Z,8.2nm,0.9s								
ETMB	Extrema	26.49	136		P		P	21 44 58.4	-1.3
ETMB						IAmb	IAmb	21 45 11.4	
	comp=Z,5.8nm,0.7s								
TXAR	Lajitas Array	26.65	321		P		P	21 45 01.3	+0.2
	comp=Z,0.4nm,0.5s,baz=146,slow=10,SNR=8.9								
TXAR						LR	LR	21 58 16.4	
	comp=Z,44nm,18.9s,baz=349,slow=43								
	comp=Z,0.4nm,0.5s								
TX31	Lajitas Ar. Si	26.65	321		P		P	21 45 00.9	-0.2
WVT	Waverly	26.71	354		P		P	21 44 59.3	-2.2
H43A	Windswept, Lux	34.99	356		P		P	21 46 13.3	-1.1
PDAR	Pinedale Array	39.72	331		P		P	21 46 56.2	+1.3
	comp=Z,0.2nm,0.6s,baz=139,slow=17,SNR=2.0								
	comp=Z,0.2nm,0.6s								
ULM	Lac du Bonnet	41.73	349		P		P	21 47 10.9	-0.1
	comp=Z,2.2nm,0.9s,baz=184,slow=6.1,SNR=3.0								
	comp=Z,2.2nm,0.9s								
NVAR	Mina Array Bea	41.78	319		P		P	21 47 13.1	+1.1
	comp=Z,1.2nm,0.7s,baz=133,slow=8.3,SNR=4.9								
NVAR					PcP		PcP	21 49 10.3	+1.9
	comp=Z,0.9nm,0.6s,baz=125,slow=4.7,SNR=4.7								
	comp=Z,1.2nm,0.7s								
YKA	Yellowknife Ar	57.23	344		P		P	21 49 09.1	-0.1
	comp=Z,0.3nm,0.6s,baz=140,slow=6.9,SNR=7.3								
	comp=Z,0.3nm,0.6s								
ESDC	Sonseca Array	76.84	51		P		P	21 51 16.5	+2.0
	comp=Z,3.3nm,0.9s,baz=272,slow=5.6,SNR=9.9								
	comp=Z,3.3nm,0.9s								
EKA	Eskdalemuir Ar	77.42	35		P		P	21 51 17.8	+0.5
	comp=Z,2.4nm,0.8s,baz=282,slow=20,SNR=2.3								
	comp=Z,2.4nm,0.8s								
TORD	Torodi Ar. Bea	84.32	78		P		P	21 51 57.0	+2.0
	comp=Z,0.3nm,0.6s,baz=204,slow=3.2,SNR=2.9								
NOA	NORSAR Array B	84.61	29		P		P	21 51 56.9	+1.2
	comp=Z,1.1nm,0.9s,baz=276,slow=5.1,SNR=2.1								
	comp=Z,1.1nm,0.9s								
HFS	Hagfors	85.98	30		P		P	21 52 02.9	+0.4
	comp=Z,2.7nm,1.0s,baz=134,slow=4.3,SNR=2.1								
	comp=Z,2.7nm,1.0s								
SEY	Seymchan	95.78	337		LR		LR	22 40 17.0	
	comp=Z,61nm,18.1s,baz=316,slow=38								
ASAR	Alice Springs	140.63	244		PKP		PKPdf	21 58 52.4	-0.5
	comp=Z,0.1nm,0.4s,baz=126,slow=2.4,SNR=2.9								
WRA	Warramunga Arr	141.01	250		PKP		PKPdf	21 58 53.9	+0.3
	comp=Z,0.6nm,0.8s,baz=192,slow=0.4,SNR=5.2								
CMAR	Chiang Mai Arr	152.04	353		PKPbc		PKiKP	21 59 18.3	-0.7
	comp=Z,0.7nm,0.5s,baz=333,slow=2.5,SNR=6.8								

*IDC **06** 21:48:41.2±2.6, 36˚.55N×70˚.57E, h270km±26km, mb3.4/9, mbtmp4.1/15, Error ellipse: s-maj=22.1km s-min=18.6km az=116.0*

*NEIC **06** 21:48:42.0±1.5, 36˚.71N±0˚.06×70˚.4E±0˚.1, h266km±5km, mb4.0/12, Error ellipse: s-maj=12.5km s-min=9.0km az=98.0*

ISC 06 21:48:40.6±0.6, **36˚.65N**±0˚.05×**70˚.47E**±0˚.06, **h250**km, **n58,** σ1°**48**/64, **mb4.0**/12, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIMJ	Simiganj	2.32	330		Pn	21 49 28.7	+2.5
KBL	Kabul	2.40	209	Pn	Pn	21 49 30.2	+3.0
KBL				Sn	S	21 50 06.1	+2.2
BTK	Batken	3.42	4		Pn	21 49 40.2	+2.5
BTK				Sn	S	21 50 24.1	+1.0
NIL	Nilore	3.76	142		Pn	21 49 45.3	+3.5
ARSB	Arslanbob	5.06	22		Pn	21 49 57.8	+0.6
KSH	Kashi	5.20	55	Pn	Pn	21 49 55.8	-3.1
KSH				Sn	S	21 50 51.0	-10
KSH				pmax	pmax		
	comp=Z,92nm,0.6s						
KSH				smax	smax		
	comp=N,160nm,0.7s						
KSH				smax	smax		
	comp=E,99nm,0.7s						
UCH	Uchtor	6.39	28	P	Pn	21 50 15.2	+1.2
	SNR=16						
NRN	Naryn	6.43	40	Pn	Pn	21 50 14.6	+0.2
KK31	Karatay Array	6.45	0		Pn	21 50 15.3	+1.0
KKAR	Karatay Array	6.45	0		Pn	21 50 15.3	+1.0
KKAR	Karatay Array	6.45	0	Pn	Pn	21 50 15.2	+0.9
DHRM	DHARAMSHALA	6.51	131	*e*P	Pn	21 50 17.1	+1.6
DHRM				*e*S	S	21 51 30.0	-1.3
DHRM				IAML		21 51 35.5	
	comp=E,138nm,0.5s						
DHRM				IAML		21 51 44.9	
	comp=E,81nm,0.3s						
EKS2	Erkin-Say	6.53	22	P	Pn	21 50 16.7	+1.4
	SNR=30						
AAK	Ala-Archa	6.74	26	P	Pn	21 50 19.5	+1.4
	SNR=14						
AAK	Ala-Archa	6.74	26	P	Pn	21 50 19.6	+1.6
	comp=E,13nm,0.5s,baz=202,slow=6.1,SNR=111						
AAK				S	S	21 51 37.6	+1.4
	comp=E,3.3nm,0.6s,baz=147,slow=20,SNR=1.1						
KBK	Karagaybulak	6.92	29	P	Pn	21 50 21.4	+1.0
	SNR=8.8						
FRU1	Bishkek	6.94	26		Pn	21 50 21.2	+0.7
HRA	Herat	7.08	254	Pn	Pn	21 50 23.4	+0.9
ULHL	Ulahol	7.15	37	P	Pn	21 50 24.8	+1.4
	SNR=18						
TKM2	Tokmak 2	7.40	31	P	Pn	21 50 27.9	+1.4
	SNR=9.9						
TARG	Taragay, Kyrgy	7.63	46	Pn	Pn	21 50 30.5	+0.9
SMLA	Simla	7.83	133	*e*P	Pn	21 50 33.5	+1.8
SMLA				*e*S	S	21 51 57.5	-3.7
SMLA				IAML		21 52 02.1	
	comp=E,38nm,0.5s						
SMLA				IAML		21 52 05.8	
	comp=N,27nm,0.3s						
PRZ	Przheval'sk	8.45	44	Pn	Pn	21 50 42.0	+2.2
DDI	Dehra Dun	8.94	133	*e*P	Pn	21 50 47.6	+1.7
DDI				IAML		21 51 32.8	
	comp=E,38nm,0.3s						
DDI				IAML		21 51 35.5	
	comp=N,50nm,0.3s						
MAKZ	Makanchi	13.29	37		Pn	21 51 40.3	+0.4
MK31	Makanchi Array	13.43	37		Pn	21 51 42.2	+0.5
MKAR	Makanchi Array	13.43	37	P	Pn	21 51 42.5	+0.8
	comp=N,0.9nm,0.6s,baz=229,slow=16,SNR=17						
ABKAR	Akbulak array	14.75	332		P	21 51 56.4	-1.1
ABKAR	Akbulak array	14.75	332		P	21 51 56.6	-0.9
WMQ	Urumqi	14.97	56	*e*P	P	21 52 01.5	+1.5
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=N,640nm,9.1s						
WMQ				LR	LR		
	comp=E,670nm,7.7s						
WMQ				LR	LR		
	comp=Z,78nm,13.3s						
KURBB	Kurchatov Arra	15.13	20	P	P	21 52 02.0	+0.4
	comp=Z,0.9nm,0.5s,baz=210,slow=11,SNR=14						
KURK	Kurchatov	15.23	20	P	P	21 52 02.2	-0.6
BVAR	Borovoye Array	16.38	360	P	P	21 52 15.8	+0.4
	comp=Z,3.4nm,0.5s,baz=160,slow=8.5,SNR=36						
BVAR				S	S	21 55 14.0	+0.3
	comp=Z,1.9nm,1.0s,baz=168,slow=18,SNR=5.3						
BRVK	Borovoye	16.41	360	P	P	21 52 16.3	+0.6
AKTO	Aktyubinsk	16.44	331	P	P	21 52 16.8	+0.7
	comp=Z,19nm,0.7s,baz=145,slow=8.5,SNR=33						
WSAR	Wadi Sarin	16.83	221	P	P	21 52 21.4	+0.9
	comp=Z,6.8nm,0.8s,baz=68,slow=8.4,SNR=9.5						
UOSS	Minazif	16.90	230	P	P	21 52 20.5	-0.8
UOSS				IAmb	IAmb	21 52 23.1	
	comp=Z,11nm,1.1s						
LSA	Lhasa	18.63	106	P	P	21 52 42.5	+2.0
LSA				IAmb	IAmb	21 53 02.0	
	comp=Z,5.1nm,1.5s						
ZAA0	Zalesovo Array	19.96	25	P	P	21 52 53.2	-0.8
ZALV	Zalesovo Beam	19.96	25	P	P	21 52 52.9	-1.1
ZALV	Zalesovo Beam	19.96	25	P	P	21 52 53.7	-0.2
	comp=Z,2.2nm,0.5s,baz=218,slow=10,SNR=11						
	comp=Z,2.2nm,0.5s						
ARU	Arti	21.36	342	P	P	21 53 08.6	+0.3
	comp=Z,3.1nm,0.4s,baz=102,slow=6.6,SNR=7.2						
	comp=Z,3.1nm,0.4s						
HHC	Hu-ho-hao-te	32.11	70	*e*P	P	21 54 45.0	+0.3
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.9s						
NRIK	Noril'sk	34.06	11	P	P	21 55 00.2	-0.8
	comp=Z,1.5nm,0.5s,baz=133,slow=4.6,SNR=3.6						
	comp=Z,1.5nm,0.5s						
FIA1	FINESS Array S	37.12	326	P	P	21 55 26.1	-1.0
FINES	FINESS Array B	37.12	326	P	P	21 55 26.3	-0.7
FINES	FINESS Array B	37.12	326	P	P	21 55 27.0	-0.1
	comp=Z,1.1nm,0.4s,baz=120,slow=9.4,SNR=16						
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	40.85	338	P	P	21 55 57.3	-0.4
ARCES	ARCESS Array B	40.85	338	P	P	21 55 57.9	+0.1
	comp=Z,1.4nm,0.6s,baz=116,slow=6.9,SNR=12						
	comp=Z,1.4nm,0.6s						
HFS	Hag

CHM eP 21 55 08.6
baz=332
CHM Chimkent 4.75 333 eP **Pn** **21 55 12.0 +4.5**
721nm,0.1s
CHM eS **Sn** **21 56 00.2 -1.1**
2µm,0.3s
CHM Chimkent 4.75 333 ePN **Pn** **21 55 08.5 +1.0**
AAK Ala-Arcka 4.76 18 P **Pn** **21 55 10.4 +2.4**
SNR=242
AAK Ala-Arcka 4.76 18 Pn **Pn** **21 55 10.2 +2.3**
AAK Ala-Arcka 4.76 18 *i* P **Pn** **21 55 10.3 +2.4**
SNR=378
AAK Ala-Arcka 4.76 18 P **Pn** **21 55 10.1 +2.2**
265nm,0.4s,baz=169,slow=5.2,SNR=511
AAK S **Sn** **21 56 02.6 +0.6**
2µm,0.9s,baz=337,slow=20,SNR=38
AAK LR LR 21 56 52.7
comp=Z,189nm,19.0s,baz=246,slow=37
AAK Ala-Arcka 4.76 18 P **Pn** **21 55 10.4 +2.4**
AAK S **Sn** **21 56 02.9 +0.9**
DZA Taraz 4.85 350 ⇓ *i* P **Pn** **21 55 10.3 +1.3**
baz=349
DZA Taraz 4.85 350 eP **Pn** **21 55 12.9 +3.9**
1µm,0.2s
DZA eS **Sn** **21 56 01.8 -2.1**
2µm,0.5s
DZA Taraz 4.85 350 *d* iPN **Pn** **21 55 10.3 +1.3**
KBK Karagaybulak 4.90 22 P **Pn** **21 55 12.2 +2.4**
SNR=91
FRU1 Bishkek 4.96 18 **Pn** **21 55 13.3 +2.8**
FRU1 Bishkek 4.96 18 PN **Pn** **21 55 13.3 +2.8**
ULHL Ulahol 5.02 34 P **Pn** **21 55 14.1 +2.6**
SNR=37
CHMS Chumysh 5.17 19 P **Pn** **21 55 15.5 +2.2**
SNR=190
CHMS Chumysh 5.17 19 ⇓ P **Pn** **21 55 15.3 +2.0**
170nm,0.4s
CHMS ⇓ S **Sn** **21 56 10.1 -1.5**
2µm,1.1s
KK31 Karatay Array 5.21 344 ⇓ P **Pn** **21 55 14.7 +1.0**
260nm,0.3s,baz=154,slow=12,SNR=7314
KK31 ⇑ S **Sn** **21 56 10.4 -2.1**
309nm,0.4s,baz=144,slow=22,SNR=4.8
KK31 Karatay Array 5.21 344 Pn **Pn** **21 55 14.8 +1.0**
KK31 Karatay Array 5.21 344 PN **Pn** **21 55 14.8 +1.0**
KKAR Karatay Array 5.21 344 Pn **Pn** **21 55 14.8 +1.0**
KKAR Karatay Array 5.21 344 Pn **Pn** **21 55 14.7 +1.0**
KKAR Karatay Array 5.21 344 PN **Pn** **21 55 14.8 +1.0**
TKM2 Tokmak 2 5.35 25 P **Pn** **21 55 18.0 +2.1**
SNR=77
TKM2 Tokmak 2 5.35 25 ⇓ P **Pn** **21 55 17.5 +1.6**
65nm,0.5s
TKM2 ⇓ S **Sn** **21 56 16.0 -0.3**
283nm,0.6s
TKM2 Tokmak 2 5.35 25 PN **Pn** **21 55 17.4 +1.6**
USP Ospenovka 5.36 16 P **Pn** **21 55 17.6 +1.7**
SNR=122
TARG Taragay, Kyrgy 5.45 47 Pn **Pn** **21 55 19.0 +1.6**
TARG Taragay, Kyrgy 5.45 47 PN **Pn** **21 55 19.0 +1.6**
SGDS Sogindy 5.57 16 ⇑ *i* P **Pn** **21 55 20.3 +1.5**
baz=16
SGDS Sogindy 5.57 16 *c* iPN **Pn** **21 55 20.2 +1.5**
KST Kastek 5.58 27 eP Pn 21 55 35.0 +16
75nm,0.3s
KST eS Sn 21 56 41.6 +20
331nm,0.6s
DGS Degeres 5.69 25 eP Pn 21 55 33.2 +13
50nm,0.4s
DGS eS Sn 21 56 38.5 +14
271nm,0.3s
MTBS Maitube 5.83 30 eP Pn 21 55 38.1 +16
80nm,0.3s
MTBS eS Sn 21 56 47.3 +20
132nm,0.4s
TNSS Tian-Shan 5.97 33 eP Pn 21 55 44.4 +20
57nm,0.3s
TNSS eS Sn 21 56 58.9 +27
129nm,0.4s
KRBS Karabastau 6.07 22 eP Pn 21 55 42.4 +17
60nm,0.2s
KRBS eS Sn 21 56 54.4 +21
245nm,0.7s
AAA Alma-Ata 6.09 32 eP Pn 21 55 27.8 +2.0
baz=32
AAA Alma-Ata 6.09 32 eP Pn 21 55 45.3 +19
75nm,0.2s
AAA eS Sn 21 56 59.6 +25
272nm,0.3s
MDOK Medeo 6.11 33 ⇑ P **Pn** **21 55 27.5 +1.3**
152nm,1.1s
MDOK ⇑ S **Sn** **21 56 38.6 +3.9**
398nm,0.9s
MDOK Medeo 6.11 33 *i* P **Pn** **21 55 27.6 +1.4**
baz=33
MDOK Medeo 6.11 33 eP Pn 21 55 48.2 +22
49nm,0.2s
MDOK eS Sn 21 57 05.1 +30
259nm,0.7s
MDOK Medeo 6.11 33 *i* PN **Pn** **21 55 27.5 +1.3**
KNDC Almaty 6.12 32 ⇑ P **Pn** **21 55 28.3 +2.1**
271nm,0.7s
KNDC ⇑ S **Sn** **21 56 35.7 +0.9**
2µm,1.3s
PRZ Przheval'sk 6.27 44 **Pn** **21 55 30.2 +1.7**
PRZ Przheval'sk 6.27 44 PN **Pn** **21 55 30.2 +1.7**
KUU Kurty 6.46 26 ⇑ *i* P **Pn** **21 55 31.4 +0.6**
baz=25
KUU Kurty 6.46 26 eP Pn 21 55 54.5 +24
31nm,0.3s
KUU eS Sn 21 57 16.8 +34
153nm,0.4s
KUU Kurty 6.46 26 *c* iPN **Pn** **21 55 31.4 +0.6**
DHRM DHARAMSHALA 6.63 151 eP **Pn** **21 55 34.1 +0.7**
DHRM eS **Sn** **21 56 43.2 -4.4**
DHRM IAML 21 56 46.3
comp=N,2µm,0.3s
DHRM IAML 21 56 48.1
comp=E,3µm,0.5s
CHKK Chushkaly 6.66 29 eP **Pn** **21 55 34.1 +0.5**
baz=29
CHKK Chushkaly 6.66 29 ePN **Pn** **21 55 34.0 +0.5**
SATY Saty 6.68 40 eP **Pn** **21 55 34.8 +0.9**
baz=40
SATY eS **Sn** **21 56 48.8 +0.3**
baz=40
SATY Saty 6.68 40 ePN **Pn** **21 55 34.7 +0.9**
ZHN Zhinishke 6.77 40 eP **Pn** **21 55 36.1 +0.9**
baz=40
ZHN Zhinishke 6.77 40 ePN **Pn** **21 55 36.0 +0.9**
BTLS Baital 7.01 9 *i* P **Pn** **21 55 39.3 +1.0**
baz=8.8
BTLS Baital 7.01 9 *i* Pn **Pn** **21 55 39.3 +1.0**
UZB Uzynbulak 7.06 43 eP **Pn** **21 55 40.1 +1.0**
comp=E,10.0nm,0.4s,baz=42
UZB Uzynbulak 7.06 43 ePN **Pn** **21 55 40.1 +1.0**
UZB pmax pmax
comp=Z,10.0nm,0.4s
KPKS Kokpek 7.11 39 ⇑ *i* P **Pn** **21 55 40.9 +1.2**
comp=Z,11nm,0.4s,baz=39
KPKS Kokpek 7.11 39 *c* iPN **Pn** **21 55 40.9 +1.2**
KPKS pmax pmax
comp=Z,11nm,0.4s
SHLS Shalkode 7.30 44 ⇑ *i* P **Pn** **21 55 46.6 +4.1**
comp=Z,15nm,0.4s,baz=46
SHLS Shalkode 7.30 44 *c* iPN **Pn** **21 55 46.5 +4.1**
SHLS pmax pmax
comp=Z,15nm,0.4s
PDGK Podgornoye 7.43 43 ⇓ P **Pn** **21 55 44.6 +0.4**
comp=Z,130nm,1.0s
PDGK ⇑ S **Sn** **21 57 04.4 -2.6**
comp=Z,450nm,1.2s
PDGK Podgornoye 7.43 43 PN **Pn** **21 55 44.6 +0.4**
SMLA Simla 7.96 150 eP **Pn** **21 55 50.7 -0.5**
SMLA eS **Sn** **21 57 12.9 -6.8**
SMLA IAML 21 57 17.1
comp=E,2µm,0.5s
SMLA IAML 21 57 18.2
comp=N,2µm,0.4s
TDK Taldyqorghan 8.18 31 ⇑ *i* P **Pn** **21 55 54.9 +0.6**
baz=31
TDK Taldyqorghan 8.18 31 *c* iPN **Pn** **21 55 54.8 +0.6**
DDI Dehra Dun 9.03 148 eP **Pn** **21 56 05.1 -0.9**
DDI eS Sn 21 57 37.3 -8.7
DDI IAML 21 57 44.2
comp=N,1µm,0.3s
DDI IAML 21 57 48.1
comp=E,2µm,0.3s
HRA Herat 9.08 249 **Pn** **21 56 06.1 -0.6**
OTUK Ortayu 10.12 359 ⇓ P **Pn** **21 56 19.2 -1.4**
comp=E,137nm,0.9s
OTUK ⇑ S **Sn** **21 58 05.3 -6.9**
comp=E,204nm,1.1s
OTUK Ortayu 10.12 359 P **Pn** **21 56 19.2 -1.4**
MAKZ Makanchi 11.15 36 ⇑ P **Pn** **21 56 34.2 -0.4**
comp=E,88nm,0.8s
MAKZ Makanchi 11.15 36 **Pn** **21 56 34.7 +0.2**
MAKZ Makanchi 11.15 36 P **Pn** **21 56 34.7 +0.2**
MK31 Makanchi Array 11.28 37 ⇓ P **Pn** **21 56 36.1 -0.2**
comp=E,44nm,0.8s,baz=224,slow=13,SNR=258
MK31 Makanchi Array 11.28 37 Pn **Pn** **21 56 36.8 +0.4**
MK31 Makanchi Array 11.28 37 *c* iP **Pn** **21 56 36.2 -0.2**
MKAR Makanchi Array 11.28 37 P **Pn** **21 56 36.9 +0.5**
comp=E,54nm,1.0s,baz=219,slow=9.4,SNR=170
MKAR S **Sn** **21 58 42.5 +2.1**
comp=E,4.3nm,0.5s,baz=227,slow=28,SNR=1.1
MKAR LR LR 22 00 38.8
comp=E,101nm,19.3s,baz=242,slow=36
GEYT Alibeck 11.35 273 **Pn** **21 56 33.8 -3.6**
GEYT Alibeck 11.35 273 P **Pn** **21 56 33.8 -3.6**
GEYT Alibeck 11.35 273 P **Pn** **21 56 33.3 -4.0**
comp=E,26nm,0.4s,baz=106,slow=11,SNR=142
GEYT S Sn 21 58 33.1 -9.0
comp=E,115nm,0.7s,baz=112,slow=19,SNR=14
GEYT LR LR 22 01 50.5
comp=E,119nm,21.6s,baz=102,slow=42
GYA0 ALIBECK ARRAY 11.35 273 P **Pn** **21 56 33.9 -3.4**
GYA0 S **Sn** **21 58 38.8 -3.3**
GYA0B ALIBECK ARRAY 11.35 273 ⇑ P **Pn** **21 56 33.9 -3.4**
GYA0B ⇓ S **Sn** **21 58 38.9 -3.2**
GYA0B ALIBECK ARRAY 11.35 273 **Pn** **21 56 33.9 -3.4**
WMQ Urumqi 12.81 59 eP **Pn** **21 56 55.6 -1.3**
WMQ S **Sn** **21 59 16.0 -1.7**
WMQ pmax pmax
comp=E,30nm,2.3s
KURBB Kurchatov Arra 13.22 17 ⇑ P **Pn** **21 56 58.8 -3.3**
comp=E,37nm,1.0s
KURBB Kurchatov Arra 13.22 17 P **Pn** **21 56 59.5 -2.5**
comp=E,6.7nm,0.7s,baz=207,slow=12,SNR=38
KURBB S **Sn** **21 59 21.2 -6.1**
comp=E,4.6nm,0.8s,baz=190,slow=28,SNR=4.0
KURK Kurchatov 13.33 17 ⇓ P **Pn** **21 57 00.5 -2.9**
comp=E,50nm,1.3s
KURK Kurchatov 13.33 17 Pn **Pn** **21 57 01.5 -1.9**
KURK Kurchatov 13.33 17 *ce* P **Pn** **21 57 01.6 -1.9**
KURK pmax pmax
comp=Z,9.0nm,0.8s
KURK Kurchatov 13.33 17 P **Pn** **21 57 01.3 -2.1**
KURK S **Sn** **21 59 35.1 +5.2**
AB31 Akbulak array 14.35 325 P **Pn** **21 57 13.5 -3.3**
comp=Z,138nm,0.5s,baz=134,slow=12,SNR=5142
AB31 ⇓ S **Sn** **21 59 48.5 -6.1**
comp=Z,44nm,0.5s,baz=139,slow=24,SNR=14
AB31 Akbulak array 14.35 325 P **Pn** **21 57 13.4 -3.3**
AB31 S **Sn** **21 59 48.4 -6.1**
ABKAR Akbulak array 14.35 325 Pn **Pn** **21 57 13.5 -3.2**
ABKAR Akbulak array 14.35 325 Pn **Pn** **21 57 13.8 -2.9**
BVA0 Borovoye Array 14.98 355 ⇑ P **Pn** **21 57 23.5 -1.3**
comp=Z,74nm,0.7s,baz=160,slow=12,SNR=349
BVA0 Borovoye Array 14.98 355 P **Pn** **21 57 23.5 -1.3**
BVAR Borovoye Array 14.98 355 P **Pn** **21 57 23.7 -1.1**
comp=Z,59nm,0.8s,baz=158,slow=12,SNR=140
BVAR S **Sn** **22 00 02.2 -7.7**
comp=Z,22nm,0.8s,baz=164,slow=22,SNR=3.7
BVAR LR LR 22 02 59.4
comp=Z,123nm,21.9s,baz=181,slow=36
BHUJ Bhuj 15.02 190 eP **Pn** **21 57 23.9 -1.6**
BHUJ IAmb IAmb 21 57 36.5
comp=Z,36nm,0.7s
BHUJ eS **Sn** **22 00 03.7 -7.4**
BRVK Borovoye 15.02 355 ⇓ P **Pn** **21 57 23.1 -2.2**
comp=Z,124nm,0.9s
BRVK Borovoye 15.02 355 Pn **Pn** **21 57 24.1 -1.2**
BRVK Borovoye 15.02 355 *ce* P **Pn** **21 57 23.7 -1.6**
BRVK pmax pmax
comp=Z,65nm,1.3s
BRVK Borovoye 15.02 355 P **Pn** **21 57 24.3 -1.0**
DGZ Jazzator, Alta 15.77 38 *c* iP **Pn** **21 57 33.6 -1.4**
NGCH Negor - Chabah 15.96 220 P **Pn** **21 57 37.9 +0.6**
AKTO Aktyubinsk 16.06 325 ⇓ P **Pn** **21 57 36.2 -2.3**
comp=Z,29nm,0.5s
AKTO ⇓ S **Sn** **22 00 30.3 -5.7**
comp=Z,44nm,0.7s
AKTO Aktyubinsk 16.06 325 P **Pn** **21 57 37.3 -1.1**
comp=Z,90nm,0.5s,baz=131,slow=13,SNR=172
AKTO S **Sn** **22 00 27.2 -8.8**
comp=Z,36nm,0.5s,baz=173,slow=23,SNR=8.3
AKTO LR LR 22 04 14.2
comp=Z,262nm,18.5s,baz=72,slow=38
JASK Jask - Hormozg 17.39 230 P **P** **21 57 54.3 -0.4**
JASK S **Sn** **22 01 03.3 -5.0**
LSA Lhasa 17.59 113 P **Pn** **21 57 57.9 +0.1**
LSA Lhasa 17.59 113 P **P** **21 57 57.5 0.0**
LSA Lhasa 17.59 113 P **Pn** **21 57 57.9 +0.1**
GOMU GeErMu 17.89 89 P **Pn** **21 58 01.3 0.0**
GOMU pmax pmax
comp=Z,54nm,0.9s
ZAA0 Zalesovo Array 17.95 24 ⇑ P **P** **21 57 59.9 -0.9**
comp=Z,2.8nm,0.5s
ZAA0 Zalesovo Array 17.95 24 P **P** **21 58 00.4 -0.3**
ZALV Zalesovo Beam 17.95 24 P **P** **21 58 00.7 -0.1**
comp=Z,26nm,0.5s,baz=211,slow=10.0,SNR=111
ZALV S **S** **22 01 13.0 -8.5**
comp=Z,3.1nm,0.6s,baz=225,slow=12,SNR=1.7
ZALV LR LR 22 05 05.7
comp=Z,123nm,18.1s,baz=354,slow=37
BOK Bokaro 18.29 137 eP **P** **21 58 02.1 -2.6**
BANOM Banah 18.31 233 P **P** **21 58 05.6 +0.6**
LKRN Lenkeran, Azer 18.59 279 P **Pn** **21 58 09.0 -0.2**
MDH Madha 18.76 232 P **P** **21 58 08.8 -1.0**
MASF Masafi 18.79 232 P **Pn** **21 58 11.6 -0.2**
MASF P **Pn** **21 58 11.6 -0.2**
MSFE Esma-Masafi 18.80 232 *i* P **Pn** **21 58 11.5 -0.4**
SNR=6.2
WSAR Wadi Sarin 19.00 223 P **P** **21 58 12.4 -0.1**
comp=Z,16nm,1.1s,baz=67,slow=7.5,SNR=9.2
WSAR LR LR 22 06 11.7
comp=Z,94nm,19.1s,baz=94,slow=38
WSAR Wadi Sarin 19.00 223 P **P** **21 58 11.8 -0.7**
WSAR S **S** **22 01 42.5 -0.6**
UOSS Minazif 19.07 231 P **P** **21 58 12.6 -0.7**
UOSS Minazif 19.07 231 *i* P **P** **21 58 11.6 -1.7**
SNR=9.7
UOSS Minazif 19.07 231 P **P** **21 58 11.4 -1.9**
HATD Hatta, Dubai 19.21 231 P **P** **21 58 13.7 -1.1**
HATD Hatta, Dubai 19.21 231 P **P** **21 58 15.5 +0.7**
SNR=7.5
WBK Wadi Bani Khal 19.33 221 P **Pn** **21 58 20.1 +1.9**
ASHO Ashiyiah 19.36 231 *i* P **P** **21 58 15.8 -0.6**
SNR=38
ASHO Ashiyiah 19.36 231 P **P** **21 58 15.9 -0.5**
SNR=14
SMDO Samad 19.45 224 P **P** **21 58 18.1 +0.6**
SOHO SOHO 19.48 229 P **P** **21 58 15.5 -2.1**
JLN Jalan Bani Buh 19.49 219 P **P** **21 58 18.4 +0.5**
JLN P **P** **21 58 18.4 +0.5**
MAK Makhachkala 19.57 292 eP **P** **21 58 19.2 +0.7**
MAK eS **S** **22 01 55.4 +1.1**
MAK pmax pmax
comp=Z,82nm,0.9s
MAK MLR MLR
comp=Z,282nm,14.0s
FAQ Al Faqa, Dubai 19.60 232 P **P** **21 58 18.1 -0.8**
FAQ Al Faqa, Dubai 19.60 232 P **P** **21 58 18.2 -0.8**
SEKA Sheki 19.70 287 P **P** **21 58 20.1 0.0**
MNGR Mingechevir, A 19.79 286 P **P** **21 58 21.9 +1.0**
ASUD Al Ashush, Dub 19.85 232 *i* P **P** **21 58 22.1 +0.4**
SNR=6.3
ASUD Al Ashush, Dub 19.85 232 P **P** **21 58 21.8 +0.1**
JMDO Jabal Madar 19.98 222 P **P** **21 58 23.2 +0.1**
JMDO P **P** **21 58 23.2 +0.1**
ALNE Al Ain 20.01 230 *i* P **P** **21 58 23.3 -0.1**
SNR=21
ALNE Al Ain 20.01 230 P **P** **21 58 23.5 +0.1**
ALNE S **S** **22 02 03.5 +0.2**
ARQ Araqi 20.10 227 P **P** **21 58 24.7 +0.3**
AJN Ajban 20.11 233 P **P** **21 58 24.3 -0.2**
ZKTA Zakatala 20.14 288 P **P** **21 58 25.6 +0.8**
BSY Bisya 20.17 225 P **P** **21 58 25.3 +0.1**
SVE Sverdlovsk 20.31 341 *c* iP **P** **21 58 26.6 +0.2**
SVE eS **S** **22 02 10.5 +1.9**
SVE pmax pmax
comp=Z,101nm,0.7s
GANJ Ganja 20.37 285 P **P** **21 58 28.1 +0.9**
ARU Arti 20.54 338 P **P** **21 58 28.9 0.0**
ARU Arti 20.54 338 IAmb IAmb 22 02 24.7
comp=Z,20nm,1.2s
ARU Arti 20.54 338 *ce* P **P** **21 58 28.7 -0.2**
ARU pmax pmax
comp=Z,188nm,1.7s
ARU Arti 20.54 338 P **P** **21 58 29.1 +0.2**
comp=Z,37nm,0.5s,baz=153,slow=6.5,SNR=75
ARU S **S** **22 02 11.1 -2.1**
comp=Z,5.4nm,0.5s,baz=118,slow=18,SNR=2.0
ARU LR LR 22 06 49.0
comp=Z,222nm,19.8s,baz=142,slow=38
comp=Z,37nm,0.5s
ARU Arti 20.54 338 P **S** **22 02 11.1 -2.1**
SHL Shillong 20.63 122 eP **P** **21 58 30.5 +0.2**
NAX Nakhchivan 21.09 281 P **P** **21 58 36.0 +0.9**
MHTO MHTO 21.19 220 P **P** **21 58 36.2 0.0**
SNR=6.9
MHTO S **S** **22 02 28.0 +1.5**
JRN Qarnain Island 21.23 237 P **P** **21 58 35.3 -1.3**
HYB Hyderabad 21.30 164 eP **P** **21 58 40.9 +3.6**
GTA Gaotai 21.31 78 P **P** **21 58 38.2 +0.7**
GTA pP pP 21 59 03.6 +6.2
GTA PP **sP** **21 59 11.8 +1.8**
GTA pmax pmax
comp=Z,20nm,1.8s
UMZA Um Al Zommool 21.37 229 P **P** **21 58 37.3 -0.8**
GNI Garni 21.59 284 P **P** **21 58 42.9 +2.3**
GNI Garni 21.59 284 *d* iP **P** **21 58 43.0 +2.5**
GNI pmax pmax
comp=Z,89nm,0.8s
GNI Garni 21.59 284 P **P** **21 58 42.7 +2.1**
comp=Z,28nm,0.6s,baz=40,slow=1.5,SNR=43
GNI S Sn 22 02 44.3 -4.9
comp=Z,8.3nm,0.9s,baz=44,slow=23,SNR=2.4
comp=Z,28nm,0.6s
GNI Garni 21.59 284 P **P** **21 58 39.4 -1.2**
GNI S **S** **22 02 38.0 +3.6**
GHWR Ruwais 21.89 236 P **P** **21 58 42.4 -1.1**
SHMA Al-Shehemyia 21.92 242 P **P** **21 58 42.0 -1.8**
SNR=8.2
SHMA S **S** **22 02 42.1 +1.9**
MOKO MOKOCHONG 21.97 116 eP **P** **21 58 44.8 +0.2**
KOHI KOHIMA 22.06 118 eP **P** **21 58 45.9 +0.4**
SAKB Bahrain 22.14 243 P **P** **21 58 45.7 -0.5**
SAKB S **S** **22 02 47.0 +2.8**
ZEI Tsey 22.20 291 eP **P** **21 58 48.0 +1.0**
ZEI pmax pmax
comp=Z,26nm,0.6s
BELG Belogornoye 22.44 318 *d* iP **P** **21 58 48.7 -0.4**
BELG pmax pmax
comp=Z,65nm,1.1s
TRNA Turayna 22.47 240 P **P** **21 58 49.4 -0.3**
SNR=7.9
AKH Akhalkalaki 22.49 288 P **P** **21 58 51.2 +1.2**
AKH Akhalkalaki 22.49 288 P **P** **21 58 51.2 +1.2**
IMP Imphal 22.52 120 eP **P** **21 58 49.9 -0.4**
ONI Oni 22.53 291 P **P** **21 58 51.7 +1.5**
ONI Oni 22.53 291 P **P** **21 58 51.7 +1.5**
SLWR Sila 22.59 238 P **P** **21 58 49.8 -1.1**
SLWR P **P** **21 58 49.8 -1.1**
SMRA Abu-Samra 22.73 240 P **P** **21 58 52.4 0.0**
KARS Kars 22.83 286 P **P** **21 58 54.9 +1.4**
KARS Kars 22.83 286 P **P** **21 58 54.9 +1.4**
KBZ Khabaz 22.99 294 *i* P **P** **21 58 54.5 -0.2**
KBZ pmax pmax
comp=Z,31nm,1.1s
KBZ Khabaz 22.99 294 P **P** **21 58 55.0 +0.3**
comp=Z,7.2nm,0.7s,baz=106,slow=8.8,SNR=22
KBZ S Sn 22 03 13.3 -8.8
comp=Z,13nm,0.9s,baz=183,slow=10.0,SNR=3.8
KBZ LR LR 22 10 05.8
comp=Z,157nm,18.4s,baz=80,slow=42
comp=Z,7.2nm,0.7s
GOF Gofitskoye 23.01 297 *ce* P **P** **21 58 56.7 +1.7**
KIV Kislovodsk 23.16 294 ⇑ P **P** **21 58 58.0 +1.5**
KIV Kislovodsk 23.16 294 P **P** **21 58 56.4 -0.1**
KIV Kislovodsk 23.16 294 *i* P **P** **21 58 56.6 +0.1**
SNR=18
KIV Kislovodsk 23.16 294 eP **P** **21 58 56.2 -0.3**
KIV eS **S** **22 03 00.2 -0.3**
KIV pmax pmax
comp=Z,46nm,1.0s
KIV MLR MLR
comp=Z,144nm,14.0s
KIV Kislovodsk 23.16 294 P **P** **21 58 57.2 +0.7**
KIV S **S** **22 03 05.4 +4.9**
SAIH SAIHA 23.49 126 eP **P** **21 59 02.2 +0.4**
GURO Guroymak-BITLI 23.85 281 P **P** **21 59 03.5 +0.6**
BCA Borcka 23.90 288 ⇑ P **P** **21 59 05.4 +2.3**
MOY Mondy 24.12 47 eP **P** **21 59 06.9 +1.7**
MOY pmax pmax
comp=Z,50nm,1.9s
LABN Labinsk 24.61 295 eP **P** **21 59 12.8 +3.2**
LABN pmax pmax
comp=Z,128nm,0.9s
SHAO Shalim 24.87 221 *i* P **P** **21 59 12.8 +0.6**
SNR=6.6
SHAO Shalim 24.87 221 P **P** **21 59 13.0 +0.9**
SNR=6.6
ERBR Yeremizino-Bor 24.88 298 eP **P** **21 59 13.8 +1.8**
ERBR pmax pmax
comp=Z,115nm,1.3s
LZH Lanzhou 25.02 85 ⇓ P **P** **21 59 15.3 +1.7**
LZH pP pP 21 59 38.7 +2.5
LZH sP sP 21 59 50.4 +2.5
LZH pmax pmax
comp=Z,10.0nm,1.4s
ZAK Zakamensk 25.04 51 eP **P** **21 59 14.6 +1.1**
ZAK pmax pmax
comp=Z,37nm,1.2s
DOK Doka 25.18 225 P **P** **21 59 15.2 +0.3**
SNR=11
SOC Sochi 25.29 293 eP **P** **21 59 17.3 +1.6**
SOC e*PP **pP** **21 59 38.0 -0.1**
SOC e*SP **sP** **21 59 52.4 +2.7**
SOC eS **S** **22 03 37.6 +3.1**
SOC pmax pmax
comp=Z,28nm,0.6s
VRH Novokhopyorsk 25.29 311 eP **P** **21 59 15.8 +0.2**
VRH pmax pmax
comp=Z,64nm,0.6s
KIRV Kirov 25.35 331 *d* iP **P** **21 59 16.3 +0.2**
DMTO DMTO 25.48 222 P **P** **21 59 17.7 +0.1**
SNR=12
TNCH TengChong 25.62 113 P **P** **21 59 20.7 +1.6**
TNCH pP pP 21 59 41.4 -0.4
TNCH sP sP 21 59 52.9 -0.6
TNCH S **S** **22 03 39.4 -1.1**
TNCH pmax pmax
comp=Z,19nm,1.0s
TNCH pmax pmax
comp=Z,110nm,2.9s
TNCH LR LR
comp=Z,180nm,5.3s
TNCH LR LR
comp=Z,210nm,6.3s
TNCH LR LR
comp=Z,140nm,15.1s
WHFO Wadi Hawf 25.95 224 P **P** **21 59 22.0 +0.1**
SNR=12
WHFO P **P** **21 59 22.0 +0.1**
SNR=7.2
RBK Rabkut 26.05 223 P **P** **21 59 22.8 0.0**
IRK Irkutsk 26.22 47 eP **P** **21 59 25.1 +1.0**
IRK pmax pmax
comp=Z,44nm,2.8s
SONM Songino Array 26.45 58 P **P** **21 59 27.3 +1.0**
SONM Songino Array 26.45 58 P **P** **21 59 27.3 +1.0**
SONM pmax pmax
comp=Z,23nm,1.1s
SONM Songino Array 26.45 58 P **P** **21 59 27.1 +0.8**
comp=Z,5.5nm,0.5s,baz=258,slow=8.8,SNR=56
SONM LR LR 22 11 20.6
comp=Z,125nm,18.6s,baz=286,slow=39
comp=Z,5.5nm,0.5s
ARPR Arapgir-MALATY 26.63 283 P **P** **21 59 30.3 +2.3**
ARPR IAmb IAmb 21 59 32.8
comp=Z,30nm,1.0s
CD2 Chengdu 26.66 96 eP **P** **21 59 28.0 -0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s

ABTO Aybut 26.67 224 P **P** 21 59 28.1 -0.4
SNR=11
VORD Divnogorie 26.68 310 *e*P **P** 21 59 28.5 +0.3
VORD pmax pmax
comp=Z,50nm,0.8s
VSR Storozhevoye 26.83 310 *e*P **P** 21 59 28.7 -0.8
VSR *e**PP **pP** 21 59 47.8 -4.2
VSR pmax pmax
comp=Z,40nm,0.7s
ULN Ulaanbaatar 26.89 58 P **P** 21 59 30.6 +0.3
ULN Ulaanbaatar 26.89 58 *i* P **P** 21 59 30.6 +0.3
ULN pmax pmax
comp=Z,20nm,1.1s
ULN Ulaanbaatar 26.89 58 P **P** 21 59 31.6 +1.3
VORR Voronezh 26.93 311 *e*P **P** 21 59 31.5 +1.1
VORR pmax pmax
comp=Z,51nm,0.6s
ANN Anapa 26.96 296 *e*P **P** 21 59 31.0 +0.2
ANN pmax pmax
comp=Z,55nm,1.4s
PZH PanZhiHua 27.18 107 P **P** 21 59 33.3 +0.2
PZH pP **pP** 21 59 59.2 +3.3
PZH S **S** 22 04 05.1 +0.1
PZH ScS **ScS** 22 10 11.5 -2.9
PZH pmax pmax
comp=Z,10.0nm,1.7s
PZH pmax pmax
comp=Z,60nm,4.7s
RAYN Ar Rayn 27.25 246 P **P** 21 59 33.7 +0.1
RAYN Ar Rayn 27.25 246 P **P** 21 59 33.7 +0.1
RAYN Ar Rayn 27.25 246 P **P** 21 59 33.7 +0.1
RAYN pmax pmax
comp=Z,10.0nm,0.9s
RAYN Ar Rayn 27.25 246 P **P** 21 59 33.7 +0.1
LPSR Galich'ya Gora 27.38 313 *e*P **P** 21 59 34.5 +0.1
LPSR pmax pmax
comp=Z,60nm,0.7s
GAZ Gaziantep 27.86 279 P **P** 21 59 39.9 +1.0
BTO Baotou 28.98 73 *e*P **P** 21 59 48.8 -0.1
BTO pP **pP** 22 00 10.5 -1.2
BTO sP **sP** 22 00 22.2 -1.2
BTO PP **PnPn** 22 00 41.8 -3.6
BTO S **S** 22 04 33.4 +0.5
BTO pmax pmax
comp=Z,26nm,0.8s
BTO pmax pmax
comp=Z,430nm,5.3s
BTO LR LR
comp=Z,460nm,5.3s
BTO LR LR
comp=Z,190nm,6.3s
BTO LR LR
comp=Z,240nm,4.6s
MOS Moscow 29.20 318 *e*P **P** 21 59 49.1 -1.4
MOS *e**PP **sP** 22 00 22.1 -2.5
MOS *e* 22 00 51.3
MOS pmax pmax
comp=Z,91nm,0.8s
SIM Simferopol' 29.32 296 *e*P **P** 21 59 52.3 +0.5
SIM *e*S **S** 22 04 31.1 -7.0
SIM pmax pmax
comp=Z,38nm,0.6s
OBN Obninsk 29.53 317 P **P** 21 59 53.7 +0.3
OBN Obninsk 29.53 317 *d i*P **P** 21 59 54.1 +0.6
OBN *e**SP **sP** 22 00 23.2 -4.3
OBN *e*SS **SnSn** 22 06 17.1 -1.8
OBN pmax pmax
comp=Z,86nm,0.6s
XAN Xi'an 29.60 87 P **P** 21 59 54.7 +0.3
XAN sP sP 22 00 32.0 +2.9
XAN pmax pmax
comp=Z,9.0nm,1.9s
CRAI Chiangrai 30.00 119 P **P** 21 59 58.6 +0.6
HHC Hu-ho-hao-te 30.11 72 *e*P **P** 22 00 00.0 +1.1
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,160nm,6.0s
BR131 Keskin Array S 30.12 285 P **P** 21 59 59.6 +0.6
BR131 IAmb IAmb 22 00 02.0
comp=Z,14nm,0.8s
BR131 Keskin Array S 30.12 285 *i* P **P** 21 59 58.7 -0.4
BR131 Keskin Array S 30.12 285 P **P** 22 00 01.1 +2.1
SNR=6.4
BRTR Keskin Array B 30.12 285 P **P** 21 59 59.7 +0.6
BRTR Keskin Array B 30.12 285 *ce*P **P** 22 00 00.6 +1.5
BRTR pmax pmax
comp=Z,7.0nm,0.6s
BRTR Keskin Array B 30.12 285 P **P** 21 59 59.8 +0.7
comp=Z,9.6nm,0.9s,baz=108,slow=9.0,SNR=21
BRTR LR LR 22 15 06.8
comp=Z,94nm,20.7s,baz=10.0,slow=42
comp=Z,9.6nm,0.9s
CMAR Chiang Mai Arr 30.26 123 *i* P **P** 22 00 04.5 +4.2
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 30.26 123 P **P** 22 00 00.8 +0.6
comp=Z,1.0nm,0.7s,baz=301,slow=9.3,SNR=5.8
CMAR ScP **ScP** 22 06 33.4 +1.0
comp=Z,0.6nm,0.3s,baz=282,slow=4.5,SNR=4.2
comp=Z,1.0nm,0.7s
MMAI Mount Meron Ar 30.46 272 P **P** 22 00 03.7 +1.7
comp=Z,0.8nm,0.5s,baz=62,slow=9.0,SNR=4.9
MMAI PcP **PcP** 22 03 00.1 +0.9
comp=Z,0.9nm,0.4s,baz=72,slow=5.4,SNR=4.8
comp=Z,0.8nm,0.5s
KLMR Klimovskoe 30.69 329 *e*P **P** 22 00 02.0 -1.7
KLMR *e* 22 00 37.7
KLMR pmax pmax
comp=Z,48nm,0.7s
ANTO Ankara 30.74 286 P **P** 22 00 05.3 +0.9
ANTO IAmb IAmb 22 00 08.5
comp=Z,47nm,1.4s
ANTO Ankara 30.74 286 P **P** 22 00 05.3 +0.9
ANTO pmax pmax
comp=Z,47nm,1.4s
ANTO Ankara 30.74 286 P **P** 22 00 07.2 +2.8
BR231 Keskin MP Arra 30.75 286 P **P** 22 00 05.1 +0.5
BR231 IAmb IAmb 22 00 08.0
comp=Z,18nm,0.8s
GHAJ Ghor Haditha 30.96 269 P **P** 22 00 07.0 +0.6
GHAJ IAmb IAmb 22 00 10.9
comp=Z,31nm,1.6s
CSS Mathiatis 31.47 276 P **P** 22 00 11.4 +0.6
PALK Pallekele 31.59 164 P **P** 22 00 11.7 -0.4
PALK IAmb IAmb 22 00 12.9
comp=Z,33nm,1.6s
PALK Pallekele 31.59 164 P **P** 22 00 11.7 -0.4
PALK pmax pmax
comp=Z,33nm,1.6s
MDUB Mudurnu 31.84 287 P **P** 22 00 14.7 +0.5
EIL Elat 32.11 266 LR LR 22 16 14.7
comp=Z,101nm,18.8s,baz=63,slow=42
PURM Purcari 32.29 299 ⇑P **P** 22 00 20.2 +2.4
NRIK Noril'sk 32.33 10 P **P** 22 00 18.8 +0.9
NRIK Noril'sk 32.33 10 *i* P **P** 22 00 17.3 -0.6
NRIK pmax pmax
comp=Z,21nm,1.2s
NRIK Noril'sk 32.33 10 P **P** 22 00 18.8 +0.9
comp=Z,3.9nm,0.4s,baz=197,slow=5.5,SNR=13
comp=Z,3.9nm,0.4s
AKASG Malin Array Be 32.90 307 P **P** 22 00 23.0 -0.2
AKASG IAmb IAmb 22 00 24.9
comp=Z,28nm,0.7s
AKASG Malin Array Be 32.90 307 P **P** 22 00 23.0 -0.2
AKASG pmax pmax
comp=Z,28nm,0.7s
AKASG Malin Array Be 32.90 307 P **P** 22 00 23.6 +0.4
comp=Z,4.4nm,0.5s,baz=78,slow=7.3,SNR=40
AKASG LR LR 22 16 01.4
comp=Z,105nm,20.6s,baz=76,slow=40
comp=Z,4.4nm,0.5s
AKBB Malin Array Si 32.90 307 P **P** 22 00 23.5 +0.4
AKBB IAmb IAmb 22 00 24.9
comp=Z,27nm,0.6s
AKBB Malin Array Si 32.90 307 *ce*P **P** 22 00 23.1 -0.1
KIEV Kiev 32.91 307 P **P** 22 00 23.2 0.0
KIEV IAmb IAmb 22 00 24.9
comp=Z,24nm,0.7s
KIEV Kiev 32.91 307 *i* P **P** 22 00 23.3 +0.1
SNR=20
KIEV Kiev 32.91 307 P **P** 22 00 23.2 0.0
KIEV pmax pmax
comp=Z,24nm,0.7s
KIEV Kiev 32.91 307 P **P** 22 00 23.8 +0.6

MILM Milestii Mici 33.01 300 ⇑P **P** 22 00 26.5 +2.3
MILM Milestii Mici 33.01 300 P **P** 22 00 26.4 +2.3
XLT XiLinHaoTe 33.09 66 *e*P **P** 22 00 27.0 +1.9
XLT pmax pmax
comp=Z,9.0nm,1.3s
XLT pmax pmax
comp=Z,150nm,5.5s
HNS HongShan 33.17 78 *e*P **P** 22 00 27.1 +1.4
BOD Bodaibo 33.34 40 *e*P **P** 22 00 26.9 0.0
BOD pmax pmax
comp=Z,18nm,1.4s
TPGR Topolog 33.37 296 ⇑P **P** 22 00 29.0 +1.6
LEOM Leova 33.41 299 ⇑P **P** 22 00 30.1 +2.5
LEOM Leova 33.41 299 P **P** 22 00 30.1 +2.5
MFTR Murfatlar 33.42 295 ⇑P **P** 22 00 29.7 +1.9
CFR Carcaliu 33.55 297 ⇑P **P** 22 00 30.1 +1.2
CFR Carcaliu 33.55 297 P **P** 22 00 30.0 +1.2
VLDR Vladesti 33.55 298 ⇑P **P** 22 00 31.2 +2.3
TATR Tatarca 33.59 297 ⇑P **P** 22 00 31.1 +2.0
SCTR Scanteiesti 33.62 297 ⇑P **P** 22 00 31.9 +2.4
ELL Elmali 33.63 281 P **P** 22 00 31.2 +1.3
ELL Elmali 33.63 281 P **P** 22 00 31.2 +1.3
ELL pmax pmax
comp=Z,113nm,0.5s
VARL Varlezi 33.71 298 ⇑P **P** 22 00 32.6 +2.3
BJI Beijing 33.71 73 P **P** 22 00 32.8 +2.5
ICOR Ion Corvin 33.88 295 ⇑P **P** 22 00 33.0 +1.3
GHRR 34.01 298 ⇑P **P** 22 00 35.3 +2.5
PANC Panciu 34.20 298 ⇑P **P** 22 00 36.8 +2.3
MNK Minsk 34.23 313 *i* P **P** 22 00 35.7 +1.0
comp=E,8.0nm,0.8s
MNK *i* P **P** 22 00 35.7 +1.0
comp=N,4.0nm,0.8s
MNK *i* P **P** 22 00 35.7 +1.0
comp=Z,26nm,0.8s,baz=99
MNK *i* pP **pP** 22 00 57.1 -0.3
MNK *i* sP **sP** 22 01 10.2 +0.8
MNK *i* PP **PP** 22 01 53.9 +0.2
MNK *i* S **S** 22 05 56.9 +2.7
MNK *i* sS **sS** 22 06 36.9 +2.7
MNK *i* SS **SnSn** 22 08 18.8 +6.2
MNK *i* LQ LQ 22 12 11.5
MNK *i* LR LR 22 13 59.5
MNK *i* LRM MLR 22 16 36.8
comp=Z,164nm,15.9s
MNK *i* LRM MLR 22 17 03.0
comp=N,142nm,16.3s
MNK *i* LRM MLR 22 17 03.3
comp=E,55nm,16.3s
MNK Minsk 34.23 313 *i* P **P** 22 00 35.6 +1.0
MNK *i* *PP **pP** 22 00 57.1 -0.3
MNK *i* *SP **sP** 22 01 10.1 +0.8
MNK *i* 22 01 53.9
MNK *i* 22 03 08.8
MNK *i* S **S** 22 05 56.9 +2.7
MNK *i* *SS **sS** 22 06 36.8 +2.7
MNK pmax pmax
comp=N,4.0nm,0.8s
MNK pmax pmax
comp=E,8.0nm,0.8s
MNK pmax pmax
comp=Z,26nm,0.8s
MNK MLR MLR
comp=Z,164nm,16.0s
MNK MLR MLR
comp=N,142nm,16.0s
MNK MLR MLR
comp=E,55nm,16.0s
PRD Provadia 34.26 293 *e*P **P** 22 00 36.7 +1.6
ODBI Odobesti 34.27 298 ⇑P **P** 22 00 37.6 +2.5
NEF NEVSHA 34.35 293 *e*P **P** 22 00 37.6 +1.8
VRI Vrincioaia 34.49 298 ⇑P **P** 22 00 39.5 +2.4
VRI Vrincioaia 34.49 298 P **P** 22 00 39.4 +2.4
BALB Balikesir 34.50 287 P **P** 22 00 38.2 +1.0
BALB IAmb IAmb 22 00 40.6
comp=Z,47nm,1.2s
TESR Tescani 34.51 299 ⇑P **P** 22 00 39.0 +1.7
PLOR Plostina 34.55 298 ⇓P **P** 22 00 40.1 +2.5
PLOR Plostina 34.55 298 P **P** 22 00 40.0 +2.5
ISR Istrita 34.68 297 ⇑P **P** 22 00 41.2 +2.5
ISR Istrita 34.68 297 P **P** 22 00 41.2 +2.5
PRAR RASCA 34.77 301 ⇑P **P** 22 00 41.4 +2.0
LOZB Loznitsa 34.83 294 ⇑P **P** 22 00 41.5 +1.5
NEHR Nehoiu 34.83 297 ⇑P **P** 22 00 41.6 +1.7
COVR Voineasa-Covas 34.86 298 ⇑P **P** 22 00 42.7 +2.4
RAZG Razgrad 34.87 294 ⇑P **P** 22 00 42.5 +2.2
NACGM Naroch 34.93 314 *e*P **P** 22 00 41.9 +1.2
TURR Turia 34.98 298 ⇑P **P** 22 00 43.7 +2.5
JMB Yambol 35.00 292 *e*P **P** 22 00 43.4 +2.0
IDID Didziasalis 35.02 314 *e*P **P** 22 00 41.3 -0.1
MLR Muntele Rosu 35.07 297 ⇑P **P** 22 00 44.6 +2.5
MLR Muntele Rosu 35.07 297 P **P** 22 00 43.2 +1.0
MLR IAmb IAmb 22 00 46.3
comp=Z,34nm,0.9s
MLR Muntele Rosu 35.07 297 P **P** 22 00 43.2 +1.0
MLR pmax pmax
comp=Z,34nm,0.9s
MLR Muntele Rosu 35.07 297 LR LR 22 20 07.3
comp=Z,104nm,19.5s,baz=68,slow=45
ARG Arkhangelos 35.16 281 P **P** 22 00 43.3 +0.4
ARG IAmb IAmb 22 00 45.0
comp=Z,24nm,0.7s
ARG Arkhangelos 35.16 281 P **P** 22 00 43.3 +0.4
ARG pmax pmax
comp=Z,24nm,0.7s
SZH Strazhitsa 35.29 293 *e*P **P** 22 00 46.4 +2.5
IIGN Ignalina 35.32 314 *e*P **P** 22 00 45.1 +1.1
IZAR Zarasai 35.37 315 *e*P **P** 22 00 47.2 +2.7
HIA Hailar 35.39 56 P **P** 22 00 45.6 +0.9
HIA Hailar 35.39 56 P **P** 22 00 45.6 +0.9
HIA pmax pmax
comp=Z,12nm,1.2s
ELND Elena 35.41 293 ⇑P **P** 22 00 46.6 +1.6
ISAL Salakas 35.41 315 *e*P **P** 22 00 47.3 +2.6
DOPR Dopca 35.42 298 ⇑P **P** 22 00 47.4 +2.3
BURAR Bucovina Array 35.44 301 ⇑P **P** 22 00 46.9 +1.6
BURAR Bucovina Array 35.44 301 P **P** 22 00 46.1 +0.8
BURAR Bucovina Array 35.44 301 P **P** 22 00 46.9 +1.6
BUR08 Bucovina Ar. S 35.45 301 P **P** 22 00 46.3 +0.9
ALN Alexandroupoli 35.62 289 P **P** 22 00 47.2 +0.4
ALN IAmb IAmb 22 00 49.6
comp=Z,17nm,0.9s
ALN Alexandroupoli 35.62 289 P **P** 22 00 47.2 +0.4
ALN pmax pmax
comp=Z,17nm,0.9s
VSU Vasula 35.69 320 *ce*P **P** 22 00 46.5 -0.6
VSU pmax pmax
comp=Z,71nm,1.7s
VSU Vasula 35.69 320 *e*P **P** 22 00 48.7 +1.6
VOIR 35.70 297 ⇑P **P** 22 00 49.4 +1.8
VOIR 35.70 297 P **P** 22 00 49.3 +1.8
MTUR Matau 35.71 297 ⇑P **P** 22 00 50.0 +2.4
MTUR Matau 35.71 297 P **P** 22 00 50.0 +2.4
HUMR Humele 35.84 296 ⇑P **P** 22 00 50.7 +2.1
RDO Rodhopi 35.95 290 P **P** 22 00 50.2 +0.6
RDO IAmb IAmb 22 00 52.4
comp=Z,14nm,1.0s
ARR Arges 36.00 297 ⇓P **P** 22 00 52.5 +2.5
ARCR ARCALIA 36.06 300 ⇓P **P** 22 00 51.6 +1.2
KARP Karpathos 36.11 280 P **P** 22 00 51.3 +0.3
LVV L'vov 36.19 305 *e*P **P** 22 00 53.1 +1.6
PLVB Pleven 36.25 294 ⇓P **P** 22 00 53.7 +1.5
LVZ Lovozero 36.42 337 P **P** 22 00 53.2 -0.1
LVZ IAmb IAmb 22 02 17.1
comp=Z,58nm,1.3s
LVZ Lovozero 36.42 337 P **P** 22 00 53.2 -0.1
LVZ pmax pmax
comp=Z,58nm,1.3s
RZN Rozhen 36.44 291 *e*P P 22 00 59.8 +5.8
LOT Lotru 36.60 297 ⇑P **P** 22 00 57.4 +2.2
CJR Cluj-Napoca 36.60 300 ⇑P **P** 22 00 57.6 +2.5
CJR Cluj-Napoca 36.60 300 P **P** 22 00 57.6 +2.5
PABE Paberze 36.61 314 P **P** 22 00 55.5 +0.5
PABE Paberze 36.61 314 *e*P **P** 22 00 56.8 +1.8
APA Apatity 36.62 336 ⇓*i*P P 22 00 46.2 -8.8
APA *i* *PP pP 22 01 08.8 -10
APA pmax pmax
comp=Z,5.0nm,0.8s
APA MLR MLR
comp=Z,1μm,12.0s
VSVD Vaisvydziai 36.70 315 *e*P **P** 22 00 57.0 +1.3
PGB Panagyurishte 36.71 293 *e*P **P** 22 00 58.4 +2.3
FIA1 FINESS Array S 36.84 325 P **P** 22 00 57.3 +0.5

FINES FINESS Array B 36.84 325 P **P** 22 00 57.6 +0.8
comp=Z,32nm,0.4s,baz=109,slow=9.2,SNR=270
FINES LR LR 22 18 59.9
comp=Z,269nm,18.3s,baz=234,slow=41
comp=Z,32nm,0.4s
MPEP Malo Peshtene 36.89 294 *e*P **P** 22 00 59.8 +2.2
SUW Suwalki 36.90 312 *e*P **P** 22 00 58.5 +1.1
SUW Suwalki 36.90 312 P **P** 22 00 57.9 +0.5
SUW Suwalki 36.90 312 P **P** 22 00 58.1 +0.6
SUW Suwalki 36.90 312 *e*P **P** 22 00 58.6 +1.1
APE Apeiranthos 36.92 283 ⇑P **P** 22 00 59.5 +1.6
APE Apeiranthos 36.92 283 P **P** 22 00 59.5 +1.6
MARR Marisel-Cluj 36.93 300 ⇑P **P** 22 01 00.4 +2.4
KWP Kalwaria Pacla 37.05 304 *e*P **P** 22 01 00.9 +2.1
KWP Kalwaria Pacla 37.05 304 P **P** 22 00 59.8 +1.0
KWP Kalwaria Pacla 37.05 304 P **P** 22 00 59.8 +1.0
KWP pmax pmax
comp=Z,46nm,0.5s
VALD Valchedram 37.06 295 *e*P **P** 22 01 01.2 +2.3
DEV Deva 37.16 298 ⇑P **P** 22 01 02.3 +2.6
DEV Deva 37.16 298 P **P** 22 01 02.3 +2.6
SANT Santorini 37.18 282 P **P** 22 01 00.4 +0.3
MMB Musomishta 37.20 291 *e*P **P** 22 01 02.6 +2.3
DRGR 37.20 300 ⇑P **P** 22 01 01.7 +1.4
DRGR 37.20 300 P **P** 22 01 01.6 +1.4
MTSE Matsula 37.24 320 *e*P **P** 22 01 01.5 +1.2
GZR Gura Zlata 37.30 297 ⇑P **P** 22 01 02.6 +1.6
GZR Gura Zlata 37.30 297 P **P** 22 01 02.6 +1.6
KOLS Kolonicke sedl 37.36 303 *e*P **P** 22 01 03.0 +1.6
KOLS pmax pmax
comp=Z,15nm,0.7s
KOLS Kolonicke sedl 37.36 303 *e*P **P** 22 01 03.0 +1.6
KOLS *e*PP **PP** 22 02 27.6 -0.7
VTS Vitosha 37.38 293 *e*P **P** 22 01 03.7 +1.8
KKB Krupnik 37.60 292 *e*P **P** 22 01 05.7 +2.1
BLKB Belogradchik 37.61 295 ⇑P **P** 22 01 05.9 +2.1
HERR Herculane 37.62 297 ⇓P **P** 22 01 04.7 +1.0
SURR Surduc 37.71 298 ⇑P **P** 22 01 07.1 +2.6
PBUR Paburge 37.82 315 *e*P **P** 22 01 07.3 +2.1
CRVS Cervenica-Dubn 37.89 303 *e*P **P** 22 01 07.6 +1.6
CRVS pmax pmax
comp=Z,11nm,0.8s
CRVS Cervenica-Dubn 37.89 303 *e*P **P** 22 01 07.6 +1.6
SIRR Siria 37.97 299 ⇑P **P** 22 01 09.3 +2.6
STHS Stebnicka Huta 38.01 304 *e*P **P** 22 01 07.5 +0.5
STHS pmax pmax
comp=Z,11nm,0.6s
STHS Stebnicka Huta 38.01 304 *e*P **P** 22 01 07.5 +0.5
BZS Buzias 38.08 298 ⇑P **P** 22 01 09.9 +2.3
BZS Buzias 38.08 298 P **P** 22 01 09.8 +2.3
NJ2 Nanjing 38.10 85 *e*P **P** 22 01 07.8 -0.1
NJ2 pmax pmax
comp=Z,9.0nm,1.2s
NJ2 pmax pmax
comp=Z,320nm,3.5s
BOVS Bovan 38.31 295 ⇑P **P** 22 01 11.0 +1.5
NIE Niedzica 38.62 304 *e*P **P** 22 01 14.2 +2.0
AGG Agios Georgios 38.83 287 P **P** 22 01 13.8 -0.2
AGG IAmb IAmb 22 01 16.1
comp=Z,26nm,1.7s
AGG Agios Georgios 38.83 287 P **P** 22 01 13.8 -0.2
AGG pmax pmax
comp=Z,26nm,1.7s
OJC Ojcow 38.91 306 *e*P **P** 22 01 15.4 +1.0
OJC Ojcow 38.91 306 P **P** 22 01 15.0 +0.5
OJC Ojcow 38.91 306 P **P** 22 01 15.0 +0.5
OJC pmax pmax
comp=Z,40nm,0.7s
PSZ Piszkesteto 39.01 302 ⇑P **P** 22 01 17.4 +2.0
PSZ Piszkesteto 39.01 302 P **P** 22 01 15.9 +0.5
PSZ Piszkesteto 39.01 302 P **P** 22 01 15.9 +0.5
PSZ pmax pmax
comp=Z,13nm,0.9s
FNA Florina 39.11 290 P **P** 22 01 16.6 +0.2
FNA Florina 39.11 290 P **P** 22 01 16.6 +0.2
FNA pmax pmax
comp=Z,7.0nm,0.6s
LANS Liptovska Anna 39.19 304 *e*P **P** 22 01 19.4 +2.6
LANS pmax pmax
comp=Z,4.0nm,0.6s
LANS Liptovska Anna 39.19 304 *e*P **P** 22 01 19.4 +2.6
VADS Vadso 39.24 338 *e*P **P** 22 01 17.7 +0.8
VADS IAmb IAmb 22 01 18.6
comp=Z,25nm,0.8s
FRGS Fruska Gora 39.41 298 ⇑P **P** 22 01 20.7 +2.0
KEV Kevo 39.76 337 P **P** 22 01 21.8 +0.6
KEV Kevo 39.76 337 P **P** 22 01 21.8 +0.6
KEV pmax pmax
comp=Z,150nm,2.0s
CN2 Changchun 39.82 64 P **P** 22 01 22.5 +0.4
CN2 pmax pmax
comp=Z,10.0nm,0.9s
PUK Puka 39.92 293 P **P** 22 01 23.6 +0.5
MORH Mrgy, Hungar 40.06 299 ⇑P **P** 22 01 25.7 +1.7
SRO Srobarova 40.08 302 *e*P **P** 22 01 27.0 +2.9
SRO pmax pmax
comp=Z,59nm,1.7s
SRO Srobarova 40.08 302 *e*P **P** 22 01 27.0 +2.9
ZEA Zeya 40.10 49 *e*P **P** 22 01 24.8 +0.5
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ARA0 ARCESS Array S 40.12 336 *e*P **P** 22 01 25.6 +1.3
ARA0 IAmb IAmb 22 01 26.1
comp=Z,46nm,1.2s
ARCES ARCESS Array B 40.12 336 P **P** 22 01 24.7 +0.4
ARCES IAmb IAmb 22 01 26.4
comp=Z,47nm,1.2s
ARCES ARCESS Array B 40.12 336 P **P** 22 01 24.7 +0.4
ARCES pmax pmax
comp=Z,47nm,1.3s
ARCES ARCESS Array B 40.12 336 P **P** 22 01 23.6 -0.7
comp=Z,14nm,0.6s,baz=113,slow=9.9,SNR=88
ARCES LR LR 22 19 13.1
comp=Z,172nm,18.2s,baz=210,slow=38
comp=Z,14nm,0.6s
MAUC Maruska 40.24 304 *e*P **P** 22 01 27.9 +2.4
HEH HeiHe 40.33 54 *e*P **P** 22 01 27.5 +1.3
HEH pP **pP** 22 01 49.1 -0.7
HEH pmax pmax
comp=Z,42nm,1.0s
JAVC Velka Javorina 40.39 304 *e*P **P** 22 01 29.3 +2.5
MORC Moravsky Berou 40.39 305 ⇑P **P** 22 01 28.6 +1.8
MORC Moravsky Berou 40.39 305 P **P** 22 01 27.4 +0.6
MORC IAmb IAmb 22 01 29.6
comp=Z,16nm,0.8s
MORC Moravsky Berou 40.39 305 *e*P **P** 22 01 27.6 +0.8
MORC Moravsky Berou 40.39 305 P **P** 22 01 27.4 +0.6
MORC pmax pmax
comp=Z,16nm,0.8s
GKP Gorka Klasztor 40.41 310 *e*P **P** 22 01 27.7 +0.9
GKP Gorka Klasztor 40.41 310 *e*P **P** 22 01 28.4 +1.6
KTK1 Kautokeino 40.63 335 *e*P **P** 22 01 29.4 +0.9
KTK1 IAmb IAmb 22 01 29.9
comp=Z,12nm,0.5s
MODS Modra-Piesok 40.70 303 *e*P **P** 22 01 31.5 +2.2
MODS pmax pmax
comp=Z,29nm,1.3s
MODS Modra-Piesok 40.70 303 *e*P **P** 22 01 31.5 +2.2
BNX BinXian 40.85 61 ⇓P **P** 22 01 32.1 +1.5
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,330nm,4.9s
KRLC Kraliky 40.85 306 *e*P **P** 22 01 31.9 +1.3
KRLC Kraliky 40.85 306 *e*P **P** 22 01 31.9 +1.3
VRAC Vranov 41.05 304 ⇑P **P** 22 01 34.4 +2.2
VRAC Vranov 41.05 304 *e*P **P** 22 01 33.7 +1.5
VRAC Vranov 41.05 304 P **P** 22 01 34.4 +2.2
VRAC Vranov 41.05 304 LR LR 22 20 52.7
comp=Z,222nm,20.6s,baz=350,slow=39
KSP Ksiaz 41.10 307 *e*P **P** 22 01 33.9 +1.3
DPC Dobruska-Polom 41.12 306 *e*P **P** 22 01 34.6 +1.8
DPC Dobruska-Polom 41.12 306 *e*P **P** 22 01 34.6 +1.8
HAMF Hammerfest 41.17 338 *e*P **P** 22 01 34.1 +1.2
HAMF IAmb IAmb 22 01 34.9
comp=Z,26nm,0.7s
OSTC Ostas 41.17 306 *e*P **P** 22 01 34.7 +1.5
OSTC Ostas 41.17 306 *e*P **P** 22 01 34.7 +1.5
KRUC Moravsky 41.20 304 *e*P **P** 22 01 34.9 +1.5
BLEU Blekinge 41.25 315 *i* P **P** 22 01 33.4 -0.2
CHVC Chvalec 41.27 306 *e*P **P** 22 01 35.5 +1.5
CHVC Chvalec 41.27 306 *e*P **P** 22 01 35.5 +1.5
UPC Upice 41.31 306 *e*P **P** 22 01 35.8 +1.5

UPC Upice 41.31 306 *e*P P **22 01 35.8 +1.5**
STON Ston 41.33 295 *i* P P **22 01 34.8 +0.3**
RONA Rosalia, Austr 41.44 302 *e*P P **22 01 36.6 +1.2**
comp=Z,7.7nm,0.5s,SNR=5.6
KALN Kalnik 41.57 300 *i* P P **22 01 37.6 +1.1**
RICI Ricice 41.60 296 *i* P P **22 01 37.1 +0.3**
CONA Conrad Observa 41.70 302 *e*P P **22 01 39.0 +1.4**
comp=Z,6.7nm,0.5s,SNR=14
BSD Bornholm Skovb 41.75 313 *i* P P **22 01 37.0 -0.7**
BSD *i*P P **22 01 37.0 -0.7**
BSD lAmb lAmb 22 01 38.5
comp=Z,22nm,0.8s
JETT Jettan, Norway 41.77 335 *e*P P **22 01 39.1 +1.3**
JETT lAmb lAmb 22 01 40.5
comp=Z,17nm,0.5s
LOBO Lobor 41.83 300 *i* P P **22 01 39.8 +1.2**
YAK Yakutsk 41.96 36 P P **22 01 39.2 -0.2**
YAK lAmb lAmb 22 01 42.8
comp=Z,16nm,0.8s
YAK Yakutsk 41.96 36 *e*P P **22 01 40.2 +0.8**
YAK *e*'PP **pP 22 02 05.6 +2.6**
YAK *e*S **S 22 07 49.3 -1.2**
YAK *e*SS **SS 22 10 50.2 -10**
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,12nm,1.4s
YAK smax smax
comp=N,117nm,2.5s
YAK Yakutsk 41.96 36 LR LR 22 19 54.6
comp=N,89nm,20.5s,baz=174,slow=37
KIJV Kijevo 42.01 297 *i* P P **22 01 40.8 +0.7**
ARSA Arzberg 42.02 301 *e*P P **22 01 41.0 +0.9**
comp=N,5.9nm,0.6s
GOLS Golise 42.16 300 *e*P P **22 01 42.8 +1.5**
PVCC Panska Ves 42.22 306 *e*P P **22 01 43.3 +1.6**
PVCC Panska Ves 42.22 306 *e*P P **22 01 43.3 +1.6**
TRO Tromso 42.29 335 *e*P P **22 01 43.0 +1.1**
PRU Pruhonice 42.30 306 *e*P P **22 01 43.8 +1.5**
PRU Pruhonice 42.30 306 *e*P P **22 01 43.8 +1.5**
DEL Delary 42.33 315 *i* P P **22 01 42.4 -0.1**
OZLJ Ozalj 42.34 299 *i* P P **22 01 44.0 +1.3**
PLIT Plitvice 42.38 298 *i* P P **22 01 44.1 +1.1**
PERS Pernice 42.40 301 *i* P P **22 01 44.5 +1.3**
SOKA Soboth 42.45 301 *i* P P **22 01 45.0 +1.3**
comp=N,32nm,1.1s
BOJS Bojanci 42.51 299 *i* P P **22 01 45.7 +1.5**
MORI Morici 42.53 296 *i* P P **22 01 44.4 +0.1**
RUE Ruedersdorf 42.54 309 *e*P P **22 01 46.1 +2.0**
RUE Ruedersdorf 42.54 309 *e*P P **22 01 45.1 +0.9**
comp=N,14nm,0.8s,baz=82,slow=8.0
HFS Hagfors 42.55 321 P P **22 01 44.7 +0.5**
comp=N,27nm,0.4s,baz=98,slow=11,SNR=187
HFS LR LR 22 19 05.0
comp=N,237nm,18.8s,baz=285,slow=35
comp=N,27nm,0.4s
LUNU Lund 42.58 314 *i* P P **22 01 45.0 +0.5**
MDJ Mudanjiang 42.58 62 P P **22 01 46.2 +1.5**
MDJ S S **22 07 58.7 -1.5**
MDJ sS sS 22 08 42.6 +1.5
MDJ pmax pmax
comp=N,16nm,1.8s
MDJ pmax pmax
comp=N,250nm,4.0s
MDJ Mudanjiang 42.58 62 P P **22 01 47.0 +2.3**
BRG Berggiesshubel 42.58 307 *i* P P **22 01 46.1 +1.4**
BRG Amp 22 01 47.4
comp=Z,38nm,0.9s
BRG Berggiesshubel 42.58 307 *i* P P **22 01 46.0 +1.4**
BRG 22 03 26.7
BRG pmax pmax
comp=Z,38nm,0.9s
BRG Berggiesshubel 42.58 307 *e*P P **22 01 46.3 +1.7**
comp=Z,20nm,0.8s,baz=82,slow=8.0
ZVC Zvikov 42.59 305 *e*P P **22 01 46.4 +1.7**
CKRC Cesky Krumlov 42.60 304 *e*P P **22 01 46.3 +1.5**
CKRC Cesky Krumlov 42.60 304 *e*P P **22 01 46.3 +1.5**
RGN Rugen 42.69 312 P P **22 01 46.6 +1.2**
RGN Rugen 42.69 312 *e*P P **22 01 47.0 +1.7**
comp=Z,71nm,0.9s,baz=82,slow=8.0
MOA Molln 42.77 303 *e*P P **22 01 47.1 +0.8**
comp=Z,7.8nm,0.7s,SNR=6.5
OBKA Obir 42.81 301 *e*P P **22 01 49.3 +2.6**
comp=Z,26nm,1.3s
BJUU Bjuv 42.81 315 *i* P P **22 01 47.2 +0.9**
HSKC Hora Svate Kat 42.94 307 *e*P P **22 01 49.5 +2.0**
BORU Boraas 42.94 317 *i* P P **22 01 47.7 +0.4**
FAUS Fauske 42.94 331 *e*P P **22 01 48.4 +1.1**
FAUS lAmb lAmb 22 01 49.0
comp=Z,44nm,0.9s
TIP Timpagrande 42.95 289 P P **22 01 48.4 +0.5**
TIP lAmb lAmb 22 01 50.4
comp=Z,65nm,1.4s
NVLJ Novalja 42.97 298 *i* P P **22 01 48.3 +0.5**
FABU Falkenberg 42.97 316 *i* P P **22 01 47.6 0.0**
RABC Rab 42.99 298 *i* P P **22 01 48.5 +0.6**
GEC2 GERESS Array S 42.99 304 P P **22 01 48.5 +0.4**
GEC2 lAmb lAmb 22 01 51.5
comp=Z,24nm,1.2s
GEC2 GERESS Array S 42.99 304 *e*P P **22 01 49.4 +1.3**
comp=Z,8.7nm,1.0s,baz=82,slow=8.0
GERES GERESS Array B 42.99 304 P P **22 01 49.1 +1.0**
GERES GERESS Array B 42.99 304 P P **22 01 49.1 +1.0**
GERES GERESS Array B 42.99 304 P P **22 01 49.3 +1.3**
comp=Z,2.8nm,0.3s,baz=74,slow=7.8,SNR=25
GERES PP **PP 22 03 30.8 +1.3**
comp=Z,2.9nm,0.9s,baz=67,slow=10,SNR=3.9
comp=Z,2.8nm,0.3s
MOR8 Moi Rana 43.01 330 *e*P P **22 01 47.9 0.0**
MOR8 lAmb lAmb 22 01 48.9
comp=Z,69nm,0.7s
KHC Kasperske Hory 43.03 304 P P **22 01 49.4 +1.1**
KHC lAmb lAmb 22 01 51.2
comp=Z,23nm,0.7s
KHC Kasperske Hory 43.03 304 *e*P P **22 01 49.9 +1.6**
KHC *e*PP **PcP 22 03 37.4 +0.6**
KHC Kasperske Hory 43.03 304 P P **22 01 49.4 +1.1**
KHC pmax pmax
comp=Z,23nm,0.7s
STEI Steigen 43.08 332 *e*P P **22 01 49.7 +1.3**
CLL Collm 43.13 308 P P **22 01 49.4 +0.4**
CLL lAmb lAmb 22 01 51.2
comp=Z,24nm,0.7s
CLL Collm 43.13 308 P P **22 01 49.4 +0.4**
CLL pmax pmax
comp=Z,24nm,0.7s
CLL Collm 43.13 308 *i* P P **22 01 49.8 +0.8**
comp=Z,29nm,0.8s
CLL *e*PP **PP 22 03 32.0 +1.3**
CLL *e*PcP **PcP 22 03 37.0 0.0**
CLL *ep*PP 22 03 51.0
CLL Collm 43.13 308 *e*P P **22 01 50.2 +1.2**
comp=Z,17nm,0.7s,baz=82,slow=8.0
KS19 Wonju Array Si 43.19 73 P P **22 01 50.4 +0.7**
KS19 lAmb lAmb 22 03 15.5
comp=Z,75nm,1.6s
BIOA Bad Ischl, Aus 43.22 302 *e*P P **22 01 50.7 +0.9**
comp=Z,9.1nm,0.3s
KSAR Wonju Array Be 43.22 73 P P **22 01 50.4 +0.5**
KSAR Wonju Array Be 43.22 73 P P **22 01 50.4 +0.5**
KLR Kul'dur 43.23 55*ce*P P **22 01 50.2 +0.3**
KLR pmax pmax
comp=Z,15nm,1.3s
KLR Kul'dur 43.23 55 LR LR 22 20 19.0
comp=Z,61nm,21.6s,baz=316,slow=37
KSRS Korea Array 43.24 73 P P **22 01 50.6 +0.5**
comp=Z,1.1nm,0.3s,baz=285,slow=6.0,SNR=9.6
KSRS LR LR 22 21 41.0
comp=Z,42nm,18.8s,baz=305,slow=38
comp=Z,1.1nm,0.3s
MYKA Terra Mystica 43.40 301 *e*P P **22 01 52.4 +1.0**
comp=Z,4.9nm,0.5s
WET Wettzell 43.49 305 *e*P P **22 01 53.6 +1.7**
comp=Z,13nm,1.1s,baz=82,slow=8.0
PRED Cave del Predi 43.49 301 P P **22 01 52.4 +0.3**
PRED lAmb lAmb 22 01 54.6
comp=Z,53nm,1.5s
KBA Koelnbreinsper 43.52 302 *i* P P **22 01 53.3 +0.9**
comp=Z,6.0nm,0.5s
TANN Tannenbergstha 43.58 306 *e*P P **22 01 54.3 +1.6**
comp=Z,8.1nm,0.9s,baz=82,slow=8.0
NC405 NORSAR Array S 43.59 322 P P **22 01 52.8 +0.2**
NC405 lAmb lAmb 22 01 54.9
comp=Z,33nm,0.9s
KONS Konsvik 43.59 330 *e*P P **22 01 53.8 +1.3**
KONS lAmb lAmb 22 01 54.1
comp=Z,22nm,0.6s
NC602 NORSAR Array S 43.65 322 *e*P P **22 01 53.4 +0.3**
RJOB Jochberg 43.77 303 *e*P P **22 01 55.0 +0.7**
comp=Z,5.7nm,0.6s,baz=82,slow=8.0
OMEGA Omega 43.77 354 *e*P P **22 01 55.2 +1.5**
NSS Namsos 43.78 327 *e*P P **22 01 54.6 +0.6**
STRU Stromstad 43.79 319 *i* P P **22 01 53.6 -0.6**
NB2 NORSAR Subarra 43.83 322 P P **22 01 54.6 +0.1**
comp=Z,17nm,0.6s,baz=92,slow=8.6
NB2 NORSAR Subarra 43.83 322 P P **22 01 54.6 +0.1**
baz=92,slow=8.6
NOA NORSAR Array B 43.83 322 P P **22 01 54.0 -0.5**
comp=Z,11nm,0.5s,baz=102,slow=7.2,SNR=62
NOA LR LR 22 20 54.5
comp=Z,182nm,18.1s,baz=275,slow=37
comp=Z,11nm,0.5s
ROTZ Rotzenmuhle 43.83 306 *e*P P **22 01 56.8 +2.1**
comp=Z,3.0nm,1.1s,baz=82,slow=8.0
TIXI Tiksi 43.83 22 P P **22 01 54.7 +0.4**
TIXI lAmb lAmb 22 01 57.1
comp=Z,11nm,0.6s
TIXI Tiksi 43.83 22*ce*P P **22 01 54.1 -0.2**
TIXI pmax pmax
comp=Z,8.0nm,0.6s
TIXI Tiksi 43.83 22 P P **22 01 54.9 +0.6**
MANZ Manzenberg 43.86 306 *e*P P **22 01 56.6 +1.6**
comp=Z,1.8nm,0.8s,baz=82,slow=8.0
CEL Celeste 43.88 289 P P **22 01 56.1 +0.8**
CEL lAmb lAmb 22 01 57.7
comp=Z,91nm,1.5s
LESA Schwarzleotal 43.90 302 *i* P P **22 01 56.3 +0.9**
comp=Z,30nm,0.9s
NEUB Neuenburg 43.91 308 *e*P P **22 01 56.6 +1.4**
comp=Z,21nm,0.8s,baz=82,slow=8.0
MOX Moxa 44.08 307 *e*P P **22 01 58.2 +1.5**
comp=Z,11nm,0.8s,baz=82,slow=8.0
FLTG Flechtingen 44.10 309 *e*P P **22 01 57.9 +1.1**
comp=Z,36nm,0.8s,baz=82,slow=8.0
ABTA Abfaltersbach 44.14 301 *i* P P **22 01 58.0 +0.7**
comp=Z,10.0nm,0.6s
INTR Introdacqua 44.26 294 P P **22 01 58.9 +0.6**
INTR lAmb lAmb 22 02 00.4
comp=Z,14nm,0.7s
OVD Ostervraa, Den 44.33 317 *i* P P **22 01 59.3 +0.8**
USRK Ussuriysk Ar. 44.35 62 P P **22 01 59.4 +0.5**
comp=Z,4.8nm,0.8s,baz=272,slow=7.1,SNR=13
comp=Z,4.8nm,0.8s
TBLU Trondheim 44.40 325 *e*P P **22 01 59.2 +0.2**
GRF Grafenberg Arr 44.47 306 *e*P P **22 02 02.2 +2.4**
comp=Z,37nm,1.1s,baz=82,slow=8.0
GRFO Grafenberg 44.47 306 P P **22 02 00.7 +0.9**
GRFO lAmb lAmb 22 02 03.8
comp=Z,59nm,1.2s
GRFO Grafenberg 44.47 306 P P **22 02 00.7 +0.9**
GRFO pmax pmax
comp=Z,59nm,1.2s
ASSE Asse, Remlinge 44.47 309 *e*P P **22 02 00.5 +0.8**
comp=Z,3.3nm,0.6s,baz=82,slow=8.0
BSEG Bad Segeberg 44.49 312 *e*P P **22 02 01.7 +1.9**
comp=Z,22nm,0.8s,baz=82,slow=8.0
KONO Kongsberg 44.60 320 P P **22 02 01.9 +1.2**
KONO Kongsberg 44.60 320 P P **22 02 01.1 +0.5**
WTTA Wattenberg 44.63 302 *i* P P **22 02 01.7 +0.4**
comp=Z,17nm,0.7s
WATA Walderalm 44.66 302 *i* P P **22 02 02.0 +0.5**
comp=Z,28nm,1.1s,SNR=5.2
CLZ Clausthal 44.69 309 *e*P P **22 02 03.0 +1.5**
comp=Z,10nm,0.7s,baz=82,slow=8.0
NRDL Niedersach Rie 44.77 310 *e*P P **22 02 04.0 +2.0**
comp=Z,20nm,0.8s,baz=82,slow=8.0
DOMB Dombas 44.89 323 *e*P P **22 02 04.3 +1.3**
SQTA Sankt Quirin 44.92 302 *i* P P **22 02 03.8 +0.3**
comp=Z,7.2nm,0.4s
MOTA Moosalm 44.97 302 *i* P P **22 02 04.1 +0.1**
comp=Z,17nm,0.8s
GTTG Gottingen 44.98 308 *e*P P **22 02 05.5 +1.7**
comp=Z,36nm,0.9s,baz=82,slow=8.0
UBBA Unterbreizbach 45.07 307 *e*P P **22 02 05.7 +1.4**
comp=Z,7.7nm,0.6s,baz=82,slow=8.0
RETA Reutte 45.17 303 *i* P P **22 02 06.2 +0.8**
comp=Z,13nm,0.9s
HOMB Homborsund 45.20 318 *e*P P **22 02 06.0 +0.6**
HOMB Homborsund 45.20 318 *i* P P **22 02 05.3 -0.1**
FETA Feichten 45.28 302 *i* P P **22 02 06.6 +0.1**
comp=Z,4.8nm,0.6s
UBR Ueberruh 45.56 303 *e*P P **22 02 09.8 +1.2**
comp=Z,18nm,0.7s,baz=82,slow=8.0
FUORN Ofenpass-Fuorn 45.68 302 P P **22 02 10.2 +0.4**
DAVA Damuels 45.80 303 *i* P P **22 02 10.9 +0.4**
comp=Z,36nm,0.5s,SNR=12
AKN Aaknes 45.87 323 *e*P P **22 02 12.3 +1.7**
SNART Snartemo 45.88 318 *e*P P **22 02 11.6 +0.9**
SNART Snartemo 45.88 318 *i* P P **22 02 11.2 +0.4**
DAVOX Davos/Dischmat 45.91 302 LR LR 22 26 00.6
comp=Z,179nm,18.4s,baz=345,slow=42
STU Stuttgart 45.94 305 P P **22 02 12.3 +0.9**
STU lAmb lAmb 22 02 14.0
comp=Z,44nm,1.4s
STU Stuttgart 45.94 305 P P **22 02 12.3 +0.9**
STU pmax pmax
comp=Z,44nm,1.4s
TNS Taunus Mts 46.15 307 *e*P P **22 02 15.1 +2.0**
comp=Z,6.3nm,0.8s,baz=82,slow=8.0
SPITS Spitsbergen Ar 46.20 346 P P **22 02 14.2 +1.1**
SPITS Spitsbergen Ar 46.20 346 P P **22 02 14.5 +1.4**
comp=Z,8.8nm,0.6s,baz=122,slow=12,SNR=28
SPITS PcP **PcP 22 03 47.9 +0.8**
comp=Z,23nm,1.1s,baz=101,slow=6.0,SNR=2.4
comp=Z,8.8nm,0.6s
IBBN Ibbenburen 46.22 310 *e*P P **22 02 15.2 +1.6**
comp=Z,17nm,0.7s,baz=82,slow=8.0
TUE Stuetta 46.33 302 P P **22 02 14.8 0.0**
TUE lAmb lAmb 22 02 17.3
comp=Z,34nm,1.6s
BFO Black Forest 46.59 304 P P **22 02 17.4 +0.8**
BFO lAmb lAmb 22 02 18.3
comp=Z,40nm,1.6s
BFO Black Forest 46.59 304 P P **22 02 17.4 +0.8**
BFO pmax pmax
comp=Z,40nm,1.6s
BFO Black Forest 46.59 304 *e*P P **22 02 17.8 +1.2**
comp=Z,6.8nm,0.8s,baz=82,slow=8.0
BFO Black Forest 46.59 304 P P **22 02 17.4 +0.8**
BUG Bochum--Univer 46.66 309 *e*P P **22 02 19.4 +2.3**
comp=Z,29nm,1.2s,baz=82,slow=8.0
AHRW Bad Neuenahr-A 46.95 307 *e*P P **22 02 21.2 +1.9**
comp=Z,11nm,0.8s,baz=82,slow=8.0
JNU Nakatsue 47.05 77 P P **22 02 21.0 +0.6**
JNU lAmb lAmb 22 02 23.1
comp=Z,70nm,1.3s
KBS Kingsbay 47.31 347 P P **22 02 22.8 +1.1**
KBS Kingsbay 47.31 347 P P **22 02 22.8 +1.1**
KBS pmax pmax
comp=Z,102nm,1.4s
ECH Echery 47.38 304 P P **22 02 23.1 +0.5**
ECH Echery 47.38 304 P P **22 02 23.2 +0.5**
ECH pmax pmax
comp=Z,20nm,1.5s
ECH Echery 47.38 304 P P **22 02 23.6 +0.9**
BTNL Ternell 47.53 308 *d*P P **22 02 25.7 +1.8**
MEM Membach 47.60 308 *d*P P **22 02 26.1 +1.8**
comp=Z,12nm,1.0s
BHOU Houvegnez 47.66 307 *d*P P **22 02 26.8 +2.0**
WLF Walferdange 47.71 306 P P **22 02 26.1 +0.9**
WLF lAmb lAmb 22 02 28.1
comp=Z,22nm,0.7s
WLF Walferdange 47.71 306 *d*P P **22 02 26.2 +1.0**
comp=Z,19nm,0.9s
WLF Walferdange 47.71 306 P P **22 02 26.1 +0.9**
WLF pmax pmax
comp=Z,22nm,0.7s
WLF Walferdange 47.71 306 *e*P P **22 02 27.0 +1.8**
comp=Z,16nm,0.7s,baz=82,slow=8.0
WLF *ep*P **pP 22 02 55.0 +5.7**
SENIN Lac Senin/Sane 47.73 302 P P **22 02 26.1 +0.4**
JOW Kunigami 47.75 86 P P **22 02 25.9 +0.1**
JOW lAmb lAmb 22 02 57.2
comp=Z,51nm,1.0s
BCLA Clavier 48.08 308 *d*P P **22 02 29.0 +1.0**
RCHB Rochefort 48.19 307 *d*P P **22 02 30.6 +1.8**
BGES Geses 48.23 308 *d*P P **22 02 30.5 +1.3**
BMRD Maredsous 48.44 308 *d*P P **22 02 32.0 +1.2**
comp=Z,14nm,1.0s
BNI Bardonecchia 48.50 300 P P **22 02 32.0 +0.5**
BNI lAmb lAmb 22 02 34.3
comp=Z,26nm,1.1s
BNI Bardonecchia 48.50 300 P P **22 02 32.0 +0.5**
BNI pmax pmax
comp=Z,26nm,1.1s
DOU Dourbes 48.60 307 *d*P P **22 02 33.5 +1.5**
DOU *dp*P **pP 22 02 59.5 +3.3**
KEST Kesra 49.67 288 P P **22 02 41.3 +0.8**
KEST Kesra 49.67 288 P P **22 02 41.5 +1.0**
comp=Z,4.4nm,0.6s,baz=298,slow=3.3,SNR=16
comp=Z,4.4nm,0.6s
SSB Saint Sauveur 49.88 301 P P **22 02 42.9 +0.9**
SSB Saint Sauveur 49.88 301 P P **22 02 42.9 +0.9**
SSB pmax pmax
comp=Z,80nm,1.8s
SSB Saint Sauveur 49.88 301 P P **22 02 43.0 +1.1**
CLF Chambon-Foret 50.61 305 P P **22 02 47.5 +0.2**
CLF Chambon-Foret 50.61 305 P P **22 02 47.9 +0.6**
YSS Yuzh-Sakhalins 50.92 56*ce*P P **22 02 49.2 -0.5**
YSS pmax pmax
comp=Z,74nm,2.5s
JGF Kuroka 51.00 72 P P **22 02 49.6 -0.9**
JGF lAmb lAmb 22 04 25.9
comp=Z,40nm,1.8s
MJAR Matsushiro Arr 51.27 70 P P **22 02 52.9 +0.4**
comp=Z,8.3nm,1.1s,baz=297,slow=9.5,SNR=7.4
comp=Z,8.3nm,1.1s
ASAJ Asahikawa 51.70 60 P P **22 02 55.6 +0.1**
ASAJ pmax pmax
comp=Z,87nm,1.8s
ASAJ Asahikawa 51.70 60 LR LR 22 26 14.0
comp=Z,63nm,20.1s,baz=352,slow=37
JKA Kamikawa-asahi 51.70 60 P P **22 02 55.6 +0.1**
JTM Tenmabayashi 51.77 64 P P **22 02 55.0 -1.0**
EKA Eskdalemuir Ar 51.97 315 P P **22 02 57.7 +0.3**
comp=Z,4.7nm,0.5s,baz=89,slow=7.1,SNR=26
comp=Z,4.7nm,0.5s
EKB Eskdalemuir 51.98 315 P P **22 02 57.4 0.0**
ESK Eskdalemuir 52.00 315 P P **22 02 57.4 -0.2**
ESK Eskdalemuir 52.00 315 P P **22 02 57.4 -0.2**
ESK pmax pmax
comp=Z,172nm,2.0s
SEY Seymchan 52.41 35*d i*P P **22 03 00.7 +0.2**
MBAR Mbarara 54.41 235 P P **22 03 15.4 -0.6**
BILL Bilibino 56.63 27 P P **22 03 32.8 +1.9**
ALE Alert 57.57 354 P P **22 03 39.0 +1.6**
ESDC Sonseca Array 57.77 297 P P **22 03 39.3 -0.2**
ESDC lAmb lAmb 22 03 40.5
comp=Z,20nm,1.8s
ESDC Sonseca Array 57.77 297 P P **22 03 39.7 +0.2**
comp=Z,4.1nm,0.6s,baz=56,slow=7.0,SNR=48
ESDC PcP **PcP 22 04 31.7 +0.5**
comp=Z,1.7nm,0.8s,baz=41,slow=4.0,SNR=5.0
comp=Z,4.1nm,0.6s
PAB San Pablo 58.09 298 P P **22 03 41.9 +0.2**
PAB lAmb lAmb 22 04 42.8
comp=Z,46nm,1.7s
PAB San Pablo 58.09 298 P P **22 03 41.9 +0.2**
PAB pmax pmax
comp=Z,46nm,1.7s
PAB San Pablo 58.09 298 P P **22 03 42.8 +1.0**
TAM Tamanrasset 58.57 276 P P **22 03 45.8 +0.4**
TAM lAmb lAmb 22 04 39.4
comp=Z,20nm,2.0s
TAM Tamanrasset 58.57 276 P P **22 03 45.8 +0.4**
TAM pmax pmax
comp=Z,20nm,2.0s
TAM Tamanrasset 58.57 276 P P **22 03 46.3 +0.9**
NEEM North Greenlan 59.71 348 *i* P P **22 03 53.5 +0.9**
NEEM lAmb lAmb 22 03 54.7
comp=Z,7.9nm,0.6s
SUMG Summit 59.92 341 P P **22 03 55.2 +0.9**
SUMG lAmb lAmb 22 03 56.8
comp=Z,14nm,0.7s
SUMG Summit 59.92 341 P P **22 03 55.2 +0.9**
SUMG pmax pmax
comp=Z,14nm,0.7s
SUMG Summit 59.92 341 *i* P P **22 03 55.9 +1.6**
SUMG lAmb lAmb 22 03 57.2
comp=Z,11nm,0.6s
PVAQ Vaqueiros 61.41 297 P P **22 04 05.2 +0.8**
ICESG Greenland Ices 62.16 338 *i* P P **22 04 11.0 +1.6**
ICESG lAmb lAmb 22 04 13.2
comp=Z,12nm,0.8s
AVE Averroes 63.15 292 P P **22 04 16.3 +0.2**
UPNV Upernavik 63.89 345 *i* P P **22 04 21.2 +0.9**
UPNV lAmb lAmb 22 04 22.6
comp=Z,8.0nm,0.6s
C16K Lisburne Hills 65.53 20 P P **22 04 31.5 +0.5**
DY2G Dye2 65.75 337 *i* P P **22 04 34.0 +1.2**
DY2G lAmb lAmb 22 04 36.6
comp=Z,9.8nm,0.6s
B20K Meade River 66.32 17 P P **22 04 36.7 +0.6**
TOA0 Torodi Ar. Sit 66.95 269 P P **22 04 40.0 -0.9**
TOA0 lAmb lAmb 22 04 41.2
comp=Z,6.8nm,0.5s
TORD Torodi Ar. Bea 66.95 269 P P **22 04 40.3 -0.6**
comp=Z,7.6nm,0.4s,baz=47,slow=6.2,SNR=39
comp=Z,7.6nm,0.4s
ANM Nome 68.08 23 P P **22 04 48.4 +1.1**
ANM lAmb lAmb 22 06 37.6
comp=Z,24nm,1.8s
ANM Nome 68.08 23 P P **22 04 48.4 +1.1**
ANM pmax pmax
comp=Z,24nm,1.8s
TOLK Toolik Lake Re 69.06 15 P P **22 04 54.1 +0.7**
TOLK lAmb lAmb 22 05 32.5
comp=Z,13nm,0.9s
IMAR Indian Mountai 70.27 18 P P **22 05 00.8 +0.1**
BMAR Burnt Mountain 71.09 14 P P **22 05 07.3 +1.5**
L16K Owhat River 72.00 23 P P **22 05 12.4 +1.1**
L16K lAmb lAmb 22 06 16.5
comp=Z,43nm,1.9s
INK Inuvik 72.11 10 P P **22 05 13.1 +1.3**
INK Inuvik 72.11 10 P P **22 05 13.1 +1.3**
INK pmax pmax
comp=Z,15nm,1.3s
ILAR Eielson Array 72.89 17 P P **22 05 16.5 -0.1**
ILAR Eielson Array 72.89 17 P P **22 05 16.5 -0.1**
ILAR Eielson Array 72.89 17 P P **22 05 16.8 +0.2**
comp=Z,0.9nm,0.6s,baz=324,slow=4.7,SNR=9.6
comp=Z,0.9nm,0.6s
KTH Kantishna Hill 72.96 19 P P **22 05 17.4 +0.3**
SKT Skwentna 74.09 20 P P **22 05 24.0 +0.3**
SKT lAmb lAmb 22 07 39.8
comp=Z,62nm,1.9s
SCRK Sand Creek 74.22 16 P P **22 05 25.4 +0.9**
BCAR Beaver Creek A 75.49 15 P P **22 05 32.9 +1.2**
DBIC Dimbokro 75.97 267 P P **22 05 34.6 -0.6**
DBIC lAmb lAmb 22 07 33.1
comp=Z,46nm,1.8s
DBIC Dimbokro 75.97 267 P P **22 05 34.6 -0.6**
DBIC pmax pmax
comp=Z,46nm,1.8s
DBIC Dimbokro 75.97 267 P P **22 05 34.9 -0.3**
comp=Z,2.9nm,0.6s,baz=61,slow=5.2,SNR=3.9
DBIC LR LR 22 43 38.9
comp=Z,78nm,18.0s,baz=16,slow=39
comp=Z,2.9nm,0.6s
LBTB Lobatse 76.68 223 P P **22 05 38.5 -0.5**
LBTB lAmb lAmb 22 06 21.2
comp=Z,30nm,1.6s
LBTB Lobatse 76.68 223 P P **22 05 38.5 -0.5**
LBTB pmax pmax
comp=Z,30nm,1.7s
YKA Yellowknife Ar 79.57 3 *i* P P **22 05 55.4 +1.0**
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA Yellowknife Ar 79.57 3 P P **22 05 55.1 +0.8**
comp=Z,3.0nm,0.6s,baz=348,slow=5.7,SNR=74
comp=Z,3.0nm,0.6s
SCHQ Schefferville 81.07 338 P P **22 06 02.3 -0.3**
WB0 Warramunga Arr 81.76 123 P P **22 06 06.0 -0.7**
WRA Warramunga Arr 81.85 123 P P **22 06 06.3 -0.8**
WRA Warramunga Arr 81.85 123 *i* P P **22 06 06.8 -0.3**
WRA pmax pmax
comp=Z,1.0nm,0.3s
WRA Warramunga Arr 81.85 123 P P **22 06 06.3 -0.8**
comp=Z,0.8nm,0.4s,baz=320,slow=4.4,SNR=16
comp=Z,0.8nm,0.4s
FCC Fort Churchill 82.83 353 P P **22 06 11.9 +0.2**
FCC lAmb lAmb 22 06 17.7
comp=Z,29nm,1.8s
FCC Fort Churchill 82.83 353 P P **22 06 11.9 +0.2**

FCC			pmax	pmax		
	comp=Z,29nm,1.8s					
ASAR	**Alice Springs**	**84.22 126**	P	**P**	**22 06 19.5**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=301,slow=6.4,SNR=4.7					
	comp=Z,0.5nm,0.8s					
GBN	**Guysborough**	**87.12 330**	P	**P**	**22 06 34.3**	**+0.9**
FFC	**Flin Flon**	**87.40 357**	P	**P**	**22 06 35.1**	**+0.5**
FFC	**Flin Flon**	**87.40 357**	P	**P**	**22 06 35.1**	**+0.5**
FFC			pmax	pmax		
	comp=Z,6.0nm,0.9s					
PPT2	**Papeete2**	**137.99 73**	eLR	LR	22 57 50.2	
	comp=Z,80nm,22.2s					
TRQA	**Tornquist**	**144.45 256**		PKPbc	22 13 22.5	+0.5
TRQA	**Tornquist**	**144.45 256**	PKIKP	PKPbc	22 13 22.5	+0.5
PLCA	**Paso Flores**	**151.47 253**	PKPbc	**PKiKP**	**22 13 41.9**	**+0.5**
	comp=Z,2.5nm,0.5s,baz=21,slow=1.9,SNR=8.7					

*ASIES **06** 21:56:42.7,23.98N×121.59E,h7km,ML3.7,Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-2.54; $M_{\theta\theta}$0.60; $M_{\phi\phi}$-2.67; $M_{r\theta}$-2.57; $M_{\theta\phi}$-6.34; $M_{\phi r}$-2.41; Fault plane solution: $M_0$7.71612×10^{20} NP1: ϕ_s85.83000°,δ74.49000°,λ-157.03000°. NP2: ϕ_s349.36000°,δ67.91000°,λ-16.77000°. Principal axes: T Plg4.4090°, Azm216.5910°; N Plg62.5220°, Azm118.0660°; P Plg27.0620°, Azm308.8490°;*

*JMA **06** 21:56:42.2±0.3,24.0N±0.3×12.2E±, h2km±3km, MV3.0/11, TAIWAN REGION*

*TAP **06** 21:56:42.7,23.98N×121.59E,h7km,ML3.7,C*

ISC 06 21:56:42.8±0.8,**23.98N**±0.01×**121.61E**±0.02,**h9**km±5km, **n143,**σ0.85/229,**4C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.10**	**353**	*i* P		**Pg**	**21 56 45.7**	**+0.3**
	baz=7.0							
TWD				*i* S		**Sg**	**21 56 47.5**	**+0.2**
	baz=7.0							
ETM	**Tongmen**	**0.11**	**264**	P		**Pg**	**21 56 45.4**	**-0.1**
	baz=262							
ETM				S		**Sg**	**21 56 47.0**	**-0.4**
	baz=262							
ETL	**Fush Village**	**0.18**	**4**	*i* P		**Pg**	**21 56 47.0**	**+0.3**
	baz=9.0							
ETL				*i* S		**Sg**	**21 56 49.5**	**+0.1**
	baz=9.0							
LXIB	**Xiulin Townshi**	**0.18**	**284**	⇓*i* P		**Pg**	**21 56 46.7**	**-0.1**
	baz=278							
LXIB				S		**Sg**	**21 56 49.6**	**+0.1**
	baz=278							
SHUL	**Shoufeng**	**0.19**	**193**	P		**Pg**	**21 56 47.6**	**+0.8**
	baz=195							
SHUL				S		**Sg**	**21 56 52.4**	**+2.8**
	baz=195							
NACB	**Ninganchiao**	**0.20**	**356**	P		**Pg**	**21 56 47.0**	**+0.1**
NACB	**Ninganchiao**	**0.20**	**356**	⇓*i* P		**Pg**	**21 56 47.1**	**+0.1**
	baz=7.0							
NACB				*i* S		**Sg**	**21 56 49.5**	**-0.2**
	baz=7.0							
ESL	**Shilin**	**0.23**	**225**	⇑*i* P		**Pg**	**21 56 47.4**	**-0.2**
	baz=226							
ESL				*i* S		**Sg**	**21 56 50.2**	**-0.5**
	baz=226							
TEGC	**Jichi Village**	**0.28**	**194**	P		**Pb**	**21 56 49.2**	**-0.7**
	baz=195							
TEGC				S		**Sb**	**21 56 55.0**	**+0.4**
	baz=195							
WARBT	**Fenglin Townsh**	**0.33**	**218**	⇑*i* P		**Pg**	**21 56 49.1**	**-0.3**
	baz=226							
WARBT				*i* S		**Sg**	**21 56 53.1**	**-0.7**
	baz=226							
EGFH	**Guangfu**	**0.35**	**209**	P		**Pg**	**21 56 49.8**	**0.0**
	baz=215							
WHF	**Hehuan Shan**	**0.36**	**298**	⇓*i* P		**Pg**	**21 56 50.0**	**0.0**
	baz=300							
WHF				*i* S		**Sg**	**21 56 55.0**	**+0.1**
	baz=300							
EAHA	**Aohua**	**0.37**	**19**	P		**Pg**	**21 56 50.5**	**+0.3**
	baz=31							
EAHA				S		**Sg**	**21 56 55.2**	**+0.1**
	baz=31							
OWD	**Renai**	**0.40**	**267**	⇓P		**Pg**	**21 56 50.8**	**+0.1**
	baz=278							
OWD				S		**Sg**	**21 56 56.1**	**+0.1**
	baz=278							
CHGB	**Renai**	**0.41**	**282**	⇓*i* P		**Pg**	**21 56 51.1**	**+0.2**
	baz=282							
CHGB				*i* S		**Sb**	**21 56 57.0**	**-1.7**
	baz=282							
FUSS	**Fushou**	**0.43**	**309**	⇓*i* P		**Pg**	**21 56 51.6**	**+0.3**
	baz=320							
FUSS				*i* S		**Sb**	**21 56 58.0**	**-1.4**
	baz=320							
WUSB	**Renai**	**0.45**	**272**	*i* P		**Pb**	**21 56 52.0**	**-1.0**
	baz=282							
WUSB				S		**Sb**	**21 56 58.2**	**-1.7**
	baz=282							
ENA	**Nanau**	**0.46**	**15**	P		**Pg**	**21 56 52.2**	**+0.2**
	baz=17							
ENA				S		**Sg**	**21 56 58.3**	**+0.3**
	baz=17							
TWT	**Tachien**	**0.48**	**305**	*i* P		**Pb**	**21 56 52.8**	**-0.8**
	baz=304							
TWT				S		**Sb**	**21 56 60.0**	**-0.9**
	baz=304							
VWDT	**VWDT**	**0.48**	**243**	⇓*i* P		**Pg**	**21 56 52.4**	**+0.2**
	baz=234							
VWDT				*i* S		**Sg**	**21 56 58.3**	**-0.3**
	baz=234							
EWUT	**Wuta**	**0.49**	**18**	P		**Pg**	**21 56 52.6**	**+0.2**
	baz=20							
EWUT				S		**Sg**	**21 56 58.6**	**-0.3**
	baz=20							
NNSB	**Datong**	**0.49**	**335**	⇓*i* P		**Pg**	**21 56 52.9**	**+0.4**
	baz=328							
NNSB				*i* S		**Sg**	**21 56 59.1**	**0.0**
	baz=328							
NNSH	**Datong**	**0.49**	**335**	P		**Pg**	**21 56 52.9**	**+0.4**
	baz=336							
NNSH				S		**Sg**	**21 56 59.3**	**+0.3**
	baz=336							
TDCB	**Techi**	**0.50**	**304**	⇓*i* P		**Pg**	**21 56 52.7**	**+0.2**
	baz=313							
TDCB				S		**Sb**	**21 56 59.7**	**-1.5**
	baz=313							
NNS	**Nan Shan**	**0.51**	**335**	⇓*i* P		**Pg**	**21 56 53.1**	**+0.4**
	baz=328							
NNS				*i* S		**Sg**	**21 56 59.6**	**+0.1**
	baz=328							
HGSD	**Ruisui**	**0.51**	**199**	P		**Pb**	**21 56 53.5**	**-0.5**
	baz=208							
EHY	**Hungye**	**0.54**	**209**	⇑*i* P		**Pg**	**21 56 53.0**	**-0.2**
	baz=218							
EHY				S		**Sg**	**21 57 00.2**	**-0.1**
	baz=218							
LATG	**Datong**	**0.56**	**352**	⇓*i* P		**Pg**	**21 56 53.9**	**+0.2**
	baz=343							
LATG				*i* S		**Sg**	**21 57 01.4**	**+0.3**
	baz=343							
DPDB	**Guoxing**	**0.63**	**275**	P		**Pb**	**21 56 55.4**	**-0.6**
	baz=276							
DPDB				S		**Sb**	**21 57 04.5**	**-0.4**
	baz=276							
NDT	**Datong Townshi**	**0.63**	**352**	P		**Pg**	**21 56 55.3**	**+0.3**
	baz=343							
NDT				S		**Sg**	**21 57 03.1**	**-0.2**
	baz=343							
SSLB	**Suanglung**	**0.63**	**253**	P		**Pb**	**21 56 55.3**	**-0.8**
SSLB	**Suanglung**	**0.63**	**253**	P		**Pb**	**21 56 55.2**	**-0.8**
	baz=265							
SSLB				S		**Sg**	**21 57 02.1**	**-1.2**
	baz=265							
ESAO	**Su ao**	**0.63**	**20**	*e*P		**Pg**	**21 56 55.5**	**+0.4**
	baz=21							
ESAO				*e*S		**Sg**	**21 57 03.6**	**+0.2**
	baz=21							
WCS	**Beigang Elemen**	**0.64**	**277**	⇓*i* P		**Pb**	**21 56 55.7**	**-0.5**
	baz=278							
WCS				S		**Sb**	**21 57 04.0**	**-1.3**
	baz=278							
YULB	**Yu-li**	**0.65**	**206**	P		**Pg**	**21 56 55.6**	**+0.2**
YULB	**Yu-li**	**0.65**	**206**	P		**Pg**	**21 56 55.5**	**+0.2**
YULB	**Yu-li**	**0.65**	**206**	P		**Pg**	**21 56 54.9**	**-0.5**
	baz=216							
YULB				S		**Sg**	**21 57 03.7**	**-0.2**
	baz=216							
SMLT	**Sun Moon Lake**	**0.66**	**262**	⇓*i* P		**Pb**	**21 56 55.8**	**-0.7**
	baz=262							
SMLT				*i* S		**Sg**	**21 57 04.0**	**-0.1**
	baz=262							
ENTT	**Nioudou**	**0.66**	**357**	⇓*i* P		**Pb**	**21 56 56.0**	**-0.5**
	baz=358							
ENTT				S		**Sg**	**21 57 04.9**	**+0.6**
	baz=358							
NDS	**Dongshan**	**0.66**	**8**	P		**Pg**	**21 56 56.0**	**+0.3**
	baz=9.0							
NDS				S		**Sg**	**21 57 04.5**	**+0.2**
	baz=9.0							
EOS4	**EOS4**	**0.66**	**77**	*e*P		**Pb**	**21 56 56.6**	**+0.3**
	baz=88							
TWC	**Suao**	**0.67**	**19**	P		**Pg**	**21 56 55.8**	**+0.1**
	baz=9.0							
TWC				S		**Sg**	**21 57 04.5**	**+0.1**
	baz=9.0							
ECBN	**Changbin**	**0.67**	**193**	P		**Pb**	**21 56 57.3**	**+0.6**
	baz=181							
ECBN				S		**Sb**	**21 57 07.7**	**+1.5**
	baz=181							
WHP	**Taichung City**	**0.68**	**296**	⇓*i* P		**Pb**	**21 56 56.6**	**-0.2**
	baz=288							
WHP				S		**Sb**	**21 57 06.2**	**-0.1**
	baz=288							
EYUL	**Yuli**	**0.68**	**203**	*e*P		**Pg**	**21 56 55.9**	**-0.1**
	baz=212							
TWF1	**Yuli**	**0.69**	**205**	P		**Pg**	**21 56 55.8**	**-0.3**
	baz=216							
TWF1				S		**Sg**	**21 57 05.3**	**+0.3**
	baz=216							
TYC	**Yuchr**	**0.69**	**264**	P		**Pg**	**21 56 56.2**	**0.0**
	baz=264							
TYC				S		**Sg**	**21 57 04.4**	**-0.9**
	baz=264							
EOS2	**EOS2**	**0.72**	**52**	*e*P		**Pn**	**21 56 59.2**	**+0.2**
	baz=66							
YHNB	**Yeheng**	**0.72**	**343**	P		**Pb**	**21 56 57.7**	**+0.1**
YHNB	**Yeheng**	**0.72**	**343**	⇓*i* P		**Pb**	**21 56 57.2**	**-0.4**
	baz=344							
YHNB				*i* S		**Sg**	**21 57 06.2**	**-0.1**
	baz=344							
NSK	**Sanguang**	**0.73**	**342**	⇓*i* P		**Pb**	**21 56 57.4**	**-0.4**
	baz=343							
NSK				*i* S		**Sg**	**21 57 06.3**	**-0.3**
	baz=343							
TWE	**Neicheng**	**0.74**	**4**	P		**Pb**	**21 56 57.5**	**-0.4**
	baz=6.0							
TWE				S		**Sg**	**21 57 07.2**	**+0.3**
	baz=6.0							
WHYT	**Xinyi Township**	**0.75**	**248**	P		**Pb**	**21 56 57.6**	**-0.5**
	baz=257							
WHYT				S		**Sg**	**21 57 07.1**	**+0.1**
	baz=257							
FUSB	**Fushanzhiwuyua**	**0.78**	**358**	P		**Pb**	**21 56 58.3**	**-0.3**
	baz=359							
FUSB				S		**Sg**	**21 57 08.0**	**-0.1**
	baz=359							
NFF	**Wufeng Townshi**	**0.79**	**326**	P		**Pb**	**21 56 58.8**	**0.0**
	baz=326							
NFF				S		**Sg**	**21 57 08.7**	**+0.2**
	baz=326							
NWLT	**Wulai**	**0.80**	**353**	P		**Pb**	**21 56 58.9**	**-0.1**
	baz=354							
NWLT				S		**Sg**	**21 57 08.4**	**-0.4**
	baz=354							
CHKH	**Chenggong**	**0.81**	**194**	*e*P		**Pb**	**21 56 58.9**	**-0.1**
	baz=185							
CHKH				*e*S		**Sn**	**21 57 11.6**	**-0.8**
	baz=185							
WJS	**Zhushan**	**0.82**	**259**	*e*P		**Pn**	**21 57 00.1**	**-0.5**
	baz=260							
WJS				*e*S		**Sn**	**21 57 11.7**	**-1.1**
	baz=260							
FULB	**Fuli**	**0.83**	**201**	*e*P		**Pb**	**21 56 59.4**	**+0.1**
	baz=217							
TWQ1	**Liyutan**	**0.85**	**296**	P		**Pn**	**21 57 00.3**	**-0.7**
	baz=296							
TWQ1				*e*S		**Sn**	**21 57 13.2**	**-0.3**
	baz=296							
WNT	**Mingjian**	**0.85**	**264**	P		**Pn**	**21 57 00.9**	**-0.1**
	baz=264							
WNT				S		**Sn**	**21 57 12.7**	**-0.9**
	baz=264							
NSTT	**Nanjuang**	**0.86**	**320**	⇓*i* P		**Pb**	**21 56 60.0**	**+0.1**
	baz=320							
NSTT				S		**Sb**	**21 57 11.6**	**+0.1**
	baz=320							
LIOB	**Emei**	**0.86**	**321**	P		**Pb**	**21 57 00.2**	**+0.3**
	baz=321							
LIOB				S		**Sb**	**21 57 11.8**	**+0.3**
	baz=321							
ALS	**Alishan**	**0.87**	**238**	P		**Pb**	**21 56 59.8**	**-0.5**
	baz=247							
NSY	**Sanyi**	**0.89**	**300**	*e*P		**Pn**	**21 57 01.4**	**-0.1**
	baz=300							
NSY				*e*S		**Sn**	**21 57 14.5**	**-0.1**
	baz=300							
CHKT	**Chengkung**	**0.90**	**194**	P		**Pb**	**21 57 00.3**	**-0.3**
	baz=196							
CHKT				*e*S		**Sn**	**21 57 14.1**	**-0.7**
	baz=196							
EHD	**Haiduan**	**0.90**	**204**	*e*P		**Pg**	**21 57 00.0**	**-0.2**
	baz=207							
NMLH	**Miaoli**	**0.93**	**307**	*e*P		**Pn**	**21 57 01.7**	**-0.4**
	baz=306							
CHN5	**Tsauling**	**0.93**	**246**	⇑*i* P		**Pn**	**21 57 01.7**	**-0.5**
	baz=236							
CHN5				S		**Sn**	**21 57 15.0**	**-0.7**
	baz=236							
ECS	**Chishang**	**0.95**	**202**	*e*P		**Pn**	**21 57 02.1**	**-0.2**
	baz=206							
ELDTW	**Lidau**	**0.95**	**215**	P		**Pg**	**21 56 59.9**	**-1.3**
	baz=203							
WDJ	**Dajia District**	**0.96**	**293**	*e*P		**Pn**	**21 57 03.1**	**+0.7**
	baz=293							
WDJ				*e*S		**Sn**	**21 57 17.8**	**+1.6**
	baz=293							
WCHH	**Zhanghua**	**0.97**	**276**	*e*P		**Pn**	**21 57 03.0**	**+0.4**
	baz=277							
WCHH				*e*S		**Sn**	**21 57 19.2**	**+2.9**
	baz=277							
NHDH	**Xindian Distri**	**0.98**	**356**	*e*P		**Pn**	**21 57 02.6**	**-0.2**
	baz=356							
NHDH				*e*S		**Sb**	**21 57 14.9**	**-0.2**
	baz=356							
SBCB	**Hsinchu**	**0.99**	**325**	*e*P		**Pn**	**21 57 02.9**	**0.0**
	baz=325							
TWA	**Mucha**	**1.00**	**359**	P		**Pn**	**21 57 02.9**	**-0.1**
	baz=349							
TWA				S		**Sb**	**21 57 15.3**	**-0.3**
	baz=349							
TATO	**Taipei**	**1.00**	**354**	P		**Pn**	**21 57 03.2**	**+0.2**
TATO	**Taipei**	**1.00**	**354**	P		**Pn**	**21 57 03.0**	**0.0**
WGK	**Gukeng**	**1.00**	**253**	*e*P		**Pn**	**21 57 03.1**	**0.0**
	baz=255							
WGK				*e*S		**Sn**	**21 57 17.9**	**+0.6**
	baz=255							
TIPB	**Shuangxi**	**1.01**	**11**	*e*P		**Pb**	**21 57 02.5**	**0.0**
	baz=3.0							
TIPB				*e*S		**Sg**	**21 57 14.9**	**-0.5**
	baz=3.0							
WDLH	**Douliu**	**1.02**	**254**	*e*P		**Pn**	**21 57 03.5**	**+0.2**
	baz=255							
EDH	**Donghe**	**1.04**	**196**	*e*P		**Pg**	**21 57 01.1**	**-1.7**
	baz=217							
NCUH	**Zhongli**	**1.06**	**339**	*e*P		**Pg**	**21 57 02.9**	**-0.4**
	baz=338							
WCKO	**Fanlu**	**1.07**	**240**	P		**Pn**	**21 57 04.1**	**+0.2**
	baz=235							
WCKO				S		**Sn**	**21 57 19.4**	**+0.6**
	baz=235							
TWB1	**Santiao Chiao**	**1.08**	**18**	*e*P		**Pb**	**21 57 04.0**	**+0.3**
	baz=10.0							
NWF	**Wu-fen Shan**	**1.10**	**8**	*e*P		**Pn**	**21 57 04.7**	**+0.3**
	baz=9.0							
NWF				*e*S		**Sg**	**21 57 18.3**	**-0.1**
	baz=9.0							
WFSB	**Wu-fen Shan**	**1.10**	**8**	*e*P		**Pn**	**21 57 05.0**	**+0.6**
	baz=9.0							
WFSB				*e*S		**Sg**	**21 57 18.2**	**-0.1**
	baz=9.0							
STYH	**Taoyuan**	**1.11**	**224**	P		**Pg**	**21 57 03.8**	**-0.4**
	baz=213							
CHN4	**Tsaushan**	**1.12**	**236**	P		**Pn**	**21 57 04.9**	**+0.2**
	baz=230							
CHN4				S		**Sn**	**21 57 21.4**	**+1.1**
	baz=230							
TPUB	**Ta-pu**	**1.12**	**233**	P		**Pn**	**21 57 05.0**	**+0.2**
TPUB	**Ta-pu**	**1.12**	**233**	P		**Pn**	**21 57 04.9**	**+0.2**
TPUB	**Ta-pu**	**1.12**	**233**	P		**Pb**	**21 57 04.4**	**0.0**
	baz=236							
CHN2	**Minshiung**	**1.13**	**247**	*e*P		**Pn**	**21 57 05.6**	**+0.8**
	baz=263							
CHN2				*e*S		**Sn**	**21 57 22.2**	**+1.8**
	baz=263							
WRL	**Guolierlin Hig**	**1.13**	**266**	*e*P		**Pn**	**21 57 04.8**	**0.0**
	baz=267							
TWS1	**Kuangyinshan**	**1.13**	**351**	P		**Pn**	**21 57 05.8**	**+1.0**
TWS1				*e*S		**Sn**	**21 57 23.3**	**+2.8**
SXI1	**Grass Mountain**	**1.14**	**12**	*e*P		**Pn**	**21 57 05.1**	**+0.1**
	baz=352							
LONT	**Longtian**	**1.15**	**203**	*e*P		**Pn**	**21 57 05.6**	**+0.5**
	baz=206							
WTK	**Tuku**	**1.16**	**256**	*e*P		**Pn**	**21 57 05.8**	**+0.7**
	baz=257							
YM01	**YM01**	**1.17**	**358**	*e*P		**Pg**	**21 57 04.9**	**-0.3**
	baz=356							
WTP	**Ta-pu**	**1.17**	**232**	P		**Pn**	**21 57 05.4**	**0.0**
	baz=234							
WTP				S		**Sn**	**21 57 21.6**	**+0.1**
	baz=234							
NTST	**Danshui**	**1.19**	**353**	*e*P		**Pn**	**21 57 06.3**	**+0.7**
	baz=1.0							
NTST				*e*S		**Sn**	**21 57 24.2**	**+2.3**
	baz=1.0							
ANP	**Anpu**	**1.21**	**356**	*e*P		**Pn**	**21 57 04.3**	**-1.7**
	baz=354							
TWK	**Hsinying**	**1.25**	**236**	P		**Pg**	**21 57 07.0**	**+0.2**
	baz=226							
TWK				S		**Sn**	**21 57 24.5**	**+1.1**
	baz=226							
TWG	**Pinlang**	**1.25**	**203**	*e*P		**Pn**	**21 57 05.8**	**-0.7**
	baz=207							
TWGBT	**Beinan**	**1.25**	**203**	P		**Pg**	**21 57 06.7**	**-0.2**
TWGBT	**Beinan**	**1.25**	**203**	P		**Pg**	**21 57 08.7**	**+1.8**
TWGBT	**Beinan**	**1.25**	**203**	*e*P		**Pn**	**21 57 05.5**	**-1.0**
	baz=207							
CHN1	**Nanshi**	**1.27**	**232**	*e*P		**Pg**	**21 57 07.4**	**+0.2**
	baz=234							
CHN1				*e*S		**Sn**	**21 57 24.8**	**+1.0**
	baz=234							
SNST	**Tainan City**	**1.27**	**234**	*e*P		**Pg**	**21 57 07.6**	**+0.4**
	baz=237							
SNST				*e*S		**Sn**	**21 57 25.7**	**+1.8**
	baz=237							
SGST	**Jiashian**	**1.30**	**227**	P		**Pn**	**21 57 06.7**	**-0.4**
	baz=229							
SGST				S		**Sn**	**21 57 26.0**	**+1.4**
	baz=229							
LDUT	**Ludao**	**1.30**	**186**	*e*P		**Pn**	**21 57 04.8**	**-2.4**
	baz=172							
WSF	**Szhu**	**1.31**	**255**	P		**Pg**	**21 57 08.5**	**+0.4**
	baz=257							
WSF				S		**Sn**	**21 57 27.2**	**+2.2**
	baz=257							
SLGT	**Liugui**	**1.32**	**222**	P		**Pb**	**21 57 07.6**	**-0.2**
	baz=225							
SLGT				*e*S		**Sn**	**21 57 27.2**	**+2.1**
	baz=225							
WSL	**Shuilin Townsh**	**1.34**	**251**	*e*P		**Pg**	**21 57 08.7**	**+0.1**
	baz=265							
WSL				*e*S		**Sn**	**21 57 28.5**	**+2.8**
	baz=265							
ICHU	**Yijhu**	**1.37**	**244**	P		**Pg**	**21 57 09.1**	**+0.1**
	baz=247							
ICHU				S		**Sg**	**21 57 28.6**	**+1.9**
	baz=247							
YOJ	**Yonaguni jima**	**1.37**	**69**	P		**Pn**	**21 57 08.0**	**-0.1**
YOJ	**Yonaguni jima**	**1.37**	**69**	*e*P		**Pn**	**21 57 07.3**	**-0.8**
	baz=66							
YOJ	**Yonaguni jima**	**1.37**	**69**	P		**Pn**	**21 57 07.9**	**-0.2**
CHN8	**Yiju**	**1.43**	**244**	*e*P		**Pg**	**21 57 09.8**	**-0.5**
	baz=247							
CHN8				S		**Sg**	**21 57 31.3**	**+2.5**
	baz=247							
SCST	**Cishan**	**1.49**	**224**	*e*P		**Pg**	**21 57 11.5**	**0.0**
	baz=214							
SHHT	**Tainan City**	**1.50**	**231**	*e*P		**Pg**	**21 57 12.5**	**+0.9**
	baz=235							
SHHT				*e*S		**Sg**	**21 57 35.4**	**+4.3**
	baz=235							
ECL	**Taimali**	**1.50**	**204**	*e*P		**Pn**	**21 57 09.1**	**-0.8**
	baz=195							
TSMG	**Majia**	**1.55**	**215**	P		**Pb**	**21 57 11.6**	**0.0**
	baz=220							
TSMG				S		**Sg**	**21 57 33.8**	**+1.3**
	baz=220							
TWM1	**Shoushan**	**1.58**	**224**	*e*P		**Pg**	**21 57 13.1**	**-0.2**
	baz=228							
TSCK	**Chigu Township**	**1.62**	**240**	*e*P		**Pb**	**21 57 12.6**	**-0.3**
	baz=244							
TSCK				*e*S		**Sg**	**21 57 34.4**	**-0.7**
	baz=244							
MASBT	**Mashibuluo**	**1.63**	**214**	P		**Pn**	**21 57 11.8**	**+0.1**
	baz=220							
MASBT				S		**Sg**	**21 57 35.5**	**+0.2**
	baz=220							
EAST	**Anshuo**	**1.73**	**204**	P		**Pb**	**21 57 14.7**	**-0.2**
	baz=197							
SCZT	**Fangliau**	**1.84**	**210**	*e*P		**Pb**	**21 57 16.1**	**-0.5**
	baz=215							
SLIU	**Shizi**	**1.91**	**203**	*e*P		**Pn**	**21 57 17.7**	**0.0**
	baz=200							
PHUB	**P'eng-hu**	**1.92**	**257**	*e*P		**Pn**	**21 57 16.5**	**+0.8**
	baz=258							
PHUB				*e*S		**Sb**	**21 57 41.2**	**-0.9**
	baz=258							
PNG	**Penghu**	**1.93**	**258**	*e*P		**Pn**	**21 57 16.4**	**+0.7**
	baz=261							
PNG				*e*S		**Sb**	**21 57 41.5**	**-0.7**
	baz=261							
WDGT	**Dungji**	**1.93**	**249**	*e*P		**Pn**	**21 57 16.7**	**+0.9**
	baz=253							
LYUB	**Lan-yu**	**1.97**	**181**	*e*P		**Pn**	**21 57 14.2**	**-2.1**
	baz=167							
JKRS	**Kuro-shima**	**2.21**	**83**	P		**Pn**	**21 57 19.9**	**+0.3**
VWUC	**VWUC**	**2.21**	**298**	*e*P		**Pn**	**21 57 19.3**	**-0.3**
	baz=297							
JIJ	**Ishigaki jima**	**2.34**	**80**	P		**Pn**	**21 57 21.1**	**-0.4**
JIJ				*e*S		**Sn**	**21 57 49.8**	**-0.7**
JISG	**Ishigakijimahi**	**2.54**	**76**	P		**Pn**	**21 57 23.9**	**-0.2**
JISG				S		**Sn**	**21 57 54.3**	**-0.9**
KNMB	**Chin-men Tao**	**2.98**	**280**	*e*P		**Pn**	**21 57 29.4**	**-0.8**
	baz=280							
LYJJ	**Jianjiangzhen**	**3.06**	**327**	*e*P		**Pn**	**21 57 31.0**	**-0.3**
	baz=312							
MHZQ	**Yeshan**	**3.15**	**313**	*e*P		**Pn**	**21 57 31.9**	**-0.7**
	baz=312							
XPSS	**Dashiqiu**	**3.21**	**337**	*e*P		**Pn**	**21 57 32.8**	**-0.6**
	baz=333							
AXDP	**Jialang**	**3.44**	**286**	*e*P		**Pn**	**21 57 36.1**	**-0.5**
	baz=286							
DSXP	**Dongshan**	**3.84**	**267**	*e*P		**Pn**	**21 57 42.1**	**0.0**
	baz=268							

*IDC **06** 21:57:37.4±3.7,37.96N×72.51E,h81km±29km,mb3.8/12, mbtmp4.3/16,Error ellipse: s-maj=29.1km s-min=20.9km az=151.0*

*NEIC **06** 21:57:42.2±1.8,38.22N±0.07×72.45E±0.09,h111km±9km, mb4.5/12,Error ellipse: s-maj=11.0km s-min=9.0km az=120.0*

ISC 06 21:57:42.1±0.8,**38.15N**±0.08×**72.26E**±0.07,**h119**km,**n41,** σ1.9/62/43,**mb4.2**/15,**Tajikist

63nm,1.0s,baz=135,slow=57,SNR=1.1
GEYT S **Sn** **22 02 15.5 -5.5**
8.5nm,0.4s,baz=76,slow=37,SNR=2.0
MKAR Makanchi Array 11.37 37 Pn **Pn** **22 00 20.6 -0.3**
BVAR Borovoye Array 14.94 356 P **Pn** **22 01 07.6 +0.6**
7.3nm,0.5s,baz=167,slow=8.3,SNR=1.8
ZALV Zalesovo Beam 18.00 25 P **P** **22 01 42.2 -1.2**
6.5nm,0.4s,baz=212,slow=9.5,SNR=6.8
OBN Obninsk 29.39 317 P **P** **22 03 34.6 +0.9**
AKASG Malin Array Be 32.73 307 P **P** **22 04 04.6 +1.3**
0.4nm,0.3s,baz=81,slow=8.1,SNR=2.5
0.4nm,0.3s
AKBB Malin Array Si 32.73 307 P **P** **22 04 04.5 +1.3**
AKBB IAmb IAmb 22 04 07.2
comp=Z,4.3nm,0.8s
FIA1 FINESS Array S 36.70 325 P **P** **22 04 38.0 +0.8**
FINES FINESS Array B 36.70 325 P **P** **22 04 38.0 +0.8**
FINES FINESS Array B 36.70 325 P **P** **22 04 38.6 +1.4**
comp=Z,3.3nm,0.4s,baz=112,slow=9.1,SNR=8.4
comp=Z,3.3nm,0.4s
KWP Kalwaria Pacla 36.88 304 P **P** **22 04 41.2 +2.3**
KWP IAmb IAmb 22 04 41.8
comp=Z,17nm,1.2s
ARCES ARCESS Array B 40.02 337 P **P** **22 05 05.6 +0.7**
ARCES IAmb IAmb 22 05 09.6
comp=Z,11nm,1.2s
ARCES ARCESS Array B 40.02 337 P **P** **22 05 05.3 +0.4**
comp=Z,1.1nm,0.5s,baz=105,slow=9.2,SNR=3.6
comp=Z,1.1nm,0.5s
HFS Hagfors 42.41 321 P **P** **22 05 25.6 +1.1**
comp=Z,2.6nm,0.4s,baz=98,slow=11,SNR=4.6
comp=Z,2.6nm,0.4s
GERES GERESS Array B 42.82 304 P **P** **22 05 30.2 +2.1**
comp=Z,0.4nm,0.3s,baz=70,slow=8.1,SNR=2.0
comp=Z,0.4nm,0.3s
KHC Kasperske Hory 42.86 304 P **P** **22 05 30.3 +1.9**
CLL Collm 42.96 308 *eP* **P** **22 05 30.0 +0.9**
NC303 NORSAR Array S 43.62 322 P **P** **22 05 35.6 +1.3**
NOA NORSAR Array B 43.69 322 P **P** **22 05 35.7 +0.8**
comp=Z,1.3nm,0.5s,baz=101,slow=7.3,SNR=3.3
comp=Z,1.3nm,0.5s
TIXI Tiksi 43.87 22 P **P** **22 05 35.8 -0.3**
TIXI IAmb IAmb 22 05 36.6
comp=Z,4.8nm,0.3s
SPITS Spitsbergen Ar 46.13 346 P **P** **22 05 55.2 +1.3**
comp=Z,19nm,1.0s,baz=123,slow=3.1,SNR=2.0
comp=Z,19nm,1.0s
EKA Eskdalemuir Ar 51.81 315 P **P** **22 06 38.5 +1.0**
comp=Z,2.8nm,0.9s,baz=87,slow=7.0,SNR=1.7
comp=Z,2.8nm,0.9s
ESDC Sonseca Array 57.59 297 P **P** **22 07 20.7 +1.2**
comp=Z,0.9nm,0.8s,baz=51,slow=7.3,SNR=2.9
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 66.76 269 P **P** **22 08 21.3 +0.3**
comp=Z,11nm,0.6s,baz=49,slow=6.1,SNR=2.7
comp=Z,11nm,0.6s
E24K Your Creek 69.77 15 P **P** **22 08 39.2 +0.2**
IMAR Indian Mountai 70.30 18 P **P** **22 08 41.7 -0.5**
J16K Anvik River 70.52 22 P **P** **22 08 44.1 +0.6**
BMAR Burnt Mountain 71.11 14 P **P** **22 08 47.7 +0.6**
YKA Yellowknife Ar 79.55 3 P **P** **22 09 35.6 +0.2**
comp=Z,0.6nm,0.6s,baz=349,slow=5.7,SNR=4.7
comp=Z,0.6nm,0.6s
WRA Warramunga Arr 82.02 123 P **P** **22 09 47.4 -1.7**
comp=Z,0.3nm,0.7s,baz=319,slow=4.9,SNR=1.3
comp=Z,0.3nm,0.7s

*JMA **06** 22:00:21.9±0.2,24.1°N±0.6°×121.8°E±0.7,h0km, TAIWAN REGION*
*TAP **06** 22:00:21.7,24.10°N×121.77°E,h6km,ML3.6,C*
*ASIES **06** 22:00:21.7,24.10°N×121.77°E,h6km,ML3.6,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr0.04; Mθθ-0.12; Mφφ0.08; Mrθ0.24; Mθφ-0.85; Mrφ1.30; Fault plane solution: M0 1.57132×10^{21} NP1:φ$_{s}$6.87000°, δ88.87000°, λ57.40000°. NP2:φ$_{s}$275.10000°, δ32.61000°, λ177.89000°. Principal axes: T Plg37.5650°, Azm248.1580°; N Plg32.5850°, Azm7.6040°; P Plg35.5640°, Azm124.7970°;*
ISC 06 22:00:22.5±1.0,24.11N±0.02×121.81E±0.03,h7km±6km, n104,σ1$03/152,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.17**	**286**	P		**Pg**	**22 00 25.4**	**-0.7**
	baz=294							
ETL				*e*S		**Sg**	**22 00 28.4**	**-0.2**
	baz=294							
TWD	**Chiawan**	**0.20**	**261**	P		**Pg**	**22 00 25.8**	**-0.6**
	baz=272							
TWD				S		**Sg**	**22 00 28.4**	**-0.7**
	baz=272							
NACB	**Ninganchiao**	**0.20**	**288**	P		**Pg**	**22 00 25.9**	**-0.7**
	baz=295							
NACB				S		**Sg**	**22 00 29.0**	**-0.4**
	baz=295							
EAHA	**Aohua**	**0.23**	**344**	P		**Pg**	**22 00 27.0**	**0.0**
	baz=353							
EAHA				*e*S		**Sb**	**22 00 31.7**	**+1.6**
	baz=353							
ENA	**Nanau**	**0.32**	**349**	P		**Pg**	**22 00 28.5**	**-0.4**
	baz=356							
ETM	**Tongmen**	**0.32**	**243**	P		**Pg**	**22 00 28.0**	**-0.8**
	baz=243							
ETM				S		**Sg**	**22 00 32.9**	**-0.2**
	baz=243							
EWUT	**Wuta**	**0.34**	**355**	P		**Pg**	**22 00 29.4**	**+0.3**
	baz=1.0							
LXIB	**Xiulin Townshi**	**0.37**	**256**	P		**Pg**	**22 00 28.9**	**-0.8**
	baz=258							
SHUL	**Shoufeng**	**0.39**	**215**	P		**Pg**	**22 00 31.0**	**+0.9**
	baz=212							
SHUL				*e*S		**Sb**	**22 00 38.5**	**+0.5**
	baz=212							
ESL	**Shilin**	**0.45**	**229**	*e*P		**Pg**	**22 00 30.5**	**-0.7**
	baz=238							
ESL				*e*S		**Sg**	**22 00 37.9**	**+0.7**
	baz=238							
ESAO	**Su ao**	**0.47**	**4**	*e*P		**Pb**	**22 00 32.0**	**-1.0**
	baz=6.0							
TEGC	**Jichi Village**	**0.47**	**212**	*e*P		**Pb**	**22 00 32.8**	**-0.2**
	baz=209							
TEGC				*e*S		**Sb**	**22 00 41.2**	**+1.1**
	baz=209							
LATG	**Datong**	**0.49**	**329**	P		**Pg**	**22 00 32.1**	**0.0**
	baz=341							
WHF	**Hehuan Shan**	**0.50**	**274**	*i* P		**Pg**	**22 00 31.6**	**-0.5**
	baz=277							
WHF				*e*S		**Sg**	**22 00 38.6**	**-0.2**
	baz=277							
TWC	**Suao**	**0.50**	**4**	P		**Pb**	**22 00 32.6**	**-0.9**
	baz=7.0							
NNSB	**Datong**	**0.50**	**309**	P		**Pg**	**22 00 31.9**	**-0.2**
	baz=312							
NNSB				*e*S		**Sg**	**22 00 38.7**	**-0.1**
	baz=312							
NNS	**Nan Shan**	**0.52**	**310**	*i* P		**Pg**	**22 00 32.0**	**-0.5**
	baz=312							
NDS	**Dongshan**	**0.53**	**351**	P		**Pb**	**22 00 33.3**	**-0.7**
	baz=354							
NDS				*e*S		**Sb**	**22 00 42.1**	**+0.2**
	baz=354							
WARBT	**Fenglin Townsh**	**0.55**	**225**	P		**Pg**	**22 00 32.4**	**-0.7**
	baz=230							
NDT	**Datong Townshi**	**0.56**	**331**	P		**Pg**	**22 00 33.5**	**+0.2**
	baz=335							
NDT				*e*S		**Sb**	**22 00 42.3**	**-0.5**
	baz=335							
EGFH	**Guangfu**	**0.56**	**218**	P		**Pg**	**22 00 33.3**	**0.0**
	baz=217							
ENTT	**Nioudou**	**0.57**	**337**	P		**Pg**	**22 00 33.6**	**+0.1**
	baz=341							
ENTT				*e*S		**Sb**	**22 00 42.8**	**-0.4**
	baz=341							
CHGB	**Renai**	**0.58**	**265**	P		**Pg**	**22 00 33.2**	**-0.6**
	baz=267							
TWT	**Tachien**	**0.59**	**284**	P		**Pg**	**22 00 33.8**	**-0.2**
	baz=285							
OWD	**Renai**	**0.60**	**255**	P		**Pg**	**22 00 33.3**	**-0.7**
	baz=267							
OWD				*e*S		**Sg**	**22 00 41.4**	**-0.5**
	baz=267							
TDCB	**Techi**	**0.61**	**284**	P		**Pg**	**22 00 34.3**	**0.0**
	baz=285							
TWE	**Neicheng**	**0.62**	**348**	P		**Pb**	**22 00 35.0**	**-0.7**
	baz=352							
WUSB	**Renai**	**0.64**	**260**	P		**Pg**	**22 00 34.4**	**-0.4**
	baz=261							
WUSB				*e*S		**Sg**	**22 00 43.7**	**+0.4**
	baz=261							
FUSB	**Fushanzhiwuyua**	**0.68**	**343**	P		**Pb**	**22 00 36.1**	**-0.5**
	baz=346							
FUSB				*e*S		**Sb**	**22 00 46.1**	**-0.1**
	baz=346							
YHNB	**Yeheng**	**0.68**	**325**	P		**Pg**	**22 00 35.7**	**0.0**
	baz=327							
YHNB				*e*S		**Sb**	**22 00 45.6**	**-0.8**
	baz=327							
NSK	**Sanguang**	**0.70**	**324**	P		**Pg**	**22 00 35.9**	**0.0**
	baz=327							
NSK				*e*S		**Sb**	**22 00 46.6**	**-0.2**
	baz=327							
VWDT	**VWDT**	**0.70**	**240**	P		**Pg**	**22 00 35.9**	**-0.2**
	baz=240							
HGSD	**Ruisui**	**0.71**	**210**	P		**Pg**	**22 00 36.9**	**+0.8**
	baz=195							
NWLT	**Wulai**	**0.72**	**337**	P		**Pb**	**22 00 36.9**	**-0.5**
	baz=340							
NWLT				S		**Sb**	**22 00 46.8**	**-0.6**
	baz=340							
EHY	**Hungye**	**0.75**	**217**	P		**Pg**	**22 00 36.6**	**-0.2**
	baz=230							
EHY				*e*S		**Sb**	**22 00 48.4**	**+0.2**
	baz=230							
WHP	**Taichung City**	**0.80**	**282**	P		**Pg**	**22 00 38.3**	**+0.3**
	baz=283							
NFF	**Wufeng Townshi**	**0.82**	**310**	P		**Pg**	**22 00 38.3**	**+0.2**
	baz=302							
WCS	**Beigang Elemen**	**0.82**	**266**	P		**Pg**	**22 00 38.1**	**-0.2**
	baz=268							
SSLB	**Suanglung**	**0.84**	**248**	P		**Pg**	**22 00 38.1**	**-0.6**
	baz=261							
SSLB				S		**Sg**	**22 00 49.3**	**-0.4**
	baz=261							
YULB	**Yu-li**	**0.85**	**213**	P		**Pb**	**22 00 38.3**	**-1.3**
	baz=213							
YULB				S		**Sb**	**22 00 52.0**	**+0.7**
	baz=213							
TIPB	**Shuangxi**	**0.86**	**1**	P		**Pn**	**22 00 40.5**	**-0.5**
	baz=11							
SMLT	**Sun Moon Lake**	**0.86**	**255**	P		**Pg**	**22 00 38.6**	**-0.5**
	baz=256							
SMLT				*e*S		**Sg**	**22 00 51.3**	**+1.0**
	baz=256							
EYUL	**Yuli**	**0.88**	**211**	P		**Pb**	**22 00 39.7**	**-0.4**
	baz=225							
NHDH	**Xindian Distri**	**0.89**	**343**	*e*P		**Pn**	**22 00 40.4**	**-1.0**
	baz=345							
TWF1	**Yuli**	**0.89**	**212**	P		**Pb**	**22 00 39.1**	**-1.0**
	baz=225							
TWA	**Mucha**	**0.89**	**347**	*e*P		**Pn**	**22 00 40.3**	**-1.1**
	baz=349							
TYC	**Yuchr**	**0.89**	**257**	P		**Pb**	**22 00 38.9**	**-1.3**
	baz=259							
TYC				*e*S		**Sb**	**22 00 50.6**	**-1.8**
	baz=259							
LIOB	**Emei**	**0.90**	**307**	P		**Pb**	**22 00 40.2**	**-0.2**
	baz=306							
NSTT	**Nanjuang**	**0.90**	**305**	P		**Pb**	**22 00 39.8**	**-0.6**
	baz=305							
TWB1	**Santiao Chiao**	**0.91**	**10**	*e*P		**Pn**	**22 00 41.8**	**+0.2**
	baz=3.0							
WFSB	**Wu-fen Shan**	**0.96**	**359**	*e*P		**Pn**	**22 00 41.9**	**-0.4**
	baz=360							
WHYT	**Xinyi Township**	**0.97**	**245**	P		**Pb**	**22 00 40.9**	**-0.6**
	baz=255							
WHYT				*e*S		**Sb**	**22 00 54.6**	**+0.1**
	baz=255							
TWQ1	**Liyutan**	**0.97**	**284**	*e*P		**Pn**	**22 00 42.6**	**+0.1**
	baz=284							
SXI1	**Grass Mountain**	**0.98**	**4**	P		**Pn**	**22 00 42.4**	**-0.3**
	baz=344							
CHKH	**Chenggong**	**0.99**	**203**	*e*P		**Pb**	**22 00 40.6**	**-1.3**
	baz=183							
NSY	**Sanyi**	**1.00**	**288**	*e*P		**Pn**	**22 00 43.4**	**+0.4**
	baz=288							
SBCB	**Hsinchu**	**1.01**	**312**	*e*P		**Pn**	**22 00 43.8**	**+0.7**
	baz=312							
NMLH	**Miaoli**	**1.02**	**295**	*e*P		**Pn**	**22 00 43.1**	**0.0**
	baz=296							
NMLH				*e*S		**Sn**	**22 00 58.0**	**+0.3**
	baz=296							
FULB	**Fuli**	**1.02**	**208**	P		**Pb**	**22 00 41.6**	**-0.9**
	baz=222							
NCUH	**Zhongli**	**1.02**	**327**	P		**Pn**	**22 00 43.5**	**+0.3**
	baz=328							
NCUH				*e*S		**Sn**	**22 00 59.3**	**+1.4**
	baz=328							
HSN	**Hsinchu**	**1.03**	**312**	*e*P		**Pn**	**22 00 43.8**	**+0.5**
	baz=316							
WJS	**Zhushan**	**1.03**	**254**	P		**Pn**	**22 00 42.9**	**-0.4**
	baz=256							
WJS				*e*S		**Sn**	**22 00 57.5**	**-0.4**
	baz=256							
TWS1	**Kuangyinshan**	**1.05**	**340**	*e*P		**Pn**	**22 00 44.1**	**+0.6**
	baz=342							
WNT	**Mingjian**	**1.05**	**258**	*e*P		**Pn**	**22 00 43.3**	**-0.3**
	baz=260							
WNT				*e*S		**Sn**	**22 00 58.3**	**-0.3**
	baz=260							
YM01	**YM01**	**1.05**	**348**	P		**Pn**	**22 00 44.6**	**+0.9**
	baz=333							
WDJ	**Dajia District**	**1.09**	**283**	*e*P		**Pg**	**22 00 45.2**	**+1.8**
	baz=283							
JYNG	**Yonagunijimaku**	**1.09**	**72**	*e*P		**Pg**	**22 00 44.1**	**+0.7**
ALS	**Alishan**	**1.09**	**237**	P		**Pb**	**22 00 42.9**	**-1.0**
	baz=239							
ALS				*e*S		**Sn**	**22 00 59.7**	**-0.3**
	baz=239							
ANP	**Anpu**	**1.10**	**346**	P		**Pg**	**22 00 44.4**	**+0.7**
	baz=348							
EHD	**Haiduan**	**1.10**	**210**	*e*P		**Pb**	**22 00 42.3**	**-1.6**
	baz=209							
ECS	**Chishang**	**1.15**	**208**	*e*P		**Pb**	**22 00 44.8**	**+0.3**
	baz=207							
CHN5	**Tsauling**	**1.15**	**244**	P		**Pn**	**22 00 44.3**	**-0.8**
	baz=248							
CHN5				*e*S		**Sg**	**22 01 02.3**	**+2.7**
	baz=248							
ELDTW	**Lidau**	**1.17**	**218**	P		**Pn**	**22 00 43.5**	**-1.8**
	baz=217							
WGK	**Gukeng**	**1.22**	**250**	*e*P		**Pg**	**22 00 46.9**	**+1.1**
	baz=253							
WGK				*e*S		**Sg**	**22 01 04.1**	**+2.5**
	baz=253							
EDH	**Donghe**	**1.22**	**202**	*e*P		**Pn**	**22 00 44.2**	**-1.7**
	baz=185							
WDLH	**Douliu**	**1.23**	**250**	*e*P		**Pb**	**22 00 46.3**	**+0.2**
	baz=254							
WDLH				*e*S		**Sg**	**22 01 05.1**	**+2.9**
	baz=254							
WCKO	**Fanlu**	**1.29**	**239**	P		**Pg**	**22 00 47.9**	**+0.6**
	baz=243							
WCKO				*e*S		**Sg**	**22 01 06.2**	**+2.2**
	baz=243							
STYH	**Taoyuan**	**1.33**	**226**	P		**Pn**	**22 00 46.5**	**-0.9**
	baz=228							
STYH				*e*S		**Sg**	**22 01 06.2**	**+1.0**
	baz=228							
TPUB	**Ta-pu**	**1.35**	**233**	P		**Pb**	**22 00 48.1**	**+0.1**
	baz=238							
TPUB				*e*S		**Sg**	**22 01 06.9**	**+1.0**
	baz=238							
STYT	**Tauyuan**	**1.35**	**226**	*e*P		**Pn**	**22 00 46.6**	**-1.2**
	baz=207							
WTK	**Tuku**	**1.36**	**252**	P		**Pn**	**22 00 48.0**	**+0.1**
	baz=256							
WTK				*e*S		**Sg**	**22 01 07.8**	**+1.4**
	baz=256							
WTP	**Ta-pu**	**1.39**	**232**	*e*P		**Pn**	**22 00 48.2**	**-0.1**
	baz=236							
WTP				*e*S		**Sg**	**22 01 09.4**	**+2.2**
	baz=236							
LDUT	**Ludao**	**1.46**	**192**	*e*S		**Sn**	**22 01 05.1**	**-3.6**
	baz=178							
TWK	**Hsinying**	**1.47**	**235**	*e*P		**Pb**	**22 00 50.0**	**-0.2**
	baz=240							
TWK				*e*S		**Sg**	**22 01 11.9**	**+2.0**
	baz=240							
CHN1	**Nanshi**	**1.49**	**232**	*e*P		**Pb**	**22 00 50.8**	**+0.2**
	baz=235							
SNST	**Tainan City**	**1.49**	**234**	*e*P		**Pb**	**22 00 50.6**	**+0.1**
	baz=238							
SNST				*e*S		**Sg**	**22 01 11.8**	**+1.3**
	baz=238							
SGST	**Jiashian**	**1.52**	**228**	*e*P		**Pn**	**22 00 50.0**	**0.0**
	baz=231							
SGST				*e*S		**Sg**	**22 01 11.8**	**+0.5**
	baz=231							
WSF	**Szhu**	**1.53**	**252**	*e*S		**Sg**	**22 01 12.4**	**+0.8**
	baz=258							
SLGT	**Liugui**	**1.54**	**224**	*e*P		**Pn**	**22 00 50.4**	**+0.1**
	baz=227							
SLGT				*e*S		**Sg**	**22 01 13.3**	**+1.3**
	baz=227							
WSL	**Shuilin Townsh**	**1.56**	**248**	*e*S		**Sg**	**22 01 14.3**	**+1.6**
	baz=254							
CHN8	**Yiju**	**1.65**	**243**	*e*S		**Sg**	**22 01 17.0**	**+1.5**
	baz=249							
CHN3	**Shinhua**	**1.68**	**232**	*e*S		**Sg**	**22 01 18.7**	**+2.3**
	baz=237							
TSMG	**Majia**	**1.76**	**218**	*e*P		**Pn**	**22 00 53.5**	**+0.2**
	baz=220							
TSMG				*e*S		**Sb**	**22 01 18.4**	**+1.0**
	baz=220							
MASBT	**Mashibuluo**	**1.84**	**216**	*e*P		**Pn**	**22 00 54.7**	**+0.3**
	baz=219							
MASBT				*e*S		**Sb**	**22 01 21.1**	**+1.4**
	baz=219							
SCZT	**Fangliau**	**2.05**	**212**	*e*P		**Pn**	**22 00 58.3**	**+1.1**
	baz=216							
SCZT				*e*S		**Sb**	**22 01 26.9**	**+1.3**
	baz=216							
LYUB	**Lan-yu**	**2.11**	**186**	*e*S		**Sn**	**22 01 20.4**	**-4.2**
	baz=188							
PHUB	**P'eng-hu**	**2.13**	**254**	*e*P		**Pn**	**22 00 59.4**	**+1.0**
	baz=259							
PHUB				*e*S		**Sb**	**22 01 26.8**	**-1.2**
	baz=259							
PNG	**Penghu**	**2.13**	**256**	*e*S		**Sb**	**22 01 26.7**	**-1.4**
	baz=260							
VWUC	**VWUC**	**2.32**	**293**	*e*P		**Pn**	**22 01 00.8**	**-0.3**
	baz=293							
VWUC				S		**Sn**	**22 01 29.1**	**-0.7**
	baz=293							
TWKBT	**Hengchun**	**2.35**	**203**	*e*S		**Sn**	**22 01 31.3**	**+0.8**
	baz=207							
VCHM	**Qimei**	**2.36**	**248**	*e*S		**Sn**	**22 01 32.5**	**+1.7**
	baz=238							
PTMZ	**Houxiangcun**	**2.62**	**291**	P		**Pn**	**22 01 04.5**	**-0.6**
	baz=292							
PTMZ				S		**Sn**	**22 01 36.0**	**-1.1**
	baz=292							
KNMB	**Chin-men Tao**	**3.14**	**277**	*e*P		**Pn**	**22 01 12.3**	**0.0**
	baz=279							
MHZQ	**Yeshan**	**3.20**	**309**	P		**Pn**	**22 01 14.0**	**+0.8**
	baz=304							

*IDC **06** 22:19:28.3±3.0,6.48S×129.06E,h0km,mb3.5/1, mbtmp3.4/3,ML3.6/2,Error ellipse: s-maj=295.5km s-min=31.6km az=68.0*
*DJA **06** 22:19:36.0±0.5,6°S±3°×13°1E±1°5,h10km,M4.1/6, mb4.0/2,mB5.2/2,MLv4.1/6,Mw(mB)4.7/2,MwMwp5.3/1, Mwp5.5/1*
ISC 06 22:19:36.1±2.0,6.40S±0.06×130.6E±0.3,h35km,n6, σ2$83/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.71**	**157**	P		**Pn**	**22 20 06.3**	**+2.9**
FAKI	**Fak Fak**	**3.81**	**25**	P		**Pn**	**22 20 34.4**	**+2.1**
FAKI				S		**Sn**	**22 21 14.7**	**-1.2**
SWI	**Sorong**	**5.53**	**7**	P		**Pn**	**22 20 56.6**	**+0.6**
WRA	**Warramunga Arr**	**13.94**	**165**	Pn		**Pn**	**22 22 50.7**	**-0.5**
	0.3nm,0.3s,baz=333,slow=14,SNR=22							
WRA					Sn	**Sn**	**22 25 20.8**	**-4.1**
	0.3nm,0.3s,baz=331,slow=22,SNR=8.0							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**17.46**	**170**	P		**Pn**	**22 23 37.7**	**+0.7**
	0.2nm,0.3s,baz=356,slow=11,SNR=11							
	0.8nm,0.6s							
MKAR	**Makanchi Array**	**68.07**	**326**	P		P	22 30 25.0	-7.2
	0.3nm,0.6s,baz=121,slow=8.2,SNR=4.9							
	0.3nm,0.6s							

TAP 06 22:35:27.0,24.25N×121.76E,h10km,ML3.1,9C-5D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.06**	**345**	⇑*i* P		Pg	22 35 29.4	+0.3
	baz=352							
EHP				*i* S		Sg	22 35 31.1	+0.4
	baz=352							
EAHA	**Aohua**	**0.08**	**348**	⇑*i* P		Pg	22 35 29.7	+0.3
	baz=348							
EAHA				*i* S		Sg	22 35 31.2	+0.2
	baz=348							
ETL	**Fush Village**	**0.15**	**233**	⇓*i* P		Pg	22 35 30.7	+0.3
	baz=225							
ETL				*i* S		Sg	22 35 33.2	+0.4
	baz=225							
NACB	**Ninganchiao**	**0.17**	**243**	⇓*i* P		Pg	22 35 30.9	+0.2
	baz=235							
NACB				*i* S		Sg	22 35 33.5	+0.4
	baz=235							
ENA	**Nanau**	**0.18**	**355**	⇑*i* P		Pg	22 35 31.1	+0.3
	baz=357							
ENA				*i* S		Sg	22 35 33.8	+0.4
	baz=357							
EWUT	**Wuta**	**0.19**	**5**	⇑*i* P		Pg	22 35 31.5	+0.3
	baz=5.0							
EWUT				S		Sg	22 35 34.4	+0.5
	baz=5.0							
TWD	**Chiawan**	**0.23**	**221**	⇓*i* P		Pg	22 35 31.8	+0.1
	baz=219							
TWD				S		Sg	22 35 35.4	+0.6
	baz=219							
ESAO	**Su ao**	**0.33**	**14**	*i* P		Pg	22 35 33.8	+0.1
	baz=13							
ESAO				*e*S		Sg	22 35 38.2	+0.1
	baz=13							
LATG	**Datong**	**0.35**	**323**	⇑*i* P		Pg	22 35 34.6	+0.5
	baz=323							
LATG				*i* S		Sg	22 35 39.7	+0.8
	baz=323							
TWC	**Suao**	**0.37**	**13**	⇓*i* P		Pg	22 35 34.5	+0.2
	baz=6.0							
TWC				S		Sg	22 35 39.4	+0.2
	baz=6.0							
ETM	**Tongmen**	**0.37**	**221**	*i* P		Pg	22 35 34.4	0.0
	baz=220							
ETM				*e*S		Sg	22 35 39.7	+0.3
	baz=220							
NDS	**Dongshan**	**0.38**	**354**	*i* P		Pg	22 35 35.0	+0.4
	baz=354							
NDS				*e*S		Sg	22 35 40.4	+0.7
	baz=354							
NNSB	**Datong**	**0.39**	**297**	P		Pg	22 35 35.3	+0.6
	baz=297							
NNSB				*i* S		Sg	22 35 39.9	+0.1
	baz=297							
LXIB	**Xiulin Townshi**	**0.39**	**234**	⇓*i* P		Pg	22 35 34.6	-0.1
	baz=234							
LXIB				*e*S		Sg	22 35 40.4	+0.4
	baz=234							
NNS	**Nan Shan**	**0.40**	**298**	*i* P		Pg	22 35 35.5	+0.5
	baz=298							
NNS				*e*S		Sg	22 35 40.8	+0.6
	baz=298							
NDT	**Datong Townshi**	**0.41**	**327**	⇑*i* P		Pb	22 35 35.9	-0.6
	baz=327							
NDT				S		Sb	22 35 42.1	-0.8
	baz=327							
ENTT	**Nioudou**	**0.42**	**336**	⇑*i* P		Pg	22 35 36.0	+0.6
	baz=336							
ENTT				*i* S		Sg	22 35 42.0	+0.9
	baz=336							
WHF	**Hehuan Shan**	**0.46**	**257**	*e*P		Pg	22 35 36.6	+0.4
	baz=256							
WHF				*e*S		Sg	22 35 42.8	+0.4
	baz=256							
FUSS	**Fushou**	**0.47**	**270**	⇑*i* P		Pg	22 35 36.8	+0.6
	baz=270							
FUSS				*e*S		Sg	22 35 43.1	+0.6
	baz=270							
TWE	**Neicheng**	**0.47**	**350**	⇑*i* P		Pg	22 35 36.9	+0.6
	baz=351							
TWE				*e*S		Sg	22 35 42.0	-0.6
	baz=351							
ILA	**Ilan**	**0.51**	**359**	*e

	baz=354							
ILA				*e*S		Sg	22 35 44.4	+0.6
	baz=354							
FUSB	**Fushanzhiwuyua**	**0.53**	**343**	P		Pb	22 35 38.0	-0.5
	baz=343							
FUSB				S		Sg	22 35 44.9	+0.5
	baz=343							
TWT	**Tachien**	**0.53**	**270**	*e*P		Pb	22 35 38.5	-0.1
	baz=270							
TWT				*e*S		Sb	22 35 45.8	-0.6
	baz=270							
YHNB	**Yeheng**	**0.54**	**320**	*e*P		Pb	22 35 38.4	-0.3
	baz=320							
YHNB				*i* S		Sb	22 35 45.8	-0.9
	baz=320							
TDCB	**Techi**	**0.55**	**270**	P		Pb	22 35 38.4	-0.4
	baz=270							
TDCB				*i* S		Sg	22 35 45.6	+0.7
	baz=270							
NSK	**Sanguang**	**0.56**	**319**	*e*P		Pb	22 35 38.6	-0.4
	baz=319							
NSK				*e*S		Sg	22 35 46.0	+0.7
	baz=319							
CHGB	**Renai**	**0.57**	**251**	P		Pg	22 35 38.4	+0.3
	baz=242							
CHGB				*e*S		Sg	22 35 45.5	-0.1
	baz=242							
NWLT	**Wulai**	**0.57**	**336**	*i* P		Pb	22 35 38.9	-0.3
	baz=336							
NWLT				*i* S		Sg	22 35 45.9	+0.1
	baz=336							
OWD	**Renai**	**0.61**	**241**	*e*P		Pg	22 35 39.0	+0.2
	baz=241							
OWD				*e*S		Sg	22 35 47.5	+0.6
	baz=241							
WUSB	**Renai**	**0.64**	**246**	*e*P		Pg	22 35 39.8	+0.3
	baz=239							
WUSB				*e*S		Sg	22 35 48.6	+0.8
	baz=239							
NFF	**Wufeng Townshi**	**0.70**	**303**	*e*P		Pb	22 35 41.4	+0.1
	baz=303							
NFF				*e*S		Sb	22 35 50.4	-0.6
	baz=303							
TIPB	**Shuangxi**	**0.72**	**5**	P		Pg	22 35 41.3	+0.4
	baz=5.0							
TIPB				*e*S		Sg	22 35 50.3	-0.1
	baz=5.0							
WHP	**Taichung City**	**0.74**	**272**	*e*P		Pb	22 35 42.3	+0.2
	baz=272							
WHP				*e*S		Sb	22 35 52.2	-0.2
	baz=272							
VWDT	**VWDT**	**0.75**	**229**	*e*P		Pg	22 35 41.7	+0.1
	baz=235							
LIOB	**Emei**	**0.78**	**300**	*e*P		Pb	22 35 43.5	+0.7
	baz=300							
LIOB				*e*S		Sb	22 35 53.9	+0.4
	baz=300							
TWB1	**Santiao Chiao**	**0.78**	**15**	*e*P		Pg	22 35 42.0	-0.2
	baz=8.0							
NSTT	**Nanjuang**	**0.79**	**299**	*e*P		Pb	22 35 43.2	+0.4
	baz=299							
NSTT				*i* S		Sb	22 35 53.7	+0.1
	baz=299							
WCS	**Beigang Elemen**	**0.80**	**256**	*e*P		Pb	22 35 43.0	0.0
	baz=256							
WCS				*e*S		Sb	22 35 53.5	-0.3
	baz=256							
HGSD	**Ruisui**	**0.81**	**202**	*e*P		Pb	22 35 43.5	+0.2
	baz=220							
NWF	**Wu-fen Shan**	**0.82**	**1**	*e*P		Pb	22 35 43.6	+0.1
	baz=352							
NWF				*e*S		Sg	22 35 53.7	+0.2
	baz=352							
WFSB	**Wu-fen Shan**	**0.82**	**1**	*e*P		Pb	22 35 43.2	-0.2
	baz=354							
WFSB				*i* S		Sg	22 35 53.9	+0.4
	baz=354							
EHY	**Hungye**	**0.84**	**208**	*e*P		Pg	22 35 43.1	-0.2
	baz=208							
SXI1	**Grass Mountain**	**0.85**	**7**	*e*P		Pb	22 35 43.8	-0.1
	baz=14							
SXI1				*e*S		Sg	22 35 54.5	+0.1
	baz=14							
SMLT	**Sun Moon Lake**	**0.87**	**245**	*e*P		Pb	22 35 44.4	+0.2
	baz=236							
SMLT				*e*S		Sb	22 35 55.7	-0.3
	baz=236							
SSLB	**Suanglung**	**0.87**	**238**	P		Pg	22 35 43.6	-0.2
	baz=238							
SSLB				*e*S		Sg	22 35 55.2	+0.1
	baz=238							
TYC	**Yuchr**	**0.89**	**247**	*e*P		Pg	22 35 44.3	+0.1
	baz=238							
TYC				*e*S		Sb	22 35 56.8	+0.2
	baz=238							
TNOU	**National Taiwa**	**0.90**	**1**	*e*P		Pb	22 35 44.8	+0.1
	baz=1.0							
TNOU				*e*S		Sg	22 35 55.2	-0.8
	baz=1.0							
TWS1	**Kuangyinshan**	**0.90**	**340**	*e*P		Pb	22 35 44.9	+0.1
	baz=340							
TWS1				*e*S		Sb	22 35 57.7	+0.8
	baz=340							
TWQ1	**Liyutan**	**0.90**	**276**	*e*P		Pn	22 35 46.1	+0.3
	baz=276							
YM01	**YM01**	**0.91**	**349**	P		Pb	22 35 45.1	+0.2
	baz=349							
YM01				*e*S		Sg	22 35 56.6	+0.2
	baz=349							
NMLH	**Miaoli**	**0.93**	**288**	*e*P		Pn	22 35 46.9	+0.7
	baz=298							
NMLH				*e*S		Sn	22 35 59.3	-0.2
	baz=298							
YULB	**Yu-li**	**0.95**	**206**	*e*P		Pg	22 35 44.8	-0.6
	baz=216							
YULB				*e*S		Sb	22 35 58.6	+0.2
	baz=216							
EYUL	**Yuli**	**0.98**	**204**	*e*P		Pb	22 35 46.5	+0.2
	baz=218							
TWF1	**Yuli**	**0.99**	**205**	*e*P		Pg	22 35 45.9	-0.2
	baz=216							
TWF1				*e*S		Sg	22 35 57.7	-1.3
	baz=216							
WHYT	**Xinyi Township**	**0.99**	**236**	*e*P		Pn	22 35 47.1	0.0
	baz=236							
TWY	**Chenhua**	**1.03**	**352**	*e*P		Pn	22 35 48.9	+1.3
	baz=352							
TWY				*e*S		Sn	22 36 02.3	+0.2
	baz=352							
WJS	**Zhushan**	**1.03**	**246**	*e*P		Pn	22 35 48.3	+0.7
	baz=238							
FULB	**Fuli**	**1.13**	**202**	*e*P		Pn	22 35 50.0	+1.0
	baz=216							
ALS	**Alishan**	**1.14**	**230**	*e*P		Pg	22 35 49.1	0.0
	baz=230							
CHN5	**Tsauling**	**1.18**	**237**	*e*P		Pg	22 35 50.9	+1.1
	baz=231							
CHKT	**Chengkung**	**1.20**	**198**	*e*P		Pb	22 35 49.0	-0.9
	baz=188							
EHD	**Haiduan**	**1.21**	**205**	*e*P		Pn	22 35 50.1	+0.1
	baz=217							
ELDTW	**Lidau**	**1.26**	**213**	*e*P		Pn	22 35 50.6	-0.2
	baz=213							
WRL	**Guolierlin Hig**	**1.31**	**255**	*e*P		Pg	22 35 52.7	+0.5
	baz=254							
WCKO	**Fanlu**	**1.33**	**233**	*e*P		Pg	22 35 53.4	+0.8
	baz=226							
WTK	**Tuku**	**1.37**	**246**	*e*P		Pg	22 35 54.0	+0.6
	baz=232							
CHN4	**Tsaushan**	**1.39**	**230**	*e*P		Pg	22 35 54.1	+0.3
	baz=231							
CHN4				*e*S		Sg	22 36 14.8	+2.9
	baz=231							
TPUB	**Ta-pu**	**1.40**	**228**	*e*P		Pn	22 35 51.6	-1.1
	baz=228							
STYH	**Taoyuan**	**1.40**	**220**	*e*P		Pb	22 35 53.5	+0.1
	baz=221							
WTP	**Ta-pu**	**1.45**	**227**	*e*P		Pg	22 35 55.2	+0.3
	baz=227							
TWK	**Hsinying**	**1.52**	**230**	*e*P		Pg	22 35 56.0	-0.2
	baz=230							
CHN1	**Nanshi**	**1.55**	**227**	*e*P		Pb	22 35 56.2	+0.4
	baz=228							
SLGT	**Liugui**	**1.61**	**219**	*e*P		Pb	22 35 57.2	+0.2
	baz=221							
ICHU	**Yijhu**	**1.62**	**237**	*e*P		Pg	22 35 57.6	-0.5
	baz=237							

JMA ***06*** *22:36:55.0±0.2,24.˚N±1.˚×122.˚4E±0.˚4, h22km±2km, MV2.9/12, NW OFF ISHIGAKIJIMA IS*
TAP ***06*** *22:36:55.5, 24.˚16N×122.˚43E, h26km, ML3.2, C*
ISC 06 22:36:55.3±1.0**, 24˚09N**±0.˚04×**122˚43E**±0.˚02**, h30**km±6km**, n44,** σ0**962**/78**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.11**	**288**	S	**Sb**	**22 37 03.9**	**+0.3**
	baz=249						
EOS3	**EOS3**	**0.22**	**333**	P	**Pb**	**22 37 01.4**	**-0.3**
	baz=311						
EOS3				S	**Sb**	**22 37 06.3**	**+0.4**
	baz=311						
EOS2	**EOS2**	**0.38**	**331**	P	**Pb**	**22 37 03.7**	**0.0**
	baz=314						
EOS2				S	**Sn**	**22 37 10.5**	**-0.3**
	baz=314						
JYNG	**Yonagunijimaku**	**0.59**	**52**	P	**Pb**	**22 37 06.8**	**-0.5**
JYNG				S	**Sb**	**22 37 14.5**	**-0.9**
YOJ	**Yonaguni jima**	**0.65**	**55**	P	**Pb**	**22 37 07.8**	**-0.4**
	baz=66						
YOJ				S	**Sn**	**22 37 17.3**	**-0.3**
	baz=66						
YOJ	**Yonaguni jima**	**0.65**	**55**	P	**Pb**	**22 37 07.7**	**-0.4**
YOJ				*e*S	**Sn**	**22 37 17.3**	**-0.3**
EAHA	**Aohua**	**0.68**	**291**	P	**Pb**	**22 37 08.6**	**0.0**
	baz=286						
EAHA				S	**Sn**	**22 37 19.3**	**+1.1**
	baz=286						
EWUT	**Wuta**	**0.69**	**301**	P	**Pb**	**22 37 08.2**	**-0.7**
	baz=297						
EWUT				S	**Sb**	**22 37 18.1**	**-0.1**
	baz=297						
ENA	**Nanau**	**0.71**	**298**	P	**Pb**	**22 37 08.9**	**-0.4**
	baz=293						
ENA				S	**Sn**	**22 37 19.2**	**-0.1**
	baz=293						
ESAO	**Su ao**	**0.72**	**312**	P	**Pb**	**22 37 08.6**	**-0.8**
	baz=308						
ESAO				S	**Sn**	**22 37 19.8**	**+0.3**
	baz=308						
TWC	**Suao**	**0.74**	**315**	P	**Pb**	**22 37 08.6**	**-1.1**
	baz=305						
TWC				*e*S	**Sn**	**22 37 19.6**	**-0.3**
	baz=305						
NDS	**Dongshan**	**0.85**	**310**	P	**Pn**	**22 37 11.8**	**+0.6**
	baz=306						
LATG	**Datong**	**0.94**	**299**	P	**Pn**	**22 37 13.0**	**+0.5**
	baz=302						
LATG				S	**Sn**	**22 37 25.3**	**+0.4**
	baz=302						
TWE	**Neicheng**	**0.94**	**312**	P	**Pb**	**22 37 12.5**	**-0.5**
	baz=310						
TWE				S	**Sn**	**22 37 25.5**	**+0.7**
	baz=310						
ENTT	**Nioudou**	**0.96**	**305**	P	**Pn**	**22 37 13.2**	**+0.5**
	baz=303						
ENTT				S	**Sn**	**22 37 26.4**	**+1.0**
	baz=303						
NDT	**Datong Townshi**	**0.98**	**302**	P	**Pn**	**22 37 13.6**	**+0.6**
	baz=299						
NDT				S	**Sn**	**22 37 27.0**	**+1.1**
	baz=299						
TWB1	**Santiao Chiao**	**1.00**	**336**	*e*P	**Pn**	**22 37 13.1**	**-0.1**
	baz=352						
TWB1				*e*S	**Sb**	**22 37 25.6**	**-1.2**
	baz=352						
NNSB	**Datong**	**1.01**	**290**	P	**Pn**	**22 37 13.8**	**+0.3**
	baz=288						
NNSB				S	**Sb**	**22 37 26.8**	**-0.6**
	baz=288						
FUSB	**Fushanzhiwuyua**	**1.02**	**311**	P	**Pb**	**22 37 14.0**	**-0.4**
	baz=309						
FUSB				S	**Sn**	**22 37 28.4**	**+1.5**
	baz=309						
WARBT	**Fenglin Townsh**	**1.02**	**249**	*e*S	**Sb**	**22 37 26.6**	**-1.0**
	baz=238						
NNS	**Nan Shan**	**1.03**	**290**	P	**Pb**	**22 37 14.8**	**+0.2**
	baz=288						
NNS				S	**Sn**	**22 37 27.6**	**+0.5**
	baz=288						
TIPB	**Shuangxi**	**1.04**	**328**	P	**Pn**	**22 37 13.8**	**0.0**
	baz=326						
TIPB				S	**Sn**	**22 37 27.5**	**+0.2**
	baz=326						
WHF	**Hehuan Shan**	**1.07**	**273**	P	**Pn**	**22 37 14.3**	**-0.2**
	baz=272						
WHF				S	**Sb**	**22 37 28.3**	**-0.9**
	baz=272						
NWLT	**Wulai**	**1.09**	**309**	P	**Pb**	**22 37 15.6**	**+0.1**
	baz=307						
NWLT				S	**Sn**	**22 37 29.3**	**+0.7**
	baz=307						
FUSS	**Fushou**	**1.09**	**279**	*e*P	**Pb**	**22 37 15.9**	**+0.2**
	baz=277						
FUSS				*e*S	**Sn**	**22 37 29.7**	**+0.7**
	baz=277						
SXI1	**Grass Mountain**	**1.12**	**333**	P	**Pn**	**22 37 15.2**	**+0.2**
	baz=340						
YHNB	**Yeheng**	**1.12**	**301**	P	**Pn**	**22 37 15.4**	**+0.4**
	baz=286						
YHNB				S	**Sb**	**22 37 29.6**	**-0.8**
	baz=286						
NSK	**Sanguang**	**1.14**	**301**	P	**Pn**	**22 37 15.4**	**+0.2**
	baz=286						
NSK				S	**Sb**	**22 37 30.1**	**-0.9**
	baz=286						
WFSB	**Wu-fen Shan**	**1.14**	**329**	*e*P	**Pb**	**22 37 15.9**	**-0.5**
	baz=328						
WFSB				*e*S	**Sn**	**22 37 30.9**	**+1.1**
	baz=328						
CHGB	**Renai**	**1.15**	**269**	*e*P	**Pn**	**22 37 15.0**	**-0.5**
	baz=255						
CHGB				*e*S	**Sn**	**22 37 30.4**	**+0.1**
	baz=255						
TWA	**Mucha**	**1.18**	**319**	*e*S	**Sb**	**22 37 33.0**	**+1.1**
	baz=327						
NHDH	**Xindian Distri**	**1.20**	**317**	P	**Pb**	**22 37 17.5**	**+0.1**
	baz=332						
NHDH				S	**Sb**	**22 37 32.9**	**+0.3**
	baz=332						
WUSB	**Renai**	**1.20**	**266**	*e*P	**Pn**	**22 37 16.6**	**+0.4**
	baz=265						
WUSB				*e*S	**Sn**	**22 37 31.5**	**0.0**
	baz=265						
IRIF	**Iriomote-Funau**	**1.21**	**78**	P	**Pn**	**22 37 16.8**	**+0.6**
IRIF				*e*S	**Sb**	**22 37 32.9**	**-0.1**
VWDT	**VWDT**	**1.23**	**255**	*e*P	**Pn**	**22 37 17.0**	**+0.7**
	baz=253						
YULB	**Yu-li**	**1.25**	**237**	*e*P	**Pn**	**22 37 16.5**	**-0.1**
	baz=236						
EYUL	**Yuli**	**1.26**	**234**	*e*P	**Pn**	**22 37 16.5**	**-0.2**
	baz=234						
HATJ	**Hateruma jima**	**1.26**	**91**	*e*S	**Sb**	**22 37 34.6**	**+0.5**
YM01	**YM01**	**1.31**	**324**	*e*S	**Sb**	**22 37 34.9**	**-0.9**
	baz=336						
NFF	**Wufeng Townshi**	**1.31**	**295**	P	**Pb**	**22 37 19.2**	**-0.2**
	baz=293						
NFF				S	**Sb**	**22 37 35.2**	**-0.7**
	baz=293						
NSTT	**Nanjuang**	**1.41**	**293**	P	**Pb**	**22 37 20.0**	**-0.9**
	baz=292						
NSTT				S	**Sb**	**22 37 38.6**	**0.0**
	baz=292						
JKRS	**Kuro-shima**	**1.45**	**84**	P	**Pb**	**22 37 21.0**	**-0.6**
JKRS				S	**Sb**	**22 37 40.0**	**+0.3**
JIJ	**Ishigaki jima**	**1.59**	**80**	P	**Pn**	**22 37 21.6**	**+0.2**
JIJ				*e*S	**Sn**	**22 37 41.7**	**+0.9**
JISG	**Ishigakijimahi**	**1.79**	**73**	P	**Pn**	**22 37 23.7**	**-0.3**
JISG				*e*S	**Sn**	**22 37 46.7**	**+1.0**

IDC ***06*** *22:43:50.1±1.2,26.˚75N×143.˚34E, h0km, mb3.9/8, mbtmp3.9/11, ML3.7/3, Error ellipse: s-maj=32.4km s-min=18.3km az=62.0*
NEIC ***06*** *22:43:50.6±0.8,27.˚0N±0.˚1×143.˚73E±0.˚04, h10km±2km, mb4.2/7, Error ellipse: s-maj=19.2km s-min=5.4km az=185.0*
JMA ***06*** *22:43:53.2±0.1,27.˚N±1.˚×143.˚6E±0.˚7, h77km, MV4.3/21, NEAR CHICHIJIMA ISLAND*
ISC 06 22:43:50.9±0.9**, 27˚08N**±0.˚09×**143˚66E**±0.˚08**, h10**km**, n37,** σ1**961**/39**, mb4.1**/13**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.32**	**271**	*e*P	**Pn**	**22 44 16.1**	**+0.7**
CBIJ				*e*S	**Sb**	**22 44 33.4**	**+0.7**
JCJ	**Chichijima**	**1.32**	**271**	Pn	**Pn**	**22 44 15.6**	**+0.3**
JCJ				Sn	**Sn**	**22 44 34.4**	**+1.4**
JCJ	**Chichijima**	**1.32**	**271**	Pn	**Pn**	**22 44 12.1**	**-3.3**
	25nm,0.3s,baz=64,slow=17,SNR=18						
JCJ				Sn	**Sb**	**22 44 29.2**	**-3.5**
	143nm,0.3s,baz=276,slow=22,SNR=25						
JHH2	**Haha-jima-NKT2**	**1.40**	**252**	*e*S	**Sb**	**22 44 35.5**	**+0.4**
JHH2	**Haha-jima-NKT2**	**1.40**	**252**	A	A	22 44 35.5	
	comp=E,3.0nm,2.8s,comp=N,2.0nm,4.6s						
BSO3	**Boso 3**	**8.15**	**341**	*e*P	**Pn**	**22 45 49.0**	**-0.1**
JOD2	**Odawara 2**	**9.04**	**335**	*e*P	**Pn**	**22 46 01.9**	**+0.3**
JHU	**Hanno**	**9.51**	**338**	*e*P	**Pn**	**22 46 08.1**	**+0.3**
JRY	**Ryogami san**	**9.79**	**337**	*e*P	**Pn**	**22 46 12.0**	**+0.3**
JHO	**Hitachi**	**9.86**	**345**	*e*P	**Pn**	**22 46 10.9**	**-1.7**
JHO				*e*S	Sn	22 47 55.7	-7.7
JAG	**Ashikaga**	**9.98**	**340**	*e*P	**Pn**	**22 46 14.0**	**-0.3**
JAG				*e*S	**Sn**	**22 48 01.4**	**-5.0**
MJAR	**Matsushiro Arr**	**10.51**	**335**	Pn	**Pn**	**22 46 22.3**	**+0.7**
	comp=N,0.5nm,0.3s,baz=165,slow=12,SNR=25						
	comp=N,3.1nm,0.6s						
MAJO	**Matsushiro**	**10.51**	**335**	Pn	**Pn**	**22 46 21.8**	**+0.2**
MJB9	**Matsu-Tunnel**	**10.51**	**335**	Pn	**Pn**	**22 46 22.5**	**+0.9**
JFK	**Kawauchi**	**10.52**	**348**	*e*S	Sn	22 48 09.5	-10
JMM	**Marumori**	**11.02**	**348**	Pn	**Pn**	**22 46 27.8**	**-0.8**
KSRS	**Korea Array**	**16.83**	**312**	Pn	**P**	**22 47 49.1**	**+0.3**
	comp=N,0.2nm,0.3s,baz=127,slow=10,SNR=3.1						
	comp=N,1.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**19.50**	**334**	P	**Pn**	**22 48 21.8**	**+2.5**
	comp=N,0.3nm,0.3s,baz=150,slow=9.5,SNR=6.4						
	comp=N,1.1nm,0.5s						
SONM	**Songino Array**	**35.64**	**316**	P	**P**	**22 50 50.8**	**+1.7**
	comp=N,0.6nm,0.5s,baz=110,slow=6.9,SNR=5.4						
	comp=N,0.6nm,0.5s						
WR0	**Warramunga Arr**	**47.59**	**192**	P	**P**	**22 52 24.8**	**-2.2**
WRA	**Warramunga Arr**	**47.61**	**192**	P	**P**	**22 52 24.7**	**-2.5**
WRA	**Warramunga Arr**	**47.61**	**192**	P	**P**	**22 52 24.9**	**-2.3**
	comp=N,1.2nm,0.6s,baz=12,slow=8.5,SNR=11						
	comp=N,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**50.36**	**319**	P	**P**	**22 52 49.4**	**+1.5**
	comp=N,0.3nm,0.3s,baz=104,slow=12,SNR=2.2						
	comp=N,0.3nm,0.3s						
ASAR	**Alice Springs**	**51.33**	**191**	P	**P**	**22 52 53.5**	**-2.0**
	comp=N,0.2nm,0.5s,baz=4.5,slow=5.9,SNR=1.8						
	comp=N,0.2nm,0.5s						
MKAR	**Makanchi Array**	**51.50**	**310**	P	**P**	**22 52 57.1**	**+0.5**
MKAR	**Makanchi Array**	**51.50**	**310**	P	**P**	**22 52 57.7**	**+1.1**
	comp=N,0.7nm,0.4s,baz=87,slow=9.9,SNR=20						
	comp=N,0.7nm,0.4s						
MAKZ	**Makanchi**	**51.71**	**310**	P	**P**	**22 52 59.0**	**+0.7**
MAKZ				IAmb	IAmb	22 52 59.9	
	comp=Z,2.5nm,1.2s						
KURK	**Kurchatov**	**53.93**	**315**	P	**P**	**22 53 14.9**	**+0.3**
KURK				IAmb	IAmb	22 53 17.5	
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**53.99**	**314**	P	**P**	**22 53 15.9**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=89,slow=8.0,SNR=10.0						
	comp=Z,1.2nm,0.5s						
E24K	**Your Creek**	**56.91**	**25**	P	**P**	**22 53 36.5**	**+0.7**
E24K				IAmb	IAmb	22 53 57.7	
	comp=Z,3.1nm,1.4s						
BVAR	**Borovoye Array**	**58.94**	**318**	P	**P**	**22 53 51.2**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=89,slow=6.0,SNR=12						
	comp=Z,1.0nm,0.4s						
KK31	**Karatay Array**	**60.16**	**306**	P	**P**	**22 53 58.9**	**0.0**
KK31				IAmb	IAmb	22 54 00.6	
	comp=Z,2.1nm,0.7s						
KKAR	**Karatay Array**	**60.16**	**306**	P	**P**	**22 53 59.0**	**+0.2**
G31M	**Satah River**	**62.31**	**26**	P	**P**	**22 54 12.9**	**0.0**
G31M				IAmb	IAmb	22 54 42.1	
	comp=Z,2.3nm,1.2s						
ABKAR	**Akbulak array**	**66.05**	**315**	P	**P**	**22 54 38.0**	**+0.2**
FINES	**FINESS Array B**	**78.53**	**334**	P	**P**	**22 55 52.5**	**+0.4**
FINES	**FINESS Array B**	**78.53**	**334**	P	**P**	**22 55 53.1**	**+1.0**
	comp=Z,2.6nm,1.0s,baz=57,slow=7.0,SNR=6.7						
	comp=Z,2.6nm,1.0s						

ASIES ***06*** *22:54:28.9,24.˚02N×121.˚75E, h4km, ML3.7, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr1.22; Mθθ-0.06; Mϕϕ-1.16; Mrθ0.47; Mrϕ-0.40; Mθϕ1.43; Fault plane solution: M₀1.95874×10²¹ NP1:ϕs18.23000°, δ70.04000°, λ90.19000°. NP2:ϕs197.67000°, δ19.96000°, λ89.48000°. Principal axes: T Plg64.9590°, Azm288.5390°; N Plg0.1780°, Azm198.1590°; P Plg25.0410°, Azm108.0760°;*
TAP ***06*** *22:54:28.9,24.˚02N×121.˚75E, h4km, ML3.7, C*
JMA ***06*** *22:54:29.4±0.2,24.˚0N±0.˚4×12˚2E±.˚, h0km, MV3.2/13, TAIWAN REGION*
ISC 06 22:54:29.7±0.9**, 24˚01N**±0.˚01×**121˚75E**±0.˚02**, h9**km±7km**, n119,** σ0**887**/201**, 17C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.16**	**295**	⇑*i*P	**Pg**	**22 54 32.7**	**-0.3**
	baz=296						
TWD				S	**Sg**	**22 54 36.1**	**+0.8**
	baz=296						
ETL	**Fush Village**	**0.19**	**321**	P	**Pg**	**22 54 33.3**	**-0.2**
	baz=320						
NACB	**Ninganchiao**	**0.21**	**318**	P	**Pg**	**22 54 34.1**	**+0.1**
NACB	**Ninganchiao**	**0.21**	**318**	*i* P	**Pg**	**22 54 33.8**	**-0.3**
	baz=318						
NACB				S	**Sg**	**22 54 37.0**	**0.0**
	baz=318						
ETM	**Tongmen**	**0.24**	**259**	⇑*i*P	**Pg**	**22 54 34.4**	**-0.2**
	baz=259						
ETM				S	**Sg**	**22 54 38.8**	**+1.0**
	baz=259						
SHUL	**Shoufeng**	**0.28**	**217**	*e*P	**Pb**	**22 54 36.1**	**-0.8**
	baz=216						
SHUL				S	**Sb**	**22 54 42.1**	**+0.2**
	baz=216						
LXIB	**Xiulin Townshi**	**0.31**	**272**	⇑*i*P	**Pg**	**22 54 35.6**	**-0.3**
	baz=271						
LXIB				S	**Sg**	**22 54 40.2**	**+0.2**
	baz=271						
EAHA	**Aohua**	**0.32**	**358**	*i* P	**Pb**	**22 54 36.3**	**-1.2**
	baz=345						
EAHA				*i* S	**Sb**	**22 54 41.6**	**-1.2**
	baz=345						
ESL	**Shilin**	**0.35**	**236**	⇑*i*P	**Pg**	**22 54 36.2**	**-0.4**
	baz=242						
ESL				S	**Sb**	**22 54 42.2**	**-1.6**
	baz=242						
TEGC	**Jichi Village**	**0.36**	**212**	P	**Pb**	**22 54 37.7**	**-0.5**
	baz=210						
TEGC				S	**Sb**	**22 54 45.2**	**+1.2**
	baz=210						
ENA	**Nanau**	**0.41**	**359**	*e*P	**Pb**	**22 54 37.9**	**-1.4**
	baz=360						
ENA				S	**Sb**	**22 54 45.0**	**-0.7**
	baz=360						
EWUT	**Wuta**	**0.43**	**3**	*e*P	**Pb**	**22 54 38.5**	**-1.1**
	baz=3.0						
EWUT				*e*S	**Sb**	**22 54 45.2**	**-0.9**
	baz=3.0						
WARBT	**Fenglin Townsh**	**0.44**	**229**	*e*P	**Pg**	**22 54 37.8**	**-0.6**
	baz=235						
EGFH	**Guangfu**	**0.45**	**221**	*e*P	**Pb**	**22 54 38.6**	**-1.3**
	baz=222						
WHF	**Hehuan Shan**	**0.46**	**287**	*e*P	**Pg**	**22 54 38.7**	**-0.1**
	baz=287						
WHF				*e*S	**Sb**	**22 54 46.0**	**-1.4**
	baz=287						
FUSS	**

NNSB				S		Sb	22 54 48.5	-0.7	
	baz=309								
NNS	**Nan Shan**	**0.55**	**321**	*eP*		**Pb**	**22 54 40.4**	**-1.2**	
	baz=320								
NNS				*eS*		**Sb**	**22 54 49.2**	**-0.4**	
	baz=320								
LATG	**Datong**	**0.56**	**339**	⇑*iP*		**Pb**	**22 54 40.6**	**-1.2**	
	baz=337								
LATG				*eS*		**Sb**	**22 54 49.2**	**-0.7**	
	baz=337								
ESAO	**Su ao**	**0.57**	**9**	*eP*		**Pb**	**22 54 41.8**	**-0.1**	
	baz=358								
ESAO				S		**Sn**	**22 54 52.0**	**-1.5**	
	baz=358								
TWT	**Tachien**	**0.58**	**295**	*iP*		**Pb**	**22 54 41.6**	**-0.5**	
	baz=294								
TWT				S		**Sb**	**22 54 50.6**	**+0.1**	
	baz=294								
WUSB	**Renai**	**0.58**	**268**	*iP*		**Pb**	**22 54 41.1**	**-1.0**	
	baz=278								
WUSB				*iS*		**Sb**	**22 54 50.0**	**-0.5**	
	baz=278								
EOS3	**EOS3**	**0.58**	**62**	P		**Pn**	**22 54 43.4**	**-0.7**	
	baz=69								
TDCB	**Techi**	**0.59**	**294**	P		**Pb**	**22 54 41.5**	**-0.9**	
	baz=294								
TDCB				*eS*		**Sb**	**22 54 50.0**	**-0.9**	
	baz=294								
EOS2	**EOS2**	**0.60**	**47**	P		**Pn**	**22 54 44.5**	**+0.2**	
	baz=58								
HGSD	**Ruisui**	**0.60**	**210**	*eP*		**Pb**	**22 54 42.2**	**-0.2**	
	baz=196								
TWC	**Suao**	**0.60**	**9**	P		**Pb**	**22 54 42.0**	**-0.4**	
	baz=359								
TWC				S		**Sb**	**22 54 52.2**	**+1.1**	
	baz=359								
VWDT	**VWDT**	**0.61**	**245**	⇑*iP*		**Pb**	**22 54 41.7**	**-0.9**	
	baz=255								
VWDT				S		**Sb**	**22 54 50.2**	**-1.1**	
	baz=255								
NDS	**Dongshan**	**0.62**	**357**	P		**Pb**	**22 54 42.2**	**-0.6**	
	baz=357								
NDS				*eS*		**Sb**	**22 54 51.8**	**+0.2**	
	baz=357								
NDT	**Datong Townshi**	**0.63**	**340**	P		**Pb**	**22 54 42.1**	**-0.7**	
	baz=340								
NDT				*eS*		**Sb**	**22 54 51.3**	**-0.4**	
	baz=340								
EHY	**Hungye**	**0.64**	**218**	P		**Pg**	**22 54 41.6**	**-0.4**	
	baz=218								
ENTT	**Nioudou**	**0.65**	**345**	⇑*iP*		**Pb**	**22 54 42.5**	**-0.7**	
	baz=333								
ENTT				S		**Sb**	**22 54 53.0**	**+0.7**	
	baz=333								
TWE	**Neicheng**	**0.71**	**354**	*iP*		**Pb**	**22 54 43.8**	**-0.4**	
	baz=355								
TWE				S		**Sb**	**22 54 54.3**	**+0.2**	
	baz=355								
YHNB	**Yeheng**	**0.74**	**332**	⇑*iP*		**Pb**	**22 54 44.2**	**-0.6**	
	baz=322								
YHNB				S		**Sb**	**22 54 55.0**	**0.0**	
	baz=322								
YULB	**Yu-li**	**0.74**	**214**	P		**Pb**	**22 54 44.4**	**-0.5**	
YULB	**Yu-li**	**0.74**	**214**	P		**Pg**	**22 54 43.6**	**-0.4**	
	baz=213								
YULB				S		**Sb**	**22 54 55.3**	**+0.1**	
	baz=213								
ECBN	**Changbin**	**0.75**	**202**	*eP*		**Pb**	**22 54 44.7**	**-0.2**	
	baz=187								
NSK	**Sanguang**	**0.75**	**332**	⇑*iP*		**Pb**	**22 54 44.4**	**-0.6**	
	baz=321								
NSK				S		**Sb**	**22 54 55.7**	**+0.3**	
	baz=321								
FUSB	**Fushanzhiwuyua**	**0.76**	**349**	⇑*iP*		**Pb**	**22 54 44.9**	**-0.3**	
	baz=338								
FUSB				S		**Sb**	**22 54 56.1**	**+0.5**	
	baz=338								
SSLB	**Suanglung**	**0.76**	**253**	P		**Pb**	**22 54 44.5**	**-0.7**	
SSLB	**Suanglung**	**0.76**	**253**	⇑*iP*		**Pb**	**22 54 44.3**	**-0.9**	
	baz=265								
SSLB				S		**Sg**	**22 54 54.4**	**+0.1**	
	baz=265								
WCS	**Beigang Elemen**	**0.77**	**273**	⇑P		**Pb**	**22 54 44.7**	**-0.5**	
	baz=273								
WCS				*eS*		**Sb**	**22 54 55.2**	**-0.6**	
	baz=273								
EYUL	**Yuli**	**0.77**	**211**	*eP*		**Pn**	**22 54 45.9**	**-0.9**	
	baz=229								
TWF1	**Yuli**	**0.78**	**212**	*eS*		**Sb**	**22 54 57.2**	**+1.0**	
	baz=211								
WHP	**Taichung City**	**0.78**	**290**	⇓*eP*		**Pb**	**22 54 45.5**	**0.0**	
	baz=290								
WHP				S		**Sb**	**22 54 56.6**	**+0.3**	
	baz=290								
SMLT	**Sun Moon Lake**	**0.79**	**261**	⇑*iP*		**Pb**	**22 54 45.0**	**-0.7**	
	baz=272								
SMLT				S		**Sb**	**22 54 56.4**	**-0.1**	
	baz=272								
NWLT	**Wulai**	**0.79**	**344**	P		**Pb**	**22 54 45.6**	**-0.1**	
	baz=329								
NWLT				S		**Sb**	**22 54 56.8**	**+0.2**	
	baz=329								
TYC	**Yuchr**	**0.82**	**263**	⇑*iP*		**Pb**	**22 54 45.4**	**-0.8**	
	baz=272								
TYC				S		**Sb**	**22 54 56.9**	**-0.5**	
	baz=272								
NFF	**Wufeng Townshi**	**0.84**	**317**	*eP*		**Pb**	**22 54 46.5**	**-0.1**	
	baz=316								
NFF				S		**Sb**	**22 54 58.1**	**0.0**	
	baz=316								
CHKH	**Chenggong**	**0.88**	**202**	*eP*		**Pb**	**22 54 46.7**	**-0.5**	
	baz=186								
CHKH				*eS*		**Sn**	**22 55 00.0**	**-1.2**	
	baz=186								
WHYT	**Xinyi Township**	**0.88**	**249**	*eP*		**Pg**	**22 54 45.5**	**-1.1**	
	baz=258								
WHYT				*eS*		**Sn**	**22 55 00.5**	**-0.8**	
	baz=258								
FULB	**Fuli**	**0.91**	**207**	*eP*		**Pb**	**22 54 47.8**	**+0.1**	
	baz=224								
FULB				*eS*		**Sn**	**22 55 02.7**	**+0.6**	
	baz=224								
LIOB	**Emei**	**0.92**	**313**	P		**Pn**	**22 54 48.3**	**-0.6**	
	baz=313								
LIOB				*eS*		**Sn**	**22 55 01.1**	**-1.2**	
	baz=313								
NSTT	**Nanjuang**	**0.92**	**312**	⇑*iP*		**Pn**	**22 54 48.1**	**-0.8**	
	baz=312								
NSTT				S		**Sb**	**22 55 00.4**	**+0.1**	
	baz=312								
TWQ1	**Liyutan**	**0.95**	**291**	*eP*		**Pn**	**22 54 49.5**	**+0.2**	
	baz=303								
TWQ1				*eS*		**Sn**	**22 55 03.6**	**+0.5**	
	baz=303								
WJS	**Zhushan**	**0.95**	**259**	*eP*		**Pn**	**22 54 49.2**	**-0.1**	
	baz=268								
WJS				*eS*		**Sn**	**22 55 03.0**	**-0.1**	
	baz=268								
TIPB	**Shuangxi**	**0.96**	**4**	*eP*		**Pb**	**22 54 48.5**	**0.0**	
	baz=354								
TIPB				*eS*		**Sb**	**22 55 01.8**	**+0.4**	
	baz=354								
NHDH	**Xindian Distri**	**0.97**	**348**	*eP*		**Pn**	**22 54 49.3**	**-0.2**	
	baz=336								
NHDH				*eS*		**Sn**	**22 55 02.8**	**-0.7**	
	baz=336								
TWA	**Mucha**	**0.97**	**351**	*eP*		**Pn**	**22 54 49.1**	**-0.5**	
	baz=338								
WNT	**Mingjian**	**0.98**	**262**	*eP*		**Pn**	**22 54 49.4**	**-0.3**	
	baz=269								
WNT				*eS*		**Sn**	**22 55 04.7**	**+0.8**	
	baz=269								
TATO	**Taipei**	**0.99**	**346**	P		**Pn**	**22 54 49.7**	**-0.1**	
NSY	**Sanyi**	**0.99**	**294**	*eP*		**Pn**	**22 54 50.2**	**+0.4**	
	baz=306								
NSY				*eS*		**Sn**	**22 55 04.8**	**+0.8**	
	baz=306								
EHD	**Haiduan**	**0.99**	**210**	*eP*		**Pb**	**22 54 48.9**	**-0.2**	
	baz=212								
ALS	**Alishan**	**1.00**	**240**	*eP*		**Pb**	**22 54 49.4**	**0.0**	
	baz=239								
ALS				*eS*		**Sn**	**22 55 03.7**	**-0.9**	
	baz=239								
TWB1	**Santiao Chiao**	**1.01**	**12**	*eP*		**Pn**	**22 54 50.0**	**-0.1**	
	baz=3.0								
TWB1				*eS*		**Sb**	**22 55 03.5**	**+0.6**	
	baz=3.0								
NMLH	**Miaoli**	**1.02**	**301**	*eP*		**Pn**	**22 54 50.9**	**+0.7**	
	baz=300								
NMLH				*eS*		**Sn**	**22 55 05.0**	**+0.2**	
	baz=300								
ECS	**Chishang**	**1.03**	**208**	*eP*		**Pn**	**22 54 50.1**	**-0.4**	
	baz=226								
SBCB	**Hsinchu**	**1.04**	**318**	*eP*		**Pn**	**22 54 51.2**	**+0.6**	
	baz=317								
SBCB				*eS*		**Sn**	**22 55 05.4**	**+0.1**	
	baz=317								
NWF	**Wu-fen Shan**	**1.05**	**2**	P		**Pn**	**22 54 50.9**	**+0.1**	
	baz=339								
NWF				S		**Sn**	**22 55 05.1**	**-0.6**	
	baz=339								
WFSB	**Wu-fen Shan**	**1.05**	**2**	P		**Pn**	**22 54 50.8**	**+0.1**	
	baz=339								
WFSB				S		**Sn**	**22 55 05.0**	**-0.6**	
	baz=339								
HSN	**Hsinchu**	**1.06**	**318**	*eP*		**Pn**	**22 54 51.8**	**+1.0**	
	baz=317								
ELDTW	**Lidau**	**1.06**	**219**	*eP*		**Pb**	**22 54 50.0**	**-0.3**	
	baz=221								
CHN5	**Tsauling**	**1.07**	**247**	⇓*eP*		**Pn**	**22 54 50.6**	**-0.3**	
	baz=247								
CHN5				*eS*		**Sn**	**22 55 06.4**	**+0.5**	
	baz=247								
WDJ	**Dajia District**	**1.07**	**288**	*eP*		**Pn**	**22 54 51.6**	**+0.7**	
	baz=298								
WDJ				*eS*		**Sn**	**22 55 07.2**	**+1.3**	
	baz=298								
NCUH	**Zhongli**	**1.08**	**332**	*eP*		**Pn**	**22 54 51.8**	**+0.8**	
	baz=330								
NCUH				*eS*		**Sn**	**22 55 08.4**	**+2.2**	
	baz=330								
SXI1	**Grass Mountain**	**1.08**	**6**	*eP*		**Pn**	**22 54 51.3**	**+0.1**	
	baz=343								
SXI1				*eS*		**Sn**	**22 55 06.6**	**+0.2**	
	baz=343								
EDH	**Donghe**	**1.11**	**202**	*eP*		**Pg**	**22 54 50.0**	**-1.1**	
	baz=217								
EDH				*eS*		**Sg**	**22 55 04.8**	**-0.7**	
	baz=217								
TWS1	**Kuangyinshan**	**1.12**	**344**	*eP*		**Pn**	**22 54 52.3**	**+0.7**	
	baz=341								
TNOU	**National Taiwa**	**1.13**	**1**	*eP*		**Pn**	**22 54 51.8**	**0.0**	
	baz=336								
YM01	**YM01**	**1.14**	**352**	*eP*		**Pn**	**22 54 52.2**	**+0.3**	
	baz=348								
WDLH	**Douliu**	**1.16**	**254**	*eP*		**Pn**	**22 54 53.0**	**+0.9**	
	baz=255								
JYNG	**Yonaguni jima**	**1.18**	**68**	*eP*		**Pn**	**22 54 52.3**	**0.0**	
JYNG				*eS*		**Sn**	**22 55 09.8**	**+1.2**	
NTST	**Danshui**	**1.18**	**347**	*eS*		**Sn**	**22 55 10.3**	**+1.7**	
	baz=346								
ANP	**Anpu**	**1.19**	**350**	*eP*		**Pn**	**22 54 53.2**	**+0.6**	
	baz=346								
WCKO	**Fanlu**	**1.20**	**242**	*eP*		**Pn**	**22 54 53.6**	**+1.0**	
	baz=241								
WCKO				*eS*		**Sn**	**22 55 10.0**	**+0.9**	
	baz=241								
STYH	**Taoyuan**	**1.23**	**227**	*eP*		**Pg**	**22 54 52.2**	**-1.0**	
	baz=212								
STYH				*eS*		**Sn**	**22 55 09.9**	**+0.2**	
	baz=212								
YOJ	**Yonaguni jima**	**1.23**	**69**	*eP*		**Pn**	**22 54 54.0**	**+0.9**	
LONT	**Longtian**	**1.24**	**207**	*eP*		**Pn**	**22 54 53.2**	**0.0**	
	baz=206								
LONT				*eS*		**Sb**	**22 55 09.4**	**-0.1**	
	baz=206								
CHN4	**Tsaushan**	**1.25**	**238**	*eP*		**Pn**	**22 54 54.0**	**+0.6**	
	baz=239								
TPUB	**Ta-pu**	**1.25**	**236**	P		**Pn**	**22 54 54.5**	**+1.1**	
TPUB	**Ta-pu**	**1.25**	**236**	*eP*		**Pn**	**22 54 54.1**	**+0.7**	
	baz=235								
TPUB				*eS*		**Sn**	**22 55 12.0**	**+1.6**	
	baz=235								
WRL	**Guolierlin Hig**	**1.26**	**265**	*eP*		**Pn**	**22 54 54.3**	**+0.7**	
	baz=266								
WRL				*eS*		**Sn**	**22 55 12.0**	**+1.3**	
	baz=266								
WTK	**Tuku**	**1.29**	**256**	*eP*		**Pb**	**22 54 55.1**	**+1.0**	
	baz=257								
WTK				*eS*		**Sn**	**22 55 12.9**	**+1.5**	
	baz=257								
WTP	**Ta-pu**	**1.29**	**234**	*eP*		**Pb**	**22 54 54.6**	**+0.4**	
	baz=233								
WTP				*eS*		**Sn**	**22 55 13.1**	**+1.6**	
	baz=233								
TWG	**Pinlang**	**1.34**	**208**	*eP*		**Pn**	**22 54 53.8**	**-0.8**	
	baz=194								
TWGBT	**Beinan**	**1.34**	**207**	P		**Pb**	**22 54 54.5**	**-0.5**	
TWGBT	**Beinan**	**1.34**	**207**	*eP*		**Pn**	**22 54 54.0**	**-0.7**	
	baz=194								
TWK	**Hsinying**	**1.38**	**238**	*eP*		**Pg**	**22 54 56.1**	**0.0**	
	baz=235								
TWK				*eS*		**Sn**	**22 55 15.1**	**+1.6**	
	baz=235								
CHN1	**Nanshi**	**1.39**	**234**	*eP*		**Pg**	**22 54 56.5**	**+0.1**	
	baz=231								
CHN1				*eS*		**Sn**	**22 55 16.1**	**+2.2**	
	baz=231								
SNST	**Tainan City**	**1.39**	**236**	*eP*		**Pg**	**22 54 57.4**	**+0.9**	
	baz=233								
SNST				*eS*		**Sn**	**22 55 17.0**	**+3.0**	
	baz=233								
SGST	**Jiashian**	**1.42**	**229**	*eP*		**Pn**	**22 54 55.6**	**-0.1**	
	baz=211								
SGST				*eS*		**Sn**	**22 55 16.3**	**+1.8**	
	baz=211								
SLGT	**Liugui**	**1.43**	**225**	*eP*		**Pg**	**22 54 57.1**	**-0.1**	
	baz=209								
SLGT				*eS*		**Sg**	**22 55 18.4**	**+2.6**	
	baz=209								
ICHU	**Yijhu**	**1.50**	**245**	*eS*		**Sg**	**22 55 19.3**	**+1.5**	
	baz=243								
CHN8	**Yiju**	**1.56**	**245**	*eS*		**Sg**	**22 55 21.3**	**+1.5**	
	baz=243								
SCST	**Cishan**	**1.61**	**226**	*eP*		**Pg**	**22 55 00.3**	**-0.2**	
	baz=223								
SCST				*eS*		**Sg**	**22 55 23.4**	**+1.9**	
	baz=223								
TSMG	**Majia**	**1.65**	**218**	*eS*		**Sg**	**22 55 22.7**	**-0.1**	
	baz=215								
MASBT	**Mashibuluo**	**1.73**	**217**	*eP*		**Pb**	**22 55 01.0**	**-0.7**	
	baz=214								
MASBT				*eS*		**Sg**	**22 55 24.2**	**-1.2**	
	baz=214								
TSCK	**Chigu Township**	**1.75**	**241**	*eP*		**Pb**	**22 55 01.7**	**-0.4**	
	baz=238								
TSCK				*eS*		**Sg**	**22 55 25.2**	**-0.8**	
	baz=238								
IRIF	**Iriomote-Funau**	**1.84**	**80**	*eS*		**Sn**	**22 55 25.6**	**+0.7**	
SCZT	**Fangliau**	**1.94**	**213**	*eP*		**Pb**	**22 55 04.4**	**-0.8**	
	baz=211								
SCZT				*eS*		**Sg**	**22 55 30.2**	**-1.7**	
	baz=211								
PHUB	**P'eng-hu**	**2.06**	**256**	*eP*		**Pn**	**22 55 04.8**	**+0.4**	
	baz=257								
PHUB				*eS*		**Sb**	**22 55 31.7**	**-1.2**	
	baz=257								
PNG	**Penghu**	**2.06**	**258**	*eS*		**Sb**	**22 55 31.8**	**-1.2**	
	baz=260								
JKRS	**Kuro-shima**	**2.08**	**83**	*eP*		**Pn**	**22 55 05.0**	**+0.2**	
JKRS				S		**Sn**	**22 55 31.7**	**+1.0**	
JIJ	**Ishigaki jima**	**2.21**	**80**	*eP*		**Pn**	**22 55 05.7**	**-0.9**	
JIJ				*eS*		**Sn**	**22 55 33.6**	**-0.5**	
JISG	**Ishigakijimahi**	**2.41**	**76**	P		**Pn**	**22 55 08.6**	**-0.7**	
JISG				S		**Sn**	**22 55 38.1**	**-0.8**	
JMJ2	**Miyako jima3**	**3.34**	**77**	P		**Pn**	**22 55 23.9**	**+1.8**	

*IDC **06** 23:11:41.4±0.7, 23.99N×121.77E, h0km, mb4.1/19, mbtmp4.1/21, ML3.5/2, MS3.8/38, Error ellipse: s-maj=19.0km s-min=14.8km az=60.0*
*TAP **06** 23:11:42.8, 24.06N×121.71E, h6km, ML4.9, C*
*JMA **06** 23:11:42.5±0.3, 24.0N±0.4×121.7E±0.7, h0km±2km, MD4.7/15, MV4.4/15, TAIWAN REGION*
*ASIES **06** 23:11:42.8, 24.06N×121.71E, h6km, ML4.9, Mw4.5, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}2.19; $M_{\theta\theta}$-2.06; $M_{\phi\phi}$-1.66; $M_{r\theta}$3.40; $M_{\theta\phi}$-1.62; $M_{\phi r}$4.54; Fault plane solution: M_o6.37913×10^{22} NP1:ϕ_s37.90000°, δ76.93000°, λ,84.59000°. NP2:ϕ_s240.62000°, δ14.13000°, λ,112.10000°. Principal axes: T Plg57.7420°, Azm300.7240°; N Plg5.2700°, Azm39.1270°; P Plg31.7200°, Azm132.3950°;*
*NIED **06** 23:11:42.5, 24.03N×121.71E, h0km, MW4.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.79; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.61; Fault plane solution: M_o1.14000×10^{16} NP1:ϕ_s44.00000°, δ69.00000°, λ,88.00000°. NP2:ϕ_s229.00000°, δ21.00000°, λ,94.00000°.*
*NEIC **06** 23:11:43.1±1.4, 24.05N±0.02×121.72E±0.02, h10km±1km, mb4.8/68 Error ellipse: s-maj=3.5km s-min=3.0km az=218.0*
*BJI **06** 23:11:44.0±0.0, 24.32N×121.62E, h3km, mb4.3/48, mB4.9/32, ML4.6/12, Ms4.4.7/61, Ms7 4.5/55*

ISC 06 23:11:44.0±0.5, 24.06N±0.01×121.72E±0.02, h12km±2km, n354, σ1§48/446, mb4.8/57, MS4.0/38, 14C-72D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.11**	**282**	⇓*iP*			**Pg**	**23 11 45.6**	**-1.5**
	baz=282								
TWD				*iS*			**Sg**	**23 11 47.4**	**-1.9**
	baz=282								
ETL	**Fush Village**	**0.13**	**320**	⇓*iP*			**Pg**	**23 11 46.0**	**-1.4**
	baz=316								
ETL				*iS*			**Sg**	**23 11 48.1**	**-1.7**
	baz=316								
NACB	**Ninganchiao**	**0.16**	**316**	Pg			**Pg**	**23 11 46.3**	**-1.5**
NACB				Sg			**Sg**	**23 11 48.7**	**-1.8**
NACB	**Ninganchiao**	**0.16**	**316**	P			**Pg**	**23 11 46.4**	**-1.4**
NACB	**Ninganchiao**	**0.16**	**316**	⇓*iP*			**Pg**	**23 11 46.4**	**-1.4**
	baz=314								
NACB				*iS*			**Sg**	**23 11 48.6**	**-1.8**
	baz=314								
ETM	**Tongmen**	**0.22**	**246**	⇓*iP*			**Pg**	**23 11 47.6**	**-1.2**
	baz=250								
ETM				*iS*			**Sg**	**23 11 50.9**	**-1.1**
	baz=250								
EHP	**Heping Village**	**0.25**	**5**	*iP*			**Pg**	**23 11 48.4**	**-0.9**
	baz=351								
EHP				*iS*			**Sg**	**23 11 52.3**	**-0.6**
	baz=351								
EAHA	**Aohua**	**0.27**	**4**	⇓*iP*			**Pg**	**23 11 48.7**	**-0.9**
	baz=348								
EAHA				*iS*			**Sg**	**23 11 53.2**	**-0.3**
	baz=348								
LXIB	**Xiulin Townshi**	**0.28**	**263**	⇓*iP*			**Pg**	**23 11 48.6**	**-1.2**
	baz=258								
LXIB				*eS*			**Sg**	**23 11 52.8**	**-1.0**
	baz=258								
SHUL	**Shoufeng**	**0.30**	**208**	⇓*iP*			**Pg**	**23 11 50.4**	**+0.2**
	baz=221								
SHUL				*eS*			**Sb**	**23 11 56.6**	**+0.5**
	baz=221								
ESL	**Shilin**	**0.35**	**227**	⇓*iP*			**Pg**	**23 11 50.0**	**-1.1**
	baz=238								
ESL				*iS*			**Sg**	**23 11 56.4**	**+0.5**
	baz=238								
ENA	**Nanau**	**0.37**	**3**	⇓*iP*			**Pg**	**23 11 50.6**	**-0.9**
	baz=359								
ENA				S			**Sg**	**23 11 55.9**	**-0.6**
	baz=359								
TEGC	**Jichi Village**	**0.38**	**205**	⇓P			**Pg**	**23 11 51.6**	**0.0**
	baz=210								
TEGC				S			**Sb**	**23 11 59.0**	**+0.6**
	baz=210								
EWUT	**Wuta**	**0.39**	**8**	⇓*iP*			**Pg**	**23 11 51.0**	**-0.8**
	baz=2.0								
EWUT				S			**Sg**	**23 11 56.5**	**-0.6**
	baz=2.0								
WHF	**Hehuan Shan**	**0.42**	**282**	⇓*iP*			**Pg**	**23 11 51.5**	**-1.1**
	baz=282								
WHF				*iS*			**Sg**	**23 11 57.6**	**-0.7**
	baz=282								
WARBT	**Fenglin Townsh**	**0.45**	**222**	⇓*iP*			**Pg**	**23 11 51.8**	**-1.1**
	baz=237								
WARBT				S			**Sg**	**23 11 59.5**	**+0.5**
	baz=237								
EGFH	**Guangfu**	**0.47**	**215**	⇓P			**Pg**	**23 11 52.5**	**-0.7**
	baz=225								
FUSS	**Fushou**	**0.47**	**294**	⇓*iP*			**Pg**	**23 11 52.6**	**-0.7**
	baz=293								
FUSS				S			**Sg**	**23 11 59.8**	**+0.1**
	baz=293								
NNSB	**Datong**	**0.48**	**321**	⇓*iP*			**Pg**	**23 11 52.7**	**-0.8**
	baz=316								
NNSB				*iS*			**Sg**	**23 11 59.5**	**-0.4**
	baz=316								
NNSH	**Datong**	**0.48**	**321**	⇓*iP*			**Pg**	**23 11 52.7**	**-0.8**
	baz=316								
NNSH				S			**Sg**	**23 11 59.4**	**-0.5**
	baz=316								
NNS	**Nan Shan**	**0.49**	**321**	⇓*iP*			**Pg**	**23 11 52.9**	**-0.8**
	baz=317								
NNS				*iS*			**Sg**	**23 12 00.1**	**-0.3**
	baz=317								
CHGB	**Renai**	**0.50**	**271**	⇓*iP*			**Pg**	**23 11 53.1**	**-0.7**
	baz=262								
CHGB				S			**Sg**	**23 12 00.3**	**-0.2**
	baz=262								
OWD	**Renai**	**0.51**	**259**	⇓*iP*			**Pg**	**23 11 53.0**	**-0.9**
	baz=271								
OWD				*eS*			**Sb**	**23 12 01.2**	**-1.0**
	baz=271								
LATG	**Datong**	**0.51**	**340**	⇓*iP*			**Pg**	**23 11 53.2**	**-0.8**
	baz=334								
LATG				S			**Sg**	**23 12 00.2**	**-0.6**
	baz=334								
ESAO	**Su ao**	**0.53**	**13**	⇓*iP*			**Pg**	**23 11 53.5**	**-0.9**
	baz=357								
ESAO				*eS*			**Sg**	**23 12 00.5**	**-1.0**
	baz=357								
TWT	**Tachien**	**0.53**	**292**	⇓*iP*			**Pg**	**23 11 54.0**	**-0.5**
	baz=290								
TWT				S			**Sg**	**23 12 01.8**	**+0.2**
	baz=290								
TDCB	**Techi**	**0.55**	**291**	⇓*iP*			**Pg**	**23 11 54.1**	**-0.7**
	baz=290								
TDCB				S			**Sg**	**23 12 01.4**	**-0.7**
	baz=290								
WUSB	**Renai**	**0.55**	**263**	⇓*iP*			**Pg**	**23 11 54.1**	**-0.7**
	baz=266								
WUSB				*iS*			**Sb**	**23 12 02.5**	**-1.0**
	baz=266								
EOS4	**EOS4**	**0.55**	**83**	*eP*			**Pg**	**23 11 54.9**	**+0.2**
	baz=92								
TWC	**Suao**	**0.56**	**12**	⇓*iP*			**Pg**	**23 11 54.3**	**-0.8**
	baz=358								
TWC				S			**Sg**	**23 12 02.0**	**-0.5**
	baz=358								
NDS	**Dongshan**	**0.57**	**360**	⇓*iP*			**Pg**	**23 11 54.6**	**-0.6**
	baz=352								
NDS				*iS*			**Sg**	**23 12 02.9**	**0.0**
	baz=352								
NDT	**Datong Townshi**	**0.57**	**341**	⇓*iP*			**Pg**	**23 11 54.7**	**-0.6**
	baz=334								
NDT				S			**Sg**	**23 12 03.1**	**+0.2**
	baz=334								
EOS2	**EOS2**	**0.59**	**52**

WPL S Sg 23 12 06.2 -0.5
baz=268
NSK Sanguang 0.70 332 ⇓ *i* P Pg 23 11 57.1 -0.5
baz=320
NSK S Sb 23 12 07.1 -0.7
baz=320
ILA Ilan 0.71 2 ⇓ *e* P Pg 23 11 57.1 -0.6
baz=347
FUSB Fushanzhiwuyua 0.71 350 ⇓ *i* P Pg 23 11 57.2 -0.6
baz=345
FUSB S Sg 23 12 07.0 -0.2
baz=345
DPDB Guoxing 0.72 268 ⇓ *i* P Pg 23 11 57.5 -0.5
baz=270
DPDB *e* S Sb 23 12 08.2 -0.2
baz=270
WCS Beigang Elemen 0.74 270 ⇓ *i* P Pg 23 11 57.7 -0.6
baz=264
WCS S Sb 23 12 08.0 -0.8
baz=264
WHP Taichung City 0.74 288 ⇓ *i* P Pg 23 11 58.0 -0.3
baz=287
WHP S Sb 23 12 08.6 -0.3
baz=287
NWLT Wulai 0.74 345 ⇓ *i* P Pg 23 11 57.9 -0.6
baz=326
NWLT S Sb 23 12 08.4 -0.6
baz=326
SSLB Suanglung 0.75 249 Pg Pg 23 11 57.5 -1.0
SSLB Sg Sg 23 12 06.6 -1.7
SSLB Suanglung 0.75 249 P Pg 23 11 57.7 -0.8
SSLB Suanglung 0.75 249 ⇓ *i* P Pg 23 11 57.6 -0.9
baz=264
SSLB S Sg 23 12 06.7 -1.6
baz=264
YULB Yu-li 0.76 210 Pg Pg 23 11 58.0 -0.8
YULB Sg Sg 23 12 08.0 -0.8
YULB Yu-li 0.76 210 P Pg 23 11 58.5 -0.3
YULB Yu-li 0.76 210 P Pg 23 11 57.2 -1.6
baz=230
YULB S Sb 23 12 09.6 +0.1
baz=230
SMLT Sun Moon Lake 0.77 257 ⇓ *i* P Pg 23 11 58.2 -0.6
baz=260
SMLT S Sb 23 12 09.0 -0.7
baz=260
ECBN Changbin 0.78 198 P Pg 23 11 58.5 -0.5
baz=205
ECBN S Sb 23 12 10.7 +0.8
baz=205
NFF Wufeng Townshi 0.79 317 ⇓ *i* P Pg 23 11 58.9 -0.5
baz=313
NFF S Sb 23 12 09.7 -0.7
baz=313
EYUL Yuli 0.79 207 *e* P Pb 23 11 59.4 -0.3
baz=230
TWF1 Yuli 0.80 209 ⇓ *e* P Pg 23 11 57.6 -1.8
baz=230
TWF1 *e* S Sb 23 12 10.8 +0.2
baz=230
TYC Yuchr 0.80 259 ⇓ *i* P Pg 23 11 58.6 -0.9
baz=262
TYC S Sg 23 12 09.2 -0.8
baz=262
NTC Toucheng 0.80 7 *e* P Pg 23 11 58.8 -0.7
baz=350
LIOB Emei 0.87 313 ⇓ *i* P Pb 23 12 00.7 -0.3
baz=309
NSTT Nanjuang 0.87 311 ⇓ *i* P Pg 23 12 00.5 -0.3
baz=309
NSTT S Sg 23 12 11.4 -0.7
baz=309
WHYT Xinyi Township 0.87 246 *e* P Pg 23 12 00.3 -0.4
baz=258
WHYT *e* S Sn 23 12 13.5 -1.1
baz=258
NJD Zhudong 0.89 320 *e* P Pb 23 12 01.4 +0.1
baz=316
CHKH Chenggong 0.91 199 ⇓ *e* P Pg 23 12 00.3 -1.3
baz=207
CHKH S Sn 23 12 14.8 -0.7
baz=207
TWQ1 Liyutan 0.91 289 ⇓ P Pb 23 12 01.6 -0.1
baz=300
TWQ1 *e* S Sn 23 12 15.8 +0.2
baz=300
TIPB Shuangxi 0.92 6 ⇓ *i* P Pg 23 12 01.0 -0.8
baz=349
TIPB *e* S Sg 23 12 13.3 -0.4
baz=349
NHDH Xindian Distri 0.92 349 ⇓ P Pg 23 12 01.2 -0.6
baz=343
TWA Mucha 0.93 353 ⇓ P Pg 23 12 01.4 -0.5
baz=346
TWA *e* S Sg 23 12 13.0 -1.1
baz=346
WWF Wufeng 0.93 269 ⇑ *e* P Pn 23 12 02.9 +0.1
baz=265
WWF *e* S Sn 23 12 17.2 +1.1
baz=265
WJS Zhushan 0.93 256 *e* P Pb 23 12 01.9 -0.1
baz=259
WJS *e* S Sn 23 12 15.5 -0.7
baz=259
FULB Fuli 0.94 205 *e* P Pg 23 12 01.1 -1.0
baz=227
TATO Taipei 0.94 347 Pg Pg 23 12 01.4 -0.7
TATO Sg Sg 23 12 13.8 -0.6
TATO Taipei 0.94 347 ⇓ P Pg 23 12 01.5 -0.6
baz=332
TATO S Sg 23 12 13.6 -0.8
baz=332
NSY Sanyi 0.94 293 ⇓ *i* P Pn 23 12 02.5 -0.5
baz=302
NSY *e* S Sn 23 12 17.0 +0.6
baz=302
TCU Taichung 0.95 276 ⇑ *i* P Pn 23 12 03.5 +0.3
baz=270
TCU *e* S Sn 23 12 17.7 +1.0
baz=270
HSN1 Hsinchu 0.96 319 ⇓ P Pn 23 12 02.8 -0.5
baz=314
HSN1 *e* S Sb 23 12 14.8 -0.4
baz=314
WNT1 Nantou City 0.96 261 P Pn 23 12 02.9 -0.3
baz=264
WNT1 S Sn 23 12 17.3 +0.5
baz=264
WNT Mingjian 0.96 260 *i* P Pn 23 12 02.8 -0.4
baz=261
WNT *e* S Sn 23 12 17.6 +0.7
baz=261
BACT New Taipei Cit 0.97 345 *e* P Pb 23 12 02.5 -0.2
baz=330
NMLH Miaoli 0.97 300 ⇓ P Pn 23 12 03.3 -0.1
baz=298
NMLH *e* S Sn 23 12 18.9 +1.8
baz=298
TWB1 Santiao Chiao 0.98 15 *e* P Pg 23 12 02.3 -0.6
baz=360
NHY Taipei 0.99 352 *e* P Pg 23 12 02.5 -0.5
baz=345
SBCB Hsinchu 0.99 318 ⇓ P Pn 23 12 03.1 -0.5
baz=314
SBCB S Sn 23 12 17.0 -0.6
baz=314
NJN Zhunan 0.99 309 *e* P Pb 23 12 03.1 0.0
baz=306
ALS Alishan 1.00 237 ⇓ *i* P Pg 23 12 02.6 -0.7
baz=243
ALS *i* S Sb 23 12 16.8 +0.3
baz=243
TAP Taipei 1.00 349 *e* P Pb 23 12 03.0 -0.2
baz=334
CHKT Chengkung 1.00 199 *e* P Pg 23 12 01.1 -2.2
baz=207
CHKT *e* S Sb 23 12 16.6 +0.1
baz=207
HSN Hsinchu 1.01 318 P Pn 23 12 03.9 0.0
baz=316
HSN *e* S Sn 23 12 19.9 +1.9
baz=316
NWF Wu-fen Shan 1.01 3 ⇓ *i* P Pg 23 12 03.1 -0.4
baz=347
NWF S Sg 23 12 16.1 -0.6
baz=347
WFSB Wu-fen Shan 1.01 3 ⇓ *i* P Pg 23 12 03.0 -0.5
baz=347
WFSB S Sg 23 12 16.0 -0.7
baz=347
NTY Taoyuan 1.01 338 ⇑ *e* P Pn 23 12 04.1 +0.1
baz=325
EHD Haiduan 1.02 208 *e* P Pg 23 12 01.1 -2.5
baz=228
WDJ Dajia District 1.02 287 P Pn 23 12 04.5 +0.4
baz=296
WDJ S Sn 23 12 18.9 +0.5
baz=296
NCUH Zhongli 1.03 332 *e* P Pn 23 12 03.9 -0.3
baz=326
NCUH *e* S Sn 23 12 20.8 +2.2
baz=326
NCU National Centr 1.03 332 P Pn 23 12 04.2 0.0
baz=327
NCU *e* S Sn 23 12 20.2 +1.6
baz=327
SXI1 Grass Mountain 1.04 8 ⇓ *i* P Pg 23 12 03.6 -0.6
baz=345
WYL Yuanlin Townsh 1.04 265 *e* P Pn 23 12 04.4 0.0
baz=268
WYL *e* S Sn 23 12 20.3 +1.5
baz=268
CHN5 Tsauling 1.05 245 ⇓ *i* P Pn 23 12 04.3 -0.3
baz=251
CHN5 *i* S Sn 23 12 20.1 +0.8
baz=251
WCHH Zhanghua 1.06 272 P Pn 23 12 04.9 +0.3
baz=273
ECS Chishang 1.06 206 *e* P Pb 23 12 03.1 -1.1
baz=227
ELDTW Lidau 1.07 217 *e* P Pb 23 12 02.1 -2.4
baz=213
ELDTW S Sb 23 12 18.6 0.0
baz=213
TWS1 Kuangyinshan 1.07 345 P Pg 23 12 04.5 -0.2
baz=339
TWS1 *e* S Sn 23 12 19.5 -0.1
baz=339
TNOU National Taiwa 1.09 3 ⇓ P Pb 23 12 04.5 -0.2
baz=355
TNOU S Sb 23 12 17.4 -1.5
baz=355
YM01 YM01 1.09 353 ⇓ *i* P Pg 23 12 04.7 -0.3
baz=330
WGK Gukeng 1.12 251 *e* P Pb 23 12 05.1 -0.1
baz=256
WGK *e* S Sn 23 12 21.7 +1.0
baz=256
NHW Xinwu Township 1.13 327 ⇑ P Pn 23 12 05.7 +0.1
baz=321
NHW *e* S Sn 23 12 22.3 +1.4
baz=321
NTST Danshui 1.13 348 *e* P Pg 23 12 05.5 -0.3
baz=339
WDLH Douliu 1.14 252 *e* P Pg 23 12 05.9 0.0
baz=256
ANP Anpu 1.14 351 ⇓ P Pb 23 12 05.1 -0.6
baz=343
EDH Donghe 1.14 199 *e* P Pb 23 12 03.4 -2.2
baz=207
NWRT Kuosheng 1.14 357 *e* P Pb 23 12 05.3 -0.4
baz=348
JYNG Yonagunijimaku 1.19 70 *e* P Pn 23 12 05.6 -0.8
JYNG Yonagunijimaku 1.19 70 A A 23 12 05.6
comp=E,16nm,1.9s,comp=N,26nm,2.3s
WCKO Fanlu 1.19 239 ⇓ P Pg 23 12 06.6 -0.3
baz=247
WCKO *e* S Sn 23 12 23.9 +1.4
baz=247
TWY Chenhua 1.22 355 *e* P Pg 23 12 07.0 -0.5
baz=332
NSM Shimen 1.23 355 *e* P Pg 23 12 07.3 -0.4
baz=332
STYH Taoyuan 1.23 225 P Pn 23 12 06.3 -0.6
baz=237
STYH *e* S Sb 23 12 22.5 -0.5
baz=237
WRL Guolierlin Hig 1.23 263 ⇑ *e* P Pb 23 12 07.0 -0.2
baz=257
CHN4 Tsaushan 1.25 236 ⇑ P Pn 23 12 07.0 -0.2
baz=245
CHN4 S Sg 23 12 25.2 +1.0
baz=245
YOJ Yonaguni jima 1.25 71 Pn 23 12 06.5 -0.7
YOJ Yonaguni jima 1.25 71 *e* P Pn 23 12 06.4 -0.8
baz=67
YOJ Yonaguni jima 1.25 71 P Pn 23 12 06.4 -0.8
YOJ *e* S Sb 23 12 23.2 -0.3
YOJ Yonaguni jima 1.25 71 A A 23 12 06.4
comp=E,16nm,1.8s,comp=N,18nm,1.9s
TPUB Ta-pu 1.25 233 Pn Pb 23 12 07.2 -0.2
TPUB Ta-pu 1.25 233 ⇑ P Pb 23 12 07.2 -0.2
baz=242
TPUB S Sg 23 12 24.9 +0.7
baz=242
CHN2 Minshiung 1.25 246 *e* P Pg 23 12 08.0 -0.1
baz=252
CHN2 *e* S Sg 23 12 25.4 +1.0
baz=252
STYT Tauyuan 1.25 225 ⇓ P Pn 23 12 06.3 -1.0
baz=234
STYT S Sb 23 12 23.3 -0.3
baz=234
RLNB Erlin 1.25 263 ⇑ P Pg 23 12 07.7 -0.4
baz=267
RLNB *e* S Sg 23 12 25.1 +0.7
baz=267
LONT Longtian 1.27 205 *e* P Pn 23 12 05.4 -2.0
baz=214
WTK Tuku 1.27 253 *e* P Pb 23 12 07.7 -0.1
baz=258
WTP Ta-pu 1.29 232 *e* P Pn 23 12 07.6 -0.3
baz=240
WTP *e* S Sg 23 12 25.3 -0.4
baz=240
CHY Chiayi 1.31 245 *e* P Pb 23 12 08.5 0.0
baz=251
WTCT Ta-ch'eng 1.33 262 *e* P Pn 23 12 07.9 -0.3
baz=266
WTCT *e* S Sg 23 12 27.9 +1.1
baz=266
TWGBT Beinan 1.36 206 *e* P Pn 23 12 06.1 -2.7
baz=215
TWG Pinlang 1.36 206 *e* P Pn 23 12 05.8 -3.0
baz=215
TWK Hsinying 1.37 235 *e* P Pn 23 12 09.1 +0.1
baz=244
TWK *e* S Sg 23 12 29.4 +1.1
baz=244
WMLT Mailiao 1.39 260 *e* P Pb 23 12 09.4 -0.4
baz=253
WMLT *e* S Sg 23 12 28.4 -0.4
baz=253
CHN1 Nanshi 1.39 232 *e* P Pb 23 12 09.9 -0.1
baz=242
CHN1 *e* S Sg 23 12 29.1 +0.2
baz=242
SNST Tainan City 1.39 234 *e* P Pb 23 12 10.1 +0.2
baz=241
LDUT Ludao 1.40 189 *e* P Pn 23 12 05.6 -3.6
baz=201
TTN Taitung 1.40 202 *e* P Pn 23 12 08.8 -0.4
baz=213
SGST Jiashian 1.42 227 ⇑ *e* P Pn 23 12 09.0 -0.6
baz=237
SGST *e* S Sg 23 12 29.6 -0.2
baz=237
WSF Szhu 1.43 253 *e* P Pb 23 12 10.4 -0.1
baz=259
WSF *e* S Sg 23 12 30.6 +0.5
baz=259
SLGT Liugui 1.44 223 *e* P Pn 23 12 09.9 0.0
baz=235
SLGT *e* S Sg 23 12 30.8 +0.3
baz=235
WSL Shuilin Townsh 1.46 249 *e* P Pb 23 12 10.9 -0.2
baz=255
ICHU Yijhu 1.49 243 *e* P Pb 23 12 11.2 -0.4
baz=251
ICHU *e* S Sg 23 12 31.4 -0.5
baz=251
CHN8 Yiju 1.55 243 *e* P Pn 23 12 11.8 +0.4
baz=252
CHN8 *e* S Sb 23 12 32.1 -0.1
baz=252
PCYT Pengchaiyu 1.60 12 ⇑ *e* P Pn 23 12 11.9 -0.1
baz=357
SSHA Shanhua 1.60 235 *e* P Pb 23 12 12.7 -0.7
baz=242
ECL Taimali 1.61 206 *e* P Pn 23 12 11.0 -1.2
baz=216
SCST Cishan 1.62 224 ⇓ *e* P Pb 23 12 14.0 +0.2
baz=236
SCST *e* S Sg 23 12 37.2 +1.1
baz=236
SHHT Tainan City 1.62 231 *e* P Pb 23 12 14.2 +0.3
baz=239
SSD Sandimen 1.64 218 *e* P Pn 23 12 11.8 -0.8
baz=242
SSD *e* S Sn 23 12 34.0 +0.4
baz=242
SCLT Jiali 1.65 238 *e* P Pn 23 12 13.2 +0.5
baz=245
TSMG Majia 1.67 216 *e* P Pn 23 12 12.9 -0.1
baz=215
TWM1 Shoushan 1.71 224 *e* P Pg 23 12 15.9 -0.8
baz=232
SGLT Jiouru 1.74 221 *e* P Pg 23 12 16.6 -0.8
baz=219
TSCK Chigu Township 1.75 239 *e* P Pn 23 12 14.2 +0.2
baz=246
MASBT Mashibuluo 1.75 215 *e* P Pn 23 12 13.3 -0.7
baz=228
MASBT *e* S Sb 23 12 37.5 -0.4
baz=228
TSPT Pingtung City 1.77 220 *e* P Pb 23 12 16.2 -0.1
baz=228
SNJT Kaohsiung City 1.81 225 *e* P Pb 23 12 17.0 -0.1
baz=233
EAST Anshuo 1.85 206 *e* P Pn 23 12 15.3 -0.2
baz=203
TAW Tawu 1.85 204 *e* P Pb 23 12 16.9 -0.8
baz=215
IRIF Iriomote-Funau 1.86 81 *e* P Pn 23 12 15.3 -0.3
IRIF *e* S Sn 23 12 38.9 -0.1
IRIF Iriomote-Funau 1.86 81 A A 23 12 15.3
comp=E,11nm,2.1s,comp=N,14nm,4.9s
TAWH Dawu Township 1.87 204 *e* P Pb 23 12 17.1 -1.0
baz=215
HATJ Hateruma jima 1.91 90 P Pn 23 12 16.6 +0.4
HATJ *e* S Sn 23 12 39.3 -0.9
HATJ Hateruma jima 1.91 90 A A 23 12 16.6
comp=E,25nm,3.0s,comp=N,22nm,3.4s
WSSB Gushan 1.94 224 *e* P Pn 23 12 17.9 +1.1
baz=232
SCZT Fangliau 1.96 211 *e* P Pn 23 12 16.9 -0.1
baz=205
LAY Lan-yu 2.01 184 *e* P Pn 23 12 14.1 -3.6
baz=198
SLIU Shizi 2.02 205 *e* P Pn 23 12 18.5 +0.7
baz=203
PHUB P'eng-hu 2.04 255 *e* P Pn 23 12 18.3 +0.2
baz=262
PHUB *e* S Sn 23 12 44.4 +1.0
baz=262
PNG Penghu 2.04 257 *e* P Pn 23 12 18.1 0.0
baz=263
PNG *e* S Sn 23 12 44.6 +1.2
baz=263
WDGT Dungji 2.05 248 *e* P Pn 23 12 18.1 0.0
baz=254
LYUB Lan-yu 2.05 183 *e* P Pn 23 12 14.2 -4.0
baz=197
JKRS Kuro-shima 2.10 85 *e* P Pn 23 12 18.7 -0.2
JKRS S Sn 23 12 46.1 +1.1
JKRS Kuro-shima 2.10 85 A A 23 12 18.7
comp=E,22nm,2.9s,comp=N,21nm,5.1s
TWP Hsiaoliuchiu 2.11 216 *e* P Pb 23 12 21.6 -0.5
baz=225
HEN Hengchun 2.23 204 *e* P Pn 23 12 21.9 +1.2
baz=202
JIJ Ishigaki jima 2.24 82 P Pn 23 12 19.8 -1.0
JIJ Ishigaki jima 2.24 82 A A 23 12 19.8
comp=E,4.0nm,3.9s,comp=N,6.0nm,3.2s
VCHM Qimei 2.26 249 *e* P Pn 23 12 21.3 +0.2
baz=241
TWK1 Hengchun 2.26 202 *e* P Pn 23 12 22.2 +1.1
baz=201
TWKBT Hengchun 2.26 202 *e* P Pn 23 12 21.8 +0.6
baz=201
VWUC VWUC 2.27 295 *e* P Pn 23 12 20.2 -1.0
baz=293
TSEB Hengchuen, Pin 2.27 199 *e* P Pn 23 12 22.4 +1.1
baz=201
JISG Ishigakijimahi 2.42 77 P Pn 23 12 22.6 -0.8
JISG *e* S Sn 23 12 51.5 -1.5
PTMZ Houxiangcun 2.56 293 *e* P Pn 23 12 24.6 -0.6
baz=291
MATB Ma-tsu 2.63 323 ⇑ *e* P Pn 23 12 25.2 -1.1
baz=315
MSUT Lienchiang 2.66 323 *e* P Pn 23 12 25.7 -0.9
baz=315
JTJ Tarama 2.78 77 *e* P Pn 23 12 27.9 -0.4
JTJ S Sn 23 13 03.0 +1.1
JTJ Tarama 2.78 77 A A 23 12 27.9
comp=E,8.0nm,5.1s,comp=N,8.0nm,3.0s
QZH Quanzhou 2.98 288 ⇓ *i* Pn Pn 23 12 30.1 -0.9
QZH Sn Sn 23 13 04.8 -1.9
QZH smax smax
comp=N,1μm,1.2s
QZH smax smax
comp=N,1μm,1.1s
KNM Kinmen 3.02 278 *e* P Pn 23 12 32.8 +1.2
baz=279
LYJJ Jianjiangzhen 3.05 325 *e* P Pn 23 12 31.2 -0.8
baz=317
KNMB Chin-men Tao 3.06 278 Pn Pn 23 12 31.5 -0.7
KNMB Chin-men Tao 3.06 278 *e* P Pn 23 12 31.6 -0.7
baz=280
MHZQ Yeshan 3.17 310 *e* P Pn 23 12 32.7 -1.0
baz=306
XPSS Dashiqiu 3.18 335 *e* P Pn 23 12 33.3 -0.4
baz=324
JMJ Miyako jima 2 3.35 76 *e* P Pn 23 12 35.7 -0.3
baz=76
AXDP Jialang 3.52 285 *e* P Pn 23 12 38.0 -0.4
baz=284
ZPLA Ao Xicun 3.63 269 *e* P Pn 23 12 39.5 -0.5
baz=272
DSXP Dongshan 3.94 266 *e* P Pn 23 12 43.7 -0.5
baz=269
SXFK Yanhouchang 4.36 303 *e* P Pn 23 12 49.3 -0.8
baz=300
VDOS Pratas Island 5.70 235 *e* P Pn 23 13 10.0 +1.6
baz=245
JOW Kunigami 6.54 64 Pn Pn 23 13 17.4 -2.5
JOW Kunigami 6.54 64 *e* P Pn 23 13 18.5 -1.5
baz=75
JOW Kunigami 6.54 64 Pn Pn 23 13 18.4 -1.6
comp=N,4.4nm,0.3s,baz=144,slow=15,SNR=9.2
comp=N,10nm,0.3s
SSE Sheshan 7.03 356 Pn Pn 23 13 25.2 -1.5
SSE Sn Sn 23 14 47.3 +0.8
SSE smax smax
comp=N,78nm,1.1s
SSE smax smax
comp=N,80nm,1.1s
SSE LR LR
comp=N,1μm,9.0s
SSE LR LR
comp=N,410nm,7.8s
GZH Guangzhou 7.74 265 Pn Pn 23 13 31.6 -4.9
GZH Sn Sn 23 14 57.0 -7.1
GZH smax smax
comp=N,300nm,0.9s
GZH smax smax
comp=N,260nm,0.9s
NJ2 Nanjing 8.36 343 ⇑ P Pn 23 13 43.8 -1.1
NJ2 S Sn 23 15 18.0 -1.2
NJ2 pmax pmax
comp=N,36nm,0.8s
NJ2 smax smax
comp=N,190nm,0.9s
NJ2 smax smax
comp=N,230nm,1.1s
NJ2 LR LR
comp=N,3μm,9.0s
NJ2 LR LR
comp=N,1μm,5.2s
NJ2 LR LR
comp=N,3μm,10.9s
CNSH ChangSha 8.90 299 ⇑ P Pn 23 13 51.7 -0.7
CNSH S Sn 23 15 34.4 +1.8

CNSH smax smax
comp=N,510nm,1.0s
CNSH smax smax
comp=N,430nm,1.1s
WHN Wuhan 9.20 316 P **Pn** **23 13 56.5 0.0**
WHN S **Sn** **23 15 35.5 -4.4**
WHN pmax pmax
comp=N,30nm,0.5s
WHN LR LR
comp=N,8µm,8.5s
WHN LR LR
comp=N,8µm,8.4s
WHN LR LR
comp=N,12µm,8.8s
TGY Tagaytay City 9.93 184 LR LR 23 18 28.5
comp=N,214nm,20.3s,baz=177,slow=41
GULI GuiLin 10.40 279 *eP* Pn 23 14 20.3 +7.4
JNU Nakatsue 12.09 40 LR LR 23 20 09.6
comp=N,234nm,19.6s,baz=216,slow=42
QIZ Qiongzhong 12.13 248 P **Pn** **23 14 36.9 +0.3**
QIZ S **Sn** **23 16 52.6 +0.8**
QIZ LR LR
comp=N,750nm,11.8s
QIZ LR LR
comp=N,500nm,8.4s
QIZ LR LR
comp=N,490nm,8.4s
TIA Tai'an 12.75 343 *eP* **Pn** **23 14 44.1 -0.9**
TIA LR LR
comp=N,750nm,10.0s
TIA LR LR
comp=N,570nm,8.0s
TIA LR LR
comp=N,1µm,10.6s
GYA Guiyang 13.83 283 P **Pn** **23 15 02.5 +2.5**
GYA S **Sn** **23 17 38.2 +4.6**
GYA pmax pmax
comp=N,13nm,1.7s
GYA LR LR
comp=N,930nm,4.5s
GYA LR LR
comp=N,4µm,8.7s
GYA LR LR
comp=N,4µm,9.4s
KSRS Korea Array 14.38 20 Pn **P** **23 15 13.2 -1.1**
comp=N,0.9nm,0.3s,baz=194,slow=11,SNR=20
KSRS LR LR 23 21 05.2
comp=N,144nm,21.0s,baz=215,slow=39
KS19 Wonju Array Si 14.40 20 Pn **Pn** **23 15 09.0 +1.4**
HNS HongShan 14.59 337 *eP* **Pn** **23 15 12.6 +2.4**
HNS LR LR
comp=N,1µm,12.3s
HNS LR LR
comp=N,1µm,12.3s
HNS LR LR
comp=N,2µm,11.9s
XAN Xi'an 14.96 315 P **Pn** **23 15 15.7 +0.4**
XAN S **Sn** **23 18 03.9 +3.0**
XAN pmax pmax
comp=N,29nm,1.7s
XAN LR LR
comp=N,1µm,7.8s
XAN LR LR
comp=N,4µm,9.8s
XAN LR LR
comp=N,4µm,9.8s
TIY Taiyuan 15.76 332 P **P** **23 15 28.6 -1.1**
TIY pmax pmax
comp=N,340nm,6.1s
TIY LR LR
comp=N,2µm,7.9s
TIY LR LR
comp=N,1µm,9.7s
TIY LR LR
comp=N,1µm,10.3s
BJI Beijing 16.61 345 P **Pn** **23 15 36.7 +0.1**
BJI pP **pP** **23 15 40.5 -1.8**
BJI sP **sP** **23 15 43.9 -0.1**
BJI PP **PnPn** **23 15 49.2 +3.3**
BJI S **Sn** **23 18 36.2 -4.7**
BJI pmax pmax
comp=N,84nm,4.7s
BJI LR LR
comp=N,310nm,13.1s
BJI LR LR
comp=N,170nm,12.0s
BJI LR LR
comp=N,390nm,13.2s
DAV Davao City (W) 17.29 167 LR LR 23 22 27.4
comp=N,162nm,18.8s,baz=358,slow=38
KMI Kunming 17.29 277 ↑P **P** **23 15 49.0 +2.0**
KMI LR LR
comp=N,490nm,8.6s
KMI LR LR
comp=N,3µm,9.6s
KMI LR LR
comp=N,3µm,10.3s
CD2 Chengdu 17.33 297 P **P** **23 15 46.5 -0.6**
CD2 S **Sn** **23 19 01.0 +2.5**
CD2 pmax pmax
comp=N,10.0nm,0.8s
CD2 LR LR
comp=N,2µm,7.1s
CD2 LR LR
comp=N,2µm,7.1s
CD2 LR LR
comp=N,3µm,7.7s
PZH PanZhiHua 18.23 282 P **Pn** **23 15 55.9 -1.1**
PZH S **Sn** **23 19 17.3 -3.2**
PZH SS **SnSn** **23 19 43.9 +10**
PZH pmax pmax
comp=N,10.0nm,0.8s
PZH pmax pmax
comp=N,100nm,6.1s
PZH LR LR
comp=N,770nm,10.0s
PZH LR LR
comp=N,2µm,10.6s
PZH LR LR
comp=N,1µm,11.2s
JCJ Chichijima 18.71 76 LR LR 23 22 11.0
comp=N,207nm,20.7s,baz=272,slow=34
HHC Hu-ho-hao-te 18.79 335 *eP* **Pn** **23 16 05.2 +1.5**
HHC pmax pmax
comp=N,6.0nm,0.6s
HHC pmax pmax
comp=N,220nm,5.2s
HHC LR LR
comp=N,870nm,11.1s
HHC LR LR
comp=N,430nm,9.6s
HHC LR LR
comp=N,930nm,9.9s
MJAR Matsushiro Arr 18.88 45 P **Pn** **23 16 04.7 0.0**
baz=228,slow=7.0,SNR=2.9
MJAR LR LR 23 24 31.3
comp=N,137nm,18.1s,baz=223,slow=41
comp=N,0.8nm,0.4s
BTO Baotou 19.20 332 *eP* **Pn** **23 16 10.7 +2.0**
BTO pP **sP** **23 16 14.4 +2.0**
BTO sP **pP** **23 16 17.9 +6.8**
BTO PP **PnPn** **23 16 28.5 +6.9**
BTO pmax pmax
comp=N,9.0nm,0.7s
BTO pmax pmax
comp=N,620nm,6.4s
BTO LR LR
comp=N,3µm,11.0s
BTO LR LR
comp=N,2µm,7.7s
BTO LR LR
comp=N,5µm,10.1s
LZH Lanzhou 19.53 312 *eP* **Pn** **23 16 13.2 +0.4**
LZH sP sP 23 16 18.7 +2.6
LZH S **Sn** **23 19 50.0 -2.0**
LZH SS **SnSn** **23 20 08.8 +2.5**
LZH pmax pmax
comp=N,8.0nm,1.3s
LZH pmax pmax
comp=N,480nm,4.8s
LZH LR LR
comp=N,640nm,13.1s
LZH LR LR
comp=N,2µm,12.4s
LZH LR LR
comp=N,2µm,13.4s
CN2 Changchun 19.93 8 P **P** **23 16 16.3 +0.7**
CN2 S **S** **23 19 55.3 -4.3**
CN2 pmax pmax
comp=N,10.0nm,0.7s
CN2 pmax pmax
comp=N,300nm,4.0s
CN2 LR LR
comp=N,1µm,12.0s
CN2 LR LR
comp=N,700nm,12.0s
CN2 LR LR
comp=N,1µm,12.0s
XLT XiLinHaoTe 20.33 348 *eP* **P** **23 16 20.4 +0.4**
XLT pP sP 23 16 25.0 0.0
XLT sP pP 23 16 27.9 +4.5
XLT PP **PnPn** **23 16 41.9 +4.9**
XLT pmax pmax
comp=N,9.0nm,1.3s
XLT pmax pmax
comp=N,210nm,5.0s
XLT LR LR
comp=N,61nm,13.3s
XLT LR LR
comp=N,310nm,10.8s
XLT LR LR
comp=N,660nm,13.0s
TNCH TengChong 21.12 277 P **P** **23 16 29.1 +0.2**
TNCH pP pP 23 16 30.9 -1.5
TNCH sP sP 23 16 34.2 +0.7
TNCH PP **PnPn** **23 16 52.0 +4.0**
TNCH SS **SnSn** **23 20 54.2 +8.8**
TNCH pmax pmax
comp=N,13nm,1.6s
TNCH LR LR
comp=N,600nm,6.7s
TNCH LR LR
comp=N,1µm,8.0s
TNCH LR LR
comp=N,2µm,9.4s
MDJ Mudanjiang 21.50 15 P **P** **23 16 33.9 +1.4**
MDJ pP sP 23 16 36.5 -0.8
MDJ sP pP 23 16 39.9 +3.9
MDJ S **S** **23 20 28.9 -1.7**
MDJ PcP **PcP** **23 20 40.2 +5.1**
MDJ ScP **ScP** **23 24 15.0 +3.0**
MDJ PcS **PcS** **23 24 18.4 +5.2**
MDJ LR LR
comp=N,580nm,9.1s
MDJ LR LR
comp=N,740nm,11.1s
MDJ LR LR
comp=N,870nm,12.8s
USRK Ussuriysk Ar. 21.78 20 P **P** **23 16 36.9 +1.3**
comp=N,2.4nm,0.7s,baz=220,slow=11,SNR=5.4
comp=N,2.4nm,0.7s
CHTO Chiang Mai 21.82 261 P **P** **23 16 36.0 -0.2**
CMAR Chiang Mai Arr 21.93 260 P **P** **23 16 38.5 +1.1**
comp=N,1.1nm,0.3s,baz=56,slow=8.7,SNR=10
CMAR LR LR 23 25 39.4
comp=N,123nm,19.0s,baz=85,slow=38
comp=N,1.1nm,0.3s
GTA Gaotai 24.02 315 P **P** **23 16 59.1 +0.2**
GTA pmax pmax
comp=N,260nm,5.1s
GTA LR LR
comp=N,380nm,12.7s
GTA LR LR
comp=N,990nm,12.4s
GTA LR LR
comp=N,1µm,12.0s
GUMO Guam 24.22 111 LR LR 23 24 27.7
comp=N,128nm,21.1s,baz=324,slow=32
GOMU GeErMu 26.14 304 P **P** **23 17 18.9 +0.5**
GOMU pmax pmax
comp=N,4.0nm,1.0s
GOMU LR LR
comp=N,320nm,9.0s
GOMU LR LR
comp=N,390nm,8.4s
GOMU LR LR
comp=N,490nm,9.7s
ASAJ Asahikawa 26.31 35 LR LR 23 28 17.3
comp=N,87nm,18.1s,baz=237,slow=38
KLR Kul'dur 26.34 15 LR LR 23 27 36.1
comp=N,183nm,18.4s,baz=196,slow=36
ULN Ulaanbaatar 26.47 338 P **P** **23 17 20.2 -0.8**
HEH HeiHe 26.52 8 *eP* **P** **23 17 21.4 +0.1**
HEH sP **sP** **23 17 27.2 +1.0**
HEH pmax pmax
comp=N,11nm,1.6s
HEH pmax pmax
comp=N,240nm,6.1s
HEH LR LR
comp=N,350nm,12.8s
HEH LR LR
comp=N,540nm,13.6s
HEH LR LR
comp=N,770nm,13.3s
SONM Songino Array 26.68 337 P **P** **23 17 22.1 -0.8**
SONM Songino Array 26.68 337 P **P** **23 17 22.9 0.0**
comp=N,4.6nm,1.1s,baz=158,slow=9.9,SNR=21
SONM LR LR 23 29 07.7
comp=N,483nm,18.4s,baz=173,slow=39
comp=N,4.6nm,1.1s
WMQ Urumqi 34.09 314 *eP* **P** **23 18 28.4 -0.1**
WMQ sP sP 23 18 37.9 +4.6
WMQ pmax pmax
comp=N,5.0nm,0.7s
WMQ LR LR
comp=N,560nm,8.7s
WMQ LR LR
comp=N,170nm,12.1s
YAK Yakutsk 38.34 6 LR LR 23 37 45.7
comp=N,160nm,18.9s,baz=134,slow=41
MK31 Makanchi Array 38.77 316 P **P** **23 19 07.0 -1.2**
MKAR Makanchi Array 38.77 316 P **P** **23 19 07.0 -1.2**
MKAR Makanchi Array 38.77 316 P **P** **23 19 07.8 -0.4**
comp=N,2.6nm,0.7s,baz=102,slow=10,SNR=20
MKAR LR LR 23 35 47.4
comp=N,137nm,20.4s,baz=56,slow=37
comp=N,2.6nm,0.7s
MAKZ Makanchi 38.97 316 P **P** **23 19 09.6 -0.4**
MAKZ IAmb IAmb 23 19 15.4
comp=Z,44nm,2.0s
PETK Petropavlovsk- 39.70 34 LR LR 23 36 52.3
comp=Z,171nm,18.1s,baz=249,slow=38
ZAA0 Zalesovo Array 40.62 327 P **P** **23 19 21.4 -2.1**
ZALV Zalesovo Beam 40.62 327 P **P** **23 19 22.6 -0.9**
comp=Z,3.9nm,0.7s,baz=111,slow=8.1,SNR=22
ZALV LR LR 23 37 01.8
comp=Z,135nm,20.9s,baz=99,slow=37
comp=Z,3.9nm,0.7s
MA2 Magadan 40.92 22 LR LR 23 38 10.4
comp=Z,106nm,19.6s,baz=266,slow=39
KSH Kashi 41.38 303 P P 23 19 34.9 +4.8
KSH pmax pmax
comp=Z,7.0nm,1.4s
KSH LR LR
comp=Z,420nm,15.1s
KSH LR LR
comp=Z,530nm,10.3s
KSH LR LR
comp=Z,400nm,15.5s
PMG Port Moresby 41.52 140 LR LR 23 33 27.3
comp=Z,90nm,21.3s,baz=307,slow=32
NRN Naryn 41.66 306 P **P** **23 19 32.8 +0.1**
KURK Kurchatov 42.50 320 P **P** **23 19 37.5 -1.5**
KURBB Kurchatov Arra 42.52 320 P **P** **23 19 38.7 -0.4**
comp=Z,1.2nm,0.6s,baz=115,slow=7.3,SNR=8.3
comp=Z,1.2nm,0.6s
AAK Ala-Archa 42.97 307 LR LR 23 40 20.6
comp=Z,95nm,20.6s,baz=61,slow=40
COEN Coen 43.21 149 P **P** **23 19 44.9 -0.2**
COEN IAmb IAmb 23 19 46.9
comp=Z,21nm,1.1s
WB0 Warramunga Arr 45.28 163 P **P** **23 19 58.6 -3.0**
WB0 IAmb IAmb 23 20 18.2
comp=Z,40nm,1.9s
PSA00 Pilbara Seismi 45.39 182 P **P** **23 20 01.2 -1.3**
WRA Warramunga Arr 45.43 163 P **P** **23 20 00.5 -2.3**
comp=Z,1.1nm,0.5s,baz=345,slow=8.5,SNR=10.0
comp=Z,1.1nm,0.5s
WB2 Warramunga Arr 45.43 163 P **P** **23 19 59.8 -3.0**
WB2 IAmb IAmb 23 20 46.6
comp=Z,35nm,1.9s
KK31 Karatay Array 45.94 307 P **P** **23 20 06.3 -0.3**
KKAR Karatay Array 45.94 307 P **P** **23 20 06.6 -0.1**
KBL Kabul 46.66 295 P **P** **23 20 12.1 -0.6**
KBL IAmb IAmb 23 20 18.2
comp=Z,14nm,1.2s
TIXI Tiksi 47.80 3 P **P** **23 20 18.2 -2.6**
TIXI IAmb IAmb 23 20 23.5
comp=Z,11nm,0.8s
TIXI Tiksi 47.80 3 LR LR 23 42 58.3
comp=Z,290nm,18.4s,baz=204,slow=39
BVAR Borovoye Array 48.08 321 P **P** **23 20 22.8 -0.4**
comp=Z,1.6nm,0.6s,baz=108,slow=8.9,SNR=13
BVAR LR LR 23 41 02.3
comp=Z,93nm,18.8s,baz=339,slow=37
comp=Z,1.6nm,0.6s
BRVK Borovoye 48.15 321 P **P** **23 20 22.8 -1.0**
BRVK IAmb IAmb 23 20 39.3
comp=Z,11nm,1.3s
ASAR Alice Springs 48.89 165 P **P** **23 20 28.4 -1.4**
comp=Z,1.0nm,0.8s,baz=342,slow=6.8,SNR=5.9
ASAR LR LR 23 40 58.6
comp=Z,41nm,19.3s,baz=359,slow=36
comp=Z,1.0nm,0.8s
NRIK Noril'sk 49.65 345 P **P** **23 20 33.1 -1.9**
NRIK IAmb IAmb 23 20 34.7
comp=Z,19nm,1.6s
NRIK Noril'sk 49.65 345 P **P** **23 20 34.5 -0.5**
comp=Z,1.7nm,0.7s,baz=131,slow=8.3,SNR=4.8
comp=Z,1.7nm,0.7s
CTA Charters Tower 49.97 149 LR LR 23 39 53.5
comp=Z,90nm,21.3s,baz=266,slow=34
BILL Bilibino 51.64 20 P **P** **23 20 49.9 -0.1**
ABKAR Akbulak array 53.88 314 P **P** **23 21 05.1 -1.8**
ABKAR Akbulak array 53.88 314 P **P** **23 21 06.4 -0.6**
ABKAR IAmb IAmb 23 21 10.5
comp=Z,3.9nm,0.9s
AKTO Aktyubinsk 55.20 316 LR LR 23 46 00.4
comp=Z,130nm,20.9s,baz=306,slow=37
GEYT Alibeck 55.28 300 P **P** **23 21 16.8 -0.6**
GEYT Alibeck 55.28 300 P **P** **23 21 18.2 +0.8**
comp=Z,3.2nm,0.8s,baz=90,slow=10,SNR=7.2
comp=Z,3.2nm,0.8s
ARU Arti 55.50 323 P **P** **23 21 16.5 -2.1**
ARU Arti 55.50 323 LR LR 23 44 29.2
comp=Z,186nm,18.2s,baz=50,slow=35
NWAO Narrogin (SRO) 56.83 185 LR LR 23 47 02.9
comp=Z,26nm,19.9s,baz=184,slow=37
STKA Stephens Creek 58.78 160 P **P** **23 21 41.3 -0.7**
comp=Z,1.4nm,0.5s,baz=315,slow=9.3,SNR=4.3
STKA LR LR 23 47 01.6
comp=Z,33nm,21.3s,baz=25,slow=36
comp=Z,1.4nm,0.5s
KIRV Kirov 60.60 325 LR LR 23 50 25.9
comp=Z,204nm,18.7s,baz=72,slow=38
BELG Belogornoye 61.72 318 LR LR 23 48 52.2
comp=Z,161nm,21.4s,baz=86,slow=36
C18K Utukok River 63.13 24 IAmb IAmb 23 22 59.4
comp=Z,16nm,1.8s
DZM Mont Dzumac 63.19 133 LR LR 23 44 51.2
comp=Z,56nm,21.3s,baz=338,slow=32
D19K Kuna River 64.26 24 IAmb IAmb 23 22 22.4
comp=Z,7.4nm,0.8s
B20K Meade River 64.59 22 P **P** **23 22 21.4 +0.8**
B20K IAmb IAmb 23 22 25.3
comp=Z,6.9nm,1.0s
ONI Oni 65.76 308 P **P** **23 22 29.3 +0.4**
ONI IAmb IAmb 23 22 39.8
comp=Z,7.6nm,1.1s
KBZ Khabaz 65.94 309 P **P** **23 22 30.1 +0.2**
comp=Z,4.5nm,1.0s,baz=84,slow=9.2,SNR=5.2
comp=Z,4.5nm,1.0s
AKH Akhalkalaki 65.96 306 P **P** **23 22 29.4 -1.0**
KIV Kislovodsk 66.05 309 P **P** **23 22 29.5 -1.2**
H21K Melozitna Rive 66.50 27 IAmb IAmb 23 22 36.9
comp=Z,11nm,1.4s
TOLK Toolik Lake Re 67.38 23 P **P** **23 22 37.8 -1.0**
TOLK IAmb IAmb 23 24 07.0
comp=Z,13nm,1.5s
MLY Manley 67.44 27 P **P** **23 22 39.4 +0.2**
MLY IAmb IAmb 23 22 45.5
comp=Z,11nm,1.2s
G23K Bananza Creek 67.48 25 P **P** **23 22 39.0 -0.4**
G23K IAmb IAmb 23 22 43.6
comp=Z,6.8nm,1.0s
D24K Happy Valley 67.57 23 IAmb IAmb 23 22 44.2
comp=Z,11nm,1.1s
KDAK Kodiak Island 67.73 35 LR LR 23 55 51.8
comp=Z,84nm,18.1s,baz=83,slow=39
E24K Your Creek 67.86 24 IAmb IAmb 23 22 45.4
comp=Z,9.1nm,1.1s
SUA Susitna One 68.01 31 P **P** **23 22 41.5 -1.5**
F24K Squaw Lake 68.18 24 IAmb IAmb 23 22 51.1
comp=Z,8.8nm,0.9s
NEA2 Nenana 68.22 28 P **P** **23 22 42.7 -1.4**
NEA2 IAmb IAmb 23 22 47.8
comp=Z,7.3nm,0.8s
D25K Kavik River 68.40 22 IAmb IAmb 23 22 51.6
comp=Z,7.7nm,0.9s
H24K Noodor Dome 68.48 26 P **P** **23 22 44.5 -1.3**
H24K IAmb IAmb 23 23 03.2
comp=Z,11nm,1.3s
MDM Murphy Dome 68.50 27 P **P** **23 22 45.0 -0.9**
RND Reindeer 68.53 29 P **P** **23 22 43.9 -2.2**
RAYN Ar Rayn 68.85 287 P **P** **23 22 47.0 -1.8**
E25K Arctic Village 68.93 24 P **P** **23 22 47.2 -1.3**
ILAR Eielson Array 69.10 27 P **P** **23 22 49.1 -0.5**
comp=Z,0.6nm,0.8s,baz=286,slow=7.3,SNR=9.2
comp=Z,0.6nm,0.8s
BMAR Burnt Mountain 69.44 24 P **P** **23 22 51.1 -0.6**
SPITS Spitsbergen Ar 69.71 348 LR LR 23 57 23.4
comp=Z,229nm,18.2s,baz=211,slow=39
D27M Malcolm River 70.29 22 IAmb IAmb 23 23 03.6
comp=Z,6.9nm,1.1s
J26L Joseph Creek 70.56 27 IAmb IAmb 23 23 01.4
comp=Z,8.9nm,1.0s
E28M Babbage River 70.97 23 IAmb IAmb 23 23 05.3
comp=Z,6.9nm,1.1s
L26K Log Cabin Wild 71.04 29 P **P** **23 23 01.9 +0.3**
L26K IAmb IAmb 23 23 07.4
comp=Z,8.6nm,1.1s
F28M Old Crow 71.14 24 P **P** **23 23 01.4 -0.7**
F28M IAmb IAmb 23 23 06.5
comp=Z,9.8nm,1.1s
E29M Blow River 71.61 23 P **P** **23 23 04.3 -0.5**
L27K Beaver Creek, 71.70 28 IAmb IAmb 23 23 09.9
comp=Z,7.0nm,0.9s
BCAR Beaver Creek A 71.71 28 P **P** **23 23 04.8 -0.8**
I28M Miner Creek 71.77 26 P **P** **23 23 05.6 -0.4**
FINES FINESS Array B 71.80 330 P **P** **23 23 05.4 -0.7**
comp=Z,1.7nm,0.9s,baz=64,slow=4.4,SNR=7.1
FINES LR LR 23 55 54.5
comp=Z,252nm,20.7s,baz=30,slow=37
comp=Z,1.7nm,0.9s
DAWY Dawson 72.43 27 P **P** **23 23 08.6 -1.3**
DAWY IAmb IAmb 23 23 13.8
comp=Z,7.7nm,0.9s
EPYK Eagle Plains 72.72 24 P **P** **23 23 11.8 +0.2**
EPYK IAmb IAmb 23 23 15.1
comp=Z,9.0nm,1.0s
INK Inuvik 73.16 22 P **P** **23 23 14.3 +0.2**
INK IAmb IAmb 23 23 17.6
comp=Z,8.9nm,1.1s
K29M Barlow Dome 73.28 27 IAmb IAmb 23 23 43.2
comp=Z,14nm,1.6s
AKASG Malin Array Be 73.29 318 P **P** **23 23 15.1 -0.1**
comp=Z,0.7nm,0.6s,baz=67,slow=3.4,SNR=4.6
comp=Z,0.7nm,0.6s
BRTR Keskin Array B 73.64 307 P **P** **23 23 16.0 -1.6**
BRTR Keskin Array B 73.64 307 P **P** **23 23 17.4 -0.2**
comp=Z,2.1nm,0.9s,baz=103,slow=5.0,SNR=5.3
comp=Z,2.1nm,0.9s
M30M Minto, Yukon 74.04 28 P **P** **23 23 19.3 -0.1**
M30M IAmb IAmb 23 23 23.3
comp=Z,10.0nm,1.1s
ANTO Ankara 74.22 307 P **P** **23 23 20.4 -0.6**
ANTO IAmb IAmb 23 23 29.0
comp=Z,5.7nm,0.7s
MMAI Mount Meron Ar 74.38 299 LR LR 00 02 34.5
comp=Z,41nm,18.5s,baz=346,slow=41
EIL Elat 75.85 296 LR LR 00 01 06.8
comp=Z,42nm,20.4s,baz=98,slow=39
HFS Hagfors 77.92 331 LR LR 00 01 19.6
comp=Z,370nm,19.1s,baz=12,slow=38
NOA NORSAR Array B 78.56 332 LR LR 00 01 15.7
comp=Z,170nm,18.6s,baz=55,slow=38
VRAC Vranov 81.35 320 LR LR 00 04 26.7
comp=Z,206nm,19.7s,baz=326,slow=39
CLL Collm 82.45 323 *eP* **P** **23 24 07.0 +0.9**
YKA Yellowknife Ar 82.90 23 P **P** **23 24 07.7 -0.5**
comp=Z,2.2nm,0.9s,baz=314,slow=4.8,SNR=16

comp=Z,2.2nm,0.9s
GERES **GERESS Array B** 83.25 321 LR LR 00 05 01.5
comp=Z,221nm,21.1s,baz=324,slow=38
NVAR **Mina Array Bea** 96.19 43 P **P** **23 25 13.1 +0.7**
comp=Z,0.8nm,0.8s,baz=285,slow=4.6,SNR=2.3
comp=Z,0.8nm,0.8s

CATAC 06 23:12:08.8±0.4, 12°.16N×88°.59W, h10km, mb3.7, ML3.3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.29**	**51**	*i* P	Pb	23 12 33.4	+0.1
CSGN				IAML		23 13 00.4	
	comp=Z,1μm,1.0s						
PACA	**Pacayal**	**1.33**	**11**	*i* P	Pg	23 12 34.5	+0.2
PACA				IAML		23 13 05.8	
	comp=Z,2μm,1.0s						
LCND	**La Caada**	**1.33**	**31**	*i* P	Pb	23 12 33.8	-0.1
LCND				*i* S	Sb	23 12 48.5	-2.5
LCND				IAML		23 12 52.9	
	comp=Z,160nm,1.0s						
SCLA	**Alcaldia de Sa**	**1.54**	**355**	*i* P	Pb	23 12 37.0	-0.4
SCLA				*i* S	Sb	23 12 56.9	-0.1
SCLA				IAML		23 13 03.7	
	comp=Z,91nm,1.0s						
LOMA	**Loma Larga**	**1.58**	**339**	*i* P	Pn	23 12 36.3	-0.7
LOMA				*i* S	Sn	23 12 56.4	-1.2
LOMA				IAML		23 13 03.2	
	comp=Z,230nm,1.0s						
CRIN	**San Cristobal**	**1.60**	**70**	*i* P	Pb	23 12 38.1	-0.4
CRIN				*i* S	Sb	23 12 59.3	+0.4
CRIN				IAML		23 13 13.8	
	comp=Z,520nm,1.0s						
JAYA	**Jayaque - finc**	**1.70**	**331**	*i* P	Pn	23 12 38.4	-0.3
JAYA				*i* S	Sn	23 12 59.9	-0.8
JAYA				IAML		23 13 07.3	
	comp=Z,500nm,1.0s						
MACN	**El Madrono**	**1.90**	**81**	*i* P	Pn	23 12 41.3	0.0
MACN				*i* S	Sn	23 13 05.2	-0.2
MACN				IAML		23 13 14.6	
	comp=Z,96nm,1.0s						
COPN	**Copaltepe**	**1.96**	**89**	*i* P	Pn	23 12 42.7	+0.6
COPN				IAML		23 13 10.3	
	comp=Z,130nm,1.0s						
MOMN	**Momotombo**	**2.02**	**83**	*i* P	Pn	23 12 43.7	+0.7
MOMN				*i* S	Sn	23 13 08.8	+0.4
MOMN				IAML		23 13 13.3	
	comp=Z,4.5nm,1.0s						
NUBE	**Las Nubes**	**2.08**	**326**	*i* P	Pn	23 12 44.4	+0.5
NUBE				*i* S	Sn	23 13 08.3	-1.7
NUBE				IAML		23 13 16.6	
	comp=Z,100nm,1.0s						
SAJU	**San Juanillo,**	**3.51**	**126**	*i* P	Pn	23 13 05.0	+1.5
SAJU				*i* S	Sn	23 13 40.5	-4.6
SAJU				IAML		23 14 12.0	
	comp=Z,53nm,1.0s						
CDM	**Cerro de Muert**	**5.41**	**118**	*i* P	Pn	23 13 33.1	+3.1
CDM				IAmb	IAmb	23 13 37.8	
	comp=Z,11nm,1.2s						
CDM				IAML		23 13 43.6	
	comp=Z,35nm,1.0s						
CDM				*i* S	Sn	23 14 31.5	-1.0

IDC 06 23:13:14.2±2.7, 31°.10S×176°.73W, h0km, mb3.7/2, mbtmp3.9/4, ML3.9/2, Error ellipse: s-maj=56.7km s-min=29.3km az=91.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.11**	**331**	Pn	Pn	23 13 52.0	+1.2
	54nm,0.3s,baz=45,slow=23,SNR=1.7						
RAO				Sn	Sn	23 14 17.2	-0.5
	191nm,0.3s,baz=17,slow=23,SNR=5.7						
	210nm,0.3s						
URZ	**Urewera**	**8.75**	**214**	Pn	Pn	23 15 21.2	-0.8
	1.2nm,0.3s,baz=32,slow=22,SNR=8.0						
URZ				Sn	Sn	23 16 57.4	-4.0
	0.7nm,0.3s,baz=57,slow=23,SNR=2.3						
	2.6nm,0.3s						
ASAR	**Alice Springs**	**44.16**	**267**	P	P	23 21 25.2	+0.3
	0.7nm,0.6s,baz=104,slow=7.4,SNR=5.1						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**45.21**	**272**	P	P	23 21 33.1	-0.2
	0.4nm,0.4s,baz=111,slow=7.9,SNR=7.5						
	0.4nm,0.4s						
H03S2	**Juan Fernandez**	**79.17**	**123**	T	T	00 52 41.5	
	baz=242,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**79.18**	**123**	T	T	00 52 43.2	
	baz=242,slow=74,SNR=16						
H03S3	**Juan Fernandez**	**79.19**	**123**	T	T	00 52 40.6	
	baz=242,slow=74,SNR=16						
FINES	**FINESS Array B**	**146.17**	**340**	PKPbc	PKPdf	23 32 54.5	-0.2
	1.3nm,0.6s,baz=56,slow=2.5,SNR=7.8						

TAP 06 23:22:40.0, 24°.02N×121°.65E, h6km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.08**	**317**	P	Pg	23 22 42.4	+0.6
	baz=321						
ETL	**Fush Village**	**0.14**	**348**	*e*P	Pg	23 22 43.5	+0.7
	baz=348						
ETM	**Tongmen**	**0.16**	**248**	P	Pg	23 22 43.8	+0.6
	baz=248						
ETM				*e*S	Sg	23 22 46.5	+1.1
	baz=248						
NACB	**Ninganchiao**	**0.16**	**340**	P	Pg	23 22 43.9	+0.7
	baz=340						
LXIB	**Xiulin Townshi**	**0.22**	**269**	*i* P	Pg	23 22 45.8	+1.4
	baz=269						
LXIB				*e*S	Sg	23 22 49.3	+1.9
	baz=269						
SHUL	**Shoufeng**	**0.25**	**199**	*e*P	Pg	23 22 46.8	+1.9
	baz=199						
SHUL				*e*S	Sg	23 22 50.6	+2.4
	baz=199						
ESL	**Shilin**	**0.29**	**224**	*e*P	Pg	23 22 46.5	+0.8
	baz=222						
EAHA	**Aohua**	**0.31**	**15**	*e*P	Pb	23 22 47.7	-0.3
	baz=14						
EAHA				*e*S	Sg	23 22 51.5	+1.1
	baz=14						
WHF	**Hehuan Shan**	**0.38**	**289**	*e*P	Pb	23 22 48.7	-0.6
	baz=288						
WHF				*e*S	Sb	23 22 54.3	-1.3
	baz=288						
WARBT	**Fenglin Townsh**	**0.39**	**219**	*e*P	Pb	23 22 48.5	-0.8
	baz=218						
ENA	**Nanau**	**0.41**	**11**	P	Pb	23 22 49.1	-0.6
	baz=12						
FUSS	**Fushou**	**0.43**	**301**	*e*P	Pb	23 22 49.8	-0.4
	baz=300						
CHGB	**Renai**	**0.44**	**275**	*e*P	Pb	23 22 50.4	+0.1
	baz=274						
NNSB	**Datong**	**0.47**	**329**	P	Pb	23 22 50.6	-0.2
	baz=328						
NNSB				*e*S	Sb	23 22 57.5	-0.6
	baz=328						
WUSB	**Renai**	**0.49**	**266**	*e*P	Pb	23 22 50.6	-0.4
	baz=266						
LATG	**Datong**	**0.52**	**347**	*e*P	Pb	23 22 51.3	-0.4
	baz=347						
LATG				*e*S	Sb	23 22 59.8	+0.3
	baz=347						
VWDT	**VWDT**	**0.54**	**240**	*e*P	Pb	23 22 51.4	-0.5
	baz=240						

*IDC **06** 23:24:06.3±0.8, 23°.94N×121°.73E, h0km, mb3.8/10, mbtmp3.8/11, ML3.8/1, Error ellipse: s-maj=30.0km s-min=17.8km az=66.0*
*JMA **06** 23:24:07.8±0.1, 24°.0N±0°.3×121°.6E±1°.0, h6km±2km, MV3.5/14, TAIWAN REGION*
*NIED **06** 23:24:07.8, 23°.97N×121°.62E, h6km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr4.96; Mθθ-1.15; Mφφ-3.80; Mrθ4.89; Mrφ-2.37; Mθφ6.59; Fault plane solution: M₀9.65000×10¹⁴ NP1:φs36.00000°, δ74.00000°, λ93.00000°. NP2:φs205.00000°, δ16.00000°, λ79.00000°.*
*NEIC **06** 23:24:08.3±1.4, 23°.96N±0°.03×121°.60E±0°.04, h10km±1km, mb4.6/32 Error ellipse: s-maj=7.9km s-min=4.0km az=307.0*
*ASIES **06** 23:24:08, 23°.98N×121°.60E, h6km, ML4.1, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr2.53; Mθθ-0.98; Mφφ-1.55; Mrθ6.09; Mφθ-1.24; Mθr8.94; Fault plane solution: M₀11.10490×10²¹ NP1: φs34.36000°, δ83.42000°, λ89.05000°. NP2:φs222.60000°, δ6.64000°, λ.98.18000°. Principal axes: T Plg51.5630°, Azm303.2860°; N Plg0.9430°, Azm34.4740°; P Plg38.4210°, Azm125.2220°;*
*TAP **06** 23:24:08.0, 23°.98N×121°.60E, h6km, ML4.1, C*

ISC 06 23:24:07.9±0.8, 23°.97N±0°.01×121°.63E±0°.01, h9km±5km, n216, s0°82°/315, mb4.5/26, 19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.12**	**345**	⇓*i* P	Pg	**23 24 10.7**	**-0.1**
	baz=4.0						
TWD				*i* S	Sg	**23 24 12.3**	**-0.3**
	baz=4.0						
ETM	**Tongmen**	**0.12**	**269**	⇓P	Pg	**23 24 10.8**	**-0.1**
	baz=259						
ETM				*i* S	Sg	**23 24 12.3**	**-0.6**
	baz=259						
SHUL	**Shoufeng**	**0.19**	**199**	⇓*i* P	Pg	**23 24 12.9**	**+1.0**
	baz=189						
SHUL				*e*S	Sg	**23 24 16.8**	**+2.2**
	baz=189						
ETL	**Fush Village**	**0.19**	**358**	⇓*i* P	Pg	**23 24 12.0**	**0.0**
	baz=8.0						
ETL				*i* S	Sg	**23 24 14.5**	**-0.2**
	baz=8.0						
LXIB	**Xiulin Townshi**	**0.20**	**285**	⇓*i* P	Pg	**23 24 12.2**	**0.0**
	baz=276						
LXIB				*i* S	Sg	**23 24 15.2**	**0.0**
	baz=276						
NACB	**Ninganchiao**	**0.21**	**351**	Pg	Pg	**23 24 12.2**	**-0.1**
NACB				Sg	Sg	**23 24 14.9**	**-0.3**
NACB	**Ninganchiao**	**0.21**	**351**	P	Pg	**23 24 12.1**	**-0.2**
NACB	**Ninganchiao**	**0.21**	**351**	⇓*i* P	Pg	**23 24 12.2**	**-0.1**
	baz=12						
NACB				*i* S	Sg	**23 24 14.8**	**-0.4**
	baz=12						
ESL	**Shilin**	**0.24**	**230**	⇓*i* P	Pg	**23 24 12.7**	**-0.1**
	baz=220						
ESL				*e*S	Sg	**23 24 16.0**	**+0.1**
	baz=220						
TEGC	**Jichi Village**	**0.27**	**198**	*e*P	Pb	**23 24 14.8**	**-0.1**
	baz=195						
TEGC				*e*S	Sb	**23 24 20.1**	**+0.5**
	baz=195						
WARBT	**Fenglin Townsh**	**0.33**	**222**	⇓*i* P	Pg	**23 24 14.6**	**0.0**
	baz=225						
WARBT				*e*S	Sg	**23 24 19.1**	**+0.1**
	baz=225						
EGFH	**Guangfu**	**0.35**	**212**	*e*P	Pg	**23 24 15.2**	**+0.3**
	baz=219						
EGFH				*e*S	Sg	**23 24 19.9**	**+0.4**
	baz=219						
EHP	**Heping Village**	**0.36**	**17**	*e*P	Pg	**23 24 15.1**	**+0.1**
	baz=24						
EHP				*e*S	Sg	**23 24 19.9**	**+0.2**
	baz=24						
EAHA	**Aohua**	**0.37**	**15**	*e*P	Pg	**23 24 15.3**	**-0.1**
	baz=32						
EAHA				*e*S	Sg	**23 24 20.6**	**+0.3**
	baz=32						
WHF	**Hehuan Shan**	**0.38**	**298**	⇓P	Pg	**23 24 15.5**	**-0.1**
	baz=298						
WHF				*e*S	Sg	**23 24 20.3**	**-0.2**
	baz=298						
OWD	**Renai**	**0.41**	**268**	*e*P	Pg	**23 24 16.3**	**+0.2**
	baz=266						
OWD				*e*S	Sg	**23 24 22.0**	**+0.3**
	baz=266						
CHGB	**Renai**	**0.43**	**283**	P	Pg	**23 24 16.5**	**+0.1**
	baz=281						
CHGB				S	Sg	**23 24 22.3**	**+0.3**
	baz=281						
FUSS	**Fushou**	**0.45**	**308**	⇓*i* P	Pg	**23 24 17.1**	**+0.3**
	baz=309						
FUSS				*e*S	Sg	**23 24 23.1**	**+0.3**
	baz=309						
WUSB	**Renai**	**0.47**	**273**	*i* P	Pb	**23 24 17.6**	**-0.8**
	baz=271						
WUSB				*e*S	Sg	**23 24 23.9**	**+0.5**
	baz=271						
ENA	**Nanau**	**0.47**	**12**	⇓*i* P	Pg	**23 24 17.1**	**0.0**
	baz=18						
ENA				*e*S	Sg	**23 24 23.6**	**+0.2**
	baz=18						
EWUT	**Wuta**	**0.49**	**16**	*e*P	Pg	**23 24 17.8**	**+0.2**
	baz=23						
VWDT	**VWDT**	**0.49**	**245**	*e*P	Pb	**23 24 18.0**	**-0.8**
	baz=242						
VWDT				*e*S	Sb	**23 24 24.7**	**-1.4**
	baz=242						
TWT	**Tachien**	**0.50**	**305**	⇓*i* P	Pb	**23 24 18.4**	**-0.7**
	baz=304						
TWT				*e*S	Sg	**23 24 25.0**	**+0.6**
	baz=304						
HGSD	**Ruisui**	**0.51**	**202**	*e*P	Pb	**23 24 19.8**	**+0.7**
	baz=204						
NNSB	**Datong**	**0.51**	**334**	⇓*i* P	Pg	**23 24 18.1**	**+0.1**
	baz=337						
NNSB				*e*S	Sg	**23 24 24.5**	**-0.2**
	baz=337						
TDCB	**Techi**	**0.52**	**304**	⇓*i* P	Pb	**23 24 18.4**	**-0.9**
	baz=304						
TDCB				S	Sg	**23 24 25.3**	**+0.4**
	baz=304						
NNS	**Nan Shan**	**0.53**	**334**	⇓*i* P	Pg	**23 24 18.4**	**+0.2**
	baz=337						
NNS				*e*S	Sg	**23 24 24.8**	**-0.4**
	baz=337						
EHY	**Hungye**	**0.54**	**212**	*e*P	Pg	**23 24 18.5**	**+0.1**
	baz=213						
LATG	**Datong**	**0.57**	**351**	*e*P	Pg	**23 24 18.9**	**-0.2**
	baz=354						
LATG				*e*S	Sg	**23 24 25.9**	**-0.8**
	baz=354						
ESAO	**Su ao**	**0.64**	**18**	*e*P	Pg	**23 24 20.3**	**0.0**
	baz=29						
ESAO				S	Sg	**23 24 28.5**	**-0.2**
	baz=29						
NDT	**Datong Townshi**	**0.64**	**350**	*i* P	Pg	**23 24 20.7**	**+0.3**
	baz=343						
NDT				S	Sg	**23 24 29.2**	**+0.4**
	baz=343						
SSLB	**Suanglung**	**0.64**	**254**	Pg	Pb	**23 24 20.7**	**-0.7**
SSLB				Sg	Sg	**23 24 28.2**	**-0.7**
SSLB	**Suanglung**	**0.64**	**254**	*i* P	Pb	**23 24 20.8**	**-0.6**
	baz=264						
SSLB				S	Sg	**23 24 28.6**	**-0.2**
	baz=264						
EOS4	**EOS4**	**0.65**	**76**	*e*P	Pb	**23 24 22.2**	**+1.0**
	baz=88						
EOS4				*e*S	Sb	**23 24 32.8**	**+2.6**
	baz=88						
YULB	**Yu-li**	**0.65**	**208**	Pg	Pg	**23 24 19.9**	**-0.6**
YULB	**Yu-li**	**0.65**	**208**	P	Pb	**23 24 22.3**	**+0.9**
YULB	**Yu-li**	**0.65**	**208**	*e*P	Pg	**23 24 20.5**	**0.0**
	baz=213						
WCS	**Beigang Elemen**	**0.66**	**278**	P	Pb	**23 24 21.4**	**-0.3**
	baz=277						
WCS				*e*S	Sb	**23 24 29.9**	**-1.1**
	baz=277						
ECBN	**Changbin**	**0.67**	**194**	*e*P	Pb	**23 24 22.1**	**+0.3**
	baz=178						
ECBN				*e*S	Sb	**23 24 32.7**	**+1.6**
	baz=178						
NDS	**Dongshan**	**0.67**	**7**	*i* P	Pg	**23 24 21.1**	**+0.2**
	baz=10.0						
NDS				*e*S	Sg	**23 24 29.8**	**+0.1**
	baz=10.0						
TWC	**Suao**	**0.67**	**17**	*e*P	Pg	**23 24 21.0**	**+0.1**
	baz=21						
TWC				*e*S	Sg	**23 24 29.7**	**0.0**
	baz=21						
ENTT	**Nioudou**	**0.67**	**355**	*e*P	Pg	**23 24 21.3**	**+0.3**
	baz=359						
ENTT				*e*S	Sg	**23 24 30.0**	**+0.2**
	baz=359						
SMLT	**Sun Moon Lake**	**0.67**	**263**	*i* P	Pb	**23 24 21.6**	**-0.4**
	baz=261						
SMLT				S	Sb	**23 24 30.3**	**-1.1**
	baz=261						
EYUL	**Yuli**	**0.68**	**205**	*e*P	Pb	**23 24 21.5**	**-0.4**
	baz=209						
TWF1	**Yuli**	**0.68**	**207**	*e*P	Pg	**23 24 21.2**	**0.0**
	baz=215						
TWF1				*e*S	Sb	**23 24 31.0**	**-0.6**
	baz=215						
WHP	**Taichung City**	**0.70**	**296**	⇓*i* P	Pb	**23 24 22.1**	**-0.2**
	baz=287						
WHP				*e*S	Sb	**23 24 31.6**	**-0.5**
	baz=287						
EOS3	**EOS3**	**0.70**	**63**	*e*P	Pb	**23 24 23.5**	**+1.2**
	baz=63						
TYC	**Yuchr**	**0.71**	**265**	⇓*i* P	Pb	**23 24 21.9**	**-0.5**
	baz=264						
TYC				*e*S	Sg	**23 24 30.7**	**-0.3**
	baz=264						
EOS2	**EOS2**	**0.71**	**51**	*e*P	Pb	**23 24 23.8**	**+1.4**
	baz=68						
YHNB	**Yeheng**	**0.74**	**342**	Pg	Pg	**23 24 22.1**	**-0.1**
YHNB				Sg	Sg	**23 24 31.7**	**-0.1**
YHNB	**Yeheng**	**0.74**	**342**	P	Pb	**23 24 22.8**	**-0.2**
YHNB	**Yeheng**	**0.74**	**342**	*e*P	Pg	**23 24 22.1**	**-0.1**
	baz=344						
YHNB				*e*S	Sg	**23 24 31.8**	**-0.1**
	baz=344						
NSK	**Sanguang**	**0.75**	**341**	*e*P	Pg	**23 24 22.5**	**+0.1**
	baz=344						
NSK				*i* S	Sg	**23 24 32.3**	**+0.1**
	baz=344						
TWE	**Neicheng**	**0.75**	**3**	P	Pg	**23 24 22.8**	**+0.3**
	baz=7.0						
TWE				*e*S	Sg	**23 24 32.6**	**+0.3**
	baz=7.0						
WHYT	**Xinyi Township**	**0.76**	**249**	P	Pb	**23 24 23.1**	**-0.3**
	baz=248						
WHYT				*e*S	Sb	**23 24 32.8**	**-1.0**
	baz=248						
FUSB	**Fushanzhiwuyua**	**0.79**	**357**	*i* P	Pg	**23 24 23.4**	**+0.1**
FUSB				*e*S	Sb	**23 24 34.4**	**-0.4**
CHKH	**Chenggong**	**0.80**	**196**	P	Pb	**23 24 24.3**	**+0.3**
	baz=182						
CHKH				*e*S	Sn	**23 24 36.9**	**-0.5**
	baz=182						
ILA	**Ilan**	**0.80**	**8**	*e*P	Pb	**23 24 24.1**	**0.0**
	baz=11						
ILA				*e*S	Sb	**23 24 35.3**	**+0.3**
	baz=11						
NFF	**Wufeng Townshi**	**0.81**	**325**	*i* P	Pb	**23 24 24.3**	**0.0**
	baz=326						
NFF				*i* S	Sb	**23 24 35.0**	**-0.4**
	baz=326						
NWLT	**Wulai**	**0.81**	**352**	P	Pg	**23 24 23.6**	**-0.1**
	baz=354						
NWLT				S	Sg	**23 24 34.3**	**-0.1**
	baz=354						
FULB	**Fuli**	**0.82**	**202**	*e*P	Pb	**23 24 24.7**	**+0.3**
	baz=213						
WJS	**Zhushan**	**0.84**	**260**	*e*P	Pb	**23 24 25.3**	**+0.6**
	baz=259						
WJS				*e*S	Sn	**23 24 37.2**	**-1.2**
	baz=259						
TWQ1	**Liyutan**	**0.87**	**296**	*e*P	Pb	**23 24 25.8**	**+0.6**
	baz=295						
WNT	**Mingjian**	**0.87**	**264**	*e*P	Pn	**23 24 26.1**	**-0.3**
	baz=263						
WNT				*e*S	Sn	**23 24 38.1**	**-1.0**
	baz=263						
NSTT	**Nanjuang**	**0.88**	**319**	⇓*i* P	Pb	**23 24 25.6**	**+0.3**
	baz=321						
NSTT				*i* S	Sb	**23 24 36.7**	**-0.4**
	baz=321						
LIOB	**Emei**	**0.88**	**320**	⇓*i* P	Pb	**23 24 25.9**	**+0.5**
	baz=322						
LIOB				*e*S	Sb	**23 24 37.3**	**+0.1**
	baz=322						
ALS	**Alishan**	**0.88**	**239**	*e*P	Pb	**23 24 25.4**	**-0.2**
	baz=237						
ALS				*e*S	Sb	**23 24 37.9**	**+0.4**
	baz=237						
CHKT	**Chengkung**	**0.90**	**196**	*e*P	Pb	**23 24 25.6**	**-0.1**
	baz=183						
CHKT				*e*S	Sn	**23 24 39.5**	**-0.3**
	baz=183						
EHD	**Haiduan**	**0.90**	**206**	P	Pg	**23 24 25.3**	**0.0**
	baz=215						
EHD				*e*S	Sb	**23 24 38.1**	**+0.2**
	baz=215						
NSY	**Sanyi**	**0.91**	**300**	*e*P	Pn	**23 24 27.0**	**+0.1**
	baz=300						
NSY				*e*S	Sb	**23 24 38.6**	**+0.5**
	baz=300						
CHN5	**Tsauling**	**0.95**	**247**	P	Pn	**23 24 27.4**	**-0.1**
	baz=235						
CHN5				*e*S	Sn	**23 24 41.2**	**0.0**
	baz=235						
ECS	**Chishang**	**0.95**	**204**	*e*P	Pb	**23 24 26.9**	**+0.4**
	baz=202						
NMLH	**Miaoli**	**0.95**	**307**	*i* P	Pn	**23 24 28.1**	**+0.5**
	baz=307						
NMLH				*e*S	Sn	**23 24 40.7**	**-0.5**
	baz=307						
ELDTW	**Lidau**	**0.96**	**216**	*e*P	Pg	**23 24 25.2**	**-1.1**
	baz=206						
ELDTW				*e*S	Sg	**23 24 39.0**	**+0.1**
	baz=206						
WDJ	**Dajia District**	**0.98**	**293**	*e*P	Pn	**23 24 28.8**	**+0.9**
	baz=293						
WDJ				*e*S	Sn	**23 24 41.9**	**0.0**
	baz=293						
WCHH	**Zhanghua**	**0.99**	**277**	*e*P	Pn	**23 24 28.6**	**+0.7**
	baz=274						
NHDH	**Xindian Distri**	**1.00**	**355**	P	Pb	**23 24 27.8**	**+0.4**
	baz=357						
NHDH				*e*S	Sg	**23 24 39.7**	**-0.4**
	baz=357						
SBCB	**Hsinchu**	**1.01**	**325**	*e*P	Pn	**23 24 28.8**	**+0.5**
	baz=326						
TWA	**Mucha**	**1.01**	**358**	P	Pb	**23 24 27.9**	**+0.3**
	baz=350						
TWA				S	Sg	**23 24 40.2**	**-0.3**
	baz=350						
TATO	**Taipei**	**1.01**	**353**	Pg	Pb	**23 24 27.8**	**+0.2**
TATO				Sg	Sg	**23 24 40.3**	**-0.3**
TATO	**Taipei**	**1.01**	**353**	P	Pb	**23 24 28.1**	**+0.5**
TIPB	**Shuangxi**	**1.02**	**10**	*e*P	Pg	**23 24 27.8**	**+0.2**
	baz=15						
WGK	**Gukeng**	**1.02**	**254**	*e*P	Pn	**23 24 29.3**	**+0.9**
	baz=254						
WGK				*e*S	Sn	**23 24 44.1**	**+1.3**
	baz=254						
HSN	**Hsinchu**	**1.03**	**324**	P	Pn	**23 24 29.6**	**+1.1**
	baz=328						
HSN				*e*S	Sb	**23 24 42.0**	**+0.6**
	baz=328						
EDH	**Donghe**	**1.03**	**197**	*e*P	Pg	**23 24 27.6**	**-0.2**
	baz=184						
EDH				*e*S	Sn	**23 24 44.0**	**+0.9**
	baz=184						
WDLH	**Douliu**	**1.04**	**255**	P	Pn	**23 24 29.6**	**+0.9**
	baz=255						
WDLH				S	Sn	**23 24 44.6**	**+1.3**
	baz=255						
NCUH	**Zhongli**	**1.08**	**338**	*e*P	Pn	**23 24 30.0**	**+0.8**
	baz=340						
WCKO	**Fanlu**	**1.08**	**241**	*e*P	Pn	**23 24 29.6**	**+0.4**
	baz=239						
TWB1	**Santiao Chiao**	**1.09**	**17**	*e*P	Pb	**23 24 29.2**	**+0.3**
	baz=11						
TWB1				*e*S	Sg	**23 24 42.6**	**-0.4**
	baz=11						
NWF	**Wu-fen Shan**	**1.11**	**7**	*e*P	Pb	**23 24 29.9**	**+0.6**
	baz=10.0						
NWF				*i* S	Sg	**23 24 43.5**	**-0.2**
	baz=10.0						
WFSB	**Wu-fen Shan**	**1.11**	**7**	P	Pb	**23 24 29.9**	**+0.6**
	baz=10.0						
WFSB				*e*S	Sg	**23 24 42.6**	**-1.0**
	baz=10.0						
STYH	**Taoyuan**	**1.11**	**225**	*e*P	Pb	**23 24 29.5**	**+0.2**
	baz=209						
CHN4	**Tsaushan**	**1.13**	**237**	*e*P	Pn	**23 24 31.0**	**+1.0**
	baz=236						
TPUB	**Ta-pu**	**1.13**	**234**		Pn	**23 24 30.3**	**+0.3**
TPUB	**Ta-pu**	**1.13**	**234**	P	Pn	**23 24 30.7**	**+0.7**
TPUB	**Ta-pu**	**1.13**	**234**	*e*P	Pn	**23 24 30.6**	**+0.7**
	baz=233						
CHN2	**Minshiung**	**1.14**	**248**	*e*P	Pn	**23 24 31.5**	**+1.4**
	baz=264						
CHN2				S	Sn	**23 24 47.9**	**+2.0**

		baz=264							
SXI1	**Grass Mountain**	**1.14**	**11**	*e*P		**Pg**	**23 24 30.1**	**+0.1**
	baz=3.0								
SXI1				*e*S		**Sg**	**23 24 44.8**	**-0.1**
	baz=3.0								
TWS1	**Kuangyinshan**	**1.15**	**350**	*i* P		**Pn**	**23 24 31.5**	**+1.3**
	baz=3.0								
TWS1				*e*S		**Sb**	**23 24 45.7**	**+0.8**
	baz=3.0								
WRL	**Guolierlin Hig**	**1.15**	**267**	P		**Pn**	**23 24 30.9**	**+0.7**
	baz=266								
WRL				*e*S		**Sn**	**23 24 47.4**	**+1.4**
	baz=266								
LONT	**Longtian**	**1.15**	**204**	*e*P		**Pg**	**23 24 29.8**	**-0.3**
	baz=210								
WTK	**Tuku**	**1.17**	**257**	*e*P		**Pn**	**23 24 31.6**	**+1.1**
	baz=256								
WTK				*e*S		**Sn**	**23 24 47.8**	**+1.3**
	baz=256								
WTP	**Ta-pu**	**1.18**	**233**	*e*P		**Pn**	**23 24 31.4**	**+0.8**
	baz=231								
YM01	**YM01**	**1.18**	**357**	*e*P		**Pn**	**23 24 31.3**	**+0.7**
	baz=12								
TNOU	**National Taiwa**	**1.19**	**6**	*e*P		**Pb**	**23 24 30.9**	**+0.3**
	baz=10.0								
NTST	**Danshui**	**1.20**	**352**	*e*P		**Pn**	**23 24 32.1**	**+1.2**
	baz=354								
ANP	**Anpu**	**1.22**	**355**	*e*P		**Pn**	**23 24 32.1**	**+0.9**
	baz=358								
WTCT	**Ta-ch'eng**	**1.24**	**266**	*e*P		**Pn**	**23 24 32.6**	**+1.2**
	baz=265								
WTCT				*e*S		**Sn**	**23 24 49.7**	**+1.4**
	baz=265								
TWG	**Pinlang**	**1.25**	**204**			**Pg**	**23 24 29.4**	**-2.6**
TWG	**Pinlang**	**1.25**	**204**	*e*P		**Pg**	**23 24 31.0**	**-1.0**
	baz=208								
TWGBT	**Beinan**	**1.25**	**204**	P		**Pg**	**23 24 30.2**	**-1.8**
TWGBT	**Beinan**	**1.25**	**204**	*e*P		**Pg**	**23 24 30.5**	**-1.5**
	baz=208								
TWK	**Hsinying**	**1.26**	**237**	*e*P		**Pn**	**23 24 32.9**	**+1.2**
	baz=225								
TWK				*e*S		**Sn**	**23 24 50.5**	**+1.7**
	baz=225								
CHN1	**Nanshi**	**1.28**	**233**	P		**Pn**	**23 24 33.4**	**+1.4**
	baz=232								
CHN1				*e*S		**Sn**	**23 24 50.4**	**+1.2**
	baz=232								
SNST	**Tainan City**	**1.28**	**235**	*e*P		**Pb**	**23 24 33.4**	**+1.3**
	baz=235								
SNST				*e*S		**Sn**	**23 24 50.3**	**+1.1**
	baz=235								
JYNG	**Yonagunijimaku**	**1.29**	**68**	P		**Pn**	**23 24 32.5**	**+0.4**
JYNG				S		**Sb**	**23 24 49.7**	**+0.6**
LDUT	**Ludao**	**1.30**	**187**	*e*P		**Pn**	**23 24 30.3**	**-1.9**
	baz=171								
LDUT				*i* S		**Sb**	**23 24 48.5**	**-0.7**
	baz=171								
SGST	**Jiashian**	**1.30**	**228**	*e*P		**Pn**	**23 24 32.5**	**+0.2**
	baz=228								
SGST				*e*S		**Sn**	**23 24 51.6**	**+1.8**
	baz=228								
TWY	**Chenhua**	**1.30**	**359**	*e*P		**Pn**	**23 24 32.0**	**-0.3**
	baz=348								
SLGT	**Liugui**	**1.32**	**223**	P		**Pg**	**23 24 33.6**	**+0.2**
	baz=224								
SLGT				*e*S		**Sn**	**23 24 52.7**	**+2.3**
	baz=224								
WSF	**Szhu**	**1.33**	**256**	*e*P		**Pg**	**23 24 34.0**	**+0.5**
	baz=256								
WSF				*e*S		**Sn**	**23 24 52.0**	**+1.5**
	baz=256								
YOJ	**Yonaguni jima**	**1.35**	**68**			**Pn**	**23 24 32.5**	**-0.5**
YOJ	**Yonaguni jima**	**1.35**	**68**	P		**Pn**	**23 24 33.2**	**+0.2**
YOJ	**Yonaguni jima**	**1.35**	**68**	*e*P		**Pn**	**23 24 32.9**	**-0.1**
	baz=65								
YOJ				*e*S		**Sb**	**23 24 52.0**	**+1.1**
	baz=65								
YOJ	**Yonaguni jima**	**1.35**	**68**	P		**Pn**	**23 24 32.7**	**-0.3**
YOJ				*e*S		**Sb**	**23 24 51.4**	**+0.5**
WSL	**Shuilin Townsh**	**1.36**	**251**	*e*P		**Pg**	**23 24 34.4**	**+0.4**
	baz=264								
WSL				*e*S		**Sn**	**23 24 54.0**	**+2.8**
	baz=264								
ICHU	**Yijhu**	**1.38**	**244**	*e*P		**Pg**	**23 24 35.0**	**+0.6**
	baz=246								
ICHU				*e*S		**Sn**	**23 24 54.8**	**+3.2**
	baz=246								
CHN8	**Yiju**	**1.44**	**245**	*e*P		**Pg**	**23 24 35.2**	**-0.4**
	baz=246								
CHN8				*e*S		**Sg**	**23 24 56.8**	**+2.5**
	baz=246								
CHN3	**Shinhua**	**1.46**	**233**	*e*P		**Pg**	**23 24 36.1**	**+0.1**
	baz=235								
ECL	**Taimali**	**1.50**	**205**	*e*P		**Pn**	**23 24 34.1**	**-0.9**
	baz=189								
SCST	**Cishan**	**1.50**	**224**	*e*P		**Pg**	**23 24 37.2**	**+0.5**
	baz=210								
SHHT	**Tainan City**	**1.51**	**232**	*e*P		**Pg**	**23 24 38.2**	**+1.3**
	baz=234								
TSMG	**Majia**	**1.55**	**216**	*e*P		**Pb**	**23 24 36.7**	**-0.1**
	baz=206								
TWM1	**Shoushan**	**1.59**	**224**	*e*P		**Pg**	**23 24 39.2**	**+0.7**
	baz=225								
MASBT	**Mashibuluo**	**1.63**	**214**	*e*P		**Pn**	**23 24 35.9**	**-1.0**
	baz=203								
TSCK	**Chigu Township**	**1.64**	**240**	*e*P		**Pg**	**23 24 38.6**	**-0.7**
	baz=243								
TSCK				S		**Sg**	**23 25 01.5**	**+1.0**
	baz=243								
PCYT	**Pengchaiyu**	**1.70**	**14**	*e*P		**Pb**	**23 24 39.4**	**-0.1**
	baz=15								
EAST	**Anshuo**	**1.73**	**205**	*e*P		**Pn**	**23 24 37.6**	**-0.6**
	baz=193								
TAWH	**Dawu Township**	**1.76**	**203**	*e*P		**Pn**	**23 24 38.4**	**-0.2**
	baz=191								
WSSB	**Gushan**	**1.82**	**224**	*e*P		**Pb**	**23 24 41.5**	**+0.1**
	baz=228								
SCZT	**Fangliau**	**1.84**	**211**	*e*P		**Pn**	**23 24 40.9**	**+1.2**
	baz=214								
SLIU	**Shizi**	**1.90**	**204**	*e*P		**Pn**	**23 24 41.1**	**+0.5**
	baz=193								
LAY	**Lan-yu**	**1.92**	**182**	*e*P		**Pn**	**23 24 38.9**	**-2.0**
	baz=164								
PHUB	**P'eng-hu**	**1.94**	**257**	*e*P		**Pn**	**23 24 41.7**	**+0.6**
	baz=257								
PHUB				*e*S		**Sb**	**23 25 08.2**	**+0.4**
	baz=257								
PNG	**Penghu**	**1.94**	**259**	*e*P		**Pn**	**23 24 41.5**	**+0.4**
	baz=259								
PNG				*i* S		**Sb**	**23 25 07.5**	**-0.4**
	baz=259								
IRIF	**Iriomote-Funau**	**1.95**	**79**	P		**Pn**	**23 24 41.4**	**+0.1**
IRIF				*e*S		**Sn**	**23 25 06.6**	**+0.7**
LYUB	**Lan-yu**	**1.96**	**181**	*e*P		**Pn**	**23 24 38.2**	**-3.1**
	baz=165								
HATJ	**Hateruma jima**	**1.99**	**87**	*e*S		**Sn**	**23 25 07.1**	**+0.3**
TWK1	**Hengchun**	**2.15**	**201**	*e*P		**Pn**	**23 24 44.5**	**+0.5**
	baz=203								
TWKBT	**Hengchun**	**2.15**	**201**	*e*P		**Pn**	**23 24 43.3**	**-0.7**
	baz=192								
VCHM	**Qimei**	**2.15**	**250**	*e*P		**Pn**	**23 24 44.4**	**+0.3**
	baz=238								
VCHM				S		**Sb**	**23 25 14.4**	**+0.4**
	baz=238								
JKRS	**Kuro-shima**	**2.19**	**82**	P		**Pn**	**23 24 45.2**	**+0.7**
JKRS				*e*S		**Sn**	**23 25 12.6**	**+0.9**
VWUC	**VWUC**	**2.23**	**298**	*e*P		**Pn**	**23 24 44.9**	**-0.2**
	baz=296								
JIJ	**Ishigaki jima**	**2.33**	**80**	P		**Pn**	**23 24 46.1**	**-0.3**
JIJ				*e*S		**Sn**	**23 25 13.9**	**-1.3**
JISG	**Ishigakijimahi**	**2.52**	**75**	P		**Pn**	**23 24 48.9**	**-0.1**
JISG				*e*S		**Sn**	**23 25 19.1**	**-0.8**
PTMZ	**Houxiangcun**	**2.52**	**296**	*e*P		**Pn**	**23 24 49.0**	**-0.1**
	baz=294								
MATB	**Ma-tsu**	**2.66**	**325**	*e*P		**Pn**	**23 24 50.9**	**-0.1**
	baz=308								
KNM	**Kinmen**	**2.95**	**279**	*e*P		**Pn**	**23 24 56.9**	**+1.9**
	baz=276								
KNMB	**Chin-men Tao**	**3.00**	**280**	Pn		**Pn**	**23 24 55.8**	**+0.1**
KNMB	**Chin-men Tao**	**3.00**	**280**	*e*P		**Pn**	**23 24 55.5**	**-0.2**
	baz=278								
LYJJ	**Jianjiangzhen**	**3.08**	**327**	*e*P		**Pn**	**23 24 57.0**	**+0.3**
	baz=312								
MHZQ	**Yeshan**	**3.17**	**313**	*e*P		**Pn**	**23 24 57.4**	**-0.6**
	baz=312								
XPSS	**Dashiqiu**	**3.23**	**336**	*e*P		**Pn**	**23 24 58.1**	**-0.6**
	baz=335								
AXDP	**Jialang**	**3.46**	**286**	*e*P		**Pn**	**23 25 02.0**	**0.0**
	baz=284								
ZPLA	**Ao Xicun**	**3.55**	**270**	*e*P		**Pn**	**23 25 03.5**	**+0.3**
	baz=267								
DSXP	**Dongshan**	**3.86**	**267**	*e*P		**Pn**	**23 25 07.9**	**+0.5**
	baz=264								
SXFK	**Yanhouchang**	**4.35**	**305**	*e*P		**Pn**	**23 25 13.7**	**-0.5**
	baz=303								
JOW	**Kunigami**	**6.65**	**63**	Pn		**Pn**	**23 25 44.3**	**-1.6**
JOW	**Kunigami**	**6.65**	**63**	Pn		**Pn**	**23 25 44.6**	**-1.3**
	4.0nm,0.3s,baz=230,slow=20,SNR=1.7								
	7.3nm,0.3s								
KSRS	**Korea Array**	**14.49**	**20**	Pn		**P**	**23 27 37.9**	**-2.0**
	0.7nm,0.3s,baz=196,slow=12,SNR=8.0								
USA0B	**Ussuriysk Arra**	**21.89**	**20**	P		**P**	**23 29 00.9**	**-0.3**
KLR	**Kul'dur**	**26.44**	**15**	P		**P**	**23 29 45.9**	**+0.8**
	1.1nm,0.6s,baz=215,slow=12,SNR=2.9								
	1.1nm,0.6s								
SONM	**Songino Array**	**26.73**	**337**	P		**P**	**23 29 48.6**	**+0.8**
SONM	**Songino Array**	**26.73**	**337**	P		**P**	**23 29 48.5**	**+0.8**
	0.7nm,0.7s,baz=150,slow=9.7,SNR=5.5								
	0.7nm,0.7s								
MTN	**Manton Dam**	**37.75**	**165**	P		**P**	**23 31 22.8**	**-1.5**
MTN				IAmb		IAmb	23 32 01.5		
	comp=Z,11nm,1.1s								
MK31	**Makanchi Array**	**38.78**	**316**	P		**P**	**23 31 32.8**	**0.0**
MKAR	**Makanchi Array**	**38.78**	**316**	P		**P**	**23 31 33.4**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=109,slow=7.8,SNR=9.9								
MKAR				PcP		**PcP**	**23 33 44.1**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=137,slow=2.7,SNR=1.7								
	comp=Z,1.0nm,0.7s								
MAKZ	**Makanchi**	**38.98**	**316**	P		**P**	**23 31 35.2**	**+0.7**
ZALV	**Zalesovo Beam**	**40.65**	**327**	P		**P**	**23 31 48.1**	**-0.1**
ZALV	**Zalesovo Beam**	**40.65**	**327**	P		**P**	**23 31 47.9**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=118,slow=7.2,SNR=5.8								
	comp=Z,0.7nm,0.4s								
KURBB	**Kurchatov Arra**	**42.54**	**320**	P		**P**	**23 32 04.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=100,slow=9.7,SNR=2.2								
	comp=Z,0.4nm,0.3s								
WB0	**Warramunga Arr**	**45.21**	**163**	P		**P**	**23 32 24.9**	**-0.6**
WB0				IAmb		IAmb	23 32 27.9		
	comp=Z,9.2nm,1.4s								
WRA	**Warramunga Arr**	**45.37**	**163**	P		**P**	**23 32 26.2**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=345,slow=8.6,SNR=15								
	comp=Z,0.6nm,0.4s								
WB2	**Warramunga Arr**	**45.37**	**163**	P		**P**	**23 32 26.1**	**-0.8**
WB2				IAmb		IAmb	23 32 28.9		
	comp=Z,12nm,1.4s								
WR0	**Warramunga Arr**	**45.44**	**163**	P		**P**	**23 32 26.7**	**-0.6**
WR0				IAmb		IAmb	23 33 08.1		
	comp=Z,9.4nm,1.3s								
BVAR	**Borovoye Array**	**48.10**	**321**	P		**P**	**23 32 48.5**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=105,slow=8.8,SNR=5.9								
	comp=Z,0.7nm,0.5s								
ASAR	**Alice Springs**	**48.83**	**165**	P		**P**	**23 32 53.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=338,slow=6.1,SNR=5.2								
	comp=Z,0.5nm,0.5s								
ABKAR	**Akbulak array**	**53.88**	**314**	P		**P**	**23 33 31.6**	**+0.2**
BBOO	**Buckleboo**	**58.11**	**166**	P		**P**	**23 34 01.2**	**-0.6**
BBOO				IAmb		IAmb	23 34 28.7		
	comp=Z,7.5nm,1.3s								
M16K	**Timber Creek**	**64.24**	**32**	P		**P**	**23 34 42.0**	**-1.1**
D19K	**Kuna River**	**64.37**	**24**	P		**P**	**23 34 43.9**	**0.0**
D19K				IAmb		IAmb	23 34 53.3		
	comp=Z,4.7nm,1.2s								
H19K	**Roundabout Mou**	**65.12**	**27**	P		**P**	**23 34 49.9**	**+1.2**
H19K				IAmb		IAmb	23 35 14.3		
	comp=Z,4.3nm,1.2s								
TTA	**Tatalina**	**65.49**	**30**	P		**P**	**23 34 51.0**	**-0.4**
TTA				IAmb		IAmb	23 34 59.0		
	comp=Z,5.9nm,1.4s								
B22K	**Teshekpuk Lake**	**65.96**	**22**	P		**P**	**23 34 54.0**	**-0.1**
D22K	**Ayikyak River**	**66.33**	**23**	P		**P**	**23 34 56.8**	**+0.2**
D22K				IAmb		IAmb	23 35 06.2		
	comp=Z,9.2nm,1.4s								
H21K	**Melozitna Rive**	**66.61**	**27**	P		**P**	**23 34 59.0**	**+0.6**
H21K				IAmb		IAmb	23 35 27.9		
	comp=Z,5.5nm,1.4s								
CAST	**Castle Rocks**	**67.21**	**29**	P		**P**	**23 35 02.2**	**0.0**
TOLK	**Toolik Lake Re**	**67.49**	**23**	P		**P**	**23 35 04.1**	**+0.2**
KDAK	**Kodiak Island**	**67.85**	**35**	P		**P**	**23 35 07.2**	**+0.9**
E24K	**Your Creek**	**67.97**	**24**	P		**P**	**23 35 07.3**	**+0.3**
E24K				IAmb		IAmb	23 35 11.9		
	comp=Z,4.3nm,1.3s								
SUA	**Susitna One**	**68.13**	**31**	P		**P**	**23 35 07.9**	**-0.3**
F24K	**Squaw Lake**	**68.29**	**24**	P		**P**	**23 35 09.7**	**+0.7**
F24K				IAmb		IAmb	23 35 14.8		
	comp=Z,4.5nm,1.4s								
RND	**Reindeer**	**68.64**	**29**	P		**P**	**23 35 10.4**	**-0.9**
RND				IAmb		IAmb	23 35 24.4		
	comp=Z,4.1nm,0.9s								
ILAR	**Eielson Array**	**69.22**	**27**	P		**P**	**23 35 14.3**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=274,slow=4.7,SNR=5.9								
	comp=Z,0.3nm,0.5s								
KNK	**Knik Glacier**	**69.22**	**31**	P		**P**	**23 35 15.1**	**+0.2**
BMAR	**Burnt Mountain**	**69.56**	**24**	P		**P**	**23 35 17.6**	**+0.7**
M24K	**Tolsona, Glenn**	**70.12**	**30**	P		**P**	**23 35 20.4**	**-0.1**
KLU	**Klutina**	**70.39**	**31**	P		**P**	**23 35 22.3**	**+0.1**
J26L	**Joseph Creek**	**70.67**	**27**	P		**P**	**23 35 24.4**	**+0.6**
E28M	**Babbage River**	**71.08**	**23**	P		**P**	**23 35 26.1**	**-0.1**
E28M				IAmb		IAmb	23 35 29.4		
	comp=Z,5.9nm,1.4s								
K27K	**Chicken**	**71.43**	**27**	P		**P**	**23 35 30.0**	**+1.6**
K27K				IAmb		IAmb	23 36 02.7		
	comp=Z,7.4nm,1.4s								
M26K	**Nabesna, AK**	**71.48**	**29**	P		**P**	**23 35 29.5**	**+0.7**
BCAR	**Beaver Creek A**	**71.83**	**28**	P		**P**	**23 35 31.4**	**+0.6**
CTGM	**Chitina Glacie**	**72.67**	**30**	P		**P**	**23 35 37.0**	**+1.0**
L29M	**L29M**	**73.39**	**28**	P		**P**	**23 35 41.3**	**+1.1**
L29M				IAmb		IAmb	23 35 46.2		
	comp=Z,6.6nm,1.1s								
YKA	**Yellowknife Ar**	**83.01**	**23**	P		**P**	**23 36 32.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=310,slow=5.2,SNR=7.8								
	comp=Z,0.8nm,0.7s								

TAP 06 23:30:59.5, 24.02N×121.63E, h6km±1km, ML1.4, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.06**	**331**	⇓*i*P		Pg	23 31 01.5	+0.4
	baz=340							
TWD				S		Sg	23 31 02.8	+0.6
	baz=340							
ETL	**Fush Village**	**0.14**	**357**	*i* P		Pg	23 31 02.5	+0.2
	baz=359							
ETL				S		Sg	23 31 04.8	+0.5
	baz=359							
ETM	**Tongmen**	**0.14**	**245**	*e*P		Pg	23 31 02.8	+0.5
	baz=244							
ETM				*e*S		Sg	23 31 05.0	+0.7
	baz=244							
NACB	**Ninganchiao**	**0.15**	**348**	*i* P		Pg	23 31 02.8	+0.2
	baz=349							

*ECX **06** 23:31:58.7±0.6, 30.03N×114.15W, h20km±5km, MD3.5, ML3.7, Fault plane solution: NP1:φ68.00000°, δ48.00000°, λ8.00000°.*

*MEX **06** 23:32:00.3±0.6, 30.01N×114.15W, h10km±10km, MD4.2*

ISC 06 23:31:57.0±1.6, 30.05N±0.04×114.11W±0.04, h12km±13km, n17, σ1°13/25, 6C-5D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SLGB	**San Luis Gonza**	**0.34**	**230**	⇓*i*P		**Pb**	**23 32 05.0**	**0.0**
SLGB				*e*S		**Sg**	**23 32 09.2**	**+1.0**
SLGB				IAML			23 32 09.6	
	comp=N,18μm,0.4s							
SLGB				IAML			23 32 09.7	
	comp=E,14μm,0.5s							
SFX	**San Felipe**	**1.17**	**327**	*i* P		**Pn**	**23 32 18.7**	**-0.6**
SFX				*e*S		**Sb**	**23 32 33.6**	**-0.8**
SFX	**San Felipe**	**1.17**	**327**	⇑*i*P		**Pn**	**23 32 18.8**	**-0.5**
SFX				IAML			23 32 45.7	
	comp=E,1μm,0.9s							
BAHB	**Baha de los**	**1.20**	**156**	*e*P		**Pn**	**23 32 19.1**	**-0.5**
BAHB				*e*S		**Sb**	**23 32 33.4**	**-1.7**
BAHB	**Baha de los**	**1.20**	**156**	⇓*e*P		**Pn**	**23 32 19.2**	**-0.5**
BAHB				*e*S		**Sb**	**23 32 35.1**	**0.0**
PLIB	**Puerto Liberta**	**1.23**	**96**	⇑*e*PG		**Pn**	**23 32 19.9**	**-0.2**
PLIB				IAML			23 32 47.5	
	comp=E,2μm,0.7s							
PPXB	**Puerto Peasco**	**1.35**	**18**	⇓*e*P		**Pb**	**23 32 22.1**	**-0.1**
SPIG	**San Pedro Mart**	**1.54**	**311**	⇑*i*P		**Pn**	**23 32 24.7**	**+0.1**
	baz=134,slow=14							
SPIG				*i* S		**Sn**	**23 32 43.8**	**-0.9**
SPIG	**San Pedro Mart**	**1.54**	**311**	⇑*i*P		**Pn**	**23 32 24.7**	**+0.1**
SPIG				*e*S		**Sn**	**23 32 44.2**	**-0.4**
PIX	**Pinacate**	**1.61**	**20**	⇓*e*P		**Pb**	**23 32 26.1**	**-0.5**
SQX	**San Quintin**	**1.61**	**289**	⇑*i*P		**Pn**	**23 32 25.5**	**+0.2**
SQX				*e*S		**Sn**	**23 32 46.0**	**-0.1**
SQX				IAML			23 32 46.5	
	comp=E,783nm,0.4s							
SQX				IAML			23 32 50.5	
	comp=N,790nm,0.3s							
ECBX	**El Chinero**	**1.63**	**330**	⇑*e*P		**Pn**	**23 32 25.1**	**-0.5**
BKIRB	**Bahia Kino**	**2.19**	**122**	*e*P		**Pn**	**23 32 35.0**	**+1.8**
214A	**Organ Pipe Nat**	**2.20**	**30**	⇓*e*P		**Pn**	**23 32 34.9**	**+1.4**
HSIG		**2.94**	**110**	*e*P		Pg	23 32 59.0	+5.7
HSIG				*e*S		**Sg**	**23 33 30.0**	**-1.4**
CBX	**Cerro Bola**	**3.14**	**317**	*e*P		**Pn**	**23 32 47.3**	**+0.8**
CBX				*e*S		**Sn**	**23 33 27.1**	**+3.0**
NOVRB	**El Novillo Son**	**4.05**	**105**	*e*P		**Pn**	**23 33 00.4**	**+1.6**

IDC 06 23:32:45.7±2.8, 33.44S×179.02W, h0km, mb3.6/2, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=68.3km s-min=36.3km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URZ	**Urewera**	**5.75**	**212**	Pn		Pn	23 34 13.2	+1.0
	1.6nm,0.3s,baz=83,slow=16,SNR=2.1							
URZ				Sn		Sn	23 35 17.8	-1.1
	1.5nm,0.3s,baz=203,slow=23,SNR=1.8							
	4.5nm,0.3s							
ASAR	**Alice Springs**	**42.18**	**271**	P		P	23 40 40.3	-0.1
	0.7nm,0.7s,baz=110,slow=7.5,SNR=6.9							
	0.7nm,0.7s							
WRA	**Warramunga Arr**	**43.45**	**276**	P		P	23 40 50.5	-0.2
	0.3nm,0.4s,baz=118,slow=7.7,SNR=8.0							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**147.66**	**338**	PKPbc		PKPbc	23 52 30.5	-0.9
	0.9nm,0.5s,baz=34,slow=3.5,SNR=10							

*IDC **06** 23:43:50.4±0.6, 24.00N×121.80E, h0km, mb4.2/23, mbtmp4.2/25, ML3.8/2, MS3.9/44, Error ellipse: s-maj=18.4km s-min=13.8km az=70.0*

*TAP **06** 23:43:51.8, 24.03N×121.65E, h7km, ML4.9, C*

*NIED **06** 23:43:51.6, 24.01N×121.67E, h4km, MW4.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.64; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.29; $M_{r\phi}$0.78; Fault plane solution: $M_0$6.22000×10^{16} NP1:φ±42.00000°, δ74.00000°, λ91.00000°. NP2:φ±218.00000°, δ16.00000°, λ86.00000°.*

*ASIES **06** 23:43:51.8, 24.03N×121.65E, h7km, ML4.9, Mw4.5, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}2.93; $M_{\theta\theta}$-1.36; $M_{\phi\phi}$-1.61; $M_{r\theta}$2.90; $M_{\theta\phi}$-1.53; $M_{r\phi}$5.03; Fault plane solution: $M_0$6.52455×10^{22} NP1:φ±31.44000°, δ76.65000°, λ84.64000°. NP2:φ±233.55000°, δ14.36000°, λ111.47000°. Principal axes: T Plg58.0180°, Azm294.2980°; N Plg5.2080°, Azm32.6920°; P Plg31.4540°, Azm125.8890°;*

*JMA **06** 23:43:51.6±0.1, 24.04N±0.3×121.7E±0.7, h4km, MD4.7/14, MV4.1/14, TAIWAN REGION*

*NEIC **06** 23:43:51.8±1.9, 23.99N±0.02×121.68E±0.04, h10km±1km, mb4.7/49, Error ellipse: s-maj=5.9km s-min=3.2km az=289.0*

*BJI **06** 23:43:52.0±0.0, 24.00N×121.59E, h14km, mb4.3/46, mB4.8/21, ML4.7/12, Ms4.8/57, Ms7 4.7/51*

ISC 06 23:43:52.5±0.6, 24.01N±0.01×121.68E±0.02, h14km±3km, n322, σ1°58/434, mb4.4/48, MS3.9/41, 30C-23D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.10**	**313**	⇓*i*P		Pg	23 43 54.1	-1.6
	baz=318							
TWD				*i* S		Sg	23 43 55.6	-2.2
	baz=318							
ETL	**Fush Village**	**0.15**	**341**	*i* P		Pg	23 43 55.0	-1.4
	baz=355							
ETM	**Tongmen**	**0.17**	**255**	⇓*i*P		Pg	23 43 55.4	-1.3
	baz=249							
ETM				*i* S		Sg	23 43 57.8	-1.6
	baz=249							
NACB	**Ninganchiao**	**0.18**	**335**			Pg	23 43 55.2	-1.5
NACB						Sg	23 43 57.3	-2.3
NACB	**Ninganchiao**	**0.18**	**335**	P		Pg	23 43 55.5	-1.2
NACB	**Ninganchiao**	**0.18**	**335**	⇓*i*P		Pg	23 43 55.3	-1.5
	baz=338							
NACB				S		Sg	23 43 57.6	-2.0
	baz=338							
LXIB	**Xiulin Townshi**	**0.24**	**272**	⇓*i*P		Pg	23 43 56.6	-1.3
	baz=259							
LXIB				S		Sg	23 43 59.8	-1.7
	baz=259							
SHUL	**Shoufeng**	**0.25**	**205**	P		Pg	23 43 58.2	+0.4
	baz=210							
SHUL				S		Sg	23 44 03.5	+2.1
	baz=210							
ESL	**Shilin**	**0.30**	**229**	⇓*i*P		Pg	23 43 57.7	-1.0
	baz=234

TDCB S Sg 23 44 09.0 -1.2
baz=296
LATG Datong 0.54 345 ⇓*i*P Pg 23 44 02.2 -1.0
baz=343
LATG S Sg 23 44 09.4 -1.0
baz=343
VWDT VWDT 0.55 243 ⇓*i*P Pg 23 44 02.8 -0.6
baz=244
VWDT *e*S Sg 23 44 10.2 -0.5
baz=244
HGSD Ruisui 0.57 204 *e*P Pb 23 44 04.3 +0.1
baz=221
HGSD *e*S Sn 23 44 16.3 +1.0
baz=221
ESAO Su ao 0.58 15 *e*P Pg 23 44 03.0 -1.0
baz=7.0
ESAO S Sg 23 44 11.2 -0.5
baz=7.0
EOS4 EOS4 0.60 79 P Pb 23 44 05.1 +0.6
baz=78
EOS4 S Sn 23 44 15.4 -0.2
baz=78
EHY Hungye 0.60 213 P Pg 23 44 03.6 -0.7
baz=221
EHY S Sb 23 44 12.6 -0.6
baz=221
NDT Datong Townshi 0.61 346 ⇑*i*P Pg 23 44 03.9 -0.6
baz=344
NDT S Sg 23 44 11.3 -1.2
baz=344
TWC Suao 0.62 15 ⇑*i*P Pg 23 44 03.8 -0.9
baz=7.0
TWC S Sg 23 44 11.8 -1.0
baz=7.0
NDS Dongshan 0.62 3 P Pg 23 44 04.0 -0.7
baz=1.0
NDS *e*S Sg 23 44 12.9 0.0
baz=1.0
ENTT Nioudou 0.63 351 ⇑*i*P Pg 23 44 04.3 -0.7
baz=349
ENTT S Sg 23 44 12.5 -0.9
baz=349
EOS3 EOS3 0.65 65 *e*P Pn 23 44 07.2 0.0
baz=63
EOS2 EOS2 0.65 51 P Pn 23 44 06.7 -0.6
baz=65
SSLB Suanglung 0.70 252 Pg Pg 23 44 05.5 -0.7
SSLB Sg Sg 23 44 13.5 -1.9
SSLB Suanglung 0.70 252 P Pb 23 44 05.7 -0.8
SSLB Suanglung 0.70 252 ⇓*i*P Pg 23 44 05.4 -0.7
baz=262
SSLB *i* S Sg 23 44 13.5 -1.9
baz=262
WCS Beigang Elemen 0.70 274 ⇑P Pb 23 44 05.7 -0.8
baz=265
WCS S Sg 23 44 14.6 -0.9
baz=265
TWE Neicheng 0.71 359 ⇑*i*P Pg 23 44 05.7 -0.7
baz=358
TWE S Sg 23 44 15.5 -0.2
baz=358
YULB Yu-li 0.71 210 Pg Pg 23 44 05.2 -1.1
YULB Sg Sg 23 44 12.4 -3.3
YULB Yu-li 0.71 210 P Pb 23 44 06.2 -0.5
YULB Yu-li 0.71 210 *e*P Pg 23 44 05.3 -1.1
baz=211
YHNB Yeheng 0.71 337 Pg Pg 23 44 05.8 -0.7
YHNB Sg Sg 23 44 14.8 -1.1
YHNB Yeheng 0.71 337 P Pg 23 44 05.9 -0.5
YHNB Yeheng 0.71 337 ⇑*i*P Pg 23 44 05.7 -0.7
baz=328
YHNB S Sg 23 44 14.3 -1.5
baz=328
WHP Taichung City 0.72 292 ⇑*i*P Pb 23 44 06.3 -0.7
baz=291
WHP S Sg 23 44 15.6 -0.5
baz=291
ECBN Changbin 0.72 197 P Pb 23 44 06.8 -0.1
baz=189
ECBN S Sb 23 44 17.6 +1.0
baz=189
SMLT Sun Moon Lake 0.72 260 ⇑*i*P Pb 23 44 06.2 -0.8
baz=260
SMLT *e*S Sg 23 44 15.3 -0.9
baz=260
NSK Sanguang 0.72 336 ⇑*i*P Pg 23 44 05.8 -0.8
baz=327
NSK *e*S Sg 23 44 15.0 -1.2
baz=327
EYUL Yuli 0.74 206 *e*P Pg 23 44 06.1 -0.8
baz=224
TWF1 Yuli 0.74 208 *e*P Pg 23 44 06.0 -1.0
baz=223
TWF1 *e*S Sb 23 44 17.9 +0.6
baz=223
FUSB Fushanzhiwuyua 0.75 354 ⇑*i*P Pg 23 44 06.4 -0.7
baz=351
FUSB S Sg 23 44 16.1 -1.0
baz=351
ILA Ilan 0.75 5 *e*P Pb 23 44 07.6 +0.1
baz=2.0
ILA *e*S Sb 23 44 17.2 -0.4
baz=2.0
TYC Yuchr 0.76 262 ⇑*i*P Pg 23 44 06.6 -0.7
baz=262
TYC *e*S Sg 23 44 15.7 -1.6
baz=262
NWLT Wulai 0.78 348 P Pg 23 44 07.2 -0.6
baz=346
NWLT S Sg 23 44 16.4 -1.6
baz=346
NFF Wufeng Townshi 0.80 321 ⇑P Pb 23 44 07.6 -0.7
baz=319
NFF *e*S Sg 23 44 17.8 -0.9
baz=319
WHYT Xinyi Township 0.82 248 *e*P Pb 23 44 07.8 -0.7
baz=256
WHYT *e*S Sb 23 44 18.8 -0.6
baz=256
NTC Toucheng 0.85 9 *e*P Pn 23 44 10.5 +0.4
baz=355
NTC *e*S Sb 23 44 20.3 -0.1
baz=355
CHKH Chenggong 0.85 198 P Pb 23 44 08.8 -0.4
baz=191
CHKH *e*S Sn 23 44 22.1 -0.4
baz=191
NSTT Nanjuang 0.87 315 ⇑*i*P Pb 23 44 09.1 -0.3
baz=314
NSTT S Sg 23 44 20.0 -0.9
baz=314
LIOB Emei 0.87 316 ⇑*i*P Pb 23 44 09.4 -0.1
baz=315
LIOB S Sg 23 44 20.2 -0.8
baz=315
FULB Fuli 0.88 204 *e*P Pb 23 44 09.9 +0.2
baz=219
WJS Zhushan 0.89 258 *e*P Pn 23 44 10.0 -0.7
baz=259
WJS *e*S Sn 23 44 22.6 -0.7
baz=259
TWQ1 Liyutan 0.89 292 ⇑P Pb 23 44 09.9 +0.1
baz=303
TWQ1 *e*S Sn 23 44 22.8 -0.6
baz=303
WNT Mingjian 0.92 262 ⇑P Pn 23 44 10.9 -0.1
baz=262
WNT S Sn 23 44 23.9 -0.1
baz=262
NSY Sanyi 0.93 296 ⇑*i*P Pn 23 44 11.0 -0.2
baz=306
NSY *e*S Sn 23 44 23.6 -0.8
baz=306
ALS Alishan 0.94 238 P Pb 23 44 10.5 -0.3
baz=240
ALS *e*S Sb 23 44 24.0 +0.7
baz=240
CHKT Chengkung 0.95 198 *e*P Pb 23 44 10.4 -0.4
baz=183
CHKT *e*S Sn 23 44 25.3 +0.4
baz=183
NHDH Xindian Distri 0.96 352 *e*P Pb 23 44 10.5 -0.4
baz=340
NHDH *e*S Sg 23 44 22.1 -1.5
baz=340
EHD Haiduan 0.96 207 *e*P Pg 23 44 08.9 -2.2
baz=224
EHD *e*S Sn 23 44 24.6 -0.6
baz=224
NMLH Miaoli 0.96 303 *e*P Pn 23 44 11.8 +0.1
baz=302
NMLH *e*S Sb 23 44 23.9 +0.3
baz=302
TIPB Shuangxi 0.97 8 ⇑P Pg 23 44 10.4 -0.9
baz=354
TIPB *e*S Sg 23 44 23.3 -0.6
baz=354
TWA Mucha 0.97 355 *e*P Pb 23 44 10.8 -0.3
baz=342
TWA *e*S Sg 23 44 23.2 -0.8
baz=342
TATO Taipei 0.97 350 Pg Pb 23 44 10.8 -0.4
TATO Sg Sg 23 44 22.6 -1.5
TATO Taipei 0.97 350 P Pb 23 44 11.3 +0.1
SBCB Hsinchu 1.00 321 *e*P Pn 23 44 12.4 +0.2
baz=320
SBCB *e*S Sb 23 44 25.4 +0.7
baz=320
CHN5 Tsauling 1.00 246 ⇑P Pn 23 44 12.1 -0.2
baz=238
CHN5 *e*S Sn 23 44 26.8 +0.5
baz=238
ECS Chishang 1.00 205 *e*P Pn 23 44 12.1 -0.1
baz=223
WDJ Dajia District 1.00 290 *e*P Pn 23 44 12.9 +0.6
baz=298
WDJ *e*S Sn 23 44 25.6 -0.6
baz=298
ELDTW Lidau 1.02 217 *e*P Pg 23 44 10.3 -1.9
baz=232
ELDTW *e*S Sb 23 44 25.4 +0.1
baz=232
HSN Hsinchu 1.02 321 *e*P Pn 23 44 12.9 +0.5
baz=322
HSN *e*S Sn 23 44 26.7 +0.2
baz=322
WCHH Zhanghua 1.02 274 *e*P Pn 23 44 12.9 +0.4
baz=274
WCHH *e*S Sn 23 44 28.1 +1.4
baz=274
TWB1 Santiao Chiao 1.03 16 *e*P Pb 23 44 11.9 -0.3
baz=3.0
TWB1 *e*S Sg 23 44 25.0 -1.0
baz=3.0
TAP Taipei 1.04 351 *e*P Pn 23 44 12.7 0.0
baz=339
TAP *e*S Sb 23 44 25.6 -0.1
baz=339
NCUH Zhongli 1.05 335 *e*P Pn 23 44 13.2 +0.3
baz=332
NWF Wu-fen Shan 1.06 5 *e*P Pb 23 44 12.6 -0.1
baz=342
NWF *e*S Sg 23 44 25.4 -1.5
baz=342
WFSB Wu-fen Shan 1.06 5 *e*P Pb 23 44 12.6 0.0
baz=341
WFSB *e*S Sg 23 44 25.0 -1.9
baz=341
WGK Gukeng 1.07 253 *e*P Pn 23 44 13.5 +0.4
baz=254
WGK *e*S Sn 23 44 28.7 +0.9
baz=254
EDH Donghe 1.09 198 *e*P Pg 23 44 12.3 -1.2
baz=185
EDH *e*S Sn 23 44 28.5 +0.2
baz=185
WDLH Douliu 1.09 253 *e*P Pn 23 44 13.8 +0.4
baz=254
WDLH *e*S Sn 23 44 29.3 +1.0
baz=254
SXI1 Grass Mountain 1.09 9 ⇑P Pg 23 44 12.9 -0.8
baz=358
SXI1 *e*S Sb 23 44 28.0 +0.5
baz=358
TWS1 Kuangyinshan 1.11 348 ⇓P Pn 23 44 14.3 +0.6
baz=345
TWS1 *e*S Sn 23 44 29.0 +0.2
baz=345
YM01 YM01 1.14 355 *e*P Pn 23 44 14.2 +0.2
baz=349
YM01 *e*S Sn 23 44 29.8 +0.3
baz=349
WCKO Fanlu 1.14 240 *e*P Pn 23 44 14.5 +0.5
baz=244
WCKO *e*S Sn 23 44 30.7 +1.3
baz=244
TNOU National Taiwa 1.14 4 *e*P Pn 23 44 14.7 +0.6
baz=342
TNOU *e*S Sb 23 44 29.3 +0.7
baz=342
NTST Danshui 1.17 350 *e*P Pn 23 44 15.5 +1.1
baz=347
NTST *e*S Sn 23 44 30.6 +0.4
baz=347
STYH Taoyuan 1.18 225 *e*P Pn 23 44 14.5 -0.1
baz=230
STYH *e*S Sg 23 44 29.3 -1.2
baz=230
ANP Anpu 1.18 353 *e*P Pn 23 44 15.1 +0.3
baz=350
TPUB Ta-pu 1.19 234 Pn 23 44 15.1 +0.2
TPUB Sn 23 44 30.8 -0.1
TPUB Ta-pu 1.19 234 P Pn 23 44 15.6 +0.8
TPUB Ta-pu 1.19 234 ⇓P Pn 23 44 15.5 +0.6
baz=226
TPUB S Sn 23 44 31.5 +0.6
baz=226
WRL Guolierlin Hig 1.19 265 *e*P Pn 23 44 15.8 +1.0
baz=254
WRL *e*S Sn 23 44 32.7 +1.8
baz=254
CHN2 Minshiung 1.20 247 *e*P Pn 23 44 16.4 +1.5
baz=262
CHN2 *e*S Sn 23 44 32.8 +1.8
baz=262
LONT Longtian 1.21 205 *e*P Pb 23 44 13.8 -1.4
baz=210
LONT *e*S Sn 23 44 32.5 +1.2
baz=210
WTK Tuku 1.22 255 *e*P Pn 23 44 16.4 +1.2
baz=257
WTK *e*S Sn 23 44 33.8 +2.2
baz=257
WTP Ta-pu 1.24 232 ⇑*i*P Pn 23 44 15.8 +0.4
baz=236
WTP *e*S Sn 23 44 32.5 +0.5
baz=236
JYNG Yonagunijimaku 1.24 69 P Pn 23 44 15.0 -0.5
JYNG S Sb 23 44 31.3 -0.3
JYNG Yonagunijimaku 1.24 69 A A 23 44 15.0
comp=E,12nm,7.9s,comp=N,16nm,2.3s
CHY Chiayi 1.26 246 *e*P Pg 23 44 17.1 +0.4
baz=262
CHY *e*S Sn 23 44 34.5 +2.1
baz=262
TWY Chenhua 1.26 357 *e*P Pg 23 44 16.9 +0.1
baz=341
WTCT Ta-ch'eng 1.29 264 *e*P Pg 23 44 16.7 -0.6
baz=265
WTCT *e*S Sn 23 44 34.6 +1.5
baz=265
YOJ Yonaguni jima 1.30 70 Pn 23 44 15.5 -0.8
YOJ Yonaguni jima 1.30 70 P Pn 23 44 16.2 0.0
YOJ Yonaguni jima 1.30 70 ⇓P Pn 23 44 15.8 -0.4
baz=68
YOJ Yonaguni jima 1.30 70 P Pn 23 44 16.2 0.0
YOJ *e*S Sn 23 44 34.0 +0.6
YOJ Yonaguni jima 1.30 70 A A 23 44 16.2
comp=E,12nm,2.6s,comp=N,14nm,7.5s
TWGBT Beinan 1.31 205 P Pn 23 44 14.6 -1.8
TWGBT Beinan 1.31 205 *e*P Pn 23 44 14.3 -2.1
baz=207
TWG Pinlang 1.31 205 Pn 23 44 13.9 -2.6
TWG Sg Sb 23 44 31.4 -2.2
TWG Pinlang 1.31 205 *e*P Pn 23 44 14.1 -2.3
baz=210
TWG *e*S Sb 23 44 31.9 -1.7
baz=210
TWK Hsinying 1.32 236 *e*P Pg 23 44 17.3 -0.6
baz=240
TWK *e*S Sn 23 44 36.0 +2.0
baz=240
CHN1 Nanshi 1.34 232 ⇓P Pg 23 44 17.8 -0.5
baz=238
CHN1 *e*S Sn 23 44 35.8 +1.3
baz=238
SNST Tainan City 1.34 234 P Pg 23 44 17.9 -0.4
baz=238
SNST S Sn 23 44 37.6 +3.2
baz=238
TTN Taitung 1.34 201 *e*P Pn 23 44 16.4 -0.4
baz=206
TTN *e*S Sb 23 44 34.5 0.0
baz=206
LDUT Ludao 1.34 188 *e*P Pn 23 44 14.7 -2.2
baz=180
LDUT *e*S Sb 23 44 33.5 -1.1
baz=180
SGST Jiashian 1.36 228 ⇓*i*P Pn 23 44 17.1 -0.1
baz=232
SGST S Sg 23 44 37.5 +0.9
baz=232
WSF Szhu 1.38 255 P Pg 23 44 18.4 -0.8
baz=257
WSF S Sg 23 44 37.6 +0.4
baz=257
SLGT Liugui 1.39 223 P Pg 23 44 18.3 -0.9
baz=228
SLGT S Sg 23 44 37.8 +0.6
baz=228
WSL Shuilin Townsh 1.41 250 P Pg 23 44 19.3 -0.4
baz=253
WSL S Sg 23 44 40.0 +1.8
baz=253
ICHU Yijhu 1.44 243 P Pg 23 44 19.6 -0.5
baz=248
ICHU S Sg 23 44 39.6 +0.7
baz=248
CHN3 Shinhua 1.52 233 *e*P Pg 23 44 21.8 0.0
baz=237
CHN3 *e*S Sg 23 44 43.0 +1.5
baz=237
SSHA Shanhua 1.54 236 *e*S Sg 23 44 42.4 +0.1
baz=242
ECL Taimali 1.56 205 *e*P Pn 23 44 18.4 -1.4
baz=193
SCST Cishan 1.56 224 *e*P Pg 23 44 21.8 -0.7
baz=231
SCST *e*S Sg 23 44 44.0 +1.1
baz=231
SHHT Tainan City 1.57 231 *e*P Pg 23 44 22.5 -0.2
baz=237
SHHT *e*S Sg 23 44 45.4 +2.4
baz=237
SCLT Jiali 1.59 239 *e*P Pb 23 44 21.3 -0.5
baz=244
SCLT *e*S Sg 23 44 43.8 -0.1
baz=244
TSMG Majia 1.61 216 *e*P Pb 23 44 21.1 -0.9
baz=235
TSMG *e*S Sg 23 44 43.7 -0.6
baz=235
TAI1 Yung-k'ang 1.64 234 *e*P Pn 23 44 20.9 -0.1
baz=241
TAI1 *e*S Sg 23 44 45.8 +0.3
baz=241
PCYT Pengchaiyu 1.65 12 *e*P Pb 23 44 22.7 -0.1
baz=351
TWM1 Shoushan 1.65 225 *e*P Pg 23 44 23.4 -0.9
baz=228
SGLT Jiouru 1.68 221 *e*P Pg 23 44 24.7 -0.1
baz=225
MASBT Mashibuluo 1.69 215 *e*P Pn 23 44 21.4 -0.2
baz=222
MASBT *e*S Sb 23 44 44.4 -0.2
baz=222
TSCK Chigu Township 1.69 240 *e*P Pb 23 44 22.9 -0.6
baz=246
TSCK *e*S Sg 23 44 45.6 -1.5
baz=246
EAST Anshuo 1.79 205 *e*P Pn 23 44 21.6 -1.4
baz=192
WSSB Gushan 1.88 224 *e*P Pb 23 44 26.3 -0.5
baz=229
SCZT Fangliau 1.90 211 *e*P Pb 23 44 26.9 -0.1
baz=214
SCZT *e*S Sg 23 44 52.5 -1.2
baz=214
IRIF Iriomote-Funau 1.90 80 P Pn 23 44 24.6 0.0
IRIF *e*S Sn 23 44 49.3 +0.9
IRIF Iriomote-Funau 1.90 80 A A 23 44 24.6
comp=E,10.0nm,2.2s,comp=N,11nm,4.5s
HATJ Hateruma jima 1.95 88 *e*P Pn 23 44 25.1 -0.1
HATJ *e*S Sn 23 44 49.5 0.0
HATJ Hateruma jima 1.95 88 A A 23 44 25.1
comp=E,18nm,3.8s,comp=N,17nm,3.5s
SLIU Shizi 1.96 205 *e*P Pb 23 44 27.6 -0.4
baz=193
LAY Lan-yu 1.97 183 *e*P Pn 23 44 22.7 -2.8
baz=177
LAY *e*S Sn 23 44 48.6 -1.4
baz=177
PHUB P'eng-hu 1.99 256 P Pn 23 44 25.2 -0.6
baz=259
PHUB S Sb 23 44 52.2 -1.1
baz=259
PNG Penghu 1.99 258 *e*P Pn 23 44 26.5 +0.7
baz=260
PNG S Sb 23 44 52.4 -0.9
baz=260
WDGT Dungji 2.00 248 *e*P Pn 23 44 26.6 +0.8
baz=252
WDGT *e*S Sb 23 44 52.2 -1.1
baz=252
LYUB Lan-yu 2.00 182 *e*P Pn 23 44 23.0 -3.0
baz=185
JKRS Kuro-shima 2.14 83 P Pn 23 44 28.6 +0.7
JKRS *e*S Sn 23 44 55.3 +1.0
JKRS Kuro-shima 2.14 83 A A 23 44 28.6
comp=E,22nm,2.8s,comp=N,15nm,3.7s
TWKBT Hengchun 2.21 201 *e*P Pn 23 44 28.8 0.0
baz=189
VCHM Qimei 2.21 249 *e*P Pn 23 44 29.6 +0.7
baz=241
VCHM *e*S Sb 23 44 58.1 -1.5
baz=241
VWUC VWUC 2.25 296 *e*P Pn 23 44 28.5 -0.9
baz=295
VWUC *e*S Sn 23 44 55.4 -1.5
baz=295
JIJ Ishigaki jima 2.28 81 P Pn 23 44 29.2 -0.5
JIJ *e*S Sn 23 44 57.5 -0.1
JIJ Ishigaki jima 2.28 81 A A 23 44 29.2
comp=E,3.0nm,6.6s,comp=N,4.0nm,6.9s
JISG Ishigakijimahi 2.47 76 P Pn 23 44 32.0 -0.4
JISG S Sn 23 45 01.7 -0.7
JISG Ishigakijimahi 2.47 76 A A 23 44 32.0
comp=N,4.0nm,4.9s
PTMZ Houxiangcun 2.54 294 *e*P Pn 23 44 32.6 -0.8
baz=293
MATB Ma-tsu 2.65 324 *e*P Pn 23 44 34.9 +0.1
baz=323
MATB *e*S Sn 23 45 07.5 +0.8
baz=323
JTJ Tarama 2.83 77 A A 23 44 38.9
comp=E,6.0nm,2.8s,comp=N,8.0nm,3.2s
QZH Quanzhou 2.96 289 ⇑*i*Pn Pn 23 44 38.7 -0.4
QZH Sn Sn 23 45 14.8 +0.3
QZH smax smax
comp=N,2μm,1.1s
QZH smax smax
comp=N,2μm,0.9s
KNM Kinmen 2.99 278 *e*P Pn 23 44 40.9 +1.4
baz=278
KNMB Chin-men Tao 3.04 279 Pn Pn 23 44 39.5 -0.7
KNMB Chin-men Tao 3.04 279 *e*P Pn 23 44 39.8 -0.4
baz=279
LYJJ Jianjiangzhen 3.07 326 *e*P Pn 23 44 40.1 -0.5
baz=324
MHZQ Yeshan 3.18 311 *e*P Pn 23 44 41.7 -0.4
baz=297
XPSS Dashiqiu 3.20 335 *e*P Pn 23 44 42.1 -0.4
baz=334
AXDP Jialang 3.49 285 *e*P Pn 23 44 46.5 0.0
baz=285
ZPLA Ao Xicun 3.59 270 *e*P Pn 23 44 48.2 +0.3
baz=271
DSXP Dongshan 3.90 266 *e*P Pn 23 44 52.1 0.0
baz=268
SXFK Yanhouchang 4.36 304 *e*P Pn 23 44 58.4 0.0
baz=302
JOW Kunigami 6.59 63 Pn Pn 23 45 27.8 -1.3
comp=N,10.0nm,0.3s,baz=140,slow=15,SNR=11
comp=N,19nm,0.3s

SSE Sheshan 7.07 357 Pn **Pn** **23 45 35.4 -0.2**
SSE Sn **Sn** **23 46 58.9 +3.1**
SSE smax smax
comp=N,63nm,1.2s
SSE smax smax
comp=N,76nm,1.0s
SSE LR LR
comp=N,1μm,10.0s
SSE LR LR
comp=N,360nm,10.0s
HKPS Hong Kong Po S 7.15 258 Pn **Pn** **23 45 37.1 +0.4**
GZH Guangzhou 7.70 265 Pn Pn 23 45 39.4 -4.9
GZH Sn **Sn** **23 47 03.7 -7.7**
GZH smax smax
comp=N,400nm,1.0s
GZH smax smax
comp=N,500nm,0.9s
NJ2 Nanjing 8.39 343 ⇓P **Pn** **23 45 56.1 +2.4**
NJ2 pmax pmax
comp=N,36nm,0.8s
NJ2 smax smax
comp=N,200nm,0.9s
NJ2 smax smax
comp=N,190nm,1.3s
NJ2 LR LR
comp=N,4μm,7.6s
NJ2 LR LR
comp=N,1μm,5.9s
NJ2 LR LR
comp=N,4μm,10.9s
CNSH ChangSha 8.89 300 ⇑P Pn 23 45 54.8 -5.8
CNSH S **Sn** **23 47 32.4 -8.2**
CNSH smax smax
comp=N,680nm,1.2s
CNSH smax smax
comp=E,560nm,1.3s
WHN Wuhan 9.21 317 P **Pn** **23 46 05.1 +0.2**
WHN pmax pmax
comp=E,58nm,0.7s
WHN LR LR
comp=E,11μm,7.2s
WHN LR LR
comp=E,9μm,8.5s
WHN LR LR
comp=E,16μm,9.5s
TGY Tagaytay City 9.88 184 LR LR 23 49 44.7
comp=E,331nm,21.0s,baz=17,slow=36
QIZ Qiongzhong 12.08 248 P **Pn** **23 46 42.2 -2.1**
QIZ S **Sn** **23 49 00.8 +1.9**
QIZ LR LR
comp=E,780nm,13.5s
QIZ LR LR
comp=E,480nm,10.0s
QIZ LR LR
comp=E,580nm,8.8s
JNU Nakatsue 12.15 40 LR LR 23 52 21.8
comp=E,300nm,18.9s,baz=216,slow=42
TIA Tai'an 12.78 343 *e*P **Pn** **23 46 55.2 +1.4**
TIA LR LR
comp=E,1μm,9.4s
TIA LR LR
comp=E,670nm,7.8s
TIA LR LR
comp=E,2μm,9.8s
LYN LuoYang 13.22 325 ⇑P **Pn** **23 46 57.2 -2.6**
LYN PP **P** **23 47 08.8 -0.9**
LYN S **Sn** **23 49 32.5 +5.9**
LYN pmax pmax
comp=Z,22nm,0.4s
LYN pmax pmax
comp=Z,190nm,7.1s
LYN LR LR
comp=N,9μm,8.8s
LYN LR LR
comp=E,4μm,9.2s
LYN LR LR
comp=Z,10μm,9.6s
GYA Guiyang 13.80 283 P **Pn** **23 47 08.0 0.0**
GYA S **Sn** **23 49 42.9 +1.6**
GYA LR LR
comp=Z,2μm,8.2s
GYA LR LR
comp=Z,5μm,9.5s
GYA LR LR
comp=Z,6μm,9.6s
KSAR Wonju Array Be 14.41 20 Pn **Pn** **23 47 14.3 -1.7**
KSRS Korea Array 14.43 20 Pn **P** **23 47 22.5 -0.7**
comp=Z,0.8nm,0.3s,baz=197,slow=12,SNR=31
KSRS LR LR 23 52 44.6
comp=Z,114nm,18.8s,baz=210,slow=37
KS19 Wonju Array Si 14.46 20 Pn **Pn** **23 47 14.5 -2.3**
HNS HongShan 14.62 337 ⇑P **P** **23 47 25.9 +0.6**
HNS PP **PnPn** **23 47 36.9 +10**
HNS *e*S **S** **23 50 11.8 -8.2**
HNS pmax pmax
comp=Z,8.0nm,1.8s
HNS LR LR
comp=N,2μm,10.8s
HNS LR LR
comp=E,2μm,10.8s
HNS LR LR
comp=Z,3μm,10.8s
XAN Xi'an 14.96 315 P **Pn** **23 47 24.6 +0.9**
XAN S **Sn** **23 50 13.4 +4.1**
XAN pmax pmax
comp=Z,25nm,1.2s
XAN LR LR
comp=Z,2μm,7.5s
XAN LR LR
comp=Z,5μm,9.9s
XAN LR LR
comp=Z,4μm,9.6s
SLVN Son La 16.62 264 **Pn** **23 47 46.4 +1.2**
BJI Beijing 16.64 345 P **P** **23 47 47.3 -0.4**
BJI S **Sn** **23 50 50.0 0.0**
BJI pmax pmax
comp=Z,140nm,5.3s
BJI LR LR
comp=Z,520nm,11.2s
BJI LR LR
comp=Z,160nm,11.5s
BJI LR LR
comp=Z,570nm,11.7s
DAV Davao City (W) 17.26 167 LR LR 23 55 02.2
comp=Z,224nm,18.6s,baz=345,slow=39
KMI Kunming 17.26 278 ⇑P **P** **23 47 58.2 +3.2**
KMI pmax pmax
comp=Z,8.0nm,1.2s
KMI LR LR
comp=Z,730nm,6.6s
KMI LR LR
comp=Z,4μm,9.4s
KMI LR LR
comp=Z,4μm,10.0s
CD2 Chengdu 17.31 297 P **Pn** **23 47 54.5 +0.5**
CD2 S **Sn** **23 51 08.3 +1.8**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,2μm,6.5s
CD2 LR LR
comp=Z,2μm,7.2s
CD2 LR LR
comp=Z,2μm,7.6s
PZH PanZhiHua 18.20 282 P **Pn** **23 48 03.7 -1.3**
PZH S **Sn** **23 51 28.4 +0.2**
PZH SS **SnSn** **23 51 52.0 +10**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,150nm,5.9s
PZH LR LR
comp=Z,1μm,9.2s
PZH LR LR
comp=Z,3μm,10.2s
PZH LR LR
comp=Z,3μm,11.6s
JCJ Chichijima 18.76 76 LR LR 23 53 28.3
comp=Z,111nm,20.9s,baz=314,slow=31
HHC Hu-ho-hao-te 18.81 336 *e*P **Pn** **23 48 12.5 +0.2**
HHC SS S 23 52 01.8 +16
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,270nm,5.3s
HHC LR LR
comp=Z,1μm,10.7s
HHC LR LR
comp=Z,440nm,10.7s
HHC LR LR
comp=Z,1μm,11.5s
MJAR Matsushiro Arr 18.93 45 P **Pn** **23 48 13.7 -0.1**
baz=238,slow=10,SNR=2.0
MJAR LR LR 23 56 45.4
comp=Z,166nm,18.9s,baz=228,slow=41
comp=Z,1.0nm,0.4s
BTO Baotou 19.23 332 *e*P **Pn** **23 48 18.7 +1.3**
BTO pP **sP** **23 48 22.5 +0.3**
BTO sP **pP** **23 48 25.8 +5.3**
BTO PP **PnPn** **23 48 33.9 +3.6**
BTO pmax pmax
comp=Z,16nm,0.5s
BTO pmax pmax
comp=Z,540nm,4.5s
BTO LR LR
comp=Z,4μm,10.9s
BTO LR LR
comp=Z,2μm,7.6s
BTO LR LR
comp=Z,7μm,10.3s
LZH Lanzhou 19.54 312 *e*P **Pn** **23 48 22.9 +1.7**
LZH sP sP 23 48 29.7 +4.1
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,360nm,4.1s
LZH LR LR
comp=Z,1μm,12.7s
LZH LR LR
comp=Z,2μm,13.1s
LZH LR LR
comp=Z,3μm,13.7s
CN2 Changchun 19.98 8 P **Pn** **23 48 26.1 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,900nm,12.0s
CN2 LR LR
comp=Z,800nm,12.0s
CN2 LR LR
comp=Z,800nm,11.0s
CRAI Chiangrai 20.09 263 P Pn 23 48 27.1 -0.6
TNCH TengChong 21.09 278 P **P** **23 48 43.2 +6.3**
TNCH pP sP 23 48 45.8 +3.1
TNCH sP pP 23 48 47.4 +6.1
TNCH S **S** **23 52 27.0 -4.6**
TNCH sS sS 23 52 34.5 -3.5
TNCH SS **SnSn** **23 52 59.6 +6.6**
TNCH pmax pmax
comp=Z,53nm,1.1s
TNCH LR LR
comp=Z,810nm,9.3s
TNCH LR LR
comp=Z,2μm,9.0s
TNCH LR LR
comp=Z,3μm,9.1s
CHTO Chiang Mai 21.78 261 P **P** **23 48 44.3 +0.2**
USRK Ussuriysk Ar. 21.84 20 P **P** **23 48 44.7 +0.2**
comp=Z,3.9nm,0.9s,baz=217,slow=9.1,SNR=4.1
comp=Z,3.9nm,0.9s
CM31 Chiang Mai Arr 21.89 260 P **P** **23 48 46.1 +0.8**
CMAR Chiang Mai Arr 21.89 260 P **P** **23 48 45.0 -0.3**
CMAR Chiang Mai Arr 21.89 260 P **P** **23 48 47.2 +1.9**
comp=Z,1.8nm,0.4s,baz=67,slow=8.3,SNR=2.4
CMAR LR LR 23 57 47.1
comp=Z,221nm,18.7s,baz=85,slow=38
comp=Z,1.8nm,0.4s
MRSI Marisa 23.40 179 P **P** **23 48 59.6 -1.5**
MPSI Mapaga 23.60 184 P **P** **23 49 03.3 +0.2**
GTA Gaotai 24.03 315 P **P** **23 49 08.2 +1.0**
GTA pP sP 23 49 11.1 -2.2
GTA sS sS 23 53 37.0 +5.4
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA LR LR
comp=Z,640nm,12.4s
GTA LR LR
comp=Z,1μm,12.4s
GTA LR LR
comp=Z,1μm,12.4s
GUMO Guam 24.24 111 LR LR 23 58 04.1
comp=Z,123nm,19.9s,baz=249,slow=35
LUWI Luwuk 24.93 177 P **P** **23 49 14.8 -0.6**
GOMU GeErMu 26.13 304 P **P** **23 49 27.6 +0.9**
GOMU pmax pmax
comp=Z,9.0nm,1.3s
GOMU LR LR
comp=Z,540nm,9.7s
GOMU LR LR
comp=Z,560nm,8.8s
GOMU LR LR
comp=Z,990nm,8.7s
ASAJ Asahikawa 26.37 35 LR LR 23 59 07.7
comp=Z,111nm,20.4s,baz=196,slow=35
KLR Kul'dur 26.39 15 P **P** **23 49 29.4 +1.0**
comp=Z,6.7nm,0.9s,baz=230,slow=7.2,SNR=13
KLR LR LR 00 00 48.4
comp=Z,172nm,18.8s,baz=198,slow=39
comp=Z,6.7nm,0.9s
ULN Ulaanbaatar 26.50 338 P **P** **23 49 29.7 +0.1**
ULN IAmb IAmb 23 49 38.1
comp=Z,9.1nm,0.9s
HEH HeiHe 26.57 8 *e*P **P** **23 49 33.4 +3.3**
HEH LR LR
comp=Z,270nm,12.2s
HEH LR LR
comp=Z,630nm,11.2s
HEH LR LR
comp=Z,940nm,10.8s
SONM Songino Array 26.70 337 P **P** **23 49 31.2 -0.3**
SONM IAmb IAmb 23 49 38.1
comp=Z,8.9nm,1.0s
SONM Songino Array 26.70 337 P **P** **23 49 32.1 +0.7**
comp=Z,4.4nm,0.8s,baz=155,slow=8.5,SNR=29
SONM LR LR 00 01 26.7
comp=Z,398nm,19.6s,baz=157,slow=40
comp=Z,4.4nm,0.8s
LSA Lhasa 27.77 288 P **P** **23 49 38.9 -2.7**
LSA IAmb IAmb 23 49 51.0
comp=Z,8.1nm,0.9s
WMQ Urumqi 34.10 314 *e*P **P** **23 50 38.9 +2.1**
WMQ LR LR
comp=Z,490nm,10.5s
WMQ LR LR
comp=Z,940nm,9.3s
WMQ LR LR
comp=Z,290nm,12.1s
YAK Yakutsk 38.39 6 LR LR 00 07 53.6
comp=Z,160nm,19.1s,baz=144,slow=38
MK31 Makanchi Array 38.77 316 P **P** **23 51 16.0 -0.7**
MKAR Makanchi Array 38.77 316 P **P** **23 51 16.1 -0.6**
MKAR Makanchi Array 38.77 316 P **P** **23 51 17.0 +0.3**
comp=Z,1.3nm,0.6s,baz=100,slow=9.3,SNR=16
MKAR PcP **PcP** **23 53 28.4 +0.5**
comp=Z,1.1nm,0.8s,baz=102,slow=5.0,SNR=3.7
MKAR LR LR 00 07 56.8
comp=Z,154nm,18.0s,baz=52,slow=37
comp=Z,1.3nm,0.6s
MAKZ Makanchi 38.98 316 P **P** **23 51 17.7 -0.7**
MAKZ IAmb IAmb 23 51 27.9
comp=Z,8.7nm,0.9s
PETK Petropavlovsk- 39.76 34 LR LR 00 08 05.8
comp=Z,67nm,18.1s,baz=214,slow=37
ZAA0 Zalesovo Array 40.63 327 P **P** **23 51 31.1 -0.8**
ZALV Zalesovo Beam 40.63 327 P **P** **23 51 31.0 -1.0**
ZALV Zalesovo Beam 40.63 327 P **P** **23 51 31.8 -0.2**
comp=Z,3.7nm,0.8s,baz=111,slow=8.1,SNR=13
ZALV LR LR 00 09 07.7
comp=Z,129nm,19.2s,baz=92,slow=37
comp=Z,3.7nm,0.8s
MA2 Magadan 40.97 22 LR LR 00 10 18.7
comp=Z,134nm,18.2s,baz=250,slow=39
KSH Kashi 41.37 303 P **P** **23 51 42.6 +4.2**
KSH sP sP 23 51 51.0 +6.4
KSH pmax pmax
comp=Z,5.0nm,1.4s
PMG Port Moresby 41.51 140 LR LR 00 05 45.0
comp=Z,73nm,21.8s,baz=352,slow=32
NRN Naryn 41.65 306 P **P** **23 51 40.9 0.0**
NRN IAmb IAmb 23 51 52.5
comp=Z,9.2nm,1.0s
KURK Kurchatov 42.51 320 P **P** **23 51 46.8 -0.6**
KURK IAmb IAmb 23 51 53.1
comp=Z,7.6nm,1.1s
KURBB Kurchatov Arra 42.53 320 P **P** **23 51 48.3 +0.7**
comp=Z,3.4nm,0.2s,baz=115,slow=9.3,SNR=4.4
comp=Z,3.4nm,0.2s
PALK Pallekele 42.62 254 LR LR 00 10 48.6
comp=Z,65nm,18.7s,baz=155,slow=38
AAK Ala-Archa 42.97 307 LR LR 00 11 56.9
comp=Z,129nm,18.6s,baz=51,slow=39
COEN Coen 43.19 149 P **P** **23 51 51.7 -1.5**
COEN IAmb IAmb 23 52 02.0
comp=Z,18nm,1.1s
PSA00 Pilbara Seismi 45.34 182 P **P** **23 52 08.5 -1.9**
WRA Warramunga Arr 45.40 163 P **P** **23 52 09.3 -1.5**
WRA Warramunga Arr 45.40 163 P **P** **23 52 10.2 -0.7**
comp=Z,3.6nm,1.0s,baz=344,slow=8.5,SNR=12
comp=Z,3.6nm,1.0s
WB2 Warramunga Arr 45.40 163 P **P** **23 52 09.2 -1.7**
WB2 IAmb IAmb 23 52 14.1
comp=Z,19nm,1.4s
KK31 Karatay Array 45.93 307 P **P** **23 52 14.9 -0.1**
KKAR Karatay Array 45.93 307 P **P** **23 52 14.8 -0.2**
KKAR Karatay Array 45.93 307 P **P** **23 52 15.1 +0.1**
KKAR IAmb IAmb 23 52 22.4
comp=Z,4.1nm,1.1s
KBL Kabul 46.64 296 P **P** **23 52 21.3 +0.4**
KBL IAmb IAmb 23 52 28.8
comp=Z,11nm,1.1s
TIXI Tiksi 47.84 3 P **P** **23 52 28.5 -0.9**
TIXI Tiksi 47.84 3 P **P** **23 52 28.9 -0.5**
comp=Z,3.0nm,0.4s,baz=193,slow=3.8,SNR=8.5
TIXI LR LR 00 14 30.4
comp=Z,214nm,18.3s,baz=199,slow=38
comp=Z,3.0nm,0.4s
BVAR Borovoye Array 48.09 321 P **P** **23 52 32.2 +0.5**
comp=Z,1.8nm,0.7s,baz=122,slow=11,SNR=2.5
BVAR LR LR 00 15 55.4
comp=Z,107nm,19.5s,baz=43,slow=40
comp=Z,1.8nm,0.7s
BRVK Borovoye 48.16 321 P **P** **23 52 29.8 -2.4**
BRVK IAmb IAmb 23 52 42.1
comp=Z,7.6nm,0.9s
ASAR Alice Springs 48.86 165 P **P** **23 52 36.1 -1.8**
ASAR Alice Springs 48.86 165 P **P** **23 52 37.5 -0.4**
comp=Z,3.1nm,1.0s,baz=337,slow=6.4,SNR=16
ASAR ScP **ScP** **23 57 56.8 -0.2**
comp=Z,0.6nm,0.7s,baz=354,slow=5.2,SNR=5.6
ASAR LR LR 00 14 31.3
comp=Z,37nm,18.1s,baz=360,slow=38
comp=Z,3.1nm,1.0s
NRIK Noril'sk 49.69 345 P **P** **23 52 43.1 -0.5**
comp=Z,2.1nm,0.9s,baz=127,slow=7.3,SNR=5.0
NRIK LR LR 00 14 52.7
comp=Z,218nm,19.3s,baz=348,slow=38
comp=Z,2.1nm,0.9s
CTA Charters Tower 49.95 149 LR LR 00 12 02.3
comp=Z,68nm,21.8s,baz=268,slow=34
ABKAR Akbulak array 53.88 314 P **P** **23 53 15.2 -0.1**
ABKAR Akbulak array 53.88 314 P **P** **23 53 15.6 +0.3**
ABKAR IAmb IAmb 23 53 24.1
comp=Z,4.8nm,0.9s
GEYT Alibeck 55.27 301 P **P** **23 53 26.9 +1.3**
GEYT IAmb IAmb 23 53 45.6
comp=Z,10nm,1.2s
GEYT Alibeck 55.27 301 P **P** **23 53 26.7 +1.0**
comp=Z,5.7nm,1.1s,baz=96,slow=12,SNR=4.8
comp=Z,5.7nm,1.1s
ARU Arti 55.52 323 LR LR 00 17 16.5
comp=Z,169nm,21.1s,baz=35,slow=36
BBOO Buckleboo 58.15 166 P **P** **23 53 45.6 -0.3**
BBOO IAmb IAmb 23 53 49.6
comp=Z,19nm,1.4s
STKA Stephens Creek 58.75 160 P **P** **23 53 50.5 +0.4**
comp=Z,1.5nm,0.5s,baz=354,slow=10.0,SNR=4.9
STKA LR LR 00 19 10.8
comp=Z,27nm,21.7s,baz=24,slow=36
comp=Z,1.5nm,0.5s
KIRV Kirov 60.62 325 LR LR 00 20 58.5
comp=Z,243nm,19.7s,baz=65,slow=37
BELG Belogornoye 61.72 318 LR LR 00 23 06.5
comp=Z,129nm,20.7s,baz=168,slow=38
DZM Mont Dzumac 63.19 133 *e*LR LR 00 13 11.3
comp=Z,204nm,23.9s
DZM Mont Dzumac 63.19 133 LR LR 00 18 50.2
comp=Z,44nm,19.5s,baz=254,slow=33
GNI Garni 65.27 305 LR LR 00 27 34.3
comp=Z,96nm,18.0s,baz=9.5,slow=40
ONI Oni 65.75 308 P **P** **23 54 36.3 -0.9**
ONI IAmb IAmb 23 54 47.4
comp=Z,5.7nm,0.9s
KBZ Khabaz 65.94 309 P **P** **23 54 39.1 +0.9**
comp=Z,1.2nm,0.8s,baz=60,slow=3.1,SNR=4.7
comp=Z,1.2nm,0.8s
AKH Akhalkalaki 65.95 306 P **P** **23 54 38.5 -0.1**
IMAR Indian Mountai 66.14 26 P **P** **23 54 38.5 -0.7**
CAST Castle Rocks 67.15 29 P **P** **23 54 45.6 -0.1**
RSO Redoubt South 67.27 32 P **P** **23 54 47.6 +1.0**
MLY Manley 67.50 27 P **P** **23 54 47.8 -0.1**
GURO Guroymak-BITLI 67.67 304 P **P** **23 54 48.2 -1.4**
GURO IAmb IAmb 23 54 59.4
comp=Z,5.9nm,1.3s
SUA Susitna One 68.07 31 P **P** **23 54 50.7 -0.9**
NEA2 Nenana 68.27 28 P **P** **23 54 52.6 -0.2**
MDM Murphy Dome 68.56 27 P **P** **23 54 54.8 +0.2**
RND Reindeer 68.58 29 P **P** **23 54 54.2 -0.6**
RAYN Ar Rayn 68.83 287 P **P** **23 54 55.4 -1.6**
RAYN IAmb IAmb 23 55 16.3
comp=Z,5.2nm,1.1s
E25K Arctic Village 68.98 24 P **P** **23 54 58.4 +1.2**
E25K IAmb IAmb 23 55 16.2
comp=Z,5.9nm,1.3s
ILAR Eielson Array 69.16 27 P **P** **23 54 56.8 -1.5**
comp=Z,0.5nm,0.6s,baz=287,slow=6.6,SNR=9.0
comp=Z,0.5nm,0.6s
BMAR Burnt Mountain 69.50 24 P **P** **23 55 00.5 +0.1**
SPITS Spitsbergen Ar 69.75 348 LR LR 00 29 33.6
comp=Z,203nm,18.1s,baz=209,slow=39
ARCES ARCESS Array B 69.87 338 LR LR 00 32 09.3
comp=Z,82nm,18.4s,baz=249,slow=42
F28M Old Crow 71.20 24 P **P** **23 55 11.4 +0.7**
F28M IAmb IAmb 23 55 24.4
comp=Z,11nm,1.2s
BCAR Beaver Creek A 71.77 28 P **P** **23 55 14.0 -0.3**
FINES FINESS Array B 71.82 330 P **P** **23 55 14.8 +0.2**
comp=Z,2.8nm,0.9s,baz=35,slow=7.0,SNR=6.8
FINES LR LR 00 30 32.0
comp=Z,354nm,21.1s,baz=8.0,slow=39
comp=Z,2.8nm,0.9s
DAWY Dawson 72.48 27 P **P** **23 55 18.4 -0.1**
DAWY IAmb IAmb 23 55 28.0
comp=Z,5.7nm,1.0s
INK Inuvik 73.21 22 P **P** **23 55 21.0 -1.7**
INK IAmb IAmb 23 55 24.7
comp=Z,10nm,1.2s
F31M Tsiigehtchic 73.47 23 P **P** **23 55 24.2 -0.1**
F31M IAmb IAmb 23 55 37.2
comp=Z,6.5nm,0.9s
BRTR Keskin Array B 73.64 307 P **P** **23 55 26.5 +0.5**
comp=Z,1.4nm,0.8s,baz=83,slow=10,SNR=3.7
comp=Z,1.4nm,0.8s
M30M Minto, Yukon 74.10 28 P **P** **23 55 27.0 -1.1**
M30M IAmb IAmb 23 55 45.4
comp=Z,18nm,1.4s
MMAI Mount Meron Ar 74.37 299 LR LR 00 33 22.6
comp=Z,58nm,19.9s,baz=342,slow=40
C36M Paulatuk 75.81 19 P **P** **23 55 36.6 -1.1**
C36M IAmb IAmb 23 55 39.0
comp=Z,8.9nm,1.1s
EIL Elat 75.83 296 LR LR 00 31 11.4
comp=Z,41nm,19.0s,baz=44,slow=37
MLR Muntele Rosu 77.09 314 LR LR 00 31 22.6
comp=Z,172nm,18.3s,baz=353,slow=37
HFS Hagfors 77.94 331 P **P** **23 55 50.7 +0.8**
comp=Z,1.3nm,0.8s,baz=74,slow=11,SNR=1.3
HFS LR LR 00 33 35.7
comp=Z,425nm,18.9s,baz=18,slow=38
comp=Z,1.3nm,0.8s
NOA NORSAR Array B 78.59 332 P **P** **23 55 54.0 +0.4**
comp=Z,1.1nm,0.9s,baz=48,slow=2.2,SNR=1.9
NOA LR LR 00 33 17.3
comp=Z,140nm,20.0s,baz=65,slow=38
comp=Z,1.1nm,0.9s
URZ Urewera 80.86 139 LR LR 00 32 12.9
comp=Z,40nm,18.4s,baz=300,slow=36
RPZ Rata Peaks 81.19 146 LR LR 00 29 39.3
comp=Z,36nm,20.6s,baz=318,slow=34
VRAC Vranov 81.36 320 LR LR 00 33 32.5
comp=Z,220nm,19.1s,baz=328,slow=37

YKA	Yellowknife Ar	82.95	23	P		P	23	56	16.0 -0.9
YKA	Yellowknife Ar	82.95	23	P		P	23	56	16.3 -0.6
	comp=Z,2.4nm,0.9s,baz=314,slow=4.8,SNR=16								
	comp=Z,2.4nm,0.9s								
GERES	GERESS Array B	83.26	321	P		P	23	56	20.1 +1.2
	comp=Z,0.4nm,0.3s,baz=72,slow=9.4,SNR=3.2								
GERES					LR	LR	00	36	47.2
	comp=Z,321nm,19.4s,baz=314,slow=38								
	comp=Z,0.4nm,0.3s								
DAVOX	Davos/Dischmat	86.53	320	LR		LR	00	37	51.7
	comp=Z,159nm,18.8s,baz=318,slow=37								
PINE	Pine Mountain	91.46	40	P		P	23	56	59.8 +0.9
PPT	Papeete	95.87	107	LR		LR	00	31	01.4
	comp=Z,52nm,20.6s,baz=260,slow=30								
PPT2	Papeete2	95.88	107	eLR		LR	00	28	15.5
PPT2	comp=Z,164nm,24.8s			eLR		LR	00	28	20.9
	comp=Z,120nm,23.5s								
NVAR	Mina Array Bea	96.25	43	P		P	23	57	21.5 +0.5
	comp=Z,0.6nm,0.7s,baz=17,slow=1.5,SNR=4.7								
	comp=Z,0.6nm,0.7s								

OMAN 07 00:10:53.2±0.4,21°.03N×61°.30E,h2^{km}±11^{km},mb4.2/1, ml2.5/7, Error ellipse: s-maj=20.1km s-min=2.9km az=283.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLN	Jalan Bani Buh	2.08	303	P	Pn	00 11 28.6	-0.5
	SNR=15						
JLN				S	Sn	00 11 55.6	0.0
WBK	Wadi Bani Khal	2.67	306	P	Pn	00 11 37.2	0.0
	SNR=9.7						
WBK				S	Sn	00 12 12.4	+2.1
MHTO	MHTO	3.11	270	P	Pn	00 11 42.5	-0.8
	SNR=14						
MHTO				S	Sn	00 12 20.9	-0.2
JMDO	Jabal Madar	3.26	295	P	Pn	00 11 44.3	-1.0
JMDO				S	Sn	00 12 27.9	+3.2
WSAR	Wadi Sarin	3.31	312	P	Pn	00 11 46.4	+0.4
WSAR				S	Sn	00 12 26.3	+0.4
DQM	DQM	3.69	253	P	Pn	00 11 50.1	-1.2
DQM				S	Sn	00 12 34.6	-0.8
BSY	Bisya	4.17	295	P	Pn	00 11 56.8	-1.1
BSY				S	Sn	00 12 49.5	+2.2
ARQ	Araqi	4.99	298	P	Pn	00 12 08.2	-0.9
ARQ				S	Sn	00 13 07.1	-0.3
UMZA	Um Al Zommool	5.94	287	P	Pn	00 12 20.9	-1.3
UMZA				S	Sn	00 13 32.7	+1.8
DOK	Doka	7.17	252	P	Pn	00 12 40.7	+1.7

*IDC **07** 00:15:28.8±2.4,38°.38N×142°.10E,h50^{km}±21^{km},mb3.5/11, mbtmp3.7/16,ML3.2/4,MS3.3/4, Error ellipse: s-maj=22.4km s-min=15.6km az=95.0*
*JMA **07** 00:15:28.7±0.1,38°.3N±0°.3×141°.9E±0°.6,h45^{km},MV3.7/40, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*NIED **07** 00:15:28.7,38°.28N×141°.92E,h45^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.28; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-2.79; $M_{r\theta}$3.01; $M_{\theta\phi}$-1.92; $M_{\phi r}$3.98; Fault plane solution: $M_0$6.14000×10^{14} NP1:ϕ_s36.00000°, δ72.00000°, λ95.00000°. NP2:ϕ_s201.00000°,δ18.00000°, λ76.00000°.*

ISC 07 00:15:28.1±1.6,38°.31N±0°.05×142°.0E±0°.1,h41^{km}±13^{km}, n39,σ1^{s}78/42,mb3.7/11,14D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakibobu	0.43	270	⇓*i*P	Pn	00 15 38.0	0.0
JIKH				⇓S	Sn	00 15 44.3	-0.6
JIO	Ouri	0.54	286	⇓*i*P	Pn	00 15 39.5	0.0
JIO				⇓S	Sn	00 15 46.9	-0.5
JKMT	Kesennumamotoy	0.65	320	⇓*i*P	Pn	00 15 41.5	+0.5
JKMT				⇓S	Sn	00 15 50.4	+0.2
OFUJ	Ofunato	0.81	341	⇓*i*P	Pn	00 15 43.9	+0.7
OFUJ				⇓*e*S	Sn	00 15 54.6	+0.5
JMK	Ichinoseki	0.89	316	⇓*i*P	Pn	00 15 44.8	+0.6
JMK				⇓*e*S	Sn	00 15 56.5	+0.5
JMM	Marumori	1.06	246	⇓*i*P	Pn	00 15 45.6	-0.9
JOU	Okura	1.06	273	⇓*i*P	Pn	00 15 46.6	+0.1
JOU				⇓S	Sn	00 15 59.7	-0.4
JOM	Ohasama	1.29	335	⇓*i*P	Pn	00 15 58.8	+1.1
JFK	Kawauchi	1.30	224	*i*P	Pn	00 15 48.9	-1.0
JFK				S	Sn	00 16 03.5	-2.6
JYK	Kaneyama	1.43	296	*i*P	Pn	00 15 52.0	+0.4
JOTO	OTAMA OYAMA	1.52	241	P	Pn	00 15 52.9	0.0
JOTO				S	Sn	00 16 11.2	-0.3
JRG	Rokugo	1.53	316	P	Pn	00 15 54.1	+1.2
JYS	Shirataka	1.53	267	P	Pn	00 15 53.3	+0.3
JYS				S	Sn	00 16 12.0	+0.3
MJAR	Matsushiro Arr	3.50	241	P	Pn	00 16 21.3	+1.2
	0.3nm,0.3s,baz=59,slow=11,SNR=15						
MJAR				S	Sn	00 17 05.3	+5.0
	4.1nm,0.4s,baz=19,slow=16,SNR=1.7						
MJAR				LR	LR	00 17 54.8	
	comp=Z,151nm,18.6s,baz=52,slow=40						
	7.7nm,0.7s						
JHJ	Hachijo jima 2	5.49	200	P	Pn	00 16 48.5	+1.2
	10nm,0.3s,baz=66,slow=20,SNR=1.6						
JHJ				S	Sn	00 17 44.6	-4.6
	149nm,0.8s,baz=76,slow=20,SNR=1.6						
	104nm,0.7s						
ASAJ	Asahikawa	5.82	4	P	Pn	00 16 50.0	-1.9
	1.1nm,0.3s,baz=124,slow=19,SNR=1.8						
ASAJ				S	Sn	00 17 50.6	-6.6
	11nm,0.9s,baz=61,slow=7.8,SNR=2.0						
	2.5nm,0.4s						
USRK	Ussuriysk Ar.	9.56	311	P	Pn	00 17 43.2	0.0
	0.2nm,0.3s,baz=126,slow=14,SNR=2.9						
	1.7nm,0.6s						
JNU	Nakatsue	10.42	244	LR	LR	00 22 23.7	
	comp=Z,96nm,18.1s,baz=360,slow=39						
KSRS	Korea Array	11.17	270	P	Pn	00 18 07.4	+2.3
	0.9nm,0.6s,baz=83,slow=14,SNR=2.0						
KLR	Kul'dur	13.18	329	LR	LR	00 23 09.2	
	comp=Z,64nm,19.4s,baz=38,slow=35						
SONM	Songino Array	27.49	302	P	P	00 21 10.3	-0.3
	0.6nm,0.4s,baz=112,slow=7.8,SNR=3.9						
	0.6nm,0.4s						
H11N2	WAKE ISLAND Hy	28.43	124	T	T	00 51 33.6	
	baz=316,slow=75,SNR=79						
H11N1	WAKE ISLAND Hy	28.43	124	T	T	00 51 31.5	
	baz=316,slow=75,SNR=64						
H11N3	WAKE ISLAND Hy	28.44	124	T	T	00 51 30.9	
	baz=316,slow=75,SNR=69						
H11S1	WAKE ISLAND Hy	29.18	126	T	T	00 52 26.9	
	baz=318,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	29.19	126	T	T	00 52 27.5	
	baz=318,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	29.20	126	T	T	00 52 30.6	
	baz=318,slow=76,SNR=20						
ZALV	Zalesovo Beam	41.42	311	P	P	00 23 09.2	-1.1
	1.0nm,0.7s,baz=81,slow=7.6,SNR=5.9						
	1.0nm,0.7s						
MKAR	Makanchi Array	43.85	301	P	P	00 23 29.6	-0.7
	0.6nm,0.7s,baz=86,slow=8.9,SNR=7.5						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	45.60	307	P	P	00 23 43.6	-0.4
	1.2nm,0.4s,baz=83,slow=8.2,SNR=11						
	1.2nm,0.4s						
WRA	Warramunga Arr	58.39	188	P	P	00 25 18.7	-0.8
	0.4nm,0.6s,baz=4.1,slow=7.1,SNR=6.9						
	0.4nm,0.6s						
ASAR	Alice Springs	62.12	188	P	P	00 25 44.4	-0.6
	0.5nm,0.7s,baz=18,slow=6.2,SNR=4.6						
	0.5nm,0.7s						
ARCES	ARCESS Array B	62.97	339	LR	LR	00 58 41.6	
	comp=Z,121nm,18.1s,baz=254,slow=41						
FINES	FINESS Array B	67.91	332	P	P	00 26 22.4	+0.3
	1.2nm,0.6s,baz=32,slow=11,SNR=5.6						
	1.2nm,0.6s						
NB2	NORSAR Subarra	73.19	337	P	P	00 26 54.7	+0.3
	comp=Z,3.4nm,0.8s,baz=38,slow=5.9						
NOA	NORSAR Array B	73.19	337	P	P	00 26 54.0	-0.4
	comp=Z,1.5nm,0.8s,baz=39,slow=5.9,SNR=3.7						
	comp=Z,1.5nm,0.8s						
AKASG	Malin Array Be	73.58	322	P	P	00 26 56.3	-0.5
	comp=Z,0.3nm,0.3s,baz=46,slow=5.3,SNR=2.2						
	comp=Z,0.3nm,0.3s						
PDAR	Pinedale Array	76.44	46	P	P	00 27 14.2	+0.5
	comp=Z,0.2nm,0.5s,baz=311,slow=1.9,SNR=1.6						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	88.97	53	P	P	00 28 19.7	+0.8
	comp=Z,0.2nm,0.7s,baz=311,slow=4.7,SNR=2.3						
	comp=Z,0.2nm,0.7s						

*IDC **07** 00:18:38.8±1.3,61°.73N×150°.14W,h47^{km}±17^{km},mb3.5/7, mbtmp3.6/12,ML3.0/5,MS2.7/1, Error ellipse: s-maj=24.3km s-min=9.9km az=114.0*
*NEIC **07** 00:18:39.9±1.3,61°.69N±0°.01×149°.85W±0°.03,h30^{km}±8^{km}, Error ellipse: s-maj=2.8km s-min=0.8km az=224.0*
*AEIC **07** 00:18:40.8±1.3,61°.69N±0°.02×149°.84W±0°.04,h29^{km}±6^{km}, ML3.5,ML3.7/204(NEIC), Error ellipse: s-maj=2.8km s-min=2.7km az=205.0*

ISC 07 00:18:39.6±0.8,61°.68N±0°.03×149°.84W±0°.03,h47^{km}±8^{km}, n306,σ1^{s}17/333,mb3.8/7,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	Palmer	0.35	105		Pn	00 18 48.3	-0.6
PMR				Sg	Sn	00 18 55.2	-0.2
PMR				IAML		00 18 56.1	
	comp=N,10μm,0.3s						
PMR				IAML		00 18 56.2	
	comp=E,10μm,0.3s						
PMR	Palmer	0.35	105	P	Pn	00 18 48.2	-0.6
	baz=286						
PMR				S	Sn	00 18 55.5	+0.1
	baz=286						
GHO	Glory Hole Cre	0.44	78	Pg	Pn	00 18 49.7	-0.4
GHO				Sg	Sn	00 18 58.0	+0.5
GHO				IAML		00 18 58.5	
	comp=E,5μm,0.7s						
GHO				IAML		00 18 59.2	
	comp=N,6μm,0.3s						
SUA	Susitna One	0.49	244		Pn	00 18 50.3	-0.3
SUA				Sg	Sn	00 18 58.6	+0.1
SUA				IAML		00 18 59.7	
	comp=N,3μm,0.5s						
SUA				IAML		00 18 59.8	
	comp=E,6μm,0.6s						
SUA	Susitna One	0.49	244	P	Pn	00 18 50.3	-0.3
	baz=62						
SUA				S	Sn	00 18 59.1	+0.6
	baz=62						
FIS	Fire Island	0.57	199		Pn	00 18 51.7	+0.2
FIS				IAML		00 19 03.2	
	comp=N,5μm,0.7s						
RC01	Rabbit Creek A	0.60	175		Pn	00 18 51.6	-0.2
RC01				Sg	Sn	00 19 01.1	+0.4
RC01				IAML		00 19 02.4	
	comp=N,4μm,0.2s						
RC01				IAML		00 19 03.0	
	comp=E,3μm,0.2s						
RC01	Rabbit Creek A	0.60	175	P	Pn	00 18 51.7	-0.2
	baz=355						
RC01				S	Sn	00 19 01.7	+1.0
	baz=355						
KNK	Knik Glacier	0.71	112		Pn	00 18 53.5	+0.1
KNK					Sn	00 19 04.1	+0.7
KNK				IAML		00 19 08.2	
	comp=N,3μm,0.5s						
KNK	Knik Glacier	0.71	112	P	Pn	00 18 53.5	+0.1
	baz=293						
KNK				S	Sn	00 19 04.7	+1.4
	baz=293						
SML	Sawmill	0.73	79		Pn	00 18 53.2	-0.4
SML				Sg	Sn	00 19 03.2	-0.6
SML				IAML		00 19 05.1	
	comp=N,2μm,0.4s						
SML	Sawmill	0.73	79	P	Pn	00 18 53.3	-0.4
	baz=261						
CUT	Chulitna	0.75	344		Pn	00 18 53.5	-0.3
CUT				Sg	Sn	00 19 04.0	-0.3
CUT	Chulitna	0.75	344	P	Pn	00 18 53.6	-0.3
	baz=164						
CUT				S	Sn	00 19 04.5	+0.2
	baz=164						
SKT	Skwentna	0.86	291	Pn	Pn	00 18 54.4	-0.9
SKT					Sn	00 19 06.8	0.0
SKT				IAML		00 19 07.3	
	comp=E,2μm,0.4s						
SKT				IAML		00 19 07.7	
	comp=N,3μm,0.2s						
SKT	Skwentna	0.86	291	P	Pn	00 18 54.9	-0.5
	baz=109						
SKT				S	Sn	00 19 06.8	0.0
	baz=109						
STLK	Strandline Lak	0.97	260		Pn	00 18 57.2	+0.3
M23K	Glacier View	1.01	83		Pn	00 18 57.5	+0.1
M23K					Sn	00 19 12.2	+1.7
M23K	Glacier View	1.01	83	P	Pn	00 18 57.3	-0.1
	baz=265						
M23K				S	Sn	00 19 12.2	+1.7
	baz=265						
CAPN	Captain Cook N	1.12	215	Pn	Pn	00 19 00.1	+1.3
SPCG	Spurr Capps Gl	1.12	250		Pn	00 18 59.4	+0.5
SPCG					Sn	00 19 14.5	+1.3
SPCP	Crater Peak Br	1.19	250		Pn	00 19 00.5	+0.6
SLKM	Skilak Lake	1.19	189		Pn	00 19 00.3	+0.4
SCM	Sheep Creek Mo	1.20	82	Pn	Pn	00 19 00.2	+0.1
SCM	Sheep Creek Mo	1.20	82		Sn	00 19 17.2	+1.9
SCM	Sheep Creek Mo	1.20	82	IAML		00 19 18.7	
	comp=E,3μm,0.7s						
SCM				IAML		00 19 21.1	
	comp=N,2μm,0.5s						
SCM	Sheep Creek Mo	1.20	82	P	Pn	00 19 00.5	+0.4
	baz=264						
O22K	Cooper Landing	1.21	177	Pn	Pn	00 19 00.7	+0.7
O22K	Cooper Landing	1.21	177	P	Pn	00 19 00.2	+0.2
	baz=357						
SPCN	Chakachatna No	1.22	249		Pn	00 19 01.2	+0.9
N20K	Mount Spurr	1.24	248	P	Pn	00 19 00.8	+0.3
	baz=66						
SPCR	Spurr Chakacha	1.24	248		Pn	00 19 00.8	+0.3
WAT7	Susitna Watana	1.24	21		Pn	00 19 01.0	+0.4
WAT7					Sn	00 19 17.3	+1.0
SPBG	Spurr Blockage	1.29	252		Pn	00 19 01.8	+0.6
WAT1	Susitna Watana	1.30	27		Pn	00 19 01.6	+0.2
WAT1					Sn	00 19 18.8	+1.2
WAT1	Susitna Watana	1.30	27	P	Pn	00 19 01.6	+0.2
	baz=208						
WAT6	Susitna Watana	1.33	47		Pn	00 19 02.3	+0.4
WAT6	Susitna Watana	1.33	47	P	Pn	00 19 02.3	+0.4
	baz=229						
SPNN	North Nagishla	1.41	258		Pn	00 19 03.4	+0.4
M20K	Styx River	1.58	279		Pn	00 19 05.8	+0.6
M20K					Sn	00 19 27.2	+2.7
M20K	Styx River	1.58	279	IAML		00 19 27.7	
	comp=N,525nm,0.9s						
M20K				IAML		00 19 28.1	
	comp=E,890nm,0.7s						
SEW	Seward	1.59	173		Pn	00 19 06.5	+1.2
SEW	Seward	1.59	173	P	Pn	00 19 06.5	+1.2
	baz=353						
PPLA	Purkeypile	1.64	319		Pn	00 19 06.5	+0.4
PPLA	Purkeypile	1.64	319	P	Pn	00 19 06.5	+0.4
	baz=137						
RDT	Redoubt	1.67	229		Pn	00 19 07.3	+0.8
RDT					Sn	00 19 29.6	+2.9
DFR	Drift River	1.76	233		Pn	00 19 08.7	+1.0
M24K	Tolsona, Glenn	1.79	75	Pn	Pn	00 19 09.2	+1.2
M24K	Tolsona, Glenn	1.79	75	P	Pn	00 19 09.7	+1.6
	baz=258						
TRF	Thorofare Moun	1.79	353	Pn	Pn	00 19 08.7	+0.6
TRF				IAML		00 19 32.9	
	comp=N,1μm,0.4s						
TRF				IAML		00 19 33.3	
	comp=E,579nm,0.9s						
TRF	Thorofare Moun	1.79	353	P	Pn	00 19 08.9	+0.8
	baz=173						
RND	Reindeer	1.79	14	Pn	Pn	00 19 08.5	+0.4
RND					Sn	00 19 31.4	+1.8
DHY	Denali Highway	1.81	38	Pn	Pn	00 19 08.6	+0.2
DHY				Sn	Sn	00 19 31.9	+1.7
DHY				IAML		00 19 34.2	
	comp=E,396nm,0.4s						
DHY				IAML		00 19 35.9	
	comp=N,459nm,0.4s						
DHY	Denali Highway	1.81	38	P	Pn	00 19 09.2	+0.8
	baz=221						
RDJH	Redoubt Jeurge	1.81	234		Pn	00 19 09.4	+1.1
RSO	Redoubt South	1.87	230	Pn	Pn	00 19 10.2	+0.9
RDSO	Redoubt South	1.88	230		Pn	00 19 10.1	+0.8
RDSO					Sn	00 19 34.1	+2.3
NCT	North Crescent	1.88	235		Pn	00 19 10.3	+1.0
KLU	Klutina	1.88	94	Pn	Pn	00 19 09.7	+0.3
KLU				IAML		00 19 36.5	
	comp=E,469nm,0.2s						
KLU	Klutina	1.88	94	P	Pn	00 19 10.0	+0.7
	baz=278						
RDWB	Redoubt West	1.89	232		Pn	00 19 10.5	+1.0
RED	Redoubt Volcan	1.91	230		Pn	00 19 10.6	+0.9
KTH	Kantishna Hill	1.94	346	Pn	Pn	00 19 11.1	+0.9
KTH				IAML		00 19 37.7	
	comp=N,594nm,0.6s						
KTH				IAML		00 19 37.8	
	comp=E,748nm,0.6s						
BRLK	Bradley Lake	1.99	195	Pn	Pn	00 19 11.8	+0.9
BRLK				IAML		00 19 42.1	
	comp=E,323nm,0.6s						
BRSE	Bradley Lake S	2.00	193		Pn	00 19 10.9	+0.1
BRSE	Bradley Lake S	2.00	193	P	Pn	00 19 12.5	+1.7
	baz=12						
CAST	Castle Rocks	2.03	330	Pn	Pn	00 19 11.5	+0.2
CAST				Sn	Sn	00 19 35.8	+0.4
CAST				IAML		00 19 39.2	
	comp=E,523nm,0.3s						
CAST				IAML		00 19 39.3	
	comp=N,449nm,0.4s						
CAST	Castle Rocks	2.03	330	P	Pn	00 19 11.7	+0.4
	baz=148						
DIV	Divide	2.03	104		Pn	00 19 11.8	+0.4
P23K	Montague Islan	2.07	144		Pn	00 19 12.0	+0.2
P23K	Montague Islan	2.07	144	P	Pn	00 19 12.0	+0.2
	baz=326						
HIN	Hinchinbrook I	2.07	127	Pn	Pn	00 19 11.6	-0.3
MCK	McKinley	2.10	11		Pn	00 19 13.5	+1.2
MCK					Sn	00 19 39.8	+2.6
MCK	McKinley	2.10	11	P	Pn	00 19 13.5	+1.2
	baz=192						
O20K	Slope Mountain	2.11	222		Pn	00 19 13.7	+1.3
O20K	Slope Mountain	2.11	222	P	Pn	00 19 14.1	+1.6
	baz=39						
M19K	Big River Lodg	2.17	278		Pn	00 19 13.4	+0.2
M19K				IAML		00 19 41.4	
	comp=N,285nm,0.4s						
HOM	Homer	2.22	204	Pn	Pn	00 19 14.6	+0.8
CNPM	China Poot	2.27	198	Pn	Pn	00 19 15.1	+0.5
CNPM				IAML		00 19 51.7	
	comp=E,326nm,0.5s						
CNPM				IAML		00 19 52.0	
	comp=N,294nm,0.5s						
IVE	Iliamna Volcan	2.28	224		Pn	00 19 15.0	+0.1
EYAK	Cordova Ski Ar	2.29	118	Pn	Pn	00 19 16.4	+1.7
EYAK	Cordova Ski Ar	2.29	118	P	Pn	00 19 16.5	+1.7
	baz=302						
HARP	HAARP	2.32	70		Pn	00 19 15.1	-0.2
HARP	HAARP	2.32	70	P	Pn	00 19 17.4	+2.2
	baz=254						
N19K	Bonanza Creek	2.41	251	Pn	Pn	00 19 16.6	+0.1
PAX	Paxson	2.41	56	Pn	Pn	00 19 18.2	+1.6
PAX	Paxson	2.41	56	P	Pn	00 19 18.6	+2.0
	baz=240						
L19K	White Mountain	2.42	284	Pn	Pn	00 19 17.8	+1.1
L19K				IAML		00 19 47.2	
	comp=N,204nm,0.7s						
L19K	White Mountain	2.42	284	P	Pn	00 19 17.5	+0.8
	baz=100						
CHUM	Lake Minchumin	2.48	334		Pn	00 19 18.0	+0.5
N25K	Chitina, Valde	2.50	89	Pn	Pn	00 19 18.5	+0.7
N25K				IAML		00 19 56.5	
	comp=E,223nm,0.5s						
N25K				IAML		00 19 57.5	
	comp=N,402nm,0.5s						
N25K	Chitina, Valde	2.50	89	P	Pn	00 19 18.6	+0.7
	baz=274						
BWN	Browne	2.50	4	Pn	Pn	00 19 17.6	-0.2
BWN				IAML		00 20 04.4	
	comp=N,400nm,1.5s						
BWN				IAML		00 20 04.7	
	comp=E,425nm,0.7s						
K20K	Telida	2.58	312	Pn	Pn	00 19 18.4	-0.5
BMRM	Bremner River	2.62	104	Pn	Pn	00 19 19.5	0.0
BMRM	Bremner River	2.62	104	P	Pn	00 19 19.6	+0.2
	baz=288						
WACK	Wrangell Chich	2.63	81		Pn	00 19 21.0	+1.2
P19K	Oil Pt	2.63	221	Pn	Pn	00 19 21.9	+2.3
P19K				IAML		00 19 59.3	
	comp=N,434nm,0.5s						
P19K				IAML		00 19 59.7	
	comp=E,428nm,0.5s						
P19K	Oil Pt	2.63	221	P	Pn	00 19 22.6	+3.0
	baz=38						
O19K	Port Alsworth	2.65	238	Pn	Pn	00 19 20.5	+0.7
O19K				IAML		00 20 01.2	
	comp=N,466nm,0.4s						
GOAT	Goat Mountain	2.71	112		Pn	00 19 20.6	-0.1
SVW2	Sparrevohn	2.83	261	Pn	Pn	00 19 22.0	-0.2
RAGM	Ragged Mountai	2.83	115	Pn	Pn	00 19 23.0	+0.7
K24K	Donnelly Dome	2.83	39		Pn	00 19 24.5	+2.2
K24K	Donnelly Dome	2.83	39	P	Pn	00 19 25.9	+3.6
	baz=223						
Q23K	Middleton Isla	2.84	141	Pn	Pn	00 19 23.9	+1.6
MID	Middleton Isla	2.85	141	Pn	Pn	00 19 23.7	+1.3
M18K	Stony River	2.87	269		Pn	00 19 23.4	+0.6
GLB	Gilahina Butte	2.89	92	Pn	Pn	00 19 24.4	+1.2
GLB				IAML		00 20 07.5	
	comp=N,289nm,0.6s						
GLB				IAML		00 20 17.9	
	comp=E,156nm,0.7s						
WRH	Wood River Hil	2.91	15	Pn	Pn	00 19 23.1	-0.2
NEA2	Nenana	2.94	6	Pn	Pn	00 19 23.9	+0.1
HMT	Hamilton	3.03	114	Pn	Pn	00 19 25.5	+0.5
HDA	Harding Lake	3.04	24	Pn	Pn	00 19 25.7	+0.6
HDA				IAML		00 20 08.9	
	comp=N,211nm,0.3s						
HDA				IAML		00 20 09.2	
	comp=E,206nm,0.5s						
HDA	Harding Lake	3.04	24	P	Pn	00 19 26.3	+1.2
	baz=207						
RIDG	Independent Ri	3.09	46	Pn	Pn	00 19 27.4	+1.6
RIDG				IAML		00 20 09.1	
	comp=N,310nm,1.1s						
RIDG	Independent Ri	3.09	46	P	Pn	00 19 28.7	+2.8
	baz=230						
N18K	Kilae Creek	3.10	254	Pn	Pn	00 19 26.0	0.0
VRDI	Verde Repeater	3.10	96	Pn	Pn	00 19 26.8	+0.7
CCB	Clear Creek Bu	3.12	16	Pn	Pn	00 19 26.2	+0.1
MENT	Mentasta	3.12	64	Pn	Pn	00 19 26.8	+0.5
TTA	Tatalina	3.14	296	Pn	Pn	00 19 26.6	0.0
TTA	Tatalina	3.14	296	P	Pn	00 19 26.6	0.0
	baz=111						
J20K	Nowinta River	3.19	324	Pn	Pn	00 19 27.0	-0.1
NICHA	Nichawak Mount	3.21	114		Pn	00 19 29.3	+1.8
O18K	Koktuh Hills	3.21	238	Pn	Pn	00 19 27.7	+0.2
O18K	Koktuh Hills	3.21	238	P	Pn	00 19 28.5	+1.0
	baz=53						
BER

ILAR S Sn 00 20 08.1 -0.3
comp=N,27nm,0.8s,baz=212,slow=22,SNR=6.7
comp=N,6.8nm,0.4s
MLY Manley 3.39 354 Pn Pn 00 19 30.4 +0.6
MLY IAML 00 20 10.7
comp=N,134nm,0.3s
MLY Manley 3.39 354 P Pn 00 19 30.5 +0.6
baz=173
I23K Minto, Yukon-K 3.48 3 Pn Pn 00 19 32.2 +1.0
I23K IAML 00 20 14.0
comp=N,173nm,0.7s
I23K IAML 00 20 28.0
comp=E,119nm,0.8s
I23K Minto, Yukon-K 3.48 3 P Pn 00 19 32.1 +0.9
baz=184
P18K Big Mountain, 3.52 232 Pn Pn 00 19 31.9 +0.1
J19K Poorman 3.52 314 Pn Pn 00 19 32.0 +0.3
J19K IAML 00 20 14.1
comp=N,84nm,0.6s
J19K IAML 00 20 29.9
comp=E,88nm,0.6s
SCRK Sand Creek 3.54 47 Pn Pn 00 19 33.0 +1.0
SCRK IAML 00 20 29.6
comp=E,114nm,0.6s
SCRK IAML 00 20 31.7
comp=N,90nm,0.5s
SCRK Sand Creek 3.54 47 P Pn 00 19 33.5 +1.5
baz=232
PTPK Patty Peak 3.58 95 Pn 00 19 34.5 +1.8
POKR Poker Plat Res 3.61 16 Pn Pn 00 19 33.9 +0.9
POKR Poker Plat Res 3.61 16 P Pn 00 19 34.2 +1.2
baz=199
WAX Waxell Ridge 3.61 107 Pn Pn 00 19 33.5 +0.4
WAX IAML 00 20 40.3
comp=E,204nm,0.4s
I21K Tanana 3.64 346 Pn Pn 00 19 34.0 +0.7
I21K IAML 00 20 16.7
comp=E,76nm,0.7s
I21K Tanana 3.64 346 P Pn 00 19 34.3 +1.0
baz=164
J18K Innoko River 3.65 302 Pn Pn 00 19 34.2 +0.7
J18K IAML 00 20 16.2
comp=N,75nm,0.9s
M17K Holitna River 3.65 269 Pn Pn 00 19 33.9 +0.4
M17K IAML 00 20 44.7
comp=E,196nm,1.4s
M17K IAML 00 20 48.5
comp=N,200nm,1.0s
M17K Holitna River 3.65 269 P Pn 00 19 34.0 +0.5
baz=82
KIAG Kiagna River 3.69 99 Pn 00 19 34.3 +0.1
SNH Sunshine Point 3.73 111 Pn Pn 00 19 34.6 -0.1
SNH IAML 00 20 04.4
comp=N,167nm,2.8s
SNH IAML 00 20 34.0
comp=E,134nm,2.3s
N17K Nushagak Hills 3.75 255 Pn 00 19 35.2 +0.3
N17K IAML 00 20 43.6
comp=N,75nm,0.9s
N17K Nushagak Hills 3.75 255 P Pn 00 19 35.4 +0.5
baz=69
I20K Naaghedeneel 3.76 328 Pn Pn 00 19 35.6 +0.6
ISLE Juniper Island 3.79 103 Pn Pn 00 19 36.0 +0.4
ISLE IAML 00 20 42.9
comp=E,126nm,0.9s
BARK Barkley Ridge 3.80 107 Pn 00 19 36.3 +0.7
M27K Edge Creek, AK 3.81 76 Pn Pn 00 19 37.5 +1.6
M27K IAML 00 20 47.5
comp=N,68nm,0.8s
L27K Beaver Creek, 3.98 66 Pn Pn 00 19 39.9 +1.9
BARN Barnard Glacie 3.98 95 Pn Pn 00 19 39.8 +1.5
BARN IAML 00 20 41.5
comp=N,73nm,0.9s
BARN IAML 00 20 43.0
comp=E,107nm,0.4s
BCAR Beaver Creek A 4.00 66 Pn Pn 00 19 40.2 +1.9
J26L Joseph Creek 4.01 42 Pn Pn 00 19 39.8 +1.3
J26L IAML 00 20 30.0
comp=E,130nm,0.9s
J26L Joseph Creek 4.01 42 P Pn 00 19 40.0 +1.4
baz=228
O17K Koliganek Bris 4.05 245 Pn 00 19 39.6 +0.7
O17K Koliganek Bris 4.05 245 P Pn 00 19 39.6 +0.7
baz=58
K17K Iditarod 4.10 288 Pn Pn 00 19 39.8 +0.2
K17K IAML 00 20 57.7
comp=N,96nm,1.0s
K17K IAML 00 21 02.5
comp=E,62nm,1.1s
P17K Kvichak River 4.11 236 Pn 00 19 40.9 +1.0
P17K Kvichak River 4.11 236 P Pn 00 19 42.5 +2.6
baz=50
MESA MESA 4.13 108 Pn Pn 00 19 41.0 +0.7
MESA IAML 00 20 46.7
comp=N,130nm,0.9s
MESA IAML 00 20 49.2
comp=E,142nm,0.6s
KDAK Kodiak Island 4.15 201 Pn Pn 00 19 41.6 +1.3
KDAK IAML 00 20 49.3
comp=E,106nm,3.2s
KDAK IAML 00 20 52.3
comp=E,115nm,3.5s
KDAK Kodiak Island 4.15 201 P Pn 00 19 40.6 +0.2
comp=E,0.7nm,0.3s,baz=80,slow=11,SNR=10
KDAK S Sn 00 20 26.2 -1.3
comp=E,11nm,0.5s,baz=106,slow=18,SNR=1.6
KDAK LR LR 00 21 25.7
comp=E,101nm,20.0s,baz=45,slow=40
comp=E,3.2nm,0.2s
CTGM Chitina Glacie 4.16 96 Pn Pn 00 19 41.6 +1.0
CTGM IAML 00 20 48.4
comp=E,52nm,0.4s
CTGM IAML 00 20 48.9
comp=N,83nm,0.6s
H21K Melozitna Rive 4.20 343 Pn Pn 00 19 41.8 +0.7
H24K Noodor Dome 4.26 11 Pn Pn 00 19 42.7 +0.8
H24K IAML 00 20 33.3
comp=N,45nm,0.7s
K27K Chicken 4.26 53 Pn Pn 00 19 43.4 +1.5
K27K IAML 00 20 54.1
comp=N,53nm,0.8s
YUK2 White River 4.28 85 Pn 00 19 43.1 +0.9
PRP Porcupine Dome 4.30 25 Pn Pn 00 19 43.3 +0.7
PRP IAML 00 20 38.4
comp=E,67nm,0.7s
PRP IAML 00 20 40.9
comp=N,112nm,0.8s
PRP Porcupine Dome 4.30 25 P Pn 00 19 44.3 +1.7
baz=209
LOGN Logan Glacier 4.35 98 Pn Pn 00 19 44.3 +1.0
LOGN IAML 00 20 54.9
comp=E,69nm,0.7s
LOGN IAML 00 20 56.3
comp=N,59nm,1.1s
TABL Table Mountain 4.41 103 Pn Pn 00 19 44.5 +0.5
TABL IAML 00 21 00.1
comp=N,64nm,1.1s
TABL IAML 00 21 00.3
comp=E,54nm,0.7s
GCSA Galena City Sc 4.43 317 Pn 00 19 45.0 +0.9
GCSA Galena City Sc 4.43 317 P Pn 00 19 45.0 +0.9
baz=131
H20K Anotleneega Mo 4.44 332 Pn 00 19 45.3 +1.0
M16K Timber Creek 4.44 265 Pn Pn 00 19 44.8 +0.5
M16K IAML 00 21 05.2
comp=N,55nm,1.6s
YUK3 Moose Creek 4.46 85 Pn 00 19 45.6 +0.8
YUK3 Moose Creek 4.46 85 P Pn 00 19 45.6 +0.8
baz=273
O16K Kokwok River B 4.57 246 Pn Pn 00 19 46.8 +0.7
O16K IAML 00 21 05.1
comp=N,37nm,1.1s
CNTC Contact Creek 4.58 224 Pn 00 19 47.2 +0.8
Q17K Contact Creek 4.58 224 P Pn 00 19 48.4 +2.0
baz=39
L16K Owhat River 4.59 275 Pn Pn 00 19 46.9 +0.5
L16K IAML 00 21 16.7
comp=N,48nm,0.9s
L16K Owhat River 4.59 275 P Pn 00 19 46.8 +0.5
baz=86
IMAR Indian Mountai 4.65 340 Pn Pn 00 19 47.8 +0.6
I26K Coal Creek Min 4.71 37 Pn Pn 00 19 48.7 +0.7
I26K IAML 00 21 06.9
comp=E,72nm,0.8s
I26K IAML 00 21 14.5
comp=N,74nm,0.8s
OHAK Old Harbor 4.81 203 Pn Pn 00 19 51.5 +2.1
OHAK IAML 00 22 26.3
comp=E,80nm,4.5s
P16K Nushagak River 4.84 240 Pn 00 19 51.1 +1.3
P16K Nushagak River 4.84 240 P Pn 00 19 51.1 +1.3
baz=53
H19K Roundabout Mou 4.86 325 Pn Pn 00 19 50.5 +0.5
H19K IAML 00 20 46.5
comp=N,33nm,0.7s
H19K IAML 00 21 20.6
comp=E,38nm,0.9s
EGAK Eagle 5.00 48 Pn Pn 00 19 53.2 +1.2
EGAK Eagle 5.00 48 P Pn 00 19 53.3 +1.3
baz=236
G23K Bananza Creek 5.05 359 Pn Pn 00 19 52.2 -0.5
G23K Bananza Creek 5.05 359 P Pn 00 19 54.1 +1.4
baz=179
G21K Allakaket 5.11 343 Pn Pn 00 19 54.0 +0.5
G21K IAML 00 20 53.4
comp=E,50nm,0.6s
G21K IAML 00 20 54.2
comp=N,34nm,0.8s
G24K Hadweenzic Riv 5.14 11 Pn Pn 00 19 54.7 +0.8
G24K IAML 00 21 20.2
comp=E,25nm,1.0s
N15K Kwethluk River 5.23 258 Pn Pn 00 19 55.8 +0.7
N15K IAML 00 21 14.2
comp=E,49nm,3.3s
N15K IAML 00 21 37.3
comp=N,43nm,1.0s
J16K Anvik River 5.25 293 Pn Pn 00 19 55.4 +0.1
J16K IAML 00 21 24.4
comp=N,23nm,2.6s
BCPM Bancas Point 5.29 105 Pn Pn 00 19 57.4 +1.4
FYU Fort Yukon 5.30 20 Pn Pn 00 19 57.6 +1.6
DAWY Dawson 5.34 59 Pn Pn 00 19 58.2 +1.5
DAWY IAML 00 21 27.7
comp=E,30nm,1.2s
DAWY IAML 00 21 30.8
comp=N,36nm,0.8s
M29M Somme Creek 5.40 77 Pn Pn 00 19 59.4 +1.7
I17K Unalakleet 5.45 299 Pn Pn 00 19 58.3 +0.2
I17K Unalakleet 5.45 299 P Pn 00 19 59.1 +1.0
baz=109
K15K Wolf Creek Mou 5.55 281 Pn Pn 00 20 00.1 +0.7
O15K Ungalikthiuk R 5.55 247 Pn 00 20 00.8 +1.3
COLD Coldfoot 5.57 359 Pn Pn 00 20 01.0 +1.2
COLD Coldfoot 5.57 359 P Pn 00 20 01.5 +1.7
baz=178
H17K Granite Mounta 5.59 310 Pn Pn 00 20 00.3 +0.2
L29M L29M 5.63 70 Pn Pn 00 20 02.5 +1.8
G18K Tagagawik 5.75 321 Pn Pn 00 20 02.8 +0.5
G18K Tagagawik 5.75 321 P Pn 00 20 03.2 +0.9
baz=133
F21K Alatna River 5.78 346 Pn Pn 00 20 02.9 +0.2
I28M Miner Creek 5.81 45 Pn Pn 00 20 04.1 +0.9
G26K Porcupine Rive 5.90 24 Pn 00 20 05.6 +1.3
F24K Squaw Lake 5.92 7 Pn Pn 00 20 06.2 +1.6
F20K Avaraart Lake 5.96 337 Pn Pn 00 20 06.8 +1.7
J29N Klondike Camp 5.96 57 Pn Pn 00 20 05.3 0.0
HYT Haines Junctio 6.01 93 Pn Pn 00 20 06.4 +0.4
K29M Barlow Dome 6.06 64 Pn Pn 00 20 07.6 +1.0
O14K Tigyukauivet M 6.15 252 Pn Pn 00 20 07.4 -0.4
L14K Kuka Creek 6.16 272 Pn Pn 00 20 08.1 +0.3
M30M Minto, Yukon 6.18 76 Pn Pn 00 20 09.0 +0.7
BMAR Burnt Mountain 6.20 19 Pn Pn 00 20 09.1 +0.7
F19K Shaleruckik Mo 6.21 330 Pn Pn 00 20 08.6 0.0
P29M Windy Craggy 6.29 104 Pn Pn 00 20 10.7 +0.9
H16K Elim 6.35 303 Pn 00 20 11.2 +0.8
H16K Elim 6.35 303 P Pn 00 20 11.2 +0.8
baz=112
E24K Your Creek 6.45 5 Pn Pn 00 20 12.7 +0.9
J14K Nanvaranak Lak 6.50 285 Pn Pn 00 20 13.3 +0.7
F18K Selawik 6.54 323 Pn 00 20 14.2 +1.2
F18K Selawik 6.54 323 P Pn 00 20 14.7 +1.7
baz=134
E19K Redstone River 6.61 334 Pn Pn 00 20 14.8 +0.8
M13K Dall Lake 6.69 265 Pn Pn 00 20 15.8 +0.7
O30N Mendenhall 6.70 92 Pn Pn 00 20 14.6 -0.7
E25K Arctic Village 6.71 14 Pn Pn 00 20 16.3 +0.9
E25K Arctic Village 6.71 14 P Pn 00 20 17.5 +2.1
baz=198
N31M Braeburn, Yuko 6.71 85 Pn Pn 00 20 15.0 -0.5
G16K Koyuk River 6.71 309 Pn Pn 00 20 15.9 +0.4
J30M Hart River 6.77 59 Pn Pn 00 20 18.4 +2.1
H29M Whitestone 6.79 43 Pn Pn 00 20 18.2 +1.7
F17K Baldwin Pennin 6.91 319 Pn Pn 00 20 19.5 +1.4
TOLK Toolik Lake Re 6.99 1 Pn Pn 00 20 21.4 +2.2
TOLK Toolik Lake Re 6.99 1 P Pn 00 20 21.4 +2.2
baz=181
I30M Mount Dempster 6.99 54 Pn Pn 00 20 22.7 +3.2
M31M Drury Creek, Y 7.30 79 Pn Pn 00 20 24.6 +1.0
WHY Whitehorse 7.30 91 Pn Pn 00 20 23.3 -0.4
F28M Old Crow 7.32 31 Pn Pn 00 20 24.5 +0.7
F28M Old Crow 7.32 31 P Pn 00 20 25.7 +1.9
baz=220
D22K Ayikyak River 7.33 352 Pn Pn 00 20 25.6 +1.8
E18K Tukpahlearik C 7.38 326 Pn Pn 00 20 26.4 +1.8
EPYK Eagle Plains 7.43 45 Pn Pn 00 20 26.9 +1.7
E17K Hotham Inlet 7.50 321 Pn 00 20 27.1 +1.0
E17K Hotham Inlet 7.50 321 P Pn 00 20 27.5 +1.4
baz=131
D24K Happy Valley 7.51 3 Pn Pn 00 20 29.5 +3.1
ANM Nome 7.61 299 Pn Pn 00 20 28.6 +0.9
D19K Kuna River 7.67 337 Pn Pn 00 20 30.8 +2.2
F15K North Star Dit 7.71 308 Pn Pn 00 20 29.3 +0.2
FARO Faro, Yukon 7.79 79 Pn Pn 00 20 30.9 +0.7
D25K Kavik River 7.80 9 Pn Pn 00 20 32.5 +2.1
G30M tAoh Zrail Nji 7.94 42 Pn Pn 00 20 33.7 +1.4
N32M Quiet Lake 8.05 86 Pn Pn 00 20 33.7 -0.2
E28M Babbage River 8.18 27 Pn Pn 00 20 35.9 +0.4
P32M Atlin 8.20 98 Pn Pn 00 20 37.4 +1.6
F14K Arctic Creek 8.27 305 Pn 00 20 37.7 +0.9
F14K Arctic Creek 8.27 305 P Pn 00 20 37.7 +0.9
baz=110
E29M Blow River 8.40 32 Pn Pn 00 20 39.7 +1.2
P33M Teslin, Yukon 8.41 93 Pn Pn 00 20 39.5 +0.6
D27M Malcolm River 8.43 22 Pn Pn 00 20 40.3 +1.3
C18K Utukok River 8.45 331 Pn Pn 00 20 40.0 +0.7
JIS Juneau Island 8.46 107 Pn Pn 00 20 42.3 +2.9
C19K Lookout Ridge 8.48 336 Pn Pn 00 20 39.8 +0.2
G31M Satah River 8.55 45 Pn Pn 00 20 41.4 +0.9
S32K Killisnoo 8.81 112 Pn Pn 00 20 45.1 +0.9
B22K Teshekpuk Lake 8.81 352 Pn Pn 00 20 45.0 +0.8
TNA Tin City 8.93 304 Pn Pn 00 20 46.5 +0.8
TNA Tin City 8.93 304 P Pn 00 20 47.4 +1.7
baz=107
F31M Tsiigehtchic 8.99 43 Pn Pn 00 20 46.6 0.0
C16K Lisburne Hills 9.29 322 Pn Pn 00 20 53.0 +2.3
INK Inuvik 9.55 39 Pn Pn 00 20 54.1 -0.1
INK Inuvik 9.55 39 P Pn 00 20 54.4 +0.2
comp=N,0.1nm,0.3s,baz=241,slow=17,SNR=9.5
INK S Sn 00 22 40.1 +0.1
comp=N,2.3nm,0.4s,baz=148,slow=13,SNR=6.1
comp=N,1.5nm,0.7s
R33M Jennings River 9.57 95 Pn Pn 00 20 54.6 -0.1
DLBC Dease Lake 10.41 99 P Pn 00 21 08.3 +2.2
comp=N,0.1nm,0.3s,baz=188,slow=25,SNR=1.4
DLBC S Sn 00 23 04.2 +3.0
comp=N,2.3nm,0.8s,baz=314,slow=0.9,SNR=1.8
comp=N,0.6nm,0.4s
C36M Paulatuk 13.05 43 Pn Pn 00 21 39.0 -3.0
YKA Yellowknife Ar 16.39 72 P P 00 22 28.1 -0.1
comp=N,0.1nm,0.3s,baz=284,slow=9.8,SNR=1.8
comp=N,0.2nm,0.6s
SONM Songino Array 55.03 307 P P 00 28 05.9 -0.3
comp=N,0.6nm,0.8s,baz=31,slow=7.9,SNR=4.0
comp=N,0.6nm,0.8s
ZALV Zalesovo Beam 56.91 325 P P 00 28 17.5 -1.8
comp=N,0.9nm,0.3s,baz=34,slow=6.6,SNR=8.2
comp=N,0.9nm,0.3s
EKA Eskdalemuir Ar 60.41 21 P P 00 28 42.2 -1.4
comp=N,0.3nm,0.4s,baz=324,slow=6.1,SNR=2.0
comp=N,0.3nm,0.4s
BVAR Borovoye Array 61.27 334 P P 00 28 47.9 -1.6
comp=N,0.6nm,0.5s,baz=38,slow=6.4,SNR=4.4
comp=N,0.6nm,0.5s
KURBB Kurchatov Arra 61.59 327 P P 00 28 50.0 -1.6
comp=N,0.5nm,0.4s,baz=28,slow=7.0,SNR=1.5
comp=N,0.5nm,0.4s
MKAR Makanchi Array 64.05 323 P P 00 29 05.2 -2.9
comp=N,0.4nm,0.4s,baz=29,slow=6.9,SNR=11
comp=N,0.4nm,0.4s
ESDC Sonseca Array 75.27 27 P P 00 30 16.9 -0.4
comp=N,0.5nm,0.6s,baz=338,slow=6.5,SNR=2.2
comp=N,0.5nm,0.6s

NEIC ***07*** *00:26:56.7±1.5,56°53N±0.0°09×148°74W±0.0°10, h26km±10km, ML3.5/64, ML3.2(AEIC), Error ellipse: s-maj=13.0km s-min=7.1km az=162.0*
AEIC ***07*** *00:26:59.7±1.9,56°51N±0.0°08×148°6W×0.0°1, h10km±7km, Error ellipse: s-maj=12.4km s-min=8.1km az=159.0*

ISC 07 00:26:54.5±1.7,56°53N±0.0°09×148°72W±0.0°06,h10km, n140,σ1°54/76,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.45	302		Pn	Pn	00 27 34.9	+0.4
KDAK					Sn	Sn	00 28 02.0	-2.5
OHAK	Old Harbor	2.60	287	Pn	Pn	Pn	00 27 36.8	+0.3
OHAK				Sn	Sn	Sn	00 28 05.7	-2.5
OHAK	Old Harbor	2.60	287	P	Pn	Pn	00 27 37.0	+0.4
	baz=104							
OHAK				S	Sn	Sn	00 28 06.5	-1.7
	baz=104							
SYI	Shuyak Island	2.88	318	Pn	Pn	Pn	00 27 39.8	-0.5
SYI				Sn	Sn	Sn	00 28 12.9	-2.0
Q20K	Shuyak Island	2.88	318	P	Pn	Pn	00 27 41.4	+1.1
	baz=135							
Q20K				S	Sn	Sn	00 28 14.2	-0.7
	baz=135							
SII	Sitkinak Islan	3.03	273		Pn	Pn	00 27 41.5	-0.9
SII					Sn	Sn	00 28 16.1	-2.6
SII				IAML			00 28 30.1	
	comp=E,75nm,0.6s							
Q23K	Middleton Isla	3.17	22	Pn	Pn	Pn	00 27 42.8	-1.5
MID	Middleton Isla	3.17	23	Pn	Pn	Pn	00 27 42.9	-1.4
CNPM	China Poot	3.29	337	Pn	Pn	Pn	00 27 46.0	0.0
BRSE	Bradley Lake S	3.40	342		Pn	Pn	00 27 47.9	+0.5
BRSE					Sn	Sn	00 28 26.9	-0.8
BRSE	Bradley Lake S	3.40	342	P	Pn	Pn	00 27 47.9	+0.5
	baz=160							
BRSE				S	Sn	Sn	00 28 26.9	-0.8
	baz=160							
BRLK	Bradley Lake	3.44	341	Pn	Pn	Pn	00 27 47.8	-0.3
BRLK				Sn	Sn	Sn	00 28 28.2	-0.7
BRLK				IAML			00 28 51.2	
	comp=E,46nm,1.5s							
HOM	Homer	3.50	335	Pn	Pn	Pn	00 27 49.1	+0.2
HOM				IAML			00 28 38.1	
	comp=N,128nm,1.3s							
HOM				IAML			00 28 45.5	
	comp=E,154nm,0.9s							
P23K	Montague Islan	3.55	11		Pn	Pn	00 27 49.8	+0.3
P23K					Sn	Sn	00 28 28.6	-2.9
P23K	Montague Islan	3.55	11	P	Pn	Pn	00 27 49.8	+0.4
	baz=191							
P23K				S	Sn	Sn	00 28 28.6	-2.9
	baz=191							
Q19K	Cape Douglas,	3.57	314	Pn	Pn	Pn	00 27 51.4	+1.4
Q19K				IAML			00 28 44.9	
	comp=N,134nm,0.9s							
Q19K	Cape Douglas,	3.57	314	P	Pn	Pn	00 27 51.6	+1.7
	baz=130							
SEW	Seward	3.60	354		Sn	Sn	00 28 30.3	-2.5
SEW	Seward	3.60	354	Pn	Pn	Pn	00 27 49.9	-0.4
SEW	Seward	3.60	354	P	Pn	Pn	00 27 50.3	+0.1
	baz=173							
SEW				S	Sn	Sn	00 28 30.3	-2.5
	baz=173							
KAHG	Katmai Hook Gl	3.71	304		Pn	Pn	00 27 53.7	+1.9
AUCH	Augustine Cone	3.80	320		Pn	Pn	00 27 55.3	+2.3
AUL	Augustine Lava	3.81	321		Pn	Pn	00 27 54.8	+1.7
P19K	Oil Pt	3.94	324	Pn	Pn	Pn	00 27 56.2	+1.2
P19K				IAML			00 28 54.2	
	comp=N,68nm,1.1s							
P19K				IAML			00 29 01.8	
	comp=E,72nm,1.4s							
ACHA	Angle Creek He	3.96	298		Pn	Pn	00 27 57.5	+2.3
HIN	Hinchinbrook I	4.05	16	Pn	Pn	Pn	00 27 56.2	-0.2
HIN				IAML			00 29 04.3	
	comp=N,95nm,1.1s							
HIN				IAML			00 29 46.7	
	comp=E,75nm,1.5s							
SLKM	Skilak Lake	4.07	349		Pn	Pn	00 27 57.1	+0.5
SLKM					Sn	Sn	00 28 43.5	-0.9
IVE	Iliamna Volcan	4.17	329		Pn	Pn	00 27 58.8	+0.6
CNTC	Contact Creek	4.25	297		Pn	Pn	00 28 00.6	+1.3
Q17K	Contact Creek	4.25	297	P	Pn	Pn	00 28 01.9	+2.6
	baz=111							
EYAK	Cordova Ski Ar	4.32	20	Pn	Pn	Pn	00 28 00.6	+0.5
EYAK	Cordova Ski Ar	4.32	20	P	Pn	Pn	00 28 01.5	+1.4
	baz=202							
CAPN	Captain Cook N	4.44	344	Pn	Pn	Pn	00 28 02.8	+1.1
RED	Redoubt Volcan	4.44	333		Pn	Pn	00 28 02.3	+0.4
RDSO	Redoubt South	4.47	333		Pn	Pn	00 28 02.5	+0.3
RSO	Redoubt South	4.48	333	Pn	Pn	Pn	00 28 03.2	+0.7
HMT	Hamilton	4.48	30	Pn	Pn	Pn	00 28 02.0	-0.3
NICHA	Nichawak Mount	4.48	32		Pn	Pn	00 28 03.4	+1.1
RDT	Redoubt	4.49	336		Pn	Pn	00 28 02.5	0.0
P18K	Big Mountain,	4.50	312	Pn	Pn	Pn	00 28 03.0	+0.4
P18K	Big Mountain,	4.50	312	P	Pn	Pn	00 28 03.5	+0.8
	baz=127							
RDWB	Redoubt West	4.52	333			Pn	00 28 03.3	+0.2
DFR	Drift River	4.57	335			Pn	00 28 04.0	+0.3
RC01	Rabbit Creek A	4.60	354	Pn		Pn	00 28 04.7	+0.7
RC01				IAML			00 28 58.7	
	comp=E,47nm,0.8s							
RC01				IAML			00 29 00.5	
	comp=N,28nm,0.8s							
BERG	Berg Lake	4.68	32	Pn	Pn	Pn	00 28 05.2	0.0
BERG				IAML			00 29 07.3	
	comp=N,57nm,0.8s							
GRIN	Grindle Hills	4.71	35			Pn	00 28 06.1	+0.6
O19K	Port Alsworth	4.71	324	Pn		Pn	00 28 06.4	+0.9
O18K	Koktuh Hills	4.79	317	Pn		Pn	00 28 07.3	+0.8
O18K	Koktuh Hills	4.79	317	P		Pn	00 28 07.7	+1.1
	baz=131							
SNH	Sunshine Point	4.79	38	Pn		Pn	00 28 07.0	+0.3
KNK	Knik Glacier	4.90	1	Pn		Pn	00 28 08.6	+0.4
KNK				IAML			00 29 12.7	
	comp=E,20nm,0.6s							
KNK				IAML			00 29 14.7	
	comp=N,22nm,1.2s							
P17K	Kvichak River	4.91	306			Pn	00 28 10.3	+2.0
P17K	Kvichak River	4.91	306	P		Pn	00 28 10.3	+2.0
	baz=120							
BMRM	Bremner River	4.94	24	Pn		Pn	00 28 08.7	0.0
BMRM	Bremner River	4.94	24	P		Pn	00 28 10.5	+1.8
	baz=207							
WAX	Waxell Ridge	4.99	36	Pn		Pn	00 28 09.3	-0.1
WAX				IAML			00 29 07.8	
	comp=E,41nm,1.1s							
SUA	Susitna One	5.06	349	Pn		Pn	00 28 08.1	-2.3
SUA				IAML			00 29 12.6	
	comp=E,18nm,0.8s							
SUA				IAML			00 29 14.4	
	comp=N,14nm,1.5s							
BARK	Barkley Ridge	5.07	37			Pn	00 28 11.2	+0.6
MESA	MESA	5.10	41	Pn		Pn	00 28 12.2	+1.1
MESA				IAML			00 29 47.1	
	comp=E,35nm,1.3s							
MESA				IAML			00 30 30.3	
	comp=N,46nm,1.5s							
CRQM	Cirque	5.14	32	Pn		Pn	00 28 11.9	+0.3
CRQM				IAML			00 29 11.2	
	comp=N,34nm,1.5s							
CRQM				IAML			00 29 15.8	
	comp=E,26nm,0.6s							
KLU	Klutina	5.18	15	Pn		Pn	00 28 12.2	+0.2
KLU				IAML			00 29 12.2	
	comp=E,20nm,1.5s							
KLU				IAML			00 29 12.3	
	comp=N,19nm,1.5s							
TGL	Tana Glacier	5.23	34	Pn		Pn	00 28 12.8	+0.1
N19K	Bonanza Creek	5.24	327	Pn		Pn	00 28 13.1	+0.2
GHO	Glory Hole Cre	5.26	359	Pn		Pn	00 28 14.3	+1.2
GHO				IAML			00 29 17.3	
	comp=N,38nm,0.9s							
GHO				IAML			00 29 21.6	
	comp=E,38nm,0.7s							
SPNN	North Nagishla	5.27	339			Pn	00 28 14.6	+1.2
ISLE	Juniper Island	5.27	37	Pn		Pn	00 28 13.6	+0.2
ISLE				IAML			00 29 22.7	
	comp=E,27nm,1.4s							
ISLE				IAML			00 29 28.6	
	comp=N,35nm,1.4s							

BAGL	Bagley Icefiel	5.27	38			Pn	00 28 13.7	+0.5
SML	Sawmill	5.30	2	Pn		Pn	00 28 14.8	+1.2
SML				IAML			00 29 11.3	
	comp=E,22nm,1.5s							
SML				IAML			00 29 24.8	
	comp=N,27nm,1.4s							
SCM	Sheep Creek Mo	5.37	7	Pn		Pn	00 28 15.0	+0.4
SCM				IAML			00 29 20.8	
	comp=N,34nm,0.6s							
CHGN	Chignik	5.39	272	Pn		Pn	00 28 15.5	+0.7
CHGN				IAML			00 29 44.9	
	comp=N,35nm,0.4s							
CHGN				IAML			00 29 45.2	
	comp=E,35nm,0.2s							
VRDI	Verde Repeater	5.44	28	Pn		Pn	00 28 15.7	0.0
KIAG	Kiagna River	5.51	34			Pn	00 28 17.1	+0.5
N25K	Chitina, Valde	5.51	21	Pn		Pn	00 28 17.3	+0.7
N25K	Chitina, Valde baz=204	5.51	21	P		Pn	00 28 18.1	+1.5
GLB	Gilahina Butte	5.54	25	Pn		Pn	00 28 17.4	+0.5
TABL	Table Mountain	5.58	42	Pn		Pn	00 28 18.1	+0.5
N18K	Kilae Creek	5.60	321	Pn		Pn	00 28 18.3	+0.6
SKT	Skwentna	5.65	346	Pn		Pn	00 28 19.7	+1.3
PTPK	Patty Peak	5.68	32			Pn	00 28 19.9	+0.8
MCARA	McCarthy VSAT	5.69	29	Pn		Pn	00 28 19.2	+0.3
PCA	Pinnacle	5.71	48	Pn		Pn	00 28 19.8	+0.5
M24K	Tolsona, Glenn	5.74	12	Pn		Pn	00 28 19.9	+0.2
SVW2	Sparrevohn	5.80	325	Pn		Pn	00 28 20.4	-0.1
M20K	Styx River	5.83	339	Pn		Pn	00 28 20.8	-0.1
BARN	Barnard Glacie	5.84	36	Pn		Pn	00 28 21.4	+0.3
O16K	Kokwok River B	5.85	306	Pn		Pn	00 28 21.6	+0.6
PNL	Peninsula	5.86	54			Pn	00 28 22.3	+1.0
PNL	Peninsula baz=241	5.86	54	P		Pn	00 28 22.3	+1.0
CTGM	Chitina Glacie	5.88	38	Pn		Pn	00 28 21.7	+0.1
LOGN	Logan Glacier	5.89	40	Pn		Pn	00 28 22.1	+0.3
BCPM	Bancas Point	5.89	51	Pn		Pn	00 28 21.1	-0.6
CUT	Chulitna	5.95	353	Pn		Pn	00 28 23.7	+1.3
N17K	Nushagak Hills	5.98	316	Pn		Pn	00 28 23.8	+1.0
M19K	Big River Lodg	6.12	334	Pn		Pn	00 28 24.9	0.0
L19K	White Mountain	6.48	334	Pn		Pn	00 28 29.1	-0.6
O29M	Mount Kennedy	6.53	50	Pn		Pn	00 28 31.0	+0.5
P29M	Windy Craggy	6.60	57	Pn		Pn	00 28 31.4	0.0
DHY	Denali Highway	6.60	5	Pn		Pn	00 28 33.2	+1.6
M17K	Holitna River	6.64	321	Pn		Pn	00 28 32.2	+0.2
M27K	Edge Creek, AK	6.80	28	Pn		Pn	00 28 35.4	+1.1
RND	Reindeer	6.90	359	Pn		Pn	00 28 37.1	+1.5
S31K	Pelican	6.92	73	Pn		Pn	00 28 34.9	-1.0
M16K	Timber Creek	6.97	314	Pn		Pn	00 28 37.3	+0.8
TRF	Thorofare Moun	6.99	354	Pn		Pn	00 28 38.2	+1.3
L18K	Granite Mounta	7.01	328	Pn		Pn	00 28 37.0	0.0
CAST	Castle Rocks	7.11	348	Pn		Pn	00 28 38.8	+0.3
KTH	Kantishna Hill	7.13	352	Pn		Pn	00 28 40.5	+1.8
O14K	Tigyukauivet M	7.22	297	Pn		Pn	00 28 41.3	+1.4
HYT	Haines Junctio	7.25	49	Pn		Pn	00 28 41.6	+1.0
K20K	Telida	7.35	341	Pn		Pn	00 28 44.2	+2.4
TTA	Tatalina	7.40	333	Pn		Pn	00 28 42.2	-0.2
L27K	Beaver Creek,	7.41	25	Pn		Pn	00 28 44.2	+1.6
BCAR	Beaver Creek A	7.42	25	Pn		Pn	00 28 44.4	+1.6
L16K	Owhat River	7.58	318	Pn		Pn	00 28 44.8	-0.1
S32K	Killisnoo	7.78	77	Pn		Pn	00 28 46.7	-0.9
O30N	Mendenhall	7.83	52	Pn		Pn	00 28 47.3	-1.0
R32K	Eaglecrest	7.87	71	Pn		Pn	00 28 49.5	+0.7
K17K	Iditarod	7.87	326	Pn		Pn	00 28 48.8	-0.1
M29M	Somme Creek	7.89	37	Pn		Pn	00 28 50.1	+0.9
J18K	Innoko River	8.02	333	Pn		Pn	00 28 50.6	-0.3
J20K	Nowinta River	8.13	343	Pn		Pn	00 28 53.0	+0.7
J19K	Poorman	8.23	338	Pn		Pn	00 28 52.4	-1.4
J25K	Salcha River,	8.27	10	Pn		Pn	00 28 55.7	+1.3
N31M	Braeburn, Yuko	8.31	48	Pn		Pn	00 28 55.9	+1.0
WHY	Whitehorse	8.32	54	Pn		Pn	00 28 55.2	+0.1
J26L	Joseph Creek	8.39	15	Pn		Pn	00 28 57.2	+1.2
MDM	Murphy Dome	8.46	1	Pn		Pn	00 28 58.7	+1.8
L29M	L29M	8.47	35	Pn		Pn	00 28 58.0	+0.9
P32M	Atlin	8.52	63	Pn		Pn	00 28 57.5	-0.3
M30M	Minto, Yukon	8.56	40	Pn		Pn	00 28 59.5	+1.3
K15K	Wolf Creek Mou	8.71	317	Pn		Pn	00 29 00.9	+0.6
DAWY	Dawson	8.85	28	Pn		Pn	00 29 03.5	+1.2
J16K	Anvik River	9.02	324	Pn		Pn	00 29 04.5	0.0
K29M	Barlow Dome	9.20	33	Pn		Pn	00 29 06.9	-0.3
I26K	Coal Creek Min	9.21	15	Pn		Pn	00 29 07.2	+0.1
M31M	Drury Creek, Y	9.25	46	Pn		Pn	00 29 08.3	+0.6
H21K	Melozitna Rive	9.37	350	Pn		Pn	00 29 09.2	-0.2
R33M	Jennings River	9.85	66	Pn		Pn	00 29 17.1	+1.0
J30M	Hart River	10.09	32	Pn		Pn	00 29 21.6	+2.2
BMAR	Burnt Mountain	11.11	8	Pn		Pn	00 29 35.2	+2.1

JMA ***07*** *00:28:31.8±0.2,24°.0N±0°.6×12°.2E±°, h3km, TAIWAN REGION*
TAP ***07*** *00:28:31.9,23°.97N×121°.59E,h7km,ML3.1,C*
ISC 07 00:28:32.1±0.8, 23°.96N±0°.01×121°.61E±0°.02, h8km±6km, n95, σ0s48/165, 10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	Tongmen	0.11	272	⇓*i*P	Pg	00 28 34.5	-0.2
	baz=270						
ETM				*i* S	Sg	00 28 36.1	-0.3
	baz=270						
TWD	Chiawan	0.12	353	⇓*i*P	Pg	00 28 34.8	0.0
	baz=6.0						
TWD				S	Sg	00 28 36.7	+0.1
	baz=6.0						
SHUL	Shoufeng	0.18	195	P	Pg	00 28 36.5	+0.7
	baz=189						
SHUL				*e*S	Sg	00 28 40.1	+1.7
	baz=189						
LXIB	Xiulin Townshi	0.19	288	⇓*i*P	Pg	00 28 36.0	-0.1
	baz=282						
LXIB				S	Sg	00 28 38.5	-0.3
	baz=282						
ETL	Fush Village	0.20	3	*e*P	Pg	00 28 36.0	-0.1
	baz=8.0						
ETL				*e*S	Sg	00 28 39.1	+0.2
	baz=8.0						
NACB	Ninganchiao	0.21	356	P	Pg	00 28 36.3	-0.1
NACB	Ninganchiao	0.21	356	⇓*i*P	Pg	00 28 36.2	-0.2
	baz=11						
NACB				S	Sg	00 28 39.2	-0.1
	baz=11						
ESL	Shilin	0.22	228	*i* P	Pg	00 28 36.2	-0.3
	baz=223						
ESL				S	Sg	00 28 38.8	-0.8
	baz=223						
TEGC	Jichi Village	0.26	195	P	Pb	00 28 38.4	-0.6
	baz=195						
TEGC				*e*S	Sb	00 28 44.0	+0.4
	baz=195						
WARBT	Fenglin Townsh	0.32	220	⇓*i*P	Pg	00 28 38.1	-0.3
	baz=227						
WARBT				*e*S	Sg	00 28 42.1	-0.6
	baz=227						
EGFH	Guangfu	0.34	210	P	Pg	00 28 38.9	+0.1
	baz=221						
EGFH				*e*S	Sg	00 28 43.4	+0.2
	baz=221						
WHF	Hehuan Shan	0.37	300	P	Pg	00 28 39.2	-0.3
	baz=301						
WHF				*e*S	Sg	00 28 44.2	-0.1
	baz=301						
EAHA	Aohua	0.38	18	*e*P	Pg	00 28 39.5	-0.1
	baz=29						
OWD	Renai	0.40	269	P	Pg	00 28 39.9	0.0
	baz=269						
OWD				*e*S	Sg	00 28 45.0	-0.3
	baz=269						
CHGB	Renai	0.41	284	⇓*i*P	Pg	00 28 40.4	+0.1
	baz=284						
CHGB				*e*S	Sg	00 28 45.2	-0.5
	baz=284						
FUSS	Fushou	0.44	310	⇓P	Pg	00 28 41.0	+0.2
	baz=311						
FUSS				*e*S	Sg	00 28 47.6	+1.0
	baz=311						
WUSB	Renai	0.45	274	P	Pg	00 28 41.1	+0.2
	baz=274						
WUSB				S	Sg	00 28 47.3	+0.3
	baz=274						
ENA	Nanau	0.48	14	P	Pg	00 28 41.3	-0.1
	baz=17						
ENA				*e*S	Sg	00 28 47.5	-0.2
	baz=17						
TWT	Tachien	0.49	306	P	Pg	00 28 42.1	+0.4
	baz=306						
TWT				*e*S	Sb	00 28 49.8	-0.8
	baz=306						
HGSD	Ruisui	0.50	200	*e*P	Pg	00 28 41.8	+0.1
	baz=207						
EWUT	Wuta	0.50	17	P	Pg	00 28 41.9	0.0
	baz=28						
EWUT				*e*S	Sg	00 28 49.1	+0.5
	baz=28						
TDCB	Techi	0.51	305	⇓P	Pg	00 28 42.2	+0.2
	baz=306						
TDCB				*e*S	Sg	00 28 48.5	-0.2
	baz=306						
NNSB	Datong	0.51	336	⇓P	Pg	00 28 42.1	+0.1
	baz=337						
NNSB				*e*S	Sg	00 28 48.5	-0.3
	baz=337						
NNSH	Datong	0.51	336	P	Pg	00 28 42.2	+0.2
	baz=337						
NNSH				S	Sg	00 28 48.7	-0.1
	baz=337						
NNS	Nan Shan	0.52	335	⇓P	Pg	00 28 42.4	+0.1
	baz=338						
NNS				*e*S	Sg	00 28 49.5	+0.3
	baz=338						
EHY	Hungye	0.53	210	P	Pg	00 28 42.1	-0.2
	baz=219						
EHY				*e*S	Sg	00 28 50.0	+0.8
	baz=219						
LATG	Datong	0.58	352	P	Pg	00 28 43.1	-0.2
	baz=354						
LATG				*e*S	Sb	00 28 52.3	-0.6
	baz=354						
WPL	Puli Township	0.60	275	P	Pg	00 28 44.1	+0.4
	baz=275						
WPL				*e*S	Sb	00 28 53.0	-0.5
	baz=275						
SSLB	Suanglung	0.63	254	P	Pg	00 28 44.2	0.0
SSLB	Suanglung	0.63	254	P	Pg	00 28 44.2	0.0
	baz=254						
SSLB				*e*S	Sg	00 28 51.8	-0.7
	baz=254						
DPDB	Guoxing	0.63	277	P	Pg	00 28 44.8	+0.5
	baz=277						
DPDB				*e*S	Sg	00 28 53.3	+0.7
	baz=277						
YULB	Yu-li	0.64	207	P	Pn	00 28 46.7	-0.8
YULB	Yu-li	0.64	207	P	Pg	00 28 44.1	-0.3
	baz=216						
YULB				*e*S	Sb	00 28 53.7	-0.9
	baz=216						
NDT	Datong Townshi	0.64	352	P	Pg	00 28 45.0	+0.4
	baz=344						
NDT				*e*S	Sb	00 28 54.0	-0.8
	baz=344						
ESAO	Su ao	0.65	19	*e*P	Pb	00 28 45.5	-0.1
	baz=22						
WCS	Beigang Elemen	0.65	279	P	Pg	00 28 44.9	+0.3
	baz=279						
WCS				*e*S	Sg	00 28 53.8	+0.7
	baz=279						
SMLT	Sun Moon Lake	0.66	263	P	Pg	00 28 45.2	+0.4
	baz=263						
SMLT				*e*S	Sg	00 28 53.6	+0.2
	baz=263						
EYUL	Yuli	0.67	204	*e*P	Pg	00 28 45.1	+0.1
	baz=215						
EYUL				*e*S	Sb	00 28 55.3	-0.2
	baz=215						
TWF1	Yuli	0.67	206	*e*P	Pg	00 28 44.8	-0.3
	baz=216						
TWF1				*e*S	Sb	00 28 55.5	-0.1
	baz=216						
NDS	Dongshan	0.68	8	*e*P	Pg	00 28 45.2	+0.1
	baz=9.0						
NDS				*e*S	Sb	00 28 55.0	-0.7
	baz=9.0						
ENTT	Nioudou	0.68	356	P	Pg	00 28 45.4	+0.2
	baz=358						
ENTT				*e*S	Sg	00 28 54.3	+0.3
	baz=358						
TWC	Suao	0.68	18	*e*P	Pg	00 28 45.0	-0.2
	baz=9.0						
TWC				*e*S	Sg	00 28 54.5	+0.4
	baz=9.0						
WHP	Taichung City	0.69	297	*e*P	Pb	00 28 46.0	-0.4
	baz=289						
WHP				*e*S	Sb	00 28 55.3	-0.8
	baz=289						
TYC	Yuchr	0.69	265	P	Pg	00 28 45.6	+0.1
	baz=266						
TYC				*e*S	Sg	00 28 54.5	-0.1
	baz=266						
EOS3	EOS3	0.72	63	*e*P	Pb	00 28 46.7	-0.1
	baz=59						
EOS3				*e*S	Sb	00 28 57.5	+0.7
	baz=59						
YHNB	Yeheng	0.74	343	P	Pb	00 28 46.9	-0.4
YHNB	Yeheng	0.74	343	*e*P	Pg	00 28 46.6	+0.3
	baz=344						
YHNB				*e*S	Sg	00 28 56.0	0.0
	baz=344						
WHYT	Xinyi Township	0.74	249	*e*P	Pg	00 28 46.5	+0.1
	baz=248						
NSK	Sanguang	0.75	342	*e*P	Pg	00 28 46.8	+0.2
	baz=344						
NSK				*e*S	Sg	00 28 56.5	+0.2
	baz=344						
TWE	Neicheng	0.76	4	P	Pg	00 28 47.0	+0.3
	baz=6.0						
TWE				*e*S	Sb	00 28 57.6	-0.5
	baz=6.0						
CHKH	Chenggong	0.79	195	*e*P	Pb	00 28 47.8	-0.4
	baz=183						
CHKH				*e*S	Sn	00 29 00.6	-0.9
	baz=183						
FUSB	Fushanzhiwuyua	0.79	358	P	Pg	00 28 47.5	+0.1
	baz=359						
FUSB				*e*S	Sg	00 28 58.2	+0.4
	baz=359						
NFF	Wufeng Townshi	0.81	326	P	Pb	00 28 48.1	-0.3
	baz=327						
NFF				*e*S	Sb	00 28 59.6	+0.1
	baz=327						
FULB	Fuli	0.81	201	*e*P	Pb	00 28 48.5	-0.1
	baz=217						
FULB				*e*S	Sn	00 29 01.5	-0.7
	baz=217						
NWLT	Wulai	0.82	353	P	Pg	00 28 48.2	+0.3
	baz=348						
NWLT				*e*S	Sg	00 28 58.8	+0.3
	baz=348						
WJS	Zhushan	0.82	260	*e*P	Pb	00 28 48.9	+0.3
	baz=261						
WJS				*e*S	Sb	00 29 00.7	+0.8
	baz=261						
WNT	Mingjian	0.85	265	*e*P	Pb	00 28 49.3	+0.1
	baz=265						
WNT				*e*S	Sb	00 29 01.6	+0.8
	baz=265						
TWQ1	Liyutan	0.86	297	*e*P	Pn	00 28 50.0	-0.5
	baz=297						
TWQ1				*e*S	Sb	00 29 01.8	+0.9
	baz=297						
ALS	Alishan	0.87	239	*e*P	Pb	00 28 49.2	-0.4
	baz=239						
ALS				*e*S	Sb	00 29 01.5	+0.1
	baz=239						
NSTT	Nanjuang	0.87	320	*e*P	Pb	00 28 49.4	0.0
	baz=321						
NSTT				*e*S	Sb	00 29 01.3	0.0
	baz=321						
LIOB	Emei	0.87	321	*e*P	Pb	00 28 49.5	0.0
	baz=322						
LIOB				*e*S	Sg	00 28 60.0	-0.3
	baz=322						
CHKT	Chengkung	0.89	195	*e*P	Pn	00 28 51.1	+0.2
	baz=195						
EHD	Haiduan	0.89	205	*e*P	Pg	00 28 48.8	-0.5
	baz=216						
EHD				*e*S	Sb	00 29 02.8	+0.8
	baz=216						
NSY	Sanyi	0.90	300	*e*P	Pb	00 28 50.2	+0.2
	baz=301						
NSY				*e*S	Sn	00 29 03.5	-0.8
	baz=301						
NMLH	Miaoli	0.94	308	*e*P	Pg	00 28 50.0	-0.2
	baz=307						
ELDTW	Lidau	0.94	215	*e*P	Pg	00 28 49.6	-0.6
	baz=214						
NHDH	Xindian Distri	1.00	355	*e*P	Pg	00 28 51.5	+0.2
	baz=357						
TWA	Mucha	1.01	359	*e*P	Pg	00 28 51.4	-0.2
	baz=349						
TWA				*e*S	Sb	00 29 05.7	+0.3
	baz=349						
WDLH	Douliu	1.02	255	*e*P	Pg	00 28 51.8	+0.1
	baz=256						
WDLH				*e*S	Sn	00 29 06.7	-0.6
	baz=256						
TIPB	Shuangxi	1.02	11	P	Pg	00 28 51.7	-0.1
	baz=1.0						
TIPB				*e*S	Sb	00 29 06.5	+0.7
	baz=1.0						
EDH	Donghe	1.02	196	*e*P	Pg	00 28 50.3	-1.5
	baz=199						
EDH				*e*S	Sb	00 29 06.2	+0.5
	baz=199						
WCKO	Fanlu	1.06	241	*e*P	Pn	00 28 53.0	-0.3
	baz=236						
WCKO				*e*S	Sn	00 29 07.7	-0.5
	baz=236						
TWB1	Santiao Chiao	1.10	18	*e*P	Pg	00 28 52.7	-0.5
	baz=11						
TWB1				*e*S	Sb	00 29 08.2	+0.4
	baz=11						
STYH	Taoyuan	1.10	224	*e*P	Pb	00 28 53.5	+0.1
	baz=227						
STYH				*e*S	Sb	00 29 08.2	+0.3
	baz=227						
NWF	Wu-fen Shan	1.11	8	*e*P	Pb	00 28 53.9	+0.2
	baz=8.0						
WFSB	Wu-fen Shan	1.11	8	*e*P	Pn	00 28 54.3	+0.3
	baz=8.0						
CHN4	Tsaushan	1.12	237	*e*P	Pn	00 28 54.2	+0.1
	baz=238						
TPUB	Ta-pu	1.12	234	P	Pn	00 28 54.3	+0.2
TPUB	Ta-pu	1.12	234	*e*P	Pn	00 28 53.9	-0.2
	baz=235						
TPUB				*e*S	Sn	00 29 09.5	-0.2
	baz=235						
WRL	Guolierlin Hig	1.13	267	*e*P	Pb	00 28 53.9	0.0
	baz=266						
LONT	Longtian	1.14	203	*e*P	Pg	00 28 53.8	-0.3
	baz=215						
LONT				*e*S	Sg	00 29 08.9	+0.1
	baz=215						
SXI1	Grass Mountain	1.15	12	*e*P	Pg	00 28 53.8	-0.5
	baz=359						
WTK	Tuku	1.15	257	*e*P	Pn	00 28 54.5	-0.1
	baz=258						
WTK				*e*S	Sn	00 29 10.3	-0.2
	baz=258						
WTP	Ta-pu	1.16	232	*e*P	Pn	00 28 54.9	+0.2
	baz=234						
YM01	YM01	1.18	358	*e*P	Pn	00 28 55.2	+0.2
	baz=357						
NTST	Danshui	1.21	353	*e*P	Pg	00 28 55.5	+0.2
	baz=352						
TWK	Hsinying	1.24	236	*e*P	Pg	00 28 56.4	+0.5
	baz=227						
TWK				*e*S	Sn	00 29 13.9	+1.1
	baz=227						
CHN1	Nanshi	1.26	232	*e*P	Pg	00 28 56.8	+0.5
	baz=235						
CHN1				*e*S	Sn	00 29 14.3	+1.1
	baz=235						
SNST	Tainan City	1.26	234	*e*P	Pg	00 28 56.5	+0.2
	baz=237						
SNST				*e*S	Sn	00 29 14.7	+1.5
	baz=237						
SGST	Jiashian	1.29	227	*e*P	Pb	00 28 56.6	0.0
	baz=230						
SGST				*e*S	Sn	00 29 14.3	+0.4
	baz=230						
SLGT	Liugui	1.31	223	*e*P	Pg	00 28 57.4	+0.1
	baz=226						
SLGT				*e*S	Sn	00 29 15.7	+1.3
	baz=226						
ICHU	Yijhu	1.36	244	*e*P	Pn	00 28 56.6	-0.8
	baz=247						
TSMG	Majia	1.54	216	*e*P	Pb	00 29 00.7	-0.1
	baz=209						
MASBT	Mashibuluo	1.62	214	*e*P	Pn	00 29 01.3	+0.3
	baz=206						
JISG	Ishigakijimahi	2.54	75	S	Sn	00 29 44.7	0.0

IDC 07 00:34:14.6±2.5, 20°.53S×176°.13W, h0km, mb3.9/2, mbtmp4.0/3, ML4.2/1, Error ellipse: s-maj=66.1km s-min=50.1km az=119.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	18.61	197	P	P	00 38 33.2	-0.3
	0.8nm,0.3s,baz=62,slow=17,SNR=1.3 4.0nm,0.5s						
ASAR	Alice Springs	46.22	257	P	P	00 42 41.9	+0.1
	2.1nm,0.8s,baz=88,slow=8.3,SNR=14 2.1nm,0.8s						
WRA	Warramunga Arr	46.33	262	P	P	00 42 42.3	-0.4
	0.9nm,0.6s,baz=98,slow=7.8,SNR=7.4 0.9nm,0.6s						
AKASG	Malin Array Be	143.87	332	PKP	PKPbc	00 53 49.6	+0.2
	0.8nm,0.3s,baz=42,slow=3.6,SNR=5.2						
MMAI	Mount Meron Ar	149.35	300	PKPbc	PKPbc	00 54 06.0	0.0
	2.0nm,0.5s,baz=72,slow=5.6,SNR=15						

JMA ***07*** *00:49:01.4±0.2,24°.N±1°.×122°.6E±0°.9, h43km, MV2.3/11, NW OFF ISHIGAKIJIMA IS*
TAP ***07*** *00:49:02.4,24°.09N×122°.53E,h40km,ML3.1,C*
ISC 07 00:49:02.5±1.7, 24°.00N±0°.04×122°.58E±0°.03, h35km±2km, n62, σ1s21/96, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.26	297	P	Pn	00 49 09.7	-0.2
	baz=278						
EOS4				*i* S	Sn	00 49 15.2	-0.5
	baz=278						
EOS3	EOS3	0.37	320	*e*P	Pn	00 49 11.3	+0.2
	baz=313						
EOS3				S	Sn	00 49 18.1	+0.8
	baz=313						
EOS2	EOS2	0.52	323	*e*P	Pn	00 49 13.7	+0.3
	baz=311						
JYNG	Yonagunijimaku	0.56	37	P	Pn	00 49 13.3	-0.7
JYNG				*e*S	Sn	00 49 22.0	-0.1
YOJ	Yonaguni jima	0.61	41	*i* P	Pn	00 49 14.2	-0.5
	baz=56						
YOJ				*i* S	Sn	00 49 22.9	-0.3
	baz=56						
YOJ	Yonaguni jima	0.61	41	P	Pn	00 49 14.1	-0.6
YOJ				*e*S	Sn	00 49 22.7	-0.5
ESAO	Su ao	0.88	311	*e*P	Pn	00 49 17.7	-0.7
	baz=300						
ETL	Fush Village	0.88	280	*e*P	Pn	00 49 18.1	-0.4
	baz=262						
ETL				*e*S	Sn	00 49 29.5	-0.6
	baz=262						
TWC	Suao	0.90	313	*e*P	Pn	00 49 18.6	0.0
	baz=310						
TWD	Chiawan	0.90	275	*e*P	Pn	00 49 18.0	-0.7
	baz=269						
NACB	Ninganchiao	0.91	281	*e*P	Pn	00 49 18.6	-0.3
	baz=263						
NACB				*e*S	Sn	00 49 29.3	-1.4
	baz=263						
SHUL	Shoufeng	0.95	257	P	Pn	00 49 18.6	-0.7
	baz=251						
SHUL				*e*S	Sn	00 49 31.5	-0.2
	baz=251						
ETM	Tongmen	0.99	268	*e*P	Pn	00 49 18.8	-1.1
	baz=262						
ETM				*e*S	Sn	00 49 31.2	-1.5
	baz=262						
ESL	Shilin	1.06	260	P	Pn	00 49 19.7	-1.2
	baz=247						
ESL				S	Sn	00 49 33.0	-1.4
	baz=247						
LXIB	Xiulin Townshi	1.06	271	P	Pn	00 49 20.3	-0.7
	baz=266						
LXIB				*e*S	Sn	00 49 33.4	-1.2
	baz=266						
LATG	Datong	1.09	299	*e*P	Pn	00 49 21.1	-0.4

	baz=295							
LATG	**Datong**	**1.09**	**299**	*e*S		**Pn**	**00 49 21.3**	**-0.1**
	baz=326							
TWE	**Neicheng**	**1.09**	**311**	*e*P		**Pn**	**00 49 21.9**	**+0.6**
	baz=309							
ENTT	**Nioudou**	**1.12**	**305**	*e*P		**Pn**	**00 49 22.7**	**+1.0**
	baz=302							
ENTT	**Nioudou**	**1.12**	**305**	*e*S		**Pn**	**00 49 22.9**	**+1.2**
	baz=339							
WARBT	**Fenglin Townsh**	**1.12**	**256**	*e*P		**Pn**	**00 49 20.5**	**-1.3**
	baz=242							
WARBT				*e*S		**Sn**	**00 49 34.1**	**-1.9**
	baz=242							
HATJ	**Hateruma jima**	**1.13**	**87**	*e*S		**Sn**	**00 49 36.0**	**+0.1**
NDT	**Datong Townshi**	**1.14**	**302**	*e*P		**Pn**	**00 49 23.2**	**+1.3**
	baz=288							
NNSB	**Datong**	**1.17**	**292**	*e*P		**Pn**	**00 49 21.7**	**-0.8**
	baz=288							
NNSB	**Datong**	**1.17**	**292**	*e*S		**Pn**	**00 49 21.7**	**-0.8**
	baz=300							
HGSD	**Ruisui**	**1.17**	**245**	P		**Pn**	**00 49 21.3**	**-1.1**
	baz=239							
HGSD				*e*S		**Sn**	**00 49 35.4**	**-1.7**
	baz=239							
FUSB	**Fushanzhiwuyua**	**1.18**	**310**	*e*P		**Pn**	**00 49 23.2**	**+0.7**
	baz=308							
NNS	**Nan Shan**	**1.18**	**292**	*e*P		**Pn**	**00 49 22.0**	**-0.6**
	baz=288							
TIPB	**Shuangxi**	**1.18**	**325**	*e*P		**Pn**	**00 49 23.9**	**+1.4**
	baz=330							
WHF	**Hehuan Shan**	**1.21**	**277**	*e*P		**Pn**	**00 49 22.8**	**-0.5**
	baz=272							
WHF				*e*S		**Sn**	**00 49 37.2**	**-1.4**
	baz=272							
ECBN	**Changbin**	**1.24**	**237**	*e*P		**Pn**	**00 49 24.5**	**+1.2**
	baz=232							
ECBN				*e*S		**Sn**	**00 49 37.5**	**-1.2**
	baz=232							
FUSS	**Fushou**	**1.24**	**282**	*e*P		**Pn**	**00 49 23.2**	**-0.4**
	baz=277							
NWLT	**Wulai**	**1.25**	**308**	*e*P		**Pn**	**00 49 24.9**	**+1.5**
	baz=318							
EHY	**Hungye**	**1.25**	**247**	*e*P		**Pn**	**00 49 22.5**	**-1.0**
	baz=242							
SXI1	**Grass Mountain**	**1.26**	**330**	P		**Pn**	**00 49 23.4**	**-0.2**
	baz=340							
SXI1				*e*S		**Sn**	**00 49 37.8**	**-1.6**
	baz=340							
YHNB	**Yeheng**	**1.28**	**302**	*e*P		**Pn**	**00 49 24.1**	**+0.2**
	baz=287							
OWD	**Renai**	**1.28**	**268**	*e*P		**Pn**	**00 49 23.6**	**-0.4**
	baz=255							
CHGB	**Renai**	**1.28**	**273**	P		**Pn**	**00 49 23.5**	**-0.6**
	baz=268							
CHGB				S		**Sn**	**00 49 38.9**	**-1.3**
	baz=268							
NSK	**Sanguang**	**1.30**	**301**	*e*P		**Pn**	**00 49 24.9**	**+0.7**
	baz=287							
TDCB	**Techi**	**1.32**	**281**	*e*P		**Pn**	**00 49 24.5**	**-0.1**
	baz=268							
YULB	**Yu-li**	**1.32**	**243**	P		**Pn**	**00 49 23.8**	**-0.6**
	baz=252							
YULB				*e*S		**Sn**	**00 49 39.5**	**-1.3**
	baz=252							
TWA	**Mucha**	**1.33**	**317**	*e*P		**Pn**	**00 49 26.2**	**+1.6**
	baz=316							
JKRS	**Kuro-shima**	**1.33**	**80**	*e*P		**Pn**	**00 49 25.5**	**+0.9**
JKRS				*e*S		**Sn**	**00 49 41.9**	**+0.9**
WUSB	**Renai**	**1.33**	**270**	*e*P		**Pn**	**00 49 24.5**	**-0.2**
	baz=265							
WUSB				*e*S		**Sn**	**00 49 40.7**	**-0.6**
	baz=265							
VWDT	**VWDT**	**1.34**	**260**	⇓ *i*P		**Pn**	**00 49 24.5**	**-0.1**
	baz=255							
VWDT				*e*S		**Sn**	**00 49 40.1**	**-1.1**
	baz=255							
TWF1	**Yuli**	**1.34**	**241**	P		**Pn**	**00 49 24.1**	**-0.6**
	baz=228							
TWF1				*e*S		**Sn**	**00 49 40.3**	**-1.0**
	baz=228							
CHKH	**Chenggong**	**1.35**	**234**	*e*P		**Pn**	**00 49 25.8**	**+1.0**
	baz=219							
CHKH				*e*S		**Sn**	**00 49 39.1**	**-2.4**
	baz=219							
FULB	**Fuli**	**1.42**	**236**	*e*P		**Pn**	**00 49 26.3**	**+0.4**
	baz=231							
FULB				*e*S		**Sn**	**00 49 42.0**	**-1.3**
	baz=231							
JIJ	**Ishigaki jima**	**1.48**	**76**	*e*P		**Pn**	**00 49 26.0**	**-0.6**
JIJ				S		**Sn**	**00 49 43.4**	**-1.2**
EHD	**Haiduan**	**1.52**	**236**	*e*P		**Pn**	**00 49 27.5**	**+0.3**
	baz=223							
EHD				*e*S		**Sn**	**00 49 44.6**	**-1.1**
	baz=223							
SMLT	**Sun Moon Lake**	**1.54**	**266**	*e*P		**Pn**	**00 49 27.8**	**+0.3**
	baz=261							
EDH	**Donghe**	**1.55**	**229**	*e*S		**Sn**	**00 49 44.2**	**-2.4**
	baz=218							
LDUT	**Ludao**	**1.67**	**218**	*e*P		**Pn**	**00 49 30.3**	**+1.1**
	baz=214							
LDUT				*e*S		**Sn**	**00 49 46.7**	**-2.7**
	baz=214							
ALS	**Alishan**	**1.69**	**254**	*e*P		**Pn**	**00 49 30.4**	**+0.5**
	baz=249							
ALS				*e*S		**Sn**	**00 49 50.7**	**+0.2**
	baz=249							
STYH	**Taoyuan**	**1.85**	**244**	*e*P		**Pn**	**00 49 32.3**	**+0.6**
	baz=232							
STYH				*e*S		**Sn**	**00 49 53.6**	**-0.2**
	baz=232							
STYT	**Tauyuan**	**1.87**	**244**	*e*S		**Sn**	**00 49 54.8**	**+0.4**
	baz=232							
WCKO	**Fanlu**	**1.89**	**253**	*e*P		**Pn**	**00 49 34.2**	**+1.9**
	baz=249							
WCKO				*e*S		**Sn**	**00 49 57.6**	**+2.6**
	baz=249							
CHN4	**Tsaushan**	**1.93**	**251**	*e*P		**Pn**	**00 49 34.6**	**+1.8**
	baz=247							
CHN4				*e*S		**Sn**	**00 49 59.4**	**+3.6**
	baz=247							
WTP	**Ta-pu**	**1.95**	**248**	*e*P		**Pn**	**00 49 35.0**	**+1.9**
	baz=244							
WTP				*e*S		**Sn**	**00 49 58.4**	**+2.0**
	baz=244							
JTJ	**Tarama**	**2.04**	**71**	*e*S		**Sn**	**00 49 58.0**	**-0.5**
SGST	**Jiashian**	**2.04**	**244**	*e*P		**Pn**	**00 49 35.6**	**+1.2**
	baz=240							
SGST				*e*S		**Sn**	**00 50 01.3**	**+2.6**
	baz=240							
TWK	**Hsinying**	**2.05**	**249**	*e*P		**Pn**	**00 49 36.4**	**+1.9**
	baz=246							
TWK				*e*S		**Sn**	**00 50 01.1**	**+2.2**
	baz=246							

TAP 07 00:49:07.3,24.24N×121.74E,h10km,ML1.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**1**	*e*P	Pg	00 49 09.3	-0.3
	baz=6.0						
EAHA	**Aohua**	**0.09**	**360**	P	Pg	00 49 10.3	+0.4
	baz=359						
EAHA				S	Sg	00 49 12.8	+1.2
	baz=359						
ETL	**Fush Village**	**0.13**	**234**	*i* P	Pg	00 49 11.1	+0.7
	baz=233						
ETL				S	Sg	00 49 14.3	+1.7
	baz=233						
NACB	**Ninganchiao**	**0.15**	**244**	*i* P	Pg	00 49 11.4	+0.8
	baz=244						
NACB				*i* S	Sg	00 49 14.2	+1.3
	baz=244						
ENA	**Nanau**	**0.19**	**0**	*e*P	Pg	00 49 11.8	+0.5
	baz=2.0						
ENA				*e*S	Sg	00 49 14.8	+0.7
	baz=2.0						
TWD	**Chiawan**	**0.20**	**220**	*e*P	Pg	00 49 12.1	+0.5
	baz=218						
EWUT	**Wuta**	**0.21**	**10**	*e*P	Pg	00 49 12.2	+0.5
	baz=9.0						
LATG	**Datong**	**0.35**	**327**	*e*P	Pb	00 49 15.5	-0.3
	baz=326						
NNSB	**Datong**	**0.38**	**300**	P	Pb	00 49 16.0	-0.3
	baz=300						
NNS	**Nan Shan**	**0.39**	**301**	*e*P	Pb	00 49 16.7	+0.3
	baz=301						
NDT	**Datong Townshi**	**0.42**	**330**	*e*P	Pb	00 49 16.6	-0.3
	baz=330						
ENTT	**Nioudou**	**0.43**	**338**	P	Pb	00 49 16.9	-0.2
	baz=339						
WHF	**Hehuan Shan**	**0.44**	**258**	*e*P	Pb	00 49 17.3	-0.2
	baz=257						
FUSB	**Fushanzhiwuyua**	**0.54**	**345**	*e*P	Pb	00 49 18.7	-0.2
	baz=344						
YHNB	**Yeheng**	**0.54**	**322**	*e*P	Pb	00 49 19.1	0.0
	baz=322						
NSK	**Sanguang**	**0.56**	**321**	*e*P	Pb	00 49 19.2	-0.1
	baz=321						

*IDC **07** 00:56:12.2±1.2,55.64N×149.14W,h0km,mb3.8/9, mbtmp3.8/14,ML3.6/5,MS3.6/3,Error ellipse: s-maj=26.1km s-min=17.3km az=34.0*
*NEIC **07** 00:56:13.8±1.7,55.71N±0.09×149.2W±0.1,h12km±7km, mb4.1/1,ML4.2/48,ML3.8(AEIC),Error ellipse: s-maj=13.0km s-min=8.2km az=166.0*
*AEIC **07** 00:56:17.4±1.7,55.63N±0.09×149.1W±0.1,h11km±7km, Error ellipse: s-maj=13.9km s-min=8.5km az=170.0*
ISC 07 00:56:13.6±0.8,55.78N±0.07×149.12W±0.05,h10km, n299,σ1§18/303,mb3.9/9,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.73**	**304**		**Pn**	**00 56 56.8**	**-0.6**
OHAK					**Sn**	**00 57 27.7**	**-2.7**
OHAK	**Old Harbor**	**2.73**	**304**	P	**Pn**	**00 56 56.9**	**-0.5**
OHAK	**Old Harbor**	**2.73**	**304**	P	**Pn**	**00 56 57.0**	**-0.4**
	baz=122						
OHAK				S	**Sn**	**00 57 28.5**	**-1.9**
	baz=122						
KDAK	**Kodiak Island**	**2.77**	**318**	Pn	**Pn**	**00 56 57.4**	**-0.6**
KDAK				Sn	**Sn**	**00 57 29.4**	**-2.1**
KDAK	**Kodiak Island**	**2.77**	**318**	S	**Sn**	**00 57 30.6**	**-0.9**
	baz=137						
KDAK	**Kodiak Island**	**2.77**	**318**	Pn	**Pn**	**00 56 58.0**	**0.0**
	14nm,0.3s,baz=156,slow=6.3,SNR=287						
KDAK				Sn	**Sn**	**00 57 29.4**	**-2.1**
	22nm,0.3s,baz=94,slow=15,SNR=11						
KDAK				LR	LR	00 58 18.2	
	comp=Z,424nm,21.2s,baz=147,slow=44 44nm,0.3s						
SII	**Sitkinak Islan**	**2.94**	**288**		**Pn**	**00 56 59.6**	**-0.8**
SII					**Sn**	**00 57 32.8**	**-2.9**
SII	**Sitkinak Islan**	**2.94**	**288**	IAML		00 57 38.3	
	comp=N,528nm,0.6s						
SII				IAML		00 57 40.2	
	comp=E,906nm,0.4s						
SII	**Sitkinak Islan**	**2.94**	**288**	P	**Pn**	**00 56 59.6**	**-0.8**
	baz=106						
SYI	**Shuyak Island**	**3.35**	**329**	Pn	**Pn**	**00 57 06.2**	**+0.3**
SYI				Sn	**Sn**	**00 57 43.6**	**-2.2**
Q20K	**Shuyak Island**	**3.35**	**329**	P	**Pn**	**00 57 06.6**	**+0.6**
	baz=148						
Q20K				S	**Sn**	**00 57 45.3**	**-0.5**
	baz=148						
R18K	**Karluk**	**3.45**	**304**		**Pn**	**00 57 07.6**	**+0.4**
R18K					**Sn**	**00 57 46.8**	**-1.3**
R18K	**Karluk**	**3.45**	**304**	IAML		00 57 50.2	
	comp=E,241nm,0.5s						
R18K				IAML		00 57 53.5	
	comp=N,355nm,0.5s						
R18K	**Karluk**	**3.45**	**304**	P	**Pn**	**00 57 07.6**	**+0.4**
	baz=121						
R18K				S	**Sn**	**00 57 46.8**	**-1.3**
	baz=121						
CNPM	**China Poot**	**3.93**	**344**	Pn	**Pn**	**00 57 13.8**	**-0.1**
CNPM				Sn	**Sn**	**00 57 58.4**	**-1.6**
CNPM				IAML		00 58 02.2	
	comp=N,122nm,0.4s						
MID	**Middleton Isla**	**3.95**	**21**	Pn	**Pn**	**00 57 14.3**	**+0.1**
MID				IAML		00 58 42.4	
	comp=N,474nm,3.2s						
MID	**Middleton Isla**	**3.95**	**21**	P	**Pn**	**00 57 15.0**	**+0.8**
Q23K	**Middleton Isla**	**3.95**	**21**	Pn	**Pn**	**00 57 13.2**	**-1.0**
Q23K				IAML		00 58 41.2	
	comp=N,498nm,2.9s						
Q23K				IAML		00 58 45.9	
	comp=E,509nm,2.8s						
Q23K	**Middleton Isla**	**3.95**	**21**	P	**Pn**	**00 57 14.7**	**+0.5**
	baz=203						
Q19K	**Cape Douglas,**	**4.00**	**324**	Pn	**Pn**	**00 57 15.9**	**+1.0**
Q19K				IAML		00 58 15.8	
	comp=E,304nm,0.8s						
Q19K				IAML		00 57 17.9	
	comp=N,182nm,0.9s						
Q19K	**Cape Douglas,**	**4.00**	**324**	P	**Pn**	**00 57 15.8**	**+0.8**
	baz=141						
KAHG	**Katmai Hook Gl**	**4.02**	**315**		**Pn**	**00 57 16.7**	**+1.4**
BRSE	**Bradley Lake S**	**4.07**	**348**		**Pn**	**00 57 16.2**	**+0.3**
BRSE					**Sn**	**00 58 03.0**	**-0.6**
BRSE	**Bradley Lake S**	**4.07**	**348**	P	**Pn**	**00 57 16.2**	**+0.3**
	baz=167						
BRSE				S	**Sn**	**00 58 02.9**	**-0.6**
	baz=167						
BRLK	**Bradley Lake**	**4.11**	**347**	Pn	**Pn**	**00 57 16.3**	**-0.1**
BRLK				Sn	**Sn**	**00 58 02.8**	**-1.7**
BRLK				IAML		00 58 07.9	
	comp=E,113nm,0.8s						
HOM	**Homer**	**4.12**	**342**	Pn	**Pn**	**00 57 15.5**	**-1.0**
HOM				IAML		00 58 09.5	
	comp=N,287nm,0.7s						
HOM				IAML		00 58 26.8	
	comp=E,275nm,3.2s						
KCE	**Katmai Mt Cerb**	**4.14**	**309**		**Pn**	**00 57 18.4**	**+1.6**
ACHA	**Angle Creek He**	**4.18**	**308**		**Pn**	**00 57 18.6**	**+1.2**
ANCK	**Angle Creek**	**4.25**	**307**		**Pn**	**00 57 19.6**	**+1.2**
KVTA	**Katmai Vly 10**	**4.26**	**310**		**Pn**	**00 57 19.8**	**+1.3**
AUCH	**Augustine Cone**	**4.28**	**329**		**Pn**	**00 57 20.1**	**+1.2**
KAHC	**Katmai Hardscr**	**4.31**	**314**		**Pn**	**00 57 20.6**	**+1.4**
KAHC	**Katmai Hardscr**	**4.31**	**314**	P	**Pn**	**00 57 20.6**	**+1.4**
	baz=131						
P23K	**Montague Islan**	**4.33**	**11**		**Pn**	**00 57 20.0**	**+0.6**
P23K	**Montague Islan**	**4.33**	**11**	P	**Pn**	**00 57 20.2**	**+0.8**
	baz=193						
SEW	**Seward**	**4.34**	**358**	Pn	**Pn**	**00 57 20.4**	**+0.8**
SEW	**Seward**	**4.34**	**358**	P	**Pn**	**00 57 20.0**	**+0.4**
	baz=178						
PLK3	**Peulik 3**	**4.38**	**299**		**Pn**	**00 57 20.6**	**+0.5**
CNTC	**Contact Creek**	**4.46**	**307**		**Pn**	**00 57 22.2**	**+0.9**
Q17K	**Contact Creek**	**4.46**	**307**	P	**Pn**	**00 57 22.2**	**+0.9**
	baz=122						
P19K	**Oil Pt**	**4.47**	**332**	Pn	**Pn**	**00 57 22.2**	**+0.9**
P19K				IAML		00 58 19.2	
	comp=E,253nm,0.5s						
P19K				IAML		00 58 19.3	
	comp=N,233nm,0.5s						
P19K	**Oil Pt**	**4.47**	**332**	P	**Pn**	**00 57 22.4**	**+1.1**
	baz=149						
KELA	**Mount Kelaz**	**4.49**	**309**		**Pn**	**00 57 22.9**	**+1.2**
PLK1	**Peulik 1**	**4.59**	**299**		**Pn**	**00 57 23.9**	**+0.9**
O20K	**Slope Mountain**	**4.70**	**338**		**Pn**	**00 57 25.1**	**+0.5**
O20K	**Slope Mountain**	**4.70**	**338**	P	**Pn**	**00 57 25.2**	**+0.5**
	baz=156						
Q22K	**Cooper Landing**	**4.73**	**356**	Pn	**Pn**	**00 57 25.1**	**+0.3**
IVE	**Iliamna Volcan**	**4.73**	**336**		**Pn**	**00 57 25.3**	**+0.3**
SLKM	**Skilak Lake**	**4.78**	**353**		**Pn**	**00 57 26.0**	**+0.4**
HIN	**Hinchinbrook I**	**4.84**	**16**	Sn	**Sn**	**00 58 20.3**	**-2.1**
HIN				IAML		00 58 23.4	
	comp=E,228nm,0.9s						
HIN				IAML		00 58 24.4	
	comp=N,178nm,1.1s						
HIN	**Hinchinbrook I**	**4.84**	**16**		**Pn**	**00 57 27.1**	**+0.7**
KAIM	**Kayak Island**	**4.86**	**29**	Pn	**Pn**	**00 57 27.4**	**+0.7**
KAIM				IAML		00 59 39.5	
	comp=E,273nm,2.9s						
P18K	**Big Mountain,**	**4.89**	**320**	Pn	**Pn**	**00 57 27.3**	**+0.1**
P18K	**Big Mountain,**	**4.89**	**320**	P	**Pn**	**00 57 27.4**	**+0.3**
	baz=136						
R16K	**Pilot Point**	**5.00**	**295**		**Pn**	**00 57 29.1**	**+0.6**
R16K	**Pilot Point**	**5.00**	**295**	IAML		00 59 45.7	
	comp=N,218nm,4.1s						
R16K				IAML		01 00 47.1	
	comp=E,220nm,4.0s						
R16K	**Pilot Point**	**5.00**	**295**	P	**Pn**	**00 57 29.1**	**+0.6**
	baz=109						
RED	**Redoubt Volcan**	**5.04**	**339**		**Pn**	**00 57 29.1**	**-0.2**
RSO	**Redoubt South**	**5.08**	**339**	Pn	**Pn**	**00 57 29.8**	**0.0**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	Pn	**Pn**	**00 57 30.9**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**00 57 31.7**	**+1.7**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**00 57 31.0**	**+0.9**
	baz=202						
RDT	**Redoubt**	**5.12**	**341**		**Pn**	**00 57 30.3**	**0.0**

RDWB	**Redoubt West**	**5.12**	**339**			**Pn**	**00 57 30.3**	**-0.1**
CAPN	**Captain Cook N**	**5.12**	**349**	Pn		**Pn**	**00 57 29.4**	**-0.8**
SUCK	**Suckling Hills**	**5.16**	**31**	Pn		**Pn**	**00 57 31.7**	**+0.9**
SUCK				IAML			00 58 59.1	
	comp=E,175nm,2.8s							
RAGM	**Ragged Mountai**	**5.19**	**25**	Pn		**Pn**	**00 57 32.0**	**+0.8**
ANNW	**Aniakchak Nort**	**5.20**	**287**			**Pn**	**00 57 31.7**	**+0.3**
NCT	**North Crescent**	**5.21**	**339**			**Pn**	**00 57 31.6**	**+0.1**
O19K	**Port Alsworth**	**5.22**	**330**	Pn		**Pn**	**00 57 31.8**	**+0.1**
O19K				IAML			00 58 35.4	
	comp=N,203nm,0.4s							
O18K	**Koktuh Hills**	**5.23**	**324**	Pn		**Pn**	**00 57 32.2**	**+0.5**
O18K	**Koktuh Hills**	**5.23**	**324**	P		**Pn**	**00 57 32.0**	**+0.3**
	baz=140							
P17K	**Kvichak River**	**5.23**	**314**			**Pn**	**00 57 32.9**	**+1.2**
P17K	**Kvichak River**	**5.23**	**314**	P		**Pn**	**00 57 32.9**	**+1.2**
	baz=129							
CHGN	**Chignik**	**5.24**	**280**	Pn		**Pn**	**00 57 30.9**	**-0.9**
CHGN				IAML			00 58 31.9	
	comp=N,127nm,0.4s							
CHGN				IAML			00 58 34.3	
	comp=E,159nm,0.4s							
NICHA	**Nichawak Mount**	**5.24**	**29**			**Pn**	**00 57 33.2**	**+1.2**
HMT	**Hamilton**	**5.25**	**27**	Pn		**Pn**	**00 57 32.6**	**+0.6**
RC01	**Rabbit Creek A**	**5.34**	**357**	Pn		**Pn**	**00 57 33.9**	**+0.7**
RC01	**Rabbit Creek A**	**5.34**	**357**	P		**Pn**	**00 57 34.0**	**+0.7**
	baz=176							
GOAT	**Goat Mountain**	**5.35**	**24**			**Pn**	**00 57 34.4**	**+0.9**
BERG	**Berg Lake**	**5.45**	**30**	Pn		**Pn**	**00 57 35.2**	**+0.4**
GRIN	**Grindle Hills**	**5.47**	**32**			**Pn**	**00 57 36.0**	**+1.0**
SNH	**Sunshine Point**	**5.54**	**35**	Pn		**Pn**	**00 57 36.8**	**+0.8**
KHIT	**Khitrov Hills**	**5.62**	**31**			**Pn**	**00 57 37.6**	**+0.5**
KNK	**Knik Glacier**	**5.66**	**3**	Pn		**Pn**	**00 57 38.1**	**+0.3**
KNK	**Knik Glacier**	**5.66**	**3**	P		**Pn**	**00 57 39.1**	**+1.3**
	baz=184							
N20K	**Mount Spurr**	**5.68**	**345**	P		**Pn**	**00 57 37.9**	**0.0**
	baz=162							
SPCR	**Spurr Chakacha**	**5.68**	**345**			**Pn**	**00 57 37.9**	**0.0**
SPCN	**Chakachatna No**	**5.70**	**345**			**Pn**	**00 57 38.7**	**+0.5**
BMRM	**Bremner River**	**5.72**	**23**	Pn		**Pn**	**00 57 39.3**	**+0.8**
BMRM	**Bremner River**	**5.72**	**23**	P		**Pn**	**00 57 39.5**	**+1.0**
	baz=206							
SPCP	**Crater Peak Br**	**5.73**	**345**			**Pn**	**00 57 39.5**	**+0.8**
SPCG	**Spurr Capps Gl**	**5.74**	**346**			**Pn**	**00 57 40.2**	**+1.4**
WAX	**Waxell Ridge**	**5.74**	**33**	Pn		**Pn**	**00 57 39.4**	**+0.6**
SUA	**Susitna One**	**5.77**	**352**	Pn		**Pn**	**00 57 39.9**	**+0.6**
SUA	**Susitna One**	**5.77**	**352**	P		**Pn**	**00 57 39.4**	**+0.2**
	baz=171							
N19K	**Bonanza Creek**	**5.79**	**333**	Pn		**Pn**	**00 57 39.4**	**-0.1**
N19K	**Bonanza Creek**	**5.79**	**333**	P		**Pn**	**00 57 39.7**	**+0.1**
	baz=149							
P16K	**Nushagak River**	**5.80**	**308**			**Pn**	**00 57 40.4**	**+0.8**
P16K	**Nushagak River**	**5.80**	**308**	P		**Pn**	**00 57 40.4**	**+0.8**
	baz=121							
BARK	**Barkley Ridge**	**5.82**	**34**			**Pn**	**00 57 40.6**	**+0.7**
MESA	**MESA**	**5.83**	**38**	Pn		**Pn**	**00 57 40.0**	**-0.2**
MESA	**MESA**	**5.83**	**38**	P		**Pn**	**00 57 40.9**	**+0.7**
	baz=223							
PMR	**Palmer**	**5.83**	**360**	Pn		**Pn**	**00 57 41.2**	**+1.2**
PMR	**Palmer**	**5.83**	**360**	P		**Pn**	**00 57 42.8**	**+2.8**
O17K	**Koliganek Bris**	**5.85**	**316**			**Pn**	**00 57 41.0**	**+0.7**
O17K	**Koliganek Bris**	**5.85**	**316**	P		**Pn**	**00 57 41.2**	**+0.9**
	baz=131							
VNFG	**Fog Glacier, M**	**5.88**	**279**			**Pn**	**00 57 40.1**	**-0.6**
CRQM	**Cirque**	**5.91**	**30**			**Pn**	**00 57 41.6**	**+0.5**
SPNN	**North Nagishla**	**5.91**	**343**			**Pn**	**00 57 41.8**	**+0.6**
KLU	**Klutina**	**5.97**	**15**	Pn		**Pn**	**00 57 43.2**	**+1.2**
KLU	**Klutina**	**5.97**	**15**	P		**Pn**	**00 57 43.2**	**+1.2**
	baz=197							
BAGL	**Bagley Icefiel**	**6.01**	**35**			**Pn**	**00 57 43.2**	**+0.7**
GHO	**Glory Hole Cre**	**6.01**	**1**	Pn		**Pn**	**00 57 44.2**	**+1.6**
ISLE	**Juniper Island**	**6.02**	**34**	Pn		**Pn**	**00 57 43.9**	**+1.1**
CNBA	**Chernabura Isl**	**6.06**	**265**	Pn		**Pn**	**00 57 39.9**	**-3.2**
SML	**Sawmill**	**6.06**	**4**	Pn		**Pn**	**00 57 44.8**	**+1.5**
SML	**Sawmill**	**6.06**	**4**	P		**Pn**	**00 57 44.8**	**+1.5**
	baz=184							
N18K	**Kilae Creek**	**6.08**	**327**	Pn		**Pn**	**00 57 43.7**	**+0.2**
N18K	**Kilae Creek**	**6.08**	**327**	P		**Pn**	**00 57 43.8**	**+0.3**
	baz=142							
SCM	**Sheep Creek Mo**	**6.15**	**8**	Pn		**Pn**	**00 57 46.0**	**+1.6**
SCM	**Sheep Creek Mo**	**6.15**	**8**	P		**Pn**	**00 57 46.1**	**+1.7**
	baz=189							
O16K	**Kokwok River B**	**6.15**	**312**	Pn		**Pn**	**00 57 45.4**	**+1.0**
VRDI	**Verde Repeater**	**6.22**	**26**	Pn		**Pn**	**00 57 46.0**	**+0.4**
SAMH	**Samovar Hills**	**6.22**	**42**			**Pn**	**00 57 47.0**	**+1.5**
KIAG	**Pavlof Volcan**	**6.27**	**32**			**Pn**	**00 57 46.7**	**+0.6**
TABL	**Table Mountain**	**6.30**	**39**	Pn		**Pn**	**00 57 47.3**	**+0.7**
N25K	**Chitina, Valde**	**6.30**	**20**	Pn		**Pn**	**00 57 47.9**	**+1.4**
N25K	**Chitina, Valde**	**6.30**	**20**	P		**Pn**	**00 57 48.1**	**+1.6**
	baz=204							
GRNC	**Granite Creek**	**6.30**	**35**			**Pn**	**00 57 47.2**	**+0.5**
GLB	**Gilahina Butte**	**6.32**	**24**	Pn		**Pn**	**00 57 47.4**	**+0.6**
SVW2	**Sparrevohn**	**6.32**	**330**	Pn		**Pn**	**00 57 46.3**	**-0.4**
SVW2	**Sparrevohn**	**6.32**	**330**	P		**Pn**	**00 57 46.9**	**+0.2**
SKT	**Skwentna**	**6.35**	**350**	Pn		**Pn**	**00 57 47.8**	**+0.7**
SKT	**Skwentna**	**6.35**	**350**	P		**Pn**	**00 57 47.9**	**+0.7**
	baz=168							
N17K	**Nushagak Hills**	**6.39**	**321**	Pn		**Pn**	**00 57 47.9**	**+0.1**
PCA	**Pinnacle**	**6.40**	**44**

SIT	Sitka	7.76	75	P	Pn	00 58 03.7	-2.7
PLBC	Pleasant Camp	7.77	56		Pn	00 58 07.5	+0.9
PLBC	Pleasant Camp baz=246	7.77	56	P	Pn	00 58 07.5	+0.9
CAST	Castle Rocks	7.81	350	Pn	Pn	00 58 08.2	+1.0
CAST	Castle Rocks baz=168	7.81	350	P	Pn	00 58 08.7	+1.5
L26K	Log Cabin Wild	7.84	20	Pn	Pn	00 58 10.9	+3.3
M15K	Kasigluk River	7.84	314		Pn	00 58 08.5	+0.9
KTH	Kantishna Hill	7.86	354	Pn	Pn	00 58 08.5	+0.7
N14K	Kuskokwak Cree	7.86	307		Pn	00 58 09.3	+1.2
BVCY	Beaver Creek	7.89	29		Pn	00 58 09.3	+1.0
BVCY	Beaver Creek baz=216	7.89	29	P	Pn	00 58 09.3	+1.0
HYT	Haines Junctio	7.93	46	Pn	Pn	00 58 10.1	+1.1
L17K	Donlin	7.94	327		Pn	00 58 09.4	+0.5
YUK5	Granite Creek	7.97	43		Pn	00 58 10.9	+1.4
TTA	Tatalina	7.99	337	Pn	Pn	00 58 09.4	-0.3
K20K	Telida	8.01	344	Pn	Pn	00 58 09.3	-0.5
L16K	Owhat River	8.02	322	Pn	Pn	00 58 10.5	+0.5
L16K	Owhat River baz=134	8.02	322	P	Pn	00 58 11.1	+1.1
L27K	Beaver Creek,	8.19	24	Pn	Pn	00 58 13.6	+1.2
S32K	Killisnoo	8.20	72	Pn	Pn	00 58 10.3	-2.2
BCAR	Beaver Creek A	8.21	24	Pn	Pn	00 58 13.4	+0.8
BESE	Bessie Mountai	8.24	64		Pn	00 58 12.1	-1.1
SKAG	Skagway	8.27	58	Pn	Pn	00 58 13.8	+0.5
SKAG	Skagway	8.27	58	P	Pn	00 58 14.5	+1.1
R32K	Eaglecrest	8.35	67	Pn	Pn	00 58 14.1	-0.4
K17K	Iditarod	8.39	330	Pn	Pn	00 58 14.8	-0.3
ISNN	Isanotski Nort	8.42	270		Pn	00 58 14.2	-1.4
O30N	Mendenhall	8.49	49	Pn	Pn	00 58 17.8	+1.3
O30N	Mendenhall baz=239	8.49	49	P	Pn	00 58 17.5	+1.1
J18K	Innoko River	8.61	337	Pn	Pn	00 58 16.6	-1.6
L15K	Ungalak Mounta	8.73	318		Pn	00 58 20.7	+1.0
J20K	Nowinta River	8.79	345	Pn	Pn	00 58 20.9	+0.3
M13K	Dall Lake	8.85	308	Pn	Pn	00 58 22.6	+1.3
J19K	Poorman	8.86	341	Pn	Pn	00 58 21.1	-0.4
CCB	Clear Creek Bu	8.92	4	Pn	Pn	00 58 22.3	-0.1
WHY	Whitehorse	8.96	51	Pn	Pn	00 58 24.1	+1.2
U33K	Whale Pass	8.98	81		Pn	00 58 19.7	-3.5
K27K	Chicken	9.00	20	Pn	Pn	00 58 24.6	+1.2
N31M	Braeburn, Yuko	9.00	45	Pn	Pn	00 58 24.9	+1.4
P32M	Atlin	9.09	59	Pn	Pn	00 58 24.6	0.0
IL31		9.09	6	Pn	Pn	00 58 26.5	+1.9
ILAR	Eielson Array comp=E,0.3nm,0.3s,baz=193,slow=13,SNR=21	9.09	6	Pn	Pn	00 58 25.9	+1.2
ILAR	comp=E,0.6nm,0.3s,baz=177,slow=20,SNR=12 comp=E,1.5nm,0.6s			Sn	Sn	01 00 02.6	-4.4
K15K	Wolf Creek Mou	9.13	321	Pn	Pn	00 58 26.3	+1.0
J26L	Joseph Creek	9.18	15	Pn	Pn	00 58 27.0	+1.1
MDM	Murphy Dome	9.22	2	Pn	Pn	00 58 27.2	+0.7
L29M	L29M	9.23	33	Pn	Pn	00 58 28.3	+1.7
M30M	Minto, Yukon	9.29	38	Pn	Pn	00 58 28.5	+1.1
M30M	Minto, Yukon baz=228	9.29	38	P	Pn	00 58 28.9	+1.5
I23K	Minto, Yukon-K	9.40	359	Pn	Pn	00 58 30.1	+1.2
J16K	Anvik River	9.51	327	Pn	Pn	00 58 30.1	-0.3
DAWY	Dawson	9.63	26	Pn	Pn	00 58 33.1	+1.0
Q32M	Nakina River	9.64	64	Pn	Pn	00 58 32.8	+0.4
P33M	Teslin, Yukon	9.72	56	Pn	Pn	00 58 33.5	+0.1
P33M	Teslin, Yukon baz=249	9.72	56	P	Pn	00 58 34.2	+0.8
EGAK	Eagle	9.85	20	Pn	Pn	00 58 35.6	+0.6
M31M	Drury Creek, Y	9.94	44	Pn	Pn	00 58 37.4	+1.0
K29M	Barlow Dome	9.96	31	Pn	Pn	00 58 38.3	+1.6
N32M	Quiet Lake	9.96	51	Pn	Pn	00 58 37.9	+1.2
I26K	Coal Creek Min	10.00	15	Pn	Pn	00 58 38.0	+0.9
H21K	Melozitna Rive	10.07	351	Pn	Pn	00 58 38.4	+0.2
S34M	Telegraph Cree	10.08	70	Pn	Pn	00 58 37.5	-0.8
H24K	Noodor Dome	10.11	3	Pn	Pn	00 58 41.2	+2.5
J14K	Nanvaranak Lak	10.15	319	Pn	Pn	00 58 40.1	+0.9
FARO	Faro, Yukon	10.37	45	Pn	Pn	00 58 43.9	+1.6
R33M	Jennings River	10.39	62	Pn	Pn	00 58 42.7	+0.1
IMAR	Indian Mountai	10.48	350	Pn	Pn	00 58 44.1	+0.4
T35M	Bob Quinn	10.53	76	Pn	Pn	00 58 43.9	-0.5
I28M	Miner Creek	10.68	21	Pn	Pn	00 58 47.2	+0.6
DLBC	Dease Lake	10.71	68	Pn	Pn	00 58 46.1	-0.9
DLBC	Dease Lake comp=E,0.9nm,0.3s,baz=266,slow=10,SNR=23 comp=E,1.7nm,0.3s	10.71	68	Pn	Pn	00 58 46.5	-0.5
J30M	Hart River	10.86	30	Pn	Pn	00 58 50.8	+1.8
FYU	Fort Yukon	10.98	8	Pn	Pn	00 58 50.8	+0.3
G19K	Purcell Mounta	11.09	343	Pn	Pn	00 58 52.4	+0.5
I30M	Mount Dempster	11.34	28	Pn	Pn	00 58 57.6	+2.1
G16K	Koyuk River	11.60	332	Pn	Pn	00 58 59.2	+0.2
F21K	Alatna River	11.67	352	Pn	Pn	00 59 01.2	+1.2
F20K	Avaraart Lake	11.73	347	Pn	Pn	00 59 02.3	+1.5
BMAR	Burnt Mountain	11.89	9	Pn	Pn	00 59 05.8	+2.8
ANM	Nome	11.92	324	Pn	Pn	00 59 04.3	+0.9
F17K	Baldwin Pennin	12.17	336	Pn	Pn	00 59 07.9	+1.1
TGTN	Hyland Airport	12.25	53		Pn	00 59 10.2	+2.2
E24K	Your Creek	12.35	1	Pn	Pn	00 59 10.1	+0.9
F15K	North Star Dit	12.48	329	Pn	Pn	00 59 11.5	+0.5
G30M	tAoh Zrail Nji	12.79	23	Pn	Pn	00 59 18.1	+2.8
TOL	Toolik Lake Re	12.91	359	Pn	Pn	00 59 15.6	-1.4
G31M	Satah River	13.20	26	Pn	Pn	00 59 21.8	+0.9
D22K	Ayikyak River	13.25	354	Pn	Pn	00 59 23.0	+1.4
C18K	Utukok River	14.05	342	Pn	Pn	00 59 33.7	+1.3
INK	Inuvik comp=E,0.1nm,0.3s,baz=198,slow=11,SNR=7.5 comp=E,2.2nm,0.9s	14.47	24	Pn	Pn	00 59 39.9	+1.8
B22K	Teshekpuk Lake	14.74	354	Pn	Pn	00 59 41.5	-0.3
YKA	Yellowknife Ar	18.75	55	P	P	01 00 31.1	-1.1
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=261,slow=11,SNR=16 comp=E,1.3nm,0.8s	18.75	55	P	Pn	01 00 33.5	+0.8
A36M	Sachs Harbour	19.11	23	P	Pn	01 00 38.6	+1.7
A36M	comp=Z,9.3nm,0.8s			IAmb	IAmb	01 00 48.4	
NVAR	Mina Array Bea comp=Z,0.3nm,0.7s,baz=316,slow=7.6,SNR=3.0 comp=Z,0.3nm,0.7s	26.89	117	P	P	01 01 54.5	-0.2
TXAR	Lajitas Array comp=Z,0.4nm,0.9s,baz=349,slow=0.9,SNR=3.5 comp=Z,0.4nm,0.9s	41.56	110	P	P	01 04 01.4	+0.1
SADO	Sadowa comp=Z,94nm,19.3s,baz=38,slow=38	44.20	74	LR	LR	01 23 57.4	
H11N2	WAKE ISLAND Hy baz=32,slow=76,SNR=12	48.71	241	T	T	01 57 24.5	
H11N3	WAKE ISLAND Hy baz=32,slow=76,SNR=14	48.72	241	T	T	01 57 25.4	
H11N1	WAKE ISLAND Hy baz=32,slow=76,SNR=9.6	48.73	241	T	T	01 57 16.9	
H11S1	WAKE ISLAND Hy baz=29	49.85	240	T	T	01 59 53.2	
H11S2	WAKE ISLAND Hy baz=29	49.86	240	T	T	01 59 35.4	
H11S3	WAKE ISLAND Hy baz=29	49.87	240	T	T	01 59 38.9	
ARCES	ARCESS Array B comp=Z,4.2nm,0.9s,baz=7.6,slow=7.5,SNR=4.1 comp=Z,4.2nm,0.9s	54.93	2	P	P	01 05 44.7	+0.7
SONM	Songino Array comp=Z,0.8nm,0.8s,baz=46,slow=6.2,SNR=5.2 comp=Z,0.8nm,0.8s	59.04	310	P	P	01 06 13.4	-0.1
ZALV	Zalesovo Beam comp=Z,0.4nm,0.5s,baz=62,slow=6.2,SNR=3.9 comp=Z,0.4nm,0.5s	62.04	327	P	P	01 06 34.3	+0.6
FINES	FINESS Array B comp=Z,2.3nm,0.8s,baz=3.8,slow=8.4,SNR=7.1 comp=Z,2.3nm,0.8s	63.06	3	P	P	01 06 41.7	+1.4
BVAR	Borovoye Array comp=Z,1.1nm,0.7s,baz=34,slow=5.4,SNR=6.2 comp=Z,1.1nm,0.7s	66.78	335	P	P	01 07 05.8	+1.0
KURBB	Kurchatov Arra comp=Z,0.4nm,0.5s,baz=32,slow=6.5,SNR=1.7 comp=Z,0.4nm,0.5s	66.82	329	P	P	01 07 05.8	+0.8
MKAR	Makanchi Array comp=Z,0.4nm,0.5s,baz=28,slow=5.6,SNR=5.1	69.06	325	P	P	01 07 20.3	+1.1
MKAR	comp=Z,110nm,19.6s,baz=9.0,slow=38 comp=Z,0.4nm,0.5s			LR	LR	01 40 29.3	

*IDC **07** 00:56:54.5±6.4, 22.°88S×179.°98E, h492km±77km, mb3.1/4, mbtmp4.1/5, Error ellipse: s-maj=56.6km s-min=30.2km az=1.0*
ISC 07 00:56:55.3±1.2, 23.°0S±0.°2×180.°0E±0.°2, h500km, n8, σ0s47/6, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.43	188	P	P	P	01 00 09.7	-0.1
	16nm,0.5s,baz=99,slow=3.8,SNR=12							
ASAR	Alice Springs	42.15	260	P	P	P	01 04 04.1	+0.6
	1.1nm,0.7s,baz=95,slow=8.0,SNR=8.2							
	1.1nm,0.7s							
WRA	Warramunga Arr	42.43	265	P	P	P	01 04 05.5	-0.3
	1.1nm,0.6s,baz=92,slow=8.3,SNR=26							
	1.1nm,0.6s							
PETK	Petropavlovsk-	78.19	347	P	P	P	01 08 02.2	0.0
	2.0nm,0.7s,baz=116,slow=6.6,SNR=3.6							
	2.0nm,0.7s							
TXAR	Lajitas Array	89.98	58	P	P	P	01 09 01.4	+0.2
	0.4nm,0.9s,baz=224,slow=5.0,SNR=3.4							
	0.4nm,0.9s							
HFS	Hagfors	141.63	349	PKhKP	PKPpre		01 15 22.6	
	1.3nm,0.3s,baz=58,slow=4.1,SNR=11							
AKASG	Malin Array Be	144.16	328	PKP	PKPbc		01 15 31.2	-1.8
	2.0nm,0.5s,baz=44,slow=4.3,SNR=6.6							
MMAI	Mount Meron Ar	147.27	296	PKPbc	PKPbc		01 15 42.2	-0.4
	1.4nm,0.6s,baz=80,slow=4.7,SNR=6.9							

*SOME **07** 00:58:30.2, 44.°05N×85.°27E, h10km*
*NNC **07** 00:58:35.2±2.6, 43.°41N×84.°92E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=19.0km s-min=10.5km az=125.0*
ISC 07 00:58:30.3±2.3, 43.°3N±0.°1×85.°18E±0.°09, h10km, n22, σ2s78/35, 4C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DJR	Jarkent	4.05	287	Pg	Pg	Pb	00 59 43.1	+1.3
	3.1nm,0.1s							
DJR				Lg	Lg		01 00 35.5	
	3.3nm,0.3s							
DJR	Jarkent	4.05	287	*e*P		Pb	00 59 43.0	+1.3
	3.1nm,0.1s							
DJR				*e*S		Sg	01 00 35.5	-4.7
	3.3nm,0.3s							
MK31	Makanchi Array	4.09	331	Pn		Pn	00 59 36.7	+3.8
	1.1nm,0.4s,baz=137,slow=14,SNR=77							
MK31				⇓Pg		Pb	00 59 44.8	+2.4
	4.5nm,0.5s,baz=130,slow=15,SNR=16							
MK31				⇓Sn		Sn	01 00 24.1	+3.2
	1.7nm,0.2s,baz=133,slow=25,SNR=5.1							
MK31				⇓Lg		Lg	01 00 38.6	
	16nm,0.6s,baz=128,slow=32,SNR=14							
PDGK	Podgornoye	4.15	273	Pg		Pg	00 59 48.3	-1.6
	2.8nm,0.4s							
PDGK				Lg		Lg	01 00 44.6	
	3.5nm,0.5s							
SHLS	Shalkode	4.18	271	Pg		Pb	00 59 44.1	+0.1
	5.0nm,0.1s							
SHLS				Lg		Lg	01 00 37.3	
	6.7nm,0.4s							
SHLS	Shalkode	4.18	271	*e*P		Pb	00 59 44.1	+0.1
	5.0nm,0.1s							
SHLS				*e*S		Sb	01 00 37.3	+2.8
	6.7nm,0.4s							
ZSN	Zaisan	4.21	357	Pg		Pn	00 59 33.7	-0.8
	5.8nm,0.2s							
ZSN				Lg		Lg	01 00 19.5	
	11nm,0.2s							
ZSN	Zaisan	4.21	357	*e*P		Pn	00 59 33.7	-0.8
	5.8nm,0.2s							
ZSN				*e*S		Sn	01 00 19.5	-4.1
	11nm,0.2s							
MAKZ	Makanchi	4.22	329	⇓Pn		Pn	00 59 38.7	+4.0
	2.3nm,0.7s							
MAKZ				⇓Pg		Pb	00 59 46.8	+2.2
	2.9nm,0.6s							
MAKZ				⇑Sn		Sn	01 00 26.9	+2.9
	3.8nm,0.3s							
MAKZ				⇑Lg		Lg	01 00 43.7	
	16nm,0.6s							
KNOS	Konyrlen	4.48	286	Pg		Pb	00 59 50.7	+1.5
	4.9nm,0.1s							
KNOS				Lg		Lg	01 00 48.8	
	6.2nm,0.2s							
KAPS	Kapalarasan	4.65	298	Pg		Pb	00 59 51.4	-0.5
	1.5nm,0.1s							
KAPS				Lg		Lg	01 00 49.9	
	12nm,0.2s							
KAPS	Kapalarasan	4.65	298	*e*P		Pb	00 59 51.4	-0.5
	1.5nm,0.1s							
KAPS				*e*S		Sb	01 00 49.9	+1.9
	12nm,0.2s							
KPKS	Kokpek	4.74	275	Pg		Pg	00 59 58.7	-2.4
	3.3nm,0.1s							
KPKS				Lg		Lg	01 01 02.2	
	11nm,0.3s							
KPKS	Kokpek	4.74	275	*e*P		Pg	00 59 58.7	-2.4
	3.3nm,0.1s							
KPKS				*e*S		Sg	01 01 02.2	-0.2
	11nm,0.3s							
BLB	Baldybastay	4.93	282	Pg		Pb	01 00 00.1	+3.2
	8.8nm,0.1s							
BLB				Lg		Lg	01 01 04.8	
	5.4nm,0.2s							
TDK	Taldyqorghan	5.18	292	Pg		Pb	01 00 02.3	+1.3
	16nm,0.3s							
TDK				Lg		Lg	01 01 08.7	
	13nm,0.1s							
TDK	Taldyqorghan	5.18	292	*e*P		Pb	01 00 02.2	+1.3
	16nm,0.3s							
TDK				*e*S		Sg	01 01 08.7	-7.8
	13nm,0.1s							
CHKK	Chushkaly	5.98	279	Pg		Pg	01 00 21.8	-3.0
	0.8nm,0.1s							
CHKK				Lg		Lg	01 01 42.4	
	2.7nm,0.2s							
CHKK	Chushkaly	5.98	279	*e*P		Pg	01 00 21.8	-3.0
	0.8nm,0.1s							
CHKK				*e*S		Sg	01 01 42.4	+0.1
	2.7nm,0.2s							
KTBS	Karatobe	6.20	277	Pg		Pg	01 00 25.8	-3.2
	2.0nm,0.7s							
KTBS				Lg		Lg	01 01 49.0	
	2.4nm,0.4s							
KTBS	Karatobe	6.20	277	*e*P		Pg	01 00 25.8	-3.2
	2.0nm,0.7s							
KTBS				*e*S		Sg	01 01 49.0	-0.2
	2.4nm,0.4s							
KURK	Kurchatov	8.71	331	⇓Pn		Pn	01 00 37.9	+1.7
	1.8nm,1.0s							
KURK				⇑Sn		Sn	01 02 14.8	+0.5
	2.3nm,0.7s							
KURK				⇑Lg		Lg	01 03 02.9	
	6.4nm,0.7s							

IDC 07 01:03:20.4±7.5, 20.°42S×179.°67W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=312.0km s-min=117.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.01	257	P	P	P	01 11 21.4	-0.6
	1.1nm,0.8s,baz=95,slow=7.8,SNR=10							
	1.1nm,0.8s							
WRA	Warramunga Arr	43.06	262	P	P		01 11 22.7	+0.4
	1.2nm,0.8s,baz=96,slow=8.3,SNR=8.9							
	1.2nm,0.8s							
AKASG	Malin Array Be	142.17	330	PKP	PKPdf		01 22 53.7	-0.8
	0.6nm,0.5s,baz=67,slow=0.5,SNR=4.4							

*SSNC **07** 01:05:54.7±1.6, 18.°22N×76.°06W, h0km±11km, MD3.3, ML3.7*
*JSN **07** 01:05:54.4±0.4, 18.°38N×76.°15W, h0km±50km, MD3.4*
ISC 07 01:05:54.4±1.8, 18.°3N±0.°1×76.°10W±0.°09, h11km±15km, n14, σ0s61/20, 1C-2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GWJ	Greenwich	0.63	251	⇓*i*P		Pg	01 06 06.4	-0.3
HOJ	Hope	0.68	246	⇑*i*P		Pg	01 06 07.3	-0.2
HOJ				*i*S		Sg	01 06 16.9	+0.5
STH	Stony Hill	0.70	253	*e*P		Pg	01 06 07.6	-0.4
STH	Stony Hill	0.70	253	*e*P		Pg	01 06 07.5	-0.5
STH				*e*S		Sg	01 06 18.1	+0.8
STH	comp=N,154μm,0.1s			IAML			01 06 21.1	
STH	comp=E,113μm,0.1s			IAML			01 06 21.1	
MTDJ	Mount Denham	1.36	268	*e*P		Pn	01 06 19.2	-0.2
MTDJ				*e*S		Sn	01 06 37.8	+0.3
MTDJ	comp=E,1μm,0.4s			IAML			01 06 42.2	
MTDJ	comp=E,1μm,0.3s			IAML			01 06 42.6	
CHIV	Chivirico	1.71	350	*e*P		Pn	01 06 23.9	-0.2
RCC	Rio Carpintero	1.74	13	*e*P		Pn	01 06 24.4	-0.2
RCC				*e*S		Sn	01 06 46.5	-0.3
GTBY	Guantanamo Bay	1.88	30	⇓*e*P		Pn	01 06 26.3	-0.2
LMGC	Las Mercedes	1.97	334	*e*P		Pn	01 06 26.9	-0.7
GTMO	Guantanamo	2.00	27	*e*P		Pn	01 06 27.2	-0.9
PILO	Pilon	2.03	323	*e*P		Pn	01 06 27.7	-0.8
PILO				*e*S		Sn	01 06 54.4	+0.4
PILO	comp=E,61nm,0.3s			IAML			01 06 56.0	
PILO	comp=N,122nm,0.2s			IAML			01 06 56.5	
PINC	Pinares de May	2.21	8	*e*P		Pn	01 06 30.7	-0.3
PINC				*e*S		Sn	01 06 58.6	+0.3
PINC	comp=N,49nm,0.1s			IAML			01 07 00.8	
PINC	comp=E,30nm,0.1s			IAML			01 07 01.0	
NMDO	Nuevo Mundo	2.50	25	*e*P		Pn	01 06 35.6	+0.6
HLGC	Holguin	2.59	1	*e*P		Pn	01 06 37.5	+1.3

*IDC **07** 01:17:25.4±3.5, 23.°90N×121.°88E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=282.6km s-min=30.2km az=62.0*
*JMA **07** 01:17:27.7±0.2, 24.°1N±0.°6×12.°2E±.°, h0km, MV3.2/11, TAIWAN REGION*
*ASIES **07** 01:17:28.3, 24.°09N×121.°69E, h8km, ML3.7, Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^20 Nm; Mrr8.46; Mθθ-4.19; Mϕϕ-4.28; Mrθ4.80; Mrϕ-5.65; Mθϕ5.33; Fault plane solution: M0 11.70810×10^20 NP1: ϕs42.83000°, δ64.02000°, λ88.07000°. NP2: ϕs227.22000°, δ26.05000°, λ93.94000°. Principal axes: T Plg70.9210°, Azm308.6720°; N Plg1.7290°, Azm43.6790°; P Plg18.9940°, Azm134.2750°;*
*TAP **07** 01:17:28.3, 24.°09N×121.°69E, h8km, ML3.7, C*
ISC 07 01:17:28.1±0.9, 24.°09N±0.°01×121.°72E±0.°02, h8km±6km, n134, σ0s75/207, mb3.3/3, 3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.11	309	⇓*i*P		Pg	01 17 30.9	+0.2
	baz=315							
TWD	Chiawan	0.11	265	⇓*i*P		Pg	01 17 30.7	+0.1
	baz=270							
TWD				*i*S		Sg	01 17 32.2	-0.1
	baz=270							
NACB	Ninganchiao	0.14	307	P		Pg	01 17 31.3	+0.2
NACB	Ninganchiao	0.14	307	⇓*i*P		Pg	01 17 31.2	+0.1
	baz=311							
NACB				S		Sg	01 17 33.1	-0.1
	baz=311							
EHP	Heping Village	0.22	6	P		Pg	01 17 33.1	+0.5
	baz=9.0							
EHP				S		Sg	01 17 36.6	+1.0
	baz=9.0							
ETM	Tongmen	0.24	239	*i*P		Pg	01 17 33.1	+0.2
	baz=238							
ETM				S		Sg	01 17 36.1	0.0
	baz=238							
EAHA	Aohua	0.24	5	P		Pg	01 17 33.4	+0.5
	baz=6.0							
EAHA				S		Sg	01 17 37.1	+0.9
	baz=6.0							
LXIB	Xiulin Townshi	0.28	256	P		Pg	01 17 33.9	+0.1
	baz=248							
LXIB				S		Sg	01 17 37.4	-0.2
	baz=248							
SHUL	Shoufeng	0.33	205	*e*P		Pb	01 17 36.7	+0.4
	baz=209							
ENA	Nanau	0.34	4	*i*P		Pg	01 17 35.3	+0.5
	baz=6.0							
ENA				S		Sg	01 17 39.8	+0.6
	baz=6.0							
EWUT	Wuta	0.36	9	P		Pg	01 17 35.8	+0.6
	baz=9.0							
EWUT				S		Sg	01 17 40.7	+0.8
	baz=9.0							
ESL	Shilin	0.38	223	P		Pg	01 17 35.7	+0.2
	baz=230							
ESL				S		Sg	01 17 40.6	+0.1
	baz=230							
TEGC	Jichi Village	0.41	203	P		Pb	01 17 38.3	+0.7
	baz=204							
TEGC				*e*S		Sb	01 17 45.9	+1.9
	baz=204							
WHF	Hehuan Shan	0.41	278	P		Pg	01 17 36.5	+0.1
	baz=278							
WHF				*e*S		Sg	01 17 41.7	-0.1
	baz=278							
NNSB	Datong	0.45	318	P		Pg	01 17 37.4	+0.5
	baz=318							
NNSB				S		Sg	01 17 43.4	+0.4
	baz=318							
FUSS	Fushou	0.46	290	P		Pg	01 17 37.6	+0.5
	baz=290							
FUSS				S		Sg	01 17 43.9	+0.8
	baz=290							
NNS	Nan Shan	0.47	318	P		Pg	01 17 37.6	+0.4
	baz=318							
NNS				S		Sg	01 17 43.8	+0.3
	baz=318							
LATG	Datong	0.47	339	P		Pg	01 17 37.8	+0.4
	baz=326							
WARBT	Fenglin Townsh	0.48	219	P		Pg	01 17 37.6	+0.2
	baz=230							
CHGB	Renai	0.49	267	P		Pg	01 17 38.2	+0.4
	baz=259							
CHGB				S		Sg	01 17 44.6	+0.3
	baz=259							
EGFH	Guangfu	0.49	212	P		Pg	01 17 38.4	+0.7
	baz=224							
EGFH				*e*S		Sb	01 17 46.4	-0.1
	baz=224							
ESAO	Su ao	0.50	14	P		Pg	01 17 38.3	+0.5
	baz=13							
ESAO				*e*S		Sg	01 17 44.6	+0.2
	baz=13							
OWD	Renai	0.51	255	P		Pg	01 17 38.3	+0.3
	baz=255							
OWD				*e*S		Sg	01 17 44.4	-0.4
	baz=255							
TWT	Tachien	0.52	288	P		Pb	01 17 39.0	-0.5
	baz=287							
TWT				*e*S		Sg	01 17 45.9	+0.9
	baz=287							
TWC	Suao	0.53	13	P		Pg	01 17 39.1	+0.7
	baz=4.0							
TWC				*e*S		Sg	01 17 45.8	+0.4
	baz=4.0							
TDCB	Techi	0.53	288	P		Pg	01 17 39.1	+0.6
	baz=288							
TDCB				S		Sg	01 17 46.0	+0.4
	baz=288							
NDS	Dongshan	0.54	0	P		Pg	01 17 39.3	+0.7
	baz=358							
NDS				*e*S		Sg	01 17 46.7	+0.9
	baz=358							
NDT	Datong Townshi	0.54	340	P		Pb	01 17 39.3	-0.6
	baz=338							
NDT				S		Sb	01 17 46.

	baz=193							
HGSD				*e*S		**Sn**	**01 17 53.8**	**-0.4**
	baz=193							
YHNB	**Yeheng**	**0.66**	**332**	P		**Pb**	**01 17 41.7**	**-0.2**
YHNB	**Yeheng**	**0.66**	**332**	P		**Pb**	**01 17 41.6**	**-0.3**
	baz=331							
YHNB				*e*S		**Sg**	**01 17 49.4**	**0.0**
	baz=331							
NSK	**Sanguang**	**0.67**	**331**	P		**Pb**	**01 17 41.7**	**-0.4**
	baz=330							
NSK				S		**Sg**	**01 17 50.2**	**+0.4**
	baz=330							
ILA	**Ilan**	**0.67**	**3**	*e*P		**Pb**	**01 17 42.2**	**+0.1**
	baz=2.0							
ILA				*e*S		**Sb**	**01 17 51.6**	**0.0**
	baz=2.0							
FUSB	**Fushanzhiwuyua**	**0.68**	**350**	P		**Pb**	**01 17 42.0**	**-0.3**
	baz=349							
FUSB				S		**Sb**	**01 17 51.0**	**-0.8**
	baz=349							
EHY	**Hungye**	**0.68**	**212**	P		**Pg**	**01 17 41.6**	**+0.3**
	baz=213							
WPL	**Puli Township**	**0.70**	**264**	P		**Pb**	**01 17 42.3**	**-0.2**
	baz=256							
WPL				*e*S		**Sg**	**01 17 50.8**	**+0.2**
	baz=256							
NWLT	**Wulai**	**0.71**	**344**	P		**Pb**	**01 17 42.6**	**-0.2**
	baz=330							
NWLT				*e*S		**Sg**	**01 17 51.6**	**+0.5**
	baz=330							
DPDB	**Guoxing**	**0.72**	**266**	P		**Pb**	**01 17 42.7**	**-0.3**
	baz=258							
DPDB				*e*S		**Sg**	**01 17 50.7**	**-0.8**
	baz=258							
WHP	**Taichung City**	**0.73**	**285**	P		**Pb**	**01 17 43.1**	**0.0**
	baz=285							
WHP				*e*S		**Sb**	**01 17 52.9**	**-0.4**
	baz=285							
WCS	**Beigang Elemen**	**0.73**	**268**	P		**Pb**	**01 17 42.9**	**-0.2**
	baz=268							
SSLB	**Suanglung**	**0.76**	**247**	P		**Pg**	**01 17 43.1**	**+0.3**
SSLB	**Suanglung**	**0.76**	**247**	P		**Pg**	**01 17 43.0**	**+0.3**
	baz=258							
SSLB				*e*S		**Sg**	**01 17 51.9**	**-0.7**
	baz=258							
NFF	**Wufeng Townshi**	**0.77**	**315**	P		**Pb**	**01 17 43.8**	**+0.1**
	baz=314							
NFF				*e*S		**Sg**	**01 17 52.9**	**0.0**
	baz=314							
SMLT	**Sun Moon Lake**	**0.77**	**255**	*i* P		**Pb**	**01 17 43.6**	**-0.3**
	baz=255							
SMLT				*e*S		**Sg**	**01 17 53.3**	**+0.2**
	baz=255							
YULB	**Yu-li**	**0.79**	**209**	P		**Pg**	**01 17 43.7**	**+0.3**
YULB	**Yu-li**	**0.79**	**209**	*e*P		**Pg**	**01 17 43.2**	**-0.2**
	baz=225							
TYC	**Yuchr**	**0.81**	**257**	P		**Pb**	**01 17 44.0**	**-0.4**
	baz=258							
TYC				*e*S		**Sg**	**01 17 52.6**	**-1.5**
	baz=258							
EYUL	**Yuli**	**0.82**	**206**	*e*P		**Pn**	**01 17 45.5**	**-0.5**
	baz=221							
TWF1	**Yuli**	**0.83**	**208**	*e*P		**Pg**	**01 17 43.9**	**-0.2**
	baz=223							
LIOB	**Emei**	**0.84**	**311**	P		**Pb**	**01 17 45.6**	**+0.5**
	baz=310							
LIOB				*e*S		**Sb**	**01 17 56.9**	**+0.4**
	baz=310							
NSTT	**Nanjuang**	**0.84**	**310**	P		**Pb**	**01 17 45.4**	**+0.4**
	baz=309							
NSTT				*e*S		**Sb**	**01 17 56.4**	**-0.2**
	baz=309							
WHYT	**Xinyi Township**	**0.88**	**244**	*e*P		**Pb**	**01 17 45.7**	**0.0**
	baz=252							
WHYT				*e*S		**Sb**	**01 17 57.9**	**+0.3**
	baz=252							
TIPB	**Shuangxi**	**0.88**	**7**	P		**Pb**	**01 17 45.8**	**+0.1**
	baz=355							
TIPB				*e*S		**Sg**	**01 17 55.8**	**-0.9**
	baz=355							
NHDH	**Xindian Distri**	**0.89**	**349**	*e*P		**Pb**	**01 17 46.0**	**+0.3**
	baz=345							
TWA	**Mucha**	**0.89**	**352**	P		**Pb**	**01 17 46.3**	**+0.4**
	baz=350							
TWA				*e*S		**Sg**	**01 17 57.4**	**+0.4**
	baz=350							
TWQ1	**Liyutan**	**0.90**	**287**	*e*P		**Pn**	**01 17 46.9**	**-0.2**
	baz=287							
TATO	**Taipei**	**0.91**	**347**	P		**Pb**	**01 17 46.5**	**+0.4**
NSY	**Sanyi**	**0.93**	**291**	P		**Pn**	**01 17 47.7**	**+0.2**
	baz=291							
CHKH	**Chenggong**	**0.94**	**198**	*e*P		**Pb**	**01 17 47.0**	**+0.3**
	baz=191							
CHKH				*e*S		**Sn**	**01 18 00.8**	**-0.4**
	baz=191							
WJS	**Zhushan**	**0.94**	**254**	*e*P		**Pn**	**01 17 47.2**	**-0.4**
	baz=254							
WJS				*e*S		**Sn**	**01 18 00.5**	**-0.8**
	baz=254							
TWB1	**Santiao Chiao**	**0.95**	**15**	P		**Pb**	**01 17 47.1**	**+0.3**
	baz=4.0							
TWB1				*e*S		**Sg**	**01 17 58.4**	**-0.3**
	baz=4.0							
NMLH	**Miaoli**	**0.95**	**298**	*e*P		**Pn**	**01 17 48.1**	**+0.3**
	baz=297							
SBCB	**Hsinchu**	**0.96**	**317**	*e*P		**Pn**	**01 17 48.1**	**+0.2**
	baz=315							
WNT	**Mingjian**	**0.97**	**258**	P		**Pn**	**01 17 48.4**	**+0.4**
	baz=258							
WNT				*e*S		**Sn**	**01 18 01.8**	**0.0**
	baz=258							
FULB	**Fuli**	**0.97**	**204**	*e*P		**Pb**	**01 17 47.6**	**+0.5**
	baz=222							
NWF	**Wu-fen Shan**	**0.98**	**4**	P		**Pn**	**01 17 48.0**	**-0.2**
	baz=351							
NWF				*e*S		**Sg**	**01 18 00.0**	**+0.3**
	baz=351							
WFSB	**Wu-fen Shan**	**0.98**	**4**	P		**Pb**	**01 17 47.8**	**+0.4**
	baz=351							
WFSB				*e*S		**Sg**	**01 18 00.0**	**+0.4**
	baz=351							
HSN	**Hsinchu**	**0.98**	**316**	*e*P		**Pn**	**01 17 48.8**	**+0.6**
	baz=317							
NCUH	**Zhongli**	**1.00**	**331**	*e*P		**Pn**	**01 17 48.9**	**+0.5**
	baz=329							
NCUH				*e*S		**Sn**	**01 18 04.0**	**+1.3**
	baz=329							
SXI1	**Grass Mountain**	**1.01**	**8**	P		**Pn**	**01 17 48.5**	**-0.2**
	baz=357							
SXI1				*e*S		**Sb**	**01 18 01.2**	**-0.2**
	baz=357							
ALS	**Alishan**	**1.01**	**235**	*e*P		**Pb**	**01 17 48.1**	**+0.1**
	baz=247							
WDJ	**Dajia District**	**1.01**	**285**	P		**Pn**	**01 17 49.9**	**+1.2**
	baz=295							
WDJ				*e*S		**Sn**	**01 18 03.6**	**+0.5**
	baz=295							
CHKT	**Chengkung**	**1.04**	**198**	*e*P		**Pg**	**01 17 47.5**	**-0.5**
	baz=193							
TWS1	**Kuangyinshan**	**1.04**	**345**	*e*P		**Pn**	**01 17 49.9**	**+0.9**
	baz=343							
TWS1				*e*S		**Sn**	**01 18 04.4**	**+0.7**
	baz=343							
EHD	**Haiduan**	**1.05**	**207**	*e*P		**Pg**	**01 17 48.0**	**-0.2**
	baz=224							
TNOU	**National Taiwa**	**1.06**	**3**	*e*P		**Pn**	**01 17 49.1**	**-0.1**
	baz=357							
WCHH	**Zhanghua**	**1.06**	**270**	*e*P		**Pn**	**01 17 50.3**	**+1.1**
	baz=271							
YM01	**YM01**	**1.06**	**353**	P		**Pn**	**01 17 49.5**	**+0.2**
	baz=359							
YM01				*e*S		**Sn**	**01 18 04.0**	**-0.2**
	baz=359							
NTST	**Danshui**	**1.10**	**347**	*e*P		**Pn**	**01 17 50.3**	**+0.6**
	baz=352							
NTST				*e*S		**Sn**	**01 18 06.2**	**+1.1**
	baz=352							
ELDTW	**Lidau**	**1.10**	**216**	*e*P		**Pg**	**01 17 49.2**	**-0.1**
	baz=230							
ELDTW				*e*S		**Sb**	**01 18 04.3**	**+0.2**
	baz=230							
ANP	**Anpu**	**1.11**	**351**	*e*P		**Pn**	**01 17 50.4**	**+0.4**
	baz=345							
WGK	**Gukeng**	**1.13**	**249**	*e*P		**Pn**	**01 17 50.7**	**+0.5**
	baz=251							
WGK				*e*S		**Sn**	**01 18 07.7**	**+1.8**
	baz=251							
WDLH	**Douliu**	**1.15**	**250**	*e*P		**Pn**	**01 17 51.1**	**+0.6**
	baz=252							
WDLH				*e*S		**Sn**	**01 18 07.9**	**+1.6**
	baz=252							
EDH	**Donghe**	**1.18**	**199**	*e*P		**Pb**	**01 17 48.7**	**-2.0**
	baz=190							
JYNG	**Yonagunijimaku**	**1.18**	**72**	S		**Sn**	**01 18 07.3**	**+0.2**
TWY	**Chenhua**	**1.19**	**355**	*e*P		**Pn**	**01 17 51.2**	**+0.3**
	baz=337							
WCKO	**Fanlu**	**1.21**	**238**	*e*P		**Pg**	**01 17 52.2**	**+0.9**
	baz=241							
WCKO				*e*S		**Sn**	**01 18 09.7**	**+1.9**
	baz=241							
WRL	**Guolierlin Hig**	**1.24**	**262**	*e*P		**Pg**	**01 17 52.6**	**+0.7**
	baz=262							
WRL				*e*S		**Sn**	**01 18 10.2**	**+1.7**
	baz=262							
YOJ	**Yonaguni jima**	**1.24**	**72**	P		Pg	01 17 57.0	+5.1
YOJ	**Yonaguni jima**	**1.24**	**72**	*e*P		**Pg**	**01 17 52.3**	**+0.3**
	baz=68							
YOJ	**Yonaguni jima**	**1.24**	**72**	*e*P		**Pg**	**01 17 52.6**	**+0.7**
STYH	**Taoyuan**	**1.26**	**223**	*e*P		**Pn**	**01 17 51.8**	**-0.2**
	baz=231							
STYH				*e*S		**Sn**	**01 18 09.4**	**+0.4**
	baz=231							
CHN4	**Tsaushan**	**1.26**	**235**	*e*P		**Pg**	**01 17 53.2**	**+0.8**
	baz=226							
CHN4				*e*S		**Sn**	**01 18 11.9**	**+2.6**
	baz=226							
TPUB	**Ta-pu**	**1.27**	**232**	P		**Pg**	**01 17 53.3**	**+0.8**
TPUB	**Ta-pu**	**1.27**	**232**	*e*P		**Pg**	**01 17 53.0**	**+0.5**
	baz=236							
TPUB				*e*S		**Sn**	**01 18 11.7**	**+2.3**
	baz=236							
WTK	**Tuku**	**1.28**	**252**	*e*P		**Pg**	**01 17 53.0**	**+0.4**
	baz=253							
WTK				*e*S		**Sn**	**01 18 10.8**	**+1.2**
	baz=253							
LONT	**Longtian**	**1.29**	**205**	*e*P		**Pg**	**01 17 53.0**	**0.0**
	baz=210							
WTP	**Ta-pu**	**1.31**	**230**	*e*P		**Pg**	**01 17 54.0**	**+0.6**
	baz=235							
TWK	**Hsinying**	**1.39**	**234**	*e*P		**Pg**	**01 17 55.2**	**+0.4**
	baz=238							
TWK				*e*S		**Sg**	**01 18 14.8**	**+1.9**
	baz=238							
TWGBT	**Beinan**	**1.39**	**205**	P		**Pg**	**01 17 56.2**	**+1.3**
TWGBT	**Beinan**	**1.39**	**205**	*e*P		**Pg**	**01 17 55.0**	**+0.1**
	baz=211							
TWG	**Pinlang**	**1.40**	**205**	*e*P		**Pg**	**01 17 55.0**	**+0.1**
	baz=211							
CHN1	**Nanshi**	**1.41**	**231**	*e*P		**Pg**	**01 17 55.7**	**+0.4**
	baz=235							
CHN1				*e*S		**Sg**	**01 18 16.3**	**+2.7**
	baz=235							
SGST	**Jiashian**	**1.44**	**226**	*e*P		**Pb**	**01 17 55.0**	**-0.2**
	baz=231							
SGST				*e*S		**Sg**	**01 18 15.8**	**+1.2**
	baz=231							
SLGT	**Liugui**	**1.47**	**222**	*e*P		**Pb**	**01 17 55.8**	**+0.1**
	baz=228							
ICHU	**Yijhu**	**1.50**	**241**	*e*P		**Pb**	**01 17 56.0**	**-0.3**
	baz=245							
ICHU				*e*S		**Sg**	**01 18 17.9**	**+1.4**
	baz=245							
PCYT	**Pengchaiyu**	**1.57**	**12**	*e*P		**Pb**	**01 17 57.0**	**-0.4**
	baz=2.0							
SCST	**Cishan**	**1.64**	**223**	*e*P		**Pg**	**01 17 59.7**	**+0.1**
	baz=229							
SCST				*e*S		**Sg**	**01 18 23.5**	**+2.6**
	baz=229							
TSMG	**Majia**	**1.69**	**216**	*e*P		**Pb**	**01 17 59.9**	**+0.4**
	baz=235							
TSMG				*e*S		**Sg**	**01 18 23.1**	**+0.6**
	baz=235							
TSCK	**Chigu Township**	**1.76**	**238**	*e*P		**Pn**	**01 17 58.6**	**-0.3**
	baz=244							
MASBT	**Mashibuluo**	**1.78**	**214**	*e*P		**Pb**	**01 18 01.2**	**+0.3**
	baz=217							
MASBT				*e*S		**Sg**	**01 18 24.9**	**-0.3**
	baz=217							
EAST	**Anshuo**	**1.88**	**205**	*e*P		**Pb**	**01 18 02.1**	**-0.5**
	baz=197							
SCZT	**Fangliau**	**1.98**	**211**	*e*P		**Pb**	**01 18 04.2**	**-0.2**
	baz=198							
PNG	**Penghu**	**2.04**	**256**	*e*P		**Pn**	**01 18 03.8**	**+1.0**
	baz=258							
PNG				*e*S		**Sb**	**01 18 31.0**	**-0.1**
	baz=258							
SLIU	**Shizi**	**2.05**	**204**	*e*P		**Pb**	**01 18 05.2**	**-0.4**
	baz=198							
WDGT	**Dungji**	**2.06**	**247**	*e*P		**Pn**	**01 18 03.3**	**+0.4**
	baz=250							
JIJ	**Ishigaki jima**	**2.23**	**83**	S		**Sn**	**01 18 34.3**	**+1.1**
VWUC	**VWUC**	**2.25**	**294**	*e*P		**Pn**	**01 18 05.5**	**-0.2**
	baz=294							
VCHM	**Qimei**	**2.27**	**248**	*e*P		**Pn**	**01 18 05.2**	**-0.8**
	baz=238							
JISG	**Ishigakijimahi**	**2.42**	**78**	S		**Sn**	**01 18 38.2**	**+0.5**
PTMZ	**Houxiangcun**	**2.54**	**292**	*e*P		**Pn**	**01 18 10.0**	**+0.3**
	baz=292							
MATB	**Ma-tsu**	**2.60**	**322**	*e*P		**Pn**	**01 18 10.1**	**-0.5**
	baz=319							
KNMB	**Chin-men Tao**	**3.06**	**278**	*e*P		**Pn**	**01 18 17.2**	**+0.4**
	baz=278							
XPSS	**Dashiqiu**	**3.15**	**334**	*e*P		**Pn**	**01 18 17.8**	**-0.1**
	baz=329							
MHZQ	**Yeshan**	**3.15**	**310**	*e*P		**Pn**	**01 18 18.3**	**+0.2**
	baz=310							
AXDP	**Jialang**	**3.50**	**284**	*e*P		**Pn**	**01 18 22.7**	**-0.2**
	baz=284							
MKAR	**Makanchi Array**	**38.74**	**316**	P		**P**	**01 24 53.6**	**+0.7**
	0.2nm,0.4s,baz=104,slow=9.2,SNR=5.2							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**40.59**	**327**	P		**P**	**01 25 08.1**	**+0.1**
	0.5nm,0.4s,baz=134,slow=8.2,SNR=3.8							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**45.46**	**163**	P		**P**	**01 25 44.5**	**-3.4**
	0.2nm,0.6s,baz=343,slow=8.8,SNR=1.4							
	0.2nm,0.6s							

IDC ***07*** *01:21:44.7±0.8,23.99N×121.89E,h0km,mb3.8/11, mbtmp3.8/12,ML3.3/1,MS3.5/4,Error ellipse: s-maj=31.5km s-min=16.7km az=61.0*

TAP ***07*** *01:21:45.4,24.00N×121.72E,h6km,ML4.4,C*

ASIES ***07*** *01:21:45.4,24.00N×121.72E,h6km,ML4.4,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.53; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$0.25; $M_{r\theta}$0.56; $M_{\theta\phi}$-0.25; $M_{\phi r}$1.02; Fault plane solution: $M_0$1.38739×10^{22} NP1:ϕ_s40.19000°, δ77.90000°,λ63.95000°. NP2:ϕ_s286.98000°,δ28.54000°, λ153.98000°. Principal axes: T Plg50.2990°, Azm281.1100°; N Plg25.4260°, Azm46.0400°; P Plg28.2280°, Azm150.8260°;*

JMA ***07*** *01:21:46.1±0.1,24.01N±0.3×121.7E±0.7,h3km,MV3.6/13, TAIWAN REGION*

NIED ***07*** *01:21:46.1,24.01N×121.72E,h3km,MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.07; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$0.81; $M_{r\theta}$1.47; $M_{\theta\phi}$-0.42; $M_{\phi r}$0.17; Fault plane solution: $M_0$1.57000×10^{15} NP1: ϕ_s100.00000°,δ87.00000°,λ114.00000°. NP2: ϕ_s196.00000°,δ24.00000°,λ7.00000°.*

ISC 07 01:21:45.8±1.0,23.97N±0.01×121.75E±0.02,h7km±6km, n182,σ0°63/233,mb3.8/11,MS3.5/3,47C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TWD	**Chiawan**	**0.18**	**309**	⇑*i*P	**Pg**	**01 21 49.2**	**-0.2**
	baz=309						
TWD				*i* S	**Sg**	**01 21 52.1**	**+0.1**
	baz=309						
ETL	**Fush Village**	**0.23**	**329**	⇑P	**Pg**	**01 21 50.1**	**-0.2**
	baz=331						
ETL				S	**Sg**	**01 21 53.4**	**+0.1**
	baz=331						
ETM	**Tongmen**	**0.23**	**270**	⇑*i*P	**Pg**	**01 21 50.3**	**-0.2**
	baz=261						
ETM				*i* S	**Sg**	**01 21 53.8**	**+0.2**
	baz=261						
SHUL	**Shoufeng**	**0.25**	**224**	⇓P	**Pg**	**01 21 51.7**	**+1.1**
	baz=214						
NACB	**Ninganchiao**	**0.25**	**326**	P	**Pg**	**01 21 50.3**	**-0.4**
NACB	**Ninganchiao**	**0.25**	**326**	⇑*i*P	**Pg**	**01 21 50.4**	**-0.4**
	baz=327						
NACB				*i* S	**Sg**	**01 21 54.1**	**0.0**
	baz=327						
LXIB	**Xiulin Townshi**	**0.31**	**280**	⇑*i*P	**Pg**	**01 21 51.7**	**-0.2**
	baz=275						
TEGC	**Jichi Village**	**0.32**	**217**	*e*P	**Pb**	**01 21 53.4**	**-0.4**
	baz=208						
ESL	**Shilin**	**0.33**	**243**	⇑*i*P	**Pg**	**01 21 52.1**	**-0.1**
	baz=234						
EHP	**Heping Village**	**0.34**	**359**	*e*P	**Pg**	**01 21 51.7**	**-0.8**
	baz=4.0						
EAHA	**Aohua**	**0.36**	**359**	P	**Pg**	**01 21 52.9**	**0.0**
	baz=2.0						
WARBT	**Fenglin Townsh**	**0.41**	**234**	⇑P	**Pg**	**01 21 53.8**	**0.0**
	baz=227						
EGFH	**Guangfu**	**0.42**	**225**	⇑P	**Pg**	**01 21 54.3**	**+0.4**
	baz=219						
ENA	**Nanau**	**0.46**	**359**	⇑*i*P	**Pg**	**01 21 54.8**	**+0.1**
	baz=3.0						
ENA				*i* S	**Sg**	**01 22 01.6**	**+0.8**
	baz=3.0						
WHF	**Hehuan Shan**	**0.48**	**292**	⇑*i*P	**Pg**	**01 21 54.8**	**-0.3**
	baz=289						
WHF				*i* S	**Sg**	**01 22 01.5**	**+0.1**
	baz=289						
EWUT	**Wuta**	**0.48**	**3**	*e*P	**Pg**	**01 21 55.2**	**+0.2**
	baz=6.0						
OWD	**Renai**	**0.52**	**269**	⇑*i*P	**Pg**	**01 21 55.8**	**-0.1**
	baz=265						
CHGB	**Renai**	**0.53**	**280**	⇑*i*P	**Pg**	**01 21 56.1**	**0.0**
	baz=277						
FUSS	**Fushou**	**0.54**	**301**	⇑*i*P	**Pg**	**01 21 56.3**	**0.0**
	baz=299						
HGSD	**Ruisui**	**0.56**	**212**	⇓P	**Pb**	**01 21 57.5**	**-0.4**
	baz=208						
NNSB	**Datong**	**0.57**	**324**	⇑*i*P	**Pg**	**01 21 56.7**	**-0.1**
	baz=324						
NNSB				*e*S	**Sg**	**01 22 05.0**	**+0.7**
	baz=324						
NNSH	**Datong**	**0.57**	**324**	⇑*i*P	**Pg**	**01 21 56.7**	**-0.1**
	baz=324						
NNSH				*e*S	**Sg**	**01 22 05.1**	**+0.8**
	baz=324						
WUSB	**Renai**	**0.58**	**273**	⇑*i*P	**Pg**	**01 21 57.0**	**0.0**
	baz=269						
WUSB				*e*S	**Sg**	**01 22 04.8**	**+0.3**
	baz=269						
NNS	**Nan Shan**	**0.58**	**324**	⇑*i*P	**Pg**	**01 21 56.9**	**-0.2**
	baz=324						
VWDT	**VWDT**	**0.59**	**249**	⇑*i*P	**Pg**	**01 21 57.6**	**+0.3**
	baz=245						
VWDT				*e*S	**Sg**	**01 22 05.2**	**+0.1**
	baz=245						
TWT	**Tachien**	**0.60**	**299**	⇑*i*P	**Pg**	**01 21 57.6**	**+0.3**
	baz=296						
TWT				*i* S	**Sb**	**01 22 06.2**	**-1.2**
	baz=296						
EHY	**Hungye**	**0.60**	**221**	*e*P	**Pg**	**01 21 57.4**	**0.0**
	baz=216						
EHY				S	**Sb**	**01 22 07.8**	**+0.4**
	baz=216						
LATG	**Datong**	**0.60**	**340**	⇑*i*P	**Pg**	**01 21 57.3**	**-0.1**
	baz=341						
LATG				S	**Sg**	**01 22 06.0**	**+0.7**
	baz=341						
EOS3	**EOS3**	**0.61**	**58**	*e*P	**Pn**	**01 22 00.2**	**-0.5**
	baz=61						
TDCB	**Techi**	**0.61**	**298**	⇑*i*P	**Pg**	**01 21 57.6**	**0.0**
	baz=296						
TDCB				*e*S	**Sg**	**01 22 05.5**	**-0.1**
	baz=296						
ESAO	**Su ao**	**0.61**	**8**	*e*P	**Pg**	**01 21 58.0**	**+0.4**
	baz=11						
EOS2	**EOS2**	**0.63**	**44**	*e*P	**Pn**	**01 22 00.5**	**-0.6**
	baz=47						
TWC	**Suao**	**0.65**	**8**	⇑*i*P	**Pg**	**01 21 58.5**	**+0.3**
	baz=11						
TWC				S	**Sb**	**01 22 08.0**	**-0.6**
	baz=11						
NDS	**Dongshan**	**0.67**	**357**	P	**Pg**	**01 21 58.7**	**+0.1**
	baz=359						
NDS				S	**Sb**	**01 22 09.5**	**+0.3**
	baz=359						
NDT	**Datong Townshi**	**0.67**	**341**	⇑*i*P	**Pg**	**01 21 58.8**	**+0.1**
	baz=342						
NDT				*i* S	**Sb**	**01 22 08.7**	**-0.7**
	baz=342						
ENTT	**Nioudou**	**0.69**	**346**	⇑P	**Pg**	**01 21 59.2**	**+0.1**
	baz=348						
ENTT				S	**Sb**	**01 22 09.4**	**-0.6**
	baz=348						
ECBN	**Changbin**	**0.70**	**203**	*e*P	**Pg**	**01 21 59.4**	**+0.1**
	baz=200						
YULB	**Yu-li**	**0.70**	**216**	P	**Pb**	**01 22 00.8**	**+0.4**
YULB	**Yu-li**	**0.70**	**216**	*e*P	**Pg**	**01 21 59.5**	**+0.2**
	baz=212						
WPL	**Puli Township**	**0.73**	**274**	⇑*i*P	**Pg**	**01 21 59.8**	**+0.1**
	baz=271						
EYUL	**Yuli**	**0.73**	**213**	*e*P	**Pb**	**01 22 01.3**	**+0.5**
	baz=209						
TWF1	**Yuli**	**0.74**	**214**	*e*P	**Pg**	**01 21 59.8**	**-0.2**
	baz=210						
SSLB	**Suanglung**	**0.75**	**257**	P	**Pg**	**01 22 00.0**	**-0.2**
SSLB	**Suanglung**	**0.75**	**257**	⇑*i*P	**Pg**	**01 22 00.2**	**0.0**
	baz=253						
DPDB	**Guoxing**	**0.76**	**275**	⇑*i*P	**Pg**	**01 22 00.5**	**+0.2**
	baz=273						
DPDB				*e*S	**Sb**	**01 22 11.0**	**-0.8**
	baz=273						
TWE	**Neicheng**	**0.76**	**354**	P	**Pg**	**01 22 00.5**	**+0.2**
	baz=357						
TWE				*i* S	**Sb**	**01 22 11.8**	**0.0**
	baz=357						
WCS	**Beigang Elemen**	**0.77**	**277**	⇑*i*P	**Pg**	**01 22 00.6**	**0.0**
	baz=274						
YHNB	**Yeheng**	**0.78**	**334**	P	**Pg**	**01 22 01.0**	**+0.2**
YHNB	**Yeheng**	**0.78**	**334**	⇑*i*P	**Pg**	**01 22 00.9**	**+0.2**
	baz=334						
YHNB				*i* S	**Sb**	**01 22 11.6**	**-0.9**
	baz=334						
SMLT	**Sun Moon Lake**	**0.78**	**264**	⇑*i*P	**Pg**	**01 22 01.0**	**+0.2**
	baz=261						
SMLT				*e*S	**Sg**	**01 22 11.7**	**+0.7**
	baz=261						
NSK	**Sanguang**	**0.79**	**333**	⇑*i*P	**Pg**	**01 22 01.1**	**+0.1**
	baz=334						
NSK				*e*S	**Sg**	**01 22 11.9**	**+0.6**
	baz=334						
WHP	**Taichung City**	**0.80**	**293**	⇑*i*P	**Pg**	**01 22 01.4**	**+0.3**
	baz=291						
WHP				S	**Sb**	**01 22 13.0**	**-0.1**
	baz=291						
FUSB	**Fushanzhiwuyua**	**0.81**	**349**	P	**Pg**	**01 22 01.4**	**+0.1**
	baz=350						
FUSB				*e*S	**Sg**	**01 22 12.0**	**+0.2**
	baz=350						
TYC	**Yuchr**	**0.82**	**266**	⇑*i*P	**Pg**	**01 22 01.4**	**-0.1**
	baz=263						
CHKH	**Chenggong**	**0.83**	**203**	*e*P	**Pg**	**01 22 02.2**	**+0.4**
	baz=200						
NWLT	**Wulai**	**0.84**	**345**	⇑P	**Pg**	**01 22 02.1**	**+0.2**
	baz=345						
NWLT				*e*S	**Sb**	**01 22 13.8**	**-0.4**
	baz=345						
WHYT	**Xinyi Township**	**0.86**	**252

	baz=292							
TWQ1				*e*S	**Sn**	**01 22 19.0**	**-0.9**	
	baz=292							
ALS	**Alishan**	**0.98**	**243**	⇑*i*P	**Pg**	**01 22 04.8**	**+0.3**	
	baz=239							
ALS				S	**Sb**	**01 22 18.9**	**+0.6**	
	baz=239							
NJD	**Zhudong**	**0.98**	**322**	*e*P	**Pn**	**01 22 05.6**	**-0.3**	
	baz=321							
NJD				*e*S	**Sn**	**01 22 19.9**	**-0.1**	
	baz=321							
WNT	**Mingjian**	**0.98**	**265**	⇑*i*P	**Pn**	**01 22 05.4**	**-0.5**	
	baz=262							
WNT				*e*S	**Sn**	**01 22 20.1**	**+0.1**	
	baz=262							
WNT1	**Nantou City**	**0.98**	**267**	*e*P	**Pb**	**01 22 05.2**	**+0.2**	
	baz=264							
WNT1				*e*S	**Sn**	**01 22 20.3**	**+0.2**	
	baz=264							
ECS	**Chishang**	**0.99**	**209**	*e*P	**Pn**	**01 22 06.6**	**+0.5**	
	baz=207							
TCU	**Taichung**	**1.00**	**281**	⇑*e*P	**Pn**	**01 22 06.2**	**+0.1**	
	baz=278							
TIPB	**Shuangxi**	**1.00**	**4**	⇑P	**Pg**	**01 22 04.9**	**-0.2**	
	baz=5.0							
TIPB				S	**Sb**	**01 22 18.7**	**-0.3**	
	baz=5.0							
NSY	**Sanyi**	**1.01**	**297**	*e*P	**Pn**	**01 22 06.2**	**-0.2**	
	baz=295							
NHDH	**Xindian Distri**	**1.01**	**348**	*e*P	**Pg**	**01 22 05.1**	**-0.2**	
	baz=349							
TWA	**Mucha**	**1.02**	**352**	⇑P	**Pg**	**01 22 05.5**	**+0.1**	
	baz=353							
ELDTW	**Lidau**	**1.02**	**221**	*e*P	**Pg**	**01 22 04.0**	**-1.4**	
	baz=218							
TATO	**Taipei**	**1.03**	**347**	P	**Pb**	**01 22 06.1**	**+0.1**	
TATO	**Taipei**	**1.03**	**347**	P	**Pb**	**01 22 05.8**	**-0.2**	
	baz=348							
TATO				S	**Sg**	**01 22 19.1**	**0.0**	
	baz=348							
NMLH	**Miaoli**	**1.04**	**303**	⇑*e*P	**Pn**	**01 22 07.0**	**+0.2**	
	baz=302							
CHN5	**Tsauling**	**1.05**	**250**	⇑*i*P	**Pn**	**01 22 06.5**	**-0.4**	
	baz=247							
CHN5				*e*S	**Sn**	**01 22 22.2**	**+0.3**	
	baz=247							
HSN1	**Hsinchu**	**1.05**	**321**	*e*P	**Pn**	**01 22 06.8**	**-0.1**	
	baz=320							
TWB1	**Santiao Chiao**	**1.06**	**12**	*e*P	**Pn**	**01 22 06.7**	**-0.3**	
	baz=14							
BACT	**New Taipei Cit**	**1.06**	**345**	*e*P	**Pn**	**01 22 07.6**	**+0.5**	
	baz=345							
EDH	**Donghe**	**1.07**	**203**	*e*P	**Pg**	**01 22 04.4**	**-1.9**	
	baz=200							
WYL	**Yuanlin Townsh**	**1.07**	**270**	*e*P	**Pg**	**01 22 05.6**	**-0.7**	
	baz=268							
WYL				*e*S	**Sn**	**01 22 22.1**	**-0.1**	
	baz=268							
SBCB	**Hsinchu**	**1.08**	**320**	*e*P	**Pn**	**01 22 07.3**	**0.0**	
	baz=319							
SBCB				*e*S	**Sb**	**01 22 21.5**	**+0.5**	
	baz=319							
WDJ	**Dajia District**	**1.08**	**291**	*e*P	**Pn**	**01 22 07.8**	**+0.4**	
	baz=289							
TAP	**Taipei**	**1.09**	**348**	*e*P	**Pn**	**01 22 07.9**	**+0.5**	
	baz=349							
TAP				*e*S	**Sn**	**01 22 21.9**	**-0.9**	
	baz=349							
HSN	**Hsinchu**	**1.09**	**320**	*e*P	**Pn**	**01 22 07.5**	**0.0**	
	baz=322							
WCHH	**Zhanghua**	**1.09**	**276**	*e*P	**Pn**	**01 22 07.7**	**+0.2**	
	baz=274							
NWF	**Wu-fen Shan**	**1.10**	**2**	*e*P	**Pb**	**01 22 07.1**	**-0.1**	
	baz=2.0							
NWF				S	**Sb**	**01 22 22.2**	**+0.4**	
	baz=2.0							
WFSB	**Wu-fen Shan**	**1.10**	**2**	*e*P	**Pn**	**01 22 07.4**	**-0.2**	
	baz=2.0							
WFSB				*e*S	**Sb**	**01 22 22.0**	**+0.3**	
	baz=2.0							
NTY	**Taoyuan**	**1.11**	**338**	*e*P	**Pn**	**01 22 08.1**	**+0.4**	
	baz=338							
WGK	**Gukeng**	**1.12**	**256**	*e*P	**Pn**	**01 22 07.8**	**-0.1**	
	baz=253							
NCUH	**Zhongli**	**1.12**	**333**	*e*P	**Pn**	**01 22 08.0**	**+0.1**	
	baz=333							
NCU	**National Centr**	**1.12**	**333**	*e*P	**Pn**	**01 22 07.9**	**0.0**	
	baz=333							
SXI1	**Grass Mountain**	**1.13**	**6**	P	**Pb**	**01 22 07.7**	**0.0**	
	baz=7.0							
SXI1				*e*S	**Sn**	**01 22 24.1**	**+0.3**	
	baz=7.0							
WDLH	**Douliu**	**1.14**	**256**	*e*P	**Pn**	**01 22 07.6**	**-0.1**	
	baz=254							
TWS1	**Kuangyinshan**	**1.17**	**345**	*e*P	**Pn**	**01 22 08.9**	**+0.3**	
	baz=346							
WCKO	**Fanlu**	**1.17**	**244**	*e*P	**Pn**	**01 22 08.8**	**+0.2**	
	baz=241							
TNOU	**National Taiwa**	**1.18**	**1**	*e*P	**Pn**	**01 22 09.0**	**+0.3**	
	baz=2.0							
YM01	**YM01**	**1.19**	**352**	P	**Pn**	**01 22 08.8**	**-0.1**	
	baz=353							
STYH	**Taoyuan**	**1.19**	**229**	*e*P	**Pb**	**01 22 08.4**	**-0.2**	
	baz=226							
JYNG	**Yonagunijimaku**	**1.20**	**66**	*e*P	**Pb**	**01 22 08.6**	**-0.2**	
LONT	**Longtian**	**1.20**	**208**	*e*P	**Pb**	**01 22 07.5**	**-1.3**	
	baz=206							
STYT	**Tauyuan**	**1.21**	**229**	P	**Pb**	**01 22 08.4**	**-0.7**	
	baz=226							
STYT				*e*S	**Sn**	**01 22 25.5**	**-0.3**	
	baz=226							
NHW	**Xinwu Township**	**1.22**	**329**	*e*P	**Pn**	**01 22 09.7**	**+0.5**	
	baz=328							
TPUB	**Ta-pu**	**1.22**	**237**	P	**Pg**	**01 22 09.7**	**+0.5**	
TPUB	**Ta-pu**	**1.22**	**237**	⇑P	**Pg**	**01 22 09.7**	**+0.5**	
	baz=235							
TPUB				*i* S	**Sn**	**01 22 26.2**	**+0.1**	
	baz=235							
CHN4	**Tsaushan**	**1.22**	**240**	⇑*i*P	**Pg**	**01 22 09.6**	**+0.4**	
	baz=238							
NTST	**Danshui**	**1.23**	**347**	*e*P	**Pg**	**01 22 10.2**	**+0.9**	
	baz=348							
ANP	**Anpu**	**1.23**	**350**	*e*P	**Pg**	**01 22 10.0**	**+0.5**	
	baz=351							
CHN2	**Minshiung**	**1.24**	**250**	*e*P	**Pg**	**01 22 09.9**	**+0.2**	
	baz=248							
YOJ	**Yonaguni jima**	**1.25**	**67**	P	**Pg**	**01 22 10.6**	**+0.8**	
YOJ	**Yonaguni jima**	**1.25**	**67**	*e*P	**Pb**	**01 22 09.8**	**+0.1**	
	baz=68							
YOJ	**Yonaguni jima**	**1.25**	**67**	*e*P	**Pg**	**01 22 09.9**	**+0.1**	
YOJ				S	**Sg**	**01 22 26.4**	**+0.3**	
WRL	**Guolierlin Hig**	**1.26**	**267**	*e*P	**Pb**	**01 22 09.7**	**-0.1**	
	baz=265							
WTP	**Ta-pu**	**1.26**	**236**	*e*P	**Pg**	**01 22 10.0**	**0.0**	
	baz=233							
RLNB	**Erlin**	**1.27**	**267**	*e*P	**Pg**	**01 22 10.2**	**0.0**	
	baz=265							
RLNB				*e*S	**Sn**	**01 22 28.6**	**+1.3**	
	baz=265							
WTK	**Tuku**	**1.28**	**258**	*e*P	**Pn**	**01 22 09.7**	**-0.3**	
	baz=255							
TWGBT	**Beinan**	**1.30**	**208**	P	**Pn**	**01 22 08.8**	**-1.5**	
TWGBT	**Beinan**	**1.30**	**208**	*e*P	**Pn**	**01 22 07.6**	**-2.7**	
	baz=206							
TWG	**Pinlang**	**1.30**	**209**	*e*P	**Pn**	**01 22 07.8**	**-2.5**	
	baz=206							
TWY	**Chenhua**	**1.31**	**354**	*e*P	**Pg**	**01 22 11.4**	**+0.5**	
	baz=355							
TWK	**Hsinying**	**1.35**	**239**	*e*P	**Pb**	**01 22 11.3**	**-0.1**	
	baz=236							
CHN1	**Nanshi**	**1.36**	**236**	*e*P	**Pg**	**01 22 12.2**	**+0.3**	
	baz=233							
CHN1				*e*S	**Sg**	**01 22 31.4**	**+1.8**	
	baz=233							
SNST	**Tainan City**	**1.37**	**237**	*e*P	**Pg**	**01 22 12.1**	**+0.1**	
	baz=235							
SGST	**Jiashian**	**1.39**	**231**	*e*P	**Pn**	**01 22 11.4**	**-0.2**	
	baz=228							
SLGT	**Liugui**	**1.40**	**227**	*e*P	**Pb**	**01 22 12.3**	**0.0**	
	baz=224							
WSF	**Szhu**	**1.44**	**257**	*e*P	**Pb**	**01 22 12.8**	**0.0**	
	baz=255							
ICHU	**Yijhu**	**1.48**	**246**	*e*P	**Pb**	**01 22 13.5**	**0.0**	
	baz=244							
CHN8	**Yiju**	**1.54**	**247**	*e*P	**Pb**	**01 22 14.4**	**-0.2**	
	baz=244							
ECL	**Taimali**	**1.54**	**208**	*e*P	**Pg**	**01 22 16.1**	**+0.6**	
	baz=206							
SCST	**Cishan**	**1.58**	**227**	*e*P	**Pb**	**01 22 15.5**	**+0.2**	
	baz=225							
SSD	**Sandimen**	**1.59**	**220**	*e*P	**Pn**	**01 22 14.0**	**-0.4**	
	baz=218							
SSD				*e*S	**Sg**	**01 22 36.9**	**+0.1**	
	baz=218							
SHHT	**Tainan City**	**1.59**	**234**	*e*P	**Pg**	**01 22 16.4**	**+0.1**	
	baz=232							
TSMG	**Majia**	**1.61**	**219**	*e*P	**Pb**	**01 22 15.3**	**-0.6**	
	baz=217							
TWM1	**Shoushan**	**1.67**	**227**	*e*P	**Pb**	**01 22 17.2**	**+0.5**	
	baz=225							
PCYT	**Pengchaiyu**	**1.68**	**10**	*e*P	**Pn**	**01 22 16.0**	**+0.4**	
	baz=11							
SGLT	**Jiouru**	**1.69**	**223**	*e*P	**Pg**	**01 22 17.7**	**-0.5**	
	baz=221							
MASBT	**Mashibuluo**	**1.69**	**218**	*e*P	**Pn**	**01 22 15.6**	**-0.1**	
	baz=215							
EAST	**Anshuo**	**1.78**	**208**	*e*P	**Pn**	**01 22 16.5**	**-0.5**	
	baz=206							
TAWH	**Dawu Township**	**1.80**	**206**	*e*P	**Pb**	**01 22 19.1**	**0.0**	
	baz=204							
HATJ	**Hateruma jima**	**1.88**	**87**	*e*S	**Sg**	**01 22 46.1**	**-0.2**	
SCZT	**Fangliau**	**1.90**	**213**	*e*P	**Pn**	**01 22 19.0**	**+0.5**	
	baz=211							
WSSB	**Gushan**	**1.90**	**226**	*e*P	**Pb**	**01 22 20.4**	**-0.3**	
	baz=224							
SLIU	**Shizi**	**1.95**	**207**	*e*P	**Pn**	**01 22 20.2**	**+0.9**	
	baz=205							
WDGT	**Dungji**	**2.04**	**250**	*e*P	**Pn**	**01 22 21.0**	**+0.5**	
	baz=248							
WDGT				*e*S	**Sb**	**01 22 47.6**	**-1.2**	
	baz=248							
PHUB	**P'eng-hu**	**2.04**	**258**	*e*P	**Pn**	**01 22 20.8**	**+0.2**	
	baz=256							
PNG	**Penghu**	**2.05**	**259**	*e*P	**Pn**	**01 22 20.6**	**-0.1**	
	baz=257							
PNG				*e*S	**Sn**	**01 22 47.5**	**+1.1**	
	baz=257							
JKRS	**Kuro-shima**	**2.08**	**82**	P	**Pb**	**01 22 22.9**	**-0.9**	
TWK1	**Hengchun**	**2.19**	**204**	*e*P	**Pb**	**01 22 24.4**	**-1.4**	
	baz=202							
TWKBT	**Hengchun**	**2.19**	**203**	*e*P	**Pb**	**01 22 25.4**	**-0.4**	
	baz=202							
JIJ	**Ishigaki jima**	**2.22**	**79**	*e*P	**Pn**	**01 22 22.8**	**-0.2**	
VCHM	**Qimei**	**2.26**	**251**	*e*P	**Pn**	**01 22 23.4**	**-0.1**	
	baz=249							
VWUC	**VWUC**	**2.33**	**296**	*e*P	**Pn**	**01 22 24.0**	**-0.5**	
	baz=295							
PTMZ	**Houxiangcun**	**2.62**	**295**	*e*P	**Pn**	**01 22 28.1**	**-0.4**	
	baz=293							
MATB	**Ma-tsu**	**2.72**	**323**	*e*P	**Pn**	**01 22 29.6**	**-0.3**	
	baz=322							
JTJ	**Tarama**	**2.78**	**75**	*e*P	**Pn**	**01 22 32.5**	**+1.9**	
QZH	**Quanzhou**	**3.04**	**289**	Pn	**Pn**	**01 22 34.5**	**+0.3**	
QZH				Sn	**Sn**	**01 23 09.5**	**-1.3**	
KNM	**Kinmen**	**3.06**	**279**	*e*P	**Pn**	**01 22 35.8**	**+1.3**	
	baz=277							
LYJJ	**Jianjiangzhen**	**3.14**	**325**	*e*P	**Pn**	**01 22 34.4**	**-1.3**	
	baz=325							
MHZQ	**Yeshan**	**3.26**	**311**	*e*P	**Pn**	**01 22 36.8**	**-0.5**	
	baz=310							
XPSS	**Dashiqiu**	**3.27**	**335**	*e*P	**Pn**	**01 22 36.2**	**-1.2**	
	baz=334							
AXDP	**Jialang**	**3.57**	**286**	*e*P	**Pn**	**01 22 40.7**	**-0.8**	
	baz=284							
ZPLA	**Ao Xicun**	**3.66**	**270**	*e*P	**Pn**	**01 22 41.8**	**-1.0**	
	baz=269							
JOW	**Kunigami**	**6.55**	**63**	Pn	**Pn**	**01 23 22.4**	**-0.2**	
	1.6nm,0.3s,baz=157,slow=15,SNR=1.7							
	8.1nm,0.3s							
KSRS	**Korea Array**	**14.45**	**20**	Pn	**P**	**01 25 16.6**	**-0.9**	
	0.4nm,0.3s,baz=205,slow=12,SNR=4.5							
KSRS				LR	LR	01 31 30.4		
	comp=Z,127nm,19.0s,baz=190,slow=41							
KLR	**Kul'dur**	**26.42**	**15**	LR	LR	01 39 04.6		
	comp=Z,69nm,19.4s,baz=240,slow=39							
SONM	**Songino Array**	**26.77**	**337**	P	**P**	**01 27 28.0**	**+1.7**	
	1.5nm,0.8s,baz=155,slow=9.5,SNR=9.6							
SONM				LR	LR	01 39 13.7		
	comp=Z,137nm,20.4s,baz=178,slow=39							
	1.5nm,0.8s							
YAK	**Yakutsk**	**38.43**	**6**	LR	LR	01 48 09.8		
	comp=Z,64nm,18.2s,baz=2.0,slow=41							
MKAR	**Makanchi Array**	**38.85**	**316**	P	**P**	**01 29 11.8**	**+0.3**	
	1.0nm,0.7s,baz=108,slow=9.5,SNR=11							
	1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**40.71**	**327**	P	**P**	**01 29 25.9**	**-0.9**	
	1.2nm,0.6s,baz=104,slow=6.3,SNR=6.2							
	1.2nm,0.6s							
KURBB	**Kurchatov Arra**	**42.61**	**320**	P	**P**	**01 29 42.9**	**+0.4**	
	1.2nm,0.8s,baz=112,slow=7.9,SNR=4.5							
	1.2nm,0.8s							
AAK	**Ala-Archa**	**43.05**	**307**	P	**P**	**01 29 48.3**	**+1.9**	
	1.4nm,0.7s,baz=214,slow=9.8,SNR=4.3							
	1.4nm,0.7s							
WRA	**Warramunga Arr**	**45.33**	**163**	P	**P**	**01 30 03.4**	**-1.3**	
	1.1nm,0.7s,baz=345,slow=8.7,SNR=6.5							
	1.1nm,0.7s							
BVAR	**Borovoye Array**	**48.17**	**321**	P	**P**	**01 30 26.9**	**+0.4**	
	1.5nm,0.7s,baz=77,slow=6.2,SNR=3.4							
	1.5nm,0.7s							
ASAR	**Alice Springs**	**48.80**	**165**	P	**P**	**01 30 31.1**	**-0.6**	
	0.7nm,0.9s,baz=339,slow=7.3,SNR=3.5							
	0.7nm,0.9s							
STKA	**Stephens Creek**	**58.68**	**160**	P	**P**	**01 31 45.8**	**+1.8**	
	0.9nm,0.5s,baz=320,slow=7.9,SNR=3.1							
	0.9nm,0.5s							
ILAR	**Eielson Array**	**69.17**	**27**	P	**P**	**01 32 51.0**	**-1.7**	
	0.3nm,0.8s,baz=282,slow=4.9,SNR=2.6							
	0.3nm,0.8s							
YKA	**Yellowknife Ar**	**82.97**	**23**	P	**P**	**01 34 11.1**	**-0.2**	
	0.5nm,0.6s,baz=313,slow=4.8,SNR=12							
	0.5nm,0.6s							

TAP 07 01:24:35.5,24.11N×121.62E,h9km,ML1.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TWD	**Chiawan**	**0.03**	**223**	*i* P		Pg	01 24 37.7	+0.4
	baz=212							
TWD				S		Sg	01 24 39.2	+0.8
	baz=212							
ETL	**Fush Village**	**0.05**	**2**	*i* P		Pg	01 24 37.9	+0.3
	baz=1.0							
ETL				*e*S		Sg	01 24 39.4	+0.5
	baz=1.0							
NACB	**Ninganchiao**	**0.07**	**341**	P		Pg	01 24 38.2	+0.5
	baz=340							
NACB				S		Sg	01 24 40.0	+0.8
	baz=340							
ETM	**Tongmen**	**0.18**	**220**	*i* P		Pg	01 24 40.1	+0.7
	baz=220							
ETM				*e*S		Sg	01 24 43.0	+1.0
	baz=220							
LXIB	**Xiulin Townshi**	**0.21**	**246**	P		Pg	01 24 40.9	+1.0
	baz=246							
LXIB				S		Sg	01 24 44.5	+1.7
	baz=246							
SHUL	**Shoufeng**	**0.32**	**190**	*e*P		Pb	01 24 43.5	0.0
	baz=189							
SHUL				*e*S		Sb	01 24 50.6	+1.9
	baz=189							
WHF	**Hehuan Shan**	**0.33**	**277**	P		Pb	01 24 43.3	-0.5
	baz=276							
ESL	**Shilin**	**0.34**	**211**	P		Pg	01 24 42.7	+0.5
	baz=209							
ESL				*e*S		Sg	01 24 47.2	+0.5
	baz=209							
NNSB	**Datong**	**0.39**	**326**	P		Pb	01 24 44.3	-0.4
	baz=325							
NNSB				S		Sb	01 24 50.1	-0.8
	baz=325							
NNS	**Nan Shan**	**0.40**	**326**	*e*S		Sb	01 24 50.8	-0.5
	baz=326							

TAP 07 01:24:39.5,24.22N×121.73E,h13km±1km,ML1.8,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EHP	**Heping Village**	**0.09**	**5**	*e*P		Pg	01 24 41.9	-0.4
	baz=10.0							
EAHA	**Aohua**	**0.11**	**4**	*e*P		Pb	01 24 43.0	-0.4
	baz=3.0							
EAHA				*e*S		Sb	01 24 45.9	-0.1
	baz=3.0							
ETL	**Fush Village**	**0.12**	**237**	P		Pb	01 24 43.6	0.0
	baz=237							
ETL				S		Sb	01 24 46.0	-0.4
	baz=237							
NACB	**Ninganchiao**	**0.14**	**249**	P		Pb	01 24 43.5	-0.4
	baz=248							
NACB				S		Sb	01 24 46.4	-0.5
	baz=248							
TWD	**Chiawan**	**0.19**	**221**	*e*P		Pb	01 24 44.5	-0.3
	baz=219							
TWD				*e*S		Sg	01 24 47.3	+0.7
	baz=219							
ENA	**Nanau**	**0.20**	**2**	*e*P		Pb	01 24 44.6	-0.5
	baz=4.0							
EWUT	**Wuta**	**0.23**	**11**	P		Pb	01 24 45.0	-0.4
	baz=22							
EWUT				*e*S		Sb	01 24 49.0	-0.5
	baz=22							
EWUT	**Wuta**	**0.23**	**11**	*e*P		Pb	01 24 45.0	-0.4
	baz=10.0							
EWUT				*e*S		Sb	01 24 49.1	-0.3
	baz=10.0							

*ASIES **07** 01:26:54.8,24.09N×121.68E,h9km,ML3.9,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$-0.75; $M_{r\theta}$2.32; $M_{r\phi}$-1.03; $M_{\theta\phi}$0.74; Fault plane solution: $M_0$2.81186×10^{21} NP1:ϕ_s68.06000°, δ77.81000°, λ108.62000°. NP2:ϕ_s190.13000°, δ22.14000°, λ34.07000°. Principal axes: T Plg53.5390°, Azm0.4010°; N Plg18.1910°, Azm243.9960°; P Plg30.3770°, Azm142.8910°;*

*TAP **07** 01:26:54.8,24.09N×121.68E,h9km,ML3.9,C*

*JMA **07** 01:26:55.2±0.4,24.1N±0.5×121.7E±0.7,h0km±2km, MV3.2/12,TAIWAN REGION*

ISC 07 01:26:54.8±0.9,24.12N±0.02×121.73E±0.02,h7km±6km, n57,σ1.107/76,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ETL	**Fush Village**	**0.11**	**293**	*i* P		Pg	**01 26 57.6**	**+0.3**
	baz=319							
ETL				*i* S		Sg	**01 26 59.0**	**+0.1**
	baz=319							
TWD	**Chiawan**	**0.13**	**253**	*i* P		Pg	**01 26 57.3**	**-0.3**
	baz=266							
TWD				*i* S		Sg	**01 26 58.8**	**-0.7**
	baz=266							
NACB	**Ninganchiao**	**0.14**	**294**	*i* P		Pg	**01 26 57.8**	**+0.1**
	baz=315							
NACB				S		Sg	**01 26 59.6**	**-0.1**
	baz=315							
EHP	**Heping Village**	**0.19**	**3**	*i* P		Pg	**01 26 59.9**	**+1.1**
	baz=6.0							
EHP				*i* S		Sg	**01 27 03.3**	**+1.9**
	baz=6.0							
EAHA	**Aohua**	**0.21**	**2**	*i* P		Pg	**01 27 00.1**	**+1.0**
	baz=8.0							
EAHA				S		Sg	**01 27 03.8**	**+1.9**
	baz=8.0							
ETM	**Tongmen**	**0.27**	**235**	*i* P		Pg	**01 26 59.6**	**-0.5**
	baz=237							
ETM				*i* S		Sg	**01 27 02.6**	**-1.0**
	baz=237							
LXIB	**Xiulin Townshi**	**0.30**	**252**	P		Pg	**01 27 00.3**	**-0.5**
	baz=247							
LXIB				*e*S		Sg	**01 27 04.1**	**-0.9**
	baz=247							
ENA	**Nanau**	**0.31**	**2**	*i* P		Pb	**01 27 02.0**	**-0.7**
	baz=7.0							
ENA				*i* S		Sb	**01 27 06.6**	**-1.3**
	baz=7.0							
EWUT	**Wuta**	**0.33**	**8**	P		Pb	**01 27 02.4**	**-0.7**
	baz=11							
EWUT				S		Sb	**01 27 07.5**	**-1.0**
	baz=11							
SHUL	**Shoufeng**	**0.36**	**205**	*e*P		Pb	**01 27 03.1**	**-0.4**
	baz=208							
SHUL				*e*S		Sb	**01 27 10.0**	**+0.6**
	baz=208							
ESL	**Shilin**	**0.41**	**222**	*e*P		Pg	**01 27 02.3**	**-0.5**
	baz=229							
ESL				*e*S		Sg	**01 27 06.7**	**-1.4**
	baz=229							
WHF	**Hehuan Shan**	**0.43**	**274**	P		Pg	**01 27 02.9**	**-0.4**
	baz=278							
WHF				*e*S		Sg	**01 27 08.1**	**-0.8**
	baz=278							
NNSB	**Datong**	**0.44**	**314**	*i* P		Pb	**01 27 03.9**	**-1.1**
	baz=320							
NNSB				S		Sb	**01 27 10.0**	**-1.9**
	baz=320							
NNS	**Nan Shan**	**0.46**	**315**	P		Pb	**01 27 04.2**	**-1.1**
	baz=320							
NNS				S		Sb	**01 27 10.4**	**-1.9**
	baz=320							
FUSS	**Fushou**	**0.46**	**286**	P		Pg	**01 27 03.9**	**0.0**
	baz=291							
FUSS				S		Sg	**01 27 10.0**	**0.0**
	baz=291							
ESAO	**Su ao**	**0.47**	**13**	S		Sb	**01 27 11.6**	**-0.9**
	baz=13							
TWC	**Suao**	**0.50**	**12**	*e*S		Sb	**01 27 13.3**	**-0.2**
	baz=5.0							
CHGB	**Renai**	**0.51**	**264**	P		Pg	**01 27 04.7**	**0.0**
	baz=259							
CHGB				S		Sg	**01 27 10.9**	**-0.6**
	baz=259							
NDS	**Dongshan**	**0.51**	**359**	*e*S		Sb	**01 27 13.5**	**-0.4**
	baz=359							
NDT	**Datong Townshi**	**0.52**	**338**	P		Pb	**01 27 06.0**	**-0.3**
	baz=340							
NDT				*e*S		Sb	**01 27 13.1**	**-1.0**
	baz=340							
TWT	**Tachien**	**0.52**	**285**	*e*S		Sg	**01 27 12.3**	**+0.4**
	baz=288							
TDCB	**Techi**	**0.54**	**285**	S		Sg	**01 27 12.5**	**+0.1**
	baz=288							
ENTT	**Nioudou**	**0.54**	**344**	S		Sb	**01 27 14.1**	**-0.5**
	baz=346							
WUSB	**Renai**	**0.57**	**258**	*e*S		Sg	**01 27 12.8**	**-0.7**
	baz=260							
TWE	**Neicheng**	**0.60**	**355**	*e*S		Sb	**01 27 16.4**	**0.0**
	baz=357							
YHNB	**Yeheng**	**0.64**	**330**	*e*S		Sb	**01 27 16.6**	**-0.8**
	baz=332							
NSK	**Sanguang**	**0.65**	**329**	*e*S		Sb	**01 27 16.9**	**-0.9**
	baz=332							
NWLT	**Wulai**	**0.69**	**343**	*e*S		Sb	**01 27 17.9**	**-1.0**
	baz=332							
WHP	**Taichung City**	**0.73**	**283**	*e*S		Sb	**01 27 19.4**	**-0.8**
	baz=286							
NFF	**Wufeng Townshi**	**0.76**	**313**	*e*S		Sb	**01 27 20.0**	**-0.9**
	baz=315							
SSLB	**Suanglung**	**0.78**	**245**	*e*S		Sg	**01 27 19.0**	**-1.1**
	baz=257							
SMLT	**Sun Moon Lake**	**0.79**	**253**	*e*S		S

TPUB	**Ta-pu**	**1.30**	**231**	*eS*	**Sn**	**01 27 38.4**	**+1.5**
	baz=223						
WTK	**Tuku**	**1.30**	**251**	*eS*	**Sn**	**01 27 38.5**	**+1.5**
	baz=253						
TWK	**Hsinying**	**1.42**	**234**	*eS*	**Sg**	**01 27 42.3**	**+1.8**
	baz=236						
CHN1	**Nanshi**	**1.44**	**230**	*eS*	**Sg**	**01 27 43.2**	**+2.0**
	baz=233						
WSF	**Szhu**	**1.46**	**251**	*eS*	**Sg**	**01 27 43.4**	**+1.6**
	baz=253						
TSMG	**Majia**	**1.72**	**216**	*eS*	**Sb**	**01 27 49.4**	**+0.8**
	baz=232						
MASBT	**Mashibuluo**	**1.81**	**214**	*eS*	**Sb**	**01 27 51.6**	**+0.6**
	baz=214						
JKRS	**Kuro-shima**	**2.08**	**86**	*eP*	**Pb**	**01 27 31.8**	**-1.2**
JIJ	**Ishigaki jima**	**2.22**	**83**	*eP*	**Pn**	**01 27 32.7**	**+0.8**
JISG	**Ishigakijimahi**	**2.40**	**78**	*eP*	**Pn**	**01 27 35.0**	**+0.6**
JISG				*eS*	**Sn**	**01 28 03.2**	**-0.9**

TAP 07 01:28:05.7,24°.10N×121°.64E,h9km,ML2.5,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**249**	*i* P	Pg	01 28 08.0	+0.5
	baz=247						
TWD				*i* S	Sg	01 28 09.4	+0.7
	baz=247						
ETL	**Fush Village**	**0.07**	**345**	*i* P	Pg	01 28 08.2	+0.5
	baz=344						
ETL				S	Sg	01 28 09.7	+0.5
	baz=344						
NACB	**Ninganchiao**	**0.09**	**331**	*i* P	Pg	01 28 08.5	+0.5
	baz=331						
NACB				S	Sg	01 28 10.3	+0.7
	baz=331						
ETM	**Tongmen**	**0.19**	**226**	*eP*	Pg	01 28 10.3	+0.7
	baz=226						
ETM				*eS*	Sg	01 28 13.2	+0.9
	baz=226						
LXIB	**Xiulin Townshi**	**0.22**	**250**	P	Pg	01 28 11.1	+0.8
	baz=250						
LXIB				*eS*	Sg	01 28 14.6	+1.3
	baz=250						
SHUL	**Shoufeng**	**0.32**	**193**	*eP*	Pb	01 28 13.7	+0.1
	baz=193						
SHUL				*eS*	Sb	01 28 19.9	+1.1
	baz=193						
ESL	**Shilin**	**0.34**	**214**	*eP*	Pg	01 28 12.7	+0.3
	baz=212						
ENA	**Nanau**	**0.34**	**15**	*eP*	Pg	01 28 12.6	+0.1
	baz=16						
WHF	**Hehuan Shan**	**0.35**	**278**	*eP*	Pb	01 28 13.6	-0.8
	baz=278						
EWUT	**Wuta**	**0.37**	**20**	*eP*	Pg	01 28 13.2	+0.2
	baz=19						
FUSS	**Fushou**	**0.39**	**293**	*eP*	Pb	01 28 14.6	-0.4
	baz=292						
NNSB	**Datong**	**0.41**	**325**	⇓*i* P	Pb	01 28 14.7	-0.5
	baz=324						
NNSH	**Datong**	**0.41**	**325**	*eP*	Pb	01 28 14.6	-0.6
	baz=324						
NNS	**Nan Shan**	**0.42**	**325**	*eP*	Pb	01 28 15.0	-0.5
	baz=325						
CHGB	**Renai**	**0.43**	**265**	*eP*	Pb	01 28 15.4	-0.3
	baz=265						
WARBT	**Fenglin Townsh**	**0.44**	**212**	*eP*	Pg	01 28 14.8	+0.5
	baz=211						
OWD	**Renai**	**0.45**	**252**	P	Pb	01 28 15.5	-0.4
	baz=251						
TDCB	**Techi**	**0.47**	**290**	*eP*	Pb	01 28 16.0	-0.3
	baz=289						
WUSB	**Renai**	**0.49**	**258**	*eP*	Pb	01 28 16.5	-0.1
	baz=257						
NDT	**Datong Townshi**	**0.52**	**347**	*eP*	Pb	01 28 16.6	-0.4
	baz=346						
VWDT	**VWDT**	**0.57**	**233**	*eP*	Pb	01 28 17.7	-0.2
	baz=233						
YHNB	**Yeheng**	**0.62**	**337**	*i* P	Pb	01 28 19.0	+0.1
	baz=337						
NSK	**Sanguang**	**0.63**	**336**	*eP*	Pb	01 28 18.9	-0.1
	baz=336						
FUSB	**Fushanzhiwuyua**	**0.66**	**356**	*eP*	Pb	01 28 19.6	+0.1
	baz=355						

TAP 07 01:28:34.2,24°.08N×121°.69E,h10km,ML2.9,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**268**	*i* P	Pg	01 28 36.8	+0.3
	baz=270						
ETL	**Fush Village**	**0.10**	**321**	*i* P	Pg	01 28 37.0	+0.2
	baz=318						
NACB	**Ninganchiao**	**0.13**	**316**	*i* P	Pg	01 28 37.3	+0.2
	baz=315						
ETM	**Tongmen**	**0.22**	**237**	*i* P	Pg	01 28 39.2	+0.5
	baz=240						
ETM				S	Sg	01 28 42.1	+0.5
	baz=240						
EHP	**Heping Village**	**0.23**	**11**	*eS*	Sg	01 28 42.9	+0.8
	baz=4.0						
EAHA	**Aohua**	**0.25**	**10**	*i* P	Pg	01 28 39.5	+0.2
	baz=6.0						
EAHA				*eS*	Sg	01 28 43.0	+0.3
	baz=6.0						
LXIB	**Xiulin Townshi**	**0.26**	**256**	P	Pg	01 28 40.0	+0.4
	baz=250						
LXIB				S	Sg	01 28 43.6	+0.5
	baz=250						
ENA	**Nanau**	**0.35**	**8**	*eP*	Pg	01 28 41.3	+0.3
	baz=6.0						
ENA				*eS*	Sg	01 28 46.0	+0.3
	baz=6.0						
EWUT	**Wuta**	**0.37**	**12**	*i* P	Pg	01 28 41.7	+0.2
	baz=9.0						
EWUT				*eS*	Sg	01 28 46.6	+0.2
	baz=9.0						
FUSS	**Fushou**	**0.44**	**292**	*eP*	Pb	01 28 43.6	-0.7
	baz=291						
FUSS				*eS*	Sg	01 28 49.7	+1.0
	baz=291						
NNSB	**Datong**	**0.44**	**321**	*i* P	Pg	01 28 43.4	+0.5
	baz=319						
NNSB				*eS*	Sg	01 28 49.3	+0.5
	baz=319						
NNS	**Nan Shan**	**0.46**	**321**	P	Pg	01 28 43.7	+0.5
	baz=320						
NNS				S	Sg	01 28 50.0	+0.8
	baz=320						
CHGB	**Renai**	**0.47**	**267**	*eP*	Pb	01 28 44.2	-0.6
	baz=260						
CHGB				S	Sg	01 28 50.6	+0.9
	baz=260						
WUSB	**Renai**	**0.53**	**260**	*eP*	Pb	01 28 45.4	-0.4
	baz=262						
NDT	**Datong Townshi**	**0.54**	**343**	*eP*	Pb	01 28 45.5	-0.4
	baz=339						
NDT				*eS*	Sg	01 28 52.4	+0.5
	baz=339						
TWC	**Suao**	**0.54**	**15**	*eS*	Sg	01 28 52.5	+0.6
	baz=4.0						
NDS	**Dongshan**	**0.55**	**2**	*eP*	Pb	01 28 45.4	-0.5
	baz=357						
ENTT	**Nioudou**	**0.57**	**348**	*eP*	Pb	01 28 46.0	-0.3
	baz=335						
YHNB	**Yeheng**	**0.65**	**334**	P	Pb	01 28 47.5	-0.2
	baz=331						
NSK	**Sanguang**	**0.66**	**333**	P	Pb	01 28 47.7	-0.3
	baz=331						
NSK				S	Sg	01 28 56.0	+0.2
	baz=331						
WHP	**Taichung City**	**0.71**	**286**	*eS*	Sb	01 28 59.0	+0.4
	baz=286						
NWLT	**Wulai**	**0.71**	**346**	*eS*	Sg	01 28 57.8	+0.5
	baz=331						
SSLB	**Suanglung**	**0.74**	**247**	*eP*	Pb	01 28 48.9	-0.3
	baz=258						
SSLB				*eS*	Sg	01 28 58.6	+0.6
	baz=258						

*SFS **07** 01:31:51.4,35°.42N×3°.74W,h3km,ML2.8/20,ML3.3/16, MLv2.6/20*
*MDD **07** 01:31:51.6±0.3,35°.41N×3°.74W,h0km,mb_Lg2.8/21, Error ellipse: s-maj=3.0km s-min=2.1km az=176.0*
*IGIL **07** 01:31:52.2,35°.41N×3°.74W,h0km,ML1.8*

*INMG **07** 01:31:53.2±1.6,35°.43N×3°.67W,h17km,ML2.3,Error ellipse: s-maj=3.6km s-min=3.1km az=12.0*
*CNRM **07** 01:31:54.3,35°.42N×3°.98W,h20km,ML2.7*
ISC 07 01:31:51.2±1.1,35°.44N±0°.02×3°.73W±0°.02,h13km±9km, n81,σ1°29/129,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.28**	**217**	P	**Pb**	**01 31 58.1**	**0.0**
PALE	**Palemas**	**0.28**	**217**	S	**Sb**	**01 32 03.1**	**+0.4**
EMEL	**Melilla**	**0.65**	**102**	P	**Pg**	**01 32 04.1**	**+0.2**
EMEL				S	**Sg**	**01 32 12.3**	**-0.3**
EMLI	**Melilla**	**0.66**	**102**	Pg	**Pg**	**01 32 04.2**	**+0.1**
EMLI				Sg	**Sg**	**01 32 12.8**	**+0.1**
EALB	**Alboran**	**0.76**	**49**	Pg	**Pb**	**01 32 06.3**	**+0.1**
EALB				Sg	**Sb**	**01 32 16.6**	**+0.2**
EALB	**Alboran**	**0.76**	**49**	P	**Pb**	**01 32 06.4**	**+0.1**
EALB				S	**Sb**	**01 32 16.5**	**0.0**
EALB				*i* Vmb_Lg		01 32 17.6	
AKLM	**AKL**	**0.94**	**187**	P	**Pn**	**01 32 11.0**	**+0.9**
AKLM	**AKL**	**0.94**	**187**	S	**Sb**	**01 32 21.5**	**-0.2**
CHAS	**Isla Isabel II**	**1.10**	**103**	Sg	**Sb**	**01 32 24.5**	**-1.8**
CHAS				Pg	**Pb**	**01 32 10.7**	**-1.4**
TAF	**Taforalt**	**1.25**	**120**	P	**Pg**	**01 32 15.6**	**+0.3**
SMIR	**Smir Dam**	**1.36**	**281**	P	**Pn**	**01 32 14.5**	**-1.4**
SMIR	**Smir Dam**	**1.36**	**281**	S	**Sn**	**01 32 31.4**	**-2.4**
EMIJ	**Mijas**	**1.40**	**323**	Pn	**Pn**	**01 32 16.2**	**-0.3**
EMIJ				Sn	**Sg**	**01 32 35.9**	**-0.5**
EMIJ	**Mijas**	**1.40**	**323**	P	**Pn**	**01 32 16.0**	**-0.5**
EMIJ				S	**Sg**	**01 32 36.9**	**+0.4**
EMIJ				*i* Vmb_Lg		01 32 44.1	
CEU	**Ceuta**	**1.41**	**289**	Pn	**Pn**	**01 32 14.4**	**-2.2**
ECEU	**Ceuta**	**1.41**	**289**	P	**Pn**	**01 32 15.8**	**-0.8**
ECEU				S	**Sn**	**01 32 32.5**	**-2.6**
ECEU				*i* Vmb_Lg		01 32 35.2	
ELGU	**Los Guajares,**	**1.43**	**3**	Pn	**Pn**	**01 32 15.8**	**-1.1**
ELGU				Sn	**Sn**	**01 32 34.9**	**-0.6**
ELGU	**Los Guajares,**	**1.43**	**3**	P	**Pn**	**01 32 15.8**	**-1.1**
ELGU				S	**Sn**	**01 32 35.0**	**-0.6**
EMAL	**Malaga-Limoner**	**1.43**	**337**	Pn	**Pn**	**01 32 16.1**	**-0.8**
EMAL				Sn	**Sb**	**01 32 36.3**	**+0.3**
EBER	**Berja**	**1.61**	**25**	Pn	**Pn**	**01 32 18.9**	**-0.6**
EBER				Sn	**Sn**	**01 32 39.6**	**-0.5**
EBER	**Berja**	**1.61**	**25**	P	**Pn**	**01 32 18.9**	**-0.6**
EBER				S	**Sb**	**01 32 40.9**	**-0.2**
EBER				*i* Vmb_Lg		01 32 57.5	
EGOR	**Sierra Gorda,**	**1.69**	**350**	Pn	**Pn**	**01 32 20.2**	**-0.5**
EGOR	**Sierra Gorda,**	**1.69**	**350**	P	**Pn**	**01 32 20.1**	**-0.5**
EGOR				S	**Sb**	**01 32 44.3**	**+0.7**
EGOR				*i* Vmb_Lg		01 32 50.5	
EJIF	**Jimena Fronter**	**1.73**	**306**	P	**Pn**	**01 32 21.7**	**+0.7**
EJIF				S	**Sb**	**01 32 45.5**	**+1.0**
EQUE	**Quentar**	**1.77**	**8**	P	**Pn**	**01 32 22.5**	**+0.8**
EQUE				S	**Sb**	**01 32 45.5**	**-0.4**
EQUE				*i* Vmb_Lg		01 32 52.7	
EQTA	**Presa de Quent**	**1.78**	**8**	Pn	**Pn**	**01 32 22.5**	**+0.8**
ENIJ	**Nijar**	**1.96**	**39**	P	**Pn**	**01 32 23.3**	**-0.9**
ENIJ				S	**Sn**	**01 32 46.4**	**-2.3**
ENIJ				*i* Vmb_Lg		01 33 03.1	
ESPR	**Espera**	**2.23**	**310**	P	**Pb**	**01 32 31.0**	**-0.4**
ESPR				S	**Sb**	**01 32 59.3**	**+0.4**
ESPR				*i* Vmb_Lg		01 33 09.1	
IFR	**Ifrane**	**2.24**	**211**	Pn	**Pn**	**01 32 29.2**	**+1.0**
IFR				Sn	**Sn**	**01 32 55.2**	**-0.5**
EQES	**Quesada**	**2.42**	**13**	P	**Pb**	**01 32 32.8**	**-1.8**
EQES				S	**Sn**	**01 33 02.2**	**+2.2**
EQES				*i* Vmb_Lg		01 33 06.5	
MD31	**MD31**	**2.71**	**199**	P	**Pn**	**01 32 36.6**	**+2.1**
MD31	**MD31**	**2.71**	**199**	S	**Sn**	**01 33 06.9**	**-0.3**
MDT	**Midelt**	**2.72**	**196**	P	**Pb**	**01 32 38.3**	**-1.5**
EADA	**Adamuz**	**2.80**	**346**	Pn	**Pn**	**01 32 37.4**	**+1.6**
EADA				Sn	**Sn**	**01 33 10.6**	**+1.2**
EADA	**Adamuz**	**2.80**	**346**	P	**Pn**	**01 32 38.3**	**+2.5**
EADA				S	**Sn**	**01 33 11.7**	**+2.2**
EADA				*i* Vmb_Lg		01 33 18.8	
EZAR	**Zarzadilla de**	**2.93**	**33**	P	**Pn**	**01 32 37.9**	**+0.4**
EZAR				S	**Sn**	**01 33 14.6**	**+1.7**
ECAB	**El Cabril**	**2.96**	**333**	Pn	**Pn**	**01 32 39.6**	**+1.7**
ECAB	**El Cabril**	**2.96**	**333**	P	**Pn**	**01 32 39.3**	**+1.4**
ECAB				S	**Sn**	**01 33 15.3**	**+2.0**
ECAB				*i* Vmb_Lg		01 33 26.3	
ZHG	**ZHG**	**3.12**	**231**	P	**Pn**	**01 32 42.5**	**+2.3**
ZHG	**ZHG**	**3.12**	**231**	S	**Sn**	**01 33 18.3**	**+0.9**
EMUR	**La Murta**	**3.12**	**39**	S	**Sn**	**01 33 15.4**	**-1.9**
EMUR				*i* Vmb_Lg		01 33 17.6	
E001A	**Albudeite (Mur**	**3.18**	**35**	S	**Sn**	**01 33 20.4**	**+1.6**
EMIN	**Mina Concepcio**	**3.31**	**315**	P	**Pn**	**01 32 43.0**	**+0.2**
EMIN				*i* Vmb_Lg		01 33 21.5	
EMIN				S	**Sn**	**01 33 21.6**	**-0.4**
ETOB	**Tobarra**	**3.64**	**28**	Pn	**Pn**	**01 32 49.5**	**+2.1**
ETOB				Sn	**Sn**	**01 33 30.4**	**+0.1**
ETOB	**Tobarra**	**3.64**	**28**	P	**Pn**	**01 32 49.5**	**+2.1**
ETOB				S	**Sn**	**01 33 31.7**	**+1.5**
EGRO	**El Granado**	**3.67**	**306**	Pn	**Pn**	**01 32 47.9**	**+0.2**
EGRO				Sn	**Sn**	**01 33 28.9**	**-1.9**
EGRO	**El Granado**	**3.67**	**306**	P	**Pn**	**01 32 47.9**	**+0.2**
EGRO				S	**Sn**	**01 33 29.0**	**-1.9**
EGRO				*i* Vmb_Lg		01 33 34.2	
AVE	**Averroes**	**3.72**	**236**	P	**Pn**	**01 32 51.6**	**+3.2**
PVAQ	**Vaqueiros**	**3.76**	**303**	*eP*	**Pn**	**01 32 49.8**	**+0.9**
PVAQ				*eS*	**Sn**	**01 33 31.8**	**-1.2**
PVAQ	**Vaqueiros**	**3.76**	**303**	P	**Pn**	**01 32 50.8**	**+1.9**
PBAR	**Barrancos**	**3.80**	**317**	*eP*	**Pn**	**01 32 50.1**	**+0.6**
PBAR				*eS*	**Sn**	**01 33 33.4**	**-0.7**
PBAR				A	A	01 33 44.3	
	2.9nm,0.4s						
PBAR	**Barrancos**	**3.80**	**317**	Pn	**Pn**	**01 32 49.2**	**-0.3**
PBDV	**Barranco-do-Ve**	**3.84**	**299**	*eP*	**Pn**	**01 32 50.5**	**+0.5**
PBDV				*eS*	**Sn**	**01 33 35.1**	**+0.2**
PBDV				A	A	01 33 40.0	
	4.5nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.84**	**299**	Pn	**Pn**	**01 32 50.3**	**+0.3**
FIGM	**Figuig**	**3.89**	**147**	P	**Pb**	**01 32 57.3**	**-2.5**
PCVE	**Castro Verde**	**4.10**	**303**	*eP*	**Pn**	**01 32 54.9**	**+1.4**
PCVE				*eS*	**Sn**	**01 33 40.9**	**-0.5**
PCVE				A	A	01 33 42.7	
	4.1nm,0.7s						
PCVE	**Castro Verde**	**4.10**	**303**	Pn	**Pn**	**01 32 53.8**	**+0.3**
PCVE				Sn	**Sn**	**01 33 40.8**	**-0.5**
PAB	**San Pablo**	**4.13**	**353**	P	**Pn**	**01 32 55.3**	**+1.3**
PAB				S	**Sn**	**01 33 41.2**	**-1.0**
PAB				*i* Vmb_Lg		01 34 05.3	
PBEJ	**Beja**	**4.20**	**309**	*eP*	**Pn**	**01 32 56.6**	**+1.6**
PBEJ				*eS*	**Sn**	**01 33 44.1**	**+0.2**
EBAD	**Badajoz**	**4.22**	**323**	Pn	**Pn**	**01 32 55.8**	**+0.5**
EBAD	**Badajoz**	**4.22**	**323**	P	**Pn**	**01 32 56.1**	**+0.9**
EBAD				S	**Sn**	**01 33 43.9**	**-0.4**
EBAD				*i* Vmb_Lg		01 33 48.5	
ESDC	**Sonseca Array**	**4.23**	**358**	P	**Pn**	**01 32 56.4**	**+1.0**
ESDC				S	**Sn**	**01 33 44.1**	**-0.5**
ESDC				*i* Vmb_Lg		01 33 56.8	
MESJ	**Messejana**	**4.33**	**305**	*eP*	**Pn**	**01 32 57.6**	**+0.8**
MESJ				*eS*	**Sn**	**01 33 46.3**	**-0.7**
MESJ				A	A	01 33 47.7	
	3.8nm,0.6s						
MESJ	**Messejana**	**4.33**	**305**	*eP*	**Pn**	**01 32 57.5**	**+0.8**
MESJ				*eS*	**Sn**	**01 33 45.4**	**-1.6**
MESJ				IAML		01 33 48.4	
	comp=N,1.9nm,0.3s						
MORF	**Marmelete**	**4.38**	**297**	*eP*	**Pn**	**01 32 59.0**	**+1.5**
MORF				*eS*	**Sn**	**01 33 47.8**	**-0.6**
MORF				A	A	01 33 50.9	
	comp=N,3.7nm,0.9s						
PFVI	**Vila Bisbo**	**4.45**	**294**	*eP*	**Pn**	**01 32 58.9**	**+0.6**
PFVI				*eS*	**Sn**	**01 33 49.0**	**-0.9**
PTEO	**Sao Teotonio**	**4.54**	**299**	*eP*	**Pn**	**01 33 01.1**	**+1.6**
PTEO				*eS*	**Sn**	**01 33 51.3**	**-0.8**
PTEO				A	A	01 33 54.7	
	comp=N,7.5nm,0.6s						
PESTR	**Estremoz**	**4.60**	**319**	*eP*	**Pn**	**01 33 02.2**	**+1.7**
EVO	**Evora**	**4.61**	**313**	*eP*	**Pn**	**01 33 01.8**	**+1.2**
EVO				*eS*	**Sn**	**01 33 52.3**	**-1.6**
EVO				A	A	01 33 57.5	
	comp=N,2.0nm,0.4s						
EVO	**Evora**	**4.61**	**313**	Pn	**Pn**	**01 33 01.5**	**+0.9**
EVO				Sn	**Sn**	**01 33 51.8**	**-2.1**
PNCL	**Nicolau / Gran**	**4.68**	**306**	*eP*	**Pn**	**01 33 02.0**	**+0.5**
PNCL				*eS*	**Sn**	**01 33 55.0**	**-0.7**
PNCL				A	A	01 34 02.9	
	comp=N,3.4nm,0.6s						
PNCL	**Nicolau / Gran**	**4.68**	**306**	Pn	**Pn**	**01 33 01.5**	**0.0**
PMRV	**Marv??o**	**4.93**	**325**	*eP*	**Pn**	**01 33 06.4**	**+1.4**
PMRV				*eS*	**Sn**	**01 34 00.0**	**-1.9**
PMRV				A	A	01 34 35.0	
	comp=N,3.0nm,0.6s						
EPLA	**Plasencia**	**4.97**	**339**	P	**Pn**	**01 33 07.7**	**+2.1**
PMTG	**Montargil**	**5.09**	**317**	*eP*	**Pn**	**01 33 08.5**	**+1.3**
PMTG				*eS*	**Sn**	**01 34 05.9**	**0.0**
OUZM	**OUZ**	**5.18**	**210**	P	**Pn**	**01 33 10.1**	**+1.5**
PCBR	**Castelo Branco**	**5.30**	**327**	*eP*	**Pn**	**01 33 11.8**	**+1.7**
PSBE	**So Bento**	**5.72**	**317**	*eP*	**Pn**	**01 33 18.0**	**+2.1**
MTE	**Manteigas**	**5.79**	**330**	*eP*	**Pn**	**01 33 18.9**	**+2.0**
MTE				A	A	01 34 16.4	
	comp=N,4.4nm,0.7s						
MVO	**Moncorvo**	**6.27**	**337**	*eP*	**Pn**	**01 33 25.2**	**+1.7**
PBRG	**Braganca**	**6.78**	**341**	*eP*	**Pn**	**01 33 32.4**	**+2.0**

*CNRM **07** 01:52:34.8,35°.64N×3°.80W,h12km,ML2.2*
*SFS **07** 01:52:38.1,35°.27N×3°.69W,h42km,ML2.7/6,ML2.7/6, MLv2.7/6*
*MDD **07** 01:52:39.1±1.0,35°.44N×3°.68W,h16km±8km,mb_Lg2.4/7, Error ellipse: s-maj=7.3km s-min=5.0km az=107.0*
ISC 07 01:52:37.4±1.2,35°.45N±0°.03×3°.74W±0°.03,h19km±4km, n25,σ1°26/35,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.28**	**216**	P	**Pg**	**01 52 43.5**	**-0.3**
PALE	**Palemas**	**0.28**	**216**	S	**Sg**	**01 52 48.7**	**+0.6**
EMEL	**Melilla**	**0.65**	**103**	P	**Pg**	**01 52 50.0**	**-0.4**
EMEL				S	**Sg**	**01 52 58.5**	**-0.7**
EMLI	**Melilla**	**0.66**	**103**	Sg	**Sg**	**01 52 58.4**	**-0.9**
EMLI				Pg	**Pg**	**01 52 49.8**	**-0.7**
EALB	**Alboran**	**0.75**	**49**	S	**Sg**	**01 53 02.0**	**-0.3**
EALB				*i* Vmb_Lg		01 53 06.3	
AKLM	**AKL**	**0.94**	**186**	P	**Pb**	**01 52 56.0**	**+0.8**
AKLM	**AKL**	**0.94**	**186**	S	**Sn**	**01 53 09.4**	**+0.6**
TAF	**Taforalt**	**1.25**	**120**	P	**Pn**	**01 52 58.7**	**-1.3**
SMIR	**Smir Dam**	**1.36**	**280**	P	**Pn**	**01 53 00.0**	**-1.4**
SMIR	**Smir Dam**	**1.36**	**280**	S	**Sn**	**01 53 16.2**	**-2.8**
EMIJ	**Mijas**	**1.40**	**323**	Pn	**Pn**	**01 53 02.1**	**+0.2**
EMIJ	**Mijas**	**1.40**	**323**	P	**Pn**	**01 53 02.4**	**+0.4**
EMIJ				S	**Sn**	**01 53 20.0**	**0.0**
ELGU	**Los Guajares,**	**1.42**	**4**	Pn	**Pn**	**01 53 02.8**	**+0.4**
ELGU	**Los Guajares,**	**1.42**	**4**	P	**Pn**	**01 53 02.6**	**+0.2**
ELGU				S	**Sn**	**01 53 21.7**	**-0.1**
ELGU				*i* Vmb_Lg		01 53 21.7	
EBER	**Berja**	**1.60**	**25**	Pn	**Pn**	**01 53 05.6**	**+0.6**
EBER				Sn	**Sn**	**01 53 25.1**	**-0.2**
EBER	**Berja**	**1.60**	**25**	P	**Pn**	**01 53 05.4**	**+0.4**
EBER				*i* Vmb_Lg		01 53 24.4	
EBER				S	**Sn**	**01 53 25.0**	**-0.3**
EGOR	**Sierra Gorda,**	**1.69**	**350**	Pn	**Pn**	**01 53 07.0**	**+0.9**
EGOR				Sn	**Sn**	**01 53 29.1**	**+1.8**
EQUE	**Quentar**	**1.77**	**8**	P	**Pn**	**01 53 08.8**	**+1.6**
EQUE				S	**Sn**	**01 53 29.3**	**0.0**
EQUE				*i* Vmb_Lg		01 53 29.4	
EQTA	**Presa de Quent**	**1.77**	**8**	Pn	**Pn**	**01 53 08.6**	**+1.4**
EQTA				Sn	**Sn**	**01 53 29.4**	**+0.1**
ENIJ	**Nijar**	**1.96**	**39**	S	**Sn**	**01 53 33.3**	**-0.6**
ENIJ				*i* Vmb_Lg		01 53 45.2	
ESPR	**Espera**	**2.23**	**310**	S	**Sn**	**01 53 37.8**	**-2.5**
ESPR				*i* Vmb_Lg		01 53 38.8	
EQES	**Quesada**	**2.41**	**13**	P	**Pn**	**01 53 18.1**	**+2.1**
EQES				S	**Sb**	**01 53 48.5**	**-1.2**
EQES				*i* Vmb_Lg		01 53 51.3	
MD31	**MD31**	**2.71**	**199**	P	**Pn**	**01 53 20.8**	**+0.7**
MDT	**Midelt**	**2.72**	**196**	P	**Pn**	**01 53 23.0**	**+2.7**
EADA	**Adamuz**	**2.80**	**346**	P	**Pn**	**01 53 23.4**	**+2.2**

IDC 07 01:58:30.7±5.8,4°.34S×140°.10E,h0km,mb3.7/2, mbtmp3.9/3,ML4.1/1,Error ellipse: s-maj=169.4km s-min=42.1km az=118.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.50**	**199**	Pn	Pn	02 02 24.8	+1.0
	0.8nm,0.3s,baz=14,slow=12,SNR=33						
WRA				Sn	Sn	02 05 26.6	-1.1
	0.1nm,0.3s,baz=7.1,slow=23,SNR=2.2 1.7nm,0.4s						
ASAR	**Alice Springs**	**20.13**	**197**	P	P	02 03 07.2	+0.6
	1.6nm,0.6s,baz=22,slow=9.1,SNR=22						
ASAR				S	Sn	02 06 54.8	-0.8
	0.2nm,0.5s,baz=17,slow=25,SNR=1.8 1.6nm,0.6s						
STKA	**Stephens Creek**	**27.43**	**177**	P	P	02 04 17.7	-0.7
	1.2nm,0.7s,baz=343,slow=14,SNR=3.3 1.2nm,0.7s						

*JMA **07** 01:58:33.9±0.1,24°.0N±0°.3×121°.7E±0°.7,h0km,MV3.4/12, TAIWAN REGION*
*TAP **07** 01:58:34.8,24°.05N×121°.67E,h8km,ML3.6,C*
*ASIES **07** 01:58:34.8,24°.05N×121°.67E,h8km,ML3.6,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^20Nm; Mrr=3.12; Mθθ=0.04; Mϕϕ=3.16; Mrθ=2.96; Mθϕ=-6.40; Mϕr=7.38; Fault plane solution: M0=10.67910×10^20 NP1: ϕs=182.71000°,δ=77.86000°,λ=-49.15000°. NP2: ϕs=286.38000°,δ=42.31000°,λ=-161.79000°. Principal axes: T Plg=21.9730°, Azm=242.7910°; N Plg=39.7490°, Azm=352.3980°; P Plg=42.1950°, Azm=131.3350°:*
ISC 07 01:58:34.6±0.9,24°.04N±0°.01×121°.70E±0°.02,h7km±6km, n106,σ0°.74/167,5C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.10**	**293**	*i* P	**Pg**	**01 58 37.1**	**+0.2**
	baz=297						
TWD	

	baz=225									
FUSS	**Fushou**	**0.46**	**297**	*i*	P		**Pb**	**01 58 44.1**	**-1.1**	
	baz=296									
FUSS				*i*	S		**Sb**	**01 58 50.8**	**-1.7**	
	baz=296									
CHGB	**Renai**	**0.48**	**272**	⇓*i*	P		**Pg**	**01 58 44.3**	**+0.4**	
	baz=263									
CHGB				*i*	S		**Sg**	**01 58 49.4**	**-0.9**	
	baz=263									
NNSB	**Datong**	**0.48**	**323**	⇓*i*	P		**Pg**	**01 58 44.3**	**+0.4**	
	baz=323									
NNSB				*i*	S		**Sg**	**01 58 50.4**	**+0.2**	
	baz=323									
OWD	**Renai**	**0.48**	**260**	*i*	P		**Pg**	**01 58 44.3**	**+0.3**	
	baz=259									
OWD					S		**Sg**	**01 58 50.5**	**+0.1**	
	baz=259									
NNS	**Nan Shan**	**0.50**	**323**	⇓*i*	P		**Pg**	**01 58 44.5**	**+0.3**	
	baz=324									
NNS					S		**Sg**	**01 58 50.7**	**0.0**	
	baz=324									
LATG	**Datong**	**0.52**	**342**	⇓*i*	P		**Pg**	**01 58 44.9**	**+0.3**	
	baz=341									
LATG					S		**Sg**	**01 58 51.6**	**+0.2**	
	baz=341									
TWT	**Tachien**	**0.52**	**294**	⇓*i*	P		**Pb**	**01 58 45.4**	**-0.8**	
	baz=292									
TWT				*i*	S		**Sb**	**01 58 52.5**	**-1.5**	
	baz=292									
WUSB	**Renai**	**0.53**	**265**	*i*	P		**Pb**	**01 58 45.4**	**-1.0**	
	baz=264									
WUSB					S		**Sg**	**01 58 52.3**	**+0.4**	
	baz=264									
TDCB	**Techi**	**0.54**	**293**	⇓*i*	P		**Pb**	**01 58 45.5**	**-1.0**	
	baz=293									
TDCB					S		**Sg**	**01 58 52.1**	**+0.1**	
	baz=293									
ESAO	**Su ao**	**0.55**	**14**	*e*P			**Pg**	**01 58 45.9**	**+0.6**	
	baz=11									
ESAO					S		**Sg**	**01 58 52.6**	**+0.2**	
	baz=11									
TWC	**Suao**	**0.58**	**14**	*i*	P		**Pg**	**01 58 46.3**	**+0.5**	
	baz=7.0									
TWC					S		**Sg**	**01 58 54.1**	**+0.7**	
	baz=7.0									
VWDT	**VWDT**	**0.58**	**241**	⇑*i*	P		**Pb**	**01 58 46.3**	**-0.8**	
	baz=235									
VWDT					S		**Sg**	**01 58 54.0**	**+0.5**	
	baz=235									
NDT	**Datong Townshi**	**0.58**	**343**	⇓*i*	P		**Pb**	**01 58 46.5**	**-0.7**	
	baz=342									
NDT					S		**Sg**	**01 58 54.2**	**+0.6**	
	baz=342									
NDS	**Dongshan**	**0.59**	**2**	*i*	P		**Pg**	**01 58 46.6**	**+0.6**	
NDS					S		**Sg**	**01 58 54.2**	**+0.5**	
HGSD	**Ruisui**	**0.60**	**205**		P		**Pb**	**01 58 48.0**	**+0.6**	
	baz=193									
ENTT	**Nioudou**	**0.61**	**349**	⇓*i*	P		**Pb**	**01 58 46.9**	**-0.7**	
	baz=348									
ENTT				*i*	S		**Sg**	**01 58 54.9**	**+0.5**	
	baz=348									
EHY	**Hungye**	**0.63**	**213**		P		**Pg**	**01 58 47.3**	**+0.5**	
	baz=221									
EHY					S		**Sb**	**01 58 56.1**	**-1.0**	
	baz=221									
TWE	**Neicheng**	**0.68**	**358**	⇓*i*	P		**Pb**	**01 58 48.3**	**-0.5**	
	baz=357									
TWE				*i*	S		**Sg**	**01 58 57.0**	**+0.5**	
	baz=357									
YHNB	**Yeheng**	**0.69**	**335**	⇓*i*	P		**Pb**	**01 58 48.6**	**-0.4**	
	baz=334									
YHNB				*i*	S		**Sg**	**01 58 57.2**	**+0.2**	
	baz=334									
NSK	**Sanguang**	**0.70**	**334**	⇓*i*	P		**Pb**	**01 58 48.7**	**-0.6**	
	baz=325									
NSK				*i*	S		**Sg**	**01 58 57.6**	**+0.2**	
	baz=325									
WCS	**Beigang Elemen**	**0.72**	**272**		P		**Pb**	**01 58 49.1**	**-0.3**	
	baz=271									
FUSB	**Fushanzhiwuyua**	**0.72**	**352**		P		**Pg**	**01 58 48.5**	**0.0**	
	baz=350									
FUSB					S		**Sg**	**01 58 58.4**	**+0.4**	
	baz=350									
SSLB	**Suanglung**	**0.73**	**250**	⇑*i*	P		**Pb**	**01 58 49.0**	**-0.6**	
	baz=260									
SSLB					S		**Sg**	**01 58 57.3**	**-0.7**	
	baz=260									
WHP	**Taichung City**	**0.73**	**289**	⇑*i*	P		**Pb**	**01 58 49.5**	**-0.2**	
	baz=289									
WHP					S		**Sb**	**01 58 59.2**	**-0.7**	
	baz=289									
YULB	**Yu-li**	**0.74**	**210**		P		**Pg**	**01 58 49.0**	**+0.1**	
	baz=225									
YULB					eS		**Sb**	**01 58 59.7**	**-0.5**	
	baz=225									
SMLT	**Sun Moon Lake**	**0.75**	**258**	⇑*i*	P		**Pb**	**01 58 49.5**	**-0.5**	
	baz=258									
SMLT				*i*	S		**Sb**	**01 58 59.6**	**-0.9**	
	baz=258									
ECBN	**Changbin**	**0.76**	**198**	*e*P			**Pb**	**01 58 50.4**	**+0.3**	
	baz=185									
NWLT	**Wulai**	**0.76**	**346**	*i*	P		**Pb**	**01 58 49.8**	**-0.3**	
	baz=344									
NWLT					S		**Sg**	**01 58 58.3**	**-0.7**	
	baz=344									
EYUL	**Yuli**	**0.77**	**207**	*e*P			**Pb**	**01 58 51.0**	**+0.7**	
	baz=222									
TWF1	**Yuli**	**0.78**	**208**		P		**Pg**	**01 58 49.4**	**-0.1**	
	baz=222									
NFF	**Wufeng Townshi**	**0.79**	**318**	⇑*i*	P		**Pb**	**01 58 50.6**	**-0.2**	
	baz=317									
NFF					eS		**Sb**	**01 59 01.1**	**-0.7**	
	baz=317									
WHYT	**Xinyi Township**	**0.85**	**246**	*e*P			**Pb**	**01 58 51.8**	**+0.2**	
	baz=254									
WHYT					eS		**Sb**	**01 59 03.2**	**-0.1**	
	baz=254									
NSTT	**Nanjuang**	**0.87**	**313**	⇓*i*	P		**Pb**	**01 58 52.0**	**0.0**	
	baz=312									
NSTT				*i*	S		**Sb**	**01 59 03.1**	**-0.6**	
	baz=312									
LIOB	**Emei**	**0.87**	**314**		P		**Pb**	**01 58 52.1**	**+0.1**	
	baz=313									
LIOB					eS		**Sn**	**01 59 04.4**	**-1.8**	
	baz=313									
CHKH	**Chenggong**	**0.89**	**198**	*e*P			**Pg**	**01 58 51.9**	**+0.2**	
	baz=190									
TWQ1	**Liyuan**	**0.90**	**290**		P		**Pb**	**01 58 52.5**	**-0.1**	
	baz=301									
TWQ1					S		**Sn**	**01 59 05.5**	**-1.4**	
	baz=301									
WJS	**Zhushan**	**0.91**	**256**	*e*P			**Pn**	**01 58 53.2**	**-0.7**	
	baz=257									
FULB	**Fuli**	**0.92**	**204**	*e*P			**Pb**	**01 58 52.6**	**-0.2**	
	baz=221									
NHDH	**Xindian Distri**	**0.93**	**350**	*e*P			**Pb**	**01 58 53.2**	**+0.1**	
	baz=338									
NHDH					eS		**Sb**	**01 59 04.9**	**-0.8**	
	baz=338									
NSY	**Sanyi**	**0.93**	**294**		P		**Pb**	**01 58 53.0**	**-0.1**	
	baz=294									
TIPB	**Shuangxi**	**0.94**	**7**		P		**Pb**	**01 58 53.0**	**-0.2**	
	baz=354									
TIPB					eS		**Sg**	**01 59 04.9**	**+0.1**	
	baz=354									
WNT	**Mingjian**	**0.94**	**260**		P		**Pn**	**01 58 54.4**	**+0.1**	
	baz=252									
NMLH	**Miaoli**	**0.96**	**301**		P		**Pn**	**01 58 54.8**	**+0.2**	
	baz=300									
NMLH					S		**Sn**	**01 59 08.9**	**+0.4**	
	baz=300									
ALS	**Alishan**	**0.97**	**237**	*i*	P		**Pb**	**01 58 53.8**	**-0.1**	
	baz=239									
ALS				*i*	S		**Sn**	**01 59 08.7**	**-0.5**	
	baz=239									
CHKT	**Chengkung**	**0.98**	**198**	*i*	P		**Pb**	**01 58 54.2**	**+0.2**	
	baz=193									
CHKT					S		**Sn**	**01 59 09.2**	**+0.2**	
	baz=193									
SBCB	**Hsinchu**	**0.99**	**319**	*e*P			**Pn**	**01 58 54.6**	**-0.4**	
	baz=318									
EHD	**Haiduan**	**1.00**	**207**	*e*P			**Pg**	**01 58 53.7**	**0.0**	
	baz=222									
TWB1	**Santiao Chiao**	**1.00**	**15**		P		**Pb**	**01 58 54.6**	**+0.4**	
	baz=4.0									
TWB1					S		**Sg**	**01 59 07.1**	**+0.4**	
	baz=4.0									
WDJ	**Dajia District**	**1.01**	**288**	*e*P			**Pn**	**01 58 56.5**	**+1.2**	
	baz=288									
NWF	**Wu-fen Shan**	**1.03**	**4**		P		**Pn**	**01 58 55.2**	**-0.4**	
	baz=350									
NWF					S		**Sg**	**01 59 06.9**	**-0.9**	
	baz=350									
WFSB	**Wu-fen Shan**	**1.03**	**4**	*e*P			**Pb**	**01 58 54.8**	**+0.1**	
	baz=352									
WFSB					eS		**Sg**	**01 59 07.0**	**-0.7**	
	baz=352									
CHN5	**Tsauling**	**1.03**	**245**		P		**Pn**	**01 58 56.2**	**+0.6**	
	baz=233									
NCUH	**Zhongli**	**1.03**	**333**	*e*P			**Pn**	**01 58 55.7**	**+0.2**	
	baz=341									
NCUH					eS		**Sn**	**01 59 10.9**	**+0.6**	
	baz=341									
WCHH	**Zhanghua**	**1.04**	**272**		P		**Pn**	**01 58 56.1**	**+0.4**	
	baz=272									
WCHH					S		**Sn**	**01 59 12.0**	**+1.6**	
	baz=272									
ELDTW	**Lidau**	**1.05**	**217**	*e*P			**Pg**	**01 58 54.2**	**-0.6**	
	baz=206									
SXI1	**Grass Mountain**	**1.06**	**9**		P		**Pn**	**01 58 56.0**	**0.0**	
	baz=351									
TWS1	**Kuangyinshan**	**1.09**	**346**	*e*P			**Pn**	**01 58 57.0**	**+0.8**	
	baz=343									
WGK	**Gukeng**	**1.10**	**252**	*e*P			**Pn**	**01 58 57.4**	**+1.0**	
	baz=253									
YM01	**YM01**	**1.11**	**354**		P		**Pn**	**01 58 56.8**	**+0.2**	
	baz=359									
YM01					eS		**Sn**	**01 59 12.7**	**+0.5**	
	baz=359									
WDLH	**Douliu**	**1.12**	**252**	*e*P			**Pn**	**01 58 56.9**	**+0.2**	
	baz=254									
EDH	**Donghe**	**1.12**	**199**	*e*P			**Pg**	**01 58 54.2**	**-1.9**	
	baz=188									
EDH					eS		**Sb**	**01 59 11.7**	**+0.6**	
	baz=188									
ANP	**Anpu**	**1.15**	**352**	*e*P			**Pn**	**01 58 57.1**	**-0.1**	
	baz=348									
WCKO	**Fanlu**	**1.17**	**239**	*e*P			**Pn**	**01 58 57.8**	**+0.4**	
	baz=242									
JYNG	**Yonagunijimaku**	**1.21**	**70**	*e*P			**Pn**	**01 58 56.7**	**-1.2**	
STYH	**Taoyuan**	**1.21**	**225**	*e*P			**Pn**	**01 58 57.8**	**-0.1**	
	baz=228									
WRL	**Guolierlin Hig**	**1.22**	**264**	*e*P			**Pn**	**01 58 58.6**	**+0.6**	
	baz=264									
TPUB	**Ta-pu**	**1.23**	**233**		P		**Pn**	**01 58 58.8**	**+0.6**	
	baz=236									
LONT	**Longtian**	**1.24**	**205**	*e*P			**Pn**	**01 58 57.9**	**-0.5**	
	baz=209									
WTK	**Tuku**	**1.25**	**254**	*e*P			**Pg**	**01 58 59.4**	**+0.8**	
	baz=255									
WTK					eS		**Sn**	**01 59 17.4**	**+1.9**	
	baz=255									
YOJ	**Yonaguni jima**	**1.27**	**70**	*e*P			**Pn**	**01 58 58.9**	**+0.2**	
	baz=68									
YOJ	**Yonaguni jima**	**1.27**	**70**	*e*P			**Pn**	**01 58 58.4**	**-0.4**	
WTP	**Ta-pu**	**1.27**	**232**		P		**Pg**	**01 58 59.9**	**+0.9**	
	baz=235									
WTP					S		**Sn**	**01 59 18.3**	**+2.1**	
	baz=235									
TWG	**Pinlang**	**1.34**	**205**	*e*P			**Pb**	**01 59 00.1**	**0.0**	
	baz=209									
TWGBT	**Beinan**	**1.34**	**205**	*e*P			**Pn**	**01 58 58.9**	**-0.8**	
	baz=209									
TWK	**Hsinying**	**1.35**	**235**	*e*P			**Pg**	**01 59 01.1**	**+0.6**	
	baz=239									
TWK					eS		**Sn**	**01 59 21.2**	**+3.0**	
	baz=239									
CHN1	**Nanshi**	**1.37**	**232**		P		**Pg**	**01 59 01.5**	**+0.6**	
	baz=235									
SNST	**Tainan City**	**1.37**	**234**	*e*P			**Pg**	**01 59 01.7**	**+0.8**	
	baz=238									
SNST					eS		**Sg**	**01 59 20.6**	**+1.9**	
	baz=238									
LDUT	**Ludao**	**1.38**	**189**	*e*P			**Pn**	**01 58 58.5**	**-1.7**	
	baz=192									
SGST	**Jiashian**	**1.40**	**227**	*e*P			**Pn**	**01 59 00.6**	**+0.1**	
	baz=231									
SLGT	**Liugui**	**1.42**	**223**	*e*P			**Pb**	**01 59 01.5**	**+0.1**	
	baz=227									
WSL	**Shuilin Townsh**	**1.44**	**249**	*e*P			**Pg**	**01 59 03.0**	**+0.7**	
	baz=251									
ICHU	**Yijhu**	**1.47**	**243**	*e*P			**Pg**	**01 59 02.7**	**-0.1**	
	baz=245									
TSMG	**Majia**	**1.64**	**216**	*e*P			**Pg**	**01 59 05.7**	**-0.4**	
	baz=210									
SCZT	**Fangliau**	**1.93**	**211**	*e*P			**Pb**	**01 59 09.1**	**-1.0**	
	baz=203									
PHUB	**P'eng-hu**	**2.02**	**255**	*e*P			**Pn**	**01 59 09.9**	**+0.9**	
	baz=258									
PNG	**Penghu**	**2.02**	**257**	*e*P			**Pb**	**01 59 10.4**	**-1.2**	
	baz=259									
WDGT	**Dungji**	**2.02**	**248**	*e*P			**Pn**	**01 59 09.9**	**+0.8**	
	baz=250									
LYUB	**Lan-yu**	**2.03**	**183**	*e*P			**Pn**	**01 59 06.6**	**-2.6**	
	baz=187									
JKRS	**Kuro-shima**	**2.12**	**84**		P		**Pn**	**01 59 11.2**	**+0.7**	
JIJ	**Ishigaki jima**	**2.25**	**81**	*e*P			**Pn**	**01 59 12.5**	**+0.1**	
JIJ					eS		**Sn**	**01 59 40.4**	**0.0**	
JISG	**Ishigakijimahi**	**2.44**	**77**		P		**Pn**	**01 59 14.7**	**-0.2**	
JISG					S		**Sn**	**01 59 46.2**	**+1.2**	

*CNRM **07** 01:59:00.9, 35.67N×3.85W, h0km, ML1.9*
*MDD **07** 01:59:03.7±1.3, 35.23N×3.79W, h34km±38km, mb_Lg2.2/7, Error ellipse: s-maj=18.1km s-min=5.7km az=12.0*
*SFS **07** 01:59:03.0, 35.26N×3.58W, h80km, ML2.7/5, ML2.7/5, MLv2.7/5*

ISC 07 01:59:03.3±1.1, 35.47N±0.04×3.77W±0.03, h14km±9km, n22, σ1s37/31, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PALE	**Palemas**	**0.28**	**209**	P		**Pg**	**01 59 09.4**		**+0.1**
PALE	**Palemas**	**0.28**	**209**	S		**Sg**	**01 59 15.0**		**+1.6**
EMEL	**Melilla**	**0.69**	**104**	P		**Pg**	**01 59 16.0**		**-0.8**
EMEL				S		**Sg**	**01 59 24.9**		**-0.9**
EMLI	**Melilla**	**0.69**	**104**	Sg		**Sg**	**01 59 24.8**		**-1.2**
EMLI				Pg		**Pg**	**01 59 16.0**		**-0.9**
AKLM	**AKL**	**0.96**	**184**	P		**Pb**	**01 59 22.0**		**+0.3**
AKLM	**AKL**	**0.96**	**184**	S		**Sn**	**01 59 36.4**		**+0.5**
TAF	**Taforalt**	**1.29**	**120**	P		**Pn**	**01 59 27.1**		**+0.1**
SMIR	**Smir Dam**	**1.33**	**280**	P		**Pn**	**01 59 26.0**		**-1.4**
SMIR	**Smir Dam**	**1.33**	**280**	S		**Sb**	**01 59 42.4**		**-2.5**
EMIJ	**Mijas**	**1.36**	**324**	Pn		**Pn**	**01 59 29.0**		**+1.1**
EMIJ	**Mijas**	**1.36**	**324**	P		**Pn**	**01 59 28.5**		**+0.5**
EMIJ				S		**Sn**	**01 59 46.1**		**+0.2**
EMIJ				*i* Vmb_Lg			01 59 52.4		
ECEU	**Ceuta**	**1.38**	**289**	S		**Sn**	**01 59 43.9**		**-2.2**
ECEU				*i* Vmb_Lg			01 59 52.1		
ELGU	**Los Guajares,**	**1.40**	**5**	Pn		**Pn**	**01 59 29.0**		**+0.5**
ELGU	**Los Guajares,**	**1.40**	**5**	P		**Pn**	**01 59 29.1**		**+0.5**
ELGU				S		**Sn**	**01 59 47.8**		**+0.9**
ELGU				*i* Vmb_Lg			01 59 50.3		
EBER	**Berja**	**1.60**	**26**	Pn		**Pn**	**01 59 30.2**		**-1.1**
EBER				Sn		**Sn**	**01 59 50.7**		**-1.1**
EBER	**Berja**	**1.60**	**26**	P		**Pn**	**01 59 32.6**		**+1.3**
EBER				S		**Sn**	**01 59 51.6**		**-0.3**
EBER				*i* Vmb_Lg			02 00 04.9		
EGOR	**Sierra Gorda,**	**1.66**	**351**	P		**Pn**	**01 59 33.3**		**+1.1**
EGOR				S		**Sn**	**01 59 55.1**		**+1.7**
EGOR				*i* Vmb_Lg			02 00 08.3		
EQUE	**Quentar**	**1.75**	**9**	P		**Pn**	**01 59 34.1**		**+0.7**
EQUE				S		**Sn**	**01 59 56.8**		**+1.1**
EQUE				*i* Vmb_Lg			01 59 59.4		
EQTA	**Presa de Quent**	**1.76**	**9**	Pn		**Pn**	**01 59 33.8**		**+0.3**
EQTA				Sn		**Sn**	**01 59 56.6**		**+0.9**
EQES	**Quesada**	**2.40**	**13**	P		**Pn**	**01 59 44.9**		**+2.6**
EQES				S		**Sn**	**02 00 14.1**		**+2.6**
EQES				*i* Vmb_Lg			02 00 27.5		
MD31	**MD31**	**2.72**	**198**	P		Pb	01 59 50.4		-1.4
MDT	**Midelt**	**2.73**	**195**	P		**Pn**	**01 59 49.0**		**+2.0**

*IDC **07** 02:01:48.1±0.9, 31.06N×143.03E, h0km, mb3.7/11, mbtmp3.7/12, ML2.8/1, Error ellipse: s-maj=25.7km s-min=21.5km az=79.0*

ISC 07 02:01:53.0±0.9, 31.2N±0.1×142.8E±0.1, h30km, n13, σ1s70/13, mb3.7/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
JHJ	**Hachijo jima 2**	**3.20**	**308**	Sn		**Sn**	**02 03 14.9**		**-3.5**
	33nm,0.3s,baz=262,slow=22,SNR=4.6								

MJAR	**Matsushiro Arr**	**6.57**	**326**	Pn			**Pn**	**02 03 27.8**	**+0.2**	
	0.2nm,0.3s,baz=159,slow=12,SNR=5.1 1.7nm,0.5s									
SONM	**Songino Array**	**32.28**	**312**	P			**P**	**02 08 19.4**	**+0.3**	
	0.5nm,0.7s,baz=88,slow=4.8,SNR=3.7 0.5nm,0.7s									
MKAR	**Makanchi Array**	**48.37**	**307**	P			**P**	**02 10 33.8**	**+1.7**	
	0.6nm,0.6s,baz=96,slow=7.4,SNR=8.7 0.6nm,0.6s									
KURBB	**Kurchatov Arra**	**50.64**	**312**	P			**P**	**02 10 50.0**	**+0.8**	
	0.5nm,0.7s,baz=87,slow=6.3,SNR=4.6 0.5nm,0.7s									
WRA	**Warramunga Arr**	**51.46**	**190**	P			**P**	**02 10 54.8**	**-0.8**	
	0.8nm,0.6s,baz=8.9,slow=7.8,SNR=8.2 0.8nm,0.6s									
ILAR	**Eielson Array**	**53.92**	**30**	P			**P**	**02 11 13.2**	**-0.2**	
	0.4nm,0.7s,baz=263,slow=6.2,SNR=5.2 0.4nm,0.7s									
ASAR	**Alice Springs**	**55.18**	**190**	P			**P**	**02 11 22.0**	**-1.0**	
	0.4nm,0.8s,baz=10,slow=5.8,SNR=2.2 0.4nm,0.8s									
YKA	**Yellowknife Ar**	**68.33**	**29**	P			**P**	**02 12 51.4**	**+0.3**	
	0.5nm,0.7s,baz=295,slow=6.7,SNR=7.9 0.5nm,0.7s									
FINES	**FINESS Array B**	**74.54**	**334**	P			**P**	**02 13 30.2**	**+1.7**	
	3.0nm,1.1s,baz=129,slow=5.2,SNR=3.7 3.0nm,1.1s									
KBZ	**Khabaz**	**75.64**	**313**	P			**P**	**02 13 37.1**	**+1.9**	
	1.5nm,0.8s,baz=217,slow=0.9,SNR=4.5 1.5nm,0.8s									
NVAR	**Mina Array Bea**	**77.61**	**53**	P			**P**	**02 13 45.2**	**-1.6**	
	0.3nm,0.6s,baz=313,slow=6.0,SNR=2.7 0.3nm,0.6s									
TXAR	**Lajitas Array**	**92.75**	**53**	P			**P**	**02 15 01.6**	**-1.3**	
	0.5nm,1.0s,baz=298,slow=1.9,SNR=3.9 0.5nm,1.0s									

TAP 07 02:15:26.7, 24.20N×121.68E, h13km, ML2.4, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
ETL	**Fush Village**	**0.07**	**230**	*i*	P	Pg	02 15	30.3	+0.8
	baz=229								
ETL				*i*	S	Sg	02 15	32.2	+0.8
	baz=229								
NACB	**Ninganchiao**	**0.08**	**250**	*i*	P	Pg	02 15	30.5	+0.9
	baz=249								
NACB				*i*	S	Sg	02 15	32.4	+0.8
	baz=249								
EAHA	**Aohua**	**0.14**	**23**		P	Pb	02 15	30.9	-0.3
	baz=23								
EAHA					S	Sg	02 15	33.4	+0.7
	baz=23								
TWD	**Chiawan**	**0.14**	**212**	⇓*i*	P	Pb	02 15	31.1	-0.2
	baz=209								
TWD				*i*	S	Sg	02 15	33.5	+0.6
	baz=209								
ENA	**Nanau**	**0.23**	**14**	*i*	P	Pb	02 15	32.5	-0.3
	baz=15								
ENA					S	Sb	02 15	36.1	-0.7
	baz=15								
ETM	**Tongmen**	**0.29**	**216**		P	Pb	02 15	33.6	-0.2
	baz=215								
NNSB	**Datong**	**0.35**	**310**	*e*P		Pb	02 15	34.5	-0.4
	baz=309								
NNSB					S	Sb	02 15	40.4	0.0
	baz=309								
LATG	**Datong**	**0.36**	**337**	*e*P		Pb	02 15	35.1	0.0
	baz=337								
LATG					eS	Sb	02 15	40.6	0.0
	baz=337								
NNS	**Nan Shan**	**0.37**	**310**		P	Pb	02 15	35.2	0.0
	baz=310								
NNS					S	Sb	02 15	40.8	-0.1
	baz=310								
WHF	**Hehuan Shan**	**0.38**	**261**	*e*P		Pg	02 15	34.9	+0.2
	baz=260								
WHF					eS	Sb	02 15	40.9	-0.7
	baz=260								
FUSS	**Fushou**	**0.40**	**276**	*e*P		Pb	02 15	36.2	+0.4
	baz=276								
FUSS					eS	Sb	02 15	42.1	+0.2
	baz=276								
NDT	**Datong Townshi**	**0.43**	**339**	*e*P		Pb	02 15	36.3	+0.2
	baz=338								
NDT					eS	Sb	02 15	42.9	+0.5
	baz=338								
NDS	**Dongshan**	**0.43**	**4**		P	Pb	02 15	36.6	+0.4
	baz=4.0								
NDS					S	Sb	02 15	43.2	+0.6
	baz=4.0								
TWC	**Suao**	**0.43**	**21**	*e*S		Sb	02 15	42.5	-0.1
	baz=22								
ENTT	**Nioudou**	**0.45**	**347**		P	Pb	02 15	36.6	+0.1
	baz=347								
ENTT					S	Sb	02 15	42.9	-0.1
	baz=347								
TDCB	**Techi**	**0.48**	**276**	*e*S		Sb	02 15	44.2	+0.1
	baz=275								
OWD	**Renai**	**0.52**	**242**	*e*S		Sb	02 15	46.0	+0.6
	baz=241								
YHNB	**Yeheng**	**0.54**	**329**	*e*S		Sb	02 15	46.4	+0.6
	baz=329								
WARBT	**Fenglin Townsh**	**0.55**	**209**	*e*P		Pg	02 15	37.7	+0.1
	baz=209								
NSK	**Sanguang**	**0.56**	**328**	*e*S		Sb	02 15	46.6	+0.4
	baz=328								
WUSB	**Renai**	**0.56**	**248**	*e*P		Pg	02 15	37.4	-0.3
	baz=247								
FUSB	**Fushanzhiwuyua**	**0.56**	**351**	*e*S		Sb	02 15	46.6	+0.2
	baz=351								

*MOS **07** 02:18:00.3±1.4, 24.07N×121.69E, h10km, mb4.9/39, MS4.5/7, Error ellipse: s-maj=9.0km s-min=5.8km az=110.0*

*GCMT **07** 02:18:01.8±0.4, 23.95N±0.03×121.76E±0.03, h23km±1km, MW4.9/73, Moment Tensor Solution. s20,c21; s73,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.65±.18; $M_{\theta\

δ72.00000°,λ90.00000°. NP2:φ₈235.00000°,δ18.00000°, λ91.00000°.

ISC 07 02:18:03.7ε0.4,**24'05N**±0'01×**121'73E**±0'02,**h15**km,**2**km, **n691**,σ1$**43**/722,**mb5.0**/134,**MS4.3**/59,**21C-61D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=275	**0.13**	**284**	⇓*i*P	**Pg**	**02 18 05.8**	**-1.6**
TWD				*i* S	**Sg**	**02 18 07.8**	**-1.9**
ETL	**Fush Village** baz=312	**0.15**	**317**	⇓*i*P	**Pg**	**02 18 06.0**	**-1.6**
ETL				*i* S	**Sg**	**02 18 08.5**	**-1.8**
NACB	**Ninganchiao**	**0.18**	**314**	Pg	**Pg**	**02 18 06.4**	**-1.6**
NACB				Sg	**Sg**	**02 18 08.9**	**-2.0**
NACB	**Ninganchiao**	**0.18**	**314**	P	**Pg**	**02 18 06.5**	**-1.5**
NACB	**Ninganchiao** baz=311	**0.18**	**314**	⇓*i*P	**Pg**	**02 18 06.5**	**-1.6**
NACB				S	**Sg**	**02 18 09.0**	**-2.0**
ETM	**Tongmen** baz=247	**0.24**	**250**	⇓*i*P	**Pg**	**02 18 07.9**	**-1.0**
ETM				*i* S	**Sg**	**02 18 11.7**	**-0.7**
EHP	**Heping Village** baz=352	**0.26**	**1**	P	**Pg**	**02 18 08.3**	**-1.1**
EHP				S	**Sg**	**02 18 12.4**	**-0.8**
EAHA	**Aohua** baz=359	**0.28**	**1**	⇓*i*P	**Pg**	**02 18 08.5**	**-1.2**
EAHA				S	**Sg**	**02 18 13.1**	**-0.6**
LXIB	**Xiulin Townshi** baz=253	**0.29**	**265**	⇓*i*P	**Pg**	**02 18 08.9**	**-1.2**
LXIB				*e*S	**Sg**	**02 18 13.3**	**-1.0**
SHUL	**Shoufeng** baz=220	**0.30**	**211**	⇓*i*P	**Pb**	**02 18 10.7**	**-0.2**
SHUL				*i* S	**Sb**	**02 18 16.5**	**+0.9**
ESL	**Shilin** baz=236	**0.36**	**230**	P	**Pg**	**02 18 10.2**	**-0.9**
ESL				S	**Sg**	**02 18 16.6**	**+0.5**
ENA	**Nanau**	**0.38**	**1**	⇓*i*P	**Pg**	**02 18 10.4**	**-1.0**
ENA				*i* S	**Sg**	**02 18 15.7**	**-1.0**
TEGC	**Jichi Village** baz=210	**0.38**	**208**	P	**Pb**	**02 18 11.9**	**-0.3**
TEGC				S	**Sn**	**02 18 19.9**	**-1.9**
EWUT	**Wuta** baz=352	**0.40**	**6**	⇓P	**Pg**	**02 18 10.8**	**-0.9**
WHF	**Hehuan Shan** baz=281	**0.44**	**283**	⇓*i*P	**Pg**	**02 18 11.6**	**-1.1**
WHF				S	**Sg**	**02 18 17.6**	**-1.2**
WARBT	**Fenglin Townsh** baz=232	**0.46**	**224**	⇓P	**Pg**	**02 18 12.2**	**-0.7**
EGFH	**Guangfu** baz=230	**0.47**	**217**	⇓P	**Pg**	**02 18 13.0**	**-0.1**
FUSS	**Fushou** baz=299	**0.49**	**294**	⇓*i*P	**Pg**	**02 18 12.7**	**-0.8**
NNSB	**Datong** baz=317	**0.50**	**320**	⇓*i*P	**Pg**	**02 18 12.7**	**-0.9**
NNSB				*e*S	**Sg**	**02 18 18.8**	**-1.6**
NNSH	**Datong** baz=316	**0.50**	**320**	⇓P	**Pg**	**02 18 12.7**	**-1.0**
NNSH				S	**Sg**	**02 18 19.4**	**-0.9**
NNS	**Nan Shan** baz=317	**0.51**	**320**	⇓*i*P	**Pg**	**02 18 12.9**	**-1.0**
NNS				*i* S	**Sg**	**02 18 19.6**	**-1.2**
CHGB	**Renai** baz=271	**0.51**	**271**	*i* P	**Pg**	**02 18 13.2**	**-0.8**
CHGB				*i* S	**Sg**	**02 18 20.1**	**-0.8**
OWD	**Renai** baz=267	**0.52**	**260**	P	**Pg**	**02 18 13.3**	**-0.8**
LATG	**Datong** baz=335	**0.52**	**339**	⇓*i*P	**Pg**	**02 18 13.1**	**-1.0**
LATG				S	**Sg**	**02 18 19.7**	**-1.4**
ESAO	**Su ao** baz=5.0	**0.54**	**11**	*e*P	**Pg**	**02 18 13.5**	**-0.8**
EOS4	**EOS4** baz=93	**0.54**	**82**	*e*P	**Pn**	**02 18 16.1**	**-0.4**
TWT	**Tachien** baz=289	**0.55**	**292**	P	**Pg**	**02 18 14.1**	**-0.6**
TWT				S	**Sg**	**02 18 21.9**	**-0.1**
TDCB	**Techi** baz=296	**0.56**	**291**	⇓*i*P	**Pg**	**02 18 14.1**	**-0.8**
WUSB	**Renai** baz=265	**0.57**	**264**	⇓*i*P	**Pg**	**02 18 14.3**	**-0.6**
WUSB				S	**Sg**	**02 18 21.6**	**-1.0**
TWC	**Suao** baz=358	**0.57**	**11**	⇓*i*P	**Pg**	**02 18 14.1**	**-0.8**
EOS3	**EOS3** baz=62	**0.58**	**66**	*e*P	**Pn**	**02 18 17.7**	**+0.4**
NDS	**Dongshan** baz=354	**0.58**	**358**	⇓P	**Pg**	**02 18 14.4**	**-0.8**
NDS				*e*S	**Sg**	**02 18 22.5**	**-0.5**
EOS2	**EOS2** baz=28	**0.58**	**51**	*e*P	**Pn**	**02 18 17.5**	**+0.1**
NDT	**Datong Townshi** baz=336	**0.59**	**340**	⇓*i*P	**Pg**	**02 18 14.6**	**-0.8**
NDT				S	**Sg**	**02 18 22.9**	**-0.2**
ENTT	**Nioudou** baz=344	**0.61**	**345**	⇓*i*P	**Pg**	**02 18 14.9**	**-0.8**
ENTT				S	**Sg**	**02 18 23.4**	**-0.4**
VWDT	**VWDT** baz=242	**0.62**	**242**	⇓P	**Pg**	**02 18 15.3**	**-0.5**
VWDT				*e*S	**Sb**	**02 18 24.7**	**0.0**
HGSD	**Ruisui** baz=196	**0.62**	**207**	⇓*i*P	**Pb**	**02 18 16.2**	**-0.1**
EHY	**Hungye** baz=217	**0.66**	**215**	⇓*i*P	**Pg**	**02 18 15.7**	**-0.9**
TWE	**Neicheng** baz=354	**0.67**	**355**	⇓*i*P	**Pg**	**02 18 16.2**	**-0.7**
TWE				S	**Sg**	**02 18 25.1**	**-0.7**
YHNB	**Yeheng**	**0.70**	**332**	Pg	**Pg**	**02 18 16.7**	**-0.7**
YHNB				Sg	**Sg**	**02 18 25.8**	**-0.9**
YHNB	**Yeheng**	**0.70**	**332**	P	**Pg**	**02 18 17.1**	**-0.3**
YHNB	**Yeheng** baz=329	**0.70**	**332**	⇓*i*P	**Pg**	**02 18 16.9**	**-0.6**
YHNB				S	**Sg**	**02 18 25.6**	**-1.2**
WPL	**Puli Township** baz=266	**0.71**	**267**	*e*P	**Pg**	**02 18 17.1**	**-0.6**
NSK	**Sanguang** baz=329	**0.71**	**331**	⇓*i*P	**Pg**	**02 18 17.0**	**-0.7**
NSK				*e*S	**Sg**	**02 18 26.4**	**-0.7**
ILA	**Ilan** baz=347	**0.71**	**1**	*e*P	**Pg**	**02 18 17.6**	**-0.1**
FUSB	**Fushanzhiwuyua** baz=338	**0.72**	**349**	⇓*i*P	**Pg**	**02 18 17.1**	**-0.7**
FUSB				S	**Sg**	**02 18 26.6**	**-0.7**
DPDB	**Guoxing** baz=269	**0.74**	**269**	*e*P	**Pg**	**02 18 17.6**	**-0.5**
DPDB				*e*S	**Sb**	**02 18 28.2**	**-0.1**
WCS	**Beigang Elemen** baz=270	**0.75**	**271**	*e*P	**Pg**	**02 18 17.9**	**-0.5**
NWLT	**Wulai** baz=341	**0.76**	**344**	P	**Pg**	**02 18 17.8**	**-0.7**
NWLT				*e*S	**Sb**	**02 18 28.8**	**0.0**
WHP	**Taichung City** baz=287	**0.76**	**288**	⇓*i*P	**Pg**	**02 18 18.1**	**-0.4**
WHP				S	**Sb**	**02 18 28.9**	**+0.1**
SSLB	**Suanglung**	**0.76**	**250**	Pg	**Pg**	**02 18 17.7**	**-0.8**
SSLB				Sg	**Sg**	**02 18 25.0**	**-3.5**
SSLB	**Suanglung**	**0.76**	**250**	P	**Pg**	**02 18 18.1**	**-0.4**
SSLB	**Suanglung** baz=261	**0.76**	**250**	⇓*i*P	**Pg**	**02 18 17.9**	**-0.7**
SSLB				S	**Sg**	**02 18 27.3**	**-1.2**
YULB	**Yu-li** baz=261	**0.77**	**212**	Pg	**Pg**	**02 18 17.6**	**-1.1**
YULB				Sg	**Sb**	**02 18 29.5**	**+0.5**
YULB	**Yu-li**	**0.77**	**212**	P	**Pb**	**02 18 19.2**	**+0.4**
YULB	**Yu-li** baz=228	**0.77**	**212**	P	**Pg**	**02 18 17.1**	**-1.5**
ECBN	**Changbin** baz=191	**0.77**	**200**	*e*P	**Pg**	**02 18 18.4**	**-0.4**
SMLT	**Sun Moon Lake** baz=259	**0.78**	**258**	P	**Pg**	**02 18 18.5**	**-0.4**
SMLT				*e*S	**Sb**	**02 18 29.6**	**+0.1**
EYUL	**Yuli** baz=229	**0.80**	**209**	*e*P	**Pg**	**02 18 19.1**	**-0.1**
TWF1	**Yuli** baz=225	**0.80**	**210**	*e*P	**Pg**	**02 18 18.0**	**-1.3**
NTC	**Toucheng** baz=350	**0.81**	**6**	*e*P	**Pg**	**02 18 19.3**	**-0.2**
NFF	**Wufeng Townshi** baz=314	**0.81**	**316**	P	**Pg**	**02 18 19.0**	**-0.5**
NFF				S	**Sg**	**02 18 29.1**	**-1.1**
TYC	**Yuchr** baz=261	**0.81**	**260**	⇑*i*P	**Pg**	**02 18 18.9**	**-0.6**
TYC				*i* S	**Sg**	**02 18 29.4**	**-0.9**
WHYT	**Xinyi Township** baz=257	**0.88**	**247**	⇑P	**Pg**	**02 18 20.8**	**0.0**
WHYT				*e*S	**Sn**	**02 18 33.6**	**-0.6**
LIOB	**Emei** baz=310	**0.89**	**312**	P	**Pb**	**02 18 20.7**	**-0.1**
LIOB				*e*S	**Sg**	**02 18 33.1**	**+0.6**
NSTT	**Nanjuang** baz=309	**0.89**	**311**	*i* P	**Pb**	**02 18 20.7**	**-0.1**
NSTT				S	**Sb**	**02 18 32.0**	**-0.5**
NJD	**Zhudong** baz=316	**0.90**	**319**	*e*P	**Pg**	**02 18 21.3**	**+0.1**
CHKH	**Chenggong** baz=194	**0.91**	**200**	⇓P	**Pb**	**02 18 20.4**	**-0.8**
TIPB	**Shuangxi** baz=351	**0.92**	**5**	⇓P	**Pb**	**02 18 20.8**	**-0.7**
TWQ1	**Liyutan** baz=267	**0.93**	**289**	⇓P	**Pg**	**02 18 21.8**	**+0.1**
NHDH	**Xindian Distri** baz=343	**0.93**	**348**	⇓*e*P	**Pb**	**02 18 21.4**	**-0.2**
FULB	**Fuli** baz=198	**0.94**	**206**	*e*P	**Pb**	**02 18 21.6**	**-0.1**
TWA	**Mucha** baz=348	**0.94**	**352**	⇓P	**Pb**	**02 18 21.3**	**-0.5**
TWA				S	**Sg**	**02 18 34.3**	**0.0**
WWF	**Wufeng** baz=270	**0.95**	**270**	⇑*e*P	**Pn**	**02 18 23.2**	**+0.7**
WJS	**Zhushan** baz=258	**0.95**	**256**	⇑P	**Pn**	**02 18 22.6**	**+0.1**
WJS				*e*S	**Sn**	**02 18 36.9**	**+1.1**
TATO	**Taipei**	**0.95**	**346**	Pg	**Pb**	**02 18 21.4**	**-0.5**
TATO				Sg	**Sb**	**02 18 33.2**	**-1.1**
TATO	**Taipei**	**0.95**	**346**	P	**Pb**	**02 18 22.0**	**+0.1**
TATO	**Taipei** baz=333	**0.95**	**346**	⇓P	**Pb**	**02 18 21.6**	**-0.3**
TATO				*i* S	**Sb**	**02 18 33.4**	**-1.0**
TCU	**Taichung** baz=271	**0.97**	**276**	⇑*e*P	**Pn**	**02 18 23.2**	**+0.3**
TCU				*e*S	**Sn**	**02 18 37.6**	**+1.2**
WNT1	**Nantou City** baz=263	**0.97**	**262**	*e*P	**Pn**	**02 18 23.1**	**+0.2**
WNT1				*e*S	**Sn**	**02 18 37.3**	**+0.8**
WNT	**Mingjian** baz=261	**0.98**	**260**	⇑*i*P	**Pn**	**02 18 23.4**	**+0.5**
WNT				*e*S	**Sn**	**02 18 37.4**	**+0.9**
HSN1	**Hsinchu** baz=315	**0.98**	**318**	*e*P	**Pn**	**02 18 23.2**	**+0.3**
BACT	**New Taipei Cit** baz=339	**0.98**	**344**	*e*P	**Pn**	**02 18 23.0**	**0.0**
TWB1	**Santiao Chiao** baz=360	**0.98**	**14**	*e*P	**Pb**	**02 18 22.0**	**-0.5**
NMLH	**Miaoli** baz=297	**0.99**	**300**	⇑P	**Pn**	**02 18 23.6**	**+0.5**
NHY	**Taipei** baz=345	**1.00**	**351**	*e*P	**Pn**	**02 18 24.0**	**+0.8**
CHKT	**Chengkung** baz=195	**1.00**	**200**	*e*P	**Pb**	**02 18 21.3**	**-1.5**
CHKT				*e*S	**Sn**	**02 18 38.2**	**+1.0**
ALS	**Alishan** baz=242	**1.01**	**238**	⇓*i*P	**Pb**	**02 18 23.0**	**-0.1**
ALS				S	**Sg**	**02 18 36.7**	**+0.2**
SBCB	**Hsinchu** baz=315	**1.01**	**317**	⇑P	**Pn**	**02 18 24.0**	**+0.6**
SBCB				S	**Sg**	**02 18 36.7**	**+0.3**
TAP	**Taipei** baz=335	**1.01**	**348**	*e*P	**Pb**	**02 18 23.0**	**+0.1**
TAP				*e*S	**Sb**	**02 18 36.2**	**+0.2**
NJN	**Zhunan** baz=306	**1.01**	**309**	*e*P	**Pn**	**02 18 23.9**	**+0.5**
EHD	**Haiduan** baz=225	**1.02**	**209**	*e*P	**Pb**	**02 18 21.8**	**-1.3**
NWF	**Wu-fen Shan** baz=349	**1.02**	**2**	⇓P	**Pb**	**02 18 23.0**	**-0.2**
NWF				*e*S	**Sb**	**02 18 36.1**	**-0.3**
WFSB	**Wu-fen Shan** baz=350	**1.02**	**2**	⇓P	**Pb**	**02 18 23.1**	**0.0**
WFSB				S	**Sb**	**02 18 36.3**	**0.0**
HSN	**Hsinchu** baz=317	**1.02**	**317**	*e*P	**Pn**	**02 18 24.5**	**+0.9**
HSN				*e*S	**Sb**	**02 18 35.9**	**-0.6**
NTY	**Taoyuan** baz=325	**1.03**	**337**	*e*P	**Pn**	**02 18 24.2**	**+0.6**
WDJ	**Dajia District** baz=296	**1.04**	**287**	*e*P	**Pg**	**02 18 24.9**	**+1.0**
WDJ				*e*S	**Sn**	**02 18 39.4**	**+1.2**
NCU	**National Centr** baz=227	**1.04**	**332**	*e*P	**Pg**	**02 18 24.1**	**+0.2**
NCUH	**Zhongli** baz=326	**1.04**	**331**	⇑*e*P	**Pg**	**02 18 24.5**	**+0.6**
SXI1	**Grass Mountain** baz=355	**1.05**	**7**	⇓*i*P	**Pb**	**02 18 23.4**	**-0.3**
SXI1				*e*S	**Sn**	**02 18 38.2**	**-0.2**
WYL	**Yuanlin Townsh** baz=267	**1.06**	**266**	*e*P	**Pb**	**02 18 23.2**	**-0.6**
WYL				*e*S	**Sn**	**02 18 38.6**	**+0.1**
ECS	**Chishang** baz=224	**1.06**	**207**	*e*P	**Pb**	**02 18 23.9**	**0.0**
CHN5	**Tsauling** baz=249	**1.07**	**245**	⇑*i*P	**Pg**	**02 18 24.8**	**+0.4**
CHN5				*i* S	**Sn**	**02 18 40.4**	**+1.5**
WCHH	**Zhanghua** baz=273	**1.07**	**272**	*e*P	**Pg**	**02 18 24.7**	**+0.2**
WCHH				*e*S	**Sn**	**02 18 41.6**	**+2.7**
ELDTW	**Lidau** baz=222	**1.08**	**218**	*e*P	**Pb**	**02 18 21.5**	**-2.7**
TWS1	**Kuangyinshan** baz=341	**1.09**	**345**	*e*P	**Pg**	**02 18 25.1**	**+0.3**
TWS1				*e*S	**Sn**	**02 18 39.6**	**+0.4**
TNOU	**National Taiwa** baz=344	**1.10**	**2**	*e*P	**Pb**	**02 18 24.4**	**0.0**
YM01	**YM01** baz=345	**1.10**	**352**	*e*P	**Pn**	**02 18 24.8**	**+0.1**
WGK	**Gukeng** baz=254	**1.13**	**252**	*e*P	**Pg**	**02 18 25.7**	**+0.1**
EDH	**Donghe** baz=207	**1.14**	**200**	*e*P	**Pb**	**02 18 22.6**	**-2.6**
NHW	**Xinwu Township** baz=323	**1.14**	**327**	*e*P	**Pn**	**02 18 25.4**	**+0.2**
NHW				*e*S	**Sg**	**02 18 41.7**	**+1.0**
NTST	**Danshui** baz=350	**1.14**	**347**	*e*P	**Pg**	**02 18 25.7**	**-0.1**
NTST				*e*S	**Sg**	**02 18 43.2**	**+2.6**
ANP	**Anpu** baz=343	**1.15**	**350**	*e*P	**Pn**	**02 18 25.5**	**+0.1**
NWRT	**Kuosheng** baz=349	**1.15**	**357**	*e*P	**Pg**	**02 18 25.6**	**-0.3**
WDLH	**Douliu** baz=255	**1.15**	**252**	*e*P	**Pg**	**02 18 26.4**	**+0.5**
JYNG	**Yonagunijimaku**	**1.18**	**70**	P	**Pn**	**02 18 25.5**	**-0.1**
JYNG	**Yonagunijimaku** comp=E,43nm,8.2s,comp=N,59nm,2.1s	**1.18**	**70**	A	A	02 18 25.5	
WCKO	**Fanlu** baz=244	**1.20**	**240**	*e*P	**Pg**	**02 18 26.9**	**+0.1**
WCKO				*e*S	**Sg**	**02 18 44.0**	**+1.5**
TWY	**Chenhua** baz=333	**1.23**	**354**	*e*P	**Pg**	**02 18 27.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.24**	**70**		**Pn**	**02 18 26.1**	**-0.4**
YOJ					**Sg**	**02 18 43.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.24**	**70**	P	**Pb**	**02 18 26.8**	**0.0**
YOJ	**Yonaguni jima** baz=69	**1.24**	**70**	⇓P	**Pn**	**02 18 26.4**	**-0.1**
YOJ	**Yonaguni jima**	**1.24**	**70**	P	**Pn**	**02 18 26.1**	**-0.4**
YOJ						02 18 43.5	
YOJ	**Yonaguni jima**	**1.24**	**70**	P	**Pn**	**02 18 26.4**	**-0.1**
YOJ				*e*S	**Sg**	**02 18 43.8**	**+0.1**
YOJ	**Yonaguni jima** comp=E,44nm,3.1s,comp=N,47nm,4.6s	**1.24**	**70**	A	A	02 18 26.4	
STYH	**Taoyuan** baz=219	**1.24**	**225**	⇓P	**Pn**	**02 18 26.3**	**-0.3**
NSM	**Shimen** baz=333	**1.24**	**354**	*e*P	**Pg**	**02 18 27.5**	**-0.2**
WRL	**Guolierlin Hig** baz=266	**1.25**	**264**	*e*P	**Pg**	**02 18 28.0**	**+0.2**
WRL				*e*S	**Sg**	**02 18 46.0**	**+1.9**
CHN4	**Tsaushan** baz=242	**1.25**	**237**	⇓*i*P	**Pg**	**02 18 27.5**	**-0.4**
CHN4				*e*S	**Sg**	**02 18 46.2**	**+1.9**
STYT	**Tauyuan** baz=232	**1.26**	**226**	⇓*i*P	**Pn**	**02 18 26.6**	**-0.2**
STYT				*e*S	**Sb**	**02 18 43.3**	**+0.1**
TPUB	**Ta-pu**	**1.26**	**234**		**Pb**	**02 18 27.3**	**+0.2**
TPUB				Sg	**Sg**	**02 18 45.0**	**+0.7**
TPUB	**Ta-pu**	**1.26**	**234**	P	**Pg**	**02 18 28.3**	**+0.3**
TPUB	**Ta-pu** baz=239	**1.26**	**234**	⇓P	**Pb**	**02 18 27.4**	**+0.2**
TPUB				S	**Sg**	**02 18 45.1**	**+0.7**
CHN2	**Minshiung** baz=249	**1.26**	**246**	*e*P	**Pg**	**02 18 28.3**	**+0.2**
LONT	**Longtian** baz=212	**1.27**	**206**	*e*P	**Pn**	**02 18 25.4**	**-1.5**
RLNB	**Erlin** baz=265	**1.27**	**263**	*e*P	**Pg**	**02 18 27.8**	**-0.4**
RLNB				*e*S	**Sg**	**02 18 45.6**	**+0.9**
WTK	**Tuku** baz=257	**1.28**	**254**	*e*P	**Pg**	**02 18 29.0**	**+0.5**
WTP	**Ta-pu** baz=238	**1.30**	**232**	⇓*i*P	**Pb**	**02 18 27.9**	**0.0**
WTP				*e*S	**Sg**	**02 18 46.2**	**+0.5**
CHY	**Chiayi** baz=249	**1.32**	**246**	*e*P	**Pg**	**02 18 30.4**	**+1.3**
WTCT	**Ta-ch'eng** baz=264	**1.34**	**262**	*e*P	**Pb**	**02 18 28.3**	**-0.3**
TWGBT	**Beinan**	**1.36**	**206**	P	**Pn**	**02 18 27.4**	**-0.9**
TWGBT	**Beinan** baz=213	**1.36**	**206**	*e*P	**Pn**	**02 18 26.2**	**-2.0**
TWG	**Pinlang**	**1.36**	**207**	Pn	**Pn**	**02 18 26.1**	**-2.1**
TWG				Sg	**Sn**	**02 18 43.5**	**-2.6**
TWG	**Pinlang** baz=213	**1.36**	**207**	*e*P	**Pn**	**02 18 26.4**	**-1.9**
TWK	**Hsinying** baz=240	**1.38**	**236**	⇑P	**Pb**	**02 18 29.8**	**+0.4**
TWK				*e*S	**Sg**	**02 18 50.4**	**+2.0**
LDUT	**Ludao** baz=198	**1.39**	**190**	*e*P	**Pn**	**02 18 26.3**	**-2.3**
TTN	**Taitung** baz=203	**1.40**	**203**	*e*P	**Pg**	**02 18 30.1**	**-0.5**
CHN1	**Nanshi** baz=238	**1.40**	**232**	P	**Pb**	**02 18 29.9**	**+0.3**
CHN1				*e*S	**Sg**	**02 18 50.3**	**+1.4**
SNST	**Tainan City** baz=239	**1.40**	**234**	*e*P	**Pg**	**02 18 30.1**	**-0.6**
SGST	**Jiashian** baz=233	**1.43**	**228**	⇓*e*P	**Pn**	**02 18 28.8**	**-0.3**
WSF	**Szhu** baz=257	**1.44**	**254**	*e*P	**Pb**	**02 18 30.4**	**+0.1**
WSF				*e*S	**Sg**	**02 18 51.9**	**+1.6**
SLGT	**Liugui** baz=215	**1.45**	**224**	*e*P	**Pb**	**02 18 29.9**	**-0.5**
WSL	**Shuilin Townsh** baz=254	**1.48**	**250**	*e*P	**Pb**	**02 18 31.3**	**+0.4**
WSL				*e*S	**Sg**	**02 18 52.7**	**+1.3**
ICHU	**Yijhu** baz=246	**1.50**	**243**	*e*P	**Pb**	**02 18 31.3**	**0.0**
CHN8	**Yiju** baz=247	**1.56**	**244**	*e*P	**Pn**	**02 18 31.6**	**+0.6**
CHN3	**Shinhua** baz=236	**1.59**	**233**	*e*P	**Pb**	**02 18 33.2**	**+0.4**
PCYT	**Pengchaiyu** baz=359	**1.60**	**11**	⇓*e*P	**Pb**	**02 18 32.3**	**-0.8**
SSHA	**Shanhua** baz=239	**1.61**	**236**	*e*P	**Pg**	**02 18 34.0**	**-0.6**
ECL	**Taimali** baz=199	**1.61**	**207**	*e*P	**Pn**	**02 18 30.9**	**-0.8**
SCST	**Cishan** baz=218	**1.62**	**225**	⇓*e*P	**Pb**	**02 18 33.7**	**+0.3**
SHHT	**Tainan City** baz=235	**1.63**	**232**	*e*P	**Pg**	**02 18 34.8**	**-0.3**
SSD	**Sandimen** baz=238	**1.65**	**218**	*e*P	**Pn**	**02 18 31.7**	**-0.5**
SSD				*e*S	**Sg**	**02 18 55.5**	**-1.2**
SCLT	**Jiali** baz=242	**1.66**	**239**	*e*P	**Pg**	**02 18 35.2**	**-0.5**
TSMG	**Majia** baz=214	**1.67**	**217**	*e*P	**Pb**	**02 18 34.2**	**0.0**
TWM1	**Shoushan** baz=229	**1.71**	**225**	⇑*e*P	**Pb**	**02 18 35.8**	**+0.8**
SGLT	**Jiouru** baz=217	**1.74**	**221**	*e*P	**Pb**	**02 18 35.9**	**+0.4**
MASBT	**Mashibuluo** baz=213	**1.75**	**216**	*e*P	**Pn**	**02 18 34.4**	**+0.8**
TSCK	**Chigu Township** baz=243	**1.76**	**240**	*e*P	**Pn**	**02 18 34.2**	**+0.6**
SNJT	**Kaohsiung City** baz=228	**1.82**	**225**	*e*P	**Pb**	**02 18 35.9**	**-0.9**
IRIF	**Iriomote-Funau**	**1.84**	**81**	P	**Pn**	**02 18 34.9**	**+0.1**
IRIF				*e*S	**Sb**	**02 18 59.5**	**-0.6**
IRIF	**Iriomote-Funau** comp=E,21nm,1.5s,comp=N,34nm,3.4s	**1.84**	**81**	A	A	02 18 34.9	
EAST	**Anshuo** baz=214	**1.85**	**206**	*e*P	**Pn**	**02 18 33.6**	**-1.4**
TAW	**Tawu** baz=212	**1.85**	**205**	*e*P	**Pb**	**02 18 37.0**	**-0.3**
TAWH	**Dawu Township** baz=212	**1.87**	**205**	*e*P	**Pn**	**02 18 36.0**	**+0.7**
HATJ	**Hateruma jima**	**1.89**	**89**	P	**Pn**	**02 18 35.6**	**+0.1**
HATJ	**Hateruma jima** comp=E,46nm,2.6s,comp=N,70nm,3.4s	**1.89**	**89**	A	A	02 18 35.6	
WSSB	**Gushan** baz=227	**1.95**	**224**	*e*P	**Pb**	**02 18 37.8**	**-1.2**
SCZT	**Fangliau** baz=201	**1.96**	**212**	*e*P	**Pb**	**02 18 37.8**	**-1.4**
LAY	**Lan-yu** baz=194	**2.01**	**185**	*e*P	**Pn**	**02 18 34.6**	**-2.6**
SLIU	**Shizi** baz=214	**2.02**	**205**	*e*P	**Pn**	**02 18 37.3**	**+0.1**
LYUB	**Lan-yu** baz=194	**2.04**	**184**	*e*P	**Pn**	**02 18 34.4**	**-3.2**
PHUB	**P'eng-hu** baz=260	**2.05**	**255**	⇓*e*P	**Pn**	**02 18 38.6**	**+0.9**
PHUB				*e*S	**Sn**	**02 19 04.3**	**+1.2**
PNG	**Penghu** baz=260	**2.05**	**257**	*e*P	**Pn**	**02 18 38.7**	**+1.0**

WDGT Dungji 2.06 248 *e*P Pn 02 18 39.1 +1.3
baz=251
JKRS Kuro-shima 2.09 84 P Pn 02 18 38.9 +0.7
JKRS Kuro-shima 2.09 84 A A 02 18 38.9
comp=E,56nm,3.0s,comp=N,62nm,5.3s
TWP Hsiaoliuchiu 2.11 217 *e*P Pg 02 18 43.1 -1.2
baz=220
JIJ Ishigaki jima 2.22 81 P Pn 02 18 39.8 -0.2
JIJ *e*S Sb 02 19 10.0 -1.0
JIJ Ishigaki jima 2.22 81 A A 02 18 39.8
comp=E,10.0nm,7.9s,comp=N,17nm,3.4s
HEN Hengchun 2.23 204 *e*P Pb 02 18 44.1 +0.3
baz=200
TWK1 Hengchun 2.26 202 *e*P Pn 02 18 40.8 +0.1
baz=196
TWKBT Hengchun 2.26 202 *e*P Pn 02 18 40.7 +0.1
baz=196
TSEB Hengchuen, Pin 2.27 200 *e*P Pn 02 18 41.3 +0.5
baz=197
VCHM Qimei 2.27 249 *e*P Pn 02 18 42.0 +1.2
baz=236
VWUC VWUC 2.28 295 *e*P Pn 02 18 40.3 -0.6
baz=293
JISG Ishigakijimahi 2.41 77 P Pn 02 18 42.5 -0.2
JISG Ishigakijimahi 2.41 77 A A 02 18 42.5
comp=E,9.0nm,6.9s,comp=N,11nm,5.4s
PTMZ Houxiangcun 2.58 293 *e*P Pn 02 18 44.2 -0.8
baz=292
MATB Ma-tsu 2.65 323 *e*P Pn 02 18 45.7 -0.3
baz=316
JTJ Tarama 2.77 77 P Pn 02 18 48.0 +0.4
JTJ Tarama 2.77 77 A A 02 18 48.0
comp=E,19nm,10.7s,comp=N,21nm,4.1s
QZH Quanzhou 3.00 288 Pn Pn 02 18 49.0 -1.7
QZH Sn Sn 02 19 25.9 -0.5
QZH smax smax
comp=N,2μm,1.2s
QZH smax smax
comp=N,2μm,1.1s
KNM Kinmen 3.04 278 *e*P Pn 02 18 53.3 +2.0
baz=279
LYJJ Jianjiangzhen 3.07 325 *e*P Pn 02 18 51.6 -0.1
baz=318
KNMB Chin-men Tao 3.08 278 Pn Pn 02 18 51.1 -0.8
KNMB Chin-men Tao 3.08 278 *e*P Pn 02 18 51.7 -0.2
baz=280
XPSS Dashiqiu 3.19 334 *e*P Pn 02 18 53.4 +0.1
baz=325
MHZQ Yesham 3.19 310 *e*P Pn 02 18 54.0 +0.6
baz=306
JIRB Irabujima 3.23 75 A A 02 18 56.0
comp=E,15nm,10.9s,comp=N,11nm,4.4s
JIKM Ikemajima 3.32 74 A A 02 18 57.3
comp=E,14nm,9.1s,comp=N,14nm,6.2s
JMJ2 Miyako jima3 3.35 77 *e*S Sn 02 19 38.8 +3.7
JMJ2 Miyako jima3 3.35 77 A A 02 19 38.8
comp=E,19nm,5.2s,comp=N,17nm,6.7s
JOGS Gusukube 3.42 77 *e*S Sn 02 19 40.6 +3.7
JOGS Gusukube 3.42 77 A A 02 19 40.6
comp=E,22nm,11.1s,comp=N,25nm,7.8s
AXDP Jialang 3.53 285 *e*P Pn 02 18 58.3 +0.2
baz=285
ZPLA Ao Xicun 3.65 269 *e*P Pn 02 18 59.9 +0.3
baz=272
DSXP Dongshan 3.96 266 *e*P Pn 02 19 04.3 +0.3
baz=269
SXFK Yanhouchang 4.38 303 *e*P Pn 02 19 10.1 +0.3
baz=301
JOW Kunigami 6.53 64 Pn Pn 02 19 37.8 -1.5
JOW Kunigami 6.53 64 P Pn 02 19 39.0 -0.3
JOW Kunigami 6.53 64 Pn Pn 02 19 38.6 -0.7
comp=N,4.9nm,0.3s,baz=118,slow=26,SNR=7.5
comp=N,10.0nm,0.3s
SSE Sheshan 7.04 356 Pn Pn 02 19 45.2 -1.0
SSE Sn Sn 02 21 06.3 +0.3
SSE smax smax
comp=N,200nm,1.2s
SSE smax smax
comp=N,160nm,1.0s
SSE LR LR
comp=N,4μm,10.7s
SSE LR LR
comp=N,1μm,10.6s
GZH Guangzhou 7.76 265 Pn Pn 02 19 51.9 -4.2
GZH Sn Sn 02 21 16.9 -6.9
GZH smax smax
comp=N,410nm,1.2s
GZH smax smax
comp=N,420nm,1.1s
NJ2 Nanjing 8.37 343 ⇓P Pn 02 20 03.6 -0.9
NJ2 pP Pn 02 20 06.7 +2.2
NJ2 sP Pn 02 20 09.6 +5.1
NJ2 S Sn 02 21 38.7 -0.1
NJ2 sS Sn 02 21 45.9 +7.1
NJ2 pmax pmax
comp=N,38nm,0.5s
NJ2 smax smax
comp=N,580nm,1.0s
NJ2 smax smax
comp=N,310nm,0.8s
NJ2 LR LR
comp=N,8μm,9.0s
NJ2 LR LR
comp=N,3μm,4.7s
NJ2 LR LR
comp=N,8μm,9.0s
CNSH ChangSha 8.92 299 ⇑P Pn 02 20 12.2 +0.1
CNSH S Sn 02 21 54.9 +2.6
CNSH smax smax
comp=N,1μm,1.2s
CNSH smax smax
comp=N,1μm,1.1s
CNSH LR LR
comp=N,7μm,9.9s
CNSH LR LR
comp=N,8μm,8.4s
CNSH LR LR
comp=N,9μm,8.8s
WHN Wuhan 9.22 316 ⇑P Pn 02 20 16.6 +0.4
WHN pP 02 20 19.2
WHN pmax pmax
comp=N,64nm,0.9s
WHN LR LR
comp=N,27μm,9.9s
WHN LR LR
comp=N,28μm,7.6s
WHN LR LR
comp=N,42μm,9.2s
TGY Tagaytay City 9.92 184 LR LR 02 25 08.1
comp=N,308nm,18.4s,baz=358,slow=43
GULI GuiLin 10.41 279 P Pn 02 20 30.7 -1.9
GULI LR LR
comp=N,3μm,9.2s
GULI LR LR
comp=N,10μm,8.7s
GULI LR LR
comp=N,13μm,9.5s
JNU Nakatsue 12.09 40 Pn Pn 02 20 56.7 +1.2
comp=N,15nm,1.0s,baz=141,slow=6.5,SNR=3.3
JNU LR LR 02 26 30.4
comp=N,815nm,19.3s,baz=217,slow=42
QIZ Qiongzhong 12.14 248 P Pn 02 20 56.6 +0.4
QIZ S Sn 02 23 18.3 +6.9
QIZ LR LR
comp=N,2μm,12.9s
QIZ LR LR
comp=N,1μm,5.9s
QIZ LR LR
comp=N,1μm,9.3s
TIA Tai'an 12.76 343 *e*P Pn 02 21 09.8 +5.1
TIA pmax pmax
comp=N,8.0nm,2.0s
TIA LR LR
comp=N,3μm,9.8s
TIA LR LR
comp=N,2μm,8.2s
TIA LR LR
comp=N,4μm,9.6s
LYN LuoYang 13.22 324 *e*P Pn 02 21 10.6 -0.3
LYN pmax pmax
comp=N,13nm,0.6s
LYN pmax pmax
comp=N,150nm,3.7s
LYN LR LR
comp=N,21μm,9.3s
LYN LR LR
comp=N,9μm,9.4s
LYN LR LR
comp=N,23μm,9.7s
GYA Guiyang 13.85 283 P Pn 02 21 21.4 +1.7
GYA S Sn 02 23 54.7 +1.4
GYA pmax pmax
comp=N,24nm,1.3s
GYA pmax pmax
comp=N,310nm,6.4s
GYA LR LR
comp=N,3μm,9.4s
GYA LR LR
comp=N,9μm,8.7s
GYA LR LR
comp=N,11μm,9.1s
KSAR Wonju Array Be 14.35 20 Pn Pn 02 21 23.6 -2.8
KSAR Wonju Array Be 14.35 20 P Pn 02 21 23.6 -2.8
KSRS Korea Array 14.38 20 Pn Pn 02 21 29.8 +3.0
comp=N,0.4nm,0.3s,baz=201,slow=12,SNR=12
KSRS LR LR 02 27 14.8
comp=N,466nm,21.3s,baz=200,slow=38
KS19 Wonju Array Si 14.40 20 Pn Pn 02 21 28.3 +1.2
HNS HongShan 14.61 337 ⇓P Pn 02 21 32.7 +2.8
HNS PP PnPn 02 21 43.2 +5.2
HNS *e*S Sn 02 24 14.2 +2.7
HNS pmax pmax
comp=N,14nm,1.4s
HNS LR LR
comp=N,5μm,12.7s
HNS LR LR
comp=N,3μm,12.3s
HNS LR LR
comp=N,6μm,12.3s
DL2 Dalian 14.81 360 *e*P P 02 21 42.5 +4.0
DL2 S S 02 24 30.2 -4.7
XAN Xi'an 14.97 315 P Pn 02 21 35.6 +0.6
XAN S Sn 02 24 23.9 +3.3
XAN pmax pmax
comp=N,44nm,1.5s
XAN LR LR
comp=N,4μm,8.6s
XAN LR LR
comp=N,12μm,9.0s
XAN LR LR
comp=N,13μm,9.9s
TIY Taiyuan 15.77 332 ⇓P P 02 21 49.7 +0.4
TIY S S 02 24 47.6 -7.1
TIY pmax pmax
comp=N,470nm,5.3s
TIY LR LR
comp=N,4μm,12.1s
TIY LR LR
comp=N,3μm,9.1s
TIY LR LR
comp=N,4μm,12.1s
BJI Beijing 16.62 345 P P 02 21 58.3 -0.3
BJI pP pP 02 22 01.7 -0.9
BJI sP sP 02 22 05.9 +1.5
BJI S Sn 02 24 59.4 -1.0
BJI pmax pmax
comp=N,130nm,5.2s
BJI LR LR
comp=N,1μm,12.1s
BJI LR LR
comp=N,460nm,12.0s
BJI LR LR
comp=N,1μm,12.8s
SLVN Son La 16.67 264 P P 02 21 58.7 -0.7
DAV Davao City (W) 17.28 167 LR LR 02 28 28.2
comp=N,371nm,21.8s,baz=352,slow=36
KMI Kunming 17.31 277 ⇑P P 02 22 05.9 -0.7
KMI S Sn 02 25 12.7 -5.1
KMI pmax pmax
comp=N,15nm,1.7s
KMI pmax pmax
comp=N,220nm,8.2s
KMI LR LR
comp=N,1μm,10.4s
KMI LR LR
comp=N,8μm,9.0s
KMI LR LR
comp=N,8μm,9.8s
CD2 Chengdu 17.34 297 P P 02 22 07.8 +1.1
CD2 pmax pmax
comp=N,20nm,0.8s
CD2 LR LR
comp=N,5μm,7.3s
CD2 LR LR
comp=N,4μm,7.3s
CD2 LR LR
comp=N,5μm,7.8s
SNY Shenyang 17.80 5 ⇑P P 02 22 17.3 +5.7
SNY S S 02 25 36.0 +0.2
PZH PanZhiHua 18.25 282 P P 02 22 17.5 +0.7
PZH PP PnPn 02 22 31.4 +3.4
PZH S Sn 02 25 40.3 0.0
PZH pmax pmax
comp=N,10.0nm,0.8s
PZH pmax pmax
comp=N,160nm,5.1s
PZH LR LR
comp=N,2μm,10.1s
PZH LR LR
comp=N,4μm,10.7s
PZH LR LR
comp=N,4μm,12.6s
JCJ Chichijima 18.70 76 LR LR 02 28 31.9
comp=N,353nm,18.1s,baz=204,slow=34
HHC Hu-ho-hao-te 18.80 335 *e*P Pn 02 22 23.6 +0.3
HHC PP PnPn 02 22 40.7 +5.2
HHC S Sn 02 25 51.5 -1.9
HHC pmax pmax
comp=N,6.0nm,0.6s
HHC pmax pmax
comp=N,520nm,5.9s
HHC LR LR
comp=N,3μm,11.8s
HHC LR LR
comp=N,950nm,11.1s
HHC LR LR
comp=N,3μm,12.0s
MJAR Matsushiro Arr 18.87 45 P P 02 22 23.2 -0.3
baz=203,slow=7.8,SNR=1.8
MJAR LR LR 02 30 43.4
comp=N,489nm,19.3s,baz=231,slow=40
comp=N,0.7nm,0.3s
BTO Baotou 19.22 332 *e*P Pn 02 22 30.0 +1.7
BTO pP sP 02 22 33.8 +0.6
BTO sP pP 02 22 37.9 +6.6
BTO PP PnPn 02 22 47.6 +6.3
BTO pmax pmax
comp=N,23nm,0.6s
BTO pmax pmax
comp=N,990nm,6.7s
BTO LR LR
comp=N,10μm,10.9s
BTO LR LR
comp=N,4μm,8.6s
BTO LR LR
comp=N,14μm,10.4s
LZH Lanzhou 19.55 312 *e*P Pn 02 22 34.0 +1.6
LZH sP sP 02 22 43.5 +5.9
LZH S S 02 26 10.8 -0.8
LZH SS Sn 02 26 30.4 +19
LZH pmax pmax
comp=N,15nm,1.2s
LZH pmax pmax
comp=N,780nm,4.8s
LZH LR LR
comp=N,2μm,12.7s
LZH LR LR
comp=N,6μm,13.1s
LZH LR LR
comp=N,7μm,13.1s
CN2 Changchun 19.94 8 *e*P P 02 22 35.7 +0.6
CN2 pmax pmax
comp=N,10.0nm,0.6s
CN2 pmax pmax
comp=N,200nm,5.0s
CN2 LR LR
comp=N,3μm,12.0s
CN2 LR LR
comp=N,900nm,12.0s
CN2 LR LR
comp=N,3μm,12.1s
CRAI Chiangrai 20.14 263 P Pn 02 22 38.6 -0.8
XLT XiLinHaoTe 20.34 348 *e*P Pn 02 22 42.0 +0.4
XLT sP sP 02 22 49.7 +4.2
XLT PP PnPn 02 22 58.0 +1.4
XLT S S 02 26 23.5 -3.6
XLT pmax pmax
comp=N,16nm,1.3s
XLT pmax pmax
comp=N,300nm,3.7s
XLT LR LR
comp=N,170nm,13.4s
XLT LR LR
comp=N,1μm,9.8s
XLT LR LR
comp=N,2μm,13.8s
TNCH TengChong 21.14 277 P P 02 22 50.7 +2.2
TNCH pP pP 02 22 53.0 +0.3
TNCH sP sP 02 22 55.4 +0.8
TNCH PP PnPn 02 23 11.3 +3.6
TNCH S S 02 26 39.6 -3.9
TNCH pmax pmax
comp=N,99nm,1.3s
TNCH LR LR
comp=N,2μm,8.6s
TNCH LR LR
comp=N,4μm,9.5s
TNCH LR LR
comp=N,4μm,9.7s
MDJ Mudanjiang 21.50 15 P P 02 22 54.9 +3.0
MDJ pP sP 02 22 57.0 -0.4
MDJ sP pwP 02 22 58.0 +0.1
MDJ PP PnPn 02 23 17.9 +5.5
MDJ PcS PcS 02 30 34.8 +2.2
MDJ pmax pmax
comp=N,18nm,1.0s
MDJ pmax pmax
comp=N,300nm,4.3s
MDJ LR LR
comp=N,2μm,14.3s
MDJ LR LR
comp=N,2μm,12.9s
MDJ LR LR
comp=N,3μm,13.3s
USA0B Ussuriysk Arra 21.79 20 P P 02 22 56.1 +1.1
USA0B Ussuriysk Arra 21.79 20 P P 02 22 56.1 +1.1
USA0B pmax pmax
comp=Z,33nm,1.4s
USRK Ussuriysk Ar. 21.79 20 P P 02 22 55.7 +0.7
USRK Ussuriysk Ar. 21.79 20 P P 02 22 55.7 +0.7
USRK Ussuriysk Ar. 21.79 20 P P 02 22 56.8 +1.8
comp=Z,4.5nm,0.8s,baz=208,slow=12,SNR=5.1
USRK LR LR 02 32 13.5
comp=Z,583nm,18.5s,baz=192,slow=39
comp=Z,4.5nm,0.8s
CHTO Chiang Mai 21.84 261 P P 02 22 57.1 +1.3
CHTO Chiang Mai 21.84 261 P P 02 22 57.1 +1.3
CHTO pmax pmax
comp=Z,29nm,1.2s
CMAR Chiang Mai Arr 21.95 260 P P 02 22 57.8 +0.8
CMAR Chiang Mai Arr 21.95 260 P P 02 22 57.8 +0.8
CMAR Chiang Mai Arr 21.95 260 P P 02 22 59.5 +2.5
comp=Z,1.8nm,0.4s,baz=61,slow=8.2,SNR=15
CMAR PcP PcP 02 26 54.9 -0.9
comp=Z,1.2nm,0.3s,baz=29,slow=2.1,SNR=1.3
CMAR LR LR 02 31 51.3
comp=Z,317nm,18.9s,baz=80,slow=38
comp=Z,1.8nm,0.4s
BNX BinXian 22.12 11 ⇓P P 02 22 58.9 +0.3
BNX pP sP 02 23 03.7 -0.4
BNX sP pwP 02 23 06.8 +2.1
BNX PP PnPn 02 23 24.6 +3.7
BNX S S 02 27 00.4 -1.6
BNX sS pS 02 27 02.3 -5.4
BNX pmax pmax
comp=Z,7.0nm,1.5s
BNX pmax pmax
comp=Z,180nm,4.5s
BNX LR LR
comp=Z,2μm,11.3s
BNX LR LR
comp=Z,810nm,9.0s
BNX LR LR
comp=Z,1μm,10.3s
MPSI Mapaga 23.64 185 P P 02 23 15.1 +0.6
comp=Z,26nm,1.5s
GTA Gaotai 24.04 315 P P 02 23 19.2 +0.8
GTA pP sP 02 23 25.2 +0.7
GTA S S 02 27 38.5 +3.3
GTA sS sS 02 27 47.6 +4.3
GTA pmax pmax
comp=Z,11nm,1.3s
GTA pmax pmax
comp=Z,190nm,4.6s
GTA LR LR
comp=Z,1μm,11.6s
GTA LR LR
comp=Z,3μm,12.0s
GTA LR LR
comp=Z,3μm,12.7s
GUMO Guam 24.21 111 LR LR 02 33 33.5
comp=Z,176nm,18.3s,baz=287,slow=39
LUWI Luwuk 24.96 178 P P 02 23 26.9 +0.2
LUWI Luwuk 24.96 178 P P 02 23 27.0 +0.2
comp=Z,66nm,1.2s,comp=Z,5μm
HIA Hailar 25.22 357 P P 02 23 28.5 -0.5
HIA Hailar 25.22 357 *i*P P 02 23 28.3 -0.6
HIA pmax pmax
comp=Z,13nm,0.8s
GOMU GeErMu 26.15 304 P P 02 23 39.2 +1.3
GOMU pP sP 02 23 43.4 -0.6
GOMU sP pP 02 23 45.3 +3.1
GOMU pmax pmax
comp=Z,4.0nm,1.1s
GOMU LR LR
comp=Z,950nm,9.6s
GOMU LR LR
comp=Z,1μm,9.8s
ASAJ Asahikawa 26.31 35 LR LR 02 34 13.8
comp=Z,167nm,18.8s,baz=157,slow=37
KLR Kul'dur 26.34 15 *ce*P P 02 23 38.6 -0.4
KLR pmax pmax
comp=Z,19nm,1.0s
KLR Kul'dur 26.34 15 LR LR 02 34 58.8
comp=Z,592nm,18.7s,baz=200,slow=39
ULN Ulaanbaatar 26.48 337 P P 02 23 40.5 0.0
ULN Ulaanbaatar 26.48 337 P P 02 23 40.1 -0.4
ULN pmax pmax
comp=Z,33nm,1.3s
HEH HeiHe 26.53 8 *e*P P 02 23 41.2 +0.5
HEH sP sP 02 23 46.4 -0.7
HEH S S 02 28 14.1 -0.3
HEH ScP ScP 02 30 47.7 +3.0
HEH pmax pmax
comp=Z,10.0nm,1.3s
HEH LR LR
comp=Z,1μm,13.0s
HEH LR LR
comp=Z,1μm,11.5s
HEH LR LR
comp=Z,2μm,12.9s
SONM Songino Array 26.69 337 P P 02 23 42.4 0.0
SONM Songino Array 26.69 337 P P 02 23 42.4 0.0
SONM pmax pmax
comp=Z,14nm,1.0s
SONM Songino Array 26.69 337 P P 02 23 43.0 +0.6
comp=Z,11nm,1.0s,baz=158,slow=8.4,SNR=30
SONM LR LR 02 35 27.9
comp=Z,1μm,18.5s,baz=169,slow=39
comp=Z,11nm,1.0s
YSS Yuzh-Sakhalins 28.38 31 *i*P P 02 23 54.4 -3.0
YSS pmax pmax
comp=Z,28nm,1.0s
ZEA Zeya 29.94 7 *e*P P 02 24 11.0 -0.1
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=E,300nm,13.0s
ZEA MLR MLR
comp=N,1μm,14.0s
ZEA MLR MLR
comp=Z,1μm,13.0s
ZAK Zakamensk 29.95 336 *e*P P 02 24 11.4 0.0
ZAK pmax pmax
comp=Z,6.0nm,1.3s
PSI Prapat 30.53 230 P P 02 24 17.0 +0.2
PSI pmax pmax
comp=Z,35nm,1.7s
RPSI Rantau Prapat 30.60 230 P P 02 24 17.0 -0.3

RPSI IAmb IAmb 02 24 28.0
comp=Z,35nm,1.7s
SOEI Soe 33.69 175 P **P** **02 24 44.5 0.0**
comp=Z,52nm,0.5s
WMQ Urumqi 34.11 314 *e*P **P** **02 24 49.0 +1.0**
WMQ pP pP 02 24 52.8 +0.5
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ LR LR
comp=Z,1μm,11.1s
WMQ LR LR
comp=Z,2μm,11.1s
WMQ LR LR
comp=Z,560nm,11.9s
DGZ Jazzator, Alta 37.01 323 *i* P **P** **02 25 12.1 -0.8**
DGZ pmax pmax
comp=Z,9.0nm,1.3s
YAK Yakutsk 38.35 6 P **P** **02 25 22.4 -1.4**
YAK IAmb IAmb 02 25 29.8
comp=Z,20nm,0.5s
YAK Yakutsk 38.35 6 *e*P **P** **02 25 23.0 -0.8**
YAK *e* 02 27 39.9
YAK *e*S **S** **02 31 17.6 0.0**
YAK *e**SS **ScP** **02 31 25.1 +0.3**
YAK *e* 02 35 31.6
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=Z,189nm,4.8s
YAK pmax pmax
comp=E,65nm,5.6s
YAK pmax pmax
comp=N,60nm,4.8s
YAK smax smax
comp=N,101nm,3.7s
YAK MLR MLR
comp=Z,1μm,13.0s
YAK MLR MLR
comp=N,1μm,12.0s
YAK MLR MLR
comp=E,438nm,15.0s
YAK Yakutsk 38.35 6 LR LR 02 42 02.6
comp=E,403nm,19.7s,baz=160,slow=38
MK31 Makanchi Array 38.78 316 P **P** **02 25 27.7 -0.1**
MK31 Makanchi Array 38.78 316 *i* P **P** **02 25 28.7 +0.9**
MKAR Makanchi Array 38.78 316 P **P** **02 25 27.8 0.0**
MKAR Makanchi Array 38.78 316 P **P** **02 25 27.8 0.0**
MKAR Makanchi Array 38.78 316 P **P** **02 25 28.9 +1.1**
comp=E,7.9nm,0.9s,baz=104,slow=10,SNR=32
MKAR PcP **PcP** **02 27 37.9 -1.1**
comp=E,1.3nm,0.8s,baz=72,slow=4.7,SNR=3.1
comp=E,7.9nm,0.9s
MAKZ Makanchi 38.99 316 P **P** **02 25 29.8 +0.3**
MAKZ Makanchi 38.99 316 P **P** **02 25 29.8 +0.3**
MAKZ pmax pmax
comp=Z,13nm,1.1s
PETK Petropavlovsk- 39.70 34 LR LR 02 40 40.6
comp=Z,134nm,21.6s,baz=227,slow=34
ZAA0 Zalesovo Array 40.63 327 P **P** **02 25 41.5 -1.4**
ZALV Zalesovo Beam 40.63 327 P **P** **02 25 41.8 -1.2**
ZALV Zalesovo Beam 40.63 327 *i* P **P** **02 25 42.7 -0.3**
ZALV pmax pmax
comp=Z,15nm,1.0s
ZALV Zalesovo Beam 40.63 327 P **P** **02 25 42.8 -0.2**
comp=Z,15nm,1.0s,baz=116,slow=6.9,SNR=40
ZALV LR LR 02 43 50.9
comp=Z,414nm,18.0s,baz=126,slow=38
comp=Z,15nm,1.0s
HYB Hyderabad 40.80 269 *e*P **P** **02 25 44.5 -0.4**
MA2 Magadan 40.92 22 LR LR 02 44 39.3
comp=Z,338nm,18.3s,baz=238,slow=39
KSH Kashi 41.39 303 P **P** **02 25 52.6 +2.9**
KSH pmax pmax
comp=Z,9.0nm,1.0s
KSH LR LR
comp=Z,780nm,12.7s
KSH LR LR
comp=Z,560nm,14.8s
KSH LR LR
comp=Z,860nm,15.5s
PMG Port Moresby 41.50 140 LR LR 02 40 00.3
comp=Z,129nm,21.4s,baz=4.5,slow=32
H11N1 WAKE ISLAND Hy 41.99 87 T T 03 11 08.9
baz=284
H11N2 WAKE ISLAND Hy 41.99 87 T T 03 11 06.6
baz=284,SNR=11
H11N3 WAKE ISLAND Hy 42.01 87 T T 03 11 06.0
baz=284
H11S3 WAKE ISLAND Hy 42.12 89 T T 03 11 06.7
baz=284
H11S1 WAKE ISLAND Hy 42.13 89 T T 03 11 07.4
baz=284
H11S2 WAKE ISLAND Hy 42.14 89 T T 03 11 04.9
baz=284
KURK Kurchatov 42.52 320 P **P** **02 25 58.2 -0.3**
KURK Kurchatov 42.52 320 *ce*P **P** **02 25 55.9 -2.6**
KURK pmax pmax
comp=Z,14nm,1.3s
KURBB Kurchatov Arra 42.54 320 P **P** **02 25 59.0 +0.3**
comp=Z,5.2nm,1.0s,baz=115,slow=7.5,SNR=20
KURBB LR LR 02 45 53.5
comp=Z,168nm,20.2s,baz=188,slow=39
comp=Z,5.2nm,1.0s
PALK Pallekele 42.68 254 LR LR 02 44 55.1
comp=Z,130nm,18.3s,baz=164,slow=38
FRU1 Bishkek 42.92 308 P **P** **02 25 57.8 -4.2**
AAK Ala-Archa 42.99 307 *i* P **P** **02 26 01.7 -1.0**
AAK pmax pmax
comp=Z,7.0nm,1.2s
COEN Coen 43.20 149 P **P** **02 26 04.2 -0.2**
COEN IAmb IAmb 02 26 05.7
comp=Z,26nm,0.9s
SEY Seymchan 43.93 20 *i* P **P** **02 26 06.5 -3.3**
SEY pmax pmax
comp=Z,14nm,2.2s
PSA00 Pilbara Seismi 45.38 182 IAmb IAmb 02 26 30.4
comp=Z,36nm,1.1s
WRAB Tennant Creek 45.41 163 P **P** **02 26 21.8 -0.2**
WRAB Tennant Creek 45.41 163 P **P** **02 26 21.8 -0.2**
WRAB pmax pmax
comp=Z,17nm,0.4s
WRA Warramunga Arr 45.42 163 *i* P **P** **02 26 21.7 -0.4**
WRA pmax pmax
comp=Z,6.0nm,1.1s
WRA Warramunga Arr 45.42 163 P **P** **02 26 20.5 -1.6**
comp=Z,2.3nm,0.7s,baz=345,slow=8.7,SNR=9.3
comp=Z,2.3nm,0.7s
WB2 Warramunga Arr 45.42 163 P **P** **02 26 21.4 -0.7**
WB2 IAmb IAmb 02 26 25.7
comp=Z,51nm,1.9s
WR0 Warramunga Arr 45.49 163 P **P** **02 26 19.9 -2.7**
KK31 Karatay Array 45.95 307 P **P** **02 26 25.7 -0.5**
KK31 Karatay Array 45.95 307 P **P** **02 26 25.7 -0.5**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 45.95 307 P **P** **02 26 25.6 -0.6**
KKAR Karatay Array 45.95 307 P **P** **02 26 25.6 -0.6**
KBL Kabul 46.67 296 P **P** **02 26 31.6 -0.6**
KBL Kabul 46.67 296 P **P** **02 26 31.6 -0.6**
KBL pmax pmax
comp=Z,32nm,1.3s
TIXI Tiksi 47.80 3 P **P** **02 26 38.7 -1.5**
TIXI Tiksi 47.80 3 *i* P **P** **02 26 38.2 -2.0**
TIXI pmax pmax
comp=Z,43nm,1.1s
TIXI Tiksi 47.80 3 LR LR 02 49 19.0
comp=Z,853nm,18.0s,baz=200,slow=39
BVAR Borovoye Array 48.10 321 P **P** **02 26 43.4 +0.6**
comp=Z,3.9nm,0.8s,baz=117,slow=12,SNR=13
BVAR LR LR 02 50 07.4
comp=Z,161nm,21.9s,baz=97,slow=40
comp=Z,3.9nm,0.8s
BRVK Borovoye 48.17 321 P **P** **02 26 42.7 -0.6**
BRVK IAmb IAmb 02 26 59.7
comp=Z,13nm,1.1s
BRVK Borovoye 48.17 321 *ce*P **P** **02 26 41.4 -1.9**
BRVK pmax pmax
comp=Z,16nm,1.3s
SHEM Shemya Is, Ala 48.61 40 LR LR 02 44 55.4
comp=Z,45nm,21.7s,baz=280,slow=33
AS31 Alice Springs 48.88 165 P **P** **02 26 48.2 -0.9**
ASAR Alice Springs 48.88 165 P **P** **02 26 47.4 -1.7**
ASAR Alice Springs 48.88 165 P **P** **02 26 48.2 -0.9**
comp=Z,1.9nm,0.8s,baz=346,slow=6.7,SNR=12
ASAR LR LR 02 48 43.3
comp=Z,78nm,19.6s,baz=344,slow=38
comp=Z,1.9nm,0.8s
NRIK Noril'sk 49.66 345 P **P** **02 26 53.2 -1.3**
NRIK Noril'sk 49.66 345 *i* P **P** **02 26 52.2 -2.3**
NRIK pmax pmax
comp=Z,11nm,1.0s
NRIK Noril'sk 49.66 345 P **P** **02 26 53.5 -1.0**
comp=Z,6.3nm,0.9s,baz=116,slow=6.4,SNR=5.4
NRIK LR LR 02 48 36.2
comp=Z,277nm,19.9s,baz=149,slow=37
comp=Z,6.3nm,0.9s
CTA Charters Tower 49.95 149 LR LR 02 46 03.6
comp=Z,212nm,21.7s,baz=268,slow=34
BILL Bilibino 51.64 20 P **P** **02 27 09.2 -0.3**
BILL Bilibino 51.64 20 *i* P **P** **02 27 09.0 -0.5**
ABKAR Akbulak array 53.90 314 P **P** **02 27 26.4 0.0**
SVE Sverdlovsk 54.45 324⇑ *e*P **P** **02 27 30.9 +0.6**
SVE pmax pmax
comp=Z,22nm,1.4s
GEYT Alibeck 55.30 300 P **P** **02 27 39.2 +2.3**
comp=Z,7.5nm,1.0s,baz=96,slow=3.0,SNR=15
GEYT LR LR 02 55 16.5
comp=Z,316nm,19.0s,baz=102,slow=40
comp=Z,7.5nm,1.0s
ARU Arti 55.52 323 P **P** **02 27 36.9 -1.1**
ARU IAmb IAmb 02 27 38.8
comp=Z,16nm,1.1s
ARU Arti 55.52 323 *d* *i* P **P** **02 27 38.2 +0.1**
ARU 02 29 41.6
ARU S **S** **02 35 27.4 +4.7**
ARU SS **SS** **02 39 07.4 +0.1**
ARU pmax pmax
comp=Z,19nm,1.2s
NWAO Narrogin (SRO) 56.82 185 LR LR 02 52 35.9
comp=Z,44nm,21.8s,baz=350,slow=37
BBOO Buckleboo 58.17 166 P **P** **02 27 56.9 -0.1**
BBOO IAmb IAmb 02 28 06.7
comp=Z,31nm,1.6s
STKA Stephens Creek 58.76 160 P **P** **02 28 00.5 -0.8**
comp=Z,2.3nm,0.8s,baz=341,slow=8.2,SNR=3.9
STKA LR LR 02 53 34.4
comp=Z,54nm,21.4s,baz=21,slow=36
comp=Z,2.3nm,0.8s
TNA Tin City 60.23 27 P **P** **02 28 11.5 +0.5**
baz=263
M11K Mekoryuk 60.56 33 P **P** **02 28 13.3 0.0**
baz=267
KIRV Kirov 60.62 325 *i* P **P** **02 28 13.0 -0.7**
KIRV Kirov 60.62 325 LR LR 02 56 21.6
comp=Z,430nm,18.0s,baz=88,slow=38
F14K Arctic Creek 60.88 27 P **P** **02 28 15.8 +0.4**
baz=264
ANM Nome 61.21 28 P **P** **02 28 18.1 +0.4**
ANM IAmb IAmb 02 28 23.5
comp=Z,16nm,1.3s
ANM Nome 61.21 28 P **P** **02 28 17.9 +0.2**
baz=266
ANM Nome 61.21 28 P **P** **02 28 18.1 +0.4**
ANM pmax pmax
comp=Z,16nm,1.3s
K13K Kusilvak Mount 61.38 31 P **P** **02 28 19.0 +0.2**
baz=268
C16K Lisburne Hills 61.57 24 P **P** **02 28 20.5 +0.4**
baz=264
F15K North Star Dit 61.60 27 P **P** **02 28 20.7 +0.3**
baz=266
BELG Belogornoye 61.73 318 *i* P **P** **02 28 19.9 -1.5**
BELG pmax pmax
comp=Z,5.0nm,1.1s
BELG Belogornoye 61.73 318 LR LR 02 59 28.2
comp=Z,202nm,18.4s,baz=137,slow=40
G15K Niukluk 61.81 28 P **P** **02 28 22.2 +0.5**
baz=267
J14K Nanvaranak Lak 61.92 30 P **P** **02 28 22.9 +0.5**
baz=268
M13K Dall Lake 61.97 33 P **P** **02 28 23.3 +0.4**
baz=270
L14K Kuka Creek 62.30 32 IAmb IAmb 02 28 30.2
comp=Z,16nm,0.9s
L14K Kuka Creek 62.30 32 P **P** **02 28 25.7 +0.7**
baz=270
C17K DeLong Mountai 62.39 24 P **P** **02 28 26.1 +0.5**
baz=266
G16K Koyuk River 62.54 27 P **P** **02 28 27.1 +0.5**
baz=268
H16K Elim 62.56 28 P **P** **02 28 26.6 -0.2**
baz=268
M14K Bethel 62.66 32 P **P** **02 28 28.0 +0.5**
baz=271
MAK Makhachkala 62.77 307 *e*P P 02 28 21.8 -6.7
MAK *e*S **S** **02 36 49.2 -7.9**
MAK *e*SS **SS** **02 40 54.4 -7.3**
MAK *e*SSS SSS 02 43 48.4
MAK pmax pmax
comp=Z,106nm,1.0s
MAK MLR MLR
comp=Z,196nm,11.0s
E17K Hotham Inlet 62.82 25 P **P** **02 28 28.9 +0.4**
baz=268
K15K Wolf Creek Mou 62.85 31 P **P** **02 28 28.6 -0.2**
baz=270
L15K Ungalak Mounta 62.88 31 P **P** **02 28 29.3 +0.4**
baz=271
B18K Kokolik River 62.95 23 P **P** **02 28 29.7 +0.4**
baz=266
F17K Baldwin Pennin 63.02 26 P **P** **02 28 30.4 +0.6**
baz=268
C18K Utukok River 63.13 24 P **P** **02 28 31.1 +0.5**
baz=267
DZM Mont Dzumac 63.17 133 *e*LR LR 02 47 17.1
comp=Z,478nm,25.1s
DZM Mont Dzumac 63.17 133 LR LR 02 51 13.0
comp=Z,128nm,21.6s,baz=360,slow=32
I17K Unalakleet 63.23 29 P **P** **02 28 31.9 +0.7**
I17K IAmb IAmb 02 28 36.3
comp=Z,16nm,1.1s
I17K Unalakleet 63.23 29 P **P** **02 28 31.6 +0.4**
baz=270
G17K Kiwalik Mounta 63.25 27 P **P** **02 28 32.3 +0.9**
baz=269
J16K Anvik River 63.27 30 P **P** **02 28 31.7 +0.2**
baz=271
M15K Kasigluk River 63.28 33 P **P** **02 28 31.4 -0.3**
baz=272
H17K Granite Mounta 63.56 28 IAmb IAmb 02 28 38.3
comp=Z,10nm,1.1s
H17K Granite Mounta 63.56 28 P **P** **02 28 34.1 +0.6**
baz=270
N15K Kwethluk River 63.60 33 P **P** **02 28 33.9 +0.1**
baz=273
F18K Selawik 63.67 26 P **P** **02 28 34.5 +0.4**
baz=270
C19K Lookout Ridge 63.73 23 P **P** **02 28 34.9 +0.4**
baz=269
L16K Owhat River 63.84 31 P **P** **02 28 35.2 0.0**
L16K IAmb IAmb 02 28 39.9
comp=Z,12nm,1.1s
L16K Owhat River 63.84 31 P **P** **02 28 35.3 0.0**
baz=272
G18K Tagagawik 64.08 27 IAmb IAmb 02 28 41.7
comp=Z,23nm,1.8s
G18K Tagagawik 64.08 27 P **P** **02 28 36.9 +0.1**
baz=271
M16K Timber Creek 64.12 32 IAmb IAmb 02 28 41.9
comp=Z,12nm,0.9s
M16K Timber Creek 64.12 32 P **P** **02 28 37.3 +0.1**
baz=273
H18K Honhosa River 64.22 28 P **P** **02 28 38.4 +0.6**
baz=272
N16K Nishlik Lake 64.24 33 P **P** **02 28 37.9 -0.2**
baz=274
D19K Kuna River 64.26 24 IAmb IAmb 02 28 43.8
comp=Z,16nm,0.8s
D19K Kuna River 64.26 24 P **P** **02 28 38.3 +0.3**
baz=270
K17K Iditarod 64.34 30 P **P** **02 28 39.2 +0.6**
baz=273
L17K Donlin 64.37 31 P **P** **02 28 39.1 +0.2**
baz=273
E19K Redstone River 64.61 25 IAmb IAmb 02 28 53.7
comp=Z,8.9nm,1.0s
E19K Redstone River 64.61 25 P **P** **02 28 40.2 0.0**
baz=272
O16K Kokwok River B 64.64 34 P **P** **02 28 40.3 -0.3**
baz=275
G19K Purcell Mounta 64.71 26 IAmb IAmb 02 29 15.6
comp=Z,26nm,1.9s
G19K Purcell Mounta 64.71 26 P **P** **02 28 41.6 +0.6**
baz=272
A21K Barrow 64.76 21 P **P** **02 28 41.6 +0.4**
baz=270
D20K Etivluk River 64.81 24 P **P** **02 28 41.8 +0.2**
baz=272
M17K Holitna River 64.83 32 P **P** **02 28 42.0 +0.2**
baz=274
E20K Nigu River 64.98 24 P **P** **02 28 43.3 +0.6**
baz=272
H19K Roundabout Mou 65.00 27 P **P** **02 28 43.0 +0.2**
baz=273
J18K Innoko River 65.02 29 IAmb IAmb 02 29 26.7
comp=Z,18nm,1.6s
J18K Innoko River 65.02 29 P **P** **02 28 43.0 0.0**
baz=274
N17K Nushagak Hills 65.02 33 P **P** **02 28 43.2 +0.1**
baz=275
L18K Granite Mounta 65.12 31 IAmb IAmb 02 28 50.9
comp=Z,12nm,1.1s
L18K Granite Mounta 65.12 31 P **P** **02 28 43.8 +0.1**
baz=274
O17K Koliganek Bris 65.13 33 P **P** **02 28 43.8 0.0**
baz=275
F20K Avaraart Lake 65.21 25 P **P** **02 28 44.8 +0.7**
baz=273
GNI Garni 65.29 305 *i* P **P** **02 28 44.3 -1.1**
GNI pmax pmax
comp=Z,17nm,1.7s
TTA Tatalina 65.37 30 P **P** **02 28 45.3 -0.1**
TTA IAmb IAmb 02 29 57.9
comp=Z,33nm,2.0s
TTA Tatalina 65.37 30 P **P** **02 28 46.0 +0.6**
baz=275
TTA Tatalina 65.37 30 P **P** **02 28 45.3 -0.1**
TTA pmax pmax
comp=Z,33nm,2.0s
ZEI Tsey 65.41 308 *e*P **P** **02 28 42.9 -3.3**
ZEI pmax pmax
comp=Z,12nm,1.3s
C21K Knifeblade Rid 65.45 23 P **P** **02 28 46.7 +0.9**
baz=273
J19K Poorman 65.46 29 IAmb IAmb 02 28 50.0
comp=Z,12nm,1.1s
J19K Poorman 65.46 29 P **P** **02 28 46.5 +0.7**
baz=275,SNR=6.4
B21K Ikpikpuk River 65.48 22 P **P** **02 28 46.9 +1.0**
baz=273
VRH Novokhopyorsk 65.50 317 *e*P **P** **02 28 44.5 -1.8**
VRH pmax pmax
comp=Z,20nm,0.7s
P17K Kvichak River 65.52 34 P **P** **02 28 46.6 +0.3**
baz=276
KLMR Klimovskoe 65.55 328 *e*P **P** **02 28 44.4 -2.0**
KLMR pmax pmax
comp=Z,43nm,1.5s
M18K Stony River 65.59 31 P **P** **02 28 47.3 +0.6**
baz=276
H20K Anotleneega Mo 65.66 27 P **P** **02 28 47.5 +0.4**
baz=275
SVW2 Sparrevohn 65.75 32 IAmb IAmb 02 28 50.6
comp=Z,27nm,1.5s
ONI Oni 65.77 308 P **P** **02 28 47.6 -0.8**
ONI IAmb IAmb 02 29 08.1
comp=Z,13nm,1.3s
ONI Oni 65.77 308 P **P** **02 28 47.6 -0.8**
ONI pmax pmax
comp=Z,13nm,1.3s
B22K Teshekpuk Lake 65.85 22 P **P** **02 28 48.7 +0.4**
baz=274
I20K Naaghedeneel 65.89 28 P **P** **02 28 48.9 +0.4**
baz=275
Q17K Contact Creek 65.92 35 P **P** **02 28 48.8 -0.2**
baz=277
KBZ Khabaz 65.96 309 *i* P **P** **02 28 48.1 -1.3**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KBZ Khabaz 65.96 309 P **P** **02 28 50.9 +1.5**
comp=Z,4.5nm,0.9s,baz=161,slow=5.4,SNR=9.1
comp=Z,4.5nm,0.9s
L19K White Mountain 65.98 31 P **P** **02 28 49.5 +0.2**
baz=276
KIV Kislovodsk 66.06 309 P **P** **02 28 50.2 -0.1**
KIV IAmb IAmb 02 29 15.3
comp=Z,18nm,1.0s
KIV Kislovodsk 66.06 309 *e*P **P** **02 28 51.0 +0.8**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,173nm,17.0s
F21K Alatna River 66.07 25 IAmb IAmb 02 29 58.9
comp=Z,21nm,1.9s
F21K Alatna River 66.07 25 P **P** **02 28 50.2 +0.4**
baz=275
O18K Koktuh Hills 66.07 33 P **P** **02 28 49.8 -0.1**
baz=277
J20K Nowinta River 66.09 28 IAmb IAmb 02 28 56.5
comp=Z,14nm,1.1s
J20K Nowinta River 66.09 28 P **P** **02 28 50.3 +0.4**
baz=276
P18K Big Mountain, 66.12 34 P **P** **02 28 51.0 +0.8**
baz=277
G21K Allakaket 66.13 26 IAmb IAmb 02 28 56.9
comp=Z,16nm,1.2s
G21K Allakaket 66.13 26 P **P** **02 28 50.5 +0.4**
baz=275
K20K Telida 66.21 29 P **P** **02 28 51.1 +0.3**
baz=276
D22K Ayikyak River 66.22 23 P **P** **02 28 51.0 +0.3**
baz=275
M19K Big River Lodg 66.23 31 P **P** **02 28 51.3 +0.4**
baz=277
N19K Bonanza Creek 66.31 32 P **P** **02 28 52.3 +0.8**
baz=277
L20K Farewell, AK 66.40 30 P **P** **02 28 52.5 +0.5**
baz=277
H21K Melozitna Rive 66.50 27 IAmb IAmb 02 28 59.0
comp=Z,13nm,0.9s
H21K Melozitna Rive 66.50 27 P **P** **02 28 53.2 +0.7**
baz=276
M20K Styx River 66.82 31 P **P** **02 28 55.3 +0.5**
baz=278
G22K Bettles 66.87 25 P **P** **02 28 55.5 +0.6**
baz=277
I21K Tanana 66.90 27 IAmb IAmb 02 29 01.6
comp=Z,16nm,1.0s
I21K Tanana 66.90 27 P **P** **02 28 55.7 +0.6**
baz=277
CHUM Lake Minchumin 66.92 29 P **P** **02 28 55.8 +0.6**
baz=278
D23K Nanushuk River 66.93 23 P **P** **02 28 55.9 +0.6**
baz=277
LPSR Galich'ya Gora 66.99 319 *e*P **P** **02 28 53.8 -2.0**
LPSR pmax pmax
comp=Z,20nm,1.1s
Q19K Cape Douglas, 66.99 34 P **P** **02 28 56.1 +0.3**
baz=279
H22K Ishtalitna Cre 67.06 26 P **P** **02 28 56.7 +0.6**
baz=278,SNR=16
VSR Storozhevoye 67.08 317 *e*P **P** **02 28 54.4 -2.1**
VSR pmax pmax
comp=Z,10.0nm,1.3s
CAST Castle Rocks 67.09 29 P **P** **02 28 56.2 -0.2**
CAST IAmb IAmb 02 29 02.6
comp=Z,13nm,1.0s
CAST Castle Rocks 67.09 29 P **P** **02 28 56.9 +0.5**
baz=278
P19K Oil Pt 67.09 33 P **P** **02 28 57.4 +0.9**
baz=279
PPLA Purkeypile 67.12 30 P **P** **02 28 56.9 +0.3**
baz=278
MOS Moscow 67.22 322 *e*P **P** **02 28 54.0 -3.2**
COLD Coldfoot 67.34 25 P **P** **02 28 58.7 +0.9**
baz=278
N20K Mount Spurr 67.36 32 P **P** **02 28 58.9 +0.7**
baz=279
TOLK Toolik Lake Re 67.38 23 IAmb IAmb 02 29 01.7
comp=Z,13nm,1.1s
TOLK Toolik Lake Re 67.38 23 P **P** **02 28 58.3 +0.2**
baz=278
MLY Manley 67.44 27 IAmb IAmb 02 29 04.8
comp=Z,19nm,1.0s
MLY Manley 67.44 27 P **P** **02 28 58.7 +0.1**
baz=278,SNR=6.4

E23K	**Chandalar**	**67.44**	**24**	P	**P**	**02 28 58.5**	**-0.1**
	baz=278							
G23K	**Bananza Creek**	**67.48**	**25**	IAmb	IAmb	02 29 05.5		
	comp=Z,19nm,1.4s							
G23K	**Bananza Creek**	**67.48**	**25**	P	**P**	**02 28 59.4**	**+0.5**
	baz=278							
C24K	**Franklin Bluff**	**67.53**	**22**	P	**P**	**02 28 59.3**	**+0.3**
	baz=278							
SKT	**Skwentna**	**67.56**	**31**	P	**P**	**02 28 59.3**	**-0.1**
	baz=279							
D24K	**Happy Valley**	**67.57**	**23**	P	**P**	**02 28 59.9**	**+0.6**
	baz=278							
Q20K	**Shuyak Island**	**67.68**	**34**	P	**P**	**02 29 00.1**	**-0.1**
	baz=280							
KDAK	**Kodiak Island**	**67.72**	**35**	P	**P**	**02 29 00.2**	**-0.2**
	baz=280							
KDAK	**Kodiak Island**	**67.72**	**35**	LR	LR	02 58 51.8		
	comp=Z,35nm,20.6s,baz=113,slow=36							
E24K	**Your Creek**	**67.86**	**24**	IAmb	IAmb	02 29 07.3		
	comp=Z,11nm,0.8s							
E24K	**Your Creek**	**67.86**	**24**	P	**P**	**02 29 01.7**	**+0.5**
	baz=279							
TRF	**Thorofare Moun**	**67.88**	**29**	P	**P**	**02 29 01.6**	**+0.1**
	baz=280							
OBN	**Obninsk**	**67.92**	**322**	*e*P	**P**	**02 29 00.1**	**-1.6**
OBN				*e*		02 29 21.6		
OBN				*e*		02 31 31.1		
OBN				*e*PPP	PPP	02 33 08.3		
OBN				*e*S	**S**	**02 38 00.4**	**+0.7**
OBN				pmax	pmax			
	comp=Z,47nm,2.5s							
OBN				MLR	MLR			
	comp=Z,177nm,12.0s							
I23K	**Minto, Yukon-K**	**68.00**	**27**	P	**P**	**02 29 02.0**	**0.0**
	baz=280,SNR=5.3							
SUA	**Susitna One**	**68.01**	**31**	P	**P**	**02 29 02.7**	**+0.4**
	baz=280							
CUT	**Chulitna**	**68.07**	**30**	P	**P**	**02 29 02.6**	**+0.1**
	baz=280							
F24K	**Squaw Lake**	**68.18**	**24**	IAmb	IAmb	02 29 06.9		
	comp=Z,13nm,1.0s							
F24K	**Squaw Lake**	**68.18**	**24**	P	**P**	**02 29 03.6**	**+0.4**
	baz=280							
NEA2	**Nenana**	**68.22**	**28**	P	**P**	**02 29 03.6**	**+0.2**
	baz=280,SNR=5.4							
SOC	**Sochi**	**68.25**	**309**	*e*P	**P**	**02 29 00.9**	**-3.1**
SOC				*e*PPP	PPP	02 33 10.0		
SOC				*e*S	**S**	**02 38 02.0**	**-1.2**
SOC				*e*SS	**SS**	**02 42 22.3**	**-4.5**
SOC				MLR	MLR			
	comp=Z,216nm,18.0s							
D25K	**Kavik River**	**68.40**	**22**	P	**P**	**02 29 04.8**	**+0.2**
	baz=281							
MCK	**McKinley**	**68.43**	**29**	P	**P**	**02 29 04.7**	**-0.1**
	baz=281,SNR=5.9							
G24K	**Hadweenzic Riv**	**68.48**	**25**	IAmb	IAmb	02 29 11.4		
	comp=Z,9.4nm,0.9s							
G24K	**Hadweenzic Riv**	**68.48**	**25**	P	**P**	**02 29 05.1**	**0.0**
	baz=281							
H24K	**Noodor Dome**	**68.48**	**26**	IAmb	IAmb	02 29 11.6		
	comp=Z,14nm,1.1s							
H24K	**Noodor Dome**	**68.48**	**26**	P	**P**	**02 29 05.3**	**+0.2**
	baz=281							
MDM	**Murphy Dome**	**68.50**	**27**	P	**P**	**02 29 04.7**	**-0.5**
RC01	**Rabbit Creek A**	**68.56**	**31**	P	**P**	**02 29 05.8**	**+0.2**
	baz=281							
O22K	**Cooper Landing**	**68.68**	**32**	P	**P**	**02 29 07.0**	**+0.6**
	baz=281							
PMR	**Palmer**	**68.75**	**31**	P	**P**	**02 29 07.0**	**+0.2**
	baz=281							
WAT1	**Susitna Watana**	**68.77**	**30**	P	**P**	**02 29 06.6**	**-0.3**
	baz=281							
POKR	**Poker Plat Res**	**68.81**	**27**	P	**P**	**02 29 07.4**	**+0.2**
	baz=281,SNR=6.6							
RAYN	**Ar Rayn**	**68.87**	**287**	P	**P**	**02 29 07.8**	**-0.5**
RAYN	**Ar Rayn**	**68.87**	**287**	P	**P**	**02 29 07.8**	**-0.5**
RAYN				pmax	pmax			
	comp=Z,9.0nm,1.1s							
E25K	**Arctic Village**	**68.93**	**24**	IAmb	IAmb	02 29 12.3		
	comp=Z,10nm,1.1s							
E25K	**Arctic Village**	**68.93**	**24**	P	**P**	**02 29 08.3**	**+0.4**
	baz=282,SNR=8.9							
G25K	**Bearman Lake**	**69.01**	**25**	P	**P**	**02 29 08.8**	**+0.5**
	baz=282							
F25K	**Christian River**	**69.01**	**24**	P	**P**	**02 29 08.6**	**+0.2**
	baz=282							
SML	**Sawmill**	**69.08**	**31**	P	**P**	**02 29 09.0**	**+0.1**
	baz=282							
KNK	**Knik Glacier**	**69.10**	**31**	P	**P**	**02 29 09.0**	**0.0**
	baz=282							
IL31		**69.10**	**27**	IAmb	IAmb	02 29 56.1		
	comp=Z,33nm,1.8s							
ILAR	**Eielson Array**	**69.10**	**27**	P	**P**	**02 29 09.1**	**+0.1**
ILAR	**Eielson Array**	**69.10**	**27**	P	**P**	**02 29 09.1**	**+0.1**
ILAR	**Eielson Array**	**69.10**	**27**	P	**P**	**02 29 08.7**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=286,slow=8.2,SNR=14							
ILAR				LR	LR	03 03 07.4		
	comp=Z,71nm,18.2s,baz=331,slow=39							
	comp=Z,0.9nm,0.8s							
HDA	**Harding Lake**	**69.15**	**28**	P	**P**	**02 29 09.0**	**-0.3**
	baz=282							
WAT6	**Susitna Watana**	**69.19**	**30**	P	**P**	**02 29 09.9**	**+0.2**
	baz=282							
DHY	**Denali Highway**	**69.25**	**29**	P	**P**	**02 29 10.3**	**+0.2**
	baz=282							
M23K	**Glacier View**	**69.36**	**31**	P	**P**	**02 29 11.2**	**+0.6**
	baz=282							
PRP	**Porcupine Dome**	**69.50**	**26**	P	**P**	**02 29 11.8**	**+0.2**
	baz=283							
SCM	**Sheep Creek Mo**	**69.54**	**30**	P	**P**	**02 29 12.2**	**+0.4**
	baz=283							
F26K	**Sheenjek River**	**69.55**	**24**	P	**P**	**02 29 12.2**	**+0.5**
	baz=283,SNR=17							
SPITS	**Spitsbergen Ar**	**69.72**	**348**	LR	LR	03 03 43.3		
	comp=Z,385nm,18.7s,baz=24,slow=39							
J25K	**Salcha River,**	**69.77**	**27**	P	**P**	**02 29 13.7**	**+0.6**
	baz=283							
K24K	**Donnelly Dome**	**69.79**	**28**	P	**P**	**02 29 13.6**	**+0.4**
	baz=283							
ARCES	**ARCESS Array B**	**69.85**	**338**	LR	LR	03 06 32.0		
	comp=Z,188nm,19.5s,baz=127,slow=42							
G26K	**Porcupine Rive**	**69.86**	**25**	P	**P**	**02 29 13.9**	**+0.4**
	baz=284,SNR=12							
M24K	**Tolsona, Glenn**	**70.00**	**30**	P	**P**	**02 29 14.8**	**+0.2**
	baz=284							
PAX	**Paxson**	**70.12**	**29**	P	**P**	**02 29 16.1**	**+0.7**
	baz=284							
KLU	**Klutina**	**70.27**	**31**	P	**P**	**02 29 16.7**	**+0.4**
	baz=284							
D27M	**Malcolm River**	**70.30**	**22**	IAmb	IAmb	02 29 23.0		
	comp=Z,14nm,1.0s							
D27M	**Malcolm River**	**70.30**	**22**	P	**P**	**02 29 16.9**	**+0.6**
	baz=286							
ARPR	**Arapgir-MALATY**	**70.35**	**305**	IAmb	IAmb	02 29 26.3		
	comp=Z,14nm,1.3s							
HARP	**HAARP**	**70.40**	**30**	P	**P**	**02 29 17.6**	**+0.6**
	baz=284							
SCRK	**Sand Creek**	**70.51**	**28**	P	**P**	**02 29 16.9**	**-0.9**
SCRK				IAmb	IAmb	02 29 44.8		
	comp=Z,24nm,1.6s							
SCRK	**Sand Creek**	**70.51**	**28**	P	**P**	**02 29 18.0**	**+0.2**
	baz=285							
I26K	**Coal Creek Min**	**70.52**	**26**	IAmb	IAmb	02 29 37.1		
	comp=Z,12nm,1.1s							
I26K	**Coal Creek Min**	**70.52**	**26**	P	**P**	**02 29 17.9**	**+0.2**
	baz=285							
J26L	**Joseph Creek**	**70.56**	**27**	IAmb	IAmb	02 29 22.8		
	comp=Z,13nm,1.1s							
J26L	**Joseph Creek**	**70.56**	**27**	P	**P**	**02 29 18.0**	**-0.1**
	baz=285							
N25K	**Chitina, Valde**	**70.85**	**30**	P	**P**	**02 29 20.2**	**+0.3**
	baz=285							
H27K	**Steamboat Moun**	**70.92**	**25**	P	**P**	**02 29 20.0**	**-0.1**
	baz=286							
E28M	**Babbage River**	**70.97**	**23**	IAmb	IAmb	02 29 26.9		
	comp=Z,21nm,1.3s							
E28M	**Babbage River**	**70.97**	**23**	P	**P**	**02 29 20.9**	**+0.5**
	baz=287							
D28M	**Stokes Point**	**71.03**	**22**	P	**P**	**02 29 21.3**	**+0.6**
	baz=288							
L26K	**Log Cabin Wild**	**71.04**	**29**	IAmb	IAmb	02 29 27.4		
	comp=Z,35nm,1.6s							
L26K	**Log Cabin Wild**	**71.04**	**29**	P	**P**	**02 29 21.2**	**+0.3**
	baz=286							
I27K	**Kandik River**	**71.06**	**26**	P	**P**	**02 29 21.6**	**+0.6**
	baz=286							
F28M	**Old Crow**	**71.14**	**24**	IAmb	IAmb	02 29 24.5		
	comp=Z,15nm,1.1s							
F28M	**Old Crow**	**71.14**	**24**	P	**P**	**02 29 22.1**	**+0.7**
	baz=287,SNR=14							
K27K	**Chicken**	**71.31**	**28**	IAmb	IAmb	02 29 28.6		
	comp=Z,16nm,1.1s							
K27K	**Chicken**	**71.31**	**28**	P	**P**	**02 29 23.2**	**+0.7**
	baz=286							
M26K	**Nabesna, AK**	**71.37**	**29**	P	**P**	**02 29 21.9**	**-1.1**
M26K				IAmb	IAmb	02 29 28.7		
	comp=Z,22nm,1.1s							
M26K	**Nabesna, AK**	**71.37**	**29**	P	**P**	**02 29 23.2**	**+0.3**
	baz=286							
EGAK	**Eagle**	**71.48**	**27**	IAmb	IAmb	02 29 28.0		
	comp=Z,11nm,0.9s							
EGAK	**Eagle**	**71.48**	**27**	P	**P**	**02 29 23.4**	**-0.1**
	baz=287							
E29M	**Blow River**	**71.61**	**23**	P	**P**	**02 29 24.3**	**+0.1**
	baz=289,SNR=8.4							
MCARA	**McCarthy VSAT**	**71.64**	**30**	P	**P**	**02 29 24.5**	**0.0**
	baz=286							
L27K	**Beaver Creek,**	**71.69**	**28**	IAmb	IAmb	02 29 31.2		
	comp=Z,15nm,1.1s							
L27K	**Beaver Creek,**	**71.69**	**28**	P	**P**	**02 29 25.2**	**+0.3**
	baz=287							
I28M	**Miner Creek**	**71.77**	**26**	P	**P**	**02 29 26.0**	**+0.7**
	baz=288							
CRQE	**Cirque**	**71.79**	**31**	P	**P**	**02 29 25.4**	**-0.2**
	baz=287							
SIM	**Simferopol'**	**71.80**	**312**	*e*P	**P**	**02 29 26.2**	**+0.4**
SIM				pmax	pmax			
	comp=Z,13nm,1.0s							
FINES	**FINESS Array B**	**71.82**	**330**	P	**P**	**02 29 26.1**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=108,slow=8.9,SNR=5.9							
FINES				LR	LR	03 03 49.3		
	comp=Z,722nm,19.6s,baz=60,slow=38							
	comp=Z,4.7nm,0.9s							
M27K	**Edge Creek, AK**	**71.88**	**29**	P	**P**	**02 29 26.5**	**+0.4**
	baz=287							
H29M	**Whitestone**	**72.14**	**25**	P	**P**	**02 29 27.9**	**+0.5**
	baz=289							
BNN	**Bunyan**	**72.28**	**305**	P	**P**	**02 29 29.0**	**0.0**
BNN				IAmb	IAmb	02 29 35.7		
	comp=Z,19nm,1.0s							
BVCY	**Beaver Creek**	**72.31**	**29**	P	**P**	**02 29 28.8**	**+0.2**
	baz=288							
DAWY	**Dawson**	**72.43**	**27**	P	**P**	**02 29 29.2**	**-0.1**
	baz=285							
CTG	**Chitna Glacier**	**72.55**	**31**	P	**P**	**02 29 30.0**	**-0.1**
	baz=288							
F30M	**Barrier River**	**72.62**	**23**	P	**P**	**02 29 30.5**	**+0.2**
	baz=291							
G30M	**tAoh Zraii Nji**	**72.69**	**24**	IAmb	IAmb	02 29 33.3		
	comp=Z,20nm,1.1s							
G30M	**tAoh Zraii Nji**	**72.69**	**24**	P	**P**	**02 29 30.9**	**+0.2**
	baz=290							
YUK3	**Moose Creek**	**72.69**	**30**	P	**P**	**02 29 31.3**	**+0.2**
	baz=288							
EPYK	**Eagle Plains**	**72.72**	**24**	P	**P**	**02 29 30.8**	**-0.1**
	baz=290							
J29N	**Klondike Camp**	**72.78**	**27**	P	**P**	**02 29 31.3**	**-0.1**
	baz=290							
MNK	**Minsk**	**72.94**	**323**	*i* P	**P**	**02 29 28.5**	**-3.9**
MNK				*i*		02 32 10.5		
MNK				*i* S	**S**	**02 38 55.8**	**-2.7**
MNK				*i* SS	**SS**	**02 43 37.1**	**-1.2**
MNK				pmax	pmax			
	comp=E,11nm,1.5s							
MNK				pmax	pmax			
	comp=N,18nm,1.5s							
MNK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MNK				MLR	MLR			
	comp=N,161nm,18.0s							
MNK				MLR	MLR			
	comp=Z,221nm,16.0s							
MNK				MLR	MLR			
	comp=E,190nm,20.0s							
INK	**Inuvik**	**73.16**	**22**	IAmb	IAmb	02 29 38.6		
	comp=Z,15nm,1.1s							
INK	**Inuvik**	**73.16**	**22**	P	**P**	**02 29 33.2**	**-0.2**
	baz=292,SNR=17							
INK	**Inuvik**	**73.16**	**22**	LR	LR	03 03 56.5		
	comp=Z,131nm,18.1s,baz=358,slow=38							
I30M	**Mount Dempster**	**73.25**	**26**	IAmb	IAmb	02 29 38.0		
	comp=Z,22nm,1.3s							
I30M	**Mount Dempster**	**73.25**	**26**	P	**P**	**02 29 34.1**	**-0.1**
	baz=291,SNR=11							
L29M	**L29M**	**73.28**	**28**	P	**P**	**02 29 34.1**	**-0.2**
	baz=290							
K29M	**Barlow Dome**	**73.28**	**27**	IAmb	IAmb	02 29 42.2		
	comp=Z,35nm,1.9s							
K29M	**Barlow Dome**	**73.28**	**27**	P	**P**	**02 29 34.1**	**-0.3**
	baz=290							
AKASG	**Malin Array Be**	**73.31**	**318**	P	**P**	**02 29 34.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=59,slow=6.0,SNR=9.1							
AKASG				LR	LR	03 04 50.6		
	comp=Z,203nm,21.5s,baz=20,slow=38							
	comp=Z,0.5nm,0.5s							
AKBB	**Malin Array Si**	**73.31**	**318**	*ce*P	**P**	**02 29 33.1**	**-1.5**
AKBB				pmax	pmax			
	comp=Z,25nm,3.2s							
M29M	**Somme Creek**	**73.36**	**29**	P	**P**	**02 29 34.1**	**-0.8**
M29M				IAmb	IAmb	02 29 42.6		
	comp=Z,9.0nm,0.7s							
M29M	**Somme Creek**	**73.36**	**29**	P	**P**	**02 29 35.2**	**+0.3**
	baz=290							
F31M	**Tsiigehtchic**	**73.42**	**23**	IAmb	IAmb	02 29 42.4		
	comp=Z,9.6nm,0.8s							
F31M	**Tsiigehtchic**	**73.42**	**23**	P	**P**	**02 29 35.1**	**+0.1**
	baz=293							
G31M	**Satah River**	**73.43**	**24**	P	**P**	**02 29 34.7**	**-0.3**
	baz=292							
J30M	**Hart River**	**73.51**	**26**	P	**P**	**02 29 35.7**	**0.0**
	baz=291							
BR131	**Keskin Array S**	**73.66**	**307**	*i* P	**P**	**02 29 33.5**	**-3.6**
BRTR	**Keskin Array B**	**73.66**	**307**	P	**P**	**02 29 37.7**	**+0.6**
	comp=Z,3.4nm,0.9s,baz=144,slow=48,SNR=3.7							
YUK6	**Outpost Mounta**	**73.92**	**30**	P	**P**	**02 29 38.9**	**+0.5**
	baz=290							
M30M	**Minto, Yukon**	**74.04**	**28**	IAmb	IAmb	02 29 44.0		
	comp=Z,15nm,1.1s							
M30M	**Minto, Yukon**	**74.04**	**28**	P	**P**	**02 29 39.3**	**+0.5**
	baz=291							
A36M	**Sachs Harbour**	**74.10**	**17**	P	**P**	**02 29 39.6**	**+0.7**
	baz=299							
HYT	**Haines Junctio**	**74.36**	**30**	P	**P**	**02 29 41.0**	**+0.2**
	baz=291							
MMAI	**Mount Meron Ar**	**74.40**	**299**	P	**P**	**02 29 42.4**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=104,slow=3.5,SNR=4.7							
MMAI				LR	LR	03 07 46.8		
	comp=Z,87nm,18.9s,baz=22,slow=40							
	comp=Z,2.1nm,0.9s							
PABE	**Paberze**	**74.75**	**324**	P	**P**	**02 29 41.7**	**-1.2**
P30M	**Million Dollar**	**74.87**	**31**	P	**P**	**02 29 44.1**	**+0.4**
	baz=292							
N31M	**Braeburn, Yuko**	**74.89**	**29**	P	**P**	**02 29 44.3**	**+0.6**
	baz=292							
O30N	**Mendenhall**	**75.02**	**30**	P	**P**	**02 29 44.8**	**+0.2**
	baz=292							
M31M	**Drury Creek, Y**	**75.22**	**28**	P	**P**	**02 29 46.1**	**+0.5**
	baz=293							
PLBC	**Pleasant Camp**	**75.40**	**31**	P	**P**	**02 29 47.2**	**+0.5**
	baz=292							
WHY	**Whitehorse**	**75.61**	**30**	P	**P**	**02 29 48.2**	**+0.1**
	baz=293							
FARO	**Faro, Yukon**	**75.65**	**28**	IAmb	IAmb	02 29 54.6		
	comp=Z,16nm,1.1s							
FARO	**Faro, Yukon**	**75.65**	**28**	P	**P**	**02 29 48.8**	**+0.6**
	baz=294							
C36M	**Paulatuk**	**75.76**	**20**	P	**P**	**02 29 48.7**	**+0.2**
	baz=301,SNR=9.6							
EIL	**Elat**	**75.86**	**296**	LR	LR	03 07 48.0		
	comp=Z,93nm,20.0s,baz=264,slow=39							
SKAG	**Skagway**	**75.88**	**31**	P	**P**	**02 29 50.2**	**+0.8**
	baz=293							
N32M	**Quiet Lake**	**76.22**	**29**	IAmb	IAmb	02 29 56.0		
	comp=Z,15nm,1.1s							
N32M	**Quiet Lake**	**76.22**	**29**	P	**P**	**02 29 51.6**	**+0.2**
	baz=295							
P32M	**Atlin**	**76.58**	**30**	P	**P**	**02 29 53.1**	**-0.4**
	baz=295							
P33M	**Teslin, Yukon**	**76.73**	**30**	P	**P**	**02 29 54.3**	**-0.1**
	baz=294							
R32K	**Eaglecrest**	**76.75**	**32**	P	**P**	**02 29 54.7**	**+0.4**
	baz=294							
MLR	**Muntele Rosu**	**77.11**	**314**	LR	LR	03 08 06.2		
	comp=Z,198nm,19.2s,baz=36,slow=39							
HFS	**Hagfors**	**77.93**	**331**	P	**P**	**02 30 01.9**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=108,slow=4.7,SNR=1.6							
HFS				LR	LR	03 06 52.7		
	comp=Z,673nm,20.7s,baz=54,slow=38							
	comp=Z,1.0nm,0.6s							
R33M	**Jennings River**	**77.93**	**30**	P	**P**	**02 30 01.1**	**-0.1**
	baz=297							
TGTN	**Hyland Airport**	**78.12**	**27**	P	**P**	**02 30 02.5**	**+0.4**
	baz=299							
WTLY	**Watson Lake, Y**	**78.57**	**29**	P	**P**	**02 30 05.0**	**+0.5**
WTLY				IAmb	IAmb	02 30 07.0		
	comp=Z,14nm,1.1s							
WTLY	**Watson Lake, Y**	**78.57**	**29**	P	**P**	**02 30 04.9**	**+0.3**
	baz=298							
NB2	**NORSAR Subarra**	**78.58**	**332**	P	**P**	**02 30 04.9**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=59,slow=5.9							
NOA	**NORSAR Array B**	**78.58**	**332**	P	**P**	**02 30 05.0**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=60,slow=5.4,SNR=4.2							
NOA				LR	LR	03 06 39.2		
	comp=Z,262nm,19.5s,baz=60,slow=37							
	comp=Z,2.3nm,0.9s							
RES	**Resolute Bay**	**78.72**	**9**	LR	LR	03 08 58.4		
	comp=Z,113nm,18.4s,baz=7.0,slow=39							
DLBC	**Dease Lake**	**78.81**	**31**	P	**P**	**02 30 06.1**	**+0.1**
	baz=298							
WRGLY	**Wrigley**	**79.19**	**25**	P	**P**	**02 30 08.4**	**+0.6**
	baz=302							
LANS	**Liptovska Anna**	**79.74**	**319**	*e*P	**P**	**02 30 15.4**	**+4.2**
URZ	**Urewera**	**80.85**	**139**	LR	LR	03 00 08.1		
	comp=Z,63nm,21.3s,baz=120,slow=31							
RPZ	**Rata Peaks**	**81.20**	**146**	LR	LR	03 06 57.2		
	comp=Z,50nm,18.0s,baz=304,slow=36							
VRAC	**Vranov**	**81.37**	**320**	LR	LR	03 08 39.3		
	comp=Z,237nm,21.0s,baz=2.5,slow=37							
CLL	**Collm**	**82.46**	**323**	*e*P	**P**	**02 30 25.0**	**-0.6**
YKA	**Yellowknife Ar**	**82.90**	**23**	P	**P**	**02 30 27.7**	**+0.1**
	comp=Z,6.8nm,0.9s,baz=313,slow=5.0,SNR=24							
	comp=Z,6.8nm,0.9s							
GERES	**GERESS Array B**	**83.27**	**321**	P	**P**	**02 30 30.5**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=59,slow=5.1,SNR=4.8							
GERES				LR	LR	03 11 19.5		
	comp=Z,286nm,19.4s,baz=40,slow=38							
	comp=Z,0.8nm,0.6s							
DAVOX	**Davos/Dischmat**	**86.53**	**320**	LR	LR	03 14 19.5		
	comp=Z,358nm,19.8s,baz=0.5,slow=39							
BHOU	**Houvegnez**	**86.74**	**325**	*d*P	**P**	**02 30 46.3**	**-0.9**
BMRD	**Maredsous**	**87.42**	**325**	*d*PcP	**P**	**02 30 51.4**	**+0.9**
DOU	**Dourbes**	**87.63**	**325**	*dx*	**P**	**02 30 52.8**	**+1.3**
LON	**Longmire**	**89.19**	**38**	IAmb	IAmb	02 31 24.1		
	comp=Z,11nm,1.2s							
NEW	**Newport**	**90.83**	**35**	IAmb	IAmb	02 31 13.5		
	comp=Z,12nm,1.1s							
NEW	**Newport**	**90.83**	**35**	P	**P**	**02 31 07.0**	**+0.3**
	baz=309							
L04D	**Klamath Falls**	**91.49**	**42**	P	**P**	**02 31 10.0**	**0.0**
J05D	**Fort Rock, OR**	**91.52**	**41**	P	**P**	**02 31 09.7**	**-0.4**
I07A	**Izee**	**92.07**	**39**	IAmb	IAmb	02 31 25.8		
	comp=Z,14nm,1.5s							
FRB	**Frobisher Bay**	**92.13**	**5**	LR	LR	03 15 51.1		
	comp=Z,177nm,18.6s,baz=48,slow=38							
FCC	**Fort Churchill**	**92.32**	**18**	IAmb	IAmb	02 34 40.2		
	comp=Z,25nm,1.9s							
FFC	**Flin Flon**	**93.05**	**24**	P	**P**	**02 31 16.0**	**-0.8**
FFC				IAmb	IAmb	02 31 36.4		
	comp=Z,7.2nm,1.1s							
FFC	**Flin Flon**	**93.05**	**24**	P	**P**	**02 31 16.0**	**-0.8**
FFC				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ORV	**Oroville**	**93.51**	**44**	P	**P**	**02 31 18.1**	**-1.1**
ORV	**Oroville**	**93.51**	**44**	P	**P**	**02 31 18.1**	**-1.1**
ORV				pmax	pmax			
	comp=Z,5.0nm,1.2s							
EGMT	**Eagleton**	**94.69**	**32**	IAmb	IAmb	02 31 32.7		
	comp=Z,11nm,1.2s							
EGMT	**Eagleton**	**94.69**	**32**	P	**P**	**02 31 24.5**	**-0.1**
	baz=314							
CMB	**Columbia Colle**	**95.10**	**44**	P	**P**	**02 31 26.5**	**-0.1**
CMB	**Columbia Colle**	**95.10**	**44**	P	**P**	**02 31 26.5**	**-0.1**
CMB				pmax	pmax			
	comp=Z,6.0nm,1.2s							
HLID	**Hailey**	**95.27**	**37**	P	**P**	**02 31 27.4**	**0.0**
	baz=310							
BOZ	**Bozeman (W)**	**95.42**	**34**	P	**P**	**02 31 28.4**	**+0.3**
	baz=313							
PPT	**Papeete**	**95.83**	**107**	LR	LR	03 05 22.8		
	comp=Z,91nm,19.9s,baz=258,slow=30							
PPT2	**Papeete2**	**95.84**	**107**	*e*LR	LR	03 02 21.0		
	comp=Z,182nm,25.2s							
PPT2				*e*LR	LR	03 02 29.3		
	comp=Z,178nm,23.8s							
NVAR	**Mina Array Bea**	**96.19**	**43**	P	**P**	**02 31 33.2**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=266,slow=5.9,SNR=3.0							
	comp=Z,0.4nm,0.6s							
H17A	**Grant Village**	**96.79**	**35**	P	**P**	**02 31 34.1**	**-0.3**
	baz=313							
RLMT	**Red Lodge**	**96.96**	**34**	P	**P**	**02 31 34.8**	**-0.3**
	baz=314							
MPMC	**Manual Prospec**	**98.14**	**45**	P	Pdif	02 31 40.9	+0.3	
	baz=308							
LSZ	**Lusaka**	**99.25**	**257**	LR	LR	03 13 46.8		
	comp=Z,48nm,19.5s,baz=225,slow=34							
ELIB	**Princess Elisa**	**115.25**	**200**	*d*PKP	**PKPdf**	**02 36 46.2**	**+2.2**	

TAP 07 02:24:30.6, 24.09N×121.66E, h10km, ML1.9, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.06**	**260**	⇓*i*P	Pg	02 24 33.4	+0.7
	baz=260						
TWD				*i* S	Sg	02 24 34.7	+0.5
	baz=260						
ETL	**Fush Village**	**0.08**	**334**	⇓*i*P	Pg	02 24 33.9	+0.9
	baz=333						
ETL				S	Sg	02 24 35.5	+0.9
	baz=333						
NACB	**Ninganchiao**	**0.10**	**324**	⇓*i*P	Pg	02

	baz=256							
ENA	**Nanau**	**0.20**	**285**	*i*	P	Pg	02 24 43.3	+0.3
	baz=284							
ENA					S	Sg	02 24 47.5	+1.0
	baz=284							
ESAO	**Su ao**	**0.22**	**333**		P	Pg	02 24 43.7	+0.4
	baz=333							
ESAO					S	Sg	02 24 47.9	+0.9
	baz=333							
TWC	**Suao**	**0.25**	**338**	*i*	P	Pg	02 24 44.0	+0.3
	baz=339							
TWC				*i*	S	Sg	02 24 48.8	+1.0
	baz=339							
EOS2	**EOS2**	**0.26**	**81**	*i*	P	Pg	02 24 44.3	+0.6
	baz=80							
NDS	**Dongshan**	**0.34**	**320**	*e*	P	Pb	02 24 45.5	+0.3
	baz=319							
NDS				*e*	S	Sb	02 24 51.3	+1.2
	baz=319							
EOS3	**EOS3**	**0.34**	**105**		P	Pb	02 24 45.9	+0.7
	baz=105							
EOS3					S	Sb	02 24 52.0	+1.8
	baz=105							
ETL	**Fush Village**	**0.37**	**234**	*e*	P	Pb	02 24 46.5	+0.8
	baz=234							
EOS4	**EOS4**	**0.42**	**127**	*e*	P	Pg	02 24 46.7	+0.3
	baz=127							
LATG	**Datong**	**0.42**	**292**		P	Pb	02 24 47.3	+0.6
	baz=292							
LATG				*e*	S	Sb	02 24 54.0	+1.4
	baz=292							
ENTT	**Nioudou**	**0.44**	**307**		P	Pg	02 24 47.5	+0.6
	baz=306							
ENTT					S	Sb	02 24 54.5	+1.3
	baz=306							
TWD	**Chiawan**	**0.44**	**228**	*e*	P	Pg	02 24 47.0	0.0
	baz=227							
NDT	**Datong Townshi**	**0.46**	**299**	*e*	P	Pg	02 24 47.8	+0.4
	baz=299							
NDT				*e*	S	Sn	02 24 55.6	-1.3
	baz=299							
FUSB	**Fushanzhiwuyua**	**0.51**	**319**	*e*	P	Pg	02 24 48.5	+0.4
	baz=318							
FUSB				*e*	S	Sg	02 24 56.6	+1.5
	baz=318							
NNSB	**Datong**	**0.52**	**276**		P	Pg	02 24 48.8	+0.3
	baz=275							
NNS	**Nan Shan**	**0.53**	**277**		P	Pg	02 24 48.8	+0.1
	baz=276							
NNS				*e*	S	Sg	02 24 57.2	+1.2
	baz=276							
NWLT	**Wulai**	**0.57**	**314**	*e*	P	Pb	02 24 49.0	-0.2
	baz=314							
NWLT				*e*	S	Sg	02 24 58.3	+1.1
	baz=314							
ETM	**Tongmen**	**0.59**	**226**	*e*	P	Pg	02 24 50.0	+0.4
	baz=225							
YHNB	**Yeheng**	**0.60**	**299**	*e*	P	Pg	02 24 50.3	+0.4
	baz=298							
YHNB				*e*	S	Sg	02 24 59.2	+1.1
	baz=298							
TIPB	**Shuangxi**	**0.60**	**349**	*e*	P	Pg	02 24 50.2	+0.3
	baz=348							
TIPB				*e*	S	Sg	02 24 59.2	+1.1
	baz=348							
LXIB	**Xiulin Townshi**	**0.61**	**234**	*e*	P	Pg	02 24 50.3	+0.2
	baz=234							
NSK	**Sanguang**	**0.62**	**299**	*e*	P	Pg	02 24 50.7	+0.4
	baz=298							
NSK				*e*	S	Sn	02 24 59.8	-1.2
	baz=298							
FUSS	**Fushou**	**0.66**	**259**	*e*	P	Pg	02 24 51.0	0.0
	baz=258							
WHF	**Hehuan Shan**	**0.67**	**250**	*e*	P	Pg	02 24 51.3	0.0
	baz=249							

*IDC **07** 02:29:10.4±1.0,23°.92N×121°.78E,h0km,mb3.5/8, mbtmp3.6/9,ML3.6/1,Error ellipse: s-maj=33.6km s-min=20.2km az=64.0*

*JMA **07** 02:29:11.7±0.1,23°.9N±0°.2×121°.6E±0°.9,h0km,MV3.4/14, TAIWAN REGION*

*ASIES **07** 02:29:12.6,23°.96N×121°.60E,h6km,ML4.0,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr3.58; Mθθ-0.99; Mφφ-2.60; Mrθ0.14; Mrφ-1.80; Mθφ1.82; Fault plane solution: M₀4.10875×10^{21} NP1:φs20.66000°, δ58.05000°,λ76.39000°. NP2:φs225.25000°,δ34.45000°, λ110.67000°. Principal axes: T Plg73.2050°, Azm255.5000°; N Plg11.5180°, Azm27.9690°; P Plg12.0540°, Azm120.4630°;*

*TAP **07** 02:29:12.6,23°.96N×121°.60E,h6km,ML4.0,B*

ISC 07 02:29:12.1±0.8,23°.93N±0°.01×121°.64E±0°.02,h11km±5km, n175,σ0s65/231,mb3.6/8,5C-41D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.14**	**283**	⇓*i*	P		**Pg**	**02 29 15.3**	**-0.2**
	baz=275								
ETM				*i*	S		**Sg**	**02 29 16.9**	**-0.9**
	baz=275								
TWD	**Chiawan**	**0.15**	**343**	⇓*i*	P		**Pg**	**02 29 15.8**	**+0.2**
	baz=3.0								
TWD				*i*	S		**Sg**	**02 29 17.9**	**-0.2**
	baz=3.0								
SHUL	**Shoufeng**	**0.16**	**207**	*i*	P		**Pb**	**02 29 17.0**	**-0.1**
	baz=183								
ETL	**Fush Village**	**0.23**	**355**	⇓*i*	P		**Pg**	**02 29 17.1**	**+0.2**
	baz=6.0								
ETL				*i*	S		**Sg**	**02 29 20.2**	**0.0**
	baz=6.0								
ESL	**Shilin**	**0.23**	**239**	⇓*i*	P		**Pg**	**02 29 16.9**	**+0.1**
	baz=226								
ESL					S		**Sg**	**02 29 19.7**	**-0.4**
	baz=226								
LXIB	**Xiulin Townshi**	**0.23**	**293**	⇓*i*	P		**Pg**	**02 29 16.7**	**-0.3**
	baz=285								
LXIB				*i*	S		**Sg**	**02 29 19.6**	**-0.7**
	baz=285								
TEGC	**Jichi Village**	**0.24**	**203**		P		**Pb**	**02 29 18.8**	**+0.2**
	baz=197								
TEGC					S		**Sg**	**02 29 23.8**	**+3.3**
	baz=197								
NACB	**Ninganchiao**	**0.24**	**349**		P		**Pg**	**02 29 17.2**	**0.0**
NACB	**Ninganchiao**	**0.24**	**349**	⇓*i*	P		**Pg**	**02 29 17.2**	**0.0**
	baz=10.0								
NACB				*i*	S		**Sg**	**02 29 20.2**	**-0.4**
	baz=10.0								
WARBT	**Fenglin Townsh**	**0.32**	**228**	⇑*i*	P		**Pg**	**02 29 18.6**	**+0.1**
	baz=229								
WARBT				*e*	S		**Sg**	**02 29 22.5**	**-0.4**
	baz=229								
EGFH	**Guangfu**	**0.33**	**217**	⇓*e*	P		**Pg**	**02 29 19.2**	**+0.4**
	baz=216								
EHP	**Heping Village**	**0.39**	**13**	*e*	P		**Pg**	**02 29 19.6**	**-0.2**
	baz=23								
EAHA	**Aohua**	**0.40**	**12**		P		**Pg**	**02 29 20.3**	**+0.2**
	baz=26								
EAHA					S		**Sg**	**02 29 26.3**	**+0.8**
	baz=26								
WHF	**Hehuan Shan**	**0.41**	**301**	*i*	P		**Pg**	**02 29 20.0**	**-0.3**
	baz=302								
WHF				*i*	S		**Sg**	**02 29 25.7**	**-0.1**
	baz=302								
OWD	**Renai**	**0.43**	**273**	⇓*i*	P		**Pg**	**02 29 20.6**	**0.0**
	baz=271								
OWD					S		**Sg**	**02 29 25.7**	**-0.7**
	baz=271								
CHGB	**Renai**	**0.45**	**287**	⇓*i*	P		**Pg**	**02 29 21.1**	**+0.1**
	baz=285								
CHGB					S		**Sg**	**02 29 26.2**	**-0.8**
	baz=285								
FUSS	**Fushou**	**0.48**	**311**	⇓*i*	P		**Pg**	**02 29 21.8**	**+0.1**
	baz=312								
FUSS					S		**Sg**	**02 29 28.1**	**0.0**
	baz=312								
HGSD	**Ruisui**	**0.48**	**205**		P		**Pb**	**02 29 23.3**	**+0.7**
	baz=207								
WUSB	**Renai**	**0.49**	**277**	⇓*i*	P		**Pg**	**02 29 21.9**	**+0.3**
	baz=275								
WUSB				*i*	S		**Sg**	**02 29 27.8**	**-0.3**
	baz=275								
VWDT	**VWDT**	**0.49**	**249**	⇓*i*	P		**Pg**	**02 29 22.3**	**+0.5**
	baz=246								
VWDT					S		**Sg**	**02 29 28.3**	**-0.1**
	baz=246								
ENA	**Nanau**	**0.50**	**10**	⇓*i*	P		**Pg**	**02 29 22.3**	**+0.3**
	baz=25								
ENA					S		**Sg**	**02 29 29.2**	**+0.6**
	baz=25								
EHY	**Hungye**	**0.52**	**215**	⇓*i*	P		**Pg**	**02 29 22.5**	**+0.3**
	baz=217								
EWUT	**Wuta**	**0.53**	**13**	⇓	P		**Pg**	**02 29 22.8**	**+0.4**
	baz=21								
TWT	**Tachien**	**0.53**	**307**	⇓*i*	P		**Pg**	**02 29 22.9**	**+0.3**
	baz=306								
TWT				*i*	S		**Sg**	**02 29 30.6**	**+0.8**
	baz=306								
TDCB	**Techi**	**0.55**	**306**	⇓*i*	P		**Pg**	**02 29 23.0**	**+0.2**
	baz=306								
TDCB				*i*	S		**Sg**	**02 29 30.2**	**+0.1**
	baz=306								
NNSB	**Datong**	**0.55**	**334**	⇓*i*	P		**Pg**	**02 29 23.0**	**+0.2**
	baz=337								
NNSB				*i*	S		**Sg**	**02 29 30.1**	**0.0**
	baz=337								
NNSH	**Datong**	**0.55**	**334**	⇓*i*	P		**Pg**	**02 29 23.0**	**+0.1**
	baz=337								
NNSH				*i*	S		**Sg**	**02 29 29.7**	**-0.4**
	baz=337								
NNS	**Nan Shan**	**0.56**	**334**	⇓*i*	P		**Pg**	**02 29 23.3**	**+0.1**
	baz=338								
NNS				*i*	S		**Sg**	**02 29 30.5**	**-0.1**
	baz=338								
LATG	**Datong**	**0.61**	**350**	⇓*i*	P		**Pg**	**02 29 24.1**	**+0.1**
	baz=353								
LATG					S		**Sg**	**02 29 32.4**	**+0.3**
	baz=353								
YULB	**Yu-li**	**0.62**	**211**		P		**Pg**	**02 29 24.8**	**+0.5**
YULB	**Yu-li**	**0.62**	**211**	⇑	P		**Pg**	**02 29 24.3**	**0.0**
	baz=213								
WPL	**Puli Township**	**0.63**	**277**	⇓*i*	P		**Pg**	**02 29 24.8**	**+0.4**
	baz=276								
WPL					S		**Sg**	**02 29 32.4**	**-0.4**
	baz=276								
ECBN	**Changbin**	**0.64**	**196**	*e*	P		**Pb**	**02 29 25.5**	**+0.2**
	baz=178								
EOS4	**EOS4**	**0.64**	**73**	*e*	P		**Pg**	**02 29 25.1**	**+0.6**
	baz=87								
SSLB	**Suanglung**	**0.65**	**257**		P		**Pg**	**02 29 25.0**	**+0.3**
SSLB	**Suanglung**	**0.65**	**257**	⇓*i*	P		**Pg**	**02 29 24.9**	**+0.1**
	baz=255								
SSLB				*i*	S		**Sg**	**02 29 32.5**	**-0.7**
	baz=255								
EYUL	**Yuli**	**0.66**	**207**	*e*	P		**Pb**	**02 29 25.7**	**+0.1**
	baz=212								
TWF1	**Yuli**	**0.66**	**209**	*e*	P		**Pg**	**02 29 24.7**	**-0.2**
	baz=213								
DPDB	**Guoxing**	**0.66**	**279**	⇓*i*	P		**Pg**	**02 29 25.3**	**+0.3**
	baz=277								
ESAO	**Su ao**	**0.67**	**16**	*e*	P		**Pg**	**02 29 24.9**	**-0.2**
	baz=21								
NDT	**Datong Townshi**	**0.68**	**350**		P		**Pg**	**02 29 25.6**	**+0.3**
	baz=344								
NDT					S		**Sg**	**02 29 34.6**	**+0.4**
	baz=344								
WCS	**Beigang Elemen**	**0.68**	**281**	⇓*i*	P		**Pg**	**02 29 25.7**	**+0.4**
	baz=279								
WCS				*e*	S		**Sg**	**02 29 34.3**	**0.0**
	baz=279								
SMLT	**Sun Moon Lake**	**0.68**	**266**	⇓*i*	P		**Pg**	**02 29 25.7**	**+0.3**
	baz=264								
SMLT				*i*	S		**Sg**	**02 29 34.2**	**-0.2**
	baz=264								
TWC	**Suao**	**0.70**	**15**	⇓*i*	P		**Pg**	**02 29 26.0**	**+0.3**
	baz=20								
TWC					S		**Sb**	**02 29 35.6**	**-0.3**
	baz=20								
NDS	**Dongshan**	**0.70**	**5**	⇓*i*	P		**Pg**	**02 29 26.1**	**+0.4**
	baz=9.0								
NDS					S		**Sb**	**02 29 35.6**	**-0.5**
	baz=9.0								
ENTT	**Nioudou**	**0.71**	**354**	⇓*i*	P		**Pg**	**02 29 26.2**	**+0.4**
	baz=358								
ENTT					S		**Sb**	**02 29 36.3**	**0.0**
	baz=358								
EOS3	**EOS3**	**0.71**	**60**	*e*	P		**Pn**	**02 29 27.7**	**-0.3**
	baz=61								
TYC	**Yuchr**	**0.72**	**268**	⇓*i*	P		**Pg**	**02 29 26.2**	**+0.1**
	baz=267								
TYC				*i*	S		**Sg**	**02 29 35.0**	**-0.6**
	baz=267								
EOS2	**EOS2**	**0.72**	**48**	*e*	P		**Pn**	**02 29 28.5**	**+0.3**
	baz=64								
WHP	**Taichung City**	**0.72**	**298**	⇓*i*	P		**Pg**	**02 29 26.7**	**+0.5**
	baz=290								
WHP					S		**Sb**	**02 29 36.5**	**-0.3**
	baz=290								
WHYT	**Xinyi Township**	**0.76**	**252**	*e*	P		**Pg**	**02 29 27.4**	**+0.5**
	baz=248								
CHKH	**Chenggong**	**0.77**	**197**	*e*	P		**Pg**	**02 29 27.5**	**+0.5**
	baz=182								
YHNB	**Yeheng**	**0.77**	**342**		P		**Pb**	**02 29 27.6**	**-0.1**
YHNB	**Yeheng**	**0.77**	**342**	⇓*i*	P		**Pg**	**02 29 27.4**	**+0.3**
	baz=344								
YHNB					S		**Sg**	**02 29 36.6**	**-0.6**
	baz=344								
NSK	**Sanguang**	**0.79**	**341**	⇓*i*	P		**Pg**	**02 29 27.6**	**+0.3**
	baz=344								
NSK					S		**Sg**	**02 29 37.3**	**-0.3**
	baz=344								
TWE	**Neicheng**	**0.79**	**2**	⇓*i*	P		**Pg**	**02 29 27.7**	**+0.4**
	baz=5.0								
TWE					S		**Sg**	**02 29 38.1**	**+0.5**
	baz=5.0								
FULB	**Fuli**	**0.80**	**204**	*e*	P		**Pb**	**02 29 28.3**	**+0.2**
	baz=216								
FUSB	**Fushanzhiwuyua**	**0.82**	**356**	⇓*i*	P		**Pb**	**02 29 28.5**	**0.0**
	baz=359								
FUSB					S		**Sg**	**02 29 38.9**	**0.0**
	baz=359								
ILA	**Ilan**	**0.83**	**6**	*e*	P		**Pg**	**02 29 28.0**	**-0.3**
	baz=11								
NFF	**Wufeng Townshi**	**0.85**	**325**	⇓*i*	P		**Pb**	**02 29 28.9**	**0.0**
	baz=327								
NFF				*e*	S		**Sg**	**02 29 39.3**	**-0.2**
	baz=327								
WJS	**Zhushan**	**0.85**	**263**	*e*	P		**Pn**	**02 29 29.7**	**-0.3**
	baz=252								
NWLT	**Wulai**	**0.85**	**351**	⇓*i*	P		**Pg**	**02 29 28.8**	**+0.3**
	baz=354								
NWLT				*e*	S		**Sg**	**02 29 39.8**	**+0.1**
	baz=354								
CHKT	**Chengkung**	**0.87**	**197**	*e*	P		**Pg**	**02 29 29.1**	**+0.2**
	baz=197								
CHKT				*e*	S		**Sn**	**02 29 42.9**	**-0.1**
	baz=197								
WWF	**Wufeng**	**0.87**	**277**	*e*	P		**Pn**	**02 29 30.6**	**+0.3**
	baz=275								
ALS	**Alishan**	**0.88**	**242**	⇓*i*	P		**Pg**	**02 29 29.6**	**+0.5**
	baz=249								
EHD	**Haiduan**	**0.88**	**207**	*e*	P		**Pg**	**02 29 28.9**	**-0.2**
	baz=207								
WNT	**Mingjian**	**0.88**	**267**		P		**Pn**	**02 29 30.3**	**-0.2**
	baz=266								
WNT				*e*	S		**Sb**	**02 29 41.7**	**+0.5**
	baz=266								
WNT1	**Nantou City**	**0.88**	**269**	*e*	P		**Pn**	**02 29 30.4**	**-0.1**
	baz=258								
TWQ1	**Liyutan**	**0.90**	**298**	*e*	P		**Pb**	**02 29 30.1**	**+0.4**
	baz=297								
NSTT	**Nanjuang**	**0.91**	**320**	⇓*i*	P		**Pb**	**02 29 30.1**	**+0.2**
	baz=321								
NSTT					S		**Sg**	**02 29 41.4**	**-0.1**
	baz=321								
LIOB	**Emei**	**0.91**	**321**	*e*	P		**Pb**	**02 29 30.2**	**+0.3**
	baz=322								
ECS	**Chishang**	**0.92**	**205**	*e*	P		**Pg**	**02 29 29.8**	**0.0**
	baz=205								
ELDTW	**Lidau**	**0.94**	**218**	*e*	P		**Pg**	**02 29 29.2**	**-1.1**
	baz=215								
CHN5	**Tsauling**	**0.95**	**250**	⇓*i*	P		**Pn**	**02 29 31.3**	**-0.1**
	baz=238								
CHN5					S		**Sn**	**02 29 45.0**	**0.0**
	baz=238								
WYL	**Yuanlin Townsh**	**0.97**	**272**	*e*	P		**Pb**	**02 29 29.9**	**-1.2**
	baz=271								
NMLH	**Miaoli**	**0.98**	**308**	*e*	P		**Pn**	**02 29 31.7**	**-0.2**
	baz=307								
WCHH	**Zhanghua**	**1.00**	**279**	*e*	P		**Pn**	**02 29 32.3**	**+0.2**
	baz=277								
EDH	**Donghe**	**1.01**	**198**	*e*	P		**Pb**	**02 29 30.4**	**-1.2**
	baz=184								
WDJ	**Dajia District**	**1.01**	**294**	⇓*i*	P		**Pn**	**02 29 32.9**	**+0.7**
	baz=294								
WDJ				*e*	S		**Sn**	**02 29 47.4**	**+1.0**
	baz=294								
NHDH	**Xindian Distri**	**1.03**	**354**	*e*	P		**Pn**	**02 29 32.5**	**0.0**
	baz=357								
WDLH	**Douliu**	**1.04**	**257**	*e*	P		**Pb**	**02 29 32.2**	**+0.1**
	baz=256								
SBCB	**Hsinchu**	**1.05**	**325**	*e*	P		**Pn**	**02 29 33.2**	**+0.5**
	baz=326								
SBCB				*e*	S		**Sn**	**02 29 48.5**	**+1.2**
	baz=326								
TATO	**Taipei**	**1.05**	**352**		P		**Pn**	**02 29 33.0**	**+0.2**
TATO	**Taipei**	**1.05**	**352**		P		**Pn**	**02 29 32.8**	**0.0**
	baz=354								
TATO					S		**Sb**	**02 29 46.0**	**0.0**
	baz=354								
TIPB	**Shuangxi**	**1.05**	**9**		P		**Pg**	**02 29 32.6**	**+0.2**
	baz=1.0								
TIPB				*e*	S		**Sb**	**02 29 45.6**	**-0.4**
	baz=1.0								
HSN	**Hsinchu**	**1.06**	**325**	*e*	P		**Pn**	**02 29 33.6**	**+0.6**
	baz=328								
HSN				*e*	S		**Sn**	**02 29 49.0**	**+1.3**
	baz=328								
WCKO	**Fanlu**	**1.07**	**243**	*e*	P		**Pn**	**02 29 33.7**	**+0.5**
	baz=242								
STYH	**Taoyuan**	**1.10**	**227**	*e*	P		**Pb**	**02 29 33.2**	**+0.1**
	baz=212								
NCUH	**Zhongli**	**1.11**	**338**	*e*	P		**Pg**	**02 29 34.2**	**+0.7**
	baz=339								
TWB1	**Santiao Chiao**	**1.12**	**16**	*e*	P		**Pb**	**02 29 33.4**	**0.0**
	baz=12								
STYT	**Tauyuan**	**1.12**	**227**	*e*	P		**Pb**	**02 29 33.4**	**-0.1**
	baz=212								
TPUB	**Ta-pu**	**1.12**	**236**		P		**Pg**	**02 29 34.4**	**+0.7**
TPUB	**Ta-pu**	**1.12**	**236**	⇑*i*	P		**Pg**	**02 29 34.2**	**+0.4**
	baz=236								
TPUB					S		**Sg**	**02 29 48.9**	**+0.5**
	baz=236								
CHN4	**Tsaushan**	**1.12**	**239**	⇑*i*	P		**Pg**	**02 29 34.5**	**+0.8**
	baz=239								
CHN4					S		**Sn**	**02 29 50.0**	**+0.7**
	baz=239								
LONT	**Longtian**	**1.13**	**205**	*e*	P		**Pb**	**02 29 32.2**	**-1.4**
	baz=206								
NWF	**Wu-fen Shan**	**1.14**	**6**	*e*	P		**Pb**	**02 29 34.0**	**+0.1**
	baz=9.0								
WFSB	**Wu-fen Shan**	**1.14**	**6**	*e*	P		**Pn**	**02 29 34.2**	**+0.2**
	baz=7.0								
CHN2	**Minshiung**	**1.14**	**250**	*e*	P		**Pn**	**02 29 34.3**	**+0.3**
	baz=250								
WRL	**Guolierlin Hig**	**1.16**	**269**	*e*	P		**Pg**	**02 29 34.6**	**+0.2**
	baz=267								
WTP	**Ta-pu**	**1.17**	**234**	⇑	P		**Pg**	**02 29 34.9**	**+0.3**
	baz=236								
WTP				*e*	S		**Sn**	**02 29 50.4**	**0.0**
	baz=236								
SXI1	**Grass Mountain**	**1.18**	**10**		P		**Pg**	**02 29 35.1**	**+0.3**
	baz=2.0								
SXI1				*e*	S		**Sb**	**02 29 49.5**	**-0.3**
	baz=2.0								
WTK	**Tuku**	**1.18**	**258**	*e*	P		**Pg**	**02 29 35.1**	**+0.3**
	baz=258								
RLNB	**Erlin**	**1.18**	**268**	*e*	P		**Pg**	**02 29 34.9**	**+0.2**
	baz=266								
TWS1	**Kuangyinshan**	**1.18**	**350**	*e*	P		**Pg**	**02 29 35.3**	**+0.4**
	baz=1.0								
TWS1				*e*	S		**Sn**	**02 29 52.5**	**+1.8**
	baz=1.0								
NHW	**Xinwu Township**	**1.20**	**333**	*e*	P		**Pg**	**02 29 35.4**	**+0.2**
	baz=334								
NHW				*e*	S		**Sn**	**02 29 52.7**	**+1.5**
	baz=334								
YM01	**YM01**	**1.21**	**357**		P		**Pg**	**02 29 35.9**	**+0.4**
	baz=10.0								
TNOU	**National Taiwa**	**1.22**	**5**	*e*	P		**Pn**	**02 29 35.0**	**-0.1**
	baz=8.0								
TWGBT	**Beinan**	**1.23**	**205**		P		**Pg**	**02 29 36.2**	**+0.5**
TWGBT	**Beinan**	**1.23**	**205**	*e*	P		**Pn**	**02 29 33.5**	**-1.7**
	baz=206								
NTST	**Danshui**	**1.24**	**352**	*e*	P		**Pg**	**02 29 36.8**	**+0.8**
	baz=352								
TWK	**Hsinying**	**1.25**	**238**	*e*	P		**Pg**	**02 29 36.5**	**+0.3**
	baz=240								
TWK				*i*	S		**Sg**	**02 29 53.6**	**+1.2**
	baz=240								
ANP	**Anpu**	**1.25**	**355**	*e*	P		**Pb**	**02 29 36.2**	**0.0**
	baz=356								
LDUT	**Ludao**	**1.26**	**187**	*e*	P		**Pn**	**02 29 33.6**	**-2.1**
	baz=170								
CHN1	**Nanshi**	**1.27**	**234**	*e*	P		**Pb**	**02 29 36.2**	**+0.2**
	baz=236								
CHN1				*e*	S		**Sg**	**02 29 54.9**	**+1.9**
	baz=236								
SNST	**Tainan City**	**1.27**	**236**	*e*	P		**Pg**	**02 29 36.9**	**+0.4**
	baz=236								
SGST	**Jiashian**	**1.29**	**229**	*e*	P		**Pn**	**02 29 36.2**	**+0.1**
	baz=231								
SGST				*e*	S		**Sg**	**02 29 55.0**	**+1.3**
	baz=231								
JYNG	**Yonagunijimaku**	**1.29**	**66**		P		**Pn**	**02 29 36.4**	**+0.2**
JYNG				*e*	S		**Sg**	**02 29 54.4**	**+0.5**
SLGT	**Liugui**	**1.31**	**225**	*e*	P		**Pg**	**02 29 38.3**	**+1.0**
	baz=210								
TWY	**Chenhua**	**1.34**	**358**	*e*	P		**Pb**	**02 29 37.6**	**+0.4**
	baz=347								
YOJ	**Yonaguni jima**	**1.35**	**67**		P		**Pb**	**02 29 38.0**	**+0.5**
YOJ	**Yonaguni jima**	**1.35**	**67**	*e*	P		**Pn**	**02 29 37.2**	**+0.2**
	baz=68								
YOJ	**Yonaguni jima**	**1.35**	**67**		P		**Pb**	**02 29 37.9**	**+0.3**
YOJ				*e*	S		**Sg**	**02 29 56.5**	**+0.7**
ICHU	**Yijhu**	**1.38**	**246**	*e*	P		**Pb**	**02 29 38.2**	**+0.4**
	baz=248								
CHN8	**Yiju**	**1.44**	**246**	*e*	P		**Pn**	**02 29 38.6**	**+0.5**
	baz=248								
ECL	**Taimali**	**1.47**	**206**	*e*	P		**Pn**	**02 29 39.2**	**+0.6**
	baz=189								
SCST	**Cishan**	**1.48**	**226**	*e*	P		**Pn**	**02 29 38.8**	**+0.1**
	baz=213								
SHHT	**Tainan City**	**1.50**	**233**	*e*	P		**Pb**	**02 29 40.6**	**+0.6**
	baz=237								
TSMG	**Majia**	**1.53**	**217**	*e*	P		**Pn**	**02 29 39.9**	**+0.5**
	baz=208								
TWM1	**Shoushan**	**1.57**	**226**	*e*	P		**Pn**	**02 29 40.6**	**+0.5**
	baz=230								
MASBT	**Mashibuluo**	**1.61**	**215**	*e*	P		**Pn**	**02 29 41.3**	**+0.8**
	baz=205								
TSCK	**Chigu Township**	**1.63**	**242**	*e*	P		**Pb**	**02 29 42.4**	**+0.2**
	baz=246								
EAST	**Anshuo**	**1.71**	**206**	*e*	P		**Pn**	**02 29 42.1**	**+0.2**
	baz=191								
TAWH	**Dawu Township**	**1.73**	**204**	*e*	P		**Pb**	**02 29 43.6**	**-0.3**
	baz=190								
SCZT	**Fangliau**	**1.82**	**211**	*e*

LYJJ	**Jianjiangzhen** baz=311	**3.12**	**327**	*e*P	**Pn**	**02 30 00.8**	**-0.4**
MHZQ	**Yeshan** baz=311	**3.21**	**313**	*e*P	**Pn**	**02 30 03.1**	**+0.6**
XPSS	**Dashiqiu** baz=334	**3.26**	**337**	*e*P	**Pn**	**02 30 02.9**	**-0.3**
AXDP	**Jialang** baz=285	**3.48**	**287**	*e*P	**Pn**	**02 30 06.6**	**+0.3**
ZPLA	**Ao Xicun** baz=268	**3.56**	**271**	*e*P	**Pn**	**02 30 07.9**	**+0.5**
DSXP	**Dongshan** baz=266	**3.87**	**268**	*e*P	**Pn**	**02 30 11.8**	**+0.2**
SXFK	**Yanhouchang** baz=303	**4.38**	**305**	*e*P	**Pn**	**02 30 18.9**	**+0.3**
JOW	**Kunigami** baz=70	**6.66**	**63**	*e*P	**Pn**	**02 30 49.4**	**-0.4**
JOW	**Kunigami** 2.6nm,0.3s,baz=153,slow=18,SNR=6.5 5.5nm,0.3s	**6.66**	**63**	Pn	**Pn**	**02 30 49.2**	**-0.7**
KSRS	**Korea Array** 0.2nm,0.3s,baz=198,slow=11,SNR=2.6	**14.51**	**20**	Pn	**P**	**02 32 42.0**	**-2.1**
SONM	**Songino Array** 0.5nm,0.7s,baz=167,slow=7.2,SNR=2.4 0.5nm,0.7s	**26.76**	**337**	P	**P**	**02 34 53.8**	**+1.8**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=98,slow=12,SNR=5.3 0.5nm,0.6s	**38.81**	**316**	P	**P**	**02 36 38.1**	**+1.1**
ZALV	**Zalesovo Beam** 0.8nm,0.6s,baz=115,slow=10.0,SNR=4.1 0.8nm,0.6s	**40.68**	**327**	P	**P**	**02 36 52.2**	**-0.2**
H11N1	**WAKE ISLAND Hy** baz=282,slow=75,SNR=12	**42.08**	**87**	T	T	03 22 00.4	
H11N2	**WAKE ISLAND Hy** baz=282,slow=75,SNR=13	**42.08**	**87**	T	T	03 22 02.1	
H11N3	**WAKE ISLAND Hy** baz=282,slow=75,SNR=8.5	**42.10**	**87**	T	T	03 22 01.1	
H11S3	**WAKE ISLAND Hy** baz=284,slow=74,SNR=14	**42.20**	**88**	T	T	03 22 08.8	
H11S1	**WAKE ISLAND Hy** baz=284,slow=74,SNR=13	**42.21**	**88**	T	T	03 22 09.4	
H11S2	**WAKE ISLAND Hy** baz=284,slow=74,SNR=8.4	**42.22**	**88**	T	T	03 22 10.7	
KURBB	**Kurchatov Arra** 0.5nm,0.7s,baz=113,slow=8.9,SNR=4.3 0.5nm,0.7s	**42.57**	**320**	P	**P**	**02 37 08.4**	**+0.5**
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=343,slow=8.5,SNR=4.5 1.1nm,0.9s	**45.33**	**163**	P	**P**	**02 37 30.4**	**0.0**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=351,slow=6.3,SNR=4.6 0.3nm,0.4s	**48.79**	**165**	P	**P**	**02 37 56.7**	**-0.7**
ILAR	**Eielson Array** 0.2nm,0.5s,baz=277,slow=5.5,SNR=4.6 0.2nm,0.5s	**69.24**	**27**	P	**P**	**02 40 17.8**	**-1.0**
YKA	**Yellowknife Ar** 0.4nm,0.7s,baz=310,slow=5.1,SNR=7.9 0.4nm,0.7s	**83.04**	**23**	P	**P**	**02 41 37.5**	**+0.1**

*RSNC **07** 02:30:12.8±1.8, 7.˚42N×72.˚11W, h0km±7km, ML2.7*
*FUNV **07** 02:30:12.3, 7.˚47N×72.˚01W, h5km, MW3.6*
ISC 07 02:30:10.5±1.2, 7.˚46N±0.˚03×71.˚98W±0.˚03, h7km±10km, n25, σ1s59/48, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.52**	**320**	*e*P			**Pg**	**02 30 20.6**	**-0.1**
CAPV				*e*S			**Sb**	**02 30 28.5**	**-1.5**
PAMC	**Pamplona, Colo**	**0.73**	**261**	⇓*i*P			**Pg**	**02 30 23.1**	**-1.5**
PAMC				*e*S			**Sg**	**02 30 31.7**	**-2.5**
PAMC				*i*				02 30 32.5	
	comp=Z,152nm,0.2s								
TAMC	**Tame, Arauca**	**1.03**	**170**	*e*P			**Pb**	**02 30 31.3**	**+0.5**
TAMC				*e*S			**Sb**	**02 30 45.5**	**+0.9**
TAMC				*i*				02 30 48.0	
	comp=Z,167nm,0.2s								
SOCV	**Socops**	**1.38**	**54**	*e*P			**Pg**	**02 30 37.8**	**+0.8**
SOCV				*e*S			**Sg**	**02 30 56.6**	**+1.7**
BARC	**Barichara**	**1.48**	**234**	*e*P			**Pn**	**02 30 36.9**	**-0.9**
BARC				*e*S			**Sn**	**02 30 55.7**	**-1.7**
BARC				*i*				02 31 01.1	
	comp=Z,83nm,0.5s								
OCAC	**Ocana**	**1.54**	**300**	⇑*i*P			**Pn**	**02 30 38.7**	**+0.2**
OCAC				*e*S			**Sb**	**02 30 58.8**	**-0.5**
SDV	**Santo Domingo**	**1.94**	**43**	*e*P			**Pb**	**02 30 47.4**	**+1.0**
SDV				*e*S			**Sg**	**02 31 14.2**	**+1.1**
SDV				*i*				02 31 19.3	
	comp=Z,113nm,0.4s								
PTBC	**PUERTO BERRIO,**	**2.63**	**250**	*e*P			**Pn**	**02 30 53.7**	**+0.3**
PTBC				*e*S			**Sn**	**02 31 26.3**	**+0.7**
PTBC				*i*				02 31 30.7	
	comp=Z,49nm,0.6s								
MCQV	**Machiques**	**2.63**	**348**	*e*P			**Pn**	**02 30 54.1**	**+0.6**
MCQV				*e*S			**Sn**	**02 31 25.9**	**+0.2**
SPBC	**San Pablo de B**	**2.75**	**229**	*e*P			**Pn**	**02 30 56.2**	**+1.0**
SPBC				*e*S			**Sn**	**02 31 29.9**	**+1.1**
SPBC				*i*				02 31 37.5	
	comp=Z,19nm,0.4s								
SANV	**Sanarito**	**3.15**	**50**	*e*P			**Pn**	**02 31 01.6**	**+0.9**
SANV				*e*S			**Sn**	**02 31 38.6**	**-0.1**
CURV	**Curarigua**	**3.23**	**38**	*e*P			**Pn**	**02 31 02.6**	**+1.0**
CURV				*e*S			**Sn**	**02 31 40.3**	**-0.2**
PTGC	**Puerto Gaitan,**	**3.24**	**183**	*e*P			**Pn**	**02 31 03.3**	**+1.4**
PTGC				*e*S			**Sn**	**02 31 42.9**	**+2.1**
PTGC				*i*				02 32 00.2	
	comp=Z,58nm,0.5s								
UREC	**San Jos de Ur**	**3.54**	**275**	*e*P			**Pn**	**02 31 07.8**	**+1.9**
UREC				*i*				02 32 02.3	
	comp=Z,25nm,0.1s								
CRJC	**Cerrejon, Guaj**	**3.65**	**346**	*e*P			**Pn**	**02 31 08.7**	**+1.1**
CRJC				*e*S			**Sn**	**02 31 51.8**	**+0.9**
CRJC				*i*				02 32 19.8	
	comp=Z,24nm,0.7s								
TEPV	**Terepaima**	**3.71**	**48**	*e*P			**Pn**	**02 31 09.2**	**+0.8**
TEPV				*e*S			**Sn**	**02 31 51.8**	**-0.5**
SIQV	**Siquisique**	**3.82**	**34**	*e*P			**Pn**	**02 31 10.5**	**+0.6**
SIQV				*e*S			**Sn**	**02 31 53.8**	**-1.4**
SJCC	**San Jacinto, C**	**3.99**	**308**	*e*P			**Pn**	**02 31 14.3**	**+2.1**
SJCC				*e*S			**Sn**	**02 31 59.8**	**+0.6**
SJCC				*i*				02 32 23.2	
	comp=Z,5.2nm,0.5s								
GUY2C	**Guyana, Caldas**	**4.04**	**237**	*e*P			**Pn**	**02 31 14.6**	**+1.4**
GUY2C				*e*S			**Sn**	**02 32 01.8**	**+0.8**
GUY2C				*i*				02 32 26.1	
	comp=Z,9.0nm,0.6s								
BAUV	**El Baul**	**4.16**	**69**	*e*P			**Pn**	**02 31 15.3**	**+0.8**
BAUV				*e*S			**Sn**	**02 32 02.1**	**-1.4**
PRAC	**Prado**	**4.72**	**218**	*e*P			**Pn**	**02 31 23.4**	**+1.3**
PRAC				*e*S			**Sn**	**02 32 17.6**	**+0.4**
PRAC				*i*				02 32 47.7	
	comp=Z,4.6nm,0.7s								
BENV	**Beln**	**4.99**	**60**	*e*P			**Pn**	**02 31 27.2**	**+1.3**
BENV				*e*S			**Sn**	**02 32 22.1**	**-1.8**
TURV	**Turiamo**	**5.05**	**54**	*e*P			**Pn**	**02 31 27.2**	**+0.5**
TURV				*e*S			**Sn**	**02 32 22.7**	**-2.7**
CACV	**CAICARA DEL OR**	**5.39**	**89**	*e*P			Pn	02 31 39.0	+7.6
CACV				*e*S			**Sb**	**02 32 44.1**	**-5.9**
TACV	**Tcata**	**5.57**	**61**	*e*P			**Pn**	**02 31 34.4**	**+0.5**
TACV				*e*S			**Sn**	**02 32 35.2**	**-3.1**

*IDC **07** 02:54:09.4±1.4, 23.˚30N×121.˚51E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=74.4km s-min=29.9km az=65.0*
*JMA **07** 02:54:13.2±0.2, 24.˚1N±0.˚3×121.˚7E±0.˚7, h0km±1km, MV3.2/12, TAIWAN REGION*
*ASIES **07** 02:54:13.8, 24.˚08N×121.˚67E, h9km, ML3.9, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr=0.85; Mθθ0.48; Mφφ0.37; Mrθ2.18; Mθφ-0.14; Mφr3.18; Fault plane solution: M₀3.92667×10^{21} NP1: φs214.38000°, δ85.85000°, λ-90.05000°. NP2:φs35.07000°, δ4.15000°, λ-89.31000°. Principal axes: T Plg40.8500°, Azm304.4250°; N Plg0.0500°, Azm214.3820°; P Plg49.1500°, Azm124.3240°;*
*TAP **07** 02:54:13.8, 24.˚08N×121.˚67E, h9km, ML3.9, C*
ISC 07 02:54:13.8±1.0, 24.˚06N±0.˚01×121.˚71E±0.˚02, h4km±7km, n115, σ0s54/169, mb3.5/4, 10C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=273	**0.11**	**282**	⇓*i*P			**Pg**	**02 54 16.1**	**+0.1**
TWD	baz=273			*i*	S		**Sg**	**02 54 17.6**	**+0.1**
ETL	**Fush Village** baz=328	**0.13**	**321**	*i*	P		**Pg**	**02 54 16.5**	**+0.1**
ETL	baz=328			*i*	S		**Sg**	**02 54 18.1**	**0.0**
NACB	**Ninganchiao**	**0.16**	**317**		P		**Pg**	**02 54 16.7**	**-0.2**
NACB	**Ninganchiao** baz=322	**0.16**	**317**	⇓*i*P			**Pg**	**02 54 16.8**	**-0.1**
NACB	baz=322			*i*	S		**Sg**	**02 54 18.8**	**-0.2**
ETM	**Tongmen** baz=238	**0.22**	**245**	*i*	P		**Pg**	**02 54 18.3**	**+0.2**
ETM	baz=238			*i*	S		**Sg**	**02 54 21.2**	**+0.2**
EHP	**Heping Village** baz=12	**0.25**	**6**	P			**Pg**	**02 54 19.4**	**+0.7**
EHP	baz=12			S			**Sg**	**02 54 22.8**	**+0.7**
EAHA	**Aohua** baz=9.0	**0.27**	**5**	P			**Pg**	**02 54 19.1**	**0.0**
EAHA	baz=9.0			S			**Sg**	**02 54 22.3**	**-0.3**
LXIB	**Xiulin Townshi** baz=247	**0.28**	**262**	*i*	P		**Pg**	**02 54 19.2**	**0.0**
LXIB	baz=247			*i*	S		**Sg**	**02 54 22.8**	**0.0**
SHUL	**Shoufeng** baz=207	**0.30**	**207**	⇑*i*P			**Pb**	**02 54 21.7**	**0.0**
ESL	**Shilin** baz=229	**0.35**	**226**	*i*	P		**Pg**	**02 54 20.9**	**+0.3**
ESL	baz=229			*i*	S		**Sg**	**02 54 25.2**	**-0.1**
ENA	**Nanau** baz=8.0	**0.37**	**4**	⇓*i*P			**Pg**	**02 54 21.1**	**+0.1**
ENA	baz=8.0			*i*	S		**Sg**	**02 54 26.1**	**+0.3**
TEGC	**Jichi Village** baz=202	**0.38**	**204**	P			**Pb**	**02 54 23.2**	**+0.1**
TEGC	baz=202			S			**Sb**	**02 54 30.7**	**+1.4**
EWUT	**Wuta** baz=11	**0.39**	**9**	P			**Pg**	**02 54 21.5**	**+0.2**
EWUT	baz=11			S			**Sg**	**02 54 26.8**	**+0.4**
WHF	**Hehuan Shan** baz=280	**0.42**	**282**	⇑*i*P			**Pg**	**02 54 21.9**	**0.0**
WHF	baz=280			*i*	S		**Sg**	**02 54 27.2**	**-0.2**
WARBT	**Fenglin Townsh** baz=226	**0.45**	**221**	P			**Pg**	**02 54 22.8**	**+0.4**
WARBT	baz=226			S			**Sg**	**02 54 28.4**	**+0.1**
EGFH	**Guangfu** baz=222	**0.47**	**214**	*e*P			**Pg**	**02 54 23.6**	**+0.8**
FUSS	**Fushou** baz=293	**0.47**	**294**	P			**Pg**	**02 54 23.1**	**+0.3**
FUSS	baz=293			S			**Sg**	**02 54 28.9**	**0.0**
NNSB	**Datong** baz=322	**0.47**	**321**	*i*	P		**Pg**	**02 54 23.1**	**+0.1**
NNSB	baz=322			*i*	S		**Sg**	**02 54 29.1**	**-0.1**
NNS	**Nan Shan** baz=322	**0.49**	**321**	⇑*i*P			**Pg**	**02 54 23.3**	**+0.1**
NNS	baz=322			*i*	S		**Sg**	**02 54 29.6**	**0.0**
CHGB	**Renai** baz=259	**0.49**	**270**	P			**Pg**	**02 54 23.5**	**+0.2**
CHGB	baz=259			S			**Sg**	**02 54 29.7**	**0.0**
OWD	**Renai** baz=255	**0.50**	**258**	P			**Pg**	**02 54 23.4**	**0.0**
OWD	baz=255			*e*S			**Sg**	**02 54 29.7**	**-0.2**
LATG	**Datong** baz=341	**0.50**	**340**	⇓*i*P			**Pg**	**02 54 23.5**	**0.0**
LATG	baz=341			S			**Sg**	**02 54 29.8**	**-0.3**
TWT	**Tachien** baz=289	**0.53**	**292**	*i*	P		**Pg**	**02 54 24.4**	**+0.5**
TWT	baz=289			*i*	S		**Sg**	**02 54 31.0**	**+0.2**
ESAO	**Su ao** baz=13	**0.53**	**13**	*e*P			**Pg**	**02 54 24.1**	**+0.1**
ESAO	baz=13			*e*S			**Sg**	**02 54 30.4**	**-0.4**
TDCB	**Techi** baz=290	**0.54**	**291**	⇑*i*P			**Pg**	**02 54 24.5**	**+0.3**
TDCB	baz=290			*i*	S		**Sg**	**02 54 31.2**	**0.0**
WUSB	**Renai** baz=260	**0.55**	**263**	P			**Pg**	**02 54 24.6**	**+0.3**
WUSB	baz=260			S			**Sg**	**02 54 31.3**	**-0.2**
TWC	**Suao** baz=5.0	**0.56**	**13**	⇑*i*P			**Pg**	**02 54 24.9**	**+0.3**
TWC	baz=5.0			*i*	S		**Sg**	**02 54 32.2**	**+0.3**
NDT	**Datong Townshi** baz=342	**0.57**	**342**	⇑*i*P			**Pg**	**02 54 25.1**	**+0.3**
NDT	baz=342			S			**Sg**	**02 54 31.4**	**-0.9**
NDS	**Dongshan** baz=360	**0.57**	**0**	P			**Pg**	**02 54 25.1**	**+0.3**
NDS	baz=360			S			**Sg**	**02 54 33.1**	**+0.8**
ENTT	**Nioudou** baz=348	**0.59**	**347**	⇑*i*P			**Pg**	**02 54 25.5**	**+0.2**
ENTT	baz=348			*i*	S		**Sg**	**02 54 33.2**	**+0.3**
VWDT	**VWDT** baz=231	**0.60**	**240**	P			**Pg**	**02 54 25.9**	**+0.5**
VWDT	baz=231			S			**Sg**	**02 54 33.2**	**0.0**
HGSD	**Ruisui** baz=219	**0.62**	**205**	P			**Pb**	**02 54 27.2**	**+0.1**
HGSD	baz=219			S			**Sn**	**02 54 38.1**	**-1.6**
EHY	**Hungye** baz=219	**0.66**	**213**	*i*	P		**Pg**	**02 54 26.8**	**+0.4**
EHY	baz=219			S			**Sg**	**02 54 35.5**	**+0.6**
TWE	**Neicheng** baz=358	**0.66**	**356**	*i*	P		**Pg**	**02 54 26.8**	**+0.3**
TWE	baz=358			*i*	S		**Sg**	**02 54 35.5**	**+0.4**
YHNB	**Yeheng** baz=333	**0.68**	**333**	P			**Pg**	**02 54 27.2**	**+0.3**
YHNB	**Yeheng** baz=333	**0.68**	**333**	⇑*i*P			**Pb**	**02 54 27.3**	**-1.0**
YHNB	baz=333			*i*	S		**Sg**	**02 54 35.7**	**-0.1**
NSK	**Sanguang** baz=333	**0.69**	**332**	⇓*i*P			**Pb**	**02 54 27.6**	**-0.9**
NSK	baz=333			*i*	S		**Sg**	**02 54 35.9**	**-0.3**
FUSB	**Fushanzhiwuyua** baz=351	**0.71**	**351**	⇑*i*P			**Pg**	**02 54 27.6**	**+0.2**
FUSB	baz=351			*i*	S		**Sg**	**02 54 36.8**	**+0.2**
WCS	**Beigang Elemen** baz=260	**0.73**	**270**	P			**Pb**	**02 54 28.4**	**-0.6**
WCS	baz=260			S			**Sg**	**02 54 37.5**	**+0.2**
WHP	**Taichung City** baz=286	**0.73**	**287**	*i*	P		**Pb**	**02 54 28.5**	**-0.7**
WHP	baz=286			S			**Sg**	**02 54 37.7**	**+0.3**
NWLT	**Wulai** baz=333	**0.74**	**345**	P			**Pb**	**02 54 28.6**	**-0.6**
NWLT	baz=333			S			**Sg**	**02 54 37.9**	**+0.2**
SMLT	**Sun Moon Lake** baz=255	**0.76**	**257**	⇑*i*P			**Pg**	**02 54 28.7**	**+0.3**
SMLT	baz=255			*i*	S		**Sg**	**02 54 37.9**	**-0.5**
YULB	**Yu-li** baz=211	**0.76**	**210**	P			**Pg**	**02 54 28.8**	**+0.4**
YULB	**Yu-li** baz=211	**0.76**	**210**	P			**Pg**	**02 54 28.1**	**-0.3**
ECBN	**Changbin** baz=188	**0.78**	**198**	P			**Pb**	**02 54 29.8**	**-0.1**
ECBN	baz=188			*e*S			**Sb**	**02 54 41.5**	**+0.8**
NFF	**Wufeng Townshi** baz=316	**0.79**	**317**	P			**Pb**	**02 54 29.4**	**-0.6**
NFF	baz=316			S			**Sg**	**02 54 38.8**	**-0.3**
EYUL	**Yuli** baz=221	**0.79**	**207**	*e*P			**Pb**	**02 54 30.4**	**+0.3**
TYC	**Yuchr** baz=257	**0.80**	**259**	P			**Pg**	**02 54 29.1**	**0.0**
TYC	baz=257			*i*	S		**Sg**	**02 54 38.6**	**-0.8**
TWF1	**Yuli** baz=221	**0.80**	**208**	*i*	P		**Pg**	**02 54 28.9**	**-0.2**
LIOB	**Emei** baz=312	**0.86**	**313**	P			**Pb**	**02 54 30.9**	**-0.4**
LIOB	baz=312			S			**Sb**	**02 54 42.1**	**-1.2**
NSTT	**Nanjuang** baz=311	**0.86**	**311**	*i*	P		**Pb**	**02 54 30.7**	**-0.6**
NSTT	baz=311			*i*	S		**Sg**	**02 54 41.3**	**-0.3**
TWQ1	**Liyutan** baz=300	**0.90**	**289**	*i*	P		**Pb**	**02 54 31.9**	**-0.1**
TWQ1	baz=300			*i*	S		**Sg**	**02 54 43.0**	**+0.1**
CHKH	**Chenggong** baz=191	**0.91**	**199**	*e*P			**Pg**	**02 54 31.1**	**-0.2**
CHKH	baz=191			*e*S			**Sn**	**02 54 46.1**	**-0.7**
TIPB	**Shuangxi** baz=356	**0.92**	**6**	P			**Pg**	**02 54 31.5**	**+0.2**
NHDH	**Xindian Distri** baz=340	**0.92**	**349**	*e*P			**Pb**	**02 54 31.9**	**-0.3**
WJS	**Zhushan** baz=255	**0.93**	**256**	*e*P			**Pn**	**02 54 32.8**	**-0.8**
TATO	**Taipei**	**0.94**	**347**	P			**Pb**	**02 54 32.4**	**-0.1**
FULB	**Fuli** baz=219	**0.94**	**204**	*e*P			**Pb**	**02 54 32.3**	**-0.3**
NMLH	**Miaoli** baz=299	**0.97**	**300**	*e*P			**Pn**	**02 54 33.6**	**-0.5**
TWB1	**Santiao Chiao** baz=4.0	**0.98**	**15**	*e*P			**Pb**	**02 54 32.9**	**-0.4**
SBCB	**Hsinchu** baz=318	**0.99**	**318**	*e*P			**Pn**	**02 54 33.9**	**-0.5**
ALS	**Alishan** baz=236	**0.99**	**237**	P			**Pb**	**02 54 33.8**	**+0.1**
ALS	baz=236			S			**Sb**	**02 54 47.7**	**+0.5**
CHKT	**Chengkung** baz=192	**1.01**	**198**	*i*	P		**Pg**	**02 54 33.1**	**+0.1**
CHKT	baz=192			S			**Sn**	**02 54 48.8**	**-0.4**
NWF	**Wu-fen Shan** baz=353	**1.01**	**4**	*i*	P		**Pb**	**02 54 33.7**	**-0.1**
NWF	baz=353			*i*	S		**Sg**	**02 54 46.3**	**0.0**
WFSB	**Wu-fen Shan** baz=353	**1.01**	**4**	*e*P			**Pb**	**02 54 33.7**	**-0.1**
WFSB	baz=353			*e*S			**Sg**	**02 54 46.4**	**+0.1**
EHD	**Haiduan** baz=221	**1.02**	**207**	*e*P			**Pb**	**02 54 33.9**	**-0.1**
WDJ	**Dajia District** baz=286	**1.02**	**287**	*e*P			**Pn**	**02 54 35.1**	**+0.3**
NCUH	**Zhongli** baz=331	**1.02**	**332**	*e*P			**Pn**	**02 54 35.6**	**+0.7**
SXI1	**Grass Mountain** baz=353	**1.04**	**8**	P			**Pb**	**02 54 34.0**	**-0.4**
CHN5	**Tsauling** baz=234	**1.05**	**244**	⇓*i*P			**Pn**	**02 54 35.4**	**0.0**
CHN5	baz=234			*i*	S		**Sn**	**02 54 50.5**	**0.0**
WCHH	**Zhanghua** baz=270	**1.05**	**271**	*e*P			**Pn**	**02 54 35.2**	**-0.1**
WCHH	baz=270			*e*S			**Sn**	**02 54 50.6**	**+0.2**
TWS1	**Kuangyinshan** baz=345	**1.07**	**346**	*e*P			**Pn**	**02 54 35.8**	**+0.2**
TWS1	baz=345			*e*S			**Sn**	**02 54 50.3**	**-0.6**
ELDTW	**Lidau** baz=229	**1.07**	**216**	*e*P			**Pg**	**02 54 34.1**	**-0.3**
ELDTW	baz=229			*e*S			**Sg**	**02 54 48.7**	**+0.3**
YM01	**YM01** baz=1.0	**1.09**	**353**	*e*P			**Pn**	**02 54 35.8**	**-0.1**
WGK	**Gukeng** baz=251	**1.12**	**251**	*e*P			**Pn**	**02 54 36.8**	**+0.6**
NTST	**Danshui** baz=346	**1.13**	**348**	*e*P			**Pn**	**02 54 37.0**	**+0.7**
WDLH	**Douliu** baz=252	**1.14**	**251**	*e*P			**Pn**	**02 54 36.5**	**+0.1**
ANP	**Anpu** baz=349	**1.14**	**351**	*e*P			**Pb**	**02 54 35.9**	**-0.1**
EDH	**Donghe** baz=186	**1.14**	**199**	*e*P			**Pg**	**02 54 33.9**	**-1.8**
JYNG	**Yonagunijimaku**	**1.19**	**71**	*e*P			**Pg**	**02 54 34.7**	**-1.9**
JYNG				*e*S			**Sb**	**02 54 52.9**	**+0.2**
TWY	**Chenhua** baz=341	**1.22**	**355**	*e*P			**Pn**	**02 54 38.9**	**+1.4**
WRL	**Guolierlin Hig** baz=254	**1.23**	**263**	*e*P			**Pn**	**02 54 37.9**	**+0.1**
STYH	**Taoyuan** baz=227	**1.23**	**224**	*e*P			**Pg**	**02 54 37.1**	**-0.3**
TPUB	**Ta-pu** baz=235	**1.25**	**233**	P			**Pn**	**02 54 38.4**	**+0.4**
TPUB	**Ta-pu** baz=235	**1.25**	**233**	*e*P			**Pn**	**02 54 38.1**	**+0.1**
YOJ	**Yonaguni jima** baz=69	**1.25**	**71**	P			**Pn**	**02 54 37.8**	**-0.2**
YOJ	**Yonaguni jima** baz=69	**1.25**	**71**	*e*P			**Pn**	**02 54 37.7**	**-0.3**
YOJ	**Yonaguni jima**	**1.25**	**71**	*e*P			**Pn**	**02 54 37.7**	**-0.3**
WTK	**Tuku** baz=254	**1.27**	**253**	*e*P			**Pg**	**02 54 38.2**	**+0.2**
WTP	**Ta-pu** baz=233	**1.29**	**231**	*e*P			**Pg**	**02 54 38.7**	**+0.1**
TWG	**Pinlang** baz=208	**1.36**	**206**	*e*P			**Pn**	**02 54 37.2**	**-2.3**
TWGBT	**Beinan**	**1.36**	**205**	P			**Pg**	**02 54 40.7**	**+0.7**
TWK	**Hsinying** baz=236	**1.37**	**235**	*e*P			**Pb**	**02 54 39.7**	**-0.3**
CHN1	**Nanshi** baz=234	**1.39**	**232**	*e*P			**Pb**	**02 54 40.0**	**-0.3**
SNST	**Tainan City** baz=235	**1.39**	**233**	*e*P			**Pb**	**02 54 39.9**	**-0.4**
SGST	**Jiashian** baz=229	**1.42**	**227**	*e*P			**Pn**	**02 54 40.3**	**-0.1**
SLGT	**Liugui** baz=226	**1.44**	**223**	*e*P			**Pb**	**02 54 41.0**	**-0.2**
WSL	**Shuilin Townsh** baz=250	**1.46**	**249**	*e*P			**Pg**	**02 54 42.4**	**+0.7**
ICHU	**Yijhu** baz=244	**1.48**	**242**	*e*P			**Pb**	**02 54 41.7**	**-0.2**
TSMG	**Majia** baz=211	**1.67**	**216**	*e*P			**Pn**	**02 54 44.1**	**+0.4**
TSCK	**Chigu Township** baz=241	**1.75**	**239**	*e*P			**Pb**	**02 54 45.3**	**-1.0**
MASBT	**Mashibuluo** baz=209	**1.75**	**215**	*e*P			**Pn**	**02 54 44.9**	**0.0**
SCZT	**Fangliau** baz=203	**1.96**	**211**	*e*P			**Pb**	**02 54 48.8**	**-1.1**
PHUB	**P'eng-hu** baz=256	**2.03**	**255**	*e*P			**Pn**	**02 54 49.0**	**+0.2**
PNG	**Penghu** baz=257	**2.04**	**257**	*e*P			**Pn**	**02 54 48.8**	**0.0**
WDGT	**Dungji** baz=248	**2.04**	**248**	*e*P			**Pn**	**02 54 49.4**	**+0.6**
JKRS	**Kuro-shima**	**2.11**	**85**	*e*P			**Pn**	**02 54 50.2**	**+0.4**
JIJ	**Ishigaki jima**	**2.24**	**82**	*e*P			**Pn**	**02 54 51.2**	**-0.5**
JIJ				*e*S			**Sn**	**02 55 21.3**	**+1.6**
VCHM	**Qimei** baz=236	**2.26**	**248**	*e*P			**Pn**	**02 54 52.1**	**+0.2**
VWUC	**VWUC** baz=294	**2.26**	**295**	*e*P			**Pn**	**02 54 50.6**	**-1.2**
JISG	**Ishigakijimahi**	**2.43**	**77**	P			**Pn**	**02 54 54.8**	**+0.6**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=98,slow=9.2,SNR=2.1 0.1nm,0.4s	**38.76**	**316**	P			**P**	**03 01 39.3**	**0.0**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=125,slow=7.2,SNR=2.5 0.3nm,0.3s	**40.61**	**327**	P			**P**	**03 01 54.5**	**0.0**
ASAR	**Alice Springs** 0.6nm,0.9s,baz=1.4,slow=11,SNR=4.3 0.6nm,0.9s	**48.90**	**165**	P			P	03 02 51.7	-9.2
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=313,slow=5.7,SNR=4.7 0.2nm,0.5s	**82.90**	**23**	P			**P**	**03 06 39.9**	**+0.6**

*ASIES **07** 02:54:25.4, 24.˚09N×121.˚66E, h11km, ML3.7, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr0.67; Mθθ0.16; Mφφ-0.83; Mrθ-2.13; Mθr0.15; Mφr-2.22; Fault plane solution: M₀3.17021×10^{21} NP1: φs221.14000°, δ85.65000°, λ99.53000°. NP2: φs335.47000°, δ10.47000°, λ24.69000°. Principal axes: T Plg48.5040°, Azm141.3220°; N Plg9.5040°, Azm40.4130°;*

P Plg39.9160°, Azm302.3620°;

TAP 07 02:54:25.4,24.09N×121.66E,h11km,ML3.7,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=261	**0.06**	**262**	*i*P	Pg	02 54 28.4	+0.8
TWD				*i* S	Sg	02 54 29.8	+0.6
ETL	**Fush Village** baz=332	**0.08**	**332**	*i* P	Pg	02 54 28.8	+0.9
ETL				*i* S	Sg	02 54 30.3	+0.6
NACB	**Ninganchiao** baz=323	**0.10**	**324**	P	Pb	02 54 28.9	-0.6
NACB				*i* S	Sg	02 54 31.0	+0.9
ETM	**Tongmen** baz=231	**0.20**	**232**	P	Pb	02 54 30.6	-0.4
ETM				S	Sg	02 54 33.5	+1.0
EHP	**Heping Village** baz=19	**0.23**	**18**	P	Pb	02 54 31.1	-0.5
EHP				*e*S	Sg	02 54 35.0	+1.5
LXIB	**Xiulin Townshi** baz=253	**0.24**	**254**	*e*P	Pb	02 54 31.3	-0.5
LXIB				S	Sg	02 54 35.1	+1.4
EAHA	**Aohua** baz=16	**0.25**	**16**	P	Pb	02 54 31.8	-0.1
EAHA				*e*S	Sg	02 54 35.5	+1.5
SHUL	**Shoufeng** baz=197	**0.31**	**197**	*e*P	Pb	02 54 32.5	-0.5
ENA	**Nanau** baz=13	**0.34**	**12**	*e*P	Pb	02 54 33.4	-0.1
ENA				*i* S	Sg	02 54 38.0	+1.0
ESL	**Shilin** baz=216	**0.34**	**218**	*e*P	Pb	02 54 33.2	-0.4
WHF	**Hehuan Shan** baz=278	**0.37**	**279**	*e*P	Pb	02 54 33.7	-0.5
WHF				*i* S	Sb	02 54 39.5	-0.6
EWUT	**Wuta** baz=16	**0.37**	**16**	*e*S	Sb	02 54 39.0	-0.8
FUSS	**Fushou** baz=292	**0.41**	**292**	*e*P	Pg	02 54 34.0	+0.3
NNSB	**Datong** baz=322	**0.42**	**323**	*e*P	Pb	02 54 34.7	-0.3
NNSB				S	Sb	02 54 41.6	+0.1
NNS	**Nan Shan** baz=323	**0.44**	**323**	*e*P	Pb	02 54 35.1	-0.1
NNS				S	Sb	02 54 41.9	0.0
CHGB	**Renai** baz=266	**0.45**	**266**	*e*S	Sb	02 54 42.0	-0.3
OWD	**Renai** baz=253	**0.47**	**253**	*e*P	Pb	02 54 35.7	0.0
OWD				*e*S	Sb	02 54 42.2	-0.5
TWT	**Tachien** baz=289	**0.47**	**290**	*e*P	Pb	02 54 35.6	-0.3
TWT				*e*S	Sb	02 54 44.1	+1.1
TDCB	**Techi** baz=289	**0.49**	**290**	P	Pg	02 54 35.4	+0.4
TDCB				S	Sb	02 54 43.5	+0.1
WUSB	**Renai** baz=259	**0.51**	**259**	*e*P	Pb	02 54 36.2	-0.2
ESAO	**Su ao** baz=18	**0.51**	**19**	*e*P	Pb	02 54 36.0	-0.4
ESAO				*e*S	Sb	02 54 43.7	-0.2
NDT	**Datong Townshi** baz=345	**0.53**	**345**	*e*S	Sb	02 54 45.0	+0.6
NDS	**Dongshan** baz=5.0	**0.54**	**5**	*e*P	Pb	02 54 36.7	-0.3
NDS				*e*S	Sb	02 54 45.2	+0.4
ENTT	**Nioudou** baz=351	**0.56**	**351**	P	Pb	02 54 37.1	-0.1
ENTT				S	Sb	02 54 45.4	+0.2
YHNB	**Yeheng** baz=335	**0.64**	**336**	*e*S	Sb	02 54 48.0	+0.5
NSK	**Sanguang** baz=335	**0.65**	**335**	*e*S	Sb	02 54 48.7	+0.8

RSNC 07 02:54:32.4±1.6,6.87N×73.17W,h150km±6km,ML3.1, Mw3.5,1C-3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**184**	⇓*i*P	Pn	02 54 53.0	-0.3
BARC				*e*S	Sn	02 55 08.3	-0.8
BARC				*i*		02 55 09.4	
	comp=Z,782nm,0.2s						
PAMC	**Pamplona, Colo**	**0.66**	**44**	⇓*i*P	Pn	02 54 55.9	+0.6
PAMC				*e*S	Sn	02 55 12.9	+0.2
PAMC				*i*		02 55 15.3	
	comp=Z,310nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.32**	**256**	*e*P	Pn	02 54 59.3	-0.9
PTBC				*e*S	Sn	02 55 20.9	-0.5
PTBC				*i*		02 55 22.8	
	comp=Z,187nm,0.4s						
OCAC	**Ocana**	**1.37**	**354**	*e*P	Pn	02 55 01.1	+0.1
OCAC				*e*S	Sn	02 55 23.0	+0.2
OCAC				*i*		02 55 28.2	
	comp=Z,356nm,0.2s						
TAMC	**Tame, Arauca**	**1.43**	**107**	⇓*i*P	Pn	02 55 01.2	-0.1
TAMC				*e*S	Sn	02 55 22.7	-0.8
SPBC	**San Pablo de B**	**1.50**	**217**	⇑*e*P	Pn	02 55 01.7	-0.5
SPBC				*e*S	Sn	02 55 23.8	-1.2
SPBC				*i*		02 55 26.8	
	comp=Z,479nm,0.2s						
ROSC	**El Rosal**	**2.32**	**210**	*e*P	Pn	02 55 12.5	+0.8
ROSC				*e*S	Sn	02 55 42.5	+0.5
ROSC				*i*		02 55 45.5	
	comp=Z,121nm,0.3s						
CVER	**Cruz Verde, Cu**	**2.50**	**201**	*e*P	Pn	02 55 14.1	0.0
CVER				*e*S	Sn	02 55 45.9	-0.1
CVER				*i*		02 55 52.9	
	comp=Z,70nm,0.4s						
UREC	**San Jos de Ur**	**2.51**	**291**	*e*P	Pn	02 55 12.6	-1.1
UREC				*e*S	Sn	02 55 43.4	-2.1
UREC				*i*		02 55 57.0	
	comp=Z,78nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.73**	**233**	*e*P	Pn	02 55 16.8	-0.1
GUY2C				*e*S	Sn	02 55 51.2	+0.1
GUY2C				*i*		02 56 00.2	
	comp=Z,72nm,0.3s						
VILC	**Villavicencio,**	**2.79**	**191**	*e*P	Pn	02 55 16.0	-1.3
VILC				*e*S	Sn	02 55 50.1	-1.8
VILC				*i*		02 56 00.4	
	comp=Z,82nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.84**	**159**	*e*P	Pn	02 55 15.5	-2.4
PTGC				*e*S	Sn	02 55 49.1	-3.8
PTGC				*i*		02 55 52.3	
	comp=Z,55nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.85**	**358**	*e*P	Pn	02 55 17.4	-0.5
LL6C				*e*S	Sn	02 55 52.2	-1.1
LL6C				*i*		02 55 56.6	
	comp=Z,40nm,0.6s						
RECRC	**Villamaria, Ca**	**2.88**	**229**	*e*S	Sn	02 55 54.6	-0.1
NIZA	**Niza - Manizal**	**2.91**	**232**	*e*P	Pn	02 55 22.6	+3.6
NIZA				*e*S	Sn	02 55 59.6	+4.7
CBOC	**Ciudad Bolivar**	**3.00**	**251**	*e*P	Pn	02 55 20.4	+0.4
CBOC				*e*S	Sn	02 55 55.6	-1.1
CBOC				*i*		02 56 03.2	
	comp=Z,28nm,0.6s						
DBBC	**Dabeiba**	**3.03**	**273**	*e*P	Pn	02 55 20.4	+0.2
DBBC				*e*S	Sn	02 55 56.2	-0.9
DBBC				*i*		02 55 59.4	
	comp=Z,57nm,0.6s						
ARGC	**Ariguani, Magd**	**3.16**	**340**	*e*P	Pn	02 55 22.9	+1.0
ARGC				*e*S	Sn	02 56 02.3	+2.1
ARGC				*i*		02 56 11.6	
	comp=Z,27nm,0.3s						
SDV	**Santo Domingo**	**3.21**	**51**	*e*P	Pn	02 55 22.3	-0.4
SDV				*e*S	Sn	02 55 59.5	-2.1
SDV				*i*		02 56 01.9	
	comp=Z,34nm,0.5s						
ANIL	**Santa Ana**	**3.24**	**223**	*e*P	Pn	02 55 24.0	+0.8
ANIL				*e*S	Sn	02 56 02.2	-0.2
APAC	**Apartado, Choc**	**3.54**	**287**	*e*P	Pn	02 55 26.8	+0.1
APAC				*e*S	Sn	02 56 08.6	-0.2
APAC				*i*		02 56 14.2	
	comp=Z,41nm,0.5s						
PRAC	**Prado**	**3.57**	**209**	*e*P	Pn	02 55 26.2	-1.0
PRAC				*e*S	Sn	02 56 09.0	-0.6
PRAC				*i*		02 56 14.9	
	comp=Z,78nm,0.4s						
ORTC	**Ortega, Tolima**	**3.59**	**215**	*e*P	Pn	02 55 27.1	-0.4
ORTC				*e*S	Sn	02 56 10.7	+0.5
ORTC				*i*		02 56 16.7	
	comp=Z,49nm,0.5s						
SJCC	**San Jacinto, C**	**3.61**	**327**	*e*P	Pn	02 55 26.5	-1.2
SJCC				*e*S	Sn	02 56 08.3	-2.4
SJCC				*i*		02 56 12.6	
	comp=Z,22nm,0.4s						
PLMC	**San Jos del P**	**3.66**	**238**	*e*P	Pn	02 55 28.2	-0.1
PLMC				*e*S	Sn	02 56 08.1	-3.7
PLMC				*i*		02 56 16.8	
	comp=Z,36nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.14**	**4**	*e*P	Pn	02 55 33.3	-1.3
CRJC				*e*S	Sn	02 56 21.5	-1.5
CRJC				*i*		02 56 25.7	
	comp=Z,45nm,0.3s						
YOTC	**Yotoco, Valle**	**4.27**	**228**	*e*P	Pn	02 55 35.4	-0.9
YOTC				*e*S	Sn	02 56 26.5	+0.5
YOTC				*i*		02 56 32.5	
	comp=Z,6.5nm,0.7s						
SMRC	**Santa Marta, M**	**4.40**	**346**	*e*P	Pn	02 55 38.2	+0.3
SMRC				*e*S	Sn	02 56 27.0	-1.9
SMRC				*i*		02 56 28.8	
	comp=Z,25nm,0.4s						
MALC	**Bahia Malaga**	**5.03**	**236**	*e*P	Pn	02 55 47.5	+1.3
MALC				*e*S	Sn	02 56 43.9	+0.1
JAMC	**Jamundi, Valle**	**5.04**	**224**	*e*P	Pn	02 55 42.0	-4.5
JAMC				*e*S	Sn	02 56 42.1	-2.2
JAMC				*i*		02 56 54.6	
	comp=Z,4.3nm,0.6s						
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	Pn	02 55 46.1	-2.6
GARC				*e*S	Sn	02 56 43.6	-4.6
GARC				*i*		02 56 50.9	
	comp=Z,16nm,0.3s						
POPC	**Popayan, Colom**	**5.54**	**219**	*e*P	Pn	02 55 51.2	-2.1
POPC				*e*S	Sn	02 56 54.6	-1.8
BBAC	**Balboa, Cauca**	**6.30**	**220**	*e*P	Pn	02 56 03.7	+0.3
BBAC				*e*S	Sn	02 57 11.3	-3.3
BBAC				*i*		02 57 14.9	
	comp=Z,2.1nm,0.4s						

TAP 07 03:09:14.4,24.12N×121.65E,h12km,ML2.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=326	**0.04**	**328**	P	Pg	03 09 17.3	+0.6
ETL				*e*S	Sg	03 09 18.9	+0.6
TWD	**Chiawan** baz=222	**0.06**	**227**	P	Pg	03 09 17.3	+0.5
TWD				S	Sg	03 09 19.0	+0.4
NACB	**Ninganchiao** baz=315	**0.07**	**316**	*e*P	Pg	03 09 17.7	+0.8
NACB				S	Sg	03 09 19.6	+0.9
ETM	**Tongmen** baz=221	**0.21**	**222**	*e*P	Pb	03 09 19.8	-0.5
ETM				*e*S	Sg	03 09 22.9	+0.9
EAHA	**Aohua** baz=22	**0.22**	**22**	*e*P	Pg	03 09 19.7	+0.6
EAHA				*e*S	Sg	03 09 23.2	+0.8
LXIB	**Xiulin Townshi** baz=244	**0.24**	**244**	*e*P	Pg	03 09 20.1	+0.6
LXIB				*e*S	Sg	03 09 24.1	+1.1
ENA	**Nanau** baz=17	**0.32**	**16**	P	Pb	03 09 21.6	-0.4
ENA				S	Sg	03 09 26.0	+0.9
EWUT	**Wuta** baz=20	**0.34**	**21**	*e*P	Pb	03 09 22.1	-0.4
EWUT				*e*S	Sg	03 09 26.6	+0.6
SHUL	**Shoufeng** baz=193	**0.34**	**193**	*e*P	Pb	03 09 22.7	+0.2
SHUL				*e*S	Sb	03 09 28.3	+0.4
WHF	**Hehuan Shan** baz=273	**0.35**	**274**	*e*P	Pb	03 09 22.9	+0.1
ESL	**Shilin** baz=211	**0.36**	**212**	*e*P	Pb	03 09 22.3	-0.5
NNSB	**Datong** baz=321	**0.39**	**322**	*e*P	Pb	03 09 23.5	+0.1
NNSH	**Datong** baz=321	**0.39**	**322**	*e*P	Pb	03 09 23.1	-0.2
NNSH				*e*S	Sb	03 09 29.5	+0.2
FUSS	**Fushou** baz=288	**0.39**	**289**	*e*P	Pb	03 09 23.6	+0.2
FUSS				*e*S	Sb	03 09 28.5	-0.9
NNS	**Nan Shan** baz=322	**0.40**	**322**	*e*P	Pb	03 09 23.4	-0.2
LATG	**Datong** baz=344	**0.42**	**345**	*e*P	Pb	03 09 23.9	-0.1
LATG				*e*S	Sb	03 09 29.6	-0.8
CHGB	**Renai** baz=261	**0.44**	**262**	*e*P	Pb	03 09 24.6	+0.4
TWT	**Tachien** baz=285	**0.45**	**287**	*e*P	Pb	03 09 24.3	-0.1
TWT				*e*S	Sb	03 09 31.5	+0.3
OWD	**Renai** baz=248	**0.46**	**249**	*e*P	Pb	03 09 24.6	0.0
TDCB	**Techi** baz=285	**0.46**	**286**	*e*P	Pb	03 09 24.2	-0.4
WARBT	**Fenglin Townsh** baz=210	**0.47**	**211**	*e*P	Pb	03 09 24.4	-0.3
NDT	**Datong Townshi** baz=345	**0.49**	**346**	*e*P	Pb	03 09 25.1	0.0
EGFH	**Guangfu** baz=203	**0.50**	**204**	*e*S	Sb	03 09 31.9	-0.4
WUSB	**Renai** baz=254	**0.50**	**255**	*e*P	Pb	03 09 25.4	+0.2
NDS	**Dongshan** baz=7.0	**0.51**	**7**	*e*P	Pb	03 09 25.1	-0.3
ENTT	**Nioudou** baz=352	**0.52**	**352**	*e*P	Pb	03 09 25.5	0.0
VWDT	**VWDT** baz=231	**0.59**	**232**	*e*P	Pb	03 09 27.3	+0.6
VWDT				*e*S	Sg	03 09 34.3	+0.5
YHNB	**Yeheng** baz=335	**0.60**	**336**	P	Pb	03 09 27.5	+0.6
NSK	**Sanguang** baz=334	**0.61**	**334**	*e*P	Pb	03 09 27.2	+0.2
NSK				*e*S	Sb	03 09 35.3	-0.4
FUSB	**Fushanzhiwuyua** baz=355	**0.64**	**355**	*e*P	Pb	03 09 28.1	+0.6
FUSB				*e*S	Sb	03 09 37.1	+0.7
WPL	**Puli Township** baz=260	**0.64**	**260**	*e*P	Pg	03 09 26.6	-0.3
WHP	**Taichung City** baz=283	**0.66**	**284**	*e*S	Sb	03 09 36.6	-0.5
HGSD	**Ruisui** baz=198	**0.66**	**198**	*e*P	Pb	03 09 28.5	+0.5
HGSD				*e*S	Sg	03 09 35.9	-0.1
NWLT	**Wulai** baz=348	**0.66**	**349**	*e*P	Pb	03 09 28.3	+0.3
NWLT				*e*S	Sb	03 09 36.7	-0.5
DPDB	**Guoxing** baz=262	**0.67**	**262**	*e*S	Sg	03 09 36.0	-0.1
WCS	**Beigang Elemen** baz=264	**0.68**	**264**	*e*P	Pb	03 09 28.6	+0.5
NFF	**Wufeng Townshi** baz=316	**0.70**	**316**	*e*S	Sb	03 09 38.3	0.0
SMLT	**Sun Moon Lake** baz=250	**0.72**	**251**	*e*P	Pb	03 09 29.1	0.0
SMLT				*e*S	Sb	03 09 39.1	+0.1
NTC	**Toucheng** baz=12	**0.75**	**13**	*e*S	Sn	03 09 40.9	-1.2
TYC	**Yuchr** baz=252	**0.76**	**253**	*e*P	Pb	03 09 29.8	+0.3
TYC				*e*S	Sg	03 09 37.4	-1.6
NSTT	**Nanjuang** baz=310	**0.78**	**311**	*e*P	Pb	03 09 30.4	+0.5
YULB	**Yu-li** baz=203	**0.80**	**204**	*e*P	Pb	03 09 30.8	+0.6
TATO	**Taipei** baz=350	**0.86**	**350**	*e*P	Pb	03 09 31.3	0.0
TIPB	**Shuangxi** baz=10.0	**0.86**	**11**	*e*P	Pb	03 09 31.6	+0.3
TIPB				*e*S	Sb	03 09 43.1	+0.2
CHKH	**Chenggong** baz=193	**0.96**	**194**	*e*P	Pb	03 09 33.1	+0.1
SXI1	**Grass Mountain** baz=12	**0.99**	**12**	*e*P	Pn	03 09 34.3	+0.1
SXI1				*e*S	Sg	03 09 45.3	-1.1
TNOU	**National Taiwa** baz=6.0	**1.03**	**6**	*e*P	Pn	03 09 34.9	+0.2

IDC 07 03:24:49.8±2.3,6.22S×129.46E,h0km,mb3.6/1, mbtmp3.5/3,ML3.5/2,Error ellipse: s-maj=154.3km s-min=31.5km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=343,slow=13,SNR=12	**14.44**	**161**	Pn	Pn	03 28 14.5	-1.2
WRA	0.1nm,0.3s,baz=353,slow=22,SNR=2.7 0.4nm,0.4s			Sn	Sn	03 30 42.1	-15
ASAR	**Alice Springs** 0.1nm,0.3s,baz=348,slow=12,SNR=6.6 0.3nm,0.4s	**17.87**	**167**	P	P	03 29 00.8	0.0
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=113,slow=7.1,SNR=5.7 0.4nm,0.5s	**67.28**	**327**	P	P	03 35 46.4	0.0

*TAP **07** 03:29:47.9,24.08N×121.77E,h8km,ML3.1,D*
*JMA **07** 03:29:48.7±0.4,24°N±1°×12°2E±°,h0km,TAIWAN REGION*

ISC 07 03:29:48.9±0.9,24.10N±0.01×121.76E±0.03,h9km±6km, n81,σ0.69/147,3C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=300	**0.14**	**296**	*i* P	**Pg**	**03 29 51.8**	**-0.2**
ETL				S	**Sg**	**03 29 54.2**	**+0.1**
TWD	**Chiawan** baz=279	**0.15**	**264**	⇑*i*P	**Pg**	**03 29 51.9**	**-0.2**
TWD				*i* S	**Sg**	**03 29 54.4**	**0.0**
NACB	**Ninganchiao** baz=301	**0.17**	**297**	*i* P	**Pg**	**03 29 52.1**	**-0.3**
NACB				*i* S	**Sg**	**03 29 54.9**	**0.0**
EHP	**Heping Village** baz=355	**0.21**	**355**	*e*P	**Pg**	**03 29 53.4**	**+0.2**
EHP				*e*S	**Sg**	**03 29 57.6**	**+1.3**
EAHA	**Aohua** baz=353	**0.23**	**355**	*i* P	**Pg**	**03 29 53.6**	**0.0**
EAHA				*i* S	**Sg**	**03 29 57.8**	**+1.0**
ETM	**Tongmen** baz=257	**0.28**	**242**	⇑*i*P	**Pg**	**03 29 54.3**	**-0.2**
ETM				*i* S	**Sg**	**03 29 58.6**	**+0.5**
LXIB	**Xiulin Townshi** baz=261	**0.33**	**257**	⇑*i*P	**Pg**	**03 29 55.0**	**-0.4**
LXIB				*e*S	**Sg**	**03 30 00.0**	**+0.2**
ENA	**Nanau** baz=356	**0.33**	**357**	P	**Pg**	**03 29 55.5**	**+0.1**
ENA				S	**Sg**	**03 30 00.6**	**+0.8**
EWUT	**Wuta**	**0.35**	**3**	P	**Pg**	**03 29 55.7**	**0.0**
EWUT				*e*S	**Sg**	**03 30 01.1**	**+0.7**
SHUL	**Shoufeng** baz=214	**0.36**	**210**	*e*P	**Pb**	**03 29 56.8**	**-0.6**
SHUL				*e*S	**Sb**	**03 30 03.5**	**+0.4**
ESL	**Shilin** baz=240	**0.41**	**227**	P	**Pg**	**03 29 56.6**	**-0.3**
ESL				*e*S	**Sg**	**03 30 02.6**	**+0.2**
TEGC	**Jichi Village** baz=210	**0.44**	**208**	*e*P	**Pb**	**03 29 58.7**	**0.0**
TEGC				*e*S	**Sb**	**03 30 06.7**	**+1.3**
WHF	**Hehuan Shan** baz=280	**0.46**	**276**	P	**Pg**	**03 29 57.6**	**-0.3**
WHF				S	**Sg**	**03 30 03.9**	**-0.1**
NNSB	**Datong** baz=314	**0.48**	**314**	*i* P	**Pg**	**03 29 58.1**	**-0.1**
NNSB				*e*S	**Sg**	**03 30 04.7**	**+0.2**
NNSH	**Datong** baz=312	**0.48**	**314**	P	**Pg**	**03 29 58.2**	**0.0**
ESAO	**Su ao** baz=1.0	**0.48**	**9**	*e*P	**Pg**	**03 29 58.4**	**+0.1**
ESAO				*e*S	**Sb**	**03 30 05.8**	**-0.9**
LATG	**Datong** baz=333	**0.49**	**334**	P	**Pg**	**03 29 58.4**	**0.0**
LATG				*e*S	**Sg**	**03 30 04.8**	**0.0**
NNS	**Nan Shan** baz=315	**0.49**	**314**	P	**Pg**	**03 29 58.5**	**0.0**
NNS				*e*S	**Sg**	**03 30 05.4**	**+0.4**
FUSS	**Fushou** baz=291	**0.49**	**288**	*i* P	**Pg**	**03 29 58.6**	**+0.1**
FUSS				S	**Sb**	**03 30 05.8**	**-1.5**
WARBT	**Fenglin Townsh** baz=237	**0.51**	**222**	*i* P	**Pg**	**03 29 58.4**	**-0.3**
WARBT				*e*S	**Sg**	**03 30 05.6**	**+0.1**
TWC	**Suao** baz=2.0	**0.52**	**9**	*e*P	**Pg**	**03 29 59.0**	**+0.1**
TWC				*e*S	**Sb**	**03 30 06.9**	**-0.8**
EGFH	**Guangfu** baz=216	**0.52**	**216**	P	**Pg**	**03 29 59.0**	**-0.1**
NDS	**Dongshan** baz=354	**0.54**	**356**	P	**Pb**	**03 29 59.8**	**-0.6**
NDS				*e*S	**Sb**	**03 30 07.8**	**-0.5**
CHGB	**Renai** baz=271	**0.54**	**266**	*i* P	**Pg**	**03 29 59.4**	**0.0**
CHGB				S	**Sg**	**03 30 06.8**	**+0.3**
NDT	**Datong Townshi** baz=335	**0.55**	**336**	P	**Pb**	**03 29 59.8**	**-0.9**
NDT				S	**Sb**	**03 30 08.3**	**-0.4**
OWD	**Renai** baz=270	**0.55**	**255**	*i* P	**Pg**	**03 29 59.5**	**-0.1**
OWD				S	**Sg**	**03 30 07.0**	**0.0**
TWT	**Tachien** baz=287	**0.56**	**286**	P	**Pb**	**03 30 00.0**	**-0.9**
TWT				*e*S	**Sb**	**03 30 08.2**	**-0.9**
ENTT	**Nioudou** baz=342	**0.57**	**342**	P	**Pb**	**03 30 00.1**	**-0.9**
ENTT				S	**Sb**	**03 30 08.6**	**-0.7**
TDCB	**Techi** baz=288	**0.57**	**286**	*e*P	**Pb**	**03 30 00.1**	**-1.0**
TDCB				*e*S	**Sb**	**03 30 08.3**	**-1.1**
WUSB	**Renai**	**0.60**	**260**	*i* P	**Pg**	**03 30 00.4**	**-0.1**

	baz=263							
WUSB				S		Sg	03 30 08.7	+0.4
	baz=263							
TWE	**Neicheng**	**0.63**	**352**	P		**Pb**	03 30 01.6	-0.4
	baz=352							
TWE				S		**Sb**	03 30 10.7	-0.2
	baz=352							
VWDT	**VWDT**	**0.66**	**239**	*e*P		**Pg**	03 30 01.6	-0.1
	baz=242							
VWDT				*e*S		**Sb**	03 30 11.2	-0.7
	baz=242							
YHNB	**Yeheng**	**0.67**	**328**	P		**Pb**	03 30 02.2	-0.6
	baz=328							
YHNB				S		**Sb**	03 30 11.8	-0.4
	baz=328							
HGSD	**Ruisui**	**0.68**	**207**	*e*P		**Pb**	03 30 02.8	-0.1
	baz=196							
FUSB	**Fushanzhiwuyua**	**0.68**	**347**	*i* P		**Pb**	03 30 02.2	-0.7
	baz=337							
FUSB				S		**Sb**	03 30 11.9	-0.5
	baz=337							
NSK	**Sanguang**	**0.68**	**328**	P		**Pb**	03 30 02.4	-0.6
	baz=328							
NSK				*e*S		**Sb**	03 30 12.0	-0.6
	baz=328							
EHY	**Hungye**	**0.71**	**214**	*e*P		**Pg**	03 30 02.1	-0.6
	baz=231							
EHY				*e*S		**Sg**	03 30 11.8	-0.2
	baz=231							
NWLT	**Wulai**	**0.72**	**341**	P		**Pb**	03 30 03.1	-0.4
	baz=340							
NWLT				*e*S		**Sg**	03 30 12.1	0.0
	baz=340							
DPDB	**Guoxing**	**0.77**	**265**	P		**Pb**	03 30 03.8	-0.6
	baz=259							
DPDB				S		**Sb**	03 30 14.2	-0.7
	baz=259							
WHP	**Taichung City**	**0.77**	**284**	*e*P		**Pb**	03 30 04.0	-0.4
	baz=286							
WHP				*e*S		**Sb**	03 30 15.1	+0.1
	baz=286							
WCS	**Beigang Elemen**	**0.78**	**267**	*e*P		**Pg**	03 30 03.7	-0.1
	baz=268							
NFF	**Wufeng Townshi**	**0.79**	**312**	*e*P		**Pb**	03 30 04.5	-0.3
	baz=313							
NFF				*e*S		**Sb**	03 30 15.5	-0.3
	baz=313							
SMLT	**Sun Moon Lake**	**0.81**	**255**	P		**Pb**	03 30 04.5	-0.7
	baz=258							
SMLT				*e*S		**Sb**	03 30 15.8	-0.6
	baz=258							
YULB	**Yu-li**	**0.82**	**211**	*e*P		**Pg**	03 30 04.3	-0.4
	baz=227							
YULB				*e*S		**Sg**	03 30 15.4	0.0
	baz=227							
TYC	**Yuchr**	**0.85**	**257**	P		**Pg**	03 30 04.9	-0.3
	baz=260							
TYC				*e*S		**Sg**	03 30 16.1	-0.2
	baz=260							
EYUL	**Yuli**	**0.85**	**209**	*e*P		**Pb**	03 30 05.2	-0.6
	baz=221							
TWF1	**Yuli**	**0.85**	**210**	*e*P		**Pg**	03 30 05.1	-0.2
	baz=212							
TWF1				*e*S		**Sb**	03 30 16.7	-0.7
	baz=212							
LIOB	**Emei**	**0.87**	**309**	*e*P		**Pb**	03 30 06.1	-0.1
	baz=310							
LIOB				*e*S		**Sb**	03 30 18.1	+0.1
	baz=310							
NSTT	**Nanjuang**	**0.87**	**308**	*e*P		**Pb**	03 30 06.0	-0.2
	baz=309							
NSTT				*e*S		**Sg**	03 30 16.4	-0.6
	baz=309							
TIPB	**Shuangxi**	**0.87**	**4**	*e*P		**Pb**	03 30 06.0	-0.2
	baz=2.0							
TIPB				*e*S		**Sb**	03 30 17.8	-0.2
	baz=2.0							
WHYT	**Xinyi Township**	**0.92**	**244**	*e*P		**Pb**	03 30 07.0	0.0
	baz=245							
TWQ1	**Liyutan**	**0.94**	**286**	*e*P		**Pb**	03 30 07.6	+0.3
	baz=285							
CHKH	**Chenggong**	**0.96**	**200**	*e*P		**Pg**	03 30 06.3	-1.1
	baz=202							
CHKH				*e*S		**Sb**	03 30 20.7	+0.2
	baz=202							
NWF	**Wu-fen Shan**	**0.97**	**1**	*e*P		**Pn**	03 30 08.3	-0.4
	baz=347							
WFSB	**Wu-fen Shan**	**0.97**	**1**	*e*P		**Pb**	03 30 07.9	0.0
	baz=352							
WFSB				*e*S		**Sb**	03 30 21.3	+0.5
	baz=352							
WJS	**Zhushan**	**0.98**	**254**	*e*P		**Pn**	03 30 08.6	-0.3
	baz=257							
WJS				*e*S		**Sn**	03 30 23.3	+0.4
	baz=257							
NMLH	**Miaoli**	**0.99**	**297**	*e*P		**Pn**	03 30 09.5	+0.6
	baz=298							
NMLH				*e*S		**Sn**	03 30 23.4	+0.4
	baz=298							
FULB	**Fuli**	**0.99**	**206**	*e*P		**Pg**	03 30 07.3	-0.6
	baz=197							
FULB				*e*S		**Sb**	03 30 21.4	0.0
	baz=197							
SXI1	**Grass Mountain**	**1.00**	**6**	*e*P		**Pb**	03 30 08.4	+0.1
	baz=4.0							
SXI1				*e*S		**Sn**	03 30 22.8	-0.6
	baz=4.0							
WNT	**Mingjian**	**1.01**	**258**	P		**Pn**	03 30 09.2	0.0
	baz=261							
WNT				*e*S		**Sn**	03 30 23.6	+0.1
	baz=261							
ALS	**Alishan**	**1.05**	**236**	*e*P		**Pb**	03 30 09.1	-0.3
	baz=236							
YM01	**YM01**	**1.06**	**351**	*e*P		**Pn**	03 30 10.2	+0.3
	baz=349							
YM01				*e*S		**Sn**	03 30 25.2	+0.4
	baz=349							
EHD	**Haiduan**	**1.07**	**208**	*e*P		**Pg**	03 30 09.0	-0.5
	baz=212							
EHD				*e*S		**Sb**	03 30 24.3	+0.6
	baz=212							
ANP	**Anpu**	**1.11**	**349**	*e*P		**Pn**	03 30 10.7	0.0
	baz=349							
CHN5	**Tsauling**	**1.11**	**244**	*e*P		**Pn**	03 30 10.6	0.0
	baz=235							
CHN5				*e*S		**Sn**	03 30 27.5	+1.4
	baz=235							
ELDTW	**Lidau**	**1.13**	**217**	*e*P		**Pg**	03 30 10.3	-0.4
	baz=206							
ELDTW				*e*S		**Sg**	03 30 24.9	-0.4
	baz=206							
WDLH	**Douliu**	**1.19**	**250**	*e*P		**Pn**	03 30 11.9	+0.2
	baz=253							
WDLH				*e*S		**Sn**	03 30 29.1	+1.1
	baz=253							
EDH	**Donghe**	**1.20**	**201**	*e*P		**Pg**	03 30 09.1	-2.7
	baz=200							
WRL	**Guolierlin Hig**	**1.28**	**262**	*e*P		**Pn**	03 30 13.5	+0.6
	baz=264							
WRL				*e*S		**Sn**	03 30 32.2	+2.0
	baz=264							
STYH	**Taoyuan**	**1.29**	**225**	*e*P		**Pg**	03 30 11.8	-1.8
	baz=228							
STYH				*e*S		**Sg**	03 30 29.6	-0.8
	baz=228							
WTP	**Ta-pu**	**1.35**	**231**	*e*P		**Pg**	03 30 14.8	0.0
	baz=234							
WTP				*e*S		**Sn**	03 30 34.0	+2.0
	baz=234							
TWK	**Hsinying**	**1.43**	**235**	*e*P		**Pg**	03 30 16.2	-0.1
	baz=222							
TWK				*e*S		**Sn**	03 30 36.4	+2.4
	baz=222							
CHN1	**Nanshi**	**1.45**	**231**	*e*P		**Pg**	03 30 16.8	+0.1
	baz=234							
CHN1				*e*S		**Sg**	03 30 37.7	+2.2
	baz=234							
SGST	**Jiashian**	**1.48**	**227**	*e*P		**Pn**	03 30 15.4	-0.3
	baz=230							
SGST				*e*S		**Sg**	03 30 36.9	+0.4
	baz=230							
SLGT	**Liugui**	**1.50**	**223**	*e*P		**Pb**	03 30 16.5	-0.4
	baz=226							
SLGT				*e*S		**Sg**	03 30 38.0	+0.9
	baz=226							
TSMG	**Majia**	**1.72**	**217**	*e*P		**Pn**	03 30 19.5	+0.5
	baz=207							
MASBT	**Mashibuluo**	**1.81**	**215**	*e*P		**Pn**	03 30 20.7	+0.6
	baz=205							
EAST	**Anshuo**	**1.90**	**206**	*e*P		**Pn**	03 30 21.2	-0.3
	baz=197							
PHUB	**P'eng-hu**	**2.09**	**254**	*e*P		**Pn**	03 30 24.5	+0.5
	baz=253							
PHUB				*e*S		**Sn**	03 30 51.2	+1.1
	baz=253							
VWUC	**VWUC**	**2.29**	**293**	*e*P		**Pn**	03 30 26.2	-0.5
	baz=292							
VWUC				*e*S		**Sn**	03 30 54.2	-0.8
	baz=292							
JISG	**Ishigakijimahi**	**2.38**	**78**	P		**Pn**	03 30 27.7	-0.3

TAP 07 03:36:12.8, 24.12N×121.63E, h8km, ML0.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**350**	P	Pg	03 36 14.9	+0.4
	baz=349						
ETL				*i* S	Sg	03 36 16.5	+0.7
	baz=349						
TWD	**Chiawan**	**0.05**	**219**	P	Pg	03 36 14.9	+0.4
	baz=212						
TWD				S	Sg	03 36 16.6	+0.7
	baz=212						
NACB	**Ninganchiao**	**0.06**	**329**	P	Pg	03 36 15.2	+0.4
	baz=328						
NACB				*i* S	Sg	03 36 17.0	+0.9
	baz=328						
ETM	**Tongmen**	**0.20**	**220**	*e*P	Pg	03 36 17.9	+1.0
	baz=219						

*IDC **07** 03:36:16.8±0.6, 24.06N×121.91E, h0km, mb4.3/24, mbtmp4.4/25, ML4.2/1, MS4.1/44, Error ellipse: s-maj=18.1km s-min=13.4km az=66.0*

*BJI **07** 03:36:16.9±0.0, 24.04N×121.81E, h7km, mb4.5/62, mB4.9/44, ML5.3/11, Ms5.0/79, Ms7 5.0/75*

*MOS **07** 03:36:16.0±1.2, 24.00N×121.62E, h10km, mb5.0/37, MS4.5/6, Error ellipse: s-maj=10.6km s-min=6.1km az=113.6*

*GCMT **07** 03:36:17.6±0.4, 23.93N±0.03×121.87E±0.04, h21km±1km, MW4.8/70, Moment Tensor Solution. s14,c15; s70,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.96±.19; $M_{\theta\theta}$-1.21±.11; $M_{\phi\phi}$-0.75±.11; $M_{r\theta}$0.91±.17; $M_{\theta\phi}$-0.58±.07; $M_{r\phi}$0.82±.20; Best double couple: $M_0$2.16100×10^{16} NP1:ϕ_s52.00000°, δ62.00000°, λ87.00000°. NP2: ϕ_s238.00000°, δ28.00000°, λ96.00000°. Principal axes: T 2.3420, Plg73.0000°, Azm314.0000°; N -0.3690, Plg3.0000°, Azm53.0000°; P -1.9800, Plg17.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 03:36:18.6±1.4, 24.05N±0.02×121.75E±0.04, h10km±1km, mb5.0/136, Mwr4.8/20 Error ellipse: s-maj=5.7km s-min=3.3km az=275.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.05; $M_{\theta\theta}$0.86; $M_{\phi\phi}$1.19; $M_{r\theta}$0.36; $M_{\theta\phi}$-1.20; $M_{r\phi}$0.50; Fault plane solution: M_o2.23000×10^{16} NP1:ϕ_s303.33000°, δ45.30000°, λ-113.18000°. NP2:ϕ_s154.66000°, δ49.20000°, λ-68.31000°. Principal axes: T 2.2368, Plg2.0000°, Azm230.0000°; N -0.0075, Plg16.0000°, Azm320.0000°; P -2.2293, Plg74.0000°, Azm133.0000°;*

*ASIES **07** 03:36:18.5, 24.08N×121.74E, h7km, ML5.2, Mw4.7, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}0.76; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$-0.16; $M_{r\theta}$0.51; $M_{\theta\phi}$-0.41; $M_{r\phi}$1.11; Fault plane solution: M_o1.46025×10^{23} NP1:ϕ_s31.86000°, δ74.75000°, λ73.94000°. NP2:ϕ_s259.45000°, δ22.00000°, λ135.42000°. Principal axes: T Plg57.3030°, Azm280.6440°; N Plg15.4750°, Azm36.1950°; P Plg28.0140°, Azm134.6650°;*

*TAP **07** 03:36:18.5, 24.08N×121.74E, h7km, ML5.2, C*

*JMA **07** 03:36:18.1±0.2, 24.1N±0.5×121.7E±0.8, h0km, MD5.1/17, MW4.7/17, TAIWAN REGION*

*NEIC **07** 03:36:19.3, 24.04N×121.73E, h10km*

ISC 07 03:36:19.1±0.4, 24.05N±0.01×121.76E±0.01, h13km±2km, h13km:pP-P, n649, σ1$30/703, mb4.9/125, MS4.3/54, 58C-51D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.15**	**282**	⇓*i*P	**Pg**	03 36 21.6	-1.1
	baz=279						
TWD				*i* S	**Sg**	03 36 24.0	-1.3
	baz=279						
ETL	**Fush Village**	**0.16**	**312**	⇓*i*P	**Pg**	03 36 21.8	-1.2
	baz=306						
ETL				*i* S	**Sg**	03 36 24.3	-1.4
	baz=306						
NACB	**Ninganchiao**	**0.19**	**310**		**Pg**	03 36 21.4	-2.0
NACB				Sg	**Sg**	03 36 24.8	-1.6
NACB	**Ninganchiao**	**0.19**	**310**	P	**Pg**	03 36 22.5	-0.9
NACB	**Ninganchiao**	**0.19**	**310**	⇓*i*P	**Pg**	03 36 22.2	-1.2
	baz=305						
NACB				*i* S	**Sg**	03 36 24.8	-1.6
	baz=305						
ETM	**Tongmen**	**0.26**	**251**	P	**Pg**	03 36 23.9	-0.6
	baz=248						
ETM				*i* S	**Sg**	03 36 28.1	0.0
	baz=248						
EHP	**Heping Village**	**0.26**	**357**	P	**Pg**	03 36 23.8	-0.8
	baz=358						
EHP				S	**Sg**	03 36 27.7	-0.6
	baz=358						
EAHA	**Aohua**	**0.28**	**357**	⇓*i*P	**Pg**	03 36 24.1	-0.9
	baz=356						
EAHA				*i* S	**Sg**	03 36 28.1	-0.8
	baz=356						
LXIB	**Xiulin Townshi**	**0.31**	**265**	*i* P	**Pg**	03 36 25.1	-0.5
	baz=253						
LXIB				*i* S	**Sg**	03 36 30.0	0.0
	baz=253						
SHUL	**Shoufeng**	**0.32**	**214**	⇓*i*P	**Pb**	03 36 26.6	0.0
	baz=214						
SHUL				S	**Sb**	03 36 33.0	+1.4
	baz=214						
ENA	**Nanau**	**0.38**	**358**	⇓*i*P	**Pg**	03 36 26.0	-0.7
	baz=358						
ENA				*i* S	**Sg**	03 36 31.2	-0.6
	baz=358						
ESL	**Shilin**	**0.38**	**232**	⇑P	**Pg**	03 36 26.3	-0.4
	baz=241						
ESL				*e*S	**Sg**	03 36 32.2	+0.4
	baz=241						
TEGC	**Jichi Village**	**0.39**	**210**	P	**Pb**	03 36 27.7	-0.2
	baz=212						
TEGC				S	**Sb**	03 36 35.6	+1.8
	baz=212						
EWUT	**Wuta**	**0.39**	**3**	⇓P	**Pg**	03 36 26.3	-0.7
	baz=1.0						
EWUT				S	**Sg**	03 36 32.2	-0.1
	baz=1.0						
WHF	**Hehuan Shan**	**0.46**	**282**	P	**Pg**	03 36 27.5	-0.8
	baz=280						
WHF				S	**Sg**	03 36 33.5	-1.0
	baz=280						
WARBT	**Fenglin Townsh**	**0.47**	**226**	⇑*i*P	**Pg**	03 36 28.2	-0.3
	baz=237						
WARBT				S	**Sg**	03 36 35.0	+0.2
	baz=237						
EGFH	**Guangfu**	**0.48**	**218**	⇓P	**Pg**	03 36 28.8	+0.2
	baz=232						
FUSS	**Fushou**	**0.51**	**293**	⇓*i*P	**Pg**	03 36 28.8	-0.4
	baz=291						
FUSS				*e*S	**Sg**	03 36 35.1	-0.8
	baz=291						
NNSB	**Datong**	**0.51**	**318**	⇓*i*P	**Pg**	03 36 28.4	-0.7
	baz=313						
NNSH	**Datong**	**0.51**	**318**	P	**Pg**	03 36 28.4	-0.8
	baz=314						
NNSH				S	**Sg**	03 36 35.0	-0.9
	baz=314						
EOS4	**EOS4**	**0.52**	**82**	⇓*e*P	**Pn**	03 36 31.4	-0.5
	baz=88						
NNS	**Nan Shan**	**0.52**	**318**	⇓*i*P	**Pg**	03 36 28.6	-0.8
	baz=315						
NNS				S	**Sg**	03 36 34.9	-1.5
	baz=315						
LATG	**Datong**	**0.53**	**337**	⇓*i*P	**Pg**	03 36 28.8	-0.7
	baz=333						
LATG				*i* S	**Sg**	03 36 35.8	-0.7
	baz=333						
ESAO	**Su ao**	**0.53**	**9**	*e*P	**Pg**	03 36 29.1	-0.4
	baz=3.0						
CHGB	**Renai**	**0.53**	**271**	⇓*i*P	**Pg**	03 36 29.3	-0.3
	baz=271						
CHGB				S	**Sg**	03 36 36.0	-0.8
	baz=271						
OWD	**Renai**	**0.54**	**260**	P	**Pg**	03 36 29.1	-0.6
	baz=267						
TWC	**Suao**	**0.56**	**9**	⇓P	**Pg**	03 36 29.7	-0.5
	baz=358						
TWC				*e*S	**Sb**	03 36 38.2	-0.6
	baz=358						
EOS3	**EOS3**	**0.56**	**65**	⇓*e*P	**Pn**	03 36 32.6	-0.1
	baz=66						
TWT	**Tachien**	**0.57**	**291**	⇓*i*P	**Pg**	03 36 30.1	-0.2
	baz=288						
TWT				*e*S	**Sg**	03 36 37.8	0.0
	baz=288						
EOS2	**EOS2**	**0.57**	**50**	*e*P	**Pn**	03 36 32.3	-0.5
	baz=31						
NDS	**Dongshan**	**0.58**	**356**	⇓P	**Pg**	03 36 30.1	-0.4
	baz=353						
NDS				S	**Sg**	03 36 38.2	-0.1
	baz=353						
TDCB	**Techi**	**0.58**	**290**	⇓*i*P	**Pg**	03 36 30.2	-0.4
	baz=289						
TDCB				S	**Sg**	03 36 37.5	-0.8
	baz=289						
WUSB	**Renai**	**0.59**	**264**	⇑P	**Pg**	03 36 30.3	-0.3
	baz=263						
WUSB				S	**Sg**	03 36 37.9	-0.5
	baz=263						
NDT	**Datong Townshi**	**0.59**	**338**	⇓*i*P	**Pg**	03 36 30.3	-0.5
	baz=334						
NDT				S	**Sg**	03 36 37.8	-0.8
	baz=334						
ENTT	**Nioudou**	**0.61**	**344**	⇓*i*P	**Pg**	03 36 30.6	-0.5
	baz=342						
ENTT				*i* S	**Sg**	03 36 38.6	-0.6
	baz=342						
HGSD	**Ruisui**	**0.63**	**209**	⇓*i*P	**Pb**	03 36 32.1	+0.1
	baz=198						
HGSD				S	**Sn**	03 36 42.9	-0.9
	baz=198						
VWDT	**VWDT**	**0.64**	**242**	⇑*i*P	**Pg**	03 36 31.4	0.0
	baz=243						
VWDT				*i* S	**Sb**	03 36 40.8	0.0
	baz=243						
EHY	**Hungye**	**0.67**	**216**	⇓P	**Pg**	03 36 31.5	-0.7
	baz=234						
EHY				S	**Sn**	03 36 43.3	-1.4
	baz=234						
TWE	**Neicheng**	**0.67**	**353**	⇓*i*P	**Pg**	03 36 31.8	-0.4
	baz=352						
TWE				*i* S	**Sg**	03 36 40.7	-0.4
	baz=352						
YHNB	**Yeheng**	**0.71**	**331**		**Pg**	03 36 32.4	-0.5
YHNB				Sg	**Sg**	03 36 42.2	-0.1
YHNB	**Yeheng**	**0.71**	**331**	P	**Pg**	03 36 32.9	0.0
YHNB	**Yeheng**	**0.71**	**331**	⇓*i*P	**Pg**	03 36 32.6	-0.2
	baz=328						
YHNB				*i* S	**Sg**	03 36 41.7	-0.5
	baz=328						
ILA	**Ilan**	**0.71**	**359**	*e*P	**Pg**	03 36 32.8	-0.2
	baz=344						
NSK	**Sanguang**	**0.72**	**330**	⇓*i*P	**Pg**	03 36 32.7	-0.4
	baz=328						
NSK				S	**Sg**	03 36 42.7	+0.1
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.72**	**348**	⇓*i*P	**Pg**	03 36 32.8	-0.4
	baz=337						
FUSB				*i* S	**Sg**	03 36 42.4	-0.4
	baz=337						
WPL	**Puli Township**	**0.73**	**267**	*e*P	**Pg**	03 36 33.2	-0.1
	baz=267						
WPL				*e*S	**Sg**	03 36 42.2	-0.8
	baz=267						
DPDB	**Guoxing**	**0.76**	**269**	P	**Pg**	03 36 33.6	-0.3
	baz=269						
DPDB				*e*S	**Sb**	03 36 44.6	+0.2
	baz=269						
NWLT	**Wulai**	**0.76**	**342**	⇓P	**Pg**	03 36 33.5	-0.4
	baz=339						
NWLT				S	**Sg**	03 36 42.4	-1.5
	baz=339						
WCS	**Beigang Elemen**	**0.77**	**271**	⇑P	**Pg**	03 36 33.9	-0.1
	baz=270						
WHP	**Taichung City**	**0.77**	**287**	⇓P	**Pb**	03 36 34.2	-0.2
	baz=286						
WHP				*i* S	**Sg**	03 36 44.0	-0.3
	baz=286						
YULB	**Yu-li**	**0.78**	**213**		**Pg**	03 36 33.2	-1.0
YULB				Sg	**Sg**	03 36 43.8	-0.6
YULB	**Yu-li**	**0.78**	**213**	P	**Pn**	03 36 35.1	-0.7
YULB	**Yu-li**	**0.78**	**213**	⇓P	**Pg**	03 36 33.1	-1.1
	baz=230						
YULB				*e*S	**Sb**	03 36 44.6	-0.4
	baz=230						
SSLB	**Suanglung**	**0.78**	**251**		**Pg**	03 36 33.2	-1.0
SSLB	**Suanglung**	**0.78**	**251**	P	**Pb**	03 36 34.3	-0.2
ECBN	**Changbin**	**0.78**	**201**	⇓*e*P	**Pg**	03 36 34.3	0.0
	baz=206						
ECBN				*e*S	**Sb**	03 36 46.1	+1.0
	baz=206						
SMLT	**Sun Moon Lake**	**0.80**	**258**	⇑*i*P	**Pg**	03 36 34.4	-0.3
	baz=259						
SMLT				*i* S	**Sb**	03 36 45.8	+0.1
	baz=259						
NTC	**Toucheng**	**0.80**	**5**	*e*P	**Pg**	03 36 32.9	-1.8
	baz=359						
EYUL	**Yuli**	**0.81**	**210**	*e*P	**Pg**	03 36 34.2	-0.5
	baz=228						
TWF1	**Yuli**	**0.81**	**211**	⇓*e*P	**Pg**	03 36 33.8	-1.1
	baz=230						
TWF1				*e*S	**Sn**	03 36 48.3	+0.1
	baz=230						
NFF	**Wufeng Townshi**	**0.82**	**315**	⇓P	**Pg**	03 36 34.8	-0.2
	baz=313						
NFF				S	**Sg**	03 36 45.2	-0.6
	baz=313						
TYC	**Yuchr**	**0.83**	**260**	⇑*i*P	**Pg**	03 36 34.9	-0.4
	baz=261						
TYC				*i* S	**Sg**	03 36 46.2	0.0
	baz=261						
LIOB	**Emei**	**0.90**	**311**	⇓P	**Pb**	03 36 36.6	+0.1
	baz=309						
LIOB				*e*S	**Sg**	03 36 48.2	-0.1
	baz=309						
WHYT	**Xinyi Township**	**0.90**	**247**	⇑*i*P	**Pg**	03 36 36.4	-0.1
	baz=257						
WHYT				S	**Sb**	03 36 49.4	+0.9
	baz=257						
NSTT	**Nanjuang**	**0.90**	**310**	⇓*i*P	**Pg**	03 36 36.5	-0.1
	baz=308						
NSTT				S	**Sg**	03 36 47.8	-0.5
	baz=308						
NJD	**Zhudong**	**0.92**	**318**	*e*P	**Pn**	03 36 37.7	0.0
	baz=316						
NJD				*e*S	**Sn**	03 36 50.4	-0.3
	baz=316						
CHKH	**Chenggong**	**0.92**	**201**	*e*P	**Pg**	03 36 36.2	-0.6
	baz=207						
CHKH				*e*S	**Sn**	03 36 50.7	0.0
	baz=207						
TIPB	**Shuangxi**	**0.92**	**4**	⇓*i*P	**Pg**	03 36 36.5	-0.4
TIPB				*e*S	**Sg**	03 36 48.7	-0.2
NHDH	**Xindian Distri**	**0.93**	**347**	⇓P	**Pg**	03 36 36.9	-0.2
	baz=334						
NHDH				S	**Sg**	03 36 47.8	-1.5
	baz=334						
TWA	**Mucha**	**0.94**	**350**	⇓P	**Pg**	03 36 37.1	-0.2
	baz=344						
TWQ1	**Liyutan**	**0.94**	**288**	P	**Pn**	03 36 37.7	-0.4
	baz=298						
TWQ1				*e*S	**Sn**	03 36 52.6	+1.1
	baz=298						
FULB	**Fuli**	**0.95**	**207**	*e*P	**Pg**	03 36 37.1	-0.3
	baz=226						
TATO	**Taipei**	**0.95**	**345**		**Pg**	03 36 37.1	-0.4
TATO				Sg	**Sg**	03 36 48.8	-1.2
TATO	**Taipei**	**0.95**	**345**	P	**Pb**	03 36 37.8	+0.3
TATO	**Taipei**	**0.95**	**345**	⇓*i*P	**Pg**	03 36 37.4	-0.1
	baz=332						
TATO				*i* S	**Sg**	03 36 49.7	-0.3
	baz=332						
WJS	**Zhushan**	**0.97**	**257**	⇑*i*P	**Pn**	03 36 38.6	+0.2
	baz=258						

WJS eS Sn 03 36 52.9 +0.8
baz=258
WWF Wufeng 0.97 270⇑eP Pn 03 36 39.0 +0.7
baz=269
NSY Sanyi 0.98 292 ⇑P Pn 03 36 38.9 +0.3
baz=291
NSY eS Sn 03 36 52.8 +0.5
baz=291
BACT New Taipei Cit 0.99 343 eP Pn 03 36 38.7 +0.1
baz=337
HSN1 Hsinchu 0.99 317 eP Pn 03 36 39.7 +1.0
baz=312
TCU Taichung 0.99 276 ⇑P Pn 03 36 39.3 +0.6
baz=271
TCU eS Sn 03 36 54.2 +1.6
baz=271
WNT1 Nantou City 0.99 262 ⇑P Pn 03 36 39.2 +0.4
baz=262
WNT1 S Sn 03 36 53.7 +1.0
baz=262
WNT Mingjian 0.99 260⇑iP Pn 03 36 39.2 +0.4
baz=262
WNT eS Sn 03 36 53.6 +0.9
baz=262
NHY Taipei 1.00 350 eP Pn 03 36 39.5 +0.7
baz=343
NMLH Miaoli 1.00 299⇑eP Pn 03 36 39.5 +0.6
baz=297
NMLH eS Sn 03 36 54.0 +1.1
baz=297
TAP Taipei 1.01 347 P Pn 03 36 38.9 -0.1
baz=335
TAP eS Sn 03 36 53.0 -0.1
baz=335
CHKT Chengkung 1.01 201 eP Pb 03 36 37.4 -1.1
baz=207
CHKT eS Sn 03 36 52.9 -0.2
baz=207
NWF Wu-fen Shan 1.02 1⇓iP Pb 03 36 38.5 -0.1
baz=340
WFSB Wu-fen Shan 1.02 1⇓iP Pg 03 36 38.6 -0.1
baz=350
WFSB S Sb 03 36 51.8 -0.1
baz=350
SBCB Hsinchu 1.02 317⇑eP Pn 03 36 39.9 +0.8
baz=314
SBCB *i* S Sn 03 36 53.3 0.0
baz=314
ALS Alishan 1.02 239⇑iP Pb 03 36 39.0 +0.1
baz=242
ALS S Sb 03 36 53.0 +0.7
baz=242
NJN Zhunan 1.02 308⇓eP Pn 03 36 40.1 +1.0
baz=304
EHD Haiduan 1.03 209 eP Pb 03 36 37.5 -1.3
baz=228
NTY Taoyuan 1.03 336 eP Pn 03 36 39.9 +0.6
baz=333
NTY eS Sn 03 36 54.6 +0.9
baz=333
HSN Hsinchu 1.04 316⇑eP Pn 03 36 40.1 +0.8
baz=314
SXI1 Grass Mountain 1.04 6⇓iP Pg 03 36 39.2 -0.1
baz=9.0
SXI1 eS Sn 03 36 53.6 -0.4
baz=9.0
NCUH Zhongli 1.05 330 P Pn 03 36 40.0 +0.4
baz=327
NCUH eS Sn 03 36 55.6 +1.5
baz=327
NCU National Centr 1.05 331 *i* P Pn 03 36 39.9 +0.4
baz=327
NCU eS Sn 03 36 55.9 +1.8
baz=327
WDJ Dajia District 1.06 286⇑iP Pn 03 36 40.5 +0.8
baz=295
WDJ eS Sn 03 36 55.8 +1.5
baz=295
ECS Chishang 1.07 207 eP Pg 03 36 39.5 -0.2
baz=215
WYL Yuanlin Townsh 1.08 266 eP Pb 03 36 38.4 -1.2
baz=266
CHN5 Tsauling 1.08 246⇑iP Pn 03 36 40.5 +0.4
baz=250
CHN5 *i* S Sn 03 36 56.9 +1.8
baz=250
TWS1 Kuangyinshan 1.09 344 ⇓P Pn 03 36 40.6 +0.5
baz=340
TWS1 eS Sn 03 36 57.0 +1.9
baz=340
ELDTW Lidau 1.09 218 ⇑P Pb 03 36 38.3 -1.6
baz=211
ELDTW S Sb 03 36 54.1 0.0
baz=211
TNOU National Taiwa 1.09 1 P Pb 03 36 39.7 -0.2
baz=356
TNOU S Sb 03 36 54.0 -0.2
baz=356
WCHH Zhanghua 1.09 272 ⇑P Pn 03 36 40.4 +0.3
baz=272
YM01 YM01 1.10 351 ⇓P Pn 03 36 40.3 0.0
baz=347
YM01 eS Sn 03 36 55.4 -0.1
baz=347
NTST Danshui 1.14 346 eP Pg 03 36 41.5 +0.3
baz=350
NTST eS Sn 03 36 57.3 +0.9
baz=350
EDH Donghe 1.15 201⇓eP Pb 03 36 38.1 -2.7
baz=192
NHW Xinwu Township 1.15 326 eP Pg 03 36 41.8 +0.5
baz=322
NHW eS Sn 03 36 58.8 +2.3
baz=322
NWRT Kuosheng 1.15 356 eP Pg 03 36 41.6 +0.3
baz=344
WGK Gukeng 1.15 252 ⇑P Pg 03 36 41.6 +0.3
baz=255
WGK eS Sn 03 36 59.3 +2.7
baz=255
ANP Anpu 1.15 349 eP Pb 03 36 40.6 -0.4
baz=339
JYNG Yonagunijimaku 1.16 70 P Pn 03 36 41.0 0.0
JYNG eS Sn 03 36 57.0 +0.4
JYNG Yonagunijimaku 1.16 70 A A 03 36 41.0
comp=E,32nm,3.9s,comp=N,41nm,1.9s
WDLH Douliu 1.17 252 ⇑P Pg 03 36 41.7 0.0
baz=255
YOJ Yonaguni jima 1.22 70 Pn 03 36 41.8 0.0
YOJ Yonaguni jima 1.22 70 P Pg 03 36 42.4 -0.1
YOJ Yonaguni jima 1.22 70 ⇓P Pb 03 36 42.0 0.0
baz=74
YOJ Yonaguni jima 1.22 70 P Pn 03 36 41.8 0.0
YOJ Yonaguni jima 1.22 70 P Pg 03 36 42.3 -0.2
YOJ S Sg 03 36 58.6 +0.2
YOJ Yonaguni jima 1.22 70 A A 03 36 42.3
comp=E,33nm,3.7s,comp=N,30nm,8.2s
WCKO Fanlu 1.22 240 ⇑P Pg 03 36 42.5 -0.1
baz=245
WCKO S Sg 03 37 00.1 +1.7
baz=245
TWY Chenhua 1.23 353 eP Pg 03 36 42.4 -0.4
baz=330
NSM Shimen 1.24 353 eP Pg 03 36 44.2 +1.2
baz=331
STYH Taoyuan 1.25 226 eP Pn 03 36 42.1 -0.3
baz=233
STYH eS Sn 03 36 59.2 +0.2
baz=233
WRL Guolierlin Hig 1.27 264 ⇑P Pg 03 36 43.3 -0.3
baz=266
WRL eS Sg 03 37 01.2 +1.1
baz=266
STYT Tauyuan 1.27 226⇑iP Pb 03 36 42.8 -0.2
baz=233
STYT eS Sn 03 36 59.7 +0.1
baz=233
CHN4 Tsaushan 1.27 237⇑iP Pg 03 36 43.5 -0.1
baz=243
CHN4 eS Sg 03 37 00.8 +0.7
baz=243
TPUB Ta-pu 1.27 234 Pb 03 36 42.9 -0.1
TPUB Ta-pu 1.27 234⇑iP Pg 03 36 43.4 -0.2
baz=240
TPUB eS Sg 03 37 00.1 -0.1
baz=240
LONT Longtian 1.27 207 eP Pn 03 36 41.4 -1.2
baz=215
CHN2 Minshiung 1.28 247 eP Pg 03 36 44.3 +0.5
baz=251
CHN2 S Sg 03 37 02.3 +1.8
baz=251
RLNB Erlin 1.29 263 ⇑P Pg 03 36 43.7 -0.2
baz=266
RLNB S Sg 03 37 01.5 +0.8
baz=266
WTK Tuku 1.30 254 eP Pg 03 36 43.8 -0.4
baz=258
WTK eS Sg 03 37 03.0 +1.9
baz=258
WTP Ta-pu 1.32 233⇑iP Pb 03 36 44.0 +0.2
baz=239
WTP eS Sg 03 37 03.2 +1.6
baz=239
CHY Chiayi 1.34 246 eP Pg 03 36 44.9 0.0
baz=262
CHY eS Sg 03 37 03.7 +1.4
baz=262
WTCT Ta-ch'eng 1.36 262 P Pb 03 36 44.7 +0.3
baz=265
WTCT eS Sg 03 37 03.0 0.0
baz=265
TWG Pinlang 1.38 207 Pn 03 36 42.1 -1.9
TWG Pinlang 1.38 207⇑eP Pn 03 36 42.0 -2.0
baz=215
TWGBT Beinan 1.38 207 P Pn 03 36 42.8 -1.2
TWGBT Beinan 1.38 207 eP Pn 03 36 42.0 -2.0
baz=215
LDUT Ludao 1.40 191 eP Pn 03 36 41.6 -2.7
baz=182
TWK Hsinying 1.40 236⇑iP Pb 03 36 45.1 0.0
baz=241
TWK S Sg 03 37 05.4 +1.1
baz=241
TTN Taitung 1.41 204 eP Pn 03 36 43.7 -0.7
baz=212
CHN1 Nanshi 1.42 233 ⇑P Pb 03 36 45.5 0.0
baz=239
CHN1 S Sg 03 37 05.9 +1.1
baz=239
SNST Tainan City 1.42 235 ⇑P Pb 03 36 45.7 +0.3
baz=240
SNST eS Sg 03 37 05.2 +0.3
baz=240
WMLT Mailiao 1.42 260 P Pg 03 36 46.0 -0.5
baz=252
WMLT S Sg 03 37 06.2 +1.2
baz=252
SGST Jiashian 1.44 228⇓eP Pn 03 36 44.6 -0.3
baz=235
SGST S Sg 03 37 06.5 +0.8
baz=235
WSF Szhu 1.46 254 P Pb 03 36 46.4 +0.2
baz=258
WSF eS Sg 03 37 07.3 +1.1
baz=258
SLGT Liugui 1.46 224 eP Pb 03 36 46.0 -0.2
baz=231
SLGT eS Sg 03 37 07.4 +1.1
baz=231
WSL Shuilin Townsh 1.50 250 eP Pb 03 36 46.9 +0.2
baz=255
WSL eS Sg 03 37 08.0 +0.7
baz=255
ICHU Yijhu 1.52 243 eP Pb 03 36 46.7 -0.4
baz=248
ICHU eS Sg 03 37 08.7 +0.7
baz=248
CHN8 Yiju 1.58 244 eP Pb 03 36 47.9 -0.3
baz=249
CHN8 S Sg 03 37 09.9 -0.1
baz=249
PCYT Pengchaiyu 1.60 10 P Pb 03 36 48.1 -0.4
baz=357
CHN3 Shinhua 1.60 233 eP Pb 03 36 49.0 +0.4
baz=238
ECL Taimali 1.62 207 eP Pn 03 36 45.1 -2.3
baz=203
SSHA Shanhua 1.62 236 eP Pn 03 36 47.7 +0.2
baz=241
SCST Cishan 1.64 225⇑eP Pb 03 36 49.7 +0.5
baz=232
SCST eS Sg 03 37 14.6 +2.7
baz=232
SHHT Tainan City 1.65 232 eP Pg 03 36 50.0 -0.7
baz=237
SSD Sandimen 1.66 219 eP Pn 03 36 47.4 -0.5
baz=217
SCLT Jiali 1.68 239 eP Pb 03 36 49.8 0.0
baz=244
SCLT eS Sg 03 37 13.2 +0.2
baz=244
TSMG Majia 1.68 218 eP Pn 03 36 48.2 0.0
baz=216
TWM1 Shoushan 1.73 225 ⇑P Pb 03 36 51.1 +0.4
baz=230
SGLT Jiouru 1.76 222 eP Pb 03 36 51.0 -0.2
baz=212
MASBT Mashibuluo 1.77 216 eP Pn 03 36 49.2 -0.2
baz=222
MASBT eS Sb 03 37 13.3 0.0
baz=222
TSPT Pingtung City 1.79 221 eP Pg 03 36 53.6 +0.1
baz=211
IRIF Iriomote-Funau 1.82 81 P Pn 03 36 50.3 +0.1
IRIF eS Sb 03 37 15.1 0.0
IRIF Iriomote-Funau 1.82 81 A A 03 36 50.3
comp=E,20nm,5.0s,comp=N,29nm,3.2s
SNJT Kaohsiung City 1.83 226 eP Pb 03 36 53.0 +0.5
baz=231
EAST Anshuo 1.86 207 eP Pn 03 36 49.6 -1.1
baz=206
TAW Tawu 1.86 205 eP Pb 03 36 52.9 -0.1
baz=214
HATJ Hateruma jima 1.87 89 S Sb 03 37 16.2 -0.3
HATJ Hateruma jima 1.87 89 A A 03 37 16.2
comp=E,41nm,3.1s,comp=N,38nm,4.2s
TAWH Dawu Township 1.88 205 eP Pb 03 36 53.2 -0.1
baz=203
WSSB Gushan 1.96 225 eP Pb 03 36 53.5 -1.2
baz=229
SCZT Fangliau 1.97 212 eP Pn 03 36 53.2 +1.0
baz=206
KAU Kaohsiung 1.99 222 eP Pg 03 36 56.2 -1.0
baz=245
SLIU Shizi 2.03 206 eP Pb 03 36 55.3 -0.5
baz=208
LYUB Lan-yu 2.04 184 eP Pn 03 36 50.4 -2.8
baz=194
JKRS Kuro-shima 2.07 84 P Pn 03 36 54.3 +0.8
JKRS S Sb 03 37 21.7 -0.4
JKRS Kuro-shima 2.07 84 A A 03 36 54.3
comp=E,45nm,3.5s,comp=N,43nm,3.3s
PHUB P'eng-hu 2.07 255 eP Pn 03 36 53.9 +0.3
baz=259
PHUB eS Sn 03 37 19.5 +0.2
baz=259
PNG Penghu 2.07 257 ⇑P Pn 03 36 53.7 +0.1
baz=261
PNG eS Sb 03 37 20.8 -1.5
baz=261
WDGT Dungji 2.08 248 P Pn 03 36 54.4 +0.8
baz=238
WDGT eS Sn 03 37 19.9 +0.5
baz=238
TWP Hsiaoliuchiu 2.13 217 eP Pb 03 36 58.2 +0.7
baz=223
SMST Manzhou Townsh 2.19 203 eP Pn 03 36 56.2 +1.0
baz=202
JIJ Ishigaki jima 2.20 81 eP Pn 03 36 55.4 0.0
JIJ Ishigaki jima 2.20 81 A A 03 36 55.4
comp=E,8.0nm,8.0s,comp=N,9.0nm,2.7s
HEN Hengchun 2.24 205 eP Pb 03 36 58.4 -1.1
baz=207
TWK1 Hengchun 2.27 203 eP Pn 03 36 54.6 -1.7
baz=203
TWKBT Hengchun 2.27 203 eP Pn 03 36 56.5 +0.1
baz=203
VCHM Qimei 2.29 249 eP Pn 03 36 57.5 +0.9
baz=237
VWUC VWUC 2.30 295⇑eP Pn 03 36 56.4 -0.3
baz=292
JISG Ishigakijimahi 2.39 77 P Pn 03 36 58.3 +0.3
JISG Ishigakijimahi 2.39 77 A A 03 36 58.3
comp=E,7.0nm,9.5s,comp=N,11nm,2.7s
PTMZ Houxiangcun 2.59 293⇑eP Pn 03 37 00.2 -0.5
baz=291
MATB Ma-tsu 2.66 322⇑eP Pn 03 37 00.6 -1.0
baz=313
JTJ Tarama 2.75 77 P Pn 03 37 03.6 +0.7
JTJ Tarama 2.75 77 A A 03 37 03.6
comp=E,15nm,2.9s,comp=N,20nm,2.9s
QZH Quanzhou 3.02 288⇑iPn Pn 03 37 05.7 -0.9
QZH Sn Sn 03 37 41.0 -1.6
QZH smax smax
comp=N,3μm,0.8s
QZH smax smax
comp=N,2μm,0.9s
KNM Kinmen 3.06 278 eP Pn 03 37 08.8 +1.7
baz=278
LYJJ Jianjiangzhen 3.08 324 eP Pn 03 37 06.5 -0.9
baz=315
KNMB Chin-men Tao 3.10 278 Pn Pn 03 37 07.1 -0.7
KNMB Chin-men Tao 3.10 278⇑eP Pn 03 37 06.7 -1.1
baz=279
XPSS Dashiqiu 3.20 334 eP Pn 03 37 08.9 -0.1
baz=322
MHZQ Yeshan 3.21 310⇑eP Pn 03 37 08.6 -0.6
baz=304
JIRB Irabujima 3.21 75 eP Pn 03 37 11.8 +2.6
JIRB eS Sn 03 37 50.0 +2.6
JIRB Irabujima 3.21 75 A A 03 37 11.8
comp=E,9.0nm,9.0s,comp=N,13nm,3.1s
JIKM Ikemajima 3.30 74 A A 03 37 12.9
comp=E,11nm,4.9s,comp=N,12nm,6.7s
JMJ Miyako jima 2 3.31 76 eP Pn 03 37 11.2 +0.5
baz=80
JMJ2 Miyako jima3 3.33 77 P Pn 03 37 12.5 +1.6
JMJ2 S Sn 03 37 52.3 +2.0
JMJ2 Miyako jima3 3.33 77 A A 03 37 12.5
comp=E,19nm,3.2s,comp=N,14nm,4.6s
JOGS Gusukube 3.40 77 A A 03 37 14.4
comp=E,15nm,10.2s,comp=N,18nm,3.5s
AXDP Jialang 3.55 285 eP Pn 03 37 13.9 0.0
baz=285
ZPLA Ao Xicun 3.67 269 eP Pn 03 37 15.6 +0.1
baz=272
DSXP Dongshan 3.98 266⇑eP Pn 03 37 19.6 -0.2
baz=269
SXFK Yanhouchang 4.40 303 eP Pn 03 37 25.6 0.0
baz=300
JOW Kunigami 6.51 63 Pn 03 37 53.8 -0.9
JOW Kunigami 6.51 63 eP Pn 03 37 54.2 -0.5
baz=76
JOW Kunigami 6.51 63 Pn Pn 03 37 54.0 -0.6
comp=N,11nm,0.3s,baz=127,slow=23,SNR=23
JOW Sn Sn 03 39 12.4 +3.6
comp=N,1.5nm,0.3s,baz=198,slow=20,SNR=0.8
comp=N,24nm,0.2s
SSE Sheshan 7.04 356 Pn Pn 03 38 01.0 -0.8
SSE Sn Sn 03 39 22.4 +0.7
SSE smax smax
comp=N,130nm,1.1s
SSE smax smax
comp=N,190nm,1.0s
SSE LR LR
comp=N,3μm,10.6s
SSE LR LR
comp=N,1μm,10.3s
NJ2 Nanjing 8.37 343 ⇓P Pn 03 38 19.1 -1.1
NJ2 pP Pn 03 38 22.9 +2.7
NJ2 S Sn 03 39 54.6 0.0
NJ2 pmax pmax
comp=N,45nm,0.5s
NJ2 smax smax
comp=N,350nm,0.8s
NJ2 smax smax
comp=N,430nm,1.0s
NJ2 LR LR
comp=N,5μm,9.7s
NJ2 LR LR
comp=N,3μm,8.1s
NJ2 LR LR
comp=N,6μm,9.0s
CNSH ChangSha 8.93 299 ⇑P Pn 03 38 25.9 -2.0
CNSH smax smax
comp=N,2μm,1.2s
CNSH smax smax
comp=N,900nm,1.3s
CNSH LR LR
comp=N,6μm,9.6s
CNSH LR LR
comp=N,7μm,8.5s
CNSH LR LR
comp=N,8μm,8.9s
WHN Wuhan 9.23 316 ⇓P Pn 03 38 31.4 -0.5
WHN sP 03 38 36.1
WHN pmax pmax
comp=N,74nm,0.9s
WHN LR LR
comp=N,22μm,10.3s
WHN LR LR
comp=N,21μm,7.6s
WHN LR LR
comp=N,34μm,9.7s
TGY Tagaytay City 9.93 185 LR LR 03 42 25.4
comp=N,700nm,20.5s,baz=344,slow=37
GULI GuiLin 10.43 279 P Pn 03 38 46.4 -2.1
GULI S Sn 03 40 48.0 +2.7
GULI LR LR
comp=N,3μm,9.2s
GULI LR LR
comp=N,10μm,9.2s
GULI LR LR
comp=N,12μm,10.3s
QIZ Qiongzhong 12.16 248 P Pn 03 39 11.4 -0.7
QIZ S Sn 03 41 28.7 +1.1
QIZ LR LR
comp=N,1μm,10.7s
QIZ LR LR
comp=N,900nm,9.5s
QIZ LR LR
comp=N,1μm,7.5s
ENH Enshi 12.55 302 Pn 03 39 14.0 -3.5
TIA Tai'an 12.76 343 eP P 03 39 26.0 -5.4
TIA LR LR
comp=N,2μm,8.8s
TIA LR LR
comp=N,1μm,9.8s
TIA LR LR
comp=N,3μm,9.4s
LYN LuoYang 13.23 324 eP Pn 03 39 27.5 +0.9
LYN pmax pmax
comp=N,11nm,0.6s
LYN pmax pmax
comp=N,320nm,8.4s
LYN LR LR
comp=N,17μm,9.5s
LYN LR LR
comp=N,7μm,9.2s
LYN LR LR
comp=N,18μm,9.6s
GYA Guiyang 13.87 283⇑iP Pn 03 39 37.5 +2.0
GYA S Sn 03 42 13.7 +4.2
GYA pmax pmax
comp=N,35nm,1.6s
GYA pmax pmax
comp=N,320nm,4.3s
GYA LR LR
comp=N,2μm,6.7s
GYA LR LR
comp=N,8μm,9.0s
GYA LR LR
comp=N,10μm,9.3s
KSAR Wonju Array Be 14.35 20 Pn Pn 03 39 41.3 -0.6
KSAR Wonju Array Be 14.35 20 P Pn 03 39 41.3 -0.6
KSRS Korea Array 14.37 20 Pn Pn 03 39 45.4 +3.2
comp=N,0.1nm,0.3s,baz=203,slow=14,SNR=9.4
KSRS LR LR 03 45 31.5
comp=N,349nm,21.6s,baz=195,slow=39
KS19 Wonju Array Si 14.39 20 Pn Pn 03 39 43.5 +0.9
HNS HongShan 14.61 337 ⇑P P 03 39 50.3 -1.6
HNS pmax pmax
comp=N,12nm,1.1s
HNS LR LR
comp=N,4μm,12.8s
HNS LR LR
comp=N,3μm,11.6s
HNS LR LR
comp=N,4μm,12.7s
DL2 Dalian 14.81 360 P P 03 39 55.2 +1.1
DL2 S S 03 42 45.0 -5.6
XAN Xi'an 14.99 314 P Pn 03 39 51.3 +0.6

XAN S **Sn** **03 42 38.4 +1.7**
XAN pmax pmax
comp=N,40nm,1.3s
XAN LR LR
comp=N,3µm,8.7s
XAN LR LR
comp=N,9µm,9.6s
XAN LR LR
comp=N,11µm,10.2s
BJT Baijiatuau 16.60 345 Pn **Pn** **03 40 10.0 -1.6**
BJT Baijiatuau 16.60 345 P **Pn** **03 40 10.0 -1.6**
BJT pmax pmax
comp=Z,8.0nm,0.8s
BJI Beijing 16.62 345 P **P** **03 40 13.3 -0.9**
BJI pP **pP** **03 40 17.1 -0.7**
BJI sP **sP** **03 40 20.6 +1.0**
BJI S **Sn** **03 43 18.8 +2.6**
BJI pmax pmax
comp=Z,100nm,8.0s
BJI LR LR
comp=Z,960nm,12.9s
BJI LR LR
comp=Z,460nm,12.0s
BJI LR LR
comp=Z,1µm,12.1s
SLVN Son La 16.69 264 Pn **Pn** **03 40 10.8 -2.1**
DAV Davao City (W) 17.28 167 LR LR 03 46 54.6
comp=Z,217nm,18.8s,baz=3.0,slow=37
KMI Kunming 17.33 277 ⇑P **Pn** **03 40 21.4 +0.3**
KMI pmax pmax
comp=Z,19nm,1.2s
KMI pmax pmax
comp=Z,280nm,4.3s
KMI LR LR
comp=Z,8µm,9.0s
KMI LR LR
comp=Z,8µm,9.9s
CD2 Chengdu 17.36 297 P **P** **03 40 23.2 +0.7**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 LR LR
comp=Z,3µm,6.8s
CD2 LR LR
comp=Z,3µm,7.3s
CD2 LR LR
comp=Z,4µm,7.7s
PZH PanZhiHua 18.26 282 P **P** **03 40 35.0 +2.4**
PZH S **Sn** **03 43 54.9 -1.5**
PZH SS **SnSn** **03 44 15.3 +5.2**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,210nm,7.5s
PZH LR LR
comp=Z,2µm,9.0s
PZH LR LR
comp=Z,4µm,10.7s
PZH LR LR
comp=Z,4µm,12.3s
HHC Hu-ho-hao-te 18.80 335 *e*P **Pn** **03 40 40.2 +1.2**
HHC PP sP 03 40 59.2 +15
HHC SS **SnSn** **03 44 36.5 +13**
HHC pmax pmax
comp=Z,15nm,1.3s
HHC pmax pmax
comp=Z,310nm,4.1s
HHC LR LR
comp=Z,2µm,12.2s
HHC LR LR
comp=Z,710nm,11.1s
HHC LR LR
comp=Z,2µm,11.1s
MJAR Matsushiro Arr 18.86 45 P **Pn** **03 40 41.5 +2.0**
comp=Z,2.0nm,0.6s,baz=217,slow=10.0,SNR=3.1
BTO Baotou 19.23 332 *e*P **Pn** **03 40 46.6 +2.6**
BTO pP **sP** **03 40 50.2 +1.8**
BTO sP pP 03 40 54.4 +7.8
BTO PP **PnPn** **03 41 04.5 +7.5**
BTO pmax pmax
comp=Z,690nm,6.9s
BTO LR LR
comp=Z,8µm,11.4s
BTO LR LR
comp=Z,3µm,8.2s
BTO LR LR
comp=Z,11µm,9.9s
LZH Lanzhou 19.56 312 ⇓P **Pn** **03 40 49.7 +1.5**
LZH pP sP 03 40 54.5 +2.6
LZH sS sS 03 44 34.3 +1.0
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,500nm,4.1s
LZH LR LR
comp=Z,2µm,12.0s
LZH LR LR
comp=Z,5µm,12.7s
LZH LR LR
comp=Z,6µm,12.7s
CN2 Changchun 19.93 8 *e*P **Pn** **03 40 51.8 -0.5**
CN2 *e*S **S** **03 44 32.5 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=Z,2µm,12.0s
CN2 LR LR
comp=Z,700nm,12.0s
CN2 LR LR
comp=Z,2µm,10.0s
CRAI Chiangrai 20.16 263 P **P** **03 40 51.7 -1.7**
XLT XiLinHaoTe 20.34 348 *e*P Pn 03 40 57.0 -0.2
XLT sP sP 03 41 03.1 +2.5
XLT pmax pmax
comp=Z,11nm,1.1s
XLT pmax pmax
comp=Z,150nm,4.0s
XLT LR LR
comp=Z,130nm,12.6s
XLT LR LR
comp=Z,1µm,10.0s
XLT LR LR
comp=Z,2µm,13.8s
TNCH TengChong 21.16 277 P **P** **03 41 04.7 +0.4**
TNCH sP pwP 03 41 10.9 +1.0
TNCH pmax pmax
comp=Z,38nm,0.9s
TNCH pmax pmax
comp=Z,210nm,5.9s
TNCH LR LR
comp=Z,2µm,7.8s
TNCH LR LR
comp=Z,4µm,8.7s
TNCH LR LR
comp=Z,4µm,9.3s
MDJ Mudanjiang 21.49 15 P **P** **03 41 10.3 +2.8**
MDJ pP sP 03 41 11.6 -0.7
MDJ sP pP 03 41 13.2 +2.4
MDJ PP **PnPn** **03 41 27.2 -0.7**
MDJ S **S** **03 45 05.0 -0.5**
MDJ pmax pmax
comp=Z,15nm,1.1s
MDJ pmax pmax
comp=Z,190nm,4.8s
MDJ LR LR
comp=Z,2µm,14.1s
MDJ LR LR
comp=Z,2µm,15.3s
MDJ LR LR
comp=Z,3µm,13.3s
USRK Ussuriysk Ar. 21.78 20 P **P** **03 41 11.2 +0.6**
comp=Z,2.0nm,0.5s,baz=205,slow=7.0,SNR=10
USRK LR LR 03 50 28.7
comp=Z,482nm,18.4s,baz=191,slow=39
comp=Z,2.0nm,0.5s
CHTO Chiang Mai 21.85 261 P **P** **03 41 10.9 -0.7**
CHTO Chiang Mai 21.85 261 P **P** **03 41 10.9 -0.7**
CHTO pmax pmax
comp=Z,27nm,1.2s
CMAR Chiang Mai Arr 21.97 260 P **P** **03 41 15.3 +2.5**
comp=Z,3.6nm,0.3s,baz=60,slow=8.6,SNR=16
CMAR PcP **PcP** **03 45 12.2 +0.6**
comp=Z,0.9nm,0.3s,baz=106,slow=2.0,SNR=4.5
CMAR LR LR 03 50 16.5
comp=Z,322nm,19.4s,baz=75,slow=38
comp=Z,3.6nm,0.3s
BNX BinXian 22.12 11 ⇑P **P** **03 41 13.7 -0.5**
BNX pP **pP** **03 41 17.6 +0.1**
BNX sP **pwP** **03 41 21.2 +1.7**
BNX PP **PnPn** **03 41 40.1 +3.7**
BNX S **S** **03 45 11.5 -6.2**
BNX pmax pmax
comp=Z,9.0nm,1.2s
BNX pmax pmax
comp=Z,54nm,3.9s
BNX LR LR
comp=Z,970nm,10.8s
BNX LR LR
comp=Z,560nm,13.1s
BNX LR LR
comp=Z,1µm,11.0s
SBUM Sibu 23.37 205 P **P** **03 41 26.3 -1.3**
GTA Gaotai 24.05 315 P **P** **03 41 34.7 +0.5**
GTA sP sP 03 41 47.6 +8.1
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,190nm,4.6s
GTA LR LR
comp=Z,920nm,12.4s
GTA LR LR
comp=Z,3µm,11.6s
GTA LR LR
comp=Z,3µm,12.0s
GUMO Guam 24.19 111 LR LR 03 51 50.4
comp=Z,116nm,18.1s,baz=304,slow=39
LUWI Luwuk 24.96 178 P **P** **03 41 42.9 +0.5**
comp=Z,63nm,0.8s
HIA Hailar 25.22 357 P **P** **03 41 43.3 -1.2**
HIA Hailar 25.22 357 *i*P **P** **03 41 44.1 -0.5**
HIA pmax pmax
comp=Z,18nm,1.2s
STKI Sintang 25.84 204 P **P** **03 41 51.1 +0.6**
GOMU GeErMu 26.17 304 P **P** **03 41 54.8 +1.1**
GOMU pP pP 03 41 57.8 +0.3
GOMU sP sP 03 42 02.1 +3.1
GOMU S **S** **03 46 22.3 -3.3**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU LR LR
comp=Z,860nm,9.7s
GOMU LR LR
comp=Z,930nm,9.7s
GOMU LR LR
comp=Z,1µm,9.9s
KLR Kul'dur 26.33 15*ce*P **P** **03 41 53.4 -1.2**
KLR pmax pmax
comp=Z,14nm,1.0s
KLR Kul'dur 26.33 15 P **P** **03 41 54.6 0.0**
comp=Z,14nm,0.9s,baz=242,slow=7.4,SNR=20
KLR LR LR 03 53 14.0
comp=Z,445nm,18.9s,baz=198,slow=39
comp=Z,14nm,0.9s
ULN Ulaanbaatar 26.49 337 P **P** **03 41 56.1 -0.1**
ULN IAmb IAmb 03 41 58.2
comp=Z,37nm,1.3s
ULN Ulaanbaatar 26.49 337 *i*P **P** **03 41 55.3 -0.9**
ULN pmax pmax
comp=Z,36nm,1.4s
HEH HeiHe 26.53 8 *e*P **P** **03 41 57.4 +1.1**
HEH pP **sP** **03 42 01.9 +1.1**
HEH pmax pmax
comp=Z,10.0nm,1.0s
HEH pmax pmax
comp=Z,160nm,5.0s
HEH LR LR
comp=Z,1µm,11.4s
HEH LR LR
comp=Z,1µm,11.6s
HEH LR LR
comp=Z,2µm,13.9s
SONM Songino Array 26.70 337 P **P** **03 41 57.9 -0.2**
SONM IAmb IAmb 03 42 03.8
comp=Z,40nm,1.5s
SONM Songino Array 26.70 337 P **P** **03 41 57.9 -0.2**
SONM pmax pmax
comp=Z,40nm,1.5s
SONM Songino Array 26.70 337 P **P** **03 41 58.7 +0.6**
comp=Z,7.5nm,0.8s,baz=158,slow=9.2,SNR=48
SONM LR LR 03 53 43.3
comp=Z,1µm,18.6s,baz=148,slow=39
comp=Z,7.5nm,0.8s
LSA Lhasa 27.83 288 P **P** **03 42 07.1 -1.7**
LSA Lhasa 27.83 288 P **P** **03 42 07.1 -1.7**
LSA pmax pmax
comp=Z,12nm,0.8s
YSS Yuzh-Sakhalins 28.37 31 *e*P **P** **03 42 13.2 +0.3**
YSS *e*S **S** **03 46 59.6 +0.3**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,400nm,13.0s
ZEA Zeya 29.93 7 *e*P **P** **03 42 31.5 +4.8**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=E,400nm,14.0s
ZEA MLR MLR
comp=N,800nm,12.0s
ZEA MLR MLR
comp=Z,800nm,13.0s
ZAK Zakamensk 29.95 336 *e*P **P** **03 42 25.8 -1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
KPJI Karang Pucung 33.61 203 P **P** **03 42 59.1 -0.3**
comp=Z,23nm,1.7s
LWLI Liwa 33.65 213 P **P** **03 42 59.5 -0.4**
comp=Z,150nm,0.4s
KASI Kota Agung 33.87 212 P **P** **03 43 01.7 0.0**
comp=Z,20nm,1.1s
WMQ Urumqi 34.12 314 *e*P **P** **03 43 02.7 -1.0**
WMQ pP sP 03 43 09.7 +0.6
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ LR LR
comp=Z,1µm,9.9s
WMQ LR LR
comp=Z,1µm,10.5s
WMQ LR LR
comp=Z,500nm,11.9s
DGZ Jazzator, Alta 37.02 323 *i*P **P** **03 43 26.0 -2.6**
DGZ pmax pmax
comp=Z,6.0nm,1.3s
YAK Yakutsk 38.35 6 *e*P **P** **03 43 40.7 +1.2**
YAK *e**PP **sP** **03 43 44.9 +1.0**
YAK *e* 03 45 07.5
YAK *e* 03 45 53.9
YAK *e*S **S** **03 49 35.9 +2.5**
YAK *e**SS **ScP** **03 49 43.5 +2.8**
YAK *e*SS **SnSn** **03 52 10.6 -8.1**
YAK *e* 03 53 50.1
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=Z,110nm,4.1s
YAK pmax pmax
comp=N,88nm,4.6s
YAK pmax pmax
comp=E,106nm,3.8s
YAK smax smax
comp=E,53nm,2.8s
YAK MLR MLR
comp=Z,2µm,14.0s
YAK MLR MLR
comp=N,1µm,13.0s
YAK Yakutsk 38.35 6 LR LR 04 01 08.8
comp=N,536nm,18.4s,baz=162,slow=39
MK31 Makanchi Array 38.80 316 P **P** **03 43 43.5 0.0**
MK31 Makanchi Array 38.80 316 *i*P **P** **03 43 43.0 -0.6**
MKAR Makanchi Array 38.80 316 P **P** **03 43 43.8 +0.2**
comp=N,6.0nm,0.7s,baz=112,slow=9.3,SNR=18
MKAR PcP **PcP** **03 45 55.2 +0.5**
comp=N,1.5nm,0.8s,baz=85,slow=5.1,SNR=2.6
MKAR LR LR 04 00 24.1
comp=N,212nm,19.4s,baz=132,slow=37
comp=N,6.0nm,0.7s
MAKZ Makanchi 39.00 316 P **P** **03 43 45.4 +0.1**
MAKZ IAmb IAmb 03 43 57.7
comp=Z,59nm,1.9s
MAKZ Makanchi 39.00 316 P **P** **03 43 45.4 +0.1**
MAKZ pmax pmax
comp=Z,59nm,1.9s
ZAA0 Zalesovo Array 40.64 327 P **P** **03 43 58.4 -0.4**
ZALV Zalesovo Beam 40.64 327 P **P** **03 43 58.1 -0.6**
comp=Z,13nm,0.9s,baz=114,slow=7.3,SNR=43
ZALV LR LR 04 00 46.6
comp=Z,230nm,20.3s,baz=105,slow=36
comp=Z,13nm,0.9s
HYB Hyderabad 40.82 269 *e*P **P** **03 44 00.4 -0.3**
HYB *e*pP **pP** **03 44 03.1 -1.3**
MA2 Magadan 40.91 22 LR LR 04 02 54.7
comp=Z,270nm,18.8s,baz=232,slow=39
KSH Kashi 41.41 303 P **P** **03 44 09.5 +4.0**
KSH sP sP 03 44 18.8 +8.0
KSH pmax pmax
comp=Z,10.0nm,1.0s
KSH LR LR
comp=Z,860nm,15.5s
KSH LR LR
comp=Z,670nm,14.8s
KSH LR LR
comp=Z,740nm,14.1s
PMG Port Moresby 41.49 140 LR LR 03 58 27.4
comp=Z,116nm,20.2s,baz=238,slow=32
H11N1 WAKE ISLAND Hy 41.97 87 T T 04 29 19.8
baz=284
H11N2 WAKE ISLAND Hy 41.97 87 T T 04 29 17.5
baz=284
H11N3 WAKE ISLAND Hy 41.99 87 T T 04 29 16.4
baz=284
H11S3 WAKE ISLAND Hy 42.10 89 T T 04 29 23.7
baz=284
H11S1 WAKE ISLAND Hy 42.11 89 T T 04 29 24.3
baz=284
H11S2 WAKE ISLAND Hy 42.12 89 T T 04 29 23.7
baz=284
KURK Kurchatov 42.53 320 P **P** **03 44 13.8 -0.4**
KURK Kurchatov 42.53 320*ce*P **P** **03 44 12.4 -1.9**
KURK pmax pmax
comp=Z,13nm,1.3s
KURBB Kurchatov Arra 42.55 320 P **P** **03 44 14.4 0.0**
comp=Z,6.0nm,1.1s,baz=115,slow=7.4,SNR=16
comp=Z,6.0nm,1.1s
PALK Pallekele 42.70 254 LR LR 04 03 01.0
comp=Z,110nm,19.2s,baz=159,slow=37
AAK Ala-Archa 43.00 307 LR LR 04 05 03.6
comp=Z,197nm,19.7s,baz=84,slow=40
COEN Coen 43.19 149 P **P** **03 44 18.2 -1.8**
COEN IAmb IAmb 03 44 21.3
comp=Z,24nm,0.8s
SEY Seymchan 43.93 20 LR LR 04 04 15.9
comp=Z,221nm,19.3s,baz=14,slow=38
WB0 Warramunga Arr 45.26 163 P **P** **03 44 36.0 -0.5**
WB0 IAmb IAmb 03 45 22.0
comp=Z,25nm,1.5s
PSA00 Pilbara Seismi 45.39 182 P **P** **03 44 36.6 -0.9**
PSA00 IAmb IAmb 03 44 57.9
comp=Z,34nm,1.4s
WRA Warramunga Arr 45.41 163 P **P** **03 44 37.3 -0.4**
WRA Warramunga Arr 45.41 163 P **P** **03 44 37.3 -0.4**
WRA pmax pmax
comp=Z,1.0nm,1.4s
WRA Warramunga Arr 45.41 163 P **P** **03 44 36.3 -1.4**
comp=Z,4.7nm,0.7s,baz=346,slow=8.7,SNR=18
comp=Z,4.7nm,0.7s
WB2 Warramunga Arr 45.42 163 P **P** **03 44 37.4 -0.4**
WR0 Warramunga Arr 45.48 163 P **P** **03 44 37.3 -1.0**
WR0 IAmb IAmb 03 45 16.4
comp=Z,42nm,1.9s
KK31 Karatay Array 45.97 307 P **P** **03 44 41.7 -0.3**
KK31 Karatay Array 45.97 307 P **P** **03 44 41.7 -0.3**
KK31 pmax pmax
comp=Z,14nm,1.3s
KKAR Karatay Array 45.97 307 P **P** **03 44 41.8 -0.2**
KKAR Karatay Array 45.97 307 P **P** **03 44 41.8 -0.2**
KKAR pmax pmax
comp=Z,14nm,1.3s
KBL Kabul 46.69 296 P **P** **03 44 47.3 -0.7**
KBL Kabul 46.69 296 P **P** **03 44 47.3 -0.7**
KBL pmax pmax
comp=Z,32nm,1.3s
SIMJ Simiganj 46.73 301 P **P** **03 44 47.2 -1.0**
TIXI Tiksi 47.80 3 P **P** **03 44 54.5 -1.3**
TIXI IAmb IAmb 03 45 00.8
comp=Z,18nm,1.1s
TIXI Tiksi 47.80 3*ce*P **P** **03 44 54.4 -1.4**
TIXI pmax pmax
comp=Z,28nm,1.7s
TIXI Tiksi 47.80 3 LR LR 04 06 55.4
comp=Z,377nm,19.7s,baz=196,slow=38
BVAR Borovoye Array 48.11 321 P **P** **03 44 58.3 -0.2**
comp=Z,2.7nm,0.7s,baz=104,slow=11,SNR=14
BVAR LR LR 04 05 00.4
comp=Z,132nm,21.4s,baz=94,slow=36
comp=Z,2.7nm,0.7s
BRVK Borovoye 48.18 321 P **P** **03 44 58.8 -0.2**
BRVK IAmb IAmb 03 45 11.3
comp=Z,11nm,0.9s
BRVK Borovoye 48.18 321*ce*P **P** **03 44 56.7 -2.3**
BRVK pmax pmax
comp=Z,16nm,1.3s
AS31 Alice Springs 48.88 165 P **P** **03 45 04.3 -0.4**
ASAR Alice Springs 48.88 165 P **P** **03 45 03.1 -1.6**
ASAR Alice Springs 48.88 165 P **P** **03 45 03.2 -1.6**
ASAR Alice Springs 48.88 165 P **P** **03 45 04.7 -0.1**
comp=Z,6.6nm,1.0s,baz=345,slow=6.7,SNR=26
ASAR LR LR 04 06 48.8
comp=Z,73nm,19.4s,baz=1.5,slow=38
comp=Z,6.6nm,1.0s
NRIK Noril'sk 49.67 345 P **P** **03 45 09.1 -1.1**
NRIK Noril'sk 49.67 345 *i*P **P** **03 45 08.4 -1.8**
NRIK pmax pmax
comp=Z,14nm,1.3s
NRIK Noril'sk 49.67 345 P **P** **03 45 08.9 -1.3**
comp=Z,3.7nm,0.6s,baz=127,slow=4.9,SNR=6.6
NRIK LR LR 04 07 18.4
comp=Z,286nm,18.9s,baz=148,slow=38
comp=Z,3.7nm,0.6s
CTA Charters Tower 49.94 149 LR LR 04 04 31.2
comp=Z,139nm,21.2s,baz=268,slow=34
BILL Bilibino 51.63 20 P **P** **03 45 25.3 +0.2**
BILL Bilibino 51.63 20 *i*P **P** **03 45 25.9 +0.8**
ABKAR Akbulak array 53.91 314 IAmb IAmb 03 45 51.3
comp=Z,26nm,1.5s
SVE Sverdlovsk 54.46 324 *e*P **P** **03 45 46.4 +0.3**
SVE pmax pmax
comp=Z,20nm,1.0s
AKTO Aktyubinsk 55.23 316 LR LR 04 11 18.9
comp=Z,253nm,18.4s,baz=69,slow=38
GEYT Alibeck 55.31 300 IAmb IAmb 03 45 55.2
comp=Z,13nm,0.9s
GEYT Alibeck 55.31 300 P **P** **03 45 54.4 +1.7**
comp=Z,8.3nm,0.9s,baz=111,slow=3.3,SNR=17
comp=Z,8.3nm,0.9s
GYA0B ALIBECK ARRAY 55.31 300 IAmb IAmb 03 46 03.2
comp=Z,14nm,1.1s
ARU Arti 55.53 323 P **P** **03 45 53.6 -0.2**
ARU IAmb IAmb 03 45 54.2
comp=Z,15nm,1.0s
ARU Arti 55.53 323*c i*P **P** **03 45 53.5 -0.3**
ARU 03 47 53.6
ARU S **S** **03 53 41.9 +3.2**
ARU SS **SS** **03 57 21.8 -1.5**
ARU pmax pmax
comp=Z,17nm,1.0s
ARU Arti 55.53 323 LR LR 04 11 16.8
comp=Z,274nm,21.7s,baz=98,slow=38
STKA Stephens Creek 58.76 160 *i*P **P** **03 46 16.2 -0.7**
STKA Stephens Creek 58.76 160 P **P** **03 46 15.8 -1.0**
comp=Z,2.9nm,0.5s,baz=346,slow=6.4,SNR=8.0
STKA LR LR 04 11 29.1
comp=Z,34nm,22.0s,baz=23,slow=36
comp=Z,2.9nm,0.5s
KIRV Kirov 60.63 325 *i*P **P** **03 46 27.5 -2.0**
KIRV Kirov 60.63 325 LR LR 04 14 35.8
comp=Z,276nm,18.0s,baz=87,slow=38
F14K Arctic Creek 60.88 27 P **P** **03 46 31.5 +0.5**
baz=264
ANM Nome 61.20 28 P **P** **03 46 33.8 +0.5**
baz=266
C16K Lisburne Hills 61.56 24 P **P** **03 46 36.4 +0.7**
baz=264
F15K North Star Dit 61.59 27 P **P** **03 46 36.9 +1.0**
baz=266

BELG Belogornoye 61.74 318 *i* P P 03 46 36.8 -0.3
BELG pmax pmax
comp=Z,5.0nm,1.1s
G15K Niukluk 61.80 28 P P 03 46 38.4 +1.1
baz=267
J14K Nanvaranak Lak 61.91 30 P P 03 46 39.5 +1.5
baz=268
L14K Kuka Creek 62.29 32 IAmb IAmb 03 46 46.6
comp=Z,13nm,0.9s
L14K Kuka Creek 62.29 32 P P 03 46 41.9 +1.2
baz=270
C17K DeLong Mountai 62.38 24 P P 03 46 42.3 +1.1
baz=266
G16K Koyuk River 62.53 27 P P 03 46 43.4 +1.2
baz=268
H16K Elim 62.55 28 P P 03 46 43.5 +1.1
baz=268
M14K Bethel 62.65 32 P P 03 46 43.9 +0.9
baz=271
E17K Hotham Inlet 62.81 25 P P 03 46 45.4 +1.4
baz=268
K15K Wolf Creek Mou 62.84 31 P P 03 46 46.1 +1.8
baz=270
L15K Ungalak Mounta 62.87 31 P P 03 46 46.0 +1.4
baz=271
B18K Kokolik River 62.94 23 P P 03 46 46.5 +1.5
baz=266
F17K Baldwin Pennin 63.01 26 P P 03 46 47.3 +1.9
baz=268
O14K Tigyukauivet M 63.03 34 P P 03 46 47.4 +1.8
baz=272
C18K Utukok River 63.12 24 P P 03 46 47.3 +1.1
baz=267
DZM Mont Dzumac 63.16 133 *e*LR LR 04 05 39.9
comp=Z,374nm,24.9s
DZM Mont Dzumac 63.16 133 LR LR 04 11 08.2
comp=Z,95nm,19.5s,baz=348,slow=33
I17K Unalakleet 63.22 29 P P 03 46 47.9 +1.1
baz=270
G17K Kiwalik Mounta 63.24 27 P P 03 46 47.9 +1.0
baz=269
J16K Anvik River 63.26 30 P P 03 46 47.6 +0.5
baz=271
M15K Kasigluk River 63.27 33 P P 03 46 47.8 +0.6
baz=272
E18K Tukpahlearik C 63.30 25 P P 03 46 48.2 +0.9
baz=268
H17K Granite Mounta 63.55 28 IAmb IAmb 03 46 56.3
comp=Z,7.1nm,0.9s
H17K Granite Mounta 63.55 28 P P 03 46 50.0 +0.9
baz=270
N15K Kwethluk River 63.59 33 P P 03 46 49.5 +0.1
baz=273
F18K Selawik 63.66 26 P P 03 46 50.5 +0.9
baz=270
C19K Lookout Ridge 63.72 23 IAmb IAmb 03 46 57.3
comp=Z,8.7nm,1.1s
C19K Lookout Ridge 63.72 23 P P 03 46 50.5 +0.4
baz=269
O15K Ungalikthiuk R 63.77 34 P P 03 46 50.9 +0.3
baz=273
L16K Owhat River 63.82 31 P P 03 46 51.4 +0.6
baz=272
G18K Tagagawik 64.07 27 P P 03 46 52.7 +0.3
baz=271
M16K Timber Creek 64.11 32 IAmb IAmb 03 46 57.2
comp=Z,15nm,1.1s
M16K Timber Creek 64.11 32 P P 03 46 53.4 +0.7
baz=273
H18K Honhosa River 64.20 28 P P 03 46 54.1 +0.7
baz=272
N16K Nishlik Lake 64.23 33 P P 03 46 54.4 +0.7
baz=274
D19K Kuna River 64.25 24 IAmb IAmb 03 47 02.4
comp=Z,15nm,1.0s
D19K Kuna River 64.25 24 P P 03 46 54.1 +0.5
baz=270
K17K Iditarod 64.33 30 IAmb IAmb 03 46 59.0
comp=Z,14nm,1.0s
K17K Iditarod 64.33 30 P P 03 46 54.6 +0.5
baz=273
L17K Donlin 64.36 31 P P 03 46 54.9 +0.5
baz=273
E19K Redstone River 64.60 25 P P 03 46 56.2 +0.3
baz=272
G19K Purcell Mounta 64.70 26 P P 03 46 57.2 +0.7
G19K Purcell Mounta 64.70 26 P P 03 46 56.8 +0.3
baz=272
A21K Barrow 64.75 21 P P 03 46 57.0 +0.3
baz=270
D20K Etivluk River 64.80 24 P P 03 46 57.6 +0.4
baz=272
M17K Holitna River 64.81 32 P P 03 46 57.9 +0.5
baz=274
E20K Nigu River 64.97 24 P P 03 46 58.9 +0.5
baz=272
H19K Roundabout Mou 64.99 27 IAmb IAmb 03 47 05.5
comp=Z,16nm,1.0s
H19K Roundabout Mou 64.99 27 P P 03 46 59.3 +0.8
baz=273
J18K Innoko River 65.00 29 P P 03 46 59.3 +0.7
baz=274
N17K Nushagak Hills 65.01 33 P P 03 46 59.1 +0.4
baz=275
L18K Granite Mounta 65.11 31 IAmb IAmb 03 47 04.1
comp=Z,13nm,1.1s
L18K Granite Mounta 65.11 31 P P 03 47 00.4 +1.1
baz=274
O17K Koliganek Bris 65.12 33 P P 03 47 00.2 +0.8
baz=275
F20K Avaraart Lake 65.20 25 P P 03 47 00.3 +0.5
baz=273
GNI Garni 65.31 305 *i* P P 03 47 01.6 +0.4
GNI pmax pmax
comp=Z,16nm,1.4s
TTA Tatalina 65.36 30 P P 03 47 01.2 +0.2
baz=275,SNR=5.8
C21K Knifeblade Rid 65.44 23 P P 03 47 01.8 +0.5
baz=273
J19K Poorman 65.45 29 IAmb IAmb 03 47 07.9
comp=Z,9.8nm,1.0s
J19K Poorman 65.45 29 P P 03 47 02.6 +1.1
baz=275
Q16K King Salmon 65.45 35 P P 03 47 02.7 +1.1
baz=276
B21K Ikpikpuk River 65.47 22 P P 03 47 02.4 +0.9
baz=273
P17K Kvichak River 65.51 34 P P 03 47 02.9 +1.0
baz=276
VRH Novokhopyorsk 65.51 317 *e*P P 03 46 59.5 -2.5
VRH pmax pmax
comp=Z,20nm,1.4s
KLMR Klimovskoe 65.56 328 *e*P P 03 46 59.7 -2.5
KLMR pmax pmax
comp=Z,28nm,1.3s
M18K Stony River 65.58 31 P P 03 47 03.8 +1.5
baz=276
N18K Kilae Creek 65.63 32 P P 03 47 03.4 +0.7
baz=276
H20K Anotleneega Mo 65.64 27 P P 03 47 03.5 +0.8
baz=275
E21K Killik River 65.78 24 P P 03 47 04.7 +1.1
baz=274
ONI Oni 65.79 308 P P 03 47 04.7 +0.6
ONI IAmb IAmb 03 47 18.0
comp=Z,12nm,1.1s
ONI Oni 65.79 308 P P 03 47 04.7 +0.6
ONI pmax pmax
comp=Z,12nm,1.1s
B22K Teshekpuk Lake 65.84 22 P P 03 47 04.7 +0.9
baz=274
I20K Naaghedeneel 65.88 28 P P 03 47 04.8 +0.6
baz=275
Q17K Contact Creek 65.90 35 P P 03 47 04.7 +0.1
baz=277
L19K White Mountain 65.97 31 IAmb IAmb 03 47 12.3
comp=Z,16nm,1.0s
L19K White Mountain 65.97 31 P P 03 47 05.8 +0.9
baz=276
KBZ Khabaz 65.97 309 *i* P P 03 47 03.6 -1.6
KBZ pmax pmax
comp=Z,10.0nm,1.0s
KBZ Khabaz 65.97 309 P P 03 47 06.1 +0.9
comp=Z,3.8nm,0.9s,baz=100,slow=4.0,SNR=7.5
KBZ LR LR 04 19 56.4
comp=Z,110nm,21.2s,baz=36,slow=40
comp=Z,3.8nm,0.9s
O18K Koktuh Hills 66.06 33 P P 03 47 05.1 -0.4
O18K Koktuh Hills 66.06 33 P P 03 47 06.3 +0.8
baz=277
F21K Alatna River 66.06 25 P P 03 47 06.4 +1.0
baz=275
IMAR Indian Mountai 66.07 26 P P 03 47 05.4 0.0
KIV Kislovodsk 66.08 309 P P 03 47 05.2 -0.8
KIV Kislovodsk 66.08 309 *e*P P 03 47 05.9 -0.1
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,132nm,17.0s
J20K Nowinta River 66.08 28 IAmb IAmb 03 47 12.9
comp=Z,9.0nm,0.9s
J20K Nowinta River 66.08 28 P P 03 47 06.5 +1.0
baz=276
P18K Big Mountain, 66.11 34 P P 03 47 06.5 +0.7
baz=277
G21K Allakaket 66.12 26 IAmb IAmb 03 47 12.6
comp=Z,12nm,1.1s
G21K Allakaket 66.12 26 P P 03 47 07.2 +1.4
baz=275
K20K Telida 66.20 29 P P 03 47 06.7 +0.4
baz=276
D22K Ayikyak River 66.21 23 P P 03 47 06.7 +0.4
baz=275,SNR=23
M19K Big River Lodg 66.22 31 P P 03 47 07.2 +0.7
baz=277
N19K Bonanza Creek 66.30 32 P P 03 47 07.5 +0.4
baz=277
L20K Farewell, AK 66.39 30 P P 03 47 07.8 +0.3
baz=277
H21K Melozitna Rive 66.49 27 IAmb IAmb 03 47 15.3
comp=Z,15nm,1.1s
H21K Melozitna Rive 66.49 27 P P 03 47 08.7 +0.5
baz=276
M20K Styx River 66.81 31 P P 03 47 11.1 +0.7
baz=278
G22K Bettles 66.86 25 P P 03 47 11.3 +0.8
baz=277
LVZ Lovozero 66.88 336 *ce*P P 03 47 10.8 +0.1
LVZ pmax pmax
comp=Z,31nm,1.7s
I21K Tanana 66.89 27 P P 03 47 11.8 +1.1
baz=277
CHUM Lake Minchumin 66.91 29 P P 03 47 11.9 +1.0
baz=278
D23K Nanushuk River 66.92 23 P P 03 47 11.8 +0.9
baz=277
LPSR Galich'ya Gora 67.00 319 *e*P P 03 47 08.7 -2.9
LPSR pmax pmax
comp=Z,10.0nm,1.0s
H22K Ishtalitna Cre 67.04 26 P P 03 47 12.3 +0.6
baz=278
VORD Divnogorie 67.06 317 *e*P P 03 47 09.5 -2.5
VORD pmax pmax
comp=Z,9.0nm,0.8s
CAST Castle Rocks 67.08 29 IAmb IAmb 03 47 19.5
comp=Z,12nm,1.0s
CAST Castle Rocks 67.08 29 P P 03 47 12.7 +0.7
baz=278
P19K Oil Pt 67.08 33 P P 03 47 12.9 +0.9
baz=279
VSR Storozhevoye 67.09 317 *e*P P 03 47 09.8 -2.4
VSR pmax pmax
comp=Z,20nm,1.4s
PPLA Purkeypile 67.10 30 P P 03 47 13.2 +0.9
baz=278
MOS Moscow 67.23 322 *e*P P 03 47 08.5 -4.5
COLD Coldfoot 67.33 25 P P 03 47 14.9 +1.4
baz=278
N20K Mount Spurr 67.34 32 P P 03 47 14.4 +0.6
baz=279
TOLK Toolik Lake Re 67.37 23 P P 03 47 14.0 +0.2
baz=278
MLY Manley 67.43 27 P P 03 47 15.0 +0.8
baz=278
E23K Chandalar 67.43 24 P P 03 47 15.2 +1.0
baz=278
G23K Bananza Creek 67.47 25 P P 03 47 15.6 +1.2
baz=278
C24K Franklin Bluff 67.52 22 P P 03 47 15.7 +1.1
baz=278
SKT Skwentna 67.54 31 P P 03 47 15.4 +0.5
baz=279
D24K Happy Valley 67.56 23 P P 03 47 15.7 +0.8
baz=278
E24K Your Creek 67.85 24 IAmb IAmb 03 47 22.4
comp=Z,6.3nm,0.7s
E24K Your Creek 67.85 24 P P 03 47 17.5 +0.7
baz=279,SNR=13
TRF Thorofare Moun 67.87 29 P P 03 47 17.3 +0.2
baz=280
OBN Obninsk 67.93 322 *e*P P 03 47 15.8 -1.6
OBN *e* 03 47 43.0
OBN *e* 03 49 46.1
OBN *e*PPP PPP 03 51 23.9
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,179nm,13.0s
I23K Minto, Yukon-K 67.99 27 P P 03 47 18.7 +1.1
baz=280
SUA Susitna One 68.00 31 P P 03 47 18.3 +0.3
baz=280
CUT Chulitna 68.06 30 P P 03 47 18.5 +0.4
baz=280
F24K Squaw Lake 68.17 24 IAmb IAmb 03 47 22.4
comp=Z,12nm,1.0s
F24K Squaw Lake 68.17 24 P P 03 47 19.2 +0.4
baz=280
NEA2 Nenana 68.20 28 P P 03 47 19.3 +0.3
baz=280
BRSE Bradley Lake S 68.31 33 P P 03 47 20.7 +1.0
baz=281
D25K Kavik River 68.39 22 IAmb IAmb 03 47 23.4
comp=Z,16nm,1.1s
D25K Kavik River 68.39 22 P P 03 47 21.2 +1.0
baz=281
MCK McKinley 68.42 29 P P 03 47 21.2 +0.8
baz=281,SNR=5.5
G24K Hadweenzic Riv 68.47 25 P P 03 47 21.4 +0.7
baz=281
H24K Noodor Dome 68.47 26 IAmb IAmb 03 47 34.6
comp=Z,13nm,1.1s
H24K Noodor Dome 68.47 26 P P 03 47 22.0 +1.2
baz=281,SNR=5.5
O22K Cooper Landing 68.67 32 P P 03 47 23.0 +1.1
baz=281
PMR Palmer 68.73 31 P P 03 47 23.1 +0.8
baz=281
WAT1 Susitna Watana 68.76 30 P P 03 47 22.9 +0.3
baz=281
POKR Poker Plat Res 68.79 27 P P 03 47 23.0 +0.3
baz=281
SEW Seward 68.88 32 P P 03 47 24.1 +0.9
baz=282
RAYN Ar Rayn 68.89 287 P P 03 47 22.7 -1.4
RAYN IAmb IAmb 03 47 25.7
comp=Z,9.1nm,1.1s
RAYN Ar Rayn 68.89 287 P P 03 47 22.7 -1.4
RAYN pmax pmax
comp=Z,9.0nm,1.1s
E25K Arctic Village 68.92 24 P P 03 47 23.9 +0.5
baz=282,SNR=7.6
G25K Bearman Lake 69.00 25 P P 03 47 25.0 +1.1
baz=282
F25K Christian Rive 69.00 24 P P 03 47 25.0 +1.0
baz=282,SNR=12
SML Sawmill 69.06 31 P P 03 47 25.4 +0.9
baz=282
KNK Knik Glacier 69.09 31 P P 03 47 25.2 +0.6
baz=282
69.09 27 IAmb IAmb 03 47 33.5
comp=Z,18nm,1.7s
ILAR Eielson Array 69.09 27 P P 03 47 23.1 -1.5
comp=Z,0.7nm,0.5s,baz=264,slow=5.0,SNR=18
ILAR LR LR 04 19 57.8
comp=Z,74nm,18.5s,baz=98,slow=38
comp=Z,0.7nm,0.5s
HDA Harding Lake 69.14 28 P P 03 47 25.9 +1.0
baz=282
WAT6 Susitna Watana 69.18 30 P P 03 47 25.3 -0.1
baz=282
DHY Denali Highway 69.24 29 P P 03 47 25.8 +0.2
baz=282
M23K Glacier View 69.35 31 P P 03 47 26.8 +0.6
baz=282
SCM Sheep Creek Mo 69.53 30 P P 03 47 27.4 0.0
baz=283
F26K Sheenjek River 69.54 24 P P 03 47 27.8 +0.5
baz=283
SPITS Spitsbergen Ar 69.72 348 LR LR 04 22 07.2
comp=Z,395nm,18.2s,baz=26,slow=39
J25K Salcha River, 69.76 27 P P 03 47 28.7 -0.1
baz=283
K24K Donnelly Dome 69.78 28 P P 03 47 29.2 +0.3
baz=283
G26K Porcupine Rive 69.85 25 P P 03 47 29.4 +0.2
baz=284
ARCES ARCESS Array B 69.86 338 LR LR 04 21 52.0
comp=Z,176nm,19.5s,baz=178,slow=39
M24K Tolsona, Glenn 69.99 30 P P 03 47 30.2 -0.1
baz=284
PAX Paxson 70.11 29 P P 03 47 30.9 -0.1
baz=284
RIDG Independent Ri 70.19 28 P P 03 47 32.1 +0.6
baz=284
KLU Klutina 70.26 31 P P 03 47 32.0 +0.1
baz=284
D27M Malcolm River 70.28 22 IAmb IAmb 03 47 38.1
comp=Z,7.3nm,0.8s
D27M Malcolm River 70.28 22 P P 03 47 32.6 +0.7
baz=286
SCRK Sand Creek 70.50 28 P P 03 47 33.2 -0.2
SCRK IAmb IAmb 03 47 39.4
comp=Z,17nm,1.5s
SCRK Sand Creek 70.50 28 P P 03 47 33.7 +0.3
baz=285
I26K Coal Creek Min 70.51 26 IAmb IAmb 03 47 38.5
comp=Z,19nm,1.4s
I26K Coal Creek Min 70.51 26 P P 03 47 33.6 +0.4
baz=285
J26L Joseph Creek 70.55 27 IAmb IAmb 03 47 39.2
comp=Z,7.5nm,0.8s
J26L Joseph Creek 70.55 27 P P 03 47 33.8 +0.1
baz=285
N25K Chitina, Valde 70.84 30 P P 03 47 35.5 0.0
baz=285
H27K Steamboat Moun 70.91 25 P P 03 47 36.0 +0.3
baz=286
E28M Babbage River 70.96 23 IAmb IAmb 03 47 42.0
comp=Z,7.2nm,0.8s
E28M Babbage River 70.96 23 P P 03 47 36.5 +0.5
baz=287
D28M Stokes Point 71.02 22 P P 03 47 36.6 +0.3
baz=288
L26K Log Cabin Wild 71.03 29 P P 03 47 37.0 +0.5
baz=286
I27K Kandik River 71.05 26 P P 03 47 36.9 +0.3
baz=286,SNR=5.6
F28M Old Crow 71.13 24 IAmb IAmb 03 47 40.5
comp=Z,11nm,1.0s
F28M Old Crow 71.13 24 P P 03 47 37.1 +0.1
baz=287,SNR=7.2
K27K Chicken 71.30 28 IAmb IAmb 03 47 44.9
comp=Z,21nm,1.2s
K27K Chicken 71.30 28 P P 03 47 38.3 +0.2
baz=286
M26K Nabesna, AK 71.36 29 IAmb IAmb 03 47 50.1
comp=Z,14nm,1.0s
M26K Nabesna, AK 71.36 29 P P 03 47 38.5 -0.1
baz=286
E29M Blow River 71.60 23 P P 03 47 40.1 +0.3
baz=289
L27K Beaver Creek, 71.69 28 P P 03 47 40.6 +0.2
baz=287
I28M Miner Creek 71.76 26 P P 03 47 41.1 +0.1
baz=288,SNR=5.1
FINES FINESS Array B 71.82 330 P P 03 47 41.2 0.0
comp=Z,3.1nm,0.8s,baz=72,slow=6.2,SNR=6.5
FINES LR LR 04 22 21.8
comp=Z,584nm,18.1s,baz=66,slow=38
comp=Z,3.1nm,0.8s
H29M Whitestone 72.13 25 IAmb IAmb 03 47 50.8
comp=Z,23nm,1.2s
H29M Whitestone 72.13 25 P P 03 47 43.4 +0.3
baz=289
BNN Bunyan 72.30 305 IAmb IAmb 03 47 46.0
comp=Z,20nm,1.2s
DAWY Dawson 72.42 27 P P 03 47 43.7 -1.2
DAWY IAmb IAmb 03 47 51.1
comp=Z,10nm,0.9s
DAWY Dawson 72.42 27 P P 03 47 45.1 +0.3
baz=289
F30M Barrier River 72.61 23 P P 03 47 46.6 +0.7
baz=291
G30M tAoh Zraii Nji 72.68 24 IAmb IAmb 03 47 48.7
comp=Z,18nm,1.1s
G30M tAoh Zraii Nji 72.68 24 P P 03 47 46.9 +0.5
baz=291
EPYK Eagle Plains 72.71 24 IAmb IAmb 03 47 48.9
comp=Z,16nm,1.1s
EPYK Eagle Plains 72.71 24 P P 03 47 46.3 -0.3
baz=290,SNR=5.8
J29N Klondike Camp 72.77 27 IAmb IAmb 03 47 53.9
comp=Z,11nm,0.8s
J29N Klondike Camp 72.77 27 P P 03 47 46.7 -0.3
baz=290
MNK Minsk 72.95 323 *i* P P 03 47 44.3 -3.8
MNK *i* 03 50 26.2
MNK *i* PPP PPP 03 52 10.7
MNK *i* S S 03 57 11.4 -3.1
MNK pmax pmax
comp=E,10.0nm,1.3s
MNK pmax pmax
comp=N,21nm,1.6s
MNK pmax pmax
comp=Z,16nm,1.1s
MNK MLR MLR
comp=E,110nm,19.0s
MNK MLR MLR
comp=N,307nm,17.0s
MNK MLR MLR
comp=Z,284nm,15.0s
INK Inuvik 73.15 22 IAmb IAmb 03 47 52.1
comp=Z,22nm,1.4s
INK Inuvik 73.15 22 P P 03 47 48.7 -0.4
baz=293,SNR=11
I30M Mount Dempster 73.25 26 IAmb IAmb 03 47 54.0
comp=Z,10nm,0.9s
I30M Mount Dempster 73.25 26 P P 03 47 50.0 +0.2
baz=291
L29M L29M 73.27 28 IAmb IAmb 03 47 57.0
comp=Z,11nm,0.8s
L29M L29M 73.27 28 P P 03 47 50.4 +0.5
baz=290
K29M Barlow Dome 73.27 27 IAmb IAmb 03 47 57.3
comp=Z,16nm,1.3s
K29M Barlow Dome 73.27 27 P P 03 47 50.1 0.0
baz=290
AKASG Malin Array Be 73.32 318 P P 03 47 49.6 -0.8
comp=Z,1.8nm,0.7s,baz=61,slow=5.1,SNR=6.3
AKASG LR LR 04 22 07.1
comp=Z,248nm,19.3s,baz=3.0,slow=38
comp=Z,1.8nm,0.7s
AKBB Malin Array Si 73.32 318 *ce*P P 03 47 48.4 -2.0
AKBB pmax pmax
comp=Z,18nm,1.7s
IDID Didziasalis 73.33 324 *e*P P 03 47 49.3 -1.0
M29M Somme Creek 73.35 29 IAmb IAmb 03 47 57.6
comp=Z,9.9nm,0.7s
M29M Somme Creek 73.35 29 P P 03 47 50.9 +0.4
baz=290
F31M Tsiigehtchic 73.41 23 P P 03 47 50.1 -0.5
baz=293
G31M Satah River 73.42 24 IAmb IAmb 03 48 44.5
comp=Z,20nm,1.6s
G31M Satah River 73.42 24 P P 03 47 50.2 -0.4
baz=292
NACGM Naroch 73.44 323 *e*P P 03 47 51.7 +0.7
comp=E,1μm,1.1s
J30M Hart River 73.50 26 IAmb IAmb 03 48 03.4
comp=Z,25nm,1.9s
J30M Hart River 73.50 26 P P 03 47 51.3 -0.1
baz=291
BRTR Keskin Array B 73.67 307 *ce*P P 03 47 53.0 +0.1
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 73.67 307 P P 03 47 53.5 +0.7
comp=Z,6.0nm,1.1s,baz=87,slow=8.8,SNR=8.4
comp=Z,6.0nm,1.1s
RAF Rauma 73.94 330 *e*P P 03 47 54.1 +0.4
M30M Minto, Yukon 74.03 28 IAmb IAmb 03 47 58.8
comp=Z,13nm,1.1s
M30M Minto, Yukon 74.03 28 P P 03 47 54.9 +0.4
baz=291

A36M	**Sachs Harbour**	**74.10**	**17**	P		**P**		**03 47 53.6**	**-0.9**
	baz=299,SNR=5.3								
HYT	**Haines Junctio**	**74.35**	**30**	P		**P**		**03 47 55.9**	**-0.5**
	baz=291								
MMAI	**Mount Meron Ar**	**74.42**	**299**	P		**P**		**03 47 57.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=80,slow=9.4,SNR=4.8								
MMAI				LR		LR		04 26 04.7	
	comp=Z,84nm,18.5s,baz=299,slow=40								
	comp=Z,0.3nm,0.3s								
P29M	**Windy Craggy**	**74.67**	**31**	P		**P**		**03 47 58.9**	**+0.7**
	baz=291								
PABE	**Paberze**	**74.76**	**324**	*e*P		**P**		**03 47 59.3**	**+0.6**
P30M	**Million Dollar**	**74.86**	**31**	P		**P**		**03 47 59.9**	**+0.6**
	baz=292								
N31M	**Braeburn, Yuko**	**74.88**	**29**	P		**P**		**03 47 59.6**	**+0.2**
	baz=292								
O30N	**Mendenhall**	**75.01**	**30**	P		**P**		**03 48 00.6**	**+0.4**
	baz=292								
M31M	**Drury Creek, Y**	**75.21**	**28**	IAmb		IAmb		03 48 50.8	
	comp=Z,34nm,1.8s								
M31M	**Drury Creek, Y**	**75.21**	**28**	P		**P**		**03 48 01.6**	**+0.3**
	baz=293								
WHY	**Whitehorse**	**75.60**	**30**	P		**P**		**03 48 03.9**	**+0.2**
	baz=293								
FARO	**Faro, Yukon**	**75.64**	**28**	IAmb		IAmb		03 48 07.0	
	comp=Z,11nm,1.0s								
FARO	**Faro, Yukon**	**75.64**	**28**	P		**P**		**03 48 03.6**	**-0.1**
	baz=294								
SUW	**Suwalki**	**75.72**	**323**	P		**P**		**03 48 02.8**	**-1.5**
SUW	**Suwalki**	**75.72**	**323**	P		**P**		**03 48 02.8**	**-1.5**
SUW				pmax		pmax			
	comp=Z,41nm,1.1s								
SUW	**Suwalki**	**75.72**	**323**	*e*P		**P**		**03 48 04.7**	**+0.4**
C36M	**Paulatuk**	**75.75**	**20**	P		**P**		**03 48 04.3**	**+0.2**
	baz=301,SNR=11								
SKAG	**Skagway**	**75.87**	**31**	P		**P**		**03 48 05.0**	**-0.1**
	baz=293								
EIL	**Elat**	**75.88**	**296**	LR		LR		04 25 52.3	
	comp=Z,68nm,20.6s,baz=58,slow=39								
N32M	**Quiet Lake**	**76.21**	**29**	IAmb		IAmb		03 48 54.1	
	comp=Z,11nm,0.9s								
N32M	**Quiet Lake**	**76.21**	**29**	P		**P**		**03 48 07.3**	**+0.3**
	baz=295								
P32M	**Atlin**	**76.57**	**30**	P		**P**		**03 48 09.9**	**+0.8**
	baz=295								
P33M	**Teslin, Yukon**	**76.72**	**30**	P		**P**		**03 48 10.2**	**+0.2**
	baz=295								
R32K	**Eaglecrest**	**76.74**	**32**	P		**P**		**03 48 09.7**	**-0.2**
	baz=294								
R33M	**Jennings River**	**77.92**	**30**	P		**P**		**03 48 16.6**	**-0.2**
	baz=297								
HFS	**Hagfors**	**77.94**	**331**	P		**P**		**03 48 17.6**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=99,slow=9.2,SNR=2.0								
HFS				LR		LR		04 25 08.6	
	comp=Z,495nm,18.2s,baz=60,slow=38								
	comp=Z,2.2nm,0.8s								
TGTN	**Hyland Airport**	**78.11**	**27**	P		**P**		**03 48 18.3**	**+0.6**
	baz=299								
KOLS	**Kolonicke sedl**	**78.15**	**318**	*e*P		**P**		**03 48 19.4**	**+1.3**
KOLS	**Kolonicke sedl**	**78.15**	**318**	*e*P		**P**		**03 48 19.4**	**+1.3**
S34M	**Telegraph Cree**	**78.52**	**31**	P		**P**		**03 48 20.4**	**+0.5**
	baz=297								
WTLY	**Watson Lake, Y**	**78.56**	**29**	IAmb		IAmb		03 48 33.0	
	comp=Z,14nm,1.2s								
NB2	**NORSAR Subarra**	**78.59**	**332**	P		**P**		**03 48 20.5**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=60,slow=5.6								
NOA	**NORSAR Array B**	**78.59**	**332**	P		**P**		**03 48 21.1**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=57,slow=5.8,SNR=3.3								
NOA				LR		LR		04 25 52.3	
	comp=Z,352nm,18.8s,baz=55,slow=38								
	comp=Z,0.9nm,0.7s								
DLBC	**Dease Lake**	**78.79**	**31**	P		**P**		**03 48 22.4**	**+0.9**
	baz=298								
WRGLY	**Wrigley**	**79.18**	**25**	P		**P**		**03 48 23.5**	**+0.1**
	baz=302								
URZ	**Urewera**	**80.84**	**139**	LR		LR		04 23 43.0	
	comp=Z,33nm,19.8s,baz=120,slow=35								
RPZ	**Rata Peaks**	**81.19**	**146**	LR		LR		04 22 30.0	
	comp=Z,24nm,20.3s,baz=294,slow=34								
CLL	**Collm**	**82.47**	**323**	*e*P		P		03 48 55.0	+14
CLL				MLR		MLR			
	comp=Z,300nm,20.8s								
CLL	**Collm**	**82.47**	**323**	*e*P		**P**		**03 48 42.0**	**+0.7**
CLL				*ex*		x		03 48 55.0	
CLL				AMS		AMS		04 29 00.0	
	comp=Z,300nm,20.8s								
YKA	**Yellowknife Ar**	**82.89**	**23**	P		**P**		**03 48 42.9**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=313,slow=5.0,SNR=32								
	comp=Z,4.1nm,0.8s								
GERES	**GERESS Array B**	**83.28**	**321**	P		**P**		**03 48 46.2**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=79,slow=7.1,SNR=4.3								
GERES				LR		LR		04 29 28.9	
	comp=Z,243nm,18.7s,baz=5.0,slow=38								
	comp=Z,1.5nm,0.9s								
DAVOX	**Davos/Dischmat**	**86.54**	**320**	LR		LR		04 32 55.9	
	comp=Z,172nm,21.1s,baz=360,slow=39								
RAR	**Rarotonga**	**88.58**	**114**	LR		LR		04 25 56.3	
	comp=Z,65nm,18.1s,baz=196,slow=34								
EDM	**Edmonton**	**89.47**	**30**	IAmb		IAmb		03 49 23.1	
	comp=Z,14nm,1.1s								
MXC	**Moxie City**	**90.12**	**38**	IAmb		IAmb		03 49 23.7	
	comp=Z,7.9nm,0.9s								
I04A	**Tendick Farm,**	**90.52**	**41**	P		**P**		**03 49 21.5**	**+0.5**
I04A				IAmb		IAmb		03 49 24.3	
	comp=Z,17nm,1.3s								
NEW	**Newport**	**90.81**	**35**	IAmb		IAmb		03 49 30.0	
	comp=Z,9.5nm,1.2s								
NEW	**Newport**	**90.81**	**35**	P		**P**		**03 49 22.7**	**+0.4**
	baz=309								
J05D	**Fort Rock, OR**	**91.51**	**41**	P		**P**		**03 49 24.0**	**-1.7**
J05D				IAmb		IAmb		03 49 34.0	
	comp=Z,12nm,1.4s								
FRB	**Frobisher Bay**	**92.12**	**5**	LR		LR		04 35 15.9	
	comp=Z,96nm,18.4s,baz=19,slow=38								
BMO	**Blue Mountains**	**92.83**	**38**	IAmb		IAmb		03 49 39.1	
	comp=Z,9.1nm,1.4s								
FFC	**Flin Flon**	**93.04**	**24**	P		**P**		**03 49 31.5**	**-0.9**
FFC				IAmb		IAmb		03 49 37.9	
	comp=Z,8.5nm,1.1s								
FFC	**Flin Flon**	**93.04**	**24**	P		**P**		**03 49 31.5**	**-0.9**
FFC				pmax		pmax			
	comp=Z,8.0nm,1.1s								
EGMT	**Eagleton**	**94.68**	**32**	P		**P**		**03 49 40.4**	**+0.2**
	baz=314								
HLID	**Hailey**	**95.26**	**37**	P		**P**		**03 49 43.1**	**0.0**
	baz=310								
BOZ	**Bozeman (W)**	**95.41**	**34**	P		**P**		**03 49 44.0**	**+0.3**
	baz=313								
PPT	**Papeete**	**95.81**	**107**	LR		LR		04 25 00.7	
	comp=Z,86nm,19.3s,baz=240,slow=31								
PPT2	**Papeete2**	**95.82**	**107**	*e*LR		LR		04 20 47.2	
PPT2						LR		04 20 49.6	
	comp=Z,201nm,25.8s			*e*LR					
	comp=Z,130nm,24.0s								
NVAR	**Mina Array Bea**	**96.17**	**43**	P		**P**		**03 49 47.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=287,slow=7.2,SNR=1.9								
	comp=Z,0.3nm,0.6s								
LSZ	**Lusaka**	**99.27**	**257**	LR		LR		04 34 48.2	
	comp=Z,58nm,18.0s,baz=116,slow=35								

TAP 07 03:37:36.6,24.07N×121.73E,h9km,ML4.5,1C-6D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.12**	**276**	⇓*i*	P		Pg	03 37 39.9	+0.5
	baz=278								
TWD				*i*	S		Sg	03 37 41.7	+0.4
	baz=278								
ETL	**Fush Village**	**0.13**	**313**	⇓*i*	P		Pg	03 37 40.1	+0.5
	baz=313								
ETL				*i*	S		Sg	03 37 42.7	+1.0
	baz=313								
NACB	**Ninganchiao**	**0.16**	**311**	⇓*i*	P		Pg	03 37 40.5	+0.4
	baz=311								
NACB				*i*	S		Sg	03 37 43.1	+0.6
	baz=311								
ETM	**Tongmen**	**0.24**	**245**	*i*	P		Pg	03 37 42.1	+0.6
	baz=250								
ETM				*i*	S		Sg	03 37 45.8	+1.1
	baz=250								
EHP	**Heping Village**	**0.24**	**3**	*i*	P		Pg	03 37 42.2	+0.7
	baz=351								
EHP				*i*	S		Sg	03 37 46.1	+1.3
	baz=351								
EAHA	**Aohua**	**0.26**	**2**	*i*	P		Pg	03 37 42.5	+0.6
	baz=357								
EAHA					S		Sg	03 37 46.7	+1.3
	baz=357								
LXIB	**Xiulin Townshi**	**0.29**	**261**	*i*	P		Pg	03 37 43.0	+0.5
	baz=255								
LXIB				*i*	S		Sg	03 37 47.6	+1.1
	baz=255								
SHUL	**Shoufeng**	**0.32**	**209**	⇑	P		Pb	03 37 44.6	+0.1
	baz=213								
SHUL				*e*	S		Sb	03 37 50.6	+0.8
	baz=213								
ENA	**Nanau**	**0.36**	**2**	⇓*i*	P		Pg	03 37 44.4	+0.7
	baz=360								
ENA				*i*	S		Sg	03 37 49.2	+0.7
	baz=360								
ESL	**Shilin**	**0.37**	**227**	P			Pg	03 37 44.6	+0.7
	baz=238								
ESL					S		Sg	03 37 49.3	+0.5
	baz=238								
EWUT	**Wuta**	**0.38**	**7**	⇓*i*	P		Pg	03 37 44.8	+0.7
	baz=3.0								
EWUT				*e*	S		Sg	03 37 50.1	+1.0
	baz=3.0								
TEGC	**Jichi Village**	**0.40**	**206**	*e*P			Pb	03 37 45.9	+0.1
	baz=210								
TEGC					S		Sb	03 37 53.4	+1.4
	baz=210								
WHF	**Hehuan Shan**	**0.43**	**280**	P			Pg	03 37 45.8	+0.6
	baz=282								
WHF				*i*	S		Sg	03 37 52.0	+1.1
	baz=282								
WARBT	**Fenglin Townsh**	**0.47**	**222**	P			Pg	03 37 46.3	+0.6
	baz=236								
WARBT					S		Sg	03 37 52.9	+0.9
	baz=236								
FUSS	**Fushou**	**0.48**	**292**	P			Pb	03 37 46.8	-0.6
	baz=299								
NNSB	**Datong**	**0.48**	**319**	⇓*i*	P		Pb	03 37 46.7	-0.7
	baz=317								
NNSB				*i*	S		Sg	03 37 53.3	+1.0
	baz=317								
NNSH	**Datong**	**0.48**	**319**	P			Pg	03 37 46.6	+0.6
	baz=314								
EGFH	**Guangfu**	**0.48**	**215**	P			Pb	03 37 47.1	-0.2
	baz=231								
EGFH				*e*	S		Sb	03 37 55.6	+1.0
	baz=231								
NNS	**Nan Shan**	**0.49**	**319**	*i*	P		Pb	03 37 47.0	-0.6
	baz=317								
NNS					S		Sg	03 37 53.8	+1.0
	baz=317								
LATG	**Datong**	**0.50**	**338**	P			Pb	03 37 47.8	+0.1
	baz=335								
LATG					S		Sb	03 37 54.6	-0.6
	baz=335								
CHGB	**Renai**	**0.51**	**269**	*i*	P		Pb	03 37 47.4	-0.5
	baz=272								
CHGB				*i*	S		Sg	03 37 54.2	+0.9
	baz=272								
ESAO	**Su ao**	**0.52**	**12**	*e*P			Pb	03 37 48.4	+0.4
	baz=359								
OWD	**Renai**	**0.52**	**258**	P			Pg	03 37 47.4	+0.6
	baz=269								
OWD					S		Sb	03 37 55.2	-0.5
	baz=269								
TWT	**Tachien**	**0.54**	**290**	P			Pb	03 37 48.5	+0.2
	baz=290								
TWT				*e*	S		Sb	03 37 56.2	-0.1
	baz=290								
TWC	**Suao**	**0.55**	**11**	*e*P			Pb	03 37 48.0	-0.4
	baz=359								
TDCB	**Techi**	**0.55**	**290**	P			Pb	03 37 48.4	-0.2
	baz=290								
TDCB					S		Sb	03 37 55.9	-0.9
	baz=290								
NDS	**Dongshan**	**0.56**	**359**	P			Pb	03 37 48.4	-0.3
	baz=354								
NDS					S		Sb	03 37 56.7	-0.2
	baz=354								
WUSB	**Renai**	**0.56**	**262**	*i*	P		Pb	03 37 48.4	-0.4
	baz=266								
WUSB				*e*	S		Sb	03 37 56.9	-0.1
	baz=266								
NDT	**Datong Townshi**	**0.57**	**340**	P			Pb	03 37 48.5	-0.4
	baz=336								
NDT				*e*	S		Sg	03 37 55.7	+0.6
	baz=336								
ENTT	**Nioudou**	**0.59**	**345**	*e*P			Pb	03 37 49.0	-0.2
	baz=334								
ENTT				*e*	S		Sb	03 37 57.4	-0.2
	baz=334								
VWDT	**VWDT**	**0.62**	**240**	P			Pb	03 37 49.6	-0.1
	baz=243								
VWDT				*e*	S		Sb	03 37 58.9	+0.3
	baz=243								
HGSD	**Ruisui**	**0.64**	**206**	*e*P			Pb	03 37 50.8	+0.9
	baz=199								
TWE	**Neicheng**	**0.65**	**355**	*e*P			Pb	03 37 50.3	+0.1
	baz=353								
TWE				*e*	S		Sb	03 37 58.9	-0.5
	baz=353								
EHY	**Hungye**	**0.67**	**214**	P			Pb	03 37 50.2	-0.4
	baz=231								
EHY				*e*	S		Sb	03 38 00.3	+0.3
	baz=231								
YHNB	**Yeheng**	**0.68**	**332**	P			Pb	03 37 50.7	-0.1
	baz=330								
YHNB					S		Sb	03 38 00.2	-0.1
	baz=330								
NSK	**Sanguang**	**0.69**	**331**	*e*P			Pb	03 37 50.7	-0.3
	baz=329								
NSK				*e*	S		Sb	03 38 00.7	0.0
	baz=329								
FUSB	**Fushanzhiwuyua**	**0.70**	**349**	*e*P			Pb	03 37 51.8	+0.7
	baz=336								
WPL	**Puli Township**	**0.71**	**266**	P			Pb	03 37 51.1	-0.1
	baz=268								
WPL					S		Sb	03 38 00.9	-0.2
	baz=268								
DPDB	**Guoxing**	**0.73**	**267**	P			Pb	03 37 51.8	+0.1
	baz=270								
DPDB					S		Sb	03 38 01.9	0.0
	baz=270								
NWLT	**Wulai**	**0.74**	**344**	*e*P			Pb	03 37 51.9	+0.2
	baz=327								
WHP	**Taichung City**	**0.74**	**286**	P			Pb	03 37 52.2	+0.3
	baz=287								
WHP					S		Sb	03 38 02.8	+0.6
	baz=287								
WCS	**Beigang Elemen**	**0.75**	**269**	*e*P			Pb	03 37 51.9	+0.1
	baz=270								
SMLT	**Sun Moon Lake**	**0.78**	**257**	P			Pb	03 37 52.8	+0.4
	baz=259								
SMLT				*e*	S		Sb	03 38 03.8	+0.5
	baz=259								
YULB	**Yu-li**	**0.78**	**211**	*e*P			Pb	03 37 53.0	+0.5
	baz=228								
ECBN	**Changbin**	**0.79**	**199**	*e*P			Pb	03 37 52.8	+0.2
	baz=191								
NFF	**Wufeng Townshi**	**0.79**	**315**	P			Pb	03 37 53.0	+0.4
	baz=314								
NFF				*e*	S		Sb	03 38 03.8	+0.3
	baz=314								
EYUL	**Yuli**	**0.81**	**208**	*e*P			Pn	03 37 54.4	+0.1
	baz=225								
TYC	**Yuchr**	**0.81**	**259**	P			Pb	03 37 52.7	-0.3
	baz=261								
TYC					S		Sg	03 38 03.4	+0.4
	baz=261								
TWF1	**Yuli**	**0.81**	**209**	*e*P			Pb	03 37 52.9	-0.1
	baz=226								
LIOB	**Emei**	**0.87**	**312**	*e*P			Pn	03 37 55.0	-0.2
	baz=309								
NSTT	**Nanjuang**	**0.87**	**310**	*e*P			Pn	03 37 54.6	-0.5
	baz=308								
WHYT	**Xinyi Township**	**0.88**	**245**	*e*P			Pn	03 37 55.3	0.0
	baz=256								
WHYT				*e*	S		Sb	03 38 07.0	+0.9
	baz=256								
NJD	**Zhudong**	**0.89**	**319**	*e*P			Pn	03 37 55.5	+0.2
	baz=315								
TIPB	**Shuangxi**	**0.90**	**6**	*e*P			Pb	03 37 54.8	+0.2
	baz=351								
NHDH	**Xindian Distri**	**0.91**	**348**	*e*P			Pn	03 37 55.6	-0.1
	baz=343								
TWQ1	**Liyutan**	**0.92**	**288**	P			Pn	03 37 56.4	+0.6
	baz=299								
TWQ1				*e*	S		Sn	03 38 10.3	+1.2
	baz=299								
TWA	**Mucha**	**0.92**	**352**	*e*P			Pn	03 37 56.7	+0.9
	baz=346								
CHKH	**Chenggong**	**0.92**	**199**	*e*P			Pb	03 37 54.8	0.0
	baz=193								
TATO	**Taipei**	**0.93**	**346**	*e*P			Pn	03 37 56.0	+0.1
	baz=333								
TATO				*e*	S		Sn	03 38 09.5	+0.1
	baz=333								
WWF	**Wufeng**	**0.94**	**269**	*e*P			Pn	03 37 57.2	+1.1
	baz=270								
WJS	**Zhushan**	**0.95**	**255**	*e*P			Pn	03 37 56.6	+0.5
	baz=259								
WJS				*e*	S		Sn	03 38 10.5	+0.6
	baz=259								
NSY	**Sanyi**	**0.95**	**292**	*e*P			Pn	03 37 57.1	+0.9
	baz=291								
FULB	**Fuli**	**0.95**	**205**	*e*P			Pn	03 37 55.9	-0.4
	baz=198								
TCU	**Taichung**	**0.96**	**275**	*e*P			Pn	03 37 57.5	+1.1
	baz=271								
TWB1	**Santiao Chiao**	**0.96**	**14**	*e*P			Pn	03 37 57.9	+1.5
	baz=360								
WNT1	**Nantou City**	**0.97**	**261**	*e*P			Pn	03 37 56.7	+0.2
	baz=264								
WNT1				*e*	S		Sn	03 38 11.8	+1.4
	baz=264								
WNT	**Mingjian**	**0.97**	**259**	P			Pn	03 37 57.3	+0.8
	baz=262								
WNT				*e*	S		Sn	03 38 11.4	+0.9
	baz=262								
NMLH	**Miaoli**	**0.97**	**299**	*e*P			Pn	03 37 58.1	+1.6
	baz=298								
NMLH				*e*	S		Sn	03 38 13.0	+2.4
	baz=298								
SBCB	**Hsinchu**	**0.99**	**317**	*e*P			Pn	03 37 58.1	+1.3
	baz=313								
NJN	**Zhunan**	**0.99**	**308**	*e*P			Pn	03 37 57.9	+1.1
	baz=305								
NWF	**Wu-fen Shan**	**1.00**	**3**	*e*P			Pn	03 37 58.4	+1.5
	baz=342								
WFSB	**Wu-fen Shan**	**1.00**	**3**	*e*P			Pn	03 37 58.4	+1.5
	baz=342								
HSN	**Hsinchu**	**1.01**	**317**	*e*P			Pn	03 37 58.2	+1.3
	baz=315								
ALS	**Alishan**	**1.01**	**237**	*i*	P		Pn	03 37 57.1	-0.2
	baz=241								
ALS				*e*	S		Sn	03 38 11.7	-0.2
	baz=241								
CHKT	**Chengkung**	**1.02**	**199**	P			Pn	03 37 57.1	0.0
	baz=204								
CHKT					S		Sn	03 38 11.5	-0.1
	baz=204								
SXI1	**Grass Mountain**	**1.03**	**7**	*e*P			Pn	03 37 57.4	0.0
	baz=347								
WDJ	**Dajia District**	**1.03**	**286**	*e*P			Pn	03 37 59.0	+1.7
	baz=285								
EHD	**Haiduan**	**1.03**	**208**	*e*P			Pb	03 37 56.7	0.0
	baz=224								
WYL	**Yuanlin Townsh**	**1.06**	**264**	*e*P			Pn	03 37 56.3	-0.6
	baz=251								
TWS1	**Kuangyinshan**	**1.07**	**345**	*e*P			Pn	03 37 59.1	+1.3
	baz=338								
WCHH	**Zhanghua**	**1.07**	**271**	*e*P			Pn	03 37 58.6	+0.7
	baz=272								
WCHH				*e*	S		Sn	03 38 15.2	+2.3
	baz=272								
CHN5	**Tsauling**	**1.07**	**244**	P			Pn	03 37 58.9	+1.0
	baz=239								
CHN5				*e*	S		Sn	03 38 14.9	+1.9
	baz=239								
ECS	**Chishang**	**1.07**	**206**	*e*P			Pg	03 37 57.1	-0.2
	baz=223								
TNOU	**National Taiwa**	**1.08**	**2**	*e*P			Pn	03 37 58.3	+0.3
	baz=344								
YM01	**YM01**	**1.08**	**352**	*e*P			Pn	03 37 58.8	+0.7
	baz=345								
ELDTW	**Lidau**	**1.09**	**217**	*e*P			Pg	03 37 56.8	-0.8
	baz=209								
ELDTW				*e*	S		Sb	03 38 12.2	0.0
	baz=209								
ANP	**Anpu**	**1.13**	**350**	*e*P			Pg	03 37 57.4	-1.0
	baz=343								
WGK	**Gukeng**	**1.13**	**251**	*e*P			Pn	03 38 01.3	+2.6
	baz=252								
EDH	**Donghe**	**1.16**	**200**	*e*P			Pb	03 37 58.5	-0.4
	baz=205								
WCKO	**Fanlu**	**1.21**	**239**	P			Pg	03 38 01.1	+1.3
	baz=242								
WCKO				*e*	S		Sn	03 38 18.9	+2.6
	baz=242								
YOJ	**Yonaguni jima**	**1.23**	**71**	*e*P			Pn	03 37 59.2	-0.9
	baz=71								
WRL	**Guolierlin Hig**	**1.25**	**263**	*e*P			Pg	03 38 01.4	+0.8
	baz=254								
WRL				*e*	S		Sn	03 38 20.3	+3.0
	baz=254								
CHN4	**Tsaushan**	**1.26**	**236**	P			Pg	03 38 02.4	+1.5
	baz=239								
RLNB	**Erlin**	**1.27**	**262**	*e*P			Pg	03 38 02.2	+1.3
	baz=264								
RLNB					S		Sn	03 38 20.2	+2.6
	baz=264								
CHN2	**Minshiung**	**1.27**	**245**	*e*P			Pg	03 38 02.6	+1.7
	baz=247								
STYT	**Tauyuan**	**1.27**	**225**	*e*P			Pg	03 38 01.2	+0.2
	baz=230								
STYT				*e*	S		Sn	03 38 18.1	+0.2
	baz=230								
WTK	**Tuku**	**1.28**	**253**	*e*P			Pg	03 38 02.0	+0.7
	baz=256								
WTK				*e*	S		Sn	03 38 21.0	+2.9
	baz=256								
WTP	**Ta-pu**	**1.31**	**232**	*e*P			Pg	03 38 02.4	+0.6
	baz=235								
TWG	**Pinlang**	**1.38**	**206**	*e*P			Pg	03 38 03.4	+0.2
	baz=210								
TWGBT	**Beinan**	**1.38**	**206**	*e*P			Pn	03 38 00.2	-1.9
	baz=210								
TWK	**Hsinying**	**1.39**	**235**	*e*P			Pg	03 38 04.1	+0.8
	baz=237								
TWK				*e*	S		Sg	03 38 23.5	+2.2
	baz=237								
CHN1	**Nanshi**	**1.41**	**232**	*e*P			Pg	03 38 04.2	+0.5
	baz=235								
SNST	**Tainan City**	**1.41**	**233**	*e*P			Pg	03 38 05.4	+1.7
	baz=235								
SGST	**Jiashian**	**1.44**	**227**	*e*P			Pb	03 38 03.4	-0.2
	baz=232								
SGST				*e*	S		Sg	03 38 24.4	+1.5
	baz=232								
WSF	**Szhu**	**1.45**	**253**	*e*P			Pg	03 38 04.5	+0.2
	baz=255								
SLGT	**Liugui**	**1.46**	**223**	*e*P			Pg	03 38 04.5	-0.2
	baz=229								
SLGT				*e*	S		Sg	03 38 25.1	+1.5
	baz=229								
WSL	**Shuilin Townsh**	**1.48**	**249**	*e*P			Pg	03 38 05.

WTP	**Ta-pu** baz=4.0	**0.03**	**345**	⇑	*i*	P	Pg	03 37 57.8	+0.3
WTP	baz=4.0				*i*	S	Sg	03 37 59.4	+0.6
CHN1	**Nanshi** baz=246	**0.09**	**247**			P	Pg	03 37 58.6	+0.5
CHN1	baz=246					S	Sg	03 38 01.0	+1.0
SNST	**Tainan City** baz=269	**0.11**	**269**		*e*	P	Pg	03 37 58.9	+0.5
SNST	baz=269				*e*	S	Sg	03 38 01.5	+1.1
TWK	**Hsinying** baz=291	**0.13**	**290**			P	Pg	03 37 59.0	+0.3
TWK	baz=291				*e*	S	Sg	03 38 01.8	+1.0
CHN4	**Tsaushan** baz=349	**0.13**	**349**			P	Pb	03 37 59.4	-0.7
STYH	**Taoyuan** baz=218	**0.15**	**110**		*e*	P	Pb	03 37 60.0	-0.4
STYH	**Taoyuan** baz=105	**0.15**	**110**			P	Pb	03 37 59.7	-0.7

TAP ***07*** *03:40:27.7, 24°.21N × 121°.72E, h8km, ML4.0, C*
JMA ***07*** *03:40:28.1 ± 0.1, 24°.2N ± 0°.3 × 121°.7E ± 0°.6, h9km ± 1km,*
MV2.9/8, TAIWAN REGION

ISC 07 03:40:27.9 ± 0.8, **24°.20N** ± 0°.01 × **121°.72E** ± 0°.02, **h8km** ± 5km,
n158, σ 0 **s73/242, 17C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=239	**0.10**	**246**		*i*	P	**Pg**	**03 40 30.5**	**+0.3**
ETL	baz=239				*i*	S	**Sg**	**03 40 32.2**	**+0.3**
EHP	**Heping Village** baz=16	**0.11**	**10**		*i*	P	**Pg**	**03 40 30.6**	**+0.1**
EHP	baz=16				*i*	S	**Sg**	**03 40 32.5**	**+0.2**
NACB	**Ninganchiao** baz=246	**0.12**	**258**	⇑	*i*	P	**Pg**	**03 40 30.7**	**+0.2**
NACB	baz=246				*i*	S	**Sg**	**03 40 32.6**	**+0.3**
EAHA	**Aohua** baz=18	**0.13**	**8**	⇓	*i*	P	**Pg**	**03 40 30.8**	**+0.1**
EAHA	baz=18				*i*	S	**Sg**	**03 40 33.0**	**+0.2**
TWD	**Chiawan** baz=219	**0.16**	**224**	⇓	*i*	P	**Pg**	**03 40 31.4**	**+0.2**
TWD	baz=219				*i*	S	**Sg**	**03 40 33.8**	**+0.3**
ENA	**Nanau** baz=8.0	**0.23**	**5**		*i*	P	**Pg**	**03 40 32.6**	**+0.1**
ENA	baz=8.0				*i*	S	**Sg**	**03 40 35.7**	**0.0**
EWUT	**Wuta** baz=13	**0.25**	**12**	⇓	*i*	P	**Pg**	**03 40 33.0**	**+0.1**
EWUT	baz=13					S	**Sg**	**03 40 36.5**	**+0.1**
ETM	**Tongmen** baz=212	**0.31**	**222**	⇓	*i*	P	**Pg**	**03 40 34.0**	**0.0**
ETM	baz=212				*i*	S	**Sg**	**03 40 38.2**	**+0.1**
LXIB	**Xiulin Townshi** baz=237	**0.33**	**238**	⇓	*i*	P	**Pg**	**03 40 34.5**	**0.0**
LXIB	baz=237				*e*	S	**Sg**	**03 40 39.0**	**+0.2**
LATG	**Datong** baz=332	**0.38**	**333**	⇑	*i*	P	**Pg**	**03 40 35.6**	**+0.3**
LATG	baz=332				*i*	S	**Sg**	**03 40 40.6**	**+0.2**
NNSB	**Datong** baz=306	**0.38**	**307**	⇑	*i*	P	**Pg**	**03 40 35.8**	**+0.4**
NNSB	baz=306				*i*	S	**Sg**	**03 40 40.8**	**+0.3**
NNSH	**Datong** baz=306	**0.38**	**307**	⇑	*i*	P	**Pg**	**03 40 35.8**	**+0.4**
NNSH	baz=306				*i*	S	**Sg**	**03 40 40.7**	**+0.2**
ESAO	**Su ao** baz=17	**0.39**	**17**	⇓		P	**Pg**	**03 40 35.5**	**-0.1**
NNS	**Nan Shan** baz=307	**0.40**	**308**	⇑	*i*	P	**Pg**	**03 40 36.0**	**+0.4**
NNS	baz=307				*i*	S	**Sg**	**03 40 41.1**	**+0.2**
WHF	**Hehuan Shan** baz=261	**0.42**	**263**		*i*	P	**Pg**	**03 40 36.4**	**+0.2**
WHF	baz=261					S	**Sg**	**03 40 41.7**	**0.0**
TWC	**Suao** baz=18	**0.43**	**16**	⇓	*i*	P	**Pg**	**03 40 36.2**	**0.0**
TWC	baz=18					S	**Sg**	**03 40 42.0**	**+0.1**
SHUL	**Shoufeng** baz=207	**0.43**	**199**		*e*	P	**Pb**	**03 40 37.1**	**-0.6**
NDS	**Dongshan** baz=6.0	**0.43**	**360**	⇓	*i*	P	**Pg**	**03 40 36.6**	**+0.3**
FUSS	**Fushou** baz=276	**0.44**	**277**	⇑	*i*	P	**Pg**	**03 40 36.9**	**+0.5**
FUSS	baz=276					S	**Sg**	**03 40 42.8**	**+0.6**
NDT	**Datong Townshi** baz=335	**0.45**	**335**	⇑	*i*	P	**Pg**	**03 40 37.1**	**+0.5**
NDT	baz=335				*i*	S	**Sg**	**03 40 43.3**	**+0.9**
ENTT	**Nioudou** baz=343	**0.46**	**343**	⇓	*i*	P	**Pg**	**03 40 37.2**	**+0.3**
ENTT	baz=343				*i*	S	**Sg**	**03 40 43.4**	**+0.5**
ESL	**Shilin** baz=214	**0.46**	**214**	⇓	*i*	P	**Pg**	**03 40 36.7**	**-0.1**
TWT	**Tachien** baz=275	**0.50**	**277**	⇑	*i*	P	**Pb**	**03 40 38.4**	**-0.6**
TWT	baz=275				*i*	S	**Sb**	**03 40 45.1**	**-1.4**
TEGC	**Jichi Village** baz=187	**0.51**	**199**			P	**Pb**	**03 40 39.3**	**+0.2**
TDCB	**Techi** baz=275	**0.51**	**276**	⇑	*i*	P	**Pb**	**03 40 38.5**	**-0.8**
TDCB	baz=275				*i*	S	**Sg**	**03 40 44.7**	**+0.1**
CHGB	**Renai** baz=245	**0.52**	**255**		*i*	P	**Pg**	**03 40 38.3**	**+0.4**
CHGB	baz=245					S	**Sg**	**03 40 44.8**	**+0.1**
EOS2	**EOS2** baz=56	**0.52**	**65**		*e*	P	**Pb**	**03 40 39.4**	**+0.3**
TWE	**Neicheng** baz=4.0	**0.52**	**355**	⇓	*i*	P	**Pg**	**03 40 38.4**	**+0.4**
TWE	baz=4.0				*i*	S	**Sg**	**03 40 45.0**	**+0.1**
OWD	**Renai** baz=243	**0.55**	**244**		*e*	P	**Pg**	**03 40 38.7**	**+0.2**
EOS4	**EOS4** baz=84	**0.55**	**98**		*e*	P	**Pb**	**03 40 40.8**	**+1.2**
EOS3	**EOS3** baz=79	**0.55**	**81**		*e*	P	**Pb**	**03 40 40.1**	**+0.4**
YHNB	**Yeheng** baz=326	**0.56**	**326**	⇑	*i*	P	**Pb**	**03 40 39.5**	**-0.6**
YHNB	baz=326				*i*	S	**Sg**	**03 40 46.6**	**+0.4**
ILA	**Ilan** baz=3.0	**0.57**	**3**		*e*	P	**Pg**	**03 40 39.4**	**+0.5**
WARBT	**Fenglin Townsh** baz=221	**0.57**	**213**		*i*	P	**Pg**	**03 40 38.5**	**-0.3**
FUSB	**Fushanzhiwuyua** baz=347	**0.57**	**348**	⇓	*i*	P	**Pg**	**03 40 39.4**	**+0.4**
FUSB	baz=347					S	**Sg**	**03 40 46.4**	**-0.1**
NSK	**Sanguang** baz=326	**0.58**	**326**	⇑	*i*	P	**Pb**	**03 40 39.7**	**-0.6**
NSK	baz=326				*i*	S	**Sg**	**03 40 47.0**	**+0.4**
WUSB	**Renai** baz=241	**0.59**	**250**	⇓		P	**Pg**	**03 40 39.5**	**+0.3**
WUSB	baz=241					S	**Sg**	**03 40 47.0**	**+0.1**
EGFH	**Guangfu** baz=215	**0.59**	**207**	⇓	*e*	P	**Pg**	**03 40 39.2**	**0.0**
NWLT	**Wulai** baz=341	**0.61**	**341**			P	**Pb**	**03 40 40.2**	**-0.6**
NWLT	baz=341				*i*	S	**Sg**	**03 40 47.6**	**-0.1**
VWDT	**VWDT** baz=230	**0.69**	**230**	⇓	*i*	P	**Pg**	**03 40 41.2**	**+0.1**
VWDT	baz=230					S	**Sb**	**03 40 51.2**	**-0.5**
NFF	**Wufeng Townshi** baz=308	**0.70**	**308**	⇑	*i*	P	**Pb**	**03 40 42.0**	**-0.4**
NFF	baz=308				*e*	S	**Sg**	**03 40 50.4**	**0.0**
WHP	**Taichung City** baz=276	**0.71**	**277**	⇑	*i*	P	**Pb**	**03 40 42.5**	**-0.1**
WHP	baz=276				*i*	S	**Sb**	**03 40 51.6**	**-0.9**
WPL	**Puli Township** baz=244	**0.72**	**255**		*e*	P	**Pb**	**03 40 42.3**	**-0.4**
WPL	baz=244					S	**Sg**	**03 40 50.9**	**-0.2**
DPDB	**Guoxing** baz=257	**0.74**	**257**		*e*	P	**Pb**	**03 40 42.8**	**-0.3**
DPDB	baz=257					S	**Sb**	**03 40 52.5**	**-0.9**
WCS	**Beigang Elemen** baz=259	**0.75**	**259**		*e*	P	**Pb**	**03 40 42.7**	**-0.5**
HGSD	**Ruisui** baz=210	**0.75**	**201**		*e*	P	**Pb**	**03 40 43.3**	**+0.1**
TIPB	**Shuangxi** baz=357	**0.78**	**7**	⇓		P	**Pg**	**03 40 42.9**	**0.0**
TIPB	baz=357					S	**Sg**	**03 40 52.3**	**-0.7**
EHY	**Hungye** baz=214	**0.78**	**208**			P	**Pg**	**03 40 42.5**	**-0.4**
LIOB	**Emei** baz=305	**0.78**	**305**			P	**Pb**	**03 40 43.7**	**0.0**
LIOB	baz=305				*e*	S	**Sb**	**03 40 54.1**	**-0.3**
NHDH	**Xindian Distri** baz=347	**0.78**	**347**		*e*	P	**Pb**	**03 40 43.6**	**-0.2**
NSTT	**Nanjuang** baz=303	**0.78**	**304**	⇑	*i*	P	**Pb**	**03 40 43.7**	**-0.1**
NSTT	baz=303					S	**Sb**	**03 40 53.6**	**-0.9**
NJD	**Zhudong** baz=320	**0.79**	**313**		*e*	P	**Pn**	**03 40 44.5**	**-0.7**
TWA	**Mucha** baz=351	**0.79**	**351**			P	**Pg**	**03 40 43.4**	**+0.3**
TWA	baz=351				*e*	S	**Sg**	**03 40 52.6**	**-0.8**
TATO	**Taipei** baz=345	**0.80**	**345**			P	**Pb**	**03 40 44.0**	**0.0**
TATO	baz=345				*e*	S	**Sg**	**03 40 53.2**	**-0.6**
SMLT	**Sun Moon Lake** baz=237	**0.81**	**247**			P	**Pb**	**03 40 43.8**	**-0.5**
SMLT	baz=237				*e*	S	**Sg**	**03 40 53.6**	**-0.4**
BACT	**New Taipei Cit** baz=342	**0.84**	**343**		*e*	P	**Pn**	**03 40 45.7**	**-0.2**
TYC	**Yuchr** baz=240	**0.84**	**250**		*e*	P	**Pb**	**03 40 44.2**	**-0.5**
TYC	baz=240					S	**Sg**	**03 40 54.5**	**-0.4**
TWB1	**Santiao Chiao** baz=17	**0.84**	**17**			P	**Pg**	**03 40 44.2**	**+0.1**
TWB1	baz=17					S	**Sg**	**03 40 54.6**	**-0.5**
TAP	**Taipei** baz=347	**0.86**	**347**		*e*	P	**Pb**	**03 40 45.5**	**+0.4**
TAP	baz=347					S	**Sb**	**03 40 56.2**	**-0.5**
HSN1	**Hsinchu** baz=319	**0.86**	**312**		*e*	P	**Pn**	**03 40 46.1**	**-0.1**
NWF	**Wu-fen Shan** baz=355	**0.87**	**4**	⇓		P	**Pg**	**03 40 45.0**	**+0.3**
NWF	baz=355					S	**Sg**	**03 40 55.4**	**-0.6**
WFSB	**Wu-fen Shan** baz=355	**0.87**	**4**		*e*	P	**Pb**	**03 40 45.8**	**+0.5**
WFSB	baz=355					S	**Sg**	**03 40 55.7**	**-0.3**
TWQ1	**Liyutan** baz=279	**0.88**	**280**	⇑	*i*	P	**Pn**	**03 40 45.9**	**-0.6**
TWQ1	baz=279					S	**Sb**	**03 40 57.3**	**+0.1**
NTY	**Taoyuan** baz=335	**0.89**	**334**		*e*	P	**Pn**	**03 40 46.2**	**-0.4**
NTY	baz=335				*e*	S	**Sn**	**03 40 58.5**	**-1.2**
YULB	**Yu-li** baz=216	**0.89**	**206**		*e*	P	**Pg**	**03 40 44.5**	**-0.5**
YULB	baz=216				*e*	S	**Sb**	**03 40 57.2**	**-0.4**
SBCB	**Hsinchu** baz=311	**0.89**	**312**		*e*	P	**Pn**	**03 40 46.5**	**-0.2**
NSY	**Sanyi** baz=284	**0.90**	**284**	⇑	*i*	P	**Pn**	**03 40 46.8**	**0.0**
NSY	baz=284					S	**Sb**	**03 40 58.5**	**+0.6**
SXI1	**Grass Mountain** baz=2.0	**0.90**	**9**	⇓	*i*	P	**Pb**	**03 40 45.6**	**-0.2**
SXI1	baz=2.0				*e*	S	**Sg**	**03 40 56.8**	**-0.2**
NCUH	**Zhongli** baz=328	**0.91**	**328**		*e*	P	**Pn**	**03 40 46.7**	**-0.2**
NCU	**National Centr** baz=328	**0.91**	**328**		*e*	P	**Pn**	**03 40 46.6**	**-0.3**
NCU	baz=328				*e*	S	**Sn**	**03 40 59.0**	**-1.3**
ECBN	**Changbin** baz=184	**0.91**	**196**			P	**Pb**	**03 40 45.9**	**0.0**
HSN	**Hsinchu** baz=314	**0.91**	**312**			P	**Pn**	**03 40 46.9**	**-0.1**
HSN	baz=314				*e*	S	**Sn**	**03 41 00.4**	**+0.2**
NMLH	**Miaoli** baz=298	**0.91**	**292**		*e*	P	**Pn**	**03 40 46.6**	**-0.3**
EYUL	**Yuli** baz=216	**0.92**	**203**		*e*	P	**Pn**	**03 40 47.0**	**-0.1**
TWF1	**Yuli** baz=217	**0.93**	**205**		*e*	P	**Pg**	**03 40 44.8**	**-0.8**
WHYT	**Xinyi Township** baz=246	**0.94**	**238**		*e*	P	**Pn**	**03 40 47.5**	**+0.1**
WHYT	baz=246				*e*	S	**Sn**	**03 40 59.9**	**-1.1**
TWS1	**Kuangyinshan** baz=353	**0.94**	**343**		*e*	P	**Pn**	**03 40 47.1**	**-0.3**
TWS1	baz=353				*e*	S	**Sb**	**03 40 59.6**	**+0.5**
WWF	**Wufeng** baz=253	**0.94**	**261**			P	**Pn**	**03 40 47.6**	**+0.2**
WWF	baz=253					S	**Sn**	**03 41 01.1**	**0.0**
TNOU	**National Taiwa** baz=3.0	**0.95**	**3**			P	**Pg**	**03 40 46.4**	**+0.2**
TCU	**Taichung** baz=266	**0.95**	**267**		*e*	P	**Pn**	**03 40 48.1**	**+0.6**
TCU	baz=266				*e*	S	**Sn**	**03 41 01.9**	**+0.6**
YM01	**YM01** baz=351	**0.95**	**352**			P	**Pb**	**03 40 46.9**	**+0.2**
YM01	baz=351					S	**Sg**	**03 40 58.9**	**+0.2**
WJS	**Zhushan** baz=241	**0.98**	**248**		*e*	P	**Pn**	**03 40 48.2**	**+0.3**
WJS	baz=241				*e*	S	**Sn**	**03 41 01.4**	**-0.6**
WNT1	**Nantou City** baz=242	**0.99**	**253**		*e*	P	**Pn**	**03 40 48.6**	**+0.6**
NTST	**Danshui** baz=355	**0.99**	**346**			P	**Pn**	**03 40 48.0**	**-0.1**
NTST	baz=355				*e*	S	**Sn**	**03 41 02.5**	**+0.2**
WDJ	**Dajia District** baz=278	**0.99**	**279**		*e*	P	**Pn**	**03 40 48.7**	**+0.6**
WDJ	baz=278				*e*	S	**Sn**	**03 41 02.2**	**-0.1**
WNT	**Mingjian** baz=246	**1.00**	**252**		*e*	P	**Pn**	**03 40 48.6**	**+0.4**
WNT	baz=246				*e*	S	**Sn**	**03 41 02.2**	**-0.2**
ANP	**Anpu** baz=350	**1.00**	**350**		*e*	P	**Pn**	**03 40 47.8**	**-0.5**
NWRT	**Kuosheng** baz=347	**1.00**	**357**		*e*	P	**Pb**	**03 40 47.6**	**+0.2**
NHW	**Xinwu Township** baz=323	**1.01**	**323**		*e*	P	**Pn**	**03 40 48.6**	**+0.2**
NHW	baz=323				*e*	S	**Sn**	**03 41 03.3**	**+0.6**
CHKH	**Chenggong** baz=187	**1.04**	**197**		*e*	P	**Pg**	**03 40 47.6**	**-0.3**
WCHH	**Zhanghua** baz=263	**1.07**	**264**		*e*	P	**Pn**	**03 40 49.9**	**+0.8**
WCHH	baz=263				*e*	S	**Sn**	**03 41 05.3**	**+1.2**
WYL	**Yuanlin Townsh** baz=257	**1.07**	**257**		*e*	P	**Pn**	**03 40 49.0**	**-0.1**
WYL	baz=257				*e*	S	**Sn**	**03 41 03.1**	**-1.0**
FULB	**Fuli** baz=217	**1.07**	**201**		*e*	P	**Pg**	**03 40 48.1**	**-0.3**
TWY	**Chenhua** baz=354	**1.08**	**354**		*e*	P	**Pn**	**03 40 49.6**	**+0.3**
ALS	**Alishan** baz=230	**1.08**	**231**		*e*	P	**Pb**	**03 40 48.6**	**-0.3**
ALS	baz=230				*e*	S	**Sn**	**03 41 05.0**	**+0.1**
CHN5	**Tsauling** baz=238	**1.12**	**238**			P	**Pn**	**03 40 50.3**	**+0.3**
CHN5	baz=238					S	**Sn**	**03 41 06.2**	**+0.6**
CHKT	**Chengkung** baz=183	**1.14**	**197**		*e*	P	**Pg**	**03 40 49.0**	**-0.8**
EHD	**Haiduan** baz=218	**1.14**	**204**		*e*	P	**Pg**	**03 40 48.9**	**-1.0**
JYNG	**Yonagunijimaku**	**1.15**	**77**		*e*	P	**Pn**	**03 40 50.4**	**+0.2**
JYNG						S	**Sg**	**03 41 05.4**	**+0.6**
WGK	**Gukeng** baz=244	**1.17**	**245**		*e*	P	**Pn**	**03 40 51.2**	**+0.7**
WGK	baz=244				*e*	S	**Sn**	**03 41 08.5**	**+1.7**
ECS	**Chishang** baz=216	**1.19**	**203**		*e*	P	**Pn**	**03 40 51.4**	**+0.6**
ELDTW	**Lidau** baz=214	**1.19**	**213**		*e*	P	**Pb**	**03 40 49.7**	**-1.0**
WDLH	**Douliu** baz=245	**1.19**	**245**		*e*	P	**Pn**	**03 40 51.6**	**+0.7**
WDLH	baz=245				*e*	S	**Sn**	**03 41 09.1**	**+1.9**
YOJ	**Yonaguni jima** baz=64	**1.21**	**77**			P	**Pn**	**03 40 50.7**	**-0.3**
YOJ	**Yonaguni jima**	**1.21**	**77**			P	**Pn**	**03 40 51.2**	**+0.1**
YOJ						S	**Sn**	**03 41 07.9**	**+0.3**
WRL	**Guolierlin Hig** baz=256	**1.26**	**257**		*e*	P	**Pg**	**03 40 52.5**	**+0.4**
WRL	baz=256					S	**Sn**	**03 41 10.5**	**+1.6**
WCKO	**Fanlu** baz=233	**1.27**	**234**		*e*	P	**Pg**	**03 40 52.7**	**+0.5**
WCKO	baz=233					S	**Sn**	**03 41 10.7**	**+1.5**
EDH	**Donghe** baz=185	**1.28**	**197**		*e*	P	**Pn**	**03 40 49.9**	**-2.1**
RLNB	**Erlin** baz=256	**1.28**	**256**		*e*	P	**Pg**	**03 40 53.1**	**+0.7**
RLNB	baz=256				*e*	S	**Sn**	**03 41 10.4**	**+1.0**
CHN2	**Minshiung** baz=240	**1.32**	**240**		*e*	P	**Pg**	**03 40 53.4**	**+0.3**
CHN2	baz=240				*e*	S	**Sn**	**03 41 11.9**	**+1.6**
WTK	**Tuku** baz=247	**1.32**	**248**		*e*	P	**Pg**	**03 40 53.7**	**+0.5**
CHN4	**Tsaushan** baz=218	**1.33**	**231**	⇑		P	**Pg**	**03 40 54.2**	**+0.7**
CHN4	baz=218					S	**Sg**	**03 41 13.2**	**+2.5**
STYH	**Taoyuan** baz=221	**1.34**	**220**		*e*	P	**Pb**	**03 40 53.0**	**-0.2**
TPUB	**Ta-pu** baz=220	**1.34**	**228**			P	**Pg**	**03 40 53.5**	**0.0**
TPUB	baz=220				*e*	S	**Sg**	**03 41 12.8**	**+1.8**
STYT	**Tauyuan** baz=221	**1.35**	**221**			P	**Pn**	**03 40 53.1**	**-0.1**
WTP	**Ta-pu** baz=227	**1.39**	**227**			P	**Pg**	**03 40 54.7**	**+0.2**
WTP	baz=227				*e*	S	**Sg**	**03 41 14.1**	**+1.6**
LONT	**Longtian** baz=215	**1.39**	**203**		*e*	P	**Pn**	**03 40 52.0**	**-1.6**
TWK	**Hsinying** baz=243	**1.46**	**231**			P	**Pg**	**03 40 55.9**	**+0.1**
TWK	baz=243					S	**Sg**	**03 41 16.1**	**+1.3**
PCYT	**Pengchaiyu** baz=12	**1.46**	**13**		*e*	P	**Pn**	**03 40 54.6**	**+0.1**
WSF	**Szhu** baz=260	**1.48**	**248**		*e*	P	**Pg**	**03 40 55.8**	**-0.4**
WSF	baz=260					S	**Sg**	**03 41 16.6**	**+1.2**
SNST	**Tainan City** baz=241	**1.48**	**229**		*e*	P	**Pg**	**03 40 56.0**	**-0.3**
SNST	baz=241				*e*	S	**Sg**	**03 41 17.5**	**+1.9**
CHN1	**Nanshi** baz=216	**1.48**	**228**		*e*	P	**Pg**	**03 40 56.3**	**0.0**
CHN1	baz=216				*e*	S	**Sg**	**03 41 17.1**	**+1.5**
TWG	**Pinlang** baz=208	**1.49**	**204**		*e*	P	**Pn**	**03 40 54.8**	**-0.2**
TWGBT	**Beinan** baz=208	**1.49**	**203**		*e*	P	**Pn**	**03 40 54.5**	**-0.4**
WSL	**Shuilin Townsh** baz=244	**1.52**	**244**		*e*	P	**Pg**	**03 40 57.1**	**0.0**
SGST	**Jiashian** baz=216	**1.52**	**223**			P	**Pb**	**03 40 56.0**	**-0.3**
SGST	baz=216				*e*	S	**Sg**	**03 41 18.1**	**+1.3**
SLGT	**Liugui** baz=221	**1.55**	**220**		*e*	P	**Pb**	**03 40 56.8**	**0.0**
ICHU	**Yijhu** baz=238	**1.56**	**238**		*e*	P	**Pg**	**03 40 57.8**	**+0.1**
ICHU	baz=238				*e*	S	**Sg**	**03 41 20.2**	**+2.1**
CHN8	**Yiju** baz=222	**1.62**	**239**		*e*	P	**Pn**	**03 40 55.1**	**-1.6**
SHHT	**Tainan City** baz=228	**1.72**	**227**		*e*	P	**Pg**	**03 41 00.5**	**-0.3**
SCST	**Cishan** baz=223	**1.72**	**221**		*e*	P	**Pb**	**03 40 59.9**	**+0.1**
SCLT	**Jiali** baz=235	**1.73**	**234**		*e*	P	**Pg**	**03 41 00.7**	**-0.3**
ECL	**Taimali** baz=194	**1.74**	**204**		*e*	P	**Pb**	**03 41 00.0**	**-0.1**
SSD	**Sandimen** baz=216	**1.76**	**215**			P	**Pb**	**03 40 59.6**	**-0.7**
TSMG	**Majia** baz=209	**1.78**	**214**		*e*	P	**Pb**	**03 41 00.6**	**-0.2**
TSCK	**Chigu Township** baz=221	**1.83**	**235**		*e*	P	**Pb**	**03 41 00.7**	**-0.8**
MASBT	**Mashibuluo** baz=208	**1.87**	**213**		*e*	P	**Pn**	**03 41 00.3**	**+0.2**
EAST	**Anshuo** baz=196	**1.98**	**204**		*e*	P	**Pb**	**03 41 03.6**	**-0.5**
TAWH	**Dawu Township** baz=196	**2.00**	**203**		*e*	P	**Pb**	**03 41 03.8**	**-0.7**
WSSB	**Gushan** baz=223	**2.05**	**221**		*e*	P	**Pb**	**03 41 04.2**	**-1.1**
PNG	**Penghu** baz=253	**2.08**	**253**		*e*	P	**Pb**	**03 41 04.8**	**-1.0**
PNG	baz=253				*e*	S	**Sb**	**03 41 30.9**	**-0.9**
SCZT	**Fangliau** baz=208	**2.08**	**209**		*e*	P	**Pb**	**03 41 04.5**	**-1.4**
PHUB	**P'eng-hu** baz=252	**2.08**	**251**		*e*	P	**Pb**	**03 41 04.4**	**-1.4**
PHUB	baz=252					S	**Sb**	**03 41 30.5**	**-1.3**
WDGT	**Dungji** baz=244	**2.10**	**244**		*e*	P	**Pb**	**03 41 04.6**	**-1.7**
VWUC	**VWUC** baz=291	**2.21**	**291**		*e*	P	**Pn**	**03 41 04.5**	**-0.3**
VCHM	**Qimei** baz=235	**2.32**	**245**		*e*	P	**Pn**	**03 41 07.5**	**+1.2**
VCHM	baz=235				*e*	S	**Sb**	**03 41 36.5**	**-2.2**
PTMZ	**Houxiangcun** baz=290	**2.51**	**290**		*e*	P	**Pn**	**03 41 09.1**	**+0.1**
MATB	**Ma-tsu** baz=320	**2.52**	**321**		*e*	P	**Pn**	**03 41 08.9**	**-0.2**
MSUT	**Lienchiang** baz=321	**2.55**	**321**		*e*	P	**Pn**	**03 41 11.2**	**+1.6**
LYJJ	**Jianjiangzhen** baz=323	**2.94**	**323**		*e*	P	**Pn**	**03 41 16.2**	**+1.4**
KNM	**Kinmen** baz=274	**3.00**	**275**		*e*	P	**Pn**	**03 41 18.2**	**+2.4**
KNMB	**Chin-men Tao** baz=275	**3.05**	**276**		*e*	P	**Pn**	**03 41 16.2**	**-0.1**
XPSS	**Dashiqiu** baz=333	**3.05**	**333**		*e*	P	**Pn**	**03 41 17.8**	**+1.4**
MHZQ	**Yeshan** baz=308	**3.09**	**308**		*e*	P	**Pn**	**03 41 17.7**	**+0.8**

AXDP	**Jialang** baz=282	**3.48**	**282**	*e*P	**Pn**	**03 41 22.6 +0.2**
ZPLA	**Ao Xicun** baz=265	**3.64**	**267**	*e*P	**Pn**	**03 41 23.6 -0.9**
DSXP	**Dongshan** baz=262	**3.96**	**264**	*e*P	**Pn**	**03 41 29.7 +0.9**
SXFK	**Yanhouchang** baz=301	**4.29**	**302**	*e*P	**Pn**	**03 41 33.7 +0.3**

IDC ***07*** *03:43:50.0±0.9,26.26N×129.50E,h0km,mb3.9/10, mbtmp3.9/12,ML3.5/2,Error ellipse: s-maj=33.1km s-min=15.3km az=67.0*

JMA ***07*** *03:43:51.3±0.1,26.31N±0.6×129.6E±0.4,h44km,MV3.7/19, NEAR MINAMI-DAITOJIMA IS*

NIED ***07*** *03:43:51.3,26.31N×129.62E,h44km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.15; Mθθ0.80; Mφφ0.35; Mrθ0.10; Mθφ0.53; Mφr0.03; Fault plane solution: M₀1.15000×10¹⁵ NP1: φs238.00000°,δ47.00000°,λ-88.00000°. NP2:φs55.00000°, δ43.00000°,λ-92.00000°.*

ISC 07 03:43:51.4±0.7,26.31N±0.04×129.59E±0.03,h15km,n28, σ1s86/41,mb3.9/10,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.25**	**305**	P			**Pn**	**03 44 12.9**	**-1.3**
JYRO				S			**Sb**	**03 44 28.7**	**-1.8**
JOW	**Kunigami**	**1.29**	**294**	P			**Pn**	**03 44 13.8**	**-1.1**
JOW				*e*S			**Sb**	**03 44 29.8**	**-1.9**
JOW	**Kunigami** 231nm,0.3s,baz=119,slow=21,SNR=245	**1.29**	**294**	Pn			**Pb**	**03 44 14.1**	**-1.3**
JOW	186nm,0.3s,baz=90,slow=20,SNR=9.0			Sn			**Sb**	**03 44 29.3**	**-2.4**
JOW	comp=Z,1μm,20.5s,baz=176,slow=50			LR			LR	03 44 51.5	
JOKE	**Okinoerabujima**	**1.39**	**319**	P			**Pn**	**03 44 15.1**	**-1.2**
JOKE				S			**Sn**	**03 44 32.0**	**-2.3**
JNTH	**Nagotoyohara**	**1.42**	**279**	P			**Pn**	**03 44 15.4**	**-1.2**
JNTH				S			**Sn**	**03 44 32.5**	**-2.6**
JMZ	**Minamidaito 2**	**1.55**	**108**	P			**Pn**	**03 44 16.7**	**-1.7**
JMZ				S			**Sn**	**03 44 34.1**	**-4.1**
JKDJ	**Kitadaitoujima**	**1.57**	**103**	P			**Pn**	**03 44 17.4**	**-1.4**
JKDJ				S			**Sn**	**03 44 35.5**	**-3.4**
JTK	**Tokunoshima**	**1.58**	**339**	P			**Pn**	**03 44 17.8**	**-1.0**
JTK				*e*S			**Sn**	**03 44 36.5**	**-2.5**
JIH	**Iheya**	**1.62**	**297**	P			**Pn**	**03 44 18.6**	**-0.8**
JIH				S			**Sn**	**03 44 38.0**	**-2.1**
JJT3	**Tamagusuku3**	**1.63**	**265**	P			**Pn**	**03 44 19.0**	**-0.6**
JJT3				S			**Sn**	**03 44 39.2**	**-1.1**
JAMN	**Amaminishikomi**	**1.96**	**349**	P			**Pn**	**03 44 22.8**	**-1.3**
JAMN				*e*S			**Sn**	**03 44 45.6**	**-2.9**
JZK	**Kikaishima**	**2.03**	**10**	P			**Pn**	**03 44 24.4**	**-0.6**
JZK				S			**Sn**	**03 44 48.9**	**-1.2**
JAM	**Amami Oshima**	**2.09**	**0**	P			**Pn**	**03 44 24.8**	**-1.1**
JAGN	**Aguni-jima**	**2.12**	**278**	P			**Pn**	**03 44 25.9**	**-0.4**
JKE	**Kume jima 2**	**2.52**	**271**	P			**Pn**	**03 44 30.8**	**-0.9**
JKE				S			**Sn**	**03 44 59.1**	**-3.1**
JTAJ	**Takarajima**	**2.85**	**353**	*e*S			**Sn**	**03 45 07.1**	**-3.3**
JNU	**Nakatsue** 1.4nm,0.3s,baz=186,slow=14,SNR=11 5.1nm,0.4s	**6.88**	**9**	Pn			**Pn**	**03 45 32.3**	**+0.5**
KSRS	**Korea Array** 0.1nm,0.3s,baz=168,slow=12,SNR=3.3 1.2nm,0.6s	**11.20**	**353**	Pn			**Pn**	**03 46 33.0**	**+2.1**
SONM	**Songino Array** 0.9nm,0.5s,baz=142,slow=10,SNR=6.9 0.9nm,0.5s	**28.16**	**326**	P			**P**	**03 49 45.5**	**+2.3**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=94,slow=10,SNR=6.2 0.5nm,0.6s	**42.40**	**312**	P			**P**	**03 51 44.9**	**-0.4**
KURBB	**Kurchatov Arra** 1.2nm,0.2s,baz=103,slow=8.9,SNR=2.1 1.2nm,0.2s	**45.64**	**316**	P			**P**	**03 52 11.0**	**-0.2**
WRA	**Warramunga Arr** 1.5nm,0.6s,baz=354,slow=8.6,SNR=8.8 1.5nm,0.6s	**46.21**	**174**	P			**P**	**03 52 16.4**	**+0.4**
ASAR	**Alice Springs** 1.0nm,0.8s,baz=5.0,slow=14,SNR=11 1.0nm,0.8s	**49.86**	**175**	P			**P**	**03 52 44.9**	**+0.8**
BVAR	**Borovoye Array** 0.7nm,0.4s,baz=90,slow=9.9,SNR=4.9 0.7nm,0.4s	**51.03**	**318**	P			**P**	**03 52 54.1**	**+1.4**
STKA	**Stephens Creek** 0.8nm,0.4s,baz=4.8,slow=12,SNR=2.8 0.8nm,0.4s	**58.98**	**168**	P			**P**	**03 53 51.0**	**+0.6**
FINES	**FINESS Array B** 1.6nm,0.8s,baz=76,slow=3.3,SNR=7.2 1.6nm,0.8s	**73.39**	**331**	P			**P**	**03 55 23.4**	**+0.9**
AKASG	**Malin Array Be** 0.4nm,0.5s,baz=65,slow=6.1,SNR=1.9 0.4nm,0.5s	**76.26**	**320**	P			**P**	**03 55 40.8**	**+1.5**
YKA	**Yellowknife Ar** 0.4nm,0.9s,baz=304,slow=6.2,SNR=3.8 0.4nm,0.9s	**77.94**	**25**	P			**P**	**03 55 49.5**	**+1.0**

TAP 07 03:46:00.7,24.12N×121.62E,h9km,ML0.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=195	**0.04**	**206**	P			Pg	03 46 02.8	+0.3
TWD	baz=195			*i* S			Sg	03 46 04.4	+0.8
ETL	**Fush Village** baz=9.0	**0.04**	**10**	*i* P			Pg	03 46 02.9	+0.4
ETL	baz=9.0			*e*S			Sg	03 46 04.4	+0.6
NACB	**Ninganchiao** baz=341	**0.06**	**342**	P			Pg	03 46 03.2	+0.6
NACB	baz=341			S			Sg	03 46 04.9	+0.8
WHF	**Hehuan Shan** baz=274	**0.32**	**275**	*e*P			Pg	03 46 08.0	+0.7

IDC ***07*** *03:57:57.7±1.4,24.06N×121.86E,h0km,mb3.5/4, mbtmp3.6/5,ML3.5/1,MS3.6/1,Error ellipse: s-maj=41.0km s-min=27.4km az=59.0*

TAP ***07*** *03:57:58.5,24.05N×121.66E,h7km,ML4.0,C*

NIED ***07*** *03:57:58.5,24.04N×121.66E,h0km,MW3.8,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr-0.02; Mθθ-6.06; Mφφ6.07; Mrθ-2.38; Mθφ-0.67; Mφr-1.33; Fault plane solution: M₀6.66000×10¹⁴ NP1: φs41.00000°,δ84.00000°,λ-22.00000°. NP2:φs133.00000°, δ68.00000°,λ-174.00000°.*

ASIES ***07*** *03:57:58.5,24.05N×121.66E,h7km,ML4.0,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.57; Mθθ-3.34; Mφφ2.77; Mrθ1.64; Mθφ0.11; Mφr1.93; Fault plane solution: M₀4.00293×10²¹ NP1:φs48.72000°, δ83.48000°,λ39.95000°. NP2:φs313.29000°,δ50.36000°, λ171.52000°. Principal axes: T Plg32.1000°, Azm278.9390°; N Plg49.6100°, Azm56.4440°; P Plg21.7660°, Azm174.4340°;*

JMA ***07*** *03:57:58.5±0.1,24.0N±0.3×121.7E±0.9,h0km,MV3.5/13, TAIWAN REGION*

ISC 07 03:57:58.4±1.0,24.03N±0.01×121.70E±0.02,h4km±7km, n173,σ0s68/225,mb3.5/4,29C-25D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=303	**0.11**	**299**	⇓*i*P			**Pg**	**03 58 00.7**	**+0.1**
TWD	baz=303			*i* S			**Sg**	**03 58 02.1**	**-0.1**
ETL	**Fush Village** baz=339	**0.15**	**332**	⇓*i*P			**Pg**	**03 58 01.5**	**+0.1**
ETL	baz=339			*i* S			**Sg**	**03 58 03.5**	**+0.1**
NACB	**Ninganchiao**	**0.18**	**327**	P			**Pg**	**03 58 02.0**	**+0.1**
NACB	**Ninganchiao** baz=332	**0.18**	**327**	⇓*i*P			**Pg**	**03 58 01.9**	**0.0**
NACB	baz=332			*i* S			**Sg**	**03 58 04.1**	**-0.1**
ETM	**Tongmen** baz=245	**0.20**	**253**	⇑*i*P			**Pg**	**03 58 02.6**	**+0.3**
ETM	baz=245			*i* S			**Sg**	**03 58 05.1**	**+0.2**
LXIB	**Xiulin Townshi** baz=255	**0.26**	**269**	⇑*i*P			**Pg**	**03 58 03.6**	**+0.1**
LXIB	baz=255			*i* S			**Sg**	**03 58 07.1**	**+0.1**
SHUL	**Shoufeng** baz=211	**0.27**	**208**	⇑P			**Pb**	**03 58 05.0**	**-0.7**
SHUL	baz=211			*e*S			**Sb**	**03 58 11.2**	**+0.5**
EHP	**Heping Village** baz=10.0	**0.29**	**7**	P			**Pg**	**03 58 04.2**	**+0.3**
EHP	baz=10.0			S			**Sg**	**03 58 08.3**	**+0.6**
EAHA	**Aohua** baz=10.0	**0.30**	**7**	⇓*i*P			**Pg**	**03 58 04.5**	**+0.2**
EAHA	baz=10.0			*i* S			**Sg**	**03 58 08.8**	**+0.5**
ESL	**Shilin** baz=233	**0.32**	**229**	⇑*i*P			**Pg**	**03 58 05.0**	**+0.3**
ESL	baz=233			*i* S			**Sg**	**03 58 09.0**	**+0.2**
TEGC	**Jichi Village** baz=202	**0.35**	**205**	P			**Pb**	**03 58 07.3**	**+0.2**
TEGC	baz=202			*e*S			**Sb**	**03 58 14.2**	**+1.2**
ENA	**Nanau** baz=6.0	**0.40**	**5**	⇓*i*P			**Pg**	**03 58 06.4**	**+0.3**
ENA	baz=6.0			*i* S			**Sg**	**03 58 11.7**	**+0.3**
WHF	**Hehuan Shan** baz=285	**0.42**	**287**	⇑*i*P			**Pg**	**03 58 06.6**	**+0.1**
WHF	baz=285			*i* S			**Sg**	**03 58 11.8**	**-0.3**
WARBT	**Fenglin Townsh** baz=228	**0.42**	**223**	⇑*i*P			**Pg**	**03 58 06.7**	**+0.3**
EWUT	**Wuta** baz=9.0	**0.42**	**10**	⇓*i*P			**Pg**	**03 58 06.9**	**+0.3**
EWUT	baz=9.0			S			**Sg**	**03 58 12.3**	**+0.2**
EGFH	**Guangfu** baz=220	**0.43**	**215**	⇑P			**Pg**	**03 58 07.4**	**+0.6**
FUSS	**Fushou** baz=297	**0.47**	**298**	⇑*i*P			**Pg**	**03 58 07.9**	**+0.4**
FUSS	baz=297			*i* S			**Sg**	**03 58 14.1**	**+0.4**
CHGB	**Renai** baz=272	**0.48**	**274**	⇑*i*P			**Pg**	**03 58 08.1**	**+0.4**
CHGB	baz=272			S			**Sg**	**03 58 14.3**	**+0.3**
OWD	**Renai** baz=260	**0.49**	**262**	⇑*i*P			**Pg**	**03 58 08.0**	**+0.3**
OWD	baz=260			*e*S			**Sg**	**03 58 14.1**	**0.0**
NNSB	**Datong** baz=324	**0.49**	**324**	⇓*i*P			**Pg**	**03 58 08.2**	**+0.2**
NNSB	baz=324			*i* S			**Sg**	**03 58 14.3**	**-0.1**
NNSH	**Datong** baz=323	**0.49**	**324**	⇓*i*P			**Pg**	**03 58 08.1**	**+0.2**
NNSH	baz=323			S			**Sg**	**03 58 14.2**	**-0.2**
NNS	**Nan Shan** baz=324	**0.51**	**324**	⇓*i*P			**Pg**	**03 58 08.4**	**+0.2**
NNS	baz=324			S			**Sg**	**03 58 14.8**	**-0.1**
TWT	**Tachien** baz=293	**0.53**	**295**	⇑*i*P			**Pg**	**03 58 09.3**	**-1.1**
TWT	baz=293			S			**Sg**	**03 58 16.2**	**+0.7**
LATG	**Datong** baz=342	**0.53**	**343**	⇓*i*P			**Pg**	**03 58 08.8**	**+0.1**
LATG	baz=342			S			**Sg**	**03 58 16.0**	**+0.4**
WUSB	**Renai** baz=265	**0.54**	**267**	⇑*i*P			**Pg**	**03 58 09.1**	**+0.4**
WUSB	baz=265			S			**Sg**	**03 58 16.4**	**+0.7**
TDCB	**Techi** baz=293	**0.55**	**295**	⇑*i*P			**Pg**	**03 58 09.3**	**+0.4**
TDCB	baz=293			*i* S			**Sg**	**03 58 16.2**	**+0.2**
ESAO	**Su ao** baz=11	**0.56**	**13**	⇓P			**Pg**	**03 58 09.4**	**+0.2**
ESAO	baz=11			S			**Sg**	**03 58 16.5**	**-0.1**
EOS4	**EOS4** baz=82	**0.57**	**80**	*e*P			**Pn**	**03 58 12.4**	**-0.5**
VWDT	**VWDT** baz=235	**0.58**	**242**	⇑*i*P			**Pg**	**03 58 10.0**	**+0.5**
VWDT	baz=235			*e*S			**Sb**	**03 58 18.6**	**-1.1**
HGSD	**Ruisui** baz=222	**0.59**	**206**	*e*P			**Pb**	**03 58 11.1**	**-0.2**
TWC	**Suao** baz=7.0	**0.60**	**13**	⇓*i*P			**Pg**	**03 58 10.1**	**+0.3**
TWC	baz=7.0			*e*S			**Sg**	**03 58 17.3**	**-0.3**
NDT	**Datong Townshi** baz=343	**0.60**	**343**	⇓*i*P			**Pg**	**03 58 10.4**	**+0.5**
NDT	baz=343			*i* S			**Sg**	**03 58 18.0**	**+0.3**
NDS	**Dongshan** baz=1.0	**0.61**	**1**	⇓*i*P			**Pg**	**03 58 10.4**	**+0.3**
NDS	baz=1.0			*e*S			**Sg**	**03 58 18.1**	**+0.2**
EOS3	**EOS3** baz=60	**0.62**	**65**	*e*P			**Pn**	**03 58 14.1**	**+0.3**
EHY	**Hungye** baz=211	**0.62**	**214**	⇑*i*P			**Pg**	**03 58 10.7**	**+0.4**
EOS2	**EOS2** baz=61	**0.62**	**51**	*e*P			**Pb**	**03 58 12.4**	**+0.7**
ENTT	**Nioudou** baz=348	**0.62**	**349**	⇓*i*P			**Pg**	**03 58 10.7**	**+0.4**
ENTT	baz=348			*i* S			**Sg**	**03 58 19.1**	**+0.6**
WPL	**Puli Township** baz=268	**0.68**	**269**	⇑P			**Pg**	**03 58 11.9**	**+0.4**
WPL	baz=268			S			**Sg**	**03 58 20.0**	**-0.3**
TWE	**Neicheng** baz=357	**0.69**	**357**	⇓*i*P			**Pg**	**03 58 12.1**	**+0.3**
TWE	baz=357			*e*S			**Sg**	**03 58 20.9**	**+0.1**
YHNB	**Yeheng**	**0.71**	**335**	P			**Pb**	**03 58 12.6**	**-0.7**
YHNB	**Yeheng** baz=326	**0.71**	**335**	⇓*i*P			**Pb**	**03 58 12.5**	**-0.9**
YHNB	baz=326			S			**Sg**	**03 58 21.2**	**0.0**
DPDB	**Guoxing** baz=269	**0.71**	**271**	⇑*i*P			**Pb**	**03 58 12.6**	**-0.7**
DPDB	baz=269			*e*S			**Sg**	**03 58 21.7**	**+0.5**
NSK	**Sanguang** baz=325	**0.72**	**334**	⇓*i*P			**Pg**	**03 58 12.6**	**+0.4**
NSK	baz=325			S			**Sg**	**03 58 21.7**	**+0.1**
WCS	**Beigang Elemen** baz=272	**0.72**	**273**	⇑*i*P			**Pb**	**03 58 12.8**	**-0.8**
SSLB	**Suanglung**	**0.72**	**251**	P			**Pg**	**03 58 12.7**	**+0.4**
SSLB	**Suanglung** baz=260	**0.72**	**251**	⇑*i*P			**Pg**	**03 58 12.6**	**+0.3**
SSLB	baz=260			S			**Sg**	**03 58 20.8**	**-0.8**
YULB	**Yu-li**	**0.73**	**211**	P			**Pg**	**03 58 13.1**	**+0.7**
YULB	**Yu-li** baz=212	**0.73**	**211**	P			**Pg**	**03 58 12.8**	**+0.3**
WHP	**Taichung City** baz=289	**0.73**	**290**	⇑*i*P			**Pb**	**03 58 13.2**	**-0.6**
WHP	baz=289			*i* S			**Sb**	**03 58 23.1**	**-1.1**
FUSB	**Fushanzhiwuyua** baz=350	**0.74**	**352**	⇓*i*P			**Pg**	**03 58 13.0**	**+0.4**
FUSB	baz=350			*i* S			**Sg**	**03 58 22.2**	**+0.1**
ILA	**Ilan** baz=2.0	**0.74**	**3**	*e*P			**Pg**	**03 58 12.6**	**+0.1**
ECBN	**Changbin** baz=185	**0.74**	**198**	P			**Pb**	**03 58 13.9**	**0.0**
SMLT	**Sun Moon Lake** baz=258	**0.75**	**259**	⇑*i*P			**Pg**	**03 58 13.2**	**+0.5**
SMLT	baz=258			*e*S			**Sb**	**03 58 23.3**	**-1.3**
EYUL	**Yuli** baz=224	**0.76**	**207**	*e*P			**Pg**	**03 58 13.6**	**+0.6**
TWF1	**Yuli** baz=222	**0.77**	**209**	P			**Pg**	**03 58 13.3**	**+0.2**
NWLT	**Wulai** baz=344	**0.77**	**346**	⇓*i*P			**Pg**	**03 58 13.6**	**+0.4**
NWLT	baz=344			S			**Sg**	**03 58 23.0**	**-0.2**
TYC	**Yuchr** baz=260	**0.78**	**261**	⇑*i*P			**Pg**	**03 58 13.7**	**+0.3**
TYC	baz=260			*e*S			**Sg**	**03 58 24.0**	**+0.4**
NFF	**Wufeng Townshi** baz=318	**0.81**	**319**	P			**Pb**	**03 58 14.4**	**-0.6**
NFF	baz=318			S			**Sg**	**03 58 24.3**	**0.0**
WHYT	**Xinyi Township** baz=247	**0.84**	**247**	*e*P			**Pg**	**03 58 14.9**	**+0.3**
CHKH	**Chenggong** baz=190	**0.88**	**199**	*e*P			**Pg**	**03 58 15.7**	**+0.5**
NSTT	**Nanjuang** baz=313	**0.88**	**313**	P			**Pb**	**03 58 15.9**	**-0.3**
NSTT	baz=313			S			**Sg**	**03 58 26.8**	**+0.1**
LIOB	**Emei** baz=314	**0.88**	**315**	P			**Pb**	**03 58 16.1**	**-0.2**
LIOB	baz=314			S			**Sg**	**03 58 26.9**	**+0.2**
FULB	**Fuli** baz=222	**0.90**	**204**	*e*P			**Pb**	**03 58 16.5**	**-0.2**
TWQ1	**Liyutan** baz=302	**0.91**	**291**	P			**Pb**	**03 58 16.7**	**0.0**
TWQ1	baz=302			*e*S			**Sb**	**03 58 29.1**	**0.0**
WJS	**Zhushan** baz=257	**0.91**	**257**	*e*P			**Pb**	**03 58 16.7**	**-0.1**
WWF	**Wufeng** baz=271	**0.92**	**271**	*e*P			**Pn**	**03 58 17.4**	**-0.7**
NSY	**Sanyi** baz=294	**0.94**	**295**	⇑P			**Pn**	**03 58 17.8**	**-0.6**
WNT	**Mingjian** baz=252	**0.94**	**261**	*e*P			**Pn**	**03 58 17.8**	**-0.6**
WNT1	**Nantou City** baz=263	**0.94**	**263**	*e*P			**Pn**	**03 58 17.6**	**-0.8**
TCU	**Taichung** baz=270	**0.94**	**278**	⇑*e*P			**Pn**	**03 58 18.4**	**0.0**
NHDH	**Xindian Distri** baz=341	**0.95**	**350**	*e*P			**Pb**	**03 58 17.0**	**-0.4**
TIPB	**Shuangxi** baz=354	**0.95**	**7**	⇓P			**Pg**	**03 58 16.7**	**+0.1**
TIPB	baz=354			*e*S			**Sg**	**03 58 28.4**	**-0.5**
TWA	**Mucha** baz=352	**0.96**	**354**	*e*P			**Pb**	**03 58 17.1**	**-0.5**
TATO	**Taipei**	**0.96**	**348**	P			**Pb**	**03 58 17.8**	**+0.1**
TATO	**Taipei** baz=346	**0.96**	**348**	⇓P			**Pb**	**03 58 17.3**	**-0.4**
TATO	baz=346			S			**Sg**	**03 58 29.4**	**-0.1**
ALS	**Alishan** baz=247	**0.97**	**238**	⇑*i*P			**Pb**	**03 58 17.4**	**-0.5**
CHKT	**Chengkung** baz=193	**0.97**	**199**	P			**Pb**	**03 58 17.7**	**-0.1**
CHKT	baz=193			*e*S			**Sn**	**03 58 33.5**	**+0.4**
NMLH	**Miaoli** baz=301	**0.97**	**302**	*e*P			**Pn**	**03 58 18.4**	**-0.5**
EHD	**Haiduan** baz=224	**0.98**	**208**	*e*P			**Pg**	**03 58 17.4**	**+0.1**
NJN	**Zhunan** baz=318	**1.00**	**311**	*e*P			**Pn**	**03 58 18.6**	**-0.7**
SBCB	**Hsinchu** baz=319	**1.00**	**320**	*e*P			**Pn**	**03 58 19.3**	**0.0**
TWB1	**Santiao Chiao** baz=4.0	**1.01**	**15**	*e*P			**Pg**	**03 58 18.1**	**+0.3**
HSN	**Hsinchu** baz=321	**1.02**	**319**	*e*P			**Pg**	**03 58 17.9**	**0.0**
WDJ	**Dajia District** baz=288	**1.02**	**289**	P			**Pn**	**03 58 19.4**	**-0.1**
WYL	**Yuanlin Townsh** baz=252	**1.03**	**267**	*e*P			**Pg**	**03 58 17.9**	**-0.2**
CHN5	**Tsauling** baz=233	**1.03**	**246**	⇑P			**Pn**	**03 58 19.2**	**-0.5**
ELDTW	**Lidau** baz=206	**1.04**	**217**	*e*P			**Pg**	**03 58 17.8**	**-0.6**
NWF	**Wu-fen Shan** baz=360	**1.04**	**4**	*e*P			**Pb**	**03 58 18.7**	**-0.4**
WFSB	**Wu-fen Shan** baz=352	**1.04**	**4**	⇓*i*P			**Pb**	**03 58 18.7**	**-0.3**
WFSB	baz=352			*e*S			**Sg**	**03 58 31.8**	**-0.1**
WCHH	**Zhanghua** baz=273	**1.05**	**273**	*e*P			**Pn**	**03 58 19.5**	**-0.3**
NCUH	**Zhongli** baz=332	**1.05**	**333**	*e*P			**Pn**	**03 58 19.8**	**-0.1**
SXI1	**Grass Mountain** baz=351	**1.08**	**8**	⇓P			**Pg**	**03 58 19.2**	**+0.2**
WGK	**Gukeng** baz=253	**1.10**	**252**	*e*P			**Pg**	**03 58 19.4**	**0.0**
TWS1	**Kuangyinshan** baz=344	**1.10**	**347**	P			**Pn**	**03 58 20.6**	**0.0**
EDH	**Donghe** baz=185	**1.11**	**199**	*e*P			**Pg**	**03 58 18.0**	**-1.7**
WDLH	**Douliu** baz=254	**1.12**	**253**	*e*P			**Pn**	**03 58 21.0**	**+0.2**
TNOU	**National Taiwa** baz=359	**1.12**	**3**	*e*P			**Pg**	**03 58 20.0**	**+0.1**
YM01	**YM01**	**1.12**	**354**	P			**Pn**	**03 58 20.6**	**-0.4**
NTST	**Danshui** baz=345	**1.16**	**349**	*e*P			**Pn**	**03 58 21.6**	**+0.3**
WCKO	**Fanlu** baz=242	**1.16**	**240**	*e*P			**Pn**	**03 58 21.7**	**+0.2**
STYH	**Taoyuan** baz=216	**1.20**	**225**	*e*P			**Pg**	**03 58 21.4**	**0.0**
WRL	**Guolierlin Hig** baz=265	**1.22**	**264**	*e*P			**Pn**	**03 58 21.9**	**-0.3**
CHN4	**Tsaushan** baz=231	**1.22**	**237**	⇑*i*P			**Pn**	**03 58 22.7**	**+0.5**
CHN4	baz=231			*e*S			**Sn**	**03 58 41.4**	**+2.3**
TPUB	**Ta-pu**	**1.22**	**234**	P			**Pn**	**03 58 22.7**	**+0.5**
TPUB	**Ta-pu** baz=227	**1.22**	**234**	⇑*i*P			**Pn**	**03 58 22.4**	**+0.1**
TPUB	baz=227			*e*S			**Sn**	**03 58 40.3**	**+1.1**
STYT	**Tauyuan** baz=229	**1.22**	**225**	*e*P			**Pg**	**03 58 21.9**	**+0.1**
STYT	baz=229			*e*S			**Sn**	**03 58 38.9**	**-0.4**
CHN2	**Minshiung** baz=249	**1.23**	**247**	*e*P			**Pn**	**03 58 22.6**	**+0.3**
LONT	**Longtian** baz=209	**1.23**	**205**	*e*P			**Pg**	**03 58 20.5**	**-1.5**
RLNB	**Erlin** baz=264	**1.23**	**264**	*e*P			**Pn**	**03 58 22.5**	**+0.1**
TWY	**Chenhua** baz=340	**1.25**	**356**	*e*P			**Pn**	**03 58 23.2**	**+0.6**
WTK	**Tuku** baz=255	**1.25**	**255**	*e*P			**Pn**	**03 58 22.7**	**+0.1**
WTP	**Ta-pu** baz=235	**1.26**	**232**	⇑*i*P			**Pn**	**03 58 23.1**	**+0.2**
YOJ	**Yonaguni jima**	**1.27**	**70**	P			**Pg**	**03 58 23.3**	**+0.5**
YOJ	**Yonaguni jima** baz=67	**1.27**	**70**	*e*P			**Pn**	**03 58 23.0**	**0.0**
YOJ	**Yonaguni jima**	**1.27**	**70**	P			**Pg**	**03 58 23.2**	**+0.4**
TWG	**Pinlang** baz=209	**1.33**	**206**	*e*P			**Pn**	**03 58 21.6**	**-2.2**
TWGBT	**Beinan**	**1.33**	**206**	P			**Pn**	**03 58 22.2**	**-1.6**
TWGBT	**Beinan** baz=208	**1.33**	**206**	*e*P			**Pn**	**03 58 21.5**	**-2.2**
TWK	**Hsinying** baz=238	**1.34**	**236**	*e*P			**Pg**	**03 58 25.2**	**+1.0**
CHN1	**Nanshi** baz=237	**1.36**	**232**	*e*P			**Pg**	**03 58 25.1**	**+0.5**
CHN1	baz=237			*e*S			**Sn**	**03 58 44.9**	**+2.2**
LDUT	**Ludao** baz=193	**1.36**	**189**	*e*P			**Pn**	**03 58 21.4**	**-2.7**
SNST	**Tainan City** baz=237	**1.36**	**234**	*e*P			**Pg**	**03 58 24.7**	**+0.2**
SGST	**Jiashian** baz=231	**1.39**	**228**	⇓P			**Pn**	**03 58 24.4**	**-0.2**
SGST	baz=231			*e*S			**Sg**	**03 58 45.8**	**+2.6**
WSF	**Szhu** baz=255	**1.41**	**254**	*e*P			**Pg**	**03 58 25.2**	**-0.2**
SLGT	**Liugui** baz=228	**1.41**	**224**	*e*P			**Pg**	**03 58 25.8**	**+0.3**
WSL	**Shuilin Townsh** baz=251	**1.44**	**250**	*e*P			**Pg**	**03 58 26.6**	**+0.6**
ICHU	**Yijhu** baz=246	**1.46**	**243**	*e*P			**Pg**	**03 58 26.2**	**-0.2**
CHN8	**Yiju** baz=246	**1.52**	**244**	*e*P			**Pn**	**03 58 27.2**	**0.0**
CHN3	**Shinhua** baz=236	**1.55**	**233**	*e*P			**Pg**	**03 58 28.9**	**+0.9**
ECL	**Taimali** baz=210	**1.58**	**206**	*e*P			**Pn**	**03 58 26.4**	**-0.8**
SCST	**Cishan**	**1.59**	**225**	*e*P			**Pg**	**03 58 29.0**	**+0.2**

baz=229
SHHT Tainan City 1.59 231 *e*P Pg 03 58 30.2 +1.2
baz=235
SSD Sandimen 1.61 218 *e*P Pn 03 58 26.9 -0.7
baz=211
PCYT Pengchaiyu 1.63 12 *e*P Pb 03 58 28.8 -0.2
baz=348
TSMG Majia 1.63 217 *e*P Pb 03 58 29.1 0.0
baz=210
TWM1 Shoushan 1.68 225 *e*P Pg 03 58 30.6 +0.1
baz=229
MASBT Mashibuluo 1.72 215 *e*P Pn 03 58 28.8 -0.2
baz=208
TSCK Chigu Township 1.72 240 *e*P Pn 03 58 29.5 +0.4
baz=243
EAST Anshuo 1.81 206 *e*P Pn 03 58 29.1 -1.4
baz=194
TAWH Dawu Township 1.84 204 *e*P Pn 03 58 30.0 -0.7
baz=208
IRIF Iriomote-Funau 1.88 80 *e*P Pb 03 58 32.7 -0.6
SCZT Fangliau 1.92 211 *e*P Pn 03 58 32.0 +0.1
baz=204
HATJ Hateruma jima 1.92 89 S Sn 03 58 56.8 +0.3
SLIU Shizi 1.98 205 *e*P Pn 03 58 33.0 +0.2
baz=195
PHUB P'eng-hu 2.02 256 *e*P Pn 03 58 34.0 +0.8
baz=258
LYUB Lan-yu 2.02 183 *e*P Pn 03 58 29.8 -3.4
baz=188
PNG Penghu 2.02 257 *e*P Pn 03 58 33.5 +0.3
baz=259
WDGT Dungji 2.02 248 *e*P Pn 03 58 33.5 +0.2
baz=251
JKRS Kuro-shima 2.12 84 *e*P Pn 03 58 35.5 +1.0
TWK1 Hengchun 2.23 202 *e*P Pn 03 58 36.2 +0.1
baz=191
TWKBT Hengchun 2.23 202 *e*P Pn 03 58 35.8 -0.3
baz=191
VCHM Qimei 2.24 249 *e*P Pn 03 58 36.8 +0.5
baz=237
JIJ Ishigaki jima 2.25 81 P Pn 03 58 36.5 0.0
VWUC VWUC 2.27 296 *e*P Pn 03 58 35.4 -1.2
baz=295
JISG Ishigakijimahi 2.45 76 P Pn 03 58 38.9 -0.2
PTMZ Houxiangcun 2.56 294 *e*P Pn 03 58 39.9 -0.7
baz=293
MATB Ma-tsu 2.65 323 *e*P Pn 03 58 41.5 -0.3
baz=322
KNM Kinmen 3.01 278 *e*P Pn 03 58 48.3 +1.5
baz=277
KNMB Chin-men Tao 3.06 279 *e*P Pn 03 58 47.3 -0.2
baz=278
LYJJ Jianjiangzhen 3.07 325 *e*P Pn 03 58 46.8 -0.9
baz=324
MHZQ Yeshan 3.18 311 *e*P Pn 03 58 49.2 0.0
baz=297
XPSS Dashiqiu 3.20 335 *e*P Pn 03 58 49.2 -0.2
baz=334
AXDP Jialang 3.51 285 *e*P Pn 03 58 53.3 -0.4
baz=284
ZPLA Ao Xicun 3.62 269 *e*P Pn 03 58 54.9 -0.2
baz=269
DSXP Dongshan 3.93 266 *e*P Pn 03 58 59.4 -0.1
baz=266
SXFK Yanhouchang 4.37 304 *e*P Pn 03 59 05.0 -0.6
baz=302
JOW Kunigami 6.57 63 Pn Pn 03 59 34.7 -1.1
2.6nm,0.3s,baz=134,slow=20,SNR=5.4
5.4nm,0.3s
KSRS Korea Array 14.41 20 Pn P 04 01 30.1 0.0
0.4nm,0.3s,baz=196,slow=12,SNR=5.9
KLR Kul'dur 26.37 15 LR LR 04 14 55.2
comp=Z,131nm,18.5s,baz=330,slow=39
SONM Songino Array 26.73 337 P P 04 03 39.5 +0.8
0.5nm,0.8s,baz=163,slow=10,SNR=4.1
0.5nm,0.8s
MKAR Makanchi Array 38.78 316 P P 04 05 24.7 +0.6
0.7nm,0.7s,baz=101,slow=9.6,SNR=7.6
0.7nm,0.7s
WRA Warramunga Arr 45.40 163 P P 04 06 18.3 0.0
0.5nm,0.6s,baz=345,slow=8.8,SNR=4.7
0.5nm,0.6s
YKA Yellowknife Ar 82.93 23 P P 04 10 22.9 -1.4
0.2nm,0.6s,baz=310,slow=5.2,SNR=4.1
0.2nm,0.6s

GII ***07*** *04:04:05.7±0.4, 32.403N±0.003×36.685E±0.001, h3km, Md1.9/6, Mws2.2/3, confirmed*
JSO ***07*** *04:04:06, 32.39N×36.68E, h10km, ML2.6/22, Mw2.2/22*
GRAL ***07*** *04:04:07.0±0.4, 32.39N×36.63E, h0km±7km, MD3.1*
ISC 07 04:04:06.2±0.9, 32.39N±0.03×36.66E±0.04, h10km, n47, σ062/49, 1D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASF	**Jabal al Asfar**	**0.30**	**137**	P	**Pg**	**04 04 12.5**	**+0.3**
ASF				S	**Sg**	**04 04 16.8**	**+0.6**
HSUJ	**Al Zarqa**	**0.49**	**234**	P	**Pg**	**04 04 15.8**	**+0.1**
SHMJ	**Saham**	**0.83**	**294**	P	**Pg**	**04 04 22.8**	**+0.6**
QRNJ	**Al-Qirein**	**0.92**	**267**	P	**Pg**	**04 04 24.2**	**+0.3**
KSHT	**Keshet**	**0.93**	**310**	S	**Sb**	**04 04 37.0**	**+0.2**
KSHT	**Keshet**	**0.93**	**310**	⇓*i*P	**Pg**	**04 04 23.9**	**-0.2**
HMDT	**Nahal Hemdat**	**0.97**	**262**	P	**Pg**	**04 04 25.1**	**+0.3**
HMDT	**Nahal Hemdat**	**0.97**	**262**	S	**Sg**	**04 04 38.7**	**+1.3**
HMDT	**Nahal Hemdat**	**0.97**	**262**	P	**Pg**	**04 04 24.8**	**-0.1**
MMLI	**Mount Malkishu**	**1.05**	**273**	S	**Sb**	**04 04 41.3**	**+1.0**
MMLI	**Mount Malkishu**	**1.05**	**273**	P	**Pg**	**04 04 26.0**	**-0.3**
UJAP	**Al Uja**	**1.10**	**247**	P	**Pb**	**04 04 26.4**	**-0.9**
GEM	**Giv'at Ha'Em**	**1.17**	**315**	P	**Pb**	**04 04 27.6**	**-1.0**
GEM	**Giv'at Ha'Em**	**1.17**	**315**	S	**Sg**	**04 04 44.1**	**+0.2**
GEM	**Giv'at Ha'Em**	**1.17**	**315**	P	**Pb**	**04 04 27.6**	**-1.0**
MMB1	**Mount Meron ar**	**1.22**	**301**	P	**Pn**	**04 04 29.0**	**-0.4**
MMA0B	**Mount Meron ar**	**1.23**	**301**	P	**Pn**	**04 04 28.9**	**-0.6**
MMA0B	**Mount Meron ar**	**1.23**	**301**	S	**Sb**	**04 04 45.7**	**+0.2**
SALP	**Salfit**	**1.28**	**256**	P	**Pn**	**04 04 29.9**	**-0.3**
SALP	**Salfit**	**1.28**	**256**	P	**Pn**	**04 04 29.7**	**-0.6**
RCY	**Rachaya**	**1.30**	**328**	*e*P	**Pn**	**04 04 29.9**	**-0.7**
RCY				*e*S	**Sb**	**04 04 47.1**	**-0.6**
DSI	**Dead Sea**	**1.36**	**233**	P	**Pn**	**04 04 30.4**	**-0.8**
DSI	**Dead Sea**	**1.36**	**233**	S	**Sn**	**04 04 49.3**	**-0.1**
DSI	**Dead Sea**	**1.36**	**233**	P	**Pn**	**04 04 30.5**	**-0.8**
SLTI	**Sal'it**	**1.38**	**264**	P	**Pn**	**04 04 31.6**	**+0.1**
SLTI	**Sal'it**	**1.38**	**264**	S	**Sb**	**04 04 51.2**	**+1.5**
SLTI	**Sal'it**	**1.38**	**264**	P	**Pn**	**04 04 31.3**	**-0.2**
GHAJ	**Ghor Haditha**	**1.43**	**221**	P	**Pn**	**04 04 31.3**	**-0.8**
GHAJ	**Ghor Haditha**	**1.43**	**221**	P	**Pn**	**04 04 31.3**	**-0.8**
GHAJ	**Ghor Haditha**	**1.43**	**221**	S	**Sn**	**04 04 51.1**	**+0.2**
HNTI	**Hanita**	**1.43**	**299**	P	**Pn**	**04 04 32.1**	**-0.1**
HNTI	**Hanita**	**1.43**	**299**	S	**Sb**	**04 04 51.9**	**+0.7**
OFRI	**`Ofer**	**1.43**	**280**	P	**Pn**	**04 04 32.1**	**-0.1**
OFRI	**`Ofer**	**1.43**	**280**	P	**Pn**	**04 04 32.2**	**-0.1**
OFRI	**`Ofer**	**1.43**	**280**	S	**Sb**	**04 04 52.5**	**+1.1**
LISJ	**El Lisan**	**1.52**	**221**	P	**Pn**	**04 04 33.3**	**-0.1**
KARJ	**KARJ**	**1.53**	**214**	P	Pn	04 04 25.8	-7.8
MDBI	**Mazsada**	**1.54**	**226**	P	**Pn**	**04 04 34.1**	**+0.4**
MDBI	**Mazsada**	**1.54**	**226**	P	**Pn**	**04 04 33.6**	**-0.1**
MSBI	**Mazada**	**1.54**	**226**	P	**Pn**	**04 04 34.1**	**+0.4**
DQRL	**Deir Qamar**	**1.60**	**325**	*e*P	**Pn**	**04 04 34.9**	**+0.2**
DQRL				*e*S	**Sb**	**04 04 55.6**	**-0.6**
ZAHL	**Zahle**	**1.60**	**336**	*e*P	**Pn**	**04 04 35.0**	**+0.3**
YTIR	**Yattir**	**1.67**	**232**	P	**Pn**	**04 04 35.3**	**-0.2**
BHL	**Bhannes**	**1.73**	**331**	*e*P	**Pn**	**04 04 36.8**	**+0.4**
HWQ	**Hawqa**	**1.98**	**343**	*e*P	**Pn**	**04 04 40.5**	**+0.7**
BEIL	**Beino**	**2.18**	**350**	*e*P	**Pn**	**04 04 43.4**	**+0.7**
PRNI	**Paran**	**2.48**	**215**	P	**Pn**	**04 04 46.0**	**-0.6**

IDC ***07*** *04:19:03.5±3.6, 8.20S×117.11E, h154km±32km, mb3.6/6, mbtmp4.0/6, Error ellipse: s-maj=46.5km s-min=14.5km az=52.0*
DJA ***07*** *04:19:03.6±0.2, 9.5S±4.4×11.7E±1.0, h150km±5km, M4.6/15, mb4.5/13, mB5.5/5, MLv4.5/15, Mw(mB)5.0/5*
ISC 07 04:19:03.8±0.9, 8.53S±0.07×116.92E±0.06, h154km±9km, n52, σ1830/53, mb4.2/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.21**	**190**	P	**Pn**	**04 19 24.0**	**-0.5**
PLAI	**Plampang**	**0.90**	**109**	P	**Pn**	**04 19 28.1**	**0.0**
PLAI	**Plampang**	**0.90**	**109**	P	**Pn**	**04 19 28.1**	**0.0**
DNP	**Denpasar**	**1.69**	**265**	P	**Pn**	**04 19 35.4**	**-0.2**
SRBI	**Singaraja**	**1.74**	**285**	P	**Pn**	**04 19 36.0**	**-0.2**
JAGI	**Jajag, Banyuwa**	**2.74**	**271**	P	**Pn**	**04 19 47.3**	**-0.7**
JAGI	**Jajag, Banyuwa**	**2.74**	**271**	P	**Pn**	**04 19 47.1**	**-0.9**
BLJI	**Banyuglugur**	**3.38**	**283**	P	**Pn**	**04 19 57.2**	**+1.1**
GMJI	**Gumukmas**	**3.45**	**274**	P	**Pn**	**04 19 56.1**	**-0.8**
BASI	**Baing, Sumba**	**3.98**	**115**	P	**Pn**	**04 20 03.4**	**-0.5**
KAPI	**Kappang**	**4.49**	**39**	P	**Pn**	**04 20 11.9**	**+1.4**
BKSI	**Bulukumba**	**4.50**	**45**	P	**Pn**	**04 20 11.9**	**+1.2**
GRJI	**Gresik**	**4.68**	**290**	P	**Pn**	**04 20 14.6**	**+1.5**
BWJI	**Bawean**	**5.00**	**302**	P	**Pn**	**04 20 18.5**	**+1.3**
	442nm,0.6s,2.1nm						
PWJI	**Pagerwojo**	**5.09**	**275**	P	**Pn**	**04 20 19.1**	**+0.7**
	15nm,1.0s,1μm0.1nm						
MMRI	**Maumere**	**5.26**	**92**	P	**Pn**	**04 20 19.6**	**-1.1**
	65nm,0.8s,5μm0.5nm						
UGM	**Wanagama**	**6.36**	**275**	P	**Pn**	**04 20 35.7**	**+0.3**
UGM	**Wanagama**	**6.36**	**275**	P	**Pn**	**04 20 35.2**	**-0.2**
	119nm,1.9s,0.7nm						
SOEI	**Soe**	**7.36**	**100**	P	**Pn**	**04 20 48.3**	**-0.5**
	51nm,0.7s,0.3nm						
KPJI	**Karang Pucung**	**8.00**	**278**	P	**Pn**	**04 20 57.8**	**+0.6**
	20nm,0.5s						
BBJI	**Bungbulang**	**9.24**	**276**	P	**Pn**	**04 21 12.5**	**-1.3**
LUWI	**Luwuk**	**9.45**	**38**	P	**Pn**	**04 21 18.2**	**+1.7**
	19nm,1.1s						
CNJI	**Cibinong**	**9.77**	**276**	P	**Pn**	**04 21 21.6**	**+0.8**
	18nm,1.3s,1μm						
MRSI	**Marisa**	**10.25**	**29**	P	**Pn**	**04 21 27.9**	**+0.8**
	31nm,1.1s						
XMIS	**Christmas Isla**	**11.28**	**259**	P	**Pn**	**04 21 38.9**	**-1.8**
	34nm,1.3s						
PPBI	**Pangkal Pinang**	**12.46**	**300**	P	**Pn**	**04 21 57.6**	**+1.7**
FITZ	**Fitzroy Crossi**	**12.74**	**139**	P	**Pn**	**04 21 59.6**	**0.0**
PSA00	**Pilbara Seismi**	**13.27**	**168**	P	**Pn**	**04 22 06.7**	**+0.4**
KNRA	**Kununurra**	**13.58**	**123**	P	**Pn**	**04 22 09.4**	**-0.9**
GIRL	**Giralia**	**14.27**	**190**	P	**Pn**	**04 22 19.7**	**+0.8**
FAKI	**Fak Fak**	**16.24**	**71**	P	**Pn**	**04 22 42.6**	**-0.8**
	13nm,1.5s						
MEEK	**Meekatharra**	**18.08**	**175**	P	**Pn**	**04 23 06.1**	**+0.7**
WRKA	**Warakurna**	**19.68**	**148**	P	**Pn**	**04 23 22.7**	**-1.5**
WRA	**Warramunga Arr**	**20.32**	**126**	P	**P**	**04 23 27.7**	**-0.3**
	3.4nm,0.5s,baz=297,slow=12,SNR=24						
WRA				S	**S**	**04 27 04.5**	**-3.1**
	0.5nm,0.7s,baz=292,slow=24,SNR=2.0						
	3.4nm,0.5s						
MORW	**Morawa**	**20.45**	**182**	P	Pn	04 23 31.2	-2.0
BLDU	**Ballidu**	**21.97**	**180**	P	**P**	**04 23 46.5**	**+1.0**
ASAR	**Alice Springs**	**22.16**	**135**	P	**P**	**04 23 48.0**	**+0.5**
	6.8nm,0.6s,baz=308,slow=9.1,SNR=66						
ASAR				S	**S**	**04 27 42.9**	**+2.2**
	0.7nm,0.7s,baz=321,slow=25,SNR=4.0						
	6.8nm,0.6s						
AS01	**Alice Springs**	**22.19**	**135**	P	**P**	**04 23 48.4**	**+0.6**
KMBL	**Kambalda**	**23.19**	**169**	P	**P**	**04 23 57.7**	**+0.7**
FORT	**Forrest**	**24.46**	**156**	P	**P**	**04 24 09.8**	**+1.3**
OOD	**Oodnadatta**	**26.11**	**140**	P	**P**	**04 24 24.3**	**+0.9**
MULG	**Mulgathing**	**26.94**	**146**	P	**P**	**04 24 31.5**	**+0.6**
BBOO	**Buckleboo**	**29.96**	**146**	P	**P**	**04 24 59.7**	**+2.0**
HTT	**Hallett**	**32.04**	**144**	P	**P**	**04 25 17.5**	**+1.5**
STKA	**Stephens Creek**	**32.64**	**139**	P	**P**	**04 25 22.3**	**+1.1**
	1.8nm,0.4s,baz=317,slow=10.0,SNR=7.3						
	1.8nm,0.4s						
CMSA	**Cobar Meteorol**	**35.22**	**135**	P	**P**	**04 25 46.4**	**+2.9**
SONM	**Songino Array**	**56.89**	**352**	P	**P**	**04 28 30.9**	**-1.8**
	0.3nm,0.5s,baz=183,slow=8.1,SNR=2.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**63.12**	**334**	P	**P**	**04 29 13.3**	**-1.7**
	0.2nm,0.5s,baz=138,slow=6.9,SNR=4.7						
	0.2nm,0.5s						
VNDA	**Vanda**	**72.77**	**171**	P	**P**	**04 30 16.6**	**+1.8**
	12nm,1.3s,baz=320,slow=8.2,SNR=7.4						
	12nm,1.3s						
TORD	**Torodi Ar. Bea**	**116.35**	**280**	PKP	**PKPdf**	**04 37 27.4**	**-2.7**
	0.3nm,0.6s,baz=101,slow=1.5,SNR=1.8						
CPUP	**Vila Florida**	**144.90**	**189**	PKPbc	**PKPdf**	**04 38 23.3**	**-0.1**
	2.4nm,0.5s,baz=204,slow=2.8,SNR=11						
BDFB	**Brasilia**	**151.72**	**212**	PKPbc	**PKiKP**	**04 38 41.9**	**+0.2**
	0.6nm,0.4s,baz=158,slow=5.4,SNR=3.9						

IDC 07 04:30:37.6±3.0, 54.19N×87.09E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.3km s-min=16.8km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**261**	I	I	04 38 50.0	
	0.1nm,1.0s,baz=80,slow=343,SNR=5.3						
ZALV	**Zalesovo Beam**	**1.36**	**261**	Pg	Pg	04 31 02.2	-1.4
	1.3nm,0.3s,baz=76,slow=15,SNR=16						
ZALV				Lg	Lg	04 31 22.4	
	0.9nm,0.3s,baz=77,slow=24,SNR=4.9						
KURBB	**Kurchatov Arra**	**6.34**	**239**	Pn	Pn	04 32 12.2	-0.1
	0.1nm,0.3s,baz=54,slow=13,SNR=7.3						
KURBB				Sn	Sn	04 33 24.2	-1.1
	0.1nm,0.3s,baz=52,slow=23,SNR=4.4						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**8.01**	**204**	Pn	Pn	04 32 37.5	+2.3
	0.1nm,0.3s,baz=28,slow=14,SNR=4.1						
MKAR				Sn	Sn	04 34 05.5	-1.0
	0.1nm,0.3s,baz=21,slow=25,SNR=2.2						
	0.1nm,0.3s						

JMA ***07*** *04:33:13.5±0.2, 24.0N±0.5×12.2E±, h2km, MV3.1/14, TAIWAN REGION*
ASIES ***07*** *04:33:13.6, 23.99N×121.59E, h7km, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^21 Nm; Mrr1.46; Mθθ-0.86; Mφφ-0.60; Mrθ0.48; Mrφ-0.87; Mθφ1.23; Fault plane solution: M0 2.03356×10^21 NP1:φ0=31.46000°, δ65.92000°, λ74.00000°. NP2:φ0=246.56000°, δ28.64000°, λ121.67000°. Principal axes: T Plg65.3730°, Azm273.5720°; N Plg14.5750°, Azm38.1280°; P Plg19.3990°, Azm133.3820°;*
TAP ***07*** *04:33:13.6, 23.99N×121.59E, h7km, ML3.6, C*
ISC 07 04:33:13.7±0.8, 23.97N±0.01×121.62E±0.02, h8km±6km, n149, σ055/180, 2C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.11**	**349**	⇓*i*P	**Pg**	**04 33 16.2**	**-0.1**
	baz=8.0						
TWD				*i* S	**Sg**	**04 33 17.7**	**-0.3**
	baz=8.0						
ETM	**Tongmen**	**0.12**	**267**	P	**Pg**	**04 33 16.3**	**-0.1**
	baz=254						
ETM				S	**Sg**	**04 33 18.1**	**-0.2**
	baz=254						
ETL	**Fush Village**	**0.19**	**1**	*i* P	**Pg**	**04 33 17.4**	**-0.2**
	baz=18						
SHUL	**Shoufeng**	**0.19**	**196**	P	**Pg**	**04 33 18.5**	**+0.9**
	baz=188						
SHUL				*e*S	**Sg**	**04 33 22.7**	**+2.4**
	baz=188						
LXIB	**Xiulin Townshi**	**0.19**	**285**	⇓*i*P	**Pg**	**04 33 17.7**	**-0.1**
	baz=273						
LXIB				*i* S	**Sg**	**04 33 20.7**	**+0.2**
	baz=273						
NACB	**Ninganchiao**	**0.20**	**354**	P	**Pg**	**04 33 17.7**	**-0.2**
NACB	**Ninganchiao**	**0.20**	**354**	⇓*i*P	**Pg**	**04 33 17.6**	**-0.2**
	baz=1.0						
ESL	**Shilin**	**0.23**	**227**	⇓P	**Pg**	**04 33 18.2**	**-0.2**
	baz=217						
TEGC	**Jichi Village**	**0.27**	**195**	P	**Pb**	**04 33 20.4**	**-0.5**
	baz=193						
TEGC				*e*S	**Sb**	**04 33 25.9**	**+0.4**
	baz=193						
WARBT	**Fenglin Townsh**	**0.33**	**220**	⇓P	**Pg**	**04 33 20.1**	**-0.2**
	baz=214						
EGFH	**Guangfu**	**0.35**	**210**	*e*P	**Pg**	**04 33 20.9**	**+0.3**
	baz=212						
EHP	**Heping Village**	**0.35**	**18**	*e*P	**Pb**	**04 33 21.8**	**-0.5**
	baz=26						
WHF	**Hehuan Shan**	**0.37**	**298**	*e*P	**Pg**	**04 33 21.0**	**-0.1**
	baz=297						
WHF				S	**Sg**	**04 33 26.0**	**0.0**
	baz=297						
EAHA	**Aohua**	**0.37**	**17**	*e*P	**Pg**	**04 33 20.9**	**-0.2**
	baz=23						
OWD	**Renai**	**0.41**	**268**	*e*P	**Pg**	**04 33 21.8**	**+0.1**
	baz=264						
CHGB	**Renai**	**0.42**	**282**	⇓*i*P	**Pg**	**04 33 22.1**	**+0.2**
	baz=280						
CHGB				*e*S	**Sg**	**04 33 28.0**	**+0.5**
	baz=280						
FUSS	**Fushou**	**0.44**	**309**	⇓P	**Pg**	**04 33 22.5**	**+0.2**
	baz=308						
FUSS				*e*S	**Sb**	**04 33 29.1**	**-1.6**
	baz=308						
WUSB	**Renai**	**0.46**	**273**	⇓P	**Pg**	**04 33 23.0**	**+0.3**
	baz=270						
WUSB				S	**Sg**	**04 33 29.6**	**+0.8**
	baz=270						
ENA	**Nanau**	**0.47**	**14**	⇓*i*P	**Pg**	**04 33 22.6**	**-0.3**
	baz=19						
VWDT	**VWDT**	**0.49**	**244**	⇓P	**Pg**	**04 33 23.5**	**+0.3**
	baz=232						
VWDT				*e*S	**Sb**	**04 33 30.6**	**-1.3**
	baz=232						
TWT	**Tachien**	**0.49**	**305**	*e*P	**Pg**	**04 33 23.7**	**+0.4**
	baz=302						
EWUT	**Wuta**	**0.49**	**17**	*e*P	**Pg**	**04 33 23.1**	**-0.3**
	baz=22						
NNSB	**Datong**	**0.50**	**335**	⇓*i*P	**Pg**	**04 33 23.6**	**0.0**
	baz=336						
NNSB				S	**Sg**	**04 33 29.8**	**-0.4**
	baz=336						
NNSH	**Datong**	**0.50**	**335**	*e*P	**Pg**	**04 33 23.5**	**0.0**
	baz=335						
TDCB	**Techi**	**0.51**	**304**	⇓P	**Pg**	**04 33 23.9**	**+0.3**
	baz=303						
TDCB				*e*S	**Sg**	**04 33 30.6**	**+0.3**
	baz=303						
HGSD	**Ruisui**	**0.51**	**201**	*e*P	**Pb**	**04 33 24.9**	**0.0**
	baz=206						
NNS	**Nan Shan**	**0.52**	**334**	⇓P	**Pg**	**04 33 23.8**	**0.0**
	baz=337						
NNS				*e*S	**Sg**	**04 33 30.9**	**+0.3**
	baz=337						
EHY	**Hungye**	**0.54**	**210**	⇓*i*P	**Pg**	**04 33 24.1**	**-0.1**
	baz=214						
LATG	**Datong**	**0.57**	**351**	⇓P	**Pg**	**04 33 24.5**	**-0.2**
	baz=344						
LATG				*e*S	**Sb**	**04 33 34.4**	**+0.1**
	baz=344						
WPL	**Puli Township**	**0.61**	**274**	P	**Pb**	**04 33 25.9**	**-0.7**
	baz=272						
WPL				*e*S	**Sb**	**04 33 34.1**	**-1.2**
	baz=272						
DPDB	**Guoxing**	**0.64**	**276**	P	**Pb**	**04 33 26.6**	**-0.6**
	baz=273						
ESAO	**Su ao**	**0.64**	**19**	*e*P	**Pg**	**04 33 26.2**	**+0.2**
	baz=22						
NDT	**Datong Townshi**	**0.64**	**351**	*e*P	**Pg**	**04 33 26.1**	**+0.1**
	baz=343						
NDT				*e*S	**Sb**	**04 33 35.9**	**-0.2**
	baz=343						
SSLB	**Suanglung**	**0.64**	**253**	P	**Pg**	**04 33 26.4**	**+0.4**
SSLB	**Suanglung**	**0.64**	**253**	⇓*i*P	**Pg**	**04 33 26.2**	**+0.2**
	baz=263						
SSLB				S	**Sg**	**04 33 33.9**	**-0.4**
	baz=263						
YULB	**Yu-li**	**0.65**	**207**	P	**Pb**	**04 33 27.3**	**0.0**
YULB	**Yu-li**	**0.65**	**207**	*e*P	**Pg**	**04 33 26.2**	**-0.1**
	baz=211						
WCS	**Beigang Elemen**	**0.65**	**278**	⇓*e*P	**Pb**	**04 33 26.7**	**-0.7**
	baz=275						
EOS4	**EOS4**	**0.66**	**77**	*e*P	**Pb**	**04 33 27.4**	**+0.2**
	baz=91						
SMLT	**Sun Moon Lake**	**0.66**	**263**	⇓*i*P	**Pb**	**04 33 27.0**	**-0.7**
	baz=260						
NDS	**Dongshan**	**0.67**	**8**	*e*P	**Pg**	**04 33 26.4**	**-0.2**
	baz=11						
ENTT	**Nioudou**	**0.67**	**356**	⇓*i*P	**Pg**	**04 33 26.7**	**0.0**
	baz=359						
TWC	**Suao**	**0.67**	**18**	*e*P	**Pg**	**04 33 26.5**	**-0.2**
	baz=23						
ECBN	**Changbin**	**0.67**	**193**	*e*P	**Pb**	**04 33 27.6**	**0.0**
	baz=191						
EYUL	**Yuli**	**0.68**	**204**	*e*P	**Pg**	**04 33 27.2**	**+0.4**
	baz=210						
TWF1	**Yuli**	**0.68**	**206**	*e*P	**Pg**	**04 33 26.6**	**-0.3**
	baz=211						
WHP	**Taichung City**	**0.69**	**297**	⇓P	**Pb**	**04 33 27.5**	**-0.5**
	baz=295						
TYC	**Yuchr**	**0.70**	**265**	*e*P	**Pg**	**04 33 27.4**	**+0.2**
	baz=262						
EOS3	**EOS3**	**0.71**	**64**	*e*P	**Pb**	**04 33 28.8**	**+0.5**
	baz=64						
YHNB	**Yeheng**	**0.73**	**342**	P	**Pg**	**04 33 28.1**	**+0.3**
YHNB	**Yeheng**	**0.73**	**342**	⇓*i*P	**Pg**	**04 33 27.9**	**0.0**
	baz=344						
YHNB				*e*S	**Sb**	**04 33 38.5**	**-0.4**
	baz=344						
NSK	**Sanguang**	**0.74**	**341**	⇓*i*P	**Pg**	**04 33 28.1**	**0.0**
	baz=335						
NSK				*e*S	**Sb**	**04 33 38.6**	**-0.7**
	baz=335						
TWE	**Neicheng**	**0.75**	**3**	P	**Pg**	**04 33 28.2**	**0.0**
	baz=7.0						
TWE				S	**Sb**	**04 33 38.5**	**-0.8**
	baz=7.0						
WHYT	**Xinyi Township**	**0.75**	**249**	*e*P	**Pb**	**04 33 28.7**	**-0.4**
	baz=246						
FUSB	**Fushanzhiwuyua**	**0.79**	**358**	⇓*i*P	**Pg**	**04 33 28.9**	**0.0**
FUSB					S	**Sg**	**04 33 39.4**	**+0.3**
NFF	**Wufeng Townshi**	**0.80**	**325**	*e*P	**Pb**	**04 33 29.4**	**-0.5**
	baz=326						
NFF				*e*S	**Sb**	**04 33 40.7**	**-0.3**
	baz=326						
CHKH	**Chenggong**	**0.80**	**195**	*e*P	**Pb**	**04 33 30.0**	**+0.1**
	baz=195						
NWLT	**Wulai**	**0.81**	**352**	⇓P	**Pg**	**04 33 29.4**	**+0.1**
	baz=354						
NWLT				*e*S	**Sb**	**04 33 40.8**	**-0.4**
	baz=354						
FULB	**Fuli**	**0.82**	**201**	*e*P	**Pb**	**04 33 30.1**	**-0.2**
	baz=215						
WJS	**Zhushan**	**0.83**	**260**	*e*P	**Pn**	**04 33 31.5**	**-0.2**
	baz=249						
TWQ1	**Liyutan**	**0.86**	**296**	*e*P	**Pb**	**04 33 31.0**	**+0.1**
	baz=295						
WNT	**Mingjian**	**0.86**	**264**	*e*P	**Pn**	**04 33 31.6**	**-0.5**
	baz=254						
WNT1	**Nantou City**	**0.86**	**266**	*e*P	**Pb**	**04 33 30.8**	**-0.1**
	baz=264						
NSTT	**Nanjuang**	**0.87**	**319**	P	**Pb**	**04 33 31.0**	**0.0**
	baz=320						
NSTT				*e*S	**Sb**	**04 33 42.5**	**-0.3**
	baz=320						
LIOB	**Emei**	**0.87**	**321**	*e*P	**Pb**	**04 33 30.8**	**-0.3**
	baz=321					

	baz=338						
TAP	**Taipei**	**1.07**	**354**	*e*P	**Pn**	**04 33 35.5**	**+0.5**
	baz=357						
WCKO	**Fanlu**	**1.07**	**240**	*e*P	**Pn**	**04 33 35.0**	**0.0**
	baz=240						
TWB1	**Santiao Chiao**	**1.09**	**18**	*e*P	**Pb**	**04 33 34.8**	**0.0**
	baz=12						
NWF	**Wu-fen Shan**	**1.10**	**8**	*e*P	**Pn**	**04 33 36.0**	**+0.4**
	baz=9.0						
WFSB	**Wu-fen Shan**	**1.10**	**8**	*e*P	**Pn**	**04 33 35.8**	**+0.3**
	baz=9.0						
STYH	**Taoyuan**	**1.11**	**224**	*e*P	**Pg**	**04 33 35.0**	**0.0**
	baz=217						
CHN4	**Tsaushan**	**1.12**	**237**	*e*P	**Pn**	**04 33 35.9**	**+0.1**
	baz=237						
TPUB	**Ta-pu**	**1.13**	**234**	P	**Pn**	**04 33 36.3**	**+0.5**
TPUB	**Ta-pu**	**1.13**	**234**	*e*P	**Pn**	**04 33 35.7**	**-0.1**
	baz=234						
STYT	**Tauyuan**	**1.13**	**225**	*e*P	**Pn**	**04 33 35.7**	**-0.2**
	baz=225						
CHN2	**Minshiung**	**1.14**	**248**	*e*P	**Pn**	**04 33 37.0**	**+1.1**
	baz=248						
WRL	**Guolierlin Hig**	**1.14**	**267**	*e*P	**Pn**	**04 33 36.3**	**+0.3**
	baz=265						
TWS1	**Kuangyinshan**	**1.14**	**351**	*e*P	**Pn**	**04 33 36.9**	**+0.9**
SXI1	**Grass Mountain**	**1.14**	**12**	*e*P	**Pn**	**04 33 36.1**	**0.0**
	baz=13						
LONT	**Longtian**	**1.15**	**203**	*e*P	**Pg**	**04 33 36.0**	**+0.2**
	baz=204						
RLNB	**Erlin**	**1.16**	**266**	*e*P	**Pn**	**04 33 36.7**	**+0.6**
	baz=265						
RLNB				*e*S	**Sn**	**04 33 53.5**	**+1.3**
	baz=265						
WTK	**Tuku**	**1.16**	**256**	*e*P	**Pn**	**04 33 36.6**	**+0.3**
	baz=255						
WTP	**Ta-pu**	**1.17**	**232**	P	**Pn**	**04 33 36.5**	**+0.1**
	baz=232						
YM01	**YM01**	**1.17**	**358**	*e*P	**Pn**	**04 33 36.6**	**+0.1**
	baz=10.0						
TNOU	**National Taiwa**	**1.18**	**7**	*e*P	**Pn**	**04 33 37.5**	**+0.9**
	baz=8.0						
NTST	**Danshui**	**1.20**	**353**	*e*P	**Pg**	**04 33 37.1**	**+0.3**
	baz=352						
ANP	**Anpu**	**1.21**	**356**	*e*P	**Pb**	**04 33 36.7**	**-0.3**
	baz=356						
TWG	**Pinlang**	**1.25**	**204**	*e*P	**Pn**	**04 33 36.1**	**-1.4**
	baz=205						
TWGBT	**Beinan**	**1.25**	**203**	P	**Pb**	**04 33 37.7**	**+0.1**
TWGBT	**Beinan**	**1.25**	**203**	*e*P	**Pn**	**04 33 36.0**	**-1.5**
	baz=192						
TWK	**Hsinying**	**1.25**	**236**	*e*P	**Pg**	**04 33 38.4**	**+0.6**
	baz=236						
CHN1	**Nanshi**	**1.27**	**232**	*e*P	**Pg**	**04 33 38.4**	**+0.3**
	baz=232						
SNST	**Tainan City**	**1.27**	**234**	*e*P	**Pn**	**04 33 37.4**	**-0.4**
	baz=234						
SGST	**Jiashian**	**1.30**	**227**	*e*P	**Pb**	**04 33 38.5**	**0.0**
	baz=228						
TWY	**Chenhua**	**1.30**	**359**	*e*P	**Pg**	**04 33 40.6**	**+1.9**
	baz=348						
JYNG	**Yonagunijimaku**	**1.30**	**68**	*e*P	**Pg**	**04 33 39.1**	**+0.3**
SLGT	**Liugui**	**1.32**	**223**	*e*P	**Pg**	**04 33 39.4**	**+0.3**
	baz=209						
WSL	**Shuilin Townsh**	**1.35**	**251**	*e*P	**Pn**	**04 33 38.6**	**-0.3**
	baz=263						
YOJ	**Yonaguni jima**	**1.36**	**69**	*e*P	**Pb**	**04 33 39.4**	**0.0**
	baz=68						
YOJ	**Yonaguni jima**	**1.36**	**69**	P	**Pb**	**04 33 39.5**	**0.0**
ICHU	**Yijhu**	**1.37**	**244**	*e*P	**Pg**	**04 33 40.1**	**0.0**
	baz=246						
CHN8	**Yiju**	**1.43**	**245**	*e*P	**Pb**	**04 33 40.5**	**-0.2**
	baz=245						
SSD	**Sandimen**	**1.52**	**217**	*e*P	**Pb**	**04 33 42.0**	**-0.1**
	baz=207						
TSMG	**Majia**	**1.55**	**216**	*e*P	**Pg**	**04 33 43.2**	**-0.2**
	baz=207						
MASBT	**Mashibuluo**	**1.63**	**214**	*e*P	**Pb**	**04 33 43.5**	**-0.6**
	baz=205						
EAST	**Anshuo**	**1.73**	**204**	*e*P	**Pb**	**04 33 45.4**	**-0.4**
	baz=195						
TAWH	**Dawu Township**	**1.76**	**203**	*e*P	**Pb**	**04 33 46.0**	**-0.2**
	baz=192						
SCZT	**Fangliau**	**1.84**	**210**	*e*P	**Pn**	**04 33 46.5**	**+0.9**
	baz=214						
PHUB	**P'eng-hu**	**1.93**	**257**	*e*P	**Pn**	**04 33 47.2**	**+0.4**
	baz=256						
PHUB				*e*S	**Sb**	**04 34 12.9**	**-0.5**
	baz=256						
WDGT	**Dungji**	**1.93**	**249**	*e*P	**Pn**	**04 33 47.8**	**+0.9**
	baz=251						
PNG	**Penghu**	**1.93**	**258**	*e*P	**Pn**	**04 33 47.5**	**+0.6**
	baz=258						
HATJ	**Hateruma jima**	**2.00**	**87**	*e*S	**Sb**	**04 34 14.5**	**-0.9**
VCHM	**Qimei**	**2.15**	**250**	*e*P	**Pn**	**04 33 50.9**	**+1.1**
	baz=251						
JKRS	**Kuro-shima**	**2.20**	**83**	P	**Pn**	**04 33 50.7**	**+0.1**
JKRS				*e*S	**Sn**	**04 34 17.6**	**-0.4**
VWUC	**VWUC**	**2.22**	**298**	*e*P	**Pn**	**04 33 50.8**	**-0.1**
	baz=296						
JIJ	**Ishigaki jima**	**2.34**	**80**	P	**Pn**	**04 33 52.8**	**+0.3**
JIJ				*e*S	**Sn**	**04 34 21.0**	**-0.3**
PTMZ	**Houxiangcun**	**2.51**	**296**	*e*P	**Pn**	**04 33 55.3**	**+0.4**
	baz=294						
JISG	**Ishigakijimahi**	**2.53**	**75**	P	**Pn**	**04 33 54.4**	**-0.8**
JISG				S	**Sn**	**04 34 25.9**	**-0.3**
MATB	**Ma-tsu**	**2.65**	**325**	*e*P	**Pn**	**04 33 57.0**	**+0.2**
	baz=309						
JTJ	**Tarama**	**2.89**	**76**	S	**Sn**	**04 34 35.0**	**0.0**
KNMB	**Chin-men Tao**	**2.99**	**280**	*e*P	**Pn**	**04 34 01.6**	**+0.2**
	baz=279						
LYJJ	**Jianjiangzhen**	**3.07**	**327**	*e*P	**Pn**	**04 34 02.9**	**+0.3**
	baz=312						
MHZQ	**Yeshan**	**3.16**	**313**	*e*P	**Pn**	**04 34 04.4**	**+0.6**
	baz=311						
XPSS	**Dashigiu**	**3.22**	**337**	*e*P	**Pn**	**04 34 04.6**	**+0.1**
	baz=334						
AXDP	**Jialang**	**3.45**	**286**	*e*P	**Pn**	**04 34 07.7**	**-0.1**
	baz=285						
ZPLA	**Ao Xicun**	**3.54**	**270**	*e*P	**Pn**	**04 34 09.3**	**+0.3**
	baz=269						
DSXP	**Dongshan**	**3.85**	**267**	*e*P	**Pn**	**04 34 12.9**	**-0.3**
	baz=266						
SXFK	**Yanhouchang**	**4.34**	**305**	*e*P	**Pn**	**04 34 19.9**	**-0.1**
	baz=303						

IDC ***07*** *04:39:16.5±1.1,23.˙93N×121.˙74E,h0km,mb3.4/6, mbtmp3.5/7,ML3.5/1,MS2.9/4,Error ellipse: s-maj=39.8km s-min=22.0km az=64.0*

TAP ***07*** *04:39:18.4,24.˙00N×121.˙61E,h7km,ML4.0,B*

JMA ***07*** *04:39:18.1±0.2,24.˙0N±0.˙2×121.˙6E±0.˙7,h3km±2km, MV3.3/14,TAIWAN REGION*

ASIES ***07*** *04:39:18.4,24.˙00N×121.˙61E,h7km,ML4.0,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr5.23; Mθθ-2.37; Mφφ-2.86; Mrθ2.06; Mθφ-2.57; Mφr3.38; Fault plane solution: M₀6.54266×10²¹ NP1:φs35.78000°, δ63.65000°,λ.84.29000°. NP2:φs228.47000°,δ26.92000°, λ.101.35000°. Principal axes: T Plg70.7980°, Azm293.4390°; N Plg5.1120°, Azm38.3230°; P Plg18.4580°, Azm130.0340°;*

ISC 07 04:39:18.0±0.8,23.˙98N±0.˙01×121.˙66E±0.˙02,h10km±4km, n180,σ0.64/248,mb3.4/6,4C-34D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**266**	*i* P		**Pg**	**04 39 20.4**		**+0.4**
HWA	baz=172			*e*S		**Sg**	**04 39 21.5**		**+0.1**
TWD	**Chiawan**	**0.12**	**330**	⇓*i*P		**Pg**	**04 39 20.7**		**-0.1**
TWD	baz=358			*i* S		**Sg**	**04 39 22.5**		**-0.3**
ETM	**Tongmen**	**0.15**	**265**	P		**Pg**	**04 39 21.3**		**-0.1**
ETM	baz=252			*i* S		**Sg**	**04 39 23.3**		**-0.5**
ETL	**Fush Village**	**0.18**	**350**	⇓*i*P		**Pg**	**04 39 21.8**		**-0.1**
ETL	baz=5.0			S		**Sg**	**04 39 24.7**		**+0.1**
NACB	**Ninganchiao**	**0.20**	**343**	⇓*i*P		**Pg**	**04 39 22.1**		**-0.2**
NACB	baz=355			*i* S		**Sg**	**04 39 24.5**		**-0.6**
	baz=355								
SHUL	**Shoufeng**	**0.21**	**205**	⇓P		**Pg**	**04 39 23.6**		**+1.2**
SHUL	baz=191			*e*S		**Sg**	**04 39 27.7**		**+2.3**
LXIB	**Xiulin Townshi**	**0.23**	**280**	⇓*i*P		**Pg**	**04 39 22.6**		**-0.2**
LXIB	baz=270			*i* S		**Sg**	**04 39 25.8**		**-0.3**
ESL	**Shilin**	**0.27**	**231**	⇓*i*P		**Pg**	**04 39 23.4**		**0.0**
ESL	baz=230			*e*S		**Sg**	**04 39 26.9**		**-0.1**
TEGC	**Jichi Village**	**0.29**	**202**	*e*P		**Pb**	**04 39 25.3**		**-0.1**
TEGC	baz=196			S		**Sb**	**04 39 31.0**		**+0.7**
EHP	**Heping Village**	**0.34**	**13**	*e*P		**Pb**	**04 39 26.6**		**+0.4**
	baz=24								
EAHA	**Aohua**	**0.35**	**12**	*e*P		**Pg**	**04 39 25.1**		**0.0**
	baz=29								
EAHA				*e*S		**Sg**	**04 39 30.2**		**+0.4**
	baz=29								
WARBT	**Fenglin Townsh**	**0.36**	**224**	⇓*i*P		**Pg**	**04 39 25.2**		**0.0**
	baz=225								
WARBT				S		**Sg**	**04 39 29.8**		**-0.2**
	baz=225								
EGFH	**Guangfu**	**0.38**	**214**	*e*P		**Pg**	**04 39 25.9**		**+0.4**
	baz=213								
WHF	**Hehuan Shan**	**0.40**	**295**	⇓*i*P		**Pg**	**04 39 25.8**		**-0.2**
	baz=295								
WHF				*i* S		**Sg**	**04 39 30.9**		**-0.4**
	baz=295								
OWD	**Renai**	**0.44**	**267**	⇓*i*P		**Pg**	**04 39 26.8**		**0.0**
	baz=274								
OWD				S		**Sg**	**04 39 32.4**		**-0.2**
	baz=274								
CHGB	**Renai**	**0.45**	**280**	⇓*i*P		**Pg**	**04 39 27.1**		**+0.1**
	baz=279								
CHGB				*i* S		**Sg**	**04 39 32.6**		**-0.3**
	baz=279								
ENA	**Nanau**	**0.45**	**10**	*e*P		**Pg**	**04 39 26.8**		**-0.1**
	baz=27								
ENA				*e*S		**Sg**	**04 39 33.3**		**+0.4**
	baz=27								
FUSS	**Fushou**	**0.46**	**305**	⇓*i*P		**Pg**	**04 39 27.3**		**+0.1**
	baz=307								
FUSS				S		**Sg**	**04 39 33.6**		**+0.3**
	baz=307								
EWUT	**Wuta**	**0.48**	**13**	⇓*e*P		**Pg**	**04 39 27.4**		**+0.1**
	baz=29								
EWUT				*e*S		**Sg**	**04 39 33.8**		**+0.2**
	baz=29								
WUSB	**Renai**	**0.49**	**271**	⇓*i*P		**Pg**	**04 39 28.0**		**+0.2**
	baz=269								
WUSB				S		**Sg**	**04 39 34.6**		**+0.3**
	baz=269								
NNSB	**Datong**	**0.51**	**331**	⇓*i*P		**Pg**	**04 39 28.1**		**0.0**
	baz=335								
NNSB				S		**Sg**	**04 39 34.4**		**-0.5**
	baz=335								
NNSH	**Datong**	**0.51**	**331**	⇓*e*P		**Pg**	**04 39 28.1**		**0.0**
	baz=334								
NNSH				S		**Sg**	**04 39 34.5**		**-0.4**
	baz=334								
TWT	**Tachien**	**0.52**	**302**	⇓*i*P		**Pg**	**04 39 28.6**		**+0.4**
	baz=302								
TWT				S		**Sg**	**04 39 35.2**		**+0.2**
	baz=302								
VWDT	**VWDT**	**0.53**	**245**	⇓*i*P		**Pg**	**04 39 28.6**		**+0.4**
	baz=233								
VWDT				S		**Sg**	**04 39 35.0**		**-0.1**
	baz=233								
NNS	**Nan Shan**	**0.53**	**330**	⇓*i*P		**Pg**	**04 39 28.4**		**0.0**
	baz=336								
NNS				*e*S		**Sg**	**04 39 35.0**		**-0.4**
	baz=336								
HGSD	**Ruisui**	**0.53**	**204**	⇓P		**Pb**	**04 39 29.7**		**+0.2**
	baz=206								
TDCB	**Techi**	**0.53**	**301**	⇓*i*P		**Pg**	**04 39 28.7**		**+0.2**
	baz=302								
TDCB				S		**Sg**	**04 39 34.7**		**-0.8**
	baz=302								
EHY	**Hungye**	**0.56**	**213**	*e*P		**Pg**	**04 39 29.2**		**+0.2**
	baz=216								
EHY				*e*S		**Sg**	**04 39 36.4**		**-0.1**
	baz=216								
LATG	**Datong**	**0.57**	**348**	⇓*i*P		**Pg**	**04 39 29.1**		**0.0**
	baz=353								
LATG				*e*S		**Sg**	**04 39 36.3**		**-0.3**
	baz=353								
ESAO	**Su ao**	**0.62**	**16**	*e*P		**Pg**	**04 39 30.2**		**+0.2**
	baz=21								
EOS4	**EOS4**	**0.62**	**77**	*e*P		**Pn**	**04 39 32.0**		**-0.6**
	baz=79								
NDT	**Datong Townshi**	**0.63**	**348**	⇓*i*P		**Pg**	**04 39 30.6**		**+0.2**
	baz=342								
NDT				*e*S		**Sg**	**04 39 38.7**		**0.0**
	baz=342								
WPL	**Puli Township**	**0.64**	**273**	P		**Pg**	**04 39 30.9**		**+0.4**
	baz=272								
WPL				*e*S		**Sg**	**04 39 38.6**		**-0.3**
	baz=272								
TWC	**Suao**	**0.65**	**15**	P		**Pg**	**04 39 30.9**		**+0.2**
	baz=21								
TWC				*e*S		**Sg**	**04 39 39.4**		**+0.3**
	baz=21								
NDS	**Dongshan**	**0.65**	**5**	⇓*i*P		**Pg**	**04 39 30.8**		**+0.1**
	baz=9.0								
NDS				*e*S		**Sg**	**04 39 39.8**		**+0.6**
	baz=9.0								
ENTT	**Nioudou**	**0.66**	**353**	⇓*i*P		**Pg**	**04 39 31.2**		**+0.3**
	baz=358								
ENTT				S		**Sg**	**04 39 39.5**		**-0.1**
	baz=358								
DPDB	**Guoxing**	**0.67**	**275**	⇓P		**Pg**	**04 39 31.5**		**+0.4**
	baz=274								
DPDB				*e*S		**Sg**	**04 39 40.0**		**+0.1**
	baz=274								
SSLB	**Suanglung**	**0.67**	**254**	⇓*i*P		**Pg**	**04 39 31.3**		**+0.2**
	baz=263								
SSLB				*i* S		**Sg**	**04 39 39.4**		**-0.5**
	baz=263								
YULB	**Yu-li**	**0.67**	**210**	P		**Pb**	**04 39 32.4**		**+0.5**
YULB	**Yu-li**	**0.67**	**210**	P		**Pg**	**04 39 31.1**		**+0.1**
	baz=215								
YULB				*e*S		**Sg**	**04 39 40.5**		**+0.6**
	baz=215								
EOS3	**EOS3**	**0.67**	**63**	*e*P		**Pb**	**04 39 32.9**		**+1.1**
	baz=64								
EOS2	**EOS2**	**0.68**	**50**	*e*P		**Pn**	**04 39 33.3**		**-0.4**
	baz=68								
ECBN	**Changbin**	**0.69**	**196**	*e*P		**Pb**	**04 39 32.5**		**+0.3**
	baz=192								
WCS	**Beigang Elemen**	**0.69**	**277**	*e*P		**Pg**	**04 39 31.7**		**+0.3**
	baz=276								
WCS				*e*S		**Sg**	**04 39 40.4**		**+0.1**
	baz=276								
SMLT	**Sun Moon Lake**	**0.70**	**262**	⇓*i*P		**Pg**	**04 39 32.0**		**+0.4**
	baz=260								
SMLT				S		**Sg**	**04 39 41.1**		**+0.3**
	baz=260								
EYUL	**Yuli**	**0.70**	**206**	*e*P		**Pb**	**04 39 32.4**		**0.0**
	baz=213								
TWF1	**Yuli**	**0.71**	**208**	*e*P		**Pg**	**04 39 31.7**		**-0.1**
	baz=215								
TWF1				*e*S		**Sg**	**04 39 41.6**		**+0.6**
	baz=215								
WHP	**Taichung City**	**0.72**	**295**	⇓*i*P		**Pb**	**04 39 32.4**		**-0.3**
	baz=286								
WHP				*e*S		**Sb**	**04 39 42.1**		**-0.5**
	baz=286								
YHNB	**Yeheng**	**0.73**	**339**	⇓*i*P		**Pg**	**04 39 32.5**		**+0.2**
	baz=343								
YHNB				S		**Sg**	**04 39 41.3**		**-0.5**
	baz=343								
TWE	**Neicheng**	**0.74**	**1**	*i* P		**Pg**	**04 39 32.5**		**+0.2**
	baz=6.0								
TWE				S		**Sg**	**04 39 42.3**		**+0.3**
	baz=6.0								
TYC	**Yuchr**	**0.74**	**264**	*i* P		**Pg**	**04 39 32.4**		**+0.1**
	baz=263								
TYC				*i* S		**Sg**	**04 39 41.9**		**0.0**
	baz=263								
NSK	**Sanguang**	**0.74**	**338**	⇓*i*P		**Pg**	**04 39 32.6**		**+0.2**
	baz=334								
NSK				*e*S		**Sg**	**04 39 41.6**		**-0.6**
	baz=334								
FUSB	**Fushanzhiwuyua**	**0.78**	**355**	⇓P		**Pg**	**04 39 33.4**		**+0.3**
	baz=359								
FUSB				*i* S		**Sg**	**04 39 43.7**		**+0.4**
	baz=359								
WHYT	**Xinyi Township**	**0.79**	**249**	*e*P		**Pb**	**04 39 33.8**		**-0.1**
	baz=246								
NWLT	**Wulai**	**0.81**	**350**	⇓*e*P		**Pg**	**04 39 33.9**		**+0.3**
	baz=354								
NWLT				*e*S		**Sg**	**04 39 43.6**		**-0.5**
	baz=354								
NFF	**Wufeng Townshi**	**0.81**	**323**	*e*P		**Pg**	**04 39 34.0**		**+0.2**
	baz=325								
CHKH	**Chenggong**	**0.82**	**197**	*e*P		**Pg**	**04 39 34.3**		**+0.5**
	baz=182								
FULB	**Fuli**	**0.85**	**203**	*e*P		**Pg**	**04 39 34.7**		**+0.3**
	baz=215								
WJS	**Zhushan**	**0.87**	**260**	*e*P		**Pb**	**04 39 35.7**		**+0.5**
	baz=258								
WJS				*e*S		**Sn**	**04 39 48.7**		**-0.4**
	baz=258								
WWF	**Wufeng**	**0.88**	**274**	*e*P		**Pn**	**04 39 36.7**		**+0.2**
	baz=273								
WWF				*e*S		**Sn**	**04 39 50.0**		**+0.6**
	baz=273								
NSTT	**Nanjuang**	**0.88**	**317**	⇓*i*P		**Pb**	**04 39 35.7**		**+0.2**
	baz=320								
NSTT				S		**Sg**	**04 39 46.2**		**-0.4**
	baz=320								
LIOB	**Emei**	**0.89**	**319**	*e*P		**Pb**	**04 39 35.7**		**+0.2**
	baz=321								
LIOB				*e*S		**Sb**	**04 39 47.8**		**+0.3**
	baz=321								
TWQ1	**Liyutan**	**0.89**	**295**	*e*P		**Pb**	**04 39 36.0**		**+0.4**
	baz=294								
WNT	**Mingjian**	**0.90**	**264**	*e*P		**Pb**	**04 39 36.2**		**+0.5**
	baz=262								
WNT				*e*S		**Sb**	**04 39 48.4**		**+0.6**
	baz=262								
WNT1	**Nantou City**	**0.90**	**266**	*e*P		**Pb**	**04 39 36.4**		**+0.6**
	baz=263								
ALS	**Alishan**	**0.91**	**239**	P		**Pb**	**04 39 36.2**		**0.0**
	baz=237								
ALS				S		**Sg**	**04 39 47.8**		**+0.2**
	baz=237								
TCU	**Taichung**	**0.91**	**281**	*e*P		**Pn**	**04 39 37.3**		**+0.3**
	baz=279								
CHKT	**Chengkung**	**0.92**	**197**	*e*P		**Pg**	**04 39 36.1**		**+0.4**
	baz=195								
CHKT				*e*S		**Sn**	**04 39 50.4**		**+0.1**
	baz=195								
EHD	**Haiduan**	**0.93**	**207**	*e*P		**Pg**	**04 39 35.9**		**0.0**
	baz=216								
EHD				*e*S		**Sn**	**04 39 50.2**		**-0.4**
	baz=216								
NSY	**Sanyi**	**0.93**	**298**	*e*P		**Pn**	**04 39 36.8**		**-0.4**
	baz=311								
NSY				*e*S		**Sb**	**04 39 49.2**		**+0.5**
	baz=311								
NMLH	**Miaoli**	**0.97**	**305**	*e*P		**Pn**	**04 39 38.1**		**+0.4**
	baz=305								
ECS	**Chishang**	**0.97**	**205**	*e*P		**Pn**	**04 39 37.7**		**-0.1**
	baz=204								
CHN5	**Tsauling**	**0.98**	**247**	⇑P		**Pn**	**04 39 38.0**		**0.0**
	baz=235								
CHN5				S		**Sn**	**04 39 52.1**		**+0.2**
	baz=235								
ELDTW	**Lidau**	**0.98**	**217**	*e*P		**Pg**	**04 39 36.4**		**-0.6**
	baz=200								
HSN1	**Hsinchu**	**0.99**	**324**	*e*P		**Pn**	**04 39 38.2**		**+0.2**
	baz=325								
NHDH	**Xindian Distri**	**0.99**	**353**	*e*P		**Pb**	**04 39 37.7**		**+0.4**
	baz=357								
WYL	**Yuanlin Townsh**	**0.99**	**269**	*e*P		**Pg**	**04 39 36.3**		**-0.8**
	baz=268								
TWA	**Mucha**	**1.00**	**356**	*e*P		**Pb**	**04 39 37.7**		**+0.2**
	baz=349								
TWA				S		**Sg**	**04 39 50.3**		**+0.1**
	baz=349								
TIPB	**Shuangxi**	**1.00**	**9**	*e*P		**Pb**	**04 39 37.6**		**+0.1**
	baz=356								
WDJ	**Dajia District**	**1.00**	**292**	*e*P		**Pn**	**04 39 38.5**		**+0.3**
	baz=292								
WDJ				*e*S		**Sn**	**04 39 52.4**		**+0.1**
	baz=292								
TATO	**Taipei**	**1.00**	**351**	P		**Pn**	**04 39 38.0**		**-0.2**
TATO	**Taipei**	**1.00**	**351**	⇓P		**Pb**	**04 39 37.7**		**+0.1**
	baz=355								
TATO				S		**Sg**	**04 39 50.3**		**-0.1**
	baz=355								
WCHH	**Zhanghua**	**1.01**	**276**	*e*P		**Pg**	**04 39 37.5**		**0.0**
	baz=275								
SBCB	**Hsinchu**	**1.01**	**323**	*e*P		**Pn**	**04 39 39.2**		**+0.8**
	baz=325								
HSN	**Hsinchu**	**1.03**	**323**	*e*P		**Pn**	**04 39 39.2**		**+0.6**
	baz=327								
WGK	**Gukeng**	**1.05**	**254**	*e*P		**Pn**	**04 39 39.2**		**+0.3**
	baz=253								
EDH	**Donghe**	**1.05**	**198**	*e*P		**Pg**	**04 39 37.9**		**-0.4**
	baz=215								
TWB1	**Santiao Chiao**	**1.07**	**16**	*e*P		**Pn**	**04 39 39.3**		**+0.2**
	baz=12								
WDLH	**Douliu**	**1.07**	**254**	*e*P		**Pn**	**04 39 39.9**		**+0.8**
	baz=253								
NCUH	**Zhongli**	**1.07**	**336**	*e*P		**Pb**	**04 39 38.9**		**+0.1**
	baz=338								
NWF	**Wu-fen Shan**	**1.09**	**6**	*e*P		**Pn**	**04 39 39.6**		**0.0**
	baz=7.0								
WFSB	**Wu-fen Shan**	**1.09**	**6**	*e*P		**Pn**	**04 39 40.1**		**+0.7**
	baz=7.0								
WCKO	**Fanlu**	**1.11**	**241**	*e*P		**Pn**	**04 39 39.9**		**+0.2**
	baz=241								
WCKO				*e*S		**Sn**	**04 39 55.6**		**+0.6**
	baz=241								
SXI1	**Grass Mountain**	**1.13**	**10**	*e*P		**Pn**	**04 39 40.7**		**+0.7**
	baz=353								
TWS1	**Kuangyinshan**	**1.14**	**349**	*e*P		**Pn**	**04 39 40.8**		**+0.7**
	baz=1.0								
TWS1				*e*S		**Sn**	**04 39 56.1**		**+0.3**
	baz=1.0								
STYH	**Taoyuan**	**1.14**	**225**	*e*P		**Pn**	**04 39 40.3**		**+0.2**
	baz=224								
STYH				*e*S		**Sg**	**04 39 55.5**		**+0.6**
	baz=224								
STYT	**Tauyuan**	**1.16**	**226**	*e*P		**Pn**	**04 39 40.7**		**+0.2**
	baz=224								
STYT				*e*S		**Sn**	**04 39 56.7**		**+0.3**
	baz=224								
CHN4	**Tsaushan**	**1.16**	**238**	⇑*e*P		**Pn**	**04 39 40.9**		**+0.5**
	baz=224								
CHN4				*e*S		**Sn**	**04 39 57.0**		**+0.6**
	baz=224								
TPUB	**Ta-pu**	**1.16**	**235**	P		**Pn**	**04 39 41.6**		**+1.2**
TPUB	**Ta-pu**	**1.16**	**235**	⇑P		**Pn**	**04 39 40.7**		**+0.2**
	baz=221								
TPUB				S		**Sn**	**04 39 56.3**		**-0.1**
	baz=221								
YM01	**YM01**	**1.16**	**356**	⇑P		**Pn**	**04 39 40.8**		**+0.3**
	baz=350			

TWY	**Chenhua**	**1.29**	**358**	*e*P		**Pg**	**04 39 43.8 +0.9**
	baz=346						
CHN1	**Nanshi**	**1.30**	**233**	*e*P		**Pg**	**04 39 43.3 +0.1**
	baz=233						
CHN1				*e*S		**Sg**	**04 40 01.1 +1.0**
	baz=233						
SNST	**Tainan City**	**1.31**	**235**	*e*P		**Pg**	**04 39 43.6 +0.4**
	baz=223						
SNST				*e*S		**Sg**	**04 40 01.2 +1.1**
	baz=223						
LDUT	**Ludao**	**1.31**	**188**	*e*P		**Pn**	**04 39 40.9 -1.6**
	baz=169						
YOJ	**Yonaguni jima**	**1.32**	**69**	P		**Pb**	**04 39 43.1 +0.1**
YOJ				S		**Sg**	**04 40 01.4 +0.8**
SGST	**Jiashian**	**1.33**	**228**	*e*P		**Pn**	**04 39 43.1 +0.4**
	baz=228						
SGST				S		**Sg**	**04 40 01.8 +0.8**
	baz=228						
SLGT	**Liugui**	**1.35**	**224**	*e*P		**Pg**	**04 39 44.0 0.0**
	baz=209						
WSF	**Szhu**	**1.36**	**256**	*e*P		**Pb**	**04 39 43.6 0.0**
	baz=255						
WSL	**Shuilin Townsh**	**1.39**	**251**	*e*P		**Pg**	**04 39 44.8 +0.1**
	baz=264						
ICHU	**Yijhu**	**1.41**	**244**	*e*P		**Pb**	**04 39 44.8 +0.4**
	baz=245						
CHN8	**Yiju**	**1.47**	**245**	*e*P		**Pb**	**04 39 45.3 -0.2**
	baz=246						
ECL	**Taimali**	**1.52**	**205**	*e*P		**Pn**	**04 39 45.5 +0.1**
	baz=190						
SCST	**Cishan**	**1.53**	**225**	*e*P		**Pb**	**04 39 47.0 +0.6**
	baz=227						
SHHT	**Tainan City**	**1.54**	**232**	*e*P		**Pg**	**04 39 47.8 +0.2**
	baz=234						
SSD	**Sandimen**	**1.55**	**218**	*e*P		**Pb**	**04 39 46.8 -0.1**
	baz=207						
TSMG	**Majia**	**1.57**	**216**	*e*P		**Pn**	**04 39 46.9 +0.8**
	baz=206						
TWM1	**Shoushan**	**1.62**	**225**	*e*P		**Pb**	**04 39 48.0 0.0**
	baz=227						
SGLT	**Jiouru**	**1.65**	**221**	*e*P		**Pn**	**04 39 47.4 +0.3**
	baz=210						
MASBT	**Mashibuluo**	**1.66**	**215**	*e*P		**Pn**	**04 39 48.1 +0.8**
	baz=217						
MASBT				*e*S		**Sb**	**04 40 10.3 +0.7**
	baz=217						
TSCK	**Chigu Township**	**1.67**	**240**	*e*P		**Pn**	**04 39 48.2 +0.9**
	baz=242						
PCYT	**Pengchaiyu**	**1.68**	**13**	*e*P		**Pn**	**04 39 46.4 -1.2**
	baz=13						
EAST	**Anshuo**	**1.76**	**205**	*e*P		**Pb**	**04 39 50.1 -0.3**
	baz=194						
TAWH	**Dawu Township**	**1.78**	**204**	*e*P		**Pb**	**04 39 50.6 -0.2**
	baz=191						
SCZT	**Fangliau**	**1.86**	**211**	*e*P		**Pn**	**04 39 50.9 +0.8**
	baz=212						
IRIF	**Iriomote-Funau**	**1.92**	**79**	S		**Sn**	**04 40 15.5 +0.3**
SLIU	**Shizi**	**1.93**	**204**	*e*P		**Pb**	**04 39 52.4 -0.9**
	baz=193						
LAY	**Lan-yu**	**1.94**	**183**	*e*P		**Pn**	**04 39 49.2 -1.9**
	baz=166						
HATJ	**Hateruma jima**	**1.96**	**87**	*e*S		**Sn**	**04 40 17.0 +0.8**
PHUB	**P'eng-hu**	**1.97**	**257**	*e*P		**Pn**	**04 39 52.6 +1.1**
	baz=257						
PHUB				*e*S		**Sb**	**04 40 18.1 -0.5**
	baz=257						
WDGT	**Dungji**	**1.97**	**249**	*e*P		**Pn**	**04 39 52.3 +0.8**
	baz=237						
WDGT				*e*S		**Sb**	**04 40 17.8 -0.8**
	baz=237						
LYUB	**Lan-yu**	**1.97**	**182**	*e*P		**Pn**	**04 39 50.5 -1.1**
	baz=180						
PNG	**Penghu**	**1.97**	**258**	*e*P		**Pn**	**04 39 52.7 +1.2**
	baz=258						
PNG				*e*S		**Sb**	**04 40 18.0 -0.7**
	baz=258						
JKRS	**Kuro-shima**	**2.16**	**83**	P		**Pn**	**04 39 55.6 +1.4**
TWK1	**Hengchun**	**2.17**	**201**	*e*P		**Pb**	**04 39 56.7 -0.8**
	baz=188						
TWKBT	**Hengchun**	**2.17**	**201**	*e*P		**Pb**	**04 39 56.4 -1.1**
	baz=188						
VCHM	**Qimei**	**2.19**	**250**	*e*P		**Pn**	**04 39 55.2 +0.7**
	baz=252						
VWUC	**VWUC**	**2.25**	**297**	*e*P		**Pn**	**04 39 55.1 -0.3**
	baz=296						
JIJ	**Ishigaki jima**	**2.30**	**80**	P		**Pn**	**04 39 55.9 -0.1**
JISG	**Ishigakijimahi**	**2.49**	**75**	P		**Pn**	**04 39 58.9 +0.2**
JISG				*e*S		**Sn**	**04 40 30.3 +1.0**
PTMZ	**Houxiangcun**	**2.54**	**295**	*e*P		**Pn**	**04 40 00.0 +0.6**
	baz=294						
MATB	**Ma-tsu**	**2.66**	**325**	*e*P		**Pn**	**04 40 02.2 +1.2**
	baz=309						
KNM	**Kinmen**	**2.98**	**279**	*e*P		**Pn**	**04 40 07.7 +2.3**
	baz=278						
KNMB	**Chin-men Tao**	**3.02**	**280**	*e*P		**Pn**	**04 40 06.8 +0.8**
	baz=280						
LYJJ	**Jianjiangzhen**	**3.08**	**326**	*e*P		**Pn**	**04 40 08.4 +1.6**
	baz=325						
MHZQ	**Yeshan**	**3.18**	**312**	*e*P		**Pn**	**04 40 09.6 +1.4**
	baz=311						
XPSS	**Dashiqiu**	**3.22**	**336**	*e*P		**Pn**	**04 40 10.1 +1.4**
	baz=335						
AXDP	**Jialang**	**3.48**	**286**	*e*P		**Pn**	**04 40 12.8 +0.5**
	baz=285						
ZPLA	**Ao Xicun**	**3.58**	**270**	*e*P		**Pn**	**04 40 14.0 +0.4**
	baz=269						
DSXP	**Dongshan**	**3.88**	**267**	*e*P		**Pn**	**04 40 18.4 +0.5**
	baz=266						
SXFK	**Yanhouchang**	**4.36**	**304**	*e*P		**Pn**	**04 40 24.9 +0.5**
	baz=304						
JOW	**Kunigami**	**6.62**	**63**	Pn		**Pn**	**04 40 54.6 -0.9**
	2.0nm,0.3s,baz=254,slow=20,SNR=2.5						
	9.9nm,0.4s						
KSRS	**Korea Array**	**14.46**	**20**	Pn		**P**	**04 42 47.0 -2.6**
	0.2nm,0.3s,baz=197,slow=13,SNR=4.2						
KSRS				LR		LR	04 49 37.8
	comp=Z,61nm,18.0s,baz=340,slow=43						
DAV	**Davao City (W)**	**17.23**	**167**	LR		LR	04 48 54.3
	comp=Z,74nm,19.4s,baz=14,slow=34						
MJAR	**Matsushiro Arr**	**18.97**	**45**	LR		LR	04 50 42.1
	comp=Z,20nm,19.8s,baz=289,slow=36						
CMAR	**Chiang Mai Arr**	**21.87**	**260**	LR		LR	04 53 24.3
	comp=Z,31nm,20.2s,baz=65,slow=39						
SONM	**Songino Array**	**26.72**	**337**	P		**P**	**04 44 59.7 +1.9**
	0.4nm,0.5s,baz=151,slow=6.5,SNR=2.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**38.78**	**316**	P		**P**	**04 46 43.7 +0.8**
	0.6nm,0.8s,baz=105,slow=9.9,SNR=4.7						
	0.6nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**42.06**	**87**	T		T	05 32 24.9
	baz=276,slow=74,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**42.07**	**87**	T		T	05 32 24.8
	baz=276,slow=74,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**42.08**	**87**	T		T	05 32 24.9
	baz=276,slow=74,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**42.19**	**89**	T		T	05 32 14.3
	baz=284,slow=74,SNR=20						
H11S1	**WAKE ISLAND Hy**	**42.20**	**88**	T		T	05 32 14.5
	baz=284,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	**42.21**	**89**	T		T	05 32 15.0
	baz=284,slow=74,SNR=9.2						
KURBB	**Kurchatov Arra**	**42.54**	**320**	P		**P**	**04 47 13.2 -0.6**
	0.2nm,0.4s,baz=102,slow=9.6,SNR=1.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**45.37**	**163**	P		**P**	**04 47 36.0 -0.9**
	0.4nm,0.5s,baz=344,slow=8.6,SNR=4.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**48.83**	**165**	P		**P**	**04 48 03.7 -0.2**
	0.2nm,0.3s,baz=346,slow=6.7,SNR=2.9						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**82.99**	**23**	P		**P**	**04 51 43.0 -0.2**
	0.2nm,0.6s,baz=311,slow=4.8,SNR=5.0						
	0.2nm,0.6s						

TAP ***07*** *04:43:43.6,24.°01N×121.°61E,h7km,ML3.5,C*
JMA ***07*** *04:43:43.1±0.2,24.°0N±0.°4×12.°2E±°,h0km, TAIWAN REGION*
ISC 07 04:43:43.6±0.8, 23.°99N±0.°01×121.°65E±0.°02, h9km±5km, n94, σ0°68/149, 29D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**252**	*i* P		**Pg**		**04 43 45.4**	**+0.1**
	baz=179								
HWA				*i* S		**Sg**		**04 43 47.0**	**+0.4**
	baz=179								
TWD	**Chiawan**	**0.10**	**331**	⇓*i* P		**Pg**		**04 43 45.9**	**-0.2**
	baz=356								
TWD				*i* S		**Sg**		**04 43 47.4**	**-0.5**
	baz=356								
ETM	**Tongmen**	**0.14**	**260**	⇓*i* P		**Pg**		**04 43 46.4**	**-0.4**
	baz=250								
ETM				*i* S		**Sg**		**04 43 48.3**	**-0.7**
	baz=250								
ETL	**Fush Village**	**0.17**	**352**	⇓*i* P		**Pg**		**04 43 47.2**	**0.0**
	baz=4.0								
ETL				*i* S		**Sg**		**04 43 49.5**	**-0.2**
	baz=4.0								
NACB	**Ninganchiao**	**0.19**	**345**	P		**Pg**		**04 43 47.4**	**-0.1**
NACB	**Ninganchiao**	**0.19**	**345**	⇓*i* P		**Pg**		**04 43 47.4**	**-0.2**
	baz=355								
NACB				*i* S		**Sg**		**04 43 49.8**	**-0.4**
	baz=355								
SHUL	**Shoufeng**	**0.22**	**201**	*i* P		**Pg**		**04 43 49.0**	**+1.0**
	baz=192								
SHUL				S		**Sg**		**04 43 54.6**	**+3.6**
	baz=192								
LXIB	**Xiulin Townshi**	**0.22**	**278**	⇓*i* P		**Pg**		**04 43 47.8**	**-0.3**
	baz=268								
LXIB				*i* S		**Sg**		**04 43 51.0**	**-0.2**
	baz=268								
ESL	**Shilin**	**0.27**	**228**	*i* P		**Pg**		**04 43 48.6**	**-0.3**
	baz=229								
ESL				*i* S		**Sg**		**04 43 52.3**	**-0.2**
	baz=229								
TEGC	**Jichi Village**	**0.30**	**200**	P		**Pb**		**04 43 50.9**	**-0.2**
	baz=196								
TEGC				S		**Sb**		**04 43 56.7**	**+0.6**
	baz=196								
EAHA	**Aohua**	**0.35**	**14**	⇓*i* P		**Pg**		**04 43 50.4**	**-0.1**
	baz=29								
EAHA				S		**Sg**		**04 43 55.1**	**0.0**
	baz=29								
WARBT	**Fenglin Townsh**	**0.36**	**222**	*i* P		**Pg**		**04 43 50.5**	**-0.2**
	baz=224								
WARBT				S		**Sg**		**04 43 55.8**	**+0.3**
	baz=224								
EGFH	**Guangfu**	**0.38**	**212**	P		**Pg**		**04 43 51.1**	**+0.1**
	baz=218								
EGFH				S		**Sg**		**04 43 56.8**	**+0.7**
	baz=218								
WHF	**Hehuan Shan**	**0.38**	**294**	⇓*i* P		**Pg**		**04 43 51.0**	**-0.3**
	baz=294								
WHF				*i* S		**Sg**		**04 43 56.2**	**-0.2**
	baz=294								
OWD	**Renai**	**0.43**	**265**	⇓*i* P		**Pg**		**04 43 52.0**	**-0.1**
	baz=273								
OWD				S		**Sg**		**04 43 57.8**	**-0.1**
	baz=273								
CHGB	**Renai**	**0.44**	**279**	⇓*i* P		**Pg**		**04 43 52.3**	**0.0**
	baz=278								
CHGB				*i* S		**Sg**		**04 43 58.3**	**+0.2**
	baz=278								
ENA	**Nanau**	**0.44**	**11**	⇓*i* P		**Pg**		**04 43 52.3**	**0.0**
	baz=27								
ENA				*i* S		**Sg**		**04 43 58.3**	**+0.2**
	baz=27								
WUSB	**Renai**	**0.49**	**270**	⇓*i* P		**Pg**		**04 43 53.1**	**+0.1**
	baz=269								
WUSB				S		**Sg**		**04 43 59.5**	**0.0**
	baz=269								
NNSB	**Datong**	**0.50**	**331**	⇓*i* P		**Pg**		**04 43 53.4**	**+0.1**
	baz=335								
NNSB				S		**Sg**		**04 43 59.6**	**-0.4**
	baz=335								
TWT	**Tachien**	**0.51**	**301**	⇓*i* P		**Pg**		**04 43 53.8**	**+0.4**
	baz=301								
TWT				*i* S		**Sg**		**04 44 00.9**	**+0.8**
	baz=301								
NNS	**Nan Shan**	**0.51**	**331**	⇓*i* P		**Pg**		**04 43 53.6**	**0.0**
	baz=335								
NNS				*i* S		**Sg**		**04 43 59.9**	**-0.5**
	baz=335								
TDCB	**Techi**	**0.52**	**300**	⇓*i* P		**Pg**		**04 43 53.9**	**+0.2**
	baz=301								
TDCB				S		**Sg**		**04 44 00.7**	**+0.2**
	baz=301								
VWDT	**VWDT**	**0.52**	**243**	⇓*i* P		**Pg**		**04 43 53.7**	**0.0**
	baz=232								
VWDT				*i* S		**Sg**		**04 44 00.4**	**-0.2**
	baz=232								
HGSD	**Ruisui**	**0.54**	**203**	P		**Pb**		**04 43 55.7**	**+0.5**
	baz=218								
LATG	**Datong**	**0.55**	**348**	⇓*i* P		**Pg**		**04 43 54.3**	**-0.1**
	baz=353								
LATG				S		**Sg**		**04 44 00.9**	**-0.8**
	baz=353								
EHY	**Hungye**	**0.57**	**212**	*i* P		**Pg**		**04 43 54.5**	**-0.1**
	baz=216								
EHY				S		**Sg**		**04 44 01.9**	**-0.2**
	baz=216								
ESAO	**Su ao**	**0.61**	**17**	P		**Pb**		**04 43 56.4**	**0.0**
	baz=21								
ESAO				*e*S		**Sg**		**04 44 03.0**	**-0.4**
	baz=21								
NDT	**Datong Townshi**	**0.62**	**348**	⇓*i* P		**Pg**		**04 43 55.9**	**+0.3**
	baz=342								
NDT				*i* S		**Sg**		**04 44 03.5**	**-0.3**
	baz=342								
NDS	**Dongshan**	**0.64**	**5**	⇓*i* P		**Pg**		**04 43 56.1**	**+0.1**
	baz=9.0								
NDS				S		**Sg**		**04 44 04.9**	**+0.5**
	baz=9.0								
TWC	**Suao**	**0.64**	**16**	*i* P		**Pg**		**04 43 56.1**	**+0.1**
	baz=21								
TWC				*i* S		**Sg**		**04 44 04.9**	**+0.5**
	baz=21								
ENTT	**Nioudou**	**0.65**	**353**	⇓*i* P		**Pg**		**04 43 56.4**	**+0.2**
	baz=358								
ENTT				*i* S		**Sg**		**04 44 04.6**	**-0.1**
	baz=358								
SSLB	**Suanglung**	**0.67**	**253**	P		**Pg**		**04 43 56.5**	**0.0**
SSLB	**Suanglung**	**0.67**	**253**	⇓*i* P		**Pg**		**04 43 56.4**	**-0.1**
	baz=262								
SSLB				S		**Sg**		**04 44 04.2**	**-1.0**
	baz=262								
YULB	**Yu-li**	**0.68**	**209**	P		**Pg**		**04 43 56.3**	**-0.3**
	baz=215								
YULB				S		**Sg**		**04 44 06.4**	**+0.9**
	baz=215								
WCS	**Beigang Elemen**	**0.68**	**276**	P		**Pg**		**04 43 57.0**	**+0.4**
	baz=275								
WCS				S		**Sg**		**04 44 06.1**	**+0.5**
	baz=275								
SMLT	**Sun Moon Lake**	**0.69**	**261**	⇓*i* P		**Pg**		**04 43 57.2**	**+0.2**
	baz=260								
SMLT				*i* S		**Sg**		**04 44 05.8**	**-0.3**
	baz=260								
ECBN	**Changbin**	**0.69**	**195**	*e*P		**Pb**		**04 43 57.8**	**-0.1**
	baz=181								
ECBN				*e*S		**Sn**		**04 44 09.4**	**-1.1**
	baz=181								
WHP	**Taichung City**	**0.70**	**294**	⇓P		**Pb**		**04 43 57.6**	**-0.5**
	baz=285								
WHP				S		**Sb**		**04 44 07.7**	**-0.2**
	baz=285								
EYUL	**Yuli**	**0.71**	**205**	*e*P		**Pb**		**04 43 58.1**	**0.0**
	baz=213								
TWF1	**Yuli**	**0.71**	**207**	P		**Pg**		**04 43 56.4**	**-0.9**
	baz=214								
TWF1				S		**Sg**		**04 44 06.5**	**-0.2**
	baz=214								
YHNB	**Yeheng**	**0.72**	**340**	P		**Pb**		**04 43 58.0**	**-0.4**
YHNB	**Yeheng**	**0.72**	**340**	⇓*i* P		**Pg**		**04 43 57.8**	**+0.3**
	baz=334								
YHNB				S		**Sg**		**04 44 06.7**	**-0.3**
	baz=334								
TWE	**Neicheng**	**0.73**	**1**	⇓*i* P		**Pg**		**04 43 57.9**	**+0.2**
	baz=6.0								
TWE				*i* S		**Sg**		**04 44 07.7**	**+0.5**
	baz=6.0								
TYC	**Yuchr**	**0.73**	**263**	⇓*i* P		**Pg**		**04 43 57.7**	**0.0**
	baz=262								
TYC				S		**Sg**		**04 44 07.0**	**-0.2**
	baz=262								
NSK	**Sanguang**	**0.73**	**339**	⇓*i* P		**Pg**		**04 43 58.0**	**+0.2**
	baz=333								
NSK				S		**Sg**		**04 44 06.9**	**-0.4**
	baz=333								
FUSB	**Fushanzhiwuyua**	**0.77**	**356**	⇓*i* P		**Pg**		**04 43 58.5**	**+0.1**
	baz=359								
FUSB				S		**Sg**		**04 44 07.8**	**-0.7**
	baz=359								
WHYT	**Xinyi Township**	**0.79**	**248**	*e*P		**Pb**		**04 43 59.4**	**-0.1**
	baz=255								
WHYT				*e*S		**Sb**		**04 44 09.6**	**-0.7**
	baz=255								
NWLT	**Wulai**	**0.80**	**350**	*i* P		**Pg**		**04 43 59.2**	**+0.3**
	baz=354								
NWLT				S		**Sg**		**04 44 08.6**	**-0.8**
	baz=354								
NFF	**Wufeng Townshi**	**0.80**	**323**	*i* P		**Pb**		**04 43 59.5**	**-0.3**
	baz=325								
NFF				S		**Sg**		**04 44 09.3**	**-0.2**
	baz=325								
CHKH	**Chenggong**	**0.83**	**196**	P		**Pb**		**04 44 00.5**	**+0.3**
	baz=182								
CHKH				S		**Sn**		**04 44 14.1**	**+0.3**
	baz=182								
FULB	**Fuli**	**0.85**	**203**	P		**Pb**		**04 44 00.7**	**+0.1**
	baz=215								
WJS	**Zhushan**	**0.86**	**259**	*e*P		**Pb**		**04 44 00.8**	**+0.1**
	baz=258								
WJS				*e*S		**Sb**		**04 44 13.2**	**+0.8**
	baz=258								
NSTT	**Nanjuang**	**0.87**	**317**	⇓*i* P		**Pb**		**04 44 01.0**	**+0.1**
	baz=319								
NSTT				*i* S		**Sg**		**04 44 11.4**	**-0.2**
	baz=319								
LIOB	**Emei**	**0.87**	**319**	P		**Pb**		**04 44 01.1**	**+0.2**
	baz=320								
WNT	**Mingjian**	**0.89**	**263**	*i* P		**Pn**		**04 44 02.3**	**0.0**
	baz=262								
WNT				S		**Sn**		**04 44 14.8**	**-0.6**
	baz=262								
ALS	**Alishan**	**0.91**	**238**	P		**Pg**		**04 44 01.2**	**+0.1**
	baz=237								
ALS				*e*S		**Sn**		**04 44 15.0**	**-1.2**
	baz=237								
NSY	**Sanyi**	**0.92**	**298**	P		**Pn**		**04 44 02.5**	**-0.1**
	baz=311								
NSY				S		**Sn**		**04 44 15.7**	**-0.3**
	baz=311								
CHKT	**Chengkung**	**0.92**	**196**	*e*P		**Pg**		**04 44 01.4**	**+0.1**
	baz=195								
EHD	**Haiduan**	**0.93**	**206**	*e*P		**Pn**		**04 44 02.5**	**-0.4**
	baz=205								
NMLH	**Miaoli**	**0.95**	**305**	*e*P		**Pn**		**04 44 03.3**	**+0.1**
	baz=305								
CHN5	**Tsauling**	**0.97**	**246**	P		**Pn**		**04 44 03.5**	**0.0**
	baz=230								
ECS	**Chishang**	**0.97**	**204**	*e*P		**Pn**		**04 44 03.6**	**+0.1**
	baz=204								
NHDH	**Xindian Distri**	**0.97**	**353**	*e*P		**Pb**		**04 44 02.7**	**0.0**
	baz=357								
ELDTW	**Lidau**	**0.99**	**216**	*e*P		**Pg**		**04 44 02.5**	**0.0**
	baz=201								
WDJ	**Dajia District**	**0.99**	**291**	*e*P		**Pn**		**04 44 05.0**	**+1.3**
	baz=291								
WDJ				*e*S		**Sn**		**04 44 17.9**	**+0.2**
	baz=291								
TIPB	**Shuangxi**	**0.99**	**9**	P		**Pg**		**04 44 02.6**	**0.0**
	baz=3.0								
TIPB				*e*S		**Sg**		**04 44 15.0**	**-0.6**
	baz=3.0								
TATO	**Taipei**	**0.99**	**352**	P		**Pn**		**04 44 03.4**	**-0.3**
SBCB	**Hsinchu**	**1.00**	**323**	*e*P		**Pn**		**04 44 03.9**	**+0.1**
	baz=324								
TWB1	**Santiao Chiao**	**1.06**	**17**	*e*P		**Pn**		**04 44 05.2**	**+0.6**
	baz=12								
TWB1				*e*S		**Sg**		**04 44 16.6**	**-1.1**
	baz=12								
NCUH	**Zhongli**	**1.06**	**337**	*e*P		**Pn**		**04 44 05.6**	**+1.0**
	baz=351								
NCUH				*e*S		**Sn**		**04 44 21.6**	**+2.0**
	baz=351								
WDLH	**Douliu**	**1.06**	**254**	*e*P		**Pn**		**04 44 05.3**	**+0.7**
	baz=253								
EDH	**Donghe**	**1.06**	**197**	*e*P		**Pg**		**04 44 01.8**	**-2.2**
	baz=215								
NWF	**Wu-fen Shan**	**1.08**	**6**	*e*P		**Pb**		**04 44 04.6**	**0.0**
	baz=8.0								
WFSB	**Wu-fen Shan**	**1.08**	**6**	*e*P		**Pn**		**04 44 05.1**	**+0.2**
	baz=8.0								
WCKO	**Fanlu**	**1.10**	**240**	*e*P		**Pn**		**04 44 05.5**	**+0.2**
	baz=240								
SXI1	**Grass Mountain**	**1.12**	**11**	*e*P		**Pb**		**04 44 04.7**	**-0.4**
	baz=353								
STYH	**Taoyuan**	**1.14**	**225**	*e*P		**Pn**		**04 44 05.5**	**0.0**
	baz=211								
YM01	**YM01**	**1.15**	**356**	*e*P		**Pn**		**04 44 06.4**	**+0.5**
	baz=10.0								
CHN4	**Tsaushan**	**1.16**	**237**	*e*P		**Pn**		**04 44 06.5**	**+0.5**
	baz=237								
TPUB	**Ta-pu**	**1.16**	**234**	P		**Pn**		**04 44 06.5**	**+0.5**
TPUB	**Ta-pu**	**1.16**	**234**	*e*P		**Pg**		**04 44 06.0**	**+0.1**
	baz=234								
WRL	**Guolierlin Hig**	**1.17**	**266**	*e*P		**Pg**		**04 44 06.7**	**+0.7**
	baz=265								
LONT	**Longtian**	**1.18**	**204**	*e*P		**Pb**		**04 44 03.9**	**-2.2**
	baz=204								
ANP	**Anpu**	**1.20**	**354**	*e*P		**Pg**		**04 44 07.2**	**+0.6**
	baz=356								
WTP	**Ta-pu**	**1.20**	**232**	*e*P		**Pg**		**04 44 07.0**	**+0.2**
	baz=232								
TWG	**Pinlang**	**1.28**	**205**	*e*P		**Pn**		**04 44 05.3**	**-2.4**
	baz=205								
TWGBT	**Beinan**	**1.28**	**204**	P		**Pg**		**04 44 10.5**	**+2.4**
TWGBT	**Beinan**	**1.28**	**204**	*e*P		**Pn**		**04 44 05.8**	**-1.8**
	baz=205								
TWK	**Hsinying**	**1.29**	**236**	*e*P		**Pg**		**04 44 08.5**	**+0.2**
	baz=237								
CHN1	**Nanshi**	**1.30**	**232**	*e*P		**Pb**		**04 44 08.4**	**+0.1**
	baz=232								
SGST	**Jiashian**	**1.33**	**227**	*e*P		**Pb**		**04 44 08.6**	**-0.2**
	baz=212								
SLGT	**Liugui**	**1.35**	**223**	*e*P		**Pn**		**04 44 08.8**	**+0.1**
	baz=225								
JIJ	**Ishigaki jima**	**2.31**	**80**	*e*P		**Pn**		**04 44 22.7**	**+0.9**
JISG	**Ishigakijimahi**	**2.50**	**76**	P		**Pn**		**04 44 24.1**	**-0.4**
JISG				S		**Sn**		**04 44 55.1**	**0.0**

NEIC ***07*** *04:46:43.6±1.6, 17.°9N±0.°3×68.°5W±0.°1, h75km±22km, ML2.5/24, Md3.5/12(RSPR), Error ellipse: s-maj=39.1km s-min=13.1km az=192.0*
SDD ***07*** *04:46:45.8±1.3, 17.°91N×68.°48W, h78km±9km, MD3.0, ML2.5, MW2.7*
RSPR ***07*** *04:46:45.6, 17.°92N×68.°48W, h77km±1km, MD3.5/12*
OSPL ***07*** *04:46:46.4±0.9, 17.°88N×68.°48W, h69km±24km, ML2.6*
ISC 07 04:46:44.0±1.5, 17.°87N±0.°10×68.°49W±0.°04, h80km±13km, n56, σ0°80/69, 6C-8D, Mona Passage

| Code | Station Name | Δ

CRPR				*e*Sg	**Sn**	**04 47 23.6**	**-0.9**
CRPR				IAML		04 47 24.1	
	comp=N,65nm,1.8s						
CRPR	**Cabo Rojo, PR**	**1.32**	**84**	*i* P	**Pn**	**04 47 07.6**	**+0.5**
CRPR				*e*S	**Sn**	**04 47 23.8**	**-0.6**
CRPR				IAML		04 47 25.6	
	comp=Z,37nm,0.8s						
PRSN	**Puerto Rico Se**	**1.33**	**75**	Pn	**Pn**	**04 47 07.0**	**-0.2**
PRSN				IAML		04 47 37.6	
	comp=N,55nm,0.3s						
PRSN	**Puerto Rico Se**	**1.33**	**75**	*e*Pg	**Pn**	**04 47 06.7**	**-0.5**
PRSN				*e*Sg	**Sn**	**04 47 27.6**	**+3.0**
PRSN				IAML		04 47 37.6	
	comp=N,54nm,0.2s						
LSP	**Las Mesas**	**1.37**	**77**	⇓*i*P	**Pn**	**04 47 08.3**	**+0.6**
LSP	**Las Mesas**	**1.37**	**77**	*e*S	**Sn**	**04 47 26.2**	**+0.6**
LSP	**Las Mesas**	**1.37**	**77**		**Pn**	**04 47 08.3**	**+0.6**
LSP					**Sn**	**04 47 26.2**	**+0.6**
MLPR	**Magueyes Islan**	**1.38**	**86**	⇓*e*P	**Pn**	**04 47 07.3**	**-0.6**
MLPR	**Magueyes Islan**	**1.38**	**86**	*e*S	**Sn**	**04 47 24.2**	**-1.6**
MLPR	**Magueyes Islan**	**1.38**	**86**		**Pn**	**04 47 07.3**	**-0.6**
MLPR	**Magueyes Islan**	**1.38**	**86**		**Sn**	**04 47 24.9**	**-0.9**
MLPR	**Magueyes Islan**	**1.38**	**86**	⇑*e*Pg	**Pn**	**04 47 07.5**	**-0.3**
MLPR				*e*Sg	**Sn**	**04 47 25.1**	**-0.8**
MLPR				IAML		04 47 55.2	
	comp=N,40nm,3.0s						
AGPR	**Aguadilla, PR**	**1.44**	**66**	⇑*e*P	**Pn**	**04 47 09.4**	**+0.7**
AGPR	**Aguadilla, PR**	**1.44**	**66**	*e*S	**Sn**	**04 47 27.6**	**+0.5**
AGPR	**Aguadilla, PR**	**1.44**	**66**		**Pn**	**04 47 08.8**	**+0.2**
AGPR					**Sn**	**04 47 26.5**	**-0.6**
AGPR	**Aguadilla, PR**	**1.44**	**66**	*i* P	**Pn**	**04 47 09.3**	**+0.7**
AGPR				IAML		04 47 31.0	
	comp=Z,72nm,1.2s						
AOPR	**Arecibo Observ**	**1.72**	**74**	⇓*e*P	**Pn**	**04 47 12.7**	**+0.4**
AOPR	**Arecibo Observ**	**1.72**	**74**	*e*S	**Sn**	**04 47 33.8**	**+0.1**
AOPR	**Arecibo Observ**	**1.72**	**74**		**Pn**	**04 47 12.7**	**+0.4**
AOPR	**Arecibo Observ**	**1.72**	**74**		**Sn**	**04 47 32.6**	**-1.0**
AOPR	**Arecibo Observ**	**1.72**	**74**	*e*Pg	**Pn**	**04 47 12.6**	**+0.3**
AOPR				*e*Sg	**Sn**	**04 47 33.8**	**+0.1**
AOPR				IAML		04 47 37.0	
	comp=N,67nm,0.1s						
UUPR	**Utuado, UPR, P**	**1.73**	**77**		**Pn**	**04 47 12.8**	**+0.4**
OBIP	**Obispado Ponce**	**1.80**	**84**	⇑*e*P	**Pn**	**04 47 13.3**	**-0.1**
OBIP	**Obispado Ponce**	**1.80**	**84**	*e*S	**Sn**	**04 47 34.7**	**-0.9**
OBIP	**Obispado Ponce**	**1.80**	**84**		**Pn**	**04 47 12.8**	**-0.5**
OBIP					**Sn**	**04 47 34.4**	**-1.3**
CELP	**Cerrillos**	**1.83**	**83**	⇑*e*P	**Pn**	**04 47 14.4**	**+0.7**
CELP	**Cerrillos**	**1.83**	**83**	*e*S	**Sn**	**04 47 36.1**	**-0.2**
CELP	**Cerrillos**	**1.83**	**83**		**Pn**	**04 47 14.1**	**+0.3**
CELP	**Cerrillos**	**1.83**	**83**		**Sn**	**04 47 36.1**	**-0.2**
CELP	**Cerrillos**	**1.83**	**83**	IAML		04 47 47.0	
	comp=N,31nm,1.9s						
CELP	**Cerrillos**	**1.83**	**83**	⇑*e*Pg	**Pn**	**04 47 14.4**	**+0.7**
CELP				*e*Sg	**Sn**	**04 47 34.8**	**-1.6**
IGPR	**InterUniversit**	**2.27**	**87**	*e*S	**Sn**	**04 47 46.2**	**-0.6**
IGPR	**InterUniversit**	**2.27**	**87**		**Sn**	**04 47 46.2**	**-0.6**
IGPR	**InterUniversit**	**2.27**	**87**	Pn	**Pn**	**04 47 19.6**	**0.0**
IGPR	**InterUniversit**	**2.27**	**87**	IAML		04 47 50.8	
	comp=E,28nm,1.5s						
IGPR				IAML		04 47 56.9	
	comp=N,23nm,1.0s						
GCPR	**Guaynabo City**	**2.33**	**79**	⇓*e*P	**Pn**	**04 47 21.0**	**+0.6**
GCPR	**Guaynabo City**	**2.33**	**79**	*e*S	**Sn**	**04 47 47.1**	**-1.2**
GCPR	**Guaynabo City**	**2.33**	**79**		**Pn**	**04 47 21.0**	**+0.6**
GCPR					**Sn**	**04 47 47.1**	**-1.2**
GCPR	**Guaynabo City**	**2.33**	**79**	IAML		04 47 56.5	
	comp=E,22nm,2.5s						
GCPR				IAML		04 48 28.3	
	comp=N,22nm,3.7s						
LOBA2	**Hotel Casa Bon**	**2.48**	**275**	⇓*e*Pg	**Pn**	**04 47 23.6**	**+1.2**
LOBA2				*e*Sg	**Sn**	**04 47 50.7**	**-1.2**
HUMP	**Col San Antoni**	**2.53**	**84**	⇓*e*P	**Pn**	**04 47 23.9**	**+0.9**
HUMP	**Col San Antoni**	**2.53**	**84**	*e*S	**Sn**	**04 47 52.8**	**-0.2**
HUMP	**Col San Antoni**	**2.53**	**84**		**Pn**	**04 47 23.9**	**+0.9**
HUMP					**Sn**	**04 47 52.8**	**-0.2**
HUMP	**Col San Antoni**	**2.53**	**84**	IAML		04 47 55.8	
	comp=N,35nm,2.4s						
HUMP				IAML		04 47 59.5	
	comp=E,23nm,0.3s						

*IDC **07** 04:50:40.4±0.8,24˙01N×121˙80E,h0km,mb4.0/12, mbtmp4.0/13,ML3.8/1,MS3.6/17,Error ellipse: s-maj=30.3km s-min=15.8km az=65.0*

*TAP **07** 04:50:42.6,24˙05N×121˙64E,h8km,ML4.4,C*

*ASIES **07** 04:50:42.6,24˙05N×121˙64E,h8km,ML4.4,Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.91; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$-0.37; $M_{r\theta}$1.13; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.89; Fault plane solution: M_o1.73736×10^{22} NP1:ϕ_s51.49000°, δ73.07000°,λ91.48000°. NP2:ϕ_s226.41000°,δ16.99000°, λ85.15000°. Principal axes: T Plg61.9000°, Azm323.7020°; N Plg1.4160°, Azm231.0490°; P Plg28.0580°, Azm140.2950°;*

*JMA **07** 04:50:42.0±0.1,24˙04N×121˙66E,h0km,MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.03; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$-1.16; $M_{r\theta}$3.89; $M_{\theta\phi}$-1.19; $M_{\phi r}$2.17; Fault plane solution: M_o4.94000×10^{15} NP1:ϕ_s59.00000°, δ78.00000°,λ98.00000°. NP2:ϕ_s205.00000°,δ15.00000°, λ57.00000°.*

ISC 07 04:50:42.2±0.7,24˙04N±0˙01×121˙68E±0˙02,h9km±4km, n224,g0s85/293,mb4.0/13,MS3.5/13,9C-41D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.09**	**298**	⇓*i*P	**Pg**	**04 50 44.5**	**-0.1**
	baz=309						
TWD				*i* S	**Sg**	**04 50 45.7**	**-0.6**
	baz=309						
HWA	**Hwalien**	**0.09**	**229**	⇑*i*P	**Pg**	**04 50 45.3**	**+0.7**
	baz=196						
HWA				S	**Sg**	**04 50 47.4**	**+1.1**
	baz=196						
ETL	**Fush Village**	**0.13**	**336**	⇓*i*P	**Pg**	**04 50 45.4**	**+0.1**
	baz=352						
ETL				*i* S	**Sg**	**04 50 47.4**	**0.0**
	baz=352						
NACB	**Ninganchiao**	**0.16**	**329**	P	**Pg**	**04 50 45.7**	**0.0**
NACB	**Ninganchiao**	**0.16**	**329**	⇓*i*P	**Pg**	**04 50 45.7**	**0.0**
	baz=350						
NACB				*i* S	**Sg**	**04 50 47.7**	**-0.4**
	baz=350						
ETM	**Tongmen**	**0.19**	**247**	P	**Pg**	**04 50 46.2**	**0.0**
	baz=236						
ETM				S	**Sg**	**04 50 48.5**	**-0.4**
	baz=236						
LXIB	**Xiulin Townshi**	**0.25**	**266**	⇓*i*P	**Pg**	**04 50 47.2**	**-0.1**
	baz=249						
LXIB				*e*S	**Sg**	**04 50 50.2**	**-0.5**
	baz=249						
SHUL	**Shoufeng**	**0.27**	**204**	⇑*i*P	**Pb**	**04 50 48.9**	**-0.4**
	baz=193						
SHUL				*e*S	**Sb**	**04 50 55.0**	**+1.0**
	baz=193						
EHP	**Heping Village**	**0.28**	**11**	P	**Pg**	**04 50 48.3**	**+0.6**
	baz=23						
EHP				*i* S	**Sg**	**04 50 52.2**	**+0.6**
	baz=23						
EAHA	**Aohua**	**0.29**	**10**	⇓P	**Pg**	**04 50 48.5**	**+0.4**
	baz=28						
EAHA				*e*S	**Sg**	**04 50 52.4**	**+0.4**
	baz=28						
ESL	**Shilin**	**0.32**	**226**	⇑*i*P	**Pg**	**04 50 48.6**	**0.0**
	baz=226						
ESL				S	**Sg**	**04 50 52.3**	**-0.6**
	baz=226						
TEGC	**Jichi Village**	**0.35**	**202**	⇓*i*P	**Pb**	**04 50 50.9**	**+0.3**
	baz=193						
TEGC				S	**Sb**	**04 50 57.5**	**+1.2**
	baz=193						
ENA	**Nanau**	**0.39**	**8**	⇓*i*P	**Pg**	**04 50 50.4**	**+0.4**
	baz=16						
ENA				*i* S	**Sg**	**04 50 55.6**	**+0.5**
	baz=16						
WHF	**Hehuan Shan**	**0.40**	**286**	⇓*i*P	**Pg**	**04 50 50.1**	**-0.1**
	baz=284						
WHF				*i* S	**Sg**	**04 50 55.1**	**-0.4**
	baz=284						
EWUT	**Wuta**	**0.41**	**12**	⇓P	**Pg**	**04 50 50.8**	**+0.4**
	baz=19						
EWUT				S	**Sg**	**04 50 56.4**	**+0.5**
	baz=19						
WARBT	**Fenglin Townsh**	**0.42**	**220**	⇑*i*P	**Pg**	**04 50 50.4**	**0.0**
	baz=221						
WARBT				*e*S	**Sg**	**04 50 55.5**	**-0.4**
	baz=221						
EGFH	**Guangfu**	**0.44**	**213**	⇑P	**Pg**	**04 50 51.0**	**+0.3**
	baz=213						
FUSS	**Fushou**	**0.45**	**298**	⇓*i*P	**Pg**	**04 50 51.4**	**+0.3**
	baz=297						
FUSS				*e*S	**Sg**	**04 50 57.4**	**+0.3**
	baz=297						
CHGB	**Renai**	**0.47**	**273**	⇓*i*P	**Pg**	**04 50 51.6**	**+0.2**
	baz=260						
CHGB				S	**Sg**	**04 50 57.2**	**-0.3**
	baz=260						
OWD	**Renai**	**0.47**	**260**	*e*P	**Pg**	**04 50 51.5**	**+0.1**
	baz=256						
OWD				*e*S	**Sg**	**04 50 57.5**	**-0.2**
	baz=256						
NNSB	**Datong**	**0.47**	**325**	⇓*i*P	**Pg**	**04 50 51.8**	**+0.2**
	baz=328						
NNSB				*i* S	**Sg**	**04 50 57.4**	**-0.5**
	baz=328						
NNSH	**Datong**	**0.47**	**325**	⇓*i*P	**Pg**	**04 50 51.8**	**+0.3**
	baz=327						
NNSH				*e*S	**Sg**	**04 50 57.6**	**-0.2**
	baz=327						
NNS	**Nan Shan**	**0.49**	**325**	⇓*i*P	**Pg**	**04 50 52.0**	**+0.2**
	baz=328						
NNS				S	**Sg**	**04 50 58.2**	**-0.1**
	baz=328						
TWT	**Tachien**	**0.51**	**295**	⇓*i*P	**Pg**	**04 50 52.7**	**+0.5**
	baz=293						
TWT				S	**Sg**	**04 50 59.2**	**+0.2**
	baz=293						
LATG	**Datong**	**0.52**	**344**	⇓*i*P	**Pg**	**04 50 52.6**	**+0.3**
	baz=348						
LATG				S	**Sg**	**04 50 58.3**	**-0.8**
	baz=348						
WUSB	**Renai**	**0.52**	**265**	⇓*i*P	**Pg**	**04 50 52.5**	**+0.2**
	baz=261						
WUSB				*e*S	**Sg**	**04 50 59.0**	**-0.2**
	baz=261						
TDCB	**Techi**	**0.53**	**294**	⇓*i*P	**Pg**	**04 50 52.8**	**+0.3**
	baz=294						
TDCB				S	**Sg**	**04 50 59.0**	**-0.4**
	baz=294						
ESAO	**Su ao**	**0.56**	**15**	*e*P	**Pg**	**04 50 53.4**	**+0.4**
	baz=26						
ESAO				S	**Sg**	**04 51 00.2**	**-0.1**
	baz=26						
VWDT	**VWDT**	**0.57**	**240**	⇑*i*P	**Pg**	**04 50 53.6**	**+0.4**
	baz=228						
VWDT				S	**Sg**	**04 51 00.7**	**-0.1**
	baz=228						
NDT	**Datong Townshi**	**0.58**	**345**	⇓*i*P	**Pg**	**04 50 54.1**	**+0.6**
	baz=348						
NDT				S	**Sg**	**04 51 01.6**	**+0.4**
	baz=348						
EOS4	**EOS4**	**0.59**	**82**	*e*P	**Pn**	**04 50 55.5**	**-0.8**
	baz=84						
TWC	**Suao**	**0.59**	**15**	⇓P	**Pg**	**04 50 54.1**	**+0.5**
	baz=20						
HGSD	**Ruisui**	**0.59**	**204**	⇓*i*P	**Pb**	**04 50 55.0**	**+0.3**
	baz=213						
HGSD				*e*S	**Sn**	**04 51 06.5**	**0.0**
	baz=213						
NDS	**Dongshan**	**0.59**	**3**	P	**Pg**	**04 50 54.3**	**+0.6**
	baz=7.0						
NDS				*e*S	**Sg**	**04 51 01.9**	**+0.3**
	baz=7.0						
ENTT	**Nioudou**	**0.61**	**350**	⇓*i*P	**Pg**	**04 50 54.6**	**+0.6**
	baz=354						
ENTT				*i* S	**Sg**	**04 51 02.5**	**+0.5**
	baz=354						
EHY	**Hungye**	**0.62**	**212**	*e*P	**Pg**	**04 50 54.5**	**+0.2**
	baz=207						
EOS2	**EOS2**	**0.63**	**53**	*e*P	**Pn**	**04 50 57.2**	**0.0**
	baz=40						
EOS3	**EOS3**	**0.63**	**67**	*e*P	**Pn**	**04 50 57.2**	**+0.1**
	baz=67						
WPL	**Puli Township**	**0.66**	**268**	P	**Pg**	**04 50 55.4**	**+0.3**
	baz=266						
TWE	**Neicheng**	**0.68**	**359**	P	**Pb**	**04 50 55.9**	**-0.3**
	baz=4.0						
TWE				S	**Sg**	**04 51 04.0**	**-0.3**
	baz=4.0						
YHNB	**Yeheng**	**0.69**	**336**	P	**Pb**	**04 50 56.2**	**-0.3**
YHNB	**Yeheng**	**0.69**	**336**	⇓*i*P	**Pb**	**04 50 56.1**	**-0.3**
	baz=339						
YHNB				*i* S	**Sg**	**04 51 04.5**	**-0.1**
	baz=339						
DPDB	**Guoxing**	**0.69**	**270**	*e*P	**Pg**	**04 50 56.0**	**+0.5**
	baz=268						
NSK	**Sanguang**	**0.70**	**335**	⇓*i*P	**Pb**	**04 50 56.3**	**-0.3**
	baz=331						
NSK				S	**Sg**	**04 51 04.5**	**-0.5**
	baz=331						
WCS	**Beigang Elemen**	**0.70**	**272**	*e*P	**Pg**	**04 50 56.2**	**+0.4**
	baz=270						
SSLB	**Suanglung**	**0.71**	**250**	P	**Pg**	**04 50 56.3**	**+0.3**
SSLB	**Suanglung**	**0.71**	**250**	⇓*i*P	**Pg**	**04 50 56.1**	**+0.1**
	baz=257						
SSLB				*e*S	**Sg**	**04 51 03.3**	**-2.0**
	baz=257						
WHP	**Taichung City**	**0.71**	**290**	⇓*i*P	**Pb**	**04 50 56.6**	**-0.2**
	baz=289						
WHP				*e*S	**Sg**	**04 51 05.6**	**+0.3**
	baz=289						
FUSB	**Fushanzhiwuyua**	**0.72**	**353**	⇓*i*P	**Pb**	**04 50 56.8**	**-0.2**
	baz=357						
FUSB				*i* S	**Sg**	**04 51 05.5**	**-0.2**
	baz=357						
ILA	**Ilan**	**0.73**	**5**	*e*P	**Pb**	**04 50 56.9**	**-0.2**
	baz=8.0						
SMLT	**Sun Moon Lake**	**0.73**	**258**	⇓*i*P	**Pg**	**04 50 56.7**	**+0.3**
	baz=255						
SMLT				*e*S	**Sg**	**04 51 05.6**	**-0.4**
	baz=255						
YULB	**Yu-li**	**0.73**	**209**	P	**Pb**	**04 50 56.9**	**-0.2**
YULB	**Yu-li**	**0.73**	**209**	⇓*e*P	**Pg**	**04 50 56.1**	**-0.2**
	baz=206						
ECBN	**Changbin**	**0.75**	**197**	P	**Pb**	**04 50 57.8**	**+0.4**
	baz=183						
ECBN				*e*S	**Sn**	**04 51 09.5**	**-0.9**
	baz=183						
NWLT	**Wulai**	**0.75**	**347**	⇓*i*P	**Pb**	**04 50 57.4**	**-0.1**
	baz=350						
NWLT				S	**Sg**	**04 51 06.5**	**-0.1**
	baz=350						
EYUL	**Yuli**	**0.76**	**206**	*e*P	**Pb**	**04 50 58.3**	**+0.6**
	baz=217						
TYC	**Yuchr**	**0.77**	**260**	⇓*i*P	**Pg**	**04 50 57.1**	**+0.1**
	baz=257						
TYC				*e*S	**Sg**	**04 51 06.9**	**-0.1**
	baz=257						
TWF1	**Yuli**	**0.77**	**207**	*e*P	**Pg**	**04 50 56.7**	**-0.3**
	baz=218						
NFF	**Wufeng Townshi**	**0.78**	**319**	⇓P	**Pb**	**04 50 57.9**	**-0.2**
	baz=320						
NFF				*e*S	**Sg**	**04 51 07.1**	**-0.5**
	baz=320						
NTC	**Toucheng**	**0.82**	**9**	*e*P	**Pb**	**04 50 59.1**	**+0.5**
	baz=12						
WHYT	**Xinyi Township**	**0.83**	**246**	*e*P	**Pn**	**04 50 59.7**	**-0.4**
	baz=250						
WHYT				*e*S	**Sb**	**04 51 09.7**	**-0.4**
	baz=250						
NSTT	**Nanjuang**	**0.86**	**314**	⇓*i*P	**Pb**	**04 50 59.5**	**+0.2**
	baz=315						
NSTT				*e*S	**Sg**	**04 51 09.8**	**-0.2**
	baz=315						
LIOB	**Emei**	**0.86**	**315**	⇓*i*P	**Pb**	**04 50 59.6**	**+0.4**
	baz=316						
LIOB				S	**Sg**	**04 51 10.4**	**+0.5**
	baz=316						
NJD	**Zhudong**	**0.88**	**322**	*e*P	**Pn**	**04 51 00.5**	**-0.3**
	baz=329						
CHKH	**Chenggong**	**0.88**	**197**	⇓P	**Pb**	**04 50 59.5**	**-0.2**
	baz=185						
CHKH				*e*S	**Sn**	**04 51 14.7**	**+1.1**
	baz=185						
TWQ1	**Liyutan**	**0.89**	**291**	P	**Pb**	**04 50 60.0**	**+0.2**
	baz=303						
TWQ1				S	**Sn**	**04 51 13.2**	**-0.6**
	baz=303						
WJS	**Zhushan**	**0.90**	**256**	*e*P	**Pn**	**04 51 00.8**	**-0.2**
	baz=253						
WJS				*e*S	**Sn**	**04 51 13.6**	**-0.5**
	baz=253						
WWF	**Wufeng**	**0.90**	**270**	*e*P	**Pn**	**04 51 01.2**	**+0.3**
	baz=269						
FULB	**Fuli**	**0.91**	**203**	*e*P	**Pb**	**04 51 00.4**	**+0.3**
	baz=216						
NSY	**Sanyi**	**0.92**	**294**	P	**Pn**	**04 51 01.3**	**-0.1**
	baz=294						
TCU	**Taichung**	**0.93**	**277**	⇓*e*P	**Pn**	**04 51 01.4**	**0.0**
	baz=270						
TCU				*e*S	**Sn**	**04 51 14.7**	**0.0**
	baz=270						
WNT	**Mingjian**	**0.93**	**260**	P	**Pn**	**04 51 01.6**	**+0.3**
	baz=257						
WNT				*e*S	**Sn**	**04 51 15.0**	**+0.2**
	baz=257						
WNT1	**Nantou City**	**0.93**	**262**	*e*P	**Pn**	**04 51 01.6**	**+0.3**
	baz=261						
NHDH	**Xindian Distri**	**0.93**	**351**	P	**Pb**	**04 51 00.9**	**+0.3**
	baz=343						
NHDH				*i* S	**Sg**	**04 51 12.3**	**0.0**
	baz=343						
TIPB	**Shuangxi**	**0.94**	**8**	⇓P	**Pb**	**04 51 00.7**	**0.0**
	baz=355						
TWA	**Mucha**	**0.94**	**355**	⇓*i*P	**Pb**	**04 51 01.2**	**+0.5**
	baz=346						
TWA				*e*S	**Sg**	**04 51 11.9**	**-0.8**
	baz=346						
TATO	**Taipei**	**0.95**	**349**	P	**Pn**	**04 51 01.5**	**-0.2**
TATO	**Taipei**	**0.95**	**349**	⇓*i*P	**Pb**	**04 51 01.3**	**+0.5**
	baz=352						
TATO				*i* S	**Sg**	**04 51 12.2**	**-0.7**
	baz=352						
NMLH	**Miaoli**	**0.95**	**302**	*e*P	**Pn**	**04 51 01.9**	**+0.2**
	baz=301						
HSN1	**Hsinchu**	**0.95**	**321**	*e*P	**Pn**	**04 51 01.8**	**+0.1**
	baz=322						
ALS	**Alishan**	**0.96**	**237**	*e*P	**Pb**	**04 51 01.0**	**-0.1**
	baz=245						
CHKT	**Chengkung**	**0.98**	**197**	*e*P	**Pg**	**04 51 00.9**	**-0.2**
	baz=177						
CHKT				*e*S	**Sb**	**04 51 15.1**	**+0.7**
	baz=177						
BACT	**New Taipei Cit**	**0.98**	**347**	*e*P	**Pn**	**04 51 02.0**	**-0.1**
	baz=349						
NJN	**Zhunan**	**0.98**	**311**	*e*P	**Pn**	**04 51 02.1**	**0.0**
	baz=320						
SBCB	**Hsinchu**	**0.98**	**320**	*e*P	**Pn**	**04 51 02.8**	**+0.6**
	baz=321						
SBCB				*e*S	**Sb**	**04 51 15.3**	**+0.8**
	baz=321						
EHD	**Haiduan**	**0.99**	**206**	*e*P	**Pb**	**04 51 01.5**	**+0.1**
	baz=205						
HSN	**Hsinchu**	**1.00**	**320**	*e*P	**Pn**	**04 51 02.5**	**+0.1**
	baz=323						
HSN				*e*S	**Sn**	**04 51 16.4**	**-0.2**
	baz=323						
WDJ	**Dajia District**	**1.00**	**288**	*e*P	**Pn**	**04 51 03.1**	**+0.7**
	baz=297						
WDJ				*e*S	**Sn**	**04 51 16.1**	**-0.4**
	baz=297						
NHY	**Taipei**	**1.00**	**354**	*e*P	**Pn**	**04 51 02.2**	**-0.2**
	baz=5.0						
TWB1	**Santiao Chiao**	**1.00**	**16**	*e*P	**Pn**	**04 51 02.3**	**-0.2**
	baz=12						
TWB1				*e*S	**Sg**	**04 51 14.1**	**-0.6**
	baz=12						
TAP	**Taipei**	**1.01**	**351**	P	**Pn**	**04 51 02.5**	**0.0**
	baz=344						
TAP				*i* S	**Sb**	**04 51 15.2**	**0.0**
	baz=344						
WYL	**Yuanlin Townsh**	**1.01**	**266**	*e*P	**Pn**	**04 51 03.0**	**+0.5**
	baz=265						
CHN5	**Tsauling**	**1.02**	**245**	P	**Pn**	**04 51 02.7**	**0.0**
	baz=231						
CHN5				*i* S	**Sn**	**04 51 18.0**	**+0.9**
	baz=231						
NTY	**Taoyuan**	**1.02**	**340**	*e*P	**Pn**	**04 51 03.3**	**+0.7**
	baz=335						
WCHH	**Zhanghua**	**1.03**	**273**	*e*P	**Pn**	**04 51 03.5**	**+0.7**
	baz=272						
ECS	**Chishang**	**1.03**	**204**	*e*P	**Pn**	**04 51 03.2**	**+0.4**
	baz=217						
NCUH	**Zhongli**	**1.03**	**334**	*e*P	**Pn**	**04 51 03.3**	**+0.5**
	baz=335						
NCU	**National Centr**	**1.03**	**334**	*e*P	**Pn**	**04 51 03.0**	**+0.1**
	baz=347						
NCU				*e*S	**Sn**	**04 51 17.2**	**-0.2**
	baz=347						
NWF	**Wu-fen Shan**	**1.03**	**5**	⇑P	**Pn**	**04 51 03.0**	**+0.1**
	baz=8.0						
NWF				*e*S	**Sg**	**04 51 14.7**	**-0.9**
	baz=8.0						
WFSB	**Wu-fen Shan**	**1.03**	**5**	⇓P	**Pn**	**04 51 02.7**	**-0.1**
	baz=8.0						
WFSB				S	**Sg**	**04 51 14.7**	**-0.8**
	baz=8.0						
ELDTW	**Lidau**	**1.04**	**216**	*e*P	**Pg**	**04 51 01.3**	**-1.0**
	baz=201						
SXI1	**Grass Mountain**	**1.07**	**9**	P	**Pn**	**04 51 03.9**	**+0.5**
	baz=5.0						
SXI1				*e*S	**Sn**	**04 51 19.5**	**+1.2**
	baz=5.0						
WGK	**Gukeng**	**1.08**	**251**	*e*P	**Pn**	**04 51 04.3**	**+0.8**
	baz=250						
TWS1	**Kuangyinshan**	**1.08**	**347**	⇓*i*P	**Pn**	**04 51 04.6**	**+1.0**
	baz=350						
TWS1				S	**Sb**	**04 51 17.8**	**+0.4**
	baz=350						
WDLH	**Douliu**	**1.10**	**252**	*e*P	**Pn**	**04 51 05.2**	**+1.4**
	baz=251						
YM01	**YM01**	**1.11**	**355**	P	**Pn**	**04 51 04.2**	**+0.3**
	baz=355						
TNOU	**National Taiwa**	**1.11**	**4**	*e*P	**Pn**	**04 51 04.0**	**+0.1**
	baz=5.0						
EDH	**Donghe**	**1.12**	**198**	*e*P	**Pg**	**04 51 03.1**	**-0.6**
	baz=197						
NHW	**Xinwu Township**	**1.12**	**329**	*e*P	**Pn**	**04 51 04.6**	**+0.5**
	baz=329						
NTST	**Danshui**	**1.14**	**349**	*e*P	**Pn**	**04 51 05.7**	**+1.4**
	baz=350						
ANP	**Anpu**	**1.15**	**353**	*e*P	**Pn**	**04 51 05.0**	**+0.4**
	baz=355						
ANP				*e*S	**Sb**	**04 51 19.9**	**+0.4**
	baz=355						
WCKO	**Fanlu**	**1.15**	**239**	*e*P	**Pn**	**04 51 05.5**	**+1.0**
	baz=239						
NWRT	**Kuosheng**	**1.16**	**359**	*e*P	**Pn**	**04 51 05.7**	**+1.1**
STYH	**Taoyuan**	**1.20**	**224**	*e*P	**Pg**	**04 51 05.4**	**+0.1**
	baz=224						
WRL	**Guolierlin Hig**	**1.20**	**264**	*e*P	**Pg**	**04 51 06.2**	**+0.9**
	baz=248						
WRL				*e*S	**Sn**	**04 51 23.7**	**+2.1**
	baz=248						
CHN4	**Tsaushan**	**1.21**	**236**	⇑*i*P	**Pg**	**04 51 06.3**	**+0.9**

YOJ	**Yonaguni jima**	**1.28**	**71**	*eP*		**Pg**	**04 51 06.8**	**-0.1**
	baz=69								
YOJ				*eS*		**Sb**	**04 51 23.2**	**+0.1**
	baz=69								
YOJ	**Yonaguni jima**	**1.28**	**71**	P		**Pg**	**04 51 07.0**	**+0.1**
YOJ				*eS*		**Sn**	**04 51 24.9**	**+1.3**
YOJ	**Yonaguni jima**	**1.28**	**71**	A		A	04 51 07.0	
	comp=E,6.0nm,2.8s,comp=N,7.0nm,2.3s								
TWG	**Pinlang**	**1.33**	**205**	*eP*		**Pn**	**04 51 05.2**	**-1.8**
	baz=204								
TWGBT	**Beinan**	**1.33**	**205**	P		**Pn**	**04 51 05.4**	**-1.6**
TWGBT	**Beinan**	**1.33**	**205**	*eP*		**Pn**	**04 51 04.8**	**-2.1**
	baz=204								
TWK	**Hsinying**	**1.34**	**235**	*eP*		**Pg**	**04 51 08.5**	**+0.6**
	baz=233								
TWK				*eS*		**Sg**	**04 51 27.0**	**+1.7**
	baz=233								
CHN1	**Nanshi**	**1.36**	**232**	⇑ *iP*		**Pg**	**04 51 08.9**	**+0.6**
	baz=229								
CHN1				*i* S		**Sg**	**04 51 28.1**	**+2.2**
	baz=229								
SNST	**Tainan City**	**1.36**	**233**	*eP*		**Pg**	**04 51 09.1**	**+0.8**
	baz=233								
TTN	**Taitung**	**1.37**	**201**	*eP*		**Pg**	**04 51 09.4**	**+0.9**
	baz=201								
LDUT	**Ludao**	**1.37**	**188**	*eP*		**Pn**	**04 51 05.4**	**-2.1**
	baz=175								
SGST	**Jiashian**	**1.39**	**227**	*eP*		**Pn**	**04 51 07.9**	**+0.2**
	baz=224								
SGST				*eS*		**Sg**	**04 51 28.4**	**+1.5**
	baz=224								
WSF	**Szhu**	**1.40**	**254**	*eP*		**Pg**	**04 51 09.3**	**+0.3**
	baz=251								
WSF				*eS*		**Sg**	**04 51 28.9**	**+1.8**
	baz=251								
SLGT	**Liugui**	**1.41**	**223**	*eP*		**Pg**	**04 51 09.3**	**0.0**
	baz=223								
CHN8	**Yiju**	**1.52**	**243**	*eP*		**Pb**	**04 51 10.8**	**+0.3**
	baz=244								
CHN3	**Shinhua**	**1.54**	**232**	*eP*		**Pg**	**04 51 12.3**	**+0.5**
	baz=233								
ECL	**Taimali**	**1.58**	**205**	*eP*		**Pn**	**04 51 09.7**	**-0.7**
	baz=188								
SCST	**Cishan**	**1.58**	**224**	*eP*		**Pg**	**04 51 12.3**	**-0.3**
	baz=225								
SHHT	**Tainan City**	**1.59**	**231**	*eP*		**Pg**	**04 51 12.6**	**-0.1**
	baz=232								
SSD	**Sandimen**	**1.61**	**217**	*eP*		**Pn**	**04 51 10.4**	**-0.4**
	baz=207								
SCLT	**Jiali**	**1.61**	**238**	*eP*		**Pb**	**04 51 12.2**	**+0.1**
	baz=239								
PCYT	**Pengchaiyu**	**1.62**	**12**	*eP*		**Pb**	**04 51 12.2**	**-0.1**
	baz=12								
TSMG	**Majia**	**1.63**	**216**	*eP*		**Pb**	**04 51 12.7**	**+0.3**
	baz=229								
TSMG				*eS*		**Sg**	**04 51 34.1**	**-0.6**
	baz=229								
TWM1	**Shoushan**	**1.67**	**224**	*eP*		**Pg**	**04 51 14.2**	**-0.2**
	baz=225								
MASBT	**Mashibuluo**	**1.72**	**214**	*eP*		**Pn**	**04 51 12.6**	**+0.4**
	baz=215								
MASBT				*eS*		**Sb**	**04 51 36.3**	**+0.7**
	baz=215								
EAST	**Anshuo**	**1.82**	**205**	*eP*		**Pn**	**04 51 12.1**	**-1.6**
	baz=189								
TAW	**Tawu**	**1.82**	**204**	*eP*		**Pb**	**04 51 15.6**	**-0.1**
	baz=188								
TAWH	**Dawu Township**	**1.84**	**204**	*eP*		**Pn**	**04 51 14.6**	**+0.6**
	baz=188								
IRIF	**Iriomote-Funau**	**1.89**	**81**	P		**Pn**	**04 51 15.4**	**+0.8**
IRIF				*eS*		**Sb**	**04 51 40.4**	**-0.3**
SCZT	**Fangliau**	**1.93**	**211**	*eP*		**Pn**	**04 51 15.9**	**+0.8**
	baz=212								
HATJ	**Hateruma jima**	**1.94**	**89**	P		**Pn**	**04 51 15.9**	**+0.6**
HATJ				S		**Sn**	**04 51 40.9**	**+1.1**
HATJ	**Hateruma jima**	**1.94**	**89**	A		A	04 51 15.9	
	comp=E,7.0nm,3.2s,comp=N,10.0nm,3.8s								
SLIU	**Shizi**	**1.99**	**204**	*eP*		**Pn**	**04 51 16.9**	**+0.9**
	baz=190								
LAY	**Lan-yu**	**1.99**	**184**	*eP*		**Pn**	**04 51 15.2**	**-0.9**
	baz=184								
PHUB	**P'eng-hu**	**2.00**	**255**	*eP*		**Pb**	**04 51 18.0**	**-0.8**
	baz=254								
PHUB				*eS*		**Sn**	**04 51 42.4**	**+1.1**
	baz=254								
PNG	**Penghu**	**2.00**	**257**	*eP*		**Pn**	**04 51 17.1**	**+0.9**
	baz=257								
WDGT	**Dungji**	**2.01**	**248**	*eP*		**Pn**	**04 51 17.4**	**+1.1**
	baz=230								
WDGT				*eS*		**Sn**	**04 51 42.1**	**+0.6**
	baz=230								
LYUB	**Lan-yu**	**2.03**	**183**	*eP*		**Pn**	**04 51 13.4**	**-3.1**
	baz=183								
JKRS	**Kuro-shima**	**2.13**	**84**	P		**Pn**	**04 51 19.4**	**+1.4**
JKRS				*eS*		**Sn**	**04 51 45.8**	**+1.2**
JKRS	**Kuro-shima**	**2.13**	**84**	A		A	04 51 19.4	
	comp=E,8.0nm,5.5s,comp=N,8.0nm,5.6s								
HEN	**Hengchun**	**2.20**	**203**	*eP*		**Pb**	**04 51 21.6**	**-0.6**
	baz=191								
VCHM	**Qimei**	**2.23**	**249**	*eP*		**Pb**	**04 51 21.0**	**-1.6**
	baz=234								
TWK1	**Hengchun**	**2.24**	**201**	*eP*		**Pn**	**04 51 20.6**	**+1.2**
	baz=187								
TWKBT	**Hengchun**	**2.24**	**201**	*eP*		**Pb**	**04 51 21.5**	**-1.2**
	baz=187								
VWUC	**VWUC**	**2.25**	**295**	*eP*		**Pn**	**04 51 19.7**	**+0.2**
	baz=294								
TSEB	**Hengchuen, Pin**	**2.25**	**199**	*eP*		**Pb**	**04 51 22.1**	**-0.8**
	baz=187								
JIJ	**Ishigaki jima**	**2.27**	**81**	P		**Pn**	**04 51 20.3**	**+0.4**
JIJ				S		**Sn**	**04 51 48.1**	**+0.2**
JISG	**Ishigakijimahi**	**2.46**	**77**	P		**Pn**	**04 51 23.0**	**+0.5**
JISG				S		**Sn**	**04 51 52.7**	**+0.1**
PTMZ	**Houxiangcun**	**2.54**	**294**	*eP*		**Pn**	**04 51 23.6**	**+0.1**
	baz=293								
MATB	**Ma-tsu**	**2.63**	**324**	*eP*		**Pn**	**04 51 25.0**	**+0.2**
	baz=323								
MATB				*eS*		**Sn**	**04 51 57.1**	**+0.3**
	baz=323								
QZH	**Quanzhou**	**2.96**	**288**	Pn		**Pn**	**04 51 29.6**	**+0.3**
QZH				Sn		**Sn**	**04 52 03.6**	**-1.3**
QZH				smax		smax			
	comp=N,440nm,1.0s								
QZH				smax		smax			
	comp=E,310nm,0.9s								
QZH				LR		LR			
	comp=E,3μm,8.4s								
QZH				LR		LR			
	comp=Z,3μm,9.8s								
KNM	**Kinmen**	**2.99**	**278**	*eP*		**Pn**	**04 51 31.9**	**+2.1**
	baz=277								
KNMB	**Chin-men Tao**	**3.04**	**279**	*eP*		**Pn**	**04 51 30.9**	**+0.5**
	baz=278								
LYJJ	**Jianjiangzhen**	**3.05**	**326**	*eP*		**Pn**	**04 51 31.7**	**+1.1**
	baz=325								
MHZQ	**Yeshan**	**3.16**	**311**	*eP*		**Pn**	**04 51 33.2**	**+1.1**
	baz=296								
XPSS	**Dashiqiu**	**3.18**	**335**	*eP*		**Pn**	**04 51 32.6**	**+0.3**
	baz=334								
AXDP	**Jialang**	**3.49**	**285**	*eP*		**Pn**	**04 51 36.9**	**+0.3**
	baz=283								
ZPLA	**Ao Xicun**	**3.60**	**269**	*eP*		**Pn**	**04 51 38.9**	**+0.8**
	baz=268								
DSXP	**Dongshan**	**3.91**	**266**	*eP*		**Pn**	**04 51 43.0**	**+0.6**
	baz=265								
SXFK	**Yanhouchang**	**4.35**	**304**	*eP*		**Pn**	**04 51 49.0**	**+0.6**
	baz=302								
JOW	**Kunigami**	**6.58**	**64**	Pn		**Pn**	**04 52 18.4**	**-0.7**
	comp=Z,4.7nm,0.3s,baz=156,slow=13,SNR=12								
	comp=Z,12nm,0.2s								
SSE	**Sheshan**	**7.04**	**357**	Pn		**Pn**	**04 52 24.7**	**-0.8**
SSE				Sn		**Sn**	**04 53 44.3**	**-1.4**
SSE				smax		smax			
	comp=N,27nm,1.1s								
SSE				smax		smax			
	comp=E,52nm,0.9s								
SSE				LR		LR			
	comp=N,360nm,10.3s								
SSE				LR		LR			
	comp=E,250nm,10.6s								
WHN	**Wuhan**	**9.19**	**316**	P		**Pn**	**04 52 53.0**	**-1.9**
WHN				S		**Sn**	**04 54 33.2**	**-5.3**
WHN				LR		LR			
	comp=N,3μm,8.1s								
WHN				LR		LR			
	comp=E,2μm,9.7s								
WHN				LR		LR			
	comp=Z,4μm,10.2s								
TGY	**Tagaytay City**	**9.91**	**184**	LR		LR	04 56 48.7		
	comp=Z,193nm,18.8s,baz=328,slow=37								
KSRS	**Korea Array**	**14.40**	**20**	Pn		**P**	**04 54 10.8**	**-2.4**
	comp=Z,0.8nm,0.3s,baz=196,slow=11,SNR=18								
KSRS				LR		LR	05 00 31.1		
	comp=Z,74nm,19.5s,baz=200,slow=41								
DAV	**Davao City (W)**	**17.28**	**167**	LR		LR	05 01 36.0		
	comp=Z,120nm,18.7s,baz=11,slow=38								
MJAR	**Matsushiro Arr**	**18.91**	**45**	LR		LR	05 03 13.5		
	comp=Z,78nm,20.2s,baz=221,slow=40								
CMAR	**Chiang Mai Arr**	**21.90**	**260**	P		**P**	**04 55 40.2**	**+4.5**
	comp=Z,1.1nm,0.3s,baz=59,slow=7.1,SNR=5.0								
CMAR				LR		LR	05 04 28.0		
	comp=Z,51nm,19.2s,baz=85,slow=38								
GUMO	**Guam**	**24.25**	**111**	LR		LR	05 05 06.6		
	comp=Z,38nm,19.2s,baz=308,slow=36								
KLR	**Kul'dur**	**26.36**	**15**	LR		LR	05 07 28.8		
	comp=Z,98nm,18.6s,baz=252,slow=38								
SONM	**Songino Array**	**26.68**	**337**	P		**P**	**04 56 22.3**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=150,slow=12,SNR=6.6								
SONM				LR		LR	05 07 58.3		
	comp=Z,237nm,18.1s,baz=130,slow=39								
	comp=Z,1.7nm,0.8s								
YAK	**Yakutsk**	**38.37**	**6**	LR		LR	05 16 46.5		
	comp=Z,106nm,18.6s,baz=153,slow=41								
MKAR	**Makanchi Array**	**38.76**	**316**	P		**P**	**04 58 07.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=101,slow=10,SNR=8.4								
	comp=Z,0.7nm,0.7s								
ZALV	**Zalesovo Beam**	**40.61**	**327**	P		**P**	**04 58 22.0**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=110,slow=8.4,SNR=8.2								
	comp=Z,2.2nm,0.6s								
H11N1	**WAKE ISLAND Hy**	**42.04**	**87**	T		T	05 43 49.1		
	baz=276,slow=75,SNR=4.7								
H11N2	**WAKE ISLAND Hy**	**42.04**	**87**	T		T	05 43 50.6		
	baz=276,slow=75,SNR=5.6								
H11N3	**WAKE ISLAND Hy**	**42.06**	**87**	T		T	05 43 51.2		
	baz=276,slow=75,SNR=3.9								
H11S3	**WAKE ISLAND Hy**	**42.17**	**89**	T		T	05 43 51.1		
	baz=283,SNR=23								
H11S1	**WAKE ISLAND Hy**	**42.17**	**89**	T		T	05 43 50.8		
	baz=283,slow=74,SNR=20								
H11S2	**WAKE ISLAND Hy**	**42.19**	**89**	T		T	05 43 51.1		
	baz=283,slow=74,SNR=17								
KURBB	**Kurchatov Arra**	**42.51**	**320**	P		**P**	**04 58 38.5**	**+0.7**
	comp=Z,1.2nm,0.2s,baz=113,slow=8.6,SNR=1.7								
	comp=Z,1.2nm,0.2s								
PALK	**Pallekele**	**42.63**	**254**	LR		LR	05 16 29.4		
	comp=Z,31nm,19.0s,baz=126,slow=36								
SEY	**Seymchan**	**43.96**	**20**	LR		LR	05 19 44.4		
	comp=Z,41nm,18.2s,baz=330,slow=40								
WRA	**Warramunga Arr**	**45.42**	**163**	P		**P**	**04 58 59.5**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=344,slow=8.6,SNR=6.4								
	comp=Z,1.5nm,0.8s								
TIXI	**Tiksi**	**47.81**	**3**	LR		LR	05 20 45.0		
	comp=Z,52nm,19.0s,baz=204,slow=38								
BVAR	**Borovoye Array**	**48.08**	**321**	P		**P**	**04 59 22.6**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=108,slow=8.4,SNR=5.4								
BVAR				LR		LR	05 21 13.2		
	comp=Z,121nm,19.8s,baz=315,slow=38								
	comp=Z,0.8nm,0.5s								
ASAR	**Alice Springs**	**48.88**	**165**	P		**P**	**04 59 27.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=341,slow=7.8,SNR=8.5								
	comp=Z,0.8nm,0.8s								
NRIK	**Noril'sk**	**49.66**	**345**	P		**P**	**04 59 33.2**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=140,slow=6.6,SNR=3.5								
	comp=Z,1.8nm,0.7s								
CTA	**Charters Tower**	**49.97**	**149**	LR		LR	05 19 06.6		
	comp=Z,38nm,20.9s,baz=80,slow=34								
STKA	**Stephens Creek**	**58.77**	**160**	P		**P**	**05 00 40.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=313,slow=8.3,SNR=4.0								
	comp=Z,0.8nm,0.3s								
ILAR	**Eielson Array**	**69.13**	**27**	P		**P**	**05 01 47.4**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=282,slow=5.3,SNR=9.3								
	comp=Z,0.4nm,0.5s								
FINES	**FINESS Array B**	**71.80**	**330**	P		**P**	**05 02 05.3**	**+0.5**
	comp=Z,4.1nm,1.1s,baz=45,slow=0.5,SNR=4.3								
FINES				LR		LR	05 36 29.9		
	comp=Z,255nm,19.8s,baz=278,slow=38								
	comp=Z,4.1nm,1.1s								
HFS	**Hagfors**	**77.92**	**331**	LR		LR	05 40 18.4		
	comp=Z,323nm,21.7s,baz=328,slow=38								
NOA	**NORSAR Array B**	**78.56**	**332**	LR		LR	05 41 10.9		
	comp=Z,124nm,20.7s,baz=260,slow=38								
YKA	**Yellowknife Ar**	**82.93**	**23**	P		**P**	**05 03 07.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=314,slow=4.9,SNR=13								
	comp=Z,0.8nm,0.7s								

IDC 07 04:51:39.2±47.0, 17°50S×176°62W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=871.7km s-min=169.4km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.32**	**241**	P	P	04 59 18.7	+0.1
	1.6nm,0.8s,baz=42,slow=14,SNR=3.6						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**46.39**	**259**	P	P	05 00 07.4	-0.4
	0.5nm,0.4s,baz=96,slow=7.0,SNR=8.6						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**46.54**	**254**	P	P	05 00 09.0	0.0
	4.1nm,0.7s,baz=87,slow=8.8,SNR=39						
	4.1nm,0.7s						

TAP 07 04:52:30.2, 24°08N×121°62E, h9km, ML2.8, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.02**	**283**	*i* P	Pg	04 52 32.4	+0.5
	baz=293						
TWD				*i* S	Sg	04 52 33.6	+0.6
	baz=293						
ETL	**Fush Village**	**0.08**	**2**	*i* P	Pg	04 52 33.2	+0.7
	baz=2.0						
ETL				*i* S	Sg	04 52 35.0	+0.8
	baz=2.0						
HWA	**Hwalien**	**0.10**	**188**	*i* P	Pg	04 52 33.2	+0.6
	baz=183						
HWA				*i* S	Sg	04 52 35.7	+1.3
	baz=183						
NACB	**Ninganchiao**	**0.10**	**347**	⇓ *iP*	Pg	04 52 33.5	+0.7
	baz=346						
NACB				*i* S	Sg	04 52 35.4	+0.9
	baz=346						
ETM	**Tongmen**	**0.16**	**227**	*i* P	Pg	04 52 34.1	+0.5
	baz=226						
LXIB	**Xiulin Townshi**	**0.20**	**254**	P	Pg	04 52 35.1	+0.7
	baz=254						
SHUL	**Shoufeng**	**0.29**	**190**	P	Pb	04 52 37.4	-0.2
	baz=190						
ESL	**Shilin**	**0.31**	**213**	*i* P	Pg	04 52 36.6	+0.1
	baz=211						
WHF	**Hehuan Shan**	**0.33**	**282**	P	Pb	04 52 38.0	-0.7
	baz=282						
ENA	**Nanau**	**0.37**	**17**	*i* P	Pg	04 52 38.0	+0.5
	baz=18						
TEGC	**Jichi Village**	**0.37**	**191**	*e*P	Pb	04 52 39.6	+0.6
	baz=190						
FUSS	**Fushou**	**0.38**	**297**	*e*P	Pb	04 52 39.2	-0.2
	baz=296						
CHGB	**Renai**	**0.41**	**268**	P	Pb	04 52 39.6	-0.2
	baz=267						
NNSB	**Datong**	**0.41**	**328**	*e*P	Pb	04 52 39.6	-0.2
	baz=328						
NNSB				*e*S	Sb	04 52 45.7	-0.6
	baz=328						
WARBT	**Fenglin Townsh**	**0.41**	**211**	*e*P	Pb	04 52 39.3	-0.4
	baz=210						
OWD	**Renai**	**0.42**	**254**	*e*P	Pb	04 52 39.4	-0.6
	baz=253						
NNS	**Nan Shan**	**0.43**	**328**	*e*P	Pb	04 52 39.6	-0.5
	baz=328						
TDCB	**Techi**	**0.46**	**293**	*e*P	Pb	04 52 40.3	-0.3
	baz=292						
LATG	**Datong**	**0.47**	**349**	*e*P	Pb	04 52 40.3	-0.5
	baz=349						
WUSB	**Renai**	**0.47**	**260**	*e*P	Pb	04 52 40.1	-0.6
	baz=259						
NDT	**Datong Townshi**	**0.53**	**349**	*e*P	Pb	04 52 41.9	+0.1
	baz=349						
ENTT	**Nioudou**	**0.56**	**355**	*e*P	Pb	04 52 42.4	+0.1
	baz=355						

*IDC **07** 04:56:50.4±1.5, 24°28N×122°09E, h0km, mb3.4/4, mbtmp3.4/4, MS3.4/1, Error ellipse: s-maj=76.3km s-min=30.9km az=63.0*

*TAP **07** 04:56:50.3, 24°06N×121°64E, h10km, ML3.7, C*

*ASIES **07** 04:56:50.3, 24°06N×121°64E, h10km, ML3.7, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.61; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$-0.84; $M_{r\theta}$0.84; $M_{r\phi}$-1.17; $M_{\theta\phi}$1.23; Fault plane solution: $M_0$2.98682×10^{21} NP1:ϕ_s45.74000°, δ59.83000°, λ79.89000°. NP2:ϕ_s245.26000°, δ31.67000°, λ106.80000°. Principal axes: T Plg73.1790°, Azm290.3300°; N Plg8.7280°, Azm50.8490°; P Plg14.2650°, Azm143.0860°;*

*JMA **07** 04:56:51.2±0.2, 24°1N±0.6×122°2E±°, h0km, MV3.2/10, TAIWAN REGION*

ISC 07 04:56:50.9±0.8, 24°08N±0°02×121°65E±0°03, h10km±4km, n37, σ0°93/63, mb3.5/4, 2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.05**	**271**	*i* P	Pg	04 56 52.4	-0.5
	baz=311						
TWD				*i* S	Sg	04 56 53.9	-0.5
	baz=311						
ETL	**Fush Village**	**0.08**	**342**	*i* P	Pg	04 56 53.2	-0.1
	baz=354						
ETL				*i* S	Sg	04 56 55.2	+0.1
	baz=354						
NACB	**Ninganchiao**	**0.11**	**331**	⇓ *iP*	Pg	04 56 53.5	-0.1
	baz=342						
NACB				*i* S	Sg	04 56 55.6	0.0
	baz=342						
HWA	**Hwalien**	**0.11**	**203**	*i* P	Pg	04 56 53.2	-0.4
	baz=194						
HWA				*i* S	Sg	04 56 55.4	-0.1
	baz=194						
ETM	**Tongmen**	**0.18**	**232**	*i* P	Pg	04 56 54.2	-0.6
	baz=235						
ETM				*i* S	Sg	04 56 56.8	-0.7
	baz=235						
LXIB	**Xiulin Townshi**	**0.23**	**255**	*i* P	Pg	04 56 55.3	-0.4
	baz=250						
LXIB				*i* S	Sg	04 56 58.7	-0.2
	baz=250						
EHP	**Heping Village**	**0.24**	**19**	P	Pb	04 56 56.1	-1.3
	baz=22						
EHP				*e*S	Sg	04 57 00.3	+1.0
	baz=22						
EAHA	**Aohua**	**0.26**	**18**	*i* P	Pb	04 56 56.3	-1.4
	baz=28						
EAHA				S	Sg	04 57 00.2	+0.4
	baz=28						
SHUL	**Shoufeng**	**0.30**	**196**	*e*P	Pg	04 56 57.4	+0.4
	baz=194						
SHUL				*e*S	Sg	04 57 02.5	+1.5
	baz=194						
ESL	**Shilin**	**0.33**	**217**	*i* P	Pg	04 56 56.7	-0.8
	baz=225						
ESL				*i* S	Sg	04 57 00.7	-1.2
	baz=225						
ENA	**Nanau**	**0.36**	**13**	*i* P	Pb	04 56 58.2	-1.1
	baz=15						
ENA				*e*S	Sb	04 57 03.6	-1.4
	baz=15						
WHF	**Hehuan Shan**	**0.36**	**281**	*i* P	Pg	04 56 58.0	-0.2
	baz=284						
WHF				*i* S	Sg	04 57 03.2	+0.2
	baz=284						
TEGC	**Jichi Village**	**0.38**	**196**	*e*P	Pg	04 56 58.9	+0.5
	baz=185						
TEGC				*e*S	Sb	04 57 06.1	+0.4
	baz=185						
EWUT	**Wuta**	**0.38**	**18**	P	Pb	04 56 58.6	-1.2
	baz=18						
EWUT				*e*S	Sb	04 57 03.8	-1.9
	baz=18						
FUSS	**Fushou**	**0.41**	**294**	*e*P	Pg	04 56 59.3	+0.3
	baz=298						
FUSS				*e*S	Sg	04 57 05.2	+0.8
	baz=298						
NNSB	**Datong**	**0.43**	**325**	*e*P	Pb	04 56 59.6	-0.9
	baz=328						
NNSB				*e*S	Sg	04 57 05.4	+0.4
	baz=328						
NNSH	**Datong**	**0.43**	**325**	⇓ *eP*	Pb	04 56 59.7	-0.9
	baz=327						
NNSH				*e*S	Sb	04 57 05.6	-1.5
	baz=327						
WARBT	**Fenglin Townsh**	**0.43**	**214**	*e*P	Pg	04 56 58.7	-0.7
	baz=221						
WARBT				*e*S	Sg	04 57 04.1	-1.1
	baz=221						
CHGB	**Renai**	**0.44**	**268**	P	Pg	04 56 59.6	+0.1
	baz=270						
CHGB				S	Sg	04 57 05.6	+0.3
	baz=270						
NNS	**Nan Shan**	**0.44**	**325**	*e*P	Pb	04 56 59.9	-0.9
	baz=328						
NNS				*e*S	Sb	04 57 06.2	-1.4
	baz=328						
OWD	**Renai**	**0.45**	**254**	P	Pg	04 56 59.6	-0.2
	baz=256						
OWD				S	Sg	04 57 05.9	+0.1
	baz=256						
EGFH	**Guangfu**	**0.46**	**207**	P	Pg	04 56 59.4	-0.5
	baz=213						
EGFH				*e*S	Sg	04 57 05.6	-0.3
	baz=213						
LATG	**Datong**	**0.47**	**346**	*i* P	Pb	04 57 00.5	-0.8
	baz=348						
LATG				*e*S	Sb	04 57 07.2	-1.1
	baz=348						
TWT	**Tachien**	**0.47**	**292**	*e*P	Pb	04 57 00.6	-0.7
	baz=294						
TWT				*e*S	Sb	04 57 07.8	-0.6
	baz=294						
TDCB	**Techi**	**0.48**	**291**	*e*P	Pb	04 57 00.8	-0.8
	baz=294						
TDCB				*e*S	Sb	04 57 07.7	-1.1
	baz=294						
WUSB	**Renai**	**0.50**	**260**	*e*P	Pg	04 57 00.6	0.0
	baz=262						
WUSB				*e*S	Sg	04 57 07.5	+0.3
	baz=262						
NDT	**Datong Townshi**	**0.54**	**346**	*e*P	Pb	04 57 01.9	-0.5
	baz=348						
NDT				*e*S	Sb	04 57 09.2	-1.0
	baz=348						
JYNG	**Yonagunijimaku**	**1.24**	**72**	S	Sn	04 57 31.0	+0.1
YOJ	**Yonaguni jima**	**1.30**	**73**	P	Pb	04 57 14.7	-0.7
JKRS	**Kuro-shima**	**2.16**	**85**	S	Sb	04 57 55.4	-1.5
JIJ	**Ishigaki jima**	**2.29**	**82**	S	Sn	04 57 56.2	-0.8
JISG	**Ishigakijimahi**	**2.48**	**78**	S	Sn	04 58 00.4	-1.2
MKAR	**Makanchi Array**	**38.71**	**316**	P	P	**05 04 16.6**	**+1.6**
	0.2nm,0.3s,baz=106,slow=9.2,SNR=

	baz=335								
HWA	**Hwalien**	**0.09**	**214**⇑	*i*	P	**Pg**	**04 59 03.5**	**+0.1**
	baz=180								
HWA				*i*	S	**Sg**	**04 59 05.7**	**+0.7**
	baz=180								
ETL	**Fush Village**	**0.11**	**343**⇓	*i*	P	**Pg**	**04 59 03.6**	**-0.2**
	baz=5.0								
ETL				*i*	S	**Sg**	**04 59 05.6**	**-0.1**
	baz=5.0								
NACB	**Ninganchiao**	**0.14**	**334**⇓	*i*	P	**Pg**	**04 59 03.8**	**-0.4**
	baz=351								
NACB				*i*	S	**Sg**	**04 59 05.9**	**-0.3**
	baz=351								
ETM	**Tongmen**	**0.17**	**241**	*i*	P	**Pg**	**04 59 04.6**	**-0.3**
	baz=229								
ETM				*i*	S	**Sg**	**04 59 07.0**	**-0.3**
	baz=229								
LXIB	**Xiulin Townshi**	**0.23**	**262**⇓	*i*	P	**Pg**	**04 59 05.5**	**-0.4**
	baz=258								
LXIB					S	**Sg**	**04 59 08.9**	**-0.1**
	baz=258								
EHP	**Heping Village**	**0.27**	**16**	*e*	P	**Pg**	**04 59 06.7**	**+0.1**
	baz=27								
EHP				*e*	S	**Sg**	**04 59 10.6**	**+0.4**
	baz=27								
SHUL	**Shoufeng**	**0.28**	**199**⇑	*i*	P	**Pg**	**04 59 07.2**	**+0.4**
	baz=190								
SHUL				*e*	S	**Sb**	**04 59 13.2**	**-0.2**
	baz=190								
EAHA	**Aohua**	**0.29**	**15**	*i*	P	**Pg**	**04 59 06.5**	**-0.4**
	baz=23								
EAHA				*i*	S	**Sg**	**04 59 10.5**	**-0.3**
	baz=23								
ESL	**Shilin**	**0.32**	**221**⇑	*i*	P	**Pg**	**04 59 06.9**	**-0.6**
	baz=212								
ESL				*e*	S	**Sg**	**04 59 11.0**	**-0.6**
	baz=212								
TEGC	**Jichi Village**	**0.36**	**198**		P	**Pg**	**04 59 09.2**	**+0.9**
	baz=190								
TEGC				*e*	S	**Sb**	**04 59 15.9**	**+0.2**
	baz=190								
WHF	**Hehuan Shan**	**0.37**	**285**⇓	*i*	P	**Pg**	**04 59 08.3**	**-0.4**
	baz=285								
WHF				*i*	S	**Sg**	**04 59 13.4**	**-0.2**
	baz=285								
ENA	**Nanau**	**0.38**	**11**⇓	*i*	P	**Pg**	**04 59 08.5**	**-0.3**
	baz=19								
ENA					S	**Sg**	**04 59 13.6**	**-0.2**
	baz=19								
EWUT	**Wuta**	**0.41**	**15**⇓	*i*	P	**Pg**	**04 59 08.8**	**-0.4**
	baz=21								
EWUT					S	**Sg**	**04 59 14.2**	**-0.4**
	baz=21								
WARBT	**Fenglin Townsh**	**0.42**	**217**⇑	*i*	P	**Pg**	**04 59 08.8**	**-0.6**
	baz=211								
WARBT				*e*	S	**Sg**	**04 59 14.1**	**-0.8**
	baz=211								
FUSS	**Fushou**	**0.43**	**297**⇓	*i*	P	**Pg**	**04 59 09.6**	**-0.1**
	baz=299								
FUSS				*i*	S	**Sg**	**04 59 15.4**	**+0.1**
	baz=299								
EGFH	**Guangfu**	**0.44**	**209**⇑	*e*	P	**Pg**	**04 59 09.4**	**-0.4**
	baz=204								
EGFH				*e*	S	**Sg**	**04 59 16.0**	**+0.5**
	baz=204								
CHGB	**Renai**	**0.44**	**271**	⇓	P	**Pg**	**04 59 09.9**	**-0.1**
	baz=270								
CHGB					S	**Sg**	**04 59 15.7**	**-0.1**
	baz=270								
NNSB	**Datong**	**0.45**	**326**⇓	*e*	P	**Pg**	**04 59 10.0**	**-0.1**
	baz=330								
NNSB				*e*	S	**Sg**	**04 59 16.0**	**-0.1**
	baz=330								
NNSH	**Datong**	**0.45**	**326**	*e*	P	**Pg**	**04 59 10.0**	**-0.1**
	baz=330								
NNSH				*e*	S	**Sg**	**04 59 15.9**	**-0.1**
	baz=330								
OWD	**Renai**	**0.45**	**258**⇓	*e*	P	**Pg**	**04 59 09.9**	**-0.2**
	baz=255								
OWD				*e*	S	**Sg**	**04 59 16.3**	**+0.2**
	baz=255								
NNS	**Nan Shan**	**0.47**	**326**⇓	*e*	P	**Pg**	**04 59 10.2**	**-0.2**
	baz=330								
NNS				*e*	S	**Sg**	**04 59 16.5**	**0.0**
	baz=330								
TWT	**Tachien**	**0.49**	**294**⇓	*e*	P	**Pg**	**04 59 11.0**	**+0.2**
	baz=294								
TWT				*e*	S	**Sg**	**04 59 17.7**	**+0.6**
	baz=294								
LATG	**Datong**	**0.50**	**346**⇓	*i*	P	**Pg**	**04 59 10.7**	**-0.2**
	baz=350								
LATG					S	**Sg**	**04 59 17.1**	**-0.3**
	baz=350								
WUSB	**Renai**	**0.50**	**263**⇓	*e*	P	**Pg**	**04 59 10.9**	**-0.1**
	baz=261								
WUSB				*e*	S	**Sg**	**04 59 18.0**	**+0.5**
	baz=261								
TDCB	**Techi**	**0.50**	**294**⇓	*e*	P	**Pg**	**04 59 11.0**	**0.0**
	baz=294								
TDCB				*e*	S	**Sg**	**04 59 17.7**	**+0.2**
	baz=294								
ESAO	**Su ao**	**0.55**	**18**	*e*	P	**Pg**	**04 59 11.7**	**-0.2**
	baz=22								
ESAO				*e*	S	**Sg**	**04 59 18.4**	**-0.7**
	baz=22								
VWDT	**VWDT**	**0.56**	**238**	*i*	P	**Pg**	**04 59 11.9**	**-0.2**
	baz=235								
VWDT				*i*	S	**Sg**	**04 59 19.2**	**-0.2**
	baz=235								
NDT	**Datong Townshi**	**0.56**	**346**	⇓	P	**Pg**	**04 59 12.2**	**0.0**
	baz=350								
NDT					S	**Sg**	**04 59 19.4**	**-0.2**
	baz=350								
NDS	**Dongshan**	**0.58**	**5**	*e*	P	**Pg**	**04 59 12.4**	**-0.1**
	baz=9.0								
NDS				*e*	S	**Sg**	**04 59 20.1**	**-0.1**
	baz=9.0								
TWC	**Suao**	**0.58**	**17**⇑	*e*	P	**Pg**	**04 59 12.3**	**-0.2**
	baz=22								
TWC				*e*	S	**Sg**	**04 59 20.1**	**0.0**
	baz=22								
ENTT	**Nioudou**	**0.59**	**352**	*e*	P	**Pg**	**04 59 12.7**	**0.0**
	baz=356								
ENTT				*e*	S	**Sg**	**04 59 20.5**	**+0.1**
	baz=356								
HGSD	**Ruisui**	**0.60**	**201**	*e*	P	**Pg**	**04 59 13.3**	**+0.5**
	baz=197								
HGSD				*e*	S	**Sb**	**04 59 22.9**	**+0.3**
	baz=197								
EOS4	**EOS4**	**0.60**	**83**	*e*	P	**Pb**	**04 59 15.3**	**+1.4**
	baz=85								
EOS4				*e*	S	**Sb**	**04 59 24.0**	**+1.5**
	baz=85								
EHY	**Hungye**	**0.62**	**210**	*e*	P	**Pg**	**04 59 12.7**	**-0.6**
	baz=205								
EHY				*e*	S	**Sg**	**04 59 22.6**	**+1.1**
	baz=205								
EOS2	**EOS2**	**0.64**	**55**	*e*	P	**Pb**	**04 59 16.3**	**+1.7**
	baz=58								
EOS2				*e*	S	**Sb**	**04 59 24.6**	**+1.0**
	baz=58								
WPL	**Puli Township**	**0.64**	**267**	*e*	P	**Pg**	**04 59 13.9**	**+0.2**
	baz=265								
WPL				*e*	S	**Sg**	**04 59 22.2**	**+0.1**
	baz=265								
TWE	**Neicheng**	**0.67**	**1**	*e*	P	**Pg**	**04 59 14.2**	**0.0**
	baz=5.0								
TWE				*e*	S	**Sg**	**04 59 22.9**	**+0.1**
	baz=5.0								
YHNB	**Yeheng**	**0.67**	**337**	*e*	P	**Pg**	**04 59 14.3**	**+0.1**
	baz=340								
YHNB				*e*	S	**Sg**	**04 59 22.7**	**-0.2**
	baz=340								
DPDB	**Guoxing**	**0.67**	**269**	*e*	P	**Pg**	**04 59 14.4**	**+0.2**
	baz=267								
DPDB				*e*	S	**Sg**	**04 59 23.2**	**+0.3**
	baz=267								
NSK	**Sanguang**	**0.68**	**336**	*e*	P	**Pg**	**04 59 14.5**	**+0.1**
	baz=340								
NSK				*e*	S	**Sg**	**04 59 23.0**	**-0.3**
	baz=340								
WCS	**Beigang Elemen**	**0.68**	**271**	*e*	P	**Pg**	**04 59 14.5**	**0.0**
	baz=270								
WCS				*e*	S	**Sb**	**04 59 23.9**	**-1.3**
	baz=270								
WHP	**Taichung City**	**0.69**	**289**	*e*	P	**Pb**	**04 59 15.0**	**-0.6**
	baz=289								
WHP				*e*	S	**Sb**	**04 59 24.4**	**-0.9**
	baz=289								
SSLB	**Suanglung**	**0.70**	**248**⇓	*e*	P	**Pg**	**04 59 14.4**	**-0.3**
	baz=246								
SSLB				*e*	S	**Sg**	**04 59 23.2**	**-0.6**
	baz=246								
FUSB	**Fushanzhiwuyua**	**0.71**	**355**	*e*	P	**Pg**	**04 59 15.0**	**0.0**
	baz=358								
FUSB				*e*	S	**Sg**	**04 59 24.2**	**+0.1**
	baz=358								
ILA	**Ilan**	**0.71**	**6**	*e*	P	**Pg**	**04 59 15.5**	**+0.5**
	baz=11								
ILA				*e*	S	**Sg**	**04 59 25.3**	**+0.9**
	baz=11								
SMLT	**Sun Moon Lake**	**0.71**	**257**⇓	*e*	P	**Pg**	**04 59 14.9**	**-0.1**
	baz=254								
SMLT				*e*	S	**Sb**	**04 59 24.9**	**-1.2**
	baz=254								
NWLT	**Wulai**	**0.74**	**349**	*e*	P	**Pg**	**04 59 15.4**	**0.0**
	baz=352								
NWLT				*e*	S	**Sg**	**04 59 24.4**	**-0.6**
	baz=352								
YULB	**Yu-li**	**0.74**	**207**	*e*	P	**Pg**	**04 59 14.5**	**-0.9**
	baz=204								
YULB				*e*	S	**Sg**	**04 59 25.4**	**+0.4**
	baz=204								
TYC	**Yuchr**	**0.75**	**259**⇓	*e*	P	**Pg**	**04 59 15.4**	**-0.3**
	baz=257								
TYC				*e*	S	**Sg**	**04 59 25.6**	**+0.2**
	baz=257								
ECBN	**Changbin**	**0.76**	**195**	*e*	P	**Pg**	**04 59 16.0**	**+0.2**
	baz=191								
ECBN				*e*	S	**Sb**	**04 59 28.8**	**+1.6**
	baz=191								
NFF	**Wufeng Townshi**	**0.76**	**320**	*e*	P	**Pg**	**04 59 16.2**	**+0.2**
	baz=321								
NFF				*e*	S	**Sg**	**04 59 25.8**	**0.0**
	baz=321								
EYUL	**Yuli**	**0.77**	**204**	*e*	P	**Pg**	**04 59 15.2**	**-0.8**
	baz=201								
TWF1	**Yuli**	**0.77**	**206**	*e*	P	**Pg**	**04 59 15.1**	**-1.0**
	baz=202								
TWF1				*e*	S	**Sb**	**04 59 27.7**	**0.0**
	baz=202								
WHYT	**Xinyi Township**	**0.82**	**245**	*e*	P	**Pb**	**04 59 17.8**	**0.0**
	baz=242								
WHYT				*e*	S	**Sb**	**04 59 28.3**	**-0.8**
	baz=242								
NSTT	**Nanjuang**	**0.83**	**314**	*e*	P	**Pb**	**04 59 17.8**	**-0.3**
	baz=316								
NSTT				*e*	S	**Sb**	**04 59 28.6**	**-0.8**
	baz=316								
LIOB	**Emei**	**0.83**	**315**	*e*	P	**Pb**	**04 59 17.8**	**-0.2**
	baz=317								
LIOB				*e*	S	**Sb**	**04 59 28.6**	**-0.9**
	baz=317								
NJD	**Zhudong**	**0.86**	**323**	*e*	P	**Pn**	**04 59 19.2**	**-0.5**
	baz=324								
NJD				*e*	S	**Sb**	**04 59 30.7**	**+0.6**
	baz=324								
TWQ1	**Liyutan**	**0.86**	**290**	*e*	P	**Pb**	**04 59 18.6**	**+0.1**
	baz=290								
TWQ1				*e*	S	**Sb**	**04 59 30.4**	**+0.1**
	baz=290								
WWF	**Wufeng**	**0.88**	**270**	*e*	P	**Pn**	**04 59 19.5**	**-0.5**
	baz=269								
WJS	**Zhushan**	**0.88**	**255**	*e*	P	**Pg**	**04 59 18.4**	**+0.2**
	baz=254								
WJS				*e*	S	**Sn**	**04 59 31.9**	**-1.2**
	baz=254								
CHKH	**Chenggong**	**0.89**	**196**	*e*	P	**Pg**	**04 59 17.8**	**-0.6**
	baz=193								
CHKH				*e*	S	**Sb**	**04 59 31.5**	**+0.5**
	baz=193								
NSY	**Sanyi**	**0.90**	**294**	*e*	P	**Pn**	**04 59 19.7**	**-0.5**
	baz=294								
TCU	**Taichung**	**0.90**	**276**	*e*	P	**Pn**	**04 59 20.1**	**-0.2**
	baz=276								
TCU				*e*	S	**Sn**	**04 59 33.4**	**-0.2**
	baz=276								
WNT1	**Nantou City**	**0.91**	**261**	*e*	P	**Pg**	**04 59 18.9**	**+0.1**
	baz=260								
WNT	**Mingjian**	**0.91**	**259**	*e*	P	**Pb**	**04 59 19.9**	**+0.6**
	baz=258								
WNT				*e*	S	**Sn**	**04 59 33.4**	**-0.3**
	baz=258								
FULB	**Fuli**	**0.91**	**202**	*e*	P	**Pg**	**04 59 18.4**	**-0.4**
	baz=199								
FULB				*e*	S	**Sn**	**04 59 35.0**	**+1.2**
	baz=199								
NHDH	**Xindian Distri**	**0.92**	**352**	*e*	P	**Pg**	**04 59 19.1**	**+0.3**
	baz=355								
NHDH				*e*	S	**Sg**	**04 59 30.4**	**-0.4**
	baz=355								
TWA	**Mucha**	**0.93**	**356**	*e*	P	**Pg**	**04 59 19.4**	**+0.3**
	baz=359								
TWA				*e*	S	**Sg**	**04 59 30.9**	**-0.3**
	baz=359								
NMLH	**Miaoli**	**0.93**	**302**	*e*	P	**Pn**	**04 59 20.3**	**-0.4**
	baz=302								
NMLH				*e*	S	**Sb**	**04 59 32.8**	**+0.6**
	baz=302								
TIPB	**Shuangxi**	**0.93**	**9**	*e*	P	**Pg**	**04 59 19.1**	**0.0**
	baz=12								
TIPB				*e*	S	**Sg**	**04 59 30.2**	**-1.0**
	baz=12								
TATO	**Taipei**	**0.93**	**350**	*e*	P	**Pb**	**04 59 19.6**	**-0.1**
	baz=353								
TATO				*e*	S	**Sg**	**04 59 30.8**	**-0.6**
	baz=353								
ALS	**Alishan**	**0.95**	**236**	*e*	P	**Pg**	**04 59 19.6**	**0.0**
	baz=233								
ALS				*e*	S	**Sb**	**04 59 34.1**	**+1.0**
	baz=233								
SBCB	**Hsinchu**	**0.96**	**320**	*e*	P	**Pn**	**04 59 21.2**	**+0.1**
	baz=322								
WDJ	**Dajia District**	**0.98**	**288**	*e*	P	**Pn**	**04 59 22.1**	**+0.7**
	baz=288								
WDJ				*e*	S	**Sn**	**04 59 35.6**	**+0.2**
	baz=288								
HSN	**Hsinchu**	**0.98**	**320**	*e*	P	**Pn**	**04 59 21.5**	**+0.2**
	baz=324								
HSN				*e*	S	**Sn**	**04 59 34.8**	**-0.6**
	baz=324								
CHKT	**Chengkung**	**0.99**	**196**	*e*	P	**Pg**	**04 59 19.6**	**-0.6**
	baz=193								
CHKT				*e*	S	**Sb**	**04 59 34.7**	**+0.9**
	baz=193								
EHD	**Haiduan**	**0.99**	**205**	*e*	P	**Pg**	**04 59 19.0**	**-1.3**
	baz=202								
EHD				*e*	S	**Sb**	**04 59 34.9**	**+0.9**
	baz=202								
TWB1	**Santiao Chiao**	**1.00**	**17**	*e*	P	**Pg**	**04 59 20.2**	**-0.2**
	baz=20								
TWB1				*e*	S	**Sg**	**04 59 33.1**	**-0.3**
	baz=20								
CHN5	**Tsauling**	**1.01**	**243**	*e*	P	**Pb**	**04 59 21.2**	**+0.2**
	baz=242								
CHN5				*e*	S	**Sn**	**04 59 36.0**	**-0.2**
	baz=242								
WCHH	**Zhanghua**	**1.01**	**272**	*e*	P	**Pb**	**04 59 21.2**	**+0.2**
	baz=271								
WCHH				*e*	S	**Sn**	**04 59 37.7**	**+1.6**
	baz=271								
NCUH	**Zhongli**	**1.01**	**335**	*e*	P	**Pn**	**04 59 21.7**	**-0.1**
	baz=337								
NWF	**Wu-fen Shan**	**1.02**	**6**	*e*	P	**Pg**	**04 59 21.1**	**+0.3**
	baz=9.0								
NWF				*e*	S	**Sg**	**04 59 33.4**	**-0.8**
	baz=9.0								
WFSB	**Wu-fen Shan**	**1.02**	**6**	*e*	P	**Pn**	**04 59 22.0**	**+0.1**
	baz=9.0								
WFSB				*e*	S	**Sg**	**04 59 33.2**	**-1.0**
	baz=9.0								
ELDTW	**Lidau**	**1.04**	**215**	*e*	P	**Pg**	**04 59 19.5**	**-1.8**
	baz=212								
ELDTW				*e*	S	**Sg**	**04 59 35.1**	**+0.3**
	baz=212								
SXI1	**Grass Mountain**	**1.06**	**11**	*e*	P	**Pg**	**04 59 21.9**	**+0.3**
	baz=13								
SXI1				*e*	S	**Sn**	**04 59 38.9**	**+1.4**
	baz=13								
TWS1	**Kuangyinshan**	**1.07**	**348**	*e*	P	**Pn**	**04 59 22.9**	**+0.3**
	baz=350								
TWS1				*e*	S	**Sb**	**04 59 36.6**	**+0.4**
	baz=350								
WDLH	**Douliu**	**1.09**	**251**	*e*	P	**Pn**	**04 59 23.1**	**+0.2**
	baz=249								
WDLH				*e*	S	**Sn**	**04 59 39.0**	**+0.8**
	baz=249								
YM01	**YM01**	**1.09**	**356**	*e*	P	**Pb**	**04 59 22.8**	**+0.3**
	baz=358								
YM01				*e*	S	**Sn**	**04 59 38.4**	**0.0**
	baz=358								
EDH	**Donghe**	**1.12**	**197**	*e*	P	**Pg**	**04 59 20.1**	**-2.7**
	baz=195								
EDH				*e*	S	**Sb**	**04 59 38.3**	**+0.5**
	baz=195								
WCKO	**Fanlu**	**1.14**	**238**	*e*	P	**Pn**	**04 59 23.9**	**+0.3**
	baz=236								
WCKO				*e*	S	**Sn**	**04 59 40.9**	**+1.3**
	baz=236								
WRL	**Guolierlin Hig**	**1.18**	**263**	*e*	P	**Pn**	**04 59 24.4**	**+0.2**
	baz=262								
WRL				*e*	S	**Sn**	**04 59 41.0**	**+0.6**
	baz=262								
STYH	**Taoyuan**	**1.20**	**223**	*e*	P	**Pg**	**04 59 23.6**	**-0.6**
	baz=221								
STYH				*e*	S	**Sb**	**04 59 40.2**	**+0.4**
	baz=221								
CHN4	**Tsaushan**	**1.20**	**235**	*e*	P	**Pn**	**04 59 24.7**	**+0.3**
	baz=233								
CHN4				*e*	S	**Sn**	**04 59 42.7**	**+1.7**
	baz=233								
TPUB	**Ta-pu**	**1.21**	**232**	*e*	P	**Pb**	**04 59 24.5**	**+0.1**
	baz=230								
TPUB				*e*	S	**Sn**	**04 59 41.6**	**+0.6**
	baz=230								
STYT	**Tauyuan**	**1.21**	**223**	*e*	P	**Pg**	**04 59 23.9**	**-0.6**
	baz=221								
STYT				*e*	S	**Sb**	**04 59 40.7**	**+0.3**
	baz=221								
JYNG	**Yonagunijimaku**	**1.24**	**71**		P	**Pn**	**04 59 24.0**	**-0.9**
LONT	**Longtian**	**1.24**	**203**	*e*	P	**Pg**	**04 59 23.4**	**-1.7**
	baz=201								
LONT				*e*	S	**Sn**	**04 59 43.8**	**+1.9**
	baz=201								
WTP	**Ta-pu**	**1.25**	**230**	*e*	P	**Pg**	**04 59 25.0**	**-0.2**
	baz=228								
WTP				*e*	S	**Sn**	**04 59 43.3**	**+1.1**
	baz=228								
YOJ	**Yonaguni jima**	**1.30**	**71**	*e*	P	**Pn**	**04 59 24.9**	**-0.9**
	baz=72								
YOJ				*e*	S	**Sb**	**04 59 43.9**	**+1.1**
	baz=72								
YOJ	**Yonaguni jima**	**1.30**	**71**		P	**Pn**	**04 59 24.8**	**-0.9**
YOJ					S	**Sb**	**04 59 42.7**	**-0.1**
TWK	**Hsinying**	**1.33**	**234**	*e*	P	**Pg**	**04 59 26.8**	**0.0**
	baz=232								
TWK				*e*	S	**Sn**	**04 59 46.2**	**+2.1**
	baz=232								
TWG	**Pinlang**	**1.34**	**204**	*e*	P	**Pn**	**04 59 23.3**	**-3.0**
	baz=202								
TWG				*e*	S	**Sn**	**04 59 45.1**	**+0.7**
	baz=202								
TWGBT	**Beinan**	**1.34**	**204**	*e*	P	**Pn**	**04 59 23.3**	**-3.0**
	baz=202								
TWGBT				*e*	S	**Sn**	**04 59 45.6**	**+1.2**
	baz=202								
SNST	**Tainan City**	**1.35**	**232**	*e*	P	**Pg**	**04 59 27.9**	**+0.8**
	baz=231								
SNST				*e*	S	**Sn**	**04 59 46.4**	**+1.7**
	baz=231								
SGST	**Jiashian**	**1.38**	**226**	*e*	P	**Pn**	**04 59 26.3**	**-0.6**
	baz=224								
SGST				*e*	S	**Sn**	**04 59 46.9**	**+1.4**
	baz=224								
LDUT	**Ludao**	**1.38**	**187**	*e*	P	**Pn**	**04 59 23.7**	**-3.2**
	baz=186								
SLGT	**Liugui**	**1.41**	**222**	*e*	P	**Pn**	**04 59 27.2**	**-0.1**
	baz=220								
SLGT				*e*	S	**Sg**	**04 59 47.9**	**+1.4**
	baz=220								
JKRS	**Kuro-shima**	**2.15**	**85**		P	**Pn**	**04 59 37.4**	**-0.2**
JIJ	**Ishigaki jima**	**2.29**	**82**		P	**Pn**	**04 59 38.1**	**-1.2**
JIJ				*e*	S	**Sn**	**05 00 06.0**	**-1.7**
JISG	**Ishigakijimahi**	**2.48**	**77**		P	**Pn**	**04 59 41.0**	**-1.0**
JISG					S	**Sn**	**05 00 10.9**	**-1.5**

IDC 07 05:05:32.6±2.9, 54.14N×86.64E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=24.6km s-min=14.5km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.09**	**261**	I	I		05 11 20.0	
	0.1nm,0.9s,baz=80,slow=343,SNR=1.1							
ZALV	**Zalesovo Beam**	**1.09**	**261**	Pg	Pg		05 05 51.7	-1.8
	0.7nm,0.3s,baz=81,slow=18,SNR=11							
ZALV				Lg	Lg		05 06 09.6	
	2.4nm,0.3s,baz=78,slow=29,SNR=13							
KURBB	**Kurchatov Arra**	**6.09**	**238**	Pn	Pn		05 07 04.8	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=4.9							
KURBB				Lg	Lg		05 08 49.7	
	baz=121,slow=23,SNR=4.2							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**7.86**	**202**	Pn	Pn		05 07 29.3	+1.2
	0.2nm,0.3s,baz=26,slow=11,SNR=6.7							
	0.3nm,0.3s							

CATAC ***07*** *05:06:02.0±0.4, 12.51N×87.76W, h33km±6km, ML3.8*
SNET ***07*** *05:06:02.0±1.2, 12.68N×87.66W, h80km±10km, ML3.8*
ISC 07 05:06:02.0±1.5, 12.48N±0.08×87.77W±0.05, h52±23km, n51, σ0s30/63, 2C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.53**	**23**	*i* P		**Pn**	**05 06 13.7**	**-0.2**
CSGN				IAML			05 06 27.2	
	comp=Z,2μm,1.0s							
CHNN	**El Viejo**	**0.64**	**77**	*i* P		**Pn**	**05 06 15.1**	**-0.1**
CHNN				IAML			05 06 26.3	
	comp=Z,7μm,1.0s							
CRIN	**San Cristobal**	**0.73**	**73**	*i* P		**Pn**	**05 06 17.0**	**+0.6**
CRIN				*i* S		**Sn**	**05 06 26.3**	**-0.5**
CRIN				IAML			05 06 34.5	
	comp=Z,13μm,1.0s							
AMPH	**Amapala**	**0.81**	**8**⇓	*i* P		**Pn**	**05 06 17.2**	**-0.1**
AMPH				*e* S		**Sn**	**05 06 29.0**	**+0.6**
AMPH	**Amapala**	**0.81**	**8**	*i* P		**Pn**	**05 06 17.1**	**-0.1**
AMPH				*i* S		**Sn**	**05 06 28.3**	**-0.1**
LCND	**La Caada**	**0.83**	**352**⇓	*i* P		**Pn**	**05 06 17.4**	**-0.1**
LCND				*e* S		**Sn**	**05 06 29.6**	**+0.7**
LCND	**La Caada**	**0.83**	**352**	*i* P		**Pn**	**05 06 17.5**	**-0.1**
LCND				*i* P		**Pn**	**05 06 17.7**	**+0.1**
LCND				*i* S		**Sn**	**05 06 28.9**	**-0.1**
LCND				*i* S		**Sn**	**05 06 29.1**	**+0.1**
LCND				IAML			05 06 31.7	
	comp=Z,2μm,1.0s							
LCND				IAML			05 07 02.0	
	comp=Z,23μm,1.0s							
TEL3	**Telica 3**	**0.91**	**84**	*i* P		**Pn**	**05 06 18.5**	**-0.1**
TEL3				IAML			05 06 37.8	
	comp=Z,4μm,1.0s							
HERN	**Volcan Telica**	**0.92**	**82**	*i* P		**Pn**	**05 06 18.6**	**-0.3**
HERN				IAML			05 06 33.9	
	comp=Z,5μm,1.0s							
PACN	**Al O del Volca**	**0.95**	**89**	*i* P		**Pn**	**05 06 19.2**	**0.0**
PACN				IAML			05 06 34.6	
	comp=Z,4μm,1.0s							
PLRN	**Geotermica Pol**	**0.98**	**84**	*i* P		**Pn**	**05 06 19.4**	**-0.2**
PLRN				IAML			05 06 34.0	
	comp=Z,5μm,1.0s							
ROCN	**Rota Cerro Neg**	**1.00**

PACA				*i* S		**Sn**	**05 06 36.2**	**+0.1**	
PACA				IAML			05 06 39.3		
	comp=Z,12µm,1.0s								
ALJI	**Alcalda de J**	**1.15**	**317**	*e*P		Pn	05 06 11.9	-10	
ALJI				*e*S		Sn	05 06 26.3	-10	
COPN	**Copaltepe**	**1.19**	**105**	*i* P		**Pn**	**05 06 22.0**	**-0.4**	
COPN				IAML			05 06 39.0		
	comp=Z,2µm,1.0s								
MOMN	**Momotombo**	**1.20**	**93**	*i* P		**Pn**	**05 06 22.4**	**-0.2**	
MOMN				IAML			05 06 41.6		
	comp=Z,95nm,1.0s								
TECA	**Tecapa**	**1.23**	**325**	*e*P		**Pn**	**05 06 23.0**	**-0.2**	
TECA				*e*S		**Sn**	**05 06 39.1**	**+0.2**	
MOM2	**El Cardon**	**1.25**	**92**	*i* P		**Pn**	**05 06 23.6**	**+0.3**	
MOM2				IAML			05 06 40.6		
	comp=Z,820nm,1.0s								
AMTN	**Mateare**	**1.33**	**101**	*i* P		**Pn**	**05 06 24.3**	**0.0**	
AMTN				IAML			05 06 57.6		
	comp=Z,6µm,1.0s								
MSHP	**Masachapa**	**1.37**	**118**	*i* P		**Pn**	**05 06 24.8**	**0.0**	
MSHP				IAML			05 06 47.7		
	comp=Z,210nm,1.0s								
SAPS	**Ciudad Sandino**	**1.37**	**103**	*i* P		**Pn**	**05 06 24.9**	**+0.1**	
SAPS				IAML			05 06 48.1		
	comp=Z,3µm,1.0s								
BRAN	**Las Pilas**	**1.40**	**80**	*i* P		**Pn**	**05 06 25.4**	**+0.1**	
BRAN				IAML			05 06 46.4		
	comp=Z,2µm,1.0s								
TECO	**Alcaldia de Te**	**1.44**	**317**	*e*P		**Pn**	**05 06 25.2**	**-0.6**	
TECO	**Alcaldia de Te**	**1.44**	**317**	*i* P		**Pn**	**05 06 25.2**	**-0.6**	
TECO				IAML			05 06 44.4		
	comp=Z,440nm,1.0s								
LIMN	**Finca el Limon**	**1.48**	**67**	*i* P		**Pn**	**05 06 26.1**	**-0.4**	
LIMN				IAML			05 06 45.7		
	comp=Z,900nm,1.0s								
TISN	**Laguna Tiscapa**	**1.50**	**103**	*i* P		**Pn**	**05 06 26.6**	**0.0**	
TISN				IAML			05 06 45.6		
	comp=Z,110nm,1.0s								
UNAN	**Cigeo UNAN**	**1.51**	**104**	*i* P		**Pn**	**05 06 26.5**	**-0.2**	
UNAN				IAML			05 06 52.5		
	comp=Z,3µm,1.0s								
UESV	**Universidad de**	**1.52**	**319**	*i* P		**Pn**	**05 06 26.7**	**-0.2**	
UESV				IAML			05 06 51.3		
	comp=Z,610nm,1.0s								
SCLA	**Alcaldia de Sa**	**1.53**	**322**	*e*P		**Pn**	**05 06 27.0**	**-0.1**	
SCLA	**Alcaldia de Sa**	**1.53**	**322**	*i* P		**Pn**	**05 06 27.0**	**-0.1**	
SCLA				IAML			05 06 53.7		
	comp=Z,300nm,1.0s								
COEG	**Centro de Oper**	**1.57**	**316**	*e*P		**Pn**	**05 06 27.4**	**-0.2**	
COEG	**Centro de Oper**	**1.57**	**316**	*i* P		**Pn**	**05 06 27.4**	**-0.2**	
COEG				IAML			05 06 49.5		
	comp=Z,380nm,1.0s								
WILN	**Americas 2**	**1.58**	**102**	*i* P		**Pn**	**05 06 27.6**	**0.0**	
WILN				IAML			05 06 51.3		
	comp=Z,440nm,1.0s								
MAS3	**Al N del Volca**	**1.62**	**106**	*i* P		**Pn**	**05 06 28.2**	**-0.1**	
MAS3				IAML			05 06 50.1		
	comp=Z,1µm,1.0s								
SJTE	**Alcalda de S**	**1.65**	**313**	*e*P		**Pn**	**05 06 28.7**	**0.0**	
SJTE	**Alcalda de S**	**1.65**	**313**	*i* P		**Pn**	**05 06 28.4**	**-0.3**	
SJTE				*i* S		**Sn**	**05 06 48.4**	**-0.5**	
SJTE				IAML			05 06 51.9		
	comp=Z,920nm,1.0s								
PAVA	**Las Pavas**	**1.67**	**317**	*i* P		**Pn**	**05 06 29.2**	**+0.1**	
PAVA				*i* S		**Sn**	**05 06 50.0**	**+0.6**	
PAVA				IAML			05 06 55.0		
	comp=Z,570nm,1.0s								
LFRS	**El Faro**	**1.70**	**312**	*e*P		**Pn**	**05 06 29.4**	**+0.1**	
NANN	**Nandasmo**	**1.70**	**108**	*i* P		**Pn**	**05 06 30.2**	**+0.9**	
NANN				IAML			05 06 54.5		
	comp=Z,13µm,1.0s								
YUSH	**Yuscaran**	**1.72**	**32**	*i* P		**Pn**	**05 06 29.6**	**-0.1**	
YUSH				*i* S		**Sn**	**05 06 50.5**	**0.0**	
LOMA	**Loma Larga**	**1.79**	**310**	*e*P		**Pn**	**05 06 30.5**	**-0.2**	
LOMA	**Loma Larga**	**1.79**	**310**	*i* P		**Pn**	**05 06 30.7**	**0.0**	
LOMA				IAML			05 06 53.3		
	comp=Z,760nm,1.0s								
JAYA	**Jayaque - finc**	**2.01**	**306**	*e*P		**Pn**	**05 06 33.6**	**-0.2**	

NEIC ***07*** *05:07:04.1±1.8, 59.85N±0.03×150.55W±0.08, h35km±9km, Error ellipse: s-maj=6.7km s-min=1.6km az=120.0*

AEIC ***07*** *05:07:04.7±1.7, 59.89N±0.03×150.66W±0.08, h29km±7km, ML3.5,ML3.6/150(NEIC), Error ellipse: s-maj=6.7km s-min=3.4km az=122.0*

IDC ***07*** *05:07:09.0±6.8, 60.18N×150.63W, h89km±55km, mb3.3/4, mbtmp3.7/6,ML3.7/2, MS2.6/2, Error ellipse: s-maj=51.2km s-min=24.1km az=35.0*

ISC 07 05:07:03.9±0.8, 59.82N±0.04×150.59W±0.03, h47km, n162, σ1.503/143, mb3.7/4, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res	
					Op	ISC	h	m	s	ISC
BRSE	**Bradley Lake S**	**0.11**	**225**			**Pn**	**05 07 09.7**			**-1.7**
BRSE						**Sn**	**05 07 14.8**			**-1.9**
BRSE	**Bradley Lake S**	**0.11**	**225**	P		**Pn**	**05 07 09.7**			**-1.7**
	baz=22									
BRSE				S		**Sn**	**05 07 14.8**			**-1.9**
	baz=22									
BRLK	**Bradley Lake**	**0.16**	**250**			**Pn**	**05 07 10.3**			**-1.4**
BRLK				IAML			05 07 15.7			
	comp=N,10µm,0.1s									
BRLK				IAML			05 07 15.9			
	comp=E,10µm,0.1s									
BRLK	**Bradley Lake**	**0.16**	**250**			**Sn**	**05 07 15.4**			**-1.7**
CNPM	**China Poot**	**0.44**	**228**			**Pn**	**05 07 13.3**			**-0.9**
CNPM	**China Poot**	**0.44**	**228**			**Sn**	**05 07 20.6**			**-0.9**
HOM	**Homer**	**0.55**	**254**			**Pn**	**05 07 15.1**			**-0.5**
HOM	**Homer**	**0.55**	**254**			**Sn**	**05 07 23.8**			**-0.2**
HOM	**Homer**	**0.55**	**254**	P		**Pn**	**05 07 15.0**			**-0.6**
	baz=66									
HOM				S		**Sn**	**05 07 23.8**			**-0.2**
	baz=66									
SEW	**Seward**	**0.64**	**63**			**Pn**	**05 07 15.6**			**-1.1**
SEW	**Seward**	**0.64**	**63**	P		**Pn**	**05 07 15.6**			**-1.1**
	baz=249									
SLKM	**Skilak Lake**	**0.72**	**15**			**Pn**	**05 07 16.5**			**-1.3**
SLKM						**Sn**	**05 07 25.9**			**-1.9**
O22K	**Cooper Landing**	**0.80**	**33**			**Pn**	**05 07 17.9**			**-0.9**
O22K	**Cooper Landing**	**0.80**	**33**	P		**Pn**	**05 07 17.8**			**-1.0**
	baz=217									
CAPN	**Captain Cook N**	**0.99**	**344**			**Pn**	**05 07 21.8**			**+0.4**
O20K	**Slope Mountain**	**1.05**	**285**			**Pn**	**05 07 21.4**			**-0.9**
O20K	**Slope Mountain**	**1.05**	**285**	P		**Pn**	**05 07 21.4**			**-0.9**
	baz=101									
RDT	**Redoubt**	**1.18**	**311**			**Pn**	**05 07 22.8**			**-1.3**
IVE	**Iliamna Volcan**	**1.24**	**280**			**Pn**	**05 07 23.8**			**-1.0**
IVE						**Sn**	**05 07 39.8**			**-0.6**
RED	**Redoubt Volcan**	**1.25**	**300**			**Sn**	**05 07 39.3**			**-1.3**
RSO	**Redoubt South**	**1.26**	**302**			**Pn**	**05 07 24.1**			**-1.1**
FIS	**Fire Island**	**1.34**	**8**	IAML			05 07 54.5			
	comp=E,2µm,0.6s									
P19K	**Oil Pt**	**1.35**	**264**			**Pn**	**05 07 26.3**			**0.0**
P19K	**Oil Pt**	**1.35**	**264**	P		**Pn**	**05 07 26.1**			**-0.2**
	baz=79									
RC01	**Rabbit Creek A**	**1.35**	**18**			**Pn**	**05 07 25.9**			**-0.3**
RC01				IAML			05 07 45.7			
	comp=N,1µm,0.4s									
RC01	**Rabbit Creek A**	**1.35**	**18**	P		**Pn**	**05 07 25.9**			**-0.3**
	baz=200									
SYI	**Shuyak Island**	**1.52**	**218**			**Pn**	**05 07 29.6**			**+1.0**
SYI				IAML			05 07 53.9			
	comp=N,532nm,0.7s									
SYI				IAML			05 07 54.1			
	comp=E,892nm,0.5s									
Q20K	**Shuyak Island**	**1.52**	**218**	P		**Pn**	**05 07 29.5**			**+0.9**
	baz=35									
N20K	**Mount Spurr**	**1.60**	**331**	P		**Pn**	**05 07 29.0**			**-0.8**
	baz=149									
P23K	**Montague Islan**	**1.62**	**82**			**Pn**	**05 07 29.8**			**-0.1**
P23K	**Montague Islan**	**1.62**	**82**	P		**Pn**	**05 07 29.8**			**-0.1**
	baz=267									
SPCG	**Spurr Capps Gl**	**1.64**	**335**			**Pn**	**05 07 29.9**			**-0.4**
SUA	**Susitna One**	**1.65**	**357**			**Pn**	**05 07 30.0**			**-0.5**
SUA				IAML			05 07 52.8			
	comp=E,652nm,0.7s									
SUA				IAML			05 07 53.7			
	comp=N,493nm,0.8s									
SUA	**Susitna One**	**1.65**	**357**	P		**Pn**	**05 07 30.1**			**-0.5**
	baz=178									
Q19K	**Cape Douglas,**	**1.80**	**242**			**Pn**	**05 07 33.1**			**+0.6**
Q19K	**Cape Douglas,**	**1.80**	**242**	P		**Pn**	**05 07 33.0**			**+0.6**
	baz=57									
O19K	**Port Alsworth**	**1.91**	**283**	Pn		**Pn**	**05 07 33.9**			**0.0**
	baz=98									
KNK	**Knik Glacier**	**1.92**	**32**			**Pn**	**05 07 33.5**			**-0.5**
KNK				IAML			05 08 03.6			
	comp=E,837nm,0.6s									
KNK				IAML			05 08 06.5			
	comp=N,535nm,0.6s									
KNK	**Knik Glacier**	**1.92**	**32**	P		**Pn**	**05 07 33.6**			**-0.5**
	baz=216									
PMR	**Palmer**	**1.92**	**21**			**Pn**	**05 07 33.5**			**-0.5**
PMR				IAML			05 08 04.6			
	comp=E,532nm,0.4s									
PMR				IAML			05 08 05.4			
	comp=N,404nm,0.6s									
PMR	**Palmer**	**1.92**	**21**	P		**Pn**	**05 07 33.5**			**-0.5**
	baz=204									
GHO	**Glory Hole Cre**	**2.13**	**22**			**Pn**	**05 07 36.4**			**-0.6**
HIN	**Hinchinbrook I**	**2.13**	**72**			**Pn**	**05 07 37.5**			**+0.6**
HIN				IAML			05 08 19.2			
	comp=E,445nm,1.0s									
N19K	**Bonanza Creek**	**2.18**	**299**			**Pn**	**05 07 37.3**			**-0.3**
N19K				IAML			05 08 16.6			
	comp=N,274nm,0.7s									
SKT	**Skwentna**	**2.22**	**348**			**Pn**	**05 07 38.2**			**0.0**
SKT				IAML			05 08 10.2			
	comp=N,462nm,0.4s									
SKT				IAML			05 08 11.3			
	comp=E,426nm,0.7s									
SKT	**Skwentna**	**2.22**	**348**	P		**Pn**	**05 07 38.1**			**0.0**
	baz=168									
SML	**Sawmill**	**2.28**	**28**			**Pn**	**05 07 39.0**			**-0.1**
SML				IAML			05 08 16.6			
	comp=N,492nm,0.7s									
SML				IAML			05 08 17.3			
	comp=E,424nm,0.8s									
SML	**Sawmill**	**2.28**	**28**	P		**Pn**	**05 07 38.7**			**-0.4**
	baz=211									
KDAK	**Kodiak Island**	**2.29**	**208**			**Pn**	**05 07 39.3**			**+0.2**
KDAK				IAML			05 08 22.6			
	comp=E,254nm,1.0s									
KDAK				IAML			05 08 23.0			
	comp=E,252nm,0.7s									
KDAK	**Kodiak Island**	**2.29**	**208**	LR		LR	05 08 48.1			
	comp=E,118nm,18.6s,baz=66,slow=38									
O18K	**Koktuh Hills**	**2.33**	**273**			**Pn**	**05 07 40.0**			**+0.4**
O18K				IAML			05 08 22.6			
	comp=N,410nm,1.0s									
O18K				IAML			05 08 23.1			
	comp=E,475nm,0.6s									
O18K	**Koktuh Hills**	**2.33**	**273**	P		**Pn**	**05 07 39.3**			**-0.4**
	baz=88									
P18K	**Big Mountain,**	**2.39**	**262**			**Pn**	**05 07 40.9**			**+0.4**
P18K	**Big Mountain,**	**2.39**	**262**	P		**Pn**	**05 07 40.5**			**-0.1**
	baz=76									
M23K	**Glacier View**	**2.43**	**34**	P		**Pn**	**05 07 40.9**			**-0.2**
	baz=218									
SCM	**Sheep Creek Mo**	**2.58**	**37**	IAML			05 08 30.1			
	comp=N,334nm,1.2s									
SCM	**Sheep Creek Mo**	**2.58**	**37**	P		**Pn**	**05 07 43.1**			**-0.1**
	baz=221									
CUT	**Chulitna**	**2.60**	**3**	P		**Pn**	**05 07 45.8**			**+2.4**
	baz=184									
N18K	**Kilae Creek**	**2.78**	**290**	P		**Pn**	**05 07 45.2**			**-0.6**
	baz=105									
SVW2	**Sparrevohn**	**2.78**	**300**			**Pn**	**05 07 45.3**			**-0.6**
SVW2				IAML			05 08 33.8			
	comp=N,166nm,0.5s									
SVW2				IAML			05 08 38.8			
	comp=E,167nm,0.5s									
M19K	**Big River Lodg**	**2.80**	**320**	P		**Pn**	**05 07 46.0**			**-0.1**
	baz=136									
KLU	**Klutina**	**2.85**	**52**			**Pn**	**05 07 46.9**			**+0.1**
KLU				IAML			05 08 33.7			
	comp=E,316nm,0.5s									
KLU	**Klutina**	**2.85**	**52**	P		**Pn**	**05 07 46.5**			**-0.3**
	baz=237									
ACHA	**Angle Creek He**	**2.93**	**239**			**Pn**	**05 07 48.6**			**+0.7**
OHAK	**Old Harbor**	**2.96**	**210**			**Pn**	**05 07 48.0**			**-0.3**
OHAK				IAML			05 08 42.5			
	comp=N,145nm,0.6s									
OHAK				IAML			05 08 45.9			
	comp=E,132nm,0.9s									
OHAK	**Old Harbor**	**2.96**	**210**	P		**Pn**	**05 07 47.7**			**-0.6**
	baz=26									
WAT6	**Susitna Watana**	**3.10**	**25**	P		**Pn**	**05 07 50.6**			**+0.3**
	baz=208									
Q17K	**Contact Creek**	**3.15**	**243**	P		**Pn**	**05 07 51.6**			**+0.7**
	baz=57									
M24K	**Tolsona, Glenn**	**3.15**	**41**			**Pn**	**05 07 51.9**			**+1.0**
M24K	**Tolsona, Glenn**	**3.15**	**41**	P		**Pn**	**05 07 51.6**			**+0.6**
	baz=226									
L19K	**White Mountain**	**3.15**	**321**	IAML			05 08 42.4			
	comp=N,132nm,0.9s									
WAT1	**Susitna Watana**	**3.18**	**17**	P		**Pn**	**05 07 52.0**			**+0.6**
	baz=200									
PPLA	**Purkeypile**	**3.18**	**347**	P		**Pn**	**05 07 52.5**			**+1.0**
	baz=166									
O17K	**Koliganek Bris**	**3.29**	**272**	P		**Pn**	**05 07 53.0**			**+0.3**
	baz=85									
Q16K	**King Salmon**	**3.32**	**252**	P		**Pn**	**05 07 54.7**			**+1.5**
	baz=66									
N17K	**Nushagak Hills**	**3.37**	**285**	IAML			05 08 50.4			
	comp=N,107nm,0.7s									
N25K	**Chitina, Valde**	**3.45**	**56**	Pn		**Pn**	**05 07 55.3**			**+0.2**
N25K				IAML			05 08 55.5			
	comp=E,124nm,0.8s									
N25K	**Chitina, Valde**	**3.45**	**56**	P		**Pn**	**05 07 55.0**			**-0.1**
	baz=242									
DHY	**Denali Highway**	**3.62**	**24**	IAML			05 08 49.5			
	comp=E,107nm,1.0s									
DHY				IAML			05 08 55.1			
	comp=N,99nm,1.3s									
DHY	**Denali Highway**	**3.62**	**24**	P		**Pn**	**05 07 58.2**			**+0.7**
	baz=207									
TRF	**Thorofare Moun**	**3.65**	**2**	IAML			05 08 52.3			
	comp=E,83nm,0.8s									
TRF				IAML			05 08 52.3			
	comp=N,111nm,0.5s									
TRF	**Thorofare Moun**	**3.65**	**2**	P		**Pn**	**05 07 59.2**			**+1.3**
	baz=183									
CAST	**Castle Rocks**	**3.68**	**350**	Pn		**Pn**	**05 07 59.1**			**+0.9**
CAST	**Castle Rocks**	**3.68**	**350**	P		**Pn**	**05 07 59.5**			**+1.3**
	baz=168									
HARP	**HAARP**	**3.70**	**43**	P		**Pn**	**05 07 59.0**			**+0.6**
	baz=229									
RND	**Reindeer**	**3.70**	**12**	Pn		**Pn**	**05 07 59.4**			**+1.0**
RND				IAML			05 09 04.3			
	comp=N,74nm,1.0s									
GLB	**Gilahina Butte**	**3.72**	**61**	IAML			05 08 58.1			
	comp=N,154nm,0.7s									
GLB				IAML			05 08 58.2			
	comp=E,94nm,0.7s									
KTH	**Kantishna Hill**	**3.75**	**358**	IAML			05 08 53.1			
	comp=N,135nm,0.7s									
KTH				IAML			05 08 59.0			
	comp=E,79nm,0.8s									
VRDI	**Verde Repeater**	**3.80**	**65**	IAML			05 09 07.0			
	comp=N,101nm,0.8s									
O16K	**Kokwok River B**	**3.81**	**270**	Pn		**Pn**	**05 08 00.4**			**+0.6**
O16K				IAML			05 09 07.1			
	comp=N,97nm,0.9s									
O16K	**Kokwok River B**	**3.81**	**270**	P		**Pn**	**05 08 00.2**			**+0.4**
	baz=82									
L18K	**Granite Mounta**	**3.82**	**312**	IAML			05 09 01.0			
	comp=N,84nm,0.9s									
L18K				IAML			05 09 14.5			
	comp=E,68nm,1.3s									
CRQM	**Cirque**	**3.83**	**73**	IAML			05 09 11.1			
	comp=E,114nm,1.7s									
CRQM				IAML			05 09 18.3			
	comp=N,90nm,0.9s									
P16K	**Nushagak River**	**3.86**	**261**	P		**Pn**	**05 08 01.7**			**+1.1**
	baz=74									
MCK	**McKinley**	**4.01**	**11**	P		**Pn**	**05 08 03.9**			**+1.3**
	baz=192									
PAX	**Paxson**	**4.01**	**36**	P		**Pn**	**05 08 03.0**			**+0.3**
	baz=221									
TTA	**Tatalina**	**4.07**	**322**	Pn		**Pn**	**05 08 03.2**			**-0.4**
TTA	**Tatalina**	**4.07**	**322**	P		**Pn**	**05 08 03.1**			**-0.4**
	baz=138									
ISLE	**Juniper Island**	**4.19**	**76**	Pn		**Pn**	**05 08 05.3**			**-0.1**
ISLE				IAML			05 09 25.7			
	comp=N,85nm,1.3s									
ISLE				IAML			05 09 28.0			
	comp=E,69nm,1.0s									
M16K	**Timber Creek**	**4.32**	**290**	IAML			05 09 21.1			
	comp=N,55nm,1.3s									
M16K				IAML			05 09 21.2			
	comp=E,51nm,1.2s									
M26K	**Nabesna, AK**	**4.51**	**52**	IAML			05 09 22.4			
	comp=E,46nm,0.7s									
M26K				IAML			05 09 23.7			
	comp=N,52nm,0.6s									
M26K	**Nabesna, AK**	**4.51**	**52**	P		**Pn**	**05 08 10.2**			**+0.7**
	baz=239									
MENT	**Mentasta**	**4.55**	**44**			**Pn**	**05 08 11.1**			**+0.9**
BARN	**Barnard Glacie**	**4.60**	**70**	Pn		**Pn**	**05 08 12.5**			**+1.6**
BARN				IAML			05 09 27.9			
	comp=N,44nm,0.9s									
BARN				IAML			05 09 30.6			
	comp=E,38nm,0.7s									
K24K	**Donnelly Dome**	**4.61**	**28**	P		**Pn**	**05 08 12.4**			**+1.5**
	baz=212									
J20K	**Nowinta River**	**4.68**	**341**	IAML			05 09 30.4			
	comp=E,41nm,1.1s									
K17K	**Iditarod**	**4.72**	**311**	IAML			05 09 42.3			
	comp=N,46nm,1.1s									
K17K				IAML			05 09 50.0			
	comp=E,51nm,1.3s									
CTG	**Chitna Glacier**	**4.73**	**72**	P		**Pn**	**05 08 15.5**			**+2.8**
	baz=261									
CTGM	**Chitina Glacie**	**4.74**	**72**	IAML			05 09 53.0			
	comp=N,40nm,2.9s									
L26K	**Log Cabin Wild**	**4.74**	**44**	IAML			05 09 35.8			
	comp=N,41nm,1.0s									
L26K				IAML			05 09 36.6			
	comp=E,60nm,0.7s									
L16K	**Owhat River**	**4.75**	**297**	P		**Pn**	**05 08 12.7**			**-0.1**
	baz=109									
TABL	**Table Mountain**	**4.77**	**78**	Pn		**Pn**	**05 08 14.7**			**+1.4**
TABL				IAML			05 09 06.7			
	comp=E,55nm,0.9s									
TABL				IAML			05 09 13.0			
	comp=N,51nm,1.3s									
RIDG	**Independent Ri**	**4.79**	**32**	IAML			05 09 36.1			
	comp=N,66nm,0.8s									
RIDG	**Independent Ri**	**4.79**	**32**	P		**Pn**	**05 08 14.0**			**+0.6**
	baz=218									
NEA2	**Nenana**	**4.85**	**8**	P		**Pn**	**05 08 14.3**			**+0.2**
	baz=190									
LOGN	**Logan Glacier**	**4.88**	**74**	Pn		**Pn**	**05 08 16.6**			**+2.0**
LOGN				IAML			05 09 42.6			
	comp=E,36nm,2.4s									
LOGN				IAML			05 09 50.7			
	comp=N,37nm,3.4s									
HDA	**Harding Lake**	**4.92**	**19**	IAML			05 09 35.0			
	comp=E,50nm,1.2s									
HDA				IAML			05 09 36.7			
	comp=N,50nm,0.6s									
HDA	**Harding Lake**	**4.92**	**19**	P		**Pn**	**05 08 16.2**			**+1.1**
	baz=202									
M27K	**Edge Creek, AK**	**4.94**	**55**	IAML			05 09 46.0			
	comp=E,32nm,3.9s									
M27K	**Edge Creek, AK**	**4.94**	**55**	P		**Pn**	**05 08 16.6**			**+1.1**
	baz=244									
CCB	**Clear Creek Bu**	**5.02**	**14**	IAML			05 09 39.4			
	comp=E,31nm,1.8s									
SCRK	**Sand Creek**	**5.21**	**34**	IAML			05 09 45.1			
	comp=E,32nm,0.7s									
SCRK				IAML			05 09 47.4			
	comp=N,32nm,1.7s									
SCRK	**Sand Creek**	**5.21**	**34**	P		**Pn**	**05 08 18.8**			**-0.5**
	baz=220									
COLA	**College**	**5.23**	**13**			**Pn**	**05 08 20.1**			**+0.7**
MLY	**Manley**	**5.23**	**359**	Pn		**Pn**	**05 08 20.0**			**+0.5**
MLY	**Manley**	**5.23**	**359**	P		**Pn**	**05 08 19.8**			**+0.4**
	baz=179									
ILAR	**Eielson Array**	**5.26**	**18**	Pn		**Pn**	**05 08 20.0**			**+0.1**
ILAR	**Eielson Array**	**5.26**	**18**	P		**Pn**	**05 08 20.6**			**+0.8**
	comp=N,6.5nm,0.3s,baz=205,slow=14,SNR=385									
ILAR				S		**Sn**	**05 09 16.9**			**-2.2**
	comp=N,4.7nm,0.6s,baz=288,slow=20,SNR=4.7									
ILAR				LR		LR	05 09 49.8			
	comp=N,56nm,19.5s,baz=80,slow=33									
	comp=N,23nm,0.4s									
MDM	**Murphy Dome**	**5.28**	**11**	Pn		**Pn**	**05 08 20.5**			**+0.4**
MDM				IAML			05 09 52.9			
	comp=E,32nm,1.9s									
L27K	**Beaver Creek,**	**5.32**	**49**	P		**Pn**	**05 08 20.9**			**+0.3**
	baz=237									
BCAR	**Beaver Creek A**	**5.34**	**49**	Pn		**Pn**	**05 08 21.1**			**+0.2**
I23K	**Minto, Yukon-K**	**5.38**	**6**	IAML			05 09 55.0			
	comp=N,27nm,3.7s									
I23K				IAML			05 10 01.3			
	comp=E,27nm,1.2s									
I23K	**Minto, Yukon-K**	**5.38**	**6**	P		**Pn**	**05 08 21.9**			**+0.4**
	baz=187									
J25K	**Salcha River,**	**5.40**	**25**	IAML			05 09 41.6			
	comp=N,27nm,0.9s									
J25K				IAML			05 09 43.3			
	comp=E,42nm,0.7s									
O14K	**Tigyukauivet M**	**5.46**	**269**	P		**Pn**	**05 08 23.6**			**+1.1**
	baz=79									
POKR	**Poker Plat Res**	**5.52**	**14**	P		**Pn**	**05 08 23.9**			**+0.6**
	baz=197									
YUK8	**Steele Glacier**	**5.54**	**70**	P		**Pn**	**05 08 26.1**			**+2.2**
	baz=260					

Fault plane solution: $M_0$8.49707×10^{21} NP1:ϕ_s27.91000°, δ82.88000°, λ61.19000°. NP2:ϕ_s285.22000°, δ29.61000°, λ165.48000°. Principal axes: T Plg44.6170°, Azm269.3000°; N Plg28.5750°, Azm31.8080°; P Plg31.8140°, Azm141.5570°;

ISC 07 05:07:38.9±0.9,**23.96N**±0.01×**121.77E**±0.02,**h9**km±6km, **n203,**σ0**66**/280,**mb3.8**/12,**55C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.15**	**277**	⇓*i*P			**Pg**	**05 07 42.3**	**+0.1**
	baz=263								
HWA				*e*S			**Sg**	**05 07 44.8**	**+0.3**
	baz=263								
TWD	**Chiawan**	**0.20**	**307**	⇑*i*P			**Pg**	**05 07 42.7**	**-0.4**
	baz=309								
TWD				*i* S			**Sg**	**05 07 45.5**	**-0.3**
	baz=309								
ETL	**Fush Village**	**0.24**	**326**	⇑*i*P			**Pg**	**05 07 43.5**	**-0.3**
	baz=317								
ETL				*i* S			**Sg**	**05 07 47.2**	**+0.1**
	baz=317								
ETM	**Tongmen**	**0.26**	**272**	⇑*i*P			**Pg**	**05 07 43.7**	**-0.3**
	baz=263								
ETM				*i* S			**Sg**	**05 07 47.3**	**-0.2**
	baz=263								
SHUL	**Shoufeng**	**0.26**	**228**	⇑*i*P			**Pb**	**05 07 45.2**	**-0.5**
	baz=215								
SHUL				*e*S			**Sb**	**05 07 50.7**	**+0.5**
	baz=215								
NACB	**Ninganchiao**	**0.27**	**323**	P			**Pg**	**05 07 43.9**	**-0.4**
NACB	**Ninganchiao**	**0.27**	**323**	⇑*i*P			**Pg**	**05 07 43.9**	**-0.4**
	baz=325								
NACB				*i* S			**Sg**	**05 07 47.2**	**-0.7**
	baz=325								
TEGC	**Jichi Village**	**0.33**	**221**	P			**Pb**	**05 07 46.9**	**0.0**
	baz=210								
LXIB	**Xiulin Townshi**	**0.33**	**281**	⇑*i*P			**Pg**	**05 07 45.1**	**-0.5**
	baz=266								
LXIB				*i* S			**Sg**	**05 07 49.8**	**-0.3**
	baz=266								
ESL	**Shilin**	**0.34**	**245**	⇑*i*P			**Pg**	**05 07 45.5**	**-0.2**
	baz=244								
ESL				S			**Sg**	**05 07 50.5**	**+0.3**
	baz=244								
EHP	**Heping Village**	**0.35**	**355**	*e*P			**Pg**	**05 07 46.4**	**+0.6**
	baz=351								
EHP				S			**Sb**	**05 07 52.0**	**-1.1**
	baz=351								
EAHA	**Aohua**	**0.37**	**355**	P			**Pg**	**05 07 46.4**	**+0.2**
	baz=350								
EAHA				S			**Sg**	**05 07 51.9**	**+0.7**
	baz=350								
EGFH	**Guangfu**	**0.43**	**228**	⇑*e*P			**Pg**	**05 07 47.6**	**+0.3**
	baz=220								
WARBT	**Fenglin Townsh**	**0.43**	**236**	⇑*i*P			**Pg**	**05 07 47.2**	**0.0**
	baz=237								
WARBT				*e*S			**Sg**	**05 07 53.4**	**+0.5**
	baz=237								
ENA	**Nanau**	**0.47**	**357**	⇑*i*P			**Pg**	**05 07 48.3**	**+0.2**
	baz=353								
ENA				*i* S			**Sg**	**05 07 55.2**	**+1.0**
	baz=353								
EWUT	**Wuta**	**0.48**	**1**	⇑P			**Pg**	**05 07 48.7**	**+0.3**
	baz=356								
EWUT				S			**Sb**	**05 07 56.0**	**-0.9**
	baz=356								
WHF	**Hehuan Shan**	**0.50**	**292**	⇑*i*P			**Pg**	**05 07 48.3**	**-0.4**
	baz=287								
WHF				*i* S			**Sg**	**05 07 54.9**	**-0.5**
	baz=287								
EOS4	**EOS4**	**0.53**	**72**	*e*P			**Pn**	**05 07 51.9**	**-0.4**
	baz=89								
OWD	**Renai**	**0.55**	**270**	⇑*i*P			**Pg**	**05 07 49.3**	**-0.2**
	baz=275								
OWD				*e*S			**Sg**	**05 07 57.0**	**+0.3**
	baz=275								
CHGB	**Renai**	**0.56**	**281**	⇑*i*P			**Pg**	**05 07 49.6**	**-0.2**
	baz=276								
CHGB				S			**Sg**	**05 07 57.3**	**+0.2**
	baz=276								
FUSS	**Fushou**	**0.56**	**301**	⇑*i*P			**Pg**	**05 07 49.7**	**-0.2**
	baz=296								
FUSS				*e*S			**Sg**	**05 07 58.3**	**+1.0**
	baz=296								
HGSD	**Ruisui**	**0.56**	**215**	*e*P			**Pb**	**05 07 51.5**	**+0.6**
	baz=197								
NNSH	**Datong**	**0.59**	**323**	⇑*i*P			**Pg**	**05 07 50.2**	**-0.2**
	baz=318								
NNSH				*e*S			**Sg**	**05 07 58.4**	**+0.3**
	baz=318								
NNSB	**Datong**	**0.59**	**323**	⇑*i*P			**Pg**	**05 07 50.1**	**-0.2**
	baz=319								
NNSB				S			**Sg**	**05 07 58.2**	**+0.1**
	baz=319								
EOS3	**EOS3**	**0.60**	**57**	*e*P			**Pn**	**05 07 54.0**	**+0.5**
	baz=58								
WUSB	**Renai**	**0.60**	**273**	⇑*i*P			**Pg**	**05 07 50.4**	**-0.1**
	baz=276								
WUSB				*i* S			**Sg**	**05 07 58.3**	**-0.2**
	baz=276								
NNS	**Nan Shan**	**0.60**	**323**	⇑*i*P			**Pg**	**05 07 50.4**	**-0.2**
	baz=319								
NNS				S			**Sg**	**05 07 58.7**	**+0.1**
	baz=319								
EHY	**Hungye**	**0.61**	**223**	⇑*e*P			**Pg**	**05 07 50.8**	**+0.1**
	baz=204								
EHY				*e*S			**Sb**	**05 08 00.9**	**+0.4**
	baz=204								
VWDT	**VWDT**	**0.61**	**251**	⇑*i*P			**Pg**	**05 07 51.0**	**+0.2**
	baz=253								
VWDT				*i* S			**Sg**	**05 07 59.2**	**+0.4**
	baz=253								
LATG	**Datong**	**0.62**	**339**	⇑*i*P			**Pg**	**05 07 50.8**	**-0.1**
	baz=327								
LATG				*i* S			**Sg**	**05 07 59.6**	**+0.6**
	baz=327								
ESAO	**Su ao**	**0.62**	**6**	*e*P			**Pb**	**05 07 51.5**	**-0.4**
	baz=3.0								
ESAO				*e*S			**Sb**	**05 08 00.4**	**-0.3**
	baz=3.0								
TWT	**Tachien**	**0.62**	**298**	⇑*i*P			**Pg**	**05 07 51.1**	**+0.1**
	baz=294								
TWT				S			**Sg**	**05 07 59.2**	**+0.1**
	baz=294								
EOS2	**EOS2**	**0.62**	**42**	*e*P			**Pn**	**05 07 54.6**	**+0.8**
	baz=40								
TDCB	**Techi**	**0.63**	**298**	⇑*i*P			**Pg**	**05 07 51.1**	**-0.1**
	baz=295								
TDCB				*i* S			**Sg**	**05 07 59.2**	**-0.3**
	baz=295								
TWC	**Suao**	**0.65**	**6**	⇑*i*P			**Pb**	**05 07 52.0**	**-0.5**
	baz=4.0								
TWC				S			**Sb**	**05 08 02.0**	**+0.3**
	baz=4.0								
NDS	**Dongshan**	**0.67**	**356**	⇑*i*P			**Pg**	**05 07 52.3**	**+0.3**
	baz=347								
NDS				S			**Sb**	**05 08 02.5**	**+0.1**
	baz=347								
NDT	**Datong Townshi**	**0.68**	**340**	P			**Pg**	**05 07 52.3**	**+0.2**
	baz=328								
NDT				S			**Sb**	**05 08 01.9**	**-0.7**
	baz=328								
ECBN	**Changbin**	**0.70**	**205**	*e*P			**Pb**	**05 07 53.7**	**+0.3**
	baz=200								
ECBN				*e*S			**Sn**	**05 08 05.4**	**-0.6**
	baz=200								
ENTT	**Nioudou**	**0.70**	**345**	⇑*i*P			**Pg**	**05 07 52.7**	**+0.1**
	baz=335								
ENTT				S			**Sb**	**05 08 02.5**	**-0.8**
	baz=335								
YULB	**Yu-li**	**0.71**	**218**	*e*P			**Pg**	**05 07 52.7**	**0.0**
	baz=212								
YULB				*e*S			**Sn**	**05 08 05.4**	**-0.9**
	baz=212								
EYUL	**Yuli**	**0.74**	**214**	*e*P			**Pb**	**05 07 54.7**	**+0.7**
	baz=227								
TWF1	**Yuli**	**0.74**	**216**	*e*P			**Pb**	**05 07 53.8**	**-0.3**
	baz=225								
TWF1				*e*S			**Sn**	**05 08 06.2**	**-0.9**
	baz=225								
WPL	**Puli Township**	**0.75**	**274**	⇑*i*P			**Pg**	**05 07 53.2**	**-0.1**
	baz=270								
WPL				*i* S			**Sg**	**05 08 03.0**	**-0.1**
	baz=270								
TWE	**Neicheng**	**0.77**	**353**	⇑*i*P			**Pb**	**05 07 54.0**	**-0.4**
	baz=346								
TWE				*e*S			**Sb**	**05 08 05.2**	**+0.3**
	baz=346								
SSLB	**Suanglung**	**0.77**	**257**	P			**Pg**	**05 07 53.7**	**0.0**
SSLB	**Suanglung**	**0.77**	**257**	⇑*i*P			**Pg**	**05 07 53.6**	**-0.1**
	baz=263								
SSLB				*i* S			**Sg**	**05 08 04.1**	**+0.3**
	baz=263								
DPDB	**Guoxing**	**0.78**	**276**	⇑*i*P			**Pg**	**05 07 54.0**	**+0.1**
	baz=272								
DPDB				*e*S			**Sb**	**05 08 04.8**	**-0.6**
	baz=272								
WCS	**Beigang Elemen**	**0.79**	**277**	⇑*i*P			**Pg**	**05 07 54.1**	**-0.1**
	baz=273								
WCS				S			**Sg**	**05 08 04.5**	**0.0**
	baz=273								
YHNB	**Yeheng**	**0.80**	**333**	P			**Pg**	**05 07 54.5**	**+0.2**
YHNB	**Yeheng**	**0.80**	**333**	⇑*i*P			**Pg**	**05 07 54.4**	**+0.1**
	baz=323								
YHNB				S			**Sg**	**05 08 04.9**	**+0.2**
	baz=323								
SMLT	**Sun Moon Lake**	**0.80**	**265**	⇑*i*P			**Pg**	**05 07 54.3**	**0.0**
	baz=271								
SMLT				S			**Sg**	**05 08 05.1**	**+0.3**
	baz=271								
ILA	**Ilan**	**0.80**	**358**	*e*P			**Pb**	**05 07 55.2**	**+0.1**
	baz=348								
NSK	**Sanguang**	**0.81**	**332**	⇑*i*P			**Pg**	**05 07 54.6**	**+0.1**
	baz=323								
NSK				S			**Sg**	**05 08 05.5**	**+0.5**
	baz=323								
FUSB	**Fushanzhiwuyua**	**0.81**	**348**	⇑*i*P			**Pb**	**05 07 55.0**	**-0.3**
	baz=339								
FUSB				S			**Sg**	**05 08 05.2**	**-0.1**
	baz=339								
WHP	**Taichung City**	**0.82**	**293**	⇑*i*P			**Pg**	**05 07 54.9**	**+0.1**
	baz=281								
WHP				*e*S			**Sg**	**05 08 05.7**	**+0.3**
	baz=281								
CHKH	**Chenggong**	**0.84**	**204**	*e*P			**Pb**	**05 07 56.2**	**+0.6**
	baz=189								
TYC	**Yuchr**	**0.84**	**266**	⇑*i*P			**Pg**	**05 07 54.8**	**-0.2**
	baz=271								
TYC				S			**Sg**	**05 08 05.9**	**-0.1**
	baz=271								
NWLT	**Wulai**	**0.85**	**343**	⇑*i*P			**Pg**	**05 07 55.5**	**+0.2**
	baz=329								
NWLT				S			**Sb**	**05 08 07.0**	**-0.5**
	baz=329								
FULB	**Fuli**	**0.87**	**210**	*e*P			**Pb**	**05 07 56.6**	**+0.3**
	baz=195								
WHYT	**Xinyi Township**	**0.88**	**253**	*e*P			**Pg**	**05 07 56.1**	**+0.2**
	baz=249								
NFF	**Wufeng Townshi**	**0.90**	**318**	⇑*i*P			**Pg**	**05 07 56.2**	**0.0**
	baz=315								
NFF				S			**Sg**	**05 08 07.5**	**-0.4**
	baz=315								
CHKT	**Chengkung**	**0.93**	**204**	*e*P			**Pg**	**05 07 57.0**	**+0.1**
	baz=199								
CHKT				S			**Sn**	**05 08 12.3**	**+0.6**
	baz=199								
EHD	**Haiduan**	**0.96**	**213**	*e*P			**Pg**	**05 07 57.4**	**0.0**
	baz=222								
WJS	**Zhushan**	**0.96**	**262**	*e*P			**Pn**	**05 07 58.7**	**0.0**
	baz=265								
WJS				*e*S			**Sb**	**05 08 11.0**	**+0.3**
	baz=265								
NSTT	**Nanjuang**	**0.97**	**314**	⇑*i*P			**Pb**	**05 07 57.8**	**-0.1**
	baz=309								
NSTT				*e*S			**Sg**	**05 08 09.6**	**-0.7**
	baz=309								
LIOB	**Emei**	**0.97**	**315**	⇑*i*P			**Pb**	**05 07 58.0**	**0.0**
	baz=310								
LIOB				*e*S			**Sb**	**05 08 10.9**	**0.0**
	baz=310								
WWF	**Wufeng**	**0.98**	**275**	*e*P			**Pb**	**05 07 58.5**	**+0.3**
	baz=272								
TWQ1	**Liyutan**	**0.99**	**293**	⇑*e*P			**Pb**	**05 07 58.5**	**+0.1**
	baz=290								
ALS	**Alishan**	**0.99**	**243**	⇑*i*P			**Pg**	**05 07 58.1**	**+0.1**
	baz=239								
ALS				*i* S			**Sb**	**05 08 12.0**	**+0.2**
	baz=239								
NJD	**Zhudong**	**0.99**	**321**	*e*P			**Pn**	**05 07 58.9**	**-0.2**
	baz=318								
ECS	**Chishang**	**1.00**	**211**	*e*P			**Pn**	**05 07 59.6**	**+0.5**
	baz=221								
WNT	**Mingjian**	**1.00**	**266**	⇑*e*P			**Pn**	**05 07 58.8**	**-0.3**
	baz=267								
WNT				*e*S			**Sn**	**05 08 13.5**	**+0.1**
	baz=267								
WNT1	**Nantou City**	**1.00**	**267**	*e*P			**Pb**	**05 07 58.8**	**+0.3**
	baz=263								
TIPB	**Shuangxi**	**1.01**	**3**	⇑*i*P			**Pb**	**05 07 58.7**	**0.0**
	baz=355								
TIPB				S			**Sb**	**05 08 12.4**	**+0.4**
	baz=355								
TCU	**Taichung**	**1.02**	**281**	*e*P			**Pn**	**05 07 59.5**	**0.0**
	baz=275								
NHDH	**Xindian Distri**	**1.02**	**347**	*e*P			**Pg**	**05 07 58.5**	**-0.1**
	baz=336								
NSY	**Sanyi**	**1.03**	**296**	⇑*e*P			**Pn**	**05 07 59.4**	**-0.2**
	baz=292								
ELDTW	**Lidau**	**1.03**	**222**	*e*P			**Pg**	**05 07 57.9**	**-0.8**
	baz=203								
ELDTW				*e*S			**Sn**	**05 08 14.3**	**-0.1**
	baz=203								
TWA	**Mucha**	**1.03**	**350**	⇑P			**Pb**	**05 07 59.0**	**0.0**
	baz=339								
TWA				S			**Sb**	**05 08 12.7**	**0.0**
	baz=339								
TATO	**Taipei**	**1.04**	**346**	P			**Pn**	**05 07 59.8**	**0.0**
TATO	**Taipei**	**1.04**	**346**	P			**Pn**	**05 07 59.6**	**-0.2**
	baz=334								
TATO				*i* S			**Sg**	**05 08 12.7**	**0.0**
	baz=334								
TWB1	**Santiao Chiao**	**1.06**	**11**	P			**Pn**	**05 08 00.0**	**0.0**
	baz=6.0								
TWB1				*e*S			**Sn**	**05 08 14.4**	**-0.6**
	baz=6.0								
CHN5	**Tsauling**	**1.06**	**250**	⇑P			**Pb**	**05 07 59.8**	**+0.2**
	baz=234								
CHN5				*e*S			**Sn**	**05 08 15.9**	**+0.7**
	baz=234								
NMLH	**Miaoli**	**1.06**	**303**	⇑*e*P			**Pn**	**05 08 00.3**	**+0.2**
	baz=298								
HSN1	**Hsinchu**	**1.07**	**320**	*e*P			**Pb**	**05 07 59.7**	**+0.1**
	baz=316								
EDH	**Donghe**	**1.07**	**204**	*e*P			**Pg**	**05 07 59.0**	**-0.5**
	baz=188								
BACT	**New Taipei Cit**	**1.08**	**344**	*e*P			**Pn**	**05 08 00.7**	**+0.5**
	baz=342								
WYL	**Yuanlin Townsh**	**1.09**	**270**	*e*P			**Pb**	**05 08 00.1**	**+0.1**
	baz=250								
NHY	**Taipei**	**1.09**	**350**	*e*P			**Pn**	**05 08 01.4**	**+1.0**
	baz=349								
NJN	**Zhunan**	**1.09**	**311**	*e*P			**Pn**	**05 08 00.6**	**+0.1**
	baz=308								
SBCB	**Hsinchu**	**1.10**	**319**	⇑*e*P			**Pn**	**05 08 00.7**	**+0.2**
	baz=314								
SBCB				*e*S			**Sn**	**05 08 15.7**	**-0.1**
	baz=314								
TAP	**Taipei**	**1.10**	**347**	*e*P			**Pn**	**05 08 00.9**	**+0.4**
	baz=336								
TAP				*e*S			**Sn**	**05 08 15.5**	**-0.4**
	baz=336								
WDJ	**Dajia District**	**1.10**	**291**	*e*P			**Pn**	**05 08 00.9**	**+0.3**
	baz=286								
NWF	**Wu-fen Shan**	**1.11**	**0**	⇑*i*P			**Pn**	**05 08 00.6**	**-0.1**
	baz=351								
NWF				S			**Sn**	**05 08 15.8**	**-0.4**
	baz=351								
WFSB	**Wu-fen Shan**	**1.11**	**0**	P			**Pn**	**05 08 00.7**	**+0.1**
	baz=352								
WFSB				S			**Sn**	**05 08 15.8**	**-0.3**
	baz=352								
HSN	**Hsinchu**	**1.11**	**319**	*e*P			**Pn**	**05 08 00.8**	**+0.1**
	baz=316								
HSN				*e*S			**Sn**	**05 08 16.1**	**-0.1**
	baz=316								
WCHH	**Zhanghua**	**1.12**	**276**	*e*P			**Pg**	**05 08 00.4**	**0.0**
	baz=271								
NTY	**Taoyuan**	**1.12**	**337**	*e*P			**Pn**	**05 08 01.4**	**+0.5**
	baz=328								
SXI1	**Grass Mountain**	**1.14**	**5**	*e*P			**Pn**	**05 08 01.4**	**+0.3**
	baz=359								
SXI1				*e*S			**Sn**	**05 08 16.7**	**-0.2**
	baz=359								
NCUH	**Zhongli**	**1.14**	**332**	*e*P			**Pn**	**05 08 01.2**	**+0.1**
	baz=328								
NCU	**National Centr**	**1.14**	**332**	*e*P			**Pn**	**05 08 01.2**	**+0.1**
	baz=329								
NCU				*e*S			**Sn**	**05 08 17.6**	**+0.8**
	baz=329								
WGK	**Gukeng**	**1.14**	**256**	*e*P			**Pb**	**05 08 00.8**	**0.0**
	baz=250								
WDLH	**Douliu**	**1.16**	**257**	*e*P			**Pn**	**05 08 01.5**	**+0.1**
	baz=251								
JYNG	**Yonagunijimaku**	**1.18**	**65**	*i* P			**Pn**	**05 08 01.8**	**+0.2**
JYNG				S			**Sn**	**05 08 18.6**	**+0.8**
TWS1	**Kuangyinshan**	**1.18**	**344**	⇑*e*P			**Pn**	**05 08 02.2**	**+0.5**
	baz=343								
TWS1				*e*S			**Sn**	**05 08 18.1**	**+0.1**
	baz=343								
TNOU	**National Taiwa**	**1.19**	**0**	*e*P			**Pn**	**05 08 01.8**	**0.0**
	baz=352								
TNOU				*e*S			**Sn**	**05 08 18.1**	**+0.1**
	baz=352								
WCKO	**Fanlu**	**1.19**	**244**	*e*P			**Pb**	**05 08 01.6**	**0.0**
	baz=239								
YM01	**YM01**	**1.20**	**351**	⇑P			**Pn**	**05 08 02.3**	**+0.4**
	baz=351								
YM01				*e*S			**Sn**	**05 08 19.5**	**+1.1**
	baz=351								
LONT	**Longtian**	**1.20**	**210**	*e*P			**Pg**	**05 08 02.1**	**+0.1**
	baz=207								
STYH	**Taoyuan**	**1.20**	**230**	*e*P			**Pg**	**05 08 02.2**	**+0.2**
	baz=213								
STYT	**Tauyuan**	**1.22**	**230**	*e*P			**Pb**	**05 08 01.4**	**-0.9**
	baz=211								
STYT				S			**Sn**	**05 08 19.1**	**+0.1**
	baz=211								
NHW	**Xinwu Township**	**1.23**	**328**	*e*P			**Pg**	**05 08 02.7**	**+0.1**
	baz=322								
TPUB	**Ta-pu**	**1.23**	**238**	P			**Pg**	**05 08 03.3**	**+0.7**
TPUB	**Ta-pu**	**1.23**	**238**	P			**Pg**	**05 08 02.7**	**+0.1**
	baz=233								
TPUB				S			**Sn**	**05 08 19.6**	**+0.3**
	baz=233								
NTST	**Danshui**	**1.24**	**346**	*e*P			**Pg**	**05 08 03.3**	**+0.6**
	baz=344								
NTST				*e*S			**Sn**	**05 08 21.4**	**+2.1**
	baz=344								
YOJ	**Yonaguni jima**	**1.24**	**66**	P			**Pg**	**05 08 03.6**	**+0.9**
YOJ	**Yonaguni jima**	**1.24**	**66**	*e*P			**Pg**	**05 08 03.0**	**+0.3**
	baz=69								
YOJ	**Yonaguni jima**	**1.24**	**66**	P			**Pg**	**05 08 02.8**	**+0.1**
YOJ				S			**Sn**	**05 08 19.2**	**-0.1**
CHN4	**Tsaushan**	**1.24**	**241**	P			**Pg**	**05 08 03.0**	**+0.2**
	baz=236								
CHN4				*e*S			**Sn**	**05 08 20.8**	**+1.5**
	baz=236								
NWRT	**Kuosheng**	**1.24**	**355**	*e*P			**Pg**	**05 08 03.4**	**+0.6**
	baz=354								
ANP	**Anpu**	**1.24**	**349**	*e*P			**Pg**	**05 08 02.8**	**-0.1**
	baz=347								
CHN2	**Minshiung**	**1.26**	**251**	*e*P			**Pn**	**05 08 02.8**	**0.0**
	baz=245								
WRL	**Guolierlin Hig**	**1.28**	**268**	⇑*e*P			**Pn**	**05 08 02.9**	**-0.1**
	baz=263								
WTP	**Ta-pu**	**1.28**	**237**	P			**Pg**	**05 08 03.5**	**0.0**
	baz=231								
WTP				*e*S			**Sn**	**05 08 21.6**	**+1.3**
	baz=231								
RLNB	**Erlin**	**1.29**	**267**	*e*P			**Pn**	**05 08 03.2**	**0.0**
	baz=262								
RLNB				*e*S			**Sn**	**05 08 21.0**	**+0.4**
	baz=262								
WTK	**Tuku**	**1.29**	**258**	*e*P			**Pb**	**05 08 03.6**	**+0.2**
	baz=253								
TWGBT	**Beinan**	**1.30**	**209**	P			**Pg**	**05 08 03.8**	**-0.1**
TWGBT	**Beinan**	**1.30**	**209**	*e*P			**Pn**	**05 08 03.0**	**-0.3**
	baz=207								
TWG	**Pinlang**	**1.30**	**210**	*e*P			**Pn**	**05 08 02.8**	**-0.5**
	baz=207								
LDUT	**Ludao**	**1.31**	**192**	*e*P			**Pn**	**05 08 01.1**	**-2.3**
	baz=191								
TWY	**Chenhua**	**1.32**	**353**	*e*P			**Pg**	**05 08 04.5**	**+0.3**
	baz=351								
TWK	**Hsinying**	**1.36**	**240**	*e*P			**Pb**	**05 08 04.8**	**+0.1**
	baz=233								
TWK				*e*S			**Sg**	**05 08 23.5**	**+0.7**
	baz=233								
CHN1	**Nanshi**	**1.38**	**236**	*e*P			**Pb**	**05 08 05.1**	**+0.2**
	baz=231								
CHN1				*e*S			**Sg**	**05 08 24.6**	**+1.4**
	baz=231								
SNST	**Tainan City**	**1.38**	**238**	*e*P			**Pb**	**05 08 05.0**	**0.0**
	baz=233								
SGST	**Jiashian**	**1.40**	**232**	*e*P			**Pn**	**05 08 04.3**	**-0.3**
	baz=214								
SLGT	**Liugui**	**1.41**	**227**	*e*P			**Pg**	**05 08 05.9**	**-0.1**
	baz=211								
WSF	**Szhu**	**1.46**	**258**	*e*P			**Pb**	**05 08 05.9**	**-0.3**
	baz=253								
WSL	**Shuilin Townsh**	**1.48**	**253**	*e*P			**Pb**	**05 08 06.5**	**-0.1**
	baz=248								
ICHU	**Yijhu**	**1.49**	**247**	*e*P			**Pb**	**05 08 07.2**	**+0.4**
	baz=241								
ECL	**Taimali**	**1.55**	**209**	*e*P			**Pn**	**05 08 06.9**	**+0.1**
	baz=193								
CHN8	**Yiju**	**1.56**	**247**	*e*P			**Pn**	**05 08 06.9**	**+0.1**
	baz=242								
SCST	**Cishan**	**1.59**	**228**	*e*P			**Pg**	**05 08 09.0**	**-0.4**
	baz=223								
SSD	**Sandimen**	**1.60**	**221**	*e*P			**Pn**	**05 08 07.4**	**0.0**
	baz=206								
SSD				*e*S			**Sb**	**05 08 29.3**	**+0.3**
	baz=206								
SHHT	**Tainan City**	**1.61**	**235**	*e*P			**Pg**	**05 08 10.5**	**+0.7**
	baz=229								
TSMG	**Majia**	**1.62**	**220**	*e*P			**Pb**	**05 08 08.9**	**-0.2**
	baz=208								
TWM1	**Shoushan**	**1.68**	**228**	*e*P			**Pg**	**05 08 11.5**	**+0.4**
	baz=222								
PCYT	**Pengchaiyu**	**1.69**	**9**	*e*P			**Pb**	**05 08 09.7**	**-0.5**
	baz=5.0								
MASBT	**Mashibuluo**	**1.70**	**218**	*e*P			**Pn**	**05 08 08.9**	**+0.1**
	baz=213								
MASBT				*e*S			**Sb**	**05 08 32.4**	**+0.5**
	baz=213								
SGLT	**Jiouru**	**1.70**	**224**	*e*P			**Pb**	**05 08 10.6**	**+0.2**
	baz=209								
EAST	**Anshuo**	**1.78**	**209**	*e*P			**Pb**	**05 08 12.1**	**+0.2**
	baz=194								
TAWH	**Dawu Township**	**1.81**	**207**	*e*P			**Pb**	**05 08 12.5**	**+0.3**
	baz=192								
IRIF	**I

LYJJ	Jianjiangzhen	3.16	325	*e*P		Pn	05 08 28.7	-0.2
	baz=317							
MHZQ	Yeshan	3.28	311	*e*P		Pn	05 08 30.6	+0.2
	baz=304							
XPSS	Dashiqiu	3.29	335	*e*P		Pn	05 08 31.0	+0.4
	baz=327							
JMJ	Miyako jima 2	3.32	74	*e*P		Pb	05 08 36.1	-2.0
	baz=98							
AXDP	Jialang	3.59	286	*e*P		Pn	05 08 35.0	+0.2
	baz=278							
ZPLA	Ao Xicun	3.68	270	*e*P		Pn	05 08 35.6	-0.4
	baz=263							
DSXP	Dongshan	3.99	267	*e*P		Pn	05 08 40.7	+0.4
	baz=260							
SXFK	Yanhouchang	4.46	304	*e*P		Pn	05 08 46.9	+0.1
	baz=299							
JOW	Kunigami	6.54	63	Pn		Pn	05 09 13.9	-1.4
	1.5nm,0.3s,baz=342,slow=20,SNR=1.3							
	8.6nm,0.5s							
KSRS	Korea Array	14.45	20	Pn		P	05 11 08.2	-2.3
	0.2nm,0.3s,baz=203,slow=13,SNR=5.3							
KSRS				LR		LR	05 17 23.3	
	comp=Z,82nm,18.1s,baz=205,slow=41							
TNCH	TengChong	21.18	278	*e*P		P	05 12 26.1	+1.1
TNCH				pP		sP	05 12 28.3	+0.1
TNCH				S		S	05 16 15.8	-5.1
TNCH				pmax		pmax		
	comp=Z,47nm,0.6s							
TNCH				pmax		pmax		
	comp=Z,130nm,5.4s							
TNCH				LR		LR		
	comp=N,470nm,9.2s							
TNCH				LR		LR		
	comp=E,480nm,9.1s							
TNCH				LR		LR		
	comp=Z,390nm,9.3s							
CMAR	Chiang Mai Arr	21.96	260	P		P	05 12 35.3	+2.1
	0.5nm,0.3s,baz=71,slow=8.7,SNR=1.4							
CMAR				LR		LR	05 22 12.7	
	comp=Z,42nm,18.7s,baz=45,slow=40							
	0.5nm,0.3s							
GTA	Gaotai	24.12	315	*e*P		P	05 13 03.7	+8.4
GTA				pP		sP	05 13 08.0	+9.3
KLR	Kul'dur	26.42	15	LR		LR	05 24 50.1	
	comp=Z,70nm,18.8s,baz=306,slow=39							
SONM	Songino Array	26.79	337	P		P	05 13 19.6	+0.2
	1.4nm,0.7s,baz=159,slow=6.2,SNR=5.2							
	1.4nm,0.7s							
MKAR	Makanchi Array	38.87	316	P		P	05 15 04.7	+0.1
	1.2nm,0.7s,baz=109,slow=9.3,SNR=13							
	1.2nm,0.7s							
ZALV	Zalesovo Beam	40.73	327	P		P	05 15 19.2	-0.7
	2.8nm,0.7s,baz=114,slow=9.3,SNR=9.8							
	2.8nm,0.7s							
H11N1	WAKE ISLAND Hy	41.96	87	T		T	06 00 46.4	
	baz=276,slow=75,SNR=8.5							
H11N2	WAKE ISLAND Hy	41.96	87	T		T	06 00 46.2	
	baz=276,slow=75,SNR=7.4							
H11N3	WAKE ISLAND Hy	41.98	87	T		T	06 00 47.5	
	baz=276,slow=75,SNR=8.6							
H11S3	WAKE ISLAND Hy	42.09	89	T		T	06 00 49.6	
	baz=281							
H11S1	WAKE ISLAND Hy	42.10	89	T		T	06 00 46.4	
	baz=281							
H11S2	WAKE ISLAND Hy	42.10	89	T		T	06 00 46.5	
	baz=281							
KURBB	Kurchatov Arra	42.63	320	P		P	05 15 36.0	+0.5
	0.9nm,0.7s,baz=110,slow=8.3,SNR=9.1							
	0.9nm,0.7s							
WRA	Warramunga Arr	45.32	163	P		P	05 15 57.4	-0.1
	1.0nm,0.7s,baz=346,slow=8.7,SNR=5.9							
	1.0nm,0.7s							
BVAR	Borovoye Array	48.19	321	P		P	05 16 19.6	-0.1
	1.2nm,0.7s,baz=89,slow=6.1,SNR=4.7							
	1.2nm,0.7s							
ASAR	Alice Springs	48.78	165	P		P	05 16 24.9	+0.4
	0.3nm,0.4s,baz=337,slow=8.2,SNR=4.4							
	0.3nm,0.4s							
STKA	Stephens Creek	58.67	160	P		P	05 17 37.9	+1.1
	0.7nm,0.4s,baz=7.1,slow=6.2,SNR=2.9							
	0.7nm,0.4s							
ILAR	Eielson Array	69.17	27	P		P	05 18 47.1	+1.6
	0.3nm,0.6s,baz=284,slow=5.8,SNR=5.8							
	0.3nm,0.6s							
YKA	Yellowknife Ar	82.97	23	P		P	05 20 03.8	-0.4
	0.6nm,0.8s,baz=315,slow=5.0,SNR=8.7							
	0.6nm,0.8s							

TAP ***07*** *05:09:45.8,24.˚12N×121.˚70E,h9km,ML3.6,C*
JMA ***07*** *05:09:46.1±0.2,24.˚1N±0.˚4×121.˚7E±1.˚0,h5km±2km,*
TAIWAN REGION
ISC 07 05:09:46.1±0.8,24.˚11N±0.˚02×121.˚70E±0.˚02,h10km±5km,
n87,σ0.54/131,2C-14D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETL	Fush Village	0.09	306	*i* P		Pg	05 09 48.3	-0.2
	baz=296							
ETL				*i* S		Sg	05 09 50.0	-0.3
	baz=296							
TWD	Chiawan	0.10	254	⇓*i* P		Pg	05 09 48.5	-0.1
	baz=255							
TWD				*i* S		Sg	05 09 50.4	-0.1
	baz=255							
NACB	Ninganchiao	0.12	304	⇓*i* P		Pg	05 09 48.7	-0.2
	baz=297							
NACB				*i* S		Sg	05 09 50.5	-0.4
	baz=297							
HWA	Hwalien	0.16	214	P		Pg	05 09 50.0	+0.5
	baz=224							
HWA				S		Sg	05 09 54.0	+2.2
	baz=224							
EHP	Heping Village	0.20	10	P		Pg	05 09 50.2	-0.2
	baz=10.0							
EHP				S		Sg	05 09 53.2	-0.1
	baz=10.0							
EAHA	Aohua	0.22	9	⇓*i* P		Pg	05 09 50.5	-0.3
	baz=6.0							
EAHA				*i* S		Sg	05 09 53.6	-0.2
	baz=6.0							
ETM	Tongmen	0.24	234	⇑*i* P		Pg	05 09 51.0	0.0
	baz=234							
ETM				*i* S		Sg	05 09 54.3	+0.1
	baz=234							
LXIB	Xiulin Townshi	0.28	252	⇓*i* P		Pg	05 09 51.6	-0.1
	baz=251							
LXIB				*i* S		Sg	05 09 55.5	0.0
	baz=251							
ENA	Nanau	0.32	6	⇓*i* P		Pg	05 09 52.4	-0.2
	baz=6.0							
ENA				*i* S		Sg	05 09 56.5	-0.3
	baz=6.0							
SHUL	Shoufeng	0.34	202	⇓*i* P		Pb	05 09 54.4	0.0
	baz=212							
SHUL				*i* S		Sb	05 10 01.3	+1.4
	baz=212							
EWUT	Wuta	0.34	12	P		Pg	05 09 52.5	-0.5
	baz=10.0							
EWUT				S		Sg	05 09 57.3	-0.2
	baz=10.0							
ESL	Shilin	0.38	220	⇑*i* P		Pg	05 09 53.6	0.0
	baz=228							
ESL				S		Sg	05 09 58.5	-0.1
	baz=228							
WHF	Hehuan Shan	0.40	275	*i* P		Pg	05 09 54.3	+0.1
	baz=274							
WHF				*i* S		Sg	05 09 59.3	-0.2
	baz=274							
TEGC	Jichi Village	0.42	200	P		Pb	05 09 55.6	-0.1
	baz=191							
TEGC				S		Sb	05 10 03.9	+1.7
	baz=191							
NNSB	Datong	0.43	318	⇓*i* P		Pg	05 09 54.8	+0.1
	baz=315							
NNSB				S		Sg	05 10 00.3	-0.1
	baz=315							
FUSS	Fushou	0.44	289	P		Pg	05 09 55.0	+0.2
	baz=287							
FUSS				S		Sg	05 10 01.2	+0.5
	baz=287							
NNS	Nan Shan	0.45	318	⇓*i* P		Pg	05 09 55.0	+0.1
	baz=316							
NNS				*i* S		Sg	05 10 01.0	+0.2
	baz=316							
LATG	Datong	0.46	339	P		Pg	05 09 54.9	-0.1
	baz=337							
LATG				*i* S		Sg	05 10 01.2	+0.1
	baz=337							
WARBT	Fenglin Townsh	0.48	217	*i* P		Pg	05 09 55.4	-0.1
	baz=225							
WARBT				S		Sb	05 10 03.8	-0.2
	baz=225							
CHGB	Renai	0.48	265	⇓*i* P		Pg	05 09 55.8	+0.2
	baz=256							
CHGB				*i* S		Sg	05 10 02.4	+0.4
	baz=256							
ESAO	Su ao	0.48	16	P		Pg	05 09 55.8	+0.3
	baz=13							
ESAO				S		Sg	05 10 01.8	-0.2
	baz=13							
TWT	Tachien	0.50	287	P		Pb	05 09 56.4	-0.8
	baz=284							
TWT				*i* S		Sb	05 10 03.6	-1.1
	baz=284							
EGFH	Guangfu	0.50	210	P		Pg	05 09 56.2	+0.3
	baz=223							
OWD	Renai	0.50	253	P		Pg	05 09 56.0	+0.1
	baz=252							
OWD				S		Sg	05 10 02.6	0.0
	baz=252							
TDCB	Techi	0.52	286	⇓*i* P		Pb	05 09 56.6	-0.8
	baz=285							
TDCB				S		Sg	05 10 03.3	+0.2
	baz=285							
TWC	Suao	0.52	15	*i* P		Pg	05 09 56.0	-0.2
	baz=6.0							
NDT	Datong Townshi	0.52	341	P		Pg	05 09 56.5	+0.2
	baz=338							
NDT				S		Sg	05 10 03.5	+0.3
	baz=338							
NDS	Dongshan	0.52	1	P		Pg	05 09 56.5	+0.2
	baz=358							
NDS				S		Sg	05 10 03.0	-0.3
	baz=358							
ENTT	Nioudou	0.55	347	⇓*i* P		Pg	05 09 56.9	+0.1
	baz=345							
ENTT				*i* S		Sg	05 10 04.1	+0.2
	baz=345							
WUSB	Renai	0.55	258	⇓*i* P		Pg	05 09 57.0	+0.2
	baz=257							
WUSB				*i* S		Sg	05 10 03.9	0.0
	baz=257							
TWE	Neicheng	0.61	357	P		Pg	05 09 58.3	+0.3
	baz=356							
TWE				S		Sg	05 10 05.7	-0.3
	baz=356							
VWDT	VWDT	0.62	236	P		Pb	05 09 58.5	-0.6
	baz=236							
VWDT				S		Sb	05 10 07.0	-0.9
	baz=236							
YHNB	Yeheng	0.63	332	P		Pg	05 09 58.7	+0.3
	baz=330							
YHNB				S		Sg	05 10 06.8	+0.1
	baz=330							
NSK	Sanguang	0.65	331	⇓*i* P		Pg	05 09 59.0	+0.3
	baz=329							
NSK				*i* S		Sg	05 10 07.2	0.0
	baz=329							
ILA	Ilan	0.66	4	*e*S		Sb	05 10 08.6	-0.4
	baz=2.0							
FUSB	Fushanzhiwuyua	0.66	351	P		Pg	05 09 59.0	+0.2
	baz=349							
FUSB				S		Sg	05 10 07.4	-0.1
	baz=349							
HGSD	Ruisui	0.66	203	*e*P		Pb	05 09 59.6	-0.2
	baz=195							
NWLT	Wulai	0.69	345	P		Pg	05 09 59.8	+0.3
	baz=349							
NWLT				S		Sg	05 10 08.2	-0.4
	baz=349							
EHY	Hungye	0.69	210	P		Pg	05 09 59.4	-0.1
	baz=218							
EHY				S		Sb	05 10 09.5	-0.4
	baz=218							
WHP	Taichung City	0.71	284	P		Pb	05 10 00.5	-0.2
	baz=283							
WHP				S		Sb	05 10 10.1	-0.5
	baz=283							
WCS	Beigang Elemen	0.72	266	P		Pb	05 10 01.1	+0.3
	baz=258							
WCS				*e*S		Sg	05 10 09.6	0.0
	baz=258							
NFF	Wufeng Townshi	0.75	315	P		Pb	05 10 01.0	-0.3
	baz=313							
NFF				S		Sg	05 10 10.2	-0.1
	baz=313							
SSLB	Suanglung	0.75	245	⇓*i* P		Pg	05 10 00.7	0.0
	baz=255							
SSLB				S		Sg	05 10 09.9	-0.6
	baz=255							
SMLT	Sun Moon Lake	0.77	253	P		Pb	05 10 01.3	-0.3
	baz=253							
SMLT				S		Sb	05 10 11.3	-0.9
	baz=253							
TYC	Yuchr	0.80	256	P		Pb	05 10 01.9	-0.2
	baz=257							
YULB	Yu-li	0.80	208	*e*P		Pg	05 10 01.1	-0.5
	baz=221							
YULB				*e*S		Sb	05 10 13.4	+0.3
	baz=221							
ECBN	Changbin	0.82	196	*e*P		Pb	05 10 02.4	-0.1
	baz=189							
LIOB	Emei	0.82	311	P		Pb	05 10 02.6	0.0
	baz=309							
LIOB				*e*S		Sb	05 10 13.3	-0.5
	baz=309							
NSTT	Nanjuang	0.82	309	P		Pb	05 10 02.3	-0.2
	baz=308							
NSTT				S		Sg	05 10 13.0	+0.2
	baz=308							
EYUL	Yuli	0.83	205	*e*P		Pg	05 10 02.2	0.0
	baz=221							
TWF1	Yuli	0.84	206	*e*P		Pg	05 10 01.1	-1.1
	baz=223							
NHDH	Xindian Distri	0.87	349	*e*P		Pg	05 10 02.8	0.0
	baz=345							
TIPB	Shuangxi	0.87	7	*e*P		Pg	05 10 03.0	+0.2
	baz=347							
WHYT	Xinyi Township	0.88	242	*e*P		Pn	05 10 04.6	0.0
	baz=245							
TWQ1	Liyutan	0.88	286	*e*P		Pn	05 10 05.5	+0.8
	baz=285							
NSY	Sanyi	0.91	290	*e*P		Pn	05 10 04.8	-0.3
	baz=289							
TWB1	Santiao Chiao	0.93	16	P		Pb	05 10 04.5	0.0
	baz=4.0							
NMLH	Miaoli	0.94	297	*e*P		Pn	05 10 06.8	+1.4
	baz=296							
SBCB	Hsinchu	0.94	316	*e*P		Pn	05 10 06.2	+0.7
	baz=314							
CHKH	Chenggong	0.95	197	*e*P		Pn	05 10 03.4	-1.0
	baz=191							
WNT	Mingjian	0.96	256	*e*P		Pn	05 10 05.7	+0.1
	baz=250							
NWF	Wu-fen Shan	0.96	4	*e*P		Pb	05 10 05.1	+0.2
	baz=359							
WFSB	Wu-fen Shan	0.96	4	*e*P		Pg	05 10 04.4	-0.3
	baz=359							
NCUH	Zhongli	0.98	331	*e*P		Pn	05 10 06.3	+0.4
	baz=327							
FULB	Fuli	0.98	203	*e*P		Pb	05 10 04.9	-0.3
	baz=223							
SXI1	Grass Mountain	0.99	9	*e*P		Pg	05 10 05.2	-0.1
	baz=350							
WDJ	Dajia District	1.00	284	*e*P		Pn	05 10 07.3	+1.0
	baz=284							
ALS	Alishan	1.01	234	*e*P		Pn	05 10 06.4	-0.3
	baz=237							
TNOU	National Taiwa	1.04	4	*e*P		Pg	05 10 05.8	-0.3
	baz=358							
YM01	YM01	1.04	353	*e*P		Pn	05 10 07.4	+0.5
	baz=334							
CHKT	Chengkung	1.05	197	*e*P		Pg	05 10 06.0	-0.3
	baz=187							
EHD	Haiduan	1.06	206	*e*P		Pg	05 10 06.1	-0.3
	baz=222							
CHN5	Tsauling	1.07	242	*e*P		Pn	05 10 07.5	+0.3
	baz=231							
NTST	Danshui	1.08	348	*e*P		Pn	05 10 07.3	0.0
	baz=343							
ANP	Anpu	1.09	351	*e*P		Pn	05 10 07.5	0.0
	baz=346							
ELDTW	Lidau	1.11	215	*e*P		Pg	05 10 06.6	-0.8
	baz=209							
WGK	Gukeng	1.12	248	*e*P		Pn	05 10 08.8	+0.9
	baz=251							
WDLH	Douliu	1.14	249	*e*P		Pn	05 10 09.2	+1.0
	baz=252							
TWY	Chenhua	1.17	355	*e*P		Pn	05 10 09.3	+0.8
	baz=337							
EDH	Donghe	1.19	198	*e*P		Pg	05 10 06.8	-2.1
	baz=189							
WCKO	Fanlu	1.21	237	*e*P		Pn	05 10 09.7	+0.6
	baz=241							
WRL	Guolierlin Hig	1.23	261	*e*P		Pn	05 10 10.0	+0.6
	baz=262							
YOJ	Yonaguni jima	1.25	73	P		Pg	05 10 10.6	+0.6
YOJ				S		Sn	05 10 26.8	+0.3
CHN4	Tsaushan	1.26	234	*e*P		Pg	05 10 10.8	+0.5
	baz=238							
TPUB	Ta-pu	1.27	231	*e*P		Pg	05 10 10.8	+0.4
	baz=236							
LONT	Longtian	1.30	204	*e*P		Pn	05 10 09.2	-1.2
	baz=210							
WTP	Ta-pu	1.31	230	*e*P		Pg	05 10 11.2	-0.2
	baz=234							

IDC 07 05:11:33.9±10.0,27.˚29S×22.˚90E,h0km,mbtmp2.1/1,
ML1.8/1,Error ellipse: s-maj=82.6km s-min=54.6km
az=123.0,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I47ZA	BOSHOF INFRASO	2.46	123	I		I	05 29 30.0	
	baz=303,slow=304,SNR=1.4							
BOSA	Boshof	2.47	123	Pn		Pn	05 12 16.1	+0.5
	0.1nm,0.3s,baz=305,slow=17,SNR=1.6							
BOSA				Sn		Sn	05 12 45.7	-0.7
	0.4nm,0.3s,baz=223,slow=20,SNR=13							
	1.7nm,0.9s							
I35NA	TSUMEB INFRASO	9.42	328	I		I	06 09 20.0	
	baz=152,slow=321,SNR=1.3							

ASIES ***07*** *05:32:54.1,24.˚01N×121.˚76E,h5km,ML3.5,Mw3.6,*
Moment Tensor Solution. Moment tensor: Scale 10²¹Nm;
Mrr1.99; Mθθ-1.76; Mφφ-1.73; Mrθ0.18; Mrφ-1.30; Mθφ1.36;
Fault plane solution: M₀2.93211×10²¹ NP1:φ29.22000°,
δ58.77000°,λ72.60000°. NP2:φ240.38000°,δ35.32000°,
λ116.26000°. Principal axes: T Plg70.6600°,
Azm259.5230°; N Plg14.8210°, Azm38.4530°; P
Plg12.1420°, Azm131.7160°;
TAP 07 05:32:54.1,24.˚01N×121.˚76E,h5km,ML3.5,2C-2D,C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	Hwalien	0.15	256	⇓*i* P		Pg	05 32 58.5	+1.4
	baz=245							
HWA				S		Sg	05 33 02.8	+3.7
	baz=245							
TWD	Chiawan	0.17	294	⇓*i* P		Pg	05 32 58.1	+0.6
	baz=295							
TWD				*i* S		Sg	05 33 01.8	+2.1
	baz=295							
ETL	Fush Village	0.19	319	*i* P		Pg	05 32 58.7	+0.7
	baz=318							
ETL				*i* S		Sg	05 33 02.6	+2.0
	baz=318							
NACB	Ninganchiao	0.22	316	*i* P		Pg	05 32 59.2	+0.7
	baz=316							
NACB				*i* S		Sg	05 33 03.7	+2.2
	baz=316							
ETM	Tongmen	0.25	259	*i* P		Pg	05 32 59.7	+0.7
	baz=259							
ETM				*i* S		Sb	05 33 04.3	-1.5
	baz=259							
SHUL	Shoufeng	0.29	219	P		Pb	05 33 01.6	-0.2
	baz=219							
SHUL				*e*S		Sb	05 33 07.7	+0.8
	baz=219							
EHP	Heping Village	0.30	356	P		Pg	05 33 00.8	+0.9
	baz=357							
EHP				S		Sb	05 33 06.8	-0.3
	baz=357							
EAHA	Aohua	0.32	356	P		Pb	05 33 01.3	-0.9
	baz=356							
EAHA				*e*S		Sb	05 33 07.5	-0.1
	baz=356							
LXIB	Xiulin Townshi	0.32	272	⇑*i* P		Pg	05 33 00.9	+0.5
	baz=271							
LXIB				S		Sb	05 33 06.7	-1.2
	baz=271							
ESL	Shilin	0.36	237	P		Pg	05 33 01.2	+0.1
	baz=244							
ESL				S		Sb	05 33 08.5	-0.5
	baz=244							
TEGC	Jichi Village	0.36	214	P		Pb	05 33 03.5	+0.5
	baz=213							
TEGC				*e*S		Sb	05 33 10.6	+1.5
	baz=213							
ENA	Nanau	0.41	357	P		Pb	05 33 03.3	-0.7
	baz=358							
ENA				*e*S		Sb	05 33 10.5	0.0
	baz=358							
EWUT	Wuta	0.43	2	P		Pb	05 33 03.8	-0.5
	baz=1.0							
EWUT				*e*S		Sb	05 33 11.3	+0.3
	baz=1.0							
WARBT	Fenglin Townsh	0.45	230	P		Pg	05 33 03.4	+0.5
	baz=238							
WARBT				*e*S		Sb	05 33 10.5	-1.2
	baz=238							
EGFH	Guangfu	0.46	222	P		Pb	05 33 04.0	-0.7
	baz=223							
WHF	Hehuan Shan	0.47	286	P		Pg	05 33 03.6	+0.3
	baz=286							
WHF				*i* S		Sg	05 33 10.8	+1.2
	baz=286							
FUSS	Fushou	0.53	296	*i* P		Pb	05 33 05.2	-0.8
	baz=296							
FUSS				*e*S		Sb	05 33 13.5	-0.5
	baz=296							
NNSB	Datong	0.54	320	P		Pb	05 33 05.5	-0.6
	baz=320							
NNSB				*i* S		Sb	05 33 14.0	-0.2
	baz=320							
OWD	Renai	0.54	264	P		Pb	05 33 05.6	-0.6
	baz=275							
OWD				*e*S		Sb	05 33 13.5	-0.7
	baz=275							
CHGB	Renai	0.54	275	*i* P		Pb	05 33 05.5	-0.7
	baz=275							
CHGB				*e*S		Sb	05 33 14.0	-0.3
	baz=275							
NNS	Nan Shan	0.55	320	*i* P		Pg	05 33 05.6	+0.7
	baz=320							
NNS				S		Sb	05 33 13.4	-1.2
	baz=320							
LATG	Datong	0.56	338	P		Pb	05 33 06.8	+0.2
	baz=337							
LATG				*e*S		Sb	05 33 15.9	+1.0
	baz=337							
ESAO	Su ao	0.56	8	P		Pb	05 33 06.8	+0.2
	baz=359							
ESAO				*e*S		Sb	05 33 15.8	+0.9
	baz=359							
TWT	Tachien	0.59	294	P		Pb	05 33 06.8	-0.1
	baz=293							
TWT				S		Sb	05 33 15.2	-0.5
	baz=293							
WUSB	Renai	0.59	268	P		Pb	05 33 06.7	-0.3
	baz=278							
WUSB				*e*S		Sb	05 33 16.5	+0.8
	baz=278							
TWC	Suao	0.60	8	P		Pb	05 33 07.4	+0.3
	baz=358							
TWC				*e*S		Sb	05 33 17.5	+1.7
	baz=358							
TDCB	Techi	0.60	294	P		Pb	05 33 06.6	-0.6
	baz=293							
TDCB				*i* S		Sb	05 33 16.1	+0.1
	baz=293							
HGSD	Ruisui	0.60	211	P		Pb	05 33 07.6	+0.4
	baz=196							
HGSD				*e*S		Sb	05 33 17.1	+1.1
	baz=196							
NDS	Dongshan	0.62	356	P		Pb	05 33 07.9	+0.5
	baz=356							
NDS				*e*S		Sb	05 33 17.3	+0.9
	baz=356							
VWDT	VWDT	0.62	246	⇑*i* P		Pb	05 33 07.0	-0.5

	baz=255							
VWDT				*e*S		Sb	05 33 16.6	+0.1
	baz=255							
NDT	**Datong Townshi**	**0.63**	**339**	P		Pb	05 33 07.5	-0.1
	baz=338							
NDT				*e*S		Sb	05 33 16.9	+0.2
	baz=338							
EHY	**Hungye**	**0.65**	**219**	P		Pg	05 33 06.5	0.0
	baz=204							
EHY				S		Sb	05 33 18.6	+1.4
	baz=204							
ENTT	**Nioudou**	**0.65**	**344**	P		Pb	05 33 08.3	+0.3
	baz=332							
ENTT				*i* S		Sb	05 33 18.2	+0.9
	baz=332							
TWE	**Neicheng**	**0.71**	**353**	P		Pb	05 33 09.0	0.0
	baz=354							
TWE				*i* S		Sb	05 33 19.7	+0.7
	baz=354							
YHNB	**Yeheng**	**0.74**	**332**	*i* P		Pb	05 33 09.4	-0.2
	baz=321							
YHNB				*e*S		Sb	05 33 20.6	+0.5
	baz=321							
ECBN	**Changbin**	**0.75**	**202**	*e*S		Sb	05 33 21.1	+1.0
	baz=202							
YULB	**Yu-li**	**0.75**	**215**	P		Pb	05 33 09.6	-0.1
	baz=214							
YULB				*e*S		Sn	05 33 21.7	-1.4
	baz=214							
NSK	**Sanguang**	**0.76**	**331**	*i* P		Pb	05 33 09.6	-0.2
	baz=321							
NSK				*e*S		Sb	05 33 21.2	+0.7
	baz=321							
FUSB	**Fushanzhiwuyua**	**0.76**	**348**	P		Pb	05 33 09.4	-0.5
	baz=337							
FUSB				*e*S		Sb	05 33 21.0	+0.4
	baz=337							
SSLB	**Suanglung**	**0.77**	**253**	P		Pb	05 33 09.7	-0.4
	baz=265							
SSLB				*e*S		Sg	05 33 19.8	+0.7
	baz=265							
EYUL	**Yuli**	**0.78**	**212**	P		Pb	05 33 10.8	+0.7
	baz=233							
EYUL				*e*S		Sn	05 33 23.6	-0.1
	baz=233							
WCS	**Beigang Elemen**	**0.78**	**273**	P		Pb	05 33 10.2	0.0
	baz=273							
WCS				*e*S		Sb	05 33 21.1	+0.1
	baz=273							
TWF1	**Yuli**	**0.78**	**213**	P		Pb	05 33 10.2	-0.1
	baz=230							
TWF1				*e*S		Sn	05 33 22.8	-1.2
	baz=230							
WHP	**Taichung City**	**0.79**	**290**	P		Pn	05 33 11.5	-0.5
	baz=289							
WHP				*e*S		Sb	05 33 21.9	+0.4
	baz=289							
NWLT	**Wulai**	**0.80**	**343**	P		Pb	05 33 10.0	-0.5
	baz=342							
NWLT				S		Sb	05 33 22.3	+0.7
	baz=342							
SMLT	**Sun Moon Lake**	**0.80**	**261**	*i* P		Pb	05 33 10.5	0.0
	baz=270							
SMLT				*i* S		Sb	05 33 21.8	+0.1
	baz=270							
TYC	**Yuchr**	**0.83**	**263**	*i* P		Pb	05 33 11.0	-0.1
	baz=272							
TYC				*i* S		Sb	05 33 22.7	+0.1
	baz=272							
NFF	**Wufeng Townshi**	**0.85**	**316**	*i* P		Pb	05 33 11.6	+0.2
	baz=316							
NFF				*i* S		Sn	05 33 24.8	-0.9
	baz=316							
CHKH	**Chenggong**	**0.88**	**202**	P		Pg	05 33 11.4	+0.3
	baz=202							
CHKH				*e*S		Sb	05 33 25.1	+1.1
	baz=202							
WHYT	**Xinyi Township**	**0.89**	**249**	P		Pb	05 33 12.6	+0.6
	baz=258							
WHYT				*e*S		Sb	05 33 24.4	+0.2
	baz=258							
FULB	**Fuli**	**0.92**	**208**	P		Pb	05 33 13.0	+0.5
	baz=223							
FULB				S		Sn	05 33 27.7	+0.4
	baz=223							
LIOB	**Emei**	**0.93**	**313**	P		Pn	05 33 13.6	-0.2
	baz=313							
LIOB				*e*S		Sn	05 33 26.6	-0.9
	baz=313							
NSTT	**Nanjuang**	**0.93**	**312**	P		Pn	05 33 13.4	-0.4
	baz=311							
NSTT				S		Sb	05 33 25.7	+0.4
	baz=311							
TIPB	**Shuangxi**	**0.96**	**3**	P		Pn	05 33 13.9	-0.4
	baz=353							
TIPB				*e*S		Sn	05 33 27.7	-0.5
	baz=353							
TWQ1	**Liyutan**	**0.96**	**290**	*e*P		Pn	05 33 16.0	+1.7
	baz=303							
TWQ1				*i* S		Sn	05 33 28.7	+0.3
	baz=303							
WJS	**Zhushan**	**0.96**	**259**	P		Pn	05 33 14.5	+0.2
	baz=265							
WJS				*e*S		Sn	05 33 29.1	+0.8
	baz=265							
NHDH	**Xindian Distri**	**0.97**	**347**	P		Pn	05 33 14.1	-0.3
	baz=337							
NHDH				*e*S		Sb	05 33 27.5	+0.9
	baz=337							
TWA	**Mucha**	**0.98**	**350**	P		Pn	05 33 14.9	+0.4
	baz=350							
TWA				S		Sn	05 33 28.0	-0.7
	baz=350							
CHKT	**Chengkung**	**0.98**	**202**	P		Pg	05 33 13.2	+0.2
	baz=181							
CHKT				S		Sn	05 33 28.4	-0.3
	baz=181							
WNT	**Mingjian**	**0.99**	**262**	P		Pn	05 33 15.4	+0.7
	baz=268							
WNT				*e*S		Sn	05 33 30.2	+1.0
	baz=268							
NSY	**Sanyi**	**1.00**	**294**	P		Pn	05 33 15.1	+0.3
	baz=306							
NSY				*e*S		Sn	05 33 30.1	+0.8
	baz=306							
EHD	**Haiduan**	**1.00**	**211**	P		Pb	05 33 13.9	0.0
	baz=223							
EHD				*e*S		Sn	05 33 29.1	-0.2
	baz=223							
ALS	**Alishan**	**1.01**	**240**	P		Pn	05 33 14.9	-0.3
	baz=239							
ALS				*e*S		Sn	05 33 31.1	+1.2
	baz=239							
TWB1	**Santiao Chiao**	**1.01**	**12**	P		Pn	05 33 15.2	+0.2
	baz=4.0							
TWB1				*e*S		Sn	05 33 30.0	+0.5
	baz=4.0							
NMLH	**Miaoli**	**1.03**	**301**	P		Pn	05 33 16.9	+1.7
	baz=300							
NMLH				S		Sn	05 33 31.3	+1.3
	baz=300							
ECS	**Chishang**	**1.04**	**209**	*e*P		Pn	05 33 15.7	+0.3
	baz=222							
ECS				*e*S		Sn	05 33 29.9	-0.3
	baz=222							
SBCB	**Hsinchu**	**1.05**	**318**	P		Pn	05 33 16.8	+1.3
	baz=317							
SBCB				*e*S		Sn	05 33 32.2	+1.7
	baz=317							
NWF	**Wu-fen Shan**	**1.05**	**1**	P		Pn	05 33 16.0	+0.4
	baz=351							
NWF				*i* S		Sn	05 33 30.3	-0.4
	baz=351							
WFSB	**Wu-fen Shan**	**1.05**	**1**	P		Pn	05 33 16.1	+0.6
	baz=351							
WFSB				*e*S		Sn	05 33 30.2	-0.4
	baz=351							
ELDTW	**Lidau**	**1.07**	**220**	P		Pg	05 33 14.4	-0.2
	baz=204							
ELDTW				*e*S		Sn	05 33 30.9	-0.2
	baz=204							
CHN5	**Tsauling**	**1.08**	**248**	P		Pn	05 33 15.9	0.0
	baz=247							
CHN5				S		Sn	05 33 32.7	+1.5
	baz=247							
WDJ	**Dajia District**	**1.08**	**288**	*e*P		Pn	05 33 17.0	+1.2
	baz=289							
WDJ				*e*S		Sn	05 33 33.2	+2.0
	baz=289							
SXI1	**Grass Mountain**	**1.08**	**5**	P		Pn	05 33 16.5	+0.5
	baz=343							
SXI1				*e*S		Sn	05 33 32.8	+1.4
	baz=343							
NCUH	**Zhongli**	**1.09**	**331**	P		Pn	05 33 17.4	+1.4
	baz=331							
NCUH				*e*S		Sn	05 33 33.3	+1.9
	baz=331							
EDH	**Donghe**	**1.12**	**202**	P		Pg	05 33 14.0	-1.6
	baz=185							
EDH				*e*S		Sg	05 33 29.1	-1.0
	baz=185							
TWS1	**Kuangyinshan**	**1.13**	**344**	P		Pn	05 33 17.7	+1.1
	baz=344							
TWS1				*e*S		Sn	05 33 32.1	-0.3
	baz=344							
YM01	**YM01**	**1.14**	**351**	P		Pn	05 33 17.7	+0.9
	baz=336							
YM01				*e*S		Sn	05 33 33.9	+1.1
	baz=336							
WGK	**Gukeng**	**1.15**	**254**	*e*S		Sn	05 33 34.0	+1.2
	baz=253							
WDLH	**Douliu**	**1.17**	**254**	*e*P		Pn	05 33 19.6	+2.5
	baz=253							
WDLH				*e*S		Sn	05 33 35.8	+2.5
	baz=253							
NTST	**Danshui**	**1.18**	**346**	*e*P		Pn	05 33 17.5	+0.2
	baz=345							
NTST				*e*S		Sn	05 33 36.1	+2.3
	baz=345							
ANP	**Anpu**	**1.19**	**349**	P		Pn	05 33 18.4	+1.0
	baz=349							
ANP				*e*S		Sn	05 33 36.3	+2.2
	baz=349							
WCKO	**Fanlu**	**1.21**	**242**	P		Pn	05 33 19.2	+1.6
	baz=240							
WCKO				*e*S		Sn	05 33 36.9	+2.5
	baz=240							
STYH	**Taoyuan**	**1.23**	**227**	P		Pn	05 33 18.1	+0.1
	baz=212							
STYH				*e*S		Sb	05 33 34.2	+0.2
	baz=212							
LONT	**Longtian**	**1.25**	**208**	*e*S		Sg	05 33 33.7	-0.5
	baz=207							
TPUB	**Ta-pu**	**1.26**	**236**	P		Pn	05 33 19.1	+0.7
	baz=234							
TPUB				*e*S		Sn	05 33 38.7	+3.1
	baz=234							
CHN4	**Tsaushan**	**1.26**	**239**	P		Pn	05 33 18.7	+0.3
	baz=237							
CHN4				*e*S		Sn	05 33 38.6	+2.9
	baz=237							
TWY	**Chenhua**	**1.27**	**353**	*e*P		Pb	05 33 19.8	+1.3
	baz=342							
TWY				*e*S		Sn	05 33 38.1	+2.3
	baz=342							
WRL	**Guolierlin Hig**	**1.27**	**265**	P		Pb	05 33 19.4	+0.9
	baz=266							
WRL				S		Sn	05 33 39.1	+3.1
	baz=266							
WTK	**Tuku**	**1.30**	**256**	*e*P		Pg	05 33 21.7	+2.7
	baz=256							
WTK				*e*S		Sn	05 33 37.4	+0.8
	baz=256							
WTP	**Ta-pu**	**1.30**	**234**	P		Pg	05 33 19.2	+0.1
	baz=232							
WTP				*e*S		Sn	05 33 38.1	+1.3
	baz=232							
TWG	**Pinlang**	**1.34**	**208**	*e*P		Pn	05 33 19.5	0.0
	baz=207							
TWG				*e*S		Sb	05 33 35.6	-1.7
	baz=207							
TWGBT	**Beinan**	**1.34**	**208**	*e*P		Pn	05 33 19.6	+0.1
	baz=194							
LDUT	**Ludao**	**1.36**	**191**	*e*S		Sb	05 33 34.7	-3.0
	baz=178							
TWK	**Hsinying**	**1.39**	**238**	P		Pg	05 33 20.8	+0.1
	baz=238							
CHN1	**Nanshi**	**1.40**	**234**	P		Pg	05 33 22.2	+1.2
	baz=231							
CHN1				*e*S		Sg	05 33 41.7	+2.5
	baz=231							
SGST	**Jiashian**	**1.43**	**230**	*e*P		Pb	05 33 21.1	-0.1
	baz=211							
SGST				*e*S		Sg	05 33 40.3	+0.3
	baz=211							
SLGT	**Liugui**	**1.44**	**225**	P		Pb	05 33 21.6	+0.1
	baz=211							
SLGT				*e*S		Sg	05 33 41.8	+1.3
	baz=211							
ICHU	**Yijhu**	**1.51**	**245**	*e*P		Pn	05 33 21.7	0.0
	baz=244							
ICHU				*e*S		Sg	05 33 44.7	+2.1
	baz=244							
TSMG	**Majia**	**1.66**	**218**	P		Pb	05 33 25.0	-0.2
	baz=217							
TSMG				*e*S		Sg	05 33 47.1	-0.3
	baz=217							
MASBT	**Mashibuluo**	**1.74**	**217**	P		Pb	05 33 26.2	-0.3
	baz=216							
MASBT				S		Sg	05 33 51.6	+1.6
	baz=216							
EAST	**Anshuo**	**1.83**	**208**	*e*P		Pb	05 33 27.1	-0.9
	baz=195							
EAST				*e*S		Sb	05 33 51.9	+0.6
	baz=195							
TAWH	**Dawu Township**	**1.85**	**206**	*e*S		Sn	05 33 50.5	+0.3
	baz=192							
SCZT	**Fangliau**	**1.94**	**213**	P		Pb	05 33 29.7	-0.3
	baz=197							
SCZT				*e*S		Sg	05 33 57.2	+0.7
	baz=197							
LAY	**Lan-yu**	**1.98**	**186**	*e*S		Sn	05 33 49.6	-3.8
	baz=186							
SLIU	**Shizi**	**2.00**	**207**	*e*P		Pn	05 33 28.0	-0.5
	baz=199							
LYUB	**Lan-yu**	**2.01**	**185**	*e*P		Pn	05 33 27.4	-1.3
	baz=189							
PHUB	**P'eng-hu**	**2.07**	**257**	*e*S		Sb	05 33 57.9	-0.2
	baz=256							
WDGT	**Dungji**	**2.07**	**249**	*e*P		Pn	05 33 30.0	+0.6
	baz=248							
WDGT				*e*S		Sn	05 33 56.8	+1.2
	baz=248							
PNG	**Penghu**	**2.07**	**258**	*e*S		Sn	05 33 56.8	+1.2
	baz=258							
VCHM	**Qimei**	**2.28**	**250**	*e*S		Sb	05 34 04.3	0.0
	baz=249							
VWUC	**VWUC**	**2.32**	**295**	*e*P		Pn	05 33 34.1	+1.2
	baz=291							
MATB	**Ma-tsu**	**2.69**	**323**	*e*P		Pn	05 33 39.2	+1.1
	baz=320							
MATB				*e*S		Sn	05 34 12.3	+1.3
	baz=320							
MHZQ	**Yeshan**	**3.23**	**311**	*e*P		Pn	05 33 47.3	+1.8
	baz=303							

JMA ***07*** *05:39:11.3±0.3,44˚N±1˚×14˚8E±˚, h0km, MD4.9/40, MV5.5/40, SE OFF ETOROFU*
JMA Felt I J1 at SE OFF ETOROFU .
NIED ***07*** *05:39:11.3,43˚.91N×147˚.85E, h0km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.13; Mθθ-2.89; Mφφ-0.24; Mrθ-0.18; Mθφ-5.40; Mφr-3.28; Fault plane solution: M₀6.90000×10¹⁵ NP1: φs196.00000°, δ71.00000°, λ41.00000°. NP2:φs91.00000°, δ52.00000°, λ156.00000°.*
SKHL ***07*** *05:39:12.2±0.1,44˚.10N×148˚.10E, h67km±2km, mb5.6/8, mbv4.9/2*
MOS ***07*** *05:39:12.3±1.1,44˚.26N×148˚.03E, h61km, mb4.8/26, Error ellipse: s-maj=7.0km s-min=5.8km az=96.9*
MOS Felt (III) at Malokuril'skoye; (II-III) at Gorniy, Goryachiye Klyuchi; (II) at Yuzhno-Kuril'sk, Reydovo, Kuril'sk.
NEIC ***07*** *05:39:14.6±1.6,44˚.1N±0˚.1×148˚.0E±0˚.1, h62km±8km, mb4.6/145, Error ellipse: s-maj=15.5km s-min=11.2km az=152.0*
IDC ***07*** *05:39:16.7±2.0,44˚.36N×148˚.03E, h78km±17km, mb4.0/27, mbtmp4.3/33, MS3.6/20, Error ellipse: s-maj=17.1km s-min=10.7km az=159.0*
ISC 07 05:39:12.8±0.5, 44°12N±0°.04×148°10E±0°.04, h51km±3km, h51km:pP-P, n616, σ1§42/585, mb4.5/121, MS3.6/12, 26C-5D, Kuril Islands

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

SHO	**Shikotan**	**0.95**	**255**	⇑*i* PN		**Pn**	**05 39 28.6**	**-1.2**
SHO				*i* S		**Sn**	**05 39 39.9**	**-2.5**
SHO				pmax	pmax			
	comp=N,2μm,0.3s							
SHO				pmax	pmax			
	comp=E,3μm,0.3s							
SHO				pmax	pmax			
	comp=Z,5μm,0.3s							
SHO				smax	smax			
	comp=N,8μm,0.2s							
SHO				smax	smax			
	comp=E,15μm,0.3s							
SHO	**Shikotan**	**0.95**	**255**	*i* P		**Pn**	**05 39 28.6**	**-1.2**
SHO				AMB	AMB		05 39 30.8	
	comp=E,5μm,0.3s							
SHO				*i* S		**Sn**	**05 39 39.9**	**-2.5**
SHO				A	A		05 39 44.5	
	comp=E,8μm,0.3s							
SHO				A	A		05 39 44.5	
	comp=E,15μm,0.3s							
KUR	**Kuril'sk**	**1.13**	**352**	*d* PN		**Pn**	**05 39 31.6**	**-0.7**
KUR				*i* S		**Sn**	**05 39 45.5**	**-1.2**
KUR				pmax	pmax			
	comp=N,538nm,0.6s							
KUR				pmax	pmax			
	comp=Z,2μm,0.6s							
KUR				pmax	pmax			
	comp=E,429nm,0.4s							
KUR				smax	smax			
	comp=E,11μm,0.6s							
KUR				smax	smax			
	comp=N,8μm,0.2s							
KUR				smax	smax			
	comp=E,21μm,1.5s							
KUR				smax	smax			
	comp=N,14μm,1.4s							
KUR	**Kuril'sk**	**1.13**	**352**	*i* P		**Pn**	**05 39 31.5**	**-0.7**
KUR				AMB	AMB		05 39 32.1	
	comp=N,2μm,0.4s							
KUR				*i* S		**Sn**	**05 39 45.7**	**-1.0**
KUR				A	A		05 39 50.5	
	comp=N,14μm,2.0s							
KUR				A	A		05 39 50.5	
	comp=N,21μm,2.0s							
KUR				A	A		05 39 52.9	
	comp=N,8μm,0.4s							
KUR				A	A		05 39 52.9	
	comp=N,7μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.62**	**268**	*c* PN		**Pn**	**05 39 38.3**	**-0.6**
YUK				*i* S		**Sn**	**05 39 56.0**	**-2.5**
YUK				pmax	pmax			
	comp=E,587nm,0.2s							
YUK				pmax	pmax			
	comp=Z,2μm,0.2s							
YUK				smax	smax			
	comp=N,31μm,0.5s							
YUK				smax	smax			
	comp=E,2μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.62**	**268**	*i* P		**Pn**	**05 39 37.4**	**-1.5**
YUK				AMB	AMB		05 39 40.2	
	comp=E,2μm,0.2s							
YUK				*i* S		**Sn**	**05 39 56.4**	**-2.1**
YUK				A	A		05 40 00.5	
	comp=E,27μm,0.5s							
YUK				A	A		05 40 00.5	
	comp=E,2μm,0.5s							
NEM2	**Nemuro 2**	**1.87**	**247**	*e*P		**Pn**	**05 39 41.2**	**-1.1**
NEM2				*e*S		**Sn**	**05 40 03.9**	**-0.8**
NMR	**Nemuro--Hokkai**	**1.88**	**247**	⇑PN		**Pn**	**05 39 41.2**	**-1.2**
NMR				*e*S		**Sn**	**05 40 03.9**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.88**	**247**	*i* P		**Pn**	**05 39 40.9**	**-1.5**
NMR				*e*S		**Sn**	**05 40 02.4**	**-2.5**
RUSJ	**Misakicho**	**2.06**	**271**	⇑PN		**Pn**	**05 39 45.5**	**+0.6**
RUSJ				*i* S		**Sn**	**05 40 10.1**	**+0.8**
JRA	**Rausu**	**2.16**	**266**	*e*P		**Pn**	**05 39 46.5**	**+0.2**
JRA				*e*S		**Sn**	**05 40 12.5**	**+0.7**
JRA	**Rausu**	**2.16**	**266**	A		A	05 39 46.5	
	comp=E,12nm,0.7s,comp=N,28nm,1.7s							
JNSB	**Nemuroshibetsu**	**2.26**	**262**	*e*P		**Pn**	**05 39 47.9**	**+0.2**
JNSB				*e*S		**Sn**	**05 40 14.1**	**-0.3**
JNSB	**Nemuroshibetsu**	**2.26**	**262**	A		A	05 39 47.9	
	comp=E,15nm,1.7s,comp=N,16nm,3.5s							
JKHN	**Kushirohamanak**	**2.37**	**245**	*e*P		**Pn**	**05 39 48.8**	**-0.4**
JKHN				*e*S		**Sn**	**05 40 15.6**	**-1.5**
JKHN	**Kushirohamanak**	**2.37**	**245**	A		A	05 39 48.8	
	comp=E,11nm,0.9s,comp=N,10.0nm,0.5s							
JNK	**Nakash**	**2.50**	**259**	*e*P		**Pn**	**05 39 51.1**	**+0.1**
JNK	**Nakash**	**2.50**	**259**	A		A	05 39 51.1	
	comp=E,8.0nm,0.4s,comp=N,8.0nm,1.0s							
AKK	**Akkeshi**	**2.61**	**246**	*e*P		**Pn**	**05 39 51.5**	**-1.0**
JAK	**Akkeshi**	**2.72**	**247**	*e*P		**Pn**	**05 39 53.2**	**-0.7**
JAK	**Akkeshi**	**2.72**	**247**	A		A	05 39 53.2	
	comp=E,14nm,1.5s,comp=N,8.0nm,0.5s							
JTKR	**Abashiri--Toko**	**3.03**	**269**	*e*P		**Pn**	**05 39 58.9**	**+0.7**
JAR	**Ashorobuto**	**3.25**	**257**	*e*P		**Pn**	**05 40 02.0**	**+0.8**
JAR	**Ashorobuto**	**3.25**	**257**	A		A	05 40 02.0	
	comp=E,8.0nm,0.6s,comp=N,8.0nm,0.5s							
JOB	**Onbets**	**3.33**	**250**	*e*P		**Pn**	**05 40 02.7**	**+0.3**
JOB				*e*S		**Sn**	**05 40 39.8**	**-0.9**
JOB	**Onbets**	**3.33**	**250**	A		A	05 40 02.7	
	comp=E,8.0nm,0.8s,comp=N,7.0nm,0.7s							
JMP	**Maruseppu**	**3.42**	**270**	*e*P		**Pn**	**05 40 04.8**	**+1.2**
JCH	**Churui**	**3.77**	**248**	*e*P		**Pn**	**05 40 08.4**	**0.0**
JCH				*e*S		**Sn**	**05 40 50.7**	**-0.7**
JCH	**Churui**	**3.77**	**248**	A		A	05 40 08.4	
	comp=E,5.0nm,0.5s,comp=N,9.0nm,0.9s							
JKK2	**Kamakawa 2**	**3.87**	**268**	*e*P		**Pn**	**05 40 12.0**	**+2.2**
JTHR	**Tokachihiroo**	**3.96**	**244**	A		A	05 40 11.4	
	comp=E,6.0nm,2.3s,comp=N,7.0nm,3.3s							
JKA	**Kamikawa-asahi**	**3.96**	**272**	Pn		**Pn**	**05 40 13.2**	**+2.2**
ASAJ	**Asahikawa**	**3.96**	**272**	*e*P		**Pn**	**05 40 13.6**	**+2.5**
ASAJ	**Asahikawa**	**3.96**	**272**	P		**Pn**	**05 40 13.6**	**+2.5**
	comp=N,60nm,0.5s,baz=80,slow=16,SNR=24							
ASAJ				S		**Sn**	**05 41 01.0**	**+4.7**
	comp=N,181nm,0.6s,baz=67,slow=13,SNR=2.3							
ASAJ				LR		LR	05 41 54.8	
	comp=N,844nm,19.7s,baz=120,slow=40							
JSE	**Soyaes**	**4.03**	**284**	*e*P		**Pn**	**05 40 14.2**	**+2.2**
JFR	**Furan**	**4.11**	**259**	A		A	05 40 14.1	
	comp=E,4.0nm,1.9s,comp=N,5.0nm,2.1s							
ERM	**Erimo**	**4.19**	**242**	Pn		**Pn**	**05 40 15.6**	**+1.5**
ERM	**Erimo**	**4.19**	**242**	*i* PN		**Pn**	**05 40 15.8**	**+1.7**
JEM	**Erimo**	**4.19**	**242**	A		A	05 40 14.6	
	comp=E,5.0nm,3.7s,comp=N,5.0nm,1.2s							
JAB	**Ashibetsu**	**4.30**	**264**	A		A	05 40 17.0	
	comp=E,3.0nm,2.8s,comp=N,3.0nm,1.9s							
JNBK	**Urakawa-nobuka**	**4.32**	**247**	*e*P		**Pn**	**05 40 16.0**	**0.0**
JNBK	**Urakawa-nobuka**	**4.32**	**247**	A		A	05 40 16.0	
	comp=E,24nm,0.7s,comp=N,20nm,0.6s							
JBT2	**Biori 2**	**4.39**	**254**	A		A	05 40 17.9	
	comp=E,4.0nm,4.4s,comp=N,2.0nm,2.4s							
JSHD	**Hidakashinhida**	**4.46**	**249**	A		A	05 40 18.6	
	comp=E,18nm,0.9s,comp=N,15nm,1.5s							
JSS	**Shosan**	**4.50**	**276**	*e*P		**Pn**	**05 40 21.8**	**+3.5**
JWK2	**Keihoku**	**4.58**	**287**	*e*P		**Pn**	**05 40 22.9**	**+3.4**
JHR	**Hokuryu**	**4.62**	**268**	*e*P		**Pn**	**05 40 22.9**	**+2.9**
YSS	**Yuzh-Sakhalins**	**4.71**	**309**	Pn		**Pn**	**05 40 21.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.71**	**309**	*i* PN		**Pn**	**05 40 21.4**	**+0.2**
YSS				*e*S		**Sn**	**05 41 11.9**	**-2.6**
YSS				pmax	pmax			
	comp=Z,140nm,0.5s							
YSS				pmax	pmax			
	comp=Z,200nm,3.3s							
YSS				smax	smax			
	comp=N,130nm,0.7s							
YSS				smax	smax			
	comp=E,160nm,0.6s							
YSS	**Yuzh-Sakhalins**	**4.71**	**309**	*e*P		**Pn**	**05 40 21.4**	**+0.2**
YSS				AMB	AMB		05 40 22.4	
	comp=E,140nm,0.5s							
YSS				AMB	AMB		05 40 23.6	
	comp=E,200nm,3.0s							
YSS				*e*S		**Sn**	**05 41 12.8**	**-1.7**
YSS				A	A		05 41 17.8	
	comp=E,180nm,0.7s							
YSS				A	A		05 41 17.8	
	comp=E,180nm,0.7s							
JIAM	**Iburiatsuma**	**4.75**	**254**	A		A	05 40 22.9	
	comp=E,12nm,1.0s,comp=N,14nm,1.6s							
JISS	**Ishikarishitsu**	**4.92**

JKB Kayabe 5.64 249 A A 05 40 35.3
comp=E,10.0nm,3.0s,comp=N,7.0nm,0.9s
JAHD Aomorihigashid 5.74 243 A A 05 40 36.5
comp=E,18nm,1.5s,comp=N,17nm,1.5s
JOT Ohata 5.87 245 A A 05 40 38.3
comp=E,7.0nm,1.6s,comp=N,3.0nm,1.2s
JTM Tenmabayashi 6.17 240 Pn **Pn 05 40 41.5 +0.1**
JSI2 Shiura 2 6.45 244 A A 05 40 46.4
comp=E,6.0nm,1.9s,comp=N,4.0nm,1.1s
UGL Uglegorsk 6.47 322 *e*P **Pn 05 40 46.1 +0.7**
UGL AMB AMB 05 40 48.9
comp=N,90nm,0.5s
*e*S **Sn 05 41 56.1 -1.7**
UGL A A 05 42 04.0
comp=N,90nm,0.5s
UGL A A 05 42 04.0
comp=N,130nm,0.5s
TYV Tymovskoe 7.69 333 *e*PN **Pn 05 41 03.0 +0.9**
TYV *e*S **Sn 05 42 28.1 +0.4**
TYV pmax pmax
comp=Z,100nm,3.5s
TYV pmax pmax
comp=Z,35nm,0.8s
TYV smax smax
comp=N,19nm,1.1s
TYV smax smax
comp=E,16nm,1.1s
TYV smax smax
comp=N,300nm,4.8s
TYV smax smax
comp=E,500nm,4.8s
TYV Tymovskoe 7.69 333 *e*P **Pn 05 41 02.2 +0.1**
TYV AMB AMB 05 41 06.7
comp=E,100nm,4.0s
TYV AMB AMB 05 41 07.2
comp=E,40nm,0.8s
TYV *e*S **Sn 05 42 24.6 -3.1**
TYV A A 05 42 29.8
comp=E,20nm,1.0s
TYV A A 05 42 29.8
comp=E,20nm,1.0s
TYV A A 05 42 35.2
comp=E,300nm,5.0s
TYV A A 05 42 35.2
comp=E,500nm,5.0s
JMM Marumori 8.34 224 **Pn 05 41 09.8 -1.2**
SKR Severo-Kuril's 8.52 37 *e*PN **Pn 05 41 13.1 -0.3**
SKR pmax pmax
comp=Z,421nm,0.5s
SKR MLR MLR
comp=Z,900nm,11.0s
SKR Severo-Kuril's 8.52 37 *e*P **Pn 05 41 13.8 +0.4**
SKR AMB AMB 05 41 14.5
comp=Z,420nm,0.5s
SKR *e*S **Sn 05 42 45.5 -2.6**
SKR A A 05 43 06.2
comp=Z,240nm,0.8s
SKR A A 05 43 06.2
comp=Z,230nm,0.8s
SKR AMS AMS 05 44 22.5
comp=Z,900nm,11.0s
NKL Nikolayevsk 10.28 334 *e*P **Pn 05 41 38.0 +0.5**
NKL AMB AMB 05 41 40.1
comp=Z,10.0nm,0.5s
MJB9 Matsu-Tunnel 10.68 228 Pn **Pn 05 41 42.1 -1.0**
MAJO Matsushiro 10.68 228 Pn **Pn 05 41 41.3 -1.8**
MAJO Matsushiro 10.68 228 *i* PN **Pn 05 41 40.0 -3.1**
MJAR Matsushiro Arr 10.68 228 P **Pn 05 41 42.2 -0.9**
comp=Z,4.5nm,0.5s,baz=30,slow=13,SNR=11
MJAR LR LR 05 46 06.4
comp=Z,203nm,20.6s,baz=44,slow=38
PEA0B Petropavlovsk- 11.00 32 Pn **Pn 05 41 46.8 -0.6**
PEA0B Petropavlovsk- 11.00 32 *ce*PN **Pn 05 41 47.1 -0.3**
PETK Petropavlovsk- 11.00 32 Pn **Pn 05 41 47.0 -0.4**
PETK Petropavlovsk- 11.00 32 P **Pn 05 41 47.3 -0.1**
comp=Z,28nm,0.5s,baz=210,slow=8.8,SNR=142
PETK LR LR 05 45 50.0
comp=Z,172nm,21.5s,baz=214,slow=36
PET Petropavlovsk 11.31 34 **Pn 05 41 52.7 +1.1**
PET Petropavlovsk 11.31 34 *e*PN **Pn 05 41 56.1 +4.5**
PET *e*S **Sn 05 43 58.4 +2.0**
PET pmax pmax
comp=Z,21nm,0.8s
PET Petropavlovsk 11.31 34 *e*P **Pn 05 41 51.0 -0.6**
PET AMB AMB 05 41 57.7
comp=Z,20nm,0.8s
USA0B Ussuriysk Arra 11.58 276 **Pn 05 41 57.0 +1.7**
USA0B Ussuriysk Arra 11.58 276 PN **Pn 05 41 57.0 +1.7**
USRK Ussuriysk Ar. 11.58 276 Pn **Pn 05 41 57.3 +2.0**
USRK Ussuriysk Ar. 11.58 276 P **Pn 05 41 57.4 +2.1**
comp=Z,9.1nm,0.7s,baz=88,slow=12,SNR=14
USRK LR LR 05 46 20.3
comp=Z,252nm,19.6s,baz=52,slow=37
JGF Kuroka 11.84 228 **Pn 05 41 58.5 -0.5**
KLR Kul'dur 12.33 300 *ce*PN **Pn 05 42 05.5 -0.1**
KLR pmax pmax
comp=Z,45nm,1.3s
KLR Kul'dur 12.33 300 P **Pn 05 42 09.4 +3.8**
comp=Z,31nm,1.0s,baz=110,slow=15,SNR=42
KLR LR LR 05 47 18.5
comp=Z,196nm,18.7s,baz=71,slow=40
KLR Kul'dur 12.33 300 *e*P **Pn 05 42 03.4 -2.2**
MDJ Mudanjiang 13.26 279 P **Pn 05 42 19.2 +1.0**
MDJ S **Sn 05 47 47.8 +3.9**
MDJ SS **S 05 45 01.4 -4.7**
MDJ PcP **PcP 05 47 42.3 -2.6**
MDJ ScP **ScP 05 51 09.8 -4.0**
MDJ PcS **PcS 05 51 17.6 -1.7**
MDJ Mudanjiang 13.26 279 Pn **Pn 05 42 18.8 +0.6**
HEH HeiHe 15.32 301 *e*P **Pn 05 42 47.0 +1.4**
MA2 Magadan 15.57 5 LR LR 05 49 03.8
comp=Z,71nm,19.6s,baz=145,slow=38
CN2 Changchun 16.31 277 *e*P **Pn 05 42 57.6 -0.7**
CN2 *e*S **Sn 05 45 55.2 -2.9**
KSRS Korea Array 16.65 253 P **P 05 43 04.5 +0.3**
comp=Z,2.9nm,0.9s,baz=64,slow=12,SNR=8.2
KSRS LR LR 05 49 41.5
comp=Z,125nm,18.5s,baz=65,slow=37
ZEA Zeya 16.69 313 *e*P **P 05 43 03.8 -0.8**
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA Zeya 16.69 313 *e*P **Pn 05 42 58.0 -4.9**
JNU Nakatsue 17.33 237 LR LR 05 49 15.6
comp=Z,180nm,19.8s,baz=72,slow=34
SEY Seymchan 19.02 6 *i* P **P 05 43 28.5 -1.6**
SEY pmax pmax
comp=Z,11nm,1.5s
SEY Seymchan 19.02 6 P **P 05 43 29.1 -1.0**
comp=Z,2.6nm,0.6s,baz=188,slow=9.6,SNR=5.7
SHEM Shemya Is, Ala 19.20 54 P **Pn 05 43 33.4 -0.2**
comp=Z,28nm,0.8s,baz=286,slow=20,SNR=1.8
SHEM LR LR 05 53 05.0
comp=Z,59nm,18.6s,baz=304,slow=43
YAK Yakutsk 20.94 335 *e*P **P 05 43 50.5 -0.6**
YAK *e* 05 44 11.6
YAK *e*S **S 05 47 42.8 +1.5**
YAK *e* 05 47 54.0
YAK *e*SS **SnSn 05 48 09.4 +4.6**
YAK *e* 05 55 10.7
YAK pmax pmax
comp=Z,44nm,1.0s
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=Z,47nm,1.3s
YAK smax smax
comp=N,53nm,2.0s
YAK smax smax
comp=E,35nm,2.3s
YAK Yakutsk 20.94 335 P **P 05 43 50.7 -0.3**
comp=E,21nm,0.5s,baz=94,slow=1.3,SNR=8.3
YAK LR LR 05 52 16.9
comp=E,103nm,18.9s,baz=132,slow=38
comp=E,21nm,0.5s
YAK Yakutsk 20.94 335 *e*P **P 05 43 50.4 -0.6**
XLT XiLinHaoTe 22.96 281 *e*P **P 05 44 12.3 -0.5**
XLT pP **pP 05 44 26.9 +2.3**
JOW Kunigami 23.52 229 LR LR 05 54 34.7
comp=E,148nm,18.6s,baz=44,slow=39
BJI Beijing 23.96 271 P **P 05 44 23.0 +0.8**
BJI pP **pP 05 44 37.0 +2.0**
BJI PcP **PcP 05 48 05.2 +2.0**
BJT Baijiatuau 23.97 271 P **P 05 44 21.9 -0.5**
BJT IAmb IAmb 05 44 24.9
comp=Z,15nm,0.7s
BJT Baijiatuau 23.97 271 P **P 05 44 21.9 -0.5**
BJT pmax pmax
comp=Z,15nm,0.7s
BOD Bodaibo 25.15 315 *e*P **P 05 44 30.8 -2.1**
BOD pmax pmax
comp=Z,5.0nm,0.8s
BOD Bodaibo 25.15 315 *e*P **P 05 44 30.8 -2.1**
BILL Bilibino 25.82 16 *i* P **P 05 44 37.8 -1.1**
BILL Bilibino 25.82 16 *e*P **P 05 44 37.8 -1.1**
NJ2 Nanjing 25.84 252 *e*P **P 05 44 40.8 +1.4**
NJ2 pP **sP 05 44 55.8 -2.4**
HNS HongShan 26.05 267 ⇑P **P 05 44 41.4 +0.2**
HHC Hu-ho-hao-te 27.00 276 *e*P **P 05 44 53.9 +3.9**
HHC S **S 05 49 15.7 -8.2**
BTO Baotou 28.19 276 *e*P **P 05 45 02.8 +2.2**
BTO pP **sP 05 45 17.6 -1.9**
BTO sP pP 05 45 23.3 +10
BTO PP **PnPn 05 45 57.0 +6.5**
BTO S **S 05 49 47.1 +4.5**
BTO SS **SnSn 05 51 09.3 +7.0**
ULN Ulaanbaatar 28.52 292 P **P 05 45 03.3 -0.2**
ULN Ulaanbaatar 28.52 292 *i* P **P 05 45 02.1 -1.4**
ULN Ulaanbaatar 28.52 292 *e*P **P 05 45 02.1 -1.4**
H11N2 WAKE ISLAND Hy 28.94 141 T T 06 15 58.2
baz=332,slow=76,SNR=2478
H11N1 WAKE ISLAND Hy 28.95 141 T T 06 15 57.8
baz=332,slow=76,SNR=790
H11N3 WAKE ISLAND Hy 28.96 141 T T 06 15 56.8
baz=332,slow=76,SNR=1971
SONM Songino Array 28.97 292 P **P 05 45 07.8 +0.4**
SONM Songino Array 28.97 292 P **P 05 45 07.8 +0.4**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 28.97 292 P **P 05 45 07.6 +0.2**
comp=Z,2.7nm,0.6s,baz=80,slow=8.9,SNR=14
SONM LR LR 05 57 05.0
comp=Z,140nm,19.1s,baz=0.5,slow=37
comp=Z,2.7nm,0.6s
LYN LuoYang 28.98 263 ⇓P **P 05 45 10.0 +2.5**
WHN Wuhan 29.84 254 P **P 05 45 19.2 +4.1**
H11S1 WAKE ISLAND Hy 29.93 143 T T 06 17 03.3
baz=332,slow=76,SNR=5626
H11S3 WAKE ISLAND Hy 29.93 143 T T 06 16 58.7
baz=332,slow=76,SNR=3681
H11S2 WAKE ISLAND Hy 29.95 143 T T 06 17 04.6
baz=332,slow=76,SNR=3214
XAN Xi'an 31.77 265 *e*P **P 05 45 33.8 +1.6**
TNA Tin City 32.17 33 P **P 05 45 36.7 +1.4**
baz=250
FALS False Pass 32.64 53 P **P 05 45 39.9 +0.4**
baz=271
F14K Arctic Creek 32.77 33 P **P 05 45 41.2 +0.6**
baz=252
ANM Nome 32.89 35 P **P 05 45 42.5 +0.9**
ANM IAmb IAmb 05 45 43.6
comp=Z,17nm,1.3s
ANM Nome 32.89 35 P **P 05 45 42.7 +1.0**
baz=254
ANM Nome 32.89 35 P **P 05 45 42.6 +0.9**
ANM pmax pmax
comp=Z,17nm,1.3s
M13K Dall Lake 32.98 43 P **P 05 45 44.0 +1.6**
baz=263
J14K Nanvaranak Lak 33.26 39 P **P 05 45 45.7 +0.9**
baz=259
L14K Kuka Creek 33.43 41 P **P 05 45 47.4 +1.1**
baz=262
F15K North Star Dit 33.51 33 P **P 05 45 48.7 +1.7**
baz=253
G15K Niukluk 33.56 35 P **P 05 45 48.3 +0.8**
baz=255
M14K Bethel 33.70 43 P **P 05 45 50.2 +1.5**
M14K Bethel 33.70 43 P **P 05 45 49.7 +1.0**
baz=263,SNR=6.4
N14K Kuskokwak Cree 33.75 44 P **P 05 45 50.4 +1.2**
baz=265
O14K Tigyukauivet M 33.92 45 P **P 05 45 51.7 +1.2**
baz=266
L15K Ungalak Mounta 34.04 41 P **P 05 45 52.5 +0.9**
baz=262
C16K Lisburne Hills 34.08 29 P **P 05 45 51.1 -0.8**
baz=249
K15K Wolf Creek Mou 34.11 40 P **P 05 45 53.3 +1.0**
baz=262
H16K Elim 34.22 36 P **P 05 45 53.7 +0.5**
baz=257,SNR=6.2
M15K Kasigluk River 34.32 43 P **P 05 45 54.9 +0.8**
baz=265
G16K Koyuk River 34.34 34 P **P 05 45 54.3 +0.1**
G16K Koyuk River 34.34 34 P **P 05 45 55.1 +0.9**
baz=256
LZH Lanzhou 34.45 272 *e*P **P 05 45 55.0 -0.7**
LZH pP **pP 05 46 07.7 -1.0**
LZH sP **sP 05 46 15.5 +0.8**
N15K Kwethluk River 34.57 44 P **P 05 45 56.9 +0.6**
baz=266
O15K Ungalikthiuk R 34.65 46 P **P 05 45 57.8 +0.9**
baz=268
J16K Anvik River 34.68 38 P **P 05 45 58.0 +0.8**
baz=261
I17K Unalakleet 34.74 37 P **P 05 45 58.7 +1.1**
baz=260
S14K Fog Glacier 34.80 51 P **P 05 45 59.2 +0.8**
baz=272
C17K DeLong Mountai 34.91 29 P **P 05 45 59.6 +0.5**
baz=251
E17K Hotham Inlet 34.98 32 P **P 05 46 00.9 +1.2**
baz=254,SNR=6.1
L16K Owhat River 35.00 41 P **P 05 46 01.0 +1.1**
baz=264
F17K Baldwin Pennin 35.04 33 P **P 05 46 00.9 +0.7**
baz=256
G17K Kiwalik Mounta 35.06 34 P **P 05 46 01.4 +0.9**
baz=258
M16K Timber Creek 35.19 42 P **P 05 46 02.4 +0.8**
baz=266
N16K Nishlik Lake 35.24 43 P **P 05 46 03.4 +1.3**
baz=267
H17K Granite Mounta 35.26 36 P **P 05 46 03.3 +1.1**
H17K Granite Mounta 35.26 36 P **P 05 46 03.2 +1.1**
baz=259,SNR=5.1
CHGN Chignik 35.43 51 P **P 05 46 01.8 -1.9**
O16K Kokwok River B 35.55 45 P **P 05 46 05.6 +0.9**
baz=269
L17K Donlin 35.59 41 P **P 05 46 06.3 +1.2**
baz=265,SNR=7.1
P16K Nushagak River 35.59 46 P **P 05 46 06.2 +1.2**
baz=270
K17K Iditarod 35.65 40 P **P 05 46 07.0 +1.5**
baz=264,SNR=8.7
C18K Utukok River 35.65 29 P **P 05 46 05.8 +0.2**
baz=253
B18K Kokolik River 35.66 28 P **P 05 46 06.0 +0.4**
baz=251
F18K Selawik 35.70 33 P **P 05 46 06.5 +0.7**
baz=257
GTA Gaotai 35.91 280 *e*P **P 05 46 08.0 -0.2**
GTA pP pP 05 46 11.2 -10
H18K Honhosa River 35.94 35 P **P 05 46 08.9 +0.8**
H18K Honhosa River 35.94 35 P **P 05 46 08.6 +0.6**
baz=261,SNR=8.9
M17K Holitna River 35.95 42 P **P 05 46 09.3 +1.2**
baz=267
G18K Tagagawik 35.95 34 IAmb IAmb 05 46 09.7
comp=Z,9.3nm,0.9s
G18K Tagagawik 35.95 34 P **P 05 46 09.6 +1.5**
baz=259,SNR=6.4
N17K Nushagak Hills 36.03 43 P **P 05 46 09.7 +0.9**
baz=268
O17K Koliganek Bris 36.06 45 P **P 05 46 09.9 +0.8**
baz=269
Q16K King Salmon 36.29 46 P **P 05 46 11.7 +0.7**
baz=271
C19K Lookout Ridge 36.34 29 P **P 05 46 12.1 +0.6**
baz=254
L18K Granite Mounta 36.35 40 P **P 05 46 12.6 +1.1**
baz=266
J18K Innoko River 36.44 38 P **P 05 46 13.0 +0.7**
baz=265
G19K Purcell Mounta 36.63 34 P **P 05 46 14.0 +0.2**
baz=261
N18K Kilae Creek 36.67 43 P **P 05 46 15.5 +1.2**
baz=269
D19K Kuna River 36.70 30 IAmb IAmb 05 46 17.2
comp=Z,8.6nm,0.9s
D19K Kuna River 36.70 30 P **P 05 46 15.5 +1.0**
baz=256
Q17K Contact Creek 36.71 47 P **P 05 46 15.1 +0.4**
baz=272
TTA Tatalina 36.71 39 P **P 05 46 15.7 +1.0**
TTA IAmb IAmb 05 46 16.6
comp=Z,12nm,0.9s
TTA Tatalina 36.71 39 P **P 05 46 15.6 +1.0**
baz=266,SNR=6.5
TTA Tatalina 36.71 39 P **P 05 46 15.7 +1.0**
TTA pmax pmax
comp=Z,12nm,0.9s
M18K Stony River 36.73 42 P **P 05 46 16.1 +1.4**
baz=268,SNR=5.8
H19K Roundabout Mou 36.79 35 P **P 05 46 16.2 +1.0**
baz=262
E19K Redstone River 36.80 32 P **P 05 46 15.9 +0.5**
baz=259
SVW2 Sparrevohn 36.83 42 IAmb IAmb 05 46 18.3
comp=Z,12nm,0.9s
J19K Poorman 36.97 38 P **P 05 46 17.7 +0.9**
baz=265
P18K Big Mountain, 37.01 45 P **P 05 46 18.0 +0.8**
P18K Big Mountain, 37.01 45 P **P 05 46 18.0 +0.8**
baz=271
O18K Koktuh Hills 37.01 44 P **P 05 46 18.6 +1.4**
O18K IAmb IAmb 05 46 20.9
comp=Z,14nm,1.1s
O18K Koktuh Hills 37.01 44 P **P 05 46 18.1 +0.8**
baz=271
CD2 Chengdu 37.13 264 P **P 05 46 18.5 0.0**
L19K White Mountain 37.21 41 P **P 05 46 19.6 +0.7**
baz=268
D20K Etivluk River 37.29 30 P **P 05 46 20.4 +0.9**
baz=258
F20K Avaraart Lake 37.31 33 P **P 05 46 20.0 +0.4**
F20K Avaraart Lake 37.31 33 P **P 05 46 20.8 +1.2**
baz=261
E20K Nigu River 37.35 30 P **P 05 46 21.0 +1.0**
baz=259
N19K Bonanza Creek 37.37 43 P **P 05 46 21.5 +1.2**
N19K IAmb IAmb 05 46 22.8
comp=Z,12nm,1.0s
N19K Bonanza Creek 37.37 43 P **P 05 46 21.5 +1.2**
baz=270,SNR=5.1
M19K Big River Lodg 37.42 41 P **P 05 46 21.6 +1.0**
baz=269
H20K Anotleneega Mo 37.44 35 P **P 05 46 21.6 +0.9**
baz=264
O19K Port Alsworth 37.45 44 P **P 05 46 22.1 +1.3**
baz=271
I20K Naaghedeneel 37.54 36 P **P 05 46 22.8 +1.3**
baz=265
K20K Telida 37.62 39 P **P 05 46 23.3 +1.0**
baz=267
J20K Nowinta River 37.63 37 P **P 05 46 23.5 +1.1**
baz=266,SNR=7.7
L20K Farewell, AK 37.67 40 P **P 05 46 23.7 +1.0**
baz=268
Q19K Cape Douglas, 37.85 46 P **P 05 46 25.1 +0.8**
baz=273
A21K Barrow 37.92 26 P **P 05 46 24.1 -0.5**
baz=254,SNR=7.2
M20K Styx River 38.02 41 P **P 05 46 26.7 +0.9**
M20K IAmb IAmb 05 46 28.5
comp=Z,13nm,1.1s
M20K Styx River 38.02 41 P **P 05 46 26.8 +1.1**
baz=270
C21K Knifeblade Rid 38.03 29 P **P 05 46 26.1 +0.5**
baz=259
G21K Allakaket 38.11 34 P **P 05 46 27.1 +0.7**
baz=264
OHAK Old Harbor 38.17 49 P **P 05 46 26.6 -0.4**
OHAK IAmb IAmb 05 46 33.7
comp=Z,7.8nm,0.9s
OHAK Old Harbor 38.17 49 P **P 05 46 26.9 -0.1**
baz=276
B21K Ikpikpuk River 38.18 28 P **P 05 46 26.9 +0.1**
baz=259
E21K Killik River 38.19 30 P **P 05 46 27.1 0.0**
baz=261
F21K Alatna River 38.20 32 P **P 05 46 28.2 +1.0**
baz=263
O20K Slope Mountain 38.30 44 P **P 05 46 29.3 +1.1**
baz=273
H21K Melozitna Rive 38.31 35 P **P 05 46 29.2 +1.1**
baz=265
CHUM Lake Minchumin 38.42 38 P **P 05 46 30.5 +1.5**
baz=268
PPLA Purkeypile 38.46 39 P **P 05 46 30.9 +1.4**
baz=270
N20K Mount Spurr 38.47 42 P **P 05 46 31.1 +1.5**
baz=272,SNR=7.1
KDAK Kodiak Island 38.49 48 P **P 05 46 29.6 -0.1**
KDAK Kodiak Island 38.49 48 P **P 05 46 30.0 +0.4**
baz=276
KDAK Kodiak Island 38.49 48 P **P 05 46 29.6 -0.1**
KDAK pmax pmax
comp=Z,22nm,0.9s
CAST Castle Rocks 38.51 39 P **P 05 46 31.3 +1.4**
CAST IAmb IAmb 05 46 31.8
comp=Z,9.3nm,0.8s
CAST Castle Rocks 38.51 39 P **P 05 46 31.1 +1.3**
baz=269,SNR=8.8
Q20K Shuyak Island 38.52 46 P **P 05 46 30.4 +0.5**
baz=275
I21K Tanana 38.62 36 P **P 05 46 31.4 +0.8**
baz=267
B22K Teshekpuk Lake 38.72 27 P **P 05 46 31.3 -0.2**
baz=259
D22K Ayikyak River 38.73 30 IAmb IAmb 05 47 08.4
comp=Z,8.4nm,1.2s
D22K Ayikyak River 38.73 30 P **P 05 46 32.6 +1.0**
baz=262,SNR=5.9
SKT Skwentna 38.77 41 P **P 05 46 33.0 +1.0**
SKT IAmb IAmb 05 46 37.0
comp=Z,11nm,1.2s
SKT Skwentna 38.77 41 P **P 05 46 32.3 +0.3**
baz=271
HOM Homer 38.82 45 P **P 05 46 32.6 +0.2**
baz=274
H22K Ishtalitna Cre 38.92 35 P **P 05 46 33.9 +0.7**
baz=266
G22K Bettles 38.94 33 P **P 05 46 33.9 +0.6**
baz=265
CAPN Captain Cook N 39.00 43 P **P 05 46 34.6 +0.7**
baz=273
CNPM China Poot 39.04 45 P **P 05 46 35.1 +0.8**
MLY Manley 39.14 36 P **P 05 46 36.1 +1.0**
baz=268
SUA Susitna One 39.16 42 P **P 05 46 36.3 +0.9**
SUA IAmb IAmb 05 46 38.6
comp=Z,8.6nm,0.8s
SUA Susitna One 39.16 42 P **P 05 46 36.1 +0.7**
baz=273
BRLK Bradley Lake 39.20 44 P **P 05 46 35.8 +0.2**
BRSE Bradley Lake S 39.27 44 P **P 05 46 37.0 +0.8**
baz=275
TRF Thorofare Moun 39.32 39 P **P 05 46 37.6 +0.9**
TRF Thorofare Moun 39.32 39 P **P 05 46 37.3 +0.6**
baz=270
CUT Chulitna 39.35 40 P **P 05 46 37.2 +0.4**
baz=272
D23K Nanushuk River 39.45 30 P **P 05 46 38.0 +0.4**
baz=263
COLD Coldfoot 39.47 33 P **P 05 46 38.2 +0.4**
baz=266,SNR=7.3
G23K Bananza Creek 39.51 33 P **P 05 46 38.6 +0.5**
baz=267
RC01 Rabbit Creek A 39.67 42 P **P 05 46 39.8 +0.3**
baz=274
O22K Cooper Landing 39.72 43 P **P 05 46 40.5 +0.6**
baz=275
I23K Minto, Yukon-K 39.73 36 IAmb IAmb 05 46 43.9
comp=Z,13nm,1.4s
I23K Minto, Yukon-K 39.73 36 P **P 05 46 40.4 +0.6**
baz=269,SNR=6.1
E23K Chandalar 39.76 31 P **P 05 46 40.7 +0.5**
baz=266
TOLK Toolik Lake Re 39.82 30 P **P 05 46 41.3 +0.7**
TOLK IAmb IAmb 05 46 54.8
comp=Z,9.4nm,1.4s
TOLK Toolik Lake Re 39.82 30 P **P 05 46 41.4 +0.7**
baz=265

NEA2 **Nenana** 39.85 37 IAmb IAmb 05 46 42.3
comp=Z,8.5nm,0.8s
NEA2 **Nenana** 39.85 37 P **P** **05 46 41.6 +0.7**
baz=270,SNR=6.1
SEW **Seward** 39.89 44 P **P** **05 46 41.7 +0.5**
baz=275
MCK **McKinley** 39.92 38 P **P** **05 46 42.1 +0.6**
baz=271,SNR=5.2
PMR **Palmer** 39.93 41 P **P** **05 46 41.8 +0.3**
baz=274
RND **Reindeer** 39.97 39 P **P** **05 46 42.2 +0.2**
RND IAmb IAmb 05 46 42.6
comp=Z,12nm,1.0s
RND **Reindeer** 39.97 39 P **P** **05 46 42.2 +0.2**
RND pmax pmax
comp=Z,12nm,1.0s
GHO **Glory Hole Cre** 40.01 41 P **P** **05 46 43.4 +1.0**
WAT1 **Susitna Watana** 40.13 40 P **P** **05 46 43.2 -0.1**
baz=273
D24K **Happy Valley** 40.14 30 P **P** **05 46 43.6 +0.3**
baz=265
E24K **Your Creek** 40.18 31 IAmb IAmb 05 46 46.5
comp=Z,4.4nm,0.7s
E24K **Your Creek** 40.18 31 P **P** **05 46 44.1 +0.4**
baz=267,SNR=10
MDM **Murphy Dome** 40.21 36 P **P** **05 46 44.5 +0.6**
MDM IAmb IAmb 05 46 45.9
comp=Z,22nm,1.4s
C24K **Franklin Bluff** 40.23 29 P **P** **05 46 44.5 +0.5**
baz=264
KNK **Knik Glacier** 40.26 42 P **P** **05 46 45.2 +0.7**
KNK **Knik Glacier** 40.26 42 P **P** **05 46 45.2 +0.7**
baz=275
SML **Sawmill** 40.29 41 P **P** **05 46 45.4 +0.7**
SML **Sawmill** 40.29 41 P **P** **05 46 45.3 +0.7**
baz=274,SNR=6.3
SML **Sawmill** 40.29 41 P **P** **05 46 45.4 +0.7**
H24K **Noodor Dome** 40.35 35 IAmb IAmb 05 46 48.2
comp=Z,14nm,1.3s
H24K **Noodor Dome** 40.35 35 P **P** **05 46 46.3 +1.1**
baz=270,SNR=6.0
COLA **College** 40.37 36 P **P** **05 46 45.8 +0.6**
COLA **College** 40.37 36 P **P** **05 46 46.1 +0.9**
baz=271
COLA **College** 40.37 36 P **P** **05 46 45.8 +0.6**
COLA pmax pmax
comp=Z,14nm,0.7s
F24K **Squaw Lake** 40.38 32 P **P** **05 46 46.3 +0.9**
baz=268
CCB **Clear Creek Bu** 40.39 37 P **P** **05 46 46.2 +0.8**
CCB IAmb IAmb 05 46 47.0
comp=Z,7.9nm,1.1s
WAT6 **Susitna Watana** 40.52 40 P **P** **05 46 47.3 +0.7**
baz=274
G24K **Hadweenzic Riv** 40.52 34 P **P** **05 46 47.5 +1.0**
baz=269
POKR **Poker Plat Res** 40.54 36 P **P** **05 46 47.9 +1.2**
baz=271,SNR=6.5
DHY **Denali Highway** 40.65 39 IAmb IAmb 05 46 48.5
comp=Z,10nm,0.9s
DHY **Denali Highway** 40.65 39 P **P** **05 46 48.4 +0.7**
baz=274,SNR=6.5
SCM **Sheep Creek Mo** 40.77 41 P **P** **05 46 49.5 +0.9**
SCM **Sheep Creek Mo** 40.77 41 P **P** **05 46 49.5 +0.9**
baz=275
SCM **Sheep Creek Mo** 40.77 41 P **P** **05 46 49.5 +0.9**
SCM pmax pmax
comp=Z,35nm,1.4s
HDA **Harding Lake** 40.77 37 IAmb IAmb 05 46 50.1
comp=Z,11nm,0.8s
HDA **Harding Lake** 40.77 37 P **P** **05 46 49.3 +0.7**
baz=272,SNR=8.3
IL31 40.78 36 IAmb IAmb 05 46 50.4
comp=Z,18nm,1.3s
ILAR **Eielson Array** 40.78 36 P **P** **05 46 48.6 0.0**
comp=Z,7.4nm,1.0s,baz=257,slow=6.7,SNR=39
comp=Z,7.4nm,1.0s
DGZ **Jazzator, Alta** 40.83 300 *i* P **P** **05 46 48.3 -1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
GOMU **GeErMu** 40.87 278 P **P** **05 46 49.8 -0.4**
GOMU pP pP 05 46 53.3 -10
GOMU sP sP 05 46 56.9 -12
G25K **Bearman Lake** 41.07 33 P **P** **05 46 52.0 +1.1**
baz=270
PZH **PanZhiHua** 41.12 260 P **P** **05 46 53.7 +1.7**
F25K **Christian Rive** 41.25 32 P **P** **05 46 53.8 +1.3**
baz=270
E25K **Arctic Village** 41.28 31 P **P** **05 46 52.6 -0.1**
E25K **Arctic Village** 41.28 31 P **P** **05 46 53.8 +1.1**
baz=269
M24K **Tolsona, Glenn** 41.28 41 P **P** **05 46 54.2 +1.3**
baz=276
K24K **Donnelly Dome** 41.32 38 P **P** **05 46 53.4 +0.3**
baz=274,SNR=7.1
ZALV **Zalesovo Beam** 41.33 307 P **P** **05 46 53.6 +0.4**
ZALV **Zalesovo Beam** 41.33 307 P **P** **05 46 52.5 -0.8**
comp=Z,1.0nm,0.5s,baz=82,slow=8.6,SNR=3.8
ZALV PcP **PcP** **05 48 50.9 +0.2**
comp=Z,2.2nm,0.5s,baz=80,slow=3.6,SNR=6.8
ZALV LR LR 06 04 16.5
comp=Z,78nm,19.9s,baz=46,slow=36
comp=Z,1.0nm,0.5s
PRP **Porcupine Dome** 41.33 35 P **P** **05 46 53.2 -0.1**
PRP IAmb IAmb 05 46 55.2
comp=Z,15nm,1.3s
PRP **Porcupine Dome** 41.33 35 P **P** **05 46 54.1 +0.8**
baz=272
J25K **Salcha River,** 41.44 37 P **P** **05 46 54.6 +0.4**
baz=274
KLU **Klutina** 41.47 41 P **P** **05 46 55.2 +0.8**
baz=277
PAX **Paxson** 41.52 39 P **P** **05 46 56.0 +1.1**
baz=275
BMAR **Burnt Mountain** 41.66 32 P **P** **05 46 57.6 +1.8**
HARP **HAARP** 41.73 40 P **P** **05 46 57.9 +1.5**
baz=276
RIDG **Independent Ri** 41.74 38 P **P** **05 46 57.7 +1.1**
baz=275
F26K **Sheenjek River** 41.82 32 P **P** **05 46 58.3 +1.2**
baz=271
G26K **Porcupine Rive** 41.98 33 P **P** **05 46 59.3 +0.9**
baz=272
SCRK **Sand Creek** 42.09 38 IAmb IAmb 05 47 00.5
comp=Z,9.9nm,0.9s
SCRK **Sand Creek** 42.09 38 P **P** **05 46 59.7 +0.1**
baz=275,SNR=9.2
BMRM **Bremner River** 42.17 42 P **P** **05 47 01.1 +1.0**
baz=278
J26L **Joseph Creek** 42.23 37 P **P** **05 47 01.1 +0.5**
baz=275
MENT **Mentasta** 42.32 39 IAmb IAmb 05 47 11.0
comp=Z,7.4nm,0.7s
L26K **Log Cabin Wild** 42.48 39 IAmb IAmb 05 47 05.0
comp=Z,11nm,0.8s
L26K **Log Cabin Wild** 42.48 39 P **P** **05 47 04.1 +1.5**
baz=277,SNR=7.5
WMQ **Urumqi** 42.60 292 *e*P **P** **05 47 05.4 +1.6**
VRDI **Verde Repeater** 42.68 42 P **P** **05 47 05.4 +1.0**
VRDI IAmb IAmb 05 47 08.6
comp=Z,26nm,1.4s
M26K **Nabesna, AK** 42.72 40 P **P** **05 47 06.2 +1.6**
baz=278
MCARA **McCarthy VSAT** 42.86 41 P **P** **05 47 07.3 +1.6**
H27K **Steamboat Moun** 42.93 34 P **P** **05 47 07.6 +1.5**
baz=275
K27K **Chicken** 42.93 37 P **P** **05 47 07.2 +1.0**
baz=277
CRQE **Cirque** 42.93 42 P **P** **05 47 06.9 +0.6**
baz=280
D27M **Malcolm River** 42.95 30 P **P** **05 47 07.3 +1.0**
baz=272
I27K **Kandik River** 42.95 35 P **P** **05 47 07.7 +1.3**
baz=276
WAX **Waxell Ridge** 43.10 43 P **P** **05 47 08.8 +1.1**
L27K **Beaver Creek,** 43.16 39 P **P** **05 47 09.7 +1.5**
baz=278
BCAR **Beaver Creek A** 43.18 39 P **P** **05 47 10.0 +1.7**
EGAK **Eagle** 43.23 36 P **P** **05 47 09.2 +0.6**
EGAK **Eagle** 43.23 36 P **P** **05 47 09.0 +0.4**
baz=277,SNR=7.5
M27K **Edge Creek, AK** 43.25 40 P **P** **05 47 10.2 +1.3**
baz=279
ISLE **Juniper Island** 43.32 42 P **P** **05 47 11.0 +1.4**
F28M **Old Crow** 43.45 32 IAmb IAmb 05 47 13.1
comp=Z,7.5nm,0.7s
F28M **Old Crow** 43.45 32 P **P** **05 47 11.6 +1.2**
baz=275,SNR=11
E28M **Babbage River** 43.50 31 P **P** **05 47 11.5 +0.8**
baz=274
BARN **Barnard Glacie** 43.57 42 P **P** **05 47 12.9 +1.4**
BARN IAmb IAmb 05 47 18.3
comp=Z,22nm,1.3s
I28M **Miner Creek** 43.66 35 IAmb IAmb 05 47 14.2
comp=Z,10nm,0.8s
I28M **Miner Creek** 43.66 35 P **P** **05 47 13.0 +0.8**
baz=277,SNR=10
BVCY **Beaver Creek** 43.70 40 P **P** **05 47 13.7 +1.2**
baz=280,SNR=5.1
D28M **Stokes Point** 43.73 29 P **P** **05 47 13.4 +0.9**
baz=274
CTG **Chitna Glacier** 43.74 42 P **P** **05 47 14.0 +1.1**
baz=281
CTGM **Chitina Glacie** 43.74 42 P **P** **05 47 14.5 +1.5**
LOGN **Logan Glacier** 43.93 42 P **P** **05 47 15.7 +1.3**
TABL **Table Mountain** 43.94 42 P **P** **05 47 15.5 +0.9**
YUK3 **Moose Creek** 44.00 40 P **P** **05 47 16.1 +0.9**
baz=281
DAWY **Dawson** 44.09 37 P **P** **05 47 16.4 +0.7**
DAWY **Dawson** 44.09 37 P **P** **05 47 16.3 +0.7**
baz=279
E29M **Blow River** 44.12 31 P **P** **05 47 17.3 +1.6**
baz=276
H29M **Whitestone** 44.20 34 P **P** **05 47 18.1 +1.7**
baz=278
M29M **Sommer Creek** 44.80 39 P **P** **05 47 22.8 +1.5**
baz=282
L29M **L29M** 44.81 38 P **P** **05 47 23.2 +1.8**
baz=281
EPYK **Eagle Plains** 44.84 34 IAmb IAmb 05 47 23.0
comp=Z,8.0nm,0.8s
EPYK **Eagle Plains** 44.84 34 P **P** **05 47 22.9 +1.4**
baz=279
G30M **tAoh Zraii Nji** 44.94 33 P **P** **05 47 23.4 +1.2**
baz=279
YUK4 **Talbot Arm** 44.94 41 P **P** **05 47 24.7 +2.2**
baz=282
K29M **Barlow Dome** 44.94 37 P **P** **05 47 23.6 +1.2**
baz=281
F30M **Barrier River** 45.01 32 P **P** **05 47 24.4 +1.6**
baz=279
MK31 **Makanchi Array** 45.02 298 P **P** **05 47 22.8 -0.4**
MK31 **Makanchi Array** 45.02 298 *i* P **P** **05 47 22.7 -0.5**
MKAR **Makanchi Array** 45.02 298 P **P** **05 47 23.1 -0.1**
comp=Z,2.5nm,0.5s,baz=78,slow=9.0,SNR=34
MKAR LR LR 06 07 27.0
comp=Z,153nm,19.7s,baz=44,slow=38
comp=Z,2.5nm,0.5s
I30M **Mount Dempster** 45.17 35 P **P** **05 47 25.2 +1.0**
baz=280
O29M **Mount Kennedy** 45.21 42 P **P** **05 47 26.3 +1.7**
baz=284
MAKZ **Makanchi** 45.22 298 P **P** **05 47 24.5 -0.2**
MAKZ **Makanchi** 45.22 298 P **P** **05 47 24.5 -0.2**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
J30M **Hart River** 45.31 36 P **P** **05 47 26.5 +1.1**
baz=281
M30M **Minto, Yukon** 45.53 39 P **P** **05 47 28.9 +1.9**
baz=283
HYT **Haines Junctio** 45.60 41 P **P** **05 47 29.9 +2.2**
HYT **Haines Junctio** 45.60 41 P **P** **05 47 29.9 +2.2**
baz=284,SNR=8.2
G31M **Satah River** 45.70 33 P **P** **05 47 29.7 +1.5**
baz=281
INK **Inuvik** 45.74 31 IAmb IAmb 05 48 05.7
comp=Z,8.8nm,1.2s
INK **Inuvik** 45.74 31 P **P** **05 47 29.5 +1.0**
baz=280,SNR=6.5
P29M **Windy Craggy** 45.78 43 P **P** **05 47 30.9 +1.9**
baz=285
F31M **Tsiigehtchic** 45.81 32 IAmb IAmb 05 47 31.7
comp=Z,9.5nm,0.8s
F31M **Tsiigehtchic** 45.81 32 P **P** **05 47 30.1 +1.0**
baz=281,SNR=7.9
KURK **Kurchatov** 45.90 304 P **P** **05 47 29.1 -0.8**
KURK **Kurchatov** 45.90 304 *i* P **P** **05 47 27.7 -2.3**
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK **Kurchatov** 45.90 304 *e*P **P** **05 47 27.7 -2.3**
KURBB **Kurchatov Arra** 45.98 304 P **P** **05 47 30.0 -0.6**
comp=Z,1.5nm,0.3s,baz=72,slow=8.8,SNR=9.4
KURBB PcP **PcP** **05 49 06.8 +0.2**
comp=Z,1.0nm,0.3s,baz=69,slow=4.3,SNR=4.1
comp=Z,1.5nm,0.3s
P30M **Million Dollar** 46.04 42 P **P** **05 47 32.5 +1.5**
baz=285
CRAI **Chiangrai** 46.10 255 P **P** **05 47 32.6 +0.6**
CRAI IAmb IAmb 05 47 33.7
comp=Z,10nm,1.0s
N31M **Braeburn, Yuko** 46.25 40 P **P** **05 47 34.8 +2.1**
baz=285
O30N **Mendenhall** 46.28 41 P **P** **05 47 34.6 +1.6**
baz=285
PLBC **Pleasant Camp** 46.50 43 P **P** **05 47 36.4 +1.7**
baz=286
M31M **Drury Creek, Y** 46.70 39 IAmb IAmb 05 47 38.7
comp=Z,7.5nm,0.8s
M31M **Drury Creek, Y** 46.70 39 P **P** **05 47 37.8 +1.6**
baz=285,SNR=5.4
WHY **Whitehorse** 46.89 41 P **P** **05 47 39.3 +1.5**
baz=286
FARO **Faro, Yukon** 47.17 39 IAmb IAmb 05 47 42.1
comp=Z,7.2nm,0.8s
FARO **Faro, Yukon** 47.17 39 P **P** **05 47 41.4 +1.5**
baz=286
N32M **Quiet Lake** 47.59 40 P **P** **05 47 44.5 +1.3**
baz=287
SIT **Sitka** 47.75 46 P **P** **05 47 45.6 +1.3**
baz=289
A36M **Sachs Harbour** 47.75 25 IAmb IAmb 05 47 44.9
comp=Z,4.0nm,0.8s
A36M **Sachs Harbour** 47.75 25 P **P** **05 47 44.5 +0.3**
baz=284,SNR=5.6
P32M **Atlin** 47.76 42 P **P** **05 47 46.1 +1.6**
baz=288
R32K **Eaglecrest** 47.77 44 P **P** **05 47 46.2 +1.7**
baz=288
P33M **Teslin, Yukon** 48.00 41 P **P** **05 47 46.9 +0.5**
baz=288
CHTO **Chiang Mai** 48.05 254 P **P** **05 47 46.8 -0.4**
CHTO IAmb IAmb 05 47 49.1
comp=Z,6.1nm,0.8s
CHTO **Chiang Mai** 48.05 254 P **P** **05 47 46.8 -0.4**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CMAR **Chiang Mai Arr** 48.29 254 P **P** **05 47 50.0 +1.0**
CMAR **Chiang Mai Arr** 48.29 254 P **P** **05 47 50.0 +1.0**
comp=Z,1.7nm,0.3s,baz=37,slow=7.8,SNR=7.6
CMAR LR LR 06 09 59.3
comp=Z,44nm,18.7s,baz=245,slow=38
comp=Z,1.7nm,0.3s
C36M **Paulatuk** 48.83 28 IAmb IAmb 05 48 13.9
comp=Z,3.9nm,0.6s
R33M **Jennings River** 49.15 42 P **P** **05 47 57.3 +2.0**
baz=290
S34M **Telegraph Cree** 49.59 44 P **P** **05 48 00.7 +2.2**
baz=291
BVAR **Borovoye Array** 49.80 309 P **P** **05 48 00.3 +0.1**
comp=Z,0.8nm,0.4s,baz=127,slow=17,SNR=5.0
BVAR LR LR 06 10 40.0
comp=Z,126nm,18.2s,baz=333,slow=38
comp=Z,0.8nm,0.4s
BRVK **Borovoye** 49.85 309 *i* P **P** **05 47 59.2 -1.3**
BRVK pmax pmax
comp=Z,8.0nm,2.2s
BRVK **Borovoye** 49.85 309 *e*P **P** **05 47 59.2 -1.3**
WTLY **Watson Lake, Y** 49.93 41 P **P** **05 48 02.8 +1.7**
baz=291
DLBC **Dease Lake** 49.94 43 P **P** **05 48 02.9 +1.7**
DLBC **Dease Lake** 49.94 43 P **P** **05 48 03.2 +2.0**
baz=291
T35M **Bob Quinn** 50.37 45 P **P** **05 48 06.6 +2.1**
baz=292
WRGLY **Wrigley** 51.14 36 P **P** **05 48 11.1 +1.0**
baz=292
AAK **Ala-Archa** 51.82 296 P **P** **05 48 15.7 0.0**
AAK IAmb IAmb 05 48 16.5
comp=Z,10nm,1.4s
AAK **Ala-Archa** 51.82 296 *i* P **P** **05 48 13.1 -2.6**
AAK pmax pmax
comp=Z,6.0nm,1.4s
AAK **Ala-Archa** 51.82 296 P **P** **05 48 15.2 -0.5**
comp=Z,2.1nm,0.5s,baz=127,slow=5.5,SNR=8.7
comp=Z,2.1nm,0.5s
AAK **Ala-Archa** 51.82 296 *e*P **P** **05 48 13.1 -2.6**
KSH **Kashi** 52.37 292 P **P** **05 48 23.4 +3.6**
BBB **Bella Bella** 53.51 50 LR LR 06 08 57.7
comp=Z,34nm,21.5s,baz=60,slow=33
KK31 **Karatay Array** 54.15 298 IAmb IAmb 05 48 32.9
comp=Z,4.4nm,0.8s
KKAR **Karatay Array** 54.15 298 P **P** **05 48 32.5 -0.2**
KKAR IAmb IAmb 05 48 32.9
comp=Z,4.3nm,0.8s
KKAR **Karatay Array** 54.15 298 P **P** **05 48 32.5 -0.2**
KKAR pmax pmax
comp=Z,4.0nm,0.9s
ARU **Arti** 54.55 317 *c i* P **P** **05 48 35.0 -0.3**
ARU 05 50 35.8
ARU S **S** **05 56 14.4 +3.8**
ARU SS **SS** **05 59 52.8 -0.3**
ARU pmax pmax
comp=Z,7.0nm,0.9s
ARU **Arti** 54.55 317 P **P** **05 48 35.1 -0.3**
comp=Z,6.2nm,0.2s,baz=93,slow=4.3,SNR=7.6
comp=Z,6.2nm,0.2s
ARU **Arti** 54.55 317 *e*P **P** **05 48 33.4 -1.9**
YKA **Yellowknife Ar** 55.11 34 P **P** **05 48 39.9 +0.6**
comp=Z,3.1nm,0.7s,baz=297,slow=7.1,SNR=45
comp=Z,3.1nm,0.7s
BTK **Batken** 55.50 295 IAmb IAmb 05 48 43.0
comp=Z,5.4nm,0.6s
NIL **Nilore** 57.34 287 P **P** **05 48 55.3 -0.4**
NIL **Nilore** 57.34 287 P **P** **05 48 55.3 -0.4**
NIL pmax pmax
comp=Z,22nm,1.0s
ABKAR **Akbulak array** 57.37 309 P **P** **05 48 54.5 -1.1**
ABKAR **Akbulak array** 57.37 309 IAmb IAmb 05 48 58.0
comp=Z,6.1nm,1.1s
ARCES **ARCESS Array B** 59.14 340 P **P** **05 49 06.7 -1.0**
comp=Z,3.0nm,0.8s,baz=30,slow=7.6,SNR=3.6
ARCES PcP **PcP** **05 49 57.2 +1.4**
comp=Z,4.2nm,0.9s,baz=54,slow=4.6,SNR=4.9
comp=Z,3.0nm,0.8s
KBL **Kabul** 59.71 290 P **P** **05 49 11.1 -1.3**
KBL **Kabul** 59.71 290 P **P** **05 49 11.1 -1.3**
KBL pmax pmax
comp=Z,11nm,1.0s
NEW **Newport** 61.57 49 P **P** **05 49 25.4 +0.7**
baz=305
PINE **Pine Mountain** 61.99 55 P **P** **05 49 29.1 +1.3**
PINE IAmb IAmb 05 49 32.1
comp=Z,4.3nm,0.8s
FINES **FINESS Array B** 64.86 333 P **P** **05 49 44.6 -1.5**
comp=Z,2.8nm,0.5s,baz=40,slow=7.5,SNR=22
comp=Z,2.8nm,0.5s
GEYT **Alibeck** 64.86 299 IAmb IAmb 05 49 47.2
comp=Z,9.7nm,1.1s
GEYT **Alibeck** 64.86 299 P **P** **05 49 46.7 +0.1**
comp=Z,4.3nm,0.6s,baz=29,slow=3.4,SNR=9.5
comp=Z,4.3nm,0.6s
GYA0B **ALIBECK ARRAY** 64.86 299 IAmb IAmb 05 49 50.9
comp=Z,6.4nm,0.7s
WRA **Warrenga Arr** 64.98 194 P **P** **05 49 49.0 +1.7**
comp=Z,1.1nm,1.0s,baz=9.5,slow=6.8,SNR=3.6
comp=Z,1.1nm,1.0s
FFC **Flin Flon** 64.99 37 P **P** **05 49 47.7 +0.6**
FFC IAmb IAmb 05 49 48.6
comp=Z,8.9nm,0.8s
FFC **Flin Flon** 64.99 37 P **P** **05 49 47.7 +0.6**
FFC pmax pmax
comp=Z,9.0nm,0.9s
FCC **Fort Churchill** 65.36 30 P **P** **05 49 49.0 -0.4**
FCC IAmb IAmb 05 49 49.8
comp=Z,5.4nm,0.5s
FCC **Fort Churchill** 65.36 30 P **P** **05 49 49.0 -0.4**
FCC pmax pmax
comp=Z,5.0nm,0.5s
OBN **Obninsk** 65.42 324 *e*P **P** **05 49 46.9 -2.9**
OBN *e**PP **pP** **05 50 03.4 -0.5**
OBN *e**SP **sP** **05 50 10.5 +0.9**
OBN *e* 05 50 19.8
OBN *e* 05 52 13.3
OBN *e*PPP PPP 05 53 46.7
OBN pmax pmax
comp=Z,4.0nm,1.0s
OBN MLR MLR
comp=Z,190nm,15.0s
PNTR **Pine Nut** 65.60 59 P **P** **05 49 52.2 +0.6**
PNTR IAmb IAmb 05 49 53.2
comp=Z,4.7nm,0.8s
EGMT **Eagleton** 65.64 46 P **P** **05 49 52.0 +0.5**
baz=310
YERR **Yerington** 65.88 59 IAmb IAmb 05 49 55.4
comp=Z,9.3nm,1.1s
HLID **Hailey** 65.91 52 P **P** **05 49 53.9 +0.4**
baz=309
BOZ **Bozeman (W)** 66.18 49 IAmb IAmb 05 49 56.9
comp=Z,4.1nm,0.8s
BOZ **Bozeman (W)** 66.18 49 P **P** **05 49 55.8 +0.7**
baz=309
KVN **Kaiserville** 66.54 58 IAmb IAmb 05 49 59.5
comp=Z,6.4nm,1.0s
LHV **Little Huntoon** 66.79 59 IAmb IAmb 05 50 01.5
comp=Z,9.5nm,1.0s
ELK **Elko** 67.20 55 LR LR 06 18 34.3
comp=Z,42nm,19.3s,baz=39,slow=35
DSP **Deep Springs** 67.67 59 IAmb IAmb 05 50 06.9
comp=Z,5.3nm,1.0s
RLMT **Red Lodge** 67.77 48 P **P** **05 50 04.8 -0.5**
baz=311
CWC **Cottonwood Cre** 68.19 60 P **P** **05 50 08.6 +0.6**
baz=309
GRAC **Grapevine Rang** 68.28 59 P **P** **05 50 09.4 +1.0**
baz=310
R11B **Troy Canyon, C** 68.51 57 P **P** **05 50 10.8 +0.8**
baz=310
ASAR **Alice Springs** 68.69 194 P **P** **05 50 13.0 +2.1**
comp=Z,0.5nm,0.6s,baz=10,slow=5.3,SNR=5.8
comp=Z,0.5nm,0.6s
MPMC **Manual Prospec** 68.80 60 P **P** **05 50 12.7 +0.8**
baz=310
FURC **Furnace Creek,** 68.93 59 P **P** **05 50 13.7 +1.4**
baz=310
DUG **Dugway, Tooele** 68.97 54 P **P** **05 50 13.6 +0.7**
baz=310
TPNV **Topopah Spring** 69.00 59 P **P** **05 50 13.7 +0.6**
baz=310
BW06 **Boulder Array** 69.15 50 P **P** **05 50 14.3 +0.3**
baz=311
PD31 **Pinedale Array** 69.15 50 P **P** **05 50 13.8 -0.2**
PDAR **Pinedale Array** 69.15 50 P **P** **05 50 14.3 +0.3**
comp=Z,1.2nm,0.6s,baz=265,slow=1.9,SNR=16
comp=Z,1.2nm,0.6s
GWY **Greenwater Val** 69.23 60 IAmb IAmb 05 50 16.0
comp=Z,4.5nm,0.8s
EDW2 **Edwards Air Fo** 69.23 61 P **P** **05 50 15.0 +0.6**
baz=310
QSM **Queen of Sheba** 69.24 60 IAmb IAmb 05 50 16.1
comp=Z,5.6nm,1.0s
NB2 **NORSAR Subarra** 69.51 339 P **P** **05 50 14.2 -1.4**
comp=Z,1.4nm,0.8s,baz=30,slow=6.2
NOA **NORSAR Array B** 69.51 339 P **P** **05 50 14.6 -1.0**
comp=Z,0.6nm,0.4s,baz=32,slow=6.6,SNR=13
comp=Z,0.6nm,0.4s
HFS **Hagfors** 69.62 338 P **P** **05 50 14.9 -1.3**
comp=Z,2.4nm,0.5s,baz=44,slow=4.5,SNR=17
comp=Z,2.4nm,0.5s
GSC **Goldstone, Bar** 69.71 60 P **P** **05 50 17.9 +0.5**
baz=310
BFSC **Mount Baldy Ra** 69.86 62 P **P** **05 50 19.1 +0.7**
baz=310
KIV **Kislovodsk** 70.03 312 ⇑P **P** **05 50 19.2 0.0**
KIV **Kislovodsk** 70.03 312 *e*P **P** **05 50 17.6 -1.6**
KIV pmax pmax
comp=Z,13nm,1.1s
KIV **Kislovodsk** 70.03 312 *e*P **P** **05 50 17.6 -1.6**
KBZ **Khabaz** 70.07 312 *i* P **P** **05 50 17.6 -1.7**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ **Khabaz** 70.07 312 P **P** **05 50 19.8 +0.5**
comp=Z,6.5nm,0.9s,baz=80,slow=3.9,SNR=12
KBZ LR LR 06 22 59.2
comp=Z,181nm,18.4s,baz=339,slow=38
comp=Z,6.5nm,0.9s
KBZ **Khabaz** 70.07 312 *e*P **P** **05 50 17.6 -1.7**
ZEI **Tsey** 70.16 311 *e*P **P** **05 50 18.6 -1.6**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
TUQ **Turquoise Moun** 70.17 60 P **P** **05 50 21.0 +0.7**
baz=310
HEC **Hector,Ludlow** 70.31 60 P **P** **05 50 21.7 +0.6**

baz=310
ONI Oni 70.53 311 P P 05 50 22.9 +0.6
ONI IAmb IAmb 05 50 23.9
comp=Z,7.9nm,1.1s
ONI Oni 70.53 311 P P 05 50 22.9 +0.6
ONI pmax pmax
comp=Z,8.0nm,1.1s
MURC Murrieta 70.56 62 P P 05 50 23.3 +0.7
baz=311
RDMU Red Mountain 70.59 52 IAmb IAmb 05 50 24.7
comp=Z,7.3nm,0.7s
P17A Butcher Ranch, 70.65 54 IAmb IAmb 05 50 24.8
comp=Z,8.6nm,1.4s
GMRC Granite Mounta 70.76 60 P P 05 50 24.6 +0.7
baz=311
ULM Lac du Bonnet 70.79 38 P P 05 50 23.3 -0.3
comp=Z,1.5nm,0.6s,baz=6.0,slow=7.4,SNR=4.2
comp=Z,1.5nm,0.6s
MDND Maddock 70.81 41 P P 05 50 24.5 +0.7
baz=315
K22A Casper 70.89 49 P P 05 50 25.0 +0.4
baz=313
PFO Pinyon Flats O 71.02 61 P P 05 50 26.0 +0.5
baz=311
TPFO Pinon Flats 71.03 61 P P 05 50 25.9 +0.4
baz=311
BELC Belle Mtn. Jos 71.06 61 P P 05 50 26.1 +0.4
baz=311
RSSD Black Hills 71.21 46 P P 05 50 26.9 +0.3
baz=314
GNI Garni 71.46 308 *i* P P 05 50 26.8 -1.3
GNI pmax pmax
comp=Z,8.0nm,1.1s
IRM Iron Mountain 71.49 60 P P 05 50 28.8 +0.6
baz=311
MONP2 Monument Peak 71.51 62 P P 05 50 28.7 +0.2
baz=311
O20A White River Ci 71.64 52 P P 05 50 29.7 +0.5
baz=313
HMU Henry Mountain 71.67 55 IAmb IAmb 05 50 30.9
comp=Z,4.6nm,0.7s
AKASG Malin Array Be 71.69 324 P P 05 50 28.1 -1.0
comp=Z,1.5nm,0.4s,baz=38,slow=6.1,SNR=11
comp=Z,1.5nm,0.4s
AKBB Malin Array Si 71.69 324 *ce* P P 05 50 26.5 -2.5
AKBB pmax pmax
comp=Z,4.0nm,1.0s
KIEV Kiev 71.70 324 ⇑P P 05 50 23.9 -5.1
PDMCI Parker Dam,Lak 72.02 60 P P 05 50 32.2 +0.9
baz=312
N23A Red Feather La 72.40 50 P P 05 50 34.3 +0.5
baz=314
WUAZ Wupatki 72.91 57 P P 05 50 37.5 +0.7
baz=312
ISCO Idaho Springs 73.34 51 P P 05 50 39.7 +0.2
baz=314
SORM Soroca 74.00 323 ⇑P P 05 50 39.9 -2.8
S22A 4UR Ranch, Cre 74.07 53 P P 05 50 44.3 +0.5
baz=314
GURO Guroymak-BITLI 74.08 308 P P 05 50 44.7 +1.1
GURO IAmb IAmb 05 50 46.6
comp=Z,6.3nm,1.0s
Q24A Divide 74.18 51 P P 05 50 44.5 +0.1
baz=314
214A Organ Pipe Nat 74.41 61 P P 05 50 45.7 +0.2
baz=312
EYMN Ely 74.43 37 P P 05 50 45.3 0.0
baz=320
OGNE Ogallala 74.49 48 P P 05 50 45.9 +0.1
baz=315
SDCO Great Sand Dun 74.83 52 P P 05 50 48.6 +0.4
baz=314
E38A The Farm, Brul 75.43 38 P P 05 50 50.1 -0.9
E38A IAmb IAmb 05 50 51.4
comp=Z,6.6nm,0.8s
TUC Tucson 75.44 59 P P 05 50 52.2 +0.8
baz=313
BUR08 Bucovina Ar. S 75.73 324 P P 05 50 51.7 -1.2
BURAR Bucovina Array 75.75 324 ⇑P P 05 50 51.1 -1.9
BURAR Bucovina Array 75.75 324 P P 05 50 52.3 -0.7
STHS Stebnicka Huta 75.92 327 *eP* P 05 50 54.4 +0.5
STHS Stebnicka Huta 75.92 327 *eP* P 05 50 54.4 +0.5
TESR Tescani 75.99 323 ⇑P P 05 50 53.0 -1.2
ANMO Albuquerque 76.23 55 P P 05 50 56.7 +0.6
baz=314
ANMO Albuquerque 76.23 55 *i* P P 05 50 53.6 -2.5
ANMO pmax pmax
comp=Z,1.0nm,1.1s
CFR Carcaliu 76.35 321 ⇑P P 05 50 56.0 -0.3
TPGR Topolog 76.47 321 ⇑P P 05 50 56.6 -0.4
PLOR Plostina 76.50 322 ⇑P P 05 50 57.0 -0.3
OZUR 76.69 323 ⇑P P 05 50 57.7 -0.5
LANS Liptovska Anna 76.82 328 *eP* P 05 50 58.9 -0.1
LANS Liptovska Anna 76.82 328 *eP* P 05 50 58.9 -0.1
DPC Dobruska-Polom 76.98 331 *eP* P 05 50 59.9 0.0
DPC Dobruska-Polom 76.98 331 *eP* P 05 50 59.9 0.0
MORC Moravsky Berou 77.02 330 ⇑P P 05 50 57.3 -2.9
SCHQ Schefferville 77.05 20 P P 05 50 59.9 -0.2
comp=Z,2.0nm,0.5s,baz=350,slow=6.2,SNR=6.4
comp=Z,2.0nm,0.5s
MLR Muntele Rosu 77.09 322 ⇑P P 05 50 59.9 -0.7
121A Cookes Peak, D 77.12 57 P P 05 51 01.7 +0.5
baz=314
CBKS Cedar Bluff 77.25 48 P P 05 51 02.1 +0.6
baz=317
CLL Collm 77.30 333 *eP* P 05 51 00.0 -1.6
CLL Collm 77.30 333 *eP* P 05 51 01.0 -0.6
MARR Marisel-Cluj 77.37 325 ⇑P P 05 51 00.6 -1.6
VOIR 77.52 323 ⇑P P 05 51 02.6 -0.4
ARR Arges 77.76 323 ⇑P P 05 51 04.2 -0.2
EKA Eskdalemuir Ar 77.97 344 P P 05 51 04.0 -1.2
EKA Eskdalemuir Ar 77.97 344 P P 05 51 04.0 -1.2
comp=Z,0.3nm,0.4s,baz=18,slow=5.0,SNR=7.2
comp=Z,0.3nm,0.4s
SCIA State Center 78.25 42 P P 05 51 07.7 +0.6
baz=320
MODS Modra-Piesok 78.28 329 *eP* P 05 51 08.9 +1.8
MODS Modra-Piesok 78.28 329 *eP* P 05 51 08.9 +1.8
ZVC Zvikov 78.50 331 *eP* P 05 51 08.1 -0.2
SURR Surduc 78.52 325 ⇑P P 05 51 08.3 -0.1
BZS Buzias 78.84 325 ⇑P P 05 51 09.7 -0.5
KHC Kasperske Hory 78.97 332 P P 05 51 10.5 -0.3
KHC Kasperske Hory 78.97 332 *eP* P 05 51 10.6 -0.3
KHC Kasperske Hory 78.97 332 *ce* P P 05 51 08.7 -2.2
KHC pmax pmax
comp=Z,8.0nm,0.9s
CKRC Cesky Krumlov 78.98 331 *eP* P 05 51 07.9 -3.1
CKRC Cesky Krumlov 78.98 331 *eP* P 05 51 07.9 -3.1
MNTX Cornudas Mount 79.15 56 P P 05 51 12.6 +0.4
baz=316
GERES GERESS Array B 79.17 331 P P 05 51 11.0 -1.1
comp=Z,0.9nm,0.5s,baz=43,slow=5.9,SNR=2.5
comp=Z,0.9nm,0.5s
CONA Conrad Observa 79.18 330 *eP* P 05 51 12.1 -0.1
comp=Z,0.7nm,0.4s
RONA Rosalia, Austr 79.21 329 *i* P P 05 51 12.3 0.0
comp=Z,0.8nm,0.3s
MOA Molln 79.82 330 *eP* P 05 51 15.1 -0.4
comp=Z,0.9nm,0.4s
BMRD Maredsous 80.69 337 *dP* P 05 51 20.5 +0.4
LESA Schwarzleotal 80.74 331 *eP* P 05 51 20.9 +0.3
comp=Z,1.0nm,0.3s
WMOK Wichita Mounta 80.76 50 P P 05 51 20.9 +0.1
baz=318
KBA Koelnbreinsper 80.81 331 *eP* P 05 51 21.3 +0.3
comp=Z,1.2nm,0.3s
OBKA Obir 80.86 330 *eP* P 05 51 20.4 -0.8
comp=Z,1.6nm,0.4s
HDIL Hopedale 81.17 41 P P 05 51 22.9 0.0
baz=322
WTTA Wattenberg 81.24 332 *i* P P 05 51 23.3 0.0
comp=Z,2.2nm,0.4s
RETA Reutte 81.34 332 *eP* P 05 51 23.6 -0.2
comp=Z,1.3nm,0.5s
MOTA Moosalm 81.35 332 *eP* P 05 51 24.0 +0.1
comp=Z,2.8nm,0.6s
SQTA Sankt Quirin 81.42 332 *eP* P 05 51 24.4 +0.2
comp=Z,1.2nm,0.4s
TUL3 Leonard 81.50 47 P P 05 51 24.8 +0.1
baz=319
FETA Feichten 81.76 332 *eP* P 05 51 25.4 -0.7
comp=Z,3.1nm,0.8s
MMAI Mount Meron Ar 81.80 308 P P 05 51 27.1 +0.6
comp=Z,0.7nm,0.3s,baz=40,slow=6.8,SNR=6.0
comp=Z,0.7nm,0.3s
TX31 Lajitas Ar. Si 81.87 57 IAmb IAmb 05 51 28.5
comp=Z,4.4nm,0.9s
TXAR Lajitas Array 81.87 57 P P 05 51 27.5 +0.6
comp=Z,3.1nm,0.7s,baz=298,slow=3.8,SNR=46
comp=Z,3.1nm,0.7s
CCM Cathedral Cave 82.19 43 P P 05 51 27.9 -0.4
CCM IAmb IAmb 05 51 28.9
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 82.19 43 P P 05 51 28.1 -0.2
baz=321
CCM Cathedral Cave 82.19 43 P P 05 51 27.9 -0.4
CCM pmax pmax
comp=Z,5.0nm,0.8s
SFIN Lafayette 82.32 39 P P 05 51 28.7 -0.3
baz=324
P46A Rosedale 82.88 40 IAmb IAmb 05 51 32.7
comp=Z,8.8nm,0.7s
O48B Farmland 83.29 38 P P 05 51 33.9 -0.1
baz=325
FCAR Ozark Folk Cen 83.43 45 IAmb IAmb 05 52 15.9
comp=Z,4.5nm,0.4s
PPT Papeete 83.62 122 LR LR 06 31 49.9
comp=Z,48nm,18.4s,baz=258,slow=38
DRIO Del Rio 83.63 55 IAmb IAmb 05 51 37.2
comp=Z,5.2nm,0.8s
MIAR Mount Ida 83.71 47 P P 05 51 36.4 +0.2
baz=320
P49A Miami Univ. Ec 84.08 38 P P 05 51 38.0 0.0
baz=325
ACSO Alum Creek Sta 84.27 37 P P 05 51 39.0 0.0
baz=326
WCI Wyandotte Cave 84.42 40 P P 05 51 40.2 +0.4
baz=324
WVT Waverly 85.38 42 P P 05 51 44.5 -0.1
baz=323
BLA Blacksburg 87.89 37 P P 05 51 56.8 -0.1
baz=327
LRAL Lakeview Retre 88.27 44 P P 05 51 58.6 -0.1
baz=324
KMSC Kings Mountain 89.22 39 P P 05 52 02.7 -0.5
baz=327
H03N2 Juan Fernandez 142.28 90 T T 08 37 33.3
baz=304,slow=77,SNR=23
H03N3 Juan Fernandez 142.29 90 T T 08 37 35.2
baz=304,slow=77,SNR=21
H03N1 Juan Fernandez 142.29 90 T T 08 37 33.9
baz=304,slow=77,SNR=23
BDFB Brasilia 148.49 31 PKPbc PKPbc 05 58 54.6 +0.4
comp=Z,1.8nm,0.7s,baz=275,slow=1.1,SNR=3.5

IDC 07 05:41:27.2±2.9, 54.03N×86.55E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=24.0km s-min=14.3km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**266**	I	I	05 47 20.0	
	baz=85,slow=348,SNR=9.2						
ZALV	**Zalesovo Beam**	**1.03**	**266**	Pg	Pg	05 41 45.8	-1.0
	0.5nm,0.3s,baz=86,slow=19,SNR=6.8						
ZALV				Lg	Lg	05 42 01.2	
	1.1nm,0.3s,baz=84,slow=28,SNR=8.0						
ZALV				Rg	Rg	05 42 08.3	
	13nm,1.0s,baz=85,slow=33,SNR=12						
KURBB	**Kurchatov Arra**	**5.98**	**238**	Pn	Pn	05 42 58.5	+1.6
	0.1nm,0.3s,baz=56,slow=13,SNR=1.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.74**	**202**	Pn	Pn	05 43 21.7	+0.7
	0.1nm,0.3s,baz=25,slow=13,SNR=5.4						
	0.1nm,0.2s						

*IDC **07** 05:52:46.2±2.1, 7.88N×83.23W, h0km, mb3.4/5, mbtmp3.7/7, ML4.4/3, MS3.5/4, Error ellipse: s-maj=54.1km s-min=30.9km az=32.0*
*CATAC **07** 05:52:47.2±0.4, 7.99N×83.00W, h5km, MB5.0, mb4.9, ML4.5*
*UCR **07** 05:52:47.9±0.7, 8.08N×82.91W, h13km±3km, MW4.6*
*UPA **07** 05:52:48.6±1.6, 8.19N×82.98W, h7km±3km, MW4.3*
ISC 07 05:52:48.9±0.9, 8.11N±0.04×82.94W±0.02, h15km±5km, n137,σ1°38/162, mb3.4/5, 6C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIMO3	**Limones**	**0.07**	**99**	*eP*	**Pg**	**05 52 51.6**	**-0.2**
PTPM	**Petroterminale**	**0.11**	**32**	*eP*	**Pg**	**05 52 51.8**	**-0.5**
PTPM				*eS*	**Sb**	**05 52 55.0**	**-0.2**
CDITO	**Canoas**	**0.46**	**8**	*eP*	**Pg**	**05 52 57.3**	**-0.9**
CDITO	**Canoas**	**0.46**	**8**	*i*|P	**Pg**	**05 52 57.2**	**-0.9**
CDITO	**Canoas**	**0.46**	**8**	*i* P	**Pg**	**05 52 57.7**	**-0.4**
CDITO				IAML		05 53 14.6	
	comp=Z,16μm,1.0s						
PIRO	**Carate, Puerto**	**0.49**	**306**	⇑P	**Pg**	**05 52 57.8**	**-0.8**
PIRO	**Carate, Puerto**	**0.49**	**306**	*i* P	**Pg**	**05 52 57.8**	**-0.8**
PIRO				IAML		05 53 14.2	
	comp=Z,13μm,1.0s						
FITO	**Golfito**	**0.55**	**337**	*eP*	**Pg**	**05 52 58.4**	**-1.4**
PTJ1	**Puerto Jimnez**	**0.56**	**319**	⇑*i*P	**Pg**	**05 52 59.5**	**-0.3**
JIME	**Puerto Jimenez**	**0.57**	**318**	⇑*i*P	**Pg**	**05 52 59.7**	**-0.5**
PEDE3	**Pedregal, Chir**	**0.57**	**62**	*eP*	**Pg**	**05 52 59.3**	**-1.0**
DVD	**David**	**0.58**	**56**	*eP*	**Pg**	**05 52 59.5**	**-0.7**
DVD				*eS*	**Sg**	**05 53 08.1**	**+0.1**
EDAD	**Golfito**	**0.58**	**337**	*eP*	**Pg**	**05 52 58.9**	**-1.5**
MLIR3	**Monte Lirio, C**	**0.69**	**9**	*eP*	**Pg**	**05 53 01.8**	**-0.5**
VITO	**San Vito**	**0.70**	**357**	*eP*	**Pg**	**05 53 01.4**	**-1.2**
BRU2	**Volcan**	**0.72**	**20**	*eP*	**Pg**	**05 53 02.0**	**-0.9**
BRU2				*eS*	**Sb**	**05 53 13.3**	**+0.2**
BRU2	**Volcan**	**0.72**	**20**	*i*|P	**Pg**	**05 53 02.1**	**-0.9**
BRU2	**Volcan**	**0.72**	**20**	*i* P	**Pg**	**05 53 02.5**	**-0.5**
BRU2				IAML		05 53 19.2	
	comp=Z,10μm,1.0s						
PTAR3	**Potrerillos Ar**	**0.72**	**37**	*eP*	**Pg**	**05 53 02.3**	**-0.7**
BCO2	**Palmira**	**0.72**	**34**	*eP*	**Pg**	**05 53 02.5**	**-0.6**
BCO2				*eS*	**Sb**	**05 53 14.2**	**+1.0**
BC3P	**Paso Ancho**	**0.77**	**25**	*eP*	**Pg**	**05 53 02.7**	**-1.2**
PLAN	**Los Planes de**	**0.92**	**307**	*i* P	**Pb**	**05 53 05.1**	**-1.5**
PLAN				*i* S	**Sg**	**05 53 18.8**	**-0.1**
PLAN				IAML		05 53 22.4	
	comp=Z,18μm,1.0s						
POTG	**Potrero Grande**	**0.95**	**349**	*eP*	**Pb**	**05 53 05.8**	**-1.4**
POTG	**Potrero Grande**	**0.95**	**349**	*i* P	**Pb**	**05 53 06.3**	**-0.9**
POTG				*i* S	**Sg**	**05 53 20.0**	**+0.2**
POTG				IAML		05 53 27.5	
	comp=Z,14μm,1.0s						
EDPN	**Palmar Norte**	**0.99**	**329**	⇑*i*P	**Pb**	**05 53 06.2**	**-1.6**
EDBA	**Buenos Aires**	**1.10**	**342**	*eP*	**Pb**	**05 53 08.6**	**-1.1**
BURE	**Buenos Aires**	**1.13**	**339**	*eP*	**Pb**	**05 53 08.7**	**-1.4**
CHGR2	**Aguacate**	**1.13**	**44**	*eP*	**Pb**	**05 53 08.2**	**-2.1**
CHGR2				*eS*	**Sb**	**05 53 24.4**	**-0.4**
DRK0	**Durika**	**1.18**	**345**	*eP*	**Pn**	**05 53 09.3**	**-1.8**
NANC3	**Nancito, Chiri**	**1.20**	**84**	*eP*	**Pb**	**05 53 11.7**	**+0.3**
OCHAL	**Ojochal**	**1.20**	**324**	*i* P	**Pb**	**05 53 11.3**	**-0.2**
OCHAL				IAML		05 53 31.5	
	comp=Z,40nm,1.0s						
CNI2	**El Empalme, Bo**	**1.38**	**19**	*eP*	**Pn**	**05 53 13.0**	**-0.7**
CNI2				*eS*	**Sn**	**05 53 29.8**	**-1.9**
PEZE	**Perez Zeledon,**	**1.46**	**330**	*eP*	**Pn**	**05 53 13.7**	**-1.2**
PEZE				⇑*i*P	**Pb**	**05 53 13.8**	**-2.1**
PEZE	**Perez Zeledon,**	**1.46**	**330**	*i* P	**Pn**	**05 53 14.2**	**-0.7**
PEZE				*i* S	**Sg**	**05 53 36.8**	**+0.8**
PEZE				IAML		05 53 43.7	
	comp=Z,2μm,1.0s						
ZELE	**Perez Zeledon**	**1.47**	**329**	*eP*	**Pn**	**05 53 14.5**	**-0.5**
RGM0	**Gandoca**	**1.50**	**12**	⇓*i*P	**Pn**	**05 53 15.7**	**+0.3**
RGM0	**Gandoca**	**1.50**	**12**	*i* P	**Pb**	**05 53 16.5**	**-0.1**
RGM0				*i* S	**Sg**	**05 53 39.8**	**+2.4**
RGM0				IAML		05 53 54.3	
	comp=Z,3μm,1.0s						
BUS1	**Rivas**	**1.64**	**331**	*eP*	**Pn**	**05 53 16.7**	**-0.9**
CDM	**Cerro de Muert**	**1.65**	**330**	*eP*	**Pn**	**05 53 16.7**	**-1.1**
CDM	**Cerro de Muert**	**1.65**	**330**	*i* P	**Pn**	**05 53 17.2**	**-0.6**
CDM				*i* S	**Sb**	**05 53 40.6**	**+0.5**
CDM				IAML		05 53 42.9	
	comp=Z,2μm,1.0s						
GMAL	**Guarumal, Vera**	**1.72**	**102**	*eP*	**Pn**	**05 53 18.8**	**+0.4**
GMAL	**Guarumal, Vera**	**1.72**	**102**	*eP*	**Pn**	**05 53 16.5**	**-1.8**
MESA3	**La Mesa, Verag**	**1.73**	**89**	*eP*	**Pn**	**05 53 19.2**	**+0.7**
LLNJ	**Naranjito**	**1.78**	**320**	*eP*	**Pn**	**05 53 18.4**	**-0.8**
SVQ2	**Quepos**	**1.79**	**317**	*eP*	**Pn**	**05 53 18.6**	**-0.6**
RAZU	**San Marcos de**	**1.88**	**325**	⇑*eP*	**Pb**	**05 53 22.2**	**-0.8**
SAFE3	**Santa Fe, Vera**	**1.88**	**78**	*eP*	**Pn**	**05 53 20.7**	**+0.1**
SAFE3				*eS*	**Sb**	**05 53 46.7**	**+0.3**
TURIB	**Turrialba**	**1.93**	**337**	*eP*	**Pn**	**05 53 21.1**	**-0.3**
LCR2	**La Lucha 2**	**1.93**	**327**	⇓*eP*	**Pn**	**05 53 20.8**	**-0.6**
LCR2	**La Lucha 2**	**1.93**	**327**	*i* P	**Pn**	**05 53 21.5**	**0.0**
LCR2				IAML		05 53 23.0	
	comp=Z,3μm,1.0s						
LCR2				*i* S	**Sb**	**05 53 48.2**	**+0.1**
REPA	**Paraso**	**1.94**	**332**	*eP*	**Pn**	**05 53 22.4**	**+0.9**
STIA3	**Santiago, Vera**	**1.94**	**90**	*eP*	**Pn**	**05 53 22.0**	**+0.5**
STIA3				*eS*	**Sb**	**05 53 49.2**	**+1.1**
VTCV	**VTCV, Calle Va**	**2.02**	**337**	*i* P	**Pn**	**05 53 22.9**	**+0.3**
VTCV				*i* S	**Sb**	**05 53 51.3**	**+0.8**
OCM	**Ochomogo**	**2.04**	**330**	*i* P	**Pn**	**05 53 23.4**	**+0.4**
OCM				IAML		05 53 24.9	
	comp=Z,1μm,1.0s						
OCM				*i* S	**Sb**	**05 53 51.3**	**+0.2**
VTRT	**Volcan Turrial**	**2.06**	**336**	*i* P	**Pn**	**05 53 24.5**	**+1.2**
VTRT				IAML		05 54 13.2	
	comp=Z,3μm,1.0s						
HAYA	**Volcan Irazu**	**2.06**	**334**	*i* P	**Pn**	**05 53 23.9**	**+0.5**
HAYA				IAML		05 53 31.8	
	comp=Z,4μm,1.0s						
VIRE	**VIRE**	**2.07**	**333**	*i* P	**Pn**	**05 53 23.9**	**+0.3**
VIRE				IAML		05 53 28.0	
	comp=Z,3μm,1.0s						
VIRE				*i* S	**Sb**	**05 53 52.1**	**-0.2**
CACAO	**El Cacao, Vera**	**2.19**	**110**	*eP*	**Pn**	**05 53 26.3**	**+1.5**
CACAO	**El Cacao, Vera**	**2.19**	**110**	*eP*	**Pn**	**05 53 24.4**	**-0.5**
HDC	**Heredia**	**2.21**	**328**	*i* P	**Pn**	**05 53 25.8**	**+0.6**
HDC				*i* S	**Sb**	**05 53 54.9**	**-1.0**
HDC				IAML		05 54 13.7	
	comp=Z,3μm,1.0s						
HDC3	**Heredia 3**	**2.21**	**328**	*i* P	**Pn**	**05 53 25.8**	**+0.6**
HDC3				*i* S	**Sb**	**05 53 55.0**	**-0.9**
HDC3				IAML		05 54 13.7	
	comp=Z,3μm,1.0s						
JACO	**JACO, Garabito**	**2.30**	**312**	*i* P	**Pn**	**05 53 25.1**	**-1.2**
JACO				IAML		05 53 30.0	
	comp=Z,1μm,1.0s						
PESE3	**Pese, Herrera**	**2.31**	**95**	*eP*	**Pn**	**05 53 27.1**	**+0.6**
TCS1	**Tacares**	**2.34**	**325**	*i* P	**Pn**	**05 53 28.4**	**+1.4**
TCS1				IAML		05 54 10.1	
	comp=Z,15μm,1.0s						
RIFO	**Rio Frio, Sara**	**2.40**	**336**	*i* P	**Pn**	**05 53 28.6**	**+0.9**
RIFO				*i* S	**Sb**	**05 54 00.5**	**-0.7**
RIFO				IAML		05 54 20.1	
	comp=Z,1μm,1.0s						
CHIT3	**Chitre**	**2.50**	**93**	*eP*	**Pn**	**05 53 30.0**	**+1.0**
CHIT3				*eS*	**Sn**	**05 54 01.1**	**+1.8**
LAFE	**Finca La Fe, P**	**2.58**	**311**	*i* P	**Pn**	**05 53 29.6**	**-0.6**
LAFE				IAML		05 54 28.6	
	comp=Z,6.6nm,1.0s						
TRT1	**Tortuguero**	**2.58**	**343**	*i* P	**Pn**	**05 53 31.7**	**+1.5**
CPMI	**Catarata Coope**	**2.58**	**327**	*i* P	**Pn**	**05 53 31.5**	**+1.0**
CPMI				IAML		05 54 15.4	
	comp=Z,770nm,1.0s						
PNME	**Penonome**	**2.61**	**82**	*eP*	**Pn**	**05 53 30.9**	**+0.3**
PNME	**Penonome**	**2.61**	**82**	*eP*	**Pn**	**05 53 30.8**	**+0.2**
AZU	**Azuero**	**2.66**	**97**	*eP*	**Pn**	**05 53 31.8**	**+0.6**
AZU				*eS*	**Sn**	**05 54 05.2**	**+2.0**
AZU	**Azuero**	**2.66**	**97**	*eP*	**Pn**	**05 53 32.4**	**+1.1**
SOCE	**Pocosol**	**2.80**	**324**	*i* P	**Pn**	**05 53 34.5**	**+1.2**
SOCE				IAML		05 53 36.9	
	comp=Z,3μm,1.0s						
ACHO3	**Achotines, Los**	**2.82**	**104**	*eP*	**Pn**	**05 53 34.4**	**+0.8**
JTS	**Las Juntas de**	**2.94**	**318**	*eP*	**Pn**	**05 53 34.9**	**-0.3**
JTS	**Las Juntas de**	**2.94**	**318**	Pn	**Pn**	**05 53 34.9**	**-0.3**
	comp=Z,233nm,0.3s,baz=200,slow=3.1,SNR=535						
JTS				Sn	**Sn**	**05 54 09.7**	**-0.6**
	comp=Z,16nm,0.3s,baz=282,slow=13,SNR=3.8						
JTS	**Las Juntas de**	**2.94**	**318**	*eP*	**Pn**	**05 53 34.7**	**-0.5**
COVE	**Coope Vega, Sa**	**2.97**	**331**	*i* P	**Pn**	**05 53 36.0**	**+0.5**
COVE				IAML		05 54 58.1	
	comp=Z,900nm,1.0s						
INDI	**Punta Indio, G**	**3.08**	**305**	*i* P	**Pn**	**05 53 35.8**	**-1.2**
INDI				IAML		05 54 46.8	
	comp=Z,670nm,1.0s						
ZANG	**Zanguenga, Cho**	**3.15**	**74**	*eP*	**Pn**	**05 53 41.0**	**+3.0**
ZANG				*eS*	**Sn**	**05 54 15.8**	**+0.4**
DUNO	**Dulce Nombre,**	**3.19**	**308**	*i* P	**Pn**	**05 53 38.4**	**-0.3**
DUNO				IAML		05 53 40.3	
	comp=Z,630nm,1.0s						
DUNO	**Dulce Nombre,**	**3.19**	**308**	*i* P	**Sn**	**05 54 15.2**	**-1.3**
DUNO				IAML		05 54 20.7	
	comp=Z,460nm,1.0s						
BCIP	**Isla Barro Col**	**3.24**	**71**	*eP*	**Pn**	**05 53 39.2**	**0.0**
BCIP	**Isla Barro Col**	**3.24**	**71**	*eP*	**Pn**	**05 53 40.2**	**+1.0**
BCIP	**Isla Barro Col**	**3.24**	**71**	*i* P	**Pn**	**05 53 40.6**	**+1.4**
BCIP				*i* S	**Sb**	**05 54 21.9**	**-3.5**
BCIP				IAML		05 54 44.8	
	comp=Z,460nm,1.0s						
ORTG	**Ortega, Santa**	**3.35**	**312**	*i* P	**Pn**	**05 53 41.2**	**+0.4**
ORTG				IAML		05 53 41.6	
	comp=Z,530nm,1.0s						
SAJU	**San Juanillo,**	**3.36**	**306**	*i* P	**Pn**	**05 53 40.2**	**-0.7**
SAJU				IAML		05 53 40.7	
	comp=Z,410nm,1.0s						
UPA	**Univ. de Panam**	**3.47**	**75**	*eP*	**Pn**	**05 53 42.9**	**+0.4**
UPA	**Univ. de Panam**	**3.47**	**75**	*eP*	**Pb**	**05 53 46.5**	**-3.6**
HZTE	**Horizontes, Gu**	**3.68**	**315**	*i* P	**Pn**	**05 53 46.7**	**+1.3**
HZTE				IAML		05 54 00.9	
	comp=Z,540nm,1.0s						
HZTE				*i* S	**Sn**	**05 54 30.7**	**+2.1**
BLUN	**Bluefields**	**3.96**	**348**	*i* P	**Pn**	**05 53 50.1**	**+1.0**
BLUN				IAML		05 53 50.5	
	comp=Z,440nm,1.0s						
ACON	**Acoyapa**	**4.42**	**330**	*eP*	**Pn**	**05 53 56.0**	**+0.5**
TOTI	**Torti**	**4.65**	**80**	*eP*	**Pn**	**05 54 01.0**	**+2.3**
TOTI				*eS*	**Sg**	**05 55 15.1**	**-3.1**
UPD2	**Meteti**	**4.89**	**85**	*eP*	**Pn**	**05 54 03.1**	**+1.1**
UPD2	**Meteti**	**4.89**	**85**	*eP*	**Pn**	**05 53 59.1**	**-2.9**
NANN	**Nandasmo**	**4.93**	**321**	*i* P	**Pn**	**05 54 04.0**	**+1.5**
NANN	**Nandasmo**	**4.93**	**321**	*i* P	**Pn**	**05 54 05.7**	**+3.2**
BOAB	**BOACO BROADBAN**	**5.08**	**328**	*i* P	**Pn**	**05 54 05.2**	**+0.6**
BOAB				IAML		05 54 13.4	
	comp=Z,160nm,1.0s						
BOAB				IAmb	IAmb	05 54 13.5	
	comp=Z,130nm,0.9s						
BOAB				IVmB_BB		05 54 20.2	
	comp=Z,2μm,1.0s						
BOAB	**BOACO BROADBAN**	**5.08**	**328**	*i* P	**Pn**	**05 54 06.3**	**+1.7**
BOAB				IAML		05 54 13.4	
	comp=Z,160nm,1.0s						
MSHP	**Masachapa**	**5.12**	**316**	*i* P	**Pn**	**05 54 07.6**	**+2.5**
MSHP				IAML		05 54 08.1	
	comp=Z,45nm,1.0s						
PTAC	**Punta Ardita,**	**5.17**	**100**	*eP*	**Pn**	**05 54 06.8**	**+0.9**
SAPS	**Ciudad Sandino**	**5.28**	**320**	*i* P	**Pn**	**05 54 09.3**	**+1.9**
COPN	**Copaltepe**	**5.41**	**319**	*i* P	**Pn**	**05 54 10.6**	**+1.4**
MACN	**El Madrono**	**5.68**	**320**	*i* P	**Pn**	**05 54 10.0**	**-2.9**
MACN				IAML		05 54 15.5	
	comp=Z,100nm,1.0s						
CNGN	**Cerro Negro**	**5.72**	**320**	*eP*	**Pn**	**05 54 14.0**	**+0.6**
PACN	**Al O del Volca**	**5.78**	**319**	*i* P	**Pn**	**05 54 16.3**	**+2.1**
SOLC	**Bahia Solano**	**5.79**	**109**	*eP*	**Pn**	**05 54 13.3**	**-1.1**
LIMN	**Finca el Limon**	**5.96**	**326**	*i* P	**Pn**	**05 54 18.6**	**+1.8**
CRIN	**San Cristobal**	**6.09**	**319**	*eP*	**Pn**	**05 54 18.7**	**0.0**
CSGN	**Cosiguina Volc**	**6.63**	**317**	*i* P	**Pn**	**05 54 27.5**	**+1.5**
DBBC	**Dabeiba**	**6.76**	**99**	*eP*	**Pn**	**05 54

comp=Z,3.7nm,0.7s
ATAH Atahualpa 15.81 163 LR LR 06 01 55.9
PCRV Puerto La Cruz 18.18 82 LR LR 06 05 53.5
comp=Z,172nm,18.3s,slow=42
SJG San Juan 19.11 57 P **Pn** **05 57 15.8 +3.5**
comp=Z,1.6nm,0.3s,baz=332,slow=5.3,SNR=3.9
SJG LR LR 06 04 02.0
comp=Z,109nm,19.5s,baz=225,slow=35
comp=Z,17nm,0.8s
TXAR Lajitas Array 28.73 320 P **P** **05 58 47.0 +0.9**
comp=Z,0.2nm,0.7s,baz=145,slow=9.8,SNR=2.4
comp=Z,0.2nm,0.7s
PDAR Pinedale Array 41.70 330 P **P** **06 00 36.8 -0.7**
comp=Z,0.1nm,0.5s,baz=123,slow=6.6,SNR=2.3
comp=Z,0.1nm,0.5s
ULM Lac du Bonnet 43.37 348 P **P** **06 00 51.7 +1.1**
comp=Z,1.6nm,0.5s,baz=173,slow=7.7,SNR=5.5
comp=Z,1.6nm,0.5s
FRB Frobisher Bay 56.49 8 LR LR 06 25 37.4
comp=Z,106nm,18.5s,baz=153,slow=35
YKA Yellowknife Ar 58.97 343 P **P** **06 02 47.6 0.0**
comp=Z,0.4nm,0.9s,baz=133,slow=7.2,SNR=6.9
comp=Z,0.4nm,0.9s
ILAR Eielson Array 71.76 336 P **P** **06 04 09.4 -1.0**
comp=Z,0.3nm,0.8s,baz=99,slow=2.9,SNR=3.7
comp=Z,0.3nm,0.8s
KSRS Korea Array 126.26 330 PKP **PKiKP** **06 11 52.2 +0.3**
comp=Z,1.9nm,1.1s,baz=59,slow=4.7,SNR=4.1
ASAR Alice Springs 141.49 242 PKP **PKPdf** **06 12 18.7 -1.7**
comp=Z,0.3nm,0.6s,baz=108,slow=3.0,SNR=4.6
WRA Warramunga Arr 142.07 248 PKP **PKPdf** **06 12 17.8 -3.7**
comp=Z,0.6nm,0.7s,baz=110,slow=2.5,SNR=2.9

*IDC **07** 05:54:48.1±1.7, 13°.85S×65°.98E, h0km, mb4.3/8, mbtmp4.3/8, MS3.9/33, Error ellipse: s-maj=55.8km s-min=25.3km az=59.0*
*GCMT **07** 05:54:54.0±0.3, 13°.66S±0°.02×66°.04E±0°.02, h17km±1km, MW4.8/101, Moment Tensor Solution. s13,c14; s101,c125; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.11±.10; Mθθ=1.97±.09; Mϕϕ=2.08±.10; Mrθ=0.46±.23; Mθϕ=0.86±.08; Mϕr=0.58±.24; Best double couple: M=2.32200×10^16 NP1:ϕs=147.00000°, δ=88.00000°, λ=-161.00000°. NP2:ϕs=56.00000°, δ=71.00000°, λ=-3.00000°. Principal axes: T 2.3490, Plg=11.0000°, Azm=280.0000°; N -0.0560, Plg=71.0000°, Azm=154.0000°; P -2.2940, Plg=15.0000°, Azm=13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 07 05:54:49.1±1.8, 13°.9S±0°.3×65°.7E±0°.3, h10km, n46, s=1.9s=65°/13, mb4.4/9, MS3.9/34, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.12**	**47**	T		T		06 05 37.9	
	baz=226,slow=75,SNR=672								
H08S2	**Diego Garcia H**	**9.13**	**47**	T		T		06 05 43.8	
	baz=226,slow=75,SNR=1005								
H08S3	**Diego Garcia H**	**9.14**	**47**	T		T		06 05 44.1	
	baz=226,slow=75,SNR=947								
PALK	**Pallekele**	**25.80**	**36**	LR		LR		06 08 12.3	
	comp=Z,193nm,19.5s,baz=316,slow=32								
ATD	**Arta Tunnel**	**33.98**	**317**	LR		LR		06 13 32.9	
	comp=Z,7.1nm,20.2s,baz=99,slow=33								
H04N2	**CROZET ISLANDS**	**34.20**	**197**	T		T		06 38 12.1	
	baz=25,slow=75,SNR=134								
H04N1	**CROZET ISLANDS**	**34.20**	**197**	T		T		06 38 13.9	
	baz=25,slow=75,SNR=104								
H04N3	**CROZET ISLANDS**	**34.21**	**197**	T		T		06 38 11.9	
	baz=25,slow=75,SNR=110								
LSZ	**Lusaka**	**36.31**	**263**	LR		LR		06 15 31.3	
	comp=Z,224nm,19.3s,baz=132,slow=34								
MBAR	**Mbarara**	**37.06**	**288**	LR		LR		06 15 46.6	
	comp=Z,193nm,18.1s,baz=86,slow=34								
LBTB	**Lobatse**	**39.26**	**247**	LR		LR		06 17 18.2	
	comp=Z,149nm,18.1s,baz=86,slow=34								
BOSA	**Boshof**	**40.22**	**242**	LR		LR		06 16 46.9	
	comp=Z,111nm,19.3s,baz=80,slow=33								
SUR	**Sutherland**	**44.81**	**238**	LR		LR		06 17 56.3	
	comp=Z,124nm,19.4s,baz=83,slow=31								
CMAR	**Chiang Mai Arr**	**45.93**	**46**	P		**P**		**06 03 12.0**	**-0.5**
	0.9nm,0.3s,baz=244,slow=10,SNR=5.1								
CMAR				LR		LR		06 20 58.8	
	comp=Z,42nm,18.6s,baz=240,slow=34								
	0.9nm,0.3s								
TSUM	**Tsumeb**	**46.31**	**257**	LR		LR		06 22 25.1	
	comp=Z,225nm,18.1s,baz=140,slow=36								
NWAO	**Narrogin (SRO)**	**50.39**	**121**	LR		LR		06 19 58.6	
	comp=Z,102nm,21.7s,baz=128,slow=30								
GEYT	**Alibeck**	**52.08**	**352**	LR		LR		06 22 57.8	
	comp=Z,81nm,21.2s,baz=20,slow=32								
MAW	**Mawson**	**53.65**	**181**	LR		LR		06 21 53.4	
	comp=Z,76nm,20.3s,baz=360,slow=30								
MMAI	**Mount Meron Ar**	**54.94**	**329**	LR		LR		06 26 14.6	
	comp=Z,96nm,18.5s,baz=132,slow=34								
AAK	**Ala-Archa**	**56.87**	**8**	LR		LR		06 27 07.9	
	comp=Z,140nm,18.2s,baz=188,slow=34								
MKAR	**Makanchi Array**	**62.26**	**13**	P		**P**		**06 05 10.3**	**-0.9**
	2.1nm,0.8s,baz=205,slow=8.0,SNR=16								
MKAR				LR		LR		06 29 04.0	
	comp=Z,183nm,18.7s,baz=242,slow=33								
	2.1nm,0.8s								
DAV	**Davao City (W)**	**62.97**	**75**	LR		LR		06 30 03.6	
	comp=Z,56nm,20.9s,baz=130,slow=34								
ASAR	**Alice Springs**	**64.77**	**110**	P		**P**		**06 05 26.8**	**-1.6**
	0.8nm,0.6s,baz=268,slow=5.8,SNR=8.3								
ASAR				LR		LR		06 31 03.1	
	comp=Z,140nm,18.1s,baz=266,slow=34								
	0.8nm,0.6s								
KURBB	**Kurchatov Arra**	**65.26**	**9**	P		**P**		**06 05 30.0**	**-0.9**
	1.1nm,0.2s,baz=205,slow=6.8,SNR=6.0								
	1.1nm,0.2s								
WRA	**Warramunga Arr**	**65.54**	**106**	P		**P**		**06 05 32.5**	**-0.9**
	2.9nm,0.9s,baz=270,slow=6.0,SNR=7.3								
	2.9nm,0.9s								
BVAR	**Borovoye Array**	**66.81**	**3**	P		**P**		**06 05 40.5**	**-0.3**
	3.7nm,0.8s,baz=162,slow=5.9,SNR=11								
BVAR				LR		LR		06 33 01.5	
	comp=Z,83nm,18.1s,baz=207,slow=34								
	3.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**68.89**	**290**	LR		LR		06 33 05.5	
	comp=Z,73nm,19.7s,baz=143,slow=33								
ZALV	**Zalesovo Beam**	**69.56**	**12**	P		**P**		**06 05 57.2**	**-0.8**
	3.2nm,0.7s,baz=207,slow=5.6,SNR=16								
ZALV				LR		LR		06 33 25.9	
	comp=Z,113nm,20.6s,baz=254,slow=33								
	3.2nm,0.7s								
STKA	**Stephens Creek**	**70.90**	**119**	LR		LR		06 32 25.9	
	comp=Z,124nm,20.7s,baz=214,slow=32								
SONM	**Songino Array**	**71.39**	**28**	P		**P**		**06 06 09.6**	**0.0**
	2.4nm,0.8s,baz=214,slow=6.7,SNR=16								
	2.4nm,0.8s								
KEST	**Kesra**	**72.64**	**315**	LR		LR		06 38 52.2	
	comp=Z,98nm,19.1s,baz=296,slow=36								
DBIC	**Dimbokro**	**72.95**	**282**	LR		LR		06 38 28.0	
	comp=Z,60nm,18.0s,baz=126,slow=36								
CTA	**Charters Tower**	**76.60**	**108**	LR		LR		06 38 09.8	
	comp=Z,124nm,19.5s,baz=264,slow=34								
KSRS	**Korea Array**	**77.57**	**46**	P		**P**		**06 06 49.1**	**+3.6**
	1.0nm,0.6s,baz=267,slow=6.0,SNR=4.1								
KSRS				LR		LR		06 41 08.3	
	comp=Z,34nm,18.8s,baz=10.0,slow=36								
GERES	**GERESS Array B**	**77.58**	**328**	LR		LR		06 43 58.9	
	comp=Z,128nm,18.2s,baz=308,slow=38								
VNDA	**Vanda**	**77.82**	**167**	LR		LR		06 36 20.0	
	comp=Z,77nm,18.6s,baz=231,slow=32								
PMG	**Port Moresby**	**79.55**	**97**	LR		LR		06 38 16.0	
	comp=Z,59nm,19.7s,baz=218,slow=33								
GUMO	**Guam**	**83.01**	**74**	LR		LR		06 40 50.6	
	comp=Z,21nm,20.3s,baz=161,slow=33								
NRIK	**Noril'sk**	**84.49**	**8**	LR		LR		06 43 57.2	
	comp=Z,88nm,19.7s,baz=327,slow=35								
KLR	**Kul'dur**	**85.54**	**37**	LR		LR		06 46 35.8	
	comp=Z,54nm,19.3s,baz=326,slow=36								
RPZ	**Rata Peaks**	**91.23**	**136**	LR		LR		06 40 33.9	
	comp=Z,57nm,20.2s,baz=300,slow=30								
DZM	**Mont Dzumac**	**94.49**	**114**	LR		LR		06 48 38.5	
	comp=Z,78nm,19.2s,baz=64,slow=34								
TIXI	**Tiksi**	**95.06**	**16**	LR		LR		06 50 31.3	
	comp=Z,123nm,20.9s,baz=195,slow=35								
ILAR	**Eielson Array**	**124.53**	**16**	PKP		**PKPdf**		**06 13 49.2**	**+0.9**
	0.4nm,0.8s,baz=274,slow=3.1,SNR=4.1								
YKA	**Yellowknife Ar**	**131.51**	**0**	PKP		**PKiKP**		**06 14 04.2**	**+1.5**
	0.2nm,0.7s,baz=338,slow=1.8,SNR=4.5								
YKA				PP		**PP**		**06 16 17.8**	**-2.3**
	0.2nm,0.6s,baz=359,slow=6.8,SNR=3.9								

PDAR Pinedale Array 150.99 353 PKPbc **PKPbc** **06 14 42.5 -0.4**
0.9nm,0.6s,baz=85,slow=1.9,SNR=9.1

*UPP **07** 05:54:53.6±0.0, 67°.85N×20°.22E, h0km, ML2.0, Confirmed Induced event*
*IDC **07** 05:54:54.8±1.1, 67°.83N×20°.73E, h0km, mbtmp3.3/4, ML2.4/4, Error ellipse: s-maj=16.1km s-min=7.4km az=113.0*
*HEL **07** 05:54:54.3±0.1, 67°.85N×20°.20E, h1km, ML2.0, ML2.0(UPP), Confirmed Induced event*
*BER **07** 05:54:56.8±1.9, 67°.88N×20°.38E, h0km±17km, ML2.3, Confirmed Induced event*
ISC 07 05:54:53.4±0.7, 67°.83N±0°.02×20°.28E±0°.02, h0km, n37, s=0.971/51, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**10**	P		**Pg**		**05 54 56.1**	**+0.3**
KUA				S		**Sg**		**05 54 57.7**	**+0.3**
KUA	**Kurravaara**	**0.13**	**10**	*i* P		**Pg**		**05 54 56.1**	**+0.3**
KUA				*i* S		**Sg**		**05 54 57.7**	**+0.3**
RATU	**Laukkuluspa**	**0.26**	**269**	P		**Pg**		**05 54 58.3**	**0.0**
RATU	**Laukkuluspa**	**0.26**	**269**	*i* P		**Pg**		**05 54 58.3**	**0.0**
LANU	**Lannavaara**	**0.68**	**71**	P		**Pg**		**05 55 06.8**	**+0.4**
LANU	**Lannavaara**	**0.68**	**71**	*e*P		**Pg**		**05 55 06.8**	**+0.4**
LANU				*e*S		**Sg**		**05 55 16.2**	**+0.9**
DUNU	**Dundret**	**0.72**	**171**	P		**Pg**		**05 55 07.4**	**+0.3**
DUNU	**Dundret**	**0.72**	**171**	*i* P		**Pg**		**05 55 07.4**	**+0.3**
MASU	**Masugnsbyn**	**0.76**	**119**	P		**Pg**		**05 55 08.4**	**+0.6**
MASU	**Masugnsbyn**	**0.76**	**119**	*i* P		**Pg**		**05 55 08.4**	**+0.6**
SALU	**Saltoluokta**	**0.82**	**237**	P		**Pg**		**05 55 08.7**	**-0.3**
SALU	**Saltoluokta**	**0.82**	**237**	*i* P		**Pg**		**05 55 08.7**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*S		**Sb**		**05 55 32.6**	**-0.3**
KIF				MSG				05 55 38.3	
	comp=Z,18nm,0.3s								
PAJU	**Pajala**	**1.36**	**125**	P		**Pg**		**05 55 19.0**	**-0.4**
PAJU	**Pajala**	**1.36**	**125**	*e*P		**Pg**		**05 55 19.0**	**-0.4**
PAJU				*e*S		**Sg**		**05 55 37.4**	**+0.4**
HEF	**Hetta**	**1.39**	**64**	*e*P		**Pn**		**05 55 19.7**	**-0.3**
HEF				*e*S		**Sg**		**05 55 38.0**	**-0.1**
HEF	**Hetta**	**1.39**	**64**	*e*P		**Pn**		**05 55 19.4**	**-0.6**
HEF				*e*S		**Sg**		**05 55 37.6**	**-0.4**
HEF				MSG				05 55 41.6	
	comp=Z,6.5nm,0.1s								
KLF	**Kolari**	**1.54**	**111**	*e*P		**Pn**		**05 55 22.2**	**+0.2**
KLF				*e*S		**Sg**		**05 55 42.9**	**+0.3**
KLF				MSG				05 55 47.1	
	comp=Z,11nm,0.2s								
KTK1	**Kautokeino**	**1.61**	**41**	*e*P		**Pn**		**05 55 23.2**	**+0.1**
KTK1				*e*S		**Sn**		**05 55 44.8**	**+0.2**
KTK1				IAML				05 55 49.9	
	comp=Z,35nm,0.4s								
KTK1	**Kautokeino**	**1.61**	**41**	*e*P		**Pn**		**05 55 23.2**	**+0.1**
KTK1				*e*S		**Sn**		**05 55 44.3**	**-0.3**
JETT	**Jettan, Norway**	**1.73**	**2**	*e*P		**Pn**		**05 55 24.8**	**0.0**
JETT				*e*S		**Sn**		**05 55 46.7**	**-0.9**
JETT				IAML				05 55 50.5	
	comp=Z,100nm,0.7s								
TRO	**Tromso**	**1.88**	**345**	*e*P		**Pb**		**05 55 27.7**	**-0.8**
TRO	**Tromso**	**1.88**	**345**	*e*P		**Pn**		**05 55 27.2**	**+0.6**
TRO				*e*S		**Sn**		**05 55 51.5**	**+0.4**
STEI	**Steigen**	**1.91**	**275**	*e*P		**Pb**		**05 55 28.2**	**-0.8**
STEI				*e*S		**Sb**		**05 55 53.3**	**0.0**
FAUS	**Fauske**	**1.96**	**259**	*e*P		**Pb**		**05 55 29.1**	**-0.9**
FAUS				*e*S		**Sb**		**05 55 55.1**	**+0.2**
KALU	**Kalix**	**2.32**	**147**	*e*P		**Pn**		**05 55 34.3**	**+1.5**
TOF	**Tornio**	**2.37**	**136**	*e*P		**Pb**		**05 55 35.3**	**-1.5**
TOF				MSG				05 56 09.3	
	comp=Z,12nm,0.2s								
SGF	**Sodankyl**	**2.42**	**96**	*e*P		**Pn**		**05 55 35.5**	**+1.4**
SGF				MSG				05 56 12.3	
	comp=Z,6.3nm,0.2s								
RNF	**Rovaniemi**	**2.55**	**116**	*e*P		**Pb**		**05 55 38.3**	**-1.6**
LOF	**Lofoten**	**2.56**	**280**	*e*P		**Pn**		**05 55 37.2**	**+1.2**
ARCES	**ARCESS Array B**	**2.56**	**46**	Pn		**Pn**		**05 55 37.0**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=228,slow=14,SNR=72								
ARCES				Lg		Lg		05 56 10.6	
	comp=Z,5.5nm,0.3s,baz=227,slow=23,SNR=29								
	comp=Z,2.8nm,0.3s								
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*P		**Pn**		**05 55 37.0**	**+0.9**
MOR8	**Moi Rana**	**2.83**	**237**	*e*P		**Pn**		**05 55 41.1**	**+1.3**
VADS	**Vadso**	**4.00**	**51**	*e*P		**Pn**		**05 55 57.2**	**+1.4**
FINES	**FINESS Array B**	**6.88**	**156**	Pn		**Pn**		**05 56 36.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=4.7								
FINES				Sn		**Sn**		**05 57 54.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=346,slow=23,SNR=3.3								
FINES				Lg		Lg		05 58 26.7	
	comp=Z,0.7nm,0.3s,baz=343,slow=26,SNR=11								
	comp=Z,1.1nm,0.6s								
NOA	**NORSAR Array B**	**7.85**	**214**	Pn		**Pn**		**05 56 48.8**	**0.0**
	baz=58,slow=17,SNR=1.9								
NOA				Lg		Lg		05 59 02.4	
	baz=78,slow=17,SNR=5.1								
	comp=Z,0.3nm,0.6s								
SPITS	**Spitsbergen Ar**	**10.46**	**356**	Pn		**Pn**		**05 57 24.4**	**0.0**
	baz=168,slow=15								
	comp=Z,14nm,1.1s								

IDC 07 06:05:28.5±2.7, 54°.10N×86°.47E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=22.4km s-min=13.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**262**	I		I		06 11 10.0	
	baz=80,slow=344,SNR=4.1								
ZALV	**Zalesovo Beam**	**0.99**	**262**	Pg		Pg		06 05 45.6	-1.8
	0.6nm,0.3s,baz=78,slow=17,SNR=5.4								
ZALV				Lg		Lg		06 06 01.9	
	1.1nm,0.3s,baz=83,slow=27,SNR=6.9								
KURBB	**Kurchatov Arra**	**5.98**	**238**	Pn		Pn		06 06 59.7	+1.5
	0.1nm,0.3s,baz=53,slow=13,SNR=3.5								
	0.5nm,0.4s								
MKAR	**Makanchi Array**	**7.78**	**202**	Pn		Pn		06 07 23.9	+0.9
	0.2nm,0.3s,baz=24,slow=13,SNR=7.5								
	0.3nm,0.3s								

*SOME **07** 06:07:12.8, 39°.77N×70°.13E, h0km*
*KRNET **07** 06:07:14.1±0.1, 39°.95N×68°.76E, mb3.5*
*NNC **07** 06:07:16.4±5.2, 46°.35N×69°.00E, h0km, mb3.7, mpv3.8, Error ellipse: s-maj=51.1km s-min=24.8km az=178.0*
*ISU **07** 06:07:19.1, 40°.07N×69°.00E, h6km*
ISC 07 06:07:19.9±1.3, 40°.09N±0°.04×69°.10E±0°.02, h1km±11km, n30, s=2.927/51, 7C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BXML	**Bakhmal**	**0.92**	**245**	P		**Pn**		**06 07 39.3**	**-0.8**
BXML				S		**Sn**		**06 07 54.2**	**+0.2**
DZI	**Dzhizak**	**0.98**	**272**	P		**Pg**		**06 07 37.1**	**-1.6**
DZI				S		**Sg**		**06 07 50.4**	**-1.0**
BTK	**Batken**	**1.32**	**91**	⇓*e*P		**Pn**		**06 07 44.2**	**-1.3**
	baz=86								
BTK				⇓*e*S		**Sg**		**06 08 05.8**	**+3.7**
	baz=86								
MINT	**Mingtut**	**1.48**	**75**	P		**Pg**		**06 07 48.7**	**+0.5**
MINT				S		**Sg**		**06 08 10.8**	**+3.4**
CHRV	**Charvak**	**1.68**	**22**	P		**Pg**		**06 07 51.8**	**-0.3**
CHRV				S		**Sg**		**06 08 15.9**	**+2.0**
CHMI	**Chimion**	**1.86**	**84**	P		**Pg**		**06 07 55.6**	**0.0**
CHMI				S		**Sg**		**06 08 22.4**	**+2.7**
FRG	**Fergana**	**2.07**	**81**	P		**Pg**		**06 07 58.7**	**-0.9**
FRG				S		**Sg**		**06 08 28.8**	**+2.4**
TRKS	**Terek-Say**	**2.11**	**46**	⇓*e*P		**Pn**		**06 07 56.6**	**0.0**
	baz=50								
TRKS				⇓*e*S		**Sg**		**06 08 27.8**	**0.0**
	baz=50								
KSNS	**Kasansay**	**2.13**	**59**	P		**Pg**		**06 07 59.6**	**-1.1**
KSNS				S		**Sg**		**06 08 30.5**	**+2.2**
CHM	**Chimkent**	**2.26**	**9**	*e*P		**Pb**		**06 08 01.4**	**-0.1**
	62nm,0.1s								
CHM				*e*S		**Sg**		**06 08 36.2**	**+3.7**
	422nm,0.4s								
TSTA	**Tashata**	**2.62**	**78**	P		**Pb**		**06 08 06.6**	**-1.2**
TSTA				S		**Sg**		**06 08 45.5**	**+1.3**
NUT	**Nurota**	**2.66**	**281**	P		**Pn**		**06 08 04.8**	**+0.9**
NUT				S		**Sb**		**06 08 41.9**	**+0.4**
ARK	**Arkit**	**2.76**	**51**	⇑*e*P		**Pn**		**06 08 06.0**	**+0.6**
	baz=52								
ARK				⇑*e*S		**Sb**		**06 08 44.1**	**-0.4**
	baz=52								
ZRB	**Zarabog**	**2.96**	**229**	P		**Pn**		**06 08 09.3**	**+1.2**
ZRB				S		**Sb**		**06 08 50.9**	**+0.7**
KK31	**Karatay Array**	**3.19**	**19**	⇑Pn		**Pn**		**06 08 11.3**	**0.0**
	0.8nm,0.4s,baz=218,slow=17,SNR=92								
KK31				⇑Pg		**Pb**		**06 08 18.1**	**+0.6**
	3.6nm,0.3s,baz=210,slow=17,SNR=29								
KKAR	**Karatay Array**	**3.19**	**19**	⇓*e*P		**Pn**		**06 08 11.0**	**-0.3**
	baz=22								
KKAR				⇓*e*S		**Sb**		**06 08 52.5**	**-4.4**
	baz=22								
DZA	**Taraz**	**3.27**	**30**	Pg		**Pn**		**06 08 14.1**	**+1.8**
	68nm,0.1s								
DZA				Lg		Lg		06 08 57.5	
	144nm,0.2s								
DZA	**Taraz**	**3.27**	**30**	*e*P		**Pn**		**06 08 13.9**	**+1.7**
	41nm,0.1s								
DZA				*e*S		**Sb**		**06 08 58.3**	**-0.7**
	82nm,0.2s								
TMD	**Tamdy-Bulak**	**3.77**	**298**	P		**Pn**		**06 08 20.9**	**+1.8**
TMD				S		**Sb**		**06 09 13.5**	**+0.1**
MRKS	**Merke**	**4.08**	**48**	Pg		**Pn**		**06 08 24.2**	**+0.6**
	2.6nm,0.3s								
MRKS				Lg		Lg		06 09 16.0	
	15nm,0.3s								
MRKS	**Merke**	**4.08**	**48**	*e*P		**Pn**		**06 08 24.2**	**+0.6**
	2.6nm,0.3s								
MRKS				*e*S		**Sn**		**06 09 16.0**	**+3.9**
	15nm,0.3s								
DZN	**Dzhankel'dy**	**4.46**	**282**	P		**Pn**		**06 08 30.4**	**+1.7**
DZN				S		**Sb**		**06 09 32.0**	**-1.3**
CHMS	**Chumysh**	**5.14**	**54**	⇑Pg		**Pg**		**06 08 55.2**	**-3.2**
	2.5nm,0.6s								
CHMS				⇑Sn		**Sn**		**06 09 40.7**	**+2.6**
	2.7nm,0.5s								
CHMS				⇓Lg		Lg		06 10 03.8	
	9.0nm,0.8s								
TKM2	**Tokmak 2**	**5.64**	**58**	⇓Pn		**Pn**		**06 08 44.6**	**-0.5**
	2.6nm,0.7s								
TKM2				⇑Lg		Lg		06 10 19.6	
	5.6nm,0.8s								
DGS	**Degeres**	**5.91**	**56**	Pg		**Pn**		**06 08 47.9**	**-0.7**
	3.1nm,0.4s								
DGS				Lg		Lg		06 09 58.6	
	3.2nm,0.6s								
DGS	**Degeres**	**5.91**	**56**	*e*P		Pn		06 08 55.1	+6.5
	2.3nm,0.2s								
DGS				*e*S		**Sb**		**06 10 08.8**	**-6.1**
	4.0nm,0.5s								
KRBS	**Karabastau**	**6.09**	**52**	*e*P		Pb		06 08 59.0	-7.8
	1.0nm,0.3s								
KRBS				*e*S		**Sb**		**06 10 15.1**	**-5.1**
	1.6nm,0.3s								
KUU	**Kurty**	**6.60**	**52**	Pg		**Pn**		**06 08 58.1**	**+0.1**
	5.0nm,0.8s								
KUU				Lg		Lg		06 10 17.2	
	4.4nm,0.9s								
KUU	**Kurty**	**6.60**	**52**	*e*P		Pb		06 09 07.7	-7.7
	1.0nm,0.2s								
KUU				*e*S		**Sb**		**06 10 30.7**	**-4.1**
	1.2nm,0.2s								
KTBS	**Karatobe**	**6.71**	**55**	*e*P		Pb		06 09 09.8	-7.6
	0.7nm,0.2s								
KTBS				*e*S		**Sb**		**06 10 33.5**	**-4.6**
	1.8nm,0.5s								

*UPA **07** 06:13:17.1±1.0, 8°.11N×83°.11W, h7km±8km, MW3.8*
*UCR **07** 06:13:18.0±0.7, 7°.99N×82°.87W, h12km±5km, MW3.8*
*CATAC **07** 06:13:19.1±0.6, 8°.00N×82°.98W, h5km, ML3.6*
ISC 07 06:13:16.6±1.5, 7°.93N±0°.06×82°.92W±0°.03, h11km±11km, n53, s=1.908/64, 2C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LIMO3	**Limones**	**0.18**	**18**	*e*P		**Pb**		**06 13 23.0**	**+1.1**
PTPM	**Petroterminale**	**0.27**	**8**	*e*P		**Pb**		**06 13 23.3**	**-0.2**
PTPM				*e*S		**Sg**		**06 13 26.6**	**+0.7**
PIRO	**Carate, Puerto**	**0.62**	**319**	⇑*i* P		**Pb**		**06 13 29.5**	**-0.1**
PIRO	**Carate, Puerto**	**0.62**	**319**	*i* P		**Pb**		**06 13 29.4**	**-0.1**
PIRO				*i* S		**Sg**		**06 13 36.8**	**-0.2**
PIRO				IAML				06 13 41.6	
	comp=Z,2μm,1.0s								
CDITO	**Canoas**	**0.64**	**4**	*i* P		**Pg**		**06 13 29.4**	**+0.4**
CDITO				IAML				06 13 43.2	
	comp=Z,1μm,1.0s								
DVD	**David**	**0.68**	**43**	*e*P		**Pb**		**06 13 30.9**	**+0.4**
PTJ1	**Puerto Jimnez**	**0.71**	**328**	*e*P		**Pb**		**06 13 31.1**	**+0.1**
PTJ1				*e*S		**Sb**		**06 13 40.8**	**0.0**
JIME	**Puerto Jimenez**	**0.72**	**326**	⇑*i* P		**Pb**		**06 13 31.3**	**+0.1**
EDAD	**Golfito**	**0.76**	**341**	*e*P		**Pg**		**06 13 30.5**	**-0.8**
BCO2	**Palmira**	**0.87**	**26**	*e*P		**Pg**		**06 13 33.4**	**0.0**
BCO2				*e*S		**Sb**		**06 13

INDI				IAML		06 15 21.0	
	comp=Z,45nm,1.0s						
CMARA	**Lajas Hojancha**	**3.23**	**310**	*e*P	**Pn**	**06 14 08.8**	**+1.5**
DUNO	**Dulce Nombre,**	**3.32**	**310**	*i* P	**Pn**	**06 14 10.2**	**+1.7**
DUNO				IAML		06 14 51.1	
	comp=Z,120nm,1.0s						
NICO	**Nicoya**	**3.32**	**311**	*e*P	**Pn**	**06 14 10.4**	**+1.9**
SAJU	**San Juanillo,**	**3.48**	**308**	*i* P	**Pn**	**06 14 12.0**	**+1.3**
SAJU				IAML		06 15 24.9	
	comp=Z,37nm,1.0s						
ORTG	**Ortega, Santa**	**3.48**	**314**	*i* P	**Pn**	**06 14 12.9**	**+2.1**
ORTG				IAML		06 14 13.3	
	comp=Z,39nm,1.0s						
HZTE	**Horizontes, Gu**	**3.82**	**316**	*i* P	**Pn**	**06 14 17.6**	**+2.1**
HZTE				IAML		06 15 43.1	
	comp=Z,120nm,1.0s						
ESPN	**Las Esperanzas**	**4.45**	**342**	*i* P	**Pn**	**06 14 26.7**	**+2.6**
ESPN				IAML		06 14 27.1	
	comp=Z,160nm,1.0s						

IDC 07 06:16:07.2±3.2, 32°.45S×78°.49E, h0km, mb3.9/4, mbtmp3.9/4, MS3.4/3, Error ellipse: s-maj=100.3km s-min=39.3km az=38.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**24.64**	**228**	T	T	06 47 32.8	
	baz=65,slow=75,SNR=393						
H04N1	**CROZET ISLANDS**	**24.65**	**229**	T	T	06 47 33.1	
	baz=65,slow=75,SNR=346						
H04N3	**CROZET ISLANDS**	**24.65**	**228**	T	T	06 47 31.8	
	baz=65,slow=75,SNR=404						
H04S1	**CROZET ISLANDS**	**24.85**	**227**	T	T	06 47 52.1	
	baz=64,slow=75,SNR=12						
H04S3	**CROZET ISLANDS**	**24.87**	**227**	T	T	06 47 48.2	
	baz=64,slow=75,SNR=22						
H04S2	**CROZET ISLANDS**	**24.87**	**227**	T	T	06 47 49.5	
	baz=64,slow=75,SNR=19						
H08S2	**Diego Garcia H**	**25.31**	**346**	T	T	06 47 36.7	
	baz=168,slow=75,SNR=143						
H08S1	**Diego Garcia H**	**25.31**	**346**	T	T	06 47 34.2	
	baz=168,slow=75,SNR=119						
H08S3	**Diego Garcia H**	**25.33**	**346**	T	T	06 47 35.4	
	baz=168,slow=75,SNR=118						
H01W2	**Cape Leeuwin H**	**29.67**	**105**	T	T	06 53 05.3	
	baz=265,slow=74,SNR=44						
H01W3	**Cape Leeuwin H**	**29.67**	**105**	T	T	06 53 05.3	
	baz=265,slow=74,SNR=40						
H01W1	**Cape Leeuwin H**	**29.68**	**105**	T	T	06 53 09.2	
	baz=265,slow=74,SNR=51						
NWAO	**Narrogin (SRO)**	**32.49**	**101**	LR	LR	06 31 55.8	
	comp=Z,109nm,20.0s,baz=148,slow=29						
PALK	**Pallekele**	**39.56**	**3**	LR	LR	06 36 19.7	
	comp=Z,70nm,18.6s,baz=313,slow=31						
ASAR	**Alice Springs**	**49.22**	**95**	P	P	06 24 57.5	0.0
	0.8nm,0.7s,baz=243,slow=6.0,SNR=7.5 0.8nm,0.7s						
WRA	**Warramunga Arr**	**51.13**	**90**	P	P	06 25 11.5	-0.5
	0.9nm,0.9s,baz=246,slow=8.0,SNR=2.8 0.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.28**	**24**	P	P	06 25 35.7	+0.5
	0.7nm,0.3s,baz=206,slow=10.0,SNR=4.4						
CMAR				LR	LR	06 46 56.2	
	comp=Z,15nm,18.5s,baz=185,slow=34 0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**86.22**	**4**	P	P	06 28 49.0	-1.0
	0.9nm,0.4s,baz=197,slow=4.5,SNR=6.8 0.9nm,0.4s						
YKA	**Yellowknife Ar**	**148.80**	**12**	PKPbc	PKPbc	06 35 55.8	0.0
	1.1nm,0.7s,baz=325,slow=3.5,SNR=19						

IDC 07 06:33:58.5±3.0, 53°.50N×87°.28E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=29.7km s-min=15.8km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.53**	**288**	I	I	06 43 10.0	
	baz=105,slow=342,SNR=1.1						
ZALV	**Zalesovo Beam**	**1.53**	**288**	Pg	Pn	06 34 26.4	-0.7
	1.5nm,0.3s,baz=107,slow=13,SNR=14						
ZALV				Lg	Lg	06 34 46.6	
	0.5nm,0.3s,baz=102,slow=27,SNR=2.6						
KURBB	**Kurchatov Arra**	**6.12**	**245**	Pn	Pn	06 35 31.3	+1.2
	0.1nm,0.3s,baz=62,slow=14,SNR=4.0 0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.44**	**207**	Pn	Pn	06 35 49.2	+1.0
MKAR	0.2nm,0.3s,baz=29,slow=13,SNR=7.4			Lg	Lg	06 37 52.3	
	baz=18,slow=29,SNR=2.8 0.2nm,0.3s						

JMA 07 06:40:16.8±0.1, 24°.3N±0°.2×123°.9E±0°.2, h11km±1km, MV0.8/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**273**	P	Pg	06 40 19.9	0.0
IRIF				S	Sg	06 40 22.5	+0.5
JKRS	**Kuro-shima**	**0.15**	**126**	P	Pg	06 40 20.2	0.0
JKRS				S	Sg	06 40 23.0	+0.4
JIJ	**Ishigaki jima**	**0.25**	**82**	P	Pg	06 40 21.9	0.0
JIJ				S	Sg	06 40 25.4	0.0
HATJ	**Hateruma jima**	**0.28**	**193**	P	Pg	06 40 22.3	-0.1
HATJ				S	Sg	06 40 26.8	+0.6
JISG	**Ishigakijimahi**	**0.48**	**57**	*e*P	Pg	06 40 26.2	+0.1
JISG				*e*S	Sg	06 40 32.9	+0.5
JTJ	**Tarama**	**0.82**	**67**	*e*P	Pg	06 40 32.4	-0.2
JTJ				*e*S	Sg	06 40 43.6	+0.3

IDC 07 06:40:17.0±2.6, 53°.57N×86°.84E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=25.0km s-min=14.1km az=75.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**289**	I	I	06 48 00.0	
	baz=103,slow=346,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.26**	**288**	Pg	Pg	06 40 41.1	0.0
	0.4nm,0.3s,baz=109,slow=12,SNR=6.8						
ZALV				Lg	Lg	06 40 57.5	
	0.5nm,0.3s,baz=111,slow=28,SNR=6.2						
KURBB	**Kurchatov Arra**	**5.91**	**243**	Pn	Pn	06 41 46.2	+0.5
	baz=62,slow=14,SNR=3.0 0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.38**	**205**	Pn	Pn	06 42 07.5	+1.5
MKAR	0.1nm,0.3s,baz=26,slow=14,SNR=5.8			Lg	Lg	06 44 08.1	
	baz=24,slow=27,SNR=1.9 0.1nm,0.2s						

TAP 07 06:40:46.5, 24°.20N×121°.70E, h13km, ML2.0, 2C-2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**241**	⇑*i*P	Pg	06 40 49.5	+0.2
	baz=240						
ETL				S	Sg	06 40 51.4	+0.1
	baz=240						
NACB	**Ninganchiao**	**0.10**	**256**	⇑*i*P	Pg	06 40 49.6	+0.1
	baz=256						
NACB				*i* S	Sg	06 40 51.6	0.0
	baz=256						
EAHA	**Aohua**	**0.13**	**15**	*i* P	Pg	06 40 50.1	+0.2
	baz=14						
EAHA				*i* S	Sg	06 40 52.7	+0.3
	baz=14						
TWD	**Chiawan**	**0.15**	**219**	⇓*i*P	Pg	06 40 50.4	+0.2
	baz=217						
TWD				*i* S	Sg	06 40 52.9	+0.1
	baz=217						
ENA	**Nanau**	**0.23**	**9**	*i* P	Pg	06 40 51.7	+0.2
	baz=10.0						
ENA				*i* S	Sg	06 40 55.4	+0.5
	baz=10.0						
EWUT	**Wuta**	**0.26**	**16**	P	Pg	06 40 52.2	+0.3
	baz=14						
EWUT				S	Sg	06 40 55.7	+0.2
	baz=14						
ETM	**Tongmen**	**0.30**	**219**	P	Pg	06 40 52.6	-0.1
	baz=220						
ETM				*e*S	Sg	06 40 56.8	0.0
	baz=220						
LXIB	**Xiulin Townshi**	**0.32**	**236**	P	Pg	06 40 53.0	-0.1
	baz=237						
LXIB				S	Sg	06 40 57.7	+0.2
	baz=237						
NNSB	**Datong**	**0.37**	**308**	*i* P	Pg	06 40 54.3	+0.3
	baz=308						
NNSB				*i* S	Sg	06 40 59.6	+0.5
	baz=308						
LATG	**Datong**	**0.37**	**335**	⇓*i*P	Pg	06 40 54.4	+0.3
	baz=333						
LATG				*i* S	Sg	06 40 59.8	+0.7
	baz=333						
NNS	**Nan Shan**	**0.38**	**309**	*i* P	Pg	06 40 54.5	+0.2
	baz=309						
NNS				*i* S	Sg	06 40 59.9	+0.4
	baz=309						
WHF	**Hehuan Shan**	**0.40**	**262**	*i* P	Pg	06 40 55.1	+0.4
	baz=262						
WHF				*i* S	Sg	06 40 59.9	-0.3
	baz=262						
FUSS	**Fushou**	**0.42**	**277**	P	Pb	06 40 55.6	-0.4
	baz=277						
FUSS				S	Sg	06 41 01.3	+0.6
	baz=277						
SHUL	**Shoufeng**	**0.43**	**197**	P	Pb	06 40 56.3	+0.4
	baz=201						
TWC	**Suao**	**0.43**	**18**	*i* P	Pg	06 40 55.4	+0.3
	baz=12						
TWC				S	Sg	06 41 01.5	+0.6
	baz=12						
NDS	**Dongshan**	**0.43**	**2**	*i* P	Pb	06 40 55.6	-0.4
NDS				S	Sb	06 41 01.7	-0.7
NDT	**Datong Townshi**	**0.44**	**337**	P	Pb	06 40 55.9	-0.2
	baz=336						
NDT				S	Sb	06 41 02.2	-0.4
	baz=336						
ESL	**Shilin**	**0.46**	**213**	P	Pg	06 40 55.4	-0.1
	baz=219						
ESL				S	Sg	06 41 01.5	-0.1
	baz=219						
ENTT	**Nioudou**	**0.46**	**344**	*i* S	Sg	06 41 02.2	+0.6
	baz=344						
TWT	**Tachien**	**0.48**	**277**	*e*P	Pb	06 40 56.9	0.0
	baz=276						
TWT				*e*S	Sb	06 41 03.6	-0.4
	baz=276						
TDCB	**Techi**	**0.50**	**276**	P	Pb	06 40 57.0	-0.2
	baz=276						
TDCB				S	Sg	06 41 03.0	-0.1
	baz=276						
CHGB	**Renai**	**0.50**	**254**	P	Pb	06 40 56.9	-0.4
	baz=249						
CHGB				S	Sg	06 41 03.3	+0.2
	baz=249						
YHNB	**Yeheng**	**0.56**	**328**	*e*P	Pg	06 40 57.7	+0.3
	baz=326						
YHNB				*e*S	Sb	06 41 05.5	-0.5
	baz=326						
WARBT	**Fenglin Townsh**	**0.56**	**211**	*e*P	Pg	06 40 57.5	+0.1
	baz=217						
FUSB	**Fushanzhiwuyua**	**0.57**	**350**	P	Pb	06 40 58.2	-0.1
	baz=349						
FUSB				S	Sg	06 41 05.5	+0.3
	baz=349						
NSK	**Sanguang**	**0.57**	**327**	P	Pg	06 40 57.5	-0.2
	baz=326						
NSK				*e*S	Sg	06 41 05.8	+0.5
	baz=326						
WUSB	**Renai**	**0.57**	**249**	P	Pb	06 40 58.5	0.0
	baz=244						
WUSB				*e*S	Sg	06 41 05.9	+0.5
	baz=244						
NWLT	**Wulai**	**0.60**	**343**	*e*P	Pb	06 40 58.8	-0.1
	baz=347						
NWLT				*e*S	Sg	06 41 06.3	-0.1
	baz=347						
VWDT	**VWDT**	**0.68**	**229**	P	Pb	06 41 00.3	+0.2
	baz=230						
VWDT				*e*S	Sb	06 41 09.5	+0.1
	baz=230						
WHP	**Taichung City**	**0.69**	**277**	*e*P	Pg	06 40 59.7	-0.3
	baz=277						
WHP				*e*S	Sb	06 41 10.1	+0.1
	baz=277						
EHY	**Hungye**	**0.77**	**207**	*e*P	Pg	06 41 01.4	-0.1
	baz=207						
SSLB	**Suanglung**	**0.80**	**239**	*e*P	Pb	06 41 02.2	0.0
	baz=240						
SSLB				*e*S	Sb	06 41 13.7	+0.8
	baz=240						

TAP 07 06:56:20.6, 24°.20N×121°.86E, h6km, ML1.8, 3D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**314**	*e*P	Pg	06 56 25.1	+1.4
	baz=315						
EAHA	**Aohua**	**0.17**	**318**	P	Pg	06 56 25.0	+1.0
	baz=318						
EAHA				S	Sg	06 56 28.2	+1.9
	baz=318						
ETL	**Fush Village**	**0.22**	**259**	P	Pg	06 56 26.2	+1.3
	baz=258						
NACB	**Ninganchiao**	**0.25**	**263**	P	Pg	06 56 26.1	+0.7
	baz=263						
NACB				*i* S	Sg	06 56 31.0	+2.3
	baz=263						
ENA	**Nanau**	**0.25**	**334**	⇓*i*P	Pb	06 56 26.6	-1.0
	baz=334						
ENA				*i* S	Sb	06 56 30.9	-1.2
	baz=334						
EWUT	**Wuta**	**0.25**	**342**	⇓*i*P	Pb	06 56 26.7	-0.9
	baz=342						
EWUT				*i* S	Sb	06 56 31.1	-1.1
	baz=342						
TWD	**Chiawan**	**0.27**	**243**	P	Pg	06 56 26.6	+0.7
	baz=242						
ESAO	**Su ao**	**0.37**	**357**	*e*P	Pg	06 56 28.6	+0.8
	baz=357						
ESAO				S	Sb	06 56 35.5	-0.1
	baz=357						
TWC	**Suao**	**0.41**	**358**	*i* P	Pb	06 56 29.6	-0.5
	baz=359						
TWC				S	Sb	06 56 36.5	-0.1
	baz=359						
ETM	**Tongmen**	**0.41**	**235**	P	Pb	06 56 29.7	-0.6
	baz=235						
ETM				S	Sb	06 56 36.8	0.0
	baz=235						
LXIB	**Xiulin Townshi**	**0.45**	**246**	*i* P	Pb	06 56 30.6	-0.4
	baz=246						
LXIB				S	Sb	06 56 38.2	+0.2
	baz=246						
NDS	**Dongshan**	**0.45**	**343**	P	Pb	06 56 30.4	-0.5
	baz=342						
NDS				*e*S	Sb	06 56 37.2	-0.7
	baz=342						
LATG	**Datong**	**0.45**	**317**	*i* P	Pb	06 56 30.6	-0.4
	baz=317						
LATG				S	Sb	06 56 38.1	+0.1
	baz=317						
NNSB	**Datong**	**0.49**	**297**	⇓*e*P	Pb	06 56 31.8	+0.1
	baz=297						
NNSB				*e*S	Sb	06 56 38.2	-1.0
	baz=297						
SHUL	**Shoufeng**	**0.50**	**214**	*i* P	Pb	06 56 31.5	-0.2
	baz=213						
SHUL				*i* S	Sb	06 56 39.4	+0.2
	baz=213						
NNS	**Nan Shan**	**0.51**	**298**	*e*P	Pg	06 56 30.9	+0.5
	baz=298						
NNS				*e*S	Sb	06 56 38.6	-1.0
	baz=298						
NDT	**Datong Townshi**	**0.51**	**321**	P	Pb	06 56 31.8	-0.1
	baz=321						
NDT				*i* S	Sb	06 56 39.9	+0.2
	baz=321						
ENTT	**Nioudou**	**0.51**	**328**	P	Pb	06 56 31.4	-0.6
	baz=328						
ENTT				*i* S	Sb	06 56 39.8	0.0
	baz=328						
WHF	**Hehuan Shan**	**0.55**	**264**	P	Pb	06 56 32.0	-0.8
	baz=263						
FUSS	**Fushou**	**0.57**	**275**	*e*P	Pb	06 56 33.4	+0.3
	baz=274						
FUSB	**Fushanzhiwuyua**	**0.61**	**336**	P	Pb	06 56 33.6	0.0
	baz=335						
FUSB				*e*S	Sb	06 56 42.5	0.0
	baz=335						
YHNB	**Yeheng**	**0.64**	**316**	P	Pb	06 56 34.0	-0.3
	baz=316						
YHNB				*e*S	Sb	06 56 43.6	0.0
	baz=316						
CHGB	**Renai**	**0.65**	**257**	*e*P	Pb	06 56 34.5	+0.2
	baz=257						
CHGB				S	Sb	06 56 44.3	+0.6
	baz=257						
TDCB	**Techi**	**0.65**	**275**	*e*P	Pb	06 56 34.4	+0.1
	baz=274						
TDCB				*e*S	Sb	06 56 44.4	+0.7
	baz=274						
NSK	**Sanguang**	**0.66**	**316**	P	Pb	06 56 34.0	-0.5
	baz=315						
NSK				*i* S	Sb	06 56 44.3	+0.3
	baz=315						
NWLT	**Wulai**	**0.66**	**330**	*i* P	Pb	06 56 34.4	-0.1
	baz=330						
NWLT				*e*S	Sb	06 56 44.2	+0.2
	baz=330						
OWD	**Renai**	**0.68**	**249**	*i* P	Pb	06 56 34.7	-0.1
	baz=248						
OWD				*e*S	Sb	06 56 45.2	+0.7
	baz=248						
WUSB	**Renai**	**0.71**	**253**	*i* P	Pb	06 56 35.3	-0.1
	baz=252						
WUSB				S	Sb	06 56 46.1	+0.5
	baz=252						
TIPB	**Shuangxi**	**0.77**	**357**	P	Pb	06 56 36.6	+0.2
	baz=357						
TIPB				*e*S	Sb	06 56 48.1	+1.1
	baz=357						
VWDT	**VWDT**	**0.80**	**236**	*e*P	Pg	06 56 36.1	+0.2
	baz=235						
VWDT				*e*S	Sn	06 56 50.0	-0.5
	baz=235						
SSLB	**Suanglung**	**0.93**	**244**	P	Pb	06 56 39.4	+0.3
	baz=243						
SSLB				*e*S	Sn	06 56 53.0	-0.8
	baz=243						

TAP 07 06:56:25.8, 24°.02N×121°.62E, h12km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**200**	P	Pg	06 56 28.9	+0.8
	baz=189						
HWA				*e*S	Sg	06 56 30.1	+0.4
	baz=189						
TWD	**Chiawan**	**0.07**	**340**	*e*P	Pg	06 56 29.6	+1.3
	baz=347						
TWD				*i* S	Sg	06 56 31.1	+1.0
	baz=347						
ETM	**Tongmen**	**0.13**	**246**	*e*S	Sg	06 56 31.3	-0.1
	baz=246						
ETL	**Fush Village**	**0.14**	**1**	P	Pb	06 56 30.1	-0.4
ETL				*e*S	Sg	06 56 31.5	-0.3
NACB	**Ninganchiao**	**0.16**	**351**	P	Pg	06 56 30.1	+0.6
	baz=351						
LXIB	**Xiulin Townshi**	**0.19**	**271**	*e*S	Sg	06 56 34.8	+1.7
	baz=271						
SHUL	**Shoufeng**	**0.23**	**193**	S	Sg	06 56 36.1	+2.0
	baz=193						
WARBT	**Fenglin Townsh**	**0.37**	**216**	*i* P	Pb	06 56 34.1	-0.2
	baz=215						
WARBT				S	Sb	06 56 39.9	-0.1
	baz=215						
CHGB	**Renai**	**0.41**	**276**	*e*S	Sb	06 56 41.8	+0.4
	baz=276						
OWD	**Renai**	**0.41**	**261**	S	Sb	06 56 41.6	+0.2
	baz=261						
WUSB	**Renai**	**0.46**	**267**	*i* S	Sb	06 56 43.1	+0.3
	baz=266						
TDCB	**Techi**	**0.48**	**299**	P	Pb	06 56 36.0	-0.3
	baz=298						
TDCB				S	Sb	06 56 43.9	+0.4
	baz=298						
VWDT	**VWDT**	**0.51**	**239**	S	Sb	06 56 44.3	+0.2
	baz=239						

IDC 07 07:05:26.5±3.1, 54°.16N×86°.45E, h0km, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=24.1km s-min=13.8km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**258**	I	I	07 11 20.0	
	0.1nm,0.7s,baz=76,slow=342,SNR=2.3						
ZALV	**Zalesovo Beam**	**0.99**	**258**	Pg	Pg	07 05 45.5	+0.1
	1.0nm,0.3s,baz=74,slow=16,SNR=5.1						
ZALV				Lg	Lg	07 05 58.7	
	1.9nm,0.3s,baz=79,slow=31,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.01**	**237**	Pn	Pn	07 06 57.9	+1.4
	baz=52,slow=13,SNR=3.1 0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn	07 07 22.0	+0.3
	baz=24,slow=14,SNR=1.6 0.1nm,0.5s						

IDC ***07*** *07:11:29.6±0.7, 26°.32N×129°.55E, h0km, mb4.0/14, mbtmp3.9/16, ML3.6/2, MS3.6/19, Error ellipse: s-maj=24.5km s-min=14.2km az=66.0*

JMA ***07*** *07:11:31.4±0.1, 26°.3N±0°.7×129°.6E±0°.5, h44km, MD4.0/19, MV4.0/19, NEAR MINAMI-DAITOJIMA IS*

NIED ***07*** *07:11:31.4, 26°.31N×129°.61E, h44km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-3.17; Mθθ1.57; Mϕϕ1.60; Mrθ0.83; Mθϕ1.45; Mϕr0.52; Fault plane solution: M₀3.26000×10¹⁵ NP1: ϕs228.00000°, δ54.00000°, λ-86.00000°. NP2:ϕs41.00000°, δ37.00000°, λ-96.00000°.*

NEIC ***07*** *07:11:32.5±2.0, 26°.25N±0°.08×129°.55E±0°.04, h16km±4km, mb4.4/21 Error ellipse: s-maj=11.8km s-min=1.9km az=201.0*

ISC 07 07:11:29.9±4.6, 26°.31N±0°.04×129°.57E±0°.04, h4km±28km, n78, σ1ϕ51/76, mb4.2/24, MS3.9/15, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.23**	**306**	P	**Pn**	**07 11 52.9**	**-0.9**
JYRO				S	**Sb**	**07 12 08.5**	**-1.5**
JYRO	**Yoronjima**	**1.23**	**306**	A	A	07 11 52.9	
	comp=E,5.0nm,9.6s,comp=N,4.0nm,4.9s						
JOW	**Kunigami**	**1.28**	**294**		**Pn**	**07 11 53.7**	**-0.7**
JOW	**Kunigami**	**1.28**	**294**	P	**Pn**	**07 11 53.8**	**-0.7**
JOW				S	**Sb**	**07 12 09.3**	**-1.9**
JOW	**Kunigami**	**1.28**	**294**	A	A	07 11 53.8	
	comp=E,4.0nm,3.2s,comp=N,4.0nm,0.7s						
JOW	**Kunigami**	**1.28**	**294**	Pn	**Pn**	**07 11 53.8**	**-0.7**
	comp=N,362nm,0.3s,baz=116,slow=22,SNR=40						
JOW				Sn	**Sb**	**07 12 09.4**	**-1.8**
	comp=N,386nm,0.3s,baz=72,slow=20,SNR=11						
JOW				LR	LR	07 12 34.8	
	comp=N,1μm,21.5s,baz=152,slow=52						
JOKE	**Okinoerabujima**	**1.38**	**320**	P	**Pn**	**07 11 55.6**	**-0.3**
JOKE				*e*S	**Sn**	**07 12 12.6**	**-2.1**
JNTH	**Nagotoyohara**	**1.41**	**279**	P	**Pn**	**07 11 55.4**	**-0.8**
JNTH				*e*S	**Sn**	**07 12 12.4**	**-2.8**
JMZ	**Minamidaito 2**	**1.56**	**108**		**Pn**	**07 11 57.4**	**-1.0**
JMZ	**Minamidaito 2**	**1.56**	**108**	P	**Pn**	**07 11 56.7**	**-1.7**
JMZ				S	**Sn**	**07 12 14.1**	**-4.9**
JTK	**Tokunoshima**	**1.57**	**339**	P	**Pn**	**07 11 57.8**	**-0.8**
JTK				*e*S	**Sn**	**07 12 16.5**	**-2.9**
JKDJ	**Kitadaitoujima**	**1.59**	**103**	P	**Pn**	**07 11 57.4**	**-1.3**
JKDJ				*e*S	**Sn**	**07 12 16.6**	**-3.1**
JIH	**Iheya**	**1.61**	**297**	P	**Pn**	**07 11 58.7**	**-0.3**
JIH				S	**Sn**	**07 12 17.9**	**-2.4**
JIH	**Iheya**	**1.61**	**297**	A	A	07 11 58.7	
	comp=E,3.0nm,2.5s,comp=N,3.0nm,0.7s						
JJT3	**Tamagusuku3**	**1.62**	**265**	*e*P	**Pn**	**07 11 59.3**	**+0.2**
JJT3				*e*S	**Sn**	**07 12 19.5**	**-0.9**
JAMN	**Amaminishikomi**	**1.96**	**350**	*e*P	**Pn**	**07 12 03.0**	**-0.8**
JZK	**Kikaishima**	**2.03**	**10**	P	**Pn**	**07 12 04.6**	**-0.2**
JZK				S	**Sn**	**07 12 28.7**	**-2.0**
JAM	**Amami Oshima**	**2.10**	**1**	P	**Pn**	**07 12 04.5**	**-1.2**
JAGN	**Aguni-jima**	**2.11**	**278**	*e*P	**Pn**	**07 12 06.0**	**+0.1**
JAGN				*e*S	**Sn**	**07 12 30.2**	**-2.3**
JAGN	**Aguni-jima**	**2.11**	**278**	A	A	07 12 06.0	
	comp=E,4.0nm,2.2s,comp=N,3.0nm,0.8s						

JKE	**Kume jima 2**	**2.50**	**271**	P	**Pn**	**07 12 10.7**	**-0.6**
JKE				*e*S	**Sn**	**07 12 38.2**	**-4.0**
JTAJ	**Takarajima**	**2.85**	**353**	*e*P	**Pn**	**07 12 15.4**	**-0.8**
JTAJ				*e*S	**Sn**	**07 12 45.7**	**-5.2**
JNU	**Nakatsue**	**6.88**	**9**	Pn	**Pn**	**07 13 12.1**	**+0.4**
	comp=N,1.9nm,0.3s,baz=191,slow=10,SNR=14						
	comp=N,6.2nm,0.4s						
SSLB	**Suanglung**	**8.21**	**254**	Pn	**Pn**	**07 13 27.0**	**-2.8**
JMN	**Monobe**	**8.28**	**26**	Pn	**Pn**	**07 13 31.6**	**+0.8**
TPUB	**Ta-pu**	**8.66**	**252**	Pn	**Pn**	**07 13 34.8**	**-1.2**
KSRS	**Korea Array**	**11.20**	**353**	Pn	**Pn**	**07 14 10.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=175,slow=12,SNR=2.5						
KSRS				LR	LR	07 18 37.9	
	comp=N,89nm,21.3s,baz=180,slow=38						
	comp=N,1.0nm,0.5s						
BJT	**Baijiatuan**	**17.66**	**324**	P	**P**	**07 15 37.7**	**0.0**
BJT				IAmb	IAmb	07 15 40.5	
	comp=Z,14nm,0.8s						
USRK	**Ussuriysk Ar.**	**17.96**	**6**	LR	LR	07 22 35.2	
	comp=Z,54nm,18.9s,baz=33,slow=37						
GUMO	**Guam**	**19.13**	**128**	LR	LR	07 21 38.1	
	comp=Z,71nm,18.7s,baz=328,slow=32						
DAV	**Davao City (W)**	**19.51**	**192**	LR	LR	07 23 07.8	
	comp=Z,46nm,20.4s,baz=9.0,slow=36						
KLR	**Kul'dur**	**22.95**	**4**	LR	LR	07 24 20.1	
	comp=Z,71nm,19.6s,baz=286,slow=34						
ULN	**Ulaanbaatar**	**27.85**	**326**	P	**P**	**07 17 21.7**	**+1.1**
ULN				IAmb	IAmb	07 17 24.9	
	comp=Z,3.9nm,1.0s						
SONM	**Songino Array**	**28.16**	**326**	P	**P**	**07 17 24.4**	**+1.2**
SONM	**Songino Array**	**28.16**	**326**	P	**P**	**07 17 24.8**	**+1.5**
	comp=Z,3.7nm,1.1s,baz=143,slow=12,SNR=12						
SONM				LR	LR	07 29 00.6	
	comp=Z,110nm,19.1s,baz=51,slow=37						
	comp=Z,3.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.33**	**261**	LR	LR	07 29 54.7	
	comp=Z,30nm,19.2s,baz=60,slow=38						
PMG	**Port Moresby**	**39.40**	**152**	LR	LR	07 33 42.8	
	comp=Z,40nm,20.2s,baz=314,slow=34						
MK31	**Makanchi Array**	**42.38**	**312**	P	**P**	**07 19 26.4**	**+1.0**
MKAR	**Makanchi Array**	**42.38**	**312**	P	**P**	**07 19 25.3**	**0.0**
MKAR	**Makanchi Array**	**42.38**	**312**	P	**P**	**07 19 25.1**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=92,slow=10.0,SNR=11						
MKAR				LR	LR	07 38 15.9	
	comp=Z,99nm,18.7s,baz=340,slow=38						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**42.92**	**322**	P	**P**	**07 19 28.6**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=121,slow=5.6,SNR=1.9						
	comp=Z,0.6nm,0.6s						
TIXI	**Tiksi**	**45.38**	**360**	LR	LR	07 40 08.8	
	comp=Z,49nm,18.1s,baz=222,slow=38						
KURK	**Kurchatov**	**45.59**	**316**	P	**P**	**07 19 50.2**	**-0.7**
KURBB	**Kurchatov Arra**	**45.63**	**316**	P	**P**	**07 19 50.8**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=102,slow=8.6,SNR=8.3						
KURBB				LR	LR	07 40 49.6	
	comp=Z,127nm,19.4s,baz=172,slow=39						
	comp=Z,1.1nm,0.6s						
WB0	**Warramunga Arr**	**46.04**	**174**	P	**P**	**07 19 54.8**	**0.0**
WB0				IAmb	IAmb	07 19 55.7	
	comp=Z,6.5nm,1.1s						
WRA	**Warramunga Arr**	**46.21**	**174**	P	**P**	**07 19 56.5**	**+0.4**
WRA	**Warramunga Arr**	**46.21**	**174**	P	**P**	**07 19 56.2**	**+0.1**
	comp=Z,4.8nm,0.9s,baz=347,slow=8.3,SNR=14						
	comp=Z,4.8nm,0.9s						
WB2	**Warramunga Arr**	**46.21**	**174**	P	**P**	**07 19 56.2**	**+0.1**
WB2				IAmb	IAmb	07 19 56.6	
	comp=Z,7.3nm,0.8s						
WR0	**Warramunga Arr**	**46.24**	**174**	P	**P**	**07 19 55.9**	**-0.4**
PSA00	**Pilbara Seismi**	**48.52**	**192**	P	**P**	**07 20 14.2**	**+0.1**
PSA00				IAmb	IAmb	07 20 14.6	
	comp=Z,5.2nm,0.9s						
CTAO	**Charters Tower**	**48.88**	**159**	P	**P**	**07 20 17.6**	**+0.8**
ASAR	**Alice Springs**	**49.86**	**175**	P	**P**	**07 20 24.7**	**+0.3**
ASAR	**Alice Springs**	**49.86**	**175**	P	**P**	**07 20 24.9**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=6.5,slow=13,SNR=21						
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**50.35**	**305**	P	**P**	**07 20 29.1**	**+1.1**
BVAR	**Borovoye Array**	**51.02**	**318**	P	**P**	**07 20 33.4**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=80,slow=9.3,SNR=8.9						
BVAR				LR	LR	07 43 31.3	
	comp=Z,153nm,19.8s,baz=98,slow=38						
	comp=Z,1.2nm,0.7s						
BRVK	**Borovoye**	**51.09**	**318**	P	**P**	**07 20 33.9**	**+0.5**
BRVK				IAmb	IAmb	07 20 47.7	
	comp=Z,4.3nm,1.2s						
FORT	**Forrest**	**56.78**	**182**	P	**P**	**07 21 15.2**	**+0.1**
ABKAR	**Akbulak array**	**57.47**	**313**	P	**P**	**07 21 19.1**	**-0.8**
ABKAR				IAmb	IAmb	07 21 22.5	
	comp=Z,2.3nm,0.9s						
ARU	**Arti**	**58.08**	**322**	LR	LR	07 49 08.8	
	comp=Z,166nm,19.8s,baz=5.0,slow=39						
STKA	**Stephens Creek**	**58.98**	**168**	P	**P**	**07 21 30.2**	**-0.3**
STKA	**Stephens Creek**	**58.98**	**168**	P	**P**	**07 21 30.9**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=341,slow=7.0,SNR=5.4						
	comp=Z,1.0nm,0.6s						
D19K	**Kuna River**	**59.32**	**24**	P	**P**	**07 21 33.2**	**+0.7**
D19K				IAmb	IAmb	07 21 34.5	
	comp=Z,5.0nm,1.1s						
DZM	**Mont Dzumac**	**59.91**	**140**	LR	LR	07 46 22.5	
	comp=Z,39nm,18.0s,baz=16,slow=35						
IMAR	**Indian Mountai**	**60.87**	**27**	P	**P**	**07 21 44.3**	**+1.1**
D22K	**Ayikyak River**	**61.32**	**24**	P	**P**	**07 21 47.6**	**+1.4**
D22K				IAmb	IAmb	07 21 48.6	
	comp=Z,4.5nm,1.1s						
KIRV	**Kirov**	**62.88**	**325**	LR	LR	07 54 53.5	
	comp=Z,137nm,19.0s,baz=314,slow=41						
ILAR	**Eielson Array**	**63.80**	**28**	P	**P**	**07 22 02.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=275,slow=5.4,SNR=5.1						
	comp=Z,0.5nm,0.6s						
BELG	**Belogornoye**	**64.83**	**318**	LR	LR	07 52 17.9	
	comp=Z,111nm,19.1s,baz=128,slow=38						
A36M	**Sachs Harbour**	**69.77**	**19**	P	**P**	**07 22 41.8**	**+1.0**
KBZ	**Khabaz**	**70.04**	**310**	P	**P**	**07 22 44.2**	**+1.3**
	comp=Z,3.5nm,1.0s,baz=113,slow=6.0,SNR=6.6						
KBZ				LR	LR	08 00 07.7	
	comp=Z,77nm,19.7s,baz=343,slow=42						
	comp=Z,3.5nm,1.0s						
C36M	**Paulatuk**	**71.19**	**21**	P	**P**	**07 22 50.0**	**+0.5**
C36M				IAmb	IAmb	07 22 50.5	
	comp=Z,4.1nm,0.8s						
FINES	**FINESS Array B**	**73.39**	**331**	P	**P**	**07 23 03.2**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=59,slow=5.7,SNR=11						
	comp=Z,2.7nm,0.8s						
AKASG	**Malin Array Be**	**76.25**	**320**	P	**P**	**07 23 19.4**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=63,slow=2.3,SNR=4.8						
AKASG				LR	LR	07 59 16.7	
	comp=Z,209nm,21.8s,baz=4.5,slow=38						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**77.94**	**25**	P	**P**	**07 23 29.4**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=299,slow=5.8,SNR=7.2						
	comp=Z,0.7nm,0.9s						
HFS	**Hagfors**	**79.31**	**333**	LR	LR	08 04 40.8	
	comp=Z,254nm,18.4s,baz=328,slow=40						
PINE	**Pine Mountain**	**85.00**	**43**	P	**P**	**07 24 07.5**	**+0.7**
J08A	**Circle Bar Ran**	**86.74**	**43**	P	**P**	**07 24 15.0**	**-0.4**
J08A				IAmb	IAmb	07 24 17.8	
	comp=Z,4.8nm,0.9s						
PDAR	**Pinedale Array**	**92.34**	**39**	P	**P**	**07 24 42.5**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=76,slow=1.1,SNR=3.5						
	comp=Z,0.2nm,0.5s						

SDD 07 07:22:11.4±2.5, 19°67N×68°41W, h146km±99km, MD3.1, ML2.9, MW2.1, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.72**	**134**	*e*S	Sn	07 23 05.7	-1.5
AGPR	**Aguadilla, PR**	**1.72**	**134**	*e*Pg	Pn	07 22 41.9	-1.2
AGPR				*e*Sg	Sn	07 23 05.5	-1.7
AGPR				IAML		07 23 06.4	
	comp=N,125nm,1.9s						
PRSN	**Puerto Rico Se**	**1.88**	**140**	*e*Pg	Pn	07 22 43.2	-1.7
PRSN				*e*Sg	Sn	07 23 08.0	-2.6
PRSN				IAML		07 23 24.4	
	comp=N,20nm,1.4s						
SODR	**Sosua Marina B**	**2.04**	**273**	*e*Pg	Pn	07 22 46.1	-0.7
SODR				*e*Sg	Sn	07 23 09.6	-4.3
SODR				IAML		07 23 30.5	
	comp=N,226nm,1.5s						
AOPR	**Arecibo Observ**	**2.05**	**130**	*e*S	Sn	07 23 08.8	-5.3
AOPR	**Arecibo Observ**	**2.05**	**130**	*e*Pg	Pn	07 22 44.0	-2.8
AOPR				*e*Sg	Sn	07 23 09.3	-4.9
AOPR				IAML		07 23 40.9	
	comp=N,35nm,3.0s						
CELP	**Cerrillos**	**2.35**	**132**	*e*Pg	Pn	07 22 49.7	-0.9
CELP				*e*Sg	Sn	07 23 16.2	-4.4
CELP				IAML		07 23 30.6	
	comp=N,20nm,2.5s						

RSPR 07 07:22:47.7, 19°00N×67°01W, h32km±10km, MD2.7/3, 4C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**0.69**	**159**	*e*P	Pn	07 22 58.9	-2.4
LSP	**Las Mesas**	**0.82**	**185**	*e*S	Sn	07 23 11.8	-2.3
CRPR	**Cabo Rojo, PR**	**0.99**	**186**	*e*P	Pn	07 23 04.2	-1.2
CRPR	**Cabo Rojo, PR**	**0.99**	**186**	*e*S	Sn	07 23 16.4	-1.9
CELP	**Cerrillos**	**1.00**	**156**	*e*P	Pn	07 23 04.5	-1.1
CELP	**Cerrillos**	**1.00**	**156**	*e*S	Sn	07 23 17.2	-1.5
MLPR	**Magueyes Islan**	**1.02**	**182**	*e*P	Pn	07 23 04.4	-1.5
MLPR	**Magueyes Islan**	**1.02**	**182**	*e*S	Sn	07 23 15.1	-4.0

*IDC **07** 07:23:07.6±1.6, 23°.08S×179°.23E, h550km±15km, mb3.9/11, mbtmp4.7/12, Error ellipse: s-maj=17.9km s-min=15.0km az=170.0*
*NOU **07** 07:23:08.9, 22°.92S×179°.41E, h588km, mb5.0/50, South of Fiji Islands*
*NEIC **07** 07:23:08.2±1.9, 23°.1S±0°.1×179°.2E±0°.1, h553km±3km, mb4.6/109, Error ellipse: s-maj=18.2km s-min=15.3km az=135.0*

ISC 07 07:23:09.6±0.4, 23°.12S±0°.07×179°.18E±0°.06, h579km, n237, σ1°45/209, mb4.5/66, 3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**6.44**	**8**	P	**P**	**07 24 52.1**	**-1.6**
GLKZ	**Green Lake**	**6.64**	**158**	P	**P**	**07 24 54.0**	**-1.3**
DGTI	**Dogotuki**	**6.81**	**5**	P	**P**	**07 24 55.0**	**-2.1**
PINNC	**Pines Island,**	**10.83**	**270**	P	**P**	**07 25 36.0**	**-0.4**
NIUE	**Niue**	**10.93**	**70**		**P**	**07 25 34.7**	**-2.8**
NIUE	**Niue**	**10.93**	**70**	P	**P**	**07 25 34.7**	**-2.8**
NFK	**Norfolk Island**	**11.69**	**237**	P	**P**	**07 25 44.7**	**-0.4**
	baz=12,SNR=4.2						
DZM	**Mont Dzumac**	**11.81**	**273**	P	**P**	**07 25 44.8**	**-1.7**
DZM	**Mont Dzumac**	**11.81**	**273**	P	**P**	**07 25 46.4**	**-0.1**
DZM	**Mont Dzumac**	**11.81**	**273**	P	**P**	**07 25 45.3**	**-1.2**
	18nm,1.0s,baz=80,slow=19,SNR=3.7						
AFI	**Afiamalu**	**12.54**	**45**	P	**P**	**07 25 49.6**	**-4.5**
AFI	**Afiamalu**	**12.54**	**45**	P	**P**	**07 25 49.6**	**-4.5**
OUZ	**Omahuta**	**13.00**	**201**	P	**P**	**07 25 59.9**	**+1.6**
WCZ	**Waipu Caves**	**13.44**	**197**	P	**P**	**07 26 04.3**	**+1.4**
KUZ	**Kuaotunu**	**13.90**	**192**	P	**P**	**07 26 08.5**	**+1.0**
KUZ	**Kuaotunu**	**13.90**	**192**	P	**P**	**07 26 07.4**	**-0.1**
WIAZ	**Waiheke Island**	**14.06**	**193**	P	**P**	**07 26 09.6**	**+0.4**
ETAZ	**East Tamaki Re**	**14.27**	**194**	P	**P**	**07 26 12.6**	**+1.4**
MKAZ	**Moumakai**	**14.36**	**193**	P	**P**	**07 26 12.3**	**+0.3**
MXZ	**Matakaoa Point**	**14.41**	**183**	P	**P**	**07 26 10.3**	**-2.1**
MXZ	**Matakaoa Point**	**14.41**	**183**	P	**P**	**07 26 10.4**	**-2.1**
AWAZ	**Awhitu Peninsu**	**14.44**	**195**	P	**P**	**07 26 13.2**	**+0.4**
HAZ	**Te Kaha**	**14.63**	**184**	P	**P**	**07 26 12.5**	**-2.2**
WMGZ	**Waiomatatini S**	**14.66**	**182**	P	**P**	**07 26 13.0**	**-1.9**
PKGZ	**Pakiroa**	**14.75**	**183**	P	**P**	**07 26 13.3**	**-2.6**
TOZ	**Tahuroa Road**	**14.90**	**191**	P	**P**	**07 26 17.5**	**+0.3**
TOZ	**Tahuroa Road**	**14.90**	**191**	P	**P**	**07 26 18.5**	**+1.3**
PUZ	**Puketiti**	**14.92**	**183**	P	**P**	**07 26 15.3**	**-2.2**
TWGZ	**Tauwhareparae**	**15.04**	**184**	P	**P**	**07 26 17.2**	**-1.5**
URZ	**Urewera**	**15.19**	**186**	P	**P**	**07 26 16.3**	**-3.7**
	138nm,0.8s,baz=86,slow=5.3,SNR=32						
URZ				S	**S**	**07 28 50.0**	**-5.8**
	42nm,0.5s,baz=295,slow=22,SNR=22						
URZ	**Urewera**	**15.19**	**186**	P	**P**	**07 26 16.5**	**-3.5**
MWZ	**Matawai**	**15.23**	**185**	P	**P**	**07 26 18.3**	**-2.2**
RTZ	**Ruatahuna**	**15.56**	**186**	P	**P**	**07 26 20.1**	**-3.5**
RTZ				IAmb	IAmb	07 26 23.3	
	comp=Z,39nm,0.7s						
HIZ	**Hauiti**	**15.78**	**193**	P	**P**	**07 26 26.0**	**+0.4**
BKZ	**Black Stump Fm**	**16.16**	**188**		**P**	**07 26 25.8**	**-3.4**
BKZ				IAmb	IAmb	07 26 45.9	
	comp=Z,18nm,0.8s						
BKZ	**Black Stump Fm**	**16.16**	**188**	P	**P**	**07 26 30.0**	**+0.8**
BFZ	**Birch Farm**	**17.68**	**187**	IAmb	IAmb	07 26 47.3	
	comp=Z,31nm,0.8s						
MRZ	**Mangatainoka R**	**17.75**	**189**	IAmb	IAmb	07 26 48.4	
	comp=Z,51nm,1.3s						
TCW	**Tory Channel**	**18.50**	**192**	P	**P**	**07 26 50.6**	**+0.1**
QRZ	**Quartz Range**	**18.52**	**196**	P	**P**	**07 26 52.2**	**+1.5**
TKNZ	**Takaka Hill**	**18.61**	**195**	P	**P**	**07 26 50.6**	**-0.9**
PLWZ	**Palliser**	**18.69**	**189**	P	**P**	**07 26 51.0**	**-1.2**
MRNZ	**Matariki Terra**	**19.00**	**195**	P	**P**	**07 26 54.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**19.06**	**192**	P	**P**	**07 26 55.1**	**-0.5**
DSZ	**Denniston Nort**	**19.57**	**197**	P	**P**	**07 27 00.2**	**0.0**
LHI	**Lord Howe Isla**	**19.71**	**241**	P	**P**	**07 27 01.3**	**-0.4**
	baz=20,SNR=4.2						
LHI	**Lord Howe Isla**	**19.71**	**241**	P	**P**	**07 27 01.2**	**-0.4**
LHI	**Lord Howe Isla**	**19.71**	**241**	P	**P**	**07 27 03.6**	**+2.0**
KHZ	**Kahutara**	**19.81**	**192**	P	**P**	**07 27 01.2**	**-1.1**
LTZ	**Lake Taylor**	**20.43**	**195**	P	**P**	**07 27 06.5**	**-1.5**
GVZ	**Greta Valley S**	**20.44**	**193**	P	**P**	**07 27 06.7**	**-1.4**
INZ	**Inchbonnie**	**20.58**	**196**	P	**P**	**07 27 07.3**	**-2.0**
OXZ	**Oxford**	**21.00**	**195**	P	**P**	**07 27 10.8**	**-2.2**
RPZ	**Rata Peaks**	**21.61**	**196**	P	**P**	**07 27 18.2**	**-0.4**
RPZ	**Rata Peaks**	**21.61**	**196**	P	**P**	**07 27 17.6**	**-0.9**
	comp=Z,11nm,0.5s,baz=322,slow=1.3,SNR=13						
	comp=Z,11nm,0.5s						
FOZ	**Fox Glacier**	**21.78**	**199**	P	**P**	**07 27 19.5**	**-0.5**
JCZ	**Jackson Bay**	**22.58**	**200**	P	**P**	**07 27 27.6**	**+0.3**
WKZ	**Wanaka**	**23.19**	**199**	P	**P**	**07 27 32.0**	**-0.7**
MLZ	**Mavora Lakes**	**23.95**	**199**	P	**P**	**07 27 39.6**	**+0.2**
DCZ	**Deep Cove**	**24.35**	**201**	P	**P**	**07 27 43.0**	**+0.2**
DCZ				IAmb	IAmb	07 27 44.1	
	comp=Z,27nm,0.8s						
WHZ	**Wether Hill Ro**	**24.48**	**199**	P	**P**	**07 27 44.4**	**+0.4**
ARMA	**Armidale**	**25.61**	**248**	P	**P**	**07 27 55.7**	**+1.4**
	baz=25,SNR=36						
ARMA	**Armidale**	**25.61**	**248**	P	**P**	**07 27 55.5**	**+1.2**
ARMA	**Armidale**	**25.61**	**248**	P	**P**	**07 27 56.0**	**+1.7**
EIDS	**Eidsvold**	**25.70**	**259**	P	**P**	**07 27 55.4**	**+0.3**
	baz=26,SNR=10						
EIDS	**Eidsvold**	**25.70**	**259**	P	**P**	**07 27 53.8**	**-1.3**
EIDS				IAmb	IAmb	07 27 56.4	
	comp=Z,31nm,0.8s						
EIDS	**Eidsvold**	**25.70**	**259**	P	**P**	**07 27 55.7**	**+0.6**
AUPHS	**Peel High Scho**	**26.35**	**246**	P	**P**	**07 28 02.2**	**+1.4**
MGCD	**Mangrove Creek**	**26.64**	**242**	P	**P**	**07 28 04.8**	**+1.5**
	baz=26,SNR=7.3						
MGCD	**Mangrove Creek**	**26.64**	**242**	P	**P**	**07 28 05.1**	**+1.9**
SYDH	**Sydney Hard Ro**	**27.08**	**241**	P	**P**	**07 28 08.4**	**+1.3**
WOLH	**Wollongong Har**	**27.15**	**239**	P	**P**	**07 28 09.2**	**+1.5**
AUUHS	**Ulladulla High**	**27.76**	**237**	P	**P**	**07 28 14.2**	**+1.2**
AUDCS	**Dubbo College**	**28.46**	**245**	P	**P**	**07 28 20.3**	**+1.2**
CNB	**Canberra Magne**	**28.61**	**238**	P	**P**	**07 28 21.8**	**+1.3**
	baz=28,SNR=33						
CNB	**Canberra Magne**	**28.61**	**238**	P	**P**	**07 28 22.1**	**+1.6**
AULRC	**Lightning Ridg**	**28.62**	**251**	P	**P**	**07 28 22.3**	**+1.8**
CAN	**Canberra**	**28.89**	**238**	P	**P**	**07 28 24.0**	**+1.1**
YNG	**Young**	**29.10**	**241**	P	**P**	**07 28 26.0**	**+1.3**
AUSMG	**Snowy Mountain**	**29.52**	**236**	P	**P**	**07 28 29.6**	**+1.2**
CTA	**Charters Tower**	**30.73**	**269**	P	**P**	**07 28 39.5**	**+0.6**
CTA	**Charters Tower**	**30.73**	**269**	P	**P**	**07 28 39.5**	**+0.6**
	comp=Z,39nm,0.3s,baz=103,slow=12,SNR=37						
	comp=Z,39nm,0.3s						
CTAO	**Charters Tower**	**30.73**	**269**	P	**P**	**07 28 39.1**	**+0.3**
CTAO	**Charters Tower**	**30.73**	**269**	P	**P**	**07 28 39.4**	**+0.6**
CMSA	**Cobar Meteorol**	**30.82**	**247**	P	**P**	**07 28 40.0**	**+0.5**
	baz=31,SNR=55						
CMSA	**Cobar Meteorol**	**30.82**	**247**	P	**P**	**07 28 40.3**	**+0.8**
QLP	**Quilpie**	**31.84**	**257**	P	**P**	**07 28 48.5**	**+0.3**
	baz=32,SNR=15						
QLP	**Quilpie**	**31.84**	**257**	P	**P**	**07 28 50.3**	**+2.1**
TOO	**Toolangi**	**32.25**	**236**	P	**P**	**07 28 52.2**	**+0.6**
	baz=32,SNR=20						
TOO	**Toolangi**	**32.25**	**236**	P	**P**	**07 28 52.5**	**+0.9**
TOO	**Toolangi**	**32.25**	**236**	P	**P**	**07 28 52.5**	**+0.9**
TAU	**Tasmania Unive**	**32.93**	**226**	P	**P**	**07 28 58.2**	**+1.0**
TAU				IAmb	IAmb	07 28 58.3	
	comp=Z,25nm,0.7s						
MTSU	**Mount Surprise**	**32.95**	**272**	P	**P**	**07 28 58.1**	**+0.3**
	baz=33,SNR=16						
MTSU	**Mount Surprise**	**32.95**	**272**	P	**P**	**07 28 58.2**	**+0.4**
BRAT	**Ballarat**	**33.44**	**236**	P	**P**	**07 29 03.0**	**+1.5**
PMG	**Port Moresby**	**33.53**	**289**	P	**P**	**07 29 02.1**	**-0.6**
PMG	**Port Moresby**	**33.53**	**289**	P	**P**	**07 29 02.5**	**-0.2**
STKA	**Stephens Creek**	**34.32**	**247**	P	**P**	**07 29 09.6**	**+0.6**
	baz=34,SNR=30						
STKA	**Stephens Creek**	**34.32**	**247**	P	**P**	**07 29 09.9**	**+0.8**
STKA				IAmb	IAmb	07 29 10.7	
	comp=Z,7.7nm,1.0s						
STKA	**Stephens Creek**	**34.32**	**247**	P	**P**	**07 29 09.9**	**+0.8**
STKA	**Stephens Creek**	**34.32**	**247**	P	**P**	**07 29 09.7**	**+0.6**
	comp=Z,25nm,0.7s,baz=90,slow=9.3,SNR=71						
STKA				ScP	**ScP**	**07 34 22.1**	**+3.2**
	comp=Z,1.6nm,0.7s,baz=135,slow=4.3,SNR=3.7						
	comp=Z,25nm,0.7s						
ARPS	**Mount Arapiles**	**34.87**	**238**	P	**P**	**07 29 13.9**	**+0.3**
	baz=35,SNR=13						
ARPS	**Mount Arapiles**	**34.87**	**238**	P	**P**	**07 29 15.1**	**+1.5**
INKA	**Innaminka**	**34.92**	**254**	P	**P**	**07 29 15.5**	**+1.4**
COEN	**Coen**	**35.25**	**279**	P	**P**	**07 29 18.4**	**+1.4**
	baz=35,SNR=4.3						
HTT	**Hallett**	**36.71**	**245**	P	**P**	**07 29 29.1**	**+0.2**
	baz=36,SNR=34						
HTT	**Hallett**	**36.71**	**245**	P	**P**	**07 29 29.5**	**+0.6**
QIS	**Mount Isa**	**36.75**	**266**	P	**P**	**07 29 28.8**	**-0.5**
	baz=37,SNR=4.1						
QIS	**Mount Isa**	**36.75**	**266**	P	**P**	**07 29 29.6**	**+0.3**
LCRK	**Leigh Creek**	**37.13**	**250**	P	**P**	**07 29 33.1**	**+0.8**
WHYH	**Whyalla**	**37.80**	**245**	P	**P**	**07 29 38.0**	**+0.3**
BBOO	**Buckleboo**	**39.06**	**246**	P	**P**	**07 29 47.6**	**-0.3**
	baz=39,SNR=83						
BBOO	**Buckleboo**	**39.06**	**246**	P	**P**	**07 29 47.5**	**-0.3**
BBOO				IAmb	IAmb	07 29 48.4	
	comp=Z,26nm,0.8s						
BBOO	**Buckleboo**	**39.06**	**246**	P	**P**	**07 29 47.8**	**-0.1**
OOD	**Oodnadatta**	**39.39**	**254**	P	**P**	**07 29 52.0**	**+1.4**
MULG	**Mulgathing**	**40.73**	**250**	P	**P**	**07 30 01.3**	**+0.1**
AS01	**Alice Springs**	**41.38**	**260**	P	**P**	**07 30 06.6**	**+0.1**
AS31	**Alice Springs**	**41.42**	**260**	P	**P**	**07 30 07.0**	**+0.1**
AS31				IAmb	IAmb	07 30 07.5	
	comp=Z,9.3nm,0.7s						
ASAR	**Alice Springs**	**41.42**	**260**	P	**P**	**07 30 06.5**	**-0.4**
ASAR	**Alice Springs**	**41.42**	**260**	P	**P**	**07 30 06.8**	**0.0**
	comp=Z,42nm,0.9s,baz=91,slow=8.2,SNR=234						
ASAR				ScP	**ScP**	**07 34 50.6**	**+4.3**
	comp=Z,6.4nm,1.0s,baz=108,slow=3.9,SNR=15						
ASAR				S	**S**	**07 35 39.1**	**-2.0**
	comp=Z,2.4nm,0.9s,baz=100,slow=14,SNR=9.0						
	comp=Z,42nm,0.9s						
WR0	**Warramunga Arr**	**41.52**	**266**	IAmb	IAmb	07 30 07.2	
	comp=Z,16nm,0.9s						
WC3	**Warramunga Arr**	**41.68**	**266**	P	**P**	**07 30 07.6**	**-1.3**
	baz=42						
WB0	**Warramunga Arr**	**41.70**	**266**	P	**P**	**07 30 07.6**	**-1.4**
WB0				IAmb	IAmb	07 30 09.0	
	comp=Z,29nm,0.9s						
WB2	**Warramunga Arr**	**41.70**	**266**	P	**P**	**07 30 07.9**	**-1.2**
WB2				IAmb	IAmb	07 30 09.1	
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**41.70**	**266**	P	**P**	**07 30 08.1**	**-1.0**
WRAB				IAmb	IAmb	07 30 09.1	
	comp=Z,27nm,0.8s						
WRA	**Warramunga Arr**	**41.71**	**266**	P	**P**	**07 30 08.3**	**-0.9**
	comp=Z,17nm,0.7s,baz=96,slow=8.1,SNR=363						
WRA				ScP	**ScP**	**07 34 52.1**	**+4.7**
	comp=Z,7.1nm,1.1s,baz=95,slow=4.1,SNR=12						
WRA				S	**S**	**07 35 42.9**	**-2.4**
	comp=Z,2.1nm,0.9s,baz=112,slow=12,SNR=6.1						
	comp=Z,17nm,0.7s						
KDU	**Kakadu**	**45.47**	**275**	P	**P**	**07 30 37.2**	**-1.0**
	baz=45,SNR=9.0			

TCRU	**Three Creeks R**	**88.67**	**47**	IAmb	IAmb	07 35 05.7
	comp=Z,8.8nm,1.3s					
MVU	**Marysvale**	**88.78**	**47**	IAmb	IAmb	07 35 42.8
	comp=Z,9.3nm,1.3s					
MFID	**Camas Ranch**	**89.07**	**41**	IAmb	IAmb	07 35 05.7
	comp=Z,5.1nm,0.9s					
GO06	**Curarrehue**	**89.31**	**133**	P	**P**	**07 35 06.7 +1.5**
GO06				IAmb	IAmb	07 35 08.1
	comp=Z,14nm,1.2s					
PLCA	**Paso Flores**	**89.34**	**135**	P	**P**	**07 35 06.8 +1.5**
	comp=Z,5.5nm,1.0s,baz=262,slow=1.7,SNR=6.1					
	comp=Z,5.5nm,1.0s					
PZH	**PanZhiHua**	**89.65**	**299**	P	**P**	**07 35 08.2 +1.2**
F10A	**Beach Ranch, E**	**89.67**	**39**	P	**P**	**07 35 07.2 +0.7**
F10A				IAmb	IAmb	07 35 07.5
	comp=Z,3.9nm,0.8s					
Q16A	**Castle Valley**	**89.69**	**47**	P	**P**	**07 35 08.6 +1.6**
Q16A				IAmb	IAmb	07 35 10.2
	comp=Z,5.0nm,0.8s					
TMUT	**Trail Mountain**	**89.85**	**47**	IAmb	IAmb	07 35 10.2
	comp=Z,10nm,0.8s					
TLIG	**Tlapa**	**89.93**	**71**	IAmb	IAmb	07 35 10.9
	comp=Z,7.2nm,0.9s					
MPU	**Maple Canyon**	**89.94**	**46**	IAmb	IAmb	07 35 09.9
	comp=Z,5.3nm,1.0s					
HVU	**Hansel Valley**	**90.10**	**44**	IAmb	IAmb	07 35 10.5
	comp=Z,5.0nm,0.7s					
SRU	**San Rafael Swe**	**90.22**	**47**	IAmb	IAmb	07 35 11.1
	comp=Z,8.4nm,0.8s					
P17A	**Butcher Ranch,**	**90.25**	**47**	IAmb	IAmb	07 35 12.3
	comp=Z,7.9nm,1.3s					
TCUT	**Toone Canyon**	**90.64**	**45**	IAmb	IAmb	07 35 13.2
	comp=Z,7.5nm,0.9s					
TX31	**Lajitas Ar. Si**	**90.66**	**58**		**P**	**07 35 12.6 +1.0**
TX31				IAmb	IAmb	07 35 14.1
	comp=Z,4.2nm,1.0s					
TXAR	**Lajitas Array**	**90.66**	**58**	P	**P**	**07 35 13.1 +1.5**
	comp=Z,2.4nm,0.8s,baz=215,slow=6.4,SNR=31					
	comp=Z,2.4nm,0.8s					
BSUT	**Blindstream Ca**	**90.77**	**46**	IAmb	IAmb	07 35 14.0
	comp=Z,7.8nm,0.8s					
ANMO	**Albuquerque**	**91.08**	**52**		**P**	**07 35 13.9 +0.5**
ANMO				IAmb	IAmb	07 35 15.2
	comp=Z,4.3nm,1.1s					
ALPN	**Alpine**	**91.14**	**57**	IAmb	IAmb	07 35 15.6
	comp=Z,2.6nm,0.8s					
ILAR	**Eielson Array**	**91.46**	**14**	P	**P**	**07 35 14.1 -0.2**
	comp=Z,0.4nm,0.7s,baz=223,slow=4.7,SNR=8.8					
	comp=Z,0.4nm,0.7s					
E19K	**Redstone River**	**92.00**	**9**	IAmb	IAmb	07 35 17.7
	comp=Z,3.4nm,0.8s					
PDAR	**Pinedale Array**	**92.66**	**44**	P	**P**	**07 35 20.9 +0.3**
	comp=Z,0.8nm,0.6s,baz=202,slow=1.6,SNR=7.6					
	comp=Z,0.8nm,0.6s					
D19K	**Kuna River**	**92.86**	**8**	IAmb	IAmb	07 35 22.1
	comp=Z,4.5nm,1.1s					
DRIO	**Del Rio**	**93.10**	**59**	IAmb	IAmb	07 35 24.1
	comp=Z,5.3nm,0.8s					
YKA	**Yellowknife Ar**	**99.99**	**26**	PKKPbc	PKKPbc	07 52 09.0 -2.0
	comp=Z,0.2nm,0.8s,baz=55,slow=1.8,SNR=3.9					
MKAR	**Makanchi Array**	**111.08**	**313**	PKiKP	**PKiKP**	**07 40 37.1 -0.7**
	comp=Z,0.8nm,0.8s,baz=90,slow=0.5,SNR=7.4					
MKAR				PKKPbc	**PKKPbc**	**07 51 36.8 -0.3**
	comp=Z,0.5nm,0.7s,baz=269,slow=5.9,SNR=4.6					
MKAR				PKKPab	**PKKPab**	**07 51 48.8 +1.5**
	comp=Z,1.0nm,0.7s,baz=293,slow=3.3,SNR=8.3					
KURBB	**Kurchatov Arra**	**114.17**	**317**	PKKPbc	PKKPbc	07 51 26.9 0.0
	comp=Z,0.5nm,0.4s,baz=271,slow=3.9,SNR=4.7					
KK31	**Karatay Array**	**118.80**	**308**	PKPdf	**PKPdf**	**07 40 52.5 -0.3**
KKAR	**Karatay Array**	**118.80**	**308**		**PKPdf**	**07 40 52.5 -0.3**
BDFB	**Brasilia**	**119.87**	**125**	PKP	**PKPdf**	**07 40 54.6 -1.2**
	comp=Z,2.3nm,0.7s,baz=135,slow=1.4,SNR=4.2					
BOSA	**Boshof**	**122.75**	**207**	PKP	**PKiKP**	**07 41 01.6 +0.3**
	comp=Z,2.1nm,0.8s,baz=57,slow=2.0,SNR=4.4					
ARCES	**ARCESS Array B**	**130.97**	**348**	PKP	**PKiKP**	**07 41 16.1 -0.2**
	comp=Z,1.8nm,0.7s,baz=90,slow=3.6,SNR=6.1					
FINES	**FINESS Array B**	**137.47**	**341**	PKP	**PKPdf**	**07 41 27.7 +0.1**
	comp=Z,2.4nm,0.8s,baz=0.0,slow=5.9,SNR=3.8					
NOA	**NORSAR Array B**	**141.20**	**351**	PKhKP	PKPpre	07 41 28.8
	comp=Z,1.2nm,0.7s,baz=16,slow=4.6,SNR=3.5					
HFS	**Hagfors**	**141.64**	**348**	PKhKP	PKPpre	07 41 29.4
	comp=Z,3.1nm,0.8s,baz=71,slow=5.2,SNR=4.8					
AKASG	**Malin Array Be**	**143.91**	**327**	PKP	PKPbc	07 41 38.4 -0.4
	comp=Z,2.4nm,0.4s,baz=43,slow=3.9,SNR=19					
AKASG				SKPbc	**SKiKP**	**07 44 25.5 +0.7**
	comp=Z,4.0nm,0.9s,baz=52,slow=2.0,SNR=7.3					
KIEV	**Kiev**	**143.93**	**327**		PKPbc	07 41 38.1 -0.8
BNN	**Bunyan**	**145.14**	**305**	PKPdf	**PKPbc**	**07 41 43.0 -0.2**
BRTR	**Keskin Array B**	**146.51**	**308**	PKPbc	**PKPbc**	**07 41 47.1 +0.1**
	comp=Z,1.7nm,0.6s,baz=66,slow=3.4,SNR=4.4					
MMAI	**Mount Meron Ar**	**146.69**	**295**	PKPbc	**PKPbc**	**07 41 48.5 +0.9**
	comp=Z,4.4nm,0.5s,baz=75,slow=4.4,SNR=14					
EKA	**Eskdalemuir Ar**	**147.78**	**3**	PKPbc	**PKPbc**	**07 41 49.5 -0.1**
	comp=Z,4.3nm,0.6s,baz=347,slow=1.6,SNR=8.6					
BURAR	**Bucovina Array**	**147.91**	**326**		**PKiKP**	**07 41 51.5 -0.1**
CRVS	**Cervenica-Dubn**	**148.82**	**331**	*e*PKP	**PKiKP**	**07 41 53.4 0.0**
LANS	**Liptovska Anna**	**149.48**	**333**	*e*PKP	**PKiKP**	**07 41 55.6 +0.8**
MORC	**Moravsky Berou**	**149.74**	**336**	*e*PKP	**PKPbc**	**07 41 54.4 -0.2**
CLL	**Collm**	**149.89**	**343**		**PKPdf**	**07 41 52.0 +2.7**
JAVC	**Velka Javorina**	**150.44**	**335**	*e*PKP	**PKPbc**	**07 41 56.6 +0.3**
VRAC	**Vranov**	**150.48**	**337**	*e*PKP	**PKPbc**	**07 41 56.6 +0.3**
KRUC	**Moravsky**	**150.75**	**337**	*e*PKP	**PKPbc**	**07 41 56.3 -0.7**
MODS	**Modra-Piesok**	**150.98**	**335**	*e*PKP	**PKiKP**	**07 41 58.8 +0.9**
GERES	**GERESS Array B**	**151.87**	**339**	PKPbc	**PKiKP**	**07 41 59.8 0.0**
	comp=Z,2.1nm,0.7s,baz=358,slow=4.3,SNR=6.1					
BTNL	**Ternell**	**152.06**	**351**	*d*PKP	**PKiKP**	**07 42 00.4 +0.3**
BMRD	**Maredsous**	**152.52**	**352**	*d*PKP	**PKiKP**	**07 42 01.2 +0.2**
DBIC	**Dimbokro**	**163.19**	**166**	PKP	**PKPdf**	**07 42 07.2 0.0**
	comp=Z,3.4nm,0.7s,baz=148,slow=2.2,SNR=3.7					
TOA0	**Torodi Ar. Sit**	**169.79**	**194**		**PKPab**	**07 43 30.5 0.0**

ATH 07 07:40:08.5, 40.78N×22.97E, h19km±1km, ML1.0/4, Manual Solution by M.Kolligri This location: 2020/04/29 00:04:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THE	**Thessaloniki**	**0.15**	**181**	P	Pg	07 40 13.1	+0.3
THE				S	Sg	07 40 16.1	+0.3
HORT	**Hortiatis**	**0.21**	**151**	P	Pg	07 40 14.1	+0.4
HORT				S	Sg	07 40 17.3	0.0
SOH	**Sokhos**	**0.29**	**82**	P	Pb	07 40 15.3	+0.1
SOH				S	Sb	07 40 19.8	+0.2
KNT	**Kendrikon**	**0.38**	**352**	P	Pg	07 40 16.6	0.0
KNT				S	Sg	07 40 21.3	-0.8
GRG	**Griva**	**0.47**	**292**	P	Pb	07 40 18.1	0.0
GRG				S	Sb	07 40 24.7	0.0

ATH 07 07:40:39.1, 39.04N×22.90E, h17km±3km, ML1.6/1, Error ellipse: s-maj=9.1km s-min=1.4km az=332.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	**0.40**	**34**	P	Pb	07 40 47.7	-0.1
XOR				S	Sg	07 40 52.6	-0.3
AGG	**Agios Georgios**	**0.45**	**268**	P	Pg	07 40 47.7	-0.5
AGG				S	Sg	07 40 54.5	+0.2
AGG				AML	AML	07 40 55.0	
	comp=E,257μm,0.5s						
AGG				AML	AML	07 40 55.5	
	comp=N,184μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.60**	**268**	P	Pg	07 40 50.6	-0.4
MAKR				S	Sb	07 40 59.3	-0.1

*TRN **07** 07:46:23.5, 10.06N×62.04W, h49km, MD3.7, Near South-west peninsula of Trinidad.*
*FUNV **07** 07:46:26.7, 10.22N×62.34W, h32km, MW3.9*
ISC 07 07:46:24.0±1.3, 10.18N±0.05×62.30W±0.05, h48km±41km, n14, σ1§67/23, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**1.00**	**62**	*e*P	Pn	07 46 39.1	-2.5
TRN				*e*S	**Sn**	**07 46 51.2**	**-3.4**
CRUV	**Carupano**	**1.04**	**298**	*e*P	**Pn**	**07 46 43.6**	**+1.3**
CRUV				*e*S	**Sn**	**07 46 55.6**	**-0.2**
GRGR	**Grenville**	**2.04**	**18**	*e*P	**Pn**	**07 46 56.6**	**+0.7**
GRGR				*e*S	**Sn**	**07 47 21.1**	**+0.9**
GRHS	**Sauteurs**	**2.13**	**18**	*e*P	**Pn**	**07 46 57.5**	**+0.3**
GRHS				*e*S	**Sn**	**07 47 22.4**	**0.0**
PCRV	**Puerto La Cruz**	**2.30**	**270**	*e*P	**Pn**	**07 47 01.5**	**+2.0**
PCRV				*e*S	**Sn**	**07 47 25.4**	**-1.3**
GCMP	**Grenada, Carri**	**2.45**	**20**	*e*P	**Pn**	**07 47 02.0**	**+0.5**
GCMP				*e*S	**Sn**	**07 47 30.4**	**+0.2**
SVT	**Saint Vincent**	**3.15**	**19**	*e*S	**Sn**	**07 47 46.3**	**-1.2**
SVB	**Belmont**	**3.24**	**18**	*e*S	**Sn**	**07 47 48.9**	**-0.9**
SLBI	**Saint Lucia, B**	**4.04**	**19**	*e*P	**Pn**	**07 47 24.6**	**+1.3**
SLBI				*e*S	**Sn**	**07 48 09.2**	**-0.1**
LUEV	**Luepa**	**4.39**	**169**	*e*P	**Pn**	**07 47 29.8**	**+1.5**
LUEV				*e*S	**Sn**	**07 48 18.0**	**-0.2**
MPOM	**Morne Pois Mar**	**4.47**	**18**	*e*P	**Pn**	**07 47 29.9**	**+0.6**
MPOM				*e*S	**Sn**	**07 48 18.6**	**-1.4**
BIM	**Bigot**	**4.48**	**15**	*e*P	**Pn**	**07 47 30.2**	**+0.9**
BIM				*e*S	**Sn**	**07 48 18.8**	**-1.5**
CACV	**CAICARA DEL OR**	**4.93**	**239**	*e*P	Pn	07 47 31.1	-4.5
CACV				*e*S	Sn	07 48 19.6	-12
BAUV	**El Baul**	**5.79**	**258**	*e*P	**Pn**	**07 47 48.2**	**+0.7**
BAUV				*e*S	**Sn**	**07 48 48.1**	**-4.5**

*JMA **07** 07:48:20.9±0.1, 26.3N±0.5×129.6E±0.4, h44km, MV3.2/19, NEAR MINAMI-DAITOJIMA IS*
*IDC **07** 07:48:20.4±1.3, 26.17N×129.44E, h0km, mb3.6/4, mbtmp3.6/5, ML3.2/1, MS2.6/1, Error ellipse: s-maj=35.6km s-min=18.7km az=66.0*
ISC 07 07:48:22.8±0.9, 26.33N±0.05×129.62E±0.03, h35km, n22, σ1§26/34, mb3.7/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**1.25**	**304**	P	**Pn**	**07 48 42.5**	**-1.3**
JYRO				S	**Sn**	**07 48 58.5**	**-0.9**
JOW	**Kunigami**	**1.30**	**293**	P	**Pn**	**07 48 43.6**	**-0.9**
JOW				*e*S	**Sn**	**07 48 59.4**	**-1.3**
JOW	**Kunigami**	**1.30**	**293**	Pn	**Pn**	**07 48 43.4**	**-1.1**
	120nm,0.3s,baz=116,slow=20,SNR=326						
JOW				Sn	**Sn**	**07 48 59.4**	**-1.3**
	168nm,0.3s,baz=124,slow=16,SNR=19						
JOW				LR	LR	07 49 24.3	
	comp=Z,167nm,20.0s,baz=286,slow=52						
JOKE	**Okinoerabujima**	**1.39**	**318**	*e*P	**Pn**	**07 48 44.7**	**-1.0**
JOKE				*e*S	**Sn**	**07 49 01.7**	**-1.2**
JNTH	**Nagotoyohara**	**1.44**	**278**	P	**Pn**	**07 48 45.0**	**-1.4**
JNTH				*e*S	**Sn**	**07 49 02.8**	**-1.2**
JMZ	**Minamidaito 2**	**1.53**	**109**	*e*P	**Pn**	**07 48 46.5**	**-1.1**
JMZ				S	**Sn**	**07 49 03.7**	**-2.6**
JKDJ	**Kitadaitoujima**	**1.56**	**104**	*e*P	**Pn**	**07 48 46.8**	**-1.2**
JKDJ				S	**Sn**	**07 49 05.4**	**-1.5**
JTK	**Tokunoshima**	**1.57**	**338**	P	**Pn**	**07 48 47.5**	**-0.7**
JTK				*e*S	**Sn**	**07 49 06.4**	**-0.9**
JIH	**Iheya**	**1.64**	**296**	P	**Pn**	**07 48 48.4**	**-0.7**
JIH				*e*S	**Sn**	**07 49 08.1**	**-0.8**
JJT3	**Tamagusuku3**	**1.66**	**264**	*e*P	**Pn**	**07 48 48.5**	**-0.8**
JJT3				*e*S	**Sn**	**07 49 09.2**	**-0.2**
JAMN	**Amaminishikomi**	**1.95**	**349**	P	**Pn**	**07 48 52.5**	**-0.8**
JAMN				S	**Sn**	**07 49 15.2**	**-1.4**
JZK	**Kikaishima**	**2.01**	**9**	P	**Pn**	**07 48 54.5**	**+0.4**
JZK				*e*S	**Sn**	**07 49 18.5**	**+0.4**
JAM	**Amami Oshima**	**2.08**	**360**	P	**Pn**	**07 48 54.2**	**-1.0**
JAGN	**Aguni-jima**	**2.14**	**278**	P	**Pn**	**07 48 55.5**	**-0.6**
JAGN				S	**Sn**	**07 49 20.2**	**-1.2**
JKE	**Kume jima 2**	**2.54**	**271**	P	**Pn**	**07 49 00.3**	**-1.2**
JKE				*e*S	**Sn**	**07 49 29.7**	**-1.4**
JTAJ	**Takarajima**	**2.84**	**353**	*e*P	**Pn**	**07 49 05.0**	**-0.7**
JTAJ				S	**Sn**	**07 49 36.8**	**-1.9**
JNU	**Nakatsue**	**6.86**	**9**	Pn	Pn	07 50 06.1	+5.1
	0.4nm,0.3s,baz=239,slow=5.9,SNR=1.5						
	2.2nm,0.4s						
KSRS	**Korea Array**	**11.19**	**353**	LR	LR	07 55 17.5	
	comp=Z,30nm,18.7s,baz=125,slow=37						
MKAR	**Makanchi Array**	**42.40**	**311**	P	P	07 56 18.3	+4.4
	0.5nm,0.7s,baz=101,slow=7.5,SNR=2.8						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**46.22**	**174**	P	**P**	**07 56 45.8**	**+1.2**
	0.6nm,0.5s,baz=354,slow=8.6,SNR=4.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**49.87**	**175**	P	**P**	**07 57 14.8**	**+2.1**
	0.5nm,0.8s,baz=7.6,slow=13,SNR=10						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**58.99**	**168**	P	**P**	**07 58 20.2**	**+1.3**
	0.4nm,0.5s,baz=10,slow=11,SNR=1.4						
	0.4nm,0.5s						

GUC 07 07:59:08.3±0.6, 24.17S×67.50W, h210km±5km, ML3.6, 4C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.36**	**333**	*e*P	Pn	07 59 43.2	+1.1
AF01				*e*S	S	08 00 10.0	+1.8
AF01				IAML		08 00 13.1	
	comp=N,192nm,0.2s						
LVC	**Limon Verde**	**2.02**	**320**	*e*P	Pn	07 59 49.8	+1.5
LVC				*e*S	S	08 00 20.6	+1.7
GO02	**Mina Guanaco**	**2.15**	**242**	*e*P	Pn	07 59 51.2	+1.8
GO02				*e*S	S	08 00 23.5	+2.4
GO02				IAML		08 00 25.3	
	comp=N,261nm,0.3s						
PB06	**IPOC Station P**	**2.40**	**307**	*e*P	Pn	07 59 54.1	+2.2
PB06				*e*S	S	08 00 28.0	+2.5
PB06				IAML		08 00 29.5	
	comp=E,243nm,0.3s						
PB14	**IPOC Station P**	**2.69**	**260**	*e*P	Pn	07 59 57.5	+2.2
PB14				*e*S	S	08 00 34.2	+2.7
PB14				IAML		08 00 39.2	
	comp=E,40nm,0.3s						
PB05	**IPOC Station P**	**2.81**	**297**	*e*P	Pn	07 59 58.7	+2.3
PB05				*e*S	S	08 00 35.8	+2.3
PB05				IAML		08 00 40.3	
	comp=E,116nm,0.1s						
PB09	**IPOC Station P**	**2.85**	**325**	*e*P	Pn	07 59 59.1	+2.1
PB09				*e*S	S	08 00 37.2	+2.5
PB09				IAML		08 00 38.2	
	comp=E,86nm,0.3s						
PB10	**IPOC Station P**	**2.87**	**282**	*e*P	Pn	07 59 59.7	+2.6
PB10				*e*S	S	08 00 37.3	+2.6
PB10				IAML		08 00 48.0	
	comp=E,74nm,0.6s						
AC02	**Maricunga**	**3.04**	**209**	*e*P	Pn	08 00 00.3	+0.9
AC02				*e*S	S	08 00 41.0	+2.0
PB04	**IPOC Station P**	**3.04**	**306**	*e*P	Pn	08 00 01.3	+2.1
PB04				*e*S	S	08 00 40.7	+2.2
PB04				IAML		08 00 44.4	
	comp=E,154nm,0.2s						
PB07	**IPOC Station P**	**3.28**	**317**	*e*P	Pn	08 00 03.7	+1.8
PB07				*e*S	S	08 00 45.0	+1.4
AC01	**Pan de Azucar**	**3.43**	**234**	*e*P	Pn	08 00 05.0	+1.4
AC01				*e*S	S	08 00 48.0	+1.4
PB02	**IPOC Station P**	**3.59**	**322**	*e*P	Pn	08 00 07.8	+2.2
PB02				*e*S	S	08 00 51.7	+1.4
PB01	**IPOC Station P**	**3.61**	**329**	*e*P	Pn	08 00 06.7	+0.9
PB01				*e*S	S	08 00 51.1	+0.4
PATCX	**Punta Patache**	**4.14**	**323**	*e*P	Pn	08 00 13.9	+1.6
PATCX				*e*S	S	08 01 04.0	+1.8
GO03	**Copiap**	**4.21**	**215**	*e*P	Pn	08 00 13.2	+0.1
PB08	**IPOC Station P**	**4.29**	**339**	*e*P	Pn	08 00 15.8	+1.3
PB08				*e*S	S	08 01 06.5	+0.4

*IDC **07** 08:23:27.5±0.9, 24.01N×121.84E, h0km, mb3.6/10, mbtmp3.6/11, ML3.2/1, MS2.7/1, Error ellipse: s-maj=26.9km s-min=19.8km az=63.0*
*TAP **07** 08:23:29.7, 24.09N×121.68E, h8km, ML4.2, B*
*JMA **07** 08:23:29.9±0.1, 24.1N±0.3×121.6E±0.8, h9km, MV3.5/13, TAIWAN REGION*
*ASIES **07** 08:23:29.7, 24.09N×121.68E, h8km, ML4.2, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^21 Nm; Mrr=3.10; Mθθ=0.84; Mϕϕ=3.94; Mrθ=3.02; Mϕθ=-2.79; Mϕr=5.78; Fault plane solution: M0=7.94794×10^21 NP1: ϕs=193.92000°, δ=77.49000°, λ=-60.95000°. NP2: ϕs=305.23000°, δ=31.41000°, λ=-155.44000°. Principal axes: T Plg=26.7640°, Azm=261.3090°; N Plg=28.2950°, Azm=7.0630°; P Plg=49.1710°, Azm=135.5990°;*
ISC 07 08:23:29.6±0.8, 24.08N±0.01×121.70E±0.02, h9km±5km, n182, σ0§65/247, mb3.6/10, 15C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.10**	**273**	⇓*i*P	**Pg**	**08 23 32.0**	**0.0**
	baz=267						
TWD				*i* S	**Sg**	**08 23 33.5**	**-0.3**
	baz=267						
ETL	**Fush Village**	**0.11**	**319**	⇓*i*P	**Pg**	**08 23 32.3**	**0.0**
	baz=320						
ETL				*i* S	**Sg**	**08 23 34.0**	**-0.2**
	baz=320						
HWA	**Hwalien**	**0.13**	**222**	P	**Pg**	**08 23 33.5**	**+0.9**
	baz=221						
NACB	**Ninganchiao**	**0.14**	**315**	P	**Pg**	**08 23 32.7**	**0.0**
NACB	**Ninganchiao**	**0.14**	**315**	⇓*i*P	**Pg**	**08 23 32.7**	**-0.1**
	baz=315						
NACB				*i* S	**Sg**	**08 23 34.6**	**-0.3**
	baz=315						
ETM	**Tongmen**	**0.22**	**240**	P	**Pg**	**08 23 34.3**	**+0.2**
	baz=238						
ETM				*e*S	**Sg**	**08 23 37.2**	**+0.1**
	baz=238						
EHP	**Heping Village**	**0.24**	**9**	P	**Pg**	**08 23 34.4**	**-0.1**
	baz=11						
EHP				*i* S	**Sg**	**08 23 38.6**	**+0.9**
	baz=11						
EAHA	**Aohua**	**0.26**	**8**	*i* P	**Pg**	**08 23 34.9**	**+0.1**
	baz=7.0						
EAHA				*i* S	**Sg**	**08 23 38.9**	**+0.6**
	baz=7.0						
LXIB	**Xiulin Townshi**	**0.27**	**259**	⇓*i*P	**Pg**	**08 23 35.2**	**+0.1**
	baz=248						
LXIB				*e*S	**Sg**	**08 23 38.6**	**-0.2**
	baz=248						
SHUL	**Shoufeng**	**0.31**	**204**	*e*P	**Pb**	**08 23 37.9**	**+0.5**
	baz=213						
SHUL				*e*S	**Sb**	**08 23 44.3**	**+1.8**
	baz=213						
ENA	**Nanau**	**0.35**	**6**	⇓*i*P	**Pg**	**08 23 36.8**	**+0.2**
	baz=7.0						
ENA				*e*S	**Sg**	**08 23 41.5**	**+0.1**
	baz=7.0						
ESL	**Shilin**	**0.36**	**224**	⇑*i*P	**Pg**	**08 23 36.9**	**+0.2**
	baz=230						
ESL				*e*S	**Sg**	**08 23 41.3**	**-0.1**
	baz=230						
EWUT	**Wuta**	**0.38**	**11**	⇓*i*P	**Pg**	**08 23 37.3**	**+0.3**
	baz=10.0						
EWUT				*e*S	**Sg**	**08 23 42.1**	**+0.1**
	baz=10.0						
TEGC	**Jichi Village**	**0.39**	**202**	P	**Pb**	**08 23 39.0**	**+0.3**
	baz=203						
TEGC				*e*S	**Sb**	**08 23 46.0**	**+1.2**
	baz=203						
WHF	**Hehuan Shan**	**0.41**	**280**	⇓*i*P	**Pg**	**08 23 37.8**	**0.0**
	baz=278						
WHF				*i* S	**Sg**	**08 23 43.3**	**+0.2**
	baz=278						
FUSS	**Fushou**	**0.45**	**292**	⇓*i*P	**Pg**	**08 23 38.9**	**+0.3**
	baz=291						
FUSS				*e*S	**Sg**	**08 23 44.6**	**0.0**
	baz=291						
NNSB	**Datong**	**0.46**	**320**	⇓*i*P	**Pg**	**08 23 38.9**	**+0.3**
	baz=319						
NNSB				*i* S	**Sg**	**08 23 44.8**	**+0.1**
	baz=319						
NNSH	**Datong**	**0.46**	**320**	⇓*i*P	**Pg**	**08 23 38.8**	**+0.2**
	baz=319						
NNSH				*i* S	**Sg**	**08 23 44.9**	**+0.3**
	baz=319						
WARBT	**Fenglin Townsh**	**0.46**	**219**	⇑*i*P	**Pg**	**08 23 38.6**	**+0.1**
	baz=227						
WARBT				*e*S	**Sg**	**08 23 44.1**	**-0.5**
	baz=227						
NNS	**Nan Shan**	**0.47**	**321**	⇓*i*P	**Pg**	**08 23 39.1**	**+0.2**
	baz=320						
NNS				*i* S	**Sg**	**08 23 45.3**	**+0.2**
	baz=320						
EGFH	**Guangfu**	**0.48**	**212**	*e*P	**Pg**	**08 23 39.3**	**+0.4**
	baz=223						
CHGB	**Renai**	**0.48**	**268**	⇑*i*P	**Pg**	**08 23 39.4**	**+0.4**
	baz=259						
CHGB				*i* S	**Sg**	**08 23 45.8**	**+0.4**
	baz=259						
LATG	**Datong**	**0.49**	**341**	⇓*i*P	**Pg**	**08 23 39.3**	**+0.2**
	baz=339						
LATG				*i* S	**Sg**	**08 23 45.6**	**+0.1**
	baz=339						
OWD	**Renai**	**0.50**	**256**	⇑P	**Pg**	**08 23 39.4**	**+0.1**
	baz=255						
OWD				*e*S	**Sg**	**08 23 45.3**	**-0.5**
	baz=255						
TWT	**Tachien**	**0.51**	**290**	⇓*i*P	**Pb**	**08 23 40.2**	**-0.7**
	baz=288						
TWT				S	**Sg**	**08 23 47.2**	**+0.8**
	baz=288						
ESAO	**Su ao**	**0.52**	**15**	⇓*e*P	**Pg**	**08 23 39.7**	**+0.1**
	baz=5.0						
TDCB	**Techi**	**0.53**	**290**	⇓*i*P	**Pg**	**08 23 40.3**	**+0.4**
	baz=288						
TDCB				S	**Sg**	**08 23 46.8**	**-0.1**
	baz=288						
WUSB	**Renai**	**0.54**	**261**	*i* P	**Pg**	**08 23 40.5**	**+0.4**
	baz=260						
WUSB				*i* S	**Sg**	**08 23 47.0**	**-0.3**
	baz=260						
TWC	**Suao**	**0.55**	**14**	⇓*i*P	**Pg**	**08 23 40.5**	**+0.2**
	baz=5.0						
TWC				S	**Sg**	**08 23 47.9**	**+0.4**
	baz=5.0						
NDT	**Datong Townshi**	**0.55**	**342**	⇓*i*P	**Pg**	**08 23 40.8**	**+0.5**
	baz=340					

baz=260
SSLB Suanglung 0.74 247 P Pb 08 23 44.3 -0.4
SSLB Suanglung 0.74 247⇑ *i*P Pg 08 23 44.1 +0.2
baz=258
SSLB *e*S **Sg 08 23 52.7 -0.9**
baz=258
SMLT Sun Moon Lake 0.76 256⇑ *i*P Pg 08 23 44.6 +0.3
baz=255
SMLT *i* S **Sg 08 23 54.3 +0.2**
baz=255
NFF Wufeng Townshi 0.77 316⇓ *i*P Pb 08 23 45.1 -0.1
baz=315
NFF *i* S **Sg 08 23 54.8 +0.2**
baz=315
YULB Yu-li 0.77 209 P Pg 08 23 44.5 0.0
YULB Yu-li 0.77 209 *e*P Pg 08 23 44.1 -0.4
baz=225
ECBN Changbin 0.79 197 *e*P Pg 08 23 45.2 +0.4
baz=187
TYC Yuchr 0.79 258 *i* P Pg 08 23 44.9 +0.1
baz=257
TYC *i* S **Sg 08 23 54.5 -0.7**
baz=257
EYUL Yuli 0.81 206 *e*P Pg 08 23 45.4 +0.3
baz=221
TWF1 Yuli 0.81 207 ⇓P Pg 08 23 44.9 -0.4
baz=223
LIOB Emei 0.84 312⇓ *e*P Pb 08 23 46.7 +0.2
baz=311
LIOB *e*S **Sb 08 23 57.8 -0.2**
baz=311
NSTT Nanjuang 0.85 311 *e*P Pb 08 23 46.5 0.0
baz=310
NSTT *e*S **Sg 08 23 57.1 +0.2**
baz=310
WHYT Xinyi Township 0.86 244 *e*P Pb 08 23 47.2 +0.5
baz=246
TWQ1 Liyutan 0.89 288 *e*P Pb 08 23 47.6 +0.3
baz=288
NHDH Xindian Distri 0.90 350 *e*P Pb 08 23 47.1 -0.2
baz=346
TIPB Shuangxi 0.90 7⇓ *i*P Pg 08 23 47.2 +0.2
baz=348
TWA Mucha 0.91 353 P Pb 08 23 47.4 -0.2
baz=351
TWA *e*S **Sg 08 23 58.8 -0.1**
baz=351
TATO Taipei 0.92 348 P Pb 08 23 48.0 +0.3
TATO Taipei 0.92 348 *e*P Pb 08 23 48.0 +0.3
baz=336
TATO *i* S **Sg 08 23 59.1 -0.2**
baz=336
WWF Wufeng 0.92 268 *e*P Pn 08 23 49.0 +0.3
baz=268
CHKH Chenggong 0.92 198 *e*P Pg 08 23 47.3 -0.1
baz=192
NSY Sanyi 0.92 292 ⇑P Pn 08 23 48.7 -0.1
baz=291
WJS Zhushan 0.93 254 *e*P Pn 08 23 48.3 -0.5
baz=255
TCU Taichung 0.94 275⇑ *e*P Pn 08 23 49.2 +0.2
baz=269
TCU *e*S **Sn 08 24 02.6 0.0**
baz=269
FULB Fuli 0.95 203 *e*P Pb 08 23 48.2 -0.1
baz=221
NMLH Miaoli 0.95 299 *e*P Pn 08 23 49.4 +0.3
baz=298
WNT1 Nantou City 0.95 260 *e*P Pn 08 23 48.6 -0.5
baz=261
WNT Mingjian 0.95 258 *e*P Pn 08 23 49.2 +0.1
baz=258
WNT *e*S **Sn 08 24 02.5 -0.3**
baz=258
TWB1 Santiao Chiao 0.96 16 P Pb 08 23 48.5 0.0
baz=5.0
TWB1 *e*S **Sg 08 24 00.8 +0.1**
baz=5.0
SBCB Hsinchu 0.97 318 *e*P Pg 08 23 48.3 +0.1
baz=316
TAP Taipei 0.98 350 *e*P Pg 08 23 47.3 -1.2
baz=337
HSN Hsinchu 0.98 317 *e*P Pb 08 23 49.1 +0.3
baz=319
NWF Wu-fen Shan 0.99 4 ⇓P Pb 08 23 49.1 +0.1
baz=352
NWF *e*S **Sb 08 24 02.0 -0.3**
baz=352
WFSB Wu-fen Shan 0.99 4⇓ *i*P Pb 08 23 49.0 0.0
baz=352
WFSB S **Sg 08 24 01.9 +0.2**
baz=352
ALS Alishan 0.99 236⇑ *i*P Pb 08 23 49.2 0.0
baz=237
ALS S **Sb 08 24 02.9 +0.3**
baz=237
NCUH Zhongli 1.01 332 *e*P Pn 08 23 50.0 +0.1
baz=329
NCU National Centr 1.01 332 *e*P Pg 08 23 48.1 -0.9
baz=330
WDJ Dajia District 1.01 286 *e*P Pn 08 23 49.7 -0.2
baz=286
CHKT Chengkung 1.02 198 *e*P Pg 08 23 48.8 -0.4
baz=192
SXI1 Grass Mountain 1.03 9 *e*P Pg 08 23 49.3 -0.1
baz=358
SXI1 *e*S **Sn 08 24 04.1 -0.7**
baz=358
EHD Haiduan 1.03 206 *e*P Pg 08 23 48.9 -0.4
baz=222
WCHH Zhanghua 1.04 270 *e*P Pn 08 23 50.2 -0.2
baz=271
CHN5 Tsauling 1.05 243⇑ *i*P Pn 08 23 50.8 +0.2
baz=235
CHN5 S **Sn 08 24 05.7 +0.2**
baz=235
TWS1 Kuangyinshan 1.05 346 *e*P Pn 08 23 50.5 -0.1
baz=343
TNOU National Taiwa 1.07 3 *e*P Pg 08 23 49.8 -0.4
baz=358
YM01 YM01 1.07 354 *e*P Pn 08 23 50.9 0.0
baz=359
ELDTW Lidau 1.08 216 *e*P Pg 08 23 49.6 -0.8
baz=208
ELDTW *e*S **Sg 08 24 04.5 0.0**
baz=208
NHW Xinwu Township 1.10 327 *e*P Pn 08 23 51.2 0.0
baz=325
NTST Danshui 1.11 348 *e*P Pn 08 23 51.5 +0.2
baz=344
WGK Gukeng 1.11 250 *e*P Pg 08 23 51.0 0.0
baz=252
YM08 YM08 1.11 355 *e*P Pn 08 23 51.2 -0.2
baz=350
ANP Anpu 1.12 352 *e*P Pn 08 23 51.3 -0.2
baz=347
WDLH Douliu 1.13 250 *e*P Pn 08 23 51.9 +0.3
baz=252
EDH Donghe 1.16 198 *e*P Pb 08 23 50.1 -1.7
baz=203
WCKO Fanlu 1.19 238 *e*P Pg 08 23 52.9 +0.4
baz=242
JYNG Yonagunijimaku 1.20 71 *e*P Pg 08 23 53.2 +0.6
JYNG S **Sn 08 24 08.9 +0.1**
JYNG Yonagunijimaku 1.20 71 A A 08 23 53.2
comp=E,3.0nm,8.6s,comp=N,5.0nm,4.0s
TWY Chenhua 1.20 356 *e*P Pb 08 23 51.9 -0.6
baz=339
WRL Guolierlin Hig 1.22 262 *e*P Pg 08 23 53.4 +0.3
baz=264
STYH Taoyuan 1.24 224 *e*P Pn 08 23 52.5 -0.6
baz=227
STYH *e*S **Sb 08 24 08.8 -0.4**
baz=227
RLNB Erlin 1.24 262 *e*P Pg 08 23 53.6 +0.2
baz=263
CHN4 Tsaushan 1.25 235⇑ *i*P Pg 08 23 54.0 +0.5
baz=225
CHN4 *e*S **Sn 08 24 12.4 +2.3**
baz=225
CHN2 Minshiung 1.25 245 *e*P Pg 08 23 54.0 +0.4
baz=246
CHN2 *e*S **Sn 08 24 10.3 +0.2**
baz=246
TPUB Ta-pu 1.25 232 P Pg 08 23 54.2 +0.6
TPUB Ta-pu 1.25 232⇑ *i*P Pg 08 23 54.0 +0.4
baz=224
TPUB S **Sn 08 24 10.6 +0.4**
baz=224
STYT Tauyuan 1.25 224 *e*P Pb 08 23 53.5 0.0
baz=227
STYT *e*S **Sb 08 24 09.5 -0.3**
baz=227
YOJ Yonaguni jima 1.25 72 P Pg 08 23 53.9 +0.2
YOJ Yonaguni jima 1.25 72 *e*P Pn 08 23 53.4 +0.1
baz=69
YOJ Yonaguni jima 1.25 72 *e*P Pg 08 23 53.8 +0.1
YOJ S **Sn 08 24 11.1 +0.8**
YOJ Yonaguni jima 1.25 72 A A 08 23 53.8
comp=E,3.0nm,1.4s,comp=N,2.0nm,2.6s
WTK Tuku 1.26 252 *e*P Pg 08 23 53.8 -0.1
baz=255
LONT Longtian 1.28 204 *e*P Pn 08 23 53.1 -0.5
baz=209
WTP Ta-pu 1.29 231 P Pb 08 23 54.3 +0.1
baz=233
WTP *e*S **Sg 08 24 13.3 +2.0**
baz=233
TWK Hsinying 1.37 234 *e*P Pg 08 23 56.0 0.0
baz=237
TWK *e*S **Sg 08 24 14.8 +1.0**
baz=237
TWG Pinlang 1.38 205 *e*P Pn 08 23 52.6 -2.3
baz=208
TWGBT Beinan 1.38 205 P Pn 08 23 53.3 -1.7
TWGBT Beinan 1.38 205 *e*P Pn 08 23 52.9 -2.1
baz=209
CHN1 Nanshi 1.39 231 *e*P Pg 08 23 56.5 +0.1
baz=235
CHN1 *e*S **Sg 08 24 16.4 +2.0**
baz=235
SNST Tainan City 1.40 233 *e*P Pg 08 23 56.4 0.0
baz=236
LDUT Ludao 1.41 189 *e*P Pn 08 23 53.2 -2.2
baz=194
SGST Jiashian 1.43 226 *e*P Pn 08 23 55.6 0.0
baz=230
SGST *e*S **Sg 08 24 15.9 +0.4**
baz=230
SLGT Liugui 1.45 222 *e*P Pb 08 23 56.6 -0.1
baz=227
ICHU Yijhu 1.48 242 *e*P Pb 08 23 57.2 -0.2
baz=245
CHN8 Yiju 1.55 242 *e*P Pb 08 23 58.2 -0.2
baz=246
PCYT Pengchaiyu 1.58 12 *e*P Pn 08 23 58.3 +0.4
baz=3.0
SCST Cishan 1.62 223 *e*P Pb 08 23 59.5 -0.1
baz=228
ECL Taimali 1.62 205 *e*P Pn 08 23 59.0 +0.6
baz=193
SHHT Tainan City 1.63 230 *e*P Pg 08 24 00.5 -0.3
baz=235
SSD Sandimen 1.65 217 *e*P Pn 08 23 58.6 -0.1
baz=221
TSMG Majia 1.67 216 *e*P Pb 08 24 00.3 -0.3
baz=212
TWM1 Shoushan 1.71 224 *e*P Pg 08 24 02.0 -0.5
baz=228
MASBT Mashibuluo 1.76 214 *e*P Pn 08 23 59.7 -0.6
baz=216
MASBT *e*S **Sb 08 24 24.1 -0.1**
baz=216
EAST Anshuo 1.86 205 *e*P Pn 08 23 59.9 -1.7
baz=195
IRIF Iriomote-Funau 1.87 82 P Pb 08 24 03.2 -0.7
IRIF *e*S **Sb 08 24 27.5 +0.1**
TAWH Dawu Township 1.88 204 *e*P Pn 08 24 00.9 -1.0
baz=209
HATJ Hateruma jima 1.92 90 S Sb 08 24 28.9 0.0
SCZT Fangliau 1.97 211 *e*P Pn 08 24 04.1 +1.0
baz=204
SLIU Shizi 2.03 204 *e*P Pn 08 24 02.6 -1.3
baz=196
PHUB P'eng-hu 2.03 254 *e*P Pn 08 24 05.0 +1.1
baz=257
PNG Penghu 2.03 256 *e*P Pn 08 24 04.2 +0.2
baz=259
LAY Lan-yu 2.03 184 *e*P Pn 08 24 01.6 -2.4
baz=189
WDGT Dungji 2.04 247 *e*P Pn 08 24 03.7 -0.4
baz=250
JKRS Kuro-shima 2.11 85 *e*P Pn 08 24 06.7 +1.6
JKRS S **Sb 08 24 34.0 -0.4**
VWUC VWUC 2.25 294 *e*P Pn 08 24 06.5 -0.4
baz=294
JIJ Ishigaki jima 2.25 82 P Pn 08 24 07.2 +0.2
JIJ S **Sn 08 24 35.2 +0.4**
VCHM Qimei 2.25 248 *e*P Pn 08 24 06.8 -0.3
baz=236
TWK1 Hengchun 2.28 201 *e*P Pn 08 24 08.6 +1.2
baz=191
TWKBT Hengchun 2.28 201 *e*P Pn 08 24 06.5 -0.9
baz=191
JISG Ishigakijimahi 2.43 77 *e*P Pn 08 24 10.2 +0.6
JISG *e*S **Sn 08 24 40.1 +0.8**
PTMZ Houxiangcun 2.54 293 *e*P Pn 08 24 10.4 -0.6
baz=292
MATB Ma-tsu 2.61 323 *e*P Pn 08 24 11.8 -0.1
baz=319
LYJJ Jianjiangzhen 3.03 325 *e*P Pn 08 24 17.6 -0.1
baz=324
KNMB Chin-men Tao 3.05 278 *e*P Pn 08 24 17.6 -0.4
baz=278
MHZQ Yeshan 3.15 310 *e*P Pn 08 24 19.5 +0.1
baz=310
XPSS Dashiqiu 3.15 335 *e*P Pn 08 24 19.1 -0.4
baz=332
AXDP Jialang 3.50 284 *e*P Pn 08 24 24.5 +0.4
baz=284
ZPLA Ao Xicun 3.62 269 *e*P Pn 08 24 26.0 +0.2
baz=269
SXFK Yanhouchang 4.34 303 *e*P Pn 08 24 36.0 +0.2
baz=303
JOW Kunigami 6.54 64 Pn Pn 08 25 05.6 -0.5
comp=N,1.3nm,0.3s,baz=270,slow=20,SNR=1.3
comp=N,8.7nm,0.5s
WHN Wuhan 9.18 316 P Pn 08 26 02.8 +21
KSRS Korea Array 14.36 20 Pn P 08 27 01.9 +1.7
comp=N,0.2nm,0.3s,baz=196,slow=12,SNR=6.9
KSRS LR LR 08 32 53.3
comp=N,32nm,19.7s,baz=190,slow=39
CMAR Chiang Mai Arr 21.92 260 P P 08 28 25.3 +1.9
comp=N,0.9nm,0.3s,baz=79,slow=9.3,SNR=2.1
comp=N,0.9nm,0.3s
SONM Songino Array 26.65 337 P P 08 29 08.1 -0.7
comp=N,0.7nm,0.7s,baz=157,slow=7.8,SNR=1.8
comp=N,0.7nm,0.7s
MKAR Makanchi Array 38.74 316 P P 08 30 54.8 +0.6
comp=N,0.4nm,0.5s,baz=99,slow=10,SNR=7.2
comp=N,0.4nm,0.5s
H11N1 WAKE ISLAND Hy 42.02 87 T T 09 16 38.8
baz=276,slow=75,SNR=5.1
H11N2 WAKE ISLAND Hy 42.02 87 T T 09 16 39.4
baz=276,slow=75,SNR=4.3
H11N3 WAKE ISLAND Hy 42.04 87 T T 09 16 39.2
baz=276,slow=75,SNR=4.8
KURBB Kurchatov Arra 42.50 320 P P 08 31 24.8 -0.3
comp=N,0.2nm,0.5s,baz=109,slow=9.5,SNR=1.9
comp=N,0.2nm,0.5s
WRA Warramunga Arr 45.45 163 P P 08 31 47.5 -1.6
comp=N,0.5nm,0.7s,baz=344,slow=8.9,SNR=5.1
comp=N,0.5nm,0.7s
BVAR Borovoye Array 48.06 321 P P 08 32 09.7 +0.5
comp=N,0.5nm,0.5s,baz=98,slow=9.1,SNR=3.9
comp=N,0.5nm,0.5s
ASAR Alice Springs 48.91 165 P P 08 32 13.9 -2.2
comp=N,0.2nm,0.5s,baz=343,slow=6.6,SNR=5.2
comp=N,0.2nm,0.5s
ILAR Eielson Array 69.09 27 P P 08 34 34.9 -0.8
comp=N,0.2nm,0.5s,baz=284,slow=5.6,SNR=5.0
comp=N,0.2nm,0.5s
FINES FINESS Array B 71.78 330 P P 08 34 51.9 -0.2
comp=N,2.5nm,1.0s,baz=172,slow=5.8,SNR=3.4
comp=N,2.5nm,1.0s
YKA Yellowknife Ar 82.89 23 P P 08 35 54.2 -0.1
comp=N,0.3nm,0.6s,baz=310,slow=5.2,SNR=8.0
comp=N,0.3nm,0.6s

TAP 07 08:24:52.7, 24.10N×121.62E, h10km, ML2.3, 5D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWD	**Chiawan** baz=217	**0.03**	**229**	**⇓*i*P**		Pg	08 24 55.0	+0.5
TWD	baz=217			*i* S		Sg	08 24 56.5	+0.7
ETL	**Fush Village** baz=2.0	**0.06**	**2**	**⇓*i*P**		Pg	08 24 55.3	+0.5
ETL	baz=2.0			S		Sg	08 24 56.9	+0.5
NACB	**Ninganchiao** baz=342	**0.08**	**342**	**⇓*i*P**		Pg	08 24 55.6	+0.6
NACB	baz=342			*i* S		Sg	08 24 57.5	+0.8
HWA	**Hwalien** baz=182	**0.12**	**187**	P		Pg	08 24 56.4	+0.8
HWA	baz=182			*e*S		Sg	08 24 58.7	+1.0
HWA	**Hwalien** baz=44	**0.12**	**187**	*e*P		Pg	08 24 56.5	+0.9
HWA	baz=44			*e*S		Sg	08 24 58.8	+1.2
ETM	**Tongmen** baz=221	**0.18**	**221⇓**	*e*P		Pg	08 24 57.3	+0.8
ETM	baz=221			*e*S		Sg	08 25 00.2	+1.1
LXIB	**Xiulin Townshi** baz=247	**0.20**	**248**	P		Pg	08 24 57.9	+0.8
LXIB	baz=247			S		Sg	08 25 01.2	+1.2
LXIB	**Xiulin Townshi** baz=324	**0.20**	**248**	P		Pg	08 24 57.9	+0.8
LXIB	baz=324			*e*S		Sg	08 25 00.7	+0.7
EAHA	**Aohua** baz=25	**0.25**	**25**	*e*P		Pg	08 24 57.6	-0.2
WHF	**Hehuan Shan** baz=277	**0.33**	**278**	P		Pb	08 25 00.7	-0.2
WHF	baz=277			S		Sb	08 25 05.5	-0.9
ENA	**Nanau** baz=19	**0.34**	**19**	P		Pg	08 24 59.7	+0.2
ENA	baz=19			*e*S		Sg	08 25 04.3	+0.1
EWUT	**Wuta** baz=22	**0.37**	**23**	*e*P		Pg	08 25 00.0	-0.1
FUSS	**Fushou** baz=293	**0.38**	**293**	*e*P		Pb	08 25 01.8	+0.2
FUSS	baz=293			*e*S		Sb	08 25 07.9	+0.3
NNSB	**Datong** baz=326	**0.39**	**326⇓**	***i*P**		Pb	08 25 01.7	-0.2
NNSB	baz=326			S		Sb	08 25 07.6	-0.4
NNS	**Nan Shan** baz=327	**0.41**	**326**	P		Pb	08 25 01.7	-0.4
NNS	baz=327			*e*S		Sb	08 25 08.2	-0.2
LATG	**Datong** baz=348	**0.44**	**349**	*e*P		Pb	08 25 02.1	-0.6
TDCB	**Techi** baz=289	**0.45**	**290**	*e*P		Pb	08 25 03.1	+0.3
NDT	**Datong Townshi** baz=348	**0.51**	**349**	*e*P		Pb	08 25 03.3	-0.5
NDT	baz=348			*e*S		Sb	08 25 11.1	-0.2
ENTT	**Nioudou** baz=355	**0.54**	**355**	*e*P		Pb	08 25 04.0	-0.3
TWC	**Suao** baz=23	**0.55**	**22**	*e*P		Pb	08 25 04.2	-0.2
TWC	baz=23			*e*S		Sg	08 25 11.1	+0.6
YHNB	**Yeheng** baz=338	**0.61**	**339**	P		Pb	08 25 05.8	+0.3
YHNB	baz=338			*e*S		Sb	08 25 13.8	-0.4
NSK	**Sanguang** baz=337	**0.62**	**337**	*e*P		Pb	08 25 06.0	+0.3
FUSB	**Fushanzhiwuyua** baz=357	**0.66**	**357**	*e*P		Pb	08 25 06.1	-0.3

TAP 07 08:24:53.5, 23.89N×121.52E, h6km, ML2.3, 2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETM	**Tongmen** baz=343	**0.08**	**343**	*i* P		Pg	08 24 56.1	+0.7
ESL	**Shilin** baz=223	**0.11**	**227⇓**	***i*P**		Pg	08 24 56.6	+0.7
ESL	baz=223			*i* S		Sg	08 24 58.6	+1.2
SHUL	**Shoufeng** baz=157	**0.11**	**158**	*i* P		Pg	08 24 56.4	+0.6
SHUL	baz=157			*i* S		Sg	08 24 58.8	+1.4
TEGC	**Jichi Village** baz=171	**0.18**	**174**	*e*P		Pg	08 24 58.4	+1.3
TEGC	baz=171			*e*S		Sg	08 25 02.2	+2.7
WARBT	**Fenglin Townsh** baz=215	**0.21**	**216**	P		Pg	08 24 58.1	+0.5
WARBT	baz=215			*e*S		Sg	08 25 01.3	+0.9
EGFH	**Guangfu** baz=201	**0.23**	**201**	*e*P		Pg	08 24 58.5	+0.4
OWD	**Renai** baz=282	**0.32**	**282⇓**	***i*P**		Pb	08 25 01.2	-0.5
OWD	baz=282			S		Sb	08 25 06.2	-1.0
CHGB	**Renai** baz=264	**0.36**	**299**	P		Pb	08 25 01.8	-0.7
CHGB	baz=264			*e*S		Sb	08 25 08.1	-0.3
CHGB	**Renai** baz=298	**0.36**	**299**	P		Pb	08 25 01.9	-0.5
CHGB	baz=298			S		Sb	08 25 07.8	-0.7
VWDT	**VWDT** baz=249	**0.37**	**249**	*e*P		Pb	08 25 02.2	-0.2
VWDT	baz=249			*e*S		Sb	08 25 08.0	-0.5
WUSB	**Renai** baz=285	**0.38**	**286**	P		Pb	08 25 02.2	-0.5
WUSB	baz=285			S		Sb	08 25 08.5	-0.5
EHY	**Hungye** baz=204	**0.42**	**206**	*e*P		Pb	08 25 02.6	-0.7
YULB	**Yu-li** baz=202	**0.53**	**202**	*e*P		Pg	08 25 04.5	+0.7
SMLT	**Sun Moon Lake** baz=269	**0.57**	**270**	*e*P		Pb	08 25 06.0	+0.2

*CATAC **07** 08:28:15.2±0.8, 8.34N×82.89W, h14km±2km, ML2.7*
*UPA **07** 08:28:17.6±0.8, 8.45N×82.92W, h20km±9km, MW3.1*
ISC 07 08:28:15.9±0.9, 8.44N±0.04×82.93W±0.04, h13km, n20, σ1s45/26, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CDITO	**Canoas**	**0.14**	**21**	*e*P		**Pb**	**08 28 22.1**	**+1.6**
CDITO	**Canoas**	**0.14**	**21**	*i* P		**Pb**	**08 28 22.1**	**+1.6**
CDITO				*i* SA			08 28 26.0	
CDITO				IAML			08 28 29.4	
	comp=Z,2μm,1.0s							
PTPM	**Petroterminale**	**0.24**	**169**	*e*P		**Pb**	**08 28 23.5**	**+1.4**
PTPM				*e*S		**Sb**	**08 28 29.0**	**+2.7**
MLIR3	**Monte Lirio, C**	**0.37**	**16**	*e*P		**Pn**	**08 28 25.8**	**-1.2**
PIRO	**Carate, Puerto**	**0.41**	**265**	*i* P		**Pn**	**08 28 25.9**	**-1.6**
PIRO				*i* S		**Sn**	**08 28 33.1**	**-1.9**
PIRO				IAML			08 28 34.8	
	comp=Z,2μm,1.0s							
BRU2	**Volcan**	**0.42**	**33**	*e*P		**Pn**	**08 28 26.5**	**-1.4**
BRU2				*e*S		**Sb**	**08 28 33.6**	**+1.9**
BRU2	**Volcan**	**0.42**	**33**	*i* P		**Pn**	**08 28 26.4**	**-1.4**
BRU2				*i* S		**Sb**	**08 28 33.6**	**+1.9**
BRU2				IAML			08 28 35.4	
	comp=Z,340nm,1.0s							
DVD	**David**	**0.47**	**90**	*e*P		**Pn**	**08 28 26.8**	**-1.5**
BCO2	**Palmira**	**0.48**	**55**	*e*P		**Pn**	**08 28 27.2**	**-1.5**
BCO2				*e*S		**Sn**	**08 28 35.4**	**-1.7**
BC3P	**Paso Ancho**	**0.49**	**40**	*e*P		**Pn**	**08 28 27.4**	**-1.4**
POTG	**Potrero Grande**	**0.64**	**343**	*i* P		**Pb**	**08 28 29.6**	**+0.6**
POTG				IAML			08 28 44.5	
	comp=Z,410nm,1.0s							
PLAN	**Los Planes de**	**0.78**	**287**	*i* P		**Pg**	**08 28 29.5**	**-1.6**
PLAN				*i* SA			08 28 43.4	
PLAN				IAML			08 28 47.3	
	comp=Z,620nm,1.0s							

CHGR2	**Aguacate**	0.92	57	*e*P		Pn	08 28 33.7	-0.9
OCHAL	**Ojochal**	0.97	313	*i* P		Pb	08 28 34.4	-0.2
OCHAL				*i* SA			08 28 49.2	
OCHAL				IAML			08 30 50.9	
	comp=Z,2.5nm,1.0s							
CNI2	**El Empalme, Bo**	1.08	25	*e*P		Pn	08 28 36.4	-0.3
CDM	**Cerro de Muert**	1.38	323	*i* P		Pn	08 28 40.9	-0.5
CDM				*i* S		Sn	08 29 00.1	+0.4
CDM				IAML			08 29 09.4	
	comp=Z,39nm,1.0s							
RIMA	**Rio Macho**	1.61	325	*i* P		Pn	08 28 44.5	+0.2
RIMA				IAML			08 29 11.0	
	comp=Z,26nm,1.0s							
LCR2	**La Lucha 2**	1.68	321	*i* P		Pn	08 28 45.5	+0.3
LCR2				*i* SA			08 29 10.9	
LCR2				IAML			08 29 14.2	
	comp=Z,44nm,1.0s							
JACO	**JACO, Garabito**	2.10	306	*i* P		Pn	08 28 51.4	+0.6
JACO				IAML			08 29 16.0	
	comp=Z,52nm,1.0s							
SAJU	**San Juanillo,**	3.19	301	*i* P		Pn	08 29 06.8	+1.0

CATAC 07 08:30:07.7±0.4,**12°.25N**×**86°.84W**,**h92**km±4km,**ML2.1, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	0.25	106	*i* P	Pn	08 30 22.5	+1.4
COPN				IAML		08 30 37.4	
	comp=Z,130nm,1.0s						
PACN	**Al O del Volca**	0.26	9	*i* P	Pn	08 30 22.8	+1.6
PACN				IAML		08 30 42.5	
	comp=Z,76nm,1.0s						
LEVN	**Ruinas Leon Vi**	0.26	54	*i* P	Pn	08 30 22.3	+1.1
LEVN				IAML		08 30 49.5	
	comp=Z,200nm,1.0s						
MACN	**El Madrono**	0.27	36	*i* P	Pn	08 30 22.8	+1.5
MACN				*i* S	Sn	08 30 32.6	+1.3
MACN				IAML		08 30 39.8	
	comp=Z,43nm,1.0s						
CNGA	**Al SSO del Vol**	0.28	28	*i* P	Pn	08 30 23.7	+2.4
CNGA				IAML		08 30 41.2	
	comp=Z,75nm,1.0s						
CNGN	**Cerro Negro**	0.28	28	*i* P	Pn	08 30 22.2	+0.8
CNGN				IAML		08 30 47.2	
	comp=Z,75nm,1.0s						
ROCN	**Rota Cerro Neg**	0.28	18	*i* P	Pn	08 30 22.7	+1.4
ROCN				IAML		08 30 40.8	
	comp=Z,59nm,1.0s						
MOMN	**Momotombo**	0.33	61	*i* P	Pn	08 30 22.6	+1.0
MOMN				IAML		08 30 31.3	
	comp=Z,2.8nm,1.0s						
PLRN	**Geotermica Pol**	0.34	11	*i* P	Pn	08 30 22.7	+1.1
PLRN				IAML		08 30 44.2	
	comp=Z,100nm,1.0s						
HERN	**Volcan Telica**	0.36	1	*i* P	Pn	08 30 22.9	+1.1
HERN				*i* S	Sn	08 30 34.7	+2.4
HERN				IAML		08 30 41.6	
	comp=Z,69nm,1.0s						
MOM2	**El Cardon**	0.39	61	*i* P	Pn	08 30 23.3	+1.4
MOM2				IAML		08 30 34.8	
	comp=Z,120nm,1.0s						
SAPS	**Ciudad Sandino**	0.43	100	*i* P	Pn	08 30 23.5	+1.4
SAPS				*i* S	Sn	08 30 34.7	+1.8
SAPS				IAML		08 30 40.0	
	comp=Z,150nm,1.0s						
CRIN	**San Cristobal**	0.50	335	*i* P	Pn	08 30 24.0	+1.3
CRIN				*i* S	Sn	08 30 35.7	+1.8
CRIN				IAML		08 30 43.0	
	comp=Z,240nm,1.0s						
MSHP	**Masachapa**	0.51	145	*i* P	Pn	08 30 24.2	+1.5
MSHP				IAML		08 30 39.3	
	comp=Z,85nm,1.0s						
TISN	**Laguna Tiscapa**	0.56	101	*i* P	Pn	08 30 24.0	+0.8
TISN				IAML		08 30 42.5	
	comp=Z,11nm,1.0s						
UNAN	**Cigeo UNAN**	0.57	104	IAML		08 30 21.2	
	comp=Z,590nm,1.0s						
UNAN				*i* P	Pn	08 30 24.0	+0.8
UNAN				*i* S	Sn	08 30 38.6	+3.8
NANN	**Nandasmo**	0.76	114	*i* P	Pn	08 30 26.9	+1.9
NANN				IAML		08 30 49.1	
	comp=Z,1μm,1.0s						
NADN	**Granada**	0.93	122	*i* P	Pn	08 30 27.3	+0.5
NADN				IAML		08 30 59.5	
	comp=Z,340nm,1.0s						
LIMN	**Finca el Limon**	0.93	29	*i* P	Pn	08 30 27.8	+0.9
LIMN				IAML		08 30 28.0	
	comp=Z,74nm,1.0s						
CSGN	**Cosiguina Volc**	1.01	316	*i* P	Pn	08 30 28.0	+0.2
CSGN				IAML		08 30 48.7	
	comp=Z,78nm,1.0s						
BOAB	**BOACO BROADBAN**	.16	80	*i* P	Pn	08 30 29.8	+0.4
BOAB				IAML		08 30 30.0	
	comp=Z,47nm,1.0s						
AMPH	**Amapala**	1.31	322	*i* P	Pn	08 30 31.3	+0.1
YUSH	**Yuscaran**	1.70	360	*i* P	Pn	08 30 36.4	+0.2
SAJU	**San Juanillo,**	2.43	153	*i* P	Pn	08 30 44.9	-0.8
SAJU				IAML		08 31 16.1	
	comp=Z,88nm,1.0s						
SIUN	**Universidad Ur**	2.48	54	*i* P	Pn	08 30 45.2	-1.2
SIUN				IAML		08 31 38.5	
	comp=Z,12μm,1.0s						
NUBE	**Las Nubes**	3.31	300	*i* P	Pn	08 30 56.8	-0.8
NUBE				IAML		08 33 14.2	
	comp=Z,67nm,1.0s						
VIRE	**VIRE**	3.67	128	*i* P	Pn	08 30 56.9	-5.8

*IDC **07** 08:32:14.9±4.1,20°.79S×67°.27E,h0km,mb3.8/7, mbtmp3.8/7,MS3.5/9,Error ellipse: s-maj=122.4km s-min=30.3km az=56.0*

ISC 07 08:32:17.1±4.3,**20°.8S**±0°.5×**67°.4E**±0°.7,**h10**km,**n20,** σ0s**74/7,mb4.0/7,MS3.6/9,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	13.93	21	T	T	08 48 52.6	
	baz=199,slow=76,SNR=70						
H08S2	**Diego Garcia H**	13.93	22	T	T	08 48 54.8	
	baz=199,slow=76,SNR=108						
H08S3	**Diego Garcia H**	13.95	21	T	T	08 48 54.0	
	baz=199,slow=76,SNR=54						
H04N2	**CROZET ISLANDS**	28.38	203	T	T	09 08 51.1	
	baz=32,slow=75,SNR=753						
H04N1	**CROZET ISLANDS**	28.39	203	T	T	09 08 56.9	
	baz=32,slow=75,SNR=659						
H04N3	**CROZET ISLANDS**	28.40	203	T	T	09 08 53.9	
	baz=32,slow=75,SNR=780						
PALK	**Pallekele**	30.77	27	LR	LR	08 48 28.5	
	comp=Z,74nm,18.0s,baz=328,slow=32						
LSZ	**Lusaka**	37.60	272	LR	LR	08 51 44.3	
	comp=Z,97nm,18.1s,baz=72,slow=31						
LEM	**Lembang**	41.32	76	LR	LR	08 54 02.7	
	comp=Z,34nm,20.0s,baz=214,slow=32						
NWAO	**Narrogin (SRO)**	45.73	116	LR	LR	08 56 55.2	
	comp=Z,67nm,18.0s,baz=201,slow=32						
MAW	**Mawson**	46.94	182	LR	LR	08 55 30.6	
	comp=Z,72nm,21.8s,baz=171,slow=30						
CMAR	**Chiang Mai Arr**	49.75	41	P	P	08 41 10.0	0.0
	0.6nm,0.3s,baz=234,slow=8.6,SNR=5.5						
CMAR				LR	LR	09 00 22.3	
	comp=Z,21nm,18.2s,baz=250,slow=34 0.6nm,0.3s						
ASAR	**Alice Springs**	61.16	106	P	P	08 42 32.6	+0.3
	0.9nm,0.8s,baz=266,slow=5.2,SNR=8.0						
ASAR				LR	LR	09 05 16.1	
	comp=Z,49nm,20.5s,baz=269,slow=32 0.9nm,0.8s						
WRA	**Warramunga Arr**	62.35	102	P	P	08 42 39.9	-0.4
	1.0nm,0.9s,baz=266,slow=6.4,SNR=5.0 1.0nm,0.9s						
BRTR	**Keskin Array B**	67.91	332	LR	LR	09 10 29.6	
	comp=Z,80nm,19.2s,baz=320,slow=34						
MKAR	**Makanchi Array**	68.56	11	P	P	08 43 19.2	-0.6
	0.6nm,0.8s,baz=200,slow=7.7,SNR=5.6 0.6nm,0.8s						
KURBB	**Kurchatov Arra**	71.73	7	P	P	08 43 39.8	+0.6
	0.8nm,0.9s,baz=186,slow=5.7,SNR=5.5 0.8nm,0.9s						
CTA	**Charters Tower**	73.14	105	LR	LR	09 12 34.1	
	comp=Z,37nm,19.5s,baz=82,slow=33						
ZALV	**Zalesovo Beam**	75.89	11	P	P	08 44 02.6	-0.9
	0.9nm,0.5s,baz=182,slow=5.4,SNR=3.7 0.9nm,0.5s						
SONM	**Songino Array**	76.72	26	P	P	08 44 09.1	+0.5
	0.6nm,0.6s,baz=224,slow=6.2,SNR=4.1 0.6nm,0.6s						

*IDC **07** 08:44:48.7±15.0,51°.17N×179°.65E,h0km,mb3.8/3, mbtmp3.8/4,ML2.5/1,Error ellipse: s-maj=430.5km s-min=101.3km az=171.0*
*AEIC **07** 08:45:03.7±1.0,51°.46N±0°.08×178°.28E±0°.07,h51km±6km, Error ellipse: s-maj=11.4km s-min=6.0km az=194.0*
*NEIC **07** 08:45:04.4±1.0,51°.45N±0°.06×178°.27E±0°.09, h46km±13km,ML3.6/6,ML3.5(AEIC),Error ellipse: s-maj=10.9km s-min=3.4km az=223.0*

ISC 07 08:45:03.9±1.1,**51°.5N**±0°.1×**178°.25E**±0°.06,**h57**km±12km, **n37,** σ0s**99/37,mb3.8/3,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSE	**Little Sitkin**	0.49	24		Pn	08 45 15.4	-0.1
LSNW	**Little Sitkin**	0.52	19		Pn	08 45 15.4	-0.3
LSPA	**Little Sitkin**	0.52	23		Pn	08 45 15.7	-0.1
LSPA					Sn	08 45 24.5	+0.1
AMKA	**Amchitka**	0.67	99		Pn	08 45 17.2	-0.2
AMKA					Sn	08 45 27.2	-0.2
CESW	**Semis' Southwe**	0.92	62		Pn	08 45 20.5	-0.2
CERB	**Semis' Cerberu**	0.97	62		Pn	08 45 21.6	+0.3
CERB					Sn	08 45 35.1	+0.9
CEAP	**Semis' Anvil P**	0.98	57		Pn	08 45 21.3	-0.1
GASW	**Gareloi Southw**	1.83	80		Pn	08 45 33.6	+0.7
GASW					Sn	08 45 56.2	+1.2
GANO	**Gareloi North**	1.87	78		Pn	08 45 33.8	+0.3
GANE	**Gareloi Northe**	1.88	79		Pn	08 45 34.0	+0.4
TANO	**Tanaga North**	2.30	78		Pn	08 45 39.8	+0.5
TASE	**Tanaga Southea**	2.34	80		Pn	08 45 40.3	+0.4
TAFP	**Tanaga Falls P**	2.38	78		Pn	08 45 40.7	+0.2
TAFP					Sn	08 46 08.9	+0.5
SMY	**Shemya**	2.85	298		Pn	08 45 47.9	+1.1
SMY	**Shemya**	2.85	298	IAML		08 46 36.9	
	comp=E,205nm,1.0s						
SMY				IAML		08 46 37.7	
	comp=N,153nm,1.5s						
KICM	**Kanaga Island**	2.87	79		Pn	08 45 47.6	+0.6
KIWB	**Kanaga Island**	2.89	81		Pn	08 45 47.9	+0.6
ADK	**Adak**	3.18	81		Pn	08 45 51.5	+0.2
ADK				IAML		08 46 31.4	
	comp=N,105nm,0.7s						
GSCK	**Great Sitkin C**	3.51	79		Pn	08 45 56.3	+0.4
GSTR	**Great Sitkin T**	3.59	78	Pn	Pn	08 45 58.0	+1.0
ATKA	**Atka Island**	4.74	78		Pn	08 46 13.0	+0.3
ATKA	**Atka Island**	4.74	78	IAML		08 47 22.6	
	comp=N,57nm,1.4s						
KOFP	**Korovin Flat P**	4.81	78		Pn	08 46 15.0	+1.3
MSW	**Makushin Switc**	9.41	69		Pn	08 47 18.4	+1.8
UNV	**Unalaska Valle**	9.56	70		Pn	08 47 20.5	+1.9
AKUT	**Akutan**	10.03	68	Pn	Pn	08 47 25.0	0.0
PETK	**Petropavlovsk-**	12.68	285	Pn	Pn	08 48 01.7	+0.5
PETK	**Petropavlovsk-**	12.68	285	Pn	Pn	08 48 02.5	+1.2
	comp=N,0.1nm,0.3s,baz=68,slow=17,SNR=2.0 comp=N,1.7nm,0.9s						
SDPT	**Sand Point**	13.25	65	Pn	Pn	08 48 07.5	-1.4
CHGN	**Chignik**	14.55	62	Pn	Pn	08 48 24.7	-1.6
N15K	**Kwethluk River**	14.89	46	Pn	Pn	08 48 32.8	+2.0
H11N2	**WAKE ISLAND Hy**	32.92	200	T	T	09 26 58.5	
	baz=11,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	32.93	200	T	T	09 26 59.3	
	baz=11,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	32.94	200	T	T	09 26 59.9	
	baz=11,slow=76,SNR=16						
SONM	**Songino Array**	44.94	295	P	P	08 53 13.0	0.0
	comp=N,0.5nm,0.5s,baz=58,slow=8.1,SNR=5.2 comp=N,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	57.70	312	P	P	08 54 47.1	-1.1
	comp=N,0.9nm,0.5s,baz=40,slow=6.7,SNR=9.9 comp=N,0.9nm,0.5s						
MKAR	**Makanchi Array**	58.51	307	P	P	08 54 51.8	-2.1
	comp=N,0.3nm,0.4s,baz=53,slow=6.0,SNR=11 comp=N,0.3nm,0.4s						

IDC 07 08:55:24.6±3.2,**54°.12N**×**87°.13E**,**h0**km,**mbtmp2.6**/2, **ML1.9**/2,**Error ellipse: s-maj=30.1km s-min=18.0km az=64.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.38	264	I	I	09 03 00.0	
	baz=82,slow=345,SNR=8.2						
ZALV	**Zalesovo Beam**	1.38	264	Pg	Pg	08 55 49.1	-1.9
	1.7nm,0.3s,baz=85,slow=16,SNR=22						
ZALV				Lg	Lg	08 56 08.7	
	0.5nm,0.3s,baz=83,slow=29,SNR=4.3						
KURBB	**Kurchatov Arra**	6.32	240	Pn	Pn	08 57 00.1	+1.1
	baz=54,slow=13,SNR=4.9 0.5nm,0.5s						
MKAR	**Makanchi Array**	7.95	205	Pn	Pn	08 57 22.6	+1.2
	baz=28,slow=14,SNR=1.9 0.1nm,0.5s						

*TRN **07** 09:13:06.9,11°.09N×62°.22W,h104km,MD4.1,North of the Paria peninsula. Felt in Trinidad, MMI III.*
*FUNV **07** 09:13:08.0,10°.97N×62°.04W,h107km,MW4.2*

ISC 07 09:13:05.3±1.5,**11°.06N**±0°.05×**62°.20W**±0°.06, **h127**km±13km,**n29,** σ2s**41/54,3D,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	0.89	118	⇓*i*P	Pn	09 13 27.8	+0.9
TRN				*e*S	Sn	09 13 41.0	-2.2
TPP	**Pointe-a-Pierr**	1.05	135	*e*S	Sn	09 13 43.7	-2.1
CRUV	**Carupano**	1.09	249	*e*P	Pn	09 13 31.5	+2.8
CRUV				*e*S	Sn	09 13 46.9	+0.3
GRGR	**Grenville**	1.19	27	*e*P	Pn	09 13 30.3	+0.5
GRGR				*e*S	Sn	09 13 47.0	-1.5
GRHS	**Sauteurs**	1.28	25	⇓*i*P	Pn	09 13 31.1	+0.4
GRHS				*e*S	Sn	09 13 48.3	-1.7
GCMP	**Grenada, Carri**	1.60	28	*e*P	Pn	09 13 34.6	+0.2
GCMP				*e*S	Sn	09 13 54.5	-2.1
CUMV	**Cumana_UDO**	2.06	252	*e*P	Pn	09 13 43.8	+4.0
CUMV				*e*S	Sn	09 14 08.1	+1.9
SVT	**Saint Vincent**	2.29	24	⇓*i*P	Pn	09 13 43.0	+0.3
SVT				*e*S	Sn	09 14 10.4	-1.1
SVB	**Belmont**	2.38	23	*e*P	Pn	09 13 44.2	+0.3
SVB				*e*S	Sn	09 14 12.0	-1.6
SVV	**Soufriere Volc**	2.44	23	*e*P	Pn	09 13 46.5	+1.9
PCRV	**Puerto La Cruz**	2.55	250	*e*P	Pn	09 13 49.2	+3.1
PCRV				*e*S	Sn	09 14 18.1	+0.7
SLBI	**Saint Lucia, B**	3.18	22	*e*P	Pn	09 13 54.7	+0.6
SLBI				*e*S	Sn	09 14 30.4	-1.5
BBGH	**Gun Hill**	3.31	51	*e*P	Pn	09 13 57.4	+1.5
BBGH				*e*S	Sn	09 14 34.7	-0.3
BIM	**Bigot**	3.61	18	*e*P	Pn	09 14 00.8	+0.9
BIM				*e*S	Sn	09 14 40.2	-1.8
MPOM	**Morne Pois Mar**	3.61	21	*e*P	Pn	09 14 00.7	+1.0
MPOM				*e*S	Sn	09 14 40.2	-1.7
FDF	**Fort de France**	3.79	16	*e*P	Pn	09 14 03.3	+1.0
FDF				*e*S	Sn	09 14 43.9	-2.5
FUNV	**FUNVISIS**	4.57	263	*e*P	Pn	09 14 15.3	+2.6
FUNV				*e*S	Sn	09 15 05.3	+0.3
TACV	**Tcata**	4.83	259	*e*P	Pn	09 14 18.8	+2.6
TACV				*e*S	Sn	09 15 10.9	-0.4
CBE	**Ff, Capester**	5.01	7	*e*P	Pn	09 14 20.8	+2.3
CBE				*e*S	Sn	09 15 12.1	-3.4
LUEV	**Luepa**	5.24	172	*e*P	Pn	09 14 21.8	+0.1
LUEV				*e*S	Sn	09 15 13.8	-7.5
BENV	**Beln**	5.42	259	*e*P	Pn	09 14 26.7	+2.7
BENV				*e*S	Sn	09 15 24.4	-1.0
CACV	**CAICARA DEL OR**	5.51	231	*e*P	Pn	09 14 22.4	-2.9
CACV				*e*S	Sn	09 15 16.5	-11
TURV	**Turiamo**	5.58	264	*e*P	Pn	09 14 28.3	+2.2
TURV				*e*S	Sn	09 15 27.7	-1.4
MBFL	**Flemmings, Mon**	5.65	360	*e*P	Pn	09 14 28.5	+1.4
ANBD	**Bethesda, Anti**	5.96	4	*e*P	Pn	09 14 33.1	+1.8
ANBD				*e*S	Sn	09 15 35.3	-3.1
BAUV	**El Baul**	6.13	250	*e*P	Pn	09 14 35.1	+1.5
BAUV				*e*S	Sn	09 15 40.1	-2.3
TEPV	**Terepaima**	6.96	262	*e*P	Pn	09 14 46.2	+1.4
TEPV				*e*S	Sn	09 15 59.7	-2.9
SANV	**Sanarito**	7.38	259	*e*P	Pn	09 14 52.2	+1.6
SANV				*e*S	Sn	09 16 09.9	-3.1
SOCV	**Socops**	8.97	253	*e*P	Pn	09 15 12.2	+0.3
SOCV				*e*S	Sn	09 16 44.4	-6.9

TAP 07 09:13:30.1,24°.06N×**121°.62E,h11**km,**ML1.5,C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	0.03	317	P	Pg	09 13 32.6	+0.6
	baz=330						
TWD				*e*S	Sg	09 13 34.3	+0.8
	baz=330						
HWA	**Hwalien**	0.08	190	*e*P	Pg	09 13 33.0	+0.5
	baz=184						
HWA				*e*S	Sg	09 13 35.2	+1.0
	baz=184						
ETL	**Fush Village**	0.10	2	*e*P	Pg	09 13 33.3	+0.5
	baz=1.0						
ETL				*e*S	Sg	09 13 35.3	+0.4
	baz=1.0						
NACB	**Ninganchiao**	0.12	349	*e*P	Pg	09 13 33.7	+0.7
	baz=348						
NACB				*e*S	Sg	09 13 36.2	+1.1
	baz=348						
ETM	**Tongmen**	0.15	232	*e*P	Pg	09 13 33.7	+0.3
	baz=232						
ETM				*e*S	Sg	09 13 36.2	+0.4
	baz=232						
LXIB	**Xiulin Townshi**	0.19	260	*e*P	Pg	09 13 34.8	+0.6
	baz=259						
LXIB				*e*S	Sg	09 13 39.0	+1.8
	baz=259						
SHUL	**Shoufeng**	0.27	191	*e*P	Pb	09 13 36.4	-0.6
	baz=191						
SHUL				*e*S	Sb	09 13 42.3	+0.7
	baz=191						
EAHA	**Aohua**	0.29	22	*e*P	Pb	09 13 36.9	-0.4
	baz=21						
WHF	**Hehuan Shan**	0.34	285	*e*P	Pb	09 13 37.8	-0.6
	baz=285						
WHF				*e*S	Sb	09 13 43.1	-0.8
	baz=285						
FUSS	**Fushou**	0.39	299	*e*P	Pb	09 13 39.1	-0.1
	baz=299						
WARBT	**Fenglin Townsh**	0.40	212	*e*P	Pg	09 13 38.2	+0.3
	baz=212						
CHGB	**Renai**	0.41	271	*e*P	Pb	09 13 39.3	-0.2
	baz=270						
WUSB	**Renai**	0.46	262	*e*P	Pb	09 13 40.5	+0.1
	baz=262						
WUSB				*e*S	Sb	09 13 46.8	-0.5
	baz=262						

IDC 07 09:15:41.7±999.0,**53°.60N**×**0°.28E**,**h0**km,**Error ellipse: s-maj=529.7km s-min=176.5km az=102.0,United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	9.67	114	I	I	10 16 36.1	
	0.1nm,1.5s,baz=303,slow=337,SNR=6.6						
I43RU	**DUBNA INFRASON**	21.16	67	I	I	11 22 40.0	
	baz=276,slow=331,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	34.86	71	I	I	12 46 10.0	
	baz=298,slow=337,SNR=0.8						

*IDC **07** 09:21:02.0±0.7,15°.69N×96°.35W,h0km,mb4.2/20, mbtmp4.2/23,ML4.3/3,MS3.9/33,Error ellipse: s-maj=21.0km s-min=12.5km az=53.0*
*MEX **07** 09:21:04.5±0.5,15°.50N×96°.45W,h18km±18km,MD5.0*
*NEIC **07** 09:21:04.6±2.1,15°.76N±0°.03×96°.48W±0°.04,h10km±1km, mb4.6/334,Md5.0/179(MEX),Error ellipse: s-maj=7.2km s-min=5.5km az=241.0*

ISC 07 09:21:02.5±1.2,**15°.57N**±0°.04×**96°.50W**±0°.02,**h7**km±7km, **n639,** σ2s**26**/589,**mb4.6**/135,**MS3.8**/31,**9C-2D,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.43	63		Pg	09 21 11.8	+0.9
HUIG					Sg	09 21 17.0	+0.5
HUIG	**Huatulco**	0.43	63	⇓*i*P	Pg	09 21 11.8	+0.9
HUIG				*e*S	Sg	09 21 17.0	+0.5
PEIG	**Puerto Escondi**	0.75	304		Pg	09 21 16.6	-0.4
PEIG					Sg	09 21 25.2	-1.7
PEIG	**Puerto Escondi**	0.75	304	*e*P	Pg	09 21 16.6	-0.4
PEIG				*e*S	Sg	09 21 25.2	-1.7
OXIG	**Oaxaca**	1.51	352		Pn	09 21 29.3	-0.9
OXIG					Sn	09 21 47.2	-3.0
VHO	**Vista Hermosa**	1.51	352	⇑*e*P	Pn	09 21 29.3	-0.9
VHO				*e*S	Sn	09 21 47.2	-3.0
YOIG	**Yosondua**	1.62	322		Pn	09 21 30.6	-1.3
YOIG					Sn	09 21 51.5	-1.7
YOIG	**Yosondua**	1.62	322	⇑*e*P	Pn	09 21 30.6	-1.3
YOIG				*e*S	Sn	09 21 51.0	-2.2
YOIG				*e*S	Sn	09 21 51.5	-1.7
PNIG	**Pinotepa**	1.76	298		Pn	09 21 32.0	-1.5
PNIG					Sn	09 21 53.5	-2.7
PNIG	**Pinotepa**	1.76	298	*e*P	Pn	09 21 32.0	-1.5
PNIG				*i* S	Sn	09 21 53.5	-2.7
NILT	**Santiago Nilte**	2.06	61	*e*P	Pn	09 21 36.2	-1.4
NILT				*e*S	Sn	09 21 59.4	-4.2
TXIG	**Tlaxiaco**	2.07	324		Pn	09 21 37.4	-0.5
TXIG					Sn	09 22 01.5	-2.6
TXIG	**Tlaxiaco**	2.07	324	*e*P	Pn	09 21 37.4	-0.5
TXIG				*e*S	Sn	09 22 01.5	-2.6
CMIG	**Matias Romero**	2.17	46		Pn	09 21 37.1	-1.9
CMIG					Sn	09 22 03.1	-3.1
CMIG	**Matias Romero**	2.17	46	Pn	Pn	09 21 38.1	-1.0
	383nm,0.3s,baz=253,slow=12,SNR=2978						
CMIG				Sn	Sn	09 22 05.1	-1.1
	283nm,0.3s,baz=256,slow=19,SNR=5.1						
CMIG	**Matias Romero**	2.17	46	*e*P	Pn	09 21 37.1	-1.9
CMIG				*e*S	Sn	09 22 03.1	-3.1
NEUV	**Arroyo Zacate**	2.23	17	*e*P	Pn	09 21 39.3	-0.7
NEUV				*e*S	Sn	09 22 05.4	-2.4
TOIG	**Toxpalan**	2.57	348		Pn	09 21 44.8	+0.1
TOIG					Sn	09 22 14.9	-1.3
TOIG	**Toxpalan**	2.57	348	*e*P	Pn	09 21 44.8	+0.1
TOIG				*e*S	Sn	09 22 14.3	-1.9
TOIG				*e*S	Sn	09 22 14.9	-1.3
HLIG	**Huajuapan de L**	2.57	331		Pn	09 21 45.2	+0.4
HLIG					Sn	09 22 15.5	-0.9
HLIG	**Huajuapan de L**	2.57	331	*e*P	Pn	09 21 45.2	+0.4
HLIG				*i* S	Sn	09 22 15.5	-0.9
CARR	**Arriaga**	2.58	75	*e*P	Pn	09 21 42.3	-2.5
CARR				*i* S	Sn	09 22 11.5	-4.9
CRIG	**Cruz

TGIG		3.46	69		Pn	09 21 55.8	-1.1
TGIG					Sn	09 22 34.1	-4.2
TGIG		3.46	69⇑	eP	Pn	09 21 55.8	-1.1
TGIG				eS	Sn	09 22 34.1	-4.2
TGBT	Tuxtla Gutierr	3.49	69		Pn	09 22 01.2	+4.0
TGBT					Sb	09 22 43.0	-4.4
TGBT	Tuxtla Gutierr	3.49	69	eP	Pn	09 22 01.2	+4.0
TGBT				eS	Sb	09 22 43.0	-4.4
ACP2	Acapulco	3.50	292		Pb	09 22 05.8	+0.9
ACP2					Sn	09 22 32.2	-6.9
ACP2	Acapulco	3.50	292	eP	Pb	09 22 05.8	+0.9
ACP2				eS	Sn	09 22 32.2	-6.9
JAUV	Jalcomulco	3.79	356	eP	Pn	09 22 00.1	-1.2
JAUV				eS	Sn	09 22 42.5	-3.7
MEIG	Mezcala	3.79	309		Pn	09 22 02.1	+0.6
MEIG					Sn	09 22 41.1	-5.4
MEIG	Mezcala	3.79	309⇑	eP	Pn	09 22 02.1	+0.6
MEIG				eS	Sn	09 22 41.1	-5.4
PHPU	Puebla	3.80	336		Pb	09 22 07.1	-3.1
PHPU					Sn	09 22 41.0	-5.9
PHPU	Puebla	3.80	336	eP	Pb	09 22 07.1	-3.1
PHPU				eS	Sn	09 22 41.0	-5.9
CAIG	El Cayaco	3.90	293		Pn	09 22 01.8	-1.1
CAIG					Sn	09 22 40.6	-8.4
CAIG	El Cayaco	3.90	293	eP	Pn	09 22 01.8	-1.1
CAIG				eS	Sn	09 22 40.6	-8.4
PLIG	Platanillo	4.01	315		Pn	09 22 06.6	+2.1
PLIG					Sn	09 22 49.1	-2.8
PLIG	Platanillo	4.01	315	eP	Pn	09 22 06.6	+2.1
PLIG				eS	Sn	09 22 49.1	-2.8
PPIG	Popocatepetl	4.03	330		Pn	09 22 07.4	+2.3
PPIG					Sn	09 22 52.3	-0.5
PPM	Popocatepetl	4.03	330	eP	Pn	09 22 07.4	+2.3
PPM				eS	Sn	09 22 52.3	-0.4
YAIG	Yautepec	4.09	324		Pn	09 22 07.4	+1.7
YAIG					Sn	09 22 49.8	-4.0
YAIG	Yautepec	4.09	324	eP	Pn	09 22 07.4	+1.7
YAIG				eS	Sn	09 22 49.8	-4.0
ATYC	Atoyac	4.11	294	eP	Pn	09 22 09.9	+4.2
ATYC				iS	Sn	09 22 48.0	-6.1
LVIG	Laguna Verde	4.13	1	eP	Pn	09 22 03.7	-2.3
LVIG				eS	Sn	09 22 54.3	-0.4
PATR	El Naranjo	4.14	96	eP	Pn	09 22 05.5	-1.0
PATR				eS	Sn	09 22 47.2	-8.1
THIG		4.14	99		Pn	09 22 04.7	-1.5
THIG					Sn	09 22 45.0	-10
THIG		4.14	99	eP	Pn	09 22 04.7	-1.5
THIG				eS	Sn	09 22 45.0	-10
AMVM	AMECAMECA	4.16	329		Pn	09 22 08.5	+1.8
AMVM					Sn	09 22 52.5	-3.3
AMVM	AMECAMECA	4.16	329	eP	Pn	09 22 08.5	+1.8
AMVM				eS	Sn	09 22 52.5	-3.3
VHSA	Villahermosa	4.17	54	eP	Pn	09 22 07.1	+0.5
VHSA				eS	Sn	09 22 56.1	+0.4
PAVE	Pavencul	4.19	95	eP	Pn	09 22 06.6	-0.5
PAVE				eS	Sn	09 22 45.4	-11
CCIG	Comitan	4.26	80	Pn	Pn	09 22 07.3	-0.7
CCIG	Comitan	4.26	80	eP	Pn	09 22 06.8	-1.2
CCIG				eS	Sn	09 22 51.6	-6.4
CHUJ	Union Juarez	4.27	96	eP	Pn	09 22 07.3	-0.8
CHUJ				eS	Sn	09 22 50.4	-8.0
MPVM	San Francisco	4.33	327	eP	Pn	09 22 11.0	+1.9
MPVM				eS	Sn	09 22 57.5	-2.4
THVM	De Xico	4.40	328	eP	Pb	09 22 16.8	-3.7
THVM				eS	Sn	09 22 59.7	-2.1
TLVM	San Miguel Top	4.42	325	eP	Pn	09 22 12.3	+2.0
TLVM				eS	Sn	09 22 54.8	-7.4
XCVM	Xochimilco	4.43	326	eP	Pb	09 22 16.6	-4.4
XCVM				eS	Sn	09 23 01.1	-1.3
TXVM	Universitario	4.48	329	eP	Pn	09 22 14.7	+3.6
TXVM				eS	Sn	09 23 03.9	+0.2
UNM	Universidad Na	4.53	326	Pn	Pn	09 22 11.2	-0.6
UNM	Universidad Na	4.53	326	eP	Pn	09 22 10.8	-1.0
UNM				eS	Sn	09 23 04.5	-0.4
CUP5	Mexico City	4.53	326	eP	Pn	09 22 06.6	-5.2
CUP5				eS	Sn	09 23 02.0	-2.9
COVM	Coyoacan	4.53	326	eP	Pn	09 22 14.0	+2.2
COVM				eS	Sn	09 23 05.1	+0.2
COVM				eS	Sb	09 23 08.1	-9.5
AOVM	Tlapan	4.56	324	eP	Pn	09 22 14.7	+2.3
AOVM				eS	Sn	09 23 03.7	-2.2
BJVM	Benito Juarez	4.56	326	eP	Pn	09 22 13.1	+0.9
BJVM				eS	Sn	09 23 03.3	-2.3
ARIG	Puente Sto Nin	4.56	307		Pn	09 22 13.6	+1.5
ARIG					Sn	09 23 02.9	-2.4
ARIG	Puente Sto Nin	4.56	307	eP	Pn	09 22 13.6	+1.5
ARIG				eS	Sn	09 23 02.9	-2.4
PBVM	Pinon	4.57	328		Pn	09 22 12.2	+0.1
PBVM					Sn	09 23 03.1	-2.4
PBVM	Pinon	4.57	328	eP	Pn	09 22 12.2	+0.1
PBVM				eS	Sn	09 23 03.1	-2.4
SMSP	San Marcos	4.59	97	eP	Pn	09 22 12.9	+0.1
SMSP				eS	Sn	09 23 05.4	-1.1
INVM	La Marquesa	4.61	324	eP	Pn	09 22 15.8	+2.8
INVM				eS	Sn	09 23 05.9	-1.1
CJVM	Cuajimalpa	4.61	325	eP	Pn	09 22 16.8	+3.9
CJVM				eS	Sn	09 23 07.5	+0.6
VTVM	Tizayuca	4.71	333		Pn	09 22 12.2	-2.1
VTVM					Sn	09 23 09.2	0.0
VTVM	Tizayuca	4.71	333	eP	Pn	09 22 12.2	-2.1
VTVM				eS	Sn	09 23 09.2	0.0
PTVM	Pico Tres Padr	4.71	328		Pn	09 22 16.1	+1.8
PTVM					Sn	09 23 08.2	-1.1
PTVM	Pico Tres Padr	4.71	328	eP	Pn	09 22 16.1	+1.8
PTVM				eS	Sn	09 23 08.2	-1.1
RTAL	Retalhuleu	4.76	102	Pn	Pn	09 22 16.4	+1.7
AZVM	Cuida Lopez Ma	4.79	327		Pb	09 22 21.4	-5.6
AZVM					Sn	09 23 09.5	-1.9
AZVM	Cuida Lopez Ma	4.79	327	eP	Pb	09 22 21.4	-5.6
AZVM				eS	Sn	09 23 09.5	-1.9
TEJU	Tejupilco	4.82	314	eP	Pn	09 22 18.4	+2.8
TEJU				eS	Sn	09 23 07.1	-4.7
HUEH	Huehuetenango	4.83	92		Pn	09 22 16.9	+1.0
HUEH	Huehuetenango	4.83	92	eP	Pn	09 22 16.2	+0.3
HUEH				eS	Sn	09 23 09.8	-2.4
ZUVM	ZUMPANGO	4.89	330		Pn	09 22 21.0	+4.2
ZUVM					Sn	09 23 13.6	-0.3
ZUVM	ZUMPANGO	4.89	330	eP	Pn	09 22 21.0	+4.2
ZUVM				eS	Sn	09 23 13.6	-0.3
DHIG	Demacu	5.29	333		Pn	09 22 27.2	+5.0
DHIG					Sn	09 23 17.8	-5.7
DEIG	Demacu	5.29	333	eP	Pn	09 22 27.2	+5.0
DEIG				eS	Sn	09 23 17.8	-5.8
ACIG	Acambay	5.44	324		Pn	09 22 28.7	+4.5
ACIG					Sn	09 23 21.4	-5.8
ACIG	Acambay	5.44	324	eP	Pn	09 22 28.7	+4.5
ACIG				eS	Sn	09 23 21.4	-5.8
MOIG	Morelia	6.05	313		Pn	09 22 34.9	+2.1
MOIG	Morelia	6.05	313	eP	Pn	09 22 36.6	+3.9
MOIG				eS	Sn	09 23 34.9	-7.5
SCIG	Sabancuy	6.10	56⇑	eP	Pn	09 22 30.2	-2.9
SCIG				iS	Sn	09 23 37.7	-5.6
CTUV	Llano Grande	6.13	344	eP	Pn	09 22 34.6	+1.1
CTUV				eS	Sn	09 23 42.7	-1.2
JRQG	Juriquilla Cam	6.33	324		Pn	09 22 35.5	-1.1
PETF	Flores	6.51	77		Pn	09 22 38.5	-0.3
PETF	Flores	6.51	77⇑	eP	Pn	09 22 37.5	-1.3
PETF				eS	Sn	09 23 48.8	-4.6
ESQI	Esquipulas	6.99	97	Pn	Pn	09 22 46.1	+0.6
MTO3	Montecristo	7.00	99		Pn	09 22 47.2	+1.4
MMIG	Aquila	7.08	293		Pn	09 22 47.8	+1.1
MMIG					Sn	09 23 58.6	-8.9
MMIG	Aquila	7.08	293	eP	Pn	09 22 47.8	+1.1
MMIG				eS	Sn	09 23 58.6	-8.9
RPIG	Rio Verde	7.09	333		Pn	09 22 49.5	+2.6
RPIG					Sn	09 24 08.4	+0.6
RPIG	Rio Verde	7.09	333	eP	Pn	09 22 49.5	+2.6
RPIG				eS	Sn	09 24 08.4	+0.6
COIG	Colima	7.74	299	eP	Pn	09 22 59.4	+3.6
COIG				eS	Sn	09 24 18.9	-5.0
JUBC	Volcan de Coli	7.80	301	eP	Pn	09 22 59.8	+3.0
JUBC				eS	Sn	09 24 25.9	+0.4
EZ5V		7.81	301		Pn	09 23 00.7	+3.9
EZ5V		7.81	301	eP	Pn	09 23 00.7	+3.9
EZ5V				eS	Sn	09 24 29.2	+3.5
MNGA	Volcan de Coli	7.82	301	eP	Pn	09 23 01.1	+4.1
MNGA				eS	Sn	09 24 28.3	+2.4
SOMAC	Volcano de Col	7.85	301	eP	Pn	09 23 01.7	+4.1
SOMAC				eS	Sn	09 24 28.6	+1.6

GTIG	Gomez Farias	7.87	342		Pn	09 22 59.3	+1.8
GTIG					Sn	09 24 31.0	+4.2
GTIG	Gomez Farias	7.87	342	eP	Pn	09 22 59.3	+1.8
GTIG				eS	Sn	09 24 31.0	+4.2
CDAR	Ciudad de Arme	7.92	296	eP	Pn	09 22 59.9	+1.7
CDAR				eS	Sn	09 24 23.7	-4.3
CEGR	Campo Tres	7.98	299	eP	Pn	09 23 02.2	+3.1
CEGR				eS	Sn	09 24 29.9	+0.1
MYIG	Mrida	8.37	49	eP	Pn	09 23 03.6	-0.6
MYIG				eS	Sn	09 24 33.7	-5.3
AAIG	Aguscalientes	8.45	320		Pn	09 23 10.1	+4.4
AAIG					Sn	09 24 45.9	+4.4
AAIG	Aguscalientes	8.45	320	eP	Pn	09 23 10.1	+4.4
AAIG				eS	Sn	09 24 45.9	+4.4
CIHU	Emiliano Zapat	8.67	296	eP	Pn	09 23 10.2	+1.6
CIHU				eS	Sn	09 24 48.1	+1.5
CJM	Chamela	9.04	297⇑	eP	Pn	09 23 17.1	+3.6
CJM				eS	Sn	09 24 58.0	+2.5
TGUH	Tegucigalpa,Un	9.05	98	Pn	Pn	09 23 15.1	+1.2
TEIG	Tepich	9.10	58	Pn	Pn	09 23 13.2	-1.1
ZAIG	Zacatecas	9.17	322	Pn	Pn	09 23 15.6	0.0
ESTA	Talpa de Allen	9.28	302	eP	Pn	09 23 20.8	+3.9
ESTA				eS	Sn	09 25 00.3	-1.4
CRIN	San Cristobal	9.60	106		Pn	09 23 22.4	+1.1
LNIG	Linares	9.69	344	eP	Pn	09 23 22.4	0.0
LNIG				eS	Sn	09 25 10.9	-0.6
MATN	Matagalpa	10.59	103		Pn	09 23 35.7	+0.9
BOAB	BOACO BROADBAN	10.96	105	Pn	Pn	09 23 40.0	+0.1
ACON	Acoyapa	11.57	107	Pn	Pn	09 23 48.8	+0.5
HBVL	Hebbronville	11.61	350	Pn	Pn	09 23 47.6	-1.2
HZTE	Horizontes, Gu	11.67	113	Pn	Pn	09 23 51.2	+1.7
HZTE	Horizontes, Gu	11.67	113	IAML		09 24 19.3	
	comp=Z,140nm,1.0s						
HZTE	Horizontes, Gu	11.67	113	iP	Pn	09 23 53.7	+4.1
SAJU	San Juanillo,	11.86	116	IAML		09 23 57.4	
	comp=Z,55nm,1.0s						
SAJU	San Juanillo,	11.86	116	iP	Pn	09 23 56.7	+4.5
ORTG	Ortega, Santa	11.94	114	Pn	Pn	09 23 56.2	+2.8
ORTG	Ortega, Santa	11.94	114	IAML		09 24 04.5	
	comp=Z,48nm,1.0s						
ORTG	Ortega, Santa	11.94	114	iP	Pn	09 23 57.0	+3.6
DUNO	Dulce Nombre,	12.04	116		Pn	09 23 56.4	+1.7
DUNO	Dulce Nombre,	12.04	116	IAML		09 24 03.9	
	comp=Z,45nm,1.0s						
DUNO	Dulce Nombre,	12.04	116	iP	Pn	09 23 59.6	+4.9
INDI	Punta indio, G	12.13	117	IAML		09 24 14.0	
	comp=Z,46nm,1.0s						
INDI	Punta indio, G	12.13	117	iP	Pn	09 24 00.9	+4.9
JTS	Las Juntas de	12.42	114	Pn	Pn	09 24 01.0	+1.1
JTS	Las Juntas de	12.42	114	Pn	Pn	09 24 00.1	+0.2
	comp=Z,0.9nm,0.3s,baz=310,slow=18,SNR=2.6						
	comp=Z,2.9nm,0.3s						
ARE1	Arenal 1	12.55	112		Pn	09 24 03.0	+1.2
SOCE	Pocosol	12.68	113	Pn	Pn	09 24 06.7	+3.3
COVE	Coope Vega, Sa	12.73	111		Pn	09 24 05.7	+1.6
833A	Chaparral WMA,	12.97	349	Pn	Pn	09 24 06.6	-0.7
833A	Chaparral WMA,	12.97	349	P	Pn	09 24 08.9	+1.6
	baz=167						
LCR2	La Lucha 2	13.50	114		Pn	09 24 18.4	+3.7
EF01	Eagle Ford 01	13.60	353	Pn	Pn	09 24 13.9	-2.1
RIMA	Rio Macho	13.61	114		Pn	09 24 19.1	+2.8
RIMA	Rio Macho	13.61	114	iP	Pn	09 24 20.5	+4.2
PEZE	Perez Zeledon,	13.95	115		Pn	09 24 22.9	+2.1
HNDO	Hondo	14.13	350		Pn	09 24 22.8	-0.4
HPIG		14.16	324		Pn	09 24 23.2	-0.7
DRIO	Del Rio	14.30	345	Pn	Pn	09 24 24.0	-1.5
HKT	Hockley	14.33	2	Pn	Pn	09 24 24.6	-1.2
DRK0	Durika	14.38	114		Pn	09 24 27.7	+0.8
BCIG	La Boquilla	14.51	327	P	P	09 24 35.0	-0.2
BCIG	La Boquilla	14.51	327	eP	P	09 24 35.0	-0.2
SOR	Soroa	14.63	59	Pn	Pn	09 24 26.6	-3.4
JCT	Junction City	15.15	349	Pn	Pn	09 24 37.0	0.0
JCT	Junction City	15.15	349	P	Pn	09 24 38.9	+1.9
	baz=168						
435B	Jarrell	15.18	356		Pn	09 24 37.1	-0.3
435B	Jarrell	15.18	356	P	Pn	09 24 38.7	+1.4
	baz=176						
TXAR	Lajitas Array	15.21	335		Pn	09 24 37.2	-0.7
TXAR	Lajitas Array	15.21	335	Pn	Pn	09 24 39.6	+1.7
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=15						
TXAR				Lg	Lg	09 29 00.9	
	baz=97,slow=30,SNR=2.0						
TXAR				LR	LR	09 30 00.1	
	comp=Z,128nm,21.0s,baz=145,slow=36						
	comp=Z,1.1nm,0.8s						
TX31	Lajitas Ar. Si	15.21	335		Pn	09 24 38.8	+0.9
SAND	Sanderson	15.22	341	Pn	Pn	09 24 36.4	-1.6
LPIG	La Paz	15.51	305	Pn	Pn	09 24 44.0	+2.3
	comp=Z,1.5nm,0.3s,baz=190,slow=12,SNR=1.4						
LPIG				LR	LR	09 29 51.8	
	comp=Z,367nm,19.3s,baz=130,slow=34						
	comp=Z,3.2nm,0.3s						
CSIG	Choix	15.73	317	e	P	09 24 51.4	+2.6
BRDY	Brady	15.81	352	Pn	Pn	09 24 44.2	-1.5
NATX	Nacogdoches	16.20	6		Pn	09 24 49.3	-1.5
NATX				IAmb	IAmb	09 25 10.5	
	comp=Z,37nm,0.9s						
NATX	Nacogdoches	16.20	6	P	Pn	09 24 50.9	+0.1
	baz=186						
WHTX	Lake Whitney,	16.37	357	P	Pn	09 24 53.1	+0.2
	baz=177						
MNHN	Monahans	16.71	341		Pn	09 24 57.1	-0.1
SGCY	Sterling City	16.81	346	IAmb	IAmb	09 25 07.7	
	comp=Z,34nm,0.9s						
FW16	Waxahatchie	16.84	359		Pn	09 24 56.8	-2.1
FW16				IAmb	IAmb	09 25 13.9	
	comp=Z,40nm,0.7s						
346A	Big Creek Wild	17.01	21	IAmb	IAmb	09 25 11.1	
	comp=Z,53nm,0.9s						
FW07	Weatherford	17.10	356	IAmb	IAmb	09 25 25.7	
	comp=Z,27nm,0.7s						
ABTX	Abilene, Hawle	17.22	351		Pn	09 25 02.5	-1.1
ABTX				IAmb	IAmb	09 25 15.5	
	comp=Z,29nm,0.8s						
ABTX	Abilene, Hawle	17.22	351	P	P	09 25 04.5	-0.7
	baz=170						
PLPT	Palo Pinto	17.25	355	IAmb	IAmb	09 25 17.5	
	comp=Z,61nm,1.4s						
FW06	Azle	17.35	357		Pn	09 25 04.2	-1.1
FW06				IAmb	IAmb	09 25 32.9	
	comp=Z,40nm,1.1s						
ODSA	Odessa	17.37	343	P	Pn	09 25 05.5	-0.1
ODSA				IAmb	IAmb	09 25 14.5	
	comp=Z,58nm,0.9s						
Z38A	Mt. Pleasant	17.67	4	IAmb	IAmb	09 25 16.6	
	comp=Z,86nm,1.1s						
SN01	Snyder 1	17.67	348	P	Pn	09 25 07.9	-1.4
APMT	Aspermont	17.98	350	P	Pn	09 25 11.8	-1.3
MNTX	Cornudas Mount	17.98	335	P	P	09 25 14.4	+0.7
	baz=151,SNR=9.2						
DKNS	Dickens	18.46	348	P	Pn	09 25 17.8	-1.2
DKNS				IAmb	IAmb	09 25 25.3	
	comp=Z,26nm,0.7s						
DWPF	Disney Wildern	18.72	46	P	P	09 25 19.5	-2.3
	baz=232						
250A	Grady	18.81	28	IAmb	IAmb	09 25 29.9	
	comp=Z,27nm,0.7s						
HSIG		18.89	318	P	Pn	09 25 26.0	+1.8
X34A	Smith Ranch, M	18.99	357	IAmb	IAmb	09 25 46.0	
	comp=Z,54nm,1.0s						
352A	Blakely	19.04	32	IAmb	IAmb	09 25 32.6	
	comp=Z,41nm,0.9s						
MIAR	Mount Ida	19.08	7	IAmb	IAmb	09 25 33.9	
	comp=Z,48nm,0.8s						
MIAR	Mount Ida	19.08	7	P	P	09 25 25.0	-0.7
	baz=189,SNR=18						
X40A	Basin Creek Fa	19.12	9	P	P	09 25 24.1	-2.1
Z47A	Carrollton	19.14	22	IAmb	IAmb	09 25 56.9	
	comp=Z,23nm,0.8s						
MSTX	Muleshoe	19.17	344	IAmb	IAmb	09 25 33.9	
	comp=Z,50nm,0.9s						
MSTX	Muleshoe	19.17	344	P	Pn	09 25 27.6	-0.2
	baz=161,SNR=26						
WMOK	Wichita Mounta	19.20	354	P	P	09 25 26.2	-0.8
	baz=173,SNR=12						
Y45A	Yeager Farm, C	19.27	18	IAmb	IAmb	09 25 50.4	
	comp=Z,38nm,0.8s						
LRAL	Lakeview Retre	19.41	25	P	P	09 25 28.0	-1.2
	baz=209						
UALR	University of	19.49	10	P	P	09 25 29.3	-0.9
UALR				IAmb	IAmb	09 25 35.8	
	comp=Z,38nm,0.9s						
W35A	Tecumseh	19.50	359	IAmb	IAmb	09 25 37.4	
	comp=Z,95nm,1.5s						

FNO	Franklin	19.62	358	IAmb	IAmb	09 25 45.6	
	comp=Z,21nm,0.7s						
TIGA	Tifton	19.71	34	P	P	09 25 32.2	-0.5
	baz=220						
SMWD	Samnorwood	19.74	351	IAmb	IAmb	09 25 39.7	
	comp=Z,37nm,0.7s						
121A	Cookes Peak, D	19.75	331	P	P	09 25 32.9	-0.4
121A	Cookes Peak, D	19.75	331	P	Pn	09 25 36.4	+1.6
	baz=146						
AMTX	Amarillo	19.79	347	IAmb	IAmb	09 25 40.1	
	comp=Z,25nm,0.8s						
AMTX	Amarillo	19.79	347	P	Pn	09 25 34.3	-0.7
	baz=165						
OXF	Oxford	19.91	17	IAmb	IAmb	09 25 34.2	
	comp=Z,40nm,0.8s						
OXF	Oxford	19.91	17	P	P	09 25 33.4	-1.4
	baz=200						
WHAR	Wooly Hollow	20.00	10	IAmb	IAmb	09 25 49.1	
	comp=Z,27nm,0.8s						
152A	Waverly Hall	20.11	30	IAmb	IAmb	09 25 50.1	
	comp=Z,37nm,0.8s						
DEOK	Depew	20.19	0	IAmb	IAmb	09 25 44.6	
	comp=Z,32nm,0.7s						
TUL3	Leonard	20.27	2	P	P	09 25 38.1	-0.5
TUL3				IAmb	IAmb	09 25 46.2	
	comp=Z,42nm,0.8s						
TUL3	Leonard	20.27	2	P	Pn	09 25 39.5	-1.1
	baz=182,SNR=16						
OK052	Battle Ridge R	20.34	359	IAmb	IAmb	09 25 54.4	
	comp=Z,31nm,0.8s						
Y49A	Blount Mountai	20.36	25	IAmb	IAmb	09 26 02.3	
	comp=Z,14nm,0.7s						
OK033	Mehan	20.39	359	IAmb	IAmb	09 25 52.7	
	comp=Z,27nm,0.8s						
DUN6	Lazy B Ranch	20.41	328	IAmb	IAmb	09 26 00.8	
	comp=Z,52nm,1.1s						
Z51A	Franklin	20.43	28	IAmb	IAmb	09 25 59.5	
	comp=Z,30nm,1.3s						
QUOK	Quay	20.52	360	IAmb	IAmb	09 25 59.9	
	comp=Z,44nm,0.9s						
RLO	Rose Lookout	20.55	3	IAmb	IAmb	09 25 58.0	
	comp=Z,15nm,0.8s						
ELIS	Ellis County	20.58	353	IAmb	IAmb	09 25 57.9	
	comp=Z,66nm,1.5s						
FCAR	Ozark Folk Cen	20.61	10	IAmb	IAmb	09 25 47.8	
	comp=Z,42nm,0.8s						
255A	Hazlehurst	20.70	36	IAmb	IAmb	09 26 06.8	
	comp=Z,40nm,0.9s						
HHAR	Hobbs	20.75	6	P	P	09 25 42.5	-1.4
HHAR				IAmb	IAmb	09 25 51.3	
	comp=Z,21nm,0.8s						
OK048	Pawnee Station	20.77	359	IAmb	IAmb	09 25 51.6	
	comp=Z,44nm,0.9s						
U32A	Winter Ranch,	20.84	354	IAmb	IAmb	09 25 56.1	
	comp=Z,40nm,1.0s						
OK051	E0350 and S346	20.85	359	IAmb	IAmb	09 25 55.1	
	comp=Z,34nm,0.8s						
U38A	Gravette	20.87	5	P	P	09 25 43.5	-1.7
LCAR	Lake Charles	20.97	12	IAmb	IAmb	09 26 03.5	
	comp=Z,13nm,0.7s						
TUC	Tucson	21.13	325	P	P	09 25 51.0	+2.9
	baz=138						
T35A	Sooner Cattle	21.26	360	P	P	09 25 47.4	-2.0
ANMO	Albuquerque	21.27	337	P	P	09 25 50.8	+1.1
ANMO	Albuquerque	21.27	337	P	P	09 25 51.5	+1.8
	baz=152						
ANMO	Albuquerque	21.27	337	P	P	09 25 50.8	+1.1
	comp=Z,3.9nm,0.7s,baz=240,slow=12,SNR=19						
ANMO				LR	LR	09 33 04.1	
	comp=Z,172nm,19.6s,baz=249,slow=34						
	comp=Z,3.9nm,0.7s						
FPAL	Fort Paine	21.28	25	IAmb	IAmb	09 25 58.4	
	comp=Z,18nm,0.8s						
GOGA	Godfrey	21.32	31	P	P	09 25 49.6	-0.5
	baz=217,SNR=7.2						
KAN13	South Haven SW	21.38	358	IAmb	IAmb	09 25 53.8	
	comp=Z,31nm,0.8s						
KAN17	Caldwell West	21.42	357	IAmb	IAmb	09 25 54.2	
	comp=Z,20nm,0.8s						
KAN09	Caldwell North	21.50	358	IAmb	IAmb	09 26 18.3	
	comp=Z,21nm,0.8s						
RTBA	Rita Blanca	21.51	346	IAmb	IAmb	09 25 54.2	
	comp=Z,23nm,0.8s						
KAN01	Argonia South	21.53	357	IAmb	IAmb	09 25 55.3	
	comp=Z,26nm,0.8s						
X51A	Calhoun	21.62	27	IAmb	IAmb	09 26 09.6	
	comp=Z,14nm,0.8s						
KAN12	Harper NE Stat	21.68	357	IAmb	IAmb	09 25 57.4	
	comp=Z,32nm,0.9s						
SWET	Sewanee	21.74	24	IAmb	IAmb	09 26 12.1	
	comp=Z,16nm,0.8s						
PBMO	Poplar Bluff	21.80	13	IAmb	IAmb	09 26 02.9	
	comp=Z,32nm,0.9s						
V48A	Smith Brothers	21.87	22	IAmb	IAmb	09 25 57.9	
	comp=Z,18nm,0.8s						
WVT	Waverly	21.89	19	P	P	09 25 54.1	-2.0
WVT				IAmb	IAmb	09 25 57.8	
	comp=Z,23nm,1.1s						
WVT	Waverly	21.89	19	P	P	09 25 55.6	-0.6
	baz=203						
W50A	Signal Mountai	21.97	25	IAmb	IAmb	09 26 21.3	
	comp=Z,15nm,0.7s						
214A	Organ Pipe Nat	22.06	321	P	P	09 25 56.5	-1.6
214A	Organ Pipe Nat	22.06	321	P	P	09 26 01.0	+2.9
	baz=134,SNR=6.2						
S39A	Bolivar	22.21	7	P	P	09 25 58.0	-1.6
S39A				IAmb	IAmb	09 26 08.0	
	comp=Z,20nm,0.8s						
X18A	Snowflake	22.42	330	IAmb	IAmb	09 26 16.1	
	comp=Z,17nm,1.0s						
CGM3	Cape Girardeau	22.48	14	IAmb	IAmb	09 26 30.2	
	comp=Z,26nm,1.2s						
CPCT	Cooper Cave	22.52	26	IAmb	IAmb	09 26 04.7	
	comp=Z,22nm,0.9s						
T25A	Trinidad	22.60	343	IAmb	IAmb	09 26 07.5	
	comp=Z,20nm,0.7s						
T25A	Trinidad	22.60	343	P	P	09 26 06.5	+2.5
	baz=160,SNR=9.7						
W18A	Petrified Fore	22.80	331	P	P	09 26 08.1	+2.0
	baz=145						
R32A	Long Quarter,	22.85	356	P	P	09 26 05.5	-0.9
R32A				IAmb	IAmb	09 26 25.1	
	comp=Z,21nm,0.8s						
BG3	Lake Jocassee	22.86	30	IAmb	IAmb	09 26 28.9	
	comp=Z,29nm,0.9s						
CCM	Cathedral Cave	22.88	11	P	P	09 26 04.3	-2.4
CCM				IAmb	IAmb	09 26 29.5	
	comp=Z,17nm,0.7s						
CCM	Cathedral Cave	22.88	11	P	P	09 26 05.7	-1.0
	baz=193						
NHSC	New Hope	22.88	37	P	P	09 26 05.7	-1.0
	baz=224						
V51A	Loudon	22.89	26	IAmb	IAmb	09 26 08.3	
	comp=Z,20nm,0.8s						
U49A	Red Boiling Sp	22.94	23	IAmb	IAmb	09 26 24.0	
	comp=Z,19nm,0.7s						
S44A	Carbondale	22.95	15	IAmb	IAmb	09 26 13.4	
	comp=Z,20nm,0.8s						
SIUC	Southern Illin	22.98	15	IAmb	IAmb	09 26 26.3	
	comp=Z,19nm,0.6s						
JSC	Jenkinsville	23.14	34	IAmb	IAmb	09 26 13.6	
	comp=Z,24nm,0.7s						
V52A	Sevierville	23.25	27	IAmb	IAmb	09 26 35.9	
	comp=Z,14nm,0.9s						
CBKS	Cedar Bluff	23.33	354	P	P	09 26 12.4	+1.0
	baz=172,SNR=6.3						
KSU1	Kansas State U	23.44	360	IAmb	IAmb	09 26 13.1	
	comp=Z,32nm,1.1s						
KSU1	Kansas State U	23.44	360	P	P	09 26 12.2	-0.3
	baz=180,SNR=8.9						
OTAV	Otavalo	23.45	129	P	P	09 26 17.0	+3.7
V53A	Saluda	23.46	29	IAmb	IAmb	09 26 21.2	
	comp=Z,9.7nm,0.8s						
SDCO	Great Sand Dun	23.48	342	P	P	09 26 14.4	+1.2
	baz=158,SNR=17						
Y14A	Wickenburg	23.58	324	IAmb	IAmb	09 26 21.9	
	comp=Z,14nm,1.1s						
T50A	Nancy	23.74	24	IAmb	IAmb	09 26 15.4	
	comp=Z,15nm,0.8s						
KMSC	Kings Mountain	23.77	32	IAmb	IAmb	09 26 36.6	
	comp=Z,23nm,0.9s						
KMSC	Kings Mountain	23.77	32	P	P	09 26 13.8	-1.9
	baz=219,SNR=6.4						
TZTN	Tazewell	23.86	27	IAmb	IAmb	09 26 42.7	
	comp=Z,22nm,1.1s						
TZTN	Tazewell	23.86	27	P	P	09 26 15.5	-1.1
	baz=212						
S22A	4UR Ranch, Cre	23.90	339	P	P	09 26 18.6	+1.3

baz=155
WUAZ **Wupatki** 23.91 329 IAmb IAmb 09 26 21.2
comp=Z,25nm,0.8s
WUAZ **Wupatki** 23.91 329 P P **09 26 19.8 +2.5**
baz=142,SNR=30
KSCO **Kaye Shedlock'** 23.96 348 IAmb IAmb 09 26 19.6
comp=Z,24nm,1.0s
KSCO **Kaye Shedlock'** 23.96 348 P P **09 26 18.9 +1.2**
baz=165,SNR=5.8
MVCO **Mesa Verde** 24.04 336 IAmb IAmb 09 26 22.2
comp=Z,16nm,0.9s
MVCO **Mesa Verde** 24.04 336 P P **09 26 20.3 +1.7**
baz=150,SNR=9.4
ROSC **El Rosal** 24.27 114 P P **09 26 22.3 +1.3**
comp=Z,4.2nm,0.4s,baz=299,slow=19,SNR=1.3
comp=Z,4.2nm,0.4s
WCI **Wyandotte Cave** 24.30 20 P P **09 26 19.3 -1.3**
WCI **Wyandotte Cave** 24.30 20 P P **09 26 20.2 -0.5**
baz=204
V55A **Taylorsville** 24.38 31 IAmb IAmb 09 26 21.1
comp=Z,14nm,0.7s
W57A **Gilead** 24.48 34 IAmb IAmb 09 26 27.1
comp=Z,15nm,0.8s
PDMCI **Parker Dam,Lak** 24.50 323 P P **09 26 24.6 +2.1**
baz=135
Q24A **Divide** 24.51 344 P P **09 26 23.9 +0.9**
baz=159
SWSC **Sam W. Stewart** 24.60 318 P P **09 26 26.1 +2.7**
baz=130
IKP **In-Ko-Pah, Jac** 24.61 317 P P **09 26 25.9 +2.2**
baz=129
U54A **Nelsons Funny** 24.62 29 IAmb IAmb 09 26 30.5
comp=Z,20nm,0.8s
R49A **Shelbyville** 24.74 22 IAmb IAmb 09 26 25.1
comp=Z,22nm,0.9s
P43A **Skaggs, Pawnee** 24.75 13 IAmb IAmb 09 26 33.2
comp=Z,18nm,0.7s
S51A **Beattyville** 24.77 25 IAmb IAmb 09 26 41.0
comp=Z,11nm,0.8s
BC3 **Big Chuckawall** 24.84 320 P P **09 26 28.0 +2.2**
baz=132,SNR=6.1
MONP2 **Monument Peak** 24.97 317 P P **09 26 30.6 +3.6**
baz=129,SNR=6.6
IRM **Iron Mountain** 24.99 321 P P **09 26 29.9 +2.9**
baz=133,SNR=9.2
R50A **Paris** 25.04 23 IAmb IAmb 09 26 27.1
comp=Z,13nm,0.8s
U15A **North Rim** 25.09 329 IAmb IAmb 09 26 43.8
comp=Z,10nm,0.9s
NEE2 **Needles Airpor** 25.11 323 P P **09 26 31.1 +3.0**
baz=135
SMCO **Snowmass** 25.25 341 IAmb IAmb 09 26 46.2
comp=Z,13nm,1.2s
BELC **Belle Mtn. Jos** 25.41 320 P P **09 26 34.0 +3.0**
baz=131
ISCO **Idaho Springs** 25.42 343 IAmb IAmb 09 26 38.9
comp=Z,8.7nm,0.6s
ISCO **Idaho Springs** 25.42 343 P P **09 26 32.7 +1.6**
baz=159,SNR=11
PMD **Palm Desert** 25.42 319 P P **09 26 33.1 +2.2**
V58A **Windy Hill, Pi** 25.44 34 IAmb IAmb 09 26 37.9
comp=Z,16nm,0.7s
TPFO **Pinon Flats** 25.44 318 P P **09 26 34.9 +3.6**
baz=130
PFO **Pinyon Flats O** 25.45 318 P P **09 26 32.9 +1.6**
PFO **Pinyon Flats O** 25.45 318 P P **09 26 35.2 +3.9**
baz=130
PFO **Pinyon Flats O** 25.45 318 P P **09 26 33.9 +2.6**
comp=Z,1.9nm,0.8s,baz=134,slow=12,SNR=8.3
PFO LR LR 09 36 05.2
comp=Z,196nm,19.8s,baz=140,slow=36
comp=Z,1.9nm,0.8s
O44A **Mansfield** 25.48 14 IAmb IAmb 09 26 52.0
comp=Z,16nm,0.8s
HMU **Henry Mountain** 25.59 333 IAmb IAmb 09 26 43.2
comp=Z,11nm,0.9s
HDIL **Hopedale** 25.67 13 IAmb IAmb 09 26 33.2
comp=Z,19nm,0.8s
HDIL **Hopedale** 25.67 13 P P **09 26 32.7 -0.4**
baz=196
CNNC **Cliffs of the** 25.73 37 P P **09 26 31.9 -1.7**
baz=225
GMRC **Granite Mounta** 25.73 322 P P **09 26 36.7 +2.9**
baz=133
OGNE **Ogallala** 25.74 350 P P **09 26 35.0 +1.3**
baz=168,SNR=12
KNB **Kanab** 25.81 329 IAmb IAmb 09 26 40.8
comp=Z,14nm,1.2s
BRIGG **Briggsdale** 25.83 346 IAmb IAmb 09 26 49.8
comp=Z,17nm,0.9s
BLA **Blacksburg** 25.85 30 IAmb IAmb 09 26 40.6
comp=Z,15nm,0.7s
BLA **Blacksburg** 25.85 30 P P **09 26 34.2 -0.6**
baz=218
S54A **Dingess, Beckl** 25.90 28 IAmb IAmb 09 26 40.8
comp=Z,14nm,0.7s
V12A **Nelson** 25.92 324 P P **09 26 37.5 +1.9**
V12A IAmb IAmb 09 26 44.2
comp=Z,13nm,1.1s
P49A **Miami Univ. Ec** 26.01 21 P P **09 26 34.7 -1.5**
baz=207,SNR=12
SFIN **Lafayette** 26.04 17 P P **09 26 35.5 -0.9**
baz=201
R53A **Hurricane** 26.05 27 IAmb IAmb 09 26 38.8
comp=Z,13nm,0.7s
SDV **Santo Domingo** 26.12 102 P P **09 26 38.7 +1.0**
SDV **Santo Domingo** 26.12 102 LR LR 09 38 46.8
comp=Z,190nm,18.7s,baz=320,slow=41
T57A **Hurt** 26.27 32 IAmb IAmb 09 26 45.0
comp=Z,11nm,0.8s
MTPU **Mount Pierson** 26.32 331 IAmb IAmb 09 27 04.9
comp=Z,9.9nm,0.9s
TUQ **Turquoise Moun** 26.34 322 P P **09 26 42.8 +3.5**
baz=134
SCIA **State Center** 26.40 6 P P **09 26 39.7 0.0**
baz=187
O48B **Farmland** 26.51 20 P P **09 26 40.7 0.0**
baz=205,SNR=12
O20A **White River Ci** 26.53 340 IAmb IAmb 09 27 09.4
comp=Z,8.8nm,0.8s
O20A **White River Ci** 26.53 340 P P **09 26 42.9 +1.8**
baz=154,SNR=5.6
N23A **Red Feather La** 26.53 344 IAmb IAmb 09 27 08.9
comp=Z,8.0nm,0.9s
N23A **Red Feather La** 26.53 344 P P **09 26 43.4 +2.2**
baz=159
Q16A **Castle Valley** 26.59 334 IAmb IAmb 09 27 07.7
comp=Z,13nm,0.8s
CIS **Catalina Islan** 26.60 316 P P **09 26 45.6 +3.9**
baz=126
BFSC **Mount Baldy Ra** 26.62 318 P P **09 26 44.3 +2.4**
baz=129
MVU **Marysvale** 26.71 332 IAmb IAmb 09 26 58.8
comp=Z,17nm,1.0s
M44A **Midewin, Midew** 26.75 14 IAmb IAmb 09 26 52.1
comp=Z,18nm,0.9s
L40A **Anamosa** 26.79 9 IAmb IAmb 09 26 52.2
comp=Z,20nm,0.9s
S57A **Dark Hollow, R** 27.01 32 IAmb IAmb 09 26 50.5
comp=Z,11nm,0.9s
P52A **Corning** 27.07 25 IAmb IAmb 09 26 55.7
comp=Z,18nm,0.8s
P52A **Corning** 27.07 25 P P **09 26 44.5 -1.2**
baz=212,SNR=8.3
Q54A **Coxs Mills** 27.08 28 IAmb IAmb 09 26 53.7
comp=Z,16nm,0.8s
T59A **Double "B" Far** 27.16 35 IAmb IAmb 09 26 45.4
comp=Z,14nm,1.0s
EDW2 **Edwards Air Fo** 27.24 319 P P **09 26 50.5 +3.1**
baz=129
ACSO **Alum Creek Sta** 27.25 23 IAmb IAmb 09 26 46.9
comp=Z,18nm,0.8s
ACSO **Alum Creek Sta** 27.25 23 P P **09 26 46.4 -1.0**
baz=210,SNR=6.3
LRMC **Laurel Mtn Rad** 27.43 320 P P **09 26 52.1 +3.0**
baz=131
N49A **Columbus Grove** 27.43 21 IAmb IAmb 09 26 48.6
comp=Z,11nm,0.9s
L44A **Lake County Fo** 27.53 14 P P **09 26 49.4 -0.4**
baz=198
TPNV **Topopah Spring** 27.58 324 P P **09 26 53.8 +3.2**
baz=135
FURC **Furnace Creek,** 27.60 323 P P **09 26 52.9 +2.5**
baz=134
MPMC **Manual Prospec** 27.69 321 P P **09 26 54.7 +3.1**
baz=132
JFWS **Jewell Farm** 27.77 10 P P **09 26 51.1 -0.9**
baz=193,SNR=11

S11A **Rachel** 27.81 326 IAmb IAmb 09 27 01.8
comp=Z,14nm,1.2s
O53A **New Philadelph** 27.97 25 P P **09 26 52.9 -0.9**
baz=213,SNR=11
ECSD **EROS Data Cent** 28.07 360 IAmb IAmb 09 27 15.6
comp=Z,5.6nm,0.8s
R11B **Troy Canyon, C** 28.24 327 P P **09 26 59.2 +2.8**
baz=138
GRAC **Grapevine Rang** 28.26 323 P P **09 26 59.6 +3.2**
baz=133
O54A **Avella** 28.27 27 IAmb IAmb 09 26 55.7
comp=Z,18nm,0.9s
CWC **Cottonwood Cre** 28.30 321 P P **09 26 59.4 +2.4**
baz=132
K22A **Casper** 28.33 344 P P **09 26 58.4 +1.3**
baz=159
DUG **Dugway, Tooele** 28.36 333 P P **09 26 59.6 +2.2**
baz=145
I37A **Lemond, Waseca** 28.47 5 IAmb IAmb 09 27 03.3
comp=Z,9.6nm,0.8s
TCUT **Toone Canyon** 28.55 336 IAmb IAmb 09 27 27.2
comp=Z,12nm,0.8s
BAUV **El Baul** 28.56 100 P P **09 26 57.9 -1.4**
I40A **Norwalk** 28.67 9 IAmb IAmb 09 27 01.1
comp=Z,11nm,0.6s
P57A **Homestead Farm** 28.80 31 IAmb IAmb 09 27 06.7
comp=Z,13nm,1.1s
ATAH **Atahualpa** 28.82 140 LR LR 09 36 42.5
comp=Z,67nm,19.7s,baz=322,slow=33
SJG **San Juan** 29.14 81 LR LR 09 37 56.0
comp=Z,111nm,21.6s,baz=202,slow=35
RSSD **Black Hills** 29.17 349 P P **09 27 05.6 +0.9**
baz=165
M53A **WI Miller and** 29.19 25 P P **09 27 03.6 -1.0**
baz=213,SNR=10.0
BW06 **Boulder Array** 29.33 340 P P **09 27 06.4 +0.3**
baz=154
PDAR **Pinedale Array** 29.33 340 P P **09 27 06.8 +0.6**
comp=Z,1.4nm,0.7s,baz=140,slow=9.2,SNR=18
PDAR LR LR 09 39 18.6
comp=Z,103nm,18.6s,baz=170,slow=38
comp=Z,1.4nm,0.7s
SPMN **Marine on St.** 29.73 5 P P **09 27 08.5 -0.9**
baz=187,SNR=8.3
SSPA **Standing Stone** 29.76 29 P P **09 27 08.2 -1.5**
baz=218
LHV **Little Huntoon** 29.77 324 IAmb IAmb 09 27 21.6
comp=Z,6.8nm,1.0s
ELK **Elko** 29.90 331 P P **09 27 12.4 +1.2**
comp=Z,2.5nm,0.8s,baz=141,slow=7.2,SNR=12
ELK LR LR 09 39 33.2
comp=Z,164nm,20.1s,baz=138,slow=37
comp=Z,2.5nm,0.8s
M55A **Ridgway** 30.02 27 IAmb IAmb 09 27 11.2
comp=Z,12nm,0.9s
ERPA **Erie** 30.04 25 P P **09 27 11.1 -1.0**
baz=213,SNR=7.8
F36A **Milaca** 30.30 4 IAmb IAmb 09 27 14.8
comp=Z,7.6nm,0.7s
LOHW **Long Hollow** 30.43 340 IAmb IAmb 09 27 18.2
comp=Z,7.8nm,0.8s
TPAW **Teton Pass** 30.44 339 IAmb IAmb 09 27 23.3
comp=Z,6.5nm,0.9s
GLMI **Grayling** 30.85 17 P P **09 27 18.3 -0.9**
baz=203
FLWY **Flagg Ranch** 30.88 340 IAmb IAmb 09 27 23.2
comp=Z,4.8nm,0.8s
COWI **Conover** 31.06 10 IAmb IAmb 09 27 27.6
comp=Z,8.9nm,1.0s
L56A **Greenwood** 31.09 28 IAmb IAmb 09 27 26.4
comp=Z,10nm,0.8s
H17A **Grand Village** 31.11 340 P P **09 27 24.2 +2.2**
baz=153
E38A **The Farm, Brul** 31.22 7 IAmb IAmb 09 27 33.0
comp=Z,11nm,0.8s
MPK **Martis Peak** 31.36 323 IAmb IAmb 09 27 34.3
comp=Z,9.3nm,1.1s
RLMT **Red Lodge** 31.37 343 IAmb IAmb 09 27 31.7
comp=Z,9.2nm,0.9s
RLMT **Red Lodge** 31.37 343 P P **09 27 25.1 +1.0**
baz=156,SNR=9.2
PCRV **Puerto La Cruz** 31.50 96 LR LR 09 39 59.1
comp=Z,48nm,20.4s,slow=36
HLID **Hailey** 31.81 335 P P **09 27 29.6 +1.6**
baz=146,SNR=11
BINY **Binghamton** 31.87 30 P P **09 27 27.4 -1.0**
baz=220
EYMN **Ely** 32.55 6 IAmb IAmb 09 27 55.2
comp=Z,4.0nm,0.8s
EYMN **Ely** 32.55 6 P P **09 27 34.0 -0.2**
baz=189
SADO **Sadowa** 32.60 23 LR LR 09 44 13.3
comp=Z,101nm,18.1s,baz=244,slow=43
B35A **Bob, Littlefor** 32.78 3 IAmb IAmb 09 27 36.2
comp=Z,7.6nm,0.7s
WVOR **Wild Horse Val** 32.84 329 IAmb IAmb 09 27 39.7
comp=Z,7.1nm,1.1s
J08A **Circle Bar Ran** 33.45 330 IAmb IAmb 09 27 45.1
comp=Z,6.8nm,0.7s
NNA **Nana** 33.59 143 LR LR 09 39 08.4
comp=Z,82nm,18.7s,baz=335,slow=32
PLID **Pearl Lake** 33.71 335 IAmb IAmb 09 27 46.9
comp=Z,8.7nm,0.8s
NCB **Newcomb** 34.06 29 IAmb IAmb 09 27 46.9
comp=Z,11nm,0.8s
EGMT **Eagleton** 34.16 344 P P **09 27 49.1 +0.7**
baz=157
LONY **Lake Ozonia** 34.39 28 P P **09 27 49.0 -1.3**
baz=220,SNR=7.4
YBH **Yreka Blue Hor** 34.50 324 P P **09 27 51.5 +0.1**
comp=Z,0.9nm,0.6s,baz=168,slow=12,SNR=1.9
YBH LR LR 09 43 42.6
comp=Z,151nm,18.1s,baz=173,slow=39
comp=Z,0.9nm,0.6s
ULM **Lac du Bonnet** 34.59 1 IAmb IAmb 09 27 58.4
comp=Z,7.9nm,1.1s
ULM **Lac du Bonnet** 34.59 1 P P **09 27 50.4 -1.6**
comp=Z,3.2nm,0.7s,baz=188,slow=11,SNR=7.9
ULM LR LR 09 42 48.3
comp=Z,160nm,18.2s,baz=250,slow=38
comp=Z,3.2nm,0.7s
F10A **Beach Ranch, E** 34.93 334 IAmb IAmb 09 28 05.2
comp=Z,9.4nm,0.8s
FRNY **Flat Rock** 35.01 29 IAmb IAmb 09 27 55.4
comp=Z,9.0nm,0.9s
LBNH **Lisbon** 35.37 31 P P **09 27 58.6 -0.1**
baz=224
TRQ **Mont Tremblant** 35.65 26 IAmb IAmb 09 28 00.9
comp=Z,18nm,1.1s
VLDQ **Val d'Or** 36.05 22 IAmb IAmb 09 28 12.3
comp=Z,16nm,1.3s
H04A **Detroit Lake** 36.24 328 IAmb IAmb 09 28 12.6
comp=Z,9.8nm,0.9s
HOOD **Mount Hood Mea** 36.44 330 IAmb IAmb 09 28 11.0
comp=Z,14nm,1.1s
NEW **Newport** 36.76 337 P P **09 28 10.8 +0.2**
baz=145
NEW **Newport** 36.76 337 P P **09 28 10.7 0.0**
comp=Z,1.8nm,0.8s,baz=133,slow=9.6,SNR=3.5
NEW LR LR 09 45 15.5
comp=Z,168nm,19.8s,baz=158,slow=40
comp=Z,1.8nm,0.8s
PKME **Peaks-Kenny Pk** 37.42 32 P P **09 28 15.4 -0.9**
baz=226
LMQ **La Malbaie** 38.54 29 IAmb IAmb 09 28 31.3
comp=Z,22nm,1.3s
D62A **Allapoint, All** 38.81 30 IAmb IAmb 09 28 37.7
comp=Z,14nm,1.1s
FFC **Flin Flon** 39.30 355 P P **09 28 31.8 -0.2**
EDM **Edmonton** 39.84 344 P P **09 28 37.0 +0.4**
EDM IAmb IAmb 09 28 38.1
comp=Z,12nm,0.8s
LPAZ **La Paz** 42.27 137 P P **09 29 00.4 +2.8**
FCC **Fort Churchill** 43.16 2 P P **09 29 03.6 0.0**
FCC IAmb IAmb 09 29 04.0
comp=Z,9.1nm,1.1s
RPN **Rapa Nui** 44.23 196 LR LR 09 42 53.3
comp=Z,75nm,21.0s,baz=350,slow=30
MDP **Montagnes des** 44.30 99 LR LR 09 49 45.0
comp=Z,73nm,18.6s,baz=286,slow=39
SCHQ **Schefferville** 45.41 24 P P **09 29 19.8 -2.0**
comp=Z,5.3nm,0.8s,baz=243,slow=10,SNR=6.7
SCHQ LR LR 09 50 22.7
comp=Z,116nm,19.0s,baz=244,slow=39
comp=Z,5.3nm,0.8s
YKA **Yellowknife Ar** 48.58 349 P P **09 29 45.8 -0.6**
comp=Z,2.4nm,0.8s,baz=155,slow=7.1,SNR=40
YKA LR LR 09 53 29.0
comp=Z,133nm,19.1s,baz=314,slow=40

comp=Z,2.4nm,0.8s
KOTAN **Kotaneelee Air** 48.80 342 P P **09 29 49.3 +1.2**
baz=144
DLBC **Dease Lake** 49.50 338 P P **09 29 55.2 +1.6**
baz=136
DLBC **Dease Lake** 49.50 338 P P **09 29 53.9 +0.3**
comp=Z,3.0nm,0.8s,baz=170,slow=9.3,SNR=6.4
DLBC LR LR 09 51 00.7
comp=Z,311nm,18.1s,baz=116,slow=36
comp=Z,3.0nm,0.8s
WTLY **Watson Lake, Y** 50.29 340 IAmb IAmb 09 30 01.6
comp=Z,12nm,1.1s
WTLY **Watson Lake, Y** 50.29 340 P P **09 30 00.6 +1.1**
baz=138
R33M **Jennings River** 50.52 338 P P **09 30 03.0 +1.5**
baz=135
Q32M **Nakina River** 50.70 337 P P **09 30 03.6 +0.7**
baz=133
N32M **Quiet Lake** 52.51 339 P P **09 30 17.7 +1.5**
baz=134
FARO **Faro, Yukon** 53.35 340 P P **09 30 23.7 +1.4**
baz=134
M31M **Drury Creek, Y** 53.69 339 P P **09 30 26.8 +2.0**
baz=133
HYT **Haines Junctio** 53.92 337 P P **09 30 28.6 +1.9**
baz=128
YUK6 **Outpost Mounta** 54.32 336 P P **09 30 31.7 +1.9**
baz=128
M29M **Somme Creek** 55.29 338 P P **09 30 38.2 +1.6**
baz=128
L29M **L29M** 55.59 339 P P **09 30 40.3 +1.7**
baz=129
K29M **Barlow Dome** 55.85 339 P P **09 30 41.5 +0.9**
baz=130
I30M **Mount Dempster** 56.38 341 P P **09 30 45.3 +0.9**
baz=132
MCARA **McCarthy VSAT** 56.42 335 P P **09 30 46.1 +1.6**
baz=123
CPUP **Villa Florida** 56.44 137 P P **09 30 43.7 -1.4**
comp=Z,0.6nm,0.5s,baz=267,slow=9.5,SNR=1.9
comp=Z,0.6nm,0.5s
L27K **Beaver Creek,** 56.90 337 P P **09 30 49.2 +1.2**
baz=125
G31M **Satah River** 56.94 343 P P **09 30 49.0 +0.9**
baz=135
M26K **Nabesna, AK** 56.97 336 P P **09 30 50.5 +2.0**
baz=123
BDFB **Brasilia** 57.05 121 P P **09 30 50.7 +0.9**
comp=Z,4.8nm,0.7s,baz=281,slow=1.2,SNR=5.6
comp=Z,4.8nm,0.7s
F31M **Tsiigehtchic** 57.17 344 P P **09 30 50.2 +0.5**
baz=136
L26K **Log Cabin Wild** 57.45 337 P P **09 30 53.1 +1.2**
baz=123
K27K **Chicken** 57.55 338 P P **09 30 54.5 +2.0**
baz=125
H29M **Whitestone** 57.66 341 P P **09 30 53.6 +0.3**
baz=130
KLU **Klutina** 57.67 334 P P **09 30 54.8 +1.3**
baz=120
EGAK **Eagle** 57.67 339 P P **09 30 53.7 +0.4**
EGAK IAmb IAmb 09 30 54.5
comp=Z,7.0nm,0.9s
EGAK **Eagle** 57.67 339 P P **09 30 54.2 +0.9**
baz=127
INK **Inuvik** 57.74 345 P P **09 30 54.0 +0.3**
INK IAmb IAmb 09 30 54.5
comp=Z,6.0nm,0.8s
INK **Inuvik** 57.74 345 P P **09 30 54.1 +0.3**
baz=137,SNR=9.0
INK **Inuvik** 57.74 345 LR LR 09 58 02.6
comp=Z,191nm,19.0s,baz=186,slow=38
F30M **Barrier River** 57.85 343 P P **09 30 55.4 +0.8**
baz=134
SCRK **Sand Creek** 58.22 338 P P **09 30 57.7 +0.3**
SCRK IAmb IAmb 09 31 00.2
comp=Z,5.4nm,0.9s
SCRK **Sand Creek** 58.22 338 P P **09 30 59.3 +1.9**
baz=123
PAX **Paxson** 58.24 336 P P **09 30 58.6 +1.1**
baz=121
I27K **Kandik River** 58.32 340 P P **09 30 59.6 +1.7**
baz=127
J26L **Joseph Creek** 58.35 338 P P **09 30 57.8 -0.4**
J26L IAmb IAmb 09 31 00.8
comp=Z,5.0nm,0.9s
J26L **Joseph Creek** 58.35 338 P P **09 30 59.5 +1.2**
baz=124
RIDG **Independent Ri** 58.41 337 P P **09 30 58.1 -0.5**
RIDG **Independent Ri** 58.41 337 P P **09 30 59.7 +1.1**
baz=122
SCM **Sheep Creek Mo** 58.42 334 P P **09 31 00.8 +2.0**
baz=119
H27K **Steamboat Moun** 58.67 340 P P **09 31 01.7 +1.3**
baz=127
KNK **Knik Glacier** 58.70 334 P P **09 31 02.6 +1.9**
baz=117
K24K **Donnelly Dome** 58.79 337 P P **09 31 02.8 +1.5**
baz=121
A36M **Sachs Harbour** 58.91 350 IAmb IAmb 09 31 26.1
comp=Z,7.8nm,0.8s
A36M **Sachs Harbour** 58.91 350 P P **09 31 02.1 +0.3**
baz=147,SNR=10
WAT6 **Susitna Watana** 58.95 335 P P **09 31 03.9 +1.4**
baz=119
E29M **Blow River** 58.96 343 P P **09 31 03.1 +0.8**
baz=132
BRSE **Bradley Lake S** 58.99 331 P P **09 31 03.8 +1.2**
baz=114
F28M **Old Crow** 59.02 342 P P **09 31 03.9 +1.1**
baz=129,SNR=11
DHY **Denali Highway** 59.04 336 P P **09 31 04.0 +0.8**
baz=119
PMR **Palmer** 59.07 334 P P **09 31 04.7 +1.6**
baz=117
J25K **Salcha River,** 59.07 338 P P **09 31 04.1 +0.9**
baz=122
KDAK **Kodiak Island** 59.11 329 LR LR 09 54 44.2
comp=Z,11nm,19.0s,baz=135,slow=34
RES **Resolute Bay** 59.12 0 LR LR 09 56 54.7
comp=Z,109nm,18.9s,baz=24,slow=36
WAT1 **Susitna Watana** 59.40 335 P P **09 31 07.1 +1.6**
baz=118
HDA **Harding Lake** 59.55 337 P P **09 31 07.1 +0.7**
baz=120
E28M **Babbage River** 59.56 343 P P **09 31 06.7 +0.2**
baz=130
SUA **Susitna One** 59.71 333 P P **09 31 09.3 +1.5**
SUA IAmb IAmb 09 31 13.5
comp=Z,8.1nm,0.9s
SUA **Susitna One** 59.71 333 P P **09 31 09.0 +1.3**
baz=115
IL31 59.71 338 IAmb IAmb 09 31 09.2
comp=Z,4.6nm,0.8s
ILAR **Eielson Array** 59.71 338 P P **09 31 09.5 +1.9**
ILAR **Eielson Array** 59.71 338 P P **09 31 07.9 +0.3**
comp=Z,2.9nm,0.9s,baz=133,slow=4.7,SNR=34
ILAR LR LR 09 58 50.0
comp=Z,126nm,18.0s,baz=112,slow=38
comp=Z,2.9nm,0.9s
D28M **Stokes Point** 59.82 344 P P **09 31 09.1 +1.0**
baz=131
G26K **Porcupine Rive** 59.83 340 P P **09 31 09.0 +0.7**
baz=125
MCK **McKinley** 59.98 336 P P **09 31 10.7 +1.3**
baz=118
POKR **Poker Flat Res** 60.09 338 P P **09 31 11.7 +1.6**
baz=120
N20K **Mount Spurr** 60.24 333 P P **09 31 12.1 +0.8**
baz=113
SKT **Skwentna** 60.27 334 IAmb IAmb 09 31 19.1
comp=Z,2.7nm,0.8s
SKT **Skwentna** 60.27 334 P P **09 31 12.4 +0.9**
baz=114
D27M **Malcolm River** 60.37 343 P P **09 31 12.6 +0.5**
baz=129
F26K **Sheenjek River** 60.37 341 P P **09 31 12.9 +0.8**
baz=125
TRF **Thorofare Moun** 60.38 335 P P **09 31 13.8 +1.4**
TRF **Thorofare Moun** 60.38 335 P P **09 31 13.4 +1.0**
baz=116
BWN **Browne** 60.39 336 P P **09 31 13.7 +1.4**
G25K **Bearman Lake** 60.48 340 P P **09 31 13.8 +1.0**
baz=122
H24K **Noodor Dome** 60.61 338 P P **09 31 14.6 +0.8**
baz=120
F25K **Christian Rive** 60.78 341 P P **09 31 15.8 +0.8**
baz=123

I23K	**Minto, Yukon-K**	**60.81 337**	IAmb	IAmb	09 31 16.9	
	comp=Z,6.7nm,0.8s					
I23K	**Minto, Yukon-K**	**60.81 337**	P	**P**	**09 31 16.5**	**+1.5**
	baz=118,SNR=7.4					
O19K	**Port Alsworth**	**60.82 331**	P	**P**	**09 31 15.6**	**+0.4**
	baz=111					
M20K	**Styx River**	**60.92 333**	P	**P**	**09 31 17.0**	**+1.0**
	baz=113					
PPLA	**Purkeypile**	**60.92 334**	P	**P**	**09 31 16.6**	**+0.5**
	baz=114					
P18K	**Big Mountain,**	**60.98 330**	P	**P**	**09 31 17.0**	**+0.6**
	baz=110					
PLCA	**Paso Flores**	**60.98 158**	P	**P**	**09 31 18.2**	**+1.6**
	comp=Z,2.7nm,0.9s,baz=319,slow=8.8,SNR=5.3					
	comp=Z,2.7nm,0.9s					
E25K	**Arctic Village**	**61.05 341**	P	**P**	**09 31 17.2**	**+0.5**
	baz=124					
CAST	**Castle Rocks**	**61.10 335**	P	**P**	**09 31 17.6**	**+0.5**
	baz=115					
N19K	**Bonanza Creek**	**61.12 332**	P	**P**	**09 31 17.9**	**+0.5**
	baz=111					
O18K	**Koktuh Hills**	**61.12 330**	P	**P**	**09 31 17.7**	**+0.4**
	baz=110					
MLY	**Manley**	**61.27 337**	P	**P**	**09 31 19.5**	**+1.2**
MLY			IAmb	IAmb	09 31 20.0	
	comp=Z,6.6nm,0.9s					
MLY	**Manley**	**61.27 337**	P	**P**	**09 31 18.9**	**+0.6**
	baz=117					
CHUM	**Lake Minchumin**	**61.39 335**	P	**P**	**09 31 20.1**	**+1.1**
	baz=115					
Q16K	**King Salmon**	**61.44 329**	P	**P**	**09 31 19.6**	**+0.2**
	baz=108					
L20K	**Farewell, AK**	**61.47 334**	P	**P**	**09 31 20.2**	**+0.5**
	baz=112					
F24K	**Squaw Lake**	**61.47 340**	P	**P**	**09 31 20.1**	**+0.5**
	baz=121					
M19K	**Big River Lodg**	**61.48 333**	P	**P**	**09 31 20.1**	**+0.4**
	baz=112					
CHGN	**Chignik**	**61.68 326**	P	**P**	**09 31 22.1**	**+1.1**
	baz=105					
N18K	**Kilae Creek**	**61.72 331**	P	**P**	**09 31 21.9**	**+0.6**
	baz=110					
L19K	**White Mountain**	**61.78 333**	P	**P**	**09 31 22.6**	**+0.8**
	baz=111					
G23K	**Bananza Creek**	**61.80 339**	P	**P**	**09 31 22.8**	**+1.0**
	baz=118					
I21K	**Tanana**	**61.81 337**	P	**P**	**09 31 21.5**	**-0.4**
	baz=116					
K20K	**Telida**	**61.89 334**	P	**P**	**09 31 22.9**	**+0.4**
	baz=113					
H22K	**Ishtalitna Cre**	**61.90 338**	P	**P**	**09 31 22.5**	**0.0**
	baz=117					
E24K	**Your Creek**	**61.96 340**	P	**P**	**09 31 23.6**	**+0.8**
	baz=121					
D25K	**Kavik River**	**61.97 342**	P	**P**	**09 31 23.6**	**+0.7**
	baz=123					
M18K	**Stony River**	**61.97 332**	P	**P**	**09 31 23.5**	**+0.6**
	baz=110					
O17K	**Koliganek Bris**	**62.00 330**	P	**P**	**09 31 23.8**	**+0.7**
	baz=108					
P16K	**Nushagak River**	**62.21 329**	P	**P**	**09 31 26.2**	**+1.6**
	baz=107					
J20K	**Nowinta River**	**62.24 335**	P	**P**	**09 31 25.6**	**+0.8**
	baz=113					
N17K	**Nushagak Hills**	**62.28 331**	P	**P**	**09 31 26.3**	**+1.2**
	baz=108					
E23K	**Chandalar**	**62.31 340**	P	**P**	**09 31 26.3**	**+1.0**
	baz=119					
H21K	**Melozitna Rive**	**62.33 337**	P	**P**	**09 31 26.3**	**+1.0**
	baz=115					
G22K	**Bettles**	**62.42 339**	P	**P**	**09 31 26.9**	**+1.0**
	baz=117					
O16K	**Kokwok River B**	**62.43 330**	P	**P**	**09 31 26.3**	**+0.2**
	baz=107					
TTA	**Tatalina**	**62.55 334**	P	**P**	**09 31 27.2**	**+0.2**
	baz=110					
TOLK	**Toolik Lake Re**	**62.59 341**	P	**P**	**09 31 27.7**	**+0.6**
	baz=120					
L18K	**Granite Mounta**	**62.60 333**	P	**P**	**09 31 28.0**	**+0.8**
	baz=110					
J19K	**Poorman**	**62.77 335**	P	**P**	**09 31 28.5**	**+0.2**
	baz=112					
C24K	**Franklin Bluff**	**62.87 342**	P	**P**	**09 31 29.7**	**+0.8**
	baz=121					
G21K	**Allakaket**	**62.95 338**	P	**P**	**09 31 30.4**	**+0.9**
	baz=115					
N16K	**Nishlik Lake**	**63.01 331**	P	**P**	**09 31 31.2**	**+1.2**
	baz=107					
J18K	**Innoko River**	**63.04 334**	P	**P**	**09 31 31.2**	**+1.0**
	baz=110					
H20K	**Anotleneega Mo**	**63.05 337**	P	**P**	**09 31 31.4**	**+1.3**
	baz=113					
E22K	**Anaktuvuk Pass**	**63.08 340**	P	**P**	**09 31 31.0**	**+0.7**
	baz=117					
D23K	**Nanushuk River**	**63.10 341**	P	**P**	**09 31 32.0**	**+1.6**
	baz=119					
O15K	**Ungalikthiuk R**	**63.16 329**	P	**P**	**09 31 32.3**	**+1.4**
	baz=105					
F21K	**Alatna River**	**63.24 339**	P	**P**	**09 31 32.8**	**+1.3**
	baz=115					
M16K	**Timber Creek**	**63.26 331**	P	**P**	**09 31 32.8**	**+1.2**
	baz=107					
L17K	**Donlin**	**63.29 332**	P	**P**	**09 31 32.4**	**+0.7**
	baz=108					
K17K	**Iditarod**	**63.47 333**	P	**P**	**09 31 33.7**	**+0.8**
	baz=108					
H19K	**Roundabout Mou**	**63.67 336**	P	**P**	**09 31 34.5**	**+0.3**
	baz=111					
L16K	**Owhat River**	**63.69 332**	P	**P**	**09 31 35.6**	**+1.2**
	baz=107					
D22K	**Ayikyak River**	**63.70 340**	P	**P**	**09 31 35.5**	**+1.1**
	baz=117					
F20K	**Avaraart Lake**	**63.97 338**	P	**P**	**09 31 37.2**	**+1.1**
	baz=113					
M15K	**Kasigluk River**	**63.98 330**	P	**P**	**09 31 37.9**	**+1.5**
	baz=105					
G19K	**Purcell Mounta**	**64.14 337**	P	**P**	**09 31 37.9**	**+0.6**
	baz=111					
C21K	**Knifeblade Rid**	**64.50 340**	P	**P**	**09 31 40.7**	**+1.0**
	baz=115					
M14K	**Bethel**	**64.60 330**	P	**P**	**09 31 41.4**	**+1.0**
	baz=104					
L15K	**Ungalak Mounta**	**64.61 331**	P	**P**	**09 31 41.7**	**+1.2**
	baz=105					
E20K	**Nigu River**	**64.61 339**	P	**P**	**09 31 41.6**	**+1.1**
	baz=113					
J16K	**Anvik River**	**64.64 333**	P	**P**	**09 31 42.0**	**+1.3**
	baz=106					
E19K	**Redstone River**	**64.67 338**	P	**P**	**09 31 41.4**	**+0.6**
	baz=112					
I17K	**Unalakleet**	**64.86 334**	P	**P**	**09 31 43.6**	**+1.6**
	baz=106					
D20K	**Etivluk River**	**64.93 340**	P	**P**	**09 31 43.3**	**+0.8**
	baz=113					
G17K	**Kiwalik Mounta**	**65.31 336**	P	**P**	**09 31 46.0**	**+1.0**
	baz=107					
D19K	**Kuna River**	**65.36 339**	P	**P**	**09 31 45.9**	**+0.6**
	baz=111					
H16K	**Elim**	**65.71 334**	P	**P**	**09 31 48.9**	**+1.3**
	baz=105					
J14K	**Nanvaranak Lak**	**65.81 332**	P	**P**	**09 31 49.1**	**+0.9**
	baz=103					
E18K	**Tukpahlearik C**	**65.88 338**	P	**P**	**09 31 49.3**	**+0.7**
	baz=108					
C19K	**Lookout Ridge**	**66.08 340**	P	**P**	**09 31 51.1**	**+1.1**
	baz=110					
E17K	**Hotham Inlet**	**66.23 337**	P	**P**	**09 31 51.9**	**+1.0**
	baz=107,SNR=6.1					
G15K	**Niukluk**	**66.55 335**	P	**P**	**09 31 54.3**	**+1.4**
	baz=104					
D17K	**Noatak River**	**66.87 338**	P	**P**	**09 31 55.5**	**+0.5**
	baz=106					
B18K	**Kokolik River**	**66.91 340**	P	**P**	**09 31 56.4**	**+1.2**
	baz=108					
F15K	**North Star Dit**	**66.97 335**	P	**P**	**09 31 56.4**	**+0.7**
	baz=104					
C17K	**DeLong Mountai**	**67.12 338**	P	**P**	**09 31 57.8**	**+1.2**
	baz=106					
JMIC	**Jan Mayen**	**74.75 20**	LR	LR	10 07 45.7	
	comp=Z,147nm,18.4s,baz=155,slow=38					
EKA	**Eskdalemuir Ar**	**79.23 35**	P	**P**	**09 33 07.8**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=282,slow=5.1,SNR=7.6					
	comp=Z,3.2nm,0.7s					
SPITS	**Spitsbergen Ar**	**79.41 11**	LR	LR	10 11 23.9	
	comp=Z,135nm,18.4s,baz=183,slow=38					
ESDC	**Sonseca Array**	**82.14 51**	P	**P**	**09 33 23.8**	**-0.6**
ESDC	**Sonseca Array**	**82.14 51**	P	**P**	**09 33 24.2**	**-0.2**
	comp=Z,5.4nm,1.0s,baz=296,slow=5.5,SNR=13					
	comp=Z,5.4nm,1.0s					
NB2	**NORSAR Subarra**	**84.82 28**	P	**P**	**09 33 38.5**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=295,slow=5.1					
NOA	**NORSAR Array B**	**84.82 28**	P	**P**	**09 33 37.2**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=296,slow=4.9,SNR=5.7					
	comp=Z,3.2nm,0.9s					
ARCES	**ARCESS Array B**	**85.98 17**	P	**P**	**09 33 41.5**	**-1.8**
	comp=Z,2.4nm,0.8s,baz=340,slow=7.8,SNR=1.8					
	comp=Z,2.4nm,0.8s					
HFS	**Hagfors**	**86.31 28**	LR	LR	10 12 45.2	
	comp=Z,195nm,19.2s,baz=324,slow=36					
PETK	**Petropavlovsk-**	**86.87 324**	P	**P**	**09 33 47.3**	**-0.7**
	comp=Z,3.1nm,1.0s,baz=130,slow=11,SNR=4.4					
	comp=Z,3.1nm,1.0s					
TIXI	**Tiksi**	**87.79 347**	LR	LR	10 18 13.8	
	comp=Z,49nm,18.1s,baz=20,slow=39					
DAVOX	**Davos/Dischmat**	**89.60 41**	LR	LR	10 13 03.3	
	comp=Z,104nm,18.4s,baz=286,slow=35					
FINES	**FINESS Array B**	**90.88 24**	LR	LR	10 15 30.9	
	comp=Z,140nm,18.4s,baz=298,slow=36					
GERES	**GERESS Array B**	**91.12 38**	LR	LR	10 15 42.4	
	comp=Z,80nm,18.0s,baz=316,slow=36					
VRAC	**Vranov**	**92.62 37**	LR	LR	10 18 02.7	
	comp=Z,122nm,18.2s,baz=342,slow=37					
TORD	**Torodi Ar. Bea**	**94.22 75**	LR	LR	10 12 10.1	
	comp=Z,78nm,20.9s,baz=322,slow=33					
STKA	**Stephens Creek**	**125.00 242**	PKP	**PKPdf**	**09 40 04.2**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=12,slow=4.6,SNR=8.5					
WRA	**Warramunga Arr**	**131.53 257**	PKP	**PKPdf**	**09 40 17.7**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=84,slow=2.2,SNR=4.9					
ASAR	**Alice Springs**	**132.04 252**	PKP	**PKPdf**	**09 40 18.2**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=80,slow=2.3,SNR=4.4					

*IDC **07** 09:31:09.7±3.9,30°.49N×141°.13E,h0km,mb3.3/3, mbtmp3.3/4,ML2.7/1,Error ellipse: s-maj=160.6km s-min=24.2km az=74.0*
*JMA **07** 09:31:14.8±0.4,31°.N±2°×14°.3E±°,h100km,MV2.9/4,FAR E OFF IZU ISLANDS*
ISC 07 09:31:10.3±1.9,31.0N±0.1×142.5E±0.4,h35km,n7, σ1s78/11,mb3.4/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**3.88**	**341**	*eP*	**Pn**	**09 32 08.4**	**+1.3**
BSO1				*eS*	**Sn**	**09 32 49.4**	**-1.8**
JOD2	**Odawara 2**	**5.15**	**327**	*eP*	**Pn**	**09 32 26.4**	**+1.5**
JOD2				*eS*	**Sn**	**09 33 22.0**	**-1.1**
JRY	**Ryogami san**	**5.86**	**330**	P	**Pn**	**09 32 36.1**	**+1.4**
JRY				*eS*	**Sn**	**09 33 37.4**	**-3.3**
MJAR	**Matsushiro Arr**	**6.60**	**328**	Pn	**Pn**	**09 32 46.1**	**+1.2**
	0.2nm,0.3s,baz=160,slow=11,SNR=7.3						
MJAR				Sn	**Sn**	**09 34 00.1**	**+1.1**
	baz=172,slow=32,SNR=1.3						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**48.30**	**307**	P	**P**	**09 39 48.3**	**+0.2**
	0.2nm,0.5s,baz=84,slow=9.5,SNR=1.8						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**51.23**	**190**	P	**P**	**09 40 09.4**	**-1.2**
	0.6nm,0.8s,baz=4.8,slow=7.5,SNR=5.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**54.95**	**190**	P	**P**	**09 40 37.9**	**-0.1**
	0.1nm,0.4s,baz=10,slow=5.7,SNR=1.5						
	0.1nm,0.4s						

*JMA **07** 09:31:50.3±0.3,23°.9N±0°.3×12°.2E±°,h2km±3km,TAIWAN REGION*
*TAP **07** 09:31:50.8,23°.97N×121°.60E,h7km,ML3.4,C*
ISC 07 09:31:51.1±0.8,23°.96N±0°.01×121°.61E±0°.02,h7km±5km, n99,σ0s57/145,4C-39D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.02**	**351**	⇑*iP*	**Pg**	**09 31 52.4**	**0.0**
	baz=86						
HWA				S	**Sg**	**09 31 54.0**	**+0.7**
	baz=86						
ETM	**Tongmen**	**0.11**	**274**	*i* P	**Pg**	**09 31 53.3**	**-0.2**
	baz=264						
TWD	**Chiawan**	**0.12**	**355**	⇓*iP*	**Pg**	**09 31 53.6**	**-0.2**
	baz=5.0						
TWD				*i* S	**Sg**	**09 31 55.6**	**0.0**
	baz=5.0						
SHUL	**Shoufeng**	**0.17**	**194**	⇑*iP*	**Pg**	**09 31 55.4**	**+0.7**
	baz=190						
SHUL				S	**Sg**	**09 31 58.9**	**+1.8**
	baz=190						
LXIB	**Xiulin Townshi**	**0.19**	**289**	⇓*iP*	**Pg**	**09 31 54.9**	**-0.1**
	baz=279						
LXIB				S	**Sg**	**09 31 57.1**	**-0.5**
	baz=279						
ETL	**Fush Village**	**0.20**	**4**	⇓*iP*	**Pg**	**09 31 54.9**	**-0.3**
	baz=8.0						
ETL				*i* S	**Sg**	**09 31 57.8**	**-0.1**
	baz=8.0						
NACB	**Ninganchiao**	**0.21**	**357**	P	**Pg**	**09 31 55.1**	**-0.4**
NACB	**Ninganchiao**	**0.21**	**357**	⇓*iP*	**Pg**	**09 31 55.1**	**-0.4**
NACB				S	**Sg**	**09 31 58.1**	**-0.2**
ESL	**Shilin**	**0.22**	**228**	⇓*iP*	**Pg**	**09 31 55.1**	**-0.3**
	baz=222						
ESL				S	**Sg**	**09 31 58.4**	**0.0**
	baz=222						
TEGC	**Jichi Village**	**0.26**	**194**	P	**Pb**	**09 31 57.3**	**-0.8**
	baz=196						
TEGC				S	**Sb**	**09 32 02.1**	**-0.6**
	baz=196						
ETLH	**Xiulin Townshi**	**0.27**	**335**	⇓*iP*	**Pg**	**09 31 56.4**	**-0.2**
	baz=336						
ETLH				S	**Sg**	**09 31 59.9**	**-0.3**
	baz=336						
WARBT	**Fenglin Townsh**	**0.31**	**220**	⇓*iP*	**Pg**	**09 31 57.0**	**-0.4**
	baz=227						
WARBT				S	**Sg**	**09 32 00.9**	**-0.6**
	baz=227						
EGFH	**Guangfu**	**0.33**	**210**	*eP*	**Pg**	**09 31 57.6**	**-0.1**
	baz=215						
WHF	**Hehuan Shan**	**0.36**	**301**	⇓*iP*	**Pg**	**09 31 58.2**	**-0.2**
	baz=300						
WHF				S	**Sg**	**09 32 03.6**	**+0.3**
	baz=300						
EAHA	**Aohua**	**0.39**	**18**	*eP*	**Pg**	**09 31 58.2**	**-0.5**
	baz=29						
OWD	**Renai**	**0.40**	**269**	P	**Pg**	**09 31 58.9**	**0.0**
	baz=268						
OWD				*eS*	**Sg**	**09 32 04.6**	**+0.5**
	baz=268						
CHGB	**Renai**	**0.41**	**284**	⇓*iP*	**Pg**	**09 31 59.4**	**+0.2**
	baz=283						
CHGB				S	**Sg**	**09 32 04.3**	**-0.3**
	baz=283						
FUSS	**Fushou**	**0.44**	**311**	⇓*iP*	**Pg**	**09 31 59.9**	**+0.2**
	baz=310						
FUSS				S	**Sg**	**09 32 05.8**	**+0.2**
	baz=310						
WUSB	**Renai**	**0.45**	**274**	⇓*iP*	**Pg**	**09 32 00.2**	**+0.3**
	baz=272						
VWDT	**VWDT**	**0.47**	**245**	⇓*iP*	**Pg**	**09 32 00.5**	**+0.2**
	baz=244						
VWDT				S	**Sg**	**09 32 06.3**	**-0.2**
	baz=244						
ENA	**Nanau**	**0.48**	**15**	⇓P	**Pg**	**09 32 00.1**	**-0.4**
	baz=18						
TWT	**Tachien**	**0.49**	**307**	⇓*iP*	**Pg**	**09 32 01.1**	**+0.4**
	baz=304						
HGSD	**Ruisui**	**0.49**	**200**	⇑*iP*	**Pb**	**09 32 01.4**	**-0.7**
	baz=207						
TDCB	**Techi**	**0.51**	**306**	⇓*iP*	**Pg**	**09 32 01.2**	**+0.2**
	baz=305						
TDCB				*eS*	**Sg**	**09 32 07.3**	**-0.2**
	baz=305						
EWUT	**Wuta**	**0.51**	**18**	⇓*iP*	**Pg**	**09 32 00.6**	**-0.4**
	baz=21						
NNSB	**Datong**	**0.51**	**336**	⇓*iP*	**Pg**	**09 32 01.0**	**0.0**
	baz=337						
NNSB				S	**Sg**	**09 32 07.7**	**-0.1**
	baz=337						
EHY	**Hungye**	**0.52**	**210**	*eP*	**Pg**	**09 32 01.0**	**-0.2**
	baz=216						
NNS	**Nan Shan**	**0.53**	**336**	⇓*iP*	**Pg**	**09 32 01.3**	**-0.1**
	baz=337						
NNS				S	**Sg**	**09 32 08.2**	**0.0**
	baz=337						
LATG	**Datong**	**0.58**	**353**	⇓*iP*	**Pg**	**09 32 02.1**	**-0.3**
	baz=343						
SSLB	**Suanglung**	**0.62**	**254**	P	**Pg**	**09 32 03.2**	**0.0**
SSLB	**Suanglung**	**0.62**	**254**	⇓*iP*	**Pg**	**09 32 03.2**	**0.0**
	baz=253						
SSLB				*eS*	**Sg**	**09 32 10.7**	**-0.6**
	baz=253						
YULB	**Yu-li**	**0.63**	**207**	P	**Pg**	**09 32 03.1**	**-0.2**
YULB	**Yu-li**	**0.63**	**207**	*eP*	**Pg**	**09 32 02.8**	**-0.5**
	baz=212						
WCS	**Beigang Elemen**	**0.65**	**279**	⇓*iP*	**Pg**	**09 32 04.0**	**+0.4**
	baz=277						
NDT	**Datong Townshi**	**0.65**	**352**	⇓P	**Pg**	**09 32 03.5**	**-0.1**
	baz=343						
NDT				S	**Sg**	**09 32 12.0**	**-0.1**
	baz=343						
ESAO	**Su ao**	**0.65**	**19**	*eP*	**Pg**	**09 32 04.1**	**+0.4**
	baz=21						
SMLT	**Sun Moon Lake**	**0.65**	**264**	⇓*iP*	**Pg**	**09 32 04.0**	**+0.3**
	baz=263						
SMLT				S	**Sg**	**09 32 12.4**	**+0.1**
	baz=263						
EYUL	**Yuli**	**0.66**	**204**	*eP*	**Pb**	**09 32 04.8**	**-0.2**
	baz=211						
TWF1	**Yuli**	**0.67**	**205**	*eP*	**Pg**	**09 32 03.5**	**-0.5**
	baz=212						
ENTT	**Nioudou**	**0.68**	**357**	⇓*iP*	**Pg**	**09 32 04.2**	**-0.1**
	baz=358						
ENTT				*eS*	**Sg**	**09 32 13.4**	**+0.3**
	baz=358						
NDS	**Dongshan**	**0.68**	**8**	⇑*iP*	**Pg**	**09 32 04.1**	**-0.1**
	baz=10.0						
TWC	**Suao**	**0.68**	**19**	⇓P	**Pg**	**09 32 04.5**	**+0.1**
	baz=22						
WHP	**Taichung City**	**0.68**	**298**	⇓*iP*	**Pb**	**09 32 04.9**	**-0.6**
	baz=297						
TYC	**Yuchr**	**0.69**	**266**	⇓*iP*	**Pg**	**09 32 04.5**	**+0.1**
	baz=265						
TYC				S	**Sg**	**09 32 13.5**	**+0.1**
	baz=265						
EOS2	**EOS2**	**0.73**	**51**	*eP*	**Pn**	**09 32 07.3**	**-0.5**
	baz=66						
WHYT	**Xinyi Township**	**0.74**	**249**	*eP*	**Pg**	**09 32 05.7**	**+0.3**
	baz=247						
YHNB	**Yeheng**	**0.74**	**343**	P	**Pg**	**09 32 05.7**	**+0.3**
YHNB	**Yeheng**	**0.74**	**343**	⇓*iP*	**Pg**	**09 32 05.5**	**+0.1**
	baz=344						
YHNB				S	**Sg**	**09 32 15.1**	**0.0**
	baz=344						
NSK	**Sanguang**	**0.75**	**342**	⇓*iP*	**Pg**	**09 32 05.6**	**0.0**
	baz=343						
NSK				S	**Sg**	**09 32 15.1**	**-0.3**
	baz=343						
TWE	**Neicheng**	**0.76**	**4**	⇓P	**Pg**	**09 32 05.7**	**-0.1**
	baz=6.0						
TWE				*eS*	**Sg**	**09 32 16.1**	**+0.4**
	baz=6.0						
CHKH	**Chenggong**	**0.79**	**194**	⇓P	**Pb**	**09 32 06.7**	**-0.5**
	baz=183						
CHKH				*eS*	**Sb**	**09 32 19.1**	**+1.1**
	baz=183						
FUSB	**Fushanzhiwuyua**	**0.80**	**359**	⇓*iP*	**Pg**	**09 32 06.4**	**-0.1**
	baz=359						
FUSB				S	**Sg**	**09 32 17.2**	**+0.2**
	baz=359						
NFF	**Wufeng Townshi**	**0.81**	**326**	⇓P	**Pb**	**09 32 07.0**	**-0.6**
	baz=326						
NFF				*eS*	**Sg**	**09 32 17.6**	**+0.5**
	baz=326						
FULB	**Fuli**	**0.81**	**201**	⇓P	**Pb**	**09 32 07.3**	**-0.3**
	baz=216						
WJS	**Zhushan**	**0.82**	**261**	⇓P	**Pb**	**09 32 07.6**	**-0.1**
	baz=251						
NWLT	**Wulai**	**0.82**	**353**	⇓P	**Pg**	**09 32 06.9**	**-0.1**
	baz=342						
TWQ1	**Liyutan**	**0.86**	**297**	*eP*	**Pn**	**09 32 09.2**	**-0.5**
	baz=296						
ALS	**Alishan**	**0.86**	**239**	⇓P	**Pg**	**09 32 07.9**	**+0.1**
	baz=239						
ALS				*eS*	**Sb**	**09 32 20.8**	**+0.3**
	baz=239						
NSTT	**Nanjuang**	**0.87**	**321**	⇓*iP*	**Pb**	**09 32 08.4**	**-0.2**
	baz=321						
NSTT				*eS*	**Sb**	**09 32 19.7**	**-0.7**
	baz=321						
LIOB	**Emei**	**0.87**	**322**	*i* P	**Pb**	**09 32 08.9**	**+0.2**
	baz=322						
LIOB				*eS*	**Sb**	**09 32 20.7**	**+0.1**
	baz=322						
CHKT	**Chengkung**	**0.88**	**195**	P	**Pb**	**09 32 08.4**	**-0.5**
	baz=184						
CHKT				*eS*	**Sb**	**09 32 21.3**	**+0.4**
	baz=184						
EHD	**Haiduan**	**0.89**	**205**	*eP*	**Pg**	**09 32 08.3**	**+0.1**
	baz=206						
NSY	**Sanyi**	**0.90**	**301**	*eP*	**Pb**	**09 32 09.4**	**+0.3**
	baz=300						
CHN5	**Tsauling**	**0.93**	**247**	⇓P	**Pb**	**09 32 09.7**	**+0.1**
	baz=236						
CHN5				*eS*	**Sn**	**09 32 24.1**	**-0.2**
	baz=236						
ELDTW	**Lidau**	**0.94**	**215**	*eP*	**Pg**	**09 32 07.9**	**-1.3**
	baz=214						
NMLH	**Miaoli**	**0.94**	**308**	*eP*	**Pn**	**09 32 10.6**	**-0.3**
	baz=307						
WDLH	**Douliu**	**1.02**	**255**	*eP*	**Pn**	**09 32 11.4**	**-0.4**
	baz=255						
TWA	**Mucha**	**1.02**	**359**	*eP*	**Pg**	**09 32 10.7**	**0.0**
	baz=351						
TATO	**Taipei**	**1.02**	**354**	P	**Pb**	**09 32 11.1**	**0.0**
EDH	**Donghe**	**1.02**	**196**	*eP*	**Pg**	**09 32 08.9**	**-1.9**
	baz=187						
EDH				*eS*	**Sb**	**09 32 24.8**	**0.0**
	baz=187						
TIPB	**Shuangxi**	**1.03**	**11**	*eP*	**Pg**	**09 32 10.7**	**-0.3**
	baz=12						
WCKO	**Fanlu**	**1.06**	**241**	*eP*	**Pn**	**09 32 12.2**	**-0.2**
	baz=235						
WCKO				*eS*	**Sn**	**09 32 28.3**	**+0.9**
	baz=235						
NCUH	**Zhongli**	**1.08**	**339**	*eS*	**Sn**	**09 32 29.5**	**+1.5**
	baz=351						
STYH	**Taoyuan**	**1.09**	**224**	*eP*	**Pg**	**09 32 11.8**	**-0.4**
	baz=218						
TWB1	**Santiao Chiao**	**1.10**	**18**	*eP*	**Pg**	**09 32 12.1**	**-0.2**
	baz=12						
CHN4	**Tsaushan**	**1.11**	**237**	*eP*	**Pn**	**09 32 13.2**	**0.0**
	baz=238						
CHN4				*eS*	**Sn**	**09 32 29.6**	**+0.8**
	baz=238						
TPUB	**Ta-pu**	**1.11**	**234**	P	**Pn**	**09 32 12.9**	**-0.3**
TPUB	**Ta-pu**	**1.11**	**234**	*eP*	**Pn**	**09 32 13.0**	**-0.2**
	baz=235						
WFSB	**Wu-fen Shan**	**1.12**	**8**	*eP*	**Pn**	**09 32 13.0**	**-0.2**
	baz=8.0						
WRL	**Guolierlin Hig**	**1.13**	**267**	*eP*	**Pn**	**09 32 13.2**	**-0.2**
	baz=268						
WRL				*eS*	**Sn**	**09 32 29.2**	**0.0**
	baz=268						
WTK	**Tuku**	**1.15**	**257**	*eP*	**Pb**	**09 32 13.2**	**-0.1**
	baz=258						
WTK				*eS*	**Sn**	**09 32 30.3**	**+0.6**
	baz=258						
WTP	**Ta-pu**	**1.16**	**232**	*eP*	**Pb**	**09 32 13.4**	**-0.1**
	baz=234						
WTP				*eS*	**Sn**	**09 32 29.6**	**-0.3**
	baz=234						
SXI1	**Grass Mountain**	**1.16**	**12**	*eP*	**Pg**	**09 32 13.1**	**-0.3**
	baz=359						
YM01	**YM01**	**1.18**	**358**	*eP*	**Pn**	**09 32 14.1**	**-0.1**
	baz=10.0						
YM08	**YM08**	**1.22**	**359**	*eP*	**Pn**	**09 32 14.6**	**-0.2**
	baz=10.0						
TWGBT	**Beinan**	**1.23**	**203**	P	**Pg**	**09

JYNG				S		Sb	09 32 32.6	-0.7
ICHU	**Yijhu**	**1.36**	**244**	*e*P		**Pg**	09 32 17.5	+0.4
	baz=247							
ICHU				*e*S		**Sg**	09 32 36.5	+1.7
	baz=247							
YOJ	**Yonaguni jima**	**1.38**	**68**	P		**Pg**	09 32 20.0	+2.5
SCST	**Cishan**	**1.48**	**224**	*e*P		**Pg**	09 32 19.6	+0.1
	baz=214							
TSMG	**Majia**	**1.53**	**216**	*e*P		**Pn**	09 32 18.8	-0.2
	baz=208							
MASBT	**Mashibuluo**	**1.61**	**214**	*e*P		**Pn**	09 32 20.1	0.0
	baz=206							
PHUB	**P'eng-hu**	**1.92**	**257**	*e*P		**Pn**	09 32 24.8	+0.5
	baz=258							
PHUB				*e*S		**Sb**	09 32 49.9	-0.8
	baz=258							

IDC 07 09:32:53.2±3.5, 53°.95N×91°.01E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=29.4km s-min=23.5km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.66**	**272**	I	I	09 56 00.0	
	baz=91,slow=344,SNR=5.9						
ZALV	**Zalesovo Beam**	**3.66**	**272**	Pn	Pn	09 33 50.3	-0.6
	0.6nm,0.3s,baz=102,slow=21,SNR=3.0						
ZALV				Pg	Pb	09 33 58.2	-0.4
	0.7nm,0.3s,baz=90,slow=16,SNR=2.6						
ZALV				Lg	Lg	09 34 47.9	
	1.2nm,0.3s,baz=90,slow=28,SNR=6.3 1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**8.35**	**252**	Pn	Pn	09 34 56.4	+1.1
	0.2nm,0.3s,baz=68,slow=15,SNR=2.1						
KURBB				Sn	Sn	09 36 28.1	-2.1
	0.1nm,0.3s,baz=66,slow=25,SNR=1.3						
KURBB				Lg	Lg	09 37 16.2	
	0.1nm,0.3s,baz=69,slow=29,SNR=4.5 0.9nm,0.2s						
MKAR	**Makanchi Array**	**9.07**	**221**	Pn	Pn	09 35 05.1	-0.2
	0.1nm,0.3s,baz=34,slow=15,SNR=9.4						
MKAR				Sn	Sn	09 36 48.9	+0.8
	0.1nm,0.3s,baz=37,slow=23,SNR=7.1						
MKAR				Lg	Lg	09 37 35.2	
	baz=36,slow=22 0.2nm,0.4s						
SONM	**Songino Array**	**11.47**	**116**	Lg	Lg	09 38 49.7	
	baz=310,slow=32						

*JMA **07** 09:35:10.3±0.2, 24°.0N±0°.2×121°.6E±0°.8, h2km±2km, MV3.1/13, TAIWAN REGION*
*TAP **07** 09:35:10.4, 23°.99N×121°.60E, h6km, ML3.4, B*
ISC 07 09:35:10.6±0.8, 23°.98N±0°.01×121°.62E±0°.02, h7km±5km, n107, σ0§54/154, 7C-40D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.01**	**266**	⇑*i*P	**Pg**	**09 35 11.9**	**-0.1**
	baz=140						
HWA				*i* S	**Sg**	**09 35 13.3**	**+0.5**
	baz=140						
TWD	**Chiawan**	**0.10**	**347**	⇓*i*P	**Pg**	**09 35 12.9**	**-0.1**
	baz=5.0						
TWD				*i* S	**Sg**	**09 35 14.6**	**0.0**
	baz=5.0						
ETM	**Tongmen**	**0.12**	**264**	⇓*i*P	**Pg**	**09 35 13.0**	**-0.2**
	baz=255						
ETM				S	**Sg**	**09 35 14.7**	**-0.4**
	baz=255						
ETL	**Fush Village**	**0.18**	**0**	⇓*i*P	**Pg**	**09 35 14.3**	**-0.1**
	baz=9.0						
ETL				S	**Sg**	**09 35 16.8**	**0.0**
	baz=9.0						
LXIB	**Xiulin Townshi**	**0.20**	**283**	⇓*i*P	**Pg**	**09 35 14.5**	**-0.1**
	baz=273						
LXIB				S	**Sg**	**09 35 17.1**	**-0.2**
	baz=273						
NACB	**Ninganchiao**	**0.20**	**353**	P	**Pg**	**09 35 14.4**	**-0.2**
NACB	**Ninganchiao**	**0.20**	**353**	⇓*i*P	**Pg**	**09 35 14.5**	**-0.1**
	baz=360						
NACB				S	**Sg**	**09 35 16.8**	**-0.5**
	baz=360						
SHUL	**Shoufeng**	**0.20**	**196**	*e*P	**Pg**	**09 35 15.3**	**+0.7**
	baz=189						
SHUL				S	**Sg**	**09 35 19.7**	**+2.4**
	baz=189						
ESL	**Shilin**	**0.24**	**227**	⇓*i*P	**Pg**	**09 35 15.0**	**-0.4**
	baz=217						
ETLH	**Xiulin Townshi**	**0.26**	**331**	⇓*i*P	**Pg**	**09 35 15.8**	**0.0**
	baz=334						
ETLH				S	**Sg**	**09 35 19.1**	**-0.2**
	baz=334						
TEGC	**Jichi Village**	**0.28**	**196**	P	**Pb**	**09 35 17.3**	**-0.6**
	baz=194						
TEGC				S	**Sb**	**09 35 23.0**	**+0.1**
	baz=194						
WARBT	**Fenglin Townsh**	**0.34**	**220**	⇓*i*P	**Pg**	**09 35 16.8**	**-0.5**
	baz=214						
EGFH	**Guangfu**	**0.35**	**210**	*e*P	**Pg**	**09 35 17.5**	**-0.1**
	baz=218						
EGFH				*e*S	**Sb**	**09 35 24.1**	**-0.9**
	baz=218						
EAHA	**Aohua**	**0.37**	**17**	P	**Pg**	**09 35 17.6**	**-0.3**
	baz=33						
EAHA				S	**Sg**	**09 35 22.4**	**-0.2**
	baz=33						
WHF	**Hehuan Shan**	**0.37**	**297**	⇓*i*P	**Pg**	**09 35 17.7**	**-0.2**
	baz=297						
WHF				S	**Sg**	**09 35 22.7**	**-0.1**
	baz=297						
OWD	**Renai**	**0.41**	**267**	⇓*i*P	**Pg**	**09 35 18.6**	**0.0**
	baz=265						
OWD				*e*S	**Sg**	**09 35 23.9**	**-0.1**
	baz=265						
CHGB	**Renai**	**0.42**	**281**	⇓*i*P	**Pg**	**09 35 19.0**	**+0.1**
	baz=279						
FUSS	**Fushou**	**0.44**	**308**	⇓*i*P	**Pg**	**09 35 19.5**	**+0.3**
	baz=308						
FUSS				S	**Sg**	**09 35 25.5**	**+0.5**
	baz=308						
ENA	**Nanau**	**0.46**	**14**	⇓*i*P	**Pg**	**09 35 19.5**	**-0.1**
	baz=19						
ENA				S	**Sg**	**09 35 25.8**	**+0.1**
	baz=19						
WUSB	**Renai**	**0.46**	**272**	⇓*i*P	**Pg**	**09 35 19.8**	**+0.2**
	baz=270						
WUSB				S	**Sg**	**09 35 25.7**	**+0.1**
	baz=270						
EWUT	**Wuta**	**0.49**	**17**	⇓P	**Pg**	**09 35 20.0**	**-0.1**
	baz=23						
TWT	**Tachien**	**0.49**	**304**	⇓*i*P	**Pg**	**09 35 20.7**	**+0.5**
	baz=302						
VWDT	**VWDT**	**0.49**	**243**	⇓*i*P	**Pg**	**09 35 20.3**	**+0.1**
	baz=232						
VWDT				*e*S	**Sg**	**09 35 26.7**	**+0.1**
	baz=232						
NNSB	**Datong**	**0.50**	**334**	⇓*i*P	**Pg**	**09 35 20.4**	**+0.1**
	baz=336						
NNSB				S	**Sg**	**09 35 26.7**	**-0.2**
	baz=336						
TDCB	**Techi**	**0.50**	**303**	⇓*i*P	**Pg**	**09 35 20.7**	**+0.3**
	baz=303						
TDCB				*e*S	**Sg**	**09 35 27.4**	**+0.3**
	baz=303						
NNS	**Nan Shan**	**0.51**	**334**	⇓*i*P	**Pg**	**09 35 20.7**	**+0.1**
	baz=337						
NNS				S	**Sg**	**09 35 27.4**	**0.0**
	baz=337						
HGSD	**Ruisui**	**0.52**	**201**	*e*P	**Pb**	**09 35 21.5**	**-0.5**
	baz=205						
EHY	**Hungye**	**0.54**	**210**	*e*P	**Pg**	**09 35 20.8**	**-0.3**
	baz=213						
LATG	**Datong**	**0.56**	**351**	⇓*i*P	**Pg**	**09 35 21.5**	**-0.1**
	baz=344						
ESAO	**Su ao**	**0.63**	**19**	*e*P	**Pg**	**09 35 22.6**	**-0.2**
	baz=29						
ESAO				*e*S	**Sg**	**09 35 30.5**	**-0.5**
	baz=29						
NDT	**Datong Townshi**	**0.63**	**351**	⇓*i*P	**Pg**	**09 35 23.0**	**+0.2**
	baz=343						
NDT				*e*S	**Sg**	**09 35 31.0**	**-0.1**
	baz=343						
SSLB	**Suanglung**	**0.64**	**253**	P	**Pg**	**09 35 23.0**	**0.0**
SSLB	**Suanglung**	**0.64**	**253**	⇓P	**Pg**	**09 35 22.9**	**0.0**
	baz=250						
EOS4	**EOS4**	**0.65**	**77**	*e*P	**Pn**	**09 35 25.3**	**-0.6**
	baz=91						
WCS	**Beigang Elemen**	**0.65**	**277**	⇓P	**Pg**	**09 35 23.6**	**+0.4**
	baz=275						
YULB	**Yu-li**	**0.65**	**207**	P	**Pb**	**09 35 24.6**	**+0.2**
YULB	**Yu-li**	**0.65**	**207**	⇑*i*P	**Pg**	**09 35 22.9**	**-0.3**
	baz=215						
YULB				*e*S	**Sg**	**09 35 31.3**	**-0.5**
	baz=215						
NDS	**Dongshan**	**0.66**	**8**	⇓*i*P	**Pg**	**09 35 23.4**	**+0.1**
	baz=10.0						
NDS				*e*S	**Sg**	**09 35 32.4**	**+0.5**
	baz=10.0						
ENTT	**Nioudou**	**0.66**	**356**	⇓*i*P	**Pg**	**09 35 23.6**	**+0.2**
	baz=359						
TWC	**Suao**	**0.66**	**18**	⇓*i*P	**Pg**	**09 35 23.3**	**-0.1**
	baz=9.0						
TWC				S	**Sg**	**09 35 32.3**	**+0.2**
	baz=9.0						
SMLT	**Sun Moon Lake**	**0.67**	**262**	⇓*i*P	**Pg**	**09 35 23.8**	**+0.2**
	baz=261						
SMLT				S	**Sg**	**09 35 32.2**	**0.0**
	baz=261						
EYUL	**Yuli**	**0.69**	**204**	*e*P	**Pb**	**09 35 24.7**	**-0.2**
	baz=209						
WHP	**Taichung City**	**0.69**	**296**	⇓P	**Pb**	**09 35 24.4**	**-0.6**
	baz=286						
WHP				*e*S	**Sb**	**09 35 34.1**	**-0.6**
	baz=286						
TWF1	**Yuli**	**0.69**	**206**	*e*P	**Pg**	**09 35 23.5**	**-0.4**
	baz=210						
TYC	**Yuchr**	**0.70**	**264**	⇑*i*P	**Pg**	**09 35 24.4**	**+0.2**
	baz=263						
TYC				*e*S	**Sg**	**09 35 32.7**	**-0.6**
	baz=263						
EOS3	**EOS3**	**0.71**	**64**	*e*P	**Pn**	**09 35 26.4**	**-0.5**
	baz=64						
EOS2	**EOS2**	**0.71**	**52**	*e*P	**Pn**	**09 35 27.6**	**+0.7**
	baz=39						
YHNB	**Yeheng**	**0.72**	**342**	P	**Pg**	**09 35 25.0**	**+0.3**
YHNB	**Yeheng**	**0.72**	**342**	⇓*i*P	**Pg**	**09 35 24.9**	**+0.3**
	baz=352						
NSK	**Sanguang**	**0.73**	**341**	⇓*i*P	**Pg**	**09 35 25.0**	**+0.2**
	baz=351						
TWE	**Neicheng**	**0.74**	**3**	⇓P	**Pg**	**09 35 25.0**	**+0.1**
	baz=7.0						
TWE				S	**Sg**	**09 35 35.0**	**+0.4**
	baz=7.0						
FUSB	**Fushanzhiwuyua**	**0.78**	**358**	⇓*i*P	**Pg**	**09 35 25.9**	**+0.2**
FUSB				*e*S	**Sg**	**09 35 36.3**	**+0.5**
NFF	**Wufeng Townshi**	**0.80**	**325**	⇓*i*P	**Pb**	**09 35 26.5**	**-0.3**
	baz=326						
NWLT	**Wulai**	**0.80**	**352**	⇓*e*P	**Pg**	**09 35 26.3**	**+0.2**
	baz=354						
NWLT				*e*S	**Sg**	**09 35 36.5**	**-0.1**
	baz=354						
CHKH	**Chenggong**	**0.81**	**195**	*e*P	**Pg**	**09 35 26.5**	**+0.3**
	baz=182						
CHKH				S	**Sn**	**09 35 40.3**	**-0.4**
	baz=182						
FULB	**Fuli**	**0.83**	**201**	*e*P	**Pb**	**09 35 27.5**	**+0.1**
	baz=214						
WJS	**Zhushan**	**0.83**	**259**	*e*P	**Pb**	**09 35 28.0**	**+0.6**
	baz=258						
WJS				S	**Sb**	**09 35 39.1**	**+0.3**
	baz=258						
TWQ1	**Liyutan**	**0.86**	**296**	*e*P	**Pb**	**09 35 28.1**	**+0.3**
	baz=294						
NSTT	**Nanjuang**	**0.86**	**319**	⇓*i*P	**Pb**	**09 35 27.9**	**0.0**
	baz=320						
NSTT				*e*S	**Sb**	**09 35 39.5**	**-0.2**
	baz=320						
WNT	**Mingjian**	**0.86**	**264**	*e*P	**Pn**	**09 35 28.6**	**-0.6**
	baz=262						
WNT				*e*S	**Sn**	**09 35 40.9**	**-1.1**
	baz=262						
LIOB	**Emei**	**0.86**	**320**	⇓*i*P	**Pb**	**09 35 28.2**	**+0.2**
	baz=321						
ALS	**Alishan**	**0.88**	**238**	⇑*i*P	**Pg**	**09 35 27.9**	**+0.3**
	baz=235						
NSY	**Sanyi**	**0.90**	**299**	*e*P	**Pb**	**09 35 29.1**	**+0.5**
	baz=298						
CHKT	**Chengkung**	**0.91**	**195**	*e*S	**Sn**	**09 35 42.5**	**-0.6**
	baz=183						
NMLH	**Miaoli**	**0.94**	**306**	*e*P	**Pn**	**09 35 30.2**	**-0.1**
	baz=306						
CHN5	**Tsauling**	**0.94**	**246**	⇓P	**Pb**	**09 35 29.5**	**+0.1**
	baz=235						
CHN5				*e*S	**Sn**	**09 35 43.3**	**-0.8**
	baz=235						
ELDTW	**Lidau**	**0.96**	**215**	*e*P	**Pg**	**09 35 28.0**	**-1.1**
	baz=212						
WCHH	**Zhanghua**	**0.98**	**276**	*e*P	**Pn**	**09 35 30.7**	**-0.1**
	baz=274						
SBCB	**Hsinchu**	**1.00**	**325**	*e*P	**Pn**	**09 35 30.8**	**-0.2**
	baz=325						
TWA	**Mucha**	**1.00**	**358**	⇑*e*P	**Pb**	**09 35 30.3**	**0.0**
	baz=350						
TWA				*e*S	**Sg**	**09 35 43.1**	**+0.3**
	baz=350						
TATO	**Taipei**	**1.00**	**353**	P	**Pb**	**09 35 30.3**	**0.0**
TIPB	**Shuangxi**	**1.01**	**11**	⇑*i*P	**Pg**	**09 35 29.9**	**-0.1**
	baz=14						
HSN	**Hsinchu**	**1.01**	**324**	*e*P	**Pn**	**09 35 31.8**	**+0.5**
	baz=328						
WDLH	**Douliu**	**1.03**	**254**	*e*P	**Pn**	**09 35 31.4**	**-0.1**
	baz=253						
NCUH	**Zhongli**	**1.06**	**338**	*e*P	**Pn**	**09 35 32.0**	**0.0**
	baz=339						
WCKO	**Fanlu**	**1.07**	**240**	*e*P	**Pn**	**09 35 32.1**	**-0.1**
	baz=239						
TWB1	**Santiao Chiao**	**1.08**	**18**	*e*P	**Pg**	**09 35 31.2**	**-0.1**
	baz=13						
WFSB	**Wu-fen Shan**	**1.10**	**8**	⇓*e*P	**Pg**	**09 35 31.8**	**0.0**
	baz=10.0						
STYH	**Taoyuan**	**1.12**	**224**	*e*P	**Pg**	**09 35 32.1**	**0.0**
	baz=221						
TPUB	**Ta-pu**	**1.13**	**234**	P	**Pn**	**09 35 32.8**	**-0.1**
TPUB	**Ta-pu**	**1.13**	**234**	⇓P	**Pb**	**09 35 32.7**	**+0.1**
	baz=233						
TPUB				*e*S	**Sn**	**09 35 48.6**	**-0.1**
	baz=233						
TWS1	**Kuangyinshan**	**1.13**	**351**	*e*P	**Pn**	**09 35 33.7**	**+0.8**
	baz=354						
SXI1	**Grass Mountain**	**1.14**	**12**	*e*P	**Pb**	**09 35 32.7**	**0.0**
YM01	**YM01**	**1.16**	**358**	*e*P	**Pn**	**09 35 33.5**	**+0.1**
	baz=11						
WTK	**Tuku**	**1.17**	**256**	*e*P	**Pn**	**09 35 33.8**	**+0.5**
	baz=256						
WTK				*e*S	**Sn**	**09 35 49.8**	**+0.3**
	baz=256						
WTP	**Ta-pu**	**1.18**	**232**	⇑P	**Pn**	**09 35 33.7**	**+0.1**
	baz=231						
YM08	**YM08**	**1.21**	**359**	*e*P	**Pb**	**09 35 33.7**	**-0.1**
	baz=12						
ANP	**Anpu**	**1.21**	**356**	*e*P	**Pn**	**09 35 34.1**	**+0.1**
	baz=357						
TWG	**Pinlang**	**1.26**	**204**	*e*P	**Pn**	**09 35 33.6**	**-1.0**
	baz=204						
TWGBT	**Beinan**	**1.26**	**203**	*e*P	**Pn**	**09 35 33.7**	**-1.0**
	baz=204						
TWK	**Hsinying**	**1.26**	**236**	*e*P	**Pg**	**09 35 35.3**	**+0.5**
	baz=235						
CHN1	**Nanshi**	**1.28**	**232**	*e*P	**Pg**	**09 35 35.5**	**+0.4**
	baz=232						
CHN1				*e*S	**Sn**	**09 35 53.3**	**+1.0**
	baz=232						
SNST	**Tainan City**	**1.28**	**234**	*e*P	**Pg**	**09 35 36.0**	**+0.8**
	baz=233						
TWY	**Chenhua**	**1.29**	**359**	*e*P	**Pg**	**09 35 35.6**	**+0.1**
	baz=347						
JYNG	**Yonagunijimaku**	**1.30**	**68**	P	**Pn**	**09 35 34.7**	**-0.5**
JYNG				*e*S	**Sb**	**09 35 52.0**	**-0.2**
SGST	**Jiashian**	**1.30**	**227**	*e*P	**Pb**	**09 35 35.5**	**0.0**
	baz=227						
SGST				*e*S	**Sn**	**09 35 53.4**	**+0.4**
	baz=227						
SLGT	**Liugui**	**1.33**	**223**	*e*P	**Pn**	**09 35 35.6**	**0.0**
	baz=222						
YOJ	**Yonaguni jima**	**1.36**	**69**	P	**Pg**	**09 35 37.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.36**	**69**	*e*P	**Pn**	**09 35 35.1**	**-0.8**
	baz=68						
YOJ	**Yonaguni jima**	**1.36**	**69**	*e*P	**Pn**	**09 35 35.5**	**-0.5**
TSMG	**Majia**	**1.55**	**216**	*e*P	**Pb**	**09 35 40.0**	**+0.2**
	baz=206						
MASBT	**Mashibuluo**	**1.64**	**214**	*e*P	**Pn**	**09 35 40.1**	**+0.2**
	baz=217						
MASBT				*e*S	**Sg**	**09 36 04.2**	**+1.0**
	baz=217						
EAST	**Anshuo**	**1.74**	**204**	*e*P	**Pb**	**09 35 43.4**	**+0.4**
	baz=194						
JKRS	**Kuro-shima**	**2.20**	**83**	*e*P	**Pn**	**09 35 48.4**	**+0.8**
JKRS				S	**Sb**	**09 36 16.6**	**-1.5**
JIJ	**Ishigaki jima**	**2.33**	**80**	*e*P	**Pn**	**09 35 48.8**	**-0.6**
JIJ				S	**Sn**	**09 36 17.8**	**-0.6**
JISG	**Ishigakijimahi**	**2.53**	**76**	P	**Pn**	**09 35 51.5**	**-0.6**
JISG				*e*S	**Sn**	**09 36 22.9**	**-0.3**
JTJ	**Tarama**	**2.89**	**76**	P	**Pn**	**09 35 59.3**	**+2.3**
JTJ				*e*S	**Sn**	**09 36 34.4**	**+2.4**

*ASIES **07** 09:46:38.2, 24°.01N×121°.73E, h9km, ML4.0, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.86; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$-0.17; $M_{r\theta}$3.69; $M_{\theta\phi}$-2.39; $M_{\phi r}$7.66; Fault plane solution: M_o8.87449×10^{21} NP1:ϕ_s24.28000°, δ85.25000°, λ78.32000°. NP2:ϕ_s272.43000°, δ12.60000°, λ157.66000°. Principal axes: T Plg48.4790°, Azm281.8110°; N Plg11.6410°, Azm25.2650°; P Plg39.1570°, Azm124.9230°;*
*JMA **07** 09:46:38.9±0.1, 24°.0N±0°.2×121°.6E±0°.7, h0km, MV3.5/12, TAIWAN REGION*
*TAP **07** 09:46:38.2, 24°.01N×121°.73E, h9km, ML4.0, C*
*IDC **07** 09:46:48.7±7.6, 23°.86N×121°.71E, h110km±72km, mb3.1/8, mbtmp3.5/9, ML3.0/1, MS3.2/2, Error ellipse: s-maj=39.8km s-min=19.6km az=69.0*
ISC 07 09:46:38.5±0.8, 23°.99N±0°.01×121°.74E±0°.01, h11km±5km, n177, σ1§03/268, mb3.4/8, 3C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.12**	**264**	P	**Pg**	**09 46 42.1**	**+0.6**
	baz=255						
HWA				S	**Sg**	**09 46 45.5**	**+1.7**
	baz=255						
TWD	**Chiawan**	**0.16**	**305**	⇓*i*P	**Pg**	**09 46 41.8**	**-0.3**
	baz=302						
TWD				*i* S	**Sg**	**09 46 44.4**	**-0.2**
	baz=302						
ETL	**Fush Village**	**0.20**	**329**	*i* P	**Pg**	**09 46 42.6**	**-0.2**
	baz=326						
ETL				*i* S	**Sg**	**09 46 46.2**	**+0.4**
	baz=326						
ETM	**Tongmen**	**0.22**	**264**	⇑*i*P	**Pg**	**09 46 43.3**	**+0.1**
	baz=262						
ETM				S	**Sg**	**09 46 47.2**	**+0.8**
	baz=262						
NACB	**Ninganchiao**	**0.23**	**325**	P	**Pg**	**09 46 43.0**	**-0.3**
NACB	**Ninganchiao**	**0.23**	**325**	P	**Pg**	**09 46 43.0**	**-0.3**
	baz=321						
NACB				S	**Sg**	**09 46 46.3**	**-0.2**
	baz=321						
SHUL	**Shoufeng**	**0.26**	**218**	P	**Pb**	**09 46 44.8**	**-0.3**
	baz=214						
SHUL				*e*S	**Sb**	**09 46 50.5**	**+1.0**
	baz=214						
LXIB	**Xiulin Townshi**	**0.30**	**276**	*i* P	**Pg**	**09 46 44.5**	**-0.2**
	baz=274						
LXIB				S	**Sb**	**09 46 50.0**	**-0.9**
	baz=274						
ETLH	**Xiulin Townshi**	**0.32**	**313**	*e*P	**Pg**	**09 46 44.8**	**-0.2**
	baz=311						
ETLH				*e*S	**Sg**	**09 46 49.8**	**+0.5**
	baz=311						
EHP	**Heping Village**	**0.32**	**1**	P	**Pg**	**09 46 45.0**	**0.0**
	baz=355						
EHP				*e*S	**Sg**	**09 46 50.2**	**+0.8**
	baz=355						
ESL	**Shilin**	**0.33**	**238**	*i* P	**Pg**	**09 46 45.5**	**+0.4**
	baz=242						
ESL				S	**Sg**	**09 46 50.6**	**+1.1**
	baz=242						
TEGC	**Jichi Village**	**0.33**	**213**	P	**Pb**	**09 46 46.5**	**+0.1**
	baz=209						
EAHA	**Aohua**	**0.34**	**1**	*i* P	**Pg**	**09 46 45.3**	**0.0**
	baz=353						
EAHA				*e*S	**Sg**	**09 46 50.1**	**+0.2**
	baz=353						
WARBT	**Fenglin Townsh**	**0.42**	**230**	*i* P	**Pg**	**09 46 47.1**	**+0.3**
	baz=238						
WARBT				*e*S	**Sg**	**09 46 53.2**	**+0.8**
	baz=238						
EGFH	**Guangfu**	**0.43**	**222**	*e*P	**Pg**	**09 46 47.6**	**+0.7**
	baz=229						
EGFH				*e*S	**Sb**	**09 46 54.8**	**+0.3**
	baz=229						
ENA	**Nanau**	**0.44**	**1**	*i* P	**Pg**	**09 46 47.2**	**0.0**
	baz=352						
ENA				*i* S	**Sg**	**09 46 53.7**	**+0.7**
	baz=352						
EWUT	**Wuta**	**0.46**	**5**	P	**Pg**	**09 46 47.7**	**+0.2**
	baz=355						
EWUT				S	**Sg**	**09 46 53.9**	**+0.3**
	baz=355						
WHF	**Hehuan Shan**	**0.46**	**290**	*i* P	**Pg**	**09 46 47.7**	**0.0**
	baz=287						
OWD	**Renai**	**0.51**	**266**	P	**Pg**	**09 46 48.9**	**+0.3**
	baz=276						
OWD				*e*S	**Sb**	**09 46 56.6**	**-0.5**
	baz=276						
FUSS	**Fushou**	**0.52**	**300**	*i* P	**Pg**	**09 46 48.9**	**+0.2**
	baz=298						
FUSS				S	**Sg**	**09 46 55.8**	**+0.1**
	baz=298						
CHGB	**Renai**	**0.52**	**278**	⇑P	**Pg**	**09 46 49.0**	**+0.3**
	baz=278						
CHGB				*e*S	**Sb**	**09 46 56.9**	**-0.4**
	baz=278						
NNSB	**Datong**	**0.54**	**324**	P	**Pg**	**09 46 49.2**	**0.0**
	baz=321						
NNSB				S	**Sb**	**09 46 57.2**	**-0.7**
	baz=321						
NNSH	**Datong**	**0.54**	**324**	P	**Pg**	**09 46 49.3**	**+0.1**
	baz=320						
NNSH				*e*S	**Sb**	**09 46 57.5**	**-0.5**
	baz=320						
EOS4	**EOS4**	**0.55**	**76**	*e*P	**Pb**	**09 46 50.4**	**+0.5**
	baz=87						
NNS	**Nan Shan**	**0.56**	**324**	P	**Pg**	**09 46 49.4**	**0.0**
	baz=321						
NNS				*e*S	**Sg**	**09 46 55.7**	**-1.2**
	baz=321						
WUSB	**Renai**	**0.57**	**270**	P	**Pg**	**09 46 50.0**	**+0.4**
	baz=278						
WUSB				*e*S	**Sb**	**09 46 58.4**	**-0.2**
	baz=278						
HGSD	**Ruisui**	**0.57**	**210**	*e*P	**Pb**	**09 46 50.8**	**+0.3**
	baz=196						
TWT	**Tachien**	**0.57**	**297**	P	**Pb**	**09 46 50.4**	**-0.3**
	baz=294						
LATG	**Datong**	**0.58**	**341**	⇑*i*P	**Pg**	**09 46 49.8**	**-0.1**
	baz=338						
LATG				*e*S	**Sb**	**09 46 58.3**	**-0.7**
	baz=338						
TDCB	**Techi**	**0.59**	**297**	P	**Pg**	**09 46 50.4**	**+0.4**
	baz=296						
TDCB				*e*S	**Sb**	**09 46 59.3**	**0.0**
	baz=296						
ESAO	**Su ao**	**0.59**	**10**	*e*P	**Pb**	**09 46 50.6**	**-0.3**
	baz=5.0						
ESAO				*e*S	**Sb**	**09 46 59.7**	**+0.4**
	baz=5.0						
VWDT	**VWDT**	**0.59**	**247**	P	**Pb**	**09 46 51.0**	**+0.1**
	baz=245						
VWDT				S	**Sb**	**09 46 59.1**	**-0.1**
	baz=245						
EOS3	**EOS3**	**0.61**	**61**	*e*P	**Pn**	**09 46 52.4**	**-0.5**
	baz=68						
EHY	**Hungye**	**0.61**	**218**	*e*P	**Pg**	**09 46 50.9**	**+0.5**
	baz=204						
EHY				*e*S	**Sb**	**09 46 59.9**	**+0.1**
	baz=204						

ENTT	**Nioudou**	**0.67**	**347**	P	**Pg**	**09 46 51.7 +0.2**
	baz=334					
WPL	**Puli Township**	**0.71**	**272**	P	**Pb**	**09 46 53.0 +0.1**
	baz=272					
WPL				*e*S	**Sb**	**09 47 03.8 +1.0**
	baz=272					
YULB	**Yu-li**	**0.72**	**214**	P	**Pn**	**09 46 54.3 -0.3**
YULB	**Yu-li**	**0.72**	**214**	*e*P	**Pg**	**09 46 52.8 +0.4**
	baz=214					
YULB				*e*S	**Sb**	**09 47 03.5 +0.6**
	baz=214					
ECBN	**Changbin**	**0.72**	**201**	P	**Pb**	**09 46 53.2 +0.2**
	baz=200					
ECBN				*e*S	**Sn**	**09 47 04.6 -1.0**
	baz=200					
TWE	**Neicheng**	**0.73**	**355**	P	**Pg**	**09 46 53.0 +0.2**
	baz=344					
DPDB	**Guoxing**	**0.74**	**274**	*e*P	**Pb**	**09 46 53.5 0.0**
	baz=273					
DPDB				*e*S	**Sb**	**09 47 04.4 +0.8**
	baz=273					
SSLB	**Suanglung**	**0.74**	**254**	P	**Pb**	**09 46 53.6 +0.1**
SSLB	**Suanglung**	**0.74**	**254**	P	**Pg**	**09 46 53.3 +0.4**
	baz=264					
SSLB				S	**Sb**	**09 47 03.7 +0.1**
	baz=264					
EYUL	**Yuli**	**0.74**	**211**	*e*P	**Pb**	**09 46 53.8 +0.4**
	baz=229					
EYUL				*e*S	**Sb**	**09 47 04.5 +0.9**
	baz=229					
TWF1	**Yuli**	**0.75**	**212**	*e*P	**Pg**	**09 46 53.4 +0.3**
	baz=212					
TWF1				*e*S	**Sb**	**09 47 04.5 +0.7**
	baz=212					
YHNB	**Yeheng**	**0.75**	**334**	P	**Pb**	**09 46 53.5 -0.2**
YHNB	**Yeheng**	**0.75**	**334**	*i* P	**Pg**	**09 46 53.4 +0.3**
	baz=333					
YHNB				*e*S	**Sb**	**09 47 04.0 0.0**
	baz=333					
WCS	**Beigang Elemen**	**0.76**	**275**	*e*P	**Pb**	**09 46 53.6 -0.1**
	baz=275					
WCS				*e*S	**Sg**	**09 47 02.6 -0.4**
	baz=275					
NSK	**Sanguang**	**0.77**	**333**	*i* P	**Pg**	**09 46 53.7 +0.3**
	baz=332					
NSK				S	**Sb**	**09 47 04.4 0.0**
	baz=332					
SMLT	**Sun Moon Lake**	**0.77**	**262**	P	**Pg**	**09 46 53.9 +0.4**
	baz=272					
SMLT				*e*S	**Sb**	**09 47 05.1 +0.5**
	baz=272					
ILA	**Ilan**	**0.77**	**1**	*e*P	**Pg**	**09 46 53.4 -0.1**
	baz=348					
WHP	**Taichung City**	**0.78**	**292**	P	**Pb**	**09 46 54.2 +0.2**
	baz=291					
WHP				*e*S	**Sb**	**09 47 05.5 +0.9**
	baz=291					
FUSB	**Fushanzhiwuyua**	**0.78**	**350**	P	**Pg**	**09 46 53.8 +0.1**
	baz=339					
FUSB				*e*S	**Sb**	**09 47 04.7 0.0**
	baz=339					
TYC	**Yuchr**	**0.81**	**264**	*e*P	**Pg**	**09 46 54.4 +0.3**
	baz=264					
TYC				*e*S	**Sg**	**09 47 03.8 -0.9**
	baz=264					
NWLT	**Wulai**	**0.81**	**345**	*e*P	**Pg**	**09 46 54.5 +0.3**
	baz=330					
NWLT				*e*S	**Sb**	**09 47 05.3 -0.4**
	baz=330					
CHKH	**Chenggong**	**0.85**	**202**	*e*P	**Pg**	**09 46 55.1 +0.1**
	baz=200					
CHKH				*e*S	**Sn**	**09 47 08.8 0.0**
	baz=200					
NFF	**Wufeng Townshi**	**0.85**	**319**	*e*P	**Pb**	**09 46 55.4 0.0**
	baz=318					
NFF				*e*S	**Sb**	**09 47 07.5 +0.7**
	baz=318					
WHYT	**Xinyi Township**	**0.86**	**250**	*e*P	**Pb**	**09 46 55.7 +0.3**
	baz=258					
WHYT				*e*S	**Sb**	**09 47 07.6 +0.7**
	baz=258					
FULB	**Fuli**	**0.89**	**207**	*e*P	**Pn**	**09 46 56.6 -0.2**
	baz=221					
NSTT	**Nanjuang**	**0.93**	**314**	*e*P	**Pb**	**09 46 57.0 +0.4**
	baz=312					
NSTT				*e*S	**Sg**	**09 47 07.6 -0.9**
	baz=312					
LIOB	**Emei**	**0.93**	**315**	*e*P	**Pb**	**09 46 57.0 +0.5**
	baz=313					
LIOB				*e*S	**Sg**	**09 47 08.4 -0.2**
	baz=313					
WJS	**Zhushan**	**0.94**	**260**	*e*P	**Pn**	**09 46 58.0 +0.4**
	baz=268					
WJS				*e*S	**Sn**	**09 47 12.6 +1.6**
	baz=268					
CHKT	**Chengkung**	**0.95**	**201**	*e*P	**Pg**	**09 46 56.9 +0.1**
	baz=191					
CHKT				*e*S	**Sb**	**09 47 10.6 +1.1**
	baz=191					
TWQ1	**Liyutan**	**0.95**	**292**	*e*P	**Pn**	**09 46 58.6 +0.9**
	baz=302					
TWQ1				*e*S	**Sn**	**09 47 10.8 -0.5**
	baz=302					
EHD	**Haiduan**	**0.97**	**210**	*e*P	**Pg**	**09 46 56.3 -0.9**
	baz=211					
EHD				*e*S	**Sb**	**09 47 10.6 +0.5**
	baz=211					
WNT	**Mingjian**	**0.97**	**264**	*e*P	**Pn**	**09 46 58.5 +0.5**
	baz=270					
WNT				*e*S	**Sn**	**09 47 13.6 +1.9**
	baz=270					
ALS	**Alishan**	**0.98**	**241**	*e*P	**Pb**	**09 46 58.1 +0.5**
	baz=240					
ALS				*e*S	**Sg**	**09 47 10.6 +0.5**
	baz=240					
TIPB	**Shuangxi**	**0.98**	**5**	*e*P	**Pn**	**09 46 57.9 -0.3**
	baz=353					
NSY	**Sanyi**	**0.99**	**296**	*e*P	**Pn**	**09 46 59.1 +0.8**
	baz=305					
NSY				*e*S	**Sb**	**09 47 11.3 +0.7**
	baz=305					
NHDH	**Xindian Distri**	**0.99**	**349**	*e*P	**Pg**	**09 46 57.8 +0.2**
	baz=346					
TWA	**Mucha**	**1.00**	**352**	*e*P	**Pn**	**09 46 58.5 0.0**
	baz=351					
TWA				*e*S	**Sb**	**09 47 11.3 +0.4**
	baz=351					
ECS	**Chishang**	**1.01**	**208**	*e*P	**Pn**	**09 46 59.1 +0.5**
	baz=222					
TATO	**Taipei**	**1.01**	**347**	P	**Pn**	**09 46 59.2 +0.6**
NMLH	**Miaoli**	**1.02**	**303**	*e*P	**Pn**	**09 46 59.9 +1.1**
	baz=299					
ELDTW	**Lidau**	**1.03**	**220**	*e*P	**Pb**	**09 46 57.7 -0.8**
	baz=206					
ELDTW				*e*S	**Sg**	**09 47 12.9 +1.0**
	baz=206					
TWB1	**Santiao Chiao**	**1.04**	**13**	*e*P	**Pg**	**09 46 58.9 +0.3**
	baz=5.0					
CHN5	**Tsauling**	**1.04**	**248**	*e*P	**Pn**	**09 46 59.8 +0.7**
	baz=237					
CHN5				*e*S	**Sn**	**09 47 14.7 +0.9**
	baz=237					
SBCB	**Hsinchu**	**1.05**	**320**	*e*P	**Pn**	**09 46 59.9 +0.8**
	baz=316					
WDJ	**Dajia District**	**1.06**	**290**	P	**Pn**	**09 47 01.1 +1.8**
	baz=286					
TAP	**Taipei**	**1.07**	**349**	*e*P	**Pb**	**09 46 57.6 -1.4**
	baz=339					
TAP				*e*S	**Sb**	**09 47 12.4 -0.5**
	baz=339					
HSN	**Hsinchu**	**1.07**	**319**	*e*P	**Pn**	**09 47 00.6 +1.2**
	baz=318					
NWF	**Wu-fen Shan**	**1.08**	**2**	*e*P	**Pn**	**09 47 00.3 +0.7**
	baz=346					
WFSB	**Wu-fen Shan**	**1.08**	**2**	*e*P	**Pn**	**09 47 00.2 +0.7**
	baz=352					
WFSB				*e*S	**Sb**	**09 47 12.7 -0.5**
	baz=352					
WCHH	**Zhanghua**	**1.08**	**275**	*e*P	**Pn**	**09 47 00.9 +1.4**
	baz=271					
EDH	**Donghe**	**1.09**	**201**	*e*P	**Pb**	**09 46 58.9 -0.5**
	baz=201					
EDH				*e*S	**Sn**	**09 47 14.8 +0.2**
	baz=201					
NCUH	**Zhongli**	**1.10**	**333**	*e*P	**Pn**	**09 47 00.2 +0.5**
	baz=330					
NCUH				*e*S	**Sn**	**09 47 17.2 +2.3**
	baz=330					
SXI1	**Grass Mountain**	**1.11**	**7**	*e*P	**Pn**	**09 47 00.1 +0.1**
	baz=350					
WGK	**Gukeng**	**1.12**	**255**	*e*P	**Pg**	**09 47 00.7 +0.7**
	baz=251					
WDLH	**Douliu**	**1.14**	**255**	*e*P	**Pg**	**09 47 01.7 +1.3**
	baz=255					
WDLH				*e*S	**Sn**	**09 47 17.7 +1.9**
	baz=255					
TWS1	**Kuangyinshan**	**1.14**	**345**	*e*P	**Pg**	**09 47 01.5 +0.9**
	baz=342					
TNOU	**National Taiwa**	**1.16**	**2**	*e*P	**Pg**	**09 47 01.5 +0.7**
	baz=354					
TNOU				*e*S	**Sn**	**09 47 16.8 +0.4**
	baz=354					
YM01	**YM01**	**1.16**	**353**	*e*P	**Pg**	**09 47 01.2 +0.3**
	baz=349					
WCKO	**Fanlu**	**1.17**	**242**	*e*P	**Pg**	**09 47 02.1 +1.0**
	baz=232					
WCKO				*e*S	**Sn**	**09 47 17.5 +0.7**
	baz=232					
JYNG	**Yonagunijimaku**	**1.20**	**67**	P	**Pg**	**09 47 03.9 +2.3**
JYNG				S	**Sn**	**09 47 22.0 +4.6**
NTST	**Danshui**	**1.20**	**347**	*e*P	**Pg**	**09 47 02.4 +0.8**
	baz=345					
NTST				*e*S	**Sn**	**09 47 20.0 +2.5**
	baz=345					
STYH	**Taoyuan**	**1.20**	**227**	*e*P	**Pn**	**09 47 00.9 -0.3**
	baz=214					
STYH				*e*S	**Sb**	**09 47 17.1 +0.3**
	baz=214					
YM08	**YM08**	**1.20**	**354**	*e*P	**Pg**	**09 47 02.1 +0.5**
	baz=350					
ANP	**Anpu**	**1.21**	**351**	*e*P	**Pg**	**09 47 02.1 +0.3**
	baz=347					
LONT	**Longtian**	**1.21**	**207**	*e*P	**Pn**	**09 47 00.1 -1.3**
	baz=209					
TPUB	**Ta-pu**	**1.22**	**236**	P	**Pg**	**09 47 03.0 +0.9**
TPUB	**Ta-pu**	**1.22**	**236**	*e*P	**Pg**	**09 47 02.4 +0.3**
	baz=235					
TPUB				*e*S	**Sg**	**09 47 20.2 +2.2**
	baz=235					
CHN4	**Tsaushan**	**1.23**	**239**	*e*P	**Pg**	**09 47 02.9 +0.9**
	baz=237					
CHN2	**Minshiung**	**1.24**	**249**	*e*P	**Pg**	**09 47 03.6 +1.3**
	baz=248					
CHN2				*e*S	**Sg**	**09 47 22.1 +3.6**
	baz=248					
WRL	**Guolierlin Hig**	**1.25**	**266**	*e*P	**Pb**	**09 47 02.3 +0.3**
	baz=266					
WRL				*e*S	**Sg**	**09 47 21.3 +2.6**
	baz=266					
YOJ	**Yonaguni jima**	**1.26**	**68**	P	**Pg**	**09 47 04.0 +1.3**
YOJ	**Yonaguni jima**	**1.26**	**68**	*e*P	**Pn**	**09 47 01.5 -0.4**
	baz=68					
YOJ	**Yonaguni jima**	**1.26**	**68**	*e*P	**Pg**	**09 47 05.2 +2.6**
YOJ				S	**Sg**	**09 47 24.0 +5.0**
WTP	**Ta-pu**	**1.27**	**235**	P	**Pb**	**09 47 02.9 +0.4**
	baz=233					
WTP				*e*S	**Sg**	**09 47 22.0 +2.6**
	baz=233					
WTK	**Tuku**	**1.27**	**257**	*e*P	**Pg**	**09 47 03.8 +0.9**
	baz=256					
WTK				*e*S	**Sg**	**09 47 23.1 +3.6**
	baz=256					
TWY	**Chenhua**	**1.29**	**354**	*e*P	**Pg**	**09 47 03.1 -0.1**
	baz=351					
TWG	**Pinlang**	**1.31**	**208**	*e*P	**Pn**	**09 47 01.1 -1.7**
	baz=209					
TWG				*e*S	**Sb**	**09 47 20.2 +0.2**
	baz=209					
TWGBT	**Beinan**	**1.31**	**207**	P	**Pg**	**09 47 05.5 +1.7**
TWGBT	**Beinan**	**1.31**	**207**	*e*P	**Pn**	**09 47 00.7 -2.1**
	baz=209					
TWGBT				*e*S	**Sb**	**09 47 19.6 -0.4**
	baz=209					
LDUT	**Ludao**	**1.33**	**191**	*e*P	**Pn**	**09 47 00.7 -2.3**
	baz=180					
LDUT				*e*S	**Sb**	**09 47 17.9 -2.7**
	baz=180					
TWK	**Hsinying**	**1.35**	**238**	*e*P	**Pg**	**09 47 04.6 +0.1**
	baz=236					
TWK				*e*S	**Sg**	**09 47 23.5 +1.4**
	baz=236					
CHN1	**Nanshi**	**1.37**	**234**	*e*P	**Pg**	**09 47 05.0 +0.2**
	baz=233					
CHN1				*e*S	**Sg**	**09 47 25.8 +3.2**
	baz=233					
SNST	**Tainan City**	**1.37**	**236**	*e*P	**Pb**	**09 47 04.7 +0.6**
	baz=234					
SGST	**Jiashian**	**1.39**	**230**	*e*P	**Pb**	**09 47 04.4 -0.1**
	baz=218					
SLGT	**Liugui**	**1.41**	**225**	*e*P	**Pb**	**09 47 05.2 +0.4**
	baz=213					
SLGT				*e*S	**Sg**	**09 47 24.9 +1.1**
	baz=213					
WSF	**Szhu**	**1.43**	**256**	*e*P	**Pn**	**09 47 04.6 +0.3**
	baz=254					
ICHU	**Yijhu**	**1.48**	**245**	*e*P	**Pb**	**09 47 06.3 +0.4**
	baz=244					
ICHU				*e*S	**Sg**	**09 47 27.2 +1.2**
	baz=244					
CHN8	**Yiju**	**1.54**	**246**	*e*P	**Pn**	**09 47 04.3 -1.5**
	baz=244					
CHN8				*e*S	**Sg**	**09 47 28.4 +0.4**
	baz=244					
ECL	**Taimali**	**1.56**	**208**	*e*P	**Pn**	**09 47 06.1 -0.1**
	baz=195					
SCST	**Cishan**	**1.58**	**226**	*e*P	**Pb**	**09 47 08.5 +0.7**
	baz=225					
SCST				*e*S	**Sg**	**09 47 30.5 +1.0**
	baz=225					
SHHT	**Tainan City**	**1.60**	**233**	*e*P	**Pg**	**09 47 09.7 +0.5**
	baz=249					
TSMG	**Majia**	**1.62**	**218**	*e*P	**Pb**	**09 47 08.5 0.0**
	baz=220					
TSMG				*e*S	**Sg**	**09 47 31.1 +0.3**
	baz=220					
TWM1	**Shoushan**	**1.67**	**226**	*e*P	**Pg**	**09 47 11.1 +0.4**
	baz=214					
MASBT	**Mashibuluo**	**1.71**	**217**	*e*P	**Pn**	**09 47 08.1 0.0**
	baz=207					
MASBT				*e*S	**Sb**	**09 47 31.3 0.0**
	baz=207					
TSCK	**Chigu Township**	**1.73**	**241**	*e*P	**Pb**	**09 47 09.7 -0.5**
	baz=239					
TSCK				*e*S	**Sg**	**09 47 33.4 -0.8**
	baz=239					
EAST	**Anshuo**	**1.79**	**207**	*e*P	**Pn**	**09 47 08.2 -1.2**
	baz=208					
EAST				*e*S	**Sn**	**09 47 32.2 0.0**
	baz=208					
TAW	**Tawu**	**1.80**	**206**	*e*P	**Pn**	**09 47 09.7 +0.3**
	baz=207					
TAWH	**Dawu Township**	**1.82**	**206**	*e*P	**Pn**	**09 47 10.8 +1.1**
	baz=208					
HATJ	**Hateruma jima**	**1.89**	**88**	P	**Pg**	**09 47 14.4 -0.5**
HATJ				S	**Sg**	**09 47 40.9 +1.5**
HATJ	**Hateruma jima**	**1.89**	**88**	A	A	09 47 14.4
	comp=N,6.0nm,7.0s					
WSSB	**Gushan**	**1.91**	**226**	*e*P	**Pb**	**09 47 13.1 -0.2**
	baz=225					
SCZT	**Fangliau**	**1.91**	**213**	*e*P	**Pb**	**09 47 12.7 -0.7**
	baz=215					
SCZT				*e*S	**Sb**	**09 47 37.7 +0.5**
	baz=215					
SLIU	**Shizi**	**1.96**	**206**	*e*P	**Pb**	**09 47 13.6 -0.7**
	baz=207					
SLIU				*e*S	**Sb**	**09 47 38.1 -0.6**
	baz=207					
LYUB	**Lan-yu**	**1.98**	**184**	*e*P	**Pn**	**09 47 08.8 -3.1**
	baz=188					
PHUB	**P'eng-hu**	**2.04**	**257**	*e*P	**Pn**	**09 47 13.6 +0.9**
	baz=255					
PHUB				*e*S	**Sb**	**09 47 40.4 -0.4**
	baz=255					
PNG	**Penghu**	**2.04**	**259**	*e*P	**Pn**	**09 47 14.3 +1.5**
	baz=256					
PNG				*e*S	**Sb**	**09 47 41.1 +0.2**
	baz=256					
JKRS	**Kuro-shima**	**2.09**	**83**	*e*P	**Pb**	**09 47 17.3 +0.8**
JKRS				S	**Sg**	**09 47 46.0 +0.2**
TWKBT	**Hengchun**	**2.21**	**203**	*e*P	**Pn**	**09 47 14.7 -0.4**
	baz=195					
TWKBT				*e*S	**Sn**	**09 47 43.1 +0.8**
	baz=195					
JIJ	**Ishigaki jima**	**2.23**	**80**	P	**Pn**	**09 47 15.4 0.0**
JIJ				S	**Sn**	**09 47 42.9 0.0**
VCHM	**Qimei**	**2.25**	**250**	*e*P	**Pn**	**09 47 16.7 +1.0**
	baz=248					
VCHM				*e*S	**Sn**	**09 47 45.0 +1.6**
	baz=248					
VWUC	**VWUC**	**2.31**	**296**	*e*P	**Pn**	**09 47 17.0 +0.5**
	baz=291					
JISG	**Ishigakijimahi**	**2.42**	**75**	*e*P	**Pn**	**09 47 17.8 -0.2**
JISG				S	**Sn**	**09 47 48.1 +0.5**
PTMZ	**Houxiangcun**	**2.60**	**294**	*e*P	**Pn**	**09 47 20.8 +0.3**
	baz=289					
MATB	**Ma-tsu**	**2.70**	**323**	*e*P	**Pn**	**09 47 21.7 -0.1**
	baz=316					
KNM	**Kinmen**	**3.04**	**279**	*e*P	**Pn**	**09 47 28.9 +2.3**
	baz=271					
KNMB	**Chin-men Tao**	**3.09**	**279**	*e*P	**Pn**	**09 47 26.7 -0.5**
	baz=272					
LYJJ	**Jianjiangzhen**	**3.12**	**325**	*e*P	**Pn**	**09 47 28.0 +0.5**
	baz=319					
MHZQ	**Yeshan**	**3.23**	**311**	*e*P	**Pn**	**09 47 29.9 +0.8**
	baz=305					
XPSS	**Dashiqiu**	**3.25**	**335**	*e*P	**Pn**	**09 47 29.1 -0.2**
	baz=327					
AXDP	**Jialang**	**3.55**	**286**	*e*P	**Pn**	**09 47 33.4 -0.1**
	baz=279					
ZPLA	**Ao Xicun**	**3.65**	**270**	*e*P	**Pn**	**09 47 35.3 +0.5**
	baz=263					
DSXP	**Dongshan**	**3.96**	**267**	*e*P	**Pn**	**09 47 38.7 -0.4**
	baz=261					
SXFK	**Yanhouchang**	**4.42**	**304**	*e*P	**Pn**	**09 47 45.3 -0.2**
	baz=300					
KSRS	**Korea Array**	**14.43**	**20**	P	**P**	**09 50 09.7 +0.2**
	comp=N,0.1nm,0.3s,baz=199,slow=12,SNR=2.4					
KSRS				LR	LR	09 56 13.6
	comp=N,48nm,18.3s,baz=335,slow=39 comp=N,0.7nm,0.6s					
SONM	**Songino Array**	**26.74**	**337**	P	**P**	**09 52 18.4 +0.3**
	comp=N,0.4nm,0.5s,baz=159,slow=13,SNR=3.7 comp=N,0.4nm,0.5s					
MKAR	**Makanchi Array**	**38.83**	**316**	P	**P**	**09 54 02.9 -0.6**
	comp=N,0.3nm,0.6s,baz=101,slow=11,SNR=1.5 comp=N,0.3nm,0.6s					
ZALV	**Zalesovo Beam**	**40.68**	**327**	P	**P**	**09 54 18.1 -0.6**
	comp=N,1.3nm,0.3s,baz=118,slow=8.3,SNR=4.5 comp=N,1.3nm,0.3s					
MA2	**Magadan**	**40.97**	**22**	LR	LR	10 12 51.4
	comp=N,46nm,18.5s,baz=88,slow=38					
H11N1	**WAKE ISLAND Hy**	**41.99**	**87**	T	T	10 39 46.2
	baz=276,slow=74					
H11N2	**WAKE ISLAND Hy**	**41.99**	**87**	T	T	10 39 51.2
	baz=276,slow=74					
H11N3	**WAKE ISLAND Hy**	**42.01**	**87**	T	T	10 39 48.6
	baz=276					
H11S3	**WAKE ISLAND Hy**	**42.12**	**89**	T	T	10 39 44.4
	baz=279,slow=75,SNR=14					
H11S1	**WAKE ISLAND Hy**	**42.13**	**89**	T	T	10 39 42.0
	baz=279,slow=75,SNR=7.9					
H11S2	**WAKE ISLAND Hy**	**42.14**	**89**	T	T	10 39 39.1
	baz=279,slow=75,SNR=5.9					
KURBB	**Kurchatov Arra**	**42.58**	**320**	P	**P**	**09 54 35.9 +1.6**
	comp=N,0.2nm,0.3s,baz=122,slow=6.9,SNR=1.7 comp=N,0.2nm,0.3s					
WRA	**Warramunga Arr**	**45.36**	**163**	P	**P**	**09 54 54.4 -2.6**
	comp=N,0.3nm,0.6s,baz=344,slow=8.8,SNR=2.0 comp=N,0.3nm,0.6s					
ASAR	**Alice Springs**	**48.82**	**165**	P	**P**	**09 55 22.8 -1.1**
	comp=N,0.3nm,0.8s,baz=347,slow=7.7,SNR=2.5 comp=N,0.3nm,0.8s					
ILAR	**Eielson Array**	**69.15**	**27**	P	**P**	**09 57 44.6 0.0**
	comp=N,0.3nm,0.8s,baz=291,slow=7.6,SNR=2.7 comp=N,0.3nm,0.8s					
YKA	**Yellowknife Ar**	**82.95**	**23**	P	**P**	**09 59 00.9 -2.3**
	comp=N,0.2nm,0.6s,baz=311,slow=4.5,SNR=5.8 comp=N,0.2nm,0.6s					

NEIC ***07*** *09:47:37.6±1.9,2.97S±0.04×81.14W±0.06,h35km±7km, mb4.0/3,Error ellipse: s-maj=9.7km s-min=4.4km az=67.0*
IGQ ***07*** *09:47:40±0.4,3.3°S±2.8°×81.7W±0.9°,h6km*
ISC 07 09:47:37.7±1.5,2.91S±0.04×80.99W±0.07,h28km±12km, n102,σ1§85/118,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.72**	**0**			**Pb**	**09 47 52.6**	**+0.8**
SALI						**Sb**	**09 48 02.3**	**+0.9**
ARNL	**Arenillas**	**1.12**	**124**			**Pb**	**09 47 58.5**	**0.0**
ARNL						**Sb**	**09 48 12.5**	**-0.2**
ARNL	**Arenillas**	**1.12**	**124**	P		**Pb**	**09 47 58.0**	**-0.5**
ARNL				S		**Sb**	**09 48 12.0**	**-0.7**
ACH1	**Ecuador-Univer**	**1.14**	**109**	P		**Pn**	**09 47 58.0**	**+0.2**
ACH1				S		**Sb**	**09 48 12.0**	**-1.4**
AGUAY	**Guayaquil**	**1.35**	**51**	P		**Pn**	**09 48 00.0**	**-0.6**
AGUAY				S		**Sn**	**09 48 16.0**	**-1.6**
PPLP	**Puerto Lpez**	**1.38**	**9**	*e*P		**Pn**	**09 48 01.3**	**+0.2**
PPLP				*e*S		**Sn**	**09 48 18.0**	**-0.4**
MILO	**Milagro-Astudi**	**1.57**	**66**	P		**Pn**	**09 48 04.0**	**+0.3**
MILO				S		**Sn**	**09 48 24.0**	**+0.9**
AMIL	**Milagro (Trans**	**1.60**	**61**	P		**Pn**	**09 48 04.0**	**-0.1**
AMIL				S		**Sn**	**09 48 24.0**	**+0.2**
ISPT	**Isla de la Pla**	**1.64**	**357**	P		**Pn**	**09 48 04.0**	**-0.7**
AMCR	**Ecuador-Macara**	**1.78**	**144**	P		**Pn**	**09 48 08.0**	**+1.3**
MCRA	**Macar, Loja**	**1.78**	**144**	Pn		**Pn**	**09 48 07.8**	**+1.1**
MCRA				Sn		**Sn**	**09 48 26.4**	**-2.0**
MCRA	**Macar, Loja**	**1.78**	**144**	P		**Pn**	**09 48 08.0**	**+1.3**
COHC	**Cochancay**	**1.79**	**76**	Pn		**Pn**	**09 48 07.3**	**+0.5**
COHC				Sn		**Sn**	**09 48 27.8**	**-0.8**
COHC	**Cochancay**	**1.79**	**76**	*e*P		**Pn**	**09 48 07.3**	**+0.5**
COHC				*e*S		**Sn**	**09 48 29.2**	**+0.6**
COHC	**Cochancay**	**1.79**	**76**	P		**Pn**	**09 48 07.0**	**+0.2**
COHC				S		**Sn**	**09 48 29.0**	**+0.4**
ACUE	**Ecuador-Cuenca**	**2.03**	**90**	P		**Pb**	**09 48 13.0**	**-1.2**
AZOG	**Ecuador-Azogue**	**2.15**	**86**	P		**Pn**	**09 48 12.0**	**0.0**
AQUE	**Quevedo**	**2.38**	**39**	P		**Pn**	**09 48 15.0**	**+0.1**
AQUE				S		**Sn**	**09 48 42.0**	**-1.2**
BOSC	**San Juan Bosco**	**2.51**	**95**			**Pn**	**09 48 19.7**	**+2.9**
BOSC	**San Juan Bosco**	**2.51**	**95**	P		**Pn**	**09 48 19.0**	**+2.2**
CHSH	**Refugio Sur-Vo**	**2.55**	**56**			**Pn**	**09 48 18.6**	**+0.9**
CHSH	**Refugio Sur-Vo**	**2.55**	**56**	P		**Pn**	**09 48 18.0**	**+0.3**
TAMH	**Tambohuasha Ch**	**2.60**	**58**	P		**Pn**	**09 48 18.0**	**-0.3**
PORT	**Chimborazo Vol**	**2.65**	**57**	P		**Pn**	**09 48 19.0**	**0.0**
PORT				S		**Sn**	**09 48 52.0**	**+1.5**
ZUMB	**Zumba**	**2.68**	**136**	P		**Pn**	**09 48 22.0**	**+2.9**
IGUA	**Igualata**	**2.75**	**59**	P		**Pn**	**09 48 21.0**	**+0.6**
SANGA	**Volcan Sangay**	**2.76**	**72**	P		**Pn**	**09 48 22.0**	**+1.5**
BMAS	**Trigal station**	**2.88**	**61**	P		**Pn**	**09 48 23.0**	**+1.0**
TUYU	**Q. Yuibug Volc**	**2.89**	**61**	P		**Pn**	**09 48 24.0**	**+1.7**
ARRY	**Arrayan**	**2.90**	**61**	P		**Pn**	**09 48 23.0**	**+0.7**
BBIL	**Ulba Tungurahu**	**2.90**	**60**	P		**Pn**	**09 48 24.0**	**+1.7**
JUI6	**Juive**	**2.92**	**60**	P		**Pn**	**09 48 24.0**	**+1.4**
POND	**Pondoa**	**2.94**	**60**	P		**Pn**	**09 48 24.0**	**+1.1**
BRUN	**Tungurahua Vol**	**2.96**	**60**	P		**Pn**	**09 48 24.0**	**+0.8**
BULB	**Ulba Tungurahu**	**2.97**	**60**	P		**Pn**	**09 48 24.0**	**+0.7**
MAG1	**Magdalena**	**3.07**	**23**	P		**Pn**	**09 48 23.0**	**-1.5**
ILLI	**Illinizas Sur**	**3.15**	**46**	P		**Pn**	**09 48 27.0**	**+1.1**
PIS1	**Pisayambo**	**3.19**	**55**	P		**Pn**	**09 48 29.0**	**+2.5**
PAST	**Pastocalle**	**3.22**	**47**	P		**Pn**	**09 48 29.0**	**+2.1**
SRAM	**San Ramn-Vol**	**3.24**	**49**	P		**Pn**	**09 48 30.0**	**+2.9**
PUYO	**Puyo, Santa Ro**	**3.29**	**65**	P		**Pn**	**09 48 30.0**	**+2.6**
BRRN	**Barrancas

PULU	**Pululahua**	**3.83**	**41**	P	**Pn**	**09 48 37.0**	**+1.8**
PAC1	**Pacto, Paraso**	**3.85**	**35**	*e*P	**Pn**	**09 48 35.9**	**+0.6**
PAC1				*e*S	**Sn**	**09 49 19.2**	**-0.4**
PAC1	**Pacto, Paraso**	**3.85**	**35**	P	**Pn**	**09 48 35.0**	**-0.2**
OTAV	**Otavalo**	**4.03**	**39**		**Pn**	**09 48 39.0**	**+1.0**
OTAV	**Otavalo**	**4.03**	**39**	*e*P	**Pn**	**09 48 39.8**	**+1.8**
OTAV				*e*S	**Sn**	**09 49 24.8**	**+0.3**
OTAV	**Otavalo**	**4.03**	**39**	P	**Pn**	**09 48 40.0**	**+2.0**
CUSE	**Cuicocha Este**	**4.12**	**39**	*e*P	**Pn**	**09 48 40.8**	**+1.6**
CUSE				*e*S	**Sn**	**09 49 29.3**	**+2.7**
CUSE	**Cuicocha Este**	**4.12**	**39**	P	**Pn**	**09 48 40.0**	**+0.8**
CUIC	**Cuicocha-Domo**	**4.14**	**40**	P	**Pn**	**09 48 41.0**	**+1.5**
COTA	**Cotacachi**	**4.18**	**39**	P	**Pn**	**09 48 42.0**	**+1.9**
ANGU	**Angureal**	**4.19**	**45**	P	**Pn**	**09 48 43.0**	**+2.7**
CAYA	**Cayambe**	**4.22**	**45**	P	**Pn**	**09 48 43.0**	**+2.3**
IMBA	**Imbabura, San**	**4.22**	**41**		**Pn**	**09 48 40.7**	**+0.1**
IMBA	**Imbabura, San**	**4.22**	**41**	P	**Pn**	**09 48 43.0**	**+2.4**
URCU	**Urcuqui**	**4.31**	**39**	P	**Pn**	**09 48 44.0**	**+2.2**
LNGL	**El Angel-Carch**	**4.70**	**40**	P	**Pn**	**09 48 50.0**	**+2.7**
CHMA	**Chilma**	**4.76**	**38**	P	**Pn**	**09 48 50.0**	**+2.1**
CHL1	**Volc¡n Chiles**	**4.78**	**40**	P	**Pn**	**09 48 51.0**	**+2.6**
ECEN	**Cerro Negro**	**4.79**	**39**	P	**Pn**	**09 48 52.0**	**+3.5**
BONI	**La Bonita**	**4.81**	**46**	*e*P	**Pn**	**09 48 49.7**	**+1.1**
TULM	**Tulcn-Chalpat**	**4.82**	**42**	Pn	**Pn**	**09 48 49.0**	**0.0**
TULM	**Tulcn-Chalpat**	**4.82**	**42**	*e*P	Pn	09 48 54.2	+5.3
CMBC	**Cumbal**	**4.97**	**40**	*e*P	**Pn**	**09 48 55.5**	**+4.6**
GCUF	**Volcan Galeras**	**5.50**	**42**	*e*P	**Pn**	**09 49 02.1**	**+4.0**
BBAC	**Balboa, Cauca**	**6.17**	**37**	*e*P	**Pn**	**09 49 10.0**	**+2.8**
BBAC				*e*S	**Sn**	**09 50 17.4**	**+0.5**
PTLC	**Puerto Leguiza**	**6.91**	**64**	*e*P	**Pn**	**09 49 15.0**	**-2.2**
POPC	**Popayan, Colom**	**6.93**	**39**	*e*P	**Pn**	**09 49 17.9**	**+0.3**
JAMC	**Jamundi, Valle**	**7.46**	**35**	*e*P	**Pn**	**09 49 24.4**	**-0.6**
CZSB	**Cruzeiro do Su**	**9.54**	**120**	Pn	**Pn**	**09 49 54.1**	**+0.8**
ROSC	**El Rosal**	**10.19**	**41**	Pn	**Pn**	**09 49 60.0**	**-2.6**
TBTG	**Tabatinga, AM**	**11.14**	**97**		**Pn**	**09 50 14.1**	**-1.1**
ETMB	**Extrema**	**16.20**	**116**	Pn	**Pn**	**09 51 22.3**	**-1.2**
ETMB				IAmb	IAmb	09 51 24.2	
	comp=Z,3.8nm,0.7s						
SAML	**Samuel**	**18.70**	**109**	P	**P**	**09 51 54.1**	**+0.1**
SAML				IAmb	IAmb	09 51 56.0	
	comp=Z,6.0nm,0.8s						
MACA	**Manacapuru-AM**	**20.28**	**91**		**P**	**09 52 11.2**	**-0.2**
MACA				IAmb	IAmb	09 52 13.6	
	comp=Z,38nm,0.6s						

IDC 07 09:49:16.2±2.5, 54°24N×86°17E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=18.8km s-min=11.9km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.85**	**251**	I	I	09 53 50.0	
	baz=68,slow=342,SNR=4.4						
ZALV	**Zalesovo Beam**	**0.85**	**251**	Pg	Pg	09 49 31.1	-1.3
	1.0nm,0.3s,baz=69,slow=20,SNR=11						
ZALV				Lg	Lg	09 49 44.5	
	5.5nm,0.3s,baz=72,slow=29,SNR=13						
KURBB	**Kurchatov Arra**	**5.91**	**235**	Pn	Pn	09 50 46.7	+1.8
	0.1nm,0.3s,baz=52,slow=14,SNR=4.6						
KURBB				Lg	Lg	09 52 26.4	
	baz=52,slow=16,SNR=1.2						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**7.85**	**200**	Pn	Pn	09 51 12.2	+0.7
	0.3nm,0.3s,baz=24,slow=13,SNR=12						
MKAR				Lg	Lg	09 53 23.8	
	0.1nm,0.3s,baz=18,slow=28,SNR=3.4						
	0.5nm,0.3s						

*MDD **07** 10:09:40.8±1.0, 36°54N×10°66W, h30km±17km, mb_Lg3.1/10, Error ellipse: s-maj=11.4km s-min=5.2km az=63.0*
*INMG **07** 10:09:43.3±1.3, 36°62N×10°51W, h19km, ML2.2, Error ellipse: s-maj=6.5km s-min=4.1km az=80.0*
*IGIL **07** 10:09:43.4, 36°57N×10°56W, h34km, ML1.9*
*CNRM **07** 10:09:47.5, 36°40N×9°90W, h109km*

ISC 07 10:09:38.5±1.8, 36°60N±0°04×10°46W±0°07, h15km±10km, n64, σ1s64/91, 1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.41**	**68**	⇓*e*P	**Pg**	**10 10 06.6**	**+0.9**
PFVI				*e*S	**Sg**	**10 10 24.1**	**0.0**
PFVI				A	A	10 10 25.0	
	24nm,0.2s						
PFVI	**Vila Bisbo**	**1.41**	**68**	Sn	**Sg**	**10 10 24.0**	**0.0**
PFVI				Pn	**Pg**	**10 10 06.1**	**+0.4**
MORF	**Marmelete**	**1.61**	**64**	*e*P	**Pg**	**10 10 09.8**	**+0.4**
MORF				*e*S	**Sg**	**10 10 29.2**	**-1.1**
MORF				A	A	10 10 30.1	
	21nm,0.3s						
MORF	**Marmelete**	**1.61**	**64**	*e*S	**Sb**	**10 10 28.8**	**+0.7**
MORF				IAML		10 10 30.8	
	comp=N,25nm,0.1s						
PTEO	**Sao Teotonio**	**1.68**	**55**	*e*S	**Sb**	**10 10 30.5**	**+0.5**
PTEO				A	A	10 10 32.4	
	comp=N,13nm,0.7s						
PBDV	**Barranco-do-Ve**	**2.13**	**72**	*e*P	**Pb**	**10 10 16.8**	**+0.1**
PBDV				*e*S	**Sb**	**10 10 42.0**	**-0.9**
PBDV				A	A	10 10 49.2	
	comp=N,7.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**2.13**	**72**	Sn	**Sb**	**10 10 41.7**	**-1.2**
PNCL	**Nicolau / Gran**	**2.15**	**45**	*e*P	**Pb**	**10 10 16.4**	**-0.8**
PNCL				*e*S	**Sb**	**10 10 41.9**	**-1.8**
PNCL				A	A	10 10 43.5	
	comp=N,6.6nm,0.3s						
PNCL	**Nicolau / Gran**	**2.15**	**45**	Pn	**Pb**	**10 10 16.3**	**-0.9**
PNCL				Sn	**Sn**	**10 10 41.4**	**+1.1**
MESJ	**Messejana**	**2.17**	**55**	*e*P	**Pb**	**10 10 17.6**	**+0.1**
MESJ				*e*S	**Sb**	**10 10 42.5**	**-1.8**
MESJ				A	A	10 10 50.5	
	comp=N,6.7nm,0.1s						
MESJ	**Messejana**	**2.17**	**55**	*e*P	**Pb**	**10 10 17.4**	**-0.1**
MESJ				*e*S	**Sn**	**10 10 41.9**	**+1.1**
MESJ				IAML		10 10 43.5	
	comp=N,3.2nm,0.1s						
PCVE	**Castro Verde**	**2.19**	**61**	*e*P	**Pb**	**10 10 17.5**	**-0.3**
PCVE				*e*S	**Sb**	**10 10 42.8**	**-2.0**
PCVE				A	A	10 10 44.9	
	comp=N,5.3nm,0.7s						
PCVE	**Castro Verde**	**2.19**	**61**	Pn	**Pb**	**10 10 17.0**	**-0.8**
PCVE				Sn	**Sb**	**10 10 42.8**	**-2.0**
PVAQ	**Vaqueiros**	**2.34**	**69**	*e*P	**Pb**	**10 10 19.7**	**-0.6**
PVAQ				*e*S	**Sn**	**10 10 46.5**	**+1.7**
PVAQ	**Vaqueiros**	**2.34**	**69**	Sn	**Sn**	**10 10 45.9**	**+1.0**
PVAQ	**Vaqueiros**	**2.34**	**69**	P	**Pg**	**10 10 22.3**	**-1.0**
PBEJ	**Beja**	**2.51**	**55**	*e*S	**Sn**	**10 10 50.3**	**+1.2**
PMAFR	**Mafra**	**2.53**	**21**	*e*S	**Sn**	**10 10 50.2**	**+0.7**
PMAFR				A	A	10 10 53.7	
	comp=N,20nm,0.4s						
PMAFR	**Mafra**	**2.53**	**21**	Sn	**Sn**	**10 10 50.1**	**+0.5**
EGRO	**El Granado**	**2.56**	**68**	Pn	**Pb**	**10 10 22.4**	**-1.6**
EGRO				Sn	**Sb**	**10 10 52.7**	**-2.6**
EGRO	**El Granado**	**2.56**	**68**	P	**Pb**	**10 10 22.6**	**-1.4**
EGRO				S	**Sn**	**10 10 51.9**	**+1.7**
EGRO				*i* Vmb_Lg		10 10 54.9	
EVO	**Evora**	**2.74**	**45**	*e*S	**Sn**	**10 10 55.6**	**+0.9**
EVO				A	A	10 10 55.9	
	comp=N,7.2nm,0.2s						
EVO	**Evora**	**2.74**	**45**	Sn	**Sn**	**10 10 55.0**	**+0.3**
PMTG	**Montargil**	**3.03**	**35**	*e*P	**Pg**	**10 10 35.5**	**-1.1**
PMTG				*e*S	**Sn**	**10 11 02.4**	**+0.5**
PMTG				A	A	10 11 04.5	
	comp=N,3.9nm,0.7s						
PBAR	**Barrancos**	**3.15**	**59**	*e*P	**Pn**	**10 10 30.5**	**+3.0**
PBAR				*e*S	**Sn**	**10 11 05.6**	**+0.9**
PBAR				A	A	10 11 07.2	
	comp=N,2.9nm,0.2s						
PBAR	**Barrancos**	**3.15**	**59**	Sn	**Sn**	**10 11 05.6**	**+0.8**
PSBE	**So Bento**	**3.19**	**24**	*e*S	**Sn**	**10 11 07.9**	**+2.0**
PSBE				A	A	10 11 11.3	
	comp=N,16nm,0.6s						
PESTR	**Estremoz**	**3.21**	**44**	*e*P	**Pb**	**10 10 35.4**	**+0.2**
PESTR				*e*S	**Sn**	**10 11 07.4**	**+1.1**
PESTR				A	A	10 11 12.4	
	comp=N,2.9nm,0.8s						
PESTR	**Estremoz**	**3.21**	**44**	Sn	**Sn**	**10 11 07.3**	**+1.0**
PESTR	**Estremoz**	**3.21**	**44**	P	**Pb**	**10 10 37.0**	**+1.8**
EMIN	**Mina Concepcio**	**3.24**	**68**	Sn	**Sn**	**10 11 07.9**	**+0.8**
EMIN	**Mina Concepcio**	**3.24**	**68**	P	**Pn**	**10 10 30.6**	**+1.8**
EMIN				S	**Sn**	**10 11 08.1**	**+1.0**
EMIN				*i* Vmb_Lg		10 11 16.4	
EBAD	**Badajoz**	**3.48**	**51**	Sn	**Sn**	**10 11 13.4**	**+0.5**
EBAD	**Badajoz**	**3.48**	**51**	P	**Pn**	**10 10 34.6**	**+2.5**
EBAD				S	**Sn**	**10 11 13.2**	**+0.2**
EBAD				*i* Vmb_Lg		10 11 16.1	
ESPR	**Espera**	**3.71**	**85**	Sn	**Sn**	**10 11 19.4**	**+0.8**
ESPR				Pn	**Pn**	**10 10 38.3**	**+3.1**
ESPR	**Espera**	**3.71**	**85**	P	**Pn**	**10 10 37.9**	**+2.7**
ESPR				S	**Sn**	**10 11 18.9**	**+0.3**
ESPR				*i* Vmb_Lg		10 11 21.8	
PMRV	**Marv??o**	**3.72**	**40**	*e*P	**Pn**	**10 10 37.9**	**+2.5**
PMRV				*e*S	**Sn**	**10 11 18.7**	**-0.2**
PMRV				A	A	10 11 20.3	
	comp=N,2.5nm,0.2s						
PCAS	**Casmilo, Conde**	**3.77**	**24**	*e*S	**Sn**	**10 11 20.9**	**+0.6**
PCBR	**Castelo Branco**	**4.00**	**35**	*e*S	**Sn**	**10 11 26.1**	**+0.4**
AVE	**Averroes**	**4.14**	**142**	Pn	**Pn**	**10 10 43.4**	**+2.3**
AVE				Sn	**Sn**	**10 11 30.5**	**+1.2**
ECAB	**El Cabril**	**4.28**	**68**	Sn	**Sn**	**10 11 32.4**	**-0.3**
ECAB				Pn	**Pn**	**10 10 46.1**	**+3.0**
ECAB	**El Cabril**	**4.28**	**68**	P	**Pn**	**10 10 44.8**	**+1.7**
ECAB				S	**Sn**	**10 11 32.6**	**-0.2**
ECAB				*i* Vmb_Lg		10 11 34.2	
ZHG	**ZHG**	**4.44**	**134**	P	**Pn**	**10 10 47.8**	**+2.4**
ZHG	**ZHG**	**4.44**	**134**	S	**Sn**	**10 11 34.2**	**-2.7**
EPLA	**Plasencia**	**4.88**	**44**	P	**Pn**	**10 10 53.3**	**+2.0**
EPLA				S	**Sn**	**10 11 47.2**	**-0.4**
EPLA				*i* Vmb_Lg		10 11 52.2	
EADA	**Adamuz**	**4.94**	**70**	P	**Pn**	**10 10 54.4**	**+2.2**
EADA				S	**Sn**	**10 11 48.9**	**-0.1**
EADA				*i* Vmb_Lg		10 11 52.3	
POLO	**Lamas de Olo**	**5.20**	**23**	*e*S	**Sn**	**10 11 53.9**	**-1.6**
POLO				A	A	10 12 00.1	
	comp=N,2.5nm,0.7s						
MVO	**Moncorvo**	**5.28**	**29**	*e*S	**Sn**	**10 11 56.0**	**-1.6**
IFR	**Ifrane**	**5.35**	**124**	Sn	**Sn**	**10 11 57.0**	**-2.4**
IFR				Pn	**Pn**	**10 10 58.9**	**+0.9**
LCRM	**LCR**	**5.43**	**121**	P	**Pn**	**10 11 00.5**	**+1.4**
LCRM	**LCR**	**5.43**	**121**	S	**Sn**	**10 11 56.7**	**-4.7**
ELOB	**Lobios**	**5.58**	**19**	S	**Sn**	**10 12 01.5**	**-3.3**
ELOB				*i* Vmb_Lg		10 12 04.9	
PGAV	**Gavieira, Arco**	**5.62**	**17**	*e*P	Pn	10 11 07.2	+5.7
PGAV				*e*S	**Sn**	**10 12 04.6**	**-1.2**
PGAV				A	A	10 12 12.5	
	comp=N,4.6nm,0.8s						
PAB	**San Pablo**	**5.65**	**57**	P	**Pn**	**10 11 04.1**	**+2.2**
PAB				S	**Sn**	**10 12 05.1**	**-1.5**
PAB				*i* Vmb_Lg		10 15 02.7	
PSIM	**Granatula de C**	**5.76**	**65**	P	Pn	10 10 48.3	-15
PSIM				S	Sn	10 11 45.7	-24
OUK	**Oukaimeden**	**5.80**	**157**	P	**Pn**	**10 11 05.4**	**+1.1**
MD31	**MD31**	**5.99**	**127**	P	**Pn**	**10 11 08.4**	**+1.7**
EQES	**Quesada**	**6.02**	**76**	S	**Sn**	**10 12 16.1**	**+0.3**
EQES				*i* Vmb_Lg		10 12 19.9	
ECAL	**Calabor**	**6.06**	**27**	S	**Sn**	**10 12 14.8**	**-2.0**
MDT	**Midelt**	**6.13**	**126**	P	**Pn**	**10 11 09.7**	**+1.2**
GUD	**Guadarrama**	**6.38**	**49**	S	**Sn**	**10 12 22.2**	**-2.4**
EAGO	**Agolada(Pontev**	**6.46**	**16**	S	**Sn**	**10 12 23.4**	**-3.0**
OUZM	**OUZ**	**6.46**	**150**	P	**Pn**	**10 11 13.9**	**+0.7**
ETOR	**Torete**	**7.80**	**55**	S	**Sn**	**10 12 56.9**	**-2.8**

IDC 07 10:10:45.2±12.0, 2°92N×84°92W, h0km, mb3.2/3, mbtmp3.2/3, MS3.4/11, Error ellipse: s-maj=388.8km s-min=234.5km az=47.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**7.32**	**360**	LR	LR	10 14 51.0	
	comp=Z,156nm,20.2s,baz=162,slow=34						
ROSC	**El Rosal**	**10.75**	**79**	LR	LR	10 16 48.3	
	comp=Z,108nm,20.4s,baz=260,slow=34						
ATAH	**Atahualpa**	**11.93**	**147**	LR	LR	10 17 15.0	
	comp=Z,110nm,18.6s,baz=346,slow=33						
SDV	**Santo Domingo**	**15.39**	**67**	LR	LR	10 19 27.3	
	comp=Z,107nm,20.3s,baz=260,slow=34						
NNA	**Nana**	**16.85**	**152**	LR	LR	10 20 14.1	
	comp=Z,33nm,21.8s,baz=314,slow=34						
CMIG	**Matias Romero**	**17.14**	**326**	LR	LR	10 19 32.2	
	comp=Z,48nm,18.7s,baz=142,slow=31						
TEIG	**Tepich**	**17.51**	**349**	LR	LR	10 21 12.3	
	comp=Z,794nm,21.6s,baz=334,slow=36						
SIV	**San Ignacio**	**30.16**	**129**	LR	LR	10 28 46.7	
	comp=Z,100nm,18.6s,baz=295,slow=36						
H03N2	**Juan Fernandez**	**36.61**	**172**	T	T	10 55 42.8	
	baz=351,slow=76,SNR=4.1						
H03N1	**Juan Fernandez**	**36.61**	**172**	T	T	10 55 35.3	
	baz=351,slow=76,SNR=6.6						
H03N3	**Juan Fernandez**	**36.62**	**172**	T	T	10 55 35.2	
	baz=351,slow=76,SNR=6.7						
SADO	**Sadowa**	**41.98**	**6**	LR	LR	10 36 33.9	
	comp=Z,75nm,18.4s,baz=74,slow=37						
PFO	**Pinyon Flats O**	**42.42**	**320**	LR	LR	10 33 06.7	
	comp=Z,84nm,19.5s,baz=52,slow=32						
PDAR	**Pinedale Array**	**45.35**	**334**	P	P	10 19 05.3	-0.2
	0.1nm,0.5s,baz=141,slow=9.2,SNR=1.7						
	0.1nm,0.5s						
YBH	**Yreka Blue Hor**	**51.37**	**324**	LR	LR	10 40 45.3	
	comp=Z,62nm,18.4s,baz=34,slow=35						
YKA	**Yellowknife Ar**	**63.40**	**345**	P	P	10 21 16.4	+0.1
	0.3nm,0.9s,baz=143,slow=6.5,SNR=4.3						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**75.70**	**337**	P	P	10 22 32.2	0.0
	0.4nm,1.0s,baz=111,slow=4.9,SNR=2.6						
	0.4nm,1.0s						

*NNC **07** 10:10:50.6±0.6, 51°70N×75°43E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=14.3km s-min=3.7km az=26.0, Suspected Mining explosion.*
*IDC **07** 10:10:53.1±1.2, 51°50N×75°43E, h0km, mbtmp2.5/4, ML1.7/4, Error ellipse: s-maj=28.6km s-min=11.3km az=27.0*

ISC 07 10:10:52.9±1.2, 51°7N±0°2×75°5E±0°1, h0km, n12, σ2s11/10, 7C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.18**	**117**	⇑Pg	**Pn**	**10 11 31.4**	**+1.0**
	4.9nm,0.6s						
KURBB				⇑Lg	Lg	10 12 01.1	
	31nm,0.7s						
KURBB	**Kurchatov Arra**	**2.18**	**117**	Pn	**Pn**	**10 11 30.0**	**-0.4**
	0.1nm,0.3s,baz=305,slow=19,SNR=26						
KURBB				Lg	Lg	10 12 01.3	
	0.2nm,0.3s,baz=306,slow=32,SNR=10						
	1.7nm,0.6s						
KURK	**Kurchatov**	**2.18**	**115**	⇑Pg	**Pn**	**10 11 31.2**	**+0.7**
	4.5nm,0.9s						
KURK				⇑Lg	Lg	10 11 59.9	
	14nm,0.8s						
BVA0	**Borovoye Array**	**3.42**	**295**	⇓Pg	**Pb**	**10 11 52.4**	**-1.8**
	2.3nm,0.9s,baz=117,slow=18,SNR=4.0						
BVA0				⇑Lg	Lg	10 12 38.3	
	5.1nm,0.8s,baz=106,slow=27,SNR=4.8						
BVAR	**Borovoye Array**	**3.42**	**295**	Pn	**Pn**	**10 11 47.8**	**+0.4**
	baz=117,slow=16,SNR=4.6						
BVAR				Lg	Lg	10 12 34.8	
	0.1nm,0.3s,baz=102,slow=21,SNR=7.7						
	0.7nm,0.5s						
BRVK	**Borovoye**	**3.49**	**296**	⇓Pg	**Pn**	**10 11 52.7**	**+4.3**
	1.6nm,1.1s						
BRVK				⇓Lg	Lg	10 12 39.4	
	6.3nm,0.7s						
OTUK	**Ortayu**	**3.98**	**212**	⇑Lg	Lg	10 12 55.4	
	5.6nm,0.9s						
ZALV	**Zalesovo Beam**	**6.10**	**64**	Pn	**Pn**	**10 12 24.4**	**+0.1**
	0.2nm,0.3s,baz=260,slow=14,SNR=4.7						
ZALV				Lg	Lg	10 14 10.1	
	0.1nm,0.3s,baz=163,slow=11,SNR=2.1						
	0.6nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.10**	**64**	I	I	10 51 10.0	
	baz=249,slow=331,SNR=3.8						
MAKZ	**Makanchi**	**6.45**	**136**	⇑Lg	Lg	10 14 17.9	
	4.6nm,0.8s						
MK31	**Makanchi Array**	**6.60**	**135**	⇓Pn	**Pn**	**10 12 29.6**	**-1.5**
	1.2nm,0.9s,baz=311,slow=9.7,SNR=4.2						
MK31				⇓Sn	**Sn**	**10 13 48.9**	**+1.9**
	1.2nm,1.0s,baz=318,slow=25,SNR=8.0						
MK31				⇓Lg	Lg	10 14 24.2	
	3.0nm,0.8s,baz=323,slow=25,SNR=4.5						
MKAR	**Makanchi Array**	**6.60**	**135**	Pn	**Pn**	**10 12 29.9**	**-1.3**
	baz=317,slow=10.0,SNR=4.9						
MKAR				Lg	Lg	10 14 17.9	
	0.1nm,0.3s,baz=313,slow=23,SNR=8.5						
	0.4nm,0.8s						

*UPA **07** 10:11:00.3±1.5, 8°06N×83°01W, h15km±3km, MD4.1, ML3.7, MW4.0*
*UCR **07** 10:11:01.0±0.8, 8°05N×82°90W, h12km±5km, MW3.9*

ISC 07 10:11:02.1±1.0, 8°13N±0°05×82°93W±0°03, h17km±5km, n39, σ1s01/52, 5C-8D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIMO3	**Limones**	**0.07**	**113**	⇑*e*P	**Pg**	**10 11 04.8**	**-0.5**
LIMO3				*e*S	**Sg**	**10 11 07.8**	**+0.3**
PTPM	**Petroterminale**	**0.09**	**31**	⇓*i*P	**Pg**	**10 11 05.2**	**-0.3**
PTPM				*e*S	**Sg**	**10 11 08.5**	**+0.7**
CDITO	**Canoas**	**0.45**	**7**	⇓*e*P	**Pg**	**10 11 10.8**	**-0.4**
CDITO				*e*S	**Sb**	**10 11 19.7**	**+1.8**
CDITO	**Canoas**	**0.45**	**7**	⇓*i*P	**Pg**	**10 11 10.7**	**-0.5**
PIRO	**Carate, Puerto**	**0.49**	**304**	⇑*i*P	**Pg**	**10 11 11.4**	**-0.6**
FITO	**Golfito**	**0.54**	**335**	*e*P	**Pg**	**10 11 12.1**	**-0.9**
PTJ1	**Puerto Jimnez**	**0.55**	**318**	⇑*i*P	**Pb**	**10 11 13.1**	**-0.3**
PEDE3	**Pedregal, Chir**	**0.56**	**63**	*e*P	**Pg**	**10 11 12.7**	**-0.6**
PEDE3				*e*S	**Sb**	**10 11 23.2**	**+2.0**
DVD	**David**	**0.56**	**57**	*e*P	**Pg**	**10 11 13.0**	**-0.3**
DVD				*e*S	**Sb**	**10 11 21.5**	**+0.3**
JIME	**Puerto Jimenez**	**0.57**	**316**	⇑*i*P	**Pb**	**10 11 13.3**	**-0.3**
EDAD	**Golfito**	**0.57**	**336**	*e*P	**Pg**	**10 11 12.5**	**-1.1**
LOCO3	**Loma Colorada,**	**0.58**	**61**	⇓*e*P	**Pg**	**10 11 13.2**	**-0.4**
LOCO3				*e*S	**Sn**	**10 11 24.4**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.67**	**9**	*e*P	**Pg**	**10 11 15.3**	**-0.1**
VITO	**San Vito**	**0.69**	**356**	⇑*e*P	**Pg**	**10 11 15.6**	**-0.1**
BRU2	**Volcan**	**0.70**	**19**	⇓*e*P	**Pg**	**10 11 15.6**	**-0.4**
BRU2				*e*S	**Sn**	**10 11 28.0**	**0.0**
BRU2	**Volcan**	**0.70**	**19**	⇓*i*P	**Pg**	**10 11 15.6**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.70**	**37**	⇓*e*P	**Pg**	**10 11 15.6**	**-0.4**
PTAR3				AMP		10 11 15.8	
	comp=Z,3µm,0.1s						
PTAR3				*e*S	**Sn**	**10 11 28.2**	**+0.2**
BCO2	**Palmira**	**0.71**	**34**	⇓*e*P	**Pg**	**10 11 15.7**	**-0.4**
BCO2				*e*S	**Sb**	**10 11 27.7**	**+2.1**
BC3P	**Paso Ancho**	**0.75**	**24**	*e*P	**Pg**	**10 11 14.2**	**-2.8**
LNBQ3	**Los Naranjos,**	**0.82**	**36**	*e*P	**Pg**	**10 11 17.0**	**-1.1**
LNBQ3				*e*S	**Sb**	**10 11 30.6**	**+1.9**
POTG	**Potrero Grande**	**0.94**	**348**	*e*P	**Pg**	**10 11 19.4**	**-1.0**
EDPN	**Palmar Norte**	**0.98**	**328**	*e*P	**Pg**	**10 11 19.8**	**-1.4**
BURE	**Buenos Aires**	**1.12**	**339**	*e*P	**Pb**	**10 11 22.9**	**-0.1**
CHGR2	**Aguacate**	**1.12**	**44**	*e*P	**Pb**	**10 11 21.6**	**-1.4**
CHGR2				*e*S	**Sb**	**10 11 36.9**	**-0.4**
DRK0	**Durika**	**1.17**	**344**	*e*P	**Pb**	**10 11 23.0**	**-1.1**
NANC3	**Nancito, Chiri**	**1.19**	**84**	*e*P	**Pb**	**10 11 23.2**	**-1.0**
NANC3				*e*S	**Sn**	**10 11 41.7**	**+1.9**
CNI2	**El Empalme, Bo**	**1.36**	**19**	*e*P	**Pn**	**10 11 26.3**	**-0.2**
CNI2				*e*S	**Sb**	**10 11 45.6**	**+1.2**
PEZE	**Perez Zeledon,**	**1.45**	**329**	*e*P	**Pn**	**10 11 27.7**	**0.0**
ZELE	**Perez Zeledon**	**1.46**	**328**	*e*P	**Pn**	**10 11 28.2**	**+0.4**
BUS1	**Rivas**	**1.63**	**330**	*e*P	**Pn**	**10 11 30.4**	**-0.1**
CDM	**Cerro de Muert**	**1.64**	**330**	*e*P	**Pn**	**10 11 30.5**	**-0.1**
GMAL	**Guarumal, Vera**	**1.71**	**102**	*e*P	**Pn**	**10 11 31.3**	**+0.1**
MESA3	**La Mesa, Verag**	**1.72**	**89**	*e*P	**Pb**	**10 11 32.2**	**-1.1**
RSUS3	**Rio de Jesus,**	**1.75**	**95**	*e*P	**Pb**	**10 11 32.7**	**-1.2**
LLNJ	**Naranjito**	**1.77**	**319**	*e*P	**Pn**	**10 11 32.1**	**+0.1**
SVQ2	**Quepos**	**1.79**	**317**	*e*P	**Pn**	**10 11 31.9**	**-0.3**
CACAO	**El Cacao, Vera**	**2.19**	**111**	*e*P	**Pn**	**10 11 38.8**	**+1.0**
CHIT3	**Chitre**	**2.49**	**94**	*e*P	**Pb**	**10 11 44.7**	**-1.8**
JTS	**Las Juntas de**	**2.94**	**317**	*e*P	**Pn**	**10 11 48.3**	**+0.2**

IDC 07 10:16:33.0±1.4, 1°05N×123°58E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=184.0km s-min=22.1km az=63.0, Minahassa Peninsula, Sulawesi

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

baz=231
NNSB Datong 0.39 309 ⇓P Pb 10 19 55.2 -0.2
baz=309
NNSB eS Sg 10 20 00.5 +0.4
baz=309
NNSH Datong 0.39 309⇓eP Pb 10 19 55.2 -0.3
baz=309
NNSH eS Sg 10 20 00.6 +0.4
baz=309
LATG Datong 0.39 334⇓iP Pb 10 19 55.2 -0.2
baz=337
LATG eS Sb 10 20 00.9 -0.5
baz=337
NNS Nan Shan 0.40 310 ⇓P Pb 10 19 55.4 -0.3
baz=310
NNS eS Sg 10 20 00.9 +0.3
baz=310
ESAO Su ao 0.41 17⇓iP Pb 10 19 55.5 -0.3
baz=23
ESAO iS Sg 10 20 00.6 0.0
baz=23
WHF Hehuan Shan 0.41 265⇓iP Pb 10 19 55.8 -0.2
baz=259
WHF eS Sg 10 20 01.2 +0.2
baz=259
SHUL Shoufeng 0.42 199 ⇑P Pb 10 19 56.8 +0.9
baz=194
SHUL eS Sn 10 20 05.2 -0.5
baz=194
FUSS Fushou 0.43 279⇓iP Pb 10 19 56.3 0.0
baz=275
FUSS S Sg 10 20 02.0 +0.5
baz=275
TWC Suao 0.44 16⇓iP Pb 10 19 56.2 -0.1
baz=23
TWC S Sg 10 20 02.1 +0.4
baz=23
ESL Shilin 0.45 215 ⇑P Pb 10 19 56.2 -0.2
baz=208
ESL eS Sb 10 20 04.0 +1.1
baz=208
NDS Dongshan 0.45 0⇓iP Pb 10 19 56.5 0.0
baz=5.0
NDS eS Sb 10 20 02.5 -0.4
baz=5.0
NDT Datong Townshi 0.46 336⇓iP Pb 10 19 56.6 0.0
baz=339
NDT eS Sb 10 20 02.6 -0.5
baz=339
ENTT Nioudou 0.47 344⇓iP Pb 10 19 56.9 0.0
baz=348
ENTT eS Sb 10 20 03.5 -0.2
baz=348
TWT Tachien 0.50 278 ⇓P Pb 10 19 57.8 +0.5
baz=274
TWT S Sb 10 20 04.5 0.0
baz=274
TEGC Jichi Village 0.50 199 eP Pn 10 19 58.5 -0.8
baz=193
TEGC eS Sn 10 20 08.6 +0.9
baz=193
CHGB Renai 0.51 256 P Pb 10 19 57.8 +0.2
baz=252
CHGB eS Sb 10 20 04.5 -0.4
baz=252
TDCB Techi 0.51 278⇓iP Pb 10 19 57.9 +0.3
baz=275
TDCB S Sg 10 20 04.3 +0.4
baz=275
EOS2 EOS2 0.53 63 iP Pn 10 19 59.4 -0.3
baz=68
EOS2 eS Sn 10 20 07.8 -0.4
baz=68
TWE Neicheng 0.54 355 ⇓P Pb 10 19 58.0 0.0
baz=1.0
TWE S Sb 10 20 05.2 -0.3
baz=1.0
OWD Renai 0.54 245 ⇑P Pb 10 19 58.3 +0.2
baz=240
OWD eS Sb 10 20 06.3 +0.6
baz=240
WARBT Fenglin Townsh 0.55 213 ⇑P Pb 10 19 58.0 -0.2
baz=208
WARBT eS Sb 10 20 06.9 +1.0
baz=208
EOS4 EOS4 0.56 96 P Pn 10 20 00.1 +0.2
baz=99
EOS4 eS Sn 10 20 09.1 +0.5
baz=99
EOS3 EOS3 0.56 79 iP Pn 10 20 00.5 +0.4
baz=83
EOS3 eS Sn 10 20 11.2 +2.1
baz=83
YHNB Yeheng 0.57 328 Pb 10 19 58.8 +0.1
YHNB Sg Sg 10 20 06.1 +0.2
YHNB Yeheng 0.57 328 P Pb 10 19 59.1 +0.5
YHNB Yeheng 0.57 328 ⇓P Pb 10 19 58.7 +0.1
baz=329
YHNB eS Sg 10 20 05.9 +0.1
baz=329
EGFH Guangfu 0.57 207 ⇑P Pb 10 19 58.8 +0.2
baz=203
EGFH eS Sn 10 20 08.9 -0.7
baz=203
WUSB Renai 0.58 251 eP Pb 10 19 59.1 +0.4
baz=247
WUSB eS Sb 10 20 06.8 +0.1
baz=247
ILA Ilan 0.58 3 eP Pb 10 19 59.2 +0.5
baz=8.0
ILA eS Sb 10 20 07.3 +0.5
baz=8.0
FUSB Fushanzhiwuyua 0.59 349 ⇓P Pb 10 19 58.9 +0.1
baz=352
FUSB S Sg 10 20 06.5 +0.3
baz=352
NSK Sanguang 0.59 327 ⇓P Pb 10 19 58.9 +0.1
baz=329
NSK eS Sg 10 20 06.4 +0.2
baz=329
NWLT Wulai 0.62 342 ⇓P Pb 10 19 59.6 +0.2
baz=344
NWLT S Sg 10 20 07.3 0.0
baz=344
VWDT VWDT 0.68 231 ⇑P Pb 10 20 00.7 +0.5
baz=227
VWDT eS Sn 10 20 11.4 -0.7
baz=227
NFF Wufeng Townshi 0.70 310 eP Pb 10 20 01.2 +0.4
baz=309
NFF eS Sb 10 20 10.1 -0.2
baz=309
WHP Taichung City 0.71 278 P Pn 10 20 02.0 -0.3
baz=275
WHP eS Sb 10 20 11.0 +0.5
baz=275
WPL Puli Township 0.71 256 eP Pn 10 20 01.8 -0.5
baz=253
WPL eS Sb 10 20 10.8 +0.3
baz=253
DPDB Guoxing 0.73 258⇑eP Pn 10 20 02.1 -0.6
baz=255
DPDB eS Sb 10 20 11.8 +0.6
baz=255
HGSD Ruisui 0.74 201 P Pn 10 20 02.2 -0.4
baz=198
HGSD eS Sn 10 20 15.4 +1.8
baz=198
WCS Beigang Elemen 0.74 260⇑eP Pn 10 20 02.1 -0.6
baz=257
WCS eS Sb 10 20 11.8 +0.4
baz=257
EHY Hungye 0.76 208 eP Pg 10 20 01.4 -0.3
baz=204
EHY eS Sn 10 20 14.2 -0.1
baz=204
LIOB Emei 0.79 306⇑eP Pn 10 20 03.1 -0.2
baz=306
LIOB eS Sb 10 20 13.3 +0.7
baz=306
NSTT Nanjuang 0.79 305⇑eP Pn 10 20 03.0 -0.4
baz=304
NSTT eS Sb 10 20 12.9 +0.2
baz=304
TIPB Shuangxi 0.79 7⇓eP Pb 10 20 02.7 +0.4
baz=10.0
TIPB eS Sg 10 20 12.6 0.0
baz=10.0

NJD Zhudong 0.79 314 eP Pn 10 20 04.7 +1.2
baz=314
NHDH Xindian Distri 0.80 348 eP Pn 10 20 03.2 -0.3
baz=350
NHDH eS Sg 10 20 12.7 -0.1
baz=350
SSLB Suanglung 0.80 241 Pb 10 20 02.6 +0.2
SSLB Sg Sg 10 20 12.9 0.0
SSLB Suanglung 0.80 241 P Pn 10 20 03.2 -0.4
SSLB Suanglung 0.80 241⇑eP Pb 10 20 02.8 +0.4
baz=237
SSLB eS Sb 10 20 13.0 0.0
baz=237
SMLT Sun Moon Lake 0.80 248⇑eP Pn 10 20 03.2 -0.5
baz=245
SMLT eS Sb 10 20 14.2 +1.0
baz=245
TWA Mucha 0.80 352 eP Pn 10 20 03.4 -0.2
baz=354
TWA eS Sb 10 20 13.2 0.0
baz=354
TATO Taipei 0.81 345 Pn 10 20 03.3 -0.5
TATO Taipei 0.81 345 P Pn 10 20 03.9 +0.2
TATO Taipei 0.81 345 eP Pn 10 20 03.5 -0.3
baz=348
TATO eS Sg 10 20 13.3 -0.1
baz=348
TYC Yuchr 0.83 251⇑eP Pn 10 20 03.5 -0.4
baz=247
TYC eS Sb 10 20 14.6 +0.6
baz=247
BACT New Taipei Cit 0.85 343 eP Pn 10 20 05.1 +0.9
baz=345
BACT eS Sg 10 20 15.3 +0.8
baz=345
TWB1 Santiao Chiao 0.86 17 eP Pn 10 20 03.9 -0.4
baz=20
TWB1 eS Sb 10 20 14.5 -0.3
baz=20
NHY Taipei 0.86 351 eP Pn 10 20 05.2 +0.8
baz=353
HSN1 Hsinchu 0.87 313 eP Pn 10 20 05.5 +1.0
baz=313
HSN1 eS Sn 10 20 16.9 0.0
baz=313
TAP Taipei 0.87 348 eP Pn 10 20 05.4 +0.8
baz=350
TAP eS Sg 10 20 15.8 +0.6
baz=350
TWQ1 Liyutan 0.88 281 eP Pn 10 20 05.2 +0.6
baz=279
TWQ1 eS Sn 10 20 18.3 +1.3
baz=279
YULB Yu-li 0.88 206 Pb 10 20 03.0 -0.7
YULB Yu-li 0.88 206 P Pn 10 20 04.3 -0.3
YULB Yu-li 0.88 206 eP Pb 10 20 02.9 -0.7
baz=203
YULB eS Sn 10 20 16.9 -0.1
baz=203
NWF Wu-fen Shan 0.89 4 eP Pn 10 20 05.0 +0.2
baz=7.0
NWF eS Sb 10 20 14.7 -0.9
baz=7.0
WFSB Wu-fen Shan 0.89 4 eP Pn 10 20 04.9 +0.2
baz=6.0
WFSB eS Sb 10 20 14.9 -0.6
baz=6.0
ECBN Changbin 0.90 196 eP Pn 10 20 05.0 +0.1
baz=193
ECBN eS Sn 10 20 19.4 +1.9
baz=193
NTY Taoyuan 0.90 335 eP Pn 10 20 05.8 +0.9
baz=336
NTY eS Sn 10 20 18.2 +0.6
baz=336
SBCB Hsinchu 0.90 313 eP Pn 10 20 05.8 +0.9
baz=313
SBCB eS Sn 10 20 18.0 +0.4
baz=313
NSY Sanyi 0.90 285 eP Pn 10 20 05.4 +0.5
baz=284
NSY eS Sn 10 20 19.3 +1.6
baz=284
EYUL Yuli 0.91 204 eP Pb 10 20 04.2 -0.1
baz=201
EYUL eS Sn 10 20 19.9 +2.1
baz=201
TWF1 Yuli 0.91 205 eP Pb 10 20 03.5 -0.8
baz=201
TWF1 eS Sn 10 20 17.6 -0.4
baz=201
NMLH Miaoli 0.91 293 eP Pn 10 20 06.2 +1.1
baz=292
NMLH eS Sn 10 20 17.6 -0.4
baz=292
HSN Hsinchu 0.92 312 eP Pn 10 20 05.8 +0.6
baz=315
HSN eS Sn 10 20 18.6 +0.5
baz=315
NCUH Zhongli 0.92 328 eP Pn 10 20 06.0 +0.8
baz=329
NCUH eS Sn 10 20 18.1 0.0
baz=329
NCU National Centr 0.92 329 eP Pn 10 20 05.9 +0.8
baz=330
NCU eS Sn 10 20 18.5 +0.3
baz=330
SXI1 Grass Mountain 0.92 9 eP Pn 10 20 05.3 +0.1
baz=12
SXI1 eS Sn 10 20 17.5 -0.8
baz=12
WHYT Xinyi Township 0.93 239 eP Pn 10 20 05.3 0.0
baz=236
WHYT eS Sn 10 20 19.7 +1.3
baz=236
WWF Wufeng 0.94 262 eP Pn 10 20 07.1 +1.7
baz=259
WWF eS Sn 10 20 21.3 +2.7
baz=259
TCU Taichung 0.95 268 eP Pn 10 20 07.0 +1.4
baz=266
TCU eS Sn 10 20 20.6 +1.8
baz=266
TWS1 Kuangyinshan 0.95 344 eP Pn 10 20 06.7 +1.1
baz=346
TWS1 eS Sn 10 20 19.4 +0.4
baz=346
TNOU National Taiwa 0.96 3 eP Pn 10 20 06.4 +0.6
baz=5.0
TNOU eS Sg 10 20 18.4 +0.3
baz=5.0
YM01 YM01 0.97 352 eP Pn 10 20 06.1 +0.2
baz=354
YM01 eS Sg 10 20 18.8 +0.5
baz=354
WJS Zhushan 0.97 248 eP Pn 10 20 07.0 +1.1
baz=246
WJS eS Sn 10 20 21.4 +2.0
baz=246
WNT1 Nantou City 0.98 254 eP Pn 10 20 08.3 +2.2
baz=251
WNT1 eS Sn 10 20 22.5 +2.8
baz=251
WNT Mingjian 0.99 252 eP Pn 10 20 07.5 +1.4
baz=249
WNT eS Sn 10 20 21.9 +2.1
baz=249
WDJ Dajia District 0.99 280 eP Pn 10 20 08.0 +1.8
baz=278
WDJ eS Sn 10 20 21.7 +1.7
baz=278
NTST Danshui 1.01 346 eP Pn 10 20 07.6 +1.2
baz=348
NTST eS Sn 10 20 21.4 +1.1
baz=348
YM08 YM08 1.01 354 eP Pn 10 20 07.2 +0.7
baz=355
YM08 eS Sn 10 20 20.7 +0.4
baz=355
ANP Anpu 1.01 350 eP Pn 10 20 07.2 +0.6
baz=352
ANP eS Sn 10 20 20.4 -0.2
baz=352
NHW Xinwu Township 1.02 324 eP Pn 10 20 07.1 +0.5
baz=324
NHW eS Sn 10 20 22.4 +1.8
baz=324
CHKH Chenggong 1.03 197 eP Pb 10 20 06.3 0.0

baz=194
CHKH eS Sn 10 20 22.0 +1.2
baz=194
FULB Fuli 1.05 202 eP Pg 10 20 07.2 +0.1
baz=199
FULB eS Sn 10 20 23.4 +1.9
baz=199
WCHH Zhanghua 1.06 265 eP Pg 10 20 08.8 +1.5
baz=263
WCHH eS Sn 10 20 26.2 +4.6
baz=263
ALS Alishan 1.07 231 eP Pg 10 20 08.3 +0.8
baz=228
ALS eS Sn 10 20 23.1 +0.9
baz=228
TWY Chenhua 1.09 355 eP Pg 10 20 09.3 +1.4
baz=357
TWY eS Sn 10 20 23.5 +1.1
baz=357
CHN5 Tsauling 1.11 239 eP Pg 10 20 09.3 +1.1
baz=236
CHN5 eS Sn 10 20 25.9 +2.8
baz=236
CHKT Chengkung 1.12 197 eP Pb 10 20 07.7 -0.2
baz=194
CHKT eS Sg 10 20 24.6 +1.4
baz=194
EHD Haiduan 1.13 204 eP Pb 10 20 06.8 -1.2
baz=202
EHD eS Sg 10 20 24.8 +1.5
baz=202
JYNG Yonagunijimaku 1.15 76 P Pg 10 20 09.3 +0.3
JYNG S Sg 10 20 25.4 +1.2
JYNG Yonagunijimaku 1.15 76 A A 10 20 09.3
comp=E,7.0nm,1.1s,comp=N,13nm,3.0s
WGK Gukeng 1.17 245 eP Pg 10 20 10.6 +1.3
baz=242
WGK eS Sg 10 20 26.5 +2.0
baz=242
ECS Chishang 1.17 203 eP Pg 10 20 09.6 +0.1
baz=201
ECS eS Sg 10 20 28.9 +4.1
baz=201
ELDTW Lidau 1.18 213 eP Pn 10 20 08.0 -0.8
baz=210
ELDTW eS Sg 10 20 24.9 0.0
baz=210
WDLH Douliu 1.18 246 eP Pg 10 20 10.8 +1.2
baz=243
WDLH eS Sg 10 20 27.2 +2.1
baz=243
YOJ Yonaguni jima 1.22 77 Pb 10 20 09.9 +0.4
YOJ Yonaguni jima 1.22 77 P Pg 10 20 10.6 +0.3
YOJ Yonaguni jima 1.22 77 eP Pg 10 20 10.5 +0.3
baz=78
YOJ eS Sg 10 20 27.4 +1.3
baz=78
YOJ Yonaguni jima 1.22 77 P Pg 10 20 10.5 +0.3
YOJ S Sg 10 20 27.2 +1.2
YOJ Yonaguni jima 1.22 77 A A 10 20 10.5
comp=E,9.0nm,1.3s,comp=N,9.0nm,1.3s
WRL Guolierlin Hig 1.25 257 eP Pg 10 20 11.4 +0.5
baz=255
WRL eS Sg 10 20 29.5 +2.1
baz=255
WCKO Fanlu 1.26 234 eP Pg 10 20 11.7 +0.7
baz=232
WCKO eS Sg 10 20 29.6 +2.2
baz=232
EDH Donghe 1.26 197 eP Pn 10 20 08.6 -1.3
baz=195
EDH eS Sg 10 20 27.3 -0.2
baz=195
RLNB Erlin 1.27 257 eP Pg 10 20 12.2 +0.9
baz=255
RLNB eS Sg 10 20 30.4 +2.5
baz=255
CHN2 Minshiung 1.31 241 eP Pg 10 20 13.3 +1.3
baz=238
CHN2 eS Sg 10 20 31.3 +2.4
baz=238
WTK Tuku 1.31 248 eP Pg 10 20 13.2 +1.2
baz=246
WTK eS Sg 10 20 31.8 +2.7
baz=246
CHN4 Tsaushan 1.32 231 eP Pg 10 20 12.9 +0.7
baz=229
CHN4 eS Sg 10 20 32.3 +2.9
baz=229
STYH Taoyuan 1.32 221 eP Pb 10 20 11.7 +0.4
baz=218
STYH eS Sg 10 20 29.9 +0.3
baz=218
TPUB Ta-pu 1.33 229 Pn Pb 10 20 11.3 -0.1
TPUB Ta-pu 1.33 229 P Pg 10 20 13.0 +0.7
TPUB Ta-pu 1.33 229 eP Pg 10 20 12.6 +0.3
baz=226
TPUB eS Sg 10 20 31.6 +1.9
baz=226
STYT Tauyuan 1.34 221 eP Pb 10 20 12.1 +0.4
baz=218
STYT eS Sg 10 20 30.5 +0.3
baz=218
WTP Ta-pu 1.37 227 eP Pg 10 20 13.3 0.0
baz=225
WTP eS Sg 10 20 33.3 +2.2
baz=225
LONT Longtian 1.38 203 eP Pn 10 20 11.1 -0.4
baz=201
LONT eS Sg 10 20 34.3 +3.0
baz=201
TWK Hsinying 1.45 231 eP Pg 10 20 14.9 +0.3
baz=229
TWK eS Sg 10 20 34.0 +0.5
baz=229
WSF Szhu 1.47 249 eP Pg 10 20 15.6 +0.5
baz=246
WSF eS Sg 10 20 35.9 +1.7
baz=246
SNST Tainan City 1.47 230 eP Pg 10 20 15.0 -0.1
baz=227
SNST eS Sg 10 20 34.8 +0.5
baz=227
CHN1 Nanshi 1.47 228 eP Pg 10 20 15.2 +0.1
baz=226
CHN1 eS Sg 10 20 35.9 +1.6
baz=226
TWG Pinlang 1.48 204 Pn 10 20 12.1 -0.8
TWG Pinlang 1.48 204 eP Pn 10 20 11.5 -1.4
baz=201
TWG eS Sn 10 20 30.9 -1.0
baz=201
TWGBT Beinan 1.48 203 P Pn 10 20 12.1 -0.8
TWGBT Beinan 1.48 203 eP Pn 10 20 11.4 -1.4
baz=201
TWGBT eS Sn 10 20 31.9 -0.1
baz=201
SGST Jiashian 1.51 224 eP Pb 10 20 14.5 0.0
baz=221
SGST eS Sg 10 20 35.4 -0.1
baz=221
LDUT Ludao 1.52 189 eP Pn 10 20 12.5 -0.9
baz=187
LDUT eS Sn 10 20 32.6 -0.3
baz=187
SLGT Liugui 1.54 220 eP Pg 10 20 15.7 -0.6
baz=218
SLGT eS Sg 10 20 36.8 +0.5
baz=218
ICHU Yijhu 1.55 238 eP Pg 10 20 16.3 -0.2
baz=236
ICHU eS Sg 10 20 37.6 +0.9
baz=236
TSMG Majia 1.77 214 eP Pb 10 20 19.4 +0.4
baz=212
TSMG eS Sb 10 20 41.0 0.0
baz=212
IRIF Iriomote-Funau 1.85 85 P Pb 10 20 19.8 -0.4
IRIF S Sb 10 20 43.3 +0.1
IRIF Iriomote-Funau 1.85 85 A A 10 20 19.8
comp=E,3.0nm,6.3s,comp=N,6.0nm,1.8s
MASBT Mashibuluo 1.85 213 eP Pb 10 20 19.4 -1.0
baz=211
MASBT eS Sg 10 20 45.2 -1.3
baz=211
HATJ Hateruma jima 1.92 93 P Pb 10 20 20.8 -0.7
HATJ S Sb 10 20 45.2 +0.1
HATJ Hateruma jima 1.92 93 A A 10 20 20.8

comp=E,5.0nm,3.0s,comp=N,7.0nm,5.6s
EAST Anshuo 1.96 204 *e*P **Pn 10 20 19.3 -0.2**
baz=202
EAST *e*S **Sg 10 20 49.0 -0.9**
baz=202
PNG Penghu 2.07 253 *e*P **Pb 10 20 22.5 -1.5**
baz=252
PNG *e*S **Sb 10 20 49.0 -0.6**
baz=252
PHUB P'eng-hu 2.07 252 *e*P **Pb 10 20 22.6 -1.5**
baz=250
PHUB *e*S **Sb 10 20 48.7 -1.0**
baz=250
JKRS Kuro-shima 2.10 88 P **Pb 10 20 23.1 -1.4**
JKRS *e*S **Sb 10 20 49.9 -0.5**
JKRS Kuro-shima 2.10 88 A A 10 20 23.1
comp=E,9.0nm,4.6s,comp=N,7.0nm,2.1s
LYUB Lan-yu 2.17 183 *e*P **Pn 10 20 21.7 -0.7**
baz=182
LYUB *e*S **Sb 10 20 51.3 -1.3**
baz=182
VWUC VWUC 2.21 292⇑ *e*P **Pn 10 20 23.5 +0.5**
baz=291
VWUC *e*S **Sn 10 20 49.6 -0.5**
baz=291
JIJ Ishigaki jima 2.22 85 P **Pn 10 20 24.2 +1.1**
JIJ *e*S **Sn 10 20 51.6 +1.3**
JIJ Ishigaki jima 2.22 85 A A 10 20 24.2
comp=E,2.0nm,5.8s,comp=N,2.0nm,8.4s
JISG Ishigakijimahi 2.40 80 P **Pn 10 20 26.9 +1.3**
JISG S **Sn 10 20 56.2 +1.5**
JISG Ishigakijimahi 2.40 80 A A 10 20 26.9
comp=E,4.0nm,6.5s,comp=N,3.0nm,3.4s
JTJ Tarama 2.76 80 P **Pn 10 20 33.1 +2.6**
JTJ *e*S **Sn 10 21 06.5 +2.9**
JTJ Tarama 2.76 80 A A 10 20 33.1
comp=E,4.0nm,3.2s,comp=N,5.0nm,3.2s
QZH Quanzhou 2.94 286 Pn **Pn 10 20 33.3 +0.3**
QZH Sn **Sn 10 21 06.6 -1.5**
QZH smax smax
comp=N,640nm,0.8s
QZH smax smax
comp=E,380nm,0.8s
KNMB Chin-men Tao 3.05 276 Pn **Pn 10 20 35.3 +0.9**
JIRB Irabujima 3.21 78 P **Pn 10 20 39.6 +2.8**
JIRB *e*S **Sn 10 21 17.9 +3.0**
JIKM Ikemajima 3.30 76 P **Pn 10 20 40.5 +2.6**
JIKM S **Sn 10 21 20.6 +3.7**
JMJ Miyako jima 2 3.32 78 P **Pn 10 20 41.3 +3.1**
JMJ2 Miyako jima3 3.34 80 P **Pn 10 20 41.2 +2.8**
JMJ2 S **Sn 10 21 21.0 +3.1**
JOGS Gusukube 3.41 80 P **Pn 10 20 42.5 +3.1**
JOGS S **Sn 10 21 22.9 +3.2**
JOW Kunigami 6.49 65 Pn **Pn 10 21 22.2 +0.4**
JOW Kunigami 6.49 65 P **Pn 10 21 23.6 +1.8**
JOW Kunigami 6.49 65 Pn **Pn 10 21 21.6 -0.1**
comp=E,1.9nm,0.3s,baz=232,slow=12,SNR=8.1
comp=E,6.0nm,0.3s
SSE Sheshan 6.90 356 Pn **Pn 10 21 27.1 -0.3**
SSE Sn **Sn 10 22 47.4 +1.7**
SSE smax smax
comp=N,46nm,1.1s
SSE smax smax
comp=E,69nm,1.0s
SSE LR LR
comp=N,380nm,12.5s
SSE LR LR
comp=E,150nm,12.5s
TGY Tagaytay City 10.05 184 LR LR 10 25 35.3
comp=E,160nm,19.4s,baz=166,slow=35
JNU Nakatsue 12.00 40 Pn **Pn 10 22 38.9 +1.6**
comp=E,0.1nm,0.3s,baz=297,slow=15,SNR=2.0
KSRS Korea Array 14.26 20 Pn **Pn 10 23 10.2 +2.1**
comp=E,0.3nm,0.3s,baz=197,slow=14,SNR=9.9
KSRS LR LR 10 29 29.1
comp=E,92nm,21.6s,baz=210,slow=41
KS19 Wonju Array Si 14.28 20 Pn 10 23 08.0 -0.6
MJAR Matsushiro Arr 18.79 45 P **Pn 10 24 06.5 +0.4**
baz=235,slow=6.3,SNR=1.7
MJAR LR LR 10 31 43.7
comp=E,96nm,18.6s,baz=216,slow=38
comp=E,0.7nm,0.6s
CRAI Chiangrai 20.14 263 P **P 10 24 20.4 -0.2**
JMM Marumori 21.24 46 P **P 10 24 32.0 -0.2**
JMM IAmb IAmb 10 24 52.3
comp=Z,22nm,1.0s
USRK Ussuriysk Ar. 21.67 20 P **P 10 24 37.1 +0.4**
USRK Ussuriysk Ar. 21.67 20 P **P 10 24 37.3 +0.5**
comp=Z,3.4nm,0.7s,baz=215,slow=12,SNR=8.4
USRK LR LR 10 32 34.2
comp=Z,103nm,19.8s,baz=194,slow=36
comp=Z,3.4nm,0.7s
CMAR Chiang Mai Arr 21.95 259 P **P 10 24 41.6 +1.5**
comp=Z,1.0nm,0.3s,baz=64,slow=8.5,SNR=4.8
comp=Z,1.0nm,0.3s
GUMO Guam 24.27 112 LR LR 10 34 06.7
comp=Z,40nm,19.3s,baz=353,slow=36
ASAJ Asahikawa 26.21 36 LR LR 10 36 36.3
comp=Z,174nm,18.2s,baz=231,slow=39
KLR Kul'dur 26.21 15 P **P 10 25 20.6 -0.3**
comp=Z,2.9nm,0.7s,baz=200,slow=6.8,SNR=10.0
KLR LR LR 10 36 15.6
comp=Z,101nm,19.2s,baz=194,slow=38
comp=Z,2.9nm,0.7s
ULN Ulaanbaatar 26.35 337 P **P 10 25 22.2 -0.1**
ULN IAmb IAmb 10 25 34.4
comp=Z,5.1nm,1.0s
SONM Songino Array 26.56 337 P **P 10 25 23.6 -0.7**
SONM IAmb IAmb 10 25 40.5
comp=Z,4.2nm,1.0s
SONM Songino Array 26.56 337 P **P 10 25 22.7 -1.5**
comp=Z,0.8nm,0.7s,baz=122,slow=7.0,SNR=3.8
SONM LR LR 10 36 12.0
comp=Z,72nm,21.6s,baz=152,slow=37
comp=Z,0.8nm,0.7s
MTN Manton Dam 37.93 165 P **P 10 27 02.4 -1.4**
MTN IAmb IAmb 10 27 09.0
comp=Z,8.7nm,1.1s
MK31 Makanchi Array 38.68 316 P **P 10 27 10.6 +0.7**
MK31 IAmb IAmb 10 27 19.7
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 38.68 316 P **P 10 27 10.7 +0.8**
comp=Z,2.3nm,0.7s,baz=110,slow=9.7,SNR=25
comp=Z,2.3nm,0.7s
MAKZ Makanchi 38.88 316 P **P 10 27 12.4 +0.8**
MAKZ IAmb IAmb 10 27 13.4
comp=Z,3.4nm,0.9s
PETK Petropavlovsk- 39.60 34 P **P 10 27 17.1 -0.4**
PETK Petropavlovsk- 39.60 34 LR LR 10 45 03.7
comp=Z,63nm,18.8s,baz=228,slow=38
ZAA0 Zalesovo Array 40.51 327 P **P 10 27 25.3 +0.3**
ZAA0 IAmb IAmb 10 27 38.4
comp=Z,3.4nm,1.1s
ZALV Zalesovo Beam 40.51 327 P **P 10 27 24.9 -0.1**
ZALV Zalesovo Beam 40.51 327 P **P 10 27 24.1 -0.9**
comp=Z,2.3nm,0.7s,baz=118,slow=8.5,SNR=4.1
comp=Z,2.3nm,0.7s
MA2 Magadan 40.80 22 P **P 10 27 26.8 -0.5**
MA2 Magadan 40.80 22 LR LR 10 45 34.0
comp=Z,102nm,18.1s,baz=131,slow=38
PMG Port Moresby 41.62 140 LR LR 10 42 29.7
comp=Z,70nm,21.7s,baz=234,slow=33
H11S3 WAKE ISLAND Hy 42.13 89 T T 11 12 59.6
baz=284
H11S1 WAKE ISLAND Hy 42.14 89 T T 11 13 38.9
baz=284,slow=74
H11S2 WAKE ISLAND Hy 42.15 89 T T 11 13 16.7
baz=284,slow=74
KURBB Kurchatov Arra 42.42 320 P **P 10 27 40.5 -0.2**
comp=Z,0.7nm,0.7s,baz=106,slow=7.6,SNR=6.9
comp=Z,0.7nm,0.7s
AAK Ala-Archa 42.89 307 LR LR 10 48 55.3
comp=Z,152nm,19.5s,baz=345,slow=41
WRA Warramunga Arr 45.55 163 P **P 10 28 05.1 -1.1**
comp=Z,1.4nm,0.8s,baz=345,slow=8.8,SNR=6.8
comp=Z,1.4nm,0.8s
TIXI Tiksi 47.67 3 P **P 10 28 21.3 -0.9**
BVAR Borovoye Array 47.98 321 P **P 10 28 24.5 -0.4**
comp=Z,0.8nm,0.6s,baz=120,slow=5.8,SNR=3.8
BVAR PcP **PcP 10 29 52.3 -0.6**
comp=Z,1.5nm,0.9s,baz=54,slow=2.6,SNR=3.7
comp=Z,0.8nm,0.6s
AS31 Alice Springs 49.01 165 P **P 10 28 32.3 -0.8**
ASAR Alice Springs 49.01 165 P **P 10 28 33.5 +0.3**
comp=Z,0.9nm,0.8s,baz=339,slow=7.8,SNR=11
comp=Z,0.9nm,0.8s
CTA Charters Tower 50.08 149 LR LR 10 48 04.6
comp=Z,41nm,21.6s,baz=272,slow=34
ABKAR Akbulak array 53.79 314 P **P 10 29 08.7 +0.1**
STKA Stephens Creek 58.90 160 P **P 10 29 45.0 -0.2**
comp=Z,1.3nm,0.7s,baz=20,slow=3.9,SNR=4.4
comp=Z,1.3nm,0.7s
KBZ Khabaz 65.86 309 P **P 10 30 32.4 +0.6**
comp=Z,2.4nm,0.8s,baz=158,slow=1.5,SNR=6.3
comp=Z,2.4nm,0.8s
ILAR Eielson Array 68.99 27 P **P 10 30 50.9 -0.4**
comp=Z,0.3nm,0.5s,baz=272,slow=5.6,SNR=7.3
comp=Z,0.3nm,0.5s
FINES FINESS Array B 71.69 330 P **P 10 31 07.3 -0.5**
comp=Z,2.3nm,0.9s,baz=57,slow=7.0,SNR=5.7
comp=Z,2.3nm,0.9s
AKASG Malin Array Be 73.19 318 P **P 10 31 15.2 -1.8**
comp=Z,1.2nm,0.7s,baz=60,slow=6.3,SNR=4.9
comp=Z,1.2nm,0.7s
NOA NORSAR Array B 78.45 332 LR LR 11 12 30.4
comp=Z,16nm,20.5s,baz=295,slow=40
YKA Yellowknife Ar 82.78 23 P **P 10 32 09.1 -0.9**
comp=Z,1.0nm,0.6s,baz=312,slow=5.1,SNR=30
comp=Z,1.0nm,0.6s

IDC 07 10:26:37.4±2.1, 0°.38N×126°.44E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=174.0km s-min=28.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.63**	**159**	P		P	P	10 31 28.8	-0.6
	1.2nm,0.6s,baz=338,slow=11,SNR=11								
	1.2nm,0.6s								
ASAR	**Alice Springs**	**24.98**	**164**	P		P	P	10 32 03.3	+0.4
	0.6nm,0.8s,baz=344,slow=11,SNR=10								
	0.6nm,0.8s								
MKAR	**Makanchi Array**	**60.15**	**327**	P		P	P	10 36 46.8	-0.1
	0.1nm,0.5s,baz=132,slow=6.0,SNR=1.7								
	0.1nm,0.5s								

*TAP **07** 10:29:27.1, 24°.22N×121°.67E, h12km, ML3.4, B*
*JMA **07** 10:29:27.1±0.1, 24°.2N±0°.2×121°.7E±0°.5, h17km, MV2.7/12, TAIWAN REGION*
ISC 07 10:29:27.0±0.8, 24°.19N±0°.01×121°.69E±0°.02, h13km±4km, n94, σ0°.69/179, 3C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.07**	**244**	*i* P			Pg	10 29 30.0	+0.2
	baz=219								
ETL				*i* S			Sg	10 29 32.1	+0.4
	baz=219								
NACB	**Ninganchiao**	**0.09**	**261**	P			Pg	10 29 30.1	+0.2
NACB	**Ninganchiao**	**0.09**	**261**	*i* P			Pg	10 29 30.1	+0.2
	baz=239								
NACB				*i* S			Sg	10 29 32.2	+0.3
	baz=239								
EHP	**Heping Village**	**0.13**	**22**	⇓*i* P			Pg	10 29 30.4	-0.1
	baz=37								
EHP				*i* S			Sg	10 29 32.9	0.0
	baz=37								
TWD	**Chiawan**	**0.14**	**218**	⇑*i* P			Pg	10 29 30.7	+0.2
	baz=205								
TWD				*i* S			Sb	10 29 33.5	-0.8
	baz=205								
EAHA	**Aohua**	**0.15**	**19**	⇓*i* P			Pg	10 29 30.5	-0.3
	baz=28								
EAHA				*i* S			Sg	10 29 33.0	-0.2
	baz=28								
ETLH	**Xiulin Townshi**	**0.19**	**276**	⇓*i* P			Pg	10 29 31.6	+0.2
	baz=267								
ETLH				*i* S			Sb	10 29 34.8	-1.2
	baz=267								
HWA	**Hwalien**	**0.22**	**200**	*i* P			Pb	10 29 32.7	-0.2
	baz=193								
HWA				*e*S			Sb	10 29 37.1	+0.3
	baz=193								
ENA	**Nanau**	**0.24**	**12**	⇓*i* P			Pg	10 29 32.1	-0.2
	baz=18								
ENA				*i* S			Sg	10 29 35.5	-0.3
	baz=18								
EWUT	**Wuta**	**0.27**	**18**	⇓*i* P			Pg	10 29 32.5	-0.3
	baz=23								
EWUT				*i* S			Sg	10 29 36.1	-0.5
	baz=23								
ETM	**Tongmen**	**0.28**	**219**	P			Pg	10 29 33.2	+0.2
	baz=213								
ETM				*e*S			Sb	10 29 37.5	-1.1
	baz=213								
LXIB	**Xiulin Townshi**	**0.30**	**237**	⇓*i* P			Pg	10 29 33.4	+0.1
	baz=231								
LXIB				*i* S			Sb	10 29 38.1	-1.1
	baz=231								
NNSB	**Datong**	**0.37**	**311**	⇓P			Pg	10 29 34.6	+0.1
	baz=308								
NNSB				S			Sg	10 29 39.9	+0.4
	baz=308								
NNSH	**Datong**	**0.37**	**311**	*e*P			Pg	10 29 34.7	+0.2
	baz=308								
NNSH				*e*S			Sg	10 29 40.1	+0.6
	baz=308								
LATG	**Datong**	**0.38**	**337**	⇓*i* P			Pg	10 29 34.7	0.0
	baz=337								
LATG				*i* S			Sg	10 29 40.0	+0.2
	baz=337								
NNS	**Nan Shan**	**0.38**	**311**	⇓*i* P			Pg	10 29 34.8	+0.1
	baz=309								
NNS				S			Sg	10 29 40.4	+0.4
	baz=309								
WHF	**Hehuan Shan**	**0.39**	**264**	⇓*i* P			Pb	10 29 35.3	-0.7
	baz=259								
WHF				S			Sb	10 29 40.9	-1.1
	baz=259								
FUSS	**Fushou**	**0.41**	**279**	⇓*i* P			Pb	10 29 35.7	-0.5
	baz=274								
FUSS				S			Sb	10 29 41.5	-0.9
	baz=274								
ESAO	**Su ao**	**0.41**	**20**	⇓P			Pg	10 29 34.9	-0.3
	baz=23								
ESAO				S			Sg	10 29 40.1	-0.8
	baz=23								
SHUL	**Shoufeng**	**0.41**	**196**	*e*P			Pb	10 29 36.4	+0.3
	baz=193								
SHUL				*e*S			Sn	10 29 45.5	-0.7
	baz=193								
ESL	**Shilin**	**0.44**	**212**	*e*P			Pg	10 29 35.8	0.0
	baz=208								
ESL				*e*S			Sb	10 29 42.8	-0.2
	baz=208								
NDT	**Datong Townshi**	**0.44**	**339**	⇓*i* P			Pg	10 29 36.0	+0.2
	baz=339								
NDT				S			Sg	10 29 42.2	+0.4
	baz=339								
NDS	**Dongshan**	**0.45**	**3**	⇓P			Pg	10 29 35.9	0.0
	baz=5.0								
NDS				*e*S			Sg	10 29 42.0	+0.1
	baz=5.0								
TWC	**Suao**	**0.45**	**19**	⇓*i* P			Pg	10 29 35.7	-0.2
	baz=24								
TWC				S			Sg	10 29 41.5	-0.4
	baz=24								
ENTT	**Nioudou**	**0.46**	**346**	⇓P			Pg	10 29 36.4	+0.1
	baz=348								
ENTT				*e*S			Sg	10 29 42.8	+0.3
	baz=348								
TWT	**Tachien**	**0.47**	**278**	*e*P			Pb	10 29 37.2	0.0
	baz=274								
TWT				*e*S			Sb	10 29 43.9	-0.3
	baz=274								
CHGB	**Renai**	**0.48**	**255**	⇓*e*P			Pb	10 29 37.2	-0.3
	baz=251								
CHGB				*e*S			Sb	10 29 43.9	-0.8
	baz=251								
TDCB	**Techi**	**0.49**	**278**	⇓*e*P			Pb	10 29 37.3	-0.3
	baz=274								
TDCB				*e*S			Sb	10 29 43.8	-0.9
	baz=274								
TEGC	**Jichi Village**	**0.49**	**196**	*e*P			Pb	10 29 38.5	+0.9
	baz=193								
TEGC				*e*S			Sn	10 29 46.6	-1.5
	baz=193								
OWD	**Renai**	**0.52**	**244**	*e*P			Pb	10 29 37.7	-0.4
	baz=240								
OWD				*e*S			Sb	10 29 45.9	+0.3
	baz=240								
TWE	**Neicheng**	**0.53**	**358**	⇓*e*P			Pg	10 29 37.6	+0.1
	baz=1.0								
TWE				*e*S			Sg	10 29 44.8	+0.2
	baz=1.0								
WARBT	**Fenglin Townsh**	**0.54**	**211**	*e*P			Pg	10 29 37.6	-0.1
	baz=208								
WARBT				*e*S			Sb	10 29 46.3	+0.3
	baz=208								
EOS2	**EOS2**	**0.55**	**65**	P			Pb	10 29 38.8	+0.5
	baz=68								
EOS2				*e*S			Sb	10 29 47.5	+1.4
	baz=68								
WUSB	**Renai**	**0.56**	**250**	*e*P			Pb	10 29 38.5	-0.1
	baz=246								
WUSB				*e*S			Sb	10 29 46.0	-0.6
	baz=246								
YHNB	**Yeheng**	**0.56**	**329**	P			Pb	10 29 38.5	-0.2
YHNB	**Yeheng**	**0.56**	**329**	*e*P			Pg	10 29 38.2	+0.2
	baz=329								
YHNB				*e*S			Sg	10 29 45.8	+0.3
	baz=329								
EGFH	**Guangfu**	**0.57**	**205**	*e*P			Pg	10 29 38.3	+0.2
	baz=202								
EGFH				*e*S			Sn	10 29 48.0	-1.9
	baz=202								
NSK	**Sanguang**	**0.57**	**328**	*e*P			Pg	10 29 38.2	0.0
	baz=328								
NSK				*e*S			Sg	10 29 45.8	-0.1
	baz=328								
FUSB	**Fushanzhiwuyua**	**0.58**	**351**	⇓P			Pg	10 29 38.5	+0.1
	baz=352								
FUSB				*e*S			Sg	10 29 45.9	-0.1
	baz=352								
EOS4	**EOS4**	**0.58**	**96**	*e*P			Pn	10 29 40.4	-0.2
	baz=99								
EOS3	**EOS3**	**0.58**	**80**	*e*P			Pn	10 29 40.2	-0.6
	baz=83								
EOS3				*e*S			Sn	10 29 49.6	-0.5
	baz=83								
NWLT	**Wulai**	**0.61**	**344**	*e*P			Pg	10 29 39.1	+0.1
	baz=344								
NWLT				*e*S			Sg	10 29 46.8	-0.3
	baz=344								
VWDT	**VWDT**	**0.66**	**229**	*e*P			Pb	10 29 40.3	-0.1
	baz=227								
VWDT				*e*S			Sb	10 29 49.9	+0.4
	baz=227								
NFF	**Wufeng Townshi**	**0.68**	**311**	*e*P			Pb	10 29 40.7	-0.1
	baz=309								
NFF				*e*S			Sb	10 29 49.5	-0.6
	baz=309								
WHP	**Taichung City**	**0.68**	**278**	*e*P			Pn	10 29 41.5	-0.9
	baz=275								
WHP				*e*S			Sb	10 29 50.6	+0.4
	baz=275								
WPL	**Puli Township**	**0.69**	**255**	*e*P			Pb	10 29 41.2	+0.3
	baz=253								
WPL				*e*S			Sb	10 29 50.4	+0.1
	baz=253								
DPDB	**Guoxing**	**0.71**	**258**⇑	*e*P			Pn	10 29 41.7	-1.1
	baz=255								
DPDB				*e*S			Sb	10 29 51.2	+0.3
	baz=255								
WCS	**Beigang Elemen**	**0.72**	**260**	*e*P			Pb	10 29 41.7	+0.3
	baz=257								
WCS				*e*S			Sb	10 29 51.4	+0.2
	baz=257								
HGSD	**Ruisui**	**0.73**	**199**	*e*P			Pb	10 29 41.8	+0.2
	baz=198								
HGSD				*e*S			Sn	10 29 54.7	+0.7
	baz=198								
EHY	**Hungye**	**0.76**	**206**	*e*P			Pg	10 29 40.9	-0.8
	baz=204								
EHY				*e*S			Sn	10 29 53.1	-1.5
	baz=204								
LIOB	**Emei**	**0.76**	**307**	*e*P			Pn	10 29 42.7	-0.8
	baz=306								
LIOB				*e*S			Sb	10 29 52.7	+0.2
	baz=306								
NSTT	**Nanjuang**	**0.77**	**305**	*e*P			Pn	10 29 42.7	-0.8
	baz=304								
NSTT				*e*S			Sb	10 29 52.2	-0.3
	baz=304								
SSLB	**Suanglung**	**0.78**	**239**	P			Pb	10 29 42.3	-0.1
SSLB	**Suanglung**	**0.78**	**239**⇑	*e*P			Pb	10 29 42.4	0.0
	baz=237								
SSLB				*e*S			Sb	10 29 52.3	-0.6
	baz=237								
SMLT	**Sun Moon Lake**	**0.78**	**247**	*e*P			Pb	10 29 42.7	+0.2
	baz=244								
SMLT				*e*S			Sb	10 29 53.2	+0.1
	baz=244								
NHDH	**Xindian Distri**	**0.79**	**349**	*e*P			Pb	10 29 42.5	0.0
	baz=350								
NHDH				*e*S			Sg	10 29 52.2	-0.4
	baz=350								
TIPB	**Shuangxi**	**0.79**	**9**	*e*P			Pg	10 29 42.3	-0.1
	baz=10.0								
TIPB				*e*S			Sg	10 29 51.9	-1.0
	baz=10.0								
TWA	**Mucha**	**0.80**	**353**	*e*P			Pb	10 29 42.8	+0.1
	baz=354								
TWA				*e*S			Sg	10 29 52.9	0.0
	baz=354								
TATO	**Taipei**	**0.81**	**347**	P			Pg	10 29 42.8	+0.1
TATO	**Taipei**	**0.81**	**347**	*e*P			Pg	10 29 42.8	+0.1
	baz=348								
TATO				*e*S			Sg	10 29 52.8	-0.5
	baz=348								
TYC	**Yuchr**	**0.81**	**250**	*e*P			Pb	10 29 43.1	+0.2
	baz=247								
TYC				*e*S			Sb	10 29 54.2	+0.4
	baz=247								
TWQ1	**Liyutan**	**0.85**	**281**	*e*P			Pn	10 29 45.1	+0.4
	baz=279								
TWQ1				*e*S			Sn	10 29 56.5	-0.4
	baz=279								
TWB1	**Santiao Chiao**	**0.86**	**18**	*e*P			Pb	10 29 43.5	-0.3
	baz=21								
TWB1				*e*S			Sg	10 29 54.2	-0.8
	baz=21								
YULB	**Yu-li**	**0.87**	**204**	P			Pg	10 29 43.2	-0.6
YULB	**Yu-li**	**0.87**	**204**	*e*P			Pg	10 29 43.2	-0.7
	baz=203								
YULB				*e*S			Sb	10 29 55.6	+0.2
	baz=203								
NSY	**Sanyi**	**0.88**	**285**	*e*P			Pn	10 29 45.5	+0.5
	baz=283								
NSY				*e*S			Sn	10 29 57.7	+0.1
	baz=283								
SBCB	**Hsinchu**	**0.88**	**313**	*e*P			Pn	10 29 45.8	+0.8
	baz=312								
SBCB				*e*S			Sn	10 29 59.7	+2.1
	baz=312								
NMLH	**Miaoli**	**0.89**	**293**	*e*P			Pn	10 29 46.1	+0.9
	baz=292								
NMLH				*e*S			Sn	10 29 57.2	-0.8
	baz=292								
EYUL	**Yuli**	**0.90**	**202**	*e*P			Pn	10 29 45.1	-0.3
	baz=201								
EYUL				*e*S			Sn	10 29 58.0	-0.3
	baz=201								
NCUH	**Zhongli**	**0.90**	**330**	*e*P			Pn	10 29 45.5	+0.1
	baz=329								
NCUH				*e*S			Sn	10 29 58.4	+0.1
	baz=329								
TWF1	**Yuli**	**0.91**	**203**	*e*P			Pb	10 29 43.2	-1.4
	baz=201								
TWF1				*e*S			Sn	10 29 57.9	-0.4
	baz=201								
WHYT	**Xinyi Township**	**0.91**	**238**	*e*P			Pn	10 29 45.2	-0.3
	baz=235								
WHYT				*e*S			Sn	10 29 58.2	-0.2
	baz=235								
SXI1	**Grass Mountain**	**0.92**	**11**	*e*P			Pb	10 29 45.0	+0.1
	baz=12								
SXI1				*e*S			Sb	10 29 56.8	-0.3
	baz=12								
TWS1	**Kuangyinshan**	**0.94**	**345**	*e*P			Pn	10 29 45.9	0.0
	baz=346								
TWS1				*e*S			Sn	10 29 58.6	-0.6
	baz=346								
YM01	**YM01**	**0.96**	**354**	*e*P			Pn	10 29 46.3	+0.1
	baz=354								
YM01				*e*S			Sg	10 29 58.8	+0.6
	baz=354								
ALS	**Alishan**	**1.05**	**230**	*e*P			Pn	10 29 47.6	-0.1
	baz=228								
ALS				*e*S			Sn	10 30 02.0	-0.3
	baz=228								
CHN5	**Tsauling**	**1.09**	**238**	*e*P			Pg	10 29 49.1	+0.9

	baz=236								
CHN5					*e*S		**Sn**	**10 30 05.1**	**+2.0**
	baz=236								
EHD	**Haiduan**	**1.12**	**203**	*e*P			**Pb**	**10 29 47.2**	**-1.1**
	baz=202								
EHD					*e*S		**Sn**	**10 30 03.9**	**+0.1**
	baz=202								
WDLH	**Douliu**	**1.16**	**245**	*e*P			**Pg**	**10 29 50.7**	**+1.3**
	baz=243								
WDLH					*e*S		**Sg**	**10 30 07.6**	**+3.0**
	baz=243								
ELDTW	**Lidau**	**1.17**	**212**	*e*P			**Pb**	**10 29 47.4**	**-1.8**
	baz=210								
ELDTW					*e*S		**Sn**	**10 30 04.5**	**-0.4**
	baz=210								
JYNG	**Yonagunijimaku**	**1.18**	**77**	P			**Pn**	**10 29 49.0**	**-0.1**
JYNG				S			**Sn**	**10 30 05.2**	**+0.1**
YOJ	**Yonaguni jima**	**1.24**	**77**	P			**Pb**	**10 29 50.6**	**+0.4**
YOJ	**Yonaguni jima**	**1.24**	**77**	*e*P			**Pn**	**10 29 49.8**	**-0.2**
	baz=78								
YOJ					*e*S		**Sn**	**10 30 07.0**	**+0.5**
	baz=78								
YOJ	**Yonaguni jima**	**1.24**	**77**	P			**Pn**	**10 29 50.3**	**+0.4**
YOJ				S			**Sb**	**10 30 06.5**	**+0.4**
EDH	**Donghe**	**1.26**	**196**	*e*P			**Pn**	**10 29 48.5**	**-1.8**
	baz=195								
EDH					*e*S		**Sg**	**10 30 09.0**	**+1.3**
	baz=195								
TPUB	**Ta-pu**	**1.31**	**228**	P			**Pg**	**10 29 52.3**	**+0.1**
TPUB	**Ta-pu**	**1.31**	**228**	*e*P			**Pg**	**10 29 52.3**	**+0.1**
	baz=226								
TPUB					*e*S		**Sg**	**10 30 11.0**	**+1.6**
	baz=226								
STYT	**Tauyuan**	**1.33**	**220**	*e*P			**Pb**	**10 29 51.8**	**-0.1**
	baz=218								
STYT					*e*S		**Sg**	**10 30 09.9**	**0.0**
	baz=218								
WTP	**Ta-pu**	**1.36**	**227**	*e*P			**Pg**	**10 29 53.1**	**0.0**
	baz=225								
WTP					*e*S		**Sg**	**10 30 12.3**	**+1.5**
	baz=225								
CHN1	**Nanshi**	**1.46**	**227**	*e*P			**Pg**	**10 29 54.6**	**-0.4**
	baz=226								
CHN1					*e*S		**Sg**	**10 30 15.2**	**+1.2**
	baz=226								
TWGBT	**Beinan**	**1.47**	**202**	P			**Pb**	**10 29 53.7**	**-0.5**
JKRS	**Kuro-shima**	**2.12**	**88**	*e*P			**Pn**	**10 30 03.0**	**+0.9**
JKRS				S			**Sn**	**10 30 29.6**	**+1.3**
JIJ	**Ishigaki jima**	**2.25**	**85**	*e*P			**Pn**	**10 30 04.2**	**+0.3**
JIJ				S			**Sn**	**10 30 31.0**	**-0.5**
JISG	**Ishigakijimahi**	**2.42**	**80**	*e*P			**Pn**	**10 30 06.6**	**+0.3**
JISG				S			**Sn**	**10 30 37.1**	**+1.3**

TAP ***07*** *10:33:12.8,24˚.04N×121˚.61E,h10km,ML3.1,B*
JMA ***07*** *10:33:12.8±0.1,24˚.0N±0˚.3×121˚.7E±0˚.9,h0km, TAIWAN REGION*

ISC 07 10:33:12.8±0.8,**24˚.03N**±0˚.02×**121˚.66E**±0˚.02,**h9**km±5km, **n60,σ0:49**/117,**1C-19D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.08**	**307**		*i*	P	**Pg**	**10 33 14.9**	**-0.1**
	baz=352								
TWD					*i*	S	**Sg**	**10 33 16.4**	**-0.1**
	baz=352								
HWA	**Hwalien**	**0.08**	**223**	↑	*i*	P	**Pg**	**10 33 15.2**	**+0.2**
	baz=178								
HWA					*e*	S	**Sg**	**10 33 17.2**	**+0.7**
	baz=178								
ETL	**Fush Village**	**0.13**	**344**	↓	*i*	P	**Pg**	**10 33 15.8**	**0.0**
	baz=5.0								
ETL					*i*	S	**Sg**	**10 33 18.0**	**+0.2**
	baz=5.0								
NACB	**Ninganchiao**	**0.15**	**336**	↓	*i*	P	**Pg**	**10 33 16.1**	**0.0**
	baz=354								
NACB					*i*	S	**Sg**	**10 33 18.5**	**+0.1**
	baz=354								
ETM	**Tongmen**	**0.17**	**246**		*i*	P	**Pg**	**10 33 16.3**	**-0.1**
	baz=235								
ETM					*i*	S	**Sg**	**10 33 18.7**	**-0.1**
	baz=235								
LXIB	**Xiulin Townshi**	**0.23**	**267**	↓	*i*	P	**Pg**	**10 33 17.4**	**-0.1**
	baz=264								
LXIB					*i*	S	**Sg**	**10 33 20.7**	**0.0**
	baz=264								
ETLH	**Xiulin Townshi**	**0.24**	**316**	↓	*i*	P	**Pg**	**10 33 17.7**	**0.0**
	baz=324								
ETLH					*i*	S	**Sg**	**10 33 21.2**	**+0.2**
	baz=324								
SHUL	**Shoufeng**	**0.26**	**200**	*e*	P		**Pb**	**10 33 19.0**	**-0.7**
	baz=190								
SHUL					*e*	S	**Sb**	**10 33 24.5**	**+0.3**
	baz=190								
EHP	**Heping Village**	**0.28**	**15**	*e*	P		**Pg**	**10 33 18.6**	**+0.1**
	baz=25								
EHP					*e*	S	**Sg**	**10 33 23.5**	**+1.1**
	baz=25								
EAHA	**Aohua**	**0.30**	**13**	⇓		P	**Pg**	**10 33 18.8**	**-0.1**
	baz=22								
EAHA					*e*	S	**Sg**	**10 33 23.4**	**+0.4**
	baz=22								
ESL	**Shilin**	**0.30**	**224**	⇓	*e*	P	**Pg**	**10 33 18.6**	**-0.2**
	baz=214								
ESL					*e*	S	**Sg**	**10 33 22.7**	**-0.2**
	baz=214								
TEGC	**Jichi Village**	**0.34**	**199**	*e*	P		**Pb**	**10 33 20.6**	**-0.4**
	baz=190								
TEGC					*e*	S	**Sb**	**10 33 27.8**	**+1.2**
	baz=190								
WHF	**Hehuan Shan**	**0.38**	**287**	⇓	*e*	P	**Pg**	**10 33 20.4**	**0.0**
	baz=288								
WHF					*e*	S	**Sg**	**10 33 25.8**	**+0.3**
	baz=288								
ENA	**Nanau**	**0.40**	**10**	⇓	*i*	P	**Pg**	**10 33 20.8**	**+0.1**
	baz=18								
ENA					*e*	S	**Sg**	**10 33 26.5**	**+0.6**
	baz=18								
WARBT	**Fenglin Townsh**	**0.40**	**219**	*e*	P		**Pg**	**10 33 20.5**	**-0.2**
	baz=213								
WARBT					*e*	S	**Sg**	**10 33 26.4**	**+0.3**
	baz=213								
EGFH	**Guangfu**	**0.42**	**211**	*e*	P		**Pg**	**10 33 21.4**	**+0.4**
	baz=204								
EGFH					*e*	S	**Sb**	**10 33 28.4**	**-0.5**
	baz=204								
EWUT	**Wuta**	**0.42**	**15**	⇓	*i*	P	**Pg**	**10 33 21.2**	**+0.1**
	baz=21								
EWUT					*e*	S	**Sg**	**10 33 27.1**	**+0.4**
	baz=21								
FUSS	**Fushou**	**0.44**	**299**	⇓		P	**Pg**	**10 33 21.7**	**+0.3**
	baz=301								
FUSS					*e*	S	**Sg**	**10 33 28.1**	**+0.9**
	baz=301								
CHGB	**Renai**	**0.45**	**273**	↓	*i*	P	**Pg**	**10 33 21.9**	**+0.3**
	baz=273								
CHGB						S	**Sg**	**10 33 27.9**	**+0.4**
	baz=273								
OWD	**Renai**	**0.45**	**260**		*i*	P	**Pg**	**10 33 21.7**	**+0.1**
	baz=258								
OWD					*e*	S	**Sg**	**10 33 27.8**	**+0.1**
	baz=258								
NNSB	**Datong**	**0.47**	**327**	⇓	*e*	P	**Pg**	**10 33 22.3**	**+0.3**
	baz=332								
NNSB					*e*	S	**Sg**	**10 33 28.7**	**+0.5**
	baz=332								
NNSH	**Datong**	**0.47**	**327**	*e*	P		**Pg**	**10 33 22.2**	**+0.3**
	baz=332								
NNSH					*e*	S	**Sg**	**10 33 28.8**	**+0.6**
	baz=332								
NNS	**Nan Shan**	**0.48**	**327**	⇓	*e*	P	**Pg**	**10 33 22.5**	**+0.2**
	baz=332								
NNS					*e*	S	**Sg**	**10 33 29.2**	**+0.5**
	baz=332								
TWT	**Tachien**	**0.49**	**296**	*e*	P		**Pb**	**10 33 23.2**	**-0.6**
	baz=297								
TWT					*e*	S	**Sb**	**10 33 30.3**	**-0.9**
	baz=297								
WUSB	**Renai**	**0.50**	**265**			P	**Pg**	**10 33 22.9**	**+0.3**
	baz=264								
WUSB					*e*	S	**Sg**	**10 33 29.6**	**+0.4**
	baz=264								
TDCB	**Techi**	**0.51**	**296**			P	**Pg**	**10 33 23.2**	**+0.4**
	baz=297								
TDCB					*e*	S	**Sb**	**10 33 30.3**	**-1.3**
	baz=297								
LATG	**Datong**	**0.52**	**346**	⇓		P	**Pg**	**10 33 23.0**	**+0.2**
	baz=351								
LATG					*e*	S	**Sg**	**10 33 30.0**	**+0.3**
	baz=351								
VWDT	**VWDT**	**0.55**	**240**	*e*	P		**Pg**	**10 33 23.9**	**+0.3**
	baz=236								
VWDT					*e*	S	**Sg**	**10 33 31.3**	**+0.5**
	baz=236								
ESAO	**Su ao**	**0.56**	**17**	*e*	P		**Pb**	**10 33 24.6**	**-0.3**
	baz=22								
ESAO					*e*	S	**Sg**	**10 33 31.3**	**+0.1**
	baz=22								
HGSD	**Ruisui**	**0.58**	**202**	*e*	P		**Pb**	**10 33 25.3**	**+0.2**
	baz=197								
NDT	**Datong Townshi**	**0.58**	**347**	⇓	*i*	P	**Pg**	**10 33 24.6**	**+0.4**
	baz=351								
NDT						S	**Sg**	**10 33 32.3**	**+0.5**
	baz=351								
TWC	**Suao**	**0.60**	**17**	*e*	P		**Pg**	**10 33 24.6**	**+0.2**
	baz=22								
TWC					*e*	S	**Sb**	**10 33 33.5**	**-0.5**
	baz=22								
NDS	**Dongshan**	**0.60**	**5**	*e*	P		**Pg**	**10 33 24.7**	**+0.3**
	baz=9.0								
NDS					*e*	S	**Sg**	**10 33 32.9**	**+0.5**
	baz=9.0								
ENTT	**Nioudou**	**0.61**	**352**	⇓	*e*	P	**Pg**	**10 33 25.0**	**+0.4**
	baz=357								
ENTT					*e*	S	**Sb**	**10 33 33.5**	**-0.9**
	baz=357								
EHY	**Hungye**	**0.61**	**211**	*e*	P		**Pg**	**10 33 24.6**	**0.0**
	baz=206								
EHY					*e*	S	**Sb**	**10 33 33.8**	**-0.6**
	baz=206								
WPL	**Puli Township**	**0.65**	**268**	*e*	P		**Pb**	**10 33 25.7**	**-0.6**
	baz=267								
WPL					*e*	S	**Sg**	**10 33 34.2**	**+0.5**
	baz=267								
EOS2	**EOS2**	**0.65**	**53**	*e*	P		**Pn**	**10 33 28.3**	**+0.3**
	baz=56								
DPDB	**Guoxing**	**0.67**	**270**	*e*	P		**Pb**	**10 33 26.4**	**-0.4**
	baz=269								
DPDB					*e*	S	**Sb**	**10 33 35.3**	**-1.0**
	baz=269								
TWE	**Neicheng**	**0.68**	**0**	*e*	P		**Pg**	**10 33 26.4**	**+0.4**
	baz=6.0								
TWE					*e*	S	**Sg**	**10 33 35.2**	**+0.2**
	baz=6.0								
YHNB	**Yeheng**	**0.69**	**338**	⇓	*e*	P	**Pb**	**10 33 26.6**	**-0.4**
	baz=341								
YHNB					*e*	S	**Sb**	**10 33 35.7**	**-0.9**
	baz=341								
WCS	**Beigang Elemen**	**0.69**	**272**	*e*	P		**Pb**	**10 33 26.5**	**-0.5**
	baz=271								
SSLB	**Suanglung**	**0.69**	**249**	*e*	P		**Pg**	**10 33 26.2**	**0.0**
	baz=247								
SSLB					*e*	S	**Sg**	**10 33 34.6**	**-0.7**
	baz=247								
NSK	**Sanguang**	**0.70**	**337**	*e*	P		**Pb**	**10 33 26.8**	**-0.4**
	baz=341								
NSK					*e*	S	**Sg**	**10 33 35.8**	**+0.4**
	baz=341								
WHP	**Taichung City**	**0.70**	**291**	⇓	*e*	P	**Pb**	**10 33 27.5**	**+0.3**
	baz=291								
WHP					*e*	S	**Sb**	**10 33 37.8**	**+0.9**
	baz=291								
SMLT	**Sun Moon Lake**	**0.71**	**258**	*e*	P		**Pg**	**10 33 26.9**	**+0.3**
	baz=256								
SMLT					*e*	S	**Sg**	**10 33 36.2**	**+0.3**
	baz=256								
YULB	**Yu-li**	**0.72**	**208**	*e*	P		**Pg**	**10 33 26.7**	**0.0**
	baz=204								
YULB					*e*	S	**Sb**	**10 33 37.3**	**-0.2**
	baz=204								
FUSB	**Fushanzhiwuyua**	**0.73**	**355**	*e*	P		**Pb**	**10 33 27.3**	**-0.4**
	baz=358								
FUSB					*e*	S	**Sb**	**10 33 37.3**	**-0.5**
	baz=358								
TYC	**Yuchr**	**0.75**	**260**	*e*	P		**Pg**	**10 33 27.4**	**+0.1**
	baz=259								
TYC					*e*	S	**Sg**	**10 33 36.9**	**-0.1**
	baz=259								
NWLT	**Wulai**	**0.75**	**349**	*e*	P		**Pg**	**10 33 27.7**	**+0.3**
	baz=352								
NWLT					*e*	S	**Sg**	**10 33 37.2**	**0.0**
	baz=352								
TWF1	**Yuli**	**0.76**	**206**	*e*	P		**Pg**	**10 33 27.3**	**-0.1**
	baz=202								
TWF1					*e*	S	**Sb**	**10 33 39.8**	**+1.2**
	baz=202								
NFF	**Wufeng Townshi**	**0.78**	**320**	*e*	P		**Pb**	**10 33 28.4**	**-0.1**
	baz=323								
NFF					*e*	S	**Sb**	**10 33 38.6**	**-0.6**
	baz=323								
WHYT	**Xinyi Township**	**0.81**	**246**	*e*	P		**Pb**	**10 33 28.9**	**-0.2**
	baz=244								
WHYT					*e*	S	**Sb**	**10 33 39.9**	**-0.4**
	baz=244								
NSTT	**Nanjuang**	**0.85**	**315**	*e*	P		**Pb**	**10 33 29.9**	**+0.2**
	baz=317								
NSTT					*e*	S	**Sb**	**10 33 41.5**	**+0.3**
	baz=317								
LIOB	**Emei**	**0.85**	**316**	*e*	P		**Pb**	**10 33 30.2**	**+0.4**
	baz=318								
LIOB					*e*	S	**Sb**	**10 33 41.8**	**+0.6**
	baz=318								
TWQ1	**Liyutan**	**0.87**	**291**	*e*	P		**Pb**	**10 33 30.7**	**+0.6**
	baz=292								
TWQ1					*e*	S	**Sn**	**10 33 44.2**	**+0.2**
	baz=292								
CHKH	**Chenggong**	**0.87**	**196**	*e*	P		**Pg**	**10 33 29.6**	**0.0**
	baz=193								
CHKH					*e*	S	**Sb**	**10 33 43.2**	**+1.3**
	baz=193								
WJS	**Zhushan**	**0.88**	**256**	*e*	P		**Pn**	**10 33 31.2**	**-0.2**
	baz=255								
WJS					*e*	S	**Sb**	**10 33 43.5**	**+1.3**
	baz=255								
NHDH	**Xindian Distri**	**0.93**	**352**	*e*	P		**Pb**	**10 33 31.4**	**+0.3**
	baz=355								
NHDH					*e*	S	**Sb**	**10 33 43.6**	**-0.1**
	baz=355								
TIPB	**Shuangxi**	**0.95**	**9**	*e*	P		**Pb**	**10 33 31.3**	**-0.1**
	baz=12								
TIPB					*e*	S	**Sb**	**10 33 43.9**	**-0.2**
	baz=12								
JISG	**Ishigakijimahi**	**2.48**	**77**	P			**Pn**	**10 33 53.0**	**-0.4**
JISG				S			**Sn**	**10 34 23.0**	**-0.7**

TAP 07 10:33:37.8,23˚.74N×121˚.40E,h23km,ML2.1,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WARBT	**Fenglin Townsh**	**0.02**	**217**		*i*	P	Pb	10 33 41.7	-0.1
	baz=217								
WARBT					*i*	S	Sb	10 33 44.5	0.0
	baz=217								
EGFH	**Guangfu**	**0.07**	**160**		*i*	P	Pb	10 33 41.7	-0.3
	baz=160								
EGFH					*i*	S	Sb	10 33 44.7	-0.1
	baz=160								
ESL	**Shilin**	**0.08**	**21**	*e*		P	Pb	10 33 42.1	0.0
	baz=26								
ESL					*e*	S	Sb	10 33 45.4	+0.5
	baz=26								
VWDT	**VWDT**	**0.24**	**274**	*e*		P	Pb	10 33 44.1	+0.4
	baz=274								
VWDT					*e*	S	Sb	10 33 48.8	+1.0
	baz=274								
EHY	**Hungye**	**0.24**	**198**		*i*	P	Pb	10 33 43.6	-0.2
	baz=196								
EHY					*e*	S	Sb	10 33 47.4	-0.5
	baz=196								

JMA ***07*** *10:51:04.9±0.1,22˚.8N±0˚.2×121˚.4E±0˚.6,h20km±1km, MV3.5/16,TAIWAN REGION*
TAP ***07*** *10:51:04.9,22˚.77N×121˚.33E,h29km,ML3.4,B*

ISC 07 10:51:04.8±0.9,**22.73N**±0˚.02×**121˚.37E**±0˚.02,**h29**km±4km, **n132,σ0:85**/171,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.11**	**120**		*i*	P	**Pn**	**10 51 10.8**	**+0.2**
	baz=120								
LDUT					*i*	S	**Sb**	**10 51 15.0**	**+1.4**
	baz=120								
TTN	**Taitung**	**0.20**	**277**	*e*		P	**Pb**	**10 51 11.4**	**+0.5**
	baz=265								
TTN					*e*	S	**Sn**	**10 51 16.5**	**+1.4**
	baz=265								
EDH	**Donghe**	**0.25**	**346**	*e*	P		**Pb**	**10 51 11.3**	**-0.1**
	baz=346								
EDH					*i*	S	**Sb**	**10 51 15.9**	**-0.2**
	baz=346								
TWGBT	**Beinan**	**0.28**	**289**			P	**Pb**	**10 51 11.5**	**-0.4**
TWGBT	**Beinan**	**0.28**	**289**			P	**Pb**	**10 51 11.5**	**-0.4**
	baz=282								
TWGBT					*e*	S	**Sb**	**10 51 15.9**	**-0.8**
	baz=282								
LONT	**Longtian**	**0.28**	**309**			P	**Pb**	**10 51 11.7**	**-0.2**
	baz=306								
TWG	**Pinlang**	**0.29**	**289**			P	**Pb**	**10 51 11.5**	**-0.5**
	baz=282								
TWG					*e*	S	**Sb**	**10 51 15.9**	**-1.0**
	baz=282								
CHKT	**Chengkung**	**0.37**	**360**	*i*		P	**Pb**	**10 51 12.9**	**-0.3**
	baz=12								
CHKT					*i*	S	**Sb**	**10 51 18.6**	**-0.2**
	baz=12								
ECS	**Chishang**	**0.39**	**340**			P	**Pb**	**10 51 13.3**	**-0.2**
	baz=331								
ECL	**Taimali**	**0.40**	**251**	*i*		P	**Pb**	**10 51 12.9**	**-0.7**
	baz=253								
ECL					*e*	S	**Sb**	**10 51 18.5**	**-1.2**
	baz=253								
EHD	**Haiduan**	**0.44**	**340**			P	**Pb**	**10 51 13.3**	**-1.0**
	baz=341								
CHKH	**Chenggong**	**0.46**	**3**	*i*		P	**Pb**	**10 51 14.1**	**-0.4**
	baz=12								
CHKH					*i*	S	**Sb**	**10 51 20.8**	**-0.4**
	baz=12								
FULB	**Fuli**	**0.47**	**352**			P	**Pb**	**10 51 14.2**	**-0.5**
	baz=340								
ELDTW	**Lidau**	**0.56**	**325**			P	**Pb**	**10 51 14.8**	**-1.5**
	baz=325								
TAW	**Tawu**	**0.57**	**230**	*e*		P	**Pn**	**10 51 17.3**	**+0.3**
	baz=232								
TAWH	**Dawu Township**	**0.59**	**229**	*i*		P	**Pb**	**10 51 16.1**	**-0.5**
	baz=232								
TAWH					*e*	S	**Sb**	**10 51 23.6**	**-1.0**
	baz=232								
ECBN	**Changbin**	**0.59**	**8**	*e*		P	**Pb**	**10 51 16.2**	**-0.4**
	baz=22								
ECBN					*e*	S	**Sb**	**10 51 24.5**	**-0.2**
	baz=22								
EAST	**Anshuo**	**0.59**	**234**	*e*		P	**Pb**	**10 51 16.1**	**-0.6**
	baz=229								
EYUL	**Yuli**	**0.62**	**356**	*e*		P	**Pb**	**10 51 16.1**	**-1.1**
	baz=346								
TWF1	**Yuli**	**0.62**	**354**	*e*		P	**Pb**	**10 51 15.6**	**-1.6**
	baz=347								
YULB	**Yu-li**	**0.66**	**354**			P	**Pb**	**10 51 16.1**	**-1.8**
YULB	**Yu-li**	**0.66**	**354**	*e*		P	**Pb**	**10 51 16.1**	**-1.8**
	baz=347								
TSMG	**Majia**	**0.67**	**268**	*e*		P	**Pb**	**10 51 17.1**	**-0.8**
	baz=262								
MASBT	**Mashibuluo**	**0.69**	**260**	*i*		P	**Pn**	**10 51 17.6**	**-1.0**
	baz=255								
STYH	**Taoyuan**	**0.70**	**309**			P	**Pn**	**10 51 17.6**	**-1.2**
	baz=308								
STYH					*e*	S	**Sb**	**10 51 26.4**	**-1.5**
	baz=308								
LAY	**Lan-yu**	**0.71**	**166**	*e*		P	**Pn**	**10 51 18.4**	**-0.5**
	baz=166								
SLGT	**Liugui**	**0.71**	**292**			P	**Pn**	**10 51 18.0**	**-1.0**
	baz=289								
SLIU	**Shizi**	**0.73**	**226**	*e*		P	**Pn**	**10 51 18.1**	**-1.1**
	baz=212								
LYUB	**Lan-yu**	**0.75**	**164**	*e*		P	**Pn**	**10 51 17.8**	**-1.6**
	baz=165								
HGSD	**Ruisui**	**0.76**	**4**	*e*		P	**Pn**	**10 51 18.5**	**-1.1**
	baz=14								
EHY	**Hungye**	**0.78**	**357**	*e*		P	**Pn**	**10 51 17.9**	**-2.0**
	baz=349								
SCZT	**Fangliau**	**0.78**	**243**	*e*		P	**Pn**	**10 51 19.3**	**-0.5**
	baz=239								
SGST	**Jiashian**	**0.80**	**296**	*i*		P	**Pn**	**10 51 19.4**	**-0.8**
	baz=300								
SGST					*e*	S	**Sn**	**10 51 30.3**	**-0.9**
	baz=300								
SCST	**Cishan**	**0.82**	**281**			P	**Pb**	**10 51 20.7**	**+0.2**
	baz=279								
SMST	**Manzhou Townsh**	**0.86**	**215**			P	**Pn**	**10 51 20.3**	**-0.6**
	baz=204								
WTP	**Ta-pu**	**0.86**	**307**			P	**Pn**	**10 51 20.9**	**-0.2**
	baz=306								
WTP					*e*	S	**Sb**	**10 51 32.7**	**+0.2**
	baz=306								
TWM1	**Shoushan**	**0.88**	**276**	*e*		P	**Pb**	**10 51 22.6**	**+1.2**
	baz=274								
TPUB	**Ta-pu**	**0.89**	**310**			P	**Pn**	**10 51 21.4**	**+0.1**
TPUB	**Ta-pu**	**0.89**	**310**			P	**Pn**	**10 51 21.2**	**-0.2**
	baz=309								
TPUB					*e*	S	**Sn**	**10 51 33.1**	**-0.2**
	baz=309								
CHN1	**Nanshi**	**0.90**	**301**			P	**Pb**	**10 51 22.0**	**+0.2**
	baz=303								
CHN1					*e*	S	**Sb**	**10 51 34.3**	**+0.8**
	baz=303								
HEN	**Hengchun**	**0.93**	**219**	*e*		P	**Pn**	**10 51 22.1**	**+0.2**
	baz=212								
HEN					*e*	S	**Sb**	**10 51 34.4**	**+0.2**
	baz=212								
TSEB	**Hengchuen, Pin**	**0.93**	**208**	*e*		S	**Sb**	**10 51 35.1**	**+0.8**
	baz=201								
ALS	**Alishan**	**0.94**	**326**			P	**Pn**	**10 51 21.7**	**-0.6**
	baz=326								
TWKBT	**Hengchun**	**0.94**	**213**	*e*		P	**Pn**	**10 51 21.6**	**-0.4**
	baz=204								
EGFH	**Guangfu**	**0.94**	**3**	*e*		P	**Pb**	**10 51 22.4**	**-0.1**
	baz=3.0								
SNST	**Tainan City**	**0.94**	**302**			P	**Pb**	**10 51 22.6**	**+0.1**
	baz=308								
SNST					*e*	S	**Sb**	**10 51 35.7**	**+1.1**
	baz=308								
TWK1	**Hengchun**	**0.94**	**214**	*e*		P	**Pn**	**10 51 21.6**	**-0.4**
	baz=204								
TWK1					*e*	S	**Sn**	**10 51 33.9**	**-0.6**
	baz=204								
TWK	**Hsinying**	**0.97**	**304**	*e*		P	**Pb**	**10 51 23.0**	**-0.1**
	baz=312								
SHHT	**Tainan City**	**0.98**	**287**	*e*		P	**Pb**	**10 51 25.1**	**+1.8**
	baz=286								
WARBT	**Fenglin Townsh**	**0.98**	**1**	*e*		P	**Pn**	**10 51 20.6**	**-2.1**
CHN3	**Shinhua**	**0.99**	**291**	*e*		P	**Pb**	**10 51 25.4**	**+2.2**
	baz=289								
WCKO	**Fanlu**	**1.00**	**315**	*e*		P	**Pb**	**10 51 23.2**	**-0.2**
	baz=321								
WCKO					*e*	S	**Sb**	**10 51 36.7**	**+0.5**
	baz=321								
VWDT	**VWDT**	**1.04**	**349**	*e*		P	**Pn**	**10 51 22.5**	**-0.9**
	baz=352								
SHUL	**Shoufeng**	**1.07**	**10**	*e*		P	**Pn**	**10 51 23.2**	**-0.6**
	baz=357								
SHUL					*e*	S	**Sb**	**10 51 38.0**	**-0.3**
	baz=357								
CHN5	**Tsauling**	**1.07**	**324**			P	**Pb**	**10 51 24.5**	**-0.3**
	baz=323								
**W

ETM	**Tongmen**	**1.24**	**5**	*eP*		**Pn**	**10 51 24.7**	**-1.5**
	baz=4.0							
WJS	**Zhushan**	**1.24**	**332**	*eP*		**Pb**	**10 51 27.5**	**0.0**
	baz=330							
TSCK	**Chigu Township**	**1.25**	**290**	*eP*		**Pb**	**10 51 27.3**	**-0.5**
	baz=289							
TSCK				*eS*		**Sb**	**10 51 44.3**	**+0.8**
	baz=289							
WUSB	**Renai**	**1.28**	**350**	*eP*		**Pn**	**10 51 26.6**	**-0.3**
	baz=355							
LXIB	**Xiulin Townshi**	**1.29**	**2**	*eP*		**Pn**	**10 51 25.1**	**-1.9**
	baz=11							
WNT	**Mingjian**	**1.30**	**331**	*eP*		**Pb**	**10 51 28.7**	**0.0**
	baz=330							
WTK	**Tuku**	**1.31**	**317**	*eP*		**Pb**	**10 51 28.4**	**-0.4**
	baz=316							
WTK				*eS*		**Sb**	**10 51 45.2**	**0.0**
	baz=316							
WSL	**Shuilin Townsh**	**1.31**	**307**	*eP*		**Pb**	**10 51 28.6**	**-0.3**
	baz=307							
WSL				*eS*		**Sb**	**10 51 46.0**	**+0.8**
	baz=307							
CHGB	**Renai**	**1.34**	**352**	*eP*		**Pn**	**10 51 27.2**	**-0.6**
	baz=357							
WCS	**Beigang Elemen**	**1.39**	**343**	*eP*		**Pn**	**10 51 29.0**	**+0.8**
	baz=353							
WHF	**Hehuan Shan**	**1.41**	**356**	*eP*		**Pn**	**10 51 28.3**	**-0.6**
	baz=5.0							
NACB	**Ninganchiao**	**1.45**	**8**	*eP*		**Pn**	**10 51 28.5**	**-0.6**
	baz=6.0							
ETLH	**Xiulin Townshi**	**1.48**	**4**	*eP*		**Pn**	**10 51 29.9**	**+0.4**
	baz=2.0							
WRL	**Guolierlin Hig**	**1.48**	**322**	*eP*		**Pn**	**10 51 30.1**	**+0.6**
	baz=321							
FUSS	**Fushou**	**1.52**	**356**	*eP*		**Pn**	**10 51 30.1**	**-0.1**
	baz=3.0							
TWT	**Tachien**	**1.53**	**353**	*eP*		**Pn**	**10 51 31.2**	**+0.9**
TDCB	**Techi**	**1.53**	**353**	*eP*		**Pn**	**10 51 31.0**	**+0.7**
WCHH	**Zhanghua**	**1.54**	**331**	*eP*		**Pb**	**10 51 31.8**	**-0.8**
	baz=317							
WHP	**Taichung City**	**1.59**	**346**	*eP*		**Pb**	**10 51 33.3**	**-0.3**
	baz=354							
EAHA	**Aohua**	**1.63**	**12**	*eS*		**Sn**	**10 51 51.9**	**+0.3**
	baz=1.0							
EOS4	**EOS4**	**1.64**	**32**	*eP*		**Pn**	**10 51 31.5**	**+0.2**
	baz=32							
EOS4				*eS*		**Sn**	**10 51 50.6**	**-0.7**
	baz=32							
WDGT	**Dungji**	**1.66**	**289**	*eS*		**Sn**	**10 51 52.2**	**0.0**
	baz=289							
NNSB	**Datong**	**1.69**	**0**	*eP*		**Pn**	**10 51 32.3**	**-0.2**
	baz=9.0							
NNS	**Nan Shan**	**1.70**	**0**	*eP*		**Pn**	**10 51 33.4**	**+0.7**
	baz=9.0							
NSY	**Sanyi**	**1.77**	**342**	*eP*		**Pb**	**10 51 35.7**	**-0.9**
	baz=341							
EOS3	**EOS3**	**1.78**	**29**	*eP*		**Pn**	**10 51 34.3**	**+0.8**
	baz=27							
EOS3				*eS*		**Sn**	**10 51 55.1**	**+0.1**
	baz=27							
LATG	**Datong**	**1.80**	**5**	*eP*		**Pn**	**10 51 33.5**	**-0.6**
	baz=2.0							
EOS2	**EOS2**	**1.86**	**25**	*eP*		**Pn**	**10 51 35.2**	**+0.6**
	baz=33							
EOS2				*eS*		**Sn**	**10 51 58.6**	**+1.5**
	baz=33							
PNG	**Penghu**	**1.86**	**297**	*eP*		**Pn**	**10 51 35.4**	**+0.6**
	baz=297							
PNG				*eS*		**Sn**	**10 51 57.2**	**-0.2**
	baz=297							
NDT	**Datong Townshi**	**1.87**	**4**	*eP*		**Pn**	**10 51 35.9**	**+1.0**
	baz=11							
NMLH	**Miaoli**	**1.88**	**344**	*eP*		**Pn**	**10 51 36.1**	**+1.2**
	baz=341							
NFF	**Wufeng Townshi**	**1.91**	**353**	*eP*		**Pn**	**10 51 36.7**	**+1.2**
	baz=356							
ENTT	**Nioudou**	**1.91**	**5**	*eP*		**Pn**	**10 51 35.6**	**+0.1**
	baz=3.0							
NSTT	**Nanjuang**	**1.92**	**350**	*eP*		**Pn**	**10 51 36.6**	**+1.0**
	baz=350							
NSTT				*eS*		**Sb**	**10 52 01.9**	**-0.8**
	baz=350							
TWC	**Suao**	**1.92**	**13**	*eP*		**Pn**	**10 51 36.6**	**+1.1**
YHNB	**Yeheng**	**1.93**	**0**	*P*		**Pn**	**10 51 36.5**	**+0.7**
YHNB	**Yeheng**	**1.93**	**0**	*eP*		**Pn**	**10 51 36.4**	**+0.6**
	baz=8.0							
LIOB	**Emei**	**1.94**	**350**	*eP*		**Pn**	**10 51 36.8**	**+1.1**
	baz=349							
NSK	**Sanguang**	**1.94**	**360**	*eP*		**Pn**	**10 51 36.8**	**+0.9**
	baz=9.0							
TWE	**Neicheng**	**2.00**	**8**	*eP*		**Pn**	**10 51 36.8**	**+0.1**
	baz=5.0							
FUSB	**Fushanzhiwuyua**	**2.03**	**6**	*eP*		**Pn**	**10 51 37.0**	**-0.1**
	baz=2.0							
NWLT	**Wulai**	**2.04**	**3**	*eP*		**Pn**	**10 51 38.0**	**+0.8**
	baz=10.0							
NHDH	**Xindian Distri**	**2.23**	**4**	*eP*		**Pn**	**10 51 40.3**	**+0.6**
	baz=10.0							
JYNG	**Yonagunijimaku**	**2.24**	**40**	*eP*		**Pn**	**10 51 40.3**	**+0.3**
JYNG				*S*		**Sn**	**10 52 06.7**	**0.0**
TIPB	**Shuangxi**	**2.27**	**11**	*eP*		**Pn**	**10 51 41.1**	**+0.7**
	baz=7.0							
YOJ	**Yonaguni jima**	**2.29**	**41**	*P*		**Pn**	**10 51 41.9**	**+1.3**
YOJ	**Yonaguni jima**	**2.29**	**41**	*eP*		**Pn**	**10 51 41.4**	**+0.7**
	baz=38							
YOJ	**Yonaguni jima**	**2.29**	**41**	*P*		**Pn**	**10 51 41.3**	**+0.7**
YOJ				*eS*		**Sn**	**10 52 07.9**	**0.0**
SXI1	**Grass Mountain**	**2.40**	**11**	*eP*		**Pn**	**10 51 43.8**	**+1.6**
	baz=7.0							
YM01	**YM01**	**2.41**	**4**	*eP*		**Pn**	**10 51 43.2**	**+0.9**
	baz=1.0							
HATJ	**Hateruma jima**	**2.60**	**59**	*P*		**Pn**	**10 51 45.3**	**+0.4**
HATJ				*eS*		**Sn**	**10 52 14.8**	**-0.7**
IRIF	**Iriomote-Funau**	**2.69**	**53**	*S*		**Sn**	**10 52 18.3**	**+0.5**
JKRS	**Kuro-shima**	**2.85**	**58**	*P*		**Pn**	**10 51 49.2**	**+0.8**
JKRS				*eS*		**Sn**	**10 52 22.2**	**+0.4**
VWUC	**VWUC**	**2.86**	**322**	*eP*		**Pn**	**10 51 48.3**	**-0.1**
	baz=311							
JIJ	**Ishigaki jima**	**3.02**	**57**	*P*		**Pn**	**10 51 51.4**	**+0.7**
JIJ				*eS*		**Sn**	**10 52 25.2**	**-0.7**
PTMZ	**Houxiangcun**	**3.09**	**319**	*eP*		**Pn**	**10 51 51.5**	**-0.1**
	baz=317							
KNM	**Kinmen**	**3.17**	**303**	*eP*		**Pn**	**10 51 54.8**	**+2.0**
	baz=302							
KNMB	**Chin-men Tao**	**3.23**	**303**	*eP*		**Pn**	**10 51 53.8**	**+0.2**
	baz=304							
JISG	**Ishigakijimahi**	**3.27**	**55**	*eP*		**Pn**	**10 51 54.4**	**+0.2**
JISG				*S*		**Sn**	**10 52 30.4**	**-1.6**
JTJ	**Tarama**	**3.60**	**57**	*P*		**Pn**	**10 51 59.7**	**+1.1**
JTJ				*eS*		**Sn**	**10 52 40.3**	**+0.1**
MATB	**Ma-tsu**	**3.65**	**339**	*eP*		**Pn**	**10 51 59.1**	**-0.2**
	baz=337							
AXDP	**Jialang**	**3.79**	**305**	*eP*		**Pn**	**10 52 01.5**	**+0.3**
	baz=306							
MHZQ	**Yeshan**	**3.98**	**328**	*eP*		**Pn**	**10 52 03.8**	**0.0**
	baz=326							
JIRB	**Irabujima**	**4.06**	**58**	*eP*		**Pn**	**10 52 06.4**	**+1.4**
JIRB				*S*		**Sn**	**10 52 52.6**	**+0.9**
XPSS	**Dashiqiu**	**4.32**	**346**	*eP*		**Pn**	**10 52 07.9**	**-0.6**
	baz=345							
SXFK	**Yanhouchang**	**4.98**	**318**	*eP*		**Pn**	**10 52 17.7**	**0.0**
	baz=318							

IDC 07 10:59:39.1±34.0, **20.05S**×**178.02W**, **h519**km±306km,
mb2.7/3, mbtmp3.6/3, Error ellipse: s-maj=375.5km
s-min=50.9km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**44.61**	**256**	P		P	11 07 05.1	-0.1
	1.3nm,1.0s,baz=98,slow=7.5,SNR=9.9							
ASAR				PcP		PcP	11 08 36.8	-0.3
	0.1nm,0.5s,baz=109,slow=3.8,SNR=1.9							
	1.3nm,1.0s							
WRA	**Warramunga Arr**	**44.65**	**262**	P		P	11 07 05.4	-0.2
	0.1nm,0.3s,baz=97,slow=7.5,SNR=1.6							
	0.1nm,0.3s							
ILAR	**Eielson Array**	**87.88**	**13**	P		P	11 11 32.5	-0.1
	0.3nm,0.4s,baz=218,slow=5.2,SNR=7.9							
	0.3nm,0.4s							

*GII **07** 11:01:21.8±0.3,29.541N±0.004×35.003E±0.001,h17km,*
Md2.5,4,Mws2.5/7, confirmed
*JSO **07** 11:01:21,29.52N×34.90E,h10km,ML2.5/17,Mw2.6/17*

*SGS **07** 11:01:21.9,29.52N×34.91E,h22km,Ml2.5*
ISC 07 11:01:21.4±1.0, **29.51N**±0.02×**34.91E**±0.07, **h25**km±6km,
n40,σ**0.48/42, 1C, Egypt**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EIL	**Elat**	**0.17**	**13**	P		**Pb**	**11 01 26.6**	**-0.1**
EIL				S		**Sb**	**11 01 30.2**	**-0.1**
EIL	**Elat**	**0.17**	**13**	S		**Sb**	**11 01 29.7**	**-0.5**
EIL	**Elat**	**0.17**	**13**	P		**Pb**	**11 01 26.2**	**-0.5**
AQBJ	**Aqaba**	**0.26**	**29**	P		**Pb**	**11 01 27.6**	**-0.2**
AQBJ				S		**Sb**	**11 01 32.9**	**+0.8**
MBRI	**Mt Berech**	**0.29**	**1**	P		**Pb**	**11 01 28.3**	**0.0**
MBRI	**Mt Berech**	**0.29**	**1**	P		**Pb**	**11 01 27.9**	**-0.4**
MBRI	**Mt Berech**	**0.29**	**1**	S		**Sb**	**11 01 33.2**	**+0.1**
JMOS	**Jabal al Moall**	**0.38**	**152**	S		**Sb**	**11 01 35.8**	**+0.6**
JMOS	**Jabal al Moall**	**0.38**	**152**	P		**Pb**	**11 01 29.9**	**+0.3**
HAQS	**Haql**	**0.45**	**179**	P		**Pb**	**11 01 31.2**	**+0.3**
HAQS	**Haql**	**0.45**	**179**	S		**Sb**	**11 01 37.7**	**+0.5**
HRFI	**Mount Harif**	**0.54**	**12**	P		**Pb**	**11 01 32.1**	**-0.3**
HRFI	**Mount Harif**	**0.54**	**12**	S		**Sb**	**11 01 39.5**	**-0.3**
HRFI	**Mount Harif**	**0.54**	**12**	P		**Pb**	**11 01 31.7**	**-0.7**
KRMI	**Paran Flat**	**0.63**	**346**	P		**Pb**	**11 01 33.6**	**-0.2**
KRMI	**Paran Flat**	**0.63**	**346**	S		**Sb**	**11 01 42.5**	**+0.2**
KRMI	**Paran Flat**	**0.63**	**346**	P		**Pb**	**11 01 33.7**	**-0.2**
PRNI	**Paran**	**0.85**	**6**	P		**Pb**	**11 01 37.5**	**0.0**
PRNI	**Paran**	**0.85**	**6**	S		**Sb**	**11 01 49.1**	**+0.6**
PRNI	**Paran**	**0.85**	**6**	⇑*i*	P	**Pb**	**11 01 37.4**	**-0.2**
JLOS		**0.92**	**146**	P		**Pb**	**11 01 38.4**	**-0.4**
TAYS	**Tayyib Ism**	**0.95**	**182**	P		**Pn**	**11 01 38.7**	**-0.6**
ZFRI	**Zfri**	**1.07**	**13**	P		**Pb**	**11 01 41.3**	**0.0**
ZFRI	**Zfri**	**1.07**	**13**	S		**Sn**	**11 01 55.1**	**+0.1**
ZFRI	**Zfri**	**1.07**	**13**	P		**Pn**	**11 01 40.7**	**-0.2**
BDAS	**Al Bad`**	**1.08**	**171**	P		**Pn**	**11 01 40.5**	**-0.6**
RSHS		**1.21**	**185**	P		**Pn**	**11 01 42.5**	**-0.3**
KZIT	**Kziot**	**1.47**	**343**	S		**Sb**	**11 02 06.4**	**+0.2**
KZIT	**Kziot**	**1.47**	**343**	P		**Pn**	**11 01 46.8**	**+0.4**
LISJ	**El Lisan**	**1.80**	**16**	P		**Pn**	**11 01 52.3**	**+1.4**
MDBI	**Mazsada**	**1.84**	**12**	P		**Pb**	**11 01 53.9**	**-0.5**
MSBI	**Mazada**	**1.84**	**12**	P		**Pb**	**11 01 53.7**	**-0.7**
MSBI	**Mazada**	**1.84**	**12**	P		**Pn**	**11 01 51.3**	**-0.2**
MSBI	**Mazada**	**1.84**	**12**	S		**Sn**	**11 02 13.9**	**-0.1**
YTIR	**Yattir**	**1.86**	**6**	P		**Pb**	**11 01 53.9**	**-0.9**
YTIR	**Yattir**	**1.86**	**6**	P		**Pn**	**11 01 52.1**	**+0.2**
YTIR	**Yattir**	**1.86**	**6**	S		**Sn**	**11 02 15.2**	**+0.5**
TBKS	**Tabuk**	**1.92**	**131**	P		**Pb**	**11 01 55.4**	**-0.4**
DSI	**Dead Sea**	**2.10**	**11**	S		**Sn**	**11 02 20.5**	**+0.2**
DSI	**Dead Sea**	**2.10**	**11**	P		**Pn**	**11 01 55.3**	**+0.3**

IDC 07 11:08:17.0±2.8, **11.70S**×**167.24E**, **h0**km, **mb3.9**/4,
mbtmp3.9/4, **Error ellipse: s-maj=123.5km**
s-min=34.2km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**31.01**	**226**	P		P	11 14 37.0	+0.5
	1.0nm,0.4s,baz=9.9,slow=8.2,SNR=3.6							
	1.0nm,0.4s							
WRA	**Warramunga Arr**	**32.65**	**251**	P		P	11 14 51.2	+0.1
	0.6nm,0.4s,baz=86,slow=8.8,SNR=6.2							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**33.83**	**245**	P		P	11 15 00.9	-0.5
	0.6nm,0.4s,baz=70,slow=9.6,SNR=16							
	0.6nm,0.4s							
ILAR	**Eielson Array**	**83.67**	**18**	P		P	11 20 47.2	0.0
	0.5nm,0.6s,baz=230,slow=5.2,SNR=2.2							
	0.5nm,0.6s							

*NEIC **07** 11:11:47.4±0.2,37.20N±0.01×97.82W±0.01,h5km±1km,*
Error ellipse: s-maj=2.3km s-min=1.8km az=13.0
NEIC 07 11:11:47.5±0.4, **37.20N**±0.01×**97.82W**±0.01, **h6**km±1km,
mb_Lg3.0/64, **ML3.1**/19, **ML3.4**/40, **Error ellipse:**
s-maj=1.6km s-min=1.3km az=204.0, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAN06	**Argonia West S**	**0.06**	**323**			Pg	11 11 49.2	+0.1
KAN06				Sg		Sg	11 11 50.3	+0.1
KAN01	**Argonia South**	**0.07**	**138**	Pg		Pg	11 11 49.4	+0.2
KAN01				Sg		Sg	11 11 50.6	+0.3
KAN01				IAML			11 11 50.7	
	comp=E,31μm,0.2s							
KAN05	**Bluff City Nor**	**0.10**	**205**			Pg	11 11 50.0	+0.2
KAN05				Sg		Sg	11 11 51.8	+0.5
KAN05				IAML			11 11 53.5	
	comp=N,23μm,0.2s							
KAN08	**Anthony NE Sta**	**0.13**	**281**			Pg	11 11 50.5	+0.3
KAN08				Sg		Sg	11 11 52.5	+0.6
KAN08				IAML			11 11 52.6	
	comp=E,13μm,0.3s							
KAN08				IAML			11 11 52.7	
	comp=N,16μm,0.3s							
KS21	**Milan North St**	**0.15**	**56**	IAML			11 11 54.5	
	comp=N,9μm,0.1s							
KS21	**Milan North St**	**0.15**	**56**	Pg		Pg	11 11 50.9	+0.3
KAN17	**Caldwell West**	**0.16**	**166**	Pg		Pg	11 11 51.2	+0.3
KAN17				Sg		Sg	11 11 53.8	+0.7
KAN17				IAML			11 11 54.0	
	comp=E,12μm,0.2s							
KAN09	**Caldwell North**	**0.17**	**113**	Pg		Pg	11 11 51.3	+0.3
KAN09				IAML			11 11 54.1	
	comp=N,13μm,0.3s							
KAN12	**Harper NE Stat**	**0.17**	**303**			Pg	11 11 51.4	+0.3
KAN12				IAML			11 11 55.7	
	comp=N,13μm,0.3s							
KAN12				IAML			11 11 56.3	
	comp=E,11μm,0.3s							
KAN10	**Anthony SW Sta**	**0.24**	**250**			Pg	11 11 52.5	+0.3
KAN14	**Manchester OK**	**0.27**	**206**			Pg	11 11 53.2	+0.3
KAN14				Sg		Sg	11 11 57.1	+0.6
KAN14				IAML			11 11 57.2	
	comp=E,8μm,0.2s							
KAN13	**South Haven SW**	**0.33**	**125**	Pg		Pg	11 11 54.2	+0.2
KAN13				IAML			11 12 05.1	
	comp=E,4μm,0.3s							
GC02	**Grant County #**	**0.35**	**186**	Pg		Pg	11 11 54.6	+0.2
OK032	**Salt Plains WL**	**0.51**	**218**	Pg		Pg	11 11 57.5	+0.1
OK032				IAML			11 12 06.5	
	comp=E,3μm,0.3s							
OK032				IAML			11 12 08.5	
	comp=E,2μm,0.2s							
BLOK	**Blackwell**	**0.65**	**132**			Pg	11 12 00.1	-0.1
BLOK				IAML			11 12 09.5	
	comp=E,2μm,0.3s							
BLOK				IAML			11 12 11.0	
	comp=N,2μm,0.2s							
CROK	**Carrier**	**0.71**	**191**	Pg		Pg	11 12 01.2	0.0
CROK				IAML			11 12 12.1	
	comp=N,2μm,0.3s							
OK051	**E0350 and S346**	**1.05**	**131**			Pg	11 12 07.3	-0.3
OK051				IAML			11 12 24.1	
	comp=N,917nm,0.2s							
OK051				IAML			11 12 27.1	
	comp=N,1μm,0.2s							
OK048	**Pawnee Station**	**1.05**	**138**			Pg	11 12 07.3	-0.4
T35A	**Sooner Cattle**	**1.08**	**105**			Pg	11 12 07.9	-0.4
T35A						Sg	11 12 22.1	-0.2
U32A	**Winter Ranch,**	**1.26**	**230**			Pg	11 12 10.9	-0.7
U32A				IAML			11 12 46.4	
	comp=E,388nm,0.7s							
OK033	**Mehan**	**1.35**	**148**			Pn	11 12 12.7	-0.4
QUOK	**Quay**	**1.36**	**139**			Pn	11 12 12.7	-0.4
R32A	**Long Quarter,**	**1.41**	**330**			Pn	11 12 13.7	-0.1
OK029	**Liberty Lake**	**1.43**	**168**			Pn	11 12 14.1	-0.1
OK052	**Battle Ridge R**	**1.46**	**146**			Pn	11 12 14.3	-0.2
DEOK	**Depew**	**1.72**	**142**			Pn	11 12 18.4	+0.3
OKCSW	**OKLAHOMA CITY**	**1.82**	**170**	Pn		Pn	11 12 19.9	+0.4
FNO	**Franklin**	**1.97**	**170**	Pn		Pn	11 12 22.6	+1.1
TUL3	**Leonard**	**2.08**	**128**	Pn		Pn	11 12 24.2	+1.2
TUL3				IAmb_Lg			11 12 54.6	
	comp=Z,82nm,0.8s							
KSU1	**Kansas State U**	**2.12**	**26**	Pn		Pn	11 12 24.3	+0.7
W35A	**Tecumseh**	**2.18**	**159**	Pn		Pn	11 12 25.0	+0.6
CBKS	**Cedar Bluff**	**2.21**	**317**	Pn		Pn	11 12 25.5	+0.6
WMOK	**Wichita Mounta**	**2.58**	**198**	Pn		Pn	11 12 30.6	+0.7
X34A	**Smith Ranch, M**	**2.60**	**180**			Pn	11 12 31.1	+1.0
X34A				IAmb_Lg			11 13 12.9	
	comp=Z,42nm,0.7s							
U38A	**Gravette**	**2.86**	**104**			Pn	11 12 34.8	+1.1
SMWD	**Samnorwood**	**2.87**	**224**	Pn		Pn	11 12 34.6	+0.6
LOOK	**Love County**	**3.25**	**171**	Pn		Pn	11 12 39.8	+0.7
HHAR	**Hobbs**	**3.25**	**105**			Pn	11 12 39.8	+0.7
WTFS	**Witchita Falls**	**3.47**	**189**			Pn	11 12 42.8	+0.7
N33A	**J Bar K, Exete**	**3.54**	**4**	Pn		Pn	11 12 43.0	-0.2
N33A				IAmb_Lg			11 13 42.9	
	comp=Z,29nm,1.0s							
S39A	**Bolivar**	**3.61**	**81**			Pn	11 12 44.5	+0.4
Z35A	**Perchaven, San**	**3.89**	**173**	Pn		Pn	11 12 48.4	+0.4
AMTX	**Amarillo**	**3.89**	**235**	Pn		Pn	11 12 48.1	+0.1
AMTX				IAmb_Lg			11 14 00.8	
	comp=Z,35nm,0.8s							
RTBA	**Rita Blanca**	**4.02**	**261**	Pn		Pn	11 12 50.7	+0.9
N35A	**Tabor**	**4.03**	**24**			Pn	11 12 50.5	+0.7
P38A	**Dawn**	**4.14**	**53**			Pn	11 12 51.5	+0.2
P38A				IAmb_Lg			11 14 05.0	
	comp=Z,20nm,0.7s							
KSCO	**Kaye Shedlock`**	**4.20**	**297**	Pn		Pn	11 12 53.0	+0.7
BGNE	**Belgrade**	**4.21**	**357**	Pn		Pn	11 12 51.9	-0.4
BGNE				IAmb_Lg			11 13 58.2	
	comp=Z,36nm,0.7s							
APMT	**Aspermont**	**4.30**	**207**	Pn		Pn	11 12 53.9	+0.3
MIAR	**Mount Ida**	**4.34**	**126**			Pn	11 12 55.1	+1.0
DKNS	**Dickens**	**4.35**	**217**			Pn	11 12 55.3	+1.0
PLPT	**Palo Pinto**	**4.40**	**185**			Pn	11 12 54.8	-0.1
MGMO	**Mountain Grove**	**4.43**	**89**			Pn	11 12 56.0	+0.7
MGMO				IAmb_Lg			11 14 10.2	
	comp=Z,26nm,0.7s							
R40A	**Maddies Statio**	**4.53**	**74**	Pn		Pn	11 12 56.7	0.0
Z38A	**Mt. Pleasant**	**4.57**	**149**	IAmb_Lg			11 14 16.9	
	comp=Z,23nm,0.7s							
TREL	**Terrell**	**4.68**	**162**			Pn	11 12 59.0	+0.2
FCAR	**Ozark Folk Cen**	**4.77**	**104**	Pn		Pn	11 13 01.1	+1.1
FCAR				IAmb_Lg			11 14 22.3	
	comp=Z,22nm,0.8s							
ABTX	**Abilene, Hawle**	**4.81**	**199**	Pn		Pn	11 13 00.6	0.0
WHAR	**Wooly Hollow**	**4.86**	**111**			Pn	11 13 01.2	0.0
WHAR				IAmb_Lg			11 14 33.1	
	comp=Z,21nm,0.7s							
X40A	**Basin Creek Fa**	**4.87**	**122**			Pn	11 13 01.4	0.0
OGNE	**Ogallala**	**4.97**	**320**	IAmb_Lg			11 14 28.3	
	comp=Z,25nm,0.7s							
SN01	**Snyder 1**	**5.01**	**211**	IAmb_Lg			11 14 30.2	
	comp=Z,16nm,1.0s							
N38A	**Joes South For**	**5.06**	**43**	IAmb_Lg			11 14 32.0	
	comp=Z,30nm,0.7s							
P40A	**Paris**	**5.09**	**61**			Pn	11 13 04.9	+0.4
MSTX	**Muleshoe**	**5.17**	**233**	Pn		Pn	11 13 05.2	-0.4
WHTX	**Lake Whitney,**	**5.21**	**177**	Pn		Pn	11 13 05.9	-0.1
T25A	**Trinidad**	**5.27**	**271**	IAmb_Lg			11 14 39.4	
	comp=Z,18nm,0.9s							
CCM	**Cathedral Cave**	**5.29**	**79**			Pn	11 13 07.0	-0.1
CCM				IAmb_Lg			11 14 39.5	
	comp=Z,19nm,0.8s							
237A	**Washetta, Mont**	**5.45**	**162**	Pn		Pn	11 13 08.9	-0.4
LCAR	**Lake Charles**	**5.47**	**100**	IAmb_Lg			11 14 40.4	
	comp=Z,23nm,0.9s							
SCIA	**State Center**	**5.89**	**36**	IAmb_Lg			11 15 03.1	
	comp=Z,27nm,0.8s							
FVM	**French Village**	**5.92**	**80**	IAmb_Lg			11 14 56.7	
	comp=Z,20nm,0.8s							
PBMO	**Poplar Bluff**	**5.93**	**92**	IAmb_Lg			11 15 01.6	
	comp=Z,22nm,0.8s							
SGCY	**Sterling City**	**5.94**	**208**	Pn		Pn	11 13 15.4	-0.7
SGCY				IAmb_Lg			11 15 09.7	
	comp=Z,21nm,1.1s							
BRDY	**Brady**	**5.98**	**190**	Pn		Pn	11 13 16.0	-0.7
SLM	**Saint Louis**	**6.16**	**74**	IAmb_Lg			11 15 00.5	
	comp=Z,25nm,0.8s							
435B	**Jarrell**	**6.41**	**178**	IAmb_Lg			11 15 13.6	
	comp=Z,24nm,1.0s							
CGM3	**Cape Girardeau**	**6.51**	**87**	IAmb_Lg			11 15 15.1	
	comp=Z,17nm,0.8s							
JCT	**Junction City**	**6.91**	**194**	IAmb_Lg			11 15 37.4	
	comp=Z,15nm,0.9s							
L40A	**Anamosa**	**7.03**	**44**	IAmb_Lg			11 15 29.1	
	comp=Z,20nm,0.8s							
N23A	**Red Feather La**	**7.32**	**303**	IAmb_Lg			11 15 51.1	
	comp=Z,18nm,0.8s							
OXF	**Oxford**	**7.33**	**109**	IAmb_Lg			11 15 56.4	
	comp=Z,15nm,0.8s							
O44A	**Mansfield**	**7.88**	**65**	IAmb_Lg			11 16 03.8	
	comp=Z,16nm,0.8s							
L42A	**Oliver, Polo**	**7.91**	**50**	IAmb_Lg			11 15 57.9	
	comp=Z,15nm,0.8s							
I40A	**Norwalk**	**8.64**	**37**	IAmb_Lg			11 16 27.6

TEGC **Jichi Village** **0.32 217** P **Pb** **11 13 14.1 -0.3**
baz=209
TEGC eS **Sb** **11 13 20.9 +1.4**
baz=209
ESL **Shilin** **0.33 242**⇑ *i*P **Pg** **11 13 12.9 -0.7**
baz=242
ESL eS **Sg** **11 13 17.9 -0.2**
baz=242
ETLH **Xiulin Townshi** **0.34 315** *e*P **Pg** **11 13 12.6 -1.3**
baz=311
EHP **Heping Village** **0.34 359** *i* P **Pg** **11 13 12.8 -1.1**
baz=351
EHP *i* S **Sg** **11 13 18.5 -0.2**
baz=351
EAHA **Aohua** **0.36 359** *i* P **Pg** **11 13 13.1 -1.2**
baz=350
EAHA S **Sg** **11 13 18.2 -1.0**
baz=350
WARBT **Fenglin Townsh** **0.41 233**⇑ *i*P **Pg** **11 13 14.5 -0.7**
baz=236
WARBT *i* S **Sg** **11 13 21.1 +0.3**
baz=236
ENA **Nanau** **0.46 359**⇑ *i*P **Pg** **11 13 15.2 -0.9**
baz=353
ENA S **Sg** **11 13 21.5 -0.7**
baz=353
WHF **Hehuan Shan** **0.47 292**⇑ *i*P **Pg** **11 13 15.3 -1.2**
baz=290
WHF S **Sg** **11 13 23.1 +0.2**
baz=290
EWUT **Wuta** **0.48 3** ⇑P **Pg** **11 13 15.4 -1.0**
baz=352
OWD **Renai** **0.52 269**⇑ *i*P **Pg** **11 13 16.4 -0.8**
baz=275
OWD eS **Sg** **11 13 24.5 +0.2**
baz=275
CHGB **Renai** **0.53 280**⇑ *i*P **Pg** **11 13 16.7 -0.8**
baz=275
CHGB *i* S **Sg** **11 13 23.8 -0.8**
baz=275
FUSS **Fushou** **0.54 302**⇑ *i*P **Pg** **11 13 16.6 -1.0**
baz=297
EOS4 **EOS4** **0.54 73** ⇑P **Pb** **11 13 18.3 +0.2**
baz=89
HGSD **Ruisui** **0.56 212**⇓ *i*P **Pg** **11 13 18.0 +0.1**
baz=196
HGSD eS **Sb** **11 13 27.4 +1.0**
baz=196
NNSB **Datong** **0.57 324**⇑ *i*P **Pg** **11 13 17.0 -1.1**
baz=321
NNSH **Datong** **0.57 324**⇑ *i*P **Pg** **11 13 16.9 -1.2**
baz=322
NNSH eS **Sg** **11 13 24.8 -0.9**
baz=322
WUSB **Renai** **0.58 273**⇑ *i*P **Pg** **11 13 17.6 -0.7**
baz=276
WUSB S **Sg** **11 13 26.0 +0.1**
baz=276
NNS **Nan Shan** **0.58 324**⇑ *i*P **Pg** **11 13 17.3 -1.1**
baz=323
NNS eS **Sg** **11 13 24.7 -1.4**
baz=323
VWDT **VWDT** **0.59 249**⇑ *i*P **Pg** **11 13 18.3 -0.2**
baz=244
VWDT S **Sb** **11 13 26.9 -0.5**
baz=244
TWT **Tachien** **0.59 299**⇑ *i*P **Pg** **11 13 18.0 -0.6**
baz=295
EHY **Hungye** **0.60 220**⇑ *i*P **Pg** **11 13 18.2 -0.4**
baz=216
LATG **Datong** **0.60 341**⇑ *i*P **Pg** **11 13 17.7 -1.1**
baz=328
LATG eS **Sg** **11 13 25.5 -1.3**
baz=328
TDCB **Techi** **0.61 298**⇑ *i*P **Pg** **11 13 18.0 -0.9**
baz=297
TDCB eS **Sg** **11 13 25.5 -1.5**
baz=297
EOS3 **EOS3** **0.61 58** *e*P **Pb** **11 13 19.8 +0.4**
baz=57
ESAO **Su ao** **0.61 8** *e*P **Pg** **11 13 17.7 -1.2**
baz=359
EOS2 **EOS2** **0.63 44** *e*P **Pn** **11 13 20.8 -0.6**
baz=56
TWC **Suao** **0.65 8** ⇑P **Pg** **11 13 18.8 -0.8**
baz=6.0
TWC eS **Sg** **11 13 27.3 -0.9**
baz=6.0
NDS **Dongshan** **0.67 358**⇑ *i*P **Pg** **11 13 19.1 -0.8**
baz=350
NDS S **Sg** **11 13 28.2 -0.5**
baz=350
NDT **Datong Townshi** **0.67 341**⇑ *i*P **Pg** **11 13 19.1 -0.9**
baz=342
NDT eS **Sg** **11 13 28.7 -0.2**
baz=342
ENTT **Nioudou** **0.69 346**⇑ *i*P **Pg** **11 13 19.6 -0.9**
baz=336
ENTT S **Sg** **11 13 29.0 -0.6**
baz=336
ECBN **Changbin** **0.70 203** *e*P **Pg** **11 13 20.5 0.0**
baz=187
YULB **Yu-li** **0.70 216** **Pg** **11 13 20.0 -0.6**
YULB **Yu-li** **0.70 216** P **Pg** **11 13 20.5 -0.1**
YULB **Yu-li** **0.70 216** *e*P **Pg** **11 13 19.8 -0.9**
baz=226
WPL **Puli Township** **0.72 274**⇑ *i*P **Pg** **11 13 20.4 -0.6**
baz=270
WPL eS **Sg** **11 13 29.8 -0.7**
baz=270
EYUL **Yuli** **0.73 213** *e*P **Pg** **11 13 21.2 +0.1**
baz=225
TWF1 **Yuli** **0.74 214** *e*P **Pg** **11 13 21.3 +0.1**
baz=225
SSLB **Suanglung** **0.75 256** **Pg** **11 13 20.9 -0.6**
SSLB **Suanglung** **0.75 256** P **Pg** **11 13 21.3 -0.2**
SSLB **Suanglung** **0.75 256**⇑ *i*P **Pg** **11 13 20.9 -0.6**
baz=264
SSLB eS **Sg** **11 13 30.5 -0.8**
baz=264
DPDB **Guoxing** **0.75 275** ⇑P **Pg** **11 13 20.9 -0.7**
baz=271
DPDB eS **Sg** **11 13 31.3 -0.2**
baz=271
TWE **Neicheng** **0.76 354**⇑ *i*P **Pg** **11 13 20.9 -0.7**
baz=346
TWE eS **Sg** **11 13 30.3 -1.2**
baz=346
WCS **Beigang Elemen** **0.77 277**⇑ *i*P **Pg** **11 13 21.1 -0.7**
baz=274
WCS eS **Sg** **11 13 31.6 -0.4**
baz=274
YHNB **Yeheng** **0.78 334** **Pg** **11 13 21.4 -0.7**
YHNB Sg **Sg** **11 13 31.5 -0.8**
YHNB **Yeheng** **0.78 334** P **Pg** **11 13 21.8 -0.3**
YHNB **Yeheng** **0.78 334**⇑ *i*P **Pg** **11 13 21.3 -0.7**
baz=334
YHNB eS **Sg** **11 13 30.8 -1.6**
baz=334
SMLT **Sun Moon Lake** **0.78 264**⇑ *i*P **Pg** **11 13 21.5 -0.6**
baz=270
SMLT S **Sg** **11 13 31.8 -0.5**
baz=270
NSK **Sanguang** **0.79 333** ⇑P **Pg** **11 13 21.2 -1.1**
baz=334
NSK S **Sg** **11 13 31.6 -1.1**
baz=334
WHP **Taichung City** **0.80 293**⇑ *i*P **Pg** **11 13 21.9 -0.5**
baz=292
WHP eS **Sb** **11 13 33.4 0.0**
baz=292
ILA **Ilan** **0.80 0** *e*P **Pg** **11 13 21.8 -0.6**
baz=348
FUSB **Fushanzhiwuyua** **0.80 350**⇑ *i*P **Pg** **11 13 21.8 -0.8**
baz=340
FUSB S **Sg** **11 13 32.1 -1.0**
baz=340
TYC **Yuchr** **0.82 266**⇑ *i*P **Pg** **11 13 21.9 -0.8**
baz=262
TYC eS **Sg** **11 13 32.0 -1.5**
baz=262
CHKH **Chenggong** **0.83 203** *e*P **Pg** **11 13 22.6 -0.5**
baz=190
NWLT **Wulai** **0.84 345** ⇑P **Pg** **11 13 22.3 -0.9**
baz=332
NWLT eS **Sg** **11 13 33.2 -1.0**
baz=332
WHYT **Xinyi Township** **0.86 252**⇑ *e*P **Pg** **11 13 22.9 -0.7**
baz=247
FULB **Fuli** **0.87 209** *e*P **Pg** **11 13 22.7 -1.1**
baz=195
NFF **Wufeng Townshi** **0.88 319**⇑ *i*P **Pg** **11 13 23.1 -0.8**
baz=318
NFF eS **Sg** **11 13 34.3 -1.2**
baz=318
CHKT **Chengkung** **0.93 202**⇑ *e*P **Pb** **11 13 23.9 -1.0**
baz=199
CHKT eS **Sn** **11 13 38.3 -0.5**
baz=199
WJS **Zhushan** **0.94 261** ⇑P **Pg** **11 13 25.2 0.0**
baz=265
WJS eS **Sn** **11 13 38.4 -0.8**
baz=265
LIOB **Emei** **0.95 316** ⇑P **Pb** **11 13 24.7 -0.5**
baz=313
NSTT **Nanjuang** **0.95 314**⇑ *e*P **Pb** **11 13 24.8 -0.4**
baz=314
NSTT eS **Sb** **11 13 36.6 -1.1**
baz=314
EHD **Haiduan** **0.95 212** *e*P **Pb** **11 13 24.4 -0.9**
baz=222
WWF **Wufeng** **0.96 275**⇑ *e*P **Pg** **11 13 25.7 +0.2**
baz=271
NJD **Zhudong** **0.97 322** *e*P **Pb** **11 13 24.8 -0.8**
baz=319
ALS **Alishan** **0.97 242** ⇑P **Pg** **11 13 25.4 -0.4**
baz=238
WNT **Mingjian** **0.98 265**⇑ *e*P **Pn** **11 13 26.1 -0.2**
baz=266
WNT eS **Sn** **11 13 39.6 -0.4**
baz=266
WNT1 **Nantou City** **0.98 267**⇑ *e*P **Pg** **11 13 26.0 +0.2**
baz=268
WNT1 eS **Sn** **11 13 40.4 +0.4**
baz=268
ECS **Chishang** **0.99 209** *e*P **Pb** **11 13 25.0 -1.0**
baz=221
TCU **Taichung** **1.00 281**⇑ *e*P **Pn** **11 13 26.4 -0.1**
baz=279
TCU eS **Sn** **11 13 41.1 +0.6**
baz=279
TIPB **Shuangxi** **1.00 4**⇑ *e*P **Pb** **11 13 25.3 -0.9**
baz=354
NSY **Sanyi** **1.01 297**⇑ *e*P **Pn** **11 13 26.6 -0.1**
baz=307
NSY eS **Sn** **11 13 41.1 +0.4**
baz=307
NHDH **Xindian Distri** **1.01 349** *e*P **Pb** **11 13 25.6 -0.8**
baz=337
TWA **Mucha** **1.02 352** *e*P **Pb** **11 13 25.8 -0.6**
baz=351
ELDTW **Lidau** **1.02 221**⇑ *e*P **Pb** **11 13 24.8 -1.7**
baz=218
TATO **Taipei** **1.03 347** **Pb** **11 13 26.2 -0.4**
TATO **Taipei** **1.03 347** P **Pn** **11 13 27.0 -0.1**
TATO **Taipei** **1.03 347**⇑ *e*P **Pb** **11 13 26.4 -0.2**
baz=337
TATO eS **Sb** **11 13 38.5 -1.6**
baz=337
NMLH **Miaoli** **1.04 303**⇑ *e*P **Pb** **11 13 26.8 0.0**
baz=300
CHN5 **Tsauling** **1.05 250**⇑ *i*P **Pg** **11 13 27.1 0.0**
baz=234
CHN5 eS **Sn** **11 13 42.0 +0.2**
baz=234
HSN1 **Hsinchu** **1.05 321** *e*P **Pb** **11 13 26.7 -0.2**
baz=320
HSN1 eS **Sb** **11 13 40.4 -0.1**
baz=320
TWB1 **Santiao Chiao** **1.06 12**⇑ *i*P **Pb** **11 13 26.6 -0.6**
baz=5.0
BACT **New Taipei Cit** **1.06 345** *e*P **Pn** **11 13 27.5 0.0**
baz=343
WYL **Yuanlin Townsh** **1.07 270** *e*P **Pb** **11 13 26.8 -0.4**
baz=249
EDH **Donghe** **1.07 202** *e*P **Pb** **11 13 25.4 -1.9**
baz=189
NJN **Zhunan** **1.07 312** *e*P **Pg** **11 13 27.7 +0.1**
baz=309
SBCB **Hsinchu** **1.08 320** *e*P **Pg** **11 13 27.7 0.0**
baz=319
SBCB eS **Sg** **11 13 41.9 +0.1**
baz=319
WDJ **Dajia District** **1.08 291** *e*P **Pg** **11 13 28.2 +0.4**
baz=300
WDJ eS **Sn** **11 13 43.2 +0.7**
baz=300
NHY **Taipei** **1.08 351** *e*P **Pg** **11 13 28.0 +0.2**
baz=350
TAP **Taipei** **1.09 348** *e*P **Pb** **11 13 27.6 -0.1**
baz=334
WCHH **Zhanghua** **1.09 276** *e*P **Pn** **11 13 27.8 -0.1**
baz=272
HSN **Hsinchu** **1.09 320**⇑ *e*P **Pn** **11 13 27.8 -0.1**
baz=321
HSN eS **Sn** **11 13 42.8 -0.1**
baz=321
NWF **Wu-fen Shan** **1.10 2**⇑ *i*P **Pb** **11 13 27.3 -0.6**
baz=347
WFSB **Wu-fen Shan** **1.10 2**⇑ *i*P **Pb** **11 13 27.6 -0.3**
baz=354
WFSB eS **Sb** **11 13 40.3 -1.8**
baz=354
NTY **Taoyuan** **1.11 338** *e*P **Pg** **11 13 28.2 -0.1**
baz=329
WGK **Gukeng** **1.12 256**⇑ *e*P **Pb** **11 13 28.1 -0.1**
baz=250
NCU **National Centr** **1.12 333**⇑ *e*P **Pn** **11 13 28.3 -0.1**
baz=330
NCUH **Zhongli** **1.12 333**⇑ *e*P **Pb** **11 13 28.2 0.0**
baz=329
SXI1 **Grass Mountain** **1.13 6**⇑ *i*P **Pb** **11 13 28.2 -0.1**
baz=353
SXI1 eS **Sn** **11 13 43.8 -0.1**
baz=353
WDLH **Douliu** **1.14 256** *e*P **Pn** **11 13 28.6 +0.1**
baz=251
TWS1 **Kuangyinshan** **1.17 345** *e*P **Pb** **11 13 29.2 +0.2**
baz=345
TWS1 eS **Sb** **11 13 44.1 +0.1**
baz=345
WCKO **Fanlu** **1.17 244**⇑ *i*P **Pn** **11 13 28.9 -0.1**
baz=239
TNOU **National Taiwa** **1.18 1** *e*P **Pn** **11 13 28.7 -0.4**
baz=347
YM01 **YM01** **1.19 352**⇑ *i*P **Pn** **11 13 29.1 -0.1**
baz=350
STYH **Taoyuan** **1.19 229** *e*P **Pn** **11 13 28.9 -0.4**
baz=213
JYNG **Yonagunijimaku** **1.20 66** P **Pn** **11 13 29.1 -0.3**
JYNG eS **Sb** **11 13 44.4 -0.4**
JYNG **Yonagunijimaku** **1.20 66** A A 11 13 29.1
comp=E,50nm,10.4s,comp=N,75nm,9.4s
LONT **Longtian** **1.20 208** *e*P **Pn** **11 13 28.5 -0.9**
baz=208
STYT **Tauyan** **1.21 229**⇑ *i*P **Pn** **11 13 29.0 -0.5**
baz=212
STYT eS **Sb** **11 13 45.2 0.0**
baz=212
NHW **Xinwu Township** **1.22 329** *e*P **Pn** **11 13 29.4 -0.2**
baz=327
NHW eS **Sg** **11 13 47.5 +1.2**
baz=327
TPUB **Ta-pu** **1.22 237** **Pg** **11 13 30.5 0.0**
TPUB **Ta-pu** **1.22 237** P **Pg** **11 13 30.6 +0.2**
TPUB **Ta-pu** **1.22 237** P **Pb** **11 13 29.8 0.0**
baz=232
TPUB S **Sg** **11 13 46.2 -0.1**
baz=232
CHN4 **Tsaushan** **1.22 240** *e*P **Pg** **11 13 30.5 0.0**
baz=236
NTST **Danshui** **1.22 347** *e*P **Pn** **11 13 29.7 0.0**
baz=344
YM08 **YM08** **1.23 353** ⇑P **Pn** **11 13 29.3 -0.5**
baz=336
YM08 eS **Sg** **11 13 46.6 +0.1**
baz=336
ANP **Anpu** **1.23 350** ⇑P **Pn** **11 13 29.5 -0.4**
baz=350
ANP eS **Sg** **11 13 46.7 -0.1**
baz=350
NWRT **Kuosheng** **1.23 356** *e*P **Pn** **11 13 29.9 0.0**
baz=355
CHN2 **Minshiung** **1.24 250** *e*P **Pg** **11 13 30.7 -0.2**
baz=245
WRL **Guolierlin Hig** **1.25 267** *e*P **Pn** **11 13 29.8 -0.3**
baz=262
YOJ **Yonaguni jima** **1.25 67** **Pn** **11 13 30.1 0.0**
YOJ **Yonaguni jima** **1.25 67** P **Pb** **11 13 30.3 -0.1**
YOJ **Yonaguni jima** **1.25 67** *e*P **Pn** **11 13 28.9 -1.2**
baz=68
YOJ **Yonaguni jima** **1.25 67** P **Pn** **11 13 29.7 -0.4**
YOJ eS **Sb** **11 13 46.6 +0.1**
YOJ **Yonaguni jima** **1.25 67** A A 11 13 29.7
comp=E,52nm,6.4s,comp=N,67nm,7.0s
WTP **Ta-pu** **1.26 236** *e*P **Pn** **11 13 30.4 +0.1**
baz=231
RLNB **Erlin** **1.27 267** ⇑P **Pb** **11 13 30.7 0.0**
baz=262
WTK **Tuku** **1.27 258** *e*P **Pb** **11 13 31.0 +0.2**
baz=252
TWGBT **Beinan** **1.30 208** P **Pn** **11 13 29.1 -1.6**
TWGBT **Beinan** **1.30 208** *e*P **Pn** **11 13 28.8 -1.9**
baz=208
TWG **Pinlang** **1.30 209** **Pn** **11 13 28.9 -1.9**
TWG **Pinlang** **1.30 209** *e*P **Pn** **11 13 29.6 -1.1**
baz=208
CHY **Chiayi** **1.30 249** *e*P **Pg** **11 13 31.5 -0.4**
baz=244
TWY **Chenhua** **1.31 354** *e*P **Pb** **11 13 31.5 +0.1**
baz=351
LDUT **Ludao** **1.31 191** *e*P **Pn** **11 13 28.9 -2.0**
baz=180
NSM **Shimen** **1.32 354** *e*P **Pb** **11 13 31.9 +0.3**
baz=336
TTN **Taitung** **1.33 205** *e*P **Pn** **11 13 30.4 -0.7**
baz=191
WTCT **Ta-ch'eng** **1.34 266** *e*P **Pn** **11 13 31.2 -0.2**
baz=260
WTCT eS **Sg** **11 13 50.4 0.0**
baz=260
TWK **Hsinying** **1.35 239** *e*P **Pb** **11 13 32.1 +0.1**
baz=234
CHN1 **Nanshi** **1.36 235** *e*P **Pg** **11 13 33.3 +0.2**
baz=231
CHN1 eS **Sg** **11 13 51.0 +0.2**
baz=231
SNST **Tainan City** **1.37 237** *e*P **Pb** **11 13 32.2 -0.1**
baz=233
SGST **Jiashian** **1.38 231** *e*P **Pn** **11 13 31.6 -0.3**
baz=236
SGST eS **Sg** **11 13 52.1 +0.5**
baz=236
SLGT **Liugui** **1.40 226** *e*P **Pb** **11 13 32.8 -0.1**
baz=212
WMLT **Mailiao** **1.40 264** *e*P **Pn** **11 13 32.0 -0.2**
baz=258
WSF **Szhu** **1.43 257** *e*P **Pb** **11 13 33.3 -0.2**
baz=252
WSL **Shuilin Townsh** **1.46 253** *e*P **Pn** **11 13 33.4 +0.4**
baz=247
ICHU **Yijhu** **1.47 246** *e*P **Pb** **11 13 33.6 -0.5**
baz=241
CHN8 **Yiju** **1.54 247** *e*P **Pn** **11 13 34.3 +0.3**
baz=241
CHN8 eS **Sg** **11 13 56.0 -0.5**
baz=241
ECL **Taimali** **1.54 208** *e*P **Pn** **11 13 32.0 -2.1**
baz=194
CHN3 **Shinhua** **1.55 235** *e*P **Pb** **11 13 35.5 +0.1**
baz=231
SSHA **Shanhua** **1.57 239** *e*P **Pb** **11 13 35.9 0.0**
baz=235
SCST **Cishan** **1.57 227** *e*P **Pb** **11 13 35.8 -0.1**
baz=213
SSD **Sandimen** **1.59 220** *e*P **Pn** **11 13 33.8 -0.9**
baz=207
SSD eS **Sb** **11 13 56.8 +0.7**
baz=207
SHHT **Tainan City** **1.59 234** *e*P **Pb** **11 13 35.9 -0.2**
baz=248
TSMG **Majia** **1.61 219** *e*P **Pb** **11 13 35.9 -0.6**
baz=218
TSMG eS **Sg** **11 13 58.2 -0.7**
baz=218
SCLT **Jiali** **1.63 241** *e*P **Pb** **11 13 36.9 +0.1**
baz=236
SCLT eS **Sg** **11 13 58.5 -0.9**
baz=236
TWM1 **Shoushan** **1.67 227** *e*P **Pb** **11 13 37.1 -0.4**
baz=224
PCYT **Pengchaiyu** **1.68 10** *e*P **Pn** **11 13 35.5 -0.6**
baz=6.0
SGLT **Jiouru** **1.69 223** *e*P **Pb** **11 13 38.0 +0.1**
baz=211
MASBT **Mashibuluo** **1.69 217** *e*P **Pn** **11 13 35.7 -0.4**
baz=216
MASBT eS **Sb** **11 13 59.3 +0.2**
baz=216
TSPT **Pingtung City** **1.72 222** *e*P **Pg** **11 13 40.0 0.0**
baz=206
TSCK **Chigu Township** **1.73 242** *e*P **Pn** **11 13 36.8 +0.1**
baz=237
SNJT **Kaohsiung City** **1.77 227** *e*P **Pb** **11 13 38.3 -0.9**
baz=225
EAST **Anshuo** **1.78 208** *e*P **Pn** **11 13 35.8 -1.6**
baz=197
TAW **Tawu** **1.78 206** *e*P **Pn** **11 13 38.3 +0.9**
baz=206
TAWH **Dawu Township** **1.80 206** *e*P **Pn** **11 13 37.9 +0.2**
baz=196
IRIF **Iriomote-Funau** **1.85 78** P **Pn** **11 13 38.8 +0.5**
IRIF eS **Sb** **11 14 02.8 -0.8**
IRIF **Iriomote-Funau** **1.85 78** A A 11 13 38.8
comp=E,39nm,2.7s,comp=N,34nm,3.8s
HATJ **Hateruma jima** **1.88 87** P **Pn** **11 13 38.6 -0.2**
HATJ eS **Sn** **11 14 02.4 0.0**
HATJ **Hateruma jima** **1.88 87** A A 11 13 38.6
comp=E,58nm,2.7s,comp=N,79nm,3.1s
SCZT **Fangliau** **1.90 213** *e*P **Pn** **11 13 39.4 +0.4**
baz=211
SCZT eS **Sb** **11 14 05.2 +0.3**
baz=211
WSSB **Gushan** **1.90 226** *e*P **Pb** **11 13 41.0 -0.4**
baz=224
LAY **Lan-yu** **1.93 185** *e*P **Pn** **11 13 36.5 -2.9**
baz=188
SLIU **Shizi** **1.95 207** *e*P **Pn** **11 13 38.5 -1.1**
baz=197
LYUB **Lan-yu** **1.96 184** *e*P **Pn** **11 13 36.2 -3.7**
baz=187
WDGT **Dungji** **2.04 250** *e*P **Pn** **11 13 40.8 -0.1**
baz=245
PHUB **P'eng-hu** **2.04 258** *e*P **Pn** **11 13 41.2 +0.3**
baz=252
PHUB eS **Sn** **11 14 05.7 -0.7**
baz=252
PNG **Penghu** **2.05 259** *e*P **Pn** **11 13 41.5 +0.5**
baz=254
PNG eS **Sn** **11 14 06.5 +0.1**
baz=254
TWP **Hsiaoliuchiu** **2.06 219** *e*P **Pb** **11 13 44.0 -0.1**
baz=218
JKRS **Kuro-shima** **2.08 82** P **Pn** **11 13 42.2 +0.7**
JKRS S **Sn** **11 14 08.6 +1.3**
JKRS **Kuro-shima** **2.08 82** A A 11 13 42.2
comp=E,61nm,3.0s,comp=N,52nm,2.6s
SMST **Manzhou Townsh** **2.11 204** *e*P **Pn** **11 13 42.3 +0.4**
baz=193
TWK1 **Hengchun** **2.19 204** *e*P **Pn** **11 13 43.4 +0.4**
baz=193
TWKBT **Hengchun** **2.19 203** *e*P **Pn** **11 13 42.7 -0.3**
baz=193
TSEB **Hengchuen, Pin** **2.20 201** *e*P **Pn** **11 13 44.4 +1.2**
baz=192
JIJ **Ishigaki jima** **2.22 79** P **Pn** **11 13 43.7 +0.3**
JIJ S **Sn** **11 14 11.1 +0.3**
JIJ **Ishigaki jima** **2.22 79** A A 11 13 43.7
comp=E,9.0nm,5.1s,comp=N,22nm,8.7s
VCHM **Qimei** **2.26 251** *e*P **Pn** **11 13 43.9 0.0**
baz=245
VCHM eS **Sn** **11 14 11.5 -0.1**
baz=245
VWUC **VWUC** **2.33 296** *e*P **Pn** **11 13 44.4 -0.5**
baz=291
JISG **Ishigakijimahi** **2.42 75** P **Pn** **11 13 45.8 -0.3**
JISG eS **Sn** **11 14 16.0 +0.4**
JISG **Ishigakijimahi** **2.42 75** A A 11 13 45.8
comp=E,13nm,6.1s,comp=N,17nm,8.3s
PTMZ **Houxiangcun** **2.62 295** *e*P **Pn** **11 13 48.5 -0.4**
baz=289
MATB **Ma-tsu** **2.72 323** *e*P **Pn** **11 13 50.3 0.0**
baz=316
MSUT **Lienchiang** **2.75 323** *e*P **Pn** **11 13 49.8 -0.9**

baz=316
JTJ Tarama 2.78 75 *e*P Pn **11 13 51.8 +0.8**
JTJ *e*S **Sn** **11 14 25.8 +1.3**
JTJ Tarama 2.78 75 A A 11 13 51.8
comp=E,20nm,3.6s,comp=N,32nm,2.4s
QZH Quanzhou 3.04 289 Pn Pn **11 13 51.9 -2.7**
QZH smax smax
comp=N,2μm,1.5s
QZH smax smax
comp=N,2μm,1.0s
KNM Kinmen 3.06 279 *e*P Pn **11 13 56.3 +1.3**
baz=272
KNMB Chin-men Tao 3.11 280 Pn Pn **11 13 55.9 +0.3**
KNMB Chin-men Tao 3.11 280 *e*P Pn **11 13 55.6 0.0**
baz=274
LYJJ Jianjiangzhen 3.14 325 *e*P Pn **11 13 54.8 -1.2**
baz=318
JIRB Irabujima 3.24 74 P Pn **11 13 58.4 +1.0**
JIRB S **Sn** **11 14 37.5 +1.7**
JIRB Irabujima 3.24 74 A A 11 13 58.4
comp=E,16nm,3.1s,comp=N,15nm,5.9s
MHZQ Yeshan 3.25 311 *e*P Pn **11 13 57.6 0.0**
baz=305
XPSS Dashiqiu 3.27 335 *e*P Pn **11 13 56.8 -1.1**
baz=327
JIKM Ikemajima 3.33 73 P Pn **11 14 00.0 +1.3**
JIKM *e*S **Sn** **11 14 40.2 +2.1**
JIKM Ikemajima 3.33 73 A A 11 14 00.0
comp=E,17nm,8.3s,comp=N,21nm,9.2s
JMJ Miyako jima 2 3.34 75 P Pn **11 14 00.8 +2.0**
JMJ Miyako jima 2 3.34 75 *e*P Pn **11 13 59.7 +0.9**
baz=94
JMJ2 Miyako jima3 3.36 76 P Pn **11 14 00.1 +1.0**
JMJ2 *e*S **Sn** **11 14 40.5 +1.8**
JMJ2 Miyako jima3 3.36 76 A A 11 14 00.1
comp=E,33nm,9.3s,comp=N,28nm,7.0s
JOGS Gusukube 3.43 76 *e*P Pn **11 14 01.5 +1.4**
JOGS S **Sn** **11 14 42.5 +2.0**
JOGS Gusukube 3.43 76 A A 11 14 01.5
comp=E,28nm,6.7s,comp=N,28nm,9.0s
AXDP Jialang 3.57 286 *e*P Pn **11 14 01.8 -0.1**
baz=279
ZPLA Ao Xicun 3.66 270 *e*P Pn **11 14 03.0 -0.1**
baz=264
DSXP Dongshan 3.96 267 *e*P Pn **11 14 07.4 0.0**
baz=261
SXFK Yanhouchang 4.44 304 *e*P Pn **11 14 13.3 -0.6**
baz=299
JOW Kunigami 6.56 63 Pn Pn **11 14 41.8 -1.2**
JOW Kunigami 6.56 63 *e*P Pn **11 14 41.6 -1.5**
baz=65
JOW Kunigami 6.56 63 Pn Pn **11 14 41.5 -1.6**
comp=N,4.4nm,0.3s,baz=190,slow=6.8,SNR=22
JOW Sn **Sn** **11 15 55.8 -1.9**
baz=167,slow=16
comp=N,9.3nm,0.3s
SSE Sheshan 7.12 356 Pn Pn **11 14 50.5 -0.2**
SSE Sn **Sn** **11 16 14.4 +2.9**
SSE smax smax
comp=N,120nm,1.1s
SSE smax smax
comp=N,150nm,1.2s
SSE LR LR
comp=N,3μm,10.0s
SSE LR LR
comp=N,2μm,10.3s
GZH Guangzhou 7.76 265 Pn Pn 11 14 54.7 -4.9
GZH Sn **Sn** **11 16 19.7 -7.6**
GZH smax smax
comp=N,590nm,1.4s
GZH smax smax
comp=N,460nm,1.2s
NJ2 Nanjing 8.45 343 *e*P Pn **11 15 07.2 -1.8**
NJ2 pP Pn **11 15 10.7 +1.7**
NJ2 S **Sn** **11 16 43.5 -0.8**
NJ2 sS **Sn** **11 16 49.5 +5.2**
NJ2 pmax pmax
comp=N,31nm,0.5s
NJ2 smax smax
comp=N,470nm,1.1s
NJ2 smax smax
comp=N,300nm,1.0s
NJ2 LR LR
comp=N,7μm,7.6s
NJ2 LR LR
comp=N,4μm,6.6s
NJ2 LR LR
comp=N,8μm,10.0s
CNSH ChangSha 8.97 300 *e*P Pn **11 15 18.6 +2.5**
CNSH S **Sn** **11 17 03.9 +6.9**
CNSH smax smax
comp=N,840nm,1.5s
CNSH smax smax
comp=N,720nm,1.2s
CNSH LR LR
comp=N,9μm,7.8s
CNSH LR LR
comp=N,7μm,7.5s
WHN Wuhan 9.28 316 ⇑P Pn **11 15 20.1 -0.4**
WHN LR LR
comp=N,32μm,8.1s
WHN LR LR
comp=N,27μm,8.1s
WHN LR LR
comp=N,41μm,8.5s
TGY Tagaytay City 9.84 185 LR LR 11 19 57.2
comp=N,553nm,18.2s,baz=0.5,slow=42
GULI GuiLin 10.44 280 P Pn **11 15 40.1 +3.8**
GULI S **Sn** **11 17 40.1 +6.9**
GULI LR LR
comp=N,10μm,8.9s
GULI LR LR
comp=N,15μm,8.4s
GULI LR LR
comp=N,18μm,8.4s
QIZ Qiongzhong 12.12 248 P Pn **11 15 58.4 -0.9**
QIZ S **Sn** **11 18 15.0 +0.6**
QIZ LR LR
comp=N,4μm,14.1s
QIZ LR LR
comp=N,1μm,10.8s
QIZ LR LR
comp=N,2μm,9.2s
JNU Nakatsue 12.14 39 Pn Pn **11 15 59.4 -0.3**
JNU Nakatsue 12.14 39 Pn Pn **11 16 01.3 +1.7**
comp=N,0.2nm,0.3s,baz=37,slow=20,SNR=2.7
JNU LR LR 11 21 36.1
comp=N,1μm,18.1s,baz=217,slow=42
ENH Enshi 12.59 303 Pn Pn **11 16 02.0 -3.8**
LYN LuoYang 13.29 325 *e*P Pn **11 16 19.7 +4.4**
LYN PP **P** **11 16 28.9 +3.9**
LYN S **Sn** **11 18 41.8 -1.1**
LYN pmax pmax
comp=N,230nm,4.0s
LYN LR LR
comp=N,24μm,8.1s
LYN LR LR
comp=N,12μm,8.0s
LYN LR LR
comp=N,24μm,8.7s
GYA Guiyang 13.88 283 P Pn **11 16 24.8 +1.3**
GYA S **Sn** **11 18 57.2 -0.3**
GYA pmax pmax
comp=N,16nm,2.2s
GYA pmax pmax
comp=N,270nm,4.4s
GYA LR LR
comp=N,5μm,7.8s
GYA LR LR
comp=N,10μm,7.3s
GYA LR LR
comp=N,12μm,8.8s
KSAR Wonju Array Be 14.43 20 Pn Pn **11 16 32.5 +1.7**
KSRS Korea Array 14.45 20 Pn Pn **11 16 32.1 +1.0**
comp=N,0.1nm,0.3s,baz=200,slow=12,SNR=2.9
KSRS LR LR 11 22 50.7
comp=N,1μm,18.1s,baz=195,slow=41
KS19 Wonju Array Si 14.48 20 Pn **11 16 32.2 +0.7**
HNS HongShan 14.69 337 ⇑P **P** **11 16 38.7 -1.8**
HNS PP **PnPn** **11 16 52.2 +10**
HNS SS **S** **11 19 37.2 +1.4**
HNS pmax pmax
comp=N,10.0nm,0.8s
HNS LR LR
comp=N,4μm,13.1s
HNS LR LR
comp=N,4μm,10.8s
HNS LR LR
comp=N,5μm,12.4s
JHS Saijyo 14.78 39 Pn **11 16 35.0 -0.7**
XAN Xi'an 15.04 315 P Pn **11 16 39.7 +0.5**
XAN S **Sn** **11 19 29.2 +3.5**
XAN pmax pmax
comp=N,38nm,1.5s
XAN LR LR
comp=N,4μm,7.4s
XAN LR LR
comp=N,12μm,10.0s
XAN LR LR
comp=N,13μm,9.8s
TIY Taiyuan 15.85 332 P **P** **11 16 53.1 -0.5**
TIY PP **sP** **11 17 00.5 +1.6**
TIY pmax pmax
comp=N,540nm,4.7s
TIY LR LR
comp=N,5μm,7.9s
TIY LR LR
comp=N,3μm,10.3s
TIY LR LR
comp=N,5μm,9.7s
SLVN Son La 16.68 264 Pn **11 16 59.4 -1.1**
BJI Beijing 16.70 345 P Pn **11 17 00.2 -0.4**
BJI pP **P** **11 17 03.7 +0.8**
BJI sP **sP** **11 17 07.4 -0.8**
BJI S **Sn** **11 20 03.6 -2.3**
BJI PcP **PcP** **11 21 49.4 -0.2**
BJI pmax pmax
comp=N,200nm,8.3s
BJI LR LR
comp=N,1μm,12.4s
BJI LR LR
comp=N,600nm,12.4s
BJI LR LR
comp=N,1μm,11.9s
DAV Davao City (W) 17.20 167 LR LR 11 23 55.4
comp=N,451nm,18.6s,baz=344,slow=38
KMI Kunming 17.33 278 ⇓P **P** **11 17 10.6 +0.3**
KMI pmax pmax
comp=N,10.0nm,0.8s
KMI pmax pmax
comp=N,360nm,13.3s
KMI LR LR
comp=N,4μm,7.1s
KMI LR LR
comp=N,5μm,6.7s
KMI LR LR
comp=N,9μm,9.6s
DLV T Lat 17.36 229 P Pn **11 17 08.4 -0.8**
CD2 Chengdu 17.39 297 P **P** **11 17 10.8 +0.1**
CD2 S **Sn** **11 20 23.3 +0.4**
CD2 pmax pmax
comp=N,20nm,0.8s
CD2 pmax pmax
comp=N,330nm,6.2s
CD2 LR LR
comp=N,5μm,6.2s
CD2 LR LR
comp=N,7μm,7.1s
CD2 LR LR
comp=N,6μm,7.6s
SNY Shenyang 17.88 4 ⇑P **P** **11 17 16.6 +0.7**
SNY pmax pmax
comp=N,7.0nm,1.7s
SNY pmax pmax
comp=N,380nm,7.9s
SNY LR LR
comp=N,2μm,10.1s
SNY LR LR
comp=N,1μm,10.2s
SNY LR LR
comp=N,3μm,11.0s
PZH PanZhiHua 18.27 282 P **P** **11 17 21.3 +0.8**
PZH S **Sn** **11 20 45.9 +1.5**
PZH SS **SnSn** **11 21 06.5 +8.4**
PZH pmax pmax
comp=N,10.0nm,0.7s
PZH pmax pmax
comp=N,370nm,8.9s
PZH LR LR
comp=N,3μm,9.3s
PZH LR LR
comp=N,5μm,9.6s
PZH LR LR
comp=N,5μm,10.8s
KKM Kota Kinabalu 18.60 197 P **P** **11 17 22.7 -1.4**
KKM lAmb lAmb 11 17 39.9
comp=Z,88nm,1.4s
JCJ Chichijima 18.70 76 LR LR 11 23 43.6
comp=Z,226nm,19.9s,baz=266,slow=34
HHC Hu-ho-hao-te 18.88 336 *e*P **Pn** **11 17 29.5 +1.9**
HHC sP sP 11 17 36.0 +3.6
HHC PP **PnPn** **11 17 46.9 +6.9**
HHC pmax pmax
comp=Z,16nm,1.2s
HHC pmax pmax
comp=Z,560nm,4.6s
HHC LR LR
comp=Z,4μm,8.8s
HHC LR LR
comp=Z,1μm,10.3s
HHC LR LR
comp=Z,3μm,8.9s
MAJO Matsushiro 18.92 45 P **P** **11 17 27.5 0.0**
MJAR Matsushiro Arr 18.92 45 P **P** **11 17 27.3 -0.1**
comp=Z,0.1nm,0.3s,baz=235,slow=8.9,SNR=4.4
MJAR LR LR 11 25 48.7
comp=Z,858nm,19.0s,baz=232,slow=40
comp=Z,1.9nm,0.8s
BTO Baotou 19.30 332 *e*P **Pn** **11 17 33.4 +0.7**
BTO pP **sP** **11 17 37.1 +0.2**
BTO sP **pP** **11 17 40.3 +5.2**
BTO PP **PnPn** **11 17 51.7 +6.0**
BTO pmax pmax
comp=Z,11nm,0.6s
BTO pmax pmax
comp=Z,900nm,7.0s
BTO LR LR
comp=Z,10μm,11.1s
BTO LR LR
comp=Z,4μm,11.7s
BTO LR LR
comp=Z,13μm,9.9s
LZH Lanzhou 19.61 312 *e*P **Pn** **11 17 38.8 +2.2**
LZH pP sP 11 17 42.8 +2.9
LZH sP pP 11 17 46.6 +7.9
LZH sS sS 11 21 21.3 -0.8
LZH pmax pmax
comp=Z,24nm,1.4s
LZH pmax pmax
comp=Z,520nm,4.8s
LZH LR LR
comp=Z,4μm,12.7s
LZH LR LR
comp=Z,5μm,12.7s
LZH LR LR
comp=Z,6μm,13.1s
CN2 Changchun 20.02 8 *e*P **P** **11 17 39.0 -0.3**
CN2 *e*S **S** **11 21 18.6 -5.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=Z,2μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,2μm,10.0s
XLT XiLinHaoTe 20.42 348 *e*P **P** **11 17 44.7 +0.9**
XLT sP sP 11 17 54.4 +5.2
XLT pmax pmax
comp=Z,13nm,1.7s
XLT pmax pmax
comp=Z,180nm,5.2s
XLT LR LR
comp=Z,140nm,11.9s
XLT LR LR
comp=Z,1μm,12.6s
XLT LR LR
comp=Z,2μm,13.6s
TNCH TengChong 21.16 278 P **P** **11 17 51.9 -0.2**
TNCH sP sP 11 17 58.3 +1.5
TNCH PP **PnPn** **11 18 15.1 +3.7**
TNCH S **S** **11 21 41.6 -5.8**
TNCH PcP **PcP** **11 21 56.2 -1.7**
TNCH SS Sn 11 22 16.1 +22
TNCH pmax pmax
comp=Z,44nm,1.1s
TNCH pmax pmax
comp=Z,170nm,4.4s
TNCH LR LR
comp=Z,3μm,9.3s
TNCH LR LR
comp=Z,5μm,8.6s
TNCH LR LR
comp=Z,6μm,8.8s
MDJ Mudanjiang 21.57 15 P **P** **11 17 58.1 +1.9**
MDJ pP pP 11 18 00.1 +0.7
MDJ S **S** **11 21 54.7 -0.2**
MDJ ScP **ScP** **11 25 38.9 +4.0**
MDJ pmax pmax
comp=Z,11nm,1.0s
MDJ pmax pmax
comp=Z,120nm,3.5s
MDJ LR LR
comp=Z,1μm,18.2s
MDJ LR LR
comp=Z,4μm,15.3s
MDJ LR LR
comp=Z,2μm,17.1s
MDJ Mudanjiang 21.57 15 P **P** **11 17 55.9 -0.3**
CHTO Chiang Mai 21.83 261 P **P** **11 17 57.9 -1.3**
USA0B Ussuriysk Arra 21.86 20 P **P** **11 17 59.2 0.0**
USRK Ussuriysk Ar. 21.86 20 P **P** **11 17 58.8 -0.4**
USRK Ussuriysk Ar. 21.86 20 P **P** **11 17 59.7 +0.5**
comp=Z,3.1nm,0.7s,baz=215,slow=9.8,SNR=5.1
USRK LR LR 11 27 19.2
comp=Z,664nm,18.6s,baz=193,slow=39
comp=Z,3.1nm,0.7s
CM31 Chiang Mai Arr 21.94 260 P **P** **11 17 59.7 -0.7**
CMAR Chiang Mai Arr 21.94 260 P **P** **11 17 59.7 -0.7**
CMAR Chiang Mai Arr 21.94 260 P **P** **11 18 00.9 +0.5**
comp=Z,1.8nm,0.7s,baz=60,slow=8.4,SNR=14
CMAR LR LR 11 25 59.1
comp=Z,389nm,18.9s,baz=80,slow=35
comp=Z,1.8nm,0.7s
BNX BinXian 22.20 11 ⇑P **P** **11 18 03.1 +0.2**
BNX pP **sP** **11 18 07.3 -0.3**
BNX sP **pwP** **11 18 10.0 +0.9**
BNX PP **PnPn** **11 18 29.7 +4.4**
BNX S **S** **11 22 04.7 -2.3**
BNX sS **pS** **11 22 09.1 -2.8**
BNX pmax pmax
comp=Z,8.0nm,1.2s
BNX pmax pmax
comp=Z,45nm,3.6s
BNX LR LR
comp=Z,1μm,11.3s
BNX LR LR
comp=Z,990nm,7.8s
BNX LR LR
comp=Z,2μm,10.9s
SBUM Sibu 23.29 205 P **P** **11 18 14.7 +0.1**
GTA Gaotai 24.10 315 P **P** **11 18 22.9 +0.5**
GTA pP sP 11 18 33.3 +5.8
GTA sP pP 11 18 37.8 +12
GTA pmax pmax
comp=Z,11nm,1.7s
GTA pmax pmax
comp=Z,220nm,6.5s
GTA LR LR
comp=Z,2μm,11.3s
GTA LR LR
comp=Z,3μm,12.4s
GTA LR LR
comp=Z,3μm,11.3s
GUMO Guam 24.17 111 LR LR 11 28 53.2
comp=Z,143nm,18.0s,baz=299,slow=39
LUWI Luwuk 24.88 178 P **P** **11 18 28.2 -1.2**
KSM Kuching 24.95 208 P **P** **11 18 30.2 0.0**
ERM Erimo 25.31 40 P **P** **11 18 32.6 -0.5**
GOMU GeErMu 26.21 304 P **P** **11 18 40.4 -1.5**
GOMU S **S** **11 23 16.1 +2.1**
GOMU pmax pmax
comp=Z,2.0nm,0.4s
GOMU LR LR
comp=Z,1μm,8.4s
GOMU LR LR
comp=Z,2μm,8.8s
GOMU LR LR
comp=Z,3μm,8.4s
ASAJ Asahikawa 26.37 35 LR LR 11 29 29.5
comp=Z,609nm,18.3s,baz=244,slow=37
KLR Kul'dur 26.42 15 LR LR 11 29 12.8
comp=Z,650nm,19.4s,baz=200,slow=37
ULN Ulaanbaatar 26.56 338 P **P** **11 18 44.4 -0.3**
ULN lAmb lAmb 11 19 04.7
comp=Z,22nm,1.1s
HEH HeiHe 26.61 8 *e*P **P** **11 18 46.0 +1.1**
HEH pP **sP** **11 18 49.2 -0.6**
HEH S **S** **11 23 22.3 +3.1**
HEH pmax pmax
comp=Z,11nm,0.8s
HEH pmax pmax
comp=Z,200nm,6.5s
HEH LR LR
comp=Z,560nm,10.7s
HEH LR LR
comp=Z,2μm,12.2s
HEH LR LR
comp=Z,2μm,12.9s
SONM Songino Array 26.77 337 P **P** **11 18 45.6 -0.9**
SONM Songino Array 26.77 337 P **P** **11 18 45.4 -1.1**
comp=Z,2.9nm,0.8s,baz=154,slow=9.9,SNR=6.0
SONM LR LR 11 30 34.2
comp=Z,1μm,18.8s,baz=152,slow=39
comp=Z,2.9nm,0.8s
LSA Lhasa 27.84 289 P **P** **11 18 54.8 -1.9**
WMQ Urumqi 34.18 314 *e*P **P** **11 19 54.1 +2.1**
WMQ LR LR
comp=Z,1μm,8.5s
WMQ LR LR
comp=Z,2μm,8.9s
WMQ LR LR
comp=Z,420nm,10.7s
MTN Manton Dam 37.72 165 P **P** **11 20 20.7 -1.7**
MK31 Makanchi Array 38.85 316 P **P** **11 20 31.5 -0.2**
MKAR Makanchi Array 38.85 316 P **P** **11 20 31.6 -0.2**
comp=Z,3.7nm,0.8s,baz=106,slow=9.7,SNR=14
MKAR PcP **PcP** **11 22 42.8 +0.1**
comp=Z,0.5nm,0.8s,baz=77,slow=3.1,SNR=1.2
MKAR LR LR 11 37 47.7
comp=Z,514nm,18.1s,baz=112,slow=38
comp=Z,3.7nm,0.8s
MAKZ Makanchi 39.06 316 P **P** **11 20 33.5 0.0**
PETK Petropavlovsk- 39.76 34 LR LR 11 37 31.3
comp=Z,240nm,18.0s,baz=244,slow=37
KNRA Kununurra 39.99 169 P **P** **11 20 41.4 0.0**
ZAA0 Zalesovo Array 40.71 327 P **P** **11 20 45.9 -1.1**
ZALV Zalesovo Beam 40.71 327 P **P** **11 20 45.7 -1.3**
comp=Z,1.8nm,0.5s,baz=108,slow=8.3,SNR=11
ZALV LR LR 11 37 48.5
comp=Z,238nm,21.5s,baz=117,slow=36
comp=Z,1.8nm,0.5s
PMG Port Moresby 41.43 140 LR LR 11 35 24.8
comp=Z,99nm,20.7s,baz=300,slow=32
KSH Kashi 41.45 303 P **P** **11 20 57.6 +4.1**
KSH sP pwP 11 21 08.4 +8.4
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH LR LR
comp=Z,1μm,11.3s
KSH LR LR
comp=Z,790nm,10.0s
KSH LR LR
comp=Z,1μm,10.0s
NRN Naryn 41.73 306 P **P** **11 20 56.2 +0.1**
H11N1 WAKE ISLAND Hy 41.99 87 T T 12 06 24.8
baz=276
H11N2 WAKE ISLAND Hy 41.99 87 T T 12 06 14.3
baz=276
H11N3 WAKE ISLAND Hy 42.00 87 T T 12 06 13.9
baz=276
H11S3 WAKE ISLAND Hy 42.11 89 T T 12 06 04.2
baz=275,slow=74
H11S1 WAKE ISLAND Hy 42.12 89 T T 12 06 11.9
baz=275,slow=74
H11S2 WAKE ISLAND Hy 42.13 89 T T 12 06 11.3

baz=275
KURK **Kurchatov** 42.59 320 P **P** 11 21 02.1 -0.4
KURBB **Kurchatov Arra** 42.61 320 P **P** 11 21 02.1 -0.5
comp=Z,2.7nm,0.9s,baz=114,slow=7.5,SNR=16
KURBB PcP **PcP** 11 22 53.8 -0.9
comp=Z,1.7nm,1.1s,baz=87,slow=5.0,SNR=3.0
comp=Z,2.7nm,0.9s
PALK **Pailekele** 42.67 254 LR LR 11 39 47.9
comp=Z,178nm,19.2s,baz=160,slow=38
AAK **Ala-Archa** 43.05 307 LR LR 11 41 54.4
comp=Z,335nm,18.4s,baz=92,slow=40
COEN **Coen** 43.12 149 P **P** 11 21 07.3 +0.1
WB0 **Warramunga Arr** 45.18 163 P **P** 11 21 22.5 -1.1
WB0 IAmb IAmb 11 21 30.0
comp=Z,11nm,1.2s
PSA00 **Pilbara Seismi** 45.30 182 IAmb IAmb 11 21 30.4
comp=Z,20nm,1.4s
WRA **Warramunga Arr** 45.34 163 P **P** 11 21 24.1 -0.7
WRA **Warramunga Arr** 45.34 163 P **P** 11 21 23.0 -1.9
comp=Z,3.1nm,0.8s,baz=344,slow=8.6,SNR=11
WRA PcP **PcP** 11 23 01.2 -3.2
comp=Z,1.3nm,1.1s,baz=326,slow=2.2,SNR=1.8
comp=Z,3.1nm,0.8s
WB2 **Warramunga Arr** 45.34 163 P **P** 11 21 23.2 -1.7
WB2 IAmb IAmb 11 21 30.7
comp=Z,8.8nm,0.8s
WR0 **Warramunga Ar** 45.41 163 P **P** 11 21 24.4 -1.0
WR0 IAmb IAmb 11 21 31.3
comp=Z,9.6nm,0.8s
KK31 **Karatay Array** 46.01 307 P **P** 11 21 29.5 -0.6
KKAR **Karatay Array** 46.01 307 P **P** 11 21 29.2 -0.9
TIXI **Tiksi** 47.88 3 LR LR 11 44 26.1
comp=Z,898nm,18.7s,baz=200,slow=39
BVAR **Borovoye Array** 48.17 321 P **P** 11 21 46.3 -0.5
comp=Z,1.7nm,0.5s,baz=109,slow=8.2,SNR=7.1
BVAR PcP **PcP** 11 23 12.8 -1.2
comp=Z,1.4nm,0.7s,baz=83,slow=3.3,SNR=2.2
BVAR LR LR 11 44 17.5
comp=Z,223nm,18.4s,baz=64,slow=39
comp=Z,1.7nm,0.5s
BRVK **Borovoye** 48.24 321 P **P** 11 21 46.7 -0.6
SHEM **Shemya Is, Ala** 48.67 40 LR LR 11 43 00.1
comp=Z,67nm,20.0s,baz=299,slow=37
AS31 **Alice Springs** 48.80 165 P **P** 11 21 50.6 -1.3
ASAR **Alice Springs** 48.80 165 P **P** 11 21 51.2 -0.7
ASAR **Alice Springs** 48.80 165 P **P** 11 21 50.5 -1.4
comp=Z,1.9nm,0.8s,baz=337,slow=6.6,SNR=16
ASAR PcP **PcP** 11 23 15.6 -1.0
comp=Z,0.6nm,0.8s,baz=0.0,slow=3.7,SNR=1.1
ASAR LR LR 11 43 42.0
comp=Z,72nm,18.6s,baz=10,slow=38
comp=Z,1.9nm,0.8s
NRIK **Noril'sk** 49.75 345 P **P** 11 21 57.0 -1.6
NRIK IAmb IAmb 11 22 15.7
comp=Z,13nm,1.4s
NRIK **Noril'sk** 49.75 345 P **P** 11 21 56.5 -2.0
comp=Z,1.8nm,0.6s,baz=121,slow=8.2,SNR=1.9
comp=Z,1.8nm,0.6s
CTA **Charters Tower** 49.88 149 LR LR 11 41 03.4
comp=Z,149nm,21.5s,baz=282,slow=34
ABKAR **Akbulak array** 53.96 314 P **P** 11 22 30.0 -0.3
ABKAR IAmb IAmb 11 22 35.1
comp=Z,6.7nm,0.9s
AKTO **Aktyubinsk** 55.29 316 LR LR 11 47 52.6
comp=Z,294nm,21.7s,baz=159,slow=38
GEYT **Alibeck** 55.35 301 P **P** 11 22 39.4 -1.3
GEYT IAmb IAmb 11 22 54.0
comp=Z,7.0nm,0.9s
GEYT **Alibeck** 55.35 301 P **P** 11 22 41.2 +0.5
comp=Z,1.2nm,0.3s,baz=64,slow=6.6,SNR=6.4
GEYT LR LR 11 48 51.8
comp=Z,338nm,18.9s,baz=72,slow=39
comp=Z,1.2nm,0.3s
ARU **Arti** 55.59 323 P **P** 11 22 40.4 -1.6
ARU IAmb IAmb 11 22 49.4
comp=Z,23nm,1.4s
ARU **Arti** 55.59 323 LR LR 11 47 41.3
comp=Z,276nm,18.4s,baz=86,slow=37
BBOO **Buckleboo** 58.09 166 P **P** 11 23 00.1 +0.1
BBOO IAmb IAmb 11 23 07.1
comp=Z,18nm,1.3s
STKA **Stephens Creek** 58.68 160 P **P** 11 23 03.0 -1.2
comp=Z,1.5nm,0.6s,baz=355,slow=9.4,SNR=5.3
comp=Z,1.5nm,0.6s
C16K **Lisburne Hills** 61.64 24 IAmb IAmb 11 23 52.4
comp=Z,7.7nm,1.2s
BELG **Belogornoye** 61.80 318 LR LR 11 53 24.4
comp=Z,200nm,19.2s,baz=174,slow=39
C18K **Utukok River** 63.20 24 IAmb IAmb 11 23 37.1
comp=Z,5.4nm,1.1s
E18K **Tukpahlearik C** 63.38 25 IAmb IAmb 11 23 40.4
comp=Z,4.9nm,0.9s
G18K **Tagagawik** 64.14 27 IAmb IAmb 11 23 45.2
comp=Z,10nm,1.3s
G19K **Purcell Mountain** 64.78 26 IAmb IAmb 11 23 47.8
comp=Z,12nm,1.4s
J18K **Innoko River** 65.08 29 IAmb IAmb 11 23 53.0
comp=Z,14nm,1.3s
F20K **Avaraart Lake** 65.28 25 IAmb IAmb 11 23 52.3
comp=Z,8.5nm,1.4s
J19K **Poorman** 65.53 29 IAmb IAmb 11 23 56.6
comp=Z,9.4nm,1.0s
KBZ **Khabaz** 66.02 309 P **P** 11 23 52.5 -0.8
comp=Z,1.9nm,0.9s,baz=82,slow=7.1,SNR=3.7
comp=Z,1.9nm,0.9s
J20K **Nowinta River** 66.16 28 IAmb IAmb 11 24 00.4
comp=Z,12nm,1.1s
CAST **Castle Rocks** 67.16 29 P **P** 11 24 00.3 +0.1
CAST IAmb IAmb 11 24 05.6
comp=Z,10.0nm,0.9s
TOLK **Toolik Lake Re** 67.45 23 IAmb IAmb 11 24 05.7
comp=Z,5.1nm,0.9s
MLY **Manley** 67.51 27 IAmb IAmb 11 24 07.9
comp=Z,9.6nm,1.0s
KTH **Kantishna Hill** 67.65 29 IAmb IAmb 11 24 11.1
comp=Z,9.9nm,0.9s
KDAK **Kodiak Island** 67.79 35 P **P** 11 24 04.0 -0.2
comp=Z,3.9nm,0.8s,baz=291,slow=7.4,SNR=6.7
comp=Z,3.9nm,0.8s
TRF **Thorofare Moun** 67.95 29 P **P** 11 24 04.1 -1.3
TRF IAmb IAmb 11 24 11.4
comp=Z,9.2nm,0.9s
I23K **Minto, Yukon-K** 68.07 27 IAmb IAmb 11 24 11.2
comp=Z,12nm,1.1s
SUA **Susitna One** 68.07 31 P **P** 11 24 06.3 +0.1
F24K **Squaw Lake** 68.25 24 IAmb IAmb 11 24 12.8
comp=Z,8.8nm,1.1s
MDM **Murphy Dome** 68.57 27 P **P** 11 24 09.4 +0.3
PMR **Palmer** 68.81 31 IAmb IAmb 11 24 14.3
comp=Z,9.6nm,1.0s
RAYN **Ar Rayn** 68.90 287 P **P** 11 24 11.0 -1.0
RAYN IAmb IAmb 11 24 20.4
comp=Z,8.2nm,1.4s
E25K **Arctic Village** 69.00 24 IAmb IAmb 11 24 22.6
comp=Z,11nm,1.4s
ILAR **Eielson Array** 69.17 27 P **P** 11 24 11.3 -1.5
comp=Z,0.6nm,0.6s,baz=277,slow=5.2,SNR=4.2
ILAR LR LR 11 57 08.4
comp=Z,83nm,19.1s,baz=276,slow=38
comp=Z,0.6nm,0.6s
HDA **Harding Lake** 69.22 28 IAmb IAmb 11 24 16.9
comp=Z,7.3nm,0.9s
DHY **Denali Highway** 69.31 29 IAmb IAmb 11 24 18.8
comp=Z,6.8nm,0.9s
SPITS **Spitsbergen Ar** 69.81 348 LR LR 11 58 58.6
comp=Z,469nm,18.2s,baz=28,slow=39
ARCES **ARCESS Array B** 69.93 338 LR LR 11 58 29.3
comp=Z,150nm,19.0s,baz=224,slow=39
SCRK **Sand Creek** 70.58 28 IAmb IAmb 11 24 26.8
comp=Z,11nm,1.1s
I26K **Coal Creek Min** 70.59 26 IAmb IAmb 11 24 31.1
comp=Z,18nm,1.4s
J26L **Joseph Creek** 70.62 27 IAmb IAmb 11 24 25.9
comp=Z,7.9nm,0.8s
E28M **Babbage River** 71.04 23 IAmb IAmb 11 24 47.7
comp=Z,6.7nm,1.0s
L26K **Log Cabin Wild** 71.11 29 IAmb IAmb 11 24 29.9
comp=Z,6.2nm,0.8s
F28M **Old Crow** 71.21 24 IAmb IAmb 11 24 45.4
comp=Z,11nm,1.1s
EGAK **Eagle** 71.55 27 IAmb IAmb 11 24 37.2
comp=Z,9.5nm,1.1s
L27K **Beaver Creek,** 71.76 28 IAmb IAmb 11 24 34.2
comp=Z,9.3nm,0.9s
I28M **Miner Creek** 71.84 26 IAmb IAmb 11 24 39.4
comp=Z,8.2nm,1.1s
FINES **FINESS Array B** 71.89 330 P **P** 11 24 28.1 -1.3
comp=Z,0.6nm,0.4s,baz=76,slow=8.0,SNR=8.1
FINES LR LR 11 58 10.5
comp=Z,532nm,21.6s,baz=66,slow=38
comp=Z,0.6nm,0.4s
DAWY **Dawson** 72.49 27 IAmb IAmb 11 24 38.2
comp=Z,8.5nm,1.0s
G30M **tAoh Zraii Nji** 72.76 24 IAmb IAmb 11 24 44.0
comp=Z,12nm,1.1s
EPYK **Eagle Plains** 72.79 24 IAmb IAmb 11 24 43.8
comp=Z,14nm,1.3s
J29N **Klondike Camp** 72.85 27 IAmb IAmb 11 24 41.1
comp=Z,10nm,1.1s
INK **Inuvik** 73.23 22 IAmb IAmb 11 24 47.0
comp=Z,6.0nm,0.9s
INK **Inuvik** 73.23 22 P **P** 11 24 36.2 -1.0
comp=Z,3.2nm,0.8s,baz=302,slow=5.2,SNR=10
INK LR LR 12 00 31.2
comp=Z,82nm,18.9s,baz=196,slow=39
comp=Z,3.2nm,0.8s
I30M **Mount Dempster** 73.32 26 IAmb IAmb 11 24 58.4
comp=Z,9.7nm,1.1s
AKASG **Malin Array Be** 73.37 318 P **P** 11 24 37.0 -1.4
comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=4.5
AKASG LR LR 12 00 11.7
comp=Z,209nm,21.0s,baz=28,slow=38
comp=Z,0.1nm,0.3s
F31M **Tsiigehtchic** 73.49 23 IAmb IAmb 11 24 43.7
comp=Z,9.5nm,0.7s
BRTR **Keskin Array B** 73.72 307 P **P** 11 24 40.3 -0.6
BRTR **Keskin Array B** 73.72 307 P **P** 11 24 40.7 -0.2
comp=Z,1.7nm,0.8s,baz=99,slow=7.4,SNR=5.2
comp=Z,1.7nm,0.8s
MMAI **Mount Meron Ar** 74.45 300 LR LR 12 03 01.4
comp=Z,87nm,21.0s,baz=288,slow=40
C36M **Paulatuk** 75.84 19 IAmb IAmb 11 25 01.4
comp=Z,10nm,1.1s
EIL **Elat** 75.91 296 LR LR 12 02 51.0
comp=Z,111nm,19.1s,baz=59,slow=39
HFS **Hagfors** 78.01 331 P **P** 11 25 03.7 -1.2
comp=Z,1.3nm,0.7s,baz=53,slow=5.8,SNR=1.9
HFS LR LR 12 02 43.5
comp=Z,682nm,20.7s,baz=54,slow=38
comp=Z,1.3nm,0.7s
NOA **NORSAR Array B** 78.66 332 P **P** 11 25 07.1 -1.4
comp=Z,0.7nm,0.7s,baz=61,slow=5.5,SNR=1.8
NOA LR LR 12 04 44.8
comp=Z,117nm,20.8s,baz=60,slow=39
comp=Z,0.7nm,0.7s
RES **Resolute Bay** 78.79 9 LR LR 12 04 15.4
comp=Z,234nm,18.4s,baz=4.0,slow=39
DLBC **Dease Lake** 78.87 31 P **P** 11 25 09.3 -0.4
comp=Z,3.1nm,1.0s,baz=286,slow=3.5,SNR=5.0
comp=Z,3.1nm,1.0s
JMIC **Jan Mayen** 79.17 345 LR LR 12 04 40.3
comp=Z,217nm,18.5s,baz=31,slow=39
YKA **Yellowknife Ar** 82.97 23 P **P** 11 25 31.2 -0.2
comp=Z,2.8nm,0.8s,baz=313,slow=4.8,SNR=15
YKA LR LR 12 07 58.8
comp=Z,127nm,18.3s,baz=345,slow=40
comp=Z,2.8nm,0.8s
GERES **GERESS Array B** 83.34 321 P **P** 11 25 34.6 +0.9
comp=Z,0.8nm,0.6s,baz=54,slow=6.8,SNR=3.5
comp=Z,0.8nm,0.6s
BORG **Borgarnes** 87.07 345 LR LR 12 07 43.6
comp=Z,190nm,19.6s,baz=37,slow=38
SFJD **Kangerlussuaq** 89.14 357 LR LR 12 07 13.4
comp=Z,238nm,18.2s,baz=62,slow=36
NEW **Newport** 90.89 35 P **P** 11 26 11.6 +1.2
comp=Z,2.9nm,0.9s,baz=307,slow=4.9,SNR=5.8
comp=Z,2.9nm,0.9s
J05D **Fort Rock, OR** 91.58 41 P **P** 11 26 16.9 +3.1
FRB **Frobisher Bay** 92.21 5 LR LR 12 11 14.2
comp=Z,175nm,19.1s,baz=9.0,slow=38
FCC **Fort Churchill** 92.39 18 P **P** 11 26 16.3 -0.7
FCC IAmb IAmb 11 26 16.8
comp=Z,6.7nm,1.2s
FFC **Flin Flon** 93.12 24 P **P** 11 26 20.3 -0.2
FFC IAmb IAmb 11 26 24.5
comp=Z,6.8nm,1.1s

*LDO **07** 11:14:00.8±0.9,41.362N±0.007×73.87W±0.01,h6km±2km, ML2.2/28,mb_Lg2.2/9(NEIC),ML2.3/12(NEIC),Error ellipse: s-maj=1.6km s-min=1.0km az=77.0*
NEIC 07 11:14:00.1±0.7,41.366N±0.008×73.85W±0.01,h7km±3km, Error ellipse: s-maj=1.7km s-min=1.0km az=62.0,New York

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRNY	**Black Rk. Fore**	0.13	292		Pg	11 14 05.0	+2.1
CMNY	**Cheesecote Mou**	0.22	223		Pg	11 14 04.5	0.0
CMNY					Sg	11 14 07.6	+0.2
TRNY	**Table Rock, Ra**	0.36	232		Pg	11 14 06.7	-0.4
PAL	**Palisades**	0.36	187		Pg	11 14 07.0	-0.2
PAL				Sg	Sg	11 14 11.8	-0.1
PAL				IAML		11 14 12.0	
	comp=E,241nm,0.2s						
WSPT	**Westport, CT**	0.44	116		Pg	11 14 08.7	+0.1
WSPT				Sg	Sg	11 14 14.2	-0.1
NPNY	**Mohonk Preserv**	0.45	331		Pg	11 14 08.3	-0.5
NPNY					Sg	11 14 14.2	-0.4
KSCT	**Kent School, K**	0.45	37		Pg	11 14 08.5	-0.4
KSCT				Sg	Sg	11 14 14.4	-0.4
FOR	**Fordham**	0.50	183		Pg	11 14 09.4	-0.4
FOR					Sg	11 14 15.8	-0.6
N62A	**Caumsett State**	0.52	146	Pg	Pg	11 14 10.1	0.0
N62A				Sg	Sg	11 14 16.8	-0.2
N62A				IAML		11 14 20.3	
	comp=N,340nm,0.3s						
MSNJ	**Montclair St.**	0.54	208		Pg	11 14 10.0	-0.6
MSNJ					Sg	11 14 17.2	-0.4
CPNY	**Central Park**	0.58	188	Pg	Pg	11 14 10.4	-0.9
ODNJ	**Ogdensburg**	0.64	244	Pg	Pg	11 14 11.4	-1.0
ODNJ	**Ogdensburg**	0.64	244		Sg	11 14 19.6	-1.0
YLE	**Yale**	0.69	94		Pg	11 14 13.8	+0.4
YLE					Sg	11 14 22.4	+0.1
YLE	**Yale**	0.69	94	IAML		11 14 22.6	
	comp=N,141nm,0.3s						
YLE				IAML		11 14 24.5	
	comp=N,118nm,0.3s						
BRNJ	**Basking Ridge**	0.87	219	Pg	Pg	11 14 15.8	-1.0
PANJ	**Princeton**	1.18	213		Pg	11 14 21.3	-1.5
PANJ					Sg	11 14 35.1	-3.0
L59A	**Walton**	1.21	313		Pg	11 14 21.9	-1.5
L59A				Sg	Sg	11 14 37.5	-1.7
L59A				IAML		11 14 40.8	
	comp=N,96nm,0.1s						
L59A				IAML		11 14 40.9	
	comp=E,63nm,0.3s						
M63A	**Gales Ferry**	1.36	88	Pg	Pn	11 14 23.3	-2.1
TRY	**Troy**	1.37	6	IAmb_Lg		11 14 45.8	
	comp=Z,13nm,1.2s						
LUPA	**Lehigh Univers**	1.38	237	Pg	Pn	11 14 24.4	-1.4
HCNY	**Howe Caverns**	1.39	343		Pn	11 14 25.1	-0.9
HCNY					Sb	11 14 42.3	-2.2
L61B	**Northampton**	1.39	38		Pn	11 14 24.9	-1.1
QUA2	**Belchertown**	1.44	50	Pg	Pn	11 14 26.1	-0.6
KSPA	**Keystone Colle**	1.45	278		Pn	11 14 26.6	-0.2
KSPA				IAmb_Lg		11 14 46.1	
	comp=Z,15nm,0.8s						
TUPA	**Temple Univers**	1.57	221		Pn	11 14 28.1	-0.4
TUPA					Sn	11 14 47.7	-1.3
BINY	**Binghamton**	1.80	298		Pn	11 14 31.9	+0.2
WUPA	**West Chester U**	1.96	224		Pn	11 14 34.1	+0.3
J58A	**Remsen**	2.26	332		Pn	11 14 39.3	+1.4
MVL	**Millersville**	2.34	235	IAmb_Lg		11 15 20.7	
	comp=Z,12nm,1.1s						
J57A	**Williamstown**	2.59	323	Pn	Pb	11 14 44.9	-2.0
NCB	**Newcomb**	2.62	354	Pn	Pn	11 14 44.3	+1.4
NCB				IAmb_Lg		11 15 25.9	
	comp=Z,9.1nm,1.1s						

*IDC **07** 11:14:12.5±0.8,56.21N×148.61W,h0km,mb4.2/25, mbtmp4.2/31,ML3.7/6,MS3.8/27,Error ellipse: s-maj=19.6km s-min=11.3km az=26.0*
*NEIC **07** 11:14:13.8±1.5,56.24N±0.08×148.64W±0.10,h17km±3km, mb4.3/89,ML4.2/64,ML4.0(AEIC),Error ellipse: s-maj=11.3km s-min=8.0km az=177.0*
*AEIC **07** 11:14:17.5±1.5,56.24N±0.08×148.62W±0.10,h12km±5km, Error ellipse: s-maj=11.1km s-min=7.7km az=178.0*
ISC 07 11:14:16.9±0.5,56.24N±0.06×148.55W±0.04,h35km, n388,σ1$74/349,mb4.3/56,MS3.8/21,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	2.69	307		Pn	11 14 55.5	-2.1
KDAK	**Kodiak Island**	2.69	307		Sn	11 15 24.7	-4.3
KDAK	**Kodiak Island**	2.69	307	S	Sn	11 15 25.9	-3.1
	baz=125						
KDAK	**Kodiak Island**	2.69	307	Pn	Pn	11 14 55.1	-2.5
	9.8nm,0.3s,baz=133,slow=6.1,SNR=237						
KDAK				Sn	Sn	11 15 26.1	-2.9
	17nm,0.3s,baz=236,slow=22,SNR=9.1						
KDAK				LR	LR	11 16 12.5	
	comp=Z,3μm,19.9s,baz=143,slow=45						
	32nm,0.3s						
OHAK	**Old Harbor**	2.79	293		Pn	11 14 56.0	-2.9
OHAK	**Old Harbor**	2.79	293		Sn	11 15 27.6	-3.8
OHAK	**Old Harbor**	2.79	293	P	Pn	11 14 56.3	-2.6
OHAK	**Old Harbor**	2.79	293	P	Pn	11 14 56.1	-2.9
	baz=110						
OHAK				S	Sn	11 15 27.5	-3.8
	baz=110						
SII	**Sitkinak Islan**	3.15	278		Pn	11 15 01.5	-2.4
SII				IAML		11 15 39.2	
	comp=E,715nm,1.2s						
SII				IAML		11 15 50.5	
	comp=N,713nm,1.0s						
SII	**Sitkinak Islan**	3.15	278		Sn	11 15 36.1	-4.1
SII	**Sitkinak Islan**	3.15	278	P	Pn	11 15 01.5	-2.4
SII	**Sitkinak Islan**	3.15	278	P	Pn	11 15 01.5	-2.4
	baz=95						
SII				S	Sn	11 15 36.1	-4.1
	baz=95						
SYI	**Shuyak Island**	3.15	320	Pn	Pn	11 15 02.2	-1.8
SYI	**Shuyak Island**	3.15	320		Sn	11 15 39.1	-1.3
Q20K	**Shuyak Island**	3.16	320	P	Pn	11 15 01.7	-2.3
	baz=138						
Q20K				S	Sn	11 15 39.1	-1.3
	baz=138						
Q23K	**Middleton Isla**	3.41	19	Pn	Pn	11 15 05.7	-1.8
Q23K				IAML		11 15 54.0	
	comp=N,305nm,1.6s						
Q23K				IAML		11 16 01.5	
	comp=E,399nm,1.3s						
Q23K	**Middleton Isla**	3.41	19	P	Pn	11 15 05.5	-2.0
	baz=201						
MID	**Middleton Isla**	3.41	19	Pn	Pn	11 15 05.4	-2.1
MID				IAML		11 15 51.7	
	comp=E,353nm,1.3s						
MID				IAML		11 15 53.9	
	comp=N,314nm,1.5s						
MID	**Middleton Isla**	3.41	19	P	Pn	11 15 06.9	-0.6
CNPM	**China Poot**	3.59	338		Pn	11 15 08.1	-1.9
CNPM	**China Poot**	3.59	338		Sn	11 15 49.9	-1.3
BRSE	**Bradley Lake S**	3.70	343		Pn	11 15 09.3	-2.2
BRSE	**Bradley Lake S**	3.70	343	P	Pn	11 15 09.5	-2.0
	baz=161						
BRLK	**Bradley Lake**	3.75	342		Pn	11 15 10.1	-2.0
HOM	**Homer**	3.80	336	Pn	Pn	11 15 11.7	-1.2
HOM				IAML		11 16 15.4	
	comp=N,610nm,1.3s						
HOM				IAML		11 16 27.9	
	comp=E,509nm,2.0s						
HOM	**Homer**	3.80	336	P	Pn	11 15 11.7	-1.2
	baz=154						
P23K	**Montague Islan**	3.82	9		Pn	11 15 11.3	-1.8
P23K					Sn	11 15 53.5	-3.3
P23K	**Montague Islan**	3.82	9	P	Pn	11 15 11.3	-1.8
	baz=190						
P23K				S	Sn	11 15 53.5	-3.3
	baz=190						
Q19K	**Cape Douglas,**	3.84	317		Pn	11 15 12.1	-1.4
Q19K				IAML		11 16 18.6	
	comp=N,452nm,1.0s						
Q19K	**Cape Douglas,**	3.84	317	P	Pn	11 15 12.3	-1.1
	baz=133						
SEW	**Seward**	3.91	353		Sn	11 15 55.9	-2.9
SEW	**Seward**	3.91	353		Pn	11 15 12.2	-2.1
SEW	**Seward**	3.91	353	P	Pn	11 15 12.5	-1.8
	baz=173						
SEW				S	Sn	11 15 55.9	-2.9
	baz=173						
KAHG	**Katmai Hook Gl**	3.96	307		Pn	11 15 13.8	-1.3
AU22	**Augustine Moun**	4.06	323		Pn	11 15 15.5	-0.9
AUCH	**Augustine Cone**	4.08	322		Pn	11 15 15.9	-0.9
AUL	**Augustine Lava**	4.09	322		Pn	11 15 15.9	-1.0
ACHA	**Angle Creek He**	4.18	301		Pn	11 15 16.8	-1.3
P19K	**Oil Pt**	4.23	326		Pn	11 15 17.6	-1.2
P19K				IAML		11 16 14.4	
	comp=E,330nm,0.4s						
P19K				IAML		11 16 14.4	
	comp=N,354nm,0.4s						
P19K	**Oil Pt**	4.23	326	P	Pn	11 15 17.2	-1.6
	baz=143						
KVTA	**Katmai Vly 10**	4.24	303		Pn	11 15 18.0	-0.9
KAHC	**Katmai Hardscr**	4.24	307		Pn	11 15 18.2	-0.8
KAHC	**Katmai Hardscr**	4.24	307	P	Pn	11 15 17.7	-1.4
	baz=123						
ANCK	**Angle Creek**	4.25	300		Pn	11 15 18.1	-1.0
KAIM	**Kayak Island**	4.30	29		Pn	11 15 18.2	-1.5
KAIM				IAML		11 16 14.3	
	comp=E,331nm,1.5s						
O22K	**Cooper Landing**	4.30	352		Pn	11 15 18.2	-1.5
O22K	**Cooper Landing**	4.30	352	P	Pn	11 15 18.0	-1.7
	baz=172						
HIN	**Hinchinbrook I**	4.31	14		Pn	11 15 18.3	-1.6
SLKM	**Skilak Lake**	4.37	349		Pn	11 15 18.7	-2.0
O20K	**Slope Mountain**	4.42	332		Pn	11 15 19.6	-1.8
O20K	**Slope Mountain**	4.42	332	P	Pn	11 15 19.6	-1.8
	baz=150						
IVE	**Iliamna Volcan**	4.47	330		Pn	11 15 19.8	-2.3
PLK3	**Peulik 3**	4.47	292		Pn	11 15 20.4	-1.6
CNTC	**Contact Creek**	4.47	300		Pn	11 15 20.9	-1.3
Q17K	**Contact Creek**	4.47	300	P	Pn	11 15 20.9	-1.3
	baz=115						
EYAK	**Cordova Ski Ar**	4.57	18		Pn	11 15 22.1	-1.2
EYAK	**Cordova Ski Ar**	4.57	18	P	Pn	11 15 22.1	-1.2
EYAK	**Cordova Ski Ar**	4.57	18	P	Pn	11 15 22.1	-1.2
	baz=200						
SUCK	**Suckling Hills**	4.60	31		Pn	11 15 22.5	-1.3
SUCK				IAML		11 16 20.5	
	comp=N,360nm,1.5s						
RAGM	**Ragged Mountai**	4.63	25		Pn	11 15 23.2	-1.1
PLK1	**Peulik 1**	4.67	293		Pn	11 15 23.2	-1.6
NICHA	**Nichawak Mount**	4.68	29		Pn	11 15 23.7	-1.3
HMT	**Hamilton**	4.69	27	Pn	Pn	11 15 23.9	-1.3
CAPN	**Captain Cook N**	4.74	344		Pn	11 15 24.7	-1.0
RED	**Redoubt Volcan**	4.74	334		Pn	11 15 23.5	-2.4
P18K	**Big Mountain,**	4.77	314	Pn	Pn	11 15 24.1	-2.1
P18K	**Big Mountain,**	4.77	314	P	Pn	11 15 24.0	-2.1
	baz=129						
RSO	**Redoubt South**	4.78	334		Pn	11 15 24.4	-2.0
GOAT	**Goat Mountain**	4.80	23		Pn	11 15 25.0	-1.6
RDT	**Redoubt**	4.80	337		Pn	11 15 23.8	-2.7
RDWB	**Redoubt West**	4.82	334		Pn	11 15 24.6	-2.4
DFR	**Drift River**	4.88	335		Pn	11 15 25.4	-2.3
BERG	**Berg Lake**	4.89	30		Pn	11 15 26.1	-1.6
BERG				IAML		11 16 23.8	
	comp=N,238nm,0.3s						
BERG				IAML		11 16 35.2	
	comp=E,277nm,1.1s						
RDJH	**Redoubt Jeurge**	4.90	335		Pn	11 15 25.9	-2.2
RC01	**Rabbit Creek A**	4.90	353	Pn	Pn	11 15 26.6	-1.4
RC01				IAML		11 16 23.6	
	comp=N,140nm,1.4s						
RC01				IAML		11 16 30.8	
	comp=E,140nm,1.5s						
RC01	**Rabbit Creek A**	4.90	353	P	Pn	11 15 26.5	-1.5
	baz=172						
GRIN	**Grindle Hills**	4.91	32		Pn	11 15 26.7	-1.3
NCT	**North Crescent**	4.91	334		Pn	11 15 25.9	-2.2
SNH	**Sunshine Point**	4.97	35		Pn	11 15 27.6	-1.4
SNH				IAML		11 16 31.7	
	comp=N,202nm,2.0s						
SNH				IAML		11 16 43.0	
	comp=E,155nm,1.4s						
FIS	**Fire Island**	5.00	351		Pn	11 15 28.1	-1.2
FIS				IAML		11 16 39.4	
	comp=N,242nm,1.7s						
FIS				IAML		11 16 51.4	
	comp=E,290nm,1.7s						
O19K	**Port Alsworth**	5.00	325	Pn	Pn	11 15 27.3	-2.0
O19K				IAML		11 16 36.5	
	comp=E,247nm,0.5s						
O19K				IAML		11 16 45.5	
	comp=N,222nm,0.4s						
O19K	**Port Alsworth**	5.00	325	P	Pn	11 15 27.2	-2.0

Q16K King Salmon 5.01 303 Pn 11 15 28.3 -1.1
Q16K King Salmon 5.01 303 P Pn 11 15 28.3 -1.1
baz=117
KHIT Khitrov Hills 5.06 31 Pn 11 15 28.6 -1.6
O18K Koktuh Hills 5.06 318 Pn Pn 11 15 28.0 -2.2
O18K IAML 11 16 35.1
comp=N,85nm,1.2s
O18K Koktuh Hills 5.06 318 P Pn 11 15 28.2 -2.0
baz=134
DIV Divide 5.12 15 Pn 11 15 29.8 -1.2
R16K Pilot Point 5.12 289 Pn 11 15 29.1 -1.8
R16K IAML 11 16 30.4
comp=E,180nm,1.1s
R16K Pilot Point 5.12 289 P Pn 11 15 29.4 -1.6
baz=102
P17K Kvichak River 5.16 308 Pn 11 15 30.3 -1.2
P17K Kvichak River 5.16 308 P Pn 11 15 30.3 -1.2
baz=122
BMRM Bremner River 5.17 22 Pn 11 15 30.4 -1.3
BMRM Bremner River 5.17 22 P Pn 11 15 30.5 -1.3
baz=205
WAX Waxell Ridge 5.18 33 Pn 11 15 30.1 -1.7
KNK Knik Glacier 5.19 1 Pn 11 15 30.5 -1.5
KNK IAML 11 16 38.2
comp=E,77nm,1.5s
KNK IAML 11 16 41.8
comp=N,85nm,1.2s
KNK Knik Glacier 5.19 1 P Pn 11 15 31.0 -1.0
baz=181
BARK Barkley Ridge 5.26 35 Pn 11 15 31.5 -1.4
MESA MESA 5.27 39 Pn 11 15 32.3 -0.9
MESA IAML 11 17 13.1
comp=E,218nm,0.4s
MESA IAML 11 17 13.2
comp=N,192nm,0.2s
MESA MESA 5.27 39 P Pn 11 15 32.0 -1.2
baz=224
N20K Mount Spurr 5.33 341 P Pn 11 15 32.3 -1.5
baz=158
SPCR Spurr Chakacha 5.33 341 Pn 11 15 31.9 -2.0
CRQM Cirque 5.34 30 Pn 11 15 33.0 -1.3
CRQM IAML 11 16 42.1
comp=N,187nm,1.4s
CRQM IAML 11 16 53.9
comp=E,139nm,1.2s
SPCN Chakachatna No 5.35 341 Pn 11 15 32.9 -1.2
SUA Susitna One 5.36 349 Pn Pn 11 15 32.3 -2.1
SUA IAML 11 16 43.4
comp=E,67nm,1.7s
SUA Susitna One 5.36 349 P Pn 11 15 32.6 -1.8
baz=167
PMR Palmer 5.38 357 Pn 11 15 33.0 -1.5
PMR Palmer 5.38 357 P Pn 11 15 33.2 -1.3
PMR Palmer 5.38 357 P Pn 11 15 33.0 -1.5
baz=177
SPCP Crater Peak Br 5.38 341 Pn 11 15 32.9 -1.8
SPCG Spurr Capps Gl 5.38 342 Pn 11 15 33.0 -1.6
SPBG Spurr Blockage 5.41 340 Pn 11 15 33.4 -1.7
ANPB Aniakchak Plen 5.42 280 Pn 11 15 33.3 -1.8
TGL Tana Glacier 5.43 31 Pn 11 15 33.9 -1.5
KLU Klutina 5.44 13 Pn 11 15 34.5 -0.9
KLU Klutina 5.44 13 P Pn 11 15 34.5 -0.9
baz=196
BAGL Bagley Icefiel 5.45 36 Pn 11 15 34.1 -1.4
ISLE Juniper Island 5.46 34 Pn 11 15 34.0 -1.7
N19K Bonanza Creek 5.54 328 Pn 11 15 34.7 -2.1
GHO Glory Hole Cre 5.55 358 Pn 11 15 35.9 -1.1
SPNN North Nagishla 5.58 339 Pn 11 15 35.9 -1.4
SML Sawmill 5.59 1 Pn Pn 11 15 36.5 -0.9
SML Sawmill 5.59 1 P Pn 11 15 36.5 -0.9
baz=181
M23K Glacier View 5.59 4 Pn 11 15 36.6 -0.8
M23K Glacier View 5.59 4 P Pn 11 15 36.9 -0.5
baz=185
SCM Sheep Creek Mo 5.65 6 Pn 11 15 37.7 -0.6
SCM Sheep Creek Mo 5.65 6 P Pn 11 15 37.5 -0.7
baz=187
VRDI Verde Repeater 5.66 26 Pn Pn 11 15 36.8 -1.9
SAMH Samovar Hills 5.67 43 Pn 11 15 37.7 -0.8
KIAG Kiagna River 5.71 32 Pn 11 15 37.4 -1.7
TABL Table Mountain 5.74 40 Pn 11 15 38.8 -0.9
O17K Koliganek Bris 5.76 311 Pn 11 15 37.6 -2.1
O17K Koliganek Bris 5.76 311 P Pn 11 15 37.9 -1.9
baz=125
N25K Chitina, Valde 5.76 19 Pn Pn 11 15 39.1 -0.7
N25K Chitina, Valde 5.76 19 P Pn 11 15 38.8 -1.0
baz=202
GLB Gilahina Butte 5.77 23 Pn Pn 11 15 38.5 -1.4
P16K Nushagak River 5.79 303 Pn 11 15 38.9 -1.3
P16K Nushagak River 5.79 303 P Pn 11 15 38.9 -1.3
baz=116
PCA Pinnacle 5.85 45 Pn 11 15 39.9 -1.2
PINM Pinnacle 5.85 45 P Pn 11 15 39.8 -1.2
baz=232
N18K Kilae Creek 5.88 322 Pn 11 15 39.5 -1.9
N18K Kilae Creek 5.88 322 P Pn 11 15 39.3 -2.2
baz=136
PTPK Patty Peak 5.89 30 Pn 11 15 40.5 -1.2
MCARA McCarthy VSAT 5.90 27 Pn 11 15 41.0 -0.7
MCARA McCarthy VSAT 5.90 27 P Pn 11 15 40.9 -0.9
baz=211
SKT Skwentna 5.96 346 Pn Pn 11 15 41.1 -1.4
SKT Skwentna 5.96 346 P Pn 11 15 41.6 -0.9
baz=164
PNL Peninsula 5.96 51 Pn 11 15 41.5 -1.1
PNL Peninsula 5.96 51 P Pn 11 15 41.5 -1.1
PNL Peninsula 5.96 51 P Pn 11 15 41.5 -1.1
baz=238
M24K Tolsona, Glenn 6.01 11 Pn Pn 11 15 42.6 -0.6
M24K Tolsona, Glenn 6.01 11 P Pn 11 15 42.9 -0.4
baz=193
BCPM Bancas Point 6.02 48 Pn 11 15 42.1 -1.2
BARN Barnard Glacie 6.02 34 Pn 11 15 42.3 -1.2
CTG Chitna Glacier 6.05 36 P Pn 11 15 42.5 -1.4
baz=221
CTGM Chitina Glacie 6.05 36 Pn 11 15 42.7 -1.3
LOGN Logan Glacier 6.06 38 Pn 11 15 42.6 -1.5
O16K Kokwok River B 6.09 307 Pn 11 15 42.4 -1.9
SVW2 Sparrevohn 6.09 326 Pn 11 15 41.7 -2.7
SVW2 Sparrevohn 6.09 326 P Pn 11 15 42.1 -2.3
M20K Styx River 6.13 339 Pn 11 15 42.9 -2.0
M20K Styx River 6.13 339 P Pn 11 15 42.8 -2.2
baz=156
VNFG Fog Glacier, M 6.13 275 Pn 11 15 42.8 -2.2
N17K Nushagak Hills 6.25 317 Pn 11 15 44.4 -2.1
N17K Nushagak Hills 6.25 317 P Pn 11 15 44.2 -2.2
baz=130
WAT6 Susitna Watana 6.38 3 Pn 11 15 47.2 -1.1
WAT6 Susitna Watana 6.38 3 P Pn 11 15 47.2 -1.1
baz=184
HARP HAARP 6.42 14 Pn 11 15 48.3 -0.5
HARP HAARP 6.42 14 P Pn 11 15 48.3 -0.5
baz=197
CHNA Chernabura Isl 6.42 262 P Pn 11 15 46.9 -1.9
baz=74
CNBA Chernabura Isl 6.43 262 Pn 11 15 45.9 -2.9
M19K Big River Lodg 6.43 335 Pn 11 15 46.6 -2.4
M18K Stony River 6.47 327 Pn 11 15 46.6 -2.9
WAT1 Susitna Watana 6.61 0 Pn 11 15 50.6 -0.9
WAT1 Susitna Watana 6.61 0 P Pn 11 15 50.8 -0.6
baz=180
WAT7 Susitna Watana 6.62 359 Pn 11 15 50.6 -0.9
O29M Mount Kennedy 6.65 48 Pn 11 15 51.2 -0.9
P29M Windy Craggy 6.69 55 Pn 11 15 51.1 -1.4
O15K Ungalikthiuk R 6.72 301 Pn 11 15 51.6 -1.3
L19K White Mountain 6.78 334 Pn 11 15 51.4 -2.4
L19K White Mountain 6.78 334 P Pn 11 15 50.9 -2.8
baz=149
SDPT Sand Point 6.78 267 Pn Pn 11 15 51.5 -2.3
SDPT Sand Point 6.78 267 P Pn 11 15 51.7 -2.1
YUK8 Steele Glacier 6.81 38 Pn 11 15 53.8 -0.7
YUK8 Steele Glacier 6.81 38 P Pn 11 15 53.8 -0.7
baz=226
L20K Farewell, AK 6.82 339 Pn 11 15 51.9 -2.4
YUK2 White River 6.84 32 Pn 11 15 54.2 -0.4
N16K Nishlik Lake 6.85 313 Pn 11 15 52.9 -1.8
DHY Denali Highway 6.88 4 Pn Pn 11 15 54.9 -0.4
DHY Denali Highway 6.88 4 P Pn 11 15 54.8 -0.4
baz=186
M17K Holitna River 6.93 322 Pn 11 15 54.1 -1.7
M17K Holitna River 6.93 322 P Pn 11 15 53.7 -2.1
baz=135
PAX Paxson 6.93 12 Pn 11 15 55.5 -0.4
baz=194
S31K Pelican 6.93 70 Pn Pn 11 15 51.6 -4.2
YUK3 Moose Creek 6.95 34 Pn 11 15 55.3 -0.9
YUK3 Moose Creek 6.95 34 P Pn 11 15 55.3 -0.9
baz=220
YUK7 Dusty Glacier 6.96 48 Pn 11 15 55.8 -0.6
M27K Edge Creek, AK 7.02 26 Pn 11 15 56.0 -1.2
YUK6 Outpost Mounta 7.11 44 Pn 11 15 58.2 -0.3
YUK6 Outpost Mounta 7.11 44 P Pn 11 15 58.2 -0.3
baz=232
M16K Timber Creek 7.24 316 Pn 11 15 58.4 -1.7
N15K Kwethluk River 7.25 308 Pn 11 15 59.2 -1.0
P30M Million Dollar 7.26 53 Pn 11 15 59.5 -0.9
PLBC Pleasant Camp 7.26 59 Pn 11 15 59.2 -1.1
PLBC Pleasant Camp 7.26 59 P Pn 11 15 59.2 -1.1
baz=248
R31K City Hall, Gus 7.27 67 Pn 11 15 57.9 -2.5
TRF Thorofare Moun 7.29 354 Pn 11 16 00.4 -0.4
TRF Thorofare Moun 7.29 354 P Pn 11 16 00.5 -0.4
baz=172
L18K Granite Mounta 7.30 329 Pn 11 15 58.0 -2.8
BVCY Beaver Creek 7.33 29 Pn 11 16 00.9 -0.4
BVCY Beaver Creek 7.33 29 P Pn 11 16 01.2 -0.1
baz=216
SIT Sitka 7.34 78 Pn 11 15 55.6 -5.8
HYT Haines Junctio 7.38 47 Pn Pn 11 16 01.4 -0.8
HYT Haines Junctio 7.38 47 P Pn 11 16 01.3 -0.8
baz=236
PVV Pavlof Volcano 7.51 269 Pn 11 16 01.5 -2.3
MCK McKinley 7.52 359 Pn 11 16 03.5 -0.4
MCK McKinley 7.52 359 P Pn 11 16 03.5 -0.4
baz=178
L27K Beaver Creek, 7.64 24 Pn 11 16 05.3 -0.3
BCR Beaver Creek A 7.65 24 Pn Pn 11 16 05.3 -0.4
TTA Tatalina 7.70 334 Pn Pn 11 16 04.0 -2.4
TTA Tatalina 7.70 334 P Pn 11 16 04.2 -2.2
TTA Tatalina 7.70 334 P Pn 11 16 03.8 -2.7
baz=148
L17K Donlin 7.74 324 Pn 11 16 04.5 -2.4
SKAG Skagway 7.76 60 P Pn 11 16 06.6 -0.5
BESE Bessie Mountai 7.76 67 Pn 11 16 05.1 -2.1
S32K Killisnoo 7.76 75 Pn 11 16 03.9 -3.3
M15K Kasigluk River 7.77 310 Pn 11 16 06.1 -1.2
L16K Owhat River 7.86 319 P Pn 11 16 06.7 -1.9
baz=130
N14K Kuskokwak Cree 7.88 303 Pn 11 16 07.0 -1.7
O30N Mendenhall 7.95 50 Pn 11 16 08.7 -1.1
O30N Mendenhall 7.95 50 P Pn 11 16 08.9 -0.8
baz=240
JIS Juneau Island 7.95 69 Pn 11 16 07.7 -2.1
JIS Juneau Island 7.95 69 P Pn 11 16 08.3 -1.4
M29M Somme Creek 8.07 35 Pn 11 16 10.7 -0.9
K17K Iditarod 8.17 327 Pn 11 16 10.6 -2.1
WHY Whitehorse 8.42 53 Pn 11 16 15.5 -0.8
J20K Nowinta River 8.43 343 Pn 11 16 15.4 -1.0
CCB Clear Creek Bu 8.44 2 Pn 11 16 16.3 -0.2
N31M Braeburn, Yuko 8.45 46 Pn Pn 11 16 16.2 -0.5
K27K Chicken 8.45 20 Pn 11 16 16.5 -0.1
J19K Poorman 8.54 339 Pn 11 16 15.5 -2.3
J25K Salcha River, 8.55 9 Pn 11 16 17.1 -0.9
P32M Atlin 8.58 61 Pn Pn 11 16 16.9 -1.6
P32M Atlin 8.58 61 P Pn 11 16 16.9 -1.6
baz=253
IL31 8.60 5 Pn 11 16 18.6 0.0
ILAR Eielson Airay 8.60 5 Pn Pn 11 16 16.9 -1.7
comp=E,0.7nm,0.3s,baz=188,slow=13,SNR=31
ILAR Sn Sn 11 17 50.1 -4.2
comp=E,0.9nm,0.3s,baz=188,slow=22,SNR=8.7
ILAR LR LR 11 19 40.8
comp=E,290nm,21.8s,baz=196,slow=38
comp=E,2.4nm,0.4s
U33K Whale Pass 8.61 84 Pn 11 16 13.7 -5.1
L15K Ungalaik Mounta 8.62 315 Pn 11 16 17.2 -1.6
J26L Joseph Creek 8.65 15 Pn 11 16 18.6 -0.8
J26L Joseph Creek 8.65 15 P Pn 11 16 18.9 -0.4
baz=199
L29M L29M 8.67 33 Pn 11 16 19.6 0.0
COLA College 8.67 2 Pn 11 16 18.6 -1.0
COLA College 8.67 2 P Pn 11 16 20.6 +1.0
CRAG Craig 8.72 89 P Pn 11 16 15.7 -4.6
M30M Minto, Yukon 8.73 38 Pn 11 16 19.7 -0.8
ISLZ Isanotski Laza 8.74 266 Pn 11 16 18.1 -2.6
ISNN Isanotski Nort 8.75 267 Pn 11 16 18.9 -1.9
L14K Kuka Creek 8.93 311 Pn 11 16 22.2 -1.0
I23K Minto, Yukon-K 8.95 358 Pn 11 16 21.2 -2.2
K15K Wolf Creek Mou 8.99 318 Pn 11 16 22.5 -1.5
DAWY Dawson 9.07 26 Pn Pn 11 16 24.1 -1.1
P30M Teslin, Yukon 9.23 58 Pn Pn 11 16 25.5 -1.5
J16K Tavik River 9.30 324 Pn 11 16 25.6 -2.7
K29M Barlow Dome 9.40 31 Pn 11 16 28.4 -1.3
S34M Telegraph Cree 9.63 73 Pn Pn 11 16 31.4 -1.4
FARO Faro, Yukon 9.82 46 Pn Pn 11 16 35.2 -0.2
R33M Jennings River 9.89 64 Pn Pn 11 16 34.9 -1.6
IMAR Indian Mountai 10.09 348 Pn Pn 11 16 38.1 -0.9
DLBC Dease Lake 10.25 70 Pn 11 16 40.1 -1.3
DLBC Dease Lake 10.25 70 Pn Pn 11 16 39.8 -1.5
comp=E,0.8nm,0.3s,baz=268,slow=7.0,SNR=13
DLBC Sn Sn 11 18 32.1 -2.8
comp=E,0.3nm,0.3s,baz=186,slow=25,SNR=1.3
DLBC LR LR 11 19 59.0
comp=E,686nm,21.5s,baz=285,slow=34
comp=E,2.3nm,0.3s
J30M Hart River 10.29 31 Pn 11 16 41.8 -0.2
F19K Shaleruckik Mo 11.48 341 Pn 11 16 55.0 -3.0
ANM Nome 11.74 322 Pn 11 16 58.8 -2.8
F17K Baldwin Pennin 11.88 335 Pn 11 17 00.2 -3.3
E25K Arctic Village 12.00 5 Pn 11 17 02.7 -2.6
F28M Old Crow 12.11 16 Pn Pn 11 17 05.4 -1.2
TOLK Toolik Lake Re 12.46 358 Pn 11 17 09.9 -1.5
E18K Tukpahlearik C 12.54 338 Pn Pn 11 17 09.2 -3.4
BBB Bella Bella 12.62 100 Pn Pn 11 17 13.5 -0.2
comp=E,0.2nm,0.3s,baz=273,slow=17,SNR=1.3
BBB Sn Sn 11 19 27.0 -5.7
comp=E,0.4nm,0.3s,baz=276,slow=10,SNR=1.9
BBB LR LR 11 20 46.0
comp=E,322nm,20.4s,baz=318,slow=31
comp=E,9.8nm,0.9s
INK Inuvik 13.92 24 Pn Pn 11 17 30.8 -0.5
INK Inuvik 13.92 24 Pn Pn 11 17 30.9 -0.3
comp=E,0.2nm,0.3s,baz=202,slow=14,SNR=38
INK LR LR 11 23 02.0
comp=E,447nm,18.4s,baz=174,slow=38
comp=E,14nm,0.9s
WRGLY Wrigley 14.38 51 Pn Pn 11 17 38.0 +0.4
CLRS Cowichan Lake 16.55 106 Pn 11 18 05.0 -1.0
CLRS IAmb IAmb 11 18 24.3
comp=Z,32nm,1.3s
HILA High Level 17.07 69 P Pn 11 18 12.2 -0.2
C36M Paulatuk 17.07 30 Pn 11 18 10.8 -1.6
C36M IAmb IAmb 11 18 16.7
comp=Z,19nm,1.1s
BRLDA Berland Lookou 17.85 84 P Pn 11 18 22.2 0.0
YKA Yellowknife Ar 18.23 56 P P 11 18 26.2 -0.5
YKA Yellowknife Ar 18.23 56 P Pn 11 18 26.8 +0.1
comp=Z,0.2nm,0.3s,baz=264,slow=11,SNR=50
YKA LR LR 11 25 15.0
comp=Z,485nm,19.0s,baz=259,slow=36
comp=Z,8.3nm,0.9s
A36M Sachs Harbour 18.56 23 P P 11 18 30.1 -0.1
LON Longmire 19.05 109 P P 11 18 35.2 -0.8
F04A Amboy 19.27 111 IAmb IAmb 11 18 43.0
comp=Z,14nm,1.1s
LTY Liberty 19.34 106 IAmb IAmb 11 18 57.9
comp=Z,26nm,1.4s
B08A Colville Reser 19.41 102 P P 11 18 39.6 -0.2
MXC Moxie City 19.97 107 P P 11 18 46.5 +0.6
MXC IAmb IAmb 11 18 51.3
comp=Z,18nm,1.2s
HOOD Mount Hood Mea 20.08 112 P P 11 18 47.3 +0.1
HOOD IAmb IAmb 11 18 54.3
comp=Z,10nm,0.9s
E07A Sunnyside 20.22 106 P 11 18 48.4 -0.2
E07A IAmb IAmb 11 18 53.3
comp=Z,17nm,1.3s
H04A Detroit Lake 20.24 114 P 11 18 48.7 -0.2
EDM Edmonton 20.41 84 P P 11 18 50.9 +0.3
EDM IAmb IAmb 11 19 03.2
comp=Z,11nm,1.0s
HAWA Hanford 20.49 106 P P 11 18 51.3 -0.3
NEW Newport 20.68 99 P P 11 18 54.0 +0.4
comp=Z,4.2nm,0.9s,baz=302,slow=8.2,SNR=1.9
NEW LR LR 11 25 04.7
comp=Z,195nm,20.3s,baz=304,slow=32
comp=Z,4.2nm,0.9s
E08A Dider Farm, El 20.68 106 IAmb IAmb 11 18 58.4
comp=Z,11nm,1.1s
I04A Tendick Farm, 20.76 116 IAmb IAmb 11 18 57.2
comp=Z,18nm,1.3s
DBO Dodson Butte 20.84 118 IAmb IAmb 11 19 14.3
comp=Z,15nm,1.1s
K02D Willamette Mer 20.95 120 IAmb IAmb 11 19 15.4
comp=Z,20nm,1.2s
HUMO Hull Mountain 21.36 119 IAmb IAmb 11 19 04.3
comp=Z,17nm,1.0s
L02F Cave Junction 21.43 121 P P 11 19 00.9 -0.8
L02F IAmb IAmb 11 19 08.0
comp=Z,12nm,1.0s
PINE Pine Mountain 21.50 114 IAmb IAmb 11 19 05.7
comp=Z,12nm,1.1s
SHEM Shemya Is, Ala 21.80 277 LR LR 11 27 00.1
comp=Z,187nm,21.4s,baz=150,slow=35
F10A Beach Ranch, E 22.00 105 IAmb IAmb 11 19 26.7
comp=Z,17nm,1.2s
YBH Yreka Blue Hor 22.14 120 IAmb IAmb 11 19 17.0
comp=Z,11nm,0.9s
YBH Yreka Blue Hor 22.14 120 P P 11 19 10.0 +0.7
comp=Z,5.7nm,1.0s,baz=333,slow=2.3,SNR=9.5
YBH LR LR 11 25 35.0
comp=Z,391nm,20.2s,baz=332,slow=31
comp=Z,5.7nm,1.0s
J08A Circle Bar Ran 23.08 111 IAmb IAmb 11 19 22.7
comp=Z,11nm,1.1s
BILL Bilibino 23.55 318 P P 11 19 21.7 -1.8
WVOR Wild Horse Val 23.65 113 P P 11 19 23.8 -1.1
WVOR IAmb IAmb 11 19 42.7
comp=Z,7.7nm,1.1s
BPMT Black Pine Rid 23.78 99 P P 11 19 24.9 -1.3
LYMT Lyon Mountain 24.10 97 P P 11 19 27.3 -1.9
ORV Oroville 24.41 122 P P 11 19 32.0 +0.2
AFDM Forest Hills D 25.14 122 P P 11 19 39.0 +0.5
AFDM IAmb IAmb 11 19 41.0
comp=Z,6.4nm,1.2s
PAHR Pah Rah Range 25.31 118 IAmb IAmb 11 19 43.0
comp=Z,11nm,1.2s
YERR Yerington 25.94 119 IAmb IAmb 11 19 50.4
comp=Z,8.0nm,0.9s
WAKR Walker 26.22 120 IAmb IAmb 11 20 03.1
comp=Z,6.2nm,1.0s
KVN Kaiserville 26.45 118 IAmb IAmb 11 19 56.0
comp=Z,7.1nm,0.9s
RYN Ryan 26.57 119 IAmb IAmb 11 20 05.1
comp=Z,7.0nm,1.3s
ELK Elko 26.63 111 P P 11 19 52.8 +0.6
comp=Z,2.2nm,0.8s,baz=310,slow=8.5,SNR=9.5
ELK LR LR 11 28 40.9
comp=Z,152nm,19.1s,baz=319,slow=33
comp=Z,2.2nm,0.8s
MDPB Devils Postpil 27.09 121 IAmb IAmb 11 19 59.6
comp=Z,5.9nm,0.9s
RES Resolute Bay 27.41 28 P P 11 19 59.7 +1.2
comp=Z,2.3nm,0.9s,baz=257,slow=11,SNR=5.3
RES LR LR 11 31 14.5
comp=Z,300nm,19.3s,baz=228,slow=37
comp=Z,2.3nm,0.9s
Q12A Willow Creek R 28.11 113 IAmb IAmb 11 20 14.7
comp=Z,9.7nm,1.2s
PDAR Pinedale Array 28.26 102 P P 11 20 07.7 +0.9
comp=Z,0.4nm,0.6s,baz=328,slow=5.3,SNR=4.6
PDAR LR LR 11 30 46.9
comp=Z,70nm,18.1s,baz=350,slow=35
comp=Z,0.4nm,0.6s
SPR3 Spring Creek 3 28.39 113 IAmb IAmb 11 20 12.0
comp=Z,4.2nm,1.0s
WCT Wildcat Mounta 28.94 119 IAmb IAmb 11 20 16.4
comp=Z,5.6nm,1.0s
ISA Isabella, Lake 28.96 123 IAmb IAmb 11 20 21.4
comp=Z,4.7nm,0.9s
TPNV Topopah Spring 29.00 118 IAmb IAmb 11 20 22.5
comp=Z,5.6nm,1.1s
GWY Greenwater Val 29.40 119 IAmb IAmb 11 20 19.8
comp=Z,6.6nm,0.9s
QSM Queen of Sheba 29.48 120 IAmb IAmb 11 20 20.5
comp=Z,7.2nm,1.0s
SEY Seymchan 29.65 308 LR LR 11 33 22.8
comp=Z,288nm,18.2s,baz=174,slow=39
GSC Goldstone, Bar 30.05 121 IAmb IAmb 11 20 25.5
comp=Z,3.2nm,0.9s
MTPU Mount Pierson 30.22 112 IAmb IAmb 11 20 29.0
comp=Z,6.2nm,1.4s
SRU San Rafael Swe 30.30 108 IAmb IAmb 11 20 36.1
comp=Z,7.1nm,1.2s
PETK Petropavlovsk- 30.58 287 P P 11 20 27.1 +0.2
comp=Z,2.5nm,0.9s,baz=70,slow=12,SNR=11
comp=Z,2.5nm,0.8s
HMU Henry Mountain 31.05 110 IAmb IAmb 11 20 34.7
comp=Z,6.2nm,1.1s
PFO Pinyon Flats O 31.59 122 LR LR 11 31 11.4
comp=Z,237nm,18.4s,baz=336,slow=32
W13A Hualapai Mount 31.64 117 IAmb IAmb 11 20 39.9
comp=Z,4.6nm,1.1s
YUH Yuha Desert 32.64 122 IAmb IAmb 11 20 48.1
comp=Z,4.7nm,0.9s
ANMO Albuquerque 35.57 109 LR LR 11 34 38.7
comp=Z,88nm,18.5s,baz=46,slow=34
TIXI Tiksi 35.93 328 P P 11 21 11.9 -1.4
TIXI IAmb IAmb 11 21 16.7
comp=Z,4.6nm,0.8s
FRB Frobisher Bay 38.17 45 P P 11 21 32.8 +0.5
comp=Z,2.6nm,0.3s,baz=270,slow=1.0,SNR=13
FRB LR LR 11 37 24.6
comp=Z,505nm,18.3s,baz=328,slow=36
comp=Z,2.6nm,0.3s
TX31 Lajitas Ar. Si 41.43 111 P P 11 22 00.1 +0.1
TXAR Lajitas Array 41.43 111 P P 11 21 59.9 0.0
TXAR Lajitas Array 41.43 111 P P 11 22 01.3 +1.4
comp=Z,2.2nm,1.1s,baz=327,slow=6.6,SNR=9.5
TXAR LR LR 11 37 51.6
comp=Z,60nm,19.4s,baz=350,slow=34
comp=Z,2.2nm,1.1s
LPIG La Paz 42.47 123 LR LR 11 37 29.6
comp=Z,104nm,18.6s,baz=4.0,slow=33
SUMG Summit 42.84 25 P P 11 22 11.1 -0.1
SFJD Kangerlussuaq 42.90 35 LR LR 11 39 25.5
comp=Z,295nm,19.0s,baz=324,slow=35
SCHQ Schefferville 43.68 56 P P 11 22 18.6 +0.8
comp=Z,3.5nm,0.9s,baz=326,slow=7.7,SNR=4.0
SCHQ LR LR 11 40 26.8
comp=Z,242nm,19.6s,baz=288,slow=36
comp=Z,3.5nm,0.9s
SADO Sadowa 43.77 75 LR LR 11 39 09.7
comp=Z,190nm,18.1s,baz=270,slow=34
NRIK Noril'sk 48.31 337 P P 11 22 54.5 +0.4
comp=Z,5.9nm,0.8s,baz=47,slow=8.0,SNR=3.4
comp=Z,5.9nm,0.8s
H11N2 WAKE ISLAND Hy 49.22 241 T T 12 16 58.2
baz=30,slow=75
H11N3 WAKE ISLAND Hy 49.22 241 T T 12 16 59.0
baz=30,slow=75
H11N1 WAKE ISLAND Hy 49.23 241 T T 12 16 58.7
baz=30,slow=75
H11S1 WAKE ISLAND Hy 50.35 240 T T 12 18 12.6
baz=29
H11S2 WAKE ISLAND Hy 50.37 240 T T 12 18 13.1
baz=29,slow=74
H11S3 WAKE ISLAND Hy 50.37 240 T T 12 18 01.4
baz=29,slow=74
MJAR Matsushiro Arr 51.57 280 LR LR 11 44 55.3
comp=Z,61nm,21.7s,baz=8.5,slow=36
CMIG Matas Romero 56.04 112 LR LR 11 47 35.1
comp=Z,67nm,19.3s,baz=326,slow=36
KSRS Korea Array 56.46 288 LR LR 11 49 38.5
comp=Z,31nm,18.7s,baz=335,slow=38
JNU Nakatsue 58.13 283 LR LR 11 49 35.0
comp=Z,64nm,19.7s,baz=30,slow=36
SONM Songino Array 58.98 311 P P 11 24 11.6 -1.0
SONM Songino Array 58.98 311 P P 11 24 14.0 +1.4
comp=Z,4.1nm,0.9s,baz=36,slow=6.5,SNR=17
SONM LR LR 11 53 12.1
comp=Z,159nm,18.1s,baz=38,slow=40
comp=Z,4.1nm,0.9s
ZALV Zalesovo Beam 61.82 327 P P 11 24 32.6 +0.9
comp=Z,0.7nm,0.7s,baz=39,slow=6.0,SNR=2.3
comp=Z,0.7nm,0.7s
NB2 NORSAR Subarra 61.98 11 P P 11 24 34.5 +1.8
comp=Z,2.3nm,0.8s,baz=348,slow=6.9
NOA NORSAR Array B 61.98 11 P P 11 24 34.5 +1.8
comp=Z,1.9nm,0.8s,baz=348,slow=6.6,SNR=6.1
comp=Z,1.9nm,0.8s
FINES FINESS Array B 62.58 3 P P 11 24 37.9 +1.2
comp=Z,4.8nm,0.8s,baz=8.9,slow=9.8,SNR=5.1
comp=Z,4.8nm,0.8s
EKA Eskdalemuir Ar 65.27 21 P P 11 24 55.7 +1.2

comp=Z,2.7nm,0.8s,baz=357,slow=6.2,SNR=3.8
comp=Z,2.7nm,0.8s
BVAR **Borovoye Array** **66.49 336** P **P** **11 25 03.2 +0.8**
comp=Z,1.6nm,0.9s,baz=23,slow=4.8,SNR=4.1
comp=Z,1.6nm,0.9s
KURBB **Kurchatov Arra** **66.58 329** P **P** **11 25 03.7 +0.8**
comp=Z,1.0nm,0.9s,baz=28,slow=6.7,SNR=3.3
comp=Z,1.0nm,0.9s
MKAR **Makanchi Array** **68.86 325** P **P** **11 25 17.9 +0.4**
comp=Z,0.4nm,0.6s,baz=46,slow=7.0,SNR=4.2
MKAR LR LR 12 00 06.6
comp=Z,98nm,21.4s,baz=27,slow=40
comp=Z,0.4nm,0.6s
AKASG **Malin Array Be** **73.41 1** P **P** **11 25 45.6 +0.8**
comp=Z,6.4nm,0.8s,baz=360,slow=5.8,SNR=17
comp=Z,6.4nm,0.8s
GERES **GERESS Array B** **74.24 12** P **P** **11 25 50.7 +0.8**
comp=Z,1.4nm,0.7s,baz=17,slow=7.2,SNR=4.6
comp=Z,1.4nm,0.7s
CONA **Conrad Observa** **75.39 11** *e*pP **P** **11 25 59.5 +3.0**
comp=Z,4.6nm,0.8s
KBA **Koelnbreinsper** **75.94 13** *i* pP **P** **11 26 03.2 +3.4**
comp=Z,4.9nm,0.7s
ARSA **Arzberg** **76.02 11** *e*pP **P** **11 26 03.3 +3.2**
comp=Z,5.0nm,1.1s
SOKA **Soboth** **76.53 12** *i* pP **P** **11 26 06.3 +3.2**
comp=Z,8.7nm,1.4s
OBKA **Obir** **76.64 12** *e*pP **P** **11 26 06.6 +2.9**
comp=Z,9.5nm,0.8s
ESDC **Sonseca Array** **79.84 27** P **P** **11 26 23.6 +2.1**
comp=Z,2.6nm,0.8s,baz=342,slow=5.7,SNR=10
comp=Z,2.6nm,0.8s
KBZ **Khabaz** **79.93 352** P **P** **11 26 23.7 +1.9**
comp=Z,3.6nm,0.9s,baz=355,slow=7.8,SNR=5.4
comp=Z,3.6nm,0.9s
GEYT **Alibeck** **83.49 339** P **P** **11 26 42.1 +1.3**
comp=Z,2.1nm,0.6s,baz=36,slow=13,SNR=4.0
comp=Z,2.1nm,0.6s
BRTR **Keskin Array B** **84.39 358** P **P** **11 26 48.2 +2.8**
comp=Z,1.4nm,0.9s,baz=338,slow=11,SNR=2.6
comp=Z,1.4nm,0.9s
CMAR **Chiang Mai Arr** **86.66 299** P **P** **11 26 57.7 +0.8**
comp=Z,0.9nm,0.4s,baz=20,slow=5.3,SNR=6.3
comp=Z,0.9nm,0.4s

JMA ***07*** *11:19:25.4±0.1,24°.1N±0°.2×121°.7E±0°.4,h2km±1km,*
TAIWAN REGION
TAP ***07*** *11:19:25.4,24°.09N×121°.67E,h9km,ML3.5,C*
ISC 07 11:19:25.6±0.9,24°.08N±0°.01×121°.69E±0°.02,h7km±6km,
n96,σ0s61/165,12C-30D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
TWD	**Chiawan**	**0.09**	**268**	⇓*i*P		**Pg**	**11 19 27.6**	**-0.1**
	baz=258							
TWD				*i* S		**Sg**	**11 19 29.1**	**0.0**
	baz=258							
ETL	**Fush Village**	**0.10**	**319**	⇓P		**Pg**	**11 19 27.9**	**0.0**
	baz=322							
NACB	**Ninganchiao**	**0.13**	**315**	⇓*i*P		**Pg**	**11 19 28.2**	**-0.2**
	baz=316							
NACB				*i* S		**Sg**	**11 19 30.0**	**-0.2**
	baz=316							
HWA	**Hwalien**	**0.13**	**218**	*e*P		**Pg**	**11 19 29.2**	**+0.8**
	baz=208							
ETM	**Tongmen**	**0.22**	**237**	⇓P		**Pg**	**11 19 29.9**	**0.0**
	baz=228							
ETM				S		**Sg**	**11 19 32.8**	**-0.1**
	baz=228							
EHP	**Heping Village**	**0.23**	**11**	⇓P		**Pg**	**11 19 30.3**	**+0.1**
	baz=14							
EHP				S		**Sg**	**11 19 33.7**	**+0.4**
	baz=14							
ETLH	**Xiulin Townshi**	**0.23**	**302**	⇓P		**Pg**	**11 19 30.1**	**-0.1**
	baz=302							
ETLH				S		**Sg**	**11 19 33.4**	**+0.1**
	baz=302							
EAHA	**Aohua**	**0.25**	**10**	⇓*i*P		**Pg**	**11 19 30.6**	**+0.1**
	baz=10.0							
EAHA				S		**Sg**	**11 19 34.2**	**+0.4**
	baz=10.0							
LXIB	**Xiulin Townshi**	**0.26**	**256**	⇓*i*P		**Pg**	**11 19 30.7**	**-0.1**
	baz=244							
LXIB				S		**Sg**	**11 19 34.5**	**+0.1**
	baz=244							
SHUL	**Shoufeng**	**0.32**	**202**	⇓P		**Pb**	**11 19 33.4**	**-0.3**
	baz=206							
SHUL				S		**Sb**	**11 19 39.6**	**+0.7**
	baz=206							
ENA	**Nanau**	**0.34**	**7**	⇓*i*P		**Pg**	**11 19 32.3**	**0.0**
	baz=9.0							
ENA				S		**Sg**	**11 19 36.9**	**0.0**
	baz=9.0							
ESL	**Shilin**	**0.36**	**222**	⇑*i*P		**Pg**	**11 19 32.5**	**-0.1**
	baz=227							
ESL				S		**Sg**	**11 19 37.0**	**-0.3**
	baz=227							
EWUT	**Wuta**	**0.37**	**12**	⇓P		**Pg**	**11 19 32.9**	**+0.1**
	baz=12							
EWUT				S		**Sg**	**11 19 37.8**	**+0.1**
	baz=12							
WHF	**Hehuan Shan**	**0.40**	**279**	⇓*i*P		**Pg**	**11 19 33.2**	**-0.2**
	baz=277							
WHF				S		**Sg**	**11 19 38.5**	**-0.2**
	baz=277							
TEGC	**Jichi Village**	**0.40**	**201**	P		**Pb**	**11 19 34.8**	**-0.1**
	baz=190							
TEGC				S		**Sb**	**11 19 42.8**	**+1.5**
	baz=190							
FUSS	**Fushou**	**0.44**	**292**	⇓P		**Pg**	**11 19 34.4**	**+0.1**
	baz=291							
FUSS				S		**Sg**	**11 19 40.6**	**+0.6**
	baz=291							
NNSB	**Datong**	**0.45**	**320**	⇓P		**Pg**	**11 19 34.4**	**+0.1**
	baz=320							
NNSB				S		**Sg**	**11 19 40.3**	**+0.2**
	baz=320							
NNS	**Nan Shan**	**0.46**	**320**	⇓P		**Pg**	**11 19 34.6**	**+0.1**
	baz=321							
NNS				S		**Sg**	**11 19 40.7**	**+0.1**
	baz=321							
WARBT	**Fenglin Townsh**	**0.46**	**218**	*e*P		**Pg**	**11 19 34.4**	**-0.1**
	baz=224							
LATG	**Datong**	**0.47**	**341**	⇓*i*P		**Pg**	**11 19 34.9**	**+0.1**
	baz=341							
LATG				S		**Sg**	**11 19 40.8**	**-0.3**
	baz=341							
CHGB	**Renai**	**0.48**	**267**	⇓*i*P		**Pg**	**11 19 35.0**	**+0.2**
	baz=257							
CHGB				*e*S		**Sg**	**11 19 41.4**	**+0.3**
	baz=257							
EGFH	**Guangfu**	**0.48**	**211**	*e*P		**Pg**	**11 19 35.0**	**+0.1**
	baz=218							
OWD	**Renai**	**0.49**	**255**	⇑P		**Pg**	**11 19 35.2**	**+0.1**
	baz=254							
TWT	**Tachien**	**0.50**	**290**	*e*P		**Pb**	**11 19 35.8**	**-1.1**
	baz=288							
TWT				*e*S		**Sg**	**11 19 42.7**	**+0.8**
	baz=288							
ESAO	**Su ao**	**0.51**	**16**	*e*P		**Pg**	**11 19 35.5**	**0.0**
	baz=15							
ESAO				S		**Sg**	**11 19 41.8**	**-0.3**
	baz=15							
TDCB	**Techi**	**0.52**	**289**	*e*P		**Pg**	**11 19 36.0**	**+0.3**
	baz=288							
TDCB				*e*S		**Sg**	**11 19 42.0**	**-0.4**
	baz=288							
WUSB	**Renai**	**0.54**	**260**	⇓*i*P		**Pg**	**11 19 36.1**	**+0.2**
	baz=259							
WUSB				*e*S		**Sg**	**11 19 43.2**	**+0.2**
	baz=259							
NDT	**Datong Townshi**	**0.54**	**342**	⇓P		**Pg**	**11 19 36.4**	**+0.3**
	baz=342							
NDT				S		**Sg**	**11 19 43.3**	**+0.1**
	baz=342							
TWC	**Suao**	**0.54**	**15**	⇓*i*P		**Pg**	**11 19 36.1**	**0.0**
	baz=7.0							
TWC				S		**Sg**	**11 19 43.3**	**+0.1**
	baz=7.0							
NDS	**Dongshan**	**0.55**	**2**	⇑*i*P		**Pg**	**11 19 36.4**	**+0.2**
	baz=1.0							
NDS				S		**Sg**	**11 19 43.8**	**+0.4**
	baz=1.0							
ENTT	**Nioudou**	**0.57**	**348**	⇓P		**Pg**	**11 19 36.7**	**+0.2**
	baz=349							
ENTT				*e*S		**Sg**	**11 19 44.2**	**+0.2**
	baz=349							
EOS2	**EOS2**	**0.59**	**56**	*e*P		**Pn**	**11 19 40.0**	**-0.4**
	baz=36							
VWDT	**VWDT**	**0.60**	**237**	⇓P		**Pg**	**11 19 37.4**	**+0.1**
	baz=229							
VWDT				*e*S		**Sb**	**11 19 46.0**	**-1.2**
	baz=229							
TWE	**Neicheng**	**0.64**	**358**	⇓*i*P		**Pg**	**11 19 38.1**	**+0.2**
	baz=359							
TWE				S		**Sg**	**11 19 46.5**	**+0.4**
	baz=359							
HGSD	**Ruisui**	**0.64**	**203**	*e*P		**Pb**	**11 19 39.0**	**-0.1**
	baz=192							
YHNB	**Yeheng**	**0.65**	**334**	⇓*i*P		**Pb**	**11 19 38.6**	**-0.8**
	baz=333							
YHNB				S		**Sg**	**11 19 46.3**	**-0.4**
	baz=333							
NSK	**Sanguang**	**0.67**	**333**	⇓*i*P		**Pg**	**11 19 38.7**	**+0.3**
	baz=333							
NSK				S		**Sg**	**11 19 47.0**	**-0.1**
	baz=333							
EHY	**Hungye**	**0.67**	**211**	*e*P		**Pg**	**11 19 38.5**	**0.0**
	baz=220							
EHY				*e*S		**Sb**	**11 19 49.0**	**-0.1**
	baz=220							
FUSB	**Fushanzhiwuyua**	**0.68**	**352**	*e*P		**Pg**	**11 19 39.0**	**+0.3**
	baz=351							
FUSB				S		**Sg**	**11 19 47.9**	**+0.3**
	baz=351							
ILA	**Ilan**	**0.68**	**4**	*e*S		**Sg**	**11 19 48.3**	**+0.7**
	baz=4.0							
WHP	**Taichung City**	**0.71**	**286**	⇑P		**Pb**	**11 19 40.0**	**-0.4**
	baz=285							
WHP				*e*S		**Sb**	**11 19 49.5**	**-0.9**
	baz=285							
NWLT	**Wulai**	**0.71**	**346**	*e*P		**Pg**	**11 19 39.6**	**+0.3**
	baz=333							
NWLT				*e*S		**Sg**	**11 19 48.1**	**-0.5**
	baz=333							
WCS	**Beigang Elemen**	**0.72**	**268**	*e*P		**Pb**	**11 19 40.1**	**-0.3**
	baz=268							
SSLB	**Suanglung**	**0.74**	**247**	⇓*i*P		**Pg**	**11 19 39.7**	**-0.1**
	baz=256							
SSLB				S		**Sg**	**11 19 48.7**	**-0.7**
	baz=256							
SMLT	**Sun Moon Lake**	**0.75**	**255**	⇑*i*P		**Pb**	**11 19 40.4**	**-0.7**
	baz=253							
SMLT				S		**Sg**	**11 19 50.0**	**+0.1**
	baz=253							
NFF	**Wufeng Townshi**	**0.76**	**316**	⇑P		**Pb**	**11 19 40.7**	**-0.5**
	baz=316							
NFF				*e*S		**Sb**	**11 19 50.6**	**-1.2**
	baz=316							
YULB	**Yu-li**	**0.78**	**208**	*e*P		**Pg**	**11 19 40.2**	**-0.3**
	baz=220							
YULB				*e*S		**Sb**	**11 19 52.7**	**+0.4**
	baz=220							
TYC	**Yuchr**	**0.79**	**257**	*e*P		**Pb**	**11 19 41.0**	**-0.6**
	baz=256							
TYC				*e*S		**Sg**	**11 19 50.6**	**-0.3**
	baz=256							
ECBN	**Changbin**	**0.80**	**196**	*e*P		**Pb**	**11 19 41.4**	**-0.3**
	baz=183							
EYUL	**Yuli**	**0.81**	**205**	*e*P		**Pb**	**11 19 42.0**	**0.0**
	baz=219							
TWF1	**Yuli**	**0.81**	**207**	*e*P		**Pb**	**11 19 41.5**	**-0.6**
	baz=218							
TWF1				*e*S		**Sb**	**11 19 53.5**	**+0.2**
	baz=218							
LIOB	**Emei**	**0.83**	**312**	⇓P		**Pb**	**11 19 42.5**	**0.0**
	baz=312							
LIOB				*e*S		**Sb**	**11 19 53.5**	**-0.5**
	baz=312							
NSTT	**Nanjuang**	**0.83**	**311**	⇓P		**Pb**	**11 19 42.2**	**-0.2**
	baz=310							
NSTT				*e*S		**Sg**	**11 19 52.8**	**+0.3**
	baz=310							
WHYT	**Xinyi Township**	**0.86**	**244**	*e*P		**Pb**	**11 19 42.9**	**0.0**
	baz=250							
WHYT				*e*S		**Sb**	**11 19 54.4**	**-0.3**
	baz=250							
TWQ1	**Liyutan**	**0.88**	**288**	*e*P		**Pn**	**11 19 43.6**	**-0.8**
	baz=287							
NHDH	**Xindian Distri**	**0.89**	**350**	P		**Pb**	**11 19 43.2**	**-0.1**
	baz=341							
NHDH				S		**Sg**	**11 19 54.1**	**-0.2**
	baz=341							
TIPB	**Shuangxi**	**0.89**	**8**	P		**Pg**	**11 19 43.0**	**+0.2**
	baz=358							
TIPB				*e*S		**Sg**	**11 19 52.9**	**-1.5**
	baz=358							
TWA	**Mucha**	**0.90**	**354**	*e*P		**Pb**	**11 19 43.2**	**-0.3**
	baz=353							
TWA				*e*S		**Sg**	**11 19 54.4**	**-0.2**
	baz=353							
NSY	**Sanyi**	**0.91**	**291**	P		**Pn**	**11 19 44.5**	**-0.5**
	baz=291							
WJS	**Zhushan**	**0.92**	**254**	*e*P		**Pn**	**11 19 44.3**	**-0.7**
	baz=253							
WJS				*e*S		**Sn**	**11 19 58.0**	**-0.5**
	baz=253							
CHKH	**Chenggong**	**0.93**	**197**	*e*P		**Pg**	**11 19 43.5**	**0.0**
	baz=190							
CHKH				*e*S		**Sb**	**11 19 57.4**	**+0.8**
	baz=190							
NMLH	**Miaoli**	**0.94**	**299**	*e*P		**Pn**	**11 19 46.0**	**+0.7**
	baz=298							
FULB	**Fuli**	**0.95**	**203**	*e*P		**Pb**	**11 19 44.2**	**-0.3**
	baz=219							
TWB1	**Santiao Chiao**	**0.96**	**16**	*e*P		**Pg**	**11 19 44.0**	**0.0**
	baz=6.0							
TWB1				S		**Sg**	**11 19 55.9**	**-0.5**
	baz=6.0							
NWF	**Wu-fen Shan**	**0.99**	**5**	*e*P		**Pb**	**11 19 45.0**	**-0.1**
	baz=354							
NWF				S		**Sg**	**11 19 56.8**	**-0.6**
	baz=354							
WFSB	**Wu-fen Shan**	**0.99**	**5**	⇑*e*P		**Pb**	**11 19 45.0**	**0.0**
	baz=354							
WFSB				S		**Sg**	**11 19 56.9**	**-0.4**
	baz=354							
ALS	**Alishan**	**0.99**	**235**	⇓P		**Pb**	**11 19 45.1**	**-0.2**
	baz=235							
NCUH	**Zhongli**	**0.99**	**332**	*e*P		**Pn**	**11 19 46.0**	**0.0**
	baz=332							
NCUH				*e*S		**Sn**	**11 20 00.6**	**+0.3**
	baz=332							
SXI1	**Grass Mountain**	**1.02**	**9**	⇑P		**Pb**	**11 19 45.6**	**0.0**
	baz=349							
CHKT	**Chengkung**	**1.02**	**197**	⇑P		**Pg**	**11 19 45.0**	**-0.3**
	baz=190							
CHKT				*e*S		**Sn**	**11 20 00.7**	**-0.3**
	baz=190							
EHD	**Haiduan**	**1.03**	**206**	*e*P		**Pg**	**11 19 44.5**	**-0.9**
	baz=218							
EHD				*e*S		**Sb**	**11 19 59.9**	**+0.3**
	baz=218							
TWS1	**Kuangyinshan**	**1.04**	**346**	*e*P		**Pn**	**11 19 47.0**	**+0.3**
	baz=346							
TWS1				*e*S		**Sn**	**11 20 01.1**	**-0.4**
	baz=346							
CHN5	**Tsauling**	**1.05**	**243**	⇓P		**Pn**	**11 19 46.8**	**-0.1**
	baz=232							
CHN5				*e*S		**Sn**	**11 20 01.4**	**-0.4**
	baz=232							
YM01	**YM01**	**1.06**	**354**	*e*P		**Pb**	**11 19 46.5**	**+0.1**
	baz=339							
ELDTW	**Lidau**	**1.09**	**215**	*e*P		**Pg**	**11 19 46.1**	**-0.4**
	baz=225							
ELDTW				*e*S		**Sb**	**11 20 00.8**	**-0.5**
	baz=225							
NTST	**Danshui**	**1.10**	**348**	*e*P		**Pn**	**11 19 47.9**	**+0.4**
	baz=355							
NTST				*e*S		**Sn**	**11 20 03.5**	**+0.7**
	baz=355							
YM08	**YM08**	**1.10**	**355**	*e*P		**Pb**	**11 19 47.2**	**+0.1**
	baz=339							
ANP	**Anpu**	**1.11**	**352**	*e*P		**Pb**	**11 19 47.3**	**+0.1**
ANP				*e*S		**Sg**	**11 20 00.9**	**-0.4**
WDLH	**Douliu**	**1.13**	**250**	*e*P		**Pn**	**11 19 48.1**	**+0.3**
	baz=251							
EDH	**Donghe**	**1.16**	**198**	*e*P		**Pg**	**11 19 44.8**	**-3.1**
	baz=185							
EDH				*e*S		**Sb**	**11 20 03.0**	**-0.3**
	baz=185							
WCKO	**Fanlu**	**1.19**	**237**	*e*P		**Pn**	**11 19 49.0**	**+0.4**
	baz=239							
JYNG	**Yonagunijimaku**	**1.20**	**72**	P		**Pg**	**11 19 48.6**	**0.0**
JYNG				S		**Sg**	**11 20 04.5**	**+0.4**
WRL	**Guolierlin Hig**	**1.22**	**262**	*e*P		**Pn**	**11 19 49.5**	**+0.5**
	baz=261							
WRL				*e*S		**Sn**	**11 20 06.5**	**+0.6**
	baz=261							
STYH	**Taoyuan**	**1.24**	**223**	⇑P		**Pb**	**11 19 49.0**	**-0.3**
	baz=224							
STYH				*e*S		**Sb**	**11 20 05.3**	**-0.3**
	baz=224							
TPUB	**Ta-pu**	**1.25**	**232**	⇑*e*P		**Pn**	**11 19 50.0**	**+0.4**
	baz=221							
WTK	**Tuku**	**1.26**	**252**	*e*P		**Pn**	**11 19 50.6**	**+0.9**
	baz=252							
WTK				*e*S		**Sn**	**11 20 07.4**	**+0.6**
	baz=252							
YOJ	**Yonaguni jima**	**1.26**	**72**	P		**Pn**	**11 19 49.1**	**-0.5**
YOJ				*e*S		**Sb**	**11 20 06.4**	**+0.3**
WTP	**Ta-pu**	**1.29**	**230**	*e*P		**Pg**	**11 19 50.8**	**+0.4**
	baz=232							
TWK	**Hsinying**	**1.37**	**234**	*e*P		**Pg**	**11 19 52.0**	**+0.1**
	baz=235							
TWK				*e*S		**Sn**	**11 20 11.2**	**+1.4**
	baz=235							
SNST	**Tainan City**	**1.39**	**232**	*e*P		**Pg**	**11 19 52.2**	**-0.2**
	baz=234							
SNST				*e*S		**Sn**	**11 20 12.4**	**+2.2**
	baz=234							
CHN1	**Nanshi**	**1.40**	**230**	⇑*e*P		**Pg**	**11 19 52.4**	**0.0**
	baz=222							
CHN1				*e*S		**Sn**	**11 20 13.5**	**+3.3**
	baz=222							
SGST	**Jiashian**	**1.43**	**226**	*e*P		**Pn**	**11 19 51.8**	**-0.1**
	baz=226							
SGST				*e*S		**Sg**	**11 20 12.2**	**+0.7**
	baz=226							
SLGT	**Liugui**	**1.45**	**222**	*e*P		**Pg**	**11 19 52.9**	**-0.5**
	baz=224							
SCST	**Cishan**	**1.62**	**223**	*e*P		**Pg**	**11 19 56.4**	**-0.4**
	baz=226							
TSMG	**Majia**	**1.68**	**215**	*e*P		**Pb**	**11 19 56.4**	**-0.4**
	baz=209							
SCZT	**Fangliau**	**1.97**	**210**	*e*P		**Pb**	**11 20 00.5**	**-1.3**
	baz=193							

TAP 07 11:21:25.9,23°.29N×120°.61E,h15km,ML1.1,1D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
TPUB	**Ta-pu**	**0.02**	**54**	⇓P		**Pg**	**11 21 29.2**	**+0.6**
	baz=52							
TPUB				S		**Sg**	**11 21 30.9**	**+0.5**
	baz=52							
WTP	**Ta-pu**	**0.04**	**176**	*e*P		**Pg**	**11 21 29.6**	**+0.8**
	baz=166							
WTP				S		**Sg**	**11 21 31.5**	**+0.9**
	baz=166							
TWK	**Hsinying**	**0.12**	**259**	*e*P		**Pg**	**11 21 29.3**	**-0.1**
	baz=257							
TWK				*e*S		**Sg**	**11 21 31.8**	**+0.1**
	baz=257							
SNST	**Tainan City**	**0.12**	**237**	*e*P		**Pb**	**11 21 30.2**	**+0.3**
	baz=237							
SNST				*e*S		**Sb**	**11 21 32.5**	**-0.2**
	baz=237							
CHN1	**Nanshi**	**0.13**	**217**	*e*P		**Pg**	**11 21 29.6**	**+0.1**
	baz=216							
CHN1				S		**Sb**	**11 21 33.3**	**+0.5**
	baz=216							
WCKO	**Fanlu**	**0.15**	**358**	P		**Pb**	**11 21 30.5**	**+0.1**
	baz=357							
WCKO				*i* S		**Sb**	**11 21 33.6**	**+0.1**
	baz=357							
STYH	**Taoyuan**	**0.19**	**128**	*i* P		**Pb**	**11 21 31.0**	**-0.1**
	baz=124							
STYH				S		**Sb**	**11 21 34.6**	**+0.1**
	baz=124							
ALS	**Alishan**	**0.28**	**39**	P		**Pb**	**11 21 32.6**	**-0.3**
	baz=40							
SLGT	**Liugui**	**0.29**	**174**	*i* P		**Pb**	**11 21 32.9**	**0.0**
	baz=173							
SLGT				S		**Sb**	**11 21 37.7**	**+0.1**
	baz=173							
CHN3	**Shinhua**	**0.31**	**227**	*i* P		**Pb**	**11 21 33.0**	**-0.1**
	baz=227							
CHN3				S		**Sb**	**11 21 38.6**	**+0.6**
	baz=227							
SSLB	**Suanglung**	**0.59**	**32**	*i* P		**Pb**	**11 21 38.0**	**0.0**
	baz=32							
YULB	**Yu-li**	**0.64**	**81**	*e*P		**Pg**	**11 21 38.4**	**0.0**
	baz=80							
WCS	**Beigang Elemen**	**0.81**	**20**	*e*P		**Pg**	**11 21 41.1**	**-0.6**
	baz=19							
WCS				*e*S		**Sb**	**11 21 52.7**	**+0.1**
	baz=19							
WARBT	**Fenglin Townsh**	**0.83**	**59**	*e*P		**Pn**	**11 21 42.7**	**-0.4**
	baz=58							
EGFH	**Guangfu**	**0.84**	**63**	P		**Pg**	**11 21 42.6**	**+0.4**
	baz=63							
WUSB	**Renai**	**0.84**	**33**	*e*P		**Pn**	**11 21 43.3**	**0.0**
	baz=33							
WUSB				*e*S		**Sn**	**11 21 55.2**	**-0.2**
	baz=33							
CHGB	**Renai**	**0.93**	**34**	*e*P		**Pb**	**11 21 43.2**	**-0.6**
	baz=33							
CHGB				*e*S		**Sb**	**11 21 54.7**	**-1.3**
	baz=33							

TAP 07 11:21:27.6,23°.90N×121°.55E,h8km,ML1.2,1C-1D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
ETM	**Tongmen**	**0.09**	**323**	⇓*i*P		**Pg**	**11 21 30.5**	**+0.7**
	baz=322							
ETM				*i* S		**Sg**	**11 21 32.5**	**+1.1**
	baz=322							
HWA	**Hwalien**	**0.09**	**33**	⇑P		**Pg**	**11 21 30.6**	**+0.6**
	baz=37							
HWA				*i* S		**Sg**	**11 21 32.9**	**+1.2**
	baz=37							
SHUL	**Shoufeng**	**0.11**	**173**	*i* P		**Pg**	**11 21 31.1**	**+0.9**
	baz=173							
SHUL				*e*S		**Sg**	**11 21 33.9**	**+1.9**
	baz=173							
ESL	**Shilin**	**0.14**	**232**	*i* P		**Pg**	**11 21 31.4**	**+0.8**
	baz=228							
ESL				*e*S		**Sg**	**11 21 33.5**	**+0.9**
	baz=228							
LXIB	**Xiulin Townshi**	**0.17**	**315**	P		**Pg**	**11 21 32.4**	**+1.0**
	baz=314							
LXIB				*e*S		**Sg**	**11 21 36.1**	**+2.2**
	baz=314							
TEGC	**Jichi Village**	**0.19**	**183**	*e*P		**Pg**	**11 21 32.0**	**+0.5**
	baz=180							
TEGC				S		**Sg**	**11 21 36.2**	**+2.1**
	baz=180							
WARBT	**Fenglin Townsh**	**0.23**	**220**	P		**Pg**	**11 21 33.2**	**+0.9**
	baz=219							
WARBT				*e*S		**Sg**	**11 21 36.4**	**+0.9**
	baz=219							
ETL	**Fush Village**	**0.27**	**15**	*i* P		**Pb**	**11 21 34.0**	**-0.7**
	baz=14							
ETL				S		**Sb**	**11 21 38.9**	**-0.6**
	baz=14							
NACB	**Ninganchiao**	**0.28**	**9**	*i* P		**Pb**	**11 21 34.3**	**-0.6**
	baz=8.0							
NACB				S		**Sb**	**11 21 39.2**	**-0.5**
	baz=8.0							
ETLH	**Xiulin Townshi**	**0.31**	**349**	*e*P		**Pg**	**11 21 34.5**	**+0.6**
	baz=348							
ETLH				*e*S		**Sg**	**11 21 38.8**	**+0.7**
	baz=348							
OWD	**Renai**	**0.35**	**279**	P		**Pb**	**11 21 35.4**	**-0.7**
	baz=279							
OWD				*e*S		**Sb**	**11 21 41.5**	**-0.4**
	baz=279							
WHF	**Hehuan Shan**	**0.36**	**313**	*i* P		**Pb**	**11 21 35.7**	**-0.8**
	baz=314							
WHF				*i* S		**Sb**	**11 21 41.4**	**-1.0**
	baz=314							
CHGB	**Renai**	**0.38**	**295**	*e*P		**Pb**	**11 21 36.7**	**-0.1**
	baz=295							
VWDT	**VWDT**	**0.40**	**249**	*e*P		**Pb**	**11 21 37.2**	**+0.2**
	baz=248							
VWDT				S		**Sb**	**11 21 42.8**	**-0.4**
	baz=248							
WUSB	**Renai

FUSS	**Fushou** baz=321	**0.45**	**321**	*e*P	Pb	11 21 38.2	+0.3
FUSS	baz=321			*e*S	Sb	11 21 43.9	-0.9
YULB	**Yu-li** baz=204	**0.55**	**205**	*i* P	Pb	11 21 39.5	-0.1
SSLB	**Suanglung** baz=258	**0.56**	**259**	*e*P	Pb	11 21 40.1	+0.5
YHNB	**Yeheng** baz=348	**0.78**	**348**	P	Pb	11 21 43.5	-0.1
YHNB	baz=348			*e*S	Sb	11 21 54.0	-0.4

JMA ***07*** *11:22:14.2±0.2,24.1N±0.2×121.7E±0.4,h0km±1km, MV3.1/13,TAIWAN REGION*
TAP ***07*** *11:22:14.1,24.06N×121.65E,h9km,ML3.7,C*
ISC 07 11:22:14.1±0.9**,24.04N**±0.01×**121.69E**±0.02**,h7**km±6km**, n118,**σ0**60**/193**,3C-43D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=201	**0.10**	**230**	⇓*i*P		**Pg**	**11 22 17.0**	**+0.5**
HWA	baz=201			S		**Sg**	**11 22 19.2**	**+1.1**
ETL	**Fush Village** baz=345	**0.13**	**331**	⇓*i*P		**Pg**	**11 22 16.9**	**0.0**
ETL	baz=345			*i* S		**Sg**	**11 22 18.7**	**-0.2**
NACB	**Ninganchiao**	**0.16**	**325**	P		**Pg**	**11 22 17.3**	**-0.1**
NACB	**Ninganchiao** baz=343	**0.16**	**325**	⇓*i*P		**Pg**	**11 22 17.2**	**-0.1**
NACB	baz=343			S		**Sg**	**11 22 19.2**	**-0.4**
ETM	**Tongmen** baz=236	**0.20**	**247**	⇓*i*P		**Pg**	**11 22 18.1**	**0.0**
ETM	baz=236			S		**Sg**	**11 22 20.6**	**-0.2**
ETLH	**Xiulin Townshi** baz=312	**0.25**	**310**	⇓*i*P		**Pg**	**11 22 19.0**	**-0.1**
ETLH	baz=312			S		**Sg**	**11 22 22.2**	**-0.3**
LXIB	**Xiulin Townshi** baz=248	**0.26**	**265**	⇓*i*P		**Pg**	**11 22 19.0**	**-0.2**
LXIB	baz=248			S		**Sg**	**11 22 22.3**	**-0.5**
EHP	**Heping Village** baz=21	**0.27**	**9**	⇓P		**Pg**	**11 22 19.7**	**+0.3**
EHP	baz=21			*i* S		**Sg**	**11 22 23.4**	**+0.4**
SHUL	**Shoufeng** baz=201	**0.28**	**205**	P		**Pb**	**11 22 21.3**	**-0.1**
SHUL	baz=201			S		**Sb**	**11 22 27.6**	**+1.3**
EAHA	**Aohua** baz=17	**0.29**	**8**	⇓P		**Pg**	**11 22 19.8**	**0.0**
EAHA	baz=17			S		**Sg**	**11 22 23.8**	**+0.2**
ESL	**Shilin** baz=226	**0.33**	**226**	⇓*i*P		**Pg**	**11 22 20.5**	**-0.1**
ESL	baz=226			S		**Sg**	**11 22 24.6**	**-0.4**
TEGC	**Jichi Village** baz=192	**0.36**	**203**	*e*P		**Pb**	**11 22 22.6**	**-0.2**
TEGC	baz=192			S		**Sb**	**11 22 30.2**	**+1.6**
ENA	**Nanau** baz=20	**0.39**	**7**	⇓*i*P		**Pg**	**11 22 21.8**	**+0.1**
ENA	baz=20			S		**Sg**	**11 22 27.0**	**+0.3**
WHF	**Hehuan Shan** baz=282	**0.40**	**285**	⇓*i*P		**Pg**	**11 22 21.9**	**-0.2**
WHF	baz=282			S		**Sg**	**11 22 26.8**	**-0.7**
EWUT	**Wuta** baz=17	**0.41**	**11**	⇓*i*P		**Pg**	**11 22 22.2**	**+0.2**
EWUT	baz=17			S		**Sg**	**11 22 27.6**	**+0.2**
WARBT	**Fenglin Townsh** baz=223	**0.43**	**221**	⇓*i*P		**Pg**	**11 22 22.3**	**-0.1**
EGFH	**Guangfu** baz=215	**0.45**	**213**	⇓P		**Pg**	**11 22 22.9**	**+0.2**
FUSS	**Fushou** baz=296	**0.46**	**296**	⇓*i*P		**Pg**	**11 22 23.1**	**+0.1**
FUSS	baz=296			*e*S		**Sg**	**11 22 29.1**	**0.0**
CHGB	**Renai** baz=260	**0.47**	**272**	⇓*i*P		**Pg**	**11 22 23.4**	**+0.1**
CHGB	baz=260			S		**Sg**	**11 22 28.8**	**-0.8**
NNSB	**Datong** baz=326	**0.48**	**324**	⇓*i*P		**Pg**	**11 22 23.4**	**+0.1**
NNSB	baz=326			S		**Sg**	**11 22 29.3**	**-0.3**
OWD	**Renai** baz=255	**0.48**	**259**	⇓P		**Pg**	**11 22 23.4**	**-0.1**
OWD	baz=255			S		**Sg**	**11 22 28.8**	**-1.0**
NNS	**Nan Shan** baz=326	**0.49**	**324**	⇓*i*P		**Pg**	**11 22 23.6**	**0.0**
NNS	baz=326			S		**Sg**	**11 22 29.9**	**-0.2**
LATG	**Datong** baz=346	**0.51**	**343**	⇓*i*P		**Pg**	**11 22 24.1**	**+0.1**
LATG	baz=346			S		**Sg**	**11 22 30.0**	**-0.8**
TWT	**Tachien** baz=292	**0.52**	**294**	⇓P		**Pg**	**11 22 24.5**	**+0.4**
TWT	baz=292			S		**Sg**	**11 22 31.0**	**0.0**
WUSB	**Renai** baz=261	**0.53**	**265**	⇓*i*P		**Pg**	**11 22 24.5**	**+0.1**
WUSB	baz=261			*i* S		**Sg**	**11 22 31.0**	**-0.3**
TDCB	**Techi** baz=292	**0.53**	**293**	⇓P		**Pg**	**11 22 24.5**	**+0.1**
TDCB	baz=292			S		**Sg**	**11 22 31.1**	**-0.3**
ESAO	**Su ao** baz=19	**0.55**	**15**	*e*P		**Pg**	**11 22 24.8**	**+0.1**
ESAO	baz=19			S		**Sg**	**11 22 31.6**	**-0.3**
EOS4	**EOS4** baz=84	**0.58**	**82**	*e*P		**Pn**	**11 22 28.1**	**-0.2**
NDT	**Datong Townshi** baz=347	**0.58**	**344**	⇓*i*P		**Pg**	**11 22 25.7**	**+0.4**
NDT	baz=347			S		**Sg**	**11 22 32.7**	**-0.2**
TWC	**Suao** baz=19	**0.58**	**14**	⇓P		**Pg**	**11 22 25.4**	**0.0**
VWDT	**VWDT** baz=228	**0.58**	**240**	⇓*i*P		**Pg**	**11 22 25.4**	**+0.1**
VWDT	baz=228			S		**Sg**	**11 22 32.8**	**-0.1**
NDS	**Dongshan** baz=6.0	**0.59**	**2**	⇓*i*P		**Pg**	**11 22 25.7**	**+0.2**
NDS	baz=6.0			S		**Sg**	**11 22 32.8**	**-0.4**
HGSD	**Ruisui** baz=218	**0.60**	**204**	⇓P		**Pb**	**11 22 27.1**	**+0.2**
ENTT	**Nioudou** baz=353	**0.60**	**349**	⇓*i*P		**Pg**	**11 22 26.0**	**+0.2**
ENTT	baz=353			S		**Sg**	**11 22 33.9**	**+0.2**
EOS2	**EOS2** baz=36	**0.62**	**53**	*e*P		**Pn**	**11 22 29.2**	**+0.1**
EOS3	**EOS3** baz=67	**0.62**	**67**	*e*P		**Pn**	**11 22 29.3**	**+0.2**
EHY	**Hungye** baz=208	**0.63**	**212**	⇓*i*P		**Pg**	**11 22 26.3**	**0.0**
TWE	**Neicheng** baz=3.0	**0.68**	**358**	⇓*i*P		**Pg**	**11 22 27.4**	**+0.3**
TWE	baz=3.0			S		**Sg**	**11 22 36.1**	**+0.2**
YHNB	**Yeheng**	**0.69**	**335**	P		**Pg**	**11 22 27.7**	**+0.3**
YHNB	**Yeheng** baz=330	**0.69**	**335**	⇓*i*P		**Pg**	**11 22 27.8**	**+0.4**
YHNB	baz=330			*i* S		**Sg**	**11 22 35.9**	**-0.4**
NSK	**Sanguang** baz=330	**0.70**	**334**	⇓*i*P		**Pg**	**11 22 27.9**	**+0.3**
NSK	baz=330			S		**Sg**	**11 22 36.4**	**-0.4**
WCS	**Beigang Elemen** baz=270	**0.71**	**271**	P		**Pg**	**11 22 28.1**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=355	**0.72**	**352**	⇓*i*P		**Pg**	**11 22 28.3**	**+0.3**
FUSB	baz=355			S		**Sg**	**11 22 37.5**	**+0.1**
WHP	**Taichung City** baz=288	**0.72**	**289**	⇓*i*P		**Pg**	**11 22 28.4**	**+0.4**
WHP	baz=288			S		**Sg**	**11 22 37.7**	**+0.3**
SSLB	**Suanglung**	**0.72**	**249**	P		**Pg**	**11 22 28.1**	**+0.1**
SSLB	**Suanglung** baz=257	**0.72**	**249**	⇓*i*P		**Pg**	**11 22 27.9**	**-0.1**
SSLB	baz=257			S		**Sg**	**11 22 36.3**	**-1.2**
SMLT	**Sun Moon Lake** baz=255	**0.74**	**258**	⇓*i*P		**Pg**	**11 22 28.4**	**0.0**
SMLT	baz=255			*e*S		**Sg**	**11 22 37.6**	**-0.5**
YULB	**Yu-li**	**0.74**	**209**	P		**Pg**	**11 22 29.1**	**+0.7**
YULB	**Yu-li** baz=207	**0.74**	**209**	*e*P		**Pg**	**11 22 28.0**	**-0.4**
NWLT	**Wulai** baz=349	**0.75**	**347**	P		**Pb**	**11 22 29.1**	**-0.4**
NWLT	baz=349			S		**Sg**	**11 22 37.6**	**-0.7**
ECBN	**Changbin** baz=187	**0.76**	**197**	*e*P		**Pb**	**11 22 29.5**	**-0.1**
TYC	**Yuchr** baz=257	**0.78**	**260**	⇓*i*P		**Pg**	**11 22 29.0**	**-0.1**
TYC	baz=257			S		**Sg**	**11 22 38.2**	**-0.9**
TWF1	**Yuli** baz=215	**0.78**	**208**	*e*P		**Pg**	**11 22 28.8**	**-0.3**
TWF1	baz=215			*e*S		**Sg**	**11 22 39.7**	**+0.5**
NFF	**Wufeng Townshi** baz=319	**0.79**	**318**	*e*P		**Pb**	**11 22 29.8**	**-0.3**
NFF	baz=319			S		**Sg**	**11 22 39.2**	**-0.3**
WHYT	**Xinyi Township** baz=250	**0.84**	**246**	*e*P		**Pb**	**11 22 31.6**	**+0.5**
WHYT	baz=250			*e*S		**Sg**	**11 22 41.4**	**+0.1**
NSTT	**Nanjuang** baz=314	**0.86**	**313**	⇓P		**Pb**	**11 22 31.1**	**-0.3**
NSTT	baz=314			S		**Sg**	**11 22 42.0**	**+0.2**
LIOB	**Emei** baz=315	**0.86**	**314**	*e*P		**Pb**	**11 22 31.4**	**+0.1**
LIOB	baz=315			*e*S		**Sg**	**11 22 41.7**	**-0.1**
CHKH	**Chenggong** baz=189	**0.89**	**198**	*e*P		**Pg**	**11 22 31.5**	**+0.3**
CHKH	baz=189			*e*S		**Sn**	**11 22 45.7**	**-0.4**
TWQ1	**Liyutan** baz=290	**0.89**	**290**	*e*P		**Pb**	**11 22 32.2**	**+0.3**
WJS	**Zhushan** baz=253	**0.91**	**256**	*e*P		**Pb**	**11 22 32.4**	**+0.2**
WJS	baz=253			*e*S		**Sn**	**11 22 46.0**	**-0.7**
FULB	**Fuli** baz=217	**0.92**	**204**	*e*P		**Pg**	**11 22 32.2**	**+0.5**
NHDH	**Xindian Distri** baz=342	**0.93**	**351**	*e*P		**Pb**	**11 22 32.2**	**-0.2**
NHDH	baz=342			*e*S		**Sg**	**11 22 43.7**	**-0.3**
NSY	**Sanyi** baz=293	**0.93**	**294**	*e*P		**Pn**	**11 22 33.0**	**-0.5**
TIPB	**Shuangxi** baz=2.0	**0.93**	**7**	*e*P		**Pg**	**11 22 32.4**	**+0.4**
TIPB	baz=2.0			*e*S		**Sg**	**11 22 43.6**	**-0.6**
TWA	**Mucha** baz=356	**0.94**	**354**	*e*P		**Pb**	**11 22 32.6**	**0.0**
WNT	**Mingjian** baz=257	**0.94**	**260**	*e*P		**Pn**	**11 22 33.4**	**-0.2**
WNT	baz=257			*e*S		**Sn**	**11 22 46.8**	**-0.5**
TATO	**Taipei**	**0.95**	**349**	P		**Pn**	**11 22 33.3**	**-0.5**
NMLH	**Miaoli** baz=301	**0.96**	**301**	*e*P		**Pn**	**11 22 33.9**	**0.0**
ALS	**Alishan** baz=245	**0.97**	**237**	⇑P		**Pg**	**11 22 33.0**	**+0.3**
CHKT	**Chengkung** baz=180	**0.99**	**198**	*e*P		**Pg**	**11 22 33.0**	**0.0**
CHKT	baz=180			*e*S		**Sn**	**11 22 49.0**	**+0.6**
TWB1	**Santiao Chiao** baz=11	**1.00**	**16**	*e*P		**Pb**	**11 22 33.8**	**+0.1**
TWB1	baz=11			*e*S		**Sg**	**11 22 45.8**	**-0.4**
NWF	**Wu-fen Shan** baz=356	**1.03**	**4**	*e*P		**Pn**	**11 22 34.9**	**-0.1**
NWF	baz=356			*e*S		**Sg**	**11 22 47.3**	**+0.1**
WFSB	**Wu-fen Shan** baz=7.0	**1.03**	**4**	*e*P		**Pn**	**11 22 34.8**	**0.0**
WFSB	baz=7.0			*e*S		**Sg**	**11 22 46.7**	**-0.5**
NCUH	**Zhongli** baz=345	**1.03**	**333**	*e*P		**Pn**	**11 22 35.7**	**+0.7**
NCUH	baz=345			*e*S		**Sn**	**11 22 50.9**	**+1.3**
CHN5	**Tsauling** baz=231	**1.03**	**245**	⇓P		**Pb**	**11 22 34.7**	**+0.4**
CHN5	baz=231			*e*S		**Sn**	**11 22 49.1**	**-0.6**
ELDTW	**Lidau** baz=203	**1.05**	**216**	*e*P		**Pg**	**11 22 33.1**	**-1.2**
SXI1	**Grass Mountain** baz=357	**1.06**	**9**	*e*P		**Pb**	**11 22 35.2**	**+0.4**
TWS1	**Kuangyinshan** baz=348	**1.08**	**347**	*e*P		**Pn**	**11 22 36.4**	**+0.8**
YM01	**YM01** baz=6.0	**1.10**	**354**	*e*P		**Pn**	**11 22 36.0**	**+0.1**
WDLH	**Douliu** baz=251	**1.11**	**252**	*e*P		**Pn**	**11 22 36.4**	**+0.3**
NTST	**Danshui** baz=349	**1.14**	**349**	*e*P		**Pn**	**11 22 37.5**	**+1.1**
YM08	**YM08** baz=341	**1.14**	**355**	*e*P		**Pn**	**11 22 36.6**	**+0.1**
ANP	**Anpu** baz=353	**1.15**	**352**	*e*P		**Pn**	**11 22 36.7**	**+0.1**
WCKO	**Fanlu** baz=237	**1.17**	**239**	*e*P		**Pn**	**11 22 37.2**	**+0.4**
WCKO	baz=237			*e*S		**Sn**	**11 22 53.4**	**+0.4**
STYH	**Taoyuan** baz=224	**1.21**	**224**	⇓P		**Pb**	**11 22 37.1**	**-0.2**
WRL	**Guolierlin Hig** baz=262	**1.21**	**264**	*e*P		**Pn**	**11 22 37.9**	**+0.5**
WRL	baz=262			*e*S		**Sn**	**11 22 54.1**	**+0.1**
JYNG	**Yonagunijimaku**	**1.21**	**70**	P		**Pb**	**11 22 37.4**	**0.0**
JYNG				S		**Sn**	**11 22 54.2**	**+0.1**
TPUB	**Ta-pu**	**1.22**	**233**	P		**Pg**	**11 22 38.2**	**+0.6**
TPUB	**Ta-pu** baz=233	**1.22**	**233**	⇓P		**Pg**	**11 22 37.9**	**+0.3**
WTK	**Tuku** baz=252	**1.25**	**254**	*e*P		**Pg**	**11 22 38.5**	**+0.5**
WTK	baz=252			*e*S		**Sn**	**11 22 55.2**	**+0.4**
WTP	**Ta-pu** baz=231	**1.27**	**231**	⇑P		**Pg**	**11 22 38.9**	**+0.5**
YOJ	**Yonaguni jima** baz=71	**1.27**	**71**	P		**Pn**	**11 22 38.1**	**-0.2**
YOJ	baz=71			S		**Sn**	**11 22 56.3**	**+0.8**
YOJ	**Yonaguni jima**	**1.27**	**71**	P		**Pn**	**11 22 38.4**	**+0.2**
YOJ				S		**Sn**	**11 22 56.5**	**+1.0**
TWGBT	**Beinan**	**1.34**	**205**	P		**Pn**	**11 22 39.4**	**+0.2**
TWK	**Hsinying** baz=233	**1.35**	**235**	*e*P		**Pg**	**11 22 40.4**	**+0.4**
TWK	baz=233			*e*S		**Sg**	**11 22 57.9**	**+0.4**
CHN1	**Nanshi** baz=232	**1.37**	**232**	*e*P		**Pg**	**11 22 40.6**	**+0.2**
SNST	**Tainan City** baz=233	**1.37**	**233**	*e*P		**Pg**	**11 22 40.8**	**+0.4**
LDUT	**Ludao** baz=177	**1.38**	**189**	*e*P		**Pn**	**11 22 36.1**	**-3.5**
LDUT	baz=177			*e*S		**Sb**	**11 22 56.0**	**-2.0**
SGST	**Jiashian** baz=225	**1.40**	**227**	⇑*e*P		**Pn**	**11 22 40.2**	**+0.2**
SGST	baz=225			*e*S		**Sg**	**11 22 59.8**	**+0.7**
SLGT	**Liugui** baz=221	**1.42**	**223**	*e*P		**Pb**	**11 22 41.0**	**+0.1**
SLGT	baz=221			*e*S		**Sg**	**11 23 01.6**	**+1.9**
ICHU	**Yijhu** baz=241	**1.46**	**243**	*e*P		**Pb**	**11 22 41.6**	**0.0**
ICHU	baz=241			*e*S		**Sg**	**11 23 02.4**	**+1.2**
SCST	**Cishan** baz=223	**1.59**	**224**	*e*P		**Pg**	**11 22 44.8**	**+0.1**
SCST	baz=223			*e*S		**Sg**	**11 23 08.2**	**+2.8**
TSMG	**Majia** baz=228	**1.64**	**216**	*e*P		**Pb**	**11 22 44.7**	**0.0**
TSMG	baz=228			*e*S		**Sg**	**11 23 07.5**	**+0.6**
TSCK	**Chigu Township** baz=239	**1.72**	**239**	⇓P		**Pb**	**11 22 45.4**	**-0.7**
TSCK	baz=239			*e*S		**Sg**	**11 23 08.8**	**-0.8**
MASBT	**Mashibuluo** baz=215	**1.73**	**215**	*e*P		**Pn**	**11 22 44.1**	**-0.4**
MASBT	baz=215			*e*S		**Sg**	**11 23 09.5**	**-0.1**
IRIF	**Iriomote-Funau**	**1.88**	**81**	P		**Pb**	**11 22 48.2**	**-0.6**
IRIF				S		**Sb**	**11 23 12.5**	**0.0**
SCZT	**Fangliau** baz=212	**1.94**	**211**	*e*P		**Pb**	**11 22 48.8**	**-0.8**
PHUB	**P'eng-hu** baz=254	**2.01**	**255**	*e*P		**Pn**	**11 22 48.6**	**+0.2**
PHUB	baz=254			*e*S		**Sn**	**11 23 14.7**	**+0.8**
PNG	**Penghu** baz=256	**2.02**	**257**	*e*P		**Pn**	**11 22 48.6**	**+0.2**
PNG	baz=256			*e*S		**Sb**	**11 23 15.2**	**-1.1**
JKRS	**Kuro-shima**	**2.12**	**84**	*e*P		**Pn**	**11 22 50.8**	**+0.9**
JKRS				*e*S		**Sb**	**11 23 18.5**	**-0.9**
VCHM	**Qimei** baz=247	**2.24**	**249**	*e*P		**Pn**	**11 22 52.4**	**+0.9**
VCHM	baz=247			*e*S		**Sn**	**11 23 19.9**	**+0.5**
VWUC	**VWUC** baz=295	**2.25**	**295**	*e*P		**Pn**	**11 22 51.1**	**-0.6**
JIJ	**Ishigaki jima**	**2.26**	**81**	P		**Pn**	**11 22 51.6**	**-0.2**
JIJ				*e*S		**Sn**	**11 23 20.0**	**+0.1**
JISG	**Ishigakijimahi**	**2.45**	**77**	P		**Pn**	**11 22 54.1**	**-0.3**
JISG				S		**Sn**	**11 23 24.4**	**-0.1**
PTMZ	**Houxiangcun** baz=293	**2.54**	**293**	*e*P		**Pn**	**11 22 55.2**	**-0.5**
KNMB	**Chin-men Tao** baz=278	**3.04**	**279**	*e*P		**Pn**	**11 23 02.5**	**-0.1**
AXDP	**Jialang** baz=284	**3.50**	**285**	*e*P		**Pn**	**11 23 08.5**	**-0.4**
JOW	**Kunigami**	**6.56**	**64**	P		**Pn**	**11 22 50.4**	**-0.6**

IDC ***07*** *11:33:07.4±0.9,23.78N×121.73E,h0km,mb3.5/11, mbtmp3.5/13,ML3.5/2,MS3.1/2,Error ellipse: s-maj=22.8km s-min=19.8km az=68.0*
TAP ***07*** *11:33:08.9,23.90N×121.57E,h10km,ML4.0,B*
JMA ***07*** *11:33:08.6±0.1,23.9N±0.3×12.2E±°,h4km,MV3.4/13, TAIWAN REGION*
ASIES ***07*** *11:33:08.9,23.90N×121.57E,h10km,ML4.0,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr=1.41; Mθθ0.43; Mφφ0.98; Mrθ=1.35; Mθφ=-2.36; Mφr1.54; Fault plane solution: M◎3.36583×10^{21} NP1: φs174.88000°,δ64.22000°,λ-36.27000°. NP2: φs282.58000°,δ57.81000°,λ-149.08000°. Principal axes: T Plg3.9680°, Azm230.0300°; N Plg46.5530°, Azm324.2310°; P Plg43.1720°, Azm136.2990°;*
ISC 07 11:33:09.3±0.7**,23.88N**±0.01×**121.61E**±0.02**,h11**km±4km**, n186,**σ0**78/264,mb3.5/11,22C-32D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=24	**0.10**	**356**	P		**Pg**	**11 33 12.0**	**+0.1**
HWA	baz=24			*i* S		**Sg**	**11 33 14.5**	**+0.6**
SHUL	**Shoufeng** baz=186	**0.10**	**206**	⇑*i*P		**Pg**	**11 33 12.4**	**+0.4**
SHUL	baz=186			*i* S		**Sg**	**11 33 15.0**	**+1.1**
ETM	**Tongmen** baz=313	**0.14**	**309**	⇓*i*P		**Pg**	**11 33 11.7**	**-0.9**
ETM	baz=313			S		**Sg**	**11 33 13.5**	**-1.4**
ESL	**Shilin** baz=243	**0.18**	**249**	⇑*i*P		**Pg**	**11 33 12.3**	**-0.8**
ESL	baz=243			*e*S		**Sg**	**11 33 14.4**	**-1.4**
TEGC	**Jichi Village** baz=188	**0.18**	**201**	P		**Pg**	**11 33 13.8**	**+0.6**
TEGC	baz=188			S		**Sg**	**11 33 18.1**	**+2.2**
TWD	**Chiawan** baz=2.0	**0.20**	**356**	*i* P		**Pg**	**11 33 13.2**	**-0.4**
TWD	baz=2.0			*i* S		**Sg**	**11 33 16.0**	**-0.5**
LXIB	**Xiulin Townshi** baz=311	**0.23**	**308**	⇓*i*P		**Pg**	**11 33 13.3**	**-0.9**
LXIB	baz=311			*i* S		**Sg**	**11 33 16.3**	**-1.2**
WARBT	**Fenglin Townsh** baz=231	**0.26**	**232**	⇑*i*P		**Pg**	**11 33 14.0**	**-0.7**
WARBT	baz=231			*e*S		**Sg**	**11 33 17.1**	**-1.1**
EGFH	**Guangfu** baz=222	**0.27**	**219**	⇑*i*P		**Pg**	**11 33 14.4**	**-0.4**
EGFH	baz=222			*e*S		**Sg**	**11 33 18.0**	**-0.5**
ETL	**Fush Village** baz=7.0	**0.28**	**2**	*i* P		**Pg**	**11 33 14.6**	**-0.5**
ETL	baz=7.0			*e*S		**Sg**	**11 33 18.2**	**-0.7**
NACB	**Ninganchiao**	**0.29**	**357**	P		**Pg**	**11 33 14.8**	**-0.6**
NACB	**Ninganchiao** baz=3.0	**0.29**	**357**	⇓*i*P		**Pg**	**11 33 14.7**	**-0.6**
NACB	baz=3.0			*i* S		**Sg**	**11 33 18.4**	**-1.0**
ETLH	**Xiulin Townshi** baz=344	**0.35**	**340**	⇓*i*P		**Pg**	**11 33 15.6**	**-0.7**
ETLH	baz=344			*e*S		**Sg**	**11 33 19.7**	**-1.3**
OWD	**Renai** baz=280	**0.41**	**281**	⇓*i*P		**Pg**	**11 33 16.7**	**-0.7**
OWD	baz=280			*e*S		**Sg**	**11 33 21.8**	**-1.0**
WHF	**Hehuan Shan** baz=312	**0.41**	**310**	⇓*i*P		**Pg**	**11 33 16.8**	**-0.8**
WHF	baz=312			S		**Sg**	**11 33 22.0**	**-1.2**
HGSD	**Ruisui** baz=207	**0.42**	**204**	⇑P		**Pg**	**11 33 18.1**	**+0.5**
CHGB	**Renai** baz=295	**0.44**	**294**	⇓*i*P		**Pg**	**11 33 17.5**	**-0.5**
CHGB	baz=295			*i* S		**Sg**	**11 33 23.2**	**-0.6**
VWDT	**VWDT** baz=259	**0.45**	**254**	⇑*i*P		**Pg**	**11 33 17.8**	**-0.3**
VWDT	baz=259			*i* S		**Sg**	**11 33 23.2**	**-0.9**
EHY	**Hungye** baz=219	**0.46**	**216**	⇑*i*P		**Pg**	**11 33 17.8**	**-0.5**
EHY	baz=219			*e*S		**Sg**	**11 33 23.9**	**-0.4**
EAHA	**Aohua** baz=11	**0.46**	**15**	⇓*e*P		**Pg**	**11 33 18.1**	**-0.3**
WUSB	**Renai** baz=284	**0.47**	**284**	⇓*i*P		**Pg**	**11 33 18.1**	**-0.4**
WUSB	baz=284			S		**Sg**	**11 33 23.8**	**-0.9**
FUSS	**Fushou** baz=319	**0.50**	**318**	⇓*i*P		**Pg**	**11 33 18.6**	**-0.5**
FUSS	baz=319			*e*S		**Sg**	**11 33 24.9**	**-0.9**
TWT	**Tachien** baz=305	**0.55**	**313**	⇓*i*P		**Pg**	**11 33 19.8**	**-0.3**
TWT	baz=305			S		**Sg**	**11 33 27.0**	**-0.3**
TDCB	**Techi** baz=305	**0.56**	**312**	⇓P		**Pg**	**11 33 19.8**	**-0.4**
TDCB	baz=305			S		**Sg**	**11 33 26.8**	**-0.9**
ENA	**Nanau** baz=7.0	**0.56**	**12**	⇓*i*P		**Pg**	**11 33 19.9**	**-0.3**
YULB	**Yu-li**	**0.56**	**211**	P		**Pg**	**11 33 19.9**	**-0.4**
YULB	**Yu-li**	**0.56**	**211**	⇑*i*P		**Pg**	**11 33 19.9**	**-0.4**

baz=218
YULB S Sg 11 33 27.2 -0.5
baz=218
ECBN Changbin 0.58 195 *e*P Pb 11 33 21.0 -0.4
baz=191
EWUT Wuta 0.58 15 *e*P Pg 11 33 20.3 -0.4
baz=10.0
NNSB Datong 0.59 339⇓*i*P Pg 11 33 20.3 -0.5
baz=340
NNSB S Sg 11 33 26.8 -1.7
baz=340
NNSH Datong 0.59 339 ⇓P Pg 11 33 20.2 -0.5
baz=334
NNSH *e*S Sg 11 33 27.1 -1.4
baz=334
EYUL Yuli 0.59 207 *e*P Pg 11 33 20.8 -0.1
baz=216
TWF1 Yuli 0.60 209⇑*i*P Pg 11 33 20.5 -0.5
baz=216
TWF1 *e*S Sg 11 33 28.2 -0.6
baz=216
NNS Nan Shan 0.60 339⇓*i*P Pg 11 33 20.5 -0.5
baz=335
NNS S Sg 11 33 27.6 -1.4
baz=335
SSLB Suanglung 0.61 262 P Pg 11 33 20.9 -0.3
SSLB Suanglung 0.61 262⇑*i*P Pg 11 33 20.6 -0.6
baz=268
SSLB *i* S Sg 11 33 27.3 -1.9
baz=268
WPL Puli Township 0.61 283 P Pg 11 33 21.0 -0.3
baz=282
WPL *i* S Sg 11 33 28.4 -0.9
baz=282
DPDB Guoxing 0.65 284 ⇓P Pg 11 33 21.8 -0.1
baz=284
DPDB *e*S Sg 11 33 30.0 -0.3
baz=284
SMLT Sun Moon Lake 0.65 271⇓*i*P Pg 11 33 21.5 -0.5
baz=270
SMLT *i* S Sg 11 33 29.6 -1.0
baz=270
LATG Datong 0.66 353⇓*i*P Pg 11 33 21.5 -0.6
baz=355
LATG *e*S Sg 11 33 30.5 -0.3
baz=355
WCS Beigang Elemen 0.67 286 *e*P Pg 11 33 21.9 -0.3
baz=285
WCS S Sg 11 33 30.3 -0.6
baz=285
EOS4 EOS4 0.69 69 *e*P Pb 11 33 23.3 +0.1
baz=80
TYC Yuchr 0.69 272 P Pg 11 33 22.0 -0.7
baz=281
TYC S Sg 11 33 30.4 -1.4
baz=281
CHKH Chenggong 0.71 196 *e*P Pb 11 33 23.5 -0.3
baz=187
CHKH *e*S Sn 11 33 35.5 -0.8
baz=187
WHYT Xinyi Township 0.72 256 *e*P Pg 11 33 23.3 +0.1
baz=263
ESAO Su ao 0.73 17 *e*P Pg 11 33 22.8 -0.6
baz=12
NDT Datong Townshi 0.73 353⇓*e*P Pg 11 33 22.9 -0.4
baz=347
NDT *e*S Sg 11 33 31.8 -1.1
baz=347
WHP Taichung City 0.73 303⇓*i*P Pg 11 33 23.2 -0.2
baz=297
WHP *e*S Sg 11 33 32.8 -0.1
baz=297
FULB Fuli 0.74 203 *e*P Pb 11 33 24.1 -0.1
baz=215
NDS Dongshan 0.76 7 *e*P Pg 11 33 23.7 -0.3
baz=8.0
TWC Suao 0.76 17 ⇓P Pg 11 33 23.8 -0.3
baz=10.0
TWC *e*S Sb 11 33 35.5 +0.5
baz=10.0
ENTT Nioudou 0.76 357⇓*i*P Pg 11 33 23.6 -0.4
baz=358
ENTT *e*S Sb 11 33 34.4 -0.6
baz=358
EOS3 EOS3 0.76 58 *e*P Pb 11 33 24.9 +0.4
baz=56
EOS2 EOS2 0.78 46 *e*P Pn 11 33 26.0 -0.2
baz=57
CHKT Chengkung 0.81 196 P Pg 11 33 24.9 0.0
baz=197
CHKT *e*S Sn 11 33 38.3 -0.4
baz=197
WJS Zhushan 0.81 266 *e*P Pb 11 33 25.9 +0.5
baz=266
WJS *e*S Sb 11 33 37.4 +1.0
baz=266
EHD Haiduan 0.82 207 *e*P Pg 11 33 24.6 -0.4
baz=206
YHNB Yeheng 0.82 345 P Pg 11 33 25.0 -0.1
YHNB Yeheng 0.82 345⇓*i*P Pg 11 33 24.9 -0.2
baz=345
YHNB S Sg 11 33 34.2 -1.6
baz=345
ALS Alishan 0.82 244⇑*i*P Pg 11 33 25.1 -0.2
baz=244
ALS *e*S Sb 11 33 37.3 +0.1
baz=244
NSK Sanguang 0.83 344⇓*i*P Pg 11 33 25.0 -0.3
baz=335
NSK *e*S Sg 11 33 35.1 -1.0
baz=335
TWE Neicheng 0.84 3⇓*i*P Pg 11 33 25.2 -0.3
baz=5.0
TWE *e*S Sg 11 33 35.4 -1.1
baz=5.0
WNT Mingjian 0.85 270 ⇑P Pb 11 33 26.5 +0.4
baz=270
WNT *e*S Sb 11 33 38.0 +0.4
baz=270
WWF Wufeng 0.85 281 *e*P Pb 11 33 26.3 +0.1
baz=287
WNT1 Nantou City 0.85 272 *e*P Pb 11 33 26.3 +0.2
baz=272
ECS Chishang 0.86 205 *e*P Pb 11 33 26.4 +0.1
baz=204
NFF Wufeng Townshi 0.88 329 ⇓P Pg 11 33 25.8 -0.4
baz=329
NFF *e*S Sg 11 33 36.1 -1.6
baz=329
ELDTW Lidau 0.88 219 *e*P Pg 11 33 24.9 -1.4
baz=206
FUSB Fushanzhiwuyua 0.88 359⇓*i*P Pg 11 33 26.0 -0.3
baz=358
FUSB *i* S Sg 11 33 37.1 -0.7
baz=358
ILA Ilan 0.89 8 *e*P Pg 11 33 25.8 -0.7
baz=9.0
TCU Taichung 0.90 288 *e*P Pn 11 33 27.7 -0.2
baz=288
TCU *e*S Sn 11 33 40.5 -0.4
baz=288
TWQ1 Liyutan 0.90 302 P Pb 11 33 26.7 -0.2
baz=302
TWQ1 *e*S Sn 11 33 40.5 -0.5
baz=302
CHN5 Tsauling 0.90 252⇑*i*P Pb 11 33 26.9 -0.1
baz=243
CHN5 *e*S Sb 11 33 39.5 +0.4
baz=243
NWLT Wulai 0.90 354 *e*P Pg 11 33 26.3 -0.4
baz=344
NSTT Nanjuang 0.93 323⇓*i*P Pg 11 33 27.3 0.0
baz=324
NSTT S Sg 11 33 38.5 -1.0
baz=324
LIOB Emei 0.94 325 ⇓P Pb 11 33 27.4 -0.2
baz=325
LIOB S Sg 11 33 39.5 -0.2
baz=325
NSY Sanyi 0.94 305 *e*P Pb 11 33 27.9 +0.1
baz=305
NSY *e*S Sn 11 33 41.2 -0.9
baz=305
EDH Donghe 0.94 197 *e*P Pg 11 33 25.6 -1.9
baz=214
WYL Yuanlin Townsh 0.95 275 *e*P Pg 11 33 27.4 -0.1
baz=276
NJD Zhudong 0.98 331 *e*P Pn 11 33 28.6 -0.4
baz=331
WGK Gukeng 0.98 259 *e*P Pb 11 33 28.4 0.0
baz=260
WGK *e*S Sn 11 33 42.0 -0.9
baz=260
WCHH Zhanghua 0.98 282 *e*P Pn 11 33 28.7 -0.4
baz=282
NMLH Miaoli 1.00 311 *e*P Pn 11 33 28.9 -0.4
baz=312
WDLH Douliu 1.00 259 *e*P Pb 11 33 28.9 +0.2
baz=260
WDJ Dajia District 1.00 298 *e*P Pn 11 33 29.7 +0.3
baz=299
WCKO Fanlu 1.02 245⇑*e*P Pb 11 33 29.1 +0.1
baz=238
WCKO *e*S Sb 11 33 42.3 -0.2
baz=238
STYH Taoyuan 1.04 228⇑*e*P Pb 11 33 29.2 -0.2
baz=229
STYH *e*S Sn 11 33 44.1 -0.3
baz=229
HSN1 Hsinchu 1.05 329 *e*P Pn 11 33 29.8 -0.2
baz=329
STYT Tauyuan 1.06 228 P Pb 11 33 29.5 -0.2
baz=229
STYT S Sg 11 33 43.5 0.0
baz=229
LONT Longtian 1.06 205 *e*P Pb 11 33 29.2 -0.5
baz=204
TPUB Ta-pu 1.07 238 P Pg 11 33 30.0 +0.1
TPUB Ta-pu 1.07 238 ⇑P Pg 11 33 29.9 0.0
baz=239
TPUB *e*S Sg 11 33 43.7 -0.1
baz=239
CHN4 Tsaushan 1.07 241⇑*i*P Pn 11 33 30.1 -0.2
baz=235
CHN4 *e*S Sn 11 33 45.6 +0.3
baz=235
SBCB Hsinchu 1.07 328 *e*P Pn 11 33 30.7 +0.3
baz=328
NHDH Xindian Distri 1.08 356 *e*P Pg 11 33 30.1 -0.1
baz=356
HSN Hsinchu 1.09 328 *e*P Pb 11 33 30.1 -0.2
baz=338
HSN *e*S Sn 11 33 45.8 +0.1
baz=338
CHN2 Minshiung 1.10 252 *e*P Pn 11 33 31.1 +0.4
baz=252
TATO Taipei 1.10 354⇑*i*P Pg 11 33 30.4 -0.1
baz=353
TATO S Sb 11 33 43.6 -1.1
baz=353
TWA Mucha 1.10 359 ⇑P Pn 11 33 30.5 -0.2
baz=350
TWA S Sb 11 33 43.5 -1.2
baz=350
TIPB Shuangxi 1.11 10 *e*P Pb 11 33 29.8 -0.7
TIPB *e*S Sb 11 33 43.8 -1.2
WTP Ta-pu 1.11 236 ⇑P Pb 11 33 30.6 -0.1
baz=244
WTP S Sn 11 33 46.1 -0.2
baz=244
WRL Guolierlin Hig 1.13 271 *e*P Pb 11 33 30.8 -0.1
baz=272
WRL *e*S Sn 11 33 47.0 +0.4
baz=272
WTK Tuku 1.14 261 *e*P Pn 11 33 31.2 0.0
baz=261
RLNB Erlin 1.15 271 *e*P Pg 11 33 31.7 +0.3
baz=272
RLNB *i* S Sn 11 33 47.2 +0.1
baz=272
NCUH Zhongli 1.15 340 *e*P Pg 11 33 31.5 0.0
baz=342
NTY Taoyuan 1.15 346 *e*P Pg 11 33 31.9 +0.4
baz=346
NCU National Centr 1.15 340 *e*P Pg 11 33 32.1 +0.6
baz=349
NCU *e*S Sn 11 33 47.7 +0.4
baz=349
TAP Taipei 1.16 355 *e*P Pn 11 33 31.4 -0.1
baz=356
TWGBT Beinan 1.16 205 *e*P Pb 11 33 28.9 -2.6
baz=191
TWG Pinlang 1.16 205 *e*P Pb 11 33 29.0 -2.4
baz=191
TWB1 Santiao Chiao 1.18 17 *e*P Pb 11 33 31.3 -0.4
baz=9.0
TWK Hsinying 1.20 240⇑*i*P Pg 11 33 32.6 +0.2
baz=242
TWK S Sn 11 33 48.2 -0.2
baz=242
NWF Wu-fen Shan 1.20 7 *e*P Pg 11 33 32.2 -0.1
baz=8.0
TTN Taitung 1.20 201 *e*P Pg 11 33 32.5 +0.1
baz=200
WFSB Wu-fen Shan 1.20 7 P Pb 11 33 32.1 0.0
baz=6.0
WFSB S Sb 11 33 46.5 -1.0
baz=6.0
LDUT Ludao 1.21 186 *e*P Pn 11 33 29.6 -2.6
baz=165
CHN1 Nanshi 1.21 235 ⇑P Pb 11 33 32.3 0.0
baz=237
CHN1 *e*S Sn 11 33 49.4 +0.7
baz=237
SNST Tainan City 1.22 238 *e*P Pn 11 33 32.0 -0.2
baz=240
SNST S Sn 11 33 49.7 +0.9
baz=240
TWS1 Kuangyinshan 1.23 352 P Pg 11 33 32.9 -0.1
baz=351
TWS1 S Sn 11 33 50.0 +0.9
baz=351
SGST Jiashian 1.23 230⇓*i*P Pn 11 33 31.8 -0.8
baz=233
SGST S Sn 11 33 49.9 +0.6
baz=233
NHW Xinwu Township 1.24 336 *e*P Pg 11 33 33.6 +0.6
baz=337
SLGT Liugui 1.25 225 *e*P Pg 11 33 33.5 +0.1
baz=230
SLGT *e*S Sg 11 33 50.3 +0.7
baz=230
YM01 YM01 1.26 358⇓*e*P Pg 11 33 33.6 0.0
baz=356
YM01 *e*S Sg 11 33 51.2 +1.1
baz=356
TNOU National Taiwa 1.27 7 *e*P Pg 11 33 33.6 -0.2
baz=7.0
NTST Danshui 1.29 353 *e*P Pg 11 33 34.1 0.0
baz=354
WSF Szhu 1.30 260 *e*P Pg 11 33 34.6 +0.3
baz=261
WSF *e*S Sg 11 33 51.5 +0.4
baz=261
YM08 YM08 1.30 359 *e*P Pg 11 33 34.4 0.0
baz=8.0
ANP Anpu 1.30 356 *e*P Pb 11 33 33.7 -0.2
baz=358
WSL Shuilin Townsh 1.32 255 *e*P Pg 11 33 34.4 -0.2
baz=269
WSL *e*S Sg 11 33 51.9 +0.2
baz=269
ICHU Yijhu 1.33 247 *e*P Pb 11 33 34.2 0.0
baz=249
JYNG Yonagunijimaku 1.34 65 P Pn 11 33 34.1 0.0
JYNG S Sn 11 33 52.1 +0.1
CHN8 Yiju 1.39 248 *e*P Pb 11 33 34.9 -0.4
baz=249
TWY Chenhua 1.39 360 *e*P Pg 11 33 36.0 0.0
CHN3 Shinhua 1.40 235 *e*P Pb 11 33 35.5 +0.1
baz=237
YOJ Yonaguni jima 1.40 65 *e*P Pn 11 33 34.6 -0.3
baz=64
YOJ Yonaguni jima 1.40 65 P Pn 11 33 35.1 +0.2
YOJ *e*S Sg 11 33 54.1 -0.4
ECL Taimali 1.41 206 *e*P Pn 11 33 33.7 -1.3
baz=190
SCST Cishan 1.43 226 *e*P Pb 11 33 36.0 +0.1
baz=213
SHHT Tainan City 1.44 234 *e*P Pg 11 33 37.6 +0.6
baz=235
SSD Sandimen 1.44 219 *e*P Pn 11 33 34.8 -0.6
baz=219
TSMG Majia 1.47 217 *e*P Pb 11 33 36.3 -0.4
baz=208
SCLT Jiali 1.48 242 *e*P Pb 11 33 36.4 -0.4
baz=243
TWM1 Shoushan 1.52 226 *e*P Pg 11 33 38.0 -0.4
baz=227
MASBT Mashibuluo 1.55 216 *e*P Pn 11 33 37.0 +0.2
baz=206
EAST Anshuo 1.65 205 *e*P Pn 11 33 37.7 -0.5
baz=193
TAWH Dawu Township 1.67 204 *e*P Pb 11 33 39.9 -0.2
baz=192
SCZT Fangliau 1.75 212 *e*P Pb 11 33 40.7 -0.8
baz=212
SLIU Shizi 1.82 205 *e*P Pn 11 33 40.8 +0.2
baz=194
LYUB Lan-yu 1.87 181 *e*P Pn 11 33 37.7 -3.5
baz=162
WDGT Dungji 1.89 251 *e*P Pn 11 33 41.5 -0.1
baz=254
PHUB P'eng-hu 1.91 259 *e*P Pn 11 33 42.3 +0.5
baz=262
PHUB *e*S Sb 11 34 06.8 -1.2
baz=262
PNG Penghu 1.91 261 *e*P Pn 11 33 42.0 +0.2
baz=264
IRIF Iriomote-Funau 1.99 76 P Pn 11 33 43.8 +0.9
IRIF S Sb 11 34 09.5 -0.8
VCHM Qimei 2.11 252 *e*P Pn 11 33 45.2 +0.6
baz=255
JKRS Kuro-shima 2.22 80 *e*P Pn 11 33 47.4 +1.3
JKRS *e*S Sb 11 34 15.4 -1.7
VWUC VWUC 2.26 300 *e*P Pn 11 33 45.9 -0.7
baz=303
JIJ Ishigaki jima 2.36 78 P Pn 11 33 49.1 +1.1
JIJ S Sn 11 34 18.9 +1.8
PTMZ Houxiangcun 2.55 298 *e*P Pn 11 33 50.8 +0.1
baz=301
JISG Ishigakijimahi 2.56 73 P Pn 11 33 50.8 0.0
JISG S Sn 11 34 22.8 +0.7
MATB Ma-tsu 2.72 327 *e*P Pn 11 33 53.6 +0.5
baz=316
KNMB Chin-men Tao 3.00 282 *e*P Pn 11 33 56.7 -0.2
baz=286
LYJJ Jianjiangzhen 3.15 328 *e*P Pn 11 33 59.0 +0.1
baz=319
XPSS Dashiqiu 3.30 337 *e*P Pn 11 34 01.6 +0.7
baz=338
AXDP Jialang 3.47 288 *e*P Pn 11 34 03.6 +0.2
baz=292
ZPLA Ao Xicun 3.54 272 *e*P Pn 11 34 04.5 +0.3
baz=275
DSXP Dongshan 3.84 268 *e*P Pn 11 34 09.2 +0.9
baz=271
JOW Kunigami 6.71 63 Pn Pn 11 34 46.4 -1.4
2.4nm,0.3s,baz=241,slow=19,SNR=8.0
JOW Sn Sn 11 36 03.2 -1.1
0.6nm,0.3s,baz=307,slow=5.1,SNR=1.8
4.9nm,0.3s
KSRS Korea Array 14.57 20 Pn Pn 11 36 36.5 +0.9
0.1nm,0.3s,baz=206,slow=12,SNR=1.2
0.4nm,0.5s
CMAR Chiang Mai Arr 21.81 260 P P 11 38 03.4 +1.7
0.7nm,0.3s,baz=78,slow=13,SNR=2.8
CMAR LR LR 11 46 05.6
comp=Z,28nm,18.8s,baz=255,slow=36
0.7nm,0.3s
SONM Songino Array 26.80 337 P P 11 38 51.3 +1.7
0.5nm,0.9s,baz=158,slow=9.2,SNR=2.3
0.5nm,0.9s
MKAR Makanchi Array 38.83 316 P P 11 40 35.4 +1.0
0.4nm,0.8s,baz=108,slow=9.3,SNR=2.7
0.4nm,0.8s
ZALV Zalesovo Beam 40.71 327 P P 11 40 50.0 +0.1
0.3nm,0.4s,baz=116,slow=6.6,SNR=1.5
0.3nm,0.4s
PMG Port Moresby 41.45 140 LR LR 11 58 57.1
comp=Z,44nm,18.9s,baz=56,slow=38
H11N1 WAKE ISLAND Hy 42.11 87 T T 12 26 07.2
baz=283,slow=75,SNR=6.1
H11N2 WAKE ISLAND Hy 42.12 87 T T 12 26 09.3
baz=283,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 42.13 87 T T 12 26 08.4
baz=283,slow=75,SNR=12
H11S3 WAKE ISLAND Hy 42.24 88 T T 12 26 11.1
baz=284,slow=74,SNR=11
H11S1 WAKE ISLAND Hy 42.24 88 T T 12 26 07.4
baz=284,slow=74,SNR=11
H11S2 WAKE ISLAND Hy 42.25 88 T T 12 26 12.3
baz=284,slow=74,SNR=11
KURBB Kurchatov Arra 42.59 320 P P 11 41 05.3 -0.1
0.2nm,0.4s,baz=112,slow=9.5,SNR=2.4
0.2nm,0.4s
WRA Warrainga Arr 45.29 163 P P 11 41 25.4 -1.8
0.6nm,0.7s,baz=346,slow=8.8,SNR=4.6
0.6nm,0.7s
BVAR Borovoye Array 48.16 321 P P 11 41 49.5 0.0
0.4nm,0.8s,baz=90,slow=10,SNR=2.0
0.4nm,0.8s
ASAR Alice Springs 48.74 165 P P 11 41 53.2 -1.1
0.3nm,0.6s,baz=335,slow=6.1,SNR=4.4
0.3nm,0.6s
ILAR Eielson Array 69.31 27 P P 11 44 17.7 +1.3
0.5nm,1.0s,baz=286,slow=6.5,SNR=2.3
0.5nm,1.0s
INK Inuvik 73.36 22 P P 11 44 40.8 -0.1
1.3nm,1.0s,baz=275,slow=3.8,SNR=3.2
1.3nm,1.0s
YKA Yellowknife Ar 83.10 23 P P 11 45 34.9 0.0
0.4nm,0.8s,baz=311,slow=4.9,SNR=7.8
0.4nm,0.8s

IDC 07 11:36:54.9±672.0, 52.90N×34.17E, h0km, Error ellipse: s-maj=272.2km s-min=90.3km az=30.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.21**	**23**	I	I	12 01 10.0	
	0.4nm,0.7s,baz=205,slow=325,SNR=8.8						
I31KZ	**AKTYUBINSK INF**	**15.00**	**90**	I	I	13 04 50.0	
	baz=288,slow=337,SNR=2.5						
I46RU	**ZALESOVO INFRA**	**29.68**	**67**	I	I	14 42 00.0	
	baz=288,slow=332,SNR=1.0						

TAP 07 11:41:46.2, 24.08N×121.50E, h5km, ML0.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**91**	P	Pg	11 41 49.2	+0.9
	baz=90						
TWD				S	Sg	11 41 50.9	+1.3
	baz=90						
LXIB	**Xiulin Townshi**	**0.10**	**231**	*e*P	Pg	11 41 49.6	+1.1
	baz=232						
LXIB				*e*S	Sg	11 41 51.7	+1.8
	baz=232						
ETM	**Tongmen**	**0.12**	**181**	P	Pg	11 41 49.2	+0.6
	baz=183						
ETM				*e*S	Sg	11 41 51.5	+1.3
	baz=183						
NACB	**Ninganchiao**	**0.13**	**45**	P	Pg	11 41 49.5	+0.6
	baz=44						
NACB				*i* S	Sg	11 41 51.4	+0.7
	baz=44						
ETL	**Fush Village**	**0.14**	**57**	P	Pg	11 41 49.2	+0.1
	baz=56						
ETL				*e*S	Sg	11 41 50.7	-0.3
	baz=56						
HWA	**Hwalien**	**0.14**	**136**	*e*P	Pg	11 41 51.1	+2.0
	baz=134						
HWA				*e*S	Sg	11 41 53.9	+2.8
	baz=134						
WHF	**Hehuan Shan**	**0.22**	**287**	P	Pg	11 41 51.2	+0.5
	baz=288						
WHF				S	Sg	11 41 54.5	+0.8
	baz=288						
CHGB	**Renai**	**0.29**	**266**	P	Pb	11 41 53.1	-1.0
	baz=267						
CHGB				*e*S	Sg	11 41 57.5	+1.5
	baz=267						
EAHA	**Aohua**	**0.33**	**42**	*e*P	Pb	11 41 53.8	-0.8
	baz=40						
EAHA				S	Sb	11 41 59.1	-1.2
	baz=40						
NNSB	**Datong**	**0.36**	**343**	P	Pg	11 41 54.2	+0.9
	baz=334						
NNSB				S	Sg	11 41 59.5	+1.4
	baz=334						
LATG	**Datong**	**0.45**	**4**	P	Pg	11 41 55.6	+0.6

	baz=2.0								
LATG				*e*S		Sg	11 42 02.2	+1.3	
	baz=2.0								

TAP 07 11:46:13.5, 24.08N×121.68E, h8km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.08**	**273**	*e*P	Pg	11 46 16.8	+1.1
	baz=274						
TWD				*i* S	Sg	11 46 17.9	+0.8
	baz=274						
ETL	**Fush Village**	**0.10**	**326**	P	Pg	11 46 16.3	+0.4
	baz=326						
ETL				S	Sg	11 46 18.9	+1.3
	baz=326						
HWA	**Hwalien**	**0.12**	**216**	*i* P	Pg	11 46 17.0	+0.7
	baz=212						
HWA				*e*S	Sg	11 46 18.8	+0.7
	baz=212						
NACB	**Ninganchiao**	**0.13**	**320**	P	Pg	11 46 16.7	+0.4
	baz=320						
NACB				*e*S	Sg	11 46 20.5	+2.2
	baz=320						
ETM	**Tongmen**	**0.21**	**238**	*e*P	Pg	11 46 17.9	+0.2
	baz=237						
ETLH	**Xiulin Townshi**	**0.23**	**305**	P	Pg	11 46 19.2	+1.1
	baz=305						
ETLH				S	Sg	11 46 23.0	+1.8
	baz=305						
SHUL	**Shoufeng**	**0.31**	**201**	P	Pb	11 46 20.5	-0.7
	baz=201						
SHUL				*e*S	Sb	11 46 26.2	-0.2
	baz=201						
ESL	**Shilin**	**0.35**	**221**	P	Pb	11 46 21.2	-0.8
	baz=220						
ESL				S	Sb	11 46 26.8	-0.8
	baz=220						
WHF	**Hehuan Shan**	**0.39**	**280**	*e*P	Pb	11 46 22.4	-0.5
	baz=280						
WHF				*e*S	Sg	11 46 26.6	+0.2
	baz=280						
WARBT	**Fenglin Townsh**	**0.45**	**217**	P	Pb	11 46 23.5	-0.2
	baz=217						
WARBT				S	Sb	11 46 30.6	+0.1
	baz=217						

TAP 07 11:46:17.6, 23.94N×121.59E, h11km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**17**	*e*P	Pg	11 46 20.6	+0.9
	baz=29						
HWA				*e*S	Sg	11 46 21.8	+0.7
	baz=29						
ETM	**Tongmen**	**0.10**	**284**	*e*P	Pg	11 46 20.6	+0.3
	baz=283						
ETM				S	Sg	11 46 23.3	+1.0
	baz=283						
TWD	**Chiawan**	**0.14**	**1**	*i* P	Pg	11 46 21.5	+0.6
	baz=4.0						
LXIB	**Xiulin Townshi**	**0.18**	**295**	P	Pb	11 46 22.5	-0.6
	baz=295						
LXIB				*i* S	Sg	11 46 25.8	+1.3
	baz=295						
ETL	**Fush Village**	**0.22**	**7**	*i* P	Pb	11 46 23.1	-0.5
	baz=7.0						
NACB	**Ninganchiao**	**0.23**	**0**	P	Pg	11 46 23.1	+0.7

TAP 07 11:46:58.6, 24.15N×121.61E, h10km, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.01**	**46**	P	Pg	11 47 00.5	+0.1
	baz=48						
ETL				*i* S	Sg	11 47 02.4	+0.7
	baz=48						
NACB	**Ninganchiao**	**0.03**	**322**	*i* P	Pg	11 47 00.9	+0.4
	baz=322						
NACB				*i* S	Sg	11 47 02.6	+0.8
	baz=322						
TWD	**Chiawan**	**0.07**	**193**	P	Pg	11 47 01.5	+0.7
	baz=186						
TWD				*e*S	Sg	11 47 02.6	+0.1
	baz=186						
EAHA	**Aohua**	**0.21**	**33**	*e*P	Pb	11 47 05.1	+0.6
	baz=32						
EAHA				S	Sg	11 47 07.7	+1.6
	baz=32						
EAHA	**Aohua**	**0.21**	**33**	*i* P	Pb	11 47 05.2	+0.7
	baz=25						
EAHA				S	Sg	11 47 07.7	+1.7
	baz=25						
LXIB	**Xiulin Townshi**	**0.22**	**235**	P	Pb	11 47 04.4	-0.4
	baz=234						
LXIB				*i* S	Sg	11 47 08.1	+1.6
	baz=234						
ENA	**Nanau**	**0.30**	**23**	*e*P	Pb	11 47 06.7	+0.6
	baz=24						
ENA				*e*S	Sb	11 47 10.3	-0.8
	baz=24						
ENA	**Nanau**	**0.30**	**23**	*i* P	Pb	11 47 06.8	+0.7
	baz=16						
ENA				*e*S	Sb	11 47 10.2	-0.9
	baz=16						
WHF	**Hehuan Shan**	**0.32**	**269**	P	Pg	11 47 05.7	+0.5
	baz=268						
EWUT	**Wuta**	**0.33**	**27**	*e*P	Pb	11 47 06.9	+0.4
	baz=27						
EWUT				*e*S	Sg	11 47 10.7	+1.1
	baz=27						
EWUT	**Wuta**	**0.33**	**27**	*i* P	Pb	11 47 07.1	+0.6
	baz=21						
EWUT				*e*S	Sb	11 47 10.8	-1.2
	baz=21						

*TAP **07** 11:47:01.1, 24.21N×121.68E, h13km, ML1.3, C*
ISC 07 11:47:01.5±1.2, 24.21N±0.03×121.68E±0.05, h16km±6km, n20, σ0932/39, 1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.07**	**226**	⇓P	**Pg**	**11 47 04.6**	**0.0**
	baz=222						
ETL				*i* S	**Sg**	**11 47 06.7**	**0.0**
	baz=222						
NACB	**Ninganchiao**	**0.08**	**247**	P	**Pg**	**11 47 04.8**	**+0.1**
	baz=242						
NACB				*i* S	**Sg**	**11 47 06.9**	**+0.1**
	baz=242						
TWD	**Chiawan**	**0.14**	**210**	*i* P	**Pb**	**11 47 05.5**	**-0.3**
	baz=207						
TWD				S	**Sb**	**11 47 08.5**	**-0.2**
	baz=207						
ETLH	**Xiulin Townshi**	**0.18**	**271**	P	**Pb**	**11 47 06.3**	**-0.1**
	baz=267						
ETLH				S	**Sb**	**11 47 09.4**	**-0.3**
	baz=267						
ETM	**Tongmen**	**0.29**	**215**	*i* P	**Pb**	**11 47 08.1**	**-0.2**
	baz=214						
ETM				*e*S	**Sb**	**11 47 12.6**	**-0.3**
	baz=214						
NNSB	**Datong**	**0.35**	**310**	*i* P	**Pb**	**11 47 09.0**	**-0.4**
	baz=308						
NNSB				*i* S	**Sb**	**11 47 14.6**	**-0.1**
	baz=308						
LATG	**Datong**	**0.36**	**338**	*e*P	**Pb**	**11 47 09.5**	**0.0**
	baz=336						
LATG				S	**Sb**	**11 47 15.0**	**0.0**
	baz=336						
NNS	**Nan Shan**	**0.36**	**310**	*i* P	**Pb**	**11 47 09.0**	**-0.6**
	baz=309						
NNS				*i* S	**Sb**	**11 47 14.9**	**-0.2**
	baz=309						
WHF	**Hehuan Shan**	**0.38**	**261**	P	**Pb**	**11 47 09.7**	**-0.4**
	baz=259						
WHF				*i* S	**Sb**	**11 47 15.7**	**-0.2**
	baz=259						
FUSS	**Fushou**	**0.40**	**276**	*e*P	**Pb**	**11 47 10.8**	**+0.5**
	baz=274						
FUSS				S	**Sb**	**11 47 16.2**	**0.0**
	baz=274						
NDT	**Datong Townshi**	**0.42**	**339**	*e*P	**Pb**	**11 47 10.8**	**+0.3**
	baz=338						
NDT				*i* S	**Sb**	**11 47 16.9**	**+0.2**
	baz=338						
TWC	**Suao**	**0.43**	**21**	*i* P	**Pb**	**11 47 10.5**	**-0.3**
	baz=22						
ENTT	**Nioudou**	**0.44**	**347**	*e*P	**Pb**	**11 47 11.0**	**+0.1**
	baz=347						
ENTT				S	**Sb**	**11 47 17.3**	**0.0**
	baz=347						
CHGB	**Renai**	**0.48**	**253**	P	**Pb**	**11 47 11.4**	**-0.3**
	baz=251						
CHGB				*e*S	**Sb**	**11 47 18.7**	**+0.1**
	baz=251						
YHNB	**Yeheng**	**0.54**	**329**	*e*P	**Pb**	**11 47 13.1**	**+0.5**
	baz=328						
YHNB				S	**Sb**	**11 47 20.3**	**+0.2**
	baz=328						
NSK	**Sanguang**	**0.55**	**328**	*i* P	**Pb**	**11 47 12.4**	**-0.4**
	baz=328						
NSK				*i* S	**Sb**	**11 47 20.7**	**+0.2**
	baz=328						
WUSB	**Renai**	**0.55**	**248**	P	**Pb**	**11 47 13.0**	**+0.1**
	baz=246						
WUSB				*i* S	**Sb**	**11 47 21.4**	**+0.8**
	baz=246						
FUSB	**Fushanzhiwuyua**	**0.56**	**352**	*i* P	**Pb**	**11 47 12.6**	**-0.3**
	baz=351						
FUSB				S	**Sb**	**11 47 20.8**	**+0.1**
	baz=351						
EGFH	**Guangfu**	**0.58**	**203**	*i* P	**Pb**	**11 47 13.3**	**0.0**
	baz=202						
EGFH				S	**Sb**	**11 47 22.0**	**+0.8**
	baz=202						
NWLT	**Wulai**	**0.59**	**345**	P	**Pb**	**11 47 13.5**	**0.0**
	baz=343						
NWLT				S	**Sb**	**11 47 21.9**	**+0.3**
	baz=343						

*IDC **07** 11:56:19.2±2.7, 59.83N×24.72E, h0km, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=34.7km s-min=8.6km az=136.0*
*EST **07** 11:56:21.4±0.1, 59.85N×26.99E, h0km, ML1.5(HEL), Explosion*
*HEL **07** 11:56:21.5±0.1, 59.84N×26.97E, h0km, ML1.4, Explosion*
ISC 07 11:56:19.5±0.8, 59.87N±0.02×27.03E±0.04, h0km, n21, σ1900/38, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.69**	**231**	*e*P	**Pg**	**11 56 33.0**	**+0.4**
ARBE				*e*S	**Sg**	**11 56 41.0**	**-0.5**
VJF	**Virojoki**	**0.72**	**21**	*e*P	**Pb**	**11 56 35.0**	**0.0**
VJF				*e*S	**Sb**	**11 56 45.0**	**-0.4**
PVF	**Pernaja**	**0.89**	**320**	*e*P	**Pb**	**11 56 38.0**	**+0.1**
PVF				*e*S	**Sb**	**11 56 49.6**	**-0.7**
EE03	**Tooma soojaam,**	**1.07**	**201**	*e*P	**Pg**	**11 56 40.1**	**+0.1**
NUR	**Nurmijrvi**	**1.35**	**299**	*e*P	**Pn**	**11 56 45.4**	**-0.2**
NUR				*e*PN	**Pb**	**11 56 47.6**	**+1.9**
NUR				*e*S	**Sg**	**11 57 02.5**	**-0.4**
NUR				*e*SN	**Sn**	**11 57 06.8**	**+2.5**
MEF	**Metsahovi**	**1.37**	**286**	*e*P	**Pg**	**11 56 45.5**	**-0.2**
MEF				*e*SN	**Sn**	**11 57 06.6**	**+2.0**
EE02	**Kiisa, Saku**	**1.37**	**241**	*e*P	**Pg**	**11 56 45.5**	**-0.2**
EE02				*e*S	**Sg**	**11 57 02.4**	**-1.1**
EE02				*e*SN	**Sn**	**11 57 06.5**	**+1.9**
VSU	**Vasula**	**1.42**	**186**	*e*P	**Pg**	**11 56 46.6**	**-0.1**
VSU				*e*PN	**Pb**	**11 56 48.6**	**+1.8**
VSU				*e*S	**Sg**	**11 57 04.3**	**-0.8**
EE08	**Sarghaua, Vand**	**1.52**	**218**	*e*P	**Pn**	**11 56 47.8**	**-0.2**
EE08				*e*SN	**Sn**	**11 57 10.3**	**+1.8**
FIA0	**FINESS Array S**	**1.65**	**344**	*e*P	**Pg**	**11 56 50.8**	**-0.3**
FIA0				*e*SN	**Sg**	**11 57 13.6**	**+1.2**
FIA0				MSG		11 57 16.3	
	comp=Z,2.1nm,0.1s						
FINES	**FINESS Array B**	**1.65**	**344**	Pg	**Pb**	**11 56 50.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=204,slow=30,SNR=37						
FINES				Lg	Lg	11 57 13.8	
	comp=Z,0.6nm,0.3s,baz=199,slow=29,SNR=20						
FIA1	**FINESS Array S**	**1.65**	**344**	*e*P	**Pb**	**11 56 50.6**	**-0.2**
FIA1				*e*SN	**Sg**	**11 57 13.4**	**+0.9**
FIA1				MSG		11 57 14.8	
	comp=Z,2.6nm,0.1s						
RUF	**Ruokolahti**	**1.83**	**30**	*e*P	**Pb**	**11 56 53.5**	**-0.3**
RUF				*e*SG	**Sg**	**11 57 18.6**	**+0.4**
RUF				MSG		11 57 21.2	
	comp=Z,3.4nm,0.1s						
EE01	**Perakula, Nova**	**1.86**	**251**	*e*PN	**Pb**	**11 56 53.9**	**-0.5**
EE01				*e*S	**Sn**	**11 57 16.8**	**+0.1**
MTSE	**Matsula**	**2.02**	**236**	*e*PB	**Pb**	**11 56 56.5**	**-0.4**
MTSE				*e*SB	**Sb**	**11 57 21.6**	**-0.9**
MTSE				*e*SG	**Sg**	**11 57 23.0**	**-1.2**
EE07	**Piusa Caves, O**	**2.05**	**173**	*e*PG	**Pb**	**11 56 57.6**	**0.0**
EE07				*e*SG	**Sb**	**11 57 23.4**	**0.0**
KAF	**Kangasniemi**	**2.28**	**351**	*e*P	**Pb**	**11 57 00.5**	**-1.0**
KAF				*e*SB	**Sb**	**11 57 30.4**	**+0.3**
KAF				MSG		11 57 34.9	
	comp=Z,3.4nm,0.2s						
KPF	**Kankaanpaa**	**3.13**	**311**	MSG		11 57 57.6	
	comp=Z,1.2nm,0.2s						
HFS	**Hagfors**	**6.69**	**278**	Pn	Pn	11 57 39.3	-20
	comp=Z,0.4nm,0.3s,baz=82,slow=11,SNR=4.5						
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**7.91**	**285**	Pn	Pn	11 57 58.4	-17
	baz=119,slow=14,SNR=3.4						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**9.73**	**357**	Pn	**Pn**	**11 58 39.5**	**-1.0**
	baz=185,slow=12,SNR=10						
	comp=Z,1.1nm,0.8s						

*IDC **07** 11:57:37.6±1.4, 0.03S±0.1×131.1E±0.1, h10km, mb3.4/3, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=87.6km s-min=26.5km az=81.0*
*DJA **07** 11:57:43.5±1.4, 1.5±10.1×131.1E±1.0, h10km, M3.5/7, MLv3.5/7*
ISC 07 11:57:38.7±1.2, 0.3S±0.1×131.1E±0.1, h10km, n7, σ163/7, mb3.4/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.63**	**165**	P	**Pg**	**11 57 50.1**	**-0.8**
FAKI	**Fak Fak**	**2.89**	**156**	P	**Pn**	**11 58 24.7**	**-0.1**
LBMI	**Labuha**	**3.61**	**264**	P	**Pb**	**11 58 42.1**	**-0.6**
WRA	**Warramunga Arr**	**19.82**	**171**	P	**Pn**	**12 02 11.2**	**0.0**
	0.1nm,0.3s,baz=351,slow=12,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**23.43**	**174**	P	**P**	**12 02 50.7**	**+2.4**
	0.6nm,0.5s,baz=354,slow=10,SNR=11						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**63.30**	**325**	P	**P**	**12 08 09.1**	**+1.3**
	0.4nm,0.9s,baz=116,slow=5.0,SNR=2.1						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**86.81**	**25**	P	**P**	**12 10 21.6**	**-1.5**
	0.2nm,0.8s,baz=249,slow=4.3,SNR=4.6						
	0.2nm,0.8s						

*IDC **07** 11:58:23.1±1.0, 23.38N×121.93E, h0km, mb3.4/10, mbtmp3.5/12, ML3.6/2, MS3.2/4, Error ellipse: s-maj=26.2km s-min=20.9km az=65.0*
*ASIES **07** 11:58:27.1, 23.97N×121.78E, h6km, ML4.0, Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}1.30; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.57; $M_{r\theta}$0.25; $M_{\theta\phi}$-0.53; $M_{r\phi}$0.30; Fault plane solution: $M_0$1.30425×10^{22} NP1:ϕ_s46.85000°, δ53.55000°, λ,87.07000°. NP2:ϕ_s231.77000°, δ36.55000°, λ93.96000°. Principal axes: T Plg81.1670°, Azm303.2280°; N Plg2.3570°, Azm48.5870°; P Plg8.5080°, Azm138.9400°;*
*JMA **07** 11:58:28.0±0.1, 24.10N±0.4×121.7E±0.8, h0km, MV3.4/15, TAIWAN REGION*
*TAP **07** 11:58:27.1, 23.97N×121.78E, h6km, ML4.0, C*
ISC 07 11:58:27.1±1.0, 23.93N±0.01×121.83E±0.01, h6km±7km, n198, σ079/271, mb3.4/10, 15C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.21**	**283**	⇓P	**Pg**	**11 58 31.4**	**+0.1**
	baz=262						
HWA				S	**Sg**	**11 58 34.9**	**+0.8**
	baz=262						
TWD	**Chiawan**	**0.26**	**305**	⇓*i* P	**Pg**	**11 58 31.8**	**-0.5**
	baz=303						
TWD				*i* S	**Sg**	**11 58 35.7**	**0.0**
	baz=303						
SHUL	**Shoufeng**	**0.28**	**240**	⇑P	**Pb**	**11 58 34.3**	**-0.4**
	baz=224						
SHUL				*e*S	**Sb**	**11 58 39.5**	**-0.2**
	baz=224						
ETL	**Fush Village**	**0.29**	**320**	P	**Pg**	**11 58 32.6**	**-0.3**
	baz=310						
ETM	**Tongmen**	**0.31**	**276**	P	**Pg**	**11 58 33.0**	**-0.2**
	baz=266						
ETM				S	**Sg**	**11 58 37.8**	**+0.5**
	baz=266						
NACB	**Ninganchiao**	**0.32**	**318**	P	**Pg**	**11 58 32.8**	**-0.7**
NACB	**Ninganchiao**	**0.32**	**318**	⇓*i*P	**Pg**	**11 58 33.0**	**-0.5**
	baz=319						
NACB				*i* S	**Sg**	**11 58 37.5**	**-0.2**
	baz=319						
TEGC	**Jichi Village**	**0.34**	**230**	*e*P	**Pb**	**11 58 36.1**	**+0.4**
	baz=217						
TEGC				*e*S	**Sb**	**11 58 43.2**	**+1.8**
	baz=217						
ESL	**Shilin**	**0.38**	**252**	⇑*i*P	**Pg**	**11 58 34.7**	**+0.2**
	baz=240						
ESL				*i* S	**Sg**	**11 58 40.7**	**+1.2**
	baz=240						
EHP	**Heping Village**	**0.39**	**348**	*e*P	**Pg**	**11 58 34.5**	**-0.1**
	baz=356						
EHP				*e*S	**Sb**	**11 58 41.2**	**-1.4**
	baz=356						
LXIB	**Xiulin Townshi**	**0.39**	**283**	⇑*i*P	**Pg**	**11 58 34.5**	**-0.3**
	baz=265						
LXIB				*i* S	**Sg**	**11 58 40.3**	**+0.4**
	baz=265						
EAHA	**Aohua**	**0.41**	**348**	*e*P	**Pg**	**11 58 35.4**	**+0.4**
	baz=355						
ETLH	**Xiulin Townshi**	**0.42**	**311**	P	**Pg**	**11 58 34.9**	**-0.4**
	baz=310						
ETLH				*e*S	**Sg**	**11 58 40.5**	**-0.3**
	baz=310						
EGFH	**Guangfu**	**0.45**	**235**	*e*P	**Pb**	**11 58 37.2**	**-0.3**
	baz=224						
EGFH				*e*S	**Sb**	**11 58 45.6**	**+1.1**
	baz=224						
WARBT	**Fenglin Townsh**	**0.46**	**243**	⇑*i*P	**Pg**	**11 58 36.5**	**+0.5**
	baz=232						
WARBT				S	**Sb**	**11 58 44.0**	**-0.7**
	baz=232						
EOS4	**EOS4**	**0.48**	**67**	*e*P	**Pn**	**11 58 40.1**	**-0.2**
	baz=74						
ENA	**Nanau**	**0.50**	**351**	P	**Pg**	**11 58 37.3**	**+0.5**
	baz=357						
EWUT	**Wuta**	**0.51**	**355**	*e*P	**Pg**	**11 58 37.5**	**+0.4**
WHF	**Hehuan Shan**	**0.56**	**293**	P	**Pg**	**11 58 37.6**	**-0.3**
	baz=287						
WHF				S	**Sg**	**11 58 45.1**	**-0.3**
	baz=287						
EOS3	**EOS3**	**0.57**	**51**	*e*P	**Pn**	**11 58 41.5**	**-0.1**
	baz=57						
HGSD	**Ruisui**	**0.57**	**221**	P	**Pb**	**11 58 40.1**	**+0.5**
	baz=211						
OWD	**Renai**	**0.60**	**272**	⇓*e*P	**Pg**	**11 58 38.7**	**0.0**
	baz=265						
EOS2	**EOS2**	**0.61**	**37**	*e*P	**Pn**	**11 58 42.3**	**+0.1**
	baz=51						
CHGB	**Renai**	**0.61**	**282**	⇑*i*P	**Pg**	**11 58 38.9**	**-0.1**
	baz=275						
CHGB				S	**Sg**	**11 58 47.0**	**0.0**
	baz=275						
FUSS	**Fushou**	**0.62**	**301**	⇓P	**Pg**	**11 58 39.0**	**-0.1**
	baz=297						
FUSS				S	**Sg**	**11 58 48.0**	**+0.7**
	baz=297						
EHY	**Hungye**	**0.63**	**228**	*e*P	**Pg**	**11 58 39.9**	**+0.6**
	baz=219						
EHY				*e*S	**Sb**	**11 58 50.3**	**+0.7**
	baz=219						
ESAO	**Su ao**	**0.64**	**1**	⇑P	**Pb**	**11 58 40.7**	**-0.1**
	baz=359						
ESAO				*e*S	**Sb**	**11 58 49.9**	**-0.2**
	baz=359						
NNSB	**Datong**	**0.64**	**321**	⇓P	**Pg**	**11 58 39.3**	**-0.2**
	baz=321						
NNSB				S	**Sg**	**11 58 48.4**	**+0.5**
	baz=321						
NNSH	**Datong**	**0.64**	**321**	P	**Pg**	**11 58 39.4**	**-0.1**
	baz=321						
NNSH				S	**Sg**	**11 58 48.5**	**+0.6**
	baz=321						
WUSB	**Renai**	**0.66**	**275**	⇑*i*P	**Pg**	**11 58 39.9**	**+0.1**
	baz=270						
WUSB				*i* S	**Sb**	**11 58 49.6**	**-0.9**
	baz=270						
NNS	**Nan Shan**	**0.66**	**321**	⇓P	**Pg**	**11 58 39.5**	**-0.3**
	baz=322						
NNS				S	**Sg**	**11 58 49.0**	**+0.6**
	baz=322						
LATG	**Datong**	**0.66**	**335**	⇓*i*P	**Pg**	**11 58 39.8**	**-0.1**
	baz=323						
LATG				S	**Sg**	**11 58 49.4**	**+0.9**
	baz=323						
TWC	**Suao**	**0.68**	**1**	P	**Pb**	**11 58 41.4**	**+0.1**
	baz=8.0						
TWT	**Tachien**	**0.68**	**298**	P	**Pg**	**11 58 40.5**	**+0.3**
	baz=294						
TWT				S	**Sg**	**11 58 49.9**	**+0.8**
	baz=294						
TDCB	**Techi**	**0.69**	**298**	⇑*i*P	**Pg**	**11 58 40.6**	**+0.1**
	baz=295						
TDCB				S	**Sg**	**11 58 49.5**	**0.0**
	baz=295						
ECBN	**Changbin**	**0.70**	**210**	*e*P	**Pb**	**11 58 42.5**	**+0.7**
	baz=202						
NDS	**Dongshan**	**0.71**	**352**	*e*P	**Pb**	**11 58 41.3**	**-0.6**
	baz=356						
NDS				*e*S	**Sb**	**11 58 52.1**	**+0.2**
	baz=356						
YULB	**Yu-li**	**0.72**	**222**	P	**Pb**	**11 58 42.2**	**0.0**
YULB	**Yu-li**	**0.72**	**222**	*e*P	**Pb**	**11 58 42.0**	**-0.2**
	baz=215						
YULB				*e*S	**Sb**	**11 58 53.0**	**+0.6**
	baz=215						
NDT	**Datong Townshi**	**0.73**	**337**	*e*P	**Pg**	**11 58 41.5**	**+0.4**
	baz=328						
NDT				S	**Sb**	**11 58 52.2**	**-0.3**
	baz=328						
ENTT	**Nioudou**	**0.75**	**341**	⇓*i*P	**Pg**	**11 58 41.7**	**+0.2**
	baz=333						
ENTT				S	**Sb**	**11 58 53.0**	**0.0**
	baz=333						
EYUL	**Yuli**	**0.75**	**219**	*e*P	**Pb**	**11 58 43.4**	**+0.8**
	baz=197						
TWF1	**Yuli**	**0.76**	**220**	*e*P	**Pb**	**11 58 42.4**	**-0.3**
	baz=225						
TWF1				*e*S	**Sn**	**11 58 54.8**	**-1.3**
	baz=225						
TWE	**Neicheng**	**0.80**	**349**	*e*P	**Pb**	**11 58 43.0**	**-0.4**
	baz=354						
TWE				*e*S	**Sb**	**11 58 54.7**	**+0.1**
	baz=354						
WPL	**Puli Township**	**0.80**	**276**	P	**Pg**	**11 58 42.7**	**+0.2**
	baz=271						
WPL				S	**Sg**	**11 58 53.4**	**+0.4**
	baz=271						
SSLB	**Suanglung**	**0.81**	**260**	P	**Pg**	**11 58 43.1**	**+0.3**
SSLB	**Suanglung**	**0.81**	**260**	⇑*i*P	**Pg**	**11 58 42.9**	**+0.1**
	baz=254						
SSLB				*e*S	**Sg**	**11 58 53.0**	**-0.4**
	baz=254						
DPDB	**Guoxing**	**0.83**	**277**	⇑*i*P	**Pg**	**11 58 43.3**	**+0.1**
	baz=272						
DPDB				*e*S	**Sg**	**11 58 54.5**	**+0.6**
	baz=272						
CHKH	**Chenggong**	**0.84**	**209**	*e*P	**Pb**	**11 58 44.5**	**+0.4**
	baz=201						
YHNB	**Yeheng**	**0.84**	**331**	P	**Pg**	**11 58 43.8**	**+0.4**
YHNB	**Yeheng**	**0.84**	**331**	⇓*i*P	**Pg**	**11 58 43.6**	**+0.3**
	baz=332						
YHNB				S	**Sg**	**11 58 55.1**	**+0.8**
	baz=332						
WCS	**Beigang Elemen**	**0.85**	**279**	P	**Pg**	**11 58 43.7**	**+0.2**
	baz=273						
SMLT	**Sun Moon Lake**	**0.85**	**267**	P	**Pg**	**11 58 43.7**	**+0.2**
	baz=261						
SMLT				*i* S	**Sb**	**11 58 55.7**	**-0.5**
	baz=261						
FUSB	**Fushanzhiwuyua**	**0.85**	**345**	⇑P	**Pb**	**11 58 44.2**	**-0.2**
	baz=338						
FUSB				S	**Sb**	**11 58 55.8**	**-0.4**
	baz=338						
NSK	**Sanguang**	**0.86**	**330**	P	**Pg**	**11 58 43.8**	**+0.1**
	baz=331						

NSK				S	Sb	11 58 55.8	-0.6		
	baz=331								
FULB	**Fuli**	**0.88**	**214**	*eP*	**Pn**	**11 58 45.5**	**-0.6**		
	baz=194								
WHP	**Taichung City**	**0.88**	**293**	*eP*	**Pg**	**11 58 44.1**	**0.0**		
	baz=280								
WHP				*i* S	**Sb**	**11 58 56.3**	**-0.6**		
	baz=280								
TYC	**Yuchr**	**0.89**	**268**	⇑P	**Pg**	**11 58 44.2**	**0.0**		
	baz=263								
TYC				*i* S	**Sg**	**11 58 56.3**	**+0.5**		
	baz=263								
NWLT	**Wulai**	**0.89**	**341**	*eP*	**Pg**	**11 58 44.6**	**+0.3**		
	baz=329								
NWLT				*eS*	**Sb**	**11 58 57.3**	**0.0**		
	baz=329								
WHYT	**Xinyi Township**	**0.93**	**256**	*eP*	**Pb**	**11 58 45.7**	**+0.1**		
	baz=250								
CHKT	**Chengkung**	**0.93**	**207**	*eP*	**Pb**	**11 58 45.7**	**0.0**		
	baz=181								
CHKT				*eS*	**Sn**	**11 59 01.4**	**+0.9**		
	baz=181								
NFF	**Wufeng Townshi**	**0.95**	**317**	*eP*	**Pg**	**11 58 45.4**	**0.0**		
	baz=317								
NFF				*eS*	**Sb**	**11 58 58.7**	**-0.4**		
	baz=317								
EHD	**Haiduan**	**0.97**	**216**	*eP*	**Pg**	**11 58 45.9**	**+0.2**		
	baz=225								
ECS	**Chishang**	**1.00**	**214**	*eP*	**Pn**	**11 58 48.5**	**+0.7**		
	baz=195								
ECS				*eS*	**Sn**	**11 59 03.7**	**+1.4**		
	baz=195								
WJS	**Zhushan**	**1.01**	**264**	*eP*	**Pb**	**11 58 47.1**	**0.0**		
	baz=266								
WJS				*eS*	**Sn**	**11 59 01.9**	**-0.6**		
	baz=266								
ALS	**Alishan**	**1.03**	**246**	⇑P	**Pg**	**11 58 47.2**	**+0.3**		
	baz=240								
ALS				*eS*	**Sn**	**11 59 02.7**	**-0.6**		
	baz=240								
LIOB	**Emei**	**1.03**	**314**	*eP*	**Pb**	**11 58 47.2**	**-0.2**		
	baz=314								
LIOB				*eS*	**Sb**	**11 59 00.8**	**-0.4**		
	baz=314								
NSTT	**Nanjuang**	**1.03**	**313**	P	**Pb**	**11 58 47.1**	**-0.2**		
	baz=312								
NSTT				S	**Sb**	**11 59 00.9**	**-0.3**		
	baz=312								
TIPB	**Shuangxi**	**1.04**	**360**	*eP*	**Pb**	**11 58 47.7**	**+0.2**		
	baz=3.0								
WWF	**Wufeng**	**1.04**	**276**	*eP*	**Pn**	**11 58 48.2**	**-0.1**		
	baz=272								
ELDTW	**Lidau**	**1.05**	**225**	*eP*	**Pg**	**11 58 47.1**	**-0.2**		
	baz=218								
ELDTW				*eS*	**Sb**	**11 59 02.1**	**+0.3**		
	baz=218								
WNT	**Mingjian**	**1.05**	**267**	⇑*eP*	**Pn**	**11 58 48.1**	**-0.3**		
	baz=269								
WNT				*eS*	**Sn**	**11 59 03.0**	**-0.4**		
	baz=269								
TWQ1	**Liyutan**	**1.05**	**293**	P	**Pb**	**11 58 48.0**	**+0.2**		
	baz=288								
TWQ1				*eS*	**Sb**	**11 59 02.7**	**+0.8**		
	baz=288								
WNT1	**Nantou City**	**1.05**	**269**	*eP*	**Pb**	**11 58 48.0**	**+0.2**		
	baz=263								
NHDH	**Xindian Distri**	**1.06**	**345**	*eP*	**Pn**	**11 58 48.8**	**+0.2**		
	baz=347								
EDH	**Donghe**	**1.07**	**207**	*eP*	**Pg**	**11 58 47.6**	**-0.1**		
	baz=182								
EDH				*eS*	**Sn**	**11 59 03.3**	**-0.6**		
	baz=182								
TWA	**Mucha**	**1.07**	**348**	*eP*	**Pn**	**11 58 48.7**	**0.0**		
	baz=339								
TWA				*eS*	**Sb**	**11 59 02.5**	**+0.2**		
	baz=339								
TCU	**Taichung**	**1.08**	**282**	*eP*	**Pn**	**11 58 49.0**	**+0.2**		
	baz=271								
TWB1	**Santiao Chiao**	**1.08**	**8**	*eP*	**Pn**	**11 58 49.0**	**+0.1**		
	baz=2.0								
TATO	**Taipei**	**1.09**	**343**	P	**Pn**	**11 58 49.7**	**+0.8**		
TATO	**Taipei**	**1.09**	**343**	*eP*	**Pn**	**11 58 48.7**	**-0.2**		
	baz=334								
TATO				*eS*	**Sb**	**11 59 02.5**	**-0.3**		
	baz=334								
NSY	**Sanyi**	**1.09**	**297**	*eP*	**Pn**	**11 58 49.0**	**+0.1**		
	baz=307								
NSY				*eS*	**Sb**	**11 59 03.6**	**+0.6**		
	baz=307								
CHN5	**Tsauling**	**1.11**	**253**	⇑P	**Pb**	**11 58 49.0**	**+0.2**		
	baz=236								
CHN5				S	**Sn**	**11 59 05.5**	**+0.6**		
	baz=236								
HSN1	**Hsinchu**	**1.12**	**319**	*eP*	**Pn**	**11 58 49.8**	**+0.3**		
	baz=317								
NMLH	**Miaoli**	**1.12**	**303**	*eP*	**Pn**	**11 58 50.2**	**+0.7**		
	baz=298								
NWF	**Wu-fen Shan**	**1.14**	**358**	*eP*	**Pn**	**11 58 50.0**	**+0.3**		
	baz=353								
NWF				*eS*	**Sn**	**11 59 05.9**	**+0.3**		
	baz=353								
WFSB	**Wu-fen Shan**	**1.14**	**358**	*eP*	**Pn**	**11 58 51.0**	**+1.4**		
	baz=354								
WFSB				*eS*	**Sn**	**11 59 06.1**	**+0.6**		
	baz=354								
TAP	**Taipei**	**1.14**	**345**	*eP*	**Pn**	**11 58 49.9**	**+0.2**		
	baz=332								
JYNG	**Yonaguni jima**	**1.14**	**63**	P	**Pn**	**11 58 51.1**	**+1.4**		
JYNG				*eS*	**Sn**	**11 59 07.4**	**+1.7**		
WYL	**Yuanlin Townsh**	**1.14**	**272**	*eP*	**Pn**	**11 58 50.8**	**+1.1**		
	baz=265								
SBCB	**Hsinchu**	**1.15**	**318**	*eP*	**Pg**	**11 58 49.1**	**-0.2**		
	baz=318								
SBCB				*eS*	**Sb**	**11 59 04.5**	**-0.2**		
	baz=318								
SXI1	**Grass Mountain**	**1.16**	**2**	*eP*	**Pn**	**11 58 49.8**	**-0.2**		
	baz=15								
WDJ	**Dajia District**	**1.16**	**291**	*eP*	**Pn**	**11 58 50.8**	**+0.8**		
	baz=286								
HSN	**Hsinchu**	**1.17**	**318**	*eP*	**Pg**	**11 58 49.3**	**-0.3**		
	baz=320								
HSN				*eS*	**Sb**	**11 59 05.3**	**+0.1**		
	baz=320								
WCHH	**Zhanghua**	**1.17**	**278**	*eP*	**Pn**	**11 58 50.6**	**+0.5**		
	baz=270								
WGK	**Gukeng**	**1.19**	**258**	*eP*	**Pb**	**11 58 50.0**	**0.0**		
	baz=250								
WGK				*eS*	**Sn**	**11 59 07.4**	**+0.6**		
	baz=250								
NCUH	**Zhongli**	**1.19**	**330**	*eP*	**Pn**	**11 58 50.9**	**+0.5**		
	baz=329								
NCU	**National Centr**	**1.19**	**331**	*eP*	**Pn**	**11 58 50.7**	**+0.4**		
	baz=331								
NCU				*eS*	**Sn**	**11 59 07.8**	**+0.9**		
	baz=331								
YOJ	**Yonaguni jima**	**1.20**	**64**	P	**Pn**	**11 58 52.7**	**+2.2**		
YOJ	**Yonaguni jima**	**1.20**	**64**	*eP*	**Pn**	**11 58 51.5**	**+1.1**		
	baz=70								
YOJ	**Yonaguni jima**	**1.20**	**64**	P	**Pn**	**11 58 52.3**	**+1.8**		
YOJ				*eS*	**Sn**	**11 59 09.2**	**+2.1**		
LONT	**Longtian**	**1.21**	**212**	*eP*	**Pg**	**11 58 49.9**	**-0.3**		
	baz=205								
WDLH	**Douliu**	**1.21**	**259**	*eP*	**Pn**	**11 58 51.8**	**+1.3**		
	baz=252								
TNOU	**National Taiwa**	**1.22**	**358**	*eP*	**Pn**	**11 58 51.1**	**+0.4**		
TWS1	**Kuangyinshan**	**1.22**	**342**	*eP*	**Pn**	**11 58 51.5**	**+0.7**		
	baz=344								
TWS1				*eS*	**Sn**	**11 59 09.7**	**+2.0**		
	baz=344								
WCKO	**Fanlu**	**1.23**	**247**	*eP*	**Pn**	**11 58 51.6**	**+0.7**		
	baz=242								
WCKO				*eS*	**Sn**	**11 59 10.5**	**+2.7**		
	baz=242								
STYH	**Taoyuan**	**1.23**	**232**	*eP*	**Pn**	**11 58 51.6**	**+0.8**		
	baz=213								
STYH				*eS*	**Sn**	**11 59 09.2**	**+1.4**		
	baz=213								
YM01	**YM01**	**1.23**	**349**	*eP*	**Pn**	**11 58 51.9**	**+0.9**		
	baz=352								
YM01				*eS*	**Sn**	**11 59 09.5**	**+1.5**		
	baz=352								
STYT	**Tauyuan**	**1.25**	**232**	P	**Pg**	**11 58 51.0**	**-0.1**		
	baz=211								
STYT				*eS*	**Sn**	**11 59 10.4**	**+2.0**		
	baz=211								
TPUB	**Ta-pu**	**1.27**	**241**	P	**Pb**	**11 58 52.9**	**+1.4**		
TPUB	**Ta-pu**	**1.27**	**241**	P	**Pb**	**11 58 52.1**	**+0.7**		
	baz=243								
TPUB				*eS*	**Sn**	**11 59 10.4**	**+1.6**		
	baz=243								
YM08	**YM08**	**1.27**	**350**	*eP*	**Pb**	**11 58 51.9**	**+0.4**		
	baz=353								
CHN4	**Tsaushan**	**1.27**	**243**	*eP*	**Pg**	**11 58 52.0**	**+0.4**		
	baz=223								
NTST	**Danshui**	**1.28**	**344**	*eP*	**Pg**	**11 58 52.7**	**+1.1**		
	baz=342								
ANP	**Anpu**	**1.28**	**347**	*eP*	**Pb**	**11 58 52.7**	**+1.0**		
	baz=346								
NHW	**Xinwu Township**	**1.29**	**327**	*eP*	**Pg**	**11 58 52.6**	**+0.8**		
	baz=324								
LDUT	**Ludao**	**1.29**	**195**	*eP*	**Pn**	**11 58 50.6**	**-1.2**		
	baz=191								
CHN2	**Minshiung**	**1.30**	**253**	*eP*	**Pg**	**11 58 52.8**	**+0.6**		
	baz=246								
TWGBT	**Beinan**	**1.30**	**212**	*eP*	**Pn**	**11 58 50.3**	**-1.6**		
	baz=191								
TWG	**Pinlang**	**1.31**	**212**	*eP*	**Pn**	**11 58 51.5**	**-0.4**		
	baz=191								
WTP	**Ta-pu**	**1.31**	**239**	P	**Pg**	**11 58 52.3**	**+0.1**		
	baz=241								
WTP				*eS*	**Sn**	**11 59 12.0**	**+2.2**		
	baz=241								
WRL	**Guolierlin Hig**	**1.33**	**269**	*eP*	**Pg**	**11 58 53.5**	**+0.9**		
	baz=262								
WTK	**Tuku**	**1.34**	**260**	*eP*	**Pg**	**11 58 53.2**	**+0.4**		
	baz=253								
RLNB	**Erlin**	**1.35**	**269**	*eP*	**Pg**	**11 58 53.4**	**+0.4**		
	baz=261								
RLNB				*eS*	**Sn**	**11 59 11.8**	**+1.2**		
	baz=261								
TWY	**Chenhua**	**1.35**	**351**	*eP*	**Pg**	**11 58 53.5**	**+0.3**		
	baz=354								
TWK	**Hsinying**	**1.40**	**242**	*eP*	**Pg**	**11 58 54.0**	**0.0**		
	baz=223								
CHN1	**Nanshi**	**1.41**	**238**	*eP*	**Pg**	**11 58 54.6**	**+0.4**		
	baz=232								
CHN1				*eS*	**Sg**	**11 59 12.9**	**+0.5**		
	baz=232								
SNST	**Tainan City**	**1.41**	**240**	*eP*	**Pg**	**11 58 54.3**	**0.0**		
	baz=217								
WTCT	**Ta-ch'eng**	**1.42**	**268**	*eP*	**Pg**	**11 58 54.2**	**-0.1**		
	baz=259								
WTCT				*eS*	**Sg**	**11 59 13.8**	**+1.0**		
	baz=259								
SGST	**Jiashian**	**1.42**	**234**	*eP*	**Pn**	**11 58 53.5**	**0.0**		
	baz=212								
SGST				*eS*	**Sg**	**11 59 14.5**	**+1.6**		
	baz=212								
SLGT	**Liugui**	**1.43**	**230**	*eP*	**Pg**	**11 58 54.8**	**+0.2**		
	baz=223								
WSF	**Szhu**	**1.50**	**259**	*eP*	**Pb**	**11 58 55.4**	**0.0**		
	baz=252								
WSL	**Shuilin Townsh**	**1.52**	**255**	*eP*	**Pg**	**11 58 57.0**	**+0.6**		
	baz=248								
ICHU	**Yijhu**	**1.53**	**249**	*eP*	**Pg**	**11 58 56.3**	**-0.2**		
	baz=242								
ECL	**Taimali**	**1.55**	**211**	*eP*	**Pn**	**11 58 54.9**	**-0.5**		
	baz=193								
CHN3	**Shinhua**	**1.59**	**238**	*eP*	**Pg**	**11 58 57.4**	**-0.3**		
	baz=232								
CHN8	**Yiju**	**1.59**	**249**	*eP*	**Pb**	**11 58 56.7**	**-0.3**		
	baz=242								
SCST	**Cishan**	**1.61**	**230**	*eP*	**Pg**	**11 58 58.0**	**-0.1**		
	baz=225								
SSD	**Sandimen**	**1.61**	**223**	*eP*	**Pn**	**11 58 56.4**	**+0.2**		
	baz=215								
SSD				*eS*	**Sg**	**11 59 19.6**	**+0.6**		
	baz=215								
SHHT	**Tainan City**	**1.63**	**237**	*eP*	**Pg**	**11 58 58.5**	**0.0**		
	baz=231								
TSMG	**Majia**	**1.64**	**222**	*eP*	**Pg**	**11 58 58.4**	**-0.2**		
	baz=206								
TWM1	**Shoushan**	**1.70**	**230**	*eP*	**Pg**	**11 58 59.9**	**+0.1**		
	baz=225								
PCYT	**Pengchaiyu**	**1.71**	**7**	*eP*	**Pg**	**11 58 59.5**	**-0.4**		
	baz=13								
MASBT	**Mashibuluo**	**1.71**	**220**	*eP*	**Pn**	**11 58 57.8**	**+0.2**		
	baz=213								
MASBT				*eS*	**Sg**	**11 59 22.2**	**0.0**		
	baz=213								
SGLT	**Jiouru**	**1.72**	**226**	*eP*	**Pb**	**11 58 59.3**	**+0.2**		
	baz=222								
TSCK	**Chigu Township**	**1.78**	**244**	*eP*	**Pn**	**11 58 58.7**	**+0.2**		
	baz=238								
IRIF	**Iriomote-Funau**	**1.78**	**77**	*eP*	**Pg**	**11 59 01.4**	**+0.1**		
IRIF				*eS*	**Sg**	**11 59 25.8**	**+1.4**		
EAST	**Anshuo**	**1.79**	**211**	*eP*	**Pn**	**11 58 58.4**	**-0.2**		
	baz=196								
TAWH	**Dawu Township**	**1.81**	**209**	*eP*	**Pb**	**11 59 00.8**	**+0.2**		
	baz=203								
HATJ	**Hateruma jima**	**1.81**	**86**	P	**Pg**	**11 59 01.8**	**-0.1**		
HATJ				S	**Sg**	**11 59 26.9**	**+1.5**		
LAY	**Lan-yu**	**1.90**	**188**	*eP*	**Pn**	**11 58 59.2**	**-0.9**		
	baz=187								
SCZT	**Fangliau**	**1.91**	**216**	*eP*	**Pb**	**11 59 02.2**	**-0.2**		
	baz=198								
WSSB	**Gushan**	**1.93**	**229**	*eP*	**Pb**	**11 59 02.5**	**-0.3**		
	baz=224								
LYUB	**Lan-yu**	**1.93**	**187**	*eP*	**Pn**	**11 58 58.9**	**-1.7**		
	baz=186								
SLIU	**Shizi**	**1.95**	**209**	*eP*	**Pn**	**11 59 01.1**	**+0.3**		
	baz=196								
JKRS	**Kuro-shima**	**2.02**	**81**	P	**Pb**	**11 59 04.6**	**+0.4**		
JKRS				*eS*	**Sg**	**11 59 31.8**	**-0.1**		
WDGT	**Dungji**	**2.10**	**252**	*eP*	**Pn**	**11 59 03.6**	**+0.7**		
	baz=245								
PHUB	**P'eng-hu**	**2.11**	**259**	*eP*	**Pn**	**11 59 03.4**	**+0.3**		
	baz=250								
PHUB				*eS*	**Sn**	**11 59 30.7**	**+1.1**		
	baz=250								
PNG	**Penghu**	**2.12**	**261**	*eP*	**Pn**	**11 59 04.1**	**+1.0**		
	baz=252								
JIJ	**Ishigaki jima**	**2.16**	**78**	P	**Pn**	**11 59 05.0**	**+1.4**		
JIJ				S	**Sb**	**11 59 33.5**	**-0.1**		
TWK1	**Hengchun**	**2.19**	**206**	*eP*	**Pn**	**11 59 04.9**	**+0.8**		
	baz=192								
TWKBT	**Hengchun**	**2.19**	**206**	*eP*	**Pb**	**11 59 05.8**	**-1.4**		
	baz=192								
VCHM	**Qimei**	**2.32**	**252**	*eP*	**Pn**	**11 59 07.0**	**+1.1**		
	baz=245								
JISG	**Ishigakijimahi**	**2.36**	**73**	P	**Pn**	**11 59 07.9**	**+1.5**		
JISG				S	**Sb**	**11 59 38.2**	**-1.1**		
VWUC	**VWUC**	**2.41**	**296**	*eP*	**Pn**	**11 59 06.7**	**-0.5**		
	baz=286								
PTMZ	**Houxiangcun**	**2.71**	**295**	*eP*	**Pn**	**11 59 10.2**	**-1.0**		
	baz=284								
JTJ	**Tarama**	**2.71**	**74**	P	**Pb**	**11 59 13.8**	**-2.3**		
JTJ				S	**Sb**	**11 59 48.1**	**-1.6**		
MATB	**Ma-tsu**	**2.79**	**323**	*eP*	**Pn**	**11 59 12.9**	**+0.5**		
	baz=316								
KNM	**Kinmen**	**3.14**	**280**	*eP*	**Pn**	**11 59 18.4**	**+1.3**		
	baz=269								
KNMB	**Chin-men Tao**	**3.19**	**280**	*eP*	**Pn**	**11 59 17.0**	**-0.8**		
	baz=270								
LYJJ	**Jianjiangzhen**	**3.21**	**325**	*eP*	**Pn**	**11 59 18.5**	**+0.4**		
	baz=317								
JMJ	**Miyako jima 2**	**3.28**	**74**	*eP*	**Pn**	**11 59 21.3**	**+2.2**		
	baz=79								
MHZQ	**Yeshan**	**3.33**	**311**	*eP*	**Pn**	**11 59 19.7**	**-0.1**		
	baz=298								
XPSS	**Dashiqiu**	**3.33**	**334**	*eP*	**Pn**	**11 59 19.9**	**+0.1**		
	baz=326								
AXDP	**Jialang**	**3.65**	**286**	*eP*	**Pn**	**11 59 24.1**	**-0.1**		
	baz=275								
ZPLA	**Ao Xicun**	**3.73**	**271**	*eP*	**Pn**	**11 59 25.1**	**-0.2**		
	baz=261								
DSXP	**Dongshan**	**4.04**	**268**	*eP*	**Pn**	**11 59 30.5**	**+0.9**		
	baz=258								
SXFK	**Yanhouchang**	**4.52**	**304**	*eP*	**Pn**	**11 59 36.4**	**+0.2**		
	baz=289								
JOW	**Kunigami**	**6.50**	**62**	Pn	**Pn**	**12 00 03.0**	**-0.5**		
	3.6nm,0.3s,baz=272,slow=17,SNR=15								
	8.2nm,0.3s								
JNU	**Nakatsue**	**12.12**	**39**	LR	LR	12 05 29.7			
	comp=Z,37nm,21.7s,baz=187,slow=34								
KSRS	**Korea Array**	**14.46**	**20**	Pn	**P**	**12 01 57.2**	**-2.0**		
	0.1nm,0.3s,baz=198,slow=11,SNR=1.9								
KSRS				LR	LR	12 07 42.3			
	comp=Z,53nm,20.7s,baz=340,slow=38								
	0.6nm,0.7s								
DAV	**Davao City (W)**	**17.15**	**167**	LR	LR	12 08 25.7			
	comp=Z,126nm,19.9s,baz=2.5,slow=36								
CMAR	**Chiang Mai Arr**	**22.01**	**260**	P	**P**	**12 03 19.4**	**-3.0**		
	0.4nm,0.3s,baz=74,slow=9.5,SNR=1.7								
	0.4nm,0.3s								
SONM	**Songino Array**	**26.83**	**337**	P	**P**	**12 04 09.8**	**+1.3**		
	0.2nm,0.3s,baz=154,slow=7.9,SNR=2.2								
SONM				LR	LR	12 15 38.5			
	comp=Z,126nm,19.1s,baz=234,slow=38								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**38.93**	**316**	P	**P**	**12 05 53.9**	**+0.1**		
	0.3nm,0.6s,baz=108,slow=8.4,SNR=5.0								
	0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**40.78**	**327**	P	**P**	**12 06 10.1**	**+1.1**		
	0.8nm,0.4s,baz=130,slow=7.8,SNR=2.8								
	0.8nm,0.4s								
H11N1	**WAKE ISLAND Hy**	**41.91**	**87**	T	T	12 51 25.4			
	baz=283,slow=75,SNR=18								
H11N2	**WAKE ISLAND Hy**	**41.91**	**87**	T	T	12 51 26.5			
	baz=283,slow=75,SNR=5.9								
H11N3	**WAKE ISLAND Hy**	**41.93**	**87**	T	T	12 51 31.3			
	baz=283,slow=75,SNR=6.9								
H11S3	**WAKE ISLAND Hy**	**42.03**	**89**	T	T	12 51 29.5			
	baz=275								
H11S1	**WAKE ISLAND Hy**	**42.04**	**89**	T	T	12 51 27.9			
	baz=275,slow=74								
H11S2	**WAKE ISLAND Hy**	**42.05**	**89**	T	T	12 51 32.8			
	baz=275,slow=74								
KURBB	**Kurchatov Arra**	**42.68**	**320**	P	**P**	**12 06 25.6**	**+0.9**		
	0.2nm,0.3s,baz=112,slow=7.1,SNR=1.9								
	0.2nm,0.3s								
WRA	**Warramunga Arr**	**45.28**	**163**	P	P	12 06 37.7	-8.1		
	0.5nm,0.8s,baz=345,slow=8.9,SNR=1.8								
	0.5nm,0.8s								
BVAR	**Borovoye Array**	**48.24**	**321**	P	**P**	**12 07 10.0**	**+1.3**		
	0.3nm,0.5s,baz=112,slow=6.4,SNR=2.0								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**48.74**	**165**	P	P	12 07 06.0	-6.9		
	0.2nm,0.8s,baz=311,slow=7.2,SNR=1.5								
	0.2nm,0.8s								
ILAR	**Eielson Array**	**69.17**	**27**	P	**P**	**12 09 33.7**	**-0.6**		
	0.3nm,0.9s,baz=287,slow=6.3,SNR=2.7								
	0.3nm,0.9s								
YKA	**Yellowknife Ar**	**82.97**	**23**	P	**P**	**12 10 52.2**	**-0.7**		
	0.2nm,0.6s,baz=314,slow=4.9,SNR=6.3								
	0.2nm,0.6s								

BJI ***07*** *12:03:25.4±0.0,20.22S×177.89W,h569km,mb5.2/63, mB5.3/32*

NEIC ***07*** *12:03:26.7±1.9,20.59S±0.09×178.22W±0.07, h560km±5km,mb5.3/576,Error ellipse: s-maj=13.1km s-min=9.8km az=192.0*

IDC ***07*** *12:03:26.2±0.6,20.61S×178.20W,h569km±6km,mb4.6/25, mbtmp5.4/28,Error ellipse: s-maj=9.5km s-min=8.6km az=124.0*

NOU ***07*** *12:03:27.0,20.63S×178.12W,h576km,mb5.0/106,Fiji Islands Region*

MOS ***07*** *12:03:27.4±0.9,20.51S×178.28W,h588km,mb5.3/30, Error ellipse: s-maj=9.6km s-min=8.1km az=109.1*

GCMT ***07*** *12:03:28.7±0.2,20.53S±0.01×178.23W±0.02, h589km±1km,MW5.4/126,Moment Tensor Solution. s126,c207; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.61±.03; Mθθ 0.97±.05; Mϕϕ 0.63±.05; Mrθ -0.63±.05; Mθϕ 0.76±.04; Mϕr=0.26±.05; Best double couple: M₀1.73500×10¹⁷ NP1:ϕ57.00000°, δ56.00000°, λ-83.00000°. NP2:ϕ225.00000°, δ34.00000°, λ-100.00000°. Principal axes: T 1.7120, Plg11.0000°, Azm143.0000°; N 0.0460, Plg6.0000°, Azm234.0000°; P -1.7570, Plg77.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 07 12:03:27.0±0.3,20.64S±0.04×178.18W±0.04, h578km±3km,h579km;pP-P,n1493,σ1s05/1345,mb5.3/339, 102C-68D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**4.24**	**337**	P	**P**	**12 04 53.6**	**+0.9**
DGTI	**Dogotuki**	**4.75**	**335**	P	**P**	**12 04 57.1**	**+0.5**
YSA	**Yasawairara**	**5.61**	**314**	P	**P**	**12 05 04.1**	**+0.4**
NIUE	**Niue**	**7.93**	**80**	P	**P**	**12 05 24.6**	**-0.3**
	baz=7.8,SNR=16						
NIUE	**Niue**	**7.93**	**80**	P	**P**	**12 05 24.9**	**0.0**
NIUE	**Niue**	**7.93**	**80**	P	**P**	**12 05 24.7**	**-0.2**
RAO	**Raoul Island**	**8.58**	**178**	S	**S**	**12 07 09.8**	**-3.1**
	507nm,0.3s,baz=85,slow=21,SNR=5.8						
GLKZ	**Green Lake**	**8.59**	**178**	P	**P**	**12 05 30.0**	**-1.1**
GLKZ				S	**S**	**12 07 10.6**	**-2.4**
AFI	**Afiamalu**	**9.07**	**43**	P	**P**	**12 05 33.7**	**-2.5**
AFI	**Afiamalu**	**9.07**	**43**	P	**P**	**12 05 33.9**	**-2.3**
AFI	**Afiamalu**	**9.07**	**43**	P	**P**	**12 05 33.7**	**-2.5**
PINNC	**Pines Island,**	**13.51**	**259**	P	**P**	**12 06 21.0**	**-0.1**
PINNC	**Pines Island,**	**13.51**	**259**	P	**P**	**12 06 22.2**	**+1.1**
YATNC	**Mamie plateau,**	**13.98**	**262**	P	**P**	**12 06 26.1**	**+0.2**
OUENC	**Ouen Island, N**	**14.05**	**260**	P	**P**	**12 06 26.0**	**-0.6**
OUENC	**Ouen Island, N**	**14.05**	**260**	P	**P**	**12 06 26.3**	**-0.3**
DZM	**Mont Dzumac**	**14.39**	**262**	P	**P**	**12 06 29.7**	**-0.4**
DZM	**Mont Dzumac**	**14.39**	**262**	P	**P**	**12 06 30.4**	**+0.3**
DZM	**Mont Dzumac**	**14.39**	**262**	*e*Pn	**P**	**12 06 29.6**	**-0.5**
	140nm,0.8s						
DZM				*e*S	S	12 08 50.1	-10
	2μm,25.1s						
DZM	**Mont Dzumac**	**14.39**	**262**	P	**P**	**12 06 29.2**	**-0.9**
	71nm,0.6s,baz=82,slow=18,SNR=36						
ONTNC	**Ouen Toro**	**14.40**	**261**	P	**P**	**12 06 29.6**	**-0.4**
NOUC	**Port Laguerre**	**14.53**	**261**	P	**P**	**12 06 31.4**	**+0.1**
OUZ	**Omahuta**	**16.23**	**205**	P	**P**	**12 06 48.7**	**+1.4**
KOUNC	**Koumac, New Ca**	**16.41**	**267**	P	**P**	**12 06 50.0**	**+0.8**

SNGZ Shannon Statio 18.49 191 P **P** **12 07 07.4 -0.5**
KUTZ Kaahu Road 18.52 195 P **P** **12 07 09.3 +1.1**
PRGZ Paritu Road 18.53 190 P **P** **12 07 09.4 +1.1**
MTHZ Maungataniwha 18.65 192 P **P** **12 07 08.5 -0.8**
KNZ Kokohu 18.66 190 P **P** **12 07 09.2 -0.2**
RAHZ Arahi 18.66 192 P **P** **12 07 09.0 -0.5**
MRHZ Matea Rd 18.72 193 P **P** **12 07 09.6 -0.4**
MHGZ Mahia Peninsul 18.75 189 P **P** **12 07 10.6 +0.4**
WATZ Wairara 18.75 195 P **P** **12 07 10.6 +0.3**
HIZ Hauiti 18.80 197 P **P** **12 07 12.5 +1.8**
HIZ Hauiti 18.80 197 P **P** **12 07 13.5 +2.8**
HIZ Hauiti 18.80 197 P **P** **12 07 13.1 +2.5**
NMHZ Naumai 18.89 192 P **P** **12 07 10.7 -0.9**
RITZ Rihia Road 18.98 194 P **P** **12 07 12.3 -0.1**
ARHZ Aropaoanui 19.02 192 P **P** **12 07 12.9 +0.2**
KATZ Kakaramea 19.02 195 P **P** **12 07 12.7 -0.1**
BKZ Black Stump Fm 19.02 193 P **P** **12 07 11.3 -1.4**
BKZ Black Stump Fm 19.02 193 P **P** **12 07 10.9 -1.8**
BKZ Black Stump Fm 19.02 193 P **P** **12 07 10.9 -1.8**
NTVZ North Tongarir 19.14 195 P **P** **12 07 13.8 -0.1**
KRVZ Karewarewa 19.14 195 P **P** **12 07 13.2 -0.8**
TMVZ Te Maari 19.15 195 P **P** **12 07 12.9 -1.1**
ETVZ East Tongariro 19.17 195 P **P** **12 07 13.8 -0.3**
TWVZ Taurewa 19.17 195 P **P** **12 07 13.9 -0.3**
WTVZ West Tongariro 19.18 195 P **P** **12 07 13.4 -0.9**
NNVZ North Ngauruho 19.19 195 P **P** **12 07 13.4 -1.0**
OTVZ Oturere 19.20 195 P **P** **12 07 12.6 -2.0**
NGZ Ngauruhoe 19.23 195 P **P** **12 07 14.3 -0.5**
SNVZ South Ngauruho 19.23 195 P **P** **12 07 13.9 -0.9**
MCHZ McNeill Hill 19.25 192 P **P** **12 07 13.5 -1.3**
COVZ Chateau Observ 19.27 195 P **P** **12 07 14.0 -1.0**
KWHZ Kaweka Forest 19.29 193 P **P** **12 07 13.6 -1.5**
TUVZ Tukino 19.31 195 P **P** **12 07 14.2 -1.2**
FWVZ Far West T-bar 19.32 195 P **P** **12 07 14.2 -1.5**
MAVZ Matarangi 19.33 195 P **P** **12 07 15.6 -0.2**
WHVZ Whangaehu Hut 19.34 195 P **P** **12 07 14.7 -1.1**
TRVZ Turoa 19.36 195 P **P** **12 07 14.8 -1.3**
WNVZ Wahianoa 19.38 195 P **P** **12 07 14.2 -1.9**
PKVZ Pokaka 19.40 195 P **P** **12 07 16.1 -0.1**
MOVZ Moawhango 19.41 194 P **P** **12 07 15.4 -1.0**
BHHZ Black Hill Sta 19.43 193 P **P** **12 07 14.1 -2.3**
KRHZ Kereru 19.51 193 P **P** **12 07 15.1 -2.0**
KAHZ Kahuranaki 19.55 191 P **P** **12 07 17.1 -0.4**
KHEZ Kahui Hut 19.76 198 P **P** **12 07 21.2 +1.7**
PXZ Pawanui 19.79 191 P **P** **12 07 18.4 -1.2**
BFZ Birch Farm 20.53 192 P **P** **12 07 25.5 -0.9**
BFZ IAmb IAmb 12 07 30.1
comp=Z,46nm,0.8s
BFZ Birch Farm 20.53 192 P **P** **12 07 25.2 -1.1**
MRZ Mangatainoka R 20.65 194 P **P** **12 07 25.6 -1.8**
MRZ IAmb IAmb 12 07 27.6
comp=Z,46nm,0.4s
SNZO South Karori 21.47 195 P **P** **12 07 34.0 -0.7**
SNZO IAmb IAmb 12 07 34.6
comp=Z,81nm,0.7s
SNZO South Karori 21.47 195 P **P** **12 07 34.7 0.0**
TCW Tory Channel 21.48 196 P **P** **12 07 35.0 +0.1**
BHW Baring Head 21.52 194 P **P** **12 07 34.5 -0.8**
BHW IAmb IAmb 12 07 35.0
comp=Z,52nm,0.7s
PLWZ Palliser 21.59 193 P **P** **12 07 35.2 -0.7**
QRZ Quartz Range 21.62 199 P **P** **12 07 36.4 +0.3**
QRZ IAmb IAmb 12 07 37.2
comp=Z,49nm,0.7s
QRZ Quartz Range 21.62 199 P **P** **12 07 36.8 +0.7**
TKNZ Takaka Hill 21.68 198 P **P** **12 07 35.8 -0.9**
TUWZ Tuamarina 21.77 196 P **P** **12 07 36.1 -1.3**
THZ Tophouse 22.37 198 P **P** **12 07 43.2 +0.4**
THZ IAmb IAmb 12 07 44.3
comp=Z,38nm,0.5s
DSZ Denniston Nort 22.68 200 IAmb IAmb 12 07 46.0
comp=Z,93nm,1.0s
KHZ Kahutara 22.80 196 P **P** **12 07 45.5 -1.1**
KHZ IAmb IAmb 12 07 46.6
comp=Z,50nm,0.9s
KHZ Kahutara 22.80 196 P **P** **12 07 45.7 -0.9**
CTZ Chatham Island 23.07 177 P **P** **12 07 52.4 +3.5**
CTZ Chatham Island 23.07 177 P **P** **12 07 51.5 +2.6**
INZ Inchbonnie 23.68 199 P **P** **12 07 53.5 -0.9**
INZ IAmb IAmb 12 07 55.8
comp=Z,53nm,0.8s
AMCZ Amberley 23.75 197 P **P** **12 07 54.4 -0.6**
OXZ Oxford 24.05 198 IAmb IAmb 12 07 57.2
comp=Z,49nm,0.8s
RPZ Rata Peaks 24.70 199 P **P** **12 08 02.9 -0.6**
FOZ Fox Glacier 24.93 201 IAmb IAmb 12 08 07.1
comp=Z,55nm,1.1s
JCZ Jackson Bay 25.76 202 P **P** **12 08 13.3 +0.4**
ODZ Otahua Downs 26.03 198 P **P** **12 08 15.1 0.0**
MLZ Mavora Lakes 27.12 201 P **P** **12 08 24.9 +0.2**
PPT2 Papeete2 27.18 88 *e*S **S** **12 12 24.1 -0.9**
comp=Z,271nm,25.5s
PPT2 *e*S S 12 12 24.5 -0.5
comp=Z,142nm,45.5s
TIAR Tiarei 27.41 88 *e*P **P** **12 08 25.7 -1.9**
comp=Z,12nm,1.2s
DCZ Deep Cove 27.55 203 P **P** **12 08 29.0 +0.6**
DCZ IAmb IAmb 12 08 30.1
comp=Z,59nm,1.0s
WHZ Wether Hill Ro 27.64 201 P **P** **12 08 29.9 +0.6**
SYZ Scrubby Hill 27.83 199 P **P** **12 08 31.4 +0.6**
EIDS Eidsvold 28.64 255 P **P** **12 08 38.1 -0.2**
baz=29,SNR=16
EIDS Eidsvold 28.64 255 P **P** **12 08 38.5 +0.2**
EIDS Eidsvold 28.64 255 P **P** **12 08 38.8 +0.5**
ARMA Armidale 28.85 244 P **P** **12 08 40.8 +0.7**
baz=29,SNR=12
ARMA Armidale 28.85 244 P **P** **12 08 41.1 +1.0**
ARMA Armidale 28.85 244 P **P** **12 08 41.2 +1.0**
RK1H Rockhampton Ha 29.14 259 P **P** **12 08 43.3 +0.7**
MGCD Mangrove Creek 29.99 239 P **P** **12 08 49.8 +0.1**
baz=30,SNR=5.7
MGCD Mangrove Creek 29.99 239 P **P** **12 08 50.6 +0.8**
XMAS Kiritimati 30.35 44 P **P** **12 08 53.6 +0.5**
XMAS Kiritimati 30.35 44 P **P** **12 08 53.1 0.0**
CNB Canberra Magne 32.00 236 P **P** **12 09 08.1 +1.1**
baz=32,SNR=17
CNB Canberra Magne 32.00 236 P **P** **12 09 07.9 +0.8**
CAN Canberra 32.29 236 P **P** **12 09 09.6 +0.2**
CAN Canberra 32.29 236 P **P** **12 09 09.6 +0.2**
CAN pmax pmax
comp=Z,29nm,1.4s
YNG Young 32.46 238 P **P** **12 09 11.5 +0.6**
TV1H Townsville Har 32.91 266 P **P** **12 09 15.4 +0.6**
CTA Charters Tower 33.30 265 P **P** **12 09 18.7 +0.5**
CTAO Charters Tower 33.30 265 P **P** **12 09 18.7 +0.5**
CTAO Charters Tower 33.30 265 P **P** **12 09 18.8 +0.6**
CTAO Charters Tower 33.30 265 P **P** **12 09 18.7 +0.5**
CTAO pmax pmax
comp=Z,34nm,1.1s
CMSA Cobar Meteorol 34.07 244 P **P** **12 09 24.7 +0.3**
baz=34,SNR=37
CMSA Cobar Meteorol 34.07 244 P **P** **12 09 25.5 +1.1**
QLP Quilpie 34.85 253 P **P** **12 09 31.1 +0.1**
baz=35,SNR=8.9
QLP Quilpie 34.85 253 P **P** **12 09 32.1 +1.1**
GLAD Gladstone 35.10 227 P **P** **12 09 33.3 +0.5**
PMG Port Moresby 35.21 283 P **P** **12 09 34.4 +0.3**
PMG IAmb IAmb 12 09 35.3
comp=Z,93nm,1.4s
PMG Port Moresby 35.21 283 P **P** **12 09 34.9 +0.8**
PMG Port Moresby 35.21 283 *i* P **P** **12 09 33.8 -0.3**
PMG pmax pmax
comp=Z,72nm,1.4s
MTSU Mount Surprise 35.41 267 P **P** **12 09 35.8 +0.1**
baz=36,SNR=42
MTSU Mount Surprise 35.41 267 P **P** **12 09 36.8 +1.0**
TOO Toolangi 35.67 234 P **P** **12 09 38.1 +0.4**
baz=36,SNR=30
TOO Toolangi 35.67 234 P **P** **12 09 38.5 +0.8**
TOO Toolangi 35.67 234 P **P** **12 09 38.7 +1.0**
TOO Toolangi 35.67 234 P **P** **12 09 38.5 +0.8**
TOO pmax pmax
comp=Z,15nm,0.8s
TAU Tasmania Unive 36.40 225 P **P** **12 09 44.3 +0.8**
TAU Tasmania Unive 36.40 225 P **P** **12 09 44.1 +0.6**
TAU Tasmania Unive 36.40 225 P **P** **12 09 44.3 +0.8**
TAU pmax pmax
comp=Z,14nm,0.8s
BRAT Ballarat 36.85 234 P **P** **12 09 48.3 +1.0**
COEN Coen 37.42 274 P **P** **12 09 52.7 +0.5**
baz=38,SNR=7.2
COEN Coen 37.42 274 P **P** **12 09 53.0 +0.7**
COEN Coen 37.42 274 P **P** **12 09 53.0 +0.7**
STKA Stephens Creek 37.57 244 P **P** **12 09 54.0 +0.7**
baz=38,SNR=17
STKA Stephens Creek 37.57 244 P **P** **12 09 54.0 +0.7**
STKA Stephens Creek 37.57 244 P **P** **12 09 54.1 +0.8**
STKA Stephens Creek 37.57 244 *i* P **P** **12 09 53.9 +0.7**
STKA Stephens Creek 37.57 244 P **P** **12 09 53.3 0.0**
comp=Z,14nm,0.5s,baz=90,slow=9.8,SNR=40
STKA PcP **PcP** **12 11 56.4 +0.7**
comp=Z,11nm,0.7s,baz=35,slow=4.4,SNR=6.0
STKA ScP **ScP** **12 14 50.0 +1.4**
comp=Z,6.6nm,0.9s,baz=53,slow=3.0,SNR=6.3
comp=Z,14nm,0.5s
INKA Innaminka 37.99 251 P **P** **12 09 58.6 +1.9**
ARPS Mount Arapiles 38.26 236 P **P** **12 09 59.1 +0.3**
baz=38,SNR=8.9
ARPS Mount Arapiles 38.26 236 P **P** **12 10 00.2 +1.4**
MANU Manus Island 38.35 294 P **P** **12 10 00.8 +1.0**
MANU IAmb IAmb 12 10 01.6
comp=Z,68nm,0.9s
QIS Mount Isa 39.43 262 P **P** **12 10 07.9 -0.6**
baz=40,SNR=7.6
QIS Mount Isa 39.43 262 P **P** **12 10 08.7 +0.2**
HTT Hallett 40.01 242 P **P** **12 10 13.2 +0.2**
baz=40,SNR=32
HTT Hallett 40.01 242 P **P** **12 10 13.5 +0.5**
LCRK Leigh Creek 40.32 247 P **P** **12 10 16.1 +0.7**
BBOO Buckleboo 42.33 244 P **P** **12 10 31.2 -0.1**
baz=42,SNR=151
BBOO Buckleboo 42.33 244 P **P** **12 10 31.3 0.0**
BBOO Buckleboo 42.33 244 P **P** **12 10 31.2 0.0**
WAKE Wake Island 42.37 338 P **P** **12 10 31.6 +0.1**
OOD Oodnadatta 42.47 251 P **P** **12 10 34.0 +1.6**
MULG Mulgathing 43.91 247 P **P** **12 10 43.6 +0.1**
WR0 Warramunga Arr 44.22 262 P **P** **12 10 45.8 -0.3**
WR0 IAmb IAmb 12 10 47.4
comp=Z,90nm,1.3s
AS01 Alice Springs 44.27 257 P **P** **12 10 46.3 -0.2**
AS31 Alice Springs 44.32 257 P **P** **12 10 46.9 0.0**
ASAR Alice Springs 44.32 257 P **P** **12 10 47.0 +0.2**
ASAR Alice Springs 44.32 257 P **P** **12 10 46.7 -0.2**
comp=Z,47nm,0.6s,baz=97,slow=7.6,SNR=762
ASAR PcP **PcP** **12 12 18.4 +0.1**
comp=Z,23nm,0.9s,baz=102,slow=4.2,SNR=15
ASAR ScP **ScP** **12 15 17.2 +1.5**
comp=Z,2.3nm,0.8s,baz=106,slow=3.4,SNR=4.5
ASAR S **S** **12 16 37.5 -2.4**
comp=Z,22nm,1.0s,baz=94,slow=15,SNR=44
comp=Z,47nm,0.6s
PTCN Pitcairn Islan 44.35 105 P **P** **12 10 47.2 +0.2**
WB0 Warramunga Arr 44.39 262 P **P** **12 10 47.2 -0.2**
WB0 IAmb IAmb 12 10 48.0
comp=Z,63nm,0.5s
WB2 Warramunga Arr 44.40 262 P **P** **12 10 47.4 -0.1**
WB2 IAmb IAmb 12 10 48.1
comp=Z,115nm,1.2s
WRAB Tennant Creek 44.40 262 P **P** **12 10 47.4 -0.1**
WRAB Tennant Creek 44.40 262 P **P** **12 10 47.4 -0.1**
WRAB pmax pmax
comp=Z,50nm,0.9s
WRA Warramunga Arr 44.41 262 P **P** **12 10 47.4 -0.2**
WRA Warramunga Arr 44.41 262 P **P** **12 10 46.8 -0.8**
comp=Z,23nm,0.3s,baz=97,slow=7.4,SNR=1136
WRA PcP **PcP** **12 12 18.6 0.0**
comp=Z,8.6nm,0.8s,baz=98,slow=4.1,SNR=10
WRA ScP **ScP** **12 15 17.9 +1.8**
comp=Z,1.9nm,0.9s,baz=96,slow=4.8,SNR=2.8
WRA S **S** **12 16 38.7 -2.5**
comp=Z,7.3nm,0.9s,baz=96,slow=14,SNR=15
WRA PKiKP **PKiKP** **12 19 16.0 -0.5**
comp=Z,1.7nm,0.9s,baz=57,slow=0.2,SNR=4.9
comp=Z,23nm,0.3s
KHLU Kahalu`u 45.56 30 P **P** **12 10 56.5 +0.2**
HUH Hualalai 45.66 30 IAmb IAmb 12 10 58.3
comp=Z,142nm,1.0s
PUH Pauahi 45.69 31 IAmb IAmb 12 10 58.4
comp=Z,141nm,0.9s
MLH Mauna Loa 45.71 31 P **P** **12 10 58.4 +0.7**
POHA Pohakuloa 45.87 30 P **P** **12 10 59.2 +0.3**
POHA IAmb IAmb 12 11 08.7
comp=Z,123nm,0.9s
POHA Pohakuloa 45.87 30 P **P** **12 10 58.6 -0.2**
KEKH Kekaha 46.05 24 P **P** **12 11 00.3 +0.4**
KIP Kipapa 46.22 26 P **P** **12 11 01.9 +0.6**
KIP Kipapa 46.22 26 P **P** **12 11 01.1 -0.1**
KIP Kipapa 46.22 26 *i* P **P** **12 11 00.0 -1.2**
KIP pmax pmax
comp=Z,66nm,1.0s
KIP Kipapa 46.22 26 P **P** **12 11 01.2 -0.1**
HLK Haleakala 46.40 29 P **P** **12 11 03.2 +0.3**
OPA Opana 46.46 26 IAmb IAmb 12 11 04.6
comp=Z,154nm,1.1s
KDU Kakadu 47.78 271 P **P** **12 11 12.6 -0.5**
baz=48,SNR=44
KDU Kakadu 47.78 271 P **P** **12 11 13.0 -0.1**
MTN Manton Dam 48.99 271 P **P** **12 11 21.1 -1.0**
baz=49,SNR=26
MTN Manton Dam 48.99 271 P **P** **12 11 21.7 -0.3**
MTN Manton Dam 48.99 271 P **P** **12 11 21.9 -0.2**
FORT Forrest 49.08 247 P **P** **12 11 22.0 -0.5**
baz=49,SNR=41
FORT Forrest 49.08 247 P **P** **12 11 22.4 -0.2**
FORT IAmb IAmb 12 11 22.5
comp=Z,56nm,0.8s
FORT Forrest 49.08 247 P **P** **12 11 22.5 0.0**
WRKA Warakurna 49.26 254 P **P** **12 11 23.7 -0.3**
baz=49,SNR=333
WRKA Warakurna 49.26 254 P **P** **12 11 24.0 0.0**
KNRA Kununurra 50.48 266 P **P** **12 11 32.6 -0.3**
baz=50,SNR=23
KNRA Kununurra 50.48 266 P **P** **12 11 32.9 -0.1**
KNRA Kununurra 50.48 266 P **P** **12 11 33.1 +0.2**
FAKI Fak Fak 51.36 283 P **P** **12 11 39.2 -0.3**
FAKI Fak Fak 51.36 283 P **P** **12 11 39.8 +0.4**
FITZ Fitzroy Crossi 52.84 263 P **P** **12 11 50.0 +0.2**
baz=53,SNR=32
FITZ Fitzroy Crossi 52.84 263 P **P** **12 11 50.1 +0.2**
KMBL Kambalda 54.34 246 P **P** **12 11 59.8 -0.6**
baz=54,SNR=6.1
KMBL Kambalda 54.34 246 P **P** **12 12 00.2 -0.2**
NLAI Namlea 55.96 280 P **P** **12 12 11.0 -0.8**
comp=Z,36nm,1.3s
SOEI Soe 56.33 272 P **P** **12 12 16.3 +1.7**
SOEI IAmb IAmb 12 12 16.9
comp=Z,234nm,1.0s
SOEI Soe 56.33 272 P **P** **12 12 13.9 -0.6**
SOEI Soe 56.33 272 P **P** **12 12 14.9 +0.4**
comp=Z,248nm,1.0s,comp=Z,2\u03bcm
TNTI Ternate 57.33 285 P **P** **12 12 21.6 +0.4**
TNTI IAmb IAmb 12 12 22.3
comp=Z,124nm,1.1s
PSA00 Pilbara Seismi 57.47 257 P **P** **12 12 21.5 -0.5**
PSA00 Pilbara Seismi 57.47 257 P **P** **12 12 21.7 -0.4**
MEEK Meekatharra 57.71 251 P **P** **12 12 22.8 -0.8**
baz=58,SNR=13
MEEK Meekatharra 57.71 251 P **P** **12 12 23.1 -0.6**
SBA Scott Base 57.72 184 P **P** **12 12 26.4 +3.7**
SBA Scott Base 57.72 184 P **P** **12 12 26.4 +3.7**
SBA pmax pmax
comp=Z,57nm,1.5s
VNDA Vanda 57.75 185 P **P** **12 12 25.0 +2.0**
VNDA Vanda 57.75 185 P **P** **12 12 25.0 +2.0**
VNDA pmax pmax
comp=Z,19nm,1.4s
VNDA Vanda 57.75 185 P **P** **12 12 24.1 +1.1**
comp=Z,4.5nm,0.6s,baz=354,slow=7.0,SNR=21
VNDA ScP **ScP** **12 16 14.1 +1.5**
comp=Z,10nm,1.1s,baz=348,slow=6.8,SNR=4.9
comp=Z,4.5nm,0.6s
VNDA Vanda 57.75 185 P **P** **12 12 25.2 +2.2**
VNDA PcP **PcP** **12 13 09.1 +1.4**
VNDA PP **PP** **12 14 42.9 +2.8**
VNDA ScP **ScP** **12 16 14.5 +1.8**
KLBR Kellerberrin 57.84 245 P **P** **12 12 24.2 -0.2**
baz=58,SNR=11
KLBR Kellerberrin 57.84 245 P **P** **12 12 25.2 +0.8**
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.8 +0.3**
baz=58,SNR=5.3
NWAO P **P** **12 12 26.8 +0.3**
baz=58,SNR=5.3
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.8 +0.3**
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.7 +0.3**
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.8 +0.3**
NWAO pmax pmax
comp=Z,112nm,1.5s
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.6 +0.1**
NWAO Narrogin (SRO) 58.15 243 P **P** **12 12 26.4 -0.1**
MMRI Maumere 58.59 272 P **P** **12 12 29.5 -0.2**
MMRI IAmb IAmb 12 12 30.2
comp=Z,154nm,1.2s
BLDU Ballidu 58.84 246 P **P** **12 12 30.8 -0.4**
baz=59,SNR=17
BLDU Ballidu 58.84 246 P **P** **12 12 31.1 -0.1**
MUN Mundaring 59.11 244 P **P** **12 12 33.2 +0.3**
baz=59,SNR=8.5
MUN Mundaring 59.11 244 P **P** **12 12 33.4 +0.5**
MORW Morawa 59.62 248 P **P** **12 12 36.0 -0.3**
baz=60,SNR=8.5
MORW Morawa 59.62 248 P **P** **12 12 35.9 -0.4**
MORW Morawa 59.62 248 P **P** **12 12 36.3 -0.1**
LUWI Luwuk 60.79 281 P **P** **12 12 44.5 +0.2**
LUWI IAmb IAmb 12 12 45.9
comp=Z,166nm,1.1s
CCD Concordia, Ant 62.29 194 P **P** **12 12 54.6 +1.1**
CCD PcP **PcP** **12 13 26.8 +0.2**
CCD pP **pP** **12 14 49.2 +2.3**
GIRL Giralia 62.35 255 P **P** **12 12 54.3 -0.1**
baz=62,SNR=4.1
GIRL Giralia 62.35 255 P **P** **12 12 55.6 +1.3**
GIRL IAmb IAmb 12 12 58.1
comp=Z,285nm,1.4s
GIRL Giralia 62.35 255 P **P** **12 12 55.3 +1.0**
PLAI Plampang 62.70 271 P **P** **12 12 56.6 -0.1**
CASY Casey 63.76 205 P **P** **12 13 03.5 +0.9**
JAGI Jajag, Banyuwa 66.21 270 P **P** **12 13 18.0 -0.9**
JAGI IAmb IAmb 12 13 18.6
comp=Z,71nm,1.0s
JHJ2 Mitsune 66.82 322 P **P** **12 13 22.4 +0.2**
JHJ2 Mitsune 66.82 322 P **P** **12 13 22.9 +0.7**
JHJ Hachijo jima 2 66.84 322 P **P** **12 13 21.9 -0.5**
comp=Z,84nm,0.4s,baz=52,slow=22,SNR=8.4
comp=Z,84nm,0.4s
JSG Sagara 68.88 322 P **P** **12 13 36.1 +1.4**
QSPA South Pole Qui 69.43 180 P **P** **12 13 39.2 +1.5**
QSPA South Pole Qui 69.43 180 P **P** **12 13 38.5 +0.8**
comp=Z,8.6nm,0.5s,baz=321,slow=0.3,SNR=51
QSPA pP **pP** **12 15 35.6 +1.4**
comp=Z,21nm,1.1s,baz=356,slow=2.1,SNR=6.7
comp=Z,8.6nm,0.5s
QSPA South Pole Qui 69.43 180 P **P** **12 13 39.0 +1.3**
QSPA PcP **PcP** **12 13 57.5 +1.2**
QSPA pP **pwP** **12 15 36.4 -1.0**
KKM Kota Kinabalu 69.63 285 P **P** **12 13 40.3 +0.6**
KKM IAmb IAmb 12 13 41.2
comp=Z,112nm,1.1s
UGM Wanagama 69.79 269 P **P** **12 13 40.6 -0.1**
UGM Wanagama 69.79 269 P **P** **12 13 40.9 +0.3**
JMM Marumori 69.82 326 P **P** **12 13 40.7 +0.5**
JMM IAmb IAmb 12 13 41.4
comp=Z,76nm,0.9s
JGF Kuroka 70.02 323 P **P** **12 13 41.6 +0.1**
JOW Kunigami 70.12 310 P **P** **12 13 43.3 +1.0**
JOW IAmb IAmb 12 13 44.1
comp=Z,103nm,1.1s
JOW Kunigami 70.12 310 P **P** **12 13 43.5 +1.2**
JOW Kunigami 70.12 310 P **P** **12 13 42.8 +0.5**
comp=Z,81nm,1.1s,baz=124,slow=16,SNR=10
comp=Z,81nm,1.1s
MJAR Matsushiro Arr 70.22 324 P **P** **12 13 42.2 -0.5**
comp=Z,22nm,0.8s,baz=156,slow=5.7,SNR=43
comp=Z,22nm,0.8s
MAJO Matsushiro 70.22 324 P **P** **12 13 43.1 +0.4**
MAJO Matsushiro 70.22 324 P **P** **12 13 43.0 +0.4**
MAJO Matsushiro 70.22 324 *i* P **P** **12 13 41.5 -1.2**
MAJO pmax pmax
comp=Z,41nm,0.9s
MAJO Matsushiro 70.22 324 P **P** **12 13 42.4 -0.3**
MJB9 Matsu-Tunnel 70.23 324 P **P** **12 13 43.8 +1.0**
JMN Monobe 70.78 319 P **P** **12 13 47.0 +1.0**
JMN IAmb IAmb 12 13 47.9
comp=Z,119nm,1.2s
AMKA Amchitka 71.74 358 P **P** **12 13 50.9 -0.2**
SBUM Sibu 71.86 280 P **P** **12 13 53.6 +0.9**
ERM Erimo 71.86 331 *ce*P **P** **12 13 52.0 -0.1**
ERM pmax pmax
comp=Z,202nm,2.5s
JTM Tenmabayashi 71.90 329 P **P** **12 13 52.7 +0.4**
KIWB Kanaga Island 72.19 1 P **P** **12 13 54.1 +0.3**
ADK Adak 72.22 1 P **P** **12 13 53.5 -0.5**
ADK Adak 72.22 1 P **P** **12 13 53.2 -0.7**
ADK Adak 72.22 1 P **P** **12 13 53.5 -0.5**
ADK pmax pmax
comp=Z,174nm,1.0s
JNU Nakatsue 72.26 317 P **P** **12 13 55.1 +0.4**
JNU IAmb IAmb 12 13 55.8
comp=Z,146nm,1.1s
JNU Nakatsue 72.26 317 P **P** **12 13 54.5 -0.2**
comp=Z,79nm,0.9s,baz=109,slow=5.1,SNR=19
comp=Z,79nm,0.9s
GSTR Great Sitkin T 72.45 1 P **P** **12 13 55.3 0.0**
ATKA Atka Island 72.61 3 P **P** **12 13 56.0 -0.2**
XMI Christmas Isla 73.50 265 P **P** **12 12 02.4 +0.2**
XMIS Christmas Isla 73.52 265 P **P** **12 12 02.7 +0.4**
XMIS IAmb IAmb 12 14 03.5
comp=Z,67nm,1.0s
NIKH Nikolski High 73.75 6 P **P** **12 14 02.1 -0.6**
baz=189
JKA Kamikawa-asahi 73.77 332 P **P** **12 14 04.8 +1.8**
JKA IAmb IAmb 12 14 05.7
comp=Z,152nm,1.0s
ASAJ Asahikawa 73.77 332 P **P** **12 14 04.8 +1.8**
ASAJ pmax pmax
comp=Z,153nm,1.0s
ASAJ Asahikawa 73.77 332 P **P** **12 14 04.0 +1.0**
comp=Z,96nm,0.9s,baz=189,slow=6.2,SNR=55
comp=Z,96nm,0.9s
SSLB Sunanglung 73.91 304 IAmb IAmb 12 14 04.0
comp=Z,61nm,0.9s
TPUB Ta-pu 73.91 303 P **P** **12 14 03.4 -0.9**
YHNB Yeheng 74.04 305 IAmb IAmb 12 14 05.7
comp=Z,77nm,1.0s
TATO Taipei 74.12 305 P **P** **12 14 05.0 -0.3**
SKR Severo-Kuril's 74.55 343 *ce*P **P** **12 14 05.4 -1.8**
UNV Unalaska Valle 74.86 7 P **P** **12 14 08.2 -0.6**
UNV Unalaska Valle 74.86 7 P **P** **12 14 08.1 -0.8**
baz=191
YSS Yuzh-Sakhalins 75.94 334 P **P** **12 14 16.4 +1.3**
YSS IAmb IAmb 12 14 17.2
comp=Z,135nm,1.0s
YSS Yuzh-Sakhalins 75.94 334 \u2191 *i*P **P** **12 14 15.6 +0.6**
YSS *e*S **S** **12 23 14.8 +3.3**
YSS *e*SS **SS** **12 28 17.0 -4.4**
YSS pmax pmax
comp=Z,300nm,2.6s
YSS pmax pmax
comp=Z,140nm,1.0s
YSS smax smax
comp=E,300nm,8.8s
PET Petropavlovsk 76.06 346 P **P** **12 14 15.3 -0.3**
PET Petropavlovsk 76.06 346 *ce*P **P** **12 14 14.6 -0.9**
PET pmax pmax
comp=Z,108nm,1.7s
QZH Quanzhou 76.35 303 \u2193 *i*P **P** **12 14 18.1 +0.3**
QZH pmax pmax
comp=Z,78nm,1.1s
PEA0B Petropavlovsk- 76.36 345 P **P** **12 14 17.5 +0.2**
PEA0B Petropavlovsk- 76.36 345 *i* P **P** **12 14 16.0 -1.2**
PETK Petropavlovsk- 76.36 345 P **P** **12 14 17.1 -0.2**
PETK Petropavlovsk- 76.36 345 P **P** **12 14 16.9 -0.3**
comp=Z,76nm,0.9s,baz=130,slow=6.8,SNR=74
comp=Z,76nm,0.9s
TJN Taejon 76.56 318 IAmb IAmb 12 14 20.9
comp=Z,160nm,1.1s
TJN Taejon 76.56 318 *i* P **P** **12 14 18.7 0.0**
CNBA Chernabura Isl 76.83 11 IAmb IAmb 12 14 20.4
comp=Z,136nm,1.2s
CHNA Chernabura Isl 76.83 11 P **P** **12 14 19.2 -0.5**
baz=198
PMBI Palembang 76.85 272 P **P** **12 14 21.6 +0.7**
KSRS Korea Array 76.88 319 P **P** **12 14 21.1 +0.7**
comp=Z,24nm,1.0s,baz=140,slow=6.4,SNR=49
comp=Z,24nm,1.0s
KSAR Wonju Array Be 76.89 319 P **P** **12 14 21.3 +0.8**
KSAR Wonju Array Be 76.89 319 P **P** **12 14 21.3 +0.8**
KS19 Wonju Array Si 76.94 319 P **P** **12 14 21.2 +0.4**
SDPT Sand Point 77.18 10 P **P** **12 14 21.2 -0.3**
SDPT IAmb IAmb 12 14 21.9
comp=Z,154nm,0.8s
SDPT Sand Point 77.18 10 P **P** **12 14 21.2 -0.3**

SDPT	**Sand Point**	77.18	10	P		P		12 14 20.9	-0.7
	baz=197,SNR=7.3								
P08K	**Saint George I**	77.28	5	P		P		12 14 21.9	-0.2
	baz=188								
INCN	**Inchon**	77.70	318	P		P		12 14 25.7	+0.8
INCN				IAmb		IAmb	12 14 26.7		
	comp=Z,123nm,1.3s								
INCN	**Inchon**	77.70	318	P		P		12 14 25.7	+0.8
INCN				pmax		pmax			
	comp=Z,123nm,1.3s								
INCN	**Inchon**	77.70	318	P		P		12 14 25.4	+0.5
SPIA	**Saint Paul Isl**	77.80	4	P		P		12 14 24.7	-0.2
	baz=188								
UGL	**Uglegorsk**	77.91	335	*e*P		P		12 14 26.0	+0.3
UGL				pmax		pmax			
	comp=Z,190nm,0.9s								
SCI2	**San Clemente I**	77.99	48	P		P		12 14 27.7	+1.1
	baz=236,SNR=12								
SBC	**Santa Barbara**	78.03	46	P		P		12 14 27.9	+1.3
	baz=235								
MCCM	**Marconi Confer**	78.18	41	IAmb		IAmb	12 14 29.7		
	comp=Z,144nm,1.3s								
PKM	**Mcpherson Peak**	78.22	46	P		P		12 14 29.4	+1.4
	baz=234,SNR=19								
S14K	**Fog Glacier**	78.23	10	P		P		12 14 27.4	+0.1
	baz=198								
CIS	**Catalina Islan**	78.32	48	P		P		12 14 29.3	+0.9
	baz=236,SNR=22								
MSHR	**Mys Shultsa**	78.33	324	*i* P		P		12 14 28.2	+0.1
MSHR				pmax		pmax			
	comp=Z,66nm,0.9s								
PMPB	**Monarch Peak**	78.34	44	P		P		12 14 30.2	+1.8
SMMC	**Simmler**	78.34	45	P		P		12 14 29.9	+1.5
	baz=234,SNR=11								
BBGB	**Big Mountain B**	78.40	44	IAmb		IAmb	12 14 32.0		
	comp=Z,160nm,1.2s								
CHGN	**Chignik**	78.44	11	IAmb		IAmb	12 14 28.9		
	comp=Z,182nm,1.1s								
CHGN	**Chignik**	78.44	11	P		P		12 14 27.8	-0.5
	baz=199,SNR=18								
BCW	**Bitter Crk WRg**	78.51	46	IAmb		IAmb	12 14 31.7		
	comp=Z,65nm,0.8s								
PSTR	**Posyet**	78.57	324	*i* P		P		12 14 30.4	+1.0
FMP	**Fort Macarthur**	78.58	47	P		P		12 14 30.6	+0.9
	baz=236								
HOPS	**Hopland Field**	78.59	41	IAmb		IAmb	12 14 32.2		
	comp=Z,165nm,1.1s								
KCPM	**Cahto Peak**	78.71	40	IAmb		IAmb	12 14 33.1		
	comp=Z,130nm,1.0s								
TJX	**Tijuana**	78.78	49	IAmb		IAmb	12 14 33.4		
	comp=Z,187nm,1.0s								
OSI	**Osito Audit: C**	78.79	46	P		P		12 14 31.9	+1.1
	baz=235								
DECC	**Green Verdugo**	78.86	47	P		P		12 14 32.1	+0.9
	baz=236								
109C	**Camp Elliot, M**	78.95	49	P		P		12 14 32.5	+0.9
	baz=237,SNR=7.4								
KMRM	**Mail Ridge**	78.97	39	P		P		12 14 33.9	+2.2
USA0B	**Ussuriysk Arra**	78.98	326	P		P		12 14 31.9	+0.4
USA0B				IAmb		IAmb	12 14 33.7		
	comp=Z,97nm,1.1s								
USA0B	**Ussuriysk Arra**	78.98	326	*i* P		P		12 14 31.5	0.0
USRK	**Ussuriysk Ar.**	78.98	326	P		P		12 14 32.2	+0.7
	comp=Z,48nm,0.9s,baz=136,slow=3.5,SNR=63								
	comp=Z,48nm,0.9s								
ARVC	**Arvin**	79.01	46	P		P		12 14 33.0	+1.1
	baz=235,SNR=14								
TYV	**Tymovskoe**	79.10	336	*e*P		P		12 14 32.6	+0.6
TYV				*e*S		S		12 23 37.4	-7.0
TYV				pmax		pmax			
	comp=Z,500nm,3.6s								
TYV				pmax		pmax			
	comp=Z,107nm,1.4s								
TYV				smax		smax			
	comp=N,500nm,7.0s								
TYV				smax		smax			
	comp=E,700nm,7.0s								
VES	**Vestal, Richgr**	79.25	45	P		P		12 14 34.0	+0.9
	baz=235,SNR=19								
MURC	**Murrieta**	79.28	48	P		P		12 14 34.6	+1.2
	baz=236,SNR=21								
BFSC	**Mount Baldy Ra**	79.31	47	P		P		12 14 34.5	+0.8
	baz=236,SNR=29								
VOG	**Valley Oaks Go**	79.33	45	P		P		12 14 34.4	+0.9
	baz=235								
KHMM	**Horse Mountain**	79.37	39	IAmb		IAmb	12 14 36.8		
	comp=Z,119nm,1.1s								
KRPM	**Rodgers**	79.38	39	IAmb		IAmb	12 14 37.0		
	comp=Z,153nm,1.1s								
MONP2	**Monument Peak**	79.43	49	P		P		12 14 35.7	+1.2
	baz=237,SNR=70								
EDW2	**Edwards Air Fo**	79.44	47	P		P		12 14 35.4	+1.1
	baz=236,SNR=77								
BELA	**Belgrano 2**	79.44	173	P		P		12 14 33.9	+0.4
SII	**Sitkinak Islan**	79.52	13	P		P		12 14 34.8	+0.7
SII	**Sitkinak Islan**	79.52	13	P		P		12 14 34.8	+0.7
SII	**Sitkinak Islan**	79.52	13	P		P		12 14 34.4	+0.3
	baz=203,SNR=17								
IKP	**In-Ko-Pah, Jac**	79.52	49	P		P		12 14 36.1	+1.4
	baz=237,SNR=38								
ISA	**Isabella, Lake**	79.56	46	P		P		12 14 36.7	+1.8
ISA	**Isabella, Lake**	79.56	46	P		P		12 14 36.2	+1.3
	baz=235,SNR=48								
ISA	**Isabella, Lake**	79.56	46	P		P		12 14 36.7	+1.8
ISA				pmax		pmax			
	comp=Z,66nm,1.1s								
KRMB	**Red Mountain**	79.68	38	IAmb		IAmb	12 14 38.5		
	comp=Z,107nm,1.1s								
SLBS	**Sierra La Lagu**	79.73	60	P		P		12 14 37.9	+1.9
R16K	**Pilot Point**	79.79	11	P		P		12 14 35.5	+0.1
	baz=200,SNR=15								
PFO	**Pinyon Flats O**	79.80	48	P		P		12 14 36.9	+0.6
PFO	**Pinyon Flats O**	79.80	48	P		P		12 14 37.4	+1.2
	baz=237,SNR=37								
PFO	**Pinyon Flats O**	79.80	48	*i* P		P		12 14 35.8	-0.5
PFO				pmax		pmax			
	comp=Z,87nm,1.3s								
TPFO	**Pinon Flats**	79.80	48	P		P		12 14 37.4	+1.2
	baz=237,SNR=34								
BBRC	**Big Bear Solar**	79.83	48	P		P		12 14 37.5	+1.0
	baz=236,SNR=19								
NJ2	**Nanjing**	79.84	310	⇑P		P		12 14 36.7	+0.4
NJ2				pmax		pmax			
	comp=Z,45nm,1.0s								
NJ2				pmax		pmax			
	comp=Z,220nm,5.7s								
KSXB	**Camp Six Broad**	79.89	38	IAmb		IAmb	12 14 39.4		
	comp=Z,92nm,1.0s								
SWSC	**Sam W. Stewart**	79.90	49	P		P		12 14 38.1	+1.4
	baz=237,SNR=29								
KBO	**Bosley Butte**	79.93	38	IAmb		IAmb	12 14 39.8		
	comp=Z,155nm,1.4s								
LRMC	**Laurel Mtn Rad**	79.99	46	P		P		12 14 38.3	+1.1
	baz=236,SNR=34								
RRX	**Edison Barstow**	80.12	47	P		P		12 14 39.0	+1.3
	baz=236								
CWC	**Cottonwood Cre**	80.26	45	P		P		12 14 39.8	+1.1
	baz=235								
MDPB	**Devils Postpil**	80.29	44	IAmb		IAmb	12 14 41.2		
	comp=Z,87nm,1.0s								
KEBM	**Edson Butte**	80.29	37	IAmb		IAmb	12 14 41.3		
	comp=Z,118nm,1.2s								
OHAK	**Old Harbor**	80.33	13	IAmb		IAmb	12 14 39.7		
	comp=Z,138nm,1.5s								
OHAK	**Old Harbor**	80.33	13	P		P		12 14 38.7	+0.5
OHAK	**Old Harbor**	80.33	13	P		P		12 14 38.5	+0.3
	baz=204,SNR=10								
BELC	**Belle Mtn. Jos**	80.33	48	P		P		12 14 40.4	+1.3
	baz=237,SNR=62								
MPMC	**Manual Prospec**	80.44	46	P		P		12 14 40.8	+1.2
	baz=236,SNR=64								
MLAC	**Mammoth, Mammo**	80.44	44	P		P		12 14 41.1	+1.4
	baz=235								
GSC	**Goldstone, Bar**	80.48	47	P		P		12 14 41.0	+1.3
	baz=236,SNR=49								
YBH	**Yreka Blue Hor**	80.51	39	IAmb		IAmb	12 14 42.5		
	comp=Z,113nm,0.9s								
TIN	**Tinemaha, Big**	80.51	45	P		P		12 14 41.4	+1.5
	baz=235								
BC3	**Big Chuckawall**	80.53	49	P		P		12 14 41.6	+1.6
	baz=238,SNR=9.2								
MDJ	**Mudanjiang**	80.53	325	P		P		12 14 40.8	+1.1
MDJ				PP		PP		12 17 57.0	+2.7
MDJ				pmax		pmax			
	comp=Z,99nm,1.0s								
MDJ				pmax		pmax			
	comp=Z,290nm,5.0s								
MDJ	**Mudanjiang**	80.53	325	P		P		12 14 40.2	+0.6
MDJ				IAmb		IAmb	12 14 41.8		
	comp=Z,108nm,1.1s								
HEC	**Hector,Ludlow**	80.55	47	P		P		12 14 41.1	+1.1
	baz=237,SNR=77								
K02D	**Willamette Mer**	80.56	37	IAmb		IAmb	12 14 42.7		
	comp=Z,80nm,1.0s								
WAKR	**Walker**	80.56	43	IAmb		IAmb	12 14 42.9		
	comp=Z,162nm,1.2s								
GLA	**Glamis**	80.65	50	P		P		12 14 42.6	+2.0
	baz=238								
J01E	**Myrtle Point**	80.71	37	IAmb		IAmb	12 14 43.2		
	comp=Z,110nm,1.0s								
Q17K	**Contact Creek**	80.76	12	P		P		12 14 40.4	-0.3
	baz=201,SNR=78								
O14K	**Tigyukauivet M**	80.81	9	P		P		12 14 40.6	-0.1
	baz=196								
DSP	**Deep Springs**	80.86	44	IAmb		IAmb	12 14 44.1		
	comp=Z,98nm,1.2s								
PIX	**Pinacate**	80.86	51	IAmb		IAmb	12 14 44.0		
	comp=Z,72nm,1.0s								
HUMO	**Hull Mountain**	80.91	38	IAmb		IAmb	12 14 44.7		
	comp=Z,155nm,1.1s								
O15K	**Ungalikthiuk R**	80.95	9	P		P		12 14 41.1	-0.3
	baz=197								
YERR	**Yerington**	80.97	43	IAmb		IAmb	12 14 44.5		
	comp=Z,194nm,1.4s								
GMRC	**Granite Mounta**	80.99	48	P		P		12 14 43.6	+1.2
	baz=237,SNR=44								
KDAK	**Kodiak Island**	80.99	14	P		P		12 14 42.0	+0.3
KDAK				IAmb		IAmb	12 14 43.9		
	comp=Z,81nm,1.1s								
KDAK	**Kodiak Island**	80.99	14	P		P		12 14 42.0	+0.3
	baz=204								
KDAK	**Kodiak Island**	80.99	14	*i* P		P		12 14 41.5	-0.2
KDAK				pmax		pmax			
	comp=Z,200nm,1.6s								
Q16K	**King Salmon**	81.01	11	P		P		12 14 41.8	+0.1
	baz=200,SNR=40								
IRM	**Iron Mountain**	81.01	48	P		P		12 14 43.9	+1.5
	baz=238,SNR=33								
LHV	**Little Huntoon**	81.02	43	IAmb		IAmb	12 14 45.0		
	comp=Z,105nm,1.0s								
GRAC	**Grapevine Rang**	81.05	45	IAmb		IAmb	12 14 44.6		
	comp=Z,57nm,0.7s								
GRAC	**Grapevine Rang**	81.05	45	P		P		12 14 44.1	+1.6
	baz=236,SNR=24								
DBO	**Dodson Butte**	81.07	37	IAmb		IAmb	12 14 45.3		
	comp=Z,92nm,1.1s								
FURC	**Furnace Creek,**	81.09	46	P		P		12 14 43.5	+0.9
	baz=236,SNR=28								
P16K	**Nushagak River**	81.11	10	P		P		12 14 42.2	0.0
	baz=199,SNR=57								
TUQ	**Turquoise Moun**	81.16	47	P		P		12 14 44.3	+1.0
	baz=237,SNR=50								
COCO	**West Island**	81.16	260	P		P		12 14 44.8	+1.2
COCO				IAmb		IAmb	12 14 46.6		
	comp=Z,72nm,0.9s								
COCO	**West Island**	81.16	260	P		P		12 14 44.8	+1.2
COCO				pmax		pmax			
	comp=Z,72nm,1.0s								
COCO	**West Island**	81.16	260	P		P		12 14 43.9	+0.3
SHOC	**Shoshone, Teco**	81.17	46	P		P		12 14 44.0	+0.8
	baz=237,SNR=9.9								
BLYC	**Blythe**	81.23	49	IAmb		IAmb	12 14 46.2		
	comp=Z,72nm,1.0s								
113A	**Mohawk Valley,**	81.26	50	IAmb		IAmb	12 14 46.4		
	comp=Z,98nm,1.2s								
PAHR	**Pah Rah Range**	81.30	42	IAmb		IAmb	12 14 46.2		
	comp=Z,148nm,1.3s								
M11K	**Mekoryuk**	81.32	6	P		P		12 14 44.4	+1.1
	baz=191,SNR=8.3								
I03D	**Drain, OR**	81.37	37	IAmb		IAmb	12 14 46.6		
	comp=Z,220nm,1.4s								
N14K	**Kuskokwak Cree**	81.40	8	P		P		12 14 44.2	+0.5
	baz=196,SNR=32								
P17K	**Kvichak River**	81.53	11	P		P		12 14 44.3	-0.1
	baz=200,SNR=74								
214A	**Organ Pipe Nat**	81.54	51	IAmb		IAmb	12 14 48.1		
	comp=Z,101nm,1.3s								
214A	**Organ Pipe Nat**	81.54	51	P		P		12 14 46.9	+1.7
	baz=239,SNR=26								
GRNR	**Gornyy**	81.55	333	⇑*i* P		P		12 14 45.2	+0.4
GRNR				pmax		pmax			
	comp=N,10.0nm,1.2s								
GRNR				pmax		pmax			
	comp=E,60nm,1.1s								
K04D	**Chiloquin, OR**	81.62	38	IAmb		IAmb	12 14 47.9		
	comp=Z,162nm,1.0s								
O16K	**Kokwok River B**	81.62	10	IAmb		IAmb	12 14 45.1		
	comp=Z,105nm,0.9s								
O16K	**Kokwok River B**	81.62	10	P		P		12 14 44.1	-0.7
	baz=199,SNR=48								
M13K	**Dall Lake**	81.66	7	IAmb		IAmb	12 14 47.3		
	comp=Z,124nm,1.2s								
M13K	**Dall Lake**	81.66	7	P		P		12 14 46.1	+1.1
	baz=194,SNR=10.0								
KVN	**Kaiserville**	81.73	43	IAmb		IAmb	12 14 48.3		
	comp=Z,131nm,1.2s								
TPNV	**Topopah Spring**	81.76	46	IAmb		IAmb	12 14 48.7		
	comp=Z,82nm,0.9s								
TPNV	**Topopah Spring**	81.76	46	P		P		12 14 47.6	+1.2
	baz=237,SNR=129								
Q20K	**Shuyak Island**	81.79	13	P		P		12 14 46.0	+0.2
	baz=204,SNR=8.1								
SYI	**Shuyak Island**	81.79	13	IAmb		IAmb	12 14 47.1		
	comp=Z,137nm,1.1s								
PDMCI	**Parker Dam,Lak**	81.79	49	P		P		12 14 47.9	+1.6
	baz=238,SNR=44								
Q19K	**Cape Douglas,**	81.82	13	P		P		12 14 45.8	-0.1
	baz=203,SNR=13								
N15K	**Kwethluk River**	81.86	9	P		P		12 14 46.6	+0.5
	baz=197								
P18K	**Big Mountain,**	81.94	12	IAmb		IAmb	12 14 47.2		
	comp=Z,115nm,0.9s								
P18K	**Big Mountain,**	81.94	12	P		P		12 14 46.1	-0.4
	baz=202,SNR=34								
COR	**Corvallis**	81.96	36	P		P		12 14 48.4	+1.4
COR				IAmb		IAmb	12 14 49.7		
	comp=Z,97nm,1.1s								
COR	**Corvallis**	81.96	36	P		P		12 14 48.4	+1.4
COR				pmax		pmax			
	comp=Z,97nm,1.1s								
O17K	**Koliganek Bris**	81.96	11	P		P		12 14 46.1	-0.5
	baz=200,SNR=34								
I04A	**Tendick Farm,**	81.96	37	IAmb		IAmb	12 14 48.6		
	comp=Z,69nm,0.8s								
M14K	**Bethel**	82.16	8	P		P		12 14 48.2	+0.7
	baz=195,SNR=34								
Q09A	**Carvers**	82.20	44	IAmb		IAmb	12 14 50.7		
	comp=Z,146nm,1.0s								
M15K	**Kasigluk River**	82.28	9	P		P		12 14 48.9	+0.8
	baz=196								
CN2	**Changchun**	82.31	323	*e*P		P		12 14 48.8	+0.1
CN2				pmax		pmax			
	comp=Z,60nm,1.0s								
N16K	**Nishlik Lake**	82.35	10	P		P		12 14 49.3	+0.7
	baz=198								
O18K	**Koktuh Hills**	82.38	11	P		P		12 14 48.5	-0.3
	baz=202,SNR=84								
WHN	**Wuhan**	82.39	306	⇑P		P		12 14 50.3	+0.9
WHN				pmax		pmax			
	comp=Z,220nm,1.3s								
Y14A	**Wickenburg**	82.41	50	IAmb		IAmb	12 14 52.0		
	comp=Z,77nm,1.1s								
BNX	**BinXian**	82.44	325	⇓P		P		12 14 49.2	-0.2
BNX				pmax		pmax			
	comp=Z,69nm,1.0s								
BNX				pmax		pmax			
	comp=Z,420nm,3.8s								
S11A	**Rachel**	82.48	45	IAmb		IAmb	12 14 52.0		
	comp=Z,96nm,0.9s								
KLR	**Kul'dur**	82.56	330	*ce*P		P		12 14 49.6	-0.3
KLR				pmax		pmax			
	comp=Z,48nm,1.3s								
KLR	**Kul'dur**	82.56	330	P		P		12 14 50.1	+0.3
	comp=Z,22nm,1.0s,baz=124,slow=4.9,SNR=46								
	comp=Z,22nm,1.0s								
P19K	**Oil Pt**	82.57	12	IAmb		IAmb	12 14 50.6		
	comp=Z,108nm,0.8s								
P19K	**Oil Pt**	82.57	12	P		P		12 14 49.6	-0.1
	baz=204,SNR=21								
H04A	**Detroit Lake**	82.64	37	IAmb		IAmb	12 14 52.5		
	comp=Z,158nm,1.2s								
L14K	**Kuka Creek**	82.64	7	IAmb		IAmb	12 14 51.8		
	comp=Z,135nm,1.1s								
L14K	**Kuka Creek**	82.64	7	P		P		12 14 50.7	+0.7
	baz=195								
N17K	**Nushagak Hills**	82.66	10	P		P		12 14 50.1	0.0
	baz=200,SNR=16								
F03A	**Seaside**	82.68	35	IAmb		IAmb	12 14 53.0		
	comp=Z,148nm,1.1s								
PRN	**Pahroc Range**	82.82	46	IAmb		IAmb	12 14 54.3		
	comp=Z,119nm,1.0s								
M16K	**Timber Creek**	82.84	9	P		P		12 14 52.3	+1.2
	baz=198								
O19K	**Port Alsworth**	82.86	12	P		P		12 14 50.8	-0.3
	baz=202,SNR=115								
RADR	**Rader Ridge**	82.86	35	IAmb		IAmb	12 14 53.6		
	comp=Z,67nm,0.9s								
CNPM	**China Poot**	82.88	13	IAmb		IAmb	12 14 52.4		
	comp=Z,115nm,1.0s								
I05D	**Terrebonne, OR**	82.91	37	IAmb		IAmb	12 14 54.2		
	comp=Z,128nm,0.9s								
HOM	**Homer**	82.91	13	P		P		12 14 51.7	+0.3
	baz=205,SNR=13								
R11B	**Troy Canyon, C**	82.97	45	P		P		12 14 53.1	+0.7
	baz=237,SNR=59								
IPM	**Ipoh**	82.98	277	IAmb		IAmb	12 14 54.5		
	comp=Z,81nm,1.0s								
N18K	**Kilae Creek**	83.02	11	P		P		12 14 51.8	-0.2
	baz=201,SNR=16								
GULI	**GuiLin**	83.06	300	P		P		12 14 51.0	-2.0
BMN	**Battle Mountai**	83.07	42	IAmb		IAmb	12 14 55.1		
	comp=Z,105nm,1.0s								
O20K	**Slope Mountain**	83.09	13	P		P		12 14 52.1	-0.3
	baz=204,SNR=28								
L15K	**Ungalak Mounta**	83.12	8	P		P		12 14 52.8	+0.4
	baz=196								
BRLK	**Bradley Lake**	83.17	14	IAmb		IAmb	12 14 53.7		
	comp=Z,133nm,0.9s								
BRSE	**Bradley Lake S**	83.18	14	P		P		12 14 52.9	+0.1
	baz=206,SNR=32								
TUC	**Tucson**	83.20	52	P		P		12 14 55.8	+2.2
	baz=240								
WISH	**Wishkah**	83.33	34	IAmb		IAmb	12 14 56.1		
	comp=Z,83nm,0.9s								
HOOD	**Mount Hood Mea**	83.34	36	IAmb		IAmb	12 14 56.1		
	comp=Z,127nm,1.1s								
WVOR	**Wild Horse Val**	83.35	40	IAmb		IAmb	12 14 56.6		
	comp=Z,97nm,1.1s								
N19K	**Bonanza Creek**	83.40	11	IAmb		IAmb	12 14 54.3		
	comp=Z,74nm,0.9s								
N19K	**Bonanza Creek**	83.40	11	P		P		12 14 53.3	-0.7
	baz=202								
L16K	**Owhat River**	83.43	9	IAmb		IAmb	12 14 55.9		
	comp=Z,103nm,1.2s								
L16K	**Owhat River**	83.43	9	P		P		12 14 54.4	+0.5
	baz=198,SNR=40								
M17K	**Holitna River**	83.44	10	P		P		12 14 55.1	+1.2
	baz=200,SNR=51								
NLWA	**Neilton Lookou**	83.45	34	IAmb		IAmb	12 14 57.0		
	comp=Z,101nm,1.0s								
SVW2	**Sparrevohn**	83.47	11	P		P		12 14 54.1	-0.1
G05A	**Wamic**	83.47	37	IAmb		IAmb	12 15 11.1		
	comp=Z,85nm,1.1s								
K15K	**Wolf Creek Mou**	83.71	8	P		P		12 14 56.3	+1.0
	baz=196								
X16A	**Lo Mia Camp, P**	83.77	50	IAmb		IAmb	12 14 59.3		
	comp=Z,74nm,1.1s								
SEW	**Seward**	83.79	14	P		P		12 14 55.3	-0.4
	baz=207,SNR=10								
M18K	**Stony River**	83.80	11	P		P		12 14 56.0	+0.2
	baz=201								
I07A	**Izee**	83.81	38	IAmb		IAmb	12 14 58.9		
	comp=Z,95nm,1.0s								
LCMT	**Little Creek M**	83.83	47	IAmb		IAmb	12 14 59.1		
	comp=Z,74nm,1.2s								
Q12A	**Willow Creek R**	83.84	44	IAmb		IAmb	12 14 58.8		
	comp=Z,54nm,0.9s								
G06A	**Carlson Farm,**	83.85	37	IAmb		IAmb	12 14 58.6		
	comp=Z,74nm,1.0s								
MA2	**Magadan**	83.88	345	P		P		12 14 56.0	-0.2
MA2				IAmb		IAmb	12 14 56.8		
	comp=Z,87nm,1.2s								
MA2	**Magadan**	83.88	345	*i* P		P		12 14 54.0	-2.2
MA2				pmax		pmax			
	comp=Z,38nm,0.9s								
MA2	**Magadan**	83.88	345	P		P		12 14 55.5	-0.7
	comp=Z,41nm,0.9s,baz=146,slow=7.3,SNR=12								
	comp=Z,41nm,0.9s								
J14K	**Nanvaranak Lak**	83.91	7	P		P		12 14 56.6	+0.4
	baz=194								
J08A	**Circle Bar Ran**	83.98	39	IAmb		IAmb	12 14 59.7		
	comp=Z,98nm,1.1s								
L17K	**Donlin**	84.00	9	P		P		12 14 57.8	+1.0
	baz=199								
CAPN	**Captain Cook N**	84.02	13	P		P		12 14 57.9	+1.1
	baz=205,SNR=7.1								
O22K	**Cooper Landing**	84.07	14	P		P		12 14 56.7	-0.4
	baz=207,SNR=16								
GNW	**Green Mountain**	84.11	34	IAmb		IAmb	12 14 59.9		
	comp=Z,60nm,0.9s								
KNB	**Kanab**	84.12	47	IAmb		IAmb	12 15 00.9		
	comp=Z,135nm,1.5s								
P23K	**Montague Islan**	84.18	15	P		P		12 14 57.4	-0.3
	baz=209								
U15A	**North Rim**	84.19	48	IAmb		IAmb	12 15 01.3		
	comp=Z,99nm,1.0s								
N20K	**Mount Spurr**	84.20	12	P		P		12 14 56.8	-1.0
	baz=204,SNR=42								
CLRS	**Cowichan Lake**	84.24	33	IAmb		IAmb	12 15 00.4		
	comp=Z,73nm,1.0s								
GAMB	**Gambell**	84.29	3	P		P		12 14 58.8	+0.7
	baz=186								
SKLT	**Songkhla**	84.33	280	P		P		12 15 00.8	+1.3
L18K	**Granite Mounta**	84.34	10	IAmb		IAmb	12 15 00.2		
	comp=Z,77nm,0.9s								
L18K	**Granite Mounta**	84.34	10	P	

comp=Z,96nm,1.2s
TTA Tatalina 85.11 10 P **P** **12 15 03.1 +0.8**
TTA Tatalina 85.11 10 P **P** **12 15 02.4 +0.2**
baz=201,SNR=43
KNK Knik Glacier 85.19 14 IAmb IAmb 12 15 03.5
comp=Z,89nm,0.9s
KNK Knik Glacier 85.19 14 P **P** **12 15 02.3 -0.3**
baz=208,SNR=16
PMR Palmer 85.20 13 P **P** **12 15 02.3 -0.2**
PMR Palmer 85.20 13 P **P** **12 15 02.2 -0.4**
baz=207,SNR=37
RAGM Ragged Mountai 85.20 16 IAmb IAmb 12 15 04.0
comp=Z,104nm,1.2s
SIT Sitka 85.32 22 P **P** **12 15 03.9 +0.7**
W18A Petrified Fore 85.33 50 P **P** **12 15 05.2 +1.1**
baz=241
HEH HeiHe 85.34 328 ⇓P **P** **12 15 03.6 +0.1**
HEH pmax pmax
comp=Z,61nm,1.3s
HEH pmax pmax
comp=Z,190nm,4.6s
I17K Unalakleet 85.35 8 P **P** **12 15 03.5 +0.2**
baz=196,SNR=12
V35K Ketchikan 85.39 25 IAmb IAmb 12 15 05.8
comp=Z,109nm,1.1s
V35K Ketchikan 85.39 25 P **P** **12 15 04.8 +1.1**
baz=223,SNR=9.7
U33K Whale Pass 85.40 23 IAmb IAmb 12 15 05.9
comp=Z,102nm,1.0s
U33K Whale Pass 85.40 23 P **P** **12 15 04.9 +1.2**
baz=222,SNR=10
BERG Berg Lake 85.46 16 IAmb IAmb 12 15 05.4
comp=Z,140nm,1.2s
E08A Dider Farm, El 85.49 37 IAmb IAmb 12 15 06.6
comp=Z,80nm,0.9s
J18K Innoko River 85.50 9 IAmb IAmb 12 15 05.4
comp=Z,113nm,1.3s
J18K Innoko River 85.50 9 P **P** **12 15 04.3 +0.2**
baz=200
ANM Nome 85.51 6 P **P** **12 15 04.1 +0.1**
baz=192,SNR=6.9
HNS HongShan 85.52 313 ⇓P **P** **12 15 05.5 +0.8**
HNS pmax pmax
comp=Z,50nm,1.2s
BMO Blue Mountains 85.53 39 IAmb IAmb 12 15 06.6
comp=Z,46nm,0.8s
121A Cookes Peak, D 85.54 53 IAmb IAmb 12 15 08.1
comp=Z,68nm,1.1s
121A Cookes Peak, D 85.54 53 P **P** **12 15 06.9 +1.8**
baz=242,SNR=37
SML Sawmill 85.56 14 IAmb IAmb 12 15 18.2
comp=Z,65nm,1.1s
SML Sawmill 85.56 14 P **P** **12 15 04.2 -0.2**
baz=208,SNR=10
MFID Camas Ranch 85.60 40 IAmb IAmb 12 15 07.3
comp=Z,68nm,1.1s
CUT Chulitna 85.68 13 P **P** **12 15 04.5 -0.3**
baz=206,SNR=33
M23K Glacier View 85.69 14 P **P** **12 15 04.4 -0.6**
baz=208,SNR=15
LYN LuoYang 85.71 309 ⇓P **P** **12 15 06.9 +1.2**
LYN pmax pmax
comp=Z,120nm,0.9s
S31K Pelican 85.71 21 IAmb IAmb 12 15 07.1
comp=Z,52nm,1.0s
S31K Pelican 85.71 21 P **P** **12 15 06.2 +1.1**
baz=219
BMRM Bremner River 85.72 16 P **P** **12 15 05.3 +0.1**
baz=211,SNR=11
MESA MESA 85.75 17 P **P** **12 15 06.3 +0.7**
baz=214,SNR=8.4
PPLA Purkeypile 85.75 12 P **P** **12 15 03.6 -1.8**
baz=204,SNR=7.8
DUG Dugway, Tooele 85.78 44 P **P** **12 15 06.3 +0.2**
baz=239,SNR=15
SCM Sheep Creek Mo 85.81 14 P **P** **12 15 05.7 +0.1**
baz=209,SNR=27
K20K Telida 85.84 11 IAmb IAmb 12 15 06.8
comp=Z,136nm,1.3s
K20K Telida 85.84 11 P **P** **12 15 05.5 -0.1**
baz=203
KLU Klutina 85.84 15 IAmb IAmb 12 15 06.9
comp=Z,87nm,1.2s
KLU Klutina 85.84 15 P **P** **12 15 05.8 +0.1**
baz=210,SNR=14
BJI Beijing 85.87 315 P **P** **12 15 06.7 +0.4**
BJI S **S** **12 24 52.2 +0.2**
BJI pmax pmax
comp=Z,20nm,1.5s
H16K Elim 85.89 7 P **P** **12 15 05.9 +0.1**
baz=195,SNR=28
S32K Killisnoo 85.90 22 IAmb IAmb 12 15 07.3
comp=Z,59nm,1.3s
S32K Killisnoo 85.90 22 P **P** **12 15 06.7 +0.7**
baz=220
WRAK Wrangell Islan 85.92 24 IAmb IAmb 12 15 08.2
comp=Z,85nm,0.9s
WRAK Wrangell Islan 85.92 24 P **P** **12 15 07.2 +1.1**
baz=222,SNR=11
CRQE Cirque 85.92 16 P **P** **12 15 06.6 +0.3**
baz=213
ENH Enshi 85.98 304 P **P** **12 15 07.6 +0.5**
T33K Petersburg 85.98 23 P **P** **12 15 07.5 +1.1**
baz=222
TGL Tana Glacier 86.00 17 IAmb IAmb 12 15 07.9
comp=Z,96nm,1.0s
G15K Niukluk 86.06 6 P **P** **12 15 06.7 +0.1**
baz=193
PNL Peninsula 86.07 19 P **P** **12 15 07.5 +0.7**
PNL Peninsula 86.07 19 P **P** **12 15 07.1 +0.3**
baz=216,SNR=6.2
PINM Pinnacle 86.17 18 P **P** **12 15 07.4 0.0**
baz=215,SNR=5.1
J19K Poorman 86.17 10 P **P** **12 15 07.4 +0.2**
baz=201
Q16A Castle Valley 86.21 46 IAmb IAmb 12 15 11.1
comp=Z,51nm,1.2s
CAST Castle Rocks 86.25 11 P **P** **12 15 06.2 -1.4**
baz=204,SNR=76
N25K Chitina, Valde 86.27 15 IAmb IAmb 12 15 08.5
comp=Z,52nm,0.7s
N25K Chitina, Valde 86.27 15 P **P** **12 15 08.1 +0.3**
baz=211,SNR=17
TNA Tin City 86.29 4 P **P** **12 15 07.7 0.0**
baz=190,SNR=13
M24K Tolsona, Glenn 86.32 14 P **P** **12 15 08.4 +0.4**
baz=210,SNR=13
F14K Arctic Creek 86.32 5 P **P** **12 15 08.0 +0.2**
baz=191
GLB Gilahina Butte 86.32 16 IAmb IAmb 12 15 08.7
comp=Z,45nm,0.8s
TMUT Trail Mountain 86.38 46 IAmb IAmb 12 15 11.8
comp=Z,69nm,1.1s
WAT6 Susitna Watana 86.38 14 P **P** **12 15 08.2 -0.2**
baz=208,SNR=42
WAT1 Susitna Watana 86.42 13 P **P** **12 15 08.1 -0.4**
baz=208
PLID Pearl Lake 86.43 39 IAmb IAmb 12 15 10.5
comp=Z,52nm,0.8s
H17K Granite Mounta 86.46 8 P **P** **12 15 08.4 -0.1**
baz=197
SEY Seymchan 86.47 347 *i* P **P** **12 15 08.7 +0.1**
SEY pmax pmax
comp=Z,121nm,1.0s
SEY Seymchan 86.47 347 P **P** **12 15 08.4 -0.2**
comp=Z,64nm,0.8s,baz=147,slow=5.4,SNR=118
comp=Z,64nm,0.8s
MCARA McCarthy VSAT 86.48 16 IAmb IAmb 12 15 10.2
comp=Z,110nm,1.2s
MCARA McCarthy VSAT 86.48 16 P **P** **12 15 09.1 +0.4**
baz=213,SNR=14
ELIB Princess Elisa 86.48 187 *d*P **P** **12 15 08.8 -0.1**
comp=Z,23nm,0.9s
ELIB *dx* x 12 15 20.4
ELIB *dx* x 12 15 30.1
R32K Eaglecrest 86.53 21 P **P** **12 15 09.9 +0.9**
baz=220,SNR=5.6
P29M Windy Craggy 86.54 19 IAmb IAmb 12 15 11.1
comp=Z,68nm,1.1s
P29M Windy Craggy 86.54 19 P **P** **12 15 10.0 +0.9**
baz=218
HLID Hailey 86.55 41 IAmb IAmb 12 15 12.2
comp=Z,57nm,1.0s
HLID Hailey 86.55 41 P **P** **12 15 10.7 +1.1**
baz=237,SNR=83
GYA Guiyang 86.57 300 ⇓*i*P **P** **12 15 10.7 +0.6**
GYA pP pwP 12 17 19.0 +1.3
GYA pmax pmax
comp=Z,33nm,0.8s
GYA pmax pmax
comp=Z,370nm,6.0s
CTG Chitna Glacier 86.58 17 P **P** **12 15 09.8 +0.5**
baz=214,SNR=14
CTGM Chitina Glacie 86.58 17 IAmb IAmb 12 15 10.8
comp=Z,93nm,1.1s
JIS Juneau Island 86.58 21 IAmb IAmb 12 15 11.2
comp=Z,64nm,1.3s
J20K Nowinta River 86.58 10 IAmb IAmb 12 15 09.7
comp=Z,40nm,1.0s
J20K Nowinta River 86.58 10 P **P** **12 15 09.0 -0.1**
baz=202
KTH Kantishna Hill 86.59 12 IAmb IAmb 12 15 09.2
comp=Z,77nm,0.9s
G16K Koyuk River 86.62 7 P **P** **12 15 09.3 +0.1**
baz=195
TRF Thorofare Moun 86.62 12 P **P** **12 15 08.8 -0.7**
baz=206,SNR=67
CHUM Lake Minchumin 86.63 11 P **P** **12 15 08.4 -1.0**
baz=204,SNR=39
GCSA Galena City Sc 86.69 9 P **P** **12 15 09.8 +0.3**
baz=200,SNR=40
C09A Chrisman Ranch 86.69 36 IAmb IAmb 12 15 11.9
comp=Z,93nm,1.0s
F15K North Star Dit 86.70 6 P **P** **12 15 09.5 -0.1**
baz=193,SNR=7.5
SRU San Rafael Swe 86.75 46 IAmb IAmb 12 15 12.7
comp=Z,62nm,0.9s
P17A Butcher Ranch, 86.78 46 IAmb IAmb 12 15 13.3
comp=Z,55nm,1.2s
HARP HAARP 86.81 15 P **P** **12 15 10.5 +0.2**
baz=211,SNR=7.2
O29M Mount Kennedy 86.83 19 IAmb IAmb 12 15 12.4
comp=Z,58nm,1.1s
O29M Mount Kennedy 86.83 19 P **P** **12 15 11.2 +0.7**
baz=217
PLBC Pleasant Camp 86.84 20 P **P** **12 15 11.4 +1.0**
baz=219,SNR=16
H18K Honhosa River 86.87 8 P **P** **12 15 09.9 -0.5**
baz=199
VHRN Van Horn 86.88 56 IAmb IAmb 12 15 14.2
comp=Z,88nm,0.9s
Y22D IRIS PASSCAL I 86.89 52 IAmb IAmb 12 15 14.2
comp=Z,67nm,1.1s
Y22D IRIS PASSCAL I 86.89 52 P **P** **12 15 13.1 +1.6**
baz=243
Y22F Passcal Instru 86.89 52 P **P** **12 15 13.2 +1.7**
baz=243
DHY Denali Highway 86.89 14 IAmb IAmb 12 15 11.8
comp=Z,112nm,1.5s
DHY Denali Highway 86.89 14 P **P** **12 15 10.3 -0.5**
baz=209,SNR=21
G17K Kiwalik Mounta 86.91 7 P **P** **12 15 10.5 -0.1**
baz=196,SNR=32
MNTX Cornudas Mount 86.97 55 P **P** **12 15 13.2 +1.4**
baz=244,SNR=100
I20K Naaghedeneel 87.11 10 IAmb IAmb 12 15 12.9
comp=Z,104nm,1.1s
I20K Naaghedeneel 87.11 10 P **P** **12 15 11.8 +0.3**
baz=202,SNR=13
T35M Bob Quinn 87.12 24 P **P** **12 15 12.9 +1.0**
baz=224,SNR=6.4
MCK McKinley 87.15 13 P **P** **12 15 11.4 -0.4**
baz=207,SNR=37
TCUT Toone Canyon 87.17 44 IAmb IAmb 12 15 15.9
comp=Z,100nm,1.3s
P30M Million Dollar 87.17 19 P **P** **12 15 13.2 +1.2**
baz=218,SNR=23
SKAG Skagway 87.17 20 P **P** **12 15 13.3 +1.3**
baz=220,SNR=7.5
MVCO Mesa Verde 87.22 49 P **P** **12 15 13.6 +0.5**
baz=242,SNR=8.8
PAX Paxson 87.23 14 P **P** **12 15 11.8 -0.5**
baz=210,SNR=20
TIY Taiyuan 87.24 312 P **P** **12 15 14.1 +1.2**
TIY pmax pmax
comp=Z,61nm,0.7s
TX31 Lajitas Ar. Si 87.28 57 P **P** **12 15 14.7 +1.4**
TX31 IAmb IAmb 12 15 16.2
comp=Z,94nm,1.1s
TXAR Lajitas Array 87.28 57 P **P** **12 15 14.8 +1.5**
comp=Z,41nm,0.9s,baz=218,slow=5.5,SNR=335
TXAR pP **pP** **12 17 18.0 +0.7**
comp=Z,3.8nm,1.0s,baz=220,slow=5.4,SNR=2.4
TXAR PKKPbc **PKKPbc** **12 32 59.7 -1.0**
comp=Z,1.0nm,0.8s,baz=112,slow=3.0,SNR=8.3
comp=Z,41nm,0.9s
YUK8 Steele Glacier 87.28 17 P **P** **12 15 13.5 +0.7**
baz=216,SNR=34
BSUT Bildstream Ca 87.30 45 IAmb IAmb 12 15 16.7
comp=Z,48nm,1.1s
M26K Nabesna, AK 87.34 16 IAmb IAmb 12 15 14.3
comp=Z,86nm,1.0s
M26K Nabesna, AK 87.34 16 P **P** **12 15 13.6 +0.8**
baz=213
LL02 Futaleuf 87.34 135 P **P** **12 15 15.9 +2.5**
YUK6 Outpost Mounta 87.40 18 P **P** **12 15 14.0 +0.6**
baz=217,SNR=9.2
PV19 Morning Glory 87.41 47 P **P** **12 15 13.9 0.0**
PV19 IAmb IAmb 12 15 15.7
comp=Z,58nm,1.3s
S34M Telegraph Cree 87.46 23 P **P** **12 15 14.7 +1.4**
baz=223,SNR=36
YUK3 Moose Creek 87.49 17 P **P** **12 15 14.3 +0.6**
baz=215,SNR=54
H19K Roundabout Mou 87.49 9 IAmb IAmb 12 15 14.7
comp=Z,72nm,1.0s
H19K Roundabout Mou 87.49 9 P **P** **12 15 13.6 +0.3**
baz=200
G18K Tagagawik 87.54 8 P **P** **12 15 13.1 -0.5**
baz=198
HYT Haines Junctio 87.56 19 IAmb IAmb 12 15 15.8
comp=Z,48nm,1.0s
HYT Haines Junctio 87.56 19 P **P** **12 15 14.8 +0.8**
baz=218,SNR=18
NEW Newport 87.59 36 IAmb IAmb 12 15 15.8
comp=Z,42nm,1.1s
NEW Newport 87.59 36 P **P** **12 15 14.7 +0.4**
baz=235,SNR=26
TROLL Troll, Antarti 87.59 180 ⇓P **P** **12 15 14.0 -0.1**
comp=Z,364nm,0.6s
M27K Edge Creek, AK 87.59 16 P **P** **12 15 14.8 +0.7**
baz=214
MENT Mentasta 87.62 15 IAmb IAmb 12 15 15.5
comp=Z,57nm,1.0s
ANMO Albuquerque 87.63 51 P **P** **12 15 15.6 +0.6**
ANMO IAmb IAmb 12 15 17.1
comp=Z,66nm,1.2s
ANMO Albuquerque 87.63 51 P **P** **12 15 16.0 +1.0**
baz=243
ANMO Albuquerque 87.63 51 *i* P **P** **12 15 15.4 +0.4**
ANMO pmax pmax
comp=Z,66nm,1.2s
YUK4 Talbot Arm 87.64 18 P **P** **12 15 15.4 +0.9**
baz=217,SNR=15
ZEA Zeya 87.67 331 *e*P **P** **12 15 14.7 +0.3**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,0.9s
H20K Anotleneega Mo 87.69 10 P **P** **12 15 14.6 +0.3**
baz=202
ALPN Alpine 87.74 56 IAmb IAmb 12 15 17.9
comp=Z,70nm,0.9s
F17K Baldwin Pennin 87.75 7 IAmb IAmb 12 15 15.7
comp=Z,50nm,1.0s
F17K Baldwin Pennin 87.75 7 P **P** **12 15 14.4 0.0**
baz=196
L26K Log Cabin Wild 87.78 15 IAmb IAmb 12 15 16.3
comp=Z,66nm,1.1s
L26K Log Cabin Wild 87.78 15 P **P** **12 15 15.1 +0.3**
baz=212,SNR=30
P32M Atlin 87.81 21 IAmb IAmb 12 15 17.1
comp=Z,57nm,1.1s
P32M Atlin 87.81 21 P **P** **12 15 15.8 +0.8**
baz=221,SNR=15
Q32M Nakina River 87.83 22 IAmb IAmb 12 15 17.0
comp=Z,47nm,0.9s
Q32M Nakina River 87.83 22 P **P** **12 15 16.2 +0.9**
baz=222
SNAA Sanae 87.87 179 *i* P **P** **12 15 14.1 -1.2**
SNAA pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 87.87 179 P **P** **12 15 15.1 -0.2**
comp=Z,5.4nm,1.0s,baz=214,slow=3.6,SNR=4.0
comp=Z,5.4nm,1.0s
I21K Tanana 87.88 11 P **P** **12 15 14.9 -0.2**
baz=204,SNR=54
K24K Donnelly Dome 87.88 14 P **P** **12 15 15.5 +0.2**
baz=210,SNR=38
NEA2 Nenana 87.89 12 IAmb IAmb 12 15 15.2
comp=Z,30nm,0.8s
NEA2 Nenana 87.89 12 P **P** **12 15 14.2 -1.0**
baz=207,SNR=19
BVCY Beaver Creek 87.91 16 P **P** **12 15 16.1 +0.7**
baz=215,SNR=58
XLT XiLinHaoTe 87.93 319 *e*P **P** **12 15 16.0 0.0**
XLT pmax pmax
comp=Z,32nm,1.0s
XLT pmax pmax
comp=Z,200nm,5.9s
O30N Mendenhall 87.95 19 IAmb IAmb 12 15 17.0
comp=Z,46nm,0.8s
O30N Mendenhall 87.95 19 P **P** **12 15 16.2 +0.6**
baz=219,SNR=20
MLY Manley 87.97 11 IAmb IAmb 12 15 15.7
comp=Z,68nm,1.1s
MLY Manley 87.97 11 P **P** **12 15 14.7 -1.0**
baz=206,SNR=55
WRH Wood River Hil 87.98 13 IAmb IAmb 12 15 16.2
comp=Z,39nm,1.0s
G19K Purcell Mounta 87.98 8 IAmb IAmb 12 15 16.8
comp=Z,66nm,0.9s
G19K Purcell Mounta 87.98 8 P **P** **12 15 15.5 -0.1**
baz=200
PECS Pecos 87.99 55 IAmb IAmb 12 15 18.7
comp=Z,49nm,1.2s
VNA3 Neumayer Olymp 88.01 176 ⇓P **P** **12 15 15.6 -0.3**
comp=Z,41nm,0.7s
RIDG Independent Ri 88.04 14 IAmb IAmb 12 15 17.1
comp=Z,80nm,1.1s
RIDG Independent Ri 88.04 14 P **P** **12 15 16.1 +0.1**
baz=211,SNR=8.4
XAN Xi'an 88.08 307 ⇓P **P** **12 15 17.7 +0.8**
XAN pmax pmax
comp=Z,140nm,1.0s
F18K Selawik 88.09 7 P **P** **12 15 15.7 -0.4**
baz=197,SNR=23
RDMU Red Mountain 88.10 45 IAmb IAmb 12 15 18.9
comp=Z,46nm,1.1s
HDA Harding Lake 88.16 13 P **P** **12 15 16.2 -0.3**
baz=205,SNR=54
H21K Melozitna Rive 88.18 10 IAmb IAmb 12 15 17.7
comp=Z,41nm,0.8s
H21K Melozitna Rive 88.18 10 P **P** **12 15 16.7 +0.2**
baz=204
L27K Beaver Creek, 88.19 16 IAmb IAmb 12 15 18.1
comp=Z,65nm,1.2s
L27K Beaver Creek, 88.19 16 P **P** **12 15 17.0 +0.3**
baz=214
AHID Auburn Hatcher 88.20 43 IAmb IAmb 12 15 19.7
comp=Z,55nm,0.9s
WHY Whitehorse 88.24 20 IAmb IAmb 12 15 18.9
comp=Z,50nm,0.9s
WHY Whitehorse 88.24 20 P **P** **12 15 17.8 +0.6**
baz=220,SNR=18
DLBC Dease Lake 88.25 23 IAmb IAmb 12 15 19.3
comp=Z,49nm,1.0s
DLBC Dease Lake 88.25 23 P **P** **12 15 18.2 +1.0**
baz=224,SNR=16
E17K Hothamlet 88.31 6 P **P** **12 15 17.0 -0.1**
baz=195,SNR=55
I23K Minto, Yukon-K 88.33 12 P **P** **12 15 16.3 -0.9**
baz=207,SNR=27
COLA College 88.38 12 P **P** **12 15 16.7 -0.7**
COLA College 88.38 12 P **P** **12 15 17.0 -0.5**
COLA College 88.38 12 P **P** **12 15 16.8 -0.7**
baz=208
COLA College 88.38 12 P **P** **12 15 16.7 -0.7**
COLA pmax pmax
comp=Z,139nm,0.9s
SCRK Sand Creek 88.44 14 IAmb IAmb 12 15 19.2
comp=Z,45nm,1.1s
SCRK Sand Creek 88.44 14 P **P** **12 15 18.0 0.0**
baz=212,SNR=34
VNA2 Neumayer--Watz 88.45 177 ⇓P **P** **12 15 18.1 +0.2**
comp=Z,22nm,0.6s,baz=186,slow=3.6
ILAR Eielson Array 88.49 13 P **P** **12 15 17.2 -0.8**
comp=Z,43nm,1.0s,baz=222,slow=5.2,SNR=60
ILAR pP **pP** **12 17 23.4 +0.8**
comp=Z,4.0nm,1.1s,baz=224,slow=5.8,SNR=4.7
ILAR PKiKP **PKiKP** **12 20 13.3 -0.9**
comp=Z,0.8nm,0.9s,baz=315,slow=2.1,SNR=5.0
comp=Z,43nm,1.0s
F19K Shaleruckik Mo 88.54 8 IAmb IAmb 12 15 19.1
comp=Z,53nm,0.9s
F19K Shaleruckik Mo 88.54 8 P **P** **12 15 18.0 -0.1**
baz=199
P33M Teslin, Yukon 88.57 21 IAmb IAmb 12 15 20.3
comp=Z,33nm,0.9s
P33M Teslin, Yukon 88.57 21 P **P** **12 15 19.1 +0.5**
baz=222,SNR=18
M29M Somme Creek 88.58 17 P **P** **12 15 19.2 +0.6**
baz=217
N31M Braeburn, Yuko 88.60 19 P **P** **12 15 19.2 +0.5**
baz=219,SNR=21
R33M Jennings River 88.60 22 P **P** **12 15 19.9 +1.1**
baz=222
H22K Ishtalitna Cre 88.64 11 P **P** **12 15 18.6 -0.1**
baz=205
S22A 4UR Ranch, Cre 88.64 49 IAmb IAmb 12 15 22.0
comp=Z,65nm,1.4s
S22A 4UR Ranch, Cre 88.64 49 P **P** **12 15 20.9 +1.1**
baz=242,SNR=40
J25K Salcha River, 88.68 14 IAmb IAmb 12 15 19.9
comp=Z,58nm,1.0s
J25K Salcha River, 88.68 14 P **P** **12 15 18.8 -0.2**
baz=210
POKR Poker Plat Res 88.68 12 IAmb IAmb 12 15 19.1
comp=Z,65nm,1.0s
POKR Poker Plat Res 88.68 12 P **P** **12 15 18.0 -0.9**
baz=209,SNR=44
HIA Hailar 88.71 325 P **P** **12 15 19.4 -0.1**
HIA Hailar 88.71 325 P **P** **12 15 19.4 -0.1**
HIA pmax pmax
comp=Z,24nm,0.9s
SAND Sanderson 88.76 57 IAmb IAmb 12 15 22.0
comp=Z,40nm,1.0s
E18K Tukpahlearik C 88.77 7 IAmb IAmb 12 15 20.5
comp=Z,67nm,1.1s
E18K Tukpahlearik C 88.77 7 P **P** **12 15 19.4 +0.1**
baz=196,SNR=54
O20A White River Ci 88.78 46 P **P** **12 15 21.1 +0.8**
baz=242,SNR=29
D17K Noatak River 88.79 6 P **P** **12 15 19.7 +0.4**
baz=194
MNHN Monahans 88.84 56 IAmb IAmb 12 15 22.4
comp=Z,35nm,1.0s
G21K Allakaket 88.86 10 P **P** **12 15 19.8 +0.1**
baz=203,SNR=73
LOHW Long Hollow 88.94 42 IAmb IAmb 12 15 22.4
comp=Z,35nm,0.8s
K27K Chicken 88.94 15 P **P** **12 15 21.2 +1.0**
baz=214
J26L Joseph Creek 88.99 14 P **P** **12 15 21.1 +0.6**
baz=212,SNR=109
F20K Avaraart Lake 89.02 9 IAmb IAmb 12 15 21.6
comp=Z,61nm,1.0s
F20K Avaraart Lake 89.02 9 P **P** **12 15 20.8 +0.4**
baz=201
RDOG Red Dog Mine 89.15 6 IAmb IAmb 12 15 22.3
comp=Z,41nm,1.0s
RDOG Red Dog Mine 89.15 6 P **P** **12 15 21.2 +0.2**
baz=194,SNR=17
C16K Lisburne Hills 89.16 5 IAmb IAmb 12 15 22.1
comp=Z,57nm,1.1s
C16K Lisburne Hills 89.16 5 P **P** **12 15 21.3 +0.3**
baz=192
M30M Minto, Yukon 89.16 18 P **P** **12 15 21.6 +0.3**
baz=218,SNR=63
BILL Bilibino 89.16 354 P **P** **12 15 20.9 -0.1**
BILL IAmb IAmb 12 15 22.2
comp=Z,47nm,1.2s
BW06 Boulder Array 89.18 43 IAmb IAmb 12 15 23.5
comp=2nm,0.8s
BW06 Boulder Array 89.18 43 P **P** **12 15 22.5 +0.4**
baz=241,SNR=74
PD31 Pinedale Array 89.18 43 IAmb IAmb 12 15 23.5
comp=Z,49nm,0.9s
PDAR Pinedale Array 89.18 43 P **P** **12 15 22.3 +0.2**
comp=Z,32nm,0.7s,baz=212,slow=3.0,SNR=346
PDAR PKKP **PKKPbc** **12 32 55.6 -1.2**
comp=Z,1.1nm,0.9s,baz=64,slow=3.4,SNR=7.0
comp=Z,32nm,0.7s
N32M Quiet Lake 89.19 20 P **P** **12 15 22.4 +1.0**

baz=222
SMCO **Snowmass** 89.20 47 lAmb lAmb 12 15 24.4
comp=Z,44nm,1.1s
E19K **Redstone River** 89.20 8 P **P** **12 15 21.5 +0.2**
baz=200,SNR=165
L29M **L29M** 89.21 17 P **P** **12 15 22.2 +0.7**
baz=217,SNR=80
H24K **Noodor Dome** 89.23 12 P **P** **12 15 19.9 -1.6**
baz=208
KMI **Kunming** 89.26 297 ‖P **P** **12 15 24.3 +1.5**
KMI pmax pmax
comp=Z,60nm,1.0s
PLCA **Paso Flores** 89.30 134 P **P** **12 15 24.4 +1.8**
baz=240,slow=8.2,SNR=6.6
PLCA PKKP **PKKPbc** **12 32 54.5 -1.5**
comp=Z,2.8nm,0.9s,baz=86,slow=5.6,SNR=4.0
comp=Z,6.0nm,1.0s
BOZ **Bozeman (W)** 89.31 40 P **P** **12 15 23.2 +0.8**
baz=239,SNR=30
HHC **Hu-ho-hao-te** 89.33 314 *e*P **P** **12 15 23.4 +0.8**
HHC SS SS 12 31 35.9 -1.7
HHC pmax pmax
comp=Z,42nm,1.3s
HHC pmax pmax
comp=Z,190nm,4.9s
H17A **Grant Village** 89.34 42 lAmb lAmb 12 15 26.1
comp=Z,58nm,0.9s
H17A **Grant Village** 89.34 42 P **P** **12 15 25.1 +2.2**
baz=240,SNR=40
CRAI **Chiangrai** 89.40 292 lAmb lAmb 12 15 25.6
comp=Z,37nm,1.0s
PRP **Porcupine Dome** 89.43 13 lAmb lAmb 12 15 23.9
comp=Z,58nm,1.1s
PRP **Porcupine Dome** 89.43 13 P **P** **12 15 22.0 -0.5**
baz=210,SNR=18
YNR **Norris Junctio** 89.44 41 lAmb lAmb 12 15 27.3
comp=Z,62nm,1.3s
F21K **Alatna River** 89.51 9 lAmb lAmb 12 15 23.7
comp=Z,58nm,1.4s
F21K **Alatna River** 89.51 9 P **P** **12 15 22.7 -0.1**
baz=203
C17K **DeLong Mountai** 89.53 5 P **P** **12 15 22.8 0.0**
baz=194
LKWY **Lake** 89.54 41 lAmb lAmb 12 15 27.2
comp=Z,55nm,0.9s
G22K **Bettles** 89.55 10 P **P** **12 15 22.9 0.0**
baz=205
M31M **Drury Creek, Y** 89.58 19 lAmb lAmb 12 15 24.2
comp=Z,32nm,1.0s
M31M **Drury Creek, Y** 89.58 19 P **P** **12 15 23.2 0.0**
baz=220,SNR=17
SDCO **Great Sand Dun** 89.58 49 P **P** **12 15 24.6 +0.5**
baz=243,SNR=42
G23K **Bananza Creek** 89.61 11 lAmb lAmb 12 15 24.5
comp=Z,49nm,1.2s
G23K **Bananza Creek** 89.61 11 P **P** **12 15 23.3 +0.1**
baz=206,SNR=21
DAWY **Dawson** 89.64 16 P **P** **12 15 23.7 +0.3**
baz=216,SNR=62
I26K **Coal Creek Min** 89.76 14 P **P** **12 15 24.1 +0.2**
baz=212
EGAK **Eagle** 89.79 15 P **P** **12 15 24.2 +0.2**
baz=214,SNR=64
WTLY **Watson Lake, Y** 89.89 22 lAmb lAmb 12 15 26.5
comp=Z,41nm,1.0s
WTLY **Watson Lake, Y** 89.89 22 P **P** **12 15 25.5 +0.9**
baz=225,SNR=22
C18K **Utukok River** 89.89 6 lAmb lAmb 12 15 25.4
comp=Z,51nm,1.1s
C18K **Utukok River** 89.89 6 P **P** **12 15 24.3 -0.2**
baz=196
FARO **Faro, Yukon** 89.92 19 P **P** **12 15 24.9 +0.1**
baz=221,SNR=14
MSTX **Muleshoe** 89.94 54 P **P** **12 15 26.0 +0.4**
MSTX lAmb lAmb 12 15 27.2
comp=Z,58nm,1.0s
MSTX **Muleshoe** 89.94 54 P **P** **12 15 26.3 +0.6**
baz=245,SNR=30
OZNA **Ozona** 89.94 57 lAmb lAmb 12 15 26.7
comp=Z,24nm,0.8s
K29M **Barlow Dome** 89.96 17 P **P** **12 15 25.6 +0.6**
baz=218
CM31 **Chiang Mai Arr** 90.00 290 P **P** **12 15 27.2 +1.0**
SNR=28
CMAR **Chiang Mai Arr** 90.00 290 P **P** **12 15 27.6 +1.4**
comp=Z,38nm,0.9s,baz=122,slow=3.0,SNR=178
CMAR PKKPbc **PKKPbc** **12 32 54.0 +0.5**
comp=Z,2.1nm,0.6s,baz=292,slow=4.7,SNR=9.0
CMAR PKPPKP **P'P'df** **12 41 01.4 -1.8**
comp=Z,0.3nm,0.4s,baz=286,slow=4.2,SNR=4.6
comp=Z,38nm,0.9s
COLD **Coldfoot** 90.05 11 P **P** **12 15 25.6 +0.4**
baz=206,SNR=70
G24K **Hadweenzic Riv** 90.07 12 P **P** **12 15 25.4 0.0**
baz=209
D19K **Kuna River** 90.08 7 P **P** **12 15 25.3 -0.1**
baz=199,SNR=75
T25A **Trinidad** 90.09 50 lAmb lAmb 12 15 28.0
comp=Z,36nm,1.1s
T25A **Trinidad** 90.09 50 P **P** **12 15 27.0 +0.6**
baz=244,SNR=6.5
E20K **Nigu River** 90.09 8 P **P** **12 15 25.7 +0.2**
baz=201
CHTO **Chiang Mai** 90.13 290 P **P** **12 15 28.0 +1.3**
CHTO lAmb lAmb 12 15 29.0
comp=Z,56nm,0.9s
CHTO **Chiang Mai** 90.13 290 P **P** **12 15 27.8 +1.1**
CHTO **Chiang Mai** 90.13 290 P **P** **12 15 28.0 +1.3**
CHTO pmax pmax
comp=Z,56nm,1.0s
CHTO **Chiang Mai** 90.13 290 P **P** **12 15 28.1 +1.3**
MAYO **Mayo, Yukon** 90.21 18 P **P** **12 15 26.9 +0.9**
baz=219,SNR=41
BTO **Baotou** 90.25 314 *e*P **P** **12 15 27.4 +0.5**
BTO SS SS 12 31 55.9 +5.1
BTO pmax pmax
comp=Z,63nm,1.1s
BTO pmax pmax
comp=Z,350nm,6.5s
J29N **Klondike Camp** 90.26 16 lAmb lAmb 12 15 28.2
comp=Z,71nm,1.0s
J29N **Klondike Camp** 90.26 16 P **P** **12 15 27.1 +0.8**
baz=217,SNR=28
833A **Chaparral WMA,** 90.28 60 lAmb lAmb 12 15 29.1
comp=Z,59nm,1.1s
833A **Chaparral WMA,** 90.28 60 P **P** **12 15 28.1 +0.9**
baz=247
SGCY **Sterling City** 90.34 56 lAmb lAmb 12 15 30.2
comp=Z,24nm,0.9s
I27K **Kandik River** 90.36 14 P **P** **12 15 26.7 -0.1**
baz=214
Q24A **Divide** 90.37 48 lAmb lAmb 12 15 29.8
comp=Z,41nm,1.4s
Q24A **Divide** 90.37 48 P **P** **12 15 28.4 +0.6**
baz=244,SNR=16
G25K **Bearman Lake** 90.39 12 P **P** **12 15 27.1 +0.4**
baz=210
ISCO **Idaho Springs** 90.42 47 P **P** **12 15 28.6 +0.7**
baz=243,SNR=7.7
D20K **Etivluk River** 90.47 8 P **P** **12 15 27.3 +0.2**
baz=200
C19K **Lookout Ridge** 90.50 7 P **P** **12 15 27.6 +0.3**
baz=197,SNR=74
RLMT **Red Lodge** 90.52 41 P **P** **12 15 29.2 +1.1**
baz=241,SNR=5.8
B18K **Kokolik River** 90.52 6 P **P** **12 15 27.6 +0.3**
baz=195
E21K **Killik River** 90.57 9 lAmb lAmb 12 15 28.5
comp=Z,35nm,1.1s
E21K **Killik River** 90.57 9 P **P** **12 15 27.5 -0.1**
baz=203
E22K **Anaktuvuk Pass** 90.61 10 P **P** **12 15 27.9 0.0**
baz=205
PZH **PanZhiHua** 90.62 298 P **P** **12 15 29.6 +0.6**
PZH pmax pmax
comp=Z,30nm,1.2s
PZH pmax pmax
comp=Z,140nm,3.7s
I28M **Miner Creek** 90.63 15 lAmb lAmb 12 15 29.0
comp=Z,39nm,0.9s
I28M **Miner Creek** 90.63 15 P **P** **12 15 28.1 +0.1**
baz=215
N23A **Red Feather La** 90.69 46 lAmb lAmb 12 15 31.2
comp=Z,48nm,1.0s
N23A **Red Feather La** 90.69 46 P **P** **12 15 30.0 +0.9**
baz=243,SNR=32
F24K **Squaw Lake** 90.72 11 lAmb lAmb 12 15 29.9
comp=Z,44nm,1.2s
F24K **Squaw Lake** 90.72 11 P **P** **12 15 28.8 +0.4**
baz=208
CD2 **Chengdu** 90.72 303 P **P** **12 15 30.1 +0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
JCT **Junction City** 90.81 58 lAmb lAmb 12 15 30.9
comp=Z,25nm,0.8s
JCT **Junction City** 90.81 58 P **P** **12 15 29.8 +0.2**
baz=246
J30M **Hart River** 90.86 17 lAmb lAmb 12 15 30.6
comp=Z,38nm,1.2s
J30M **Hart River** 90.86 17 P **P** **12 15 29.4 +0.3**
baz=219,SNR=19
E23K **Chandalar** 90.89 10 P **P** **12 15 29.4 +0.2**
baz=207,SNR=30
H27K **Steamboat Moun** 90.91 14 P **P** **12 15 29.5 +0.2**
baz=214
SN01 **Snyder 1** 90.91 55 lAmb lAmb 12 15 31.3
comp=Z,45nm,0.9s
RTBA **Rita Blanca** 91.00 51 lAmb lAmb 12 15 31.6
comp=Z,43nm,1.2s
G26K **Porcupine Rive** 91.02 13 P **P** **12 15 30.1 +0.4**
baz=212
K22A **Casper** 91.10 44 P **P** **12 15 31.3 +0.5**
baz=243,SNR=27
C21K **Knifeblade Rid** 91.12 8 P **P** **12 15 30.6 +0.5**
baz=202
AMTX **Amarillo** 91.14 53 lAmb lAmb 12 15 32.5
comp=Z,22nm,0.9s
AMTX **Amarillo** 91.14 53 P **P** **12 15 31.5 +0.4**
baz=246
D22K **Ayikyak River** 91.16 9 P **P** **12 15 30.7 +0.3**
baz=204
PHWY **Pilot Hill** 91.20 46 lAmb lAmb 12 15 33.0
comp=Z,20nm,0.8s
F25K **Christian Rive** 91.20 12 P **P** **12 15 31.1 +0.5**
baz=207,SNR=20
I30M **Mount Dempster** 91.35 16 lAmb lAmb 12 15 32.6
comp=Z,49nm,1.0s
I30M **Mount Dempster** 91.35 16 P **P** **12 15 31.5 +0.1**
baz=219
TOLK **Toolik Lake Re** 91.43 10 lAmb lAmb 12 15 32.9
comp=Z,51nm,1.4s
TOLK **Toolik Lake Re** 91.43 10 P **P** **12 15 31.6 0.0**
baz=207,SNR=20
B21K **Ikpikpuk River** 91.58 8 lAmb lAmb 12 15 33.4
comp=Z,60nm,1.4s
B21K **Ikpikpuk River** 91.58 8 P **P** **12 15 32.4 +0.2**
baz=202
F26K **Sheenjek River** 91.58 12 P **P** **12 15 33.2 +0.8**
baz=212
EGMT **Eagleton** 91.64 39 lAmb lAmb 12 15 34.8
comp=Z,37nm,1.2s
EGMT **Eagleton** 91.64 39 P **P** **12 15 33.7 +0.6**
baz=241,SNR=13
H29M **Whitestone** 91.64 15 P **P** **12 15 33.0 +0.4**
baz=217
KOTAN **Kotaneelee Air** 91.64 24 P **P** **12 15 33.3 +0.6**
baz=229,SNR=9.6
BRIGG **Briggsdale** 91.65 47 lAmb lAmb 12 15 36.2
comp=Z,21nm,1.0s
E25K **Arctic Village** 91.67 12 lAmb lAmb 12 15 34.3
comp=Z,39nm,1.5s
E25K **Arctic Village** 91.67 12 P **P** **12 15 33.1 +0.4**
baz=210,SNR=16
APMT **Aspermont** 91.69 55 lAmb lAmb 12 15 34.9
comp=Z,40nm,1.0s
BRDY **Brady** 91.76 57 lAmb lAmb 12 15 35.3
comp=Z,25nm,1.2s
ABTX **Abilene, Hawle** 91.78 56 P **P** **12 15 34.5 +0.4**
baz=247
FLDN **Fort Liard** 91.94 24 lAmb lAmb 12 15 36.0
comp=Z,51nm,1.5s
FLDN **Fort Liard** 91.94 24 P **P** **12 15 34.8 +0.8**
baz=230
D24K **Happy Valley** 92.01 10 lAmb lAmb 12 15 35.7
comp=Z,33nm,1.1s
D24K **Happy Valley** 92.01 10 P **P** **12 15 34.7 +0.5**
baz=207
CCIG **Comitan** 92.04 73 lAmb lAmb 12 15 49.0
comp=Z,40nm,1.5s
KSCO **Kaye Shedlock'** 92.16 49 P **P** **12 15 36.3 +0.5**
baz=245,SNR=19
EPYK **Eagle Plains** 92.17 15 lAmb lAmb 12 15 36.0
comp=Z,53nm,1.1s
EPYK **Eagle Plains** 92.17 15 P **P** **12 15 35.0 0.0**
baz=218,SNR=24
YAK **Yakutsk** 92.18 338 P **P** **12 15 34.4 -0.8**
YAK **Yakutsk** 92.18 338 *d* iP **P** **12 15 34.0 -1.1**
YAK *e* 12 19 26.5
YAK *e*S **SKSac** **12 25 13.1 +0.4**
YAK *e* 12 25 49.2
YAK *e*SS **SS** **12 32 15.7 -1.2**
YAK pmax pmax
comp=Z,71nm,1.0s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=Z,174nm,4.2s
YAK pmax pmax
comp=N,101nm,4.8s
YAK pmax pmax
comp=E,50nm,3.8s
YAK smax smax
comp=N,115nm,4.1s
YAK smax smax
comp=E,56nm,3.8s
YAK **Yakutsk** 92.18 338 P **P** **12 15 34.3 -0.8**
comp=E,49nm,0.8s,baz=115,slow=2.7,SNR=27
comp=E,49nm,0.8s
B22K **Teshekpuk Lake** 92.40 8 lAmb lAmb 12 15 37.2
comp=Z,51nm,1.1s
B22K **Teshekpuk Lake** 92.40 8 P **P** **12 15 36.0 0.0**
baz=203
F28M **Old Crow** 92.42 14 P **P** **12 15 36.2 +0.1**
baz=216,SNR=14
C24K **Franklin Bluff** 92.53 10 P **P** **12 15 37.0 +0.4**
baz=208
D25K **Kavik River** 92.57 11 P **P** **12 15 36.3 -0.5**
baz=210
435B **Jarrell** 92.68 58 lAmb lAmb 12 15 39.9
comp=Z,27nm,1.1s
435B **Jarrell** 92.68 58 P **P** **12 15 38.8 +0.6**
baz=248
LZH **Lanzhou** 92.72 308 *e*P **P** **12 15 38.6 +0.1**
LZH pmax pmax
comp=Z,29nm,1.2s
TNCH **TengChong** 92.77 296 P **P** **12 15 40.1 +1.2**
TNCH pmax pmax
comp=Z,26nm,1.4s
TNCH pmax pmax
comp=Z,170nm,3.1s
G30M **tAoh Zraii Nji** 92.77 15 P **P** **12 15 37.6 -0.2**
baz=219
A21K **Barrow** 92.93 7 P **P** **12 15 38.3 -0.1**
baz=200
LAO **LASA Array** 93.13 41 lAmb lAmb 12 15 41.8
comp=Z,32nm,0.8s
LAO **LASA Array** 93.13 41 P **P** **12 15 41.4 +1.5**
baz=243,SNR=9.8
G31M **Satah River** 93.22 16 P **P** **12 15 39.6 -0.1**
baz=221
WHTX **Lake Whitney,** 93.24 57 P **P** **12 15 39.6 -1.1**
baz=248
WMOK **Wichita Mounta** 93.27 54 P **P** **12 15 40.5 -0.3**
baz=247
ELIS **Ellis County** 93.30 53 lAmb lAmb 12 15 42.2
comp=Z,18nm,0.9s
E28M **Babbage River** 93.30 13 lAmb lAmb 12 15 41.4
comp=Z,35nm,1.1s
E28M **Babbage River** 93.30 13 P **P** **12 15 40.3 +0.1**
baz=216
F30M **Barrier River** 93.37 15 P **P** **12 15 40.3 -0.2**
baz=219
RSSD **Black Hills** 93.38 44 P **P** **12 15 41.4 +0.1**
RSSD lAmb lAmb 12 15 42.6
comp=Z,52nm,1.4s
RSSD **Black Hills** 93.38 44 P **P** **12 15 41.5 +0.1**
baz=244
RSSD **Black Hills** 93.38 44 P **P** **12 15 41.4 +0.1**
RSSD pmax pmax
comp=Z,52nm,1.4s
OGNE **Ogallala** 93.38 47 lAmb lAmb 12 15 42.7
comp=Z,52nm,1.4s
OGNE **Ogallala** 93.38 47 P **P** **12 15 41.6 +0.3**
baz=246
E29M **Blow River** 93.49 14 P **P** **12 15 40.5 -0.5**
baz=217
D27M **Malcolm River** 93.53 12 lAmb lAmb 12 15 42.8
comp=Z,28nm,1.2s
FW06 **Azle** 93.53 56 lAmb lAmb 12 15 43.5
comp=Z,15nm,0.8s
U32A **Winter Ranch,** 93.73 53 lAmb lAmb 12 15 44.4
comp=Z,55nm,1.0s
F31M **Tsiigehtchic** 93.75 16 P **P** **12 15 42.0 -0.1**
baz=221,SNR=53
WRGLY **Wrigley** 93.87 22 P **P** **12 15 43.0 +0.2**
baz=230,SNR=6.2
D28M **Stokes Point** 94.06 13 P **P** **12 15 43.5 0.0**
baz=217
CBKS **Cedar Bluff** 94.14 50 lAmb lAmb 12 15 46.2
comp=Z,37nm,1.0s
CBKS **Cedar Bluff** 94.14 50 P **P** **12 15 44.8 +0.1**
baz=247
INK **Inuvik** 94.45 15 P **P** **12 15 44.7 -0.6**
INK lAmb lAmb 12 15 46.0
comp=Z,35nm,1.2s
INK **Inuvik** 94.45 15 P **P** **12 15 44.8 -0.6**
baz=221,SNR=27
INK **Inuvik** 94.45 15 P **P** **12 15 44.7 -0.6**
INK pmax pmax
comp=Z,35nm,1.2s
OK032 **Salt Plains WL** 94.48 52 lAmb lAmb 12 15 47.5
comp=Z,18nm,0.9s
W35A **Tecumseh** 94.87 54 lAmb lAmb 12 15 49.8
comp=Z,31nm,1.2s
DGMT **Dagmar** 95.14 40 P **P** **12 15 49.8 +0.8**
baz=245
BLOK **Blackwell** 95.21 53 lAmb lAmb 12 15 52.6
comp=Z,37nm,1.2s
ULN **Ulaanbaatar** 95.36 319 P **P** **12 15 49.7 -0.4**
ULN **Ulaanbaatar** 95.36 319 *i* P **P** **12 15 49.7 -0.4**
ULN pmax pmax
comp=Z,24nm,1.9s
ULN **Ulaanbaatar** 95.36 319 P **P** **12 15 50.7 +0.5**
SONM **Songino Array** 95.75 319 P **P** **12 15 51.4 -0.4**
comp=Z,2.2nm,0.8s,baz=128,slow=4.0,SNR=13
SONM pP **pP** **12 17 58.1 +0.5**
comp=Z,0.5nm,0.9s,baz=117,slow=1.9,SNR=1.9
SONM PKiKP **PKiKP** **12 20 27.0 -0.4**
comp=Z,0.3nm,0.3s,baz=94,slow=1.3,SNR=1.4
SONM PKKPbc **PKKPbc** **12 32 38.7 -1.3**
comp=Z,0.4nm,0.8s,baz=228,slow=2.6,SNR=4.8
comp=Z,2.2nm,0.8s
T35A **Sooner Cattle** 95.79 53 lAmb lAmb 12 15 54.6
comp=Z,19nm,1.2s
BGNE **Belgrade** 96.26 48 P **P** **12 15 54.9 +0.7**
baz=248
KSU1 **Kansas State U** 96.51 51 lAmb lAmb 12 15 57.5
comp=Z,16nm,0.8s
KSU1 **Kansas State U** 96.51 51 P **P** **12 15 55.4 0.0**
baz=249
E28A **Huff** 96.53 43 lAmb lAmb 12 15 56.1
comp=Z,11nm,0.8s
YKA **Yellowknife Ar** 96.71 25 P **P** **12 15 55.3 -0.3**
comp=Z,4.6nm,0.8s,baz=244,slow=4.5,SNR=66
YKA pP **pP** **12 18 01.8 +0.4**
comp=Z,1.0nm,1.1s,baz=238,slow=4.7,SNR=3.3
YKA PP **PP** **12 19 57.3 -3.4**
comp=Z,1.1nm,1.0s,baz=237,slow=7.4,SNR=4.5
YKA PKiKP **PKiKP** **12 20 28.0 -0.4**
comp=Z,0.5nm,0.7s,baz=265,slow=1.5,SNR=5.9
YKA PKKPbc **PKKPbc** **12 32 35.6 -2.2**
comp=Z,0.1nm,0.4s,baz=35,slow=2.2,SNR=4.3
comp=Z,4.6nm,0.8s
SUSD **Miller** 96.84 45 P **P** **12 15 56.8 +0.1**
baz=248
GTA **Gaotai** 96.93 309 P **P** **12 15 57.9 +0.5**
GTA pP pwP 12 18 08.4 +2.1
GTA pmax pmax
comp=Z,8.0nm,1.4s
MIAR **Mount Ida** 97.19 56 P **P** **12 15 58.8 +0.3**
baz=250
C36M **Paulatuk** 97.64 17 P Pdif 12 15 59.1 -0.5
baz=230,SNR=10.0
MDND **Maddock** 97.71 42 P Pdif 12 15 60.0 -0.5
baz=248
ZAK **Zakamensk** 98.63 321 *e*P Pdif 12 16 03.4 -1.2
ZAK pmax pmax
comp=Z,4.0nm,1.3s
A36M **Sachs Harbour** 99.06 15 P **Pdif** **12 16 05.9 0.0**
baz=229
CCM **Cathedral Cave** 100.12 53 P **Pdif** **12 16 12.9 +1.5**
baz=252
AGMN **Agassiz Nation** 100.21 42 P **Pdif** **12 16 10.8 -0.8**
baz=251
ULM **Lac du Bonnet** 100.85 40 P **Pdif** **12 16 15.1 +0.8**
comp=Z,1.4nm,0.7s,baz=270,slow=9.1,SNR=3.5
ULM PKiKP **PKiKP** **12 20 38.1 +1.9**
comp=Z,2.5nm,0.9s,baz=240,slow=0.9,SNR=4.0
SPMN **Marine on St.** 101.22 46 P **Pdif** **12 16 16.9 +0.7**
baz=252
EYMN **Ely** 102.89 44 P **Pdif** **12 16 24.8 +1.3**
baz=254
GOGA **Godfrey** 104.86 60 P **Pdif** **12 16 32.3 -0.3**
baz=255
ZSN **Zaisan** 109.53 314 *e*PKiKP **PKiKP** **12 20 51.6 -0.8**
baz=314
ZALV **Zalesovo Beam** 110.49 321 PKiKP **PKiKP** **12 20 52.8 -1.2**
comp=Z,7.1nm,0.6s,baz=154,slow=1.1,SNR=34
NRIK **Noril'sk** 110.63 338 *i* PKiKP **PKiKP** **12 20 53.0 -0.8**
NRIK **Noril'sk** 110.63 338 PKiKP **PKiKP** **12 20 53.0 -0.8**
comp=Z,2.6nm,0.5s,baz=77,slow=3.0,SNR=7.4
SSPA **Standing Stone** 110.78 53 P **PKiKP** **12 20 53.7 -1.3**
baz=260
MKAR **Makanchi Array** 111.17 313 Pdiff **Pdif** **12 17 02.3 +1.9**
comp=Z,1.2nm,0.9s,baz=90,slow=4.9,SNR=7.7
MKAR PKiKP **PKiKP** **12 20 54.3 -1.3**
comp=Z,7.2nm,0.7s,baz=70,slow=1.6,SNR=59
MKAR PKKPbc **PKKPbc** **12 31 53.0 -1.4**
comp=Z,2.2nm,0.8s,baz=276,slow=3.7,SNR=16
BINY **Binghamton** 112.43 52 P **PKiKP** **12 20 56.8 -1.3**
baz=262
UZB **Uzynbulak** 112.99 309 *e*PKiKP **PKiKP** **12 20 57.5 -1.9**
baz=309
UZB **Uzynbulak** 112.99 309 *i* PKiKP **PKiKP** **12 20 57.4 -1.9**
KPKS **Kokpek** 113.28 309 *e*PKiKP **PKiKP** **12 20 58.8 -1.1**
baz=310
KPKS **Kokpek** 113.28 309 *i* PKiKP **PKiKP** **12 20 58.7 -1.1**
ZHN **Zhinishke** 113.42 309 *e*PKiKP **PKiKP** **12 20 58.9 -1.3**
baz=309
ZHN **Zhinishke** 113.42 309 *i* PKiKP **PKiKP** **12 20 58.8 -1.3**
SATY **Saty** 113.43 309 *e*PKiKP **PKiKP** **12 20 59.2 -1.0**
baz=309
SATY **Saty** 113.43 309 *i* PKiKP **PKiKP** **12 20 59.1 -1.0**
TDK **Taldyqorghan** 113.64 311 *e*PKiKP **PKiKP** **12 20 59.6 -0.7**
baz=311
TDK **Taldyqorghan** 113.64 311 *i* PKiKP **PKiKP** **12 20 59.6 -0.7**
LONY **Lake Ozonia** 113.74 49 P **PKiKP** **12 20 59.5 -1.0**
baz=264
PAL **Palisades** 113.82 53 P **PKiKP** **12 21 00.6 -0.1**
baz=263
KURK **Kurchatov** 113.98 317 *c i*PKiKP **PKiKP** **12 20 59.7 -1.0**
KURK pmax pmax
comp=Z,28nm,1.3s
KURK **Kurchatov** 113.98 317 P **PKiKP** **12 20 59.7 -1.0**
KURBB **Kurchatov Arra** 114.03 317 PKP PKPdf 12 20 59.5 -1.3
comp=Z,11nm,0.7s,baz=95,slow=1.9,SNR=102
KURBB PP **PP** **12 22 03.0 -3.7**
comp=Z,1.7nm,0.9s,baz=93,slow=6.7,SNR=5.5
KURBB PKKPbc **PKKPbc** **12 31 44.1 -0.9**
comp=Z,1.5nm,0.9s,baz=274,slow=3.8,SNR=6.9
MDOK **Medeo** 114.43 309 *e*PKP PKPdf 12 21 00.7 -1.4
baz=309
MDOK **Medeo** 114.43 309 *e*PKiKP PKPdf 12 21 00.6 -1.5
CHKK **Chushkaly** 114.54 310 *e*PKP PKPdf 12 21 00.4 -1.7
baz=310
CHKK **Chushkaly** 114.54 310 *e*PKiKP PKPdf 12 21 00.4 -1.7
KSH **Kashi** 114.83 305 PKP **PKiKP** **12 21 03.0 +0.1**
L61B **Northampton** 114.89 52 P PKPdf 12 21 02.6 -0.2
baz=264
KUU **Kurty** 115.01 310 *i* PKP **PKPdf** **12 21 01.4 -1.7**
baz=310
KUU **Kurty** 115.01 310 *i* PKiKP **PKPdf** **12 21 01.3 -1.7**
LBNH **Lisbon** 115.60 50 P **PKPdf** **12 21 03.5 -0.6**
baz=266
HRV **Adam Dziewonsk** 115.73 52 P **PKPdf** **12 21 04.1 -0.3**
baz=265
SGDS **Sogindy** 116.21 309 *e*PKP **PKPdf** **12 21 04.3 -1.1**
baz=309
SGDS **Sogindy** 116.21 309 *e*PKiKP **PKPdf** **12 21 04.3 -1.1**
AAK **Ala-Archa** 116.25 308 PKPdf **PKPdf** **12 21 05.2 -0.5**
AAK **Ala-Archa** 116.25 308 PKPdf **PKPdf** **12 21 04.6 -1.1**

AAK	**Ala-Archa**	**116.25**	**308**	*c*	/PKIKP	**PKPdf**	**12 21 05.4**	**-0.2**
AAK					pmax	pmax			
	comp=Z,8.0nm,1.7s								
AAK	**Ala-Archa**	**116.25**	**308**		P	**PKPdf**	**12 21 04.8**	**-0.9**
HUMP	**Col San Antoni**	**116.55**	**79**			**PKPdf**	**12 21 06.5**	**-0.1**
BTLS	**Baital**	**116.73**	**311**	*i*	PKP	**PKPdf**	**12 21 05.4**	**-0.9**
	baz=311								
BTLS	**Baital**	**116.73**	**311**	*i*	PKIKP	**PKPdf**	**12 21 05.3**	**-0.9**
LMQ	**La Malbaie**	**116.89**	**46**			**PKPdf**	**12 21 05.6**	**-0.9**
FRB	**Frobisher Bay**	**116.99**	**28**		PKP	**PKPdf**	**12 21 04.8**	**-1.4**
	comp=Z,6.8nm,0.6s,baz=286,slow=3.7,SNR=20								
PKME	**Peaks-Kenny Pk**	**117.53**	**49**		P	**PKiKP**	**12 21 08.1**	**+0.3**
	baz=268								
NEEM	**North Greenlan**	**117.75**	**11**	*i*	P	**PKPdf**	**12 21 06.5**	**-1.2**
NEEM					IAmb	IAmb	12 21 08.2		
	comp=Z,15nm,0.7s								
D62A	**Allapoint, All**	**117.75**	**47**			**PKPdf**	**12 21 07.5**	**-0.6**
BRZS	**Berezniki**	**117.77**	**316**	*i*	PKP	**PKPdf**	**12 21 06.6**	**-1.5**
	baz=316								
BRZS	**Berezniki**	**117.77**	**316**	*i*	PKIKP	**PKPdf**	**12 21 06.6**	**-1.5**
PQI	**Presque Isle**	**118.46**	**47**			**PKPdf**	**12 21 08.9**	**-0.6**
DZA	**Taraz**	**118.59**	**308**	*e*	PKP	**PKPdf**	**12 21 08.8**	**-1.1**
	baz=308								
DZA	**Taraz**	**118.59**	**308**	*e*	PKIKP	**PKPdf**	**12 21 08.8**	**-1.1**
UPNV	**Upernavik**	**118.85**	**17**	*i*	P	**PKPdf**	**12 21 07.5**	**-2.0**
SCHQ	**Schefferville**	**118.89**	**38**		PKP	**PKPdf**	**12 21 08.6**	**-1.5**
	comp=Z,5.1nm,0.9s,baz=315,slow=2.9,SNR=6.6								
VOI	**Vohitsoka**	**119.03**	**229**		P	**PKPdf**	**12 21 11.5**	**-0.1**
BVAR	**Borovoye Array**	**119.08**	**320**		PKP	**PKPdf**	**12 21 09.6**	**-0.9**
	comp=Z,26nm,0.6s,baz=78,slow=1.3,SNR=148								
BRVK	**Borovoye**	**119.14**	**320**		PKPdf	**PKPdf**	**12 21 10.0**	**-0.6**
BRVK	**Borovoye**	**119.14**	**320**	*c*	/PKIKP	**PKPdf**	**12 21 09.9**	**-0.7**
BRVK					pmax	pmax			
	comp=Z,33nm,1.0s								
BRVK	**Borovoye**	**119.14**	**320**		P	**PKPdf**	**12 21 09.9**	**-0.7**
BDFB	**Brasilia**	**119.22**	**122**		PKP	**PKPdf**	**12 21 11.2**	**-0.9**
	comp=Z,3.3nm,0.5s,baz=175,slow=12,SNR=5.3								
KBL	**Kabul**	**119.81**	**299**		PKPdf	**PKPdf**	**12 21 12.5**	**-0.3**
KBL	**Kabul**	**119.81**	**299**		PKIKP	**PKPdf**	**12 21 12.5**	**-0.3**
KBL	**Kabul**	**119.81**	**299**		P	**PKPdf**	**12 21 12.5**	**-0.3**
	SNR=14								
MSEY	**Mahe Island**	**121.65**	**251**		P	**PKiKP**	**12 21 17.2**	**+0.3**
SPA0	**Spitsbergen Ar**	**122.00**	**356**	*e*	P	**PKPdf**	**12 21 15.2**	**-0.3**
SPITS	**Spitsbergen Ar**	**122.00**	**356**		PKP	**PKPdf**	**12 21 14.6**	**-0.9**
	comp=Z,36nm,0.8s,baz=69,slow=7.9,SNR=30								
SPB2	**Spitsbergen Ar**	**122.00**	**356**			**PKiKP**	**12 21 15.7**	**0.0**
SFJD	**Kangerlussuaq**	**123.14**	**22**			**PKPdf**	**12 21 17.6**	**-0.3**
SFJD	**Kangerlussuaq**	**123.14**	**22**	*i*	P	**PKPdf**	**12 21 16.6**	**-1.3**
SFJD	**Kangerlussuaq**	**123.14**	**22**		PKP	**PKPdf**	**12 21 16.4**	**-1.5**
	comp=Z,16nm,0.6s,baz=290,slow=1.6,SNR=12								
SUMG	**Summit**	**123.33**	**13**		PKPdf	**PKPdf**	**12 21 18.8**	**+0.1**
SUMG	**Summit**	**123.33**	**13**		PKIKP	**PKPdf**	**12 21 18.8**	**+0.1**
SUMG	**Summit**	**123.33**	**13**	*i*	P	**PKPdf**	**12 21 17.4**	**-1.2**
NUUK	**Nuuk**	**123.97**	**25**	*i*	P	**PKPdf**	**12 21 18.8**	**-0.7**
SVE	**Sverdlovsk**	**124.01**	**325**	*e*	PKIKP	**PKPdf**	**12 21 19.8**	**0.0**
SVE					pmax	pmax			
	comp=Z,54nm,0.9s								
SUR	**Sutherland**	**124.23**	**199**			**PKiKP**	**12 21 22.0**	**+0.2**
SUR	**Sutherland**	**124.23**	**199**		P	**PKPdf**	**12 21 21.5**	**+0.1**
DY2G	**Dye2**	**124.90**	**21**	*i*	P	**PKPdf**	**12 21 20.6**	**-1.0**
ARU	**Arti**	**125.22**	**325**		PKPdf	**PKPdf**	**12 21 22.4**	**+0.2**
ARU	**Arti**	**125.22**	**325**	*c*	/PKIKP	**PKPdf**	**12 21 21.8**	**-0.4**
ARU					pmax	pmax			
	comp=Z,89nm,1.3s								
ICESG	**Greenland Ices**	**125.38**	**17**	*i*	P	**PKPdf**	**12 21 20.8**	**-1.8**
NGCH	**Negor - Chabah**	**125.56**	**287**		P	**PKiKP**	**12 21 25.5**	**+1.3**
BOSA	**Boshof**	**126.05**	**206**		PKPdf	**PKiKP**	**12 21 25.4**	**0.0**
BOSA	**Boshof**	**126.05**	**206**		PKIKP	**PKiKP**	**12 21 25.4**	**0.0**
ABKAR	**Akbulak array**	**126.07**	**316**		PKPdf	**PKiKP**	**12 21 24.3**	**-0.2**
JLN	**Jalan Bani Buh**	**126.63**	**283**		P	**PKPdf**	**12 21 26.2**	**+0.2**
	SNR=5.3								
WBK	**Wadi Bani Khal**	**127.11**	**283**		P	**PKiKP**	**12 21 28.0**	**+0.6**
WSAR	**Wadi Sarin**	**127.52**	**284**		P	**PKiKP**	**12 21 28.2**	**-0.1**
MHTO	**MHTO**	**127.75**	**281**		P	**PKPdf**	**12 21 27.5**	**-0.6**
	SNR=5.3								
JMDO	**Jabal Madar**	**127.86**	**283**		P	**PKPdf**	**12 21 28.6**	**+0.3**
DQM	**DQM**	**127.95**	**280**		P	**PKPdf**	**12 21 28.2**	**-0.3**
BIDO	**Bidbid**	**128.02**	**284**		P	**PKPdf**	**12 21 28.7**	**+0.1**
SMDO	**Samad**	**128.02**	**284**		P	**PKPdf**	**12 21 28.7**	**+0.1**
	SNR=6.4								
SCO	**Scoresbysund**	**128.18**	**10**	*i*	P	**PKPdf**	**12 21 26.1**	**-1.3**
GEYT	**Alibeck**	**128.71**	**303**		PKPdf	**PKiKP**	**12 21 30.0**	**-0.3**
GEYT	**Alibeck**	**128.71**	**303**		PKP	**PKPdf**	**12 21 29.1**	**-0.4**
	comp=Z,14nm,0.7s,baz=77,slow=3.3,SNR=22								
GEYT					PP	**PP**	**12 23 42.9**	**-2.5**
	comp=Z,5.5nm,1.1s,baz=134,slow=4.3,SNR=3.7								
GYA0B	**ALIBECK ARRAY**	**128.71**	**303**		PKPdf	**PKiKP**	**12 21 30.0**	**-0.3**
BSY	**Bisya**	**128.75**	**283**		P	**PKPdf**	**12 21 29.9**	**-0.1**
HOQ	**Hoqain**	**128.77**	**284**		P	**PKPdf**	**12 21 30.1**	**+0.1**
ARA0	**ARCESS Array S**	**129.03**	**350**	*e*	P	**PKPdf**	**12 21 28.9**	**-0.2**
ARCES	**ARCESS Array B**	**129.03**	**350**		PKhKP	PKPpre	12 21 15.8		
ARCES	comp=Z,1.3nm,0.4s,baz=292,slow=0.9,SNR=10.0				PKP	**PKPdf**	**12 21 28.4**	**-0.7**
	comp=Z,7.0nm,0.4s,baz=78,slow=1.6,SNR=42								
APA	**Apatity**	**129.03**	**345**	↓*i*	/PKIKP	**PKPdf**	**12 21 27.0**	**-2.1**
APA				*i*	*PP	**pPKPdf**	**12 23 37.6**	**-5.5**
APA					pmax	pmax			
	comp=Z,12nm,1.0s								
ARQ	**Araqi**	**129.45**	**284**		P	**PKPdf**	**12 21 31.4**	**+0.1**
SOHO	**SOHO**	**129.55**	**285**	*i*	PKPdf	**PKPdf**	**12 21 30.9**	**-0.5**
	SNR=14								
SOHO	**SOHO**	**129.55**	**285**		P	**PKPdf**	**12 21 31.5**	**+0.1**
KTK1	**Kautokeino**	**129.87**	**350**	*e*	P	**PKPdf**	**12 21 24.9**	**-5.8**
MDH	**Madha**	**129.90**	**286**		PKPdf	**PKPdf**	**12 21 30.7**	**-1.4**
MDH	**Madha**	**129.90**	**286**		P	**PKPdf**	**12 21 31.4**	**-0.7**
DMTO	**DMTO**	**129.91**	**276**		P	**PKPdf**	**12 21 31.7**	**-0.6**
UOSS	**Minazif**	**129.94**	**286**		PKPdf	**PKPdf**	**12 21 30.8**	**-1.4**
UOSS	**Minazif**	**129.94**	**286**	*i*	PKPdf	**PKPdf**	**12 21 30.8**	**-1.4**
	SNR=8.1								
UOSS	**Minazif**	**129.94**	**286**		P	**PKPdf**	**12 21 31.3**	**-0.8**
HATD	**Hatta, Dubai**	**130.00**	**286**	*i*	PKPdf	**PKPdf**	**12 21 32.0**	**-0.3**
	SNR=10								
HATD	**Hatta, Dubai**	**130.00**	**286**		P	**PKPdf**	**12 21 32.1**	**-0.2**
	SNR=5.9								
MSFE	**Esma-Masafi**	**130.03**	**286**	*i*	PKPdf	**PKPdf**	**12 21 32.0**	**-0.4**
	SNR=6.0								
MASF	**Masafi**	**130.03**	**286**		P	**PKPdf**	**12 21 32.1**	**-0.3**
ASHO	**Ashiyiah**	**130.05**	**285**	*i*	PKPdf	**PKPdf**	**12 21 32.0**	**-0.4**
	SNR=12								
ASHO	**Ashiyiah**	**130.05**	**285**		P	**PKPdf**	**12 21 32.4**	**0.0**
	SNR=6.9								
ALNE	**Al Ain**	**130.25**	**284**		PKPdf	**PKPdf**	**12 21 32.9**	**+0.2**
ALNE	**Al Ain**	**130.25**	**284**		P	**PKPdf**	**12 21 33.0**	**+0.2**
	SNR=6.1								
NAZ	**Nazwa, Dubai**	**130.44**	**286**		PKPdf	**PKPdf**	**12 21 33.2**	**+0.1**
NAZ	**Nazwa, Dubai**	**130.44**	**286**		P	**PKPdf**	**12 21 33.3**	**+0.2**
	SNR=6.9								
ASUD	**Al Ashush, Dub**	**130.70**	**285**		PKPdf	**PKPdf**	**12 21 33.4**	**-0.2**
ASUD	**Al Ashush, Dub**	**130.70**	**285**		P	**PKPdf**	**12 21 33.2**	**-0.4**
DOK	**Doka**	**130.86**	**277**		P	**PKPdf**	**12 21 33.6**	**-0.4**
WHFO	**Wadi Hawf**	**131.05**	**276**		P	**PKPdf**	**12 21 34.2**	**-0.3**
ABTO	**Aybut**	**131.37**	**275**		P	**PKPdf**	**12 21 35.5**	**+0.3**
KLMR	**Klimovskoe**	**131.94**	**336**	*e*	PKIKP	**PKPdf**	**12 21 32.8**	**-2.0**
KLMR					pmax	pmax			
	comp=Z,47nm,1.3s								
STEI	**Steigen**	**131.97**	**353**	*e*	P	**PKPdf**	**12 21 33.8**	**-0.8**
BELG	**Belogornoye**	**132.61**	**323**	*i*	PKIKP	**PKPdf**	**12 21 35.2**	**-1.1**
JRN	**Qarnain Island**	**132.97**	**285**		P	**PKPdf**	**12 21 37.9**	**+0.1**
TRNA	**Turayna**	**134.43**	**285**		P	**PKiKP**	**12 21 41.5**	**-0.6**
SHMA	**Al-Shehemyia**	**134.75**	**286**		P	**PKiKP**	**12 21 42.5**	**-0.2**
FINES	**FINESS Array B**	**135.86**	**344**		PKhKP	PKPpre	12 21 28.6		
	comp=Z,2.1nm,0.6s,baz=19,slow=2.9,SNR=11								
FINES					PKP	**PKPdf**	**12 21 40.8**	**-1.3**
	comp=Z,30nm,1.0s,baz=44,slow=2.1,SNR=14								
FINES					SKPbc	**SKPbc**	**12 24 21.4**	**+1.3**
	comp=Z,6.3nm,0.8s,baz=62,slow=4.5,SNR=7.5								
LSZ	**Lusaka**	**135.90**	**218**		PKPdf	**PKPdf**	**12 21 44.2**	**+0.4**
LSZ	**Lusaka**	**135.90**	**218**		PKIKP	**PKPdf**	**12 21 44.2**	**+0.4**
LSZ	**Lusaka**	**135.90**	**218**		P	**PKPdf**	**12 21 44.5**	**+0.7**
MOS	**Moscow**	**135.94**	**332**	*i*	PKIKP	**PKPdf**	**12 21 40.8**	**-1.6**
MOS					pmax	pmax			
	comp=Z,59nm,0.8s								
VRH	**Novokhopyorsk**	**136.42**	**324**	*e*	PKIKP	**PKPdf**	**12 21 41.2**	**-2.3**
VRH					pmax	pmax			
	comp=Z,39nm,0.6s								
OBN	**Obninsk**	**136.80**	**331**	*i*	PKIKP	**PKPdf**	**12 21 43.7**	**-0.3**
OBN					pmax	pmax			
	comp=Z,84nm,1.7s								
LPSR	**Galich'ya Gora**	**137.16**	**327**	*e*	PKIKP	**PKPdf**	**12 21 44.0**	**-0.8**
LPSR					pmax	pmax			
	comp=Z,50nm,1.3s								
MEF	**Metsahovi**	**137.34**	**344**	*e*	P	**PKPdf**	**12 21 43.9**	**-1.0**
TSUM	**Tsumeb**	**137.50**	**202**		PKPdf	**PKPdf**	**12 21 47.3**	**+0.7**
VORR	**Voronezh**	**137.53**	**326**	*e*	PKIKP	**PKPdf**	**12 21 44.1**	**-1.4**
VORR					pmax	pmax			
	comp=Z,30nm,0.9s								
KIBK	**Kibwezi**	**137.79**	**242**		PKPdf	**PKPdf**	**12 21 48.1**	**+0.8**
KIBK	**Kibwezi**	**137.79**	**242**		P	**PKPdf**	**12 21 48.3**	**+1.0**
VSR	**Storozhevoye**	**137.79**	**325**	*e*	PKIKP	**PKPdf**	**12 21 45.1**	**-0.9**
VSR					pmax	pmax			
	comp=Z,40nm,1.0s								
VORD	**Divnogorie**	**137.86**	**325**	*e*	PKIKP	**PKPdf**	**12 21 44.0**	**-2.1**
VORD					pmax	pmax			
	comp=Z,10.0nm,1.0s								
VSU	**Vasula**	**138.12**	**341**	*c*	/PKIKP	**PKPdf**	**12 21 47.3**	**+0.9**
VSU					pmax	pmax			
	comp=Z,76nm,1.7s								
DOMB	**Dombas**	**138.33**	**355**	*e*	P	PKPpre	12 21 39.1		
AKN	**Aaknes**	**138.34**	**356**	*e*	P	**PKPdf**	**12 21 47.0**	**+0.3**
ZEI	**Tsey**	**138.49**	**312**	*e*	PKIKP	PKPpre	12 21 44.5		
ZEI					pmax	pmax			
	comp=Z,11nm,1.0s								
GNI	**Garni**	**138.65**	**308**		PKPdf	**PKPdf**	**12 21 48.9**	**+0.7**
GNI	**Garni**	**138.65**	**308**	*i*	PKIKP	**PKPdf**	**12 21 47.7**	**-0.5**
MTSE	**Matsula**	**138.77**	**343**	*e*	P	**PKPdf**	**12 21 45.3**	**-2.3**
KBZ	**Khabaz**	**138.87**	**314**		PKhKP	PKPpre	12 21 40.4		
	comp=Z,1.8nm,0.8s,baz=149,slow=3.3,SNR=4.9								
KIV	**Kislovodsk**	**138.93**	**314**	*e*	PKIKP	**PKPdf**	**12 21 47.7**	**-0.8**
KIV					pmax	pmax			
	comp=Z,16nm,1.0s								
KIV	**Kislovodsk**	**138.93**	**314**		P	**PKiKP**	**12 21 51.0**	**+0.1**
NB2	**NORSAR Subarra**	**139.10**	**353**		PKP	PKPpre	12 21 39.1		
	comp=Z,1.5nm,0.5s,baz=16,slow=3.2								
NB2					SKPa	**SKPbc**	**12 24 31.1**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=9.8,slow=2.9								
NB2	**NORSAR Subarra**	**139.10**	**353**		PKPab	PKPpre	12 21 39.1		
	baz=16,slow=3.2								
NOA	**NORSAR Array B**	**139.10**	**353**		PKhKP	PKPpre	12 21 38.3		
	comp=Z,7.2nm,0.8s,baz=18,slow=2.8,SNR=14								
NOA					SKPbc	**SKPbc**	**12 24 29.9**	**+0.4**
	comp=Z,4.4nm,0.8s,baz=15,slow=4.3,SNR=6.0								
RAYN	**Ar Rayn**	**139.53**	**282**		P	**PKPdf**	**12 21 49.7**	**-0.4**
HFS	**Hagfors**	**139.65**	**351**		PKhKP	PKPpre	12 21 40.9		
	comp=Z,15nm,0.4s,baz=68,slow=3.2,SNR=65								
HFS					SKPbc	**SKPbc**	**12 24 31.2**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=176,slow=6.8,SNR=4.9								
BER	**Bergen**	**140.22**	**357**	*e*	P	PKPpre	12 21 44.2		
ODD1	**Odda**	**140.62**	**356**	*e*	P	PKPpre	12 21 44.9		
IDID	**Didziasalis**	**140.63**	**338**	*e*	P	**PKPdf**	**12 21 45.1**	**-5.9**
KONO	**Kongsberg**	**140.64**	**354**	*e*	P	PKPpre	12 21 45.5		
ISAL	**Salakas**	**140.64**	**338**	*e*	P	**PKPdf**	**12 21 45.6**	**-5.4**
IIGN	**Ignalina**	**140.78**	**338**	*e*	P	**PKPdf**	**12 21 45.4**	**-5.9**
MNK	**Minsk**	**140.84**	**336**	*i*	PKP	**PKPdf**	**12 21 51.0**	**-0.4**
MNK	comp=E,10.0nm,0.7s								
	comp=N,30nm,0.6s				*i* PKP	**PKPdf**	**12 21 51.0**	**-0.4**
MNK									
	comp=Z,42nm,0.8s,baz=41								
MNK					*i* pPKP	**pPKPdf**	**12 24 03.8**	**-1.9**
MNK					*i* PP	**PP**	**12 24 59.5**	**+0.1**
MNK					*i* SKS	**SKSdf**	**12 28 07.1**	**+0.1**
MNK					*i* SKKS	**SKKSdf**	**12 37 33.7**	**+0.4**
MNK					*i* SS	**SS**	**12 42 42.5**	**+2.1**
MNK	**Minsk**	**140.84**	**336**	*i*	PKIKP	**PKPdf**	**12 21 51.0**	**-0.4**
MNK					*i*		12 24 03.7		
MNK					*i*		12 24 59.5		
MNK					*i*		12 28 07.1		
MNK					*i*		12 37 33.6		
MNK					*i* SS	SS	12 42 42.4	+2.0	
MNK					pmax	pmax			
	comp=E,10.0nm,0.7s								
MNK					pmax	pmax			
	comp=Z,42nm,0.8s								
MNK					pmax	pmax			
	comp=N,30nm,0.6s								
NACGM	**Naroch**	**140.94**	**337**	*e*	PKP	PKPpre	12 21 46.2		
	comp=E,1µm,0.8s								
VSVD	**Vaisvydziai**	**141.04**	**340**	*e*	P	PKPpre	12 21 47.3		
STRU	**Stroemstad**	**141.06**	**352**	*i*	P	PKPpre	12 21 45.6		
BLS5	**Blasjo**	**141.12**	**356**	*e*	P	PKPpre	12 21 46.9		
PABE	**Paberze**	**141.42**	**340**	*e*	P	PKPpre	12 21 48.1		
PBUR	**Paburge**	**141.61**	**342**	↓*e*	P	PKPpre	12 21 49.5		
TJOU	**Tjoern**	**141.97**	**352**	*i*	P	PKPpre	12 21 47.7		
ANN	**Anapa**	**142.01**	**318**	*i*	PKHKP	PKPpre	12 21 50.5		
ANN					pmax	pmax			
	comp=Z,45nm,1.0s								
HOMB	**Homborsund**	**142.10**	**354**		IAmb	IAmb	12 21 51.1		
	comp=Z,85nm,0.9s								
HOMB					*e*P	PKPpre	12 21 49.7		
HOMB	**Homborsund**	**142.10**	**354**	*i*	P	PKPpre	12 21 49.3		
BORU	**Boraas**	**142.19**	**350**	*i*	P	PKPpre	12 21 48.3		
ONAU	**Onsala**	**142.55**	**351**	*i*	P	PKPpre	12 21 49.2		
FABU	**Falkenberg**	**142.80**	**350**	*i*	P	PKPpre	12 21 50.7		
SHEL	**Horse Pasture**	**142.88**	**168**		PKPdf	**PKPdf**	**12 21 56.0**	**-0.3**
SHEL	**Horse Pasture**	**142.88**	**168**		PKIKP	**PKPdf**	**12 21 56.0**	**-0.3**
SUW	**Suwalki**	**142.91**	**339**	*e*	PKP	**PKPdf**	**12 21 52.7**	**-2.5**
SUW	**Suwalki**	**142.91**	**339**			PKPpre	12 21 53.0		
SUW	**Suwalki**	**142.91**	**339**		PKIKP	**PKPdf**	**12 21 53.0**	**-2.1**
SUW	**Suwalki**	**142.91**	**339**	*e*	P	**PKPdf**	**12 21 53.3**	**-1.8**
AKASG	**Malin Array Be**	**143.05**	**331**		PKP	PKPab	12 21 52.5	-0.7	
	comp=Z,67nm,0.5s,baz=42,slow=4.4,SNR=401								
AKASG					SKPbc	**SKPbc**	**12 24 39.9**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=42,slow=2.7,SNR=4.0								
AKBB	**Malin Array Si**	**143.05**	**331**	*i*	PKHKP	PKPpre	12 21 52.1		
KIEV	**Kiev**	**143.06**	**331**	*i*	PKPbc	PKPab	12 21 52.5	-0.8	
	SNR=9.7								
DEL	**Delary**	**143.11**	**349**	*i*	P	PKPab	12 21 52.0	-1.3	
LODK	**Lodwar**	**143.13**	**247**		PKPdf	**PKPdf**	**12 21 56.2**	**-0.7**
LODK	**Lodwar**	**143.13**	**247**		P	PKPbc	12 21 55.7	+0.6	
	SNR=23								
BJUU	**Bjuv**	**143.64**	**349**	*i*	P	PKPab	12 21 53.4	-1.9	
MUD	**Monsted U'grnd**	**143.82**	**353**	*i*	P	PKPbc	12 21 54.0	-1.8	
MUD				*i*	P	PKPab	12 21 55.2	-0.7	
LUNU	**Lund**	**143.99**	**349**	*i*	P	PKPbc	12 21 54.6	-1.8	
SIM	**Simferopol'**	**143.99**	**320**	*e*	PKIKP	**PKPdf**	**12 21 57.2**	**-0.1**
SIM					pmax	pmax			
	comp=Z,410nm,0.9s								
BSD	**Bornholm Skovb**	**144.19**	**347**	*i*	P	PKPbc	12 21 55.2	-1.8	
BSD				*i*	P	**PKPdf**	**12 21 56.2**	**-1.1**
MBAR	**Mbarara**	**144.69**	**237**	*c*	/PKIKP	**PKPab**	**12 22 00.6**	**-0.2**
MBAR					pmax	pmax			
	comp=Z,90nm,1.3s								
MBAR	**Mbarara**	**144.69**	**237**		P	**PKPab**	**12 22 00.9**	**0.0**
SSRD	**Sdr. Stenderup**	**144.72**	**352**	*i*	P	**PKPdf**	**12 21 58.2**	**0.0**
RGN	**Rugen**	**145.04**	**348**	*e*	P	**PKPbc**	**12 21 59.6**	**-0.1**
EKA	**Eskdalemuir Ar**	**145.16**	**5**		PKPbc	**PKPdf**	**12 21 59.3**	**+0.3**
	comp=Z,60nm,0.8s,baz=334,slow=2.8,SNR=55								
EKA					PP	**PP**	**12 25 27.8**	**+3.1**
	comp=Z,7.8nm,1.2s,baz=14,slow=7.0,SNR=5.2								
ESK	**Eskdalemuir**	**145.17**	**5**		PKPdf	**PKPdf**	**12 21 59.1**	**+0.1**
ESK	**Eskdalemuir**	**145.17**	**5**		PKIKP	**PKPdf**	**12 21 59.1**	**+0.1**
SORM	**Soroca**	**145.24**	**328**	↑	P	**PKPdf**	**12 21 59.8**	**+0.5**
GKP	**Gorka Klasztor**	**145.33**	**344**	*e*	PKP	**PKPbc**	**12 22 00.5**	**-0.1**
GKP	**Gorka Klasztor**	**145.33**	**344**	*e*	P	**PKPdf**	**12 21 57.2**	**-2.2**
PURM	**Purcari**	**145.50**	**325**	↑	P	**PKPdf**	**12 22 00.5**	**+0.6**
BEL	**Belsk**	**145.53**	**339**	*e*	PKP	**PKPbc**	**12 22 00.6**	**-0.5**
KIS	**Kishinev**	**145.76**	**326**	*e*	PKP	**PKPbc**	**12 22 01.4**	**-0.6**
	comp=Z,340nm,1.4s								
KIS	**Kishinev**	**145.76**	**326**	*e*	PKIKP	**PKPbc**	**12 22 01.4**	**-0.6**
KIS					pmax	pmax			
	comp=Z,340nm,1.4s								
MILM	**Milestii Mici**	**145.81**	**326**	↓*i*	PKP	**PKPbc**	**12 22 01.4**	**-0.8**
	comp=Z,390nm,1.1s								
MILM	**Milestii Mici**	**145.81**	**326**	↑	P	**PKPbc**	**12 22 02.0**	**-0.2**
MILM	**Milestii Mici**	**145.81**	**326**	*d*	/PKIKP	**PKPbc**	**12 22 01.4**	**-0.8**
MILM					pmax	pmax			
	comp=Z,390nm,1.1s								
LVV	**L'vov**	**145.96**	**334**	*e*	PKIKP	**PKPdf**	**12 22 00.9**	**+0.4**
VASR	**Vaslui**	**146.52**	**327**	↑	P	**PKPbc**	**12 22 03.7**	**-0.4**
KWP	**Kalwaria Pacla**	**146.64**	**335**	*e*	PKP	**PKPbc**	**12 22 04.3**	**0.0**
KWP	**Kalwaria Pacla**	**146.64**	**335**			**PKPbc**	**12 22 04.9**	**+0.5**
KWP					PKPab	**PKPab**	**12 22 08.3**	**+1.0**
KWP	**Kalwaria Pacla**	**146.64**	**335**		PKP2	**PKPab**	**12 22 08.3**	**+1.0**
BR131	**Keskin Array S**	**146.81**	**312**		P	**PKPbc**	**12 22 04.8**	**-0.6**
	SNR=21								
BRTR	**Keskin Array B**	**146.81**	**312**		PKPbc	**PKPbc**	**12 22 04.8**	**-0.6**
	comp=Z,29nm,0.8s,baz=137,slow=3.4,SNR=53								
BIR	**Birlad**	**146.86**	**326**	↑	P	**PKPbc**	**12 22 05.5**	**+0.5**
BIR	**Birlad**	**146.86**	**326**	↑	PKP2	**PKPbc**	**12 22 05.5**	**+0.5**
RUE	**Ruedersdorf**	**146.89**	**347**	*e*	P	**PKPdf**	**12 22 01.4**	**-0.6**
VLDR	**Vladesti**	**146.90**	**326**	↑	P	**PKPbc**	**12 22 05.8**	**+0.7**
TLCR		**146.92**	**324**	↑	P	**PKPbc**	**12 22 05.5**	**+0.3**
TLCR		**146.92**	**324**	↑	PKP2	**PKPbc**	**12 22 05.5**	**+0.3**
SCTR	**Scanteiesti**	**147.06**	**325**	↑	P	**PKPbc**	**12 22 05.8**	**+0.2**
TATR	**Tatarca**	**147.07**	**325**	↓	P	**PKPbc**	**12 22 05.9**	**+0.3**
GHRR		**147.11**	**326**	↑	P	**PKPbc**	**12 22 06.0**	**+0.3**
TESR	**Tescani**	**147.19**	**328**	↑	P	**PKPbc**	**12 22 05.5**	**-0.4**
NEGRR	**Negrea**	**147.21**	**325**	↑	P	**PKPbc**	**12 22 06.2**	**+0.2**
OJC	**Ojcow**	**147.23**	**339**	*e*	PKP	**PKPbc**	**12 22 05.7**	**-0.3**
IZVR	**Izvoarele**	**147.26**	**325**	↑	P	**PKPbc**	**12 22 06.8**	**+0.7**
CFR	**Carcaliu**	**147.30**	**325**	↑	P	**PKPbc**	**12 22 06.5**	**+0.3**
CFR	**Carcaliu**	**147.30**	**325**	↑	PKP2	**PKPbc**	**12 22 06.5**	**+0.3**
ANTO	**Ankara**	**147.33**	**313**			**PKPbc**	**12 22 07.1**	**+0.5**
ANTO	**Ankara**	**147.33**	**313**		PKP2	**PKPbc**	**12 22 07.1**	**+0.5**
ANTO	**Ankara**	**147.33**	**313**		P	**PKPbc**	**12 22 06.6**	**0.0**
TPGR	**Topolog**	**147.35**	**324**	↑	P	**PKPbc**	**12 22 06.9**	**+0.5**
KOLS	**Kolonicke sedl**	**147.37**	**335**	*e*	PKIKP	**PKPdf**	**12 22 03.5**	**+0.6**
KOLS				*e*			12 22 07.1		
KOLS	**Kolonicke sedl**	**147.37**	**335**	*e*	PKP	**PKPdf**	**12 22 03.5**	**+0.6**
PANC	**Panciu**	**147.37**	**326**	↑	P	**PKPbc**	**12 22 06.7**	**+0.3**
STHS	**Stebnicka Huta**	**147.38**	**336**	*e*	PKP2	**PKPbc**	**12 22 06.0**	**-0.3**
STHS	**Stebnicka Huta**	**147.38**	**336**	*e*	PKP	**PKPbc**	**12 22 06.0**	**-0.3**
ASCN	**Ascension**	**147.45**	**149**			**PKiKP**	**12 22 08.7**	**-0.5**
ODBI	**Odobesti**	**147.49**	**326**	↑	P	**PKPbc**	**12 22 07.5**	**+0.8**
VRI	**Vrincioaia**	**147.59**	**327**	↑	P	**PKPbc**	**12 22 07.1**	**+0.1**
VRI	**Vrincioaia**	**147.59**	**327**	↑	PKP

CKRC				⇑*e*PKP	**PKPbc**	12 22 13.4	+0.2		
CKRC	**Cesky Krumlov**	**150.15**	**343**	*e*PKIKP	**PKPdf**	12 22 07.4	0.0		
BCLA	**Clavier**	**150.16**	**356**	*d*PKPdf	**PKPdf**	12 22 06.7	-0.6		
BCLA				*d*PKP	**PKPbc**	12 22 12.6	-0.5		
BHOU	**Houvegnez**	**150.16**	**355**	*d*PKP	**PKPbc**	12 22 13.3	+0.2		
BHOU				*d*PKPab	**PKPab**	12 22 21.7	0.0		
EDRB	**Edirne**	**150.17**	**321**	P	**PKPbc**	12 22 12.9	-0.5		
BGES	**Gesves**	**150.21**	**356**	*d*PKPdf	**PKPdf**	12 22 07.5	+0.1		
BGES				*d*PKP	**PKPbc**	12 22 12.9	-0.2		
BGES				*d*PKPab	**PKPab**	12 22 21.3	-0.6		
SRE	**Strehaia**	**150.21**	**328**	⇑P	**PKPbc**	12 22 12.4	-1.0		
PVL	**Pavlikeni**	**150.25**	**324**	*i* P	**PKPbc**	12 22 13.5	0.0		
GERES	**GERESS Array B**	**150.29**	**344**		**PKPbc**	12 22 13.8	+0.2		
GERES				PKPab	**PKPab**	12 22 22.6	+0.2		
GERES	**GERESS Array B**	**150.29**	**344**	PKP	**PKPdf**	12 22 07.6	-0.1		
	comp=Z,3.9nm,0.8s,baz=38,slow=2.4,SNR=17								
GERES				PKPbc	**PKPbc**	12 22 13.7	+0.2		
	comp=Z,48nm,0.8s,baz=31,slow=3.1,SNR=78								
BMRD	**Maredsous**	**150.31**	**356**	*d*PKPdf	**PKPdf**	12 22 07.8	+0.3		
BMRD				*d*PKP	**PKPbc**	12 22 13.3	-0.1		
BMRD				*d*PKPab	**PKPab**	12 22 21.7	-0.6		
PLVB	**Pleven**	**150.38**	**325**	⇑P	**PKPbc**	12 22 13.9	+0.1		
RCHB	**Rochefort**	**150.42**	**356**	*d*PKPdf	**PKPdf**	12 22 07.8	+0.1		
RCHB				*d*PKP	**PKPbc**	12 22 13.5	-0.2		
RCHB				*d*PKPab	**PKPab**	12 22 22.1	-0.7		
HERR	**Herculane**	**150.43**	**330**	⇑P	**PKPbc**	12 22 13.4	-0.5		
CONA	**Conrad Observa**	**150.51**	**341**	*i* PKP	**PKPdf**	12 22 08.1	0.0		
	comp=Z,15nm,1.2s								
CONA				*i* PKP	**PKPbc**	12 22 14.3	+0.2		
	comp=Z,84nm,0.9s,SNR=16								
DOU	**Dourbes**	**150.53**	**356**	*d*PKP	**PKPbc**	12 22 14.0	+0.1		
RONA	**Rosalia, Austr**	**150.57**	**340**	*i* PKP	**PKPdf**	12 22 08.4	+0.3		
	comp=Z,11nm,0.8s								
RONA				*i* PKP	**PKPbc**	12 22 14.4	+0.2		
	comp=Z,112nm,0.9s,SNR=18								
DIM	**Dimitrovgrad**	**150.73**	**322**	*i* P	**PKPbc**	12 22 14.7	+0.1		
VALD	**Valchedram**	**150.79**	**327**	*i* P	**PKPbc**	12 22 14.9	+0.2		
KULA	**Kula-Manisa**	**150.79**	**313**	P	**PKPbc**	12 22 14.7	-0.4		
WLF	**Walferdange**	**150.84**	**354**	*d*PKPdf	**PKPdf**	12 22 09.1	+0.8		
WLF				*d*PKP	**PKiKP**	12 22 15.1	-0.1		
WLF				*d*PKPab	**PKPab**	12 22 24.1	-0.5		
MPEP	**Malo Peshtene**	**150.87**	**326**	*i* P	**PKPbc**	12 22 14.7	-0.2		
MORH	**Mrgy, Hungar**	**151.01**	**335**	⇓P	**PKPdf**	12 22 08.7	0.0		
MOA	**Molln**	**151.05**	**343**	*i* PKP	**PKPdf**	12 22 08.2	-0.6		
	comp=Z,7.6nm,0.9s								
MOA				*i* PKP	**PKPbc**	12 22 15.0	-0.2		
	comp=Z,46nm,0.9s,SNR=6.0								
KDZ	**Kurdzhali**	**151.13**	**322**	*i* P	**PKPbc**	12 22 15.0	-0.6		
PLD	**Plovdiv**	**151.13**	**323**	*i* P	**PKPbc**	12 22 14.7	-0.9		
ALN	**Alexandroupoli**	**151.16**	**320**	P	**PKPbc**	12 22 14.4	-1.3		
ENEZ	**Enez**	**151.19**	**319**	P	**PKPbc**	12 22 14.4	-1.3		
PGB	**Panagyurishte**	**151.21**	**324**	*i* P	**PKPbc**	12 22 15.3	-0.5		
ARSA	**Arzberg**	**151.21**	**340**	*i* PKP	**PKPdf**	12 22 08.8	-0.2		
	comp=Z,4.7nm,0.8s								
ARSA				*i* PKP	**PKPbc**	12 22 15.2	-0.5		
	comp=Z,25nm,1.3s,SNR=5.6								
RDO	**Rodhopi**	**151.31**	**321**	P	**PKPbc**	12 22 15.1	-0.9		
BIOA	**Bad Ischl, Aus**	**151.37**	**343**	*i* PKP	**PKPdf**	12 22 08.6	-0.7		
	comp=Z,12nm,1.0s								
BIOA				*i* PKP	**PKPbc**	12 22 15.5	-0.5		
	comp=Z,42nm,0.9s,SNR=5.8								
FRGS	**Fruska Gora**	**151.39**	**333**	⇓P	**PKPdf**	12 22 09.5	+0.1		
FRGS	**Fruska Gora**	**151.39**	**333**	⇓*i*P	**PKPbc**	12 22 15.8	-0.3		
RZN	**Rozhen**	**151.43**	**322**	*i* P	**PKPbc**	12 22 15.8	-0.7		
EZN	**Ezine**	**151.62**	**318**	P	**PKPbc**	12 22 16.1	-0.6		
VTS	**Vitosha**	**151.64**	**325**	*i* P	**PKPbc**	12 22 16.7	-0.2		
BOVS	**Bovan**	**151.69**	**329**	⇑P	**PKPbc**	12 22 15.6	-1.2		
LESA	**Schwarzleotal**	**151.87**	**344**	*i* PKP	**PKPdf**	12 22 09.5	-0.6		
	comp=Z,16nm,1.2s								
LESA				*i* PKP	**PKPbc**	12 22 16.6	-0.5		
	comp=Z,31nm,0.6s								
SOKA	**Soboth**	**151.88**	**340**	*i* PKP	**PKPbc**	12 22 16.6	-0.6		
	comp=Z,45nm,1.0s,SNR=5.3								
BFO	**Black Forest**	**151.88**	**351**		**PKiKP**	12 22 17.3	0.0		
BFO				PKPab	**PKPab**	12 22 28.9	-0.2		
BFO	**Black Forest**	**151.88**	**351**	PKP2	**PKPab**	12 22 28.9	-0.2		
PERS	**Pernice**	**151.89**	**340**	*i* PKPbc	**PKPbc**	12 22 16.3	-0.9		
PERS				*e*PKPab	**PKPab**	12 22 29.0	-0.2		
BLCB	**Balcova**	**151.95**	**315**	P	**PKPbc**	12 22 16.4	-1.1		
PRK	**Paraskevi**	**151.99**	**317**	P	**PKPbc**	12 22 16.8	-0.8		
TEKS	**Tekeris**	**152.00**	**332**	*e*P	**PKPbc**	12 22 16.4	-1.1		
KBA	**Koelnbreinsper**	**152.01**	**343**	*i* PKP	**PKPdf**	12 22 09.6	-0.9		
	comp=Z,11nm,1.3s								
KBA				*i* PKP	**PKPbc**	12 22 16.9	-0.7		
	comp=Z,44nm,0.9s,SNR=5.7								
KAVA	**Kavala**	**152.01**	**322**	P	**PKPbc**	12 22 16.9	-0.7		
MMB	**Musomishta**	**152.09**	**323**	*i* P	**PKPbc**	12 22 16.9	-0.9		
NVR	**Nevrokopi**	**152.16**	**323**	P	**PKiKP**	12 22 18.1	0.0		
OBKA	**Obir**	**152.18**	**341**	*i* PKP	**PKPbc**	12 22 16.8	-1.1		
	comp=Z,16nm,0.8s								
OBKA	**Obir**	**152.18**	**341**	⇓*i*P	**PKPbc**	12 22 16.5	-1.4		
WATA	**Walderalm**	**152.22**	**346**	*i* PKP	**PKPdf**	12 22 09.8	-0.9		
	comp=Z,10nm,1.0s								
WATA				*i* PKP	**PKPbc**	12 22 17.5	-0.5		
	comp=Z,61nm,1.2s,SNR=8.3								
KKB	**Krupnik**	**152.24**	**324**	*i* P	**PKPbc**	12 22 17.6	-0.5		
RETA	**Reutte**	**152.25**	**347**	*e*PKP	**PKPdf**	12 22 10.3	-0.4		
	comp=Z,7.1nm,0.9s								
RETA				*i* PKP	**PKPbc**	12 22 17.6	-0.4		
	comp=Z,23nm,0.8s								
WTTA	**Wattenberg**	**152.27**	**346**	*e*PKP	**PKPdf**	12 22 10.5	-0.3		
	comp=Z,28nm,1.1s,SNR=7.2								
WTTA				*i* PKP	**PKPbc**	12 22 17.8	-0.4		
	comp=Z,94nm,0.9s								
MOTA	**Moosalm**	**152.31**	**346**	*i* PKP	**PKPdf**	12 22 10.2	-0.7		
	comp=Z,18nm,0.9s,SNR=5.1								
MOTA				*i* PKP	**PKPbc**	12 22 18.0	-0.3		
	comp=Z,47nm,1.0s								
MYKA	**Terra Mystica**	**152.34**	**342**	*i* PKP	**PKPbc**	12 22 17.2	-1.0		
	comp=Z,37nm,0.8s,SNR=5.9								
SQTA	**Sankt Quirin**	**152.41**	**346**	*i* PKP	**PKPdf**	12 22 10.3	-0.7		
	comp=Z,20nm,0.9s,SNR=5.4								
SQTA				*i* PKP	**PKPbc**	12 22 18.2	-0.3		
	comp=Z,52nm,0.8s								
KOKK	**Kokkinochori,**	**152.42**	**322**	P	**PKPbc**	12 22 17.4	-1.1		
CRES	**Cresnjev**	**152.49**	**339**	⇓*i*P	**PKPbc**	12 22 18.0	-0.5		
ABTA	**Abfaltersbach**	**152.53**	**344**	*i* PKP	**PKPdf**	12 22 10.3	-0.8		
	comp=Z,28nm,0.9s,SNR=6.7								
ABTA				*i* PKP	**PKPbc**	12 22 17.8	-0.9		
	comp=Z,62nm,0.7s								
BBLS	**Lazići**	**152.59**	**332**	⇓*i*P	**PKPbc**	12 22 18.5	-0.4		
LJU	**Ljubljana**	**152.60**	**341**	*i* PKPdf	**PKPdf**	12 22 10.9	-0.2		
LJU				*i* PKPbc	**PKPbc**	12 22 18.3	-0.4		
LJU				*i* PKPab	**PKPab**	12 22 31.9	-0.3		
CHOS	**Chios island**	**152.60**	**315**	P	**PKPbc**	12 22 17.6	-1.5		
HAPS	**Han Pijesak,BI**	**152.62**	**333**	⇓*i*P	**PKPbc**	12 22 18.7	-0.3		
DAVA	**Damuels**	**152.62**	**348**	*i* PKP	**PKPdf**	12 22 10.9	-0.4		
	comp=Z,9.0nm,0.9s								
DAVA				*i* PKP	**PKPbc**	12 22 18.9	0.0		
	comp=Z,57nm,1.3s								
A051A	**Mrakovica**	**152.68**	**336**	*e*P	**PKPbc**	12 22 17.4	-1.6		
FETA	**Feichten**	**152.70**	**347**	*i* PKP	**PKPdf**	12 22 11.4	-0.1		
	comp=Z,29nm,0.9s,SNR=7.8								
FETA				*i* PKP	**PKPbc**	12 22 18.9	-0.2		
	comp=Z,43nm,0.9s								
BLY	**Banja Luka**	**152.80**	**336**	⇑*i*P	**PKiKP**	12 22 19.2	-0.1		
RUDO	**Rudo**	**152.80**	**331**	⇑*i*P	**PKPbc**	12 22 18.1	-1.1		
SJES	**Sjenica**	**152.80**	**330**	*e*P	**PKPbc**	12 22 17.1	-2.3		
BOJS	**Bojanci**	**152.84**	**339**	*i* PKPbc	**PKPbc**	12 22 19.2	0.0		
BOJS	**Bojanci**	**152.84**	**339**	⇓*i*P	**PKPbc**	12 22 18.5	-0.7		
CEY	**Cerknica**	**152.91**	**340**	⇓*i*P	**PKPbc**	12 22 18.6	-0.8		
MGRS	**Mrkonjic Grad**	**153.11**	**335**	⇑*i*P	**PKPbc**	12 22 19.5	-0.4		
FNA	**Florina**	**153.92**	**325**	P	**PKPbc**	12 22 20.8	-1.0		
ANX	**Ano Chora**	**155.08**	**320**	P	PKPdf	12 22 23.9	+9.0		
PGAV	**Gavieira, Arco**	**157.10**	**20**	*e*PKPdf	**PKPdf**	12 22 17.8	+0.4		
PGAV	**Gavieira, Arco**	**157.10**	**20**	*e*PKPab	**PKPab**	12 22 52.0	+0.3		
TIP	**Timpagrande**	**157.49**	**328**	⇑P	**PKPdf**	12 22 17.8	-0.2		
PBRG	**Braganca**	**157.69**	**17**	*e*PKPab	**PKPab**	12 22 54.5	+0.3		
MVO	**Moncorvo**	**158.20**	**18**	*e*PKPdf	**PKPdf**	12 22 19.3	+0.5		
MVO	**Moncorvo**	**158.20**	**18**	*e*PKPab	**PKPab**	12 22 56.9	+0.4		
COI	**Coimbra**	**158.63**	**22**	*e*PKPab	**PKPab**	12 22 58.7	+0.4		
PCAS	**Casmilo, Conde**	**158.73**	**22**	*e*PKPab	**PKPab**	12 22 58.9	+0.1		
MTE	**Manteigas**	**158.75**	**20**	*e*PKPdf	**PKPdf**	12 22 19.8	+0.4		
MTE	**Manteigas**	**158.75**	**20**	*e*PKPab	**PKPab**	12 22 59.1	+0.2		
PCBR	**Castelo Branco**	**159.27**	**21**	*e*PKPdf	**PKPdf**	12 22 20.7	+0.7		
PCBR	**Castelo Branco**	**159.27**	**21**	*e*PKPab	**PKPab**	12 23 01.4	+0.3		
PMAFR	**Mafra**	**159.40**	**25**	*e*PKPab	**PKPab**	12 23 02.0	+0.3		
PMRV	**Marv??o**	**159.67**	**21**	*e*PKPdf	**PKPdf**	12 22 20.3	-0.2		
PMRV	**Marv??o**	**159.67**	**21**	*e*PKPab	**PKPab**	12 23 03.0	+0.1		
PMTG	**Montargil**	**159.70**	**23**	*e*PKPab	**PKPab**	12 23 02.7	-0.3		
PESTR	**Estremoz**	**160.11**	**22**	*e*PKPab	**PKPab**	12 23 04.8	0.0		
PESTR	**Estremoz**	**160.11**	**22**	PKPab	**PKPab**	12 23 03.8	-1.1		
EVO	**Evora**	**160.25**	**23**	*e*PKPab	**PKPab**	12 23 05.6	+0.1		
ESBB	**Sonseca Array**	**160.39**	**13**	PKPab	**PKPab**	12 23 06.1	0.0		
ESDC	**Sonseca Array**	**160.39**	**13**	PKP	**PKPdf**	12 22 20.9	-0.3		
	comp=Z,6.0nm,1.1s,baz=357,slow=3.0,SNR=9.6								
ESDC				PKPab	**PKPab**	12 23 06.2	+0.1		
	comp=Z,22nm,1.0s,baz=340,slow=3.7,SNR=28								
ESDC				PP	**PP**	12 26 49.4	-0.3		
	comp=Z,4.1nm,1.1s,baz=324,slow=5.6,SNR=6.0								
PNCL	**Nicolau / Gran**	**160.42**	**25**	*e*PKPdf	**PKPdf**	12 22 22.1	+0.8		
PNCL	**Nicolau / Gran**	**160.42**	**25**	*e*PKPab	**PKPab**	12 23 06.1	-0.1		
PAB	**San Pablo**	**160.43**	**14**		**PKPdf**	12 22 22.1	+0.7		
PAB	**San Pablo**	**160.43**	**14**	⇑PKIKP	**PKPdf**	12 22 20.0	-1.4		
PBEJ	**Beja**	**160.75**	**24**	*e*PKPdf	**PKPdf**	12 22 22.6	+0.9		
PBEJ	**Beja**	**160.75**	**24**	*e*PKPab	**PKPab**	12 23 07.7	0.0		
MESJ	**Messejana**	**160.78**	**25**	*e*PKPdf	**PKPdf**	12 22 22.5	+0.8		
MESJ	**Messejana**	**160.78**	**25**	*e*PKPab	**PKPab**	12 23 08.0	+0.2		
MESJ	**Messejana**	**160.78**	**25**	*e*PKPdf	**PKPdf**	12 22 22.0	+0.3		
PTEO	**Sao Teotonio**	**160.83**	**26**	*e*PKPdf	**PKPdf**	12 22 22.2	+0.5		
PTEO	**Sao Teotonio**	**160.83**	**26**	*e*PKPab	**PKPab**	12 23 08.3	+0.3		
PBAR	**Barrancos**	**160.92**	**22**	*e*PKPdf	**PKPdf**	12 22 22.4	+0.6		
PBAR	**Barrancos**	**160.92**	**22**	*e*PKPab	**PKPab**	12 23 08.2	-0.2		
PCVE	**Castro Verde**	**161.03**	**25**	*e*PKPdf	**PKPdf**	12 22 23.2	+1.2		
PCVE	**Castro Verde**	**161.03**	**25**	*e*PKPab	**PKPab**	12 23 09.2	+0.3		
MORF	**Marmelete**	**161.06**	**27**	*e*PKPdf	**PKPdf**	12 22 23.2	+1.1		
MORF	**Marmelete**	**161.06**	**27**	*e*PKPab	**PKPab**	12 23 09.9	+0.8		
MORF	**Marmelete**	**161.06**	**27**	*e*PKPdf	**PKPdf**	12 22 22.4	+0.4		
PFVI	**Vila Bisbo**	**161.13**	**27**	*e*PKPdf	**PKPdf**	12 22 23.6	+1.5		
PFVI	**Vila Bisbo**	**161.13**	**27**	*e*PKPab	**PKPab**	12 23 09.4	0.0		
PVAQ	**Vaqueiros**	**161.35**	**24**	*e*PKPab	**PKPab**	12 23 10.9	+0.6		
KEST	**Kesra**	**163.58**	**338**	PKPab	**PKPab**	12 23 20.4	+0.2		
	comp=Z,9.3nm,0.7s,baz=23,slow=2.1,SNR=4.7								
LIC	**Lamto**	**164.21**	**154**	⇓*i*PKIKP	**PKPdf**	12 22 25.0	-0.7		
	comp=Z,120nm,1.1s								
LIC	**Lamto**	**164.21**	**154**	⇓*i*P	**PKPab**	12 23 23.9	+0.5		
	comp=Z,45nm,0.9s								
KIC	**Kosan Boka**	**164.44**	**155**	⇓*i*PKIKP	**PKPdf**	12 22 25.2	-0.7		
	comp=Z,70nm,0.8s								
KIC	**Kosan Boka**	**164.44**	**155**	⇓*i*P	**PKPab**	12 23 25.2	+0.8		
	comp=Z,24nm,0.8s								
TIC	**Toumodi**	**164.59**	**154**	⇑*i*PKIKP	**PKPdf**	12 22 24.7	-1.4		
	comp=Z,7.5nm,0.2s								
TIC	**Toumodi**	**164.59**	**154**	⇑*i*P	**PKPab**	12 23 26.1	+1.0		
	comp=Z,6.4nm,0.3s								
DBIC	**Dimbokro**	**164.68**	**154**		**PKPdf**	12 22 26.0	-0.1		
DBIC				PKPab	**PKPab**	12 23 26.6	+1.1		
DBIC	**Dimbokro**	**164.68**	**154**	PKP	**PKPdf**	12 22 24.8	-1.3		
	comp=Z,23nm,1.0s,baz=200,slow=0.7,SNR=16								
DBIC				PKPab	**PKPab**	12 23 26.1	+0.7		
	comp=Z,3.6nm,0.9s,baz=226,slow=3.8,SNR=5.3								
TOA0	**Torodi Ar. Sit**	**172.55**	**179**	P	**PKPdf**	12 22 30.0	-1.1		
TORD	**Torodi Ar. Bea**	**172.55**	**179**	PKP	**PKPdf**	12 22 29.9	-1.1		
	comp=Z,11nm,0.3s,baz=134,slow=4.2,SNR=1.6								

*IDC **07** 12:29:09.3±3.1,56˚.19N×148˚.99W,h0km,mb3.7/1, mbtmp3.4/5,ML3.3/4, Error ellipse: s-maj=44.2km s-min=25.7km az=9.0*
*NEIC **07** 12:29:13.6±0.9,56˚.44N±0˚.09×149˚.2W±0˚.1,h25km±9km, mb3.8/3,ML3.7/68,ML3.4(AEIC),Error ellipse: s-maj=12.6km s-min=8.2km az=167.0*
*AEIC **07** 12:29:15.7±1.3,56˚.37N±0˚.08×149˚.2W±0˚.1,h12km±7km, Error ellipse: s-maj=12.2km s-min=8.1km az=160.0*
ISC 07 12:29:10.9±1.0,56˚.44N±0˚.08×149˚.15W±0˚.05,h10km, n258,σ1⇕26/263,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.31**	**307**	Pn	**Pn**	**12 29 49.3**	**+0.4**
KDAK				Sn	**Sn**	**12 30 15.0**	**-2.3**
KDAK				IAML		12 30 16.0	
	246nm,0.3s						
KDAK	**Kodiak Island**	**2.31**	**307**	Pn	**Pn**	**12 29 49.2**	**+0.4**
	5.4nm,0.3s,baz=149,slow=4.8,SNR=10						
KDAK				Sn	**Sn**	**12 30 15.4**	**-1.8**
	24nm,0.3s,baz=262,slow=22,SNR=32						
	11nm,0.3s						
OHAK	**Old Harbor**	**2.41**	**291**		**Pn**	**12 29 50.1**	**-0.1**
OHAK	**Old Harbor**	**2.41**	**291**	P	**Pn**	**12 29 49.7**	**-0.5**
OHAK	**Old Harbor**	**2.41**	**291**	P	**Pn**	**12 29 49.8**	**-0.4**
	baz=109						
OHAK				S	**Sn**	**12 30 17.1**	**-2.6**
	baz=109						
SYI	**Shuyak Island**	**2.79**	**323**	Pn	**Pn**	**12 29 56.2**	**+0.7**
SYI					**Sn**	**12 30 28.6**	**-0.6**
Q20K	**Shuyak Island**	**2.79**	**323**	P	**Pn**	**12 29 56.4**	**+0.8**
	baz=141						
Q20K				S	**Sn**	**12 30 28.2**	**-1.0**
	baz=141						
SII	**Sitkinak Islan**	**2.79**	**275**	Pn	**Pn**	**12 29 55.2**	**-0.4**
SII	**Sitkinak Islan**	**2.79**	**275**	P	**Pn**	**12 29 55.1**	**-0.5**
SII	**Sitkinak Islan**	**2.79**	**275**	P	**Pn**	**12 29 55.1**	**-0.5**
	baz=92						
SII				S	**Sn**	**12 30 26.1**	**-3.2**
	baz=92						
CNPM	**China Poot**	**3.29**	**341**		**Pn**	**12 30 03.2**	**+0.9**
CNPM				IAML		12 30 43.4	
	comp=E,86nm,0.7s						
CNPM	**China Poot**	**3.29**	**341**		**Sn**	**12 30 39.2**	**-2.3**
Q23K	**Middleton Isla**	**3.35**	**25**	Pn	**Pn**	**12 30 03.7**	**+0.5**
Q23K				IAML		12 31 35.5	
	comp=N,281nm,2.0s						
Q23K				IAML		12 31 40.6	
	comp=E,286nm,1.8s						
Q23K	**Middleton Isla**	**3.35**	**25**	P	**Pn**	**12 30 03.7**	**+0.5**
	baz=207						
MID	**Middleton Isla**	**3.35**	**25**	Pn	**Pn**	**12 30 03.9**	**+0.7**
MID				IAML		12 30 31.7	
	comp=N,244nm,1.8s						
MID	**Middleton Isla**	**3.35**	**25**	P	**Pn**	**12 30 03.7**	**+0.5**
BRSE	**Bradley Lake S**	**3.42**	**346**		**Pn**	**12 30 04.5**	**+0.4**
BRSE					**Sn**	**12 30 42.7**	**-2.0**
BRSE	**Bradley Lake S**	**3.42**	**346**	P	**Pn**	**12 30 04.5**	**+0.4**
	baz=165						
BRSE				S	**Sn**	**12 30 43.1**	**-1.6**
	baz=165						
BRLK	**Bradley Lake**	**3.46**	**345**		**Pn**	**12 30 05.2**	**+0.5**
Q19K	**Cape Douglas,**	**3.47**	**318**		**Pn**	**12 30 06.4**	**+1.5**
Q19K				IAML		12 30 50.7	
	comp=N,219nm,0.7s						
Q19K				IAML		12 30 57.1	
	comp=E,249nm,1.2s						
Q19K	**Cape Douglas,**	**3.47**	**318**	P	**Pn**	**12 30 06.2**	**+1.2**
	baz=135						
HOM	**Homer**	**3.49**	**339**	Pn	**Pn**	**12 30 05.9**	**+0.8**
HOM				IAML		12 30 49.3	
	comp=E,196nm,1.0s						
HOM				IAML		12 30 55.5	
	comp=N,218nm,0.5s						
HOM	**Homer**	**3.49**	**339**	P	**Pn**	**12 30 06.4**	**+1.3**
	baz=157						
HOM				S	**Sn**	**12 30 45.9**	**-0.5**
	baz=157						
KAHG	**Katmai Hook Gl**	**3.57**	**307**		**Pn**	**12 30 07.7**	**+1.4**
SEW	**Seward**	**3.68**	**358**	Pn	**Pn**	**12 30 07.8**	**+0.1**
SEW	**Seward**	**3.68**	**358**	P	**Pn**	**12 30 07.9**	**+0.2**
	baz=177						
P23K	**Montague Islan**	**3.68**	**14**		**Pn**	**12 30 08.6**	**+0.8**
P23K	**Montague Islan**	**3.68**	**14**	P	**Pn**	**12 30 08.6**	**+0.8**
	baz=195						
AUCH	**Augustine Cone**	**3.72**	**324**		**Pn**	**12 30 09.6**	**+1.3**
KCE	**Katmai Mt Cerb**	**3.73**	**301**		**Pn**	**12 30 10.2**	**+1.6**
ACHA	**Angle Creek He**	**3.79**	**300**		**Pn**	**12 30 11.0**	**+1.6**
KVTA	**Katmai Vly 10**	**3.85**	**303**		**Pn**	**12 30 12.0**	**+1.9**
KAHC	**Katmai Hardscr**	**3.85**	**307**	P	**Pn**	**12 30 12.1**	**+1.8**
	baz=123						
ANCK	**Angle Creek**	**3.86**	**300**		**Pn**	**12 30 12.0**	**+1.7**
P19K	**Oil Pt**	**3.88**	**328**	Pn	**Pn**	**12 30 11.8**	**+1.3**
P19K				IAML		12 31 06.1	
	comp=N,149nm,0.4s						
P19K				IAML		12 31 06.2	
	comp=E,160nm,0.7s						
P19K	**Oil Pt**	**3.88**	**328**	P	**Pn**	**12 30 11.9**	**+1.3**
	baz=145						
O22K	**Cooper Landing**	**4.06**	**356**		**Pn**	**12 30 13.6**	**+0.6**
O22K				IAML		12 31 09.2	
	comp=N,163nm,0.8s						
O22K	**Cooper Landing**	**4.06**	**356**	P	**Pn**	**12 30 13.9**	**+1.0**
	baz=176						
CNTC	**Contact Creek**	**4.08**	**299**		**Pn**	**12 30 14.5**	**+1.1**
Q17K	**Contact Creek**	**4.08**	**299**	P	**Pn**	**12 30 14.5**	**+1.1**
	baz=115						
O20K	**Slope Mountain**	**4.08**	**335**		**Pn**	**12 30 14.1**	**+0.7**
O20K	**Slope Mountain**	**4.08**	**335**	P	**Pn**	**12 30 14.1**	**+0.7**
	baz=152						
SLKM	**Skilak Lake**	**4.12**	**353**		**Pn**	**12 30 14.0**	**+0.2**
IVE	**Iliamna Volcan**	**4.13**	**332**		**Pn**	**12 30 14.3**	**+0.4**
HIN	**Hinchinbrook I**	**4.20**	**18**		**Pn**	**12 30 16.0**	**+1.0**
HIN				IAML		12 31 09.7	
	comp=N,103nm,0.9s						
HIN				IAML		12 31 11.9	
	comp=E,101nm,1.4s						
KAIM	**Kayak Island**	**4.30**	**34**	Pn	**Pn**	**12 30 17.1**	**+0.9**
KAIM	**Kayak Island**	**4.30**	**34**	P	**Pn**	**12 30 17.2**	**+1.0**
	baz=217						
P18K	**Big Mountain,**	**4.39**	**315**	Pn	**Pn**	**12 30 18.0**	**+0.5**
P18K				IAML		12 31 09.4	
	comp=N,37nm,0.5s						
P18K	**Big Mountain,**	**4.39**	**315**	P	**Pn**	**12 30 17.9**	**+0.4**
	baz=130						
RED	**Redoubt Volcan**	**4.42**	**336**		**Pn**	**12 30 17.9**	**-0.1**
RSO	**Redoubt South**	**4.45**	**336**		**Pn**	**12 30 19.6**	**+1.0**
CAPN	**Captain Cook N**	**4.46**	**347**	Pn	**Pn**	**12 30 20.3**	**+1.8**
RDT	**Redoubt**	**4.48**	**339**		**Pn**	**12 30 18.6**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.49**	**22**		**Pn**	**12 30 20.1**	**+1.3**
EYAK	**Cordova Ski Ar**	**4.49**	**22**	P	**Pn**	**12 30 19.9**	**+1.1**
EYAK	**Cordova Ski Ar**	**4.49**	**22**	P	**Pn**	**12 30 19.8**	**+1.0**
	baz=204						
RDWB	**Redoubt West**	**4.50**	**336**		**Pn**	**12 30 19.3**	**+0.2**
DFR	**Drift River**	**4.56**	**337**		**Pn**	**12 30 20.0**	**+0.2**
NCT	**North Crescent**	**4.58**	**336**		**Pn**	**12 30 20.2**	**0.0**

M19K	Big River Lodg	6.10	336	P		Pn	12 30 41.6 +0.6
	baz=152						
PNL	Peninsula	6.10	54			Pn	12 30 42.3 +1.2
PNL	Peninsula	6.10	54	P		Pn	12 30 42.7 +1.6
PNL	Peninsula	6.10	54	P		Pn	12 30 42.3 +1.2
	baz=242						
LOGN	Logan Glacier	6.11	41			Pn	12 30 42.6 +1.3
M18K	Stony River	6.13	328			Pn	12 30 41.2 -0.1
CHNA	Chernabura Isl	6.13	259	P		Pn	12 30 41.5 +0.1
	baz=71						
CNBA	Chernabura Isl	6.13	259			Pn	12 30 41.4 0.0
BCPM	Bancas Point	6.14	51	Pn		Pn	12 30 43.1 +1.6
WAT6	Susitna Watana	6.20	6			Pn	12 30 43.6 +1.1
WAT6	Susitna Watana	6.20	6	P		Pn	12 30 43.7 +1.2
	baz=187						
HARP	HAARP	6.31	17			Pn	12 30 45.8 +1.9
HARP	HAARP	6.31	17	P		Pn	12 30 45.8 +1.9
	baz=200						
O15K	Ungalikthiuk R	6.33	300			Pn	12 30 45.4 +1.3
O15K	Ungalikthiuk R	6.33	300	P		Pn	12 30 45.7 +1.6
	baz=112						
WAT7	Susitna Watana	6.41	1			Pn	12 30 46.9 +1.5
WAT1	Susitna Watana	6.42	2			Pn	12 30 46.8 +1.5
WAT1	Susitna Watana	6.42	2	P		Pn	12 30 47.0 +1.6
	baz=183						
L19K	White Mountain	6.45	335			Pn	12 30 45.9 +0.1
N16K	Nishlik Lake	6.46	313	P		Pn	12 30 47.7 +1.7
	baz=125						
SDPT	Sand Point	6.47	265			Pn	12 30 46.4 +0.5
SDPT	Sand Point	6.47	265	P		Pn	12 30 47.0 +1.0
L20K	Farewell, AK	6.52	340			Pn	12 30 46.4 -0.3
M17K	Holitna River	6.56	323			Pn	12 30 48.2 +0.9
DHY	Denali Highway	6.71	7	Pn		Pn	12 30 51.2 +1.6
DHY	Denali Highway	6.71	7	P		Pn	12 30 51.0 +1.5
	baz=188						
O29M	Mount Kennedy	6.77	51			Pn	12 30 52.4 +2.0
O29M	Mount Kennedy	6.77	51	P		Pn	12 30 51.9 +1.6
	baz=239						
PAX	Paxson	6.81	14	P		Pn	12 30 52.4 +1.6
	baz=197						
P29M	Windy Craggy	6.85	57			Pn	12 30 52.8 +1.5
P29M	Windy Craggy	6.85	57	P		Pn	12 30 52.5 +1.3
	baz=247						
YUK2	White River	6.85	35			Pn	12 30 53.3 +1.9
M16K	Timber Creek	6.86	316	Pn		Pn	12 30 52.5 +1.0
N15K	Kwethluk River	6.87	307			Pn	12 30 53.0 +1.5
YUK8	Steele Glacier	6.87	41			Pn	12 30 53.4 +1.6
YUK8	Steele Glacier	6.87	41	P		Pn	12 30 53.4 +1.6
	baz=229						
L18K	Granite Mounta	6.96	330	Pn		Pn	12 30 53.2 +0.5
YUK3	Moose Creek	6.97	36			Pn	12 30 55.3 +2.2
YUK3	Moose Creek	6.97	36	P		Pn	12 30 54.4 +1.3
	baz=223						
RND	Reindeer	6.99	1	Pn		Pn	12 30 54.7 +1.5
M27K	Edge Creek, AK	7.00	29			Pn	12 30 55.0 +1.6
O14K	Tigyukauivet M	7.05	299			Pn	12 30 55.6 +1.6
TRF	Thorofare Moun	7.05	356	Pn		Pn	12 30 55.8 +1.6
TRF	Thorofare Moun	7.05	356	P		Pn	12 30 55.9 +1.6
	baz=175						
PS1A	Pavlof South-1	7.15	267			Pn	12 30 55.9 +0.5
CAST	Castle Rocks	7.15	349	Pn		Pn	12 30 56.4 +1.0
CAST	Castle Rocks	7.15	349	P		Pn	12 30 56.3 +0.9
	baz=167						
S31K	Pelican	7.18	72	Pn		Pn	12 30 55.7 -0.1
S31K	Pelican	7.18	72	P		Pn	12 30 56.2 +0.4
	baz=263						
KTH	Kantishna Hill	7.19	354	Pn		Pn	12 30 57.2 +1.2
MCK	McKinley	7.32	1			Pn	12 30 58.9 +1.2
MCK	McKinley	7.32	1	P		Pn	12 30 59.5 +1.8
	baz=181						
TTA	Tatalina	7.37	335	P		Pn	12 30 59.2 +0.7
N14K	Kuskokwak Cree	7.49	303			Pn	12 31 01.7 +1.8
L16K	Owhat River	7.49	319	P		Pn	12 31 01.3 +1.3
	baz=131						
HYT	Haines Junctio	7.50	49	Pn		Pn	12 31 01.8 +1.6
K24K	Donnelly Dome	7.57	11			Pn	12 31 03.1 +1.9
K24K	Donnelly Dome	7.57	11	P		Pn	12 31 03.1 +1.9
	baz=194						
L27K	Beaver Creek,	7.59	26	Pn		Pn	12 31 03.3 +1.8
BCAR	Beaver Creek A	7.61	26	Pn		Pn	12 31 03.5 +1.8
SIT	Sitka	7.63	80	P		Pn	12 30 59.9 -2.0
K17K	Iditarod	7.81	327	Pn		Pn	12 31 04.3 -0.2
SKAG	Skagway	7.95	62	Pn		Pn	12 31 07.2 +0.9
SKAG	Skagway	7.95	62	P		Pn	12 31 07.2 +0.9
M14K	Bethel	7.96	308	Pn		Pn	12 31 06.7 +0.2
SCRK	Sand Creek	7.98	17	Pn		Pn	12 31 07.8 +0.9
BESE	Bessie Mountai	7.99	69			Pn	12 31 07.5 +0.5
J18K	Innoko River	8.00	335			Pn	12 31 07.8 +0.8
J18K	Innoko River	8.00	335	P		Pn	12 31 08.6 +1.6
	baz=148						
S32K	Killisnoo	8.04	77			Pn	12 31 07.8 +0.3
HDA	Harding Lake	8.07	7			Pn	12 31 09.3 +1.4
O30N	Mendenhall	8.08	52			Pn	12 31 09.3 +1.2
M29M	Somme Creek	8.11	38			Pn	12 31 10.9 +2.2
R32K	Eaglecrest	8.12	71	Pn		Pn	12 31 10.0 +1.3
J20K	Nowinta River	8.14	344	Pn		Pn	12 31 09.6 +0.7
J19K	Poorman	8.23	340	Pn		Pn	12 31 10.3 +0.2
L15K	Ungalak Mounta	8.24	315			Pn	12 31 11.6 +1.4
CCB	Clear Creek Bu	8.26	4			Pn	12 31 11.8 +1.2
K27K	Chicken	8.38	22	Pn		Pn	12 31 12.9 +0.7
ISLZ	Isanotski Laza	8.43	264			Pn	12 31 13.2 +0.2
IL31		8.43	7			Pn	12 31 14.4 +1.6
ILAR	Eielson Array	8.43	7	Pn		Pn	12 31 14.1 +1.2
	comp=E,0.7nm,0.3s,baz=188,slow=13,SNR=59						
ILAR				Sn		Sn	12 32 45.5 -2.5
	comp=E,0.3nm,0.3s,baz=187,slow=22,SNR=6.0						
	comp=E,1.8nm,0.4s						
COLA	College	8.48	4	P		Pn	12 31 14.6 +1.0
N31M	Braeburn, Yuko	8.55	48	Pn		Pn	12 31 17.3 +2.6
MDM	Murphy Dome	8.56	3	Pn		Pn	12 31 16.2 +1.5
I23K	Minto, Yukon-K	8.74	359			Pn	12 31 18.4 +1.4
I23K	Minto, Yukon-K	8.74	359	P		Pn	12 31 18.7 +1.6
	baz=179						
P32M	Atlin	8.78	63	Pn		Pn	12 31 19.4 +1.7
P32M	Atlin	8.78	63	P		Pn	12 31 19.0 +1.3
	baz=255						
U33K	Whale Pass	8.93	85			Pn	12 31 18.2 -1.4
CRAG	Craig	9.05	89	P		Pn	12 31 20.0 -1.3
P33M	Teslin, Yukon	9.38	60	Pn		Pn	12 31 27.6 +1.6
P33M	Teslin, Yukon	9.38	60	P		Pn	12 31 27.1 +1.1
	baz=253						
H21K	Melozitna Rive	9.41	351			Pn	12 31 26.3 -0.1
M31M	Drury Creek, Y	9.48	46	Pn		Pn	12 31 30.0 +2.6
H18K	Honhosa River	9.82	337	Pn		Pn	12 31 32.6 +0.7
IMAR	Indian Mountai	9.82	349	Pn		Pn	12 31 32.1 +0.1
S34M	Telegraph Cree	9.89	74	Pn		Pn	12 31 34.7 +1.7
R33M	Jennings River	10.11	65	Pn		Pn	12 31 37.7 +1.7
FYU	Fort Yukon	10.33	9	Pn		Pn	12 31 39.9 +1.0
DLBC	Dease Lake	10.49	71	Pn		Pn	12 31 43.3 +2.0
DLBC	Dease Lake	10.49	71	Pn		Pn	12 31 40.5 -0.8
	comp=E,0.4nm,0.3s,baz=270,slow=20,SNR=2.9						
DLBC				Sn		Sn	12 33 35.6 -3.2
	baz=196,slow=19						
	comp=E,0.9nm,0.3s						
F20K	Avaraart Lake	11.08	346	Pn		Pn	12 31 49.9 +0.8
BMAR	Burnt Mountain	11.23	9	Pn		Pn	12 31 52.1 +0.9
G31M	Satah River	12.62	28	Pn		Pn	12 32 11.4 +1.3
C36M	Paulatuk	17.07	31	P		P	12 33 11.0 0.0
C36M				IAmb		IAmb	12 33 20.2
	comp=Z,5.0nm,1.5s						
YKA	Yellowknife Ar	18.39	57	P		Pn	12 33 25.1 -0.5
YKA	Yellowknife Ar	18.39	57	P		P	12 33 25.9 +0.3
	baz=274,slow=10,SNR=2.5						
	comp=Z,0.1nm,0.4s						
A36M	Sachs Harbour	18.50	23	P		Pn	12 33 27.5 +0.6
A36M				IAmb		IAmb	12 33 34.3
	comp=Z,5.0nm,0.8s						
RES	Resolute Bay	27.39	28	P		P	12 34 55.6 -0.2
RES				IAmb		IAmb	12 34 56.4
	comp=Z,7.7nm,0.5s						
H11N2	WAKE ISLAND Hy	49.03	240	T		T	13 31 06.0
	baz=30,slow=76,SNR=54						
H11N3	WAKE ISLAND Hy	49.03	240	T		T	13 30 55.7
	baz=30,slow=76,SNR=151						
H11N1	WAKE ISLAND Hy	49.04	240	T		T	13 30 39.1
	baz=30,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	50.17	239	T		T	13 33 03.4
	baz=29,slow=76,SNR=6.4						
H11S2	WAKE ISLAND Hy	50.18	239	T		T	13 32 44.5
	baz=29,slow=76,SNR=4.3						
H11S3	WAKE ISLAND Hy	50.19	239	T		T	13 32 38.9
	baz=29,slow=76,SNR=5.4						
AKASG	Malin Array Be	73.21	1	P		P	12 40 43.0 +1.6
	comp=Z,0.3nm,0.4s,baz=355,slow=4.4,SNR=2.5						

comp=Z,0.3nm,0.4s

*NEIC **07** 12:33:41.2±1.4,56°42N±0°09×148°9W±0°1, h23km±9km, mb3.4/2, ML3.7/62, ML3.4(AEIC), Error ellipse: s-maj=12.8km s-min=8.5km az=167.0*
*AEIC **07** 12:33:45.3±1.2,56°50N±0°09×149°0W±0°1, h12km±7km, Error ellipse: s-maj=12.9km s-min=8.4km az=166.0*

ISC 07 12:33:39.2±1.1,56°50N±0°08×148°96W±0°06,h10km, n230,σ1°57/237,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
KDAK	Kodiak Island	2.36	305		Pn	12 34 19.4	+1.5	
OHAK	Old Harbor	2.49	289		Pn	12 34 20.5	+0.9	
OHAK	Old Harbor	2.49	289	P	Pn	12 34 20.6	+1.0	
OHAK	Old Harbor	2.49	289	P	Pn	12 34 20.5	+0.9	
	baz=105							
OHAK				S	Sn	12 34 47.9	-2.0	
	baz=105							
SYI	Shuyak Island	2.81	320		Pn	12 34 25.8	+1.7	
SYI				IAML		12 34 59.0		
	comp=E,193nm,0.3s							
SYI				IAML		12 34 59.2		
	comp=N,132nm,0.3s							
Q20K	Shuyak Island	2.81	320	P	Pn	12 34 25.7	+1.6	
	baz=137							
Q20K				S	Sn	12 34 57.7	-0.3	
	baz=137							
SII	Sitkinak Islan	2.90	273	Pn	Pn	12 34 26.2	+0.9	
SII					Sn	12 34 58.5	-1.7	
SII				IAML		12 34 58.8		
	comp=E,163nm,0.7s							
SII				IAML		12 34 58.9		
	comp=N,259nm,0.7s							
SII	Sitkinak Islan	2.90	273	P	Pn	12 34 26.2	+0.9	
SII	Sitkinak Islan	2.90	273	P	Pn	12 34 26.1	+0.7	
	baz=89							
SII				S	Sn	12 34 58.4	-1.7	
	baz=89							
Q23K	Middleton Isla	3.25	24	Pn	Pn	12 34 30.6	+0.6	
Q23K				IAML		12 35 09.4		
	comp=E,230nm,1.6s							
Q23K				IAML		12 35 16.7		
	comp=N,279nm,1.8s							
Q23K	Middleton Isla	3.25	24	P	Pn	12 34 30.7	+0.6	
	baz=206							
Q23K				S	Sn	12 35 06.5	-2.2	
	baz=206							
MID	Middleton Isla	3.25	24	Pn	Pn	12 34 31.0	+0.9	
MID				IAML		12 35 37.9		
	comp=E,220nm,1.8s							
MID	Middleton Isla	3.25	24	P	Pn	12 34 30.8	+0.7	
CNPM	China Poot	3.27	339		Pn	12 34 31.5	+1.1	
BRSE	Bradley Lake S	3.38	344		Pn	12 34 32.7	+0.7	
BRSE					Sn	12 35 09.6	-2.6	
BRSE	Bradley Lake S	3.38	344	P	Pn	12 34 32.7	+0.7	
	baz=163							
BRSE				S	Sn	12 35 09.6	-2.6	
	baz=163							
BRLK	Bradley Lake	3.43	343		Pn	12 34 33.4	+0.8	
HOM	Homer	3.47	337	Pn	Pn	12 34 34.8	+1.7	
HOM				IAML		12 35 15.8		
	comp=E,139nm,1.1s							
HOM				IAML		12 35 17.0		
	comp=N,152nm,0.7s							
HOM	Homer	3.47	337	P	Pn	12 34 34.9	+1.7	
	baz=155							
Q19K	Cape Douglas,	3.50	316	Pn	Pn	12 34 36.0	+2.4	
Q19K				IAML		12 35 19.9		
	comp=N,151nm,0.8s							
Q19K				IAML		12 35 22.1		
	comp=E,258nm,0.8s							
Q19K	Cape Douglas,	3.50	316	P	Pn	12 34 35.7	+2.1	
	baz=132							
P23K	Montague Islan	3.60	13		Pn	12 34 35.6	+0.6	
KAHG	Katmai Hook Gl	3.62	306		Pn	12 34 37.1	+1.8	
SEW	Seward	3.62	356	Pn	Pn	12 34 35.7	+0.5	
SEW	Seward	3.62	356	P	Pn	12 34 35.7	+0.5	
	baz=176							
AU22	Augustine Moun	3.71	323		Pn	12 34 38.1	+1.7	
AUCH	Augustine Cone	3.73	322		Pn	12 34 39.0	+2.1	
ACHA	Angle Creek He	3.85	299		Pn	12 34 40.4	+1.9	
P19K	Oil Pt	3.89	326		Pn	12 34 41.0	+2.0	
P19K				IAML		12 35 28.1		
	comp=N,165nm,0.3s							
P19K				IAML		12 35 28.9		
	comp=E,135nm,0.4s							
P19K	Oil Pt	3.89	326	P	Pn	12 34 41.0	+2.0	
	baz=142							
O22K	Cooper Landing	4.01	355		Pn	12 34 41.2	+0.7	
O22K				IAML		12 35 28.6		
	comp=E,181nm,0.4s							
O22K				IAML		12 35 33.6		
	comp=N,185nm,0.6s							
O22K	Cooper Landing	4.01	355	P	Pn	12 34 41.6	+1.0	
	baz=174							
SLKM	Skilak Lake	4.07	351		Pn	12 34 41.8	+0.4	
O20K	Slope Mountain	4.08	333		Pn	12 34 42.6	+1.1	
O20K	Slope Mountain	4.08	333	P	Pn	12 34 42.6	+1.1	
	baz=150							
HIN	Hinchinbrook I	4.11	17	Pn	Pn	12 34 43.0	+1.0	
HIN				IAML		12 35 28.8		
	comp=N,157nm,0.7s							
HIN				IAML		12 35 33.3		
	comp=E,131nm,0.8s							
IVE	Iliamna Volcan	4.13	330		Pn	12 34 43.0	+0.7	
CNTC	Contact Creek	4.14	298		Pn	12 34 44.6	+2.1	
Q17K	Contact Creek	4.15	298	P	Pn	12 34 44.6	+2.1	
	baz=132							
KAIM	Kayak Island	4.19	33	Pn	Pn	12 34 44.4	+1.3	
EYAK	Cordova Ski Ar	4.39	21	Pn	Pn	12 34 46.9	+1.1	
EYAK	Cordova Ski Ar	4.39	21	P	Pn	12 34 47.0	+1.2	
EYAK	Cordova Ski Ar	4.39	21	P	Pn	12 34 46.9	+1.1	
	baz=204							
RED	Redoubt Volcan	4.41	335		Pn	12 34 46.6	+0.5	
P18K	Big Mountain,	4.42	314	Pn	Pn	12 34 47.6	+1.3	
P18K	Big Mountain,	4.42	314	P	Pn	12 34 47.4	+1.1	
	baz=128							
RSO	Redoubt South	4.44	335		Pn	12 34 47.8	+1.1	
RDT	Redoubt	4.47	338		Pn	12 34 47.2	+0.3	
RDWB	Redoubt West	4.49	335		Pn	12 34 47.7	+0.4	
RAGM	Ragged Mountai	4.50	28	Pn	Pn	12 34 48.6	+1.3	
SUCK	Suckling Hills	4.50	35	Pn	Pn	12 34 48.4	+1.0	
DFR	Drift River	4.54	336		Pn	12 34 48.7	+0.7	
HMT	Hamilton	4.57	31	Pn	Pn	12 34 49.8	+1.5	
NCT	North Crescent	4.57	335		Pn	12 34 49.0	+0.6	
NICHA	Nichawak Mount	4.57	33		Pn	12 34 49.9	+1.5	
RC01	Rabbit Creek A	4.62	355	Pn	Pn	12 34 50.0	+1.0	
RC01				IAML		12 35 41.6		
	comp=E,49nm,0.4s							
RC01				IAML		12 35 44.4		
	comp=N,43nm,0.4s							
RC01	Rabbit Creek A	4.62	355	P	Pn	12 34 49.8	+0.9	
	baz=175							
GOAT	Goat Mountain	4.65	27		Pn	12 34 50.5	+1.1	
FIS	Fire Island	4.70	353	Pn	Pn	12 34 51.8	+1.7	
FIS				IAML		12 35 48.0		
	comp=E,65nm,1.4s							
FIS				IAML		12 35 49.1		
	comp=N,92nm,1.7s							
O18K	Koktuh Hills	4.72	318	Pn	Pn	12 34 51.4	+1.1	
BERG	Berg Lake	4.78	33		Pn	12 34 52.3	+1.2	
GRIN	Grindle Hills	4.81	36		Pn	12 34 53.3	+1.7	
P17K	Kvichak River	4.82	307		Pn	12 34 53.6	+1.8	
P17K	Kvichak River	4.82	307	P	Pn	12 34 53.6	+1.8	
	baz=121							
SNH	Sunshine Point	4.90	39	Pn	Pn	12 34 54.2	+1.4	
SNH				IAML		12 35 52.3		
	comp=E,81nm,1.6s							
DIV	Divide	4.93	18		Pn	12 34 54.4	+1.1	
KNK	Knik Glacier	4.93	3	Pn	Pn	12 34 54.3	+1.0	
KNK				IAML		12 35 56.3		
	comp=E,29nm,0.7s							
KNK				IAML		12 35 57.6		
	comp=N,24nm,1.7s							
KNK	Knik Glacier	4.93	3	P	Pn	12 34 54.6	+1.3	
	baz=183							
KHIT	Khitrov Hills	4.96	35		Pn	12 34 54.9	+1.2	
N20K	Mount Spurr	5.00	342	P	Pn	12 34 55.1	+0.8	
	baz=159							
SPCR	Spurr Chakacha	5.01	342		Pn	12 34 55.1	+0.8	
BMRM	Bremner River	5.02	25		Pn	12 34 55.9	+1.4	
BMRM	Bremner River	5.02	25	P	Pn	12 34 55.7	+1.2	
	baz=209							
SPCP	Crater Peak Br	5.06	342		Pn	12 34 56.0	+0.9	
SPCG	Spurr Capps Gl	5.06	343		Pn	12 34 55.9	+0.8	
SUA	Susitna One	5.06	350		Pn	12 34 55.8	+0.7	
SUA				IAML		12 35 53.8		
	comp=N,20nm,0.4s							
SUA	Susitna One	5.06	350	P	Pn	12 34 55.8	+0.7	
	baz=169							
WAX	Waxell Ridge	5.09	36		Pn	12 34 56.8	+1.3	
PMR	Palmer	5.11	359		Pn	12 34 56.8	+1.1	
PMR				IAML		12 35 53.4		
	comp=E,20nm,0.6s							
PMR				IAML		12 35 56.3		
	comp=N,21nm,0.4s							
PMR	Palmer	5.11	359	P	Pn	12 34 57.1	+1.5	
PMR	Palmer	5.11	359	P	Pn	12 34 56.7	+1.1	
	baz=179							
BARK	Barkley Ridge	5.18	38		Pn	12 34 58.1	+1.4	
N19K	Bonanza Creek	5.20	329	Pn	Pn	12 34 57.8	+0.8	
N19K	Bonanza Creek	5.20	329	P	Pn	12 34 57.8	+0.8	
	baz=144							
STLK	Strandline Lak	5.23	345		Pn	12 34 58.4	+1.1	
CRQM	Cirque	5.24	33		Pn	12 34 58.9	+1.3	
CRQM				IAML		12 35 57.5		
	comp=E,65nm,0.5s							
KLU	Klutina	5.25	16		Pn	12 34 59.1	+1.5	
KLU				IAML		12 35 59.1		
	comp=E,44nm,0.4s							
KLU				IAML		12 36 00.7		
	comp=N,61nm,0.5s							
KLU	Klutina	5.25	16	P	Pn	12 34 59.0	+1.5	
	baz=199							
SPNN	North Nagishla	5.25	340		Pn	12 34 59.0	+1.2	
GHO	Glory Hole Cre	5.29	0		Pn	12 34 59.5	+1.3	
GHO				IAML		12 36 00.3		
	comp=N,40nm,1.7s							
GHO				IAML		12 36 00.8		
	comp=E,44nm,0.5s							
SML	Sawmill	5.33	3	Pn	Pn	12 35 00.2	+1.4	
SML	Sawmill	5.33	3	P	Pn	12 35 00.5	+1.7	
	baz=184							
ISLE	Juniper Island	5.38	37	Pn	Pn	12 35 00.8	+1.3	
BAGL	Bagley Icefiel	5.38	39		Pn	12 35 00.7	+1.4	
SCM	Sheep Creek Mo	5.41	8	Pn	Pn	12 35 01.7	+1.8	
P16K	Nushagak River	5.46	301		Pn	12 35 02.7	+2.2	
VRDI	Verde Repeater	5.53	29		Pn	12 35 02.9	+1.3	
N18K	Kilae Creek	5.54	322		Pn	12 35 02.4	+0.8	
N25K	Chitina, Valde	5.59	22	Pn	Pn	12 35 03.7	+1.4	
N25K	Chitina, Valde	5.59	22	P	Pn	12 35 04.2	+1.8	
	baz=206							
KIAG	Kiagna River	5.61	35		Pn	12 35 03.8	+1.1	
GLB	Gilahina Butte	5.62	26		Pn	12 35 04.2	+1.4	
SAMH	Samovar Hills	5.64	46		Pn	12 35 04.8	+1.8	
SKT	Skwentna	5.65	348	Pn	Pn	12 35 04.0	+0.9	
GRNC	Granite Creek	5.67	39		Pn	12 35 04.9	+1.4	
TABL	Table Mountain	5.69	43		Pn	12 35 05.3	+1.5	
SVW2	Sparrevohn	5.75	326	P	Pn	12 35 04.9	+0.4	
O16K	Kokwok River B	5.76	306	Pn	Pn	12 35 06.2	+1.7	
MCARA	McCarthy VSAT	5.78	30		Pn	12 35 06.4	+1.6	
MCARA	McCarthy VSAT	5.78	30	P	Pn	12 35 06.7	+1.9	
	baz=215							
PTPK	Patty Peak	5.78	33		Pn	12 35 06.6	+1.6	
M24K	Tolsona, Glenn	5.80	13		Pn	12 35 07.1	+1.9	
M24K	Tolsona, Glenn	5.80	13	P	Pn	12 35 06.9	+1.7	
	baz=195							
M20K	Styx River	5.81	340	Pn	Pn	12 35 06.1	+0.7	
PCA	Pinnacle	5.83	48		Pn	12 35 07.2	+1.6	
PINM	Pinnacle	5.83	48	P	Pn	12 35 07.5	+1.8	
	baz=236							
N17K	Nushagak Hills	5.91	317	Pn	Pn	12 35 07.9	+1.3	
BARN	Barnard Glacie	5.94	37		Pn	12 35 08.9	+1.7	
CTG	Chitna Glacier	5.98	38	P	Pn	12 35 09.3	+1.6	
	baz=225							
CTGM	Chitina Glacie	5.98	38		Pn	12 35 09.3	+1.5	
PNL	Peninsula	5.98	54		Pn	12 35 08.8	+1.1	
PNL	Peninsula	5.98	54	P	Pn	12 35 09.5	+1.8	
PNL	Peninsula	5.98	54	P	Pn	12 35 09.1	+1.5	
	baz=242							
LOGN	Logan Glacier	6.00	40		Pn	12 35 09.4	+1.4	
BCPM	Bancas Point	6.02	51		Pn	12 35 10.0	+1.8	
M19K	Big River Lodg	6.09	335	Pn	Pn	12 35 09.8	+0.6	
WAT6	Susitna Watana	6.13	5		Pn	12 35 11.3	+1.5	
WAT6	Susitna Watana	6.13	5	P	Pn	12 35 11.3	+1.5	
	baz=186							
M18K	Stony River	6.13	328		Pn	12 35 10.3	+0.6	
HARP	HAARP	6.22	17		Pn	12 35 13.1	+2.2	
HARP	HAARP	6.22	17	P	Pn	12 35 13.1	+2.2	
	baz=200							
CNBA	Chernabura Isl	6.25	259		Pn	12 35 12.0	+0.7	
WAT7	Susitna Watana	6.35	0		Pn	12 35 14.4	+1.6	
O15K	Ungalikthiuk R	6.39	299		Pn	12 35 15.5	+2.2	
L19K	White Mountain	6.44	335		Pn	12 35 14.7	+0.6	
N16K	Nishlik Lake	6.50	312		Pn	12 35 16.4	+1.6	
N16K	Nishlik Lake	6.50	312	P	Pn	12 35 16.5	+1.6	
	baz=124							
SDPT	Sand Point	6.58	265		Pn	12 35 17.7	+1.9	
SDPT	Sand Point	6.58	265	P	Pn	12 35 17.3	+1.5	
M17K	Holitna River	6.58	322		Pn	12 35 17.1	+1.2	
DHY	Denali Highway	6.64	6	Pn	Pn	12 35 18.6	+1.7	
DHY	Denali Highway	6.64	6	P	Pn	12 35 18.6	+1.7	
	baz=188							
M26K	Nabesna, AK	6.65	25	Pn

J26L	**Joseph Creek**	**8.45**	**16**			**Pn**	**12 35 43.3**	**+1.7**
L29M	**L29M**	**8.57**	**35**			**Pn**	**12 35 45.3**	**+2.1**
K15K	**Wolf Creek Mou**	**8.64**	**317**	Pn		**Pn**	**12 35 47.1**	**+3.0**
P32M	**Atlin**	**8.65**	**63**	Pn		**Pn**	**12 35 45.5**	**+1.2**
M30M	**Minto, Yukon**	**8.66**	**40**	Pn		**Pn**	**12 35 47.1**	**+2.7**
I23K	**Minto, Yukon-K**	**8.68**	**359**	Pn		**Pn**	**12 35 46.1**	**+1.5**
U33K	**Whale Pass**	**8.81**	**86**	Pn		**Pn**	**12 35 44.9**	**-1.5**
I21K	**Tanana**	**8.83**	**352**	Pn		**Pn**	**12 35 48.4**	**+1.8**
DAWY	**Dawson**	**8.94**	**28**	Pn		**Pn**	**12 35 49.9**	**+1.7**
P33M	**Teslin, Yukon**	**9.26**	**60**	Pn		**Pn**	**12 35 54.4**	**+1.8**
Q32M	**Nakina River**	**9.26**	**68**	Pn		**Pn**	**12 35 54.4**	**+1.7**
I26K	**Coal Creek Min**	**9.27**	**15**	Pn		**Pn**	**12 35 54.7**	**+2.0**
M31M	**Drury Creek, Y**	**9.37**	**46**			**Pn**	**12 35 56.8**	**+2.7**
H21K	**Melozitna Rive**	**9.37**	**350**			**Pn**	**12 35 54.5**	**+0.4**
H19K	**Roundabout Mou**	**9.75**	**341**	Pn		**Pn**	**12 36 00.7**	**+1.5**
IMAR	**Indian Mountai**	**9.79**	**348**	Pn		**Pn**	**12 36 00.6**	**+0.8**
FARO	**Faro, Yukon**	**9.80**	**48**	Pn		**Pn**	**12 36 02.9**	**+2.8**
H18K	**Honhosa River**	**9.80**	**336**	Pn		**Pn**	**12 36 01.1**	**+1.1**
I28M	**Miner Creek**	**9.97**	**22**	Pn		**Pn**	**12 36 05.8**	**+3.3**
R33M	**Jennings River**	**9.99**	**66**	Pn		**Pn**	**12 36 04.4**	**+1.7**
J30M	**Hart River**	**10.19**	**32**	Pn		**Pn**	**12 36 07.8**	**+2.4**
FYU	**Fort Yukon**	**10.25**	**8**	Pn		**Pn**	**12 36 07.6**	**+1.5**
DLBC	**Dease Lake**	**10.37**	**71**	Pn		**Pn**	**12 36 09.5**	**+1.6**
F21K	**Alatna River**	**10.96**	**351**	Pn		**Pn**	**12 36 16.4**	**+0.5**
F20K	**Avaraart Lake**	**11.05**	**346**	Pn		**Pn**	**12 36 18.1**	**+1.1**
F24K	**Squaw Lake**	**11.07**	**2**	Pn		**Pn**	**12 36 18.8**	**+1.5**
BMAR	**Burnt Mountain**	**11.15**	**9**	Pn		**Pn**	**12 36 18.9**	**+0.4**
E19K	**Redstone River**	**11.65**	**344**	Pn		**Pn**	**12 36 26.2**	**+1.0**
TOLK	**Toolik Lake Re**	**12.19**	**359**	Pn		**Pn**	**12 36 33.6**	**+0.9**
HOLB	**Holberg**	**13.67**	**107**	Pn		**Pn**	**12 36 51.8**	**-1.0**
INK	**Inuvik**	**13.77**	**25**	Pn		**Pn**	**12 36 55.0**	**+0.9**
C36M	**Paulatuk**	**16.96**	**31**			**Pn**	**12 37 34.4**	**-1.7**
C36M					IAmb	IAmb	12 37 55.8	
	comp=Z,4.1nm,1.5s							
A36M	**Sachs Harbour**	**18.41**	**23**	P		**Pn**	**12 37 54.6**	**+0.6**
A36M					IAmb	IAmb	12 38 24.9	
	comp=Z,3.0nm,0.9s							

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*SJA **07** 12:36:11.7±1.5,29˙12S×72˙85W,h10km,ML4.7,MW4.8*
*GUC **07** 12:36:12.9±0.5,29˙13S×72˙97W,h20km,ML5.1*
*IDC **07** 12:36:16.1±0.4,29˙21S×72˙62W,h0km,mb5.1/14, mbtmp4.9/19,ML4.4/5,MS4.3/37,Error ellipse: s-maj=20.0km s-min=13.0km az=83.0*
*MOS **07** 12:36:16.7±1.2,29˙12S×72˙51W,h11km,mb5.5/22,Error ellipse: s-maj=11.4km s-min=7.5km az=98.5*
*NEIC **07** 12:36:18.1,29˙25S×72˙70W,h12km,Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10¹⁶Nm; Mrr-5.79; Mθθ1.39; Mϕϕ4.40; Mrθ-0.90; Mθϕ2.01; Mϕr0.21; Fault plane solution: M₀5.67000×10¹⁶ NP1:ϕs34.66000°, δ46.69000°,λ-78.86000°. NP2:ϕs198.65000°,δ44.44000°, λ-101.58000°. Principal axes: T 5.4105, Plg1.0000°, Azm117.0000°; N 0.5157, Plg8.0000°, Azm207.0000°; P -5.9262, Plg82.0000°, Azm19.0000°;*
*NEIC **07** 12:36:18.1±2.3,29˙25S±0˙04×72˙60W±0˙07,h10km±1km, mb5.5/484,Ms_20 4.7/14,Mwr4.9/48,Mww5.1/44 Error ellipse: s-maj=10.7km s-min=6.7km az=281.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-2.71; Mθθ0.64; Mϕϕ2.08; Mrθ-0.03; Mθϕ0.84; Mϕr-0.73; Fault plane solution: M₀2.70000×10¹⁶ NP1: ϕs209.53000°,δ37.95000°,λ-81.87000°. NP2:ϕs19.26000°, δ52.50000°,λ-96.29000°. Principal axes: T 2.5481, Plg7.0000°, Azm114.0000°; N 0.2753, Plg5.0000°, Azm23.0000°; P -2.8233, Plg81.0000°, Azm259.0000°;*
*NEIC **07** 12:36:18.1,29˙25S×72˙60W,h10km*
*VAO **07** 12:36:18.5±0.5,29˙29S×72˙53W,h10km,mb4.9*
*NEIC **07** 12:36:18.1,29˙25S×72˙59W,h12km*
*GCMT **07** 12:36:20.1±0.2,29˙33S±0˙01×72˙92W±0˙01,h12km, MW5.1/121,Moment Tensor Solution. s52,c69; s121,c192; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-5.70±.09; Mθθ1.21±.07; Mϕϕ4.49±.10; Mrθ0.12±.30; Mθϕ1.76±.07; Mϕr0.69±.32; Best double couple: M₀5.52200×10¹⁶ NP1:ϕs202.00000°,δ49.00000°, λ-92.00000°. NP2:ϕs25.00000°,δ41.00000°,λ-88.00000°. Principal axes: T 5.2980, Plg4.0000°, Azm293.0000°; N 0.4480, Plg1.0000°, Azm203.0000°; P -5.7460, Plg86.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 12:36:16.1±0.6,29˙21S±0˙03×72˙67W±0˙04,h4km±3km, h4km:pP-P,n718,σ1s53/517,mb5.5/248,MS4.5/42,12C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.43**	**120**		**Pn**	**12 36 42.1**	**-0.8**
CO06	**Fray Jorge**	**1.71**	**149**		**Pn**	**12 36 45.5**	**-1.4**
CO06				Sn	**Sn**	**12 37 05.7**	**-3.5**
CO06	**Fray Jorge**	**1.71**	**149**	*eP*	**Pn**	**12 36 45.4**	**-1.4**
CO06				*eS*	**Sn**	**12 37 05.1**	**-4.1**
AC04	**Llanos de Chal**	**1.73**	**55**		**Pn**	**12 36 45.0**	**-1.9**
AC04	**Llanos de Chal**	**1.73**	**55**	*eP*	**Pn**	**12 36 44.9**	**-2.1**
AC04				*eS*	**Sn**	**12 37 05.5**	**-4.0**
AC04				IAML		12 37 09.2	
	comp=Z,2μm,0.6s						
AC04	**Llanos de Chal**	**1.73**	**55**	*eP*	**Pn**	**12 36 44.7**	**-2.2**
LCO	**Las Campanas**	**1.74**	**84**		**Pn**	**12 36 46.9**	**-0.5**
LCO				Sn	**Sn**	**12 37 08.2**	**-1.9**
LCO	**Las Campanas**	**1.74**	**84**	*eP*	**Pn**	**12 36 46.9**	**-0.5**
LCO	**Las Campanas**	**1.74**	**84**	*eP*	**Pn**	**12 36 46.7**	**-0.7**
LCO				*eS*	**Sn**	**12 37 09.0**	**-1.1**
LCO				IAML		12 37 11.8	
	comp=Z,13μm,0.8s						
LCO	**Las Campanas**	**1.74**	**84**	*iP*	**Pn**	**12 36 46.6**	**-0.7**
LCO				*eS*	**Sn**	**12 37 07.9**	**-2.3**
LCO				IAML		12 37 10.6	
	comp=Z,38μm,0.5s						
GO04	**Tololo Observa**	**1.89**	**121**	*eP*	**Pn**	**12 36 49.5**	**0.0**
GO04				*eS*	**Sb**	**12 37 16.7**	**+1.3**
GO04				IAML		12 37 16.8	
	comp=Z,17μm,0.8s						
GO04	**Tololo Observa**	**1.89**	**121**	*iP*	**Pn**	**12 36 49.2**	**-0.2**
GO04				*eS*	**Sn**	**12 37 12.1**	**-1.8**
GO04				IAML		12 37 16.8	
	comp=E,33μm,0.5s						
AC05	**El Transito**	**2.13**	**80**		**Pn**	**12 36 53.2**	**+0.5**
AC05	**El Transito**	**2.13**	**80**	*eP*	**Pn**	**12 36 52.8**	**+0.1**
AC05				*eS*	**Sb**	**12 37 21.2**	**-1.2**
AC05				IAML		12 37 24.8	
	comp=Z,2μm,0.8s						
AC05	**El Transito**	**2.13**	**80**	*eP*	**Pn**	**12 36 52.8**	**+0.1**
AC05				*eS*	**Sn**	**12 37 18.2**	**-1.5**
CO03	**El Pedregal**	**2.36**	**134**		**Pn**	**12 36 56.3**	**+0.5**
CO03	**El Pedregal**	**2.36**	**134**	*eP*	**Pn**	**12 36 55.9**	**+0.1**
CO03				*eS*	**Sn**	**12 37 24.1**	**-1.3**
CO03				IAML		12 37 27.0	
	comp=Z,4μm,0.8s						
CO03	**El Pedregal**	**2.36**	**134**	*iP*	**Pn**	**12 36 55.8**	**-0.1**
CO03				*eS*	**Sn**	**12 37 22.8**	**-2.6**
CO03				IAML		12 37 26.7	
	comp=E,4μm,0.3s						
CO01	**Juntas del Tor**	**2.37**	**109**		**Pn**	**12 36 57.0**	**+0.8**
CO01	**Juntas del Tor**	**2.37**	**109**	*eP*	**Pn**	**12 36 56.9**	**+0.8**
CO01				*eS*	**Sn**	**12 37 26.4**	**+0.6**
CO01				IAML		12 37 34.5	
	comp=Z,3μm,1.6s						
CO01	**Juntas del Tor**	**2.37**	**109**	*iP*	**Pn**	**12 36 56.8**	**+0.7**
CO01				*eS*	**Sn**	**12 37 24.5**	**-1.3**
CO02	**Combarbal**	**2.46**	**144**		**Pn**	**12 36 57.4**	**+0.3**
CO02	**Combarbal**	**2.46**	**144**	*eP*	**Pn**	**12 36 57.1**	**-0.1**
CO02				*eS*	**Sn**	**12 37 25.9**	**-1.9**
CO02				IAML		12 37 31.2	
	comp=Z,6μm,0.9s						
CO02	**Combarbal**	**2.46**	**144**	*iP*	**Pn**	**12 36 57.1**	**-0.1**
CO02				*eS*	**Sn**	**12 37 25.3**	**-2.4**
CO02				IAML		12 37 27.3	
	comp=N,11μm,0.5s						
GO03	**Copiap**	**2.69**	**54**		**Pn**	**12 37 00.2**	**0.0**
GO03	**Copiap**	**2.69**	**54**	*eP*	**Pn**	**12 36 59.8**	**-0.5**
GO03				*eS*	**Sn**	**12 37 31.7**	**-1.5**
GO03				IAML		12 37 34.5	
	comp=Z,2μm,1.4s						
GO03	**Copiap**	**2.69**	**54**	*eP*	**Pn**	**12 36 59.5**	**-0.7**
GO03				*eS*	**Sn**	**12 37 30.6**	**-2.6**
GO03				IAML		12 37 32.6	
	comp=N,3μm,0.4s						
AROD	**Rodeo**	**2.94**	**110**	*eP*	**Pn**	**12 37 06.4**	**+2.4**
AROD				*eS*	**Sb**	**12 37 43.1**	**-2.7**
ACDV	**Cuesta del Vie**	**3.23**	**108**	*eP*	**Pb**	**12 37 14.7**	**+0.4**
ACDV				IAML		12 38 15.6	
	comp=Z,1μm,1.1s						
ACCO	**Cerro Coronel**	**3.42**	**115**	*eP*	**Pn**	**12 37 09.6**	**-1.0**
VA06	**Catapilco**	**3.54**	**161**	Pn	**Pn**	**12 37 11.3**	**-0.6**
DOCA	**Reserva Natura**	**3.56**	**120**	*eP*	Pn	12 37 07.0	-5.5
DOCA				IAML		12 38 25.7	
	comp=Z,981nm,1.4s						
AC01	**Pan de Azucar**	**3.56**	**32**	Pn	**Pn**	**12 37 09.8**	**-2.5**
AC01	**Pan de Azucar**	**3.56**	**32**	*eP*	**Pn**	**12 37 09.5**	**-2.7**
AC01				*eS*	**Sn**	**12 37 51.6**	**-3.2**
AC01				IAML		12 39 21.1	
	comp=Z,262nm,2.9s						
AC01	**Pan de Azucar**	**3.56**	**32**	*eP*	**Pn**	**12 37 09.6**	**-2.7**
AGUA	**GUANDACOL**	**3.66**	**95**	*eP*	**Pb**	**12 37 17.7**	**-3.8**
AGUA				IAML		12 38 21.5	
	comp=Z,3μm,1.9s						
VA01	**Torpederas**	**3.90**	**167**		**Pn**	**12 37 16.0**	**-0.8**
VA01	**Torpederas**	**3.90**	**167**	*eP*	**Pn**	**12 37 15.8**	**-1.0**
VA01				*eS*	**Sn**	**12 37 57.5**	**-5.6**
VA01				IAML		12 38 38.5	
	comp=Z,449nm,0.9s						
AC02	**Maricunga**	**3.93**	**54**		**Pn**	**12 37 18.4**	**+0.7**
AC02	**Maricunga**	**3.93**	**54**	*eP*	**Pn**	**12 37 18.1**	**+0.4**
AC02				*eS*	**Sn**	**12 38 03.8**	**-0.7**
AC02				IAML		12 38 06.9	
	comp=Z,420nm,0.3s						
AC02	**Maricunga**	**3.93**	**54**	*eP*	**Pn**	**12 37 18.1**	**+0.4**
VCA	**Vinchina**	**3.94**	**84**	*eP*	**Pb**	**12 37 22.4**	**-3.9**
VCA				*eS*	**Sb**	**12 38 09.6**	**-4.9**
VCA				IAML		12 38 24.8	
	comp=Z,3μm,1.8s						
VA03	**San Esteban**	**3.98**	**153**		**Pn**	**12 37 18.7**	**+0.6**
VA03	**San Esteban**	**3.98**	**153**	*eP*	**Pn**	**12 37 18.9**	**+0.7**
VA03				*eS*	**Sn**	**12 38 08.5**	**+3.2**
VA03				IAML		12 38 19.4	
	comp=Z,2μm,0.9s						
MT02	**Curacav**	**4.24**	**162**		**Pn**	**12 37 21.1**	**-0.5**
MT02	**Curacav**	**4.24**	**162**	*eP*	**Pn**	**12 37 20.8**	**-0.9**
MT02				*eS*	**Sn**	**12 38 05.0**	**-6.6**
MT02				IAML		12 38 28.4	
	comp=Z,694nm,0.7s						
PEL	**Peldehue**	**4.27**	**157**		**Pn**	**12 37 22.5**	**+0.4**
PEL	**Peldehue**	**4.27**	**157**	P	**Pn**	**12 37 22.5**	**+0.4**
MT05	**Renca**	**4.48**	**159**		**Pn**	**12 37 24.9**	**-0.1**
MT05	**Renca**	**4.48**	**159**	*eP*	**Pn**	**12 37 25.8**	**+0.9**
MT05				*eS*	**Sn**	**12 38 14.4**	**-3.2**
MT05				IAML		12 38 21.2	
	comp=Z,1μm,0.7s						
VA05	**Santo Domingo**	**4.52**	**169**		**Pn**	**12 37 24.9**	**-0.5**
MT16	**CCHEN**	**4.59**	**157**		**Pn**	**12 37 25.8**	**-0.6**
MT03	**Universidad Ad**	**4.65**	**157**		**Pn**	**12 37 27.9**	**+0.6**
MT03	**Universidad Ad**	**4.65**	**157**	*eP*	**Pn**	**12 37 28.1**	**+0.7**
MT03				*eS*	**Sn**	**12 38 20.6**	**-1.3**
MT03				IAML		12 38 35.0	
	comp=Z,1μm,0.8s						
ASAL	**Salagasta**	**4.71**	**137**	*eP*	**Pn**	**12 37 32.2**	**+4.0**
ASAL				*eS*	**Sn**	**12 38 28.7**	**+5.3**
ASAL				IAML		12 38 47.8	
	comp=Z,1μm,1.0s						
AVFE	**Valle Fertil**	**4.75**	**109**	*eP*	**Pn**	**12 37 31.4**	**+2.7**
AVFE				IAML		12 39 22.4	
	comp=Z,491nm,2.1s						
MT09	**Talagante**	**4.77**	**163**		**Pn**	**12 37 29.3**	**+0.3**
MT01	**Popeta**	**4.79**	**166**		**Pn**	**12 37 28.4**	**-0.7**
MT01	**Popeta**	**4.79**	**166**	*eP*	**Pn**	**12 37 28.2**	**-1.0**
MT01				*eS*	**Sn**	**12 38 19.2**	**-6.0**
MT01				IAML		12 38 20.2	
	comp=Z,694nm,0.5s						
GO02	**Mina Guanaco**	**4.88**	**35**	Pn	**Pn**	**12 37 29.3**	**-1.3**
GO02	**Mina Guanaco**	**4.88**	**35**	*eP*	**Pn**	**12 37 29.1**	**-1.6**
GO02				*eS*	**Sn**	**12 38 26.1**	**-1.6**
GO02				IAML		12 39 19.4	
	comp=Z,406nm,1.4s						
GO02	**Mina Guanaco**	**4.88**	**35**	*eP*	**Pn**	**12 37 28.1**	**-2.5**
MT13	**San Alfonso**	**4.96**	**156**	Pn	**Pn**	**12 37 32.3**	**+0.8**
PB14	**IPOC Station P**	**5.00**	**24**	Pn	**Pn**	**12 37 29.2**	**-3.1**
ACLC	**CERRO LA CRUZ**	**5.00**	**94**	*eP*	**Pn**	**12 37 34.7**	**+2.5**
ACLC				IAML		12 39 04.1	
	comp=Z,941nm,2.3s						
BO04	**La Punta**	**5.08**	**160**	Pn	**Pn**	**12 37 33.8**	**+0.7**
PB10	**IPOC Station P**	**5.98**	**19**	Pn	**Pn**	**12 37 42.3**	**-3.3**
PB15	**IPOC Station P**	**6.63**	**26**		**Pn**	**12 37 53.2**	**-1.5**
PB05	**IPOC Station P**	**6.71**	**20**	Pn	**Pn**	**12 37 52.0**	**-3.7**
H03N1	**Juan Fernandez** baz=111,slow=17	**6.80**	**230**	Pn	Pn	12 37 53.1	-3.4
H03N1					Sn	Sn	12 39 06.2	-8.1
H03N1					T	T	12 45 45.1	
	baz=53							
H03N2	**Juan Fernandez** baz=111,slow=17	**6.81**	**230**	Pn	Pn	12 37 53.4	-3.3	
H03N2					Sn	Sn	12 39 06.2	-8.4
H03N2					T	T	12 44 57.5	
	baz=53,slow=74							
H03N3	**Juan Fernandez** baz=111,slow=17	**6.82**	**230**	Pn	Pn	12 37 53.1	-3.6	
H03N3					Sn	Sn	12 39 05.9	-8.8
H03N3					T	T	12 44 54.6	
	baz=53,slow=74							
VA04	**Juan Fernndez**	**6.87**	**228**	Pn	Pn	12 37 54.0	-3.6	
H03S3	**Juan Fernandez**	**7.04**	**228**	Pn	Pn	12 37 55.6	-4.2	
H03S3					Sn	Sn	12 39 11.8	-8.2
H03S1	**Juan Fernandez**	**7.04**	**227**	Pn	Pn	12 37 55.4	-4.4	
H03S1					Sn	Sn	12 39 11.6	-8.6
H03S2	**Juan Fernandez**	**7.05**	**228**	Pn	Pn	12 37 55.7	-4.3	
H03S2					Sn	Sn	12 39 11.8	-8.6
PB06	**IPOC Station P**	**7.05**	**24**		**Pn**	**12 37 57.8**	**-2.6**
LVC	**Limon Verde**	**7.39**	**28**	Pn	**Pn**	**12 38 03.7**	**-1.5**
LVC	**Limon Verde**	**7.39**	**28**	*eP*	**Pn**	**12 38 03.7**	**-1.5**
LVC	**Limon Verde**	**7.39**	**28**	Pn	**Pn**	**12 38 04.0**	**-1.3**
	comp=Z,2.7nm,0.3s,baz=192,slow=5.9,SNR=22							
LVC					Sn	**Sn**	**12 39 25.0**	**-4.8**
	comp=Z,5.0nm,0.3s,baz=166,slow=19,SNR=6.1							
LVC					LR	LR	12 40 45.6	
	comp=Z,1μm,21.9s,baz=214,slow=37							
	comp=Z,7.5nm,0.4s							
BI05	**Punta Hualpn**	**7.53**	**183**	Pn	**Pn**	**12 38 04.6**	**-2.1**
PB07	**IPOC Station P**	**7.87**	**19**		**Pn**	**12 38 08.4**	**-3.2**
PB02	**IPOC Station P**	**8.25**	**18**		**Pn**	**12 38 13.6**	**-3.2**
PB01	**IPOC Station P**	**8.63**	**20**	Pn	**Pn**	**12 38 19.1**	**-2.9**
PB08	**IPOC Station P**	**9.58**	**20**		**Pn**	**12 38 33.8**	**-1.5**
PB11	**IPOC Station P**	**9.80**	**17**		**Pn**	**12 38 34.0**	**-4.0**
GO01	**Chusmiza**	**10.01**	**19**		**Pn**	**12 38 38.2**	**-3.1**
GO06	**Curarrehue**	**10.39**	**175**	Pn	**Pn**	**12 38 45.4**	**-0.7**
VACA	**Villa Angela C**	**10.65**	**84**	*eP*	**Pn**	**12 38 47.8**	**-1.8**
PB12	**IPOC Station P**	**10.77**	**12**		**Pn**	**12 38 48.0**	**-3.3**
PB16	**IPOC Station P**	**11.21**	**16**		**Pn**	**12 38 56.0**	**-1.7**
TICA	**Tres Isletas**	**11.24**	**78**	*eP*	**Pn**	**12 38 56.6**	**-1.0**
PLCA	**Paso Flores**	**11.62**	**172**	Pn	**Pn**	**12 39 02.9**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=336,slow=11,SNR=65							
PLCA					Sn	**Sn**	**12 41 16.3**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=13,slow=14,SNR=0.9							
PLCA					LR	LR	12 43 22.6	
	comp=Z,578nm,21.8s,baz=358,slow=37							
	comp=Z,7.5nm,0.5s							
PLCA	**Paso Flores**	**11.62**	**172**	*eP*	**Pn**	**12 39 02.5**	**-0.4**
TRQA	**Tornquist**	**12.53**	**138**	Pn	**Pn**	**12 39 14.6**	**-0.6**
TRQA	**Tornquist**	**12.53**	**138**	P	**Pn**	**12 39 14.6**	**-0.6**
ESFA	**Espinillo Form**	**13.33**	**75**	*eP*	**Pn**	**12 39 27.6**	**+1.4**
LPAZ	**La Paz**	**13.53**	**19**	Pn	**Pn**	**12 39 27.9**	**-1.6**
LPAZ	**La Paz**	**13.53**	**19**	*eP*	**Pn**	**12 39 27.7**	**-1.8**
CPUP	**Villa Florida**	**13.88**	**82**	Pn	**Pn**	**12 39 34.1**	**+0.4**
CPUP	**Villa Florida**	**13.88**	**82**	P	**Pn**	**12 39 34.2**	**+0.4**
CPUP	**Villa Florida**	**13.88**	**82**	Pn	**Pn**	**12 39 32.6**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=255,slow=12,SNR=5.7							
	comp=Z,4.3nm,1.0s							
CPUP	**Villa Florida**	**13.88**	**82**	*eP*	**Pn**	**12 39 32.9**	**-0.9**
ITQB	**Itaqui**	**13.99**	**96**	Pn	**Pn**	**12 39 36.1**	**+0.9**
ITQB	**Itaqui**	**13.99**	**96**	P	**Pn**	**12 39 34.2**	**-1.1**
TBOT	**Tatuaremb**	**14.64**	**104**	*eP*	**Pn**	**12 39 45.2**	**+1.1**
RODS	**Rosario do Sul**	**15.22**	**99**	*eP*	**Pn**	**12 39 51.4**	**-0.5**
UNIS	**Unistalda (Bra**	**15.38**	**94**	*eP*	**Pn**	**12 39 54.4**	**+0.3**
COYC	**Coyhaique**	**16.34**	**179**		**Pn**	**12 40 05.0**	**-1.3**
CRSM	**Crissiumal (Br**	**16.49**	**89**	*eP*	**Pn**	**12 40 09.3**	**+0.9**
PLTB	**Pedras Altas**	**16.63**	**104**	Pn	**Pn**	**12 40 09.5**	**-0.7**
ANTJ	**Antonio Joao (**	**16.65**	**68**	*eP*	**Pn**	**12 40 10.7**	**+0.1**
SIV	**San Ignacio**	**16.95**	**42**	Pn	**Pn**	**12 40 13.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=201,slow=8.9,SNR=5.1							
	comp=Z,113nm,0.9s							
NNA	**Nana**	**17.57**	**346**	P	**P**	**12 40 24.2**	**+0.9**
NNA	**Nana**	**17.57**	**346**	*iP*	**Pn**	**12 40 21.4**	**-0.8**
NNA	**Nana**	**17.57**	**346**	P	**Pn**	**12 40 22.6**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=178,slow=15,SNR=7.2							
NNA					LR	LR	12 45 33.8	
	comp=Z,942nm,18.8s,baz=169,slow=32							
	comp=Z,12nm,0.8s							
AQDB	**Aquidauana**	**17.67**	**64**	P	**Pn**	**12 40 22.4**	**-1.0**
FRBT	**Francisco Belt**	**17.68**	**84**	*eP*	**Pn**	**12 40 23.9**	**+0.5**
ITAB	**Concordia**	**18.21**	**89**	P	**Pn**	**12 40 29.2**	**-0.7**
PTLB	**Pontes e Lacer**	**18.53**	**45**		**Pn**	**12 40 34.2**	**+0.3**
TRCB	**Terra Rica**	**19.10**	**75**	P	**Pn**	**12 40 41.0**	**+0.2**
VILB	**Vilhena**	**19.90**	**38**		**P**	**12 40 49.1**	**+0.3**
ETMB	**Extrema**	**20.22**	**19**	P	**P**	**12 40 52.8**	**+0.5**
GO09	**Cerro Castillo**	**22.04**	**179**	P	**P**	**12 41 10.9**	**-0.8**
SAML	**Samuel**	**22.04**	**26**	P	**P**	**12 41 12.2**	**+0.3**
SAML				IAmb	IAmb	12 41 17.9	
	comp=Z,319nm,1.7s						
SAML	**Samuel**	**22.04**	**26**	P	**P**	**12 41 12.2**	**+0.3**
SAML				pmax	pmax		
	comp=Z,319nm,1.7s						
SAML	**Samuel**	**22.04**	**26**	*eP*	**P**	**12 41 12.4**	**+0.5**
ATAH	**Atahualpa**	**22.61**	**345**	LR	LR	12 48 22.2	
	comp=Z,512nm,20.5s,baz=186,slow=32						
PET01	**Itanhaem-SP**	**23.18**	**84**	*eP*	**P**	**12 41 22.5**	**-1.5**
SPB	**Sao Paulo**	**23.27**	**82**	P	**P**	**12 41 24.2**	**-0.7**
SPB				IAMs_20	IAMs_20	12 51 04.7	
	comp=Z,2μm,22.0s						
SPB	**Sao Paulo**	**23.27**	**82**	*eP*	**P**	**12 41 25.1**	**+0.2**
EFI	**East Falkland**	**24.95**	**158**	*iP*	**P**	**12 41 40.8**	**+0.4**
EFI				pmax	pmax		
	comp=Z,70nm,1.3s						
MCRA	**Macar, Loja**	**25.65**	**343**	P	**P**	**12 41 47.8**	**+0.5**
BDFB	**Brasilia**	**26.42**	**65**	P	**P**	**12 41 53.7**	**-0.6**
BDFB	**Brasilia**	**26.42**	**65**	P	**P**	**12 41 53.7**	**-0.6**
BDFB				pmax	pmax		
	comp=Z,57nm,0.9s						
BDFB	**Brasilia**	**26.42**	**65**	P	**P**	**12 41 54.3**	**0.0**
	comp=Z,41nm,0.8s,baz=234,slow=8.8,SNR=45							
BDFB				LR	LR	12 52 28.3		
	comp=Z,896nm,21.5s,baz=256,slow=37							
	comp=Z,41nm,0.8s							
ARNL	**Arenillas**	**26.47**	**343**	P	**P**	**12 41 55.6**	**+1.0**
BOSC	**San Juan Bosco**	**26.50**	**347**	P	**P**	**12 41 55.6**	**+0.6**
COHC	**Cochancay**	**27.33**	**346**	P	**P**	**12 42 00.9**	**-1.3**
MACA	**Manacapuru-AM**	**28.30**	**26**	P	**P**	**12 42 10.8**	**-0.2**
OTAV	**Otavalo**	**29.80**	**348**	*eP*	**P**	**12 42 27.8**	**+2.9**
ALF01	**Guarapari-ES**	**30.14**	**81**	*eP*	**P**	**12 42 28.4**	**+1.1**
TULM	**Tulum-Chalpat**	**30.16**	**350**	P	**P**	**12 42 25.2**	**-2.8**
RIB01	**Linhares ES**	**30.94**	**79**	*eP*	**P**	**12 42 35.1**	**+0.7**
RPN	**Rapa Nui**	**32.31**	**265**	LR	LR	12 52 03.4	
	comp=Z,1μm,20.2s,baz=121,slow=29						
PRAC	**Prado**	**32.81**	**356**	P	**P**	**12 42 51.7**	**+0.9**
PAYG	**Puerto Ayora**	**32.98**	**326**	IAMs_20	IAMs_20	12 52 36.8	
	comp=Z,1μm,20.0s						
ROSC	**El Rosal**	**33.89**	**357**	P	**P**	**12 43 01.9**	**+1.2**
	comp=Z,5.5nm,0.3s,baz=183,slow=11,SNR=1.6							
ROSC				LR	LR	12 57 38.2		
	comp=Z,484nm,18.3s,baz=216,slow=38							
	comp=Z,5.5nm,0.3s							
SDV	**Santo Domingo**	**37.93**	**3**	P	**P**	**12 43 34.1**	**-1.0**
SDV	**Santo Domingo**	**37.93**	**3**	LR	LR	12 59 14.3	
	comp=Z,179nm,20.5s,baz=233,slow=36							
SDV	**Santo Domingo**	**37.93**	**3**	*eP*	**P**	**12 43 35.5

PAULI **Pauline** **64.27 352** IAmb IAmb 12 46 54.1
comp=Z,46nm,1.3s
CNNC **Cliffs of the** **64.30 355** P **P** **12 46 53.5 +0.9**
baz=175
KMSC **Kings Mountain** **64.53 352** IAmb IAmb 12 46 55.8
comp=Z,24nm,1.1s
KMSC **Kings Mountain** **64.53 352** P **P** **12 46 54.0 -0.1**
baz=172
FPAL **Fort Paine** **64.58 348** IAmb IAmb 12 46 55.8
comp=Z,30nm,1.1s
BG3 **Lake Jocassee** **64.59 351** IAmb IAmb 12 46 56.4
comp=Z,40nm,1.2s
JCT **Junction City** **64.75 334** P **P** **12 46 57.2 +1.5**
baz=154,SNR=23
X48A **Hartselle** **64.76 347** IAmb IAmb 12 46 57.2
comp=Z,46nm,1.1s
W52A **Murphy** **64.84 350** IAmb IAmb 12 46 57.9
comp=Z,31nm,1.1s
V58A **Windy Hill, Pi** **64.94 354** IAmb IAmb 12 46 58.3
comp=Z,34nm,1.1s
W50A **Signal Mountai** **65.17 349** IAmb IAmb 12 46 59.9
comp=Z,46nm,1.1s
BRDY **Brady** **65.17 335** P **P** **12 46 59.8 +1.2**
V55A **Taylorsville** **65.22 352** IAmb IAmb 12 47 00.4
comp=Z,46nm,1.2s
V53A **Saluda** **65.24 351** IAmb IAmb 12 47 00.4
comp=Z,37nm,1.2s
WHTX **Lake Whitney,** **65.27 337** P **P** **12 47 00.2 +1.2**
baz=156,SNR=8.3
CPCT **Cooper Cave** **65.28 349** IAmb IAmb 12 47 00.7
comp=Z,52nm,1.2s
SWET **Sewanee** **65.29 348** IAmb IAmb 12 47 00.6
comp=Z,54nm,1.2s
TXAR **Lajitas Array** **65.31 330** P **P** **12 47 00.8 +1.2**
comp=Z,8.8nm,0.9s,baz=146,slow=9.1,SNR=54
TXAR LR LR 13 11 01.9
comp=Z,247nm,19.3s,baz=128,slow=32
comp=Z,8.8nm,0.9s
TX31 **Lajitas Ar. Si** **65.31 330** IAmb IAmb 12 47 02.4
comp=Z,31nm,1.2s
OXF **Oxford** **65.32 345** P **P** **12 46 59.0 -0.3**
baz=164,SNR=13
U59A **Littleton** **65.39 355** IAmb IAmb 12 47 02.1
comp=Z,48nm,1.4s
PLAL **Pickwick Lake** **65.48 346** IAmb IAmb 12 47 01.6
comp=Z,36nm,1.2s
V51A **Loudon** **65.60 350** IAmb IAmb 12 47 02.6
comp=Z,49nm,1.2s
U54A **Nelsons Funny** **65.95 352** IAmb IAmb 12 47 04.9
comp=Z,51nm,1.1s
T59A **Double "B" Far** **65.99 356** IAmb IAmb 12 47 05.9
comp=Z,54nm,1.2s
FW07 **Weatherford** **66.03 337** IAmb IAmb 12 47 07.5
comp=Z,47nm,1.1s
TAOE **Nuku Hiva Isla** **66.10 273** *e*LR LR 13 06 48.6
comp=Z,552nm,24.7s
X40A **Basin Creek Fa** **66.16 342** IAmb IAmb 12 47 06.8
comp=Z,43nm,1.9s
ALPN **Alpine** **66.20 331** IAmb IAmb 12 47 08.1
comp=Z,58nm,1.5s
TZTN **Tazewell** **66.20 350** IAmb IAmb 12 47 06.4
comp=Z,59nm,1.4s
TZTN **Tazewell** **66.20 350** P **P** **12 47 04.8 -0.2**
baz=170,SNR=7.4
CLTN **Cedars of Leba** **66.22 348** IAmb IAmb 12 47 06.7
comp=Z,42nm,1.2s
MIAR **Mount Ida** **66.42 341** IAmb IAmb 12 47 08.5
comp=Z,51nm,1.2s
MIAR **Mount Ida** **66.42 341** P **P** **12 47 06.6 +0.1**
baz=160,SNR=14
BLA **Blacksburg** **66.47 353** P **P** **12 47 06.9 +0.1**
baz=179
U49A **Red Boiling Sp** **66.53 349** IAmb IAmb 12 47 08.6
comp=Z,38nm,1.1s
SGCY **Sterling City** **66.53 334** P **P** **12 47 08.3 +1.0**
WVT **Waverly** **66.54 347** P **P** **12 47 06.6 -0.6**
WVT IAmb IAmb 12 47 08.5
comp=Z,57nm,1.3s
WVT **Waverly** **66.54 347** P **P** **12 47 07.3 +0.1**
baz=166
WVT **Waverly** **66.54 347** P **P** **12 47 06.6 -0.6**
WVT pmax pmax
comp=Z,57nm,1.3s
ABTX **Abilene, Hawle** **66.61 335** P **P** **12 47 08.5 +0.8**
baz=154,SNR=22
WHAR **Wooly Hollow** **66.77 343** IAmb IAmb 12 47 11.8
comp=Z,33nm,1.0s
S57A **Dark Hollow, R** **66.88 355** IAmb IAmb 12 47 11.3
comp=Z,28nm,1.1s
R58B **Mineral** **67.00 356** IAmb IAmb 12 47 12.7
comp=Z,47nm,1.2s
VHRN **Van Horn** **67.14 330** IAmb IAmb 12 47 13.8
comp=Z,46nm,1.4s
PECS **Pecos** **67.16 331** IAmb IAmb 12 47 14.3
comp=Z,40nm,1.2s
CBN **Corbin Frederi** **67.21 356** P **P** **12 47 12.0 +0.7**
baz=176
LCAR **Lake Charles** **67.22 344** IAmb IAmb 12 47 13.1
comp=Z,48nm,1.0s
S51A **Beattyville** **67.28 351** IAmb IAmb 12 47 13.2
comp=Z,35nm,1.0s
SN01 **Snyder 1** **67.29 334** IAmb IAmb 12 47 14.4
comp=Z,47nm,1.3s
FCAR **Ozark Folk Cen** **67.30 343** IAmb IAmb 12 47 13.0
comp=Z,23nm,1.1s
R55A **Marlinton** **67.50 354** IAmb IAmb 12 47 15.6
comp=Z,29nm,1.2s
POST **Post** **67.70 334** IAmb IAmb 12 47 18.1
comp=Z,25nm,0.9s
W35A **Tecumseh** **67.97 339** IAmb IAmb 12 47 17.6
comp=Z,37nm,1.2s
TBI **Tubuai** **67.98 255** *e*LR LR 13 07 36.1
comp=Z,979nm,30.0s
TBI *e*LR LR 13 07 37.4
comp=Z,2µm,29.5s
DKNS **Dickens** **68.02 335** IAmb IAmb 12 47 20.1
comp=Z,27nm,0.9s
R50A **Paris** **68.02 350** IAmb IAmb 12 47 19.1
comp=Z,28nm,1.2s
CGM3 **Cape Girardeau** **68.05 345** IAmb IAmb 12 47 19.6
comp=Z,44nm,1.0s
MNTX **Cornudas Mount** **68.09 330** P **P** **12 47 17.4 +0.2**
baz=150,SNR=44
R49A **Shelbyville** **68.16 349** IAmb IAmb 12 47 19.8
comp=Z,26nm,0.9s
WMOK **Wichita Mounta** **68.22 337** IAmb IAmb 12 47 19.7
comp=Z,29nm,1.1s
WMOK **Wichita Mounta** **68.22 337** P **P** **12 47 17.8 0.0**
baz=156,SNR=20
Q54A **Coxs Mills** **68.27 353** IAmb IAmb 12 47 18.5
comp=Z,38nm,1.4s
WCI **Wyandotte Cave** **68.29 348** P **P** **12 47 18.2 0.0**
WCI IAmb IAmb 12 47 19.3
comp=Z,41nm,1.2s
WCI **Wyandotte Cave** **68.29 348** P **P** **12 47 17.9 -0.3**
baz=167
WCI **Wyandotte Cave** **68.29 348** P **P** **12 47 18.2 0.0**
WCI pmax pmax
comp=Z,41nm,1.2s
TUL3 **Leonard** **68.34 340** P **P** **12 47 19.1 +0.6**
baz=158,SNR=15
RLO **Rose Lookout** **68.35 341** IAmb IAmb 12 47 20.5
comp=Z,40nm,1.0s
Q52A **Bidwell** **68.41 352** IAmb IAmb 12 47 20.4
comp=Z,46nm,1.1s
U38A **Gravette** **68.42 341** IAmb IAmb 12 47 20.9
comp=Z,33nm,1.2s
HSIG **Hsig** **68.49 324** IAmb IAmb 12 47 22.7
comp=Z,35nm,1.2s
P57A **Homestead Farm** **68.52 356** IAmb IAmb 12 47 22.4
comp=Z,49nm,1.1s
MGMO **Mountain Grove** **68.53 343** IAmb IAmb 12 47 21.6
comp=Z,42nm,1.2s
Q51A **Peebles** **68.61 351** IAmb IAmb 12 47 21.6
comp=Z,41nm,1.1s
VNDA **Vanda** **68.68 191** P **P** **12 47 21.6 +1.3**
comp=Z,6.0nm,1.1s,baz=124,slow=3.2,SNR=3.5
comp=Z,6.0nm,1.1s
P53A **Whipple** **68.83 353** IAmb IAmb 12 47 23.1
comp=Z,43nm,1.1s
MCWV **Mont Chateau** **68.84 354** IAmb IAmb 12 47 22.8
comp=Z,27nm,1.2s
MCWV **Mont Chateau** **68.84 354** P **P** **12 47 21.8 +0.2**
baz=173
WUPA **West Chester U** **68.84 358** IAmb IAmb 12 47 24.4
comp=Z,53nm,1.6s
MVL **Millersville** **68.94 357** IAmb IAmb 12 47 25.0
comp=Z,42nm,1.2s

MSTX **Muleshoe** **68.99 333** P **P** **12 47 23.9 +1.1**
baz=152,SNR=31
P52A **Corning** **69.06 352** IAmb IAmb 12 47 24.2
comp=Z,46nm,1.0s
P52A **Corning** **69.06 352** P **P** **12 47 23.2 +0.3**
baz=171,SNR=9.9
CCM **Cathedral Cave** **69.14 344** P **P** **12 47 24.1 +0.6**
CCM **Cathedral Cave** **69.14 344** P **P** **12 47 24.2 +0.7**
baz=163
CCM **Cathedral Cave** **69.14 344** P **P** **12 47 24.1 +0.6**
CCM pmax pmax
comp=Z,59nm,1.1s
P49A **Miami Univ. Ec** **69.31 350** IAmb IAmb 12 47 24.9
comp=Z,25nm,1.1s
P49A **Miami Univ. Ec** **69.31 350** P **P** **12 47 24.3 -0.3**
baz=169
P48A **Milroy** **69.35 349** IAmb IAmb 12 47 25.6
comp=Z,42nm,1.1s
AMTX **Amarillo** **69.38 335** P **P** **12 47 26.1 +0.8**
baz=153
T35A **Sooner Cattle** **69.48 340** IAmb IAmb 12 47 27.9
comp=Z,53nm,1.2s
O52A **Adamsville** **69.50 353** IAmb IAmb 12 47 27.0
comp=Z,27nm,1.0s
BBTS **Babate** **69.56 59** LR LR 13 16 55.7
comp=Z,230nm,20.3s,baz=202,slow=35
O53A **New Philadelph** **69.56 353** IAmb IAmb 12 47 27.5
comp=Z,55nm,1.4s
O53A **New Philadelph** **69.56 353** P **P** **12 47 26.2 +0.2**
baz=172
CROK **Carrier** **69.56 338** IAmb IAmb 12 47 28.1
comp=Z,64nm,1.2s
319A **Douglas** **69.59 327** IAmb IAmb 12 47 29.9
comp=Z,39nm,1.0s
ELIS **Ellis County** **69.64 337** IAmb IAmb 12 47 29.3
comp=Z,62nm,1.3s
SSPA **Standing Stone** **69.66 356** P **P** **12 47 27.4 +0.7**
SSPA IAmb IAmb 12 47 29.0
comp=Z,60nm,1.4s
SSPA **Standing Stone** **69.66 356** P **P** **12 47 27.2 +0.6**
baz=175
ACSO **Alum Creek Sta** **69.75 352** P **P** **12 47 27.5 +0.2**
baz=170,SNR=14
U32A **Winter Ranch,** **69.78 338** IAmb IAmb 12 47 29.8
comp=Z,58nm,1.1s
N58A **Sunbury** **69.80 357** IAmb IAmb 12 47 30.1
comp=Z,42nm,1.1s
121A **Cookes Peak, D** **69.87 329** IAmb IAmb 12 47 31.8
comp=Z,52nm,1.3s
121A **Cookes Peak, D** **69.87 329** P **P** **12 47 30.3 +1.9**
baz=148,SNR=20
PAL **Palisades** **69.87 359** P **P** **12 47 28.4 +0.4**
baz=179
O49A **Covington** **69.89 351** IAmb IAmb 12 47 29.4
comp=Z,57nm,1.1s
OK032 **Salt Plains Wi.** **69.91 338** IAmb IAmb 12 47 30.5
comp=Z,61nm,1.3s
KAN14 **Manchester OK** **69.97 339** IAmb IAmb 12 47 30.8
comp=Z,37nm,1.2s
KAN17 **Caldwell West** **69.99 339** IAmb IAmb 12 47 31.0
comp=Z,40nm,1.2s
TRNY **Table Rock, Ra** **70.02 359** IAmb IAmb 12 47 31.5
comp=Z,77nm,1.6s
KAN09 **Caldwell North** **70.03 339** IAmb IAmb 12 47 31.3
comp=Z,47nm,1.0s
O48B **Farmland** **70.08 350** IAmb IAmb 12 47 29.8
comp=Z,32nm,1.1s
O48B **Farmland** **70.08 350** P **P** **12 47 29.4 +0.1**
baz=168,SNR=7.9
M57A **Sunshine Farm,** **70.32 356** IAmb IAmb 12 47 32.7
comp=Z,36nm,1.1s
N51A **Ashland** **70.35 352** IAmb IAmb 12 47 32.2
comp=Z,39nm,1.1s
PPT2 **Papete2** **70.44 260** *e*S **S** **12 56 45.2 -1.0**
comp=Z,159nm,23.8s
PPT2 *e*SS **SS** **13 01 08.6 -8.3**
comp=Z,78nm,24.0s
PPT2 *e*LR LR 13 08 42.3
comp=Z,793nm,23.0s
PPT2 *e*LR LR 13 08 47.3
comp=Z,624nm,23.5s
M65A **Busby, Falmout** **70.44 2** P **P** **12 47 32.5 +1.0**
baz=182
PPT **Papeete** **70.45 260** LR LR 13 10 08.0
comp=Z,523nm,19.5s,baz=103,slow=29
SFIN **Lafayette** **70.52 348** IAmb IAmb 12 47 32.7
comp=Z,38nm,1.1s
SFIN **Lafayette** **70.52 348** P **P** **12 47 31.7 -0.3**
baz=167,SNR=8.1
M55A **Ridgway** **70.55 355** IAmb IAmb 12 47 34.2
comp=Z,43nm,1.1s
O44A **Mansfield** **70.56 347** IAmb IAmb 12 47 33.1
comp=Z,54nm,1.1s
M53A **WI Miller and** **70.69 354** IAmb IAmb 12 47 34.5
comp=Z,51nm,1.1s
M53A **WI Miller and** **70.69 354** P **P** **12 47 33.8 +0.8**
baz=173,SNR=6.3
Y22D **IRIS PASSCAL I** **70.79 330** P **P** **12 47 35.9 +1.9**
baz=149
Y22F **Passcal Instru** **70.79 330** P **P** **12 47 35.3 +1.4**
baz=149
M52A **Cherland** **70.86 353** IAmb IAmb 12 47 35.5
comp=Z,47nm,1.1s
TUC **Tucson** **71.08 326** P **P** **12 47 35.6 -0.1**
baz=145
HDIL **Hopedale** **71.11 347** P **P** **12 47 35.3 -0.2**
baz=165
BINY **Binghamton** **71.12 357** IAmb IAmb 12 47 38.2
comp=Z,36nm,1.2s
BINY **Binghamton** **71.12 357** P **P** **12 47 36.9 +1.2**
baz=177
QUA2 **Belchertown** **71.14 0** IAmb IAmb 12 47 38.3
comp=Z,55nm,1.3s
RTBA **Rita Blanca** **71.16 335** IAmb IAmb 12 47 38.8
comp=Z,69nm,1.7s
P38A **Dawn** **71.19 343** IAmb IAmb 12 47 37.6
comp=Z,33nm,0.9s
ERPA **Erie** **71.30 354** IAmb IAmb 12 47 38.3
comp=Z,54nm,1.1s
ERPA **Erie** **71.30 354** P **P** **12 47 37.1 +0.4**
baz=173,SNR=6.5
L61B **Northampton** **71.31 360** IAmb IAmb 12 47 39.3
comp=Z,43nm,1.1s
L61B **Northampton** **71.31 360** P **P** **12 47 38.0 +1.3**
baz=180,SNR=6.8
ANMO **Albuquerque** **71.34 331** P **P** **12 47 38.7 +1.3**
ANMO IAmb IAmb 12 47 40.6
comp=Z,41nm,1.4s
ANMO **Albuquerque** **71.34 331** P **P** **12 47 37.3 0.0**
baz=149
ANMO **Albuquerque** **71.34 331** *i* P **P** **12 47 38.6 +1.3**
ANMO pmax pmax
comp=Z,20nm,1.2s
ANMO **Albuquerque** **71.34 331** LR LR 13 14 19.9
comp=Z,397nm,20.8s,baz=244,slow=32
HRV **Adam Dziewonsk** **71.37 1** P **P** **12 47 38.4 +1.3**
baz=181
WVNY **West Valley, N** **71.47 355** P **P** **12 47 38.8 +1.1**
KSU1 **Kansas State U** **71.53 341** P **P** **12 47 38.7 +0.6**
KSU1 IAmb IAmb 12 47 39.8
comp=Z,32nm,1.1s
KSU1 **Kansas State U** **71.53 341** P **P** **12 47 39.9 +1.7**
baz=158
R32A **Long Quarter,** **71.55 339** IAmb IAmb 12 47 40.8
comp=Z,69nm,1.3s
L48A **N Adams** **71.63 351** IAmb IAmb 12 47 39.9
comp=Z,59nm,1.1s
M44A **Midewin, Midew** **71.67 348** IAmb IAmb 12 47 40.1
comp=Z,22nm,1.1s
214A **Organ Pipe Nat** **71.80 325** IAmb IAmb 12 47 43.4
comp=Z,63nm,1.2s
214A **Organ Pipe Nat** **71.80 325** P **P** **12 47 41.9 +1.9**
baz=144,SNR=23
AAM **Ann Arbor** **71.88 351** P **P** **12 47 40.2 +0.1**
AAM **Ann Arbor** **71.88 351** P **P** **12 47 40.5 +0.4**
baz=170
AAM **Ann Arbor** **71.88 351** P **P** **12 47 40.2 +0.1**
AAM pmax pmax
comp=Z,96nm,1.5s
L46A **Eue Claire** **71.98 349** P **P** **12 47 40.6 -0.1**
L46A IAmb IAmb 12 47 41.5
comp=Z,69nm,1.3s
J61A **Chester** **72.20 0** IAmb IAmb 12 47 45.1
comp=Z,46nm,1.2s
J56A **Wolcott** **72.23 357** IAmb IAmb 12 47 44.0
comp=Z,51nm,1.1s
CBKS **Cedar Bluff** **72.24 338** IAmb IAmb 12 47 44.9
comp=Z,54nm,1.1s

CBKS **Cedar Bluff** **72.24 338** P **P** **12 47 43.5 +1.0**
baz=155
ACCN **Adirondack Com** **72.25 359** IAmb IAmb 12 47 45.1
comp=Z,87nm,1.6s
J55A **Hilton** **72.28 356** IAmb IAmb 12 47 44.4
comp=Z,67nm,1.1s
J57A **Williamstown** **72.33 357** IAmb IAmb 12 47 44.9
comp=Z,66nm,1.3s
J59A **Piesco** **72.34 359** IAmb IAmb 12 47 45.3
comp=Z,46nm,1.3s
T25A **Trinidad** **72.41 334** IAmb IAmb 12 47 47.0
comp=Z,57nm,1.2s
T25A **Trinidad** **72.41 334** P **P** **12 47 45.5 +1.8**
baz=151
L44A **Lake County Fo** **72.41 348** P **P** **12 47 43.4 +0.1**
baz=166
L42A **Oliver, Polo** **72.58 347** IAmb IAmb 12 47 45.8
comp=Z,35nm,1.1s
VTX **Valle De La Tr** **72.90 322** IAmb IAmb 12 47 50.0
comp=Z,42nm,1.6s
N35A **Tabor** **72.90 342** IAmb IAmb 12 47 47.6
comp=Z,64nm,1.1s
W18A **Petrified Fore** **72.91 329** P **P** **12 47 48.4 +1.6**
baz=147
LBNH **Lisbon** **73.10 1** P **P** **12 47 48.7 +1.3**
baz=181
X16A **Lo Mia Camp, P** **73.12 327** IAmb IAmb 12 47 51.4
comp=Z,40nm,1.1s
SCIA **State Center** **73.26 344** P **P** **12 47 48.8 +0.4**
baz=161
N33A **J Bar K, Exete** **73.29 341** P **P** **12 47 49.6 +1.0**
SDCO **Great Sand Dun** **73.36 333** IAmb IAmb 12 47 52.5
comp=Z,42nm,1.4s
SDCO **Great Sand Dun** **73.36 333** P **P** **12 47 51.0 +1.5**
baz=150,SNR=30
I49A **Point Hope** **73.39 352** IAmb IAmb 12 47 50.2
comp=Z,44nm,1.1s
KSCO **Kaye Shedlock'** **73.40 336** IAmb IAmb 12 47 52.5
comp=Z,70nm,1.1s
KSCO **Kaye Shedlock'** **73.40 336** P **P** **12 47 51.2 +1.8**
baz=153,SNR=10.0
LONY **Lake Ozonia** **73.50 359** P **P** **12 47 50.3 +0.6**
baz=178,SNR=7.1
DELO **Deloro Mine** **73.51 356** IAmb IAmb 12 47 51.8
comp=Z,74nm,1.4s
JFWS **Jewell Farm** **73.57 347** IAmb IAmb 12 47 52.1
comp=Z,55nm,1.1s
JFWS **Jewell Farm** **73.57 347** P **P** **12 47 50.7 +0.5**
baz=164,SNR=7.9
FRNY **Flat Rock** **73.69 359** IAmb IAmb 12 47 53.3
comp=Z,34nm,1.1s
EMMW **East Machias** **73.72 4** IAmb IAmb 12 47 53.8
comp=Z,35nm,1.0s
K38A **Parkersburg** **73.86 345** IAmb IAmb 12 47 54.7
comp=Z,109nm,1.8s
SADO **Sadowa** **73.86 355** IAmb IAmb 12 47 53.5
comp=Z,68nm,1.1s
SADO **Sadowa** **73.86 355** LR LR 13 23 11.4
comp=Z,48nm,18.6s,baz=86,slow=38
S22A **4UR Ranch, Cre** **73.89 332** IAmb IAmb 12 47 55.9
comp=Z,50nm,1.6s
S22A **4UR Ranch, Cre** **73.89 332** P **P** **12 47 54.2 +1.6**
baz=149,SNR=16
WUAZ **Wupatki** **73.99 328** IAmb IAmb 12 47 56.6
comp=Z,70nm,1.1s
WUAZ **Wupatki** **73.99 328** P **P** **12 47 55.3 +2.2**
baz=145,SNR=43
IKP **In-Ko-Pah, Jac** **74.05 323** P **P** **12 47 55.4 +2.0**
baz=141,SNR=8.4
BLYC **Blythe** **74.09 325** IAmb IAmb 12 47 56.9
comp=Z,34nm,1.1s
G62A **West of Eustis** **74.10 2** IAmb IAmb 12 47 56.2
comp=Z,48nm,1.1s
BGNE **Belgrade** **74.11 340** IAmb IAmb 12 47 55.6
comp=Z,68nm,1.0s
BGNE **Belgrade** **74.11 340** P **P** **12 47 54.3 +0.8**
baz=157
SWSC **Sam W. Stewart** **74.12 323** P **P** **12 47 55.7 +2.1**
baz=142,SNR=7.1
MVCO **Mesa Verde** **74.13 331** IAmb IAmb 12 47 57.0
comp=Z,48nm,1.1s
MVCO **Mesa Verde** **74.13 331** P **P** **12 47 55.5 +1.6**
baz=148,SNR=31
PKME **Peaks-Kenny Pk** **74.18 2** P **P** **12 47 55.3 +1.6**
baz=183
DBIC **Dimbokro** **74.22 73** P **P** **12 47 54.9 +0.2**
DBIC IAmb IAmb 12 47 56.7
comp=Z,46nm,1.1s
DBIC **Dimbokro** **74.22 73** P **P** **12 47 54.9 +0.2**
DBIC pmax pmax
comp=Z,47nm,1.1s
DBIC **Dimbokro** **74.22 73** P **P** **12 47 55.4 +0.7**
comp=Z,24nm,0.9s,baz=229,slow=7.2,SNR=19
DBIC LR LR 13 18 08.1
comp=Z,331nm,20.7s,baz=216,slow=34
comp=Z,24nm,0.9s
Q24A **Divide** **74.28 334** IAmb IAmb 12 47 58.0
comp=Z,51nm,1.1s
Q24A **Divide** **74.28 334** P **P** **12 47 56.8 +1.9**
baz=151,SNR=36
PDMCI **Parker Dam,Lak** **74.34 325** P **P** **12 47 56.2 +1.3**
baz=143
MONP2 **Monument Peak** **74.40 323** P **P** **12 47 57.6 +2.0**
baz=141,SNR=8.2
GLMI **Grayling** **74.48 351** IAMs_20 IAMs_20 13 27 23.5
comp=Z,716nm,20.0s
GLMI **Grayling** **74.48 351** P **P** **12 47 55.6 +0.1**
baz=169
BC3 **Big Chuckawall** **74.49 324** P **P** **12 47 57.7 +1.7**
baz=142,SNR=8.8
I40A **Norwalk** **74.58 347** IAmb IAmb 12 47 57.8
comp=Z,58nm,1.4s
H43A **Windswept, Lux** **74.61 349** IAmb IAmb 12 47 57.9
comp=Z,39nm,1.1s
IRM **Iron Mountain** **74.73 325** P **P** **12 47 58.8 +1.5**
baz=142,SNR=9.7
109C **Camp Elliot, M** **74.76 322** P **P** **12 47 59.2 +1.8**
baz=141
F64A **Sherman** **74.82 3** IAmb IAmb 12 48 00.3
comp=Z,41nm,1.1s
OGNE **Ogallala** **74.92 337** P **P** **12 47 59.3 +1.1**
baz=154
NEE2 **Needles Airpor** **74.95 325** P **P** **12 47 59.2 +0.8**
baz=143
TPFO **Pinon Flats** **74.97 323** P **P** **12 48 01.0 +2.2**
baz=141,SNR=16
PFO **Pinyon Flats O** **74.98 323** P **P** **12 48 00.4 +1.6**
PFO **Pinyon Flats O** **74.98 323** P **P** **12 48 01.0 +2.1**
baz=151,SNR=16
PFO **Pinyon Flats O** **74.98 323** *i* P **P** **12 47 59.5 +0.7**
PFO pmax pmax
comp=Z,31nm,1.1s
PFO **Pinyon Flats O** **74.98 323** LR LR 13 14 45.9
comp=Z,232nm,20.9s,baz=144,slow=31
BELC **Belle Mtn. Jos** **75.05 324** P **P** **12 48 01.2 +2.0**
baz=142,SNR=13
LMN **Caledonia Moun** **75.05 6** IAmb IAmb 12 48 01.3
comp=Z,45nm,1.1s
TRQ **Mont Tremblant** **75.10 359** IAmb IAmb 12 48 00.9
comp=Z,36nm,1.1s
U15A **North Rim** **75.17 328** IAmb IAmb 12 48 03.6
comp=Z,41nm,1.1s
SMCO **Snowmass** **75.18 333** IAmb IAmb 12 48 03.6
comp=Z,52nm,1.1s
SMCO IAMs_20 IAMs_20 13 25 20.5
comp=Z,435nm,22.0s
ISCO **Idaho Springs** **75.19 334** P **P** **12 48 02.0 +1.9**
baz=151,SNR=9.8
MURC **Murrieta** **75.36 323** P **P** **12 48 03.0 +2.1**
baz=141,SNR=8.0
BRIGG **Briggsdale** **75.39 336** IAmb IAmb 12 48 04.4
comp=Z,58nm,1.3s
GMRC **Granite Mounta** **75.49 325** P **P** **12 48 03.8 +2.1**
baz=142,SNR=22
ELS **Elsinore Mount** **75.52 323** IAmb IAmb 12 48 05.1
comp=Z,35nm,1.1s
E62A **Clayton Lake** **75.53 2** IAmb IAmb 12 48 04.4
comp=Z,46nm,1.1s
SCI2 **San Clemente I** **75.61 321** P **P** **12 48 03.5 +1.2**
baz=140
HMU **Henry Mountain** **75.71 330** IAmb IAmb 12 48 06.7
comp=Z,93nm,1.5s
BBRC **Big Bear Solar** **75.73 323** P **P** **12 48 05.1 +1.9**
baz=141,SNR=7.3
G40A **Rib Lake** **75.83 347** IAmb IAmb 12 48 05.0
comp=Z,34nm,1.3s
V12A **Nelson** **75.83 326** IAmb IAmb 12 48 06.6
comp=Z,34nm,1.1s

CIS	Catalina Islan	75.86	322	P		P		12 48 05.7	+2.0
	baz=140,SNR=6.3								
HEC	Hector,Ludlow	75.86	324	P		P		12 48 05.4	+1.5
	baz=142,SNR=8.2								
E46A	Sault Ste Mari	75.96	352	IAmb		IAmb		12 48 05.4	
	comp=Z,63nm,1.2s								
PKCU	Pink Cliffs	76.00	328	IAmb		IAmb		12 48 08.3	
	comp=Z,32nm,1.1s								
D62A	Allapoint, All	76.01	3	P		P		12 48 05.2	+1.0
D62A				IAmb		IAmb		12 48 06.8	
	comp=Z,40nm,1.0s								
FMP	Fort Macarthur	76.03	322	P		P		12 48 06.6	+1.9
	baz=140								
BFSC	Mount Baldy Ra	76.10	323	P		P		12 48 07.0	+1.8
	baz=141,SNR=21								
TUQ	Turquoise Moun	76.13	325	P		P		12 48 07.5	+2.1
	baz=142,SNR=21								
RRX	Edison Barstow	76.24	324	P		P		12 48 08.0	+2.1
	baz=141								
N23A	Red Feather La	76.27	335	IAmb		IAmb		12 48 09.3	
	comp=Z,35nm,1.2s								
N23A	Red Feather La	76.27	335	P		P		12 48 07.8	+1.6
	baz=150,SNR=10								
SPMN	Marine on St.	76.32	346	P		P		12 48 06.0	0.0
	baz=162,SNR=5.3								
PASC	Pasadena Art C	76.32	322	IAmb		IAmb		12 48 09.7	
	comp=Z,36nm,1.2s								
E43A	Lone Tree Farm	76.34	350	IAmb		IAmb		12 48 07.2	
	comp=Z,76nm,1.7s								
BATG	Bathurst New B	76.37	5	IAmb		IAmb		12 48 10.4	
	comp=Z,38nm,1.3s								
LMQ	La Malbaie	76.43	2	P		P		12 48 07.8	+1.2
PHWY	Pilot Hill	76.44	335	IAmb		IAmb		12 48 10.1	
	comp=Z,34nm,1.2s								
DECC	Green Verdugo	76.47	322	P		P		12 48 09.3	+2.1
	baz=140								
GSC	Goldstone, Bar	76.47	324	IAmb		IAmb		12 48 10.7	
	comp=Z,32nm,1.2s								
GSC	Goldstone, Bar	76.47	324	P		P		12 48 09.5	+2.2
	baz=141,SNR=17								
SZCU	Shurtz Canyon	76.48	328	IAmb		IAmb		12 48 11.0	
	comp=Z,50nm,1.4s								
O20A	White River Ci	76.50	333	IAmb		IAmb		12 48 10.6	
	comp=Z,54nm,1.1s								
O20A	White River Ci	76.50	333	P		P		12 48 09.0	+1.5
	baz=148,SNR=24								
SHOC	Shoshone, Teco	76.67	325	P		P		12 48 09.6	+1.3
	baz=142,SNR=5.3								
Q16A	Castle Valley	76.71	330	IAmb		IAmb		12 48 11.9	
	comp=Z,45nm,1.2s								
EDW2	Edwards Air Fo	76.77	323	P		P		12 48 10.6	+1.7
	baz=140,SNR=18								
LDAQ	Lac Daran	76.83	1	P		P		12 48 10.1	+1.1
LDAQ				IAmb		IAmb		12 48 10.5	
	comp=Z,32nm,1.1s								
P18A	Preston Nutter	76.90	331	IAmb		IAmb		12 48 13.1	
	comp=Z,61nm,1.3s								
OSI	Osito Audit: C	76.95	322	P		P		12 48 12.0	+2.1
	baz=140								
P17A	Butcher Ranch,	76.98	331	IAmb		IAmb		12 48 13.0	
	comp=Z,41nm,1.2s								
CCAC	Calif City Air	76.99	323	IAmb		IAmb		12 48 13.3	
	comp=Z,45nm,1.2s								
TCRU	Three Creeks R	77.02	329	IAmb		IAmb		12 48 14.0	
	comp=Z,50nm,1.6s								
LRMC	Laurel Mtn Rad	77.06	324	P		P		12 48 12.3	+1.6
	baz=141,SNR=18								
F36A	Milaca	77.08	345	IAmb		IAmb		12 48 11.7	
	comp=Z,30nm,1.1s								
VLDQ	Val d'Or	77.09	357	IAmb		IAmb		12 48 12.3	
	comp=Z,30nm,1.1s								
SUSD	Miller	77.14	341	IAmb		IAmb		12 48 12.4	
	comp=Z,58nm,1.1s								
SUSD	Miller	77.14	341	P		P		12 48 11.0	+0.3
	baz=157								
PRN	Pahroc Range	77.26	327	IAmb		IAmb		12 48 15.4	
	comp=Z,52nm,1.1s								
SBC	Santa Barbara	77.35	322	P		P		12 48 13.6	+1.5
	baz=139								
E38A	The Farm, Brul	77.37	347	IAmb		IAmb		12 48 13.4	
	comp=Z,31nm,1.1s								
ARVC	Arvin	77.39	323	P		P		12 48 14.2	+1.8
	baz=140								
RDMU	Red Mountain	77.41	332	IAmb		IAmb		12 48 15.3	
	comp=Z,43nm,1.2s								
FURC	Furnace Creek,	77.41	325	P		P		12 48 14.2	+1.9
	baz=141,SNR=12								
MPMC	Manual Prospec	77.41	324	P		P		12 48 14.2	+1.5
	baz=141,SNR=14								
TPNV	Topopah Spring	77.48	326	IAmb		IAmb		12 48 16.6	
	comp=Z,41nm,1.2s								
TPNV	Topopah Spring	77.48	326	P		P		12 48 15.3	+2.3
	baz=142,SNR=30								
RAR	Rarotonga	77.53	253	LR		LR		13 13 35.4	
	comp=Z,297nm,21.5s,baz=132,slow=29								
WCT	Wildcat Mounta	77.55	325	IAmb		IAmb		12 48 16.9	
	comp=Z,32nm,1.2s								
ISA	Isabella, Lake	77.62	323	IAmb		IAmb		12 48 17.1	
	comp=Z,38nm,1.2s								
ISA	Isabella, Lake	77.62	323	P		P		12 48 15.7	+2.0
	baz=140,SNR=19								
SUR	Sutherland	77.65	120	LR		LR		13 18 31.5	
	comp=Z,247nm,19.2s,baz=240,slow=33								
PKM	Mcpherson Peak	77.74	322	P		P		12 48 16.8	+2.2
	baz=139,SNR=19								
S11A	Rachel	77.78	326	IAmb		IAmb		12 48 19.6	
	comp=Z,42nm,1.1s								
BSUT	Blindstream Ca	77.88	331	IAmb		IAmb		12 48 18.5	
	comp=Z,49nm,1.2s								
MAW	Mawson	77.92	164	P		P		12 48 15.5	+0.7
MAW	Mawson	77.92	164	P		P		12 48 15.5	+0.7
MAW				pmax		pmax			
	comp=Z,8.0nm,1.1s								
MAW	Mawson	77.92	164	P		P		12 48 15.6	+0.7
	comp=Z,23nm,0.8s,baz=239,slow=9.0,SNR=7.1								
	comp=Z,23nm,0.8s								
K22A	Casper	78.00	335	IAmb		IAmb		12 48 18.8	
	comp=Z,62nm,1.1s								
K22A	Casper	78.00	335	P		P		12 48 17.5	+1.7
	baz=150,SNR=25								
CWC	Cottonwood Cre	78.01	324	P		P		12 48 17.9	+1.9
	baz=141								
VES	Vestal, Richgr	78.07	323	P		P		12 48 17.9	+1.7
	baz=140,SNR=15								
GRAC	Grapevine Rang	78.08	325	P		P		12 48 18.2	+2.0
	baz=141								
SMMC	Simmler	78.16	322	P		P		12 48 18.9	+2.2
	baz=139,SNR=9.9								
R11B	Troy Canyon, C	78.26	327	P		P		12 48 19.4	+2.0
	baz=143,SNR=33								
RSSD	Black Hills	78.42	338	P		P		12 48 19.3	+1.2
RSSD	Black Hills	78.42	338	P		P		12 48 19.4	+1.2
	baz=152								
RSSD	Black Hills	78.42	338	P		P		12 48 19.3	+1.2
RSSD				pmax		pmax			
	comp=Z,28nm,1.1s								
DUG	Dugway, Tooele	78.48	330	IAmb		IAmb		12 48 21.6	
	comp=Z,59nm,1.5s								
DUG	Dugway, Tooele	78.48	330	P		P		12 48 20.4	+1.9
	baz=145,SNR=16								
TIN	Tinemaha, Big	78.56	324	P		P		12 48 20.9	+2.0
	baz=140,SNR=6.2								
VOG	Valley Oaks Go	78.59	323	P		P		12 48 19.4	+0.4
	baz=140								
TCUT	Toone Canyon	78.63	331	IAmb		IAmb		12 48 23.2	
	comp=Z,54nm,1.5s								
EYMN	Ely	78.65	347	P		P		12 48 19.6	+0.6
	baz=163,SNR=9.9								
HWUT	Hardware Ranch	79.10	331	IAmb		IAmb		12 48 25.6	
	comp=Z,40nm,0.8s								
D32A	Dogwood Acres,	79.11	343	IAmb		IAmb		12 48 23.4	
	comp=Z,46nm,0.9s								
WIN	Windhoek	79.14	110	P		P		12 48 22.7	0.0
WIN	Windhoek	79.14	110	P		P		12 48 22.7	0.0
WIN				pmax		pmax			
	comp=Z,26nm,1.3s								
SPUT	South Promonto	79.23	331	IAmb		IAmb		12 48 25.1	
	comp=Z,37nm,1.1s								
BW06	Boulder Array	79.26	333	P		P		12 48 23.7	+0.9
	baz=148,SNR=17								
PDAR	Pinedale Array	79.26	333	P		P		12 48 23.4	+0.6
	comp=Z,9.5nm,1.1s,baz=145,slow=5.4,SNR=39								
PDAR				LR		LR		13 20 21.5	
	comp=Z,164nm,20.2s,baz=150,slow=33								
	comp=Z,9.5nm,1.1s								
PMPB	Monarch Peak	79.27	322	IAmb		IAmb		12 48 26.4	
	comp=Z,82nm,1.5s								
MLAC	Mammoth, Mammo	79.31	324	P		P		12 48 24.8	+1.6
	baz=140,SNR=11								
B35A	Bob, Littlefor	79.49	346	IAmb		IAmb		12 48 25.2	
	comp=Z,43nm,1.2s								
BBGB	Big Mountain B	79.67	322	IAmb		IAmb		12 48 29.7	
	comp=Z,54nm,1.1s								
AHID	Auburn Hatcher	79.87	332	IAmb		IAmb		12 48 28.5	
	comp=Z,51nm,1.4s								
AGMN	Agassiz Nation	79.91	345	P		P		12 48 26.4	+0.5
	baz=160								
ELK	Elko	80.01	329	LR		LR		13 19 40.9	
	comp=Z,240nm,20.2s,baz=136,slow=32								
MDND	Maddock	80.44	342	P		P		12 48 29.7	+0.9
	baz=156								
PNTR	Pine Nut	80.81	325	IAmb		IAmb		12 48 34.5	
	comp=Z,42nm,1.2s								
FLWY	Flagg Ranch	80.81	333	IAmb		IAmb		12 48 35.3	
	comp=Z,30nm,0.9s								
H17A	Grant Village	81.03	334	P		P		12 48 33.7	+1.3
	baz=147								
TSUM	Tsumeb	81.08	107	P		P		12 48 32.5	-0.6
TSUM	Tsumeb	81.08	107	LR		LR		13 21 38.2	
	comp=Z,595nm,18.0s,baz=320,slow=34								
RLMT	Red Lodge	81.14	335	IAmb		IAmb		12 48 35.5	
	comp=Z,44nm,1.5s								
RLMT	Red Lodge	81.14	335	P		P		12 48 33.9	+1.0
	baz=148,SNR=8.1								
YMP	Mirror Lake Pl	81.15	334	IAmb		IAmb		12 49 54.7	
	comp=Z,40nm,0.9s								
PAHR	Pah Rah Range	81.17	325	IAmb		IAmb		12 48 36.4	
	comp=Z,44nm,1.2s								
MPK	Martis Peak	81.18	325	IAmb		IAmb		12 48 36.7	
	comp=Z,44nm,1.2s								
LAO	LASA Array	81.41	337	IAmb		IAmb		12 48 36.4	
	comp=Z,53nm,1.2s								
LAO	LASA Array	81.41	337	P		P		12 48 34.3	+0.3
	baz=151,SNR=12								
YHL	Hebgen Lake	81.64	333	IAmb		IAmb		12 48 38.9	
	comp=Z,50nm,1.6s								
ULM	Lac du Bonnet	81.75	345	IAmb		IAmb		12 48 37.1	
	comp=Z,59nm,1.1s								
ULM	Lac du Bonnet	81.75	345	*i* P		P		12 48 35.3	-0.4
ULM	Lac du Bonnet	81.75	345	P		P		12 48 35.5	-0.1
	comp=Z,27nm,1.0s,baz=160,slow=4.1,SNR=36								
ULM				LR		LR		13 26 18.9	
	comp=Z,83nm,18.3s,baz=173,slow=37								
	comp=Z,27nm,1.0s								
HLID	Hailey	81.91	331	IAmb		IAmb		12 48 40.0	
	comp=Z,32nm,1.1s								
HLID	Hailey	81.91	331	P		P		12 48 38.6	+1.7
	baz=144,SNR=42								
ORV	Oroville	82.13	324	IAmb		IAmb		12 48 41.1	
	comp=Z,58nm,1.2s								
DGMT	Dagmar	82.33	339	P		P		12 48 40.1	+1.3
	baz=153								
BOZ	Bozeman (W)	82.44	334	P		P		12 48 40.6	+0.9
	baz=146								
BOSA	Boshof	82.80	119	P		P		12 48 42.3	+0.2
	comp=Z,6.9nm,1.0s,baz=240,slow=7.3,SNR=5.7								
	comp=Z,6.9nm,1.0s								
TORD	Torodi Ar. Bea	83.12	71	P		P		12 48 44.4	+0.7
	comp=Z,19nm,0.3s,baz=282,slow=2.8,SNR=10								
TORD				LR		LR		13 22 58.2	
	comp=Z,275nm,21.9s,baz=222,slow=34								
	comp=Z,19nm,0.3s								
J08A	Circle Bar Ran	83.55	328	IAmb		IAmb		12 48 48.2	
	comp=Z,46nm,1.1s								
EGMT	Eagleton	83.78	336	P		P		12 48 46.8	+0.4
	baz=148								
PLID	Pearl Lake	83.81	331	IAmb		IAmb		12 48 50.5	
	comp=Z,19nm,0.8s								
SCHQ	Schefferville	83.85	3	P		P		12 48 46.5	0.0
SCHQ				IAmb		IAmb		12 48 48.4	
	comp=Z,54nm,1.4s								
SCHQ	Schefferville	83.85	3	P		P		12 48 46.9	+0.4
	comp=Z,13nm,1.1s,baz=173,slow=4.4,SNR=7.8								
SCHQ				LR		LR		13 25 46.3	
	comp=Z,100nm,20.0s,baz=254,slow=35								
	comp=Z,13nm,1.1s								
KMPM	Mount Pierce	84.12	323	IAmb		IAmb		12 48 51.6	
	comp=Z,35nm,1.1s								
YBH	Yreka Blue Hor	84.36	325	LR		LR		13 20 30.1	
	comp=Z,115nm,20.7s,baz=150,slow=32								
L04D	Klamath Falls	84.52	325	IAmb		IAmb		12 48 52.5	
	comp=Z,28nm,1.3s								
K04D	Chiloquin, OR	84.55	326	IAmb		IAmb		12 48 53.1	
	comp=Z,51nm,1.3s								
I07A	Izee	84.58	328	IAmb		IAmb		12 48 53.5	
	comp=Z,27nm,1.2s								
CASY	Casey	84.78	181	P		P		12 48 52.2	+0.8
J05D	Fort Rock, OR	84.79	327	IAmb		IAmb		12 48 54.6	
	comp=Z,45nm,1.4s								
LBTB	Lobatse	84.83	116	P		P		12 48 52.4	-0.2
LBTB	Lobatse	84.83	116	P		P		12 48 52.4	-0.2
LBTB				pmax		pmax			
	comp=Z,20nm,1.3s								
LBTB	Lobatse	84.83	116	LR		LR		13 21 09.2	
	comp=Z,624nm,21.9s,baz=230,slow=32								
PINE	Pine Mountain	85.03	327	IAmb		IAmb		12 48 56.0	
	comp=Z,36nm,1.1s								
L02F	Cave Junction	85.08	325	IAmb		IAmb		12 48 55.3	
	comp=Z,26nm,1.2s								
K02D	Willamette Mer	85.55	325	IAmb		IAmb		12 48 58.5	
	comp=Z,52nm,1.2s								
I05D	Terrebonne, OR	85.64	327	IAmb		IAmb		12 48 58.7	
	comp=Z,40nm,1.2s								
DBO	Dodson Butte	85.65	325	IAmb		IAmb		12 48 58.9	
	comp=Z,37nm,1.2s								
J01E	Myrtle Point	86.02	325	IAmb		IAmb		12 49 00.6	
	comp=Z,29nm,1.1s								
H04A	Detroit Lake	86.30	327	IAmb		IAmb		12 49 01.0	
	comp=Z,26nm,1.1s								
G05A	Wamic	86.31	328	IAmb		IAmb		12 49 22.3	
	comp=Z,47nm,1.2s								
BUCK	Buck Mountain	86.32	326	IAmb		IAmb		12 49 01.7	
	comp=Z,59nm,1.2s								
HAWA	Hanford	86.37	330	IAmb		IAmb		12 49 01.9	
	comp=Z,42nm,1.4s								
H04D	Lebanon	86.44	327	IAmb		IAmb		12 49 18.8	
	comp=Z,20nm,1.0s								
HOOD	Mount Hood Mea	86.52	328	IAmb		IAmb		12 49 02.9	
	comp=Z,34nm,1.2s								
COR	Corvallis	86.76	326	P		P		12 49 02.1	+0.8
COR	Corvallis	86.76	326	P		P		12 49 02.1	+0.8
COR				pmax		pmax			
	comp=Z,114nm,1.4s								
LTZ	Lake Taylor	86.79	222	IAmb		IAmb		12 49 04.8	
	comp=Z,47nm,1.1s								
NEW	Newport	86.80	332	P		P		12 49 02.6	+1.1
	baz=142								
NEW	Newport	86.80	332	LR		LR		13 24 48.3	
	comp=Z,301nm,18.5s,baz=143,slow=34								
RPZ	Rata Peaks	86.92	221	P		P		12 49 02.8	+0.3
INZ	Inchbonnie	87.31	222	P		P		12 49 05.4	+1.1
INZ				IAmb		IAmb		12 49 06.8	
	comp=Z,41nm,1.2s								
FFC	Flin Flon	87.32	343	P		P		12 49 04.1	+0.3
FFC	Flin Flon	87.32	343	P		P		12 49 04.1	+0.3
FFC				pmax		pmax			
	comp=Z,16nm,1.3s								
F04A	Amboy	87.33	328	P		P		12 49 04.6	+0.6
LTY	Liberty	87.54	330	IAmb		IAmb		12 49 07.1	
	comp=Z,30nm,1.4s								
MDT	Midelt	89.25	51	LR		LR		13 27 58.3	
	comp=Z,210nm,20.1s,baz=230,slow=35								
EDM	Edmonton	89.39	337	IAmb		IAmb		12 49 14.2	
	comp=Z,35nm,1.2s								
FCC	Fort Churchill	89.44	349	IAmb		IAmb		12 49 15.7	
	comp=Z,41nm,1.1s								
BRLDA	Berland Lookou	91.52	335	IAmb		IAmb		12 49 24.2	
	comp=Z,28nm,1.4s								
LSZ	Lusaka	91.82	109	P		P		12 49 25.5	-0.7
LSZ				IAmb		IAmb		12 49 29.3	
	comp=Z,32nm,1.4s								
LSZ	Lusaka	91.82	109	P		P		12 49 25.5	-0.7
LSZ				pmax		pmax			
	comp=Z,32nm,1.4s								
LSZ	Lusaka	91.82	109	LR		LR		13 27 09.3	
	comp=Z,382nm,19.6s,baz=202,slow=33								
BBB	Bella Bella	94.43	329	LR		LR		13 26 51.0	
	comp=Z,126nm,21.7s,baz=108,slow=32								
YKA	Yellowknife Ar	97.36	342	P		P		12 49 49.9	-0.2
	comp=Z,1.8nm,0.9s,baz=140,slow=4.5,SNR=29								
YKA				PKKPbc		PKKPbc		13 06 28.1	-2.3
	comp=Z,0.5nm,1.0s,baz=327,slow=3.4,SNR=4.7								
	comp=Z,1.8nm,0.9s								
KOTAN	Kotaneelee Air	98.47	337	P		Pdif		12 49 56.8	+1.6
	baz=136								
DLBC	Dease Lake	99.49	333	P		Pdif		12 50 01.0	+1.1
	baz=132								
S34M	Telegraph Cree	99.58	333	P		Pdif		12 50 00.7	+0.5
	baz=131								
WTLY	Watson Lake, Y	100.15	335	P		Pdif		12 50 03.3	+0.5
	baz=132								
FARO	Faro, Yukon	103.21	335	P		Pdif		12 50 17.2	+0.9
	baz=128								
DZM	Mont Dzumac	103.58	235	*e*LR		LR		13 24 05.0	
	comp=Z,211nm,25.1s								
ILAR	Eielson Array	109.68	334	PKKPbc		PKKPbc		13 05 51.0	-2.3
	comp=Z,0.1nm,0.5s,baz=311,slow=4.2,SNR=6.1								
G19K	Purcell Mounta	114.14	334	P		PKiKP		12 54 57.4	+1.4
	baz=108								
B22K	Teshekpuk Lake	114.16	339	P		PKPdf		12 54 55.9	0.0
	baz=109								
C21K	Knifeblade Rid	114.23	337	P		PKiKP		12 54 57.5	+1.5
	baz=108								
N14K	Kuskokwak Cree	114.32	326	P		PKPdf		12 54 55.5	-0.9
	baz=106								
H18K	Honhosa River	114.35	332	P		PKPdf		12 54 56.4	0.0
	baz=107								
E20K	Nigu River	114.44	336	P		PKiKP		12 54 58.2	+1.6
	baz=107								
D19K	Kuna River	115.20	336	P		PKPdf		12 54 58.7	+0.7
	baz=106								
F18K	Selawik	115.26	334	P		PKPdf		12 54 59.5	+1.4
	baz=105								
H16K	Elim	115.81	331	P		PKPdf		12 54 59.7	+0.5
	baz=104								
E18K	Tukpahlearik C	115.83	335	P		PKPdf		12 54 59.7	+0.5
	baz=104								
AKASG	Malin Array Be	119.30	46	PKP		PKPdf		12 55 05.8	-0.5
	comp=Z,2.3nm,0.7s,baz=264,slow=2.7,SNR=5.1								
BRTR	Keskin Array B	119.90	59	PKP		PKPdf		12 55 07.9	-0.1
	comp=Z,2.6nm,0.9s,baz=224,slow=4.0,SNR=4.8								
ASAR	Alice Springs	121.54	209	PKPdf		PKPdf		12 55 10.7	-1.0
ASAR	Alice Springs	121.54	209	PKiKP		PKPdf		12 55 10.7	-1.0
ASAR	Alice Springs	121.54	209	PKP		PKPdf		12 55 11.0	-0.7
	comp=Z,2.7nm,1.0s,baz=152,slow=2.5,SNR=13								
ASAR				PKKPbc		PKKPbc		13 05 10.9	-0.3
	comp=Z,1.1nm,0.9s,baz=353,slow=3.6,SNR=6.6								
OBN	Obninsk	124.26	41	*e*PKiKP		PKPdf		12 55 14.6	-1.1
OBN				*e*				12 57 01.8	
OBN				*e*PPP		PPP		12 59 39.1	
OBN				pmax		pmax			
	comp=Z,13nm,1.2s								
WRA	Warramunga Arr	124.62	211	PKP		PKPdf		12 55 17.0	-0.6
	comp=Z,6.0nm,1.1s,baz=154,slow=1.8,SNR=22								
SOC	Sochi	125.14	55	*e*PKiKP		PKPdf		12 55 15.0	-2.8
SOC				*e*PPP		PPP		12 59 45.2	
SOC				*e*SS		SS		13 14 00.1	-5.2
SOC				*e*SSS		SSS		13 18 37.8	
SOC				MLR		MLR			
	comp=Z,125nm,14.0s								
KLMR	Klimovskoe	125.80	34	*e*PKiKP		PKPdf		12 55 16.4	-2.1
KLMR				pmax		pmax			
	comp=Z,29nm,1.2s								
NEUR	Neytrino	127.25	56	*i* PKiKP		PKPdf		12 55 20.7	-1.4
KIV	Kislovodsk	127.32	55	*e*PKiKP		PKPdf		12 55 22.9	+0.8
KIV				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KBZ	Khabaz	127.44	55	*i* PKiKP		PKPdf		12 55 22.4	+0.2
KBZ	Khabaz	127.44	55	PKP		PKiKP		12 55 23.4	+0.7
	comp=Z,6.2nm,1.0s,baz=262,slow=1.6,SNR=11								
ZEI	Tsey	128.06	57	*e*PKiKP		PKPdf		12 55 15.6	-8.1
ZEI				pmax		pmax			
	comp=Z,2.0nm,1.1s								
PSA00	Pilbara Seismi	128.09	195	PKPdf		PKPdf		12 55 24.0	-0.2
BILL	Bilibino	128.28	336			PKPdf		12 55 23.6	+0.5
TIXI	Tiksi	135.90	350			PKPdf		12 55 37.6	+0.3
TIXI	Tiksi	135.90	350	PKiKP		PKPdf		12 55 37.6	+0.3
PETK	Petropavlovsk-	136.35	318	PKP		PKPdf		12 55 39.0	+0.3
	comp=Z,8.4nm,1.0s,baz=89,slow=6.4,SNR=7.2								
ARU	Arti	136.37	37	PKPdf		PKPdf		12 55 38.7	+0.1
ARU	Arti	136.37	37	*i* PKiKP		PKiKP		12 55 40.5	+0.1
ARU								12 58 18.9	
GEYT	Alibeck	138.49	65	PKP		PKPdf		12 55 42.5	-0.7
	comp=Z,3.4nm,0.8s,baz=258,slow=7.2,SNR=5.4								
ABKAR	Akbulak array	138.99	47	PKPdf		PKPdf		12 55 44.1	+0.4
ABKAR	Akbulak array	138.99	47	PKPdf		PKPdf		12 55 44.2	+0.4
BRVK	Borovoye	143.93	38	PKPdf		PKPdf		12 55 52.0	-0.5
BRVK	Borovoye	143.93	38	*i* PKiKP		PKPbc		12 55 51.1	+0.9
BVAR	Borovoye Array	144.00	38	PKP		PKPbc		12 55 52.0	+1.6
	comp=Z,5.9nm,0.9s,baz=294,slow=4.4,SNR=24								
YAK	Yakutsk	144.03	342	*d* iPKiKP		PKPab		12 55 50.1	+0.4
YAK				*e*				12 59 04.4	
YAK				pmax		pmax			
	comp=Z,46nm,1.1s								
YAK				pmax		pmax			
	comp=N,10.0nm,1.3s								
YAK				pmax		pmax			
	comp=E,7.0nm,1.3s								
YAK				pmax		pmax			
	comp=Z,120nm,2.5s								
YAK				pmax		pmax			
	comp=N,76nm,2.5s								
YAK				pmax		pmax			
	comp=E,44nm,2.5s								
TYV	Tymovskoe	145.85	319	*e*

TDK	**Taldyqorghan**	**152.26**	**47**	*e*PKIKP	**PKPbc**	12 56 13.4	+0.3
KSH	**Kashi**	**152.28**	**60**	PKPbc	**PKPdf**	12 56 07.9	+1.2
KSH				PP	**PP**	12 59 55.4	-0.4
RPSI	**Rantau Prapat**	**152.44**	**162**	PKPdf	**PKPdf**	12 56 05.8	-1.8
RPSI					**sPKPbc**	12 56 14.4	+0.3
PSI	**Prapat**	**152.54**	**162**	PKIKP	**PKPbc**	12 56 14.4	-0.4
KLR	**Kul'dur**	**152.68**	**324***c*	*i*PKIKP	**PKPdf**	12 56 08.1	+1.3
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KPKS	**Kokpek**	**153.05**	**50**	*e*PKPbc	**PKPbc**	12 56 15.4	+0.3
	baz=50						
KPKS	**Kokpek**	**153.05**	**50**	*e*PKIKP	**PKPbc**	12 56 15.3	+0.3
MJAR	**Matsushiro Arr**	**153.13**	**294**	PKPbc	**PKPbc**	12 56 15.3	0.0
	comp=Z,3.8nm,1.0s,baz=69,slow=0.9,SNR=5.2						
MJAR				PKPab	**pPKPab**	12 56 27.5	+0.8
	comp=Z,9.1nm,1.0s,baz=105,slow=2.8,SNR=9.6						
MAJO	**Matsushiro**	**153.14**	**294**	PKPab	**PKPab**	12 56 28.2	+1.2
MAJO	**Matsushiro**	**153.14**	**294**	PKP2	**PKPab**	12 56 28.2	+1.2
MAKZ	**Makanchi**	**153.58**	**41**		**PKPdf**	12 56 08.6	+0.3
MAKZ				PKPbc	**PKiKP**	12 56 16.8	+0.7
MAKZ				PKPab	**PKPab**	12 56 30.0	+1.6
MAKZ	**Makanchi**	**153.58**	**41**	PKIKP	**PKPdf**	12 56 08.6	+0.3
MAKZ						12 56 16.8	
SHLS	**Shalkode**	**153.70**	**51**	*e*PKPbc	**PKiKP**	12 56 17.4	+0.8
	baz=50						
SHLS	**Shalkode**	**153.70**	**51**	*e*PKIKP	**PKiKP**	12 56 17.4	+0.8
MK31	**Makanchi Array**	**153.77**	**41**	PKPdf	**PKPdf**	12 56 08.7	+0.2
MK31				PKPbc	**PKiKP**	12 56 17.3	+0.9
MK31				PKPab	**PKPab**	12 56 31.0	+1.7
MK31	**Makanchi Array**	**153.77**	**41**	*i* PKIKP	**PKPdf**	12 56 08.0	-0.5
MKAR	**Makanchi Array**	**153.77**	**41**	PKPdf	**PKPdf**	12 56 08.9	+0.3
MKAR					**PKiKP**	12 56 17.1	+0.6
MKAR				PKPab	**PKPab**	12 56 31.0	+1.7
MKAR	**Makanchi Array**	**153.77**	**41**	PKP	**PKPdf**	12 56 08.8	+0.3
	comp=Z,1.3nm,0.9s,baz=307,slow=1.2,SNR=8.6						
MKAR				PKPbc	**PKiKP**	12 56 17.1	+0.7
	comp=Z,9.0nm,0.9s,baz=300,slow=2.7,SNR=38						
HEH	**HeiHe**	**154.07**	**330**	PKPbc	**PKPdf**	12 56 08.2	-0.6
HEH				pPKP	**sPKPbc**	12 56 16.3	-0.2
USRK	**Ussuriysk Ar.**	**155.34**	**314**	PKP	**PKPdf**	12 56 10.7	0.0
	comp=Z,1.3nm,0.7s,baz=29,slow=3.3,SNR=3.0						
MDJ	**Mudanjiang**	**156.59**	**317**	PKP	**PKPdf**	12 56 11.7	-0.7
MDJ				AMB	AMB		
	comp=Z,240nm,4.7s						
WMQ	**Urumqi**	**158.59**	**42**	*e*PKP	**PKPdf**	12 56 13.7	-1.3
ZAK	**Zakamensk**	**158.63**	**7**	*e*PKP2	**PKPab**	12 56 48.8	-1.2
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
KSRS	**Korea Array**	**160.96**	**301**	PKP	**PKPdf**	12 56 17.3	-0.5
	comp=Z,1.7nm,0.9s,baz=304,slow=2.3,SNR=6.1						
ULN	**Ulaanbaatar**	**161.37**	**1**	PKPdf	**PKPdf**	12 56 18.7	+0.5
ULN				PKPab	**PKPab**	12 57 04.1	+2.0
ULN	**Ulaanbaatar**	**161.37**	**1**	PKP2	**PKPab**	12 57 04.1	+2.0
ULN						13 56 18.7	
SONM	**Songino Array**	**161.39**	**2**	PKPab	**PKPab**	12 57 03.3	+1.2
SONM	**Songino Array**	**161.39**	**2**	PKP	**PKPdf**	12 56 18.1	0.0
	comp=Z,0.7nm,0.8s,baz=127,slow=3.9,SNR=5.0						
SONM				PKPab	**PKPab**	12 57 03.4	+1.3
	comp=Z,3.8nm,1.0s,baz=335,slow=4.5,SNR=15						
SONM				PP	**PP**	13 00 44.9	+0.2
	comp=Z,1.6nm,0.9s,baz=357,slow=5.4,SNR=6.4						
CMAR	**Chiang Mai Arr**	**166.84**	**143**		**PKPab**	12 57 26.3	-0.4
CMAR	**Chiang Mai Arr**	**166.84**	**143**	PKP	**PKPdf**	12 56 23.6	-0.1
	comp=Z,0.5nm,0.3s,baz=251,slow=3.0,SNR=5.8						
CMAR				PKPab	**sPKPab**	12 57 26.4	+0.1
	comp=Z,2.6nm,0.8s,baz=228,slow=5.5,SNR=11						
CHTO	**Chiang Mai**	**167.13**	**142**	PKPab	**PKPab**	12 57 27.6	-0.4
CHTO	**Chiang Mai**	**167.13**	**142**	PKP2	**PKPab**	12 57 27.6	-0.4
HHC	**Hu-ho-hao-te**	**167.88**	**345**	*e*PKP	**PKPdf**	12 56 18.0	-6.0
GTA	**Gaotai**	**168.09**	**29**	PKP	**PKPdf**	12 56 25.0	+0.8
GTA				PKPab	**PKPab**	12 57 32.8	+0.9
GTA				LR	LR		
	comp=Z,180nm,19.3s						
GTA				LR	LR		
	comp=Z,180nm,17.8s						
GTA				LR	LR		
	comp=Z,230nm,18.2s						
BTO	**Baotou**	**168.42**	**350**	*e*PKP	**PKPdf**	12 56 18.8	-5.6
CRAI	**Chiangrai**	**169.05**	**143**	PKPab	**PKPab**	12 57 36.5	+0.1
NJ2	**Nanjing**	**169.68**	**289**	*e*PKP	**PKPdf**	12 56 22.8	-2.5
PZH	**PanZhiHua**	**174.37**	**117**	PKP	**PKPdf**	12 56 24.8	-3.0

ASIES ***07*** *12:39:39.9,24.˚10N×121.˚68E,h9km,ML3.6,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.44; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-0.07; $M_{r\theta}$1.51; $M_{r\phi}$-0.13; $M_{\theta\phi}$1.86; Fault plane solution: M_o2.43369×10^{21} NP1:ϕ_s39.71000°, δ85.48000°, λ85.88000°. NP2:ϕ_s262.09000°, δ6.11000°, λ132.22000°. Principal axes: T Plg49.3610°, Azm305.2400°; N Plg4.1020°, Azm40.0320°; P Plg40.3420°, Azm133.5240°;*

TAP ***07*** *12:39:39.9,24.˚10N×121.˚68E,h9km,ML3.6,C*

JMA ***07*** *12:39:39.9±0.1,24.˚1N±0.˚3×121.˚7E±0.˚8,h10km,MV2.9/10, TAIWAN REGION*

ISC 07 12:39:40.4±0.8,24.˚09N±0.˚01×121.˚70E±0.˚02,h7km±5km, n112,σ0s56/174,1C-14D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**262**	⇓*i*P		**Pg**	**12 39 42.2**	**-0.4**
	baz=253							
TWD				*i* S		**Sg**	**12 39 43.8**	**-0.3**
	baz=253							
ETL	**Fush Village**	**0.09**	**315**	⇓*i*P		**Pg**	**12 39 42.4**	**-0.3**
	baz=317							
ETL				*i* S		**Sg**	**12 39 44.0**	**-0.3**
	baz=317							
NACB	**Ninganchiao**	**0.12**	**311**	⇓*i*P		**Pg**	**12 39 42.7**	**-0.4**
	baz=312							
NACB				*i* S		**Sg**	**12 39 44.6**	**-0.3**
	baz=312							
HWA	**Hwalien**	**0.14**	**215**	*i* P		**Pg**	**12 39 43.8**	**+0.4**
	baz=216							
HWA				*i* S		**Sg**	**12 39 46.8**	**+1.3**
	baz=216							
EHP	**Heping Village**	**0.22**	**11**	*i* P		**Pg**	**12 39 44.6**	**-0.3**
	baz=14							
EHP				S		**Sg**	**12 39 48.0**	**+0.1**
	baz=14							
ETM	**Tongmen**	**0.22**	**236**	*i* P		**Pg**	**12 39 44.6**	**-0.4**
	baz=232							
ETM				S		**Sg**	**12 39 47.7**	**-0.3**
	baz=232							
ETLH	**Xiulin Townshi**	**0.23**	**300**	*i* P		**Pg**	**12 39 44.6**	**-0.4**
	baz=300							
ETLH				*i* S		**Sg**	**12 39 47.8**	**-0.2**
	baz=300							
EAHA	**Aohua**	**0.24**	**10**	*i* P		**Pg**	**12 39 44.9**	**-0.3**
	baz=10.0							
EAHA				*i* S		**Sg**	**12 39 48.5**	**0.0**
	baz=10.0							
LXIB	**Xiulin Townshi**	**0.27**	**255**	⇓*i*P		**Pg**	**12 39 45.3**	**-0.5**
	baz=243							
LXIB				*i* S		**Sg**	**12 39 49.1**	**-0.3**
	baz=243							
SHUL	**Shoufeng**	**0.33**	**202**	P		**Pg**	**12 39 47.9**	**+1.0**
	baz=206							
ENA	**Nanau**	**0.34**	**7**	⇓*i*P		**Pg**	**12 39 46.8**	**-0.3**
	baz=9.0							
ENA				*i* S		**Sg**	**12 39 51.4**	**-0.1**
	baz=9.0							
EWUT	**Wuta**	**0.36**	**12**	*i* P		**Pg**	**12 39 47.2**	**-0.3**
	baz=12							
EWUT				*i* S		**Sg**	**12 39 52.2**	**0.0**
	baz=12							
ESL	**Shilin**	**0.37**	**221**	*i* P		**Pg**	**12 39 47.1**	**-0.5**
	baz=226							
ESL				*i* S		**Sg**	**12 39 51.4**	**-1.0**
	baz=226							
WHF	**Hehuan Shan**	**0.40**	**278**	*i* P		**Pg**	**12 39 47.9**	**-0.5**
	baz=276							
WHF				*i* S		**Sg**	**12 39 53.3**	**-0.3**
	baz=276							
TEGC	**Jichi Village**	**0.41**	**200**	P		**Pg**	**12 39 49.2**	**+0.8**
	baz=201							
TEGC				S		**Sb**	**12 39 57.8**	**+1.5**
	baz=201							
NNSB	**Datong**	**0.44**	**320**	⇓*i*P		**Pg**	**12 39 48.9**	**-0.2**
	baz=319							
NNSB				*i* S		**Sg**	**12 39 54.9**	**+0.1**
	baz=319							
FUSS	**Fushou**	**0.44**	**291**	*i* P		**Pg**	**12 39 48.9**	**-0.2**
	baz=289							
FUSS				S		**Sg**	**12 39 55.2**	**+0.3**
	baz=289							
NNS	**Nan Shan**	**0.45**	**320**	⇓*i*P		**Pg**	**12 39 49.1**	**-0.2**
	baz=320							
NNS				*i* S		**Sg**	**12 39 55.4**	**+0.2**
	baz=320							
LATG	**Datong**	**0.47**	**341**	⇓*i*P		**Pg**	**12 39 49.2**	**-0.3**
	baz=341							
LATG				S		**Sg**	**12 39 55.4**	**-0.3**
	baz=341							
WARBT	**Fenglin Townsh**	**0.47**	**217**	P		**Pg**	**12 39 49.0**	**-0.5**
	baz=223							
WARBT				S		**Sg**	**12 39 56.0**	**+0.3**
	baz=223							
CHGB	**Renai**	**0.48**	**266**	⇓*i*P		**Pg**	**12 39 49.6**	**-0.2**
	baz=256							
CHGB				*i* S		**Sg**	**12 39 55.6**	**-0.4**
	baz=256							
EGFH	**Guangfu**	**0.49**	**210**	*e*P		**Pg**	**12 39 49.5**	**-0.4**
	baz=218							
OWD	**Renai**	**0.49**	**254**	P		**Pg**	**12 39 49.5**	**-0.5**
	baz=252							
OWD				S		**Sg**	**12 39 56.2**	**-0.4**
	baz=252							
ESAO	**Su ao**	**0.50**	**16**	P		**Pg**	**12 39 49.9**	**-0.2**
	baz=14							
ESAO				S		**Sg**	**12 39 56.1**	**-0.5**
	baz=14							
TWT	**Tachien**	**0.50**	**289**	*i* P		**Pg**	**12 39 50.1**	**-0.1**
	baz=286							
TWT				*i* S		**Sg**	**12 39 57.2**	**+0.5**
	baz=286							
TDCB	**Techi**	**0.52**	**288**	P		**Pg**	**12 39 50.3**	**-0.1**
	baz=287							
TDCB				S		**Sg**	**12 39 57.1**	**-0.1**
	baz=287							
TWC	**Suao**	**0.53**	**15**	*i* P		**Pg**	**12 39 50.6**	**-0.1**
	baz=7.0							
TWC				S		**Sg**	**12 39 57.9**	**+0.2**
	baz=7.0							
NDT	**Datong Townshi**	**0.53**	**342**	P		**Pg**	**12 39 50.8**	**0.0**
	baz=342							
NDT				S		**Sg**	**12 39 58.1**	**+0.3**
	baz=342							
WUSB	**Renai**	**0.54**	**259**	⇓*i*P		**Pg**	**12 39 50.7**	**-0.2**
	baz=258							
WUSB				*i* S		**Sg**	**12 39 57.8**	**-0.1**
	baz=258							
NDS	**Dongshan**	**0.54**	**2**	*i* P		**Pg**	**12 39 50.8**	**-0.1**
	baz=1.0							
NDS				S		**Sg**	**12 39 58.2**	**+0.3**
	baz=1.0							
ENTT	**Nioudou**	**0.56**	**348**	⇓*i*P		**Pg**	**12 39 51.1**	**-0.1**
	baz=349							
ENTT				*i* S		**Sg**	**12 39 58.6**	**+0.1**
	baz=349							
EOS4	**EOS4**	**0.57**	**87**	P		**Pn**	**12 39 54.2**	**-0.4**
	baz=88							
TWE	**Neicheng**	**0.63**	**358**	*i* P		**Pg**	**12 39 52.5**	**0.0**
	baz=358							
TWE				*i* S		**Sg**	**12 40 00.5**	**-0.2**
	baz=358							
YHNB	**Yeheng**	**0.64**	**333**	⇓*i*P		**Pg**	**12 39 53.0**	**+0.1**
	baz=333							
YHNB				*i* S		**Sg**	**12 40 01.2**	**-0.1**
	baz=333							
HGSD	**Ruisui**	**0.65**	**203**	P		**Pg**	**12 39 53.6**	**+0.7**
	baz=220							
NSK	**Sanguang**	**0.66**	**332**	⇓*i*P		**Pg**	**12 39 53.1**	**0.0**
	baz=332							
NSK				*i* S		**Sg**	**12 40 01.5**	**-0.2**
	baz=332							
FUSB	**Fushanzhiwuyua**	**0.67**	**352**	⇓*i*P		**Pg**	**12 39 53.3**	**-0.1**
	baz=351							
FUSB				*i* S		**Sg**	**12 40 02.0**	**-0.1**
	baz=351							
ILA	**Ilan**	**0.67**	**4**	*e*S		**Sg**	**12 40 03.0**	**+0.9**
	baz=4.0							
EHY	**Hungye**	**0.68**	**210**	⇑*i*P		**Pg**	**12 39 53.0**	**-0.5**
	baz=218							
EHY				S		**Sg**	**12 40 02.5**	**+0.2**
	baz=218							
NWLT	**Wulai**	**0.70**	**346**	P		**Pg**	**12 39 54.0**	**0.0**
	baz=333							
NWLT				S		**Sg**	**12 40 02.9**	**-0.3**
	baz=333							
WHP	**Taichung City**	**0.71**	**285**	*i* P		**Pg**	**12 39 54.3**	**+0.2**
	baz=284							
WHP				S		**Sg**	**12 40 04.1**	**+0.7**
	baz=284							
WCS	**Beigang Elemen**	**0.72**	**267**	P		**Pg**	**12 39 54.3**	**0.0**
	baz=257							
WCS				S		**Sg**	**12 40 04.0**	**+0.4**
	baz=257							
SSLB	**Suanglung**	**0.74**	**246**	*i* P		**Pg**	**12 39 54.3**	**-0.4**
	baz=255							
SSLB				S		**Sg**	**12 40 02.9**	**-1.5**
	baz=255							
NFF	**Wufeng Townshi**	**0.75**	**316**	P		**Pg**	**12 39 55.0**	**+0.1**
	baz=315							
NFF				S		**Sg**	**12 40 05.2**	**+0.5**
	baz=315							
SMLT	**Sun Moon Lake**	**0.76**	**254**	*i* P		**Pg**	**12 39 54.8**	**-0.2**
	baz=253							
SMLT				*i* S		**Sg**	**12 40 05.3**	**+0.4**
	baz=253							
YULB	**Yu-li**	**0.79**	**208**	*e*P		**Pg**	**12 39 54.7**	**-0.9**
	baz=210							
TYC	**Yuchr**	**0.79**	**256**	P		**Pg**	**12 39 55.0**	**-0.6**
	baz=255							
TYC				S		**Sg**	**12 40 04.9**	**-1.0**
	baz=255							
ECBN	**Changbin**	**0.81**	**196**	P		**Pg**	**12 39 55.8**	**-0.1**
	baz=187							
ECBN				S		**Sb**	**12 40 09.3**	**+1.5**
	baz=187							
EYUL	**Yuli**	**0.82**	**205**	*e*P		**Pg**	**12 39 56.7**	**+0.5**
	baz=220							
TWF1	**Yuli**	**0.82**	**206**	P		**Pg**	**12 39 55.3**	**-1.0**
	baz=219							
TWF1				*e*S		**Sg**	**12 40 07.3**	**+0.3**
	baz=219							
LIOB	**Emei**	**0.83**	**312**	P		**Pg**	**12 39 56.7**	**+0.3**
	baz=311							
LIOB				S		**Sb**	**12 40 08.4**	**-0.2**
	baz=311							
NSTT	**Nanjuang**	**0.83**	**310**	P		**Pg**	**12 39 56.1**	**-0.3**
	baz=310							
NSTT				S		**Sg**	**12 40 07.4**	**+0.2**
	baz=310							
WHYT	**Xinyi Township**	**0.87**	**243**	*e*P		**Pg**	**12 39 57.2**	**+0.1**
	baz=249							
WHYT				*e*S		**Sg**	**12 40 08.4**	**+0.1**
	baz=249							
TWQ1	**Liyutan**	**0.88**	**287**	*e*P		**Pb**	**12 39 58.5**	**+0.5**
	baz=287							
NHDH	**Xindian Distri**	**0.88**	**350**	*e*P		**Pg**	**12 39 57.4**	**0.0**
	baz=339							
NHDH				*e*S		**Sb**	**12 40 09.5**	**-0.5**
	baz=339							
TIPB	**Shuangxi**	**0.88**	**8**	P		**Pg**	**12 39 57.0**	**-0.5**
	baz=357							
TIPB				S		**Sg**	**12 40 08.7**	**-0.2**
	baz=357							
TWA	**Mucha**	**0.89**	**353**	P		**Pg**	**12 39 57.1**	**-0.4**
	baz=353							
TWA				S		**Sg**	**12 40 08.8**	**-0.3**
	baz=353							
NSY	**Sanyi**	**0.91**	**291**	P		**Pb**	**12 39 58.8**	**+0.3**
	baz=291							
WJS	**Zhushan**	**0.93**	**253**	*e*P		**Pb**	**12 39 58.9**	**+0.1**
	baz=252							
WJS				*e*S		**Sn**	**12 40 12.6**	**-0.7**
	baz=252							
NMLH	**Miaoli**	**0.94**	**298**	*e*P		**Pn**	**12 40 00.3**	**+0.3**
	baz=298							
CHKH	**Chenggong**	**0.94**	**197**	*e*P		**Pg**	**12 39 57.6**	**-0.9**
	baz=190							
CHKH				*e*S		**Sn**	**12 40 13.1**	**-0.6**
	baz=190							
WNT	**Mingjian**	**0.95**	**257**	*e*P		**Pn**	**12 39 59.9**	**-0.3**
	baz=251							
WNT				*e*S		**Sn**	**12 40 13.2**	**-0.7**
	baz=251							
SBCB	**Hsinchu**	**0.95**	**317**	*e*P		**Pn**	**12 40 00.1**	**-0.1**
	baz=316							
TWB1	**Santiao Chiao**	**0.95**	**16**	P		**Pg**	**12 39 58.5**	**-0.2**
	baz=6.0							
TWB1				*e*S		**Sg**	**12 40 10.8**	**-0.2**
	baz=6.0							
FULB	**Fuli**	**0.96**	**203**	*e*P		**Pg**	**12 39 58.7**	**-0.3**
	baz=220							
NWF	**Wu-fen Shan**	**0.98**	**5**	P		**Pg**	**12 39 59.4**	**+0.2**
	baz=354							
NWF				S		**Sg**	**12 40 12.2**	**+0.3**
	baz=354							
WFSB	**Wu-fen Shan**	**0.98**	**5**	*e*P		**Pb**	**12 39 59.9**	**+0.2**
	baz=1.0							
NCUH	**Zhongli**	**0.99**	**332**	*e*P		**Pn**	**12 40 00.4**	**-0.3**
	baz=331							
ALS	**Alishan**	**1.00**	**235**	*e*P		**Pg**	**12 39 59.7**	**0.0**
	baz=234							
ALS				*e*S		**Sb**	**12 40 14.1**	**+0.3**
	baz=234							
SXI1	**Grass Mountain**	**1.01**	**9**	P		**Pg**	**12 39 59.6**	**-0.3**
	baz=353							
CHKT	**Chengkung**	**1.03**	**197**	P		**Pg**	**12 39 59.4**	**-0.9**
	baz=191							
CHKT				*e*S		**Sb**	**12 40 15.0**	**+0.6**
	baz=191							
TWS1	**Kuangyinshan**	**1.03**	**346**	P		**Pb**	**12 40 00.9**	**+0.2**
	baz=346							
TWS1				S		**Sn**	**12 40 16.3**	**+0.2**
	baz=346							
WCHH	**Zhanghua**	**1.04**	**269**	*e*P		**Pn**	**12 40 01.2**	**-0.2**
	baz=269							
EHD	**Haiduan**	**1.04**	**206**	*e*P		**Pg**	**12 39 58.9**	**-1.5**
	baz=221							
CHN5	**Tsauling**	**1.05**	**242**	*i* P		**Pn**	**12 40 01.6**	**0.0**
	baz=232							
CHN5				S		**Sn**	**12 40 17.2**	**+0.6**
	baz=232							
TNOU	**National Taiwa**	**1.05**	**4**	*e*P		**Pg**	**12 40 00.5**	**-0.3**
	baz=360							
YM01	**YM01**	**1.05**	**354**	*e*P		**Pg**	**12 40 00.6**	**-0.1**
	baz=2.0							
ECS	**Chishang**	**1.08**	**204**	*e*P		**Pg**	**12 40 00.5**	**-0.8**
	baz=219							
NTST	**Danshui**	**1.09**	**348**	*e*P		**Pb**	**12 40 01.7**	**+0.1**
	baz=347							
ELDTW	**Lidau**	**1.09**	**215**	*e*P		**Pg**	**12 39 59.6**	**-1.8**
	baz=207							
YM08	**YM08**	**1.09**	**355**	*e*P		**Pg**	**12 40 00.6**	**-0.8**
	baz=338							
ANP	**Anpu**	**1.10**	**352**	*e*P		**Pg**	**12 40 01.4**	**-0.2**
	baz=351							
WGK	**Gukeng**	**1.11**	**249**	*e*P		**Pg**	**12 40 02.0**	**+0.2**
	baz=250							
WDLH	**Douliu**	**1.13**	**249**	*e*P		**Pg**	**12 40 02.2**	**0.0**
	baz=251							
EDH	**Donghe**	**1.17**	**198**	*e*P		**Pg**	**12 39 60.0**	**-3.0**
	baz=185							
TWY	**Chenhua**	**1.18**	**356**	*e*P		**Pn**	**12 40 04.0**	**+0.7**
	baz=340							
WCKO	**Fanlu**	**1.19**	**237**	*e*P		**Pn**	**12 40 03.6**	**+0.1**
	baz=239							
WRL	**Guolierlin Hig**	**1.22**	**261**	*e*P		**Pb**	**12 40 03.5**	**-0.3**
	baz=261							
STYH	**Taoyuan**	**1.25**	**223**	*e*P		**Pn**	**12 40 03.2**	**-1.1**
	baz=225							
TPUB	**Ta-pu**	**1.25**	**231**	*e*P		**Pn**	**12 40 04.0**	**-0.4**
	baz=221							
YOJ	**Yonaguni jima**	**1.26**	**73**	*e*P		**Pn**	**12 40 03.6**	**-0.7**
	baz=69							
YOJ	**Yonaguni jima**	**1.26**	**73**	*e*P		**Pn**	**12 40 03.7**	**-0.7**
YOJ				*e*S		**Sg**	**12 40 21.4**	**+0.5**
WTK	**Tuku**	**1.26**	**252**	*e*P		**Pn**	**12 40 04.4**	**-0.1**
	baz=252							
WTP	**Ta-pu**	**1.30**	**230**	*e*P		**Pn**	**12 40 05.1**	**+0.1**
	baz=232							
TWK	**Hsinying**	**1.38**	**234**	*e*P		**Pb**	**12 40 06.6**	**0.0**
	baz=236							
SNST	**Tainan City**	**1.40**	**232**	*e*P		**Pn**	**12 40 06.7**	**+0.3**
	baz=235							
CHN1	**Nanshi**	**1.40**	**230**	*e*P		**Pg**	**12 40 07.5**	**+0.2**
	baz=232							
WSF	**Szhu**	**1.42**	**252**	*e*P		**Pn**	**12 40 06.2**	**-0.5**
	baz=252							
SGST	**Jiashian**	**1.43**	**226**	*e*P		**Pn**	**12 40 06.3**	**-0.5**
	baz=228							
SLGT	**Liugui**	**1.46**	**222**	*e*P		**Pn**	**12 40 07.3**	**+0.1**
	baz=225							
WSL	**Shuilin Townsh**	**1.46**	**247**	*e*P		**Pb**	**12 40 08.0**	**+0.1**
	baz=248							
ICHU	**Yijhu**	**1.49**	**241**	*e*P		**Pn**	**12 40 07.5**	**-0.1**
	baz=242							
PCYT	**Pengchaiyu**	**1.57**	**13**	*e*P		**Pn**	**12 40 08.9**	**+0.2**
	baz=5.0							
SCST	**Cishan**	**1.63**	**223**	*e*P		**Pb**	**12 40 11.2**	**+0.4**
	baz=226							
SHHT	**Tainan City**	**1.63**	**229**	*e*P		**Pg**	**12 40 11.9**	**+0.2**
	baz=233							
TSMG	**Majia**	**1.69**	**215**	*e*P		**Pn**	**12 40 10.5**	**+0.2**
	baz=231							
TWM1	**Shoushan**	**1.72**	**223**	*e*P		**Pg**	**12 40 13.6**	**+0.1**
	baz=226							
TSCK	**Chigu Township**	**1.75**	**238**	*e*P		**Pn**	**12 40 11.4**	**+0.2**
	baz=239							
EAST	**Anshuo**	**1.87**	**205**	*e*P		**Pn**	**12 40 12.8**	**-0.1**
	baz=194							
JKRS	**Kuro-shima**	**2.12**	**86**	*e*P		**Pn**	**12 40 17.6**	**+1.4**
JKRS				*e*S		**Sn**	**12 40 43.6**	**+0.7**
JIJ	**Ishigaki jima**	**2.25**	**83**	*e*P		**Pn**	**12 40 17.2**	**-0.9**
JIJ				S		**Sn**	**12 40 45.7**	**-0.4**
JISG	**Ishigakijimahi**	**2.44**	**78**	P		**Pn**	**12 40 20.0**	**-0.6**
JISG				S		**Sn**	**12 40 50.2**	**-0.5**

GUC ***07*** *12:47:19.0±0.7,29.˚20S×72.˚64W,h15km,ML3.4*

SJA ***07*** *12:47:19.4±0.7,29.˚15S×72.˚83W,h40km±9km,ML3.6, MW3.6*

IDC ***07*** *12:47:20.3±0.9,29.˚22S×72.˚68W,h0km,mb3.9/4, mbtmp3.9/7,ML3.8/3,Error ellipse: s-maj=37.0km s-min=23.2km az=98.0*

ISC 07 12:47:20.4±1.3,29.20S±0.˚03×72.˚61W±0.˚06,h9km±7km, n54,σ1s60/71,mb3.9/4,1C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**1.67**	**54**	*e*P		**Pn**	**12 47 49.1**	**-0.8**
AC04				*e*S		**Sn**	**12 48 09.3**	**-2.2**
AC04

AROD					*e*S		**Sb**	**12 48 46.9**	**-1.3**
ACCO	**Cerro Coronel**	**3.38**	**115**		*e*P		Pn	12 48 04.3	-9.4
ACCO					IAML			12 49 05.1	
	comp=Z,54nm,0.4s								
AC01	**Pan de Azucar**	**3.52**	**31**		*e*P		**Pn**	**12 48 13.9**	**-1.4**
AC01					*e*S		**Sn**	**12 48 54.7**	**-2.4**
AC01	**Pan de Azucar**	**3.52**	**31**		*e*P		**Pn**	**12 48 13.9**	**-1.4**
DOCA	**Reserva Natura**	**3.52**	**121**		*e*P		**Pn**	**12 48 13.8**	**-1.8**
VA06	**Catapilco**	**3.54**	**162**		*e*P		**Pn**	**12 48 15.0**	**-0.6**
AGUA	**GUANDACOL**	**3.61**	**96**		*e*P		**Pb**	**12 48 21.9**	**-2.5**
AGUA					*e*S		**Sb**	**12 49 08.1**	**-0.3**
AGUA					IAML			12 49 12.7	
	comp=Z,150nm,0.4s								
AC02	**Maricunga**	**3.87**	**53**		*e*P		**Pn**	**12 48 22.2**	**+1.7**
AC02					*e*S		**Sn**	**12 49 07.9**	**+1.4**
AC02					IAML			12 49 09.9	
	comp=Z,70nm,0.4s								
AC02	**Maricunga**	**3.87**	**53**	⇑	*i*P		**Pn**	**12 48 22.4**	**+1.8**
VCA	**Vinchina**	**3.89**	**84**		*e*P		**Pb**	**12 48 26.6**	**-2.6**
VCA					*e*S		**Sb**	**12 49 13.3**	**-3.1**
VCA					IAML			12 49 23.9	
	comp=Z,108nm,0.8s								
VA03	**San Esteban**	**3.97**	**154**		*e*P		**Pn**	**12 48 23.0**	**+1.4**
VA03					*e*S		**Sn**	**12 49 08.4**	**0.0**
VA03					IAML			12 49 23.3	
	comp=Z,56nm,0.5s								
VA03	**San Esteban**	**3.97**	**154**		*e*P		**Pn**	**12 48 22.4**	**+0.8**
ROCH	**El Roble**	**4.01**	**160**		*e*P		**Pn**	**12 48 22.0**	**-0.2**
MT02	**Curacav**	**4.24**	**163**		*e*P		**Pn**	**12 48 24.5**	**-0.8**
MT02					*e*S		**Sn**	**12 49 12.1**	**-2.8**
MT02					IAML			12 49 32.0	
	comp=Z,35nm,0.6s								
MT02	**Curacav**	**4.24**	**163**		*e*P		**Pn**	**12 48 24.4**	**-0.9**
PEL	**Peldehue**	**4.27**	**158**		*e*P		**Pn**	**12 48 25.7**	**+0.1**
MT10	**Hacienda Santa**	**4.44**	**157**		*e*P		**Pn**	**12 48 28.8**	**+0.8**
MT03	**Universidad Ad**	**4.65**	**158**		*e*P		**Pn**	**12 48 31.9**	**+1.0**
MT03					IAML			12 49 38.5	
	comp=Z,73nm,0.9s								
AVFE	**Valle Fertil**	**4.71**	**109**		*e*P		**Pn**	**12 48 35.2**	**+3.5**
AVFE					*e*S		**Sn**	**12 49 29.2**	**+2.7**
AVFE					IAML			12 49 46.8	
	comp=Z,45nm,0.7s								
MT09	**Talagante**	**4.77**	**164**		*e*P		**Pn**	**12 48 32.9**	**+0.2**
MT01	**Popeta**	**4.80**	**166**		*e*P		**Pn**	**12 48 32.2**	**-0.7**
MT01					*e*S		**Sn**	**12 49 22.9**	**-5.7**
MT01					IAML			12 49 28.2	
	comp=Z,43nm,0.3s								
GO02	**Mina Guanaco**	**4.83**	**35**		*e*P		**Pn**	**12 48 33.3**	**-0.3**
GO02					*e*S		**Sn**	**12 49 29.4**	**-0.5**
GO02	**Mina Guanaco**	**4.83**	**35**		*e*P		**Pn**	**12 48 33.5**	**-0.1**
MT13	**San Alfonso**	**4.95**	**157**		*e*P		**Pn**	**12 48 35.8**	**+0.7**
H03N1	**Juan Fernandez**	**6.85**	**230**		T		T	12 55 52.7	
	baz=60								
H03N2	**Juan Fernandez**	**6.87**	**230**		T		T	12 55 45.1	
	baz=60								
H03N3	**Juan Fernandez**	**6.87**	**230**		T		T	12 55 51.3	
	baz=60								
LVC	**Limon Verde**	**7.36**	**28**		Pn		**Pn**	**12 49 07.9**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=204,slow=20,SNR=3.1								
LVC					Sn		**Sn**	**12 50 29.0**	**-3.2**
	comp=Z,0.9nm,0.3s,baz=199,slow=8.2,SNR=1.6								
	comp=Z,1.9nm,0.3s								
PLCA	**Paso Flores**	**11.63**	**172**		Pn		**Pn**	**12 50 06.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=338,slow=12,SNR=8.9								
	comp=Z,0.6nm,0.3s								
SIV	**San Ignacio**	**16.90**	**41**		Pn		**P**	**12 51 21.0**	**+1.7**
	baz=223,slow=10,SNR=22								
	comp=Z,9.2nm,0.8s								
BDFB	**Brasilia**	**26.37**	**65**		P		**P**	**12 52 58.3**	**+1.1**
	comp=Z,2.1nm,0.4s,baz=247,slow=7.7,SNR=3.6								
	comp=Z,2.1nm,0.4s								
QSPA	**South Pole Qui**	**61.03**	**180**		P		**P**	**12 57 35.7**	**+1.5**
	comp=Z,2.9nm,0.8s,baz=139,slow=2.4,SNR=6.7								
	comp=Z,2.9nm,0.8s								
TXAR	**Lajitas Array**	**65.32**	**330**		P		**P**	**12 58 04.4**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=153,slow=9.3,SNR=4.3								
	comp=Z,0.2nm,0.5s								
PDAR	**Pinedale Array**	**79.27**	**333**		P		**P**	**12 59 27.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=128,slow=7.0,SNR=3.7								
	comp=Z,0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**149.53**	**37**		PKPbc		**PKiKP**	**13 07 11.4**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=304,slow=3.1,SNR=8.3								
ZALV	**Zalesovo Beam**	**150.31**	**27**		PKPbc		**PKiKP**	**13 07 12.7**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=301,slow=3.4,SNR=15								
ZALV					PKPab		**sPKPab**	**13 07 20.9**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=305,slow=2.4,SNR=6.5								
MKAR	**Makanchi Array**	**153.72**	**41**		PKPbc		**PKiKP**	**13 07 20.3**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=313,slow=1.8,SNR=4.1								

BEO 07 12:49:23.5±0.3, 44.62N×21.76E, h0km, ML1.8/8, 14C-7D, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDVR	**Moldovita**	**0.16**	**349**	⇑	*i*P	Pg	12 49 25.1	-1.6
MDVR				⇑	S	Sg	12 49 27.8	-0.9
SVIS	**Svilajnac**	**0.53**	**228**		*e*Pg	Pg	12 49 33.7	+0.1
SVIS					*e*Sg	Sg	12 49 40.3	-0.1
HERR	**Herculane**	**0.54**	**61**	⇑	P	Pg	12 49 32.5	-1.3
HERR				⇓	S	Sg	12 49 39.8	-0.9
ZAGS	**Zajecar**	**0.88**	**157**		*e*Pg	Pg	12 49 39.6	-0.7
ZAGS					*e*Sg	Sb	12 49 53.0	-0.9
BOVS	**Bovan**	**0.99**	**182**	⇓	P	Pg	12 49 42.4	-0.1
BOVS				⇓	S	Sb	12 49 56.5	-0.5
BZS	**Buzias**	**1.00**	**354**	⇑	P	Pg	12 49 41.6	-1.1
BZS				⇑	S	Sg	12 49 54.7	-0.9
BZS	**Buzias**	**1.00**	**354**		*e*Pg	Pg	12 49 41.5	-1.1
BZS					*e*Sg	Sg	12 49 55.6	0.0
TRUS	**Trudelj**	**1.05**	**248**		*e*Pg	Pg	12 49 42.4	-1.2
GRUS	**Gruza**	**1.05**	**226**		*e*Pg	Pg	12 49 43.4	-0.2
GRUS					*e*Sg	Sb	12 49 58.3	-0.5
GZR	**Gura Zlata**	**1.06**	**43**	⇓	P	Pg	12 49 42.5	-1.3
GZR				⇑	S	Sg	12 49 57.2	-0.3
SURR	**Surduc**	**1.16**	**13**	⇑	P	Pg	12 49 43.6	-2.1
SURR				⇓	S	Sg	12 49 59.6	-1.2
BLKB	**Belogradchik**	**1.20**	**146**	⇑	P	Pg	12 49 45.4	-1.1
BLKB				⇑	S	Sg	12 50 02.4	+0.4
DIVS	**Divibare**	**1.37**	**248**		*e*Pg	Pg	12 49 48.8	-1.0
DIVS					*e*Sg	Sg	12 50 07.6	+0.1
SELS	**Selova**	**1.48**	**198**		*e*Pg	Pn	12 49 48.9	-2.5
SELS					*e*Sg	Sg	12 50 09.3	-1.6
ZAPS	**Zavoj**	**1.49**	**155**		*e*Pg	Pn	12 49 51.1	-0.5
ZAPS					*e*Sg	Sg	12 50 10.2	-1.1
IVAS	**Ivanjica**	**1.56**	**228**		*e*Pg	Pn	12 49 51.3	-1.2
IVAS					*e*Sg	Sn	12 50 12.5	-1.0
TEKS	**Tekeris**	**1.59**	**268**		*e*Pn	Pn	12 49 50.9	-2.1
TEKS					*e*Sg	Sn	12 50 13.2	-1.1
SIRR	**Siria**	**1.65**	**358**	⇓	P	Pn	12 49 51.0	-2.7
SIRR				⇑	S	Sn	12 50 13.6	-2.0
LOT	**Lotru**	**1.65**	**59**	⇓	S	Sn	12 50 15.0	-0.8
MARR	**Marisel-Cluj**	**2.27**	**24**	⇑	P	Pn	12 50 01.1	-1.2
MARR				⇑	S	Sn	12 50 29.7	-1.2
VOIR		**2.47**	**70**	⇑	P	Pn	12 50 04.4	-0.7
VOIR				⇑	S	Sn	12 50 35.9	-0.1

*NEIC **07** 12:49:50.5±1.0, 56.23N±0.09×149.34W±0.02, h21km±9km, ML3.5/54, ML3.2(AEIC), Error ellipse: s-maj=12.6km s-min=0.3km az=185.0*

*AEIC **07** 12:49:53.3±1.7, 56.16N±0.08×149.2W±0.1, h12km±7km, Error ellipse: s-maj=12.4km s-min=8.4km az=157.0*

ISC 07 12:49:48.8±1.5, 56.24N±0.09×149.30W±0.06, h10km, n174, σ0.91/182, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.37**	**312**			**Pn**	**12 50 28.2**	**+0.6**
KDAK						**Sn**	**12 50 56.0**	**-0.9**
KDAK	**Kodiak Island**	**2.37**	**312**		P	**Pn**	**12 50 28.3**	**+0.6**
	baz=130							
KDAK					S	**Sn**	**12 50 55.6**	**-1.2**
	baz=130							
OHAK	**Old Harbor**	**2.41**	**296**			**Pn**	**12 50 28.3**	**+0.1**
OHAK	**Old Harbor**	**2.41**	**296**		P	**Pn**	**12 50 28.0**	**-0.2**
OHAK	**Old Harbor**	**2.41**	**296**		P	**Pn**	**12 50 28.1**	**-0.1**
	baz=114							
OHAK					S	**Sn**	**12 50 55.8**	**-1.9**
	baz=114							
SII	**Sitkinak Islan**	**2.73**	**279**			**Pn**	**12 50 32.7**	**0.0**
SII					IAML		12 51 06.7	
	comp=E,82nm,0.9s							
SII					IAML		12 51 09.8	
	comp=N,86nm,2.0s							
SII	**Sitkinak Islan**	**2.73**	**279**		P	**Pn**	**12 50 32.9**	**+0.2**
SII	**Sitkinak Islan**	**2.73**	**279**		P	**Pn**	**12 50 33.0**	**+0.3**
	baz=96							
SII					S	**Sn**	**12 51 03.7**	**-2.1**
	baz=96							
SYI	**Shuyak Island**	**2.91**	**326**			**Pn**	**12 50 35.5**	**+0.5**
Q20K	**Shuyak Island**	**2.91**	**326**		P	**Pn**	**12 50 35.5**	**+0.4**
	baz=144							
Q20K					S	**Sn**	**12 51 10.1**	**+0.1**
	baz=144							
CNPM	**China Poot**	**3.46**	**343**			**Pn**	**12 50 43.0**	**+0.4**
CNPM						**Sn**	**12 51 23.3**	**-0.3**
CNPM					IAML		12 51 36.2	
	comp=N,40nm,1.4s							
Q23K	**Middleton Isla**	**3.57**	**25**		Pn	**Pn**	**12 50 44.2**	**+0.1**
MID	**Middleton Isla**	**3.57**	**25**		Pn	**Pn**	**12 50 44.2**	**0.0**
MID					IAML		12 51 15.3	
	comp=N,197nm,1.9s							
MID	**Middleton Isla**	**3.57**	**25**		P	**Pn**	**12 50 44.3**	**+0.2**
Q19K	**Cape Douglas,**	**3.57**	**321**		Pn	**Pn**	**12 50 45.7**	**+1.5**
Q19K					IAML		12 51 37.8	
	comp=N,147nm,1.3s							
Q19K					IAML		12 51 47.7	
	comp=E,134nm,1.1s							
Q19K	**Cape Douglas,**	**3.57**	**321**		P	**Pn**	**12 50 45.5**	**+1.3**
	baz=138							
BRSE	**Bradley Lake S**	**3.60**	**348**			**Pn**	**12 50 44.7**	**+0.1**
BRSE						**Sn**	**12 51 25.1**	**-2.0**
BRSE	**Bradley Lake S**	**3.60**	**348**		P	**Pn**	**12 50 44.7**	**+0.1**
	baz=167							
BRSE					S	**Sn**	**12 51 25.1**	**-2.0**
	baz=167							
KAHG	**Katmai Hook Gl**	**3.63**	**311**			**Pn**	**12 50 47.0**	**+1.9**
BRLK	**Bradley Lake**	**3.64**	**347**			**Pn**	**12 50 45.1**	**0.0**
BRLK					IAML		12 51 30.7	
	comp=N,37nm,1.4s							
HOM	**Homer**	**3.65**	**341**			**Pn**	**12 50 46.1**	**+0.8**
HOM					IAML		12 51 37.1	
	comp=E,111nm,2.0s							
HOM					IAML		12 51 49.6	
	comp=N,83nm,1.4s							
HOM	**Homer**	**3.65**	**341**		P	**Pn**	**12 50 46.1**	**+0.8**
	baz=159							
ACHA	**Angle Creek He**	**3.83**	**304**			**Pn**	**12 50 49.2**	**+1.4**
SEW	**Seward**	**3.88**	**359**			**Pn**	**12 50 48.2**	**-0.1**
SEW	**Seward**	**3.88**	**359**		P	**Pn**	**12 50 48.3**	**-0.1**
	baz=178							
P23K	**Montague Islan**	**3.90**	**14**			**Pn**	**12 50 48.9**	**+0.2**
P23K	**Montague Islan**	**3.90**	**14**		P	**Pn**	**12 50 48.9**	**+0.2**
	baz=195							
P19K	**Oil Pt**	**4.01**	**330**			**Pn**	**12 50 51.3**	**+1.0**
P19K					IAML		12 51 42.5	
	comp=E,75nm,0.4s							
P19K					IAML		12 51 42.6	
	comp=N,78nm,0.5s							
P19K	**Oil Pt**	**4.01**	**330**		P	**Pn**	**12 50 51.4**	**+1.0**
	baz=147							
CNTC	**Contact Creek**	**4.11**	**302**			**Pn**	**12 50 53.1**	**+1.4**
Q17K	**Contact Creek**	**4.11**	**302**		P	**Pn**	**12 50 53.1**	**+1.4**
	baz=118							
O20K	**Slope Mountain**	**4.24**	**337**			**Pn**	**12 50 53.7**	**+0.3**
O20K	**Slope Mountain**	**4.24**	**337**		P	**Pn**	**12 50 53.7**	**+0.3**
	baz=154							
O22K	**Cooper Landing**	**4.26**	**357**			**Pn**	**12 50 54.0**	**+0.4**
O22K					IAML		12 51 47.9	
	comp=E,123nm,0.7s							
O22K					IAML		12 51 55.8	
	comp=N,109nm,0.7s							
O22K	**Cooper Landing**	**4.26**	**357**		P	**Pn**	**12 50 54.5**	**+0.8**
	baz=176							
IVE	**Iliamna Volcan**	**4.27**	**334**			**Pn**	**12 50 54.2**	**+0.3**
SLKM	**Skilak Lake**	**4.31**	**354**			**Pn**	**12 50 54.5**	**+0.1**
HIN	**Hinchinbrook I**	**4.42**	**18**			**Pn**	**12 50 56.2**	**+0.2**
HIN					IAML		12 51 53.3	
	comp=E,88nm,1.8s							
HIN					IAML		12 51 57.8	
	comp=N,108nm,1.8s							
P18K	**Big Mountain,**	**4.48**	**317**			**Pn**	**12 50 57.2**	**+0.6**
P18K	**Big Mountain,**	**4.48**	**317**		P	**Pn**	**12 50 57.2**	**+0.6**
	baz=133							
KAIM	**Kayak Island**	**4.51**	**33**		Pn	**Pn**	**12 50 57.5**	**+0.3**
RED	**Redoubt Volcan**	**4.57**	**338**			**Pn**	**12 50 57.7**	**-0.4**
RSO	**Redoubt South**	**4.61**	**338**			**Pn**	**12 50 58.6**	**-0.1**
RDT	**Redoubt**	**4.64**	**341**			**Pn**	**12 50 59.0**	**0.0**
CAPN	**Captain Cook N**	**4.65**	**349**		Pn	**Pn**	**12 51 00.1**	**+1.2**
CAPN					IAML		12 52 12.9	
	comp=N,83nm,1.8s							
CAPN					IAML		12 52 18.6	
	comp=E,92nm,1.9s							
RDWB	**Redoubt West**	**4.65**	**338**			**Pn**	**12 50 59.0**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.71**	**22**			**Pn**	**12 51 00.4**	**+0.6**
EYAK	**Cordova Ski Ar**	**4.71**	**22**		P	**Pn**	**12 51 00.2**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.71**	**22**		P	**Pn**	**12 51 00.5**	**+0.7**
	baz=204							
O18K	**Koktuh Hills**	**4.79**	**322**			**Pn**	**12 51 01.6**	**+0.6**
O18K					IAML		12 52 03.6	
	comp=N,20nm,1.9s							
O18K	**Koktuh Hills**	**4.79**	**322**		P	**Pn**	**12 51 01.6**	**+0.6**
	baz=137							
RAGM	**Ragged Mountai**	**4.82**	**28**		Pn	**Pn**	**12 51 02.2**	**+0.8**
SUCK	**Suckling Hills**	**4.83**	**35**		Pn	**Pn**	**12 51 01.8**	**+0.3**
P17K	**Kvichak River**	**4.84**	**311**		P	**Pn**	**12 51 03.4**	**+1.8**
	baz=125							
RC01	**Rabbit Creek A**	**4.87**	**358**			**Pn**	**12 51 02.4**	**+0.3**
RC01					IAML		12 52 01.6	
	comp=N,23nm,0.5s							
RC01					IAML		12 52 09.1	
	comp=E,32nm,1.5s							
RC01	**Rabbit Creek A**	**4.87**	**358**		P	**Pn**	**12 51 02.3**	**+0.3**
	baz=177							
NICHA	**Nichawak Mount**	**4.90**	**33**			**Pn**	**12 51 03.4**	**+0.9**
GOAT	**Goat Mountain**	**4.97**	**27**			**Pn**	**12 51 04.6**	**+1.0**
CHGN	**Chignik**	**5.08**	**274**			**Pn**	**12 51 05.5**	**+0.6**
CHGN					IAML		12 52 04.0	
	comp=N,20nm,0.1s							
CHGN					IAML		12 52 06.7	
	comp=E,20nm,0.1s							
BERG	**Berg Lake**	**5.11**	**33**		Pn	**Pn**	**12 51 05.7**	**+0.5**
N20K	**Mount Spurr**	**5.20**	**344**		P	**Pn**	**12 51 06.8**	**+0.2**
	baz=162							
SPCR	**Spurr Chakacha**	**5.20**	**344**			**Pn**	**12 51 06.8**	**+0.1**
KNK	**Knik Glacier**	**5.21**	**4**			**Pn**	**12 51 07.3**	**+0.6**
KNK					IAML		12 52 09.9	
	comp=N,18nm,0.9s							
KNK					IAML		12 52 13.1	
	comp=E,22nm,2.0s							
KNK	**Knik Glacier**	**5.21**	**4**		P	**Pn**	**12 51 07.2**	**+0.5**
	baz=185							
SNH	**Sunshine Point**	**5.22**	**38**		Pn	**Pn**	**12 51 07.5**	**+0.5**
SUA	**Susitna One**	**5.29**	**352**			**Pn**	**12 51 07.9**	**0.0**
SUA					IAML		12 52 15.3	
	comp=N,11nm,2.0s							
SUA					IAML		12 52 17.8	
	comp=E,17nm,1.6s							
SUA	**Susitna One**	**5.29**	**352**		P	**Pn**	**12 51 08.0**	**+0.1**
	baz=171							
N19K	**Bonanza Creek**	**5.33**	**332**			**Pn**	**12 51 08.6**	**+0.1**
N19K	**Bonanza Creek**	**5.33**	**332**		P	**Pn**	**12 51 08.6**	**+0.1**
	baz=147							
BMRM	**Bremner River**	**5.34**	**25**			**Pn**	**12 51 09.2**	**+0.7**
BMRM	**Bremner River**	**5.34**	**25**		P	**Pn**	**12 51 09.2**	**+0.7**
	baz=209							
PMR	**Palmer**	**5.37**	**1**			**Pn**	**12 51 09.3**	**+0.4**
PMR					IAML		12 52 13.5	
	comp=N,17nm,1.9s							
PMR					IAML		12 52 18.6	
	comp=E,13nm,0.8s							
PMR	**Palmer**	**5.37**	**1**		P	**Pn**	**12 51 09.4**	**+0.5**
WAX	**Waxell Ridge**	**5.42**	**36**			**Pn**	**12 51 09.9**	**+0.2**
STLK	**Strandline Lak**	**5.44**	**347**			**Pn**	**12 51 10.3**	**+0.4**
BARK	**Barkley Ridge**	**5.50**	**38**			**Pn**	**12 51 11.4**	**+0.6**
KLU	**Klutina**	**5.55**	**17**			**Pn**	**12 51 12.2**	**+0.7**
KLU	**Klutina**	**5.55**	**17**		P	**Pn**	**12 51 12.3**	**+0.9**
	baz=199							
GHO	**Glory Hole Cre**	**5.55**	**2**			**Pn**	**12 51 12.5**	**+1.0**
CRQM	**Cirque**	**5.56**	**33**		Pn	**Pn**	**12 51 12.0**	**+0.3**
SML	**Sawmill**	**5.61**	**5**			**Pn**	**12 51 13.0**	**+0.7**
SML	**Sawmill**	**5.61**	**5**		P	**Pn**	**12 51 13.2**	**+1.0**
	baz=185							
N18K	**Kilae Creek**	**5.64**	**325**		Pn	**Pn**	**12 51 12.4**	**-0.2**
ISLE	**Juniper Island**	**5.70**	**37**			**Pn**	**12 51 13.8**	**+0.2**
SCM	**Sheep Creek Mo**	**5.70**	**9**		Pn	**Pn**	**12 51 14.4**	**+0.9**
BAGL	**Bagley Icefiel**	**5.71**	**39**			**Pn**	**12 51 14.2**	**+0.7**
O16K	**Kokwok River B**	**5.77**	**309**			**Pn**	**12 51 15.8**	**+1.4**
VRDI	**Verde Repeater**	**5.86**	**29**		Pn	**Pn**	**12 51 16.3**	**+0.5**
SVW2	**Sparrevohn**	**5.87**	**329**		Pn	**Pn**	**12 51 15.5**	**-0.3**
SVW2	**Sparrevohn**	**5.87**	**329**		P	**Pn**	**12 51 15.6**	**-0.2**
SKT	**Skwentna**	**5.87**	**350**		Pn	**Pn**	**12 51 16.1**	**+0.3**
N25K	**Chitina, Valde**	**5.91**	**22**			**Pn**	**12 51 17.1**	**+0.8**
N25K	**Chitina, Valde**	**5.91**	**22**		P	**Pn**	**12 51 17.3**	**+0.9**
	baz=206							
KIAG	**Kiagna River**	**5.94**	**35**			**Pn**	**12 51 17.2**	**+0.4**
GLB	**Gilahina Butte**	**5.95**	**26**		Pn	**Pn**	**12 51 17.9**	**+1.1**
GRNC	**Granite Creek**	**6.00**	**38**		Pn	**Pn**	**12 51 18.1**	**+0.4**
CHNA	**Chernabura Isl**	**6.01**	**261**		P	**Pn**	**12 51 17.9**	**+0.3**
	baz=73							
CNBA	**Chernabura Isl**	**6.01**	**261**			**Pn**	**12 51 17.7**	**0.0**
TABL	**Table Mountain**	**6.01**	**42**		Pn	**Pn**	**12 51 18.5**	**+0.5**
PTPK	**Patty Peak**	**6.11**	**33**			**Pn**	**12 51 20.1**	**+0.9**
PCA	**Pinnacle**	**6.15**	**47**			**Pn**	**12 51 20.4**	**+0.7**
PINM	**Pinnacle**	**6.15**	**47**		P	**Pn**	**12 51 20.2**	**+0.5**
	baz=234							
M19K	**Big River Lodg**	**6.26**	**337**		Pn	**Pn**	**12 51 21.2**	**+0.1**
M18K	**Stony River**	**6.26**	**330**			**Pn**	**12 51 21.0**	**0.0**
M18K	**Stony River**	**6.26**	**330**		P	**Pn**	**12 51 21.0**	**0.0**
	baz=144							
BARN	**Barnard Glacie**	**6.26**	**36**			**Pn**	**12 51 22.2**	**+0.8**
PNL	**Peninsula**	**6.29**	**53**			**Pn**	**12 51 22.5**	**+0.9**
PNL	**Peninsula**	**6.29**	**53**		P	**Pn**	**12 51 22.5**	**+0.9**
PNL	**Peninsula**	**6.29**	**53**		P	**Pn**	**12 51 22.5**	**+0.9**
	baz=240							
CTGM	**Chitina Glacie**	**6.31**	**38**		Pn	**Pn**	**12 51 22.3**	**+0.4**
LOGN	**Logan Glacier**	**6.32**	**40**		Pn	**Pn**	**12 51 22.3**	**+0.2**
BCPM	**Bancas Point**	**6.33**	**50**			**Pn**	**12 51 22.7**	**+0.6**
SDPT	**Sand Point**	**6.37**	**267**		Pn	**Pn**	**12 51 23.3**	**+0.8**
SDPT	**Sand Point**	**6.37**	**267**		P	**Pn**	**12 51 23.4**	**+0.8**
WAT6	**Susitna Watana**	**6.41**	**6**			**Pn**	**12 51 24.2**	**+0.9**
WAT6	**Susitna Watana**	**6.41**	**6**		P	**Pn**	**12 51 24.2**	**+0.9**
	baz=187							
HARP	**HAARP**	**6.53**	**17**			**Pn**	**12 51 26.9**	**+2.0**
HARP	**HAARP**	**6.53**	**17**		P	**Pn**	**12 51 26.9**	**+2.0**
	baz=200							
M17K	**Holitna River**	**6.68**	**324**			**Pn**	**12 51 27.5**	**+0.6**
M17K	**Holitna River**	**6.68**	**324**		P	**Pn**	**12 51 27.4**	**+0.5**
	baz=137							
DHY	**Denali Highway**	**6.93**	**7**			**Pn**	**12 51 31.5**	**+1.1**
DHY	**Denali Highway**	**6.93**	**7**		P	**Pn**	**12 51 31.5**	**+1.1**
	baz=189							
M16K	**Timber Creek**	**6.96**	**318**		Pn	**Pn**	**12 51 31.8**	**+1.2**
O29M	**Mount Kennedy**	**6.97**	**50**			**Pn**	**12 51 31.9**	**+0.9**
O29M	**Mount Kennedy**	**6.97**	**50**		P	**Pn**	**12 51 31.9**	**+0.9**
	baz=238							
P29M	**Windy Craggy**	**7.03**	**56**			**Pn**	**12 51 32.2**	**+0.5**
P29M	**Windy Craggy**	**7.03**	**56**		P	**Pn**	**12 51 31.8**	**+0.1**
	baz=245							
RND	**Reindeer**	**7.20**	**2**			**Pn**	**12 51 34.9**	**+0.9**
M27K	**Edge Creek, AK**	**7.21**	**29**		Pn	**Pn**	**12 51 35.5**	**+1.2**
TRF	**Thorofare Moun**	**7.25**	**356**			**Pn**	**12 51 35.4**	**+0.5**
TRF	**Thorofare Moun**	**7.25**	**356**		P	**Pn**	**12 51 35.8**	**+0.9**
	baz=175							
YUK7	**Dusty Glacier**	**7.27**	**49**			**Pn**	**12 51 36.6**	**+1.4**
S31K	**Pelican**	**7.33**	**71**		Pn	**Pn**	**12 51 33.7**	**-2.0**
KTH	**Kantishna Hill**	**7.38**	**354**		Pn	**Pn**	**12 51 37.4**	**+0.8**
YUK6	**Outpost Mounta**	**7.41**	**46**			**Pn**	**12 51 38.7**	**+1.7**
YUK6	**Outpost Mounta**	**7.41**	**46**		P	**Pn**	**12 51 38.7**	**+1.7**
	baz=235							
TTA	**Tatalina**	**7.52**	**336**		Pn	**Pn**	**12 51 37.9**	**-0.6**
TTA	**Tatalina**	**7.52**	**336**		P	**Pn**	**12 51

ETM eS Sg 12 52 09.2 +0.8
baz=205
LXIB Xiulin Townshi 0.30 228⇑iP Pg 12 52 05.0 +0.5
baz=222
LXIB S Sg 12 52 09.8 +1.3
baz=222
NNSB Datong 0.32 309⇓iP Pg 12 52 05.5 +0.7
baz=307
NNSB iS Sg 12 52 10.1 +1.0
baz=307
NNSH Datong 0.32 309⇓iP Pg 12 52 05.5 +0.7
baz=307
NNSH iS Sg 12 52 10.1 +1.0
baz=307
LATG Datong 0.33 339⇓iP Pg 12 52 05.5 +0.5
baz=339
LATG iS Sg 12 52 10.0 +0.6
baz=339
NNS Nan Shan 0.34 309⇓iP Pg 12 52 05.7 +0.6
baz=308
NNS iS Sg 12 52 10.4 +0.9
baz=308
WHF Hehuan Shan 0.37 258⇓iP Pg 12 52 06.5 +0.7
baz=252
WHF S Sg 12 52 11.6 +0.9
baz=252
FUSS Fushou 0.38 273⇓iP Pb 12 52 06.8 -0.4
baz=269
FUSS S Sg 12 52 11.7 +0.7
baz=269
ESAO Su ao 0.39 26⇓eP Pg 12 52 06.3 +0.3
baz=29
ESAO eS Sg 12 52 11.0 -0.1
baz=29
NDT Datong Townshi 0.40 340⇓iP Pg 12 52 06.8 +0.6
baz=341
NDT S Sg 12 52 12.3 +0.9
baz=341
NDS Dongshan 0.41 7⇓iP Pg 12 52 07.0 +0.6
baz=9.0
NDS S Sg 12 52 12.7 +1.0
baz=9.0
TWC Suao 0.42 24 ⇓P Pg 12 52 06.9 +0.3
baz=28
TWC eS Sg 12 52 12.5 +0.4
baz=28
ENTT Nioudou 0.42 348⇓iP Pg 12 52 07.1 +0.5
baz=350
ENTT iS Sg 12 52 13.0 +0.9
baz=350
TWT Tachien 0.44 274⇓iP Pb 12 52 08.2 -0.1
baz=270
TWT S Sg 12 52 14.0 +1.1
baz=270
SHUL Shoufeng 0.45 192 ⇑P Pg 12 52 08.1 +1.1
baz=189
SHUL S Sb 12 52 15.0 +0.1
baz=189
TDCB Techi 0.46 274⇓iP Pb 12 52 08.2 -0.3
baz=270
TDCB iS Sg 12 52 13.9 +0.6
baz=270
ESL Shilin 0.46 207⇑iP Pg 12 52 07.4 +0.2
baz=202
CHGB Renai 0.47 250⇑iP Pg 12 52 08.4 +0.8
baz=246
CHGB iS Sg 12 52 14.8 +1.0
baz=246
TWE Neicheng 0.49 1⇓iP Pg 12 52 08.2 +0.3
baz=4.0
TWE S Sg 12 52 15.0 +0.5
baz=4.0
YHNB Yeheng 0.51 330 P Pg 12 52 08.9 +0.6
YHNB Yeheng 0.51 330⇓iP Pg 12 52 08.7 +0.5
baz=329
YHNB S Sg 12 52 15.3 +0.2
baz=329
OWD Renai 0.52 239 ⇑P Pg 12 52 08.9 +0.5
baz=235
OWD eS Sg 12 52 15.9 +0.7
baz=235
NSK Sanguang 0.53 329⇓iP Pg 12 52 08.9 +0.3
baz=329
NSK iS Sg 12 52 15.8 +0.3
baz=329
TEGC Jichi Village 0.53 192 eP Pb 12 52 09.8 +0.2
baz=189
FUSB Fushanzhiwuyua 0.54 353⇓iP Pg 12 52 09.0 +0.3
baz=354
FUSB iS Sg 12 52 15.9 +0.1
baz=354
ILA Ilan 0.54 8 eP Pg 12 52 09.2 +0.4
baz=11
WUSB Renai 0.55 245⇑iP Pg 12 52 09.6 +0.7
baz=241
WUSB S Sg 12 52 17.2 +1.0
baz=241
EOS2 EOS2 0.56 70 eP Pb 12 52 10.6 +0.6
baz=72
WARBT Fenglin Townsh 0.56 206⇓eP Pg 12 52 09.0 -0.2
baz=203
WARBT eS Sg 12 52 17.1 +0.5
baz=203
NWLT Wulai 0.57 345⇓iP Pg 12 52 09.5 +0.2
baz=346
NWLT eS Sg 12 52 16.6 -0.2
baz=346
EGFH Guangfu 0.59 201 ⇑P Pg 12 52 09.9 +0.1
baz=198
EGFH eS Sg 12 52 18.6 +1.0
baz=198
EOS3 EOS3 0.60 84 eP Pb 12 52 11.5 +0.7
baz=86
EOS4 EOS4 0.61 100 eP Pg 12 52 11.0 +1.0
baz=101
NFF Wufeng Townshi 0.64 309⇓iP Pg 12 52 10.9 +0.3
baz=308
NFF S Sg 12 52 19.7 +0.6
baz=308
NTC Toucheng 0.65 14 eP Pg 12 52 11.0 +0.2
baz=15
NTC eS Sb 12 52 20.1 -0.6
baz=15
WHP Taichung City 0.65 275⇓eP Pg 12 52 11.5 +0.6
baz=272
WHP S Sg 12 52 20.3 +0.8
baz=272
WPL Puli Township 0.68 252 eP Pg 12 52 11.9 +0.5
baz=249
WPL iS Sg 12 52 21.0 +0.7
baz=249
DPDB Guoxing 0.70 254 ⇓P Pg 12 52 12.2 +0.5
baz=251
DPDB eS Sb 12 52 22.1 -0.1
baz=251
WCS Beigang Elemen 0.70 256 ⇓P Pg 12 52 12.3 +0.4
baz=254
WCS S Sb 12 52 22.0 -0.3
baz=254
LIOB Emei 0.72 306⇓iP Pb 12 52 12.9 -0.1
baz=304
LIOB S Sb 12 52 23.1 +0.1
baz=304
NSTT Nanjuang 0.72 304⇓iP Pg 12 52 12.7 +0.4
baz=303
NSTT iS Sg 12 52 22.3 +0.5
baz=303
NJD Zhudong 0.73 314 eP Pb 12 52 13.1 +0.1
baz=313
NHDH Xindian Distri 0.74 351 eP Pg 12 52 12.7 0.0
baz=351
NHDH eS Sg 12 52 22.5 +0.1
baz=351
TWA Mucha 0.76 355 eP Pg 12 52 12.9 0.0
baz=356
TIPB Shuangxi 0.76 11⇓iP Pg 12 52 12.8 -0.1
baz=13
TIPB eS Sg 12 52 23.3 +0.5
baz=13
HGSD Ruisui 0.76 197 eP Pg 12 52 13.2 +0.3
baz=194
TATO Taipei 0.76 348⇓iP Pg 12 52 13.2 +0.2
baz=349
TATO S Sg 12 52 22.9 0.0
baz=349
SMLT Sun Moon Lake 0.77 244 eP Pg 12 52 13.5 +0.3
baz=241
SMLT eS Sg 12 52 22.4 -1.0
baz=241
SSLB Suanglung 0.78 236 P Pg 12 52 13.8 +0.5
SSLB Suanglung 0.78 236 eP Pg 12 52 13.4 +0.1
baz=233
SSLB eS Sg 12 52 23.0 -0.5
baz=233
EHY Hungye 0.78 203 eP Pg 12 52 12.0 -1.4
baz=201
EHY eS Sg 12 52 24.4 +0.9
baz=201
BACT New Taipei Cit 0.79 346 eP Pb 12 52 14.7 +0.5
baz=346
BACT eS Sb 12 52 25.2 +0.2
baz=346
TYC Yuchr 0.80 247⇓iP Pg 12 52 13.8 +0.1
baz=244
TYC eS Sg 12 52 23.3 -0.8
baz=244
HSN1 Hsinchu 0.80 313 eP Pb 12 52 14.8 +0.5
baz=312
NHY Taipei 0.81 354 eP Pb 12 52 14.6 0.0
baz=355
TWQ1 Liyutan 0.82 279⇓eP Pb 12 52 15.0 +0.4
baz=277
TAP Taipei 0.82 350 eP Pb 12 52 14.7 +0.1
baz=351
TAP eS Sg 12 52 25.2 +0.4
baz=351
SBCB Hsinchu 0.83 313⇓eP Pb 12 52 15.4 +0.5
baz=312
TWB1 Santiao Chiao 0.83 21 eP Pg 12 52 14.1 -0.3
baz=23
TWB1 eS Sg 12 52 24.8 -0.5
baz=23
NTY Taoyuan 0.84 337 eP Pb 12 52 15.2 +0.3
baz=337
NSY Sanyi 0.84 283⇓eP Pb 12 52 15.7 +0.7
baz=281
NWF Wu-fen Shan 0.85 7 ⇓P Pg 12 52 14.7 0.0
baz=8.0
NWF S Sg 12 52 26.1 +0.3
baz=8.0
WFSB Wu-fen Shan 0.85 7 ⇓P Pg 12 52 14.7 +0.1
baz=8.0
WFSB S Sb 12 52 26.4 -0.2
baz=8.0
HSN Hsinchu 0.85 313 eP Pb 12 52 15.5 +0.4
baz=315
HSN eS Sn 12 52 28.6 -0.3
baz=315
NMLH Miaoli 0.85 292 eP Pb 12 52 15.9 +0.8
baz=290
NCUH Zhongli 0.86 330⇓eP Pb 12 52 15.5 +0.3
baz=329
NCUH eS Sn 12 52 28.4 -0.6
baz=329
NCU National Centr 0.86 330⇓eP Pb 12 52 15.6 +0.4
baz=330
NCU eS Sb 12 52 27.8 +1.0
baz=330
SXI1 Grass Mountain 0.89 13 eP Pg 12 52 15.4 0.0
baz=14
SXI1 eS Sg 12 52 26.9 -0.1
baz=14
YULB Yu-li 0.89 202 P Pg 12 52 15.7 +0.2
YULB Yu-li 0.89 202 eP Pg 12 52 13.6 -1.9
baz=200
YULB eS Sg 12 52 27.6 +0.5
baz=200
WWF Wufeng 0.90 258 eP Pn 12 52 17.1 +0.1
baz=256
TWS1 Kuangyinshan 0.90 346⇓eP Pb 12 52 16.3 +0.4
baz=346
TWS1 eS Sb 12 52 28.6 +0.5
baz=346
TCU Taichung 0.90 265 eP Pn 12 52 17.2 +0.2
baz=263
WHYT Xinyi Township 0.91 235 eP Pb 12 52 16.4 +0.3
baz=232
YM01 YM01 0.92 355 ⇓P Pg 12 52 16.3 +0.2
baz=355
YM01 S Sg 12 52 28.1 +0.1
baz=355
ECBN Changbin 0.93 192 eP Pg 12 52 16.2 +0.1
baz=190
TNOU National Taiwa 0.93 6 eP Pg 12 52 16.0 -0.1
baz=7.0
TNOU eS Sb 12 52 28.7 -0.1
baz=7.0
EYUL Yuli 0.93 200 eP Pg 12 52 15.9 -0.2
baz=198
TWF1 Yuli 0.93 201 eP Pg 12 52 14.2 -2.0
baz=199
TWF1 eS Sg 12 52 29.2 +0.8
baz=199
WDJ Dajia District 0.94 278 eP Pn 12 52 17.6 +0.1
baz=276
WJS Zhushan 0.94 245 eP Pb 12 52 17.5 +0.8
baz=243
WNT1 Nantou City 0.95 251 eP Pn 12 52 17.8 +0.2
baz=248
NTST Danshui 0.95 348 eP Pg 12 52 16.8 +0.2
baz=349
NTST eS Sn 12 52 30.8 -0.6
baz=349
NHW Xinwu Township 0.96 325 eP Pg 12 52 16.9 +0.2
baz=324
NHW eS Sn 12 52 30.8 -0.7
baz=324
WNT Mingjian 0.96 249 eP Pb 12 52 17.7 +0.8
baz=246
YM08 YM08 0.96 356 P Pg 12 52 16.4 -0.4
baz=357
YM08 eS Sg 12 52 29.6 +0.3
baz=357
ANP Anpu 0.96 352 P Pg 12 52 16.8 -0.1
baz=353
ANP eS Sb 12 52 30.0 -0.1
baz=353
NWRT Kuosheng 0.97 0 eP Pg 12 52 17.1 +0.1
WCHH Zhanghua 1.02 262 eP Pn 12 52 19.0 +0.4
baz=260
WYL Yuanlin Townsh 1.02 255 eP Pn 12 52 19.0 +0.3
baz=253
TWY Chenhua 1.05 357 eP Pb 12 52 18.9 +0.4
baz=358
CHKH Chenggong 1.06 193 eP Pg 12 52 17.4 -1.2
baz=192
ALS Alishan 1.06 228 P Pg 12 52 18.9 +0.3
baz=225
ALS eS Sb 12 52 33.3 +0.4
baz=225
FULB Fuli 1.08 198 eP Pg 12 52 18.5 -0.5
baz=197
CHN5 Tsauling 1.09 235 eP Pg 12 52 19.5 +0.1
baz=233
CHN5 eS Sn 12 52 34.9 -0.1
baz=233
WGK Gukeng 1.14 242 eP Pn 12 52 20.8 +0.5
baz=240
WGK eS Sn 12 52 36.6 +0.7
baz=240
EHD Haiduan 1.15 201 eP Pb 12 52 18.1 -2.2
baz=200
CHKT Chengkung 1.15 194 eP Pb 12 52 18.7 -1.6
baz=192
WDLH Douliu 1.16 243 eP Pn 12 52 21.2 +0.7
baz=241
ELDTW Lidau 1.19 210 eP Pb 12 52 18.5 -2.5
baz=208
JYNG Yonagunijimaku 1.19 79 P Pb 12 52 20.7 -0.3
JYNG S Sb 12 52 36.2 -0.2
WRL Guolierlin Hig 1.22 255 eP Pn 12 52 21.7 +0.3
baz=253
RLNB Erlin 1.23 255 eP Pn 12 52 21.9 +0.3
baz=253
WCKO Fanlu 1.24 231 eP Pg 12 52 22.6 +0.4
baz=229
YOJ Yonaguni jima 1.25 79 P Pn 12 52 21.5 -0.4
YOJ Yonaguni jima 1.25 79 ⇓P Pn 12 52 21.2 -0.6
baz=79
YOJ eS Sb 12 52 38.2 -0.1
baz=79
YOJ Yonaguni jima 1.25 79 P Pn 12 52 21.3 -0.5
YOJ eS Sb 12 52 38.6 +0.3
WTK Tuku 1.28 246 eP Pn 12 52 22.5 +0.3
baz=244
CHN2 Minshiung 1.29 238 eP Pg 12 52 23.2 +0.3
baz=236
EDH Donghe 1.29 195 eP Pn 12 52 19.9 -2.4
baz=193
CHN4 Tsaushan 1.31 229 eP Pb 12 52 23.5 +0.6
baz=227
WTCT Ta-ch'eng 1.31 254 eP Pn 12 52 22.5 -0.1
baz=252
WTCT eS Sg 12 52 41.0 +0.5
baz=252
TPUB Ta-pu 1.32 226 P Pg 12 52 23.9 +0.3
TPUB Ta-pu 1.32 226 eP Pb 12 52 23.5 +0.3
baz=224
TPUB eS Sn 12 52 40.8 +0.4
baz=224
STYH Taoyuan 1.33 218 eP Pn 12 52 23.1 +0.2
baz=216
STYT Tauyuan 1.34 218 eP Pn 12 52 22.7 -0.5
baz=216
WTP Ta-pu 1.37 225 eP Pn 12 52 24.0 +0.5
baz=223
LONT Longtian 1.40 200 eP Pn 12 52 23.1 -0.8
baz=199
TWK Hsinying 1.44 229 eP Pn 12 52 25.1 +0.7
baz=226
WSF Szhu 1.44 246 eP Pn 12 52 24.8 +0.4
baz=244
WSF eS Sg 12 52 44.6 0.0
baz=244
PCYT Pengchaiyu 1.45 15 eP Pn 12 52 24.5 0.0
baz=16
SNST Tainan City 1.46 227 eP Pb 12 52 25.7 +0.2
baz=225
CHN1 Nanshi 1.47 225 eP Pb 12 52 26.2 +0.6
baz=223
WSL Shuilin Townsh 1.49 242 eP Pn 12 52 24.8 -0.2
baz=240
TWG Pinlang 1.50 201 eP Pn 12 52 23.8 -1.4
baz=199
TWGBT Beinan 1.50 201 P Pn 12 52 24.4 -0.8
TWGBT Beinan 1.50 201 eP Pn 12 52 23.9 -1.3
baz=199
SGST Jiashian 1.51 221 eP Pn 12 52 25.1 -0.2
baz=219
ICHU Yijhu 1.53 236 eP Pn 12 52 26.6 +0.9
baz=234
SLGT Liugui 1.54 217 eP Pn 12 52 26.5 +0.7
baz=216
LDUT Ludao 1.56 186 eP Pn 12 52 24.4 -1.6
baz=185
CHN8 Yiju 1.59 237 eP Pb 12 52 27.7 -0.1
baz=235
CHN3 Shinhua 1.65 226 eP Pn 12 52 27.4 +0.1
baz=225
SHHT Tainan City 1.70 225 eP Pb 12 52 29.8 +0.2
baz=224
SCST Cishan 1.71 219 eP Pn 12 52 29.2 +1.0
baz=217
ECL Taimali 1.75 202 eP Pn 12 52 27.7 -0.9
baz=200
SSD Sandimen 1.75 213 eP Pn 12 52 28.7 0.0
baz=211
TSMG Majia 1.78 212 eP Pn 12 52 30.1 +1.0
baz=210
TWM1 Shoushan 1.80 219 eP Pn 12 52 30.6 +1.3
baz=218
MASBT Mashibuluo 1.86 211 eP Pn 12 52 29.9 -0.4
baz=209
IRIF Iriomote-Funau 1.89 86 P Pn 12 52 30.7 +0.1
IRIF eS Sn 12 52 54.5 0.0
HATJ Hateruma jima 1.97 94 P Pn 12 52 31.6 -0.1
HATJ S Sn 12 52 56.4 0.0
EAST Anshuo 1.98 202 eP Pn 12 52 32.2 +0.3
baz=201
TAWH Dawu Township 2.01 201 eP Pn 12 52 33.6 +1.4
baz=200
PNG Penghu 2.04 252 eP Pn 12 52 32.3 -0.2
baz=250
PNG eS Sn 12 52 57.3 -0.8
baz=250
PHUB P'eng-hu 2.04 250 eP Pn 12 52 32.4 -0.3
baz=248
WDGT Dungji 2.07 243 eP Pn 12 52 33.7 +0.7
baz=241
SCZT Fangliau 2.08 208 eP Pn 12 52 33.7 +0.5
baz=206
JKRS Kuro-shima 2.15 89 P Pn 12 52 34.0 -0.1
JKRS S Sn 12 53 00.8 0.0
SLIU Shizi 2.15 202 eP Pn 12 52 34.7 +0.5
baz=200
VWUC VWUC 2.15 291 eP Pn 12 52 33.3 -0.9
baz=290
VWUC eS Sn 12 52 59.0 -1.9
baz=290
LYUB Lan-yu 2.21 182 eP Pn 12 52 32.0 -3.0
baz=181
JIJ Ishigaki jima 2.27 86 P Pn 12 52 35.2 -0.6
JIJ eS Sn 12 53 03.1 -0.7
VCHM Qimei 2.28 244 P Pn 12 52 36.0 0.0
baz=242
VCHM eS Sn 12 53 04.0 -0.2
baz=242
TWK1 Hengchun 2.40 199 eP Pn 12 52 38.9 +1.2
baz=198
TWKBT Hengchun 2.40 199 eP Pn 12 52 38.7 +1.0
baz=198
JISG Ishigakijimahi 2.44 81 P Pn 12 52 37.7 -0.5
JISG eS Sn 12 53 07.5 -0.6
PTMZ Houxiangcun 2.45 290⇑eP Pn 12 52 37.5 -0.8
baz=288
MATB Ma-tsu 2.47 321 eP Pn 12 52 37.6 -0.9
baz=320
JTJ Tarama 2.80 81 P Pn 12 52 43.5 +0.3
JTJ S Sn 12 53 17.6 +0.6
LYJJ Jianjiangzhen 2.88 324 eP Pn 12 52 43.7 -0.6
baz=323
KNM Kinmen 2.95 274 eP Pn 12 52 46.5 +1.3
baz=272
KNMB Chin-men Tao 2.99 275 eP Pn 12 52 45.0 -0.8
baz=274
XPSS Dashiqiu 3.00 334 eP Pn 12 52 44.8 -1.1
baz=333
MHZQ Yeshan 3.03 309 eP Pn 12 52 45.2 -1.0
baz=307
JIRB Irabujima 3.25 79 P Pn 12 52 50.3 +0.9
JIRB S Sn 12 53 29.2 +1.0
JMJ Miyako jima 2 3.36 79 eP Pn 12 52 51.8 +1.0
baz=80
AXDP Jialang 3.43 282 eP Pn 12 52 51.2 -0.6
baz=280
ZPLA Ao Xicun 3.58 266 eP Pn 12 52 53.4 -0.5
baz=264
DSXP Dongshan 3.91 263 eP Pn 12 52 57.7 -0.6
baz=262
SXFK Yanhouchang 4.23 302 eP Pn 12 53 02.0 -0.8
baz=300
JOW Kunigami 6.51 65 Pn Pn 12 53 32.4 -1.8
0.5nm,0.3s,baz=234,slow=8.7,SNR=1.6
JOW Sn Sn 12 54 51.9 +3.3
0.4nm,0.3s,baz=239,slow=12,SNR=1.8
7.4nm,0.6s
KSRS Korea Array 14.23 21 Pn P 12 55 26.9 -0.4
0.2nm,0.3s,baz=200,slow=12,SNR=9.5
KSRS LR LR 13 01 04.0
comp=Z,21nm,18.1s,baz=30,slow=36
1.9nm,0.7s
SONM Songino Array 26.50 337 P P 12 57 38.5 +2.5
0.3nm,0.5s,baz=160,slow=9.2,SNR=1.4
0.3nm,0.5s
MKAR Makanchi Array 38.61 316 P P 12 59 22.5 +0.9
0.2nm,0.4s,baz=116,slow=6.7,SNR=1.6
0.2nm,0.4s
H11S3 WAKE ISLAND Hy 42.18 89 T T 13 45 26.4
baz=275
H11S1 WAKE ISLAND Hy 42.19 89 T T 13 45 15.5
baz=275
H11S2 WAKE ISLAND Hy 42.20 89 T T 13 45 22.6
baz=275
BVAR Borovoye Array 47.92 321 P P 13 00 35.0 -1.6
0.3nm,0.5s,baz=108,slow=9.3,SNR=1.6
0.3nm,0.5s
ILAR Eielson Array 68.98 27 P P 13 03 03.7 +0.2
0.1nm,0.6s,baz=278,slow=6.3,SNR=1.5
0.1nm,0.6s
YKA Yellowknife Ar 82.76 23 P P 13 04 20.3 -1.9
0.4nm,0.9s,baz=314,slow=4.9,SNR=11
0.4nm,0.9s

HEL ***07*** *12:59:57.7±0.1, 63.˚98N×28.˚08E, h0km, ML1.8, Suspected explosion*

IDC ***07*** *12:59:58.4±1.5, 63.˚81N×28.˚42E, h0km, mbtmp3.1/3, ML1.9/3, Error ellipse: s-maj=25.0km s-min=7.5km az=103.0*

ISC 07 12:59:57.5±0.8, **63.˚90N**±0.˚03×**28.˚06E**±0.˚03, **h0**km, **n33**, σ1ŝ**30**/53, **Finland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.52**	**193**	PG		**Pb**		**13 00 08.7**	**-0.8**
NIF				SG		**Sb**		**13 00 16.4**	**-1.2**
RMF	**Romuvaara** baz=254	**0.88**	**68**	PG		**Pg**		**13 00 13.2**	**-1.2**
RMF				MSG				13 00 23.9	
	comp=Z,12nm,0.2s								
RMF				SG		**Sg**		**13 00 24.5**	**-1.3**
SUF	**Sumiainen**	**1.47**	**217**	PG		**Pb**		**13 00 25.6**	**0.0**
SUF				MSG				13 00 43.8	
	comp=Z,5.7nm,0.2s								
OUF				SN		**Sn**		**13 00 45.8**	**-0.9**
OUL	**Oulu**	**1.52**	**323**	PN		**Pn**		**13 00 24.6**	**-1.3**
OUL				SN		**Sn**		**13 00 46.2**	**0.0**
OBF4	**Vikkela, Lumij**	**1.58**	**307**	PG		**Pn**		**13 00 25.9**	**-0.8**
OBF4				MSG				13 00 44.1	
	comp=Z,7.2nm,0.2s								
OUF	**Merijarvi**	**1.54**	**289**	PN		**Pn**		**13 00 25.4**	**-0.7**
OUF				MSG				13 00 43.3	
	comp=Z,8.1nm,0.2s								
JOF	**Joensuu** baz=305	**1.76**	**122**	PG		**Pn**		**13 00 29.6**	**+0.3**
JOF				SG		**Sg**		**13 00 53.9**	**-0.1**
OBF0	**Syolatti, Pyha**	**1.78**	**291**	PG		**Pn**		**13 00 29.7**	**+0.3**
OBF0				MSG				13 00 50.3	
	comp=Z,9.5nm,0.2s								
KAF	**Kangasniemi**	**1.96**	**205**	PG		**Pb**		**13 00 34.2**	**+0.1**
KAF				MSG				13 00 58.3	
	comp=Z,11nm,0.2s								
KAF				SG		**Sg**		**13 01 01.9**	**+1.4**
MSF	**Maaselka**	**2.06**	**11**	PG		**Pn**		**13 00 33.3**	**-0.1**
MSF				SG		**Sn**		**13 01 01.0**	**+1.2**
OBF8	**Ulkokalla**	**2.07**	**284**	PG		**Pn**		**13 00 34.5**	**+1.0**
OBF8				MSG				13 00 58.9	
	comp=Z,4.0nm,0.2s								
RANF	**Ranua** baz=167	**2.19**	**346**	PG		**Pn**		**13 00 36.0**	**+0.9**
RANF				SG		**Sn**		**13 01 03.5**	**+0.6**
KEF	**Keuruu**	**2.27**	**221**	PG		**Pb**		**13 00 39.3**	**+0.1**
KEF				MSG				13 01 06.6	
	comp=Z,8.4nm,0.2s								
KEF				SG		**Sg**		**13 01 09.7**	**-0.5**
KU6	**Riekki** baz=202	**2.27**	**19**	PG		**Pn**		**13 00 37.0**	**+0.7**
KU6				MSG				13 01 02.8	
	comp=Z,3.5nm,0.2s								
KU6				SG		**Sn**		**13 01 05.2**	**+0.3**
OLKF	**Oulanka, Finla**	**2.50**	**13**	PG		**Pn**		**13 00 40.6**	**+1.2**
OLKF				MSG				13 01 09.2	
	comp=Z,3.4nm,0.2s								
OLKF				SG		**Sn**		**13 01 11.8**	**+1.3**
RUF	**Ruokolahti** baz=350	**2.52**	**170**	PG		**Pb**		**13 00 43.1**	**-0.4**
RUF				MSG				13 01 14.1	
	comp=Z,7.1nm,0.2s								
RUF				SG		**Sg**		**13 01 17.6**	**-0.6**
VAF	**Ylistaro**	**2.57**	**253**	PG		**Pb**		**13 00 43.5**	**-0.9**
VAF				MSG				13 01 14.4	
	comp=Z,4.4nm,0.2s								
VAF				SG		**Sb**		**13 01 17.6**	**+1.2**
FIA0	**FINESS Array S** baz=20	**2.63**	**201**	PB		**Pb**		**13 00 44.5**	**-0.9**
FIA0				MSG				13 01 17.5	
	comp=Z,3.5nm,0.2s								
FIA0				SB		**Sb**		**13 01 19.3**	**+1.1**
FINES	**FINESS Array B**	**2.63**	**201**	Pn		**Pb**		**13 00 44.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=22,slow=16,SNR=17								
FINES				Lg		Lg		13 01 19.6	
	comp=Z,1.2nm,0.3s,baz=22,slow=21,SNR=18								
	comp=Z,1.2nm,0.3s								
TOF	**Tornio**	**2.71**	**326**	PB		**Pn**		**13 00 43.0**	**+0.8**
TOF				MSG				13 01 15.7	
	comp=Z,1.4nm,0.2s								
TOF				SB		**Sn**		**13 01 15.7**	**+0.2**
KALU	**Kalix**	**2.81**	**317**	PB		**Pn**		**13 00 44.4**	**+0.8**
KALU				SB		**Sn**		**13 01 18.9**	**+0.8**
RNF	**Rovaniemi** baz=161	**2.85**	**343**	PB		**Pn**		**13 00 45.6**	**+1.4**
RNF				SG		**Sn**		**13 01 22.2**	**+3.0**
BURU	**Burvik**	**3.00**	**286**	PN		**Pn**		**13 00 46.8**	**+0.6**
BURU				SB		**Sn**		**13 01 25.1**	**+2.3**
UMAU	**Umeaa** baz=89	**3.27**	**273**	PN		**Pn**		**13 00 50.1**	**+0.3**
VJF	**Virojoki**	**3.38**	**184**	SG		**Sb**		**13 01 41.2**	**+1.4**
KPF	**Kankaanpaa**	**3.44**	**236**	PB		**Pb**		**13 00 56.7**	**-2.5**
PAJU	**Pajala**	**3.76**	**329**	PN		**Pn**		**13 00 57.3**	**+0.7**
KLF	**Kolari**	**3.76**	**335**	PN		**Pn**		**13 00 57.2**	**+0.6**
KLF				SN		**Sn**		**13 01 40.6**	**-0.9**
VRF	**Varrio**	**3.92**	**9**	PB		**Pn**		**13 01 03.3**	**+4.4**
HEMU	**Hemsoen** baz=73	**4.69**	**259**	PN		**Pn**		**13 01 11.0**	**+1.6**
ARCES	**ARCESS Array B**	**5.75**	**351**	Pn		**Pn**		**13 01 25.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=166,slow=14,SNR=15								
ARCES				Sn		**Sn**		**13 02 29.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=165,slow=25,SNR=7.3								
	comp=Z,2.0nm,0.8s								
HFS	**Hagfors**	**7.74**	**247**	Pn		**Pn**		**13 01 52.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=62,slow=12,SNR=1.9								
HFS				Sn		**Sn**		**13 03 17.4**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=59,slow=25,SNR=1.8								
	comp=Z,2.8nm,1.0s								
I43RU	**DUBNA INFRASON** baz=334,slow=332,SNR=2.8	**8.51**	**144**	I		I		13 50 30.0	

MOS ***07*** *13:06:38.5±1.1, 24.˚06N×121.˚93E, h10km, mb5.0/37, MS4.6/6, Error ellipse: s-maj=10.1km s-min=6.0km az=108.9*

IDC ***07*** *13:06:39.3±0.6, 24.˚10N×121.˚91E, h0km, mb4.2/21, mbtmp4.2/23, ML3.7/2, MS4.2/43, Error ellipse: s-maj=16.7km s-min=13.6km az=62.0*

ASIES ***07*** *13:06:40.5, 24.˚08N×121.˚77E, h7km, ML5.1, Mw5.0, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}0.21; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$0.13; $M_{r\theta}$2.12; $M_{\theta\phi}$-0.27; $M_{r\phi}$3.63; Fault plane solution: M_o4.22029×10^{23} NP1:ϕ_s30.29000°, δ88.56000°, λ85.62000°. NP2:ϕ_s282.13000°, δ4.61000°, λ161.79000°. Principal axes: T Plg46.2680°, Azm295.8040°; N Plg4.3790°, Azm30.3950°; P Plg43.3980°, Azm124.5470°;*

NEIC ***07*** *13:06:40.8, 24.˚04N×121.˚80E, h16km*

TAP ***07*** *13:06:40.5, 24.˚08N×121.˚77E, h7km, ML5.1, C*

NEIC ***07*** *13:06:40.8, 23.˚84N×121.˚58E, h16km, Moment Tensor Solution. Duration: 1ŝ2 Moment tensor: Scale 10^{16}Nm; M_{rr}1.16; $M_{\theta\theta}$-1.33; $M_{\phi\phi}$0.17; $M_{r\theta}$0.95; $M_{\theta\phi}$-0.61; $M_{r\phi}$0.94; Fault plane solution: M_o1.92000×10^{16} NP1:ϕ_s51.16000°, δ68.63000°, λ71.44000°. NP2:ϕ_s273.82000°, δ28.01000°, λ129.13000°. Principal axes: T 1.8230, Plg62.0000°, Azm293.0000°; N 0.2025, Plg17.0000°, Azm58.0000°; P -2.0255, Plg22.0000°, Azm155.0000°;*

NEIC ***07*** *13:06:41.1±1.8, 24.˚03N±0.˚05×121.˚78E±0.˚04, h9km±4km, mb5.0/64, Mww4.8/10 Error ellipse: s-maj=7.4km s-min=5.1km az=170.0*

NIED ***07*** *13:06:42.0, 24.˚09N×121.˚77E, h4km, MW4.4, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.33; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-3.79; $M_{r\theta}$3.08; $M_{\theta\phi}$-2.15; $M_{r\phi}$1.53; Fault plane solution: M_o5.22000×10^{15} NP1:ϕ_s53.00000°, δ73.00000°, λ127.00000°. NP2:ϕ_s164.00000°, δ40.00000°, λ27.00000°.*

JMA ***07*** *13:06:42.0±0.1, 24.˚1N±0.˚2×121.˚8E±0.˚3, h4km±1km, MD5.1/19, MW4.8/19, TAIWAN REGION*

BJI ***07*** *13:06:41.0±0.0, 24.˚08N×121.˚72E, h11km, mb4.4/63, mB4.9/45, ML5.0/12, Ms5.1/85, Ms7 5.1/81*

GCMT ***07*** *13:06:41.1±0.3, 23.˚97N±0.˚02×121.˚67E±0.˚03, h21km±1km, MW4.9/83, Moment Tensor Solution. s20, c25; s83, c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.18±.20; $M_{\theta\theta}$-2.00±.12; $M_{\phi\phi}$-0.18±.12; $M_{r\theta}$1.46±.19; $M_{\theta\phi}$-1.01±.07; $M_{r\phi}$-0.17±.23; Best double couple: M_o2.75200×10^{16} NP1:ϕ_s82.00000°, δ61.00000°, λ107.00000°. NP2: ϕ_s229.00000°, δ33.00000°, λ61.00000°. Principal axes: T*

2.7200, Plg69.0000°, Azm28.0000°; N 0.0620, Plg15.0000°, Azm254.0000°; P -2.7830, Plg15.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 07 13:06:42.4±0.4, **24.˚08N**±0.˚01×**121.˚75E**±0.˚02, **h17**km±2km, **h17**km:**pP-P, n443,** σ1ŝ**45**/570, **mb4.8**/86, **MS4.4**/53, **37C-34D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=279	**0.14**	**271**	⇓*iP*			**Pg**	**13 06 44.6**	**-1.8**
TWD				*i* S			**Sg**	**13 06 47.5**	**-1.5**
ETL	**Fush Village** baz=300	**0.14**	**305**	⇓*iP*			**Pg**	**13 06 44.6**	**-1.9**
ETL				S			**Sg**	**13 06 47.3**	**-1.8**
HWA	**Hwalien** baz=248	**0.17**	**233**	P			**Pg**	**13 06 45.9**	**-0.9**
HWA				*e*S			**Sb**	**13 06 50.0**	**-0.3**
NACB	**Ninganchiao**	**0.17**	**304**				**Pg**	**13 06 45.0**	**-1.9**
NACB					Sg		**Sg**	**13 06 47.9**	**-1.9**
NACB	**Ninganchiao** baz=300	**0.17**	**304**	⇓*iP*			**Pg**	**13 06 45.0**	**-1.9**
NACB				*i* S			**Sg**	**13 06 47.8**	**-2.0**
EHP	**Heping Village** baz=354	**0.23**	**358**	P			**Pg**	**13 06 46.1**	**-1.6**
EHP				S			**Sg**	**13 06 50.7**	**-0.7**
EAHA	**Aohua** baz=353	**0.25**	**357**	⇓*iP*			**Pg**	**13 06 46.3**	**-1.7**
EAHA				*e*S			**Sg**	**13 06 51.0**	**-0.8**
ETM	**Tongmen** baz=257	**0.26**	**245**	⇑*iP*			**Pg**	**13 06 46.9**	**-1.3**
ETM				*i* S			**Sg**	**13 06 51.5**	**-0.7**
ETLH	**Xiulin Townshi** baz=296	**0.28**	**298**	*i* P			**Pg**	**13 06 47.0**	**-1.6**
ETLH				*e*S			**Sg**	**13 06 51.5**	**-1.3**
LXIB	**Xiulin Townshi** baz=261	**0.31**	**260**	⇑*iP*			**Pg**	**13 06 47.8**	**-1.4**
LXIB				*e*S			**Sg**	**13 06 52.9**	**-0.9**
SHUL	**Shoufeng** baz=214	**0.34**	**211**	⇑*iP*			**Pg**	**13 06 49.4**	**-0.1**
SHUL				*e*S			**Sb**	**13 06 55.8**	**+0.7**
ENA	**Nanau** baz=356	**0.35**	**358**	⇓*iP*			**Pg**	**13 06 48.2**	**-1.5**
ENA				S			**Sg**	**13 06 53.7**	**-1.0**
EWUT	**Wuta**	**0.37**	**4**	⇓*iP*			**Pg**	**13 06 48.6**	**-1.4**
EWUT				S			**Sg**	**13 06 54.7**	**-0.5**
ESL	**Shilin** baz=240	**0.39**	**228**	⇑*iP*			**Pg**	**13 06 49.3**	**-1.2**
ESL				S			**Sg**	**13 06 55.3**	**-0.6**
TEGC	**Jichi Village** baz=210	**0.41**	**208**	*e*P			**Pg**	**13 06 50.5**	**-0.4**
TEGC				*e*S			**Sb**	**13 06 57.3**	**-0.1**
WHF	**Hehuan Shan** baz=280	**0.45**	**279**	P			**Pg**	**13 06 50.4**	**-1.3**
WHF				*i* S			**Sg**	**13 06 57.3**	**-0.7**
NNSB	**Datong** baz=314	**0.48**	**316**	⇓*iP*			**Pg**	**13 06 51.0**	**-1.2**
NNSB				S			**Sg**	**13 06 58.0**	**-0.9**
NNSH	**Datong** baz=314	**0.48**	**316**	⇓*iP*			**Pg**	**13 06 51.0**	**-1.3**
NNSH				S			**Sg**	**13 06 57.8**	**-1.0**
WARBT	**Fenglin Townsh** baz=238	**0.49**	**223**	⇑P			**Pg**	**13 06 51.2**	**-1.1**
WARBT				S			**Sg**	**13 06 59.0**	**+0.1**
FUSS	**Fushou** baz=290	**0.49**	**290**	⇓*iP*			**Pg**	**13 06 51.4**	**-1.0**
FUSS				*e*S			**Sg**	**13 06 58.5**	**-0.6**
LATG	**Datong** baz=333	**0.50**	**336**	⇓*iP*			**Pg**	**13 06 51.2**	**-1.3**
LATG				S			**Sg**	**13 06 58.4**	**-0.9**
NNS	**Nan Shan** baz=315	**0.50**	**316**	⇓*iP*			**Pg**	**13 06 51.2**	**-1.3**
NNS				*i* S			**Sg**	**13 06 58.4**	**-0.8**
EGFH	**Guangfu** baz=233	**0.50**	**216**	*e*P			**Pg**	**13 06 51.9**	**-0.7**
EGFH				*e*S			**Sb**	**13 07 00.7**	**+0.8**
ESAO	**Su ao** baz=1.0	**0.50**	**10**	⇓P			**Pg**	**13 06 51.1**	**-1.4**
ESAO				*e*S			**Sg**	**13 06 58.0**	**-1.3**
EOS4	**EOS4** baz=95	**0.52**	**85**	*e*P			**Pb**	**13 06 53.1**	**+0.2**
CHGB	**Renai** baz=270	**0.53**	**268**	P			**Pg**	**13 06 52.1**	**-0.9**
CHGB				S			**Sg**	**13 06 59.7**	**-0.5**
TWC	**Suao** baz=359	**0.54**	**10**	⇓*iP*			**Pg**	**13 06 51.9**	**-1.3**
TWC				*e*S			**Sg**	**13 06 59.9**	**-0.5**
OWD	**Renai** baz=270	**0.54**	**257**	P			**Pg**	**13 06 52.2**	**-1.1**
OWD				S			**Sg**	**13 07 00.1**	**-0.5**
TWT	**Tachien** baz=287	**0.55**	**289**	P			**Pg**	**13 06 52.9**	**-0.6**
TWT				S			**Sb**	**13 07 01.4**	**-0.2**
EOS2	**EOS2** baz=62	**0.56**	**52**	*e*P			**Pb**	**13 06 53.7**	**0.0**
NDS	**Dongshan** baz=353	**0.56**	**357**	P			**Pg**	**13 06 52.1**	**-1.3**
NDS				S			**Sg**	**13 07 00.6**	**-0.3**
EOS3	**EOS3** baz=74	**0.56**	**68**	*e*P			**Pb**	**13 06 54.4**	**+0.7**
NDT	**Datong Townshi** baz=335	**0.57**	**337**	⇓*iP*			**Pg**	**13 06 52.7**	**-1.0**
NDT				S			**Sg**	**13 07 01.2**	**-0.1**
TDCB	**Techi** baz=287	**0.57**	**288**	*e*P			**Pg**	**13 06 52.7**	**-1.1**
TDCB				S			**Sg**	**13 07 00.6**	**-0.9**
ENTT	**Nioudou** baz=342	**0.58**	**343**	⇓*iP*			**Pg**	**13 06 53.0**	**-1.1**
ENTT				S			**Sg**	**13 07 01.8**	**0.0**
WUSB	**Renai** baz=262	**0.59**	**262**	⇑P			**Pg**	**13 06 53.2**	**-0.9**
WUSB				S			**Sg**	**13 07 01.0**	**-0.9**
TWE	**Neicheng** baz=352	**0.65**	**353**	⇓*iP*			**Pg**	**13 06 54.1**	**-1.1**
TWE				S			**Sg**	**13 07 03.6**	**-0.2**
HGSD	**Ruisui** baz=195	**0.66**	**207**	⇓P			**Pg**	**13 06 55.3**	**0.0**
YHNB	**Yeheng**	**0.68**	**330**				**Pg**	**13 06 55.0**	**-0.9**
YHNB					Sg		**Sg**	**13 07 03.5**	**-1.4**
YHNB	**Yeheng** baz=328	**0.68**	**330**	⇓*iP*			**Pg**	**13 06 55.0**	**-0.9**
YHNB				S			**Sg**	**13 07 04.6**	**-0.4**
ILA	**Ilan** baz=359	**0.69**	**360**	*e*P			**Pg**	**13 06 55.1**	**-0.8**
EHY	**Hungye** baz=231	**0.69**	**215**	*e*P			**Pg**	**13 06 54.8**	**-1.2**
EHY				*e*S			**Sb**	**13 07 05.8**	**+0.4**
FUSB	**Fushanzhiwuyua** baz=345	**0.70**	**348**	⇓*iP*			**Pg**	**13 06 55.1**	**-1.0**
FUSB				S			**Sg**	**13 07 04.9**	**-0.5**
NSK	**Sanguang** baz=328	**0.70**	**329**	⇓*iP*			**Pg**	**13 06 55.1**	**-1.0**
NSK				S			**Sg**	**13 07 05.0**	**-0.4**
WPL	**Puli Township** baz=266	**0.73**	**265**	⇑P			**Pg**	**13 06 55.9**	**-0.8**
WPL				S			**Sg**	**13 07 05.7**	**-0.7**
NWLT	**Wulai** baz=340	**0.73**	**342**	⇓P			**Pg**	**13 06 55.8**	**-1.0**
NWLT				S			**Sg**	**13 07 06.1**	**-0.5**
DPDB	**Guoxing** baz=258	**0.76**	**267**	⇑*iP*			**Pb**	**13 06 56.5**	**-0.7**
DPDB				S			**Sg**	**13 07 07.1**	**-0.2**
WHP	**Taichung City** baz=286	**0.76**	**285**	⇑*iP*			**Pb**	**13 06 56.9**	**-0.4**
WHP				*i* S			**Sb**	**13 07 07.9**	**+0.4**
WCS	**Beigang Elemen** baz=270	**0.77**	**269**	⇑P			**Pb**	**13 06 56.7**	**-0.7**
WCS				S			**Sg**	**13 07 07.7**	**+0.1**
NTC	**Toucheng** baz=4.0	**0.78**	**5**	*e*P			**Pb**	**13 06 57.4**	**-0.1**
SSLB	**Suanglung**	**0.79**	**249**				**Pb**	**13 06 56.6**	**-1.1**
SSLB					Sg		**Sb**	**13 07 07.2**	**-0.9**
SSLB	**Suanglung** baz=262	**0.79**	**249**	⇑*iP*			**Pb**	**13 06 56.7**	**-0.9**
SSLB				S			**Sb**	**13 07 07.3**	**-0.8**
NFF	**Wufeng Townshi** baz=313	**0.80**	**314**	⇓*eP*			**Pb**	**13 06 57.3**	**-0.7**
NFF				*e*S			**Sg**	**13 07 09.0**	**+0.4**
YULB	**Yu-li**	**0.80**	**211**				**Pb**	**13 06 56.5**	**-1.4**
YULB	**Yu-li** baz=227	**0.80**	**211**	*eP*			**Pb**	**13 06 56.7**	**-1.2**
YULB				*e*S			**Sn**	**13 07 09.7**	**-0.8**
SMLT	**Sun Moon Lake** baz=258	**0.80**	**256**	⇑*iP*			**Pb**	**13 06 57.3**	**-0.7**
SMLT				*i* S			**Sb**	**13 07 08.5**	**-0.2**
ECBN	**Changbin** baz=202	**0.81**	**200**	*eP*			**Pb**	**13 06 57.2**	**-0.9**
ECBN				S			**Sg**	**13 07 09.3**	**+0.5**
EYUL	**Yuli** baz=223	**0.83**	**209**	*eP*			**Pb**	**13 06 57.9**	**-0.5**
TWF1	**Yuli** baz=212	**0.83**	**210**	*eP*			**Pb**	**13 06 57.0**	**-1.5**
TWF1				*e*S			**Sn**	**13 07 11.3**	**-0.1**
TYC	**Yuchr** baz=260	**0.84**	**258**	⇑*iP*			**Pb**	**13 06 57.8**	**-0.8**
TYC				S			**Sb**	**13 07 09.5**	**0.0**
LIOB	**Emei** baz=307	**0.88**	**310**	*eP*			**Pb**	**13 06 59.2**	**0.0**
NSTT	**Nanjuang** baz=308	**0.88**	**309**	*eP*			**Pb**	**13 06 58.6**	**-0.7**
NSTT				*e*S			**Sg**	**13 07 11.7**	**+0.6**
NJD	**Zhudong** baz=314	**0.89**	**317**	*eP*			**Pg**	**13 06 59.9**	**+0.1**
TIPB	**Shuangxi** baz=2.0	**0.89**	**4**	⇓P			**Pb**	**13 06 58.7**	**-0.8**
TIPB				*e*S			**Sb**	**13 07 11.2**	**0.0**
NHDH	**Xindian Distri** baz=345	**0.91**	**347**	⇓*eP*			**Pb**	**13 06 59.0**	**-0.7**
WHYT	**Xinyi Township** baz=256	**0.91**	**245**	⇑*eP*			**Pb**	**13 06 59.2**	**-0.6**
WHYT				*e*S			**Sn**	**13 07 12.8**	**-0.4**
TWA	**Mucha** baz=350	**0.91**	**350**	⇓*iP*			**Pb**	**13 06 59.2**	**-0.6**
TATO	**Taipei**	**0.93**	**345**				**Pb**	**13 06 59.5**	**-0.6**
TATO	**Taipei** baz=343	**0.93**	**345**	⇓P			**Pb**	**13 06 59.6**	**-0.6**
TWQ1	**Liyutan** baz=299	**0.93**	**287**	P			**Pg**	**13 07 00.5**	**-0.1**
TWQ1				*e*S			**Sn**	**13 07 14.7**	**+0.8**
CHKH	**Chenggong** baz=190	**0.94**	**200**	*eP*			**Pb**	**13 06 59.4**	**-0.9**
TWB1	**Santiao Chiao** baz=4.0	**0.95**	**13**	*eP*			**Pb**	**13 06 59.9**	**-0.6**
BACT	**New Taipei Cit** baz=341	**0.96**	**343**	*eP*			**Pb**	**13 07 00.8**	**+0.2**
BACT				*e*S			**Sn**	**13 07 15.3**	**+0.9**
WWF	**Wufeng** baz=263	**0.96**	**268**	*eP*			**Pn**	**13 07 01.7**	**+0.5**
WWF				*e*S			**Sn**	**13 07 16.3**	**+1.8**
NSY	**Sanyi** baz=291	**0.96**	**291**	⇑P			**Pn**	**13 07 01.5**	**+0.2**
NSY				*e*S			**Sn**	**13 07 15.6**	**+0.9**
HSN1	**Hsinchu** baz=315	**0.97**	**316**	*eP**			**Pn**	**13 07 01.5**	**+0.2**
HSN1				*e*S			**Sn**	**13 07 14.8**	**+0.1**
FULB	**Fuli** baz=194	**0.97**	**206**	*eP*			**Pb**	**13 06 59.9**	**-1.0**
WJS	**Zhushan** baz=263	**0.97**	**255**	*eP*			**Pg**	**13 07 01.1**	**-0.1**
WJS				*e*S			**Sn**	**13 07 16.0**	**+1.3**
NHY	**Taipei** baz=349	**0.97**	**350**	*eP*			**Pb**	**13 07 00.6**	**-0.2**
TAP	**Taipei** baz=346	**0.98**	**347**	*eP*			**Pb**	**13 07 00.5**	**-0.5**
TCU	**Taichung** baz=271	**0.98**	**274**	*eP*			**Pg**	**13 07 02.0**	**+0.4**
TCU				*e*S			**Sn**	**13 07 17.1**	**+2.0**
NMLH	**Miaoli** baz=298	**0.99**	**298**	*eP*			**Pg**	**13 07 02.1**	**+0.5**
NMLH				*e*S			**Sn**	**13 07 17.4**	**+2.2**
NWF	**Wu-fen Shan** baz=351	**0.99**	**2**	⇓*iP*			**Pb**	**13 07 00.8**	**-0.5**
NWF				*e*S			**Sg**	**13 07 14.6**	**0.0**
WFSB	**Wu-fen Shan** baz=351	**0.99**	**2**	⇓*iP*			**Pb**	**13 07 00.8**	**-0.4**
WFSB				*e*S			**Sg**	**13 07 14.6**	**-0.1**
WNT1	**Nantou City** baz=262	**0.99**	**260**	P			**Pg**	**13 07 01.8**	**0.0**
WNT1				S			**Sn**	**13 07 16.7**	**+1.3**
WNT	**Mingjian** baz=260	**1.00**	**259**	⇑*iP*			**Pn**	**13 07 01.6**	**0.0**
WNT				S			**Sn**	**13 07 16.4**	**+1.0**
SBCB	**Hsinchu** baz=315	**1.00**	**316**	*eP*			**Pg**	**13 07 02.1**	**+0.3**
SBCB				*e*S			**Sn**	**13 07 15.5**	**+0.1**
NJN	**Zhunan** baz=304	**1.00**	**307**	*eP*			**Pg**	**13 07 02.2**	**+0.3**
NTY	**Taoyuan** baz=325	**1.01**	**336**	*eP*			**Pn**	**13 07 01.7**	**-0.1**
HSN	**Hsinchu** baz=317	**1.01**	**316**	*eP*			**Pn**	**13 07 02.0**	**+0.1**
HSN				*e*S			**Sn**	**13 07 17.2**	**+1.4**
SXI1	**Grass Mountain** baz=4.0	**1.02**	**6**	⇓*eP*			**Pb**	**13 07 01.3**	**-0.4**
SXI1				*e*S			**Sn**	**13 07 17.3**	**+1.2**
NCUH	**Zhongli** baz=328	**1.03**	**330**	*eP*			**Pg**	**13 07 02.3**	**0.0**
NCUH				*e*S			**Sn**	**13 07 17.7**	**+1.5**
NCU	**National Centr** baz=328	**1.03**	**330**	*eP*			**Pn**	**13 07 02.2**	**+0.1**
NCU				*e*S			**Sn**	**13 07 18.5**	**+2.4**
ALS	**Alishan** baz=239	**1.03**	**237**	*eP*			**Pb**	**13 07 01.3**	**-0.8**
ALS				S			**Sn**	**13 07 17.1**	**+0.4**
CHKT	**Chengkung**	**1.04**	**200**	*eP*			**Pb**	**13 07 00.3**	**-1.6**

CHKT baz=201 eS Sn 13 07 16.9 +0.6
WDJ Dajia District 1.05 285 ⇑P Pg 13 07 02.9 +0.2 baz=296
WDJ baz=296 eS Sn 13 07 18.5 +1.8
EHD Haiduan 1.05 209 eP Pb 13 07 00.8 -1.4 baz=209
TWS1 Kuangyinshan 1.06 343 eP Pn 13 07 02.6 0.0 baz=350
TWS1 baz=350 eS Sn 13 07 18.6 +1.6
TNOU National Taiwa 1.07 1 eP Pb 13 07 02.1 -0.4 baz=358
TNOU baz=358 eS Sn 13 07 17.4 +0.3
WYL Yuanlin Townsh 1.08 264 eP Pg 13 07 03.1 -0.2 baz=247
YM01 YM01 1.08 351 P Pb 13 07 02.4 -0.3 baz=349
YM01 baz=349 S Sn 13 07 17.6 +0.1
WCHH Zhanghua 1.09 270 eP Pg 13 07 03.4 -0.2 baz=272
WCHH baz=272 eS Sg 13 07 19.8 +2.0
CHN5 Tsauling 1.09 244 ⇑iP Pb 13 07 03.0 0.0 baz=230
CHN5 baz=230 S Sg 13 07 20.1 +2.2
ECS Chishang 1.09 207 eP Pb 13 07 02.3 -0.7 baz=207
ELDTW Lidau 1.11 217 eP Pb 13 07 01.3 -2.0 baz=206
ELDTW baz=206 eS Sn 13 07 18.0 -0.4
YM08 YM08 1.11 352 eP Pb 13 07 02.7 -0.6 baz=350
YM08 baz=350 eS Sn 13 07 18.5 +0.1
NTST Danshui 1.12 346 eP Pn 13 07 03.5 +0.2 baz=352
NTST baz=352 eS Sg 13 07 19.6 +1.0
ANP Anpu 1.12 349 ⇓iP Pb 13 07 03.4 -0.1 baz=347
ANP baz=347 eS Sg 13 07 19.3 +0.4
NWRT Kuosheng 1.12 356 eP Pn 13 07 03.1 -0.3 baz=344
NWRT baz=344 eS Sg 13 07 19.9 +1.1
NHW Xinwu Township 1.13 325 eP Pn 13 07 03.1 -0.4 baz=323
NHW baz=323 eS Sg 13 07 20.9 +1.9
JYNG Yonagunijimaku 1.15 71 P Pn 13 07 03.8 0.0
JYNG Yonagunijimaku 1.15 71 A A 13 07 03.8 comp=E,43nm,5.3s,comp=N,52nm,3.8s
WGK Gukeng 1.16 251 eP Pb 13 07 04.2 +0.2 baz=253
WGK baz=253 eS Sg 13 07 22.1 +2.2
EDH Donghe 1.17 201 eP Pn 13 07 01.9 -2.3 baz=202
EDH baz=202 eS Sg 13 07 21.2 +0.7
WDLH Douliu 1.18 251 eP Pg 13 07 04.8 -0.4 baz=254
WDLH baz=254 eS Sg 13 07 22.9 +2.4
TWY Chenhua 1.20 353 eP Pb 13 07 05.2 +0.4 baz=351
TWY baz=351 eS Sg 13 07 22.2 +0.9
YOJ Yonaguni jima 1.21 71 Pn Pn 13 07 04.2 -0.4
YOJ Yonaguni jima 1.21 71 eP Pn 13 07 04.0 -0.6 baz=73
YOJ Yonaguni jima 1.21 71 P Pn 13 07 04.2 -0.4
YOJ Yonaguni jima 1.21 71 P Pn 13 07 04.7 0.0
YOJ eS Sb 13 07 20.2 -0.1
YOJ Yonaguni jima 1.21 71 A A 13 07 04.7 comp=E,44nm,4.9s,comp=N,49nm,3.1s
NSM Shimen 1.21 353 eP Pb 13 07 04.9 -0.1 baz=336
WCKO Fanlu 1.23 239 eP Pn 13 07 05.0 +0.1 baz=242
WCKO baz=242 S Sg 13 07 23.9 +1.7
WRL Guolierlin Hig 1.27 262 eP Pn 13 07 05.5 +0.1 baz=265
WRL baz=265 eS Sg 13 07 25.1 +1.6
STYH Taoyuan 1.27 225 eP Pn 13 07 05.0 -0.4 baz=227
STYH baz=227 eS Sn 13 07 22.6 +0.5
CHN4 Tsaushan 1.28 236 eP Pb 13 07 06.1 -0.1 baz=239
CHN4 baz=239 S Sg 13 07 25.8 +1.8
RLNB Erlin 1.29 262 eP Pn 13 07 05.9 +0.3 baz=265
RLNB baz=265 eS Sg 13 07 25.2 +1.1
TPUB Ta-pu 1.29 233 Pn Pn 13 07 05.7 0.0
TPUB Ta-pu 1.29 233 eP Pn 13 07 05.5 -0.2 baz=236
TPUB baz=236 S Sg 13 07 24.4 +0.3
CHN2 Minshiung 1.29 245 eP Pb 13 07 06.8 +0.5 baz=244
STYT Tauyuan 1.29 225 eP Pn 13 07 05.3 -0.5 baz=209
LONT Longtian 1.30 206 eP Pn 13 07 04.5 -1.3 baz=207
WTK Tuku 1.31 253 eP Pg 13 07 07.3 -0.4 baz=257
WTK baz=257 eS Sg 13 07 26.1 +1.4
WTP Ta-pu 1.33 232 P Pb 13 07 07.1 0.0 baz=234
WTP baz=234 S Sg 13 07 26.1 +0.6
CHY Chiayi 1.35 245 eP Pb 13 07 07.5 +0.2 baz=243
WTCT Ta-ch'eng 1.36 261 eP Pb 13 07 07.7 +0.2 baz=264
WTCT baz=264 S Sg 13 07 27.3 +0.8
TWGBT Beinan 1.40 206 eP Pn 13 07 04.4 -2.8 baz=207
TWG Pinlang 1.40 207 Pn 13 07 05.8 -1.4
TWG Pinlang 1.40 207 eP Pn 13 07 04.8 -2.5 baz=207
TWK Hsinying 1.41 235 eP Pn 13 07 07.9 +0.4 baz=237
TWK baz=237 eS Sg 13 07 29.5 +1.5
LDUT Ludao 1.42 191 eP Pn 13 07 05.3 -2.3 baz=178
TTN Taitung 1.43 203 eP Pn 13 07 07.7 0.0 baz=204
CHN1 Nanshi 1.43 232 eP Pb 13 07 08.3 -0.4 baz=234
CHN1 baz=234 eS Sg 13 07 29.9 +1.2
SNST Tainan City 1.43 234 eP Pb 13 07 08.5 -0.2 baz=236
SNST baz=236 eS Sg 13 07 29.5 +0.8
SGST Jiashian 1.46 227 eP Pn 13 07 07.5 -0.6 baz=230
SGST baz=230 iS Sg 13 07 30.0 +0.4
WSF Szhu 1.47 253 eP Pb 13 07 09.0 -0.3 baz=256
WSF baz=256 eS Sg 13 07 30.6 +0.7
SLGT Liugui 1.48 223 eP Pb 13 07 09.1 -0.5 baz=226
SLGT baz=226 eS Sg 13 07 30.5 +0.2
WSL Shuilin Townsh 1.50 249 eP Pb 13 07 09.4 -0.5 baz=251
WSL baz=251 eS Sg 13 07 30.8 -0.1

ICHU Yijhu 1.53 242 eP Pb 13 07 09.8 -0.5 baz=245
ICHU baz=245 eS Sg 13 07 32.2 +0.5
PCYT Pengchaiyu 1.57 11 eP Pn 13 07 09.8 +0.2 baz=11
CHN8 Yiju 1.59 243 eP Pb 13 07 11.2 -0.2 baz=240
CHN3 Shinhua 1.62 232 eP Pb 13 07 12.0 +0.1 baz=234
CHN3 baz=234 eS Sg 13 07 35.8 +1.2
SSHA Shanhua 1.64 235 eP Pb 13 07 12.4 +0.2 baz=232
ECL Taimali 1.65 207 eP Pn 13 07 08.7 -2.0 baz=194
SCST Cishan 1.66 224 eP Pb 13 07 12.6 +0.1 baz=223
SHHT Tainan City 1.66 231 eP Pg 13 07 13.6 -0.8 baz=233
SHHT baz=233 eS Sg 13 07 38.2 +2.2
SSD Sandimen 1.68 218 eP Pn 13 07 10.6 -0.5 baz=208
SCLT Jiali 1.69 238 eP Pn 13 07 11.9 +0.7 baz=239
SCLT baz=239 eS Sg 13 07 36.7 -0.1
TSMG Majia 1.70 217 eP Pn 13 07 12.1 +0.7 baz=207
TAI1 Yung-k'ang 1.74 234 eP Pb 13 07 13.9 0.0 baz=230
TWM1 Shoushan 1.75 225 eP Pb 13 07 14.3 +0.3 baz=223
SGLT Jiouru 1.78 221 eP Pb 13 07 13.7 -0.9 baz=212
SGLT baz=212 eS Sg 13 07 40.1 +0.5
MASBT Mashibuluo 1.79 215 eP Pn 13 07 13.2 +0.6 baz=208
MASBT baz=208 eS Sb 13 07 36.5 -0.3
TSCK Chigu Township 1.79 239 eP Pn 13 07 13.3 +0.7 baz=241
TSCK baz=241 eS Sb 13 07 38.3 +1.4
TSPT Pingtung City 1.81 220 eP Pb 13 07 14.3 -0.8 baz=205
IRIF Iriomote-Funau 1.82 82 eP Pn 13 07 13.7 +0.6
IRIF S Sb 13 07 37.1 -0.8
IRIF Iriomote-Funau 1.82 82 A A 13 07 13.7 comp=E,20nm,2.2s,comp=N,42nm,2.7s
SNJT Kaohsiung City 1.85 225 eP Pb 13 07 15.2 -0.7 baz=223
HATJ Hateruma jima 1.88 90 P Pn 13 07 13.9 +0.1
HATJ eS Sb 13 07 39.0 -0.5
HATJ Hateruma jima 1.88 90 A A 13 07 13.9 comp=E,49nm,2.9s,comp=N,68nm,2.7s
EAST Anshuo 1.88 206 eP Pn 13 07 12.1 -1.8 baz=197
TAW Tawu 1.88 205 eP Pn 13 07 11.2 -2.7 baz=206
TAWH Dawu Township 1.90 205 eP Pn 13 07 15.3 +1.1 baz=206
SCZT Fangliau 1.99 212 eP Pn 13 07 16.2 +0.9 baz=199
KAU Kaohsiung 2.00 222 eP Pb 13 07 19.1 +0.7 baz=221
LAY Lan-yu 2.04 185 eP Pn 13 07 14.4 -1.7 baz=188
SLIU Shizi 2.05 206 eP Pb 13 07 17.9 -1.4 baz=197
JKRS Kuro-shima 2.07 85 P Pn 13 07 17.3 +0.8
JKRS Kuro-shima 2.07 85 A A 13 07 17.3 comp=E,69nm,3.3s,comp=N,57nm,3.7s
LYUB Lan-yu 2.07 184 eP Pn 13 07 13.6 -2.9 baz=187
PHUB P'eng-hu 2.07 255 eP Pn 13 07 16.9 +0.3 baz=256
PHUB baz=256 S Sb 13 07 44.2 -1.0
PNG Penghu 2.08 256 eP Pn 13 07 17.0 +0.5 baz=257
PNG baz=257 eS Sb 13 07 45.4 +0.3
WDGT Dungji 2.08 247 ⇓eP Pn 13 07 16.7 0.0 baz=232
WDGT baz=232 eS Sb 13 07 45.3 -0.1
TWP Hsiaoliuchiu 2.15 217 eP Pb 13 07 22.1 +1.2 baz=217
JIJ Ishigaki jima 2.20 82 P Pn 13 07 18.2 0.0
JIJ eS Sn 13 07 45.6 +0.4
JIJ Ishigaki jima 2.20 82 A A 13 07 18.2 comp=E,14nm,9.2s,comp=N,15nm,4.7s
HEN Hengchun 2.26 205 eP Pn 13 07 20.4 +1.3 baz=197
VWUC VWUC 2.29 294 eP Pn 13 07 18.6 -0.8 baz=290
TWK1 Hengchun 2.30 202 eP Pn 13 07 21.3 +1.7 baz=195
TWKBT Hengchun 2.30 202 eP Pn 13 07 19.5 -0.1 baz=195
VCHM Qimei 2.30 248 eP Pn 13 07 20.7 +1.1 baz=246
JISG Ishigakijimahi 2.39 77 P Pn 13 07 20.4 -0.4
JISG S Sn 13 07 50.2 +0.5
PTMZ Houxiangcun 2.58 292 eP Pn 13 07 23.3 -0.2 baz=288
MATB Ma-tsu 2.63 322 eP Pn 13 07 23.6 -0.6 baz=315
MSUT Lienchiang 2.66 322 eP Pn 13 07 24.5 -0.1 baz=316
JTJ Tarama 2.75 78 eP Pn 13 07 26.3 +0.5
JTJ S Sn 13 08 00.5 +1.8
JTJ Tarama 2.75 78 A A 13 07 26.3 comp=E,17nm,3.3s,comp=N,20nm,2.5s
QZH Quanzhou 3.00 287 ⇑iPn Pn 13 07 28.8 -0.5
QZH Sn Sn 13 08 05.2 +0.2
QZH smax smax comp=N,3μm,1.3s
QZH smax smax comp=N,2μm,0.8s
QZH LR LR comp=N,28μm,9.8s
QZH LR LR comp=N,33μm,9.5s
KNM Kinmen 3.05 277 eP Pn 13 07 31.6 +1.7 baz=273
LYJJ Jianjiangzhen 3.05 324 eP Pn 13 07 29.4 -0.6 baz=317
KNMB Chin-men Tao 3.09 278 Pn Pn 13 07 30.8 +0.2
KNMB Chin-men Tao 3.09 278 eP Pn 13 07 30.6 0.0 baz=274
XPSS Dashiqiu 3.17 334 eP Pn 13 07 30.6 -1.0 baz=331
MHZQ Yeshan 3.19 310 eP Pn 13 07 31.3 -0.5 baz=303
JIRB Irabujima 3.21 76 eP Pn 13 07 34.3 +2.2
JIRB S Sn 13 08 11.9 +2.0
JIRB Irabujima 3.21 76 A A 13 07 34.3 comp=E,12nm,9.5s,comp=N,12nm,3.8s
JIKM Ikemajima 3.29 74 P Pn 13 07 35.5 +2.2
JIKM S Sn 13 08 15.0 +2.8
JIKM Ikemajima 3.29 74 A A 13 07 35.5 comp=E,17nm,10.0s,comp=N,15nm,5.1s
JMJ Miyako jima 2 3.31 76 eP Pn 13 07 34.2 +0.7 baz=82
JMJ2 Miyako jima3 3.33 78 eP Pn 13 07 35.7 +1.9
JMJ2 eS Sn 13 08 15.9 +3.0
JMJ2 Miyako jima3 3.33 78 A A 13 07 35.7 comp=E,19nm,6.3s,comp=N,19nm,6.7s
JOGS Gusukube 3.40 78 eP Pn 13 07 36.5 +1.8
JOGS S Sn 13 08 17.1 +2.3
JOGS Gusukube 3.40 78 A A 13 07 36.5 comp=E,24nm,7.7s,comp=N,23nm,10.4s
AXDP Jialang 3.54 284 ⇑eP Pn 13 07 36.6 -0.1 baz=283
ZPLA Ao Xicun 3.66 269 ⇑eP Pn 13 07 38.3 0.0 baz=269
DSXP Dongshan 3.98 266 eP Pn 13 07 42.2 -0.5 baz=265
SXFK Yanhouchang 4.38 303 eP Pn 13 07 47.9 -0.4 baz=295
JOW Kunigami 6.50 64 Pn Pn 13 08 16.4 -1.1
JOW Kunigami 6.50 64 Pn Pn 13 08 15.9 -1.5 comp=N,8.3nm,0.3s,baz=164,slow=8.2,SNR=16

JOW Sn Sn 13 09 29.6 -1.7 baz=341,slow=20 comp=N,16nm,0.3s
SSE Sheshan 7.01 356 Pn Pn 13 08 24.4 +0.1
SSE Sn Sn 13 09 46.6 +2.9
SSE LR LR comp=N,4μm,10.0s
SSE LR LR comp=N,2μm,10.3s
HKPS Hong Kong Po S 7.23 257 Pn Pn 13 08 26.9 -0.5
GZH Guangzhou 7.78 264 Pn Pn 13 08 29.8 -5.1
GZH Sn Sn 13 09 55.4 -7.2
GZH smax smax comp=N,820nm,1.2s
GZH smax smax comp=N,670nm,1.0s
NJ2 Nanjing 8.35 343 eP Pn 13 08 41.5 -1.2
NJ2 pP 13 08 44.4
NJ2 sP 13 08 47.1
NJ2 S Sn 13 10 17.3 +0.7
NJ2 sS 13 10 21.6
NJ2 pmax pmax comp=N,45nm,0.6s
NJ2 smax smax comp=N,500nm,1.1s
NJ2 smax smax comp=N,270nm,1.0s
NJ2 LR LR comp=N,7μm,9.0s
NJ2 LR LR comp=N,3μm,5.7s
NJ2 LR LR comp=N,7μm,8.5s
CNSH ChangSha 8.92 299 ⇑P Pn 13 08 48.3 -2.3
CNSH S Sn 13 10 25.9 -4.8
CNSH smax smax comp=N,1μm,1.5s
CNSH smax smax comp=N,1μm,1.6s
CNSH LR LR comp=N,7μm,9.2s
CNSH LR LR comp=N,9μm,9.5s
CNSH LR LR comp=N,10μm,8.4s
WHN Wuhan 9.21 316 ⇓P Pn 13 08 54.3 -0.2
WHN sP 13 08 59.6
WHN S Sn 13 10 34.7 -3.1
WHN LR LR comp=N,31μm,9.0s
WHN LR LR comp=N,26μm,6.9s
WHN LR LR comp=N,41μm,10.2s
TGY Tagaytay City 9.95 185 LR LR 13 13 38.9 comp=N,491nm,19.6s,baz=30,slow=42
JNU Nakatsue 12.05 40 Pn Pn 13 09 33.8 +0.2
JNU Nakatsue 12.05 40 Pn Pn 13 09 39.0 +5.4 comp=N,0.2nm,0.3s,baz=185,slow=7.8,SNR=8.4
JNU LR LR 13 14 57.8 comp=N,2μm,18.4s,baz=226,slow=42
QIZ Qiongzhong 12.16 248 P Pn 13 09 35.9 +0.8
QIZ S Sn 13 11 55.2 +4.8
QIZ LR LR comp=N,2μm,11.2s
QIZ LR LR comp=N,1μm,9.0s
QIZ LR LR comp=N,1μm,8.0s
TJN Taejon 13.18 20 iP Pn 13 09 48.1 -0.8
LYN LuoYang 13.20 324 eP Pn 13 09 49.1 -0.1
LYN sP P 13 09 55.0 -4.1
LYN PP PnPn 13 09 59.4 +2.2
LYN S Sn 13 12 18.1 +2.5
LYN pmax pmax comp=N,8.0nm,0.6s
LYN pmax pmax comp=N,220nm,4.5s
LYN LR LR comp=N,21μm,9.5s
LYN LR LR comp=N,8μm,9.5s
LYN LR LR comp=N,22μm,9.8s
GYA Guiyang 13.86 283 ⇑iP Pn 13 10 00.6 +2.3
GYA S Sn 13 12 33.0 +1.1
GYA pmax pmax comp=N,31nm,1.6s
GYA LR LR comp=N,2μm,6.8s
GYA LR LR comp=N,9μm,9.4s
GYA LR LR comp=N,11μm,9.3s
KSAR Wonju Array Be 14.32 20 Pn Pn 13 10 03.4 -1.1
KSAR Wonju Array Be 14.32 20 P Pn 13 10 03.4 -1.1
KSRS Korea Array 14.34 20 Pn Pn 13 10 06.9 +2.1 comp=N,0.9nm,0.3s,baz=201,slow=12,SNR=15
KS19 Wonju Array Si 14.37 20 P 13 10 09.7 -2.4
HNS HongShan 14.59 337 eP Pn 13 10 09.8 +1.7
HNS PP PnPn 13 10 22.9 +6.7
HNS eS Sn 13 12 50.9 +1.5
HNS SS SnSn 13 13 03.1 +0.8
HNS LR LR comp=N,5μm,11.6s
HNS LR LR comp=N,3μm,11.2s
HNS LR LR comp=N,6μm,12.7s
XAN Xi'an 14.97 314 P Pn 13 10 14.0 +0.7
XAN S Sn 13 13 02.0 +3.2
XAN pmax pmax comp=N,56nm,1.3s
XAN LR LR comp=N,4μm,8.0s
XAN LR LR comp=N,10μm,8.1s
XAN LR LR comp=N,13μm,9.5s
TIY Taiyuan 15.76 332 P P 13 10 27.4 -0.2
TIY pmax pmax comp=N,370nm,5.6s
TIY LR LR comp=N,4μm,11.5s
TIY LR LR comp=N,3μm,9.1s
TIY LR LR comp=N,3μm,9.1s
BJI Beijing 16.60 345 P Pn 13 10 34.8 +0.5
BJI S Sn 13 13 37.1 -1.1
BJI pmax pmax comp=N,6.0nm,1.3s
BJI pmax pmax comp=N,180nm,9.2s
BJI LR LR comp=N,1μm,12.2s
BJI LR LR comp=N,500nm,12.9s
BJI LR LR comp=N,1μm,12.6s
SLVN Son La 16.69 264 Pn 13 10 35.5 -0.3
KMI Kunming 17.32 277 ⇑P P 13 10 49.5 +4.3
KMI pmax pmax comp=N,21nm,1.7s
KMI pmax pmax comp=N,330nm,4.1s
KMI LR LR comp=N,1μm,9.5s
KMI LR LR comp=N,10μm,9.0s
KMI LR LR comp=N,10μm,9.7s
CD2 Chengdu 17.34 297 P P 13 10 45.5 +0.3
CD2 pmax pmax comp=N,40nm,1.0s
CD2 LR LR comp=N,4μm,6.6s
CD2 LR LR comp=N,4μm,7.5s
CD2 LR LR comp=N,5μm,7.8s
SNY Shenyang 17.77 4 ⇑P P 13 10 49.6 -0.1
SNY pmax pmax comp=N,6.0nm,1.3s
SNY pmax pmax comp=N,380nm,7.8s

SNY LR LR
comp=N,3µm,12.0s
SNY LR LR
comp=N,2µm,12.0s
SNY LR LR
comp=N,5µm,11.8s
PZH PanZhiHua 18.25 282 P **Pn** **13 10 53.1 -2.1**
PZH sP **sP** **13 11 03.9 +2.0**
PZH S **Sn** **13 14 12.7 -6.1**
PZH SS **SnSn** **13 14 35.2 +2.6**
PZH pmax pmax
comp=N,10.0nm,1.1s
PZH pmax pmax
comp=N,240nm,9.7s
PZH LR LR
comp=N,2µm,8.7s
PZH LR LR
comp=N,4µm,11.0s
PZH LR LR
comp=N,4µm,12.1s
KKM Kota Kinabalu 18.70 197 P **P** **13 10 58.9 -1.4**
HHC Hu-ho-hao-te 18.78 335 *e*P **Pn** **13 11 02.3 +0.8**
HHC pP pP 13 11 05.8 +0.1
HHC S **Sn** **13 14 30.8 -0.5**
HHC sS S 13 14 37.0 +2.8
HHC pmax pmax
comp=N,12nm,0.7s
HHC pmax pmax
comp=N,490nm,5.0s
HHC LR LR
comp=N,3µm,12.2s
HHC LR LR
comp=N,1µm,12.2s
HHC LR LR
comp=N,3µm,11.5s
MJAR Matsushiro Arr 18.84 45 P **P** **13 11 01.4 -0.2**
baz=239,slow=6.8,SNR=3.4
MJAR LR LR 13 19 19.0
comp=N,752nm,18.3s,baz=228,slow=41
comp=N,1.8nm,0.8s
BTO Baotou 19.20 332 *e*P **Pn** **13 11 08.6 +2.0**
BTO pP **sP** **13 11 12.5 +0.2**
BTO sP **pP** **13 11 15.4 +5.1**
BTO PP **PnPn** **13 11 26.2 +6.7**
BTO pmax pmax
comp=N,18nm,0.5s
BTO pmax pmax
comp=N,1µm,7.4s
BTO LR LR
comp=N,10µm,11.5s
BTO LR LR
comp=N,4µm,11.2s
BTO LR LR
comp=N,14µm,10.1s
LZH Lanzhou 19.54 312 *e*P **Pn** **13 11 11.8 +1.0**
LZH sP sP 13 11 22.1 +6.0
LZH sS sS 13 14 56.2 -0.7
LZH pmax pmax
comp=N,14nm,1.4s
LZH pmax pmax
comp=N,620nm,6.2s
LZH LR LR
comp=N,2µm,12.7s
LZH LR LR
comp=N,6µm,13.1s
LZH LR LR
comp=N,7µm,13.1s
CN2 Changchun 19.91 8 *e*P **Pn** **13 11 14.7 -0.2**
CN2 *e*S **S** **13 14 54.3 -2.3**
CN2 pmax pmax
comp=N,10.0nm,1.1s
CN2 pmax pmax
comp=N,100nm,4.0s
CN2 LR LR
comp=N,3µm,11.0s
CN2 LR LR
comp=N,1µm,11.0s
CN2 LR LR
comp=N,3µm,12.1s
PSTR Posyet 19.98 20 *i* P **P** **13 11 10.4 -3.6**
XLT XiLinHaoTe 20.31 348 *e*P Pn 13 11 19.6 -0.2
XLT pP pP 13 11 23.3 +0.7
XLT pmax pmax
comp=N,17nm,1.0s
XLT pmax pmax
comp=N,190nm,3.5s
XLT LR LR
comp=N,180nm,13.7s
XLT LR LR
comp=N,1µm,12.6s
XLT LR LR
comp=N,2µm,14.2s
MDJ Mudanjiang 21.47 15 P **P** **13 11 32.2 +2.2**
MDJ pP pP 13 11 34.8 +0.5
MDJ sP sP 13 11 36.3 0.0
MDJ PP **PnPn** **13 11 52.8 +2.4**
MDJ PcP **PcP** **13 15 33.0 +0.2**
MDJ S Sn 13 15 34.2 -1.6
MDJ sS pS 13 15 36.5 +0.6
MDJ SS **SnSn** **13 16 00.0 +8.9**
MDJ ScP **ScP** **13 19 09.3 +0.1**
MDJ ScS **ScS** **13 22 53.0 -0.2**
MDJ pmax pmax
comp=N,15nm,1.2s
MDJ pmax pmax
comp=N,160nm,5.6s
MDJ LR LR
comp=N,3µm,12.0s
MDJ LR LR
comp=N,2µm,15.3s
MDJ LR LR
comp=N,4µm,15.1s
USA0B Ussuriysk Arra 21.75 20 *i* P **P** **13 11 31.0 -2.1**
USRK Ussuriysk Ar. 21.75 20 P **P** **13 11 31.5 -1.6**
USRK Ussuriysk Ar. 21.75 20 P **P** **13 11 31.5 -1.6**
USRK Ussuriysk Ar. 21.75 20 P **P** **13 11 33.1 0.0**
comp=N,3.0nm,0.7s,baz=216,slow=13,SNR=7.8
comp=N,3.0nm,0.7s
CHTO Chiang Mai 21.86 261 P **P** **13 11 35.6 +1.1**
CHTO Chiang Mai 21.86 261 P **P** **13 11 35.6 +1.1**
CHTO pmax pmax
comp=Z,31nm,1.2s
CMAR Chiang Mai Arr 21.97 260 P **P** **13 11 35.9 +0.2**
CMAR Chiang Mai Arr 21.97 260 *ce*P **P** **13 11 38.0 +2.3**
CMAR pmax pmax
comp=Z,5.0nm,1.0s
CMAR Chiang Mai Arr 21.97 260 P **P** **13 11 37.1 +1.5**
comp=Z,2.0nm,0.9s,baz=63,slow=8.8,SNR=15
comp=Z,2.0nm,0.9s
BNX BinXian 22.09 11 ⇓P **P** **13 11 37.1 +0.3**
BNX S **S** **13 15 37.5 -2.2**
BNX pmax pmax
comp=Z,6.0nm,0.9s
BNX pmax pmax
comp=Z,110nm,3.5s
BNX LR LR
comp=Z,2µm,12.2s
BNX LR LR
comp=Z,790nm,11.2s
BNX LR LR
comp=Z,2µm,16.2s
GTA Gaotai 24.03 315 P **P** **13 11 57.6 +0.9**
GTA S **S** **13 16 17.7 +4.4**
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,260nm,5.8s
GTA LR LR
comp=Z,1µm,12.7s
GTA LR LR
comp=Z,3µm,12.7s
GTA LR LR
comp=Z,3µm,11.6s
GUMO Guam 24.20 111 LR LR 13 22 21.7
comp=Z,185nm,18.3s,baz=300,slow=39
GOMU GeErMu 26.15 304 P **P** **13 12 17.6 +1.2**
GOMU pP pP 13 12 21.6 +0.5
GOMU sP sP 13 12 25.2 +2.0
GOMU pmax pmax
comp=Z,4.0nm,1.0s
GOMU LR LR
comp=Z,1µm,9.5s
GOMU LR LR
comp=Z,1µm,9.6s
GOMU LR LR
comp=Z,1µm,9.3s

ASAJ Asahikawa 26.28 35 LR LR 13 21 42.4
comp=Z,290nm,21.4s,baz=238,slow=34
KLR Kul'dur 26.31 15 *ce*P **P** **13 12 16.2 -1.0**
KLR pmax pmax
comp=Z,13nm,1.1s
ULN Ulaanbaatar 26.46 337 P **P** **13 12 18.9 +0.2**
ULN IAmb IAmb 13 12 28.7
comp=Z,30nm,1.1s
ULN Ulaanbaatar 26.46 337 *ce*P **P** **13 12 19.0 +0.2**
ULN pmax pmax
comp=Z,29nm,1.3s
HEH HeiHe 26.50 8 *e*P **P** **13 12 19.1 +0.2**
HEH pP **pP** **13 12 22.7 -0.7**
HEH S **S** **13 16 57.1 +4.9**
HEH sS **sS** **13 17 03.3 +3.5**
HEH pmax pmax
comp=Z,13nm,1.1s
HEH pmax pmax
comp=Z,210nm,4.9s
HEH LR LR
comp=Z,2µm,11.3s
HEH LR LR
comp=Z,970nm,10.4s
HEH LR LR
comp=Z,3µm,11.5s
SONM Songino Array 26.67 337 P **P** **13 12 21.1 +0.5**
SONM IAmb IAmb 13 12 29.7
comp=Z,33nm,1.3s
SONM Songino Array 26.67 337 P **P** **13 12 21.1 +0.5**
SONM pmax pmax
comp=Z,33nm,1.3s
SONM Songino Array 26.67 337 P **P** **13 12 20.8 +0.2**
comp=Z,11nm,1.1s,baz=158,slow=9.7,SNR=40
SONM LR LR 13 24 05.4
comp=Z,1µm,18.3s,baz=166,slow=39
comp=Z,11nm,1.1s
YSS Yuzh-Sakhalins 28.35 31 *e*P **P** **13 12 34.3 -1.2**
YSS *e*S **S** **13 17 17.0 -4.4**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,600nm,14.0s
CIT Chita 28.60 349 *e*P P 13 12 43.0 +5.2
ZEA Zeya 29.91 7 *e*P **P** **13 12 48.9 -0.4**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=E,400nm,10.0s
ZEA MLR MLR
comp=N,1µm,13.0s
ZEA MLR MLR
comp=Z,1µm,14.0s
ZAK Zakamensk 29.93 336 *e*P **P** **13 12 48.3 -1.3**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
PSI Prapat 30.56 230 P **P** **13 12 56.0 +0.5**
PSI pmax pmax
comp=Z,13nm,1.2s
RPSI Rantau Prapat 30.63 230 P **P** **13 12 56.0 0.0**
IRK Irkutsk 31.13 339 *e*P **P** **13 12 59.8 -0.3**
IRK pmax pmax
comp=Z,31nm,1.3s
WMQ Urumqi 34.10 314 *e*P **P** **13 13 29.9 +3.6**
WMQ pP sP 13 13 33.1 -0.2
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ LR LR
comp=Z,900nm,11.7s
WMQ LR LR
comp=Z,2µm,11.7s
WMQ LR LR
comp=Z,490nm,11.7s
DGZ Jazzator, Alta 36.99 323 *i* P **P** **13 13 52.0 +0.8**
DGZ pmax pmax
comp=Z,3.0nm,1.0s
YAK Yakutsk 38.32 6 P **P** **13 14 00.2 -1.8**
YAK Yakutsk 38.32 6 *e*P **P** **13 14 00.5 -1.5**
YAK *e**PP **pP** **13 14 04.1 -2.5**
YAK *e* 13 15 29.9
YAK *e* 13 16 11.9
YAK *e*S **S** **13 19 55.6 +0.2**
YAK *e**SS **pS** **13 20 00.9 +0.2**
YAK *e* 13 24 13.3
YAK pmax pmax
comp=Z,11nm,1.3s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=Z,50nm,3.0s
YAK smax smax
comp=E,87nm,3.7s
YAK smax smax
comp=N,28nm,3.2s
YAK MLR MLR
comp=Z,2µm,13.0s
YAK MLR MLR
comp=E,606nm,14.0s
YAK MLR MLR
comp=N,1µm,14.0s
YAK Yakutsk 38.32 6 LR LR 13 31 30.3
comp=N,800nm,18.0s,baz=176,slow=39
MK31 Makanchi Array 38.77 316 P **P** **13 14 06.1 -0.1**
MK31 Makanchi Array 38.77 316 *ce*P **P** **13 14 06.0 -0.1**
MKAR Makanchi Array 38.77 316 P **P** **13 14 05.8 -0.4**
MKAR Makanchi Array 38.77 316 *i* P **P** **13 14 06.1 0.0**
MKAR pmax pmax
comp=Z,10.0nm,1.0s
MKAR Makanchi Array 38.77 316 P **P** **13 14 06.2 +0.1**
comp=Z,10nm,1.0s,baz=104,slow=10,SNR=36
MKAR LR LR 13 30 30.8
comp=Z,297nm,19.5s,baz=108,slow=37
comp=Z,10nm,1.0s
MAKZ Makanchi 38.98 316 P **P** **13 14 07.9 +0.1**
MAKZ Makanchi 38.98 316 P **P** **13 14 07.9 +0.1**
MAKZ pmax pmax
comp=Z,16nm,1.0s
PETK Petropavlovsk- 39.67 34 P **P** **13 14 12.6 -0.8**
comp=Z,0.6nm,0.6s,baz=108,slow=3.8,SNR=4.9
comp=Z,0.6nm,0.6s
ZAA0 Zalesovo Array 40.62 327 P **P** **13 14 20.3 -1.0**
ZALV Zalesovo Beam 40.62 327 P **P** **13 14 20.4 -0.9**
ZALV Zalesovo Beam 40.62 327 *i* P **P** **13 14 20.7 -0.6**
ZALV pmax pmax
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 40.62 327 P **P** **13 14 20.7 -0.6**
comp=Z,20nm,1.0s,baz=114,slow=7.2,SNR=50
ZALV LR LR 13 33 41.3
comp=Z,200nm,19.3s,baz=122,slow=40
comp=Z,20nm,1.0s
HYB Hyderabad 40.81 269 *e*P **P** **13 14 23.1 -0.4**
KSH Kashi 41.39 303 P **P** **13 14 32.6 +4.5**
KSH pP sP 13 14 36.1 +1.0
KSH sP pP 13 14 41.2 +8.2
KSH pmax pmax
comp=Z,7.0nm,0.9s
KSH LR LR
comp=Z,930nm,12.7s
KSH LR LR
comp=Z,680nm,10.7s
KSH LR LR
comp=Z,930nm,15.5s
PMG Port Moresby 41.52 140 LR LR 13 30 24.6
comp=Z,89nm,21.9s,baz=305,slow=34
KURK Kurchatov 42.51 320 P **P** **13 14 36.6 -0.2**
KURK Kurchatov 42.51 320 *i* P **P** **13 14 37.3 +0.5**
KURK pmax pmax
comp=Z,9.0nm,1.1s
KURBB Kurchatov Arra 42.52 320 P **P** **13 14 37.0 0.0**
comp=Z,6.3nm,1.1s,baz=109,slow=7.4,SNR=22
KURBB LR LR 13 33 34.8
comp=Z,240nm,18.6s,baz=182,slow=38
comp=Z,6.3nm,1.1s
AAK Ala-Archa 42.98 307 LR LR 13 35 27.4
comp=Z,256nm,19.5s,baz=92,slow=40
COEN Coen 43.21 149 P **P** **13 14 40.6 -2.3**
COEN IAmb IAmb 13 14 51.0
comp=Z,26nm,1.1s
WRA Warramunga Arr 45.44 163 *i* P **P** **13 14 58.0 -2.7**
WRA pmax pmax
comp=Z,3.0nm,0.9s
WRA Warramunga Arr 45.44 163 P **P** **13 14 58.7 -2.0**
comp=Z,2.6nm,0.9s,baz=345,slow=8.7,SNR=16
comp=Z,2.6nm,0.9s
WB2 Warramunga Arr 45.44 163 P **P** **13 14 59.3 -1.4**

WB2 IAmb IAmb 13 15 07.9
comp=Z,24nm,1.4s
KKAR Karatay Array 45.95 307 P **P** **13 15 04.8 +0.2**
KKAR Karatay Array 45.95 307 P **P** **13 15 04.8 +0.2**
KBL Kabul 46.68 295 P **P** **13 15 11.2 +0.5**
KBL IAmb IAmb 13 15 22.2
comp=Z,28nm,1.3s
KBL Kabul 46.68 295 P **P** **13 15 11.2 +0.5**
KBL pmax pmax
comp=Z,28nm,1.3s
TIXI Tiksi 47.77 3 P **P** **13 15 16.8 -1.5**
TIXI Tiksi 47.77 3 *ce*P **P** **13 15 16.6 -1.8**
TIXI pmax pmax
comp=Z,28nm,1.7s
TIXI Tiksi 47.77 3 LR LR 13 37 17.1
comp=Z,471nm,19.9s,baz=202,slow=38
BVAR Borovoye Array 48.08 321 P **P** **13 15 20.8 -0.3**
comp=Z,4.9nm,0.9s,baz=112,slow=12,SNR=16
BVAR LR LR 13 38 44.7
comp=Z,225nm,18.9s,baz=78,slow=40
comp=Z,4.9nm,0.9s
BRVK Borovoye 48.16 321 P **P** **13 15 21.9 +0.3**
BRVK IAmb IAmb 13 15 23.0
comp=Z,10nm,1.0s
BRVK Borovoye 48.16 321 *ce*P **P** **13 15 22.1 +0.5**
BRVK pmax pmax
comp=Z,10.0nm,0.8s
AS31 Alice Springs 48.90 165 P **P** **13 15 26.7 -1.0**
ASAR Alice Springs 48.90 165 P **P** **13 15 26.7 -1.0**
ASAR Alice Springs 48.90 165 P **P** **13 15 26.7 -1.0**
ASAR Alice Springs 48.90 165 P **P** **13 15 27.0 -0.7**
comp=Z,2.4nm,1.0s,baz=344,slow=7.3,SNR=15
ASAR LR LR 13 37 21.1
comp=Z,60nm,20.8s,baz=4.5,slow=38
comp=Z,2.4nm,1.0s
NRIK Noril'sk 49.64 345 P **P** **13 15 31.8 -1.0**
NRIK Noril'sk 49.64 345 *ce*P **P** **13 15 32.0 -0.8**
NRIK pmax pmax
comp=Z,14nm,1.4s
NRIK Noril'sk 49.64 345 P **P** **13 15 31.8 -1.0**
comp=Z,6.6nm,0.8s,baz=132,slow=8.3,SNR=7.3
NRIK LR LR 13 36 51.0
comp=Z,323nm,21.4s,baz=131,slow=36
comp=Z,6.6nm,0.8s
CTA Charters Tower 49.97 149 LR LR 13 34 54.1
comp=Z,132nm,21.0s,baz=325,slow=34
HNR Honiara 50.01 127 LR LR 13 36 25.8
comp=Z,1µm,18.5s,baz=324,slow=36
BILL Bilibino 51.61 20 P **P** **13 15 47.3 -0.3**
ABKAR Akbulak array 53.89 314 P **P** **13 16 04.6 -0.2**
ABKAR IAmb IAmb 13 16 22.0
comp=Z,8.9nm,0.8s
SVE Sverdlovsk 54.44 324 *e*P **P** **13 16 08.7 0.0**
SVE pmax pmax
comp=Z,18nm,1.1s
AKTO Aktyubinsk 55.21 316 LR LR 13 41 50.5
comp=Z,165nm,20.5s,baz=102,slow=38
GEYT Alibeck 55.30 300 P **P** **13 16 16.5 +1.2**
GEYT IAmb IAmb 13 16 31.2
comp=Z,12nm,1.0s
GEYT Alibeck 55.30 300 P **P** **13 16 16.5 +1.2**
GEYT pmax pmax
comp=Z,12nm,1.0s
GEYT Alibeck 55.30 300 P **P** **13 16 16.6 +1.3**
comp=Z,6.7nm,1.0s,baz=101,slow=7.7,SNR=13
GEYT LR LR 13 42 34.8
comp=Z,371nm,18.8s,baz=74,slow=39
comp=Z,6.7nm,1.0s
GYA0B ALIBECK ARRAY 55.30 300 P **P** **13 16 16.6 +1.3**
GYA0B IAmb IAmb 13 16 31.2
comp=Z,13nm,0.9s
ARU Arti 55.50 323 P **P** **13 16 16.2 -0.2**
ARU IAmb IAmb 13 16 17.0
comp=Z,16nm,1.2s
ARU Arti 55.50 323 *d i*P **P** **13 16 15.8 -0.6**
ARU S **S** **13 24 02.7 +1.9**
ARU SS **SS** **13 27 41.2 -4.2**
ARU pmax pmax
comp=Z,18nm,1.3s
ARU Arti 55.50 323 LR LR 13 40 57.2
comp=Z,293nm,19.9s,baz=86,slow=37
STKA Stephens Creek 58.79 160 P **P** **13 16 39.1 -0.7**
STKA Stephens Creek 58.79 160 P **P** **13 16 39.1 -0.7**
STKA pmax pmax
comp=Z,1.0nm,0.7s
STKA Stephens Creek 58.79 160 P **P** **13 16 40.1 +0.3**
comp=Z,3.0nm,0.6s,baz=342,slow=7.3,SNR=9.9
comp=Z,3.0nm,0.6s
KIRV Kirov 60.60 325 *ce*P **P** **13 16 51.8 -0.2**
KIRV Kirov 60.60 325 LR LR 13 45 30.5
comp=Z,422nm,18.0s,baz=80,slow=38
ANM Nome 61.17 28 P **P** **13 16 56.1 +0.2**
ANM IAmb IAmb 13 17 05.6
comp=Z,20nm,1.5s
ANM Nome 61.17 28 P **P** **13 16 56.1 +0.2**
ANM pmax pmax
comp=Z,20nm,1.5s
MAK Makhachkala 62.76 307 *e*P **P** **13 17 04.9 -2.0**
MAK *e* 13 19 25.0
MAK *e*PPP PPP 13 20 51.4
MAK *e*S **S** **13 25 34.8 -0.4**
MAK *e*SS **SS** **13 29 38.9 -0.9**
MAK *e*SSS SSS 13 32 30.3
MAK pmax pmax
comp=Z,50nm,0.6s
MAK MLR MLR
comp=Z,215nm,13.0s
DZM Mont Dzumac 63.18 133 LR LR 13 41 32.0
comp=Z,97nm,20.1s,baz=303,slow=33
I17K Unalakleet 63.19 29 P **P** **13 17 10.6 +1.2**
C19K Lookout Ridge 63.70 23 P **P** **13 17 13.0 +0.2**
C19K IAmb IAmb 13 17 22.4
comp=Z,20nm,1.5s
D19K Kuna River 64.22 24 P **P** **13 17 15.3 -0.9**
D19K IAmb IAmb 13 17 19.2
comp=Z,14nm,0.9s
E19K Redstone River 64.57 25 P **P** **13 17 17.8 -0.7**
E19K IAmb IAmb 13 18 01.5
comp=Z,7.0nm,0.9s
GNI Garni 65.29 305 *i* P **P** **13 17 25.3 +1.5**
GNI pmax pmax
comp=Z,13nm,1.1s
ZEI Tsey 65.41 308 *e*P **P** **13 17 23.3 -1.3**
ZEI pmax pmax
comp=Z,12nm,1.4s
VRH Novokhopyorsk 65.49 317 *e*P **P** **13 17 22.7 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 65.53 328 *e*P **P** **13 17 21.6 -3.2**
KLMR pmax pmax
comp=Z,23nm,1.2s
ONI Oni 65.77 308 P **P** **13 17 27.1 +0.3**
ONI IAmb IAmb 13 17 48.9
comp=Z,20nm,1.4s
ONI Oni 65.77 308 P **P** **13 17 27.1 +0.3**
ONI pmax pmax
comp=Z,20nm,1.4s
B22K Teshekpuk Lake 65.82 22 P **P** **13 17 26.5 +0.1**
KBZ Khabaz 65.95 309 *ce*P **P** **13 17 28.6 +0.8**
KBZ pmax pmax
comp=Z,9.0nm,1.5s
KBZ Khabaz 65.95 309 P **P** **13 17 28.5 +0.7**
comp=Z,2.4nm,0.8s,baz=173,slow=4.4,SNR=5.8
KBZ LR LR 13 48 17.2
comp=Z,192nm,18.8s,baz=28,slow=38
comp=Z,2.4nm,0.8s
AKH Akhalkalaki 65.97 306 P **P** **13 17 29.1 +0.9**
AKH Akhalkalaki 65.97 306 P **P** **13 17 29.1 +0.9**
AKH pmax pmax
comp=Z,46nm,1.2s
KIV Kislovodsk 66.06 309 P **P** **13 17 28.5 -0.1**
KIV Kislovodsk 66.06 309 *e*P **P** **13 17 30.9 +2.3**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,146nm,17.0s
G21K Allakaket 66.09 26 P **P** **13 17 28.6 +0.2**
G21K IAmb IAmb 13 17 37.3
comp=Z,27nm,1.6s
KARS Kars 66.44 305 P **P** **13 17 30.1 -1.1**
KARS Kars 66.44 305 P **P** **13 17 30.1 -1.1**
KARS pmax pmax
comp=Z,39nm,0.5s
I21K Tanana 66.86 27 P **P** **13 17 33.7 +0.5**
I21K IAmb IAmb 13 17 43.9
comp=Z,17nm,1.4s

VORD	**Divnogorie**		**67.04**	**317**	*eP*		**P**		**13 17 32.3**	**-2.3**
VORD					pmax		pmax			
	comp=Z,5.0nm,0.9s									
CAST	**Castle Rocks**		**67.06**	**29**	P		**P**		**13 17 33.5**	**-1.1**
VSR	**Storozhevoye**		**67.07**	**317**	*eP*		**P**		**13 17 31.5**	**-3.3**
VSR					pmax		pmax			
	comp=Z,3.0nm,0.5s									
LABN	**Labinsk**		**67.30**	**310**	*eP*		**P**		**13 17 35.3**	**-1.1**
LABN					pmax		pmax			
	comp=Z,42nm,2.0s									
TOLK	**Toolik Lake Re**		**67.34**	**23**	P		**P**		**13 17 36.0**	**-0.3**
TOLK					IAmb		IAmb		13 17 39.8	
	comp=Z,7.9nm,0.8s									
MLY	**Manley**		**67.41**	**27**	P		**P**		**13 17 36.5**	**-0.2**
MLY					IAmb		IAmb		13 17 43.4	
	comp=Z,14nm,1.2s									
SKT	**Skwentna**		**67.52**	**31**	P		**P**		**13 17 36.1**	**-1.5**
KTH	**Kantishna Hill**		**67.55**	**29**	P		**P**		**13 17 38.2**	**+0.4**
KTH					IAmb		IAmb		13 17 46.9	
	comp=Z,16nm,1.2s									
TRF	**Thorofare Moun**		**67.85**	**29**	P		**P**		**13 17 39.9**	**+0.1**
OBN	**Obninsk**		**67.91**	**322**	*eP*		**P**		**13 17 38.4**	**-1.6**
OBN					*e*				13 18 04.7	
OBN					*e*				13 20 11.7	
OBN					*e*PPP		PPP		13 21 47.6	
OBN					pmax		pmax			
	comp=Z,7.0nm,1.1s									
OBN					MLR		MLR			
	comp=Z,342nm,20.0s									
I23K	**Minto, Yukon-K**		**67.97**	**27**	P		**P**		**13 17 39.5**	**-0.7**
I23K					IAmb		IAmb		13 17 50.4	
	comp=Z,26nm,1.6s									
SUA	**Susitna One**		**67.98**	**31**	P		**P**		**13 17 39.5**	**-1.1**
MDM	**Murphy Dome**		**68.47**	**27**	P		**P**		**13 17 42.7**	**-0.8**
RND	**Reindeer**		**68.49**	**29**	P		**P**		**13 17 42.3**	**-1.4**
RND	**Reindeer**		**68.49**	**29**	P		**P**		**13 17 42.3**	**-1.4**
RND					pmax		pmax			
	comp=Z,16nm,0.9s									
PMR	**Palmer**		**68.71**	**31**	P		**P**		**13 17 43.7**	**-1.3**
PMR	**Palmer**		**68.71**	**31**	P		**P**		**13 17 43.7**	**-1.3**
PMR					pmax		pmax			
	comp=Z,49nm,1.9s									
RAYN	**Ar Rayn**		**68.87**	**287**	P		**P**		**13 17 46.2**	**-0.5**
RAYN					IAmb		IAmb		13 17 48.5	
	comp=Z,14nm,1.1s									
RAYN	**Ar Rayn**		**68.87**	**287**	P		**P**		**13 17 46.2**	**-0.5**
RAYN					pmax		pmax			
	comp=Z,14nm,1.1s									
E25K	**Arctic Village**		**68.89**	**24**	P		**P**		**13 17 46.2**	**+0.2**
E25K					IAmb		IAmb		13 18 00.0	
	comp=Z,14nm,1.2s									
ILAR	**Eielson Array**		**69.07**	**27**	P		**P**		**13 17 45.0**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=271,slow=4.9,SNR=9.4									
	comp=Z,0.4nm,0.5s									
DHY	**Denali Highway**		**69.21**	**29**	P		**P**		**13 17 47.7**	**-0.5**
DHY					IAmb		IAmb		13 19 05.0	
	comp=Z,30nm,1.8s									
BMAR	**Burnt Mountain**		**69.41**	**24**	P		**P**		**13 17 48.7**	**-0.6**
SCM	**Sheep Creek Mo**		**69.50**	**30**	P		**P**		**13 17 49.3**	**-0.7**
SCM	**Sheep Creek Mo**		**69.50**	**30**	P		**P**		**13 17 49.3**	**-0.7**
SCM					pmax		pmax			
	comp=Z,87nm,1.6s									
ANN	**Anapa**		**69.56**	**311**	*eP*		**P**		**13 17 48.2**	**-2.3**
ANN					*eS*		**S**		**13 26 58.8**	**+1.0**
ANN					pmax		pmax			
	comp=Z,28nm,0.9s									
SPITS	**Spitsbergen Ar**		**69.70**	**348**	LR		LR		13 52 20.4	
	comp=Z,406nm,18.5s,baz=26,slow=39									
ARCES	**ARCESS Array B**		**69.83**	**338**	LR		LR		13 52 40.9	
	comp=Z,160nm,18.2s,baz=182,slow=40									
M24K	**Tolsona, Glenn**		**69.97**	**30**	P		**P**		**13 17 52.3**	**-0.6**
SCRK	**Sand Creek**		**70.48**	**28**	P		**P**		**13 17 55.4**	**-0.6**
SCRK					IAmb		IAmb		13 18 15.6	
	comp=Z,36nm,1.9s									
N25K	**Chitina, Valde**		**70.82**	**30**	P		**P**		**13 17 57.8**	**-0.3**
F28M	**Old Crow**		**71.11**	**24**	P		**P**		**13 17 58.6**	**-1.1**
F28M					IAmb		IAmb		13 18 13.5	
	comp=Z,10nm,0.9s									
BCAR	**Beaver Creek A**		**71.68**	**28**	P		**P**		**13 18 02.3**	**-0.9**
SIM	**Simferopol'**		**71.80**	**312**	*eP*		**P**		**13 18 05.4**	**+1.2**
SIM					pmax		pmax			
	comp=Z,29nm,1.0s									
FINES	**FINESS Array B**		**71.80**	**330**	*i* P		**P**		**13 18 04.8**	**+1.0**
FINES					pmax		pmax			
	comp=Z,3.0nm,0.9s									
FINES	**FINESS Array B**		**71.80**	**330**	P		**P**		**13 18 02.8**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=72,slow=6.2,SNR=5.7									
FINES					LR		LR		13 52 46.0	
	comp=Z,570nm,20.6s,baz=59,slow=38									
	comp=Z,3.3nm,0.8s									
I30M	**Mount Dempster**		**73.22**	**26**	P		**P**		**13 18 11.0**	**-1.5**
I30M					IAmb		IAmb		13 18 15.7	
	comp=Z,13nm,1.1s									
K29M	**Barlow Dome**		**73.25**	**27**	P		**P**		**13 18 12.2**	**-0.4**
K29M					IAmb		IAmb		13 18 16.3	
	comp=Z,11nm,1.1s									
AKASG	**Malin Array Be**		**73.29**	**318**	P		**P**		**13 18 12.8**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=59,slow=6.0,SNR=6.8									
AKASG					LR		LR		13 52 29.1	
	comp=Z,312nm,18.0s,baz=22,slow=38									
	comp=Z,2.2nm,0.9s									
AKBB	**Malin Array Si**		**73.29**	**318**	*ce*P		**P**		**13 18 13.6**	**+0.6**
AKBB					pmax		pmax			
	comp=Z,12nm,1.4s									
BRTR	**Keskin Array B**		**73.65**	**307**	*ce*P		**P**		**13 18 16.2**	**+0.7**
BRTR					pmax		pmax			
	comp=Z,2.0nm,0.6s									
BRTR	**Keskin Array B**		**73.65**	**307**	P		**P**		**13 18 16.3**	**+0.7**
	comp=Z,3.5nm,1.0s,baz=82,slow=8.9,SNR=7.5									
	comp=Z,3.5nm,1.0s									
M30M	**Minto, Yukon**		**74.01**	**28**	P		**P**		**13 18 16.4**	**-0.6**
M30M					IAmb		IAmb		13 18 21.1	
	comp=Z,16nm,1.1s									
HYT	**Haines Junctio**		**74.33**	**30**	P		**P**		**13 18 18.6**	**-0.5**
HYT					IAmb		IAmb		13 18 31.6	
	comp=Z,16nm,1.1s									
HFS	**Hagfors**		**77.91**	**331**	LR		LR		13 56 16.5	
	comp=Z,953nm,19.6s,baz=46,slow=38									
NOA	**NORSAR Array B**		**78.56**	**332**	P		**P**		**13 18 41.8**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=58,slow=5.4,SNR=3.5									
NOA					LR		LR		13 56 14.4	
	comp=Z,400nm,18.6s,baz=50,slow=38									
	comp=Z,0.9nm,0.6s									
CRVS	**Cervenica-Dubn**		**78.63**	**319**	*eP*		**P**		**13 18 47.0**	**+3.5**
RES	**Resolute Bay**		**78.68**	**9**	LR		LR		13 58 50.1	
	comp=Z,91nm,18.5s,baz=5.0,slow=40									
JMIC	**Jan Mayen**		**79.06**	**345**	LR		LR		13 58 42.1	
	comp=Z,225nm,18.5s,baz=52,slow=40									
LANS	**Liptovska Anna**		**79.73**	**319**	*eP*		**P**		**13 18 51.6**	**+2.1**
URZ	**Urewera**		**80.86**	**139**	LR		LR		13 50 56.3	
	comp=Z,48nm,20.4s,baz=120,slow=33									
RPZ	**Rata Peaks**		**81.21**	**146**	LR		LR		13 52 32.4	
	comp=Z,62nm,20.5s,baz=303,slow=34									
VRAC	**Vranov**		**81.36**	**320**	LR		LR		13 55 40.0	
	comp=Z,160nm,21.4s,baz=349,slow=36									
CLL	**Collm**		**82.45**	**323**	*eP*		**P**		**13 19 04.0**	**+0.1**
CLL					MLR		MLR			
	comp=Z,500nm,18.2s									
YKA	**Yellowknife Ar**		**82.86**	**23**	*ce*P		**P**		**13 19 04.9**	**-0.9**
YKA					pmax		pmax			
	comp=Z,1.0nm,0.8s									
YKA	**Yellowknife Ar**		**82.86**	**23**	P		**P**		**13 19 04.5**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=315,slow=4.7,SNR=20									
YKA					LR		LR		14 00 18.9	
	comp=Z,110nm,19.2s,baz=330,slow=39									
	comp=Z,0.8nm,0.7s									
GERES	**GERESS Array B**		**83.25**	**321**	P		**P**		**13 19 08.5**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=89,slow=8.4,SNR=3.9									
GERES					LR		LR		13 59 43.4	
	comp=Z,213nm,19.6s,baz=21,slow=38									
	comp=Z,1.4nm,0.9s									
DAVOX	**Davos/Dischmat**		**86.52**	**320**	LR		LR		14 02 07.1	
	comp=Z,212nm,18.5s,baz=56,slow=38									
BORG	**Borgarnes**		**86.96**	**345**	LR		LR		14 03 20.2	
	comp=Z,301nm,18.3s,baz=33,slow=39									
YBH	**Yreka Blue Hor**		**91.48**	**42**	LR		LR		13 56 26.6	
	comp=Z,41nm,20.0s,baz=26,slow=33									
FRB	**Frobisher Bay**		**92.10**	**5**	LR		LR		14 04 57.2	
	comp=Z,137nm,18.8s,baz=40,slow=38									
PPT	**Papeete**		**95.83**	**107**	LR		LR		13 53 13.2	
	comp=Z,92nm,20.4s,baz=256,slow=29									
ULM	**Lac du Bonnet**		**98.84**	**23**	LR		LR		14 08 27.7	
	comp=Z,94nm,18.3s,baz=60,slow=38									
DBBC	**Dabeiba**		**144.47**	**32**	*eP*		**PKPab**		**13 26 15.5**	**-1.7**
SDV	**Santo Domingo**		**145.08**	**22**	*eP*		**PKPbc**		**13 26 18.3**	**-1.1**
PTBC	**PUERTO BERRIO,**		**145.71**	**29**	*eP*		**PKPdf**		**13 26 17.9**	**-3.1**
PAMC	**Pamplona, Colo**		**145.74**	**26**	*eP*		**PKPdf**		**13 26 21.5**	**-0.2**
GUY2C	**Guyana, Caldas**		**146.44**	**32**	*eP*		**PKPdf**		**13 26 22.7**	**-0.1**
SPBC	**San Pablo de B**		**146.66**	**30**	*eP*		**PKPbc**		**13 26 23.8**	**-0.5**
YOTC	**Yotoco, Valle**		**147.01**	**35**	*eP*		**PKPdf**		**13 26 24.1**	**+0.7**
JAMC	**Jamundi, Valle**		**147.48**	**36**	*eP*		**PKPdf**		**13 26 25.4**	**+1.1**
ORTC	**Ortega, Tolima**		**147.63**	**33**	*eP*		**PKPdf**		**13 26 22.7**	**-1.6**
MCRA	**Macar, Loja**		**151.34**	**50**	*eP*		**PKPbc**		**13 26 35.3**	**-0.9**

TAP ***07*** *13:08:00.7,24.09N×121.74E,h7km,ML4.5,C*
JMA ***07*** *13:08:01.2±0.1,24.1N±0.3×121.7E±0.4,h0km, TAIWAN REGION*

ISC 07 13:08:01.5±1.0, 24.09N±0.01×121.75E±0.02, h3km±8km, n142, σ0§63/232, 1C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
					Op	ISC	h	m	s	ISC
ETL	**Fush Village**	**0.14**	**302**	*i* P		**Pg**	**13**	**08**	**04.0**	**-0.2**
	baz=302									
ETL				*i* S		**Sg**	**13**	**08**	**06.2**	**+0.2**
	baz=302									
TWD	**Chiawan**	**0.14**	**268**	P		**Pg**	**13**	**08**	**03.9**	**-0.4**
	baz=275									
TWD				*i* S		**Sg**	**13**	**08**	**06.4**	**+0.3**
	baz=275									
NACB	**Ninganchiao**	**0.17**	**302**	⇓*i*P		**Pg**	**13**	**08**	**04.5**	**-0.3**
	baz=302									
NACB				*i* S		**Sg**	**13**	**08**	**07.1**	**+0.1**
	baz=302									
HWA	**Hwalien**	**0.17**	**231**	*eP*		**Pg**	**13**	**08**	**05.5**	**+0.6**
	baz=237									
EHP	**Heping Village**	**0.22**	**358**	P		**Pg**	**13**	**08**	**05.8**	**-0.1**
	baz=358									
EHP				S		**Sg**	**13**	**08**	**09.7**	**+0.9**
	baz=358									
EAHA	**Aohua**	**0.24**	**358**	P		**Pg**	**13**	**08**	**06.1**	**-0.1**
	baz=355									
EAHA				S		**Sg**	**13**	**08**	**10.5**	**+1.0**
	baz=355									
ETM	**Tongmen**	**0.26**	**243**	P		**Pg**	**13**	**08**	**06.5**	**-0.1**
	baz=247									
ETM				*e*S		**Sg**	**13**	**08**	**10.1**	**+0.1**
	baz=247									
ETLH	**Xiulin Townshi**	**0.27**	**296**	P		**Pg**	**13**	**08**	**06.7**	**-0.1**
	baz=296									
ETLH				*i* S		**Sg**	**13**	**08**	**10.8**	**+0.4**
	baz=296									
LXIB	**Xiulin Townshi**	**0.31**	**258**	P		**Pg**	**13**	**08**	**07.3**	**-0.3**
	baz=252									
LXIB				*e*S		**Sg**	**13**	**08**	**12.0**	**+0.2**
	baz=252									
ENA	**Nanau**	**0.34**	**359**	⇓*i*P		**Pg**	**13**	**08**	**08.0**	**-0.1**
	baz=357									
ENA				S		**Sg**	**13**	**08**	**13.0**	**+0.5**
	baz=357									
SHUL	**Shoufeng**	**0.34**	**210**	*eP*		**Pb**	**13**	**08**	**09.1**	**-1.1**
	baz=215									
SHUL				*e*S		**Sb**	**13**	**08**	**15.4**	**-0.6**
	baz=215									
EWUT	**Wuta**	**0.36**	**4**	⇓*i*P		**Pg**	**13**	**08**	**08.4**	**-0.1**
	baz=360									
ESL	**Shilin**	**0.40**	**227**	*eP*		**Pg**	**13**	**08**	**09.0**	**-0.2**
	baz=240									
ESL				*e*S		**Sg**	**13**	**08**	**14.7**	**+0.4**
	baz=240									
TEGC	**Jichi Village**	**0.42**	**207**	*eP*		**Pg**	**13**	**08**	**10.3**	**+0.7**
	baz=212									
TEGC				*e*S		**Sb**	**13**	**08**	**18.8**	**+0.5**
	baz=212									
WHF	**Hehuan Shan**	**0.45**	**278**	*eP*		**Pg**	**13**	**08**	**10.1**	**-0.1**
	baz=279									
WHF				S		**Sg**	**13**	**08**	**15.8**	**-0.3**
	baz=279									
NNSB	**Datong**	**0.48**	**316**	⇓P		**Pg**	**13**	**08**	**10.6**	**-0.1**
	baz=314									
NNSB				*e*S		**Sg**	**13**	**08**	**16.6**	**-0.4**
	baz=314									
NNSH	**Datong**	**0.48**	**316**	⇓*i*P		**Pg**	**13**	**08**	**10.6**	**-0.1**
	baz=313									
NNSH				*e*S		**Sg**	**13**	**08**	**16.7**	**-0.2**
	baz=313									
FUSS	**Fushou**	**0.49**	**289**	*eP*		**Pg**	**13**	**08**	**11.0**	**+0.1**
	baz=288									
LATG	**Datong**	**0.49**	**336**	P		**Pg**	**13**	**08**	**11.0**	**0.0**
	baz=333									
LATG				*e*S		**Sg**	**13**	**08**	**17.7**	**+0.2**
	baz=333									
NNS	**Nan Shan**	**0.49**	**316**	*i* P		**Pg**	**13**	**08**	**10.9**	**-0.1**
	baz=315									
NNS				*i* S		**Sg**	**13**	**08**	**17.6**	**+0.2**
	baz=315									
WARBT	**Fenglin Townsh**	**0.49**	**222**	*eP*		**Pg**	**13**	**08**	**10.8**	**-0.2**
	baz=236									
WARBT				*e*S		**Sg**	**13**	**08**	**18.0**	**+0.5**
	baz=236									
ESAO	**Su ao**	**0.50**	**10**	*eP*		**Pg**	**13**	**08**	**11.0**	**0.0**
	baz=360									
ESAO				*e*S		**Sg**	**13**	**08**	**18.7**	**+1.2**
	baz=360									
EGFH	**Guangfu**	**0.51**	**215**	*eP*		**Pb**	**13**	**08**	**12.1**	**-0.9**
	baz=231									
CHGB	**Renai**	**0.53**	**267**	⇑P		**Pg**	**13**	**08**	**11.6**	**0.0**
	baz=270									
CHGB				S		**Sg**	**13**	**08**	**18.6**	**+0.1**
	baz=270									
TWC	**Suao**	**0.53**	**10**	*eP*		**Pg**	**13**	**08**	**11.8**	**+0.1**
	baz=358									
TWC				*e*S		**Sg**	**13**	**08**	**19.4**	**+0.8**
	baz=358									
OWD	**Renai**	**0.54**	**256**	*eP*		**Pg**	**13**	**08**	**11.8**	**-0.1**
	baz=260									
OWD				S		**Sg**	**13**	**08**	**19.1**	**+0.1**
	baz=260									
NDS	**Dongshan**	**0.55**	**357**	P		**Pg**	**13**	**08**	**12.0**	**-0.1**
	baz=353									
NDS				*e*S		**Sg**	**13**	**08**	**19.3**	**+0.1**
	baz=353									
TWT	**Tachien**	**0.55**	**288**	*eP*		**Pb**	**13**	**08**	**12.7**	**-1.2**
	baz=288									
TWT				S		**Sg**	**13**	**08**	**19.9**	**+0.7**
	baz=288									
NDT	**Datong Townshi**	**0.56**	**337**	⇓*i*P		**Pg**	**13**	**08**	**12.3**	**+0.1**
	baz=334									
NDT				*e*S		**Sb**	**13**	**08**	**20.7**	**-1.6**
	baz=334									
TDCB	**Techi**	**0.56**	**287**	*eP*		**Pg**	**13**	**08**	**12.6**	**+0.2**
	baz=288									
TDCB				*e*S		**Sg**	**13**	**08**	**19.8**	**0.0**
	baz=288									
ENTT	**Nioudou**	**0.58**	**343**	⇓*i*P		**Pg**	**13**	**08**	**12.6**	**0.0**
	baz=340									
ENTT				*e*S		**Sg**	**13**	**08**	**21.2**	**+1.0**
	baz=340									
WUSB	**Renai**	**0.58**	**261**	P		**Pg**	**13**	**08**	**12.9**	**+0.1**
	baz=263									
WUSB				S		**Sg**	**13**	**08**	**20.7**	**+0.3**
	baz=263									
TWE	**Neicheng**	**0.64**	**353**	*eP*		**Pg**	**13**	**08**	**14.0**	**+0.3**
	baz=352									
TWE				S		**Sg**	**13**	**08**	**23.0**	**+1.0**
	baz=352									
HGSD	**Ruisui**	**0.66**	**207**	*eP*		**Pb**	**13**	**08**	**15.3**	**-0.4**
	baz=199									
YHNB	**Yeheng**	**0.67**	**330**	*eP*		**Pg**	**13**	**08**	**14.6**	**+0.1**
	baz=328									
YHNB				*e*S		**Sg**	**13**	**08**	**24.0**	**+0.7**
	baz=328									
ILA	**Ilan**	**0.68**	**360**	*eP*		**Pb**	**13**	**08**	**15.3**	**-0.7**
	baz=344									
FUSB	**Fushanzhiwuyua**	**0.69**	**348**	*eP*		**Pg**	**13**	**08**	**15.0**	**+0.3**
	baz=336									
FUSB				S		**Sb**	**13**	**08**	**24.7**	**-1.5**
	baz=336									
NSK	**Sanguang**	**0.69**	**329**	P		**Pg**	**13**	**08**	**14.9**	**+0.1**
	baz=327									
NSK				S		**Sg**	**13**	**08**	**24.5**	**+0.8**
	baz=327									
EHY	**Hungye**	**0.70**	**214**	*eP*		**Pg**	**13**	**08**	**15.1**	**+0.2**
	baz=219									
NWLT	**Wulai**	**0.72**	**342**	P		**Pg**	**13**	**08**	**15.5**	**0.0**
	baz=339									
NWLT				*e*S		**Sb**	**13**	**08**	**25.8**	**-1.3**
	baz=339									
WPL	**Puli Township**	**0.73**	**264**	P		**Pg**	**13**	**08**	**15.4**	**-0.1**
	baz=266									
WPL				S		**Sg**	**13**	**08**	**24.9**	**-0.1**
	baz=266									
DPDB	**Guoxing**	**0.75**	**266**	*eP*		**Pb**	**13**	**08**	**16.3**	**-1.0**
	baz=267									
WHP	**Taichung City**	**0.76**	**285**	*eP*		**Pb**	**13**	**08**	**16.6**	**-0.8**
	baz=285									
WHP				*e*S		**Sb**	**13**	**08**	**27.0**	**-1.2**
	baz=285									
WCS	**Beigang Elemen**	**0.77**	**268**	*eP*		**Pg**	**13**	**08**	**16.3**	**+0.1**
	baz=262									
WCS				S		**Sg**	**13**	**08**	**26.4**	**+0.3**
	baz=262									
SSLB	**Suanglung**	**0.79**	**248**	P		**Pg**	**13**	**08**	**16.6**	**0.0**
	baz=262									
SSLB				*e*S		**Sg**	**13**	**08**	**27.4**	**+0.6**
	baz=262									
NFF	**Wufeng Townshi**	**0.79**	**313**	*eP*		**Pg**	**13**	**08**	**16.8**	**0.0**
	baz=312									
NFF				*e*S		**Sb**	**13**	**08**	**28.3**	**-0.9**
	baz=312									
SMLT	**Sun Moon Lake**	**0.80**	**256**	P		**Pg**	**13**	**08**	**17.1**	**+0.2**
	baz=258									
SMLT				S		**Sg**	**13**	**08**	**27.9**	**+0.5**
	baz=258									
YULB	**Yu-li**	**0.81**	**211**	*eP*		**Pg**	**13**	**08**	**17.3**	**+0.3**
	baz=230									
YULB				*e*S		**Sb**	**13**	**08**	**30.0**	**+0.6**
	baz=230									
ECBN	**Changbin**	**0.81**	**200**	*eP*		**Pg**	**13**	**08**	**17.1**	**0.0**
	baz=205									
ECBN				*e*S		**Sb**	**13**	**08**	**29.8**	**+0.2**
	baz=205									
EYUL	**Yuli**	**0.83**	**208**	*eP*		**Pb**	**13**	**08**	**18.1**	**-0.5**
	baz=229									
TYC	**Yuchr**	**0.84**	**258**	*eP*		**Pg**	**13**	**08**	**17.5**	**-0.1**
	baz=261									
TYC				S		**Sg**	**13**	**08**	**28.0**	**-0.4**
	baz=261									
TWF1	**Yuli**	**0.84**	**210**	*eP*		**Pb**	**13**	**08**	**17.9**	**-0.8**
	baz=228									
LIOB	**Emei**	**0.87**	**310**	*eP*		**Pb**	**13**	**08**	**18.8**	**-0.4**
	baz=309									
LIOB				*e*S		**Sb**	**13**	**08**	**32.3**	**+0.9**
	baz=309									
NSTT	**Nanjuang**	**0.87**	**309**	*eP*		**Pb**	**13**	**08**	**19.1**	**-0.2**
	baz=308									
NSTT				*e*S		**Sb**	**13**	**08**	**32.2**	**+0.9**
	baz=308									
NJD	**Zhudong**	**0.89**	**317**	*eP*		**Pb**	**13**	**08**	**19.4**	**-0.1**
	baz=313									
TIPB	**Shuangxi**	**0.89**	**4**	P		**Pg**	**13**	**08**	**18.7**	**+0.2**
TIPB						S	**Sg**	**13**	**08**	**30.2**	**+0.2**
NHDH	**Xindian Distri**	**0.90**	**347**	*eP*		**Pb**	**13**	**08**	**19.4**	**-0.3**
	baz=343									
NHDH				*e*S		**Sb**	**13**	**08**	**31.2**	**-0.8**
	baz=343									
TWA	**Mucha**	**0.90**	**350**	*eP*		**Pb**	**13**	**08**	**19.4**	**-0.5**
	baz=344									
WHYT	**Xinyi Township**	**0.91**	**245**	*eP*		**Pb**	**13**	**08**	**19.1**	**-0.8**
	baz=257									
WHYT				*e*S		**Sb**	**13**	**08**	**31.9**	**-0.5**
	baz=257									
TATO	**Taipei**	**0.92**	**345**	P		**Pg**	**13**	**08**	**19.2**	**+0.1**
	baz=332									
TATO				*e*S		**Sb**	**13**	**08**	**32.3**	**-0.3**
	baz=332									
TWQ1	**Liyutan**	**0.93**	**287**	*eP*		**Pb**	**13**	**08**	**20.4**	**+0.2**
	baz=286									
TWB1	**Santiao Chiao**	**0.94**	**13**	*eP*		**Pb**	**13**	**08**	**20.1**	**-0.4**
	baz=1.0									
TWB1				*e*S		**Sb**	**13**	**08**	**33.9**	**+0.4**
	baz=1.0									
CHKH	**Chenggong**	**0.95**	**200**	*eP*		**Pg**	**13**	**08**	**19.4**	**-0.3**
	baz=194									
BACT	**New Taipei Cit**	**0.95**	**343**	*eP*		**Pb**	**13**	**08**	**20.6**	**0.0**
	baz=336									
HSN1	**Hsinchu**	**0.96**	**316**	*eP*		**Pb**	**13**	**08**	**21.1**	**+0.3**
	baz=312									
NSY	**Sanyi**	**0.96**	**290**	*eP*		**Pn**	**13**	**08**	**21.6**	**-0.3**
	baz=289									
WWF	**Wufeng**	**0.96**	**268**	*eP*		**Pn**	**13**	**08**	**21.1**	**-0.7**
	baz=264									
WWF				*e*S		**Sn**	**13**	**08**	**35.3**	**-0.8**
	baz=264									
WJS	**Zhushan**	**0.97**	**255**	*eP*		**Pb**	**13**	**08**	**21.1**	**+0.2**
	baz=258									
WJS				*e*S		**Sb**	**13**	**08**	**34.7**	**+0.5**
	baz=258									
TAP	**Taipei**	**0.97**	**347**	*eP*		**Pb**	**13**	**08**	**21.2**	**+0.1**
	baz=340									
FULB	**Fuli**	**0.98**	**205**	*eP*		**Pb**	**13**	**08**	**20.9**	**-0.1**
	baz=226									
NWF	**Wu-fen Shan**	**0.98**	**2**	*eP*		**Pb**	**13**	**08**	**20.9**	**-0.3**
	baz=350									
NWF				*e*S		**Sg**	**13**	**08**	**33

	baz=350								
NTST				*e*S		**Sn**	**13 08 39.4**	**-0.3**	
	baz=350								
ANP	**Anpu**	**1.12**	**349**	*e*P		**Pb**	**13 08 23.6**	**0.0**	
	baz=345								
ANP				*e*S		**Sb**	**13 08 38.4**	**-0.1**	
	baz=345								
NWRT	**Kuosheng**	**1.12**	**356**	*e*P		**Pb**	**13 08 23.1**	**-0.3**	
	baz=342								
NWRT				*e*S		**Sn**	**13 08 39.7**	**-0.2**	
	baz=342								
ELDTW	**Lidau**	**1.12**	**217**	*e*P		**Pg**	**13 08 22.5**	**-0.4**	
	baz=211								
ELDTW				*e*S		**Sb**	**13 08 38.0**	**-0.5**	
	baz=211								
NHW	**Xinwu Township**	**1.12**	**325**	*e*P		**Pb**	**13 08 23.6**	**+0.1**	
	baz=322								
NHW				*e*S		**Sn**	**13 08 40.3**	**+0.3**	
	baz=322								
JYNG	**Yonagunijimaku**	**1.15**	**71**	P		**Pn**	**13 08 24.4**	**-0.1**	
JYNG				S		**Sn**	**13 08 40.4**	**-0.3**	
WGK	**Gukeng**	**1.16**	**250**	*e*P		**Pn**	**13 08 24.3**	**-0.2**	
	baz=255								
WGK				*e*S		**Sn**	**13 08 40.9**	**0.0**	
	baz=255								
WDLH	**Douliu**	**1.18**	**251**	*e*P		**Pb**	**13 08 24.2**	**-0.2**	
	baz=256								
WDLH				S		**Sn**	**13 08 42.0**	**+0.6**	
	baz=256								
EDH	**Donghe**	**1.18**	**200**	*e*P		**Pg**	**13 08 23.4**	**-0.8**	
	baz=208								
EDH				*e*S		**Sg**	**13 08 39.2**	**-0.3**	
	baz=208								
TWY	**Chenhua**	**1.19**	**353**	*e*P		**Pn**	**13 08 25.3**	**+0.3**	
	baz=330								
NSM	**Shimen**	**1.21**	**353**	*e*P		**Pg**	**13 08 24.5**	**-0.1**	
	baz=331								
YOJ	**Yonaguni jima**	**1.21**	**72**	*e*P		**Pn**	**13 08 25.4**	**+0.1**	
	baz=74								
YOJ	**Yonaguni jima**	**1.21**	**72**	P		**Pb**	**13 08 25.2**	**+0.2**	
YOJ				S		**Sn**	**13 08 42.0**	**-0.2**	
WCKO	**Fanlu**	**1.23**	**239**	*e*P		**Pg**	**13 08 24.7**	**-0.4**	
	baz=237								
WCKO				*e*S		**Sn**	**13 08 43.0**	**+0.3**	
	baz=237								
WRL	**Guolierlin Hig**	**1.27**	**262**	*e*P		**Pb**	**13 08 25.8**	**-0.3**	
	baz=266								
WRL				*e*S		**Sn**	**13 08 44.5**	**+0.9**	
	baz=266								
STYH	**Taoyuan**	**1.28**	**225**	*e*P		**Pg**	**13 08 25.2**	**-0.8**	
	baz=232								
STYH				*e*S		**Sb**	**13 08 42.6**	**-0.3**	
	baz=232								
RLNB	**Erlin**	**1.29**	**262**	*e*P		**Pb**	**13 08 26.0**	**-0.3**	
	baz=266								
RLNB				S		**Sn**	**13 08 44.5**	**+0.5**	
	baz=266								
CHN4	**Tsaushan**	**1.29**	**236**	*e*P		**Pn**	**13 08 26.3**	**-0.1**	
	baz=242								
CHN4				*e*S		**Sn**	**13 08 44.4**	**+0.3**	
	baz=242								
TPUB	**Ta-pu**	**1.29**	**233**	*e*P		**Pn**	**13 08 26.3**	**-0.1**	
	baz=240								
TPUB				*e*S		**Sn**	**13 08 44.7**	**+0.5**	
	baz=240								
STYT	**Tauyuan**	**1.29**	**225**	*e*P		**Pg**	**13 08 25.8**	**-0.5**	
	baz=221								
LONT	**Longtian**	**1.30**	**206**	*e*P		**Pg**	**13 08 24.0**	**-2.5**	
	baz=215								
WTK	**Tuku**	**1.31**	**253**	*e*P		**Pb**	**13 08 26.4**	**-0.3**	
	baz=258								
WTK				*e*S		**Sn**	**13 08 45.9**	**+1.4**	
	baz=258								
WTP	**Ta-pu**	**1.33**	**231**	*e*P		**Pg**	**13 08 26.8**	**-0.3**	
	baz=238								
WTCT	**Ta-ch'eng**	**1.36**	**261**	*e*P		**Pn**	**13 08 27.2**	**-0.1**	
	baz=264								
TWG	**Pinlang**	**1.40**	**206**	*e*P		**Pb**	**13 08 29.0**	**+0.7**	
	baz=216								
TWGBT	**Beinan**	**1.40**	**206**	*e*P		**Pn**	**13 08 26.3**	**-1.7**	
	baz=216								
TWK	**Hsinying**	**1.42**	**235**	*e*P		**Pn**	**13 08 27.8**	**-0.4**	
	baz=241								
LDUT	**Ludao**	**1.43**	**190**	*e*P		**Pn**	**13 08 26.7**	**-1.6**	
	baz=181								
CHN1	**Nanshi**	**1.44**	**232**	*e*P		**Pb**	**13 08 28.8**	**-0.1**	
	baz=239								
CHN1				*e*S		**Sn**	**13 08 49.7**	**+1.9**	
	baz=239								
SNST	**Tainan City**	**1.44**	**233**	*e*P		**Pb**	**13 08 30.0**	**+1.1**	
	baz=240								
SNST				*e*S		**Sn**	**13 08 49.2**	**+1.5**	
	baz=240								
SGST	**Jiashian**	**1.46**	**227**	*e*P		**Pn**	**13 08 28.0**	**-0.8**	
	baz=235								
SGST				*e*S		**Sn**	**13 08 48.9**	**+0.4**	
	baz=235								
WSF	**Szhu**	**1.47**	**253**	*e*P		**Pn**	**13 08 28.2**	**-0.6**	
	baz=258								
WSF				*e*S		**Sn**	**13 08 50.3**	**+1.8**	
	baz=258								
SLGT	**Liugui**	**1.48**	**223**	*e*P		**Pg**	**13 08 29.6**	**-0.4**	
	baz=232								
SLGT				S		**Sn**	**13 08 50.9**	**+1.8**	
	baz=232								
WSL	**Shuilin Townsh**	**1.50**	**248**	*e*P		**Pb**	**13 08 29.7**	**-0.3**	
	baz=254								
WSL				*e*S		**Sn**	**13 08 52.4**	**+3.0**	
	baz=254								
ICHU	**Yijhu**	**1.53**	**242**	*e*P		**Pb**	**13 08 30.2**	**-0.2**	
	baz=248								
ICHU				*e*S		**Sg**	**13 08 52.8**	**+2.1**	
	baz=248								
CHN8	**Yiju**	**1.59**	**243**	*e*P		**Pb**	**13 08 31.3**	**-0.2**	
	baz=248								
SSHA	**Shanhua**	**1.64**	**235**	*e*P		**Pb**	**13 08 31.8**	**-0.6**	
	baz=241								
ECL	**Taimali**	**1.65**	**206**	*e*P		**Pn**	**13 08 31.7**	**+0.3**	
	baz=204								
SCST	**Cishan**	**1.66**	**224**	*e*P		**Pg**	**13 08 33.1**	**-0.3**	
	baz=232								
SSD	**Sandimen**	**1.68**	**218**	*e*P		**Pn**	**13 08 31.0**	**-0.8**	
	baz=217								
TSMG	**Majia**	**1.71**	**217**	*e*P		**Pn**	**13 08 32.2**	**0.0**	
	baz=217								
MASBT	**Mashibuluo**	**1.79**	**215**	*e*P		**Pn**	**13 08 33.3**	**0.0**	
	baz=216								
EAST	**Anshuo**	**1.89**	**206**	*e*P		**Pn**	**13 08 35.3**	**+0.6**	
	baz=207								
TAWH	**Dawu Township**	**1.91**	**205**	*e*P		**Pn**	**13 08 35.2**	**+0.3**	
	baz=204								
SCZT	**Fangliau**	**2.00**	**212**	*e*P		**Pn**	**13 08 35.8**	**-0.3**	
	baz=208								
PHUB	**P'eng-hu**	**2.07**	**255**	*e*P		**Pn**	**13 08 37.4**	**+0.3**	
	baz=259								
PHUB				*e*S		**Sn**	**13 09 03.9**	**+0.4**	
	baz=259								
PNG	**Penghu**	**2.08**	**256**	*e*P		**Pn**	**13 08 37.2**	**0.0**	
	baz=260								

IDC 07 13:11:04.8±450.0, 56.78N×32.12E, h0km, Error ellipse: s-maj=182.9km s-min=65.2km az=86.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**2.81**	**89**	I	I	13 32 12.6	
	0.4nm,0.6s,baz=273,slow=306,SNR=2.1						
I37NO	**I37NO**	**13.73**	**339**	I	I	14 31 22.9	
	baz=144,slow=329,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**16.59**	**102**	I	I	14 40 30.0	
	baz=301,slow=326,SNR=1.1						

TAP 07 13:25:41.1, 23.89N×121.54E, h19km, ML1.4, 2C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.09**	**333**	*i* P	Pg	13 25 44.7	-0.3
	baz=333						
ETM				*i* S	Sg	13 25 47.3	-0.2
	baz=333						
SHUL	**Shoufeng**	**0.10**	**166**	P	Pg	13 25 45.0	0.0
	baz=166						
SHUL				*e*S	Sg	13 25 48.8	+1.2
	baz=166						
HWA	**Hwalien**	**0.11**	**34**	P	Pg	13 25 45.2	+0.1
	baz=38						
HWA				*e*S	Sg	13 25 48.6	+0.8
	baz=38						
ESL	**Shilin**	**0.12**	**233**	P	Pg	13 25 44.8	-0.4
	baz=230						
ESL				S	Sg	13 25 47.5	-0.4
	baz=230						
LXIB	**Xiulin Townshi**	**0.18**	**320**	⇑*i* P	Pg	13 25 45.7	-0.4
	baz=320						
LXIB				*i* S	Sg	13 25 49.2	-0.2
	baz=320						
TWD	**Chiawan**	**0.20**	**16**	P	Pg	13 25 46.0	-0.2
	baz=17						
TWD				S	Sg	13 25 49.7	0.0
	baz=17						
WARBT	**Fenglin Townsh**	**0.22**	**220**	⇑P	Pb	13 25 46.2	+0.1
	baz=219						
WARBT				S	Sg	13 25 49.8	-0.3
	baz=219						
EGFH	**Guangfu**	**0.24**	**205**	P	Pg	13 25 46.7	0.0
	baz=204						
EGFH				S	Sg	13 25 51.0	+0.4
	baz=204						
ETL	**Fush Village**	**0.28**	**16**	P	Pg	13 25 47.2	-0.3
	baz=16						
ETL				*e*S	Sg	13 25 52.3	+0.4
	baz=16						
NACB	**Ninganchiao**	**0.29**	**10**	*e*P	Pg	13 25 47.2	-0.4
	baz=10.0						
NACB				*i* S	Sb	13 25 52.1	0.0
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.32**	**351**	P	Pg	13 25 47.8	-0.5
	baz=351						
ETLH				S	Sg	13 25 52.8	-0.3
	baz=351						
OWD	**Renai**	**0.34**	**282**	*i* P	Pg	13 25 48.2	-0.3
	baz=281						
OWD				*i* S	Sg	13 25 53.3	-0.2
	baz=281						
WHF	**Hehuan Shan**	**0.36**	**316**	⇓P	Pg	13 25 48.6	-0.4
	baz=316						
WHF				*i* S	Sg	13 25 53.8	-0.5
	baz=316						
CHGB	**Renai**	**0.38**	**298**	P	Pg	13 25 49.1	-0.1
	baz=297						
CHGB				S	Sg	13 25 54.7	0.0
	baz=297						
WUSB	**Renai**	**0.40**	**286**	*e*P	Pb	13 25 49.7	0.0
	baz=285						
WUSB				*e*S	Sg	13 25 55.3	+0.1
	baz=285						
EHY	**Hungye**	**0.43**	**208**	*e*P	Pb	13 25 50.0	0.0
	baz=206						
EHY				*e*S	Sg	13 25 55.6	-0.3
	baz=206						
FUSS	**Fushou**	**0.45**	**323**	*i* P	Pg	13 25 50.0	-0.5
	baz=323						
FUSS				S	Sg	13 25 56.8	0.0
	baz=323						
EAHA	**Aohua**	**0.48**	**23**	*i* P	Pg	13 25 50.5	-0.4
	baz=22						
SSLB	**Suanglung**	**0.54**	**260**	P	Pb	13 25 51.8	-0.1
	baz=259						
SSLB				S	Sb	13 25 59.0	-0.3
	baz=259						
NNSB	**Datong**	**0.56**	**345**	P	Pb	13 25 52.2	-0.1
	baz=345						
EYUL	**Yuli**	**0.57**	**201**	*e*P	Pb	13 25 51.5	-0.9
	baz=200						
LATG	**Datong**	**0.65**	**359**	*i* P	Pb	13 25 53.4	-0.4
	baz=358						
WJS	**Zhushan**	**0.74**	**265**	*e*P	Pb	13 25 54.3	-1.1
	baz=265						
WJS				S	Sb	13 26 04.8	-0.4
	baz=265						
YHNB	**Yeheng**	**0.80**	**349**	*i* P	Pb	13 25 55.7	-0.6
	baz=349						
NSK	**Sanguang**	**0.80**	**348**	P	Pb	13 25 55.5	-1.0
	baz=348						

TAP 07 13:25:52.3, 24.08N×121.66E, h8km, ML1.4, 1C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**268**	P	Pg	13 25 54.1	0.0
	baz=268						
TWD				S	Sg	13 25 55.4	+0.1
	baz=268						
ETL	**Fush Village**	**0.08**	**338**	P	Pg	13 25 54.6	+0.1
	baz=337						
ETL				S	Sg	13 25 56.1	+0.1
	baz=337						
NACB	**Ninganchiao**	**0.11**	**328**	P	Pg	13 25 54.9	+0.1
	baz=327						
NACB				*i* S	Sg	13 25 56.6	0.0
	baz=327						
HWA	**Hwalien**	**0.12**	**204**	*e*P	Pg	13 25 54.0	-0.9
	baz=200						
HWA				*e*S	Sg	13 25 55.6	-1.1
	baz=200						
ETM	**Tongmen**	**0.19**	**232**	*e*P	Pg	13 25 55.1	-1.1
	baz=232						
ETM				*e*S	Sg	13 25 58.8	0.0
	baz=232						
ETLH	**Xiulin Townshi**	**0.20**	**308**	⇑*i* P	Pg	13 25 56.5	0.0
	baz=307						
ETLH				S	Sg	13 25 59.3	0.0
	baz=307						
LXIB	**Xiulin Townshi**	**0.23**	**255**	*e*P	Pg	13 25 57.3	+0.4
	baz=254						
LXIB				*i* S	Sg	13 26 00.3	+0.2
	baz=254						
EAHA	**Aohua**	**0.26**	**17**	P	Pg	13 25 57.1	-0.3
	baz=16						
EAHA				S	Sg	13 26 00.8	-0.1
	baz=16						
SHUL	**Shoufeng**	**0.31**	**196**	P	Pg	13 25 58.5	+0.2
	baz=196						
ESL	**Shilin**	**0.34**	**218**	*i* P	Pg	13 25 58.8	-0.1
	baz=216						
ESL				*e*S	Sg	13 26 04.2	+0.9
	baz=216						
ENA	**Nanau**	**0.35**	**13**	⇓*i* P	Pg	13 25 59.1	-0.1
	baz=13						
ENA				S	Sg	13 26 04.0	+0.1
	baz=13						
WHF	**Hehuan Shan**	**0.36**	**280**	*e*P	Pg	13 25 59.6	+0.1
	baz=279						
WHF				*i* S	Sg	13 26 04.3	-0.1
	baz=279						
EWUT	**Wuta**	**0.38**	**17**	P	Pg	13 25 59.7	0.0
	baz=17						
EWUT				*e*S	Sg	13 26 04.5	-0.2
	baz=17						
FUSS	**Fushou**	**0.41**	**294**	*i* P	Pg	13 26 00.2	-0.2
	baz=293						
FUSS				S	Sg	13 26 06.3	+0.5
	baz=293						
NNSB	**Datong**	**0.43**	**324**	*e*P	Pg	13 25 59.9	-0.7
	baz=323						
NNSB				*i* S	Sg	13 26 06.5	+0.3
	baz=323						
WARBT	**Fenglin Townsh**	**0.44**	**214**	*e*P	Pb	13 26 01.7	-0.6
	baz=214						
WARBT				*e*S	Sb	13 26 09.0	0.0
	baz=214						
NNS	**Nan Shan**	**0.44**	**324**	*i* P	Pg	13 26 00.8	-0.2
	baz=324						
NNS				*e*S	Sg	13 26 07.3	+0.5
	baz=324						
CHGB	**Renai**	**0.44**	**267**	*e*P	Pg	13 26 00.2	-0.7
	baz=267						
CHGB				S	Sg	13 26 06.8	+0.1
	baz=267						
OWD	**Renai**	**0.46**	**254**	P	Pg	13 26 00.8	-0.4
	baz=253						
LATG	**Datong**	**0.47**	**345**	P	Pg	13 26 01.6	+0.2
	baz=345						
LATG				*i* S	Sg	13 26 08.0	+0.4
	baz=345						
TDCB	**Techi**	**0.49**	**291**	*e*P	Pg	13 26 01.1	-0.6
	baz=290						
TDCB				S	Sg	13 26 08.7	+0.5
	baz=290						
WUSB	**Renai**	**0.50**	**260**	*e*P	Pg	13 26 01.3	-0.7
	baz=259						
WUSB				S	Sg	13 26 08.9	+0.3
	baz=259						
NDT	**Datong Townshi**	**0.54**	**346**	*e*P	Pg	13 26 03.0	+0.4
	baz=345						
YHNB	**Yeheng**	**0.64**	**336**	*e*P	Pg	13 26 05.1	+0.5
	baz=336						
YHNB				S	Sg	13 26 13.2	+0.2
	baz=336						
NSK	**Sanguang**	**0.65**	**335**	*e*P	Pb	13 26 05.4	-0.5
	baz=335						
NSK				S	Sg	13 26 13.7	+0.3
	baz=335						
WHP	**Taichung City**	**0.68**	**287**	⇓P	Pg	13 26 04.9	-0.4
	baz=286						
WHP				*e*S	Sb	13 26 15.7	-0.3
	baz=286						
NWLT	**Wulai**	**0.71**	**349**	P	Pg	13 26 05.5	-0.4
	baz=348						
NWLT				*i* S	Sg	13 26 15.4	+0.3
	baz=348						
SSLB	**Suanglung**	**0.71**	**246**	P	Pg	13 26 05.4	-0.5
	baz=245						
SSLB				*i* S	Sg	13 26 15.5	+0.4
	baz=245						
TWA	**Mucha**	**0.90**	**356**	*i* P	Pg	13 26 09.0	-0.5
	baz=356						
TWA				S	Sg	13 26 21.6	+0.4
	baz=356						

TAP 07 13:29:58.4, 24.12N×121.65E, h10km, ML0.9, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**326**	*i* P	Pg	13 30 00.9	+0.5
	baz=325						
ETL				*i* S	Sg	13 30 02.5	+0.8
	baz=325						
TWD	**Chiawan**	**0.07**	**229**	*i* P	Pg	13 30 01.1	+0.5
	baz=224						
TWD				S	Sg	13 30 03.0	+1.0
	baz=224						
NACB	**Ninganchiao**	**0.07**	**316**	⇑*i* P	Pg	13 30 01.2	+0.6
	baz=315						
NACB				*i* S	Sg	13 30 03.2	+1.0
	baz=315						
ETLH	**Xiulin Townshi**	**0.17**	**299**	P	Pg	13 30 03.4	+1.1
	baz=298						
ETLH				S	Sg	13 30 06.6	+1.8
	baz=298						
ETM	**Tongmen**	**0.21**	**222**	*e*P	Pg	13 30 03.4	+0.6
	baz=222						
ETM				*e*S	Sg	13 30 07.3	+1.5
	baz=222						
LXIB	**Xiulin Townshi**	**0.24**	**245**	P	Pg	13 30 04.1	+0.7
	baz=244						
LXIB				S	Sg	13 30 08.8	+2.2
	baz=244						
NNSB	**Datong**	**0.39**	**321**	*i* P	Pb	13 30 07.2	-0.4
	baz=321						
NNS	**Nan Shan**	**0.40**	**321**	*i* P	Pb	13 30 07.4	-0.4
	baz=321						
NNS				*i* S	Sb	13 30 13.8	-0.4
	baz=321						
LATG	**Datong**	**0.42**	**345**	P	Pb	13 30 08.0	-0.2
	baz=344						
WARBT	**Fenglin Townsh**	**0.47**	**211**	*i* P	Pb	13 30 08.6	-0.3
	baz=210						
WARBT				S	Sb	13 30 16.2	+0.3
	baz=210						

*JMA **07** 13:32:36.7±0.1, 25°N±1°×122°6E±0°3, h135km±1km, MV2.7/19, NW OFF ISHIGAKUJIMA IS*
*TAP **07** 13:32:36.9, 24°96N×122°60E, h132km, ML3.6, C*
ISC 07 13:32:36.3±1.3, 24°93N±0°04×122°60E±0°02, h139km±6km, n128, σ0°95/245, 3C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.56**	**279**	*i* P	**Pn**	**13 32 57.0**	**+0.3**
	baz=275						
TWB1				*e*S	**Sn**	**13 33 12.1**	**-0.1**
	baz=275						
JYNG	**Yonagunijimaku**	**0.57**	**146**	P	**Pn**	**13 32 56.7**	**-0.1**
JYNG				S	**Sn**	**13 33 11.8**	**-0.5**
YOJ	**Yonaguni jima**	**0.59**	**141**	P	**Pn**	**13 32 56.9**	**-0.1**
	baz=151						
YOJ				*e*S	**Sn**	**13 33 12.7**	**+0.2**
	baz=151						
YOJ	**Yonaguni jima**	**0.59**	**141**	*e*P	**Pn**	**13 32 56.8**	**-0.1**
YOJ				*e*S	**Sn**	**13 33 12.3**	**-0.3**
EOS2	**EOS2**	**0.60**	**214**	*e*P	**Pn**	**13 32 59.0**	**+2.2**
	baz=211						
EOS2				*e*S	**Sn**	**13 33 12.9**	**+0.4**
	baz=211						
SXI1	**Grass Mountain**	**0.68**	**285**	P	**Pn**	**13 32 57.9**	**+0.4**
	baz=281						
SXI1				*e*S	**Sn**	**13 33 12.8**	**-0.9**
	baz=281						
EOS3	**EOS3**	**0.69**	**202**	*e*P	**Pn**	**13 32 57.9**	**+0.5**
	baz=210						
EOS3				*e*S	**Sn**	**13 33 14.9**	**+1.6**
	baz=210						
NTC	**Toucheng**	**0.70**	**264**	*e*S	**Sn**	**13 33 15.9**	**+2.1**
	baz=261						
TIPB	**Shuangxi**	**0.70**	**274**	*i* P	**Pn**	**13 32 58.0**	**+0.3**
	baz=269						
TIPB				*i* S	**Sn**	**13 33 13.4**	**-0.5**
	baz=269						
TWC	**Suao**	**0.75**	**245**	*e*P	**Pn**	**13 32 56.2**	**-1.7**
	baz=236						
TWC				S	**Sn**	**13 33 13.6**	**-0.9**
	baz=236						
NWF	**Wu-fen Shan**	**0.76**	**281**	P	**Pn**	**13 32 58.4**	**+0.3**
	baz=278						
NWF				S	**Sn**	**13 33 14.7**	**0.0**
	baz=278						
ESAO	**Su ao**	**0.77**	**243**	*e*P	**Pn**	**13 32 56.6**	**-1.5**
	baz=236						
ESAO				S	**Sn**	**13 33 13.5**	**-1.1**
	baz=236						
EOS4	**EOS4**	**0.84**	**198**	P	**Pn**	**13 32 58.4**	**+0.2**
	baz=204						
EOS4				*e*S	**Sn**	**13 33 14.9**	**-0.1**
	baz=204						
NDS	**Dongshan**	**0.85**	**250**	*e*P	**Pn**	**13 32 58.8**	**0.0**
	baz=243						
NDS				S	**Sn**	**13 33 15.0**	**-0.8**
	baz=243						
TWE	**Neicheng**	**0.87**	**257**	*e*P	**Pn**	**13 32 59.0**	**+0.1**
	baz=254						
TWE				S	**Sn**	**13 33 15.7**	**-0.4**
	baz=254						
EWUT	**Wuta**	**0.89**	**238**	P	**Pn**	**13 32 59.6**	**+0.5**
	baz=231						
EWUT				*i* S	**Sn**	**13 33 15.8**	**-0.6**
	baz=231						
TWA	**Mucha**	**0.92**	**274**	*e*P	**Pn**	**13 32 59.7**	**+0.4**
	baz=262						
TWA				*e*S	**Sn**	**13 33 16.6**	**-0.4**
	baz=262						
ENA	**Nanau**	**0.92**	**238**	*i* P	**Pn**	**13 32 59.8**	**+0.4**
	baz=231						
ENA				S	**Sn**	**13 33 16.6**	**-0.3**
	baz=231						
FUSB	**Fushanzhiwuyua**	**0.93**	**260**	P	**Pn**	**13 32 59.7**	**+0.1**
	baz=265						
FUSB				*e*S	**Sn**	**13 33 16.2**	**-1.0**
	baz=265						
YM08	**YM08**	**0.95**	**286**	*e*P	**Pn**	**13 32 59.4**	**-0.2**
	baz=278						
YM08				*e*S	**Sn**	**13 33 17.6**	**+0.2**
	baz=278						
YM01	**YM01**	**0.96**	**283**	P	**Pn**	**13 33 00.1**	**+0.4**
	baz=276						
YM01				S	**Sn**	**13 33 17.6**	**+0.1**
	baz=276						
TWY	**Chenhua**	**0.97**	**291**	P	**Pn**	**13 33 00.1**	**+0.4**
	baz=283						
TWY				*e*S	**Sn**	**13 33 19.2**	**+1.6**
	baz=283						
NHDH	**Xindian Distri**	**0.97**	**272**	*i* P	**Pn**	**13 33 00.0**	**+0.2**
	baz=263						
NHDH				*e*S	**Sn**	**13 33 17.2**	**-0.5**
	baz=263						
ENTT	**Nioudou**	**0.98**	**253**	*i* P	**Pn**	**13 33 00.6**	**+0.7**

	baz=251										
ENTT				*e*S		**Sn**	**13 33 18.4**	**+0.6**			
	baz=251										
EAHA	**Aohua**	**0.98**	**233**	*e*P		**Pn**	**13 33 00.1**	**+0.3**			
	baz=225										
EAHA				S		**Sn**	**13 33 17.6**	**-0.2**			
	baz=225										
NWLT	**Wulai**	**1.01**	**262**	*i* P		**Pn**	**13 33 00.1**	**0.0**			
	baz=266										
NWLT				S		**Sn**	**13 33 16.8**	**-1.4**			
	baz=266										
ANP	**Anpu**	**1.01**	**285**	P		**Pn**	**13 33 00.2**	**-0.1**			
	baz=277										
NDT	**Datong Townshi**	**1.04**	**252**	P		**Pn**	**13 33 01.4**	**+1.0**			
	baz=250										
NDT				*i* S		**Sn**	**13 33 19.1**	**+0.4**			
	baz=250										
LATG	**Datong**	**1.05**	**249**	*e*P		**Pn**	**13 33 01.9**	**+1.3**			
	baz=240										
LATG				S		**Sn**	**13 33 19.2**	**+0.2**			
	baz=240										
NTST	**Danshui**	**1.07**	**283**	P		**Pn**	**13 33 01.2**	**+0.6**			
	baz=275										
NTST				*e*S		**Sn**	**13 33 16.7**	**-2.4**			
	baz=275										
TWS1	**Kuangyinshan**	**1.09**	**280**	*e*P		**Pn**	**13 33 02.6**	**+1.8**			
	baz=276										
YHNB	**Yeheng**	**1.14**	**257**	*e*P		**Pn**	**13 33 02.0**	**+0.5**			
	baz=260										
YHNB				S		**Sn**	**13 33 19.6**	**-0.9**			
	baz=260										
NSK	**Sanguang**	**1.16**	**258**	⇑P		**Pn**	**13 33 01.9**	**+0.3**			
	baz=260										
NSK				*i* S		**Sn**	**13 33 20.1**	**-0.6**			
	baz=260										
ETL	**Fush Village**	**1.17**	**230**	*e*P		**Pn**	**13 33 02.5**	**+0.8**			
	baz=223										
ETL				*e*S		**Sn**	**13 33 20.2**	**-0.8**			
	baz=223										
NACB	**Ninganchiao**	**1.18**	**231**	⇑*e*P		**Pn**	**13 33 01.9**	**+0.2**			
	baz=224										
NACB				*e*S		**Sn**	**13 33 20.4**	**-0.7**			
	baz=224										
IRIF	**Iriomote-Funau**	**1.19**	**119**	*e*P		**Pn**	**13 33 01.8**	**0.0**			
IRIF				S		**Sn**	**13 33 20.5**	**-0.7**			
NNSB	**Datong**	**1.21**	**246**	*i* P		**Pn**	**13 33 02.7**	**+0.5**			
	baz=238										
NNSB				*e*S		**Sn**	**13 33 21.7**	**-0.1**			
	baz=238										
NNS	**Nan Shan**	**1.22**	**247**	⇓P		**Pn**	**13 33 02.7**	**+0.5**			
	baz=238										
NNS				S		**Sn**	**13 33 21.4**	**-0.5**			
	baz=238										
TWD	**Chiawan**	**1.24**	**228**	⇓P		**Pn**	**13 33 02.3**	**0.0**			
	baz=222										
TWD				S		**Sn**	**13 33 21.3**	**-0.8**			
	baz=222										
ETLH	**Xiulin Townshi**	**1.24**	**235**	*e*S		**Sn**	**13 33 21.4**	**-0.9**			
	baz=234										
NCUH	**Zhongli**	**1.28**	**272**	P		**Pn**	**13 33 03.7**	**+1.0**			
	baz=276										
NCUH				*e*S		**Sn**	**13 33 23.7**	**+0.8**			
	baz=276										
HWA	**Hwalien**	**1.31**	**224**	P		**Pn**	**13 33 03.3**	**+0.3**			
	baz=216										
HWA				*e*S		**Sn**	**13 33 24.0**	**+0.7**			
	baz=216										
NFF	**Wufeng Townshi**	**1.38**	**258**	⇑P		**Pn**	**13 33 04.0**	**+0.1**			
	baz=256										
NFF				S		**Sn**	**13 33 24.1**	**-0.7**			
	baz=256										
ETM	**Tongmen**	**1.39**	**227**	*e*P		**Pn**	**13 33 03.7**	**-0.2**			
	baz=233										
ETM				*e*S		**Sn**	**13 33 23.6**	**-1.3**			
	baz=233										
HATJ	**Hateruma jima**	**1.40**	**128**	P		**Pn**	**13 33 03.8**	**-0.2**			
HATJ				S		**Sn**	**13 33 24.7**	**-0.3**			
FUSS	**Fushou**	**1.41**	**242**	⇓P		**Pn**	**13 33 05.2**	**+0.9**			
	baz=240										
FUSS				*e*S		**Sn**	**13 33 24.9**	**-0.7**			
	baz=240										
LXIB	**Xiulin Townshi**	**1.41**	**230**	*e*P		**Pn**	**13 33 03.9**	**-0.3**			
	baz=229										
LXIB				*e*S		**Sn**	**13 33 24.3**	**-1.2**			
	baz=229										
WHF	**Hehuan Shan**	**1.44**	**238**	*i* P		**Pn**	**13 33 05.4**	**+0.5**			
	baz=231										
WHF				*i* S		**Sn**	**13 33 26.1**	**-0.5**			
	baz=231										
JKRS	**Kuro-shima**	**1.46**	**118**	P		**Pn**	**13 33 04.8**	**+0.3**			
JKRS				S		**Sn**	**13 33 25.8**	**-0.3**			
TWT	**Tachien**	**1.46**	**243**	*i* P		**Pn**	**13 33 06.2**	**+1.4**			
	baz=242										
TWT				S		**Sn**	**13 33 26.6**	**+0.1**			
	baz=242										
LIOB	**Emei**	**1.47**	**259**	*i* P		**Pn**	**13 33 05.1**	**+0.4**			
	baz=258										
LIOB				*i* S		**Sn**	**13 33 25.6**	**-0.7**			
	baz=258										
SBCB	**Hsinchu**	**1.47**	**265**	*i* P		**Pn**	**13 33 05.3**	**+0.5**			
	baz=263										
SBCB				S		**Sn**	**13 33 26.5**	**+0.1**			
	baz=263										
TDCB	**Techi**	**1.47**	**243**	*e*P		**Pn**	**13 33 06.5**	**+1.6**			
	baz=242										
TDCB				*i* S		**Sn**	**13 33 26.7**	**0.0**			
	baz=242										
SHUL	**Shoufeng**	**1.48**	**220**	*i* P		**Pn**	**13 33 05.0**	**+0.2**			
	baz=213										
SHUL				*e*S		**Sn**	**13 33 26.4**	**0.0**			
	baz=213										
NSTT	**Nanjuang**	**1.48**	**259**	*i* P		**Pn**	**13 33 05.2**	**+0.3**			
	baz=257										
NSTT				*i* S		**Sn**	**13 33 26.1**	**-0.5**			
	baz=257										
HSN	**Hsinchu**	**1.48**	**266**	P		**Pn**	**13 33 04.5**	**-0.3**			
	baz=265										
HSN				*e*S		**Sn**	**13 33 26.2**	**-0.4**			
	baz=265										
JIJ	**Ishigaki jima**	**1.51**	**111**	P		**Pn**	**13 33 05.3**	**+0.2**			
JIJ				S		**Sn**	**13 33 25.9**	**-1.3**			
ESL	**Shilin**	**1.53**	**224**	*i* P		**Pn**	**13 33 05.5**	**0.0**			
	baz=229										
ESL				S		**Sn**	**13 33 26.0**	**-1.7**			
	baz=229										
TEGC	**Jichi Village**	**1.55**	**219**	*i* P		**Pn**	**13 33 05.9**	**+0.3**			
	baz=212										
TEGC				*e*S		**Sn**	**13 33 28.1**	**+0.1**			
	baz=212										
CHGB	**Renai**	**1.56**	**237**	⇓*i*P		**Pn**	**13 33 06.7**	**+0.8**			
	baz=229										
CHGB				*i* S		**Sn**	**13 33 28.5**	**0.0**			
	baz=229										
JISG	**Ishigakijimahi**	**1.59**	**102**	*e*P		**Pn**	**13 33 06.2**	**+0.1**			
JISG				*e*S		**Sn**	**13 33 27.9**	**-0.8**			
OWD	**Renai**	**1.62**	**234**	P		**Pn**	**13 33 07.2**	**+0.7**			
	baz=229										
OWD				S		**Sn**	**13 33 28.9**	**-0.7**			
	baz=229										
WARBT	**Fenglin Townsh**	**1.63**	**223**	P		**Pn**	**13 33 07.0**	**+0.4**			
	baz=228										
WARBT				*e*S		**Sn**	**13 33 27.5**	**-2.2**			
	baz=228										
WHP	**Taichung City**	**1.64**	**247**	P		**Pn**	**13 33 07.7**	**+1.1**			
	baz=253										
WHP				*i* S		**Sn**	**13 33 30.3**	**+0.4**			
	baz=253										
WUSB	**Renai**	**1.64**	**236**	*i* P		**Pn**	**13 33 07.7**	**+1.0**			
	baz=230										
WUSB				*i* S		**Sn**	**13 33 30.0**	**+0.1**			
	baz=230										
EGFH	**Guangfu**	**1.65**	**221**	*e*S		**Sn**	**13 33 29.9**	**0.0**			
	baz=214										
NMLH	**Miaoli**	**1.69**	**257**	P		**Pn**	**13 33 07.8**	**+0.6**			
	baz=256										
NMLH				S		**Sn**	**13 33 30.4**	**-0.3**			
	baz=256										
NSY	**Sanyi**	**1.75**	**254**	P		**Pn**	**13 33 08.4**	**+0.6**			
	baz=259										
NSY				S		**Sn**	**13 33 32.2**	**+0.3**			
	baz=259										
TWQ1	**Liyutan**	**1.76**	**251**	P		**Pn**	**13 33 08.8**	**+0.8**			
	baz=250										
TWQ1				S		**Sn**	**13 33 31.9**	**-0.3**			
	baz=250										
WCS	**Beigang Elemen**	**1.76**	**241**	*e*P		**Pn**	**13 33 09.4**	**+1.4**			
	baz=246										
WCS				S		**Sn**	**13 33 33.0**	**+0.7**			
	baz=246										
HGSD	**Ruisui**	**1.79**	**217**	*e*P		**Pn**	**13 33 09.3**	**+1.1**			
	baz=212										
HGSD				*i* S		**Sn**	**13 33 32.6**	**-0.1**			
	baz=212										
EHY	**Hungye**	**1.83**	**220**	⇓P		**Pn**	**13 33 09.1**	**+0.3**			
	baz=214										
EHY				*e*S		**Sn**	**13 33 31.8**	**-1.9**			
	baz=214										
SMLT	**Sun Moon Lake**	**1.86**	**237**	⇓*i*P		**Pn**	**13 33 10.6**	**+1.3**			
	baz=232										
SMLT				*e*S		**Sn**	**13 33 36.0**	**+1.5**			
	baz=232										
WDJ	**Dajia District**	**1.87**	**253**	P		**Pn**	**13 33 10.0**	**+0.8**			
	baz=251										
WDJ				*i* S		**Sn**	**13 33 34.2**	**-0.3**			
	baz=251										
SSLB	**Suanglung**	**1.88**	**233**	⇓*e*P		**Pn**	**13 33 10.7**	**+1.2**			
	baz=229										
SSLB				*e*S		**Sn**	**13 33 36.2**	**+1.5**			
	baz=229										
TYC	**Yuchr**	**1.89**	**238**	P		**Pn**	**13 33 11.0**	**+1.6**			
	baz=241										
TYC				S		**Sn**	**13 33 35.9**	**+1.2**			
	baz=241										
ECBN	**Changbin**	**1.91**	**213**	*e*P		**Pn**	**13 33 10.4**	**+0.6**			
	baz=209										
ECBN				*e*S		**Sn**	**13 33 34.9**	**-0.5**			
	baz=209										
JTJ	**Tarama**	**1.93**	**98**	P		**Pn**	**13 33 10.5**	**+0.6**			
JTJ				S		**Sn**	**13 33 35.4**	**-0.4**			
YULB	**Yu-li**	**1.93**	**218**	*e*P		**Pn**	**13 33 09.9**	**-0.2**			
	baz=224										
YULB				*e*S		**Sn**	**13 33 34.3**	**-1.6**			
	baz=224										
EYUL	**Yuli**	**1.96**	**217**	*e*P		**Pn**	**13 33 11.1**	**+0.7**			
	baz=223										
EYUL				*e*S		**Sn**	**13 33 37.2**	**+0.8**			
	baz=223										
TWF1	**Yuli**	**1.97**	**217**	P		**Pn**	**13 33 10.1**	**-0.4**			
	baz=224										
TWF1				*i* S		**Sn**	**13 33 35.1**	**-1.4**			
	baz=224										
WHYT	**Xinyi Township**	**2.01**	**233**	P		**Pn**	**13 33 12.0**	**+1.1**			
	baz=227										
WHYT				S		**Sn**	**13 33 38.8**	**+1.3**			
	baz=227										
WJS	**Zhushan**	**2.03**	**238**	*i* P		**Pn**	**13 33 12.6**	**+1.5**			
	baz=236										
WJS				*e*S		**Sn**	**13 33 39.1**	**+1.3**			
	baz=236										
WNT	**Mingjian**	**2.03**	**240**	*e*P		**Pn**	**13 33 12.6**	**+1.4**			
	baz=238										
WNT				*e*S		**Sn**	**13 33 36.4**	**-1.5**			
	baz=238										
WCHH	**Zhanghua**	**2.04**	**246**	*e*P		**Pn**	**13 33 12.7**	**+1.5**			
	baz=245										
WCHH				*e*S		**Sn**	**13 33 38.4**	**+0.4**			
	baz=245										
CHKH	**Chenggong**	**2.05**	**213**	*e*P		**Pn**	**13 33 11.9**	**+0.6**			
	baz=212										
CHKH				*e*S		**Sn**	**13 33 37.0**	**-1.2**			
	baz=212										
FULB	**Fuli**	**2.09**	**215**	P		**Pn**	**13 33 12.5**	**+0.5**			
	baz=210										
FULB				*e*S		**Sn**	**13 33 39.2**	**-0.1**			
	baz=210										
CHKT	**Chengkung**	**2.14**	**212**	⇓P		**Pn**	**13 33 12.2**	**-0.3**			
	baz=206										
CHKT				*e*S		**Sn**	**13 33 38.5**	**-1.7**			
	baz=206										
ALS	**Alishan**	**2.16**	**230**	P		**Pn**	**13 33 14.3**	**+1.2**			
	baz=222										
ALS				*e*S		**Sn**	**13 33 42.5**	**+1.3**			
	baz=222										
EHD	**Haiduan**	**2.18**	**216**	*e*P		**Pn**	**13 33 13.8**	**+0.8**			
	baz=215										
EHD				*e*S		**Sn**	**13 33 40.2**	**-0.9**			
	baz=215										
CHN5	**Tsauling**	**2.20**	**233**	⇓P		**Pn**	**13 33 14.1**	**+0.9**			
	baz=232										
CHN5				*e*S		**Sn**	**13 33 42.7**	**+1.1**			
	baz=232										
WGK	**Gukeng**	**2.23**	**237**	P		**Pn**	**13 33 14.3**	**+0.7**			
	baz=235										
WGK				*e*S		**Sn**	**13 33 44.2**	**+2.1**			
	baz=235										
WDLH	**Douliu**	**2.25**	**237**	P		**Pn**	**13 33 14.9**	**+1.2**			
	baz=236										
WDLH				*e*S		**Sn**	**13 33 44.1**	**+1.6**			
	baz=236										
ELDTW	**Lidau**	**2.25**	**220**	*e*P		**Pn**	**13 33 14.9**	**+0.9**			
	baz=219										
ELDTW				*e*S		**Sn**	**13 33 42.6**	**-0.3**			
	baz=219										
WRL	**Guolierlin Hig**	**2.27**	**244**	P		**Pn**	**13 33 14.6**	**+0.6**			
	baz=242										
WRL				*i* S		**Sn**	**13 33 42.6**	**-0.4**			
	baz=242										
EDH	**Donghe**	**2.28**	**212**	*e*P		**Pn**	**13 33 13.0**	**-1.2**			
	baz=208										
EDH				*e*S		**Sn**	**13 33 41.1**	**-2.1**			
	baz=208										
JIRB	**Irabujima**	**2.34**	**92**	*e*P		**Pn**	**13 33 15.5**	**+0.6**			
JIRB				S		**Sn**	**13 33 45.0**	**+0.5**			
WCKO	**Fanlu**	**2.35**	**231**	⇓P		**Pn**	**13 33 16.3**	**+1.3**			
	baz=230										
WCKO				*e*S		**Sn**	**13 33 46.9**	**+2.1**			
	baz=230										
WTK	**Tuku**	**2.36**	**239**	P		**Pn**	**13 33 15.7**	**+0.5**			
	baz=238										
WTK				*e*S		**Sn**	**13 33 45.0**	**-0.1**			
	baz=238										
JIKM	**Ikemajima**	**2.41**	**89**	*e*P		**Pn**	**13 33 16.6**	**+0.9**			
JIKM				*e*S		**Sn**	**13 33 45.8**	**-0.2**			
CHN4	**Tsaushan**	**2.41**	**230**	P		**Pn**	**13 33 16.7**	**+0.9**			
	baz=237										
CHN4				*i* S		**Sn**	**13 33 47.0**	**+0.9**			
	baz=237										
STYH	**Taoyuan**	**2.41**	**224**	P		**Pn**	**13 33 17.4**	**+1.5**			
	baz=223										
STYH				*e*S		**Sn**	**13 33 48.2**	**+2.0**			
	baz=223										
LONT	**Longtian**	**2.42**	**214**	*e*P		**Pn**	**13 33 16.6**	**+0.7**			
	baz=213										
LONT				*e*S		**Sn**	**13 33 45.4**	**-0.9**			
	baz=213										
TPUB	**Ta-pu**	**2.42**	**228**	*i* P		**Pn**	**13 33 16.8**	**+0.9**			
	baz=237										
TPUB				*e*S		**Sn**	**13 33 47.6**	**+1.2**			
	baz=237										
WTP	**Ta-pu**	**2.47**	**228**	P		**Pn**	**13 33 17.9**	**+1.3**			
	baz=236										
WTP				*e*S		**Sn**	**13 33 49.1**	**+1.6**			
	baz=236										
LDUT	**Ludao**	**2.47**	**205**	*e*P		**Pn**	**13 33 17.7**	**+1.1**			
	baz=204										
LDUT				*i* S		**Sn**	**13 33 46.1**	**-1.4**			
	baz=204										
JMJ2	**Miyako jima3**	**2.49**	**94**	P		**Pn**	**13 33 17.4**	**+0.7**			
JMJ2				S		**Sn**	**13 33 47.6**	**-0.2**			
TWGBT	**Beinan**	**2.52**	**214**	*e*P		**Pn**	**13 33 17.2**	**0.0**			
	baz=217										
TWGBT				*e*S		**Sn**	**13 33 47.8**	**-0.8**			
	baz=217										
TWG	**Pinlang**	**2.52**	**214**	P		**Pn**	**13 33 17.3**	**+0.1**			
	baz=217										
TWG				*e*S		**Sn**	**13 33 48.0**	**-0.6**			
	baz=217										
WSF	**Szhu**	**2.52**	**240**	*e*P		**Pn**	**13 33 18.6**	**+1.5**			
	baz=239										
WSF				*e*S		**Sn**	**13 33 49.0**	**+0.4**			
	baz=239										
TWK	**Hsinying**	**2.54**	**230**	*i* P		**Pn**	**13 33 18.2**	**+0.7**			
	baz=237										
TWK				S		**Sn**	**13 33 49.7**	**+0.6**			
	baz=237										
JOGS	**Gusukube**	**2.56**	**93**	P		**Pn**	**13 33 18.8**	**+1.2**			
JOGS				*e*S		**Sn**	**13 33 50.2**	**+0.8**			
SNST	**Tainan City**	**2.56**	**229**	P		**Pn**	**13 33 18.8**	**+1.1**			
	baz=236										
SNST				S		**Sn**	**13 33 49.9**	**+0.3**			
	baz=236										
CHN1	**Nanshi**	**2.57**	**228**	*e*P		**Pn**	**13 33 19.1**	**+1.3**			
	baz=227										
CHN1				*e*S		**Sn**	**13 33 50.5**	**+0.9**			
	baz=227										
SGST	**Jiashian**	**2.60**	**226**	*e*P		**Pn**	**13 33 18.7**	**+0.5**			
	baz=224										
SGST				*e*S		**Sn**	**13 33 48.9**	**-1.6**			
	baz=224										
SLGT	**Liugui**	**2.62**	**223**	P		**Pn**	**13 33 19.6**	**+1.1**			
	baz=229										
SLGT				*e*S		**Sn**	**13 33 52.7**	**+1.7**			
	baz=229										
MATB	**Ma-tsu**	**2.69**	**298**	*e*P		**Pn**	**13 33 18.9**	**-0.3**			
	baz=296										
TSMG	**Majia**	**2.84**	**219**	*e*P		**Pn**	**13 33 22.1**	**+0.8**			
	baz=218										
TSMG				*e*S		**Sn**	**13 33 55.3**	**-0.6**			
	baz=218										
VWUC	**VWUC**	**2.86**	**272**	*e*P		**Pn**	**13 33 21.4**	**0.0**			
	baz=271										
VWUC				*e*S		**Sn**	**13 33 54.6**	**-1.6**			
	baz=271										
MASBT	**Mashibuluo**	**2.92**	**218**	*e*P		**Pn**	**13 33 23.3**	**+1.0**			
	baz=217										
MASBT				S		**Sn**	**13 33 58.3**	**+0.5**			
	baz=217										
XPSS	**Dashiqiu**	**2.95**	**313**	*e*P		**Pn**	**13 33 22.1**	**-0.4**			
	baz=312										
LYJJ	**Jianjiangzhen**	**3.03**	**303**	*e*P		**Pn**	**13 33 23.4**	**-0.1**			
	baz=302										
LYUB	**Lan-yu**	**3.06**	**198**	*i* P		**Pn**	**13 33 24.1**	**+0.1**			
	baz=191										
LYUB				*e*S		**Sn**	**13 33 58.1**	**-2.7**			
	baz=191										
PNG	**Penghu**	**3.09**	**245**	*i* P		**Pn**	**13 33 23.8**	**-0.6**			
	baz=243										
PNG				*i* S		**Sn**	**13 33 58.9**	**-2.6**			
	baz=243										
PHUB	**P'eng-hu**	**3.10**	**244**	P		**Pn**	**13 33 23.4**	**-1.1**			
	baz=242										
PHUB				S		**Sn**	**13 33 59.2**	**-2.6**			
	baz=242										
PTMZ	**Houxiangcun**	**3.16**	**273**	⇓*e*P		**Pn**	**13 33 25.2**	**0.0**			
	baz=272										
MHZQ	**Yeshan**	**3.43**	**291**	*e*P		**Pn**	**13 33 29.0**	**+0.2**			
	baz=290										
KNMB	**Chin-men Tao**	**3.86**	**264**	*e*P		**Pn**	**13 33 34.1**	**-0.3**			
	baz=263										

JMA ***07*** *13:39:01.9±0.1,24.0°N±0.3×121.8°E±0.4,h0km,MV2.8/12, TAIWAN REGION*

ASIES ***07*** *13:39:01.6,24.00N×121.82E,h8km,ML3.5,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-7.44; $M_{\theta\theta}$0.34; $M_{\phi\phi}$6.95; $M_{r\theta}$6.43; $M_{\theta\phi}$2.83; $M_{\phi r}$6.53; Fault plane solution: $M_0$11.99480×10^{20} NP1: ϕ_s218.42000°,δ70.63000°,λ-76.72000°. NP2:ϕ_s2.98000°, δ23.34000°,λ-123.16000°. Principal axes: T Plg24.5020°, Azm298.1340°; N Plg12.5160°, Azm33.9400°; P Plg62.1000°, Azm148.7280°;*

TAP ***07*** *13:39:01.6,24.00N×121.82E,h8km,ML3.5,C*

ISC 07 13:39:02.5±0.9,23.98N±0.02×121.82E±0.02,h13km±6km, n108,σ0.68/177,32C-9D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.20**	**269**	⇑*i*P		**Pg**	**13 39 06.9**	**0.0**
	baz=255							
HWA				*i* S		**Sb**	**13 39 11.4**	**-0.3**
	baz=255							
TWD	**Chiawan**	**0.23**	**296**	⇑*i*P		**Pg**	**13 39 06.6**	**-0.8**
	baz=293							
TWD				S		**Sg**	**13 39 10.3**	**-0.4**
	baz=293							
ETL	**Fush Village**	**0.25**	**315**	⇑P		**Pg**	**13 39 07.0**	**-0.8**
	baz=313							
ETL				*e*S		**Sg**	**13 39 12.0**	**+0.5**
	baz=313							
NACB	**Ninganchiao**	**0.28**	**313**	P		**Pg**	**13 39 07.6**	**-0.8**
NACB	**Ninganchiao**	**0.28**	**313**	⇑*i*P		**Pg**	**13 39 07.5**	**-0.9**
	baz=312							
NACB				S		**Sg**	**13 39 12.3**	**0.0**
	baz=312							
ETM	**Tongmen**	**0.30**	**267**	P		**Pg**	**13 39 08.3**	**-0.4**
	baz=262							
ETM				S		**Sg**	**13 39 12.8**	**0.0**
	baz=262							
SHUL	**Shoufeng**	**0.30**	**231**	⇑P		**Pb**	**13 39 09.8**	**0.0**
	baz=225							
SHUL				S		**Sb**	**13 39 16.5**	**+1.8**
	baz=225							
EAHA	**Aohua**	**0.36**	**348**	⇑P		**Pg**	**13 39 09.4**	**-0.4**
	baz=351							
EAHA				S		**Sb**	**13 39 16.1**	**-0.1**
	baz=351							
TEGC	**Jichi Village**	**0.37**	**224**	*e*P		**Pb**	**13 39 11.1**	**+0.1**
	baz=206							
TEGC				*e*S		**Sn**	**13 39 19.0**	**-1.7**
	baz=206							
LXIB	**Xiulin Townshi**	**0.37**	**277**	⇑*i*P		**Pg**	**13 39 09.4**	**-0.7**
	baz=272							
LXIB				S		**Sg**	**13 39 14.9**	**-0.2**
	baz=272							
ETLH	**Xiulin Townshi**	**0.38**	**306**	P		**Pg**	**13 39 09.4**	**-0.8**
	baz=305							
ETLH				S		**Sg**	**13 39 15.8**	**+0.3**
	baz=305							
ESL	**Shilin**	**0.39**	**245**	*e*P		**Pg**	**13 39 10.1**	**-0.2**
	baz=241							
ENA	**Nanau**	**0.45**	**351**	⇓P		**Pg**	**13 39 11.4**	**-0.1**
	baz=356							
ENA				S		**Sb**	**13 39 18.7**	**-0.4**
	baz=356							
EWUT	**Wuta**	**0.47**	**355**	*e*P		**Pg**	**13 39 11.7**	**-0.1**
	baz=350							
EWUT				S		**Sb**	**13 39 19.2**	**-0.3**
	baz=350							
EGFH	**Guangfu**	**0.47**	**229**	⇓P		**Pg**	**13 39 11.9**	**+0.1**
	baz=210							
WARBT	**Fenglin Townsh**	**0.47**	**237**	⇓P		**Pg**	**13 39 11.8**	**-0.1**
	baz=216							
WARBT				*e*S		**Sg**	**13 39 18.7**	**+0.5**
	baz=216							
EOS4	**EOS4**	**0.48**	**73**	*e*P		**Pn**	**13 39 14.0**	**-0.8**
	baz=75							
WHF	**Hehuan Shan**	**0.53**	**288**	⇑P		**Pg**	**13 39 12.4**	**-0.7**
	baz=286							
WHF			

	baz=293							
TWT				S		Sb	13 39 24.3	-0.6
	baz=293							
EHY	**Hungye**	**0.66**	**224**	⇑P		Pg	13 39 15.3	0.0
	baz=219							
EHY				S		Sb	13 39 24.9	0.0
	baz=219							
NDS	**Dongshan**	**0.66**	**352**	⇓P		Pb	13 39 15.8	-0.2
	baz=354							
NDS				S		Sb	13 39 25.4	+0.4
	baz=354							
TDCB	**Techi**	**0.66**	**294**	⇑*i*P		Pg	13 39 15.1	-0.4
	baz=293							
TDCB				S		Sg	13 39 24.4	+0.1
	baz=293							
NDT	**Datong Townshi**	**0.68**	**336**	⇓P		Pg	13 39 15.7	-0.1
	baz=326							
NDT				S		Sb	13 39 25.8	+0.2
	baz=326							
ENTT	**Nioudou**	**0.70**	**341**	⇑*i*P		Pg	13 39 15.8	-0.3
	baz=343							
ENTT				S		Sb	13 39 26.3	+0.2
	baz=343							
TWE	**Neicheng**	**0.75**	**349**	⇑P		Pg	13 39 17.0	-0.1
	baz=353							
TWE				S		Sb	13 39 28.3	+0.6
	baz=353							
YULB	**Yu-li**	**0.76**	**219**	P		Pb	13 39 18.0	+0.4
YULB	**Yu-li**	**0.76**	**219**	⇑*i*P		Pg	13 39 16.8	-0.4
	baz=215							
YULB				S		Sb	13 39 27.7	-0.1
	baz=215							
EYUL	**Yuli**	**0.78**	**216**	*e*P		Pb	13 39 18.3	+0.3
	baz=230							
TWF1	**Yuli**	**0.79**	**218**	*e*P		Pg	13 39 17.5	-0.3
	baz=235							
YHNB	**Yeheng**	**0.80**	**330**	P		Pb	13 39 18.0	-0.3
YHNB	**Yeheng**	**0.80**	**330**	⇑*i*P		Pg	13 39 17.6	-0.4
	baz=321							
YHNB				S		Sb	13 39 28.6	-0.5
	baz=321							
FUSB	**Fushanzhiwuyua**	**0.81**	**345**	⇑P		Pb	13 39 18.1	-0.4
	baz=338							
FUSB				*e*S		Sb	13 39 29.4	+0.1
	baz=338							
NSK	**Sanguang**	**0.81**	**329**	⇑*i*P		Pg	13 39 17.9	-0.4
	baz=321							
NSK				S		Sb	13 39 29.0	-0.5
	baz=321							
SSLB	**Suanglung**	**0.81**	**257**	P		Pg	13 39 18.1	-0.2
SSLB	**Suanglung**	**0.81**	**257**	⇑*i*P		Pg	13 39 17.8	-0.5
	baz=267							
SSLB				S		Sg	13 39 28.3	-0.6
	baz=267							
WCS	**Beigang Elemen**	**0.83**	**276**	⇑P		Pg	13 39 18.3	-0.3
	baz=273							
WCS				S		Sg	13 39 29.3	-0.3
	baz=273							
NWLT	**Wulai**	**0.84**	**340**	⇑*i*P		Pg	13 39 18.6	-0.3
	baz=343							
NWLT				S		Sb	13 39 30.3	-0.1
	baz=343							
SMLT	**Sun Moon Lake**	**0.85**	**264**	⇓P		Pg	13 39 18.7	-0.2
	baz=260							
SMLT				S		Sb	13 39 30.1	-0.4
	baz=260							
WHP	**Taichung City**	**0.85**	**291**	⇑*i*P		Pb	13 39 19.0	-0.3
	baz=289							
WHP				S		Sb	13 39 31.1	+0.5
	baz=289							
CHKH	**Chenggong**	**0.88**	**206**	*e*P		Pg	13 39 18.8	-0.6
	baz=184							
TYC	**Yuchr**	**0.88**	**265**	*e*P		Pg	13 39 18.9	-0.7
	baz=262							
TYC				*e*S		Sg	13 39 30.3	-0.9
	baz=262							
NFF	**Wufeng Townshi**	**0.91**	**316**	*e*P		Pb	13 39 20.0	-0.2
	baz=305							
NFF				*e*S		Sb	13 39 32.4	0.0
	baz=305							
FULB	**Fuli**	**0.91**	**212**	*e*P		Pg	13 39 19.9	-0.3
	baz=225							
WHYT	**Xinyi Township**	**0.93**	**253**	*e*P		Pb	13 39 20.5	-0.1
	baz=235							
WHYT				*e*S		Sn	13 39 33.8	-0.8
	baz=235							
CHKT	**Chengkung**	**0.97**	**205**	*e*P		Pb	13 39 20.9	-0.4
	baz=181							
LIOB	**Emei**	**0.99**	**312**	⇓P		Pn	13 39 21.8	-0.4
	baz=301							
LIOB				S		Sg	13 39 34.9	+0.3
	baz=301							
TIPB	**Shuangxi**	**0.99**	**0**	⇑P		Pn	13 39 21.8	-0.3
	baz=357							
TIPB				*e*S		Sg	13 39 34.8	+0.2
	baz=357							
NSTT	**Nanjuang**	**0.99**	**311**	⇑P		Pg	13 39 21.4	-0.2
	baz=312							
NSTT				S		Sn	13 39 34.9	-1.1
	baz=312							
EHD	**Haiduan**	**1.00**	**214**	*e*P		Pb	13 39 20.5	-1.3
	baz=223							
EHD				*e*S		Sn	13 39 37.8	+1.5
	baz=223							
WJS	**Zhushan**	**1.01**	**261**	*e*P		Pn	13 39 22.6	+0.2
	baz=266							
WJS				S		Sn	13 39 36.9	+0.4
	baz=266							
TWA	**Mucha**	**1.02**	**348**	*e*P		Pn	13 39 22.5	-0.1
	baz=352							
TWQ1	**Liyutan**	**1.02**	**291**	*e*P		Pn	13 39 22.7	0.0
	baz=290							
TWQ1				*e*S		Sn	13 39 36.2	-0.7
	baz=290							
TWB1	**Santiao Chiao**	**1.04**	**9**	*e*P		Pn	13 39 23.0	+0.2
	baz=6.0							
TWB1				*e*S		Sn	13 39 37.5	+0.3
	baz=6.0							
TATO	**Taipei**	**1.04**	**343**	P		Pn	13 39 23.1	+0.3
ECS	**Chishang**	**1.04**	**212**	*e*P		Pb	13 39 22.3	-0.1
	baz=224							
ALS	**Alishan**	**1.04**	**244**	*e*P		Pg	13 39 22.6	0.0
	baz=239							
WNT	**Mingjian**	**1.04**	**265**	*e*P		Pn	13 39 23.2	+0.3
	baz=261							
WNT				*e*S		Sn	13 39 38.5	+1.2
	baz=261							
NSY	**Sanyi**	**1.06**	**294**	*e*P		Pn	13 39 23.7	+0.6
	baz=294							
NSY				*e*S		Sn	13 39 37.8	0.0
	baz=294							
ELDTW	**Lidau**	**1.08**	**223**	⇑*e*P		Pb	13 39 21.7	-1.4
	baz=218							
NWF	**Wu-fen Shan**	**1.09**	**358**	*e*P		Pn	13 39 24.0	+0.4
	baz=341							
WFSB	**Wu-fen Shan**	**1.09**	**358**	*e*P		Pg	13 39 24.0	+0.5
	baz=356							
WFSB				*e*S		Sb	13 39 36.9	-0.4
	baz=356							
EDH	**Donghe**	**1.11**	**205**	*e*P		Pb	13 39 20.9	-2.7
	baz=183							
SXI1	**Grass Mountain**	**1.11**	**3**	*e*P		Pg	13 39 24.4	+0.5
	baz=346							
SXI1				*e*S		Sn	13 39 40.0	+0.9
	baz=346							
CHN5	**Tsauling**	**1.11**	**250**	⇑*i*P		Pg	13 39 24.3	+0.3
	baz=245							
CHN5				*e*S		Sn	13 39 40.6	+1.4
	baz=245							
JYNG	**Yonagunijimaku**	**1.13**	**65**	P		Pg	13 39 24.3	0.0
JYNG				S		Sn	13 39 39.4	-0.1
TWS1	**Kuangyinshan**	**1.18**	**342**	*e*S		Sn	13 39 41.3	+0.7
	baz=347							
YOJ	**Yonaguni jima**	**1.19**	**66**	P		Pg	13 39 25.5	+0.1
YOJ	**Yonaguni jima**	**1.19**	**66**	P		Pg	13 39 25.3	-0.1
YOJ				S		Sg	13 39 42.0	+1.0
WDLH	**Douliu**	**1.21**	**256**	*e*P		Pg	13 39 25.9	+0.1
	baz=252							
WDLH				*e*S		Sg	13 39 43.5	+2.0
	baz=252							
ANP	**Anpu**	**1.23**	**347**	*e*P		Pg	13 39 26.4	+0.1
	baz=352							
WCKO	**Fanlu**	**1.24**	**244**	*e*P		Pg	13 39 26.1	-0.2
	baz=238							
WCKO				*e*S		Sg	13 39 44.1	+1.7
	baz=238							
LONT	**Longtian**	**1.24**	**211**	*e*P		Pn	13 39 24.4	-1.2
	baz=188							
STYH	**Taoyuan**	**1.25**	**230**	*e*P		Pn	13 39 25.3	-0.4
	baz=211							
TPUB	**Ta-pu**	**1.28**	**238**	P		Pg	13 39 26.8	-0.4
TPUB	**Ta-pu**	**1.28**	**238**	*e*P		Pb	13 39 26.7	+0.1
	baz=235							
TPUB				*e*S		Sg	13 39 44.9	+1.0
	baz=235							
WRL	**Guolierlin Hig**	**1.32**	**267**	*e*P		Pb	13 39 27.1	-0.1
	baz=263							
WRL				*e*S		Sg	13 39 46.0	+0.9
	baz=263							
WTP	**Ta-pu**	**1.32**	**237**	*e*P		Pb	13 39 27.3	0.0
	baz=215							
TWGBT	**Beinan**	**1.34**	**211**	P		Pg	13 39 28.7	+0.4
TWGBT	**Beinan**	**1.34**	**211**	*e*P		Pn	13 39 25.7	-1.3
	baz=189							
TWG	**Pinlang**	**1.34**	**211**	*e*P		Pn	13 39 25.6	-1.4
	baz=189							
TWK	**Hsinying**	**1.41**	**240**	*e*P		Pb	13 39 28.9	+0.1
	baz=235							
CHN1	**Nanshi**	**1.42**	**237**	*e*P		Pg	13 39 29.5	-0.4
	baz=231							
SNST	**Tainan City**	**1.43**	**238**	*e*P		Pg	13 39 30.1	+0.1
	baz=231							
SNST				*e*S		Sg	13 39 49.6	+1.0
	baz=231							
SGST	**Jiashian**	**1.44**	**232**	*e*P		Pb	13 39 29.1	-0.3
	baz=212							
SLGT	**Liugui**	**1.46**	**228**	*e*P		Pb	13 39 29.3	-0.3
	baz=209							
SLGT				*e*S		Sg	13 39 50.0	+0.5
	baz=209							
SCST	**Cishan**	**1.63**	**228**	*e*P		Pg	13 39 33.5	-0.4
	baz=222							
TSMG	**Majia**	**1.67**	**221**	*e*P		Pn	13 39 32.1	+0.7
	baz=214							
MASBT	**Mashibuluo**	**1.74**	**219**	*e*P		Pn	13 39 32.6	+0.1
	baz=197							
MASBT				*e*S		Sb	13 39 56.3	0.0
	baz=197							
TSCK	**Chigu Township**	**1.79**	**243**	*e*P		Pb	13 39 34.2	-1.0
	baz=235							
TSCK				*e*S		Sb	13 39 57.9	+0.2
	baz=235							
SCZT	**Fangliau**	**1.94**	**215**	*e*P		Pb	13 39 37.3	-0.5
	baz=196							
LYUB	**Lan-yu**	**1.98**	**186**	*e*P		Pn	13 39 32.8	-3.0
	baz=182							
JKRS	**Kuro-shima**	**2.02**	**82**	*e*P		Pb	13 39 38.1	-1.0
JKRS				*e*S		Sb	13 40 04.1	0.0
PHUB	**P'eng-hu**	**2.11**	**258**	*e*P		Pn	13 39 38.7	+1.1
	baz=253							
PHUB				*e*S		Sn	13 40 04.6	+0.9
	baz=253							
PNG	**Penghu**	**2.11**	**259**	*e*P		Pn	13 39 38.1	+0.5
	baz=254							
PNG				*e*S		Sn	13 40 04.3	+0.5
	baz=254							
JIJ	**Ishigaki jima**	**2.16**	**79**	P		Pn	13 39 38.6	+0.4
JIJ				S		Sn	13 40 06.2	+1.4
JISG	**Ishigakijimahi**	**2.35**	**75**	P		Pn	13 39 41.0	+0.1
JISG				S		Sn	13 40 10.1	+0.4

IDC 07 13:39:26.0±336.0, 63°95N×24°10E, h0km, Error ellipse: s-maj=139.4km s-min=92.6km az=178.0, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**5.60**	**339**	I	I	14 13 43.8	
	baz=155,slow=332,SNR=2.1						
I43RU	**DUBNA INFRASON**	**9.72**	**132**	I	I	14 37 52.4	
	baz=324,slow=328,SNR=5.2						
I31KZ	**AKTYUBINSK INF**	**22.49**	**111**	I	I	15 55 05.0	
	0.1nm,1.8s,baz=321,slow=335,SNR=10.0						

*NEIC **07** 13:39:41.8±1.6, 38°.255N±0°.007×118°.72W±0°.01, h8km±8km, **ML2.5**/15, **ML2.5**/42(NEIC), **Error ellipse: s-maj=1.7km s-min=0.6km az=59.0, California-Nevada border region***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.17**	**91**		Pg	13 39 45.7	+0.6
TVH1	**TV Hill, Hawth**	**0.21**	**349**		Pg	13 39 46.5	+0.5
TVH1					Sg	13 39 49.9	+1.0
RYN	**Ryan**	**0.40**	**22**		Pg	13 39 49.9	+0.3
RYN	**Ryan**	**0.40**	**22**		Sg	13 39 56.0	+1.2
RYN	**Ryan**	**0.40**	**22**	IAML		13 39 56.6	
	comp=E,546nm,0.2s						
RYN				IAML		13 39 56.6	
	comp=N,650nm,0.2s						
MGNR	**McGee Canyon**	**0.44**	**178**		Pg	13 39 50.7	+0.5
BENR	**Benton**	**0.55**	**168**		Pg	13 39 52.4	+0.1
WAKR	**Walker**	**0.62**	**294**		Pg	13 39 53.8	+0.2
WAKR				IAML		13 40 03.8	
	comp=E,194nm,0.5s						
WAKR				IAML		13 40 04.4	
	comp=N,171nm,0.3s						
WAKR	**Walker**	**0.62**	**294**		Sb	13 40 02.9	-0.8
MCBM	**Casa Benchmark**	**0.63**	**193**		Pg	13 39 54.0	+0.2
MCBM					Sg	13 40 02.8	+0.8
MLAC	**Mammoth, Mammo**	**0.63**	**189**		Pg	13 39 54.0	+0.2
MLAC					Sb	13 40 03.2	-0.9
MDYM	**Dry Creek**	**0.64**	**201**		Pg	13 39 54.4	+0.3
MDYM					Sb	13 40 04.2	-0.2
MDPB	**Devils Postpil**	**0.68**	**205**		Pg	13 39 54.8	0.0
MDPB				IAML		13 40 04.1	
	comp=N,186nm,0.3s						
MDPB				IAML		13 40 04.6	
	comp=E,169nm,0.3s						
YERR	**Yerington**	**0.84**	**331**		Pg	13 39 57.7	0.0
YERR	**Yerington**	**0.84**	**331**		Sb	13 40 09.4	-0.5
YERR	**Yerington**	**0.84**	**331**	IAML		13 40 10.4	
	comp=N,922nm,0.3s						
YERR				IAML		13 40 10.6	
	comp=E,891nm,0.3s						
KVN	**Kaiserville**	**0.93**	**31**		Pg	13 39 59.4	-0.1
KVN	**Kaiserville**	**0.93**	**31**		Sg	13 40 11.9	+0.3
BHPR	**Bishop**	**0.97**	**169**		Pg	13 40 00.3	0.0
KCC	**Kaiser Creek**	**1.04**	**207**		Pg	13 40 01.2	-0.4
DSP	**Deep Springs**	**1.06**	**146**		Pg	13 40 01.9	-0.1
DSP	**Deep Springs**	**1.06**	**146**		Sb	13 40 16.1	-0.1
PNTR	**Pine Nut**	**1.08**	**321**		Pg	13 40 02.2	-0.2
PNTR				IAML		13 40 17.2	
	comp=N,123nm,0.5s						
PNTR				IAML		13 40 23.0	
	comp=E,197nm,0.7s						
PNTR	**Pine Nut**	**1.08**	**321**		Sb	13 40 17.0	-0.1
MZP	**Montezuma Peak**	**1.19**	**117**		Pg	13 40 04.4	0.0
MZP	**Montezuma Peak**	**1.19**	**117**		Sn	13 40 21.1	-0.1
MZP	**Montezuma Peak**	**1.19**	**117**	IAML		13 40 23.5	
	comp=E,41nm,0.4s						
MZP				IAML		13 40 23.5	
	comp=N,73nm,0.5s						
TPH	**Tonopah**	**1.19**	**98**		Pg	13 40 04.2	-0.3
TPH	**Tonopah**	**1.19**	**98**		Sb	13 40 20.3	+0.1
TPH	**Tonopah**	**1.19**	**98**	IAML		13 40 21.5	
	comp=N,860nm,0.3s						
TPH				IAML		13 40 24.5	
	comp=E,532nm,0.4s						
TIN	**Tinemaha, Big**	**1.26**	**162**		Pg	13 40 06.4	+0.6
TIN					Sn	13 40 23.4	+0.6
CMB	**Columbia Colle**	**1.33**	**261**		Pn	13 40 06.5	-0.1
Q09A	**Carvers**	**1.34**	**64**		Pb	13 40 07.1	+0.1
Q09A	**Carvers**	**1.34**	**64**		Sn	13 40 25.3	+0.5
Q09A	**Carvers**	**1.34**	**64**	IAML		13 40 28.3	
	comp=N,491nm,0.7s						
Q09A				IAML		13 40 31.1	
	comp=E,471nm,0.6s						
RUBR	**Rubicon Trail**	**1.38**	**306**		Pb	13 40 07.7	-0.1
MPK	**Martis Peak**	**1.46**	**316**	Pg	Pb	13 40 09.2	+0.1
MPK				IAML		13 40 38.4	
	comp=E,69nm,0.8s						
MPK				IAML		13 40 40.8	
	comp=N,76nm,0.7s						
GMN	**Gold Mountain**	**1.50**	**129**		Pb	13 40 09.8	0.0
GMN				IAML		13 40 34.8	
	comp=E,46nm,0.3s						
GMN				IAML		13 40 36.0	
	comp=N,54nm,0.4s						
PAHR	**Pah Rah Range**	**1.54**	**340**		Pb	13 40 10.3	-0.1
PAHR				IAML		13 40 32.9	
	comp=N,60nm,0.3s						
PEAR	**Peavine Mounta**	**1.66**	**325**		Pb	13 40 12.9	+0.3
LOY	**Loyalton**	**1.83**	**320**		Pb	13 40 14.6	-0.9
AFDM	**Forest Hills D**	**1.90**	**292**		Pb	13 40 16.1	-0.3
AFDM				IAML		13 40 44.1	
	comp=N,44nm,0.4s						
AFDM				IAML		13 40 44.5	
	comp=E,42nm,0.4s						
BEKR	**Beckworth**	**2.06**	**322**		Pb	13 40 18.0	-1.3
TPNV	**Topopah Spring**	**2.35**	**123**		Pn	13 40 21.5	+0.8
TPNV				IAML		13 41 03.5	
	comp=E,30nm,0.8s						
TPNV				IAML		13 41 05.1	
	comp=E,30nm,0.7s						
S11A	**Rachel**	**2.43**	**104**		Pn	13 40 22.1	+0.5
R11B	**Troy Canyon, C**	**2.47**	**87**		Pn	13 40 22.2	0.0
R11B				IAML		13 41 01.4	
	comp=E,24nm,0.2s						
R11B				IAML		13 41 01.6	
	comp=N,31nm,0.3s						
NSP	**Numbskull Pass**	**2.51**	**127**		Pn	13 40 23.1	+0.4
ORV	**Oroville**	**2.53**	**302**		Pn	13 40 23.5	+0.5
GWY	**Greenwater Val**	**2.63**	**141**		Pn	13 40 24.7	+0.1
QSM	**Queen of Sheba**	**2.72**	**147**		Pn	13 40 26.0	+0.4
PRN	**Pahroc Range**	**3.02**	**105**		Pn	13 40 30.1	+0.2

*IDC **07** 13:46:54.1±1.1, 14°.90N×93°.45E, h0km, mb4.0/8, mbtmp4.0/9, ML4.1/1, Error ellipse: s-maj=35.2km s-min=19.4km az=51.0*

ISC 07 13:46:55.6±1.2, 14°.9N±0°.2×93°.5E±0°.1, h10km, n12, σ0°99/10, mb4.1/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.33**	**55**	Pn	**Pn**	**13 48 28.7**	**-0.4**
	1.0nm,0.3s,baz=237,slow=16,SNR=8.2						
CMAR				Sn	**Sn**	**13 49 41.8**	**+0.3**
	0.7nm,0.3s,baz=242,slow=22,SNR=5.5						
	1.6nm,0.3s						
MKAR	**Makanchi Array**	**33.12**	**346**	P	**P**	**13 53 33.1**	**+1.2**
	0.7nm,0.5s,baz=165,slow=8.2,SNR=13						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**37.61**	**344**	P	**P**	**13 54 11.0**	**+0.6**
	1.1nm,0.4s,baz=160,slow=8.3,SNR=11						
	1.1nm,0.4s						
GEYT	**Alibeck**	**38.72**	**313**	P	**P**	**13 54 20.6**	**+0.5**
	3.0nm,0.7s,baz=185,slow=7.4,SNR=6.6						
	3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.53**	**352**	P	**P**	**13 54 26.9**	**+0.4**
	3.2nm,0.4s,baz=174,slow=8.1,SNR=18						
	3.2nm,0.4s						
WRA	**Warramunga Arr**	**53.07**	**130**	P	**P**	**13 56 14.4**	**+0.9**
	0.5nm,0.8s,baz=312,slow=7.9,SNR=2.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**55.09**	**133**	P	**P**	**13 56 27.8**	**-0.4**
	0.3nm,0.8s,baz=304,slow=6.5,SNR=6.8						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**66.23**	**331**	P	**P**	**13 57 42.3**	**-1.3**
	4.2nm,1.1s,baz=148,slow=11,SNR=3.5						
	4.2nm,1.1s						
ARCES	**ARCESS Array B**	**68.46**	**339**	P	**P**	**13 57 56.2**	**-1.3**
	4.6nm,1.1s,baz=97,slow=7.4,SNR=4.1						
	4.6nm,1.1s						
H04N2	**CROZET ISLANDS**	**71.45**	**209**	T	T	15 16 32.5	
	baz=41,slow=74,SNR=4.3						
H04N1	**CROZET ISLANDS**	**71.46**	**209**	T	T	15 16 27.9	
	baz=41,slow=74,SNR=5.4						
H04N3	**CROZET ISLANDS**	**71.47**	**209**	T	T	15 16 23.8	
	baz=41,slow=74,SNR=5.7						

TAP 07 13:47:19.2, 24°.00N×121°.59E, h7km±1km, ML0.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**154**	P	Pg	13 47 21.3	+0.6
	baz=142						
HWA				*e*S	Sg	13 47 22.5	+0.9
	baz=142						
TWD	**Chiawan**	**0.08**	**3**	*e*P	Pg	13 47 22.0	+0.7
	baz=9.0						
TWD				*e*S	Sg	13 47 23.5	+0.9
	baz=9.0						
ETM	**Tongmen**	**0.10**	**247**	*e*P	Pg	13 47 22.3	+0.7
	baz=247						
ETM				S	Sg	13 47 24.0	+0.9
	baz=247						
ETL	**Fush Village**	**0.16**	**11**	*e*P	Pg	13 47 23.4	+0.8
	baz=10.0						
LXIB	**Xiulin Townshi**	**0.16**	**276**	*e*P	Pg	13 47 23.7	+1.0
	baz=276						
NACB	**Ninganchiao**	**0.17**	**1**	*e*P	Pg	13 47 23.4	+0.6
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.23**	**334**	*e*P	Pg	13 47 24.9	+1.0
	baz=333						
WHF	**Hehuan Shan**	**0.33**	**295**	*e*P	Pb	13 47 27.0	-0.7
	baz=295						
WARBT	**Fenglin Townsh**	**0.34**	**213**	*e*P	Pg	13 47 26.4	+0.4
	baz=213						

TAP 07 13:47:22.7, 24°.00N×121°.59E, h7km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**145**	P	Pg	13 47 24.6	+0.6
	baz=137						
HWA				*i* S	Sg	13 47 25.9	+0.9
	baz=137						
TWD	**Chiawan**	**0.08**	**7**	P	Pg	13 47 25.3	+0.7
	baz=13						
TWD				S	Sg	13 47 27.0	+1.1
	baz=13						
ETM	**Tongmen**	**0.09**	**246**	*e*P	Pg	13 47 25.6	+0.8
	baz=245						
ETM				*e*S	Sg	13 47 27.3	+1.0
	baz=245						
LXIB	**Xiulin Townshi**	**0.16**	**277**	*e*P	Pg	13 47 26.9	+0.9
	baz=276						
NACB	**Ninganchiao**	**0.17**	**3**	*e*P	Pg	13 47 26.8	+0.6
	baz=2.0						
ETLH	**Xiulin Townshi**	**0.22**	**335**	*e*P	Pg	13 47 28.1	+0.9
	baz=335						
WHF	**Hehuan Shan**	**0.33**	**296**	*e*P	Pb	13 47 30.3	-0.9
	baz=295						
WARBT	**Fenglin Townsh**	**0.34**	**213**	*e*P	Pg	13 47 30.2	+0.9
	baz=212						

TAP 07 13:47:29.1, 24°.00N×121°.60E, h6km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**170**	P	Pg	13 47 30.1	-0.2
	baz=156						
HWA				S	Sg	13 47 31.3	+0.2
	baz=156						
TWD	**Chiawan**	**0.08**	**357**	P	Pg	13 47 30.8	-0.1
	baz=2.0						
TWD				*e*S	Sg	13 47 32.3	+0.1
	baz=2.0						
ETM	**Tongmen**	**0.10**	**249**	*e*P	Pg	13 47 31.1	-0.3
	baz=249						
ETM				*e*S	Sg	13 47 32.8	-0.1
	baz=249						
ETL	**Fush Village**	**0.16**	**8**	*e*P	Pg	13 47 32.2	-0.1
	baz=7.0						
NACB	**Ninganchiao**	**0.17**	**358**	*e*P	Pg	13 47 32.3	-0.2
	baz=358						
LXIB	**Xiulin Townshi**	**0.17**	**276**	*e*P	Pg	13 47 32.6	0.0
	baz=276						
SHUL	**Shoufeng**	**0.22**	**189**	*e*P	Pg	13 47 33.7	+0.4
	baz=189						
ETLH	**Xiulin Townshi**	**0.23**	**332**	*e*P	Pg	13 47 33.6	-0.1
	baz=331						
ESL	**Shilin**	**0.24**	**219**	*e*P	Pg	13 47 34.2	+0.3
	baz=217						
WHF	**Hehuan Shan**	**0.34**	**295**	*e*P	Pg	13 47 35.8	0.0
	baz=295						

**NEIC 07 13:55:

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.62**	**335**	Pn	Pn	13 56 18.7	-0.4
PB12	**IPOC Station P**	**4.91**	**120**	Pn	Pn	13 56 21.1	-2.0
PB16	**IPOC Station P**	**5.50**	**113**	Pn	Pn	13 56 31.5	-0.2
PB11	**IPOC Station P**	**6.06**	**127**	Pn	Pn	13 56 38.0	-0.9
TA01	**Diego Aracena**	**6.18**	**135**	Pn	Pn	13 56 40.6	+0.1
GO01	**Chusmiza**	**6.37**	**124**		Pn	13 56 43.2	-0.4
PATCX	**Punta Patache**	**6.38**	**137**	Pn	Pn	13 56 42.7	-0.6
LPAZ	**La Paz**	**6.42**	**92**	Pn	Pn	13 56 44.5	+0.1
PB08	**IPOC Station P**	**6.66**	**127**		Pn	13 56 47.5	0.0
PB02	**IPOC Station P**	**6.91**	**138**		Pn	13 56 50.7	+0.2
PB01	**IPOC Station P**	**6.98**	**134**	Pn	Pn	13 56 51.6	0.0
PB07	**IPOC Station P**	**7.21**	**140**		Pn	13 56 52.5	-2.3
PB09	**IPOC Station P**	**7.67**	**137**	Pn	Pn	13 57 00.7	-0.4
PB05	**IPOC Station P**	**7.92**	**147**	Pn	Pn	13 57 03.7	-0.8
PB06	**IPOC Station P**	**8.15**	**143**	Pn	Pn	13 57 07.4	-0.2
LVC	**Limon Verde**	**8.47**	**140**	Pn	Pn	13 57 12.4	+0.2
PB15	**IPOC Station P**	**8.60**	**145**	Pn	Pn	13 57 14.8	+0.9
PB14	**IPOC Station P**	**9.35**	**154**	Pn	Pn	13 57 23.4	-0.9
GO02	**Mina Guanaco**	**10.17**	**152**	Pn	Pn	13 57 35.7	+0.2
AC01	**Pan de Azucar**	**10.65**	**159**	Pn	Pn	13 57 42.1	+0.3
VILB	**Vilhena**	**14.51**	**79**	Pn	Pn	13 58 33.2	-1.6
CO03	**El Pedregal**	**15.05**	**166**		Pn	13 58 41.0	-1.1
CO03	comp=Z,7.9nm,1.1s			IAmb	IAmb	13 58 43.2	
PTLB	**Pontes e Lacer**	**15.11**	**89**	Pn	Pn	13 58 42.2	-0.6
ITAB	**Concordia**	**23.73**	**121**	P	P	14 00 19.9	-1.7
ITAB	comp=Z,9.8nm,1.3s			IAmb	IAmb	14 00 32.6	
SDV	**Santo Domingo**	**25.27**	**10**	P	P	14 00 35.7	-0.2
SDV	comp=Z,7.4nm,1.1s			IAmb	IAmb	14 00 51.4	
JTS	**Las Juntas de**	**28.17**	**338**	P	P	14 01 00.8	-1.1

*BUT **07** 14:01:35.1±2.6, 47°.03N±0°.03×112°.87W±0°.04, h6km±4km, Error ellipse: s-maj=4.5km s-min=4.3km az=81.0*
NEIC 07 14:01:34.5±2.0, 47°.03N±0°.03×112°.95W±0°.03, h5km±1km, ML2.5/10, ML2.7/9(BUT), Error ellipse: s-maj=5.4km s-min=2.9km az=36.0, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPMT	**Black Pine Rid**	**0.68**	**210**		Pb	14 01 48.5	-0.5
LRM	**Limekiln Ridge**	**1.25**	**164**	Pg	Pb	14 01 58.8	0.0
BOZ	**Bozeman (W)**	**1.70**	**147**		Pn	14 02 05.2	+0.3
BOZ					Sn	14 02 27.3	+0.2
BOZ	46nm,0.4s			IAML		14 02 29.4	
BOZ	51nm,0.3s			IAML		14 02 30.1	
MCMT	**McKenzie Canyo**	**2.20**	**178**	Pn	Pn	14 02 12.9	+1.1
EGMT	**Eagleton**	**2.39**	**64**		Pb	14 02 16.8	-1.1
EGMT	**Eagleton**	**2.39**	**64**		Sb	14 02 47.4	-0.3
EGMT	26nm,0.4s			IAML		14 02 51.5	
EGMT	20nm,2.2s			IAML		14 03 02.4	
QLMT	**Earthquake Lak**	**2.44**	**154**	Pn	Pn	14 02 15.5	+0.3
YHL	**Hebgen Lake**	**2.50**	**150**		Pn	14 02 16.4	+0.3
YHH	**Holmes Hill**	**2.68**	**146**	Pn	Pn	14 02 18.6	+0.2
NEW	**Newport**	**3.08**	**295**	Pn	Pn	14 02 24.2	+0.5
NEW	14nm,4.9s			IAML		14 03 21.5	
NEW	16nm,4.8s			IAML		14 03 26.2	
F10A	**Beach Ranch, E**	**3.13**	**252**	Pn	Pn	14 02 25.9	+1.3

*CATAC **07** 14:13:19.4±1.0, 12°.44N×87°.95W, h30km±9km, ML3.6*
*SNET **07** 14:13:20.3±1.0, 12°.50N×87°.97W, h55km±30km, ML3.7*
ISC 07 14:13:19.4±1.8, 12°.42N±0°.08×87°.96W±0°.05, h31km±13km, n26, σ0°43/36, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.67**	**35**	*i* P	**Pb**	**14 13 32.4**	**-0.4**
CSGN	comp=Z,490nm,1.0s			IAML		14 13 48.1	
CNCH	**Conchagua**	**0.86**	**8**	*e*P	**Pb**	**14 13 35.5**	**-0.4**
CNCH				*e*S	**Sn**	**14 13 47.1**	**+0.1**
CNCH	comp=Z,4μm,0.3s			IAML		14 13 51.9	
CNCH	**Conchagua**	**0.86**	**8**	*i* P	**Pn**	**14 13 35.3**	**-0.2**
CNCH				*i* S	**Sn**	**14 13 47.2**	**+0.2**
CNCH	comp=Z,4μm,1.0s			IAML		14 13 51.9	
LCND	**La Caada**	**0.88**	**4**	*e*P	**Pn**	**14 13 35.7**	**0.0**
LCND				*e*S	**Sb**	**14 13 48.0**	**+0.2**
LCND	**La Caada**	**0.88**	**4**	*i* P	**Pn**	**14 13 35.4**	**-0.3**
LCND				*i* S	**Sb**	**14 13 48.0**	**+0.2**
LCND	comp=Z,2μm,1.0s			IAML		14 13 51.2	
AMPH	**Amapala**	**0.91**	**19**	*e*P	**Pn**	**14 13 35.7**	**-0.4**
AMPH				*e*S	**Sb**	**14 13 48.9**	**+0.5**
CRIN	**San Cristobal**	**0.93**	**73**	*i* P	**Pb**	**14 13 36.7**	**-0.4**
CRIN				*i* S	**Sb**	**14 13 50.6**	**+1.5**
CRIN	comp=Z,6μm,1.0s			IAML		14 13 54.9	
PACA	**Pacayal**	**1.10**	**341**	*e*P	**Pb**	**14 13 39.3**	**-0.7**
PACA				*e*S	**Sn**	**14 13 53.0**	**0.0**
PACA	**Pacayal**	**1.10**	**341**	*i* P	**Pn**	**14 13 39.1**	**+0.3**
PACA				*i* S	**Sn**	**14 13 53.0**	**0.0**
PACA	comp=Z,6μm,1.0s			IAML		14 13 54.8	
PACN	**Al O del Volca**	**1.14**	**86**	*i* P	**Pn**	**14 13 39.3**	**0.0**
PACN	comp=Z,3μm,1.0s			IAML		14 13 57.0	
PLRN	**Geotermica Pol**	**1.17**	**82**	*i* P	**Pn**	**14 13 39.3**	**-0.4**
PLRN				*i* S	**Sn**	**14 13 54.5**	**-0.2**
PLRN	comp=Z,2μm,1.0s			IAML		14 13 55.3	
ROCN	**Rota Cerro Neg**	**1.19**	**85**	*i* P	**Pn**	**14 13 40.0**	**+0.1**
ROCN	comp=Z,560nm,1.0s			IAML		14 13 58.1	
CNGA	**Al SSO del Vol**	**1.23**	**87**	*i* P	**Pn**	**14 13 40.6**	**+0.1**
CNGA	comp=Z,2μm,1.0s			IAML		14 13 59.2	
CNGN	**Cerro Negro**	**1.23**	**86**	*i* P	**Pn**	**14 13 40.8**	**+0.2**
CNGN	comp=Z,1μm,1.0s			IAML		14 14 03.7	
ILCN	**San Idelfonso**	**1.24**	**83**	*i* P	**Pn**	**14 13 39.9**	**-0.7**
ILCN	comp=Z,510nm,1.0s			IAML		14 13 57.1	
MOMN	**Momotombo**	**1.39**	**90**	*i* P	**Pn**	**14 13 42.4**	**-0.3**
MOMN	comp=Z,35nm,1.0s			IAML		14 14 01.5	
MOM2	**El Cardon**	**1.44**	**89**	*i* P	**Pn**	**14 13 43.3**	**-0.1**
MOM2	comp=Z,320nm,1.0s			IAML		14 14 03.9	
SCLA	**Alcaldia de Sa**	**1.48**	**330**	*e*P	**Pn**	**14 13 44.4**	**+0.4**
SCLA				*e*S	**Sn**	**14 14 02.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.48**	**330**	*i* P	**Pn**	**14 13 44.1**	**+0.2**
SCLA	comp=Z,390nm,1.0s			IAML		14 14 03.9	
SAPS	**Ciudad Sandino**	**1.54**	**99**	*i* P	**Pn**	**14 13 45.1**	**+0.4**
SAPS	comp=Z,980nm,1.0s			IAML		14 14 09.5	
LIMN	**Finca el Limon**	**1.68**	**68**	*i* P	**Pn**	**14 13 46.5**	**-0.2**
LIMN	comp=Z,250nm,1.0s			IAML		14 14 13.2	
YUSH	**Yuscaran**	**1.87**	**35**	*e*P	**Pn**	**14 13 49.4**	**0.0**
JAYA	**Jayaque - finc**	**1.90**	**310**	*e*P	**Pn**	**14 13 49.7**	**-0.2**
JAYA	comp=Z,308nm,0.2s			IAML		14 14 14.1	
JAYA	**Jayaque - finc**	**1.90**	**310**	*i* P	**Pn**	**14 13 49.6**	**-0.3**
JAYA	comp=Z,760nm,1.0s			IAML		14 14 13.8	
BOAB	**BOACO BROADBAN**	**2.24**	**89**	*i* P	**Pn**	**14 13 53.8**	**-0.6**
BOAB	comp=Z,58nm,1.0s			IAML		14 14 26.3	
NUBE	**Las Nubes**	**2.30**	**310**	*i* P	**Pn**	**14 13 55.4**	**0.0**
NUBE	comp=Z,180nm,1.0s			IAML		14 14 23.9	

TAP 07 14:15:41.0, 23°.98N×121°.59E, h9km, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=108	**0.02**	**111**	*i* P	Pg	14 15 43.1	+0.5
HWA				*i* S	Sg	14 15 44.6	+0.9
ETM	**Tongmen** baz=257	**0.09**	**258**	*i* P	Pg	14 15 44.1	+0.9
ETM				*i* S	Sg	14 15 45.7	+0.8
TWD	**Chiawan** baz=10.0	**0.10**	**6**	*i* P	Pg	14 15 44.2	+0.8
TWD				*i* S	Sg	14 15 45.9	+0.7
LXIB	**Xiulin Townshi** baz=283	**0.16**	**283**	*i* P	Pg	14 15 45.7	+1.2
LXIB				*i* S	Sg	14 15 48.3	+1.3
ETL	**Fush Village** baz=11	**0.18**	**11**	P	Pg	14 15 45.6	+0.9
ETL				S	Sg	14 15 48.5	+1.1
NACB	**Ninganchiao** baz=2.0	**0.19**	**3**	P	Pg	14 15 45.7	+0.7
NACB				*e*S	Sg	14 15 49.4	+1.7
ESL	**Shilin** baz=217	**0.22**	**219**	P	Pg	14 15 46.1	+0.6
ESL				S	Sg	14 15 49.8	+1.3
ETLH	**Xiulin Townshi** baz=336	**0.24**	**337**	P	Pg	14 15 46.8	+0.9
WARBT	**Fenglin Townsh** baz=214	**0.32**	**215**	*e*P	Pb	14 15 48.2	-0.8
WHF	**Hehuan Shan** baz=299	**0.33**	**299**	*e*P	Pb	14 15 48.9	-0.5
EGFH	**Guangfu** baz=204	**0.34**	**205**	*e*P	Pb	14 15 48.9	-0.4

JMA 07 14:18:03.0±0.1, 24°.2N±0°.4×123°.9E±0°.3, h15km±1km, MV1.8/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.09**	**55**	P	Pg	14 18 06.2	0.0
JKRS				S	Sg	14 18 08.7	+0.5
HATJ	**Hateruma jima**	**0.17**	**221**	P	Pg	14 18 07.0	-0.1
HATJ				S	Sg	14 18 10.2	+0.3
IRIF	**Iriomote-Funau**	**0.23**	**310**	P	Pg	14 18 08.1	-0.1
IRIF				S	Sg	14 18 12.0	+0.4
JIJ	**Ishigaki jima**	**0.27**	**48**	P	Pg	14 18 08.6	-0.1
JIJ				S	Sg	14 18 12.7	+0.1
JISG	**Ishigakijimahi**	**0.53**	**41**	P	Pg	14 18 13.5	0.0
JISG				*e*S	Sg	14 18 20.9	+0.3
JTJ	**Tarama**	**0.84**	**57**	P	Pg	14 18 19.6	+0.3
JTJ				S	Sg	14 18 31.2	+0.9
JYNG	**Yonagunijimaku**	**0.93**	**287**	P	Pb	14 18 20.7	-0.2
JYNG				*e*S	Sg	14 18 33.4	0.0

TAP 07 14:18:04.8, 24°.23N×121°.76E, h11km, ML1.7, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua** baz=351	**0.10**	**351**	P	Pg	14 18 07.9	+0.3
EAHA				*e*S	Sg	14 18 10.1	+0.4
ETL	**Fush Village** baz=242	**0.14**	**242**	*i* P	Pg	14 18 08.5	+0.3
ETL				S	Sg	14 18 11.1	+0.6
NACB	**Ninganchiao** baz=244	**0.16**	**251**	*e*S	Sg	14 18 11.3	+0.4
ENA	**Nanau** baz=358	**0.20**	**356**	P	Pg	14 18 09.4	+0.2
ENA				S	Sg	14 18 12.6	+0.5
TWD	**Chiawan** baz=231	**0.21**	**226**	*e*P	Pg	14 18 09.5	+0.2
ETLH	**Xiulin Townshi** baz=266	**0.25**	**266**	*e*S	Sb	14 18 14.9	-1.1
NNSB	**Datong** baz=301	**0.40**	**301**	*e*S	Sb	14 18 19.2	-1.0

TAP 07 14:19:14.0, 24°.00N×121°.60E, h8km, ML2.0, 1C-3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=156	**0.02**	**173**	*i* P	Pg	14 19 15.9	+0.5
HWA				*i* S	Sg	14 19 17.4	+0.9
TWD	**Chiawan** baz=3.0	**0.08**	**356**	*i* P	Pg	14 19 16.7	+0.6
TWD				*i* S	Sg	14 19 18.1	+0.5
ETM	**Tongmen** baz=252	**0.10**	**252**	*i* P	Pg	14 19 16.9	+0.5
ETM				*i* S	Sg	14 19 18.7	+0.5
ETL	**Fush Village** baz=7.0	**0.16**	**7**	*i* P	Pg	14 19 17.2	-0.1
ETL				*i* S	Sg	14 19 19.9	+0.2
LXIB	**Xiulin Townshi** baz=271	**0.17**	**277**	*i* P	Pg	14 19 18.3	+0.6
LXIB				S	Sg	14 19 21.2	+1.0
NACB	**Ninganchiao** baz=5.0	**0.17**	**358**	*i* P	Pg	14 19 17.6	0.0
NACB				*i* S	Sg	14 19 20.3	+0.2
ETLH	**Xiulin Townshi** baz=332	**0.23**	**332**	P	Pg	14 19 19.5	+0.8
ETLH				*e*S	Sg	14 19 22.9	+1.0
ESL	**Shilin** baz=221	**0.24**	**220**	*e*P	Pg	14 19 18.9	+0.1
WHF	**Hehuan Shan** baz=296	**0.34**	**295**	*i* P	Pg	14 19 21.6	+0.8
WARBT	**Fenglin Townsh** baz=224	**0.34**	**215**	*e*P	Pg	14 19 20.8	0.0
EAHA	**Aohua** baz=21	**0.35**	**21**	*e*P	Pg	14 19 19.3	-1.6
OWD	**Renai** baz=264	**0.39**	**264**	*e*P	Pb	14 19 22.5	-0.8
CHGB	**Renai** baz=279	**0.40**	**279**	P	Pb	14 19 22.8	-0.6
FUSS	**Fushou** baz=317	**0.41**	**307**	*e*P	Pb	14 19 23.2	-0.4
WUSB	**Renai** baz=269	**0.44**	**269**	*e*P	Pb	14 19 23.6	-0.5
ENA	**Nanau** baz=16	**0.45**	**17**	*e*P	Pg	14 19 21.2	-1.5
NNSB	**Datong** baz=343	**0.47**	**335**	*e*P	Pg	14 19 23.7	+0.5
EWUT	**Wuta** baz=19	**0.47**	**20**	*e*P	Pg	14 19 21.7	-1.5
NNS	**Nan Shan** baz=343	**0.49**	**335**	*e*P	Pg	14 19 23.9	+0.5
LATG	**Datong** baz=341	**0.54**	**353**	*e*P	Pg	14 19 24.3	-0.1
NDT	**Datong Townshi** baz=344	**0.61**	**352**	*e*P	Pg	14 19 25.4	-0.3
ENTT	**Nioudou** baz=357	**0.64**	**357**	*e*P	Pg	14 19 26.0	-0.4
YHNB	**Yeheng** baz=355	**0.70**	**343**	*e*P	Pb	14 19 28.0	-0.5
NSK	**Sanguang** baz=354	**0.71**	**342**	*e*P	Pg	14 19 28.0	+0.3
TWE	**Neicheng** baz=357	**0.72**	**5**	*e*P	Pg	14 19 27.0	-0.9
FUSB	**Fushanzhiwuyua** baz=358	**0.76**	**359**	*e*P	Pg	14 19 28.4	-0.2

*IDC **07** 14:19:18.9±0.6, 23°.91N×121°.83E, h0km, mb4.1/21, mbtmp4.1/22, ML2.8/1, MS3.9/35, Error ellipse: s-maj=20.8km s-min=14.0km az=65.0*
*NIED **07** 14:19:19.9, 23°.79N×121°.67E, h19km, MW4.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^15^Nm; Mrr7.11; Mθθ-2.39; Mφφ-4.72; Mrθ1.68; Mφθ-3.13; Mφr2.54; Fault plane solution: M0 7.64000×10^15^ NP1:φs34.00000°, δ57.00000°, λ89.00000°. NP2:φs215.00000°, δ33.00000°, λ91.00000°.*

*JMA **07** 14:19:19.9±0.3, 23°.8N±1°.0×121°.7E±0°.7, h19km, MD4.9/12, MV4.2/12, TAIWAN REGION*
*TAP **07** 14:19:19.7, 23°.96N×121°.77E, h5km, ML4.6, C*
*ASIES **07** 14:19:19.7, 23°.96N×121°.77E, h5km, ML4.6, Mw4.4, Moment Tensor Solution. Moment tensor: Scale 10^22^Nm; Mrr4.50; Mθθ-2.53; Mφφ-1.96; Mrθ1.52; Mφθ-2.56; Mφr0.45; Fault plane solution: M0 4.92792×10^22^ NP1:φs56.57000°, δ54.13000°, λ100.18000°. NP2:φs219.52000°, δ37.10000°, λ76.26000°. Principal axes: T Plg78.0430°, Azm3.6800°; N Plg8.2370°, Azm230.5550°; P Plg8.6070°, Azm139.3000°;*
*NEIC **07** 14:19:20.8±1.5, 23°.94N±0°.05×121°.74E±0°.05, h10km±1km, mb4.6/49 Error ellipse: s-maj=9.9km s-min=6.2km az=144.0*
*BJI **07** 14:19:20.5±0.0, 23°.93N×121°.77E, h9km, mb4.2/39, mB4.9/25, ML4.4/10, Ms4.9/45, Ms7 4.6/43*
ISC 07 14:19:21.0±0.3, 23°.94N±0°.01×121°.79E±0°.02, h10km, n329, σ1s46/386, mb4.4/48, MS4.0/34, 35C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=274	**0.17**	**283**	⇓*i* P	Pg	14 19 23.9	-0.8
HWA				*e*S	Sg	14 19 27.4	+0.3
TWD	**Chiawan** baz=307	**0.22**	**309**	⇓*i* P	Pg	14 19 24.5	-1.1
TWD				*i* S	Sg	14 19 28.5	-0.2
SHUL	**Shoufeng** baz=231	**0.25**	**234**	⇑P	Pg	14 19 26.7	+0.6
SHUL				*e*S	Sb	14 19 33.0	+0.9
ETL	**Fush Village** baz=324	**0.27**	**326**	P	Pg	14 19 25.4	-1.0
ETM	**Tongmen** baz=269	**0.27**	**276**	⇑*i* P	Pg	14 19 25.6	-0.9
ETM				S	Sg	14 19 30.0	-0.1
NACB	**Ninganchiao**	**0.29**	**323**	Pg	Pg	14 19 25.6	-1.2
NACB	**Ninganchiao** baz=313	**0.29**	**323**	*i* P	Pg	14 19 25.6	-1.2
NACB				S	Sg	14 19 29.4	-1.4
TEGC	**Jichi Village** baz=218	**0.32**	**225**	P	Pg	14 19 28.0	+0.7
TEGC				*e*S	Sb	14 19 35.6	+1.6
ESL	**Shilin** baz=247	**0.35**	**249**	⇑*i* P	Pg	14 19 27.2	-0.6
ESL				S	Sg	14 19 32.9	+0.4
LXIB	**Xiulin Townshi** baz=267	**0.35**	**284**	⇑*i* P	Pg	14 19 27.0	-1.0
LXIB				S	Sg	14 19 32.4	-0.3
EHP	**Heping Village** baz=352	**0.37**	**354**	*e*P	Pg	14 19 28.1	-0.2
ETLH	**Xiulin Townshi** baz=312	**0.39**	**314**	P	Pg	14 19 27.6	-1.0
ETLH				*e*S	Sg	14 19 33.9	+0.1
EAHA	**Aohua** baz=356	**0.39**	**354**	*e*P	Pg	14 19 28.3	-0.4
EAHA				*e*S	Sb	14 19 35.0	-1.1
WARBT	**Fenglin Townsh** baz=234	**0.43**	**239**	⇑*i* P	Pg	14 19 29.0	-0.4
WARBT				*e*S	Sg	14 19 35.8	+0.8
ENA	**Nanau** baz=340	**0.49**	**355**	*e*P	Pg	14 19 30.0	-0.5
EWUT	**Wuta** baz=358	**0.50**	**359**	*e*P	Pg	14 19 30.5	-0.3
EOS4	**EOS4** baz=86	**0.52**	**69**	*e*P	Pb	14 19 32.7	+0.7
WHF	**Hehuan Shan** baz=290	**0.52**	**293**	P	Pg	14 19 30.2	-1.0
WHF				*e*S	Sg	14 19 37.1	-1.0
HGSD	**Ruisui** baz=215	**0.56**	**217**	*e*P	Pg	14 19 32.3	+0.5
OWD	**Renai** baz=267	**0.56**	**272**	*e*P	Pg	14 19 31.3	-0.6
OWD				*e*S	Sg	14 19 39.8	+0.5
CHGB	**Renai** baz=278	**0.57**	**282**	⇑*i* P	Pg	14 19 31.5	-0.7
CHGB				S	Sg	14 19 40.4	+0.7
FUSS	**Fushou** baz=299	**0.58**	**302**	P	Pg	14 19 31.6	-0.7
FUSS				S	Sg	14 19 40.8	+0.7
EOS3	**EOS3** baz=58	**0.60**	**54**	*e*P	Pn	14 19 34.8	-0.6
EHY	**Hungye** baz=221	**0.60**	**225**	P	Pg	14 19 32.5	-0.2
EHY				S	Sb	14 19 42.5	+0.2
NNSB	**Datong** baz=322	**0.61**	**323**	⇓*i* P	Pg	14 19 32.0	-0.8
NNSB				S	Sg	14 19 41.3	+0.4
NNSH	**Datong** baz=322	**0.61**	**323**	P	Pg	14 19 31.8	-1.0
NNSH				*e*S	Sg	14 19 40.6	-0.3
WUSB	**Renai** baz=282	**0.61**	**275**	P	Pg	14 19 32.2	-0.7
WUSB				S	Sg	14 19 40.1	-0.9
NNS	**Nan Shan** baz=323	**0.62**	**323**	⇓P	Pg	14 19 32.2	-0.9
NNS				S	Sg	14 19 41.8	+0.5
EOS2	**EOS2** baz=58	**0.63**	**40**	*e*P	Pn	14 19 35.2	-0.6
ESAO	**Su ao** baz=5.0	**0.64**	**5**	*e*P	Pg	14 19 33.1	-0.2
LATG	**Datong** baz=323	**0.64**	**338**	⇓P	Pg	14 19 32.6	-0.8
LATG				*e*S	Sb	14 19 43.2	-0.2
TWT	**Tachien** baz=296	**0.64**	**299**	⇑*i* P	Pg	14 19 33.0	-0.4
TDCB	**Techi** baz=296	**0.65**	**299**	⇑P	Pg	14 19 33.0	-0.6
TWC	**Suao** baz=358	**0.67**	**5**	P	Pg	14 19 33.9	0.0
TWC				*e*S	Sb	14 19 43.5	-0.6
ECBN	**Changbin** baz=206	**0.69**	**206**	*e*P	Pg	14 19 34.6	+0.3
NDS	**Dongshan** baz=356	**0.69**	**355**	*e*P	Pg	14 19 34.2	-0.2
NDS				*e*S	Sb	14 19 44.3	-0.5
YULB	**Yu-li**	**0.70**	**220**		Pg	14 19 34.1	-0.5
YULB	**Yu-li**	**0.70**	**220**	P	Pg	14 19 34.7	+0.1
YULB	**Yu-li** baz=234	**0.70**	**220**	⇑*e*P	Pg	14 19 34.1	-0.5
NDT	**Datong Townshi** baz=340	**0.71**	**339**	*e*P	Pg	14 19 34.0	-0.6
NDT				S	Sb	14 19 44.7	-0.5
ENTT	**Nioudou** baz=334	**0.73**	**344**	⇓P	Pg	14 19 34.5	-0.6
ENTT				S	Sb	14 19 45.8	0.0
EYUL	**Yuli** baz=200	**0.73**	**216**	*e*P	Pg	14 19 35.4	+0.3
TWF1	**Yuli** baz=235	**0.74**	**218**	*e*P	Pg	14 19 34.4	-0.8
WPL	**Puli Township** baz=273	**0.76**	**276**	⇑P	Pg	14 19 35.0	-0.7
WPL				S	Sg	14 19 45.5	-0.1
SSLB	**Suanglung**	**0.78**	**259**		Pg	14 19 35.3	-0.6
SSLB	**Suanglung**	**0.78**	**259**	P	Pg	14 19 35.5	-0.5
SSLB	**Suanglung** baz=266	**0.78**	**259**	⇑*i* P	Pg	14 19 35.4	-0.6
SSLB				*e*S	Sg	14 19 45.2	-0.9
TWE	**Neicheng** baz=354	**0.79**	**352**	P	Pg	14 19 35.9	-0.3

TWE eS Sg 14 19 46.4 0.0
baz=354
DPDB Guoxing 0.79 277⇑*i*P Pg 14 19 35.8 -0.5
baz=274
DPDB eS Sb 14 19 47.4 -0.3
baz=274
WCS Beigang Elemen 0.81 279 ⇑P Pg 14 19 36.1 -0.4
baz=276
WCS eS Sg 14 19 47.1 0.0
baz=276
SMLT Sun Moon Lake 0.81 266⇑*i*P Pg 14 19 36.2 -0.5
baz=275
SMLT S Sg 14 19 47.2 -0.1
baz=275
YHNB Yeheng 0.82 333 Pg 14 19 36.2 -0.6
YHNB Yeheng 0.82 333 P Pg 14 19 36.7 -0.1
YHNB Yeheng 0.82 333⇓*i*P Pg 14 19 36.5 -0.3
baz=322
YHNB S Sg 14 19 47.5 0.0
baz=322
ILA Ilan 0.82 358 *e*P Pb 14 19 37.3 -0.1
baz=343
CHKH Chenggong 0.83 206 *e*P Pg 14 19 36.3 -0.6
baz=204
CHKH eS Sn 14 19 51.2 +0.3
baz=204
NSK Sanguang 0.83 332⇓*i*P Pg 14 19 36.5 -0.5
baz=322
NSK S Sg 14 19 47.6 -0.3
baz=322
FUSB Fushanzhiwuyua 0.84 348 ⇓P Pg 14 19 36.8 -0.3
baz=338
FUSB S Sb 14 19 49.1 +0.1
baz=338
WHP Taichung City 0.84 294⇑*i*P Pg 14 19 36.8 -0.4
baz=284
WHP S Sb 14 19 49.1 +0.1
baz=284
TYC Yuchr 0.85 268⇑*i*P Pg 14 19 36.7 -0.7
baz=276
TYC S Sg 14 19 48.6 +0.2
baz=276
FULB Fuli 0.86 212 *e*P Pb 14 19 38.5 +0.4
baz=198
NWLT Wulai 0.87 343 P Pg 14 19 37.6 -0.3
baz=343
NWLT eS Sb 14 19 50.3 +0.3
baz=343
WHYT Xinyi Township 0.89 254 *e*P Pg 14 19 37.3 -0.7
baz=252
CHKT Chengkung 0.92 205 *e*P Pg 14 19 38.1 -0.6
baz=203
CHKT eS Sn 14 19 53.8 +0.6
baz=203
NFF Wufeng Townshi 0.92 319 *e*P Pg 14 19 38.5 -0.2
baz=318
NFF eS Sg 14 19 50.7 0.0
baz=318
EHD Haiduan 0.95 214 *e*P Pg 14 19 38.6 -0.7
baz=229
WJS Zhushan 0.98 263 ⇑P Pg 14 19 39.9 +0.2
baz=261
WJS S Sn 14 19 54.6 0.0
baz=261
ECS Chishang 0.99 212 *e*P Pg 14 19 39.7 -0.2
baz=199
NSTT Nanjuang 0.99 314⇑*i*P Pg 14 19 39.8 -0.3
baz=312
NSTT eS Sb 14 19 54.0 +0.6
baz=312
ALS Alishan 0.99 245 ⇑P Pg 14 19 39.6 -0.6
baz=241
ALS eS Sb 14 19 54.3 +0.6
baz=241
LIOB Emei 0.99 315 ⇑P Pg 14 19 40.0 -0.1
baz=313
LIOB S Sb 14 19 54.0 +0.5
baz=313
WWF Wufeng 1.00 276 ⇑P Pb 14 19 40.5 +0.1
baz=274
WNT Mingjian 1.01 267 ⇑P Pb 14 19 40.6 +0.1
baz=264
WNT eS Sb 14 19 54.2 +0.3
baz=264
TWQ1 Liyutan 1.01 294 P Pg 14 19 40.3 -0.1
baz=291
TWQ1 eS Sn 14 19 56.1 +0.6
baz=291
WNT1 Nantou City 1.01 268 *e*P Pb 14 19 40.9 +0.3
baz=272
WNT1 eS Sn 14 19 55.9 +0.3
baz=272
NJD Zhudong 1.02 321 *e*P Pn 14 19 41.1 -0.2
baz=319
ELDTW Lidau 1.03 224 *e*P Pg 14 19 39.0 -1.7
baz=221
ELDTW eS Sn 14 19 56.2 +0.1
baz=221
TIPB Shuangxi 1.03 2 *e*P Pg 14 19 40.5 -0.3
baz=349
TCU Taichung 1.04 282 *e*P Pn 14 19 41.6 0.0
baz=273
NHDH Xindian Distri 1.05 347 ⇑P Pg 14 19 41.0 -0.1
baz=334
NSY Sanyi 1.05 297⇑*i*P Pn 14 19 41.6 -0.2
baz=306
NSY eS Sn 14 19 58.3 +1.8
baz=306
TWA Mucha 1.05 350 ⇓P Pg 14 19 41.1 -0.1
baz=340
TWA eS Sn 14 19 56.5 -0.1
baz=340
EDH Donghe 1.06 205 *e*P Pg 14 19 40.5 -0.9
baz=182
TATO Taipei 1.07 345 Pg 14 19 41.3 -0.2
TATO Taipei 1.07 345 P Pb 14 19 41.6 +0.1
CHN5 Tsauling 1.07 252⇑*i*P Pg 14 19 41.4 -0.1
baz=237
CHN5 eS Sn 14 19 58.6 +1.5
baz=237
TWB1 Santiao Chiao 1.08 10 *e*P Pb 14 19 41.8 0.0
baz=359
NMLH Miaoli 1.09 303 *e*P Pn 14 19 42.2 -0.1
baz=300
NMLH eS Sn 14 19 58.9 +1.5
baz=300
HSN1 Hsinchu 1.09 320 *e*P Pn 14 19 42.6 +0.3
baz=316
BACT New Taipei Cit 1.10 343 *e*P Pn 14 19 42.3 -0.1
baz=341
WYL Yuanlin Townsh 1.10 271 *e*P Pb 14 19 42.1 -0.1
baz=249
WYL eS Sn 14 19 59.6 +1.8
baz=249
NJN Zhunan 1.12 312 *e*P Pg 14 19 42.6 +0.1
baz=308
SBCB Hsinchu 1.12 319 ⇑P Pn 14 19 43.4 +0.6
baz=318
SBCB eS Sg 14 19 57.5 +0.4
baz=318
WDJ Dajia District 1.12 291 *e*P Pn 14 19 42.9 +0.2
baz=299
WDJ eS Sn 14 19 59.5 +1.2
baz=299
TAP Taipei 1.12 347 *e*P Pb 14 19 41.8 -0.7
baz=331
NWF Wu-fen Shan 1.13 360 P Pn 14 19 43.0 +0.1
baz=352
NWF eS Sn 14 20 00.1 +1.6
baz=352
WFSB Wu-fen Shan 1.13 360 ⇑P Pn 14 19 43.0 +0.1
baz=352
WFSB eS Sn 14 20 00.3 +1.9
baz=352
WCHH Zhanghua 1.13 277 *e*P Pn 14 19 43.0 +0.1
baz=272
HSN Hsinchu 1.14 319 *e*P Pn 14 19 43.1 +0.1
baz=320
HSN eS Sn 14 19 58.4 -0.2
baz=320
NTY Taoyuan 1.15 337 *e*P Pn 14 19 43.4 +0.3
baz=328
WGK Gukeng 1.15 258 *e*P Pb 14 19 43.0 0.0
baz=254
SXI1 Grass Mountain 1.15 4⇑*i*P Pn 14 19 43.2 -0.1
baz=5.0
SXI1 eS Sn 14 20 01.8 +2.6
baz=5.0

NCUH Zhongli 1.16 332 *e*P Pb 14 19 42.9 -0.2
baz=329
NCU National Centr 1.16 332 *e*P Pg 14 19 43.5 +0.1
baz=332
NCU eS Sn 14 20 00.7 +1.4
baz=332
WDLH Douliu 1.17 258 *e*P Pb 14 19 43.3 0.0
baz=253
JYNG Yonagunijimaku 1.18 64 P Pg 14 19 43.7 +0.1
JYNG eS Sn 14 20 01.3 +1.8
JYNG Yonagunijimaku 1.18 64 A A 14 19 43.7
comp=E,33nm,5.2s,comp=N,35nm,3.9s
LONT Longtian 1.19 211 *e*P Pb 14 19 41.0 -2.7
baz=211
WCKO Fanlu 1.19 246 ⇑P Pb 14 19 43.6 0.0
baz=243
WCKO eS Sn 14 20 01.3 +1.3
baz=243
STYH Taoyuan 1.20 231 *e*P Pn 14 19 42.4 -1.4
baz=215
TWS1 Kuangyinshan 1.20 344 P Pg 14 19 44.4 +0.3
baz=344
TWS1 eS Sn 14 20 03.0 +2.8
baz=344
TNOU National Taiwa 1.21 359 *e*P Pn 14 19 43.3 -0.6
baz=357
YM01 YM01 1.22 351 *e*P Pg 14 19 44.3 -0.1
baz=351
YM01 eS Sn 14 20 02.0 +1.3
baz=351
STYT Tauyuan 1.22 231 *e*P Pn 14 19 43.2 -0.9
baz=214
STYT eS Sn 14 20 01.2 +0.4
baz=214
YOJ Yonaguni jima 1.23 65 Pn Pn 14 19 43.9 -0.4
YOJ Yonaguni jima 1.23 65 P Pg 14 19 45.0 +0.3
YOJ Yonaguni jima 1.23 65 P Pg 14 19 44.8 +0.1
YOJ eS Sn 14 20 02.7 +1.7
YOJ Yonaguni jima 1.23 65 A A 14 19 44.8
comp=E,26nm,3.7s,comp=N,30nm,5.5s
TPUB Ta-pu 1.24 239 Pn Pn 14 19 44.0 -0.3
TPUB Ta-pu 1.24 239 P Pn 14 19 44.3 0.0
TPUB Ta-pu 1.24 239⇑*i*P Pn 14 19 44.2 -0.1
baz=237
TPUB eS Sn 14 20 01.8 +0.7
baz=237
CHN4 Tsaushan 1.24 242 *e*P Pn 14 19 44.0 -0.4
baz=226
YM08 YM08 1.26 352 *e*P Pn 14 19 44.5 -0.1
baz=349
NTST Danshui 1.26 346 *e*P Pg 14 19 45.2 +0.1
baz=339
ANP Anpu 1.27 349 *e*P Pn 14 19 44.4 -0.4
baz=344
CHN2 Minshiung 1.27 252 *e*P Pg 14 19 45.6 +0.3
baz=248
WTP Ta-pu 1.28 238 ⇑P Pn 14 19 44.7 -0.3
baz=223
WRL Guolierlin Hig 1.29 269 *e*P Pn 14 19 45.0 0.0
baz=265
TWGBT Beinan 1.29 210 P Pn 14 19 43.1 -2.0
TWGBT Beinan 1.29 210 *e*P Pn 14 19 42.8 -2.2
baz=194
TWG Pinlang 1.29 211 Pn 14 19 43.1 -2.0
TWG Pinlang 1.29 211 *e*P Pn 14 19 42.8 -2.3
baz=194
LDUT Ludao 1.29 193 *e*P Pn 14 19 42.8 -2.3
baz=194
WTK Tuku 1.30 259 *e*P Pg 14 19 46.1 +0.1
baz=255
RLNB Erlin 1.31 268 *e*P Pb 14 19 45.6 +0.1
baz=263
RLNB eS Sg 14 20 04.6 +1.6
baz=263
TTN Taitung 1.32 207 *e*P Pn 14 19 45.3 -0.2
baz=207
TWY Chenhua 1.34 353 *e*P Pg 14 19 47.1 +0.4
baz=347
TWK Hsinying 1.37 241 P Pn 14 19 46.3 +0.2
baz=237
TWK eS Sg 14 20 07.6 +2.7
baz=237
CHN1 Nanshi 1.38 237 ⇑P Pb 14 19 46.8 -0.1
baz=242
CHN1 eS Sg 14 20 06.9 +1.6
baz=242
WTCT Ta-ch'eng 1.38 267 *e*P Pn 14 19 46.5 +0.2
baz=262
SNST Tainan City 1.38 239 *e*P Pn 14 19 46.4 +0.1
baz=236
SGST Jiashian 1.40 233⇑*e*P Pn 14 19 45.6 -0.9
baz=215
SGST eS Sg 14 20 07.3 +1.4
baz=215
SLGT Liugui 1.41 228 *e*P Pb 14 19 47.3 -0.1
baz=213
SLGT eS Sg 14 20 07.9 +1.6
baz=213
WSF Szhu 1.46 259 *e*P Pn 14 19 47.9 +0.4
baz=255
WSL Shuilin Townsh 1.49 254 *e*P Pn 14 19 48.3 -0.3
baz=250
ICHU Yijhu 1.50 248 *e*P Pb 14 19 48.9 0.0
baz=243
ECL Taimali 1.54 210 *e*P Pn 14 19 47.9 -0.6
baz=198
CHN8 Yiju 1.56 248 *e*P Pn 14 19 49.3 +0.5
baz=243
CHN3 Shinhua 1.56 237 *e*P Pb 14 19 50.3 +0.4
baz=233
SCST Cishan 1.58 229 *e*P Pg 14 19 51.2 -0.1
baz=227
SSD Sandimen 1.59 222 *e*P Pn 14 19 48.3 -0.9
baz=212
SHHT Tainan City 1.61 236 *e*P Pg 14 19 51.4 -0.4
baz=232
TSMG Majia 1.61 221 *e*P Pn 14 19 49.7 +0.1
baz=218
TSMG eS Sg 14 20 14.5 +1.6
baz=218
SCLT Jiali 1.65 243 *e*P Pb 14 19 51.3 -0.1
baz=238
TWM1 Shoushan 1.67 229 *e*P Pg 14 19 52.8 -0.3
baz=227
MASBT Mashibuluo 1.69 219 *e*P Pn 14 19 50.0 -0.6
baz=206
SGLT Jiouru 1.70 225 *e*P Pb 14 19 51.5 -0.7
baz=223
PCYT Pengchaiyu 1.70 9 *e*P Pn 14 19 50.2 -0.6
baz=5.0
EAST Anshuo 1.77 209 *e*P Pn 14 19 50.1 -1.6
baz=200
TAW Tawu 1.77 208 *e*P Pb 14 19 53.5 -0.1
baz=208
TAWH Dawu Township 1.79 208 *e*P Pb 14 19 53.0 -0.9
baz=208
IRIF Iriomote-Funau 1.82 77 P Pb 14 19 53.5 -0.9
IRIF *e*S Sb 14 20 17.6 +0.4
HATJ Hateruma jima 1.85 86 P Pn 14 19 53.5 +0.8
HATJ S Sb 14 20 17.7 -0.4
HATJ Hateruma jima 1.85 86 A A 14 19 53.5
comp=E,30nm,3.4s,comp=N,31nm,4.3s
SCZT Fangliau 1.89 215 *e*P Pn 14 19 54.2 +0.8
baz=201
LAY Lan-yu 1.90 187 *e*P Pn 14 19 51.0 -2.5
baz=185
LYUB Lan-yu 1.94 186 *e*P Pn 14 19 50.6 -3.4
baz=185
JKRS Kuro-shima 2.05 81 *e*P Pn 14 19 56.7 +1.2
JKRS S Sb 14 20 23.6 -0.4
JKRS Kuro-shima 2.05 81 A A 14 19 56.7
comp=E,27nm,3.1s,comp=N,34nm,2.9s
TWP Hsiaoliuchiu 2.06 220 *e*P Pb 14 19 58.3 -0.1
baz=217
WDGT Dungji 2.06 251 *e*P Pn 14 19 55.4 -0.3
baz=245
PHUB P'eng-hu 2.07 259 *e*P Pn 14 19 55.5 -0.3
baz=252
PNG Penghu 2.08 260 *e*P Pn 14 19 55.9 0.0
baz=253
HEN Hengchun 2.15 207 *e*P Pb 14 19 59.1 -0.9
baz=195
TWK1 Hengchun 2.18 205 *e*P Pn 14 19 57.5 +0.2
baz=196
TWKBT Hengchun 2.18 204 *e*P Pn 14 19 56.6 -0.7
baz=196
TSEB Hengchuen, Pin 2.19 202 *e*P Pn 14 19 55.9 -1.5
baz=194

JIJ Ishigaki jima 2.19 78 P Pn 14 19 57.6 +0.1
JIJ *e*S Sb 14 20 26.1 -1.9
JIJ Ishigaki jima 2.19 78 A A 14 19 57.6
comp=E,4.0nm,4.3s,comp=N,7.0nm,8.2s
VCHM Qimei 2.28 252 *e*P Pn 14 19 58.4 -0.2
baz=246
VWUC VWUC 2.37 297 *e*P Pn 14 19 57.9 -2.0
baz=287
JISG Ishigakijimahi 2.39 74 P Pn 14 20 01.4 +1.2
JISG S Sb 14 20 31.5 -2.2
JISG Ishigakijimahi 2.39 74 A A 14 20 01.4
comp=E,5.0nm,8.5s,comp=N,7.0nm,5.6s
PTMZ Houxiangcun 2.67 295 *e*P Pn 14 20 02.8 -1.1
baz=284
JTJ Tarama 2.75 75 *e*P Pn 14 20 06.0 +0.9
JTJ *e*S Sn 14 20 40.5 +2.0
JTJ Tarama 2.75 75 A A 14 20 06.0
comp=E,10.0nm,5.0s,comp=N,13nm,3.1s
MATB Ma-tsu 2.76 323 *e*P Pn 14 20 03.9 -1.4
baz=309
QZH Quanzhou 3.08 290⇓*i*Pn Pn 14 20 09.1 -0.5
QZH Sn Sn 14 20 45.9 -0.6
QZH smax smax
comp=N,900nm,1.0s
QZH smax smax
comp=N,720nm,0.8s
QZH LR LR
comp=N,12μm,6.7s
QZH LR LR
comp=N,16μm,7.0s
QZH LR LR
comp=N,16μm,7.4s
KNM Kinmen 3.10 280 *e*P Pn 14 20 10.9 +1.0
baz=268
KNMB Chin-men Tao 3.15 280 Pn Pn 14 20 09.6 -0.9
KNMB Chin-men Tao 3.15 280 *e*P Pn 14 20 09.8 -0.8
baz=270
LYJJ Jianjiangzhen 3.18 325 *e*P Pn 14 20 10.0 -1.1
baz=313
JIRB Irabujima 3.21 73 P Pn 14 20 12.0 +0.5
JIRB S Sn 14 20 51.0 +1.2
JIRB Irabujima 3.21 73 A A 14 20 12.0
comp=E,7.0nm,3.0s,comp=N,9.0nm,5.4s
MHZQ Yeshan 3.30 311 *e*P Pn 14 20 12.0 -0.6
baz=297
JIKM Ikemajima 3.30 72 A A 14 20 14.4
comp=E,9.0nm,3.7s,comp=N,12nm,5.8s
XPSS Dashiqiu 3.31 334 *e*P Pn 14 20 11.6 -1.3
baz=321
JMJ Miyako jima 2 3.31 74 P Pn 14 20 15.0 +2.1
JMJ2 Miyako jima3 3.33 75 A A 14 20 14.6
comp=E,12nm,4.0s,comp=N,19nm,5.2s
JOGS Gusukube 3.40 75 A A 14 20 15.7
comp=E,18nm,3.5s,comp=N,18nm,6.1s
AXDP Jialang 3.61 286 *e*P Pn 14 20 16.4 -0.5
baz=275
ZPLA Ao Xicun 3.69 271 *e*P Pn 14 20 17.0 -1.1
baz=261
DSXP Dongshan 4.00 268 *e*P Pn 14 20 21.6 -0.7
baz=258
SXFK Yanhouchang 4.48 304 *e*P Pn 14 20 27.9 -1.0
baz=293
SSE Sheshan 7.15 356 Pn Pn 14 21 05.0 -0.6
SSE Sn Sn 14 22 27.8 +0.9
SSE smax smax
comp=N,52nm,1.2s
SSE smax smax
comp=N,65nm,1.2s
SSE LR LR
comp=N,1μm,10.3s
SSE LR LR
comp=N,540nm,10.8s
GZH Guangzhou 7.79 265 Pn Pn 14 21 09.1 -5.4
GZH Sn Sn 14 22 35.2 -7.6
GZH smax smax
comp=N,260nm,1.4s
GZH smax smax
comp=N,170nm,1.0s
NJ2 Nanjing 8.49 343 *e*P Pn 14 21 22.9 -1.0
NJ2 pP 14 21 27.1
NJ2 S Sn 14 23 02.2 +2.4
NJ2 sS 14 23 06.9
NJ2 pmax pmax
comp=N,13nm,0.5s
NJ2 smax smax
comp=N,120nm,1.0s
NJ2 smax smax
comp=N,210nm,1.1s
NJ2 LR LR
comp=N,2μm,4.3s
NJ2 LR LR
comp=N,3μm,5.2s
NJ2 LR LR
comp=N,2μm,5.7s
CNSH ChangSha 9.01 300 ⇓P Pn 14 21 34.5 +3.3
CNSH S Sn 14 23 21.9 +9.1
CNSH smax smax
comp=N,420nm,1.9s
CNSH smax smax
comp=N,750nm,1.4s
CNSH LR LR
comp=N,3μm,6.4s
CNSH LR LR
comp=N,4μm,6.0s
WHN Wuhan 9.33 316 P Pn 14 21 36.2 +0.7
WHN S Sn 14 23 17.5 -3.0
WHN LR LR
comp=N,9μm,7.8s
WHN LR LR
comp=N,7μm,8.4s
WHN LR LR
comp=N,12μm,7.7s
TGY Tagaytay City 9.82 185 LR LR 14 25 34.2
comp=N,304nm,19.1s,baz=152,slow=38
JNU Nakatsue 12.14 39 LR LR 14 27 16.4
comp=N,199nm,18.7s,baz=197,slow=39
QIZ Qiongzhong 12.14 249 P Pn 14 22 13.1 -1.0
QIZ S Sn 14 24 29.3 -0.3
QIZ LR LR
comp=N,890nm,11.4s
QIZ LR LR
comp=N,680nm,8.2s
QIZ LR LR
comp=N,940nm,8.8s
LYN LuoYang 13.33 325 ⇑P Pn 14 22 31.9 +1.6
LYN PP P 14 22 44.0 +4.0
LYN S Sn 14 24 59.8 +1.2
LYN pmax pmax
comp=N,10.0nm,0.4s
LYN pmax pmax
comp=N,230nm,5.1s
LYN LR LR
comp=N,6μm,7.3s
LYN LR LR
comp=N,5μm,7.6s
LYN LR LR
comp=N,6μm,9.2s
KSRS Korea Array 14.46 20 Pn P 14 22 49.2 -3.3
comp=N,0.5nm,0.3s,baz=200,slow=11,SNR=24
KSRS LR LR 14 29 14.2
comp=N,269nm,21.4s,baz=215,slow=41
HNS HongShan 14.73 337 *e*P P 14 22 55.0 -0.5
HNS PP PnPn 14 23 07.7 +10
HNS S Sn 14 25 39.5 +6.9
HNS LR LR
comp=N,960nm,8.4s
HNS LR LR
comp=N,1μm,7.2s
HNS LR LR
comp=N,2μm,12.7s
SLVN Son La 16.71 265 Pn Pn 14 23 12.4 -3.0
BJI Beijing 16.74 345 P Pn 14 23 13.5 -2.0
BJI S Sn 14 26 16.8 -4.6
BJI pmax pmax
comp=N,57nm,6.6s
BJI LR LR
comp=N,360nm,11.0s
DAV Davao City (W) 17.16 167 LR LR 14 29 40.0
comp=N,275nm,21.2s,baz=359,slow=36
KMI Kunming 17.37 278 ⇑P Pn 14 23 24.4 +0.6
KMI S Sn 14 26 38.1 +0.7
KMI pmax pmax
comp=N,8.0nm,0.8s
KMI pmax pmax
comp=N,180nm,3.8s
KMI LR LR

comp=N,1µm,6.5s
KMI LR LR
comp=N,2µm,6.8s
KMI LR LR
comp=N,2µm,10.0s
CD2 Chengdu 17.43 297 P P 14 23 25.9 +0.2
CD2 pmax pmax
comp=N,10.0nm,0.5s
CD2 LR LR
comp=N,3µm,5.6s
CD2 LR LR
comp=N,3µm,6.0s
CD2 LR LR
comp=N,2µm,6.9s
UBPT Khong Chiam 17.61 244 Pn 14 23 25.2 -1.4
MJAR Matsushiro Arr 18.91 45 P **Pn 14 23 42.8 +0.3**
baz=227,slow=8.1,SNR=5.2
MJAR LR LR 14 31 52.5
comp=N,115nm,19.2s,baz=256,slow=40
comp=N,2.6nm,0.9s
BTO Baotou 19.34 332 *e*P **Pn 14 23 50.6 +3.0**
BTO pP **pwP 14 23 54.4 +1.0**
BTO pmax pmax
comp=N,7.0nm,0.5s
BTO pmax pmax
comp=N,490nm,4.5s
BTO LR LR
comp=N,2µm,8.6s
BTO LR LR
comp=N,1µm,7.1s
BTO LR LR
comp=N,3µm,8.1s
LZH Lanzhou 19.66 312 *e*P **Pn 14 23 54.7 +3.1**
LZH sP sP 14 24 00.5 +6.7
LZH S **Sn 14 27 35.6 +3.1**
LZH pmax pmax
comp=N,19nm,1.4s
LZH pmax pmax
comp=N,470nm,5.5s
LZH LR LR
comp=N,1µm,13.4s
LZH LR LR
comp=N,1µm,13.7s
LZH LR LR
comp=N,2µm,13.4s
CN2 Changchun 20.04 8 *e*P **P 14 23 53.3 -0.8**
CN2 *e*S **S 14 27 32.6 -6.7**
CN2 pmax pmax
comp=N,10.0nm,0.8s
CN2 pmax pmax
comp=N,100nm,3.0s
CN2 LR LR
comp=N,600nm,13.0s
CN2 LR LR
comp=N,700nm,13.0s
CN2 LR LR
comp=N,900nm,10.0s
CRAI Chiangrai 20.18 264 Pn **P 14 23 55.8 0.0**
XLT XiLinHaoTe 20.45 348 *e*P Pn 14 23 59.9 -0.9
XLT pmax pmax
comp=N,10.0nm,1.4s
XLT pmax pmax
comp=N,180nm,4.6s
XLT LR LR
comp=N,54nm,10.2s
XLT LR LR
comp=N,370nm,10.4s
XLT LR LR
comp=N,470nm,10.7s
TNCH TengChong 21.20 278 P **P 14 24 08.2 +1.1**
TNCH pP sP 14 24 10.5 -0.2
TNCH sP pP 14 24 13.3 +3.8
TNCH PP **PnPn 14 24 32.3 +5.9**
TNCH S S 14 27 50.4 -13
TNCH SS **SnSn 14 28 34.9 +10**
TNCH pmax pmax
comp=N,19nm,1.1s
TNCH pmax pmax
comp=N,160nm,5.2s
TNCH LR LR
comp=N,1µm,6.1s
TNCH LR LR
comp=N,1µm,7.9s
TNCH LR LR
comp=N,1µm,8.4s
JMM Marumori 21.36 45 P **P 14 24 07.1 -1.4**
JMM lAmb lAmb 14 24 16.9
comp=Z,43nm,1.4s
CHTO Chiang Mai 21.86 261 P **P 14 24 14.4 +0.3**
USA0B Ussuriysk Arra 21.87 20 P **P 14 24 13.0 -0.8**
USRK Ussuriysk Ar. 21.87 20 P **P 14 24 13.2 -0.7**
USRK Ussuriysk Ar. 21.87 20 P **P 14 24 14.7 +0.8**
comp=Z,3.8nm,0.8s,baz=218,slow=13,SNR=6.9
USRK LR LR 14 32 59.8
comp=Z,191nm,18.7s,baz=214,slow=38
comp=Z,3.8nm,0.8s
CMAR Chiang Mai Arr 21.97 260 P **P 14 24 14.3 -0.9**
CMAR Chiang Mai Arr 21.97 260 P **P 14 24 16.7 +1.5**
comp=Z,1.6nm,0.9s,baz=62,slow=8.2,SNR=9.4
CMAR LR LR 14 33 55.2
comp=Z,97nm,21.5s,baz=65,slow=40
comp=Z,1.6nm,0.9s
CM31 Chiang Mai Arr 21.97 260 P **P 14 24 14.9 -0.3**
BNX BinXian 22.22 10 ⇓P **P 14 24 17.3 -0.3**
BNX pmax pmax
comp=Z,4.0nm,0.6s
BNX pmax pmax
comp=Z,180nm,4.4s
GUMO Guam 24.12 111 LR LR 14 32 02.9
comp=Z,118nm,21.2s,baz=290,slow=32
GTA Gaotai 24.15 315 P **P 14 24 37.4 0.0**
GTA S **S 14 28 58.5 +3.1**
GTA pmax pmax
comp=Z,7.0nm,2.0s
GTA LR LR
comp=Z,450nm,11.6s
GTA LR LR
comp=Z,530nm,12.7s
GTA LR LR
comp=Z,860nm,12.0s
GOMU GeErMu 26.25 304 P **P 14 24 57.7 +0.9**
GOMU pP sP 14 25 01.2 +0.5
GOMU sP pwP 14 25 05.0 +5.4
GOMU pmax pmax
comp=Z,2.0nm,0.8s
GOMU LR LR
comp=Z,530nm,8.3s
GOMU LR LR
comp=Z,850nm,8.0s
GOMU LR LR
comp=Z,970nm,8.2s
ASAJ Asahikawa 26.37 35 LR LR 14 35 26.5
comp=Z,220nm,19.2s,baz=252,slow=37
KLR Kul'dur 26.43 15 LR LR 14 36 02.2
comp=Z,155nm,18.0s,baz=204,slow=38
ULN Ulaanbaatar 26.60 338 P **P 14 24 59.1 -0.5**
ULN lAmb lAmb 14 25 01.8
comp=Z,12nm,0.9s
HEH HeiHe 26.63 8 *e*P **P 14 25 01.6 +2.0**
HEH pmax pmax
comp=Z,5.0nm,0.9s
HEH pmax pmax
comp=Z,270nm,5.2s
HEH LR LR
comp=Z,350nm,11.2s
HEH LR LR
comp=Z,480nm,11.0s
HEH LR LR
comp=Z,570nm,14.1s
SONM Songino Array 26.81 337 P **P 14 25 00.6 -0.8**
SONM lAmb lAmb 14 25 03.7
comp=Z,11nm,1.2s
SONM Songino Array 26.81 337 P **P 14 25 01.5 +0.1**
comp=Z,4.7nm,0.9s,baz=151,slow=7.7,SNR=20
SONM LR LR 14 36 41.9
comp=Z,495nm,18.9s,baz=140,slow=39
comp=Z,4.7nm,0.9s
LSA Lhasa 27.89 289 P **P 14 25 10.2 -1.5**
LSA lAmb lAmb 14 25 19.1
comp=Z,6.1nm,0.6s
GSI Gunungsitoli 32.50 230 P **P 14 25 51.5 -0.6**
YAK Yakutsk 38.45 6 LR LR 14 43 13.2
comp=Z,179nm,19.2s,baz=220,slow=37
MK31 Makanchi Array 38.90 316 P **P 14 26 46.2 -0.5**
MKAR Makanchi Array 38.90 316 P **P 14 26 46.5 -0.2**
MKAR Makanchi Array 38.90 316 P **P 14 26 46.8 +0.1**
comp=Z,2.8nm,0.7s,baz=102,slow=11,SNR=25
MKAR LR LR 14 44 04.9
comp=Z,264nm,19.3s,baz=74,slow=38
comp=Z,2.8nm,0.7s
MAKZ Makanchi 39.10 316 P **P 14 26 48.5 +0.1**
PETK Petropavlovsk- 39.76 34 LR LR 14 43 39.3
comp=Z,87nm,18.3s,baz=251,slow=37
ZAA0 Zalesovo Array 40.75 327 P **P 14 27 00.9 -1.1**
ZALV Zalesovo Beam 40.75 327 P **P 14 27 00.5 -1.5**
ZALV Zalesovo Beam 40.75 327 P **P 14 27 01.3 -0.7**
comp=Z,3.3nm,0.6s,baz=113,slow=7.7,SNR=11
ZALV LR LR 14 44 55.8
comp=Z,220nm,18.3s,baz=110,slow=38
comp=Z,3.3nm,0.6s
MA2 Magadan 41.00 22 LR LR 14 45 09.2
comp=Z,118nm,18.1s,baz=266,slow=38
PMG Port Moresby 41.39 140 LR LR 14 41 35.9
comp=Z,93nm,19.8s,baz=282,slow=32
KSH Kashi 41.49 303 P **P 14 27 12.3 +3.8**
KSH sP pwP 14 27 21.3 +10
KSH pmax pmax
comp=Z,7.0nm,1.1s
H11N1 WAKE ISLAND Hy 41.95 87 T T 15 12 22.7
baz=276
H11N2 WAKE ISLAND Hy 41.95 87 T T 15 12 23.6
baz=276
H11N3 WAKE ISLAND Hy 41.97 87 T T 15 12 32.3
baz=276
H11S3 WAKE ISLAND Hy 42.08 89 T T 15 12 23.1
baz=284,slow=74,SNR=63
H11S1 WAKE ISLAND Hy 42.08 88 T T 15 12 23.7
baz=284,slow=74,SNR=39
H11S2 WAKE ISLAND Hy 42.09 89 T T 15 12 27.6
baz=284,slow=74,SNR=39
KURK Kurchatov 42.63 320 P **P 14 27 16.9 -0.6**
KURBB Kurchatov Arra 42.65 320 P **P 14 27 17.4 -0.1**
comp=Z,1.4nm,0.7s,baz=114,slow=7.7,SNR=11
KURBB LR LR 14 46 12.6
comp=Z,140nm,21.5s,baz=152,slow=38
comp=Z,1.4nm,0.7s
COEN Coen 43.08 149 P **P 14 27 21.7 +0.4**
AAK Ala-Archa 43.09 307 LR LR 14 48 11.7
comp=Z,157nm,20.0s,baz=46,slow=40
WRA Warramunga Arr 45.30 163 P **P 14 27 37.9 -1.3**
comp=Z,1.2nm,0.7s,baz=344,slow=8.7,SNR=9.0
comp=Z,1.2nm,0.7s
WB2 Warramunga Arr 45.30 163 P **P 14 27 38.4 -0.7**
WB2 lAmb lAmb 14 28 16.3
comp=Z,7.3nm,1.2s
KK31 Karatay Array 46.06 307 P **P 14 27 45.2 +0.2**
KKAR Karatay Array 46.06 307 P **P 14 27 45.2 +0.2**
KBL Kabul 46.77 296 P **P 14 27 50.9 0.0**
KBL lAmb lAmb 14 28 05.4
comp=Z,9.3nm,1.1s
TIXI Tiksi 47.91 3 P **P 14 27 57.0 -2.0**
TIXI lAmb lAmb 14 28 14.5
comp=Z,7.8nm,1.1s
TIXI Tiksi 47.91 3 LR LR 14 49 50.5
comp=Z,230nm,18.2s,baz=201,slow=38
BVAR Borovoye Array 48.21 321 P **P 14 28 01.5 -0.1**
comp=Z,1.7nm,0.6s,baz=91,slow=8.2,SNR=7.2
comp=Z,1.7nm,0.6s
BRVK Borovoye 48.28 321 P **P 14 28 01.7 -0.5**
BRVK lAmb lAmb 14 28 04.6
comp=Z,5.4nm,1.0s
ASAR Alice Springs 48.76 165 P **P 14 28 05.5 -0.7**
comp=Z,1.0nm,0.7s,baz=339,slow=7.0,SNR=11
ASAR LR LR 14 49 55.3
comp=Z,89nm,18.1s,baz=18,slow=38
comp=Z,1.0nm,0.7s
NRIK Noril'sk 49.78 345 P **P 14 28 12.2 -1.2**
NRIK lAmb lAmb 14 28 13.9
comp=Z,4.9nm,1.0s
NRIK Noril'sk 49.78 345 P **P 14 28 12.6 -0.8**
comp=Z,2.5nm,0.6s,baz=149,slow=6.2,SNR=4.0
NRIK LR LR 14 49 58.9
comp=Z,142nm,20.5s,baz=166,slow=37
comp=Z,2.5nm,0.6s
CTA Charters Tower 49.84 149 LR LR 14 47 15.8
comp=Z,98nm,21.2s,baz=327,slow=34
HNR Honiara 49.90 127 LR LR 14 47 36.7
comp=Z,590nm,19.3s,baz=316,slow=34
ABKAR Akbulak array 54.01 314 P **P 14 28 44.9 -0.3**
AKTO Aktyubinsk 55.33 316 P **P 14 28 54.5 -0.4**
comp=Z,0.7nm,0.5s,baz=96,slow=10,SNR=3.0
comp=Z,0.7nm,0.5s
GEYT Alibeck 55.40 301 P **P 14 28 56.2 +0.6**
GEYT lAmb lAmb 14 29 02.7
comp=Z,7.1nm,1.1s
GEYT Alibeck 55.40 301 P **P 14 28 55.1 -0.4**
comp=Z,1.7nm,0.6s,baz=70,slow=5.1,SNR=5.5
comp=Z,1.7nm,0.6s
ARU Arti 55.63 323 P **P 14 28 56.4 -0.5**
comp=Z,2.1nm,0.5s,baz=100,slow=16,SNR=3.4
ARU LR LR 14 54 19.1
comp=Z,236nm,21.0s,baz=3.0,slow=38
comp=Z,2.1nm,0.5s
STKA Stephens Creek 58.65 160 P **P 14 29 17.6 -0.9**
comp=Z,1.5nm,0.6s,baz=342,slow=7.1,SNR=9.0
STKA LR LR 14 57 51.6
comp=Z,30nm,19.7s,baz=13,slow=40
comp=Z,1.5nm,0.6s
KIRV Kirov 60.73 325 LR LR 14 57 36.0
comp=Z,197nm,20.9s,baz=27,slow=38
BELG Belogornoye 61.84 318 LR LR 15 00 15.3
comp=Z,158nm,20.4s,baz=113,slow=40
DZM Mont Dzumac 63.06 133 P **P 14 29 49.6 +0.8**
DZM Mont Dzumac 63.06 133 LR LR 14 52 13.2
comp=Z,79nm,21.4s,baz=306,slow=31
H18K Honhosa River 64.29 27 P **P 14 29 55.4 -0.9**
H18K lAmb lAmb 14 30 06.9
comp=Z,7.4nm,1.2s
D19K Kuna River 64.34 24 P **P 14 29 55.9 -0.6**
TTA Tatalina 65.44 30 P **P 14 30 03.5 -0.4**
TTA lAmb lAmb 14 30 12.2
comp=Z,9.8nm,1.4s
SVW2 Sparrevohn 65.82 32 P **P 14 30 06.2 -0.1**
SVW2 lAmb lAmb 14 30 29.8
comp=Z,8.9nm,1.5s
KBZ Khabaz 66.06 309 P **P 14 30 08.2 +0.1**
comp=Z,2.7nm,0.8s,baz=181,slow=9.9,SNR=8.1
comp=Z,2.7nm,0.8s
G21K Allakaket 66.20 26 P **P 14 30 08.3 -0.3**
G21K lAmb lAmb 14 30 19.9
comp=Z,5.7nm,1.0s
CAST Castle Rocks 67.16 29 P **P 14 30 14.2 -0.6**
TOLK Toolik Lake Re 67.46 23 P **P 14 30 16.2 -0.4**
TOLK lAmb lAmb 14 30 17.6
comp=Z,4.3nm,0.8s
MLY Manley 67.52 27 P **P 14 30 17.3 +0.2**
MLY lAmb lAmb 14 30 28.4
comp=Z,9.4nm,1.2s
KTH Kantishna Hill 67.66 29 P **P 14 30 17.8 -0.2**
SUA Susitna One 68.08 31 P **P 14 30 20.0 -0.7**
MDM Murphy Dome 68.58 27 P **P 14 30 23.2 -0.6**
RND Reindeer 68.60 29 P **P 14 30 22.6 -1.4**
PMR Palmer 68.82 31 P **P 14 30 23.7 -1.5**
PMR lAmb lAmb 14 30 27.0
comp=Z,7.2nm,0.9s
SML Sawmill 69.15 31 P **P 14 30 26.6 -0.8**
ILAR Eielson Array 69.18 27 P **P 14 30 27.0 -0.5**
comp=Z,0.8nm,0.7s,baz=291,slow=8.7,SNR=18
comp=Z,0.8nm,0.7s
DHY Denali Highway 69.32 29 P **P 14 30 28.2 -0.3**
DHY lAmb lAmb 14 30 30.0
comp=Z,3.6nm,0.9s
BMAR Burnt Mountain 69.52 24 P **P 14 30 29.9 +0.3**
SPITS Spitsbergen Ar 69.84 348 LR LR 15 08 28.3
comp=Z,94nm,19.5s,baz=127,slow=42
ARCES ARCESS Array B 69.97 338 LR LR 15 06 57.0
comp=Z,151nm,19.5s,baz=234,slow=41
F28M Old Crow 71.22 24 P **P 14 30 39.7 -0.2**
F28M lAmb lAmb 14 30 41.6
comp=Z,4.2nm,0.8s
E29M Blow River 71.69 23 P **P 14 30 42.2 -0.5**
E29M lAmb lAmb 14 30 53.6
comp=Z,5.3nm,1.1s
I28M Miner Creek 71.85 26 P **P 14 30 43.3 -0.5**
I28M lAmb lAmb 14 30 54.6
comp=Z,9.5nm,1.4s
FINES FINESS Array B 71.93 330 P **P 14 30 43.4 -0.8**
comp=Z,2.3nm,0.8s,baz=111,slow=7.6,SNR=2.8
FINES LR LR 15 05 09.7
comp=Z,362nm,19.6s,baz=320,slow=38
comp=Z,2.3nm,0.8s
DAWY Dawson 72.50 27 P **P 14 30 47.1 -0.6**
DAWY lAmb lAmb 14 30 50.4
comp=Z,5.2nm,1.0s
G30M tAoh Zraii Nji 72.77 24 P **P 14 30 47.9 -1.3**
I30M Mount Dempster 73.33 26 P **P 14 30 52.2 -0.5**
I30M lAmb lAmb 14 31 02.4
comp=Z,4.5nm,1.0s
AKASG Malin Array Be 73.42 318 P **P 14 30 52.7 -0.6**
comp=Z,0.8nm,0.5s,baz=61,slow=5.9,SNR=4.3
comp=Z,0.8nm,0.5s
BRTR Keskin Array B 73.76 307 P **P 14 30 55.6 -0.1**
comp=Z,1.7nm,0.8s,baz=98,slow=5.1,SNR=4.1
comp=Z,1.7nm,0.8s
C36M Paulatuk 75.85 20 P **P 14 31 05.3 -1.7**
C36M lAmb lAmb 14 31 16.1
comp=Z,8.0nm,1.1s
HFS Hagfors 78.05 331 LR LR 15 09 09.0
comp=Z,413nm,19.8s,baz=357,slow=38
NOA NORSAR Array B 78.70 332 LR LR 15 09 23.6
comp=Z,169nm,20.6s,baz=65,slow=38
JMIC Jan Mayen 79.21 345 LR LR 15 12 55.1
comp=Z,42nm,19.9s,baz=78,slow=41
YKA Yellowknife Ar 82.98 23 P **P 14 31 45.5 -0.6**
comp=Z,1.9nm,0.7s,baz=314,slow=4.9,SNR=43
comp=Z,1.9nm,0.7s
GERES GERESS Array B 83.38 321 P **P 14 31 48.4 -0.2**
comp=Z,0.2nm,0.3s,baz=79,slow=5.1,SNR=2.8
comp=Z,0.2nm,0.3s

NOU 07 14:33:52.8, 19.49S×169.24E, h10km, MLv3.9/8,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YATNC	**Mamie plateau,**	**3.37**	**220**	P	Pn	14 34 42.9	-0.8
PININC	**Pines Island,**	**3.53**	**208**	P	Pn	14 34 46.0	+0.2
DZM	**Mont Dzumac**	**3.67**	**225**	P	Pn	14 34 47.5	-0.3
OUENC	**Ouen Island, N**	**3.68**	**217**	P	Pn	14 34 48.3	+0.5
NOUC	**Port Laguerre**	**3.78**	**226**	P	Pn	14 34 49.3	+0.1
KOUNC	**Koumac, New Ca**	**4.78**	**256**	P	Pn	14 35 02.7	+0.1

TAP ***07*** *14:35:01.7, 23.97N×121.59E, h6km, ML2.3, C*
ISC 07 14:35:02.0±0.8, 23.97N±0.01×121.60E±0.02, h8km±5km,
n69, σ0.65/122, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.01**	**67**	P	**Pg**	**14 35 03.4**	**-0.1**
	baz=81						
HWA				*e*S	**Sg**	**14 35 05.0**	**+0.6**
	baz=81						
ETM	**Tongmen**	**0.09**	**265**	*i* P	**Pg**	**14 35 04.1**	**-0.2**
	baz=265						
ETM				S	**Sg**	**14 35 05.7**	**-0.3**
	baz=265						
TWD	**Chiawan**	**0.11**	**1**	*i* P	**Pg**	**14 35 04.5**	**0.0**
	baz=7.0						
TWD				S	**Sg**	**14 35 06.3**	**0.0**
	baz=7.0						
LXIB	**Xiulin Townshi**	**0.17**	**286**	P	**Pg**	**14 35 05.6**	**-0.1**
	baz=280						
LXIB				*e*S	**Sg**	**14 35 08.2**	**0.0**
	baz=280						
ETL	**Fush Village**	**0.19**	**8**	P	**Pg**	**14 35 05.9**	**0.0**
	baz=9.0						
ETL				*e*S	**Sg**	**14 35 08.6**	**0.0**
	baz=9.0						
SHUL	**Shoufeng**	**0.19**	**189**	P	**Pg**	**14 35 06.2**	**+0.3**
	baz=189						
SHUL				*e*S	**Sg**	**14 35 09.9**	**+1.4**
	baz=189						
NACB	**Ninganchiao**	**0.20**	**360**	P	**Pg**	**14 35 06.1**	**0.0**
NACB	**Ninganchiao**	**0.20**	**360**	P	**Pg**	**14 35 06.0**	**-0.2**
	baz=12						
NACB				S	**Sg**	**14 35 08.8**	**-0.1**
	baz=12						
ESL	**Shilin**	**0.22**	**223**	P	**Pg**	**14 35 06.0**	**-0.4**
	baz=222						
ESL				*e*S	**Sg**	**14 35 08.9**	**-0.4**
	baz=222						
ETLH	**Xiulin Townshi**	**0.26**	**336**	P	**Pg**	**14 35 07.2**	**+0.1**
	baz=337						
ETLH				*e*S	**Sg**	**14 35 11.1**	**+0.4**
	baz=337						
TEGC	**Jichi Village**	**0.27**	**191**	P	**Pb**	**14 35 08.9**	**-0.2**
	baz=195						
TEGC				*e*S	**Sb**	**14 35 13.6**	**-0.2**
	baz=195						
WARBT	**Fenglin Townsh**	**0.32**	**217**	*i* P	**Pg**	**14 35 07.8**	**-0.6**
	baz=226						
WARBT				S	**Sg**	**14 35 11.7**	**-0.8**
	baz=226						
EGFH	**Guangfu**	**0.34**	**207**	P	**Pg**	**14 35 08.5**	**-0.2**
	baz=213						
WHF	**Hehuan Shan**	**0.35**	**300**	P	**Pg**	**14 35 08.9**	**-0.1**
	baz=301						
WHF				S	**Sg**	**14 35 14.5**	**+0.8**
	baz=301						
EAHA	**Aohua**	**0.38**	**20**	*e*S	**Sg**	**14 35 14.7**	**+0.2**
	baz=32						
OWD	**Renai**	**0.38**	**267**	*e*P	**Pg**	**14 35 09.7**	**+0.1**
	baz=268						
OWD				*e*S	**Sg**	**14 35 15.5**	**+0.8**
	baz=268						
CHGB	**Renai**	**0.39**	**283**	P	**Pg**	**14 35 10.1**	**+0.2**
	baz=283						
CHGB				*e*S	**Sb**	**14 35 16.2**	**-1.5**
	baz=283						
FUSS	**Fushou**	**0.42**	**311**	*i* P	**Pg**	**14 35 10.7**	**+0.3**
	baz=311						
FUSS				*e*S	**Sb**	**14 35 16.9**	**-1.6**
	baz=311						
WUSB	**Renai**	**0.44**	**273**	P	**Pg**	**14 35 10.9**	**+0.3**
	baz=273						
WUSB				S	**Sg**	**14 35 17.2**	**+0.8**
	baz=273						
ENA	**Nanau**	**0.47**	**16**	*i* P	**Pg**	**14 35 11.1**	**-0.2**
	baz=18						
ENA				S	**Sg**	**14 35 17.8**	**+0.3**
	baz=18						
TWT	**Tachien**	**0.47**	**306**	P	**Pb**	**14 35 12.1**	**-0.7**
	baz=305						
TWT				*e*S	**Sb**	**14 35 19.5**	**-0.4**
	baz=305						
TDCB	**Techi**	**0.49**	**305**	*e*P	**Pb**	**14 35 12.4**	**-0.5**
	baz=305						
TDCB				*e*S	**Sb**	**14 35 19.4**	**-0.9**
	baz=305						
NNSB	**Datong**	**0.49**	**337**	P	**Pg**	**14 35 11.9**	**+0.3**
	baz=337						
NNSB				S	**Sg**	**14 35 18.4**	**+0.2**
	baz=337						
EWUT	**Wuta**	**0.50**	**20**	P	**Pg**	**14 35 11.6**	**-0.1**
	baz=29						
EWUT				*e*S	**Sg**	**14 35 18.3**	**0.0**
	baz=29						
HGSD	**Ruisui**	**0.50**	**198**	*e*P	**Pb**	**14 35 12.7**	**-0.5**
	baz=205						
NNS	**Nan Shan**	**0.51**	**337**	*i* P	**Pg**	**14 35 12.3**	**+0.3**
	baz=338						
NNS				S	**Sg**	**14 35 19.0**	**+0.4**
	baz=338						
EHY	**Hungye**	**0.53**	**208**	P	**Pg**	**14 35 11.8**	**-0.4**
	baz=218						
EHY				*e*S	**Sg**	**14 35 18.2**	**-1.0**
	baz=218						
LATG	**Datong**	**0.56**	**354**	*e*P	**Pg**	**14 35 13.0**	**0.0**
	baz=345						
SSLB	**Suanglung**	**0.61**	**253**	P	**Pg**	**14 35 14.1**	**+0.2**
SSLB	**Suanglung**	**0.61**	**253**	*i* P	**Pg**	**14 35 14.0**	**+0.1**
	baz=253						
SSLB				S	**Sg**	**14 35 21.5**	**-0.5**
	baz=253						
WCS	**Beigang Elemen**	**0.63**	**278**	P	**Pb**	**14 35 14.7**	**-0.7**
	baz=277						
NDT	**Datong Townshi**	**0.63**	**353**	P	**Pg**	**14 35 14.4**	**+0.2**
	baz=344						
NDT				S	**Sb**	**14 35 23.9**	**-0.5**
	baz=344						
YULB	**Yu-li**	**0.64**	**205**	P	**Pg**	**14 35 14.5**	**+0.1**
YULB	**Yu-li**	**0.64**	**205**	P	**Pg**	**14 35 13.8**	**-0.6**
	baz=216						
YULB				*e*S	**Sg**	**14 35 22.2**	**-0.5**
	baz=216						
SMLT	**Sun Moon Lake**	**0.64**	**262**	P	**Pb**	**14 35 14.7**	**-0.9**
	baz=263						
SMLT				*e*S	**Sb**	**14 35 23.6**	**-1.2**
	baz=263						
ENTT	**Nioudou**	**0.67**	**358**	P	**Pg**	**14 35 15.1**	**+0.2**

	baz=359							
ENTT				*e*S		**Sb**	**14 35 24.4**	**-0.9**
	baz=359							
WHP	**Taichung City**	**0.67**	**297**	P		**Pb**	**14 35 16.0**	**0.0**
	baz=288							
WHP				*e*S		**Sb**	**14 35 25.8**	**+0.3**
	baz=288							
NDS	**Dongshan**	**0.67**	**10**	*e*P		**Pg**	**14 35 15.0**	**+0.1**
	baz=10.0							
NDS				*e*S		**Sb**	**14 35 24.7**	**-0.7**
	baz=10.0							
EYUL	**Yuli**	**0.67**	**202**	*e*P		**Pg**	**14 35 14.5**	**-0.5**
	baz=210							
TWF1	**Yuli**	**0.68**	**204**	P		**Pg**	**14 35 14.6**	**-0.5**
	baz=215							
TWF1				*e*S		**Sb**	**14 35 24.6**	**-1.0**
	baz=215							
TYC	**Yuchr**	**0.68**	**264**	P		**Pg**	**14 35 15.2**	**+0.1**
	baz=265							
TYC				S		**Sg**	**14 35 24.2**	**+0.3**
	baz=265							
YHNB	**Yeheng**	**0.72**	**344**	P		**Pb**	**14 35 16.7**	**-0.2**
YHNB	**Yeheng**	**0.72**	**344**	P		**Pb**	**14 35 16.5**	**-0.4**
	baz=344							
YHNB				*e*S		**Sg**	**14 35 25.5**	**0.0**
	baz=344							
NSK	**Sanguang**	**0.73**	**343**	P		**Pb**	**14 35 16.8**	**-0.4**
	baz=344							
NSK				*e*S		**Sb**	**14 35 26.6**	**-0.8**
	baz=344							
WHYT	**Xinyi Township**	**0.73**	**248**	P		**Pb**	**14 35 17.2**	**+0.1**
	baz=246							
TWE	**Neicheng**	**0.75**	**5**	*e*P		**Pb**	**14 35 16.7**	**-0.6**
	baz=6.0							
TWE				*e*S		**Sb**	**14 35 27.4**	**-0.3**
	baz=6.0							
FUSB	**Fushanzhiwuyua**	**0.78**	**360**	P		**Pg**	**14 35 17.2**	**+0.1**
	baz=360							
FUSB				*e*S		**Sb**	**14 35 28.2**	**-0.6**
	baz=360							
NFF	**Wufeng Townshi**	**0.79**	**327**	*i* P		**Pb**	**14 35 17.8**	**-0.3**
	baz=327							
NFF				S		**Sb**	**14 35 28.7**	**-0.2**
	baz=327							
NWLT	**Wulai**	**0.81**	**354**	P		**Pb**	**14 35 17.9**	**-0.4**
	baz=354							
NWLT				S		**Sb**	**14 35 28.8**	**-0.6**
	baz=354							
WJS	**Zhushan**	**0.81**	**259**	*e*P		**Pn**	**14 35 19.4**	**-0.3**
	baz=260							
WJS				*e*S		**Sn**	**14 35 31.3**	**-0.6**
	baz=260							
FULB	**Fuli**	**0.82**	**200**	*e*P		**Pb**	**14 35 18.8**	**+0.3**
	baz=214							
WNT	**Mingjian**	**0.84**	**264**	*e*P		**Pn**	**14 35 19.4**	**-0.7**
	baz=264							
WNT				*e*S		**Sn**	**14 35 32.5**	**-0.2**
	baz=264							
NSTT	**Nanjuang**	**0.85**	**321**	P		**Pb**	**14 35 19.1**	**+0.1**
	baz=321							
NSTT				*e*S		**Sb**	**14 35 30.7**	**+0.1**
	baz=321							
ALS	**Alishan**	**0.86**	**238**	P		**Pb**	**14 35 18.9**	**-0.5**
	baz=239							
ALS				*e*S		**Sb**	**14 35 31.1**	**-0.1**
	baz=239							
EHD	**Haiduan**	**0.90**	**204**	P		**Pg**	**14 35 18.8**	**-0.5**
	baz=216							
EHD				*e*S		**Sb**	**14 35 32.4**	**+0.4**
	baz=216							
CHN5	**Tsauling**	**0.92**	**246**	P		**Pn**	**14 35 21.2**	**-0.2**
	baz=236							
CHN5				*e*S		**Sn**	**14 35 35.1**	**+0.3**
	baz=236							
ELDTW	**Lidau**	**0.94**	**214**	P		**Pg**	**14 35 19.5**	**-0.7**
	baz=213							
TIPB	**Shuangxi**	**1.02**	**12**	P		**Pg**	**14 35 21.2**	**-0.4**
	baz=13							
EDH	**Donghe**	**1.03**	**195**	*e*P		**Pg**	**14 35 20.1**	**-1.8**
	baz=198							
EDH				*e*S		**Sb**	**14 35 36.0**	**+0.2**
	baz=198							
WCKO	**Fanlu**	**1.05**	**240**	P		**Pn**	**14 35 22.9**	**-0.2**
	baz=235							
WCKO				*e*S		**Sn**	**14 35 38.0**	**0.0**
	baz=235							
STYH	**Taoyuan**	**1.10**	**223**	P		**Pb**	**14 35 23.2**	**-0.1**
	baz=226							
STYH				*e*S		**Sb**	**14 35 38.1**	**+0.4**
	baz=226							
TPUB	**Ta-pu**	**1.11**	**233**	P		**Pn**	**14 35 24.1**	**+0.2**
TPUB	**Ta-pu**	**1.11**	**233**	P		**Pn**	**14 35 23.7**	**-0.2**
	baz=234							
TPUB				*e*S		**Sn**	**14 35 39.9**	**+0.5**
	baz=234							
SXI1	**Grass Mountain**	**1.15**	**13**	*e*P		**Pb**	**14 35 24.0**	**-0.2**
WTP	**Ta-pu**	**1.15**	**231**	*e*P		**Pn**	**14 35 25.0**	**+0.4**
	baz=238							
WTP				*e*S		**Sn**	**14 35 41.1**	**+0.5**
	baz=238							
TWK	**Hsinying**	**1.23**	**236**	*e*P		**Pn**	**14 35 26.6**	**+0.9**
	baz=226							
TWK				*e*S		**Sn**	**14 35 43.8**	**+1.2**
	baz=226							
CHN1	**Nanshi**	**1.25**	**232**	*e*P		**Pn**	**14 35 27.5**	**+1.6**
	baz=234							
CHN1				*e*S		**Sn**	**14 35 44.3**	**+1.4**
	baz=234							
SGST	**Jiashian**	**1.28**	**227**	*e*P		**Pg**	**14 35 26.8**	**0.0**
	baz=229							
SGST				*e*S		**Sn**	**14 35 45.6**	**+1.9**
	baz=229							
SLGT	**Liugui**	**1.31**	**222**	P		**Pg**	**14 35 27.5**	**+0.4**
	baz=225							
SLGT				*e*S		**Sn**	**14 35 47.1**	**+2.8**
	baz=225							

IDC 07 14:51:42.4±2.3, 3°31S×129°29E, h0km, mb3.1/2, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=134.3km s-min=30.4km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.25**	**164**	P	Pn	14 55 45.2	+0.4
	baz=344,slow=11,SNR=2.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**20.72**	**168**	P	P	14 56 24.4	-0.2
	0.3nm,0.6s,baz=349,slow=11,SNR=10						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**64.78**	**326**	P	P	15 02 22.9	0.0
	0.2nm,0.6s,baz=130,slow=8.9,SNR=2.9						
	0.2nm,0.6s						

IDC 07 15:00:40.6±751.0, 52°63N×33°48E, h0km, Error ellipse: s-maj=315.0km s-min=97.7km az=33.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.64**	**26**	I	I	15 27 38.1	
	0.1nm,0.7s,baz=209,slow=327,SNR=7.7						
I31KZ	**AKTYUBINSK INF**	**15.43**	**88**	I	I	16 32 30.0	
	baz=287,slow=329,SNR=3.9						
I46RU	**ZALESOVO INFRA**	**30.17**	**67**	I	I	18 08 13.9	
	baz=287,slow=332,SNR=1.3						

*NEIC **07** 15:03:11.9±1.1, 3°33S±0°.08×146°.4E±0°.1, h10km±2km, mb4.4/16, Error ellipse: s-maj=23.8km s-min=10.4km az=111.0*

*IDC **07** 15:03:12.2±1.0, 3°.33S×146°.07E, h0km, mb3.9/13, mbtmp4.0/15, ML3.1/2, MS3.3/5, Error ellipse: s-maj=37.7km s-min=15.7km az=92.0*

ISC 07 15:03:14.1±0.7, 3°40S±0°.07×146°.3E±0°.1, h20km, n55, σ1s32/50, mb4.0/15, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.73**	**39**		**Pn**	**15 03 39.7**	**-3.3**
TABU	**Tabubil**	**5.38**	**250**	P	Pn	15 04 38.3	+4.9
PMG	**Port Moresby**	**6.03**	**172**	Pn	**Pn**	**15 04 41.7**	**-0.5**
PMG	**Port Moresby**	**6.03**	**172**	P	**Pn**	**15 04 43.3**	**+1.1**
PMG	**Port Moresby**	**6.03**	**172**	Pn	**Pn**	**15 04 43.2**	**+1.1**
	4.4nm,0.3s,baz=347,slow=5.5,SNR=16						
PMG				LR	LR	15 06 51.3	
	comp=Z,218nm,18.7s,baz=354,slow=36						
	36nm,0.8s						
COEN	**Coen**	**10.93**	**196**	Pn	**Pn**	**15 05 48.3**	**-1.2**
HNR	**Honiara**	**14.83**	**114**	LR	LR	15 12 35.4	
	comp=Z,2μm,18.0s,baz=268,slow=37						
KDU	**Kakadu**	**16.49**	**235**	P	**Pn**	**15 07 04.7**	**+0.3**
CTA	**Charters Tower**	**16.59**	**180**	Pn	**P**	**15 07 07.9**	**-0.1**
	0.2nm,0.3s,baz=7.6,slow=17,SNR=2.4						
CTA				LR	LR	15 13 14.3	
	comp=Z,68nm,20.8s,baz=5.5,slow=36						
	9.9nm,1.1s						
CTAO	**Charters Tower**	**16.59**	**180**		**P**	**15 07 09.1**	**+1.1**
CTAO				IAmb	IAmb	15 07 09.6	
	comp=Z,29nm,1.4s						
GUMO	**Guam**	**16.94**	**355**	LR	LR	15 13 02.7	
	comp=Z,44nm,18.5s,baz=185,slow=35						
MTN	**Manton Dam**	**17.68**	**237**	Pn	**Pn**	**15 07 17.5**	**-1.9**
MTN	**Manton Dam**	**17.68**	**237**	P	**P**	**15 07 19.2**	**-1.0**
WB0	**Warramunga Arr**	**19.99**	**215**	P	**P**	**15 07 44.9**	**-0.7**
WB0				IAmb	IAmb	15 07 47.2	
	comp=Z,26nm,0.9s						
WR0	**Warramunga Arr**	**20.06**	**214**	P	**P**	**15 07 45.9**	**-0.4**
WR0				IAmb	IAmb	15 07 48.6	
	comp=Z,32nm,1.1s						
WRAB	**Tennant Creek**	**20.14**	**214**	P	**P**	**15 07 47.3**	**+0.1**
WB2	**Warramunga Arr**	**20.15**	**214**	P	**P**	**15 07 47.0**	**-0.2**
WB2				IAmb	IAmb	15 07 49.1	
	comp=Z,27nm,0.8s						
WRA	**Warramunga Arr**	**20.16**	**214**	P	**P**	**15 07 46.0**	**-1.4**
WRA	**Warramunga Arr**	**20.16**	**214**	P	**P**	**15 07 47.0**	**-0.3**
	comp=Z,20nm,0.8s,baz=38,slow=12,SNR=83						
	comp=Z,20nm,0.8s						
KNRA	**Kununurra**	**21.13**	**234**	P	**P**	**15 07 56.5**	**-1.4**
KNRA	**Kununurra**	**21.13**	**234**	P	**P**	**15 07 56.6**	**-1.3**
SOEI	**Soe**	**22.76**	**253**	P	**P**	**15 08 14.7**	**-0.9**
AS01	**Alice Springs**	**23.41**	**210**	P	**P**	**15 08 21.6**	**-0.4**
AS31	**Alice Springs**	**23.43**	**210**	P	**P**	**15 08 21.7**	**-0.6**
ASAR	**Alice Springs**	**23.43**	**210**	P	**P**	**15 08 21.8**	**-0.5**
ASAR	**Alice Springs**	**23.43**	**210**	P	**P**	**15 08 22.0**	**-0.3**
	comp=Z,11nm,0.8s,baz=45,slow=7.7,SNR=189						
ASAR				LR	LR	15 17 10.4	
	comp=Z,125nm,18.9s,baz=31,slow=36						
	comp=Z,11nm,0.8s						
LUWI	**Luwuk**	**23.62**	**275**	P	**P**	**15 08 27.6**	**+3.5**
FITZ	**Fitzroy Crossi**	**24.95**	**233**	P	**P**	**15 08 35.1**	**-1.3**
FITZ				IAmb	IAmb	15 08 37.3	
	comp=Z,4.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.95**	**233**	P	**P**	**15 08 35.9**	**-0.5**
AULRC	**Lightning Ridg**	**25.94**	**177**	P	**P**	**15 08 44.9**	**-0.3**
OOD	**Oodnadatta**	**26.28**	**202**	P	**P**	**15 08 48.2**	**-0.2**
DZM	**Mont Dzumac**	**26.96**	**135**	LR	LR	15 18 41.3	
	comp=Z,146nm,18.2s,baz=278,slow=34						
WRKA	**Warakurna**	**27.62**	**217**	P	**P**	**15 09 00.5**	**0.0**
STKA	**Stephens Creek**	**28.67**	**188**	P	**P**	**15 09 09.2**	**-0.5**
STKA	**Stephens Creek**	**28.67**	**188**	P	**P**	**15 09 12.6**	**+2.8**
	comp=Z,2.8nm,0.8s,baz=7.6,slow=9.2,SNR=8.0						
	comp=Z,2.8nm,0.8s						
BBOO	**Buckleboo**	**30.79**	**197**	P	**P**	**15 09 27.4**	**-1.1**
BBOO				IAmb	IAmb	15 09 36.0	
	comp=Z,7.8nm,1.2s						
FORT	**Forrest**	**32.22**	**210**	P	**P**	**15 09 40.4**	**-0.7**
KSRS	**Korea Array**	**44.09**	**339**	P	**P**	**15 11 20.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=145,slow=8.4,SNR=4.7						
	comp=Z,1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**51.43**	**297**	P	**P**	**15 12 19.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=121,slow=5.4,SNR=6.7						
	comp=Z,0.4nm,0.3s						
PZH	**PanZhiHua**	**52.31**	**307**	P	**P**	**15 12 24.5**	**-0.4**
HHC	**Hu-ho-hao-te**	**54.27**	**328**	*e*P	**P**	**15 12 40.0**	**+1.0**
PETK	**Petropavlovsk-**	**57.12**	**8**	P	**P**	**15 13 01.7**	**+2.6**
	comp=Z,1.4nm,0.9s,baz=162,slow=6.1,SNR=1.0						
	comp=Z,1.4nm,0.9s						
SONM	**Songino Array**	**61.81**	**331**	P	**P**	**15 13 32.3**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=142,slow=5.2,SNR=4.1						
	comp=Z,0.5nm,0.7s						
WMQ	**Urumqi**	**70.38**	**319**	*e*P	**P**	**15 14 24.8**	**-2.1**
WMQ				pP	**pP**	**15 14 31.3**	**-1.4**
MK31	**Makanchi Array**	**75.06**	**320**	P	**P**	**15 14 53.5**	**-1.1**
MK31				IAmb	IAmb	15 15 11.3	
	comp=Z,3.6nm,1.4s						
MKAR	**Makanchi Array**	**75.06**	**320**	P	**P**	**15 14 54.3**	**-0.3**
MKAR	**Makanchi Array**	**75.06**	**320**	P	**P**	**15 14 54.7**	**+0.1**
	comp=Z,1.2nm,1.0s,baz=100,slow=7.3,SNR=6.9						
	comp=Z,1.2nm,1.0s						
MAKZ	**Makanchi**	**75.26**	**320**	P	**P**	**15 14 54.9**	**-0.8**
MAKZ				IAmb	IAmb	15 14 56.6	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**76.45**	**328**	P	**P**	**15 14 59.4**	**-2.9**
ZALV	**Zalesovo Beam**	**76.45**	**328**	P	**P**	**15 15 01.1**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=99,slow=6.1,SNR=3.2						
	comp=Z,0.6nm,0.4s						
KSH	**Kashi**	**77.13**	**312**	P	P	15 15 13.2	+6.5
KURBB	**Kurchatov Arra**	**78.74**	**323**	P	**P**	**15 15 15.5**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=107,slow=5.2,SNR=3.4						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**83.39**	**23**	P	**P**	**15 15 40.4**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=248,slow=6.7,SNR=1.8						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**84.27**	**324**	P	**P**	**15 15 43.6**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=109,slow=6.5,SNR=7.3						
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**97.21**	**28**	P	Pdif	15 16 46.5	+1.3
	comp=Z,0.1nm,0.8s,baz=278,slow=4.2,SNR=1.6						
	comp=Z,0.1nm,0.8s						

*SCB **07** 15:10:19.5±1.3, 21°.06S×67°.49W, h173km±12km, ML3.3/3, MW3.5, Error ellipse: s-maj=4.4km s-min=2.9km az=0.0*

*GUC **07** 15:10:20.3±0.6, 21°.04S×67°.59W, h198km±7km, ML3.3*

ISC 07 15:10:18.4±1.8, 21°.04S±0°.05×67°.51W±0°.05, h193km±16km, n33, σ1s04/47, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.76**	**97**	Pg	**Pn**	**15 10 55.1**	**+0.6**
MOCB				Sg	**Sn**	**15 11 20.3**	**-2.1**
MOCB				IAML		15 11 21.5	
	116nm,0.4s						
PB08	**IPOC Station P**	**1.78**	**300**	*e*P	**Pn**	**15 10 55.8**	**+1.1**
PB08				*e*S	**Sn**	**15 11 23.2**	**+0.5**
PB08				IAML		15 11 26.5	
	comp=E,54nm,0.2s						
PB08	**IPOC Station P**	**1.78**	**300**	Pg	**Pn**	**15 10 55.5**	**+0.8**
PB09	**IPOC Station P**	**1.79**	**245**	⇑*i*P	**Pn**	**15 10 55.7**	**+1.3**
PB09				*e*S	**Sn**	**15 11 22.9**	**+0.5**
PB09				IAML		15 11 25.5	
	comp=N,59nm,0.5s						
PB09	**IPOC Station P**	**1.79**	**245**	Pg	**Pn**	**15 10 55.3**	**+0.8**
PB01	**IPOC Station P**	**1.85**	**269**	*e*P	**Pn**	**15 10 55.6**	**+0.6**
PB01	**IPOC Station P**	**1.85**	**269**	Pg	**Pn**	**15 10 55.4**	**+0.4**
LVC	**Limon Verde**	**2.04**	**220**	*e*P	**Pn**	**15 10 58.2**	**+1.0**
LVC				*e*S	**Sn**	**15 11 27.8**	**+0.3**
LVC				IAML		15 11 29.2	
	comp=N,133nm,0.3s						
LVC	**Limon Verde**	**2.04**	**220**	Pg	**Pn**	**15 10 57.9**	**+0.7**
PB02	**IPOC Station P**	**2.25**	**262**	*e*P	**Pn**	**15 10 59.9**	**+0.6**
PB02				*e*S	**Sn**	**15 11 29.7**	**-1.2**
PB02				IAML		15 11 30.5	
	comp=N,220nm,0.5s						
PB02	**IPOC Station P**	**2.25**	**262**	Pg	**Pn**	**15 10 59.8**	**+0.6**
PB02				Sg	**Sn**	**15 11 29.6**	**-1.3**
PB02				IAML		15 11 30.5	
	comp=N,189nm,0.3s						
PB07	**IPOC Station P**	**2.32**	**252**	⇑*e*P	**Pn**	**15 11 00.5**	**+0.4**
PB07				*e*S	**Sn**	**15 11 31.7**	**-0.8**
PB07				IAML		15 11 32.2	
	comp=N,165nm,0.2s						
PB07	**IPOC Station P**	**2.32**	**252**	Pg	**Pn**	**15 11 00.5**	**+0.4**
PB11	**IPOC Station P**	**2.38**	**302**	Pg	**Pn**	**15 11 01.2**	**+0.4**
PATCX	**Punta Patache**	**2.48**	**274**	*e*P	**Pn**	**15 11 02.2**	**+0.4**
PATCX				*e*S	**Sn**	**15 11 34.1**	**-1.5**
PATCX				IAML		15 11 35.3	
	comp=E,158nm,0.5s						
SOEO	**Opoqueri**	**2.49**	**352**	Pg	**Pn**	**15 11 03.4**	**+1.1**
PB06	**IPOC Station P**	**2.54**	**229**	⇑*e*	**Pn**	**15 11 03.1**	**+0.6**
PB06				*e*P	**Pn**	**15 11 04.0**	**+1.5**
PB06				*e*S	**Sn**	**15 11 36.9**	**-0.1**
PB06				IAML		15 11 38.2	
	comp=E,117nm,0.2s						
PB06	**IPOC Station P**	**2.54**	**229**	Pg	**Pn**	**15 11 03.3**	**+0.8**
TA01	**Diego Aracena**	**2.55**	**280**	Pg	**Pn**	**15 11 02.7**	**+0.3**
PB04	**IPOC Station P**	**2.78**	**242**	Pg	**Pn**	**15 11 05.9**	**+0.6**
PB04				Sg	**Sn**	**15 11 40.1**	**-1.7**
PB04				IAML		15 11 40.9	
	comp=E,56nm,0.2s						
PB15	**IPOC Station P**	**2.83**	**220**	*e*P	**Pn**	**15 11 07.1**	**+1.1**
PB15				*e*S	**Sn**	**15 11 43.0**	**0.0**
PB15	**IPOC Station P**	**2.83**	**220**	Pg	**Pn**	**15 11 07.0**	**+1.1**
PB05	**IPOC Station P**	**3.09**	**234**	*e*P	**Pn**	**15 11 09.5**	**+0.6**
PB05				*e*S	**Sn**	**15 11 47.0**	**-1.3**
PB05	**IPOC Station P**	**3.09**	**234**	Pg	**Pn**	**15 11 09.4**	**+0.5**
PB16	**IPOC Station P**	**3.28**	**325**	Pg	**Pn**	**15 11 13.4**	**+1.6**
SOET	**ToroToro**	**3.32**	**29**	Pg	**Pn**	**15 11 12.4**	**+0.4**
AOEA	**Aiquile**	**3.56**	**37**	Pg	**Pn**	**15 11 15.0**	**+0.1**
PB12	**IPOC Station P**	**3.59**	**312**	*e*P	**Pn**	**15 11 14.0**	**-1.0**
PB12				*e*S	**Sn**	**15 11 57.5**	**-1.7**
SOEJ	**Jacaque**	**4.09**	**351**	Pg	**Pn**	**15 11 22.9**	**+1.2**
BBOE	**La Paz, Chanca**	**4.23**	**354**	Pg	**Pn**	**15 11 25.2**	**+1.8**
BBOD	**La Paz, Gloria**	**4.50**	**347**	Pg	**Pn**	**15 11 28.2**	**+1.3**
GO02	**Mina Guanaco**	**4.53**	**205**	Pg	**Pn**	**15 11 27.3**	**+0.3**
LPAZ	**La Paz**	**4.76**	**353**	Pg	**Pn**	**15 11 31.4**	**+1.1**

TAP 07 15:16:16.8, 24°.03N×121°.63E, h5km, ML1.9, 6C-17D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**207**	⇑P	Pg	15 16 18.3	+0.1
	baz=199						
HWA				*e*S	Sg	15 16 19.9	+0.7
	baz=199						
TWD	**Chiawan**	**0.06**	**329**	*i* P	Pg	15 16 18.3	-0.1
	baz=335						
TWD				S	Sg	15 16 19.6	+0.2
	baz=335						
ETL	**Fush Village**	**0.13**	**356**	⇓*i*P	Pg	15 16 19.5	-0.1
	baz=356						
ETL				S	Sg	15 16 21.1	-0.3
	baz=356						
ETM	**Tongmen**	**0.14**	**245**	P	Pg	15 16 19.3	-0.4
	baz=244						
ETM				S	Sg	15 16 21.4	-0.1
	baz=244						
NACB	**Ninganchiao**	**0.15**	**347**	⇓P	Pg	15 16 19.7	-0.2
	baz=346						
NACB				S	Sg	15 16 21.9	0.0
	baz=346						
LXIB	**Xiulin Townshi**	**0.20**	**269**	⇓P	Pg	15 16 20.6	-0.1
	baz=268						
LXIB				S	Sg	15 16 23.8	+0.3
	baz=268						
ETLH	**Xiulin Townshi**	**0.23**	**323**	⇓*i*P	Pg	15 16 21.3	0.0
	baz=322						
ETLH				*i* S	Sg	15 16 24.6	+0.3
	baz=322						
SHUL	**Shoufeng**	**0.24**	**195**	*e*P	Pg	15 16 22.3	+0.7
	baz=195						
SHUL				S	Sg	15 16 25.5	+0.7
	baz=195						
ESL	**Shilin**	**0.28**	**221**	P	Pg	15 16 21.8	-0.5
	baz=219						
EAHA	**Aohua**	**0.32**	**18**	⇓P	Pg	15 16 22.6	-0.4
	baz=17						
TEGC	**Jichi Village**	**0.33**	**195**	*i* P	Pg	15 16 23.1	-0.1
	baz=193						
TEGC				S	Sg	15 16 27.9	+0.5
	baz=193						
WHF	**Hehuan Shan**	**0.36**	**290**	P	Pg	15 16 23.8	-0.1
	baz=289						
WARBT	**Fenglin Townsh**	**0.38**	**216**	*e*P	Pg	15 16 23.6	-0.5
	baz=216						
WARBT				*i* S	Sg	15 16 29.5	+0.4
	baz=216						
EGFH	**Guangfu**	**0.40**	**208**	P	Pg	15 16 24.4	-0.2
	baz=207						
ENA	**Nanau**	**0.41**	**14**	⇓P	Pg	15 16 24.6	-0.2
	baz=14						
FUSS	**Fushou**	**0.42**	**302**	⇓P	Pg	15 16 25.1	+0.2
	baz=301						
FUSS				S	Sg	15 16 30.6	+0.1
	baz=301						
CHGB	**Renai**	**0.42**	**275**	⇑P	Pg	15 16 25.1	+0.1
	baz=274						
OWD	**Renai**	**0.42**	**261**	⇑*i*P	Pg	15 16 25.0	0.0
	baz=260						
OWD				*i* S	Sg	15 16 30.9	+0.3
	baz=260						
EWUT	**Wuta**	**0.44**	**18**	⇓P	Pg	15 16 25.1	-0.2
	baz=17						
EWUT				S	Sg	15 16 31.8	+0.7
	baz=17						
NNSB	**Datong**	**0.46**	**331**	⇓P	Pg	15 16 25.8	+0.1
	baz=330						
NNSB				*i* S	Sg	15 16 32.3	+0.5
	baz=330						
WUSB	**Renai**	**0.47**	**266**	⇑*i*P	Pg	15 16 26.0	+0.1
	baz=265						
NNS	**Nan Shan**	**0.48**	**330**	⇓P	Pg	15 16 26.0	0.0
	baz=330						
NNS				*i* S	Sg	15 16 32.5	+0.2
	baz=330						
TDCB	**Techi**	**0.49**	**298**	*e*P	Pg	15 16 25.3	-0.9
	baz=297						
LATG	**Datong**	**0.52**	**349**	⇓P	Pg	15 16 26.9	+0.1
	baz=349						
LATG				*e*S	Sg	15 16 32.9	-0.7
	baz=349						
NDT	**Datong Townshi**	**0.58**	**349**	⇑P	Pg	15 16 28.2	+0.1
	baz=349						
NDT				S	Sg	15 16 36.4	+0.7
	baz=349						
EHY	**Hungye**	**0.59**	**209**	*i* P	Pg	15 16 28.1	0.0
	baz=208						
EHY				*e*S	Sg	15 16 35.8	0.0
	baz=208						
NDS	**Dongshan**	**0.61**	**7**	P	Pg	15 16 28.3	-0.2
	baz=7.0						
NDS				*i* S	Sg	15 16 37.1	+0.6
	baz=7.0						
TWC	**Suao**	**0.61**	**19**	P	Pg	15 16 28.9	+0.3
	baz=19						
TWC				*i* S	Sg	15 16 37.2	+0.6
	baz=19						
ENTT	**Nioudou**	**0.61**	**354**	⇓P	Pg	15 16 28.7	+0.1
	baz=354						
ENTT				*i* S	Sg	15 16 37.2	+0.5
	baz=354						
WCS	**Beigang Elemen**	**0.66**	**273**	*i* P	Pg	15 16 29.5	0.0
	baz=272						
WCS				*e*S	Sg	15 16 38.2	+0.1
	baz=272						
SSLB	**Suanglung**	**0.66**	**249**	⇓*i*P	Pg	15 16 29.5	0.0
	baz=249						
SSLB				*e*

TIPB			*i* S		Sg	15 16 48.1	+0.5
	baz=10.0						
ELDTW	**Lidau**	**1.00 214**	P		Pg	15 16 35.8	-0.3
	baz=213						
ELDTW			S		Sg	15 16 49.5	+0.4
	baz=213						

BJI ***07*** *15:21:29.5±0.0,24.°10N×121.°80E,h13km,mb5.3/78, mB5.9/67,ML6.0/11,Ms6.4/98,Ms7 6.4/95*

MOS ***07*** *15:21:29.0±1.2,24.°11N×121.°86E,h10km,mb5.8/75, MS5.8/57,Error ellipse: s-maj=6.3km s-min=3.5km az=117.2*

IDC ***07*** *15:21:29.3±0.5,24.°10N×121.°83E,h0km,mb5.1/33, mbtmp5.1/37,ML4.3/4,MS5.4/79,Error ellipse: s-maj=13.4km s-min=11.9km az=46.0*

ASIES ***07*** *15:21:30.4,24.°08N×121.°78E,h8km,ML5.8,Mw5.7, Moment Tensor Solution. Moment tensor: Scale 10^{24}Nm; M_{rr}0.65; $M_{\theta\theta}$-2.18; $M_{\phi\phi}$-0.85; $M_{r\theta}$1.91; $M_{\theta\phi}$-1.06; $M_{\phi r}$3.27; Fault plane solution: $M_0$4.29143×10^{24} NP1:ϕ_s33.23000°, δ79.59000°,λ75.44000°. NP2:ϕ_s268.39000°,δ17.83000°, λ143.82000°. Principal axes: T Plg53.2210°, Azm285.9720°; N Plg14.3090°, Azm35.9230°; P Plg33.0470°, Azm135.4750°;*

JMA ***07*** *15:21:30.7±0.2,24.°1N±0.°3×121.°8E±0.°4,h4km±2km, MD6.2/19,MW5.7/19,TAIWAN REGION*

TAP ***07*** *15:21:30.4,24.°08N×121.°78E,h8km,ML5.8,C*

NIED ***07*** *15:21:30.7,24.°05N×121.°76E,h4km,MW5.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.52; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-0.11; $M_{r\theta}$3.80; $M_{\theta\phi}$-2.00; $M_{\phi r}$1.78; Fault plane solution: $M_0$4.53000×10^{17} NP1:ϕ_s70.00000°, δ83.00000°,λ108.00000°. NP2:ϕ_s180.00000°,δ19.00000°, λ21.00000°.*

NEIC ***07*** *15:21:31,24.°10N×121.°77E,h7km*

GCMT ***07*** *15:21:31.7±0.1,24.°05N±0.°01×121.°75E±0.°01,h16km, MW5.7/152,Moment Tensor Solution. s127,c235; s152,c307; Duration: 1ŧ7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.58±.04; $M_{\theta\theta}$-1.84±.03; $M_{\phi\phi}$-0.74±.03; $M_{r\theta}$2.71±.12; $M_{\theta\phi}$-1.66±.03; $M_{\phi r}$1.88±.10; Best double couple: $M_0$4.33300×10^{17} NP1:ϕ_s55.00000°,δ70.00000°, λ91.00000°. NP2:ϕ_s233.00000°,δ20.00000°,λ88.00000°. Principal axes: T 4.1030, Plg65.0000°, Azm326.0000°; N 0.4560, Plg1.0000°, Azm235.0000°; P -4.5620, Plg25.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IPGP ***07*** *15:21:31.0,24.°10N×121.°74E,h6km,Mw6.0,Fault plane solution: NP1:ϕ_s44.00000°,δ83.00000°,λ74.00000°. NP2:ϕ_s291.00000°,δ18.00000°,λ156.00000°.*

NEIC ***07*** *15:21:31.7±2.1,24.°07N±0.°04×121.°74E±0.°05,h15km±1km, mb5.7/269,Ms_20 5.6/856,Mwb5.6/67,Mwr5.7/23, Mww5.7/32,Error ellipse: s-maj=8.0km s-min=4.6km az=126.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.81; $M_{\theta\theta}$-1.50; $M_{\phi\phi}$0.70; $M_{r\theta}$1.90; $M_{\theta\phi}$-1.18; $M_{\phi r}$2.39; Fault plane solution: $M_0$3.52000×10^{17} NP1:ϕ_s287.19000°,δ24.44000°,λ158.64000°. NP2: ϕ_s36.78000°,δ81.33000°,λ67.06000°. Principal axes: T 3.2188, Plg49.0000°, Azm282.0000°; N 0.5467, Plg23.0000°, Azm40.0000°; P -3.7655, Plg32.0000°, Azm146.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}2.04; $M_{\theta\theta}$-1.90; $M_{\phi\phi}$-0.15; $M_{r\theta}$2.70; $M_{\theta\phi}$-1.57; $M_{\phi r}$2.81; Fault plane solution: $M_0$4.64000×10^{17} NP1:ϕ_s44.96000°,δ74.73000°, λ79.17000°. NP2:ϕ_s260.94000°,δ18.65000°,λ124.53000°. Principal axes: T 4.3265, Plg59.0000°, Azm300.0000°; N 0.5747, Plg10.0000°, Azm48.0000°; P -4.9012, Plg29.0000°, Azm144.0000°;*

NEIC ***07*** *15:21:31,24.°10N×121.°77E,h7km*

NEIC ***07*** *15:21:32.1,24.°00N×121.°74E,h14km,Moment Tensor Solution. Duration: 3ŧ6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.97; $M_{\theta\theta}$-1.48; $M_{\phi\phi}$-0.49; $M_{r\theta}$2.33; $M_{\theta\phi}$-1.43; $M_{\phi r}$2.74; Fault plane solution: $M_0$4.24000×10^{17} NP1:ϕ_s41.79000°, δ74.52000°,λ81.21000°. NP2:ϕ_s251.89000°,δ17.75000°, λ118.91000°. Principal axes: T 4.0449, Plg60.0000°, Azm299.0000°; N 0.3904, Plg8.0000°, Azm44.0000°; P -4.4354, Plg29.0000°, Azm139.0000°;*

NEIC ***07*** *15:21:32.1,24.°10N×121.°74E,h14km*

ISC 07 15:21:31.5±0.4,24.°07N±0.°01×121.°82E±0.°01,h15km±2km, h16km:pP-P,n1776,σ1ŧ40/1447,mb5.6/281,MS5.6/540, 151C-89D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.20**	**297**	⇓*i*P		**Pg**	**15 21 34.5**	**-1.6**
	baz=298							
ETL				S		**Sg**	**15 21 37.4**	**-1.9**
	baz=298							
TWD	**Chiawan**	**0.20**	**273**	⇓*i*P		**Pg**	**15 21 34.7**	**-1.5**
	baz=277							
TWD				*e*S		**Sg**	**15 21 37.5**	**-1.8**
	baz=277							
HWA	**Hwalien**	**0.21**	**245**	⇑*e*P		**Pg**	**15 21 36.0**	**-0.3**
	baz=246							
NACB	**Ninganchiao**	**0.23**	**297**			**Pg**	**15 21 34.9**	**-1.7**
NACB				Sg		**Sg**	**15 21 37.5**	**-2.5**
NACB	**Ninganchiao**	**0.23**	**297**	P		**Pg**	**15 21 35.1**	**-1.5**
NACB	**Ninganchiao**	**0.23**	**297**	⇓*i*P		**Pg**	**15 21 34.9**	**-1.7**
	baz=299							
NACB				*i* S		**Sg**	**15 21 37.8**	**-2.2**
	baz=299							
EHP	**Heping Village**	**0.25**	**344**	⇓*i*P		**Pg**	**15 21 35.9**	**-1.1**
	baz=353							
EHP				S		**Sg**	**15 21 40.2**	**-0.5**
	baz=353							
EAHA	**Aohua**	**0.27**	**345**	⇓*i*P		**Pg**	**15 21 36.2**	**-1.1**
	baz=351							
EAHA				*e*S		**Sg**	**15 21 40.6**	**-0.6**
	baz=351							
ETM	**Tongmen**	**0.31**	**251**	*e*P		**Pg**	**15 21 36.9**	**-1.1**
	baz=256							
ETM				S		**Sg**	**15 21 41.6**	**-0.9**
	baz=256							
ETLH	**Xiulin Townshi**	**0.34**	**294**	⇓*i*P		**Pg**	**15 21 37.0**	**-1.5**
	baz=295							
ETLH				*e*S		**Sg**	**15 21 41.8**	**-1.5**
	baz=295							
SHUL	**Shoufeng**	**0.36**	**220**	⇑*i*P		**Pb**	**15 21 39.4**	**-0.3**
	baz=213							
ENA	**Nanau**	**0.36**	**349**	⇓*i*P		**Pg**	**15 21 38.1**	**-0.9**
	baz=355							
ENA				S		**Sg**	**15 21 43.4**	**-0.7**
	baz=355							
LXIB	**Xiulin Townshi**	**0.37**	**263**	⇓*i*P		**Pg**	**15 21 37.9**	**-1.3**
	baz=261							
LXIB				S		**Sg**	**15 21 43.2**	**-1.1**
	baz=261							
EWUT	**Wuta**	**0.38**	**355**	⇓*i*P		**Pg**	**15 21 38.4**	**-0.8**
	baz=359							
EWUT				*e*S		**Sg**	**15 21 43.9**	**-0.5**
	baz=359							
ESL	**Shilin**	**0.43**	**234**	⇑*i*P		**Pg**	**15 21 39.4**	**-0.8**
	baz=240							
ESL				*e*S		**Sg**	**15 21 45.9**	**-0.2**
	baz=240							
TEGC	**Jichi Village**	**0.44**	**215**	*e*P		**Pg**	**15 21 40.5**	**+0.2**
	baz=209							
EOS4	**EOS4**	**0.46**	**83**	*e*P		**Pn**	**15 21 42.8**	**-0.5**
	baz=92							
ESAO	**Su ao**	**0.51**	**3**	⇓*e*P		**Pg**	**15 21 40.9**	**-0.7**
	baz=360							
ESAO				*e*S		**Sg**	**15 21 48.1**	**-0.2**
	baz=360							
EOS3	**EOS3**	**0.51**	**65**	⇓*e*P		**Pn**	**15 21 44.2**	**+0.1**
	baz=74							
WHF	**Hehuan Shan**	**0.51**	**279**	⇓*i*P		**Pg**	**15 21 40.4**	**-1.4**
	baz=279							
WHF				S		**Sg**	**15 21 47.4**	**-1.3**
	baz=279							
EOS2	**EOS2**	**0.52**	**47**	⇓*e*P		**Pn**	**15 21 43.8**	**-0.5**
	baz=63							
WARBT	**Fenglin Townsh**	**0.53**	**228**	⇑*i*P		**Pg**	**15 21 41.2**	**-0.8**
	baz=238							
WARBT				*e*S		**Sg**	**15 21 48.4**	**-0.6**
	baz=238							
NNSB	**Datong**	**0.53**	**312**	⇓*i*P		**Pg**	**15 21 41.0**	**-1.2**
	baz=314							
NNSB				S		**Sg**	**15 21 48.1**	**-1.2**
	baz=314							
NNSH	**Datong**	**0.53**	**312**	⇓P		**Pg**	**15 21 40.9**	**-1.2**
	baz=312							
EGFH	**Guangfu**	**0.53**	**222**	⇑*e*P		**Pg**	**15 21 41.6**	**-0.5**
	baz=217							
LATG	**Datong**	**0.53**	**330**	⇓*i*P		**Pg**	**15 21 41.1**	**-1.1**
	baz=333							
LATG				*e*S		**Sg**	**15 21 47.8**	**-1.5**
	baz=333							
TWC	**Suao**	**0.54**	**3**	⇓*i*P		**Pg**	**15 21 41.7**	**-0.5**
	baz=1.0							
TWC				*e*S		**Sg**	**15 21 49.5**	**0.0**
	baz=1.0							
NNS	**Nan Shan**	**0.55**	**313**	⇓*i*P		**Pg**	**15 21 41.2**	**-1.2**
	baz=314							
NNS				S		**Sg**	**15 21 48.5**	**-1.3**
	baz=314							
FUSS	**Fushou**	**0.55**	**289**	⇓*i*P		**Pg**	**15 21 41.4**	**-1.1**
	baz=290							
FUSS				*e*S		**Sg**	**15 21 48.4**	**-1.5**
	baz=290							
NDS	**Dongshan**	**0.57**	**351**	⇓*i*P		**Pg**	**15 21 42.1**	**-0.7**
	baz=352							
NDS				S		**Sg**	**15 21 50.2**	**-0.2**
	baz=352							
CHGB	**Renai**	**0.59**	**269**	⇓*i*P		**Pg**	**15 21 42.1**	**-1.1**
	baz=270							
CHGB				*e*S		**Sg**	**15 21 49.4**	**-1.6**
	baz=270							
OWD	**Renai**	**0.60**	**259**	⇓*i*P		**Pg**	**15 21 42.2**	**-1.1**
	baz=269							
OWD				S		**Sg**	**15 21 50.0**	**-1.3**
	baz=269							
NDT	**Datong Townshi**	**0.60**	**333**	⇓*i*P		**Pg**	**15 21 42.6**	**-0.8**
	baz=335							
NDT				S		**Sg**	**15 21 51.0**	**-0.3**
	baz=335							
ENTT	**Nioudou**	**0.61**	**338**	⇓*i*P		**Pg**	**15 21 42.8**	**-0.8**
	baz=341							
ENTT				S		**Sg**	**15 21 51.4**	**-0.4**
	baz=341							
TWT	**Tachien**	**0.61**	**288**	⇓*i*P		**Pg**	**15 21 42.8**	**-0.9**
	baz=287							
TWT				*e*S		**Sg**	**15 21 51.2**	**-0.6**
	baz=287							
TDCB	**Techi**	**0.63**	**287**	⇓*i*P		**Pg**	**15 21 42.9**	**-1.1**
	baz=287							
TDCB				S		**Sg**	**15 21 50.2**	**-2.1**
	baz=287							
WUSB	**Renai**	**0.64**	**263**	⇓*i*P		**Pg**	**15 21 43.2**	**-0.9**
	baz=262							
WUSB				S		**Sg**	**15 21 51.4**	**-1.3**
	baz=262							
TWE	**Neicheng**	**0.66**	**348**	⇓*i*P		**Pg**	**15 21 43.9**	**-0.7**
	baz=351							
TWE				S		**Sg**	**15 21 53.0**	**-0.4**
	baz=351							
HGSD	**Ruisui**	**0.68**	**212**	⇓*i*P		**Pb**	**15 21 45.0**	**-0.1**
	baz=195							
ILA	**Ilan**	**0.70**	**355**	*e*P		**Pg**	**15 21 44.8**	**-0.4**
	baz=351							
ILA				*e*S		**Sb**	**15 21 54.8**	**-0.1**
	baz=351							
FUSB	**Fushanzhiwuyua**	**0.72**	**343**	⇓*i*P		**Pg**	**15 21 44.9**	**-0.7**
	baz=345							
FUSB				S		**Sg**	**15 21 54.9**	**-0.3**
	baz=345							
EHY	**Hungye**	**0.72**	**219**	⇑*i*P		**Pg**	**15 21 44.3**	**-1.3**
	baz=232							
EHY				*e*S		**Sb**	**15 21 55.5**	**-0.1**
	baz=232							
YHNB	**Yeheng**	**0.72**	**326**	Pg		**Pg**	**15 21 44.7**	**-1.0**
YHNB				Sg		**Sg**	**15 21 53.8**	**-1.4**
YHNB	**Yeheng**	**0.72**	**326**	P		**Pg**	**15 21 44.9**	**-0.8**
YHNB	**Yeheng**	**0.72**	**326**	⇓*i*P		**Pg**	**15 21 44.9**	**-0.8**
	baz=328							
YHNB				S		**Sg**	**15 21 54.0**	**-1.2**
	baz=328							
NSK	**Sanguang**	**0.73**	**325**	⇓*i*P		**Pg**	**15 21 45.0**	**-0.9**
	baz=327							
NSK				*e*S		**Sg**	**15 21 54.2**	**-1.4**
	baz=327							
NWLT	**Wulai**	**0.76**	**338**	⇓*i*P		**Pg**	**15 21 45.7**	**-0.7**
	baz=340							
NWLT				*e*S		**Sg**	**15 21 55.4**	**-1.0**
	baz=340							
NTC	**Toucheng**	**0.78**	**1**	*e*P		**Pg**	**15 21 46.6**	**-0.2**
	baz=2.0							
NTC				*e*S		**Sb**	**15 21 57.8**	**+0.5**
	baz=2.0							
WPL	**Puli Township**	**0.79**	**266**	P		**Pg**	**15 21 46.1**	**-0.8**
	baz=266							
WPL				S		**Sg**	**15 21 55.9**	**-1.3**
	baz=266							
DPDB	**Guoxing**	**0.81**	**268**	⇓P		**Pg**	**15 21 46.5**	**-0.9**
	baz=266							
ECBN	**Changbin**	**0.82**	**204**	*e*P		**Pg**	**15 21 47.1**	**-0.4**
	baz=202							
ECBN				*e*S		**Sb**	**15 21 58.7**	**+0.3**
	baz=202							
WHP	**Taichung City**	**0.82**	**285**	⇓*i*P		**Pg**	**15 21 46.8**	**-0.7**
	baz=285							
WHP				*i* S		**Sg**	**15 21 57.6**	**-0.8**
	baz=285							
YULB	**Yu-li**	**0.82**	**215**			**Pg**	**15 21 46.8**	**-0.7**
YULB				Sg		**Sg**	**15 21 57.1**	**-1.3**
YULB	**Yu-li**	**0.82**	**215**	P		**Pn**	**15 21 48.5**	**-0.2**
YULB	**Yu-li**	**0.82**	**215**	⇑P		**Pg**	**15 21 45.9**	**-1.7**
	baz=227							
YULB				*e*S		**Sb**	**15 21 58.5**	**-0.1**
	baz=227							
WCS	**Beigang Elemen**	**0.83**	**269**	⇓P		**Pg**	**15 21 46.7**	**-0.9**
	baz=262							
WCS				*e*S		**Sg**	**15 21 57.0**	**-1.5**
	baz=262							
SSLB	**Suanglung**	**0.84**	**251**	Pg		**Pg**	**15 21 46.8**	**-1.1**
SSLB				Sg		**Sg**	**15 21 56.7**	**-2.2**
SSLB	**Suanglung**	**0.84**	**251**	P		**Pg**	**15 21 47.3**	**-0.5**
SSLB	**Suanglung**	**0.84**	**251**	⇑*i*P		**Pg**	**15 21 46.7**	**-1.1**
	baz=262							
SSLB				S		**Sg**	**15 21 57.0**	**-1.8**
	baz=262							
NFF	**Wufeng Townshi**	**0.85**	**312**	⇓P		**Pg**	**15 21 47.0**	**-1.0**
	baz=312							
NFF				S		**Sg**	**15 21 57.5**	**-1.7**
	baz=312							
EYUL	**Yuli**	**0.85**	**212**	*e*P		**Pg**	**15 21 47.6**	**-0.5**
	baz=231							
EYUL				*e*S		**Sb**	**15 22 00.1**	**+0.9**
	baz=231							
TWF1	**Yuli**	**0.86**	**214**	⇑*e*P		**Pg**	**15 21 46.5**	**-1.7**
	baz=222							
SMLT	**Sun Moon Lake**	**0.86**	**258**	⇑*i*P		**Pg**	**15 21 47.3**	**-1.0**
	baz=257							
SMLT				*i* S		**Sg**	**15 21 58.9**	**-0.6**
	baz=257							
TYC	**Yuchr**	**0.89**	**260**	⇑*i*P		**Pb**	**15 21 47.7**	**-1.1**
	baz=260							
TYC				S		**Sb**	**15 21 59.3**	**-1.2**
	baz=260							
TIPB	**Shuangxi**	**0.90**	**1**	⇓P		**Pb**	**15 21 48.4**	**-0.5**
	baz=1.0							
TIPB				S		**Sb**	**15 22 00.2**	**-0.5**
	baz=1.0							
LIOB	**Emei**	**0.93**	**308**	⇓*e*P		**Pb**	**15 21 48.7**	**-0.7**
	baz=309							
LIOB				S		**Sb**	**15 22 00.9**	**-0.6**
	baz=309							
NHDH	**Xindian Distri**	**0.93**	**343**	⇑P		**Pb**	**15 21 48.9**	**-0.5**
	baz=344							
NHDH				*e*S		**Sb**	**15 22 01.4**	**-0.1**
	baz=344							
NSTT	**Nanjuang**	**0.93**	**307**	⇓*i*P		**Pb**	**15 21 48.8**	**-0.6**
	baz=308							
NSTT				S		**Sb**	**15 22 00.5**	**-1.1**
	baz=308							
TWA	**Mucha**	**0.93**	**347**	⇑*i*P		**Pb**	**15 21 49.0**	**-0.5**
	baz=348							
TWA				S		**Sg**	**15 22 01.9**	**0.0**
	baz=348							
NJD	**Zhudong**	**0.94**	**315**	⇑*e*P		**Pb**	**15 21 49.6**	**+0.1**
	baz=316							
NJD				*e*S		**Sg**	**15 22 02.1**	**0.0**
	baz=316							
TWB1	**Santiao Chiao**	**0.95**	**9**	*e*P		**Pb**	**15 21 49.4**	**-0.3**
	baz=2.0							
TWB1				*e*S		**Sb**	**15 22 02.2**	**+0.1**
	baz=2.0							
TATO	**Taipei**	**0.95**	**342**			**Pb**	**15 21 49.5**	**-0.3**
TATO					Sg	**Sb**	**15 22 01.1**	**-1.1**
TATO	**Taipei**	**0.95**	**342**	P		**Pg**	**15 21 50.1**	**+0.1**
TATO	**Taipei**	**0.95**	**342**	⇑P		**Pb**	**15 21 49.4**	**-0.3**
	baz=343							
TATO				S		**Sb**	**15 22 01.2**	**-1.0**
	baz=343							
CHKH	**Chenggong**	**0.95**	**204**	⇓*e*P		**Pb**	**15 21 48.9**	**-0.9**
	baz=190							
WHYT	**Xinyi Township**	**0.96**	**247**	⇑P		**Pb**	**15 21 49.1**	**-0.8**
	baz=256							
WHYT				*e*S		**Sb**	**15 22 02.4**	**0.0**
	baz=256							
BACT	**New Taipei Cit**	**0.98**	**340**	*e*P		**Pb**	**15 21 50.4**	**+0.1**
	baz=341							
BACT				S		**Sg**	**15 22 03.8**	**+0.3**
	baz=341							
FULB	**Fuli**	**0.99**	**209**	⇓*e*P		**Pb**	**15 21 49.7**	**-0.8**
	baz=195							
NHY	**Taipei**	**0.99**	**347**	*e*P		**Pb**	**15 21 50.6**	**+0.1**
	baz=347							
NHY				*e*S		**Sg**	**15 22 03.7**	**0.0**
	baz=347							
TWQ1	**Liyutan**	**0.99**	**286**	⇓P		**Pb**	**15 21 50.3**	**-0.2**
	baz=298							
TWQ1				*e*S		**Sb**	**15 22 03.5**	**+0.1**
	baz=298							
NWF	**Wu-fen Shan**	**1.00**	**358**	⇓P		**Pb**	**15 21 50.6**	**-0.1**
	baz=351							
NWF				*e*S		**Sg**	**15 22 03.9**	**-0.1**
	baz=351							
WFSB	**Wu-fen Shan**	**1.00**	**358**	⇓P		**Pb**	**15 21 50.6**	**0.0**
	baz=351							
WFSB				*e*S		**Sb**	**15 22 03.2**	**-0.4**
	baz=351							
TAP	**Taipei**	**1.01**	**344**	*e*P		**Pb**	**15 21 50.6**	**-0.1**
	baz=345							
TAP				S		**Sg**	**15 22 04.3**	**+0.1**
	baz=345							
HSN1	**Hsinchu**	**1.01**	**314**	⇑P		**Pg**	**15 21 51.1**	**0.0**
	baz=315							
HSN1				*e*S		**Sb**	**15 22 04.2**	**+0.2**
	baz=315							
SXI1	**Grass Mountain**	**1.02**	**3**	⇓P		**Pb**	**15 21 51.0**	**0.0**
	baz=353							
WWF	**Wufeng**	**1.02**	**269**	⇑P		**Pb**	**15 21 51.3**	**0.0**
	baz=263							
WWF				*e*S		**Sn**	**15 22 05.9**	**+0.5**
	baz=263							
NSY	**Sanyi**	**1.02**	**290**	⇓P		**Pb**	**15 21 51.2**	**+0.2**
	baz=291							
NSY				S		**Sg**	**15 22 05.0**	**+0.3**
	baz=291							
WJS	**Zhushan**	**1.02**	**256**	⇑P		**Pb**	**15 21 51.0**	**0.0**
	baz=257							
WJS				*e*S		**Sn**	**15 22 05.3**	**-0.2**
	baz=257							
NTY	**Taoyuan**	**1.04**	**333**	⇑P		**Pn**	**15 21 51.6**	**-0.1**
	baz=327							
NTY				*e*S		**Sg**	**15 22 05.2**	**-0.1**
	baz=327							
TCU	**Taichung**	**1.04**	**275**	⇑P		**Pg**	**15 21 51.7**	**0.0**
	baz=271							
TCU				*e*S		**Sn**	**15 22 06.9**	**+0.9**
	baz=271							
NMLH	**Miaoli**	**1.04**	**297**	⇑P		**Pg**	**15 21 51.8**	**0.0**
	baz=297							
NMLH				*e*S		**Sn**	**15 22 06.0**	**-0.1**
	baz=297							
SBCB	**Hsinchu**	**1.04**	**314**	⇑*i*P		**Pg**	**15 21 51.8**	**+0.1**
	baz=314							
SBCB				*i* S		**Sn**	**15 22 06.0**	**-0.1**
	baz=314							
CHKT	**Chengkung**	**1.05**	**203**	*e*P		**Pb**	**15 21 49.8**	**-1.6**
	baz=202							
CHKT				*e*S		**Sn**	**15 22 06.3**	**+0.2**
	baz=202							
WNT1	**Nantou City**	**1.05**	**261**	⇑*e*P		**Pb**	**15 21 51.6**	**+0.1**
	baz=262							
WNT1				*e*S		**Sn**	**15 22 07.2**	**+1.0**
	baz=262							
WNT	**Mingjian**	**1.05**	**260**	⇑P		**Pb**	**15 21 51.6**	**+0.1**
	baz=260							
WNT				*e*S		**Sn**	**15 22 06.6**	**+0.4**
	baz=260							
NJN	**Zhunan**	**1.06**	**306**	*e*P		**Pb**	**15 21 51.4**	**-0.2**
	baz=306							
NJN				*e*S		**Sg**	**15 22 05.6**	**-0.2**
	baz=306							
HSN	**Hsinchu**	**1.06**	**314**	⇑*e*P		**Pn**	**15 21 51.8**	**-0.1**
	baz=317							
HSN				S		**Sn**	**15 22 06.5**	**0.0**
	baz=317							
NCUH	**Zhongli**	**1.06**	**327**	⇑*i*P		**Pn**	**15 21 51.9**	**0.0**
	baz=328							
NCUH				*e*S		**Sn**	**15 22 06.8**	**+0.3**
	baz=328							
NCU	**National Centr**	**1.06**	**328**	⇑P		**Pn**	**15 21 51.9**	**-0.1**
	baz=329							
NCU				*e*S		**Sb**	**15 22 05.6**	**+0.1**
	baz=329							
EHD	**Haiduan**	**1.07**	**212**	*e*P		**Pb**	**15 21 49.8**	**-2.1**
	baz=209							
TNOU	**National Taiwa**	**1.08**	**358**	P		**Pb**	**15 21 51.9**	**-0.1**
	baz=351							
TNOU				*e*S		**Sb**	**15 22 05.5**	**-0.4**
	baz=351							
ALS	**Alishan**	**1.08**	**239**	⇑*i*P		**Pb**	**15 21 51.4**	**-0.8**
	baz=239							
ALS				*e*S		**Sg**	**15 22 06.6**	**0.0**
	baz=239							
TWS1	**Kuangyinshan**	**1.09**	**341**	⇑P		**Pb**	**15 21 52.0**	**-0.1**
	baz=350							
TWS1				*e*S		**Sn**	**15 22 07.4**	**+0.2**
	baz=350							
YM01	**YM01**	**1.10**	**348**	⇑P		**Pb**	**15 21 51.9**	**-0.4**
	baz=348							
YM01				*e*S		**Sb**	**15 22 06.6**	**+0.1**
	baz=348							
JYNG	**Yonagunijimaku**	**1.10**	**69**	⇓P		**Pg**	**15 21 52.9**	**+0.1**
JYNG					⇓S	**Sn**	**15 22 07.9**	**+0.5**
JYNG	**Yonagunijimaku**	**1.10**	**69**	A		A	15 21 52.9	
	comp=E,697nm,5.1s,comp=N,711nm,2.8s							
WDJ	**Dajia District**	**1.11**	**285**	⇑P		**Pg**	**15 21 52.8**	**-0.1**
	baz=296							
WDJ				S		**Sg**	**15 22 07.5**	**+0.1**
	baz=296							
ECS	**Chishang**	**1.11**	**210**	*e*P		**Pb**	**15 21 51.2**	**-1.4**
	baz=207							
YM08	**YM08**	**1.13**	**350**	⇑*i*P		**Pb**	**15 21 52.1**	**-0.8**
	baz=350							
YM08				*e*S		**Sb**	**15 22 06.7**	**-0.8**
	baz=350							
WYL	**Yuanlin Townsh**	**1.14**	**265**	⇑*e*P		**Pb**	**15 21 52.7**	**-0.2**
	baz=266							
WYL				*e*S		**Sn**	**15 22 09.6**	**+1.4**
	baz=266							
NWRT	**Kuosheng**	**1.14**	**353**	*e*P		**Pb**	**15 21 52.8**	**-0.1**
	baz=344							
NWRT				*e*S		**Sg**	**15 22 09.8**	**+1.4**
	baz=344							
NTST	**Danshui**	**1.14**	**343**	⇑*e*P		**Pb**	**15 21 53.0**	**0.0**
	baz=351							
NTST				*e*S		**Sg**	**15 22 09.2**	**+0.7**
	baz=351							
ELDTW	**Lidau**	**1.14**	**220**	⇑*e*P		**Pb**	**15 21

YOJ S Sg 15 22 08.9 -0.1
YOJ Yonaguni jima 1.16 70 A A 15 21 53.6
comp=E,731nm,8.1s,comp=N,548nm,10.9s
NHW Xinwu Township 1.17 323 ⇑P Pb 15 21 53.5 0.0
baz=323
NHW *e*S Sg 15 22 10.0 +0.6
baz=323
EDH Donghe 1.19 203⇓*e*P Pn 15 21 51.6 -2.1
EDH *e*S Sg 15 22 11.0 +1.0
baz=203
WGK Gukeng 1.21 252⇑*e*P Pn 15 21 53.9 -0.1
baz=253
WGK *e*S Sg 15 22 11.4 +0.7
baz=253
TWY Chenhua 1.22 351 *e*P Pb 15 21 54.6 +0.2
baz=337
WDLH Douliu 1.23 252⇑*e*P Pb 15 21 54.6 +0.1
baz=253
WDLH *e*S Sg 15 22 12.2 +0.9
baz=253
NSM Shimen 1.23 350⇓*e*P Pg 15 21 55.0 -0.2
baz=338
WCKO Fanlu 1.27 241 ⇑P Pn 15 21 54.8 0.0
baz=241
WCKO *e*S Sg 15 22 13.1 +0.3
baz=241
STYH Taoyuan 1.31 227 *e*P Pn 15 21 54.6 -0.6
baz=228
STYH *e*S Sg 15 22 13.8 0.0
baz=228
LONT Longtian 1.32 209⇓*e*P Pn 15 21 54.0 -1.4
baz=207
STYT Tauyuan 1.32 227 ⇑P Pn 15 21 55.0 -0.6
baz=227
STYT S Sn 15 22 13.6 +0.5
baz=227
WRL Guolierlin Hig 1.33 263⇑*e*P Pn 15 21 55.8 +0.3
baz=264
WRL S Sg 15 22 14.9 +0.6
baz=264
CHN4 Tsaushan 1.33 238⇑*i*P Pn 15 21 55.7 +0.1
baz=238
CHN4 *e*S Sg 15 22 17.1 +2.7
baz=238
TPUB Ta-pu 1.33 235 Pn Pn 15 21 55.5 -0.2
TPUB Ta-pu 1.33 235 P Pg 15 21 57.3 +0.1
TPUB Ta-pu 1.33 235 ⇑P Pn 15 21 55.6 0.0
baz=236
TPUB *i* S Sg 15 22 14.4 -0.1
baz=236
CHN2 Minshiung 1.34 247 *e*P Pb 15 21 56.4 0.0
baz=247
CHN2 *e*S Sg 15 22 15.9 +1.1
baz=247
RLNB Erlin 1.34 263 ⇑P Pb 15 21 56.2 -0.2
baz=264
RLNB *e*S Sg 15 22 15.0 +0.1
baz=264
WTK Tuku 1.36 254⇑*e*P Pb 15 21 56.6 -0.1
baz=255
WTK *e*S Sg 15 22 15.5 0.0
baz=255
WTP Ta-pu 1.37 234 ⇑P Pn 15 21 56.2 -0.1
baz=234
WTP *e*S Sg 15 22 15.3 -0.5
baz=234
CHY Chiayi 1.40 246 *e*P Pb 15 21 57.3 0.0
baz=246
CHY *e*S Sg 15 22 16.9 +0.3
baz=246
TWGBT Beinan 1.42 209 P Pn 15 21 56.5 -0.3
TWGBT Beinan 1.42 209⇑*e*P Pn 15 21 54.4 -2.4
baz=207
TWG Pinlang 1.42 209 Pn 15 21 56.0 -0.8
TWG Pinlang 1.42 209⇑*e*P Pn 15 21 54.4 -2.5
baz=207
WTCT Ta-ch'eng 1.42 262 *e*P Pn 15 21 56.9 +0.1
baz=264
WTCT *e*S Sg 15 22 16.6 -0.8
baz=264
LDUT Ludao 1.43 193⇓*e*P Pn 15 21 54.7 -2.2
baz=178
TTN Taitung 1.45 205 *e*P Pn 15 21 56.5 -0.7
baz=204
TWK Hsinying 1.46 237⇑*e*P Pn 15 21 57.6 +0.2
baz=237
TWK S Sg 15 22 19.2 +0.7
baz=237
CHN1 Nanshi 1.47 234 *e*P Pn 15 21 57.9 +0.3
baz=234
CHN1 *e*S Sg 15 22 19.4 +0.4
baz=234
SNST Tainan City 1.48 235⇑*e*P Pn 15 21 57.9 +0.3
baz=236
SNST *e*S Sg 15 22 20.0 +0.9
baz=236
WMLT Mailiao 1.48 260 *e*P Pb 15 21 58.7 -0.1
baz=249
WMLT *e*S Sb 15 22 18.2 +0.8
baz=249
SGST Jiashian 1.50 229⇑*e*P Pn 15 21 57.4 -0.5
baz=230
SGST *e*S Sg 15 22 19.7 -0.2
baz=230
SLGT Liugui 1.52 225 *e*P Pn 15 21 58.5 +0.3
baz=227
SLGT *e*S Sg 15 22 19.9 -0.5
baz=227
WSF Szhu 1.52 254⇑*e*P Pn 15 21 58.6 +0.4
baz=255
WSF *e*S Sg 15 22 20.4 -0.2
baz=255
WSL Shuilin Townsh 1.55 250⇑*e*P Pb 15 21 59.5 -0.6
baz=250
WSL *e*S Sg 15 22 22.0 +0.4
baz=250
PCYT Pengchaiyu 1.57 8 ⇑P Pb 15 21 59.6 -0.7
baz=4.0
PCYT *e*S Sg 15 22 22.4 +0.2
baz=4.0
ICHU Yijhu 1.57 244⇑*e*P Pn 15 21 59.5 +0.6
baz=244
ICHU *e*S Sg 15 22 21.8 -0.5
baz=244
CHN8 Yiju 1.64 244 *e*P Pn 15 21 60.0 +0.2
baz=244
CHN8 *e*S Sg 15 22 23.7 -0.6
baz=244
CHN3 Shinhua 1.66 234 *e*P Pb 15 22 01.4 -0.4
baz=230
ECL Taimali 1.67 209 *e*P Pn 15 21 58.8 -1.4
baz=194
SSHA Shanhua 1.68 237 *e*P Pb 15 22 01.5 -0.7
baz=233
SCST Cishan 1.69 226⇑*e*P Pb 15 22 01.9 -0.4
baz=228
SCST *e*S Sg 15 22 26.4 +0.4
baz=228
SHHT Tainan City 1.70 233⇑*e*P Pb 15 22 02.6 0.0
baz=233
SHHT *e*S Sg 15 22 27.2 +0.8
baz=233
SSD Sandimen 1.71 220 *e*P Pn 15 21 59.7 -1.2
baz=211
SSD *e*S Sb 15 22 23.9 0.0
baz=211
TSMG Majia 1.73 219⇓*e*P Pn 15 22 01.5 +0.3
baz=221
TSMG *e*S Sg 15 22 26.1 -1.2
baz=221
SCLT Jiali 1.73 239 *e*P Pb 15 22 02.3 -0.8
baz=239
SCLT *e*S Sb 15 22 24.9 +0.3
baz=239
IRIF Iriomote-Funau 1.77 81 P Pb 15 22 02.7 -0.9
IRIF Iriomote-Funau 1.77 81 A A 15 22 02.7
comp=E,382nm,4.1s,comp=N,397nm,4.8s
TAI1 Yung-k'ang 1.78 235 *e*P Pn 15 22 02.5 +0.7
baz=235
TAI1 *e*S Sb 15 22 25.9 -0.1
baz=235
TWM1 Shoushan 1.78 226 *e*P Pb 15 22 04.0 +0.1
baz=224
SGLT Jiouru 1.81 223 *e*P Pb 15 22 04.1 -0.3
baz=213
SGLT *e*S Sg 15 22 31.0 +1.2
baz=213

MASBT Mashibuluo 1.81 217 *e*P Pn 15 22 01.6 -0.6
baz=221
MASBT *e*S Sb 15 22 27.0 0.0
baz=221
HATJ Hateruma jima 1.82 90 P Pb 15 22 03.5 -1.0
HATJ *e*S Sb 15 22 27.3 +0.2
HATJ Hateruma jima 1.82 90 A A 15 22 03.5
comp=E,679nm,3.4s,comp=N,899nm,5.5s
TAI Tainan 1.83 235 *e*P Pb 15 22 05.0 +0.2
baz=230
TSCK Chigu Township 1.83 240 *e*P Pb 15 22 03.7 -1.1
baz=236
TSPT Pingtung City 1.84 221 *e*P Pb 15 22 04.4 -0.5
baz=220
SNJT Kaohsiung City 1.89 226⇑*e*P Pb 15 22 05.3 -0.4
baz=224
EAST Anshuo 1.90 208⇑*e*P Pn 15 22 01.9 -1.6
baz=197
TAW Tawu 1.90 207 *e*P Pn 15 22 02.5 -0.9
baz=206
TAWH Dawu Township 1.92 207 *e*P Pn 15 22 03.0 -0.7
baz=206
JKRS Kuro-shima 2.01 85 P Pb 15 22 06.4 -1.4
JKRS S Sb 15 22 33.0 +0.3
JKRS Kuro-shima 2.01 85 A A 15 22 06.4
comp=E,596nm,2.7s,comp=N,803nm,3.0s
WSSB Gushan 2.01 225 *e*P Pb 15 22 06.8 -1.2
baz=223
SCZT Fangliau 2.02 213 *e*P Pn 15 22 05.7 +0.6
baz=199
LAY Lan-yu 2.04 187 *e*P Pn 15 22 03.0 -2.3
baz=177
LAY *e*S Sn 15 22 28.8 -1.7
baz=177
KAU Kaohsiung 2.04 223 *e*P Pb 15 22 07.7 -0.6
baz=221
LYUB Lan-yu 2.07 186⇓*e*P Pn 15 22 03.1 -2.7
baz=187
SLIU Shizi 2.07 207 *e*P Pn 15 22 05.8 +0.1
baz=197
PHUB P'eng-hu 2.13 255 P Pn 15 22 06.3 -0.3
baz=254
PHUB *e*S Sn 15 22 33.1 +0.4
baz=254
PNG Penghu 2.13 257⇑*e*P Pn 15 22 06.2 -0.4
baz=255
PNG *e*S Sn 15 22 33.1 +0.3
baz=255
WDGT Dungji 2.13 248⇑*e*P Pn 15 22 06.7 +0.1
baz=233
WDGT *e*S Sn 15 22 33.0 +0.1
baz=233
JIJ Ishigaki jima 2.15 82 ⇓P Pn 15 22 07.1 +0.3
JIJ ⇓S Sb 15 22 36.2 -0.3
JIJ Ishigaki jima 2.15 82 A A 15 22 07.1
comp=E,268nm,8.2s,comp=N,243nm,9.8s
TWP Hsiaoliuchiu 2.17 218 *e*P Pn 15 22 08.1 +0.9
baz=218
SMST Manzhou Townsh 2.23 204 *e*P Pn 15 22 07.7 -0.3
baz=193
HEN Hengchun 2.28 206 *e*P Pn 15 22 09.4 +0.7
baz=196
TWK1 Hengchun 2.31 204 *e*P Pn 15 22 08.9 -0.2
baz=194
TWKBT Hengchun 2.31 204 *e*P Pn 15 22 09.2 0.0
baz=194
TSEB Hengchuen, Pin 2.32 202 *e*P Pn 15 22 09.5 +0.3
baz=194
JISG Ishigakijimahi 2.33 77 ⇓P Pn 15 22 09.8 +0.4
JISG ⇓S Sb 15 22 40.6 -1.4
JISG Ishigakijimahi 2.33 77 A A 15 22 09.8
comp=E,226nm,11.9s,comp=N,206nm,10.9s
VWUC VWUC 2.34 294⇑*e*P Pn 15 22 08.6 -0.9
baz=289
VCHM Qimei 2.35 249⇑*e*P Pn 15 22 09.9 +0.3
baz=233
VCHM *e*S Sn 15 22 39.0 +0.7
baz=233
PTMZ Houxiangcun 2.64 292⇑*e*P Pn 15 22 12.7 -0.9
baz=288
MATB Ma-tsu 2.68 321⇑*e*P Pn 15 22 13.1 -1.1
baz=315
JTJ Tarama 2.69 77 P Pn 15 22 15.6 +1.2
JTJ *e*S Sb 15 22 49.9 -2.5
JTJ Tarama 2.69 77 A A 15 22 15.6
comp=E,340nm,9.1s,comp=N,252nm,6.6s
MSUT Lienchiang 2.71 321 *e*P Pn 15 22 13.7 -0.8
baz=315
QZH Quanzhou 3.06 287⇑*i*Pn Pn 15 22 18.0 -1.4
QZH Sn Sn 15 22 52.3 -3.6
QZH smax smax
comp=N,17μm,1.2s
QZH smax smax
comp=N,12μm,1.3s
QZH LR LR
comp=N,544μm,9.4s
QZH LR LR
comp=N,688μm,10.0s
LYJJ Jianjiangzhen 3.09 323⇑*e*P Pn 15 22 18.8 -1.1
baz=322
KNM Kinmen 3.11 277 *e*P Pn 15 22 21.3 +1.3
baz=271
JIRB Irabujima 3.15 75 P Pn 15 22 22.0 +1.4
JIRB Irabujima 3.15 75 A A 15 22 22.0
comp=E,227nm,9.6s,comp=N,210nm,4.3s
KNMB Chin-men Tao 3.15 278 Pn Pn 15 22 19.5 -1.1
KNMB Chin-men Tao 3.15 278⇑*e*P Pn 15 22 20.3 -0.4
baz=273
XPSS Dashiqiu 3.21 333⇑*e*P Pn 15 22 20.2 -1.2
baz=331
MHZQ Yeshan 3.24 309⇑*e*P Pn 15 22 20.8 -1.0
baz=302
JIKM Ikemajima 3.24 74 P Pn 15 22 24.6 +2.7
JIKM Ikemajima 3.24 74 A A 15 22 24.6
comp=E,297nm,7.8s,comp=N,249nm,5.9s
JMJ Miyako jima 2 3.25 76 P Pn 15 22 25.4 +3.3
JMJ Miyako jima 2 3.25 76 *e*P Pn 15 22 24.2 +2.1
baz=82
JMJ2 Miyako jima3 3.27 77 P Pn 15 22 24.1 +1.8
JMJ2 S Sn 15 23 04.4 +3.4
JMJ2 Miyako jima3 3.27 77 A A 15 22 24.1
comp=E,375nm,6.7s,comp=N,343nm,6.5s
JOGS Gusukube 3.34 77 P Pn 15 22 25.6 +2.3
JOGS Gusukube 3.34 77 A A 15 22 25.6
comp=E,405nm,6.7s,comp=N,386nm,6.0s
AXDP Jialang 3.60 284⇑*e*P Pn 15 22 26.4 -0.4
baz=284
AXDP *e*S Sn 15 23 06.9 -2.2
baz=284
ZPLA Ao Xicun 3.72 269⇑*e*P Pn 15 22 28.0 -0.5
baz=263
DSXP Dongshan 4.03 266⇑*e*P Pn 15 22 32.5 -0.3
baz=259
SXFK Yanhouchang 4.43 302⇑*e*P Pn 15 22 37.5 -0.8
baz=294
JKE Kume jima 2 5.03 62 A A 15 22 49.8
comp=E,62nm,8.0s,comp=N,48nm,10.0s
JAGN Aguni-jima 5.51 62 A A 15 22 56.5
comp=E,70nm,12.6s,comp=N,50nm,4.3s
VDOS Pratas Island 5.78 236 *e*P Pn 15 22 58.1 +1.3
baz=233
JJT3 Tamagusuku3 5.79 68 A A 15 23 00.4
comp=E,120nm,11.8s,comp=N,105nm,5.4s
JNTH Nagotoyohara 6.12 65 A A 15 23 05.1
comp=E,32nm,12.6s,comp=N,23nm,8.9s
JIH Iheya 6.29 61 A A 15 23 07.4
comp=E,42nm,10.8s,comp=N,32nm,9.7s
JOW Kunigami 6.45 63 P Pn 15 23 07.4 +1.3
JOW Kunigami 6.45 63 *e*P Pn 15 23 06.2 +0.2
baz=74
JOW Kunigami 6.45 63 A A 15 23 09.7
comp=E,34nm,9.8s,comp=N,31nm,7.9s
JOW Kunigami 6.45 63 Pn Pn 15 23 06.3 +0.2
comp=N,13nm,0.3s,baz=154,slow=12,SNR=27
JOW Sn Sn 15 24 23.3 +3.8
baz=227,slow=14
comp=N,40nm,0.3s
SZP Santa 6.61 191 P Pn 15 23 12.6 +4.4
JYRO Yoronjima 6.68 62 A A 15 23 12.8
comp=E,32nm,11.5s,comp=N,30nm,9.8s
JOKE Okinoerabujima 6.92 60 A A 15 23 16.2
comp=E,33nm,9.2s,comp=N,26nm,9.1s
SSE Sheshan 7.02 356 Pn Pn 15 23 13.4 -0.5
SSE Sn Sn 15 24 34.8 +1.3
SSE smax smax
comp=N,1μm,1.2s
SSE smax smax
comp=N,1μm,1.0s
HKC Hong Kong Obse 7.25 257 ⇑P Pn 15 23 18.0 +1.0
HKPS Hong Kong Po S 7.28 257 Pn Pn 15 23 16.9 -0.6
HKPS Hong Kong Po S 7.28 257 P Pn 15 23 19.0 +1.5
HKPS Hong Kong Po S 7.28 257 *e*P Pn 15 23 18.2 +0.7
baz=248
JTK Tokunoshima 7.41 59 A A 15 23 23.1
comp=E,24nm,7.0s,comp=N,16nm,8.4s
JAMN Amaminishikomi 7.81 56 A A 15 23 28.6
comp=E,18nm,9.4s,comp=N,11nm,12.6s
GZH Guangzhou 7.83 265 Pn Pn 15 23 19.7 -5.3
GZH Sn Sn 15 24 44.9 -8.6
GZH smax smax
comp=N,5μm,1.0s
GZH smax smax
comp=N,4μm,1.2s
MCO Taipa Grande 7.84 257 P Pn 15 23 26.0 +0.8
JAM Amami Oshima 8.22 57 A A 15 23 34.3
comp=E,17nm,12.9s,comp=N,19nm,9.4s
JTAJ Takarajima 8.33 51 A A 15 23 35.7
comp=E,19nm,11.1s,comp=N,29nm,9.7s
NJ2 Nanjing 8.37 342 ⇓P Pn 15 23 30.8 -1.6
NJ2 pP 15 23 34.0
NJ2 sP 15 23 37.1
NJ2 S Sn 15 25 02.9 -3.8
NJ2 pmax pmax
comp=N,110nm,0.8s
NJ2 smax smax
comp=N,4μm,1.0s
NJ2 smax smax
comp=N,4μm,1.2s
NJ2 LR LR
comp=N,168μm,10.9s
NJ2 LR LR
comp=N,59μm,6.6s
NJ2 LR LR
comp=N,185μm,8.5s
JZK Kikaishima 8.46 58 A A 15 23 37.6
comp=E,70nm,8.1s,comp=N,69nm,5.5s
JMZ Minamidaito 2 8.71 77 Pn Pn 15 23 35.4 -1.7
JMZ Minamidaito 2 8.71 77 A A 15 23 41.1
comp=E,25nm,7.2s,comp=N,41nm,8.6s
JKDJ Kitadaitoujima 8.80 76 A A 15 23 42.3
comp=E,35nm,9.7s,comp=N,32nm,8.2s
CNSH ChangSha 8.97 299 ⇑P Pn 15 23 38.5 -2.1
CNSH S Sn 15 25 19.1 -2.4
CNSH smax smax
comp=N,6μm,1.1s
CNSH smax smax
comp=N,8μm,1.1s
CNSH LR LR
comp=N,123μm,9.6s
CNSH LR LR
comp=N,202μm,9.3s
CNSH LR LR
comp=N,230μm,9.3s
JNN Nakanoshima 9.20 50 A A 15 23 47.8
comp=E,30nm,10.1s,comp=N,19nm,8.1s
WHN Wuhan 9.25 316 ⇑P Pn 15 23 43.1 -1.4
WHN pP 15 23 47.0
WHN S Sn 15 25 23.6 -4.8
WHN pmax pmax
comp=N,210nm,0.6s
WHN LR LR
comp=N,637μm,9.1s
WHN LR LR
comp=N,604μm,8.5s
WHN LR LR
comp=N,979μm,10.0s
JKC Kuchinoerabu 9.80 48 A A 15 23 56.1
comp=E,25nm,9.2s,comp=N,20nm,8.3s
JYAK Yakushimahirau 9.88 50 A A 15 23 57.2
comp=E,8.0nm,8.5s,comp=N,8.0nm,9.4s
TGY Tagaytay City 9.95 185 Pn Pn 15 23 59.4 +5.3
baz=188,slow=22
TGY LR LR 15 28 29.0
comp=N,11μm,21.4s,baz=0.5,slow=42
JMTN Minamitane 10.25 50 A A 15 24 02.2
comp=E,13nm,9.5s,comp=N,10.0nm,10.2s
JSJ Shimokoshiki 10.31 41 A A 15 24 03.0
comp=E,12nm,8.6s,comp=N,17nm,10.8s
JTN Tanegashima 3 10.46 49 A A 15 24 05.0
comp=E,16nm,8.1s,comp=N,9.0nm,8.3s
GULI GuiLin 10.48 279 ⇓P Pn 15 23 58.4 -3.0
GULI S Sn 15 25 54.0 -4.6
GULI pmax pmax
comp=N,40nm,1.4s
GULI LR LR
comp=N,60μm,10.0s
GULI LR LR
comp=N,252μm,9.8s
GULI LR LR
comp=N,302μm,9.8s
JFU Fukue jima 2 10.51 34 A A 15 24 05.7
comp=E,13nm,12.5s,comp=N,16nm,12.4s
JSU Suzuyama 10.64 44 A A 15 24 07.6
comp=E,17nm,10.1s,comp=N,7.0nm,10.8s
JTSR Tashiro 2 10.73 47 A A 15 24 08.7
comp=E,6.0nm,11.7s,comp=N,10.0nm,9.8s
NGSJ Nagakinomoza 11.05 38 A A 15 24 13.0
comp=E,11nm,14.9s,comp=N,9.0nm,9.1s
JHD Hondo 11.12 39 A A 15 24 14.0
comp=E,12nm,10.7s,comp=N,14nm,8.3s
JZO Okuchi 11.16 42 A A 15 24 14.6
comp=E,15nm,10.3s,comp=N,10.0nm,10.0s
JNAR Kushima--Naru 11.19 46 A A 15 24 14.9
comp=E,15nm,10.1s,comp=N,11nm,8.4s
JTZ Takazaki 11.31 44 A A 15 24 16.6
comp=E,5.0nm,10.8s,comp=N,8.0nm,9.9s
JNKG Nichinankitago 11.34 46 A A 15 24 17.0
comp=E,14nm,10.6s,comp=N,14nm,6.8s
JUR Ureshino 11.48 37 A A 15 24 18.8
comp=E,12nm,10.1s,comp=N,12nm,14.0s
JIU3 Izumi3 11.58 41 A A 15 24 20.2
comp=E,10.0nm,9.4s,comp=N,6.0nm,13.6s
JTA Tamana 11.71 39 A A 15 24 22.0
comp=E,10.0nm,10.0s,comp=N,12nm,14.9s
JTSN Tsuno 11.80 44 A A 15 24 23.2
comp=E,10.0nm,9.8s,comp=N,8.0nm,12.6s
JII Iki 11.91 34 A A 15 24 24.6
comp=E,7.0nm,15.0s,comp=N,14nm,11.5s
JFI Itaya 11.97 37 A A 15 24 25.5
comp=E,10.0nm,10.2s,comp=N,16nm,11.1s
JHHC Hyugahichiya 12.02 44 A A 15 24 26.1
comp=E,10.0nm,9.5s,comp=N,6.0nm,9.0s
JKIT Kitakata 12.02 43 A A 15 24 26.2
comp=E,5.0nm,8.9s,comp=N,6.0nm,8.7s
JNU Nakatsue 12.03 39 Pn Pn 15 24 23.4 +0.9
JNU Nakatsue 12.03 39 P Pn 15 24 27.2 +4.7
JNU Nakatsue 12.03 39 A A 15 24 26.2
comp=E,7.0nm,8.0s,comp=N,10.0nm,15.1s
JNU Nakatsue 12.03 39 Pn Pn 15 24 26.4 +3.9
comp=N,0.5nm,0.3s,baz=197,slow=7.4,SNR=12
JTSM Tsushimamitsus 12.18 31 A A 15 24 28.1
comp=E,12nm,9.6s,comp=N,14nm,11.7s
QIZ Qiongzhong 12.21 248 P Pn 15 24 26.0 +0.9
QIZ S Sn 15 26 41.9 +0.8
QIZ pmax pmax
comp=N,24nm,0.9s
QIZ pmax pmax
comp=N,1μm,3.5s
QIZ LR LR
comp=N,42μm,12.0s
QIZ LR LR
comp=N,22μm,10.0s
QIZ LR LR
comp=N,26μm,8.5s
QIZ Qiongzhong 12.21 248 P Pn 15 24 27.0 +1.9
JTU Tsushima 12.34 31 P Pn 15 24 29.6 +2.9
JTU Tsushima 12.34 31 A A 15 24 30.3
comp=E,14nm,9.2s,comp=N,16nm,9.5s
JFA Akaike 12.41 37 A A 15 24 31.3
comp=E,11nm,8.8s,comp=N,8.0nm,14.6s
JBEP Beppuamama 12.49 40 A A 15 24 32.4
comp=E,11nm,10.6s,comp=N,9.0nm,13.0s
JUS Usuki 12.51 42 A A 15 24 32.6
comp=E,5.0nm,7.2s,comp=N,8.0nm,9.7s
ENH Enshi 12.59 302 Pn Pn 15 24 28.0 -2.3
ENH Enshi 12.59 302 P Pn 15 24 31.4 +1.2
TIA Tai'an 12.76 343 *e*P Pn 15 24 31.7 -0.8
TIA pmax pmax
comp=N,26nm,1.6s
TIA LR LR
comp=N,55μm,10.6s
TIA LR LR
comp=N,37μm,9.2s
TIA LR LR

JKI **Kunimi** 12.79 40 A A 15 24 36.4
comp=E,10.0nm,10.3s,comp=N,9.0nm,8.1s
JTY **Toyota** 12.97 36 A A 15 24 38.8
comp=E,7.0nm,7.9s,comp=N,8.0nm,15.1s
JTO **Tosashimizu** 13.03 45 A A 15 24 39.7
comp=E,5.0nm,11.5s,comp=N,4.0nm,10.2s
UWA2 **Uwa jima 2** 13.15 44 A A 15 24 41.2
comp=E,6.0nm,9.0s,comp=N,4.0nm,8.4s
TJN **Taejon** 13.17 20 Pn **Pn** **15 24 38.8 +0.7**
TJN **Taejon** 13.17 20 P **Pn** **15 24 40.9 +2.9**
TJN **Taejon** 13.17 20 *ce*P **Pn** **15 24 40.8 +2.8**
LYN **LuoYang** 13.24 324 ⇑P **Pn** **15 24 37.8 -1.3**
LYN sP P 15 24 45.3 -3.6
LYN PP **PnPn** **15 24 49.4 +2.3**
LYN S **Sn** **15 27 03.1 -3.0**
LYN SS **SnSn** **15 27 18.6 0.0**
LYN pmax pmax
comp=N,27nm,0.8s
LYN pmax pmax
comp=N,4μm,10.5s
LYN LR LR
comp=N,122μm,7.4s
LYN LR LR
comp=N,103μm,6.3s
LYN LR LR
comp=N,60μm,11.3s
JKD **Kudamatsu** 13.27 39 A A 15 24 42.8
comp=E,8.0nm,12.7s,comp=N,4.0nm,16.2s
JNA **Nagahama** 13.29 42 A A 15 24 43.0
comp=E,8.0nm,9.6s,comp=N,5.0nm,14.0s
JHGM **Hagimishima** 13.41 35 A A 15 24 44.6
comp=E,14nm,9.0s,comp=N,16nm,7.4s
JKU **Kubokawa** 13.49 44 A A 15 24 45.7
comp=E,4.0nm,7.7s,comp=N,3.0nm,10.3s
JHIK **Hikimi** 13.65 38 A A 15 24 47.8
comp=E,9.0nm,11.1s,comp=N,6.0nm,15.0s
JHM **Kurahashi** 13.71 41 A A 15 24 48.7
comp=E,6.0nm,11.5s,comp=N,5.0nm,13.2s
JET **Tanbara** 13.79 43 A A 15 24 49.6
comp=E,5.0nm,10.2s,comp=N,4.0nm,8.2s
JKHR **Kochiharuno** 13.90 45 A A 15 24 51.1
comp=E,5.0nm,10.3s,comp=N,6.0nm,11.8s
GYA **Guiyang** 13.91 283 ⇑*i*P **Pn** **15 24 49.0 +0.6**
GYA S **Sn** **15 27 21.4 -1.4**
GYA pmax pmax
comp=N,83nm,0.9s
GYA pmax pmax
comp=N,4μm,9.6s
GYA LR LR
comp=N,58μm,10.1s
GYA LR LR
comp=N,201μm,9.6s
GYA LR LR
comp=N,243μm,9.6s
INCN **Inchon** 13.99 16 Pn **Pn** **15 24 48.9 -0.4**
INCN **Inchon** 13.99 16 P **Pn** **15 24 48.9 -0.4**
INCN **Inchon** 13.99 16 P **P** **15 24 58.7 +1.4**
JHT **Toyohira** 14.02 39 A A 15 24 52.7
comp=E,7.0nm,10.9s,comp=N,5.0nm,11.3s
JMN **Monobe** 14.28 45 Pn **Pn** **15 24 50.3 -3.1**
JMN **Monobe** 14.28 45 P **P** **15 24 57.5 -3.0**
JMN **Monobe** 14.28 45 A A 15 24 56.1
comp=E,10.0nm,11.2s,comp=N,8.0nm,9.4s
KSAR **Wonju Array Be** 14.31 20 **P** **15 24 57.8 -2.9**
KSAR **Wonju Array Be** 14.31 20 P **P** **15 24 57.8 -2.9**
KSRS **Korea Array** 14.33 20 Pn **P** **15 24 57.9 -3.1**
comp=N,1.4nm,0.3s,baz=201,slow=12,SNR=43
KSRS LR LR 15 30 42.6
comp=N,5μm,21.5s,baz=210,slow=39
KS19 **Wonju Array Si** 14.36 20 Pn **P** **15 24 58.4 -2.9**
HNS **HongShan** 14.62 337 ⇑P **Pn** **15 24 57.3 -0.5**
HNS PP **PnPn** **15 25 06.4 +0.5**
HNS *e*S **Sn** **15 27 40.1 +0.5**
HNS SS **S** **15 27 55.7 -3.0**
HNS pmax pmax
comp=N,23nm,0.8s
HNS pmax pmax
comp=N,3μm,7.4s
HNS LR LR
comp=N,116μm,13.1s
HNS LR LR
comp=N,71μm,11.9s
HNS LR LR
comp=N,129μm,13.9s
DL2 **Dalian** 14.79 359 P **Pn** **15 25 02.9 +2.7**
DL2 S **Sn** **15 27 51.2 +7.3**
DL2 pmax pmax
comp=N,190nm,1.0s
DL2 pmax pmax
comp=N,2μm,6.0s
DL2 LR LR
comp=N,52μm,11.7s
DL2 LR LR
comp=N,13μm,9.3s
DL2 LR LR
comp=N,88μm,13.1s
XAN **Xi'an** 15.01 314 ⇑P **Pn** **15 25 02.8 -0.5**
XAN S **Sn** **15 27 46.8 -2.6**
XAN pmax pmax
comp=N,280nm,1.3s
XAN LR LR
comp=N,93μm,8.3s
XAN LR LR
comp=N,238μm,10.7s
XAN LR LR
comp=N,309μm,9.6s
TIY **Taiyuan** 15.79 332 ⇑P **Pn** **15 25 14.1 +0.6**
TIY PP **pwP** **15 25 25.6 +2.4**
TIY S **Sn** **15 28 13.9 +5.6**
TIY SS **S** **15 28 25.5 +2.6**
TIY pmax pmax
comp=N,58nm,1.6s
TIY pmax pmax
comp=N,4μm,7.1s
TIY LR LR
comp=N,99μm,12.1s
TIY LR LR
comp=N,65μm,11.5s
TIY LR LR
comp=N,88μm,10.9s
BJT **Baijiatuau** 16.60 345 **Pn** **15 25 24.7 +1.0**
BJT **Baijiatuau** 16.60 345 P **P** **15 25 26.6 +0.4**
BJT **Baijiatuau** 16.60 345 P **Pn** **15 25 24.7 +1.0**
BJT pmax pmax
comp=Z,2.0nm,0.6s
BJI **Beijing** 16.62 345 P **P** **15 25 25.5 -0.9**
BJI pP **pP** **15 25 29.0 -1.1**
BJI S **Sn** **15 28 29.2 +0.9**
BJI PcP **PcP** **15 30 14.9 +1.1**
BJI pmax pmax
comp=Z,3μm,9.9s
BJI LR LR
comp=Z,32μm,12.9s
BJI LR LR
comp=Z,10μm,12.2s
BJI LR LR
comp=Z,35μm,12.7s
SLVN **Son La** 16.75 264 P **Pn** **15 25 26.6 +0.8**
DAV **Davao City (W)** 17.28 167⇓*e*P **Pn** **15 25 33.0 +0.5**
DAV **Davao City (W)** 17.28 167 LR LR 15 32 29.3
comp=Z,6μm,18.1s,baz=348,slow=38
KMI **Kunming** 17.38 277 ⇑P **Pn** **15 25 34.1 +0.2**
KMI pP pP 15 25 38.7 -0.4
KMI pmax pmax
comp=Z,47nm,1.2s
KMI pmax pmax
comp=Z,4μm,11.9s
KMI LR LR
comp=Z,26μm,7.8s
KMI LR LR
comp=Z,122μm,9.5s
KMI LR LR
comp=Z,238μm,10.0s
CD2 **Chengdu** 17.40 297 P **Pn** **15 25 33.3 -0.6**
CD2 S **Sn** **15 28 46.8 -0.6**
CD2 pmax pmax
comp=Z,200nm,1.3s
CD2 pmax pmax
comp=Z,6μm,11.0s
CD2 LR LR
comp=Z,45μm,6.3s
CD2 LR LR
comp=Z,76μm,8.0s
CD2 LR LR
comp=Z,118μm,8.6s

DLV **T Lat** 17.48 229 P **P** **15 25 38.8 +2.5**
UBPT **Khong Chiam** 17.69 243 P **P** **15 25 38.4 0.0**
UBPT **Khong Chiam** 17.69 243 P **P** **15 25 40.9 +2.5**
JGF **Kuroka** 17.69 46 **Pn** **15 25 37.8 +0.3**
JGF **Kuroka** 17.69 46 P **P** **15 25 41.6 +3.3**
SNY **Shenyang** 17.77 4 ⇑P **P** **15 25 39.3 +0.2**
SNY S **Sn** **15 28 58.0 +1.9**
SNY pmax pmax
comp=Z,5μm,9.2s
SNY LR LR
comp=Z,75μm,11.6s
SNY LR LR
comp=Z,20μm,8.4s
SNY LR LR
comp=Z,106μm,12.0s
JHJ **Hachijo jima 2** 18.15 56 P **Pn** **15 25 43.0 -0.1**
comp=Z,5.5nm,0.3s,baz=74,slow=22,SNR=1.2
JHJ LR LR 15 32 59.3
comp=Z,6μm,18.7s,baz=274,slow=38
comp=Z,164nm,0.9s
JHJ2 **Mitsune** 18.18 56 P **P** **15 25 48.0 +4.4**
PZH **PanZhiHua** 18.31 282 P **P** **15 25 45.9 +0.5**
PZH sP **sP** **15 25 53.9 +2.6**
PZH S **Sn** **15 29 11.2 +1.5**
PZH SS **SnSn** **15 29 26.6 +3.1**
PZH pmax pmax
comp=Z,60nm,1.0s
PZH pmax pmax
comp=Z,6μm,11.2s
PZH LR LR
comp=Z,37μm,10.0s
PZH LR LR
comp=Z,94μm,12.7s
PZH LR LR
comp=Z,98μm,12.9s
NONG **Nongkai** 18.41 255 P **Pn** **15 25 49.2 +2.8**
JCJ **Chichijima** 18.62 76 P **Pn** **15 25 53.2 +4.3**
JCJ **Chichijima** 18.62 76 P **P** **15 25 47.6 -1.0**
comp=Z,5.5nm,0.3s,baz=320,slow=8.9,SNR=5.8
comp=Z,181nm,0.9s
KKM **Kota Kinabalu** 18.71 198 P **P** **15 25 49.7 -0.1**
KKM **Kota Kinabalu** 18.71 198 P **Pn** **15 25 53.3 +3.1**
MAJO **Matsushiro** 18.80 45 **P** **15 25 48.6 -2.0**
MAJO **Matsushiro** 18.80 45 P **Pn** **15 25 53.7 +2.6**
MAJO **Matsushiro** 18.80 45 *i*P **Pn** **15 25 53.4 +2.3**
MAJO pmax pmax
comp=Z,36nm,1.2s
MJB9 **Matsu-Tunnel** 18.80 45 P **P** **15 25 49.6 -1.0**
MJAR **Matsushiro Arr** 18.80 45 P **P** **15 25 50.2 -0.4**
comp=Z,0.1nm,0.3s,baz=232,slow=10.0,SNR=21
MJAR LR LR 15 34 10.2
comp=Z,16μm,18.8s,baz=228,slow=40
comp=Z,15nm,0.9s
HHC **Hu-ho-hao-te** 18.81 335 *e*P **Pn** **15 25 54.3 +3.1**
HHC PP **PnPn** **15 26 10.8 +7.3**
HHC S **S** **15 29 24.6 +0.2**
HHC sS sS 15 29 29.8 -0.3
HHC SS Sn 15 29 45.1 +24
HHC pmax pmax
comp=Z,140nm,1.8s
HHC pmax pmax
comp=Z,9μm,4.9s
HHC LR LR
comp=Z,66μm,12.2s
HHC LR LR
comp=Z,28μm,12.4s
HHC LR LR
comp=Z,67μm,12.2s
BTO **Baotou** 19.23 332 *e*P **Pn** **15 25 57.0 +0.6**
BTO pP **sP** **15 26 00.7 -0.1**
BTO sP **pwP** **15 26 03.1 +1.8**
BTO PP **PnPn** **15 26 14.9 +5.6**
BTO pmax pmax
comp=Z,77nm,0.9s
BTO pmax pmax
comp=Z,21μm,6.3s
BTO LR LR
comp=Z,227μm,11.7s
BTO LR LR
comp=Z,92μm,11.8s
BTO LR LR
comp=Z,333μm,11.0s
LZH **Lanzhou** 19.59 312 *e*P **Pn** **15 26 01.3 +0.6**
LZH sP sP 15 26 07.6 +2.2
LZH sS sS 15 29 47.4 +1.4
LZH pmax pmax
comp=Z,67nm,1.4s
LZH pmax pmax
comp=Z,9μm,5.5s
LZH LR LR
comp=Z,51μm,13.1s
LZH LR LR
comp=Z,129μm,13.1s
LZH LR LR
comp=Z,170μm,13.4s
CN2 **Changchun** 19.91 8 *e*P **Pn** **15 26 03.7 -0.5**
CN2 *e*S **S** **15 29 45.4 -0.8**
CN2 pmax pmax
comp=Z,60nm,1.4s
CN2 pmax pmax
comp=Z,2μm,8.0s
CN2 LR LR
comp=Z,68μm,12.0s
CN2 LR LR
comp=Z,22μm,12.0s
CN2 LR LR
comp=Z,52μm,16.1s
PSTR **Posyet** 19.97 20 *i*P **Pn** **15 26 04.3 -0.7**
MSHR **Mys Shultsa** 20.02 20*ce*P Pn 15 26 05.4 -0.1
MSHR pmax pmax
comp=Z,347nm,1.0s
MSHR MLR MLR
comp=Z,25μm,14.0s
CRAI **Chiangrai** 20.22 263 P **P** **15 26 05.5 -0.7**
XLT **XiLinHaoTe** 20.33 348 *e*P Pn 15 26 09.5 +0.1
XLT pP sP 15 26 12.8 0.0
XLT PP **PnPn** **15 26 24.1 -0.2**
XLT S Sn 15 29 56.6 -1.6
XLT SS **SnSn** **15 30 24.4 +11**
XLT pmax pmax
comp=Z,200nm,1.2s
XLT pmax pmax
comp=Z,3μm,7.2s
XLT LR LR
comp=Z,4μm,13.5s
XLT LR LR
comp=Z,30μm,12.7s
XLT LR LR
comp=Z,56μm,13.1s
TNCH **TengChong** 21.21 277 P **P** **15 26 15.2 -1.9**
TNCH pP pP 15 26 19.6 -1.4
TNCH sP sP 15 26 23.4 +0.6
TNCH PP 15 26 36.7
TNCH S S 15 30 01.8 -11
TNCH PcP **PcP** **15 30 21.9 -0.5**
TNCH pmax pmax
comp=Z,330nm,2.2s
TNCH pmax pmax
comp=Z,6μm,8.2s
TNCH LR LR
comp=Z,47μm,8.5s
TNCH LR LR
comp=Z,114μm,9.4s
TNCH LR LR
comp=Z,124μm,10.3s
JMM **Marumori** 21.25 45 P **P** **15 26 15.8 -1.3**
JMM IAMs_20 IAMs_20 15 35 26.8
comp=Z,17μm,19.0s
JMM **Marumori** 21.25 45 P **P** **15 26 20.2 +3.0**
MDJ **Mudanjiang** 21.46 15 P **P** **15 26 20.4 +1.1**
MDJ PP **PnPn** **15 26 39.3 -0.3**
MDJ S **S** **15 30 19.4 +2.5**
MDJ SS Sn 15 30 44.1 +19
MDJ pmax pmax
comp=Z,63nm,0.8s
MDJ pmax pmax
comp=Z,2μm,4.9s
MDJ LR LR
comp=Z,69μm,14.4s
MDJ LR LR
comp=Z,53μm,19.2s
MDJ LR LR
comp=Z,91μm,14.7s
MDJ **Mudanjiang** 21.46 15 IAMs_20 IAMs_20 15 35 35.7
comp=Z,21μm,19.0s

MDJ **Mudanjiang** 21.46 15 P **P** **15 26 20.1 +0.8**
NAYO **Nakonayok** 21.63 247 P **P** **15 26 24.1 +2.7**
USA0B **Ussuriysk Arra** 21.74 20 *i*P **P** **15 26 22.3 -0.1**
USRK **Ussuriysk Ar.** 21.74 20 P **P** **15 26 22.4 0.0**
USRK **Ussuriysk Ar.** 21.74 20 P **P** **15 26 22.8 +0.4**
comp=Z,66nm,1.0s,baz=199,slow=8.4,SNR=31
USRK LR LR 15 35 31.6
comp=Z,15μm,18.2s,baz=196,slow=39
comp=Z,66nm,1.0s
CHTO **Chiang Mai** 21.91 261 P **P** **15 26 24.5 0.0**
CHTO **Chiang Mai** 21.91 261 P **P** **15 26 26.3 +1.9**
CHTO **Chiang Mai** 21.91 261 P **P** **15 26 24.5 0.0**
CHTO pmax pmax
comp=Z,256nm,1.4s
CHTO MLR MLR
comp=Z,15μm,18.0s
CHTO **Chiang Mai** 21.91 261 P **P** **15 26 26.7 +2.2**
CM31 **Chiang Mai Arr** 22.02 260 P **P** **15 26 28.0 +2.4**
SNR=65
CM31 P **P** **15 26 28.0 +2.4**
SNR=65
CMAR **Chiang Mai Arr** 22.02 260 P **P** **15 26 26.0 +0.3**
CMAR **Chiang Mai Arr** 22.02 260 P **P** **15 26 27.0 +1.3**
comp=Z,23nm,0.8s,baz=61,slow=8.9,SNR=165
CMAR PcP **PcP** **15 30 25.1 +1.2**
comp=Z,5.0nm,0.9s,baz=84,slow=0.9,SNR=5.8
CMAR LR LR 15 35 30.7
comp=Z,9μm,19.5s,baz=75,slow=38
comp=Z,23nm,0.8s
BNX **BinXian** 22.09 10 ⇓P **P** **15 26 25.6 -0.5**
BNX pP **pP** **15 26 30.2 +0.6**
BNX sP **pwP** **15 26 33.4 +0.5**
BNX S **S** **15 30 23.5 -5.7**
BNX sS **pS** **15 30 32.1 -2.4**
BNX pmax pmax
comp=Z,28nm,1.5s
BNX pmax pmax
comp=Z,400nm,4.1s
BNX LR LR
comp=Z,48μm,11.8s
BNX LR LR
comp=Z,23μm,16.4s
BNX LR LR
comp=Z,53μm,12.1s
TOLI2 **Tolitoli** 22.84 183 P **P** **15 26 34.3 -0.1**
SBUM **Sibu** 23.41 205 P **P** **15 26 39.1 -1.0**
SRDT **SRDT** 23.48 250 P **P** **15 26 43.0 +2.1**
MND **Mandalay** 23.73 270 P **P** **15 26 45.2 +1.9**
GTA **Gaotai** 24.08 315 ⇑P **P** **15 26 46.3 -0.3**
GTA pP pwP 15 26 54.5 +1.8
GTA sP sP 15 26 59.8 +7.5
GTA S **S** **15 31 03.5 -0.2**
GTA sS sS 15 31 15.4 +3.8
GTA pmax pmax
comp=Z,59nm,1.4s
GTA pmax pmax
comp=Z,3μm,7.1s
GTA LR LR
comp=Z,31μm,12.0s
GTA LR LR
comp=Z,81μm,12.4s
GTA LR LR
comp=Z,85μm,12.7s
GUMO **Guam** 24.14 111 P **P** **15 26 47.8 +0.6**
GUMO **Guam** 24.14 111 P **P** **15 26 47.8 +0.6**
GUMO pmax pmax
comp=Z,750nm,1.2s
GUMO **Guam** 24.14 111 LR LR 15 37 12.7
comp=Z,3μm,18.1s,baz=298,slow=39
MOKO **MOKOCHONG** 24.79 281 *e*P **P** **15 26 53.5 +0.3**
KSM **Kuching** 25.07 208 P **P** **15 26 55.9 +0.3**
KSM IAmb IAmb 15 26 57.9
comp=Z,270nm,1.2s
KSM **Kuching** 25.07 208 P **P** **15 26 57.3 +1.7**
KOHI **KOHIMA** 25.17 280 *e*P **P** **15 26 56.0 -0.7**
KOHI IAmb IAmb 15 27 28.3
comp=Z,85nm,1.0s
ERM **Erimo** 25.19 40 *i*P **P** **15 26 55.3 -1.2**
ERM pmax pmax
comp=Z,10.0nm,0.6s
ERM MLR MLR
comp=Z,12μm,15.0s
HIA **Hailar** 25.20 357 P **P** **15 26 55.7 -0.9**
HIA IAmb IAmb 15 27 08.9
comp=Z,117nm,1.0s
HIA **Hailar** 25.20 357 IAMs_20 IAMs_20 15 38 08.5
comp=Z,20μm,20.0s
HIA **Hailar** 25.20 357 P **P** **15 26 57.7 +1.1**
HIA **Hailar** 25.20 357 P **P** **15 26 55.7 -0.9**
HIA pmax pmax
comp=Z,117nm,1.0s
HIA MLR MLR
comp=Z,20μm,20.0s
IMP **Imphal** 25.37 278 *e*P **P** **15 26 58.3 -0.1**
IMP IAmb IAmb 15 27 08.4
comp=Z,33nm,0.7s
BKB **Balikpapan** 25.63 191 P **P** **15 27 04.0 +3.4**
BKB **Balikpapan** 25.63 191 P **P** **15 27 03.0 +2.4**
comp=Z,140nm,1.3s,comp=Z,6μmcomp=Z,5μm
MTKI **Muara Teweh, K** 25.75 196 P **P** **15 27 03.9 +2.1**
comp=Z,126nm,1.1s,comp=Z,7μmcomp=Z,3μm
SURA **Surathani** 25.85 239 P **P** **15 27 05.4 +2.6**
STKI **Sintang** 25.88 204 P **P** **15 27 05.8 +2.8**
comp=Z,124nm,1.6s,comp=Z,6μm
GOMU **GeErMu** 26.20 304 P **P** **15 27 07.5 +1.3**
GOMU pmax pmax
comp=Z,83nm,0.9s
GOMU LR LR
comp=Z,22μm,9.4s
GOMU LR LR
comp=Z,21μm,9.6s
GOMU LR LR
comp=Z,33μm,10.5s
SRIT **Nakonsritamara** 26.23 238 P **P** **15 27 08.5 +2.4**
ASAJ **Asahikawa** 26.25 35 P **P** **15 27 04.4 -1.7**
ASAJ pmax pmax
comp=Z,100nm,1.4s
ASAJ MLR MLR
comp=Z,23μm,18.0s
ASAJ **Asahikawa** 26.25 35 LR LR 15 38 03.9
comp=Z,9μm,19.0s,baz=240,slow=38
JKA **Kamikawa-asahi** 26.25 35 P **P** **15 27 04.3 -1.8**
KLR **Kul'dur** 26.30 15*ce*P **P** **15 27 06.0 -0.5**
KLR pmax pmax
comp=Z,117nm,1.3s
KLR MLR MLR
comp=Z,33μm,14.0s
KLR **Kul'dur** 26.30 15 LR LR 15 38 45.2
comp=Z,20μm,18.0s,baz=199,slow=39
ULN **Ulaanbaatar** 26.49 337 P **P** **15 27 08.1 -0.4**
ULN IAmb IAmb 15 27 10.4
comp=Z,181nm,1.0s
ULN **Ulaanbaatar** 26.49 337*ce*P **P** **15 27 08.8 +0.4**
ULN pmax pmax
comp=Z,262nm,1.3s
ULN MLR MLR
comp=Z,38μm,17.0s
ULN **Ulaanbaatar** 26.49 337 P **P** **15 27 09.4 +1.0**
ULN P **P** **15 27 09.4 +1.0**
HEH **HeiHe** 26.50 8 *e*P **P** **15 27 08.0 -0.3**
HEH S **S** **15 31 37.2 -4.6**
HEH pmax pmax
comp=Z,72nm,1.1s
HEH pmax pmax
comp=Z,2μm,4.8s
HEH LR LR
comp=Z,41μm,13.3s
HEH LR LR
comp=Z,22μm,13.2s
HEH LR LR
comp=Z,65μm,11.9s
SAIH **SAIHA** 26.51 272 *e*P **P** **15 27 08.9 0.0**
SAIH IAmb IAmb 15 27 19.8
comp=Z,120nm,1.0s
SONM **Songino Array** 26.70 337 P **P** **15 27 09.8 -0.5**
SONM IAmb IAmb 15 27 12.2
comp=Z,138nm,1.1s
SONM **Songino Array** 26.70 337 P **P** **15 27 09.8 -0.5**
SONM pmax pmax
comp=Z,138nm,1.1s
SONM **Songino Array** 26.70 337 P **P** **15 27 10.6 +0.3**
comp=Z,115nm,1.1s,baz=155,slow=8.4,SNR=264
SONM LR LR 15 38 55.4
comp=Z,38μm,18.4s,baz=155,slow=39
comp=Z,115nm,1.1s
SHL **Shillong** 27.18 279 *e*P **P** **15 27 15.9 +0.9**

SHL IAmb IAmb 15 27 28.1
comp=Z,700nm,1.8s
GUWA GUWAHATI 27.33 281 *e*P **P** **15 27 16.9 +0.9**
GUWA IAmb IAmb 15 27 20.6
comp=Z,110nm,0.9s
KULM Kulim 27.63 231 P **P** **15 27 19.7 +0.9**
BRDH Bariadhala 27.71 273 LR LR 15 40 41.7
comp=Z,11μm,19.4s,baz=95,slow=42
LSA Lhasa 27.87 288 P **P** **15 27 21.9 +0.5**
LSA Lhasa 27.87 288 P **P** **15 27 23.0 +1.6**
LSA P **P** **15 27 23.0 +1.6**
IPM Ipoh 27.94 229 IAmb IAmb 15 27 24.1
comp=Z,189nm,1.5s
IPM Ipoh 27.94 229 P **P** **15 27 22.4 +0.8**
YUK Yuzh-Kuril'sk 28.00 39 *e*P **P** **15 27 20.0 -1.8**
YUK *e* 15 28 07.2
YUK *e*PPP PPP 15 28 16.7
YUK *e*S **S** **15 32 05.2 -0.3**
YUK *e*SS **SnSn** **15 33 21.0 +0.9**
YUK pmax pmax
comp=Z,375nm,1.5s
YUK pmax pmax
comp=N,455nm,1.4s
YUK pmax pmax
comp=E,457nm,1.4s
YUK pmax pmax
comp=Z,642nm,1.5s
YUK MLR MLR
comp=Z,11μm,16.0s
YUK MLR MLR
comp=N,7μm,17.0s
YUK MLR MLR
comp=E,9μm,16.0s
YSS Yuzh-Sakhalins 28.32 31 P **P** **15 27 25.3 +0.6**
YSS IAmb IAmb 15 27 59.6
comp=Z,133nm,1.2s
YSS Yuzh-Sakhalins 28.32 31 P **P** **15 27 26.9 +2.2**
YSS Yuzh-Sakhalins 28.32 31 *e*P **P** **15 27 25.2 +0.6**
YSS *e*S **S** **15 32 09.0 -1.6**
YSS *e*SS SnSn 15 33 46.8 +19
YSS pmax pmax
comp=Z,80nm,1.1s
YSS pmax pmax
comp=Z,400nm,3.5s
YSS MLR MLR
comp=Z,11μm,14.0s
CIT Chita 28.62 349 *e*P **P** **15 27 27.4 +0.1**
CIT *e* 15 28 12.2
CIT *e* 15 30 42.2
CIT *e* 15 33 33.6
CIT pmax pmax
comp=Z,225nm,1.9s
FAKI Fak Fak 28.68 158 P **P** **15 27 27.1 -1.0**
GRNR Gornyy 28.96 19 ⇑*i*P **P** **15 27 28.6 -1.7**
GRNR pmax pmax
comp=N,2.0nm,1.0s
GRNR pmax pmax
comp=Z,2.0nm,0.9s
GRNR MLR MLR
comp=E,9μm,12.0s
GRNR MLR MLR
comp=N,11μm,11.0s
GRNR MLR MLR
comp=Z,13μm,12.0s
DGPR DIGLIPUR 29.38 254 *e*P **P** **15 27 36.3 +1.9**
UGL Uglegorsk 29.61 27 *e*P P 15 27 44.0 +8.0
UGL *e* 15 28 48.1
UGL pmax pmax
comp=Z,70nm,1.3s
UGL MLR MLR
comp=N,7μm,13.0s
UGL MLR MLR
comp=E,15μm,13.0s
UGL MLR MLR
comp=Z,15μm,13.0s
ZEA Zeya 29.91 6 *e*P **P** **15 27 38.6 -0.1**
ZEA *e*S **S** **15 32 30.5 -4.9**
ZEA pmax pmax
comp=E,20nm,1.6s
ZEA pmax pmax
comp=N,50nm,1.2s
ZEA pmax pmax
comp=Z,110nm,1.1s
ZEA pmax pmax
comp=N,400nm,4.3s
ZEA pmax pmax
comp=Z,500nm,3.4s
ZEA smax smax
comp=E,800nm,9.1s
ZEA smax smax
comp=N,3μm,15.7s
ZEA MLR MLR
comp=N,27μm,12.0s
ZEA MLR MLR
comp=Z,25μm,12.0s
ZAK Zakamensk 29.96 336 *e*P **P** **15 27 38.5 -0.8**
ZAK pmax pmax
comp=Z,28nm,1.6s
GTK Tadong 30.05 283 *e*P **P** **15 27 42.2 +1.8**
GTK IAmb IAmb 15 27 49.9
comp=Z,208nm,1.0s
LHMI Lhok Sumawe 30.39 236 P **P** **15 27 46.3 +3.0**
PSI Prapat 30.60 230 P **P** **15 27 47.1 +1.8**
RPSI Rantau Prapat 30.67 230 IAmb IAmb 15 27 48.3
comp=Z,76nm,1.0s
KCSI Kotacane, Aceh 30.91 232 P **P** **15 27 48.2 +0.2**
comp=Z,34nn,1.2s,comp=Z,880nm
BKNI Bangkinang 31.03 223 P **P** **15 27 51.0 +2.1**
BKNI Bangkinang 31.03 223 P **P** **15 27 51.5 +2.6**
comp=Z,93nm,1.0s,comp=Z,1μm
IRK Irkutsk 31.16 339 *e*P **P** **15 27 48.9 -0.9**
IRK *e*S **S** **15 32 54.1 -1.0**
IRK pmax pmax
comp=Z,258nm,2.0s
TYV Tymovskoe 31.23 26 *e*P P 15 27 55.7 +5.3
TYV pmax pmax
comp=Z,22nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.0s
TYV MLR MLR
comp=Z,14μm,13.0s
TYV MLR MLR
comp=E,13μm,12.0s
MLSI Meulaboh, Aceh 31.42 235 P **P** **15 27 53.6 +1.2**
comp=E,83nm,1.0s
MOY Mondy 31.85 335 *e*P **P** **15 27 55.5 -0.5**
MOY pmax pmax
comp=Z,157nm,2.1s
PDSI Padang 32.35 223 P **P** **15 28 02.8 +2.2**
comp=Z,38nm,1.0s
NKL Nikolayevsk 32.36 21 *e*P **P** **15 27 57.9 -2.3**
NKL *e*S **S** **15 33 12.1 -1.5**
NKL pmax pmax
comp=N,50nm,0.7s
NKL pmax pmax
comp=E,60nm,0.9s
NKL pmax pmax
comp=Z,125nm,0.9s
NKL smax smax
comp=E,521nm,5.8s
NKL smax smax
comp=N,275nm,3.6s
NKL MLR MLR
comp=N,7μm,13.0s
NKL MLR MLR
comp=E,5μm,13.0s
NKL MLR MLR
comp=Z,9μm,13.0s
GSI Gunungsitoli 32.60 230 P **P** **15 28 03.9 +1.1**
GSI Gunungsitoli 32.60 230 P **P** **15 28 02.6 -0.2**
comp=Z,47nm,1.3s
KRJI Kerinci 32.68 220 P **P** **15 28 04.6 +1.1**
comp=Z,376nm,0.5s,comp=Z,7μm
SNSI Sinabang, Aceh 32.72 233 P **P** **15 28 04.5 +0.7**
comp=Z,182nm,1.0s
BOK Bokaro 32.79 277 *e*P **P** **15 28 05.6 +1.2**
BOK IAmb IAmb 15 28 15.6
comp=Z,149nm,1.3s
SISI Saibi 33.53 224 P **P** **15 28 11.8 +0.9**
comp=Z,101nm,1.1s,comp=Z,2μm
KPJI Karang Pucung 33.65 204 P **P** **15 28 11.3 -0.6**
comp=Z,75nm,1.6s,comp=Z,2μm
LEM Lembang 33.69 206 P **P** **15 28 14.7 +2.3**
comp=Z,112nm,1.1s,comp=Z,2μm
LWLI Liwa 33.70 213 P **P** **15 28 13.7 +1.3**
comp=Z,134nm,0.8s,comp=Z,3μm
SOEI Soe 33.70 176 P **P** **15 28 13.5 +1.0**
SOEI IAmb IAmb 15 28 50.7
comp=Z,110nm,1.0s
DBJI Dramaga 33.80 208 P **P** **15 28 15.4 +2.2**
comp=Z,147nm,1.8s,comp=Z,5μm
KASI Kota Agung 33.92 212 P **P** **15 28 16.8 +2.6**
comp=Z,75nm,1.1s,comp=Z,1μm
WMQ Urumqi 34.15 314 *e*P **P** **15 28 17.6 +1.4**
WMQ pP sP 15 28 21.8 -0.1
WMQ PP **PP** **15 29 31.9 -1.6**
WMQ S **S** **15 33 43.7 +1.7**
WMQ SS **SnSn** **15 35 49.0 -1.0**
WMQ ScS **ScS** **15 38 36.3 -3.5**
WMQ pmax pmax
comp=Z,31nm,1.7s
WMQ pmax pmax
comp=Z,1μm,7.3s
WMQ LR LR
comp=Z,31μm,11.1s
WMQ LR LR
comp=Z,56μm,12.9s
WMQ LR LR
comp=Z,17μm,12.9s
BOD Bodaibo 34.19 353 *e*P **P** **15 28 14.6 -1.5**
BOD pmax pmax
comp=Z,47nm,1.7s
BBJI Bungbulang 34.26 206 P **P** **15 28 20.4 +3.2**
VIS Vishakhapatnam 36.42 267 *e*P **P** **15 28 37.2 +1.3**
VIS IAmb IAmb 15 28 47.3
comp=Z,149nm,1.4s
DGZ Jazzator, Alta 37.04 322 *i*P **P** **15 28 40.1 -0.9**
DGZ pmax pmax
comp=Z,33nm,1.1s
DGZ MLR MLR
comp=Z,20μm,16.0s
ZSN Zaisan 37.47 318 *e*P **P** **15 28 44.9 +0.4**
baz=318
ZSN *e*S **S** **15 34 34.8 +2.1**
baz=318
ZSN Zaisan 37.47 318 *e*P **P** **15 28 44.8 +0.3**
ZSN *e*S **S** **15 34 34.8 +2.1**
MTN Manton Dam 37.80 165 P **P** **15 28 45.0 -2.5**
YAK Yakutsk 38.32 6 P **P** **15 28 50.2 -1.2**
YAK IAmb IAmb 15 28 55.2
comp=Z,133nm,1.2s
YAK Yakutsk 38.32 6 IAMs_20 IAMs_20 15 45 44.6
comp=Z,11μm,19.0s
YAK Yakutsk 38.32 6*c i*P **P** **15 28 49.5 -1.9**
YAK *e**PP **pP** **15 28 52.6 -3.1**
YAK *e* 15 30 17.3
YAK *e* 15 31 04.8
YAK *e*S **S** **15 34 43.5 -1.5**
YAK *e* 15 38 57.5
YAK pmax pmax
comp=Z,82nm,1.1s
YAK pmax pmax
comp=N,29nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK pmax pmax
comp=Z,38nm,1.4s
YAK smax smax
comp=E,148nm,2.6s
YAK smax smax
comp=N,97nm,1.3s
YAK MLR MLR
comp=Z,37μm,13.0s
YAK MLR MLR
comp=E,14μm,13.0s
YAK MLR MLR
comp=N,25μm,11.0s
YAK Yakutsk 38.32 6 LR LR 15 46 21.0
comp=N,18μm,18.1s,baz=186,slow=39
MK31 Makanchi Array 38.82 316 P **P** **15 28 55.7 -0.2**
MK31 Makanchi Array 38.82 316 *i*P **P** **15 28 55.8 -0.1**
MK31 pmax pmax
comp=Z,77nm,1.1s
MKAR Makanchi Array 38.82 316 P **P** **15 28 55.9 -0.1**
comp=Z,42nn,0.8s,baz=109,slow=9.3,SNR=157
MKAR PcP **PcP** **15 31 07.6 +0.6**
comp=Z,11nm,1.0s,baz=93,slow=3.1,SNR=2.8
MKAR LR LR 15 43 56.7
comp=Z,4μm,20.8s,baz=101,slow=35
comp=Z,42nm,0.8s
MAKZ Makanchi 39.03 316 P **P** **15 28 57.6 0.0**
MAKZ Makanchi 39.03 316 P **P** **15 28 57.6 0.0**
MAKZ pmax pmax
comp=Z,123nm,1.2s
MAKZ MLR MLR
comp=Z,5μm,20.0s
DDI Dehra Dun 39.23 289 *e*P **P** **15 29 00.5 +0.9**
DDI IAmb IAmb 15 29 16.1
comp=Z,379nm,1.2s
SHLS Shalkode 39.58 309 ⇑*e*P **P** **15 29 00.4 -2.1**
comp=Z,200nm,2.8s,baz=309
SHLS Shalkode 39.58 309*ce*P **P** **15 29 00.3 -2.1**
SHLS pmax pmax
comp=Z,200nm,2.8s
PDGK Podgornoye 39.61 310 P **P** **15 29 02.1 -0.6**
PETK Petropavlovsk- 39.64 34 P **P** **15 29 00.9 -1.7**
PETK PcP **PcP** **15 31 08.4 -1.0**
PETK Petropavlovsk- 39.64 34 P **P** **15 29 03.3 +0.6**
comp=Z,4.5nm,0.9s,baz=185,slow=3.0,SNR=9.6
PETK PcP **PcP** **15 31 09.3 -0.1**
comp=Z,12nm,0.9s,baz=199,slow=4.0,SNR=8.3
PETK LR LR 15 46 41.1
comp=Z,13μm,18.2s,baz=226,slow=38
comp=Z,4.5nm,0.9s
UZB Uzynbulak 39.89 309 *e*P **P** **15 29 05.9 +0.8**
comp=Z,173nm,2.6s,baz=309
UZB *e*S **S** **15 35 11.3 +1.8**
baz=309
UZB Uzynbulak 39.89 309 *e*P **P** **15 29 05.8 +0.7**
UZB *e*S **S** **15 35 11.3 +1.8**
UZB pmax pmax
comp=Z,173nm,2.6s
SMLA Simla 39.98 290 *e*P **P** **15 29 06.1 +0.3**
SMLA IAmb IAmb 15 29 11.7
comp=Z,196nm,1.1s
KNRA Kununurra 40.08 170 P **P** **15 29 04.8 -1.8**
PET Petropavlovsk 40.08 34 P **P** **15 29 05.3 -1.0**
PET IAMs_20 IAMs_20 15 46 27.1
comp=Z,9μm,19.0s
PET Petropavlovsk 40.08 34 *e*P **P** **15 29 06.7 +0.4**
PET *e* 15 31 11.0
PET *e*S **S** **15 35 12.1 +0.3**
PET *e* 15 39 06.3
PET pmax pmax
comp=Z,34nn,1.1s
PET MLR MLR
comp=Z,9μm,15.0s
PET MLR MLR
comp=Z,10μm,14.0s
PRZ Przheval'sk 40.18 308 IAMs_20 IAMs_20 15 48 35.3
comp=Z,10μm,18.0s
KPKS Kokpek 40.21 310 ⇑*i*P **P** **15 29 08.5 +0.9**
baz=310
KPKS *e*S **S** **15 35 16.6 +2.3**
baz=310
KPKS Kokpek 40.21 310*c i*P **P** **15 29 08.5 +0.9**
KPKS *e*S **S** **15 35 16.5 +2.3**
SATY Saty 40.31 309 ⇑*e*P **P** **15 29 09.2 +0.7**
comp=Z,168nm,2.8s,baz=309
SATY Saty 40.31 309*ce*P **P** **15 29 09.2 +0.7**
SATY pmax pmax
comp=Z,168nm,2.8s
ZHN Zhinishke 40.31 309 *e*P **P** **15 29 09.1 +0.5**
baz=309
ZHN Zhinishke 40.31 309 *e*P **P** **15 29 09.0 +0.5**
ZAA0 Zalesovo Array 40.66 327 P **P** **15 29 10.0 -1.0**
ZAA0 IAmb IAmb 15 29 12.3
comp=Z,122nm,0.9s
ZALV Zalesovo Beam 40.66 327 *i*P **P** **15 29 10.3 -0.7**
ZALV pmax pmax
comp=Z,157nm,1.0s
ZALV Zalesovo Beam 40.66 327 P **P** **15 29 10.5 -0.5**
comp=Z,156nm,1.0s,baz=116,slow=7.3,SNR=249
ZALV PcP **PcP** **15 31 12.6 0.0**
comp=Z,3.3nm,0.6s,baz=102,slow=3.6,SNR=1.4
ZALV LR LR 15 47 01.6
comp=Z,12μm,18.9s,baz=126,slow=38
comp=Z,156nm,1.0s
DHRM DHARAMSHALA 40.70 292 *e*P **P** **15 29 12.4 +0.4**
DHRM IAmb IAmb 15 29 25.0
comp=Z,322nm,1.6s
MDRS Chennai 40.76 262 *e*P **P** **15 29 15.1 +2.8**
MDRS IAmb IAmb 15 29 19.6
comp=Z,215nm,1.6s
RABL Rabaul 40.77 130 P **P** **15 29 12.7 +0.2**
RABL IAmb IAmb 15 29 22.5
comp=Z,231nm,1.3s
TDK Taldyqorghan 40.81 312 *e*P **P** **15 29 13.4 +0.9**
baz=312
TDK *e*S **S** **15 35 24.7 +1.7**
baz=312
TDK LR LR 15 46 22.4
comp=Z,9μm,11.7s,baz=312
TDK Taldyqorghan 40.81 312 *e*P **P** **15 29 13.4 +0.9**
TDK *e*S **S** **15 35 24.6 +1.7**
TDK MLR MLR
comp=Z,9μm,12.0s
HYB Hyderabad 40.87 269 *e*P **P** **15 29 12.7 -0.7**
HYB *e*PP **PnPn** **15 30 56.7 +4.8**
HYB *e*PcP **PcP** **15 31 14.1 0.0**
HYB *e*S **S** **15 35 23.7 -0.8**
HYB IVMs_BB IVMs_BB 15 50 08.6
comp=Z,4μm,10.6s
MA2 Magadan 40.87 22 P **P** **15 29 14.7 +2.0**
MA2 Magadan 40.87 22 *i*P **P** **15 29 14.9 +2.2**
MA2 pmax pmax
comp=Z,22nm,1.0s
MA2 MLR MLR
comp=Z,10μm,17.0s
MA2 Magadan 40.87 22 LR LR 15 47 47.8
comp=Z,11μm,18.0s,baz=222,slow=39
ARXS Arharly 41.00 310 *e*P **P** **15 29 14.2 +0.1**
MDOK Medeo 41.30 309 *e*P **P** **15 29 17.4 +0.7**
baz=309
MDOK *e*S **S** **15 35 32.3 +1.8**
baz=309
MDOK LR LR 15 46 37.5
comp=Z,14μm,12.0s,baz=309
MDOK Medeo 41.30 309 *e*P **P** **15 29 17.3 +0.6**
MDOK *e*S **S** **15 35 32.3 +1.8**
MDOK MLR MLR
comp=Z,14μm,12.0s
KSH Kashi 41.45 303 P **P** **15 29 21.0 +3.1**
KSH PP **PnPn** **15 31 03.3 +5.0**
KSH S **S** **15 35 39.9 +7.1**
KSH pmax pmax
comp=Z,62nm,1.0s
KSH pmax pmax
comp=Z,2μm,9.5s
KSH LR LR
comp=Z,27μm,13.4s
KSH LR LR
comp=Z,22μm,13.4s
KSH LR LR
comp=Z,30μm,15.8s
PMG Port Moresby 41.47 140 P **P** **15 29 17.9 -0.2**
PMG IAmb IAmb 15 29 34.8
comp=Z,131nm,1.1s
PMG Port Moresby 41.47 140 P **P** **15 29 17.9 -0.2**
PMG pmax pmax
comp=Z,131nm,1.2s
PMG Port Moresby 41.47 140 LR LR 15 46 29.7
comp=Z,3μm,18.3s,baz=303,slow=36
CHKK Chushkaly 41.50 310 *e*P **P** **15 29 18.5 +0.3**
baz=310
CHKK Chushkaly 41.50 310 *e*P **P** **15 29 18.5 +0.3**
NRN Naryn 41.72 306 IAMs_20 IAMs_20 15 47 46.7
comp=Z,10μm,20.0s
KUU Kurty 41.96 310 *e*P **P** **15 29 22.8 +0.8**
comp=Z,295nm,1.9s,baz=310
KUU *e*S **S** **15 35 42.0 +1.8**
baz=310
KUU LR LR 15 46 49.0
comp=Z,7μm,10.3s,baz=310
KUU Kurty 41.96 310 *e*P **P** **15 29 22.8 +0.8**
KUU *e*S **S** **15 35 41.9 +1.8**
KUU pmax pmax
comp=Z,295nm,1.9s
KUU MLR MLR
comp=Z,7μm,10.0s
H11S3 WAKE ISLAND Hy 42.05 89 T T 16 14 37.7
baz=284,slow=74,SNR=263
H11S1 WAKE ISLAND Hy 42.05 89 T T 16 14 36.5
baz=284,slow=74,SNR=122
H11S2 WAKE ISLAND Hy 42.06 89 T T 16 14 39.5
baz=284,slow=74,SNR=118
TKM2 Tokmak 2 42.29 308 P **P** **15 29 26.6 +1.7**
SNR=18
TKM2 Tokmak 2 42.29 308 *i*P **P** **15 29 25.4 +0.5**
TKM2 pmax pmax
comp=Z,50nm,0.9s
KURK Kurchatov 42.55 320 P **P** **15 29 25.6 -1.0**
KURK IAmb IAmb 15 29 40.5
comp=Z,154nm,1.4s
KURK Kurchatov 42.55 320 IAMs_20 IAMs_20 15 49 18.9
comp=Z,6μm,18.0s
KURK Kurchatov 42.55 320 P **P** **15 29 26.4 -0.2**
KURK Kurchatov 42.55 320 P **P** **15 29 26.9 +0.3**
KURBB Kurchatov Arra 42.57 320 P **P** **15 29 26.4 -0.4**
comp=Z,41nm,1.0s,baz=110,slow=7.5,SNR=122
KURBB LR LR 15 48 25.7
comp=Z,5μm,18.9s,baz=123,slow=38
comp=Z,41nm,1.0s
KBK Karagaybulak 42.71 307 P **P** **15 29 30.1 +1.8**
SNR=22
PALK Pallekele 42.76 254 P **P** **15 29 29.7 +0.9**
PALK Pallekele 42.76 254 P **P** **15 29 29.7 +0.9**
PALK pmax pmax
comp=Z,32nm,1.2s
PALK MLR MLR
comp=Z,3μm,20.0s
PALK Pallekele 42.76 254 LR LR 15 48 16.1
comp=Z,3μm,19.7s,baz=162,slow=38
PALK Pallekele 42.76 254 P **P** **15 29 30.7 +1.9**
CHMS Chumysh 42.91 308 P **P** **15 29 31.1 +1.4**
SNR=20
UCH Uchtor 42.95 307 P **P** **15 29 32.9 +2.3**
SNR=46
FRU1 Bishkek 42.97 308 P **P** **15 29 30.7 +0.5**
FRU1 Bishkek 42.97 308 P **P** **15 29 30.7 +0.5**
FRU1 pmax pmax
comp=Z,136nm,1.6s
FRU1 MLR MLR
comp=Z,12μm,18.0s
AAK Ala-Archa 43.03 307 P **P** **15 29 32.1 +1.2**
SNR=15
AAK Ala-Archa 43.03 307 P **P** **15 29 30.6 -0.3**
AAK Ala-Archa 43.03 307 IAMs_20 IAMs_20 15 50 03.9
comp=Z,8μm,18.0s
AAK Ala-Archa 43.03 307 *i*P **P** **15 29 31.6 +0.7**
SNR=17
AAK Ala-Archa 43.03 307*ce*P **P** **15 29 32.6 +1.7**
AAK pmax pmax
comp=Z,66nm,2.5s
AAK MLR MLR
comp=Z,15μm,14.0s
AAK Ala-Archa 43.03 307 LR LR 15 50 16.5
comp=Z,8μm,18.6s,baz=83,slow=40
AAK Ala-Archa 43.03 307 P **P** **15 29 31.7 +0.9**
AAK P **P** **15 29 31.7 +0.9**
SGDS Sogindy 43.09 309 *e*P **P** **15 29 31.3 +0.1**
baz=308
SGDS *e*S **S** **15 35 58.4 +1.6**
baz=308
SGDS Sogindy 43.09 309 *e*P **P** **15 29 31.2 +0.1**
SGDS *e*S **S** **15 35 58.3 +1.6**
USP Ospenovka 43.14 308 P **P** **15 29 32.9 +1.3**
SNR=10
COEN Coen 43.17 149 P **P** **15 29 32.4 +0.3**
COEN IAmb IAmb 15 29 38.8
comp=Z,218nm,1.1s
NIL Nilore 43.26 294 P **P** **15 29 32.7 0.0**
NIL Nilore 43.26 294 P **P** **15 29 32.7 0.0**
NIL pmax pmax
comp=Z,68nm,1.0s
NIL MLR MLR
comp=Z,14μm,20.0s
NIL Nilore 43.26 294 P **P** **15 29 33.5 +0.8**
COCO West Island 43.53 217 P **P** **15 29 35.2 +0.4**
COCO West Island 43.53 217 P **P** **15 29 35.3 +0.4**
COCO pmax pmax
comp=Z,434nm,1.7s
EKS2 Erkin-Say 43.56 307 P **P** **15 29 36.6 +1.5**
SNR=12
BTLS Baital 43.81 311 *e*P **P** **15 29 36.8 -0.1**
baz=311
BTLS Baital 43.81 311 *e*P **P** **15 29 36.8 -0.1**
SEY Seymchan 43.89 20*ce*P **P** **15 29 38.2 +1.0**

SEY pmax pmax
comp=Z,18nm,1.1s
SEY MLR MLR
comp=Z,10µm,17.0s
SEY Seymchan 43.89 20 PcP **PcP 15 31 22.9 -0.3**
comp=Z,23nm,0.8s,baz=209,slow=4.6,SNR=11
SEY LR LR 15 49 46.9
comp=Z,7µm,19.2s,baz=216,slow=39
POO Poona 44.86 273 *e*P **P 15 29 47.0 +1.2**
POO IAmb IAmb 15 29 51.2
comp=Z,132nm,1.3s
DZA Taraz 45.38 307 *e*P **P 15 29 50.5 +0.9**
baz=307
DZA Taraz 45.38 307 *e*P **P 15 29 50.4 +0.9**
PSA00 Pilbara Seismi 45.41 183 IAmb IAmb 15 30 09.8
comp=Z,100nm,1.2s
PSA00 Pilbara Seismi 45.41 183 IAmb IAmb 15 30 09.8
comp=Z,69nm,1.3s
WRAB Tennant Creek 45.41 163 P **P 15 29 48.8 -1.0**
WRAB Tennant Creek 45.41 163 P **P 15 29 48.8 -1.0**
WRAB pmax pmax
comp=Z,64nm,1.1s
WRAB MLR MLR
comp=Z,2µm,19.0s
WRA Warramunga Arr 45.41 163 *i* P **P 15 29 49.2 -0.7**
WRA pmax pmax
comp=Z,15nm,0.8s
WRA Warramunga Arr 45.41 163 P **P 15 29 48.8 -1.1**
comp=Z,29nm,1.1s,baz=345,slow=8.8,SNR=38
comp=Z,29nm,1.1s
WB2 Warramunga Arr 45.42 163 IAmb IAmb 15 30 01.3
comp=Z,68nm,1.1s
OTUK Ortayu 45.68 315 P **P 15 29 51.3 -0.5**
GOA Goa 45.78 268 *e*P **P 15 29 54.8 +1.9**
BRZS Berezniki 45.91 317 *e*P **P 15 29 53.4 -0.2**
baz=317
BRZS *e*S **S 15 36 39.5 +1.9**
baz=317
BRZS Berezniki 45.91 317 *e*P **P 15 29 53.4 -0.2**
BRZS *e*S **S 15 36 39.4 +1.9**
KK31 Karatay Array 46.00 307 P **P 15 29 54.7 +0.3**
KK31 Karatay Array 46.00 307 *i* P **P 15 29 55.1 +0.7**
IUG luzhnay 46.24 306 *e*P **P 15 29 56.9 +0.5**
comp=Z,62nm,1.0s,baz=306
IUG luzhnay 46.24 306 *e*P **P 15 29 56.9 +0.5**
IUG pmax pmax
comp=Z,62nm,1.0s
KBL Kabul 46.73 295 P **P 15 30 01.0 +0.5**
KBL IAmb IAmb 15 30 15.2
comp=Z,130nm,1.1s
KBL IAMs_20 IAMs_20 15 51 01.0
comp=Z,9µm,21.0s
KBL Kabul 46.73 295 P **P 15 30 01.0 +0.5**
KBL pmax pmax
comp=Z,130nm,1.1s
KBL MLR MLR
comp=Z,10µm,21.0s
KBL Kabul 46.73 295 P **P 15 30 02.0 +1.5**
SNR=93
KBL P **P 15 30 02.0 +1.5**
SNR=93
TIXI Tiksi 47.78 3 P **P 15 30 05.8 -2.0**
TIXI Tiksi 47.78 3*ce*P **P 15 30 06.1 -1.7**
TIXI pmax pmax
comp=Z,354nm,1.7s
TIXI Tiksi 47.78 3 LR LR 15 52 07.3
comp=Z,10µm,19.4s,baz=198,slow=38
BVA0 Borovoye Array 48.13 321 *i* P **P 15 30 10.7 -0.1**
BVAR Borovoye Array 48.13 321 P **P 15 30 10.7 -0.1**
comp=Z,32nm,0.9s,baz=113,slow=10,SNR=98
BVAR PcP **PcP 15 31 38.5 +0.3**
comp=Z,9.2nm,0.7s,baz=97,slow=4.5,SNR=2.7
BVAR LR LR 15 53 43.9
comp=Z,3µm,19.7s,baz=98,slow=40
comp=Z,32nm,0.9s
BRVK Borovoye 48.20 321 P **P 15 30 11.1 -0.3**
BRVK IAmb IAmb 15 30 13.0
comp=Z,89nm,0.9s
BRVK Borovoye 48.20 321 IAMs_20 IAMs_20 15 53 29.3
comp=Z,7µm,20.0s
BRVK Borovoye 48.20 321*ce*P **P 15 30 11.5 +0.1**
BRVK pmax pmax
comp=Z,86nm,0.8s
BRVK MLR MLR
comp=Z,10µm,14.0s
BRVK Borovoye 48.20 321 P **P 15 30 11.7 +0.4**
BRVK P **P 15 30 11.7 +0.4**
SHEM Shemya Is, Ala 48.55 40 LR LR 15 49 36.5
comp=Z,2µm,21.5s,baz=259,slow=35
ASAR Alice Springs 48.88 165 P **P 15 30 17.1 +0.2**
comp=Z,14nm,0.9s,baz=343,slow=6.5,SNR=26
ASAR ScP **ScP 15 35 32.6 -3.3**
comp=Z,2.9nm,1.1s,baz=15,slow=3.8,SNR=5.3
ASAR LR LR 15 49 44.1
comp=Z,755nm,21.9s,baz=350,slow=35
comp=Z,14nm,0.9s
NRIK Noril'sk 49.66 345 IAMs_20 IAMs_20 15 52 18.8
comp=Z,9µm,20.0s
NRIK Noril'sk 49.66 345*ce*P **P 15 30 21.2 -1.1**
NRIK pmax pmax
comp=Z,84nm,1.1s
NRIK MLR MLR
comp=Z,10µm,14.0s
NRIK Noril'sk 49.66 345 P **P 15 30 21.7 -0.6**
comp=Z,64nm,1.0s,baz=130,slow=7.7,SNR=57
NRIK LR LR 15 52 39.6
comp=Z,8µm,20.0s,baz=144,slow=38
comp=Z,64nm,1.0s
CTA Charters Tower 49.93 149 LR LR 15 49 46.2
comp=Z,4µm,21.7s,baz=338,slow=34
CTAO Charters Tower 49.93 149 P **P 15 30 25.3 +0.3**
CTAO IAmb IAmb 15 30 31.4
comp=Z,112nm,1.1s
CTAO Charters Tower 49.93 149 IAMs_20 IAMs_20 15 49 22.6
comp=Z,5µm,22.0s
CTAO Charters Tower 49.93 149 P **P 15 30 25.3 +0.3**
CTAO pmax pmax
comp=Z,113nm,1.1s
HNR Honiara 49.95 127 LR LR 15 50 00.5
comp=Z,21µm,20.3s,baz=308,slow=34
BILL Bilibino 51.60 20 P **P 15 30 35.6 -1.4**
BILL Bilibino 51.60 20 *e*P **P 15 30 36.5 -0.5**
MORW Morawa 53.12 186 P **P 15 30 47.7 -1.0**
AB31 Akbulak array 53.93 314 *i* P **P 15 30 54.4 -0.1**
ABKAR Akbulak array 53.93 314 P **P 15 30 54.2 -0.3**
SVE Sverdlovsk 54.48 324*d i*P **P 15 30 58.7 +0.3**
SVE *e*S **S 15 38 38.5 +1.9**
SVE *e*SS **SS 15 42 17.1 -1.7**
SVE pmax pmax
comp=Z,133nm,1.1s
SVE MLR MLR
comp=Z,17µm,15.0s
SVE MLR MLR
comp=E,13µm,14.0s
NGCH Negor - Chabah 54.71 285 P **P 15 31 02.5 +2.0**
FORT Forrest 54.86 173 IAmb IAmb 15 31 18.7
comp=Z,60nm,0.9s
AKTO Aktyubinsk 55.26 316 P **P 15 31 03.7 -0.5**
AKTO Aktyubinsk 55.26 316 LR LR 15 56 41.2
comp=Z,3µm,21.8s,baz=87,slow=38
GEYT Alibeck 55.35 300 P **P 15 31 05.9 +0.8**
comp=Z,48nm,1.1s,baz=96,slow=4.5,SNR=66
GEYT LR LR 15 57 24.8
comp=Z,6µm,18.5s,baz=100,slow=39
comp=Z,48nm,1.1s
GYA0B ALIBECK ARRAY 55.35 300 IAMs_20 IAMs_20 15 58 17.2
comp=Z,4µm,18.0s
ARU Arti 55.55 323 P **P 15 31 04.5 -1.5**
ARU IAmb IAmb 15 31 07.0
comp=Z,114nm,1.0s
ARU IAMs_20 IAMs_20 15 55 11.6
comp=Z,6µm,22.0s
ARU Arti 55.55 323*c i*P **P 15 31 05.1 -1.0**
ARU 15 32 01.2
ARU 15 33 07.5
ARU PPP PPP 15 34 19.2
ARU S **S 15 38 52.7 +1.8**
ARU 15 40 53.7
ARU SS **SS 15 42 34.4 -1.2**
ARU SSS SSS 15 44 41.2
ARU pmax pmax
comp=Z,129nm,1.0s
ARU MLR MLR
comp=Z,5µm,16.0s
ARU Arti 55.55 323 LR LR 15 56 03.5
comp=Z,5µm,19.1s,baz=89,slow=37

NWAO Narrogin (SRO) 56.85 185 LR LR 15 56 07.5
comp=Z,578nm,21.2s,baz=11,slow=36
NWAO Narrogin (SRO) 56.85 185 P **P 15 31 16.3 +0.7**
JLN Jalan Bani Buh 57.01 282 P **P 15 31 18.2 +1.2**
SNR=12
WBK Wadi Bani Khal 57.28 282 P **P 15 31 20.2 +1.1**
SNR=13
WBK P **P 15 31 20.2 +1.1**
SNR=13
WSAR Wadi Sarin 57.42 283 P **P 15 31 21.2 +1.2**
SNR=9.2
JASK Jask - Hormozg 57.48 286 P **P 15 31 21.6 +1.2**
BIDO Bidbid 57.80 284 P **P 15 31 24.4 +1.7**
SNR=9.9
SMDO Samad 57.99 283 P **P 15 31 25.6 +1.5**
SNR=18
JMDO Jabal Madar 58.12 282 P **P 15 31 26.1 +1.1**
SNR=7.6
JMDO P **P 15 31 26.1 +1.1**
SNR=7.6
BBOO Buckleboo 58.17 166 IAmb IAmb 15 31 36.9
comp=Z,68nm,1.3s
SPIA Saint Paul Isl 58.19 36 P **P 15 31 23.7 -1.1**
baz=266
GAMB Gambell 58.31 29 P **P 15 31 24.1 -1.4**
baz=260
P08K Saint George I 58.53 37 P **P 15 31 26.1 -1.1**
baz=266
MHTO MHTO 58.61 281 P **P 15 31 28.8 +0.5**
SNR=11
MHTO P **P 15 31 28.8 +0.5**
SNR=11
STKA Stephens Creek 58.76 160 P **P 15 31 28.9 -0.2**
comp=Z,13nm,0.8s,baz=356,slow=7.6,SNR=22
STKA LR LR 15 56 55.3
comp=Z,1µm,21.7s,baz=336,slow=36
comp=Z,13nm,0.8s
NIKH Nikolski High 58.79 41 P **P 15 31 27.5 -1.6**
baz=269
BSY Bisya 58.83 283 P **P 15 31 30.7 +0.8**
SNR=13
MDH Madha 58.99 286 P **P 15 31 31.5 +0.5**
MDH P **P 15 31 31.5 +0.5**
SOHO SOHO 59.06 285 *i* P **P 15 31 31.6 +0.1**
SNR=16
SOHO SOHO 59.06 285 P **P 15 31 32.0 +0.5**
MASF Masafi 59.09 286 P **P 15 31 35.4 +3.7**
SNR=5.0
MSFE Esma-Masafi 59.09 286 *i* P **P 15 31 31.7 0.0**
SNR=6.5
UOSS Minazif 59.15 286 P **P 15 31 32.0 -0.1**
HATD Hatta, Dubai 59.25 286 *i* P **P 15 31 33.2 +0.4**
SNR=8.9
HATD Hatta, Dubai 59.25 286 P **P 15 31 33.7 +0.9**
SNR=8.9
HATD P **P 15 31 33.7 +0.9**
SNR=8.9
ARQ Araqi 59.28 284 P **P 15 31 33.9 +0.9**
SNR=18
DQM DQM 59.29 280 P **P 15 31 32.5 -0.6**
ASHO Ashiyiah 59.35 285 *i* P **P 15 31 34.0 +0.5**
SNR=21
ASHO Ashiyiah 59.35 285 P **P 15 31 34.7 +1.2**
SNR=16
NAZ Nazwa, Dubai 59.62 286 *i* P **P 15 31 36.1 +0.8**
SNR=8.4
NAZ Nazwa, Dubai 59.62 286 P **P 15 31 36.4 +1.1**
SNR=8.3
NAZ P **P 15 31 36.4 +1.1**
SNR=8.3
FAQ Al Faqa, Dubai 59.74 286 P **P 15 31 37.0 +0.9**
FAQ Al Faqa, Dubai 59.74 286 P **P 15 31 37.3 +1.1**
SNR=9.8
ALNE Al Ain 59.77 285 *i* P **P 15 31 37.5 +1.1**
SNR=15
ALNE Al Ain 59.77 285 P **P 15 31 37.4 +1.0**
SNR=24
ASUD Al Ashush, Dub 60.00 286 *i* P **P 15 31 39.0 +1.0**
SNR=9.0
ASUD Al Ashush, Dub 60.00 286 P **P 15 31 39.5 +1.5**
SNR=11
TNA Tin City 60.18 27 P **P 15 31 37.8 -0.7**
baz=263,SNR=7.4
UNV Unalaska Valle 60.20 40 P **P 15 31 37.9 -0.9**
baz=271
AJN Ajban 60.32 286 *i* P **P 15 31 41.0 +0.9**
SNR=7.2
M11K Mekoryuk 60.50 33 P **P 15 31 40.2 -0.5**
baz=267
KOUNC Koumac, New Ca 60.64 133 P **P 15 31 43.3 +1.1**
KOUNC IAmb IAmb 15 31 58.0
comp=Z,112nm,1.2s
KOUNC IAMs_20 IAMs_20 15 52 44.0
comp=Z,4µm,22.0s
KIRV Kirov 60.64 325*ce*P **P 15 31 41.0 -0.7**
KIRV Kirov 60.64 325 LR LR 16 01 38.4
comp=Z,5µm,18.0s,baz=93,slow=40
UMZA Um Al Zommool 60.65 283 P **P 15 31 42.4 0.0**
UMZA P **P 15 31 42.4 0.0**
F14K Arctic Creek 60.83 27 P **P 15 31 42.7 -0.3**
baz=264,SNR=19
ANM Nome 61.16 28 P **P 15 31 44.6 -0.5**
baz=266,SNR=11
ARMA Armidale 61.26 151 IAMs_20 IAMs_20 15 56 06.6
comp=Z,3µm,22.0s
MZWR Madinat Zayed 61.51 285 P **P 15 31 48.1 -0.1**
MZWR P **P 15 31 48.1 -0.1**
C16K Lisburne Hills 61.52 24 P **P 15 31 46.7 -0.9**
C16K IAmb IAmb 15 31 52.7
comp=Z,54nm,1.1s
C16K IAMs_20 IAMs_20 16 00 37.7
comp=Z,5µm,18.0s
C16K Lisburne Hills 61.52 24 P **P 15 31 46.0 -1.6**
baz=264
F15K North Star Dit 61.55 27 IAmb IAmb 15 31 56.8
comp=Z,57nm,1.2s
F15K IAMs_20 IAMs_20 16 02 40.9
comp=Z,3µm,18.0s
F15K North Star Dit 61.55 27 P **P 15 31 47.9 0.0**
baz=266
SHAO Shalim 61.59 278 P **P 15 31 49.5 +0.7**
G15K Niukluk 61.76 28 P **P 15 31 49.1 -0.1**
baz=267
BELG Belogornoye 61.77 318 *i* P **P 15 31 48.3 -1.1**
BELG pmax pmax
comp=Z,19nm,1.1s
BELG MLR MLR
comp=Z,439nm,16.0s
BELG Belogornoye 61.77 318 LR LR 16 00 03.8
comp=Z,3µm,19.4s,baz=87,slow=38
J14K Nanvaranak Lak 61.87 30 IAmb IAmb 15 31 58.9
comp=Z,71nm,1.4s
J14K Nanvaranak Lak 61.87 30 P **P 15 31 49.4 -0.5**
baz=268,SNR=14
M13K Dall Lake 61.92 33 IAMs_20 IAMs_20 16 01 15.9
comp=Z,3µm,18.0s
M13K Dall Lake 61.92 33 P **P 15 31 49.6 -0.7**
baz=270
FALS False Pass 61.98 39 P **P 15 31 51.1 +0.2**
baz=273
JRN Qarnain Island 62.10 287 P **P 15 31 52.8 +0.6**
SNR=10
L14K Kuka Creek 62.25 32 P **P 15 31 52.7 +0.2**
baz=270,SNR=19
DMTO DMTO 62.29 278 P **P 15 31 53.5 0.0**
D17K Noatak River 62.32 25 P **P 15 31 53.1 +0.2**
baz=266,SNR=85
GHWR Ruwais 62.34 285 P **P 15 31 54.0 +0.2**
C17K DeLong Mountai 62.34 24 P **P 15 31 52.9 -0.2**
baz=266
RDOG Red Dog Mine 62.41 24 IAMs_20 IAMs_20 16 02 55.5
comp=Z,4µm,18.0s
RDOG Red Dog Mine 62.41 24 P **P 15 31 53.4 -0.2**
baz=266
G16K Koyuk River 62.48 27 IAmb IAmb 15 32 43.5
comp=Z,68nm,1.4s
G16K IAMs_20 IAMs_20 16 03 04.3
comp=Z,3µm,18.0s
G16K Koyuk River 62.48 27 P **P 15 31 53.9 -0.2**
baz=268
H16K Elim 62.51 28 P **P 15 31 54.2 -0.1**
baz=268,SNR=38
LKRN Lenkeran, Azer 62.53 302 P **P 15 31 53.8 -1.1**
M14K Bethel 62.60 32 IAmb IAmb 15 32 02.6
comp=Z,81nm,1.2s
M14K Bethel 62.60 32 P **P 15 31 54.6 -0.3**
baz=271,SNR=7.0

N14K Kuskokwak Cree 62.75 33 P **P 15 31 55.4 -0.5**
baz=271
DOK Doka 62.76 279 P **P 15 31 56.7 +0.1**
SNR=5.9
E17K Hotham Inlet 62.77 25 P **P 15 31 55.4 -0.5**
baz=268,SNR=36
K15K Wolf Creek Mou 62.80 31 P **P 15 31 56.2 0.0**
baz=270
MAK Makhachkala 62.82 307 *e*P **P 15 31 54.9 -1.8**
MAK *e* 15 34 11.0
MAK *e*PPP PPP 15 35 42.3
MAK *e*S **S 15 40 24.0 -1.5**
MAK *e*SS **SS 15 44 29.9 -0.3**
MAK *e*SSS SSS 15 47 19.0
MAK pmax pmax
comp=Z,167nm,1.7s
MAK MLR MLR
comp=Z,8µm,12.0s
L15K Ungalak Mounta 62.82 31 P **P 15 31 56.2 -0.2**
baz=271
B18K Kokolik River 62.90 23 P **P 15 31 57.0 +0.2**
baz=266
F17K Baldwin Pennin 62.97 26 P **P 15 31 57.8 +0.5**
baz=268,SNR=21
O14K Tigyukauivet M 62.99 34 IAmb IAmb 15 32 04.9
comp=Z,62nm,1.1s
O14K Tigyukauivet M 62.99 34 P **P 15 31 56.6 -0.9**
baz=272
RBK Rabkut 63.03 278 P **P 15 31 59.0 +0.4**
SNR=8.7
C18K Utukok River 63.08 24 IAmb IAmb 15 32 02.8
comp=Z,51nm,1.1s
C18K Utukok River 63.08 24 P **P 15 31 57.9 -0.2**
baz=267,SNR=36
DZM Mont Dzumac 63.13 133 P **P 15 31 59.7 +0.6**
DZM IAmb IAmb 15 32 17.5
comp=Z,52nm,1.2s
DZM Mont Dzumac 63.13 133 *e*P **P 15 31 59.5 +0.4**
comp=Z,109nm,1.3s
DZM *e*S **S 15 40 30.6 +0.5**
comp=Z,2µm,27.4s
DZM *e*SS **SS 15 44 38.0 +1.5**
comp=Z,2µm,24.9s
DZM *e*LR LR 15 50 48.5
comp=Z,11µm,24.9s
DZM Mont Dzumac 63.13 133 LR LR 15 54 55.0
comp=Z,3µm,21.4s,baz=316,slow=32
I17K Unalakleet 63.17 29 IAMs_20 IAMs_20 16 01 49.9
comp=Z,3µm,18.0s
I17K Unalakleet 63.17 29 P **P 15 31 58.7 0.0**
baz=270,SNR=34
G17K Kiwalik Mounta 63.20 27 P **P 15 31 59.1 +0.2**
baz=269
J16K Anvik River 63.22 30 IAmb IAmb 15 32 46.1
comp=Z,50nm,1.3s
J16K Anvik River 63.22 30 P **P 15 31 58.8 -0.2**
baz=271,SNR=10
M15K Kasigluk River 63.23 33 P **P 15 31 58.4 -0.7**
baz=272,SNR=13
E18K Tukpahlearik C 63.26 25 IAmb IAmb 15 32 04.5
comp=Z,32nm,0.8s
E18K Tukpahlearik C 63.26 25 P **P 15 31 59.2 0.0**
baz=268
WHFO Wadi Hawf 63.30 279 P **P 15 32 00.7 +0.3**
SEKA Sheki 63.31 305 P **P 15 31 58.5 -1.6**
SLWR Sila 63.35 286 P **P 15 32 00.8 +0.3**
SLWR P **P 15 32 00.8 +0.3**
MNGR Mingechevir, A 63.47 305 P **P 15 32 00.0 -1.1**
H17K Granite Mounta 63.51 28 P **P 15 32 01.0 +0.1**
baz=270
SHMA Al-Shehemyia 63.51 288 P **P 15 32 02.2 +0.7**
SNR=9.4
N15K Kwethluk River 63.54 33 IAMs_20 IAMs_20 16 02 25.7
comp=Z,3µm,18.0s
N15K Kwethluk River 63.54 33 P **P 15 32 00.6 -0.6**
baz=273
TRNA Turayna 63.59 287 P **P 15 32 02.8 +0.7**
SNR=15
F18K Selawik 63.62 26 P **P 15 32 01.3 -0.3**
baz=270,SNR=32
SDPT Sand Point 63.64 39 P **P 15 32 01.3 -0.6**
baz=275
OUENC Ouen Island, N 63.64 133 IAMs_20 IAMs_20 15 54 24.6
comp=Z,5µm,22.0s
ZKTA Zakatala 63.67 306 P **P 15 32 01.3 -1.1**
C19K Lookout Ridge 63.68 23 IAmb IAmb 15 32 07.3
comp=Z,62nm,1.1s
C19K IAMs_20 IAMs_20 16 02 18.6
comp=Z,6µm,22.0s
C19K Lookout Ridge 63.68 23 P **P 15 32 01.9 -0.2**
baz=269
O15K Ungalikthiuk R 63.73 34 P **P 15 32 01.9 -0.6**
baz=273,SNR=9.3
L16K Owhat River 63.78 31 IAmb IAmb 15 32 10.3
comp=Z,89nm,1.2s
L16K Owhat River 63.78 31 P **P 15 32 02.1 -0.7**
baz=272,SNR=22
SAKB Bahrain 63.85 288 P **P 15 32 03.9 +0.1**
ABTO Aybut 63.90 278 P **P 15 32 04.2 -0.1**
SNR=6.1
SMRA Abu-Samra 63.93 287 P **P 15 32 05.1 +0.7**
SNR=22
G18K Tagagawik 64.02 27 IAmb IAmb 15 32 12.3
comp=Z,64nm,1.3s
G18K IAMs_20 IAMs_20 16 02 18.0
comp=Z,3µm,19.0s
G18K Tagagawik 64.02 27 P **P 15 32 03.7 -0.6**
baz=271
M16K Timber Creek 64.06 32 IAMs_20 IAMs_20 16 02 27.3
comp=Z,3µm,19.0s
M16K Timber Creek 64.06 32 P **P 15 32 03.9 -0.7**
baz=273,SNR=23
GANJ Ganja 64.06 305 P **P 15 32 03.8 -1.3**
S14K Fog Glacier 64.08 37 P **P 15 32 04.2 -0.7**
baz=275
H18K Honhosa River 64.16 28 IAmb IAmb 15 32 14.1
comp=Z,68nm,1.3s
H18K Honhosa River 64.16 28 P **P 15 32 04.6 -0.6**
baz=272
N16K Nishlik Lake 64.19 33 P **P 15 32 05.1 -0.4**
baz=274,SNR=35
CHNA Chernabura Isl 64.19 39 P **P 15 32 04.0 -1.5**
baz=276
D19K Kuna River 64.21 24 P **P 15 32 05.1 -0.4**
baz=270
K17K Iditarod 64.28 30 P **P 15 32 06.4 +0.3**
baz=273
L17K Donlin 64.32 31 P **P 15 32 06.4 +0.1**
baz=273,SNR=58
F19K Shaleruckik Mo 64.36 26 P **P 15 32 06.0 -0.5**
F19K IAmb IAmb 15 32 14.2
comp=Z,73nm,1.4s
F19K Shaleruckik Mo 64.36 26 P **P 15 32 06.0 -0.5**
baz=271,SNR=16
E19K Redstone River 64.56 25 IAmb IAmb 15 32 15.2
comp=Z,56nm,1.0s
E19K Redstone River 64.56 25 P **P 15 32 07.4 -0.4**
baz=272
O16K Kokwok River B 64.58 34 IAmb IAmb 15 32 15.5
comp=Z,85nm,1.2s
O16K Kokwok River B 64.58 34 P **P 15 32 07.6 -0.5**
baz=275
G19K Purcell Mounta 64.66 26 IAmb IAmb 15 32 17.3
comp=Z,67nm,1.4s
G19K Purcell Mounta 64.66 26 P **P 15 32 08.1 -0.4**
baz=272
P16K Nushagak River 64.68 34 P **P 15 32 08.2 -0.5**
baz=275
CHGN Chignik 64.71 37 IAmb IAmb 15 32 13.5
comp=Z,93nm,1.4s
CHGN Chignik 64.71 37 P **P 15 32 08.7 -0.2**
baz=276
A21K Barrow 64.72 21 P **P 15 32 08.5 -0.2**
baz=270,SNR=60
D20K Etivluk River 64.76 24 P **P 15 32 08.9 -0.1**
baz=272
M17K Holitna River 64.77 32 P **P 15 32 09.1 -0.2**
baz=274
GCSA Galena City Sc 64.81 28 P **P 15 32 08.9 -0.5**
baz=273,SNR=14
E20K Nigu River 64.93 24 P **P 15 32 10.2 -0.1**
baz=272
H19K Roundabout Mou 64.95 27 IAMs_20 IAMs_20 16 02 57.7
comp=Z,3µm,18.0s
H19K Roundabout Mou 64.95 27 P **P 15 32 09.9 -0.4**
baz=273
J18K Innoko River 64.96 29 IAmb IAmb 15 32 17.8
comp=Z,103nm,1.4s

J18K	**Innoko River**	**64.96**	**29**	P	**P**		**15 32 10.1**	**-0.4**
	baz=274,SNR=26								
N17K	**Nushagak Hills**	**64.96**	**33**	IAMs_20	IAMs_20		16 02 45.4		
	comp=Z,3µm,18.0s								
N17K	**Nushagak Hills**	**64.96**	**33**	P	**P**		**15 32 10.6**	**+0.1**
	baz=275								
NAX	**Nakhchivan**	**64.97**	**304**	P	**P**		**15 32 09.8**	**-1.2**
R16K	**Pilot Point**	**65.04**	**36**	P	**P**		**15 32 10.8**	**-0.2**
	baz=276								
L18K	**Granite Mounta**	**65.06**	**31**	IAMs_20	IAMs_20		16 05 14.8		
	comp=Z,3µm,18.0s								
L18K	**Granite Mounta**	**65.06**	**31**	P	**P**		**15 32 11.5**	**+0.3**
	baz=274								
O17K	**Koliganek Bris**	**65.07**	**33**	P	**P**		**15 32 10.9**	**-0.4**
	baz=275,SNR=11								
F20K	**Avaraart Lake**	**65.16**	**25**	P	**P**		**15 32 10.9**	**-0.8**
	baz=273								
TOO	**Toolangi**	**65.23**	**159**	P	**P**		**15 32 12.8**	**+0.3**
TOO	**Toolangi**	**65.23**	**159**	P	**P**		**15 32 12.8**	**+0.3**
TOO				pmax	pmax				
	comp=Z,34nm,1.2s								
TTA	**Tatalina**	**65.32**	**30**	IAmb	IAmb		15 32 20.3		
	comp=Z,88nm,1.2s								
TTA	**Tatalina**	**65.32**	**30**	P	**P**		**15 32 15.3**	**+2.4**
TTA	**Tatalina**	**65.32**	**30**	P	**P**		**15 32 12.3**	**-0.6**
	baz=275,SNR=24								
GNI	**Garni**	**65.34**	**305**	P	**P**		**15 32 15.0**	**+1.4**
GNI	**Garni**	**65.34**	**305**	*ce*P	**P**		**15 32 15.5**	**+2.0**
GNI				pmax	pmax				
	comp=Z,91nm,1.7s								
GNI				MLR	MLR				
	comp=Z,4µm,15.0s								
GNI	**Garni**	**65.34**	**305**	LR	LR		16 04 19.2		
	comp=Z,2µm,21.3s,baz=88,slow=39								
GNI	**Garni**	**65.34**	**305**	P	**P**		**15 32 15.6**	**+2.0**
C21K	**Knifeblade Rid**	**65.40**	**23**	P	**P**		**15 32 12.5**	**-0.7**
	baz=273								
J19K	**Poorman**	**65.41**	**29**	IAmb	IAmb		15 32 21.0		
	comp=Z,96nm,1.1s								
J19K				IAMs_20	IAMs_20		16 03 57.6		
	comp=Z,3µm,19.0s								
J19K	**Poorman**	**65.41**	**29**	P	**P**		**15 32 13.2**	**-0.1**
	baz=275,SNR=43								
Q16K	**King Salmon**	**65.41**	**35**	P	**P**		**15 32 12.9**	**-0.5**
	baz=276,SNR=9.7								
B21K	**Ikpikpuk River**	**65.44**	**23**	P	**P**		**15 32 13.2**	**-0.2**
	baz=273								
ZEI	**Tsey**	**65.46**	**308**	*e*P	**P**		**15 32 13.0**	**-1.3**
ZEI				pmax	pmax				
	comp=Z,55nm,1.0s								
P17K	**Kvichak River**	**65.46**	**34**	P	**P**		**15 32 13.3**	**-0.5**
	baz=276,SNR=10								
VRH	**Novokhopyorsk**	**65.53**	**317**	*e*P	**P**		**15 32 14.3**	**-0.1**
VRH				pmax	pmax				
	comp=Z,100nm,1.1s								
M18K	**Stony River**	**65.53**	**31**	P	**P**		**15 32 13.9**	**-0.3**
	baz=276,SNR=26								
KLMR	**Klimovskoe**	**65.57**	**328**	*e*P	**P**		**15 32 12.3**	**-2.1**
KLMR				S	**S**		**15 40 57.5**	**-1.5**
KLMR				pmax	pmax				
	comp=Z,169nm,1.2s								
KLMR				MLR	MLR				
	comp=Z,14µm,14.0s								
N18K	**Kilae Creek**	**65.58**	**32**	IAMs_20	IAMs_20		16 03 23.9		
	comp=Z,3µm,19.0s								
N18K	**Kilae Creek**	**65.58**	**32**	P	**P**		**15 32 14.6**	**0.0**
	baz=276								
H20K	**Anotleneega Mo**	**65.60**	**27**	P	**P**		**15 32 14.7**	**+0.1**
	baz=275,SNR=17								
GOF	**Gofitskoye**	**65.66**	**310**	*ce*P	**P**		**15 32 15.1**	**-0.2**
SVW2	**Sparrevohn**	**65.69**	**32**	P	**P**		**15 32 17.1**	**+1.8**
E21K	**Killik River**	**65.74**	**24**	IAMs_20	IAMs_20		16 05 22.4		
	comp=Z,3µm,21.0s								
E21K	**Killik River**	**65.74**	**24**	P	**P**		**15 32 14.2**	**-1.3**
	baz=274								
B22K	**Teshekpuk Lake**	**65.81**	**22**	P	**P**		**15 32 14.7**	**-1.1**
	baz=274								
I20K	**Naaghedeneel**	**65.83**	**28**	IAMs_20	IAMs_20		16 02 04.9		
	comp=Z,3µm,18.0s								
I20K	**Naaghedeneel**	**65.83**	**28**	P	**P**		**15 32 16.3**	**+0.2**
	baz=275								
Q17K	**Contact Creek**	**65.86**	**35**	P	**P**		**15 32 15.6**	**-0.9**
	baz=277,SNR=12								
L19K	**White Mountain**	**65.92**	**31**	IAMs_20	IAMs_20		16 03 47.7		
	comp=Z,3µm,18.0s								
L19K	**White Mountain**	**65.92**	**31**	P	**P**		**15 32 16.3**	**-0.4**
	baz=276								
KBZ	**Khabaz**	**66.00**	**309**	*ce*P	**P**		**15 32 18.4**	**+0.9**
KBZ				pmax	pmax				
	comp=Z,100nm,1.2s								
KBZ				MLR	MLR				
	comp=Z,4µm,15.0s								
KBZ	**Khabaz**	**66.00**	**309**	P	**P**		**15 32 18.0**	**+0.5**
	comp=Z,22nm,0.9s,baz=79,slow=6.4,SNR=30								
KBZ				LR	LR		16 04 26.4		
	comp=Z,2µm,18.7s,baz=84,slow=39								
	comp=Z,22nm,0.9s								
O18K	**Koktuh Hills**	**66.01**	**33**	IAMs_20	IAMs_20		16 03 36.3		
	comp=Z,2µm,18.0s								
O18K	**Koktuh Hills**	**66.01**	**33**	P	**P**		**15 32 16.8**	**-0.6**
	baz=277,SNR=18								
F21K	**Alatna River**	**66.02**	**25**	P	**P**		**15 32 16.9**	**-0.4**
	baz=275								
J20K	**Nowinta River**	**66.03**	**28**	IAMs_20	IAMs_20		16 01 32.3		
	comp=Z,3µm,18.0s								
J20K	**Nowinta River**	**66.03**	**28**	P	**P**		**15 32 17.4**	**0.0**
	baz=276,SNR=32								
P18K	**Big Mountain,**	**66.06**	**34**	IAmb	IAmb		15 32 24.9		
	comp=Z,86nm,1.1s								
P18K	**Big Mountain,**	**66.06**	**34**	P	**P**		**15 32 17.6**	**-0.1**
	baz=277,SNR=14								
G21K	**Allakaket**	**66.08**	**26**	IAmb	IAmb		15 32 25.9		
	comp=Z,108nm,1.3s								
G21K	**Allakaket**	**66.08**	**26**	P	**P**		**15 32 17.8**	**+0.2**
	baz=275								
KVAR	**Kislovodsk Arr**	**66.10**	**309**	LR	LR		16 04 32.1		
	comp=Z,3µm,18.2s,baz=274,slow=39								
KIV	**Kislovodsk**	**66.11**	**309**	⇑P	**P**		**15 32 19.9**	**+1.5**
KIV	**Kislovodsk**	**66.11**	**309**	P	**P**		**15 32 18.0**	**-0.3**
KIV				IAMs_20	IAMs_20		16 06 04.5		
	comp=Z,4µm,18.0s								
KIV	**Kislovodsk**	**66.11**	**309**	*i* P	**P**		**15 32 19.1**	**+0.7**
	SNR=28								
KIV	**Kislovodsk**	**66.11**	**309**	*e*P	**P**		**15 32 19.1**	**+0.7**
KIV				*e*			15 34 44.5		
KIV				*e*S	**S**		**15 41 08.1**	**+1.7**
KIV				*e*SS	**SS**		**15 45 24.6**	**+2.9**
KIV				pmax	pmax				
	comp=Z,101nm,1.0s								
KIV				pmax	pmax				
	comp=Z,117nm,4.4s								
KIV				MLR	MLR				
	comp=Z,3µm,17.0s								
KIV	**Kislovodsk**	**66.11**	**309**	P	**P**		**15 32 19.2**	**+0.7**
K20K	**Telida**	**66.16**	**29**	IAMs_20	IAMs_20		16 02 39.5		
	comp=Z,3µm,18.0s								
K20K	**Telida**	**66.16**	**29**	P	**P**		**15 32 18.6**	**+0.4**
	baz=276,SNR=28								
M19K	**Big River Lodg**	**66.17**	**31**	IAMs_20	IAMs_20		16 05 53.0		
	comp=Z,3µm,18.0s								
M19K	**Big River Lodg**	**66.17**	**31**	P	**P**		**15 32 18.7**	**+0.4**
	baz=277								
D22K	**Ayikyak River**	**66.17**	**23**	IAMs_20	IAMs_20		16 02 15.9		
	comp=Z,4µm,22.0s								
D22K	**Ayikyak River**	**66.17**	**23**	P	**P**		**15 32 18.4**	**+0.2**
	baz=275								
NEUR	**Neytrino**	**66.23**	**308**	*i* P	**P**		**15 32 19.4**	**+0.1**
N19K	**Bonanza Creek**	**66.26**	**32**	IAmb	IAmb		15 32 26.2		
	comp=Z,62nm,1.2s								
N19K	**Bonanza Creek**	**66.26**	**32**	P	**P**		**15 32 18.9**	**-0.1**
	baz=277,SNR=17								
L20K	**Farewell, AK**	**66.34**	**30**	P	**P**		**15 32 19.7**	**+0.2**
	baz=277								
H21K	**Melozitna Rive**	**66.45**	**27**	IAMs_20	IAMs_20		16 04 28.3		
	comp=Z,3µm,18.0s								
H21K	**Melozitna Rive**	**66.45**	**27**	P	**P**		**15 32 20.5**	**+0.5**
	baz=276								
E22K	**Anaktuvuk Pass**	**66.57**	**24**	IAMs_20	IAMs_20		16 05 11.3		
	comp=Z,5µm,18.0s								
E22K	**Anaktuvuk Pass**	**66.57**	**24**	P	**P**		**15 32 20.6**	**-0.2**
	baz=276								
M20K	**Styx River**	**66.77**	**31**	P	**P**		**15 32 22.0**	**-0.2**
	baz=278								
G22K	**Bettles**	**66.82**	**25**	P	**P**		**15 32 22.2**	**-0.1**
	baz=277								
I21K	**Tanana**	**66.85**	**27**	IAmb	IAmb		15 32 32.1		
	comp=Z,96nm,1.2s								
I21K				IAMs_20	IAMs_20		16 04 40.9		
	comp=Z,4µm,18.0s								
I21K	**Tanana**	**66.85**	**27**	P	**P**		**15 32 23.0**	**+0.4**
	baz=277,SNR=29								
CHUM	**Lake Minchumin**	**66.87**	**29**	P	**P**		**15 32 23.4**	**+0.6**
	baz=278,SNR=33								
Q19K	**Cape Douglas,**	**66.93**	**34**	P	**P**		**15 32 24.0**	**+0.8**
	baz=279								
H22K	**Ishtalitna Cre**	**67.00**	**26**	P	**P**		**15 32 24.3**	**+0.7**
	baz=278								
SII	**Sitkinak Islan**	**67.01**	**37**	P	**P**		**15 32 23.1**	**-0.6**
SII	**Sitkinak Islan**	**67.01**	**37**	P	**P**		**15 32 27.4**	**+3.6**
SII	**Sitkinak Islan**	**67.01**	**37**	P	**P**		**15 32 24.1**	**+0.3**
	baz=279								
VORR	**Voronezh**	**67.01**	**318**	*e*P	**P**		**15 32 22.4**	**-1.4**
VORR				pmax	pmax				
	comp=Z,40nm,1.0s								
VORR				MLR	MLR				
	comp=Z,5µm,12.0s								
LPSR	**Galich'ya Gora**	**67.02**	**319**	*e*P	**P**		**15 32 21.9**	**-2.0**
LPSR				pmax	pmax				
	comp=Z,100nm,1.0s								
LPSR				MLR	MLR				
	comp=Z,2µm,10.0s								
P19K	**Oil Pt**	**67.03**	**33**	IAmb	IAmb		15 32 30.3		
	comp=Z,82nm,1.0s								
P19K	**Oil Pt**	**67.03**	**33**	P	**P**		**15 32 23.5**	**-0.4**
	baz=279,SNR=9.9								
CAST	**Castle Rocks**	**67.03**	**29**	IAMs_20	IAMs_20		16 02 49.0		
	comp=Z,3µm,18.0s								
CAST	**Castle Rocks**	**67.03**	**29**	P	**P**		**15 32 24.2**	**+0.3**
	baz=278,SNR=56								
PPLA	**Purkeypile**	**67.06**	**30**	P	**P**		**15 32 24.5**	**+0.3**
	baz=278,SNR=14								
VORD	**Divnogorie**	**67.08**	**317**	*e*P	**P**		**15 32 22.6**	**-1.7**
VORD				pmax	pmax				
	comp=Z,20nm,1.0s								
VORD				MLR	MLR				
	comp=Z,2µm,12.0s								
VSR	**Storozhevoye**	**67.12**	**317**	*e*P	**P**		**15 32 23.6**	**-0.9**
VSR				pmax	pmax				
	comp=Z,70nm,1.2s								
VSR				MLR	MLR				
	comp=Z,4µm,12.0s								
MOS	**Moscow**	**67.25**	**322**	*e*P	**P**		**15 32 23.2**	**-2.0**
MOS				*e*			15 32 49.2		
MOS				*e*			15 34 51.8		
MOS				*e*S	**S**		**15 41 17.2**	**-2.3**
MOS				*e*			15 42 20.8		
MOS				pmax	pmax				
	comp=Z,163nm,1.5s								
MOS				smax	smax				
	comp=E,1µm,3.5s								
MOS				smax	smax				
	comp=N,1µm,3.5s								
MOS				MLR	MLR				
	comp=Z,11µm,13.0s								
MOS				MLR	MLR				
	comp=E,9µm,14.0s								
MOS				MLR	MLR				
	comp=N,4µm,13.0s								
O20K	**Slope Mountain**	**67.27**	**33**	P	**P**		**15 32 24.6**	**-0.9**
	baz=279,SNR=14								
COLD	**Coldfoot**	**67.29**	**25**	P	**P**		**15 32 25.1**	**-0.3**
	baz=278,SNR=27								
N20K	**Mount Spurr**	**67.30**	**32**	P	**P**		**15 32 25.7**	**+0.1**
	baz=279,SNR=41								
TOLK	**Toolik Lake Re**	**67.33**	**23**	P	**P**		**15 32 25.6**	**0.0**
	baz=278,SNR=37								
LABN	**Labinsk**	**67.35**	**310**	*e*P	**P**		**15 32 26.4**	**+0.2**
LABN				*e*S	**S**		**15 41 22.2**	**+0.9**
LABN				pmax	pmax				
	comp=Z,43nm,1.0s								
OHAK	**Old Harbor**	**67.39**	**36**	IAmb	IAmb		15 32 35.1		
	comp=Z,96nm,1.4s								
OHAK	**Old Harbor**	**67.39**	**36**	P	**P**		**15 32 30.0**	**+3.9**
OHAK	**Old Harbor**	**67.39**	**36**	P	**P**		**15 32 26.1**	**0.0**
	baz=280,SNR=6.9								
MLY	**Manley**	**67.39**	**27**	IAmb	IAmb		15 32 31.6		
	comp=Z,75nm,1.1s								
MLY				IAMs_20	IAMs_20		16 05 07.1		
	comp=Z,3µm,18.0s								
MLY	**Manley**	**67.39**	**27**	P	**P**		**15 32 25.9**	**-0.2**
	baz=278,SNR=68								
BCA	**Borcka**	**67.39**	**307**	⇑P	**P**		**15 32 27.1**	**+0.6**
E23K	**Chandalar**	**67.39**	**24**	P	**P**		**15 32 26.4**	**+0.2**
	baz=278,SNR=58								
APA	**Apatity**	**67.40**	**335**	⇓*i*P	**P**		**15 32 23.9**	**-2.1**
APA				pmax	pmax				
	comp=Z,31nm,0.9s								
APA				MLR	MLR				
	comp=Z,12µm,12.0s								
G23K	**Bananza Creek**	**67.43**	**25**	P	**P**		**15 32 26.2**	**-0.2**
G23K				IAmb	IAmb		15 32 31.7		
	comp=Z,92nm,1.4s								
G23K	**Bananza Creek**	**67.43**	**25**	P	**P**		**15 32 26.0**	**-0.3**
	baz=278								
C24K	**Franklin Bluff**	**67.48**	**22**	P	**P**		**15 32 25.9**	**-0.6**
	baz=278,SNR=65								
SKT	**Skwentna**	**67.50**	**31**	IAmb	IAmb		15 32 33.4		
	comp=Z,86nm,1.2s								
SKT	**Skwentna**	**67.50**	**31**	P	**P**		**15 32 25.9**	**-0.9**
	baz=279,SNR=34								
D24K	**Happy Valley**	**67.52**	**23**	P	**P**		**15 32 26.5**	**-0.3**
	baz=278								
Q20K	**Shuyak Island**	**67.62**	**34**	P	**P**		**15 32 26.4**	**-1.2**
	baz=280								
SYI	**Shuyak Island**	**67.62**	**34**	P	**P**		**15 32 27.1**	**-0.5**
KDAK	**Kodiak Island**	**67.67**	**35**	P	**P**		**15 32 26.8**	**-1.0**
KDAK	**Kodiak Island**	**67.67**	**35**	P	**P**		**15 32 26.9**	**-1.0**
	baz=280								
KDAK	**Kodiak Island**	**67.67**	**35**	P	**P**		**15 32 26.8**	**-1.0**
KDAK				pmax	pmax				
	comp=Z,259nm,1.5s								
KDAK	**Kodiak Island**	**67.67**	**35**	P	**P**		**15 32 28.0**	**+0.2**
	comp=Z,45nm,0.8s,baz=266,slow=3.2,SNR=17								
KDAK				LR	LR		16 02 56.7		
	comp=Z,2µm,21.0s,baz=281,slow=37								
	comp=Z,45nm,0.8s								
GURO	**Guroymak-BITLI**	**67.74**	**304**	IAMs_20	IAMs_20		16 06 29.9		
	comp=Z,3µm,18.0s								
HOM	**Homer**	**67.83**	**33**	P	**P**		**15 32 28.3**	**-0.6**
	baz=280								
TRF	**Thorofare Moun**	**67.83**	**29**	IAmb	IAmb		15 32 35.8		
	comp=Z,46nm,1.0s								
TRF	**Thorofare Moun**	**67.83**	**29**	P	**P**		**15 32 28.1**	**-1.0**
	baz=280,SNR=19								
CAPN	**Captain Cook N**	**67.88**	**32**	P	**P**		**15 32 28.6**	**-0.5**
	baz=280								
I23K	**Minto, Yukon-K**	**67.95**	**27**	IAMs_20	IAMs_20		16 05 04.9		
	comp=Z,3µm,18.0s								
I23K	**Minto, Yukon-K**	**67.95**	**27**	P	**P**		**15 32 28.7**	**-0.8**
	baz=280,SNR=35								
OBN	**Obninsk**	**67.95**	**322**	P	**P**		**15 32 28.6**	**-1.1**
OBN	**Obninsk**	**67.95**	**322**	*e*P	**P**		**15 32 28.8**	**-0.9**
OBN				*e**PP	**pP**		**15 32 34.0**	**-0.1**
OBN				*e*			15 32 55.0		
OBN				*e*			15 34 57.6		
OBN				*e*PPP	PPP		15 36 40.1		
OBN				pmax	pmax				
	comp=Z,108nm,1.7s								
OBN				MLR	MLR				
	comp=Z,5µm,17.0s								
OBN	**Obninsk**	**67.95**	**322**	LR	LR		16 04 39.1		
	comp=Z,6µm,18.7s,baz=65,slow=38								
SUA	**Susitna One**	**67.95**	**31**	P	**P**		**15 32 29.3**	**-0.4**
	baz=280,SNR=59								
CUT	**Chulitna**	**68.01**	**30**	P	**P**		**15 32 29.4**	**-0.6**
	baz=280,SNR=19								
CNPM	**China Poot**	**68.05**	**33**	IAmb	IAmb		15 32 38.5		
	comp=Z,39nm,0.8s								
CNPM				IAMs_20	IAMs_20		16 04 52.2		
	comp=Z,3µm,18.0s								
BWN	**Browne**	**68.07**	**28**	P	**P**		**15 32 29.3**	**-1.0**
BWN				IAMs_20	IAMs_20		16 02 06.1		
	comp=Z,2µm,19.0s								
VSLR	**Vesyoloye**	**68.09**	**309**	*i* P	**P**		**15 32 31.4**	**+0.5**
VSLR				pmax	pmax				
	comp=Z,143nm,1.1s								
VSLR				MLR	MLR				
	comp=Z,4µm,16.0s								
F24K	**Squaw Lake**	**68.13**	**24**	IAMs_20	IAMs_20		16 04 26.3		
	comp=Z,3µm,19.0s								
F24K	**Squaw Lake**	**68.13**	**24**	P	**P**		**15 32 30.6**	**-0.1**
	baz=280								
NEA2	**Nenana**	**68.16**	**28**	IAMs_20	IAMs_20		16 05 39.7		
	comp=Z,3µm,20.0s								
NEA2	**Nenana**	**68.16**	**28**	P	**P**		**15 32 30.5**	**-0.4**
	baz=280,SNR=79								
BRSE	**Bradley Lake S**	**68.26**	**33**	P	**P**		**15 32 31.5**	**-0.1**
	baz=281								
SOC	**Sochi**	**68.29**	**309**	*e*P	P		15 32 26.0	-6.1
SOC				*e*			15 34 58.1		
SOC				*e*S	**S**		**15 41 24.6**	**-7.9**
SOC				*e*SS	**SS**		**15 45 53.7**	**-1.6**
SOC				MLR	MLR				
	comp=Z,4µm,14.0s								
D25K	**Kavik River**	**68.36**	**22**	P	**P**		**15 32 31.9**	**-0.2**
	baz=281								
MCK	**McKinley**	**68.38**	**29**	P	**P**		**15 32 31.6**	**-0.7**
	baz=281,SNR=39								
G24K	**Hadweenzic Riv**	**68.43**	**25**	IAMs_20	IAMs_20		16 08 01.4		
	comp=Z,3µm,19.0s								
G24K	**Hadweenzic Riv**	**68.43**	**25**	P	**P**		**15 32 32.3**	**-0.3**
	baz=281								
H24K	**Noodor Dome**	**68.43**	**26**	IAMs_20	IAMs_20		16 07 20.5		
	comp=Z,3µm,18.0s								
H24K	**Noodor Dome**	**68.43**	**26**	P	**P**		**15 32 31.8**	**-0.8**
	baz=281								
MDM	**Murphy Dome**	**68.45**	**27**	IAMs_20	IAMs_20		16 05 21.3		
	comp=Z,3µm,18.0s								
RND	**Reindeer**	**68.47**	**29**	IAMs_20	IAMs_20		16 06 37.9		
	comp=Z,2µm,18.0s								
RC01	**Rabbit Creek A**	**68.50**	**31**	IAmb	IAmb		15 32 40.3		
	comp=Z,70nm,1.2s								
RC01	**Rabbit Creek A**	**68.50**	**31**	P	**P**		**15 32 31.9**	**-1.1**
	baz=281,SNR=9.6								
O22K	**Cooper Landing**	**68.62**	**32**	P	**P**		**15 32 33.2**	**-0.6**
	baz=281								
COLA	**College**	**68.63**	**27**	P	**P**		**15 32 32.9**	**-0.8**
COLA				IAmb	IAmb		15 32 40.0		
	comp=Z,44nm,0.9s								
COLA	**College**	**68.63**	**27**	IAMs_20	IAMs_20		16 06 03.8		
	comp=Z,3µm,19.0s								
COLA	**College**	**68.63**	**27**	P	**P**		**15 32 37.2**	**+3.5**
COLA	**College**	**68.63**	**27**	P	**P**		**15 32 33.1**	**-0.6**
	baz=281								
COLA	**College**	**68.63**	**27**	P	**P**		**15 32 32.9**	**-0.8**
COLA				pmax	pmax				
	comp=Z,44nm,1.0s								
COLA				MLR	MLR				
	comp=Z,3µm,19.0s								
CCB	**Clear Creek Bu**	**68.69**	**28**	IAMs_20	IAMs_20		16 04 34.6		
	comp=Z,2µm,19.0s								
PMR	**Palmer**	**68.69**	**31**	P	**P**		**15 32 37.2**	**+3.0**
PMR	**Palmer**	**68.69**	**31**	P	**P**		**15 32 33.5**	**-0.7**
	baz=281,SNR=15								
WAT1	**Susitna Watana**	**68.72**	**30**	P	**P**		**15 32 34.1**	**-0.4**
	baz=281								
POKR	**Poker Plat Res**	**68.75**	**27**	IAMs_20	IAMs_20		16 06 00.3		
	comp=Z,4µm,19.0s								
POKR	**Poker Plat Res**	**68.75**	**27**	P	**P**		**15 32 33.9**	**-0.7**
	baz=281,SNR=38								
SEW	**Seward**	**68.83**	**32**	P	**P**		**15 32 34.6**	**-0.5**
	baz=282,SNR=16								
E25K	**Arctic Village**	**68.88**	**24**	IAMs_20	IAMs_20		16 02 48.4		
	comp=Z,4µm,19.0s								
E25K	**Arctic Village**	**68.88**	**24**	P	**P**		**15 32 35.2**	**-0.1**
	baz=282,SNR=38								
RAYN	**Ar Rayn**	**68.93**	**287**	P	**P**		**15 32 35.3**	**-1.2**
RAYN				IAmb	IAmb		15 32 37.9		
	comp=Z,87nm,1.0s								
RAYN	**Ar Rayn**	**68.93**	**287**	*i* P	**P**		**15 32 36.9**	**+0.4**
	SNR=83								
RAYN	**Ar Rayn**	**68.93**	**287**	P	**P**		**15 32 35.3**	**-1.2**
RAYN				pmax	pmax				
	comp=Z,87nm,1.0s								
RAYN				MLR	MLR				
	comp=Z,2µm,22.0s								
RAYN	**Ar Rayn**	**68.93**	**287**	P	**P**		**15 32 36.9**	**+0.4**
G25K	**Bearman Lake**	**68.96**	**25**	P	**P**		**15 32 35.3**	**-0.5**
	baz=282								
F25K	**Christian Rive**	**68.96**	**24**	P	**P**		**15 32 35.7**	**-0.2**
	baz=282								
SML	**Sawmill**	**69.02**	**31**	P	**P**		**15 32 36.0**	**-0.4**
	baz=282,SNR=20								
KNK	**Knik Glacier**	**69.04**	**31**	IAMs_20	IAMs_20		16 05 31.2		
	comp=Z,2µm,18.0s								
KNK	**Knik Glacier**	**69.04**	**31**	P	**P**		**15 32 35.8**	**-0.7**
	baz=282,SNR=19								
ILAR	**Eielson Array**	**69.05**	**27**	P	**P**		**15 32 34.8**	**-1.6**
ILAR	**Eielson Array**	**69.05**	**27**	P	**P**		**15 32 35.9**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=273,slow=4.6,SNR=36								
ILAR				LR	LR		16 06 07.6		
	comp=Z,3µm,18.1s,baz=274,slow=39								
	comp=Z,7.3nm,0.8s								
HDA	**Harding Lake**	**69.10**	**28**	IAmb	IAmb		15 32 43.4		
	comp=Z,80nm,1.1s								
HDA				IAMs_20	IAMs_20		16 04 57.5		
	comp=Z,3µm,18.0s								
HDA	**Harding Lake**	**69.10**	**28**	P	**P**		**15 32 36.2**	**-0.6**
	baz=282,SNR=40								
WAT6	**Susitna Watana**	**69.13**	**30**	P	**P**		**15 32 36.4**	**-0.8**
	baz=282,SNR=36								
DHY	**Denali Highway**	**69.19**	**29**	IAMs_20	IAMs_20		16 07 10.0		
	comp=Z,3µm,18.0s								
DHY	**Denali Highway**	**69.19**	**29**	P	**P**		**15 32 36.8**	**-0.8**
	baz=282,SNR=8.5								
KEV	**Kevo**	**69.30**	**338**	IAMs_20	IAMs_20		16 05 30.8		
	comp=Z,3µm,21.0s								
M23K	**Glacier View**	**69.31**	**31**	P	**P**		**15 32 37.4**	**-0.7**
	baz=282,SNR=19								
FYU	**Fort Yukon**	**69.34**	**25**	IAMs_20	IAMs_20		16 08 48.6		
	comp=Z,3µm,18.

baz=284,SNR=6.5
ARPR Arapgir-MALATY 70.40 305 P P 15 32 45.2 -0.3
ARPR IAMs_20 IAMs_20 16 07 03.3
comp=Z,2µm,19.0s
SCRK Sand Creek 70.46 28 IAmb IAmb 15 33 02.3
comp=Z,65nm,1.2s
SCRK IAMs_20 IAMs_20 16 05 10.4
comp=Z,2µm,18.0s
SCRK Sand Creek 70.46 28 P P 15 32 44.8 -0.5
baz=285,SNR=35
I26K Coal Creek Min 70.47 26 P P 15 32 43.9 -1.2
I26K IAmb IAmb 15 32 53.3
comp=Z,88nm,1.1s
I26K IAMs_20 IAMs_20 16 07 01.2
comp=Z,3µm,19.0s
I26K Coal Creek Min 70.47 26 P P 15 32 44.1 -1.0
baz=285
J26L Joseph Creek 70.50 27 IAmb IAmb 15 32 49.6
comp=Z,123nm,1.3s
J26L IAMs_20 IAMs_20 16 07 11.4
comp=Z,3µm,19.0s
J26L Joseph Creek 70.50 27 P P 15 32 44.7 -0.8
baz=285
Q23K Middleton Isla 70.51 33 IAMs_20 IAMs_20 16 08 42.3
comp=Z,4µm,19.0s
Q23K Middleton Isla 70.51 33 P P 15 32 44.7 -0.7
baz=284
EYAK Cordova Ski Ar 70.53 32 P P 15 32 48.5 +2.9
EYAK Cordova Ski Ar 70.53 32 P P 15 32 45.3 -0.2
baz=284
MSEY Mahe Island 70.56 255 P P 15 32 47.8 +1.2
MSEY Mahe Island 70.56 255 P P 15 32 47.5 +0.9
N25K Chitina, Valde 70.80 30 IAmb IAmb 15 32 57.0
comp=Z,78nm,1.2s
N25K Chitina, Valde 70.80 30 P P 15 32 46.6 -0.7
baz=285,SNR=6.6
MENT Mentasta 70.85 29 P P 15 32 50.9 +3.3
H27K Steamboat Moun 70.86 25 P P 15 32 47.6 -0.1
baz=286
E28M Babbage River 70.92 23 IAMs_20 IAMs_20 16 08 11.4
comp=Z,4µm,18.0s
E28M Babbage River 70.92 23 P P 15 32 46.6 -1.3
baz=287
BMRM Bremner River 70.96 31 P P 15 32 48.1 -0.2
baz=285,SNR=14
L26K Log Cabin Wild 70.99 29 IAmb IAmb 15 32 56.6
comp=Z,62nm,1.1s
L26K IAMs_20 IAMs_20 16 08 56.4
comp=Z,3µm,18.0s
L26K Log Cabin Wild 70.99 29 P P 15 32 48.2 -0.2
baz=286,SNR=33
I27K Kandik River 71.00 26 P P 15 32 48.2 -0.3
baz=286,SNR=71
RAGM Ragged Mountai 71.08 32 IAMs_20 IAMs_20 16 08 39.1
comp=Z,4µm,18.0s
F28M Old Crow 71.09 24 IAmb IAmb 15 32 57.1
comp=Z,111nm,1.1s
F28M IAMs_20 IAMs_20 16 05 11.9
comp=Z,4µm,18.0s
F28M Old Crow 71.09 24 P P 15 32 48.8 -0.2
baz=287,SNR=91
GLB Gilahina Butte 71.21 30 IAmb IAmb 15 32 54.9
comp=Z,91nm,1.0s
K27K Chicken 71.26 28 IAMs_20 IAMs_20 16 06 22.3
comp=Z,2µm,18.0s
K27K Chicken 71.26 28 P P 15 32 49.5 -0.5
baz=286
HMT Hamilton 71.29 32 IAMs_20 IAMs_20 16 07 20.8
comp=Z,3µm,18.0s
M26K Nabesna, AK 71.31 29 P P 15 32 49.7 -0.7
M26K IAMs_20 IAMs_20 16 09 32.9
comp=Z,3µm,18.0s
M26K Nabesna, AK 71.31 29 P P 15 32 50.0 -0.5
baz=286
KAIM Kayak Island 71.33 32 P P 15 32 50.7 +0.2
baz=286
EGAK Eagle 71.43 27 IAmb IAmb 15 32 58.4
comp=Z,95nm,1.1s
EGAK IAMs_20 IAMs_20 16 07 38.9
comp=Z,3µm,18.0s
EGAK Eagle 71.43 27 P P 15 32 50.4 -0.6
baz=287,SNR=44
VRDI Verde Repeater 71.43 31 IAmb IAmb 15 32 56.2
comp=Z,85nm,1.2s
BERG Berg Lake 71.55 31 IAMs_20 IAMs_20 16 09 01.4
comp=Z,3µm,18.0s
E29M Blow River 71.56 23 IAMs_20 IAMs_20 16 06 24.0
comp=Z,3µm,20.0s
E29M Blow River 71.56 23 P P 15 32 51.4 -0.4
baz=289,SNR=45
MCARA McCarthy VSAT 71.59 30 P P 15 32 51.5 -0.5
baz=286,SNR=20
SUCK Suckling Hills 71.60 32 IAMs_20 IAMs_20 16 07 43.8
comp=Z,3µm,18.0s
L27K Beaver Creek, 71.64 28 IAmb IAmb 15 32 57.4
comp=Z,96nm,0.9s
L27K IAMs_20 IAMs_20 16 08 53.5
comp=Z,4µm,18.0s
L27K Beaver Creek, 71.64 28 P P 15 32 52.3 -0.1
baz=287,SNR=98
ROCAM Rodrigues Isla 71.68 238 P P 15 32 51.5 -1.7
CRQM Cirque 71.71 31 IAMs_20 IAMs_20 16 03 40.4
comp=Z,3µm,22.0s
I28M Miner Creek 71.72 26 IAmb IAmb 15 33 01.2
comp=Z,81nm,1.1s
I28M IAMs_20 IAMs_20 16 08 23.3
comp=Z,3µm,19.0s
I28M Miner Creek 71.72 26 P P 15 32 52.4 -0.5
baz=288,SNR=59
CRQE Cirque 71.73 31 P P 15 32 52.5 -0.6
baz=287
BGLC Bering Glacier 71.82 32 P P 15 32 52.3 -1.1
baz=287
M27K Edge Creek, AK 71.83 29 IAmb IAmb 15 33 01.6
comp=Z,49nm,1.0s
M27K IAMs_20 IAMs_20 16 04 25.4
comp=Z,3µm,20.0s
M27K Edge Creek, AK 71.83 29 P P 15 32 53.5 -0.1
baz=287
FINES FINESS Array B 71.83 330 P P 15 32 52.3 -1.2
FINES FINESS Array B 71.83 330 *i* P P 15 32 53.2 -0.3
FINES pmax pmax
comp=Z,25nm,1.0s
FINES FINESS Array B 71.83 330 P P 15 32 53.6 +0.1
comp=Z,25nm,1.0s,baz=76,slow=8.0,SNR=25
FINES LR LR 16 07 16.8
comp=Z,12µm,19.4s,baz=74,slow=38
comp=Z,25nm,1.0s
SIM Simferopol' 71.84 312k *i* P P 15 32 54.5 +0.6
SIM *e*S S 15 42 15.4 +1.3
SIM pmax pmax
comp=Z,139nm,1.1s
SIM smax smax
comp=E,820nm,11.0s
WAX Waxell Ridge 71.93 31 IAmb IAmb 15 32 58.6
comp=Z,66nm,0.8s
WAX IAMs_20 IAMs_20 16 08 18.7
comp=Z,2µm,18.0s
SNH Sunshine Point 72.02 32 IAMs_20 IAMs_20 16 09 05.9
comp=Z,3µm,18.0s
H29M Whitestone 72.09 25 IAmb IAmb 15 32 59.9
comp=Z,92nm,1.2s
H29M Whitestone 72.09 25 P P 15 32 53.9 -1.1
baz=289
ISLE Juniper Island 72.13 31 P P 15 32 55.1 -0.3
ISLE IAmb IAmb 15 33 19.6
comp=Z,80nm,1.2s
ISLE IAMs_20 IAMs_20 16 10 45.9
comp=Z,2µm,19.0s
BVCY Beaver Creek 72.26 29 P P 15 32 54.7 -1.4
baz=288,SNR=6.0
BARN Barnard Glacie 72.31 30 IAmb IAmb 15 33 04.7
comp=Z,92nm,1.1s
DAWY Dawson 72.37 27 IAmb IAmb 15 33 02.0
comp=Z,87nm,0.9s
DAWY Dawson 72.37 27 P P 15 32 56.2 -0.6
baz=289,SNR=86
VSU Vasula 72.39 327*ce* P P 15 32 57.6 +0.7
VSU pmax pmax
comp=Z,85nm,1.7s
VSU MLR MLR
comp=Z,8µm,15.0s
VSU Vasula 72.39 327 *e* P P 15 32 57.2 +0.3
MESA MESA 72.44 31 IAMs_20 IAMs_20 16 09 16.1
comp=Z,3µm,18.0s
MESA MESA 72.44 31 P P 15 32 56.3 -1.1
baz=288
CTG Chitna Glacier 72.49 31 P P 15 32 56.9 -0.7
baz=288,SNR=18
CTGM Chitina Glacie 72.49 31 IAMs_20 IAMs_20 16 04 48.3
comp=Z,2µm,19.0s
F30M Barrier River 72.58 23 P P 15 32 56.8 -1.1
baz=291
YUK3 Moose Creek 72.64 30 P P 15 32 57.8 -0.8
baz=288,SNR=22
G30M tAoh Zrail Nji 72.64 24 P P 15 32 57.3 -1.0
baz=291,SNR=106
EPYK Eagle Plains 72.67 24 IAmb IAmb 15 33 05.1
comp=Z,69nm,0.9s
EPYK IAMs_20 IAMs_20 16 08 49.6
comp=Z,2µm,20.0s
EPYK Eagle Plains 72.67 24 P P 15 32 57.7 -0.8
baz=290,SNR=37
LOGN Logan Glacier 72.69 31 IAmb IAmb 15 33 06.5
comp=Z,69nm,0.9s
J29N Klondike Camp 72.73 27 IAmb IAmb 15 33 04.8
comp=Z,92nm,0.8s
J29N IAMs_20 IAMs_20 16 07 56.4
comp=Z,3µm,18.0s
J29N Klondike Camp 72.73 27 P P 15 32 58.4 -0.5
baz=290,SNR=22
TABL Table Mountain 72.75 31 P P 15 32 59.4 +0.2
TABL IAmb IAmb 15 33 07.3
comp=Z,113nm,1.1s
MNK Minsk 72.97 323 *i* P P 15 33 01.1 +0.7
MNK *i* 15 35 43.2
MNK *i* PPP PPP 15 37 27.7
MNK *i* S **S 15 42 28.6 +2.0**
MNK *i* SS **SS 15 47 09.8 +3.2**
MNK pmax pmax
comp=Z,49nm,0.9s
MNK pmax pmax
comp=E,45nm,1.5s
MNK pmax pmax
comp=N,23nm,0.7s
MNK MLR MLR
comp=E,2µm,13.0s
MNK MLR MLR
comp=Z,5µm,14.0s
MNK MLR MLR
comp=N,1µm,14.0s
MEF Metsahovi 72.99 329 *e* P P 15 33 00.7 +0.3
INK Inuvik 73.11 22 IAmb IAmb 15 33 07.7
comp=Z,70nm,0.9s
INK Inuvik 73.11 22 P P 15 33 00.0 -1.0
baz=293,SNR=80
INK Inuvik 73.11 22 P P 15 33 00.2 -0.7
comp=Z,46nm,0.9s,baz=292,slow=7.0,SNR=102
INK LR LR 16 08 29.3
comp=Z,2µm,19.9s,baz=328,slow=39
comp=Z,46nm,0.9s
YUK8 Steele Glacier 73.11 30 P P 15 33 00.6 -0.9
baz=289,SNR=12
I30M Mount Dempster 73.20 26 IAmb IAmb 15 33 05.8
comp=Z,112nm,1.2s
I30M IAMs_20 IAMs_20 16 08 33.6
comp=Z,3µm,18.0s
I30M Mount Dempster 73.20 26 P P 15 33 01.5 -0.3
baz=291,SNR=75
L29M L29M 73.22 28 IAMs_20 IAMs_20 16 08 57.5
comp=Z,2µm,18.0s
L29M L29M 73.22 28 P P 15 33 01.7 -0.1
baz=290
K29M Barlow Dome 73.23 27 IAmb IAmb 15 33 07.1
comp=Z,79nm,1.1s
K29M IAMs_20 IAMs_20 16 09 02.3
comp=Z,3µm,19.0s
K29M Barlow Dome 73.23 27 P P 15 33 01.7 -0.2
baz=290,SNR=48
PINM Pinnacle 73.28 31 P P 15 33 02.0 -0.2
baz=289,SNR=8.9
M29M Somme Creek 73.31 29 IAmb IAmb 15 33 07.5
comp=Z,83nm,0.9s
M29M IAMs_20 IAMs_20 16 09 45.5
comp=Z,2µm,20.0s
M29M Somme Creek 73.31 29 P P 15 33 02.3 -0.1
baz=290
AKASG Malin Array Be 73.34 318 P P 15 33 02.4 -0.2
comp=Z,11nm,0.8s,baz=59,slow=6.1,SNR=36
AKASG LR LR 16 07 42.8
comp=Z,3µm,19.8s,baz=58,slow=38
comp=Z,11nm,0.8s
AKBB Malin Array Si 73.34 318 IAmb IAmb 15 33 11.4
comp=Z,90nm,1.3s
AKBB Malin Array Si 73.34 318*ce* P P 15 33 02.2 -0.4
AKBB pmax pmax
comp=Z,90nm,1.4s
AKBB MLR MLR
comp=Z,4µm,15.0s
IDID Didziasalis 73.35 324 *e* P P 15 33 02.1 -0.5
KIEV Kiev 73.35 318 ⇑P P 15 33 03.0 +0.2
KIEV Kiev 73.35 318 P P 15 33 01.3 -1.4
KIEV IAmb IAmb 15 33 11.4
comp=Z,73nm,1.2s
KIEV IAMs_20 IAMs_20 16 07 10.3
comp=Z,4µm,20.0s
KIEV Kiev 73.35 318 *i* P P 15 33 02.4 -0.3
SNR=9.7
KIEV Kiev 73.35 318 P P 15 33 02.9 +0.2
F31M Tsiigehtchic 73.37 23 IAmb IAmb 15 33 05.7
comp=Z,151nm,1.4s
F31M IAMs_20 IAMs_20 16 07 23.0
comp=Z,3µm,20.0s
F31M Tsiigehtchic 73.37 23 P P 15 33 01.6 -0.9
baz=293,SNR=61
G31M Satah River 73.38 24 IAMs_20 IAMs_20 16 08 36.2
comp=Z,4µm,19.0s
G31M Satah River 73.38 24 P P 15 33 02.1 -0.5
baz=292,SNR=23
J30M Hart River 73.45 26 IAMs_20 IAMs_20 16 06 38.5
comp=Z,2µm,20.0s
J30M Hart River 73.45 26 P P 15 33 02.3 -0.9
baz=291
NACGM Naroch 73.45 323 *e* P P 15 33 03.6 +0.3
comp=E,3µm,1.4s
ASF Jabal al Asfar 73.53 298 LR LR 16 10 39.5
comp=E,2µm,18.2s,baz=332,slow=40
comp=Z,11nm,0.8s
YUK4 Talbot Arm 73.60 30 P P 15 33 03.4 -0.8
baz=290,SNR=17
ISAL Salakas 73.60 324 *e* P P 15 33 03.5 -0.6
BCPM Bancas Point 73.62 31 IAMs_20 IAMs_20 16 08 30.1
comp=Z,2µm,18.0s
IIGN Ignalina 73.62 324 *e* P P 15 33 03.9 -0.3
BR131 Keskin Array S 73.70 307 *i* P P 15 33 05.4 +0.2
BR131 Keskin Array S 73.70 307 P P 15 33 06.2 +1.0
SNR=22
BRTR Keskin Array B 73.70 307 *i* P P 15 33 05.6 +0.4
BRTR pmax pmax
comp=Z,53nm,1.2s
BRTR Keskin Array B 73.70 307 P P 15 33 05.7 +0.5
comp=Z,54nm,1.2s,baz=104,slow=5.2,SNR=46
BRTR LR LR 16 09 57.7
comp=Z,2µm,19.1s,baz=68,slow=40
comp=Z,54nm,1.2s
MTSE Matsula 73.77 327 *e* P P 15 33 05.3 +0.4
PNL Peninsula 73.83 31 P P 15 33 08.5 +3.1
PNL Peninsula 73.83 31 P P 15 33 04.5 -0.9
baz=290
YUK6 Outpost Mounta 73.87 30 P P 15 33 05.8 -0.1
baz=290,SNR=8.5
RAF Rauma 73.95 330 *e* P P 15 33 06.5 +0.5
M30M Minto, Yukon 73.99 28 IAmb IAmb 15 33 11.2
comp=Z,128nm,1.1s
M30M IAMs_20 IAMs_20 16 07 17.7
comp=Z,3µm,19.0s
M30M Minto, Yukon 73.99 28 P P 15 33 06.4 +0.1
baz=291,SNR=79
MAYO Mayo, Yukon 73.99 27 P P 15 33 06.0 -0.3
baz=292
O29M Mount Kennedy 74.00 31 P P 15 33 05.9 -0.6
baz=290
A36M Sachs Harbour 74.06 17 IAmb IAmb 15 33 08.2
comp=Z,50nm,j0.9s
A36M IAMs_20 IAMs_20 16 11 17.9
comp=Z,3µm,19.0s
A36M Sachs Harbour 74.06 17 P P 15 33 05.7 -0.8
baz=299,SNR=34
ANTO Ankara 74.28 307 ⇑P P 15 33 09.7 +1.2
ANTO Ankara 74.28 307 P P 15 33 07.5 -1.0
ANTO IAmb IAmb 15 33 10.7
comp=Z,41nm,0.8s
ANTO Ankara 74.28 307 P P 15 33 09.7 +1.2
ANTO Ankara 74.28 307 P P 15 33 09.4 +0.9
HYT Haines Junctio 74.30 30 P P 15 33 08.3 0.0
baz=291,SNR=40
MMAI Mount Meron Ar 74.46 299 P P 15 33 09.3 -0.3
comp=Z,14nm,1.0s,baz=69,slow=9.9,SNR=12
MMAI LR LR 16 10 39.4
comp=Z,2µm,18.8s,baz=29,slow=40
comp=Z,14nm,1.0s
BALJ Balqa 74.56 299 IAMs_20 IAMs_20 16 11 09.9
comp=Z,2µm,20.0s
P29M Windy Craggy 74.63 31 IAMs_20 IAMs_20 16 09 16.6
comp=Z,3µm,18.0s
P29M Windy Craggy 74.63 31 P P 15 33 10.3 +0.2
baz=291,SNR=14
SORM Soroca 74.69 316 ⇑P P 15 33 11.5 +0.9
SORM Soroca 74.69 316 P P 15 33 11.4 +0.9
PABE Paberze 74.78 324 P P 15 33 09.8 -1.2
PABE Paberze 74.78 324 *e* P P 15 33 11.3 +0.3
MILM Milestii Mici 74.78 315 *e* P P 15 33 09.0 -2.2
comp=Z,550nm,4.1s
MILM Milestii Mici 74.78 315 *e* P P 15 33 09.0 -2.2
MILM *e* 15 33 20.0
MILM *e* 15 42 39.0
MILM pmax pmax
comp=Z,550nm,4.1s
MILM MLR MLR
comp=Z,4µm,13.5s
P30M Million Dollar 74.81 31 P P 15 33 11.0 -0.2
baz=292
N31M Braeburn, Yuko 74.84 29 P P 15 33 11.1 -0.2
baz=292,SNR=32
GHAJ Ghor Haditha 74.88 298 IAMs_20 IAMs_20 16 11 11.2
comp=Z,3µm,18.0s
O30N Mendenhall 74.97 30 IAmb IAmb 15 33 20.4
comp=Z,79nm,1.1s
O30N Mendenhall 74.97 30 P P 15 33 12.0 -0.1
baz=292,SNR=26
M31M Drury Creek, Y 75.16 28 IAmb IAmb 15 33 20.3
comp=Z,57nm,0.9s
M31M IAMs_20 IAMs_20 16 08 03.8
comp=Z,3µm,20.0s
M31M Drury Creek, Y 75.16 28 P P 15 33 13.0 -0.1
baz=293,SNR=28
MDUB Mudurnu 75.25 308 IAMs_20 IAMs_20 16 09 00.3
comp=Z,4µm,22.0s
PLBC Pleasant Camp 75.34 31 P P 15 33 14.5 +0.4
baz=292
TLCR 75.35 313 ⇑P P 15 33 15.7 +1.2
TLCR 75.35 313 P P 15 33 15.7 +1.2
ATD Arta Tunnel 75.41 276 LR LR 16 06 31.1
comp=Z,27nm,18.2s,baz=59,slow=36
ATD Arta Tunnel 75.41 276 P P 15 33 17.2 +1.8
CSS Mathiatis 75.45 302 IAmb IAmb 15 33 23.8
comp=Z,68nm,1.1s
CSS IAMs_20 IAMs_20 16 10 53.1
comp=Z,2µm,19.0s
WHY Whitehorse 75.56 30 IAmb IAmb 15 33 23.9
comp=Z,102nm,1.2s
WHY Whitehorse 75.56 30 P P 15 33 15.7 +0.2
baz=293,SNR=27
FARO Faro, Yukon 75.60 28 P P 15 33 15.6 -0.1
baz=294
C36M Paulatuk 75.72 20 IAMs_20 IAMs_20 16 08 24.9
comp=Z,2µm,20.0s
C36M Paulatuk 75.72 20 P P 15 33 15.7 -0.5
baz=301,SNR=43
TPGR Topolog 75.72 313 ⇓P P 15 33 17.2 +0.5
SUW Suwalki 75.74 323 *e* P P 15 33 16.1 -0.4
SUW *e*L L 16 09 29.0
comp=Z,11µm,16.2s
SUW Suwalki 75.74 323 *e* P P 15 33 16.3 -0.2
CFR Carcaliu 75.81 313 ⇑P P 15 33 18.0 +1.0
CFR Carcaliu 75.81 313 P P 15 33 18.0 +1.0
SKAG Skagway 75.83 31 P P 15 33 19.1 +2.2
SKAG Skagway 75.83 31 P P 15 33 17.1 +0.1
baz=293,SNR=14
TIRR Tirgusor 75.86 313 ⇑P P 15 33 18.6 +1.1
TIRR Tirgusor 75.86 313 P P 15 33 18.5 +1.1
EIL Elat 75.92 296 LR LR 16 08 51.4
comp=Z,1µm,19.7s,baz=82,slow=37
S31K Pelican 75.98 33 P P 15 33 18.4 +0.6
S31K IAmb IAmb 15 33 23.1
comp=Z,132nm,1.4s
S31K Pelican 75.98 33 P P 15 33 18.0 +0.2
baz=293
OBL Observatory Le 76.08 75 IAMs_20 IAMs_20 15 56 43.7
comp=Z,2µm,20.0s
UWB Uwekahuna B 76.08 75 IAMs_20 IAMs_20 16 02 55.8
comp=Z,2µm,21.0s
TLBR Topalu 76.08 313 ⇑P P 15 33 20.4 +1.7
HATHI Halema'uma'u T 76.09 75 IAMs_20 IAMs_20 16 03 33.2
comp=Z,3µm,18.0s
BYL Byron's Ledge 76.10 75 IAMs_20 IAMs_20 16 03 07.3
comp=Z,2µm,19.0s
HARR Harsova 76.11 313 ⇑P P 15 33 19.9 +1.1
HARR Harsova 76.11 313 P P 15 33 19.9 +1.1
N32M Quiet Lake 76.16 29 IAMs_20 IAMs_20 16 08 49.0
comp=Z,3µm,18.0s
N32M Quiet Lake 76.16 29 P P 15 33 18.4 -0.5
baz=295
PANC Panciu 76.22 314 ⇑P P 15 33 20.9 +1.4
NPOC North of Pu'u 76.24 75 IAMs_20 IAMs_20 16 12 03.0
comp=Z,2µm,21.0s
JCUZ Jacuzzi 76.25 75 IAMs_20 IAMs_20 16 03 27.3
comp=Z,4µm,22.0s
TESR Tescani 76.32 315 ⇑P P 15 33 20.9 +0.9
PSN Preselentsi 76.33 312 *e* P P 15 33 19.4 -0.7
VRI Vrincioaia 76.50 314 ⇑P P 15 33 22.7 +1.6
VRI Vrincioaia 76.50 314 P P 15 33 22.6 +1.6
P32M Atlin 76.53 30 IAmb IAmb 15 33 29.2
comp=Z,52nm,1.0s
P32M IAMs_20 IAMs_20 16 10 32.1
comp=Z,3µm,18.0s
P32M Atlin 76.53 30 P P 15 33 21.1 +0.1
baz=295,SNR=16
PLOR Plostina 76.55 314 ⇑P P 15 33 22.9 +1.5
PLOR Plostina 76.55 314 P P 15 33 22.9 +1.5
ISP Isparta 76.63 306*ce* P P 15 33 22.4 +0.3
ISP pmax pmax
comp=Z,59nm,1.3s
P33M Teslin, Yukon 76.68 30 IAMs_20 IAMs_20 16 11 06.9
comp=Z,2µm,18.0s
P33M Teslin, Yukon 76.68 30 P P 15 33 21.6 -0.3
baz=295,SNR=22
R32K Eaglecrest 76.69 32 IAMs_20 IAMs_20 16 10 07.5
comp=Z,2µm,18.0s
R32K Eaglecrest 76.69 32 P P 15 33 21.7 -0.1
baz=294,SNR=16
JIS Juneau Island 76.76 32 IAMs_20 IAMs_20 16 10 18.2
comp=Z,2µm,18.0s
JIS Juneau Island 76.76 32 P P 15 33 25.3 +3.1
LVV L'vov 76.78 319 *e* P P 15 33 22.2 -0.3
LVV *e*S S 15 43 06.6 -2.7
SIT Sitka 76.79 33 P P 15 33 25.5 +3.1
SIT Sitka 76.79 33 P P 15 33 21.9 -0.5
baz=294
BURAR Bucovina Array 76.85 316 ⇑P P 15 33 24.2 +1.1
BURAR Bucovina Array 76.85 316 P P 15 33 22.4 -0.7
BURAR Bucovina Array 76.85 316 P P 15 33 24.2 +1.1
TURR Turia 76.90 315 ⇓P P 15 33 24.3 +1.0
S32K Killisnoo 76.99 33 P P 15 33 23.8 +0.2
baz=294
PRD Provadia 77.00 312 *e* P P 15 33 24.0 +0.1
OZUR 77.03 315 ⇑P P 15 33 25.8 +1.7
NEF NEVSHA 77.05 312 *e* P P 15 33 25.0 +0.8
BOSR Bodos 77.12 315 ⇑P P 15 33 26.3 +1.7
MLR Muntele Rosu 77.14 314 ⇑P P 15 33 26.6 +1.7
MLR Muntele Rosu 77.14 314 IAMs_20 IAMs_20 16 12 49.2
comp=Z,4µm,20.0s
MLR Muntele Rosu 77.14 314 P P 15 33 26.5 +1.7
MLR Muntele Rosu 77.14 314 LR LR 16 11 23.2
comp=Z,3µm,18.5s,baz=59,slow=39
DOPR Dopca 77.33 315 ⇑P P 15 33 27.5 +1.7
RAZG Razgrad 77.46 312 ⇑P P 15 33 27.0 +0.5
Q32M Nakina River 77.47 31 IAMs_20 IAMs_20 16 11 57.7
comp=Z,2µm,19.0s
Q32M Nakina River 77.47 31 P P 15 33 26.1 -0.4
baz=296
LOZB Loznitsa 77.48 312 ⇓P P 15 33 28.3 +1.7
VOIR 77.75 314 ⇑P P 15 33 28.8 +0.6
VOIR 77.75 314 P P 15 33 28.8 +0.6
R33M Jennings River 77.88 30 IAMs_20 IAMs_20 16 12 58.4
comp=Z,2µm,19.0s
R33M Jennings River 77.88 30 P P 15 33 28.5 -0.2
baz=297
SZH Strazhitsa 77.93 312 *e* P P 15 33 36.0 +6.8
HFS Hagfors 77.95 331 P P **15 33 28.2 -0.6**
comp=Z,9.6nm,0.7s,baz=76,slow=6.3,SNR=16
HFS LR LR 16 10 57.2

comp=Z,13µm,20.3s,baz=62,slow=38
comp=Z,9.6nm,0.7s
ARR Arges 78.05 314 ⇑P **P 15 33 30.8 +1.0**
ELND Elena 78.13 312 ⇑P **P 15 33 31.5 +1.3**
HUMR Humele 78.14 313 ⇑P **P 15 33 31.2 +0.9**
KOLS Kolonicke sedl 78.17 318 *e*P **P 15 33 31.5 +1.1**
KOLS pmax pmax
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 78.17 318 *e*P **P 15 33 31.5 +1.1**
U33K Whale Pass 78.29 34 P **P 15 33 30.4 -0.5**
baz=296
NC405 NORSAR Array S 78.35 332 P **P 15 33 29.5 -1.6**
NC405 IAmb IAmb 15 33 38.0
comp=Z,68nm,1.1s
RER Riviere de l'E 78.43 241 P **P 15 33 33.5 +1.2**
NC303 NORSAR Array S 78.44 332 IAmb IAmb 15 33 41.5
comp=Z,73nm,1.3s
S34M Telegraph Cree 78.47 31 IAmb IAmb 15 33 39.9
comp=Z,58nm,0.9s
S34M Telegraph Cree 78.47 31 P **P 15 33 31.5 -0.3**
baz=297,SNR=25
WTLY Watson Lake, Y 78.52 29 IAmb IAmb 15 33 38.9
comp=Z,78nm,1.0s
WTLY Watson Lake, Y 78.52 29 P **P 15 33 32.1 +0.1**
baz=298,SNR=38
RAO Raoul Island 78.52 129 LR LR 16 02 49.9
comp=Z,826nm,20.5s,baz=70,slow=32
MARR Marisel-Cluj 78.53 316 ⇑P **P 15 33 32.6 +0.1**
WRAK Wrangell Islan 78.55 33 IAMs_20 IAMs_20 16 13 22.7
comp=Z,2µm,18.0s
WRAK Wrangell Islan 78.55 33 P **P 15 33 31.9 -0.4**
baz=296
NB201 NORSAR Array S 78.56 332 IAmb IAmb 15 33 44.2
comp=Z,134nm,1.6s
CRAG Craig 78.57 34 P **P 15 33 36.2 +3.8**
CRAG Craig 78.57 34 P **P 15 33 31.6 -0.8**
baz=296
LOT Lotru 78.58 315 ⇓P **P 15 33 33.4 +0.5**
NB2 NORSAR Subarra 78.59 332 P **P 15 33 31.0 -1.5**
comp=Z,7.1nm,0.8s,baz=59,slow=5.6
NOA NORSAR Array B 78.59 332 P **P 15 33 31.4 -1.2**
comp=Z,9.1nm,0.7s,baz=59,slow=5.6,SNR=32
NOA LR LR 16 11 29.4
comp=Z,10µm,19.7s,baz=65,slow=38
comp=Z,9.1nm,0.7s
STHS Stebnicka Huta 78.60 319 *e*P **P 15 33 32.4 -0.4**
STHS Stebnicka Huta 78.60 319 *e*P **P 15 33 32.3 -0.5**
NEEM North Greenlan 78.62 358 *i* P **P 15 33 32.2 -0.5**
NEEM IAmb IAmb 15 33 36.9
comp=Z,69nm,1.2s
NC204 NORSAR Array S 78.67 333 IAmb IAmb 15 33 45.0
comp=Z,156nm,1.8s
CRVS Cervenica-Dubn 78.68 319 *e*P **P 15 33 34.4 +1.2**
CRVS pmax pmax
comp=Z,124nm,1.6s
CRVS Cervenica-Dubn 78.68 319 *e*P **P 15 33 34.4 +1.2**
RES Resolute Bay 78.68 9 IAMs_20 IAMs_20 16 08 50.9
comp=Z,3µm,20.0s
RES Resolute Bay 78.68 9 P **P 15 33 32.3 -0.4**
comp=Z,10.0nm,0.8s,baz=314,slow=6.1,SNR=24
RES LR LR 16 13 11.6
comp=Z,2µm,18.2s,baz=338,slow=39
comp=Z,10.0nm,0.8s
DRGR 78.74 316 ⇑P **P 15 33 34.3 +0.7**
DRGR 78.74 316 P **P 15 33 34.3 +0.7**
DLBC Dease Lake 78.75 31 P **P 15 33 33.7 +0.2**
DLBC IAmb IAmb 15 33 45.4
comp=Z,80nm,1.2s
DLBC Dease Lake 78.75 31 P **P 15 33 33.3 -0.2**
baz=298,SNR=15
DLBC Dease Lake 78.75 31 P **P 15 33 33.7 +0.2**
comp=Z,27nm,0.9s,baz=294,slow=6.3,SNR=33
DLBC LR LR 16 08 36.2
comp=Z,1µm,21.6s,baz=318,slow=36
comp=Z,27nm,0.9s
JMIC Jan Mayen 79.09 345 LR LR 16 12 49.9
comp=Z,3µm,18.1s,baz=48,slow=39
OJC Ojcow 79.13 320 *e*P **P 15 33 35.6 -0.1**
OJC *e*S **S 15 43 33.8 -0.9**
OJC *e*L L 16 12 21.2
comp=Z,4µm,18.6s
OJC Ojcow 79.13 320 IAmb IAmb 15 33 45.3
comp=Z,68nm,1.1s
WRGLY Wrigley 79.14 25 IAmb IAmb 15 33 41.3
comp=Z,55nm,1.0s
NIE Niedzica 79.17 319 *e*P **P 15 33 36.2 +0.4**
NIE *e*L L 16 13 34.0
comp=Z,3µm,19.4s
GZR Gura Zlata 79.25 315 ⇑P **P 15 33 37.5 +1.0**
GZR Gura Zlata 79.25 315 P **P 15 33 37.4 +1.0**
T35M Bob Quinn 79.32 32 IAMs_20 IAMs_20 16 12 04.1
comp=Z,2µm,19.0s
T35M Bob Quinn 79.32 32 P **P 15 33 37.1 +0.6**
baz=298,SNR=11
V35K Ketchikan 79.41 34 P **P 15 33 37.2 +0.2**
baz=297
MPEP Malo Peshtene 79.41 313 *e*P **P 15 33 38.8 +1.5**
KECS Kecovo 79.44 318 *e*P **P 15 33 38.0 +0.7**
KECS pmax pmax
comp=Z,52nm,1.6s
KECS Kecovo 79.44 318 *e*P **P 15 33 38.0 +0.7**
PGB Panagyurishte 79.44 312 *e*P **P 15 33 37.7 +0.2**
VALD Valchedram 79.48 313 *e*P **P 15 33 38.0 +0.4**
SURR Surduc 79.52 315 ⇑P **P 15 33 38.4 +0.6**
SIRR Siria 79.61 316 ⇓P **P 15 33 38.6 +0.3**
HERR Herculane 79.68 315 ⇑P **P 15 33 40.0 +1.3**
DJES Djerdap 79.70 314 ⇓P **P 15 33 39.8 +1.0**
LANS Ľiptovska Anna 79.77 319 *e*P **P 15 33 40.8 +1.6**
LANS pmax pmax
comp=Z,15nm,1.4s
LANS Liptovska Anna 79.77 319 *e*P **P 15 33 40.8 +1.6**
DIB Dawson Inlet, 79.92 36 IAmb IAmb 15 33 43.2
comp=Z,65nm,1.0s
U35K Hyder 79.93 33 IAMs_20 IAMs_20 16 15 15.3
comp=Z,2µm,18.0s
U35K Hyder 79.93 33 P **P 15 33 39.9 +0.1**
baz=298
BLKB Belogradchik 80.02 313 ⇑P **P 15 33 41.2 +0.6**
PSZ Piszkesteto 80.03 318 ⇑P **P 15 33 42.1 +1.4**
PSZ Piszkesteto 80.03 318 IAMs_20 IAMs_20 16 14 18.4
comp=Z,4µm,20.0s
PSZ Piszkesteto 80.03 318 P **P 15 33 42.0 +1.4**
VTS Vitosha 80.04 312 *e*P **P 15 33 41.3 +0.4**
OKC Ostrava-Krasne 80.26 320 AMS AMS 16 11 50.0
comp=Z,6µm,13.4s
KOTAN Kotaneelee Air 80.56 28 P **P 15 33 43.4 +0.2**
baz=302
MORC Moravsky Berou 80.64 320 ⇓P **P 15 33 44.9 +1.0**
MORC Moravsky Berou 80.64 320 *e*P **P 15 33 43.3 -0.5**
MORC Moravsky Berou 80.64 320 P **P 15 33 44.8 +1.0**
BOVS Bovan 80.66 314 ⇑P **P 15 33 44.0 0.0**
FLDN Fort Liard 80.74 27 P **P 15 33 44.5 +0.4**
baz=303
URZ Urewera 80.82 139 LR LR 16 03 50.0
comp=Z,1µm,21.9s,baz=116,slow=31
KSP Ksiaz 80.88 322 *e*P **P 15 33 44.3 -0.8**
KSP *e*S **S 15 43 54.3 +1.3**
KSP *e*L L 16 14 00.1
comp=Z,6µm,18.8s
KRLC Kraliky 80.94 321 *e*P **P 15 33 46.4 +0.9**
KRLC *e*pP **pP 15 33 50.2 +0.2**
KRLC AMS AMS 16 12 30.0
comp=Z,8µm,14.1s
KRLC Kraliky 80.94 321 *e*P **P 15 33 46.4 +0.9**
KRLC *e* 15 33 50.2
KRLC MLR MLR
comp=Z,8µm,14.1s
JAVC Velka Javorina 80.97 320 *e*P **P 15 33 46.4 +0.8**
RTZ Ruatahuna 80.97 139 IAMs_20 IAMs_20 16 04 09.6
comp=Z,2µm,21.0s
OSTC Ostas 81.05 322 AMS AMS 16 14 20.0
comp=Z,6µm,13.5s
DPC Dobruska-Polom 81.08 321 *e*P **P 15 33 47.4 +1.2**
DPC *e*pP **PcP 15 33 53.4 +0.8**
DPC AMS AMS 16 12 30.0
comp=Z,8µm,13.1s
DPC Dobruska-Polom 81.08 321 *e*P **P 15 33 47.4 +1.2**
DPC *e* 15 33 53.4
DPC MLR MLR
comp=Z,8µm,13.1s
MXZ Matakaoa Point 81.09 138 IAMs_20 IAMs_20 16 03 47.0
comp=Z,3µm,22.0s
CHVC Chvalec 81.13 322 AMS AMS 16 12 40.0
comp=Z,6µm,16.4s
RPZ Rata Peaks 81.17 146 LR LR 16 07 33.4
comp=Z,759nm,20.3s,baz=324,slow=34

UPC Upice 81.19 322 AMS AMS 16 14 30.0
comp=Z,7µm,13.6s
FRGS Fruska Gora 81.25 316 ⇑P **P 15 33 47.7 +0.5**
SMOL Smolenice 81.26 319 *e*P **P 15 33 49.4 +2.2**
VRAC Vranov 81.40 320 ⇑P **P 15 33 48.9 +1.0**
VRAC Vranov 81.40 320 *e*P **P 15 33 48.1 +0.2**
VRAC Vranov 81.40 320 P **P 15 33 48.9 +1.0**
VRAC Vranov 81.40 320 LR LR 16 13 42.1
comp=Z,4µm,19.1s,baz=60,slow=38
MODS Modra-Piesok 81.42 319 *e*P **P 15 33 49.5 +1.5**
MODS pmax pmax
comp=Z,142nm,1.6s
MODS Modra-Piesok 81.42 319 *e*P **P 15 33 49.5 +1.5**
MORH Mrgy, Hungar 81.53 317 ⇑P **P 15 33 49.1 +0.5**
KRUC Moravsky 81.63 320 *e*P **P 15 33 49.2 +0.1**
IDI Anoyia 81.78 305 LR LR 16 15 40.6
comp=Z,693nm,20.1s,baz=72,slow=40
PVCC Panska Ves 82.00 322 AMS AMS 16 14 10.0
comp=Z,6µm,13.8s
GOPC GO Pecny, Ondr 82.16 321 *e*P **P 15 33 52.8 +0.9**
GOPC AMS AMS 16 13 20.0
comp=Z,8µm,14.1s
GOPC GO Pecny, Ondr 82.16 321 *e*P **P 15 33 52.8 +0.9**
GOPC MLR MLR
comp=Z,8µm,14.1s
BRG Berggiesshubel 82.18 323 *e*P **P 15 33 52.4 +0.4**
BRG Amp 15 34 01.6
comp=Z,21nm,1.2s
BRG Berggiesshubel 82.18 323 P P 15 34 15.4 +23
BRG Amp 15 34 20.8
comp=Z,13nm,1.2s
BRG PP **PP 15 36 59.6 -0.1**
BRG Amp 15 37 00.5
comp=Z,6.6nm,1.0s
BRG Berggiesshubel 82.18 323 *e*P **P 15 33 52.3 +0.4**
BRG 15 36 59.6
BRG 15 44 00.0
BRG pmax pmax
comp=Z,21nm,1.2s
BRG MLR MLR
comp=E,8µm,12.1s
BRG MLR MLR
comp=N,3µm,12.1s
BRG MLR MLR
comp=Z,11µm,12.3s
PRU Pruhonice 82.27 322 *e*P **P 15 33 53.5 +1.1**
PRU *ex* x 15 33 59.3
PRU AMS AMS 16 13 30.0
comp=Z,7µm,12.8s
PRU Pruhonice 82.27 322 *e*P **P 15 33 53.5 +1.1**
PRU *e* 15 33 59.3
PRU MLR MLR
comp=Z,7µm,12.8s
PRA Prague 82.29 322 AMS AMS 16 15 20.0
comp=Z,6µm,12.7s
RONA Rosalia, Austr 82.31 319 *i* pP **P 15 33 54.1 +1.4**
comp=Z,9.8nm,1.1s
CONA Conrad Observa 82.46 319 *e*P **P 15 33 54.6 +1.0**
comp=Z,29nm,1.4s,SNR=8.6
CLL Collm 82.49 323 *e*P **P 15 33 53.0 -0.5**
CLL *e*S **SKSac 15 44 13.0 -1.2**
CLL pmax pmax
comp=Z,31nm,1.2s
CLL MLR MLR
comp=Z,12µm,17.6s
CLL Collm 82.49 323 *e*P **P 15 33 53.0 -0.5**
comp=Z,15nm,1.0s
CLL *i* Pmax 15 33 59.2
comp=Z,31nm,1.2s
CLL *ex* x 15 36 38.0
CLL *e*PP **PP 15 37 01.0 -1.2**
CLL *ex* x 15 37 16.0
CLL *e*S **SKSac 15 44 13.0 -1.2**
CLL *e*SS **SS 15 49 36.0 +6.0**
CLL *e*SSS SSS 15 53 18.0
CLL *e*SSSS 15 55 30.0
CLL AMS AMS 16 14 00.0
KBN Korca 82.53 311 IAMs_20 IAMs_20 16 14 48.0
comp=Z,2µm,19.0s
PUK Puka 82.53 313 IAMs_20 IAMs_20 16 14 40.9
comp=Z,3µm,20.0s
HSKC Hora Svate Kat 82.59 322 *e*P **P 15 33 55.5 +1.3**
HSKC *ex* x 15 34 00.9
HSKC AMS AMS 16 14 20.0
comp=Z,12µm,12.6s
SUMG Summit 82.67 354 *i* P **P 15 33 53.0 -1.6**
YKA Yellowknife Ar 82.85 23 *i* P **P 15 33 54.5 -0.6**
YKA pmax pmax
comp=Z,17nm,0.8s
YKA Yellowknife Ar 82.85 23 P **P 15 33 54.6 -0.6**
comp=Z,16nm,0.8s,baz=315,slow=4.8,SNR=138
YKA LR LR 16 13 23.0
comp=Z,2µm,19.6s,baz=318,slow=38
comp=Z,16nm,0.8s
CKRC Cesky Krumlov 82.96 321 *e*P **P 15 34 00.7 +4.6**
CKRC *e*S **S 15 44 12.2 -2.4**
CKRC AMS AMS 16 14 10.0
comp=Z,7µm,13.8s
CKRC Cesky Krumlov 82.96 321 *e*P **P 15 34 00.7 +4.6**
CKRC *e* 15 44 12.2
CKRC MLR MLR
comp=Z,7µm,13.8s
ARSA Arzberg 82.98 319 *e*PcP **P 15 33 57.4 +1.1**
comp=Z,16nm,1.5s
KHC Kasperske Hory 83.23 321 *e*P **P 15 33 57.5 0.0**
KHC *e*S **S 15 44 15.6 -1.8**
KHC AMS AMS 16 14 00.0
comp=Z,9µm,13.9s
KHC Kasperske Hory 83.23 321 *ce*P **P 15 33 58.3 +0.8**
KHC pmax pmax
comp=Z,70nm,1.7s
KHC MLR MLR
comp=Z,9µm,14.0s
GERES GERESS Array B 83.30 321 P **P 15 33 57.3 -0.6**
GERES GERESS Array B 83.30 321 P **P 15 33 57.9 -0.1**
comp=Z,8.6nm,0.8s,baz=46,slow=5.8,SNR=29
GERES LR LR 16 14 56.8
comp=Z,4µm,19.2s,baz=56,slow=38
comp=Z,8.6nm,0.8s
NKC Novy Kostel 83.33 322 AMS AMS 16 14 40.0
comp=Z,11µm,13.1s
UPNV Upernavik 83.39 359 *i* P **P 15 33 53.5 -4.2**
UPNV IAmb IAmb 15 33 58.5
comp=Z,23nm,0.9s
MOA Molln 83.45 320 *e*PcP **P 15 33 59.8 +1.2**
comp=Z,26nm,1.1s,SNR=5.6
SOKA Soboth 83.55 318 *i* P **P 15 33 59.8 +0.5**
comp=Z,21nm,1.1s,SNR=5.1
BIOA Bad Ischl, Aus 83.89 320 *e*PcP **P 15 34 01.9 +1.0**
comp=Z,24nm,1.3s
OBKA Obir 83.92 318 *i* PcP **P 15 34 01.9 +0.7**
comp=Z,16nm,1.1s
GRA1 Grafenberg Arr 84.28 322 IAmb IAmb 15 34 10.8
comp=Z,71nm,1.3s
KBA Koelnbreinsper 84.37 319 *i* P **P 15 34 03.8 +0.3**
comp=Z,19nm,1.0s
SCTE Santa Cesarea 84.37 311 IAMs_20 IAMs_20 16 18 22.6
comp=Z,2µm,21.0s
MYKA Terra Mystica 84.41 319 *e*PcP **P 15 34 04.4 +0.8**
comp=Z,22nm,1.7s
PRED Cave del Predi 84.55 319 IAMs_20 IAMs_20 16 15 00.8
comp=Z,4µm,20.0s
LESA Schwarzleotal 84.59 320 *i* PcP **P 15 34 05.1 +0.5**
comp=Z,35nm,1.2s
SABO M.te Sabotino 84.75 318 IAMs_20 IAMs_20 16 16 34.6
comp=Z,5µm,20.0s
CLUD Cludinico 84.95 319 IAMs_20 IAMs_20 16 17 09.5
comp=Z,3µm,19.0s
ABTA Abfaltersbach 85.03 319 *i* P **P 15 34 06.3 -0.5**
comp=Z,25nm,1.1s
STAL STALIGIAL 85.15 319 IAmb IAmb 15 34 16.2
comp=Z,44nm,1.2s
KIBK Kibwezi 85.26 265 IAmb IAmb 15 34 10.9
comp=Z,43nm,1.0s
KIBK Kibwezi 85.26 265 P **P 15 34 09.7 +1.2**
SNR=8.7
WATA Walderalm 85.28 320 *i* PcP **P 15 34 08.7 +0.6**
comp=Z,16nm,1.0s
WTTA Wattenberg 85.28 320 *e*P **P 15 34 08.2 +0.1**
comp=Z,38nm,1.2s,SNR=6.8
LODK Lodwar 85.38 272 P **P 15 34 09.7 +0.6**
LODK Lodwar 85.38 272 P **P 15 34 10.4 +1.3**
MOTA Moosalm 85.56 320 *e*P **P 15 34 09.4 -0.1**
comp=Z,21nm,1.2s
SQTA Sankt Quirin 85.56 320 *i* PcP **P 15 34 10.1 +0.6**
comp=Z,28nm,1.1s,SNR=7.0

RETA Reutte 85.68 321 *e*PcP **P 15 34 10.2 +0.2**
comp=Z,12nm,1.6s
CTI Castel Tesino 85.90 319 IAMs_20 IAMs_20 16 19 09.4
comp=Z,3µm,19.0s
FETA Feichten 85.94 320 *i* PcP **P 15 34 12.3 +0.9**
comp=Z,17nm,1.1s,SNR=9.7
TIP Timpagrande 85.95 311 IAMs_20 IAMs_20 16 16 28.4
comp=Z,2µm,22.0s
VOI Vohitsoka 86.05 244 P **P 15 34 11.5 -0.7**
VOI IAmb IAmb 15 34 21.0
comp=Z,94nm,1.6s
VOI Vohitsoka 86.05 244 P **P 15 34 12.2 0.0**
ICESG Greenland Ices 86.14 353 *i* P **P 15 34 11.1 -1.0**
CUC Castrocucco 86.21 312 IAMs_20 IAMs_20 16 18 45.3
comp=Z,2µm,18.0s
DAVA Damuels 86.30 321 *i* PcP **P 15 34 13.8 +0.6**
comp=Z,16nm,1.1s
GUMA Gualdo di Mace 86.36 316 IAMs_20 IAMs_20 16 18 14.8
comp=Z,3µm,18.0s
FUORN Ofenpass-Fuorn 86.42 320 IAmb IAmb 15 34 29.0
comp=Z,53nm,1.4s
INTR Introdacqua 86.51 315 IAMs_20 IAMs_20 16 17 54.9
comp=Z,2µm,18.0s
FDMO Fiordimonte 86.53 316 IAMs_20 IAMs_20 16 18 21.3
comp=Z,3µm,19.0s
DAVOX Davos/Dischmat 86.56 320 LR LR 16 17 14.5
comp=Z,4µm,21.2s,baz=38,slow=39
BTNL Ternell 86.56 325 *d*PcP **P 15 34 15.0 +0.8**
CAMP Campotosto 86.57 315 IAMs_20 IAMs_20 16 17 45.5
comp=Z,3µm,19.0s
MEM Membach 86.62 325 *d*P **P 15 34 14.0 -0.4**
BFO Black Forest 86.62 322 P **P 15 34 14.5 -0.1**
BFO IAmb IAmb 15 34 23.6
comp=Z,62nm,1.7s
BFO Black Forest 86.62 322 P **P 15 34 14.5 -0.1**
BFO pmax pmax
comp=Z,62nm,1.7s
BEBN Eben Emael 86.68 325 *dx* x 15 34 21.6
BHOU Houvegnez 86.76 325 *dx* x 15 34 15.0
BSTI Sart Tilman 86.86 325 *d*PcP **P 15 34 15.9 +0.3**
CEL Celeste 86.98 311 IAMs_20 IAMs_20 16 18 17.7
comp=Z,3µm,20.0s
BORG Borgarnes 86.98 345 LR LR 16 15 53.3
comp=Z,4µm,20.1s,baz=28,slow=38
CESX Cesi 87.06 316 IAMs_20 IAMs_20 16 18 57.4
comp=Z,3µm,19.0s
WLF Walferdange 87.07 324 *d*PcP **P 15 34 17.5 +0.8**
BCLA Clavier 87.09 325 *d*pP pP 15 34 19.5 -1.8
BGES Gesves 87.23 325 *d*PcP **P 15 34 17.9 +0.5**
RCHB Rochefort 87.28 325 *d*P **P 15 34 17.1 -0.5**
ECH Echery 87.34 323 IAMs_20 IAMs_20 16 16 34.3
comp=Z,4µm,21.0s
OSSC Osservatorio P 87.44 317 IAMs_20 IAMs_20 16 18 47.4
comp=Z,3µm,21.0s
BMRD Maredsous 87.44 325 *d*P **P 15 34 17.0 -1.4**
BMRD *d*PcP **PcP 15 34 19.0 -1.4**
BMRD *d*pP **pP 15 34 21.7 -1.2**
NLWA Neilton Lookou 87.60 38 IAMs_20 IAMs_20 16 21 01.6
comp=Z,2µm,18.0s
DOU Dourbes 87.65 325 *d*PcP **P 15 34 20.0 +0.6**
DOU *d*pP **PcP 15 34 22.6 +1.2**
EKA Eskdalemuir Ar 88.08 332 P **P 15 34 21.6 +0.2**
comp=Z,1.1nm,0.6s,baz=47,slow=3.1,SNR=2.1
comp=Z,1.1nm,0.6s
MSSA Maissana 88.09 318 IAMs_20 IAMs_20 16 19 04.4
comp=Z,2µm,19.0s
SENIN Lac Senin/Sane 88.29 321 P **P 15 34 23.1 +0.2**
VAE Valguarnera 88.38 311 LR LR 16 20 52.8
comp=Z,439nm,19.2s,baz=81,slow=40
RAR Rarotonga 88.54 114 LR LR 16 11 40.5
comp=Z,716nm,18.1s,baz=302,slow=34
SFJD Kangerlussuaq 89.04 357 LR LR 16 17 17.2
comp=Z,3µm,18.1s,baz=360,slow=38
DY2G Dye2 89.29 355 *i* P **P 15 34 25.9 -1.3**
HOOD Mount Hood Mea 90.04 39 P **P 15 34 31.2 +0.2**
SSB Saint Sauveur 90.49 321 IAMs_20 IAMs_20 16 18 15.8
comp=Z,3µm,19.0s
G06A Carlson Farm, 90.67 39 P **P 15 34 34.4 +0.5**
NEW Newport 90.77 35 IAMs_20 IAMs_20 16 22 09.7
comp=Z,2µm,19.0s
NEW Newport 90.77 35 P **P 15 34 34.3 0.0**
baz=309
MBAR Mbarara 91.23 270 P **P 15 34 36.6 -0.5**
MBAR Mbarara 91.23 270 *ce*P **P 15 34 38.2 +1.1**
MBAR pmax pmax
comp=Z,15nm,1.3s
MBAR Mbarara 91.23 270 LR LR 16 17 24.3
comp=Z,643nm,18.6s,baz=42,slow=37
MBAR Mbarara 91.23 270 P **P 15 34 37.6 +0.5**
YBH Yreka Blue Hor 91.45 43 IAmb IAmb 15 34 51.9
comp=Z,45nm,1.2s
YBH Yreka Blue Hor 91.45 43 LR LR 16 11 58.6
comp=Z,342nm,20.2s,baz=320,slow=33
J05D Fort Rock, OR 91.46 41 P **P 15 34 38.0 +0.3**
FRB Frobisher Bay 92.10 5 LR LR 16 19 49.5
comp=Z,3µm,19.6s,baz=350,slow=38
KEST Kesra 92.78 311 P **P 15 34 44.6 +0.8**
comp=Z,7.5nm,0.8s,baz=358,slow=6.1,SNR=3.7
KEST LR LR 16 23 09.3
comp=Z,1µm,18.1s,baz=342,slow=40
comp=Z,7.5nm,0.8s
KEST Kesra 92.78 311 P **P 15 34 44.1 +0.3**
BMO Blue Mountains 92.79 38 IAmb IAmb 15 34 52.5
comp=Z,44nm,1.3s
BMO IAMs_20 IAMs_20 16 24 01.4
comp=Z,2µm,18.0s
FFC Flin Flon 93.00 24 P **P 15 34 43.5 -0.9**
FFC Flin Flon 93.00 24 IAMs_20 IAMs_20 16 19 06.7
comp=Z,2µm,20.0s
FFC Flin Flon 93.00 24 P **P 15 34 43.5 -0.9**
FFC pmax pmax
comp=Z,76nm,1.3s
FFC MLR MLR
comp=Z,2µm,20.0s
ORV Oroville 93.45 44 IAmb IAmb 15 34 55.1
comp=Z,44nm,1.4s
WVOR Wild Horse Val 93.50 40 IAMs_20 IAMs_20 16 23 41.6
comp=Z,1µm,19.0s
AFDM Forest Hills D 94.13 44 P **P 15 34 49.4 -0.5**
AFDM IAmb IAmb 15 35 00.3
comp=Z,23nm,1.1s
MFID Camas Ranch 94.52 38 IAmb IAmb 15 35 02.8
comp=Z,27nm,1.2s
EGMT Eagleton 94.64 32 IAMs_20 IAMs_20 16 19 07.7
comp=Z,1µm,18.0s
EGMT Eagleton 94.64 32 P **P 15 34 52.2 +0.1**
baz=314
PAHR Pah Rah Range 94.68 43 IAmb IAmb 15 35 01.5
comp=Z,49nm,1.3s
CMB Columbia Colle 95.04 45 IAmb IAmb 15 35 02.8
comp=Z,31nm,1.1s
YERR Yerington 95.20 43 P **P 15 34 54.0 -1.1**
YERR IAmb IAmb 15 35 04.9
comp=Z,62nm,1.5s
HLID Hailey 95.21 37 P **P 15 34 54.4 -0.6**
baz=310
BOZ Bozeman (W) 95.36 35 IAMs_20 IAMs_20 16 21 15.2
comp=Z,2µm,19.0s
BOZ Bozeman (W) 95.36 35 P **P 15 34 55.8 +0.2**
baz=313
PPT Papeete 95.77 107 LR LR 16 10 15.3
comp=Z,992nm,21.8s,baz=294,slow=31
PPT2 Papeete2 95.78 107 *e*P **P 15 34 54.0 -3.8**
comp=Z,110nm,26.8s
PPT2 Papeete2 95.78 107 *e*PP **PP 15 38 43.2 -6.7**
PPT2 comp=Z,57nm,23.8s *e*S **S 15 46 14.0 -1.5**
PPT2 comp=Z,719nm,27.5s *e*SS **SS 15 52 40.2 -5.4**
comp=Z,411nm,24.5s
PPT2 Papeete2 95.78 107 *e*LR LR 16 05 53.0
comp=Z,3µm,25.2s
PPT2 *e*LR LR 16 06 00.0
comp=Z,4µm,23.2s
KVN Kaiserville 95.87 43 IAmb IAmb 15 35 08.0
comp=Z,71nm,1.7s
YHL Hebgen Lake 96.10 35 P **P 15 34 59.8 +0.6**
YHL IAmb IAmb 15 35 07.5
comp=Z,24nm,1.1s
YHL IAMs_20 IAMs_20 16 26 19.9
comp=Z,2µm,18.0s
MLAC Mammoth, Mammo 96.26 44 P **P 15 34 59.7 -0.3**
baz=307
YNM Yellowstone No 96.43 35 IAMs_20 IAMs_20 16 27 02.6
comp=Z,2µm,21.0s
YNR Norris Junctio 96.45 35 IAMs_20 IAMs_20 16 22 45.1
comp=Z,2µm,18.0s

ELK Elko 96.55 40 LR LR 16 17 39.0
comp=Z,457nm,19.7s,baz=338,slow=35
YMP Mirror Lake Pl 96.71 34 IAMs_20 IAMs_20 16 25 39.8
comp=Z,2µm,18.0s
H17A Grant Village 96.73 35 P **P** **15 35 04.0 +2.0**
baz=313
FLWY Flagg Ranch 96.88 35 IAMs_20 IAMs_20 16 26 39.3
comp=Z,2µm,18.0s
SMMC Simmler 96.88 47 P **P** **15 35 04.5 +1.9**
baz=306
DGMT Dagmar 96.88 29 IAMs_20 IAMs_20 16 18 20.7
comp=Z,2µm,20.0s
DGMT Dagmar 96.88 29 P **P** **15 35 03.4 +1.1**
baz=319
RLMT Red Lodge 96.90 34 IAMs_20 IAMs_20 16 24 35.8
comp=Z,2µm,18.0s
RLMT Red Lodge 96.90 34 P **P** **15 35 02.1 -0.6**
baz=314
DSP Deep Springs 96.97 44 P **P** **15 35 03.0 +0.2**
DSP IAmb IAmb 15 35 13.1
comp=Z,36nm,1.6s
TPAW Teton Pass 97.15 36 IAMs_20 IAMs_20 16 25 16.5
comp=Z,2µm,18.0s
PKM Mcpherson Peak 97.25 47 P Pdif 15 35 06.2 +1.6
baz=306
LOHW Long Hollow 97.25 35 IAMs_20 IAMs_20 16 27 31.2
comp=Z,2µm,18.0s
SNOW Snow King Moun 97.27 36 IAMs_20 IAMs_20 16 27 17.9
comp=Z,2µm,19.0s
LAO LASA Array 97.27 31 IAMs_20 IAMs_20 16 25 01.3
comp=Z,2µm,18.0s
LAO LASA Array 97.27 31 P Pdif 15 35 05.5 +1.3
baz=317
CWC Cottonwood Cre 97.46 45 P Pdif 15 35 06.5 +1.0
baz=307
GMN Gold Mountain 97.46 44 IAmb IAmb 15 35 15.3
comp=Z,24nm,1.7s
AHID Auburn Hatcher 97.56 36 IAMs_20 IAMs_20 16 25 29.5
comp=Z,2µm,18.0s
SBC Santa Barbara 97.57 47 P Pdif 15 35 05.9 +0.2
baz=306
BGU Big Grassy Mou 97.71 39 IAMs_20 IAMs_20 16 27 23.9
comp=Z,1µm,19.0s
R11B Troy Canyon, C 97.85 42 P **P** **15 35 07.0 -0.1**
baz=309
MPMC Manual Prospec 98.07 45 P Pdif 15 35 09.6 +1.4
baz=308
HWUT Hardware Ranch 98.08 37 IAMs_20 IAMs_20 16 27 30.5
comp=Z,2µm,18.0s
TBI Tubuai 98.11 112 *e*S **S** **15 46 36.1 +0.9**
comp=Z,3µm,29.0s
TBI *e*SS **SS** **15 53 14.6 -3.8**
comp=Z,2µm,34.8s
TBI eLQ LQ 16 02 46.4
comp=Z,3µm,27.0s
TBI eLR LR 16 06 56.8
comp=Z,6µm,25.8s
TBI eLR LR 16 06 56.8
comp=Z,2µm,31.2s
FURC Furnace Creek, 98.22 44 P Pdif 15 35 10.5 +1.9
baz=308
LRMC Laurel Mtn Rad 98.30 45 P Pdif 15 35 09.8 +0.7
baz=307
DUG Dugway, Tooele 98.31 39 P Pdif 15 35 11.2 +2.1
baz=311
TPNV Topopah Spring 98.31 43 P Pdif 15 35 10.8 +1.7
baz=309
BW06 Boulder Array 98.38 36 IAMs_20 IAMs_20 16 24 03.3
comp=Z,2µm,18.0s
BW06 Boulder Array 98.38 36 P Pdif 15 35 11.0 +1.5
baz=314
PDAR Pinedale Array 98.38 36 P **P** **15 35 08.7 -0.7**
PDAR Pinedale Array 98.38 36 P Pdif 15 35 10.0 +0.5
comp=Z,0.8nm,0.7s,baz=80,slow=1.4,SNR=7.6
comp=Z,0.8nm,0.7s
EDW2 Edwards Air Fo 98.45 46 P Pdif 15 35 11.5 +1.8
baz=307
CART Cartagena 98.47 318 IAMs_20 IAMs_20 16 22 52.8
comp=Z,2µm,21.0s
CTU Camp Tracy 98.59 38 IAMs_20 IAMs_20 16 27 20.1
comp=Z,2µm,18.0s
ULM Lac du Bonnet 98.83 23 IAMs_20 IAMs_20 16 22 55.6
comp=Z,2µm,19.0s
ULM Lac du Bonnet 98.83 23 P Pdif 15 35 11.8 +0.8
comp=Z,5.9nm,1.0s,baz=328,slow=5.1,SNR=7.0
ULM LR LR 16 23 06.2
comp=Z,2µm,18.3s,baz=349,slow=37
comp=Z,5.9nm,1.0s
ES17 SONSECA Array 98.88 321 IAMs_20 IAMs_20 16 28 05.6
comp=Z,2µm,20.0s
ESDC Sonseca Array 98.89 321 LR LR 16 24 51.5
comp=Z,1µm,18.7s,baz=36,slow=38
ES16 SONSECA Array 98.90 321 IAMs_20 IAMs_20 16 24 44.1
comp=Z,2µm,18.0s
ES13 SONSECA Array 98.91 321 IAMs_20 IAMs_20 16 26 03.3
comp=Z,2µm,20.0s
GSC Goldstone, Bar 98.97 45 P Pdif 15 35 12.8 +0.7
baz=308
BFSC Mount Baldy Ra 99.06 46 P **Pdif** **15 35 12.2 -0.3**
baz=307
MPU Maple Canyon 99.11 39 IAMs_20 IAMs_20 16 28 59.9
comp=Z,1µm,19.0s
BSUT Blindstream Ca 99.25 38 IAMs_20 IAMs_20 16 27 11.6
comp=Z,1µm,19.0s
MDND Maddock 99.32 27 IAMs_20 IAMs_20 16 26 04.2
comp=Z,2µm,19.0s
LSZ Lusaka 99.32 257 P **Pdif** **15 35 12.4 -1.4**
LSZ IAmb IAmb 15 35 27.0
comp=Z,28nm,1.6s
LSZ IAMs_20 IAMs_20 16 17 05.6
comp=Z,2µm,21.0s
LSZ Lusaka 99.32 257 P **Pdif** **15 35 12.5 -1.4**
LSZ pmax pmax
comp=Z,28nm,1.6s
LSZ Lusaka 99.32 257 LR LR 16 20 31.6
comp=Z,1µm,18.6s,baz=77,slow=36
LSZ Lusaka 99.32 257 P **Pdif** **15 35 13.4 -0.5**
TUQ Turquoise Moun 99.46 44 P **Pdif** **15 35 16.4 +2.1**
baz=309
HEC Hector Ludlow 99.57 45 P **Pdif** **15 35 16.7 +2.0**
baz=308
E28A Huff 99.86 28 IAMs_20 IAMs_20 16 23 09.6
comp=Z,2µm,19.0s
RDMU Red Mountain 99.89 37 IAMs_20 IAMs_20 16 28 14.4
comp=Z,2µm,18.0s
GMRC Granite Mounta 100.03 45 P **Pdif** **15 35 17.5 +0.6**
baz=309
K22A Casper 100.05 34 IAMs_20 IAMs_20 16 29 15.3
comp=Z,1µm,18.0s
P18A Preston Nutter 100.16 38 IAMs_20 IAMs_20 16 28 54.6
comp=Z,2µm,19.0s
RSSD Black Hills 100.20 32 IAMs_20 IAMs_20 16 27 35.0
comp=Z,1µm,19.0s
RSSD Black Hills 100.20 32 P **Pdif** **15 35 17.7 +0.2**
baz=318
PFO Pinyon Flats O 100.23 46 P **Pdif** **15 35 18.8 +1.1**
baz=308
TPFO Pinon Flats 100.24 46 P **Pdif** **15 35 18.4 +0.6**
baz=308
PKCU Pink Cliffs 100.42 41 IAMs_20 IAMs_20 16 24 50.7
comp=Z,1µm,19.0s
AGMN Agassiz Nation 100.44 25 IAMs_20 IAMs_20 16 25 22.6
comp=Z,2µm,18.0s
AGMN Agassiz Nation 100.44 25 P **Pdif** **15 35 18.8 +0.7**
baz=326
IRM Iron Mountain 100.75 45 P **Pdif** **15 35 21.5 +1.6**
baz=309
TAOE Nuku Hiva Isla 100.85 95 eLR LR 16 08 21.2
comp=Z,1µm,21.4s
D32A Dogwood Acres, 100.94 26 IAMs_20 IAMs_20 16 29 12.0
comp=Z,2µm,19.0s
B35A Bob, Littlefor 101.18 23 IAMs_20 IAMs_20 16 24 18.0
comp=Z,2µm,19.0s
BLYC Blythe 101.41 45 IAMs_20 IAMs_20 16 21 05.6
comp=Z,2µm,20.0s
N23A Red Feather La 101.61 35 IAMs_20 IAMs_20 16 23 30.8
comp=Z,2µm,20.0s
WUAZ Wupatki 102.25 42 IAMs_20 IAMs_20 16 31 03.5
comp=Z,1µm,19.0s
SUSD Miller 102.29 29 IAMs_20 IAMs_20 16 25 25.9
comp=Z,2µm,19.0s
SUSD Miller 102.29 29 P **Pdif** **15 35 29.2 +2.7**
baz=322
SMCO Snowmass 102.29 37 IAMs_20 IAMs_20 16 23 18.9
comp=Z,1µm,22.0s
ISCO Idaho Springs 102.58 36 IAMs_20 IAMs_20 16 26 21.4
comp=Z,2µm,20.0s
BRIGG Briggsdale 102.69 34 IAMs_20 IAMs_20 16 31 23.0
comp=Z,2µm,18.0s
F36A Milaca 103.35 25 IAMs_20 IAMs_20 16 27 17.7
comp=Z,2µm,19.0s
K30B Basset 103.39 30 IAMs_20 IAMs_20 16 30 03.2
comp=Z,2µm,18.0s
S22A 4UR Ranch, Cre 103.39 38 IAMs_20 IAMs_20 16 27 33.1
comp=Z,1µm,19.0s
Q24A Divide 103.43 36 IAMs_20 IAMs_20 16 26 30.1
comp=Z,1µm,19.0s
E38A The Farm, Brul 103.45 23 IAMs_20 IAMs_20 16 28 53.0
comp=Z,2µm,20.0s
W18A Petrified Fore 103.52 41 IAMs_20 IAMs_20 16 31 47.9
comp=Z,2µm,19.0s
214A Organ Pipe Nat 103.66 46 IAMs_20 IAMs_20 16 28 56.3
comp=Z,1µm,18.0s
X18A Snowflake 103.78 42 IAMs_20 IAMs_20 16 32 25.0
comp=Z,1µm,18.0s
ECSD EROS Data Cent 103.87 28 IAMs_20 IAMs_20 16 31 07.5
comp=Z,2µm,19.0s
D41A Chassel 104.07 21 IAMs_20 IAMs_20 16 26 09.4
comp=Z,2µm,20.0s
SDCO Great Sand Dun 104.12 37 IAMs_20 IAMs_20 16 25 24.4
comp=Z,2µm,21.0s
SPMN Marine on St. 104.16 24 IAMs_20 IAMs_20 16 24 17.1
comp=Z,2µm,20.0s
COWI Conover 104.72 22 IAMs_20 IAMs_20 16 28 36.6
comp=Z,2µm,19.0s
KSCO Kaye Shedlock' 104.72 34 IAMs_20 IAMs_20 16 30 08.1
comp=Z,2µm,21.0s
BGNE Belgrade 105.06 30 IAMs_20 IAMs_20 16 32 43.3
comp=Z,2µm,18.0s
E43A Lone Tree Farm 105.18 20 IAMs_20 IAMs_20 16 30 54.6
comp=Z,1µm,18.0s
AVE Averroes 105.22 318 IAMs_20 IAMs_20 16 28 43.6
comp=Z,2µm,19.0s
F42A Maple Grove Fa 105.36 21 IAMs_20 IAMs_20 16 26 29.4
comp=Z,2µm,19.0s
L34A Svendsen Farm, 105.40 29 IAMs_20 IAMs_20 16 32 19.3
comp=Z,2µm,19.0s
ANMO Albuquerque 105.58 40 IAMs_20 IAMs_20 16 29 15.2
comp=Z,1µm,19.0s
N33A J Bar K, Exete 105.91 30 IAMs_20 IAMs_20 16 33 23.9
comp=Z,1µm,19.0s
Y22D IRIS PASSCAL I 105.92 40 IAMs_20 IAMs_20 16 32 22.4
comp=Z,1µm,19.0s
E46A Sault Ste Mari 106.00 18 IAMs_20 IAMs_20 16 30 15.2
comp=Z,2µm,19.0s
VLDQ Val d'Or 106.10 13 IAMs_20 IAMs_20 16 29 50.4
comp=Z,2µm,18.0s
319A Douglas 106.31 44 IAMs_20 IAMs_20 16 34 06.2
comp=Z,1µm,19.0s
K38A Parkersburg 106.35 26 IAMs_20 IAMs_20 16 26 18.0
comp=Z,2µm,19.0s
121A Cooks Peak, D 106.46 42 IAMs_20 IAMs_20 16 33 30.0
comp=Z,1µm,19.0s
N35A Tabor 106.62 29 IAMs_20 IAMs_20 16 32 50.6
comp=Z,2µm,22.0s
SCIA State Center 106.79 27 IAMs_20 IAMs_20 16 31 33.7
comp=Z,2µm,19.0s
G45A Suttons Bay 106.80 20 IAMs_20 IAMs_20 16 32 13.3
comp=Z,2µm,18.0s
R32A Long Quarter, 107.14 32 IAMs_20 IAMs_20 16 31 19.8
comp=Z,2µm,18.0s
L40A Anamoose 107.45 25 IAMs_20 IAMs_20 16 25 22.2
comp=Z,2µm,20.0s
I45A Fountain 107.51 21 IAMs_20 IAMs_20 16 31 17.3
comp=Z,2µm,18.0s
KSU1 Kansas State U 107.61 30 IAMs_20 IAMs_20 16 34 26.8
comp=Z,2µm,18.0s
N38A Joes South For 107.71 27 IAMs_20 IAMs_20 16 32 37.3
comp=Z,2µm,19.0s
MSTX Muenster 108.39 38 IAMs_20 IAMs_20 16 31 52.5
comp=Z,1µm,19.0s
OK035 E0210 Rd and N 108.48 33 IAMs_20 IAMs_20 16 33 56.3
comp=Z,2µm,20.0s
TRQ Mont Tremblant 108.48 12 IAMs_20 IAMs_20 16 31 23.2
comp=Z,2µm,19.0s
MNTX Cornudas Mount 108.50 41 IAMs_20 IAMs_20 16 32 37.1
comp=Z,2µm,21.0s
P38A Dawn 108.56 28 IAMs_20 IAMs_20 16 25 37.7
comp=Z,2µm,21.0s
L44A Lake County Fo 108.58 23 IAMs_20 IAMs_20 16 25 20.9
comp=Z,2µm,21.0s
U32A Winter Ranch, 108.59 34 IAMs_20 IAMs_20 16 34 58.2
comp=Z,2µm,18.0s
OK038 West end E0370 108.64 34 IAMs_20 IAMs_20 16 33 26.6
comp=Z,2µm,18.0s
OK032 Salt Plains WL 108.66 33 IAMs_20 IAMs_20 16 31 08.8
comp=Z,2µm,19.0s
J47A Sumner 108.68 20 IAMs_20 IAMs_20 16 24 34.2
comp=Z,2µm,22.0s
N41A Harden Midland 108.75 26 IAMs_20 IAMs_20 16 27 46.7
comp=Z,2µm,21.0s
SADO Sadowa 108.87 16 IAMs_20 IAMs_20 16 30 40.6
comp=Z,2µm,18.0s
CROK Carrier 109.00 33 IAMs_20 IAMs_20 16 30 28.0
comp=Z,1µm,20.0s
M44A Midewin, Midew 109.23 23 IAMs_20 IAMs_20 16 32 26.1
comp=Z,2µm,19.0s
P40A Paris 109.26 27 IAMs_20 IAMs_20 16 28 15.3
comp=Z,2µm,21.0s
L46A Eue Claire 109.29 22 IAMs_20 IAMs_20 16 33 34.6
comp=Z,2µm,20.0s
MNTQ Montreal, Queb 109.35 11 IAMs_20 IAMs_20 16 28 09.1
comp=Z,2µm,20.0s
T35A Sooner Cattle 109.40 32 IAMs_20 IAMs_20 16 31 59.5
comp=Z,2µm,18.0s
DELO Deloro Mine 109.47 15 IAMs_20 IAMs_20 16 33 35.4
comp=Z,2µm,18.0s
WBO Williamsburg 109.52 13 IAMs_20 IAMs_20 16 32 25.5
comp=Z,1µm,18.0s
OK051 E0350 and S346 109.57 32 IAMs_20 IAMs_20 16 35 02.9
comp=Z,2µm,21.0s
OK029 Liberty Lake 109.82 33 IAMs_20 IAMs_20 16 30 35.8
comp=Z,2µm,19.0s
OK033 Mehan 109.88 33 IAMs_20 IAMs_20 16 35 13.3
comp=Z,2µm,18.0s
AAM Ann Arbor 109.89 20 IAMs_20 IAMs_20 16 33 19.2
comp=Z,2µm,20.0s
WMOK Wichita Mounta 109.97 35 IAMs_20 IAMs_20 16 35 59.0
comp=Z,2µm,18.0s
OK052 Battle Ridge R 109.99 33 IAMs_20 IAMs_20 16 30 21.1
comp=Z,2µm,18.0s
FRNY Flat Rock 110.00 12 IAMs_20 IAMs_20 16 31 48.2
comp=Z,2µm,18.0s
LONY Lake Ozonia 110.02 12 IAMs_20 IAMs_20 16 32 30.9
comp=Z,2µm,18.0s
TSUM Tsumeb 110.18 257 IAMs_20 IAMs_20 16 29 41.3
comp=Z,1µm,19.0s
P43A Skaggs, Pawnee 110.19 25 IAMs_20 IAMs_20 16 27 04.7
comp=Z,2µm,22.0s
S39A Bolivar 110.25 29 IAMs_20 IAMs_20 16 29 50.7
comp=Z,2µm,20.0s
FNO Franklin 110.28 33 IAMs_20 IAMs_20 16 33 39.8
comp=Z,2µm,18.0s
J54A Appleton 110.40 16 IAMs_20 IAMs_20 16 27 44.3
comp=Z,2µm,19.0s
SFIN Lafayette 110.46 23 IAMs_20 IAMs_20 16 32 58.5
comp=Z,2µm,18.0s
N47A Urbana 110.51 22 IAMs_20 IAMs_20 16 34 09.7
comp=Z,2µm,18.0s
MEDO Medina 110.55 16 IAMs_20 IAMs_20 16 31 24.1
comp=Z,2µm,20.0s
TUL3 Leonard 110.55 32 IAMs_20 IAMs_20 16 32 44.0
comp=Z,2µm,19.0s
J55A Hilton 110.61 15 IAMs_20 IAMs_20 16 31 31.7
comp=Z,2µm,19.0s
VT1 Waterbury 110.64 11 IAMs_20 IAMs_20 16 32 36.5
comp=Z,2µm,19.0s
NCB Newcomb 110.71 12 IAMs_20 IAMs_20 16 32 59.2
comp=Z,2µm,18.0s
RLO Rose Lookout 110.71 31 IAMs_20 IAMs_20 16 33 49.1
comp=Z,3µm,20.0s
SLM Saint Louis 110.77 26 IAMs_20 IAMs_20 16 30 26.1
comp=Z,2µm,19.0s
U38A Gravette 110.79 31 IAMs_20 IAMs_20 16 35 46.2
comp=Z,2µm,18.0s
J56A Wolcott 110.82 14 IAMs_20 IAMs_20 16 33 50.3
comp=Z,2µm,20.0s
CCM Cathedral Cave 110.84 27 IAMs_20 IAMs_20 16 29 12.2
comp=Z,2µm,20.0s
N49A Columbus Grove 110.97 21 IAMs_20 IAMs_20 16 33 21.0
comp=Z,2µm,18.0s
Q44A Meyer Farm, Va 111.02 25 IAMs_20 IAMs_20 16 31 53.7
comp=Z,2µm,20.0s
P46A Rosedale 111.09 24 IAMs_20 IAMs_20 16 32 41.3
comp=Z,2µm,19.0s
HHAR Hobbs 111.13 30 IAMs_20 IAMs_20 16 31 06.0
comp=Z,2µm,19.0s
ERPA Erie 111.13 17 IAMs_20 IAMs_20 16 31 37.7
comp=Z,2µm,20.0s
ABTX Abilene, Hawle 111.13 37 IAMs_20 IAMs_20 16 35 36.9
comp=Z,2µm,18.0s
MGMO Mountain Grove 111.16 29 IAMs_20 IAMs_20 16 36 03.7
comp=Z,2µm,18.0s
TXAR Lajitas Array 111.22 42 PKiKP **PKiKP** **15 40 06.8 +1.3**
comp=Z,1.0nm,0.8s,baz=264,slow=1.3,SNR=5.2
WVNY West Valley, N 111.22 16 IAMs_20 IAMs_20 16 33 14.0
comp=Z,2µm,18.0s
FVM French Village 111.25 27 IAMs_20 IAMs_20 16 37 19.8
comp=Z,2µm,18.0s
O48B Farmland 111.25 22 IAMs_20 IAMs_20 16 34 22.3
comp=Z,2µm,18.0s
M52A Chesterland 111.28 18 IAMs_20 IAMs_20 16 35 43.8
comp=Z,2µm,18.0s
HNH Hanover 111.33 11 IAMs_20 IAMs_20 16 29 17.4
comp=Z,2µm,21.0s
ACCN Adirondack Com 111.39 12 IAMs_20 IAMs_20 16 25 48.1
comp=Z,2µm,19.0s
N51A Ashland 111.55 20 IAMs_20 IAMs_20 16 30 17.0
comp=Z,2µm,19.0s
O49A Covington 111.58 21 IAMs_20 IAMs_20 16 34 53.2
comp=Z,2µm,21.0s
HPIG 111.64 45 IAMs_20 IAMs_20 16 30 24.5
comp=Z,1µm,19.0s
FW03 Perrin-Whitt E 111.66 35 IAMs_20 IAMs_20 16 34 15.8
comp=Z,1µm,20.0s
BLO Bloomington 111.73 23 IAMs_20 IAMs_20 16 33 29.2
comp=Z,2µm,21.0s
Z35A Perchaven, San 111.86 35 IAMs_20 IAMs_20 16 32 21.0
comp=Z,2µm,19.0s
SIUC Southern Illin 111.97 26 IAMs_20 IAMs_20 16 34 45.8
comp=Z,2µm,19.0s
S44A Carbondale 111.97 26 IAMs_20 IAMs_20 16 35 04.0
comp=Z,2µm,18.0s
FW06 Azle 111.98 35 IAMs_20 IAMs_20 16 33 30.2
comp=Z,2µm,19.0s
ACSO Alum Creek Sta 111.98 20 IAMs_20 IAMs_20 16 34 32.6
comp=Z,2µm,18.0s
TRY Troy 112.02 12 IAMs_20 IAMs_20 16 26 45.8
comp=Z,2µm,22.0s
BINY Binghamton 112.04 14 IAMs_20 IAMs_20 16 34 05.6
comp=Z,2µm,18.0s
M55A Ridgway 112.06 17 IAMs_20 IAMs_20 16 35 21.2
comp=Z,2µm,18.0s
FW07 Weatherford 112.07 35 IAMs_20 IAMs_20 16 33 29.6
comp=Z,1µm,20.0s
CGM3 Cape Girardeau 112.15 27 IAMs_20 IAMs_20 16 38 02.6
comp=Z,2µm,19.0s
L59A Walton 112.26 13 IAMs_20 IAMs_20 16 32 10.3
comp=Z,2µm,19.0s
PBMO Poplar Bluff 112.27 28 IAMs_20 IAMs_20 16 33 36.9
comp=Z,1µm,19.0s
FCAR Ozark Folk Cen 112.28 29 IAMs_20 IAMs_20 16 34 48.4
comp=Z,2µm,18.0s
K62A Royalston 112.35 11 IAMs_20 IAMs_20 16 28 41.4
comp=Z,2µm,20.0s
USIN University of 112.36 25 IAMs_20 IAMs_20 16 35 32.1
comp=Z,2µm,19.0s
O52A Adamsville 112.45 19 IAMs_20 IAMs_20 16 34 20.8
comp=Z,2µm,18.0s
L61B Northampton 112.47 12 IAMs_20 IAMs_20 16 26 10.8
comp=Z,2µm,22.0s
LCAR Lake Charles 112.56 29 IAMs_20 IAMs_20 16 36 22.6
comp=Z,2µm,18.0s
HRV Adam Dziewonsk 112.62 11 IAMs_20 IAMs_20 16 33 34.6
comp=Z,2µm,18.0s
P51A Williamsport 112.64 21 IAMs_20 IAMs_20 16 34 54.0
comp=Z,2µm,18.0s
WCI Wyandotte Cave 112.65 24 IAMs_20 IAMs_20 16 34 25.5
comp=Z,2µm,19.0s
JCT Junction City 112.66 38 IAMs_20 IAMs_20 16 36 10.6
comp=Z,1µm,19.0s
WHAR Wooly Hollow 112.70 30 IAMs_20 IAMs_20 16 37 36.6
comp=Z,2µm,18.0s
KSPA Keystone Colle 112.70 14 IAMs_20 IAMs_20 16 34 09.1
comp=Z,2µm,20.0s
P52A Corning 112.80 20 IAMs_20 IAMs_20 16 33 46.1
comp=Z,2µm,19.0s
WHTX Lake Whitney, 112.80 36 IAMs_20 IAMs_20 16 36 41.9
comp=Z,2µm,20.0s
T45A Paducah 112.80 26 IAMs_20 IAMs_20 16 35 36.9
comp=Z,2µm,18.0s
PVMO Portageville 112.89 27 IAMs_20 IAMs_20 16 30 32.2
comp=Z,2µm,21.0s
Q51A Peebles 112.96 21 IAMs_20 IAMs_20 16 31 32.6
comp=Z,2µm,19.0s
HICK Hickman 112.97 27 IAMs_20 IAMs_20 16 35 22.5
comp=Z,2µm,18.0s
R49A Shelbyville 113.00 23 IAMs_20 IAMs_20 16 32 51.7
comp=Z,2µm,20.0s
SSPA Standing Stone 113.07 16 IAMs_20 IAMs_20 16 34 01.9
comp=Z,2µm,18.0s
Z38A Mt. Pleasant 113.07 33 IAMs_20 IAMs_20 16 34 11.9
comp=Z,2µm,18.0s
PEBM Pemiscott Bayo 113.07 28 IAMs_20 IAMs_20 16 37 33.2
comp=Z,2µm,18.0s
X40A Basin Creek Fa 113.11 31 IAMs_20 IAMs_20 16 37 41.7
comp=Z,2µm,18.0s
GNAR Gosnell 113.13 28 IAMs_20 IAMs_20 16 33 52.8
comp=Z,2µm,19.0s
P53A Whipple 113.16 19 IAMs_20 IAMs_20 16 29 18.6
comp=Z,1µm,20.0s
GLAT Glass 113.18 27 IAMs_20 IAMs_20 16 35 29.0
comp=Z,2µm,18.0s
UTMT University of 113.29 27 IAMs_20 IAMs_20 16 32 33.8
comp=Z,1µm,19.0s
Q52A Bidwell 113.37 20 IAMs_20 IAMs_20 16 31 58.3
comp=Z,1µm,20.0s
HALT Halls 113.47 27 IAMs_20 IAMs_20 16 38 19.6
comp=Z,2µm,18.0s
YLE Yale 113.52 12 IAMs_20 IAMs_20 16 34 43.6
comp=Z,2µm,19.0s
PAL Palisades 113.63 13 IAMs_20 IAMs_20 16 36 44.5
comp=Z,2µm,19.0s
WLAR White Oak Lake 113.64 31 IAMs_20 IAMs_20 16 33 15.7
comp=Z,2µm,18.0s
237A Washetta, Mont 113.66 34 IAMs_20 IAMs_20 16 39 04.5
comp=Z,2µm,22.0s
N62A Caumsett State 113.79 13 IAMs_20 IAMs_20 16 32 21.8
comp=Z,1µm,20.0s
HDBT Hernando Brdge 113.81 28 IAMs_20 IAMs_20 16 32 05.7
comp=Z,2µm,22.0s
CPNY Central Park 113.83 13 IAMs_20 IAMs_20 16 34 52.7
comp=Z,2µm,21.0s
QSPA South Pole Qui 113.86 180 PKiKP **PKiKP** **15 40 09.2 0.0**
comp=Z,4.5nm,1.1s,baz=89,slow=1.3,SNR=4.9
R53A Hurricane 114.04 20 IAMs_20 IAMs_20 16 32 28.2
comp=Z,2µm,20.0s
T50A Nancy 114.25 23 IAMs_20 IAMs_20 16 34 03.9
comp=Z,2µm,20.0s
WUPA West Chester U 114.29 15 IAMs_20 IAMs_20 16 35 09.1
comp=Z,1µm,20.0s
U49A Red Boiling Sp 114.35 24 IAMs_20 IAMs_20 16 29 26.8
comp=Z,2µm,20.0s
NATX Nacogdoches, 114.44 34 IAMs_20 IAMs_20 16 34 59.1
comp=Z,1µm,19.0s
SDMD Soldier's Deli 114.49 16 IAMs_20 IAMs_20 16 37 14.5
comp=Z,1µm,20.0s
833A Chaparral WMA, 114.51 40 IAMs_20 IAMs_20 16 36 33.8
comp=Z,2µm,18.0s
CLTN Cedars of Leba 114.52 25 IAMs_20 IAMs_20 16 34 53.1
comp=Z,1µm,20.0s
OXF Oxford 114.63 28 IAMs_20 IAMs_20 16 31 39.5
comp=Z,2µm,19.0s
735A Kenedy 115.02 38 IAMs_20 IAMs_20 16 32 20.1
comp=Z,2µm,18.0s
143A Socs Landing, 115.26 31 IAMs_20 IAMs_20 16 32 42.5
comp=Z,2µm,20.0s
SWET Sewanee 115.44 25 IAMs_20 IAMs_20 16 34 54.6
comp=Z,2µm,19.0s
CBN Corbin Frederi 115.49 17 IAMs_20 IAMs_20 16 33 46.0
comp=Z,1µm,19.0s
BLA Blacksburg 115.55 20 IAMs_20 IAMs_20 16 30 40.9
comp=Z,2µm,20.0s
X48A Hartselle 115.67 26 IAMs_20 IAMs_20 16 35 28.8
comp=Z,1µm,20.0s
W50A Signal Mountai 115.69 24 IAMs_20 IAMs_20 16 36 52.2
comp=Z,2µm,18.0s
U54A Nelsons Funny 115.74 21 IAMs_20 IAMs_20 16 38 49.1
comp=Z,2µm,18.0s
CPCT Cooper Cave 115.76 24 IAMs_20 IAMs_20 16 35 01.0
comp=Z,2µm,20.0s
VBMS Vicksburg 116.07 30 IAMs_20 IAMs_20 16 33 23.9
comp=Z,2µm,18.0s
W52A Murphy 116.30 23 IAMs_20 IAMs_20 16 33 29.2
comp=Z,2µm,19.0s

X51A	**Calhoun**	**116.42**	**24**	IAMs_20	IAMs_20	16 38 04.7	
	comp=Z,1µm,19.0s						
ZAIG	**Zacatecas**	**116.55**	**46**	IAMs_20	IAMs_20	16 39 09.6	
	comp=Z,1µm,19.0s						
V55A	**Taylorsville**	**116.55**	**21**	IAMs_20	IAMs_20	16 34 41.5	
	comp=Z,2µm,20.0s						
T59A	**Double "B" Far**	**116.60**	**17**	IAMs_20	IAMs_20	16 36 46.6	
	comp=Z,2µm,18.0s						
T60A	**Surry**	**116.66**	**17**	IAMs_20	IAMs_20	16 36 23.1	
	comp=Z,2µm,20.0s						
LRAL	**Lakeview Retre**	**116.92**	**27**	IAMs_20	IAMs_20	16 30 53.9	
	comp=Z,1µm,20.0s						
U59A	**Littleton**	**117.11**	**18**	IAMs_20	IAMs_20	16 39 41.2	
	comp=Z,2µm,18.0s						
Y52A	**Lilburn**	**117.35**	**24**	IAMs_20	IAMs_20	16 39 10.0	
	comp=Z,2µm,18.0s						
Z51A	**Franklin**	**117.41**	**25**	IAMs_20	IAMs_20	16 39 59.8	
	comp=Z,2µm,19.0s						
250A	**Grady**	**118.14**	**27**	IAMs_20	IAMs_20	16 40 01.4	
	comp=Z,2µm,18.0s						
Y57A	**Sumter**	**118.50**	**21**	IAMs_20	IAMs_20	16 35 59.1	
	comp=Z,2µm,18.0s						
352A	**Blakely**	**119.12**	**26**	IAMs_20	IAMs_20	16 37 11.3	
	comp=Z,2µm,20.0s						
MOIG	**Morelia**	**119.61**	**48**	IAMs_20	IAMs_20	16 41 36.0	
	comp=Z,2µm,18.0s						
DBIC	**Dimbokro**	**119.70**	**293**	IAMs_20	IAMs_20	16 39 20.7	
	comp=Z,1µm,21.0s						
DBIC	**Dimbokro**	**119.70**	**293**	PKP	**PKiKP**	**15 40 22.0**	**0.0**
	comp=Z,5.8nm,0.8s,baz=252,slow=1.2,SNR=5.3						
UNM	**Universidad Na**	**121.20**	**46**	IAMs_20	IAMs_20	16 38 16.1	
	comp=Z,934nm,19.0s						
TLIG	**Tlapa**	**122.86**	**47**	IAMs_20	IAMs_20	16 45 24.1	
	comp=Z,1µm,18.0s						
BELA	**Belgrano 2**	**125.00**	**186**		**PKPdf**	**15 40 28.4**	**-1.8**
SOR	**Soroa**	**127.55**	**29**	IAMs_20	IAMs_20	16 43 50.7	
	comp=Z,2µm,18.0s						
CCIG	**Comitan**	**127.97**	**43**	IAMs_20	IAMs_20	16 39 59.7	
	comp=Z,1µm,22.0s						
CAMR	**Camarioca**	**128.02**	**27**	IAMs_20	IAMs_20	16 45 12.0	
	comp=Z,3µm,20.0s						
PETF	**Flores**	**128.85**	**40**	IAMs_20	IAMs_20	16 49 35.9	
	comp=Z,2µm,19.0s						
ESQI	**Esquipulas**	**131.00**	**42**	IAMs_20	IAMs_20	16 40 30.0	
	comp=Z,904nm,21.0s						
SNET	**Serv Nac Est T**	**131.75**	**42**	IAMs_20	IAMs_20	16 50 38.8	
	comp=Z,983nm,21.0s						
TGUH	**Tegucigalpa,Un**	**132.63**	**40**	IAMs_20	IAMs_20	16 49 31.9	
	comp=Z,991nm,19.0s						
BOAB	**BOACO BROADBAND**	**134.85**	**39**	IAMs_20	IAMs_20	16 51 52.7	
	comp=Z,2µm,20.0s						
ORTG	**Ortega, Santa**	**136.63**	**41**	IAMs_20	IAMs_20	16 54 31.0	
	comp=Z,991nm,22.0s						
UUPR	**Utuado, UPR, P**	**137.12**	**12**	IAMs_20	IAMs_20	16 46 13.5	
	comp=Z,1µm,21.0s						
CRPR	**Cabo Rojo, PR**	**137.28**	**13**	IAMs_20	IAMs_20	16 42 00.9	
	comp=Z,1µm,22.0s						
CELP	**Cerrillos**	**137.32**	**12**	IAMs_20	IAMs_20	16 46 45.8	
	comp=Z,1µm,19.0s						
MLPR	**Magueyes Islan**	**137.33**	**12**	IAMs_20	IAMs_20	16 42 04.2	
	comp=Z,1µm,22.0s						
OBIP	**Obispado Ponce**	**137.34**	**12**	IAMs_20	IAMs_20	16 39 24.5	
	comp=Z,965nm,19.0s						
SJG	**San Juan**	**137.36**	**11**	IAMs_20	IAMs_20	16 41 38.0	
	comp=Z,1µm,22.0s						
HUMP	**Col San Antoni**	**137.38**	**11**	IAMs_20	IAMs_20	16 41 54.5	
	comp=Z,1µm,22.0s						
IGPR	**InterUniversit**	**137.51**	**11**	IAMs_20	IAMs_20	16 46 48.9	
	comp=Z,1µm,20.0s						
JACO	**JACO, Garabito**	**137.66**	**41**	IAMs_20	IAMs_20	16 49 19.3	
	comp=Z,888nm,19.0s						
SMRT	**St. Maarten**	**137.87**	**7**	IAMs_20	IAMs_20	16 44 25.0	
	comp=Z,1µm,20.0s						
LCR2	**La Lucha 2**	**137.98**	**40**	IAMs_20	IAMs_20	16 53 45.8	
	comp=Z,1µm,19.0s						
SRBA	**San Rafael, Bu**	**138.77**	**40**	IAMs_20	IAMs_20	16 53 10.5	
	comp=Z,1µm,19.0s						
PMSA	**Palmer Station**	**139.12**	**176**	PKPdf	**PKPdf**	**15 40 56.1**	**-1.0**
BRU2	**Volcan**	**139.51**	**39**	IAMs_20	IAMs_20	16 54 32.1	
	comp=Z,1µm,20.0s						
CDITO	**Canoas**	**139.58**	**40**	IAMs_20	IAMs_20	16 54 49.1	
	comp=Z,1µm,19.0s						
UREC	**San Jos de Ur**	**144.12**	**30**	*e*P	**PKPab**	**15 41 02.6**	**-2.6**
DBBC	**Dabeiba**	**144.44**	**32**	*e*P	**PKPab**	**15 41 04.6**	**-1.9**
SDV	**Santo Domingo**	**145.06**	**22**		**PKPbc**	**15 41 07.0**	**-1.8**
SDV	**Santo Domingo**	**145.06**	**22**	*e*P	**PKPbc**	**15 41 06.6**	**-2.3**
CBOC	**Ciudad Bolivar**	**145.54**	**33**	*e*P	**PKPdf**	**15 41 09.2**	**-1.2**
PTBC	**PUERTO BERRIO**	**145.68**	**30**	*e*P	**PKPdf**	**15 41 08.6**	**-1.8**
PAMC	**Pamplona, Colo**	**145.72**	**26**	*e*P	**PKPdf**	**15 41 08.6**	**-2.5**
BARC	**Barichara**	**146.19**	**28**	*e*P	**PKPbc**	**15 41 12.6**	**+0.1**
PLMC	**San Jos del P**	**146.23**	**34**	*e*P	**PKPdf**	**15 41 10.6**	**-0.8**
GUY2C	**Guyana, Caldas**	**146.41**	**32**	*e*P	**PKPdf**	**15 41 10.6**	**-1.7**
MALC	**Bahia Malaga**	**146.43**	**36**	*e*P	**PKPbc**	**15 41 12.6**	**-0.3**
SPBC	**San Pablo de B**	**146.64**	**30**	*e*P	**PKPdf**	**15 41 12.6**	**+0.5**
GR1C	**Gorgona, Isla**	**146.80**	**39**	*e*P	**PKPdf**	**15 41 10.6**	**-1.7**
ROSC	**El Rosal**	**147.24**	**31**	PKPbc	**PKPbc**	**15 41 16.6**	**+0.8**
	comp=Z,21nm,0.8s,baz=348,slow=6.0,SNR=11						
ROSC	**El Rosal**	**147.24**	**31**	*e*P	**PKiKP**	**15 41 18.6**	**+0.5**
JAMC	**Jamundi, Valle**	**147.45**	**36**	*e*P	**PKPdf**	**15 41 12.6**	**-1.1**
ORTC	**Ortega, Tolima**	**147.60**	**33**	*e*P	**PKPdf**	**15 41 12.6**	**-1.1**
CVER	**Cruz Verde, Cu**	**147.64**	**31**	*e*P	**PKPdf**	**15 41 14.6**	**+0.3**
PRAC	**Prado**	**147.95**	**33**	*e*P	**PKPbc**	**15 41 16.6**	**-0.7**
POPC	**Popayan, Colom**	**148.01**	**37**	*e*P	**PKPdf**	**15 41 14.6**	**0.0**
BBAC	**Balboa, Cauca**	**148.12**	**38**	*e*P	**PKPbc**	**15 41 16.6**	**-1.4**
VILC	**Villavicencio,**	**148.18**	**30**	*e*P	**PKPbc**	**15 41 18.6**	**+0.6**
CRUC	**La Cruz**	**148.66**	**38**	*e*P	**PKPbc**	**15 41 19.6**	**0.0**
CMBC	**Cumbal**	**148.67**	**40**	*e*P	**PKPdf**	**15 41 16.6**	**+0.6**
GCUF	**Volcan Galeras**	**148.72**	**39**	*e*P	**PKPdf**	**15 41 16.6**	**+0.5**
OTAV	**Otavalo**	**148.85**	**42**	PKPbc	**PKPbc**	**15 41 19.4**	**-0.8**
OTAV	**Otavalo**	**148.85**	**42**	IAMs_20	IAMs_20	16 56 04.1	
	comp=Z,1µm,19.0s						
OTAV	**Otavalo**	**148.85**	**42**	PKP2	**PKPbc**	**15 41 19.4**	**-0.8**
OTAV				MLR	MLR		
	comp=Z,1µm,19.0s						
OTAV	**Otavalo**	**148.85**	**42**	*e*P	**PKPbc**	**15 41 18.6**	**-1.6**
TULM	**Tulcn-Chalpat**	**148.87**	**40**	IAMs_20	IAMs_20	16 58 23.4	
	comp=Z,1µm,18.0s						
TULM	**Tulcn-Chalpat**	**148.87**	**40**	*e*P	**PKPbc**	**15 41 20.6**	**+0.4**
GARC	**Garzon, Huila**	**148.95**	**35**	*e*P	**PKPbc**	**15 41 18.6**	**-1.5**
PULU	**Pululahua**	**148.99**	**42**	PKPbc	**PKPbc**	**15 41 19.8**	**-0.6**
BONI	**La Bonita**	**149.23**	**40**	*e*P	**PKPdf**	**15 41 18.6**	**+2.0**
CHSH	**Refugio Sur-Vo**	**149.92**	**45**	IAMs_20	IAMs_20	16 53 29.0	
	comp=Z,1µm,21.0s						
PIAT	**Ana Tenorio**	**149.93**	**43**	*e*P	**PKPbc**	**15 41 22.6**	**-0.2**
ARNL	**Arenillas**	**150.64**	**49**	IAMs_20	IAMs_20	16 57 35.6	
	comp=Z,864nm,22.0s						
PTLC	**Puerto Leguiza**	**151.01**	**36**	*e*P	**PKiKP**	**15 41 26.6**	**+1.2**
MCRA	**Macar, Loja**	**151.30**	**50**	PKPbc	**PKPbc**	**15 41 23.9**	**-1.7**
MCRA	**Macar, Loja**	**151.30**	**50**	*e*P	**PKPbc**	**15 41 22.6**	**-3.0**
BOAV	**Boa Vista**	**153.60**	**5**	PKPbc	**PKPbc**	**15 41 28.7**	**-1.9**
BOAV	**Boa Vista**	**153.60**	**5**	*e*P	**PKiKP**	**15 41 32.6**	**+1.8**
CZSB	**Cruzeiro do Su**	**158.61**	**43**	IAMs_20	IAMs_20	17 00 23.0	
	comp=Z,1µm,21.0s						
CZSB	**Cruzeiro do Su**	**158.61**	**43**	*e*P	PKPdf	15 41 12.6	-17
MACA	**Manacapuru-AM**	**159.07**	**7**	IAMs_20	IAMs_20	16 55 53.1	
	comp=Z,1µm,22.0s						
PLCA	**Paso Flores**	**160.41**	**151**	PKPab	**PKPab**	**15 42 13.2**	**+1.4**
	comp=Z,2.6nm,1.0s,baz=206,slow=7.0,SNR=5.1						
ETMB	**Extrema**	**163.89**	**30**	PKPdf	**PKPdf**	**15 41 34.8**	**-0.3**
ETMB				PKPab	**PKPab**	**15 42 25.9**	**-1.5**
SAML	**Samuel**	**164.22**	**18**		**PKPdf**	**15 41 34.4**	**-1.0**
SAML				PKPab	**PKPab**	**15 42 26.8**	**-2.1**
SAML	**Samuel**	**164.22**	**18**	PKP2	**PKPab**	**15 42 26.8**	**-2.1**
SAML						16 41 34.4	
CPUP	**Villa Florida**	**177.62**	**199**	PKP	**PKPdf**	**15 41 42.3**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=118,slow=5.9,SNR=2.8						

TAP 07 15:23:06.7,24.11N×121.71E,h11km,ML4.4,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**305**	*i* P	Pg	15 23 09.6	+0.3
	baz=303						
ETL				*i* S	Sg	15 23 11.1	-0.1
	baz=303						
TWD	**Chiawan**	**0.10**	**255**	*i* P	Pg	15 23 09.7	+0.4
	baz=264						
TWD				*i* S	Sg	15 23 11.6	+0.2
	baz=264						
NACB	**Ninganchiao**	**0.12**	**304**	⇓*i* P	Pg	15 23 09.9	+0.3
	baz=303						
NACB				*i* S	Sg	15 23 11.9	+0.1
	baz=303						
HWA	**Hwalien**	**0.16**	**215**	*e*P	Pb	15 23 11.6	0.0
	baz=223						
EHP	**Heping Village**	**0.21**	**9**	*i* P	Pg	15 23 11.4	+0.3
	baz=8.0						
EHP				*i* S	Sg	15 23 15.0	+0.9
	baz=8.0						
EAHA	**Aohua**	**0.22**	**8**	*i* P	Pg	15 23 11.7	+0.3
	baz=5.0						
EAHA				*i* S	Sg	15 23 15.2	+0.6
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.23**	**296**	*i* P	Pg	15 23 11.9	+0.5
	baz=296						
ETLH				*i* S	Sg	15 23 15.6	+0.9
	baz=296						
ETM	**Tongmen**	**0.24**	**234**	*e*P	Pg	15 23 12.2	+0.6
	baz=237						
ETM				*e*S	Sg	15 23 15.6	+0.6
	baz=237						
LXIB	**Xiulin Townshi**	**0.28**	**252**	P	Pg	15 23 13.0	+0.5
	baz=245						
LXIB				*i* S	Sg	15 23 17.1	+0.8
	baz=245						
ENA	**Nanau**	**0.32**	**6**	*i* P	Pg	15 23 13.5	+0.3
	baz=5.0						
ENA				S	Sg	15 23 17.9	+0.4
	baz=5.0						
SHUL	**Shoufeng**	**0.34**	**202**	*e*P	Pb	15 23 15.1	+0.2
	baz=191						
EWUT	**Wuta**	**0.34**	**11**	P	Pg	15 23 14.0	+0.4
	baz=8.0						
EWUT				*e*S	Sg	15 23 19.1	+1.0
	baz=8.0						
ESL	**Shilin**	**0.38**	**221**	*e*P	Pb	15 23 15.0	-0.5
	baz=229						
WHF	**Hehuan Shan**	**0.40**	**276**	*e*P	Pb	15 23 15.7	-0.5
	baz=276						
WHF				S	Sg	15 23 21.0	+0.8
	baz=276						
TEGC	**Jichi Village**	**0.42**	**201**	*e*P	Pb	15 23 15.9	-0.3
	baz=190						
NNSB	**Datong**	**0.43**	**318**	*i* P	Pg	15 23 15.8	+0.5
	baz=316						
NNSB				*i* S	Sg	15 23 21.8	+0.7
	baz=316						
NNSH	**Datong**	**0.43**	**318**	P	Pg	15 23 15.9	+0.6
	baz=315						
NNSH				S	Sg	15 23 21.9	+0.8
	baz=315						
FUSS	**Fushou**	**0.44**	**289**	P	Pb	15 23 16.2	-0.5
	baz=288						
NNS	**Nan Shan**	**0.45**	**318**	P	Pg	15 23 16.1	+0.6
	baz=317						
NNS				*i* S	Sg	15 23 22.4	+0.8
	baz=317						
LATG	**Datong**	**0.46**	**339**	P	Pg	15 23 16.1	+0.4
	baz=336						
LATG				*e*S	Sb	15 23 22.9	-0.8
	baz=336						
ESAO	**Su ao**	**0.48**	**15**	*e*P	Pg	15 23 16.6	+0.4
	baz=6.0						
WARBT	**Fenglin Townsh**	**0.48**	**217**	P	Pb	15 23 17.0	-0.3
	baz=226						
WARBT				*e*S	Sb	15 23 24.5	+0.1
	baz=226						
CHGB	**Renai**	**0.49**	**265**	*e*P	Pb	15 23 16.9	-0.6
	baz=257						
CHGB				*e*S	Sg	15 23 25.3	+0.8
	baz=257						
EGFH	**Guangfu**	**0.50**	**210**	*e*P	Pb	15 23 17.5	-0.1
	baz=222						
TWT	**Tachien**	**0.51**	**287**	*e*P	Pb	15 23 18.0	+0.2
	baz=286						
TWT				*e*S	Sb	15 23 24.9	-0.3
	baz=286						
OWD	**Renai**	**0.51**	**253**	*e*P	Pb	15 23 17.6	-0.2
	baz=255						
TWC	**Suao**	**0.52**	**15**	*e*P	Pb	15 23 17.8	0.0
	baz=7.0						
TDCB	**Techi**	**0.52**	**286**	P	Pb	15 23 17.6	-0.3
	baz=286						
TDCB				*e*S	Sg	15 23 24.5	+0.7
	baz=286						
NDT	**Datong Townshi**	**0.52**	**341**	*e*P	Pg	15 23 17.4	+0.5
	baz=337						
NDS	**Dongshan**	**0.53**	**1**	P	Pb	15 23 17.7	-0.2
	baz=357						
NDS				*e*S	Sb	15 23 24.8	-0.8
	baz=357						
ENTT	**Nioudou**	**0.55**	**347**	*e*P	Pb	15 23 18.2	-0.2
	baz=344						
ENTT				*e*S	Sg	15 23 25.3	+0.7
	baz=344						
WUSB	**Renai**	**0.55**	**258**	*e*P	Pg	15 23 17.8	+0.4
	baz=260						
TWE	**Neicheng**	**0.61**	**357**	*e*P	Pb	15 23 19.6	+0.2
	baz=356						
TWE				*e*S	Sb	15 23 27.7	-0.4
	baz=356						
YHNB	**Yeheng**	**0.64**	**332**	*e*P	Pb	15 23 20.1	+0.1
	baz=330						
YHNB				S	Sb	15 23 28.4	-0.5
	baz=330						
NSK	**Sanguang**	**0.65**	**331**	*e*P	Pb	15 23 20.5	+0.3
	baz=329						
NSK				*e*S	Sb	15 23 28.8	-0.4
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.66**	**351**	*e*P	Pg	15 23 19.7	+0.2
	baz=348						
FUSB				S	Sb	15 23 29.2	-0.3
	baz=348						
HGSD	**Ruisui**	**0.66**	**203**	*e*P	Pb	15 23 21.1	+0.8
	baz=194						
WPL	**Puli Township**	**0.69**	**262**	*e*P	Pg	15 23 20.0	-0.1
	baz=254						
WPL				*e*S	Sb	15 23 30.3	0.0
	baz=254						
EHY	**Hungye**	**0.69**	**211**	*e*P	Pb	15 23 21.1	+0.2
	baz=212						
NWLT	**Wulai**	**0.69**	**345**	*e*P	Pb	15 23 20.9	0.0
	baz=329						
NWLT				*e*S	Sb	15 23 30.0	-0.5
	baz=329						
WHP	**Taichung City**	**0.71**	**284**	*e*P	Pb	15 23 21.6	+0.4
	baz=284						
DPDB	**Guoxing**	**0.71**	**264**	*e*P	Pn	15 23 22.3	-0.6
	baz=257						
DPDB				*e*S	Sn	15 23 32.9	-1.0
	baz=257						
WCS	**Beigang Elemen**	**0.73**	**266**	*e*P	Pb	15 23 21.4	-0.1
	baz=267						
NFF	**Wufeng Townshi**	**0.75**	**314**	*e*P	Pb	15 23 22.1	+0.3
	baz=313						
SSLB	**Suanglung**	**0.76**	**245**	*e*P	Pg	15 23 21.6	+0.2
	baz=256						
SSLB				*e*S	Sb	15 23 32.6	+0.3
	baz=256						
SMLT	**Sun Moon Lake**	**0.77**	**253**	*e*P	Pg	15 23 21.7	+0.1
	baz=254						
YULB	**Yu-li**	**0.80**	**208**	*e*P	Pg	15 23 21.7	-0.5
	baz=221						
LIOB	**Emei**	**0.83**	**311**	*e*P	Pn	15 23 24.2	-0.2
	baz=309						
NSTT	**Nanjuang**	**0.83**	**309**	*e*P	Pn	15 23 23.8	-0.6
	baz=308						
TWF1	**Yuli**	**0.84**	**207**	*e*P	Pb	15 23 23.2	-0.1
	baz=219						
NJD	**Zhudong**	**0.84**	**318**	*e*P	Pn	15 23 24.8	+0.3
	baz=321						
TIPB	**Shuangxi**	**0.87**	**7**	*e*P	Pb	15 23 24.0	+0.1
	baz=354						
WHYT	**Xinyi Township**	**0.88**	**243**	*e*P	Pg	15 23 23.6	-0.1
	baz=244						
TWQ1	**Liyutan**	**0.88**	**286**	*e*P	Pn	15 23 26.2	+1.1
	baz=286						
TATO	**Taipei**	**0.89**	**347**	*e*P	Pg	15 23 23.7	-0.1
	baz=344						
HSN1	**Hsinchu**	**0.92**	**317**	*e*P	Pn	15 23 26.7	+1.2
	baz=315						
BACT	**New Taipei Cit**	**0.92**	**345**	*e*P	Pb	15 23 24.6	-0.1
	baz=341						
WWF	**Wufeng**	**0.92**	**266**	*e*P	Pn	15 23 26.1	+0.5
	baz=262						
TWB1	**Santiao Chiao**	**0.94**	**16**	*e*P	Pn	15 23 26.2	+0.4
	baz=6.0						
NMLH	**Miaoli**	**0.94**	**297**	*e*P	Pn	15 23 27.4	+1.6
	baz=297						
WJS	**Zhushan**	**0.94**	**253**	*e*P	Pn	15 23 26.4	+0.5
	baz=254						
NJN	**Zhunan**	**0.95**	**307**	*e*P	Pn	15 23 27.1	+1.1
	baz=306						
NWF	**Wu-fen Shan**	**0.96**	**4**	*e*P	Pn	15 23 26.7	+0.4
	baz=360						
WFSB	**Wu-fen Shan**	**0.96**	**4**	*e*P	Pn	15 23 26.7	+0.4
	baz=360						
SXI1	**Grass Mountain**	**1.00**	**9**	*e*P	Pn	15 23 27.0	+0.3
	baz=351						
WYL	**Yuanlin Townsh**	**1.04**	**262**	*e*P	Pn	15 23 27.4	+0.1
	baz=263						
TNOU	**National Taiwa**	**1.04**	**3**	*e*P	Pn	15 23 27.6	+0.3
	baz=359						
YM01	**YM01**	**1.04**	**353**	*e*P	Pn	15 23 28.0	+0.6
CHN5	**Tsauling**	**1.07**	**242**	*e*P	Pn	15 23 28.8	+1.0
	baz=244						
NHW	**Xinwu Township**	**1.08**	**326**	*e*P	Pn	15 23 29.5	+1.7
	baz=323						
ELDTW	**Lidau**	**1.11**	**215**	*e*P	Pn	15 23 28.3	-0.1
	baz=207						
STYT	**Tauyuan**	**1.28**	**223**	*e*P	Pg	15 23 32.7	+1.4
	baz=225						

JMA 07 15:23:20.9×0.2,38°2N×0°8×14°4E×,h38km,MV3.5/29, FAR E OFF NORTH HONSHU,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.38**	**293**	P	Pn	15 23 59.0	+1.8
OFUJ				*e*S	Sn	15 24 26.9	+1.7
JIKH	**Ishinomakikobu**	**2.39**	**274**	*i* P	Pn	15 23 58.7	+1.4
JIKH				S	Sn	15 24 26.6	+1.3
JKMT	**Kesennumamotoy**	**2.45**	**285**	P	Pn	15 23 59.7	+1.5
JKMT				*e*S	Sn	15 24 29.0	+2.2
JIO	**Ouri**	**2.49**	**277**	P	Pn	15 24 00.5	+1.7
JIO				S	Sn	15 24 29.5	+1.7
JMK	**Ichinoseki**	**2.67**	**287**	P	Pn	15 24 03.3	+2.0
JOM	**Ohasama**	**2.80**	**298**	P	Pn	15 24 04.9	+1.8
JOM				*e*S	Sn	15 24 38.0	+2.4
JANG	**Nango**	**3.17**	**314**	*e*P	Pn	15 24 09.7	+1.5
JYK	**Kaneyama**	**3.32**	**284**	*e*P	Pn	15 24 12.9	+2.7
JYK				*e*S	Sn	15 24 51.8	+3.4
JOTO	**OTAMA OYAMA**	**3.35**	**260**	P	Pn	15 24 13.1	+2.4
JOTO				S	Sn	15 24 51.9	+2.6
JCH	**Churui**	**4.49**	**349**	P	Pn	15 24 26.5	+0.2
JCH				*e*S	Sn	15 25 16.1	-1.2
JRY	**Ryogami san**	**4.97**	**246**	P	Pn	15 24 34.4	+1.4
JRY				*e*S	Sn	15 25 28.8	-0.4
JOD2	**Odawara 2**	**5.24**	**238**	*e*P	Pn	15 24 37.0	+0.4
JOD2				*e*S	Sn	15 25 35.0	-0.8
NEM2	**Nemuro 2**	**5.25**	**10**	*e*P	Pn	15 24 34.0	-2.7
NEM2				*e*S	Sn	15 25 30.3	-5.5
JTKR	**Abashiri--Toko**	**5.78**	**356**	*e*P	Pn	15 24 43.5	-0.5
JTKR				*e*S	Sn	15 25 44.9	-4.1

TAP 07 15:23:43.6,24.13N×121.72E,h11km,ML4.2,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**290**	P	Pg	15 23 46.3	+0.1
	baz=291						
ETL				S	Sg	15 23 48.0	-0.1
	baz=291						
TWD	**Chiawan**	**0.12**	**247**	*i* P	Pg	15 23 46.7	+0.2
	baz=256						
TWD				*i* S	Sg	15 23 48.8	+0.2
	baz=256						
NACB	**Ninganchiao**	**0.12**	**293**	⇓*i* P	Pg	15 23 46.7	+0.2
	baz=293						
NACB				*i* S	Sg	15 23 48.6	0.0
	baz=293						
HWA	**Hwalien**	**0.18**	**214**	*e*P	Pb	15 23 48.6	-0.3
	baz=222						
EHP	**Heping Village**	**0.18**	**7**	*i* P	Pg	15 23 47.9	+0.3
	baz=7.0						
EHP				*i* S	Sg	15 23 51.0	+0.7
	baz=7.0						
EAHA	**Aohua**	**0.20**	**6**	*i* P	Pg	15 23 48.2	+0.3
	baz=4.0						
EAHA				*e*S	Sg	15 23 51.4	+0.6
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.23**	**290**	*e*P	Pg	15 23 48.6	+0.2
	baz=291						
ETLH				S	Sg	15 23 52.1	+0.4
	baz=291						
ETM	**Tongmen**	**0.26**	**232**	*e*P	Pg	15 23 49.3	+0.4
	baz=236						
LXIB	**Xiulin Townshi**	**0.30**	**249**	*e*P	Pg	15 23 50.1	+0.5
	baz=251						
ENA	**Nanau**	**0.30**	**4**	*e*P	Pg	15 23 50.0	+0.4
	baz=4.0						
ENA				*e*S	Sg	15 23 54.2	+0.5
	baz=4.0						
EWUT	**Wuta**	**0.32**	**10**	*e*P	Pg	15 23 50.5	+0.5
	baz=8.0						
SHUL	**Shoufeng**	**0.37**	**203**	*e*P	Pb	15 23 52.4	+0.3
	baz=210						
ESL	**Shilin**	**0.41**	**220**	*e*P	Pb	15 23 52.4	-0.4
	baz=232						
WHF	**Hehuan Shan**	**0.41**	**273**	*e*P	Pg	15 23 52.2	+0.3
	baz=273						
WHF				S	Sg	15 23 57.5	+0.1
	baz=273						
NNSB	**Datong**	**0.43**	**315**	*e*P	Pb	15 23 52.8	-0.5
	baz=314						
NNSB				S	Sg	15 23 58.3	+0.6
	baz=314						
NNSH	**Datong**	**0.43**	**315**	*e*P	Pg	15 23 52.5	+0.4
	baz=313						
NNSH				S	Sg	15 23 58.3	+0.6
	baz=313	

YHNB				*e*S	Sg	15 24 04.6	+0.6		
	baz=329								
NSK	**Sanguang**	**0.64**	**329**	*e*P	Pb	15 23 56.7	-0.1		
	baz=328								
NSK				S	Sg	15 24 05.1	+0.7		
	baz=328								
FUSB	**Fushanzhiwuyua**	**0.64**	**349**	P	Pb	15 23 56.6	-0.2		
	baz=348								
FUSB				S	Sb	15 24 05.2	-0.7		
	baz=348								
NWLT	**Wulai**	**0.68**	**343**	*e*P	Pb	15 23 57.3	-0.2		
	baz=348								
NWLT				S	Sg	15 24 05.8	+0.2		
	baz=348								
WPL	**Puli Township**	**0.70**	**261**	*e*P	Pb	15 23 57.7	-0.2		
	baz=253								
WPL				*e*S	Sg	15 24 06.9	+0.5		
	baz=253								
EHY	**Hungye**	**0.72**	**210**	*e*P	Pb	15 23 58.0	-0.1		
	baz=213								
WHP	**Taichung City**	**0.72**	**282**	*e*P	Pb	15 23 57.9	-0.3		
	baz=282								
DPDB	**Guoxing**	**0.73**	**263**	*e*P	Pb	15 23 58.1	-0.2		
	baz=264								
WCS	**Beigang Elemen**	**0.74**	**265**	*e*P	Pg	15 23 58.0	+0.1		
	baz=266								
NFF	**Wufeng Townshi**	**0.74**	**313**	*e*P	Pg	15 23 58.1	+0.1		
	baz=306								
SSLB	**Suanglung**	**0.78**	**244**	*e*P	Pg	15 23 58.5	-0.1		
	baz=255								
SSLB				*e*S	Sg	15 24 09.0	+0.3		
	baz=255								
TYC	**Yuchr**	**0.82**	**254**	*e*P	Pb	15 23 59.8	0.0		
	baz=256								
LIOB	**Emei**	**0.82**	**309**	*e*P	Pb	15 24 00.3	+0.3		
	baz=309								
NSTT	**Nanjuang**	**0.82**	**308**	*e*P	Pb	15 24 00.4	+0.4		
	baz=308								
YULB	**Yu-li**	**0.83**	**208**	*e*P	Pb	15 24 00.1	+0.1		
	baz=222								
TIPB	**Shuangxi**	**0.85**	**7**	*e*P	Pb	15 24 00.7	+0.4		
	baz=355								
NHDH	**Xindian Distri**	**0.85**	**348**	*e*P	Pn	15 24 01.5	-0.1		
	baz=346								
NHDH				S	Sb	15 24 11.9	+0.1		
	baz=346								
TWA	**Mucha**	**0.86**	**352**	*e*P	Pn	15 24 01.1	-0.5		
	baz=350								
TWA				*e*S	Sb	15 24 12.1	0.0		
	baz=350								
TWF1	**Yuli**	**0.86**	**207**	*e*P	Pb	15 24 01.0	+0.4		
	baz=219								
TWQ1	**Liyutan**	**0.89**	**285**	*e*P	Pn	15 24 02.4	+0.3		
	baz=285								
HSN1	**Hsinchu**	**0.91**	**316**	*e*P	Pn	15 24 02.7	+0.3		
	baz=315								
TWB1	**Santiao Chiao**	**0.91**	**16**	*e*P	Pn	15 24 02.6	+0.2		
	baz=7.0								
TWB1				*e*S	Sb	15 24 13.9	+0.3		
	baz=7.0								
NSY	**Sanyi**	**0.92**	**288**	*e*P	Pn	15 24 03.0	+0.5		
	baz=289								
NMLH	**Miaoli**	**0.94**	**296**	*e*P	Pn	15 24 03.9	+1.1		
	baz=296								
SBCB	**Hsinchu**	**0.94**	**315**	*e*P	Pn	15 24 03.9	+1.1		
	baz=314								
NWF	**Wu-fen Shan**	**0.94**	**4**	*e*P	Pn	15 24 02.7	-0.1		
WFSB	**Wu-fen Shan**	**0.94**	**4**	*e*P	Pn	15 24 02.7	-0.1		
	baz=353								
WFSB				*e*S	Sb	15 24 14.4	-0.1		
	baz=353								
HSN	**Hsinchu**	**0.96**	**315**	*e*P	Pn	15 24 03.2	+0.2		
	baz=317								
SXI1	**Grass Mountain**	**0.97**	**8**	*e*P	Pb	15 24 02.8	+0.3		
	baz=357								
WNT	**Mingjian**	**0.98**	**256**	*e*P	Pn	15 24 03.5	+0.3		
	baz=250								
TWS1	**Kuangyinshan**	**1.01**	**344**	*e*P	Pn	15 24 04.2	+0.5		
	baz=350								
TWS1				*e*S	Sn	15 24 18.1	+0.2		
	baz=350								
ALS	**Alishan**	**1.04**	**234**	*e*P	Pn	15 24 04.1	-0.3		
	baz=237								
CHN5	**Tsauling**	**1.09**	**241**	*e*P	Pn	15 24 05.5	+0.6		
	baz=244								

TAP 07 15:24:04.2, 24.13N×121.71E, h8km, ML4.4, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**288**	*i* P	Pg	15 24 06.8	+0.4
	baz=288						
ETL				*i* S	Sg	15 24 08.5	+0.5
	baz=288						
NACB	**Ninganchiao**	**0.11**	**291**	ǁ *i* P	Pg	15 24 07.2	+0.4
	baz=285						
NACB				*i* S	Sg	15 24 09.2	+0.6
	baz=285						
TWD	**Chiawan**	**0.12**	**243**	ǁ *i* P	Pg	15 24 07.1	+0.2
	baz=251						
TWD				*i* S	Sg	15 24 09.1	+0.4
	baz=251						
EHP	**Heping Village**	**0.18**	**9**	ǁ *i* P	Pg	15 24 08.4	+0.4
	baz=9.0						
EHP				S	Sg	15 24 11.5	+1.0
	baz=9.0						
HWA	**Hwalien**	**0.18**	**212**	*e*P	Pg	15 24 09.1	+1.1
	baz=226						
EAHA	**Aohua**	**0.20**	**8**	*i* P	Pg	15 24 08.7	+0.4
	baz=5.0						
EAHA				S	Sg	15 24 11.8	+0.8
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.22**	**289**	*e*P	Pg	15 24 09.2	+0.5
	baz=290						
ETLH				*i* S	Sg	15 24 12.7	+0.8
	baz=290						
ETM	**Tongmen**	**0.26**	**230**	P	Pg	15 24 09.7	+0.3
	baz=234						
ETM				*e*S	Sg	15 24 13.8	+0.9
	baz=234						
LXIB	**Xiulin Townshi**	**0.29**	**248**	*e*P	Pg	15 24 10.4	+0.3
	baz=250						
LXIB				*e*S	Sg	15 24 14.8	+0.8
	baz=250						
ENA	**Nanau**	**0.29**	**5**	*i* P	Pg	15 24 10.4	+0.3
	baz=5.0						
ENA				S	Sg	15 24 14.6	+0.5
	baz=5.0						
EWUT	**Wuta**	**0.32**	**11**	*e*P	Pg	15 24 10.8	+0.3
	baz=9.0						
EWUT				*e*S	Sg	15 24 15.4	+0.7
	baz=9.0						
SHUL	**Shoufeng**	**0.37**	**202**	*e*P	Pb	15 24 12.8	-0.2
	baz=212						
SHUL				*e*S	Sb	15 24 20.6	+1.7
	baz=212						
ESL	**Shilin**	**0.41**	**219**	*e*P	Pg	15 24 12.3	+0.2
	baz=231						
ESL				*e*S	Sb	15 24 18.8	-1.2
	baz=231						
WHF	**Hehuan Shan**	**0.41**	**272**	*e*P	Pg	15 24 12.9	+0.6
	baz=272						
WHF				*e*S	Sg	15 24 18.2	+0.5
	baz=272						
NNSB	**Datong**	**0.42**	**315**	*i* P	Pg	15 24 13.1	+0.6
	baz=314						
NNSB				*i* S	Sg	15 24 19.0	+1.0
	baz=314						
NNSH	**Datong**	**0.42**	**315**	*e*P	Pg	15 24 13.2	+0.7
	baz=313						
NNSH				*e*S	Sg	15 24 18.9	+0.9
	baz=313						
LATG	**Datong**	**0.43**	**337**	*e*P	Pg	15 24 13.4	+0.6
	baz=335						
LATG				S	Sg	15 24 19.1	+0.6
	baz=335						
NNS	**Nan Shan**	**0.43**	**315**	P	Pg	15 24 13.2	+0.5
	baz=315						
NNS				*i* S	Sg	15 24 19.2	+0.8
	baz=315						
FUSS	**Fushou**	**0.44**	**285**	P	Pg	15 24 13.5	+0.6
	baz=286						
FUSS				*e*S	Sg	15 24 19.7	+1.0
	baz=286						
TEGC	**Jichi Village**	**0.45**	**200**	*e*P	Pb	15 24 14.3	-0.2
	baz=206						
ESAO	**Su ao**	**0.46**	**15**	*e*P	Pb	15 24 14.0	-0.6
	baz=12						
TWC	**Suao**	**0.49**	**15**	P	Pb	15 24 14.9	-0.2
	baz=14						
TWC				*e*S	Sg	15 24 21.3	+1.0
	baz=14						
CHGB	**Renai**	**0.50**	**262**	*e*P	Pg	15 24 14.5	+0.6
	baz=255						
CHGB				*e*S	Sg	15 24 20.9	+0.5
	baz=255						
NDS	**Dongshan**	**0.50**	**1**	*e*P	Pb	15 24 14.8	-0.5
	baz=358						
NDS				*e*S	Sg	15 24 21.5	+1.1
	baz=358						
NDT	**Datong Townshi**	**0.50**	**339**	*e*P	Pb	15 24 14.7	-0.7
	baz=337						
NDT				*e*S	Sb	15 24 21.8	-1.0
	baz=337						
TWT	**Tachien**	**0.50**	**284**	*e*P	Pb	15 24 15.0	-0.5
	baz=284						
TWT				S	Sb	15 24 22.1	-1.0
	baz=284						
WARBT	**Fenglin Townsh**	**0.51**	**216**	*e*P	Pb	15 24 15.2	-0.3
	baz=228						
WARBT				S	Sb	15 24 22.2	-0.8
	baz=228						
TDCB	**Techi**	**0.52**	**283**	*e*P	Pb	15 24 15.1	-0.6
	baz=284						
TDCB				S	Sg	15 24 22.1	+0.9
	baz=284						
OWD	**Renai**	**0.52**	**250**	*e*P	Pg	15 24 15.0	+0.6
	baz=253						
ENTT	**Nioudou**	**0.52**	**345**	P	Pb	15 24 15.1	-0.6
	baz=344						
ENTT				S	Sb	15 24 22.4	-1.1
	baz=344						
EGFH	**Guangfu**	**0.53**	**209**	*e*P	Pb	15 24 15.5	-0.3
	baz=224						
WUSB	**Renai**	**0.56**	**256**	*e*P	Pb	15 24 16.0	-0.4
	baz=257						
WUSB				*e*S	Sb	15 24 23.8	-0.8
	baz=257						
TWE	**Neicheng**	**0.59**	**356**	P	Pb	15 24 16.4	-0.3
	baz=356						
TWE				S	Sb	15 24 24.5	-0.8
	baz=356						
YHNB	**Yeheng**	**0.62**	**330**	*e*P	Pb	15 24 17.4	0.0
	baz=329						
YHNB				S	Sb	15 24 26.0	-0.2
	baz=329						
NSK	**Sanguang**	**0.63**	**329**	P	Pb	15 24 17.5	-0.1
	baz=329						
NSK				S	Sb	15 24 26.0	-0.6
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.63**	**350**	*i* P	Pg	15 24 16.8	+0.3
	baz=348						
FUSB				*i* S	Sb	15 24 26.0	-0.8
	baz=348						
NWLT	**Wulai**	**0.67**	**344**	*e*P	Pg	15 24 17.5	+0.3
	baz=329						
NWLT				*e*S	Sg	15 24 26.8	+0.8
	baz=329						
WPL	**Puli Township**	**0.70**	**260**	*e*P	Pb	15 24 18.4	-0.3
	baz=263						
DPDB	**Guoxing**	**0.72**	**262**	*e*P	Pb	15 24 18.7	-0.5
	baz=264						
NFF	**Wufeng Townshi**	**0.73**	**313**	*e*P	Pb	15 24 19.5	+0.2
	baz=312						
WCS	**Beigang Elemen**	**0.73**	**264**	*e*P	Pb	15 24 19.2	-0.1
	baz=266						
SSLB	**Suanglung**	**0.77**	**244**	*e*P	Pg	15 24 19.2	0.0
	baz=255						
SSLB				*e*S	Sg	15 24 29.6	+0.4
	baz=255						
SMLT	**Sun Moon Lake**	**0.78**	**252**	*e*P	Pb	15 24 20.5	+0.3
	baz=254						
LIOB	**Emei**	**0.81**	**309**	*e*P	Pn	15 24 21.4	-0.7
	baz=314						
NSTT	**Nanjuang**	**0.81**	**308**	*e*P	Pb	15 24 21.3	+0.6
	baz=307						
NJD	**Zhudong**	**0.83**	**317**	*e*P	Pn	15 24 22.3	+0.1
	baz=315						
YULB	**Yu-li**	**0.83**	**207**	*e*P	Pb	15 24 21.1	+0.2
	baz=222						
YULB				*e*S	Sb	15 24 32.8	+0.6
	baz=222						
TIPB	**Shuangxi**	**0.84**	**7**	*e*P	Pn	15 24 22.3	-0.1
	baz=347						
NHDH	**Xindian Distri**	**0.84**	**348**	*e*P	Pn	15 24 22.4	-0.1
	baz=345						
ECBN	**Changbin**	**0.85**	**196**	*e*P	Pn	15 24 22.0	-0.4
	baz=189						
TWA	**Mucha**	**0.85**	**352**	*e*P	Pb	15 24 21.8	+0.5
	baz=349						
EYUL	**Yuli**	**0.86**	**205**	*e*P	Pn	15 24 22.4	-0.2
	baz=225						
TATO	**Taipei**	**0.86**	**346**	*e*P	Pb	15 24 21.5	0.0
	baz=343						
TWF1	**Yuli**	**0.86**	**206**	*e*P	Pb	15 24 21.4	-0.2
	baz=223						
TWQ1	**Liyutan**	**0.88**	**284**	*e*P	Pn	15 24 22.9	-0.1
	baz=285						
BACT	**New Taipei Cit**	**0.90**	**344**	*e*P	Pb	15 24 22.1	+0.1
	baz=341						
HSN1	**Hsinchu**	**0.90**	**316**	*e*P	Pn	15 24 23.1	-0.2
	baz=315						
TWB1	**Santiao Chiao**	**0.91**	**16**	*e*P	Pn	15 24 23.3	0.0
	baz=4.0						
NSY	**Sanyi**	**0.91**	**288**	*e*P	Pn	15 24 23.9	+0.5
	baz=289						
TAP	**Taipei**	**0.92**	**348**	*e*P	Pb	15 24 22.9	+0.4
	baz=345						
WWF	**Wufeng**	**0.93**	**265**	*e*P	Pn	15 24 23.4	-0.2
	baz=262						
NMLH	**Miaoli**	**0.93**	**296**	*e*P	Pn	15 24 24.4	+0.7
	baz=303						
SBCB	**Hsinchu**	**0.93**	**315**	*e*P	Pn	15 24 23.5	-0.2
	baz=314						
NWF	**Wu-fen Shan**	**0.94**	**4**	*e*P	Pn	15 24 24.3	+0.5
	baz=353						
NWF				*e*S	Sb	15 24 35.1	-0.3
	baz=353						
WFSB	**Wu-fen Shan**	**0.94**	**4**	*e*P	Pn	15 24 24.1	+0.3
	baz=359						
HSN	**Hsinchu**	**0.95**	**315**	*e*P	Pn	15 24 24.3	+0.4
	baz=316						
WJS	**Zhushan**	**0.95**	**251**	*e*P	Pn	15 24 24.4	+0.5
	baz=247						
NCUH	**Zhongli**	**0.96**	**330**	*e*P	Pb	15 24 23.2	+0.1
	baz=328						
SXI1	**Grass Mountain**	**0.97**	**9**	*e*P	Pb	15 24 23.4	+0.1
	baz=350						
TWS1	**Kuangyinshan**	**1.00**	**345**	P	Pn	15 24 24.8	+0.2
	baz=343						
TWS1				S	Sn	15 24 38.5	-0.4
	baz=343						
WDJ	**Dajia District**	**1.00**	**283**	*e*P	Pn	15 24 25.5	+0.9
	baz=294						
WDJ				*e*S	Sn	15 24 41.1	+2.2
	baz=294						
FULB	**Fuli**	**1.01**	**202**	*e*P	Pg	15 24 23.3	-0.3
	baz=223						
TNOU	**National Taiwa**	**1.01**	**3**	*e*P	Pg	15 24 23.9	+0.1
	baz=359						
YM01	**YM01**	**1.02**	**353**	*e*P	Pb	15 24 24.5	+0.3
	baz=350						
YM01				*e*S	Sn	15 24 38.6	-0.8
	baz=350						
WYL	**Yuanlin Townsh**	**1.05**	**261**	*e*P	Pn	15 24 25.1	-0.1
	baz=254						
NTST	**Danshui**	**1.05**	**347**	*e*P	Pn	15 24 26.0	+0.7
	baz=343						
NHW	**Xinwu Township**	**1.06**	**325**	*e*P	Pg	15 24 23.9	-0.7
	baz=323						
ANP	**Anpu**	**1.06**	**351**	*e*P	Pn	15 24 25.5	0.0
	baz=347						
CHKT	**Chengkung**	**1.08**	**197**	*e*P	Pb	15 24 25.1	0.0
	baz=194						
CHN5	**Tsauling**	**1.09**	**241**	*e*P	Pn	15 24 24.4	-0.7
	baz=245						
ECS	**Chishang**	**1.13**	**204**	*e*P	Pn	15 24 27.5	+1.2
	baz=223						
ELDTW	**Lidau**	**1.14**	**214**	*e*P	Pg	15 24 25.1	-0.9
	baz=221						
WCKO	**Fanlu**	**1.23**	**236**	*e*P	Pb	15 24 27.6	-0.1
	baz=233						
WCKO				*e*S	Sn	15 24 47.0	+2.4
	baz=233						
YOJ	**Yonaguni jima**	**1.23**	**74**	*e*P	Pg	15 24 28.0	+0.2
	baz=55						
WRL	**Guolierlin Hig**	**1.24**	**260**	*e*P	Pg	15 24 28.3	+0.3
	baz=263						
RLNB	**Erlin**	**1.26**	**259**	P	Pg	15 24 28.4	0.0
	baz=261						
RLNB				S	Sn	15 24 48.2	+2.9
	baz=261						
CHN2	**Minshiung**	**1.28**	**242**	*e*P	Pg	15 24 29.4	+0.6
	baz=248						
STYH	**Taoyuan**	**1.29**	**222**	*e*P	Pn	15 24 25.9	-2.6
	baz=230						
CHN4	**Tsaushan**	**1.29**	**233**	*e*P	Pn	15 24 28.6	+0.1
	baz=240						
WTK	**Tuku**	**1.29**	**250**	*e*P	Pg	15 24 29.2	+0.2
	baz=254						
TPUB	**Ta-pu**	**1.29**	**230**	P	Pn	15 24 28.2	-0.5
	baz=226						
TPUB				*e*S	Sn	15 24 48.2	+2.1
	baz=226						
STYT	**Tauyuan**	**1.30**	**222**	*e*P	Pb	15 24 29.0	0.0
	baz=230						
WTCT	**Ta-ch'eng**	**1.33**	**259**	*e*P	Pn	15 24 29.3	+0.1
	baz=261						
WTP	**Ta-pu**	**1.34**	**229**	*e*P	Pn	15 24 29.1	-0.2
	baz=235						
TWK	**Hsinying**	**1.41**	**233**	*e*P	Pn	15 24 30.5	+0.1
	baz=228						
TWG	**Pinlang**	**1.43**	**204**	*e*P	Pn	15 24 29.6	-1.0
	baz=212						
TWGBT	**Beinan**	**1.43**	**204**	*e*P	Pn	15 24 29.2	-1.4
	baz=212						
SNST	**Tainan City**	**1.44**	**231**	*e*P	Pg	15 24 32.3	+0.5
	baz=227						
CHN1	**Nanshi**	**1.44**	**229**	*e*P	Pb	15 24 31.2	-0.1
	baz=237						
WSF	**Szhu**	**1.45**	**250**	*e*P	Pb	15 24 31.6	+0.1
	baz=254						
LDUT	**Ludao**	**1.47**	**189**	*e*P	Pn	15 24 30.2	-0.8
	baz=198						
SGST	**Jiashian**	**1.47**	**225**	*e*P	Pn	15 24 30.2	-0.9
	baz=232						
SLGT	**Liugui**	**1.50**	**221**	*e*P	Pn	15 24 31.8	+0.3
	baz=229						
ICHU	**Yijhu**	**1.52**	**240**	*e*P	Pb	15 24 32.5	-0.2
	baz=247						
CHN8	**Yiju**	**1.58**	**241**	*e*P	Pn	15 24 33.0	+0.5
	baz=247						
SCST	**Cishan**	**1.67**	**222**	*e*P	Pn	15 24 34.3	+0.5
	baz=231						
SCLT	**Jiali**	**1.69**	**236**	*e*P	Pn	15 24 34.5	+0.5
	baz=243						
SSD	**Sandimen**	**1.70**	**216**	*e*P	Pb	15 24 35.0	-0.8
	baz=236						
MASBT	**Mashibuluo**	**1.81**	**213**	*e*P	Pn	15 24 35.4	-0.4
	baz=214						
TAWH	**Dawu Township**	**1.94**	**203**	*e*P	Pb	15 24 39.6	-0.2
	baz=200						
PHUB	**P'eng-hu**	**2.05**	**253**	*e*P	Pn	15 24 39.0	-0.1
	baz=257						
WDGT	**Dungji**	**2.07**	**246**	*e*P	Pn	15 24 39.7	+0.3
	baz=251						
VCHM	**Qimei**	**2.29**	**247**	*e*P	Pn	15 24 42.4	+0.1
	baz=238						
PTMZ	**Houxiangcun**	**2.53**	**291**	*e*P	Pn	15 24 46.2	+0.7
	baz=292						

*IDC **07** 15:24:24.1±2.0, 2.38S×127.71E, h0km, mb4.0/3, mbtmp3.8/4, ML3.1/1, Error ellipse: s-maj=215.4km s-min=24.6km az=68.0*

ISC 07 15:24:26.1±1.5, 2.7S±0.2×127.3E±0.2, h10km, n6, σ1s 99/6, mb4.3/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**7.49**	**300**	P	**Pb**	**15 26 38.0**	**+1.8**
MPSI	**Mapaga**	**7.95**	**292**	P	**Pb**	**15 26 42.7**	**-1.3**
	98nm,2.6s,3μm6μm						
WRA	**Warramunga Arr**	**18.52**	**159**	P	**Pn**	**15 28 42.1**	**-0.9**
	0.1nm,0.3s,baz=340,slow=12,SNR=1.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**21.86**	**163**	P	**P**	**15 29 20.8**	**+1.7**
	0.8nm,0.6s,baz=348,slow=11,SNR=16						
	0.8nm,0.6s						
MKAR	**Makanrai Array**	**63.12**	**327**	P	**P**	**15 34 54.6**	**+0.5**
	6.4nm,1.1s,baz=115,slow=5.5,SNR=3.2						
	6.4nm,1.1s						
ZALV	**Zalesovo Beam**	**66.51**	**334**	P	**P**	**15 35 14.2**	**-1.7**
	2.2nm,0.9s,baz=124,slow=4.2,SNR=2.6						
	2.2nm,0.9s						

TAP 07 15:24:58.0, 24.11N×121.71E, h8km, ML3.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**299**	P	Pg	15 25 00.8	+0.5
	baz=297						
ETL				*i* S	Sg	15 25 02.4	+0.4
	baz=297						
TWD	**Chiawan**	**0.11**	**252**	P	Pg	15 25 01.0	+0.4
	baz=260						
TWD				*i* S	Sg	15 25 02.8	+0.4
	baz=260						
NACB	**Ninganchiao**	**0.12**	**299**	*i* P	Pg	15 25 01.1	+0.4
	baz=291						
NACB				*i* S	Sg	15 25 03.1	+0.4
	baz=291						
HWA	**Hwalien**	**0.17**	**216**	*e*P	Pg	15 25 02.8	+1.2
	baz=224						
EHP	**Heping Village**	**0.20**	**8**	*i* P	Pg	15 25 02.5	+0.4
	baz=7.0						
EHP				*i* S	Sg	15 25 05.8	+1.0
	baz=7.0						
EAHA	**Aohua**	**0.22**	**7**	*i* P	Pg	15 25 02.9	+0.5
	baz=4.0						
EAHA				S	Sg	15 25 06.2	+0.9
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.23**	**294**	*e*P	Pg	15 25 03.4	+0.7
	baz=293						
ETLH				S	Sg	15 25 06.7	+0.8
	baz=293						
ETM	**Tongmen**	**0.25**	**234**	*i* P	Pg	15 25 03.4	+0.4
	baz=237						
ETM				S	Sg	15 25 07.0	+0.6
	baz=237						
LXIB	**Xiulin Townshi**	**0.29**	**251**	P	Pg	15 25 04.2	+0.4
	baz=253						
LXIB				*e*S	Sg	15 25 08.3	+0.6
	baz=253						
ENA	**Nanau**	**0.31**	**5**	*i* P	Pg	15 25 04.7	+0.5
	baz=4.0						
ENA				S	Sg	15 25 09.0	+0.6
	baz=4.0						
EWUT	**Wuta**	**0.34**	**10**	*i* P	Pg	15 25 05.2	+0.6
	baz=8.0						
EWUT				S	Sg	15 25 09.9	+0.8
	baz=8.0						
SHUL	**Shoufeng**	**0.35**	**203**	*e*P	Pb	15 25 06.4	-0.1
	baz=211						
ESL	**Shilin**	**0.39**	**221**	P	Pg	15 25 05.9	+0.2
	baz=230						
ESL				*e*S	Sg	15 25 11.1	+0.2
	baz=230						
WHF	**Hehuan Shan**	**0.41**	**274**	*e*P	Pg	15 25 06.7	+0.5
	baz=275						
WHF				S	Sg	15 25 12.1	+0.5
	baz=275						
TEGC	**Jichi Village**	**0.43**	**201**	*e*P	Pb	15 25 07.8	-0.1
	baz=206						
NNSB	**Datong**	**0.43**	**316**	*e*P	Pg	15 25 07.2	+0.7
	baz=315						
NNSB				S	Sg	15 25 13.0	+0.8
	baz=315						
NNSH	**Datong**	**0.43**	**316**	*e*P	Pg	15 25 07.2	+0.6
	baz=314						
NNSH				*e*S	Sg	15 25 13.2	+0.9
	baz=314						
FUSS	**Fushou**	**0.45**	**287**	*e*P	Pg	15 25 07.0	+0.2
	baz=287						
FUSS				*e*S	Sg	15 25 13.9	+1.2
	baz=287						
NNS	**Nan Shan**	**0.45**	**316**	*e*P	Pg	15 25 07.5	+0.6
	baz=316						
NNS				*e*S	Sg	15 25 13.3	+0.6
	baz=316						
LATG	**Datong**	**0.45**	**338**	*e*P	Pb	15 25 07.7	-0.6
	baz=336						
LATG				*e*S	Sg	15 25 13.9	+1.0
	baz=336						

ESAO	**Su ao** baz=10.0	**0.47**	**15**	*e*P	Pg	15 25 07.7	+0.4
WARBT	**Fenglin Townsh** baz=230	**0.49**	**217**	*e*P	Pg	15 25 08.2	+0.5
WARBT	baz=230			*e*S	Sb	15 25 15.7	-0.7
CHGB	**Renai** baz=257	**0.49**	**264**	*e*P	Pg	15 25 08.2	+0.6
CHGB	baz=257			*e*S	Sg	15 25 15.2	+1.0
TWC	**Suao** baz=7.0	**0.51**	**14**	*e*P	Pg	15 25 08.5	+0.6
TWC	baz=7.0			*e*S	Sg	15 25 15.6	+1.0
TWT	**Tachien** baz=285	**0.51**	**286**	*e*P	Pb	15 25 08.9	-0.4
TWT	baz=285			*e*S	Sb	15 25 16.2	-0.7
OWD	**Renai** baz=254	**0.52**	**252**	*e*P	Pb	15 25 09.4	0.0
OWD	baz=254			*e*S	Sg	15 25 15.6	+0.7
NDS	**Dongshan** baz=357	**0.52**	**0**	*e*P	Pg	15 25 08.7	+0.6
NDS	baz=357			*e*S	Sb	15 25 16.0	-1.1
NDT	**Datong Townshi** baz=337	**0.52**	**340**	*e*P	Pb	15 25 08.8	-0.6
NDT	baz=337			*e*S	Sb	15 25 16.2	-0.8
TDCB	**Techi** baz=285	**0.52**	**285**	*e*P	Pb	15 25 09.3	-0.3
TDCB	baz=285			S	Sg	15 25 16.2	+1.1
ENTT	**Nioudou** baz=344	**0.54**	**346**	*e*P	Pb	15 25 09.4	-0.4
ENTT	baz=344			*e*S	Sb	15 25 16.8	-0.9
WUSB	**Renai** baz=259	**0.56**	**258**	*e*P	Pb	15 25 09.7	-0.4
WUSB	baz=259			*e*S	Sg	15 25 17.1	+1.0
TWE	**Neicheng** baz=355	**0.61**	**356**	P	Pb	15 25 10.8	0.0
TWE	baz=355			*e*S	Sb	15 25 19.1	-0.5
YHNB	**Yeheng** baz=328	**0.63**	**331**	*e*P	Pg	15 25 10.2	-0.1
NSK	**Sanguang** baz=329	**0.65**	**330**	*e*P	Pb	15 25 11.2	-0.4
NSK	baz=329			*e*S	Sb	15 25 19.9	-0.9
FUSB	**Fushanzhiwuyua** baz=348	**0.65**	**350**	P	Pb	15 25 11.4	-0.3
FUSB	baz=348			*e*S	Sg	15 25 19.8	+0.6
HGSD	**Ruisui** baz=197	**0.67**	**203**	*e*P	Pn	15 25 13.1	-0.8
NWLT	**Wulai** baz=347	**0.69**	**344**	*e*P	Pb	15 25 11.9	-0.4
WPL	**Puli Township** baz=255	**0.70**	**262**	*e*P	Pb	15 25 12.2	-0.2
WPL	baz=255			*e*S	Sg	15 25 21.2	+0.6
EHY	**Hungye** baz=215	**0.70**	**211**	*e*P	Pg	15 25 12.0	+0.4
WHP	**Taichung City** baz=277	**0.72**	**283**	*e*P	Pb	15 25 13.2	+0.3
DPDB	**Guoxing** baz=265	**0.72**	**264**	*e*P	Pb	15 25 13.1	+0.2
WCS	**Beigang Elemen** baz=267	**0.73**	**266**	*e*P	Pb	15 25 12.7	-0.4
NFF	**Wufeng Townshi** baz=312	**0.75**	**314**	*e*P	Pg	15 25 12.6	+0.2
SSLB	**Suanglung** baz=257	**0.77**	**245**	*e*P	Pg	15 25 12.9	+0.1
SSLB	baz=257			*e*S	Sg	15 25 22.6	-0.2
SMLT	**Sun Moon Lake** baz=254	**0.78**	**253**	*e*P	Pb	15 25 13.8	-0.1
SMLT	baz=254			*e*S	Sb	15 25 23.9	-0.6
TYC	**Yuchr** baz=258	**0.81**	**255**	*e*P	Pb	15 25 14.1	-0.2
YULB	**Yu-li** baz=226	**0.81**	**208**	*e*P	Pb	15 25 14.5	+0.1
NSTT	**Nanjuang** baz=307	**0.83**	**309**	*e*P	Pb	15 25 15.2	+0.6
NJD	**Zhudong** baz=315	**0.84**	**318**	*e*P	Pb	15 25 14.9	+0.1
EYUL	**Yuli** baz=225	**0.84**	**205**	*e*P	Pb	15 25 15.0	+0.1
TWF1	**Yuli** baz=224	**0.85**	**207**	*e*P	Pb	15 25 15.1	+0.1
TIPB	**Shuangxi** baz=355	**0.86**	**7**	*e*P	Pb	15 25 15.1	-0.1
TIPB	baz=355			*e*S	Sb	15 25 26.4	-0.6
TATO	**Taipei** baz=342	**0.88**	**347**	*e*P	Pb	15 25 15.9	+0.3
TWQ1	**Liyutan** baz=286	**0.89**	**285**	*e*P	Pn	15 25 17.8	+1.0
WHYT	**Xinyi Township** baz=246	**0.89**	**242**	*e*P	Pn	15 25 16.4	-0.5
HSN1	**Hsinchu** baz=314	**0.92**	**316**	*e*P	Pn	15 25 17.9	+0.7
NSY	**Sanyi** baz=289	**0.92**	**289**	*e*P	Pn	15 25 17.6	+0.3
TWB1	**Santiao Chiao** baz=2.0	**0.93**	**16**	*e*P	Pb	15 25 16.2	-0.1
WWF	**Wufeng** baz=267	**0.93**	**266**	*e*P	Pn	15 25 18.1	+0.8
NMLH	**Miaoli** baz=296	**0.94**	**297**	*e*P	Pn	15 25 18.4	+0.9
TAP	**Taipei** baz=335	**0.94**	**349**	*e*P	Pn	15 25 17.1	-0.4
TCU	**Taichung** baz=269	**0.95**	**272**	*e*P	Pn	15 25 17.9	+0.3
NWF	**Wu-fen Shan** baz=358	**0.95**	**4**	*e*P	Pn	15 25 17.5	-0.3
WFSB	**Wu-fen Shan** baz=359	**0.95**	**4**	*e*P	Pb	15 25 17.0	+0.2
WNT1	**Nantou City** baz=260	**0.97**	**258**	*e*P	Pn	15 25 18.1	+0.2
WNT	**Mingjian** baz=253	**0.97**	**256**	*e*P	Pn	15 25 17.6	-0.3
WNT	baz=253			*e*S	Sn	15 25 32.7	+0.8
NCUH	**Zhongli** baz=327	**0.98**	**331**	*e*P	Pn	15 25 18.7	+0.7
NCU	**National Centr** baz=327	**0.98**	**331**	*e*P	Pn	15 25 18.3	+0.3
WDJ	**Dajia District** baz=284	**1.01**	**284**	*e*P	Pn	15 25 19.7	+1.3
TWS1	**Kuangyinshan** baz=340	**1.02**	**345**	*e*P	Pn	15 25 18.6	0.0
ALS	**Alishan** baz=247	**1.02**	**234**	*e*P	Pb	15 25 18.2	0.0
TNOU	**National Taiwa** baz=358	**1.03**	**3**	*e*P	Pn	15 25 18.6	-0.2
YM01	**YM01** baz=347	**1.04**	**353**	*e*P	Pn	15 25 18.8	-0.1
CHKT	**Chengkung** baz=194	**1.06**	**198**	*e*P	Pg	15 25 18.4	0.0
EHD	**Haiduan** baz=223	**1.07**	**206**	*e*P	Pn	15 25 19.3	0.0
NHW	**Xinwu Township** baz=322	**1.07**	**326**	*e*P	Pn	15 25 19.6	+0.2
YM08	**YM08** baz=349	**1.07**	**354**	*e*P	Pn	15 25 19.4	0.0
ANP	**Anpu** baz=346	**1.08**	**351**	*e*P	Pn	15 25 19.5	-0.1
ELDTW	**Lidau** baz=210	**1.12**	**215**	*e*P	Pb	15 25 19.6	0.0
WCKO	**Fanlu** baz=242	**1.22**	**237**	*e*P	Pg	15 25 22.2	+0.8
RLNB	**Erlin** baz=255	**1.26**	**260**	*e*P	Pg	15 25 22.7	+0.5
STYH	**Taoyuan** baz=229	**1.27**	**223**	*e*P	Pb	15 25 22.2	0.0
TPUB	**Ta-pu** baz=237	**1.28**	**231**	*e*P	Pg	15 25 23.4	+0.7
SGST	**Jiashian** baz=232	**1.46**	**225**	*e*P	Pb	15 25 25.5	+0.1

TAP 07 15:26:16.8,24.09N×121.78E,h6km,ML3.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=297	**0.16**	**297**	*i* P	Pg	15 26 20.8	+0.8
ETL	baz=297			S	Sg	15 26 23.6	+1.4
TWD	**Chiawan** baz=281	**0.17**	**268**	*i* P	Pg	15 26 21.1	+0.9
TWD	baz=281			*i* S	Sg	15 26 24.0	+1.6
NACB	**Ninganchiao** baz=297	**0.19**	**297**	*i* P	Pg	15 26 21.2	+0.6
NACB	baz=297			S	Sg	15 26 24.2	+1.1
HWA	**Hwalien** baz=246	**0.19**	**236**	*e*P	Pg	15 26 22.7	+2.1
HWA	baz=246			S	Sg	15 26 27.3	+4.1
EHP	**Heping Village** baz=352	**0.23**	**351**	*i* P	Pg	15 26 22.1	+0.9
EHP	baz=352			*i* S	Sg	15 26 26.4	+2.2
EAHA	**Aohua** baz=351	**0.24**	**351**	P	Pg	15 26 22.4	+0.8
EAHA	baz=351			*e*S	Sg	15 26 26.5	+1.7
ETM	**Tongmen** baz=255	**0.29**	**245**	P	Pb	15 26 23.4	-0.9
ETM	baz=255			*e*S	Sb	15 26 28.1	-1.3
ETLH	**Xiulin Townshi** baz=294	**0.30**	**294**	P	Pg	15 26 23.3	+0.7
ETLH	baz=294			S	Sg	15 26 27.7	+1.1
LXIB	**Xiulin Townshi** baz=260	**0.34**	**259**	P	Pg	15 26 24.3	+0.9
LXIB	baz=260			S	Sb	15 26 29.5	-1.5
ENA	**Nanau** baz=354	**0.34**	**354**	P	Pg	15 26 24.3	+0.8
ENA	baz=354			S	Sb	15 26 29.6	-1.3
SHUL	**Shoufeng** baz=214	**0.36**	**214**	*e*P	Pb	15 26 25.7	+0.2
SHUL	baz=214			*e*S	Sb	15 26 33.0	+1.7
EWUT	**Wuta** baz=359	**0.36**	**360**	P	Pb	15 26 24.6	-0.9
EWUT	baz=359			*e*S	Sb	15 26 30.3	-1.1
ESL	**Shilin** baz=243	**0.42**	**230**	P	Pb	15 26 25.8	-0.7
ESL	baz=243			*e*S	Sb	15 26 32.7	-0.4
WHF	**Hehuan Shan** baz=278	**0.47**	**277**	P	Pb	15 26 26.9	-0.8
WHF	baz=278			S	Sb	15 26 33.9	-1.3
ESAO	**Su ao** baz=357	**0.49**	**7**	P	Pb	15 26 27.2	-0.6
ESAO	baz=357			*e*S	Sb	15 26 35.3	+0.1
NNSB	**Datong** baz=313	**0.50**	**313**	P	Pb	15 26 27.2	-0.7
NNSB	baz=313			*e*S	Sb	15 26 34.6	-0.9
LATG	**Datong** baz=341	**0.50**	**333**	P	Pg	15 26 27.2	+0.7
NNS	**Nan Shan** baz=314	**0.51**	**314**	P	Pb	15 26 27.5	-0.7
NNS	baz=314			*e*S	Sb	15 26 34.8	-1.1
WARBT	**Fenglin Townsh** baz=237	**0.51**	**225**	*e*P	Pb	15 26 27.6	-0.6
WARBT	baz=237			*e*S	Sb	15 26 35.8	-0.1
FUSS	**Fushou** baz=288	**0.52**	**288**	P	Pb	15 26 27.8	-0.6
FUSS	baz=288			*e*S	Sb	15 26 35.8	-0.4
EGFH	**Guangfu** baz=232	**0.53**	**218**	P	Pb	15 26 28.3	-0.1
EGFH	baz=232			*e*S	Sb	15 26 36.6	+0.5
TWC	**Suao** baz=359	**0.53**	**7**	*e*P	Pb	15 26 27.7	-0.6
NDS	**Dongshan** baz=352	**0.55**	**354**	P	Pb	15 26 28.8	0.0
NDS	baz=352			*e*S	Sb	15 26 36.8	-0.1
CHGB	**Renai** baz=269	**0.55**	**267**	P	Pb	15 26 28.6	-0.4
CHGB	baz=269			S	Sb	15 26 36.6	-0.6
OWD	**Renai** baz=268	**0.57**	**257**	*e*P	Pb	15 26 28.7	-0.5
OWD	baz=268			*e*S	Sb	15 26 36.5	-1.0
NDT	**Datong Townshi** baz=334	**0.57**	**335**	P	Pb	15 26 28.9	-0.2
NDT	baz=334			S	Sb	15 26 37.5	0.0
TWT	**Tachien** baz=286	**0.58**	**287**	*e*P	Pb	15 26 29.3	0.0
TWT	baz=286			*e*S	Sb	15 26 37.8	-0.1
ENTT	**Nioudou** baz=341	**0.58**	**341**	P	Pb	15 26 29.2	-0.2
ENTT	baz=341			S	Sb	15 26 37.8	-0.2
TDCB	**Techi** baz=286	**0.59**	**286**	P	Pb	15 26 29.6	0.0
TDCB	baz=286			S	Sb	15 26 38.1	-0.1
WUSB	**Renai** baz=262	**0.61**	**261**	P	Pb	15 26 29.7	-0.2
WUSB	baz=262			*e*S	Sb	15 26 38.5	-0.3
TWE	**Neicheng** baz=351	**0.64**	**351**	P	Pb	15 26 30.3	0.0
TWE	baz=351			*e*S	Sb	15 26 39.3	-0.2
YHNB	**Yeheng** baz=327	**0.69**	**328**	P	Pb	15 26 31.1	-0.1
YHNB	baz=327			*e*S	Sb	15 26 40.8	-0.2
FUSB	**Fushanzhiwuyua** baz=345	**0.69**	**345**	P	Pb	15 26 31.3	0.0
FUSB	baz=345			*e*S	Sb	15 26 41.0	-0.2
NSK	**Sanguang** baz=327	**0.70**	**327**	P	Pb	15 26 31.3	-0.1
NSK	baz=327			S	Sb	15 26 40.8	-0.6
EHY	**Hungye** baz=216	**0.71**	**216**	*e*P	Pb	15 26 31.5	-0.1
NWLT	**Wulai** baz=339	**0.73**	**340**	P	Pb	15 26 32.1	+0.2
NWLT	baz=339			*e*S	Sb	15 26 42.1	-0.1
WHP	**Taichung City** baz=285	**0.79**	**284**	P	Pb	15 26 33.5	+0.7
WHP	baz=285			*e*S	Sb	15 26 45.0	+1.2
WCS	**Beigang Elemen** baz=259	**0.79**	**268**	*e*P	Pb	15 26 33.0	+0.1
WCS	baz=259			*e*S	Sn	15 26 45.3	-1.3
SSLB	**Suanglung** baz=261	**0.81**	**249**	P	Pb	15 26 33.3	0.0
SSLB	baz=261			*e*S	Sb	15 26 44.9	+0.4
NFF	**Wufeng Townshi** baz=312	**0.81**	**312**	P	Pb	15 26 33.5	+0.2
NFF	baz=312			*e*S	Sb	15 26 44.8	+0.3
YULB	**Yu-li** baz=214	**0.82**	**213**	*e*P	Pb	15 26 33.3	-0.1
YULB	baz=214			*e*S	Sb	15 26 45.3	+0.7
SMLT	**Sun Moon Lake** baz=257	**0.83**	**256**	P	Pb	15 26 33.9	+0.3
SMLT	baz=257			*e*S	Sb	15 26 45.0	0.0
TIPB	**Shuangxi** baz=1.0	**0.88**	**3**	P	Pb	15 26 34.7	+0.2
TIPB	baz=1.0			*e*S	Sb	15 26 47.1	+0.6
LIOB	**Emei** baz=309	**0.89**	**309**	P	Pn	15 26 35.4	-0.4
LIOB	baz=309			*e*S	Sb	15 26 47.9	+1.1
NSTT	**Nanjuang** baz=308	**0.89**	**308**	P	Pb	15 26 35.1	+0.5
NSTT	baz=308			S	Sb	15 26 47.5	+0.7
NHDH	**Xindian Distri** baz=344	**0.90**	**345**	*e*P	Pb	15 26 35.3	+0.5
NHDH	baz=344			*e*S	Sb	15 26 47.4	+0.3
TWA	**Mucha** baz=348	**0.91**	**349**	*e*P	Pn	15 26 36.3	+0.3
TWA	baz=348			*e*S	Sn	15 26 48.5	-0.9
WHYT	**Xinyi Township** baz=255	**0.93**	**246**	*e*P	Pn	15 26 36.3	-0.1
WHYT	baz=255			*e*S	Sn	15 26 49.2	-0.8
TWB1	**Santiao Chiao** baz=2.0	**0.94**	**12**	*e*P	Pn	15 26 36.5	+0.1
TWB1	baz=2.0			*e*S	Sn	15 26 49.8	-0.4
TWQ1	**Liyutan** baz=285	**0.95**	**286**	P	Pn	15 26 38.1	+1.4
NWF	**Wu-fen Shan** baz=349	**0.98**	**0**	P	Pn	15 26 36.7	-0.4
NWF	baz=349			*e*S	Sb	15 26 50.1	+0.7
WFSB	**Wu-fen Shan** baz=351	**0.98**	**0**	*e*P	Pn	15 26 36.9	-0.2
WFSB	baz=351			*e*S	Sb	15 26 50.2	+0.9
NSY	**Sanyi** baz=288	**0.99**	**290**	*e*P	Pn	15 26 37.8	+0.7
FULB	**Fuli** baz=222	**0.99**	**207**	*e*P	Pb	15 26 36.4	+0.1
WJS	**Zhushan** baz=262	**1.00**	**255**	P	Pn	15 26 37.4	+0.1
WJS	baz=262			*e*S	Sn	15 26 53.0	+1.4
NMLH	**Miaoli** baz=297	**1.01**	**297**	*e*P	Pn	15 26 37.7	+0.3
NMLH	baz=297			*e*S	Sn	15 26 52.0	+0.1
SXI1	**Grass Mountain** baz=350	**1.01**	**5**	P	Pn	15 26 37.5	0.0
SBCB	**Hsinchu** baz=312	**1.01**	**314**	*e*P	Pn	15 26 38.8	+1.4
WNT	**Mingjian** baz=259	**1.02**	**259**	P	Pn	15 26 38.2	+0.6
WNT	baz=259			*e*S	Sn	15 26 53.4	+1.2
HSN	**Hsinchu** baz=315	**1.03**	**314**	*e*P	Pb	15 26 36.9	0.0
NCUH	**Zhongli** baz=328	**1.03**	**328**	*e*P	Pn	15 26 38.1	+0.4
ALS	**Alishan** baz=239	**1.06**	**237**	*e*P	Pn	15 26 38.2	-0.1
ALS	baz=239			*e*S	Sn	15 26 54.5	+0.9
TWS1	**Kuangyinshan** baz=342	**1.06**	**342**	*e*P	Pn	15 26 39.3	+1.1
EHD	**Haiduan** baz=222	**1.07**	**210**	P	Pn	15 26 38.4	+0.2
WDJ	**Dajia District** baz=283	**1.07**	**284**	*e*P	Pn	15 26 39.3	+1.1
YM01	**YM01** baz=334	**1.07**	**350**	*e*P	Pn	15 26 39.3	+0.9
YM08	**YM08** baz=335	**1.11**	**351**	P	Pn	15 26 39.7	+0.9
NTST	**Danshui** baz=343	**1.11**	**344**	*e*P	Pn	15 26 39.3	+0.5
NTST	baz=343			*e*S	Sn	15 26 56.6	+2.0
ANP	**Anpu** baz=348	**1.12**	**348**	P	Pn	15 26 39.5	+0.5
ELDTW	**Lidau** baz=205	**1.13**	**218**	*e*P	Pg	15 26 38.6	0.0
ELDTW	baz=205			*e*S	Sn	15 26 55.2	+0.1
WGK	**Gukeng** baz=253	**1.18**	**251**	*e*P	Pn	15 26 40.5	+0.8
WGK	baz=253			*e*S	Sn	15 26 59.0	+2.8
WDLH	**Douliu** baz=254	**1.20**	**251**	P	Pn	15 26 40.7	+0.7
WDLH	baz=254			*e*S	Sn	15 26 59.4	+2.7
WCKO	**Fanlu** baz=242	**1.25**	**239**	*e*P	Pg	15 26 42.2	+1.4
WCKO	baz=242			*e*S	Sn	15 27 01.4	+3.4
STYH	**Taoyuan** baz=213	**1.29**	**225**	*e*P	Pg	15 26 41.9	+0.3
STYH	baz=213			*e*S	Sn	15 27 01.6	+2.6
CHN4	**Tsaushan** baz=239	**1.31**	**236**	*e*P	Pg	15 26 43.2	+1.3
CHN4	baz=239			*e*S	Sn	15 27 03.6	+4.3
TPUB	**Ta-pu** baz=236	**1.31**	**234**	P	Pg	15 26 43.2	+1.2
TPUB	baz=236			*e*S	Sn	15 27 02.0	+2.6
WTK	**Tuku** baz=256	**1.33**	**253**	*e*P	Pg	15 26 42.5	+0.1
WTK	baz=256			*e*S	Sn	15 27 03.2	+3.3
WTP	**Ta-pu** baz=231	**1.36**	**232**	*e*P	Pg	15 26 44.1	+1.3
SGST	**Jiashian** baz=230	**1.48**	**228**	*e*P	Pb	15 26 44.8	0.0
SGST	baz=230			*e*S	Sg	15 27 06.5	+2.0
WSF	**Szhu** baz=256	**1.49**	**253**	P	Pg	15 26 45.7	+0.3
WSF	baz=256			*e*S	Sg	15 27 07.7	+3.0
SLGT	**Liugui** baz=227	**1.50**	**224**	*e*P	Pg	15 26 45.6	0.0
SLGT	baz=227			*e*S	Sg	15 27 07.9	+2.8
SCST	**Cishan** baz=211	**1.68**	**225**	*e*P	Pg	15 26 49.0	+0.1
TSMG	**Majia** baz=222	**1.73**	**217**	*e*P	Pb	15 26 48.9	0.0
TSMG	baz=222			*e*S	Sg	15 27 11.8	-0.4

IDC 07 15:30:36.1±1.3,16.09N×122.66E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=76.3km s-min=24.2km az=78.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array** 1.1nm,0.7s,baz=194,slow=11,SNR=5.4 1.1nm,0.7s	**21.79**	**11**	P	P	15 35 29.4	-0.2
WRA	**Warramunga Arr** 1.3nm,1.1s,baz=342,slow=10.0,SNR=10 1.3nm,1.1s	**37.60**	**162**	P	P	15 37 52.1	-0.6
ASAR	**Alice Springs** 0.2nm,0.9s,baz=346,slow=6.9,SNR=0.8 0.2nm,0.9s	**41.01**	**164**	P	P	15 38 21.9	+0.7
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=96,slow=1.0,SNR=5.0 0.3nm,0.3s	**79.87**	**320**	P	P	15 42 46.7	0.0

*TAP **07** 15:31:57.5,24.12N×121.71E,h8km,ML3.7,C*
*ASIES **07** 15:31:57.5,24.12N×121.71E,h8km,ML3.7,Mw4.7, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}-0.12; $M_{\theta\theta}$0.03; $M_{\phi\phi}$0.36; $M_{r\theta}$-1.37; $M_{\theta\phi}$0.05; $M_{\phi r}$-0.78; Fault plane solution: $M_0$1.60135×10^{23} NP1:ϕ_s59.13000°, δ87.37000°,λ-83.85000°. NP2:ϕ_s172.19000°,δ6.68000°, λ-156.80000°. Principal axes: T Plg42.0600°, Azm143.2800°; N Plg6.1380°, Azm238.8480°; P Plg47.2830°, Azm335.5360°;*
*JMA **07** 15:31:57.6±0.1,24.1N±0.2×121.7E±0.3,h1km±1km, MV3.2/13,TAIWAN REGION*
ISC 07 15:31:57.5±0.9,24.10N±0.01×121.74E±0.02,h6km±7km, n127,σ0$73/195,26C-25D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.12**	**298**	⇓*i*P	**Pg**	**15 32 00.2**	**+0.2**
ETL	baz=297			S	**Sg**	**15 32 01.7**	**0.0**
TWD	**Chiawan**	**0.13**	**260**	⇑*i*P	**Pg**	**15 32 00.3**	**+0.1**
TWD	baz=259			*i* S	**Sg**	**15 32 02.1**	**+0.1**
NACB	**Ninganchiao**	**0.15**	**299**	P	**Pg**	**15 32 00.7**	**+0.2**
NACB	**Ninganchiao**	**0.15**	**299**	⇑P	**Pg**	**15 32 00.5**	**0.0**
NACB	baz=291			S	**Sg**	**15 32 02.4**	**-0.1**
HWA	**Hwalien**	**0.17**	**224**	⇑P	**Pg**	**15 32 01.9**	**+1.0**
EHP	**Heping Village**	**0.21**	**1**	⇓*i*P	**Pg**	**15 32 01.9**	**+0.3**
EHP	baz=8.0			S	**Sg**	**15 32 04.9**	**+0.5**
EAHA	**Aohua**	**0.23**	**1**	⇓*i*P	**Pg**	**15 32 02.3**	**+0.3**
EAHA	baz=4.0			S	**Sg**	**15 32 05.5**	**+0.5**
ETLH	**Xiulin Townshi**	**0.25**	**294**	⇑P	**Pg**	**15 32 02.6**	**+0.1**
ETLH	baz=293			S	**Sg**	**15 32 06.2**	**+0.3**
ETM	**Tongmen**	**0.26**	**238**	⇑*i*P	**Pg**	**15 32 02.9**	**+0.3**
ETM	baz=237			S	**Sg**	**15 32 06.3**	**+0.2**
LXIB	**Xiulin Townshi**	**0.31**	**255**	⇑*i*P	**Pg**	**15 32 03.5**	**0.0**
LXIB	baz=252			S	**Sg**	**15 32 07.6**	**0.0**
ENA	**Nanau**	**0.32**	**1**	⇓*i*P	**Pg**	**15 32 04.1**	**+0.3**
ENA	baz=4.0			S	**Sg**	**15 32 08.6**	**+0.5**
EWUT	**Wuta**	**0.34**	**6**	⇓*i*P	**Pg**	**15 32 04.6**	**+0.4**
EWUT	baz=8.0			S	**Sg**	**15 32 09.2**	**+0.4**
SHUL	**Shoufeng**	**0.35**	**207**	P	**Pb**	**15 32 06.2**	**0.0**
SHUL	baz=214			S	**Sb**	**15 32 13.6**	**+1.5**
ESL	**Shilin**	**0.40**	**224**	⇑*i*P	**Pg**	**15 32 05.4**	**+0.2**
ESL	baz=229			S	**Sg**	**15 32 10.4**	**-0.1**
TEGC	**Jichi Village**	**0.43**	**205**	*e*P	**Pb**	**15 32 07.6**	**0.0**
WHF	**Hehuan Shan**	**0.43**	**276**	⇑*i*P	**Pg**	**15 32 06.0**	**0.0**
WHF	baz=274			S	**Sg**	**15 32 11.6**	**-0.2**
NNSB	**Datong**	**0.46**	**315**	⇓*i*P	**Pg**	**15 32 06.7**	**+0.3**
NNSB	baz=315			S	**Sg**	**15 32 12.7**	**+0.3**
LATG	**Datong**	**0.47**	**336**	⇓*i*P	**Pg**	**15 32 06.9**	**+0.2**
LATG	baz=336			*e*S	**Sg**	**15 32 12.7**	**-0.2**
FUSS	**Fushou**	**0.47**	**288**	⇑*i*P	**Pg**	**15 32 07.1**	**+0.4**
FUSS	baz=287			*e*S	**Sg**	**15 32 13.3**	**+0.4**
NNS	**Nan Shan**	**0.47**	**315**	⇓*i*P	**Pg**	**15 32 06.9**	**+0.2**
NNS	baz=315			S	**Sg**	**15 32 13.0**	**+0.1**
ESAO	**Su ao**	**0.48**	**12**	P	**Pg**	**15 32 07.1**	**+0.3**
ESAO	baz=13			S	**Sg**	**15 32 13.3**	**+0.2**
WARBT	**Fenglin Townsh**	**0.50**	**220**	⇑*i*P	**Pg**	**15 32 07.3**	**+0.1**
TWC	**Suao**	**0.51**	**12**	⇓*i*P	**Pg**	**15 32 07.8**	**+0.3**
TWC	baz=13			*e*S	**Sg**	**15 32 13.4**	**-0.8**
CHGB	**Renai**	**0.52**	**265**	⇑*i*P	**Pg**	**15 32 07.8**	**+0.3**
CHGB	baz=257			S	**Sg**	**15 32 14.4**	**+0.1**
EGFH	**Guangfu**	**0.52**	**213**	⇑*i*P	**Pg**	**15 32 08.0**	**+0.5**
EGFH	baz=223			*e*S	**Sb**	**15 32 17.6**	**+0.8**
NDS	**Dongshan**	**0.53**	**358**	⇓*i*P	**Pg**	**15 32 08.1**	**+0.4**
NDS	baz=357			S	**Sg**	**15 32 15.6**	**+0.9**
OWD	**Renai**	**0.53**	**254**	⇑*i*P	**Pg**	**15 32 08.0**	**+0.2**
OWD	baz=254			S	**Sg**	**15 32 14.6**	**-0.2**
TWT	**Tachien**	**0.53**	**286**	⇑*i*P	**Pb**	**15 32 08.5**	**-0.9**
TWT	baz=285			S	**Sg**	**15 32 15.3**	**+0.5**
NDT	**Datong Townshi**	**0.54**	**338**	⇓*i*P	**Pg**	**15 32 08.4**	**+0.5**
NDT	baz=337			*e*S	**Sg**	**15 32 15.3**	**+0.4**
TDCB	**Techi**	**0.55**	**286**	⇑*i*P	**Pg**	**15 32 08.5**	**+0.4**
TDCB	baz=285			S	**Sg**	**15 32 15.5**	**+0.2**
EOS2	**EOS2**	**0.55**	**55**	*e*P	**Pb**	**15 32 10.5**	**+0.9**
ENTT	**Nioudou**	**0.56**	**344**	⇓*i*P	**Pg**	**15 32 08.7**	**+0.5**
ENTT	baz=344			*e*S	**Sg**	**15 32 16.0**	**+0.5**
EOS3	**EOS3**	**0.56**	**71**	*e*P	**Pn**	**15 32 12.1**	**+0.1**
WUSB	**Renai**	**0.58**	**259**	⇑*i*P	**Pg**	**15 32 09.0**	**+0.3**
WUSB	baz=259			S	**Sg**	**15 32 15.9**	**-0.2**
TWE	**Neicheng**	**0.62**	**354**	⇓*i*P	**Pg**	**15 32 09.9**	**+0.5**
TWE	baz=355			S	**Sg**	**15 32 17.8**	**+0.3**
YHNB	**Yeheng**	**0.65**	**330**	P	**Pb**	**15 32 10.8**	**-0.6**
YHNB	**Yeheng**	**0.65**	**330**	⇓*i*P	**Pb**	**15 32 10.6**	**-0.8**
YHNB	baz=329			S	**Sg**	**15 32 18.5**	**-0.1**
ILA	**Ilan**	**0.66**	**1**	*e*P	**Pb**	**15 32 10.9**	**-0.6**
NSK	**Sanguang**	**0.67**	**329**	⇓*i*P	**Pb**	**15 32 10.8**	**-0.8**
NSK	baz=329			*e*S	**Sg**	**15 32 19.3**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.67**	**348**	⇓*i*P	**Pb**	**15 32 10.9**	**-0.8**
FUSB	baz=348			S	**Sg**	**15 32 19.5**	**+0.4**
HGSD	**Ruisui**	**0.67**	**205**	*i* P	**Pb**	**15 32 12.0**	**+0.3**
NWLT	**Wulai**	**0.70**	**342**	⇓P	**Pb**	**15 32 11.6**	**-0.7**
NWLT	baz=329			S	**Sg**	**15 32 20.6**	**+0.3**
EHY	**Hungye**	**0.70**	**213**	⇑*i*P	**Pg**	**15 32 11.3**	**+0.2**
WHP	**Taichung City**	**0.74**	**284**	⇑P	**Pb**	**15 32 12.6**	**-0.4**
WHP	baz=283			S	**Sb**	**15 32 22.1**	**-1.4**
WCS	**Beigang Elemen**	**0.76**	**267**	P	**Pb**	**15 32 12.4**	**-0.7**
WCS	baz=258			*e*S	**Sg**	**15 32 21.9**	**0.0**
NFF	**Wufeng Townshi**	**0.77**	**313**	P	**Pb**	**15 32 13.0**	**-0.4**
NFF	baz=313			S	**Sg**	**15 32 22.8**	**+0.3**
SSLB	**Suanglung**	**0.78**	**246**	P	**Pg**	**15 32 12.8**	**+0.3**
SSLB	**Suanglung**	**0.78**	**246**	⇑*i*P	**Pg**	**15 32 12.7**	**+0.1**
SSLB	baz=256			S	**Sg**	**15 32 22.1**	**-0.6**
SMLT	**Sun Moon Lake**	**0.80**	**254**	⇑*i*P	**Pb**	**15 32 13.2**	**-0.7**
SMLT	baz=254			S	**Sg**	**15 32 23.2**	**0.0**
YULB	**Yu-li**	**0.81**	**210**	P	**Pg**	**15 32 13.1**	**-0.1**
YULB	**Yu-li**	**0.81**	**210**	*e*P	**Pg**	**15 32 13.0**	**-0.2**
ECBN	**Changbin**	**0.83**	**199**	*e*P	**Pb**	**15 32 14.5**	**+0.2**
EYUL	**Yuli**	**0.84**	**207**	*e*P	**Pb**	**15 32 14.4**	**-0.2**
TWF1	**Yuli**	**0.85**	**208**	*e*P	**Pg**	**15 32 13.7**	**-0.2**
LIOB	**Emei**	**0.85**	**310**	⇓P	**Pb**	**15 32 14.8**	**+0.1**
LIOB	baz=309			S	**Sb**	**15 32 25.8**	**-0.6**
NSTT	**Nanjuang**	**0.85**	**308**	⇓*i*P	**Pb**	**15 32 14.6**	**-0.1**
NSTT	baz=307			S	**Sb**	**15 32 25.3**	**-1.2**
TIPB	**Shuangxi**	**0.87**	**5**	⇓*i*P	**Pb**	**15 32 14.8**	**-0.3**
NHDH	**Xindian Distri**	**0.88**	**347**	*e*P	**Pb**	**15 32 15.1**	**-0.2**
TWA	**Mucha**	**0.88**	**351**	⇓P	**Pb**	**15 32 15.1**	**-0.2**
TWA	baz=350			*e*S	**Sg**	**15 32 26.3**	**+0.3**
TATO	**Taipei**	**0.90**	**345**	P	**Pb**	**15 32 15.6**	**0.0**
WHYT	**Xinyi Township**	**0.90**	**244**	⇓*i*P	**Pg**	**15 32 15.1**	**+0.2**
WHYT	baz=253			*e*S	**Sb**	**15 32 27.3**	**-0.7**
TWQ1	**Liyutan**	**0.91**	**286**	*e*P	**Pn**	**15 32 16.6**	**-0.4**
TWB1	**Santiao Chiao**	**0.93**	**14**	⇑*i*P	**Pg**	**15 32 15.6**	**+0.2**
TWB1	baz=5.0			*e*S	**Sg**	**15 32 27.2**	**-0.3**
NSY	**Sanyi**	**0.94**	**289**	*e*P	**Pn**	**15 32 17.2**	**-0.2**
NSY	baz=289			*e*S	**Sb**	**15 32 29.6**	**+0.4**
CHKH	**Chenggong**	**0.96**	**199**	P	**Pb**	**15 32 16.4**	**-0.2**
CHKH	baz=191			*e*S	**Sn**	**15 32 31.0**	**-0.6**
NWF	**Wu-fen Shan**	**0.96**	**2**	⇓P	**Pb**	**15 32 16.7**	**-0.1**
NWF	baz=351			*e*S	**Sb**	**15 32 29.1**	**-0.7**
WFSB	**Wu-fen Shan**	**0.96**	**2**	⇓P	**Pb**	**15 32 16.7**	**0.0**
WFSB	baz=353			*e*S	**Sb**	**15 32 29.0**	**-0.8**
WJS	**Zhushan**	**0.96**	**253**	P	**Pb**	**15 32 16.9**	**+0.2**
WJS	baz=254			*e*S	**Sb**	**15 32 30.2**	**+0.5**
NMLH	**Miaoli**	**0.96**	**297**	*e*P	**Pn**	**15 32 17.6**	**-0.1**
HSN	**Hsinchu**	**0.99**	**315**	*e*P	**Pn**	**15 32 18.1**	**+0.1**
FULB	**Fuli**	**0.99**	**204**	*e*P	**Pb**	**15 32 16.9**	**-0.2**
WNT	**Mingjian**	**0.99**	**257**	*e*P	**Pn**	**15 32 18.1**	**+0.1**
SXI1	**Grass Mountain**	**0.99**	**7**	⇓*i*P	**Pb**	**15 32 17.3**	**0.0**
SXI1	baz=351			*e*S	**Sg**	**15 32 29.9**	**+0.3**
NCUH	**Zhongli**	**1.00**	**330**	*e*P	**Pn**	**15 32 17.7**	**-0.5**
TWS1	**Kuangyinshan**	**1.03**	**344**	*e*P	**Pn**	**15 32 18.6**	**0.0**
ALS	**Alishan**	**1.04**	**236**	⇑*i*P	**Pb**	**15 32 17.8**	**-0.3**
ALS	baz=238			S	**Sb**	**15 32 32.6**	**+0.4**
YM01	**YM01**	**1.05**	**352**	*e*P	**Pn**	**15 32 18.5**	**-0.4**
CHKT	**Chengkung**	**1.06**	**199**	*e*P	**Pb**	**15 32 18.1**	**-0.1**
EHD	**Haiduan**	**1.07**	**207**	*e*P	**Pg**	**15 32 17.8**	**-0.2**
EHD	baz=211			S	**Sn**	**15 32 35.5**	**+1.1**
NTST	**Danshui**	**1.09**	**346**	*e*P	**Pn**	**15 32 20.0**	**+0.7**
NTST	baz=353			*e*S	**Sn**	**15 32 35.5**	**+0.7**
YM08	**YM08**	**1.09**	**353**	*e*P	**Pn**	**15 32 18.9**	**-0.5**
ANP	**Anpu**	**1.10**	**350**	⇑P	**Pn**	**15 32 19.4**	**-0.2**
ANP	baz=358			*e*S	**Sn**	**15 32 34.6**	**-0.5**
ECS	**Chishang**	**1.11**	**205**	*e*P	**Pg**	**15 32 18.8**	**0.0**
ELDTW	**Lidau**	**1.12**	**216**	*e*P	**Pg**	**15 32 17.9**	**-1.2**
WGK	**Gukeng**	**1.15**	**249**	*e*P	**Pn**	**15 32 20.6**	**+0.3**
JYNG	**Yonaguni jima**	**1.16**	**72**	P	**Pn**	**15 32 20.4**	**+0.1**
WDLH	**Douliu**	**1.17**	**250**	*e*P	**Pn**	**15 32 20.8**	**+0.3**
TWY	**Chenhua**	**1.17**	**354**	*e*P	**Pn**	**15 32 20.9**	**+0.4**
EDH	**Donghe**	**1.19**	**200**	*e*P	**Pg**	**15 32 18.1**	**-2.3**
EDH	baz=189			*e*S	**Sg**	**15 32 35.9**	**-0.1**
YOJ	**Yonaguni jima**	**1.22**	**73**	P	**Pn**	**15 32 21.5**	**+0.4**
YOJ	**Yonaguni jima**	**1.22**	**73**	*e*P	**Pn**	**15 32 21.3**	**+0.1**
YOJ	**Yonaguni jima**	**1.22**	**73**	*e*P	**Pb**	**15 32 21.0**	**0.0**
WCKO	**Fanlu**	**1.23**	**238**	*e*P	**Pn**	**15 32 22.1**	**+0.7**
WCKO	baz=241			*e*S	**Sn**	**15 32 38.4**	**+0.1**
WRL	**Guolierlin Hig**	**1.26**	**261**	*e*P	**Pg**	**15 32 22.2**	**+0.5**
WRL	baz=262			*e*S	**Sn**	**15 32 39.2**	**+0.2**
STYH	**Taoyuan**	**1.28**	**224**	⇑*i*P	**Pg**	**15 32 22.0**	**-0.1**
CHN2	**Minshiung**	**1.29**	**244**	*e*P	**Pg**	**15 32 23.5**	**+1.3**
TPUB	**Ta-pu**	**1.29**	**232**	P	**Pg**	**15 32 22.8**	**+0.5**
TPUB	**Ta-pu**	**1.29**	**232**	*e*P	**Pg**	**15 32 22.8**	**+0.5**
TPUB	baz=223			*e*S	**Sn**	**15 32 41.7**	**+1.9**
WTK	**Tuku**	**1.30**	**252**	*e*P	**Pg**	**15 32 22.7**	**+0.2**
WTK	baz=253			*e*S	**Sn**	**15 32 40.9**	**+0.8**
WTP	**Ta-pu**	**1.34**	**231**	*e*P	**Pg**	**15 32 23.6**	**+0.4**
TWG	**Pinlang**	**1.42**	**206**	*e*P	**Pn**	**15 32 21.6**	**-2.3**
TWGBT	**Beinan**	**1.42**	**205**	P	**Pn**	**15 32 21.7**	**-2.2**
TWGBT	**Beinan**	**1.42**	**205**	*e*P	**Pn**	**15 32 21.7**	**-2.2**
TWK	**Hsinying**	**1.42**	**234**	*e*P	**Pg**	**15 32 24.9**	**+0.2**
CHN1	**Nanshi**	**1.44**	**231**	*e*P	**Pg**	**15 32 25.5**	**+0.4**
CHN1	baz=235			*e*S	**Sg**	**15 32 46.4**	**+2.7**
SNST	**Tainan City**	**1.44**	**233**	*e*P	**Pg**	**15 32 25.4**	**+0.3**
LDUT	**Ludao**	**1.44**	**190**	*e*P	**Pn**	**15 32 21.8**	**-2.5**
SGST	**Jiashian**	**1.47**	**226**	⇑P	**Pn**	**15 32 24.6**	**0.0**
SGST	baz=231			*e*S	**Sg**	**15 32 45.6**	**+0.9**
SLGT	**Liugui**	**1.49**	**222**	*e*P	**Pb**	**15 32 25.6**	**0.0**
SLGT	baz=227			*e*S	**Sg**	**15 32 48.2**	**+2.7**
WSL	**Shuilin Townsh**	**1.50**	**248**	*e*P	**Pb**	**15 32 25.5**	**-0.3**
WSL	baz=250			*e*S	**Sg**	**15 32 48.5**	**+2.9**
ICHU	**Yijhu**	**1.53**	**241**	*e*P	**Pg**	**15 32 26.6**	**-0.2**
ICHU	baz=245			*e*S	**Sg**	**15 32 48.4**	**+1.8**
PCYT	**Pengchaiyu**	**1.55**	**11**	*e*P	**Pb**	**15 32 26.4**	**-0.3**
CHN8	**Yiju**	**1.59**	**242**	*e*P	**Pb**	**15 32 26.9**	**-0.4**
ECL	**Taimali**	**1.66**	**206**	*e*P	**Pn**	**15 32 25.6**	**-1.7**
SCST	**Cishan**	**1.66**	**224**	⇑P	**Pg**	**15 32 29.2**	**-0.3**
SHHT	**Tainan City**	**1.67**	**230**	*e*P	**Pg**	**15 32 29.2**	**-0.3**
TSMG	**Majia**	**1.71**	**216**	*e*P	**Pn**	**15 32 28.4**	**+0.4**
TWM1	**Shoushan**	**1.75**	**224**	*e*P	**Pg**	**15 32 31.4**	**+0.2**
TSCK	**Chigu Township**	**1.79**	**238**	*e*P	**Pb**	**15 32 30.1**	**-0.7**
TSCK	baz=243			*e*S	**Sg**	**15 32 54.4**	**-0.6**
MASBT	**Mashibuluo**	**1.80**	**215**	*e*P	**Pn**	**15 32 28.7**	**-0.4**
IRIF	**Iriomote-Funau**	**1.83**	**82**	*e*P	**Pb**	**15 32 30.9**	**-0.6**
SCZT	**Fangliau**	**2.01**	**211**	*e*P	**Pb**	**15 32 33.6**	**-0.9**
PHUB	**P'eng-hu**	**2.07**	**254**	*e*P	**Pb**	**15 32 34.5**	**-1.0**
PHUB	baz=257			*e*S	**Sb**	**15 33 00.4**	**-1.1**
PNG	**Penghu**	**2.07**	**255**	*e*P	**Pn**	**15 32 33.7**	**+0.9**
PNG	baz=259			*e*S	**Sb**	**15 33 00.6**	**-0.9**
JKRS	**Kuro-shima**	**2.08**	**86**	*e*P	**Pb**	**15 32 34.7**	**-1.0**
JIJ	**Ishigaki jima**	**2.21**	**83**	P	**Pn**	**15 32 34.8**	**-0.1**
JIJ				*e*S	**Sn**	**15 33 03.2**	**+0.7**
JISG	**Ishigakijimahi**	**2.40**	**78**	P	**Pn**	**15 32 37.4**	**0.0**
JISG				*e*S	**Sn**	**15 33 07.0**	**-0.1**

TAP 07 15:32:49.3,24.11N×121.66E,h11km±1km,ML2.4,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.06**	**326**	*i* P	**Pg**	**15 32 52.3**	**+0.7**
ETL	baz=325			S	**Sg**	**15 32 53.6**	**+0.4**
TWD	**Chiawan**	**0.07**	**240**	⇓*i*P	**Pg**	**15 32 52.2**	**+0.6**
TWD	baz=236			*i* S	**Sg**	**15 32 53.9**	**+0.6**
NACB	**Ninganchiao**	**0.08**	**317**	*e*P	**Pg**	**15 32 52.6**	**+0.8**
NACB	baz=316			S	**Sg**	**15 32 54.4**	**+0.8**
ETLH	**Xiulin Townshi**	**0.18**	**300**	*e*S	**Sg**	**15 32 58.0**	**+1.8**
ETM	**Tongmen**	**0.21**	**226**	*e*P	**Pb**	**15 32 54.6**	**-0.6**
LXIB	**Xiulin Townshi**	**0.24**	**248**	*e*P	**Pb**	**15 32 55.2**	**-0.6**
ENA	**Nanau**	**0.32**	**14**	*e*P	**Pg**	**15 32 56.0**	**+0.2**
EWUT	**Wuta**	**0.35**	**18**	*e*P	**Pb**	**15 32 57.1**	**-0.5**
	baz=18						

TAP 07 15:33:18.0,24.11N×121.69E,h8km,ML2.1,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**308**	⇓*i*P	**Pg**	**15 33 20.6**	**+0.4**
TWD	**Chiawan**	**0.09**	**251**	P	**Pg**	**15 33 20.6**	**+0.3**
NACB	**Ninganchiao**	**0.11**	**306**	*e*P	**Pg**	**15 33 20.9**	**+0.4**
NACB	baz=304			*e*S	**Sg**	**15 33 22.9**	**+0.5**
ETLH	**Xiulin Townshi**	**0.21**	**297**	*e*P	**Pg**	**15 33 24.2**	**+1.8**
ETLH	baz=296			*e*S	**Sg**	**15 33 27.1**	**+1.8**
EAHA	**Aohua**	**0.22**	**11**	*e*P	**Pg**	**15 33 22.8**	**+0.2**
EAHA	baz=6.0			*e*S	**Sg**	**15 33 25.8**	**+0.3**
ETM	**Tongmen**	**0.23**	**232**	*e*P	**Pg**	**15 33 23.0**	**+0.3**
ENA	**Nanau**	**0.32**	**8**	*e*P	**Pg**	**15 33 24.6**	**+0.3**
ENA	baz=5.0			*e*S	**Sg**	**15 33 28.6**	**0.0**
	baz=5.0						

TAP 07 15:33:42.7,24.13N×121.70E,h10km,ML2.4,4C-1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**289**	*i* P	**Pg**	**15 33 45.9**	**+0.8**
ETL	baz=288			*i* S	**Sg**	**15 33 47.7**	**+1.0**
NACB	**Ninganchiao**	**0.11**	**292**	*i* P	**Pg**	**15 33 46.3**	**+0.9**
NACB	baz=291			*i* S	**Sg**	**15 33 48.3**	**+1.0**
TWD	**Chiawan**	**0.11**	**241**	⇑*i*P	**Pg**	**15 33 46.1**	**+0.6**
TWD	baz=240			*i* S	**Sg**	**15 33 48.3**	**+0.9**
EHP	**Heping Village**	**0.18**	**11**	P	**Pg**	**15 33 47.4**	**+0.8**
EHP	baz=13			S	**Sg**	**15 33 50.7**	**+1.5**
HWA	**Hwalien**	**0.18**	**210**	P	**Pg**	**15 33 47.9**	**+1.3**
HWA	baz=207			*e*S	**Sg**	**15 33 52.4**	**+3.2**
EAHA	**Aohua**	**0.20**	**9**	P	**Pg**	**15 33 47.6**	**+0.7**
ETLH	**Xiulin Townshi**	**0.22**	**290**	*i* P	**Pg**	**15 33 48.3**	**+1.1**
ETLH	baz=289			*i* S	**Sg**	**15 33 52.0**	**+1.7**
ETM	**Tongmen**	**0.26**	**229**	*i* P	**Pg**	**15 33 48.5**	**+0.6**
ETM	baz=229			*e*S	**Sg**	**15 33 52.2**	**+0.8**
LXIB	**Xiulin Townshi**	**0.29**	**247**	⇑*i*P	**Pg**	**15 33 49.3**	**+0.7**
LXIB	baz=247			*e*S	**Sg**	**15 33 53.4**	**+0.9**
ENA	**Nanau**	**0.29**	**7**	*i* P	**Pb**	**15 33 49.6**	**-0.6**
ENA	baz=7.0			*i* S	**Sb**	**15 33 54.0**	**-1.1**
EWUT	**Wuta**	**0.32**	**12**	P	**Pb**	**15 33 50.0**	**-0.6**
EWUT	baz=12			*e*S	**Sb**	**15 33 54.8**	**-1.0**
SHUL	**Shoufeng**	**0.37**	**201**	*e*P	**Pb**	**15 33 51.9**	**+0.5**
WHF	**Hehuan Shan**	**0.40**	**272**	P	**Pb**	**15 33 51.6**	**-0.6**
WHF	baz=271			*e*S	**Sb**	**15 33 57.8**	**-0.8**
ESL	**Shilin**	**0.40**	**218**	⇑*i*P	**Pg**	**15 33 51.1**	**+0.4**
ESL	baz=216			S	**Sb**	**15 33 58.4**	**+0.2**
NNSB	**Datong**	**0.41**	**315**	*e*P	**Pb**	**15 33 52.3**	**+0.1**
NNSB	baz=315			S	**Sb**	**15 33 58.4**	**-0.3**
NNS	**Nan Shan**	**0.43**	**315**	*e*P	**Pb**	**15 33 53.0**	**+0.5**
NNS	baz=315			*e*S	**Sb**	**15 33 58.9**	**-0.2**
LATG	**Datong**	**0.43**	**338**	P	**Pb**	**15 33 52.3**	**-0.2**
LATG	baz=337			S	**Sb**	**15 33 59.1**	**0.0**

FUSS	**Fushou** baz=285	**0.43**	**285**	*i* P		Pb	15 33 52.6	-0.1
FUSS	baz=285			*e*S		Sb	15 33 59.1	-0.3
ESAO	**Su ao** baz=16	**0.46**	**16**	*e*P		Pg	15 33 52.2	+0.5
CHGB	**Renai** baz=261	**0.49**	**261**	P		Pb	15 33 53.5	-0.1
CHGB	baz=261			*e*S		Sb	15 34 00.5	-0.4
TWC	**Suao** baz=16	**0.49**	**16**	*e*P		Pb	15 33 53.2	-0.3
NDS	**Dongshan** baz=1.0	**0.50**	**1**	*e*P		Pb	15 33 53.4	-0.2
WARBT	**Fenglin Townsh** baz=215	**0.51**	**215**	*e*P		Pg	15 33 53.0	+0.4
TDCB	**Techi** baz=283	**0.51**	**283**	P		Pb	15 33 54.1	+0.2
TDCB	baz=283			S		Sb	15 34 01.4	-0.1
OWD	**Renai** baz=249	**0.52**	**250**	*e*P		Pb	15 33 53.6	-0.4
ENTT	**Nioudou** baz=346	**0.52**	**346**	⇓P		Pb	15 33 54.1	+0.1
WUSB	**Renai** baz=255	**0.55**	**255**	⇑P		Pb	15 33 54.5	-0.1
TWE	**Neicheng** baz=358	**0.58**	**357**	*e*P		Pb	15 33 55.4	+0.2
YHNB	**Yeheng** baz=330	**0.61**	**331**	*e*P		Pb	15 33 56.2	+0.6
FUSB	**Fushanzhiwuyua** baz=350	**0.63**	**350**	*e*P		Pb	15 33 56.3	+0.4

TAP 07 15:33:55.8,24.13N×121.69E,h10km,ML3.2,2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=293	**0.07**	**294**	*i* P	Pg	15 33 58.9	+0.9
ETL	baz=293			*i* S	Sg	15 34 00.5	+0.8
NACB	**Ninganchiao** baz=295	**0.10**	**296**	⇓*i*P	Pg	15 33 59.2	+0.9
NACB	baz=295			*i* S	Sg	15 34 01.1	+0.9
TWD	**Chiawan** baz=238	**0.10**	**240**	⇓*i*P	Pg	15 33 59.1	+0.7
TWD	baz=238			*i* S	Sg	15 34 00.9	+0.7
HWA	**Hwalien** baz=204	**0.17**	**207**	P	Pb	15 34 00.8	-0.2
EHP	**Heping Village** baz=16	**0.18**	**14**	*i* P	Pg	15 34 00.3	+0.6
EHP	baz=16			S	Sg	15 34 04.3	+1.8
EHP	**Heping Village** baz=154	**0.18**	**14**	P	Pg	15 34 00.3	+0.6
EHP	baz=154			*i* S	Sg	15 34 04.6	+2.2
EAHA	**Aohua** baz=12	**0.20**	**13**	*i* P	Pb	15 34 00.9	-0.7
EAHA	baz=12			S	Sg	15 34 04.5	+1.5
EAHA	**Aohua** baz=153	**0.20**	**13**	P	Pb	15 34 00.9	-0.7
EAHA	baz=153			S	Sg	15 34 04.6	+1.6
ETLH	**Xiulin Townshi** baz=291	**0.20**	**292**	*i* P	Pb	15 34 01.2	-0.4
ETLH	baz=291			*i* S	Sg	15 34 04.9	+1.7
ETM	**Tongmen** baz=227	**0.24**	**228**	P	Pg	15 34 01.5	+0.7
ETM	baz=227			S	Sg	15 34 05.6	+1.4
LXIB	**Xiulin Townshi** baz=246	**0.28**	**247**	*i* P	Pb	15 34 02.2	-0.7
LXIB	baz=246			*i* S	Sg	15 34 06.4	+1.2
ENA	**Nanau** baz=10.0	**0.30**	**9**	*i* P	Pb	15 34 03.1	-0.1
ENA	baz=10.0			*i* S	Sb	15 34 07.3	-0.9
EWUT	**Wuta** baz=14	**0.32**	**14**	P	Pb	15 34 03.2	-0.4
EWUT	baz=14			S	Sb	15 34 08.1	-0.8
SHUL	**Shoufeng** baz=198	**0.36**	**199**	*e*P	Pb	15 34 04.1	-0.2
WHF	**Hehuan Shan** baz=271	**0.39**	**272**	*e*P	Pg	15 34 04.2	+0.6
ESL	**Shilin** baz=215	**0.39**	**217**	P	Pb	15 34 04.3	-0.5
NNSB	**Datong** baz=316	**0.41**	**317**	*e*P	Pg	15 34 04.4	+0.6
NNSB	baz=316			S	Sb	15 34 11.2	-0.2
NNS	**Nan Shan** baz=317	**0.42**	**317**	P	Pb	15 34 04.9	-0.5
NNS	baz=317			S	Sb	15 34 11.5	-0.4
FUSS	**Fushou** baz=285	**0.42**	**286**	*e*P	Pb	15 34 05.0	-0.5
LATG	**Datong** baz=339	**0.43**	**340**	*e*P	Pb	15 34 05.0	-0.5
LATG	baz=339			*e*S	Sb	15 34 12.9	+0.8
TEGC	**Jichi Village** baz=197	**0.44**	**198**	*e*P	Pg	15 34 04.9	+0.5
ESAO	**Su ao** baz=17	**0.46**	**17**	*e*P	Pg	15 34 05.3	+0.5
ESAO	baz=17			*e*S	Sb	15 34 13.0	0.0
CHGB	**Renai** baz=261	**0.48**	**262**	*e*S	Sb	15 34 13.6	0.0
TWT	**Tachien** baz=283	**0.49**	**285**	*e*S	Sb	15 34 14.3	+0.6
NDT	**Datong Townshi** baz=340	**0.50**	**341**	*e*P	Pb	15 34 06.4	-0.2
NDT	baz=340			*e*S	Sb	15 34 14.4	+0.5
TWC	**Suao** baz=17	**0.50**	**17**	*e*P	Pb	15 34 06.4	-0.2
TWC	baz=17			*e*S	Sb	15 34 14.3	+0.3
WARBT	**Fenglin Townsh** baz=214	**0.50**	**214**	*e*P	Pb	15 34 06.6	0.0
WARBT	baz=214			*e*S	Sb	15 34 14.3	+0.4
NDS	**Dongshan** baz=2.0	**0.50**	**3**	*e*P	Pb	15 34 06.4	-0.2
NDS	baz=2.0			*e*S	Sb	15 34 14.8	+0.8
TDCB	**Techi** baz=283	**0.50**	**284**	*e*S	Sb	15 34 14.6	+0.4
ENTT	**Nioudou** baz=348	**0.52**	**347**	*e*S	Sb	15 34 14.5	-0.1
WUSB	**Renai** baz=255	**0.54**	**255**	*e*P	Pb	15 34 07.2	-0.2
WUSB	baz=255			*e*S	Sb	15 34 16.1	+0.7
TWE	**Neicheng** baz=359	**0.59**	**358**	*e*S	Sb	15 34 16.6	0.0
YHNB	**Yeheng** baz=331	**0.61**	**332**	*e*S	Sb	15 34 17.4	+0.2
FUSB	**Fushanzhiwuyua** baz=351	**0.63**	**351**	*e*S	Sb	15 34 18.1	+0.2
NWLT	**Wulai** baz=345	**0.67**	**345**	*e*P	Pb	15 34 09.6	+0.1
NWLT	baz=345			*e*S	Sb	15 34 19.3	+0.5
WHP	**Taichung City** baz=282	**0.70**	**282**	*e*P	Pb	15 34 10.0	0.0
WHP	baz=282			*e*S	Sb	15 34 20.7	+1.0
EHY	**Hungye** baz=207	**0.71**	**209**	*e*P	Pb	15 34 10.0	-0.2
EHY	baz=207			*e*S	Sb	15 34 19.6	-0.4
WCS	**Beigang Elemen** baz=264	**0.72**	**264**	*e*P	Pb	15 34 10.2	-0.1
SSLB	**Suanglung** baz=243	**0.76**	**243**	*e*P	Pb	15 34 10.8	-0.2
SSLB	baz=243			*e*S	Sb	15 34 21.5	+0.1
SMLT	**Sun Moon Lake** baz=250	**0.76**	**251**	*e*P	Pb	15 34 11.1	-0.1
SMLT	baz=250			*e*S	Sb	15 34 22.6	+0.9
NSTT	**Nanjuang** baz=308	**0.80**	**308**	*e*P	Pb	15 34 11.8	0.0
YULB	**Yu-li** baz=206	**0.82**	**206**	*e*P	Pb	15 34 12.2	+0.2
YULB	baz=206			*e*S	Sn	15 34 24.4	-1.1
NHDH	**Xindian Distri** baz=349	**0.84**	**350**	*e*P	Pb	15 34 12.7	+0.3
TIPB	**Shuangxi** baz=8.0	**0.85**	**8**	*e*P	Pb	15 34 13.0	+0.5
EYUL	**Yuli** baz=203	**0.85**	**204**	*e*P	Pb	15 34 13.2	+0.5
TWA	**Mucha** baz=353	**0.85**	**353**	*e*P	Pb	15 34 12.5	-0.1
TWF1	**Yuli** baz=204	**0.85**	**205**	*e*P	Pb	15 34 12.7	0.0

TAP 07 15:33:56.4,24.43N×121.69E,h19km±1km,ML3.1,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=93	**0.05**	**92**	*i* P	Pg	15 34 00.3	+0.4
ENA	baz=93			*i* S	Sg	15 34 02.4	+0.2
EWUT	**Wuta** baz=79	**0.09**	**80**	*i* P	Pg	15 34 00.5	+0.3
LATG	**Datong** baz=305	**0.18**	**306**	P	Pg	15 34 02.0	+0.7
ESAO	**Su ao** baz=44	**0.20**	**45**	*i* P	Pg	15 34 02.2	+0.6
NDS	**Dongshan** baz=8.0	**0.20**	**8**	P	Pg	15 34 01.7	+0.1
NDT	**Datong Townshi** baz=317	**0.23**	**318**	*e*P	Pb	15 34 01.7	0.0
TWC	**Suao** baz=41	**0.23**	**40**	*i* P	Pg	15 34 02.5	+0.6
TWC	baz=41			S	Sg	15 34 07.1	+1.3
ENTT	**Nioudou** baz=333	**0.23**	**333**	P	Pg	15 34 02.4	+0.3
NACB	**Ninganchiao** baz=197	**0.27**	**198**	P	Pg	15 34 03.2	+0.7
NNSB	**Datong** baz=269	**0.28**	**270**	*e*P	Pg	15 34 03.2	+0.4
ETL	**Fush Village** baz=191	**0.28**	**192**	P	Pg	15 34 02.9	+0.2
NNS	**Nan Shan** baz=271	**0.28**	**272**	*e*P	Pb	15 34 03.1	+0.3
TWE	**Neicheng** baz=359	**0.29**	**357**	P	Pb	15 34 03.6	+0.6
FUSB	**Fushanzhiwuyua** baz=344	**0.34**	**345**	*e*P	Pb	15 34 04.2	+0.3
TWD	**Chiawan** baz=191	**0.36**	**193**	*e*P	Pg	15 34 03.8	-0.2
YHNB	**Yeheng** baz=310	**0.37**	**310**	*e*P	Pb	15 34 04.5	+0.1
NWLT	**Wulai** baz=334	**0.38**	**334**	*e*P	Pb	15 34 05.3	+0.7
NSK	**Sanguang** baz=309	**0.39**	**310**	*i* P	Pb	15 34 05.1	+0.4
FUSS	**Fushou** baz=245	**0.44**	**246**	*e*P	Pb	15 34 05.8	0.0

*JMA **07** 15:37:36.5±0.1,24.1N±0.2×121.7E±0.5,h6km±1km, TAIWAN REGION*
*TAP **07** 15:37:36.4,24.14N×121.71E,h9km,ML3.5,C*
ISC 07 15:37:36.4±0.9,24.13N±0.01×121.74E±0.02,h8km±6km, n118,σ0877/195,34C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=283	**0.11**	**288**	⇓*i*P	**Pg**	**15 37 39.1**	**+0.1**
ETL	baz=283			*i* S	**Sg**	**15 37 40.8**	**-0.1**
TWD	**Chiawan** baz=247	**0.14**	**251**	⇓*i*P	**Pg**	**15 37 39.5**	**+0.1**
TWD	baz=247			S	**Sg**	**15 37 41.6**	**+0.2**
NACB	**Ninganchiao** baz=288	**0.14**	**291**	⇑*i*P	**Pg**	**15 37 39.4**	**0.0**
NACB	baz=288			S	**Sg**	**15 37 41.4**	**-0.1**
EHP	**Heping Village** baz=11	**0.18**	**2**	⇑*i*P	**Pg**	**15 37 40.5**	**+0.2**
EHP	baz=11			*i* S	**Sg**	**15 37 43.4**	**+0.5**
HWA	**Hwalien** baz=219	**0.19**	**219**	P	**Pg**	**15 37 41.4**	**+1.0**
EAHA	**Aohua** baz=6.0	**0.20**	**1**	⇑*i*P	**Pg**	**15 37 40.7**	**+0.1**
EAHA	baz=6.0			*i* S	**Sg**	**15 37 43.8**	**+0.4**
ETLH	**Xiulin Townshi** baz=288	**0.25**	**289**	⇑*i*P	**Pg**	**15 37 41.5**	**+0.1**
ETLH	baz=288			S	**Sg**	**15 37 45.0**	**+0.3**
ETM	**Tongmen** baz=232	**0.27**	**234**	⇑*i*P	**Pg**	**15 37 42.0**	**+0.1**
ETM	baz=232			S	**Sg**	**15 37 45.8**	**+0.2**
ENA	**Nanau** baz=5.0	**0.30**	**1**	⇑*i*P	**Pg**	**15 37 42.5**	**+0.1**
ENA	baz=5.0			S	**Sg**	**15 37 46.7**	**+0.2**
LXIB	**Xiulin Townshi** baz=248	**0.31**	**251**	⇑*i*P	**Pg**	**15 37 42.6**	**-0.1**
LXIB	baz=248			S	**Sg**	**15 37 46.7**	**-0.1**
EWUT	**Wuta** baz=10.0	**0.32**	**7**	⇑*i*P	**Pg**	**15 37 42.9**	**+0.1**
EWUT	baz=10.0			S	**Sg**	**15 37 47.3**	**+0.2**
SHUL	**Shoufeng** baz=211	**0.37**	**205**	P	**Pb**	**15 37 45.3**	**+0.1**
SHUL	baz=211			S	**Sb**	**15 37 52.6**	**+1.5**
ESL	**Shilin** baz=231	**0.41**	**222**	⇑*i*P	**Pg**	**15 37 44.6**	**0.0**
WHF	**Hehuan Shan** baz=271	**0.43**	**273**	⇑*i*P	**Pg**	**15 37 45.0**	**0.0**
WHF	baz=271			S	**Sg**	**15 37 50.6**	**0.0**
NNSB	**Datong** baz=313	**0.44**	**313**	⇑*i*P	**Pg**	**15 37 45.2**	**+0.1**
NNSB	baz=313			S	**Sg**	**15 37 50.9**	**0.0**
LATG	**Datong** baz=335	**0.45**	**335**	⇑*i*P	**Pg**	**15 37 45.4**	**+0.1**
LATG	baz=335			S	**Sg**	**15 37 51.3**	**+0.1**
TEGC	**Jichi Village** baz=191	**0.45**	**203**	*e*P	**Pb**	**15 37 46.6**	**0.0**
TEGC	baz=191			*e*S	**Sb**	**15 37 55.8**	**+2.4**
NNS	**Nan Shan** baz=314	**0.46**	**314**	⇑*i*P	**Pg**	**15 37 45.4**	**+0.1**
NNS	baz=314			S	**Sg**	**15 37 51.5**	**+0.1**
ESAO	**Su ao** baz=14	**0.46**	**12**	P	**Pg**	**15 37 45.4**	**0.0**
ESAO	baz=14			S	**Sg**	**15 37 51.1**	**-0.3**
FUSS	**Fushou** baz=285	**0.47**	**285**	⇑*i*P	**Pg**	**15 37 45.9**	**+0.3**
FUSS	baz=285			S	**Sg**	**15 37 52.2**	**+0.5**
TWC	**Suao** baz=14	**0.49**	**12**	⇑*i*P	**Pg**	**15 37 46.1**	**+0.1**
TWC	baz=14			*e*S	**Sg**	**15 37 52.1**	**-0.4**
NDS	**Dongshan** baz=358	**0.51**	**358**	⇑P	**Pg**	**15 37 46.5**	**+0.3**
NDS	baz=358			S	**Sg**	**15 37 53.4**	**+0.4**
WARBT	**Fenglin Townsh** baz=226	**0.52**	**218**	⇓P	**Pg**	**15 37 46.5**	**+0.1**
CHGB	**Renai** baz=254	**0.52**	**263**	⇑*i*P	**Pg**	**15 37 46.8**	**+0.3**
CHGB	baz=254			*e*S	**Sg**	**15 37 53.4**	**0.0**
NDT	**Datong Townshi** baz=337	**0.52**	**337**	⇑*i*P	**Pg**	**15 37 46.9**	**+0.4**
NDT	baz=337			S	**Sg**	**15 37 53.6**	**+0.3**
TWT	**Tachien** baz=283	**0.53**	**284**	⇑P	**Pb**	**15 37 47.3**	**-0.7**
TWT	baz=283			S	**Sg**	**15 37 53.9**	**+0.2**
EGFH	**Guangfu** baz=222	**0.53**	**212**	*e*P	**Pb**	**15 37 47.4**	**-0.6**
ENTT	**Nioudou** baz=344	**0.54**	**343**	⇑*i*P	**Pg**	**15 37 47.1**	**+0.3**
ENTT	baz=344			S	**Sg**	**15 37 54.3**	**+0.4**
OWD	**Renai** baz=251	**0.54**	**252**	⇑P	**Pg**	**15 37 47.0**	**0.0**
OWD	baz=251			S	**Sg**	**15 37 53.9**	**-0.1**
TDCB	**Techi** baz=283	**0.54**	**284**	⇑P	**Pg**	**15 37 47.4**	**+0.4**
TDCB	baz=283			S	**Sg**	**15 37 54.2**	**0.0**
WUSB	**Renai** baz=249	**0.58**	**257**	⇑*i*P	**Pg**	**15 37 48.0**	**+0.3**
WUSB	baz=249			S	**Sg**	**15 37 55.1**	**-0.2**
TWE	**Neicheng** baz=356	**0.60**	**354**	⇑*i*P	**Pg**	**15 37 48.3**	**+0.3**
TWE	baz=356			S	**Sg**	**15 37 56.4**	**+0.6**
YHNB	**Yeheng** baz=329	**0.63**	**329**	⇑*i*P	**Pg**	**15 37 49.0**	**+0.3**
YHNB	baz=329			S	**Sg**	**15 37 57.0**	**0.0**
ILA	**Ilan** baz=355	**0.64**	**1**	*e*P	**Pb**	**15 37 49.4**	**-0.4**
ILA	baz=355			S	**Sg**	**15 37 58.1**	**+1.0**
FUSB	**Fushanzhiwuyua** baz=348	**0.65**	**348**	⇑*i*P	**Pg**	**15 37 49.3**	**+0.4**
FUSB	baz=348			*e*S	**Sg**	**15 37 57.3**	**-0.1**
NSK	**Sanguang** baz=328	**0.65**	**328**	⇑P	**Pg**	**15 37 49.2**	**+0.2**
NSK	baz=328			S	**Sg**	**15 37 57.6**	**+0.1**
NWLT	**Wulai** baz=349	**0.68**	**342**	⇑P	**Pg**	**15 37 50.0**	**+0.3**
NWLT	baz=349			S	**Sg**	**15 37 58.5**	**-0.1**
HGSD	**Ruisui** baz=195	**0.69**	**204**	P	**Pb**	**15 37 50.9**	**+0.2**
EHY	**Hungye** baz=212	**0.72**	**212**	*e*P	**Pg**	**15 37 50.5**	**+0.1**
WHP	**Taichung City** baz=282	**0.74**	**282**	⇑P	**Pb**	**15 37 51.3**	**-0.3**
WHP	baz=282			*e*S	**Sb**	**15 38 00.8**	**-1.0**
NFF	**Wufeng Townshi** baz=312	**0.76**	**312**	⇓P	**Pb**	**15 37 51.6**	**-0.2**
NFF	baz=312			*e*S	**Sg**	**15 38 01.0**	**+0.1**
WCS	**Beigang Elemen** baz=265	**0.76**	**265**	⇑P	**Pb**	**15 37 51.4**	**-0.5**
SSLB	**Suanglung** baz=254	**0.79**	**245**	⇑P	**Pg**	**15 37 51.7**	**+0.1**
SSLB	baz=254			*e*S	**Sg**	**15 38 01.1**	**-0.8**
SMLT	**Sun Moon Lake** baz=252	**0.80**	**253**	*e*P	**Pb**	**15 37 52.1**	**-0.6**
SMLT	baz=252			*e*S	**Sg**	**15 38 02.3**	**0.0**
YULB	**Yu-li** baz=224	**0.83**	**209**	*e*P	**Pg**	**15 37 52.2**	**-0.3**
LIOB	**Emei** baz=308	**0.84**	**308**	*e*P	**Pb**	**15 37 53.3**	**+0.1**
NSTT	**Nanjuang** baz=307	**0.84**	**307**	⇑P	**Pb**	**15 37 53.1**	**-0.1**
NSTT	baz=307			*e*S	**Sg**	**15 38 03.7**	**+0.2**
TIPB	**Shuangxi** baz=356	**0.85**	**6**	⇓P	**Pg**	**15 37 53.1**	**+0.4**
TIPB	baz=356			*e*S	**Sg**	**15 38 03.5**	**-0.3**
NHDH	**Xindian Distri** baz=338	**0.86**	**347**	P	**Pb**	**15 37 53.3**	**-0.2**
NHDH	baz=338			S	**Sg**	**15 38 04.3**	**+0.2**
EYUL	**Yuli** baz=220	**0.86**	**206**	*e*P	**Pn**	**15 37 54.2**	**-0.6**
TWA	**Mucha** baz=351	**0.86**	**351**	*e*P	**Pb**	**15 37 53.6**	**0.0**
TWA	baz=351			S	**Sg**	**15 38 04.5**	**+0.1**
TWF1	**Yuli** baz=222	**0.87**	**208**	*e*P	**Pg**	**15 37 53.1**	**-0.1**
TWQ1	**Liyutan** baz=285	**0.91**	**284**	*e*P	**Pn**	**15 37 54.8**	**-0.6**
TWB1	**Santiao Chiao** baz=6.0	**0.91**	**15**	*e*P	**Pg**	**15 37 53.8**	**-0.1**
TWB1	baz=6.0			*e*S	**Sg**	**15 38 05.5**	**-0.3**
WHYT	**Xinyi Township** baz=244	**0.91**	**242**	*e*P	**Pb**	**15 37 54.3**	**-0.2**
NSY	**Sanyi** baz=288	**0.94**	**288**	*e*P	**Pn**	**15 37 55.7**	**-0.1**
NWF	**Wu-fen Shan** baz=354	**0.94**	**3**	*e*P	**Pb**	**15 37 55.0**	**-0.1**
NWF	baz=354			*e*S	**Sg**	**15 38 06.4**	**-0.5**
WFSB	**Wu-fen Shan** baz=354	**0.94**	**3**	*e*P	**Pb**	**15 37 55.0**	**0.0**
WFSB	baz=354			*e*S	**Sg**	**15 38 06.5**	**-0.4**
SBCB	**Hsinchu** baz=314	**0.95**	**314**	*e*P	**Pn**	**15 37 56.0**	**-0.1**
NMLH	**Miaoli** baz=295	**0.95**	**296**	*e*P	**Pn**	**15 37 55.9**	**-0.2**
HSN	**Hsinchu** baz=316	**0.97**	**314**	*e*P	**Pb**	**15 37 55.6**	**+0.1**
WJS	**Zhushan** baz=252	**0.97**	**252**	*e*P	**Pn**	**15 37 56.0**	**-0.3**
WJS	baz=252			*e*S	**Sn**	**15 38 09.3**	**-0.9**
SXI1	**Grass Mountain** baz=354	**0.97**	**7**	⇑P	**Pb**	**15 37 55.6**	**0.0**
SXI1	baz=354			*e*S	**Sg**	**15 38 07.5**	**-0.3**
NCUH	**Zhongli** baz=329	**0.98**	**329**	*e*P	**Pn**	**15 37 56.2**	**-0.2**
NCUH	baz=329			*e*S	**Sn**	**15 38 11.3**	**+0.9**
CHKH	**Chenggong** baz=191	**0.98**	**199**	*e*P	**Pg**	**15 37 55.2**	**-0.1**
CHKH	baz=191			*e*S	**Sn**	**15 38 10.3**	**-0.2**
WNT	**Mingjian** baz=251	**0.99**	**256**	⇓P	**Pn**	**15 37 57.0**	**+0.4**
WNT	baz=251			*e*S	**Sn**	**15 38 10.3**	**-0.5**
FULB	**Fuli** baz=223	**1.01**	**204**	*e*P	**Pb**	**15 37 56.0**	**-0.1**
TWS1	**Kuangyinshan** baz=343	**1.01**	**343**	*e*P	**Pn**	**15 37 56.8**	**-0.2**
TWS1	baz=343			*e*S	**Sn**	**15 38 10.8**	**-0.6**
TNOU	**National Taiwa** baz=360	**1.02**	**2**	*e*P	**Pb**	**15 37 56.4**	**+0.1**
YM01	**YM01** baz=351	**1.03**	**352**	*e*P	**Pb**	**15 37 56.8**	**+0.3**
YM01	baz=351			*e*S	**Sg**	**15 38 09.7**	**+0.1**
ALS	**Alishan** baz=237	**1.05**	**235**	*e*P	**Pb**	**15 37 56.9**	**-0.1**
NTST	**Danshui** baz=344	**1.07**	**346**	*e*P	**Pn**	**15 37 57.7**	**+0.1**
YM08	**YM08** baz=336	**1.07**	**353**	*e*P	**Pg**	**15 37 57.1**	**+0.2**
ANP	**Anpu** baz=349	**1.07**	**350**	*e*P	**Pb**	**15 37 57.6**	**+0.3**
ANP	baz=349			*e*S	**Sb**	**15 38 11.8**	**+0.2**
CHKT	**Chengkung** baz=192	**1.08**	**198**	*e*P	**Pg**	**15 37 56.9**	**-0.2**
CHKT	baz=192			*e*S	**Sn**	**15 38 12.9**	**0.0**
EHD	**Haiduan** baz=222	**1.09**	**207**	*e*P	**Pg**	**15 37 56.0**	**-1.3**
ECS	**Chishang** baz=221	**1.13**	**205**	*e*P	**Pg**	**15 37 57.9**	**-0.2**

ELDTW	**Lidau**		**1.14**	**215**	*e*P		**Pg**	**15 37 57.0**	**-1.4**
	baz=228								
ELDTW					*e*S		**Sb**	**15 38 13.2**	**-0.3**
	baz=228								
TWY	**Chenhua**		**1.15**	**354**	*e*P		**Pn**	**15 37 59.2**	**+0.4**
	baz=338								
WGK	**Gukeng**		**1.16**	**248**	*e*P		**Pn**	**15 37 59.4**	**+0.5**
WGK	baz=249				*e*S		**Sn**	**15 38 15.6**	**+0.7**
	baz=249								
WDLH	**Douliu**		**1.18**	**249**	*e*P		**Pn**	**15 37 60.0**	**+0.8**
	baz=250								
WDLH					*e*S		**Sn**	**15 38 16.3**	**+0.9**
	baz=250								
YOJ	**Yonaguni jima**		**1.21**	**74**	*e*P		**Pb**	**15 37 58.8**	**-0.7**
	baz=68								
YOJ	**Yonaguni jima**		**1.21**	**74**	P		**Pb**	**15 37 59.6**	**0.0**
EDH	**Donghe**		**1.21**	**199**	*e*P		**Pb**	**15 37 57.1**	**-2.6**
	baz=188								
EDH					*e*S		**Sb**	**15 38 15.6**	**+0.2**
	baz=188								
WCKO	**Fanlu**		**1.24**	**237**	*e*P		**Pg**	**15 38 01.0**	**+0.7**
	baz=239								
WCKO					*e*S		**Sn**	**15 38 18.6**	**+1.7**
	baz=239								
WRL	**Guolierlin Hig**		**1.26**	**260**	⇓*e*P		**Pg**	**15 38 01.1**	**+0.4**
	baz=261								
WRL					*e*S		**Sn**	**15 38 17.9**	**+0.5**
	baz=261								
STYH	**Taoyuan**		**1.29**	**223**	*e*P		**Pn**	**15 38 00.6**	**-0.2**
	baz=226								
STYH					*e*S		**Sg**	**15 38 17.7**	**-0.5**
	baz=226								
TPUB	**Ta-pu**		**1.30**	**231**	⇑P		**Pg**	**15 38 01.8**	**+0.3**
	baz=221								
TPUB					*e*S		**Sn**	**15 38 20.6**	**+2.1**
	baz=221								
WTK	**Tuku**		**1.31**	**251**	*e*P		**Pg**	**15 38 02.0**	**+0.5**
	baz=252								
WTK					*e*S		**Sn**	**15 38 20.7**	**+2.2**
	baz=252								
WTP	**Ta-pu**		**1.35**	**230**	*e*P		**Pg**	**15 38 02.2**	**-0.2**
	baz=235								
TWK	**Hsinying**		**1.43**	**233**	*e*P		**Pg**	**15 38 03.5**	**-0.3**
	baz=238								
TWG	**Pinlang**		**1.43**	**205**	*e*P		**Pn**	**15 38 00.4**	**-2.3**
	baz=194								
TWGBT	**Beinan**		**1.43**	**205**	*e*P		**Pg**	**15 38 00.4**	**-2.3**
	baz=194								
SNST	**Tainan City**		**1.45**	**232**	*e*P		**Pg**	**15 38 04.5**	**+0.3**
	baz=235								
SNST					*e*S		**Sg**	**15 38 25.2**	**+2.2**
	baz=235								
CHN1	**Nanshi**		**1.45**	**230**	*e*P		**Pg**	**15 38 03.9**	**-0.4**
	baz=234								
CHN1					*e*S		**Sg**	**15 38 26.9**	**+3.8**
	baz=234								
WSF	**Szhu**		**1.47**	**251**	*e*P		**Pg**	**15 38 04.4**	**-0.2**
	baz=252								
WSF					*e*S		**Sg**	**15 38 24.8**	**+1.1**
	baz=252								
SGST	**Jiashian**		**1.48**	**226**	*e*P		**Pn**	**15 38 03.6**	**+0.2**
	baz=228								
SGST					*e*S		**Sg**	**15 38 25.2**	**+1.1**
	baz=228								
WSL	**Shuilin Townsh**		**1.50**	**247**	*e*P		**Pg**	**15 38 04.9**	**-0.4**
	baz=248								
WSL					*e*S		**Sg**	**15 38 27.6**	**+2.7**
	baz=248								
SLGT	**Liugui**		**1.51**	**222**	*e*P		**Pb**	**15 38 04.4**	**-0.2**
	baz=227								
ICHU	**Yijhu**		**1.54**	**241**	*e*P		**Pg**	**15 38 05.3**	**-0.7**
	baz=244								
ICHU					*e*S		**Sg**	**15 38 27.2**	**+1.4**
	baz=244								
SCST	**Cishan**		**1.68**	**223**	*e*P		**Pb**	**15 38 06.9**	**-0.7**
	baz=228								
SCST					*e*S		**Sg**	**15 38 31.8**	**+1.3**
	baz=228								
ECL	**Taimali**		**1.68**	**205**	*e*P		**Pn**	**15 38 05.4**	**-0.7**
	baz=197								
SHHT	**Tainan City**		**1.68**	**229**	*e*P		**Pg**	**15 38 08.2**	**-0.5**
	baz=236								
TSMG	**Majia**		**1.73**	**216**	*e*P		**Pb**	**15 38 07.7**	**-0.8**
	baz=233								
TSCK	**Chigu Township**		**1.80**	**238**	*e*P		**Pb**	**15 38 08.8**	**-0.7**
	baz=241								
TSCK					*e*S		**Sg**	**15 38 33.3**	**-1.0**
	baz=241								
MASBT	**Mashibuluo**		**1.81**	**214**	*e*P		**Pn**	**15 38 08.2**	**+0.3**
	baz=217								
MASBT					*e*S		**Sg**	**15 38 33.9**	**-0.9**
	baz=217								
SCZT	**Fangliau**		**2.02**	**211**	*e*P		**Pb**	**15 38 12.2**	**-1.3**
	baz=214								
SCZT					*e*S		**Sb**	**15 38 37.4**	**-1.3**
	baz=214								
PNG	**Penghu**		**2.07**	**255**	*e*P		**Pn**	**15 38 12.1**	**+0.7**
	baz=258								
PNG					*e*S		**Sb**	**15 38 38.9**	**-1.3**
	baz=258								
PHUB	**P'eng-hu**		**2.07**	**253**	*e*P		**Pn**	**15 38 12.1**	**+0.6**
	baz=257								
PHUB					*e*S		**Sb**	**15 38 39.0**	**-1.2**
	baz=257								
JKRS	**Kuro-shima**		**2.08**	**86**	*e*P		**Pn**	**15 38 12.6**	**+1.1**
SLIU	**Shizi**		**2.09**	**205**	P		**Pn**	**15 38 13.0**	**+1.4**
	baz=212								
WDGT	**Dungji**		**2.09**	**246**	*e*P		**Pn**	**15 38 12.4**	**+0.7**
	baz=236								
WDGT					*e*S		**Sb**	**15 38 39.3**	**-1.3**
	baz=236								
VWUC	**VWUC**		**2.25**	**293**	*e*S		**Sn**	**15 38 41.9**	**0.0**
	baz=292								
VCHM	**Qimei**		**2.30**	**247**	*e*P		**Pn**	**15 38 14.5**	**-0.1**
	baz=237								
VCHM					*e*S		**Sn**	**15 38 44.1**	**+0.9**
	baz=237								
JISG	**Ishigakijimahi**		**2.39**	**78**	P		**Pn**	**15 38 16.0**	**+0.1**
PTMZ	**Houxiangcun**		**2.55**	**291**	*e*P		**Pn**	**15 38 17.3**	**-0.7**
	baz=290								
PTMZ					*e*S		**Sn**	**15 38 48.0**	**-1.3**
	baz=290								
LYJJ	**Jianjiangzhen**		**3.00**	**324**	*e*P		**Pn**	**15 38 23.4**	**-0.9**
	baz=322								
AXDP	**Jialang**		**3.52**	**283**	*e*P		**Pn**	**15 38 31.2**	**-0.1**
	baz=283								

TAP ***07*** *15:40:57.3,24.°17N×121.°68E,h10km,ML3.1,C*
JMA ***07*** *15:40:58.0±0.2,24.°1N±0.°4×12.°2E±.°,h8km±1km, TAIWAN REGION*

ISC 07 15:40:57.8±0.8,**24.°15N**±0.°01×**121.°70E**±0.°02,**h11**km±4km, **n91**,σ0**946**/140,**1C-3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
ETL	**Fush Village**	**0.07**	**281**	*i* P		**Pg**	**15 41 00.1**		**0.0**
	baz=262								
ETL				*i* S		**Sg**	**15 41 01.6**		**-0.2**
	baz=262								
NACB	**Ninganchiao**	**0.10**	**286**	*i* P		**Pg**	**15 41 00.3**		**-0.1**
	baz=277								
NACB				*i* S		**Sg**	**15 41 02.1**		**-0.2**
	baz=277								
TWD	**Chiawan**	**0.11**	**234**	⇑*i* P		**Pg**	**15 41 00.6**		**-0.1**
	baz=217								
TWD				*i* S		**Sg**	**15 41 02.5**		**-0.2**
	baz=217								
EHP	**Heping Village**	**0.17**	**14**	*i* P		**Pg**	**15 41 01.6**		**+0.1**
	baz=25								
EHP				*i* S		**Sg**	**15 41 04.3**		**+0.2**
	baz=25								
EAHA	**Aohua**	**0.19**	**12**	*i* P		**Pg**	**15 41 01.8**		**0.0**
	baz=19								
EAHA				S		**Sg**	**15 41 04.5**		**-0.1**
	baz=19								
HWA	**Hwalien**	**0.19**	**206**	*i* P		**Pg**	**15 41 02.5**		**+0.7**
	baz=196								
HWA				S		**Sg**	**15 41 05.7**		**+1.0**
	baz=196								
ETLH	**Xiulin Townshi**	**0.20**	**287**	*i* P		**Pg**	**15 41 02.4**		**+0.2**
	baz=283								
ETLH				*i* S		**Sg**	**15 41 05.5**		**+0.3**
	baz=283								
ETM	**Tongmen**	**0.26**	**226**	*i* P		**Pg**	**15 41 03.1**		**0.0**
	baz=220								
ETM				S		**Sg**	**15 41 06.4**		**-0.3**
	baz=220								
ENA	**Nanau**	**0.28**	**8**	*i* P		**Pg**	**15 41 03.6**		**+0.1**
	baz=14								
ENA				*i* S		**Sg**	**15 41 07.5**		**+0.1**
	baz=14								
LXIB	**Xiulin Townshi**	**0.29**	**244**	⇓*i* P		**Pg**	**15 41 03.5**		**-0.2**
	baz=239								
LXIB				*i* S		**Sg**	**15 41 07.6**		**0.0**
	baz=239								
EWUT	**Wuta**	**0.31**	**14**	P		**Pg**	**15 41 04.2**		**+0.2**
	baz=18								
EWUT				S		**Sg**	**15 41 08.3**		**+0.2**
	baz=18								
SHUL	**Shoufeng**	**0.38**	**199**	P		**Pb**	**15 41 06.2**		**-0.3**
	baz=195								
SHUL				S		**Sb**	**15 41 13.8**		**+1.5**
	baz=195								
WHF	**Hehuan Shan**	**0.40**	**270**	*i* P		**Pg**	**15 41 05.7**		**0.0**
	baz=266								
WHF				*i* S		**Sg**	**15 41 11.0**		**0.0**
	baz=266								
NNSB	**Datong**	**0.40**	**314**	*i* P		**Pg**	**15 41 06.0**		**+0.3**
	baz=314								
NNSB				*i* S		**Sg**	**15 41 11.6**		**+0.5**
	baz=314								
ESL	**Shilin**	**0.41**	**216**	P		**Pg**	**15 41 05.4**		**-0.5**
	baz=211								
ESL				S		**Sg**	**15 41 11.2**		**-0.1**
	baz=211								
NNS	**Nan Shan**	**0.42**	**315**	⇓*i* P		**Pg**	**15 41 06.2**		**+0.2**
	baz=315								
NNS				*i* S		**Sg**	**15 41 12.0**		**+0.4**
	baz=315								
LATG	**Datong**	**0.42**	**338**	*i* P		**Pg**	**15 41 06.3**		**+0.3**
	baz=339								
LATG				S		**Sg**	**15 41 12.1**		**+0.5**
	baz=339								
FUSS	**Fushou**	**0.43**	**284**	P		**Pg**	**15 41 06.7**		**+0.4**
	baz=281								
FUSS				S		**Sb**	**15 41 12.8**		**-1.1**
	baz=281								
ESAO	**Su ao**	**0.45**	**17**	*e*P		**Pb**	**15 41 07.2**		**-0.5**
	baz=20								
ESAO				*e*S		**Sg**	**15 41 12.2**		**-0.4**
	baz=20								
TEGC	**Jichi Village**	**0.46**	**198**	S		**Sb**	**15 41 16.8**		**+2.2**
	baz=194								
TWC	**Suao**	**0.48**	**17**	P		**Pg**	**15 41 07.2**		**0.0**
	baz=20								
TWC				*i* S		**Sg**	**15 41 14.2**		**+0.6**
	baz=20								
NDT	**Datong Townshi**	**0.48**	**340**	P		**Pb**	**15 41 07.7**		**-0.6**
	baz=341								
NDT				S		**Sb**	**15 41 14.7**		**-0.8**
	baz=341								
CHGB	**Renai**	**0.48**	**260**	*i* P		**Pg**	**15 41 07.5**		**+0.2**
	baz=257								
CHGB				S		**Sg**	**15 41 13.8**		**0.0**
	baz=257								
NDS	**Dongshan**	**0.48**	**2**	P		**Pg**	**15 41 07.6**		**+0.3**
	baz=4.0								
NDS				S		**Sg**	**15 41 14.1**		**+0.3**
	baz=4.0								
TWT	**Tachien**	**0.49**	**283**	*i* P		**Pb**	**15 41 08.0**		**-0.5**
	baz=280								
TWT				*i* S		**Sb**	**15 41 14.8**		**-0.9**
	baz=280								
TDCB	**Techi**	**0.50**	**282**	*i* P		**Pb**	**15 41 08.0**		**-0.7**
	baz=280								
TDCB				*i* S		**Sg**	**15 41 14.8**		**+0.4**
	baz=280								
ENTT	**Houdou**	**0.51**	**346**	*i* P		**Pg**	**15 41 08.0**		**+0.3**
	baz=348								
ENTT				S		**Sg**	**15 41 14.8**		**+0.4**
	baz=348								
OWD	**Renai**	**0.51**	**248**	P		**Pg**	**15 41 08.0**		**+0.2**
	baz=245								
OWD				*e*S		**Sg**	**15 41 15.0**		**+0.4**
	baz=245								
WARBT	**Fenglin Townsh**	**0.51**	**214**	P		**Pg**	**15 41 07.5**		**-0.3**
	baz=210								
WARBT				S		**Sb**	**15 41 17.2**		**+0.9**
	baz=210								
EGFH	**Guangfu**	**0.54**	**207**	*e*P		**Pg**	**15 41 08.2**		**0.0**
	baz=204								
EGFH				*e*S		**Sb**	**15 41 17.2**		**+0.3**
	baz=204								
WUSB	**Renai**	**0.55**	**254**	P		**Pg**	**15 41 08.7**		**+0.2**
	baz=251								
WUSB				S		**Sg**	**15 41 15.8**		**-0.1**
	baz=251								
TWE	**Neicheng**	**0.57**	**357**	*i* P		**Pb**	**15 41 09.4**		**-0.4**
TWE				S		**Sg**	**15 41 17.0**		**+0.5**
YHNB	**Yeheng**	**0.60**	**331**	*i* P		**Pb**	**15 41 10.0**		**-0.3**
	baz=331								
YHNB				S		**Sb**	**15 41 18.1**		**-0.7**
	baz=331								
NSK	**Sanguang**	**0.61**	**330**	*i* P		**Pb**	**15 41 10.1**		**-0.4**
	baz=330								
NSK				*i* S		**Sb**	**15 41 18.3**		**-0.9**
	baz=330								
FUSB	**Fushanzhiwuyua**	**0.62**	**351**	⇓*i* P		**Pb**	**15 41 10.2**		**-0.5**
	baz=352								
FUSB				S		**Sg**	**15 41 17.3**		**-0.7**
	baz=352								
NWLT	**Wulai**	**0.65**	**344**	P		**Pb**	**15 41 11.0**		**-0.2**
	baz=345								
NWLT				S		**Sg**	**15 41 19.3**		**+0.3**
	baz=345								
HGSD	**Ruisui**	**0.70**	**201**	*e*P		**Pn**	**15 41 13.0**		**-0.5**
	baz=198								
WHP	**Taichung City**	**0.70**	**281**	P		**Pb**	**15 41 12.0**		**0.0**
	baz=279								
WHP				S		**Sb**	**15 41 21.6**		**0.0**
	baz=279								
NFF	**Wufeng Townshi**	**0.72**	**313**	P		**Pb**	**15 41 12.4**		**+0.1**
	baz=312								
NFF				*e*S		**Sb**	**15 41 22.2**		**0.0**
	baz=312								
WCS	**Beigang Elemen**	**0.72**	**263**	*e*P		**Pb**	**15 41 12.3**		**-0.1**
	baz=261								
WCS				*e*S		**Sb**	**15 41 21.8**		**-0.5**
	baz=261								
EHY	**Hungye**	**0.72**	**208**	P		**Pg**	**15 41 11.1**		**-0.7**
	baz=205								
SSLB	**Suanglung**	**0.77**	**242**	P		**Pg**	**15 41 12.7**		**+0.1**
	baz=240								
SSLB				S		**Sg**	**15 41 22.2**		**-0.5**
	baz=240								
SMLT	**Sun Moon Lake**	**0.78**	**250**	*i* P		**Pb**	**15 41 12.9**		**-0.4**
	baz=248								
SMLT				*i* S		**Sg**	**15 41 22.9**		**0.0**
	baz=248								
LIOB	**Emei**	**0.80**	**309**	P		**Pb**	**15 41 13.8**		**+0.2**
	baz=308								
LIOB				*e*S		**Sb**	**15 41 24.5**		**+0.1**
	baz=308								
NSTT	**Nanjuang**	**0.80**	**307**	P		**Pb**	**15 41 13.6**		**0.0**
	baz=307								
NSTT				S		**Sb**	**15 41 24.8**		**+0.4**
	baz=307								
NHDH	**Xindian Distri**	**0.83**	**349**	*e*P		**Pb**	**15 41 14.4**		**+0.2**
	baz=350								
TIPB	**Shuangxi**	**0.83**	**8**	*e*P		**Pb**	**15 41 14.2**		**-0.1**
	baz=9.0								
YULB	**Yu-li**	**0.83**	**206**	*e*P		**Pg**	**15 41 13.8**		**0.0**
	baz=204								
YULB				*e*S		**Sg**	**15 41 24.8**		**0.0**
	baz=204								
TWA	**Mucha**	**0.84**	**353**	P		**Pb**	**15 41 14.2**		**-0.2**
	baz=354								
TWA				S		**Sb**	**15 41 25.6**		**0.0**
	baz=354								
TWQ1	**Liyutan**	**0.87**	**284**	*e*P		**Pn**	**15 41 15.8**		**-0.1**
	baz=282								
EYUL	**Yuli**	**0.87**	**204**	*e*P		**Pb**	**15 41 15.1**		**+0.3**
	baz=201								
TWF1	**Yuli**	**0.87**	**205**	*e*P		**Pg**	**15 41 14.5**		**-0.1**
	baz=202								
WHYT	**Xinyi Township**	**0.89**	**240**	*e*P		**Pb**	**15 41 15.5**		**+0.2**
	baz=238								
WHYT				*e*S		**Sg**	**15 41 26.6**		**-0.1**
	baz=238								
TWB1	**Santiao Chiao**	**0.90**	**17**	*e*P		**Pb**	**15 41 15.5**		**+0.1**
	baz=19								
NWF	**Wu-fen Shan**	**0.92**	**5**	*e*P		**Pb**	**15 41 16.2**		**+0.4**
	baz=6.0								
NWF				*e*S		**Sb**	**15 41 28.1**		**0.0**
	baz=6.0								
WFSB	**Wu-fen Shan**	**0.92**	**5**	*e*P		**Pn**	**15 41 16.5**		**-0.2**
	baz=6.0								
WFSB				*e*S		**Sb**	**15 41 28.2**		**+0.1**
	baz=6.0								
NCUH	**Zhongli**	**0.94**	**330**	*e*P		**Pn**	**15 41 17.2**		**+0.2**
	baz=330								
WJS	**Zhushan**	**0.94**	**250**	*e*P		**Pb**	**15 41 16.4**		**+0.3**
	baz=248								
SXI1	**Grass Mountain**	**0.96**	**10**	*e*P		**Pb**	**15 41 16.6**		**+0.2**
	baz=11								
WNT	**Mingjian**	**0.96**	**254**	*e*P		**Pn**	**15 41 17.6**		**+0.3**
	baz=252								
TWS1	**Kuangyinshan**	**0.98**	**345**	*e*P		**Pb**	**15 41 16.7**		**-0.1**
	baz=346								
CHKH	**Chenggong**	**0.99**	**196**	*e*P		**Pg**	**15 41 16.0**		**-0.8**
	baz=194								
TNOU	**National Taiwa**	**1.00**	**4**	*e*P		**Pn**	**15 41 17.9**		**+0.2**
	baz=5.0								
YM01	**YM01**	**1.00**	**353**	*e*P		**Pb**	**15 41 17.5**		**+0.3**
	baz=354								
FULB	**Fuli**	**1.01**	**201**	*e*P		**Pb**	**15 41 17.4**		**+0.1**
	baz=199								
ALS	**Alishan**	**1.03**	**232**	*e*P		**Pg**	**15 41 17.5**		**-0.2**
	baz=230								
NTST	**Danshui**	**1.04**	**348**	*e*P		**Pn**	**15 41 18.6**		**+0.3**
	baz=348								
YM08	**YM08**	**1.04**	**355**	*e*P		**Pn**	**15 41 18.3**		**-0.1**
	baz=355								
ANP	**Anpu**	**1.05**	**351**	*e*P		**Pn**	**15 41 18.4**		**0.0**
	baz=352								
EHD	**Haiduan**	**1.09**	**204**	*e*P		**Pg**	**15 41 18.3**		**-0.5**
	baz=203								
ELDTW	**Lidau**	**1.14**	**213**	*e*P		**Pg**	**15 41 18.0**		**-1.7**
	baz=211								
WDLH	**Douliu**	**1.15**	**247**	*e*P		**Pn**	**15 41 20.5**		**+0.6**
	baz=245								
WCKO	**Fanlu**	**1.22**	**235**	*e*P		**Pg**	**15 41 21.6**		**+0.3**
	baz=233								
WRL	**Guolierlin Hig**	**1.23**	**259**	*e*P		**Pg**	**15 41 21.1**		**-0.3**
	baz=257								
YOJ	**Yonaguni jima**	**1.24**	**75**	P		**Pn**	**15 41 20.7**		**-0.3**
WTK	**Tuku**	**1.28**	**249**	*e*P		**Pg**	**15 41 22.8**		**+0.4**
	baz=248								
CHN4	**Tsaushan**	**1.28**	**232**	*e*P		**Pg**	**15 41 22.8**		**+0.4**
	baz=230								
STYH	**Taoyuan**	**1.29**	**221**	*e*P		**Pn**	**15 41 20.9**		**-0.8**
	baz=219								
TPUB	**Ta-pu**	**1.29**	**229**	*e*P		**Pn**	**15 41 21.8**		**+0.1**
	baz=228								
WTP	**Ta-pu**	**1.34**	**228**	*e*P		**Pg**	**15 41 24.0**		**+0.5**
	baz=226								
TWK	**Hsinying**	**1.41**	**232**	*e*P		**Pg**	**15 41 24.5**		**-0.4**
	baz=230								
SNST	**Tainan City**	**1.44**	**230**	*e*P		**Pn**	**15 41 23.8**		**0.0**
	baz=228								
CHN1	**Nanshi**	**1.44**	**228**	*e*P		**Pg**	**15 41 25.4**		**0.0**
	baz=227								
SGST	**Jiashian**	**1.47**	**224**	*e*P		**Pn**	**15 41 24.7**		**+0.4**
	baz=222								
SLGT	**Liugui**	**1.50**	**220**	*e*P		**Pg**	**15 41 26.2**		**-0.4**
	baz=219								
ICHU	**Yijhu**	**1.52**	**239**	*e*P		**Pb**	**15 41 25.8**		**-0.1**
	baz=237								
SCST	**Cishan**	**1.67**	**222**	*e*P		**Pb**	**15 41 28.6**		**+0.1**
	baz=220								
TSMG	**Majia**	**1.73**	**214**	*e*P		**Pb**	**15 41 29.2**		**-0.3**
	baz=213								
MASBT	**Mashibuluo**	**1.81**	**213**	*e*P		**Pb**	**15 41 30.1**		**-0.9**
	baz=211								
JIJ	**Ishigaki jima**	**2.24**	**84**	P		**Pn**	**15 41 34.8**		**-0.1**
JIJ				S		**Sn**	**15 42 02.7**		**+0.2**
JISG	**Ishigakijimahi**	**2.42**	**79**	*e*P		**Pn**	**15 41 36.9**		**-0.4**
JISG				S		**Sn**	**15 42 07.0**		**+0.1**

NEIC ***07*** *15:50:22.4±0.6,36.°031N±0.°007×97.°90W±0.°01, h3km±4km, Error ellipse: s-maj=1.6km s-min=0.5km az=52.0*

TUL 07 15:50:22.9±0.8,**36.°037N**±0.°008×**97.°899W**±0.°008, **h7**km±5km,**ML2.7**,**mb_Lg2.5**/32(NEIC),**ML2.7**/60(NEIC), **Error ellipse: s-maj=1.4km s-min=0.5km az=143.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
OK029	**Liberty Lake**	**0.43**	**124**		Pg	Pg	15 50 31.2		-0.1
OK029					Sg	Sg	15 50 37.5		+0.6
OK029					IAML		15 50 37.9		
	733nm,0.4s								
CROK	**Carrier**	**0.47**	**352**		Pg	Pg	15 50 32.2		+0.1
CROK					Sg	Sg	15 50 38.6		+0.4
CROK					IAML		15 50 44.2		
	comp=N,498nm,0.4s								
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**		Sg	Sg	15 50 46.9		+0.3
CSTR	**Hydro, Custer**	**0.75**	**239**		Pg	Pg	15 50 37.0		-0.4
CSTR					Sg	Sg	15 50 47.1		0.0
OK033	**Mehan**	**0.78**	**89**		Pg	Pg	15 50 37.6		-0.3
OK033					IAML		15 50 58.0		
	comp=N,283nm,0.1s								
OK032	**Salt Plains WL**	**0.81**	**342**		Pg	Pg	15 50 37.9		-0.5
OK032					Sg	Sg	15 50 48.8		-0.1
OK032					IAML		15 50 50.9		
	comp=N,420nm,0.2s								
OK032					IAML		15 50 58.4		
	comp=N,372nm,0.2s								
OK038	**West end E0370**	**0.81**	**303**		Pg	Pg	15 50 38.2		-0.3
OK038					Sg	Sg	15 50 49.3		+0.2
GC02	**Grant County #**	**0.81**	**2**		Pg	Pg	15 50 38.1		-0.5
GC02					Sg	Sg	15 50 49.4		+0.3
OK048	**Pawnee Station**	**0.86**	**64**		Pg	Pg	15 50 39.1		-0.4
OK048					Sg	Sg	15 50 50.4		-0.2
FNO	**Franklin**	**0.88**	**152**		Pg	Pg	15 50 39.1		-0.7
FNO					Sg	Sg	15 50 51.2		+0.1
OK052	**Battle Ridge R**	**0.89**	**92**		Pg	Pg	15 50 39.8		-0.2
OK052					Sg	Sg	15 50 51.5		-0.1
OK052					IAML		15 50 57.5		
	comp=N,188nm,0.2s								
OK052					IAML		15 50 59.6		
	comp=N,183nm,0.2s								
BLOK	**Blackwell**	**0.91**	**37**		Pg	Pg	15 50 40.1		-0.2
BLOK					Sg	Sg	15 50 52.1		0.0
KAN14	**Manchester OK**	**0.92**	**357**		Pg	Pg	15 50 39.8		-0.8
KAN14					Sg	Sg	15 50 52.7		+0.2
KAN14					IAML		15 50 54.9		
	comp=N,245nm,0.1s								
KAN14					IAML		15 50 56.0		
	comp=E,262nm,0.1s								
OK035	**E0210 Rd and N**	**0.94**	**316**		Pg	Pg	15 50 40.7		-0.2
OK035					Sg	Sg	15 50 53.2		+0.1
OK035					IAML		15 50 57.2		
	comp=E,343nm,0.2s								
U32A	**Winter Ranch,**	**0.95**	**291**		Pg	Pg	15 50 40.7		-0.6
U32A			

KAN01				IAML		15 50 59.4		
	comp=E,223nm,0.1s							
KAN01				IAML		15 51 00.6		
	comp=N,168nm,0.1s							
DEOK	**Depew**	**1.15**	**99**	Pg	Pg	15 50 44.0	-1.1	
DEOK				IAML		15 51 04.7		
	comp=E,162nm,0.1s							
DEOK				IAML		15 51 07.3		
	comp=N,154nm,0.2s							
KAN08	**Anthony NE Sta**	**1.19**	**357**	Pg	Pg	15 50 44.9	-0.9	
KAN08				IAML		15 51 08.4		
	comp=N,155nm,0.1s							
KAN06	**Argonia West S**	**1.21**	**2**	Pg	Pg	15 50 45.4	-0.7	
KAN06				IAML		15 51 02.3		
	comp=E,144nm,0.1s							
KAN06				IAML		15 51 06.1		
	comp=N,143nm,0.1s							
W35A	**Tecumseh**	**1.22**	**136**	Pg	Pg	15 50 45.2	-1.0	
W35A				IAML		15 51 06.2		
	comp=N,201nm,0.3s							
KAN12	**Harper NE Stat**	**1.26**	**356**		Pn	15 50 46.4	-0.5	
KAN12				IAML		15 51 15.3		
	comp=N,229nm,0.3s							
KS21	**Milan North St**	**1.26**	**9**		Pn	15 50 46.2	-0.8	
T35A	**Sooner Cattle**	**1.42**	**51**		Pn	15 50 49.1	0.0	
X34A	**Smith Ranch, M**	**1.43**	**178**		Pn	15 50 49.6	+0.3	
X34A				IAmb_Lg		15 51 08.0		
	comp=Z,29nm,1.2s							
TUL3	**Leonard**	**1.71**	**94**	Pn	Pn	15 50 53.4	+0.2	
TUL3				IAmb_Lg		15 51 18.9		
	comp=Z,41nm,0.9s							
SMWD	**Samnorwood**	**2.12**	**245**	Pn	Pn	15 50 58.7	-0.2	
WTFS	**Witchita Falls**	**2.31**	**192**	Pn	Pn	15 51 01.4	-0.1	
R32A	**Long Quarter,**	**2.47**	**345**	IAmb_Lg		15 51 47.4		
	comp=Z,16nm,0.8s							
APMT	**Aspermont**	**3.27**	**215**	IAmb_Lg		15 52 12.1		
	comp=Z,9.1nm,1.1s							
AMTX	**Amarillo**	**3.29**	**251**	Pn	Pn	15 51 14.7	-0.3	
AMTX				IAmb_Lg		15 52 06.3		
	comp=Z,13nm,0.7s							
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		15 52 16.3		
	comp=Z,18nm,0.8s							
MIAR	**Mount Ida**	**3.84**	**112**	Pn	Pn	15 51 20.2	-2.2	
MIAR				IAmb_Lg		15 52 29.2		
	comp=Z,11nm,0.9s							
RTBA	**Rita Blanca**	**3.93**	**277**	Pn	Pn	15 51 24.4	+0.6	
X40A	**Basin Creek Fa**	**4.42**	**109**	Pn	Pn	15 51 30.3	-0.1	
X40A				IAmb_Lg		15 52 53.6		
	comp=Z,8.9nm,0.8s							
WHAR	**Wooly Hollow**	**4.63**	**98**	Pn	Pn	15 51 33.1	-0.1	
MGMO	**Mountain Grove**	**4.67**	**75**	Pn	Pn	15 51 33.6	-0.1	
MGMO				IAmb_Lg		15 52 58.4		
	comp=Z,9.4nm,0.9s							
KSCO	**Kaye Shedlock'**	**4.79**	**310**	IAmb_Lg		15 53 07.5		
	comp=Z,9.0nm,0.8s							
P38A	**Dawn**	**4.98**	**43**	IAmb_Lg		15 53 02.0		
	comp=Z,7.2nm,0.7s							
R40A	**Maddies Statio**	**5.03**	**62**	IAmb_Lg		15 53 11.3		
	comp=Z,7.1nm,0.8s							
CCM	**Cathedral Cave**	**5.69**	**67**	IAmb_Lg		15 53 36.4		
	comp=Z,8.0nm,0.9s							
SAND	**Sanderson**	**7.03**	**212**	IAmb_Lg		15 54 08.6		
	comp=Z,6.8nm,1.0s							
N41A	**Harden Midland**	**7.23**	**48**	IAmb_Lg		15 54 19.4		
	comp=Z,9.1nm,0.7s							
JFWS	**Jewell Farm**	**9.06**	**38**	IAmb_Lg		15 55 08.8		
	comp=Z,6.7nm,0.8s							

IDC ***07*** *15:53:34.2±1.1,27.85N×127.53E,h0km,mb3.3/5, mbtmp3.5/6,ML3.2/1, Error ellipse: s-maj=44.6km s-min=15.4km az=60.0*

JMA ***07*** *15:53:35.0±0.2,28.1N±0.3×128.1E±0.4,h16km±1km, MV3.2/12,NW OFF OKINAWAJIMA IS*

ISC 07 15:53:34.9±2.7, 28.10N±0.05×128.07E±0.07, h14km±18km, n16,σ0°40/22, mb3.4/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.84**	**112**	*eP*	**Pb**	**15 53 51.0**	**-0.2**
JTK				*eS*	**Sb**	**15 54 02.5**	**+0.1**
JOKE	**Okinoerabujima**	**0.86**	**149**	*eP*	**Pb**	**15 53 51.5**	**-0.2**
JAMN	**Amaminishikomi**	**0.98**	**82**	*eP*	**Pb**	**15 53 53.5**	**-0.3**
JAMN				*eS*	**Sg**	**15 54 07.1**	**+0.3**
JIH	**Iheya**	**1.07**	**185**	*eP*	**Pb**	**15 53 55.0**	**-0.3**
JIH				*eS*	**Sb**	**15 54 09.3**	**+0.2**
JYRO	**Yoronjima**	**1.12**	**163**	*eP*	**Pn**	**15 53 55.9**	**-0.4**
JYRO				*eS*	**Sb**	**15 54 10.2**	**-0.5**
JOW	**Kunigami**	**1.28**	**172**	*eP*	**Pn**	**15 53 58.3**	**-0.1**
JOW				*eS*	**Sb**	**15 54 15.1**	**-0.1**
JOW	**Kunigami**	**1.28**	**172**	Pn	**Pn**	**15 53 58.4**	**-0.1**
	50nm,0.3s,baz=128,slow=21,SNR=145						
JOW				Sn	**Sb**	**15 54 15.2**	**+0.1**
	38nm,0.3s,baz=101,slow=29,SNR=22						
JAM	**Amami Oshima**	**1.39**	**77**	*eP*	**Pn**	**15 54 00.1**	**+0.2**
JTAJ	**Takarajima**	**1.44**	**43**	*eP*	**Pn**	**15 54 00.5**	**-0.2**
JNTH	**Nagotoyohara**	**1.58**	**182**	*eP*	**Pn**	**15 54 03.0**	**+0.5**
JNTH				*eS*	**Sn**	**15 54 22.8**	**0.0**
JNU	**Nakatsue**	**5.56**	**25**	Pn	Pb	15 55 04.8	-7.0
	0.6nm,0.3s,baz=206,slow=6.1,SNR=17						
	38nm,0.9s						
SONM	**Songino Array**	**25.92**	**325**	P	**P**	**15 59 06.5**	**-0.3**
	0.7nm,0.8s,baz=138,slow=11,SNR=3.1						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**40.20**	**310**	P	**P**	**16 01 10.2**	**-0.8**
	0.3nm,1.0s,baz=97,slow=12,SNR=1.6						
	0.3nm,1.0s						
KURBB	**Kurchatov Arra**	**43.42**	**315**	P	**P**	**16 01 38.1**	**+0.9**
	0.4nm,0.9s,baz=101,slow=9.1,SNR=1.9						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**48.15**	**172**	P	**P**	**16 02 15.1**	**+0.3**
	0.7nm,1.0s,baz=355,slow=8.2,SNR=2.5						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**51.77**	**173**	P	**P**	**16 02 42.5**	**+0.2**
	0.5nm,1.1s,baz=353,slow=8.5,SNR=2.4						
	0.5nm,1.1s						

IDC ***07*** *15:55:26.7±1.5,23.81N×121.31E,h0km,mb3.4/3, mbtmp3.4/4,ML3.2/1, Error ellipse: s-maj=73.1km s-min=26.2km az=68.0*

TAP ***07*** *15:55:27.1,24.15N×121.70E,h9km,ML3.6,C*

JMA ***07*** *15:55:27.1±0.1,24.1N±0.2×121.7E±0.4,h7km, TAIWAN REGION*

ISC 07 15:55:27.4±0.8, 24.13N±0.01×121.71E±0.02, h10km±4km, n124,σ0°61/175, mb3.5/3, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**292**	*eP*	**Pg**	**15 55 29.7**	**-0.2**
	baz=281						
ETL				*i* S	**Sg**	**15 55 31.1**	**-0.5**
	baz=281						
TWD	**Chiawan**	**0.11**	**246**	*i* P	**Pg**	**15 55 30.0**	**-0.2**
	baz=234						
TWD				*i* S	**Sg**	**15 55 31.9**	**-0.3**
	baz=234						
NACB	**Ninganchiao**	**0.12**	**294**	P	**Pg**	**15 55 29.9**	**-0.3**
	baz=287						
NACB				S	**Sg**	**15 55 31.6**	**-0.6**
	baz=287						
HWA	**Hwalien**	**0.18**	**213**	*eP*	**Pg**	**15 55 32.2**	**+1.0**
	baz=207						
HWA				*eS*	**Sg**	**15 55 36.1**	**+2.3**
	baz=207						
EHP	**Heping Village**	**0.18**	**9**	*i* P	**Pg**	**15 55 31.1**	**-0.2**
	baz=15						
EHP				S	**Sg**	**15 55 34.1**	**0.0**
	baz=15						
EAHA	**Aohua**	**0.20**	**8**	*i* P	**Pg**	**15 55 31.3**	**-0.4**
	baz=10.0						
EAHA				S	**Sg**	**15 55 34.4**	**-0.2**
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.22**	**291**	*i* P	**Pg**	**15 55 31.7**	**-0.4**
	baz=287						
ETLH				S	**Sg**	**15 55 34.8**	**-0.5**
	baz=287						
ETM	**Tongmen**	**0.26**	**231**	*eP*	**Pg**	**15 55 32.5**	**-0.1**
	baz=219						
ETM				S	**Sg**	**15 55 35.9**	**-0.2**
	baz=219						
LXIB	**Xiulin Townshi**	**0.29**	**249**	*eP*	**Pg**	**15 55 33.2**	**-0.1**
	baz=245						
LXIB				*eS*	**Sg**	**15 55 37.1**	**-0.2**
	baz=245						
ENA	**Nanau**	**0.30**	**5**	*eP*	**Pg**	**15 55 33.2**	**-0.3**
	baz=8.0						
ENA				*i* S	**Sg**	**15 55 37.2**	**-0.4**
	baz=8.0						
EWUT	**Wuta**	**0.32**	**11**	*eP*	**Pg**	**15 55 33.6**	**-0.3**
	baz=12						
EWUT				S	**Sg**	**15 55 37.9**	**-0.3**
	baz=12						
SHUL	**Shoufeng**	**0.36**	**202**	P	**Pb**	**15 55 36.5**	**+0.6**
	baz=209						
SHUL				*i* S	**Sb**	**15 55 43.4**	**+1.8**
	baz=209						
ESL	**Shilin**	**0.40**	**219**	*eP*	**Pg**	**15 55 35.2**	**-0.1**
	baz=217						
ESL				S	**Sg**	**15 55 40.5**	**-0.1**
	baz=217						
WHF	**Hehuan Shan**	**0.41**	**273**	*eP*	**Pg**	**15 55 35.1**	**-0.4**
	baz=270						
WHF				*eS*	**Sg**	**15 55 40.6**	**-0.3**
	baz=270						
NNSB	**Datong**	**0.42**	**315**	*eP*	**Pg**	**15 55 35.5**	**-0.2**
	baz=314						
NNSB				S	**Sg**	**15 55 41.2**	**-0.2**
	baz=314						
NNS	**Nan Shan**	**0.44**	**315**	*i* P	**Pg**	**15 55 35.7**	**-0.3**
	baz=315						
NNS				*eS*	**Sg**	**15 55 41.8**	**-0.1**
	baz=315						
LATG	**Datong**	**0.44**	**338**	P	**Pg**	**15 55 35.8**	**-0.2**
	baz=343						
FUSS	**Fushou**	**0.44**	**286**	P	**Pg**	**15 55 36.0**	**-0.1**
	baz=284						
TEGC	**Jichi Village**	**0.44**	**201**	*eP*	**Pb**	**15 55 37.7**	**+0.4**
	baz=207						
TEGC				*eS*	**Sb**	**15 55 47.2**	**+3.2**
	baz=207						
ESAO	**Su ao**	**0.46**	**15**	*eP*	**Pg**	**15 55 36.6**	**+0.1**
	baz=16						
ESAO				*eS*	**Sg**	**15 55 42.1**	**-0.5**
	baz=16						
CHGB	**Renai**	**0.49**	**262**	P	**Pb**	**15 55 37.3**	**-1.0**
	baz=251						
CHGB				S	**Sg**	**15 55 43.9**	**+0.3**
	baz=251						
TWC	**Suao**	**0.50**	**15**	*eP*	**Pg**	**15 55 37.1**	**0.0**
	baz=16						
TWC				*i* S	**Sg**	**15 55 43.5**	**-0.1**
	baz=16						
NDS	**Dongshan**	**0.50**	**1**	*eP*	**Pg**	**15 55 37.3**	**0.0**
NDS				*i* S	**Sg**	**15 55 43.8**	**-0.1**
TWT	**Tachien**	**0.50**	**285**	P	**Pb**	**15 55 37.5**	**-0.9**
	baz=282						
TWT				S	**Sg**	**15 55 44.4**	**+0.4**
	baz=282						
WARBT	**Fenglin Townsh**	**0.50**	**216**	*eP*	**Pb**	**15 55 37.8**	**-0.5**
	baz=223						
NDT	**Datong Townshi**	**0.51**	**339**	*i* P	**Pg**	**15 55 37.2**	**-0.1**
	baz=339						
NDT				S	**Sg**	**15 55 44.1**	**+0.2**
	baz=339						
OWD	**Renai**	**0.52**	**251**	P	**Pg**	**15 55 37.6**	**+0.1**
	baz=250						
TDCB	**Techi**	**0.52**	**284**	P	**Pb**	**15 55 37.8**	**-0.9**
	baz=283						
TDCB				*i* S	**Sg**	**15 55 44.4**	**0.0**
	baz=283						
EGFH	**Guangfu**	**0.52**	**210**	*eP*	**Pb**	**15 55 38.0**	**-0.7**
	baz=218						
EGFH				*eS*	**Sb**	**15 55 46.2**	**-0.1**
	baz=218						
ENTT	**Nioudou**	**0.53**	**346**	*eP*	**Pg**	**15 55 37.5**	**-0.2**
	baz=347						
ENTT				*i* S	**Sg**	**15 55 44.4**	**-0.2**
	baz=347						
EOS4	**EOS4**	**0.56**	**91**	*eP*	**Pn**	**15 55 40.7**	**-0.3**
	baz=88						
EOS2	**EOS2**	**0.56**	**59**	*eP*	**Pn**	**15 55 39.9**	**+0.8**
	baz=48						
WUSB	**Renai**	**0.56**	**256**	*eP*	**Pg**	**15 55 38.4**	**+0.1**
	baz=246						
WUSB				S	**Sg**	**15 55 45.4**	**-0.3**
	baz=246						
EOS3	**EOS3**	**0.58**	**74**	*eP*	**Pn**	**15 55 41.1**	**-0.4**
	baz=58						
TWE	**Neicheng**	**0.59**	**356**	*i* P	**Pg**	**15 55 38.8**	**-0.1**
	baz=357						
TWE				*i* S	**Sg**	**15 55 46.6**	**-0.1**
	baz=357						
YHNB	**Yeheng**	**0.62**	**331**	*eP*	**Pg**	**15 55 39.5**	**+0.1**
	baz=330						
NSK	**Sanguang**	**0.63**	**330**	*eP*	**Pg**	**15 55 39.6**	**-0.1**
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.64**	**350**	P	**Pg**	**15 55 39.7**	**-0.1**
	baz=350						
FUSB				*i* S	**Sg**	**15 55 48.3**	**+0.1**
	baz=350						
NWLT	**Wulai**	**0.67**	**344**	P	**Pg**	**15 55 40.3**	**-0.1**
	baz=350						
NWLT				*i* S	**Sg**	**15 55 48.9**	**-0.5**
	baz=350						
HGSD	**Ruisui**	**0.68**	**203**	*eP*	**Pn**	**15 55 42.6**	**-0.5**
	baz=220						
EHY	**Hungye**	**0.71**	**210**	*eP*	**Pg**	**15 55 40.9**	**-0.2**
	baz=212						
WHP	**Taichung City**	**0.71**	**282**	P	**Pb**	**15 55 41.4**	**-0.5**
	baz=275						
WCS	**Beigang Elemen**	**0.73**	**265**	P	**Pb**	**15 55 41.6**	**-0.6**
	baz=264						
NFF	**Wufeng Townshi**	**0.74**	**313**	*i* P	**Pg**	**15 55 41.7**	**0.0**
	baz=312						
SSLB	**Suanglung**	**0.77**	**244**	*i* P	**Pg**	**15 55 41.1**	**-1.1**
	baz=252						
SSLB				S	**Sg**	**15 55 51.7**	**-0.6**
	baz=252						
SMLT	**Sun Moon Lake**	**0.78**	**252**	P	**Pg**	**15 55 42.2**	**-0.3**
	baz=250						
SMLT				*i* S	**Sb**	**15 55 52.7**	**-1.0**
	baz=250						
TYC	**Yuchr**	**0.81**	**254**	*eP*	**Pg**	**15 55 42.8**	**-0.2**
	baz=244						
TYC				*eS*	**Sg**	**15 55 52.8**	**-0.8**
	baz=244						
LIOB	**Emei**	**0.82**	**309**	*eP*	**Pb**	**15 55 43.5**	**-0.2**
	baz=308						
NSTT	**Nanjuang**	**0.82**	**308**	P	**Pb**	**15 55 43.2**	**-0.4**
	baz=307						
NSTT				*eS*	**Sb**	**15 55 54.4**	**-0.3**
	baz=307						
YULB	**Yu-li**	**0.82**	**207**	*eP*	**Pg**	**15 55 43.0**	**-0.3**
	baz=223						
ECBN	**Changbin**	**0.84**	**196**	*eS*	**Sn**	**15 55 57.1**	**-0.5**
	baz=188						
TIPB	**Shuangxi**	**0.85**	**7**	*eP*	**Pg**	**15 55 43.5**	**-0.3**
	baz=356						
NHDH	**Xindian Distri**	**0.85**	**349**	*i* P	**Pg**	**15 55 43.7**	**-0.1**
	baz=339						
NHDH				*eS*	**Sg**	**15 55 54.8**	**-0.1**
	baz=339						
TWA	**Mucha**	**0.86**	**352**	*eP*	**Pg**	**15 55 43.9**	**0.0**
	baz=352						
TWA				*i* S	**Sg**	**15 55 54.7**	**-0.4**
	baz=352						
TWF1	**Yuli**	**0.86**	**206**	*eP*	**Pb**	**15 55 44.3**	**-0.1**
	baz=221						
TWQ1	**Liyutan**	**0.88**	**285**	*eP*	**Pn**	**15 55 46.2**	**+0.4**
	baz=284						
WHYT	**Xinyi Township**	**0.89**	**241**	*eP*	**Pb**	**15 55 44.6**	**-0.4**
	baz=241						
NSY	**Sanyi**	**0.91**	**289**	*eP*	**Pn**	**15 55 46.0**	**-0.2**
	baz=288						
TWB1	**Santiao Chiao**	**0.91**	**16**	*eP*	**Pg**	**15 55 45.0**	**0.0**
	baz=7.0						
TWB1				*eS*	**Sg**	**15 55 56.8**	**-0.1**
	baz=7.0						
TAP	**Taipei**	**0.93**	**348**	*i* P	**Pb**	**15 55 45.7**	**+0.2**
	baz=339						
TAP				*i* S	**Sg**	**15 55 57.4**	**+0.1**
	baz=339						
NMLH	**Miaoli**	**0.93**	**296**	*eP*	**Pn**	**15 55 46.3**	**-0.2**
	baz=303						
NWF	**Wu-fen Shan**	**0.94**	**4**	P	**Pb**	**15 55 45.6**	**-0.2**
	baz=2.0						
WFSB	**Wu-fen Shan**	**0.94**	**4**	*i* P	**Pb**	**15 55 45.8**	**0.0**
	baz=355						
WFSB				S	**Sg**	**15 55 58.0**	**+0.2**
	baz=355						
WJS	**Zhushan**	**0.95**	**252**	P	**Pn**	**15 55 46.7**	**0.0**
	baz=243						
HSN	**Hsinchu**	**0.95**	**315**	*eP*	**Pn**	**15 55 47.0**	**+0.2**
	baz=317						
NCUH	**Zhongli**	**0.96**	**330**	*eP*	**Pb**	**15 55 46.5**	**+0.3**
	baz=330						
NCUH				*eS*	**Sn**	**15 56 01.4**	**+0.6**
	baz=330						
WNT	**Mingjian**	**0.97**	**255**	*eP*	**Pn**	**15 55 47.2**	**+0.1**
	baz=249						
WNT				S	**Sn**	**15 56 01.1**	**+0.2**
	baz=249						
CHKH	**Chenggong**	**0.97**	**197**	*eP*	**Pg**	**15 55 45.8**	**-0.3**
	baz=190						
CHKH				*i* S	**Sn**	**15 56 01.7**	**+0.8**
	baz=190						
SXI1	**Grass Mountain**	**0.97**	**9**	*eP*	**Pb**	**15 55 46.2**	**-0.2**
	baz=353						
FULB	**Fuli**	**1.00**	**203**	*eP*	**Pb**	**15 55 46.9**	**+0.1**
	baz=220						
WDJ	**Dajia District**	**1.00**	**283**	*eP*	**Pn**	**15 55 48.1**	**+0.6**
	baz=282						
TWS1	**Kuangyinshan**	**1.00**	**345**	*eP*	**Pn**	**15 55 47.3**	**-0.2**
	baz=344						
TWS1				*i* S	**Sn**	**15 56 02.1**	**+0.4**
	baz=344						
TNOU	**National Taiwa**	**1.02**	**3**	*eP*	**Pb**	**15 55 47.0**	**-0.1**
	baz=1.0						
YM01	**YM01**	**1.02**	**353**	*i* P	**Pb**	**15 55 47.3**	**+0.1**
	baz=1.0						
YM01				*i* S	**Sb**	**15 56 01.4**	**+0.7**
	baz=1.0						
ALS	**Alishan**	**1.03**	**234**	P	**Pb**	**15 55 47.2**	**-0.2**
	baz=234						
WCHH	**Zhanghua**	**1.05**	**268**	*eP*	**Pn**	**15 55 49.0**	**+0.9**
	baz=267						
NTST	**Danshui**	**1.06**	**347**	*i* P	**Pn**	**15 55 48.6**	**+0.3**
	baz=355						
NTST				S	**Sn**	**15 56 04.1**	**+1.0**
	baz=355						
YM08	**YM08**	**1.06**	**354**	*eP*	**Pg**	**15 55 47.7**	**-0.1**
	baz=337						
ANP	**Anpu**	**1.07**	**351**	*eP*	**Pb**	**15 55 47.9**	**-0.1**
	baz=349						
CHKT	**Chengkung**	**1.07**	**197**	*eP*	**Pn**	**15 55 48.6**	**+0.2**
	baz=191						
CHKT				*eS*	**Sn**	**15 56 03.1**	**-0.2**
	baz=191						
EHD	**Haiduan**	**1.08**	**205**	*eP*	**Pb**	**15 55 48.2**	**+0.1**
	baz=222						
ELDTW	**Lidau**	**1.13**	**214**	*eP*	**Pb**	**15 55 48.9**	**-0.2**
	baz=218						
WGK	**Gukeng**	**1.14**	**248**	*eP*	**Pn**	**15 55 50.2**	**+0.8**
	baz=247						
WGK				S	**Sn**	**15 56 06.3**	**+1.3**
	baz=247						
TWY	**Chenhua**	**1.15**	**355**	*eP*	**Pn**	**15 55 50.1**	**+0.6**
	baz=340						
WDLH	**Douliu**	**1.16**	**248**	*eP*	**Pn**	**15 55 50.5**	**+0.9**
	baz=249						
JYNG	**Yonagunijimaku**	**1.17**	**74**	*eP*	**Pg**	**15 55 49.5**	**-0.4**
EDH	**Donghe**	**1.21**	**198**	*eP*	**Pg**	**15 55 48.1**	**-2.5**
	baz=187						
EDH				S	**Sb**	**15 56 06.4**	**+0.4**
	baz=187						
WCKO	**Fanlu**	**1.22**	**236**	*eP*	**Pn**	**15 55 51.6**	**+1.1**
	baz=237						
YOJ	**Yonaguni jima**	**1.23**	**74**	*eP*	**Pn**	**15 55 50.2**	**-0.5**
	baz=59						
YOJ	**Yonaguni jima**	**1.23**	**74**	*eP*	**Pn**	**15 55 50.3**	**-0.3**
YOJ					S	**Sg**	**15 56 06.2**	**-0.9**
WRL	**Guolierlin Hig**	**1.24**	**260**	*eP*	**Pn**	**15 55 51.5**	**+0.8**
	baz=260						
STYH	**Taoyuan**	**1.28**	**222**	*eP*	**Pn**	**15 55 51.2**	**-0.1**
	baz=225						
WTK	**Tuku**	**1.29**	**250**	*eP*	**Pg**	**15 55 52.4**	**+0.3**
	baz=251						
TPUB	**Ta-pu**	**1.29**	**230**	*eP*	**Pg**	**15 55 52.1**	**0.0**
	baz=221						
LONT	**Longtian**	**1.33**	**204**	*eP*	**Pn**	**15 55 50.7**	**-1.3**
	baz=219						
WTP	**Ta-pu**	**1.33**	**229**	*eP*	**Pg**	**15 55 53.1**	**+0.1**
	baz=220						
TWK	**Hsinying**	**1.41**	**233**	P	**Pg**	**15 55 54.0**	**-0.5**
	baz=235						
SNST	**Tainan City**	**1.43**	**231**	*eP*	**Pg**	**15 55 54.4**	**-0.5**
	baz=224						
CHN1	**Nanshi**	**1.43**	**229**	*eP*	**Pg**	**15 55 54.6**	**-0.3**
	baz=232						
WSF	**Szhu**	**1.45**	**251**	*eP*	**Pg**	**15 55 55.0**	**-0.1**
	baz=252						
SGST	**Jiashian**	**1.47**	**225**	*eP*	**Pn**	**15 55 54.1**	**+0.2**
	baz=227						
WSL	**Shuilin Townsh**	**1.48**	**246**	*eP*	**Pg**	**15 55 55.5**	**-0.3**
	baz=248						
SLGT	**Liugui**	**1.49**	**221**	*eP*	**Pg**	**15 55 55.6**	**-0.4**
	baz=224						
ICHU	**Yijhu**	**1.52**	**240**	*eP*	**Pg**	**15 55 56.1**	**-0.4**
	baz=243						
CHN8	**Yiju**	**1.58**	**241**	*eP*	**Pb**	**15 55 56.7**	**+0.1**
	baz=243						
SCST	**Cishan**	**1.67**	**222**	*eP*	**Pg**	**15 55 58.5**	**-0.9**
	baz=226						
SHHT	**Tainan City**	**1.67**	**229**	*eP*	**Pg**	**15 55 59.2**	**-0.2**
	baz=233						
TWM1	**Shoushan**	**1.75**	**223**	*eP*	**Pg**	**15 56 00.7**	**-0.4**
	baz=226						
TSCK	**Chigu Township**	**1.78**	**237**	*eP*	**Pb**	**15 55 59.1**	**-1.0**
	baz=241						
MASBT	**Mashibuluo**	**1.80**	**213**	*eP*	**Pb**	**15 56 00.3**	**-0.2**
	baz=220						
IRIF	**Iriomote-Funau**	**1.86**	**83**	*eP*	**Pn**	**15 55 59.5**	**+0.3**
IRIF					S	**Sn**	**15 56 23.6**	**+0.9**
SNJT	**Kaohsiung City**	**1.86**	**223**	*eP*	**Pb**	**15 56 00.9**	**-0.6**
	baz=228						
SCZT	**Fangliau**	**2.01**	**210**	*eP*	**Pb**	**15 56 03.6**	**-0.5**
	baz=200						
PHUB	**P'eng-hu**	**2.05**	**253**	*eP*	**Pn**	**15 56 03.0**	**+1.1**
	baz=254						
WDGT	**Dungji**	**2.07**	**246**	*eP*	**Pn**	**15 56 03.1**	**+1.0**
	baz=233						
SLIU	**Shizi**	**2.08**	**204**	*eP*	**Pb**	**15 56 04.5**	**-0.7**
	baz=202						
JKRS	**Kuro-shima**	**2.10**	**87**	*eP*	**Pn**	**15 56 03.2**	**+0.6**
VWUC	**VWUC**	**2.23**	**293**	*eP*	**Pn**	**15 56 03.9**	**-0.5**
	baz=293						
JIJ	**Ishigaki jima**	**2.23**	**83**	*eP*	**Pn**	**15 56 04.1**	**-0.3**
JIJ					S	**Sn**	**15 56 31.3**	**-0.7**
JISG	**Ishigakijimahi**	**2.42**	**79**	P	**Pn**	**15 56 06.8**	**-0.1**
KSRS	**Korea Array**	**14.31**	**20**	Pn	**P**	**15 58 57.4**	**+0.2**
	0.1nm,0.3s,baz=205,slow=11,SNR=6.7						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**38.71**	**316**	P	**P**	**16 02 51.9**	**+0.4**
	0.4nm,0.7s,baz=113,slow=10,SNR=4.8						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**45.50**	**163**	P	**P**	**16 03 46.1**	**-1.0**
	0.5nm,0.8s,baz=350,slow=8.1,SNR=4.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**48.96**	**165**	P	**P**	**16 04 13.6**	**-0.5**
	0.2nm,0.4s,baz=346,slow=6.8

ETL S Sg 15 56 12.3 +0.3
baz=288
TWD Chiawan 0.21 262⇓*iP* Pg 15 56 09.0 -0.3
baz=277
TWD *i*S Sg 15 56 12.6 +0.1
baz=277
EHP Heping Village 0.21 339⇓*iP* Pg 15 56 09.5 0.0
baz=342
EHP *i*S Sg 15 56 13.3 +0.7
baz=342
NACB Ninganchiao 0.22 287 Pg Pg 15 56 08.9 -0.6
NACB Sg 15 56 11.3 -1.4
NACB Ninganchiao 0.22 287⇓*iP* Pg 15 56 09.0 -0.5
baz=290
NACB *i*S Sg 15 56 12.6 -0.1
baz=290
EAHA Aohua 0.23 341⇓*iP* Pg 15 56 09.8 +0.1
baz=341
EAHA S Sg 15 56 13.9 +0.8
baz=341
HWA Hwalien 0.24 237⇓*iP* Pg 15 56 10.5 +0.6
baz=252
HWA *e*S Sg 15 56 15.4 +2.1
baz=252
ENA Nanau 0.33 347 *i*P Pb 15 56 11.5 -1.0
baz=347
ENA *i*S Sb 15 56 17.0 -0.7
baz=347
ETLH Xiulin Townshi 0.33 287⇓*iP* Pg 15 56 11.2 -0.3
baz=290
ETLH *e*S Sg 15 56 15.9 -0.1
baz=290
ETM Tongmen 0.33 245⇓*iP* Pb 15 56 11.5 -1.1
baz=258
ETM *i*S Sb 15 56 17.5 -0.4
baz=258
EWUT Wuta 0.34 353 P Pb 15 56 11.9 -0.8
baz=341
EWUT S Sb 15 56 17.6 -0.4
baz=341
LXIB Xiulin Townshi 0.39 257⇓*iP* Pg 15 56 12.3 -0.3
baz=259
LXIB *e*S Sb 15 56 18.1 -1.4
baz=259
SHUL Shoufeng 0.40 217 ⇑P Pb 15 56 13.8 +0.1
baz=218
SHUL *e*S Sb 15 56 21.9 +2.2
baz=218
ESL Shilin 0.46 231 *e*P Pb 15 56 13.9 -0.9
baz=243
ESL *e*S Sb 15 56 21.9 +0.3
baz=243
ESAO Su ao 0.47 2 *e*P Pb 15 56 14.4 -0.5
baz=351
ESAO *e*S Sb 15 56 21.8 +0.1
baz=351
TEGC Jichi Village 0.47 213 *e*P Pb 15 56 15.0 0.0
baz=213
TEGC *e*S Sb 15 56 23.9 +2.0
baz=213
TWC Suao 0.50 3 P Pb 15 56 15.2 -0.2
baz=353
TWC S Sb 15 56 22.7 +0.1
baz=353
LATG Datong 0.50 328⇓*iP* Pb 15 56 14.8 -0.7
baz=327
LATG *i*S Sb 15 56 22.7 -0.3
baz=327
WHF Hehuan Shan 0.51 274 P Pb 15 56 14.9 -1.0
baz=277
NNSB Datong 0.51 308 P Pb 15 56 14.8 -0.9
baz=310
NNSB S Sb 15 56 22.1 -1.1
baz=310
NNSH Datong 0.51 308 P Pb 15 56 14.8 -0.9
baz=309
NNSH *e*S Sb 15 56 22.3 -0.9
baz=309
NNS Nan Shan 0.53 309⇓*iP* Pb 15 56 15.1 -0.9
baz=310
NNS *i*S Sb 15 56 23.2 -0.4
baz=310
NDS Dongshan 0.53 349 P Pb 15 56 15.7 -0.4
baz=346
NDS *e*S Sb 15 56 24.0 +0.4
baz=346
FUSS Fushou 0.55 285⇓*iP* Pb 15 56 15.7 -0.7
baz=287
FUSS *e*S Sb 15 56 25.4 +1.2
baz=287
WARBT Fenglin Townsh 0.56 226 ⇑P Pb 15 56 15.7 -0.7
baz=240
WARBT S Sb 15 56 25.1 +0.7
baz=240
NDT Datong Townshi 0.57 330 ⇓P Pb 15 56 16.2 -0.4
baz=329
NDT *i*S Sb 15 56 25.2 +0.6
baz=329
EGFH Guangfu 0.57 220 *e*P Pb 15 56 16.3 -0.3
baz=219
ENTT Nioudou 0.58 336 P Pb 15 56 16.4 -0.4
baz=336
ENTT S Sb 15 56 25.3 +0.3
baz=336
CHGB Renai 0.60 265⇓*iP* Pb 15 56 16.5 -0.7
baz=267
CHGB *i*S Sb 15 56 25.9 +0.3
baz=267
TWT Tachien 0.61 284 ⇓P Pb 15 56 17.1 -0.3
baz=284
TWT S Sb 15 56 26.8 +0.8
baz=284
OWD Renai 0.61 256⇓*iP* Pb 15 56 16.6 -0.8
baz=267
OWD S Sb 15 56 25.7 -0.3
baz=267
TDCB Techi 0.62 283⇓*iP* Pb 15 56 17.2 -0.5
baz=285
TDCB S Sb 15 56 26.8 +0.4
baz=285
TWE Neicheng 0.63 347 P Pb 15 56 17.4 -0.2
baz=347
TWE S Sb 15 56 27.1 +0.8
baz=347
WUSB Renai 0.66 260⇓*iP* Pb 15 56 17.7 -0.5
baz=261
WUSB *i*S Sb 15 56 27.4 +0.2
baz=261
ILA Ilan 0.66 354 *e*P Pb 15 56 18.3 +0.2
baz=343
FUSB Fushanzhiwuyua 0.68 342⇓*iP* Pb 15 56 18.6 -0.1
baz=341
FUSB *i*S Sb 15 56 28.2 +0.2
baz=341
YHNB Yeheng 0.69 324 Pg Pb 15 56 18.3 -0.5
YHNB Sg Sg 15 56 27.2 -0.2
YHNB Yeheng 0.69 324⇓*iP* Pb 15 56 18.7 -0.1
baz=324
YHNB *i*S Sb 15 56 28.5 +0.2
baz=324
NSK Sanguang 0.71 323⇓*iP* Pb 15 56 18.9 -0.2
baz=323
NSK *i*S Sb 15 56 29.0 +0.3
baz=323
HGSD Ruisui 0.71 211 *e*P Pb 15 56 19.5 +0.4
baz=198
NWLT Wulai 0.73 336 ⇓P Pb 15 56 19.2 -0.2
baz=336
NWLT S Sb 15 56 29.4 +0.2
baz=336
NTC Toucheng 0.74 0 *e*P Pg 15 56 18.8 -0.4
baz=359
EHY Hungye 0.76 218 *e*P Pb 15 56 19.4 -0.4
baz=218
EHY *e*S Sn 15 56 32.4 -0.1
baz=218
WPL Puli Township 0.80 263 P Pb 15 56 20.1 -0.4
baz=264
WPL S Sb 15 56 31.6 +0.4
baz=264
WHP Taichung City 0.82 282 ⇓P Pb 15 56 21.0 +0.1
baz=283
WHP S Sb 15 56 32.4 +0.4
baz=283
DPDB Guoxing 0.82 265⇓*iP* Pb 15 56 20.9 -0.1
baz=266
DPDB S Sb 15 56 32.9 +0.8
baz=266

NFF Wufeng Townshi 0.83 309 P Pb 15 56 21.0 -0.1
baz=317
NFF *e*S Sb 15 56 32.9 +0.7
baz=317
WCS Beigang Elemen 0.83 267 *e*P Pb 15 56 20.8 -0.3
baz=258
WCS S Sb 15 56 32.8 +0.5
baz=258
SSLB Suanglung 0.86 248 Pg Pb 15 56 21.2 -0.4
SSLB Sg Sb 15 56 33.2 +0.2
SSLB Suanglung 0.86 248 P Pb 15 56 21.3 -0.2
baz=260
SSLB S Sb 15 56 33.0 0.0
baz=260
ECBN Changbin 0.86 203 *e*P Pb 15 56 21.3 -0.2
baz=204
TIPB Shuangxi 0.86 0 ⇑P Pb 15 56 22.1 +0.5
baz=347
TIPB S Sb 15 56 33.4 +0.3
baz=347
YULB Yu-li 0.86 214 Pg Pg 15 56 20.8 -0.7
YULB Sn 15 56 36.5 +1.4
YULB Yu-li 0.86 214 *e*P Pb 15 56 21.0 -0.6
baz=229
SMLT Sun Moon Lake 0.87 255 P Pb 15 56 21.8 -0.1
baz=256
SMLT *e*S Sb 15 56 34.2 +0.7
baz=256
EYUL Yuli 0.89 211 *e*P Pn 15 56 23.6 +0.6
baz=201
NHDH Xindian Distri 0.89 342 *e*P Pn 15 56 22.7 -0.3
baz=342
TWF1 Yuli 0.89 213 *e*P Pb 15 56 21.5 -0.7
baz=232
TWF1 *e*S Sn 15 56 36.3 +0.3
baz=232
TWA Mucha 0.90 346 *e*P Pb 15 56 22.6 +0.4
baz=344
TWA *e*S Sb 15 56 34.8 +0.7
baz=344
TYC Yuchr 0.91 257 P Pb 15 56 22.2 -0.1
baz=258
TYC S Sb 15 56 34.7 +0.3
baz=258
TWB1 Santiao Chiao 0.91 9 *e*P Pb 15 56 22.8 +0.3
baz=358
TWB1 *e*S Sb 15 56 35.6 +1.2
baz=358
LIOB Emei 0.91 306 P Pn 15 56 23.1 -0.3
baz=307
LIOB *e*S Sb 15 56 35.2 +0.7
baz=307
NSTT Nanjuang 0.91 305 P Pb 15 56 22.3 -0.2
baz=306
NSTT S Sb 15 56 35.0 +0.4
baz=306
TATO Taipei 0.92 341 Pg Pn 15 56 23.2 -0.1
TATO Sg Sb 15 56 34.7 0.0
TATO Taipei 0.92 341 P Pn 15 56 23.0 -0.3
baz=339
TATO *e*S Sb 15 56 35.0 +0.4
baz=339
NJD Zhudong 0.92 313 *e*P Pn 15 56 23.2 -0.2
baz=323
BACT New Taipei Cit 0.95 339 *e*P Pn 15 56 23.9 +0.1
baz=338
NHY Taipei 0.95 346 *e*P Pn 15 56 24.3 +0.4
baz=345
NWF Wu-fen Shan 0.96 358 P Pn 15 56 24.2 +0.1
baz=348
WFSB Wu-fen Shan 0.96 358 P Pn 15 56 24.1 +0.1
baz=345
WFSB *e*S Sn 15 56 37.6 0.0
baz=345
TAP Taipei 0.97 343 *e*P Pn 15 56 23.9 -0.2
baz=342
WHYT Xinyi Township 0.98 245 *e*P Pn 15 56 23.8 -0.5
baz=254
WHYT *e*S Sb 15 56 37.2 +0.7
baz=254
SXI1 Grass Mountain 0.98 3 ⇑P Pn 15 56 24.7 +0.3
baz=352
SXI1 *e*S Sn 15 56 38.9 +0.6
baz=352
TWQ1 Liyutan 0.99 284 *e*P Pn 15 56 24.4 0.0
baz=287
HSN1 Hsinchu 0.99 312 *e*P Pn 15 56 24.7 +0.3
baz=314
CHKH Chenggong 0.99 203 *e*P Pn 15 56 24.1 -0.4
baz=183
NTY Taoyuan 1.01 332 *e*P Pn 15 56 24.6 -0.1
baz=332
NSY Sanyi 1.02 288 P Pn 15 56 25.5 +0.7
baz=289
NSY *e*S Sn 15 56 41.5 +2.5
baz=289
SBCB Hsinchu 1.02 312 *e*P Pn 15 56 25.4 +0.5
baz=312
SBCB *e*S Sn 15 56 40.2 +1.1
baz=312
FULB Fuli 1.03 208 *e*P Pn 15 56 24.9 0.0
baz=189
WWF Wufeng 1.03 267 *e*P Pn 15 56 25.9 +1.0
baz=261
WWF *e*S Sn 15 56 42.2 +3.0
baz=261
NCUH Zhongli 1.03 326 *e*P Pn 15 56 25.4 +0.4
baz=327
NMLH Miaoli 1.03 295 *e*P Pn 15 56 25.4 +0.4
baz=306
NCU National Centr 1.03 326 *e*P Pn 15 56 25.4 +0.3
baz=325
NCU *e*S Sn 15 56 41.1 +1.7
baz=325
TNOU National Taiwa 1.04 357 *e*P Pn 15 56 25.3 +0.3
baz=355
HSN Hsinchu 1.04 312 *e*P Pn 15 56 25.9 +0.8
baz=314
HSN *e*S Sn 15 56 42.0 +2.4
baz=314
NJN Zhunan 1.04 304 *e*P Pn 15 56 25.2 +0.2
baz=306
WJS Zhushan 1.04 254 *e*P Pn 15 56 25.2 0.0
baz=261
WJS *e*S Sn 15 56 41.2 +1.6
baz=261
TCU Taichung 1.05 272 *e*P Pn 15 56 25.9 +0.7
baz=273
TWS1 Kuangyinshan 1.05 340 *e*P Pn 15 56 26.1 +0.8
baz=338
TWS1 *e*S Sn 15 56 41.9 +2.0
baz=338
YM01 YM01 1.06 347⇑*eP* Pn 15 56 26.1 +0.7
baz=345
YM01 *e*S Sn 15 56 40.5 +0.5
baz=345
WNT1 Nantou City 1.06 259 *e*P Pn 15 56 25.8 +0.4
baz=260
WNT1 *e*S Sn 15 56 41.9 +1.7
baz=260
WNT Mingjian 1.07 258 *e*P Pn 15 56 25.7 +0.2
baz=258
WNT *e*S Sn 15 56 40.8 +0.6
baz=258
JYNG Yonagunijimaku 1.08 71 *e*P Pn 15 56 27.3 +1.7
JYNG S Sn 15 56 42.8 +2.3
JYNG Yonagunijimaku 1.08 71 A A 15 56 27.3
comp=E,6.0nm,5.4s,comp=N,9.0nm,3.0s
CHKT Chengkung 1.09 203 *e*P Pn 15 56 25.5 -0.3
baz=179
YM08 YM08 1.09 349 *e*P Pn 15 56 26.2 +0.4
baz=333
NTST Danshui 1.10 342 *e*P Pn 15 56 27.0 +1.0
baz=341
WDJ Dajia District 1.11 283 P Pn 15 56 27.4 +1.4
baz=287
ALS Alishan 1.11 238 P Pb 15 56 25.8 -0.2
baz=238
ANP Anpu 1.11 346 *e*P Pn 15 56 26.3 +0.1
baz=345
EHD Haiduan 1.11 211 *e*P Pn 15 56 26.4 +0.3
baz=210
YOJ Yonaguni jima 1.14 72 Pn Pg 15 56 26.1 -0.6
YOJ Yonaguni jima 1.14 72 *e*P Pn 15 56 27.9 +1.5
baz=75
YOJ Yonaguni jima 1.14 72 *e*S Sn 15 56 44.9 +3.0
YOJ Yonaguni jima 1.14 72 A A 15 56 44.9
comp=E,8.0nm,1.4s,comp=N,8.0nm,1.9s

NHW Xinwu Township 1.14 322 *e*P Pn 15 56 26.8 +0.3
baz=321
NHW *e*S Sn 15 56 44.1 +2.1
baz=321
WYL Yuanlin Townsh 1.15 263 *e*P Pn 15 56 27.3 +0.8
baz=265
WYL *e*S Sn 15 56 43.9 +1.8
baz=265
ECS Chishang 1.15 209 *e*P Pn 15 56 26.9 +0.2
baz=225
WCHH Zhanghua 1.16 269 *e*P Pn 15 56 27.2 +0.5
baz=269
ELDTW Lidau 1.18 219 *e*P Pg 15 56 26.5 -1.0
baz=218
TWY Chenhua 1.18 350 *e*P Pn 15 56 27.9 +0.9
baz=334
EDH Donghe 1.23 203 *e*P Pg 15 56 27.2 -1.2
baz=182
WGK Gukeng 1.23 250 *e*P Pn 15 56 29.0 +1.3
baz=252
WGK *e*S Sn 15 56 47.5 +3.4
baz=252
WDLH Douliu 1.25 251 *e*P Pn 15 56 28.8 +0.8
baz=250
WCKO Fanlu 1.30 239 *e*P Pg 15 56 30.1 +0.2
baz=238
WRL Guolierlin Hig 1.34 261 *e*P Pg 15 56 30.2 -0.4
baz=261
STYH Taoyuan 1.34 226 *e*P Pb 15 56 29.5 -0.3
baz=209
LONT Longtian 1.36 208 *e*P Pg 15 56 30.7 -0.1
baz=207
RLNB Erlin 1.36 261 *e*P Pg 15 56 30.3 -0.5
baz=263
RLNB *e*S Sn 15 56 50.9 +3.6
baz=263
CHN4 Tsaushan 1.36 236 *e*P Pg 15 56 31.0 +0.1
baz=218
STYT Tauyuan 1.36 226 *e*P Pb 15 56 29.7 -0.4
baz=209
TPUB Ta-pu 1.36 234 Pn Pn 15 56 29.5 0.0
TPUB Sn 15 56 48.2 +0.8
TPUB Ta-pu 1.36 234 *e*P Pg 15 56 30.2 -0.7
baz=216
WTK Tuku 1.38 253 *e*P Pg 15 56 31.7 +0.4
baz=255
WTK *e*S Sn 15 56 51.9 +4.1
baz=255
WTP Ta-pu 1.40 232 *e*P Pg 15 56 31.8 +0.1
baz=215
CHY Chiayi 1.42 245 *e*P Pg 15 56 32.1 0.0
baz=243
WTCT Ta-ch'eng 1.43 261 *e*P Pg 15 56 31.4 -0.9
baz=263
WTCT *e*S Sg 15 56 51.6 +0.7
baz=263
TWGBT Beinan 1.46 208 *e*P Pn 15 56 31.1 +0.3
baz=207
TWG Pinlang 1.46 208 Pn Pb 15 56 31.1 -0.6
TWG Pinlang 1.46 208 *e*P Pg 15 56 31.8 -1.0
baz=207
TWK Hsinying 1.48 236 *e*P Pg 15 56 33.0 -0.3
baz=234
CHN1 Nanshi 1.50 233 *e*P Pg 15 56 32.9 -0.7
baz=231
SNST Tainan City 1.50 234 *e*P Pg 15 56 32.7 -0.9
baz=233
SGST Jiashian 1.53 228 *e*P Pb 15 56 32.8 -0.2
baz=212
PCYT Pengchaiyu 1.53 8 *e*P Pn 15 56 32.4 +0.6
baz=3.0
WSF Szhu 1.54 253 P Pg 15 56 33.6 -0.7
baz=255
WSF *e*S Sg 15 56 56.0 +1.7
baz=255
SLGT Liugui 1.55 224 *e*P Pb 15 56 33.0 -0.4
baz=210
WSL Shuilin Townsh 1.57 249 *e*P Pb 15 56 33.3 -0.5
baz=246
ICHU Yijhu 1.60 243 *e*P Pb 15 56 34.0 -0.2
baz=240
CHN8 Yiju 1.66 243 *e*P Pg 15 56 35.4 -1.3
baz=245
CHN8 *e*S Sg 15 56 59.1 +0.8
baz=245
ECL Taimali 1.70 208 *e*P Pg 15 56 36.2 -1.3
baz=207
SSHA Shanhua 1.71 236 *e*P Pb 15 56 35.0 -1.0
baz=233
SCST Cishan 1.72 225 *e*P Pn 15 56 35.0 +0.5
baz=224
SHHT Tainan City 1.73 232 *e*P Pg 15 56 38.2 +0.1
baz=229
SSD Sandimen 1.74 219 *e*P Pb 15 56 36.7 0.0
baz=218
IRIF Iriomote-Funau 1.75 82 *e*S Sb 15 56 58.9 +0.1
IRIF Iriomote-Funau 1.75 82 A A 15 56 58.9
comp=E,4.0nm,8.3s,comp=N,6.0nm,3.1s
SCLT Jiali 1.76 238 *e*P Pg 15 56 37.2 -1.4
baz=236
TSMG Majia 1.77 218 *e*P Pb 15 56 36.7 -0.4
baz=217
HATJ Hateruma jima 1.81 91 A A 15 56 38.9
comp=E,8.0nm,3.5s,comp=N,7.0nm,3.6s
TWM1 Shoushan 1.81 225 *e*P Pg 15 56 38.6 -1.0
baz=224
MASBT Mashibuluo 1.85 217 *e*P Pn 15 56 37.1 +0.9
baz=215
TSCK Chigu Township 1.86 239 *e*P Pb 15 56 37.3 -1.3
baz=236
EAST Anshuo 1.94 208 *e*P Pb 15 56 40.0 -0.1
baz=188
TAW Tawu 1.94 206 *e*P Pn 15 56 38.2 +0.7
baz=206
TAWH Dawu Township 1.96 206 *e*P Pb 15 56 39.2 -1.2
baz=206
JKRS Kuro-shima 2.00 86 P Pb 15 56 40.2 -0.8
JKRS Kuro-shima 2.00 86 A A 15 56 40.2
comp=E,9.0nm,2.8s,comp=N,10.0nm,3.4s
SCZT Fangliau 2.05 213 *e*P Pb 15 56 41.0 -0.9
baz=198
SLIU Shizi 2.11 207 *e*P Pb 15 56 41.4 -1.4
baz=189
LYUB Lan-yu 2.11 186 *e*P Pn 15 56 39.6 -0.2
baz=179
JIJ Ishigaki jima 2.13 83 S Sn 15 57 07.9 +1.4
PHUB P'eng-hu 2.15 254 *e*P Pn 15 56 39.6 -0.7
baz=250
PNG Penghu 2.15 256 *e*P Pn 15 56 41.1 +0.8
baz=251
WDGT Dungji 2.16 247 *e*P Pn 15 56 41.6 +1.1
baz=243
JISG Ishigakijimahi 2.32 78 S Sn 15 57 12.4 +1.3
TWKBT Hengchun 2.35 204 *e*P Pn 15 56 43.7 +0.6
baz=183
TWK1 Hengchun 2.35 204 *e*P Pn 15 56 42.9 -0.3
baz=183
VCHM Qimei 2.37 248 *e*P Pn 15 56 43.4 0.0
baz=244
PTMZ Houxiangcun 2.63 291 *e*P Pn 15 56 47.5 +0.5
baz=300
MATB Ma-tsu 2.65 320 *e*P Pn 15 56 48.8 +1.5
baz=323
JTJ Tarama 2.68 78 A A 15 56 51.5
comp=E,5.0nm,2.5s,comp=N,6.0nm,4.5s
LYJJ Jianjiangzhen 3.06 323 *e*P Pn 15 56 54.1 +1.1
baz=326
KNM Kinmen 3.11 276 *e*P Pn 15 56 56.1 +2.6
baz=274
KNMB Chin-men Tao 3.15 277 Pn Pn 15 56 53.0 -1.2
KNMB Chin-men Tao 3.15 277 *e*P Pn 15 56 54.5 +0.3
baz=275
AXDP Jialang 3.60 283 *e*P Pn 15 57 01.2 +1.0
baz=293
ZPLA Ao Xicun 3.73 268 *e*P Pn 15 57 02.3 +0.2
baz=261
DSXP Dongshan 4.04 265 *e*P Pn 15 57 07.5 +1.1
baz=258
SXFK Yanhouchang 4.42 302 *e*P Pn 15 57 12.1 +0.6
baz=309
JOW Kunigami 6.43 64 Pn Pn 15 57 39.3 +0.1
JOW Kunigami 6.43 64 Pn Pn 15 57 40.6 +1.4
comp=N,2.5nm,0.3s,baz=158,slow=23,SNR=2.4
comp=N,7.4nm,0.4s
KSRS Korea Array 14.29 20 Pn P 15 59 32.0 -2.0
comp=N,0.2nm,0.3s,baz=199,slow=11,SNR=9.7
KS19 Wonju Array Si 14.32 20 P P 15 59 33.9 -0.5
CM31 Chiang Mai Arr 22.04 260 P P 16 00 59.8 +0.5

CMAR	**Chiang Mai Arr**	**22.04**	**260**	P		**P**		**16 01 00.4**	**+1.0**
	comp=N,1.4nm,0.9s,baz=64,slow=8.8,SNR=7.6								
SONM	**Songino Array**	**26.67**	**336**	P		**P**		**16 01 43.8**	**+0.3**
SONM	**Songino Array**	**26.67**	**336**	P		**P**		**16 01 44.2**	**+0.7**
	comp=N,1.4nm,0.8s,baz=155,slow=10.0,SNR=6.4								
	comp=N,1.4nm,0.8s								
SHL	**Shillong**	**27.18**	**279**	P		**P**		**16 01 47.9**	**-0.6**
SHL				IAmb		IAmb		16 02 07.2	
	comp=Z,7.4nm,1.1s								
MTN	**Manton Dam**	**37.84**	**165**	P		**P**		**16 03 20.2**	**-1.1**
MTN				IAmb		IAmb		16 03 50.9	
	comp=Z,13nm,1.2s								
MK31	**Makanchi Array**	**38.80**	**316**	P		**P**		**16 03 29.2**	**0.0**
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**		**16 03 28.7**	**-0.6**
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**		**16 03 29.2**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=104,slow=9.5,SNR=14								
	comp=Z,1.6nm,0.7s								
MAKZ	**Makanchi**	**39.00**	**316**	P		**P**		**16 03 29.9**	**-1.1**
ZAAO	**Zalesovo Array**	**40.63**	**327**	P		**P**		**16 03 43.9**	**-0.4**
ZALV	**Zalesovo Beam**	**40.63**	**327**	P		**P**		**16 03 43.5**	**-0.8**
ZALV	**Zalesovo Beam**	**40.63**	**327**	P		**P**		**16 03 44.2**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=114,slow=7.2,SNR=11								
	comp=Z,3.3nm,0.8s								
KURBB	**Kurchatov Arra**	**42.54**	**320**	P		**P**		**16 04 00.1**	**0.0**
	comp=Z,2.0nm,1.1s,baz=116,slow=7.0,SNR=7.4								
	comp=Z,2.0nm,1.1s								
WB0	**Warramunga Arr**	**45.30**	**163**	P		**P**		**16 04 21.9**	**-0.7**
WB0				IAmb		IAmb		16 04 32.0	
	comp=Z,11nm,1.5s								
WRA	**Warramunga Arr**	**45.45**	**163**	P		**P**		**16 04 22.2**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=345,slow=8.7,SNR=6.2								
	comp=Z,0.5nm,0.5s								
WB2	**Warramunga Arr**	**45.45**	**163**	P		**P**		**16 04 22.1**	**-1.6**
WR0	**Warramunga Arr**	**45.52**	**163**	P		**P**		**16 04 22.1**	**-2.2**
WR0				IAmb		IAmb		16 04 45.9	
	comp=Z,5.9nm,1.1s								
KKAR	**Karatay Array**	**45.98**	**307**	P		**P**		**16 04 26.4**	**-1.4**
TIXI	**Tiksi**	**47.74**	**3**	P		**P**		**16 04 39.8**	**-1.3**
TIXI				IAmb		IAmb		16 04 47.6	
	comp=Z,3.4nm,0.7s								
BVAR	**Borovoye Array**	**48.10**	**321**	P		**P**		**16 04 43.9**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=95,slow=9.1,SNR=5.9								
	comp=Z,1.3nm,0.7s								
AS31	**Alice Springs**	**48.92**	**165**	P		**P**		**16 04 49.9**	**-0.8**
ASAR	**Alice Springs**	**48.92**	**165**	P		**P**		**16 04 50.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=343,slow=7.6,SNR=6.7								
	comp=Z,0.2nm,0.4s								
ABKAR	**Akbulak array**	**53.91**	**314**	P		**P**		**16 05 28.2**	**+0.3**
STKA	**Stephens Creek**	**58.79**	**160**	P		**P**		**16 06 05.4**	**+2.6**
STKA	**Stephens Creek**	**58.79**	**160**	P		**P**		**16 06 03.5**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=330,slow=8.7,SNR=4.0								
	comp=Z,1.1nm,0.7s								
E18K	**Tukpahlearik C**	**63.22**	**25**	P		**P**		**16 06 33.5**	**+1.0**
E18K				IAmb		IAmb		16 07 14.3	
	comp=Z,3.9nm,1.4s								
C19K	**Lookout Ridge**	**63.64**	**23**	P		**P**		**16 06 35.8**	**+0.5**
C19K				IAmb		IAmb		16 07 15.4	
	comp=Z,6.5nm,1.4s								
M16K	**Timber Creek**	**64.02**	**32**	P		**P**		**16 06 37.9**	**0.0**
D19K	**Kuna River**	**64.17**	**24**	P		**P**		**16 06 38.8**	**0.0**
D19K				IAmb		IAmb		16 06 42.4	
	comp=Z,3.1nm,1.1s								
E19K	**Redstone River**	**64.52**	**25**			**P**		**16 06 41.9**	**+0.9**
E19K				IAmb		IAmb		16 06 49.0	
	comp=Z,1.8nm,0.8s								
TTA	**Tatalina**	**65.28**	**30**	P		**P**		**16 06 47.8**	**+1.6**
TTA				IAmb		IAmb		16 07 12.8	
	comp=Z,3.1nm,1.4s								
J20K	**Nowinta River**	**66.00**	**28**	P		**P**		**16 06 51.4**	**+0.7**
J20K				IAmb		IAmb		16 06 59.0	
	comp=Z,3.0nm,0.9s								
D22K	**Ayikyak River**	**66.14**	**23**	P		**P**		**16 06 51.4**	**-0.1**
D22K				IAmb		IAmb		16 06 60.0	
	comp=Z,2.6nm,0.7s								
TOLK	**Toolik Lake Re**	**67.29**	**23**	P		**P**		**16 06 58.5**	**-0.5**
TOLK				IAmb		IAmb		16 07 08.2	
	comp=Z,2.0nm,0.8s								
SKT	**Skwentna**	**67.46**	**31**	P		**P**		**16 07 01.2**	**+1.1**
SKT				IAmb		IAmb		16 07 28.0	
	comp=Z,4.3nm,1.3s								
SUA	**Susitna One**	**67.92**	**31**	P		**P**		**16 07 02.5**	**-0.6**
MDM	**Murphy Dome**	**68.41**	**27**	P		**P**		**16 07 06.3**	**+0.2**
ILAR	**Eielson Array**	**69.01**	**27**	P		**P**		**16 07 11.3**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=288,slow=6.8,SNR=9.6								
	comp=Z,0.2nm,0.5s								
BMAR	**Burnt Mountain**	**69.36**	**24**	P		**P**		**16 07 12.5**	**+0.6**
SCM	**Sheep Creek Mo**	**69.44**	**30**	P		**P**		**16 07 12.2**	**-0.4**
E28M	**Babbage River**	**70.88**	**23**	P		**P**		**16 07 21.1**	**-0.2**
L27K	**Beaver Creek,**	**71.60**	**28**	P		**P**		**16 07 26.0**	**+0.3**
BCAR	**Beaver Creek A**	**71.62**	**28**	P		**P**		**16 07 26.1**	**+0.3**
I28M	**Miner Creek**	**71.68**	**26**	P		**P**		**16 07 25.9**	**-0.3**
I28M				IAmb		IAmb		16 07 33.9	
	comp=Z,5.9nm,1.5s								
FINES	**FINESS Array B**	**71.80**	**330**	P		**P**		**16 07 27.3**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=28,slow=9.8,SNR=4.1								
	comp=Z,2.8nm,0.9s								
LOGN	**Logan Glacier**	**72.65**	**31**	P		**P**		**16 07 32.3**	**+0.2**
INK	**Inuvik**	**73.07**	**22**	P		**P**		**16 07 33.4**	**-0.9**
INK				IAmb		IAmb		16 07 34.0	
	comp=Z,2.3nm,0.9s								
L29M	**L29M**	**73.19**	**28**	P		**P**		**16 07 34.9**	**-0.2**
L29M				IAmb		IAmb		16 07 45.6	
	comp=Z,3.2nm,0.8s								
F31M	**Tsiigehtchic**	**73.33**	**23**	P		**P**		**16 07 34.8**	**-1.1**
YKA	**Yellowknife Ar**	**82.81**	**23**	P		**P**		**16 08 27.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=310,slow=4.8,SNR=12								
	comp=Z,0.6nm,0.8s								

TAP 07 16:00:07.7, 24.19N×121.75E, h10km, ML2.2, 8C-11D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETL	**Fush Village**	**0.12**	**255**	P		Pg	16 00 10.7	+0.1
	baz=256							
EHP	**Heping Village**	**0.12**	**357**	P		Pg	16 00 11.0	+0.4
	baz=1.0							
EHP				S		Sg	16 00 13.5	+0.8
	baz=1.0							
EAHA	**Aohua**	**0.14**	**357**	*i* P		Pg	16 00 11.0	+0.1
	baz=357							
EAHA				*i* S		Sg	16 00 13.7	+0.6
	baz=357							
NACB	**Ninganchiao**	**0.14**	**264**	*i* P		Pg	16 00 10.7	-0.2
	baz=257							
TWD	**Chiawan**	**0.18**	**232**	P		Pg	16 00 12.0	+0.5
	baz=238							
TWD				S		Sg	16 00 15.3	+1.2
	baz=238							
ENA	**Nanau**	**0.24**	**359**	P		Pg	16 00 12.8	+0.2
ENA				*i* S		Sg	16 00 16.6	+0.6
ETLH	**Xiulin Townshi**	**0.24**	**274**	*e*P		Pb	16 00 14.8	+0.5
	baz=275							
ETLH				*e*S		Sg	16 00 18.0	+1.8
	baz=275							
ETLH	**Xiulin Townshi**	**0.24**	**274**	⇑P		Pb	16 00 14.7	+0.5
	baz=315							
ETLH				S		Sg	16 00 17.9	+1.8
	baz=315							
HWA	**Hwalien**	**0.25**	**212**	*i* P		Pb	16 00 13.5	-0.7
	baz=221							
HWA				*e*S		Sg	16 00 18.1	+1.9
	baz=221							
EWUT	**Wuta**	**0.26**	**6**	⇓*i*P		Pg	16 00 13.1	+0.1
	baz=6.0							
EWUT				S		Sg	16 00 16.9	+0.5
	baz=6.0							
ETM	**Tongmen**	**0.32**	**226**	⇓*e*P		Pg	16 00 13.8	-0.3
	baz=228							
ETM				*i* S		Sg	16 00 19.4	+0.9
	baz=228							
LXIB	**Xiulin Townshi**	**0.35**	**241**	⇓P		Pg	16 00 14.7	0.0
	baz=243							
LXIB				*e*S		Sb	16 00 20.9	-0.7
	baz=243							
ESAO	**Su ao**	**0.40**	**13**	P		Pg	16 00 15.5	0.0
	baz=12							
ESAO				*i* S		Sb	16 00 21.8	-1.0
	baz=12							
LATG	**Datong**	**0.40**	**330**	P		Pg	16 00 15.9	+0.3
	baz=330							
LATG				*e*S		Sb	16 00 22.4	-0.7
	baz=330							
NNSB	**Datong**	**0.41**	**306**	⇓P		Pg	16 00 15.9	+0.1
	baz=306							
NNSB				*i* S		Sg	16 00 21.9	+0.7
	baz=306							
NNS	**Nan Shan**	**0.42**	**306**	*i* P		Pg	16 00 16.3	+0.3
	baz=307							
NNS				S		Sg	16 00 22.6	+0.9
	baz=307							
TWC	**Suao**	**0.43**	**13**	*i* P		Pg	16 00 16.4	+0.3
	baz=7.0							
TWC				*e*S		Sb	16 00 23.1	-0.8
	baz=7.0							
SHUL	**Shoufeng**	**0.43**	**203**	*i* P		Pb	16 00 17.2	-0.2
	baz=211							
SHUL				*e*S		Sb	16 00 23.5	-0.5
	baz=211							
WHF	**Hehuan Shan**	**0.44**	**264**	*e*P		Pb	16 00 17.7	-0.1
	baz=265							
WHF				S		Sg	16 00 22.9	+0.4
	baz=265							
WHF	**Hehuan Shan**	**0.44**	**264**	⇑*e*P		Pb	16 00 17.7	-0.1
	baz=282							
WHF				S		Sg	16 00 22.9	+0.5
	baz=282							
NDS	**Dongshan**	**0.44**	**356**	*e*P		Pb	16 00 17.2	-0.4
	baz=2.0							
FUSS	**Fushou**	**0.46**	**277**	P		Pg	16 00 17.0	+0.2
	baz=278							
FUSS				*e*S		Sg	16 00 23.4	+0.4
	baz=278							
NDT	**Datong Townshi**	**0.46**	**333**	*i* P		Pg	16 00 17.2	+0.4
	baz=332							
NDT				*e*S		Sb	16 00 24.3	-0.6
	baz=332							
ESL	**Shilin**	**0.47**	**218**	⇑*e*P		Pg	16 00 16.4	-0.5
	baz=227							
ESL				*e*S		Sb	16 00 24.6	-0.5
	baz=227							
ENTT	**Nioudou**	**0.48**	**340**	⇑*i*P		Pg	16 00 17.6	+0.5
	baz=340							
ENTT				*e*S		Sb	16 00 25.1	-0.2
	baz=340							
TWT	**Tachien**	**0.53**	**277**	*i* P		Pb	16 00 18.6	-0.4
	baz=277							
TWT				*e*S		Sb	16 00 27.8	+1.0
	baz=277							
TWE	**Neicheng**	**0.54**	**352**	*i* P		Pg	16 00 18.6	+0.5
	baz=1.0							
TWE				*e*S		Sb	16 00 27.2	+0.3
	baz=1.0							
CHGB	**Renai**	**0.54**	**256**	*e*P		Pb	16 00 19.3	-0.1
	baz=250							
CHGB				*e*S		Sg	16 00 25.5	+0.1
	baz=250							
CHGB	**Renai**	**0.54**	**256**	⇓P		Pb	16 00 19.1	-0.2
	baz=268							
CHGB				*i* S		Sg	16 00 25.4	0.0
	baz=268							
TDCB	**Techi**	**0.54**	**277**	*e*P		Pb	16 00 19.0	-0.3
	baz=277							
TDCB				*e*S		Sb	16 00 27.2	-0.1
	baz=277							
OWD	**Renai**	**0.57**	**246**	⇑P		Pg	16 00 19.2	+0.4
	baz=247							
OWD				S		Sg	16 00 26.6	+0.2
	baz=247							
WARBT	**Fenglin Townsh**	**0.57**	**215**	*e*P		Pg	16 00 18.3	-0.6
	baz=224							
WARBT				S		Sg	16 00 26.9	+0.5
	baz=224							
FUSB	**Fushanzhiwuyua**	**0.59**	**346**	⇓P		Pg	16 00 19.6	+0.5
	baz=345							
FUSB				*e*S		Sb	16 00 29.2	+0.7
	baz=345							
YHNB	**Yeheng**	**0.59**	**325**	*e*P		Pb	16 00 19.7	-0.4
	baz=325							
YHNB				*e*S		Sb	16 00 28.2	-0.3
	baz=325							
EGFH	**Guangfu**	**0.59**	**210**	⇓P		Pg	16 00 19.0	-0.3
	baz=218							
EGFH				*e*S		Sb	16 00 28.6	0.0
	baz=218							
NSK	**Sanguang**	**0.60**	**324**	*i* P		Pb	16 00 19.9	-0.4
	baz=324							
NSK				*e*S		Sb	16 00 29.1	+0.2
	baz=324							
WUSB	**Renai**	**0.61**	**251**	*e*P		Pb	16 00 20.2	-0.3
	baz=245							
WUSB				*e*S		Sg	16 00 27.4	-0.1
	baz=245							
WUSB	**Renai**	**0.61**	**251**	*e*P		Pb	16 00 20.2	-0.2
	baz=260							
WUSB				*e*S		Sg	16 00 26.9	-0.6
	baz=260							
NWLT	**Wulai**	**0.63**	**339**	P		Pb	16 00 20.4	-0.4
	baz=346							
NWLT				S		Sb	16 00 29.2	-0.4
	baz=346							
NFF	**Wufeng Townshi**	**0.72**	**308**	*e*S		Sn	16 00 33.9	-1.3
	baz=308							
HGSD	**Ruisui**	**0.75**	**203**	⇓*e*P		Pn	16 00 23.7	-0.6
	baz=193							
HGSD				*e*S		Sn	16 00 34.7	-1.1
	baz=193							
WCS	**Beigang Elemen**	**0.78**	**260**	⇑*e*P		Pb	16 00 23.9	+0.6
	baz=254							
WCS				*e*S		Sb	16 00 33.9	+0.1
	baz=254							
WCS	**Beigang Elemen**	**0.78**	**260**	⇑*e*P		Pb	16 00 23.8	+0.6
	baz=268							
WCS				*e*S		Sb	16 00 33.6	-0.2
	baz=268							
EHY	**Hungye**	**0.78**	**210**	P		Pg	16 00 22.7	-0.1
	baz=221							
EHY				*e*S		Sg	16 00 33.4	+0.4
	baz=221							
TWA	**Mucha**	**0.80**	**349**	*e*S		Sg	16 00 33.1	-0.5
	baz=349							
NSTT	**Nanjuang**	**0.81**	**303**	P		Pb	16 00 24.2	+0.4
	baz=303							
NSTT				*e*S		Sb	16 00 34.4	-0.5
	baz=303							
SSLB	**Suanglung**	**0.83**	**241**	⇑*i*P		Pg	16 00 23.8	+0.1
	baz=252							
SSLB				*e*S		Sg	16 00 33.4	-1.1
	baz=252							
SSLB	**Suanglung**	**0.83**	**241**	⇓*i*P		Pg	16 00 23.7	0.0
	baz=245							
SSLB				*e*S		Sg	16 00 33.3	-1.2
	baz=245							
SMLT	**Sun Moon Lake**	**0.83**	**249**	⇓P		Pb	16 00 24.5	+0.2
	baz=250							
SMLT				*e*S		Sb	16 00 35.2	-0.3
	baz=250							
TYC	**Yuchr**	**0.86**	**251**	⇓*e*P		Pb	16 00 24.9	+0.2
	baz=243							
TYC				*e*S		Sb	16 00 36.9	+0.6
	baz=243							
YULB	**Yu-li**	**0.89**	**208**	P		Pg	16 00 24.5	-0.4
	baz=220							
YULB				*e*S		Sg	16 00 36.0	-0.5
	baz=220							
YULB	**Yu-li**	**0.89**	**208**	P		Pg	16 00 24.6	-0.3
	baz=204							
YULB				*i* S		Sg	16 00 35.8	-0.8
	baz=204							
WHYT	**Xinyi Township**	**0.95**	**239**	*e*P		Pn	16 00 27.6	+0.4
	baz=249							
WHYT				*e*S		Sn	16 00 40.3	-0.5
	baz=249							
CHKH	**Chenggong**	**1.04**	**198**	*e*P		Pn	16 00 28.1	-0.2
	baz=191							
CHKH				S		Sn	16 00 42.5	-0.4
	baz=191							
ALS	**Alishan**	**1.10**	**232**	P		Pg	16 00 28.8	0.0
	baz=234							
ALS				*e*S		Sb	16 00 43.3	-0.1
	baz=234							
EHD	**Haiduan**	**1.15**	**206**	*i* P		Pb	16 00 29.2	-0.4
	baz=209							
EHD				*e*S		Sn	16 00 45.6	+0.1
	baz=209							
ELDTW	**Lidau**	**1.20**	**214**	*e*P		Pb	16 00 30.5	-0.1
	baz=217							

TAP 07 16:00:09.7, 24.07N×121.63E, h9km, ML2.1, 4C-6D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWD	**Chiawan**	**0.03**	**288**	*i* S		Sg	16 00 13.2	+0.7
	baz=298							
ETL	**Fush Village**	**0.09**	**358**	*i* P		Pg	16 00 12.7	+0.7
	baz=357							
ETL				S		Sg	16 00 14.6	+0.8
	baz=357							
HWA	**Hwalien**	**0.10**	**192**	P		Pg	16 00 12.9	+0.8
	baz=187							
HWA				*i* S		Sg	16 00 15.0	+1.2
	baz=187							
NACB	**Ninganchiao**	**0.11**	**344**	⇓*i*P		Pg	16 00 13.0	+0.7
	baz=344							
NACB				S		Sg	16 00 15.0	+0.9
	baz=344							
ETM	**Tongmen**	**0.16**	**229**	*e*S		Sg	16 00 16.4	+0.9
	baz=229							
LXIB	**Xiulin Townshi**	**0.20**	**256**	S		Sg	16 00 18.1	+1.3
	baz=255							
EHP	**Heping Village**	**0.26**	**24**	*i* P		Pb	16 00 15.8	-0.8
	baz=25							
EHP				*e*S		Sb	16 00 19.9	-1.3
	baz=25							
EAHA	**Aohua**	**0.28**	**22**	*i* P		Pb	16 00 16.1	-0.8
	baz=21							
EAHA				*e*S		Sg	16 00 20.3	+1.3
	baz=21							
SHUL	**Shoufeng**	**0.29**	**192**	S		Sb	16 00 21.0	-0.9
	baz=191							
ESL	**Shilin**	**0.31**	**215**	*i* S		Sb	16 00 22.0	-0.5
	baz=213							
ENA	**Nanau**	**0.37**	**16**	*i* P		Pb	16 00 17.9	-0.5
	baz=17							
ENA				*e*S		Sb	16 00 23.2	-1.1
	baz=17							
FUSS	**Fushou**	**0.39**	**297**	*e*P		Pb	16 00 19.0	+0.1
	baz=296							
FUSS				*e*S		Sb	16 00 25.4	+0.2
	baz=296							
WARBT	**Fenglin Townsh**	**0.41**	**212**	*e*S		Sb	16 00 24.9	-0.6
	baz=212							
NNSB	**Datong**	**0.42**	**328**	⇓P		Pb	16 00 19.2	-0.1
	baz=328							
NNSB				*i* S		Sb	16 00 25.6	-0.2
	baz=328							
OWD	**Renai**	**0.43**	**254**	*i* S		Sb	16 00 25.9	-0.2
	baz=254							
NNS	**Nan Shan**	**0.43**	**328**	⇓P		Pb	16 00 19.4	-0.2
	baz=328							
NNS				*i* S		Sb	16 00 26.0	-0.3
	baz=328							
EGFH	**Guangfu**	**0.44**	**204**	S		Sb	16 00 26.4	+0.2
	baz=204							
TDCB	**Techi**	**0.46**	**293**	*i* P		Pb	16 00 19.7	-0.4
	baz=292							
LATG	**Datong**	**0.47**	**349**	⇑*i*P		Pb	16 00 19.9	-0.3
	baz=348							
LATG				*e*S		Sb	16 00 26.9	-0.5
	baz=348							
NDT	**Datong Townshi**	**0.54**	**349**	⇓P		Pb	16 00 21.4	+0.1
	baz=348							
NDT				*e*S		Sb	16 00 29.0	-0.2
	baz=348							
NDS	**Dongshan**	**0.57**	**8**	⇓*i*P		Pb	16 00 21.7	-0.1
	baz=8.0							
NDS				S		Sb	16 00 30.1	+0.2
	baz=8.0							
ENTT	**Nioudou**	**0.57**	**354**	⇑P		Pb	16 00 22.0	+0.1
	baz=355							
ENTT				S		Sb	16 00 30.2	+0.2
	baz=355							
TWC	**Suao**	**0.57**	**21**	P		Pb	16 00 21.4	-0.4
	baz=21							
TWC				*i* S		Sb	16 00 30.5	+0.4
	baz=21							
EHY	**Hungye**	**0.63**	**206**	S		Sb	16 00 32.1	+0.4
	baz=205							
YHNB	**Yeheng**	**0.64**	**339**	*e*P		Pb	16 00 23.6	+0.6
	baz=339							
YHNB				*e*S		Sb	16 00 32.1	0.0
	baz=339							
TWE	**Neicheng**	**0.65**	**3**	P		Pb	16 00 23.3	+0.2
	baz=4.0							
TWE				*i* S		Sb	16 00 32.7	+0.4
	baz=4.0							
NSK	**Sanguang**	**0.65**	**338**	*e*P		Pb	16 00 23.7	+0.4
	baz=338							
NSK				*i* S		Sb	16 00 32.8	+0.4
	baz=338							
WHP	**Taichung City**	**0.65**	**288**	⇑*e*P		Pn	16 00 24.4	-0.8
	baz=288							
WHP				*e*S		Sb	16 00 32.5	-0.1
	baz=288							
FUSB	**Fushanzhiwuyua**	**0.69**	**357**	P		Pb	16 00 24.1	+0.3
	baz=357							
FUSB				*i* S		Sb	16 00 34.0	+0.6
	baz=357							
SMLT	**Sun Moon Lake**	**0.69**	**254**	S		Sb	16 00 33.9	+0.3
	baz=253							
NWLT	**Wulai**	**0.71**	**351**	P		Pb	16 00 24.5	+0.3
	baz=350							
NWLT				*e*S		Sb	16 00 34.4	+0.2
	baz=350							
TYC	**Yuchr**	**0.72**	**257**	*e*S		Sb	16 00 34.4	-0.1
	baz=256							
NFF	**Wufeng Townshi**	**0.73**	**320**	⇑*e*P		Pn	16 00 25.4	-0.7
	baz=320							
NFF				S		Sb	16 00 35.1	+0.5
	baz=320							
NSTT	**Nanjuang**	**0.80**	**314**	⇓*e*P		Pn	16 00 27.2	+0.1
	baz=314							
NSTT				*e*S		Sn	16 00 38.3	-0.8
	baz=314							
LIOB	**Emei**	**0.80**	**316**	*e*P		Pn	16 00 27.3	+0.2
	baz=315							
LIOB				*i* S		Sb	16 00 37.5	+0.9
	baz=315							
WHYT	**Xinyi Township**	**0.80**	**242**	*e*S		Sn	16 00 38.5	-0.7
	baz=242							
ALS	**Alishan**	**0.94**	**234**	S		Sb	16 00 41.2	+0.4
	baz=233							
ELDTW	**Lidau**	**1.04**	**213**	S		Sn	16 00 44.6	-0.6
	baz=212							

*TAP **07** 16:02:10.6, 24.19N×121.76E, h15km, ML3.1, C*
*JMA **07** 16:02:10.1±0.2, 24.2N±0.3×121.8E±0.3, h1km±1km, TAIWAN REGION*
ISC 07 16:02:10.8±0.8, **24.19N**±0.01×**121.79E**±0.02, **h13**km±5km, **n101**, σ0.67/176, **4C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**338**	⇑*i*P		**Pg**	**16 02 14.2**	**+0.1**
	baz=354							
EHP				*i* S		**Sg**	**16 02 17.1**	**+0.5**
	baz=354							
EAHA	**Aohua**	**0.15**	**341**	⇑*i*P		**Pg**	**16 02 14.4**	**0.0**
	baz=351							
EAHA				*i* S		**Sg**	**16 02 17.5**	**+0.5**
	baz=351							
ETL	**Fush Village**	**0.16**	**259**	⇓*i*P		**Pg**	**16 02 14.5**	**-0.1**
	baz=256							
ETL				S		**Sg**	**16 02 17.2**	**-0.1**
	baz=256							
NACB	**Ninganchiao**	**0.18**	**265**	⇓P		**Pg**	**16 02 14.5**	**-0.4**
	baz=264							
NACB				S		**Sg**	**16 02 17.5**	**-0.3**
	baz=264							
TWD	**Chiawan**	**0.21**	**239**	⇑*i*P		**P

baz=228
ETM S Sg 16 02 22.9 +0.2
baz=228
LXIB Xiulin Townshi 0.39 244 ⇓P Pg 16 02 18.1 -0.5
baz=243
LXIB *e*S Sg 16 02 23.5 -0.3
baz=243
ESAO Su ao 0.39 7 *i* P Pg 16 02 18.7 +0.1
baz=7.0
ESAO *i* S Sg 16 02 24.2 +0.4
baz=7.0
TWC Suao 0.42 7 *i* P Pb 16 02 19.4 -0.7
baz=7.0
TWC S Sb 16 02 25.6 -0.9
baz=7.0
LATG Datong 0.42 325 *i* P Pg 16 02 19.1 -0.1
baz=327
LATG S Sg 16 02 25.2 +0.2
baz=327
NNSB Datong 0.44 303 *i* P Pg 16 02 19.4 -0.3
baz=304
NNSB *e*S Sg 16 02 24.8 -0.8
baz=304
NNSH Datong 0.44 303 ⇓P Pg 16 02 19.3 -0.3
baz=304
NNSH S Sg 16 02 25.3 -0.3
baz=304
NDS Dongshan 0.45 351 *i* P Pb 16 02 19.9 -0.8
baz=353
NDS S Sg 16 02 26.1 +0.4
baz=353
SHUL Shoufeng 0.45 208 P Pb 16 02 20.7 +0.1
baz=197
SHUL *e*S Sb 16 02 28.7 +1.4
baz=197
NNS Nan Shan 0.46 303 *i* P Pg 16 02 19.5 -0.4
baz=305
NNS S Sg 16 02 25.8 -0.3
baz=305
EOS2 EOS2 0.46 60 *e*P Pn 16 02 22.0 -1.0
baz=51
EOS2 *e*S Sg 16 02 26.3 +0.3
baz=51
NDT Datong Townshi 0.48 328 P Pg 16 02 20.4 0.0
baz=330
NDT *e*S Sb 16 02 27.5 -0.8
baz=330
WHF Hehuan Shan 0.48 265 P Pg 16 02 20.0 -0.4
baz=265
WHF *e*S Sg 16 02 26.2 -0.9
baz=265
ENTT Nioudou 0.49 335 *i* P Pg 16 02 20.5 0.0
baz=337
ENTT *i* S Sg 16 02 27.3 +0.1
baz=337
ESL Shilin 0.50 222 P Pg 16 02 20.4 -0.2
baz=225
FUSS Fushou 0.51 277 P Pg 16 02 20.6 -0.2
baz=277
FUSS S Sg 16 02 27.5 -0.1
baz=277
TWE Neicheng 0.54 348 *i* P Pb 16 02 21.6 -0.6
baz=350
TWE *i* S Sg 16 02 29.0 +0.3
baz=350
TWT Tachien 0.57 277 *i* P Pb 16 02 22.1 -0.7
baz=277
TWT S Sg 16 02 29.4 -0.1
baz=277
CHGB Renai 0.58 257 P Pg 16 02 22.1 -0.1
baz=252
CHGB *i* S Sg 16 02 29.9 -0.1
baz=252
TDCB Techi 0.58 276 *e*P Pb 16 02 22.2 -0.8
baz=277
TDCB *i* S Sg 16 02 29.4 -0.6
baz=277
FUSB Fushanzhiwuyua 0.60 342 *i* P Pb 16 02 22.6 -0.6
baz=343
FUSB *e*S Sg 16 02 30.5 0.0
baz=343
WARBT Fenglin Townsh 0.60 219 *i* P Pg 16 02 22.3 -0.2
baz=222
WARBT S Sb 16 02 31.3 -0.3
baz=222
OWD Renai 0.61 248 *e*P Pb 16 02 22.7 -0.7
baz=247
OWD *e*S Sb 16 02 31.4 -0.6
baz=247
YHNB Yeheng 0.61 322 *e*P Pg 16 02 22.7 -0.1
baz=323
YHNB *e*S Sg 16 02 31.0 +0.1
baz=323
EGFH Guangfu 0.62 213 P Pg 16 02 22.8 -0.1
baz=225
EGFH S Sb 16 02 32.1 +0.1
baz=225
NSK Sanguang 0.63 321 P Pg 16 02 22.7 -0.3
baz=322
NSK *i* S Sg 16 02 31.1 -0.3
baz=322
NWLT Wulai 0.64 336 P Pb 16 02 23.4 -0.6
baz=337
NWLT S Sg 16 02 31.8 -0.1
baz=337
WUSB Renai 0.65 253 P Pb 16 02 23.4 -0.7
baz=247
WUSB S Sb 16 02 32.2 -0.9
baz=247
NTC Toucheng 0.66 3 P Pb 16 02 24.3 0.0
baz=4.0
NTC *e*S Sg 16 02 32.6 +0.1
baz=4.0
NFF Wufeng Townshi 0.76 306 P Pb 16 02 25.5 -0.5
baz=306
NFF *e*S Sg 16 02 35.5 0.0
baz=306
HGSD Ruisui 0.77 206 P Pb 16 02 26.5 +0.4
baz=195
WHP Taichung City 0.78 277 *e*P Pn 16 02 26.9 -0.7
baz=277
WHP *e*S Sb 16 02 36.5 -0.3
baz=277
TIPB Shuangxi 0.78 2 P Pb 16 02 26.2 -0.1
baz=355
TIPB S Sb 16 02 36.5 -0.3
baz=355
EHY Hungye 0.81 213 *e*P Pg 16 02 25.1 -1.3
baz=224
NHDH Xindian Distri 0.81 342 *e*S Sb 16 02 38.9 +1.3
baz=343
TWA Mucha 0.81 346 *e*S Sb 16 02 37.9 +0.2
baz=347
WCS Beigang Elemen 0.82 261 *e*P Pb 16 02 26.5 -0.4
baz=253
WCS *e*S Sb 16 02 37.6 -0.2
baz=253
TWB1 Santiao Chiao 0.83 12 *e*S Sg 16 02 37.9 -0.1
baz=12
LIOB Emei 0.84 303 P Pb 16 02 27.3 0.0
baz=303
LIOB *e*S Sb 16 02 38.6 0.0
baz=303
NSTT Nanjuang 0.85 302 *i* P Pb 16 02 27.0 -0.4
baz=302
SSLB Suanglung 0.87 243 P Pb 16 02 27.2 -0.5
baz=251
SSLB *e*S Sb 16 02 38.7 -0.6
baz=251
SMLT Sun Moon Lake 0.87 250 *e*P Pb 16 02 28.2 +0.3
baz=249
SMLT *e*S Sn 16 02 40.8 -0.8
baz=249
NWF Wu-fen Shan 0.88 359 *i* S Sb 16 02 39.8 +0.1
baz=352
WFSB Wu-fen Shan 0.88 359 *i* S Sb 16 02 39.4 -0.2
baz=352
TYC Yuchr 0.90 252 *e*P Pn 16 02 29.2 0.0
baz=252
TYC *e*S Sb 16 02 40.4 +0.1
baz=252
SXI1 Grass Mountain 0.91 5 *e*P Pn 16 02 29.5 +0.2
baz=352
SXI1 *e*S Sb 16 02 40.5 +0.1
baz=352
YULB Yu-li 0.91 210 *e*P Pg 16 02 28.1 -0.4
baz=219
YULB *e*S Sg 16 02 40.1 -0.3
baz=219
EYUL Yuli 0.94 208 *e*P Pn 16 02 29.9 +0.1
baz=221
TWQ1 Liyutan 0.94 280 *e*P Pn 16 02 30.2 +0.4
baz=280
TWF1 Yuli 0.95 209 *e*P Pb 16 02 29.3 +0.2
baz=222
SBCB Hsinchu 0.95 309 *e*P Pn 16 02 30.1 +0.3
baz=310
SBCB *e*S Sn 16 02 43.6 +0.3
baz=310
NCUH Zhongli 0.95 325 *e*S Sn 16 02 44.4 +1.0
baz=324
NSY Sanyi 0.97 284 *e*S Sn 16 02 44.6 +0.8
baz=284
TWS1 Kuangyinshan 0.97 339 *e*P Pn 16 02 30.8 +0.6
baz=340
YM01 YM01 0.97 348 *e*P Pn 16 02 30.4 +0.1
baz=347
YM01 S Sn 16 02 43.9 -0.2
baz=347
NMLH Miaoli 0.98 291 *e*P Pn 16 02 31.1 +0.8
baz=291
NMLH S Sn 16 02 43.5 -0.6
baz=291
WHYT Xinyi Township 0.99 241 *e*P Pb 16 02 29.6 -0.2
baz=247
WHYT *e*S Sn 16 02 44.3 -0.1
baz=247
YM08 YM08 1.01 349 P Pb 16 02 30.5 +0.3
baz=349
YM08 *i* S Sn 16 02 44.8 -0.1
baz=349
NTST Danshui 1.02 342 *e*S Sn 16 02 45.8 +0.8
baz=342
ANP Anpu 1.02 346 P Pb 16 02 30.7 +0.2
baz=346
ANP S Sb 16 02 44.2 +0.3
baz=346
WJS Zhushan 1.04 250 *e*P Pn 16 02 31.5 +0.4
baz=245
WJS *e*S Sn 16 02 46.3 +0.7
baz=245
CHKH Chenggong 1.06 200 *e*P Pg 16 02 30.2 -1.0
baz=191
FULB Fuli 1.09 205 *e*P Pb 16 02 31.4 -0.1
baz=218
ALS Alishan 1.13 233 *e*P Pg 16 02 31.8 -0.8
baz=233
EHD Haiduan 1.17 208 *e*P Pg 16 02 32.5 -0.8
baz=207
EHD *e*S Sn 16 02 49.1 +0.4
baz=207
CHN5 Tsauling 1.18 240 *e*P Pg 16 02 32.1 -1.4
baz=241
CHN5 *e*S Sb 16 02 48.5 +0.2
baz=241
ECS Chishang 1.21 206 *e*P Pb 16 02 33.4 -0.2
baz=206
ELDTW Lidau 1.22 216 *e*P Pb 16 02 33.2 -0.7
baz=204
ELDTW *e*S Sn 16 02 50.4 +0.2
baz=204
WGK Gukeng 1.23 246 *e*S Sn 16 02 52.2 +1.9
baz=247
WDLH Douliu 1.25 247 *e*P Pg 16 02 35.2 +0.3
baz=248
WDLH *e*S Sn 16 02 52.0 +1.3
baz=248
EDH Donghe 1.29 200 *e*P Pn 16 02 32.7 -1.9
baz=188
WCKO Fanlu 1.32 236 *e*P Pg 16 02 37.4 +1.2
baz=236
WCKO *e*S Sn 16 02 55.8 +3.3
baz=236
WRL Guolierlin Hig 1.33 258 *e*P Pg 16 02 35.9 -0.4
baz=259
WRL *e*S Sn 16 02 52.9 +0.3
baz=259
STYH Taoyuan 1.38 223 *e*P Pn 16 02 35.5 -0.2
baz=223
STYH S Sn 16 02 54.1 +0.3
baz=223
WTK Tuku 1.38 249 P Pg 16 02 36.8 -0.5
baz=235
WTK *e*S Sg 16 02 58.5 +3.3
baz=235
CHN4 Tsaushan 1.38 233 ⇓P Pg 16 02 36.7 -0.6
baz=233
CHN4 *e*S Sg 16 02 56.5 +1.3
baz=233
TPUB Ta-pu 1.39 231 *e*P Pb 16 02 36.4 -0.2
baz=231
TPUB *e*S Sg 16 02 56.5 +1.0
baz=231
STYT Tauyuan 1.40 223 *e*P Pn 16 02 35.6 -0.4
baz=223
STYT *e*S Sg 16 02 56.2 +0.5
baz=223
WTP Ta-pu 1.43 229 *e*P Pb 16 02 37.4 0.0
baz=229
TWK Hsinying 1.51 233 *e*P Pb 16 02 38.3 -0.4
baz=233
TWK *e*S Sg 16 02 59.6 +0.2
baz=233
TWG Pinlang 1.51 206 *e*P Pn 16 02 36.8 -0.8
baz=190
TWGBT Beinan 1.51 206 *e*P Pn 16 02 37.4 -0.2
baz=205
TWGBT *e*S Sn 16 02 56.7 -0.5
baz=205
SNST Tainan City 1.53 231 *e*P Pb 16 02 39.2 +0.2
baz=231
CHN1 Nanshi 1.53 230 P Pb 16 02 38.7 -0.4
baz=220
CHN1 *e*S Sg 16 03 01.5 +1.4
baz=220
WSF Szhu 1.54 249 *e*P Pn 16 02 37.8 -0.2
baz=239
WSF *e*S Sg 16 03 00.3 -0.1
baz=239
SGST Jiashian 1.56 225 *e*P Pn 16 02 38.0 -0.4
baz=226
SGST *e*S Sg 16 03 00.5 -0.7
baz=226
SLGT Liugui 1.59 222 *i* P Pb 16 02 39.8 -0.3
baz=222
SLGT *e*S Sg 16 03 02.8 +0.8
baz=222
ICHU Yijhu 1.61 240 P Pb 16 02 40.2 -0.3
baz=241
ICHU S Sg 16 03 02.9 +0.1
baz=241
SCST Cishan 1.76 223 *e*P Pb 16 02 42.4 -0.6
baz=222
SCST S Sg 16 03 07.3 -0.2
baz=222
TSMG Majia 1.81 216 ⇓*e*P Pn 16 02 42.7 +0.9
baz=227
TSMG *e*S Sb 16 03 06.6 0.0
baz=227
JIJ Ishigaki jima 2.15 85 *e*S Sn 16 03 13.0 0.0
JISG Ishigakijimahi 2.33 80 *e*P Pn 16 02 49.3 +0.5
JISG *e*S Sn 16 03 17.8 +0.4

TAP 07 16:08:38.8, 24.05N×121.62E, h10km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.04**	**325**	*i* P	Pg	16 08 41.3	+0.5
TWD				*i* S	Sg	16 08 42.8	+0.7
HWA	**Hwalien**	**0.07**	**191**	*i* P	Pg	16 08 41.7	+0.7
HWA				*i* S	Sg	16 08 44.0	+1.3
ETL	**Fush Village**	**0.11**	**1**	*i* P	Pg	16 08 42.3	+0.7
ETL				*i* S	Sg	16 08 44.4	+0.7
NACB	**Ninganchiao**	**0.13**	**350**	P	Pg	16 08 42.5	+0.7
NACB				S	Sg	16 08 44.9	+0.9
ETM	**Tongmen**	**0.14**	**235**	P	Pg	16 08 42.8	+0.7
ETM				*i* S	Sg	16 08 45.2	+0.9

baz=262
LXIB Xiulin Townshi 0.19 262 P Pb 16 08 43.9 -0.6
baz=262
LXIB *i* S Sg 16 08 47.2 +1.4
baz=262
ETLH Xiulin Townshi 0.20 321 *i* P Pb 16 08 44.2 -0.5
baz=321
ETLH *i* S Sg 16 08 47.9 +1.8
baz=321
SHUL Shoufeng 0.27 191 *e*P Pg 16 08 44.0 -0.2
baz=191
SHUL *e*S Sb 16 08 50.8 +0.6
baz=191
ESL Shilin 0.29 216 P Pg 16 08 45.2 +0.6
baz=214
ESL *e*S Sg 16 08 49.6 +1.0
baz=214
WHF Hehuan Shan 0.34 287 P Pg 16 08 46.2 +0.5
baz=286
WHF S Sb 16 08 52.4 -0.5
baz=286
WARBT Fenglin Townsh 0.39 213 *e*P Pg 16 08 47.1 +0.6
baz=213
WARBT *e*S Sb 16 08 53.4 -0.6
baz=213
ENA Nanau 0.39 16 *e*P Pb 16 08 47.7 -0.2
baz=17
CHGB Renai 0.41 272 *e*P Pb 16 08 48.4 +0.2
baz=271
CHGB *e*S Sb 16 08 54.6 0.0
baz=271
OWD Renai 0.42 257 *e*P Pb 16 08 47.9 -0.5
baz=257
OWD *e*S Sb 16 08 54.6 -0.2
baz=257
NNSB Datong 0.44 330 *e*P Pb 16 08 48.8 +0.1
baz=330
NNSB S Sb 16 08 55.2 -0.2
baz=330
NNS Nan Shan 0.45 330 *e*P Pg 16 08 48.3 +0.6
baz=330
NNS *e*S Sb 16 08 56.1 +0.3
baz=330
WUSB Renai 0.46 263 *e*P Pb 16 08 49.0 -0.2
baz=263
WUSB *e*S Sb 16 08 56.3 +0.2
baz=263
LATG Datong 0.49 350 *e*P Pb 16 08 49.6 -0.1
baz=350
NDT Datong Townshi 0.56 350 *e*P Pb 16 08 50.6 -0.1
baz=349
NDT *e*S Sb 16 08 58.9 +0.1
baz=349
HGSD Ruisui 0.58 198 *e*P Pb 16 08 51.3 +0.2
baz=197
NDS Dongshan 0.59 9 *e*P Pg 16 08 50.6 +0.4
baz=8.0
ENTT Nioudou 0.59 355 *e*P Pb 16 08 51.3 0.0
baz=355

NEIC ***07*** *16:12:54.8±0.8, 36.03N±0.01×97.90W±0.01, h5km±1km, Error ellipse: s-maj=1.8km s-min=1.5km az=211.0*

TUL 07 16:12:55±0.9, 36.04N±0.01×97.90W±0.01, h4km±5km, ML3.2, mb_Lg3.1/102(NEIC), **ML3.4**/66(NEIC), **Error ellipse: s-maj=1.6km s-min=1.5km az=218.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.43**	**124**		Pg	16 13 03.5	+0.1
OK029				Sg	Sg	16 13 09.7	+0.7
OK029				IAML		16 13 10.3	
	4μm,0.4s						
CROK	**Carrier**	**0.47**	**352**		Pg	16 13 04.3	+0.3
CROK				Sg	Sg	16 13 11.0	+0.8
CROK				IAML		16 13 11.4	
	comp=E,2μm,0.3s						
CROK				IAML		16 13 16.7	
	comp=N,2μm,0.3s						
ADOK	**Arcadia Dam**	**0.58**	**132**		Pg	16 13 05.4	-0.7
ADOK				Sg	Sg	16 13 14.4	+0.9
OKCSW	**OKLAHOMA CITY**	**0.74**	**149**		Pg	16 13 08.9	-0.2
OKCSW				IAmb_Lg		16 13 19.2	
	comp=Z,238nm,1.1s						
OKCSW				Sg	Sg	16 13 19.4	+0.7
OKCSW				IAML		16 13 22.2	
	comp=N,2μm,0.5s						
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	Pg	16 13 09.7	+0.2
CSTR				Sg	Sg	16 13 20.2	+1.0
OK033	**Mehan**	**0.78**	**89**		Pg	16 13 09.9	0.0
OK032	**Salt Plains WL**	**0.80**	**342**		Pg	16 13 10.3	-0.1
OK032				IAML		16 13 29.2	
	comp=N,1μm,0.2s						
OK032				IAML		16 13 30.7	
	comp=N,1μm,0.2s						
GC02	**Grant County #**	**0.81**	**2**		Pg	16 13 10.5	0.0
GC02				Sg	Sg	16 13 21.0	0.0
OK038	**West end E0370**	**0.81**	**303**		Pg	16 13 10.4	-0.1
OK038				Sg	Sg	16 13 21.8	+0.7
OK048	**Pawnee Station**	**0.86**	**64**		Pg	16 13 11.3	-0.1
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	16 13 11.7	-0.2
FNO				Sg	Sg	16 13 23.7	+0.4
OK052	**Battle Ridge R**	**0.89**	**93**		Pg	16 13 12.0	-0.1
OK052				Sg	Sg	16 13 23.8	+0.2
OK052				IAML		16 13 26.4	
	comp=N,977nm,0.2s						
OK052				IAML		16 13 30.0	
	comp=N,802nm,0.2s						
BLOK	**Blackwell**	**0.91**	**37**		Pg	16 13 12.3	-0.1
BLOK				IAML		16 13 31.8	
	comp=E,2μm,0.2s						
BLOK				IAML		16 13 33.8	
	comp=N,2μm,0.2s						
KAN14	**Manchester OK**	**0.92**	**357**		Pg	16 13 12.3	-0.3
KAN14				Sg	Sg	16 13 24.5	0.0
KAN14				IAML		16 13 29.7	
	comp=E,1μm,0.4s						
KAN14				IAML		16 13 29.7	
	comp=N,2μm,0.5s						
OK035	**E0210 Rd and N**	**0.93**	**316**		Pg	16 13 12.7	-0.2
OK035				Sg	Sg	16 13 25.4	+0.3
OK035				IAML		16 13 30.5	
	comp=N,1μm,0.3s						
U32A	**Winter Ranch,**	**0.95**	**291**	Pg	Pg	16 13 13.0	-0.3
U32A				Sg	Sg	16 13 26.0	+0.3
U32A				IAML		16 13 31.6	
	comp=E,1μm,0.2s						
QUOK	**Quay**	**0.97**	**82**		Pg	16 13 13.5	-0.2
QUOK				Sg	Sg	16 13 26.3	0.0
QUOK				IAML		16 13 31.5	
	comp=E,852nm,0.2s						
QUOK				IAML		16 13 36.1	
	comp=N,735nm,0.3s						
OK051	**E0350 and S346**	**0.98**	**61**		Pg	16 13 13.5	-0.2
OK051				Sg	Sg	16 13 26.2	-0.2
OK051				IAML		16 13 32.4	
	comp=N,1μm,0.2s						
OK051				IAML		16 13 33.1	
	comp=N,1μm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**	Pg	Pg	16 13 14.0	-0.3
KAN17				Sg	Sg	16 13 27.4	0.0
KAN17				IAML		16 13 28.6	
	comp=N,1μm,0.2s						
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	16 13 14.5	-0.2
KAN05	**Bluff City Nor**	**1.07**	**1**		Pg	16 13 15.1	-0.4
KAN05				IAML		16 13 31.3	
	comp=N,887nm,0.2s						
KAN05				IAML		16 13 32.0	
	comp=E,1μm,0.2s						
KAN10	**Anthony SW Sta**	**1.09**	**352**		Pg	16 13 15.5	-0.5
KAN10				IAML		16 13 35.8	
	comp=N,558nm,0.2s						
KAN10				IAML		16 13 37.5	
	comp=E,550nm,0.1s						
KAN01	**Argonia South**	**1.12**	**6**		Pg	16 13 15.8	-0.6
KAN01				IAML		16 13 31.6	
	comp=E,1μm,0.2s						
KAN01				IAML		16 13 32.9	
	comp=N,708nm,0.1s						
KAN09	**Caldwell North**	**1.12**	**12**		Pg	16 13 15.9	-0.5
DEOK	**Depew**	**1.15**	**99**		Pg	16 13 16.3	-0.8
DEOK				IAML		16 13 35.1	
	comp=N,780nm,0.6s						
DEOK				IAML		16 13 37.0	
	comp=E,717nm,0.1s						
KAN08	**Anthony NE Sta**	**1.19**	**357**		Pg	16 13 17.2	-0.5
KAN06	**Argonia West S**	**1.21**	**2**		Pg	16 13 17.5	-0.7

KAN06					IAML			16 13 34.2	
	comp=N,546nm,0.4s								
KAN06					IAML			16 13 34.4	
	comp=E,785nm,0.2s								
W35A	**Tecumseh**	**1.22**	**136**			Pg		16 13 17.4	-0.9
W35A					IAML			16 13 38.5	
	comp=N,827nm,0.3s								
ELIS	**Ellis County**	**1.23**	**272**		Pg		Pg	16 13 17.8	-0.8
KAN12	**Harper NE Stat**	**1.26**	**356**				Pg	16 13 18.4	-0.7
KAN12					IAML			16 13 49.6	
	comp=E,1µm,0.3s								
KS21	**Milan North St**	**1.26**	**9**			Pg		16 13 18.4	-0.7
KS21	**Milan North St**	**1.26**	**9**		IAML			16 13 38.2	
	comp=E,762nm,0.1s								
T35A	**Sooner Cattle**	**1.42**	**52**		Pg		Pn	16 13 21.3	-0.4
X34A	**Smith Ranch, M**	**1.44**	**178**				Pn	16 13 21.8	-0.1
WMOK	**Wichita Mounta**	**1.49**	**209**				Pn	16 13 21.8	-0.8
WMOK					IAmb_Lg			16 13 43.8	
	comp=Z,101nm,0.8s								
TUL3	**Leonard**	**1.71**	**94**				Pn	16 13 25.4	-0.2
LOOK	**Love County**	**2.13**	**164**		Pn		Pn	16 13 31.9	+0.5
SMWD	**Samnorwood**	**2.13**	**245**		Pn		Pn	16 13 32.0	+0.6
SMWD					IAmb_Lg			16 14 01.5	
	comp=Z,86nm,0.9s								
WTFS	**Witchita Falls**	**2.32**	**192**		Pn		Pn	16 13 34.4	+0.4
RLO	**Rose Lookout**	**2.33**	**86**		Pn		Pn	16 13 34.7	+0.5
R32A	**Long Quarter,**	**2.46**	**345**		Pn		Pn	16 13 36.3	+0.2
CBKS	**Cedar Bluff**	**3.13**	**333**		Pn		Pn	16 13 45.8	+0.6
HHAR	**Hobbs**	**3.21**	**85**		Pn		Pn	16 13 46.2	-0.1
PLPT	**Palo Pinto**	**3.24**	**186**		Pn		Pn	16 13 47.0	+0.4
AMTX	**Amarillo**	**3.30**	**251**		IAmb_Lg			16 14 41.8	
	comp=Z,50nm,0.8s								
DKNS	**Dickens**	**3.44**	**227**		Pn		Pn	16 13 48.5	-1.0
DKNS					IAmb_Lg			16 14 53.8	
	comp=Z,44nm,0.7s								
Z38A	**Mt. Pleasant**	**3.67**	**138**		Pn		Pn	16 13 51.8	-0.8
Z38A					IAmb_Lg			16 14 55.0	
	comp=Z,63nm,0.9s								
ABTX	**Abilene, Hawle**	**3.70**	**203**		IAmb_Lg			16 14 59.0	
	comp=Z,43nm,0.8s								
MIAR	**Mount Ida**	**3.84**	**112**		Pn		Pn	16 13 55.3	+0.4
MIAR					IAmb_Lg			16 15 06.1	
	comp=Z,51nm,0.8s								
RTBA	**Rita Blanca**	**3.93**	**277**		Pn		Pn	16 13 56.6	+0.3
RTBA					IAmb_Lg			16 15 04.8	
	comp=Z,41nm,0.7s								
S39A	**Bolivar**	**4.02**	**64**		Pn		Pn	16 13 57.3	-0.1
S39A					IAmb_Lg			16 15 08.2	
	comp=Z,39nm,0.7s								
WHTX	**Lake Whitney,**	**4.05**	**175**		Pn		Pn	16 13 57.1	-0.8
POST	**Post**	**4.20**	**226**		Pn		Pn	16 13 59.5	-0.5
POST					IAmb_Lg			16 15 16.9	
	comp=Z,54nm,0.8s								
237A	**Washetta, Mont**	**4.39**	**156**		Pn		Pn	16 14 01.2	-1.2
X40A	**Basin Creek Fa**	**4.42**	**109**		Pn		Pn	16 14 03.2	+0.3
X40A					IAmb_Lg			16 15 25.9	
	comp=Z,52nm,0.8s								
MSTX	**Muleshoe**	**4.50**	**244**		Pn		Pn	16 14 04.6	+0.5
WLAR	**White Oak Lake**	**4.58**	**119**		IAmb_Lg			16 15 30.2	
	comp=Z,37nm,0.7s								
WHAR	**Wooly Hollow**	**4.63**	**98**		Pn		Pn	16 14 05.8	0.0
WHAR					IAmb_Lg			16 15 29.5	
	comp=Z,39nm,0.8s								
MGMO	**Mountain Grove**	**4.66**	**75**		Pn		Pn	16 14 06.7	+0.4
FCAR	**Ozark Folk Cen**	**4.69**	**90**		Pn		Pn	16 14 05.2	-1.3
FCAR					IAmb_Lg			16 15 20.6	
	comp=Z,29nm,0.8s								
UALR	**University of**	**4.71**	**104**		IAmb_Lg			16 15 32.3	
	comp=Z,49nm,0.9s								
BRDY	**Brady**	**4.83**	**191**		IAmb_Lg			16 15 37.5	
	comp=Z,33nm,0.8s								
SGCY	**Sterling City**	**4.91**	**214**		IAmb_Lg			16 15 43.8	
	comp=Z,48nm,0.7s								
P38A	**Dawn**	**4.97**	**43**		IAmb_Lg			16 15 38.7	
	comp=Z,43nm,0.7s								
R40A	**Maddies Statio**	**5.03**	**62**		Pn		Pn	16 14 10.8	-0.4
R40A					IAmb_Lg			16 15 43.1	
	comp=Z,27nm,0.7s								
Z41A	**Richland Creek**	**5.03**	**122**		IAmb_Lg			16 15 42.5	
	comp=Z,46nm,0.9s								
435B	**Jarrell**	**5.25**	**177**		IAmb_Lg			16 15 43.7	
	comp=Z,46nm,0.9s								
T25A	**Trinidad**	**5.35**	**284**		IAmb_Lg			16 15 58.6	
	comp=Z,49nm,0.7s								
BGNE	**Belgrade**	**5.36**	**358**		IAmb_Lg			16 15 51.3	
	comp=Z,34nm,0.7s								
CCM	**Cathedral Cave**	**5.69**	**67**		Pn		Pn	16 14 20.9	+0.6
CCM					IAmb_Lg			16 16 08.8	
	comp=Z,24nm,0.9s								
OZNA	**Ozona**	**5.77**	**209**		IAmb_Lg			16 16 02.6	
	comp=Z,40nm,0.7s								
OGNE	**Ogallala**	**5.87**	**328**		Pn		Pn	16 14 23.6	+0.6
OGNE					IAmb_Lg			16 16 15.4	
	comp=Z,32nm,0.8s								
MNHN	**Monahans**	**6.20**	**222**		IAmb_Lg			16 16 13.0	
	comp=Z,20nm,0.8s								
143A	**Socs Landing,**	**6.32**	**120**		IAmb_Lg			16 16 25.1	
	comp=Z,26nm,0.8s								
SDCO	**Great Sand Dun**	**6.33**	**288**		Pn		Pn	16 14 30.1	+0.7
Q24A	**Divide**	**6.46**	**299**		IAmb_Lg			16 16 28.3	
	comp=Z,31nm,0.9s								
HNDO	**Hondo**	**6.60**	**191**		IAmb_Lg			16 16 29.6	
	comp=Z,38nm,0.8s								
SLM	**Saint Louis**	**6.63**	**65**		IAmb_Lg			16 16 26.2	
	comp=Z,24nm,0.7s								
K30B	**Basset**	**6.76**	**349**		IAmb_Lg			16 16 33.7	
	comp=Z,35nm,1.0s								
BRIGG	**Briggsdale**	**6.78**	**314**		IAmb_Lg			16 16 44.1	
	comp=Z,22nm,0.7s								
PECS	**Pecos**	**6.81**	**229**		Pn		Pn	16 14 35.1	-0.8
PECS					IAmb_Lg			16 16 31.2	
	comp=Z,22nm,0.9s								
DRIO	**Del Rio**	**6.99**	**200**		IAmb_Lg			16 16 41.8	
	comp=Z,28nm,1.0s								
SAND	**Sanderson**	**7.03**	**211**		Pn		Pn	16 14 38.9	+0.1
SAND					IAmb_Lg			16 16 42.1	
	comp=Z,33nm,0.8s								
S44A	**Carbondale**	**7.12**	**74**		IAmb_Lg			16 16 49.2	
	comp=Z,26nm,0.9s								
SIUC	**Southern Illin**	**7.16**	**74**		IAmb_Lg			16 16 37.7	
	comp=Z,31nm,0.9s								
ISCO	**Idaho Springs**	**7.16**	**304**		IAmb_Lg			16 16 46.9	
	comp=Z,20nm,0.8s								
Y45A	**Yeager Farm, C**	**7.20**	**105**		IAmb_Lg			16 16 53.4	
	comp=Z,20nm,0.7s								
ALPN	**Alpine**	**7.42**	**222**		Pn		Pn	16 14 43.8	-0.4
ALPN					IAmb_Lg			16 16 52.3	
	comp=Z,24nm,1.0s								
ECSD	**EROS Data Cent**	**7.75**	**7**		Pn		Pn	16 14 47.9	-0.7
PHWY	**Pilot Hill**	**7.91**	**314**		IAmb_Lg			16 17 19.9	
	comp=Z,19nm,0.8s								
VHRN	**Van Horn**	**7.91**	**231**		Pn		Pn	16 14 50.7	-0.3
L40A	**Anamosa**	**7.94**	**39**		Pn		Pn	16 14 50.4	-0.9
L40A					IAmb_Lg			16 17 25.9	
	comp=Z,28nm,0.8s								
OLIL	**Olney**	**8.25**	**68**		IAmb_Lg			16 17 30.3	
	comp=Z,17nm,0.9s								
TXAR	**Lajitas Array**	**8.27**	**218**		Pn		Pn	16 14 54.8	-1.1
O44A	**Mansfield**	**8.49**	**58**		IAmb_Lg			16 17 30.8	
	comp=Z,24nm,0.9s								
Z47A	**Carrollton**	**8.58**	**106**		IAmb_Lg			16 17 50.2	
	comp=Z,23nm,1.2s								
RSSD	**Black Hills**	**9.34**	**332**		Pn		Pn	16 15 10.6	0.0
M44A	**Midewin, Midew**	**9.37**	**52**		IAmb_Lg			16 18 07.1	
	comp=Z,18nm,0.8s								
SPMN	**Marine on St.**	**9.96**	**21**		IAmb_Lg			16 18 11.0	
	comp=Z,12nm,0.8s								

*TAP **07** 16:17:05.1,24.°07N×121.°74E,h5km,ML2.9,D*
*JMA **07** 16:17:05.6±0.3,24.°1N±0.°7×12.°2E±.°,h0km,TAIWAN REGION*
ISC 07 16:17:06.3±0.9,**24.°07N**±0.°02×**121.°73E**±0.°03,**h9**km±6km, **n79**,σ0**95**/109,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
TWD	**Chiawan**	**0.13**	**274**	*i* P	**Pg**	**16 17 08.5**		**-0.7**
	baz=284							
TWD				S	**Sg**	**16 17 11.2**		**+0.1**
	baz=284							
ETL	**Fush Village**	**0.13**	**311**	*i* P	**Pg**	**16 17 08.9**		**-0.5**
	baz=309							
ETL				*e*S	**Sg**	**16 17 11.8**		**+0.3**
	baz=309							
HWA	**Hwalien**	**0.15**	**231**	P	**Pg**	**16 17 09.5**		**-0.1**
	baz=249							
HWA				S	**Sg**	**16 17 14.3**		**+2.5**
	baz=249							
NACB	**Ninganchiao**	**0.16**	**309**	*i* P	**Pg**	**16 17 09.3**		**-0.5**
	baz=306							
NACB				*e*S	**Sg**	**16 17 12.4**		**+0.2**
	baz=306							
EHP	**Heping Village**	**0.24**	**2**	*e*P	**Pg**	**16 17 10.7**		**-0.5**
	baz=351							
ETM	**Tongmen**	**0.24**	**245**	*i* P	**Pg**	**16 17 10.7**		**-0.5**
	baz=250							
EAHA	**Aohua**	**0.26**	**1**	*i* P	**Pg**	**16 17 10.9**		**-0.6**
	baz=346							
EAHA				S	**Sg**	**16 17 15.8**		**+0.8**
	baz=346							
ETLH	**Xiulin Townshi**	**0.27**	**301**	P	**Pg**	**16 17 11.2**		**-0.5**
	baz=303							
ETLH				*i* S	**Sg**	**16 17 15.9**		**+0.5**
	baz=303							
LXIB	**Xiulin Townshi**	**0.30**	**260**	*e*P	**Pg**	**16 17 11.8**		**-0.5**
	baz=263							
SHUL	**Shoufeng**	**0.32**	**209**	P	**Pb**	**16 17 13.7**		**-0.6**
	baz=222							
SHUL				*e*S	**Sb**	**16 17 20.3**		**+0.7**
	baz=222							
ENA	**Nanau**	**0.36**	**1**	*i* P	**Pg**	**16 17 12.4**		**-0.9**
	baz=357							
ENA				*e*S	**Sg**	**16 17 18.4**		**+0.3**
	baz=357							
ESL	**Shilin**	**0.38**	**227**	P	**Pg**	**16 17 13.3**		**-0.4**
	baz=243							
ESL				*e*S	**Sb**	**16 17 19.6**		**-1.5**
	baz=243							
EWUT	**Wuta**	**0.38**	**6**	*e*P	**Pg**	**16 17 13.3**		**-0.5**
	baz=351							
TEGC	**Jichi Village**	**0.40**	**206**	*e*S	**Sb**	**16 17 24.1**		**+2.2**
	baz=207							
WHF	**Hehuan Shan**	**0.43**	**280**	*e*P	**Pg**	**16 17 14.3**		**-0.6**
	baz=281							
WHF				*i* S	**Sg**	**16 17 21.1**		**+0.4**
	baz=281							
WARBT	**Fenglin Townsh**	**0.47**	**222**	P	**Pg**	**16 17 15.0**		**-0.6**
	baz=238							
WARBT				*e*S	**Sb**	**16 17 22.6**		**-1.4**
	baz=238							
NNSB	**Datong**	**0.48**	**318**	*e*P	**Pg**	**16 17 15.6**		**-0.1**
	baz=313							
NNSB				*i* S	**Sb**	**16 17 22.9**		**-1.4**
	baz=313							
FUSS	**Fushou**	**0.48**	**292**	*e*P	**Pb**	**16 17 15.6**		**-1.5**
	baz=290							
NNS	**Nan Shan**	**0.49**	**318**	P	**Pg**	**16 17 15.7**		**-0.2**
	baz=314							
NNS				S	**Sb**	**16 17 23.3**		**-1.4**
	baz=314							
LATG	**Datong**	**0.50**	**338**	*e*P	**Pg**	**16 17 15.8**		**-0.3**
	baz=330							
CHGB	**Renai**	**0.51**	**269**	*e*P	**Pb**	**16 17 16.2**		**-1.5**
	baz=271							
ESAO	**Su ao**	**0.51**	**11**	*e*P	**Pb**	**16 17 16.6**		**-1.0**
	baz=354							
OWD	**Renai**	**0.52**	**257**	P	**Pb**	**16 17 16.2**		**-1.6**
	baz=261							
TWT	**Tachien**	**0.54**	**290**	*e*P	**Pb**	**16 17 17.6**		**-0.5**
	baz=288							
TWC	**Suao**	**0.55**	**11**	*e*P	**Pb**	**16 17 17.3**		**-0.9**
	baz=354							
TWC				S	**Sb**	**16 17 26.1**		**0.0**
	baz=354							
TDCB	**Techi**	**0.56**	**289**	*e*P	**Pb**	**16 17 17.8**		**-0.6**
	baz=288							
NDS	**Dongshan**	**0.56**	**358**	P	**Pb**	**16 17 17.6**		**-0.8**
	baz=351							
NDS				*e*S	**Sb**	**16 17 26.3**		**-0.2**
	baz=351							
NDT	**Datong Townshi**	**0.57**	**339**	*i* P	**Pg**	**16 17 17.2**		**-0.1**
	baz=335							
NDT				*i* S	**Sb**	**16 17 25.9**		**-0.8**
	baz=335							
WUSB	**Renai**	**0.57**	**262**	P	**Pb**	**16 17 17.3**		**-1.3**
	baz=263							
ENTT	**Nioudou**	**0.59**	**345**	*i* P	**Pg**	**16 17 17.5**		**-0.2**
	baz=341							
ENTT				S	**Sb**	**16 17 27.3**		**0.0**
	baz=341							
HGSD	**Ruisui**	**0.64**	**206**	P	**Pb**	**16 17 19.6**		**-0.2**
	baz=195							
TWE	**Neicheng**	**0.65**	**355**	P	**Pb**	**16 17 18.9**		**-1.0**
	baz=352							
TWE				S	**Sb**	**16 17 28.8**		**-0.3**
	baz=352							
EHY	**Hungye**	**0.68**	**214**	P	**Pg**	**16 17 18.7**		**-0.7**
	baz=217							
YHNB	**Yeheng**	**0.68**	**331**	*i* P	**Pb**	**16 17 19.7**		**-0.7**
	baz=327							
YHNB				*e*S	**Sb**	**16 17 30.4**		**+0.4**
	baz=327							
NSK	**Sanguang**	**0.69**	**330**	*e*P	**Pb**	**16 17 19.9**		**-0.8**
	baz=327							
NSK				*e*S	**Sb**	**16 17 30.5**		**+0.1**
	baz=327							
FUSB	**Fushanzhiwuyua**	**0.70**	**349**	*e*P	**Pb**	**16 17 20.1**		**-0.7**
	baz=334							
FUSB				*i* S	**Sb**	**16 17 30.8**		**+0.2**
	baz=334							
NWLT	**Wulai**	**0.73**	**343**	P	**Pb**	**16 17 20.5**		**-0.8**
	baz=339							
NWLT				S	**Sb**	**16 17 30.7**		**-0.8**
	baz=339							
WHP	**Taichung City**	**0.75**	**286**	*e*P	**Pb**	**16 17 21.3**		**-0.3**
	baz=278							
WCS	**Beigang Elemen**	**0.75**	**269**	P	**Pb**	**16 17 20.8**		**-0.8**
	baz=270							
SSLB	**Suanglung**	**0.77**	**249**	P	**Pb**	**16 17 20.8**		**-1.1**
	baz=252							
SMLT	**Sun Moon Lake**	**0.79**	**256**	P	**Pb**	**16 17 21.5**		**-0.8**
	baz=266							
YULB	**Yu-li**	**0.79**	**211**	*e*P	**Pg**	**16 17 20.7**		**-0.7**
	baz=232							
NFF	**Wufeng Townshi**	**0.79**	**315**	*e*P	**Pb**	**16 17 22.0**		**-0.4**
	baz=311							
TYC	**Yuchr**	**0.82**	**258**	P	**Pb**	**16 17 22.0**		**-0.8**
	baz=261							
TWF1	**Yuli**	**0.82**	**209**	P	**Pb**	**16 17 21.7**		**-1.1**
	baz=228							
LIOB	**Emei**	**0.87**	**311**	*e*P	**Pn**	**16 17 24.0**		**-0.8**
	baz=307							
NSTT	**Nanjuang**	**0.87**	**310**	*e*P	**Pb**	**16 17 23.9**		**+0.2**
	baz=306							
WHYT	**Xinyi Township**	**0.89**	**245**	P	**Pn**	**16 17 24.0**		**-1.1**
	baz=258							
TIPB	**Shuangxi**	**0.90**	**5**	*e*P	**Pb**	**16 17 24.2**		**0.0**
	baz=348							
TWQ1	**Liyutan**	**0.92**	**288**	P	**Pn**	**16 17 25.8**		**+0.3**
	baz=287							
WJS	**Zhushan**	**0.95**	**255**	P	**Pn**	**16 17 25.6**		**-0.3**
	baz=259							
FULB	**Fuli**	**0.96**	**205**	P	**Pb**	**16 17 24.8**		**-0.4**
	baz=227							
NMLH	**Miaoli**	**0.98**	**299**	*e*P	**Pn**	**16 17 27.1**		**+0.8**
	baz=296							
WNT	**Mingjian**	**0.98**	**259**	P	**Pn**	**16 17 26.1**		**-0.2**
	baz=262							
ALS	**Alishan**	**1.02**	**237**	P	**Pb**	**16 17 26.0**		**-0.3**
	baz=252							
CHKT	**Chengkung**	**1.02**	**199**	*e*S	**Sn**	**16 17 41.2**		**-0.2**
	baz=199							
SXI1	**Grass Mountain**	**1.03**	**7**	*e*P	**Pn**	**16 17 27.1**		**0.0**
	baz=331							
EHD	**Haiduan**	**1.04**	**208**	*e*P	**Pg**	**16 17 24.9**		**-1.4**
	baz=228							
TWS1	**Kuangyinshan**	**1.06**	**344**	*e*P	**Pn**	**16 17 27.4**		**-0.1**
	baz=335							
TNOU	**National Taiwa**	**1.07**	**2**	*e*P	**Pn**	**16 17 28.5**		**+0.9**
	baz=337							
YM01	**YM01**	**1.08**	**352**	*e*P	**Pn**	**16 17 27.9**		**+0.2**
	baz=346							
YM01				S	**Sn**	**16 17 43.5**		**+0.5**
	baz=346							
ELDTW	**Lidau**	**1.10**	**217**	*e*P	**Pg**	**16 17 25.4**		**-2.0**
	baz=224							
NTST	**Danshui**	**1.12**	**347**	*e*S	**Sn**	**16 17 45.8**		**+2.0**
	baz=338							
YM08	**YM08**	**1.12**	**353**	*e*P	**Pn**	**16 17 28.6**		**+0.3**
	baz=337							
ANP	**Anpu**	**1.13**	**350**	*e*P	**Pn**	**16 17 28.9**		**+0.4**
	baz=337							
JYNG	**Yonagunijimaku**	**1.17**	**71**	*e*P	**Pn**	**16 17 29.0**		**+0.1**
JYNG				S	**Sn**	**16 17 44.9**		**-0.1**
WCKO	**Fanlu**	**1.21**	**239**	*e*P	**Pn**	**16 17 29.3**		**-0.2**
	baz=247							
WRL	**Guolierlin Hig**	**1.25**	**263**	*e*P	**Pn**	**16 17 29.6**		**-0.5**
	baz=257							
STYH	**Taoyuan**	**1.25**	**225**	*e*P	**Pg**	**16 17 29.0**		**-1.4**
	baz=220							
TPUB	**Ta-pu**	**1.27**	**233**	P	**Pn**	**16 17 30.2**		**-0.1**
	baz=244							
TPUB				*e*S	**Sn**	**16 17 48.7**		**+1.2**
	baz=244							
WTK	**Tuku**	**1.29**	**253**	*e*P	**Pn**	**16 17 31.7**		**+1.2**
	baz=261							
WTK				*e*S	**Sn**	**16 17 51.2**		**+3.3**
	baz=261							
WTP	**Ta-pu**	**1.31**	**232**	P	**Pn**	**16 17 32.1**		**+1.2**
	baz=240							
TWK	**Hsinying**	**1.39**	**235**	P	**Pb**	**16 17 32.4**		**-0.3**
	baz=247							
TWK				*e*S	**Sn**	**16 17 52.6**		**+2.0**
	baz=247							
CHN1	**Nanshi**	**1.41**	**232**	*e*P	**Pg**	**16 17 32.8**		**-0.7**
	baz=245							
CHN1				*e*S	**Sn**	**16 17 54.1**		**+3.0**
	baz=245							
SNST	**Tainan City**	**1.42**	**233**	*e*P	**Pg**	**16 17 32.8**		**-0.7**
	baz=243							
SGST	**Jiashian**	**1.44**	**227**	*e*P	**Pn**	**16 17 32.3**		**-0.4**
	baz=220							
SLGT	**Liugui**	**1.47**	**223**	*e*P	**Pb**	**16 17 32.8**		**-1.0**
	baz=217							
VWUC	**VWUC**	**2.27**	**294**	*e*P	**Pn**	**16 17 44.0**		**-0.1**
	baz=293							
VWUC				*e*S	**Sn**	**16 18 13.0**		**+0.7**
	baz=293							
PTMZ	**Houxiangcun**	**2.57**	**293**	*e*P	**Pn**	**16 17 48.0**		**-0.1**
	baz=292							
PTMZ				S	**Sn**	**16 18 19.4**		**-0.1**
	baz=292							

*IDC **07** 16:17:40.2±1.2,18.°05N×96.°20E,h0km,mb3.7/5, mbtmp3.6/6,ML3.1/1,MS2.7/1,Error ellipse: s-maj=19.8km s-min=14.3km az=46.0*
ISC 07 16:17:42.0±1.6,**18.°1N**±0.°2×**96.°2E**±0.°1,**h10**km,**n6**,σ0**28**/7, **mb3.6**/5,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
CMAR	**Chiang Mai Arr**	**2.58**	**83**	Pn	**Pn**	**16 18 23.6**		**-0.4**
	0.8nm,0.3s,baz=263,slow=15,SNR=44							
CMAR				Pg	**Pb**	**16 18 28.8**		**+0.2**
	17nm,0.3s,baz=262,slow=18,SNR=128							
CMAR				Lg	Lg	16 19 03.6		
	91nm,0.3s,baz=261,slow=32,SNR=24							
CMAR				LR	LR	16 19 48.5		
	comp=Z,151nm,19.4s,baz=355,slow=49 7.2nm,0.8s							
MKAR	**Makanchi Array**	**30.81**	**341**	P	**P**	**16 23 58.0**		**0.0**
	0.6nm,0.6s,baz=153,slow=9.2,SNR=7.3 0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**35.36**	**340**	P	**P**	**16 24 37.5**		**-0.2**
	1.1nm,0.5s,baz=149,slow=8.8,SNR=12 1.1nm,0.5s							
ZALV	**Zalesovo Beam**	**36.82**	**349**	P	**P**	**16 24 50.4**		**+0.3**
	0.4nm,0.4s,baz=168,slow=10,SNR=2.5 0.4nm,0.4s							
WRA	**Warramunga Arr**	**53.19**	**134**	P	**P**	**16 27 00.8**		**0.0**
	0.5nm,0.9s,baz=317,slow=7.2,SNR=2.2 0.5nm,0.9s							
ASAR	**Alice Springs**	**55.48**	**137**	P	**P**	**16 27 17.5**		**+0.1**
	0.5nm,0.7s,baz=318,slow=7.4,SNR=4.1 0.5nm,0.7s							

*JMA **07** 16:18:40.7±0.2,24.°1N±0.°5×121.°7E±0.°6,h0km,TAIWAN REGION*
*TAP **07** 16:18:41.0,24.°14N×121.°70E,h9km,ML3.2,C*
ISC 07 16:18:41.3±0.8,**24.°13N**±0.°01×**121.°72E**±0.°02,**h8**km±5km, **n99**,σ0**73**/168,**17C-15D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
ETL	**Fush Village**	**0.09**	**286**	⇓*i*P	**Pg**	**16 18 43.7**		**+0.1**
	baz=286							
ETL				*i* S	**Sg**	**16 18 45.2**		**0.0**
	baz=286							
NACB	**Ninganchiao**	**0.12**	**290**	⇓*i*P	**Pg**	**16 18 44.0**		**0.0**
	baz=290							
NACB				S	**Sg**	**16 18 45.8**		**0.0**
	baz=290							
TWD	**Chiawan**	**0.12**	**244**	⇓*i*P	**Pg**	**16 18 43.9**		**-0.1**
	baz=240							
TWD				S	**Sg**	**16 18 46.0**		**0.0**
	baz=240							
EHP	**Heping Village**	**0.18**	**7**	P	**Pg**	**16 18 45.2**		**+0.2**
	baz=12							
EHP				S	**Sg**	**16 18 47.7**		**+0.2**
	baz=12							
HWA	**Hwalien**	**0.19**	**213**	P	**Pg**	**16 18 45.8**		**+0.7**
	baz=221							
HWA				*e*S	**Sg**	**16 18 48.9**		**+1.1**
	baz=221							
EAHA	**Aohua**	**0.20**	**6**	P	**Pg**	**16 18 45.4**		**+0.1**
	baz=7.0							
EAHA				S	**Sg**	**16 18 48.2**		**+0.1**
	baz=7.0							
ETLH	**Xiulin Townshi**	**0.23**	**289**	⇓P	**Pg**	**16 18 46.0**		**+0.1**
	baz=289							
ETLH				S	**Sg**	**16 18 49.1**		**+0.1**
	baz=289							
ETM	**Tongmen**	**0.26**	**231**	⇓*i*P	**Pg**	**16 18 46.4**		**-0.2**
	baz=223							
ETM				S	**Sg**	**16 18 49.8**		**-0.3**
	baz=223							
ENA	**Nanau**	**0.29**	**4**	⇑*i*P	**Pg**	**16 18 47.2**		**0.0**
	baz=6.0							
ENA				S	**Sg**	**16 18 51.4**		**+0.3**
	baz=6.0							
LXIB	**Xiulin Townshi**	**0.30**	**248**	⇓*i*P	**Pg**	**16 18 47.1**		**-0.2**
	baz=248							
LXIB				S	**Sg**	**16 18 51.3**		**0.0**
	baz=248							
EWUT	**Wuta**	**0.32**	**10**	⇑P	**Pg**	**16 18 47.6**		**+0.1**
	baz=11							
EWUT				S	**Sg**	**16 18 51.8**		**0.0**

		baz=253						
NDT	**Datong Townshi**	**0.50**	**338**	⇑*i*	P	**Pb**	**16 18 51.5**	**-0.9**
	baz=338							
NDT					S	**Sg**	**16 18 58.0**	**+0.3**
	baz=338							
TWT	**Tachien**	**0.51**	**284**		P	**Pb**	**16 18 52.0**	**-0.7**
	baz=283							
TWT					S	**Sb**	**16 18 58.7**	**-1.5**
	baz=283							
WARBT	**Fenglin Townsh**	**0.51**	**216**	⇓*i*	P	**Pg**	**16 18 50.8**	**-0.5**
	baz=226							
ENTT	**Nioudou**	**0.52**	**345**	⇑*i*	P	**Pg**	**16 18 51.8**	**+0.3**
	baz=345							
ENTT					S	**Sg**	**16 18 58.6**	**+0.3**
	baz=345							
TDCB	**Techi**	**0.52**	**283**	*e*	P	**Pb**	**16 18 51.9**	**-0.9**
	baz=283							
TDCB					S	**Sg**	**16 18 58.7**	**+0.3**
	baz=283							
OWD	**Renai**	**0.53**	**250**	*e*	P	**Pg**	**16 18 51.4**	**-0.1**
	baz=250							
OWD					*e*S	**Sg**	**16 18 58.3**	**-0.2**
	baz=250							
EGFH	**Guangfu**	**0.53**	**210**	*e*	P	**Pb**	**16 18 51.8**	**-1.2**
	baz=222							
EOS2	**EOS2**	**0.55**	**59**	*e*	P	**Pb**	**16 18 54.0**	**+0.9**
	baz=41							
WUSB	**Renai**	**0.56**	**256**	⇓*i*	P	**Pb**	**16 18 52.5**	**-1.1**
	baz=248							
WUSB					S	**Sg**	**16 18 59.4**	**-0.3**
	baz=248							
TWE	**Neicheng**	**0.59**	**356**	⇑	P	**Pg**	**16 18 53.0**	**+0.3**
	baz=357							
TWE					*e*S	**Sg**	**16 19 01.1**	**+0.7**
	baz=357							
YHNB	**Yeheng**	**0.62**	**330**	⇑*i*	P	**Pb**	**16 18 53.8**	**-0.7**
	baz=329							
YHNB					S	**Sg**	**16 19 00.5**	**-0.8**
	baz=329							
ILA	**Ilan**	**0.63**	**3**	*e*	P	**Pb**	**16 18 54.3**	**-0.3**
	baz=3.0							
ILA					S	**Sg**	**16 19 02.5**	**+0.8**
	baz=3.0							
NSK	**Sanguang**	**0.63**	**329**	⇑	P	**Pb**	**16 18 53.9**	**-0.8**
	baz=329							
NSK					S	**Sg**	**16 19 01.6**	**-0.2**
	baz=329							
FUSB	**Fushanzhiwuyua**	**0.63**	**349**	⇑*i*	P	**Pb**	**16 18 54.0**	**-0.7**
	baz=349							
FUSB					S	**Sg**	**16 19 02.4**	**+0.5**
	baz=349							
NWLT	**Wulai**	**0.67**	**343**	⇑	P	**Pb**	**16 18 54.7**	**-0.6**
	baz=349							
NWLT					S	**Sg**	**16 19 03.0**	**0.0**
	baz=349							
HGSD	**Ruisui**	**0.69**	**203**	*e*	P	**Pb**	**16 18 55.5**	**-0.1**
	baz=221							
WHP	**Taichung City**	**0.72**	**282**	*i*	P	**Pb**	**16 18 56.0**	**-0.2**
	baz=282							
WHP					S	**Sb**	**16 19 05.2**	**-1.0**
	baz=282							
EHY	**Hungye**	**0.72**	**210**	*e*	P	**Pg**	**16 18 54.9**	**-0.3**
	baz=212							
NFF	**Wufeng Townshi**	**0.74**	**312**	⇓*i*	P	**Pb**	**16 18 56.2**	**-0.2**
	baz=312							
NFF					S	**Sg**	**16 19 05.6**	**+0.4**
	baz=312							
WCS	**Beigang Elemen**	**0.74**	**264**	⇓	P	**Pb**	**16 18 55.9**	**-0.5**
	baz=265							
SSLB	**Suanglung**	**0.78**	**244**	⇓*i*	P	**Pb**	**16 18 56.1**	**-1.0**
	baz=254							
SSLB					S	**Sg**	**16 19 06.4**	**0.0**
	baz=254							
SMLT	**Sun Moon Lake**	**0.79**	**252**	⇑*i*	P	**Pb**	**16 18 56.8**	**-0.6**
	baz=252							
SMLT					S	**Sb**	**16 19 07.1**	**-1.1**
	baz=252							
LIOB	**Emei**	**0.82**	**309**	⇑	P	**Pb**	**16 18 57.9**	**+0.1**
	baz=309							
LIOB					S	**Sb**	**16 19 08.6**	**-0.4**
	baz=309							
NSTT	**Nanjuang**	**0.82**	**307**	⇑*i*	P	**Pb**	**16 18 57.6**	**-0.2**
	baz=307							
NSTT					S	**Sb**	**16 19 08.4**	**-0.6**
	baz=307							
TYC	**Yuchr**	**0.82**	**254**	*e*	P	**Pb**	**16 18 57.0**	**-0.8**
	baz=245							
TYC					S	**Sg**	**16 19 07.2**	**-0.6**
	baz=245							
YULB	**Yu-li**	**0.83**	**208**	*e*	P	**Pg**	**16 18 56.6**	**-0.7**
	baz=221							
YULB					*e*S	**Sb**	**16 19 09.5**	**+0.1**
	baz=221							
TIPB	**Shuangxi**	**0.84**	**7**	⇑*i*	P	**Pb**	**16 18 57.8**	**-0.4**
	baz=356							
TIPB					S	**Sg**	**16 19 08.2**	**-0.3**
	baz=356							
NHDH	**Xindian Distri**	**0.84**	**348**	*e*	P	**Pb**	**16 18 58.0**	**-0.3**
	baz=338							
NHDH					S	**Sg**	**16 19 07.8**	**-0.7**
	baz=338							
TWA	**Mucha**	**0.85**	**352**		P	**Pb**	**16 18 59.0**	**+0.6**
	baz=351							
TWA					S	**Sg**	**16 19 09.0**	**+0.2**
	baz=351							
EYUL	**Yuli**	**0.86**	**205**	*e*	P	**Pn**	**16 18 59.0**	**-0.8**
	baz=221							
TWF1	**Yuli**	**0.87**	**206**	*e*	P	**Pb**	**16 18 58.4**	**-0.2**
	baz=222							
TWQ1	**Liyutan**	**0.89**	**284**	*e*	P	**Pn**	**16 18 59.6**	**-0.6**
	baz=285							
WHYT	**Xinyi Township**	**0.90**	**241**	*e*	P	**Pb**	**16 18 59.1**	**-0.1**
	baz=244							
TWB1	**Santiao Chiao**	**0.91**	**16**		P	**Pb**	**16 18 59.2**	**-0.1**
	baz=6.0							
TWB1					S	**Sg**	**16 19 10.3**	**-0.2**
	baz=6.0							
NSY	**Sanyi**	**0.92**	**288**	*e*	P	**Pn**	**16 19 01.5**	**+1.0**
	baz=288							
NMLH	**Miaoli**	**0.93**	**296**	*e*	P	**Pn**	**16 19 00.8**	**0.0**
	baz=295							
NMLH					*e*S	**Sb**	**16 19 13.0**	**+0.7**
	baz=295							
NWF	**Wu-fen Shan**	**0.94**	**4**		P	**Pb**	**16 18 59.9**	**0.0**
	baz=354							
NWF					S	**Sg**	**16 19 11.3**	**-0.2**
	baz=354							
WFSB	**Wu-fen Shan**	**0.94**	**4**		P	**Pb**	**16 18 59.9**	**+0.1**
	baz=354							
WFSB					S	**Sg**	**16 19 11.2**	**-0.3**
	baz=354							
WJS	**Zhushan**	**0.96**	**251**	*e*	P	**Pn**	**16 19 00.7**	**-0.4**
	baz=252							
WJS					*e*S	**Sb**	**16 19 12.6**	**-0.4**
	baz=252							
NCUH	**Zhongli**	**0.96**	**330**		P	**Pn**	**16 19 01.0**	**-0.1**
	baz=329							
NCUH					S	**Sn**	**16 19 16.6**	**+1.6**
	baz=329							
SXI1	**Grass Mountain**	**0.97**	**9**	⇑*i*	P	**Pb**	**16 19 00.3**	**-0.1**
	baz=354							
SXI1					S	**Sg**	**16 19 12.3**	**-0.3**
	baz=354							
WNT	**Mingjian**	**0.98**	**255**	*e*	P	**Pn**	**16 19 01.5**	**+0.2**
	baz=251							
WNT					*e*S	**Sn**	**16 19 15.1**	**-0.3**
	baz=251							
CHKH	**Chenggong**	**0.98**	**197**	*e*	P	**Pg**	**16 18 59.8**	**-0.4**
	baz=191							
CHKH					S	**Sn**	**16 19 15.1**	**-0.4**
	baz=191							
TWS1	**Kuangyinshan**	**1.00**	**344**	*e*	P	**Pn**	**16 19 01.6**	**0.0**
	baz=343							
TWS1					*e*S	**Sb**	**16 19 15.2**	**+0.9**
	baz=343							
WDJ	**Dajia District**	**1.00**	**282**	*e*	P	**Pn**	**16 19 02.8**	**+1.1**
	baz=283							
FULB	**Fuli**	**1.01**	**203**	*e*	P	**Pb**	**16 19 00.9**	**-0.1**
	baz=223							
YM01	**YM01**	**1.02**	**353**		P	**Pn**	**16 19 01.6**	**-0.3**
	baz=336							
YM01					*e*S	**Sg**	**16 19 14.0**	**-0.2**
	baz=336							
ALS	**Alishan**	**1.04**	**234**	*e*	P	**Pb**	**16 19 01.4**	**-0.4**
	baz=237							
NTST	**Danshui**	**1.05**	**347**	*e*	P	**Pn**	**16 19 02.5**	**+0.1**
	baz=354							
NTST					*e*S	**Sn**	**16 19 17.5**	**+0.2**
	baz=354							
YM08	**YM08**	**1.05**	**354**	*e*	P	**Pb**	**16 19 02.1**	**+0.2**
	baz=336							
ANP	**Anpu**	**1.06**	**350**	*e*	P	**Pb**	**16 19 02.4**	**+0.3**
	baz=347							
EHD	**Haiduan**	**1.09**	**206**	*e*	P	**Pb**	**16 19 02.0**	**-0.4**
	baz=219							
EHD					*e*S	**Sn**	**16 19 18.6**	**+0.5**
	baz=219							
ELDTW	**Lidau**	**1.14**	**214**	*e*	P	**Pg**	**16 19 02.0**	**-1.2**
	baz=220							
WGK	**Gukeng**	**1.15**	**247**	*e*	P	**Pn**	**16 19 04.2**	**+0.6**
	baz=250							
JYNG	**Yonagunijimaku**	**1.17**	**74**	*e*	P	**Pb**	**16 19 03.8**	**+0.1**
WDLH	**Douliu**	**1.17**	**248**	*e*	P	**Pn**	**16 19 04.3**	**+0.4**
	baz=249							
WDLH					*e*S	**Sn**	**16 19 21.1**	**+1.1**
	baz=249							
WCKO	**Fanlu**	**1.23**	**236**	*e*	P	**Pn**	**16 19 05.8**	**+0.9**
	baz=238							
WCKO					*e*S	**Sn**	**16 19 25.2**	**+3.5**
	baz=238							
WRL	**Guolierlin Hig**	**1.25**	**260**	*e*	P	**Pn**	**16 19 05.7**	**+0.7**
	baz=261							
WRL					*e*S	**Sn**	**16 19 22.6**	**+0.6**
	baz=261							
STYH	**Taoyuan**	**1.29**	**222**	*e*	P	**Pb**	**16 19 05.4**	**-0.4**
	baz=228							
WTK	**Tuku**	**1.29**	**250**	*e*	P	**Pb**	**16 19 06.4**	**+0.5**
	baz=252							
WTK					*e*S	**Sn**	**16 19 24.2**	**+1.0**
	baz=252							
TPUB	**Ta-pu**	**1.30**	**230**	*e*	P	**Pb**	**16 19 06.1**	**+0.1**
	baz=221							
TPUB					*e*S	**Sn**	**16 19 22.9**	**-0.4**
	baz=221							
LONT	**Longtian**	**1.33**	**204**	*e*	P	**Pn**	**16 19 04.2**	**-2.0**
	baz=221							
WTP	**Ta-pu**	**1.34**	**229**	*e*	P	**Pb**	**16 19 07.1**	**+0.3**
	baz=234							
TWK	**Hsinying**	**1.42**	**233**	*e*	P	**Pg**	**16 19 08.2**	**-0.3**
	baz=237							
SNST	**Tainan City**	**1.44**	**231**	*e*	P	**Pg**	**16 19 09.3**	**+0.3**
	baz=236							
CHN1	**Nanshi**	**1.44**	**229**	*e*	P	**Pg**	**16 19 09.1**	**+0.1**
	baz=235							
WSF	**Szhu**	**1.45**	**250**	*e*	P	**Pg**	**16 19 08.8**	**-0.4**
	baz=252							
WSF					*e*S	**Sg**	**16 19 30.6**	**+2.5**
	baz=252							
SGST	**Jiashian**	**1.48**	**225**	*e*	P	**Pn**	**16 19 08.3**	**+0.1**
	baz=228							
SGST					*e*S	**Sg**	**16 19 30.5**	**+1.7**
	baz=228							
WSL	**Shuilin Townsh**	**1.49**	**246**	*e*	P	**Pg**	**16 19 10.2**	**+0.2**
	baz=250							
SLGT	**Liugui**	**1.50**	**221**	*e*	P	**Pb**	**16 19 08.9**	**-0.6**
	baz=226							
SLGT					*e*S	**Sg**	**16 19 31.9**	**+2.3**
	baz=226							
ICHU	**Yijhu**	**1.52**	**240**	*e*	P	**Pg**	**16 19 10.5**	**-0.1**
	baz=243							
ICHU					*e*S	**Sg**	**16 19 32.1**	**+1.7**
	baz=243							
SCST	**Cishan**	**1.67**	**222**	*e*	P	**Pg**	**16 19 12.5**	**-0.9**
	baz=229							
JIJ	**Ishigaki jima**	**2.23**	**84**		P	**Pn**	**16 19 18.0**	**-0.5**
JIJ					*e*S	**Sn**	**16 19 45.4**	**-0.8**
VWUC	**VWUC**	**2.23**	**293**	*e*	P	**Pn**	**16 19 18.2**	**-0.4**
	baz=293							
JISG	**Ishigakijimahi**	**2.41**	**79**		P	**Pn**	**16 19 20.7**	**-0.3**
JISG					*e*S	**Sn**	**16 19 51.6**	**+0.9**
PTMZ	**Houxiangcun**	**2.53**	**291**	*e*	P	**Pn**	**16 19 22.5**	**-0.1**
	baz=290							
PTMZ					*e*S	**Sn**	**16 19 51.9**	**-1.8**
	baz=290							
MATB	**Ma-tsu**	**2.57**	**322**	*e*	P	**Pn**	**16 19 23.7**	**+0.5**
	baz=319							

*IDC **07** 16:22:54.6±2.0, 13.°43N×120.°51E, h58km±21km, mb3.9/10, mbtmp4.2/10, MS3.6/2, Error ellipse: s-maj=36.6km s-min=14.4km az=65.0*

ISC 07 16:22:55.5±1.0, 13.°5N±0.°1×120.°6E±0.°2, h70km, n13, g0 s63/12, mb4.2/10, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.69**	**27**	LR	LR	16 23 05.2	
	comp=Z,281nm,21.6s,baz=278,slow=14						
TGY				P	**Pn**	**16 23 09.3**	**-1.1**
	2µm,0.3s,baz=210,slow=14,SNR=22						
TGY				S	**Sn**	**16 23 22.6**	**+1.2**
	2µm,0.3s,baz=2.8,slow=21,SNR=5.5						
DAV	**Davao City (W)**	**8.03**	**142**	LR	LR	16 28 32.8	
	comp=Z,511nm,19.9s,baz=337,slow=42						
CMAR	**Chiang Mai Arr**	**21.40**	**286**	P	**P**	**16 27 37.2**	**-0.5**
	5.1nm,1.1s,baz=97,slow=8.8,SNR=18 5.1nm,1.1s						
KSRS	**Korea Array**	**24.75**	**14**	LR	LR	16 39 13.3	
	comp=Z,92nm,18.4s,baz=45,slow=40						
WRA	**Warramunga Arr**	**35.86**	**158**	P	**P**	**16 29 48.8**	**-0.1**
	9.4nm,0.7s,baz=336,slow=9.5,SNR=37 9.4nm,0.7s						
SONM	**Songino Array**	**36.24**	**344**	P	**P**	**16 29 52.0**	**+0.1**
	2.7nm,0.9s,baz=159,slow=9.3,SNR=13 2.7nm,0.9s						
ASAR	**Alice Springs**	**39.14**	**160**	P	**P**	**16 30 17.0**	**+0.4**
	6.6nm,0.7s,baz=340,slow=6.9,SNR=107 6.6nm,0.7s						
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**16 31 13.5**	**+0.3**
	0.8nm,0.8s,baz=109,slow=8.7,SNR=6.9 0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**49.21**	**333**	P	**P**	**16 31 36.5**	**-0.2**
	0.3nm,0.3s,baz=116,slow=5.8,SNR=4.1 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**50.32**	**326**	P	**P**	**16 31 45.4**	**+0.3**
	3.0nm,1.1s,baz=121,slow=8.1,SNR=10 3.0nm,1.1s						
BVAR	**Borovoye Array**	**55.90**	**326**	P	**P**	**16 32 26.2**	**+0.1**
	3.7nm,1.1s,baz=126,slow=9.7,SNR=10 3.7nm,1.1s						
GEYT	**Alibeck**	**60.19**	**306**	P	**P**	**16 32 56.9**	**+0.5**
	4.3nm,1.0s,baz=212,slow=5.3,SNR=6.3 4.3nm,1.0s						
ARCES	**ARCESS Array B**	**79.25**	**339**	P	**P**	**16 34 52.8**	**-0.1**
	3.1nm,0.9s,baz=76,slow=7.5,SNR=1.6 3.1nm,0.9s						

*KOLA **07** 16:25:20.0, 67.°61N×34.°11E, h0km, ML2.0, Error ellipse: s-maj=13.2km s-min=4.6km az=150.0, Khibiny Massif*

HEL 07 16:25:21.7±0.1, 67.°56N×33.°71E, h0km, ML1.6, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.12**	**276**	P	Pg	16 25 24.1	+0.2
APA				S	Sg	16 25 27.8	+2.4
APA0	**Apatity Array**	**0.28**	**281**	P	Pg	16 25 26.4	-0.6
APA0				S	Sg	16 25 32.3	+1.7
APA0	**Apatity Array**	**0.28**	**281**	P	Pb	16 25 28.4	-1.1
APA0				S	Sg	16 25 32.4	+1.8
LVZ	**Lovozero**	**0.50**	**46**	P	Pg	16 25 26.0	-5.2
LVZ				S	Sg	16 25 30.8	-6.8
LVZ	**Lovozero**	**0.50**	**46**	PG	Pg	16 25 30.8	-0.5
	baz=225						
VRF	**Varrio**	**1.58**	**279**	PG	Pn	16 25 50.0	-0.9
VRF				MSG		16 26 08.9	
	comp=Z,5.8nm,0.2s						
VRF				SN	Sn	16 26 11.9	-0.1
TERR	**Teriberka**	**1.73**	**17**	P	Pn	16 25 48.5	-4.5
TERR				S	Sn	16 26 09.8	-6.0
OLKF	**Oulanka, Finla**	**2.10**	**236**	PG	Pb	16 25 59.7	-0.9
OLKF				MSG		16 26 23.9	
	comp=Z,2.8nm,0.2s						
KU6	**Riekki**	**2.16**	**226**	PG	Pn	16 26 00.1	+1.2
	baz=45						
KU6				MSG		16 26 25.7	
	comp=Z,2.1nm,0.2s						
RAJF	**Raja-Jooseppi**	**2.23**	**297**	PG	Pn	16 26 01.1	+1.2
RAJF				SG	Sb	16 26 29.6	-1.3
MSF	**Maaselka**	**2.48**	**230**	SN	Sn	16 26 32.0	-2.2
SGF	**Sodankyl**	**2.76**	**271**	PG	Pb	16 26 11.2	-0.7
SGF				SN	Sn	16 26 38.7	-2.5
KMNF	**Kaamanen**	**2.96**	**306**	PB	Pn	16 26 12.5	+2.7
KMNF				SB	Sb	16 26 51.4	-0.4
VADS	**Vadso**	**3.02**	**331**	P	Pn	16 26 09.3	-1.4
VADS	**Vadso**	**3.02**	**331**	P	Pn	16 26 12.1	+1.4
RANF	**Ranua**	**3.15**	**244**	PG	Pb	16 26 17.0	-1.4
	baz=60						
RNF	**Rovaniemi**	**3.16**	**256**	PN	Pn	16 26 12.3	-0.3
	baz=72						
KEV	**Kevo**	**3.30**	**315**	PN	Pn	16 26 13.6	-0.9
KEV				SN	Sn	16 26 53.6	-0.7
ARA0	**ARCESS Array S**	**3.61**	**307**	PG	Pb	16 26 26.2	-0.1
	baz=120						
ARA0				SN	Sn	16 27 00.6	-1.4
ARCES	**ARCESS Array B**	**3.61**	**307**	P	Pn	16 26 16.1	-2.6
ARCES				S	Sn	16 26 59.0	-3.0
ARCES	**ARCESS Array B**	**3.61**	**307**	P	Pn	16 26 17.2	-1.5
ARCES				S	Sn	16 27 00.1	-1.9
RMF	**Romuvaara**	**3.69**	**207**	PN	Pn	16 26 19.3	-0.7
KLF	**Kolari**	**3.78**	**270**	PG	Pb	16 26 30.0	+0.9
HEF	**Hetta**	**3.88**	**287**	SN	Sn	16 27 09.4	+0.8
PAJU	**Pajala**	**4.14**	**267**	PG	Pb	16 26 36.4	+1.0
	baz=77						
KTK1	**Kautokeino**	**4.16**	**295**	PG	Pb	16 26 35.5	-0.1
KTK1				SG	Sb	16 27 29.7	+3.4
JOF	**Joensuu**	**4.77**	**193**	PB	Pn	16 26 39.7	+5.1
JOF				SN	Sn	16 27 27.9	-2.6
FAUS	**Fauske**	**7.07**	**277**	S	Sn	16 28 24.7	-2.6

TAP 07 16:34:53.7, 24.°12N×121.°65E, h8km, ML1.9, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.05**	**327**	⇓*i*	P	**Pg**	16 34 56.2	+0.6
	baz=326							
TWD	**Chiawan**	**0.06**	**237**		P	**Pg**	16 34 56.0	+0.4
	baz=233							
NACB	**Ninganchiao**	**0.08**	**317**	⇓*i*	P	**Pg**	16 34 56.5	+0.7
	baz=317							
HWA	**Hwalien**	**0.14**	**198**	*e*	P	**Pg**	16 34 57.7	+0.9
	baz=195							
ETLH	**Xiulin Townshi**	**0.18**	**300**		P	**Pg**	16 34 58.4	+0.9
	baz=300							
ETLH					*e*S	**Sg**	16 35 01.5	+1.3
	baz=300							
ETM	**Tongmen**	**0.21**	**225**	*e*	P	**Pg**	16 34 58.3	+0.3
	baz=224							
ETM					*e*S	**Sg**	16 35 01.2	+0.4
	baz=224							
EAHA	**Aohua**	**0.23**	**20**	*e*	P	**Pg**	16 34 58.9	+0.5
	baz=19							
EAHA					*e*S	**Sg**	16 35 02.2	+0.8
	baz=19							
LXIB	**Xiulin Townshi**	**0.24**	**247**	*e*	P	**Pg**	16 34 59.0	+0.4
	baz=247							
LXIB					*e*S	**Sg**	16 35 02.6	+0.8
	baz=247							
ENA	**Nanau**	**0.32**	**14**	*i*	P	**Pg**	16 35 00.7	+0.6
	baz=15							
SHUL	**Shoufeng**	**0.34**	**194**	*e*	P	**Pb**	16 35 01.5	-0.4
	baz=194							
EWUT	**Wuta**	**0.35**	**19**	*e*	P	**Pg**	16 35 01.1	+0.6
	baz=18							
WHF	**Hehuan Shan**	**0.36**	**275**		P	**Pg**	16 35 01.7	+0.8
	baz=274							
WHF					S	**Sb**	16 35 07.2	-1.2
	baz=274							
ESL	**Shilin**	**0.36**	**214**	*e*	P	**Pg**	16 35 01.2	+0.4
	baz=212							
ESL					*e*S	**Sg**	16 35 06.8	+1.2
	baz=212							
FUSS	**Fushou**	**0.40**	**289**	*e*	P	**Pb**	16 35 02.8	-0.4
	baz=289							
NNSB	**Datong**	**0.40**	**322**		P	**Pb**	16 35 02.7	-0.4
	baz=321							
NNSB					S	**Sb**	16 35 08.6	-0.7
	baz=321							
NNSH	**Datong**	**0.40**	**322**	*e*	P	**Pb**	16 35 02.3	-0.7
	baz=321							
NNS	**Nan Shan**	**0.41**	**322**	*e*	P	**Pb**	16 35 02.9	-0.4
	baz=322							
NNS					S	**Sb**	16 35 09.2	-0.6
	baz=322							
LATG	**Datong**	**0.43**	**344**		P	**Pb**	16 35 03.0	-0.7
	baz=344							
LATG					*e*S	**Sb**	16 35 10.5	+0.1
	baz=344							
CHGB	**Renai**	**0.44**	**263**	*i*	P	**Pb**	16 35 03.4	-0.4
	baz=262							
CHGB					S	**Sb**	16 35 09.7	-1.1
	baz=262							
OWD	**Renai**	**0.47**	**250**	*e*	P	**Pb**	16 35 04.4	+0.2
	baz=249							
WARBT	**Fenglin Townsh**	**0.47**	**212**	*e*	P	**Pg**	16 35 02.8	0.0
	baz=211							
WARBT					*e*S	**Sb**	16 35 11.4	+0.2
	baz=211							
TDCB	**Techi**	**0.47**	**287**		P	**Pb**	16 35 04.1	-0.2
	baz=286							
TDCB					*i* S	**Sb**	16 35 11.5	0.0
	baz=286							
NDT	**Datong Townshi**	**0.50**	**345**	*i*	P	**Pb**	16 35 04.7	-0.1
	baz=345							
NDT					*i* S	**Sb**	16 35 12.3	+0.1
	baz=345							
WUSB	**Renai**	**0.51**	**256**	*i*	P	**Pb**	16 35 04.6	-0.3
	baz=256							
WUSB					*e*S	**Sb**	16 35 12.1	-0.4
	baz=256							
NDS	**Dongshan**	**0.52**	**6**		P	**Pg**	16 35 04.4	+0.6
	baz=6.0							
NDS					S	**Sb**	16 35 12.9	+0.2
	baz=6.0							
TWC	**Suao**	**0.52**	**20**	*i*	P	**Pb**	16 35 05.0	-0.1
	baz=20							
TWC					*e*S	**Sb**	16 35 13.0	+0.1
	baz=20							
ENTT	**Nioudou**	**0.53**	**351**	*i*	P	**Pb**	16 35 04.8	-0.4
	baz=351							
ENTT					S	**Sb**	16 35 13.3	+0.2
	baz=351							
YHNB	**Yeheng**	**0.61**	**335**	⇓	P	**Pb**	16 35 06.8	+0.2
	baz=335							
YHNB					S	**Sb**	16 35 15.6	+0.2
	baz=335							
NSK	**Sanguang**	**0.62**	**334**		P	**Pb**	16 35 07.0	+0.2
	baz=334							
NSK					*e*S	**Sb**	16 35 16.0	+0.2
	baz=334							
FUSB	**Fushanzhiwuyua**	**0.65**	**355**	*e*	P	**Pb**	16 35 07.6	+0.3
	baz=354							
FUSB					S	**Sb**	16 35 17.8	+1.4
	baz=354							
HGSD	**Ruisui**	**0.66**	**199**		P	**Pb**	16 35 07.1	-0.3
	baz=198							
WHP	**Taichung City**	**0.67**	**284**		P	**Pb**	16 35 08.1	+0.4
	baz=284							
WHP					S	**Sb**	16 35 18.3	+1.3
	baz=284							
DPDB	**Guoxing**	**0.67**	**263**	*e*	P	**Pn**	16 35 08.7	-0.8
	baz=263							
DPDB					*e*S	**Sb**	16 35 17.4	+0.2
	baz=263							
NWLT	**Wulai**	**0.67**	**348**	*i*	P	**Pb**	16 35 07.6	-0.1
	baz=348							
NWLT					S	**Sb**	16 35 17.6	+0.3
	baz=348							
EHY	**Hungye**	**0.68**	**207**	*e*	P	**Pg**	16 35 07.2	+0.4
	baz=206							
EHY					*i* S	**Sb**	16 35 18.0	+0.7
	baz=206							
NFF	**Wufeng Townshi**	**0.71**	**317**

WHYT	**Xinyi Township** baz=240	**0.84**	**241**	P	**Pn**	16 35 11.5	-0.4
WHYT	baz=240			S	Sn	16 35 23.5	-1.0
TIPB	**Shuangxi** baz=10.0	**0.87**	**10**	*i* P	**Pb**	16 35 11.1	+0.1
NHY	**Taipei** baz=355	**0.92**	**355**	*i* P	**Pb**	16 35 12.0	+0.1
ALS	**Alishan** baz=231	**0.98**	**232**	*e*P	Pg	16 35 12.4	-0.2
ALS	baz=231			*e*S	Sn	16 35 27.6	-0.7
SXI1	**Grass Mountain** baz=11	**1.00**	**12**	*e*P	Pn	16 35 15.0	+1.0
SXI1	baz=11			*e*S	Sn	16 35 29.4	+1.1
EHD	**Haiduan** baz=203	**1.05**	**203**	*i* P	Pb	16 35 14.3	+0.2
EHD	baz=203			*e*S	Sn	16 35 30.4	+1.0

*NEIC **07** 16:38:01.6±1.6, 18°.18N±0°.08×96°.15E±0°.09, h10km±2km, mb4.1/7, Error ellipse: s-maj=16.1km s-min=11.2km az=232.0*
*IDC **07** 16:38:02.7±1.1, 18°.22N×96°.26E, h0km, mb3.9/9, mbtmp3.8/10, ML3.9/1, MS3.5/2, Error ellipse: s-maj=26.9km s-min=13.2km az=23.0*
*NDI **07** 16:38:06.5±1.6, 18°.21N×96°.04E, h10km, ML3.6, MW3.4, mb4.1(NEIC)*

ISC 07 16:38:03.1±0.7, 18°.27N±0°.05×96°.13E±0°.05, h10km, n37, σ2s49/47, mb4.0/14, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**2.67**	**85**		**Pn**	**16 38 44.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**2.67**	**85**		**Pn**	**16 38 43.9**	**-2.4**
CMAR	**Chiang Mai Arr**	**2.67**	**85**	Pn	**Pn**	**16 38 45.5**	**-0.8**
	6.9nm,0.3s,baz=263,slow=15,SNR=32						
CMAR				Pg	**Pb**	**16 38 50.4**	**-0.7**
	28nm,0.3s,baz=264,slow=18,SNR=82						
CMAR				Lg	Lg	16 39 24.4	
	55nm,0.3s,baz=264,slow=32,SNR=14						
CMAR				LR	LR	16 39 59.4	
	comp=Z,242nm,21.7s,baz=255,slow=46 5.0nm,0.6s						
CHTO	**Chiang Mai**	**2.72**	**78**	Pn	**Pn**	**16 38 45.3**	**-1.7**
MND	**Mandalay**	**3.73**	**360**	Pn	**Pn**	**16 38 58.5**	**-2.3**
CRAI	**Chiangrai**	**4.46**	**63**	Pn	**Pn**	**16 39 09.3**	**-1.5**
SAIH	**SAIHA**	**5.13**	**325**	*e*P	**Pn**	**16 39 22.1**	**+1.9**
SAIH				*e*S	**Sn**	**16 40 19.3**	**-0.4**
SAIH				*e*S	**Sn**	**16 40 24.8**	**+5.1**
SAIH				IAML		16 40 33.7	
	comp=E,59nm,0.8s						
SAIH				IAML		16 40 35.6	
	comp=N,63nm,1.3s						
DGPR	**DIGLIPUR**	**5.92**	**212**	*e*P	**Pn**	**16 39 33.1**	**+2.2**
DGPR				*e*S	**Sn**	**16 40 36.0**	**-3.0**
BELO	**BELONIA**	**6.62**	**319**	*e*P	**Pn**	**16 39 44.0**	**+3.5**
IMP	**Imphal**	**6.84**	**343**	*e*P	**Pn**	**16 39 46.8**	**+3.1**
IMP				*e*S	**Sn**	**16 41 01.0**	**-0.7**
IMP				IAML		16 41 01.1	
	comp=N,386nm,0.1s						
IMP				IAML		16 41 01.8	
	comp=E,304nm,0.1s						
TNCH	**TengChong**	**7.09**	**18**	Pn	**Pn**	**16 39 49.8**	**+2.7**
TNCH				Pg	**Pg**	**16 40 19.2**	**+0.3**
TNCH				Sn	**Sn**	**16 41 12.9**	**+5.1**
TNCH				Sg	**Sg**	**16 41 45.1**	**-5.6**
TNCH				smax	smax		
	comp=N,270nm,1.3s						
TNCH				smax	smax		
	comp=E,240nm,1.4s						
TNCH				LR	LR		
	comp=N,410nm,1.8s						
TNCH				LR	LR		
	comp=E,820nm,2.6s						
TNCH				LR	LR		
	comp=Z,470nm,9.3s						
KOHI	**KOHIMA**	**7.65**	**346**	*e*P	**Pn**	**16 39 58.2**	**+3.4**
KOHI				*e*S	**Sn**	**16 41 19.9**	**-1.8**
KOHI				*e*S	**Sn**	**16 41 20.1**	**-1.7**
KOHI				IAML		16 41 33.0	
	comp=N,14nm,0.7s						
KOHI				IAML		16 41 34.6	
	comp=E,15nm,0.9s						
SHL	**Shillong**	**8.27**	**332**	Pn	**Pn**	**16 40 01.2**	**-2.1**
SHL	**Shillong**	**8.27**	**332**	*e*P	**Pn**	**16 40 04.9**	**+1.6**
PZH	**PanZhiHua**	**9.70**	**31**	P	**Pn**	**16 40 25.0**	**+2.1**
PZH				S	**Sn**	**16 42 18.0**	**+5.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,300nm,10.1s						
PZH				LR	LR		
	comp=N,580nm,13.1s						
PZH				LR	LR		
	comp=E,870nm,10.8s						
PZH				LR	LR		
	comp=Z,250nm,8.4s						
LSA	**Lhasa**	**12.26**	**339**	Pn	**Pn**	**16 40 58.2**	**-0.1**
HYB	**Hyderabad**	**16.76**	**270**	*e*P	**Pn**	**16 41 58.9**	**+0.7**
NIL	**Nilore**	**25.57**	**311**	P	**P**	**16 43 31.8**	**-0.6**
MK31	**Makanchi Array**	**30.65**	**341**	P	**P**	**16 44 15.8**	**-1.9**
MKAR	**Makanchi Array**	**30.65**	**341**	P	**P**	**16 44 16.1**	**-1.7**
MKAR	**Makanchi Array**	**30.65**	**341**	P	**P**	**16 44 19.4**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=160,slow=8.9,SNR=15 comp=Z,0.7nm,0.7s						
MAKZ	**Makanchi**	**30.76**	**341**	P	**P**	**16 44 16.6**	**-2.0**
MAKZ				IAmb	IAmb	16 44 23.1	
	comp=Z,3.6nm,1.4s						
KURBB	**Kurchatov Arra**	**35.21**	**340**	P	**P**	**16 44 59.1**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=149,slow=8.8,SNR=8.2 comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**35.26**	**341**	P	**P**	**16 44 57.4**	**-0.5**
KURK				IAmb	IAmb	16 45 04.0	
	comp=Z,3.9nm,1.2s						
ZAA0	**Zalesovo Array**	**36.67**	**349**	P	**P**	**16 45 09.0**	**-0.9**
ZAA0				IAmb	IAmb	16 45 12.9	
	comp=Z,3.9nm,1.1s						
ZALV	**Zalesovo Beam**	**36.67**	**349**	P	**P**	**16 45 08.7**	**-1.2**
ZALV	**Zalesovo Beam**	**36.67**	**349**	P	**P**	**16 45 10.0**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=155,slow=7.6,SNR=7.7 comp=Z,1.8nm,0.8s						
GEYT	**Alibeck**	**38.49**	**309**	P	**P**	**16 45 22.8**	**-2.8**
GEYT	**Alibeck**	**38.49**	**309**	P	**P**	**16 45 29.0**	**+3.4**
	comp=Z,1.6nm,0.7s,baz=179,slow=8.6,SNR=4.1 comp=Z,1.6nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**38.49**	**309**	P	**P**	**16 45 23.4**	**-2.3**
GYA0B				IAmb	IAmb	16 45 35.2	
	comp=Z,4.3nm,1.0s						
BVAR	**Borovoye Array**	**40.07**	**336**	P	**P**	**16 45 40.8**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=138,slow=9.7,SNR=2.7 comp=Z,0.5nm,0.6s						
ABKAR	**Akbulak array**	**42.45**	**325**	P	**P**	**16 45 56.9**	**-1.3**
ABKAR				IAmb	IAmb	16 46 07.9	
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**53.36**	**134**	P	**P**	**16 47 22.7**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=325,slow=7.0,SNR=3.2 comp=Z,0.7nm,0.9s						
ASAR	**Alice Springs**	**55.64**	**137**	P	**P**	**16 47 39.8**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=318,slow=7.2,SNR=7.9 comp=Z,0.7nm,1.0s						
FINES	**FINESS Array B**	**64.60**	**330**	P	**P**	**16 48 41.9**	**+1.4**
	comp=Z,5.4nm,1.1s,baz=86,slow=6.1,SNR=5.1 comp=Z,5.4nm,1.1s						
HFS	**Hagfors**	**70.59**	**328**	P	**P**	**16 49 20.9**	**+2.5**
	comp=Z,2.0nm,0.8s,baz=94,slow=11,SNR=4.4 comp=Z,2.0nm,0.8s						
MDT	**Midelt**	**88.92**	**304**	LR	LR	17 36 43.9	
	comp=Z,107nm,18.3s,baz=260,slow=40						

IDC 07 16:42:26.5±1.5, 17°.89N×95°.90E, h0km, mb3.3/4, mbtmp3.3/5, ML4.3/1, Error ellipse: s-maj=35.5km s-min=18.4km az=63.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**2.95**	**78**	Pn	Pn	16 43 15.4	+0.8
	11nm,0.3s,baz=260,slow=18,SNR=12						
CMAR				Sn	Sn	16 43 50.5	-0.2
	21nm,0.3s,baz=261,slow=31,SNR=15 7.2nm,0.3s						
MKAR	**Makanchi Array**	**30.94**	**342**	P	P	16 48 45.2	+0.1
	0.2nm,0.6s,baz=155,slow=8.2,SNR=2.6						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**35.49**	**341**	P	P	16 49 24.5	-0.2
	0.4nm,0.5s,baz=149,slow=8.7,SNR=5.5 0.4nm,0.5s						
WRA	**Warramunga Arr**	**53.26**	**133**	P	P	16 51 46.3	-1.0
	0.3nm,0.7s,baz=320,slow=7.1,SNR=1.8 0.3nm,0.7s						
ASAR	**Alice Springs**	**55.52**	**137**	P	P	16 52 04.3	+0.6
	0.2nm,0.6s,baz=318,slow=6.9,SNR=1.7 0.2nm,0.6s						

*IDC **07** 16:58:06.7±3.3, 30°.66S×177°.89W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=72.1km s-min=23.0km az=116.0*
*NEIC **07** 16:58:09.5±2.4, 30°.65S±0°.06×178°.02W±0°.07, h10km±1km, mb4.3/11, Error ellipse: s-maj=12.6km s-min=8.0km az=43.0*

ISC 07 16:58:09.2±0.8, 30°.63S±0°.08×178°.1W±0°.2, h10km, n27, σ1s07/28, mb4.3/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.38**	**6**		**Pn**	**16 58 34.0**	**-0.5**
RAO	**Raoul Island**	**1.38**	**6**	Pn	**Pn**	**16 58 34.3**	**-0.2**
	69nm,0.3s,baz=18,slow=20,SNR=1.6						
RAO				Sn	**Sn**	**16 58 53.1**	**+0.2**
	253nm,0.3s,baz=22,slow=23,SNR=6.0						
RTZ	**Ruatahuna**	**8.95**	**206**	Pn	**Pn**	**17 00 17.2**	**-1.3**
BKZ	**Black Stump Fm**	**9.61**	**206**	Pn	**Pn**	**17 00 26.4**	**-1.3**
KHZ	**Kahutara**	**13.55**	**207**	Pn	**Pn**	**17 01 22.6**	**+1.2**
GVZ	**Greta Valley S**	**14.21**	**208**	P	**P**	**17 01 36.9**	**-1.1**
OXZ	**Oxford**	**14.92**	**209**	Pn	**Pn**	**17 01 40.9**	**+0.8**
CTAO	**Charters Tower**	**33.77**	**280**	P	**P**	**17 04 52.7**	**+1.3**
STKA	**Stephens Creek**	**34.37**	**257**	P	**P**	**17 04 56.5**	**+0.1**
STKA				IAmb	IAmb	17 04 60.0	
	comp=Z,1.7nm,0.9s						
STKA	**Stephens Creek**	**34.37**	**257**	P	**P**	**17 04 56.9**	**+0.4**
	comp=Z,8.4nm,0.7s,baz=104,slow=10,SNR=18 comp=Z,8.4nm,0.7s						
BBOO	**Buckleboo**	**38.84**	**255**	P	**P**	**17 05 34.6**	**-0.1**
BBOO				IAmb	IAmb	17 05 45.3	
	comp=Z,4.2nm,1.1s						
AS31	**Alice Springs**	**43.03**	**267**	P	**P**	**17 06 08.9**	**-0.4**
ASAR	**Alice Springs**	**43.03**	**267**	P	**P**	**17 06 08.1**	**-1.2**
ASAR	**Alice Springs**	**43.03**	**267**	P	**P**	**17 06 09.4**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=105,slow=7.4,SNR=31 comp=Z,0.5nm,0.4s						
WR0	**Warramunga Arr**	**43.86**	**273**	P	**P**	**17 06 15.9**	**-0.1**
WR0				IAmb	IAmb	17 06 16.9	
	comp=Z,3.4nm,0.8s						
WB2	**Warramunga Arr**	**44.03**	**272**	P	**P**	**17 06 17.4**	**0.0**
WB2				IAmb	IAmb	17 06 49.9	
	comp=Z,15nm,1.5s						
WRAB	**Tennant Creek**	**44.04**	**272**	P	**P**	**17 06 16.8**	**-0.6**
WRAB				IAmb	IAmb	17 06 33.8	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**44.04**	**272**	P	**P**	**17 06 17.3**	**-0.1**
WRA	**Warramunga Arr**	**44.04**	**272**	P	**P**	**17 06 17.6**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=113,slow=8.0,SNR=25 comp=Z,2.2nm,0.5s						
WB0	**Warramunga Arr**	**44.07**	**273**	P	**P**	**17 06 16.8**	**-0.8**
WB0				IAmb	IAmb	17 06 18.3	
	comp=Z,3.1nm,0.6s						
QSPA	**South Pole Qui**	**59.48**	**180**	P	**P**	**17 08 13.3**	**+1.0**
QSPA				IAmb	IAmb	17 08 19.7	
	comp=Z,3.7nm,0.8s						
PMSA	**Palmer Station**	**72.08**	**156**	P	**P**	**17 09 33.7**	**+0.5**
FIA1	**FINESS Array S**	**145.34**	**340**		**PKPbc**	**17 17 44.9**	**-1.5**
FINES	**FINESS Array B**	**145.34**	**340**		**PKPbc**	**17 17 44.0**	**-2.4**
FINES	**FINESS Array B**	**145.34**	**340**	PKPbc	**PKPbc**	**17 17 44.6**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=58,slow=4.7,SNR=10						
NC303	**NORSAR Array S**	**148.77**	**351**	PKPbc	**PKPdf**	**17 17 54.5**	**+2.1**
KIEV	**Kiev**	**151.46**	**322**	PKPbc	**PKPbc**	**17 18 02.8**	**-0.2**

*TAP **07** 16:59:43.9, 24°.12N×121°.71E, h7km, ML2.3, C*
*JMA **07** 16:59:44.6±0.3, 24°.1N±0°.7×121°.7E±0°.8, h0km, TAIWAN REGION*

ISC 07 16:59:44.5±0.9, 24°.13N±0°.02×121°.71E±0°.02, h9km±6km, n60, σ0s72/111, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.08**	**291**	*i* P	**Pg**	**16 59 46.4**	**-0.4**
	baz=295						
ETL				*i* S	**Sg**	**16 59 48.0**	**-0.4**
	baz=295						
NACB	**Ninganchiao**	**0.11**	**293**	*i* P	**Pg**	**16 59 46.9**	**-0.3**
	baz=289						
NACB				*i* S	**Sg**	**16 59 48.9**	**-0.2**
	baz=289						
TWD	**Chiawan**	**0.11**	**245**	P	**Pg**	**16 59 46.6**	**-0.6**
	baz=260						
TWD				S	**Sg**	**16 59 48.5**	**-0.6**
	baz=260						
HWA	**Hwalien**	**0.18**	**212**	*e*P	**Pg**	**16 59 48.5**	**+0.2**
	baz=229						
HWA				*e*S	**Sg**	**16 59 52.7**	**+1.8**
	baz=229						
EAHA	**Aohua**	**0.20**	**8**	*i* P	**Pg**	**16 59 48.5**	**-0.2**
	baz=3.0						
EAHA				S	**Sg**	**16 59 52.1**	**+0.6**
	baz=3.0						
ETLH	**Xiulin Townshi**	**0.22**	**291**	P	**Pg**	**16 59 48.9**	**-0.2**
	baz=292						
ETLH				*i* S	**Sg**	**16 59 52.4**	**+0.2**
	baz=292						
ETM	**Tongmen**	**0.26**	**231**	*e*P	**Pg**	**16 59 49.1**	**-0.6**
	baz=237						
ETM				S	**Sg**	**16 59 52.9**	**-0.3**
	baz=237						
LXIB	**Xiulin Townshi**	**0.29**	**248**	*e*P	**Pg**	**16 59 49.9**	**-0.5**
	baz=240						
LXIB				*i* S	**Sg**	**16 59 54.3**	**0.0**
	baz=240						
ENA	**Nanau**	**0.30**	**6**	*i* P	**Pg**	**16 59 50.2**	**-0.3**
	baz=3.0						
ENA				*i* S	**Sg**	**16 59 55.0**	**+0.5**
	baz=3.0						
EWUT	**Wuta**	**0.32**	**11**	*i* P	**Pg**	**16 59 50.9**	**0.0**
	baz=7.0						
EWUT				S	**Sg**	**16 59 55.1**	**-0.1**
	baz=7.0						
SHUL	**Shoufeng**	**0.36**	**202**	*e*P	**Pb**	**16 59 52.7**	**-0.5**
	baz=215						
SHUL				*e*S	**Sb**	**17 00 00.6**	**+1.6**
	baz=215						
ESL	**Shilin**	**0.40**	**219**	*e*P	**Pg**	**16 59 51.7**	**-0.7**
	baz=234						
ESL				*e*S	**Sg**	**16 59 56.8**	**-1.0**
	baz=234						
WHF	**Hehuan Shan**	**0.41**	**272**	*e*P	**Pg**	**16 59 52.4**	**-0.3**
	baz=274						
WHF				*e*S	**Sg**	**16 59 57.9**	**-0.1**
	baz=274						
NNSB	**Datong**	**0.42**	**315**	*e*P	**Pg**	**16 59 53.3**	**+0.4**
	baz=314						
NNSB				*i* S	**Sg**	**16 59 59.1**	**+0.7**
	baz=314						
NNS	**Nan Shan**	**0.44**	**315**	P	**Pb**	**16 59 53.8**	**-0.8**
	baz=315						
NNS				*i* S	**Sg**	**16 59 59.5**	**+0.6**
	baz=315						
LATG	**Datong**	**0.44**	**338**	*i* P	**Pg**	**16 59 53.4**	**+0.2**
	baz=335						
LATG				*e*S	**Sg**	**16 59 59.2**	**+0.3**
	baz=335						
FUSS	**Fushou**	**0.44**	**286**	*e*P	**Pg**	**16 59 52.6**	**-0.6**
	baz=287						
FUSS				*e*S	**Sb**	**17 00 00.1**	**-1.4**
	baz=287						
ESAO	**Su ao**	**0.46**	**15**	P	**Pg**	**16 59 53.4**	**-0.1**
	baz=12						
ESAO				*e*S	**Sg**	**16 59 59.9**	**+0.2**
	baz=12						
CHGB	**Renai**	**0.49**	**262**	*e*P	**Pg**	**16 59 54.4**	**+0.2**
	baz=265						
CHGB				*e*S	**Sg**	**17 00 00.9**	**+0.2**
	baz=265						
TWC	**Suao**	**0.49**	**15**	*i* P	**Pg**	**16 59 54.3**	**+0.1**
	baz=3.0						
TWC				S	**Sb**	**17 00 01.8**	**-1.0**
	baz=3.0						
NDS	**Dongshan**	**0.50**	**1**	*i* P	**Pg**	**16 59 54.6**	**+0.3**
	baz=356						
NDS				S	**Sb**	**17 00 02.1**	**-1.0**
	baz=356						
NDT	**Datong Townshi**	**0.50**	**339**	*i* P	**Pb**	**16 59 54.8**	**-0.8**
	baz=336						
NDT				*i* S	**Sb**	**17 00 02.1**	**-1.0**
	baz=336						
WARBT	**Fenglin Townsh**	**0.51**	**216**	*e*P	**Pg**	**16 59 53.5**	**-0.8**
	baz=230						
WARBT				*e*S	**Sb**	**17 00 02.6**	**-0.5**
	baz=230						
OWD	**Renai**	**0.52**	**251**	P	**Pg**	**16 59 54.3**	**-0.3**
	baz=254						
OWD				S	**Sg**	**17 00 01.7**	**+0.3**
	baz=254						
TDCB	**Techi**	**0.52**	**284**	P	**Pb**	**16 59 55.1**	**-0.8**
	baz=285						
TDCB				S	**Sb**	**17 00 02.4**	**-1.2**
	baz=285						
ENTT	**Nioudou**	**0.53**	**346**	P	**Pg**	**16 59 55.1**	**+0.3**
	baz=342						
ENTT				S	**Sg**	**17 00 02.1**	**+0.4**
	baz=342						
EGFH	**Guangfu**	**0.53**	**209**	P	**Pb**	**16 59 55.2**	**-0.8**
	baz=224						
EGFH				*e*S	**Sb**	**17 00 03.5**	**-0.2**
	baz=224						
EOS2	**EOS2**	**0.56**	**59**	*e*P	**Pg**	**16 59 54.4**	**-0.9**
	baz=38						
EOS2				*e*S	**Sb**	**17 00 04.3**	**-0.2**
	baz=38						
WUSB	**Renai**	**0.56**	**256**	*i* P	**Pg**	**16 59 55.4**	**0.0**
	baz=259						
WUSB				*e*S	**Sg**	**17 00 02.7**	**0.0**
	baz=259						
YHNB	**Yeheng**	**0.62**	**331**	P	**Pb**	**16 59 57.3**	**-0.3**
	baz=329						
YHNB				S	**Sb**	**17 00 05.9**	**-0.6**
	baz=329						
NSK	**Sanguang**	**0.63**	**330**	P	**Pb**	**16 59 57.3**	**-0.5**
	baz=328						
NSK				*e*S	**Sb**	**17 00 07.0**	**+0.2**
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.64**	**350**	*e*P	**Pb**	**16 59 57.4**	**-0.5**
	baz=347						
FUSB				*i* S	**Sb**	**17 00 06.5**	**-0.5**
	baz=347						
NWLT	**Wulai**	**0.67**	**344**	*e*P	**Pb**	**16 59 58.1**	**-0.4**
	baz=341						
NWLT				*e*S	**Sb**	**17 00 07.3**	**-0.7**
	baz=341						
HGSD	**Ruisui**	**0.69**	**202**	*e*P	**Pb**	**16 59 59.1**	**+0.4**
	baz=194						
WHP	**Taichung City**	**0.71**	**282**	*e*P	**Pb**	**16 59 59.8**	**+0.5**
	baz=283						
WHP				*e*S	**Sb**	**17 00 10.9**	**+1.8**
	baz=283						
EHY	**Hungye**	**0.71**	**210**	*e*P	**Pg**	**16 59 58.0**	**-0.3**
	baz=223						
EHY				*e*S	**Sb**	**17 00 09.4**	**+0.3**
	baz=223						
DPDB	**Guoxing**	**0.72**	**263**	P	**Pb**	**16 59 59.0**	**-0.4**
	baz=257						
DPDB				*e*S	**Sb**	**17 00 09.8**	**+0.4**
	baz=257						
WCS	**Beigang Elemen**	**0.73**	**265**	P	**Pb**	**16 59 59.1**	**-0.4**
	baz=259						
NFF	**Wufeng Townshi**	**0.74**	**313**	P	**Pb**	**16 59 59.7**	**+0.1**
	baz=312						
NFF				*e*S	**Sb**	**17 00 10.1**	**+0.3**
	baz=312						
SSLB	**Suanglung**	**0.77**	**244**	*i* P	**Pg**	**16 59 59.1**	**-0.3**
	baz=259						
SSLB				S	**Sg**	**17 00 09.7**	**+0.3**
	baz=259						
SMLT	**Sun Moon Lake**	**0.78**	**252**	P	**Pg**	**16 59 59.4**	**-0.2**
	baz=255						
TYC	**Yuchr**	**0.81**	**254**	*e*P	**Pg**	**16 59 59.0**	**-1.2**
	baz=257						
LIOB	**Emei**	**0.81**	**309**	P	**Pb**	**17 00 01.1**	**+0.1**
	baz=308						
NSTT	**Nanjuang**	**0.82**	**308**	P	**Pb**	**17 00 00.7**	**-0.2**
	baz=307						
NSTT				S	**Sb**	**17 00 12.2**	**+0.1**
	baz=307						
YULB	**Yu-li**	**0.82**	**207**	*e*P	**Pb**	**17 00 01.4**	**+0.3**
	baz=224						
YULB				*e*S	**Sg**	**17 00 11.6**	**+0.4**
	baz=224						
TIPB	**Shuangxi**	**0.85**	**7**	P	**Pb**	**17 00 01.5**	**0.0**
	baz=354						
TIPB				S	**Sb**	**17 00 12.7**	**-0.3**
	baz=354						
EYUL	**Yuli**	**0.86**	**205**	*e*P	**Pb**	**17 00 02.0**	**+0.3**
	baz=225						
EYUL				S	**Sg**	**17 00 12.6**	**+0.4**
	baz=225						
TWF1	**Yuli**	**0.86**	**206**	P	**Pg**	**17 00 01.2**	**+0.1**
	baz=224						
TWQ1	**Liyutan**	**0.88**	**285**	*e*P	**Pn**	**17 00 03.8**	**+0.6**
	baz=296						
TWQ1				S	**Sb**	**17 00 14.2**	**+0.2**
	baz=296						
WHYT	**Xinyi Township**	**0.89**	**241**	*e*P	**Pb**	**17 00 02.5**	**+0.2**
	baz=253						
WHYT				*e*S	**Sb**	**17 00 14.8**	**+0.4**
	baz=253						
SXI1	**Grass Mountain**	**0.97**	**9**	P	**Pb**	**17 00 03.9**	**+0.3**
	baz=12						
SXI1				S	**Sb**	**17 00 17.3**	**+0.6**
	baz=12						
FULB	**Fuli**	**1.00**	**202**	*e*P	**Pb**	**17 00 03.8**	**-0.3**
	baz=225						
YM01	**YM01**	**1.02**	**353**	*e*P	**Pg**	**17 00 03.1**	**-1.1**
	baz=349						
YM01				*e*S	**Sg**	**17 00 16.3**	**-1.2**
	baz=349						
ALS	**Alishan**	**1.03**	**234**	*e*P	**Pb**	**17 00 05.2**	**+0.4**
	baz=238						
ALS				*e*S	**Sg**	**17 00 17.3**	**-0.5**
	baz=238						
ANP	**Anpu**	**1.07**	**351**	P	**Pb**	**17 00 05.4**	**+0.1**
	baz=347						
ANP				S	**Sb**	**17 00 20.2**	**+0.8**
	baz=347						
EHD	**Haiduan**	**1.08**	**205**	*e*P	**Pg**	**17 00 03.6**	**-1.7**
	baz=223						
EHD				S	**Sb**	**17 00 19.5**	**-0.1**
	baz=223						
ELDTW	**Lidau**	**1.13**	**214**	P	**Pg**	**17 00 05.5**	**-0.8**
	baz=222						
WCKO	**Fanlu**	**1.22**	**236**	*e*P	**Pn**	**17 00 08.4**	**+0.5**
	baz=242						
WCKO				*e*S	**Sg**	**17 00 20.4**	**-3.5**
	baz=242						
TPUB	**Ta-pu**	**1.29**	**230**	*e*P	**Pn**	**17 00 09.9**	**+1.1**
	baz=237						
TPUB				S	**Sb**	**17 00 26.3**	**+0.6**
	baz=237						
WTP	**Ta-pu**	**1.33**	**229**	*e*P	**Pb**	**17 00 10.8**	**+1.0**
	baz=236						

TAP 07 17:01:17.4, 24°.21N×121°.73E, h9km, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.10**	**4**	*e*P	Pg	17 01 20.4	+0.5
	baz=8.0						
ETL	**Fush Village**	**0.11**	**243**	P	Pg	17 01 21.0	+0.9
	baz=241						
ETL				*i* S	Sg	17 01 23.3	+1.2
	baz=241						
EAHA	**Aohua**	**0.12**	**2**	P	Pg	17 01 21.0	+0.8
	baz=2.0						
EAHA				S	Sg	17 01 23.3	+1.2
	baz=2.0						
NACB	**Ninganchiao**	**0.13**	**253**	P	Pg	17 01 21.3	+0.9
	baz=253						
NACB				*i* S	Sg	17 01 23.9	+1.4
	baz=253						
TWD	**Chiawan**	**0.18**	**224**	*i* P	Pg	17 01 21.9	+0.7
	baz=221						
TW

	baz=268								
ETLH				*i* S		Sg	17 01 27.1	+1.7	
	baz=268								
EWUT	**Wuta**	**0.24**	**10**	P		Pg	17 01 22.9	+0.7	
	baz=10.0								
EWUT				*e*S		Sg	17 01 26.7	+1.2	
	baz=10.0								
HWA	**Hwalien**	**0.26**	**207**	P		Pb	17 01 23.9	-0.4	
	baz=204								
HWA				S		Sb	17 01 28.4	-0.4	
	baz=204								
ETM	**Tongmen**	**0.33**	**222**	P		Pb	17 01 24.7	-0.7	
	baz=221								
LXIB	**Xiulin Townshi**	**0.35**	**237**	P		Pg	17 01 25.0	+0.7	
	baz=236								
LATG	**Datong**	**0.37**	**330**	P		Pb	17 01 25.9	-0.3	
	baz=329								
LATG				S		Sb	17 01 31.6	-0.5	
	baz=329								
NNSB	**Datong**	**0.39**	**304**	P		Pb	17 01 26.3	-0.1	
	baz=303								
NNSB				*i* S		Sb	17 01 32.3	-0.3	
	baz=303								
NNS	**Nan Shan**	**0.40**	**305**	P		Pb	17 01 26.3	-0.4	
	baz=304								
NNS				S		Sb	17 01 32.4	-0.6	
	baz=304								
NDS	**Dongshan**	**0.42**	**358**	P		Pg	17 01 26.2	+0.6	
	baz=357								
NDS				*i* S		Sb	17 01 33.5	0.0	
	baz=357								
WHF	**Hehuan Shan**	**0.43**	**261**	P		Pg	17 01 26.6	+0.6	
	baz=260								
NDT	**Datong Townshi**	**0.44**	**333**	P		Pb	17 01 27.4	+0.1	
	baz=332								
NDT				S		Sb	17 01 34.1	+0.1	
	baz=332								
FUSS	**Fushou**	**0.45**	**275**	P		Pb	17 01 27.6	0.0	
	baz=274								
SHUL	**Shoufeng**	**0.45**	**200**	P		Pb	17 01 27.1	-0.4	
	baz=200								
ENTT	**Nioudou**	**0.45**	**340**	P		Pb	17 01 27.7	+0.2	
	baz=341								
ENTT				*i* S		Sb	17 01 34.2	-0.1	
	baz=341								
ESL	**Shilin**	**0.48**	**215**	P		Pb	17 01 27.8	-0.2	
	baz=213								
CHGB	**Renai**	**0.53**	**254**	*i* P		Pb	17 01 28.6	-0.4	
	baz=253								
CHGB				S		Sb	17 01 37.2	+0.4	
	baz=253								
FUSB	**Fushanzhiwuyua**	**0.56**	**346**	*e*P		Pg	17 01 28.6	+0.2	
	baz=346								
YHNB	**Yeheng**	**0.56**	**324**	*e*P		Pb	17 01 29.7	+0.3	
	baz=324								
YHNB				*e*S		Sb	17 01 37.1	-0.4	
	baz=324								
NSK	**Sanguang**	**0.57**	**324**	*e*P		Pb	17 01 29.8	+0.1	
	baz=323								
NSK				S		Sb	17 01 38.2	+0.3	
	baz=323								

ASRS ***07*** *17:07:30.3, 53.7N±0.7×88.1E±0.7, h1km±1km, MLh3.1/9, confirmed*
NNC ***07*** *17:07:33.8±2.0, 53.62N×88.12E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=17.3km s-min=8.3km az=56.0, Suspected Mining explosion.*

ISC 07 17:07:32.3±0.8, 53.76N±0.02×88.12E±0.02, h0km, n28, σ0s87/52, 7C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LUZB	**Luzhba, Kemero**	**0.48**	**101**			Pg	**Pb**	**17 07 42.8**	**-0.8**
LUZB						Sg	**Sb**	**17 07 50.3**	**-0.9**
ERU	**Erunakovo, Kuz**	**0.58**	**312**			Pg	**Pb**	**17 07 44.7**	**-0.6**
MALIN	**Malinovka, Kuz**	**0.60**	**236**			P	**Pg**	**17 07 44.1**	**+0.2**
MALIN						S	**Sg**	**17 07 52.5**	**+0.8**
TAIL	**Tailep, Kuzbas**	**0.63**	**241**			P	**Pb**	**17 07 45.8**	**-0.4**
TAIL						S	**Sg**	**17 07 54.1**	**+1.6**
KOTO	**Kotino, Kuzbas**	**0.83**	**302**			Pg	**Pg**	**17 07 48.6**	**+0.4**
KOTO						S	**Sb**	**17 08 00.9**	**-0.4**
TASR	**Tashtagol**	**1.01**	**188**			Pg	**Pg**	**17 07 51.5**	**-0.2**
TASR						Sg	**Sg**	**17 08 04.8**	**+0.1**
VCHU	**Verkh-Chumysh,**	**1.01**	**282**			P	**Pg**	**17 07 51.7**	**0.0**
VCHU						S	**Sg**	**17 08 04.9**	**+0.1**
POMOR	**Pomortsevo, Ku**	**1.14**	**305**			Pg	**Pn**	**17 07 55.9**	**+0.4**
ELT	**Eltsovka**	**1.23**	**247**			Pg	**Pg**	**17 07 54.6**	**-1.2**
ELT						Sg	**Sg**	**17 08 11.4**	**-0.3**
BJR3	**Bachatsky-3 (S**	**1.25**	**293**			Pg	**Pg**	**17 07 55.9**	**-0.4**
BJR3						S	**Sb**	**17 08 13.8**	**+0.4**
BJR2	**Bachatsky-2, K**	**1.29**	**295**			P	**Pg**	**17 07 57.2**	**+0.2**
BJR2						S	**Sn**	**17 08 15.8**	**+0.3**
BJR1	**Bachatsky 1, K**	**1.32**	**292**			Pg	**Pg**	**17 07 56.7**	**-0.9**
BJR1						S	**Sb**	**17 08 15.9**	**+0.6**
SALR	**Pechorkino, Sa**	**1.57**	**296**			Pg	**Pn**	**17 08 00.8**	**-0.6**
SALR						Sg	**Sg**	**17 08 23.6**	**+0.9**
BRCR	**Berchikul'**	**1.89**	**3**			Pg	**Pn**	**17 08 06.0**	**+0.2**
BRCR						Sg	**Sg**	**17 08 33.3**	**+0.3**
ZAA0	**Zalesovo Array**	**1.96**	**277**	⇓	P		**Pn**	**17 08 07.8**	**+1.0**
	8.5nm,0.6s								
ZAA0				⇑	S		**Sg**	**17 08 35.5**	**+0.1**
	13nm,0.8s								
KEM	**Kemerovo**	**1.98**	**324**		P		**Pn**	**17 08 07.8**	**+0.8**
KEM					S		**Sb**	**17 08 34.8**	**+0.4**
YALR	**Yailyu, Altay**	**2.02**	**189**		Pg		**Pb**	**17 08 09.3**	**-0.5**
YALR					Sg		**Sg**	**17 08 36.5**	**-0.5**
ARTR	**Artybash**	**2.03**	**195**		Pg		**Pg**	**17 08 10.9**	**-0.3**
ARTR					S		**Sg**	**17 08 38.3**	**+0.9**
DJO	**Djoy, Khakassi**	**2.10**	**116**		P		**Pb**	**17 08 10.9**	**-0.4**
DJO					S		**Sg**	**17 08 40.1**	**+0.2**
CERR	**Cheremushki**	**2.18**	**113**		P		**Pg**	**17 08 13.8**	**-0.2**
CERR					S		**Sg**	**17 08 43.6**	**+1.4**
BALAH	**Balakhonka, Ku**	**2.22**	**328**		P		**Pn**	**17 08 11.4**	**+1.0**
BALAH					S		**Sb**	**17 08 42.5**	**+1.2**
GALT	**Gorno-Altaysk,**	**2.23**	**217**		P		**Pb**	**17 08 12.6**	**-0.9**
GALT					Sg		**Sb**	**17 08 41.7**	**+0.1**
ELDR	**Elanda**	**2.83**	**207**		Pg		**Pb**	**17 08 22.2**	**-1.5**
ELDR					S		**Sb**	**17 09 00.1**	**+1.2**
NVSII	**Novosibirsk**	**3.06**	**293**		P		**Pb**	**17 08 25.1**	**-2.5**
NVSII					S		**Sb**	**17 09 05.6**	**+0.2**
KURK	**Kurchatov**	**6.58**	**246**	⇑	Pn		**Pn**	**17 09 11.0**	**+0.7**
	6.6nm,0.9s								
KURK				⇑	Lg		Lg	17 10 58.5	
	16nm,0.8s								
KURBB	**Kurchatov Arra**	**6.68**	**246**	⇓	Pn		**Pn**	**17 09 12.3**	**+0.7**
	2.1nm,0.3s								
KURBB				⇓	Lg		Lg	17 11 02.1	
	25nm,0.7s								
MK31	**Makanchi Array**	**7.91**	**210**	⇓	Pn		**Pn**	**17 09 30.2**	**+1.7**
	1.4nm,0.6s,baz=29,slow=12,SNR=29								
MK31				⇑	Sn		**Sn**	**17 10 57.6**	**-1.0**
	2.3nm,0.9s,baz=35,slow=26,SNR=2.7								
MK31				⇑	Lg		Lg	17 11 39.5	
	6.1nm,0.8s,baz=31,slow=31,SNR=5.5								
MAKZ	**Makanchi**	**7.99**	**212**	⇑	Pn		**Pn**	**17 09 31.2**	**+1.6**
	1.6nm,0.6s								
MAKZ				⇑	Sn		**Sn**	**17 10 59.9**	**-0.7**
	2.0nm,0.6s								
MAKZ				⇓	Lg		Lg	17 11 42.3	
	6.4nm,0.9s								

CATAC 07 17:11:30.5±0.6, 11.89N×86.37W, h104km±5km, ML2.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.11**	**36**	*i*	S		Sn	17 11 58.7	+2.7
MSHP	**Masachapa**	**0.18**	**249**	*i*	P		Pn	17 11 46.0	+0.9
MSHP				*i*	S		Sn	17 11 58.7	+2.7
MSHP					IAML			17 11 59.1	
	comp=Z,630nm,1.0s								
UNAN	**Cigeo UNAN**	**0.24**	**23**	*i*	S		Sn	17 11 58.5	+2.1
NANN	**Nandasmo**	**0.24**	**79**	*i*	P		Pn	17 11 47.0	+1.6
NANN				*i*	S		Sn	17 11 59.6	+3.1
NANN					IAML			17 12 09.1	
	comp=Z,3μm,1.0s								
SAPS	**Ciudad Sandino**	**0.28**	**352**	*i*	P		Pn	17 11 46.0	+0.5
SAPS				*i*	S		Sn	17 11 57.9	+1.2
SAPS					IAML			17 12 02.8	
	comp=Z,410nm,1.0s								
WILN	**Americas 2**	**0.32**	**33**	*i*	S		Sn	17 11 59.1	+2.1
COPN	**Copaltepe**	**0.36**	**322**	*i*	P		Pn	17 11 45.7	-0.2
COPN					IAML			17 11 46.2	
	comp=Z,330nm,1.0s								
MOMN	**Momotombo**	**0.54**	**342**	*i*	P		Pn	17 11 47.1	0.0
MOMN					IAML			17 11 47.3	
	comp=Z,10.0nm,1.0s								
MOMN				*i*	S		Sn	17 12 00.3	+0.8
MOMN	**Momotombo**	**0.54**	**342**		IAML			17 11 47.3	
	comp=Z,10.0nm,1.0s								
MOMN				*i*	P		Pn	17 11 47.4	+0.3
MOMN				*i*	S		Sn	17 12 01.0	+1.5
MACN	**El Madrono**	**0.64**	**332**	*i*	P		Pn	17 11 48.0	+0.1
MACN					IAML			17 11 48.4	
	comp=Z,580nm,1.0s								
MACN				*i*	S		Sn	17 12 02.3	+1.4
CNGA	**Al SSO del Vol**	**0.68**	**331**	*i*	P		Pn	17 11 48.2	0.0
CNGA					IAML			17 11 49.0	
	comp=Z,460nm,1.0s								
CNGA				*i*	S		Sn	17 12 03.9	+2.4
CNGN	**Cerro Negro**	**0.69**	**332**	*i*	P		Pn	17 11 48.1	-0.2
CNGN					IAML			17 11 51.2	
	comp=Z,250nm,1.0s								
JAPN	**Al SSO del Vol**	**0.77**	**118**	*i*	P		Pn	17 11 50.0	+1.1
JAPN					IAML			17 11 50.2	
	comp=Z,710nm,1.0s								
MORN	**Al Ó del Volca**	**0.78**	**116**	*i*	P		Pn	17 11 49.8	+0.7
MORN					IAML			17 11 50.1	
	comp=Z,890nm,1.0s								
BOAB	**BOACO BROADBAN**	**0.88**	**51**	*i*	P		Pn	17 11 50.6	+0.6
BOAB				*i*	S		Sn	17 12 06.1	+1.4
BOAB					IAML			17 12 07.5	
	comp=Z,35nm,1.0s								
CRIN	**San Cristobal**	**1.04**	**320**	*i*	P		Pn	17 11 51.5	-0.3
CRIN					IAML			17 11 53.0	
	comp=Z,1μm,1.0s								
CRIN	**San Cristobal**	**1.04**	**320**	*i*	P		Pn	17 11 51.4	-0.4
CRIN					IAML			17 11 53.0	
	comp=Z,1μm,1.0s								
LIMN	**Finca el Limon**	**1.16**	**360**	*i*	P		Pn	17 11 53.2	+0.1
LIMN					IAML			17 11 53.4	
	comp=Z,86nm,1.0s								
LIMN				*i*	S		Sn	17 12 11.5	+1.3
HZTE	**Horizontes, Gu**	**1.40**	**147**	*i*	P		Pn	17 11 56.2	+0.5
HZTE					IAML			17 11 58.1	
	comp=Z,110nm,1.0s								
ORTG	**Ortega, Santa**	**1.76**	**150**	*i*	P		Pn	17 12 00.9	+0.6
ORTG					IAML			17 12 03.2	
	comp=Z,75nm,1.0s								
ORTG				*i*	S		Sn	17 12 23.0	0.0
SAJU	**San Juanillo,**	**1.93**	**160**	*i*	P		Pn	17 12 02.5	+0.2
SAJU					IAML			17 12 26.6	
	comp=Z,530nm,1.0s								
SAJU	**San Juanillo,**	**1.93**	**160**	*i*	P		Pn	17 12 02.2	-0.1
SAJU					IAML			17 12 26.6	
	comp=Z,530nm,1.0s								
CNCH	**Conchagua**	**1.99**	**314**	*i*	P		Pn	17 12 02.7	-0.5
CNCH					IAML			17 12 03.4	
	comp=Z,150nm,1.0s								
DUNO	**Dulce Nombre,**	**2.00**	**155**	*i*	P		Pn	17 12 04.1	+0.9
DUNO					IAML			17 12 29.3	
	comp=Z,420nm,1.0s								
INDI	**Punta indio, G**	**2.19**	**157**	*i*	P		Pn	17 12 05.8	+0.1
INDI					IAML			17 12 34.4	
	comp=Z,87nm,1.0s								
INDI	**Punta indio, G**	**2.19**	**157**	*i*	P		Pn	17 12 05.6	-0.1
INDI					IAML			17 12 34.4	
	comp=Z,87nm,1.0s								
PACA	**Pacayal**	**2.47**	**310**	*i*	P		Pn	17 12 09.6	+0.1
PACA					IAML			17 12 12.6	
	comp=Z,340nm,1.0s								
LAFE	**Finca La Fe, P**	**2.52**	**145**	*i*	P		Pn	17 12 10.9	+0.9
LAFE				*i*	S		Sn	17 12 39.4	-0.9
LAFE					IAML			17 12 42.5	
	comp=Z,1.8nm,1.0s								
JACO	**JACO, Garabito**	**2.78**	**143**	*i*	S		Sn	17 12 46.8	+0.3

ISU 07 17:12:04.2, 41.38N×72.47E, h12km, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.72**	**238**			P	Pb	17 12 18.6	-0.2
NAM						S	Sb	17 12 29.4	+0.7
TSTA	**Tashata**	**0.80**	**180**			P	Pb	17 12 20.0	-0.1
TSTA						S	Sb	17 12 31.8	+0.9
FRG	**Fergana**	**1.13**	**208**			P	Pn	17 12 25.9	0.0
FRG						S	Sn	17 12 42.1	+0.7
CHMI	**Chimion**	**1.32**	**213**			P	Pb	17 12 29.0	0.0
CHMI						S	Sg	17 12 47.5	+0.7
MINT	**Mingtut**	**1.46**	**232**			P	Pb	17 12 31.1	-0.2
MINT						S	Sg	17 12 51.1	0.0
CHRV	**Charvak**	**1.91**	**279**			P	Pb	17 12 38.8	-0.2
CHRV						S	Sg	17 13 04.5	-1.1

NOU 07 17:12:14.0, 16.14S×167.91E, h168km, MLv3.6/5, Vanuatu Islands, Vanuatu Islands

KRNET ***07*** *17:12:46.0±0.1, 41.45N×72.38E, h19km, mb2.6*
SOME ***07*** *17:12:46.2, 41.42N×72.45E, h15km*
NNC ***07*** *17:12:49.3±1.4, 41.57N×72.52E, h0km, mb3.3, mpv3.2, Error ellipse: s-maj=12.2km s-min=4.7km az=174.0*

ISC 07 17:12:45.9±1.0, 41.45N±0.02×72.44E±0.02, h16km±10km, n39, σ1s72/70, 25C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.43**	**107**	⇓	*e*P		**Pg**	**17 12 55.0**	**+0.3**
	baz=5.0								
ARSB				⇓	*e*S		**Sb**	**17 13 01.7**	**+0.2**
	baz=5.0								
ARK	**Arkit**	**0.49**	**314**	⇑	*e*P		**Pg**	**17 12 55.3**	**-0.6**
	baz=18								
ARK				⇑	*e*S		**Sg**	**17 13 01.9**	**-0.7**
	baz=18								
OHH	**Osh**	**0.96**	**164**	⇑	*e*P		**Pb**	**17 13 04.2**	**-0.1**
	baz=62								
OHH				⇑	*e*S		**Sg**	**17 13 17.3**	**0.0**
	baz=62								
TRKS	**Terek-Say**	**0.98**	**275**	⇑	*e*P		**Pb**	**17 13 03.1**	**-1.5**
	baz=71								
TRKS				⇑	*i*S		**Sb**	**17 13 15.7**	**-1.6**
	baz=71								
MNAS	**Manas**	**1.03**	**3**	⇓	*e*P		**Pb**	**17 13 05.5**	**0.0**
	baz=5.0								
MNAS				⇓	*e*S		**Sg**	**17 13 19.8**	**+0.2**
	baz=5.0								
MRKS	**Merke**	**1.42**	**24**	P			**Pb**	**17 13 12.9**	**+0.9**
	2.3nm,0.1s								
MRKS				S			**Sg**	**17 13 32.2**	**+0.5**
	16nm,0.2s								
MRKS	**Merke**	**1.42**	**24**	*e*P			**Pb**	**17 13 12.9**	**+0.9**
	2.3nm,0.1s								
MRKS				*e*S			**Sg**	**17 13 32.2**	**+0.5**
	16nm,0.2s								
ARLS	**Aral**	**1.47**	**73**	⇑	*e*P		**Pg**	**17 13 13.8**	**-0.5**
	baz=74								
ARLS				⇑	*i*S		**Sg**	**17 13 33.9**	**+0.5**
	baz=74								
EKS2	**Erkin-Say**	**1.57**	**39**	⇑	*e*P		**Pb**	**17 13 15.5**	**+0.9**
	baz=40								
EKS2				⇑	*e*S		**Sg**	**17 13 36.6**	**+0.1**
	baz=40								
SFK	**Sufi-Kurgan**	**1.65**	**150**	⇓	*e*P		**Pb**	**17 13 16.4**	**+0.3**
	baz=49								
SFK				⇓	*e*S		**Sg**	**17 13 38.7**	**-0.5**
	baz=49								
DZA	**Taraz**	**1.66**	**331**	P			**Pg**	**17 13 19.3**	**+1.5**
	39nm,0.1s								
DZA				S			**Sg**	**17 13 42.9**	**+3.6**
	117nm,0.3s								
DZA	**Taraz**	**1.66**	**331**	*e*P			**Pb**	**17 13 17.1**	**+1.0**
	33nm,0.1s								
DZA				*e*S			**Sg**	**17 13 39.0**	**-0.4**
	80nm,0.2s								
UCH	**Uchtor**	**1.73**	**63**	⇑	*e*P		**Pb**	**17 13 18.6**	**+1.0**
	baz=63								
UCH				⇑	*e*S		**Sg**	**17 13 42.2**	**+0.3**
	baz=63								
BTK	**Batken**	**1.86**	**222**	⇑	*i*P		**Pb**	**17 13 19.3**	**-0.3**
	baz=21								
BTK				⇑	*i*S		**Sb**	**17 13 43.3**	**+0.7**
	baz=21								
AAK	**Ala-Archa**	**1.94**	**52**	⇑	*e*P		**Pb**	**17 13 21.4**	**+0.5**
	baz=52								
AAK				⇑	*e*S		**Sg**	**17 13 47.1**	**-1.2**
	baz=52								
DRK	**Karamyk**	**2.03**	**194**	⇑	*e*P		**Pb**	**17 13 21.8**	**-0.8**
	baz=93								
DRK				⇑	*e*S		**Sb**	**17 13 48.7**	**+1.0**
	baz=93								
KK31	**Karatay Array**	**2.18**	**320**	Pn			**Pb**	**17 13 25.2**	**+0.2**
	2.1nm,0.3s,baz=131,slow=16,SNR=27								
KK31				⇑	Sn		**Sg**	**17 13 54.9**	**-1.2**
	2.0nm,0.2s,baz=129,slow=26,SNR=9.7								
KKAR	**Karatay Array**	**2.18**	**320**	⇓	*e*P		**Pb**	**17 13 23.9**	**-1.1**
	baz=21								
KKAR				⇓	*e*S		**Sb**	**17 13 51.4**	**-0.4**
	baz=21								
KBK	**Karagaybulak**	**2.22**	**56**	⇓	*e*P		**Pb**	**17 13 25.3**	**-0.5**
	baz=57								
KBK				⇓	*e*S		**Sb**	**17 13 54.0**	**+0.9**
	baz=57								
CHM	**Chimkent**	**2.29**	**293**	*e*P			**Pb**	**17 13 28.2**	**+1.4**
	25nm,0.2s								
CHM				*e*S			**Sg**	**17 13 58.1**	**-1.3**
	77nm,0.2s								
CHMS	**Chumysh**	**2.31**	**47**	⇑	Pn		**Pg**	**17 13 29.4**	**-0.9**
	3.2nm,0.7s								
CHMS					Pg		**Pb**	**17 13 31.2**	**+4.0**
	30nm,0.1s								
CHMS				⇑	Lg		Lg	17 14 00.3	
	6.9nm,0.7s								
CHMS					Lg		Lg	17 14 03.5	
	86nm,0.2s								
USP	**Ospenovka**	**2.37**	**39**	⇑	*e*P		**Pb**	**17 13 27.2**	**-1.1**
	baz=40								
USP				⇑	*e*S		**Sb**	**17 13 57.1**	**-0.2**
	baz=40								
SGDS	**Sogindy**	**2.57**	**38**		Pg		**Pg**	**17 13 33.9**	**-1.4**
	1.8nm,0.1s								
SGDS					Lg		Lg	17 14 08.0	
	8.3nm,0.3s								
NRN	**Naryn**	**2.68**	**89**	⇑	*e*P		**Pn**	**17 13 31.4**	**+2.8**
	baz=89								
NRN				⇑	*e*S		**Sb**	**17 14 04.3**	**-2.1**
	baz=89								
TKM2	**Tokmak 2**	**2.77**	**57**	⇓	*e*P		**Pb**	**17 13 33.0**	**-2.1**
	baz=57								
TKM2				⇓	*e*S		**Sb**	**17 14 07.2**	**-1.7**
	baz=57								
DGS	**Degeres**	**3.05**	**53**		Pg		**Pb**	**17 13 42.2**	**+2.3**
	3.1nm,0.2s								
DGS					Lg		Lg	17 14 22.4	
	5.6nm,0.3s								
DGS	**Degeres**	**3.05**	**53**	*e*P			**Pb**	**17 13 42.2**	**+2.3**
	3.1nm,0.2s								
DGS				*e*S			**Sg**	**17 14 22.4**	**-1.5**
	5.6nm,0.3s								
KST	**Kastek**	**3.06**	**58**		Pg		**Pb**	**17 13 42.2**	**+2.2**
	2.7nm,0.5s								
KST					Lg		Lg	17 14 22.6	
	17nm,0.5s								
KST	**Kastek**	**3.06**	**58**	*e*P			**Pb**	**17 13 42.2**	**+2.2**
	2.7nm,0.5s								
KST				*e*S			**Sg**	**17 14 22.6**	**-1.7**
	17nm,0.5s								
KRBS	**Karabastau**	**3.28**	**46**		Pg		**Pb**	**17 13 45.9**	**+2.1**
	1.0nm,0.7s								
KRBS					Lg		Lg	17 14 28.9	
	3.3nm,0.4s								
KRBS	**Karabastau**	**3.28**	**46**	*e*P			**Pb**	**17 13 45.9**	**+2.1**
	1.0nm,0.7s								
KRBS				*e*S			**Sg**	**17 14 28.9**	**-2.3**
	3.3nm,0.4s								
KUU	**Kurty**	**3.77**	**48**		Pg		**Pb**	**17 13 54.8**	**+2.8**
	0.5nm,0.1s								
KUU					Lg		Lg	17 14 44.2	
	4.1nm,0.6s								
KUU	**Kurty**	**3.77**	**48**	*e*P			**Pb**	**17 13 54.9**	**+2.8**
	0.5nm,0.1s								
KUU				*e*S			**Sg**	**17 14 44.2**	**-2.7**
	4.1nm,0.6s								
BTLS	**Baital**	**3.77**	**18**		Pg		**Pg**	**17 13 55.6**	**-2.6**
	0.8nm,0.1s								
BTLS					Lg		Lg	17 14 45.5	
	2.2nm,0.3s								
BTLS	**Baital**	**3.77**	**18**	*e*P			**Pg**	**17 13 55.6**	**-2.6**
	0.8nm,0.1s								
BTLS				*e*S			**Sg**	**17 14 45.5**	**-1.5**
	2.2nm,0.3s								
KTBS	**Karatobe**	**3.86**	**53**		Pg		**Pg**	**17 13 57.1**	**-2.8**
	0.4nm,0.2s								
KTBS					Lg		Lg	17 14 47.8	
	5.2nm,0.3s								
KTBS	**Karatobe**	**3.86**	**53**	*e*P			**Pg**	**17 13 57.1**	**-2.8**
	0.4nm,0.2s								
KTBS				*e*S			**Sg**	**17 14 47.8**	**-2.1**
	5.2nm,0.3s								
CHKK	**Chushkaly**	**4.12**	**53**		Pg		**Pg**	**17 14 02.1**	**-2.9**
	0.2nm,0.1s								
CHKK					Lg		Lg	17 14 56.6	
	2.9nm,0.2s								
CHKK	**Chushkaly**	**4.12**	**53**	*e*P			**Pg**	**17 14 02.1**	**-2.9**
	0.2nm,0.1s								
CHKK				*e*S			**Sg**	**17 14 56.6**	**-1.8**
	2.9nm,0.2s								

IDC ***07*** *17:17:03.8±1.4, 7.11S×129.13E, h0km, mb3.9/3, mbtmp3.9/5, ML4.1/2, MS3.2/1, Error ellipse: s-maj=130.0km s-min=22.9km az=66.0*

ISC 07 17:17:05.1±1.0, 7.365S±0.09×129.14E±0.08, h10km, n11, σ2s76/10, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.23**	**106**			P	**Pb**	**17 17 45.0**	**-0.5**
SOEI	**Soe**	**5.38**	**243**			P	**Pg**	**17 18 47.9**	**-0.3**
SANI	**Sanana**	**6.14**	**329**			P	**Pb**	**17 18 51.9**	**-0.3**
KDU	**Kakadu**	**6.23**	**148**			P	Pn	17 18 43.7	+6.5
KNRA	**Kununurra**	**8.28**	**183**			P	Pn	17 19 17.3	+12
WRA	**Warramunga Arr**	**13.49**	**159**			Pn	**Pn**	**17 20 19.8**	**+3.1**
	1.0nm,0.3s,baz=340,slow=13,SNR=50								
WRA						Sn	**Sn**	**17 22 42.4**	**-4.5**
	2.5nm,0.3s,baz=330,slow=23,SNR=11								
	1.2nm,0.3s	

SHUL	**Shoufeng**	**0.21**	**186**	*i* P		Pg	17 30 44.1	+1.0
	baz=186								
SHUL				*i* S		Sg	17 30 48.6	+2.7
	baz=186								
ETLH	**Xiulin Townshi**	**0.23**	**335**	⇓*i* P		Pg	17 30 44.7	+1.1
	baz=335								
ETLH				S		Sg	17 30 48.1	+1.4
	baz=335								
ESL	**Shilin**	**0.23**	**218**	⇓*i* P		Pg	17 30 43.7	+0.2
	baz=216								
ESL				*i* S		Sg	17 30 46.8	+0.2
	baz=216								
WHF	**Hehuan Shan**	**0.33**	**297**	⇓*i* P		Pb	17 30 46.5	-0.9
	baz=296								
WHF				*e*S		Sg	17 30 51.5	+1.6
	baz=296								
WARBT	**Fenglin Townsh**	**0.33**	**214**	⇓*i* P		Pg	17 30 45.5	0.0
	baz=213								
OWD	**Renai**	**0.38**	**264**	*e*P		Pb	17 30 47.4	-0.7
	baz=263								
CHGB	**Renai**	**0.38**	**280**	⇓*i* P		Pb	17 30 47.7	-0.5
	baz=279								
CHGB				*e*S		Sb	17 30 54.0	-0.4
	baz=279								
FUSS	**Fushou**	**0.40**	**308**	⇓*i* P		Pb	17 30 48.3	-0.3
	baz=308								
FUSS				*e*S		Sb	17 30 54.3	-0.6
	baz=308								
WUSB	**Renai**	**0.43**	**269**	⇓*i* P		Pb	17 30 48.6	-0.4
	baz=269								
WUSB				*e*S		Sb	17 30 55.4	-0.3
	baz=269								
ENA	**Nanau**	**0.45**	**18**	⇓*i* P		Pg	17 30 48.4	+0.8
	baz=18								
TWT	**Tachien**	**0.46**	**304**	*e*P		Pb	17 30 49.5	+0.1
	baz=302								
TDCB	**Techi**	**0.47**	**303**	⇓P		Pb	17 30 49.6	0.0
	baz=302								
TDCB				*e*S		Sb	17 30 56.8	0.0
	baz=302								
NNSB	**Datong**	**0.47**	**336**	⇓*i* P		Pb	17 30 49.3	-0.3
	baz=336								
NNSB				*e*S		Sb	17 30 56.1	-0.7
	baz=336								
EWUT	**Wuta**	**0.48**	**21**	*e*P		Pb	17 30 49.0	-0.7
	baz=21								
NNS	**Nan Shan**	**0.48**	**336**	*e*P		Pb	17 30 49.6	-0.2
	baz=336								
NNS				*e*S		Sb	17 30 56.5	-0.7
	baz=336								
LATG	**Datong**	**0.54**	**354**	⇓P		Pb	17 30 50.3	-0.5
	baz=353								
EHY	**Hungye**	**0.55**	**207**	P		Pg	17 30 49.5	+0.1
	baz=205								
NDT	**Datong Townshi**	**0.61**	**354**	⇓P		Pb	17 30 51.9	0.0
	baz=353								
SSLB	**Suanglung**	**0.62**	**250**	⇓*i* P		Pb	17 30 51.7	-0.3
	baz=250								
WCS	**Beigang Elemen**	**0.62**	**276**	⇓P		Pb	17 30 52.4	+0.3
	baz=275								
ENTT	**Nioudou**	**0.64**	**358**	⇓P		Pb	17 30 52.5	0.0
	baz=358								
SMLT	**Sun Moon Lake**	**0.64**	**260**	P		Pb	17 30 52.5	0.0
	baz=259								
NDS	**Dongshan**	**0.64**	**10**	*e*P		Pb	17 30 52.3	-0.2
	baz=10.0								
WHP	**Taichung City**	**0.65**	**296**	*e*P		Pb	17 30 53.4	+0.7
	baz=295								
YULB	**Yu-li**	**0.66**	**204**	*e*P		Pg	17 30 51.9	+0.3
	baz=203								
TYC	**Yuchr**	**0.68**	**262**	*e*P		Pb	17 30 53.1	+0.1
	baz=262								
YHNB	**Yeheng**	**0.70**	**344**	⇓P		Pb	17 30 53.7	+0.2
	baz=343								
NSK	**Sanguang**	**0.71**	**343**	P		Pb	17 30 53.9	+0.2
	baz=343								
FUSB	**Fushanzhiwuyua**	**0.76**	**360**	*e*P		Pb	17 30 54.7	+0.2
	baz=359								

*TAP **07** 17:30:48.6, 23°.99N × 121°.59E, h8km, ML3.1, C*
*JMA **07** 17:30:49.1±0.3, 24°.0N±0°.4 × 121°.2E±°, h0km, TAIWAN REGION*
ISC 07 17:30:49.3±0.9, **24°.00N**±0°.02 × **121°.61E**±0°.03, **h6**km±5km, **n31**, σ0**°67/52**, **2C-7D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.02**	**182**	⇑*i* P	**Pg**	**17 30 50.4**	**-0.1**
	baz=122						
HWA				*i* S	**Sg**	**17 30 51.9**	**+0.6**
	baz=122						
TWD	**Chiawan**	**0.08**	**354**	⇓*i* P	**Pg**	**17 30 51.3**	**+0.1**
	baz=6.0						
TWD				S	**Sg**	**17 30 53.1**	**+0.6**
	baz=6.0						
ETM	**Tongmen**	**0.11**	**252**	⇓*i* P	**Pg**	**17 30 51.3**	**-0.3**
	baz=258						
ETM				S	**Sg**	**17 30 53.0**	**-0.3**
	baz=258						
ETL	**Fush Village**	**0.16**	**6**	*i* P	**Pg**	**17 30 52.7**	**+0.1**
	baz=9.0						
ETL				S	**Sg**	**17 30 55.2**	**+0.4**
	baz=9.0						
NACB	**Ninganchiao**	**0.17**	**357**	⇓*i* P	**Pg**	**17 30 52.9**	**+0.1**
	baz=7.0						
NACB				S	**Sg**	**17 30 55.2**	**0.0**
	baz=7.0						
LXIB	**Xiulin Townshi**	**0.18**	**277**	P	**Pg**	**17 30 52.8**	**-0.2**
	baz=275						
LXIB				*e*S	**Sg**	**17 30 55.4**	**0.0**
	baz=275						
SHUL	**Shoufeng**	**0.21**	**191**	*e*P	**Pg**	**17 30 53.8**	**+0.2**
	baz=195						
SHUL				*e*S	**Sg**	**17 30 58.3**	**+1.9**
	baz=195						
ETLH	**Xiulin Townshi**	**0.23**	**331**	*e*P	**Pg**	**17 30 54.2**	**+0.2**
	baz=335						
ETLH				*e*S	**Sg**	**17 30 57.5**	**+0.3**
	baz=335						
ESL	**Shilin**	**0.24**	**221**	*e*P	**Pg**	**17 30 53.5**	**-0.6**
	baz=225						
ESL				*e*S	**Sg**	**17 30 56.6**	**-0.7**
	baz=225						
WHF	**Hehuan Shan**	**0.34**	**295**	⇓P	**Pg**	**17 30 56.1**	**0.0**
	baz=298						
WHF				*e*S	**Sg**	**17 31 01.2**	**+0.4**
	baz=298						
CHGB	**Renai**	**0.40**	**279**	*e*P	**Pg**	**17 30 57.2**	**+0.1**
	baz=281						
CHGB				*e*S	**Sg**	**17 31 03.2**	**+0.8**
	baz=281						
FUSS	**Fushou**	**0.41**	**307**	⇓P	**Pg**	**17 30 57.8**	**+0.4**
	baz=319						
FUSS				*e*S	**Sg**	**17 31 03.8**	**+1.0**
	baz=319						
ENA	**Nanau**	**0.44**	**16**	⇓P	**Pg**	**17 30 57.9**	**0.0**
	baz=18						
ENA				S	**Sg**	**17 31 04.0**	**+0.3**
	baz=18						
WUSB	**Renai**	**0.45**	**269**	S	**Sg**	**17 31 04.3**	**+0.4**
	baz=280						
EWUT	**Wuta**	**0.47**	**20**	*e*P	**Pg**	**17 30 58.5**	**+0.1**
	baz=20						
EWUT				*e*S	**Sg**	**17 31 04.6**	**0.0**
	baz=20						
NNSB	**Datong**	**0.47**	**335**	*e*S	**Sg**	**17 31 05.2**	**+0.5**
	baz=336						
TDCB	**Techi**	**0.48**	**302**	*e*P	**Pg**	**17 30 59.1**	**+0.5**
	baz=312						
TDCB				*e*S	**Sg**	**17 31 06.0**	**+1.1**
	baz=312						
NNS	**Nan Shan**	**0.49**	**334**	*e*P	**Pg**	**17 30 59.2**	**+0.4**
	baz=336						
NNS				*e*S	**Sg**	**17 31 05.9**	**+0.7**
	baz=336						
NDT	**Datong Townshi**	**0.61**	**352**	*e*P	**Pg**	**17 31 01.1**	**+0.1**
	baz=343						
NDT				S	**Sb**	**17 31 09.8**	**-1.3**
	baz=343						
ESAO	**Su ao**	**0.61**	**21**	*e*P	**Pg**	**17 31 00.6**	**-0.6**
	baz=21						
SSLB	**Suanglung**	**0.63**	**251**	S	**Sg**	**17 31 08.8**	**-0.9**
	baz=264						
ENTT	**Nioudou**	**0.64**	**357**	⇓P	**Pb**	**17 31 02.0**	**-0.9**
	baz=358						
ENTT				*e*S	**Sb**	**17 31 10.9**	**-1.2**
	baz=358						

NDS	**Dongshan**	**0.64**	**9**	⇑P		**Pb**	**17 31 01.9**	**-1.0**
	baz=10.0								
NDS				*e*S		**Sb**	**17 31 10.9**	**-1.2**
	baz=10.0								
NSK	**Sanguang**	**0.71**	**341**	*e*P		**Pb**	**17 31 03.5**	**-0.6**
	baz=343								
NSK				*e*S		**Sg**	**17 31 12.8**	**+0.5**
	baz=343								
NWLT	**Wulai**	**0.78**	**353**	*e*S		**Sg**	**17 31 14.8**	**+0.3**
	baz=354								
TIPB	**Shuangxi**	**0.99**	**12**	*e*P		**Pb**	**17 31 08.4**	**-0.5**
	baz=11								
SXI1	**Grass Mountain**	**1.12**	**13**	*e*P		**Pn**	**17 31 13.2**	**+1.6**
	baz=4.0								
YM01	**YM01**	**1.14**	**358**	*e*P		**Pn**	**17 31 11.9**	**+0.1**
	baz=8.0								
YM08	**YM08**	**1.18**	**359**	*e*P		**Pn**	**17 31 12.7**	**+0.3**
	baz=8.0								
JYNG	**Yonagunijimaku**	**1.30**	**70**	S		**Sn**	**17 31 32.1**	**+0.4**
SGST	**Jiashian**	**1.31**	**226**	*e*P		**Pb**	**17 31 14.3**	**0.0**
	baz=228								
SGST				*e*S		**Sn**	**17 31 32.4**	**+0.5**
	baz=228								

*IDC **07** 17:33:24.7±0.6, 41°.45N × 144°.23E, h0km, mb4.3/23, mbtmp4.3/30, ML3.4/7, MS3.6/9, Error ellipse: s-maj=14.9km s-min=13.2km az=117.0*
*MOS **07** 17:33:24.3±1.0, 41°.40N × 144°.22E, h12km, mb4.9/31, Error ellipse: s-maj=7.8km s-min=5.1km az=98.8*
*NEIC **07** 17:33:26.7±1.9, 41°.48N±0°.06 × 144°.19E±0°.10, h10km±1km, mb4.6/62, Error ellipse: s-maj=12.8km s-min=10.1km az=103.0*
*JMA **07** 17:33:29.1±0.2, 42°N±1° × 144°.2E±0°.6, h40km±1km, MD4.3/40, MV4.3/40, SE OFF TOKACHI*
*NIED **07** 17:33:29.1, 41°.53N × 144°.22E, h40km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr-1.85; Mθθ-0.84; Mϕϕ2.69; Mrθ0.07; Mϕθ-0.08; Mϕr0.13; Fault plane solution: M0 2.28000 × 10^15^ NP1: ϕs183.00000°, δ47.00000°, λ-85.00000°. NP2: ϕs355.00000°, δ43.00000°, λ-96.00000°.*
ISC 07 17:33:27.2±0.8, **41°.51N**±0°.05 × **144°.19E**±0°.04, **h16**km±4km, **n210**, σ1**°22/193**, **mb4.6**/84, **MS3.9**/4, **10C**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.93**	**304**		**Pn**	**17 33 46.0**	**+0.4**
ERM	**Erimo**	**0.93**	**304**	*ce*P	**Pn**	**17 33 45.8**	**+0.2**
ERM				pmax	pmax		
	comp=Z,2μm,1.7s						
JEM	**Erimo**	**0.93**	**304**	*e*P	**Pn**	**17 33 45.9**	**+0.3**
JEM	**Erimo**	**0.93**	**304**	A	A	17 33 45.9	
	comp=E,8.0nm,1.3s,comp=N,11nm,1.2s						
JTHR	**Tokachihiroo**	**1.03**	**320**	P	**Pn**	**17 33 47.4**	**+0.4**
JTHR				*e*S	**Sn**	**17 34 01.2**	**+0.1**
JTHR	**Tokachihiroo**	**1.03**	**320**	A	A	17 33 47.4	
	comp=E,11nm,1.4s,comp=N,12nm,1.0s						
JCH	**Churui**	**1.27**	**331**	*e*P	**Pn**	**17 33 50.4**	**+0.1**
JCH				*e*S	**Sb**	**17 34 06.8**	**-0.1**
JCH	**Churui**	**1.27**	**331**	A	A	17 33 50.4	
	comp=E,5.0nm,3.0s,comp=N,5.0nm,5.1s						
JNBK	**Urakawa-nobuka**	**1.32**	**306**	*e*P	**Pg**	**17 33 52.4**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.32**	**306**	A	A	17 33 52.4	
	comp=E,13nm,1.7s,comp=N,10.0nm,0.8s						
JOB	**Onbets**	**1.42**	**349**	*e*P	**Pn**	**17 33 52.7**	**+0.3**
JOB	**Onbets**	**1.42**	**349**	A	A	17 33 52.7	
	comp=E,7.0nm,3.1s,comp=N,6.0nm,2.0s						
JAK	**Akkeshi**	**1.54**	**14**	*e*P	**Pn**	**17 33 54.2**	**+0.2**
JAK				*e*S	**Sn**	**17 34 13.7**	**+0.1**
JAK	**Akkeshi**	**1.54**	**14**	A	A	17 33 54.2	
	comp=E,6.0nm,0.8s,comp=N,7.0nm,1.3s						
JSHD	**Hidakashinhida**	**1.57**	**306**	*e*P	**Pb**	**17 33 56.1**	**+0.3**
JSHD	**Hidakashinhida**	**1.57**	**306**	A	A	17 33 56.1	
	comp=E,11nm,2.1s,comp=N,9.0nm,2.5s						
JKHN	**Kushirohamanak**	**1.73**	**24**	P	**Pn**	**17 33 57.2**	**+0.5**
JKHN				*e*S	**Sn**	**17 34 18.5**	**0.0**
JKHN	**Kushirohamanak**	**1.73**	**24**	A	A	17 33 57.2	
	comp=E,6.0nm,2.3s,comp=N,7.0nm,3.8s						
JAR	**Ashorobuto**	**1.82**	**350**	*e*P	**Pn**	**17 33 57.7**	**-0.1**
JAR				*e*S	**Sn**	**17 34 19.9**	**-0.6**
JAR	**Ashorobuto**	**1.82**	**350**	A	A	17 33 57.7	
	comp=E,3.0nm,0.6s,comp=N,3.0nm,1.4s						
JBT2	**Biratori 2**	**1.86**	**314**	*e*P	**Pn**	**17 33 59.4**	**+1.0**
JBT2	**Biratori 2**	**1.86**	**314**	A	A	17 33 59.4	
	comp=E,2.0nm,4.3s,comp=N,3.0nm,4.6s						
JIAM	**Iburiatsuma**	**2.03**	**304**	*e*P	**Pb**	**17 34 03.8**	**+0.2**
JIAM	**Iburiatsuma**	**2.03**	**304**	A	A	17 34 03.8	
	comp=E,10.0nm,2.2s,comp=N,13nm,1.3s						
JFR	**Furan**	**2.04**	**325**	*e*P	**Pn**	**17 34 01.4**	**+0.5**
JFR				*e*S	**Sn**	**17 34 26.0**	**0.0**
JAHD	**Aomorihigashid**	**2.16**	**265**	A	A	17 34 04.1	
	comp=E,13nm,0.6s,comp=N,10.0nm,0.5s						
NMR	**Nemuro--Hokkai**	**2.18**	**31**	*e*P	**Pn**	**17 34 02.6**	**-0.2**
NMR				*e*S	**Sn**	**17 34 27.2**	**-2.3**
JNSB	**Nemuroshibetsu**	**2.35**	**15**	A	A	17 34 06.0	
	comp=E,4.0nm,3.3s,comp=N,5.0nm,2.6s						
JOT	**Ohata**	**2.37**	**268**	A	A	17 34 07.1	
	comp=E,5.0nm,0.9s,comp=N,4.0nm,1.0s						
JEW	**Eniwo**	**2.44**	**304**	A	A	17 34 07.8	
	comp=E,6.0nm,3.6s,comp=N,6.0nm,2.7s						
JTM	**Tenmabayashi**	**2.47**	**254**		**Pn**	**17 34 06.6**	**-0.2**
RUSJ	**Misakicho**	**2.71**	**16**	*e*P	**Pn**	**17 34 11.4**	**+1.3**
RUSJ				*e*S	**Sn**	**17 34 42.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**2.81**	**25**	*e*P	**Pn**	**17 34 11.9**	**+0.4**
YUK				*e*S	**Sn**	**17 34 44.1**	**-0.9**
YUK				pmax	pmax		
	comp=N,141nm,0.2s						
YUK				pmax	pmax		
	comp=E,214nm,0.2s						
YUK				pmax	pmax		
	comp=Z,325nm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
JKA	**Kamikawa-asahi**	**2.86**	**336**		**Pn**	**17 34 12.7**	**+0.5**
ASAJ	**Asahikawa**	**2.86**	**336**	Pn	**Pn**	**17 34 13.0**	**+0.8**
	comp=N,6.3nm,0.3s,baz=187,slow=9.9,SNR=88						
ASAJ				Sn	**Sn**	**17 34 49.2**	**+2.9**
	comp=N,12nm,0.3s,baz=261,slow=27,SNR=7.2						
ASAJ				LR	LR	17 34 60.0	
	comp=N,132nm,22.0s,baz=178,slow=32						
JAH	**Hinai**	**3.00**	**245**	A	A	17 34 16.2	
	comp=E,3.0nm,2.9s						
JOM	**Ohasama**	**3.00**	**228**	A	A	17 34 16.2	
	comp=E,4.0nm,0.8s,comp=N,2.0nm,0.9s						
JHHS	**Hirosakihyakuz**	**3.02**	**255**	A	A	17 34 16.4	
	comp=E,6.0nm,2.9s,comp=N,8.0nm,4.7s						
SHO	**Shikotan**	**3.06**	**39**	*e*P	**Pn**	**17 34 14.9**	**0.0**
SHO				*e*S	**Sn**	**17 34 47.7**	**-3.5**
SHO				pmax	pmax		
	comp=Z,51nm,0.1s						
SHO				smax	smax		
	comp=N,713nm,0.3s						
SHO				smax	smax		
	comp=E,567nm,0.3s						
JMM	**Marumori**	**4.48**	**217**		**Pn**	**17 34 32.4**	**-2.1**
KUR	**Kuril'sk**	**4.59**	**34**	*e*P	**Pn**	**17 34 37.0**	**+1.1**
KUR				*e*S	**Sn**	**17 35 28.3**	**-0.6**
KUR				pmax	pmax		
	comp=Z,182nm,0.7s						
KUR				smax	smax		
	comp=N,540nm,0.4s						
KUR				smax	smax		
	comp=E,183nm,0.2s						
YSS	**Yuzh-Sakhalins**	**5.54**	**350**	Pn	**Pn**	**17 34 47.8**	**-1.3**
YSS	**Yuzh-Sakhalins**	**5.54**	**350**	*e*P	**Pn**	**17 34 51.5**	**+2.5**
YSS				*e*S	**Sn**	**17 35 51.4**	**-1.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,30nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
MAJO	**Matsushiro**	**6.80**	**225**		**Pn**	**17 35 06.7**	**+0.3**
MAJO	**Matsushiro**	**6.80**	**225**	*i* P	**Pn**	**17 35 06.4**	**0.0**

MJAR	**Matsushiro Arr**	**6.80**	**225**		Pn	**Pn**	**17 35 06.5**	**+0.2**
	comp=E,0.3nm,0.3s,baz=54,slow=12,SNR=17								
MJAR					Sn	**Sn**	**17 36 20.9**	**-2.5**
	baz=50,slow=30,SNR=1.8								
MJAR					LR	LR	17 38 21.1		
	comp=E,334nm,18.8s,baz=55,slow=44 comp=E,2.9nm,0.5s								
MJB9	**Matsu-Tunnel**	**6.80**	**225**			**Pn**	**17 35 07.5**	**+1.1**
JGF	**Kuroka**	**7.96**	**224**			**Pn**	**17 35 23.9**	**+1.5**
JHJ	**Hachijo jima 2**	**9.08**	**204**		Pn	**Pn**	**17 35 36.2**	**-1.3**
	comp=E,11nm,0.3s,baz=65,slow=19,SNR=1.7								
JHJ					Sn	Sn	17 37 09.8	-10	
	comp=E,21nm,0.3s,baz=130,slow=22,SNR=5.8 comp=E,122nm,0.8s								
USA0B	**Ussuriysk Arra**	**9.36**	**291**	*i* P		**Pn**	**17 35 43.4**	**+2.0**
USRK	**Ussuriysk Ar.**	**9.36**	**291**		Pn	**Pn**	**17 35 43.4**	**+2.0**
	comp=E,0.2nm,0.3s,baz=103,slow=14,SNR=4.9 comp=E,2.8nm,0.7s								
TYV	**Tymovskoe**	**9.42**	**354**	*e*P		Pn	17 35 48.3	+6.1	
TYV				*e*S		Sn	17 37 40.3	+13	
TYV				pmax		pmax			
	comp=Z,4.0nm,1.0s								
TYV				pmax		pmax			
	comp=Z,100nm,3.8s								
TYV				smax		smax			
	comp=E,500nm,4.2s								
TYV				smax		smax			
	comp=E,6.0nm,1.4s								
KLR	**Kul'dur**	**11.66**	**316**	⇑*i* P		**Pn**	**17 36 15.2**	**+2.3**	
KLR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
KLR	**Kul'dur**	**11.66**	**316**		Pn	**Pn**	**17 36 14.2**	**+1.4**	
	comp=Z,0.2nm,0.3s,baz=132,slow=12,SNR=13								
KLR					LR	LR	17 40 37.2		
	comp=Z,97nm,18.2s,baz=144,slow=37 comp=Z,4.7nm,0.8s								
KSRS	**Korea Array**	**13.20**	**257**		Pn	**Pn**	**17 36 35.0**	**+1.1**	
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=2.9								
KSRS					LR	LR	17 41 44.7		
	comp=Z,179nm,18.4s,baz=70,slow=38 comp=Z,1.4nm,0.8s								
JNU	**Nakatsue**	**13.49**	**236**		LR	LR	17 42 33.9		
	comp=Z,174nm,19.5s,baz=41,slow=41								
PETK	**Petropavlovsk-**	**14.76**	**34**		Pn	**Pn**	**17 36 55.6**	**+0.5**	
PETK	**Petropavlovsk-**	**14.76**	**34**		P	**Pn**	**17 36 55.6**	**+0.5**	
PETK	**Petropavlovsk-**	**14.76**	**34**		Pn	**Pn**	**17 36 54.9**	**-0.3**	
	comp=Z,0.3nm,0.3s,baz=213,slow=9.7,SNR=8.7 comp=Z,1.4nm,0.7s								
ZEA	**Zeya**	**16.68**	**323**	*e*P		**Pn**	**17 37 19.4**	**-0.8**	
ZEA				pmax		pmax			
	comp=N,10.0nm,1.0s								
ZEA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
MA2	**Magadan**	**18.55**	**11**	P		**P**	**17 37 43.2**	**+0.2**	
	comp=Z,6.0nm,0.7s,baz=178,slow=8.5,SNR=6.9								
BJT	**Baijiatuau**	**21.25**	**275**	P		**P**	**17 38 11.7**	**-0.8**	
BJT	**Baijiatuau**	**21.25**	**275**	P		**P**	**17 38 11.7**	**-0.8**	
BJT				pmax		pmax			
	comp=Z,7.0nm,1.0s								
SEY	**Seymchan**	**22.00**	**10**	*i* P		**P**	**17 38 19.1**	**-1.3**	
SEY				pmax		pmax			
	comp=Z,28nm,3.0s								
YAK	**Yakutsk**	**22.33**	**342**	P		**P**	**17 38 19.7**	**-4.2**	
YAK				IAmb		IAmb	17 38 21.6		
	comp=Z,17nm,0.7s								
YAK	**Yakutsk**	**22.33**	**342**	*e*P		**P**	**17 38 20.2**	**-3.7**	
YAK				*e**PP		**sP**	**17 38 28.5**	**-1.1**	
YAK				*e*			17 42 17.4		
YAK				*e*S		**S**	**17 42 24.0**	**-4.6**	
YAK				*e*			17 49 35.8		
YAK				pmax		pmax			
	comp=Z,17nm,0.8s								
YAK				pmax		pmax			
	comp=N,5.0nm,1.0s								
YAK				smax		smax			
	comp=N,16nm,1.2s								
YAK				smax		smax			
	comp=E,46nm,1.4s								
ULN	**Ulaanbaatar**	**26.97**	**296**	P		**P**	**17 39 07.3**	**-0.8**	
ULN	**Ulaanbaatar**	**26.97**	**296**	*ce*P		**P**	**17 39 08.7**	**+0.6**	
ULN				pmax		pmax			
	comp=Z,8.0nm,1.3s								
SONM	**Songino Array**	**27.41**	**296**	P		**P**	**17 39 11.7**	**-0.4**	
SONM	**Songino Array**	**27.41**	**296**	P		**P**	**17 39 11.7**	**-0.4**	
SONM				pmax		pmax			
	comp=Z,2.0nm,0.7s								
SONM	**Songino Array**	**27.41**	**296**	P		**P**	**17 39 12.5**	**+0.4**	
	comp=Z,2.6nm,0.7s,baz=84,slow=8.2,SNR=11 comp=Z,2.6nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**29.04**	**131**	T		T	18 10 25.6		
	baz=324,slow=75,SNR=124								
H11N1	**WAKE ISLAND Hy**	**29.05**	**132**	T		T	18 10 25.0		
	baz=324,slow=75,SNR=60								
H11N3	**WAKE ISLAND Hy**	**29.06**	**131**	T		T	18 10 32.4		
	baz=324,slow=75,SNR=78								
BILL	**Bilibino**	**29.13**	**17**	*i* P		**P**	**17 39 28.3**	**+1.3**	
ZAK	**Zakamensk**	**29.48**	**302**	*e*P		**P**	**17 39 31.3**	**+0.9**	
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.4s								
H11S1	**WAKE ISLAND Hy**	**29.92**	**133**	T		T	18 11 33.7		
	baz=326,slow=74,SNR=63								
H11S3	**WAKE ISLAND Hy**	**29.92**	**133**	T		T	18 11 36.5		
	baz=326,SNR=83								
H11S2	**WAKE ISLAND Hy**	**29.93**	**133**	T		T	18 11 36.3		
	baz=326,slow=74,SNR=65								
F17K	**Baldwin Pennin**	**38.78**	**32**	P		**P**	**17 40 51.7**	**+1.2**	
C18K	**Utukok River**	**39.32**	**28**	P		**P**	**17 40 55.4**	**+0.2**	
DGZ	**Jazzator, Alta**	**39.70**	**302**	*i* P		**P**	**17 40 59.4**	**+0.7**	
DGZ				pmax		pmax			
	comp=Z,7.0nm,0.8s								
H18K	**Honhosa River**	**39.72**	**34**	P		**P**	**17 40 60.0**	**+1.4**	
H18K				IAmb		IAmb	17 41 00.6		
	comp=Z,15nm,1.4s								
NRIK	**Noril'sk**	**40.20**	**333**	LR		LR	17 59 28.6		
	comp=Z,165nm,18.6s,baz=330,slow=39								
G19K	**Purcell Mounta**	**40.38**	**32**	P		**P**	**17 41 04.5**	**+0.5**	
ZAA0	**Zalesovo Array**	**40.65**	**309**	P		**P**	**17 41 05.4**	**-1.0**	
ZALV	**Zalesovo Beam**	**40.65**	**309**	P		**P**	**17 41 05.6**	**-0.8**	
ZALV	**Zalesovo Beam**	**40.65**	**309**	*i* P		**P**	**17 41 06.4**	**+0.1**	
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.5s								
ZALV	**Zalesovo Beam**	**40.65**	**309**	P		**P**	**17 41 06.9**	**+0.6**	
	comp=Z,4.5nm,0.5s,baz=91,slow=8.2,SNR=23

comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 44.79 253 P P 17 41 40.9 +0.5
comp=Z,1.6nm,0.7s,baz=43,slow=7.3,SNR=12
comp=Z,1.6nm,0.7s
KURK Kurchatov 45.00 305 P P 17 41 41.2 -0.4
KURK IAmb IAmb 17 41 47.0
comp=Z,7.3nm,0.6s
KURK Kurchatov 45.00 305 *ce*P **P 17 41 41.3 -0.4**
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURBB Kurchatov Arra 45.08 305 P P 17 41 42.4 +0.1
comp=Z,7.8nm,0.6s,baz=75,slow=8.8,SNR=27
comp=Z,7.8nm,0.6s
PRP Porcupine Dome 45.11 34 P P 17 41 44.6 +2.1
PRP IAmb IAmb 17 41 46.1
comp=Z,4.5nm,0.8s
BMAR Burnt Mountain 45.39 31 P P 17 41 46.8 +2.2
SCRK Sand Creek 45.91 36 P P 17 41 49.2 +0.4
SCRK IAmb IAmb 17 41 50.3
comp=Z,4.0nm,0.8s
L26K Log Cabin Wild 46.31 37 P P 17 41 53.7 +1.8
L26K IAmb IAmb 17 41 54.7
comp=Z,10nm,1.0s
L27K Beaver Creek, 46.99 37 IAmb IAmb 17 42 00.2
comp=Z,6.4nm,0.8s
F28M Old Crow 47.18 30 IAmb IAmb 17 42 01.6
comp=Z,6.0nm,0.8s
I28M Miner Creek 47.44 33 IAmb IAmb 17 42 07.7
comp=Z,7.4nm,1.1s
G30M tAoh Zraii Nji 48.67 31 IAmb IAmb 17 42 27.4
comp=Z,9.1nm,1.2s
BVAR Borovoye Array 49.26 310 P P 17 42 15.2 +0.3
comp=Z,2.0nm,0.3s,baz=72,slow=9.0,SNR=20
comp=Z,2.0nm,0.3s
BRVK Borovoye 49.30 310 *ce*P **P 17 42 15.4 +0.2**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
INK Inuvik 49.43 29 IAmb IAmb 17 42 18.2
comp=Z,7.4nm,0.8s
F31M Tsiigehtchic 49.53 30 IAmb IAmb 17 42 19.0
comp=Z,7.0nm,0.8s
C36M Paulatuk 52.47 27 IAmb IAmb 17 42 40.8
comp=Z,11nm,1.1s
KKAR Karatay Array 52.84 298 IAmb IAmb 17 42 42.6
comp=Z,4.4nm,0.9s
SVE Sverdlovsk 53.28 317 *e*P **P 17 42 45.8 +0.8**
SVE pmax pmax
comp=Z,17nm,0.8s
ARU Arti 54.50 317 P P 17 42 53.2 -0.6
ARU Arti 54.50 317 *c i*P **P 17 42 53.8 0.0**
ARU 17 44 51.6
ARU S **S 17 50 34.6 +2.7**
ARU SS **SS 17 54 08.2 -5.6**
ARU pmax pmax
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 56.77 309 IAmb IAmb 17 43 11.3
comp=Z,6.4nm,0.7s
KIRV Kirov 58.02 322 *ce*P **P 17 43 19.6 +0.7**
YKA Yellowknife Ar 58.87 32 P P 17 43 25.5 +0.7
comp=Z,0.8nm,0.7s,baz=300,slow=6.5,SNR=9.7
YKA PcP **PcP 17 44 14.0 0.0**
comp=Z,0.4nm,0.7s,baz=307,slow=4.2,SNR=4.0
comp=Z,0.8nm,0.7s
ARCES ARCESS Array B 60.58 339 P P 17 43 37.0 +0.5
ARCES ARCESS Array B 60.58 339 P P 17 43 37.0 +0.5
comp=Z,9.4nm,1.1s,baz=335,slow=8.2,SNR=7.1
comp=Z,9.4nm,1.1s
KLMR Klimovskoe 61.15 327 *e*P **P 17 43 39.2 -1.2**
KLMR pmax pmax
comp=Z,30nm,1.9s
WRA Warramunga Arr 61.81 191 *i* P **P 17 43 43.5 -1.9**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 61.81 191 P P 17 43 44.4 -1.0
comp=Z,2.0nm,0.8s,baz=8.2,slow=7.2,SNR=6.9
comp=Z,2.0nm,0.8s
BELG Belogornoye 62.03 316 *i* P **P 17 43 45.8 -0.7**
BELG pmax pmax
comp=Z,4.0nm,0.9s
GEYT Alibeck 63.59 298 P P 17 43 57.5 +0.2
comp=Z,2.0nm,0.5s,baz=74,slow=6.8,SNR=6.2
comp=Z,2.0nm,0.5s
ASAR Alice Springs 65.54 190 P P 17 44 09.4 -0.5
comp=Z,0.8nm,0.7s,baz=2.7,slow=5.3,SNR=18
comp=Z,0.8nm,0.7s
VRH Novokhopyorsk 65.72 318 *e*P **P 17 44 09.1 -1.8**
VRH pmax pmax
comp=Z,8.0nm,0.7s
OBN Obninsk 65.81 323 *e*P **P 17 44 12.3 +1.0**
OBN *e**PP **pwP 17 44 18.6 +0.4**
OBN *e* 17 44 42.1
OBN *e* 17 46 36.8
OBN *e*PPP PPP 17 48 09.9
OBN pmax pmax
comp=Z,31nm,2.5s
OBN MLR MLR
comp=Z,76nm,9.0s
FINES FINESS Array B 65.86 332 P P 17 44 11.6 0.0
comp=Z,10nm,0.7s,baz=48,slow=7.3,SNR=44
comp=Z,10nm,0.7s
SUMG Summit 66.20 1 P P 17 44 14.2 +0.1
SUMG Summit 66.20 1 P P 17 44 14.3 +0.1
SUMG pmax pmax
comp=Z,31nm,1.5s
LPSR Galich'ya Gora 66.26 320 *e*P **P 17 44 12.9 -1.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 67.00 319 *e*P **P 17 44 17.0 -2.0**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 67.09 318 *e*P **P 17 44 19.0 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.8s
PLID Pearl Lake 67.95 49 P P 17 44 26.3 +0.8
PLID IAmb IAmb 17 44 28.8
comp=Z,4.0nm,1.4s
FFC Flin Flon 68.79 35 P P 17 44 30.3 0.0
FFC IAmb IAmb 17 44 31.8
comp=Z,5.4nm,0.8s
FFC Flin Flon 68.79 35 P P 17 44 30.3 0.0
FFC pmax pmax
comp=Z,5.0nm,0.8s
FCC Fort Churchill 69.04 28 P P 17 44 31.8 +0.1
FCC IAmb IAmb 17 44 32.5
comp=Z,3.4nm,0.7s
FCC Fort Churchill 69.04 28 P P 17 44 31.8 +0.1
FCC pmax pmax
comp=Z,3.0nm,0.7s
GANJ Ganja 69.50 306 P P 17 44 33.5 -1.5
EGMT Eagleton 69.52 44 P P 17 44 36.0 +1.0
EGMT IAmb IAmb 17 44 36.8
comp=Z,8.2nm,1.1s
KIV Kislovodsk 69.61 311 P P 17 44 36.9 +1.2
KIV Kislovodsk 69.61 311 *e*P **P 17 44 37.2 +1.5**
KIV pmax pmax
comp=Z,12nm,1.1s
KBZ Khabaz 69.63 311 *ce*P **P 17 44 36.7 +1.1**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 69.63 311 P P 17 44 36.8 +1.1
comp=Z,5.0nm,0.8s,baz=48,slow=5.3,SNR=17
comp=Z,5.0nm,0.8s
ZEI Tsey 69.63 309 *e*P P 17 44 28.7 -7.3
ZEI pmax pmax
comp=Z,4.0nm,0.9s
ONI Oni 70.01 309 P P 17 44 39.2 +1.1
ONI IAmb IAmb 17 44 40.4
comp=Z,6.6nm,1.0s
ONI Oni 70.01 309 P P 17 44 39.2 +1.1
ONI pmax pmax
comp=Z,7.0nm,1.0s
NB2 NORSAR Subarra 70.88 338 P P 17 44 43.4 +0.3
comp=Z,2.7nm,0.8s,baz=34,slow=6.5
NOA NORSAR Array B 70.88 338 P P 17 44 43.2 +0.1
comp=Z,5.1nm,0.8s,baz=36,slow=6.1,SNR=12
NOA LR LR 18 22 50.3
comp=Z,58nm,18.8s,baz=305,slow=42
comp=Z,5.1nm,0.8s
HFS Hagfors 70.89 336 P P 17 44 43.3 +0.2
comp=Z,4.5nm,0.5s,baz=63,slow=6.8,SNR=21
HFS LR LR 18 22 05.6
comp=Z,304nm,20.8s,baz=340,slow=41
comp=Z,4.5nm,0.5s
AKASG Malin Array Be 72.07 323 P P 17 44 50.3 0.0
comp=Z,6.8nm,0.7s,baz=44,slow=5.8,SNR=18
comp=Z,6.8nm,0.7s
AKBB Malin Array Si 72.07 323 *ce*P **P 17 44 49.9 -0.5**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 72.08 323 P P 17 44 50.0 -0.4
KIEV Kiev 72.08 323 P P 17 44 50.0 -0.4
KIEV pmax pmax
comp=Z,9.0nm,0.9s
UOSS Minazif 72.49 288 P P 17 44 51.9 -1.4
DUG Dugway, Tooele 72.84 51 P P 17 44 56.3 +0.9
DUG IAmb IAmb 17 44 57.6
comp=Z,3.9nm,0.8s
DUG Dugway, Tooele 72.84 51 P P 17 44 56.3 +0.9
DUG pmax pmax
comp=Z,4.0nm,0.9s
PDAR Pinedale Array 73.03 48 P P 17 44 56.3 -0.2
PDAR Pinedale Array 73.03 48 P P 17 44 57.1 +0.6
comp=Z,1.5nm,0.7s,baz=281,slow=1.2,SNR=6.5
comp=Z,1.5nm,0.7s
GURO Guroymak-BITLI 73.40 307 P P 17 44 59.2 +0.5
ULM Lac du Bonnet 74.60 35 P P 17 45 05.2 -0.1
comp=Z,1.5nm,0.5s,baz=351,slow=7.1,SNR=4.7
comp=Z,1.5nm,0.5s
BUR08 Bucovina Ar. S 76.10 322 P P 17 45 13.6 -0.6
BUR08 IAmb IAmb 17 45 15.2
comp=Z,3.4nm,0.7s
BURAR Bucovina Array 76.11 322 P P 17 45 14.8 +0.6
BURAR IAmb IAmb 17 45 15.9
comp=Z,3.7nm,0.8s
PV14 Lion Creek, Pa 76.25 51 P P 17 45 15.6 +0.3
PV04 Paradox Valley 76.31 51 P P 17 45 16.0 +0.5
OJC Ojcow 76.50 327 P P 17 45 17.0 +0.8
OJC IAmb IAmb 17 45 17.4
comp=Z,5.2nm,0.8s
OJC Ojcow 76.50 327 P P 17 45 17.0 +0.8
OJC pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 76.52 326 *e*P **P 17 45 19.2 +2.9**
STHS pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 77.76 328 P P 17 45 24.4 +1.0
MORC IAmb IAmb 17 45 25.2
comp=Z,4.0nm,1.0s
MORC Moravsky Berou 77.76 328 P P 17 45 24.4 +1.0
MORC pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 78.26 331 *e*P **P 17 45 26.0 0.0**
CLL *e**PP **PcP 17 45 37.0 +1.6**
MODS Modra-Piesok 78.97 327 *e*P **P 17 45 31.5 +1.4**
ECSD EROS Data Cent 79.09 40 P P 17 45 31.2 +0.4
ECSD IAmb IAmb 17 45 31.9
comp=Z,5.0nm,0.9s
EKA Eskdalemuir Ar 79.60 342 P P 17 45 33.7 +0.4
comp=Z,0.8nm,0.6s,baz=14,slow=4.3,SNR=4.2
comp=Z,0.8nm,0.6s
KHC Kasperske Hory 79.83 330 P P 17 45 35.6 +0.9
KHC Kasperske Hory 79.83 330 *ce*P **P 17 45 36.6 +1.9**
KHC pmax pmax
comp=Z,9.0nm,1.3s
RONA Rosalia, Austr 79.91 327 *e*P **P 17 45 35.4 +0.2**
comp=Z,2.6nm,0.6s
GERES GERESS Array B 80.01 329 P P 17 45 36.0 +0.2
GERES GERESS Array B 80.01 329 P P 17 45 36.0 +0.2
comp=Z,0.6nm,0.5s,baz=40,slow=7.7,SNR=3.4
comp=Z,0.6nm,0.5s
MMAI Mount Meron Ar 81.10 306 P P 17 45 42.8 +0.9
comp=Z,2.3nm,0.6s,baz=56,slow=6.1,SNR=5.3
comp=Z,2.3nm,0.6s
SOKA Soboth 81.25 327 *e*P **P 17 45 42.4 -0.1**
comp=Z,7.2nm,1.1s
LESA Schwarzleotal 81.57 329 *e*P **P 17 45 44.4 +0.2**
comp=Z,3.5nm,1.0s
KBA Koelnbreinsper 81.59 328 *ep*P **P 17 45 45.9 +1.5**
comp=Z,12nm,1.4s
MYKA Terra Mystica 81.84 328 *ep*P **P 17 45 47.5 +1.9**
comp=Z,4.2nm,1.0s
ABTA Abfaltersbach 82.19 329 *ep*P **P 17 45 48.6 +1.2**
comp=Z,12nm,1.7s
MOTA Moosalm 82.23 330 *i* P **P 17 45 48.4 +0.7**
comp=Z,8.7nm,1.1s
RETA Reutte 82.24 330 *ep*P **P 17 45 49.3 +1.7**
comp=Z,7.3nm,0.9s
FETA Feichten 82.65 330 *e*P **P 17 45 50.5 +0.6**
comp=Z,17nm,2.8s
POST Post 84.33 50 pwP 17 46 05.5 -0.6
TXAR Lajitas Array 85.72 54 P **P 17 46 06.5 +0.8**
comp=Z,1.4nm,0.8s,baz=286,slow=2.9,SNR=10
comp=Z,1.4nm,0.8s
QSPA South Pole Qui 131.24 180 PKP **PKPdf 17 52 37.7 +0.3**
comp=Z,0.4nm,0.6s,baz=0.0,slow=0.0,SNR=1.5
PB08 IPOC Station P 144.64 63 PKPdf PKPbc 17 53 02.6 0.0
PB07 IPOC Station P 145.23 66 PKPbc **PKPdf 17 53 05.1 +0.6**

TAP 07 17:33:34.1,24.00N×121.61E,h7km,ML1.5,1C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.02**	**186**	⇑P		Pg 17 33 34.9	-0.5
HWA	baz=164			S		Sg 17 33 36.3	+0.1
TWD	**Chiawan**	**0.08**	**353**	P		Pg 17 33 36.1	-0.1
TWD	baz=358			*e*S		Sg 17 33 37.7	+0.2
ETM	**Tongmen**	**0.11**	**254**	*i* P		Pg 17 33 35.8	-0.7
ETM	baz=253			*e*S		Sg 17 33 37.4	-0.8
ETL	**Fush Village**	**0.16**	**5**	*e*P		Pg 17 33 37.4	-0.1
	baz=5.0						
NACB	**Ninganchiao**	**0.18**	**356**	P		Pg 17 33 37.5	-0.2
	baz=356						
LXIB	**Xiulin Townshi**	**0.18**	**278**	*i* P		Pg 17 33 37.4	-0.4
LXIB	baz=277			*e*S		Sg 17 33 41.6	+1.3
SHUL	**Shoufeng**	**0.21**	**191**	*e*P		Pg 17 33 39.2	+0.9
SHUL	baz=191			*i* S		Sg 17 33 42.9	+1.7
ETLH	**Xiulin Townshi**	**0.24**	**331**	*i* P		Pg 17 33 38.9	0.0
	baz=331						
ESL	**Shilin**	**0.24**	**221**	*e*P		Pg 17 33 37.9	-1.0
ESL	baz=219			*e*S		Sg 17 33 41.0	-1.1
TEGC	**Jichi Village**	**0.29**	**192**	*e*P		Pb 17 33 40.9	-0.8
TEGC	baz=190			S		Sb 17 33 45.5	-1.3
WARBT	**Fenglin Townsh**	**0.34**	**216**	*e*P		Pg 17 33 39.8	-1.0
WARBT	baz=216			S		Sg 17 33 45.9	+0.6
WHF	**Hehuan Shan**	**0.35**	**295**	*e*P		Pg 17 33 40.7	-0.4
WHF	baz=295			*i* S		Sg 17 33 45.9	+0.2
EAHA	**Aohua**	**0.35**	**20**	P		Pg 17 33 41.4	+0.4
	baz=19						
EGFH	**Guangfu**	**0.36**	**207**	P		Pg 17 33 41.7	+0.5
EGFH	baz=206			*e*S		Sg 17 33 46.0	0.0
OWD	**Renai**	**0.40**	**264**	*i* P		Pg 17 33 41.5	-0.4
OWD	baz=263			S		Sg 17 33 48.3	+1.2
CHGB	**Renai**	**0.40**	**279**	*e*P		Pg 17 33 42.0	0.0
CHGB	baz=279			S		Sg 17 33 47.9	+0.6
FUSS	**Fushou**	**0.42**	**307**	*e*P		Pg 17 33 42.4	+0.1
FUSS	baz=306			S		Sg 17 33 48.5	+0.7
ENA	**Nanau**	**0.45**	**16**	*e*P		Pb 17 33 44.0	-0.4
ENA	baz=16			*e*S		Sg 17 33 48.6	-0.1
WUSB	**Renai**	**0.45**	**270**	*e*P		Pg 17 33 43.0	+0.2
	baz=269						
EWUT	**Wuta**	**0.47**	**19**	*e*P		Pb 17 33 44.3	-0.5
EWUT	baz=19			S		Sg 17 33 49.9	+0.4
NNSB	**Datong**	**0.48**	**335**	*i* P		Pg 17 33 43.0	-0.4
	baz=334						
NNSB				*e*S		Sg 17 33 48.8	-0.9
HGSD	**Ruisui**	**0.53**	**199**	P		Pg 17 33 44.4	+0.1
	baz=198						
HGSD				S		Sg 17 33 51.9	+0.7
LATG	**Datong**	**0.54**	**352**	*e*P		Pb 17 33 45.5	-0.6
	baz=352						
LATG				*i* S		Sg 17 33 52.7	+0.9
EHY	**Hungye**	**0.55**	**208**	P		Pg 17 33 44.5	-0.3
	baz=207						
EHY				S		Sg 17 33 52.9	+0.8
NDT	**Datong Townshi**	**0.61**	**352**	*e*P		Pg 17 33 46.5	+0.6
	baz=351						
NDT				*i* S		Sg 17 33 54.6	+0.8
ESAO	**Su ao**	**0.62**	**20**	P		Pg 17 33 45.9	-0.1
	baz=20						
ESAO				S		Sg 17 33 54.6	+0.6
SSLB	**Suanglung**	**0.63**	**251**	*i* P		Pg 17 33 45.9	-0.4
	baz=250						
SSLB				S		Sg 17 33 54.6	+0.1
WCS	**Beigang Elemen**	**0.64**	**276**	P		Pg 17 33 45.9	-0.5
	baz=275						
WCS				S		Sb 17 33 55.9	-0.9
ENTT	**Nioudou**	**0.64**	**357**	P		Pg 17 33 46.7	+0.2
	baz=357						
ENTT				S		Sg 17 33 55.4	+0.5
NDS	**Dongshan**	**0.64**	**9**	*i* P		Pg 17 33 46.1	-0.4
	baz=8.0						
YULB	**Yu-li**	**0.67**	**205**	*i* P		Pg 17 33 46.7	-0.2
	baz=205						
YULB				*e*S		Sg 17 33 55.8	+0.2
NSK	**Sanguang**	**0.71**	**342**	*e*P		Pb 17 33 48.5	-0.5
	baz=341						
NSK				*e*S		Sb 17 33 58.5	-0.5
FUSB	**Fushanzhiwuyua**	**0.76**	**359**	P		Pg 17 33 48.4	-0.4
	baz=358						
FUSB				S		Sb 17 33 59.6	-0.7
NFF	**Wufeng Townshi**	**0.78**	**325**	*i* P		Pg 17 33 48.4	-0.6
	baz=324						
NFF				S		Sg 17 33 60.0	+0.8
NWLT	**Wulai**	**0.78**	**353**	*i* P		Pg 17 33 48.5	-0.7
	baz=352						
NWLT				S		Sg 17 33 60.0	+0.5
CHN5	**Tsauling**	**0.94**	**245**	P		Pg 17 33 51.2	-1.0
	baz=244						
CHN5				*e*S		Sg 17 34 04.2	-0.2
TIPB	**Shuangxi**	**0.99**	**12**	*i* P		Pg 17 33 52.4	-0.8
	baz=11						
TIPB				*i* S		Sg 17 34 06.4	+0.3
	baz=11						

TAP 07 17:33:37.1,24.11N×121.67E,h9km,ML1.5,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.07**	**316**	P		Pg 17 33 39.8	+0.6
	baz=315						
ETL				*i* S		Sg 17 33 41.5	+0.8
TWD	**Chiawan**	**0.08**	**247**	*i* P		Pg 17 33 39.7	+0.5
	baz=244						
TWD				*i* S		Sg 17 33 41.5	+0.7
NACB	**Ninganchiao**	**0.10**	**311**	*i* P		Pg 17 33 40.1	+0.6
	baz=311						
NACB				*i* S		Sg 17 33 42.2	+1.0
ETLH	**Xiulin Townshi**	**0.20**	**299**	P		Pg 17 33 42.2	+1.0
	baz=298						
ETLH				S		Sg 17 33 45.9	+1.7
ETM	**Tongmen**	**0.22**	**229**	P		Pg 17 33 42.2	+0.7
	baz=228						
ETM				*e*S		Sg 17 33 45.7	+1.1
EAHA	**Aohua**	**0.23**	**15**	*e*P		Pg 17 33 42.9	+1.2
	baz=15						
EAHA				*e*S		Sg 17 33 46.0	+1.1
NNSB	**Datong**	**0.41**	**320**	*i* P		Pb 17 33 46.1	-0.6
	baz=320						
NNSB				*i* S		Sb 17 33 52.7	-0.4
FUSS	**Fushou**	**0.42**	**289**	P		Pb 17 33 46.3	-0.5
	baz=289						
FUSS				S		Sb 17 33 52.9	-0.4
NNS	**Nan Shan**	**0.43**	**320**	*i* P		Pb 17 33 46.3	-0.6
	baz=320						
NNS				S		Sb 17 33 53.1	-0.4
LATG	**Datong**	**0.44**	**342**	P		Pb 17 33 47.0	-0.2
	baz=342						
LATG				S		Sb 17 33 53.6	-0.4
CHGB	**Renai**	**0.46**	**264**	*i* P		Pb 17 33 47.0	-0.5
	baz=263						
CHGB				S		Sb 17 33 54.2	-0.4
WARBT	**Fenglin Townsh**	**0.47**	**214**	*e*P		Pb 17 33 47.1	-0.5
	baz=213						
WARBT				*i* S		Sb 17 33 54.7	0.0
OWD	**Renai**	**0.48**	**251**	P		Pb 17 33 47.5	-0.3
	baz=251						
OWD				S		Sb 17 33 54.7	-0.4
NDT	**Datong Townshi**	**0.51**	**343**	P		Pb 17 33 48.2	-0.1
	baz=343						
NDT				S		Sb 17 33 55.7	-0.1
NDS	**Dongshan**	**0.52**	**4**	*i* P		Pb 17 33 48.3	-0.2
	baz=4.0						
NDS				*e*S		Sb 17 33 55.3	-0.9
WUSB	**Renai**	**0.52**	**257**	P		Pb 17 33 48.6	+0.1
	baz=256						
WUSB				*i* S		Sb 17 33 56.2	0.0
ENTT	**Nioudou**	**0.54**	**349**	P		Pb 17 33 48.5	-0.2
	baz=350						
ENTT				S		Sb 17 33 57.0	+0.4
YHNB	**Yeheng**	**0.62**	**334**	P		Pb 17 33 50.2	0.0
	baz=333						
YHNB				*i* S		Sb 17 33 59.4	+0.4
FUSB	**Fushanzhiwuyua**	**0.65**	**353**	P		Pb 17 33 50.8	+0.1
	baz=353						
FUSB				S		Sb 17 34 00.5	+0.5
NWLT	**Wulai**	**0.68**	**347**	P		Pb 17 33 51.4	+0.2
	baz=346						
NWLT				S		Sb 17 34 01.1	+0.3
SSLB	**Suanglung**	**0.73**	**244**	*e*P		Pb 17 33 52.2	+0.1
	baz=243						
SSLB				*e*S		Sn 17 34 03.7	-1.3
	baz=243						

*NEIC **07** 17:38:07.6±1.9,56.20N±0.08×149.10W±0.06,h10km±2km, ML3.6/56,ML3.3(AEIC),Error ellipse: s-maj=14.0km s-min=5.7km az=179.0*
*IDC **07** 17:38:08.9±4.2,56.02N×148.95W,h0km,mb3.1/1, mbtmp3.2/3,ML3.1/2,Error ellipse: s-maj=72.9km s-min=48.6km az=163.0*
*AEIC **07** 17:38:12.8±1.5,56.20N±0.07×149.2W±0.1,h12km±6km, Error ellipse: s-maj=11.0km s-min=9.0km az=145.0*

ISC 07 17:38:08.7±1.2, 56.30N±0.08×149.19W±0.05, h10km, n202, σ1ϑ23/206, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.38**	**310**		**Pn**	**17 38 47.5**	**-0.2**
KDAK					**Sn**	**17 39 14.7**	**-2.2**
KDAK	**Kodiak Island** baz=129	**2.38**	**310**	P	**Pn**	**17 38 47.5**	**-0.2**
KDAK	baz=129			S	**Sn**	**17 39 14.7**	**-2.2**
OHAK	**Old Harbor**	**2.44**	**294**	Pn	**Pn**	**17 38 47.2**	**-1.3**
OHAK	**Old Harbor**	**2.44**	**294**		**Sn**	**17 39 15.1**	**-3.2**
OHAK	**Old Harbor**	**2.44**	**294**	P	**Pn**	**17 38 47.7**	**-0.8**
OHAK	**Old Harbor** baz=113	**2.44**	**294**	P	**Pn**	**17 38 47.6**	**-0.9**
OHAK	baz=113			S	**Sn**	**17 39 15.1**	**-3.2**
SII	**Sitkinak Islan**	**2.79**	**278**		**Pn**	**17 38 52.3**	**-1.0**
SII					**Sn**	**17 39 23.7**	**-3.3**
SII	**Sitkinak Islan** comp=E,100nm,0.8s	**2.79**	**278**	IAML		17 39 26.7	
SII	**Sitkinak Islan**	**2.79**	**278**	P	**Pn**	**17 38 52.4**	**-0.9**
SII	**Sitkinak Islan** baz=95	**2.79**	**278**	P	**Pn**	**17 38 52.3**	**-1.0**
SII	baz=95			S	**Sn**	**17 39 23.7**	**-3.3**
SYI	**Shuyak Island**	**2.89**	**325**		**Pn**	**17 38 55.0**	**+0.2**
SYI					**Sn**	**17 39 28.6**	**-1.0**
SYI	**Shuyak Island** comp=E,89nm,0.3s	**2.89**	**325**	IAML		17 39 30.2	
Q20K	**Shuyak Island** baz=143	**2.89**	**325**	P	**Pn**	**17 38 55.0**	**+0.2**
Q20K	baz=143			S	**Sn**	**17 39 28.6**	**-1.0**
R18K	**Karluk**	**3.15**	**296**		**Pn**	**17 38 58.3**	**0.0**
R18K					**Sn**	**17 39 33.2**	**-2.7**
R18K	**Karluk** comp=N,150nm,0.4s	**3.15**	**296**	IAML		17 39 34.7	
R18K	comp=E,112nm,0.4s			IAML		17 39 39.8	
R18K	**Karluk** baz=113	**3.15**	**296**	P	**Pn**	**17 38 58.3**	**0.0**
R18K	baz=113			S	**Sn**	**17 39 33.2**	**-2.7**
CNPM	**China Poot**	**3.42**	**342**		**Pn**	**17 39 02.2**	**+0.2**
Q23K	**Middleton Isla**	**3.49**	**25**		**Pn**	**17 39 03.0**	**+0.1**
Q23K					**Sn**	**17 39 40.9**	**-3.3**
Q23K	**Middleton Isla** comp=E,187nm,1.2s	**3.49**	**25**	IAML		17 39 41.1	
Q23K	comp=N,168nm,1.4s			IAML		17 40 12.6	
Q23K	**Middleton Isla** baz=206	**3.49**	**25**	P	**Pn**	**17 39 03.1**	**+0.1**
Q23K	baz=206			S	**Sn**	**17 39 40.9**	**-3.3**
MID	**Middleton Isla**	**3.49**	**25**		**Pn**	**17 39 03.0**	**+0.1**
MID	**Middleton Isla** comp=N,164nm,1.4s	**3.49**	**25**	IAML		17 40 12.6	
MID	comp=E,190nm,1.5s			IAML		17 40 14.2	
BRSE	**Bradley Lake S**	**3.55**	**347**		**Pn**	**17 39 03.9**	**0.0**
BRSE					**Sn**	**17 39 44.9**	**-1.1**
BRSE	**Bradley Lake S** baz=166	**3.55**	**347**	P	**Pn**	**17 39 03.9**	**0.0**
BRSE	baz=166			S	**Sn**	**17 39 44.8**	**-1.1**
Q19K	**Cape Douglas,**	**3.56**	**320**		**Pn**	**17 39 05.1**	**+1.0**
Q19K	**Cape Douglas,** comp=N,159nm,0.9s	**3.56**	**320**	IAML		17 39 52.4	
Q19K	comp=E,195nm,1.3s			IAML		17 40 01.3	
Q19K	**Cape Douglas,** baz=137	**3.56**	**320**	P	**Pn**	**17 39 05.1**	**+1.0**
BRLK	**Bradley Lake**	**3.59**	**346**		**Pn**	**17 39 04.1**	**-0.4**
HOM	**Homer**	**3.62**	**340**	Pn	**Pn**	**17 39 04.7**	**0.0**
HOM	comp=E,119nm,1.1s			IAML		17 39 53.5	
HOM	comp=N,115nm,0.9s			IAML		17 40 06.9	
KAHG	**Katmai Hook Gl**	**3.64**	**309**		**Pn**	**17 39 05.7**	**+0.6**
SEW	**Seward** baz=178	**3.82**	**358**	P	**Pn**	**17 39 07.5**	**0.0**
AUL	**Augustine Lava**	**3.84**	**326**		**Pn**	**17 39 08.8**	**+1.1**
ACHA	**Angle Creek He**	**3.84**	**302**		**Pn**	**17 39 09.0**	**+1.1**
KAHC	**Katmai Hardscr**	**3.93**	**309**		**Pn**	**17 39 09.9**	**+0.8**
KAHC	**Katmai Hardscr** baz=126	**3.93**	**309**	P	**Pn**	**17 39 09.9**	**+0.8**
P19K	**Oil Pt**	**3.99**	**329**	Pn	**Pn**	**17 39 10.3**	**+0.3**
P19K	comp=E,78nm,0.4s			IAML		17 39 59.5	
P19K	comp=N,88nm,0.6s			IAML		17 40 05.0	
CNTC	**Contact Creek**	**4.13**	**301**		**Pn**	**17 39 12.3**	**+0.4**
Q17K	**Contact Creek** baz=117	**4.13**	**301**	P	**Pn**	**17 39 12.3**	**+0.4**
O22K	**Cooper Landing**	**4.21**	**356**		**Pn**	**17 39 12.9**	**+0.1**
O22K	**Cooper Landing** baz=176	**4.21**	**356**	P	**Pn**	**17 39 13.4**	**+0.6**
O20K	**Slope Mountain**	**4.21**	**336**		**Pn**	**17 39 13.3**	**+0.4**
O20K	**Slope Mountain** baz=154	**4.21**	**336**	P	**Pn**	**17 39 13.3**	**+0.4**
HIN	**Hinchinbrook I** comp=E,82nm,0.9s	**4.35**	**18**	IAML		17 40 06.0	
KAIM	**Kayak Island**	**4.43**	**33**	Pn	**Pn**	**17 39 13.8**	**-2.2**
P18K	**Big Mountain,** baz=132	**4.48**	**316**	P	**Pn**	**17 39 17.0**	**+0.4**
RDSO	**Redoubt South**	**4.57**	**337**		**Pn**	**17 39 17.4**	**-0.6**
RSO	**Redoubt South**	**4.58**	**337**		**Pn**	**17 39 17.5**	**-0.7**
CAPN	**Captain Cook N**	**4.60**	**348**	Pn	**Pn**	**17 39 16.0**	**-2.2**
CAPN	comp=E,91nm,0.6s			IAML		17 40 23.6	
RDWB	**Redoubt West**	**4.62**	**337**		**Pn**	**17 39 18.1**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.63**	**22**		**Pn**	**17 39 19.2**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.63**	**22**	P	**Pn**	**17 39 19.5**	**+0.8**
EYAK	**Cordova Ski Ar** baz=204	**4.63**	**22**	P	**Pn**	**17 39 19.2**	**+0.5**
DFR	**Drift River**	**4.68**	**338**		**Pn**	**17 39 19.3**	**-0.1**
NCT	**North Crescent**	**4.71**	**337**		**Pn**	**17 39 19.5**	**-0.3**
RAGM	**Ragged Mountai**	**4.74**	**28**	Pn	**Pn**	**17 39 21.0**	**+0.8**
SUCK	**Suckling Hills**	**4.75**	**35**	Pn	**Pn**	**17 39 19.8**	**-0.5**
SUCK	comp=E,64nm,1.2s			IAML		17 40 18.5	
SUCK	comp=N,86nm,1.3s			IAML		17 40 25.9	
O18K	**Koktuh Hills**	**4.79**	**321**	Pn	**Pn**	**17 39 20.8**	**-0.1**
O18K	comp=E,21nm,0.7s			IAML		17 40 20.6	
O18K	comp=N,24nm,0.9s			IAML		17 40 29.6	
HMT	**Hamilton**	**4.81**	**31**	Pn	**Pn**	**17 39 21.5**	**+0.3**
HMT					**Sn**	**17 40 12.6**	**-4.4**
RC01	**Rabbit Creek A** comp=E,25nm,0.5s	**4.82**	**357**	IAML		17 40 23.8	
RC01	comp=N,22nm,0.5s			IAML		17 40 27.6	
RC01	**Rabbit Creek A** baz=176	**4.82**	**357**	P	**Pn**	**17 39 21.5**	**+0.3**
NICHA	**Nichawak Mount**	**4.82**	**33**		**Pn**	**17 39 22.2**	**+1.0**
P17K	**Kvichak River** baz=125	**4.85**	**310**	P	**Pn**	**17 39 22.8**	**+1.1**
ANPB	**Aniakchak Plen**	**5.05**	**280**		**Pn**	**17 39 24.8**	**+0.3**
CHGN	**Chignik**	**5.14**	**274**		**Pn**	**17 39 24.8**	**-0.8**
CHGN	comp=N,28nm,0.1s			IAML		17 40 23.4	
CHGN	comp=E,34nm,1.0s			IAML		17 40 26.3	
SNH	**Sunshine Point**	**5.14**	**38**	Pn	**Pn**	**17 39 25.9**	**+0.2**
SNH				Sn	**Sn**	**17 40 23.2**	**-1.9**
SNH	comp=E,68nm,1.1s			IAML		17 40 28.4	
SNH	comp=N,56nm,1.5s			IAML		17 42 24.6	
KNK	**Knik Glacier** comp=E,27nm,0.9s	**5.15**	**4**	IAML		17 40 30.3	
KNK	comp=N,21nm,0.7s			IAML		17 40 32.2	
KNK	**Knik Glacier** baz=185	**5.15**	**4**	P	**Pn**	**17 39 26.6**	**+0.8**
KHIT	**Khitrov Hills**	**5.20**	**34**		**Pn**	**17 39 26.9**	**+0.4**
SPCP	**Crater Peak Br**	**5.22**	**344**		**Pn**	**17 39 27.3**	**+0.4**
SUA	**Susitna One**	**5.25**	**352**		**Pn**	**17 39 27.2**	**0.0**
SUA	**Susitna One** baz=171	**5.25**	**352**	P	**Pn**	**17 39 27.2**	**0.0**
BMRM	**Bremner River**	**5.26**	**25**		**Pn**	**17 39 28.2**	**+0.8**
BMRM	**Bremner River**	**5.26**	**25**	P	**Pn**	**17 39 28.2**	**+0.8**
	baz=209						
N19K	**Bonanza Creek**	**5.31**	**331**	Pn	**Pn**	**17 39 27.8**	**-0.3**
PMR	**Palmer**	**5.31**	**0**	Pn	**Pn**	**17 39 28.6**	**+0.6**
WAX	**Waxell Ridge**	**5.34**	**36**	Pn	**Pn**	**17 39 28.6**	**+0.2**
MESA	**MESA**	**5.46**	**41**	Pn	**Pn**	**17 39 29.6**	**-0.6**
P16K	**Nushagak River**	**5.46**	**304**		**Pn**	**17 39 30.4**	**+0.3**
P16K	**Nushagak River** baz=117	**5.46**	**304**	P	**Pn**	**17 39 30.4**	**+0.3**
KLU	**Klutina**	**5.48**	**17**		**Pn**	**17 39 30.1**	**-0.3**
KLU	**Klutina** baz=199	**5.48**	**17**	P	**Pn**	**17 39 31.5**	**+1.1**
CRQM	**Cirque**	**5.48**	**33**	Pn	**Pn**	**17 39 31.1**	**+0.6**
GHO	**Glory Hole Cre**	**5.50**	**1**		**Pn**	**17 39 31.8**	**+1.2**
SML	**Sawmill**	**5.55**	**4**	Pn	**Pn**	**17 39 32.3**	**+1.0**
SML	**Sawmill** baz=185	**5.55**	**4**	P	**Pn**	**17 39 32.5**	**+1.3**
ISLE	**Juniper Island**	**5.62**	**37**		**Pn**	**17 39 32.9**	**+0.6**
BAGL	**Bagley Icefiel**	**5.62**	**39**		**Pn**	**17 39 32.9**	**+0.6**
N18K	**Kilae Creek**	**5.63**	**324**	Pn	**Pn**	**17 39 32.0**	**-0.4**
SCM	**Sheep Creek Mo**	**5.64**	**9**		**Pn**	**17 39 33.7**	**+1.2**
SCM	**Sheep Creek Mo** baz=191	**5.64**	**9**	P	**Pn**	**17 39 33.7**	**+1.2**
VRDI	**Verde Repeater**	**5.78**	**29**	Pn	**Pn**	**17 39 35.3**	**+0.8**
O16K	**Kokwok River B**	**5.78**	**309**		**Pn**	**17 39 35.1**	**+0.7**
SKT	**Skwentna**	**5.83**	**349**		**Pn**	**17 39 34.8**	**-0.3**
N25K	**Chitina, Valde**	**5.83**	**22**	Pn	**Pn**	**17 39 35.6**	**+0.4**
N25K	**Chitina, Valde** baz=206	**5.83**	**22**	P	**Pn**	**17 39 36.4**	**+1.2**
SVW2	**Sparrevohn**	**5.85**	**328**	Pn	**Pn**	**17 39 35.3**	**-0.2**
SVW2	**Sparrevohn**	**5.85**	**328**	P	**Pn**	**17 39 35.5**	**+0.1**
GLB	**Gilahina Butte**	**5.87**	**26**		**Pn**	**17 39 36.5**	**+0.8**
M20K	**Styx River**	**5.96**	**342**	Pn	**Pn**	**17 39 37.1**	**+0.2**
N17K	**Nushagak Hills**	**5.97**	**319**	Pn	**Pn**	**17 39 37.0**	**0.0**
MCARA	**McCarthy VSAT**	**6.02**	**30**		**Pn**	**17 39 39.0**	**+1.3**
MCARA	**McCarthy VSAT** baz=214	**6.02**	**30**	P	**Pn**	**17 39 39.0**	**+1.3**
PTPK	**Patty Peak**	**6.03**	**33**		**Pn**	**17 39 38.9**	**+0.9**
M24K	**Tolsona, Glenn**	**6.03**	**14**		**Pn**	**17 39 39.4**	**+1.5**
M24K	**Tolsona, Glenn** baz=196	**6.03**	**14**	P	**Pn**	**17 39 39.4**	**+1.5**
PCA	**Pinnacle**	**6.07**	**47**		**Pn**	**17 39 39.1**	**+0.6**
PINM	**Pinnacle** baz=234	**6.07**	**47**	P	**Pn**	**17 39 39.1**	**+0.6**
CNBA	**Chernabura Isl**	**6.08**	**260**		**Pn**	**17 39 37.4**	**-1.2**
PNL	**Peninsula**	**6.21**	**53**		**Pn**	**17 39 40.8**	**+0.5**
PNL	**Peninsula**	**6.21**	**53**	P	**Pn**	**17 39 41.1**	**+0.8**
PNL	**Peninsula** baz=241	**6.21**	**53**	P	**Pn**	**17 39 40.8**	**+0.5**
CTG	**Chitna Glacier** baz=224	**6.22**	**38**	P	**Pn**	**17 39 40.9**	**+0.2**
CTGM	**Chitina Glacie**	**6.22**	**38**		**Pn**	**17 39 40.9**	**+0.2**
M19K	**Big River Lodg**	**6.23**	**337**	Pn	**Pn**	**17 39 40.2**	**-0.4**
LOGN	**Logan Glacier**	**6.24**	**40**		**Pn**	**17 39 41.3**	**+0.4**
WAT6	**Susitna Watana**	**6.35**	**6**		**Pn**	**17 39 43.3**	**+0.9**
WAT6	**Susitna Watana** baz=187	**6.35**	**6**	P	**Pn**	**17 39 43.3**	**+0.9**
SDPT	**Sand Point**	**6.43**	**266**	Pn	**Pn**	**17 39 42.8**	**-0.5**
SDPT	**Sand Point**	**6.43**	**266**	P	**Pn**	**17 39 43.0**	**-0.3**
WAT7	**Susitna Watana**	**6.56**	**1**		**Pn**	**17 39 46.4**	**+1.1**
WAT1	**Susitna Watana**	**6.56**	**3**		**Pn**	**17 39 46.4**	**+1.2**
WAT1	**Susitna Watana** baz=183	**6.56**	**3**	P	**Pn**	**17 39 46.4**	**+1.2**
L19K	**White Mountain**	**6.58**	**336**		**Pn**	**17 39 44.7**	**-0.7**
M17K	**Holitna River**	**6.67**	**324**	Pn	**Pn**	**17 39 46.7**	**+0.1**
DHY	**Denali Highway** baz=188	**6.86**	**7**	P	**Pn**	**17 39 50.6**	**+1.2**
O29M	**Mount Kennedy**	**6.88**	**50**		**Pn**	**17 39 50.7**	**+1.0**
O29M	**Mount Kennedy** baz=238	**6.88**	**50**	P	**Pn**	**17 39 50.7**	**+1.0**
M26K	**Nabesna, AK**	**6.89**	**25**	Pn	**Pn**	**17 39 50.1**	**+0.3**
N15K	**Kwethluk River**	**6.94**	**309**	Pn	**Pn**	**17 39 51.8**	**+1.5**
P29M	**Windy Craggy**	**6.95**	**57**		**Pn**	**17 39 50.7**	**+0.2**
M16K	**Timber Creek**	**6.95**	**317**	Pn	**Pn**	**17 39 49.6**	**-1.0**
L18K	**Granite Mounta**	**7.07**	**330**	Pn	**Pn**	**17 39 51.6**	**-0.5**
O14K	**Tigyukauivet M**	**7.10**	**300**	Pn	**Pn**	**17 39 53.1**	**+0.5**
M27K	**Edge Creek, AK**	**7.13**	**29**	Pn	**Pn**	**17 39 54.2**	**+1.1**
RND	**Reindeer**	**7.14**	**1**		**Pn**	**17 39 54.6**	**+1.5**
YUK7	**Dusty Glacier**	**7.19**	**49**		**Pn**	**17 39 55.2**	**+1.3**
TRF	**Thorofare Moun**	**7.20**	**356**	Pn	**Pn**	**17 39 54.8**	**+0.8**
S31K	**Pelican**	**7.25**	**71**	Pn	**Pn**	**17 39 52.7**	**-1.9**
CAST	**Castle Rocks**	**7.29**	**350**		**Pn**	**17 39 56.4**	**+1.2**
CAST	**Castle Rocks** baz=167	**7.29**	**350**	P	**Pn**	**17 39 56.4**	**+1.2**
KTH	**Kantishna Hill**	**7.33**	**354**	Pn	**Pn**	**17 39 55.6**	**-0.2**
YUK4	**Talbot Arm** baz=231	**7.45**	**43**	P	**Pn**	**17 40 00.4**	**+2.8**
K20K	**Telida**	**7.50**	**343**	Pn	**Pn**	**17 39 58.0**	**0.0**
TTA	**Tatalina**	**7.50**	**335**	Pn	**Pn**	**17 39 57.3**	**-0.8**
TTA	**Tatalina**	**7.50**	**335**	P	**Pn**	**17 39 59.8**	**+1.8**
PLBC	**Pleasant Camp** baz=250	**7.54**	**60**	P	**Pn**	**17 39 59.2**	**+0.7**
L16K	**Owhat River**	**7.59**	**320**	Pn	**Pn**	**17 39 59.3**	**+0.1**
HYT	**Haines Junctio**	**7.61**	**49**	Pn	**Pn**	**17 40 00.6**	**+1.0**
SIT	**Sitka**	**7.68**	**79**	P	**Pn**	**17 39 57.7**	**-2.7**
L27K	**Beaver Creek,**	**7.74**	**26**	Pn	**Pn**	**17 40 01.1**	**-0.2**
K17K	**Iditarod**	**7.93**	**328**	Pn	**Pn**	**17 40 03.6**	**-0.3**
SKAG	**Skagway**	**8.04**	**61**	Pn	**Pn**	**17 40 05.5**	**+0.1**
SKAG	**Skagway**	**8.04**	**61**	P	**Pn**	**17 40 04.9**	**-0.5**
S32K	**Killisnoo**	**8.09**	**76**	Pn	**Pn**	**17 40 04.3**	**-1.8**
J18K	**Innoko River**	**8.12**	**335**	Pn	**Pn**	**17 40 06.6**	**+0.1**
O30N	**Mendenhall**	**8.19**	**51**	Pn	**Pn**	**17 40 07.5**	**0.0**
R32K	**Eaglecrest**	**8.19**	**70**	Pn	**Pn**	**17 40 06.8**	**-0.8**
HDA	**Harding Lake**	**8.22**	**7**	Pn	**Pn**	**17 40 08.8**	**+1.0**
M29M	**Somme Creek**	**8.24**	**37**	Pn	**Pn**	**17 40 09.1**	**+0.9**
J20K	**Nowinta River**	**8.28**	**345**	Pn	**Pn**	**17 40 09.0**	**+0.3**
J19K	**Poorman**	**8.36**	**340**	Pn	**Pn**	**17 40 09.8**	**+0.1**
ISLZ	**Isanotski Laza**	**8.39**	**265**		**Pn**	**17 40 09.7**	**-0.5**
CCB	**Clear Creek Bu**	**8.41**	**4**	Pn	**Pn**	**17 40 12.2**	**+1.8**
J25K	**Salcha River,**	**8.55**	**11**	Pn	**Pn**	**17 40 12.4**	**-0.1**
IL31		**8.58**	**7**		**Pn**	**17 40 14.4**	**+1.6**
ILAR	**Eielson Array**	**8.58**	**7**	Pn	**Pn**	**17 40 14.2**	**+1.4**
ILAR	**Eielson Array** comp=N,0.3nm,0.3s,baz=188,slow=13,SNR=16	**8.58**	**7**	Pn	**Pn**	**17 40 14.8**	**+2.0**
ILAR	comp=N,0.3nm,0.3s,baz=190,slow=19,SNR=5.0 comp=N,0.9nm,0.5s				Sn	**Sn**	**17 41 46.5**	**-3.0**
L14K	**Kuka Creek**	**8.63**	**311**	Pn	**Pn**	**17 40 14.3**	**+0.9**
N31M	**Brabebum, Yuko**	**8.67**	**48**	Pn	**Pn**	**17 40 15.1**	**+1.1**
WHY	**Whitehorse**	**8.67**	**54**	Pn	**Pn**	**17 40 14.6**	**+0.4**
J26L	**Joseph Creek**	**8.69**	**16**	Pn	**Pn**	**17 40 14.7**	**+0.3**
MDM	**Murphy Dome**	**8.71**	**3**	Pn	**Pn**	**17 40 14.0**	**-0.6**
K15K	**Wolf Creek Mou**	**8.71**	**319**	Pn	**Pn**	**17 40 14.8**	**+0.2**
MLY	**Manley**	**8.80**	**356**	Pn	**Pn**	**17 40 14.9**	**-1.0**
L29M	**L29M**	**8.82**	**35**	Pn	**Pn**	**17 40 16.5**	**+0.4**
P32M	**Atlin**	**8.87**	**62**	Pn	**Pn**	**17 40 16.7**	**-0.1**
I23K	**Minto, Yukon-K**	**8.88**	**360**	Pn	**Pn**	**17 40 16.9**	**-0.1**
M30M	**Minto, Yukon**	**8.91**	**40**	Pn	**Pn**	**17 40 17.2**	**-0.1**
U33K	**Whale Pass**	**8.96**	**84**	Pn	**Pn**	**17 40 14.7**	**-3.3**
J16K	**Anvik River**	**9.05**	**325**	Pn	**Pn**	**17 40 19.2**	**-0.1**
CRAG	**Craig**	**9.07**	**89**	P	**Pn**	**17 40 17.1**	**-2.4**
Q32M	**Nakina River**	**9.46**	**67**	Pn	**Pn**	**17 40 24.6**	**-0.4**
P33M	**Teslin, Yukon**	**9.47**	**59**		**Pn**	**17 40 25.0**	**-0.1**
P33M	**Teslin, Yukon** baz=252	**9.47**	**59**	P	**Pn**	**17 40 25.4**	**+0.3**
I26K	**Coal Creek Min**	**9.50**	**16**	Pn	**Pn**	**17 40 25.4**	**0.0**
K29M	**Barlow Dome**	**9.54**	**33**	Pn	**Pn**	**17 40 24.6**	**-1.5**
H21K	**Melozitna Rive**	**9.55**	**351**	Pn	**Pn**	**17 40 25.6**	**-0.6**
H24K	**Noodor Dome**	**9.60**	**3**	Pn	**Pn**	**17 40 27.0**	**+0.2**
M31M	**Drury Creek, Y**	**9.60**	**46**	Pn	**Pn**	**17 40 28.4**	**+1.5**
N32M	**Quiet Lake**	**9.68**	**53**	Pn	**Pn**	**17 40 26.6**	**-1.3**
IMAR	**Indian Mountai**	**9.96**	**349**	Pn	**Pn**	**17 40 31.4**	**-0.3**
R33M	**Jennings River**	**10.19**	**65**	Pn	**Pn**	**17 40 34.5**	**-0.5**
J30M	**Hart River**	**10.43**	**32**	Pn	**Pn**	**17 40 39.2**	**+1.0**
G21K	**Allakaket**	**10.46**	**350**	Pn	**Pn**	**17 40 40.0**	**+1.5**
DLBC	**Dease Lake**	**10.56**	**70**	Pn	**Pn**	**17 40 39.1**	**-0.9**
G16K	**Koyuk River**	**11.13**	**330**	Pn	**Pn**	**17 40 46.0**	**-1.7**
F20K	**Avaraart Lake**	**11.22**	**347**	Pn	**Pn**	**17 40 50.9**	**+2.0**
YKA	**Yellowknife Ar** comp=N,0.1nm,0.3s,baz=264,slow=10.0,SNR=10.0 comp=N,0.5nm,0.7s	**18.49**	**56**	P	**Pn**	**17 42 26.4**	**+1.7**
H11S1	**WAKE ISLAND Hy** baz=28,slow=76,SNR=7.7	**50.07**	**239**	T	T	18 41 44.1	
H11S2	**WAKE ISLAND Hy** baz=28,slow=76,SNR=6.5	**50.09**	**239**	T	T	18 41 42.3	
H11S3	**WAKE ISLAND Hy** baz=28,slow=76,SNR=8.1	**50.09**	**239**	T	T	18 41 46.0	
MKAR	**Makanchi Array** comp=N,0.1nm,0.4s,baz=48,slow=8.2,SNR=1.3 comp=N,0.1nm,0.4s	**68.61**	**325**	P	**P**	**17 49 15.4**	**+3.8**

TAP 07 17:45:58.0, 24.00N×121.60E, h11km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien** baz=143	**0.02**	**156**	*i* P	**Pg**	**17 46 00.4**	**+0.4**
HWA	baz=143			S	Sg	17 46 02.1	+0.7
TWD	**Chiawan** baz=5.0	**0.08**	**0**	P	Pg	17 46 01.2	+0.7
TWD	baz=5.0			S	Sg	17 46 03.2	+0.8
ETM	**Tongmen** baz=252	**0.10**	**252**	*i* P	Pg	17 46 01.4	+0.6
ETM	baz=252			S	Sg	17 46 03.0	+0.2
ETL	**Fush Village** baz=8.0	**0.16**	**9**	P	Pb	17 46 02.6	-0.4
ETL	baz=8.0			S	Sg	17 46 05.0	+0.6
LXIB	**Xiulin Townshi** baz=278	**0.17**	**279**	*e*P	Pb	17 46 02.9	-0.3
LXIB	baz=278			S	Sg	17 46 06.0	+1.4
NACB	**Ninganchiao** baz=359	**0.18**	**360**	P	Pb	17 46 03.0	-0.3
NACB	baz=359			*e*S	Sg	17 46 05.8	+1.1
SHUL	**Shoufeng** baz=188	**0.21**	**188**	P	Pb	17 46 03.5	-0.2
SHUL	baz=188			S	Sg	17 46 07.0	+1.5
ETLH	**Xiulin Townshi** baz=333	**0.23**	**334**	P	Pb	17 46 04.2	-0.1
ESL	**Shilin** baz=217	**0.23**	**220**	*i* P	Pb	17 46 03.6	-0.6
WARBT	**Fenglin Townsh** baz=214	**0.34**	**215**	*i* P	Pb	17 46 05.6	-0.4
WARBT	baz=214			S	Sb	17 46 10.8	-0.5
WHF	**Hehuan Shan** baz=296	**0.34**	**296**	P	Pb	17 46 06.2	0.0
EAHA	**Aohua** baz=21	**0.36**	**21**	P	Pb	17 46 05.8	-0.5
EAHA	baz=21			S	Sb	17 46 11.7	-0.3
EGFH	**Guangfu** baz=205	**0.36**	**205**	P	Pb	17 46 05.9	-0.5
EGFH	baz=205			S	Sb	17 46 12.0	+0.1
OWD	**Renai** baz=263	**0.39**	**264**	*i* P	Pb	17 46 06.5	-0.3
OWD	baz=263			*e*S	Sb	17 46 12.6	-0.3
CHGB	**Renai** baz=279	**0.39**	**279**	*e*P	Pb	17 46 07.5	+0.4
FUSS	**Fushou** baz=307	**0.41**	**308**	*e*P	Pb	17 46 07.9	+0.6
WUSB	**Renai** baz=269	**0.44**	**270**	*i* P	Pb	17 46 07.4	-0.4
ENA	**Nanau** baz=18	**0.45**	**17**	*i* P	Pb	17 46 07.7	-0.2
NNSB	**Datong** baz=335	**0.47**	**336**	*i* P	Pb	17 46 08.1	-0.2
EWUT	**Wuta** baz=20	**0.48**	**20**	P	Pb	17 46 08.4	+0.1
NNS	**Nan Shan** baz=335	**0.49**	**335**	*i* P	Pb	17 46 08.2	-0.4
NNS	baz=335			S	Sb	17 46 15.4	-0.4
HGSD	**Ruisui** baz=197	**0.53**	**197**	P	Pb	17 46 08.9	-0.3
HGSD	baz=197			*i* S	Sb	17 46 17.1	+0.4
LATG	**Datong** baz=353	**0.54**	**353**	P	Pb	17 46 09.3	-0.2
LATG	baz=353			S	Sb	17 46 17.1	-0.2
NDT	**Datong Townshi** baz=352	**0.61**	**353**	P	Pb	17 46 10.9	+0.3
NDT	baz=352			S	Sb	17 46 19.3	+0.1
SSLB	**Suanglung** baz=250	**0.62**	**251**	P	Pb	17 46 11.3	+0.5
SSLB	baz=250			S	Sb	17 46 20.2	+0.6
ENTT	**Nioudou** baz=358	**0.64**	**358**	P	Pb	17 46 11.9	+0.7
WHP	**Taichung City** baz=295	**0.66**	**295**	P	Pb	17 46 11.8	+0.4
WHP	baz=295			*e*S	Sb	17 46 22.1	+1.4
YULB	**Yu-li** baz=204	**0.66**	**205**	*i* P	Pb	17 46 11.4	-0.1
YULB	baz=204			S	Sb	17 46 21.6	+0.9
YHNB	**Yeheng** baz=343	**0.70**	**343**	*e*P	Pn	17 46 13.7	-0.2
YHNB	baz=343			*e*S	Sn	17 46 23.4	-1.3
SSHA	**Shanhua** baz=234	**1.47**	**235**	*e*P	Pn	17 46 24.6	+0.2
SSHA	baz=234			S	Sn	17 46 43.8	+0.1

*IDC **07** 18:02:00.9±1.7, 55.28N×166.57E, h0km, mb3.4/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=102.9km s-min=25.1km az=155.0*

*KRSC **07** 18:02:03.1±2.0, 55.32N×166.17E, h36km±12km, Ml3.9*

ISC 07 18:02:03.7±1.0, 55.45N±0.07×166.32E±0.08, h20km, n31, σ1ϑ63/37, mb3.2/3, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.32**	**219**	*e*P	**Pb**	**18 02 09.9**	**-0.7**
BKI				*e*S	**Sb**	**18 02 15.2**	**0.0**
KBG	**Krutoberegovo**	**2.19**	**293**	*e*S	**Sn**	**18 03 03.9**	**-1.5**
SMKR	**Semkarok**	**2.95**	**295**	*e*P	**Pn**	**18 02 49.3**	**-0.1**
BDR	**Baidarnaya**	**3.08**	**293**	*e*P	**Pn**	**18 02 51.8**	**+0.6**
KLY	**Klyuchi**	**3.31**	**287**	*e*P	**Pn**	**18 02 53.2**	**-1.0**
KLY				*e*S	**Sn**	**18 03 30.4**	**-2.5**
BZWR	**Bezymyannyi-We**	**3.33**	**281**	*e*P	**Pn**	**18 02 56.7**	**+1.9**
TUMD	**Tumrok D**	**3.39**	**268

0.1nm,0.3s,baz=292,slow=7.3,SNR=2.8
0.1nm,0.3s
TXAR Lajitas Array 66.39 72 P P 18 12 51.5 +0.3
0.6nm,0.5s,baz=291,slow=4.3,SNR=11
0.6nm,0.5s

TAP ***07*** *18:02:22.5,23˚.97N×121˚.75E,h7km,ML4.2,C*
NIED ***07*** *18:02:22.7,23˚.95N×121˚.75E,h0km,MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.36; Mθθ-0.81; Mϕϕ-0.55; Mrθ-0.07; Mθϕ-0.61; Mϕr0.43; Fault plane solution: M₀1.40000×10¹⁵ NP1:ϕs37.00000°, δ51.00000°,λ72.00000°. NP2:ϕs244.00000°,δ42.00000°, λ111.00000°.*
JMA ***07*** *18:02:22.7±0.2,24˚.0N±0˚.5×12˚.2E±˚,h0km,MV3.6/15, TAIWAN REGION*
ASIES ***07*** *18:02:22.5,23˚.97N×121˚.75E,h7km,ML4.2,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr1.13; Mθθ-0.75; Mϕϕ-0.39; Mrθ0.07; Mθϕ-0.43; Mϕr0.16; Fault plane solution: M₀1.10044×10²² NP1:ϕs51.65000°, δ49.03000°,λ84.21000°. NP2:ϕs240.45000°,δ41.30000°, λ96.63000°. Principal axes: T Plg84.1510°, Azm277.2070°; N Plg4.3700°, Azm55.4590°; P Plg3.8790°, Azm145.7560°;*
IDC ***07*** *18:02:24.8±0.9,24˚.52N×121˚.79E,h0km,mb3.6/10, mbtmp3.7/11,ML3.6/1,MS3.7/2 Error ellipse: s-maj=25.5km s-min=19.1km az=60.0*
ISC 07 18:02:23.5±0.9,**23˚.95N**±0˚.01×**121˚.76E**±0˚.02,**h10**km±6km, **n154,σ0s99/227,mb3.7**/10,**36C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=264	**0.15**	**282**	⇓*i*P		**Pg**		**18 02 26.3**	**-0.6**
HWA				*i*S		**Sg**		**18 02 30.3**	**+1.2**
TWD	**Chiawan** baz=295	**0.20**	**311**	⇓*i*P		**Pg**		**18 02 26.9**	**-0.8**
TWD				S		**Sg**		**18 02 31.0**	**+0.3**
SHUL	**Shoufeng** baz=223	**0.24**	**229**	⇑*i*P		**Pg**		**18 02 29.0**	**+0.5**
SHUL				S		**Sg**		**18 02 34.9**	**+3.1**
ETL	**Fush Village** baz=315	**0.25**	**329**	*e*P		**Pg**		**18 02 27.9**	**-0.7**
ETM	**Tongmen** baz=267	**0.25**	**274**	P		**Pg**		**18 02 28.0**	**-0.6**
ETM				S		**Sg**		**18 02 31.8**	**-0.2**
NACB	**Ninganchiao**	**0.27**	**326**	P		**Pg**		**18 02 28.2**	**-0.9**
NACB	**Ninganchiao** baz=313	**0.27**	**326**	⇓*i*P		**Pg**		**18 02 28.1**	**-0.9**
NACB				S		**Sg**		**18 02 32.0**	**-0.8**
TEGC	**Jichi Village** baz=215	**0.31**	**221**	*e*P		**Pg**		**18 02 30.6**	**+0.8**
TEGC				*e*S		**Sb**		**18 02 36.6**	**+0.2**
LXIB	**Xiulin Townshi** baz=278	**0.33**	**283**	⇑*i*P		**Pg**		**18 02 29.3**	**-0.8**
LXIB				*i*S		**Sg**		**18 02 34.8**	**+0.2**
ESL	**Shilin** baz=240	**0.33**	**246**	⇑*i*P		**Pg**		**18 02 29.6**	**-0.6**
ESL				*e*S		**Sg**		**18 02 35.1**	**+0.6**
ETLH	**Xiulin Townshi** baz=311	**0.36**	**315**	*e*P		**Pg**		**18 02 30.0**	**-0.8**
ETLH				S		**Sg**		**18 02 36.3**	**+0.6**
EAHA	**Aohua** baz=357	**0.38**	**357**	⇓*e*P		**Pg**		**18 02 30.7**	**-0.4**
EAHA				S		**Sg**		**18 02 37.1**	**+1.0**
EGFH	**Guangfu** baz=209	**0.41**	**228**	⇑*i*P		**Pg**		**18 02 31.5**	**-0.1**
EGFH				*e*S		**Sb**		**18 02 38.8**	**-0.5**
WARBT	**Fenglin Townsh** baz=232	**0.41**	**237**	⇑*i*P		**Pg**		**18 02 31.2**	**-0.4**
WARBT				S		**Sg**		**18 02 38.1**	**+0.9**
ENA	**Nanau** baz=359	**0.48**	**358**	⇓*i*P		**Pg**		**18 02 32.5**	**-0.4**
ENA				S		**Sg**		**18 02 40.3**	**+1.0**
WHF	**Hehuan Shan** baz=288	**0.50**	**294**	⇑P		**Pg**		**18 02 32.6**	**-0.7**
WHF				*e*S		**Sg**		**18 02 40.4**	**+0.4**
EWUT	**Wuta** baz=2.0	**0.50**	**2**	*e*P		**Pg**		**18 02 33.1**	**-0.2**
EWUT				*e*S		**Sg**		**18 02 40.7**	**+0.9**
EOS4	**EOS4** baz=87	**0.54**	**71**	*e*P		**Pn**		**18 02 35.7**	**-1.3**
OWD	**Renai** baz=275	**0.54**	**271**	*e*P		**Pg**		**18 02 33.7**	**-0.3**
OWD				*e*S		**Sg**		**18 02 41.9**	**+0.7**
HGSD	**Ruisui** baz=212	**0.55**	**215**	*e*P		**Pg**		**18 02 34.8**	**+0.6**
CHGB	**Renai** baz=276	**0.55**	**282**	⇑P		**Pg**		**18 02 33.8**	**-0.5**
CHGB				*e*S		**Sg**		**18 02 42.7**	**+1.1**
FUSS	**Fushou** baz=296	**0.56**	**302**	⇓*e*P		**Pg**		**18 02 34.3**	**-0.3**
FUSS				*e*S		**Sg**		**18 02 42.7**	**+0.7**
NNSB	**Datong** baz=322	**0.59**	**324**	⇓P		**Pg**		**18 02 34.5**	**-0.6**
NNSB				S		**Sg**		**18 02 43.1**	**+0.2**
WUSB	**Renai** baz=271	**0.59**	**274**	⇑*i*P		**Pg**		**18 02 34.7**	**-0.4**
WUSB				S		**Sg**		**18 02 43.1**	**+0.2**
EHY	**Hungye** baz=207	**0.60**	**223**	⇑*i*P		**Pg**		**18 02 34.5**	**-0.6**
EHY				*e*S		**Sb**		**18 02 44.6**	**-0.1**
NNS	**Nan Shan** baz=322	**0.61**	**324**	⇓*i*P		**Pg**		**18 02 34.7**	**-0.6**
NNS				*e*S		**Sg**		**18 02 43.2**	**-0.2**
TWT	**Tachien** baz=295	**0.62**	**300**	P		**Pg**		**18 02 35.5**	**-0.1**
TWT				S		**Sg**		**18 02 44.9**	**+1.1**
LATG	**Datong** baz=339	**0.62**	**340**	⇓*i*P		**Pg**		**18 02 35.2**	**-0.5**
LATG				*e*S		**Sg**		**18 02 43.6**	**-0.3**
ESAO	**Su ao** baz=359	**0.63**	**7**	*e*P		**Pg**		**18 02 35.5**	**-0.3**
ESAO				S		**Sg**		**18 02 44.8**	**+0.7**
TDCB	**Techi** baz=296	**0.63**	**299**	⇓P		**Pg**		**18 02 35.6**	**-0.2**
TDCB				*e*S		**Sg**		**18 02 44.5**	**+0.4**
TWC	**Suao** baz=1.0	**0.66**	**7**	⇑P		**Pg**		**18 02 36.5**	**0.0**
TWC				*e*S		**Sb**		**18 02 46.1**	**-0.5**
NDS	**Dongshan** baz=345	**0.69**	**356**	*e*P		**Pg**		**18 02 36.8**	**0.0**
NDS				*e*S		**Sg**		**18 02 46.7**	**+0.9**
ECBN	**Changbin** baz=204	**0.69**	**205**	*e*P		**Pb**		**18 02 37.3**	**-0.4**
NDT	**Datong Townshi** baz=328	**0.69**	**341**	*e*P		**Pg**		**18 02 36.8**	**-0.1**
NDT				*e*S		**Sg**		**18 02 46.8**	**+0.8**
YULB	**Yu-li**	**0.70**	**218**	P		**Pg**		**18 02 37.2**	**+0.2**
YULB	**Yu-li** baz=230	**0.70**	**218**	*e*P		**Pg**		**18 02 36.7**	**-0.3**
ENTT	**Nioudou** baz=334	**0.71**	**345**	*e*P		**Pg**		**18 02 37.2**	**-0.1**
ENTT				*e*S		**Sb**		**18 02 47.7**	**-0.3**
EYUL	**Yuli** baz=230	**0.72**	**214**	*e*P		**Pg**		**18 02 37.6**	**+0.1**
TWF1	**Yuli** baz=232	**0.73**	**216**	*e*P		**Pg**		**18 02 37.1**	**-0.5**
SSLB	**Suanglung**	**0.76**	**258**	P		**Pg**		**18 02 38.0**	**-0.2**
SSLB	**Suanglung** baz=266	**0.76**	**258**	⇑*i*P		**Pg**		**18 02 37.7**	**-0.5**
SSLB				S		**Sg**		**18 02 48.5**	**+0.4**
WCS	**Beigang Elemen** baz=274	**0.79**	**278**	⇑*i*P		**Pg**		**18 02 38.5**	**-0.2**
WCS				S		**Sg**		**18 02 49.2**	**+0.2**
SMLT	**Sun Moon Lake** baz=271	**0.79**	**266**	⇑*i*P		**Pg**		**18 02 38.5**	**-0.4**
SMLT				S		**Sg**		**18 02 49.8**	**+0.6**
YHNB	**Yeheng**	**0.80**	**334**	P		**Pg**		**18 02 39.3**	**+0.3**
YHNB	**Yeheng** baz=332	**0.80**	**334**	P		**Pg**		**18 02 38.9**	**-0.1**
YHNB				S		**Sg**		**18 02 49.7**	**+0.1**
ILA	**Ilan** baz=352	**0.81**	**359**	*e*P		**Pb**		**18 02 40.0**	**+0.1**
ILA				*e*S		**Sb**		**18 02 51.8**	**+0.8**
NSK	**Sanguang** baz=332	**0.81**	**333**	⇓*i*P		**Pg**		**18 02 39.1**	**-0.1**
NSK				S		**Sg**		**18 02 50.5**	**+0.6**
WHP	**Taichung City** baz=282	**0.82**	**294**	⇑*i*P		**Pg**		**18 02 39.3**	**0.0**
WHP				S		**Sg**		**18 02 50.9**	**+0.9**
CHKH	**Chenggong** baz=203	**0.82**	**204**	P		**Pg**		**18 02 39.2**	**-0.3**
CHKH				*e*S		**Sn**		**18 02 52.5**	**-1.0**
FUSB	**Fushanzhiwuyua** baz=339	**0.82**	**349**	⇑*i*P		**Pg**		**18 02 39.4**	**-0.1**
FUSB				*i*S		**Sb**		**18 02 51.4**	**+0.1**
TYC	**Yuchr** baz=272	**0.83**	**267**	⇑*i*P		**Pg**		**18 02 39.0**	**-0.6**
TYC				*e*S		**Sg**		**18 02 50.6**	**+0.2**
FULB	**Fuli** baz=225	**0.86**	**210**	*e*P		**Pg**		**18 02 40.1**	**0.0**
NWLT	**Wulai** baz=329	**0.86**	**344**	⇑*i*P		**Pg**		**18 02 39.9**	**-0.2**
NWLT				S		**Sg**		**18 02 51.5**	**+0.1**
WHYT	**Xinyi Township** baz=257	**0.87**	**254**	P		**Pg**		**18 02 40.2**	**-0.2**
WHYT				S		**Sg**		**18 02 52.0**	**+0.3**
NFF	**Wufeng Townshi** baz=316	**0.90**	**319**	*e*P		**Pg**		**18 02 40.7**	**-0.3**
NFF				S		**Sg**		**18 02 52.9**	**+0.2**
CHKT	**Chengkung** baz=182	**0.92**	**203**	*e*P		**Pg**		**18 02 40.8**	**-0.4**
CHKT				*e*S		**Sn**		**18 02 55.3**	**-0.6**
EHD	**Haiduan** baz=224	**0.94**	**213**	*e*P		**Pg**		**18 02 41.0**	**-0.7**
EHD				*e*S		**Sn**		**18 02 55.6**	**-0.9**
WJS	**Zhushan** baz=265	**0.96**	**263**	⇓P		**Pn**		**18 02 42.8**	**-0.3**
WJS				S		**Sn**		**18 02 56.3**	**-0.5**
LIOB	**Emei** baz=312	**0.97**	**316**	⇓*i*P		**Pg**		**18 02 42.6**	**+0.3**
LIOB				S		**Sb**		**18 02 55.9**	**+0.3**
NSTT	**Nanjuang** baz=311	**0.97**	**315**	⇑*i*P		**Pg**		**18 02 42.1**	**-0.2**
NSTT				*e*S		**Sg**		**18 02 55.6**	**+0.6**
ALS	**Alishan** baz=240	**0.98**	**244**	⇑*i*P		**Pg**		**18 02 42.0**	**-0.5**
ECS	**Chishang** baz=225	**0.98**	**211**	*e*P		**Pb**		**18 02 42.6**	**-0.1**
TWQ1	**Liyutan** baz=288	**0.99**	**294**	⇑P		**Pb**		**18 02 42.7**	**-0.2**
TWQ1				*e*S		**Sn**		**18 02 57.5**	**-0.1**
WNT	**Mingjian** baz=268	**0.99**	**266**	⇑*e*P		**Pg**		**18 02 43.0**	**+0.4**
WNT				*e*S		**Sn**		**18 02 57.4**	**-0.2**
ELDTW	**Lidau** baz=220	**1.02**	**222**	*e*P		**Pb**		**18 02 41.7**	**-1.6**
TIPB	**Shuangxi** baz=354	**1.02**	**3**	*e*P		**Pb**		**18 02 43.2**	**-0.2**
TIPB				*e*S		**Sn**		**18 02 57.9**	**-0.6**
NSY	**Sanyi** baz=304	**1.03**	**297**	⇑*i*P		**Pn**		**18 02 44.0**	**-0.1**
NSY				*e*S		**Sn**		**18 02 59.1**	**+0.5**
NHDH	**Xindian Distri** baz=336	**1.03**	**348**	*e*P		**Pn**		**18 02 44.0**	**-0.1**
NHDH				*e*S		**Sn**		**18 02 58.4**	**-0.4**
TWA	**Mucha** baz=349	**1.04**	**351**	*e*P		**Pb**		**18 02 43.4**	**-0.4**
CHN5	**Tsauling** baz=247	**1.05**	**251**	⇑*i*P		**Pb**		**18 02 43.7**	**-0.2**
TATO	**Yeipei**	**1.05**	**346**	P		**Pn**		**18 02 44.4**	**0.0**
EDH	**Donghe** baz=186	**1.06**	**204**	*e*P		**Pb**		**18 02 42.0**	**-2.0**
EDH				*e*S		**Sb**		**18 02 57.6**	**-0.3**
NMLH	**Miaoli** baz=296	**1.06**	**304**	*e*P		**Pn**		**18 02 45.1**	**+0.5**
NMLH				*e*S		**Sn**		**18 03 00.1**	**+0.6**
SBCB	**Hsinchu** baz=317	**1.10**	**320**	*e*P		**Pg**		**18 02 45.5**	**+0.8**
SBCB				*e*S		**Sn**		**18 03 00.4**	**0.0**
WDJ	**Dajia District** baz=284	**1.10**	**291**	P		**Pg**		**18 02 45.5**	**+0.8**
WDJ				S		**Sn**		**18 03 01.8**	**+1.5**
WCHH	**Zhanghua** baz=271	**1.11**	**277**	*e*P		**Pg**		**18 02 45.4**	**+0.5**
NWF	**Wu-fen Shan** baz=351	**1.12**	**1**	*e*P		**Pg**		**18 02 45.7**	**+0.6**
NWF				*e*S		**Sb**		**18 02 59.0**	**-0.8**
WFSB	**Wu-fen Shan** baz=351	**1.12**	**1**	P		**Pg**		**18 02 45.6**	**+0.6**
WFSB				S		**Sg**		**18 03 00.0**	**+0.4**
WGK	**Gukeng** baz=250	**1.13**	**257**	⇑*i*P		**Pg**		**18 02 45.7**	**+0.4**
WGK				*e*S		**Sn**		**18 03 01.9**	**+0.8**
NCUH	**Zhongli** baz=330	**1.15**	**333**	⇓*i*P		**Pg**		**18 02 46.0**	**+0.4**
NCUH				S		**Sn**		**18 03 02.8**	**+1.3**
SXI1	**Grass Mountain** baz=339	**1.15**	**5**	*e*P		**Pb**		**18 02 45.5**	**-0.1**
WDLH	**Douliu** baz=251	**1.15**	**257**	*e*P		**Pg**		**18 02 46.1**	**+0.4**
WDLH				*e*S		**Sn**		**18 03 03.0**	**+1.4**
WCKO	**Fanlu** baz=239	**1.18**	**245**	*e*P		**Pb**		**18 02 46.1**	**+0.1**
WCKO				*e*S		**Sn**		**18 03 05.5**	**+3.3**
LONT	**Longtian** baz=208	**1.19**	**209**	*e*P		**Pn**		**18 02 44.1**	**-2.2**
JYNG	**Yonagunijimaku**	**1.19**	**65**	P		**Pb**		**18 02 46.0**	**-0.2**
JYNG				S		**Sn**		**18 03 01.9**	**-0.7**
STYH	**Taoyuan** baz=214	**1.19**	**230**	⇑*e*P		**Pn**		**18 02 44.9**	**-1.4**
STYH				*e*S		**Sn**		**18 03 03.3**	**+0.8**
TWS1	**Kuangyinshan** baz=342	**1.19**	**345**	⇑*i*P		**Pb**		**18 02 46.4**	**+0.1**
TWS1				*e*S		**Sn**		**18 03 04.0**	**+1.4**
YM01	**YM01** baz=346	**1.21**	**352**	⇑*i*P		**Pn**		**18 02 46.5**	**-0.1**
TPUB	**Ta-pu** baz=233	**1.22**	**238**	P		**Pg**		**18 02 47.1**	**+0.1**
TPUB	**Ta-pu** baz=233	**1.22**	**238**	⇑*i*P		**Pn**		**18 02 46.3**	**-0.5**
TPUB				*e*S		**Sg**		**18 03 05.4**	**+2.5**
CHN4	**Tsaushan** baz=225	**1.23**	**241**	⇑P		**Pn**		**18 02 46.6**	**-0.2**
NTST	**Danshui** baz=343	**1.25**	**347**	*e*P		**Pg**		**18 02 48.4**	**+0.9**
NTST				*e*S		**Sg**		**18 03 06.4**	**+2.7**
YM08	**YM08** baz=347	**1.25**	**353**	*e*P		**Pg**		**18 02 47.5**	**0.0**
YOJ	**Yonaguni jima**	**1.25**	**66**	P		**Pb**		**18 02 47.1**	**-0.1**
YOJ	**Yonaguni jima** baz=73	**1.25**	**66**	⇑P		**Pn**		**18 02 46.4**	**-0.7**
YOJ	**Yonaguni jima**	**1.25**	**66**	P		**Pb**		**18 02 47.0**	**-0.3**
ANP	**Anpu** baz=345	**1.25**	**350**	*e*P		**Pn**		**18 02 47.0**	**-0.3**
WTP	**Ta-pu** baz=218	**1.26**	**237**	⇑*i*P		**Pn**		**18 02 46.9**	**-0.5**
WRL	**Guolierlin Hig** baz=262	**1.27**	**268**	⇓P		**Pn**		**18 02 47.5**	**+0.1**
WTK	**Tuku** baz=252	**1.28**	**259**	*e*P		**Pg**		**18 02 48.6**	**+0.3**
WTK				*e*S		**Sg**		**18 03 08.1**	**+3.2**
TWGBT	**Beinan**	**1.29**	**209**	P		**Pn**		**18 02 45.6**	**-2.1**
TWGBT	**Beinan** baz=194	**1.29**	**209**	⇑P		**Pn**		**18 02 45.5**	**-2.1**
TWG	**Pinlang** baz=194	**1.29**	**210**	⇑P		**Pn**		**18 02 45.5**	**-2.2**
TWK	**Hsinying** baz=220	**1.35**	**240**	⇓P		**Pn**		**18 02 48.6**	**0.0**
CHN1	**Nanshi** baz=231	**1.36**	**236**	⇑P		**Pn**		**18 02 48.7**	**0.0**
CHN1				*e*S		**Sg**		**18 03 10.5**	**+3.1**
SNST	**Tainan City** baz=234	**1.37**	**238**	⇓P		**Pb**		**18 02 49.3**	**0.0**
SGST	**Jiashian** baz=214	**1.38**	**232**	⇑P		**Pn**		**18 02 48.0**	**-0.9**
SGST				*e*S		**Sg**		**18 03 09.9**	**+1.9**
SLGT	**Liugui** baz=211	**1.40**	**227**	*e*P		**Pn**		**18 02 49.4**	**+0.2**
SLGT				*e*S		**Sg**		**18 03 10.0**	**+1.5**
WSF	**Szhu** baz=251	**1.45**	**258**	⇑P		**Pb**		**18 02 50.9**	**+0.4**
WSF				*e*S		**Sg**		**18 03 12.8**	**+2.8**
WSL	**Shuilin Townsh** baz=248	**1.47**	**254**	*e*P		**Pb**		**18 02 50.9**	**-0.1**
ICHU	**Yijhu** baz=242	**1.48**	**247**	*e*P		**Pb**		**18 02 51.0**	**-0.2**
CHN8	**Yiju** baz=242	**1.54**	**248**	*e*P		**Pb**		**18 02 51.8**	**-0.5**
SCST	**Cishan** baz=213	**1.57**	**228**	⇓P		**Pb**		**18 02 52.7**	**0.0**
SHHT	**Tainan City** baz=231	**1.59**	**235**	*e*P		**Pb**		**18 02 53.5**	**+0.4**
TSMG	**Majia** baz=209	**1.61**	**220**	*e*P		**Pn**		**18 02 51.6**	**-0.5**
TWM1	**Shoushan** baz=224	**1.66**	**228**	*e*P		**Pb**		**18 02 54.8**	**+0.4**
MASBT	**Mashibuluo** baz=215	**1.69**	**218**	*e*P		**Pn**		**18 02 52.7**	**-0.4**
MASBT				S		**Sg**		**18 03 17.9**	**+0.1**
TSCK	**Chigu Township** baz=237	**1.73**	**243**	*e*P		**Pn**		**18 02 54.2**	**+0.4**
TSCK				*e*S		**Sg**		**18 03 19.2**	**-0.1**
EAST	**Anshuo** baz=197	**1.77**	**209**	*e*P		**Pn**		**18 02 52.6**	**-1.7**
IRIF	**Iriomote-Funau**	**1.84**	**77**	P		**Pn**		**18 02 55.4**	**+0.2**
SCZT	**Fangliau** baz=198	**1.89**	**214**	*e*P		**Pb**		**18 02 57.4**	**-0.8**
LYUB	**Lan-yu** baz=188	**1.94**	**185**	*e*P		**Pn**		**18 02 52.8**	**-3.8**
PHUB	**P'eng-hu** baz=250	**2.05**	**258**	*e*P		**Pn**		**18 02 58.0**	**-0.1**
PHUB				*e*S		**Sb**		**18 03 25.4**	**-1.2**
PNG	**Penghu** baz=251	**2.06**	**260**	*e*P		**Pn**		**18 02 58.5**	**+0.3**
PNG				*e*S		**Sn**		**18 03 24.8**	**+0.8**
JKRS	**Kuro-shima**	**2.07**	**82**	*e*P		**Pn**		**18 02 58.8**	**+0.4**
JKRS				*e*S		**Sb**		**18 03 26.3**	**-0.9**
JIJ	**Ishigaki jima**	**2.21**	**79**	P		**Pn**		**18 03 00.1**	**-0.3**
VCHM	**Qimei** baz=244	**2.26**	**252**	*e*P		**Pn**		**18 03 01.2**	**+0.1**
VCHM				*e*S		**Sb**		**18 03 31.2**	**-1.4**
JISG	**Ishigakijimahi**	**2.41**	**74**	P		**Pn**		**18 03 02.5**	**-0.6**
JISG				S		**Sn**		**18 03 33.5**	**+0.8**
PTMZ	**Houxiangcun** baz=286	**2.64**	**295**	*e*P		**Pn**		**18 03 05.9**	**-0.4**
JTJ	**Tarama**	**2.77**	**75**	*e*P		**Pn**		**18 03 08.7**	**+0.6**
QZH	**Quanzhou**	**3.06**	**290**	Pn		**Pn**		**18 03 12.3**	**+0.3**
QZH				Sn		**Sn**		**18 03 48.6**	**0.0**
QZH	comp=N,440nm,1.2s			smax		smax			
QZH	comp=E,290nm,0.9s			smax		smax			
KNMB	**Chin-men Tao** baz=271	**3.12**	**280**	*e*P		**Pn**		**18 03 12.2**	**-0.7**
JMJ	**Miyako jima 2**	**3.33**	**74**	P		**Pn**		**18 03 17.5**	**+1.7**
JMJ2	**Miyako jima3**	**3.35**	**76**	*e*P		**Pn**		**18 03 16.5**	**+0.6**
JOW	**Kunigami** comp=E,3.4nm,0.3s,baz=287,slow=17,SNR=5.7 comp=E,7.0nm,0.3s	**6.55**	**63**	Pn		**Pn**		**18 03 58.8**	**-1.3**
WHN	**Wuhan**	**9.31**	**317**	P		**Pn**		**18 04 36.0**	**-1.9**
WHN				S		**Sn**		**18 06 18.1**	**-4.6**
WHN	comp=N,2μm,8.0s			LR		LR			
WHN	comp=E,1μm,8.3s			LR		LR			
WHN	comp=Z,2μm,7.3s			LR		LR			
KSRS	**Korea Array** comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=2.7	**14.46**	**20**	Pn		**Pn**		**18 05 49.7**	**+1.4**
KSRS	comp=Z,37nm,18.9s,baz=35,slow=38			LR		LR		18 11 14.0	
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.4s,baz=60,slow=8.4,SNR=6.2 comp=Z,0.5nm,0.4s	**21.95**	**260**	P		**P**		**18 07 20.7**	**+3.0**
SONM	**Songino Array** comp=Z,0.9nm,0.8s,baz=162,slow=8.4,SNR=6.1 comp=Z,0.9nm,0.8s	**26.79**	**337**	P		**P**		**18 08 03.1**	**-0.8**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.7s,baz=107,slow=9.7,SNR=7.5 comp=Z,0.8nm,0.7s	**38.88**	**316**	P		**P**		**18 09 48.7**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,0.9nm,0.6s,baz=110,slow=8.2,SNR=5.1 comp=Z,0.9nm,0.6s	**40.73**	**327**	P		**P**		**18 10 02.4**	**-2.0**
H11N1	**WAKE ISLAND Hy** baz=277,slow=75,SNR=6.2	**41.97**	**87**	T		T		18 55 17.3	
H11N2	**WAKE ISLAND Hy** baz=277,slow=75,SNR=6.6	**41.97**	**87**	T		T		18 55 26.1	
H11N3	**WAKE ISLAND Hy** baz=277,slow=75,SNR=5.3	**41.99**	**87**	T		T		18 55 15.2	
H11S3	**WAKE ISLAND Hy** baz=282,slow=74,SNR=25	**42.10**	**89**	T		T		18 55 25.2	
H11S1	**WAKE ISLAND Hy** baz=282,SNR=12	**42.10**	**88**	T		T		18 55 20.5	
H11S2	**WAKE ISLAND Hy** baz=282,slow=74	**42.11**	**89**	T		T		18 55 50.5	
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.6s,baz=116,slow=7.7,SNR=4.1 comp=Z,0.5nm,0.6s	**42.63**	**320**	P		**P**		**18 10 19.4**	**-0.7**
WRA	**Warramunga Arr** comp=Z,1.4nm,0.8s,baz=345,slow=8.8,SNR=4.5 comp=Z,1.4nm,0.8s	**45.31**	**163**	P		P		18 10 48.9	+7.1
BVAR	**Borovoye Array** comp=Z,0.3nm,0.4s,baz=87,slow=8.8,SNR=3.2 comp=Z,0.3nm,0.4s	**48.19**	**321**	P		**P**		**18 11 04.1**	**0.0**
ASAR	**Alice Springs** comp=Z,0.8nm,0.9s,baz=344,slow=5.7,SNR=5.7 comp=Z,0.8nm,0.9s	**48.77**	**165**	P		P		18 11 16.1	+7.2
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=286,slow=8.3,SNR=4.8 comp=Z,0.3nm,0.6s	**69.18**	**27**	P		**P**		**18 13 29.2**	**-0.9**
HFS	**Hagfors** comp=Z,276nm,18.8s,baz=347,slow=40	**78.03**	**331**	LR		LR		18 54 22.0	
YKA	**Yellowknife Ar**	**82.98**	**23**	P		**P**		**18 14 48.4**	**-0.3**

comp=Z,0.5nm,0.6s,baz=312,slow=4.9,SNR=12
comp=Z,0.5nm,0.6s

IDC 07 18:03:43.4±2.1, 6°80S×128°90E, h0km, mb3.4/1, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=108.3km s-min=31.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.09**	**158**		Pn		Pn	18 07 04.9	+0.5
WRA	0.4nm,0.3s,baz=337,slow=12,SNR=18				Sn		Sn	18 09 26.9	-15
	0.3nm,0.3s,baz=334,slow=23,SNR=6.9 0.4nm,0.4s								
ASAR	**Alice Springs**	**17.45**	**165**	P			Pn	18 07 48.0	-0.3
ASAR	0.4nm,0.3s,baz=342,slow=9.8,SNR=38				S		Sn	18 10 49.0	-14
	0.3nm,0.5s,baz=347,slow=24,SNR=5.6 1.9nm,0.6s								
MKAR	**Makanchi Array**	**67.46**	**327**	P			P	18 14 41.1	0.0
	0.2nm,0.5s,baz=117,slow=7.4,SNR=4.6 0.2nm,0.5s								

TAP 07 18:05:12.9, 24°00N×121°58E, h7km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**131**	*i* P			Pg	18 05 14.7	+0.4
HWA	baz=126			*i* S			Sg	18 05 16.3	+1.0
	baz=126								
TWD	**Chiawan**	**0.08**	**13**	*i* P			Pg	18 05 15.8	+0.9
TWD	baz=18			*i* S			Sg	18 05 17.5	+1.1
	baz=18								
ETM	**Tongmen**	**0.08**	**246**	*i* P			Pg	18 05 15.7	+0.8
ETM	baz=245			*i* S			Sg	18 05 17.2	+0.9
	baz=245								
LXIB	**Xiulin Townshi**	**0.15**	**278**	*i* P			Pg	18 05 17.2	+1.1
LXIB	baz=277			S			Sg	18 05 19.8	+1.5
	baz=277								
ETL	**Fush Village**	**0.16**	**15**	P			Pg	18 05 17.1	+0.8
ETL	baz=15			S			Sg	18 05 19.8	+1.2
	baz=15								
NACB	**Ninganchiao**	**0.17**	**6**	*i* P			Pg	18 05 17.3	+0.9
NACB	baz=5.0			S			Sg	18 05 20.2	+1.3
	baz=5.0								
SHUL	**Shoufeng**	**0.21**	**183**	*e*P			Pg	18 05 18.6	+1.5
	baz=183								
ETLH	**Xiulin Townshi**	**0.22**	**337**	*e*P			Pg	18 05 18.5	+1.1
	baz=337								
ESL	**Shilin**	**0.23**	**215**	P			Pg	18 05 17.8	+0.4
ESL	baz=213			*e*S			Sg	18 05 21.1	+0.6
	baz=213								
WHF	**Hehuan Shan**	**0.32**	**297**	P			Pb	18 05 20.5	-0.7
WHF	baz=297			S			Sb	18 05 25.3	-1.4
	baz=297								
WARBT	**Fenglin Townsh**	**0.33**	**212**	*e*P			Pg	18 05 19.7	+0.3
	baz=211								
OWD	**Renai**	**0.37**	**263**	*e*P			Pb	18 05 21.3	-0.5
	baz=262								
CHGB	**Renai**	**0.37**	**279**	P			Pb	18 05 21.4	-0.6
	baz=279								
FUSS	**Fushou**	**0.39**	**309**	P			Pb	18 05 22.1	-0.2
FUSS	baz=309			S			Sb	18 05 28.2	-0.4
	baz=309								
WUSB	**Renai**	**0.42**	**269**	P			Pb	18 05 22.0	-0.7
	baz=268								
NNSB	**Datong**	**0.46**	**338**	*e*P			Pg	18 05 22.6	+0.7
	baz=337								
NNSB	baz=337			*e*S			Sb	18 05 29.6	-0.9
NNS	**Nan Shan**	**0.48**	**337**	*e*P			Pb	18 05 23.1	-0.5
	baz=337								
SSLB	**Suanglung**	**0.61**	**250**	P			Pb	18 05 25.7	-0.2
	baz=249								
ENTT	**Nioudou**	**0.64**	**359**	P			Pb	18 05 26.4	0.0
	baz=359								
ENTT	baz=359			*e*S			Sb	18 05 36.0	+0.5
YULB	**Yu-li**	**0.66**	**203**	*e*P			Pb	18 05 26.4	-0.3
	baz=202								
YULB	baz=202			*e*S			Sb	18 05 35.3	-0.7

IDC 07 18:12:07.2±7.3, 47°91N×91°67W, h0km, mbtmp2.5/2, ML0.7/1, Error ellipse: s-maj=79.1km s-min=60.4km az=14.0
NEIC 07 18:12:10.1±1.4, 47°55N±0°03×92°65W±0°06, h0km±2km, mb_Lg2.8/29, ML2.6/6, Error ellipse: s-maj=7.0km s-min=4.8km az=294.0
ISC 07 18:12:08.0±0.9, 47°61N±0°04×92°72W±0°04, h0km, n29, σ1s07/23, Minnesota

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.89**	**67**				**Pb**	**18 12 26.0**	**-0.4**
EYMN					Sg		**Sg**	**18 12 36.5**	**-0.2**
EYMN					IAML			18 12 41.3	
	183nm,0.8s								
EYMN					IAML			18 12 43.3	
	196nm,1.1s								
B35A	**Bob, Littlefor**	**1.01**	**318**		Pg		**Pn**	**18 12 30.0**	**+0.5**
B35A					IAML			18 12 46.0	
	comp=E,132nm,1.3s								
E38A	**The Farm, Brul**	**1.28**	**141**		Pg		**Pg**	**18 12 32.2**	**-0.4**
E38A					IAML			18 12 52.8	
	comp=E,213nm,0.7s								
F36A	**Milaca**	**1.83**	**198**		Pn		**Pn**	**18 12 41.4**	**+0.6**
AGMN	**Agassiz Nation**	**2.22**	**289**				**Pn**	**18 12 47.9**	**+1.7**
AGMN					IAmb_Lg			18 13 20.9	
	comp=Z,31nm,1.0s								
SPMN	**Marine on St.**	**2.39**	**181**		Pn		**Pn**	**18 12 49.4**	**+1.0**
SPMN							**Sn**	**18 13 18.6**	**+0.3**
D41A	**Chassel**	**2.88**	**99**		Pn		**Pn**	**18 12 56.8**	**+1.7**
COWI	**Conover**	**2.88**	**120**				**Pn**	**18 12 56.0**	**+0.7**
COWI					IAmb_Lg			18 13 39.6	
	comp=Z,23nm,0.8s								
G40A	**Rib Lake**	**2.92**	**142**				**Pn**	**18 12 57.1**	**+1.4**
F33A	**5 Mile Ranch,**	**3.03**	**236**		Pn		**Pn**	**18 12 58.6**	**+1.4**
F33A					IAmb_Lg			18 13 48.8	
	comp=Z,32nm,1.0s								
ULM	**Lac du Bonnet**	**3.36**	**323**		Pn		**Pn**	**18 13 02.7**	**+0.9**
ULM	**Lac du Bonnet**	**3.36**	**323**		Pn		**Pn**	**18 13 04.3**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=1.2				Pg		**Pg**	**18 13 11.3**	**-1.2**
ULM	comp=Z,0.3nm,0.3s,baz=143,slow=14,SNR=8.5				Sn		**Sn**	**18 13 42.5**	**+0.1**
ULM	comp=Z,0.4nm,0.3s,baz=150,slow=20,SNR=4.9				Lg		Lg	18 13 54.3	
	comp=Z,1.9nm,0.3s,baz=232,slow=18,SNR=7.8 comp=Z,0.5nm,0.5s								
I10CA	**LAC DU BONNET**	**3.39**	**321**		I		I	18 38 00.0	
	baz=128,slow=344,SNR=6.2								
I37A	**Lemond, Waseca**	**3.63**	**188**				**Pn**	**18 13 06.1**	**+0.7**
I37A					IAmb_Lg			18 14 07.2	
	comp=Z,19nm,1.0s								
F42A	**Maple Grove Fa**	**3.66**	**119**		IAmb_Lg			18 14 03.8	
	comp=Z,16nm,0.8s								
I40A	**Norwalk**	**4.00**	**158**				**Pn**	**18 13 10.5**	**-0.1**
I40A					IAmb_Lg			18 14 14.3	
	comp=Z,18nm,0.9s								
E43A	**Lone Tree Farm**	**4.11**	**105**		Pn		**Pn**	**18 13 12.8**	**+0.8**
H43A	**Windswept, Lux**	**4.66**	**131**		IAmb_Lg			18 14 41.1	
	comp=Z,25nm,0.9s								
ECSD	**EROS Data Cent**	**4.74**	**217**				**Pn**	**18 13 20.6**	**-0.1**
K38A	**Parkersburg**	**4.96**	**180**		IAmb_Lg			18 14 60.0	
	comp=Z,22nm,1.0s								
JFWS	**Jewell Farm**	**5.01**	**159**				**Pn**	**18 13 23.4**	**-1.0**
JFWS					IAmb_Lg			18 14 46.0	
	comp=Z,24nm,0.7s								
G45A	**Suttons Bay**	**5.53**	**115**		IAmb_Lg			18 15 09.3	
	comp=Z,23nm,0.7s								
L40A	**Anamosa**	**5.65**	**169**		IAmb_Lg			18 15 07.0	
	comp=Z,16nm,0.9s								
K43A	**Burlington**	**5.80**	**146**		IAmb_Lg			18 15 11.9	
	comp=Z,19nm,0.9s								
L42A	**Oliver, Polo**	**6.01**	**158**		IAmb_Lg			18 15 18.4	
	comp=Z,15nm,0.8s								
N38A	**Joes South For**	**6.83**	**183**		IAmb_Lg			18 15 52.2	
	comp=Z,16nm,1.1s								
M50A	**Fremont**	**9.29**	**128**		IAmb_Lg			18 16 56.9	
	comp=Z,8.2nm,0.8s								
R40A	**Maddies Statio**	**9.32**	**178**		Pn		**Pn**	**18 14 23.2**	**-0.4**
YKA	**Yellowknife Ar**	**19.32**	**328**		P		**P**	**18 16 34.6**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=129,slow=12,SNR=2.3								

MDD 07 18:16:53.0±0.6, 35°80N×4°82W, h89km±5km, Mb2.3/12, Error ellipse: s-maj=4.2km s-min=3.1km az=164.0
INMG 07 18:16:53.0±1.7, 35°81N×4°81W, h90km±4km, ML2.0, Error ellipse: s-maj=4.2km s-min=4.1km az=164.0
SFS 07 18:16:53.1, 35°79N×4°80W, h79km, ML2.2/14, ML2.8/7, MLv2.0/14
CNRM 07 18:16:54.9, 35°58N×4°75W, h87km, ML1.3
ISC 07 18:16:50.8±1.3, 35°79N±0°03×4°78W±0°03, h103km±7km, n53, σ1s50/80, 11C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEU	**Ceuta**	**0.49**	**283**		P		**Pn**	**18 17 07.3**	**+0.6**
ECEU	**Ceuta**	**0.50**	**282**		P		**Pn**	**18 17 07.5**	**+0.7**
ECEU					S		**Sn**	**18 17 17.8**	**-1.0**
SMIR	**Smir Dam**	**0.50**	**258**		P		**Pn**	**18 17 09.0**	**+2.1**
SMIR	**Smir Dam**	**0.50**	**258**		S		**Sn**	**18 17 20.9**	**+2.1**
EMIJ	**Mijas**	**0.77**	**0**		P		**Pn**	**18 17 09.2**	**+0.1**
EMIJ					S		**Sn**	**18 17 20.3**	**-2.6**
EMIJ	**Mijas**	**0.77**	**0**		P		**Pn**	**18 17 09.2**	**+0.1**
EMIJ					S		**Sn**	**18 17 20.7**	**-2.2**
CHEFC	**Chefchaouen**	**0.82**	**214**		P		**Pn**	**18 17 11.7**	**+2.0**
CHEFC	**Chefchaouen**	**0.82**	**214**		S		**Sn**	**18 17 24.0**	**+0.1**
EJIF	**Jimena Fronter**	**0.86**	**320**		P		**Pn**	**18 17 10.4**	**+0.4**
EJIF					S		**Sn**	**18 17 23.3**	**-1.1**
PALE	**Palemas**	**0.89**	**130**		P		**Pn**	**18 17 11.3**	**+1.0**
PALE	**Palemas**	**0.89**	**130**		S		**Sn**	**18 17 23.0**	**-2.0**
EMAL	**Malaga-Limoner**	**1.01**	**16**		S		**Sn**	**18 17 25.7**	**-1.3**
ESPR	**Espera**	**1.38**	**321**		P		**Pn**	**18 17 16.1**	**+0.3**
ESPR				⇑*i*	Vmb_V			18 17 20.7	
	124nm,SNR=0.9								
ESPR					S		**Sn**	**18 17 34.7**	**0.0**
ELGU	**Los Guajares,**	**1.42**	**41**		P		**Pn**	**18 17 16.8**	**+0.5**
ELGU					S		**Sn**	**18 17 34.2**	**-1.4**
ELGU	**Los Guajares,**	**1.42**	**41**		P		**Pn**	**18 17 16.9**	**+0.7**
ELGU				⇑*i*	Vmb_V			18 17 19.2	
	89nm,SNR=0.8								
ELGU					S		**Sn**	**18 17 34.2**	**-1.4**
EGOR	**Sierra Gorda,**	**1.42**	**22**		P		**Pn**	**18 17 17.4**	**+1.1**
EGOR					S		**Sn**	**18 17 36.4**	**+0.7**
AKLM	**AKL**	**1.48**	**149**		P		**Pn**	**18 17 18.0**	**+1.0**
AKLM	**AKL**	**1.48**	**149**		S		**Sn**	**18 17 34.8**	**-2.1**
EBER	**Berja**	**1.88**	**54**	⇑*i*	Vmb_V			18 17 25.1	
	31nm,SNR=1.1								
EBER					S		**Sn**	**18 17 46.3**	**+0.3**
IFR	**Ifrane**	**2.29**	**187**		P		**Pn**	**18 17 28.1**	**+0.7**
IFR					S		**Sn**	**18 17 53.2**	**-2.2**
ECAB	**El Cabril**	**2.34**	**347**		P		**Pn**	**18 17 29.0**	**+1.2**
ECAB					S		**Sn**	**18 17 54.9**	**-1.3**
ECAB	**El Cabril**	**2.34**	**347**		P		**Pn**	**18 17 28.8**	**+1.0**
ECAB				⇑*i*	Vmb_V			18 17 30.6	
	139nm,SNR=1.1								
ECAB					S		**Sn**	**18 17 54.8**	**-1.4**
EADA	**Adamuz**	**2.38**	**4**		P		**Pn**	**18 17 30.1**	**+1.8**
EADA					S		**Sn**	**18 17 56.4**	**-0.7**
EADA	**Adamuz**	**2.38**	**4**		P		**Pn**	**18 17 30.2**	**+1.8**
EADA				⇑*i*	Vmb_V			18 17 30.5	
	322nm,SNR=2.9								
EADA					S		**Sn**	**18 17 56.0**	**-1.2**
EQES	**Quesada**	**2.43**	**34**		P		**Pn**	**18 17 31.0**	**+1.8**
EQES				⇑*i*	Vmb_V			18 17 31.8	
	127nm,SNR=1.1								
EQES					S		**Sn**	**18 17 58.5**	**0.0**
EMIN	**Mina Concepcio**	**2.49**	**323**		S		**Sn**	**18 17 57.9**	**-1.8**
EMIN	**Mina Concepcio**	**2.49**	**323**		P		**Pn**	**18 17 31.0**	**+1.2**
EMIN				⇑*i*	Vmb_V			18 17 31.6	
	124nm,SNR=1.1								
EMIN					S		**Sn**	**18 17 58.6**	**-1.2**
EGRO	**El Granado**	**2.79**	**309**		P		**Pn**	**18 17 34.9**	**+1.2**
EGRO					S		**Sn**	**18 18 05.3**	**-1.4**
EGRO	**El Granado**	**2.79**	**309**		P		**Pn**	**18 17 34.9**	**+1.2**
EGRO				⇑*i*	Vmb_V			18 17 35.0	
	223nm,SNR=1.4								
EGRO					S		**Sn**	**18 18 04.5**	**-2.3**
PVAQ	**Vaqueiros**	**2.86**	**305**	*e*	P		**Pn**	**18 17 37.1**	**+2.4**
PVAQ				*e*	S		**Sn**	**18 18 07.2**	**-1.3**
PVAQ	**Vaqueiros**	**2.86**	**305**		S		**Sn**	**18 18 06.8**	**-1.7**
MD31	**MD31**	**2.92**	**180**		P		**Pn**	**18 17 36.7**	**+1.2**
MD31	**MD31**	**2.92**	**180**		S		**Sn**	**18 18 08.0**	**-2.1**
PBDV	**Barranco-do-Ve**	**2.92**	**301**	*e*	P		**Pn**	**18 17 36.7**	**+1.1**
PBDV				*e*	S		**Sn**	**18 18 09.0**	**-1.1**
PBDV					A		A	18 18 10.6	
	2.2nm,0.1s								
PBDV	**Barranco-do-Ve**	**2.92**	**301**		P		**Pn**	**18 17 36.7**	**+1.1**
PBDV					S		**Sn**	**18 18 08.8**	**-1.3**
MDT	**Midelt**	**2.97**	**177**		P		**Pn**	**18 17 37.5**	**+1.2**
MDT	**Midelt**	**2.97**	**177**		S		**Sn**	**18 18 09.4**	**-2.1**
PBAR	**Barrancos**	**2.99**	**323**	*e*	P		**Pn**	**18 17 38.0**	**+1.6**
PBAR				*e*	S		**Sn**	**18 18 10.5**	**-1.1**
PBAR					A		A	18 18 12.6	
	3.4nm,0.5s								
PBAR	**Barrancos**	**2.99**	**323**		P		**Pn**	**18 17 38.0**	**+1.6**
PBAR					S		**Sn**	**18 18 09.9**	**-1.7**
PCVE	**Castro Verde**	**3.20**	**306**	*e*	P		**Pn**	**18 17 40.7**	**+1.5**
PCVE				*e*	S		**Sn**	**18 18 15.3**	**-1.3**
PCVE					A		A	18 18 20.9	
	2.6nm,0.7s								
PCVE	**Castro Verde**	**3.20**	**306**		S		**Sn**	**18 18 14.8**	**-1.8**
MESJ	**Messejana**	**3.44**	**308**	*e*	S		**Sn**	**18 18 20.7**	**-1.6**
MESJ					A		A	18 18 27.0	
	4.2nm,0.5s								
EBAD	**Badajoz**	**3.45**	**330**		P		**Pn**	**18 17 44.1**	**+1.5**
EBAD				⇑*i*	Vmb_V			18 17 45.1	
	218nm,SNR=1.3								
EBAD					S		**Sn**	**18 18 21.2**	**-1.5**
MORF	**Marmelete**	**3.47**	**297**	*e*	P		**Pn**	**18 17 43.9**	**+1.1**
MORF				*e*	S		**Sn**	**18 18 21.4**	**-1.7**
MORF					A		A	18 18 22.6	
	2.8nm,0.2s								
PFVI	**Vila Bisbo**	**3.53**	**293**	*e*	S		**Sn**	**18 18 23.2**	**-1.3**
PTEO	**Sao Teotonio**	**3.62**	**300**	*e*	P		**Pn**	**18 17 46.9**	**+2.0**
PTEO				*e*	S		**Sn**	**18 18 25.9**	**-0.9**
EVO	**Evora**	**3.76**	**318**	*e*	S		**Sn**	**18 18 29.7**	**-0.4**
EVO	**Evora**	**3.76**	**318**		S		**Sn**	**18 18 28.3**	**-1.8**
PAB	**San Pablo**	**3.76**	**5**		P		**Pn**	**18 17 47.8**	**+1.0**
PAB				⇑*i*	Vmb_V			18 17 51.3	
	177nm,SNR=2.1								
PAB					S		**Sn**	**18 18 27.8**	**-2.5**
PNCL	**Nicolau / Gran**	**3.79**	**309**	*e*	S		**Sn**	**18 18 28.6**	**-2.2**
PNCL					A		A	18 18 31.0	
	1.6nm,0.1s								
PESTR	**Estremoz**	**3.80**	**325**	*e*	S		**Sn**	**18 18 29.7**	**-1.4**
PESTR					A		A	18 18 30.6	
	5.0nm,0.6s								
ETOB	**Tobarra**	**3.84**	**41**		P		**Pn**	**18 17 49.9**	**+2.1**
ETOB				⇑*i*	Vmb_V			18 17 50.7	
	26nm,SNR=1.4								
PMRV	**Marv??o**	**4.18**	**331**	*e*	S		**Sn**	**18 18 38.0**	**-2.2**

TAP 07 18:20:35.8, 24°00N×121°59E, h8km, ML2.9, B
JMA 07 18:20:35.3±0.3, 24°0N±0°4×12°2E±°, h0km, TAIWAN REGION
ISC 07 18:20:36.5±0.8, 23°98N±0°01×121°62E±0°02, h7km±5km, n76, σ0s52/123, 3C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.01**	**244**	⇓*i*	P		**Pg**	**18 20 37.7**	**-0.1**
HWA	baz=143			*i*	S		**Sg**	**18 20 39.1**	**+0.5**
	baz=143								
TWD	**Chiawan**	**0.10**	**350**	⇓*i*	P		**Pg**	**18 20 38.8**	**0.0**
TWD	baz=7.0			*i*	S		**Sg**	**18 20 40.5**	**+0.1**
	baz=7.0								
ETM	**Tongmen**	**0.11**	**262**	*i*	P		**Pg**	**18 20 38.6**	**-0.4**
ETM	baz=248				S		**Sg**	**18 20 40.2**	**-0.5**
	baz=248								
ETL	**Fush Village**	**0.18**	**2**		P		**Pg**	**18 20 40.0**	**-0.1**
	baz=9.0								
ETL					S		**Sg**	**18 20 42.8**	**+0.2**
	baz=9.0								
LXIB	**Xiulin Townshi**	**0.19**	**282**	⇓*i*	P		**Pg**	**18 20 40.1**	**-0.2**
	baz=276								
LXIB					S		**Sg**	**18 20 43.0**	**-0.1**
	baz=276								
NACB	**Ninganchiao**	**0.19**	**355**	⇓*i*	P		**Pg**	**18 20 40.3**	**-0.1**
NACB					S		**Sg**	**18 20 42.9**	**-0.1**
SHUL	**Shoufeng**	**0.20**	**194**	*e*	P		**Pg**	**18 20 40.8**	**+0.4**
	baz=187								
SHUL				*e*	S		**Sg**	**18 20 44.6**	**+1.4**
	baz=187								
ESL	**Shilin**	**0.23**	**225**	⇓*e*	P		**Pg**	**18 20 40.6**	**-0.6**
	baz=216								
ETLH	**Xiulin Townshi**	**0.26**	**332**	⇓*i*	P		**Pg**	**18 20 41.6**	**0.0**
	baz=333								
ETLH				*e*	S		**Sg**	**18 20 45.3**	**+0.2**
	baz=333								
TEGC	**Jichi Village**	**0.28**	**194**		P		**Pb**	**18 20 42.9**	**-0.9**
	baz=188								
WARBT	**Fenglin Townsh**	**0.34**	**219**	*e*	P		**Pg**	**18 20 42.4**	**-0.7**
	baz=213								
WARBT				*e*	S		**Sg**	**18 20 46.5**	**-1.0**
	baz=213								
WHF	**Hehuan Shan**	**0.36**	**297**	⇓*i*	P		**Pg**	**18 20 43.5**	**-0.2**
	baz=295								
WHF					S		**Sg**	**18 20 48.4**	**0.0**
	baz=295								
EAHA	**Aohua**	**0.36**	**18**	*e*	P		**Pg**	**18 20 43.4**	**-0.2**
	baz=22								
OWD	**Renai**	**0.40**	**266**	⇓	P		**Pg**	**18 20 44.2**	**-0.2**
	baz=263								
CHGB	**Renai**	**0.41**	**281**	⇓*i*	P		**Pg**	**18 20 44.6**	**+0.1**
	baz=278								
CHGB					S		**Sg**	**18 20 50.5**	**+0.5**
	baz=278								
FUSS	**Fushou**	**0.43**	**308**	⇓*i*	P		**Pg**	**18 20 45.2**	**+0.2**
	baz=307								
FUSS					S		**Sg**	**18 20 51.1**	**+0.5**
	baz=307								
WUSB	**Renai**	**0.46**	**271**	⇓*i*	P		**Pg**	**18 20 45.4**	**+0.1**
	baz=268								
WUSB				*e*	S		**Sg**	**18 20 51.4**	**+0.1**
	baz=268								
ENA	**Nanau**	**0.46**	**15**	⇓*i*	P		**Pg**	**18 20 45.3**	**-0.1**
	baz=18								
ENA				*e*	S		**Sg**	**18 20 51.8**	**+0.3**
	baz=18								
TWT	**Tachien**	**0.48**	**304**	⇓*i*	P		**Pg**	**18 20 46.4**	**+0.5**
	baz=302								
EWUT	**Wuta**	**0.48**	**18**	*e*	P		**Pg**	**18 20 45.6**	**-0.3**
	baz=20								
EWUT					S		**Sg**	**18 20 52.3**	**+0.1**
	baz=20								
NNSB	**Datong**	**0.49**	**335**	⇓*i*	P		**Pg**	**18 20 46.2**	**+0.2**
	baz=335								
NNSB					S		**Sg**	**18 20 52.5**	**0.0**
	baz=335								
TDCB	**Techi**	**0.50**	**303**	⇓*i*	P		**Pg**	**18 20 46.4**	**+0.3**
	baz=302								
NNS	**Nan Shan**	**0.51**	**334**	⇓*i*	P		**Pg**	**18 20 46.4**	**+0.1**
	baz=336								
NNS				*e*	S		**Sg**	**18 20 53.0**	**0.0**
	baz=336								
HGSD	**Ruisui**	**0.52**	**200**	*e*	P		**Pg**	**18 20 46.8**	**+0.3**
	baz=197								
EHY	**Hungye**	**0.54**	**210**	⇑*i*	P		**Pg**	**18 20 46.4**	**-0.6**
	baz=205								
LATG	**Datong**	**0.56**	**352**	⇓*i*	P		**Pg**	**18 20 47.3**	**0.0**
	baz=353								
LATG				*e*	S		**Sb**	**18 20 56.0**	**-0.9**
	baz=353								
NDT	**Datong Townshi**	**0.62**	**351**	⇓*i*	P		**Pg**	**18 20 48.8**	**+0.2**
	baz=353								
NDT					S		**Sg**	**18 20 57.2**	**+0.4**
	baz=353								
ESAO	**Su ao**	**0.63**	**19**	*e*	P		**Pg**	**18 20 48.3**	**-0.3**
	baz=21								
ESAO				*e*	S		**Sg**	**18 20 57.3**	**+0.5**
	baz=21								
SSLB	**Suanglung**	**0.64**	**252**	⇓*i*	P		**Pg**	**18 20 48.5**	**-0.2**
	baz=250								
SSLB				*e*	S		**Sg**	**18 20 55.9**	**-1.1**
	baz=250								
WCS	**Beigang Elemen**	**0.65**	**277**	⇓*i*	P		**Pg**	**18 20 49.3**	**+0.3**
	baz=275								
YULB	**Yu-li**	**0.65**	**206**	*e*	P		**Pg**	**18 20 48.5**	**-0.6**
	baz=204								
YULB				*e*	S		**Sg**	**18 20 57.1**	**-0.5**
	baz=204								
NDS	**Dongshan**	**0.66**	**8**	⇓*i*	P		**Pg**	**18 20 49.2**	**0.0**
	baz=10.0								
NDS				*e*	S		**Sb**	**18 20 58.5**	**-1.2**
	baz=10.0								
ENTT	**Nioudou**	**0.66**	**356**	⇓*i*	P		**Pg**	**18 20 49.4**	**+0.2**
	baz=358								
SMLT	**Sun Moon Lake**	**0.66**	**262**	⇓*i*	P		**Pg**	**18 20 49.4**	**+0.1**
	baz=259								
SMLT				*e*	S		**Sg**	**18 20 57.8**	**-0.1**
	baz=259								
TWC	**Suao**	**0.66**	**19**	⇓	P		**Pg**	**18 20 49.1**	**-0.1**
	baz=21								
WHP	**Taichung City**	**0.68**	**296**	⇓	P		**Pb**	**18 20 50.1**	**-0.6**
	baz=294								
WHP				*e*	S		**Sb**	**18 20 59.5**	**-0.8**
	baz=294								
EYUL	**Yuli**	**0.69**	**203**	*e*	P		**Pg**	**18 20 49.6**	**-0.2**
	baz=201								
TWF1	**Yuli**	**0.69**	**205**	*e*	P		**Pg**	**18 20 49.2**	**-0.6**
	baz=202								
TYC	**Yuchr**	**0.70**	**264**	⇓*i*	P		**Pg**	**18 20 49.9**	**0.0**
	baz=261								
TYC				*e*	S		**Sg**	**18 20 58.4**	**-0.6**
	baz=261								
YHNB	**Yeheng**	**0.72**	**342**	⇓*i*	P		**Pb**	**18 20 50.7**	**-0.7**
	baz=343								
YHNB				*e*	S		**Sg**	**18 20 59.6**	**-0.1**
	baz=343								
NSK	**Sanguang**	**0.73**	**341**	⇓*i*	P		**Pb**	**18 20 50.8**	**-0.8**
	baz=342								
NSK					S		**Sg**	**18 21 00.3**	**+0.2**
	baz=342								
WHYT	**Xinyi Township**	**0.75**	**248**	*e*	P		**

baz=244
CHN5 eS Sb 18 21 08.7 +0.8
baz=244
ELDTW **Lidau** 0.96 215 eP Pg 18 20 53.5 -1.5
baz=212
NHDH **Xindian Distri** 0.98 355 eP Pb 18 20 55.6 -0.3
baz=356
TWA **Mucha** 0.99 358 eP Pb 18 20 55.8 -0.3
baz=359
TIPB **Shuangxi** 1.00 11 ⇑P Pb 18 20 55.8 -0.4
baz=12
TIPB eS Sg 18 21 08.8 0.0
baz=12
WDLH **Douliu** 1.03 254 eP Pn 18 20 57.4 +0.1
baz=252
WDLH eS Sn 18 21 12.3 +0.4
baz=252
WCKO **Fanlu** 1.07 240 eP Pn 18 20 57.5 -0.4
baz=238
WCKO eS Sn 18 21 13.5 +0.4
baz=238
TWB1 **Santiao Chiao** 1.08 18 eP Pb 18 20 57.4 -0.1
baz=20
WFSB **Wu-fen Shan** 1.09 8 eP Pn 18 20 57.7 -0.5
baz=9.0
WFSB eS Sb 18 21 11.6 -0.7
baz=9.0
STYH **Taoyuan** 1.11 224 eP Pb 18 20 57.9 -0.2
baz=222
STYH eS Sb 18 21 12.6 -0.2
baz=222
TPUB **Ta-pu** 1.13 233 ⇑P Pb 18 20 58.3 -0.1
baz=231
TPUB eS Sg 18 21 12.7 -0.2
baz=231
SXI1 **Grass Mountain** 1.13 12 eP Pn 18 20 58.4 -0.4
baz=13
WTK **Tuku** 1.16 256 eP Pn 18 20 59.2 0.0
baz=254
WTK eS Sn 18 21 15.3 +0.1
baz=254
WTP **Ta-pu** 1.17 232 eP Pn 18 20 59.2 -0.1
baz=229
TWK **Hsinying** 1.25 236 eP Pg 18 21 00.6 0.0
baz=233
TWGBT **Beinan** 1.26 203 eP Pn 18 20 59.3 -1.2
baz=201
CHN1 **Nanshi** 1.27 232 eP Pg 18 21 01.4 +0.5
baz=230
CHN1 eS Sn 18 21 19.2 +1.1
baz=230
SNST **Tainan City** 1.27 234 eP Pg 18 21 01.0 0.0
baz=232
SNST eS Sn 18 21 18.6 +0.5
baz=232
SGST **Jiashian** 1.30 227 eP Pb 18 21 01.1 -0.3
baz=225
SGST eS Sn 18 21 19.7 +1.0
baz=225
SLGT **Liugui** 1.33 222 eP Pg 18 21 02.2 +0.3
baz=220
JISG **Ishigakijimahi** 2.53 76 P Pn 18 21 19.7 +1.7

*NEIC **07** 18:29:37.8±1.6,5°.80S±0°.08×110°.6E±0°.1,h537km±7km, mb4.0/15, Error ellipse: s-maj=21.1km s-min=9.9km az=74.0*
*IDC **07** 18:29:43.1±5.4,5°.56S×111°.08E,h615km±75km,mb2.9/9, mbtmp3.9/9, Error ellipse: s-maj=84.0km s-min=12.7km az=60.0*
ISC 07 18:29:37.8±0.6,**5°.83S**±0°.10×**110°.7E**±0°.1,**h550**km,**n37**, σ1§**04**/35,**mb3.8**/15,**Java Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMRI	**Semarang**	**1.23**	**190**	P	**P**	**P**	**18 30 41.2**	**-3.5**
UGM	**Wanagama**	**2.07**	**183**	P	**P**	**P**	**18 30 46.9**	**-1.1**
UGM				S	**S**	**S**	**18 31 42.5**	**-2.4**
JAGI	**Jajag, Banyuwa**	**4.36**	**127**	P	**P**	**P**	**18 31 01.2**	**-1.3**
XMIS	**Christmas Isla**	**6.76**	**227**	P	**P**	**P**	**18 31 23.5**	**-0.2**
SBUM	**Sibu**	**8.38**	**11**	P	**P**	**P**	**18 31 39.5**	**+0.1**
TNTI	**Ternate**	**17.94**	**69**	P	**P**	**P**	**18 33 16.3**	**+1.1**
KNRA	**Kununurra**	**20.29**	**120**	P	**P**	**P**	**18 33 37.0**	**+0.4**
MTN	**Manton Dam**	**21.37**	**110**	P	**P**	**P**	**18 33 47.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**26.75**	**335**	P	**P**	**P**	**18 34 35.7**	**+1.6**
	0.3nm,0.4s,baz=169,slow=7.3,SNR=2.5							
	0.3nm,0.4s							
WB0	**Warramunga Arr**	**26.93**	**123**	P		**P**	**18 34 35.9**	**+0.1**
WB0				IAmb		IAmb	18 34 53.0	
	comp=Z,8.8nm,1.3s							
WRA	**Warramunga Arr**	**26.96**	**124**	P		**P**	**18 34 35.3**	**-0.7**
WRA	**Warramunga Arr**	**26.96**	**124**	P		**P**	**18 34 36.4**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=314,slow=9.4,SNR=12							
	comp=Z,0.6nm,0.5s							
WRAB	**Tennant Creek**	**26.97**	**123**	P		**P**	**18 34 36.0**	**-0.1**
WRAB				IAmb		IAmb	18 35 16.3	
	comp=Z,6.3nm,1.2s							
WB2	**Warramunga Arr**	**26.97**	**124**	P		**P**	**18 34 36.2**	**+0.1**
WB2				IAmb		IAmb	18 34 44.0	
	comp=Z,9.7nm,1.4s							
WR0	**Warramunga Arr**	**27.14**	**123**	P		**P**	**18 34 37.8**	**+0.2**
WR0				IAmb		IAmb	18 34 38.4	
	comp=Z,4.0nm,1.1s							
AS31	**Alice Springs**	**28.55**	**131**	P		**P**	**18 34 50.1**	**+0.2**
ASAR	**Alice Springs**	**28.55**	**131**	P		**P**	**18 34 48.3**	**-1.7**
ASAR	**Alice Springs**	**28.55**	**131**	P		**P**	**18 34 50.1**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=307,slow=8.0,SNR=25							
	comp=Z,0.4nm,0.3s							
STKA	**Stephens Creek**	**38.84**	**136**	P		**P**	**18 36 16.8**	**+0.7**
STKA				IAmb		IAmb	18 36 17.2	
	comp=Z,0.7nm,0.3s							
STKA	**Stephens Creek**	**38.84**	**136**	P		**P**	**18 36 16.8**	**+0.7**
	comp=Z,2.6nm,0.3s,baz=315,slow=9.0,SNR=16							
	comp=Z,2.6nm,0.3s							
MK31	**Makanchi Array**	**58.12**	**337**	P		**P**	**18 38 38.2**	**-0.8**
MKAR	**Makanchi Array**	**58.12**	**337**	P		**P**	**18 38 38.4**	**-0.6**
MKAR	**Makanchi Array**	**58.12**	**337**	P		**P**	**18 38 38.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=152,slow=7.5,SNR=15							
	comp=Z,0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**62.68**	**338**	P		**P**	**18 39 08.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=155,slow=5.5,SNR=6.2							
	comp=Z,0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**63.39**	**343**	P		**P**	**18 39 12.8**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=102,slow=6.2,SNR=4.2							
	comp=Z,0.4nm,0.4s							
BVAR	**Borovoye Array**	**67.78**	**335**	P		**P**	**18 39 40.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=126,slow=7.3,SNR=4.2							
	comp=Z,0.6nm,0.5s							
ABKAR	**Akbulak array**	**70.33**	**327**	P		**P**	**18 39 55.5**	**-0.8**
ABKAR	**Akbulak array**	**70.33**	**327**	P		**P**	**18 39 55.7**	**-0.6**
ABKAR				IAmb		IAmb	18 39 56.6	
	comp=Z,2.5nm,0.7s							
VNDA	**Vanda**	**76.46**	**170**	P		**P**	**18 40 31.8**	**+1.0**
VNDA				IAmb		IAmb	18 40 34.6	
	comp=Z,8.0nm,1.4s							
VNDA	**Vanda**	**76.46**	**170**	P		**P**	**18 40 31.6**	**+0.9**
	comp=Z,3.9nm,1.2s,baz=289,slow=5.8,SNR=5.7							
	comp=Z,3.9nm,1.2s							
LSZ	**Lusaka**	**81.23**	**255**	P		**P**	**18 40 58.1**	**+0.6**
LSZ				IAmb		IAmb	18 40 58.5	
	comp=Z,2.1nm,0.6s							
CO03	**El Pedregal**	**143.51**	**178**			PKPbc	18 48 09.8	+0.3
MIAR	**Mount Ida**	**143.70**	**35**	PKPdf		PKPbc	18 48 10.2	+0.3
LCAR	**Lake Charles**	**143.86**	**31**			PKPbc	18 48 10.1	-0.3
CO01	**Juntas del Tor**	**144.39**	**179**			**PKPab**	**18 48 13.5**	**+0.6**
WVT	**Waverly**	**145.40**	**27**	PKPbc		**PKPbc**	**18 48 15.2**	**+0.2**
AC05	**El Transito**	**145.52**	**179**	PKPbc		**PKPbc**	**18 48 16.2**	**+0.4**

*TAP **07** 18:37:13.1,24°.04N×121°.76E,h7km,ML3.4,C*
*JMA **07** 18:37:13.1±0.1,24°.0N±0°.3×121°.7E±0°.7,h0km,MV2.9/13, TAIWAN REGION*
ISC 07 18:37:13.4±1.0,**24°.03N**±0°.01×**121°.80E**±0°.02,**h8**km±7km, **n125**, σ0§**66**/192,**12C-28D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.19**	**255**	⇓*i*P		**Pg**	**18 37 17.5**	**+0.3**
	baz=245							
HWA				S		**Sg**	**18 37 21.4**	**+1.6**
	baz=245							
TWD	**Chiawan**	**0.20**	**286**	⇓*i*P		**Pg**	**18 37 16.9**	**-0.5**
	baz=288							
TWD				S		**Sg**	**18 37 19.6**	**-0.5**
	baz=288							
ETL	**Fush Village**	**0.21**	**309**	⇓P		**Pg**	**18 37 17.4**	**-0.3**
	baz=306							
NACB	**Ninganchiao**	**0.24**	**308**	P		**Pg**	**18 37 17.7**	**-0.5**
NACB	**Ninganchiao**	**0.24**	**308**	⇓*i*P		**Pg**	**18 37 17.9**	**-0.4**
NACB	baz=312			S		**Sg**	**18 37 21.2**	**-0.3**
	baz=312							
ETM	**Tongmen**	**0.29**	**258**	⇑P		**Pg**	**18 37 18.8**	**-0.3**
ETM	baz=265			S		**Sg**	**18 37 23.2**	**+0.2**
	baz=265							
EAHA	**Aohua**	**0.31**	**349**	P		**Pg**	**18 37 20.0**	**+0.5**
EAHA	baz=356			S		**Sb**	**18 37 24.8**	**-1.5**
	baz=356							
SHUL	**Shoufeng**	**0.32**	**223**	P		**Pg**	**18 37 20.5**	**+0.7**
SHUL	baz=216			S		**Sb**	**18 37 26.0**	**-0.7**
	baz=216							
ETLH	**Xiulin Townshi**	**0.34**	**302**	⇓*i*P		**Pg**	**18 37 19.8**	**-0.4**
ETLH	baz=309			eS		**Sg**	**18 37 24.7**	**-0.1**
	baz=309							
LXIB	**Xiulin Townshi**	**0.35**	**269**	⇓*i*P		**Pg**	**18 37 19.9**	**-0.5**
LXIB	baz=268			eS		**Sg**	**18 37 24.8**	**-0.3**
	baz=268							
TEGC	**Jichi Village**	**0.40**	**217**	P		**Pb**	**18 37 22.4**	**-0.3**
TEGC	baz=210			S		**Sb**	**18 37 29.0**	**+0.2**
	baz=210							
ESL	**Shilin**	**0.40**	**238**	⇑*i*P		**Pg**	**18 37 20.7**	**-0.4**
ENA	**Nanau**	**0.41**	**352**	⇓P		**Pg**	**18 37 21.8**	**+0.5**
ENA	baz=358			S		**Sb**	**18 37 27.8**	**-1.4**
	baz=358							
EWUT	**Wuta**	**0.42**	**357**	⇓P		**Pb**	**18 37 22.2**	**-0.9**
EWUT	baz=2.0			S		**Sb**	**18 37 29.2**	**-0.4**
	baz=2.0							
EOS4	**EOS4**	**0.48**	**79**	eP		**Pn**	**18 37 25.8**	**-0.4**
WARBT	baz=90 **Fenglin Townsh**	**0.49**	**231**	⇑*i*P		**Pg**	**18 37 22.4**	**-0.4**
	baz=227							
EGFH	**Guangfu**	**0.49**	**224**	⇑P		**Pg**	**18 37 22.7**	**-0.3**
	baz=220							
WHF	**Hehuan Shan**	**0.51**	**284**	⇓P		**Pg**	**18 37 22.9**	**-0.4**
WHF	baz=285			S		**Sg**	**18 37 30.1**	**+0.1**
	baz=285							
ESAO	**Su ao**	**0.55**	**4**	eP		**Pb**	**18 37 25.2**	**-0.1**
	baz=8.0							
NNSB	**Datong**	**0.55**	**316**	⇓P		**Pg**	**18 37 24.1**	**0.0**
NNSB	baz=319			S		**Sg**	**18 37 31.2**	**-0.3**
	baz=319							
NNSH	**Datong**	**0.55**	**316**	P		**Pg**	**18 37 24.1**	**0.0**
NNSH	baz=318			eS		**Sg**	**18 37 31.3**	**-0.2**
	baz=318							
FUSS	**Fushou**	**0.56**	**294**	⇓P		**Pg**	**18 37 24.1**	**-0.2**
FUSS	baz=295			eS		**Sb**	**18 37 32.6**	**-1.1**
	baz=295							
LATG	**Datong**	**0.57**	**334**	⇓*i*P		**Pg**	**18 37 24.6**	**+0.2**
LATG	baz=337			eS		**Sb**	**18 37 32.7**	**-1.2**
	baz=337							
NNS	**Nan Shan**	**0.57**	**317**	⇓P		**Pg**	**18 37 24.4**	**-0.1**
NNS	baz=319			S		**Sg**	**18 37 32.0**	**+0.1**
	baz=319							
CHGB	**Renai**	**0.57**	**274**	⇓P		**Pg**	**18 37 24.4**	**-0.2**
CHGB	baz=274			S		**Sg**	**18 37 32.5**	**+0.3**
	baz=274							
OWD	**Renai**	**0.58**	**263**	⇓P		**Pg**	**18 37 24.2**	**-0.4**
OWD	baz=274			S		**Sg**	**18 37 32.5**	**+0.4**
	baz=274							
TWC	**Suao**	**0.58**	**4**	eP		**Pb**	**18 37 25.6**	**-0.3**
	baz=9.0							
NDS	**Dongshan**	**0.61**	**353**	eP		**Pb**	**18 37 26.0**	**-0.3**
NDS	baz=356			eS		**Sb**	**18 37 35.3**	**+0.2**
	baz=356							
TWT	**Tachien**	**0.61**	**292**	eP		**Pg**	**18 37 25.5**	**+0.2**
	baz=291							
WUSB	**Renai**	**0.63**	**267**	⇓P		**Pg**	**18 37 25.4**	**-0.2**
WUSB	baz=266			eS		**Sg**	**18 37 34.6**	**+0.8**
	baz=266							
TDCB	**Techi**	**0.63**	**291**	⇓P		**Pg**	**18 37 25.6**	**0.0**
TDCB	baz=292			eS		**Sg**	**18 37 34.0**	**+0.1**
	baz=292							
NDT	**Datong Townshi**	**0.63**	**335**	⇓P		**Pb**	**18 37 26.1**	**-0.6**
NDT	baz=338			eS		**Sb**	**18 37 34.9**	**-0.8**
	baz=338							
HGSD	**Ruisui**	**0.63**	**213**	eP		**Pg**	**18 37 26.0**	**+0.3**
	baz=196							
ENTT	**Nioudou**	**0.65**	**341**	⇓P		**Pb**	**18 37 26.5**	**-0.5**
ENTT	baz=334			eS		**Sb**	**18 37 35.5**	**-0.7**
	baz=334							
EHY	**Hungye**	**0.68**	**220**	eP		**Pg**	**18 37 25.9**	**-0.6**
	baz=232							
YHNB	**Yeheng**	**0.75**	**329**	P		**Pb**	**18 37 28.5**	**-0.2**
YHNB	**Yeheng**	**0.75**	**329**	⇓P		**Pb**	**18 37 28.3**	**-0.4**
YHNB	baz=331			eS		**Sg**	**18 37 37.1**	**-0.6**
	baz=331							
FUSB	**Fushanzhiwuyua**	**0.76**	**345**	⇓P		**Pb**	**18 37 28.6**	**-0.3**
FUSB	baz=337			eS		**Sb**	**18 37 40.2**	**+0.8**
	baz=337							
NSK	**Sanguang**	**0.76**	**328**	⇓P		**Pb**	**18 37 28.5**	**-0.5**
NSK	baz=331			eS		**Sb**	**18 37 38.7**	**-0.8**
	baz=331							
WPL	**Puli Township**	**0.77**	**269**	eP		**Pg**	**18 37 28.4**	**+0.1**
WPL	baz=269			eS		**Sg**	**18 37 39.1**	**+0.7**
	baz=269							
YULB	**Yu-li**	**0.78**	**216**	P		**Pg**	**18 37 28.2**	**-0.2**
YULB	**Yu-li**	**0.78**	**216**	⇓P		**Pg**	**18 37 27.7**	**-0.8**
YULB	baz=214			eS		**Sg**	**18 37 39.0**	**+0.4**
	baz=214							
NWLT	**Wulai**	**0.80**	**340**	⇓P		**Pb**	**18 37 29.3**	**-0.2**
	baz=342							
DPDB	**Guoxing**	**0.80**	**271**	⇑P		**Pg**	**18 37 28.9**	**+0.1**
DPDB	baz=271			eS		**Sb**	**18 37 40.5**	**-0.1**
	baz=271							
EYUL	**Yuli**	**0.81**	**213**	eP		**Pg**	**18 37 29.1**	**+0.1**
	baz=225							
SSLB	**Suanglung**	**0.81**	**253**	P		**Pg**	**18 37 28.6**	**-0.4**
SSLB	**Suanglung**	**0.81**	**253**	⇑P		**Pg**	**18 37 28.6**	**-0.4**
SSLB	baz=265			S		**Sg**	**18 37 39.5**	**-0.1**
	baz=265							
TWF1	**Yuli**	**0.81**	**215**	eP		**Pg**	**18 37 28.3**	**-0.8**
	baz=226							
WCS	**Beigang Elemen**	**0.81**	**272**	⇑P		**Pg**	**18 37 29.1**	**+0.1**
	baz=271							
WHP	**Taichung City**	**0.82**	**288**	⇓P		**Pg**	**18 37 29.5**	**+0.3**
WHP	baz=289			eS		**Sb**	**18 37 40.6**	**-0.6**
	baz=289							
SMLT	**Sun Moon Lake**	**0.84**	**260**	⇑*i*P		**Pg**	**18 37 29.3**	**-0.2**
SMLT	baz=270			S		**Sg**	**18 37 40.7**	**+0.3**
	baz=270							
NFF	**Wufeng Townshi**	**0.87**	**314**	⇓P		**Pb**	**18 37 30.5**	**-0.3**
NFF	baz=316			eS		**Sg**	**18 37 41.7**	**+0.3**
	baz=316							
TYC	**Yuchr**	**0.87**	**262**	⇑P		**Pg**	**18 37 29.8**	**-0.4**
TYC	baz=262			eS		**Sg**	**18 37 41.2**	**-0.3**
	baz=262							
CHKH	**Chenggong**	**0.91**	**204**	⇓P		**Pg**	**18 37 30.8**	**-0.1**
CHKH	baz=201			eS		**Sb**	**18 37 44.7**	**+1.1**
	baz=201							
WHYT	**Xinyi Township**	**0.93**	**250**	eP		**Pg**	**18 37 31.0**	**-0.2**
	baz=258							
WHYT				eS		**Sb**	**18 37 44.2**	**0.0**
	baz=258							
TIPB	**Shuangxi**	**0.94**	**1**	eP		**Pn**	**18 37 32.4**	**-0.6**
	baz=353							
FULB	**Fuli**	**0.95**	**210**	eP		**Pg**	**18 37 31.1**	**-0.5**
	baz=196							
LIOB	**Emei**	**0.95**	**311**	eP		**Pb**	**18 37 32.2**	**+0.2**
	baz=310							
NSTT	**Nanjuang**	**0.95**	**310**	eP		**Pb**	**18 37 31.9**	**-0.2**
NSTT	baz=311			eS		**Sg**	**18 37 44.1**	**+0.1**
	baz=311							
NJD	**Zhudong**	**0.96**	**318**	eP		**Pn**	**18 37 32.6**	**-0.5**
	baz=317							
NHDH	**Xindian Distri**	**0.97**	**345**	eP		**Pn**	**18 37 32.8**	**-0.4**
	baz=346							
TWA	**Mucha**	**0.97**	**348**	eP		**Pn**	**18 37 32.9**	**-0.4**
	baz=350							
TATO	**Taipei**	**0.99**	**343**	P		**Pn**	**18 37 33.5**	**0.0**
TATO	**Taipei**	**0.99**	**343**	P		**Pb**	**18 37 32.9**	**+0.2**
	baz=335							
TATO				S		**Sb**	**18 37 46.2**	**+0.3**
	baz=335							
TWB1	**Santiao Chiao**	**0.99**	**10**	eP		**Pn**	**18 37 33.9**	**+0.2**
	baz=4.0							
TWB1				eS		**Sn**	**18 37 47.3**	**-0.5**
	baz=4.0							
TWQ1	**Liyutan**	**0.99**	**289**	eP		**Pb**	**18 37 33.0**	**+0.1**
	baz=301							
TWQ1				eS		**Sn**	**18 37 47.3**	**-0.5**
	baz=301							
WJS	**Zhushan**	**1.00**	**259**	eP		**Pb**	**18 37 33.2**	**+0.2**
	baz=266							
WJS				eS		**Sn**	**18 37 47.6**	**-0.5**
	baz=266							
CHKT	**Chengkung**	**1.00**	**204**	eP		**Pg**	**18 37 32.2**	**-0.5**
	baz=200							
CHKT				eS		**Sb**	**18 37 46.8**	**+0.4**
	baz=200							
WWF	**Wufeng**	**1.01**	**271**	eP		**Pb**	**18 37 33.5**	**+0.4**
	baz=270							
NSY	**Sanyi**	**1.03**	**292**	⇑eP		**Pn**	**18 37 34.3**	**+0.2**
	baz=291							
EHD	**Haiduan**	**1.03**	**212**	eP		**Pg**	**18 37 32.7**	**-0.5**
	baz=223							
WNT	**Mingjian**	**1.03**	**262**	⇓P		**Pb**	**18 37 33.7**	**+0.2**
	baz=267							
WNT				eS		**Sb**	**18 37 48.0**	**+0.8**
	baz=267							
WNT1	**Nantou City**	**1.03**	**264**	eP		**Pb**	**18 37 33.7**	**+0.2**
	baz=263							
HSN1	**Hsinchu**	**1.03**	**317**	eP		**Pn**	**18 37 34.6**	**+0.4**
	baz=315							
NWF	**Wu-fen Shan**	**1.04**	**359**	eP		**Pn**	**18 37 34.7**	**+0.3**
	baz=353							
NWF				eS		**Sn**	**18 37 48.3**	**-0.9**
	baz=353							
WFSB	**Wu-fen Shan**	**1.04**	**359**	eP		**Pn**	**18 37 34.3**	**0.0**
	baz=353							
WFSB				S		**Sn**	**18 37 48.2**	**-0.8**
	baz=353							
ALS	**Alishan**	**1.05**	**241**	eP		**Pg**	**18 37 33.0**	**-0.5**
	baz=240							
ALS				eS		**Sn**	**18 37 48.9**	**-0.6**
	baz=240							
NMLH	**Miaoli**	**1.05**	**299**	eP		**Pn**	**18 37 35.0**	**+0.5**
	baz=298							
SXI1	**Grass Mountain**	**1.07**	**4**	⇑eP		**Pn**	**18 37 35.2**	**+0.5**
	baz=351							
ECS	**Chishang**	**1.07**	**210**	eP		**Pb**	**18 37 34.3**	**+0.2**
	baz=224							
NJN	**Zhunan**	**1.07**	**308**	eP		**Pn**	**18 37 34.8**	**+0.1**
	baz=307							
NTY	**Taoyuan**	**1.07**	**335**	eP		**Pn**	**18 37 35.2**	**+0.5**
	baz=327							
NCUH	**Zhongli**	**1.09**	**329**	eP		**Pn**	**18 37 35.3**	**+0.3**
	baz=328							
ELDTW	**Lidau**	**1.10**	**221**	eP		**Pg**	**18 37 32.7**	**-1.9**
	baz=205							
ELDTW				eS		**Sb**	**18 37 49.6**	**+0.3**
	baz=205							
WDJ	**Dajia District**	**1.11**	**287**	eP		**Pn**	**18 37 35.9**	**+0.7**
	baz=286							
CHN5	**Tsauling**	**1.11**	**248**	⇑P		**Pg**	**18 37 34.9**	**0.0**
	baz=236							
CHN5				eS		**Sn**	**18 37 51.7**	**+0.8**
	baz=236							
TWS1	**Kuangyinshan**	**1.13**	**342**	eP		**Pn**	**18 37 36.5**	**+1.1**
	baz=343							
JYNG	**Yonagunijimaku**	**1.13**	**68**	S		**Sn**	**18 37 52.5**	**+1.4**
YM01	**YM01**	**1.14**	**349**	eP		**Pn**	**18 37 35.8**	**+0.2**
	baz=350							
WCHH	**Zhanghua**	**1.14**	**273**	eP		**Pn**	**18 37 35.8**	**+0.2**
	baz=270							
EDH	**Donghe**	**1.14**	**204**	eP		**Pb**	**18 37 33.3**	**-2.1**
	baz=201							
EDH				eS		**Sg**	**18 37 48.4**	**-1.8**
	baz=201							
YM08	**YM08**	**1.17**	**351**	eP		**Pn**	**18 37 37.1**	**+1.0**
	baz=352							
ANP	**Anpu**	**1.18**	**348**	eP		**Pn**	**18 37 36.5**	**+0.2**
	baz=336							
WGK	**Gukeng**	**1.18**	**254**	eP		**Pb**	**18 37 36.0**	**-0.1**
	baz=254							
WGK				eS		**Sn**	**18 37 53.6**	**+1.1**
	baz=254							
YOJ	**Yonaguni jima**	**1.19**	**68**	P		Pn	18 37 41.9	+5.6
YOJ	**Yonaguni jima**	**1.19**	**68**	eS		**Sn**	**18 37 54.3**	**+1.8**
WDLH	**Douliu**	**1.20**	**254**	eP		**Pn**	**18 37 36.6**	**+0.1**
	baz=251							
WCKO	**Fanlu**	**1.24**	**242**	eP		**Pb**	**18 37 37.3**	**+0.2**
	baz=232							
WCKO				eS		**Sn**	**18 37 54.8**	**+0.8**
	baz=232							
STYH	**Taoyuan**	**1.27**	**228**	eP		**Pn**	**18 37 36.4**	**-1.0**
	baz=213							
STYH				eS		**Sb**	**18 37 54.3**	**+0.3**
	baz=213							
STYT	**Tauyuan**	**1.29**	**228**	eP		**Pn**	**18 37 36.8**	**-0.9**
	baz=227							
STYT				eS		**Sn**	**18 37 55.8**	**+0.7**
	baz=227							
TPUB	**Ta-pu**	**1.29**	**236**	P		**Pn**	**18 37 38.0**	**+0.2**
TPUB	**Ta-pu**	**1.29**	**236**	eP		**Pn**	**18 37 37.5**	**-0.2**
	baz=236							
TPUB				eS		**Sn**	**18 37 55.9**	**+0.6**
	baz=236							
WRL	**Guolierlin Hig**	**1.31**	**265**	eP		**Pb**	**18 37 38.3**	**+0.1**
	baz=266							
WRL				eS		**Sg**	**18 37 56.9**	**+1.3**
	baz=266							
RLNB	**Erlin**	**1.33**	**265**	eP		**Pn**	**18 37 38.2**	**0.0**
	baz=248							
WTK	**Tuku**	**1.34**	**256**	eP		**Pb**	**18 37 38.8**	**+0.1**
	baz=256							
WTK				eS		**Sg**	**18 37 57.5**	**+1.1**
	baz=256							
WTP	**Ta-pu**	**1.34**	**235**	eP		**Pn**	**18 37 38.1**	**-0.3**
	baz=245							
WTP				eS		**Sg**	**18 37 56.8**	**+0.4**
	baz=245							
TWGBT	**Beinan**	**1.37**	**209**	eP		**Pn**	**18 37 36.2**	**-2.6**
	baz=209							
TWG	**Pinlang**	**1.37**	**209**	eP		**Pn**	**18 37 36.5**	**-2.4**
	baz=209							
TWK	**Hsinying**	**1.42**	**238**	eP		**Pn**	**18 37 39.6**	**+0.1**
	baz=237							
TWK				eS		**Sg**	**18 37 59.5**	**+0.4**
	baz=237							
CHN1	**Nanshi**	**1.44**	**235**	eP		**Pb**	**18 37 40.4**	**0.0**
	baz=233							
SNST	**Tainan City**	**1.44**	**236**	eP		**Pb**	**18 37 40.3**	**-0.2**
	baz=236							
SNST				eS		**Sg**	**18 38 00.5**	**+0.8**
	baz=236							
SGST	**Jiashian**	**1.46**	**230**	eP		**Pn**	**18 37 39.7**	**-0.3**
	baz=229							
SGST				eS		**Sg**	**18 38 01.2**	**+0.8**
	baz=229							
SLGT	**Liugui**	**1.48**	**226**	eP		**Pn**	**18 37 40.3**	**+0.1**
	baz=227							
SLGT				eS		**Sg**	**18 38 01.9**	**+1.0**
	baz=227							
WSF	**Szhu**	**1.50**	**255**	eP		**Pb**	**18 37 41.3**	**-0.1**
	baz=257							
WSF				eS		**Sg**	**18 38 01.6**	**+0.1**
	baz=257							

ICHU	**Yijhu**	**1.54**	**245**	*e*P		**Pn**	**18 37 41.5**	**+0.4**
	baz=241								
CHN8	**Yiju**	**1.61**	**245**	*e*P		**Pn**	**18 37 42.6**	**+0.5**
	baz=244								
CHN8				*e*S		**Sg**	**18 38 05.4**	**+0.3**
	baz=244								
SCST	**Cishan**	**1.65**	**227**	*e*P		**Pb**	**18 37 44.1**	**+0.1**
	baz=213								
TSMG	**Majia**	**1.69**	**219**	*e*P		**Pn**	**18 37 44.0**	**+0.8**
	baz=208								
MASBT	**Mashibuluo**	**1.77**	**218**	*e*P		**Pn**	**18 37 43.7**	**-0.6**
	baz=221								
MASBT				*e*S		**Sn**	**18 38 07.9**	**+0.9**
	baz=221								
TSCK	**Chigu Township**	**1.80**	**241**	*e*P		**Pn**	**18 37 45.0**	**+0.3**
	baz=240								
TSCK				*e*S		**Sb**	**18 38 09.4**	**+0.1**
	baz=240								
HATJ	**Hateruma jima**	**1.83**	**89**	S		**Sb**	**18 38 10.0**	**-0.2**
LYUB	**Lan-yu**	**2.02**	**186**	*e*P		**Pn**	**18 37 46.9**	**-0.9**
	baz=188								
JKRS	**Kuro-shima**	**2.03**	**84**	*e*S		**Sb**	**18 38 16.4**	**+0.5**
JIJ	**Ishigaki jima**	**2.16**	**81**	*e*P		**Pn**	**18 37 50.1**	**+0.4**
JIJ				*e*S		**Sn**	**18 38 17.2**	**+0.5**
JISG	**Ishigakijimahi**	**2.36**	**76**	P		**Pn**	**18 37 52.8**	**+0.4**
JISG				S		**Sn**	**18 38 22.7**	**+1.2**

IDC ***07*** *18:43:31.4±1.5,23°.81N×121°.76E,h0km,mb3.3/3, mbtmp3.5/4,ML3.6/1,Error ellipse: s-maj=43.6km s-min=27.7km az=63.0*

JMA ***07*** *18:43:33.0±0.1,23°.9N±0°.3×121°.6E±1°.0,h3km,MV3.3/15, TAIWAN REGION*

ASIES ***07*** *18:43:33.2,23°.93N×121°.56E,h9km,ML3.8,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-0.09; $M_{\theta\theta}$-1.21; $M_{\phi\phi}$1.30; $M_{r\theta}$1.37; $M_{\theta\phi}$-1.55; $M_{\phi r}$-0.48; Fault plane solution: $M_0$2.47198×10^{21} NP1: ϕ_s290.15000°,δ88.66000°,λ-143.89000°. NP2: ϕ_s199.17000°,δ53.91000°,λ-1.66000°. Principal axes: T Plg23.5760°, Azm58.7100°; N Plg53.8770°, Azm291.9870°; P Plg25.6630°, Azm160.8130°;*

TAP ***07*** *18:43:33.2,23°.93N×121°.56E,h9km,ML3.8,B*

ISC 07 18:43:33.3±0.7,23°.92N±0°.01×121°.60E±0°.02,h10km±4km, n140,σ0°80/201,mb3.2/3,19C-35D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.06**	**1**	⇓	*i*P		**Pg**	**18 43 35.8**	**+0.3**
HWA	baz=43				*i* S		**Sg**	**18 43 37.8**	**+0.8**
	baz=43								
ETM	**Tongmen**	**0.11**	**296**	⇓	P		**Pg**	**18 43 35.7**	**-0.4**
ETM	baz=299				*i* S		**Sg**	**18 43 37.1**	**-1.0**
	baz=299								
SHUL	**Shoufeng**	**0.13**	**196**	⇑	*i*P		**Pg**	**18 43 37.1**	**+0.7**
SHUL	baz=190				*e*S		**Sg**	**18 43 39.9**	**+1.4**
	baz=190								
TWD	**Chiawan**	**0.16**	**358**	⇓	*i*P		**Pg**	**18 43 37.0**	**0.0**
TWD	baz=11				*e*S		**Sg**	**18 43 39.0**	**-0.5**
	baz=11								
ESL	**Shilin**	**0.19**	**237**	⇑	*i*P		**Pg**	**18 43 37.0**	**-0.3**
ESL	baz=232				S		**Sg**	**18 43 39.3**	**-0.7**
	baz=232								
LXIB	**Xiulin Townshi**	**0.20**	**301**	⇓	*i*P		**Pg**	**18 43 37.3**	**-0.4**
LXIB	baz=297				*i* S		**Sg**	**18 43 39.8**	**-0.9**
	baz=297								
TEGC	**Jichi Village**	**0.21**	**196**		P		**Pg**	**18 43 38.6**	**+0.9**
TEGC	baz=198				S		**Sg**	**18 43 43.6**	**+2.9**
	baz=198								
ETL	**Fush Village**	**0.24**	**4**	⇓	*i*P		**Pg**	**18 43 38.2**	**-0.1**
ETL	baz=10.0				S		**Sg**	**18 43 41.3**	**-0.5**
	baz=10.0								
NACB	**Ninganchiao**	**0.26**	**358**		P		**Pg**	**18 43 38.4**	**-0.2**
NACB	**Ninganchiao**	**0.26**	**358**	⇓	*i*P		**Pg**	**18 43 38.4**	**-0.2**
	baz=2.0								
WARBT	**Fenglin Townsh**	**0.28**	**225**	⇑	*i*P		**Pg**	**18 43 38.7**	**-0.3**
WARBT	baz=226				S		**Sg**	**18 43 41.5**	**-1.3**
	baz=226								
EGFH	**Guangfu**	**0.29**	**213**	⇑	*i*P		**Pg**	**18 43 39.2**	**0.0**
	baz=212								
ETLH	**Xiulin Townshi**	**0.31**	**339**	⇓	*i*P		**Pg**	**18 43 39.4**	**-0.2**
ETLH	baz=343				S		**Sg**	**18 43 43.1**	**-0.7**
	baz=343								
WHF	**Hehuan Shan**	**0.39**	**307**	⇓	*i*P		**Pg**	**18 43 40.7**	**-0.4**
WHF	baz=308				S		**Sg**	**18 43 45.5**	**-0.8**
	baz=308								
OWD	**Renai**	**0.39**	**276**	⇓	P		**Pg**	**18 43 41.1**	**-0.1**
OWD	baz=275				S		**Sg**	**18 43 45.9**	**-0.4**
	baz=275								
CHGB	**Renai**	**0.42**	**290**	⇓	*i*P		**Pg**	**18 43 41.7**	**+0.1**
CHGB	baz=291				*i* S		**Sg**	**18 43 46.8**	**-0.4**
	baz=291								
EAHA	**Aohua**	**0.43**	**17**	⇓	*i*P		**Pg**	**18 43 41.6**	**-0.2**
	baz=11								
WUSB	**Renai**	**0.45**	**280**	⇓	*i*P		**Pg**	**18 43 42.4**	**+0.2**
WUSB	baz=280				S		**Sg**	**18 43 48.0**	**-0.2**
	baz=280								
HGSD	**Ruisui**	**0.45**	**201**	⇑	P		**Pg**	**18 43 42.9**	**+0.7**
	baz=207								
FUSS	**Fushou**	**0.47**	**315**	⇓	*i*P		**Pg**	**18 43 42.5**	**0.0**
FUSS	baz=316				S		**Sg**	**18 43 48.3**	**-0.5**
	baz=316								
EHY	**Hungye**	**0.48**	**212**	⇑	*i*P		**Pg**	**18 43 42.5**	**-0.2**
EHY	baz=217				*e*S		**Sg**	**18 43 49.5**	**+0.4**
	baz=217								
TWT	**Tachien**	**0.52**	**311**	⇓	P		**Pg**	**18 43 43.7**	**+0.3**
TWT	baz=302				S		**Sg**	**18 43 50.4**	**+0.1**
	baz=302								
ENA	**Nanau**	**0.53**	**14**	⇓	P		**Pg**	**18 43 43.5**	**-0.1**
	baz=6.0								
TDCB	**Techi**	**0.53**	**310**	⇓	P		**Pg**	**18 43 43.8**	**+0.1**
TDCB	baz=302				*e*S		**Sg**	**18 43 50.1**	**-0.5**
	baz=302								
NNSB	**Datong**	**0.55**	**339**	⇓	*i*P		**Pg**	**18 43 44.0**	**0.0**
NNSB	baz=339				*e*S		**Sg**	**18 43 50.6**	**-0.7**
	baz=339								
EWUT	**Wuta**	**0.55**	**17**	⇓	P		**Pg**	**18 43 44.1**	**0.0**
	baz=8.0								
NNS	**Nan Shan**	**0.56**	**338**	⇓	P		**Pg**	**18 43 44.3**	**0.0**
NNS	baz=339				*e*S		**Sg**	**18 43 51.8**	**0.0**
	baz=339								
YULB	**Yu-li**	**0.59**	**208**	⇑	P		**Pg**	**18 43 44.6**	**-0.2**
	baz=215								
SSLB	**Suanglung**	**0.61**	**258**		P		**Pg**	**18 43 45.2**	**+0.1**
SSLB	**Suanglung**	**0.61**	**258**	⇑	*i*P		**Pg**	**18 43 45.0**	**-0.1**
	baz=268								
SSLB					*i* S		**Sg**	**18 43 52.0**	**-1.1**
	baz=268								
ECBN	**Changbin**	**0.61**	**193**	*e*P			**Pb**	**18 43 46.3**	**+0.2**
	baz=192								
EYUL	**Yuli**	**0.62**	**205**	*e*P			**Pg**	**18 43 45.6**	**+0.3**
	baz=213								
LATG	**Datong**	**0.62**	**354**	⇓	P		**Pg**	**18 43 45.2**	**-0.2**
	baz=345								
LATG					*e*S		**Sg**	**18 43 53.6**	**0.0**
	baz=345								
TWF1	**Yuli**	**0.63**	**207**	*e*P			**Pg**	**18 43 45.3**	**-0.1**
	baz=213								
SMLT	**Sun Moon Lake**	**0.65**	**267**	⇑	*i*P		**Pg**	**18 43 45.9**	**+0.1**
SMLT	baz=267				S		**Sg**	**18 43 54.0**	**-0.4**
	baz=267								
WCS	**Beigang Elemen**	**0.65**	**283**	⇓	P		**Pg**	**18 43 46.2**	**+0.4**
WCS	baz=283				S		**Sg**	**18 43 53.6**	**-0.7**
	baz=283								
TYC	**Yuchr**	**0.68**	**269**	⇑	*i*P		**Pg**	**18 43 46.5**	**-0.1**
TYC	baz=269				S		**Sg**	**18 43 54.5**	**-1.0**
	baz=269								
EOS4	**EOS4**	**0.69**	**72**	*e*P			**Pb**	**18 43 47.8**	**+0.7**
	baz=81								
EOS4				*e*S			**Sb**	**18 43 57.6**	**+1.1**
	baz=81								
NDT	**Datong Townshi**	**0.69**	**353**	⇓	P		**Pg**	**18 43 46.8**	**+0.1**
NDT	baz=347				*e*S		**Sg**	**18 43 55.4**	**-0.4**
	baz=347								
ESAO	**Su ao**	**0.69**	**18**	*e*P			**Pg**	**18 43 46.6**	**-0.2**
	baz=11								
WHYT	**Xinyi Township**	**0.72**	**253**	*e*P			**Pg**	**18 43 47.3**	**0.0**
WHYT	baz=259				*e*S		**Sg**	**18 43 56.2**	**-0.4**
	baz=259								
ENTT	**Nioudou**	**0.72**	**357**	⇓	*i*P		**Pg**	**18 43 47.4**	**+0.1**
	baz=357								
NDS	**Dongshan**	**0.72**	**8**	⇓	*i*P		**Pg**	**18 43 47.3**	**0.0**
	baz=1.0								
TWC	**Suao**	**0.73**	**18**	⇓	*i*P		**Pg**	**18 43 47.4**	**0.0**
	baz=12								
CHKH	**Chenggong**	**0.74**	**195**	*e*P			**Pg**	**18 43 48.0**	**+0.3**
	baz=183								
EOS3	**EOS3**	**0.75**	**60**	*e*P			**Pn**	**18 43 49.6**	**-0.2**
	baz=56								
EOS2	**EOS2**	**0.76**	**49**	*e*P			**Pn**	**18 43 50.5**	**+0.5**
	baz=58								
EOS2				*e*S			**Sn**	**18 44 06.2**	**+4.7**
	baz=58								
FULB	**Fuli**	**0.77**	**202**	*e*P			**Pb**	**18 43 49.2**	**+0.5**
	baz=216								
YHNB	**Yeheng**	**0.78**	**345**	P			**Pb**	**18 43 48.7**	**-0.3**
YHNB	**Yeheng**	**0.78**	**345**	⇓	*i*P		**Pg**	**18 43 48.6**	**+0.2**
YHNB	baz=345				*e*S		**Sg**	**18 43 57.9**	**-0.7**
	baz=345								
NSK	**Sanguang**	**0.79**	**344**	⇓	*i*P		**Pg**	**18 43 48.8**	**+0.2**
NSK	baz=344				*e*S		**Sg**	**18 43 57.9**	**-1.0**
	baz=344								
WJS	**Zhushan**	**0.81**	**264**	*e*P			**Pn**	**18 43 50.3**	**-0.4**
	baz=270								
WJS				*e*S			**Sb**	**18 44 01.0**	**+0.7**
	baz=270								
ALS	**Alishan**	**0.83**	**241**	⇑	*i*P		**Pg**	**18 43 49.8**	**+0.3**
	baz=251								
NFF	**Wufeng Townshi**	**0.84**	**328**	*e*P			**Pb**	**18 43 49.8**	**-0.2**
	baz=335								
CHKT	**Chengkung**	**0.84**	**195**	*e*P			**Pg**	**18 43 49.5**	**0.0**
	baz=186								
CHKT				*e*S			**Sn**	**18 44 03.0**	**-0.5**
	baz=186								
FUSB	**Fushanzhiwuyua**	**0.84**	**359**	⇓	*i*P		**Pg**	**18 43 49.6**	**0.0**
	baz=359								
FUSB				*e*S			**Sg**	**18 44 00.7**	**+0.1**
	baz=359								
WNT	**Mingjian**	**0.84**	**268**	P			**Pn**	**18 43 50.7**	**-0.5**
	baz=274								
WNT				S			**Sb**	**18 44 02.2**	**+0.9**
	baz=274								
EHD	**Haiduan**	**0.84**	**206**	⇓	P		**Pg**	**18 43 49.6**	**0.0**
	baz=207								
ILA	**Ilan**	**0.86**	**9**	*e*P			**Pb**	**18 43 50.3**	**0.0**
	baz=8.0								
NWLT	**Wulai**	**0.86**	**354**	⇓	P		**Pg**	**18 43 50.0**	**+0.1**
	baz=348								
NWLT				*e*S			**Sg**	**18 44 00.5**	**-0.7**
	baz=348								
TWQ1	**Liyutan**	**0.87**	**300**	⇓	*i*P		**Pb**	**18 43 50.9**	**+0.4**
	baz=300								
TWQ1				*e*S			**Sb**	**18 44 02.3**	**0.0**
	baz=300								
ECS	**Chishang**	**0.89**	**203**	*e*P			**Pg**	**18 43 50.7**	**+0.3**
	baz=205								
NSTT	**Nanjuang**	**0.90**	**322**	⇓	*i*P		**Pb**	**18 43 50.9**	**-0.1**
	baz=322								
NSTT				*e*S			**Sg**	**18 44 02.1**	**-0.3**
	baz=322								
ELDTW	**Lidau**	**0.90**	**217**	⇓	P		**Pg**	**18 43 49.6**	**-1.1**
	baz=209								
ELDTW				*e*S			**Sg**	**18 44 02.3**	**-0.2**
	baz=209								
LIOB	**Emei**	**0.90**	**324**	⇓	P		**Pb**	**18 43 51.3**	**+0.2**
	baz=323								
LIOB				*e*S			**Sb**	**18 44 02.8**	**-0.3**
	baz=323								
CHN5	**Tsauling**	**0.91**	**250**	⇑	P		**Pb**	**18 43 51.5**	**+0.3**
	baz=239								
CHN5				*e*S			**Sn**	**18 44 04.5**	**-0.7**
	baz=239								
NSY	**Sanyi**	**0.92**	**303**	*e*P			**Pn**	**18 43 52.1**	**-0.1**
	baz=303								
NSY				*e*S			**Sb**	**18 44 04.0**	**+0.5**
	baz=303								
NMLH	**Miaoli**	**0.97**	**310**	⇓	P		**Pn**	**18 43 53.2**	**+0.3**
	baz=309								
WCHH	**Zhanghua**	**0.97**	**280**	*e*P			**Pn**	**18 43 53.2**	**+0.2**
	baz=281								
EDH	**Donghe**	**0.98**	**196**	*e*P			**Pg**	**18 43 50.3**	**-1.8**
	baz=199								
EDH				*e*S			**Sn**	**18 44 06.4**	**-0.5**
	baz=199								
WDJ	**Dajia District**	**0.98**	**296**	*e*P			**Pn**	**18 43 54.0**	**+0.9**
	baz=304								
WDJ				*e*S			**Sn**	**18 44 07.5**	**+0.5**
	baz=304								
WGK	**Gukeng**	**0.98**	**257**	⇑	*i*P		**Pn**	**18 43 53.3**	**+0.2**
	baz=258								
WGK				S			**Sn**	**18 44 07.3**	**+0.3**
	baz=258								
WDLH	**Douliu**	**1.00**	**257**	*e*P			**Pn**	**18 43 53.8**	**+0.4**
	baz=259								
WDLH				*e*S			**Sn**	**18 44 08.0**	**+0.4**
	baz=259								
WCKO	**Fanlu**	**1.03**	**243**	⇑	P		**Pn**	**18 43 53.9**	**+0.1**
	baz=240								
WCKO				*e*S			**Sn**	**18 44 08.8**	**+0.5**
	baz=240								
SBCB	**Hsinchu**	**1.04**	**327**	*e*P			**Pn**	**18 43 54.3**	**+0.4**
	baz=326								
NHDH	**Xindian Distri**	**1.05**	**356**	P			**Pn**	**18 43 53.9**	**-0.1**
	baz=355								
NHDH				*e*S			**Sn**	**18 44 08.5**	**-0.1**
	baz=355								
STYH	**Taoyuan**	**1.06**	**226**	*e*P			**Pg**	**18 43 53.4**	**-0.3**
	baz=228								
TATO	**Taipei**	**1.06**	**354**	P			**Pn**	**18 43 54.2**	**0.0**
TWA	**Mucha**	**1.06**	**359**	*e*P			**Pn**	**18 43 54.0**	**-0.2**
	baz=357								
TIPB	**Shuangxi**	**1.07**	**11**	*e*P			**Pg**	**18 43 53.9**	**0.0**
	baz=8.0								
CHN4	**Tsaushan**	**1.08**	**239**	⇑	*i*P		**Pn**	**18 43 54.8**	**+0.3**
	baz=234								
CHN4				*e*S			**Sn**	**18 44 11.5**	**+2.0**
	baz=234								
TPUB	**Ta-pu**	**1.08**	**236**	P			**Pn**	**18 43 54.7**	**+0.2**
TPUB	**Ta-pu**	**1.08**	**236**	⇑	*i*P		**Pn**	**18 43 54.5**	**0.0**
	baz=238								
TPUB				*e*S			**Sn**	**18 44 09.3**	**-0.3**
	baz=238								
NCUH	**Zhongli**	**1.11**	**340**	*e*P			**Pn**	**18 43 55.4**	**+0.5**
	baz=347								
WRL	**Guolierlin Hig**	**1.12**	**270**	*e*P			**Pn**	**18 43 55.3**	**+0.2**
	baz=271								
WRL				*e*S			**Sn**	**18 44 10.6**	**+0.1**
	baz=271								
TAP	**Taipei**	**1.12**	**355**	*e*P			**Pn**	**18 43 55.6**	**+0.6**
	baz=354								
TAP				*e*S			**Sg**	**18 44 09.8**	**+0.3**
	baz=354								
WTP	**Ta-pu**	**1.13**	**234**	⇑	P		**Pn**	**18 43 55.3**	**+0.2**
	baz=243								
WTK	**Tuku**	**1.14**	**259**	*e*P			**Pn**	**18 43 55.7**	**+0.5**
	baz=261								
WTK				*e*S			**Sn**	**18 44 11.2**	**+0.4**
	baz=261								
TWB1	**Santiao Chiao**	**1.14**	**18**	*e*P			**Pb**	**18 43 55.0**	**-0.1**
	baz=7.0								
CHY	**Chiayi**	**1.16**	**249**	*e*S			**Sn**	**18 44 12.6**	**+1.2**
	baz=265								
NWF	**Wu-fen Shan**	**1.16**	**8**	⇑	P		**Pn**	**18 43 56.0**	**+0.3**
	baz=5.0								
WFSB	**Wu-fen Shan**	**1.16**	**8**	*e*P			**Pg**	**18 43 56.0**	**+0.3**
	baz=5.0								
TWS1	**Kuangyinshan**	**1.19**	**352**	*e*P			**Pg**	**18 43 57.0**	**+0.7**
	baz=356								
TWG	**Pinlang**	**1.19**	**204**	*e*P			**Pb**	**18 43 53.6**	**-2.4**
	baz=214								
TWGBT	**Beinan**	**1.19**	**204**	P			**Pb**	**18 43 54.1**	**-1.9**
TWGBT	**Beinan**	**1.19**	**204**	*e*P			**Pb**	**18 43 53.7**	**-2.3**
	baz=214								
SXI1	**Grass Mountain**	**1.20**	**12**	*e*P			**Pn**	**18 43 56.2**	**0.0**
	baz=358								
TWK	**Hsinying**	**1.21**	**238**	⇑	P		**Pg**	**18 43 57.1**	**+0.6**
	baz=229								
TWK				*e*S			**Sn**	**18 44 13.5**	**+0.8**
	baz=229								
WTCT	**Ta-ch'eng**	**1.21**	**268**	*e*P			**Pg**	**18 43 57.2**	**+0.6**
	baz=269								
WTCT				*e*S			**Sn**	**18 44 13.4**	**+0.8**
	baz=269								
CHN1	**Nanshi**	**1.23**	**234**	*e*P			**Pg**	**18 43 57.2**	**+0.3**
	baz=237								
YM01	**YM01**	**1.23**	**359**	*e*P			**Pg**	**18 43 57.3**	**+0.4**
	baz=356								
SNST	**Tainan City**	**1.23**	**236**	*e*P			**Pg**	**18 43 57.4**	**+0.5**
	baz=239								
SNST				*e*S			**Sn**	**18 44 13.5**	**+0.4**
	baz=239								
LDUT	**Ludao**	**1.24**	**186**	*e*P			**Pn**	**18 43 54.4**	**-2.3**
	baz=170								
SGST	**Jiashian**	**1.25**	**229**	*e*P			**Pn**	**18 43 56.6**	**-0.2**
	baz=232								
SGST				*e*S			**Sn**	**18 44 15.0**	**+1.3**
	baz=232								
NTST	**Danshui**	**1.25**	**354**	*e*P			**Pg**	**18 43 57.9**	**+0.6**
	baz=359								
NTST				*e*S			**Sn**	**18 44 15.7**	**+2.0**
	baz=359								
YM08	**YM08**	**1.27**	**359**	*e*P			**Pg**	**18 43 58.1**	**+0.4**
	baz=6.0								
ANP	**Anpu**	**1.27**	**357**	*e*P			**Pg**	**18 43 57.8**	**+0.1**
	baz=354								
SLGT	**Liugui**	**1.27**	**224**	*e*P			**Pg**	**18 43 57.9**	**+0.2**
	baz=227								
SLGT				*e*S			**Sg**	**18 44 16.1**	**+1.9**
	baz=227								
WSF	**Szhu**	**1.29**	**258**	*e*P			**Pg**	**18 43 58.5**	**+0.3**
	baz=260								
WSF				*e*S			**Sg**	**18 44 15.6**	**+0.6**
	baz=260								
WSL	**Shuilin Townsh**	**1.32**	**253**	*e*P			**Pg**	**18 43 59.1**	**+0.5**
	baz=269								
WSL				*e*S			**Sg**	**18 44 17.4**	**+1.6**
	baz=269								
ICHU	**Yijhu**	**1.33**	**246**	*e*P			**Pg**	**18 43 59.5**	**+0.6**
	baz=249								
ICHU				*e*S			**Sg**	**18 44 17.5**	**+1.3**
	baz=249								
JYNG	**Yonaguni jima**	**1.34**	**66**	P			**Pb**	**18 43 58.4**	**-0.1**
YOJ	**Yonaguni jima**	**1.40**	**67**	P			**Pg**	**18 44 00.0**	**-0.1**
YOJ	**Yonaguni jima**	**1.40**	**67**	*e*P			**Pn**	**18 43 58.6**	**-0.2**
	baz=65								
YOJ	**Yonaguni jima**	**1.40**	**67**	P			**Pn**	**18 43 58.9**	**+0.1**
YOJ				S			**Sg**	**18 44 18.2**	**-0.1**
CHN8	**Yiju**	**1.40**	**246**	*e*P			**Pg**	**18 44 00.3**	**+0.1**
	baz=249								
CHN8				*e*S			**Sg**	**18 44 19.6**	**+1.4**
	baz=249								
ECL	**Taimali**	**1.44**	**205**	*e*P			**Pn**	**18 43 59.4**	**0.0**
	baz=193								
SCST	**Cishan**	**1.45**	**225**	*e*P			**Pg**	**18 44 01.4**	**+0.4**
	baz=213								
SHHT	**Tainan City**	**1.46**	**233**	*e*P			**Pg**	**18 44 02.1**	**+0.9**
	baz=236								
TSMG	**Majia**	**1.49**	**216**	*e*P			**Pb**	**18 44 01.2**	**+0.1**
	baz=210								
MASBT	**Mashibuluo**	**1.57**	**215**	*e*P			**Pn**	**18 44 00.8**	**-0.4**
	baz=206								
TSCK	**Chigu Township**	**1.59**	**242**	*e*P			**Pb**	**18 44 02.7**	**-0.1**
	baz=245								
TSCK				*e*S			**Sg**	**18 44 25.5**	**+1.1**
	baz=245								
PNG	**Penghu**	**1.91**	**260**	*e*P			**Pn**	**18 44 06.7**	**+0.9**
	baz=263								
HATJ	**Hateruma jima**	**2.02**	**86**	S			**Sn**	**18 44 32.4**	**-0.3**
JKRS	**Kuro-shima**	**2.22**	**81**	P			**Pn**	**18 44 11.1**	**+0.9**
JIJ	**Ishigaki jima**	**2.36**	**79**	P			**Pn**	**18 44 12.1**	**0.0**
JIJ				*e*S			**Sn**	**18 44 40.2**	**-1.0**
JISG	**Ishigakijimahi**	**2.56**	**74**	P			**Pn**	**18 44 14.6**	**-0.2**
JISG				S			**Sn**	**18 44 45.3**	**-0.7**
JTJ	**Tarama**	**2.92**	**75**	S			**Sn**	**18 44 55.7**	**+0.8**
JMJ2	**Miyako jima3**	**3.50**	**76**	S			**Sn**	**18 45 10.7**	**+1.6**
JOW	**Nunigami**	**6.70**	**63**	Pn			**Pn**	**18 45 10.3**	**-1.4**
	3.0nm,0.3s,baz=169,slow=10,SNR=12 6.5nm,0.3s								
KSRS	**Korea Array**	**14.54**	**20**	Pn			**P**	**18 47 03.9**	**-1.8**
	0.2nm,0.3s,baz=198,slow=11,SNR=7.9								
SONM	**Songino Array**	**26.76**	**337**	P			**P**	**18 49 13.8**	**+0.5**
	0.3nm,0.5s,baz=161,slow=10,SNR=2.4 0.3nm,0.5s								
MKAR	**Makanchi Array**	**38.80**	**316**	P			**P**	**18 50 59.8**	**+1.6**
	0.3nm,0.6s,baz=107,slow=7.7,SNR=4.0 0.3nm,0.6s								
H11N1	**WAKE ISLAND Hy**	**42.12**	**87**	T			T	19 36 39.0	
	baz=276								
H11N2	**WAKE ISLAND Hy**	**42.12**	**87**	T			T	19 36 40.5	
	baz=276,slow=74								
H11N3	**WAKE ISLAND Hy**	**42.14**	**87**	T			T	19 36 27.4	
	baz=276,slow=74								
H11S3	**WAKE ISLAND Hy**	**42.24**	**88**	T			T	19 36 29.0	
	baz=284,slow=75,SNR=20								
H11S1	**WAKE ISLAND Hy**	**42.25**	**88**	T			T	19 36 32.4	
	baz=284,slow=75,SNR=15								
H11S2	**WAKE ISLAND Hy**	**42.26**	**88**	T			T	19 36 32.8	
	baz=284,slow=75,SNR=14								
ASAR	**Alice Springs**	**48.78**	**165**	P			**P**	**18 52 17.1**	**-1.5**
	0.2nm,0.7s,baz=342,slow=6.7,SNR=6.8 0.2nm,0.7s								

TAP 07 18:45:23.3,24°.34N×121°.67E,h10km,ML1.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.06**	**103**	*e*P			**Pg**	**18 45 25.8**	**+0.3**
	baz=103								
EAHA				*e*S			Sg	18 45 27.1	0.0
	baz=103								
ENA	**Nanau**	**0.10**	**36**	*i*	P		Pg	18 45 26.4	+0.3
	baz=39								
ENA				*e*S			Sg	18 45 27.9	-0.1
	baz=39								
EWUT	**Wuta**	**0.14**	**43**	*e*P			Pg	18 45 26.9	+0.3
	baz=43								
EWUT				S			S

	baz=330								
NDT				*e*S		Sg	18 45 34.3	+0.9	
	baz=330								
TWC	**Suao**	**0.31**	**31**	P		Pg	18 45 30.1	+0.6	
	baz=28								
TWC				*e*S		Sg	18 45 34.2	+0.5	
	baz=28								
ENTT	**Nioudou**	**0.31**	**342**	*e*P		Pb	18 45 30.5	-0.5	
	baz=343								
ENTT				*e*S		Sg	18 45 34.4	+0.6	
	baz=343								
LXIB	**Xiulin Townshi**	**0.40**	**217**	*e*P		Pg	18 45 31.5	+0.3	
	baz=216								
LXIB				*e*S		Sg	18 45 37.1	+0.5	
	baz=216								
FUSS	**Fushou**	**0.40**	**256**	*e*P		Pg	18 45 31.9	+0.6	
	baz=256								
FUSS				*e*S		Sg	18 45 37.2	+0.4	
	baz=256								
ETM	**Tongmen**	**0.41**	**204**	*e*S		Sg	18 45 37.2	+0.4	
	baz=203								
WHF	**Hehuan Shan**	**0.42**	**242**	*e*P		Pg	18 45 32.1	+0.3	
	baz=251								
WHF				*e*S		Sg	18 45 37.4	0.0	
	baz=251								
FUSB	**Fushanzhiwuyua**	**0.42**	**349**	*e*P		Pb	18 45 33.2	+0.3	
	baz=349								
FUSB				*e*S		Sg	18 45 38.2	+0.9	
	baz=349								
YHNB	**Yeheng**	**0.42**	**320**	*e*P		Pb	18 45 32.5	-0.5	
	baz=320								
YHNB				*e*S		Sg	18 45 37.7	+0.4	
	baz=320								
NSK	**Sanguang**	**0.44**	**319**	*e*S		Sg	18 45 38.5	+0.7	
	baz=320								
NWLT	**Wulai**	**0.46**	**340**	*e*S		Sg	18 45 39.3	+0.8	
	baz=346								
CHGB	**Renai**	**0.54**	**238**	*e*P		Pb	18 45 34.5	-0.5	
	baz=238								
CHGB				*e*S		Sg	18 45 41.4	+0.5	
	baz=238								
ESL	**Shilin**	**0.57**	**203**	*e*S		Sb	18 45 42.9	-0.6	
	baz=191								
OWD	**Renai**	**0.60**	**230**	*e*P		Pb	18 45 35.5	-0.4	
	baz=222								
OWD				*e*S		Sg	18 45 43.1	+0.3	
	baz=222								
WUSB	**Renai**	**0.62**	**236**	*e*P		Pb	18 45 35.9	-0.4	
	baz=235								
WUSB				*e*S		Sg	18 45 43.6	+0.2	
	baz=235								
WHP	**Taichung City**	**0.67**	**265**	*e*P		Pb	18 45 37.8	+0.7	
	baz=264								
WHP				*e*S		Sb	18 45 46.4	0.0	
	baz=264								
LIOB	**Emei**	**0.67**	**297**	*e*P		Pb	18 45 37.6	+0.5	
	baz=297								
LIOB				*e*S		Sb	18 45 45.9	-0.5	
	baz=297								
WARBT	**Fenglin Townsh**	**0.68**	**203**	*e*P		Pg	18 45 36.7	+0.3	
	baz=194								
WARBT				*e*S		Sg	18 45 45.0	-0.3	
	baz=194								

*IDC **07** 18:45:22.9±2.3, 17°.77S×178°.58W, h563km±26km, mb3.8/15, mbtmp4.7/16, Error ellipse: s-maj=21.6km s-min=12.5km az=149.0*

*NEIC **07** 18:45:23.8±1.2, 17°.9S±0°.2×178°.5W±0°.1, h574km±10km, mb4.5/160, Error ellipse: s-maj=25.1km s-min=14.5km az=152.0*

*NOU **07** 18:45:24.4, 17°.77S×178°.56W, h588km, mb5.0/41, Fiji Islands Region*

ISC 07 18:45:23.5±0.4, 17°.93S±0°.09×178°.52W±0°.06, h579km, n417, ₙ0₹71/353, mb4.5/91, 5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**1.80**	**313**	P	**P**	**18 46 36.5**	**+1.4**
DGTI	**Dogotuki**	**2.33**	**314**	P	**P**	**18 46 38.2**	**+0.8**
YSA	**Yasawairara**	**3.92**	**288**	P	**P**	**18 46 48.0**	**+1.1**
AFI	**Afiamalu**	**7.62**	**59**	P	**P**	**18 47 16.4**	**-2.3**
NIUE	**Niue**	**8.23**	**99**	P	**P**	**18 47 24.1**	**-0.3**
NIUE				S	**S**	**18 49 03.2**	**-0.3**
FUNA	**Funafuti**	**9.61**	**346**	P	**P**	**18 47 38.9**	**+0.8**
PINNC	**Pines Island,**	**13.96**	**248**	P	**P**	**18 48 21.7**	**-0.5**
OUENC	**Ouen Island, N**	**14.45**	**250**	P	**P**	**18 48 25.1**	**-1.9**
DZM	**Mont Dzumac**	**14.71**	**251**	P	**P**	**18 48 30.1**	**+0.4**
DZM	**Mont Dzumac**	**14.71**	**251**	P	**P**	**18 48 30.4**	**+0.7**
DZM	**Mont Dzumac**	**14.71**	**251**	P	**P**	**18 48 29.3**	**-0.5**
	21nm,0.6s,baz=92,slow=18,SNR=20						
ONTNC	**Ouen Toro**	**14.76**	**250**	P	**P**	**18 48 30.1**	**0.0**
KOUNC	**Koumac, New Ca**	**16.44**	**258**	P	**P**	**18 48 46.5**	**+0.6**
URZ	**Urewera**	**20.61**	**190**	P	**P**	**18 49 25.2**	**+1.7**
	16nm,0.8s,baz=244,slow=12,SNR=3.7						
	16nm,0.8s						
EIDS	**Eidsvold**	**29.16**	**250**	P	**P**	**18 50 38.8**	**-0.4**
EIDS	**Eidsvold**	**29.16**	**250**	P	**P**	**18 50 39.2**	**0.0**
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**18 50 45.7**	**+0.6**
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**18 50 46.2**	**+1.1**
AUPHS	**Peel High Scho**	**30.65**	**239**	P	**P**	**18 50 53.3**	**+1.3**
RABL	**Rabaul**	**31.77**	**292**	P	**P**	**18 51 00.4**	**-1.3**
AULRC	**Lightning Ridg**	**32.63**	**243**	P	**P**	**18 51 09.8**	**+1.0**
AUDCS	**Dubbo College**	**32.83**	**238**	P	**P**	**18 51 11.6**	**+1.2**
BULU	**Kimbe**	**32.84**	**288**	P	**P**	**18 51 10.9**	**+0.2**
CNB	**Canberra Magne**	**33.33**	**232**	P	**P**	**18 51 16.0**	**+1.3**
CTAO	**Charters Tower**	**33.34**	**261**	P	**P**	**18 51 14.7**	**-0.2**
CAN	**Canberra**	**33.60**	**233**	P	**P**	**18 51 17.2**	**+0.3**
AUSMG	**Snowy Mountain**	**34.32**	**231**	P	**P**	**18 51 24.4**	**+1.4**
PMG	**Port Moresby**	**34.36**	**280**	P	**P**	**18 51 24.0**	**+0.6**
PMG	**Port Moresby**	**34.36**	**280**	P	**P**	**18 51 24.1**	**+0.6**
PMG	**Port Moresby**	**34.36**	**280**	P	**P**	**18 51 24.2**	**+0.7**
CMSA	**Cobar Meteorol**	**35.04**	**240**	P	**P**	**18 51 29.5**	**+0.5**
MTSU	**Mount Surprise**	**35.30**	**264**	P	**P**	**18 51 31.2**	**-0.1**
QLP	**Quilpie**	**35.42**	**249**	P	**P**	**18 51 32.5**	**+0.3**
COEN	**Coen**	**37.00**	**270**	P	**P**	**18 51 45.6**	**+0.3**
COEN	**Coen**	**37.00**	**270**	P	**P**	**18 51 45.8**	**+0.5**
TOO	**Toolangi**	**37.07**	**231**	P	**P**	**18 51 46.2**	**+0.6**
TOO	**Toolangi**	**37.07**	**231**	P	**P**	**18 51 46.6**	**+1.0**
BRAT	**Ballarat**	**38.22**	**232**	P	**P**	**18 51 56.6**	**+1.7**
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**18 51 58.0**	**+0.5**
STKA				IAmb	IAmb	18 51 59.0	
	comp=Z,9.6nm,0.6s						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**18 51 58.5**	**+1.1**
	comp=Z,34nm,0.5s,baz=91,slow=10,SNR=176						
	comp=Z,34nm,0.5s						
QIS	**Mount Isa**	**39.54**	**259**	P	**P**	**18 52 05.4**	**-0.5**
ARPS	**Mount Arapiles**	**39.55**	**234**	P	**P**	**18 52 05.6**	**0.0**
HTT	**Hallett**	**41.04**	**239**	P	**P**	**18 52 18.3**	**+0.7**
WHYH	**Whyalla**	**42.08**	**240**	P	**P**	**18 52 26.3**	**+0.6**
OOD	**Oodnadatta**	**43.11**	**248**	P	**P**	**18 52 34.7**	**+0.9**
BBOO	**Buckleboo**	**43.30**	**241**	P	**P**	**18 52 35.4**	**+0.1**
BBOO	**Buckleboo**	**43.30**	**241**	P	**P**	**18 52 35.5**	**+0.2**
KHLU	**Kahalu`u**	**43.41**	**32**	P	**P**	**18 52 36.0**	**-0.3**
SDHHI	**Sand Hill**	**43.55**	**33**	P	**P**	**18 52 37.8**	**+0.3**
PUH	**Pauahi**	**43.57**	**33**	P	**P**	**18 52 37.5**	**-0.1**
MLH	**Mauna Loa**	**43.59**	**33**	P	**P**	**18 52 37.6**	**-0.3**
SBLHI	**Steaming Bluff**	**43.59**	**33**	P	**P**	**18 52 37.8**	**0.0**
HMH	**Humu'ula Sheep**	**43.63**	**32**	P	**P**	**18 52 38.6**	**+0.4**
KEKH	**Kekaha**	**43.74**	**26**	P	**P**	**18 52 38.6**	**-0.1**
HPAH	**Hawaii Prepara**	**43.88**	**32**	P	**P**	**18 52 40.0**	**+0.1**
HLK	**Haleakala**	**44.22**	**31**	P	**P**	**18 52 42.6**	**-0.1**
WR0	**Warramunga Arr**	**44.33**	**260**	P	**P**	**18 52 42.2**	**-1.2**
WR0				IAmb	IAmb	18 52 44.7	
	comp=Z,25nm,1.3s						
WB0	**Warramunga Arr**	**44.49**	**260**	IAmb	IAmb	18 52 44.3	
	comp=Z,27nm,0.9s						
WRAB	**Tennant Creek**	**44.51**	**260**	P	**P**	**18 52 43.7**	**-1.1**
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**18 52 44.4**	**-0.5**
	comp=Z,19nm,0.5s,baz=96,slow=7.0,SNR=460						
WRA				PcP	**PcP**	**18 54 15.7**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=92,slow=3.9,SNR=3.2						
	comp=Z,19nm,0.5s						
AS01	**Alice Springs**	**44.64**	**254**	P	**P**	**18 52 45.7**	**-0.1**
AS31	**Alice Springs**	**44.68**	**254**	P	**P**	**18 52 45.8**	**-0.3**
ASAR	**Alice Springs**	**44.68**	**254**	P	**P**	**18 52 46.1**	**+0.1**
	comp=Z,175nm,0.5s,baz=88,slow=8.3,SNR=5901						
ASAR				PcP	**PcP**	**18 54 16.3**	**+0.3**
	comp=Z,4.5nm,0.6s,baz=103,slow=3.7,SNR=3.8						
ASAR				ScP	**ScP**	**18 57 15.8**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=107,slow=4.5,SNR=4.7						
ASAR				S	**S**	**18 58 39.6**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=87,slow=16,SNR=7.0						
MULG	**Mulgathing**	**44.70**	**245**	P	**P**	**18 52 46.1**	**0.0**
KDU	**Kakadu**	**47.45**	**269**	P	**P**	**18 53 06.7**	**-0.4**
MTN	**Manton Dam**	**48.69**	**268**	P	**P**	**18 53 15.6**	**-0.7**
WRKA	**Warakurna**	**49.73**	**252**	P	**P**	**18 53 23.9**	**0.0**
FORT	**Forrest**	**49.90**	**245**	P	**P**	**18 53 24.5**	**-0.5**
KNRA	**Kununurra**	**50.38**	**264**	P	**P**	**18 53 28.3**	**-0.4**
SOEI	**Soe**	**55.96**	**270**	P	**P**	**18 54 09.4**	**+1.0**
SANI	**Sanana**	**56.64**	**280**	P	**P**	**18 54 12.7**	**-0.2**
PSA00	**Pilbara Seismi**	**57.80**	**255**	P	**P**	**18 54 20.3**	**-0.4**
KLBR	**Kellerberrin**	**58.72**	**244**	P	**P**	**18 54 26.5**	**-0.3**
MORW	**Morawa**	**60.37**	**246**	P	**P**	**18 54 37.6**	**-0.2**
MORW				IAmb	IAmb	18 54 38.1	
	comp=Z,13nm,0.5s						
PLAI	**Plampang**	**62.38**	**269**	P	**P**	**18 54 50.8**	**-0.4**
JAGI	**Jaiag, Banyuwa**	**65.93**	**269**	P	**P**	**18 55 11.7**	**-2.0**
MJAR	**Matsushiro Arr**	**67.86**	**323**	P	**P**	**18 55 24.6**	**-0.4**
	comp=Z,4.2nm,0.6s,baz=162,slow=6.1,SNR=14						
	comp=Z,4.2nm,0.6s						
UGM	**Wanagama**	**69.54**	**268**	P	**P**	**18 55 35.1**	**-0.5**
PETK	**Petropavlovsk-**	**73.68**	**345**	P	**P**	**18 55 58.8**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=112,slow=7.7,SNR=8.9						
	comp=Z,1.7nm,0.6s						
KSRS	**Korea Array**	**74.65**	**318**	P	**P**	**18 56 05.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=129,slow=6.6,SNR=8.2						
	comp=Z,1.2nm,0.6s						
SPIA	**Saint Paul Isl**	**75.14**	**5**	P	**P**	**18 56 07.1**	**+0.3**
	baz=188						
S14K	**Fog Glacier**	**75.64**	**11**	P	**P**	**18 56 09.5**	**-0.3**
	baz=199						
CHGN	**Chignik**	**75.86**	**11**	P	**P**	**18 56 10.2**	**-0.7**
	baz=200						
CHIR	**Chirikof Islan**	**75.98**	**13**	P	**P**	**18 56 10.8**	**-0.7**
	baz=202						
SCI2	**San Clemente I**	**76.43**	**48**	P	**P**	**18 56 15.1**	**+0.5**
	baz=238						
PKM	**Mcpherson Peak**	**76.57**	**46**	P	**P**	**18 56 15.8**	**+0.2**
	baz=237						
SMMC	**Simmler**	**76.68**	**46**	P	**P**	**18 56 16.6**	**+0.7**
	baz=236						
CIS	**Catalina Islan**	**76.75**	**48**	P	**P**	**18 56 16.8**	**+0.5**
	baz=238						
SII	**Sitkinak Islan**	**76.97**	**14**	P	**P**	**18 56 16.7**	**-0.2**
	baz=204						
KMRM	**Mail Ridge**	**77.10**	**40**	IAmb	IAmb	18 56 20.4	
	comp=Z,23nm,0.8s						
R16K	**Pilot Point**	**77.22**	**11**	P	**P**	**18 56 17.8**	**-0.4**
	baz=200						
ARVC	**Arvin**	**77.38**	**46**	P	**P**	**18 56 20.0**	**+0.3**
	baz=237						
VES	**Vestal, Richgr**	**77.59**	**46**	P	**P**	**18 56 21.6**	**+0.9**
	baz=237						
MURC	**Murrieta**	**77.72**	**49**	P	**P**	**18 56 22.3**	**+0.7**
	baz=239						
BFSC	**Mount Baldy Ra**	**77.73**	**48**	P	**P**	**18 56 22.3**	**+0.6**
	baz=238,SNR=5.2						
OHAK	**Old Harbor**	**77.78**	**14**	P	**P**	**18 56 21.5**	**+0.3**
	baz=204						
EDW2	**Edwards Air Fo**	**77.83**	**47**	P	**P**	**18 56 23.1**	**+0.9**
	baz=238,SNR=11						
R18K	**Karluk**	**77.84**	**13**	P	**P**	**18 56 21.5**	**-0.1**
	baz=203						
ISA	**Isabella, Lake**	**77.91**	**46**	P	**P**	**18 56 23.0**	**+0.4**
ISA				IAmb	IAmb	18 56 24.6	
	comp=Z,13nm,1.0s						
ISA	**Isabella, Lake**	**77.91**	**46**	P	**P**	**18 56 24.0**	**+1.4**
	baz=237						
MONP2	**Monument Peak**	**77.91**	**50**	P	**P**	**18 56 24.0**	**+1.1**
	baz=239,SNR=16						
IKP	**In-Ko-Pah, Jac**	**78.02**	**50**	P	**P**	**18 56 24.9**	**+1.6**
	baz=240,SNR=6.6						
Q17K	**Contact Creek**	**78.19**	**12**	P	**P**	**18 56 23.2**	**-0.5**
	baz=202						
PFO	**Pinyon Flats O**	**78.25**	**49**	P	**P**	**18 56 25.7**	**+1.1**
	baz=239						
PFO	**Pinyon Flats O**	**78.25**	**49**	P	**P**	**18 56 25.0**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=240,slow=1.7,SNR=4.2						
	comp=Z,2.8nm,0.7s						
TPFO	**Pinon Flats**	**78.25**	**49**	P	**P**	**18 56 25.0**	**+0.4**
	baz=239						
LRMC	**Laurel Mtn Rad**	**78.36**	**47**	P	**P**	**18 56 26.4**	**+1.3**
	baz=238						
SWSC	**Sam W. Stewart**	**78.39**	**50**	P	**P**	**18 56 26.0**	**+0.9**
	baz=240						
Q16K	**King Salmon**	**78.43**	**11**	P	**P**	**18 56 24.0**	**-0.7**
	baz=201						
KDAK	**Kodiak Island**	**78.45**	**14**	P	**P**	**18 56 24.6**	**-0.2**
	baz=205						
P16K	**Nushagak River**	**78.52**	**11**	P	**P**	**18 56 24.8**	**-0.4**
	baz=200						
MDPB	**Devils Postpil**	**78.57**	**44**	IAmb	IAmb	18 56 28.1	
	comp=Z,11nm,0.8s						
CWC	**Cottonwood Cre**	**78.60**	**46**	P	**P**	**18 56 27.5**	**+1.1**
	baz=238						
YBH	**Yreka Blue Hor**	**78.61**	**39**	IAmb	IAmb	18 56 27.9	
	comp=Z,7.9nm,0.7s						
N14K	**Kuskokwak Cree**	**78.78**	**9**	P	**P**	**18 56 26.7**	**+0.2**
	baz=196						
BELC	**Belle Mtn. Jos**	**78.78**	**49**	P	**P**	**18 56 28.5**	**+1.1**
	baz=239,SNR=5.9						
MPMC	**Manual Prospec**	**78.80**	**46**	P	**P**	**18 56 28.3**	**+0.8**
	baz=238,SNR=8.6						
WAKR	**Walker**	**78.81**	**43**	IAmb	IAmb	18 56 29.6	
	comp=Z,9.2nm,0.8s						
GSC	**Goldstone, Bar**	**78.88**	**47**	P	**P**	**18 56 28.4**	**+0.6**
	baz=239						
P17K	**Kvichak River**	**78.95**	**11**	P	**P**	**18 56 27.0**	**-0.5**
	baz=201,SNR=8.3						
HEC	**Hector,Ludlow**	**78.97**	**48**	P	**P**	**18 56 29.0**	**+0.8**
	baz=239,SNR=7.5						
BC3	**Big Chuckawall**	**79.00**	**49**	P	**P**	**18 56 29.8**	**+1.3**
	baz=240						
O16K	**Kokwok River B**	**79.03**	**10**	P	**P**	**18 56 26.9**	**-1.0**
	baz=200						
PNTR	**Pine Nut**	**79.03**	**43**	P	**P**	**18 56 29.5**	**+0.8**
PNTR				IAmb	IAmb	18 56 30.6	
	comp=Z,20nm,0.8s						
L04D	**Klamath Falls**	**79.14**	**39**	IAmb	IAmb	18 56 30.7	
	comp=Z,14nm,0.7s						
YERR	**Yerington**	**79.21**	**43**	IAmb	IAmb	18 56 30.8	
	comp=Z,15nm,0.6s						
N15K	**Kwethluk River**	**79.25**	**9**	P	**P**	**18 56 29.1**	**0.0**
	baz=198						
P18K	**Big Mountain,**	**79.37**	**12**	IAmb	IAmb	18 56 29.8	
	comp=Z,16nm,0.7s						
P18K	**Big Mountain,**	**79.37**	**12**	P	**P**	**18 56 29.1**	**-0.7**
	baz=202,SNR=6.9						
O17K	**Koliganek Bris**	**79.38**	**11**	P	**P**	**18 56 29.3**	**-0.4**
	baz=201						
GRAC	**Grapevine Rang**	**79.38**	**46**	P	**P**	**18 56 31.8**	**+1.4**
	baz=238						
GMRC	**Granite Mounta**	**79.42**	**48**	P	**P**	**18 56 31.4**	**+0.7**
	baz=239						
FURC	**Furnace Creek,**	**79.44**	**46**	P	**P**	**18 56 31.6**	**+1.1**
	baz=238						
IRM	**Iron Mountain**	**79.47**	**49**	P	**P**	**18 56 32.0**	**+1.1**
	baz=240						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**18 56 32.1**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=224,slow=8.6,SNR=11						
	comp=Z,5.8nm,0.7s						
M14K	**Bethel**	**79.54**	**8**	P	**P**	**18 56 31.7**	**+1.2**
	baz=196						
SHOC	**Shoshone, Teco**	**79.56**	**47**	P	**P**	**18 56 32.5**	**+1.2**
	baz=238						
TUQ	**Turquoise Moun**	**79.56**	**47**	P	**P**	**18 56 32.7**	**+1.3**
	baz=239						
M15K	**Kasigluk River**	**79.67**	**9**	P	**P**	**18 56 31.4**	**+0.2**
	baz=197						
N16K	**Nishlik Lake**	**79.75**	**10**	P	**P**	**18 56 32.0**	**+0.3**
	baz=199						
O18K	**Koktuh Hills**	**79.80**	**12**	IAmb	IAmb	18 56 32.3	
	comp=Z,26nm,0.8s						
O18K	**Koktuh Hills**	**79.80**	**12**	P	**P**	**18 56 31.6**	**-0.4**
	baz=202,SNR=7.8						
KVN	**Kaiserville**	**79.99**	**43**	IAmb	IAmb	18 56 34.8	
	comp=Z,7.9nm,0.7s						
P19K	**Oil Pt**	**80.01**	**13**	P	**P**	**18 56 32.6**	**-0.5**
	baz=204						
L14K	**Kuka Creek**	**80.02**	**8**	P	**P**	**18 56 34.1**	**+1.1**
	baz=195						
I04A	**Tendick Farm,**	**80.02**	**38**	IAmb	IAmb	18 56 34.4	
	comp=Z,7.5nm,0.6s						
N17K	**Nushagak Hills**	**80.07**	**11**	P	**P**	**18 56 32.9**	**-0.4**
	baz=201						
214A	**Organ Pipe Nat**	**80.11**	**52**	P	**P**	**18 56 35.7**	**+1.4**
	baz=242						
TPNV	**Topopah Spring**	**80.12**	**46**	P	**P**	**18 56 35.5**	**+1.1**
	baz=239						
M16K	**Timber Creek**	**80.24**	**10**	P	**P**	**18 56 34.9**	**+0.7**
	baz=199						
PDMCI	**Parker Dam,Lak**	**80.27**	**49**	P	**P**	**18 56 35.8**	**+0.8**
	baz=240						
K05A	**Summer Lake**	**80.29**	**39**	IAmb	IAmb	18 56 36.8	
	comp=Z,17nm,0.6s						
O19K	**Port Alsworth**	**80.29**	**12**	P	**P**	**18 56 33.9**	**-0.5**
	baz=203						
J05D	**Fort Rock, OR**	**80.41**	**39**	P	**P**	**18 56 36.4**	**+0.7**
N18K	**Kilae Creek**	**80.44**	**11**	P	**P**	**18 56 34.9**	**-0.4**
	baz=202						
L15K	**Ungalak Mounta**	**80.50**	**8**	P	**P**	**18 56 35.4**	**-0.1**
	baz=196						
O20K	**Slope Mountain**	**80.53**	**13**	P	**P**	**18 56 35.0**	**-0.8**
	baz=205						
BRSE	**Bradley Lake S**	**80.64**	**14**	P	**P**	**18 56 35.8**	**-0.5**
	baz=207						
H04A	**Detroit Lake**	**80.68**	**37**	P	**P**	**18 56 36.7**	**-0.2**
H04A				IAmb	IAmb	18 56 38.5	
	comp=Z,13nm,0.6s						
L16K	**Owhat River**	**80.81**	**9**	P	**P**	**18 56 37.9**	**+0.7**
	baz=198						
N19K	**Bonanza Creek**	**80.83**	**12**	P	**P**	**18 56 36.8**	**-0.6**
	baz=203						
M17K	**Holitna River**	**80.84**	**10**	P	**P**	**18 56 38.0**	**+0.7**
	baz=200						
PINE	**Pine Mountain**	**80.88**	**38**	IAmb	IAmb	18 56 40.2	
	comp=Z,45nm,1.5s						
K15K	**Wolf Creek Mou**	**81.08**	**8**	P	**P**	**18 56 39.2**	**+0.7**
	baz=196						
PRN	**Pahroc Range**	**81.17**	**46**	IAmb	IAmb	18 56 41.6	
	comp=Z,11nm,0.7s						
M18K	**Stony River**	**81.21**	**11**	P	**P**	**18 56 39.8**	**+0.7**
	baz=202						
J14K	**Nanvaranak Lak**	**81.28**	**7**	P	**P**	**18 56 39.6**	**+0.2**
	baz=194						
R11B	**Troy Canyon, C**	**81.29**	**45**	P	**P**	**18 56 41.1**	**+0.7**
	baz=239						
BMN	**Battle Mountai**	**81.30**	**43**	IAmb	IAmb	18 56 41.7	
	comp=Z,9.1nm,0.8s						
HOOD	**Mount Hood Mea**	**81.36**	**37**	IAmb	IAmb	18 56 41.4	
	comp=Z,10nm,0.8s						
WVOR	**Wild Horse Val**	**81.50**	**40**	IAmb	IAmb	18 56 42.7	
	comp=Z,11nm,0.8s						
O22K	**Cooper Landing**	**81.53**	**14**	P	**P**	**18 56 40.5**	**-0.3**
	baz=208						
GAMB	**Gambell**	**81.62**	**3**	P	**P**	**18 56 41.8**	**+0.6**
	baz=187						
N20K	**Mount Spurr**	**81.64**	**13**	P	**P**	**18 56 40.6**	**-0.8**
	baz=205						
L18K	**Granite Mounta**	**81.74**	**10**	IAmb	IAmb	18 56 43.0	
	comp=Z,7.5nm,0.6s						
L18K	**Granite Mounta**	**81.74**	**10**	P	**P**	**18 56 42.5**	**+0.6**
	baz=201,SNR=5.8						
TUC	**Tucson**	**81.80**	**52**	P	**P**	**18 56 43.6**	**+0.6**
TUC				IAmb	IAmb	18 56 45.8	
	comp=Z,15nm,1.3s						
TUC	**Tucson**	**81.80**	**52**	P	**P**	**18 56 44.7**	**+1.7**
	baz=243						
M19K	**Big River Lodg**	**81.85**	**11**	P	**P**	**18 56 42.1**	**-0.4**
	baz=203						
I07A	**Izee**	**81.89**	**39**	IAmb	IAmb	18 56 45.1	
	comp=Z,11nm,0.7s						
K17K	**Iditarod**	**81.95**	**9**	P	**P**	**18 56 43.4**	**+0.4**
	baz=199						
L19K	**White Mountain**	**82.02**	**11**	P	**P**	**18 56 43.6**	**+0.2**
	baz=203						
GNW	**Green Mountain**	**82.06**	**34**	IAmb	IAmb	18 56 44.9	
	comp=Z,8.5nm,0.8s						
RC01	**Rabbit Creek A**	**82.07**	**14**	P	**P**	**18 56 43.7**	**+0.1**
	baz=208						
J08A	**Circle Bar Ran**	**82.11**	**40**	IAmb	IAmb	18 56 46.0	
	comp=Z,26nm,1.3s						
Q12A	**Willow Creek R**	**82.15**	**45**	IAmb	IAmb	18 56 46.1	
	comp=Z,11nm,0.7s						
SUA	**Susitna One**	**82.18**	**13**	IAmb	IAmb	18 56 44.7	
	comp=Z,12nm,0.8s						
SUA	**Susitna One**	**82.18**	**13**	P	**P**	**18 56 43.9**	**-0.4**
	baz=207,SNR=5.4						
X16A	**Lo Mia Camp, P**	**82.28**	**50**	IAmb	IAmb	18 56 48.0	
	comp=Z,11nm,1.0s						
IPM	**Ipoh**	**82.32**	**277**	IAmb	IAmb	18 56 47.3	
	comp=Z,14nm,0.6s						
L20K	**Farewell, AK**	**82.48**	**11**	P	**P**	**18 56 45.2**	**-0.5**
	baz=204						
SKT	**Skwentna**	**82.48**	**12**	P	**P**	**18 56 44.7**	**-1.0**
	baz=206						
TTA	**Tatalina**	**82.52**	**10**	P	**P**	**18 56 45.4**	**-0.5**
TTA	**Tatalina**	**82.52**	**10**	P	**P**	**18 56 45.6**	**-0.3**
	baz=202						
KNB	**Kanab**	**82.53**	**47**	IAmb	IAmb	18 56 48.4	
	comp=Z,8.4nm,0.7s						
319A	**Douglas**	**82.53**	**54**	IAmb	IAmb	18 56 49.1	
	comp=Z,11nm,0.7s						
U15A	**North Rim**	**82.62**	**48**	IAmb	IAmb	18 56 49.6	
	comp=Z,15nm,0.7s						
KNK	**Knik Glacier**	**82.65**	**14**	P	**P**	**18 56 46.2**	**-0.4**
	baz=209						
PMR	**Palmer**	**82.65**	**14**	P	**P**	**18 56 45.7**	**-0.7**
	baz=208						
ELK	**Elko**	**82.75**	**43**	P	**P**	**18 56 48.0**	**+0.2**
	comp=Z,

	baz=196						
MCARA	**McCarthy VSAT**	**83.98**	**16**	P	**P**	**18 56 53.3**	**+0.2**
	baz=214						
J20K	**Nowinta River**	**83.99**	**10**	IAmb	IAmb	18 56 53.4	
	comp=Z,17nm,1.4s						
J20K	**Nowinta River**	**83.99**	**10**	P	**P**	**18 56 53.1**	**0.0**
	baz=203,SNR=5.9						
KTH	**Kantishna Hill**	**84.02**	**12**	IAmb	IAmb	18 56 54.0	
	comp=Z,10nm,1.1s						
CHUM	**Lake Minchumin**	**84.05**	**11**	P	**P**	**18 56 52.5**	**-0.9**
	baz=205						
TRF	**Thorofare Moun**	**84.06**	**12**	IAmb	IAmb	18 56 53.8	
	comp=Z,16nm,0.7s						
TRF	**Thorofare Moun**	**84.06**	**12**	P	**P**	**18 56 52.7**	**-1.0**
	baz=207,SNR=11						
DUG	**Dugway, Tooele**	**84.08**	**45**	P	**P**	**18 56 54.7**	**+0.4**
	baz=241						
CTG	**Chitna Glacier**	**84.10**	**17**	P	**P**	**18 56 53.7**	**-0.1**
	baz=215						
P29M	**Windy Craggy**	**84.11**	**19**	P	**P**	**18 56 54.2**	**+0.4**
	baz=219						
121A	**Cookes Peak, D**	**84.17**	**53**	P	**P**	**18 56 56.2**	**+1.2**
	baz=244						
F10A	**Beach Ranch, E**	**84.29**	**38**	IAmb	IAmb	18 56 56.3	
	comp=Z,13nm,0.9s						
HARP	**HAARP**	**84.29**	**15**	P	**P**	**18 56 54.1**	**-0.5**
	baz=212						
RND	**Reindeer**	**84.32**	**13**	IAmb	IAmb	18 56 55.2	
	comp=Z,13nm,0.7s						
DHY	**Denali Highway**	**84.35**	**14**	P	**P**	**18 56 54.5**	**-0.6**
	baz=210						
PLBC	**Pleasant Camp**	**84.42**	**20**	P	**P**	**18 56 55.1**	**-0.2**
	baz=220						
MCK	**McKinley**	**84.59**	**13**	P	**P**	**18 56 55.3**	**-0.8**
	baz=208						
GSI	**Gunungsitoli**	**84.59**	**273**	IAmb	IAmb	18 56 59.2	
	comp=Z,17nm,0.8s						
PAX	**Paxson**	**84.70**	**14**	P	**P**	**18 56 56.0**	**-0.8**
	baz=211						
HLID	**Hailey**	**84.72**	**41**	IAmb	IAmb	18 56 59.0	
	comp=Z,5.3nm,0.8s						
HLID	**Hailey**	**84.72**	**41**	P	**P**	**18 56 58.5**	**+1.1**
	baz=239,SNR=12						
P30M	**Million Dollar**	**84.74**	**19**	P	**P**	**18 56 57.7**	**+0.7**
	baz=219						
T35M	**Bob Quinn**	**84.79**	**24**	P	**P**	**18 56 57.9**	**+0.6**
	baz=226						
YUK8	**Steele Glacier**	**84.81**	**18**	P	**P**	**18 56 57.5**	**0.0**
	baz=217						
M26K	**Nabesna, AK**	**84.84**	**16**	P	**P**	**18 56 57.3**	**-0.1**
	baz=214						
H19K	**Roundabout Mou**	**84.88**	**9**	P	**P**	**18 56 57.2**	**-0.2**
	baz=201						
G18K	**Tagagawik**	**84.91**	**8**	P	**P**	**18 56 57.1**	**-0.5**
	baz=199						
YUK3	**Moose Creek**	**85.00**	**17**	P	**P**	**18 56 58.5**	**+0.1**
	baz=216						
H20K	**Anotleneega Mo**	**85.09**	**10**	P	**P**	**18 56 58.5**	**0.0**
	baz=202						
M27K	**Edge Creek, AK**	**85.09**	**16**	IAmb	IAmb	18 56 59.4	
	comp=Z,12nm,1.0s						
M27K	**Edge Creek, AK**	**85.09**	**16**	P	**P**	**18 56 59.0**	**+0.3**
	baz=215						
S34M	**Telegraph Cree**	**85.11**	**23**	IAmb	IAmb	18 57 00.4	
	comp=Z,11nm,0.7s						
S34M	**Telegraph Cree**	**85.11**	**23**	P	**P**	**18 56 59.7**	**+1.0**
	baz=225,SNR=5.1						
SRU	**San Rafael Swe**	**85.11**	**46**	IAmb	IAmb	18 57 00.9	
	comp=Z,6.2nm,0.7s						
F17K	**Baldwin Pennin**	**85.11**	**7**	P	**P**	**18 56 58.8**	**+0.3**
	baz=196						
HYT	**Haines Junctio**	**85.11**	**19**	P	**P**	**18 56 59.0**	**+0.1**
	baz=219						
YUK4	**Talbot Arm**	**85.18**	**18**	P	**P**	**18 56 59.5**	**+0.3**
	baz=218						
L26K	**Log Cabin Wild**	**85.27**	**15**	P	**P**	**18 56 59.5**	**+0.1**
	baz=213						
I21K	**Tanana**	**85.29**	**11**	P	**P**	**18 56 59.8**	**+0.4**
	baz=205						
K24K	**Donnelly Dome**	**85.35**	**14**	P	**P**	**18 56 59.9**	**+0.1**
	baz=211						
G19K	**Purcell Mounta**	**85.36**	**9**	P	**P**	**18 56 60.0**	**+0.2**
	baz=200						
MLY	**Manley**	**85.39**	**11**	P	**P**	**18 56 59.6**	**-0.3**
	baz=206						
P32M	**Atlin**	**85.41**	**21**	P	**P**	**18 57 00.6**	**+0.4**
	baz=222						
BVCY	**Beaver Creek**	**85.41**	**17**	P	**P**	**18 57 00.2**	**+0.1**
	baz=216						
WRH	**Wood River Hil**	**85.42**	**13**	IAmb	IAmb	18 57 00.8	
	comp=Z,5.9nm,0.8s						
Q32M	**Nakina River**	**85.45**	**22**	P	**P**	**18 57 01.0**	**+0.4**
	baz=224						
TCUT	**Toone Canyon**	**85.46**	**44**	IAmb	IAmb	18 57 04.7	
	comp=Z,12nm,0.7s						
F18K	**Selawik**	**85.46**	**7**	P	**P**	**18 57 00.1**	**0.0**
	baz=198						
RIDG	**Independent Ri**	**85.51**	**14**	P	**P**	**18 57 00.6**	**+0.1**
	baz=212						
O30N	**Mendenhall**	**85.51**	**19**	P	**P**	**18 57 01.1**	**+0.4**
	baz=220						
H21K	**Melozitna Rive**	**85.58**	**10**	P	**P**	**18 57 01.1**	**+0.3**
	baz=204						
NEW	**Newport**	**85.59**	**36**	P	**P**	**18 57 01.4**	**0.0**
	baz=237						
HDA	**Harding Lake**	**85.61**	**13**	IAmb	IAmb	18 57 01.8	
	comp=Z,5.6nm,0.8s						
HDA	**Harding Lake**	**85.61**	**13**	P	**P**	**18 57 00.8**	**-0.2**
	baz=210						
CCB	**Clear Creek Bu**	**85.63**	**13**	IAmb	IAmb	18 57 00.4	
	comp=Z,5.5nm,0.6s						
E17K	**Hotham Inlet**	**85.67**	**6**	P	**P**	**18 57 01.2**	**0.0**
	baz=196						
MVCO	**Mesa Verde**	**85.68**	**49**	P	**P**	**18 57 02.5**	**+0.2**
	baz=244						
MNTX	**Cornudas Mount**	**85.68**	**55**	P	**P**	**18 57 02.8**	**+0.7**
	baz=246						
I23K	**Minto, Yukon-K**	**85.76**	**12**	P	**P**	**18 57 01.0**	**-0.6**
	baz=208						
WHY	**Whitehorse**	**85.82**	**20**	P	**P**	**18 57 02.4**	**+0.2**
	baz=221						
DLBC	**Dease Lake**	**85.90**	**23**	P	**P**	**18 57 02.8**	**+0.2**
	baz=226						
SCRK	**Sand Creek**	**85.91**	**15**	P	**P**	**18 57 02.4**	**-0.2**
	baz=213						
IL31		**85.94**	**13**	IAmb	IAmb	18 57 01.9	
	comp=Z,6.1nm,1.1s						
ILAR	**Eielson Array**	**85.94**	**13**	P	**P**	**18 57 01.3**	**-1.3**
ILAR	**Eielson Array**	**85.94**	**13**	P	**P**	**18 57 01.4**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=222,slow=5.0,SNR=52						
	comp=Z,1.7nm,0.5s						
H22K	**Ishtalitna Cre**	**86.05**	**11**	P	**P**	**18 57 02.7**	**-0.3**
	baz=206						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**18 57 05.9**	**+1.6**
	comp=Z,7.0nm,0.7s,baz=218,slow=5.7,SNR=33						
	comp=Z,7.0nm,0.7s						
M29M	**Somme Creek**	**86.11**	**17**	P	**P**	**18 57 03.7**	**+0.2**
	baz=218						
POKR	**Poker Plat Res**	**86.12**	**13**	IAmb	IAmb	18 57 02.6	
	comp=Z,5.8nm,0.7s						
POKR	**Poker Plat Res**	**86.12**	**13**	P	**P**	**18 57 02.5**	**-0.9**
	baz=210						
E18K	**Tukpahlearik C**	**86.13**	**7**	P	**P**	**18 57 03.2**	**-0.1**
	baz=197						
J25K	**Salcha River,**	**86.13**	**14**	IAmb	IAmb	18 57 03.6	
	comp=Z,5.2nm,0.5s						
J25K	**Salcha River,**	**86.13**	**14**	P	**P**	**18 57 03.3**	**-0.2**
	baz=211,SNR=7.5						
P33M	**Teslin, Yukon**	**86.17**	**21**	P	**P**	**18 57 04.1**	**+0.3**
	baz=223						
ANMO	**Albuquerque**	**86.20**	**52**	P	**P**	**18 57 04.8**	**+0.1**
ANMO	**Albuquerque**	**86.20**	**52**	P	**P**	**18 57 05.4**	**+0.7**
	baz=245						
ANMO	**Albuquerque**	**86.20**	**52**	P	**P**	**18 57 05.6**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=301,slow=5.9,SNR=4.4						
	comp=Z,2.0nm,0.7s						
R33M	**Jennings River**	**86.23**	**22**	P	**P**	**18 57 04.1**	**-0.1**
	baz=225						
G21K	**Allakaket**	**86.25**	**10**	P	**P**	**18 57 03.9**	**-0.1**
	baz=204						
F20K	**Avaraart Lake**	**86.41**	**9**	P	**P**	**18 57 04.4**	**-0.3**
	baz=202						
J26L	**Joseph Creek**	**86.45**	**14**	P	**P**	**18 57 05.3**	**+0.2**
	baz=213						
E19K	**Redstone River**	**86.58**	**8**	P	**P**	**18 57 05.1**	**-0.4**
	baz=200						
H24K	**Noodor Dome**	**86.66**	**12**	P	**P**	**18 57 05.6**	**-0.4**
	baz=209						
M30M	**Minto, Yukon**	**86.69**	**18**	IAmb	IAmb	18 57 06.6	
	comp=Z,4.6nm,0.7s						
M30M	**Minto, Yukon**	**86.69**	**18**	P	**P**	**18 57 06.4**	**+0.2**
	baz=219						
L29M	**L29M**	**86.73**	**17**	P	**P**	**18 57 07.0**	**+0.7**
	baz=218						
N32M	**Quiet Lake**	**86.77**	**20**	P	**P**	**18 57 07.1**	**+0.5**
	baz=223						
PRP	**Porcupine Dome**	**86.88**	**13**	P	**P**	**18 57 06.6**	**-0.5**
	baz=211						
C17K	**DeLong Mountai**	**86.88**	**6**	P	**P**	**18 57 07.0**	**0.0**
	baz=195						
F21K	**Alatna River**	**86.91**	**10**	P	**P**	**18 57 06.7**	**-0.3**
	baz=204						
G22K	**Bettles**	**86.96**	**10**	P	**P**	**18 57 07.1**	**-0.2**
	baz=206						
G23K	**Bananza Creek**	**87.03**	**11**	P	**P**	**18 57 08.6**	**+0.9**
	baz=207						
S22A	**4UR Ranch, Cre**	**87.11**	**49**	P	**P**	**18 57 10.1**	**+1.0**
	baz=245						
M31M	**Drury Creek, Y**	**87.13**	**19**	P	**P**	**18 57 08.2**	**0.0**
	baz=222						
DAWY	**Dawson**	**87.14**	**16**	P	**P**	**18 57 08.5**	**+0.2**
	baz=217						
O20A	**White River Ci**	**87.15**	**46**	IAmb	IAmb	18 57 10.3	
	comp=Z,10.0nm,1.2s						
O20A	**White River Ci**	**87.15**	**46**	P	**P**	**18 57 09.8**	**+0.7**
	baz=244						
LOHW	**Long Hollow**	**87.16**	**42**	IAmb	IAmb	18 57 10.3	
	comp=Z,4.7nm,0.7s						
I26K	**Coal Creek Min**	**87.23**	**14**	P	**P**	**18 57 08.6**	**0.0**
	baz=214						
C18K	**Utukok River**	**87.25**	**6**	P	**P**	**18 57 09.5**	**+0.8**
	baz=196						
EGAK	**Eagle**	**87.27**	**15**	P	**P**	**18 57 08.6**	**-0.2**
	baz=215						
FLWY	**Flagg Ranch**	**87.32**	**42**	IAmb	IAmb	18 57 11.5	
	comp=Z,8.0nm,0.8s						
BW06	**Boulder Array**	**87.44**	**43**	IAmb	IAmb	18 57 11.1	
	comp=Z,5.7nm,0.6s						
BW06	**Boulder Array**	**87.44**	**43**	P	**P**	**18 57 10.5**	**+0.1**
	baz=243						
PD31	**Pinedale Array**	**87.44**	**43**	IAmb	IAmb	18 57 11.1	
	comp=Z,5.1nm,0.6s						
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**18 57 10.8**	**+0.4**
	comp=Z,4.5nm,0.5s,baz=219,slow=3.3,SNR=65						
PDAR				PP	**PP**	**19 00 43.6**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=248,slow=7.8,SNR=4.0						
	comp=Z,4.5nm,0.5s						
D19K	**Kuna River**	**87.45**	**7**	P	**P**	**18 57 09.2**	**-0.4**
	baz=199						
BOZ	**Bozeman (W)**	**87.46**	**40**	P	**P**	**18 57 11.1**	**+0.8**
	baz=241						
COLD	**Coldfoot**	**87.46**	**11**	P	**P**	**18 57 09.9**	**+0.2**
	baz=207						
E20K	**Nigu River**	**87.47**	**8**	P	**P**	**18 57 09.6**	**-0.1**
	baz=201						
K29M	**Barlow Dome**	**87.47**	**17**	P	**P**	**18 57 10.2**	**+0.2**
	baz=219						
FARO	**Faro, Yukon**	**87.48**	**19**	P	**P**	**18 57 09.7**	**-0.2**
	baz=222						
H17A	**Grant Village**	**87.54**	**42**	IAmb	IAmb	18 57 13.8	
	comp=Z,6.6nm,0.8s						
H17A	**Grnt Village**	**87.54**	**42**	P	**P**	**18 57 13.1**	**+2.2**
	baz=242						
J29N	**Klondike Camp**	**87.76**	**16**	P	**P**	**18 57 12.0**	**+0.8**
	baz=218						
I27K	**Kandik River**	**87.83**	**14**	P	**P**	**18 57 11.4**	**-0.1**
	baz=215						
D20K	**Etivluk River**	**87.84**	**8**	P	**P**	**18 57 11.2**	**-0.2**
	baz=201						
C19K	**Lookout Ridge**	**87.86**	**7**	P	**P**	**18 57 11.2**	**-0.4**
	baz=198						
B18K	**Kokolik River**	**87.88**	**6**	P	**P**	**18 57 11.2**	**-0.3**
	baz=196						
SDCO	**Great Sand Dun**	**88.06**	**49**	P	**P**	**18 57 14.4**	**+0.9**
	baz=246						
I28M	**Miner Creek**	**88.12**	**15**	P	**P**	**18 57 12.5**	**-0.3**
	baz=216						
F24K	**Squaw Lake**	**88.14**	**11**	P	**P**	**18 57 12.9**	**0.0**
	baz=209						
E23K	**Chandalar**	**88.30**	**10**	P	**P**	**18 57 13.7**	**0.0**
	baz=207						
H27K	**Steamboat Moun**	**88.37**	**14**	P	**P**	**18 57 14.4**	**+0.5**
	baz=215						
J30M	**Hart River**	**88.37**	**17**	P	**P**	**18 57 14.2**	**0.0**
	baz=220						
MMPY	**Sheldon Lake,**	**88.43**	**20**	IAmb	IAmb	18 57 15.7	
	comp=Z,8.4nm,0.8s						
MMPY	**Sheldon Lake,**	**88.43**	**20**	P	**P**	**18 57 14.9**	**+0.6**
	baz=224,SNR=5.4						
G26K	**Porcupine Rive**	**88.47**	**13**	P	**P**	**18 57 14.6**	**+0.3**
	baz=213						
C21K	**Knifeblade Rid**	**88.50**	**8**	P	**P**	**18 57 14.6**	**+0.1**
	baz=202						
D22K	**Ayikyak River**	**88.55**	**9**	P	**P**	**18 57 15.3**	**+0.6**
	baz=204						
MSTX	**Muleshoe**	**88.59**	**54**	P	**P**	**18 57 15.6**	**-0.2**
	baz=247						
F25K	**Christian Rive**	**88.63**	**12**	P	**P**	**18 57 15.7**	**+0.5**
	baz=211						
TGTN	**Hyland Airport**	**88.68**	**22**	P	**P**	**18 57 16.5**	**+1.0**
	baz=227,SNR=5.5						
RLMT	**Red Lodge**	**88.71**	**41**	IAmb	IAmb	18 57 18.2	
	comp=Z,6.1nm,1.1s						
RLMT	**Red Lodge**	**88.71**	**41**	P	**P**	**18 57 16.8**	**+0.5**
	baz=243						
CMAR	**Chiang Mai Arr**	**88.79**	**290**	P	**P**	**18 57 16.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**88.79**	**290**	P	**P**	**18 57 18.1**	**+1.2**
	comp=Z,3.3nm,0.8s,baz=119,slow=2.8,SNR=19						
	comp=Z,2.3nm,0.8s						
ISCO	**Idaho Springs**	**88.83**	**47**	P	**P**	**18 57 18.0**	**+0.9**
	baz=246						
TOLK	**Toolik Lake Re**	**88.83**	**10**	P	**P**	**18 57 16.0**	**-0.1**
	baz=207						
I30M	**Mount Dempster**	**88.86**	**16**	P	**P**	**18 57 16.3**	**0.0**
	baz=220						
B21K	**Ikpikpuk River**	**88.96**	**8**	P	**P**	**18 57 16.4**	**-0.1**
	baz=203						
F26K	**Sheenjek River**	**89.02**	**12**	P	**P**	**18 57 17.3**	**+0.4**
	baz=212						
N23A	**Red Feather La**	**89.06**	**46**	P	**P**	**18 57 19.0**	**+1.0**
	baz=245						
E25K	**Arctic Village**	**89.10**	**12**	P	**P**	**18 57 17.7**	**+0.4**
	baz=211						
ELIB	**Princess Elisa**	**89.12**	**187**	*d*P	**P**	**18 57 16.8**	**-0.8**
ELIB				*d*PcP	**PcP**	**18 57 17.9**	**-0.7**
H29M	**Whitestone**	**89.12**	**15**	P	**P**	**18 57 17.6**	**+0.1**
	baz=218						
D24K	**Happy Valley**	**89.41**	**10**	P	**P**	**18 57 19.1**	**+0.4**
	baz=208						
EPYK	**Eagle Plains**	**89.66**	**16**	P	**P**	**18 57 19.9**	**0.0**
	baz=219						
F28M	**Old Crow**	**89.88**	**14**	P	**P**	**18 57 21.0**	**+0.1**
	baz=216						
C24K	**Franklin Bluff**	**89.94**	**10**	P	**P**	**18 57 21.5**	**+0.4**
	baz=208						
G30M	**tAoh Zraii Nji**	**90.26**	**15**	IAmb	IAmb	18 57 23.1	
	comp=Z,8.9nm,0.9s						
G30M	**tAoh Zraii Nji**	**90.26**	**15**	P	**P**	**18 57 22.9**	**+0.2**
	baz=220						
ABTX	**Abilene, Hawle**	**90.53**	**56**	P	**P**	**18 57 25.4**	**+0.6**
	baz=249						
KSCO	**Kaye Shedlock'**	**90.64**	**49**	P	**P**	**18 57 24.1**	**-1.2**
	baz=247						
G31M	**Satah River**	**90.71**	**16**	P	**P**	**18 57 24.7**	**0.0**
	baz=222						
E28M	**Babbage River**	**90.75**	**13**	P	**P**	**18 57 25.0**	**+0.1**
	baz=217						
F30M	**Barrier River**	**90.85**	**15**	P	**P**	**18 57 25.8**	**+0.4**
	baz=220						
E29M	**Blow River**	**90.95**	**14**	P	**P**	**18 57 25.8**	**0.0**
	baz=218						
D27M	**Malcolm River**	**90.97**	**13**	P	**P**	**18 57 25.9**	**-0.1**
	baz=216						
F31M	**Tsiigehtchic**	**91.24**	**16**	P	**P**	**18 57 27.4**	**+0.3**
	baz=222						
LAO	**LASA Array**	**91.30**	**41**	P	**P**	**18 57 29.0**	**+1.0**
	baz=245						
PLPT	**Palo Pinto**	**91.64**	**56**	IAmb	IAmb	18 57 32.2	
	comp=Z,6.4nm,0.8s						
RSSD	**Black Hills**	**91.66**	**44**	P	**P**	**18 57 28.8**	**-1.1**
RSSD				IAmb	IAmb	18 57 30.4	
	comp=Z,4.1nm,0.7s						
RSSD	**Black Hills**	**91.66**	**44**	P	**P**	**18 57 30.2**	**+0.3**
	baz=246						
INK	**Inuvik**	**91.94**	**15**	IAmb	IAmb	18 57 30.4	
	comp=Z,2.8nm,0.8s						
INK	**Inuvik**	**91.94**	**15**	P	**P**	**18 57 29.6**	**-0.7**
	baz=222						
CBKS	**Cedar Bluff**	**92.66**	**50**	P	**P**	**18 57 35.0**	**+0.6**
	baz=249						
DGMT	**Dagmar**	**93.28**	**40**	P	**P**	**18 57 37.5**	**+0.5**
	baz=247						
YKA	**Yellowknife Ar**	**94.40**	**25**	P	**P**	**18 57 41.2**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=245,slow=4.6,SNR=16						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**109.08**	**314**	PKiKP	**PKiKP**	**19 02 47.2**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=162,slow=0.7,SNR=7.3						
BVAR	**Borovoye Array**	**116.80**	**321**	PKP	**PKPdf**	**19 03 01.8**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=85,slow=2.8,SNR=6.8						
FINES	**FINESS Array B**	**133.18**	**344**	SKPbc	**SKPbc**	**19 06 08.7**	**+0.6**
	comp=Z,1.8nm,1.0s,baz=5.7,slow=1.9,SNR=3.6						
EKA	**Eskdalemuir Ar**	**142.50**	**4**	PKhKP	PKPpre	19 03 46.8	
	comp=Z,0.4nm,0.5s,baz=350,slow=3.7,SNR=1.6						
BRTR	**Keskin Array B**	**144.72**	**315**	PKP	**PKPdf**	**19 03 55.9**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=116,slow=4.0,SNR=5.0						
MMAI	**Mount Meron Ar**	**146.06**	**303**	PKPbc	**PKPbc**	**19 04 00.3**	**+0.4**
	comp=Z,5.4nm,0.5s,baz=79,slow=4.5,SNR=15						
ZVC	**Zvikov**	**146.94**	**345**	*e*PKP	**PKiKP**	**19 04 03.9**	**+0.4**
KHC	**Kasperske Hory**	**147.37**	**345**	*e*PKP	**PKPbc**	**19 04 02.8**	**0.0**
CKRC	**Cesky Krumlov**	**147.48**	**344**	*e*PKP	**PKPbc**	**19 04 03.2**	**+0.1**
BMRD	**Maredsous**	**147.60**	**356**	*d*PKP	**PKPbc**	**19 04 04.0**	**+0.7**
GERES	**GERESS Array B**	**147.61**	**345**	PKPbc	**PKPbc**	**19 04 03.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=15,slow=3.6,SNR=6.6						
RCHB	**Rochefort**	**147.71**	**355**	*d*PKP	**PKPbc**	**19 04 03.2**	**-0.4**
DOU	**Dourbes**	**147.82**	**356**	*d*PKP	**PKPbc**	**19 04 02.8**	**-1.0**
ESDC	**Sonseca Array**	**157.83**	**11**	PKPab	**PKPab**	**19 04 50.8**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=338,slow=3.8,SNR=4.7						

JMA 07 18:45:35.7±0.3, 25°N±1′×12°4E±′, h74km, MV1.3/5, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.50**	**112**	P	Pn	18 45 49.0	+0.2
JISG				*e*S	Sn	18 45 58.7	+0.1
JIJ	**Ishigaki jima**	**0.52**	**143**	P	Pn	18 45 49.0	-0.1
JIJ				S	Sn	18 45 58.7	-0.2
JKRS	**Kuro-shima**	**0.57**	**161**	S	Sn	18 46 00.6	+0.9
JTJ	**Tarama**	**0.83**	**99**	P	Pn	18 45 52.6	+0.2
JTJ				S	Sn	18 46 04.8	0.0

TAP ***07*** *18:55:38.4, 24°.09N×121°.77E, h8km, ML2.9, C*
JMA ***07*** *18:55:38.9±0.3, 24°.1N±0°.8×12°2E±′, h0km, TAIWAN REGION*
ISC 07 18:55:39.1±1.0, 24°08N±0°.02×121°77E±0°.03, h10km±6km, n91, σ0°64/134, 9C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.16**	**300**	⇓*i*P	**Pg**	**18 55 42.4**	**-0.2**
	baz=298						
ETL				S	**Sg**	**18 55 45.0**	**-0.1**
	baz=298						
TWD	**Chiawan**	**0.16**	**270**	⇓*i*P	**Pg**	**18 55 42.5**	**-0.1**
	baz=276						
TWD				*i* S	**Sg**	**18 55 45.3**	**+0.2**
	baz=276						
HWA	**Hwalien**	**0.18**	**236**	*e*P	**Pg**	**18 55 43.8**	**+0.7**
	baz=244						
NACB	**Ninganchiao**	**0.19**	**300**	⇓*i*P	**Pg**	**18 55 42.8**	**-0.3**
	baz=299						
NACB				S	**Sg**	**18 55 45.5**	**-0.3**
	baz=299						
EAHA	**Aohua**	**0.25**	**353**	P	**Pg**	**18 55 44.0**	**-0.2**
	baz=352						
EAHA				S	**Sg**	**18 55 48.0**	**+0.3**
	baz=352						
ETM	**Tongmen**	**0.28**	**246**	⇑*i*P	**Pg**	**18 55 44.9**	**+0.1**
	baz=255						
ETM				*e*S	**Sg**	**18 55 49.0**	**+0.5**
	baz=255						
ETLH	**Xiulin Townshi**	**0.29**	**296**	*e*P	**Pg**	**18 55 44.8**	**-0.2**
	baz=295						
ETLH				S	**Sg**	**18 55 49.0**	**-0.1**
	baz=295						
LXIB	**Xiulin Townshi**	**0.33**	**260**	⇑*i*P	**Pg**	**18 55 45.7**	**-0.1**
	baz=260						
LXIB				*e*S	**Sg**	**18 55 50.8**	**+0.6**
	baz=260						
SHUL	**Shoufeng**	**0.35**	**213**	*e*P	**Pb**	**18 55 47.2**	**-0.2**
	baz=214						
SHUL				*e*S	**Sb**	**18 55 53.1**	**+0.1**
	baz=214						
ENA	**Nanau**	**0.35**	**356**	⇓*i*P	**Pg**	**18 55 45.9**	**-0.2**
	baz=356						
ENA				S	**Sg**	**18 55 51.2**	**+0.5**
	baz=356						
EWUT	**Wuta**	**0.36**	**1**	*e*P	**Pg**	**18 55 46.3**	**-0.1**
	baz=360						
EWUT				*e*S	**Sg**	**18 55 51.3**	**+0.1**
	baz=360						
ESL	**Shilin**	**0.41**	**230**	⇑*i*P	**Pg**	**18 55 47.2**	**+0.1**
	baz=240						
ESL				*e*S	**Sb**	**18 55 53.4**	**-1.4**
	baz=240						
TEGC	**Jichi Village**	**0.42**	**210**	*e*P	**Pb**	**18 55 48.6**	**-0.2**
	baz=208						
WHF	**Hehuan Shan**	**0.47**	**278**	*e*P	**Pg**	**18 55 48.2**	**-0.1**
	baz=279						
WHF				*e*S	**Sg**	**18 55 55.1**	**+0.5**
	baz=279						
NNSB	**Datong**	**0.50**	**315**	⇓P	**Pg**	**18 55 48.8**	**-0.1**
	baz=314						
NNSB				*e*S	**Sg**	**18 55 55.7**	**+0.2**
	baz=314						
NNSH	**Datong**	**0.50**	**315**	*e*P	**Pg**	**18 55 48.8**	**-0.1**
	baz=313						
NNSH				*e*S	**Sg**	**18 55 55.8**	**+0.4**
	baz=313						
WARBT	**Fenglin Townsh**	**0.50**	**224**	⇑*i*P	**Pg**	**18 55 49.0**	**+0.1**
	baz=223						
LATG	**Datong**	**0.51**	**334**	⇓*i*P	**Pg**	**18 55 48.9**	**-0.1**
	baz=333						
LATG				*e*S	**Sg**	**18 55 56.2**	**+0.5**
	baz=333						
FUSS	**Fushou**	**0.51**	**289**	*e*P	**Pg**	**18 55 49.2**	**+0.1**
	baz=290						
FUSS				*e*S	**Sb**	**18 55 56.9**	**-1.1**
	baz=290						
NNS	**Nan Shan**	**0.51**	**315**	*e*P	**Pg**	**18 55 49.1**	**-0.1**
	baz=314						
NNS				*e*S	**Sg**	**18 55 56.0**	**+0.1**
	baz=314						
EGFH	**Guangfu**	**0.52**	**218**	*e*P	**Pb**	**18 55 49.4**	**-0.9**
	baz=216						
TWC	**Suao**	**0.53**	**8**	*e*P	**Pg**	**18 55 49.6**	**+0.1**
	baz=9.0						
EOS2	**EOS2**	**0.54**	**51**	*e*P	**Pb**	**

YHNB				*e*S		**Sb**	**18 56 01.9**	**-1.1**
	baz=328							
FUSB	**Fushanzhiwuyua**	**0.70**	**346**	*e*P		**Pb**	**18 55 53.0**	**-0.5**
	baz=337							
FUSB				*e*S		**Sb**	**18 56 02.4**	**-0.8**
	baz=337							
EHY	**Hungye**	**0.70**	**216**	*e*P		**Pg**	**18 55 52.7**	**-0.1**
	baz=214							
NSK	**Sanguang**	**0.70**	**328**	*e*P		**Pb**	**18 55 53.0**	**-0.6**
	baz=328							
NSK				*e*S		**Sb**	**18 56 02.3**	**-1.1**
	baz=328							
NWLT	**Wulai**	**0.74**	**341**	*e*P		**Pb**	**18 55 53.5**	**-0.6**
	baz=340							
NWLT				*e*S		**Sg**	**18 56 03.1**	**0.0**
	baz=340							
WPL	**Puli Township**	**0.75**	**265**	*e*P		**Pb**	**18 55 53.8**	**-0.4**
	baz=264							
WHP	**Taichung City**	**0.78**	**285**	*e*P		**Pb**	**18 55 54.7**	**-0.1**
	baz=285							
WHP				*e*S		**Sb**	**18 56 05.2**	**-0.4**
	baz=285							
WCS	**Beigang Elemen**	**0.79**	**269**	*e*P		**Pb**	**18 55 54.6**	**-0.3**
	baz=267							
SSLB	**Suanglung**	**0.80**	**249**⇑	*i*P		**Pb**	**18 55 54.6**	**-0.6**
	baz=262							
SSLB				*e*S		**Sg**	**18 56 05.0**	**-0.1**
	baz=262							
YULB	**Yu-li**	**0.81**	**212**	*e*P		**Pg**	**18 55 54.3**	**-0.5**
	baz=224							
NFF	**Wufeng Townshi**	**0.81**	**313**	*e*P		**Pb**	**18 55 55.2**	**-0.2**
	baz=303							
SMLT	**Sun Moon Lake**	**0.82**	**256**⇑	*i*P		**Pb**	**18 55 55.1**	**-0.4**
	baz=258							
SMLT				*e*S		**Sb**	**18 56 06.4**	**-0.3**
	baz=258							
EYUL	**Yuli**	**0.84**	**210**	*e*P		**Pb**	**18 55 56.0**	**+0.2**
	baz=221							
TWF1	**Yuli**	**0.84**	**211**	*e*P		**Pb**	**18 55 55.4**	**-0.6**
	baz=222							
TYC	**Yuchr**	**0.85**	**258**⇑	P		**Pb**	**18 55 55.6**	**-0.5**
	baz=260							
TYC				*e*S		**Sg**	**18 56 06.5**	**-0.3**
	baz=260							
LIOB	**Emei**	**0.89**	**309**	*e*P		**Pb**	**18 55 57.0**	**+0.3**
	baz=309							
LIOB				*e*S		**Sb**	**18 56 09.1**	**+0.4**
	baz=309							
TIPB	**Shuangxi**	**0.89**	**3**	*e*P		**Pb**	**18 55 56.9**	**+0.2**
	baz=13							
NSTT	**Nanjuang**	**0.89**	**308**	P		**Pb**	**18 55 56.7**	**-0.1**
	baz=308							
NSTT				*e*S		**Sb**	**18 56 08.5**	**-0.2**
	baz=308							
TWA	**Mucha**	**0.91**	**349**	*e*P		**Pb**	**18 55 57.1**	**0.0**
	baz=340							
WHYT	**Xinyi Township**	**0.92**	**246**	*e*P		**Pb**	**18 55 57.3**	**0.0**
	baz=244							
TWQ1	**Liyutan**	**0.95**	**287**	*e*P		**Pn**	**18 55 58.3**	**-0.3**
	baz=285							
FULB	**Fuli**	**0.98**	**207**	*e*P		**Pb**	**18 55 57.9**	**-0.4**
	baz=195							
WFSB	**Wu-fen Shan**	**0.99**	**1**	*e*P		**Pn**	**18 55 59.7**	**+0.6**
	baz=348							
WJS	**Zhushan**	**0.99**	**255**	*e*P		**Pn**	**18 55 58.9**	**-0.2**
	baz=254							
NMLH	**Miaoli**	**1.00**	**297**	*e*P		**Pn**	**18 55 60.0**	**+0.6**
	baz=295							
WNT	**Mingjian**	**1.01**	**259**	*e*P		**Pn**	**18 55 59.6**	**+0.2**
	baz=258							
SXI1	**Grass Mountain**	**1.01**	**5**	*e*P		**Pn**	**18 55 60.0**	**+0.4**
	baz=353							
CHKT	**Chengkung**	**1.04**	**201**	*e*P		**Pg**	**18 55 58.6**	**-0.6**
	baz=191							
ALS	**Alishan**	**1.05**	**238**	*e*P		**Pb**	**18 55 59.6**	**0.0**
	baz=239							
ALS				*e*S		**Sn**	**18 56 14.8**	**-0.3**
	baz=239							
EHD	**Haiduan**	**1.06**	**209**	*e*P		**Pg**	**18 55 58.4**	**-1.1**
	baz=209							
YM01	**YM01**	**1.08**	**350**	*e*P		**Pn**	**18 56 00.4**	**0.0**
	baz=349							
YM01				*e*S		**Sb**	**18 56 14.1**	**-0.1**
	baz=349							
CHN5	**Tsauling**	**1.11**	**245**	*e*P		**Pn**	**18 56 00.8**	**-0.1**
	baz=231							
CHN5				*e*S		**Sn**	**18 56 17.4**	**+1.1**
	baz=231							
YM08	**YM08**	**1.12**	**352**	*e*P		**Pb**	**18 56 00.6**	**0.0**
	baz=353							
ELDTW	**Lidau**	**1.12**	**218**	*e*P		**Pg**	**18 55 59.6**	**-1.1**
	baz=216							
ANP	**Anpu**	**1.13**	**348**	*e*P		**Pn**	**18 56 01.2**	**+0.2**
	baz=350							
WGK	**Gukeng**	**1.17**	**251**	*e*P		**Pn**	**18 56 01.6**	**0.0**
	baz=247							
EDH	**Donghe**	**1.18**	**201**	*e*P		**Pg**	**18 55 59.6**	**-2.3**
	baz=200							
WDLH	**Douliu**	**1.19**	**251**	*e*P		**Pn**	**18 56 02.2**	**+0.3**
	baz=248							
WCKO	**Fanlu**	**1.24**	**239**	*e*P		**Pn**	**18 56 03.1**	**+0.5**
	baz=237							
STYH	**Taoyuan**	**1.28**	**225**	*e*P		**Pg**	**18 56 02.7**	**-1.1**
	baz=209							
WRL	**Guolierlin Hig**	**1.29**	**262**	*e*P		**Pn**	**18 56 03.3**	**+0.1**
	baz=264							
WRL				*e*S		**Sn**	**18 56 22.1**	**+1.6**
	baz=264							
CHN4	**Tsaushan**	**1.30**	**236**	*e*P		**Pb**	**18 56 03.8**	**+0.1**
	baz=238							
CHN4				*e*S		**Sn**	**18 56 22.9**	**+2.1**
	baz=238							
STYT	**Tauyuan**	**1.30**	**226**	*e*P		**Pg**	**18 56 03.0**	**-1.2**
	baz=209							
TPUB	**Ta-pu**	**1.30**	**234**	*e*P		**Pb**	**18 56 04.1**	**+0.4**
	baz=232							
WTK	**Tuku**	**1.32**	**253**	*e*P		**Pb**	**18 56 04.5**	**+0.4**
	baz=255							
WTK				*e*S		**Sn**	**18 56 23.4**	**+1.9**
	baz=255							
WTP	**Ta-pu**	**1.35**	**232**	*e*P		**Pb**	**18 56 04.5**	**0.0**
	baz=230							
TWK	**Hsinying**	**1.43**	**236**	*e*P		**Pg**	**18 56 06.2**	**-0.4**
	baz=232							
CHN1	**Nanshi**	**1.45**	**232**	*e*P		**Pg**	**18 56 06.9**	**0.0**
	baz=230							
SNST	**Tainan City**	**1.45**	**234**	*e*P		**Pb**	**18 56 06.2**	**0.0**
	baz=235							
SNST				*e*S		**Sg**	**18 56 27.0**	**+1.3**
	baz=235							
SGST	**Jiashian**	**1.47**	**228**	*e*P		**Pn**	**18 56 05.7**	**-0.1**
	baz=217							
SLGT	**Liugui**	**1.49**	**224**	*e*P		**Pn**	**18 56 06.5**	**+0.4**
	baz=209							
PHUB	**P'eng-hu**	**2.09**	**255**	*e*P		**Pn**	**18 56 14.4**	**+0.1**
	baz=251							
PNG	**Penghu**	**2.09**	**256**	*e*P		**Pn**	**18 56 15.1**	**+0.8**
	baz=252							
VWUC	**VWUC**	**2.30**	**294**	*e*P		**Pn**	**18 56 17.0**	**-0.2**
	baz=292							
VWUC				*e*S		**Sn**	**18 56 45.4**	**-0.1**
	baz=292							
VCHM	**Qimei**	**2.31**	**248**	*e*P		**Pn**	**18 56 18.8**	**+1.5**
	baz=244							
JISG	**Ishigakijimahi**	**2.37**	**77**	P		**Pn**	**18 56 17.8**	**-0.3**
PTMZ	**Houxiangcun**	**2.60**	**292**	*e*P		**Pn**	**18 56 20.9**	**-0.3**
	baz=286							
MATB	**Ma-tsu**	**2.65**	**322**	*e*P		**Pn**	**18 56 22.1**	**+0.2**
	baz=319							
KNMB	**Chin-men Tao**	**3.11**	**278**	*e*P		**Pn**	**18 56 28.3**	**0.0**
	baz=275							
AXDP	**Jialang**	**3.56**	**284**	*e*P		**Pn**	**18 56 34.6**	**+0.1**
	baz=281							

CATAC ***07*** *19:08:59.6±0.3, 12.°66N×88.°22W, h30km, ML3.2*
SNET ***07*** *19:08:59.5±0.8, 12.°65N×88.°24W, h49km±11km, ML3.5*
ISC 07 19:08:60.0±1.4**, 12.°66N**±0.°08×**88.°23W**±0.°04**, h57**km±19**km, n33, σ0°56/52, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuaɼn**	**0.59**	**358**	*e*P	**Pn**	**19 09 11.8**	**-1.0**
JUCU				*e*S	**Sn**	**19 09 21.9**	**-0.2**
CNCH	**Conchagua**	**0.72**	**32**	*e*P	**Pn**	**19 09 14.2**	**-0.2**
CNCH				*e*P	**Pn**	**19 09 15.0**	**+0.5**
CNCH				*e*S	**Sn**	**19 09 25.9**	**+0.8**
CNCH				IAML		19 09 27.6	

	comp=Z,3μm,0.1s							
CNCH	**Conchagua**	**0.72**	**32**	*i*P		**Pn**	**19 09 14.0**	**-0.5**
CNCH				*i*S		**Sn**	**19 09 25.5**	**+0.5**
CNCH				IAML			19 09 26.7	
	comp=Z,3μm,1.0s							
LCND	**La Caada**	**0.72**	**27**	*e*P		**Pn**	**19 09 13.7**	**-0.6**
LCND				*e*S		**Sn**	**19 09 24.8**	**0.0**
CSGN	**Cosiguina Volc**	**0.72**	**64**	*i*P		**Pn**	**19 09 14.7**	**+0.3**
CSGN				IAML			19 09 54.6	
	comp=Z,320nm,1.0s							
VSM	**San Miguel**	**0.76**	**357**	*e*P		**Pn**	**19 09 15.1**	**0.0**
BLLM	**Bellamira**	**0.78**	**359**	*e*P		**Pn**	**19 09 14.9**	**-0.2**
PACA	**Pacayal**	**0.81**	**353**	*e*P		**Pn**	**19 09 15.7**	**+0.1**
PACA				*e*S		**Sn**	**19 09 27.3**	**+0.4**
PACA	**Pacayal**	**0.81**	**353**	*i*P		**Pn**	**19 09 15.6**	**+0.1**
PACA				*i*S		**Sn**	**19 09 27.3**	**+0.4**
PACA				IAML			19 09 33.0	
	comp=Z,5μm,1.0s							
TECA	**Tecapa**	**0.87**	**342**	*e*P		**Pn**	**19 09 16.0**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.14**	**335**	*e*P		**Pn**	**19 09 20.2**	**+0.4**
SCLA				*e*S		**Sn**	**19 09 36.1**	**+1.5**
SCLA	**Alcaldia de Sa**	**1.14**	**335**	*i*P		**Pn**	**19 09 20.3**	**+0.4**
SCLA				*i*S		**Sn**	**19 09 34.9**	**+0.3**
SCLA				IAML			19 09 36.9	
	comp=Z,370nm,1.0s							
COEG	**Centro de Oper**	**1.14**	**326**	*i*P		**Pn**	**19 09 19.8**	**-0.1**
COEG				*i*S		**Sn**	**19 09 34.9**	**+0.2**
COEG				IAML			19 09 50.7	
	comp=Z,940nm,1.0s							
CRIN	**San Cristobal**	**1.15**	**88**	*i*P		**Pn**	**19 09 20.1**	**+0.1**
CRIN				IAML			19 09 38.7	
	comp=Z,1μm,1.0s							
SJTE	**Alcalda de S**	**1.21**	**321**	*e*P		**Pn**	**19 09 20.3**	**-0.5**
SJTE				*e*S		**Sn**	**19 09 36.4**	**0.0**
SJTE	**Alcalda de S**	**1.21**	**321**	*i*P		**Pn**	**19 09 20.3**	**-0.5**
SJTE				*i*S		**Sn**	**19 09 35.8**	**-0.6**
SJTE				IAML			19 09 39.4	
	comp=Z,500nm,1.0s							
LFRS	**El Faro**	**1.25**	**320**	*e*P		**Pn**	**19 09 20.8**	**-0.6**
PACN	**Al O del Volca**	**1.41**	**96**	*i*P		**Pn**	**19 09 23.1**	**-0.3**
PACN				IAML			19 09 59.7	
	comp=Z,760nm,1.0s							
PMON	**Piamonte**	**1.48**	**315**	*i*P		**Pn**	**19 09 24.4**	**-0.1**
PMON				IAML			19 09 46.1	
	comp=Z,410nm,1.0s							
ILCN	**San Idelfonso**	**1.50**	**93**	*i*P		**Pn**	**19 09 24.0**	**-0.5**
ILCN				IAML			19 09 45.7	
	comp=Z,84nm,1.0s							
JAYA	**Jayaque - finc**	**1.54**	**310**	*e*P		**Pn**	**19 09 24.3**	**-1.0**
JAYA				*e*S		**Sn**	**19 09 44.2**	**-0.2**
JAYA				IAML			19 09 45.2	
	comp=Z,236nm,0.2s							
JAYA	**Jayaque - finc**	**1.54**	**310**	*i*P		**Pn**	**19 09 24.9**	**-0.5**
JAYA				*i*S		**Sn**	**19 09 44.3**	**-0.2**
JAYA				IAML			19 09 48.1	
	comp=Z,550nm,1.0s							
MOMN	**Momotombo**	**1.67**	**99**	*i*P		**Pn**	**19 09 26.7**	**-0.2**
MOMN				*i*S		**Sn**	**19 09 46.9**	**-0.4**
MOMN				IAML			19 09 51.7	
	comp=Z,7.2nm,1.0s							
COPN	**Copaltepe**	**1.67**	**107**	*i*P		**Pn**	**19 09 26.4**	**-0.5**
COPN				IAML			19 09 48.3	
	comp=Z,230nm,1.0s							
LIMN	**Finca el Limon**	**1.86**	**77**	*i*P		**Pn**	**19 09 28.6**	**-1.0**
LIMN				*i*S		**Sn**	**19 09 51.5**	**-0.5**
LIMN				IAML			19 09 56.9	
	comp=Z,71nm,1.0s							
YUSH	**Yuscaran**	**1.86**	**46**	*e*P		**Pn**	**19 09 29.5**	**-0.1**
YUSH				*e*S		**Sn**	**19 09 53.0**	**+0.8**
NUBE	**Las Nubes**	**1.95**	**309**	*e*P		**Pn**	**19 09 30.9**	**0.0**
NUBE				*e*S		**Sn**	**19 09 54.3**	**0.0**
NUBE	**Las Nubes**	**1.95**	**309**	*i*P		**Pn**	**19 09 31.1**	**+0.2**
NUBE				*i*S		**Sn**	**19 09 54.7**	**+0.4**
NUBE				IAML			19 09 59.1	
	comp=Z,150nm,1.0s							
MTO3	**Montecristo**	**2.05**	**328**	*e*P		**Pn**	**19 09 32.4**	**+0.2**
MTO3	**Montecristo**	**2.05**	**328**	*i*P		**Pn**	**19 09 32.2**	**-0.1**
MTO3				IAML			19 09 51.3	
	comp=Z,27nm,1.0s							
RCPN	**Sur Rio San Ju**	**2.25**	**67**	*i*P		**Pn**	**19 09 33.9**	**-1.0**
RCPN				IAML			19 09 35.1	
	comp=Z,0.7nm,1.0s							
HZTE	**Horizontes, Gu**	**3.23**	**127**	*i*P		**Pn**	**19 09 49.6**	**+1.4**
HZTE				IAML			19 11 22.5	
	comp=Z,110nm,1.0s							
SAJU	**San Juanillo,**	**3.57**	**136**	*i*P		**Pn**	**19 09 52.8**	**-0.1**
SAJU				IAML			19 10 34.0	
	comp=Z,42nm,1.0s							

IDC ***07*** *19:20:06.6±3.4, 6.°77S×127.°47E, h434km±43km, mb3.0/6, mbtmp3.8/8, Error ellipse: s-maj=58.4km s-min=13.4km az=68.0*
ISC 07 19:20:04.3±0.7**, 6.°71S**±0.°07×**127.°35E**±0.°09**, h400**km**, n20, σ1s51/21, mb3.4/6, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.34**	**50**	P	**Pn**	**19 21 13.1**	**+2.6**
SAUI	**Saumlaki**	**4.11**	**108**	P	**Pn**	**19 21 20.9**	**+3.4**
SOEI	**Soe**	**4.30**	**225**	P	**Pn**	**19 21 21.5**	**+2.1**
SANI	**Sanana**	**4.83**	**344**	P	**Pn**	**19 21 25.3**	**+0.7**
MMRI	**Maumere**	**5.42**	**249**	P	**Pn**	**19 21 32.8**	**+2.1**
FAKI	**Fak Fak**	**6.16**	**53**	P	**Pn**	**19 21 38.8**	**0.0**
MTN	**Manton Dam**	**7.14**	**149**	P	**Pn**	**19 21 50.6**	**+1.0**
LUWI	**Luwuk**	**7.25**	**321**	P	Pn	19 21 48.7	-2.2
TNTI	**Ternate**	**7.43**	**0**	P	**Pn**	**19 21 51.5**	**-1.4**
KDU	**Kakadu**	**7.79**	**140**	P	**Pn**	**19 21 57.3**	**+0.4**
KNRA	**Kununurra**	**9.02**	**171**	P	**Pn**	**19 22 11.7**	**+0.7**
PLAI	**Plampang**	**9.72**	**257**	P	**P**	**19 22 18.2**	**-0.7**
WRA	**Warramunga Arr**	**14.80**	**153**	P	**P**	**19 23 14.5**	**-0.2**
	2.6nm,0.6s,baz=330,slow=11,SNR=29						
WRA				S	**S**	**19 25 50.3**	**-1.9**
	1.0nm,0.8s,baz=331,slow=21,SNR=5.8						
ASAR	**Alice Springs**	**17.99**	**160**	P	**P**	**19 23 49.0**	**+0.1**
	1.7nm,0.7s,baz=348,slow=12,SNR=32						
ASAR				S	**S**	**19 26 52.5**	**-2.2**
	0.6nm,0.7s,baz=339,slow=23,SNR=5.3						
CMAR	**Chiang Mai Arr**	**37.56**	**312**	P	**P**	**19 26 43.0**	**+0.4**
	0.3nm,0.6s,baz=146,slow=6.6,SNR=2.0						
	0.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.85**	**4**	P	**P**	**19 28 25.7**	**-0.3**
	0.6nm,0.4s,baz=200,slow=8.1,SNR=1.8						
	0.6nm,0.4s						
SONM	**Songino Array**	**57.38**	**343**	P	**P**	**19 29 12.6**	**-0.1**
	0.4nm,0.6s,baz=164,slow=7.5,SNR=2.2						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**66.57**	**328**	P	**P**	**19 30 13.1**	**+0.1**
	0.5nm,0.4s,baz=120,slow=8.4,SNR=15						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**70.19**	**335**	P	**P**	**19 30 34.2**	**-0.7**
	0.7nm,0.4s,baz=135,slow=3.8,SNR=5.8						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**70.91**	**330**	P	**P**	**19 30 39.4**	**+0.1**
	1.2nm,0.6s,baz=133,slow=5.1,SNR=10						
	1.2nm,0.6s						

IDC ***07*** *19:25:50.0±1.5, 24.°64S×177.°16W, h0km, mb4.1/4, mbtmp4.2/5, ML4.3/1, Error ellipse: s-maj=65.1km s-min=32.4km az=151.0*
NEIC ***07*** *19:25:58.3±1.0, 25.°7S±0.°1×177.°0W±0.°1, h63km±7km, mb4.4/17, Error ellipse: s-maj=18.2km s-min=13.3km az=126.0*
ISC 07 19:25:56.7±0.6**, 25.°59S**±0.°09×**177.°1W**±0.°1**, h50**km**, n34, σ0°87/36, mb4.4/11, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.73**	**192**	Pn	**Pn**	**19 26 52.3**	**+0.6**
NIUE	**Niue**	**9.25**	**47**	Pn	**Pn**	**19 28 09.2**	**+1.7**
NIUE				Sn	**Sn**	**19 29 48.7**	**-1.5**
URZ	**Urewera**	**13.56**	**200**	Pn	**P**	**19 29 16.1**	**+2.1**
	1.4nm,0.3s,baz=37,slow=20,SNR=2.0						
	3.1nm,0.3s						
RTZ	**Ruatahuna**	**13.93**	**200**	Pn	**Pn**	**19 29 11.0**	**-0.4**
MRZ	**Mangatainoka R**	**16.23**	**200**	Pn	**Pn**	**19 29 40.8**	**-0.5**
MRZ				IAmb	IAmb	19 29 49.9	
	comp=Z,29nm,1.3s						
KHZ	**Kahutara**	**18.48**	**202**	P	**P**	**19 30 06.8**	**-1.6**
KHZ				IAmb	IAmb	19 30 46.2	
	comp=Z,42nm,1.3s						
CTA	**Charters Tower**	**34.18**	**272**	P	**P**	**19 32 37.4**	**-0.1**
	comp=Z,11nm,1.2s,baz=8.9,slow=12,SNR=1.6						
	comp=Z,11nm,1.2s						
CTAO	**Charters Tower**	**34.18**	**272**	P	**P**	**19 32 37.3**	**-0.2**
STKA	**Stephens Creek**	**36.63**	**250**	P	**P**	**19 32 58.5**	**+0.1**
STKA	**Stephens Creek**	**36.63**	**250**	P	**P**	**19 32 59.8**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=97,slow=14,SNR=5.4						
	comp=Z,0.8nm,0.4s						
BBOO	**Buckleboo**	**41.28**	**249**	P	**P**	**19 33 37.0**	**-0.4**
BBOO				IAmb	IAmb	19 33 52.0	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**44.42**	**262**	P	**P**	**19 34 03.1**	**+0.2**
ASAR	**Alice Springs**	**44.42**	**262**	P	**P**	**19 34 03.1**	**+0.2**
ASAR	**Alice Springs**	**44.42**	**262**	P	**P**	**19 34 03.2**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=91,slow=6.9,SNR=66						
ASAR				PcP	**PcP**	**19 35 45.7**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=117,slow=4.8,SNR=1.7						
	comp=Z,2.0nm,0.5s						
WR0	**Warramunga Arr**	**44.79**	**267**	P	**P**	**19 34 06.2**	**+0.3**
WR0				IAmb	IAmb	19 34 07.5	
	comp=Z,6.1nm,1.2s						
WB2	**Warramunga Arr**	**44.96**	**267**	P	**P**	**19 34 07.6**	**+0.4**
WB2				IAmb	IAmb	19 34 10.2	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**44.97**	**267**	P	**P**	**19 34 07.5**	**+0.2**
WRAB				IAmb	IAmb	19 34 27.6	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**44.97**	**267**	P	**P**	**19 34 06.6**	**-0.7**
WRA	**Warramunga Arr**	**44.97**	**267**	P	**P**	**19 34 06.4**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=102,slow=7.5,SNR=22						
	comp=Z,0.5nm,0.3s						
WB0	**Warramunga Arr**	**44.97**	**267**	P	**P**	**19 34 07.1**	**-0.3**
WB0				IAmb	IAmb	19 34 25.3	
	comp=Z,9.5nm,1.4s						
FORT	**Forrest**	**48.25**	**251**	P	**P**	**19 34 31.6**	**-1.3**
KNRA	**Kununurra**	**51.36**	**270**	P	**P**	**19 34 57.1**	**+0.5**
VNDA	**Vanda**	**52.95**	**186**	P	**P**	**19 35 07.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**53.37**	**266**	P	**P**	**19 35 11.7**	**+0.1**
QSPA	**South Pole Qui**	**64.50**	**180**	P	**P**	**19 36 26.9**	**-1.3**
QSPA				IAmb	IAmb	19 36 43.2	
	comp=Z,7.1nm,1.4s						
SNAA	**Sanae**	**82.92**	**178**	P	**P**	**19 38 15.3**	**-0.5**
SNAA				IAmb	IAmb	19 38 22.2	
	comp=Z,8.9nm,1.4s						
MKAR	**Makanchi Array**	**115.26**	**312**	PKiKP	**PKPdf**	**19 44 31.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=194,slow=0.3,SNR=9.4						
KURBB	**Kurchatov Arra**	**118.31**	**316**	PKP	**PKPdf**	**19 44 37.0**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=113,slow=3.0,SNR=1.5						
BVAR	**Borovoye Array**	**123.47**	**318**	PKP	**PKPdf**	**19 44 47.8**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=11,slow=1.5,SNR=3.0						
NB2	**NORSAR Subarra**	**144.11**	**353**	PKP	**PKPab**	**19 45 24.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=14,slow=3.4						
NOA	**NORSAR Array B**	**144.11**	**353**	PKP	**PKPab**	**19 45 24.5**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=18,slow=2.8,SNR=4.4						
HFS	**Hagfors**	**144.68**	**351**	PKP	**PKPab**	**19 45 26.0**	**0.0**
	comp=Z,3.2nm,0.5s,baz=69,slow=4.8,SNR=15						
AKASG	**Malin Array Be**	**147.82**	**328**	PKPbc	**PKPdf**	**19 45 32.7**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=36,slow=3.6,SNR=1.3						
MMAI	**Mount Meron Ar**	**150.82**	**292**	PKPbc	**PKPbc**	**19 45 44.9**	**+0.9**
	comp=Z,0.4nm,0.2s,baz=106,slow=5.1,SNR=4.5						

IDC ***07*** *19:36:57.3±9.7, 7.°49S×127.°67E, h99km±100km, mb3.2/4, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=126.2km s-min=31.5km az=57.0*
DJA ***07*** *19:37:02.5±0.4, 7.°5S±4.°×12.°8E±.°, h211km±14km, M4.1/10, mb3.8/8, MLv4.2/10*
ISC 07 19:37:03.2±0.9**, 7.°53S**±0.°08×**128.°25E**±0.°09**, h200**km**, n20, σ3s07/17, mb3.4/4, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.06**	**99**	P	**Pn**	**19 37 54.9**	**+1.3**
SOEI	**Soe**	**4.52**	**240**	P	**Pn**	**19 38 11.8**	**+0.1**
SOEI	**Soe**	**4.52**	**240**	P	**Pn**	**19 38 11.3**	**-0.4**
FAKI	**Fak Fak**	**6.07**	**41**	P	**Pn**	**19 38 31.1**	**-0.3**
FAKI	**Fak Fak**	**6.07**	**41**	P	**Pn**	**19 38 29.4**	**-2.0**
	21nm,1.2s,0.1nm						
KDU	**Kakadu**	**6.60**	**141**	P	**Pn**	**19 38 39.7**	**+1.4**
EDFI	**Ende, Flores**	**6.61**	**259**	P	**Pn**	**19 38 38.0**	**-0.5**
	13nm,1.2s,0.1nm						
SWI	**Sorong**	**7.27**	**25**	P	**Pn**	**19 38 46.5**	**-0.5**
	10nm,0.8s,0.1nm						
KNRA	**Kununurra**	**8.12**	**177**	P	**Pn**	**19 38 58.7**	**+0.7**
WRA	**Warramunga Arr**	**13.68**	**155**	P	**P**	**19 40 09.9**	**-1.7**
	0.4nm,0.3s,baz=333,slow=13,SNR=20						
WRA				S	**S**	**19 42 34.2**	**-7.6**
	2.6nm,0.3s,baz=338,slow=21,SNR=12						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**16.94**	**162**	P	**Pn**	**19 40 52.8**	**+3.9**
	0.7nm,0.3s,baz=344,slow=12,SNR=120						
ASAR				S	**S**	**19 43 54.0**	**-0.1**
	0.7nm,0.5s,baz=347,slow=27,SNR=8.2						
	4.4nm,0.6s						
AS01	**Alice Springs**	**16.95**	**162**	P	**Pn**	**19 40 53.0**	**+3.9**
QIS	**Mount Isa**	**16.99**	**141**	P	**Pn**	**19 40 53.7**	**+4.2**
WRKA	**Warakurna**	**17.41**	**180**	P	**P

ETL				*i* S		Sg	19 55 51.1	+0.3
	baz=332							
NACB	**Ninganchiao**	**0.10**	**323**	*i* P		Pg	19 55 49.6	+0.1
	baz=323							
NACB				*i* S		Sg	19 55 51.4	0.0
	baz=323							
HWA	**Hwalien**	**0.12**	**205**	*eP*		Pg	19 55 49.6	-0.1
	baz=202							
ETLH	**Xiulin Townshi**	**0.20**	**305**	*i* P		Pg	19 55 51.5	+0.4
	baz=305							
ETLH				*i* S		Sg	19 55 54.5	+0.5
	baz=305							
LXIB	**Xiulin Townshi**	**0.24**	**253**	*eP*		Pg	19 55 51.7	-0.1
	baz=254							
EAHA	**Aohua**	**0.25**	**16**	*eP*		Pg	19 55 51.8	0.0
	baz=21							
ENA	**Nanau**	**0.34**	**12**	P		Pg	19 55 53.9	+0.3
	baz=13							
ENA				*i* S		Sg	19 55 58.9	+0.7
	baz=13							
EWUT	**Wuta**	**0.37**	**17**	*eP*		Pg	19 55 54.4	+0.3
	baz=16							
WHF	**Hehuan Shan**	**0.37**	**278**	*eP*		Pg	19 55 54.6	+0.4
	baz=278							
WHF				S		Sg	19 55 60.0	+0.8
	baz=278							
FUSS	**Fushou**	**0.41**	**292**	P		Pb	19 55 55.8	-0.5
	baz=292							
FUSS				*i* S		Sb	19 56 01.9	-0.9
	baz=292							
NNSB	**Datong**	**0.42**	**323**	*i* P		Pb	19 55 55.8	-0.6
	baz=322							
NNSB				*i* S		Sg	19 56 00.9	+0.2
	baz=322							
NNS	**Nan Shan**	**0.44**	**323**	*eP*		Pg	19 55 55.9	+0.5
	baz=323							
NNS				*eS*		Sg	19 56 01.8	+0.6
	baz=323							
CHGB	**Renai**	**0.45**	**266**	*i* P		Pb	19 55 56.4	-0.5
	baz=257							
LATG	**Datong**	**0.46**	**344**	*eP*		Pb	19 55 57.0	0.0
	baz=335							
NDT	**Datong Townshi**	**0.53**	**345**	P		Pb	19 55 57.7	-0.4
	baz=345							
NDT				*eS*		Sb	19 56 05.0	-0.8
	baz=345							
ENTT	**Nioudou**	**0.55**	**351**	*eP*		Pg	19 55 58.0	+0.4
	baz=351							
YHNB	**Yeheng**	**0.63**	**336**	*eP*		Pb	19 55 59.9	0.0
	baz=335							
EHY	**Hungye**	**0.66**	**208**	*eP*		Pg	19 56 58.2	-1.4
	baz=208							
SMLT	**Sun Moon Lake**	**0.73**	**254**	*eP*		Pb	19 56 01.2	-0.3
	baz=253							
SMLT				*eS*		Sg	19 56 10.7	+0.3
	baz=253							

TAP 07 19:55:48.5, 23°90N × 121°53E, h7 km, ML1.3, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.07**	**334**	P	Pg	19 55 51.1	+0.8
	baz=333						
ETM				S	Sg	19 55 52.7	+1.0
	baz=333						
HWA	**Hwalien**	**0.10**	**43**	P	Pg	19 55 51.3	+0.5
	baz=47						
HWA				S	Sg	19 55 53.6	+1.2
	baz=47						
SHUL	**Shoufeng**	**0.12**	**164**	*i* P	Pg	19 55 51.8	+0.8
	baz=163						
SHUL				*i* S	Sg	19 55 54.6	+1.8
	baz=163						
ESL	**Shilin**	**0.12**	**225**	↓ *i* P	Pg	19 55 51.9	+0.8
	baz=221						
ESL				*i* S	Sg	19 55 54.1	+1.1
	baz=221						
LXIB	**Xiulin Townshi**	**0.16**	**319**	P	Pg	19 55 52.7	+0.9
	baz=318						
LXIB				S	Sg	19 55 55.5	+1.4
	baz=318						
TEGC	**Jichi Village**	**0.19**	**176**	*eP*	Pg	19 55 53.7	+1.3
	baz=174						
WARBT	**Fenglin Townsh**	**0.22**	**215**	*eP*	Pg	19 55 53.7	+0.8
	baz=215						
WARBT				*eS*	Sg	19 55 57.0	+1.1
	baz=215						
EGFH	**Guangfu**	**0.25**	**202**	*eP*	Pg	19 55 54.1	+0.7
	baz=201						
NACB	**Ninganchiao**	**0.28**	**13**	*eP*	Pg	19 55 54.2	+0.2
	baz=12						
ETLH	**Xiulin Townshi**	**0.31**	**352**	*eP*	Pb	19 55 56.0	-0.4
	baz=352						
OWD	**Renai**	**0.33**	**279**	*eP*	Pb	19 55 56.4	-0.3
	baz=279						
OWD				*eS*	Sb	19 56 01.4	-0.8
	baz=279						
WHF	**Hehuan Shan**	**0.34**	**315**	*eP*	Pb	19 55 56.3	-0.9
	baz=315						
CHGB	**Renai**	**0.36**	**296**	P	Pb	19 55 57.0	-0.3
	baz=296						
CHGB				*eS*	Sb	19 56 02.5	-0.8
	baz=296						
WUSB	**Renai**	**0.39**	**284**	*eP*	Pb	19 55 57.0	-0.7
	baz=258						
WUSB				*eS*	Sb	19 56 03.4	-0.5
	baz=258						
WUSB	**Renai**	**0.39**	**284**	*eP*	Pb	19 55 57.5	-0.2
	baz=283						
WUSB				*eS*	Sb	19 56 03.3	-0.7
	baz=283						
YULB	**Yu-li**	**0.55**	**203**	*eP*	Pb	19 55 59.9	-0.5
	baz=202						

*IDC **07** 20:17:17.2±2.1, 8°.86S × 128°.16E, h0 km, mb3.2/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=138.4km s-min=29.4km az=63.0*
ISC 07 20:17:19.3±1.5, 8°.81S±0°.09 × 128°.2E±0°.2, h10 km, n7, σ 2s 36/7, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**4.58**	**22**	P	**Pb**	20 18 40.7	**+0.9**
MTN	**Manton Dam**	**4.94**	**145**	P	**Pn**	20 18 36.4	**+2.7**
KDU	**Kakadu**	**5.70**	**133**	P	**Pn**	20 18 42.0	**-2.1**
KNRA	**Kununurra**	**6.85**	**175**	P	Pb	20 19 08.7	-10
WRA	**Warramunga Arr**	**12.56**	**152**	Pn	**Pn**	20 20 16.8	**-1.5**
	0.2nm,0.3s,baz=325,slow=13,SNR=12						
WRA				Sn	**Sn**	20 22 40.4	**+2.0**
	0.1nm,0.3s,baz=332,slow=22,SNR=1.7						
	0.2nm,0.2s						
ASAR	**Alice Springs**	**15.76**	**160**	Pn	**Pn**	20 20 59.6	**-1.9**
	0.1nm,0.3s,baz=344,slow=11,SNR=8.3						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**68.78**	**328**	P	**P**	20 28 23.4	**-0.3**
	0.2nm,0.8s,baz=140,slow=5.1,SNR=1.9						
	0.2nm,0.6s						

*IDC **07** 20:22:57.6±2.6, 1°.48N × 127°.27E, h129 km±23 km, mb3.8/14, mbtmp4.2/14, MS2.9/1, Error ellipse: s-maj=33.9km s-min=9.3km az=77.0*
*NEIC **07** 20:22:57.9±1.4, 1°.42N±0°.08 × 127°.01E±0°.07, h124 km±6 km, mb4.5/41, Error ellipse: s-maj=13.2km s-min=8.3km az=212.0*
*DJA **07** 20:22:58.3±0.4, 1°N±4° × 12°7E±°, h103 km±5 km, M4.4/12, mb4.3/5, mB4.7/2, MLv4.5/12, Mw(mB)3.9/2, MwMwp4.6/1, Mwp5.0/1*
ISC 07 20:22:57.6±0.4, 1°.43N±0°.04 × 126°.98E±0°.06, h124 km, n107, σ 1s 43/114, mb4.3/32, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.76**	**149**		**Pn**	20 23 17.6	**-0.2**
TNTI	**Ternate**	**0.76**	**149**	P	**Pn**	20 23 18.0	**+0.2**
TNTI				S	**Sn**	20 23 33.1	**+0.1**
LBMI	**Labuha**	**2.12**	**166**	P	**Pn**	20 23 33.6	**+0.9**
LBMI				S	**Sn**	20 23 58.9	**-0.7**
SGSI	**Sangihe**	**2.67**	**327**	P	**Pn**	20 23 38.4	**-1.3**
KMSI	**Cibinong**	**3.12**	**254**	P	**Pn**	20 23 45.8	**+0.3**
SANI	**Sanana**	**3.59**	**196**	P	**Pn**	20 23 51.5	**-0.3**
NLAI	**Namlea**	**4.64**	**179**	P	**Pn**	20 24 06.5	**+0.8**
SWI	**Sorong**	**4.85**	**118**	P	**Pn**	20 24 09.3	**+0.8**
LUWI	**Luwuk**	**4.87**	**240**		**Pn**	20 24 08.3	**-0.6**
LUWI				Sn	**Sn**	20 25 03.8	**-0.5**
LUWI	**Luwuk**	**4.87**	**240**	P	**Pn**	20 24 08.7	**-0.2**
MRSI	**Marisa**	**5.13**	**259**	P	**Pn**	20 24 12.9	**+0.6**
	29nm,0.5s,558nm0.2nm						
FAKI	**Fak Fak**	**6.81**	**129**	Pn	**Pn**	20 24 36.8	**+1.8**
FAKI	**Fak Fak**	**6.81**	**129**	P	**Pn**	20 24 36.1	**+1.1**
TTSI	**Tana Toraja**	**8.43**	**238**	P	**Pn**	20 24 57.2	**+0.4**
	50nm,0.7s,861nm2μm						
BKSI	**Bulukumba**	**9.59**	**226**	P	**Pn**	20 25 14.1	**+1.6**
	19nm,1.2s						
KAPI	**Kappang**	**9.65**	**228**	Pn	**Pn**	20 25 14.1	**+0.8**
KAPI				Sn	**Sn**	20 26 52.2	**-7.7**
EDFI	**Ende, Flores**	**11.40**	**207**	P	**Pn**	20 25 41.2	**+4.2**
KKM	**Kota Kinabalu**	**11.68**	**293**	Pn	**Pn**	20 25 41.1	**+0.5**
PLAI	**Plampang**	**13.71**	**222**	P	**P**	20 26 12.7	**+1.3**
PLAI	**Plampang**	**13.71**	**222**	P	**P**	20 26 11.4	**0.0**
TWSI	**Taliwang, Sumb**	**14.26**	**225**	P	**P**	20 26 20.1	**+2.6**
MTN	**Manton Dam**	**14.77**	**164**	Pn	**Pn**	20 26 19.3	**-1.0**
JAGI	**Jajag, Banyuwa**	**16.13**	**232**		**P**	20 26 42.4	**+4.1**
JAGI				IAmb	IAmb	20 27 16.2	
	comp=Z,14nm,0.9s						
JAGI	**Jajag, Banyuwa**	**16.13**	**232**	P	**P**	20 26 43.5	**+5.2**
KNRA	**Kununurra**	**17.09**	**174**	P	**P**	20 26 49.0	**+0.2**
KNRA				IAmb	IAmb	20 26 50.2	
	comp=Z,22nm,0.6s						
KNRA	**Kununurra**	**17.09**	**174**	P	**Pn**	20 26 49.2	**+0.2**
FITZ	**Fitzroy Crossi**	**19.45**	**184**		**P**	20 27 15.0	**+0.4**
FITZ	**Fitzroy Crossi**	**19.45**	**184**	P	**P**	20 27 15.3	**+0.7**
LEM	**Lembang**	**20.99**	**247**	LR	LR	20 37 30.8	
	comp=Z,34nm,19.0s,baz=58,slow=41						
COEN	**Coen**	**22.16**	**134**	P	**P**	20 27 43.3	**-0.4**
COEN				IAmb	IAmb	20 27 57.0	
	comp=Z,37nm,1.4s						
WB0	**Warramunga Arr**	**22.28**	**161**	P	**P**	20 27 43.4	**-1.4**
WB0				IAmb	IAmb	20 27 50.9	
	comp=Z,8.9nm,0.8s						
WRAB	**Tennant Creek**	**22.43**	**162**	P	**P**	20 27 44.9	**-1.3**
WRAB				IAmb	IAmb	20 27 52.6	
	comp=Z,9.1nm,0.7s						
WRA	**Warramunga Arr**	**22.43**	**162**	P	**P**	20 27 43.5	**-2.9**
WRA	**Warramunga Arr**	**22.43**	**162**	P	**P**	20 27 45.4	**-0.9**
	comp=Z,4.7nm,0.4s,baz=340,slow=11,SNR=47						
WRA				S	**S**	20 31 43.4	**-0.5**
	comp=Z,1.3nm,0.7s,baz=326,slow=22,SNR=5.5						
	comp=Z,4.7nm,0.4s						
WB2	**Warramunga Arr**	**22.44**	**162**	P	**P**	20 27 45.2	**-1.1**
WB2				IAmb	IAmb	20 27 52.7	
	comp=Z,9.0nm,0.7s						
WR0	**Warramunga Arr**	**22.51**	**161**	P	**P**	20 27 45.7	**-1.4**
WR0				IAmb	IAmb	20 27 49.6	
	comp=Z,26nm,1.4s						
YULB	**Yu-li**	**22.52**	**346**	P	**P**	20 27 45.7	**-1.5**
YULB				IAmb	IAmb	20 27 49.7	
	comp=Z,27nm,1.1s						
TPUB	**Ta-pu**	**22.60**	**345**	P	**P**	20 27 46.0	**-1.9**
TPUB				IAmb	IAmb	20 28 20.9	
	comp=Z,52nm,1.3s						
SSLB	**Suanglung**	**22.98**	**346**	P	**P**	20 27 51.2	**-0.4**
SSLB				IAmb	IAmb	20 28 14.5	
	comp=Z,32nm,1.3s						
YHNB	**Yeheng**	**23.73**	**347**	P	**P**	20 27 58.0	**-0.6**
PSA00	**Pilbara Seismi**	**23.90**	**197**	P	**P**	20 27 59.7	**-0.4**
PSA00				IAmb	IAmb	20 28 16.4	
	comp=Z,31nm,1.5s						
PSA00	**Pilbara Seismi**	**23.90**	**197**	P	**P**	20 28 00.3	**+0.3**
PSA00				IAmb	IAmb	20 28 01.5	
	comp=Z,3.9nm,0.8s						
PSA00	**Pilbara Seismi**	**23.90**	**197**	P	**P**	20 28 00.6	**+0.6**
XMIS	**Christmas Isla**	**24.30**	**240**	P	**P**	20 28 03.7	**0.0**
XMIS				IAmb	IAmb	20 28 07.3	
	comp=Z,28nm,0.9s						
QIS	**Mount Isa**	**25.11**	**151**	P	**P**	20 28 11.1	**+0.1**
UBPT	**Khong Chiam**	**25.30**	**304**	P	**P**	20 28 12.4	**-0.4**
UBPT				IAmb	IAmb	20 28 44.2	
	comp=Z,18nm,1.4s						
AS31	**Alice Springs**	**25.84**	**165**	P	**P**	20 28 17.4	**-0.2**
ASAR	**Alice Springs**	**25.84**	**165**	P	**P**	20 28 16.7	**-0.9**
ASAR	**Alice Springs**	**25.84**	**165**	P	**P**	20 28 17.2	**-0.4**
	comp=Z,0.8nm,0.3s,baz=348,slow=13,SNR=26						
ASAR				PcP	**PcP**	20 31 43.5	**-0.5**
	comp=Z,0.4nm,0.5s,baz=357,slow=1.8,SNR=4.1						
ASAR				ScP	**ScP**	20 35 10.8	**-1.5**
	comp=Z,0.2nm,0.5s,baz=350,slow=3.1,SNR=5.8						
	comp=Z,0.8nm,0.3s						
AS01	**Alice Springs**	**25.85**	**165**	P	**P**	20 28 17.4	**-0.3**
WRKA	**Warakurna**	**26.34**	**177**	P	**P**	20 28 22.3	**+0.2**
GIRL	**Giralia**	**26.96**	**207**	P	**P**	20 28 29.8	**+2.2**
GIRL	**Giralia**	**26.96**	**207**	P	**P**	20 28 29.5	**+1.8**
MEEK	**Meekatharra**	**29.05**	**196**	P	**P**	20 28 46.7	**+0.5**
OOD	**Oodnadatta**	**30.24**	**165**	P	**P**	20 28 56.4	**-0.3**
NJ2	**Nanjing**	**31.41**	**347**	*eP*	**P**	20 29 09.2	**+2.3**
FORT	**Forrest**	**32.05**	**178**	P	**P**	20 29 12.2	**+0.3**
FORT	**Forrest**	**32.05**	**178**	P	**P**	20 29 12.4	**-0.1**
MORW	**Morawa**	**32.08**	**198**	P	**P**	20 29 12.5	**-0.4**
MORW				IAmb	IAmb	20 29 28.5	
	comp=Z,23nm,1.4s						
MORW	**Morawa**	**32.08**	**198**	P	**P**	20 29 13.4	**+0.5**
MULG	**Mulgathing**	**32.25**	**168**	P	**P**	20 29 14.6	**+0.3**
KMBL	**Kambalda**	**32.97**	**188**	P	**P**	20 29 21.1	**+0.4**
ENH	**Enshi**	**33.15**	**332**	P	**P**	20 29 22.4	**+0.1**
ENH				IAmb	IAmb	20 29 23.3	
	comp=Z,3.6nm,0.8s						
BLDU	**Ballidu**	**33.33**	**196**	P	**P**	20 29 24.6	**+0.8**
KLBR	**Kellerberrin**	**33.99**	**194**	P	**P**	20 29 30.1	**+0.6**
MUN	**Mundaring**	**34.76**	**196**	P	**P**	20 29 36.8	**+0.7**
PZH	**PanZhiHua**	**34.78**	**318**	P	**P**	20 29 38.5	**+1.9**
BBOO	**Buckleboo**	**35.12**	**167**	P	**P**	20 29 39.0	**-0.2**
BBOO				IAmb	IAmb	20 29 51.2	
	comp=Z,11nm,1.2s						
BBOO	**Buckleboo**	**35.12**	**167**	P	**P**	20 29 39.0	**-0.2**
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	20 29 41.7	**+0.2**
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	20 29 42.0	**+0.5**
NWAO				IAmb	IAmb	20 30 13.4	
	comp=Z,94nm,1.3s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	20 29 42.3	**+0.8**
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	20 29 42.1	**+0.6**
	comp=Z,5.1nm,0.3s,baz=19,slow=7.8,SNR=13						
	comp=Z,5.1nm,0.3s						
EIDS	**Eidsvold**	**35.41**	**140**	P	**P**	20 29 40.3	**-1.5**
EIDS				IAmb	IAmb	20 30 07.8	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**35.86**	**1**	P	**P**	20 29 44.6	**-0.8**
	comp=Z,1.2nm,0.6s,baz=177,slow=9.6,SNR=6.5						
	comp=Z,1.2nm,0.6s						
STKA	**Stephens Creek**	**35.91**	**159**	P	**P**	20 29 45.7	**-0.3**
STKA	**Stephens Creek**	**35.91**	**159**	P	**P**	20 29 46.1	**+0.2**
STKA	**Stephens Creek**	**35.91**	**159**	P	**P**	20 29 45.0	**-0.9**
	comp=Z,2.1nm,0.6s,baz=336,slow=8.5,SNR=8.7						
	comp=Z,2.1nm,0.6s						
MJAR	**Matsushiro Arr**	**36.45**	**15**	P	**P**	20 29 48.5	**-2.1**
	comp=Z,1.1nm,0.5s,baz=183,slow=9.0,SNR=7.7						
	comp=Z,1.1nm,0.5s						
XAN	**Xi'an**	**36.58**	**334**	*eP*	**P**	20 29 51.6	**-0.1**
JMM	**Marumori**	**38.42**	**18**	P	**P**	20 30 06.7	**-0.4**
ARMA	**Armidale**	**39.43**	**145**	P	**P**	20 30 15.0	**-0.8**
ARMA				IAmb	IAmb	20 30 37.3	
	comp=Z,17nm,1.3s						
ARMA	**Armidale**	**39.43**	**145**	P	**P**	20 30 16.7	**+0.9**
LZH	**Lanzhou**	**40.61**	**331**	*eP*	**P**	20 30 26.1	**+0.6**
LZH				sP	**sP**	20 31 05.4	**-1.1**
JTM	**Tenmabayashi**	**41.20**	**16**	P	**P**	20 30 28.7	**-1.3**
HHC	**Hu-ho-hao-te**	**41.65**	**342**	*eP*	**P**	20 30 35.2	**+1.3**
KOUNC	**Koumac, New Ca**	**42.56**	**123**	P	**P**	20 30 40.7	**-0.7**
USRK	**Ussuriysk Ar.**	**42.82**	**5**	P	**P**	20 30 42.2	**-1.0**
	comp=Z,2.9nm,0.8s,baz=182,slow=7.9,SNR=4.3						
	comp=Z,2.9nm,0.8s						
MDJ	**Mudanjiang**	**43.07**	**3**	P	**P**	20 30 47.6	**+2.5**
LSA	**Lhasa**	**44.16**	**313**	P	**P**	20 30 56.2	**+1.5**
JKA	**Kamikawa-asahi**	**44.71**	**16**	P	**P**	20 30 57.5	**-0.8**
GTA	**Gaotai**	**45.20**	**330**	*eP*	**P**	20 31 03.2	**+0.8**
ULN	**Ulaanbaatar**	**49.37**	**342**	P	**P**	20 31 34.3	**-0.4**
SONM	**Songino Array**	**49.55**	**342**	P	**P**	20 31 35.5	**-0.4**
SONM	**Songino Array**	**49.55**	**342**	P	**P**	20 31 36.0	**0.0**
	comp=Z,1.5nm,0.7s,baz=155,slow=9.2,SNR=12						
	comp=Z,1.5nm,0.7s						
MK31	**Makanchi Array**	**59.58**	**326**	P	**P**	20 32 47.8	**-0.5**
MK31				IAmb	IAmb	20 32 49.8	
	comp=Z,5.9nm,1.4s						
MKAR	**Makanchi Array**	**59.58**	**326**	P	**P**	20 32 48.7	**+0.4**
	comp=Z,2.0nm,0.3s,baz=118,slow=7.9,SNR=61						
	comp=Z,2.0nm,0.3s						
LBZ	**Lake Benmore**	**59.66**	**145**	P	**P**	20 32 48.5	**-0.3**
ARSB	**Arslanbob**	**62.69**	**317**	P	**P**	20 33 09.9	**+0.4**
ZALV	**Zalesovo Beam**	**62.74**	**333**	P	**P**	20 33 10.3	**+0.9**
	comp=Z,0.5nm,0.3s,baz=137,slow=7.2,SNR=4.3						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**63.80**	**328**	P	**P**	20 33 16.4	**-0.1**
	comp=Z,2.3nm,0.6s,baz=128,slow=6.3,SNR=34						
	comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**63.81**	**328**	P	**P**	20 33 16.2	**-0.3**
KURK				IAmb	IAmb	20 33 19.1	
	comp=Z,8.4nm,1.2s						
BVAR	**Borovoye Array**	**69.38**	**327**	P	**P**	20 33 51.4	**-0.4**
	comp=Z,1.1nm,0.7s,baz=128,slow=6.3,SNR=5.2						
	comp=Z,1.1nm,0.7s						
TIXI	**Tiksi**	**70.12**	**1**	P	**P**	20 33 54.9	**-1.2**
NRIK	**Noril'sk**	**72.71**	**346**	P	**P**	20 34 10.8	**-0.8**
	comp=Z,1.5nm,0.5s,baz=134,slow=4.4,SNR=4.1						
	comp=Z,1.5nm,0.5s						
ABKAR	**Akbulak array**	**74.08**	**321**	P	**P**	20 34 19.6	**-0.5**
VNDA	**Vanda**	**81.13**	**173**	P	**P**	20 34 57.9	**-0.8**
	comp=Z,3.8nm,1.1s,baz=303,slow=7.4,SNR=3.0						
	comp=Z,3.8nm,1.1s						

KRSC 07 20:31:22.9±1.8, 49°.38N × 156°.94E, h6 km±42 km, MI4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.41**	**338**	*eP*	Pn	20 31 48.0	-1.1
SKR				*eS*	Sb	20 32 07.0	-0.9
PAU	**Pauzhetka**	**2.10**	**358**	*eP*	Pb	20 32 01.2	-0.1
PAU				*eS*	Sb	20 32 28.7	+1.1
KDTR	**Khodutka, Kamc**	**2.54**	**16**	*eP*	Pb	20 32 07.1	-1.8
KDTR				*eS*	Sb	20 32 39.5	-0.8
ASAK	**Asacha**	**3.07**	**11**	*eP*	Pn	20 32 13.2	+1.1
MTVR	**Mutnovka**	**3.21**	**14**	*eP*	Pn	20 32 16.8	+2.8
RUS	**Russkaya**	**3.22**	**17**	*eP*	Pn	20 32 16.1	+2.2
RUS				*eS*	Sn	20 32 55.3	+2.7
GRL	**Gorelyy**	**3.26**	**12**	*eP*	Pn	20 32 17.8	+3.1
GRL				*eS*	Sn	20 32 55.8	+2.1
UGLR	**Uglovaya**	**4.02**	**16**	*eP*	Pn	20 32 28.8	+3.8
AVH	**Avacha**	**4.05**	**15**	*eP*	Pn	20 32 30.0	+4.5
KOK	**Koryaka**	**4.06**	**15**	*eP*	Pn	20 32 29.7	+4.0
SMAR	**Somma**	**4.06**	**16**	*eP*	Pn	20 32 30.2	+4.4
KRX	**Arik**	**4.13**	**14**	*eP*	Pn	20 32 30.1	+3.5

IDC 07 20:44:41.9±2.9, 23°.70N × 93°.98E, h73 km±33 km, mb3.1/3, mbtmp3.4/5, ML3.7/2, Error ellipse: s-maj=29.7km s-min=24.0km az=0.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.38**	**245**	P	Pn	20 45 18.6	-0.1
	20nm,0.3s,baz=0.0,slow=20,SNR=1.2						
BRDH				S	Sn	20 45 47.6	+0.7
	79nm,0.3s,baz=0.0,slow=20,SNR=6.3						
	62nm,0.3s						
CMAR	**Chiang Mai Arr**	**6.97**	**137**	P	Pn	20 46 21.6	+0.2
	0.3nm,0.3s,baz=312,slow=13,SNR=8.9						
	0.8nm,0.4s						
SONM	**Songino Array**	**26.04**	**19**	P	P	20 50 08.3	0.0
	0.3nm,0.6s,baz=190,slow=7.1,SNR=2.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**58.56**	**134**	P	P	20 54 30.7	-0.5
	0.4nm,0.7s,baz=321,slow=7.6,SNR=5.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**60.98**	**138**	P	P	20 54 48.2	+0.4
	0.4nm,0.5s,baz=320,slow=7.0,SNR=5.1						
	0.4nm,0.5s						

*IDC **07** 20:50:28.9±5.0, 17°.74N × 92°.69W, h0 km, mb3.8/4, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=92.6km s-min=17.4km az=146.0*
*MEX **07** 20:50:31.7±0.7, 17°.75N × 92°.50W, h10 km, MD4.3*
ISC 07 20:50:31.1±1.2, 17°.73N±0°.03 × 92°.64W±0°.03, h25 km±10 km, n33, σ 2s 09/60, mb3.7/4, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHSA	**Villahermosa**	**0.37**	**311**	*eP*	**Pb**	20 50 39.6	**+0.4**
VHSA				*i* S	**Sn**	20 50 47.7	**+0.3**
TGBT	**Tuxtla Gutierr**	**1.04**	**204**	*eP*	**Pn**	20 50 49.6	**-0.6**
TGBT				*i* S	**Sb**	20 51 03.9	**+0.2**
TGIG		**1.05**	**206**	*eP*	**Pn**	20 50 49.8	**-0.6**
TGIG				*i* S	**Sb**	20 51 03.8	**-0.3**
UXUV	**UXUV**	**1.49**	**254**	*i* P	**Pn**	20 50 56.5	**+0.1**
UXUV				*i* S	**Sn**	20 51 15.6	**+0.6**
CCIG	**Comitan**	**1.52**	**161**	*eP*	**Pb**	20 50 58.8	**+0.1**
CCIG				*eS*	**Sb**	20 51 18.2	**+0.5**
SCIG	**Sabancuy**	**1.85**	**48**	*eP*	**Pn**	20 51 00.9	**-0.4**
SCIG				*eS*	**Sb**	20 51 29.2	**+2.3**
CARR	**Arriaga**	**1.91**	**220**	*eP*	**Pn**	20 51 02.4	**+0.3**
CARR				*i* S	**Sn**	20 51 25.0	**-0.4**
PCIG		**2.09**	**195**	*eP*	**Pn**	20 51 04.8	**+0.3**
PCIG				*eS*	**Sn**	20 51 29.9	**+0.1**
NILT	**Santiago Nilte**	**2.22**	**239**	*eP*	**Pb**	20 51 09.1	**-1.4**
NILT				*i* S	**Sn**	20 51 34.8	**+1.9**
CMIG	**Matias Romero**	**2.23**	**254**	Pn	**Pn**	20 51 06.5	**0.0**
	7.5nm,0.3s,baz=85,slow=16,SNR=101						
CMIG				Sn	**

mbtmp4.4/15,MS3.4/23,Error ellipse: s-maj=17.7km s-min=11.2km az=100.0

ISC 07 20:59:47.0±0.4,**4°97'S**±0.05×**144°53'E**±0.06,**h50**km,**n151,** σ1§**20**/138,**mb4.6**/50,**MS3.5**/20,**1D,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**4.06**	**44**		**Pn**	**21 00 46.2**	**-0.4**
GENI	**Genyem**	**4.95**	**298**	P	**Pn**	**21 00 58.6**	**-0.3**
PMG	**Port Moresby**	**5.12**	**150**	Pn	**Pn**	**21 01 02.6**	**+1.4**
PMG	**Port Moresby**	**5.12**	**150**	P	**Pn**	**21 01 02.7**	**+1.5**
	65nm,0.4s,baz=360,slow=5.6,SNR=33						
PMG				S	**Sn**	**21 02 00.2**	**+1.1**
	84nm,0.4s,baz=303,slow=23,SNR=8.4						
PMG				LR	LR	21 03 35.1	
	comp=Z,423nm,18.2s,baz=298,slow=44						
RABL	**Rabaul**	**7.65**	**85**	Pn	**Pn**	**21 01 33.5**	**-2.4**
COEN	**Coen**	**9.03**	**188**	Pn	**Pn**	**21 01 56.6**	**+1.8**
FAKI	**Fak Fak**	**12.42**	**279**	P	**Pn**	**21 02 38.9**	**-2.3**
	29nm,1.0s						
CTA	**Charters Tower**	**15.12**	**174**	P	**Pn**	**21 03 20.6**	**+3.0**
	4.3nm,0.4s,baz=359,slow=16,SNR=5.5						
CTA				LR	LR	21 08 49.0	
	comp=Z,81nm,20.6s,baz=314,slow=36						
CTAO	**Charters Tower**	**15.12**	**174**	Pn	**Pn**	**21 03 17.3**	**-0.3**
MTN	**Manton Dam**	**15.37**	**239**	Pn	**Pn**	**21 03 18.7**	**-2.0**
MTN				IAmb	IAmb	21 03 48.8	
	comp=Z,16nm,0.6s						
NLAI	**Namlea**	**17.47**	**275**	P	**Pn**	**21 03 48.5**	**+1.2**
	comp=Z,13nm,0.7s,comp=Z,2μm						
WB0	**Warramunga Arr**	**17.71**	**213**		**Pn**	**21 03 49.4**	**-0.8**
WB0				IAmb	IAmb	21 03 55.6	
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**17.79**	**212**	P	**Pn**	**21 03 50.4**	**-0.8**
WR0				IAmb	IAmb	21 03 56.5	
	comp=Z,30nm,0.7s						
WRAB	**Tennant Creek**	**17.87**	**213**	P	**Pn**	**21 03 51.1**	**-1.1**
WRAB				IAmb	IAmb	21 03 57.9	
	comp=Z,22nm,0.8s						
WB2	**Warramunga Arr**	**17.88**	**213**	P	**Pn**	**21 03 51.5**	**-0.8**
WRA	**Warramunga Arr**	**17.89**	**213**	P	**Pn**	**21 03 51.7**	**-0.7**
WRA	**Warramunga Arr**	**17.89**	**213**	P	**Pn**	**21 03 51.9**	**-0.5**
	comp=Z,15nm,0.6s,baz=38,slow=12,SNR=78						
WRA				S	**Sn**	**21 07 14.4**	**+3.3**
	comp=Z,4.4nm,1.1s,baz=31,slow=20,SNR=7.5						
GUMO	**Guam**	**18.44**	**1**	LR	LR	21 10 59.0	
	comp=Z,91nm,19.0s,baz=192,slow=36						
SANI	**Sanana**	**18.73**	**278**	P	**P**	**21 04 00.5**	**-1.3**
	comp=Z,30nm,1.2s						
KNRA	**Kununurra**	**18.79**	**234**	P	**P**	**21 04 02.0**	**-0.4**
KNRA				IAmb	IAmb	21 04 06.4	
	comp=Z,35nm,0.7s						
SOEI	**Soe**	**20.64**	**256**	P	**P**	**21 04 22.7**	**-0.1**
SOEI	**Soe**	**20.64**	**256**	P	**P**	**21 04 23.5**	**+0.7**
	comp=Z,101nm,1.0s						
AS31	**Alice Springs**	**21.22**	**208**	P	**P**	**21 04 29.2**	**+0.3**
ASAR	**Alice Springs**	**21.23**	**208**	P	**P**	**21 04 29.0**	**+0.1**
ASAR	**Alice Springs**	**21.23**	**208**	P	**P**	**21 04 29.6**	**+0.8**
	comp=Z,16nm,0.7s,baz=28,slow=14,SNR=138						
ASAR				S	**S**	**21 08 21.4**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=27,slow=20,SNR=1.7						
ASAR				LR	LR	21 12 59.9	
	comp=Z,177nm,19.3s,baz=12,slow=37						
	comp=Z,16nm,0.7s						
EIDS	**Eidsvold**	**21.24**	**163**	P	**P**	**21 04 30.5**	**+1.6**
LUWI	**Luwuk**	**22.07**	**279**	P	**P**	**21 04 38.9**	**+0.9**
LUWI	**Luwuk**	**22.07**	**279**	P	**P**	**21 04 39.1**	**+1.1**
	comp=Z,76nm,1.1s,comp=Z,9μm						
MMRI	**Maumere**	**22.43**	**259**	P	**P**	**21 04 40.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**22.61**	**233**	P	**P**	**21 04 42.3**	**-1.4**
EDFI	**Ende, Flores**	**22.98**	**259**	P	**P**	**21 04 45.8**	**-1.9**
	comp=Z,42nm,0.7s						
MRSI	**Marisa**	**23.20**	**283**	P	**P**	**21 04 48.9**	**-0.9**
	comp=Z,23nm,1.1s						
TTSI	**Tana Toraja**	**24.72**	**273**	P	P	21 05 15.5	+12
STKA	**Stephens Creek**	**26.91**	**186**	P	**P**	**21 05 23.9**	**+0.4**
STKA	**Stephens Creek**	**26.91**	**186**	P	**P**	**21 05 23.2**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=346,slow=11,SNR=9.3						
STKA				LR	LR	21 17 10.4	
	comp=Z,109nm,19.7s,baz=20,slow=39						
	comp=Z,2.3nm,0.6s						
DZM	**Mont Dzumac**	**27.19**	**131**	LR	LR	21 15 34.8	
	comp=Z,162nm,18.6s,baz=298,slow=35						
BBOO	**Buckleboo**	**28.81**	**195**	P	**P**	**21 05 40.2**	**-0.2**
FORT	**Forrest**	**29.99**	**209**	P	**P**	**21 05 50.7**	**-0.3**
TGY	**Tagaytay City**	**30.11**	**309**	LR	LR	21 16 44.4	
	comp=Z,33nm,21.6s,baz=82,slow=34						
MORW	**Morawa**	**36.08**	**225**	P	**P**	**21 06 43.7**	**-0.5**
NWAO	**Narrogin (SRO)**	**37.71**	**219**	P	**P**	**21 06 57.2**	**-0.7**
NWAO				IAmb	IAmb	21 07 03.7	
	comp=Z,14nm,0.8s						
NWAO	**Narrogin (SRO)**	**37.71**	**219**	P	**P**	**21 06 57.3**	**-0.6**
NWAO				IAmb	IAmb	21 07 03.7	
	comp=Z,45nm,0.8s						
NWAO	**Narrogin (SRO)**	**37.71**	**219**	LR	LR	21 23 08.2	
	comp=Z,101nm,18.6s,baz=31,slow=37						
JHJ	**Hachijo jima 2**	**38.15**	**354**	LR	LR	21 22 23.5	
	comp=Z,51nm,19.2s,baz=358,slow=36						
JNU	**Nakatsue**	**40.03**	**342**	LR	LR	21 20 43.8	
	comp=Z,57nm,19.2s,baz=162,slow=31						
MJAR	**Matsushiro Arr**	**41.72**	**352**	LR	LR	21 24 09.4	
	comp=Z,42nm,18.4s,baz=180,slow=35						
MRNZ	**Matariki Terra**	**44.19**	**149**	P	**P**	**21 07 49.5**	**-1.6**
NJ2	**Nanjing**	**44.19**	**328**	*eP*	**P**	**21 07 53.4**	**+2.2**
URZ	**Urewera**	**44.44**	**143**	LR	LR	21 26 21.6	
	comp=Z,45nm,19.2s,baz=118,slow=36						
RTZ	**Ruatahuna**	**44.59**	**143**	P	**P**	**21 07 55.3**	**+0.8**
TUWZ	**Tuamarina**	**44.82**	**148**	P	**P**	**21 07 56.4**	**+0.3**
TCW	**Tory Channel**	**44.84**	**148**	P	**P**	**21 07 57.0**	**+0.7**
KSRS	**Korea Array**	**44.95**	**341**	P	**P**	**21 07 57.1**	**0.0**
	comp=Z,1.8nm,0.8s,baz=168,slow=8.7,SNR=5.3						
KSRS				LR	LR	21 23 58.7	
	comp=Z,35nm,21.0s,baz=150,slow=32						
	comp=Z,1.8nm,0.8s						
LTZ	**Lake Taylor**	**44.98**	**151**	P	**P**	**21 07 58.3**	**+0.9**
LTZ				IAmb	IAmb	21 08 25.5	
	comp=Z,15nm,1.1s						
BSWZ	**Blackbirch Sta**	**44.99**	**149**	P	**P**	**21 07 57.3**	**-0.2**
KULM	**Kulim**	**44.99**	**282**	P	**P**	**21 07 56.8**	**-1.1**
KULM				IAmb	IAmb	21 08 02.8	
	comp=Z,14nm,1.3s						
RPZ	**Rata Peaks**	**45.12**	**153**	LR	LR	21 24 23.4	
	comp=Z,40nm,19.4s,baz=322,slow=33						
MRZ	**Mangatainoka R**	**45.16**	**146**	P	**P**	**21 07 59.5**	**+0.6**
MLZ	**Mavora Lakes**	**45.20**	**157**	P	**P**	**21 07 58.9**	**-0.2**
MLZ				IAmb	IAmb	21 08 35.1	
	comp=Z,26nm,1.4s						
LBZ	**Lake Benmore**	**45.26**	**154**	P	**P**	**21 07 58.4**	**-1.2**
KHZ	**Kahutara**	**45.33**	**150**		**P**	**21 08 00.8**	**+0.7**
BFZ	**Birch Farm**	**45.54**	**146**	P	**P**	**21 08 01.5**	**-0.4**
PLWZ	**Palliser**	**45.61**	**148**	P	**P**	**21 08 03.1**	**+0.7**
RPSI	**Rantau Prapat**	**46.19**	**278**	P	**P**	**21 08 06.7**	**-0.8**
GSI	**Gunungsitoli**	**47.32**	**276**	P	**P**	**21 08 14.6**	**-1.7**
GSI				IAmb	IAmb	21 08 19.6	
	comp=Z,8.9nm,0.6s						
LHMI	**Lhok Sumawe**	**48.59**	**281**	P	**P**	**21 08 25.0**	**-1.0**
ASAJ	**Asahikawa**	**48.89**	**358**	LR	LR	21 32 00.6	
	comp=Z,22nm,18.0s,baz=181,slow=40						
CRAI	**Chiangrai**	**50.09**	**301**	P	**P**	**21 08 38.2**	**+0.8**
CRAI				IAmb	IAmb	21 08 39.9	
	comp=Z,14nm,1.2s						
USRK	**Ussuriysk Ar.**	**50.23**	**348**	LR	LR	21 28 02.5	
	comp=Z,48nm,19.7s,baz=210,slow=34						
CM31	**Chiang Mai Arr**	**50.60**	**299**	P	**P**	**21 08 41.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**50.60**	**299**	P	**P**	**21 08 42.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**50.60**	**299**	P	**P**	**21 08 42.5**	**+1.2**
	comp=Z,5.0nm,0.6s,baz=122,slow=6.1,SNR=40						
	comp=Z,5.0nm,0.6s						
CHTO	**Chiang Mai**	**50.74**	**299**	P	**P**	**21 08 43.1**	**+0.7**
CHTO				IAmb	IAmb	21 08 43.9	
	comp=Z,6.4nm,0.9s						
MDJ	**Mudanjiang**	**51.15**	**346**	P	**P**	**21 08 46.8**	**+1.8**
PZH	**PanZhiHua**	**51.90**	**309**	P	**P**	**21 08 53.4**	**+2.3**
HHC	**Hu-ho-hao-te**	**54.69**	**330**	*eP*	**P**	**21 09 14.8**	**+3.5**
XLT	**XiLinHaoTe**	**54.99**	**335**	*eP*	**P**	**21 09 14.3**	**+1.0**
KLR	**Kul'dur**	**55.11**	**350**	LR	LR	21 31 34.0	
	comp=Z,40nm,18.1s,baz=150,slow=34						
PETK	**Petropavlovsk-**	**58.92**	**9**	LR	LR	21 29 38.7	
	comp=Z,17nm,21.6s,baz=228,slow=30						
SHL	**Shillong**	**59.40**	**303**	P	**P**	**21 09 44.9**	**-0.1**
GTA	**Gaotai**	**60.39**	**321**	P	**P**	**21 09 54.1**	**+2.6**
GTA				sP	**sP**	**21 10 16.3**	**+5.2**
LSA	**Lhasa**	**61.66**	**307**	P	**P**	**21 10 00.8**	**+0.1**
LSA				IAmb	IAmb	21 10 03.1	
	comp=Z,3.8nm,0.8s						
SONM	**Songino Array**	**62.33**	**332**	P	**P**	**21 10 04.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=155,slow=7.6,SNR=3.8						
	comp=Z,0.4nm,0.5s						
SHEM	**Shemya Is, Ala**	**62.70**	**20**	LR	LR	21 33 16.2	
	comp=Z,43nm,20.4s,baz=280,slow=32						
WMQ	**Urumqi**	**70.42**	**320**	*eP*	**P**	**21 10 56.9**	**+0.7**
VNDA	**Vanda**	**73.09**	**176**	P	**P**	**21 11 11.9**	**+0.4**
VNDA	**Vanda**	**73.09**	**176**	P	**P**	**21 11 12.0**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=325,slow=7.9,SNR=19						
	comp=Z,2.8nm,0.6s						
MK31	**Makanchi Array**	**75.15**	**321**	P	**P**	**21 11 23.6**	**-0.5**
MKAR	**Makanchi Array**	**75.15**	**321**	P	**P**	**21 11 23.4**	**-0.7**
MKAR	**Makanchi Array**	**75.15**	**321**	P	**P**	**21 11 23.8**	**-0.3**
	comp=Z,7.4nm,1.1s,baz=104,slow=7.4,SNR=26						
	comp=Z,7.4nm,1.1s						
MAKZ	**Makanchi**	**75.35**	**321**	P	**P**	**21 11 24.8**	**-0.5**
MAKZ				IAmb	IAmb	21 11 26.1	
	comp=Z,6.3nm,1.1s						
ZALV	**Zalesovo Beam**	**76.84**	**328**	P	**P**	**21 11 32.1**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=94,slow=4.4,SNR=2.8						
ZALV				LR	LR	21 46 46.9	
	comp=Z,43nm,18.1s,baz=59,slow=37						
	comp=Z,0.9nm,0.6s						
NIL	**Nilore**	**77.33**	**306**	P	**P**	**21 11 36.6**	**-0.2**
KURK	**Kurchatov**	**78.92**	**324**	P	**P**	**21 11 44.4**	**-0.8**
KURK				IAmb	IAmb	21 11 45.7	
	comp=Z,6.4nm,1.2s						
KURBB	**Kurchatov Arra**	**78.94**	**324**	P	**P**	**21 11 44.1**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=111,slow=4.2,SNR=7.8						
	comp=Z,1.2nm,1.0s						
G16K	**Koyuk River**	**80.08**	**20**	P	**P**	**21 11 52.0**	**+0.8**
G16K				IAmb	IAmb	21 11 52.7	
	comp=Z,6.0nm,1.1s						
KDAK	**Kodiak Island**	**80.18**	**29**	LR	LR	21 43 11.3	
	comp=Z,28nm,21.1s,baz=58,slow=32						
H17K	**Granite Mounta**	**80.67**	**21**	P	**P**	**21 11 54.7**	**+0.4**
H17K				IAmb	IAmb	21 11 56.0	
	comp=Z,5.3nm,0.9s						
KBL	**Kabul**	**80.94**	**306**	P	**P**	**21 11 55.3**	**-1.4**
F17K	**Baldwin Pennin**	**81.06**	**19**	P	**P**	**21 11 55.3**	**-1.1**
RDOG	**Red Dog Mine**	**81.49**	**18**	P	**P**	**21 11 58.8**	**+0.1**
G18K	**Tagagawik**	**81.63**	**20**	P	**P**	**21 11 59.7**	**+0.2**
G18K				IAmb	IAmb	21 12 00.9	
	comp=Z,5.2nm,1.1s						
KK31	**Karatay Array**	**81.82**	**315**	P	**P**	**21 12 00.8**	**-0.1**
KK31				IAmb	IAmb	21 12 34.5	
	comp=Z,7.2nm,1.5s						
KKAR	**Karatay Array**	**81.82**	**315**	P	**P**	**21 12 01.0**	**+0.1**
E18K	**Tukpahlearik C**	**81.83**	**19**	P	**P**	**21 12 00.5**	**0.0**
SIMJ	**Simiganj**	**81.87**	**310**	P	**P**	**21 12 00.9**	**-0.5**
SIMJ				IAmb	IAmb	21 12 01.9	
	comp=Z,3.5nm,0.8s						
H19K	**Roundabout Mou**	**82.22**	**21**	P	**P**	**21 12 02.4**	**-0.1**
H19K				IAmb	IAmb	21 12 03.9	
	comp=Z,5.1nm,0.9s						
E19K	**Redstone River**	**82.95**	**19**	P	**P**	**21 12 05.9**	**-0.3**
E19K				IAmb	IAmb	21 12 08.2	
	comp=Z,5.9nm,0.9s						
C19K	**Lookout Ridge**	**83.10**	**17**	P	**P**	**21 12 07.1**	**0.0**
C19K				IAmb	IAmb	21 12 08.7	
	comp=Z,4.5nm,1.1s						
D19K	**Kuna River**	**83.21**	**18**	P	**P**	**21 12 07.3**	**-0.4**
F20K	**Avaraart Lake**	**83.24**	**20**	P	**P**	**21 12 08.4**	**+0.7**
IMAR	**Indian Mountai**	**83.42**	**21**	P	**P**	**21 12 08.4**	**-0.3**
NRIK	**Noril'sk**	**83.55**	**343**	P	**P**	**21 12 07.3**	**-2.0**
MLY	**Manley**	**84.11**	**23**	P	**P**	**21 12 12.5**	**+0.1**
RND	**Reindeer**	**84.20**	**25**	P	**P**	**21 12 12.0**	**-0.9**
RND				IAmb	IAmb	21 12 13.4	
	comp=Z,5.8nm,0.8s						
BVAR	**Borovoye Array**	**84.50**	**324**	P	**P**	**21 12 14.4**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=115,slow=6.7,SNR=17						
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**84.57**	**324**	P	**P**	**21 12 13.9**	**-1.0**
BRVK				IAmb	IAmb	21 12 15.5	
	comp=Z,12nm,1.4s						
DHY	**Denali Highway**	**84.69**	**25**	P	**P**	**21 12 15.2**	**-0.2**
DHY				IAmb	IAmb	21 12 37.4	
	comp=Z,4.5nm,0.8s						
B21K	**Ikpikpuk River**	**84.87**	**18**	P	**P**	**21 12 16.6**	**+0.5**
B21K				IAmb	IAmb	21 12 39.9	
	comp=Z,3.8nm,1.1s						
QSPA	**South Pole Qui**	**84.99**	**180**	P	**P**	**21 12 15.6**	**-1.3**
QSPA	**South Pole Qui**	**84.99**	**180**	P	**P**	**21 12 16.5**	**-0.5**
	comp=Z,11nm,0.5s,baz=307,slow=0.5,SNR=22						
	comp=Z,11nm,0.5s						
G23K	**Bananza Creek**	**85.09**	**21**	P	**P**	**21 12 17.0**	**-0.2**
CCB	**Clear Creek Bu**	**85.10**	**24**	P	**P**	**21 12 16.0**	**-1.3**
CCB				IAmb	IAmb	21 12 17.2	
	comp=Z,3.6nm,0.9s						
IL31		**85.52**	**24**	P	**P**	**21 12 17.9**	**-1.5**
IL31				IAmb	IAmb	21 12 19.2	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**85.52**	**24**	P	**P**	**21 12 18.0**	**-1.3**
ILAR	**Eielson Array**	**85.52**	**24**	P	**P**	**21 12 17.4**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=253,slow=5.2,SNR=26						
ILAR				LR	LR	21 42 59.0	
	comp=Z,28nm,21.3s,baz=32,slow=30						
	comp=Z,2.5nm,0.7s						
F24K	**Squaw Lake**	**86.18**	**21**	P	**P**	**21 12 22.8**	**+0.2**
F24K				IAmb	IAmb	21 12 24.9	
	comp=Z,3.4nm,0.7s						
C23K	**Itkillik River**	**86.21**	**18**	P	**P**	**21 12 22.8**	**+0.1**
C23K				IAmb	IAmb	21 13 00.2	
	comp=Z,9.2nm,1.4s						
HRA	**Herat**	**86.43**	**305**	P	**P**	**21 12 23.4**	**-1.5**
HRA				IAmb	IAmb	21 12 26.0	
	comp=Z,3.7nm,0.8s						
D24K	**Happy Valley**	**86.50**	**19**	P	**P**	**21 12 24.2**	**+0.1**
D24K				IAmb	IAmb	21 12 25.9	
	comp=Z,3.1nm,0.8s						
M27K	**Edge Creek, AK**	**86.84**	**27**	P	**P**	**21 12 25.8**	**-0.3**
L27K	**Beaver Creek,**	**87.07**	**26**	P	**P**	**21 12 27.0**	**-0.1**
L27K				IAmb	IAmb	21 12 28.1	
	comp=Z,4.3nm,1.2s						
BCAR	**Beaver Creek A**	**87.09**	**26**	P	**P**	**21 12 27.2**	**0.0**
E25K	**Arctic Village**	**87.22**	**21**	P	**P**	**21 12 28.8**	**+1.1**
K27K	**Chicken**	**87.24**	**25**	P	**P**	**21 12 29.0**	**+1.2**
K27K				IAmb	IAmb	21 12 29.4	
	comp=Z,3.9nm,0.9s						
BMAR	**Burnt Mountain**	**87.33**	**21**	P	**P**	**21 12 28.6**	**+0.3**
M29M	**Somme Creek**	**88.40**	**27**	P	**P**	**21 12 34.4**	**+0.9**
M29M				IAmb	IAmb	21 13 13.3	
	comp=Z,7.8nm,1.4s						
I28M	**Miner Creek**	**88.52**	**24**	P	**P**	**21 12 33.8**	**-0.3**
L29M	**L29M**	**88.70**	**26**	P	**P**	**21 12 34.8**	**-0.1**
L29M				IAmb	IAmb	21 12 44.3	
	comp=Z,5.2nm,1.1s						
K29M	**Barlow Dome**	**89.14**	**26**	P	**P**	**21 12 37.0**	**0.0**
J30M	**Hart River**	**89.81**	**25**	P	**P**	**21 12 40.9**	**+0.8**
J30M				IAmb	IAmb	21 13 09.3	
	comp=Z,3.6nm,1.2s						
ABKAR	**Akbulak array**	**90.20**	**319**	P	**P**	**21 12 40.3**	**-1.8**
ABKAR				IAmb	IAmb	21 12 41.5	
	comp=Z,2.3nm,0.9s						
ABKAR	**Akbulak array**	**90.20**	**319**		**P**	**21 12 39.9**	**-2.2**
G31M	**Satah River**	**91.09**	**23**	P	**P**	**21 12 45.5**	**-0.3**
G31M				IAmb	IAmb	21 13 25.1	
	comp=Z,4.3nm,1.2s						
ELIB	**Princess Elisa**	**94.53**	**196**	*dP*	**P**	**21 13 01.9**	**0.0**
YBH	**Yreka Blue Hor**	**95.33**	**49**	LR	LR	21 46 34.7	
	comp=Z,35nm,21.4s,baz=343,slow=29						
SCHQ	**Schefferville**	**124.22**	**21**	PKP	**PKPdf**	**21 18 39.9**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=229,slow=9.3,SNR=5.2						
CPUP	**Villa Florida**	**142.36**	**147**	PKP	**PKPdf**	**21 19 14.6**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=243,slow=3.8,SNR=3.6						
SDV	**Santo Domingo**	**144.89**	**82**	PKPdf	**PKPab**	**21 19 17.7**	**-1.4**
ETMB	**Extrema**	**146.03**	**116**	PKPdf	**PKPdf**	**21 19 19.3**	**-2.3**
DBIC	**Dimbokro**	**149.50**	**275**	PKPbc	**PKPbc**	**21 19 31.7**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=62,slow=3.3,SNR=4.3						

IDC 07 21:30:19.6±9.4,**1°58'S**×**147°86E**,**h0**km,**mb3.3**/3, **mbtmp3.3**/3,**Error ellipse: s-maj=316.1km s-min=35.8km az=97.0,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.53**	**215**	P	P	21 35 20.8	-0.6
	0.3nm,0.3s,baz=39,slow=11,SNR=9.9						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.78**	**211**	P	P	21 35 53.0	+0.5
	0.3nm,0.4s,baz=54,slow=8.4,SNR=6.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**74.68**	**320**	P	P	21 42 01.1	-0.1
	0.2nm,0.6s,baz=103,slow=7.7,SNR=2.2						
	0.2nm,0.6s						

*JMA **07** 21:34:38.6*±*0.1,24°.3N*±*0°.3×121°.9E*±*0°.5,h19*km*±*1km, MV3.1/14,TAIWAN REGION*

*ASIES **07** 21:34:38.4,24°.37N×121°.85E,h16*km*,ML3.8,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=0.54; $M_{\theta\theta}$=-0.01; $M_{\phi\phi}$=1.24; $M_{r\theta}$=0.65; $M_{r\phi}$=0.30; $M_{\theta\phi}$=1.35; Fault plane solution: $M_0$1.80062×10^{21} NP1: ϕ_s205.09000°,δ74.58000°,λ-80.88000°. NP2: ϕ_s353.96000°,δ17.86000°,λ-119.90000°. Principal axes: T Plg29.0150°, Azm287.7300°; N Plg8.7940°, Azm22.6530°; P Plg59.4320°, Azm127.8370°; TAP **07** 21:34:38.4,24°.37N×121°.85E,h16*km*,ML3.8,B*

ISC 07 21:34:38.4±0.8,**24°37'N**±0°.01×**121°87E**±0°.01,**h14**km±5km, **n122,**σ0§**76**/203,**10C-29D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.11**	**313**	⇓*iP*	**Pb**	**21 34 42.1**	**-0.3**
	baz=319						
EWUT				S	**Sb**	**21 34 44.4**	**-0.6**
	baz=319						
EAHA	**Aohua**	**0.12**	**251**	⇓*iP*	**Pg**	**21 34 42.1**	**+0.2**
	baz=248						
EAHA				*i* S	**Sb**	**21 34 44.7**	**-0.6**
	baz=248						
EHP	**Heping Village**	**0.13**	**243**	⇓*iP*	**Pg**	**21 34 42.1**	**+0.1**
	baz=236						
EHP				S	**Sb**	**21 34 44.9**	**-0.6**
	baz=236						
ENA	**Nanau**	**0.13**	**297**	⇓*iP*	**Pg**	**21 34 42.2**	**+0.2**
	baz=301						
ENA				S	**Sg**	**21 34 44.5**	**+0.1**
	baz=301						
ESAO	**Su ao**	**0.21**	**354**	⇓*iP*	**Pg**	**21 34 43.3**	**+0.1**
	baz=5.0						
ESAO				S	**Sg**	**21 34 46.4**	**+0.1**
	baz=5.0						
TWC	**Suao**	**0.24**	**356**	⇓*iP*	**Pg**	**21 34 43.9**	**+0.2**
	baz=8.0						
TWC				S	**Sg**	**21 34 47.2**	**0.0**
	baz=8.0						
NDS	**Dongshan**	**0.30**	**332**	⇓*iP*	**Pg**	**21 34 45.0**	**+0.3**
	baz=335						
NDS				S	**Sg**	**21 34 49.1**	**+0.1**
	baz=335						
ETL	**Fush Village**	**0.31**	**227**	*eP*	**Pg**	**21 34 44.7**	**-0.1**
	baz=225						
ETL				*eS*	**Sg**	**21 34 49.4**	**+0.2**
	baz=225						
NACB	**Ninganchiao**	**0.32**	**232**	P	**Pg**	**21 34 45.0**	**0.0**
NACB	**Ninganchiao**	**0.32**	**232**	⇓*iP*	**Pg**	**21 34 44.6**	**-0.4**
	baz=231						
NACB				*eS*	**Sg**	**21 34 49.2**	**-0.3**
	baz=231						
EOS2	**EOS2**	**0.34**	**81**	⇑P	**Pb**	**21 34 46.3**	**+0.2**
	baz=73						
EOS2				*eS*	**Sb**	**21 34 52.0**	**+0.8**
	baz=73						
LATG	**Datong**	**0.35**	**298**	⇓*iP*	**Pg**	**21 34 46.0**	**+0.3**
	baz=300						
LATG				S	**Sg**	**21 34 50.8**	**+0.1**
	baz=300						
ENTT	**Nioudou**	**0.39**	**314**	⇓*iP*	**Pg**	**21 34 46.5**	**+0.2**
	baz=318						
ENTT				S	**Sb**	**21 34 52.2**	**-0.6**
	baz=318						
ETLH	**Xiulin Townshi**	**0.39**	**245**	⇓*iP*	**Pg**	**21 34 46.1**	**-0.2**
	baz=246						
ETLH				S	**Sg**	**21 34 51.8**	**+0.1**
	baz=246						
NDT	**Datong Townshi**	**0.40**	**306**	⇓P	**Pb**	**21 34 46.9**	**-0.4**
	baz=308						
NDT				*eS*	**Sg**	**21 34 52.3**	**+0.3**
	baz=308						
ILA	**Ilan**	**0.41**	**344**	⇓*eP*	**Pb**	**21 34 47.2**	**-0.2**
	baz=349						
ILA				S	**Sb**	**21 34 53.5**	**0.0**
	baz=349						
EOS3	**EOS3**	**0.42**	**101**	⇑*iP*	**Pb**	**21 34 47.7**	**+0.2**
	baz=94						
EOS3				*eS*	**Sb**	**21 34 54.8**	**+1.2**
	baz=94						
NNSB	**Datong**	**0.45**	**278**	⇓*iP*	**Pg**	**21 34 47.5**	**+0.2**
	baz=286						
NNSB

	baz=254								
CHGB					*e*S		**Sb**	**21 35 02.0**	**-0.2**
	baz=254								
SXI1	**Grass Mountain**	**0.72**	**0**	*e*P			**Pb**	**21 34 53.0**	**+0.1**
	baz=8.0								
SXI1					*e*S		**Sg**	**21 35 01.5**	**-0.6**
	baz=8.0								
TEGC	**Jichi Village**	**0.72**	**205**	*e*P			**Pb**	**21 34 53.2**	**+0.5**
	baz=193								
TEGC					*e*S		**Sn**	**21 35 05.0**	**0.0**
	baz=193								
NFF	**Wufeng Townshi**	**0.73**	**291**	*e*P			**Pb**	**21 34 53.0**	**0.0**
	baz=299								
NFF					*e*S		**Sg**	**21 35 01.9**	**-0.5**
	baz=299								
OWD	**Renai**	**0.76**	**237**	*e*P			**Pg**	**21 34 53.0**	**-0.2**
	baz=238								
OWD					*e*S		**Sb**	**21 35 03.5**	**-0.1**
	baz=238								
TNOU	**National Taiwa**	**0.78**	**354**⇓	*e*P			**Pb**	**21 34 54.1**	**+0.3**
	baz=350								
TNOU					*e*S		**Sg**	**21 35 03.5**	**-0.5**
	baz=350								
WUSB	**Renai**	**0.78**	**241**⇓	*i*P			**Pg**	**21 34 53.6**	**-0.1**
	baz=250								
WUSB					*e*S		**Sb**	**21 35 04.8**	**+0.4**
	baz=250								
WARBT	**Fenglin Townsh**	**0.78**	**214**⇑	*e*P			**Pg**	**21 34 53.3**	**-0.3**
	baz=227								
EGFH	**Guangfu**	**0.81**	**210**	*e*P			**Pg**	**21 34 54.0**	**-0.1**
	baz=222								
YM01	**YM01**	**0.82**	**341**	*e*P			**Pn**	**21 34 55.0**	**-0.5**
	baz=335								
YM01					*e*S		**Sb**	**21 35 05.7**	**+0.3**
	baz=335								
LIOB	**Emei**	**0.82**	**290**	*e*P			**Pn**	**21 34 55.0**	**-0.6**
	baz=283								
LIOB					*e*S		**Sb**	**21 35 05.6**	**+0.1**
	baz=283								
NSTT	**Nanjuang**	**0.83**	**288**	P			**Pb**	**21 34 54.9**	**+0.2**
	baz=281								
NSTT					S		**Sg**	**21 35 05.4**	**-0.2**
	baz=281								
TWS1	**Kuangyinshan**	**0.84**	**331**	⇓P			**Pn**	**21 34 55.6**	**-0.2**
	baz=333								
TWS1					*e*S		**Sn**	**21 35 07.3**	**-0.5**
	baz=333								
WHP	**Taichung City**	**0.85**	**264**	*e*P			**Pn**	**21 34 55.5**	**-0.5**
	baz=266								
WHP					*e*S		**Sb**	**21 35 06.2**	**0.0**
	baz=266								
YM08	**YM08**	**0.85**	**343**	*e*P			**Pn**	**21 34 55.5**	**-0.6**
	baz=338								
YM08					*e*S		**Sn**	**21 35 07.2**	**-1.1**
	baz=338								
NCUH	**Zhongli**	**0.86**	**314**	*e*P			**Pn**	**21 34 56.4**	**+0.3**
	baz=300								
ANP	**Anpu**	**0.87**	**339**	*e*P			**Pn**	**21 34 56.0**	**-0.4**
	baz=340								
NTST	**Danshui**	**0.88**	**334**	*e*P			**Pn**	**21 34 56.5**	**+0.1**
	baz=336								
NTST					*e*S		**Sn**	**21 35 08.3**	**-0.6**
	baz=336								
SBCB	**Hsinchu**	**0.91**	**298**	*e*P			**Pn**	**21 34 57.3**	**+0.5**
	baz=298								
WCS	**Beigang Elemen**	**0.93**	**251**	*e*P			**Pg**	**21 34 56.5**	**+0.1**
	baz=252								
WCS					*e*S		**Sb**	**21 35 08.2**	**-0.2**
	baz=252								
HGSD	**Ruisui**	**0.96**	**205**	*e*P			**Pg**	**21 34 57.0**	**0.0**
	baz=223								
JYNG	**Yonaguni jima**	**0.98**	**85**	P			**Pg**	**21 34 57.6**	**+0.1**
JYNG					*e*S		**Sg**	**21 35 10.8**	**+0.5**
EHY	**Hungye**	**0.99**	**210**	*e*P			**Pb**	**21 34 56.1**	**-1.3**
	baz=220								
NMLH	**Miaoli**	**1.00**	**280**	*e*P			**Pn**	**21 34 59.3**	**+1.4**
	baz=280								
TWQ1	**Liyutan**	**1.00**	**269**	*e*P			**Pn**	**21 34 59.0**	**+1.0**
	baz=269								
SMLT	**Sun Moon Lake**	**1.01**	**242**	*e*P			**Pg**	**21 34 57.9**	**0.0**
	baz=241								
SSLB	**Suanglung**	**1.02**	**235**	P			**Pg**	**21 34 58.0**	**-0.1**
SSLB	**Suanglung**	**1.02**	**235**⇓	*i*P			**Pb**	**21 34 57.7**	**-0.1**
	baz=236								
TYC	**Yuchr**	**1.03**	**244**	P			**Pg**	**21 34 58.3**	**-0.1**
	baz=243								
YOJ	**Yonaguni jima**	**1.04**	**85**	P			**Pb**	**21 34 58.0**	**-0.3**
YOJ	**Yonaguni jima**	**1.04**	**85**	⇑P			**Pb**	**21 34 57.7**	**-0.6**
	baz=73								
YOJ	**Yonaguni jima**	**1.04**	**85**	P			**Pb**	**21 34 57.8**	**-0.4**
YOJ					*e*S		**Sb**	**21 35 12.0**	**+0.2**
YULB	**Yu-li**	**1.10**	**208**	P			**Pb**	**21 34 58.7**	**-0.6**
YULB	**Yu-li**	**1.10**	**208**	*e*P			**Pb**	**21 34 58.2**	**-1.1**
	baz=219								
WDJ	**Dajia District**	**1.12**	**269**	*e*P			**Pg**	**21 35 01.2**	**+1.2**
	baz=272								
WDJ					*e*S		**Sn**	**21 35 18.5**	**+3.6**
	baz=272								
EYUL	**Yuli**	**1.14**	**206**	*e*P			**Pg**	**21 35 00.4**	**0.0**
	baz=221								
TWF1	**Yuli**	**1.14**	**207**	*e*P			**Pb**	**21 34 58.4**	**-1.5**
	baz=220								
WHYT	**Xinyi Township**	**1.15**	**234**⇓	*e*P			**Pg**	**21 35 00.5**	**0.0**
	baz=234								
WJS	**Zhushan**	**1.18**	**243**	*e*P			**Pg**	**21 35 02.0**	**+0.9**
	baz=245								
WJS					*e*S		**Sg**	**21 35 18.8**	**+2.4**
	baz=245								
WNT	**Mingjian**	**1.19**	**246**	*e*P			**Pg**	**21 35 02.5**	**+1.1**
	baz=237								
WCHH	**Zhanghua**	**1.23**	**257**	*e*P			**Pg**	**21 35 02.9**	**+0.8**
	baz=260								
WCHH					*e*S		**Sg**	**21 35 22.0**	**+3.8**
	baz=260								
CHKH	**Chenggong**	**1.25**	**200**	*e*P			**Pn**	**21 35 01.3**	**-0.1**
	baz=202								
CHKH					*e*S		**Sg**	**21 35 19.1**	**+0.3**
	baz=202								
FULB	**Fuli**	**1.28**	**204**	*e*P			**Pn**	**21 35 01.5**	**-0.4**
	baz=220								
ALS	**Alishan**	**1.29**	**229**	*e*P			**Pg**	**21 35 03.2**	**-0.3**
	baz=216								
CHN5	**Tsauling**	**1.33**	**235**	*e*P			**Pg**	**21 35 03.9**	**-0.2**
	baz=238								
CHN5					*e*S		**Sg**	**21 35 23.9**	**+2.4**
	baz=238								
EHD	**Haiduan**	**1.36**	**207**	*e*P			**Pn**	**21 35 02.3**	**-0.6**
	baz=208								
WDLH	**Douliu**	**1.39**	**241**	*e*P			**Pg**	**21 35 05.6**	**+0.3**
	baz=257								
WDLH					*e*S		**Sg**	**21 35 25.2**	**+1.9**
	baz=257								
ELDTW	**Lidau**	**1.41**	**214**	*e*P			**Pn**	**21 35 02.6**	**-1.1**
	baz=201								
WRL	**Guolierlin Hig**	**1.44**	**251**	*e*P			**Pg**	**21 35 05.5**	**-0.7**
	baz=268								
WRL					*e*S		**Sg**	**21 35 25.8**	**+0.9**
	baz=268								
WCKO	**Fanlu**	**1.48**	**232**	*e*P			**Pg**	**21 35 06.7**	**-0.2**
	baz=221								
WCKO					*e*S		**Sg**	**21 35 28.2**	**+2.0**
	baz=221								
WTK	**Tuku**	**1.51**	**244**	*e*P			**Pg**	**21 35 07.1**	**-0.5**
	baz=257								
WTK					*e*S		**Sg**	**21 35 28.8**	**+1.5**
	baz=257								
CHN2	**Minshiung**	**1.52**	**237**	*e*P			**Pg**	**21 35 08.3**	**+0.6**
	baz=240								
CHN2					*e*S		**Sg**	**21 35 30.2**	**+2.7**
	baz=240								
CHN4	**Tsaushan**	**1.55**	**229**	*e*P			**Pg**	**21 35 07.5**	**-0.7**
	baz=219								
CHN4					*e*S		**Sg**	**21 35 29.1**	**+0.9**
	baz=219								
TPUB	**Ta-pu**	**1.56**	**227**	P			**Pb**	**21 35 06.8**	**-0.2**
TPUB	**Ta-pu**	**1.56**	**227**⇑	*e*P			**Pb**	**21 35 07.2**	**+0.2**
	baz=230								
TPUB					*e*S		**Sg**	**21 35 28.4**	**-0.2**
	baz=230								
STYH	**Taoyuan**	**1.56**	**220**	*e*P			**Pb**	**21 35 06.3**	**-0.7**
	baz=223								
STYH					*e*S		**Sb**	**21 35 27.2**	**+0.6**
	baz=223								
WTP	**Ta-pu**	**1.60**	**226**	*e*P			**Pb**	**21 35 07.9**	**+0.1**
	baz=229								
WTP					*e*S		**Sg**	**21 35 30.3**	**+0.1**
	baz=229								
LONT	**Longtian**	**1.61**	**205**	*e*P			**Pn**	**21 35 05.0**	**-1.3**
	baz=206								
TWK	**Hsinying**	**1.67**	**229**	*e*P			**Pb**	**21 35 09.1**	**+0.1**
	baz=231								
IRIF	**Iriomote-Funau**	**1.70**	**91**	P			**Pn**	**21 35 07.8**	**+0.2**
IRIF					*e*S		**Sn**	**21 35 28.6**	**-0.5**
SNST	**Tainan City**	**1.70**	**228**	*e*P			**Pb**	**21 35 10.1**	**+0.6**
	baz=231								
SNST					*e*S		**Sg**	**21 35 32.9**	**-0.3**
	baz=231								
CHN1	**Nanshi**	**1.70**	**226**	*e*P			**Pb**	**21 35 09.7**	**+0.2**
	baz=229								
CHN1					*e*S		**Sg**	**21 35 33.2**	**-0.1**
	baz=229								
WSL	**Shuilin Townsh**	**1.72**	**241**	*e*P			**Pb**	**21 35 10.3**	**+0.5**
	baz=245								
WSL					*e*S		**Sg**	**21 35 34.7**	**+0.8**
	baz=245								
LDUT	**Ludao**	**1.73**	**192**	*e*P			**Pn**	**21 35 06.6**	**-1.4**
	baz=194								
SGST	**Jiashian**	**1.74**	**223**	*e*P			**Pn**	**21 35 09.0**	**+0.8**
	baz=226								
SGST					*e*S		**Sb**	**21 35 32.8**	**+1.0**
	baz=226								
ICHU	**Yijhu**	**1.77**	**236**	*e*P			**Pb**	**21 35 10.9**	**+0.3**
	baz=223								
ICHU					*e*S		**Sg**	**21 35 35.0**	**-0.4**
	baz=223								
SLGT	**Liugui**	**1.77**	**220**	*e*P			**Pb**	**21 35 10.2**	**-0.4**
	baz=223								
SLGT					*e*S		**Sg**	**21 35 34.6**	**-0.8**
	baz=223								
HATJ	**Hateruma jima**	**1.79**	**100**	P			**Pn**	**21 35 09.7**	**+0.8**
CHN8	**Yiju**	**1.83**	**236**	*e*P			**Pb**	**21 35 11.7**	**0.0**
	baz=224								
CHN8					*e*S		**Sg**	**21 35 36.4**	**-0.9**
	baz=224								
ECL	**Taimali**	**1.95**	**206**	*e*P			**Pn**	**21 35 11.3**	**+0.2**
	baz=195								
JKRS	**Kuro-shima**	**1.96**	**93**	P			**Pn**	**21 35 11.5**	**+0.3**
JKRS					*e*S		**Sn**	**21 35 35.7**	**+0.2**
TSMG	**Majia**	**2.00**	**214**	*e*P			**Pb**	**21 35 13.4**	**-1.2**
	baz=217								
TSCK	**Chigu Township**	**2.04**	**234**	*e*P			**Pb**	**21 35 13.8**	**-1.4**
	baz=222								
TSCK					*e*S		**Sb**	**21 35 41.4**	**+1.1**
	baz=222								
JIJ	**Ishigaki jima**	**2.07**	**90**	P			**Pn**	**21 35 13.2**	**+0.5**
MASBT	**Mashibuluo**	**2.08**	**213**	*e*P			**Pb**	**21 35 14.8**	**-1.2**
	baz=215								
MASBT					*e*S		**Sb**	**21 35 42.3**	**+0.5**
	baz=215								
JISG	**Ishigakijimahi**	**2.23**	**84**	P			**Pn**	**21 35 14.4**	**-0.5**
JISG					*e*S		**Sn**	**21 35 42.2**	**-0.2**
PHUB	**P'eng-hu**	**2.27**	**248**	*e*P			**Pn**	**21 35 16.0**	**+0.6**
	baz=253								
PHUB					*e*S		**Sb**	**21 35 45.0**	**-2.0**
	baz=253								
VWUC	**VWUC**	**2.29**	**286**	*e*P			**Pn**	**21 35 15.6**	**-0.1**
	baz=291								
VWUC					*e*S		**Sn**	**21 35 43.1**	**-0.5**
	baz=291								
SCZT	**Fangliau**	**2.29**	**210**	*e*P			**Pb**	**21 35 17.7**	**-1.9**
	baz=212								
SCZT					*e*S		**Sb**	**21 35 48.4**	**+0.5**
	baz=212								
PTMZ	**Houxiangcun**	**2.59**	**286**	*e*P			**Pn**	**21 35 19.9**	**+0.1**
	baz=291								
PTMZ					*e*S		**Sn**	**21 35 50.7**	**-0.4**
	baz=291								
XPSS	**Dashiqiu**	**2.97**	**330**	*e*P			**Pn**	**21 35 24.5**	**-0.6**
	baz=330								

*IDC **07** 21:49:28.7±0.7, 59.22S×25.07W, h0km, mb4.1/7, mbtmp4.1/7, MS3.5/8, Error ellipse: s-maj=27.6km s-min=21.3km az=87.0*

*NEIC **07** 21:49:29.6±2.1, 59.2S±0.1×24.9W±0.2, h10km±1km, mb4.6/20, Error ellipse: s-maj=21.7km s-min=18.8km az=72.0*

ISC 07 21:49:30.9±0.5, 59.24S±0.09×25.0W±0.1, h18km, n52, σ1s08/38, mb4.5/14, MS3.6/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.02**	**303**	Pn		Pn	21 51 36.0	+10
SNAA	**Sanae**	**15.35**	**153**			**Pn**	**21 53 03.9**	**-2.5**
SNAA				IAmb		IAmb	21 53 07.3	
	comp=Z,12nm,0.6s							
SNAA	**Sanae**	**15.35**	**153**	Pn		**Pn**	**21 53 03.8**	**-2.5**
	comp=Z,2.7nm,0.3s,baz=315,slow=15,SNR=54							
SNAA					Sn	Sn	21 55 39.1	-17
	comp=Z,0.2nm,0.3s,baz=320,slow=19,SNR=2.9							
SNAA					LR	LR	21 56 45.5	
	comp=Z,113nm,21.5s,baz=344,slow=28							
BELA	**Belgrano 2**	**18.99**	**186**	P		**P**	**21 53 51.1**	**+0.1**
EFI	**East Falkland**	**20.03**	**278**	P		**Pn**	**21 54 03.9**	**-0.4**
EFI				IAmb		IAmb	21 54 24.5	
	comp=Z,66nm,1.2s							
QSPA	**South Pole Qui**	**31.00**	**180**	P		**P**	**21 55 48.1**	**+1.1**
QSPA				IAmb		IAmb	21 55 49.8	
	comp=Z,4.6nm,0.6s							
QSPA	**South Pole Qui**	**31.00**	**180**	P		**P**	**21 55 48.4**	**+1.4**
	comp=Z,4.1nm,0.5s,baz=212,slow=1.5,SNR=26							
	comp=Z,4.1nm,0.5s							
TRQA	**Tornquist**	**31.70**	**295**	P		**P**	**21 55 52.3**	**-0.9**
TRQA				IAmb		IAmb	21 56 08.4	
	comp=Z,13nm,1.4s							
LL02	**Futaleuf**	**32.62**	**278**	P		**P**	**21 56 01.9**	**+0.7**
LL02				IAmb		IAmb	21 56 22.2	
	comp=Z,8.1nm,1.0s							
PLCA	**Paso Flores**	**33.77**	**283**	P		**P**	**21 56 11.3**	**-0.1**
PLCA	**Paso Flores**	**33.77**	**283**	P		**P**	**21 56 10.7**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=171,slow=6.1,SNR=7.1							
PLCA					LR	LR	22 08 56.5	
	comp=Z,68nm,18.1s,baz=176,slow=35							
	comp=Z,1.8nm,0.7s							
BO02	**Sierra Bellavi**	**38.52**	**289**	P		**P**	**21 56 51.1**	**-0.9**
BO02				IAmb		IAmb	21 56 55.4	
	comp=Z,8.8nm,0.7s							
BO01	**Tunca**	**38.99**	**289**	P		**P**	**21 56 55.2**	**-0.6**
BO01				IAmb		IAmb	21 56 56.2	
	comp=Z,24nm,1.4s							
MT09	**Talagante**	**39.44**	**290**	P		**P**	**21 56 59.2**	**-0.6**
MT01	**Popeta**	**39.50**	**289**	P		**P**	**21 56 59.7**	**-0.4**
CPUP	**Villa Filorida**	**39.80**	**311**	LR		LR	22 13 58.1	
	comp=Z,71nm,19.0s,baz=180,slow=37							
SUR	**Sutherland**	**40.52**	**69**	LR		LR	22 11 17.4	
	comp=Z,47nm,18.3s,baz=187,slow=32							
CO01	**Juntas del Tor**	**42.15**	**294**	P		**P**	**21 57 23.4**	**+1.1**
AC05	**El Transito**	**43.19**	**294**	P		**P**	**21 57 30.9**	**+0.3**
AC05				IAmb		IAmb	21 57 47.3	
	comp=Z,9.8nm,0.6s							
VNDA	**Vanda**	**43.42**	**182**	P		**P**	**21 57 32.8**	**+1.0**
VNDA	**Vanda**	**43.42**	**182**	P		**P**	**21 57 32.9**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=185,slow=7.8,SNR=5.6							
	comp=Z,1.3nm,0.7s							
H04S2	**CROZET ISLANDS**	**45.27**	**110**	T		T	22 46 32.8	
	baz=225,slow=75,SNR=11							
H04S3	**CROZET ISLANDS**	**45.28**	**110**	T		T	22 46 32.6	
	baz=225,slow=75,SNR=14							
H04S1	**CROZET ISLANDS**	**45.29**	**110**	T		T	22 46 32.3	
	baz=225,slow=75,SNR=11							
BOSA	**Boshof**	**45.78**	**71**	P		**P**	**21 57 50.7**	**-0.6**
BOSA				IAmb		IAmb	21 58 03.1	
	comp=Z,7.2nm,1.1s							
BOSA	**Boshof**	**45.78**	**71**	P		**P**	**21 57 51.2**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=78,slow=2.3,SNR=3.6							
BOSA					LR	LR	22 13 34.8	
	comp=Z,60nm,18.6s,baz=198,slow=32							
	comp=Z,1.5nm,0.7s							
BDFB	**Brasilia**	**46.71**	**329**	P		**P**	**21 57 59.7**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=160,slow=7.0,SNR=4.2							
	comp=Z,1.6nm,0.5s							
LBTB	**Lobatse**	**48.96**	**68**	LR		LR	22 15 15.0	
	comp=Z,65nm,18.8s,baz=190,slow=32							
TSUM	**Tsumeb**	**50.36**	**56**	LR		LR	22 15 34.4	
	comp=Z,58nm,19.2s,baz=158,slow=31							
H10S2	**ASCENSION HYDR**	**50.79**	**13**	T		T	22 53 34.1	
	baz=186,slow=74,SNR=8.1							
H10S3	**ASCENSION HYDR**	**50.79**	**13**	T		T	22 53 35.1	
	baz=34,slow=74,SNR=11							
H10N1	**ASCENSION HYDR**	**51.91**	**13**	T		T	22 54 58.2	
	baz=179,slow=72,SNR=7.0							
H10N3	**ASCENSION HYDR**	**51.91**	**13**	T		T	22 54 59.1	
	baz=179,slow=72,SNR=10							
H10N2	**ASCENSION HYDR**	**51.92**	**13**	T		T	22 54 59.7	
	baz=179,slow=72,SNR=7.0							
LPAZ	**La Paz**	**53.17**	**305**	P		**P**	**21 58 47.0**	**-1.3**
BOAV	**Boa Vista**	**67.51**	**321**	P		**P**	**22 00 24.7**	**-1.0**
BOAV				IAmb		IAmb	22 00 32.4	
	comp=Z,5.1nm,1.1s							
DBIC	**Dimbokro**	**67.65**	**22**	P		**P**	**22 00 25.3**	**-1.3**
DBIC	**Dimbokro**	**67.65**	**22**	P		**P**	**22 00 27.4**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=231,slow=13,SNR=1.4							
	comp=Z,2.0nm,0.9s							
MCRA	**Macar, Loja**	**68.94**	**299**	P		**P**	**22 00 34.1**	**-0.6**
TOA0	**Torodi Ar. Sit**	**75.33**	**27**	P		**P**	**22 01 14.1**	**+1.4**
TORD	**Torodi Ar. Bea**	**75.33**	**27**	P		**P**	**22 01 14.5**	**+1.7**
	comp=Z,3.1nm,0.5s,baz=188,slow=2.9,SNR=2.4							
THZ	**Tophouse**	**78.27**	**194**	P		**P**	**22 01 29.8**	**+0.6**
JTS	**Las Juntas de**	**84.19**	**301**	LR		LR	22 41 24.3	
	comp=Z,43nm,19.1s,baz=73,slow=37							
ASAR	**Alice Springs**	**95.58**	**161**	P		**P**	**22 02 54.6**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=184,slow=4.0,SNR=4.2							
	comp=Z,0.3nm,0.7s							
PDAR	**Pinedale Array**	**122.98**	**299**	PKP		**PKiKP**	**22 08 25.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=116,slow=5.1,SNR=2.5							
NVAR	**Mina Array Bea**	**123.65**	**290**	PKP		**PKiKP**	**22 08 28.5**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=134,slow=3.7,SNR=5.8							
BVAR	**Borovoye Array**	**135.47**	**59**	PKP		**PKiKP**	**22 08 49.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=197,slow=1.5,SNR=2.8							
MKAR	**Makanchi Array**	**136.75**	**73**	PKP		**PKPdf**	**22 08 50.7**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=252,slow=1.4,SNR=1.5							
YKA	**Yellowknife Ar**	**139.29**	**315**	PKP		**PKPdf**	**22 08 56.0**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=131,slow=2.3,SNR=11							
ZALV	**Zalesovo Beam**	**142.66**	**66**	PKP		**PKPdf**	**22 08 60.0**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=252,slow=2.7,SNR=2.1							
SONM	**Songino Array**	**149.65**	**90**	PKPbc		**PKPbc**	**22 09 18.6**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=223,slow=4.0,SNR=7.3							
ILAR	**Eielson Array**	**153.04**	**307**	PKPbc		**PKiKP**	**22 09 26.1**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=139,slow=5.9,SNR=18							

*JMA **07** 21:56:05.4±0.1, 24.1N±0.3×121.7E±0.4, h0km, MV3.2/12, TAIWAN REGION*

*ASIES **07** 21:56:05.0, 24.09N×121.72E, h8km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr=0.67; Mθθ=0.65; Mφφ1.31; Mrθ=0.52; Mθφ0.34; Mφr0.40; Fault plane solution: M0 1.35851×10²¹ NP1: φs154.63000°, δ67.26000°, λ-138.63000°. NP2: φs45.83000°, δ52.44000°, λ-29.18000°. Principal axes: T Plg9.0770°, Azm277.1330°; N Plg43.7980°, Azm178.3220°; P Plg44.7760°, Azm16.2540°;*

*TAP **07** 21:56:05.0, 24.09N×121.72E, h8km, ML3.7, C*

ISC 07 21:56:05.5±0.8, 24.10N±0.01×121.72E±0.02, h8km±6km, n100, σ0s57/148, 24C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**304**⇑	*i*P		**Pg**	**21 56 08.1**	**0.0**
	baz=304							
ETL					S	**Sg**	**21 56 10.1**	**+0.3**
	baz=304							
TWD	**Chiawan**	**0.12**	**261**⇑	*i*P		**Pg**	**21 56 08.0**	**-0.2**
	baz=272							
TWD					S	**Sg**	**21 56 09.9**	**0.0**
	baz=272							
NACB	**Ninganchiao**	**0.14**	**303**	P		**Pg**	**21 56 08.4**	**-0.1**
NACB	**Ninganchiao**	**0.14**	**303**⇑	*i*P		**Pg**	**21 56 08.5**	**0.0**
	baz=304							
NACB				*i*	S	**Sg**	**21 56 10.7**	**+0.1**
	baz=304							
HWA	**Hwalien**	**0.16**	**222**	*e*P		**Pg**	**21 56 09.4**	**+0.6**
	baz=230							
EHP	**Heping Village**	**0.21**	**5**⇓	P		**Pg**	**21 56 10.0**	**+0.2**
	baz=3.0							
EHP					S	**Sg**	**21 56 13.7**	**+1.0**
	baz=3.0							
EAHA	**Aohua**	**0.23**	**4**⇓	*i*P		**Pg**	**21 56 10.2**	**+0.1**
	baz=1.0							
EAHA					S	**Sg**	**21 56 14.0**	**+0.7**
	baz=1.0							
ETLH	**Xiulin Townshi**	**0.24**	**296**	*i* P		**Pg**	**21 56 10.4**	**0.0**
	baz=297							
ETLH					*i* S	**Sg**	**21 56 14.6**	**+0.8**
	baz=297							
ETM	**Tongmen**	**0.25**	**238**⇑	*i*P		**Pg**	**21 56 10.3**	**-0.1**
	baz=243							
ETM					S	**Sg**	**21 56 13.5**	**-0.3**
	baz=243							
LXIB	**Xiulin Townshi**	**0.29**	**255**⇑	*i*P		**Pg**	**21 56 11.1**	**-0.2**
	baz=249							
LXIB					S	**Sg**	**21 56 15.4**	**+0.1**
	baz=249							
ENA	**Nanau**	**0.33**	**3**⇓	*i*P		**Pg**	**21 56 12.1**	**+0.1**
	baz=2.0							
ENA					S	**Sg**	**21 56 16.9**	**+0.6**
	baz=2.0							
SHUL	**Shoufeng**	**0.34**	**205**	P		**Pb**	**21 56 13.3**	**-0.5**
	baz=217							
SHUL					S	**Sb**	**21 56 20.5**	**+1.1**
	baz=217							
EWUT	**Wuta**	**0.35**	**8**⇓	*i*P		**Pg**	**21 56 12.5**	**+0.1**
	baz=6.0							
EWUT					*e*S	**Sg**	**21 56 16.9**	**-0.1**
	baz=6.0							
ESL	**Shilin**	**0.39**	**223**	*e*P		**Pg**	**21 56 12.7**	**-0.3**
	baz=233							
ESL					*e*S	**Sg**	**21 56 19.1**	**+0.9**
	baz=233							
WHF	**Hehuan Shan**	**0.42**	**277**⇑	*i*P		**Pg**	**21 56 13.8**	**-0.1**
	baz=278							
WHF					*e*S	**Sg**	**21 56 19.6**	**+0.3**
	baz=278							
TEGC	**Jichi

baz=262
WUSB eS Sg 21 56 23.6 -0.2
baz=262
EOS2 **EOS2** 0.56 55 eP Pb 21 56 18.2 +0.7
baz=30
EOS3 **EOS3** 0.58 71 eP Pn 21 56 19.7 -0.1
baz=47
YHNB **Yeheng** 0.65 331 P Pb 21 56 18.8 -0.4
YHNB **Yeheng** 0.65 331 ⇓iP Pb 21 56 18.6 -0.5
baz=329
YHNB eS Sg 21 56 26.7 +0.1
baz=329
HGSD **Ruisui** 0.66 204 eP Pb 21 56 19.8 +0.5
baz=224
NSK **Sanguang** 0.67 330 ⇓iP Pb 21 56 18.8 -0.6
baz=329
NSK eS Sg 21 56 27.8 +0.7
baz=329
FUSB **Fushanzhiwuyua** 0.67 350 ⇓iP Pb 21 56 18.9 -0.6
baz=338
FUSB eS Sg 21 56 27.0 -0.3
baz=338
EHY **Hungye** 0.69 212 eP Pg 21 56 18.5 -0.3
baz=216
NWLT **Wulai** 0.71 344 ⇓iP Pb 21 56 19.6 -0.5
baz=329
NWLT eS Sb 21 56 29.1 -0.9
baz=329
WHP **Taichung City** 0.73 284 ⇑P Pb 21 56 20.3 -0.3
baz=285
WHP eS Sb 21 56 30.5 -0.2
baz=285
WCS **Beigang Elemen** 0.74 267 ⇑iP Pg 21 56 20.0 +0.3
baz=269
NFF **Wufeng Townshi** 0.77 314 P Pb 21 56 20.9 -0.2
baz=313
NFF S Sg 21 56 30.6 +0.3
baz=313
SSLB **Suanglung** 0.77 246 P Pg 21 56 20.1 -0.2
SSLB **Suanglung** 0.77 246 ⇑iP Pg 21 56 20.1 -0.1
baz=259
SSLB eS Sg 21 56 30.1 -0.2
baz=259
SMLT **Sun Moon Lake** 0.78 254 ⇑iP Pg 21 56 20.7 +0.2
baz=257
SMLT eS Sg 21 56 30.7 0.0
baz=257
YULB **Yu-li** 0.80 209 P Pg 21 56 21.1 +0.2
YULB **Yu-li** 0.80 209 eP Pg 21 56 20.6 -0.3
baz=227
TYC **Yuchr** 0.81 256 ⇑iP Pg 21 56 21.1 0.0
baz=259
TYC eS Sg 21 56 31.4 -0.3
baz=259
EYUL **Yuli** 0.83 206 eP Pb 21 56 22.1 -0.1
baz=224
TWF1 **Yuli** 0.84 208 eP Pg 21 56 21.4 -0.2
baz=224
LIOB **Emei** 0.84 310 ⇑P Pb 21 56 22.7 +0.3
baz=309
LIOB eS Sb 21 56 33.6 -0.3
baz=309
NSTT **Nanjuang** 0.84 309 ⇑iP Pb 21 56 22.6 +0.2
baz=308
NSTT eS Sb 21 56 33.6 -0.4
baz=308
TIPB **Shuangxi** 0.88 6 eP Pb 21 56 22.6 -0.4
baz=354
TIPB eS Sb 21 56 34.2 -0.6
baz=354
NHDH **Xindian Distri** 0.88 348 eP Pb 21 56 22.7 -0.3
baz=337
NHDH S Sg 21 56 34.2 +0.3
baz=337
TWA **Mucha** 0.89 352 ⇓P Pb 21 56 23.0 -0.1
baz=349
TWA eS Sg 21 56 33.8 -0.4
baz=349
WHYT **Xinyi Township** 0.89 243 ⇓P Pb 21 56 23.4 +0.2
baz=254
WHYT eS Sb 21 56 34.7 -0.6
baz=254
TATO **Taipei** 0.90 346 P Pn 21 56 23.8 -0.6
TWQ1 **Liyutan** 0.90 286 eP Pn 21 56 23.9 -0.6
baz=286
TWB1 **Santiao Chiao** 0.94 15 eP Pg 21 56 23.6 0.0
baz=1.0
CHKH **Chenggong** 0.95 198 eP Pg 21 56 23.5 -0.2
baz=193
WJS **Zhushan** 0.95 253 eP Pb 21 56 24.4 +0.2
baz=256
SBCB **Hsinchu** 0.96 316 eP Pn 21 56 26.3 +1.0
baz=313
NWF **Wu-fen Shan** 0.97 3⇑eP Pn 21 56 24.8 -0.7
baz=350
NWF eS Sg 21 56 36.1 -0.7
baz=350
WFSB **Wu-fen Shan** 0.97 3 ⇓P Pb 21 56 24.7 +0.2
baz=352
WFSB eS Sg 21 56 36.1 -0.7
baz=352
WNT **Mingjian** 0.97 257 eP Pn 21 56 25.7 +0.2
baz=260
WNT eS Sn 21 56 40.7 +1.2
baz=260
FULB **Fuli** 0.98 204 eP Pn 21 56 25.6 0.0
baz=223
NCUH **Zhongli** 0.99 331 eP Pn 21 56 26.6 +0.9
baz=325
SXI1 **Grass Mountain** 1.00 8 ⇓P Pn 21 56 25.3 -0.6
baz=348
ALS **Alishan** 1.02 235 eP Pg 21 56 25.2 0.0
baz=248
TWS1 **Kuangyinshan** 1.04 345 eP Pn 21 56 26.6 +0.3
baz=342
TWS1 eS Sn 21 56 40.0 -1.0
baz=342
TNOU **National Taiwa** 1.05 3⇑eP Pn 21 56 26.2 -0.3
baz=337
YM01 **YM01** 1.05 352 eP Pn 21 56 26.5 -0.1
baz=334
YM01 eS Sb 21 56 40.0 0.0
baz=334
EHD **Haiduan** 1.06 207 eP Pg 21 56 25.6 -0.2
baz=224
CHN5 **Tsauling** 1.08 243 ⇓P Pn 21 56 27.1 +0.1
baz=234
YM08 **YM08** 1.09 354 eP Pn 21 56 27.2 +0.1
baz=332
ANP **Anpu** 1.10 350 eP Pn 21 56 27.3 0.0
baz=343
ELDTW **Lidau** 1.11 216 eP Pg 21 56 25.7 -1.1
baz=221
WGK **Gukeng** 1.14 249 eP Pn 21 56 28.2 +0.5
baz=253
JYNG **Yonagunijimaku** 1.17 72 eP Pg 21 56 28.0 0.0
TWY **Chenhua** 1.18 355 eP Pg 21 56 29.1 +1.0
baz=334
EDH **Donghe** 1.18 199 eP Pb 21 56 26.2 -2.0
baz=191
YOJ **Yonaguni jima** 1.23 73 P Pg 21 56 31.3 +2.2
YOJ **Yonaguni jima** 1.23 73 eP Pb 21 56 28.8 -0.2
baz=69
YOJ **Yonaguni jima** 1.23 73 P Pb 21 56 28.8 -0.2
STYH **Taoyuan** 1.27 223 eP Pn 21 56 28.9 -0.5
baz=229
STYH eS Sn 21 56 47.5 +0.9
baz=229
TPUB **Ta-pu** 1.28 232 P Pg 21 56 30.4 +0.4
TPUB **Ta-pu** 1.28 232 eP Pg 21 56 30.0 0.0
baz=237
WTK **Tuku** 1.29 252 eP Pg 21 56 30.5 +0.3
baz=256
WTP **Ta-pu** 1.32 230 eP Pn 21 56 31.4 +0.5
baz=236
TWGBT **Beinan** 1.40 205 P Pg 21 56 32.9 +0.5
CHN1 **Nanshi** 1.42 231 eP Pg 21 56 33.3 +0.5
baz=235
SGST **Jiashian** 1.45 226 eP Pn 21 56 31.9 -0.1
baz=231
SLGT **Liugui** 1.48 222 eP Pb 21 56 32.8 -0.4
baz=227
IRIF **Iriomote-Funau** 1.85 82 eP Pb 21 56 39.7 +0.1
JKRS **Kuro-shima** 2.09 86 P Pb 21 56 42.8 -1.0
JIJ **Ishigaki jima** 2.23 83 eP Pb 21 56 45.4 -0.6
JIJ eS Sb 21 57 13.6 -0.1
JISG **Ishigakijimahi** 2.41 78 eP Pn 21 56 45.3 0.0
JISG eS Sb 21 57 16.8 -2.2

*SJA **07** 22:11:48.6±0.6, 18°.40S×69°.36W, h136km±5km, ML3.5, MW3.5*
*GUC **07** 22:11:51.2±0.8, 18°.43S×69°.37W, h121km±4km, ML3.4*
ISC 07 22:11:49.1±1.8, **18°.42S**±0°.05×**69°.39W**±0°.08, **h137**km±11km, **n32**, σ0**.75**/53, **2C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.14**	**309**	eP	**Pn**	**22 12 08.2**	**-0.3**
PB16	**IPOC Station P**	**0.14**	**309**	⇑iP	**Pn**	**22 12 08.2**	**-0.3**
PB16				eS	**Sn**	**22 12 22.2**	**-0.8**
PB16				IAML		22 12 23.0	
	comp=E,649nm,0.3s						
PB18	**Visviri**	**0.83**	**354**	eP	**Pn**	**22 12 12.7**	**+0.7**
AP01	**Chacalluta**	**0.90**	**273**	eP	**Pn**	**22 12 11.9**	**+0.1**
AP01				IAML		22 12 32.5	
	comp=Z,530nm,0.2s						
AP01	**Chacalluta**	**0.90**	**273**	eP	**Pn**	**22 12 12.4**	**+0.6**
AP01				eS	**Sn**	**22 12 29.7**	**+0.7**
AP01				IAML		22 12 31.0	
	comp=E,2μm,0.4s						
PB12	**IPOC Station P**	**0.91**	**258**	eP	**Pn**	**22 12 12.1**	**+0.1**
PB12				eS	**Sn**	**22 12 29.9**	**+0.6**
PB12				IAML		22 12 30.3	
	comp=Z,294nm,0.1s						
PB12	**IPOC Station P**	**0.91**	**258**	⇑iP	**Pn**	**22 12 12.3**	**+0.3**
PB12				eS	**Sn**	**22 12 29.5**	**+0.2**
PB12				IAML		22 12 30.1	
	comp=E,721nm,0.3s						
PX02	**IPOC Station P**	**0.93**	**235**	eP	**Pn**	**22 12 11.7**	**-0.5**
PX02				eS	**Sn**	**22 12 28.9**	**-0.9**
PX02				IAML		22 12 30.3	
	comp=N,361nm,0.5s						
GO01	**Chusmiza**	**1.25**	**171**	eP	**Pn**	**22 12 15.9**	**+0.3**
GO01	**Chusmiza**	**1.25**	**171**	iP	**Pn**	**22 12 16.1**	**+0.4**
GO01				eS	**Sn**	**22 12 35.9**	**0.0**
GO01				IAML		22 12 37.5	
	comp=E,624nm,0.2s						
PB11	**IPOC Station P**	**1.35**	**191**	eP	**Pn**	**22 12 16.5**	**+0.2**
PB11				eS	**Sn**	**22 12 37.6**	**+0.5**
PB11				IAML		22 12 39.9	
	comp=Z,402nm,0.3s						
PB11	**IPOC Station P**	**1.35**	**191**	*i* P	**Pn**	**22 12 16.6**	**+0.2**
PB11				eS	**Sn**	**22 12 37.1**	**-0.1**
PB11				IAML		22 12 38.5	
	comp=E,954nm,0.3s						
PB08	**IPOC Station P**	**1.72**	**173**	eP	**Pn**	**22 12 21.2**	**+0.6**
PB08				IAML		22 12 49.9	
	comp=Z,148nm,0.3s						
PB08	**IPOC Station P**	**1.72**	**173**	⇓iP	**Pn**	**22 12 21.3**	**+0.6**
PB08				eS	**Sn**	**22 12 45.0**	**+0.2**
PB08				IAML		22 12 48.4	
	comp=E,259nm,0.3s						
TA02	**Huaiquique**	**1.96**	**201**	eP	**Pn**	**22 12 24.7**	**+1.6**
TA02				eS	**Sn**	**22 12 48.9**	**-0.3**
TA02				IAML		22 12 57.1	
	comp=Z,241nm,0.1s						
TA02	**Huaiquique**	**1.96**	**201**	eP	**Pn**	**22 12 24.1**	**+1.0**
TA02				eS	**Sn**	**22 12 48.2**	**-0.9**
TA02				IAML		22 12 56.1	
	comp=N,346nm,0.2s						
PX03	**IPOC Station P**	**1.98**	**186**	eP	**Pn**	**22 12 23.7**	**+0.3**
TA01	**Diego Aracena**	**2.26**	**199**	eP	**Pn**	**22 12 26.3**	**-0.3**
TA01				eS	**Sn**	**22 12 55.0**	**-0.5**
TA01	**Diego Aracena**	**2.26**	**199**	eP	**Pn**	**22 12 26.9**	**+0.3**
LPAZ	**La Paz**	**2.44**	**30**	eP	**Pn**	**22 12 29.5**	**-0.1**
PATCX	**Punta Patache**	**2.49**	**197**	eP	**Pn**	**22 12 30.6**	**+1.0**
PATCX				eS	**Sn**	**22 13 01.3**	**+0.5**
PATCX	**Punta Patache**	**2.49**	**197**	eP	**Pn**	**22 12 30.0**	**+0.4**
PATCX				IAML		22 13 08.9	
	comp=E,203nm,0.3s						
PB01	**IPOC Station P**	**2.61**	**182**	eP	**Pn**	**22 12 31.5**	**+0.4**
PB01				eS	**Sn**	**22 13 01.6**	**-1.8**
PB01				IAML		22 13 05.8	
	comp=Z,148nm,0.2s						
PB01	**IPOC Station P**	**2.61**	**182**	eP	**Pn**	**22 12 31.4**	**+0.3**
PB01				eS	**Sn**	**22 13 02.3**	**-1.1**
PB01				IAML		22 13 06.8	
	comp=N,353nm,0.3s						
PB02	**IPOC Station P**	**2.92**	**189**	eP	**Pn**	**22 12 35.9**	**+0.8**
PB02				eS	**Sn**	**22 13 10.8**	**+0.3**
PB02				IAML		22 13 14.9	
	comp=Z,214nm,0.4s						
PB02	**IPOC Station P**	**2.92**	**189**	eP	**Pn**	**22 12 35.7**	**+0.6**
PB02				IAML		22 13 18.4	
	comp=E,286nm,0.5s						
PB07	**IPOC Station P**	**3.32**	**188**	eP	**Pn**	**22 12 41.4**	**+1.1**
PB07				IAML		22 13 31.8	
	comp=Z,77nm,0.3s						
PB09	**IPOC Station P**	**3.36**	**178**	eP	**Pn**	**22 12 41.8**	**+1.0**
PB09				eS	**Sn**	**22 13 20.8**	**0.0**
PB09				IAML		22 13 21.9	
	comp=Z,73nm,0.3s						
LVC	**Limon Verde**	**4.19**	**174**	eP	**Pn**	**22 12 53.3**	**+1.4**
LVC				eS	**Sn**	**22 13 39.8**	**-0.8**
LVC				IAML		22 13 44.9	
	comp=Z,27nm,0.6s						
PB06	**IPOC Station P**	**4.26**	**182**	eP	**Pn**	**22 12 52.8**	**0.0**
PB06				eS	**Sn**	**22 13 43.1**	**+1.0**
PB06				IAML		22 13 44.0	
	comp=Z,84nm,0.2s						
PB05	**IPOC Station P**	**4.47**	**190**	eP	**Pn**	**22 12 55.0**	**-0.5**
PB05				eS	**Sn**	**22 13 45.9**	**-1.0**
PB05				IAML		22 13 46.9	
	comp=Z,113nm,0.4s						
PB10	**IPOC Station P**	**5.18**	**192**	eP	**Pn**	**22 13 03.9**	**-0.8**
PB10				eS	**Sn**	**22 14 02.2**	**-1.5**
PB10				IAML		22 14 02.5	
	comp=Z,36nm,0.2s						

TAP 07 22:14:04.7, 24°.25N×121°.77E, h11km, **ML1.3, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.09**	**342**	eP	Pg	22 14 07.2	0.0
	baz=342						
EAHA				eS	Sg	22 14 09.4	+0.4
	baz=342						
ETL	**Fush Village**	**0.16**	**237**	eP	Pg	22 14 08.3	0.0
	baz=237						
ETL				eS	Sg	22 14 10.9	+0.2
	baz=237						
NACB	**Ninganchiao**	**0.17**	**246**	eP	Pg	22 14 08.5	0.0
	baz=239						
NACB				S	Sg	22 14 11.2	+0.1
	baz=239						
ENA	**Nanau**	**0.18**	**352**	eP	Pg	22 14 08.9	+0.2
	baz=354						
ENA				S	Sg	22 14 11.8	+0.4
	baz=354						
EWUT	**Wuta**	**0.20**	**3**	eP	Pg	22 14 09.2	+0.2
	baz=9.0						
EWUT				eS	Sg	22 14 12.3	+0.5
	baz=9.0						
LATG	**Datong**	**0.36**	**323**	eS	Sg	22 14 17.0	+0.1
	baz=322						
NDT	**Datong Townshi**	**0.42**	**327**	eS	Sg	22 14 19.7	+1.0
	baz=327						
ENTT	**Nioudou**	**0.43**	**335**	eP	Pg	22 14 13.7	+0.4
	baz=335						
ENTT				eS	Sg	22 14 19.9	+0.9
	baz=335						

JMA 07 22:14:53.4±0.1, **24°.3N**±0°.3×**123°.9E**±0°.3, **h12**km±1km, **MV1.1/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**268**	*i* P	Pg	22 14 56.6	0.0
IRIF				S	Sg	22 14 59.1	+0.3
JKRS	**Kuro-shima**	**0.16**	**128**	P	Pg	22 14 57.1	0.0
JKRS				S	Sg	22 14 60.0	+0.2
JIJ	**Ishigaki jima**	**0.25**	**84**	P	Pg	22 14 58.5	-0.1
JIJ				S	Sg	22 15 02.5	+0.3
HATJ	**Hateruma jima**	**0.29**	**192**	P	Pg	22 14 59.2	-0.1
HATJ				S	Sg	22 15 03.7	+0.5
JISG	**Ishigakijimahi**	**0.47**	**58**	eP	Pg	22 15 02.9	+0.2

IDC 07 22:16:41.7±5.5, **15°.99S**×**175°.31W, h0**km, **mb4.4**/3, **mbtmp4.4**/3, **Error ellipse: s-maj=167.7km s-min=107.8km az=153.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.15**	**240**	P	P	22 24 36.4	+0.3
	1.8nm,0.5s,baz=106,slow=11,SNR=5.0						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**47.91**	**257**	P	P	22 25 21.8	-0.4
	1.1nm,0.5s,baz=93,slow=6.8,SNR=32						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**48.18**	**252**	P	P	22 25 23.9	-0.4
	12nm,0.6s,baz=89,slow=8.1,SNR=149						
ASAR				PcP	PcP	22 26 51.8	0.0
	0.5nm,0.8s,baz=76,slow=4.9,SNR=2.7						
	12nm,0.6s						

*PGC **07** 22:22:32.8±0.7, 50°.42N×130°.18W, h10km, MLSn3.1/25, Mw3.8/25, 197km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
*IDC **07** 22:22:33.5±1.9, 50°.59N×130°.02W, h0km, mb3.5/2, mbtmp3.4/6, ML3.3/3, MS3.0/3, Error ellipse: s-maj=25.8km s-min=15.8km az=68.0*
ISC 07 22:22:31.9±2.0, **50°.52N**±0°.06×**130°.11W**±0°.05, **h0**km±13km, **n67**, σ1**°81**/81, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.27**	**84**	P	**Pg**	**22 22 55.4**	**-0.8**
HOLB				S	**Sg**	**22 23 11.4**	**-1.2**
PHC	**Port Hardy**	**1.72**	**83**	Pn	**Pn**	**22 23 01.8**	**-1.2**
PHC				Sn	**Sn**	**22 23 21.9**	**-3.7**
MAYB	**Maynard**	**1.88**	**92**	Pn	**Pn**	**22 23 03.6**	**-1.8**
EDB	**Eliza Dome**	**2.03**	**107**	Pn	Pn	22 23 04.7	-2.6
BBB	**Bella Bella**	**2.09**	**36**	Pn	**Pn**	**22 23 07.7**	**-0.3**
	14nm,0.3s,baz=217,slow=14,SNR=88						
BBB				Sn	**Sn**	**22 23 31.4**	**-3.3**
	38nm,0.3s,baz=215,slow=23,SNR=6.7						
BBB	**Bella Bella**	**2.09**	**36**	Pn	**Pn**	**22 23 07.8**	**-0.3**
BBB				Sn	**Sn**	**22 23 31.4**	**-3.3**
WOSB	**Woss**	**2.30**	**98**	Pn	**Pn**	**22 23 09.8**	**-1.2**
BAIB	**Barry Inlet**	**2.30**	**334**	Pn	**Pn**	**22 23 09.5**	**-1.6**
BAIB				Sn	**Sn**	**22 23 36.6**	**-3.5**
BNB	**Barry Inlet**	**2.30**	**334**	Pn	**Pn**	**22 23 09.5**	**-1.6**
ETB	**Estevan Point**	**2.58**	**115**	Pn	**Pn**	**22 23 13.2**	**-1.6**
NCSB	**Newcastle Ridg**	**2.59**	**91**	Pn	**Pn**	**22 23 13.8**	**-1.3**
HG1B	**Mitchell Dam**	**2.73**	**333**	Pn	**Pn**	**22 23 16.3**	**-0.6**
HG1B				Sn	**Sn**	**22 23 48.7**	**-1.8**
GRIB	**Gribbell Islan**	**2.89**	**12**	Pn	**Pn**	**22 23 18.5**	**-0.7**
SPLB	**Strathcona Par**	**2.93**	**101**	Pn	**Pn**	**22 23 18.5**	**-1.2**
BNAB	**Bonilla**	**3.00**	**354**	Pn	**Pn**	**22 23 19.6**	**-1.0**
BNAB				Sn	**Sn**	**22 23 52.9**	**-4.3**
DIB	**Dawson Inlet,**	**3.06**	**332**	Pn	**Pn**	**22 23 21.3**	**-0.2**
DIB				Sn	**Sn**	**22 23 56.1**	**-2.7**
HWKB	**Hawksbury Isla**	**3.14**	**10**	Pn	**Pn**	**22 23 22.1**	**-0.6**
HWKB				Sn	**Sn**	**22 23 58.1**	**-2.7**
GRNB	**Grenville Isla**	**3.34**	**2**	Pn	**Pn**	**22 23 24.8**	**-0.5**
GRNB				Sn	**Sn**	**22 24 02.7**	**-3.0**
B012	**Ucluelet**	**3.37**	**116**	Sn	**Sn**	**22 24 01.3**	**-4.9**
OZB	**Mount Ozzard**	**3.38**	**116**	Pn	**Pn**	**22 23 23.9**	**-2.0**
B927	**Port Alberni**	**3.67**	**109**	Pn	**Pn**	**22 23 27.8**	**-2.0**
KITB	**Kitimat**	**3.68**	**14**	Pn	**Pn**	**22 23 29.8**	**-0.1**
KITB				Sn	**Sn**	**22 24 12.8**	**-1.2**
RUBB	**Prince Rupert**	**3.82**	**359**	Pn	**Pn**	**22 23 31.5**	**-0.3**
NDB	**Naden**	**3.86**	**334**	Pn	**Pn**	**22 23 31.5**	**-1.0**
NLLB	**Nanaimo Lost L**	**4.17**	**106**	Pn	**Pn**	**22 23 36.1**	**-0.5**
B926	**Mesachie Lake**	**4.24**	**111**	Pn	**Pn**	**22 23 36.8**	**-0.9**
BIB	**Bowen Island**	**4.53**	**102**	Pn	**Pn**	**22 23 40.9**	**-0.8**
SYMB	**Survey Mountai**	**4.55**	**113**	Pn	**Pn**	**22 23 41.7**	**-0.3**
GOBB	**Galiano Island**	**4.56**	**108**	Pn	**Pn**	**22 23 41.2**	**-0.8**
OBC	**Olympics--Boni**	**4.67**	**120**	Pn	**Pn**	**22 23 43.4**	**-0.2**
PGC	**Sidney**	**4.72**	**111**	Pn	**Pn**	**22 23 44.3**	**+0.1**
V35K	**Ketchikan**	**4.91**	**350**	Pn	**Pn**	**22 23 46.9**	**+0.2**
V35K				Sn	**Sn**	**22 24 40.6**	**-3.6**
HNBB	**Haney**	**5.03**	**101**	Pn	**Pn**	**22 23 49.5**	**+1.0**
MCW	**Mount Constitu**	**5.08**	**108**	Pn	**Pn**	**22 23 50.2**	**+1.0**
LLLB	**Lillooet**	**5.25**	**86**	Pn	**Pn**	**22 23 51.5**	**0.0**
FSJB	**Fort St James**	**5.31**	**40**	Pn	**Pn**	**22 23 53.0**	**+0.6**
FSJB				Sn	**Sn**	**22 24 52.5**	**-1.9**
HDW	**Hoodsport**	**5.45**	**119**	Pn	**Pn**	**22 23 54.2**	**-0.2**
MBW	**Mount Baker**	**5.61**	**105**	Pn	**Pn**	**22 23 56.7**	**+0.1**
JCW	**Jim Creek**	**5.83**	**110**	Pn	**Pn**	**22 24 00.4**	**+0.9**
U33K	**Whale Pass**	**5.89**	**343**	Pn	**Pn**	**22 24 00.5**	**+0.2**
U33K				Sn	**Sn**	**22 25 06.9**	**-1.5**
RPW	**Rockport**	**5.97**	**107**	Pn	**Pn**	**22 24 02.3**	**+0.8**
T35M	**Bob Quinn**	**6.48**	**359**	Pn	**Pn**	**22 24 10.2**	**+1.8**
T35M				Sn	**Sn**	**22 25 21.2**	**-1.8**
FMW	**Mount Fremont**	**6.63**	**119**	Pn	**Pn**	**22 24 12.2**	**+1.5**
LON	**Longmire**	**6.67**	**121**	Pn	**Pn**	**22 24 11.7**	**+0.6**
LTY	**Liberty**	**7.03**	**114**	Pn	**Pn**	**22 24 17.4**	**+1.4**
BMTB	**Bullhead Mount**	**7.32**	**38**	Sn	**Sn**	**22 25 42.9**	**-0.8**
B08A	**Colville Reser**	**7.35**	**103**	Pn	**Pn**	**22 24 20.5**	**0.0**
NBC4	**NorthernBC 4**	**7.69**	**44**	Pn	**Pn**	**22 24 26.6**	**+1.5**
NBC4				Sn	**Sn**	**22 25 51.0**	**-1.8**
DLBC	**Dease Lake**	**7.94**	**0**	Pn	**Pn**	**22 24 28.8**	**+0.3**
	0.7nm,0.3s,baz=184,slow=3.7,SNR=25						
DLBC				LR	LR	22 27 34.1	
	comp=Z,100nm,18.0s,baz=274,slow=38						
	1.6nm,0.3s						
DLBC	**Dease Lake**	**7.94**	**0**	Pn	**Pn**	**22 24 30.7**	**+2.2**
C09A	**Chrisman Ranch**	**8.22**	**105**	Pn	**Pn**	**22 24 33.1**	**+0.8**
NBC5	**NorthernBC 5**	**8.27**	**29**	Pn	**Pn**	**22 24 35.4**	**+2.3**
NBC5				Sn	**Sn**	**22 26 06.2**	**-0.9**
Q32M	**Nakina River**	**8.55**	**352**	Pn	**Pn**	**22 24 38.2**	**+1.6**
NEW	**Newport**	**8.77**	**100**	LR	LR	22 28 00.8	
	comp=Z,107nm,19.0s,baz=311,slow=38						
R33M	**Jennings River**	**8.91**	**357**	Pn	**Pn**	**22 24 44.1**	**+2.2**
SWHSA	**Sweathouse Loo**	**9.22**	**56**	Pn	**Pn**	**22 24 48.4**	**+2.4**
P32M	**Atlin**	**9.32**	**349**	Pn	**Pn**	**22 24 49.2**	**+1.7**
NBC6	**NorthernBC 6**	**9.55**	**29**	Sn	**Sn**	**22 26 37.9**	**-0.6**
P33M	**Teslin, Yukon**	**9.84**	**352**	Pn	**Pn**	**22 24 55.3**	**+0.7**
MMPY	**Sheldon Lake,**	**12.15**	**357**	Pn	**Pn**	**22 25 29.3**	**+3.2**
DAWY	**Dawson**	**14.46**	**344**	Pn	**Pn**	**22 25 58.0**	**+0.5**
YKA	**Yellowknife Ar**	**14.69**	**29**	Pn	**Pn**	**22 25 59.4**	**-1.3**
	0.1nm,0.3s,baz=219,slow=12,SNR=6.9						
	0.2nm,0.5s						
KDAK	**Kodiak Island**	**14.99**	**308**	LR	LR	22 30 44.4	
	comp=Z,49nm,19.0s,baz=201,slow=33						
PDAR	**Pinedale Array**	**16.07**	**111**	Pn	**Pn**	**22 26 21.5**	**+2.3**
	1.6nm,0.9s,baz=310,slow=12,SNR=9.3						
ILAR	**Eielson Array**	**16.79**	**335**	Pn	**Pn**	**22 26 30.5**	**+2.5**
	baz=147,slow=10,SNR=9.9						
	0.5nm,1.0s						
ULM	**Lac du Bonnet**	**21.73**	**77**	P	**P**	**22 27 26.0**	**+1.6**
	1.9nm,0.5s,baz=290,slow=11,SNR=5.0						
	1.9nm,0.5s						
TXAR	**Lajitas Array**	**29.04**	**127**	P	**P**	**22 28 35.5**	**+1.8**
	0.1nm,0.4s,baz=339,slow=7.0,SNR=3.1						
	0.1nm,0.4s						

*IDC **07** 22:23:07.7±0.8, 28°.57N×139°.91E, h409km±11km, mb2.9/10, mbtmp3.7/11, Error ellipse: s-maj=23.8km s-min=12.8km az=78.0*
*JMA **07** 22:23:08.8±0.3, 29°N±2°×140°E±°, h433km, MV3.6/14, W OFF OGASAWARA*
ISC 07 22:23:09.2±0.7, **28°.63N**±0°.08×**139°.9E**±0°.1, **h421**km, **n16**, σ1**°90**/21, **mb3.2**/10, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.56**	**126**	P	**P**	**22 24 12.7**	**+2.0**
CBIJ				eS	**S**	**22 25 02.1**	**+1.6**
JCJ	**Chichijima**	**2.56**	**126**	P	**P**	**22 24 07.5**	**-3.2**
	73nm,0.4s,baz=249,slow=23,SNR=11						
JCJ				S	**S**	**22 24 56.5**	**-4.1**
	86nm,0.6s,baz=278,slow=23,SNR=5.6						
JHH2	**Haha-jima-NKT2**	**2.85**	**134**	eP	**P**	**22 24 14.4**	**+1.5**
JHH2				eS	**S**	**22 25 07.1**	**+2.6**
JRY	**Ryogami san**	**7.41**	**354**	eP	**P**	**22 25 00.7**	**+2.7**
JAG	**Ashikaga**	**7.78**	**357**	P	**P**	**22 25 03.0**	**+1.1**
JAG				eS	**S**	**22 26 31.4**	**-2.7**
JHO	**Hitachi**	**7.98**	**4**	P	**P**	**22 25 05.6**	**+1.5**
JHO				S	**S**	**22 26 37.6**	**-0.5**
KLR	**Kul'dur**	**21.49**	**345**	P	**P**	**22 27 26.9**	**+1.2**
	1.0nm,0.6s,baz=185,slow=1.4,SNR=6.0						
	1.0nm,0.6s						
SONM	**Songino Array**	**32.19**	**316**	P	**P**	**22 29 00.5**	**+0.1**
	0.4nm,0.4s,baz=117,slow=9.1,SNR=3.6						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**47.92**	**309**	P	**P**	**22 31 07.2**	**-0.2**
	0.3nm,0.4s,baz=89,slow=9.7,SNR=10						

0.3nm,0.4s
WRA Warramunga Arr 48.58 187 P **P** **22 31 11.7 -0.9**
0.8nm,0.3s,baz=1.1,slow=7.7,SNR=27
0.8nm,0.3s
KURBB Kurchatov Arra 50.51 314 P **P** **22 31 26.1 -0.5**
0.8nm,0.4s,baz=91,slow=7.7,SNR=16
0.8nm,0.4s
ASAR Alice Springs 52.31 187 P **P** **22 31 39.3 -0.8**
0.3nm,0.4s,baz=0.4,slow=6.0,SNR=7.2
0.3nm,0.4s
BVAR Borovoye Array 55.53 317 P **P** **22 32 02.7 +0.1**
0.7nm,0.4s,baz=90,slow=7.3,SNR=9.3
0.7nm,0.4s
ILAR Eielson Array 57.36 29 P **P** **22 32 14.9 -0.2**
0.3nm,0.8s,baz=295,slow=8.2,SNR=5.2
0.3nm,0.8s
YKA Yellowknife Ar 71.76 28 P **P** **22 33 46.8 -0.2**
0.3nm,0.6s,baz=288,slow=6.3,SNR=4.3
0.3nm,0.6s
FINES FINESS Array B 75.66 333 P **P** **22 34 08.7 -0.7**
1.6nm,0.8s,baz=34,slow=10,SNR=4.4
1.6nm,0.8s

*IDC **07** 22:28:37.1±0.8,9°.69S×151°.09E,h0km,mb4.4/16, mbtmp4.3/18,ML3.9/2,MS3.3/15,Error ellipse: s-maj=28.8km s-min=17.7km az=68.0*
*DJA **07** 22:28:40.0±0.8,10°.5S±2°×11°.9E±°,h13km±6km,M4.8/22, mb4.8/22,mB5.4/7,MLv4.8/17,Mw(mB)4.8/7,MwMwp6.0/1, Mwp6.1/1*
*NEIC **07** 22:28:41.1±1.4,10°.14S±0°.07×118°.74E±0°.07,h35km±6km, mb4.5/47,Error ellipse: s-maj=10.9km s-min=9.7km az=197.0*
ISC 07 22:28:40.2±0.4,**10°.21S**±0°.05×**118°.77E**±0°.04,**h33**km,**n144,** σ1**83**/140,**mb4.5**/34,**MS3.3**/14,**1C,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.68**	**325**	P		**Pb**	**22 29 09.4**	**-1.2**
PLAI	**Plampang**	**1.68**	**325**	P		**Pn**	**22 29 07.2**	**-0.1**
PLAI				S		**Sn**	**22 29 29.5**	**+1.7**
BASI	**Baing, Sumba**	**1.79**	**90**	P		**Pb**	**22 29 11.1**	**-1.2**
BASI				S		**Sb**	**22 29 34.8**	**+0.5**
TWSI	**Taliwang, Sumb**	**2.36**	**308**	P		**Pn**	**22 29 18.2**	**+1.5**
TWSI				S		**Sb**	**22 29 48.1**	**-2.8**
EDFI	**Ende, Flores**	**3.23**	**64**	P		**Pn**	**22 29 29.8**	**+1.1**
EDFI				S		**Sn**	**22 30 10.3**	**+4.2**
MMRI	**Maumere**	**3.77**	**66**	Pn		**Pn**	**22 29 35.8**	**-0.2**
MMRI	**Maumere**	**3.77**	**66**	P		**Pn**	**22 29 38.3**	**+2.3**
MMRI	**Maumere**	**3.77**	**66**	P		**Pn**	**22 29 37.8**	**+1.8**
MMRI				S		**Sn**	**22 30 23.0**	**+3.8**
DNP	**Denpasar**	**3.82**	**293**	P		**Pn**	**22 29 40.1**	**+3.4**
DNP				S		**Sn**	**22 30 24.9**	**+4.3**
SRBI	**Singaraja**	**4.09**	**301**	P		**Pn**	**22 29 42.7**	**+2.2**
JAGI	**Jajag, Banyuwa**	**4.87**	**290**	Pn		**Pn**	**22 29 51.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**4.87**	**290**	P		**Pn**	**22 29 52.2**	**+1.1**
JAGI	**Jajag, Banyuwa**	**4.87**	**290**	P		**Pn**	**22 29 51.6**	**+0.5**
JAGI				S		**Pn**	**22 29 52.3**	**+1.1**
BKSI	**Bulukumba**	**5.04**	**16**	P		**Pn**	**22 29 54.7**	**+1.2**
660nm,0.6s,6μm2.4nm								
KAPI	**Kappang**	**5.25**	**11**	Pn		**Pn**	**22 29 55.8**	**-0.6**
SOEI	**Soe**	**5.44**	**86**	Pn		**Pn**	**22 30 00.6**	**+1.5**
SOEI	**Soe**	**5.44**	**86**	P		**Pn**	**22 30 01.1**	**+2.0**
158nm,1.1s,2μm0.9nm								
SOEI				S		**Pn**	**22 30 01.8**	**+2.7**
158nm,1.1s,2μm0.9nm								
GMJI	**Gumukmas**	**5.59**	**290**	P		**Pn**	**22 30 00.9**	**-0.2**
BLJI	**Banyuglugur**	**5.66**	**295**	P		**Pn**	**22 30 05.5**	**+3.5**
112nm,0.5s,4μm0.6nm								
BLJI				S		**Pn**	**22 30 04.7**	**+2.7**
112nm,0.5s,4μm0.6nm								
TTSI	**Tana Toraja**	**7.19**	**8**	P		**Pn**	**22 30 26.5**	**+3.4**
57nm,0.6s,2μm0.3nm								
UGM	**Wanagama**	**8.45**	**285**	Pn		**Pn**	**22 30 40.5**	**0.0**
UGM	**Wanagama**	**8.45**	**285**	P		**Pn**	**22 30 42.9**	**+2.5**
95nm,1.1s								
LUWI	**Luwuk**	**9.94**	**24**	Pn		**Pn**	**22 31 00.8**	**0.0**
LUWI	**Luwuk**	**9.94**	**24**	P		**Pn**	**22 31 03.8**	**+3.0**
57nm,1.3s								
KPJI	**Karang Pucung**	**10.13**	**286**	P		**Pn**	**22 31 06.6**	**+3.2**
22nm,0.6s,68μm								
FITZ	**Fitzroy Crossi**	**10.29**	**140**	Pn		**Pn**	**22 31 06.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**10.29**	**140**	P		**Pn**	**22 31 07.0**	**+1.4**
CMJI	**Cimerak**	**10.47**	**282**	P		**Pn**	**22 31 11.4**	**+3.3**
62nm,1.5s								
NLAI	**Namlea**	**10.79**	**51**	P		**Pn**	**22 31 14.9**	**+2.5**
30nm,0.7s,5μm								
MRSI	**Marisa**	**11.08**	**17**	P		**Pn**	**22 31 20.1**	**+3.7**
45nm,1.0s								
KNRA	**Kununurra**	**11.16**	**120**			**Pn**	**22 31 18.6**	**+1.2**
KNRA	**Kununurra**	**11.16**	**120**	P		**Pn**	**22 31 19.1**	**+1.7**
PSA00	**Pilbara Seismi**	**11.35**	**175**	Pn		**Pn**	**22 31 20.6**	**+0.6**
PSA00	**Pilbara Seismi**	**11.35**	**175**			**Pn**	**22 31 19.9**	**-0.2**
PSA00	**Pilbara Seismi**	**11.35**	**175**	P		**Pn**	**22 31 21.3**	**+1.3**
LEM	**Lembang**	**11.53**	**286**	LR		LR	22 37 24.2	
comp=Z,45nm,18.1s,baz=190,slow=45								
MTN	**Manton Dam**	**12.40**	**103**	Pn		**Pn**	**22 31 32.9**	**-1.6**
MTN	**Manton Dam**	**12.40**	**103**	P		**Pn**	**22 31 34.6**	**+0.1**
SAUI	**Saumlaki**	**12.57**	**81**	Pn		**Pn**	**22 31 36.7**	**-0.2**
GIRL	**Giralia**	**13.10**	**199**	Pn		**Pn**	**22 31 44.6**	**+0.6**
GIRL	**Giralia**	**13.10**	**199**	P		**Pn**	**22 31 46.9**	**+2.9**
KDU	**Kakadu**	**13.66**	**102**	P		**Pn**	**22 31 52.3**	**+0.6**
KASI	**Kota Agung**	**14.88**	**287**	P		**Pn**	**22 32 09.9**	**+1.6**
21nm,0.7s								
FAKI	**Fak Fak**	**15.22**	**63**	Pn		**Pn**	**22 32 12.9**	**+0.1**
FAKI	**Fak Fak**	**15.22**	**63**	P		**Pn**	**22 32 14.0**	**+1.2**
29nm,0.7s								
SWI	**Sorong**	**15.51**	**54**	P		**P**	**22 32 20.2**	**-0.4**
57nm,0.8s								
MEEK	**Meekatharra**	**16.34**	**180**	P		**P**	**22 32 28.7**	**-1.2**
KKM	**Kota Kinabalu**	**16.34**	**351**	Pn		**Pn**	**22 32 27.0**	**-0.4**
KKM				IAmb		IAmb	22 32 32.1	
comp=Z,28nm,0.8s								
KKM	**Kota Kinabalu**	**16.34**	**351**	P		**P**	**22 32 31.5**	**+1.5**
WRKA	**Warakurna**	**17.31**	**150**	P		**P**	**22 32 41.6**	**+1.0**
WB0	**Warramunga Arr**	**17.82**	**124**	P		**P**	**22 32 46.3**	**0.0**
WRA	**Warramunga Arr**	**17.87**	**125**			**P**	**22 32 46.5**	**-0.3**
WRA	**Warramunga Arr**	**17.87**	**125**	P		**Pn**	**22 32 46.0**	**-0.4**
comp=Z,0.4nm,0.3s,baz=294,slow=13,SNR=16								
WRA				S		Sn	22 35 52.6	-12
comp=Z,3.6nm,0.9s,baz=293,slow=24,SNR=6.2								
comp=Z,0.9nm,0.5s								
MORW	**Morawa**	**18.93**	**187**	P		**Pn**	**22 33 01.1**	**+1.8**
MORW				IAmb		IAmb	22 33 16.9	
comp=Z,32nm,1.2s								
MORW	**Morawa**	**18.93**	**187**	P		**Pn**	**22 33 02.7**	**+3.4**
AS31	**Alice Springs**	**19.69**	**135**	P		**Pn**	**22 33 08.5**	**0.0**
ASAR	**Alice Springs**	**19.69**	**135**	P		**Pn**	**22 33 08.4**	**0.0**
ASAR	**Alice Springs**	**19.69**	**135**	P		**Pn**	**22 33 08.9**	**+0.5**
comp=Z,0.5nm,0.3s,baz=322,slow=15,SNR=36								
ASAR				S		**S**	**22 36 38.1**	**-9.2**
comp=Z,1.1nm,0.6s,baz=301,slow=22,SNR=4.4								
comp=Z,6.1nm,0.9s								
AS01	**Alice Springs**	**19.72**	**135**	P		**Pn**	**22 33 09.9**	**+1.1**
BLDU	**Ballidu**	**20.39**	**185**	P		Pn	22 33 17.7	+1.1
BKNI	**Bangkinang**	**20.51**	**300**	P		**P**	**22 33 14.8**	**-0.9**
BKNI				IAmb		IAmb	22 33 19.4	
comp=Z,28nm,0.8s								
FORT	**Forrest**	**22.22**	**158**	P		**P**	**22 33 35.0**	**+1.0**
NWAO	**Narrogin (SRO)**	**22.65**	**183**	P		**P**	**22 33 40.3**	**+1.7**
NWAO	**Narrogin (SRO)**	**22.65**	**183**	P		P	22 33 47.5	+8.9
comp=Z,6.6nm,0.4s,baz=7.3,slow=12,SNR=13								
NWAO				S		**S**	**22 37 40.8**	**-3.8**
comp=Z,12nm,0.8s,baz=265,slow=18,SNR=2.0								
NWAO				LR		LR	22 42 33.0	
comp=Z,71nm,20.6s,baz=160,slow=36								
comp=Z,6.6nm,0.4s								
RPSI	**Rantau Prapat**	**23.55**	**302**	P		**P**	**22 33 47.5**	**-0.3**
RPSI				IAmb		IAmb	22 33 50.4	
comp=Z,16nm,1.0s								
KULM	**Kulim**	**23.72**	**310**	P		**P**	**22 33 48.0**	**-1.5**
KULM				IAmb		IAmb	22 34 07.8	
comp=Z,16nm,1.2s								
GSI	**Gunungsitoli**	**23.99**	**297**	P		**P**	**22 33 51.5**	**-0.6**
COEN	**Coen**	**24.15**	**101**	P		**P**	**22 33 54.9**	**+1.3**
COEN				IAmb		IAmb	22 34 21.9	
comp=Z,24nm,1.2s								
BBOO	**Buckleboo**	**27.57**	**147**	P		**P**	**22 34 25.9**	**+1.7**
CTA	**Charters Tower**	**28.25**	**114**	LR		LR	22 47 53.5	
comp=Z,121nm,18.6s,baz=264,slow=41								
UBPT	**Khong Chiam**	**28.55**	**332**	P		**P**	**22 34 33.7**	**+0.7**
STKA	**Stephens Creek**	**30.18**	**139**	LR		LR	22 47 25.5	
comp=Z,113nm,19.7s,baz=285,slow=37								
CMAR	**Chiang Mai Arr**	**34.55**	**325**	P		**P**	**22 35 25.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**34.55**	**325**	P		**P**	**22 35 26.5**	**+0.6**
comp=Z,1.4nm,0.5s,baz=156,slow=6.9,SNR=9.1								
CMAR				LR		LR	22 50 47.1	
comp=Z,55nm,18.3s,baz=145,slow=39								
comp=Z,1.4nm,0.5s								
GUMO	**Guam**	**35.07**	**48**	LR		LR	22 50 08.3	
comp=Z,25nm,20.3s,baz=182,slow=37								
CRAI	**Chiangrai**	**35.25**	**329**	P		**P**	**22 35 32.3**	**+0.4**
CRAI				IAmb		IAmb	22 35 33.4	
comp=Z,4.6nm,0.7s								
JOW	**Kunigami**	**37.96**	**14**	LR		LR	22 50 35.4	
comp=Z,67nm,21.1s,baz=312,slow=35								
KMI	**Kunming**	**38.44**	**336**	⇑P		**P**	**22 36 01.5**	**+2.3**
PZH	**PanZhiHua**	**40.07**	**336**	P		**P**	**22 36 13.4**	**+0.7**
ENH	**Enshi**	**41.23**	**348**	P		**P**	**22 36 21.3**	**-0.8**
ENH				IAmb		IAmb	22 36 23.1	
comp=Z,11nm,0.7s								
PALK	**Pallekele**	**41.69**	**293**	P		**P**	**22 36 25.5**	**-0.8**
PALK				IAmb		IAmb	22 36 28.2	
comp=Z,15nm,1.3s								
PALK	**Pallekele**	**41.69**	**293**	LR		LR	22 54 40.6	
comp=Z,33nm,20.2s,baz=220,slow=37								
NJ2	**Nanjing**	**42.02**	**0**	*e*P		**P**	**22 36 31.2**	**+2.7**
SHL	**Shillong**	**44.16**	**324**	P		**P**	**22 36 45.3**	**-0.9**
SHL				IAmb		IAmb	22 36 46.4	
comp=Z,6.3nm,0.8s								
JNU	**Nakatsue**	**44.61**	**15**	LR		LR	22 55 00.8	
comp=Z,20nm,21.5s,baz=216,slow=36								
XAN	**Xi'an**	**44.99**	**348**	P		**P**	**22 36 52.1**	**-0.4**
XAN				pP		**pP**	**22 36 56.2**	**-5.4**
H08S2	**Diego Garcia H**	**45.75**	**269**	T		T	23 26 08.1	
baz=95,slow=76,SNR=66								
H08S3	**Diego Garcia H**	**45.77**	**269**	T		T	23 26 26.0	
baz=95,slow=76,SNR=72								
H08S1	**Diego Garcia H**	**45.77**	**269**	T		T	23 26 14.8	
baz=95,slow=76,SNR=51								
DZM	**Mont Dzumac**	**47.11**	**111**	LR		LR	22 57 33.0	
comp=Z,55nm,18.9s,baz=3.0,slow=37								
LSA	**Lhasa**	**47.77**	**327**	P		**P**	**22 37 14.0**	**-1.0**
LSA				IAmb		IAmb	22 37 25.7	
comp=Z,4.5nm,1.0s								
LZH	**Lanzhou**	**48.15**	**344**	*e*P		**P**	**22 37 18.5**	**+1.1**
LZH				pP		**pP**	**22 37 24.5**	**-2.1**
KSRS	**Korea Array**	**48.18**	**10**	P		**P**	**22 37 15.9**	**-1.5**
comp=Z,1.3nm,0.7s,baz=190,slow=8.7,SNR=3.0								
KSRS				LR		LR	22 57 32.1	
comp=Z,27nm,20.7s,baz=170,slow=36								
comp=Z,1.3nm,0.7s								
MJAR	**Matsushiro Arr**	**49.97**	**20**	P		**P**	**22 37 28.5**	**-2.7**
comp=Z,3.0nm,0.6s,baz=202,slow=8.0,SNR=7.7								
comp=Z,3.0nm,0.6s								
BJT	**Baijiatuan**	**50.03**	**357**	P		**P**	**22 37 31.4**	**-0.1**
BJI	**Beijing**	**50.05**	**357**	P		**P**	**22 37 31.4**	**-0.3**
HHC	**Hu-ho-hao-te**	**51.23**	**353**	*e*P		**P**	**22 37 42.8**	**+2.0**
GTA	**Gaotai**	**52.42**	**341**	*e*P		**P**	**22 37 50.1**	**+0.5**
GTA				pP		**sP**	**22 38 00.8**	**-1.4**
GTA				sP		**pwP**	**22 38 05.7**	**+3.0**
XLT	**XiLinHaoTe**	**53.91**	**358**	*e*P		**P**	**22 38 00.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**55.47**	**12**	P		**P**	**22 38 10.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**55.47**	**12**	P		**P**	**22 38 10.9**	**-0.8**
USRK	**Ussuriysk Ar.**	**55.47**	**12**	P		**P**	**22 38 10.6**	**-1.1**
comp=Z,3.0nm,0.4s,baz=189,slow=7.0,SNR=12								
comp=Z,3.0nm,0.4s								
ASAJ	**Asahikawa**	**58.24**	**20**	LR		LR	23 06 21.4	
comp=Z,19nm,18.7s,baz=310,slow=39								
ULN	**Ulaanbaatar**	**58.74**	**351**	P		**P**	**22 38 34.4**	**-0.5**
ULN				IAmb		IAmb	22 38 35.9	
comp=Z,4.8nm,1.2s								
SONM	**Songino Array**	**58.82**	**350**	P		**P**	**22 38 34.8**	**-0.6**
SONM				IAmb		IAmb	22 38 36.8	
comp=Z,3.2nm,0.6s								
SONM	**Songino Array**	**58.82**	**350**	P		**P**	**22 38 35.4**	**-0.1**
comp=Z,3.8nm,0.5s,baz=167,slow=8.4,SNR=28								
comp=Z,3.8nm,0.5s								
KLR	**Kul'dur**	**60.28**	**10**	P		**P**	**22 38 43.7**	**-1.6**
comp=Z,0.7nm,0.3s,baz=185,slow=10,SNR=6.1								
KLR				LR		LR	23 06 43.4	
comp=Z,14nm,18.2s,baz=315,slow=38								
comp=Z,0.7nm,0.3s								
HEH	**HeiHe**	**60.68**	**6**	*e*P		**P**	**22 38 47.4**	**-0.6**
WMQ	**Urumqi**	**60.74**	**335**	*e*P		**P**	**22 38 48.5**	**-0.2**
KSH	**Kashi**	**63.44**	**324**	P		**P**	**22 39 07.1**	**+0.1**
NRN	**Naryn**	**64.70**	**326**	P		**P**	**22 39 15.5**	**0.0**
NRN				IAmb		IAmb	22 39 16.3	
comp=Z,3.0nm,0.6s								
KBL	**Kabul**	**64.79**	**316**	P		**P**	**22 39 15.5**	**-0.6**
MK31	**Makanchi Array**	**65.42**	**333**			**P**	**22 39 19.3**	**-0.4**
MK31				IAmb		IAmb	22 39 20.8	
comp=Z,3.6nm,0.8s								
MKAR	**Makanchi Array**	**65.42**	**333**	P		**P**	**22 39 19.4**	**-0.3**
comp=Z,4.1nm,0.6s,baz=154,slow=6.5,SNR=78								
comp=Z,4.1nm,0.6s								
AAK	**Ala-Archa**	**66.34**	**326**	P		**P**	**22 39 25.9**	**0.0**
AAK				IAmb		IAmb	22 39 33.7	
comp=Z,5.9nm,1.3s								
AAK	**Ala-Archa**	**66.34**	**326**	LR		LR	23 13 02.9	
comp=Z,79nm,21.6s,baz=24,slow=40								
ARSB	**Arslanbob**	**66.35**	**324**	P		**P**	**22 39 26.1**	**+0.2**
ARSB				IAmb		IAmb	22 39 27.0	
comp=Z,2.1nm,0.6s								
H04N2	**CROZET ISLANDS**	**66.78**	**224**	T		T	23 54 01.9	
baz=85,slow=74,SNR=6.5								
H04N1	**CROZET ISLANDS**	**66.79**	**224**	T		T	23 52 52.3	
SNR=5.4								
H04N3	**CROZET ISLANDS**	**66.79**	**224**	T		T	23 53 52.6	
baz=132,slow=74,SNR=5.2								
BTK	**Batken**	**66.85**	**322**	P		**P**	**22 39 29.0**	**-0.1**
BTK				IAmb		IAmb	22 39 57.3	
comp=Z,9.0nm,1.4s								
SIMJ	**Simiganj**	**67.15**	**320**	P		**P**	**22 39 30.3**	**-0.7**
KURBB	**Kurchatov Arra**	**69.94**	**334**	P		**P**	**22 39 47.9**	**-0.1**
comp=Z,2.0nm,0.6s,baz=142,slow=5.5,SNR=34								
comp=Z,2.0nm,0.6s								
KURK	**Kurchatov**	**69.97**	**334**	P		**P**	**22 39 47.5**	**-0.7**
KURK				IAmb		IAmb	22 39 48.7	
comp=Z,6.0nm,0.9s								
ZAA0	**Zalesovo Array**	**70.08**	**339**			**P**	**22 39 47.5**	**-1.3**
ZALV	**Zalesovo Beam**	**70.08**	**339**			**P**	**22 39 47.6**	**-1.3**
ZALV	**Zalesovo Beam**	**70.08**	**339**	P		**P**	**22 39 47.9**	**-0.9**
comp=Z,6.1nm,0.5s,baz=142,slow=4.9,SNR=40								
comp=Z,6.1nm,0.5s								
PETK	**Petropavlovsk-**	**71.27**	**24**	P		**P**	**22 39 55.4**	**-0.6**
PETK	**Petropavlovsk-**	**71.27**	**24**	P		**P**	**22 39 54.2**	**-1.8**
comp=Z,3.6nm,0.7s,baz=164,slow=4.0,SNR=4.1								
comp=Z,3.6nm,0.7s								
GEYT	**Alibeck**	**74.11**	**314**	P		**P**	**22 40 13.8**	**+0.4**
GEYT	**Alibeck**	**74.11**	**314**	P		**P**	**22 40 13.5**	**+0.1**
comp=Z,2.0nm,0.8s,baz=158,slow=9.3,SNR=4.4								
comp=Z,2.0nm,0.8s								
BVAR	**Borovoye Array**	**75.25**	**332**	P		**P**	**22 40 19.3**	**-0.3**
comp=Z,1.6nm,0.6s,baz=131,slow=6.7,SNR=12								
comp=Z,1.6nm,0.6s								
BRVK	**Borovoye**	**75.32**	**332**	P		**P**	**22 40 19.7**	**-0.3**
SEY	**Seymchan**	**77.38**	**15**	P		**P**	**22 40 29.8**	**-1.7**
comp=Z,2.9nm,0.6s,baz=200,slow=3.5,SNR=6.0								
comp=Z,2.9nm,0.6s								
ABKAR	**Akbulak array**	**78.41**	**325**			**P**	**22 40 37.4**	**-0.1**
ABKAR	**Akbulak array**	**78.41**	**325**			**P**	**22 40 37.5**	**0.0**
ABKAR				IAmb		IAmb	22 40 38.4	
comp=Z,7.3nm,1.1s								
RAYN	**Ar Rayn**	**79.03**	**296**	P		**P**	**22 40 41.1**	**-0.4**
RAYN				IAmb		IAmb	22 40 53.7	
comp=Z,4.7nm,1.1s								
TIXI	**Tiksi**	**81.96**	**3**	P		**P**	**22 40 55.2**	**-0.9**
TIXI				IAmb		IAmb	22 40 56.1	
comp=Z,5.7nm,0.9s								
NRIK	**Noril'sk**	**82.29**	**349**	P		**P**	**22 40 57.4**	**-0.5**
NRIK				IAmb		IAmb	22 40 59.1	
comp=Z,8.9nm,1.2s								
NRIK	**Noril'sk**	**82.29**	**349**	P		**P**	**22 40 57.9**	**0.0**
comp=Z,3.0nm,0.5s,baz=136,slow=6.0,SNR=5.8								
comp=Z,3.0nm,0.5s								
GURO	**Guroymak-BITLI**	**86.11**	**310**	P		**P**	**22 41 19.7**	**+1.5**
KBZ	**Khabaz**	**86.97**	**315**	P		**P**	**22 41 23.6**	**+1.6**
comp=Z,1.8nm,0.8s,baz=162,slow=3.9,SNR=5.3								
comp=Z,1.8nm,0.8s								
BOSA	**Boshof**	**88.23**	**241**			**P**	**22 41 30.8**	**+2.0**
LBTB	**Lobatse**	**88.58**	**245**	LR		LR	23 21 48.4	
comp=Z,33nm,18.0s,baz=158,slow=36								

*SKHL **07** 22:36:35.1±0.5,47°.70N×151°.70E,h157km±5km,mb4.8/7, msha5.5/6*
*MOS **07** 22:36:35.5±1.2,47°.76N×151°.73E,h188km,mb4.2/19, Error ellipse: s-maj=9.4km s-min=7.0km az=68.2*

*IDC **07** 22:36:38.9±1.0,47°.92N×151°.62E,h194km±7km,mb3.6/25, mbtmp4.1/30,Error ellipse: s-maj=15.6km s-min=9.5km az=150.0*
*NEIC **07** 22:36:38.4±1.1,47°.9N±0°.2×151°.5E±0°.2,h186km±10km, mb4.3/39,Error ellipse: s-maj=28.4km s-min=12.4km az=144.0*
ISC 07 22:36:36.0±0.6,**47°.64N**±0°.07×**151°.75E**±0°.06,**h179**km±4km, **h178**km:**pP-P,n257,**σ1**13**/265,**mb4.2**/61,**1C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.61**	**230**	*e*P		**Pn**	**22 37 30.9**	**-1.2**
KUR					AMB	AMB	22 37 32.3	
60nm,0.5s								
KUR				*e*S		**Sn**	**22 38 14.8**	**-1.0**
KUR					A	A	22 38 21.6	
110nm,0.4s								
KUR					A	A	22 38 21.6	
60nm,0.4s								
SKR	**Severo-Kuril's**	**4.18**	**42**	*e*PN		Pn	22 37 37.3	-2.0
SKR				*e*S		Sn	22 38 24.7	-4.2
SKR					pmax	pmax		
comp=Z,57nm,0.6s								
SKR					smax	smax		
comp=N,207nm,0.7s								
SKR					smax	smax		
comp=E,303nm,0.8s								
SKR					MLR	MLR		
comp=Z,900nm,12.0s								
SKR	**Severo-Kuril's**	**4.18**	**42**	*e*P		Pn	22 37 37.3	-2.0
SKR					AMB	AMB	22 37 37.7	
comp=Z,60nm,0.6s								
SKR				*e*S		Sn	22 38 24.0	-4.9
SKR					A	A	22 38 26.8	
comp=Z,210nm,0.8s								
SKR					A	A	22 38 26.8	
comp=Z,300nm,0.8s								
PAU	**Pauzhetka**	**5.05**	**39**	*e*P		**Pn**	**22 37 49.5**	**-1.0**
PAU					AMB	AMB	22 37 52.3	
comp=Z,60nm,0.4s								
PAU				*e*S		**Sn**	**22 38 45.5**	**-3.5**
PAU					A	A	22 38 49.4	
comp=Z,160nm,0.4s								
PAU					A	A	22 38 49.4	
comp=Z,130nm,0.4s								
SHO	**Shikotan**	**5.11**	**224**	*e*PN		**Pn**	**22 37 49.6**	**-1.7**
SHO	**Shikotan**	**5.11**	**224**	*e*P		**Pn**	**22 37 50.0**	**-1.3**
SHO				*e*S		**Sn**	**22 38 46.6**	**-3.8**
SHO					A	A	22 38 50.5	
comp=Z,50nm,0.4s								
SHO					A	A	22 38 50.5	
comp=Z,50nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**5.47**	**231**	*i* PN		**Pn**	**22 37 55.7**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**5.47**	**231**	*e*P		**Pn**	**22 37 55.8**	**-0.3**
YUK					AMB	AMB	22 37 58.2	
comp=Z,40nm,0.3s								
YUK				*e*S		**Sn**	**22 38 57.3**	**-1.6**
YUK					A	A	22 39 00.1	
comp=Z,100nm,0.5s								
YUK					A	A	22 39 00.1	
comp=Z,70nm,0.5s								
YSS	**Yuzh-Sakhalins**	**6.16**	**267**	*e*PN		**Pn**	**22 38 07.3**	**+2.3**
YSS				*e*S		**Sn**	**22 39 17.8**	**+2.7**
YSS					pmax	pmax		
comp=Z,30nm,0.5s								
YSS					smax	smax		
comp=N,10.0nm,0.6s								
YSS					smax	smax		
comp=E,20nm,0.6s								
PEA0B	**Petropavlovsk-**	**6.66**	**33**	Pn		**Pn**	**22 38 11.2**	**-0.4**
PEA0B	**Petropavlovsk-**	**6.66**	**33**	PN		**Pn**	**22 38 11.2**	**-0.4**
PETK	**Petropavlovsk-**	**6.66**	**33**	Pn		**Pn**	**22 38 10.8**	**-0.8**
PETK	**Petropavlovsk-**	**6.66**	**33**	PN		**Pn**	**22 38 10.8**	**-0.8**
PETK	**Petropavlovsk-**	**6.66**	**33**	P		**Pn**	**22 38 10.7**	**-0.9**
comp=E,3.8nm,0.5s,baz=213,slow=13,SNR=6.9								
AKK	**Akkeshi**	**6.71**	**229**	*e*P		**Pn**	**22 38 11.0**	**-1.3**
JKA	**Kamikawa-asahi**	**7.29**	**244**	Pn		**Pn**	**22 38 22.6**	**+2.6**
ASAJ	**Asahikawa**	**7.29**	**244**	P		**Pn**	**22 38 22.7**	**+2.7**
comp=E,24nm,0.8s,baz=70,slow=14,SNR=18								
ERM	**Erimo**	**8.30**	**230**	Pn		**Pn**	**22 38 33.6**	**+0.4**
ERM	**Erimo**

baz=343,slow=76,SNR=18
H11S2 WAKE ISLAND Hy 31.54 152 T T 23 16 22.5
baz=343,slow=76,SNR=22
H18K Honhosa River 31.59 38 P **P** **22 42 42.1 +0.6**
baz=261
G18K Tagagawik 31.60 37 P **P**
G18K IAmb IAmb 22 42 42.8
comp=Z,7.7nm,0.7s
G18K Tagagawik 31.60 37 P **P** **22 42 41.9 +0.4**
baz=260
C19K Lookout Ridge 32.02 31 P **P** **22 42 45.5 +0.4**
C19K IAmb IAmb 22 42 47.8
comp=Z,3.6nm,0.4s
C19K Lookout Ridge 32.02 31 P **P** **22 42 46.7 +1.6**
baz=254
J18K Innoko River 32.10 41 P **P** **22 42 46.0 +0.1**
J18K IAmb IAmb 22 43 18.8
comp=Z,8.5nm,1.4s
J18K Innoko River 32.10 41 P **P** **22 42 46.5 +0.6**
baz=266
F19K Shaleruckik Mo 32.13 35 P **P** **22 42 46.0 -0.1**
baz=259
G19K Purcell Mounta 32.28 36 P **P** **22 42 48.0 +0.6**
baz=261
D19K Kuna River 32.37 32 P **P** **22 42 48.3 +0.1**
baz=256
TTA Tatalina 32.38 42 P **P** **22 42 49.3 +0.9**
baz=267
H19K Roundabout Mou 32.44 38 P **P** **22 42 49.2 +0.4**
H19K Roundabout Mou 32.44 38 P **P** **22 42 49.7 +1.0**
baz=263
E19K Redstone River 32.46 34 P **P** **22 42 49.7 +0.7**
baz=259
J19K Poorman 32.63 41 P **P** **22 42 51.0 +0.5**
baz=266
D20K Etiviuk River 32.96 32 P **P** **22 42 53.9 +0.6**
baz=258
F20K Avaraart Lake 32.96 35 P **P** **22 42 53.2 -0.1**
baz=261
E20K Nigu River 33.01 33 P **P** **22 42 54.3 +0.5**
baz=259
H20K Anotleneega Mo 33.09 38 P **P** **22 42 54.8 +0.3**
baz=264
B20K Meade River 33.09 29 P **P** **22 42 54.7 +0.4**
B20K Meade River 33.09 29 P **P** **22 42 55.1 +0.7**
baz=255
K20K Telida 33.28 42 P **P** **22 42 57.8 +1.7**
baz=268
J20K Nowinta River 33.29 40 P **P** **22 42 57.2 +1.0**
baz=267
L20K Farewell, AK 33.35 43 P **P** **22 42 57.7 +1.0**
baz=270
IMAR Indian Mountai 33.61 37 P **P** **22 42 59.0 +0.1**
A21K Barrow 33.63 27 P **P** **22 42 59.7 +0.7**
baz=254
C21K Knifeblade Rid 33.70 31 P **P** **22 43 00.7 +1.0**
baz=259
G21K Allakaket 33.76 36 P **P** **22 43 00.4 +0.2**
G21K IAmb IAmb 22 43 02.2
comp=Z,5.5nm,0.8s
G21K Allakaket 33.76 36 P **P** **22 43 01.4 +1.2**
baz=264
B21K Ikpikpuk River 33.86 30 P **P** **22 43 01.7 +0.7**
B21K Ikpikpuk River 33.86 30 P **P** **22 43 01.8 +0.9**
baz=258
F21K Alatna River 33.86 35 P **P** **22 43 01.9 +0.8**
baz=263
H21K Melozitna Rive 33.96 38 P **P** **22 43 03.2 +1.2**
baz=266
PPLA Purkeypile 34.13 43 P **P** **22 43 05.7 +2.1**
baz=271
CAST Castle Rocks 34.18 42 P **P** **22 43 04.6 +0.7**
baz=270
I21K Tanana 34.27 39 P **P** **22 43 05.3 +0.7**
baz=268
D22K Ayikyak River 34.39 32 P **P** **22 43 06.6 +1.0**
baz=261
B22K Teshekpuk Lake 34.41 29 P **P** **22 43 06.3 +0.6**
baz=258
H22K Ishtalitna Cre 34.57 37 P **P** **22 43 08.1 +0.9**
baz=267
G22K Bettles 34.59 35 P **P** **22 43 08.0 +0.7**
baz=265
KTH Kantishna Hill 34.70 41 P **P** **22 43 09.1 +0.7**
KTH IAmb IAmb 22 43 10.3
comp=Z,7.7nm,1.0s
MLY Manley 34.80 39 P **P** **22 43 10.3 +1.1**
baz=269
TRF Thorofare Moun 34.98 42 P **P** **22 43 11.6 +0.7**
baz=272
COLD Coldfoot 35.13 35 P **P** **22 43 12.5 +0.6**
baz=266,SNR=5.9
G23K Bananza Creek 35.16 36 P **P** **22 43 12.4 +0.1**
baz=267
C23K Itkillik River 35.27 30 P **P** **22 43 14.0 +0.9**
baz=262
I23K Minto, Yukon-K 35.38 39 P **P** **22 43 15.1 +1.0**
baz=270
E23K Chandalar 35.42 34 P **P** **22 43 15.2 +0.7**
baz=266
TOLK Toolik Lake Re 35.49 33 P **P** **22 43 15.6 +0.6**
baz=265,SNR=10
NEA2 Nenana 35.51 40 P **P** **22 43 16.3 +1.1**
baz=271
MCK McKinley 35.58 41 P **P** **22 43 16.5 +0.6**
baz=272
WAT1 Susitna Watana 35.80 43 P **P** **22 43 17.9 +0.2**
baz=274
D24K Happy Valley 35.81 32 P **P** **22 43 18.1 +0.5**
baz=265
C24K Franklin Bluff 35.91 31 P **P** **22 43 19.0 +0.5**
baz=264
SML Sawmill 35.98 44 P **P** **22 43 20.4 +1.1**
baz=276
H24K Noodor Dome 36.00 37 P **P** **22 43 20.4 +0.9**
baz=270
COLA College 36.02 39 P **P** **22 43 20.7 +1.1**
baz=272
F24K Squaw Lake 36.04 35 P **P** **22 43 20.6 +0.8**
baz=268
G24K Hadweenzic Riv 36.17 36 P **P** **22 43 21.9 +1.0**
baz=270,SNR=6.6
POKR Poker Plat Res 36.20 39 P **P** **22 43 21.6 +0.5**
baz=272
M23K Glacier View 36.26 44 P **P** **22 43 22.3 +0.6**
baz=276
DHY Denali Highway 36.32 42 P **P** **22 43 22.3 0.0**
baz=275
HDA Harding Lake 36.43 40 P **P** **22 43 23.5 +0.5**
baz=273
ILAR Eielson Array 36.44 39 P **P** **22 43 23.4 +0.3**
comp=Z,1.3nm,0.6s,baz=268,slow=6.4,SNR=24
comp=Z,1.3nm,0.6s
D25K Kavik River 36.69 32 P **P** **22 43 26.3 +1.0**
baz=267
G25K Bearman Lake 36.72 36 P **P** **22 43 26.4 +0.9**
baz=271
F25K Christian Rive 36.90 35 P **P** **22 43 28.1 +1.0**
baz=270
E25K Arctic Village 36.94 34 P **P** **22 43 28.4 +1.1**
baz=269,SNR=8.2
K24K Donnelly Dome 36.98 41 P **P** **22 43 27.8 +0.1**
baz=275
PRP Porcupine Dome 36.98 38 P **P** **22 43 29.1 +1.2**
baz=273
J25K Salcha River, 37.10 40 P **P** **22 43 28.7 -0.1**
baz=274
KLU Klutina 37.15 45 P **P** **22 43 30.2 +0.9**
baz=278
BMAR Burnt Mountain 37.31 35 P **P** **22 43 31.4 +1.0**
HARP HAARP 37.40 43 P **P** **22 43 32.4 +1.1**
baz=277
F26K Sheenjek River 37.47 34 P **P** **22 43 33.3 +1.5**
baz=271
G26K Porcupine Rive 37.63 36 P **P** **22 43 34.5 +1.4**
baz=273,SNR=8.7
SCRK Sand Creek 37.75 40 P **P** **22 43 34.0 -0.4**
SCRK Sand Creek 37.75 40 P **P** **22 43 34.4 0.0**
baz=276
BMRM Bremner River 37.86 45 P **P** **22 43 36.4 +1.2**
baz=280
M26K Nabesna, AK 38.40 43 P **P** **22 43 41.0 +1.3**
baz=279
H27K Steamboat Moun 38.58 37 P **P** **22 43 42.6 +1.5**
baz=276
K27K Chicken 38.58 40 P **P** **22 43 41.7 +0.6**
baz=278
D27M Malcolm River 38.62 32 P **P** **22 43 42.3 +0.9**
baz=272
L27K Beaver Creek, 38.83 42 P **P** **22 43 44.3 +1.1**
L27K IAmb IAmb 22 43 45.8
comp=Z,9.7nm,1.4s
L27K Beaver Creek, 38.83 42 P **P** **22 43 45.1 +1.9**
baz=279
BCAR Beaver Creek A 38.85 42 P **P** **22 43 44.6 +1.2**
EGAK Eagle 38.88 39 P **P** **22 43 44.0 +0.4**
baz=278
M27K Edge Creek, AK 38.92 43 P **P** **22 43 45.3 +1.2**
baz=280
F28M Old Crow 39.11 34 P **P** **22 43 46.8 +1.3**
baz=275,SNR=6.8
E28M Babbage River 39.16 33 P **P** **22 43 47.7 +1.8**
baz=274
I28M Miner Creek 39.31 38 P **P** **22 43 49.0 +1.7**
baz=278
BVCY Beaver Creek 39.38 43 P **P** **22 43 49.3 +1.6**
baz=281
CTGM Chitina Glacie 39.43 45 P **P** **22 43 49.4 +1.1**
CTGM IAmb IAmb 22 44 15.3
comp=Z,16nm,1.4s
LOGN Logan Glacier 39.62 45 P **P** **22 43 51.6 +1.7**
E29M Blow River 39.78 33 P **P** **22 43 52.1 +1.1**
baz=276
H29M Whitestone 39.85 36 P **P** **22 43 53.1 +1.5**
baz=278
M29M Somme Creek 40.46 42 P **P** **22 43 58.3 +1.5**
baz=283
L29M L29M 40.48 41 P **P** **22 43 59.3 +2.5**
baz=282
EPYK Eagle Plains 40.49 36 P **P** **22 43 58.4 +1.6**
baz=279
G30M tAoh Zraii Nji 40.59 35 P **P** **22 43 58.8 +1.1**
baz=279
K29M Barlow Dome 40.60 40 P **P** **22 43 59.3 +1.4**
baz=282
F30M Barrier River 40.66 34 P **P** **22 43 59.7 +1.4**
baz=279
I30M Mount Dempster 40.82 38 P **P** **22 44 00.8 +1.1**
baz=281
J30M Hart River 40.97 39 P **P** **22 44 02.5 +1.6**
baz=282
HYT Haines Junctio 41.28 45 P **P** **22 44 04.6 +1.1**
baz=285
N30M Aishikik Lake 41.32 44 P **P** **22 44 05.3 +1.6**
baz=285
ZALV Zalesovo Beam 41.34 305 P **P** **22 44 02.4 -1.5**
ZALV Zalesovo Beam 41.34 305 P **P** **22 44 02.5 -1.4**
comp=Z,0.7nm,0.3s,baz=70,slow=6.9,SNR=5.7
ZALV PcP **PcP** **22 45 59.3 +0.7**
comp=Z,2.5nm,0.6s,baz=56,slow=3.8,SNR=13
comp=Z,0.7nm,0.3s
G31M Satah River 41.36 35 P **P** **22 44 05.0 +1.2**
baz=281
DGZ Jazzator, Alta 41.36 298 *i* P **P** **22 44 03.9 -0.5**
DGZ pmax pmax
comp=Z,1.0nm,0.3s
INK Inuvik 41.40 33 P **P** **22 44 05.1 +0.9**
INK IAmb IAmb 22 44 05.9
comp=Z,10nm,1.2s
INK Inuvik 41.40 33 P **P** **22 44 05.2 +0.9**
baz=280,SNR=7.7
INK Inuvik 41.40 33 P **P** **22 44 05.1 +0.9**
INK pmax pmax
comp=Z,10.0nm,1.2s
F31M Tsiigehtchic 41.47 34 P **P** **22 44 05.5 +0.8**
baz=281,SNR=6.6
O30N Mendenhall 41.97 44 P **P** **22 44 09.7 +0.7**
baz=286
FARO Faro, Yukon 42.83 42 P **P** **22 44 17.4 +1.5**
baz=287
A36M Sachs Harbour 43.47 27 P **P** **22 44 21.2 +0.4**
A36M IAmb IAmb 22 44 23.0
comp=Z,12nm,0.7s
A36M Sachs Harbour 43.47 27 P **P** **22 44 22.2 +1.4**
baz=283
MK31 Makanchi Array 45.71 296 P **P** **22 44 38.5 -0.5**
MK31 PcP **PcP** **22 46 15.0 +1.4**
MK31 Makanchi Array 45.71 296 *i* P **P** **22 44 37.8 -1.1**
MKAR Makanchi Array 45.71 296 P **P** **22 44 38.4 -0.5**
comp=Z,0.9nm,0.5s,baz=67,slow=7.4,SNR=18
MKAR pP **pwP** **22 45 21.2 -0.2**
comp=Z,1.2nm,0.8s,baz=65,slow=9.9,SNR=5.0
MKAR PcP **PcP** **22 46 14.3 +0.7**
comp=Z,1.0nm,0.6s,baz=72,slow=4.0,SNR=8.8
comp=Z,0.9nm,0.5s
KURK Kurchatov 46.10 302 P **P** **22 44 41.0 -0.8**
KURK Kurchatov 46.10 302 *i* P **P** **22 44 40.5 -1.4**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 46.10 302 *eP* **P** **22 44 40.5 -1.4**
KURBB Kurchatov Arra 46.19 302 P **P** **22 44 41.6 -1.0**
comp=Z,0.9nm,0.6s,baz=68,slow=8.6,SNR=10
KURBB pP **pP** **22 45 24.3 +3.4**
comp=Z,1.3nm,0.8s,baz=67,slow=8.4,SNR=4.1
KURBB PcP **PcP** **22 46 15.7 +0.5**
comp=Z,1.2nm,0.7s,baz=67,slow=3.2,SNR=7.7
comp=Z,0.9nm,0.6s
BVAR Borovoye Array 49.58 308 P **P** **22 45 08.1 -0.5**
comp=Z,2.1nm,0.3s,baz=53,slow=8.8,SNR=35
BVAR pP **pP** **22 45 51.1 +3.8**
comp=Z,1.2nm,0.8s,baz=58,slow=5.8,SNR=2.4
BVAR PcP **PcP** **22 46 27.8 +0.4**
comp=Z,1.9nm,0.4s,baz=80,slow=3.6,SNR=12
comp=Z,2.1nm,0.3s
BRVK Borovoye 49.62 308 P **P** **22 45 08.3 -0.5**
BRVK Borovoye 49.62 308 *i* P **P** **22 45 07.5 -1.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 49.62 308 *eP* **P** **22 45 07.5 -1.3**
RES Resolute Bay 50.29 18 P **P** **22 45 13.6 0.0**
RES IAmb IAmb 22 45 14.8
comp=Z,12nm,1.1s
RES Resolute Bay 50.29 18 P **P** **22 45 13.6 0.0**
RES pmax pmax
comp=Z,12nm,1.2s
YKA Yellowknife Ar 50.77 37 P **P** **22 45 17.1 -0.1**
YKA Yellowknife Ar 50.77 37 P **P** **22 45 18.0 +0.7**
comp=Z,1.7nm,0.7s,baz=299,slow=7.4,SNR=24
comp=Z,1.7nm,0.7s
CHTO Chiang Mai 51.44 255 P **P** **22 45 23.7 +0.8**
CHTO IAmb IAmb 22 45 25.6
comp=Z,4.4nm,0.8s
CHTO Chiang Mai 51.44 255 P **P** **22 45 23.7 +0.8**
CHTO pmax pmax
comp=Z,4.0nm,0.8s
SHL Shillong 51.48 267 P **P** **22 45 23.1 -0.3**
SHL IAmb IAmb 22 45 24.5
comp=Z,5.4nm,0.6s
SHL Shillong 51.48 267 P **P** **22 45 23.1 -0.3**
SHL pmax pmax
comp=Z,5.0nm,0.6s
CMAR Chiang Mai Arr 51.70 254 P **P** **22 45 25.6 +0.8**
CMAR Chiang Mai Arr 51.70 254 P **P** **22 45 27.1 +2.3**
comp=Z,2.8nm,0.8s,baz=35,slow=7.0,SNR=19
comp=Z,2.8nm,0.8s
ARU Arti 53.73 317 P **P** **22 45 38.2 -1.0**
ARU IAmb IAmb 22 45 39.4
comp=Z,6.3nm,0.7s
ARU Arti 53.73 317 *c iP* **P** **22 45 37.8 -1.4**
ARU 22 46 44.1
ARU S **S** **22 52 57.3 -1.7**
ARU SS **SKiKP** **22 56 34.3 +1.2**
ARU pmax pmax
comp=Z,15nm,1.6s
ARU Arti 53.73 317 *eP* **P** **22 45 37.9 -1.3**
BTK Batken 56.36 294 P **P** **22 45 57.9 -0.5**
BTK IAmb IAmb 22 46 00.3
comp=Z,2.2nm,0.6s
BTK Batken 56.36 294 P **P** **22 45 57.9 -0.5**
BTK pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 56.70 340 *eP* **P** **22 46 00.2 -0.1**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES ARCESS Array B 56.70 340 P **P** **22 45 59.7 -0.6**
comp=Z,5.1nm,0.9s,baz=33,slow=7.1,SNR=5.7
ARCES PcP **PcP** **22 46 53.8 -0.4**
comp=Z,5.4nm,1.0s,baz=42,slow=2.3,SNR=5.2
comp=Z,5.1nm,0.9s
ABKAR Akbulak array 57.14 309 P **P** **22 46 03.0 -0.6**
ABKAR IAmb IAmb 22 46 03.8
comp=Z,2.9nm,0.6s
ABKAR Akbulak array 57.14 309 P **P** **22 46 02.9 -0.7**
SIMJ Simiganj 58.32 294 P **P** **22 46 11.9 -0.3**
NIL Nilore 58.75 287 P **P** **22 46 15.9 +0.8**
NIL Nilore 58.75 287 P **P** **22 46 15.9 +0.8**
NIL pmax pmax
comp=Z,10.0nm,0.8s
FFC Flin Flon 60.65 40 P **P** **22 46 28.5 +0.8**
FFC IAmb IAmb 22 46 29.5
comp=Z,2.9nm,0.8s
FFC Flin Flon 60.65 40 P **P** **22 46 28.5 +0.8**
FFC pmax pmax
comp=Z,3.0nm,0.8s
FIA1 FINESS Array S 62.83 334 P **P** **22 46 40.7 -1.4**
FINES FINESS Array B 62.84 334 P **P** **22 46 40.7 -1.4**
FINES FINESS Array B 62.84 334 P **P** **22 46 40.9 -1.3**
comp=Z,3.3nm,0.4s,baz=37,slow=7.1,SNR=35
FINES PcP **PcP** **22 47 18.7 -0.1**
comp=Z,1.0nm,0.5s,baz=89,slow=1.9,SNR=4.1
comp=Z,3.3nm,0.4s
OBN Obninsk 64.05 325 *eP* **P** **22 46 49.5 -0.7**
OBN *e* 22 47 21.6
OBN *e**PP **pP** **22 47 30.1 -0.8**
OBN *e**SP **sP** **22 47 50.6 +0.8**
OBN *e* 22 49 13.6
OBN pmax pmax
comp=Z,2.0nm,0.9s
OBN Obninsk 64.05 325 *eP* **P** **22 46 49.5 -0.7**
SFJD Kangerlussuaq 64.43 10 P **P** **22 46 51.9 -0.6**
SFJD IAmb IAmb 22 46 55.5
comp=Z,4.2nm,1.0s
SFJD Kangerlussuaq 64.43 10 P **P** **22 46 51.9 -0.6**
SFJD pmax pmax
comp=Z,4.0nm,1.0s
BW06 Boulder Array 64.97 53 P **P** **22 46 59.8 +3.1**
baz=313
PDAR Pinedale Array 64.97 53 P **P** **22 46 57.0 +0.3**
comp=Z,0.3nm,0.5s,baz=282,slow=0.5,SNR=4.8
comp=Z,0.3nm,0.5s
ULM Lac du Bonnet 66.45 40 *eP* **P** **22 47 06.8 +1.1**
ULM pmax pmax
comp=Z,1.0nm,0.6s
ULM Lac du Bonnet 66.45 40 P **P** **22 47 05.9 +0.2**
comp=Z,1.1nm,0.5s,baz=219,slow=4.2,SNR=3.7
comp=Z,1.1nm,0.5s
NC303 NORSAR Array S 66.88 340 P **P** **22 47 07.8 -0.5**
NB2 NORSAR Subarra 67.08 340 P **P** **22 47 08.8 -0.8**
comp=Z,2.3nm,0.6s,baz=30,slow=6.5
NOA NORSAR Array B 67.08 340 P **P** **22 47 08.9 -0.8**
comp=Z,0.9nm,0.4s,baz=30,slow=6.6,SNR=13
comp=Z,0.9nm,0.4s
HFS Hagfors 67.29 339 P **P** **22 47 09.9 -1.0**
comp=Z,3.0nm,0.3s,baz=49,slow=6.7,SNR=29
comp=Z,3.0nm,0.3s
WRA Warramunga Arr 69.07 198 P **P** **22 47 23.5 +1.1**
comp=Z,0.5nm,1.0s,baz=22,slow=6.8,SNR=1.6
comp=Z,0.5nm,1.0s
KBZ Khabaz 69.57 313 *i* P **P** **22 47 24.9 -0.4**
KBZ pmax pmax
comp=Z,6.0nm,2.0s
KBZ Khabaz 69.57 313 P **P** **22 47 25.6 +0.3**
comp=Z,1.5nm,0.8s,baz=34,slow=10,SNR=5.5
comp=Z,1.5nm,0.8s
KBZ Khabaz 69.57 313 *eP* **P** **22 47 24.9 -0.4**
AKASG Malin Array Be 70.29 325 P **P** **22 47 28.2 -1.4**
comp=Z,1.6nm,0.4s,baz=36,slow=6.4,SNR=7.8
comp=Z,1.6nm,0.4s
AKBB Malin Array Si 70.29 325 P **P** **22 47 28.4 -1.1**
AKBB IAmb IAmb 22 47 38.4
comp=Z,5.6nm,1.3s
AKBB Malin Array Si 70.29 325 P **P** **22 47 28.4 -1.1**
AKBB pmax pmax
comp=Z,6.0nm,1.3s
KIEV Kiev 70.30 325 P **P** **22 47 28.4 -1.2**
KIEV Kiev 70.30 325 P **P** **22 47 28.4 -1.2**
KIEV pmax pmax
comp=Z,5.0nm,1.3s
ASAR Alice Springs 72.77 197 P **P** **22 47 47.1 +2.5**
comp=Z,0.4nm,0.5s,baz=337,slow=5.4,SNR=4.9
comp=Z,0.4nm,0.5s
SCHQ Schefferville 72.84 22 P **P** **22 47 44.9 +0.1**
comp=Z,1.3nm,0.4s,baz=337,slow=6.7,SNR=10.0
comp=Z,1.3nm,0.4s
EKA Eskdalemuir Ar 75.25 345 P **P** **22 47 58.4 -0.3**
comp=Z,0.8nm,0.4s,baz=19,slow=5.0,SNR=11
comp=Z,0.8nm,0.4s
GERES GERESS Array B 77.24 333 P **P** **22 48 09.2 -1.0**
comp=Z,0.3nm,0.3s,baz=94,slow=8.0,SNR=3.6
comp=Z,0.3nm,0.3s
TXAR Lajitas Array 77.86 60 P **P** **22 48 14.5 +0.6**
comp=Z,0.6nm,0.6s,baz=289,slow=3.1,SNR=7.6
comp=Z,0.6nm,0.6s
LESA Schwarzleotal 78.82 333 *eP* **P** **22 48 18.7 -0.1**
comp=Z,1.7nm,0.5s
KBA Koelnbreinsper 78.92 332 *i* P **P** **22 48 19.4 -0.1**
comp=Z,2.7nm,0.4s
MYKA Terra Mystica 79.23 332 *i* P **P** **22 48 21.2 +0.2**
comp=Z,0.8nm,0.3s
WATA Waldeim 79.23 334 *i* P **P** **22 48 19.7 -1.5**
comp=Z,2.2nm,0.3s
WTTA Wattenberg 79.28 334 *i* P **P** **22 48 21.6 +0.1**
comp=Z,2.8nm,0.4s
MOTA Moosalm 79.37 334 *i* P **P** **22 48 22.2 +0.3**
comp=Z,4.4nm,0.8s
SQTA Sankt Quirin 79.45 334 *i* P **P** **22 48 21.0 -1.3**
comp=Z,0.7nm,0.3s
ABTA Abfaltersbach 79.48 333 *eP* **P** **22 48 21.2 -1.3**
comp=Z,0.9nm,0.5s
FETA Feichten 79.77 334 *eP* **P** **22 48 22.0 -2.1**
comp=Z,0.8nm,0.5s
DAVA Damuels 79.78 335 *i* P **P** **22 48 25.0 +0.8**
comp=Z,4.7nm,0.7s
MMAI Mount Meron Ar 81.53 310 P **P** **22 48 33.9 +0.3**
comp=Z,1.1nm,0.5s,baz=49,slow=8.9,SNR=4.4
comp=Z,1.1nm,0.5s
KEST Kesra 90.44 330 P **P** **22 49 17.3 +0.1**
comp=Z,3.9nm,0.7s,baz=52,slow=0.9,SNR=4.7
comp=Z,3.9nm,0.7s

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*JMA **07**:22:44:28.8±0.3,24°.1N±0°.8×12°2E±°, h0km, TAIWAN REGION*
*TAP **07**:22:44:29.1,24°.12N×121°.70E, h9km, ML3.2, C*
ISC 07:22:44:29.0±0.9,**24°.10N**±0°.02×**121°.74E**±0°.02,**h7**km±6km,
n97,σ0°63/161,**2C-22D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=296	**0.12**	**299**	⇓*iP*		**Pg**		**22 44 31.7**	**0.0**
ETL				*i*	S	**Sg**		22 44 33.4	-0.2
TWD	**Chiawan** baz=255	**0.13**	**262**	⇓*iP*		**Pg**		22 44 31.9	0.0
TWD					S	**Sg**		22 44 33.9	+0.1
NACB	**Ninganchiao**	**0.15**	**299**		P	**Pg**		22 44 32.1	-0.1
NACB	**Ninganchiao** baz=297	**0.15**	**299**	⇓*iP*		**Pg**		22 44 32.1	-0.1
NACB					S	**Sg**		22 44 34.2	-0.2
HWA	**Hwalien** baz=221	**0.17**	**225**	*eP*		**Pg**		22 44 33.8	+1.3
EHP	**Heping Village** baz=10.0	**0.21**	**0**	*i* P		**Pg**		22 44 33.4	+0.2
EHP					S	**Sg**		22 44 36.6	+0.5
EAHA	**Aohua** baz=6.0	**0.23**	**360**	⇓*iP*		**Pg**		22 44 33.7	+0.1
EAHA				*i*	S	**Sg**		22 44 37.1	+0.4
ETLH	**Xiulin Townshi** baz=293	**0.26**	**294**	⇓*iP*		**Pg**		22 44 34.1	-0.1
ETLH				*i*	S	**Sg**		22 44 37.8	+0.1
ETM	**Tongmen** baz=235	**0.26**	**240**	⇑*iP*		**Pg**		22 44 34.3	+0.1
ETM					S	**Sg**		22 44 38.3	+0.6
LXIB	**Xiulin Townshi** baz=251	**0.31**	**255**	⇓*iP*		**Pg**		22 44 35.0	-0.1
LXIB					S	**Sg**		22 44 39.0	-0.3
ENA	**Nanau** baz=6.0	**0.33**	**0**	⇓*iP*		**Pg**		22 44 35.6	+0.1
ENA					S	**Sg**		22 44 40.0	+0.2
EWUT	**Wuta** baz=10.0	**0.35**	**6**	⇓*iP*		**Pg**		22 44 36.0	+0.2
EWUT				*e*	S	**Sg**		22 44 40.3	-0.1
SHUL	**Shoufeng**	**0.35**	**208**	*eP*		**Pb**		22 44 37.4	-0.2

baz=210
ESL Shilin 0.40 225 *e*P Pg 22 44 37.0 +0.2
baz=228
ESL *e*S Sb 22 44 43.9 -0.8
baz=228
WHF Hehuan Shan 0.44 276 *i* P Pg 22 44 37.5 -0.1
baz=274
WHF *i* S Sg 22 44 43.2 -0.2
baz=274
NNSB Datong 0.46 315⇓*i*P Pg 22 44 38.1 +0.1
baz=315
NNSB *i* S Sg 22 44 44.1 0.0
baz=315
LATG Datong 0.48 336⇓*i*P Pg 22 44 38.3 0.0
baz=337
LATG S Sg 22 44 44.7 +0.2
baz=337
FUSS Fushou 0.48 288 P Pg 22 44 38.5 +0.2
baz=287
FUSS S Sg 22 44 44.8 +0.2
baz=287
NNS Nan Shan 0.48 315⇓*i*P Pg 22 44 38.3 0.0
baz=316
NNS S Sg 22 44 44.7 +0.2
baz=316
ESAO Su ao 0.48 11 ⇓P Pg 22 44 38.5 +0.1
baz=13
ESAO *i* S Sg 22 44 44.9 +0.2
baz=13
WARBT Fenglin Townsh 0.50 221 *e*P Pg 22 44 38.9 +0.2
baz=227
EGFH Guangfu 0.52 214 *e*P Pg 22 44 39.8 +0.8
baz=222
EGFH *e*S Sb 22 44 48.4 +0.3
baz=222
TWC Suao 0.52 11 ⇓P Pg 22 44 39.2 +0.2
baz=8.0
TWC *e*S Sg 22 44 46.8 +1.0
baz=8.0
CHGB Renai 0.52 266 P Pg 22 44 39.3 +0.2
baz=256
CHGB S Sg 22 44 45.9 -0.1
baz=256
EOS4 EOS4 0.53 88 *e*P Pn 22 44 42.0 -0.7
baz=87
NDS Dongshan 0.53 358 P Pg 22 44 39.7 +0.3
baz=358
NDS S Sg 22 44 46.5 +0.2
baz=358
OWD Renai 0.54 255 P Pg 22 44 39.5 +0.1
baz=254
TWT Tachien 0.54 287 *e*P Pg 22 44 40.0 +0.6
baz=284
TWT *e*S Sg 22 44 47.0 +0.5
baz=284
NDT Datong Townshi 0.54 338 ⇓P Pg 22 44 39.8 +0.3
baz=338
NDT S Sg 22 44 47.4 +0.8
baz=338
EOS2 EOS2 0.55 55 *e*P Pb 22 44 41.9 +1.0
baz=35
TDCB Techi 0.55 286 *e*P Pg 22 44 40.1 +0.4
baz=285
TDCB *e*S Sg 22 44 47.1 +0.2
baz=285
EOS3 EOS3 0.56 70 *e*P Pn 22 44 43.4 +0.2
baz=51
ENTT Nioudou 0.56 344⇓*i*P Pg 22 44 40.1 +0.3
baz=344
ENTT S Sg 22 44 47.7 +0.4
baz=344
WUSB Renai 0.58 260 P Pg 22 44 40.5 +0.2
baz=258
WUSB S Sg 22 44 47.6 -0.2
baz=258
YHNB Yeheng 0.66 330 P Pg 22 44 42.2 +0.5
YHNB Yeheng 0.66 330 ⇓P Pg 22 44 42.1 +0.4
baz=330
YHNB *e*S Sg 22 44 50.5 +0.1
baz=330
ILA Ilan 0.66 1 *e*S Sb 22 44 51.8 -0.6
baz=2.0
HGSD Ruisui 0.67 206 ⇓P Pb 22 44 42.7 -0.3
baz=196
FUSB Fushanzhiwuyua 0.67 348⇓*i*P Pg 22 44 42.3 +0.3
baz=349
FUSB S Sg 22 44 51.1 +0.3
baz=349
NSK Sanguang 0.67 329 ⇓P Pg 22 44 42.2 +0.2
baz=329
NSK *e*S Sg 22 44 50.8 0.0
baz=329
EHY Hungye 0.70 213 *e*P Pg 22 44 42.6 0.0
baz=213
NWLT Wulai 0.71 342 P Pg 22 44 43.1 +0.4
baz=349
NWLT S Sg 22 44 51.9 0.0
baz=349
WHP Taichung City 0.75 284 *e*P Pb 22 44 44.2 -0.2
baz=283
WHP *e*S Sb 22 44 54.2 -0.6
baz=283
WCS Beigang Elemen 0.76 267 *e*P Pg 22 44 43.8 +0.2
baz=267
NFF Wufeng Townshi 0.78 313 *e*P Pb 22 44 44.5 -0.4
baz=313
NFF *e*S Sg 22 44 54.3 +0.2
baz=313
SSLB Suanglung 0.78 247 P Pg 22 44 44.2 +0.1
SSLB Suanglung 0.78 247⇑*e*P Pg 22 44 44.1 0.0
baz=256
SSLB *e*S Sg 22 44 53.6 -0.6
baz=256
SMLT Sun Moon Lake 0.80 255 ⇓P Pg 22 44 44.7 +0.3
baz=253
SMLT *e*S Sb 22 44 55.4 -0.9
baz=253
YULB Yu-li 0.81 210 P Pb 22 44 45.3 -0.2
YULB Yu-li 0.81 210 *e*P Pg 22 44 44.6 -0.1
baz=225
ECBN Changbin 0.82 199 *e*P Pb 22 44 45.5 -0.1
baz=189
TYC Yuchr 0.83 257 *e*P Pg 22 44 45.3 +0.3
baz=256
TYC *e*S Sg 22 44 55.6 -0.2
baz=256
TWF1 Yuli 0.85 209 *e*P Pg 22 44 45.8 +0.5
baz=220
TWF1 *e*S Sn 22 44 58.9 -1.2
baz=220
LIOB Emei 0.86 310 *e*P Pb 22 44 46.3 +0.1
baz=309
LIOB *e*S Sg 22 44 56.8 +0.2
baz=309
NSTT Nanjuang 0.86 308 P Pb 22 44 46.1 -0.1
baz=308
NSTT *e*S Sb 22 44 57.3 -0.7
baz=308
TIPB Shuangxi 0.87 5 *e*P Pg 22 44 46.2 +0.4
baz=356
TIPB *e*S Sg 22 44 57.0 -0.2
baz=356
NHDH Xindian Distri 0.88 347 *e*P Pb 22 44 46.5 -0.1
baz=338
NHDH *e*S Sg 22 44 57.6 +0.1
baz=338
TATO Taipei 0.90 345 P Pb 22 44 47.1 +0.1
WHYT Xinyi Township 0.91 244 *e*P Pb 22 44 47.3 +0.2
baz=245
TWQ1 Liyutan 0.92 286 *e*P Pn 22 44 48.8 +0.4
baz=296
TWQ1 *e*S Sn 22 45 04.5 +2.8
baz=296
TWB1 Santiao Chiao 0.93 14 *e*P Pg 22 44 47.0 +0.1
baz=6.0
TWB1 *e*S Sg 22 44 58.6 -0.4
baz=6.0
WJS Zhushan 0.97 254 *e*P Pn 22 44 48.7 -0.3
baz=253
WJS S Sn 22 45 02.7 -0.3
baz=253
NWF Wu-fen Shan 0.97 2 *e*P Pb 22 44 48.2 +0.1
baz=352
NWF *e*S Sg 22 45 00.3 +0.1
baz=352
WFSB Wu-fen Shan 0.97 2 *e*P Pb 22 44 48.3 +0.2
baz=353
WFSB *e*S Sg 22 45 00.1 -0.2

baz=353
NMLH Miaoli 0.97 297 *e*P Pn 22 44 50.3 +1.3
baz=296
SBCB Hsinchu 0.97 315 *e*P Pn 22 44 49.2 +0.1
baz=314
WNT Mingjian 0.99 257 *e*P Pn 22 44 49.4 +0.1
baz=252
WNT *e*S Sn 22 45 03.9 +0.4
baz=252
SXI1 Grass Mountain 1.00 7 ⇓P Pb 22 44 48.7 +0.1
baz=350
ALS Alishan 1.04 236 *e*P Pb 22 44 49.6 +0.1
baz=236
ALS *e*S Sn 22 45 04.4 -0.8
baz=236
TWS1 Kuangyinshan 1.04 344 *e*P Pn 22 44 50.2 +0.2
baz=343
TWS1 *e*S Sn 22 45 04.0 -0.7
baz=343
YM01 YM01 1.05 352 *e*P Pn 22 44 50.1 -0.2
baz=336
YM01 *e*S Sb 22 45 03.9 +0.2
baz=336
WCHH Zhanghua 1.08 269 *e*P Pn 22 44 51.8 +1.2
baz=269
CHN5 Tsauling 1.09 243 *e*P Pn 22 44 51.0 +0.2
baz=244
CHN5 *e*S Sn 22 45 06.4 +0.2
baz=244
YM08 YM08 1.09 353 *e*P Pg 22 44 50.1 +0.1
baz=335
ANP Anpu 1.10 350 *e*P Pb 22 44 50.6 +0.1
baz=346
ELDTW Lidau 1.12 216 *e*P Pg 22 44 49.3 -1.3
baz=209
WDLH Douliu 1.17 250 *e*P Pn 22 44 52.4 +0.5
baz=250
WDLH *e*S Sn 22 45 09.1 +1.0
baz=250
EDH Donghe 1.19 200 *e*P Pb 22 44 49.0 -2.9
baz=188
EDH *e*S Sb 22 45 06.9 -0.6
baz=188
YOJ Yonaguni jima 1.22 72 *e*P Pn 22 44 51.6 -0.7
baz=66
WCKO Fanlu 1.23 238 ⇓P Pg 22 44 53.7 +1.0
baz=239
WCKO *e*S Sn 22 45 10.8 +1.2
baz=239
WRL Guolierlin Hig 1.26 261 *e*P Pg 22 44 53.6 +0.4
baz=262
STYH Taoyuan 1.28 224 *e*P Pn 22 44 52.9 -0.4
baz=226
STYH *e*S Sb 22 45 10.0 0.0
baz=226
CHN4 Tsaushan 1.29 235 *e*P Pg 22 44 54.2 +0.5
baz=224
CHN4 *e*S Sn 22 45 12.4 +1.5
baz=224
TPUB Ta-pu 1.29 232 P Pg 22 44 54.7 +0.9
WTK Tuku 1.30 252 *e*P Pg 22 44 54.8 +0.8
baz=252
WTK *e*S Sn 22 45 11.9 +0.6
baz=252
WTP Ta-pu 1.34 231 *e*P Pg 22 44 54.7 0.0
baz=234
TWGBT Beinan 1.41 206 P Pg 22 44 56.8 +0.7
TWK Hsinying 1.42 234 *e*P Pg 22 44 56.3 +0.1
baz=238
CHN1 Nanshi 1.44 231 *e*P Pg 22 44 56.8 +0.3
baz=234
CHN1 *e*S Sg 22 45 16.5 +1.3
baz=234
SNST Tainan City 1.44 233 *e*P Pg 22 44 56.5 0.0
baz=235
SNST *e*S Sg 22 45 16.8 +1.5
baz=235
SGST Jiashian 1.47 227 *e*P Pn 22 44 56.1 +0.2
baz=229
SGST *e*S Sg 22 45 17.6 +1.4
baz=229
SLGT Liugui 1.49 223 *e*P Pb 22 44 57.0 0.0
baz=226
SLGT *e*S Sg 22 45 17.6 +0.7
baz=226
JIJ Ishigaki jima 2.21 83 P Pn 22 45 05.9 -0.2
JIJ S Sn 22 45 34.7 +1.0
VWUC VWUC 2.27 294 *e*P Pn 22 45 06.5 -0.4
baz=292
VWUC *e*S Sn 22 45 34.6 -0.5
baz=292
PTMZ Houxiangcun 2.56 292 *e*P Pn 22 45 10.6 -0.4
baz=291
PTMZ *e*S Sn 22 45 40.1 -2.2
baz=291
KNMB Chin-men Tao 3.08 277 *e*P Pn 22 45 17.9 -0.1
baz=279
AXDP Jialang 3.53 284 *e*P Pn 22 45 24.2 +0.1
baz=283
AXDP *e*S Sn 22 46 04.7 -1.5
baz=283

*IDC **07** 22:54:22.6±17.0, 7°.31S×119°.54E, h0km, mb3.7/2, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=301.1km s-min=191.8km az=6.0*
*DJA **07** 22:54:48.6±0.7, 8°S±12°×12°0E±°, h177km±10km, M3.6/8, mb3.4/1, mB4.8/1, MLv3.7/8, Mw(mB)4.0/1*
ISC 07 22:54:49.6±1.4, 8°.4S±0°.2×119°.99E±0°.06, h150km, n10, σ2s 27/12, Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.71**	**101**	P		**Pn**	**22 55 23.5**	**+1.9**
EDFI				S		**Sn**	**22 55 48.5**	**+2.4**
BASI	**Baing, Sumba**	**1.88**	**162**	P		**Pn**	**22 55 26.4**	**+3.1**
PLAI	**Plampang**	**2.23**	**259**	P		**Pn**	**22 55 29.4**	**+2.0**
MMRI	**Maumere**	**2.23**	**96**	P		**Pn**	**22 55 29.0**	**+1.5**
TWSI	**Taliwang, Sumb**	**3.09**	**264**	P		**Pn**	**22 55 39.7**	**+1.6**
SOEI	**Soe**	**4.43**	**108**	P		**Pn**	**22 55 56.4**	**+0.8**
JAGI	**Jajag, Banyuwa**	**5.78**	**269**	P		**Pn**	**22 56 13.1**	**-0.2**
WRA	**Warramunga Arr**	**18.00**	**131**	P		**P**	**22 58 46.3**	**-2.7**
	0.3nm,0.3s,baz=309,slow=12,SNR=23							
WRA				S		**S**	**23 02 05.0**	**-2.9**
	0.2nm,0.5s,baz=306,slow=24,SNR=5.2							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**20.19**	**140**	P		**P**	**22 59 11.8**	**-0.8**
	0.8nm,0.5s,baz=318,slow=8.8,SNR=11							
ASAR				S		Sn	23 03 00.8	-4.0
	0.3nm,0.7s,baz=308,slow=22,SNR=2.5							
	0.8nm,0.5s							
STKA	**Stephens Creek**	**30.79**	**142**	P		**P**	**23 00 50.0**	**-1.1**
	2.0nm,0.6s,baz=294,slow=9.5,SNR=3.1							
	2.0nm,0.6s							

*KRNET **07** 23:02:43.7±0.1, 40°.80N×74°.13E, h21km, mb2.7*
*NNC **07** 23:02:43.4±2.0, 40°.77N×74°.10E, h0km, mb3.5, mpv3.5, Error ellipse: s-maj=15.1km s-min=8.0km az=165.0*
*SOME **07** 23:02:44.0, 40°.73N×74°.22E, h15km*
*KNET **07** 23:02:46.5±0.3, 40°.96N×74°.08E, h9km±3km, ml2.2, Error ellipse: s-maj=3.4km s-min=2.3km az=61.0*
ISC 07 23:02:44.3±1.8, 40°.74N±0°.03×74°.11E±0°.02, h8km±14km, n54, σ1s 24/94, 28C-32D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.86**	**213**	⇓*i*P		**Pb**	**23 03 01.0**	**-0.6**
	baz=11							
SFK				⇓*i*S		**Sg**	**23 03 13.3**	**+1.3**
	baz=11							
OHH	**Osh**	**1.03**	**259**	⇓*i*P		**Pb**	**23 03 03.4**	**-1.0**
	baz=55							
OHH				⇓*i*S		**Sb**	**23 03 17.4**	**-0.7**
	baz=55							
ARSB	**Arslanbob**	**1.03**	**305**	⇑*i*P		**Pb**	**23 03 02.8**	**-1.8**
	baz=1.0							
ARSB				⇑*i*S		**Sb**	**23 03 16.6**	**-1.8**
	baz=1.0							
ARLS	**Aral**	**1.14**	**8**	⇓*i*P		**Pn**	**23 03 03.3**	**-3.4**
	baz=8.0							
ARLS				⇓*i*S		**Sb**	**23 03 17.7**	**-3.6**
	baz=8.0							
UCH	**Uchtor**	**1.52**	**11**	⇓P		**Pn**	**23 03 11.2**	**-1.1**
	3.6nm,0.1s,SNR=14							
UCH				⇑S		**Sn**	**23 03 30.9**	**-1.6**
	17nm,0.2s							
UCH	**Uchtor**	**1.52**	**11**	⇑*i*P		**Pn**	**23 03 10.5**	**-1.8**
	baz=11							
UCH				⇑*i*S		**Sn**	**23 03 29.9**	**-2.6**
	baz=11							
NRN	**Naryn**	**1.59**	**63**	⇓*i*P		**Pn**	**23 03 11.8**	**-1.3**
	baz=65							
NRN				⇓*i*S		**Sn**	**23 03 31.9**	**-2.1**
	baz=65							
AAK	**Ala-Archa**	**1.92**	**9**	⇓P		**Pn**	**23 03 18.4**	**+0.9**
	4.4nm,0.2s							
AAK				⇑S		**Sb**	**23 03 42.9**	**-1.1**
	14nm,0.3s							
AAK	**Ala-Archa**	**1.92**	**9**	⇓*i*P		**Pn**	**23 03 17.4**	**-0.1**
	baz=8.0							
AAK				⇓*i*S		**Sn**	**23 03 42.0**	**0.0**
	baz=8.0							
ARK	**Arkit**	**1.93**	**304**	⇓*i*P		**Pn**	**23 03 18.3**	**+0.7**
	baz=2.0							
ARK				⇓*i*S		**Sb**	**23 03 43.4**	**-0.8**
	baz=2.0							
EKS2	**Erkin-Say**	**1.94**	**353**	⇓P		**Pn**	**23 03 18.5**	**+0.8**
	1.8nm,0.1s,SNR=15							
EKS2				⇓S		**Sb**	**23 03 43.7**	**-0.7**
	3.4nm,0.2s							
EKS2	**Erkin-Say**	**1.94**	**353**	⇑*i*P		**Pn**	**23 03 17.6**	**-0.1**
	baz=52							
EKS2				⇑*i*S		**Sn**	**23 03 42.4**	**0.0**
	baz=52							
KBK	**Karagaybulak**	**2.02**	**18**	⇑P		**Pb**	**23 03 20.5**	**-0.9**
	7.0nm,0.1s,SNR=30							
KBK				⇓S		**Sb**	**23 03 46.5**	**-0.2**
	19nm,0.2s							
KBK	**Karagaybulak**	**2.02**	**18**	⇑*i*P		**Pn**	**23 03 18.7**	**-0.2**
	baz=18							
KBK				⇑*i*S		**Sn**	**23 03 44.2**	**-0.2**
	baz=18							
FRU1	**Bishkek**	**2.11**	**11**	⇑*i*P		**Pn**	**23 03 20.3**	**+0.3**
	baz=10.0							
FRU1				⇑*i*S		**Sn**	**23 03 46.6**	**+0.1**
	baz=10.0							
MRKS	**Merke**	**2.11**	**342**	Pg		**Pb**	**23 03 23.0**	**+0.1**
	3.3nm,0.1s							
MRKS				Lg		Lg	23 03 50.7	
	17nm,0.2s							
MRKS	**Merke**	**2.11**	**342**	*e*P		**Pb**	**23 03 23.0**	**+0.1**
	3.3nm,0.1s							
MRKS				*e*S		**Sb**	**23 03 50.7**	**+1.3**
	17nm,0.2s							
MNAS	**Manas**	**2.12**	**326**	⇑*i*P		**Pn**	**23 03 20.5**	**+0.2**
	baz=25							
MNAS				⇑*i*S		**Sn**	**23 03 47.1**	**+0.2**
	baz=25							
DRK	**Karamyk**	**2.17**	**235**	⇓*e*P		**Pb**	**23 03 22.2**	**-1.8**
	baz=34							
DRK				⇓*e*S		**Sb**	**23 03 50.6**	**-0.6**
	baz=34							
ULHL	**Ulahol**	**2.20**	**46**	⇓*i*P		**Pn**	**23 03 21.5**	**+0.1**
	baz=47							
ULHL				⇓*i*S		**Sn**	**23 03 48.9**	**0.0**
	baz=47							
CHMS	**Chumysh**	**2.31**	**12**	⇑Pg		**Pb**	**23 03 26.6**	**+0.3**
	9.0nm,1.1s							
CHMS				Pg		**Sn**	**23 03 52.7**	**+1.3**
	18nm,0.2s							
CHMS				⇓Lg		Lg	23 03 55.9	
	19nm,0.9s							
CHMS				Lg		Lg	23 04 41.9	
	80nm,0.3s							
CHMS	**Chumysh**	**2.31**	**12**	⇓*i*P		**Pn**	**23 03 22.6**	**-0.2**
	baz=12							
CHMS				⇓*i*S		**Sn**	**23 03 50.7**	**-0.7**
	baz=12							
TRKS	**Terek-Say**	**2.38**	**290**	⇓*i*P		**Pn**	**23 03 23.8**	**0.0**
	baz=87							
TRKS				⇓*i*S		**Sn**	**23 03 53.0**	**-0.2**
	baz=87							
TKM2	**Tokmak 2**	**2.45**	**27**	⇓P		**Pb**	**23 03 27.2**	**-1.6**
	1.4nm,0.1s,SNR=7.0							
TKM2				⇑S		**Sb**	**23 03 59.0**	**-0.2**
TKM2	**Tokmak 2**	**2.45**	**27**	⇑Pg		**Pb**	**23 03 28.2**	**-0.6**
	20nm,1.4s							
TKM2				⇑Lg		Lg	23 04 00.5	
	7.7nm,0.4s							
TKM2	**Tokmak 2**	**2.45**	**27**	⇑*i*P		**Pn**	**23 03 24.7**	**-0.1**
	baz=27							
TKM2				⇑*i*S		**Sn**	**23 03 54.4**	**-0.7**
	baz=27							
USP	**Ospenovka**	**2.55**	**6**	⇑*i*P		**Pn**	**23 03 26.0**	**0.0**
	baz=6.0							
USP				⇑*i*S		**Sn**	**23 03 56.7**	**-0.5**
	baz=6.0							
BTK	**Batken**	**2.60**	**256**	⇑*i*P		**Pn**	**23 03 28.0**	**+1.2**
	baz=55							
BTK				⇑*i*S		**Sn**	**23 04 00.3**	**+1.7**
	baz=55							
KST	**Kastek**	**2.69**	**30**	Pg		**Pb**	**23 03 32.7**	**-0.1**
	2.3nm,0.1s							
KST				Lg		Lg	23 04 07.4	
	11nm,0.3s							
KST	**Kastek**	**2.69**	**30**	*e*P		**Pb**	**23 03 32.7**	**-0.1**
	2.3nm,0.1s							
KST				*e*S		**Sb**	**23 04 07.4**	**+1.4**
	11nm,0.3s							
KDJ	**Kajisay**	**2.70**	**58**	⇓*i*P		**Pn**	**23 03 28.5**	**+0.3**
	baz=59							
KDJ				⇓*i*S		**Sn**	**23 04 01.2**	**+0.1**
	baz=59							
SGDS	**Sogindy**	**2.74**	**8**	Pg		**Pb**	**23 03 34.0**	**+0.4**
	3.3nm,0.1s							
SGDS				Lg		Lg	23 04 09.6	
	66nm,0.1s							
DGS	**Degeres**	**2.79**	**26**	Pg		**Pb**	**23 03 33.9**	**-0.7**
	4.3nm,0.3s							
DGS				Lg		Lg	23 04 09.6	
	22nm,0.5s							
DGS	**Degeres**	**2.79**	**26**	*e*P		**Pb**	**23 03 33.9**	**-0.7**
	4.3nm,0.3s							
DGS				*e*S		**Sb**	**23 04 09.6**	**+0.6**
	22nm,0.5s							
MTBS	**Maitube**	**2.95**	**35**	Pg		**Pb**	**23 03 37.4**	**+0.2**
	3.9nm,0.2s							
MTBS				Lg		Lg	23 04 15.4	
	14nm,0.3s							
MTBS	**Maitube**	**2.95**	**35**	*e*P		**Pb**	**23 03 37.4**	**+0.2**
	3.9nm,0.2s							
MTBS				*e*S		**Sb**	**23 04 15.3**	**+1.8**
	14nm,0.3s							
TARG	**Taragay, Kyrgy**	**2.96**	**69**	⇓*i*P		**Pn**	**23 03 32.1**	**+0.1**
	baz=70							
TARG				⇓*i*S		**Sn**	**23 04 07.6**	**-0.3**
	baz=70							
DZA	**Taraz**	**2.99**	**317**	Pg		**Pb**	**23 03 38.9**	**+1.0**
	45nm,0.1s							
DZA				Lg		Lg	23 04 17.8	
	26nm,0.2s							
DZA	**Taraz**	**2.99**	**317**	*e*P		**Pb**	**23 03 38.9**	**+1.0**
	45nm,0.1s							
DZA				*e*S		**Sb**	**23 04 17.8**	**+3.2**
	26nm,0.2s							
TNSS	**Tian-Shan**	**3.13**	**42**	Pg		**Pb**	**23 03 40.0**	**-0.4**
	5.8nm,0.1s							
TNSS				Lg		Lg	23 04 20.0	
	12nm,0.5s							
TNSS	**Tian-Shan**	**3.13**	**42**	*e*P		**Pb**	**23 03 40.0**	**-0.4**
	5.8nm,0.1s							
TNSS				*e*S		**Sb**	**23 04 20.0**	**+1.2**
	12nm,0.5s							
KRBS	**Karabastau**	**3.18**	**21**	Pg		**Pb**	**23 03 40.9**	**-0.2**
	2.2nm,0.3s							
KRBS				Lg		Lg	23 04 21.6	
	9.2nm,0.5s							
KRBS	**Karabastau**	**3.18**	**21**	*e*P		**Pb**	**23 03 40.9**	**-0.2**
	2.2nm,0.3s							
KRBS				*e*S		**Sb**	**23 04 21.6**	**+1.6**
	9.2nm,0.5s							
KOTS	**Kotyrbulak**	**3.35**	**41**	Pg		**Pb**	**23 03 44.4**	**+0.3**
	4.0nm,0.2s							
KOTS				Lg		Lg	23 04 27.5	
	16nm,0.4s							
KOTS	**Kotyrbulak**	**3.35**	**41**	*e*P		**Pb**	**23 03 44.4**	**+0.3**
	4.0nm,0.2s							
KOTS				*e*S		**Sb**	**23 04 27.6**	**+2.4**
	16nm,0.4s							
KTBS	**Karatobe**	**3.54**	**32**	Pg		**Pb**	**23 03 47.6**	**+0.4**
	1.6nm,0.3s							
KTBS				Lg		Lg	23 04 33.0	

	12nm,0.4s								
KTBS	**Karatobe**	**3.54**	**32**	*e*P		**Pb**	**23 03 47.6**	**+0.4**
	1.6nm,0.3s								
KTBS				*e*S		**Sb**	**23 04 33.0**	**+2.7**
	12nm,0.4s								
KUU	**Kurty**	**3.56**	**27**	Pg		**Pb**	**23 03 47.4**	**-0.2**
	3.0nm,0.2s								
KUU				Lg		Lg	23 04 32.6		
	12nm,0.4s								
KUU	**Kurty**	**3.56**	**27**	*e*P		**Pb**	**23 03 47.4**	**-0.2**
	3.0nm,0.2s								
KUU				*e*S		**Sb**	**23 04 32.6**	**+1.6**
	12nm,0.4s								
KK31	**Karatay Array**	**3.58**	**313**	⇑Pg		**Pb**	**23 03 49.0**	**+1.1**
	0.4nm,0.3s,baz=138,slow=15,SNR=6.4								
KK31				⇓Lg		Lg	23 04 36.4		
	1.2nm,0.3s,baz=134,slow=28,SNR=8.7								
KKAR	**Karatay Array**	**3.58**	**313**	⇑*i*P		**Pn**	**23 03 40.8**	**+0.7**
	baz=12								
KKAR				⇑*i*S		**Sn**	**23 04 22.3**	**-0.3**
	baz=12								
CHM	**Chimkent**	**3.73**	**297**	*e*P		**Pb**	**23 03 52.7**	**+2.2**
	18nm,0.2s								
CHM				*e*S		**Sg**	**23 04 41.9**	**-2.3**
	80nm,0.3s								
CHKK	**Chushkaly**	**3.78**	**33**	Pg		**Pb**	**23 03 51.9**	**+0.6**
	1.1nm,0.1s								
CHKK				Lg		Lg	23 04 40.2		
	5.0nm,0.2s								
CHKK	**Chushkaly**	**3.78**	**33**	*e*P		**Pb**	**23 03 51.9**	**+0.6**
	1.1nm,0.1s								
CHKK				*e*S		**Sb**	**23 04 40.2**	**+3.0**
	5.0nm,0.2s								

*SKO **07** 23:06:45.4,41˚.13N×22˚.87E,h21km,ML1.9*
*SOF **07** 23:06:46.4,41˚.24N±0˚.02×22˚.88E±0˚.02,h10km±2km, MD3.1/7*
*THE **07** 23:06:47.5,41˚.18N×22˚.88E,h10km,ML2.2/10,Error ellipse: s-maj=1.0km s-min=0.7km az=159.0*
*ATH **07** 23:06:47.7,41˚.19N×22˚.88E,h9km,ML2.2/8,Error ellipse: s-maj=1.5km s-min=0.8km az=162.0*
*BEO **07** 23:06:47.4±0.3,41˚.25N×22˚.89E,h3km±2km,ML2.2/8*

ISC 07 23:06:47.2±0.8,41˚20N±0˚.02×22˚87E±0˚.02,h12km±4km, n53,σ0966/96,4C-1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.04**	**153**	P	**Pg**	**23 06 49.4**	**0.0**
KNT				S	**Sg**	**23 06 51.0**	**-0.1**
	5μm,0.1s						
KNT	**Kendrikon**	**0.04**	**153**	⇓*i*Pg	**Pg**	**23 06 49.5**	**0.0**
KNT				*i* Sg	**Sg**	**23 06 51.1**	**0.0**
KNT	**Kendrikon**	**0.04**	**153**	P	**Pg**	**23 06 49.4**	**0.0**
KNT				S	**Sg**	**23 06 50.9**	**-0.1**
KNT				AML	AML	23 06 51.2	
	comp=N,14787μm,0.2s						
KNT				AML	AML	23 06 51.3	
	comp=E,12127μm,0.2s						
VAY	**Valandovo**	**0.26**	**298**	*e*Pg	**Pg**	**23 06 52.0**	**-0.5**
VAY				*e*Sg	**Sg**	**23 06 56.0**	**-0.1**
VAY	**Valandovo**	**0.26**	**298**	*i* Pg	**Pg**	**23 06 52.0**	**-0.5**
VAY				*i* Sg	**Sg**	**23 06 55.7**	**-0.4**
VAY				*e*Lg	Lg	23 06 56.0	
	comp=N,198nm,0.3s						
VAY				*e*Lg	Lg	23 06 56.9	
	comp=E,172nm,0.2s						
SOH	**Sokhos**	**0.53**	**136**	P	**Pg**	**23 06 57.1**	**-0.4**
SOH				S	**Sg**	**23 07 04.8**	**+0.3**
	comp=E,428nm,0.2s						
SOH	**Sokhos**	**0.53**	**136**	*i* Pg	**Pg**	**23 06 57.2**	**-0.3**
SOH				*i* Sg	**Sg**	**23 07 04.2**	**-0.3**
SOH	**Sokhos**	**0.53**	**136**	P	**Pg**	**23 06 57.2**	**-0.3**
SOH				S	**Sg**	**23 07 04.3**	**-0.2**
SOH				AML	AML	23 07 05.8	
	comp=E,988μm,0.2s						
SOH				AML	AML	23 07 06.9	
	comp=N,1150μm,0.2s						
SRS	**Serrai**	**0.55**	**99**	P	**Pg**	**23 06 57.4**	**-0.6**
SRS	**Serrai**	**0.55**	**99**	*e*Pg	**Pg**	**23 06 57.2**	**-0.8**
SRS				*e*Sg	**Sg**	**23 07 05.5**	**+0.2**
SRS	**Serrai**	**0.55**	**99**	*i* Pg	**Pg**	**23 06 57.3**	**-0.6**
SRS				*i* Sg	**Sg**	**23 07 05.5**	**+0.2**
SRS	**Serrai**	**0.55**	**99**	P	**Pg**	**23 06 57.5**	**-0.6**
SRS				S	**Sg**	**23 07 05.1**	**-0.2**
SRS				AML	AML	23 07 06.0	
	comp=E,356μm,0.2s						
SRS				AML	AML	23 07 06.1	
	comp=N,251μm,0.2s						
THE	**Thessaloniki**	**0.57**	**173**	P	**Pg**	**23 06 58.0**	**-0.4**
THE				S	**Sg**	**23 07 06.1**	**+0.2**
	comp=N,198nm,0.2s						
THE	**Thessaloniki**	**0.57**	**173**	⇑*i*Pg	**Pg**	**23 06 58.0**	**-0.4**
THE				*i* Sg	**Sb**	**23 07 06.5**	**-0.7**
THE	**Thessaloniki**	**0.57**	**173**	P	**Pg**	**23 06 58.0**	**-0.4**
THE				S	**Sg**	**23 07 05.9**	**0.0**
THE				AML	AML	23 07 06.8	
	comp=E,500μm,0.2s						
THE				AML	AML	23 07 07.7	
	comp=N,333μm,0.2s						
PEHC	**Pehcevo**	**0.58**	**2**	*i* Pg	**Pg**	**23 06 57.5**	**-0.9**
PEHC				*i* Sg	**Sg**	**23 07 05.4**	**-0.7**
HORT	**Hortiatis**	**0.63**	**164**	P	**Pg**	**23 06 59.3**	**-0.2**
HORT				S	**Sb**	**23 07 08.6**	**-0.3**
	comp=N,215nm,0.3s						
HORT	**Hortiatis**	**0.63**	**164**	P	**Pg**	**23 06 59.2**	**-0.2**
HORT				S	**Sg**	**23 07 07.8**	**+0.1**
HORT				AML	AML	23 07 10.8	
	comp=E,423μm,0.3s						
HORT				AML	AML	23 07 12.5	
	comp=N,432μm,0.4s						
KKB	**Krupnik**	**0.67**	**17**	⇑*i*Pg	**Pg**	**23 06 59.2**	**-1.0**
KKB				Sg	**Sg**	**23 07 07.7**	**-1.3**
MMB	**Musomishta**	**0.75**	**62**	⇑*i*Pg	**Pg**	**23 07 00.8**	**-0.8**
MMB				Sg	**Sg**	**23 07 10.9**	**-0.5**
NVR	**Nevrokopi**	**0.76**	**78**	P	**Pg**	**23 07 02.2**	**+0.3**
NVR				S	**Sb**	**23 07 12.9**	**+0.1**
	comp=N,155nm,0.1s						
NVR	**Nevrokopi**	**0.76**	**78**	P	**Pg**	**23 07 02.2**	**+0.3**
NVR				S	**Sg**	**23 07 12.3**	**+0.4**
NVR				AML	AML	23 07 13.8	
	comp=N,300μm,0.1s						
NVR				AML	AML	23 07 15.5	
	comp=E,320μm,0.2s						
KOKK	**Kokkinochori,**	**0.94**	**114**	P	**Pg**	**23 07 04.7**	**-0.5**
KOKK				S	**Sb**	**23 07 17.7**	**0.0**
	comp=E,52nm,0.3s						
KOKK	**Kokkinochori,**	**0.94**	**114**	P	**Pg**	**23 07 04.7**	**-0.5**
KOKK				S	**Sg**	**23 07 17.5**	**0.0**
FNA	**Florina**	**1.21**	**250**	P	**Pb**	**23 07 09.4**	**-0.6**
FNA				S	**Sb**	**23 07 26.0**	**+0.5**
	comp=E,100nm,0.3s						
FNA	**Florina**	**1.21**	**250**	*e*Pg	**Pb**	**23 07 09.2**	**-0.8**
FNA				*e*Sg	**Sn**	**23 07 26.7**	**+0.5**
FNA	**Florina**	**1.21**	**250**	*i* Pg	**Pb**	**23 07 09.4**	**-0.6**
FNA				*i* Sg	**Sb**	**23 07 25.5**	**0.0**
FNA	**Florina**	**1.21**	**250**	P	**Pb**	**23 07 09.5**	**-0.6**
FNA				S	**Sb**	**23 07 25.6**	**+0.1**
FNA				AML	AML	23 07 30.3	
	comp=N,177μm,0.5s						
FNA				AML	AML	23 07 30.9	
	comp=E,234μm,0.3s						
OUR	**Ouranopolis**	**1.21**	**135**	P	**Pb**	**23 07 10.0**	**0.0**
OUR				S	**Sn**	**23 07 26.5**	**+0.3**
	comp=E,132nm,0.4s						
OUR	**Ouranopolis**	**1.21**	**135**	P	**Pb**	**23 07 09.9**	**0.0**
OUR				S	**Sg**	**23 07 26.0**	**-0.2**
OUR				AML	AML	23 07 29.0	
	comp=N,297μm,0.3s						
OUR				AML	AML	23 07 29.7	
	comp=E,230μm,0.5s						
KAVA	**Kavala**	**1.26**	**99**	P	**Pn**	**23 07 10.4**	**-0.2**
KAVA				S	**Sn**	**23 07 28.2**	**+0.8**
	comp=E,128nm,0.2s						
KAVA	**Kavala**	**1.26**	**99**	P	**Pn**	**23 07 10.4**	**-0.2**
KAVA				S	**Sb**	**23 07 27.0**	**+0.1**
BOSS	**Bosilegrad**	**1.33**	**347**	*e*Pg	**Pn**	**23 07 11.5**	**-0.1**
BOSS				*e*Sg	**Sb**	**23 07 27.6**	**-1.4**
PLNA	**Plana**	**1.34**	**18**	⇑*i*P	**Pn**	**23 07 11.7**	**-0.1**
PLNA				S	**Sb**	**23 07 28.9**	**-0.6**
PAIG	**Paliouri**	**1.42**	**154**	P	**Pn**	**23 07 12.6**	**-0.1**
PAIG				S	**Sn**	**23 07 30.6**	**-0.7**
	comp=E,82nm,0.6s						
PRVS	**Prvonek**	**1.43**	**336**	*e*Pg	**Pn**	**23 07 13.8**	**+0.7**
PRVS				*e*Sg	**Sn**	**23 07 32.6**	**+0.7**
VTS	**Vitosha**	**1.44**	**11**	*i* P	**Pn**	**23 07 12.8**	**-0.5**
VTS				S	**Sn**	**23 07 31.2**	**-1.0**
RZN	**Rozhen**	**1.49**	**70**	P	**Pb**	**23 07 14.9**	**0.0**
RZN				S	**Sn**	**23 07 34.1**	**+0.7**
TYRN	**Tyrnavos**	**1.57**	**198**	P	**Pn**	**23 07 15.0**	**+0.2**
NEST	**Nestorio**	**1.59**	**241**	P	**Pn**	**23 07 15.3**	**0.0**
PGB	**Panagyurishte**	**1.63**	**36**	*i* P	**Pn**	**23 07 16.7**	**+0.9**
PGB				S	**Sn**	**23 07 37.7**	**+1.0**
KPRO	**Kipourio**	**1.69**	**223**	P	**Pn**	**23 07 16.9**	**+0.3**
PLD	**Plovdiv**	**1.69**	**56**	P	**Pn**	**23 07 16.3**	**-0.3**
PLD				S	**Sn**	**23 07 39.4**	**+1.2**
THL	**Klokotos Trika**	**1.76**	**202**	P	**Pn**	**23 07 17.4**	**-0.1**
BARS	**Barje**	**1.79**	**334**	*e*Pg	**Pn**	**23 07 19.6**	**+1.6**
BARS				*e*Sg	**Sn**	**23 07 42.4**	**+1.7**
BARS	**Barje**	**1.79**	**334**	*i* Pn	**Pn**	**23 07 18.5**	**+0.5**
ZAPS	**Zavoj**	**2.08**	**355**	*e*Pn	**Pn**	**23 07 22.0**	**+0.1**
ZAPS				*e*Sn	**Sn**	**23 07 48.7**	**+1.0**
MPEP	**Malo Peshtene**	**2.25**	**16**	P	**Pn**	**23 07 24.0**	**-0.2**
SELS	**Selova**	**2.40**	**328**	*e*Pn	**Pn**	**23 07 26.1**	**-0.2**
ZAGS	**Zajecar**	**2.65**	**350**	*e*Pn	**Pn**	**23 07 30.7**	**+1.0**
ZAGS				*e*Sg	**Sb**	**23 08 09.6**	**+2.5**
IVAS	**Ivanjica**	**3.11**	**321**	*e*Pn	**Pn**	**23 07 37.2**	**+1.1**
GRUS	**Gruza**	**3.12**	**330**	*e*Pn	**Pn**	**23 07 37.1**	**+0.9**
GRUS				*e*Sn	**Sn**	**23 08 14.9**	**+1.5**
DIVS	**Divibare**	**3.59**	**325**	*e*Pn	**Pn**	**23 07 42.3**	**-0.4**

KRSC 07 23:06:57.6±1.4,53˚73N×169˚00E,h46km±30km,MI3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.31**	**311**	*e*P	Pn	23 07 36.1	+3.0
BKI				*e*S	Sn	23 08 02.9	+2.8
TUMD	**Tumrok D**	**5.23**	**290**	*e*P	Pn	23 08 16.9	+3.6
TUMD				*e*S	Sn	23 09 15.9	+3.7
TUMR	**Tumrok**	**5.39**	**290**	*e*P	Pn	23 08 19.7	+4.2
KMNR	**Kamenistaya**	**5.47**	**295**	*e*P	Pn	23 08 20.5	+3.9
KMNR				*e*S	Sn	23 09 23.3	+5.2
UGLR	**Uglovaya**	**6.10**	**269**	*e*P	Pn	23 08 29.8	+4.6
SMAR	**Somma**	**6.11**	**270**	*e*P	Pn	23 08 29.4	+4.0
AVH	**Avacha**	**6.14**	**270**	*e*P	Pn	23 08 30.4	+4.6
KRX	**Arik**	**6.18**	**271**	*e*P	Pn	23 08 30.7	+4.3
KOK	**Koryaka**	**6.20**	**270**	*e*P	Pn	23 08 30.9	+4.3
RUS	**Russkaya**	**6.45**	**263**	*e*P	Pn	23 08 34.2	+4.3
GNL	**Ganaly**	**6.57**	**274**	*e*P	Pn	23 08 36.7	+5.1
KRMR	**Karymshinskiy**	**6.58**	**267**	*e*P	Pn	23 08 36.5	+4.8
KRMR				*e*S	Sn	23 09 51.1	+5.7
GRL	**Gorelyy**	**6.68**	**264**	*e*P	Pn	23 08 38.4	+5.2
ASAK	**Asacha**	**6.83**	**263**	*e*P	Pn	23 08 40.1	+4.9
KDTR	**Khodutka, Kamc**	**6.90**	**258**	*e*P	Pn	23 08 41.3	+5.2
KDTR				*e*S	Sn	23 09 56.0	+2.8

IDC 07 23:10:11.2±67.0,20˚77S×179˚41W,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=1216.0km s-min=170.8km az=83.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.48**	**244**	P	P	23 17 18.1	-0.2
	1.7nm,0.5s,baz=91,slow=12,SNR=4.2 1.7nm,0.5s						
ASAR	**Alice Springs**	**43.17**	**257**	P	P	23 18 14.0	0.0
	0.5nm,0.7s,baz=90,slow=8.1,SNR=3.5 0.5nm,0.7s						
WRA	**Warramunga Arr**	**43.26**	**263**	P	P	23 18 14.6	-0.2
	0.5nm,0.9s,baz=99,slow=7.7,SNR=9.0 0.5nm,0.9s						

IDC 07 23:12:21.8±2.1,15˚17S×173˚79W,h0km,mb3.9/6, mbtmp3.9/6,Error ellipse: s-maj=138.5km s-min=22.0km az=146.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**38.58**	**329**	T	T	00 00 19.2	
	baz=147,slow=74						
H11S3	**WAKE ISLAND Hy**	**38.59**	**329**	T	T	00 00 20.3	
	baz=147,slow=74						
H11S1	**WAKE ISLAND Hy**	**38.59**	**329**	T	T	00 00 21.6	
	baz=147						
H11N3	**WAKE ISLAND Hy**	**39.53**	**331**	T	T	00 01 29.3	
	baz=146						
H11N1	**WAKE ISLAND Hy**	**39.53**	**331**	T	T	00 01 33.7	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**39.55**	**331**	T	T	00 01 33.7	
	baz=146						
STKA	**Stephens Creek**	**43.83**	**240**	P	P	23 20 29.8	-0.1
	1.3nm,0.4s,baz=81,slow=14,SNR=4.3 1.3nm,0.4s						
WRA	**Warramunga Arr**	**49.53**	**257**	P	P	23 21 14.7	-0.1
	1.1nm,0.5s,baz=92,slow=6.6,SNR=32 1.1nm,0.5s						
ASAR	**Alice Springs**	**49.82**	**252**	P	P	23 21 16.9	-0.1
	1.9nm,0.4s,baz=87,slow=7.8,SNR=27 1.9nm,0.4s						
NVAR	**Mina Aray Bea**	**74.41**	**42**	P	P	23 24 02.7	+0.6
	0.8nm,0.7s,baz=214,slow=6.9,SNR=5.7 0.8nm,0.7s						
ILAR	**Eielson Array**	**82.30**	**11**	P	P	23 24 44.9	0.0
	0.2nm,0.5s,baz=212,slow=5.7,SNR=4.6 0.2nm,0.5s						
PDAR	**Pinedale Array**	**82.35**	**42**	P	P	23 24 45.3	-0.6
	0.5nm,0.8s,baz=204,slow=3.3,SNR=3.9 0.5nm,0.8s						

*SJA **07** 23:21:05.2±0.6,20˚41S×69˚02W,h110km±3km,ML3.8, MW3.7*
*GUC **07** 23:21:06.9±0.7,20˚39S×69˚06W,h107km±3km,ML3.9*
*NEIC **07** 23:21:06.8±1.1,20˚43S±0˚.03×69˚06W±0˚.08,h103km±5km, mb4.0/4,Error ellipse: s-maj=11.4km s-min=4.8km az=93.0*

ISC 07 23:21:06.6±0.9,20˚43S±0˚.03×69˚15W±0˚.05,h108km±6km, n63,σ0996/93,5C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.28**	**358**		**Pn**	**23 21 21.9**	**-0.7**
PB08				Sn	**Sn**	**23 21 33.6**	**-1.0**
PB08	**IPOC Station P**	**0.28**	**358**	*e*P	**Pn**	**23 21 22.1**	**-0.5**
PB08				*e*S	**Sn**	**23 21 34.3**	**-0.3**
PB08				IAML		23 21 35.6	
	comp=Z,2μm,0.3s						
PB08	**IPOC Station P**	**0.28**	**358**	*i* P	**Pn**	**23 21 22.1**	**-0.5**
PB08				*e*S	**Sn**	**23 21 34.0**	**-0.5**
PB08				IAML		23 21 34.3	
	comp=E,5μm,0.3s						
PB01	**IPOC Station P**	**0.69**	**208**		**Pn**	**23 21 24.8**	**0.0**
PB01				Sn	**Sn**	**23 21 38.7**	**+0.2**
PB01	**IPOC Station P**	**0.69**	**208**	*e*P	**Pn**	**23 21 24.9**	**0.0**
PB01				*e*S	**Sn**	**23 21 39.3**	**+0.8**
PB01				IAML		23 21 42.3	
	comp=Z,3μm,0.1s						
PB01	**IPOC Station P**	**0.69**	**208**	⇑*i*P	**Pn**	**23 21 24.8**	**0.0**
PB01				*e*S	**Sn**	**23 21 39.3**	**+0.8**
PB01				IAML		23 21 40.2	
	comp=N,4μm,0.5s						
GO01	**Chusmiza**	**0.76**	**356**		**Pn**	**23 21 25.5**	**-0.3**
GO01				Sn	**Sn**	**23 21 40.6**	**+0.4**
GO01	**Chusmiza**	**0.76**	**356**	*e*P	**Pn**	**23 21 25.5**	**-0.3**
GO01				*e*S	**Sn**	**23 21 41.2**	**+0.9**
GO01	**Chusmiza**	**0.76**	**356**	*e*P	**Pn**	**23 21 25.4**	**-0.5**
GO01				*e*S	**Sn**	**23 21 39.9**	**-0.4**
GO01				IAML		23 21 42.7	
	comp=N,7μm,0.1s						
PB11	**IPOC Station P**	**0.82**	**324**		**Pn**	**23 21 26.2**	**+0.2**
PB11				Sn	**Sn**	**23 21 41.3**	**+0.6**
PB11	**IPOC Station P**	**0.82**	**324**	*e*P	**Pn**	**23 21 26.2**	**+0.2**
PB11				*e*S	**Sn**	**23 21 41.5**	**+0.8**
PB11				IAML		23 21 42.4	
	comp=Z,4μm,0.3s						
PB11	**IPOC Station P**	**0.82**	**324**	*i* P	**Pn**	**23 21 26.3**	**+0.2**
PB11				*e*S	**Sn**	**23 21 40.5**	**-0.1**
TA02	**Huaiquique**	**0.94**	**279**		**Pn**	**23 21 27.7**	**+0.8**
TA02				Sn	**Sn**	**23 21 44.0**	**+1.7**
TA02	**Huaiquique**	**0.94**	**279**	*e*P	**Pn**	**23 21 27.8**	**+0.8**
TA02				*e*S	**Sn**	**23 21 44.5**	**+2.1**
TA02				IAML		23 21 46.0	
	comp=Z,2μm,0.3s						
TA02	**Huaiquique**	**0.94**	**279**	*e*P	**Pn**	**23 21 27.3**	**+0.3**
TA02				*e*S	**Sn**	**23 21 43.0**	**+0.7**
TA01	**Diego Aracena**	**0.98**	**262**		**Pn**	**23 21 27.9**	**+0.6**
TA01	**Diego Aracena**	**0.98**	**262**	*e*P	**Pn**	**23 21 28.0**	**+0.6**
TA01				*e*S	**Sn**	**23 21 45.2**	**+2.1**
TA01				IAML		23 21 50.1	
	comp=Z,1μm,0.5s						
TA01	**Diego Aracena**	**0.98**	**262**	⇑*i*P	**Pn**	**23 21 27.9**	**+0.6**
TA01				*e*S	**Sn**	**23 21 43.8**	**+0.7**
TA01				IAML		23 21 45.4	
	comp=E,3μm,0.3s						
PATCX	**Punta Patache**	**1.02**	**247**		**Pn**	**23 21 28.6**	**+0.7**
PATCX	**Punta Patache**	**1.02**	**247**	*e*P	**Pn**	**23 21 28.7**	**+0.7**
PATCX	**Punta Patache**	**1.02**	**247**	⇑*i*P	**Pn**	**23 21 28.6**	**+0.7**
PATCX				IAML		23 21 50.0	
	comp=E,3μm,0.6s						
PB02	**IPOC Station P**	**1.13**	**218**		**Pn**	**23 21 29.8**	**+0.6**
PB02	**IPOC Station P**	**1.13**	**218**	*e*P	**Pn**	**23 21 29.8**	**+0.6**
PB02				*e*S	**Sn**	**23 21 48.0**	**+1.8**
PB02				IAML		23 21 49.1	
	comp=Z,2μm,0.1s						
PB02	**IPOC Station P**	**1.13**	**218**	*i* P	**Pn**	**23 21 29.7**	**+0.6**
PB02				*e*S	**Sn**	**23 21 47.8**	**+1.6**
PB09	**IPOC Station P**	**1.36**	**184**		**Pn**	**23 21 32.2**	**+0.3**
PB09	**IPOC Station P**	**1.36**	**184**	*e*P	**Pn**	**23 21 32.2**	**+0.3**
PB09				*e*S	**Sn**	**23 21 52.3**	**+1.3**
PB09				IAML		23 21 54.1	
	comp=Z,618nm,0.2s						
PB09	**IPOC Station P**	**1.36**	**184**	⇑*i*P	**Pn**	**23 21 32.3**	**+0.5**
PB09				*e*S	**Sn**	**23 21 52.0**	**+1.0**
PB09				IAML		23 21 53.0	
	comp=N,1μm,0.3s						
PB07	**IPOC Station P**	**1.47**	**208**		**Pn**	**23 21 33.2**	**+0.2**
PB07	**IPOC Station P**	**1.47**	**208**	*e*P	**Pn**	**23 21 33.3**	**+0.2**
PB07				*e*S	**Sn**	**23 21 54.7**	**+1.5**
PB07				IAML		23 22 02.0	
	comp=Z,895nm,0.4s						
PB07	**IPOC Station P**	**1.47**	**208**	⇑*i*P	**Pn**	**23 21 33.4**	**+0.2**
PB16	**IPOC Station P**	**2.11**	**351**	Pn	**Pn**	**23 21 42.4**	**+1.0**
PB16	**IPOC Station P**	**2.11**	**351**	*e*P	**Pn**	**23 21 42.8**	**+1.3**
PB04	**IPOC Station P**	**2.12**	**206**		**Pn**	**23 21 41.7**	**+0.6**
PB04	**IPOC Station P**	**2.12**	**206**	*e*P	**Pn**	**23 21 41.7**	**+0.6**
PB04				*e*S	**Sn**	**23 22 07.5**	**-0.1**
PB04				IAML		23 22 19.1	
	comp=Z,376nm,0.2s						
PB04	**IPOC Station P**	**2.12**	**206**	*e*P	**Pn**	**23 21 41.8**	**+0.6**
PB12	**IPOC Station P**	**2.12**	**328**		**Pn**	**23 21 41.4**	**+0.3**
PB12	**IPOC Station P**	**2.12**	**328**	*e*P	**Pn**	**23 21 41.2**	**+0.1**
PB12				*e*S	**Sn**	**23 22 08.8**	**+1.3**
PB12				IAML		23 22 13.8	
	comp=Z,320nm,0.8s						
LVC	**Limon Verde**	**2.18**	**174**	Pn	**Pn**	**23 21 43.0**	**+0.7**
LVC	**Limon Verde**	**2.18**	**174**	*e*P	**Pn**	**23 21 42.9**	**+0.7**
LVC				*e*S	**Sn**	**23 22 10.7**	**+1.3**
LVC	**Limon Verde**	**2.18**	**174**	*i* P	**Pn**	**23 21 43.0**	**+0.7**
LVC				*e*S	**Sn**	**23 22 10.8**	**+1.5**
LVC				IAML		23 22 12.3	
	comp=Z,1μm,0.4s						
PB06	**IPOC Station P**	**2.30**	**190**		**Pn**	**23 21 43.5**	**-0.1**
PB06	**IPOC Station P**	**2.30**	**190**	*e*P	**Pn**	**23 21 43.3**	**-0.2**
PB06				*e*S	**Sn**	**23 22 11.5**	**-0.3**
PB06				IAML		23 22 20.3	
	comp=Z,352nm,0.5s						
PB06	**IPOC Station P**	**2.30**	**190**	*e*P	**Pn**	**23 21 43.7**	**+0.2**
AP01	**Chacalluta**	**2.34**	**331**	Pn	**Pn**	**23 21 43.8**	**0.0**
PB05	**IPOC Station P**	**2.61**	**202**		**Pn**	**23 21 47.6**	**+0.2**
PB05	**IPOC Station P**	**2.61**	**202**	*e*P	**Pn**	**23 21 47.2**	**+0.3**
PB05				*e*S	**Sn**	**23 22 17.5**	**-1.4**
PB05				IAML		23 22 27.4	
	comp=Z,177nm,1.2s						
PB05	**IPOC Station P**	**2.61**	**202**	*e*P	**Pn**	**23 21 48.0**	**+0.5**
PB15	**IPOC Station P**	**2.78**	**186**		**Pn**	**23 21 50.3**	**+0.4**
PB10	**IPOC Station P**	**3.34**	**203**	Pn	**Pn**	**23 21 56.2**	**-0.8**
PB10	**IPOC Station P**	**3.34**	**203**	*e*P	**Pn**	**23 21 56.5**	**-0.6**
YJA	**Yavi**	**3.81**	**118**	*e*P	**Pn**	**23 22 05.2**	**+1.5**
YJA				*e*S	**Sn**	**23 22 50.9**	**+3.0**
LPAZ	**La Paz**	**4.23**	**13**	Pn	**Pn**	**23 22 10.9**	**+1.3**
LPAZ	**La Paz**	**4.23**	**13**	*e*P	**Pn**	**23 22 11.8**	**+2.2**
PB14	**IPOC Station P**	**4.34**	**195**		**Pn**	**23 22 10.2**	**-0.5**
PB14	**IPOC Station P**	**4.34**	**195**	*e*P	**Pn**	**23 22 09.9**	**-0.8**
PB14				IAML		23 23 27.7	
	comp=Z,51nm,0.9s						
GO02	**Mina Guanaco**	**4.73**	**185**		**Pn**	**23 22 15.4**	**-0.6**
GO02	**Mina Guanaco**	**4.73**	**185**	*e*P	**Pn**	**23 22 15.3**	**-0.7**
GO02				*e*S	**Sn**	**23 23 09.2**	**-0.7**
AC02	**Maricunga**	**6.38**	**180**		**Pn**	**23 22 37.3**	**-1.2**
GO03	**Copiap**	**7.20**	**188**	Pn	**Pn**	**23 22 46.3**	**-2.9**
TRQA	**Tornquist**	**18.64**	**162**	P	**P**	**23 25 15.2**	**-0.5**
TRQA				IAmb	IAmb	23 25 15.8	
	comp=Z,5.7nm,0.8s						
PLCA	**Paso Flores**	**20.28**	**183**	P	**P**	**23 25 33.9**	**+0.3**
PLCA				IAmb	IAmb	23 25 38.7	
	comp=Z,9.3nm,1.1s						
BOAV	**Boa Vista**	**24.21**	**21**	P	**P**	**23 26 12.3**	**-0.9**
TOA0	**Torodi Ar. Sit**	**77.21**	**71**	P	**P**	**23 32 48.5**	**-0.7**

*NEIC **07** 23:21:13.0±1.2,56˚30N±0˚.02×159˚20W±0˚.09,h10km±7km, Error ellipse: s-maj=7.9km s-min=2.4km az=105.0*
*AEIC **07** 23:21:13.4±1.1,56˚30N±0˚.04×159˚12W±0

baz=193
O14K **Tigyukauivet M** 3.18 340 Pn 23 22 03.1 +0.2
O14K IAML 23 23 01.8
comp=E,103nm,0.9s
O16K **Kokwok River B** 3.36 9 Pn 23 22 05.7 +0.2
O16K IAML 23 23 13.9
comp=N,72nm,0.8s
OHAK **Old Harbor** 3.36 71 Pn 23 22 06.2 +0.7
OHAK **Old Harbor** 3.36 71 P Pn 23 22 06.6 +1.1
baz=256
O17K **Koliganek Bris** 3.66 17 P Pn 23 22 09.7 +0.1
baz=198
P18K **Big Mountain,** 3.75 32 Pn 23 22 10.8 -0.1
P18K **Big Mountain,** 3.75 32 P Pn 23 22 11.0 +0.1
baz=215
KDAK **Kodiak Island** 3.89 65 Pn 23 22 13.7 +1.0
N15K **Kwethluk River** 3.92 353 Pn 23 22 12.8 -0.4
Q19K **Cape Douglas,** 3.97 46 Pn Pn 23 22 13.3 -0.6
O18K **Koktuh Hills** 4.14 29 Pn 23 22 16.4 +0.1
O18K IAML 23 23 44.2
comp=N,44nm,0.6s
O18K **Koktuh Hills** 4.14 29 P Pn 23 22 16.7 +0.4
baz=212
N17K **Nushagak Hills** 4.37 13 Pn 23 22 19.6 +0.3
N17K IAML 23 23 32.5
comp=E,53nm,0.8s
N17K IAML 23 23 37.6
comp=N,53nm,0.6s
N17K **Nushagak Hills** 4.37 13 P Pn 23 22 19.7 +0.3
baz=194
M15K **Kasigluk River** 4.49 350 Pn 23 22 21.0 +0.1
M15K **Kasigluk River** 4.49 350 P Pn 23 22 21.0 +0.1
baz=169
P19K **Oil Pt** 4.61 41 Pn Pn 23 22 22.8 +0.1
P19K IAML 23 23 50.6
comp=N,48nm,0.9s
P19K IAML 23 23 51.7
comp=E,44nm,1.1s
M13K **Dall Lake** 4.69 334 Pn Pn 23 22 24.0 +0.3
M13K IAML 23 23 52.1
comp=N,58nm,1.5s
M13K IAML 23 23 57.5
comp=E,58nm,1.2s
N18K **Kilae Creek** 4.72 20 Pn 23 22 24.0 -0.3
N18K IAML 23 23 48.7
comp=E,30nm,0.9s
N18K IAML 23 23 55.3
comp=N,32nm,0.7s
M16K **Timber Creek** 4.74 1 Pn 23 22 24.0 -0.5
M16K IAML 23 23 48.6
comp=E,42nm,0.5s
M16K IAML 23 23 57.0
comp=N,51nm,0.8s
M16K **Timber Creek** 4.74 1 P Pn 23 22 24.3 -0.3
baz=181
IVE **Iliamna Volcan** 4.95 38 Pn 23 22 28.3 +0.9
N19K **Bonanza Creek** 5.15 26 P Pn 23 22 30.5 +0.4
baz=210
M17K **Holitna River** 5.20 9 Pn 23 22 30.4 -0.4
L14K **Kuka Creek** 5.38 342 Pn 23 22 32.6 -0.7
L14K **Kuka Creek** 5.38 342 P Pn 23 22 32.9 -0.4
baz=158
L16K **Owhat River** 5.44 358 Pn Pn 23 22 33.0 -1.0
M18K **Stony River** 5.49 17 Pn 23 22 35.0 +0.3
M18K **Stony River** 5.49 17 P Pn 23 22 35.0 +0.3
baz=200
L18K **Granite Mounta** 6.08 11 Pn 23 22 42.3 -0.5
M19K **Big River Lodg** 6.14 22 Pn 23 22 44.0 +0.3
M19K **Big River Lodg** 6.14 22 P Pn 23 22 44.1 +0.5
baz=206
L19K **White Mountain** 6.30 19 Pn 23 22 46.1 +0.1
L19K **White Mountain** 6.30 19 P Pn 23 22 46.0 +0.1
baz=202
K17K **Iditarod** 6.46 3 Pn Pn 23 22 46.9 -1.1
TTA **Tatalina** 6.84 12 Pn Pn 23 22 52.8 -0.6
J14K **Nanvaranak Lak** 6.85 343 Pn Pn 23 22 52.8 -0.5
J16K **Anvik River** 7.05 355 Pn 23 22 55.3 -0.8
J18K **Innoko River** 7.30 9 Pn Pn 23 22 58.8 -0.7
HIN **Hinchinbrook I** 7.82 53 Pn Pn 23 23 07.5 +0.7
J20K **Nowinta River** 8.29 15 Pn Pn 23 23 13.4 +0.2
G16K **Koyuk River** 9.26 352 Pn Pn 23 23 25.9 -0.5

*PRU **07** 23:29:29.2, 50˚.29N× 18˚.95E, h0km*
ISC 07 23:29:28.5±1.1, **50˚.28N**±0˚.06×**18˚.95E**±0˚.03, **h0km, n13,** σ0**$37/23, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.55	96	*e*Pg		**Pg**	23 29 39.1	+0.2
OJC				*e*Sg		**Sg**	23 29 46.1	+0.1
MORC	**Moravsky Berou**	1.03	242	*e*PG		**Pg**	23 29 48.4	+0.1
MORC				*e*SG		**Sg**	23 30 02.2	+0.5
MAUC	**Maruska**	1.17	219	*e*PG		**Pg**	23 29 51.3	+0.5
MAUC				*e*SG		**Sb**	23 30 07.6	+0.5
LANS	**Liptovska Anna**	1.18	163	*e*PG		**Pg**	23 29 50.8	-0.2
LANS				*e*SG		**Sg**	23 30 06.2	0.0
LANS				*e*LG		Lg	23 30 06.8	
NIE	**Niedzica**	1.23	134	*e*Pg		**Pg**	23 29 52.1	+0.2
NIE				*e*Sg		**Sg**	23 30 07.3	-0.5
KRLC	**Kraliky**	1.41	263	*e*PG		**Pg**	23 29 54.8	-0.6
KRLC				*e*SG		**Sb**	23 30 14.3	+0.2
JAVC	**Velka Javorina**	1.64	211	*e*PN		**Pg**	23 30 00.2	+0.3
DPC	**Dobruska-Polom**	1.69	274	*e*PG		**Pn**	23 29 59.5	+0.3
DPC				*e*SG		**Sg**	23 30 22.8	+0.2
STHS	**Stebnicka Huta**	1.72	119	*e*PN		**Pn**	23 29 59.6	0.0
STHS				*e*SN		**Sg**	23 30 23.9	+0.3
VRAC	**Vranov**	1.81	239	*e*PN		**Pb**	23 30 02.1	-0.3
VRAC				*e*SG		**Sb**	23 30 25.6	0.0
KRUC	**Moravsky**	2.06	235	*e*PN		**Pb**	23 30 06.4	-0.2
KRUC				*e*SG		**Sb**	23 30 33.1	+0.4
CKRC	**Cesky Krumlov**	3.35	246	*e*SG		**Sg**	23 31 16.0	-0.2
KHC	**Kasperske Hory**	3.67	254	*e*SG		**Sg**	23 31 25.5	-0.8

*DJA **07** 23:43:02.0±0.5, 8˚S±2˚×10˚7E±˚, h23km±4km, M4.1/12, mb4.4/1, mB6.1/1, MLv3.9/12, Mw(mB)5.7/1*
ISC 07 23:43:02.0±1.3, **7˚.58S**±0˚.05×**106˚.68E**±0˚.05, **h22km**±7km, **n16,** σ0**$71/21, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	0.52	59	P		**Pn**	23 43 14.1	-0.1
CNJI				S		**Sn**	23 43 21.8	-0.6
SKJI	**Sukabumi**	0.58	348	P		**Pn**	23 43 15.1	0.0
SKJI				S		**Sn**	23 43 23.0	-1.0
BBJI	**Bungbulang**	0.97	83	P		**Pb**	23 43 19.8	-0.4
DBJI	**Dramaga**	1.02	4	P		**Pn**	23 43 21.1	0.0
DBJI				S		**Sb**	23 43 34.0	-0.1
LEM	**Lembang**	1.20	51	P		**Pb**	23 43 24.1	0.0
LEM				S		**Sb**	23 43 39.6	+0.4
SBJI	**Serang**	1.55	339	P		**Pn**	23 43 28.7	+0.4
SBJI				S		**Sn**	23 43 48.1	+0.3
CMJI	**Cimerak**	1.77	97	P		**Pn**	23 43 30.5	-0.8
KPJI	**Karang Pucung**	2.25	84	P		**Pn**	23 43 38.4	+0.5
KASI	**Kota Agung**	2.98	313	P		**Pn**	23 43 47.9	-0.1
XMI	**Christmas Isla**	3.01	199	P		**Pn**	23 43 49.0	+0.5
XMIS	**Christmas Isla**	3.05	199	P		**Pn**	23 43 48.7	-0.4
UGM	**Wanagama**	3.82	95	P		**Pn**	23 44 00.0	+0.3
UGM	**Wanagama**	3.82	95	P		**Pn**	23 43 59.3	-0.4
PPBI	**Pangkal Pinang**	5.41	354	P		**Pn**	23 44 21.7	+0.2
	26nm,0.6s,16μm0.7nm							
JAGI	**Jajag, Banyuwa**	7.45	97	P		**Pn**	23 44 51.5	+1.9
JAGI	**Jajag, Banyuwa**	7.45	97	P		**Pn**	23 44 50.8	+1.2

*JMA **07** 23:53:07.1±1.0, 47˚N±8˚×15˚3E±1˚0, h30km, MV4.2/11, KURILE ISLANDS REGION*
*SKHL **07** 23:53:11.8±0.3, 46˚.80N×151˚.90E, h85km±4km, mb5.0/6, msha5.6/7*
ISC 07 23:53:11.7±1.5, **46˚.7N**±0˚.1×**152˚.1E**±0˚.1, **h50km, n18,** σ1**$93/30, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	3.29	245	*e*P		**Pn**	23 54 00.7	0.0
KUR				AMB		AMB	23 54 04.9	
	120nm,0.6s							
KUR				*e*S		**Sn**	23 54 37.5	-1.0
KUR				A		A	23 54 45.2	
	190nm,0.6s							
KUR				A		A	23 54 45.2	
	170nm,0.6s							
SHO	**Shikotan**	4.67	235	*e*P		**Pn**	23 54 19.5	0.0
SHO				*e*S		**Sn**	23 55 10.5	-1.9
SHO				A		A	23 55 15.5	
	100nm,0.2s							
SHO				A		A	23 55 15.5	
	70nm,0.2s							
SKR	**Severo-Kuril's**	4.80	32	*e*P		**Pn**	23 54 21.6	+0.3
SKR				AMB		AMB	23 54 24.5	
	100nm,0.6s							
SKR				*e*S		**Sn**	23 55 13.8	-1.7
SKR				A		A	23 55 19.2	
	310nm,0.7s							
SKR				A		A	23 55 19.2	
	380nm,0.7s							
YUK	**Yuzh-Kuril'sk**	5.13	241	*e*P		**Pn**	23 54 25.8	-0.1
YUK				AMB		AMB	23 54 27.3	
	70nm,0.4s							
YUK				*e*S		**Sn**	23 55 20.7	-3.2
YUK				A		A	23 55 35.2	
	140nm,0.5s							
YUK				A		A	23 55 35.2	
	110nm,0.5s							
NEM2	**Nemuro 2**	5.60	236	*e*P		**Pn**	23 54 31.7	-0.6
NEM2				*e*S		**Sn**	23 55 34.5	-0.8
NMR	**Nemuro--Hokkai**	5.61	236	*e*P		**Pn**	23 54 31.8	-0.6
NMR				*e*S		**Sn**	23 55 33.5	-1.9
JRA	**Rausu**	5.64	243	*e*P		**Pn**	23 54 36.5	+3.7
PAU	**Pauzhetka**	5.69	31	*e*P		**Pn**	23 54 34.5	+0.9
PAU				AMB		AMB	23 54 44.9	
	60nm,0.4s							
PAU				*e*S		**Sn**	23 55 38.4	+0.9
PAU				A		A	23 55 42.6	
	120nm,0.4s							
PAU				A		A	23 55 42.6	
	130nm,0.4s							
JNK	**Nakash**	6.07	242	*e*P		**Pn**	23 54 40.7	+1.9
JNK				*e*S		**Sn**	23 55 48.8	+1.8
AKK	**Akkeshi**	6.33	237	*e*P		**Pn**	23 54 42.4	+0.1
AKK				*e*S		**Sn**	23 55 52.0	-1.3
JTKR	**Abashiri--Toko**	6.38	248	*e*P		**Pn**	23 54 46.6	+3.5
YSS	**Yuzh-Sakhalins**	6.42	276	*e*S		**Sn**	23 55 52.1	-3.3
YSS				A		A	23 55 53.7	
	20nm,0.3s							
YSS				A		A	23 55 53.7	
	20nm,0.3s							
JAK	**Akkeshi**	6.43	238	*e*P		**Pn**	23 54 43.3	-0.4
JAR	**Ashorobuto**	6.81	243	*e*P		**Pn**	23 54 51.5	+2.6
JAR				*e*S		**Sn**	23 56 09.5	+4.5
JOB	**Onbets**	6.99	240	*e*P		**Pn**	23 54 52.2	+0.8
JOB				*e*S		**Sn**	23 56 09.6	+0.1
JCH	**Churui**	7.44	240	*e*P		**Pn**	23 54 58.0	+0.4
JCH				*e*S		**Sn**	23 56 20.1	-0.5
TYV	**Tymovskoe**	7.50	307	*e*P		**Pn**	23 54 57.8	-0.6
TYV				AMB		AMB	23 54 59.3	
	30nm,0.5s							
JNBK	**Urakawa-nobuka**	8.01	240	*e*S		**Sn**	23 56 32.6	-1.7

*NEIC **07** 23:55:25.9, 56˚.12N× 149˚.25W, h2km*
*NEIC **07** 23:55:27.7±1.9, 56˚.06N±0˚.06×149˚.23W±0˚.09, h21km±4km, mb4.6/54, ML4.5/58, Mwr4.4/91, ML4.3(AEIC), Error ellipse: s-maj=9.3km s-min=7.4km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.76; Mθθ-3.98; Mφφ3.22; Mrθ-1.71; Mφφ-0.24; Mφr-2.55; Fault plane solution: M0 4.79000×10^15^ NP1:φs129.34000°, δ50.12000°, λ169.85000°. NP2:φs225.89000°, δ82.23000°, λ40.32000°. Principal axes: T 4.8838, Plg33.0000°, Azm96.0000°; N -0.1966, Plg49.0000°, Azm235.0000°; P -4.6872, Plg21.0000°, Azm351.0000°;*
*IDC **07** 23:55:27.1±0.7, 56˚.17N×149˚.19W, h0km, mb4.1/26, mbtmp4.1/31, ML4.0/5, MS3.7/52 Error ellipse: s-maj=17.9km s-min=11.7km az=23.0*
*AEIC **07** 23:55:31.8±1.6, 56˚.16N±0˚.06×149˚.20W±0˚.08, h11km±4km, Error ellipse: s-maj=9.4km s-min=6.6km az=170.0*
ISC 07 23:55:27.0±0.4, **56˚.13N**±0˚.06×**149˚.24W**±0˚.04, **h10km, n432,** σ1**$23/409, mb4.5/55, MS3.7/49, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	2.47	314			**Pn**	23 56 07.1	-0.2
KDAK						**Sn**	23 56 34.9	-2.6
KDAK	**Kodiak Island**	2.47	314	S		**Sn**	23 56 34.5	-3.0
	baz=130							
KDAK	**Kodiak Island**	2.47	314	Pn		**Pn**	23 56 07.0	-0.3
	9.1nm,0.3s,baz=152,slow=4.8,SNR=125							
KDAK				Sn		**Sn**	23 56 34.0	-3.5
	21nm,0.3s,baz=60,slow=20,SNR=7.2							
	24nm,0.3s							
OHAK	**Old Harbor**	2.49	298			**Pn**	23 56 06.8	-0.7
OHAK				Sn		**Sn**	23 56 34.8	-3.1
OHAK	**Old Harbor**	2.49	298	P		**Pn**	23 56 06.5	-1.0
OHAK	**Old Harbor**	2.49	298	P		**Pn**	23 56 06.7	-0.9
	baz=113							
OHAK				S		**Sn**	23 56 35.1	-2.8
	baz=113							
SII	**Sitkinak Islan**	2.79	281			**Pn**	23 56 11.2	-0.5
SII				IAML			23 56 57.9	
	comp=E,1μm,0.7s							
SII	**Sitkinak Islan**	2.79	281	P		**Pn**	23 56 10.9	-0.8
SII	**Sitkinak Islan**	2.79	281	P		**Pn**	23 56 11.2	-0.5
	baz=96							
Q20K	**Shuyak Island**	3.02	327	P		**Pn**	23 56 14.4	-0.4
	baz=143							
Q20K				S		**Sn**	23 56 49.3	-1.7
	baz=143							
SYI	**Shuyak Island**	3.02	327			**Pn**	23 56 14.3	-0.5
SYI						**Sn**	23 56 49.4	-1.6
R18K	**Karluk**	3.21	299			**Pn**	23 56 17.4	0.0
R18K						**Sn**	23 56 53.3	-2.3
R18K				IAML			23 57 03.7	
	comp=E,811nm,0.6s							
R18K				IAML			23 57 05.0	
	comp=N,868nm,0.5s							
R18K	**Karluk**	3.21	299	P		**Pn**	23 56 17.7	+0.3
	baz=114							
R18K				S		**Sn**	23 56 53.3	-2.3
	baz=114							
CNPM	**China Poot**	3.57	343			**Pn**	23 56 21.8	-0.6
CNPM				IAML			23 57 07.3	
	comp=E,484nm,0.7s							
CHIR	**Chirikof Islan**	3.60	268			**Pn**	23 56 21.9	-1.0
CHIR				Sn		**Sn**	23 57 01.7	-3.6
CHIR				IAML			23 57 02.4	
	comp=E,628nm,0.7s							
MID	**Middleton Isla**	3.66	24	Pn		**Pn**	23 56 22.7	-0.9
MID				IAML			23 57 03.2	
	comp=N,708nm,1.0s							
MID				IAML			23 57 09.5	
	comp=E,628nm,1.0s							
MID	**Middleton Isla**	3.66	24	P		**Pn**	23 56 23.0	-0.6
Q23K	**Middleton Isla**	3.66	24	Pn		**Pn**	23 56 22.6	-0.9
Q23K				IAML			23 57 03.3	
	comp=N,622nm,0.9s							
Q23K				IAML			23 57 09.5	
	comp=E,691nm,1.0s							
Q23K	**Middleton Isla**	3.66	24	P		**Pn**	23 56 22.7	-0.9
	baz=206							
Q23K				S		**Sn**	23 57 02.8	-3.8
	baz=206							
Q19K	**Cape Douglas,**	3.68	322			**Pn**	23 56 24.1	+0.2
Q19K				IAML			23 57 17.5	
	comp=N,1μm,1.0s							
Q19K	**Cape Douglas,**	3.68	322	P		**Pn**	23 56 24.1	+0.2
	baz=137							
BRSE	**Bradley Lake S**	3.71	348			**Pn**	23 56 23.5	-0.9
BRSE	**Bradley Lake S**	3.71	348	P		**Pn**	23 56 23.5	-0.9
	baz=166							
KAHG	**Katmai Hook Gl**	3.73	312			**Pn**	23 56 25.8	+1.1
BRLK	**Bradley Lake**	3.75	347	Pn		**Pn**	23 56 23.9	-1.1
BRLK				IAML			23 57 12.4	
	comp=E,538nm,0.6s							
HOM	**Homer**	3.77	341			**Pn**	23 56 24.2	-0.9
HOM				IAML			23 57 28.8	
	comp=E,1μm,0.7s							
HOM				IAML			23 57 31.4	
	comp=N,1μm,0.8s							
KCE	**Katmai Mt Cerb**	3.87	306			**Pn**	23 56 27.0	+0.5
ACHA	**Angle Creek He**	3.92	305			**Pn**	23 56 28.5	+1.2
AUCH	**Augustine Cone**	3.95	327			**Pn**	23 56 28.0	+0.3
ANCK	**Angle Creek**	3.99	304			**Pn**	23 56 29.7	+1.5
KVTA	**Katmai Vly 10**	3.99	307			**Pn**	23 56 29.0	+0.8
SEW	**Seward**	3.99	358			**Pn**	23 56 26.9	-1.2
	baz=178							
SEW	**Seward**	3.99	358	P		**Pn**	23 56 27.0	-1.1
P23K	**Montague Islan**	4.00	13	P		**Pn**	23 56 27.6	-0.7
	baz=195							
KAHC	**Katmai Hardscr**	4.02	311			**Pn**	23 56 29.4	+0.8
KAHC	**Katmai Hardscr**	4.02	311	P		**Pn**	23 56 29.4	+0.8
	baz=126							
P19K	**Oil Pt**	4.13	331			**Pn**	23 56 29.9	-0.2
P19K				IAML			23 57 22.5	
	comp=N,682nm,0.6s							
P19K				IAML			23 57 29.0	
	comp=E,743nm,0.6s							
P19K	**Oil Pt**	4.13	331	P		**Pn**	23 56 30.1	0.0
	baz=147							
PLK3	**Peulik 3**	4.16	295			**Pn**	23 56 30.9	+0.4
Q17K	**Contact Creek**	4.20	303	P		**Pn**	23 56 31.9	+0.7
	baz=117							
O20K	**Slope Mountain**	4.35	337			**Pn**	23 56 32.8	-0.5
O20K	**Slope Mountain**	4.35	337	P		**Pn**	23 56 32.9	-0.3
	baz=154							
PLK1	**Peulik 1**	4.37	296			**Pn**	23 56 34.0	+0.7
O22K	**Cooper Landing**	4.37	357			**Pn**	23 56 32.6	-0.8
O22K	**Cooper Landing**	4.37	357	P		**Pn**	23 56 33.1	-0.3
	baz=176							
IVE	**Iliamna Volcan**	4.38	334			**Pn**	23 56 32.7	-1.0
HIN	**Hinchinbrook I**	4.52	18			**Pn**	23 56 34.8	-0.7
HIN				IAML			23 57 26.6	
	comp=N,775nm,0.6s							
HIN				IAML			23 57 29.8	
	comp=E,578nm,1.0s							
P18K	**Big Mountain,**	4.58	318	Pn		**Pn**	23 56 36.0	-0.4
P18K	**Big Mountain,**	4.58	318	P		**Pn**	23 56 35.9	-0.4
	baz=132							
KAIM	**Kayak Island**	4.59	32			**Pn**	23 56 36.1	-0.3
RED	**Redoubt Volcan**	4.69	338			**Pn**	23 56 36.5	-1.3
RSO	**Redoubt South**	4.72	338			**Pn**	23 56 37.5	-1.0
Q16K	**King Salmon**	4.75	306			**Pn**	23 56 39.1	+0.5
Q16K	**King Salmon**	4.75	306	P		**Pn**	23 56 39.5	+0.9
	baz=119							
CAPN	**Captain Cook N**	4.76	349			**Pn**	23 56 37.8	-1.0
EYAK	**Cordova Ski Ar**	4.80	21			**Pn**	23 56 38.9	-0.4
EYAK	**Cordova Ski Ar**	4.80	21	P		**Pn**	23 56 39.2	-0.1
EYAK	**Cordova Ski Ar**	4.80	21	P		**Pn**	23 56 38.9	-0.4
	baz=204							
DFR	**Drift River**	4.83	339			**Pn**	23 56 38.6	-1.2
NCT	**North Crescent**	4.85	338			**Pn**	23 56 38.8	-1.3
O19K	**Port Alsworth**	4.88	329			**Pn**	23 56 39.6	-0.8
O19K				IAML			23 57 37.9	
	comp=N,538nm,0.5s							
O19K				IAML			23 57 38.0	
	comp=E,499nm,0.5s							
O18K	**Koktuh Hills**	4.90	322	Pn		**Pn**	23 56 40.2	-0.5
O18K				IAML			23 57 49.5	
	comp=N,258nm,1.0s							
O18K	**Koktuh Hills**	4.90	322	P		**Pn**	23 56 40.2	-0.5
	baz=136							
SUCK	**Suckling Hills**	4.90	34			**Pn**	23 56 40.6	-0.1
SUCK				IAML			23 57 35.3	
	comp=N,472nm,1.5s							
SUCK				IAML			23 57 39.5	
	comp=E,433nm,1.0s							
RAGM	**Ragged Mountai**	4.90	28			**Pn**	23 56 40.6	-0.2
P17K	**Kvichak River**	4.94	311	P		**Pn**	23 56 42.0	+0.8
	baz=125							
HMT	**Hamilton**	4.97	30			**Pn**	23 56 41.6	-0.1
RC01	**Rabbit Creek A**	4.98	357	Pn		**Pn**	23 56 41.0	-0.8
RC01				IAML			23 57 42.7	
	comp=N,198nm,0.7s							
RC01				IAML			23 57 44.7	
	comp=E,263nm,0.9s							
RC01	**Rabbit Creek A**	4.98	357	P		**Pn**	23 56 41.0	-0.8
	baz=176							
ANNW	**Aniakchak Nort**	5.04	283			**Pn**	23 56 43.8	+1.2
FIS	**Fire Island**	5.06	355			**Pn**	23 56 42.8	0.0
FIS				IAML			23 57 49.6	
	comp=E,433nm,0.6s							
FIS				IAML			23 57 50.0	
	comp=N,399nm,0.6s							
GOAT	**Goat Mountain**	5.06	26			**Pn**	23 56 42.9	0.0
CHGN	**Chignik**	5.12	276	Pn		**Pn**	23 56 43.3	-0.4
CHGN				IAML			23 57 43.7	
	comp=N,142nm,0.7s							
CHGN	**Chignik**	5.12	276	P		**Pn**	23 56 44.2	+0.5
	baz=88							
BERG	**Berg Lake**	5.18	32			**Pn**	23 56 44.1	-0.4
GRIN	**Grindle Hills**	5.21	34			**Pn**	23 56 45.1	+0.2
SNH	**Sunshine Point**	5.29	37			**Pn**	23 56 45.8	-0.3
SNH				IAML			23 57 53.0	
	comp=N,293nm,0.7s							
KNK	**Knik Glacier**	5.32	4			**Pn**	23 56 45.8	-0.7
KNK				IAML			23 57 55.3	
	comp=N,168nm,1.0s							
KNK				IAML			23 58 11.4	
	comp=E,165nm,1.0s							
KNK	**Knik Glacier**	5.32	4	P		**Pn**	23 56 45.7	-0.7
	baz=184							
N20K	**Mount Spurr**	5.32	344	P		**Pn**	23 56 45.5	-1.0
	baz=161							
DIV	**Divide**	5.33	18			**Pn**	23 56 46.5	-0.2
SPCG	**Spurr Capps Gl**	5.38	346			**Pn**	23 56 46.7	-0.6
SPBG	**Spurr Blockage**	5.40	344			**Pn**	23 56 46.9	-0.7
SUA	**Susitna One**	5.41	352			**Pn**	23 56 47.0	-0.9
SUA	**Susitna One**	5.41	352	P		**Pn**	23 56 46.9	-0.9
	baz=171							
BMRM	**Bremner River**	5.43	25	P		**Pn**	23 56 47.6	-0.3
	baz=208							
N19K	**Bonanza Creek**	5.44	332	P		**Pn**	23 56 47.3	-1.0
	baz=147							
PMR	**Palmer**	5.48	1			**Pn**	23 56 48.2	-0.5
PMR	**Palmer**	5.48	1	P		**Pn**	23 56 48.5	-0.1
PMR	**Palmer**	5.48	1	P		**Pn**	23 56 48.2	-0.5
	baz=180							
WAX	**Waxell Ridge**	5.49	35			**Pn**	23 56 48.6	-0.2
P16K	**Nushagak River**	5.53	305	P		**Pn**	23 56 50.4	+1.0
	baz=117							
O17K	**Koliganek Bris**	5.55	314	P		**Pn**	23 56 50.2	+0.6
	baz=127							
STLK	**Strandline Lak**	5.55	347			**Pn**	23 56 48.8	-0.9
BARK	**Barkley Ridge**	5.57	37			**Pn**	23 56 49.9	-0.1
MESA	**MESA**	5.60	41			**Pn**	23 56 50.5	0.0
MESA	**MESA**	5.60	41	P		**Pn**	23 56 50.3	-0.2
	baz=227							
KLU	**Klutina**	5.65	16			**Pn**	23 56 50.9	-0.1
KLU	**Klutina**	5.65	16	P		**Pn**	23 56 50.9	-0.1
	baz=199							
GHO	**Glory Hole Cre**	5.66	2			**Pn**	23 56 51.4	+0.2
SML	**Sawmill**	5.72	4	Pn		**Pn**	23 56 52.1	+0.2
SML	**Sawmill**	5.72	4	P		**Pn**	23 56 52.1	+0.2
	baz=185							
M23K	**Glacier View**	5.74	7			**Pn**	23 56 52.4	+0.2
M23K	**Glacier View**	5.74	7	P		**Pn**	23 56 52.4	+0.2
	baz=188							
N18K	**Kilae Creek**	5.75	325			**Pn**	23 56 51.4	-1.0
VNFG	**Fog Glacier, M**	5.76	276			**Pn**	23 56 52.3	-0.3
ISLE	**Juniper Island**	5.77	36			**Pn**	23 56 52.7	-0.1
SCM	**Sheep Creek Mo**	5.81	9			**Pn**	23 56 53.4	+0.2
SCM	**Sheep Creek Mo**	5.81	9	P		**Pn**	23 56 53.5	+0.3
	baz=190							
O16K	**Kokwok River B**	5.86	310			**Pn**	23 56 54.5	+0.6
VRDI

BARN Barnard Glacie 6.33 36 Pn 23 57 00.8 +0.2
CTG Chitna Glacier 6.37 37 P Pn 23 57 00.9 -0.1
baz=224
M18K Stony River 6.37 330 P Pn 23 56 59.8 -1.1
baz=144
M19K Big River Lodg 6.37 337 Pn 23 56 59.7 -1.2
BCPM Bancas Point 6.38 49 Pn 23 57 01.3 +0.3
LOGN Logan Glacier 6.39 39 Pn 23 57 00.8 -0.4
SDPT Sand Point 6.39 268 Pn Pn 23 57 01.2 +0.1
SDPT Sand Point 6.39 268 P Pn 23 57 01.6 +0.4
SDPT Sand Point 6.39 268 P Pn 23 57 01.3 +0.1
baz=78
O15K Ungalikthiuk R 6.45 303 Pn 23 57 02.6 +0.6
WAT6 Susitna Watana 6.52 6 P Pn 23 57 02.9 -0.1
baz=187
N16K Nishlik Lake 6.65 315 Pn 23 57 05.2 +0.5
WAT7 Susitna Watana 6.73 2 Pn 23 57 05.9 0.0
WAT1 Susitna Watana 6.73 3 P Pn 23 57 06.0 +0.1
baz=183
M17K Holitna River 6.79 325 Pn 23 57 06.2 -0.4
L20K Farewell, AK 6.80 341 Pn 23 57 05.2 -1.6
PPLA Purkeypile 6.95 349 P Pn 23 57 09.3 +0.3
baz=166
O29M Mount Kennedy 7.01 49 Pn 23 57 10.3 +0.5
N15K Kwethluk River 7.03 310 Pn 23 57 11.0 +1.1
DHY Denali Highway 7.03 7 Pn 23 57 10.4 +0.3
DHY Denali Highway 7.03 7 P Pn 23 57 10.2 +0.1
baz=188
M26K Nabesna, AK 7.06 24 Pn 23 57 10.4 +0.1
M16K Timber Creek 7.06 318 Pn 23 57 10.5 +0.2
P29M Windy Craggy 7.07 55 Pn 23 57 09.7 -0.7
PS1A Pavlof South-1 7.09 269 Pn 23 57 10.7 0.0
PAX Paxson 7.12 14 Pn 23 57 11.8 +0.5
PAX Paxson 7.12 14 P Pn 23 57 11.7 +0.5
baz=197
PVV Pavlof Volcano 7.13 269 Pn 23 57 10.6 -0.6
O14K Tigyukauivet M 7.16 301 Pn 23 57 12.6 +0.9
L18K Granite Mounta 7.21 331 Pn 23 57 11.4 -0.9
YUK3 Moose Creek 7.25 35 Pn 23 57 13.9 +0.7
YUK3 Moose Creek 7.25 35 P Pn 23 57 13.9 +0.7
baz=223
RND Reindeer 7.30 1 Pn Pn 23 57 14.2 +0.5
YUK7 Dusty Glacier 7.32 48 Pn 23 57 14.2 +0.1
S31K Pelican 7.33 70 Pn 23 57 11.9 -2.1
TRF Thorofare Moun 7.37 356 Pn 23 57 14.6 -0.1
TRF Thorofare Moun 7.37 356 P Pn 23 57 14.4 -0.2
baz=175
MENT Mentasta 7.38 20 Pn 23 57 15.5 +0.7
CAST Castle Rocks 7.45 350 Pn 23 57 15.1 -0.6
CAST Castle Rocks 7.45 350 P Pn 23 57 15.8 +0.1
baz=167
YUK6 Outpost Mounta 7.46 45 Pn 23 57 16.7 +0.7
YUK6 Outpost Mounta 7.46 45 P Pn 23 57 16.7 +0.7
baz=235
M15K Kasigluk River 7.55 312 Pn 23 57 18.0 +1.0
L17K Donlin 7.61 326 Pn 23 57 17.0 -0.8
N14K Kuskokwak Cree 7.62 305 Pn 23 57 18.5 +0.5
MCK McKinley 7.63 1 Pn 23 57 18.7 +0.6
P30M Million Dollar 7.63 53 Pn 23 57 18.3 +0.1
TTA Tatalina 7.64 336 Pn 23 57 16.8 -1.5
TTA Tatalina 7.64 336 P Pn 23 57 17.4 -0.9
PLBC Pleasant Camp 7.64 59 P Pn 23 57 17.7 -0.6
baz=250
K20K Telida 7.65 343 P Pn 23 57 18.9 +0.6
baz=159
L16K Owhat River 7.70 321 Pn Pn 23 57 18.9 -0.2
L16K Owhat River 7.70 321 P Pn 23 57 18.8 -0.2
baz=132
SIT Sitka 7.74 77 Pn 23 57 16.4 -3.1
SIT Sitka 7.74 77 P Pn 23 57 16.9 -2.7
HYT Haines Junctio 7.74 48 Pn Pn 23 57 19.9 +0.1
HYT Haines Junctio 7.74 48 P Pn 23 57 20.2 +0.5
baz=238
K24K Donnelly Dome 7.89 11 Pn 23 57 22.1 +0.3
K24K Donnelly Dome 7.89 11 P Pn 23 57 22.1 +0.3
baz=194
BCAR Beaver Creek A 7.91 25 Pn Pn 23 57 22.2 +0.1
CHUM Lake Minchumin 7.93 350 Pn 23 57 21.9 -0.3
RIDG Independent Ri 7.95 14 Pn 23 57 22.9 +0.4
RIDG Independent Ri 7.95 14 P Pn 23 57 23.1 +0.6
baz=198
BWN Browne 8.07 359 Pn 23 57 24.4 +0.3
M14K Bethel 8.12 310 Pn 23 57 24.7 -0.1
SKAG Skagway 8.14 60 Pn 23 57 25.5 +0.4
SKAG Skagway 8.14 60 P Pn 23 57 26.3 +1.1
SKAG Skagway 8.14 60 P Pn 23 57 25.2 +0.1
baz=252
FALS False Pass 8.15 267 Pn Pn 23 57 23.5 -1.8
BESE Bessie Mountai 8.16 67 Pn 23 57 24.2 -1.2
S32K Killisnoo 8.16 74 Pn 23 57 23.3 -2.1
J18K Innoko River 8.26 336 Pn 23 57 25.4 -1.4
R32K Eaglecrest 8.28 69 Pn Pn 23 57 25.9 -1.1
SCRK Sand Creek 8.30 16 Pn 23 57 27.9 +0.5
O30N Mendenhall 8.31 51 Pn 23 57 26.9 -0.7
O30N Mendenhall 8.31 51 P Pn 23 57 27.9 +0.4
baz=242
JIS Juneau Island 8.35 69 Pn 23 57 27.4 -0.6
JIS Juneau Island 8.35 69 P Pn 23 57 27.6 -0.3
ISNN Isanotski Nort 8.36 267 Pn 23 57 28.5 +0.3
HDA Harding Lake 8.39 7 Pn 23 57 28.5 0.0
L15K Ungalak Mounta 8.43 316 Pn 23 57 29.6 +0.6
NEA2 Nenana 8.49 0 Pn 23 57 29.2 -0.8
CCB Clear Creek Bu 8.58 4 Pn 23 57 30.7 -0.3
M13K Dall Lake 8.58 306 Pn 23 57 31.2 +0.1
J25K Salcha River, 8.72 11 P Pn 23 57 33.1 0.0
baz=194
IL31 8.75 7 Pn 23 57 33.2 -0.2
ILAR Eielson Array 8.75 7 Pn 23 57 33.0 -0.5
ILAR Eielson Array 8.75 7 Pn Pn 23 57 32.8 -0.7
comp=E,2.4nm,0.3s,baz=187,slow=13,SNR=92
ILAR Sn Sn 23 59 06.9 -5.1
comp=E,0.8nm,0.3s,baz=178,slow=20,SNR=10
ILAR LR LR 00 01 04.0
comp=E,584nm,19.5s,baz=146,slow=39
comp=E,6.7nm,0.5s
WHY Whitehorse 8.80 53 Pn 23 57 34.5 +0.2
COLA College 8.80 4 Pn 23 57 34.1 0.0
COLA College 8.80 4 P Pn 23 57 35.0 +0.9
K15K Wolf Creek Mou 8.82 320 Pn 23 57 34.4 0.0
J26L Joseph Creek 8.86 16 Pn 23 57 35.2 +0.2
MDM Murphy Dome 8.88 3 Pn 23 57 35.2 0.0
MLY Manley 8.96 356 Pn 23 57 35.8 -0.7
MLY Manley 8.96 356 P Pn 23 57 36.3 -0.2
baz=174
P32M Atlin 8.97 61 Pn 23 57 36.3 -0.2
P32M Atlin 8.97 61 P Pn 23 57 36.3 -0.2
baz=254
U33K Whale Pass 9.01 83 Pn 23 57 33.4 -3.5
I23K Minto, Yukon-K 9.05 360 P Pn 23 57 37.8 +0.3
baz=179
M30M Minto, Yukon 9.05 39 Pn 23 57 36.8 -0.8
POKR Poker Plat Res 9.06 5 Pn 23 57 38.2 +0.4
CRAG Craig 9.10 87 Pn Pn 23 57 35.3 -3.0
CRAG Craig 9.10 87 P Pn 23 57 37.0 -1.3
J16K Anvik River 9.18 326 Pn 23 57 37.9 -1.4
I21K Tanana 9.18 353 Pn 23 57 38.7 -0.6
DAWY Dawson 9.35 28 Pn 23 57 41.5 -0.1
WRAK Wrangell Islan 9.40 81 Pn Pn 23 57 40.1 -2.3
Q32M Nakina River 9.55 66 Pn 23 57 43.8 -0.8
P33M Teslin, Yukon 9.59 58 Pn 23 57 44.5 -0.5
PRP Porcupine Dome 9.59 9 Pn 23 57 45.0 -0.1
AKUT Akutan 9.68 265 Pn Pn 23 57 45.1 -1.1
AKBBA Akutan Broad B 9.78 265 Pn 23 57 46.0 -1.5
H20K Anotleneega Mo 9.79 346 Pn 23 57 48.8 +1.2
N32M Quiet Lake 9.80 52 Pn Pn 23 57 47.7 -0.2
J14K Nanvaranak Lak 9.84 318 Pn 23 57 47.8 -0.6
H22K Ishtalitna Cre 9.85 355 Pn 23 57 47.4 -1.2
V35K Ketchikan 9.97 87 Pn Pn 23 57 47.2 -3.0
S34M Telegraph Cree 10.03 72 Pn 23 57 50.0 -1.0
H18K Honhosa River 10.09 338 Pn 23 57 50.2 -1.6
IMAR Indian Mountai 10.12 349 Pn 23 57 50.5 -1.7
I27K Kandik River 10.20 18 Pn 23 57 54.0 +0.6
R33M Jennings River 10.29 64 Pn 23 57 54.4 -0.3
T35M Bob Quinn 10.52 77 Pn 23 57 57.0 -0.7
G21K Allakaket 10.62 351 Pn 23 57 58.2 -0.8
FYIJ Fort Yukon 10.65 9 Pn 23 57 59.0 -0.4
DLBC Dease Lake 10.65 70 Pn 23 57 59.0 -0.5
DLBC Dease Lake 10.65 70 Pn Pn 23 57 59.4 -0.1
comp=E,1.8nm,0.3s,baz=246,slow=9.8,SNR=21
DLBC LR LR 00 01 33.5
comp=E,915nm,19.3s,baz=288,slow=34
comp=E,5.0nm,0.4s
G18K Tagagawik 10.79 339 Pn 23 58 00.7 -0.8

MMPY Sheldon Lake, 11.21 47 Pn 23 58 07.4 +0.1
F21K Alatna River 11.31 352 Pn 23 58 07.4 -1.1
BMAR Burnt Mountain 11.55 9 Pn 23 58 10.9 -0.9
SPIA Saint Paul Isl 11.60 284 Pn Pn 23 58 12.2 -0.3
F17K Baldwin Pennin 11.82 336 Pn 23 58 14.2 -1.2
EPYK Eagle Plains 11.88 25 Pn 23 58 16.2 0.0
E18K Tukpahlearik C 12.51 339 Pn 23 58 24.6 -0.2
TOLK Toolik Lake Re 12.56 359 Pn 23 58 25.8 +0.2
BBB Bella Bella 12.98 99 LR LR 00 02 21.9
comp=E,598nm,18.4s,baz=280,slow=32
D19K Kuna River 13.06 345 Pn 23 58 32.9 +0.6
D25K Kavik River 13.31 4 Pn 23 58 36.0 +0.2
D27M Malcolm River 13.68 13 Pn 23 58 41.3 +0.4
C18K Utukok River 13.69 341 Pn 23 58 41.4 +0.5
C23K Itkillik River 13.78 358 Pn 23 58 41.3 -0.7
INK Inuvik 14.18 24 Pn 23 58 48.3 +0.7
INK Inuvik 14.18 24 Pn Pn 23 58 49.0 +1.5
comp=E,0.4nm,0.3s,baz=210,slow=15,SNR=12
comp=E,7.3nm,1.1s
WRGLY Wrigley 14.75 51 Pn 23 58 54.4 -1.1
ATKA Atka Island 15.10 265 Pn 23 58 58.6 -1.6
ADK Adak 16.63 267 Pn 23 59 19.2 -0.7
ADK IAmb IAmb 23 59 36.6
comp=Z,94nm,1.0s
KIWB Kanaga Island 16.90 267 Pn 23 59 22.1 -1.3
C36M Paulatuk 17.36 30 Pn 23 59 28.0 -1.1
HILA High Level 17.46 69 P Pn 23 59 29.6 -0.8
BRLDA Berland Lookou 18.24 83 P P 23 59 40.3 0.0
BRLDA IAmb IAmb 23 59 44.9
comp=Z,48nm,1.0s
E03A Lebam 18.59 110 P 23 59 42.6 -1.5
YKA Yellowknife Ar 18.61 56 P Pn 23 59 44.6 +0.2
YKA Yellowknife Ar 18.61 56 P Pn 23 59 45.4 +0.9
comp=Z,0.3nm,0.3s,baz=264,slow=10,SNR=68
YKA LR LR 00 06 40.4
comp=Z,315nm,19.4s,baz=261,slow=36
comp=Z,4.6nm,0.8s
A36M Sachs Harbour 18.81 23 P 23 59 45.4 -1.0
A36M IAmb IAmb 23 59 58.9
comp=Z,35nm,0.8s
AMKA Amchitka 19.10 269 P P 23 59 47.6 -2.0
LON Longmire 19.39 107 P P 23 59 51.8 -1.1
LTY Liberty 19.68 105 P P 23 59 55.4 -0.8
LTY IAmb IAmb 00 00 01.1
comp=Z,40nm,1.4s
EDM Edmonton 20.81 83 P P 00 00 07.4 -0.9
EDM IAmb IAmb 00 00 18.5
comp=Z,41nm,1.3s
HAWA Hanford 20.83 105 P 00 00 07.2 -1.4
HAWA IAmb IAmb 00 00 23.9
comp=Z,17nm,1.2s
NEW Newport 21.04 98 P P 00 00 10.9 0.0
NEW IAmb IAmb 00 00 26.7
comp=Z,12nm,0.9s
NEW Newport 21.04 98 P P 00 00 12.8 +1.9
comp=Z,4.1nm,0.7s,baz=303,slow=9.1,SNR=7.8
NEW LR LR 00 07 16.2
comp=Z,235nm,19.5s,baz=289,slow=34
comp=Z,4.1nm,0.7s
I04A Tendick Farm, 21.06 115 P P 00 00 10.3 -0.7
I04A IAmb IAmb 00 00 25.5
comp=Z,28nm,1.1s
SHEM Shemya Is, Ala 21.43 276 LR LR 00 09 14.1
comp=Z,126nm,19.9s,baz=104,slow=38
PINE Pine Mountain 21.81 112 P P 00 00 18.4 -1.0
PINE IAmb IAmb 00 00 26.8
comp=Z,25nm,1.2s
F10A Beach Ranch, E 22.34 103 P P 00 00 24.3 -0.6
F10A IAmb IAmb 00 00 38.2
comp=Z,24nm,1.1s
YBH Yreka Blue Hor 22.42 119 LR LR 00 06 58.2
comp=Z,223nm,18.3s,baz=316,slow=31
BILL Bilibino 23.37 318 P P 00 00 35.0 -0.3
BILL IAmb IAmb 00 01 04.1
comp=Z,21nm,1.4s
PLID Pearl Lake 23.57 104 P P 00 00 37.9 +0.1
WVOR Wild Horse Val 23.97 112 P P 00 00 41.9 +0.4
WVOR IAmb IAmb 00 00 53.2
comp=Z,17nm,0.8s
ORV Oroville 24.68 120 P P 00 00 47.4 -0.5
MFID Camas Ranch 24.77 107 P P 00 00 49.0 +0.2
MFID IAmb IAmb 00 00 59.8
comp=Z,9.9nm,0.9s
EGMT Eagleton 25.28 92 P P 00 00 52.2 -1.1
EGMT IAmb IAmb 00 01 05.9
comp=Z,13nm,0.8s
HLID Hailey 25.43 105 P P 00 00 54.9 +0.1
MPK Martis Peak 25.60 119 P P 00 00 56.3 -0.2
MPK IAmb IAmb 00 01 10.3
comp=Z,13nm,1.1s
BMN Battle Mountai 26.15 113 P P 00 01 00.8 -0.6
FFC Flin Flon 26.45 73 P P 00 01 03.7 -0.1
RYN Ryan 26.86 118 P P 00 01 06.8 -1.0
ELK Elko 26.95 110 P P 00 01 08.6 -0.1
ELK Elko 26.95 110 LR LR 00 10 07.2
comp=Z,74nm,21.9s,baz=314,slow=33
NVAR Mina Array Bea 27.12 118 P P 00 01 10.3 +0.1
NVAR Mina Array Bea 27.12 118 P P 00 01 12.5 +2.3
comp=Z,2.7nm,0.7s,baz=307,slow=9.0,SNR=20
NVAR LR LR 00 10 11.8
comp=Z,194nm,18.2s,baz=300,slow=32
comp=Z,2.7nm,0.7s
PDAR Pinedale Array 28.61 101 P P 00 01 24.2 +0.7
PDAR Pinedale Array 28.61 101 P P 00 01 24.9 +1.4
comp=Z,1.2nm,0.6s,baz=313,slow=4.7,SNR=18
PDAR LR LR 00 10 48.4
comp=Z,95nm,20.7s,baz=342,slow=32
comp=Z,1.2nm,0.6s
FCC Fort Churchill 29.09 62 P P 00 01 27.4 +0.1
FCC IAmb IAmb 00 01 39.1
comp=Z,10nm,1.1s
BSUT Blindstream Ca 29.49 106 P P 00 01 31.0 -0.5
BSUT IAmb IAmb 00 01 42.8
comp=Z,9.6nm,1.1s
PETK Petropavlovsk- 30.24 287 P P 00 01 38.9 +1.3
comp=Z,3.1nm,0.8s,baz=74,slow=13,SNR=3.9
PETK LR LR 00 13 28.7
comp=Z,144nm,21.5s,baz=73,slow=36
comp=Z,3.1nm,0.8s
MA2 Magadan 31.16 302 LR LR 00 14 26.9
comp=Z,111nm,19.0s,baz=109,slow=37
ULM Lac du Bonnet 31.82 78 P P 00 01 51.5 0.0
comp=Z,1.6nm,0.7s,baz=313,slow=11,SNR=3.6
ULM LR LR 00 14 28.4
comp=Z,477nm,18.1s,baz=301,slow=36
comp=Z,1.6nm,0.7s
WUAZ Wupatki 32.88 113 P P 00 02 01.1 0.0
X16A Lo Mia Camp, P 33.70 114 P P 00 02 05.9 -2.5
X16A IAmb IAmb 00 02 20.6
comp=Z,10nm,0.8s
KSCO Kaye Shedlock' 35.01 99 P P 00 02 18.4 -1.1
EYMN Ely 35.49 78 P P 00 02 22.0 -1.5
EYMN IAmb IAmb 00 02 34.4
comp=Z,12nm,1.0s
TIXI Tiksi 35.82 328 LR LR 00 19 59.9
comp=Z,49nm,18.1s,baz=296,slow=41
ANMO Albuquerque 35.90 108 LR LR 00 17 20.5
comp=Z,60nm,18.8s,baz=45,slow=37
NEEM North Greenlan 37.72 21 eP P 00 02 52.4 +10
FRB Frobisher Bay 38.52 45 LR LR 00 18 17.1
comp=Z,211nm,18.3s,baz=336,slow=36
YAK Yakutsk 39.50 313 P P 00 02 57.4 +0.2
WMOK Wichita Mounta 40.22 100 P P 00 03 02.9 -0.7
WMOK IAmb IAmb 00 03 14.8
comp=Z,7.4nm,1.0s
R40A Maddies Statio 41.28 91 P P 00 03 11.0 -1.2
R40A IAmb IAmb 00 03 23.1
comp=Z,6.4nm,0.8s
HDIL Hopedale 41.38 86 P P 00 03 12.2 -0.9
TXAR Lajitas Array 41.75 111 P P 00 03 18.6 +2.2
comp=Z,1.8nm,0.9s,baz=324,slow=6.2,SNR=5.2
comp=Z,1.8nm,0.9s
LPIG La Paz 42.74 122 LR LR 00 18 17.7
comp=Z,81nm,19.5s,baz=29,slow=32
JCT Junction City 42.90 106 P P 00 03 25.1 -0.6
JCT IAmb IAmb 00 03 36.7
comp=Z,18nm,0.9s
SUMG Summit 43.10 24 P P 00 03 25.8 -1.4
SUMG Summit 43.10 24 iP P 00 03 29.0 +1.9
ASAJ Asahikawa 43.55 284 LR LR 00 20 03.7
comp=Z,83nm,19.6s,baz=24,slow=34
SCHQ Schefferville 44.06 56 P P 00 03 35.3 +0.7
comp=Z,2.0nm,0.9s,baz=305,slow=12,SNR=2.4
SCHQ LR LR 00 21 31.6
comp=Z,183nm,19.8s,baz=302,slow=36
comp=Z,2.0nm,0.9s
SADO Sadowa 44.17 74 LR LR 00 21 32.7
comp=Z,178nm,19.2s,baz=322,slow=36
ICESG Greenland Ices 45.10 29 iP P 00 03 45.5 +2.4
SPITS Spitsbergen Ar 45.66 4 P P 00 03 48.2 +1.1
comp=Z,6.1nm,0.9s,baz=27,slow=13,SNR=1.5
comp=Z,6.1nm,0.9s
KLR Kul'dur 45.92 296 LR LR 00 25 25.2
comp=Z,111nm,18.1s,baz=84,slow=39
NRIK Noril'sk 48.26 337 P P 00 04 07.3 -0.2
NRIK IAmb IAmb 00 04 17.8
comp=Z,9.4nm,1.1s
NRIK Noril'sk 48.26 337 P P 00 04 07.5 +0.1
comp=Z,1.0nm,0.3s,baz=22,slow=18,SNR=3.0
NRIK LR LR 00 27 03.0
comp=Z,119nm,18.6s,baz=46,slow=39
comp=Z,1.0nm,0.3s
H11N2 WAKE ISLAND Hy 48.83 240 T T 00 57 21.0
baz=28,slow=74
H11N3 WAKE ISLAND Hy 48.83 240 T T 00 57 24.4
baz=28
H11N1 WAKE ISLAND Hy 48.84 240 T T 00 57 30.1
baz=28,slow=74
USRK Ussuriysk Ar. 49.15 291 LR LR 00 25 23.0
comp=Z,193nm,20.1s,baz=29,slow=36
250A Grady 49.24 92 P P 00 04 13.3 -2.1
H11S1 WAKE ISLAND Hy 49.97 240 T T 00 58 42.2
baz=28,slow=76,SNR=33
H11S2 WAKE ISLAND Hy 49.98 240 T T 00 58 53.9
baz=28,slow=76,SNR=27
H11S3 WAKE ISLAND Hy 49.98 240 T T 00 58 55.7
baz=28,slow=76,SNR=31
MDJ Mudanjiang 50.11 293 P P 00 04 20.6 -1.3
MDJ sP sP 00 04 25.0 +0.7
MDJ PcP PcP 00 05 39.0 -2.3
MDJ PP PP 00 06 13.5 -3.2
MDJ S S 00 11 31.5 -1.6
MDJ sS sS 00 11 36.0 +0.1
MDJ ScS ScS 00 14 13.9 +1.0
MDJ Mudanjiang 50.11 293 SS SS 00 15 05.4 -0.2
MDJ pmax pmax
comp=Z,7.0nm,2.1s
MDJ pmax pmax
comp=Z,140nm,3.6s
MDJ LR LR
comp=Z,230nm,14.1s
MJAR Matsushiro Arr 51.22 280 P P 00 04 32.1 +1.7
comp=Z,0.6nm,0.3s,baz=72,slow=5.4,SNR=1.4
comp=Z,0.6nm,0.3s
JHJ Hachijo jima 2 52.86 276 LR LR 00 26 38.3
comp=Z,21nm,21.0s,baz=162,slow=35
ARCES ARCESS Array B 54.58 2 P P 00 04 55.5 +0.6
comp=Z,3.2nm,1.0s,baz=330,slow=4.2,SNR=4.0
comp=Z,3.2nm,1.0s
JCJ Chichijima 56.10 269 LR LR 00 25 59.9
comp=Z,50nm,21.8s,baz=72,slow=33
KSRS Korea Array 56.13 288 P P 00 05 07.9 +1.6
comp=Z,1.1nm,0.6s,baz=50,slow=5.9,SNR=2.2
KSRS LR LR 00 29 24.2
comp=Z,41nm,20.1s,baz=45,slow=36
comp=Z,1.1nm,0.6s
CMIG Matias Romero 56.35 111 LR LR 00 28 29.2
comp=Z,45nm,19.3s,baz=320,slow=35
TEIG Tepich 57.32 103 LR LR 00 32 05.6
comp=Z,480nm,18.5s,baz=46,slow=38
JNU Nakatsue 57.78 282 LR LR 00 31 28.4
comp=Z,44nm,20.2s,baz=62,slow=37
ULN Ulaanbaatar 58.45 310 P P 00 05 22.9 0.0
ULN IAmb IAmb 00 05 34.0
comp=Z,6.1nm,0.8s
SONM Songino Array 58.76 310 P P 00 05 24.6 -0.3
SONM Songino Array 58.76 310 P P 00 05 27.5 +2.5
comp=Z,4.9nm,0.8s,baz=46,slow=5.8,SNR=28
SONM LR LR 00 30 12.6
comp=Z,133nm,18.4s,baz=34,slow=36
comp=Z,4.9nm,0.8s
ZAA0 Zalesovo Array 61.70 327 P P 00 05 45.4 +0.6
ZALV Zalesovo Beam 61.70 327 P P 00 05 45.1 +0.3
ZALV Zalesovo Beam 61.70 327 P P 00 05 46.8 +2.0
comp=Z,2.7nm,0.7s,baz=32,slow=7.3,SNR=15
comp=Z,2.7nm,0.7s
HHC Hu-ho-hao-te 61.84 302 eP P 00 05 46.1 0.0
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,6.2s
NB2 NORSAR Subarra 62.16 11 P P 00 05 49.0 +1.1
comp=Z,2.6nm,0.9s,baz=348,slow=6.9
NOA NORSAR Array B 62.16 11 P P 00 05 49.3 +1.4
comp=Z,0.8nm,0.8s,baz=349,slow=6.7,SNR=2.7
comp=Z,0.8nm,0.8s
FIA1 FINESS Array S 62.71 3 P P 00 05 52.4 +0.9
FINES FINESS Array B 62.71 3 P P 00 05 52.6 +1.2
FINES FINESS Array B 62.71 3 P P 00 05 53.4 +2.0
comp=Z,2.1nm,0.6s,baz=0.5,slow=10,SNR=14
comp=Z,2.1nm,0.6s
HFS Hagfors 63.30 9 P P 00 05 57.1 +1.7
comp=Z,1.6nm,0.8s,baz=346,slow=11,SNR=1.5
comp=Z,1.6nm,0.8s
JOW Kunigami 64.06 280 LR LR 00 33 57.4
comp=Z,43nm,20.2s,baz=96,slow=36
GUMO Guam 65.43 257 LR LR 00 29 40.1
comp=Z,15nm,19.8s,baz=146,slow=31
ARU Arti 65.56 343 LR LR 00 36 22.9
comp=Z,80nm,19.6s,baz=350,slow=38
BVAR Borovoye Array 66.43 335 P P 00 06 17.7 +1.8
comp=Z,1.5nm,0.7s,baz=32,slow=8.7,SNR=8.3
BVAR LR LR 00 38 39.4
comp=Z,106nm,19.4s,baz=9.7,slow=39
comp=Z,1.5nm,0.7s
KURBB Kurchatov Arra 66.48 329 P P 00 06 17.8 +1.5
comp=Z,1.1nm,0.7s,baz=30,slow=6.6,SNR=8.3
KURBB LR LR 00 37 04.8
comp=Z,125nm,19.0s,baz=170,slow=38
comp=Z,1.1nm,0.7s
JTS Las Juntas de 67.29 106 LR LR 00 37 18.0
comp=Z,43nm,18.7s,baz=101,slow=37
GTA Gaotai 68.36 309 eP P 00 06 30.9 +2.4
GTA pP pwP 00 06 39.4 +3.1
GTA pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 68.73 325 P P 00 06 30.9 +0.3
MK31 IAmb IAmb 00 06 41.5
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 68.73 325 P P 00 06 31.5 +0.9
MKAR Makanchi Array 68.73 325 P P 00 06 32.1 +1.5
comp=Z,1.2nm,0.5s,baz=26,slow=5.8,SNR=25
MKAR LR LR 00 37 56.2
comp=Z,112nm,18.1s,baz=27,slow=37
comp=Z,1.2nm,0.5s
MAKZ Makanchi 68.82 325 P P 00 06 31.3 +0.1
WMQ Urumqi 69.48 320 eP P 00 06 38.2 +2.9
WMQ sP pwP 00 06 45.8 +2.7
WMQ PcP PcP 00 06 55.6 -2.9
WMQ pmax pmax
comp=Z,9.0nm,0.7s
SJG San Juan 71.33 85 LR LR 00 38 28.0
comp=Z,43nm,19.3s,baz=32,slow=36
ABKAR Akbulak array 72.20 340 P P 00 06 53.0 +1.3
ABKAR Akbulak array 72.20 340 P P 00 06 52.7 +1.0
OSTC Ostas 73.00 10 eP P 00 06 59.2 +2.8
OSTC ePCP pwP 00 07 07.3 +3.1
DPC Dobruska-Polom 73.21 10 eP P 00 07 00.7 +3.0
DPC ePCP pwP 00 07 08.2 +2.7
KRLC Kraliky 73.53 9 eP P 00 07 01.9 +2.3
KRLC ePCP pwP 00 07 09.4 +2.0
AKASG Malin Array Be 73.53 1 P P 00 06 59.5 0.0
comp=Z,1.0nm,0.5s,baz=1.1,slow=6.1,SNR=5.2
AKASG LR LR 00 42 25.6
comp=Z,56nm,18.1s,baz=32,slow=38
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 73.53 1 P P 00 07 00.5 +1.0
AKBB IAmb IAmb 00 07 09.4
comp=Z,7.0nm,0.7s
KIEV Kiev 73.54 1 P P 00 07 00.2 +0.7
KIEV IAmb IAmb 00 07 09.4
comp=Z,6.3nm,0.7s
ZVC Zvikov 73.90 11 ePCP PcP 00 07 11.6 -5.6
KHC Kasperske Hory 74.14 12 eP P 00 07 06.6 +3.4
KHC ePCP pwP 00 07 13.7 +2.8
GERES GERESS Array B 74.43 12 P P 00 07 06.5 +1.6
comp=Z,0.5nm,0.7s,baz=21,slow=6.3,SNR=2.7
GERES LR LR 00 43 22.3
comp=Z,32nm,18.2s,baz=320,slow=39
comp=Z,0.5nm,0.7s
CKRC Cesky Krumlov 74.52 11 ePCP PcP 00 07 15.2 -4.7
AAK Ala-Archa 74.89 328 LR LR 00 45 16.4

comp=Z,82nm,18.1s,baz=15,slow=40
CONA Conrad Observa 75.57 10 *i* PcP **PcP 00 07 21.7 -2.7**
comp=Z,1.7nm,0.6s
MOTA Moosalm 75.59 14 *e*PcP **PcP 00 07 21.0 -3.6**
comp=Z,7.8nm,1.4s
SQTA Sankt Quirin 75.72 14 *e*pP pP 00 07 16.7 +2.4
comp=Z,7.5nm,1.3s
WTTA Wattenberg 75.74 13 *e*PcP **PcP 00 07 22.6 -2.7**
comp=Z,2.6nm,0.5s
FETA Feichten 75.86 14 *e*PcP **PcP 00 07 23.7 -2.1**
comp=Z,5.1nm,1.0s
KBA Koelnbreinsper 76.13 12 *e*PcP **PcP 00 07 25.6 -1.4**
comp=Z,3.0nm,0.7s
SDV Santo Domingo 76.32 94 LR LR 00 41 38.8
comp=Z,35nm,19.8s,baz=298,slow=36
ABTA Abfaltersbach 76.36 13 *e*PcP **PcP 00 07 27.6 -0.3**
comp=Z,9.8nm,1.5s
BURAR Bucovina Array 76.52 4 P **P 00 07 17.5 +0.5**
MYKA Terra Mystica 76.61 12 *e*P **P 00 07 16.6 -0.9**
comp=Z,5.8nm,1.1s
SOKA Soboth 76.72 11 *e*pP pP 00 07 19.6 -0.3
comp=Z,12nm,2.0s
KSH Kashi 77.29 326 P P 00 07 27.6 +6.1
KSH sP PcP 00 07 34.9 +2.8
KSH pmax pmax
comp=Z,3.0nm,0.8s
RAR Rarotonga 77.55 190 LR LR 00 36 32.6
comp=Z,51nm,20.6s,baz=306,slow=32
ROSC El Rosal 77.61 100 LR LR 00 44 43.5
comp=Z,20nm,18.5s,baz=242,slow=38
BAUV El Baul 77.72 92 P **P 00 07 23.5 -0.6**
PZH PanZhiHua 78.21 300 P **P 00 07 28.3 +1.5**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,70nm,5.0s
MLR Muntele Rosu 78.67 3 LR LR 00 43 54.7
comp=Z,55nm,18.1s,baz=347,slow=37
KBZ Khabaz 79.99 351 P **P 00 07 37.6 +1.5**
comp=Z,1.5nm,0.9s,baz=19,slow=13,SNR=3.2
KBZ LR LR 00 45 44.8
comp=Z,41nm,20.2s,baz=348,slow=38
comp=Z,1.5nm,0.9s
ESDC Sonseca Array 80.11 27 P **P 00 07 38.5 +1.6**
comp=Z,0.6nm,0.7s,baz=339,slow=5.8,SNR=6.5
comp=Z,0.6nm,0.7s
SIMJ Simiganj 80.14 331 P **P 00 07 37.4 +0.1**
SIMJ IAmb IAmb 00 07 48.0
comp=Z,6.6nm,0.9s
MCRA Macar, Loja 82.25 110 P **P 00 07 47.9 -0.7**
GNI Garni 83.36 349 LR LR 00 50 01.4
comp=Z,53nm,18.3s,baz=14,slow=39
BRTR Keskin Array B 84.48 358 P **P 00 08 00.6 +0.7**
comp=Z,0.6nm,0.6s,baz=347,slow=12,SNR=1.5
BRTR LR LR 00 50 37.0
comp=Z,58nm,18.3s,baz=342,slow=39
comp=Z,0.6nm,0.6s
ATAH Atahualpa 85.41 110 LR LR 00 45 33.1
comp=Z,49nm,18.7s,baz=302,slow=35
CMAR Chiang Mai Arr 86.38 298 P **P 00 08 11.2 +1.8**
comp=Z,1.2nm,0.3s,baz=8.1,slow=5.2,SNR=9.5
comp=Z,1.2nm,0.3s
MDP Montagnes des 89.48 82 LR LR 00 45 59.5
comp=Z,52nm,21.9s,baz=304,slow=34
MMAI Mount Meron Ar 91.12 356 LR LR 00 57 07.1
comp=Z,14nm,18.2s,baz=296,slow=41
WSAR Wadi Sarin 97.48 334 LR LR 01 01 59.8
comp=Z,22nm,19.8s,baz=43,slow=41
QSPA South Pole Qui 145.92 180 PKPbc **PKPab 00 15 06.8 +1.0**
comp=Z,2.4nm,0.7s,baz=100,slow=1.8,SNR=4.7
BOSA Boshof 152.22 10 PKPbc **PKiKP 00 15 23.5 +0.6**
comp=Z,2.2nm,0.8s,baz=64,slow=1.2,SNR=4.3

NEIC ***08*** *00:03:33.8±1.1, 58.°05N±0.°06×143.°06W±0.°09, h10km±2km, ML3.4/108, ML3.3(AEIC), Error ellipse: s-maj=10.3km s-min=8.1km az=197.0*

IDC ***08*** *00:03:36.6±1.1, 58.°36N×143.°39W, h0km, mb3.8/7, mbtmp3.7/11, ML3.2/4, Error ellipse: s-maj=21.5km s-min=14.9km az=13.0*

AEIC ***08*** *00:03:38.7±1.0, 58.°07N±0.°06×143.°16W±0.°09, h8km±6km, Error ellipse: s-maj=8.8km s-min=6.7km az=179.0*

ISC 08 00:03:34.9±0.7, 58.°15N±0.°05×143.°25W±0.°04, h10km, n252, σt$44/256, mb3.9/7, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAIM	**Kayak Island**	**1.88**	**342**			**Pb**	**00 04 07.8**	**-1.5**
KAIM				IAML			00 04 48.0	
	comp=E,277nm,0.9s							
KAIM				IAML			00 04 50.5	
	comp=N,343nm,0.9s							
KAIM	**Kayak Island**	**1.88**	**342**	P		**Pb**	**00 04 07.9**	**-1.4**
	baz=160							
SUCK	**Suckling Hills**	**1.94**	**352**			**Pb**	**00 04 08.9**	**-1.5**
SUCK						**Sb**	**00 04 32.8**	**-1.9**
SUCK				IAML			00 04 33.4	
	comp=N,369nm,1.2s							
SUCK				IAML			00 05 09.8	
	comp=E,371nm,1.3s							
BGLC	**Bering Glacier**	**1.97**	**359**			**Pb**	**00 04 09.1**	**-1.7**
BGLC						**Sn**	**00 04 32.8**	**-0.2**
BGLC	**Bering Glacier**	**1.97**	**359**	P		**Pb**	**00 04 09.1**	**-1.7**
	baz=178							
CYK	**Cape Yakataga**	**1.98**	**11**			**Pb**	**00 04 08.6**	**-2.3**
CYK						**Sn**	**00 04 31.5**	**-1.6**
SNH	**Sunshine Point**	**2.04**	**6**			**Pb**	**00 04 09.8**	**-2.4**
SNH						**Sn**	**00 04 34.1**	**-0.9**
SNH				IAML			00 04 35.0	
	comp=E,308nm,0.9s							
MID	**Middleton Isla**	**2.06**	**310**			**Pb**	**00 04 09.8**	**-2.4**
MID				IAML			00 04 38.6	
	comp=N,264nm,2.3s							
MID				IAML			00 05 38.1	
	comp=E,293nm,2.8s							
MID	**Middleton Isla**	**2.06**	**310**	P		**Pb**	**00 04 09.9**	**-2.4**
Q23K	**Middleton Isla**	**2.06**	**310**			**Pb**	**00 04 09.8**	**-2.5**
Q23K				IAML			00 04 58.6	
	comp=N,273nm,2.4s							
Q23K				IAML			00 05 38.1	
	comp=E,297nm,2.8s							
Q23K	**Middleton Isla**	**2.06**	**310**	P		**Pb**	**00 04 09.9**	**-2.5**
	baz=128							
NICHA	**Nichawak Mount**	**2.12**	**350**			**Pb**	**00 04 11.1**	**-2.3**
NICHA						**Sn**	**00 04 36.1**	**-0.7**
GRIN	**Grindle Hills**	**2.13**	**359**			**Pb**	**00 04 11.4**	**-2.3**
MESA	**MESA**	**2.14**	**18**			**Pn**	**00 04 10.7**	**-0.1**
MESA	**MESA**	**2.14**	**18**	P		**Pn**	**00 04 10.9**	**+0.2**
	baz=197							
HMT	**Hamilton**	**2.25**	**347**			**Pn**	**00 04 12.7**	**+0.5**
BERG	**Berg Lake**	**2.26**	**354**			**Pn**	**00 04 12.6**	**+0.3**
BERG				IAML			00 05 03.8	
	comp=N,220nm,0.8s							
BARK	**Barkley Ridge**	**2.29**	**9**			**Pn**	**00 04 12.9**	**+0.1**
KHIT	**Khitrov Hills**	**2.30**	**360**			**Pn**	**00 04 13.1**	**+0.2**
YKU2	**Yakutat**	**2.30**	**52**	Pn		**Pn**	**00 04 12.1**	**-0.8**
YKU2						**Sn**	**00 04 38.7**	**-2.6**
WAX	**Waxell Ridge**	**2.31**	**5**			**Pn**	**00 04 13.1**	**+0.1**
WAX				IAML			00 05 20.5	
	comp=E,182nm,0.9s							
SAMH	**Samovar Hills**	**2.35**	**32**			**Pn**	**00 04 13.5**	**-0.2**
RAGM	**Ragged Mountai**	**2.36**	**342**			**Pn**	**00 04 14.3**	**+0.6**
BAGL	**Bagley Icefiel**	**2.42**	**14**			**Pn**	**00 04 14.6**	**+0.1**
PCA	**Pinnacle**	**2.48**	**37**			**Pn**	**00 04 14.9**	**-0.5**
PINM	**Pinnacle**	**2.48**	**37**	P		**Pn**	**00 04 14.9**	**-0.5**
	baz=218							
ISLE	**Juniper Island**	**2.50**	**10**			**Pn**	**00 04 15.7**	**0.0**
ISLE				IAML			00 05 23.6	
	comp=E,178nm,0.9s							
PNL	**Peninsula**	**2.51**	**51**	P		**Pn**	**00 04 14.8**	**-0.9**
PNL	**Peninsula**	**2.51**	**51**	P		**Pn**	**00 04 14.5**	**-1.2**
	baz=232							
TABL	**Table Mountain**	**2.54**	**24**			**Pn**	**00 04 16.4**	**+0.1**
TABL				IAML			00 04 46.8	
	comp=E,235nm,0.7s							
TABL				IAML			00 05 09.9	
	comp=N,190nm,0.8s							
GOAT	**Goat Mountain**	**2.55**	**343**			**Pn**	**00 04 16.2**	**-0.1**
BCPM	**Bancas Point**	**2.59**	**44**			**Pn**	**00 04 16.0**	**-0.9**
BCPM				IAML			00 04 53.1	
	comp=E,144nm,0.7s							
BCPM				IAML			00 05 06.5	
	comp=N,173nm,0.8s							
CRQM	**Cirque**	**2.61**	**1**			**Pn**	**00 04 17.3**	**0.0**
CRQM				IAML			00 05 23.1	
	comp=E,123nm,1.1s							
CRQM				IAML			00 05 44.7	
	comp=N,115nm,1.0s							
GRNC	**Granite Creek**	**2.70**	**16**			**Pn**	**00 04 18.6**	**+0.1**
GRNC				IAML			00 04 52.8	
	comp=E,100nm,0.7s							
GRNC				IAML			00 05 35.1	
	comp=N,126nm,1.2s							
EYAK	**Cordova Ski Ar**	**2.72**	**333**	P		**Pn**	**00 04 19.1**	**+0.5**
EYAK	**Cordova Ski Ar**	**2.72**	**333**	P		**Pn**	**00 04 18.9**	**+0.3**
	baz=151							
HIN	**Hinchinbrook I**	**2.80**	**325**			**Pn**	**00 04 20.4**	**+0.7**
KIAG	**Kiagna River**	**2.81**	**9**			**Pn**	**00 04 20.1**	**0.0**
P23K	**Montague Islan**	**2.83**	**313**			**Pn**	**00 04 20.4**	**+0.3**
P23K	**Montague Islan**	**2.83**	**313**	P		**Pn**	**00 04 20.6**	**+0.5**
	baz=130							
BMRM	**Bremner River**	**2.91**	**347**			**Pn**	**00 04 21.5**	**+0.2**
BMRM	**Bremner River**	**2.91**	**347**	P		**Pn**	**00 04 21.5**	**+0.2**
	baz=165							
LOGN	**Logan Glacier**	**2.91**	**22**			**Pn**	**00 04 21.5**	**+0.1**
LOGN				IAML			00 04 58.3	
	comp=E,120nm,0.6s							
CTG	**Chitna Glacier**	**2.98**	**18**	P		**Pn**	**00 04 22.6**	**+0.3**
	baz=198							
CTGM	**Chitina Glacier**	**2.98**	**18**	Pn		**Pn**	**00 04 22.4**	**+0.1**
CTGM				IAML			00 05 31.5	
	comp=E,77nm,0.9s							
CTGM				IAML			00 05 33.1	
	comp=N,84nm,1.0s							
BARN	**Barnard Glacie**	**3.02**	**15**			**Pn**	**00 04 22.9**	**0.0**
BARN				IAML			00 04 58.4	
	comp=E,91nm,0.6s							
PTPK	**Patty Peak**	**3.07**	**7**			**Pn**	**00 04 24.0**	**+0.4**
VRDI	**Verde Repeater**	**3.09**	**358**	Pn		**Pn**	**00 04 24.1**	**+0.3**
VRDI				IAML			00 05 00.0	
	comp=E,70nm,0.7s							
P29M	**Windy Craggy**	**3.22**	**60**			**Pn**	**00 04 23.9**	**-1.6**
P29M				IAML			00 05 11.2	
	comp=E,87nm,0.8s							
P29M				IAML			00 05 21.4	
	comp=N,122nm,0.5s							
P29M	**Windy Craggy**	**3.22**	**60**	P		**Pn**	**00 04 24.0**	**-1.5**
	baz=243							
O29M	**Mount Kennedy**	**3.23**	**46**			**Pn**	**00 04 25.5**	**-0.2**
O29M				IAML			00 05 08.2	
	comp=E,105nm,0.7s							
O29M				IAML			00 05 26.1	
	comp=N,113nm,0.7s							
MCARA	**McCarthy VSAT**	**3.24**	**2**	Pn		**Pn**	**00 04 25.9**	**+0.1**
MCARA				IAML			00 05 15.1	
	comp=N,104nm,1.0s							
MCARA				IAML			00 05 26.8	
	comp=E,89nm,0.8s							
MCARA	**McCarthy VSAT**	**3.24**	**2**	P		**Pn**	**00 04 26.3**	**+0.5**
	baz=181							
DIV	**Divide**	**3.25**	**338**			**Pn**	**00 04 26.2**	**+0.3**
GLB	**Gilahina Butte**	**3.31**	**355**	Pn		**Pn**	**00 04 27.0**	**+0.2**
N25K	**Chitina, Valde**	**3.53**	**349**			**Pn**	**00 04 30.3**	**+0.4**
N25K	**Chitina, Valde**	**3.53**	**349**	P		**Pn**	**00 04 30.4**	**+0.6**
	baz=168							
YUK7	**Dusty Glacier**	**3.54**	**45**			**Pn**	**00 04 30.2**	**+0.2**
YUK8	**Steele Glacier**	**3.60**	**28**			**Pn**	**00 04 31.9**	**+0.9**
YUK8	**Steele Glacier**	**3.60**	**28**	P		**Pn**	**00 04 31.9**	**+0.9**
	baz=210							
KLU	**Klutina**	**3.61**	**339**			**Pn**	**00 04 31.3**	**+0.4**
KLU				IAML			00 05 16.6	
	comp=N,48nm,0.4s							
KLU	**Klutina**	**3.61**	**339**	P		**Pn**	**00 04 31.5**	**+0.6**
	baz=157							
S31K	**Pelican**	**3.73**	**90**	Pn		**Pn**	**00 04 28.4**	**-4.0**
S31K	**Pelican**	**3.73**	**90**	P		**Pn**	**00 04 29.1**	**-3.4**
	baz=275							
YUK6	**Outpost Mounta**	**3.74**	**40**			**Pn**	**00 04 33.3**	**+0.4**
YUK6	**Outpost Mounta**	**3.74**	**40**	P		**Pn**	**00 04 33.8**	**+0.9**
	baz=222							
SEW	**Seward**	**3.75**	**304**			**Pn**	**00 04 32.8**	**+0.1**
SEW	**Seward**	**3.75**	**304**	P		**Pn**	**00 04 32.9**	**+0.2**
	baz=119							
P30M	**Million Dollar**	**3.79**	**56**			**Pn**	**00 04 32.8**	**-0.6**
PLBC	**Pleasant Camp**	**3.81**	**67**			**Pn**	**00 04 32.1**	**-1.5**
PLBC	**Pleasant Camp**	**3.81**	**67**	P		**Pn**	**00 04 32.1**	**-1.5**
	baz=252							
WASW	**Wrangell South**	**3.82**	**353**			**Pn**	**00 04 34.9**	**+1.0**
YUK2	**White River**	**3.84**	**17**			**Pn**	**00 04 35.0**	**+1.0**
YUK4	**Talbot Arm**	**3.96**	**34**	P		**Pn**	**00 04 38.4**	**+2.7**
	baz=217							
WAZA	**Wrangell Mount**	**3.96**	**354**			**Pn**	**00 04 36.9**	**+1.0**
HYT	**Haines Junctio**	**3.97**	**45**	Pn		**Pn**	**00 04 35.7**	**-0.2**
YUK5	**Granite Creek**	**4.05**	**40**			**Pn**	**00 04 37.5**	**+0.5**
O22K	**Cooper Landing**	**4.06**	**308**			**Pn**	**00 04 37.1**	**+0.1**
BRSE	**Bradley Lake S**	**4.20**	**295**			**Pn**	**00 04 39.6**	**+0.7**
BRSE	**Bradley Lake S**	**4.20**	**295**	P		**Pn**	**00 04 39.9**	**+1.0**
	baz=110							
KNK	**Knik Glacier**	**4.20**	**323**			**Pn**	**00 04 40.0**	**+1.1**
KNK				IAML			00 05 37.1	
	comp=E,44nm,0.8s							
KNK				IAML			00 05 38.6	
	comp=N,37nm,0.5s							
KNK	**Knik Glacier**	**4.20**	**323**	P		**Pn**	**00 04 40.0**	**+1.1**
	baz=139							
SCM	**Sheep Creek Mo**	**4.22**	**333**			**Pn**	**00 04 39.9**	**+0.6**
SCM				IAML			00 05 33.7	
	comp=E,39nm,1.5s							
SCM				IAML			00 05 51.8	
	comp=N,41nm,1.0s							
SCM	**Sheep Creek Mo**	**4.22**	**333**	P		**Pn**	**00 04 39.9**	**+0.6**
	baz=149							
M24K	**Tolsona, Glenn**	**4.23**	**341**			**Pn**	**00 04 40.6**	**+1.2**
M24K				IAML			00 05 43.1	
	comp=N,37nm,0.9s							
M24K	**Tolsona, Glenn**	**4.23**	**341**	P		**Pn**	**00 04 40.6**	**+1.2**
	baz=158							
M26K	**Nabesna, AK**	**4.26**	**2**			**Pn**	**00 04 40.5**	**+0.7**
M27K	**Edge Creek, AK**	**4.27**	**9**			**Pn**	**00 04 41.1**	**+1.0**
M27K				IAML			00 06 21.9	
	comp=E,30nm,1.1s							
M27K				IAML			00 06 35.5	
	comp=N,34nm,1.1s							
BRLK	**Bradley Lake**	**4.27**	**295**	Pn		**Pn**	**00 04 40.9**	**+0.9**
SKAG	**Skagway**	**4.32**	**69**	Pn		**Pn**	**00 04 38.1**	**-2.4**
SKAG				IAML			00 05 43.3	
	comp=N,33nm,1.3s							
SKAG				IAML			00 05 49.7	
	comp=E,35nm,1.0s							
SKAG	**Skagway**	**4.32**	**69**	P		**Pn**	**00 04 40.8**	**+0.3**
HARP	**HAARP**	**4.36**	**348**			**Pn**	**00 04 42.0**	**+0.8**
HARP	**HAARP**	**4.36**	**348**	P		**Pn**	**00 04 42.0**	**+0.8**
	baz=166							
CNPM	**China Poot**	**4.37**	**292**			**Pn**	**00 04 42.4**	**+1.1**
CNPM				IAML			00 05 36.0	
	comp=E,44nm,1.0s							
SIT	**Sitka**	**4.40**	**101**	Pn		**Pn**	**00 04 37.8**	**-3.8**
SIT				IAML			00 05 31.2	
	comp=N,34nm,1.3s							
SIT				IAML			00 05 34.6	
	comp=E,31nm,0.7s							
RC01	**Rabbit Creek A**	**4.42**	**315**	Pn		**Pn**	**00 04 42.0**	**+0.1**
RC01				IAML			00 05 36.6	
	comp=E,39nm,0.8s							
RC01				IAML			00 05 41.6	
	comp=N,49nm,0.7s							
RC01	**Rabbit Creek A**	**4.42**	**315**	P		**Pn**	**00 04 42.0**	**+0.1**
	baz=129							
BESE	**Bessie Mountai**	**4.44**	**81**			**Pn**	**00 04 39.9**	**-2.4**
SML	**Sawmill**	**4.47**	**327**	Pn		**Pn**	**00 04 43.0**	**+0.3**
SML				IAML			00 05 58.3	
	comp=E,33nm,0.8s							
SML				IAML			00 06 06.9	
	comp=N,28nm,1.0s							
SML	**Sawmill**	**4.47**	**327**	P		**Pn**	**00 04 43.2**	**+0.5**
	baz=143							
O30N	**Mendenhall**	**4.50**	**51**			**Pn**	**00 04 42.4**	**-0.6**
O30N	**Mendenhall**	**4.50**	**51**	P		**Pn**	**00 04 42.6**	**-0.4**
	baz=236							
PMR	**Palmer**	**4.55**	**322**	Pn		**Pn**	**00 04 44.2**	**+0.5**
PMR	**Palmer**	**4.55**	**322**	P		**Pn**	**00 04 45.0**	**+1.3**
GHO	**Glory Hole Cre**	**4.62**	**324**			**Pn**	**00 04 45.8**	**+1.1**
GHO				IAML			00 06 06.0	
	comp=E,34nm,1.1s							
GHO				IAML			00 06 10.5	
	comp=N,30nm,0.9s							
FIS	**Fire Island**	**4.64**	**313**			**Pn**	**00 04 45.4**	**+0.5**
S32K	**Killisnoo**	**4.69**	**95**			**Pn**	**00 04 42.0**	**-3.6**
SYI	**Shuyak Island**	**4.84**	**279**	Pn		**Pn**	**00 04 49.3**	**+1.6**
Q20K	**Shuyak Island**	**4.84**	**279**	P		**Pn**	**00 04 49.4**	**+1.8**
	baz=92							
M29M	**Somme Creek**	**4.92**	**27**			**Pn**	**00 04 49.5**	**+0.7**
M29M				IAML			00 05 45.1	
	comp=E,18nm,0.7s							
PAX	**Paxson**	**4.96**	**348**			**Pn**	**00 04 50.2**	**+0.8**
PAX	**Paxson**	**4.96**	**348**	P		**Pn**	**00 04 50.4**	**+1.0**
	baz=166							
WHY	**Whitehorse**	**4.96**	**56**	Pn		**Pn**	**00 04 48.7**	**-0.8**
WHY				IAML			00 06 24.9	
	comp=E,18nm,2.2s							
WAT6	**Susitna Watana**	**4.97**	**335**			**Pn**	**00 04 50.0**	**+0.3**
WAT6	**Susitna Watana**	**4.97**	**335**	P		**Pn**	**00 04 50.1**	**+0.4**
	baz=151							
L27K	**Beaver Creek,**	**4.97**	**7**			**Pn**	**00 04 49.3**	**-0.3**
BCAR	**Beaver Creek A**	**4.98**	**8**	Pn		**Pn**	**00 04 49.5**	**-0.2**
KDAK	**Kodiak Island**	**4.99**	**270**	Pn		**Pn**	**00 04 50.5**	**+0.8**
	comp=E,6.4nm,0.3s,baz=95,slow=7.1,SNR=106							
KDAK				Pg		**Pb**	**00 04 59.7**	**-2.5**
	comp=E,5.2nm,0.3s,baz=87,slow=8.6,SNR=7.8							
KDAK				Sn		**Sn**	**00 05 43.3**	**-4.1**
	comp=E,7.8nm,0.3s,baz=302,slow=21,SNR=13							
	comp=E,22nm,0.2s							
SUA	**Susitna One**	**5.04**	**314**			**Pn**	**00 04 50.6**	**+0.1**
SUA				IAML			00 05 50.4	
	comp=N,22nm,1.5s							
SUA				IAML			00 05 50.6	
	comp=E,30nm,0.7s							
SUA	**Susitna One**	**5.04**	**314**	P		**Pn**	**00 04 50.8**	**+0.3**
	baz=128							
P32M	**Atlin**	**5.15**	**70**			**Pn**	**00 04 49.7**	**-2.3**
O20K	**Slope Mountain**	**5.21**	**296**			**Pn**	**00 04 54.4**	**+1.6**
O20K	**Slope Mountain**	**5.21**	**296**	P		**Pn**	**00 04 55.1**	**+2.3**
	baz=108							
RDT	**Redoubt**	**5.28**	**301**			**Pn**	**00 04 54.1**	**+0.3**
DHY	**Denali Highway**	**5.34**	**339**			**Pn**	**00 04 55.2**	**+0.5**
DHY	**Denali Highway**	**5.34**	**339**	P		**Pn**	**00 04 55.9**	**+1.2**
	baz=156							
WAT1	**Susitna Watana**	**5.37**	**333**	P		**Pn**	**00 04 56.1**	**+1.0**
	baz=148							
IVE	**Iliamna Volcan**	**5.37**	**294**			**Pn**	**00 04 56.3**	**+1.2**
RDSO	**Redoubt South**	**5.38**	**299**			**Pn**	**00 04 56.4**	**+1.0**
RED	**Redoubt Volcan**	**5.39**	**299**			**Pn**	**00 04 55.8**	**+0.5**
P19K	**Oil Pt**	**5.39**	**290**			**Pn**	**00 04 56.8**	**+1.5**
P19K	**Oil Pt**	**5.39**	**290**	P		**Pn**	**00 04 57.6**	**+2.3**
	baz=102							
RSO	**Redoubt South**	**5.39**	**299**			**Pn**	**00 04 56.3**	**+0.8**
DFR	**Drift River**	**5.41**	**301**			**Pn**	**00 04 56.3**	**+0.6**
RDWB	**Redoubt West**	**5.44**	**300**			**Pn**	**00 04 57.1**	**+1.0**
M30M	**Minto, Yukon**	**5.47**	**33**			**Pn**	**00 04 56.4**	**0.0**
M30M	**Minto, Yukon**	**5.47**	**33**	P		**Pn**	**00 04 57.1**	**+0.7**
	baz=218							
OHAK	**Old Harbor**	**5.47**	**264**	Pn		**Pn**	**00 04 56.5**	**+0.2**
OHAK	**Old Harbor**	**5.47**	**264**	P		**Pn**	**00 04 57.3**	**+1.0**
OHAK	**Old Harbor**	**5.47**	**264**	P		**Pn**	**00 04 56.8**	**+0.5**
	baz=77							
N20K	**Mount Spurr**	**5.47**	**308**	P		**Pn**	**00 04 57.3**	**+0.8**
	baz=120							
SPCR	**Spurr Chakacha**	**5.47**	**308**			**Pn**	**00 04 56.6**	**+0.2**
STLK	**Strandline Lak**	**5.48**	**311**			**Pn**	**00 04 56.8**	**+0.3**
SPCP	**Crater Peak Br**	**5.48**	**308**			**Pn**	**00 04 57.0**	**+0.3**
Q19K	**Cape Douglas,**	**5.50**	**283**			**Pn**	**00 04 58.7**	**+1.9**
Q19K	**Cape Douglas,**	**5.50**	**283**	P		**Pn**	**00 04 58.8**	**+1.9**
	baz=94							
NCT	**North Crescent**	**5.51**	**300**			**Pn**	**00 04 57.8**	**+0.7**
CUT	**Chulitna**	**5.51**	**324**			**Pn**	**00 04 58.5**	**+1.6**
CUT	**Chulitna**	**5.51**	**324**	P		**Pn**	**00 04 59.4**	**+2.5**
	baz=138							
L29M	**L29M**	**5.57**	**25**			**Pn**	**00 04 58.5**	**+0.7**
L29M	**L29M**	**5.57**	**25**	P		**Pn**	**00 04 59.2**	**+1.4**
	baz=208							
SKT	**Skwentna**	**5.65**	**316**			**Pn**	**00 04 58.7**	**-0.2**
RIDG	**Independent Ri**	**5.66**	**353**			**Pn**	**00 04 59.9**	**+0.9**
P33M	**Teslin, Yukon**	**5.74**	**65**			**Pn**	**00 04 58.5**	**-1.7**
SPNN	**North Nagishla**	**5.76**	**308**			**Pn**	**00 05 01.3**	**+0.8**
K24K	**Donnelly Dome**	**5.80**	**349**			**Pn**	**00 05 02.4**	**+1.4**
K24K	**Donnelly Dome**	**5.80**	**349**	P		**Pn**	**00 05 03.6**	**+2.7**
	baz=166							
Q32M	**Nakina River**	**5.80**	**77**	Pn		**Pn**	**00 04 59.7**	**-1.4**
SCRK	**Sand Creek**	**5.86**	**357**			**Pn**	**00 05 02.1**	**+0.4**
U33K	**Whale Pass**	**5.88**	**106**	Pn		**Pn**	**00 04 57.7**	**-4.2**
U33K	**Whale Pass**	**5.88**	**106**	P		**Pn**	**00 04 58.1**	**-3.9**
	baz=294							
K27K	**Chicken**	**5.92**	**5**			**Pn**	**00 05 02.8**	**+0.2**
RND	**Reindeer**	**5.94**	**335**			**Pn**	**00 05 03.8**	**+0.9**
N32M	**Quiet Lake**	**5.96**	**55**	Pn		**Pn**	**00 05 02.0**	**-1.2**
KAHG	**Katmai Hook Gl**	**5.97**	**278**			**Pn**	**00 05 05.4**	**+2.1**
M31M	**Drury Creek, Y**	**6.00**	**44**			**Pn**	**00 05 02.8**	**-0.8**
SII	**Sitkinak Islan**	**6.13**	**260**	Pn		**Pn**	**00 05 05.7**	**+0.2**
CRAG	**Craig**	**6.17**	**112**	Pn		**Pn**	**00 05 01.9**	**-4.1**
CRAG	**Craig**	**6.17**	**112**	P		**Pn**	**00 05 02.2**	**-3.8**
CRAG	**Craig**	**6.17**	**112**	P		**Pn**	**00 05 02.0**	**-4.0**
	baz=300							
M20K	**Styx River**	**6.21**	**311**			**Pn**	**00 05 07.2**	**+0.7**
DAWY	**Dawson**	**6.22**	**16**			**Pn**	**00 05 07.0**	**+0.3**
MCK	**McKinley**	**6.24**	**336**	Pn		**Pn**	**00 05 08.2**	**+1.3**
MCK	**McKinley**	**6.24**	**336**	P		**Pn**	**00 05 08.1**	**+1.2**
	baz=151							
N19K	**Bonanza Creek**	**6.32**	**300**			**Pn**	**00 05 08.6**	**+0.6**
TRF	**Thorofare Moun**	**6.33**	**330**			**Pn**	**00 05 09.4**	**+1.1**
TRF	**Thorofare Moun**	**6.33**	**330**	P		**Pn**	**00 05 09.3**	**+1.1**
	baz=144							
P18K	**Big Mountain,**	**6.36**	**286**	Pn		**Pn**	**00 05 08.9**	**+0.3**
J26L	**Joseph Creek**	**6.37**	**359**			**Pn**	**00 05 09.8**	**+0.9**
O18K	**Koktuh Hills**

N15K	Kwethluk River	8.88	290	Pn		Pn	00 05 45.6 +2.4
IMAR	Indian Mountai	9.26	332	Pn		Pn	00 05 48.6 +0.4
BMAR	Burnt Mountain	9.33	357	Pn		Pn	00 05 49.5 +0.2
H19K	Roundabout Mou	9.66	325	Pn		Pn	00 05 55.1 +1.4
K15K	Wolf Creek Mou	9.98	302	Pn		Pn	00 05 58.8 +0.6
E25K	Arctic Village	10.06	355	Pn		Pn	00 05 59.5 +0.3
F21K	Alatna River	10.22	337	Pn		Pn	00 06 02.8 +1.3
INK	Inuvik	11.07	19	Pn		Pn	00 06 17.7 +4.7
	comp=E,0.1nm,0.3s,baz=230,slow=6.1,SNR=2.0						
G16K	Koyuk River	11.55	317	Pn		Pn	00 06 20.1 +0.4
E18K	Tukpahlearik C	12.17	327	Pn		Pn	00 06 29.8 +1.7
C18K	Utukok River	13.17	330	Pn		Pn	00 06 42.3 +0.5
C36M	Paulatuk	13.98	29	Pn		Pn	00 06 52.3 -0.4
C16K	Lisburne Hills	14.11	325	Pn		Pn	00 06 55.9 +1.4
YKA	Yellowknife Ar	14.76	61	Pn		Pn	00 07 03.2 -0.3
	baz=264,slow=9.9,SNR=1.6 comp=E,0.1nm,0.5s						
NVAR	Mina Array Bea	25.52	130	P		P	00 09 08.7 +5.1
	comp=E,0.7nm,0.7s,baz=312,slow=8.4,SNR=1.2 comp=E,0.7nm,0.7s						
PETK	Petropavlovsk-	32.77	287	P		P	00 10 10.7 +3.0
	comp=E,1.5nm,0.8s,baz=77,slow=12,SNR=1.9 comp=E,1.5nm,0.8s						
H11N2	WAKE ISLAND Hy	52.66	245	T		T	01 09 58.3
	baz=32						
H11N3	WAKE ISLAND Hy	52.67	245	T		T	01 10 07.8
	baz=32						
H11N1	WAKE ISLAND Hy	52.68	245	T		T	01 10 13.7
	baz=32						
FINES	FINESS Array B	60.45	6	P		P	00 13 45.3 +1.3
	comp=E,3.4nm,1.0s,baz=352,slow=8.4,SNR=5.8 comp=E,3.4nm,1.0s						
ZALV	Zalesovo Beam	61.68	330	P		P	00 13 53.8 +1.3
	comp=E,0.4nm,0.3s,baz=25,slow=4.8,SNR=2.1 comp=E,0.4nm,0.3s						
BVAR	Borovoye Array	65.85	338	P		P	00 14 22.2 +2.1
	comp=E,0.7nm,0.8s,baz=34,slow=8.8,SNR=3.6 comp=E,0.7nm,0.8s						
KURBB	Kurchatov Arra	66.31	332	P		P	00 14 25.0 +2.0
	comp=E,0.6nm,0.9s,baz=25,slow=6.3,SNR=5.0 comp=E,0.6nm,0.9s						
MKAR	Makanchi Array	68.84	328	P		P	00 14 40.5 +1.4
	comp=E,0.5nm,0.8s,baz=14,slow=5.3,SNR=4.1 comp=E,0.5nm,0.8s						

JMA 08 00:18:20.8±0.2, 24.3N±0.3×123.7E±0.7, h16km±1km, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.11	33	P	Pg	00 18 24.2	-0.1
IRIF				eS	Sb	00 18 26.8	-0.1
HATJ	Hateruma jima	0.23	146	P	Pg	00 18 25.9	-0.1
HATJ				S	Sg	00 18 29.2	-0.3
JKRS	Kuro-shima	0.31	91	eS	Sb	00 18 32.4	-0.4
JIJ	Ishigaki jima	0.45	75	P	Pg	00 18 29.7	-0.1
JIJ				S	Sg	00 18 35.4	-0.6
JISG	Ishigakijimahi	0.68	60	eS	Sg	00 18 43.2	+0.1
JTJ	Tarama	1.02	67	eS	Sn	00 18 54.4	0.0

TAP 08 00:19:20.6, 24.09N×121.79E, h10km, ML2.0, 2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.17	296	eP	Pg	00 19 24.9	+0.7
ETL	baz=295			eS	Sg	00 19 27.6	+0.8
TWD	Chiawan	0.18	268	i P	Pg	00 19 24.9	+0.5
NACB	baz=276 Ninganchiao	0.20	296	⇓iP	Pg	00 19 25.0	+0.3
NACB	baz=296			i S	Sg	00 19 28.1	+0.5
EAHA	baz=296 Aohua	0.25	350	eP	Pg	00 19 26.1	+0.5
EAHA	baz=347			eS	Sg	00 19 30.5	+1.5
ETLH	baz=347 Xiulin Townshi	0.30	293	P	Pg	00 19 27.1	+0.3
ENA	baz=292 Nanau	0.34	353	P	Pg	00 19 28.1	+0.7
LXIB	baz=354 Xiulin Townshi	0.35	259	P	Pg	00 19 28.1	+0.5
EWUT	baz=258 Wuta	0.36	359	eP	Pg	00 19 28.0	+0.3
TEGC	baz=359 Jichi Village	0.44	211	eP	Pg	00 19 29.8	+0.6
ESAO	baz=210 Su ao	0.49	6	eP	Pg	00 19 30.4	+0.3
ESAO	baz=358			eS	Sb	00 19 38.3	-0.3
NNSB	baz=358 Datong	0.50	313	P	Pb	00 19 31.1	-0.6
LATG	baz=312 Datong	0.51	332	P	Pb	00 19 31.2	-0.5
LATG	baz=330			eS	Sb	00 19 38.9	-0.3
NNS	baz=330 Nan Shan	0.52	313	eP	Pg	00 19 31.1	+0.4
EOS3	baz=312 EOS3	0.52	67	eP	Pg	00 19 31.0	+0.2
TWC	baz=65 Suao	0.52	6	eP	Pb	00 19 31.7	-0.2
CHGB	baz=2.0 Renai	0.56	268	P	Pb	00 19 32.2	-0.5
CHGB	baz=268			eS	Sg	00 19 39.7	+0.7
NDT	baz=268 Datong Townshi	0.57	334	P	Pb	00 19 32.6	-0.1
NDT	baz=333			eS	Sb	00 19 41.2	+0.2
OWD	baz=333 Renai	0.57	257	eP	Pb	00 19 32.8	-0.1
TWT	baz=256 Tachien	0.58	287	eP	Pb	00 19 32.7	-0.4
ENTT	baz=285 Nioudou	0.59	340	eP	Pb	00 19 33.0	0.0
TDCB	baz=340 Techi	0.60	286	P	Pb	00 19 33.1	-0.2
TDCB	baz=286			S	Sb	00 19 41.4	-0.5
WUSB	baz=286 Renai	0.62	261	eP	Pb	00 19 33.4	-0.2
HGSD	baz=260 Ruisui	0.68	210	eP	Pb	00 19 35.4	+0.8
YHNB	baz=198 Yeheng	0.69	327	⇓P	Pb	00 19 34.8	0.0
YHNB	baz=326			eS	Sb	00 19 44.0	-0.6
FUSB	baz=326 Fushanzhiwuyua	0.69	345	P	Pb	00 19 34.8	-0.1
FUSB	baz=335			S	Sb	00 19 44.4	-0.2
NSK	baz=335 Sanguang	0.71	326	eP	Pb	00 19 35.0	-0.1
NSK	baz=326			eS	Sg	00 19 44.2	+0.7
EHY	baz=326 Hungye	0.72	217	eP	Pb	00 19 35.0	-0.2
NWLT	baz=228 Wulai	0.74	339	eP	Pb	00 19 35.8	+0.3
NWLT	baz=338			eS	Sb	00 19 45.5	-0.2
DPDB	baz=338 Guoxing	0.79	266	eP	Pb	00 19 36.7	+0.2
WHP	baz=265 Taichung City	0.79	284	eP	Pb	00 19 37.1	+0.5
WCS	baz=283 Beigang Elemen	0.80	268	eP	Pb	00 19 36.8	+0.2
NFF	baz=267 Wufeng Townshi	0.82	312	eP	Pb	00 19 37.0	0.0
NFF	baz=301			eS	Sb	00 19 48.4	+0.3
SSLB	baz=301 Suanglung	0.82	249	eP	Pb	00 19 36.9	0.0
YULB	baz=235 Yu-li	0.82	213	eP	Pg	00 19 36.7	+0.2
SMLT	baz=224 Sun Moon Lake	0.84	256	eP	Pb	00 19 37.7	+0.4
TWF1	baz=254 Yuli	0.86	212	eP	Pg	00 19 37.3	+0.2
TYC	baz=223 Yuchr	0.87	258	eP	Pb	00 19 38.2	+0.4
	baz=257						
TIPB	Shuangxi	0.88	2	eP	Pb	00 19 38.2	+0.1
NSTT	baz=354 Nanjuang	0.90	307	eP	Pg	00 19 37.6	-0.4
SXI1	baz=305 Grass Mountain	1.01	5	eP	Pn	00 19 41.0	+0.1
	baz=11						

TAP 08 00:19:24.8, 23.99N×121.58E, h9km±1km, ML2.1, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.03	123	eP	Pg	00 19 27.0	+0.5
HWA	baz=118			eS	Sg	00 19 28.9	+1.1
ETM	baz=118 Tongmen	0.08	250	P	Pg	00 19 27.7	+0.6
ETM	baz=249			S	Sg	00 19 29.2	+0.5
TWD	baz=249 Chiawan	0.09	12	i P	Pg	00 19 28.2	+1.1
TWD	baz=16			i S	Sg	00 19 30.0	+1.1
LXIB	baz=16 Xiulin Townshi	0.15	280	P	Pg	00 19 29.1	+0.9
LXIB	baz=280			S	Sg	00 19 32.0	+1.4
ETL	baz=280 Fush Village	0.17	15	P	Pg	00 19 29.4	+0.9
ETL	baz=14			S	Sg	00 19 32.0	+1.0
NACB	baz=14 Ninganchiao	0.18	5	P	Pg	00 19 29.5	+0.9
NACB	baz=5.0			i S	Sg	00 19 32.4	+1.2
SHUL	baz=5.0 Shoufeng	0.21	183	eP	Pg	00 19 30.0	+0.9
ESL	baz=183 Shilin	0.22	216	P	Pg	00 19 29.6	+0.2
ESL	baz=214			eS	Sg	00 19 32.5	+0.1
ETLH	baz=214 Xiulin Townshi	0.23	338	eP	Pg	00 19 30.8	+1.3
ETLH	baz=337			eS	Sg	00 19 34.1	+1.4
WHF	baz=337 Hehuan Shan	0.32	298	eP	Pb	00 19 32.4	-0.5
WHF	baz=298			eS	Sb	00 19 37.8	-0.6
WARBT	baz=298 Fenglin Townsh	0.33	212	⇓P	Pg	00 19 31.4	+0.1
WARBT	baz=212 Fenglin Townsh	0.33	212	eP	Pg	00 19 31.4	+0.1
FUSS	baz=212 Fushou	0.40	310	P	Pg	00 19 31.6	-1.1
FUSS	baz=286 Fushou	0.40	310	eP	Pg	00 19 31.6	-1.0
NNSB	baz=309 Datong	0.47	338	eP	Pb	00 19 35.3	0.0
NNS	baz=337 Nan Shan	0.48	337	eP	Pb	00 19 35.6	+0.1
	baz=338						

*JMA **08** 00:20:32.1±0.2, 24.0N±0.5×121.7E±1.0, h3km, TAIWAN REGION*
*TAP **08** 00:20:33.4, 24.05N×121.63E, h12km, ML2.9, C*
ISC 08 00:20:32.8±0.8, 24.03N±0.01×121.71E±0.02, h12km±5km, n70, σ0.72/130, 11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.11	241	P	Pg	00 20 36.3	+0.5
HWA	baz=194			S	Sg	00 20 38.7	+0.7
TWD	baz=194 Chiawan	0.12	294	i P	Pg	00 20 35.7	-0.2
TWD	baz=314			i S	Sg	00 20 37.3	-0.8
ETL	baz=314 Fush Village	0.15	327	P	Pg	00 20 36.4	0.0
ETL	baz=354			S	Sg	00 20 38.7	-0.3
NACB	baz=354 Ninganchiao	0.18	323	⇓iP	Pg	00 20 36.6	-0.2
NACB	baz=343			S	Sg	00 20 39.0	-0.6
ETM	baz=343 Tongmen	0.21	252	⇓iP	Pg	00 20 37.0	-0.3
ETM	baz=236			i S	Sg	00 20 39.6	-0.9
ETLH	baz=236 Xiulin Townshi	0.27	310	⇓iP	Pg	00 20 38.1	-0.4
ETLH	baz=317			i S	Sg	00 20 41.7	-0.6
LXIB	baz=317 Xiulin Townshi	0.27	268	⇓iP	Pg	00 20 37.9	-0.7
LXIB	baz=255			eS	Sg	00 20 41.1	-1.3
SHUL	baz=255 Shoufeng	0.28	209	i P	Pb	00 20 39.7	0.0
SHUL	baz=199			i S	Sb	00 20 45.2	+0.8
EAHA	baz=199 Aohua	0.30	5	i P	Pg	00 20 39.4	+0.4
EAHA	baz=19			S	Sg	00 20 43.7	+0.7
ESL	baz=19 Shilin	0.34	230	i P	Pg	00 20 39.3	-0.3
ESL	baz=221			S	Sg	00 20 44.3	+0.2
ENA	baz=221 Nanau	0.40	4	i P	Pb	00 20 41.3	-0.5
ENA	baz=15			S	Sg	00 20 46.5	+0.5
EWUT	baz=15 Wuta	0.42	8	P	Pb	00 20 41.8	-0.3
EWUT	baz=18			S	Sg	00 20 47.4	+0.7
WHF	baz=18 Hehuan Shan	0.42	285	⇓iP	Pg	00 20 40.9	-0.5
WHF	baz=285			i S	Sg	00 20 45.8	-1.3
WARBT	baz=285 Fenglin Townsh	0.43	224	i P	Pg	00 20 41.1	-0.3
WARBT	baz=222			S	Sg	00 20 47.7	+0.6
EGFH	baz=222 Guangfu	0.45	216	P	Pb	00 20 42.0	-0.6
EGFH	baz=213			S	Sb	00 20 48.8	-0.3
FUSS	baz=213 Fushou	0.48	297	⇓iP	Pg	00 20 42.1	-0.2
FUSS	baz=298			S	Sg	00 20 48.3	-0.4
CHGB	baz=298 Renai	0.49	273	⇓iP	Pg	00 20 42.4	-0.2
CHGB	baz=264			i S	Sg	00 20 48.8	-0.3
NNSB	baz=264 Datong	0.49	323	⇓iP	Pg	00 20 42.6	0.0
NNSB	baz=328			S	Sg	00 20 48.8	-0.4
OWD	baz=328 Renai	0.50	261	P	Pg	00 20 42.4	-0.2
OWD	baz=263			S	Sg	00 20 48.2	-1.1
NNS	baz=263 Nan Shan	0.51	323	P	Pg	00 20 42.8	0.0
NNS	baz=328			S	Sg	00 20 49.4	-0.2
LATG	baz=328 Datong	0.53	341	⇓iP	Pg	00 20 43.4	+0.2
LATG	baz=347			S	Sg	00 20 50.6	+0.3
TWT	baz=347 Tachien	0.54	294	P	Pb	00 20 43.6	-0.7
TWT	baz=294			S	Sg	00 20 50.5	0.0
WUSB	baz=294 Renai	0.54	266	P	Pg	00 20 43.3	-0.2
WUSB	baz=263			S	Sg	00 20 50.4	-0.4
TDCB	baz=263 Techi	0.55	294	⇓iP	Pg	00 20 43.5	-0.1
TDCB	baz=294			S	Sg	00 20 50.3	-0.7
ESAO	baz=294 Su ao	0.55	13	eS	Sg	00 20 51.5	+0.5
TWC	baz=12 Suao	0.59	12	P	Pb	00 20 45.4	+0.3
TWC	baz=12			S	Sb	00 20 53.4	+0.1
NDT	baz=12 Datong Townshi	0.60	342	⇓iP	Pb	00 20 44.9	-0.3
NDT	baz=348			S	Sb	00 20 52.8	-0.8
HGSD	baz=348 Ruisui	0.60	206	eP	Pb	00 20 45.5	+0.3
NDS	baz=214 Dongshan	0.60	0	P	Pb	00 20 45.2	0.0
NDS	baz=7.0			S	Sb	00 20 53.3	-0.4
ENTT	baz=7.0 Nioudou	0.62	348	P	Pb	00 20 45.5	-0.1
ENTT	baz=354			S	Sb	00 20 53.7	-0.5
EHY	baz=354 Hungye	0.63	214	P	Pg	00 20 45.0	-0.2
EHY	baz=217			eS	Sb	00 20 54.7	+0.1
YHNB	baz=217 Yeheng	0.70	334	P	Pb	00 20 47.0	-0.1
YHNB	baz=338			eS	Sb	00 20 56.0	-0.8
NSK	baz=338 Sanguang	0.72	333	eP	Pb	00 20 47.1	-0.2
NSK	baz=338			eS	Sg	00 20 56.0	-0.2
WCS	baz=338 Beigang Elemen	0.73	272	eP	Pg	00 20 46.8	-0.2
WCS	baz=263			eS	Sg	00 20 55.8	-0.8
FUSB	baz=263 Fushanzhiwuyua	0.73	351	eP	Pb	00 20 47.6	0.0
FUSB	baz=356			S	Sb	00 20 57.2	-0.3
SSLB	baz=356 Suanglung	0.73	251	eP	Pg	00 20 46.8	-0.3
SSLB	baz=256			eS	Sg	00 20 55.2	-1.5
WHP	baz=256 Taichung City	0.74	289	P	Pb	00 20 47.9	+0.2
WHP	baz=289			eS	Sb	00 20 57.9	+0.1
YULB	baz=289 Yu-li	0.74	211	P	Pg	00 20 46.9	-0.3
ECBN	baz=206 Changbin	0.75	199	eP	Pg	00 20 47.2	-0.1
ECBN	baz=183			eS	Sb	00 20 59.9	+1.9
SMLT	baz=183 Sun Moon Lake	0.76	259	P	Pg	00 20 47.3	-0.2
SMLT	baz=256			eS	Sg	00 20 57.0	-0.5
NWLT	baz=256 Wulai	0.77	346	eP	Pb	00 20 48.0	-0.1
NWLT	baz=350			eS	Sb	00 20 57.9	-0.6
EYUL	baz=350 Yuli	0.77	208	eP	Pb	00 20 48.2	+0.1
TWF1	baz=215 Yuli	0.78	209	eP	Pb	00 20 48.4	+0.2
TWF1	baz=214			S	Sb	00 20 59.6	+0.8
TYC	baz=214 Yuchr	0.79	261	eP	Pg	00 20 47.8	-0.3
TYC	baz=258			S	Sg	00 20 57.3	-1.2
NFF	baz=258 Wufeng Townshi	0.81	318	P	Pb	00 20 48.6	-0.1
NFF	baz=320			eS	Sb	00 20 59.0	-0.6
WHYT	baz=320 Xinyi Township	0.85	247	eP	Pb	00 20 49.2	-0.4
WHYT	baz=250			eS	Sg	00 20 59.4	-1.2
NSTT	baz=250 Nanjuang	0.88	313	eP	Pg	00 20 49.5	-0.3
NSTT	baz=315			S	Sb	00 21 01.4	-0.4
LIOB	baz=315 Emei	0.88	314	P	Pb	00 20 50.3	+0.2
LIOB	baz=316			eS	Sb	00 21 01.3	-0.4
CHKH	baz=316 Chenggong	0.89	199	eP	Pg	00 20 49.9	0.0
CHKH	baz=186			eS	Sb	00 21 03.0	+1.2
FULB	baz=186 Fuli	0.91	205	eP	Pg	00 20 50.3	-0.2
WJS	baz=214 Zhushan	0.92	257	eP	Pn	00 20 51.4	-0.2
WJS	baz=255			eS	Sn	00 21 04.2	-0.5
TIPB	baz=255 Shuangxi	0.94	6	eP	Pg	00 20 50.9	-0.1
ALS	baz=1.0 Alishan	0.98	238	eP	Pb	00 20 51.6	-0.2
ALS	baz=224			eS	Sg	00 21 04.0	-0.5
EHD	baz=224 Haiduan	0.99	208	eP	Pg	00 20 50.6	-1.4
EHD	baz=214			eS	Sb	00 21 05.9	+0.9
CHN5	baz=214 Tsauling	1.04	246	eP	Pb	00 20 53.0	+0.2
CHN5	baz=244			eS	Sn	00 21 07.6	-0.2
ELDTW	baz=244 Lidau	1.05	217	eP	Pg	00 20 52.3	-0.9
ELDTW	baz=205			eS	Sg	00 21 06.7	-0.2
SXI1	baz=205 Grass Mountain	1.07	8	P	Pn	00 20 54.9	+1.2
EDH	baz=358 Donghe	1.12	200	eP	Pg	00 20 52.2	-2.2
EDH	baz=197			eS	Sg	00 21 07.0	-1.9
JYNG	baz=197 Yonagunijimaku	1.20	69	eP	Pb	00 20 53.4	-2.1
JYNG				S	Sg	00 21 09.8	-1.8
STYH	Taoyuan	1.21	225	eP	Pb	00 20 55.5	-0.2
STYH	baz=223			eS	Sg	00 21 11.1	-0.8
CHN4	baz=223 Tsaushan	1.23	237	eP	Pn	00 20 56.6	+0.8
CHN4	baz=223			eS	Sn	00 21 14.5	+2.1
WTP	baz=223 Ta-pu	1.27	232	eP	Pn	00 20 56.7	+0.3
WTP	baz=231			eS	Sg	00 21 13.7	-0.2
TWGBT	baz=231 Beinan	1.34	206	eP	Pn	00 20 57.1	-0.2
TWK	baz=204 Hsinying	1.36	236	P	Pn	00 20 58.0	+0.4
TWK	baz=235			eS	Sn	00 21 17.8	+2.3
CHN1	baz=235 Nanshi	1.37	232	P	Pg	00 20 58.9	-0.4
CHN1	baz=221			eS	Sg	00 21 18.5	+1.4
SGST	baz=221 Jiashian	1.40	228	eP	Pn	00 20 58.2	0.0
SGST	baz=226			eS	Sg	00 21 17.7	-0.3
SLGT	baz=226 Liugui	1.42	224	P	Pg	00 20 59.6	-0.5
SLGT	baz=222			eS	Sg	00 21 18.1	-0.6
TSMG	baz=222 Majia	1.65	217	eP	Pb	00 21 02.8	-0.3
TSMG	baz=230			eS	Sb	00 21 24.2	+0.5
EAST	baz=230 Anshuo	1.82	206	eP	Pb	00 21 06.5	+0.4
SLIU	baz=190 Shizi	1.99	205	eP	Pb	00 21 08.4	-0.6
	baz=191						

IDC 08 00:46:51.2±3.3, 55.49N×169.86E, h0km, mb3.2/3, mbtmp3.3/3, MS2.9/1, Error ellipse: s-maj=109.7km s-min=34.1km az=178.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**23.00**	**49**	P	P	00 51 57.0	-0.2
	0.9nm,1.2s,baz=253,slow=9.2,SNR=4.1						
ILAR				LR	LR	00 59 56.2	
	comp=Z,29nm,20.4s,baz=50,slow=34						
	0.9nm,1.2s						
NVAR	**Mina Array Bea**	**49.59**	**79**	P	P	00 55 44.1	0.0
	0.1nm,0.3s,baz=316,slow=7.6,SNR=2.3						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**52.12**	**300**	P	P	00 56 02.8	-0.1
	0.4nm,1.0s,baz=64,slow=6.6,SNR=3.6						
	0.4nm,1.0s						

*BJI **08** 00:54:15.1±0.0,23.89N×121.61E,h8km,mb4.4/66, mB5.1/50,ML5.0/13,Ms5.2/84,Ms7 5.1/79*

*IDC **08** 00:54:15.1±0.6,23.90N×121.64E,h0km,mb4.3/26, mbtmp4.3/28,ML3.8/2,MS4.2/71,Error ellipse: s-maj=15.8km s-min=13.3km az=67.0*

*MOS **08** 00:54:15.0±1.1,23.87N×121.66E,h13km,mb5.0/44, MS4.6/7,Error ellipse: s-maj=8.2km s-min=5.4km az=98.4*

*NEIC **08** 00:54:16.4,23.78N×121.54E,h12km,Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^16Nm; Mrr1.62; Mθθ-1.00; Mϕϕ-0.62; Mrθ0.98; Mθϕ-0.98; Mϕr-0.00; Fault plane solution: M0 1.98000×10^16 NP1:ϕs68.92000°, δ59.75000°,λ110.53000°. NP2:ϕs212.30000°,δ36.01000°, λ58.98000°. Principal axes: T 1.9893, Plg68.0000°, Azm21.0000°; N -0.0157, Plg18.0000°, Azm238.0000°; P -1.9736, Plg12.0000°, Azm144.0000°;*

*NEIC **08** 00:54:16.5±1.1,23.90N±0.06×121.67E±0.05,h8km±4km, mb5.0/87,Mww4.8/13 Error ellipse: s-maj=9.4km s-min=6.4km az=210.0*

*NEIC **08** 00:54:16.4,23.88N×121.65E,h12km*

*NIED **08** 00:54:17.2,23.94N×121.62E,h6km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr2.17; Mθθ-1.17; Mϕϕ-1.00; Mrθ1.83; Mθϕ-1.15; Mϕr1.40; Fault plane solution: M0 3.19000×10^16 NP1:ϕs51.00000°, δ68.00000°,λ93.00000°. NP2:ϕs223.00000°,δ22.00000°, λ82.00000°.*

*ASIES **08** 00:54:17.1,23.97N×121.58E,h12km,ML5.1,Mw4.8, Moment Tensor Solution. Moment tensor: Scale 10^23Nm; Mrr1.45; Mθθ-0.91; Mϕϕ-0.57; Mrθ1.09; Mθϕ-0.59; Mϕr1.28; Fault plane solution: M0 2.18864×10^23 NP1:ϕs43.55000°, δ70.21000°,λ84.24000°. NP2:ϕs240.14000°,δ20.58000°, λ105.59000°. Principal axes: T Plg64.3420°, Azm304.1070°; N Plg5.4210°, Azm45.5010°; P Plg24.9970°, Azm138.0370°;*

*TAP **08** 00:54:17.1,23.97N×121.58E,h12km,ML5.1,B*

*JMA **08** 00:54:17.2±0.1,23.9N±0.2×121.6E±0.8,h6km±2km, MD5.1/17,MW4.8/17,TAIWAN REGION*

*GCMT **08** 00:54:18.5±0.2,23.91N±0.02×121.63E±0.02,h16km, MW4.9/98,Moment Tensor Solution. s32,c39; s98,c150; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.44±.14; Mθθ-1.26±.09; Mϕϕ-1.18±.09; Mrθ1.94±.29; Mθϕ-1.31±.06; Mϕr0.23±.27; Best double couple: M0 3.15300×10^16 NP1:ϕs67.00000°,δ64.00000°,λ109.00000°. NP2: ϕs208.00000°,δ32.00000°,λ56.00000°. Principal axes: T 3.2930, Plg65.0000°, Azm10.0000°; N -0.2800, Plg17.0000°, Azm238.0000°; P -3.0130, Plg17.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 00:54:18.2±0.5,23.94N±0.01×121.63E±0.01,h15km±2km, n760,σ1s56/922,mb4.8/105,MS4.3/78,20C-39D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**331**	*i* P	**Pg**	**00 54 19.2**	**-1.8**
HWA	baz=77			*i* S	**Sg**	**00 54 21.6**	**-1.2**
ETM	**Tongmen**	**0.13**	**283**	⇓*i* P	**Pg**	**00 54 19.8**	**-2.1**
ETM	baz=268			*i* S	**Sg**	**00 54 21.7**	**-2.5**
TWD	**Chiawan**	**0.15**	**348**	⇓*i* P	**Pg**	**00 54 20.2**	**-1.8**
TWD	baz=11			*i* S	**Sg**	**00 54 22.9**	**-1.7**
SHUL	**Shoufeng**	**0.16**	**202**	*i* P	**Pg**	**00 54 21.7**	**-0.5**
SHUL	baz=185			S	**Sb**	**00 54 25.5**	**-0.4**
LXIB	**Xiulin Townshi**	**0.21**	**293**	⇓*i* P	**Pg**	**00 54 21.2**	**-2.0**
LXIB	baz=289			*i* S	**Sg**	**00 54 24.7**	**-1.8**
ESL	**Shilin**	**0.22**	**236**	*i* P	**Pg**	**00 54 21.5**	**-1.6**
ESL	baz=219			S	**Sg**	**00 54 24.8**	**-1.6**
ETL	**Fush Village**	**0.22**	**359**	*i* P	**Pg**	**00 54 21.6**	**-1.7**
ETL	baz=11			*i* S	**Sg**	**00 54 24.7**	**-1.9**
NACB	**Ninganchiao**	**0.24**	**352**		**Pg**	**00 54 21.5**	**-1.9**
NACB				Sg	**Sg**	**00 54 24.9**	**-2.1**
NACB	**Ninganchiao**	**0.24**	**352**	P	**Pg**	**00 54 21.9**	**-1.6**
NACB	**Ninganchiao**	**0.24**	**352**	P	**Pg**	**00 54 21.8**	**-1.7**
NACB	**Ninganchiao**	**0.24**	**352**	⇓*i* P	**Pg**	**00 54 21.7**	**-1.7**
NACB	baz=4.0			*i* S	**Sg**	**00 54 25.1**	**-1.9**
TEGC	**Jichi Village**	**0.24**	**200**	*e*P	**Pg**	**00 54 23.1**	**-0.3**
TEGC	baz=187			*e*S	**Sb**	**00 54 29.5**	**+1.2**
ETLH	**Xiulin Townshi**	**0.30**	**333**	⇓*i* P	**Pg**	**00 54 22.8**	**-1.8**
ETLH	baz=339			S	**Sg**	**00 54 26.8**	**-2.2**
WARBT	**Fenglin Townsh**	**0.31**	**226**	⇑*i* P	**Pg**	**00 54 23.3**	**-1.4**
WARBT	baz=216			S	**Sg**	**00 54 27.5**	**-1.6**
EGFH	**Guangfu**	**0.32**	**215**	*i* P	**Pg**	**00 54 23.9**	**-1.0**
EGFH	baz=205			S	**Sg**	**00 54 28.9**	**-0.6**
EHP	**Heping Village**	**0.39**	**15**	P	**Pg**	**00 54 25.2**	**-0.8**
EHP	baz=24			*e*S	**Sg**	**00 54 30.9**	**-0.5**
WHF	**Hehuan Shan**	**0.39**	**302**	⇓*i* P	**Pg**	**00 54 24.5**	**-1.8**
WHF	baz=302			S	**Sg**	**00 54 30.1**	**-1.8**
EAHA	**Aohua**	**0.40**	**14**	⇓*i* P	**Pg**	**00 54 24.8**	**-1.5**
EAHA	baz=22			*e*S	**Sg**	**00 54 31.4**	**-0.5**
OWD	**Renai**	**0.41**	**273**	⇓*i* P	**Pg**	**00 54 25.2**	**-1.4**
OWD	baz=268			S	**Sg**	**00 54 30.7**	**-1.6**
CHGB	**Renai**	**0.43**	**287**	⇓*i* P	**Pg**	**00 54 25.6**	**-1.4**
CHGB	baz=284			S	**Sg**	**00 54 32.0**	**-0.9**
FUSS	**Fushou**	**0.47**	**311**	⇓*i* P	**Pg**	**00 54 26.2**	**-1.4**
FUSS	baz=312			*e*S	**Sg**	**00 54 33.1**	**-0.9**
WUSB	**Renai**	**0.47**	**277**	⇓*i* P	**Pg**	**00 54 26.4**	**-1.2**
WUSB	baz=273			S	**Sg**	**00 54 33.0**	**-1.1**
HGSD	**Ruisui**	**0.48**	**203**	P	**Pg**	**00 54 27.6**	**-0.1**
HGSD	baz=197			*e*S	**Sn**	**00 54 37.2**	**-1.5**
ENA	**Nanau**	**0.50**	**12**	⇓*i* P	**Pg**	**00 54 26.8**	**-1.3**
ENA	baz=19			*e*S	**Sg**	**00 54 34.2**	**-0.7**
EHY	**Hungye**	**0.51**	**213**	P	**Pg**	**00 54 27.2**	**-1.2**
EHY	baz=206			*e*S	**Sg**	**00 54 34.2**	**-1.0**
	baz=206						

TWT	**Tachien**	**0.52**	**307**	⇓P	**Pg**	**00 54 27.5**	**-1.1**
TWT	baz=306			*e*S	**Sg**	**00 54 34.8**	**-0.8**
EWUT	**Wuta**	**0.53**	**15**	⇓P	**Pg**	**00 54 27.3**	**-1.3**
EWUT	baz=21			*e*S	**Sg**	**00 54 35.1**	**-0.5**
TDCB	**Techi**	**0.53**	**306**	⇓P	**Pg**	**00 54 27.5**	**-1.3**
TDCB	baz=306			*e*S	**Sg**	**00 54 34.5**	**-1.4**
NNSB	**Datong**	**0.54**	**335**	⇓*e*P	**Pg**	**00 54 27.5**	**-1.4**
NNSB	baz=338			*e*S	**Sg**	**00 54 34.5**	**-1.6**
NNSH	**Datong**	**0.54**	**335**	⇓*i*P	**Pg**	**00 54 27.5**	**-1.4**
NNSH	baz=338			*e*S	**Sg**	**00 54 34.2**	**-1.9**
NNS	**Nan Shan**	**0.55**	**335**	⇓*e*P	**Pg**	**00 54 27.8**	**-1.4**
NNS	baz=339			*e*S	**Sg**	**00 54 35.3**	**-1.3**
LATG	**Datong**	**0.60**	**351**	⇓P	**Pg**	**00 54 28.6**	**-1.5**
LATG	baz=355			*e*S	**Sg**	**00 54 38.0**	**-0.1**
WPL	**Puli Township**	**0.62**	**277**	*e*P	**Pg**	**00 54 29.4**	**-0.9**
WPL	baz=274			*e*S	**Sg**	**00 54 37.6**	**-1.0**
YULB	**Yu-li**	**0.62**	**209**		**Pg**	**00 54 29.2**	**-1.1**
YULB	**Yu-li**	**0.62**	**209**	P	**Pg**	**00 54 30.4**	**0.0**
YULB	**Yu-li**	**0.62**	**209**	P	**Pg**	**00 54 30.1**	**-0.3**
YULB	**Yu-li**	**0.62**	**209**	P	**Pg**	**00 54 29.3**	**-1.1**
YULB	baz=204			*e*S	**Sg**	**00 54 38.3**	**-0.3**
SSLB	**Suanglung**	**0.64**	**257**		**Pg**	**00 54 29.2**	**-1.4**
SSLB				Sg	**Sg**	**00 54 37.4**	**-1.7**
SSLB	**Suanglung**	**0.64**	**257**	P	**Pg**	**00 54 29.6**	**-1.1**
SSLB	**Suanglung**	**0.64**	**257**	P	**Pg**	**00 54 29.7**	**-1.0**
SSLB	**Suanglung**	**0.64**	**257**	⇓P	**Pg**	**00 54 29.5**	**-1.2**
SSLB	baz=253			*e*S	**Sg**	**00 54 38.0**	**-1.1**
ECBN	**Changbin**	**0.64**	**195**	*e*P	**Pb**	**00 54 31.2**	**+0.2**
ECBN	baz=190			*e*S	**Sn**	**00 54 41.9**	**-0.6**
DPDB	**Guoxing**	**0.65**	**279**	⇓P	**Pg**	**00 54 30.1**	**-0.9**
DPDB	baz=276			*e*S	**Sg**	**00 54 39.1**	**-0.5**
EYUL	**Yuli**	**0.65**	**206**	*e*P	**Pg**	**00 54 30.2**	**-0.8**
EOS4	**EOS4**	**0.66**	**74**	P	**Pb**	**00 54 31.4**	**+0.3**
EOS4	baz=77			S	**Sb**	**00 54 41.0**	**+1.1**
TWF1	**Yuli**	**0.66**	**208**	*e*P	**Pg**	**00 54 29.9**	**-1.2**
TWF1	baz=202			*e*S	**Sg**	**00 54 39.5**	**-0.2**
ESAO	**Su ao**	**0.67**	**17**	*e*P	**Pg**	**00 54 29.9**	**-1.4**
ESAO	baz=22			*e*S	**Sg**	**00 54 39.9**	**-0.1**
WCS	**Beigang Elemen**	**0.67**	**281**	⇓P	**Pg**	**00 54 30.2**	**-1.0**
WCS	baz=278			*e*S	**Sg**	**00 54 39.4**	**-0.7**
SMLT	**Sun Moon Lake**	**0.67**	**266**	⇓P	**Pg**	**00 54 30.3**	**-1.0**
SMLT	baz=262			*e*S	**Sg**	**00 54 39.7**	**-0.5**
NDT	**Datong Townshi**	**0.67**	**351**	⇓*e*P	**Pg**	**00 54 30.1**	**-1.2**
NDT	baz=354			*e*S	**Sg**	**00 54 38.8**	**-1.5**
NDS	**Dongshan**	**0.70**	**6**	*e*P	**Pg**	**00 54 30.6**	**-1.2**
NDS	baz=11			*e*S	**Sg**	**00 54 40.8**	**-0.3**
TWC	**Suao**	**0.70**	**17**	⇓*e*P	**Pg**	**00 54 30.6**	**-1.2**
TWC	baz=22			*e*S	**Sg**	**00 54 41.2**	**+0.1**
ENTT	**Nioudou**	**0.70**	**355**	⇓P	**Pg**	**00 54 30.7**	**-1.2**
ENTT	baz=359			*e*S	**Sn**	**00 54 43.0**	**-1.2**
TYC	**Yuchr**	**0.71**	**268**	⇓*e*P	**Pg**	**00 54 30.8**	**-1.2**
TYC	baz=264			*e*S	**Sg**	**00 54 40.9**	**-0.5**
WHP	**Taichung City**	**0.71**	**299**	⇓*e*P	**Pg**	**00 54 31.6**	**-0.4**
WHP	baz=298			*e*S	**Sg**	**00 54 41.7**	**+0.2**
EOS3	**EOS3**	**0.72**	**61**	*e*P	**Pn**	**00 54 33.3**	**-0.3**
EOS3	baz=65			*e*S	**Sn**	**00 54 45.5**	**+1.2**
EOS2	**EOS2**	**0.73**	**49**	*e*P	**Pn**	**00 54 34.2**	**+0.3**
EOS2	baz=53			*e*S	**Sn**	**00 54 48.5**	**+3.8**
WHYT	**Xinyi Township**	**0.75**	**252**	*e*P	**Pg**	**00 54 31.7**	**-1.1**
WHYT	baz=248			*e*S	**Sg**	**00 54 42.3**	**-0.4**
YHNB	**Yeheng**	**0.77**	**342**		**Pg**	**00 54 31.9**	**-1.3**
YHNB	**Yeheng**	**0.77**	**342**	P	**Pg**	**00 54 32.3**	**-0.8**
YHNB	**Yeheng**	**0.77**	**342**	P	**Pg**	**00 54 32.5**	**-0.6**
YHNB	**Yeheng**	**0.77**	**342**	⇓P	**Pg**	**00 54 32.0**	**-1.1**
YHNB	baz=345			*e*S	**Sb**	**00 54 43.4**	**-0.1**
CHKH	**Chenggong**	**0.77**	**196**	⇓*e*P	**Pg**	**00 54 32.4**	**-0.8**
CHKH	baz=192			*e*S	**Sn**	**00 54 44.9**	**-0.9**
NSK	**Sanguang**	**0.78**	**341**	⇓*e*P	**Pg**	**00 54 32.1**	**-1.2**
NSK	baz=344			*e*S	**Sg**	**00 54 42.4**	**-1.2**
FULB	**Fuli**	**0.80**	**203**	*e*P	**Pg**	**00 54 33.2**	**-0.4**
FUSB	baz=199			*e*S	**Sg**	**00 54 44.4**	**-0.6**
ILA	**Ilan**	**0.83**	**7**	*e*P	**Pb**	**00 54 33.7**	**-0.7**
ILA	baz=11			*e*S	**Sg**	**00 54 46.1**	**+0.8**
WJS	**Zhushan**	**0.83**	**262**	*e*P	**Pb**	**00 54 33.9**	**-0.4**
WJS	baz=259			*e*S	**Sn**	**00 54 47.3**	**-0.1**
NFF	**Wufeng Townshi**	**0.83**	**326**	⇓*e*P	**Pb**	**00 54 33.4**	**-1.1**
NFF	baz=327			*e*S	**Sg**	**00 54 45.0**	**-0.5**
NWLT	**Wulai**	**0.84**	**352**	*e*P	**Pb**	**00 54 33.3**	**-1.2**
NWLT	baz=355			*e*S	**Sg**	**00 54 45.9**	**+0.1**
WWF	**Wufeng**	**0.86**	**277**	*e*P	**Pn**	**00 54 35.5**	**-0.2**
WWF	baz=275			*e*S	**Sn**	**00 54 48.8**	**+0.9**
ALS	**Alishan**	**0.87**	**241**	⇓*e*P	**Pg**	**00 54 34.2**	**-0.8**
ALS	baz=237			*e*S	**Sb**	**00 54 46.6**	**0.0**
WNT	**Mingjian**	**0.87**	**266**	*e*P	**Pg**	**00 54 35.3**	**+0.3**
WNT	baz=264			*e*S	**Sn**	**00 54 48.7**	**+0.5**
CHKT	**Chengkung**	**0.87**	**196**	*e*P	**Pb**	**00 54 34.3**	**-0.6**
CHKT	baz=192			*e*S	**Sn**	**00 54 47.7**	**-0.5**
WNT1	**Nantou City**	**0.87**	**268**	*e*P	**Pn**	**00 54 35.6**	**-0.3**
WNT1	baz=266			*e*S	**Sn**	**00 54 48.4**	**+0.1**

EHD	**Haiduan**	**0.88**	**206**	*e*P	**Pb**	**00 54 33.2**	**-1.8**
EHD	baz=203			*e*S	**Sn**	**00 54 48.6**	**+0.2**
TWQ1	**Liyutan**	**0.88**	**298**	*e*P	**Pb**	**00 54 34.8**	**-0.4**
TWQ1	baz=297			*e*S	**Sg**	**00 54 47.3**	**+0.4**
TCU	**Taichung**	**0.90**	**284**	*e*P	**Pg**	**00 54 35.7**	**+0.1**
TCU	baz=282			*e*S	**Sn**	**00 54 50.2**	**+1.3**
NSTT	**Nanjuang**	**0.90**	**320**	*e*P	**Pb**	**00 54 34.8**	**-0.7**
NSTT	baz=322			*e*S	**Sb**	**00 54 46.5**	**-0.8**
LIOB	**Emei**	**0.90**	**322**	⇓*e*P	**Pb**	**00 54 35.0**	**-0.6**
LIOB	baz=323			*e*S	**Sg**	**00 54 47.7**	**+0.1**
ECS	**Chishang**	**0.92**	**204**	*e*P	**Pn**	**00 54 36.9**	**+0.3**
ECS	baz=201			*e*S	**Sn**	**00 54 52.0**	**+2.5**
NSY	**Sanyi**	**0.93**	**301**	*e*P	**Pg**	**00 54 36.1**	**-0.1**
NSY	baz=301			*e*S	**Sn**	**00 54 49.5**	**-0.2**
ELDTW	**Lidau**	**0.93**	**217**	*e*P	**Pb**	**00 54 34.5**	**-1.6**
ELDTW	baz=213			*e*S	**Sb**	**00 54 48.2**	**-0.1**
CHN5	**Tsauling**	**0.94**	**249**	*e*P	**Pb**	**00 54 36.0**	**-0.1**
CHN5	baz=246			*e*S	**Sn**	**00 54 51.4**	**+1.4**
NJD	**Zhudong**	**0.94**	**328**	*e*P	**Pn**	**00 54 36.9**	**+0.1**
NJD	baz=330			*e*S	**Sn**	**00 54 50.9**	**+1.0**
WYL	**Yuanlin Townsh**	**0.96**	**272**	*e*P	**Pn**	**00 54 37.3**	**+0.2**
WYL	baz=270			*e*S	**Sn**	**00 54 51.7**	**+1.3**
NMLH	**Miaoli**	**0.97**	**308**	*e*P	**Pb**	**00 54 36.8**	**+0.1**
NMLH	baz=308			*e*S	**Sg**	**00 54 50.1**	**+0.4**
WCHH	**Zhanghua**	**0.99**	**278**	*e*P	**Pn**	**00 54 37.6**	**+0.1**
WCHH	baz=277			*e*S	**Sn**	**00 54 53.4**	**+2.2**
WDJ	**Dajia District**	**0.99**	**295**	*e*P	**Pn**	**00 54 37.7**	**+0.2**
WDJ	baz=294			*e*S	**Sn**	**00 54 52.7**	**+1.5**
EDH	**Donghe**	**1.00**	**197**	*e*P	**Pb**	**00 54 34.9**	**-2.3**
EDH	baz=194			*e*S	**Sb**	**00 54 49.5**	**-0.8**
HSN1	**Hsinchu**	**1.01**	**326**	*e*P	**Pn**	**00 54 38.1**	**+0.4**
HSN1	baz=328			*e*S	**Sn**	**00 54 53.3**	**+1.6**
WGK	**Gukeng**	**1.01**	**256**	*e*P	**Pn**	**00 54 37.9**	**+0.1**
WGK	baz=253			*e*S	**Sn**	**00 54 53.0**	**+1.3**
NJN	**Zhunan**	**1.02**	**317**	*e*P	**Pn**	**00 54 38.7**	**+0.8**
NHDH	**Xindian Distri**	**1.03**	**355**	*e*P	**Pb**	**00 54 36.9**	**-0.7**
NHDH	baz=357			*e*S	**Sb**	**00 54 50.2**	**-0.7**
WDLH	**Douliu**	**1.03**	**256**	⇑*e*P	**Pg**	**00 54 38.0**	**0.0**
WDLH	baz=254			*e*S	**Sn**	**00 54 53.4**	**+1.2**
SBCB	**Hsinchu**	**1.03**	**326**	*e*P	**Pg**	**00 54 38.5**	**+0.3**
SBCB	baz=327			*e*S	**Sn**	**00 54 53.2**	**+0.8**
TWA	**Mucha**	**1.04**	**358**	*e*P	**Pb**	**00 54 37.4**	**-0.5**
TWA	baz=1.0			*e*S	**Sg**	**00 54 52.1**	**+0.2**
TATO	**Taipei**	**1.04**	**353**		**Pb**	**00 54 37.2**	**-0.6**
TATO	**Taipei**	**1.04**	**353**	P	**Pn**	**00 54 38.1**	**-0.2**
TATO	**Taipei**	**1.04**	**353**	P	**Pn**	**00 54 38.0**	**-0.2**
TATO	**Taipei**	**1.04**	**353**	*e*P	**Pb**	**00 54 37.3**	**-0.6**
TATO	baz=356			*e*S	**Sb**	**00 54 50.7**	**-0.7**
TIPB	**Shuangxi**	**1.05**	**10**	*e*P	**Pb**	**00 54 37.1**	**-0.9**
TIPB	baz=13			*e*S	**Sb**	**00 54 50.8**	**-0.8**
HSN	**Hsinchu**	**1.05**	**325**	*e*P	**Pg**	**00 54 39.1**	**+0.6**
HSN	baz=329			*e*S	**Sn**	**00 54 53.5**	**+0.7**
WCKO	**Fanlu**	**1.06**	**242**	*e*P	**Pn**	**00 54 38.4**	**-0.1**
WCKO	baz=239			*e*S	**Sn**	**00 54 53.9**	**+0.9**
STYH	**Taoyuan**	**1.09**	**226**	*e*P	**Pb**	**00 54 38.2**	**-0.6**
STYH	baz=223			*e*S	**Sg**	**00 54 53.5**	**-0.1**
NTY	**Taoyuan**	**1.10**	**344**	*e*P	**Pg**	**00 54 39.8**	**+0.3**
NCUH	**Zhongli**	**1.10**	**339**	*e*P	**Pn**	**00 54 39.3**	**+0.2**
NCUH	baz=340			*e*S	**Sn**	**00 54 55.9**	**+1.8**
TAP	**Taipei**	**1.10**	**354**	*e*P	**Pg**	**00 54 39.4**	**-0.1**
TAP	baz=357			*e*S	**Sb**	**00 54 53.4**	**+0.2**
NCU	**National Centr**	**1.10**	**339**	*e*P	**Pg**	**00 54 39.7**	**+0.2**
NCU	baz=341			*e*S	**Sn**	**00 54 55.9**	**+1.8**
STYT	**Tauyuan**	**1.11**	**226**	*e*P	**Pb**	**00 54 39.0**	**-0.1**
STYT	baz=223			*e*S	**Sn**	**00 54 55.3**	**+1.0**
TPUB	**Ta-pu**	**1.11**	**236**	Pn	**Pb**	**00 54 39.0**	**-0.1**
TPUB	**Ta-pu**	**1.11**	**236**	P	**Pg**	**00 54 39.5**	**-0.2**
TPUB	**Ta-pu**	**1.11**	**236**	P	**Pg**	**00 54 39.4**	**-0.2**
TPUB	**Ta-pu**	**1.11**	**236**	*e*P	**Pn**	**00 54 39.2**	**0.0**
TPUB	baz=233			*e*S	**Sn**	**00 54 54.9**	**+0.6**
CHN4	**Tsaushan**	**1.11**	**239**	*e*P	**Pg**	**00 54 39.4**	**-0.3**
CHN4	baz=236			*e*S	**Sn**	**00 54 57.5**	**+3.2**
TWB1	**Santiao Chiao**	**1.12**	**17**	*e*P	**Pb**	**00 54 38.8**	**-0.4**
TWB1	baz=20			*e*S	**Sb**	**00 54 53.3**	**-0.2**
LONT	**Longtian**	**1.12**	**204**	*e*P	**Pb**	**00 54 37.8**	**-1.5**
LONT	baz=201			*e*S	**Sg**	**00 54 57.2**	**+2.7**
CHN2	**Minshiung**	**1.13**	**249**	*e*P	**Pg**	**00 54 40.0**	**0.0**
CHN2	baz=247			*e*S	**Sg**	**00 54 56.4**	**+1.6**
NWF	**Wu-fen Shan**	**1.14**	**7**	*e*P	**Pb**	**00 54 39.2**	**-0.4**
NWF	baz=9.0			*e*S	**Sb**	**00 54 54.5**	**+0.3**
WFSB	**Wu-fen Shan**	**1.14**	**7**	*e*P	**Pn**	**00 54 39.0**	**-0.6**
WFSB	baz=9.0			*e*S	**Sb**	**00 54 54.1**	**0.0**
WRL	**Guolierlin Hig**	**1.15**	**269**	*e*P	**Pn**	**00 54 39.5**	**-0.1**
WRL	baz=267			*e*S	**Sg**	**00 54 56.0**	**+0.8**
WTP	**Ta-pu**	**1.16**	**234**	*e*P	**Pb**	**00 54 39.8**	**-0.1**
WTP	baz=231			*e*S	**Sg**	**00 54 57.5**	**+1.8**
RLNB	**Erlin**	**1.16**	**268**	*e*P	**Pb**	**00 54 40.1**	**+0.2**
	baz=266						

RLNB eS Sg 00 54 57.0 +1.2
baz=266
WTK Tuku 1.16 258 eP Pb 00 54 40.1 +0.1
baz=256
WTK eS Sg 00 54 56.3 +0.5
baz=256
SXI1 Grass Mountain 1.17 11 eP Pn 00 54 39.8 -0.4
baz=13
SXI1 eS Sg 00 54 57.6 +1.4
baz=13
TWS1 Kuangyinshan 1.18 351 eP Pb 00 54 40.4 +0.2
baz=353
TWS1 eS Sg 00 54 58.5 +2.2
baz=353
CHY Chiayi 1.19 249 eP Pb 00 54 40.6 +0.2
baz=246
CHY eS Sg 00 54 57.5 +0.9
baz=246
NHW Xinwu Township 1.19 334 eP Pg 00 54 41.4 +0.3
baz=335
NHW eS Sg 00 54 58.1 +1.4
baz=335
YM01 YM01 1.21 357 eP Pn 00 54 40.1 -0.4
baz=360
YM01 eS Sg 00 54 58.4 +1.2
baz=360
TNOU National Taiwa 1.22 6 eP Pn 00 54 40.5 -0.2
baz=8.0
TNOU eS Sb 00 54 56.6 +0.2
baz=8.0
TWG Pinlang 1.22 205 Pn Pn 00 54 38.5 -2.2
TWG Pinlang 1.22 205 eP Pn 00 54 38.3 -2.4
baz=202
TWG eS Sg 00 54 58.4 +0.7
baz=202
TWGBT Beinan 1.22 204 P Pn 00 54 39.4 -1.3
TWGBT Beinan 1.22 204 P Pn 00 54 39.3 -1.4
TWGBT Beinan 1.22 204 eP Pn 00 54 38.3 -2.4
baz=202
TWGBT eS Sg 00 55 00.2 +2.5
baz=202
NTST Danshui 1.23 352 eP Pn 00 54 41.0 +0.1
baz=354
NTST eS Sg 00 54 59.1 +1.1
baz=354
WTCT Ta-ch'eng 1.24 267 eP Pg 00 54 41.6 -0.3
baz=265
WTCT eS Sg 00 54 58.6 +0.5
baz=265
TWK Hsinying 1.24 238⇑ eP Pb 00 54 41.5 +0.1
baz=235
TWK eS Sg 00 55 00.3 +2.0
baz=235
YM08 YM08 1.25 358 eP Pn 00 54 40.5 -0.5
YM08 eS Sg 00 54 59.3 +0.8
ANP Anpu 1.25 355 eP Pn 00 54 40.6 -0.6
baz=358
ANP eS Sg 00 54 59.1 +0.5
baz=358
CHN1 Nanshi 1.26 234 eP Pb 00 54 41.6 0.0
baz=231
CHN1 eS Sg 00 55 01.0 +2.2
baz=231
TTN Taitung 1.26 201 eP Pn 00 54 40.8 -0.4
baz=198
SNST Tainan City 1.26 236⇑ eP Pb 00 54 41.7 0.0
baz=233
SNST eS Sg 00 55 00.0 +1.1
baz=233
NWRT Kuosheng 1.26 1 eP Pb 00 54 41.8 +0.1
baz=3.0
NWRT eS Sg 00 54 59.3 +0.4
baz=3.0
LDUT Ludao 1.27 187 eP Pn 00 54 38.9 -2.4
baz=185
LDUT eS Sb 00 54 55.7 -2.1
baz=185
SGST Jiashian 1.28 229 eP Pn 00 54 41.2 -0.4
baz=226
SGST eS Sg 00 55 00.5 +0.9
baz=226
WMLT Mailiao 1.29 264 eP Pg 00 54 42.7 -0.4
baz=263
WMLT eS Sg 00 54 59.6 -0.3
baz=263
SLGT Liugui 1.30 224 eP Pb 00 54 42.1 -0.3
baz=221
SLGT eS Sg 00 55 01.9 +1.7
baz=221
JYNG Yonagunijimaku 1.31 67 P Pn 00 54 41.7 -0.1
JYNG eS Sn 00 54 59.3 +0.3
JYNG Yonagunijimaku 1.31 67 A A 00 54 41.7
comp=E,45nm,4.2s,comp=N,33nm,6.3s
WSF Szhu 1.32 257 eP Pb 00 54 43.0 +0.3
baz=255
WSF eS Sg 00 55 02.1 +1.2
baz=255
TWY Chenhua 1.33 359 eP Pb 00 54 42.6 -0.3
baz=1.0
TWY eS Sg 00 55 00.6 -0.7
baz=1.0
NSM Shimen 1.35 358 eP Pg 00 54 44.5 +0.4
WSL Shuilin Townsh 1.35 252 eP Pb 00 54 43.4 +0.3
baz=250
WSL eS Sg 00 55 02.3 +0.6
baz=250
ICHU Yijhu 1.36 245 eP Pb 00 54 43.5 +0.1
baz=243
ICHU eS Sg 00 55 02.8 +0.6
baz=243
YOJ Yonaguni jima 1.37 67 Pn Pn 00 54 42.2 -0.5
YOJ Yonaguni jima 1.37 67 P Pn 00 54 42.8 +0.1
YOJ Yonaguni jima 1.37 67 P Pb 00 54 43.1 -0.3
YOJ Yonaguni jima 1.37 67 eP Pn 00 54 42.6 -0.1
baz=69
YOJ eS Sn 00 54 59.4 -1.1
baz=69
YOJ Yonaguni jima 1.37 67 P Pn 00 54 42.2 -0.5
YOJ Yonaguni jima 1.37 67 P Pn 00 54 42.6 -0.1
YOJ eS Sb 00 55 01.0 +0.3
YOJ Yonaguni jima 1.37 67 A A 00 54 42.6
comp=E,46nm,4.7s,comp=N,36nm,6.2s
CHN8 Yiju 1.43 246 eP Pb 00 54 44.5 0.0
baz=244
CHN8 eS Sg 00 55 05.5 +1.3
baz=244
CHN3 Shinhua 1.44 234 eP Pg 00 54 45.5 -0.5
baz=231
CHN3 eS Sg 00 55 08.6 +3.9
baz=231
SSHA Shanhua 1.47 237 eP Pg 00 54 46.5 +0.2
baz=235
SSHA eS Sg 00 55 07.8 +2.4
baz=235
ECL Taimali 1.47 205 eP Pn 00 54 42.1 -2.0
baz=203
ECL eS Sg 00 55 10.0 +4.4
baz=203
SCST Cishan 1.48 225 eP Pg 00 54 46.1 -0.4
baz=223
SCST eS Sg 00 55 07.4 +1.6
baz=223
SHHT Tainan City 1.49 233⇑ eP Pg 00 54 46.2 -0.6
baz=230
SHHT eS Sg 00 55 08.0 +1.8
baz=230
SSD Sandimen 1.50 218 eP Pn 00 54 43.9 -0.6
baz=215
SSD eS Sg 00 55 07.1 +0.6
baz=215
SCLT Jiali 1.52 240 eP Pb 00 54 45.9 -0.2
baz=238
SCLT eS Sg 00 55 09.5 +2.3
baz=238
TSMG Majia 1.52 217 eP Pb 00 54 45.5 -0.7
baz=214
TSMG eS Sg 00 55 06.3 -1.0
baz=214
TWM1 Shoushan 1.57 225 eP Pg 00 54 47.7 -0.6
baz=223
TWM1 eS Sg 00 55 14.8 +6.1
baz=223
SGLT Jiouru 1.60 221 eP Pg 00 54 49.2 +0.4
baz=219
SGLT eS Sg 00 55 14.2 +4.6
baz=219
MASBT Mashibuluo 1.60 215 eP Pn 00 54 46.0 0.0
baz=213

MASBT eS Sg 00 55 09.9 0.0
baz=213
TSCK Chigu Township 1.62 241 eP Pb 00 54 47.8 0.0
baz=239
TSCK eS Sg 00 55 10.0 -0.4
baz=239
TSPT Pingtung City 1.63 220 eP Pg 00 54 49.7 +0.2
baz=218
TSPT eS Sg 00 55 13.8 +3.1
baz=218
SNJT Kaohsiung City 1.67 226 eP Pb 00 54 49.4 +0.7
baz=223
SNJT eS Sb 00 55 10.7 +1.1
baz=223
EAST Anshuo 1.71 205 eP Pn 00 54 46.0 -1.4
baz=203
EAST eS Sg 00 55 15.8 +2.7
baz=203
TAW Tawu 1.71 203 eP Pg 00 54 50.5 -0.5
baz=201
TAW eS Sg 00 55 18.1 +4.8
baz=201
TAWH Dawu Township 1.73 203 eP Pn 00 54 45.6 -2.1
baz=201
TAWH eS Sg 00 55 14.7 +0.8
baz=201
PCYT Pengchaiyu 1.73 13 eP Pn 00 54 47.9 +0.2
baz=15
PCYT eS Sg 00 55 13.2 -0.8
baz=15
WSSB Gushan 1.80 225 eP Pb 00 54 50.9 0.0
baz=223
WSSB eS Sg 00 55 19.0 +2.9
baz=223
SCZT Fangliau 1.81 211 eP Pn 00 54 49.3 +0.5
baz=209
SLIU Shizi 1.88 204 eP Pn 00 54 48.7 -1.0
baz=202
SLIU eS Sb 00 55 15.5 +0.1
baz=202
LAY Lan-yu 1.89 182 eP Pn 00 54 47.5 -2.4
baz=181
LAY eS Sn 00 55 12.3 -1.2
baz=181
LYUB Lan-yu 1.93 181 eP Pn 00 54 47.6 -2.8
baz=180
LYUB eS Sn 00 55 11.8 -2.6
baz=180
WDGT Dungji 1.93 250 eP Pn 00 54 50.9 +0.5
baz=248
WDGT eS Sb 00 55 17.5 +0.6
baz=248
PHUB P'eng-hu 1.93 258 eP Pn 00 54 50.9 +0.4
baz=256
PHUB eS Sb 00 55 16.0 -0.9
baz=256
PNG Penghu 1.94 259 eP Pn 00 54 51.0 +0.5
baz=258
PNG eS Sb 00 55 16.3 -0.8
baz=258
IRIF Iriomote-Funau 1.96 78 P Pn 00 54 51.0 +0.2
IRIF eS Sn 00 55 16.3 +1.1
IRIF Iriomote-Funau 1.96 78 A A 00 54 51.0
comp=E,16nm,2.3s,comp=N,30nm,3.0s
TWP Hsiaoliuchiu 1.97 217 eP Pb 00 54 53.7 0.0
baz=215
HATJ Hateruma jima 1.99 86 P Pn 00 54 51.3 0.0
HATJ eS Sn 00 55 16.8 +0.7
HATJ Hateruma jima 1.99 86 A A 00 54 51.3
comp=E,57nm,3.1s,comp=N,49nm,4.2s
HEN Hengchun 2.09 203 eP Pb 00 54 55.3 -0.5
baz=201
HEN eS Sg 00 55 24.5 -0.9
baz=201
TWK1 Hengchun 2.12 201 eP Pn 00 54 54.4 +1.3
baz=199
TWK1 eS Sg 00 55 25.4 -1.2
baz=199
TWKBT Hengchun 2.12 201 eP Pn 00 54 53.8 +0.7
baz=199
TWKBT eS Sb 00 55 22.7 +0.2
baz=199
VCHM Qimei 2.14 251 eP Pn 00 54 54.1 +0.7
baz=249
VCHM eS Sb 00 55 22.0 -1.1
baz=249
JKRS Kuro-shima 2.20 82 P Pn 00 54 54.9 +0.8
JKRS eS Sn 00 55 22.2 +1.2
JKRS Kuro-shima 2.20 82 A A 00 54 54.9
comp=E,44nm,4.8s,comp=N,42nm,2.9s
VWUC VWUC 2.25 298 eP Pn 00 54 53.9 -0.9
baz=298
JIJ Ishigaki jima 2.33 79 P Pn 00 54 55.8 -0.2
JIJ eS Sn 00 55 24.5 +0.1
JIJ Ishigaki jima 2.33 79 A A 00 54 55.8
comp=E,7.0nm,4.3s,comp=N,10.0nm,6.4s
JISG Ishigakijimahi 2.53 75 P Pn 00 54 58.4 -0.3
JISG S Sn 00 55 29.2 -0.1
PTMZ Houxiangcun 2.54 296 eP Pn 00 54 57.9 -0.9
baz=295
PTMZ eS Sn 00 55 31.6 +2.2
baz=295
MATB Ma-tsu 2.68 326 eP Pn 00 55 00.1 -0.7
baz=325
MATB eS Sn 00 55 33.2 +0.1
baz=325
JTJ Tarama 2.89 75 P Pn 00 55 03.9 +0.2
JTJ eS Sn 00 55 38.5 +0.3
JTJ Tarama 2.89 75 A A 00 55 03.9
comp=E,16nm,3.2s,comp=N,18nm,8.3s
QZH Quanzhou 2.94 291⇓ *i* Pn Pn 00 55 04.2 -0.2
QZH Sn Sn 00 55 39.6 +0.1
QZH smax smax
comp=N,3μm,1.2s
QZH smax smax
comp=N,1μm,1.0s
KNMB Chin-men Tao 3.00 281 Pn Pn 00 55 05.0 -0.3
KNMB Chin-men Tao 3.00 281 eP Pn 00 55 04.5 -0.8
baz=280
KNMB eS Sn 00 55 39.5 -1.5
baz=280
LYJJ Jianjiangzhen 3.10 327 eP Pn 00 55 05.8 -0.7
baz=327
LYJJ eS Sn 00 55 43.4 0.0
baz=327
MHZQ Yeshan 3.19 313 eP Pn 00 55 07.8 0.0
baz=313
MHZQ eS Sn 00 55 44.5 -1.2
baz=313
XPSS Dashiqiu 3.25 337 eP Pn 00 55 08.0 -0.7
baz=337
XPSS eS Sn 00 55 47.5 +0.5
baz=337
JIKM Ikemajima 3.44 73 eS Sn 00 55 53.2 +1.5
JIKM Ikemajima 3.44 73 A A 00 55 53.2
comp=E,12nm,5.6s,comp=N,13nm,3.6s
JMJ Miyako jima 2 3.45 75 P Pn 00 55 13.5 +2.1
JMJ Miyako jima 2 3.45 75 P Pn 00 55 12.8 +1.4
JMJ2 Miyako jima3 3.47 76 eP Pn 00 55 12.9 +1.3
JMJ2 eS Sn 00 55 53.8 +1.4
JOGS Gusukube 3.54 76 eS Sn 00 55 56.1 +1.8
JOW Kunigami 6.67 63 Pn Pn 00 55 54.1 -1.5
JOW Kunigami 6.67 63 P Pn 00 55 54.4 -1.2
JOW Kunigami 6.67 63 Pn Pn 00 55 53.9 -1.6
comp=N,11nm,0.3s,baz=217,slow=5.1,SNR=21
JOW Sn Sn 00 57 09.0 -2.3
baz=274,slow=29
comp=N,27nm,0.3s
SSE Sheshan 7.14 357 Pn Pn 00 56 01.4 -0.7
SSE Sn Sn 00 57 21.0 -2.0
SSE smax smax
comp=N,130nm,1.0s
SSE smax smax
comp=N,220nm,1.0s
SSE LR LR
comp=N,3μm,10.1s
SSE LR LR
comp=N,2μm,10.0s
GZH Guangzhou 7.65 265 Pn Pn 00 56 04.8 -4.3
GZH Sn Sn 00 57 28.1 -7.5
GZH smax smax
comp=N,510nm,1.1s
GZH smax smax
comp=N,340nm,1.0s
NJ2 Nanjing 8.45 344⇓ *i* P Pn 00 56 20.2 +0.2
NJ2 S Sn 00 57 56.3 +1.2
NJ2 pmax pmax
comp=N,67nm,0.6s
NJ2 smax smax
comp=N,500nm,1.1s
NJ2 smax smax
comp=N,380nm,1.1s
NJ2 LR LR
comp=N,11μm,8.8s
NJ2 LR LR
comp=N,5μm,6.9s
NJ2 LR LR
comp=N,12μm,9.0s
CNSH ChangSha 8.89 300⇑ P Pn 00 56 24.2 -1.9
CNSH S Sn 00 58 02.5 -3.5
CNSH smax smax
comp=N,690nm,1.0s
CNSH LR LR
comp=N,9μm,8.3s
CNSH LR LR
comp=N,8μm,7.5s
CNSH LR LR
comp=N,10μm,7.6s
WHN Wuhan 9.23 317 P Pn 00 56 30.7 -0.1
WHN pP 00 56 34.0
WHN sP 00 56 36.4
WHN S Sn 00 58 13.5 -0.9
WHN pmax pmax
comp=N,56nm,0.6s
WHN LR LR
comp=N,26μm,7.8s
WHN LR LR
comp=N,18μm,9.0s
WHN LR LR
comp=N,36μm,9.6s
TGY Tagaytay City 9.80 184 LR LR 01 01 08.8
comp=N,769nm,19.8s,baz=310,slow=42
GULI GuiLin 10.34 280 P Pn 00 56 45.3 -0.7
GULI S Sn 00 58 46.9 +5.3
GULI LR LR
comp=N,10μm,7.3s
GULI LR LR
comp=N,13μm,9.3s
GULI LR LR
comp=N,15μm,8.6s
QIZ Qiongzhong 12.01 248 P Pn 00 57 08.7 -0.2
QIZ S Sn 00 59 24.9 +2.3
QIZ LR LR
comp=N,2μm,15.8s
QIZ LR LR
comp=N,1μm,14.5s
QIZ LR LR
comp=N,2μm,9.4s
JNU Nakatsue 12.23 40 Pn Pn 00 57 10.9 -1.0
JNU Nakatsue 12.23 40 Pn Pn 00 57 15.0 +3.1
comp=N,0.5nm,0.3s,baz=260,slow=6.1,SNR=3.7
JNU LR LR 01 02 49.3
comp=N,848nm,19.2s,baz=215,slow=42
LYN LuoYang 13.25 325 eP Pn 00 57 26.9 +1.1
LYN pP P 00 57 31.2 -4.4
LYN sP 00 57 33.4
LYN PP PnPn 00 57 38.1 +4.3
LYN S Sn 01 00 03.0 +10
LYN SS S 01 00 15.4 -1.9
LYN pmax pmax
comp=N,15nm,0.6s
LYN pmax pmax
comp=N,430nm,5.7s
LYN LR LR
comp=N,20μm,9.2s
LYN LR LR
comp=N,9μm,10.5s
LYN LR LR
comp=N,22μm,9.9s
TJN Taejon 13.35 20 *i* P Pn 00 57 25.3 -1.8
GYA Guiyang 13.78 284⇑ P Pn 00 57 35.4 +2.2
GYA S Sn 01 00 07.8 +1.8
GYA pmax pmax
comp=N,21nm,1.6s
GYA LR LR
comp=N,4μm,7.3s
GYA LR LR
comp=N,13μm,8.4s
GYA LR LR
comp=N,15μm,9.8s
KSAR Wonju Array Be 14.49 20 Pn Pn 00 57 42.0 -0.7
KSAR Wonju Array Be 14.49 20 P Pn 00 57 42.0 -0.7
KSRS Korea Array 14.51 20 Pn Pn 00 57 45.5 +2.4
comp=N,0.2nm,0.3s,baz=200,slow=12,SNR=6.4
KSRS LR LR 01 03 45.2
comp=N,526nm,20.1s,baz=205,slow=39
KS19 Wonju Array Si 14.54 20 Pn Pn 00 57 43.2 -0.2
HNS HongShan 14.67 338⇑ P Pn 00 57 44.8 -0.4
HNS eS Sn 01 00 33.4 +5.9
HNS pmax pmax
comp=N,20nm,1.5s
HNS pmax pmax
comp=N,450nm,7.1s
HNS LR LR
comp=N,5μm,10.5s
HNS LR LR
comp=N,5μm,11.0s
HNS LR LR
comp=N,7μm,10.8s
DL2 Dalian 14.92 360 P P 00 57 56.5 +2.4
DL2 S S 01 00 48.5 -3.0
DL2 pmax pmax
comp=Z,22nm,1.4s
DL2 LR LR
comp=N,2μm,10.2s
DL2 LR LR
comp=E,2μm,8.0s
DL2 LR LR
comp=Z,3μm,13.3s
XAN Xi'an 14.98 315 P Pn 00 57 50.2 +0.7
XAN S Sn 01 00 40.6 +5.3
XAN pmax pmax
comp=Z,39nm,2.1s
XAN LR LR
comp=Z,6μm,8.0s
XAN LR LR
comp=Z,9μm,10.0s
XAN LR LR
comp=Z,12μm,10.2s
TIY Taiyuan 15.83 332⇑ P P 00 58 04.7 +0.4
TIY pmax pmax
comp=Z,29nm,1.0s
TIY pmax pmax
comp=Z,510nm,3.6s
TIY LR LR
comp=Z,6μm,9.1s
TIY LR LR
comp=Z,5μm,9.1s
TIY LR LR
comp=Z,6μm,9.7s
SLVN Son La 16.57 264 Pn Pn 00 58 09.0 -1.1
BJT Baijiatuau 16.68 345 P Pn 00 58 11.9 +0.5
BJT Baijiatuau 16.68 345 P Pn 00 58 11.9 +0.5
BJT pmax pmax
comp=Z,19nm,1.4s
BJI Beijing 16.70 345 P P 00 58 17.2 +3.3
BJI S Sn 01 01 19.9 +3.1
BJI pmax pmax
comp=Z,9.0nm,1.3s
BJI pmax pmax
comp=Z,220nm,7.5s
BJI LR LR
comp=N,1μm,9.8s
BJI LR LR
comp=E,790nm,11.7s
BJI LR LR
comp=Z,1μm,11.5s
DAV Davao City (W) 17.19 167 LR LR 01 04 58.9
comp=Z,693nm,18.7s,baz=355,slow=38
KMI Kunming 17.23 278⇑ P P 00 58 23.1 +3.0
KMI SS SnSn 01 01 54.1 +11
KMI pmax pmax
comp=Z,17nm,1.4s
KMI pmax pmax
comp=Z,280nm,8.6s
KMI LR LR
comp=Z,1μm,4.7s
KMI LR LR
comp=Z,6μm,9.7s
KMI LR LR
comp=Z,7μm,12.3s
CD2 Chengdu 17.31 298 P P 00 58 21.0 +0.3
CD2 S Sn 01 01 33.3 +1.5

CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,360nm,4.9s
CD2 LR LR
comp=Z,5µm,6.5s
CD2 LR LR
comp=Z,6µm,6.7s
CD2 LR LR
comp=Z,6µm,11.3s
SNY Shenyang 17.92 5 ⇑P **P 00 58 30.5 +3.2**
SNY pmax pmax
comp=Z,8.0nm,1.2s
SNY pmax pmax
comp=Z,420nm,6.0s
SNY LR LR
comp=Z,2µm,12.9s
SNY LR LR
comp=Z,870nm,12.4s
SNY LR LR
comp=Z,4µm,12.2s
PZH PanZhiHua 18.18 282 P **Pn 00 58 30.0 -0.2**
PZH PP **PnPn 00 58 44.5 +3.1**
PZH S **Sn 01 01 46.4 -6.5**
PZH SS **SnSn 01 02 11.7 +5.1**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,440nm,9.3s
PZH LR LR
comp=Z,3µm,8.2s
PZH LR LR
comp=Z,6µm,9.9s
PZH LR LR
comp=Z,6µm,11.0s
JHJ Hachijo jima 2 18.37 56 LR LR 01 05 39.1
comp=Z,596nm,20.7s,baz=234,slow=37
KKM Kota Kinabalu 18.54 197 P **P 00 58 32.8 -1.6**
KKM IAmb IAmb 00 58 43.1
comp=Z,203nm,1.7s
JCJ Chichijima 18.82 76 LR LR 01 05 09.6
comp=Z,709nm,19.5s,baz=288,slow=35
HHC Hu-ho-hao-te 18.86 336 ⇓P **Pn 00 58 43.5 +5.1**
HHC sP sP 00 58 50.5 +6.5
HHC PP **PnPn 00 58 59.4 +8.6**
HHC S **S 01 02 14.2 +2.3**
HHC sS sS 01 02 19.2 +0.6
HHC pmax pmax
comp=Z,40nm,1.4s
HHC pmax pmax
comp=Z,490nm,4.6s
HHC LR LR
comp=Z,3µm,10.8s
HHC LR LR
comp=Z,1µm,14.5s
HHC LR LR
comp=Z,3µm,12.8s
MJAR Matsushiro Arr 19.02 45 P **P 00 58 38.6 -0.9**
baz=224,slow=10.0,SNR=2.3
MJAR LR LR 01 07 02.2
comp=Z,712nm,19.2s,baz=231,slow=40
comp=Z,0.9nm,0.5s
BTO Baotou 19.27 332 *e*P **Pn 00 58 46.0 +2.6**
BTO pP **sP 00 58 49.8 +0.6**
BTO sP **pP 00 58 53.0 +6.0**
BTO PP **PnPn 00 59 04.1 +7.7**
BTO pmax pmax
comp=Z,12nm,0.7s
BTO pmax pmax
comp=Z,1µm,5.8s
BTO LR LR
comp=Z,11µm,11.0s
BTO LR LR
comp=Z,5µm,9.9s
BTO LR LR
comp=Z,17µm,10.1s
LZH Lanzhou 19.55 312 *e*P **Pn 00 58 47.7 +0.8**
LZH pP sP 00 58 52.0 -0.3
LZH sP pP 00 58 55.5 +5.3
LZH S **Sn 01 02 30.8 +4.6**
LZH pmax pmax
comp=Z,38nm,1.3s
LZH pmax pmax
comp=Z,1µm,5.8s
LZH LR LR
comp=Z,4µm,9.8s
LZH LR LR
comp=Z,5µm,9.9s
LZH LR LR
comp=Z,7µm,10.4s
CRAI Chiangrai 20.04 264 **P 00 58 50.5 -0.3**
CRAI IAmb IAmb 00 59 01.2
comp=Z,138nm,1.8s
CN2 Changchun 20.06 8 *e*P Pn 00 58 52.0 -0.6
CN2 *e*PP **PnPn 00 59 11.2 +4.1**
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 LR LR
comp=Z,2µm,11.0s
CN2 LR LR
comp=Z,420nm,11.0s
CN2 LR LR
comp=Z,1µm,12.0s
PSTR Posyet 20.15 20 *i*P **P 00 58 50.7 -1.1**
MSHR Mys Shultsa 20.20 21 *i*P Pn 00 58 53.9 -0.4
MSHR pmax pmax
comp=Z,26nm,1.0s
XLT XiLinHaoTe 20.43 348 *e*P Pn 00 58 56.8 -0.2
XLT pP pP 00 59 00.1 +0.9
XLT sP sP 00 59 04.5 +3.4
XLT S **S 01 02 40.0 -3.2**
XLT pmax pmax
comp=Z,10.0nm,1.0s
XLT pmax pmax
comp=Z,320nm,3.7s
XLT LR LR
comp=Z,190nm,12.2s
XLT LR LR
comp=Z,1µm,10.6s
XLT LR LR
comp=Z,2µm,16.3s
TNCH TengChong 21.06 278 P **P 00 59 04.5 +2.5**
TNCH pP pP 00 59 06.2 -0.2
TNCH sP sP 00 59 08.4 0.0
TNCH PP **PnPn 00 59 26.9 +5.9**
TNCH S **S 01 02 52.8 -3.4**
TNCH pmax pmax
comp=Z,58nm,1.2s
TNCH pmax pmax
comp=Z,570nm,4.0s
TNCH LR LR
comp=Z,3µm,7.2s
TNCH LR LR
comp=Z,5µm,9.9s
TNCH LR LR
comp=Z,5µm,10.1s
MDJ Mudanjiang 21.63 16 P **P 00 59 08.9 +1.1**
MDJ PP **PnPn 00 59 31.6 +3.0**
MDJ S **S 01 03 09.8 +2.9**
MDJ pmax pmax
comp=Z,12nm,1.4s
MDJ pmax pmax
comp=Z,130nm,3.6s
MDJ LR LR
comp=Z,2µm,15.1s
MDJ LR LR
comp=Z,2µm,11.7s
MDJ LR LR
comp=Z,2µm,11.7s
MDJ Mudanjiang 21.63 16 P **P 00 59 06.7 -1.0**
MDJ IAmb IAmb 00 59 13.1
comp=Z,62nm,1.3s
CHTO Chiang Mai 21.72 261 P **P 00 59 08.0 -1.0**
CHTO Chiang Mai 21.72 261 P **P 00 59 08.0 -1.0**
CHTO pmax pmax
comp=Z,36nm,1.2s
CMAR Chiang Mai Arr 21.83 260 P **P 00 59 10.0 -0.2**
CMAR Chiang Mai Arr 21.83 260 P **P 00 59 10.0 -0.2**
CMAR Chiang Mai Arr 21.83 260 P **P 00 59 09.4 -0.7**
comp=Z,2.2nm,0.3s,baz=62,slow=8.4,SNR=23
CMAR LR LR 01 08 10.2
comp=Z,728nm,18.4s,baz=80,slow=38
comp=Z,2.2nm,0.3s
USRK Ussuriysk Ar. 21.92 20 P **P 00 59 10.7 -0.2**
USRK Ussuriysk Ar. 21.92 20 P **P 00 59 10.7 -0.2**
USRK Ussuriysk Ar. 21.92 20 P **P 00 59 11.4 +0.5**
comp=Z,3.2nm,0.6s,baz=212,slow=11,SNR=5.8
USRK LR LR 01 08 32.1
comp=Z,664nm,18.6s,baz=193,slow=39
comp=Z,3.2nm,0.6s
USA0B Ussuriysk Arra 21.92 20 *i*P **P 00 59 10.6 -0.3**
BNX BinXian 22.25 11 ⇑P **P 00 59 14.3 -0.1**
BNX pmax pmax
comp=Z,4.0nm,0.9s
BNX pmax pmax
comp=Z,110nm,4.2s
SBUM Sibu 23.22 204 P **P 00 59 24.0 -0.8**
GTA Gaotai 24.05 315 P **P 00 59 33.5 +0.6**
GTA sP sP 00 59 44.2 +4.6
GTA S **S 01 03 52.3 +2.6**
GTA pmax pmax
comp=Z,9.0nm,2.3s
GTA pmax pmax
comp=Z,500nm,5.5s
GTA LR LR
comp=Z,1µm,12.4s
GTA LR LR
comp=Z,3µm,11.3s
GTA LR LR
comp=Z,3µm,11.6s
GUMO Guam 24.26 111 LR LR 01 07 03.6
comp=Z,412nm,21.8s,baz=263,slow=32
LUWI Luwuk 24.85 177 P **P 00 59 38.7 -1.5**
LUWI Luwuk 24.85 177 P **P 00 59 43.7 +3.5**
comp=Z,95nm,1.4s,comp=Z,2µm
KSM Kuching 24.88 208 P **P 00 59 39.5 -0.9**
HIA Hailar 25.33 357 P **P 00 59 43.4 -0.9**
HIA Hailar 25.33 357 P **P 00 59 43.4 -0.9**
HIA pmax pmax
comp=Z,17nm,1.1s
STKI Sintang 25.69 204 P **P 00 59 51.2 +3.4**
GOMU GeErMu 26.14 304 P **P 00 59 55.3 +3.1**
GOMU pP sP 00 59 59.6 +0.7
GOMU sP pP 01 00 02.8 +5.9
GOMU pmax pmax
comp=Z,2.0nm,0.9s
GOMU LR LR
comp=Z,2µm,8.9s
GOMU LR LR
comp=Z,2µm,8.6s
GOMU LR LR
comp=Z,3µm,8.9s
ASAJ Asahikawa 26.46 35 P **P 00 59 53.1 -1.4**
ASAJ pmax pmax
comp=Z,141nm,2.0s
ASAJ Asahikawa 26.46 35 P **P 00 59 53.4 -1.2**
comp=Z,3.8nm,0.3s,baz=188,slow=7.1,SNR=2.3
ASAJ LR LR 01 10 28.0
comp=Z,343nm,20.9s,baz=183,slow=37
comp=Z,3.8nm,0.3s
JKA Kamikawa-asahi 26.46 35 P **P 00 59 53.1 -1.5**
JKA IAmb IAmb 01 00 30.7
comp=Z,141nm,2.0s
KLR Kul'dur 26.47 15*ce*P **P 00 59 55.2 +0.6**
KLR pmax pmax
comp=Z,23nm,1.3s
KLR Kul'dur 26.47 15 P **P 00 59 54.8 +0.2**
comp=Z,9.6nm,1.0s,baz=187,slow=11,SNR=14
KLR LR LR 01 10 25.1
comp=Z,500nm,19.6s,baz=200,slow=37
comp=Z,9.6nm,1.0s
ULN Ulaanbaatar 26.55 338 P **P 00 59 54.6 -0.9**
ULN IAmb IAmb 01 00 01.5
comp=Z,48nm,1.4s
ULN Ulaanbaatar 26.55 338*ce*P **P 00 59 55.8 +0.3**
ULN pmax pmax
comp=Z,26nm,1.3s
HEH HeiHe 26.66 8 *e*P **P 00 59 58.8 +2.6**
HEH S **S 01 04 37.4 +6.7**
HEH sS **sS 01 04 42.9 +4.2**
HEH pmax pmax
comp=Z,32nm,1.3s
HEH pmax pmax
comp=Z,190nm,6.7s
HEH LR LR
comp=Z,1µm,10.1s
HEH LR LR
comp=Z,1µm,11.2s
HEH LR LR
comp=Z,2µm,10.4s
SONM Songino Array 26.75 337 P **P 00 59 56.7 -0.6**
SONM Songino Array 26.75 337 P **P 00 59 56.7 -0.6**
SONM pmax pmax
comp=Z,20nm,1.0s
SONM Songino Array 26.75 337 P **P 00 59 56.9 -0.4**
comp=Z,4.2nm,0.9s,baz=158,slow=9.9,SNR=11
SONM LR LR 01 11 44.1
comp=Z,1µm,18.9s,baz=149,slow=39
comp=Z,4.2nm,0.9s
SHL Shillong 27.04 280 P **P 01 00 00.5 +0.3**
SHL IAmb IAmb 01 00 07.8
comp=Z,122nm,1.8s
SHL Shillong 27.04 280 P **P 01 00 00.5 +0.3**
SHL pmax pmax
comp=Z,122nm,1.8s
NLAI Namlea 27.53 168 P **P 01 00 05.9 +1.5**
comp=Z,42nm,1.2s
YSS Yuzh-Sakhalins 28.53 31 *e*P **P 01 00 11.4 -1.6**
YSS *e*S **S 01 04 54.0 -6.3**
YSS pmax pmax
comp=Z,20nm,0.9s
ZAK Zakamensk 30.01 336 *e*P **P 01 00 25.6 -0.7**
ZAK pmax pmax
comp=Z,4.0nm,1.3s
ZEA Zeya 30.06 7 *e*P **P 01 00 25.4 -1.2**
ZEA pmax pmax
comp=N,100nm,4.4s
ZEA pmax pmax
comp=Z,100nm,4.3s
ZEA pmax pmax
comp=E,10.0nm,1.3s
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA MLR MLR
comp=E,600nm,12.0s
ZEA MLR MLR
comp=N,1µm,14.0s
ZEA MLR MLR
comp=Z,900nm,13.0s
PSI Prapat 30.38 230 P **P 01 00 27.7 -2.2**
PSI pmax pmax
comp=Z,18nm,1.2s
RPSI Rantau Prapat 30.46 230 P **P 01 00 27.7 -2.7**
RPSI IAmb IAmb 01 00 36.7
comp=Z,18nm,1.2s
IRK Irkutsk 31.22 339 *e*P P 01 00 30.1 -6.8
IRK pmax pmax
comp=Z,69nm,2.4s
TYV Tymovskoe 31.42 26 *e*P P 01 00 44.8 +6.2
TYV pmax pmax
comp=Z,200nm,4.1s
TYV pmax pmax
comp=Z,7.0nm,1.4s
MOY Mondy 31.90 335 *e*P **P 01 00 46.5 +3.5**
MOY pmax pmax
comp=Z,24nm,1.3s
PLAI Plampang 32.78 187 P **P 01 00 50.7 -0.2**
comp=Z,21nm,0.9s
WMQ Urumqi 34.12 314 *e*P **P 01 01 05.6 +3.2**
WMQ pP sP 01 01 08.4 -0.8
WMQ pmax pmax
comp=Z,5.0nm,0.9s
WMQ LR LR
comp=Z,1µm,10.5s
WMQ LR LR
comp=Z,2µm,10.5s
WMQ LR LR
comp=Z,550nm,11.3s
DGZ Jazzator, Alta 37.04 323 *i*P **P 01 01 26.2 -1.3**
DGZ pmax pmax
comp=Z,16nm,3.1s
MTN Manton Dam 37.72 165 P **P 01 01 31.3 -2.1**
MTN IAmb IAmb 01 01 38.3
comp=Z,103nm,1.9s
YAK Yakutsk 38.47 6 P **P 01 01 38.2 -1.1**
YAK IAmb IAmb 01 01 42.6
comp=Z,37nm,1.2s
YAK Yakutsk 38.47 6 *e*P **P 01 01 40.3 +1.1**
YAK *e*S **S 01 07 37.1 +3.3**
YAK pmax pmax
comp=Z,31nm,1.3s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=Z,87nm,3.3s
YAK smax smax
comp=E,65nm,3.3s
YAK MLR MLR
comp=Z,971nm,14.0s
YAK MLR MLR
comp=N,657nm,16.0s
YAK Yakutsk 38.47 6 LR LR 01 19 12.0
comp=N,825nm,18.1s,baz=176,slow=39
MK31 Makanchi Array 38.80 316 P **P 01 01 41.5 -0.7**
MK31 Makanchi Array 38.80 316*ce*P **P 01 01 42.9 +0.6**
MKAR Makanchi Array 38.80 316 P **P 01 01 41.7 -0.6**
MKAR Makanchi Array 38.80 316 P **P 01 01 41.7 -0.6**
MKAR Makanchi Array 38.80 316 P **P 01 01 42.9 +0.6**
comp=N,6.4nm,0.8s,baz=100,slow=11,SNR=38
MKAR PcP **PcP 01 03 53.2 -0.3**
comp=N,0.9nm,0.6s,baz=98,slow=6.0,SNR=2.8
MKAR ScP **ScP 01 07 42.9 +1.6**
comp=N,0.9nm,1.0s,baz=125,slow=7.6,SNR=1.7
MKAR LR LR 01 18 22.6
comp=N,329nm,18.8s,baz=98,slow=37
comp=N,6.4nm,0.8s
MAKZ Makanchi 39.00 316 P **P 01 01 43.3 -0.7**
MAKZ Makanchi 39.00 316 P **P 01 01 43.3 -0.7**
MAKZ pmax pmax
comp=Z,11nm,0.9s
PETK Petropavlovsk- 39.85 34 P **P 01 01 52.2 +1.3**
comp=Z,1.9nm,0.9s,baz=229,slow=8.8,SNR=1.7
PETK LR LR 01 19 40.4
comp=Z,282nm,18.0s,baz=232,slow=38
comp=Z,1.9nm,0.9s
ZAA0 Zalesovo Array 40.67 327 P **P 01 01 56.3 -1.5**
ZALV Zalesovo Beam 40.67 327 P **P 01 01 56.9 -0.9**
ZALV Zalesovo Beam 40.67 327 *i*P **P 01 01 57.0 -0.7**
ZALV pmax pmax
comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 40.67 327 P **P 01 01 56.6 -1.1**
comp=Z,9.5nm,0.8s,baz=112,slow=8.0,SNR=38
ZALV PcP **PcP 01 03 57.9 -1.4**
comp=Z,1.1nm,0.8s,baz=147,slow=3.4,SNR=1.5
ZALV LR LR 01 19 49.0
comp=Z,531nm,18.6s,baz=120,slow=38
comp=Z,9.5nm,0.8s
HYB Hyderabad 40.70 269 *e*P **P 01 01 58.4 -0.1**
MA2 Magadan 41.06 22 LR LR 01 20 57.8
comp=Z,325nm,18.8s,baz=283,slow=39
KSH Kashi 41.38 303 P P 01 02 08.7 +4.8
KSH pmax pmax
comp=Z,6.0nm,1.6s
KSH LR LR
comp=Z,900nm,15.1s
KSH LR LR
comp=Z,790nm,14.1s
KSH LR LR
comp=Z,1µm,16.5s
H11S3 WAKE ISLAND Hy 42.22 88 T T 01 47 15.5
baz=284,slow=74,SNR=669
H11S1 WAKE ISLAND Hy 42.23 88 T T 01 47 16.2
baz=284,slow=74,SNR=328
H11S2 WAKE ISLAND Hy 42.24 88 T T 01 47 16.8
baz=284,slow=74,SNR=345
KURK Kurchatov 42.54 320 P **P 01 02 13.0 -0.1**
KURK Kurchatov 42.54 320*ce*P **P 01 02 13.9 +0.8**
KURK pmax pmax
comp=Z,14nm,1.0s
KURBB Kurchatov Arra 42.56 320 P **P 01 02 13.2 -0.1**
comp=Z,1.1nm,0.3s,baz=114,slow=8.6,SNR=8.6
KURBB LR LR 01 19 49.7
comp=Z,139nm,21.7s,baz=174,slow=36
comp=Z,1.1nm,0.3s
PALK Pallekele 42.56 254 LR LR 01 21 03.4
comp=Z,220nm,19.0s,baz=160,slow=38
AAK Ala-Archa 42.98 307 LR LR 01 22 11.0
comp=Z,318nm,18.7s,baz=82,slow=39
COEN Coen 43.15 149 P **P 01 02 17.6 -0.8**
COEN IAmb IAmb 01 02 28.6
comp=Z,63nm,1.3s
NIL Nilore 43.16 294 P **P 01 02 17.6 -0.8**
NIL Nilore 43.16 294 P **P 01 02 17.6 -0.8**
NIL pmax pmax
comp=Z,7.0nm,0.9s
SEY Seymchan 44.07 20 *i*P **P 01 02 23.8 -1.5**
SEY pmax pmax
comp=Z,11nm,1.8s
WB0 Warramunga Arr 45.19 163 P **P 01 02 33.0 -1.6**
WB0 IAmb IAmb 01 02 34.1
comp=Z,32nm,1.4s
PSA00 Pilbara Seismi 45.27 182 P **P 01 02 32.8 -2.4**
PSA00 IAmb IAmb 01 03 14.5
comp=Z,8.3nm,0.8s
PSA00 Pilbara Seismi 45.27 182 P **P 01 02 33.2 -2.1**
PSA00 IAmb IAmb 01 02 37.3
comp=Z,33nm,1.4s
WRA Warramunga Arr 45.34 163 P **P 01 02 34.2 -1.6**
WRA Warramunga Arr 45.34 163 *i*P **P 01 02 34.5 -1.4**
WRA pmax pmax
comp=Z,6.0nm,0.7s
WRA Warramunga Arr 45.34 163 P **P 01 02 34.0 -1.8**
comp=Z,5.3nm,0.7s,baz=344,slow=8.7,SNR=20
WRA PcP **PcP 01 04 14.6 -0.8**
comp=Z,0.8nm,0.7s,baz=342,slow=3.3,SNR=1.8
comp=Z,5.3nm,0.7s
WR0 Warramunga Arr 45.41 163 P **P 01 02 34.7 -1.7**
WR0 IAmb IAmb 01 02 38.5
comp=Z,9.8nm,0.8s
KK31 Karatay Array 45.94 308 P **P 01 02 39.7 -0.8**
KK31 Karatay Array 45.94 308 P **P 01 02 39.7 -0.8**
KK31 pmax pmax
comp=Z,9.0nm,1.2s
KKAR Karatay Array 45.94 308 P **P 01 02 39.1 -1.4**
KKAR Karatay Array 45.94 308 P **P 01 02 39.1 -1.4**
KBL Kabul 46.64 296 P **P 01 02 45.5 -0.8**
KBL IAmb IAmb 01 02 52.9
comp=Z,16nm,1.1s
KBL Kabul 46.64 296 P **P 01 02 45.5 -0.8**
KBL pmax pmax
comp=Z,16nm,1.1s
SIMJ Simiganj 46.69 301 P **P 01 02 45.6 -1.1**
SIMJ IAmb IAmb 01 04 06.0
comp=Z,16nm,1.6s
TIXI Tiksi 47.92 3 P **P 01 02 53.7 -1.8**
TIXI IAmb IAmb 01 02 59.4
comp=Z,27nm,1.1s
TIXI Tiksi 47.92 3*ce*P **P 01 02 54.1 -1.3**
TIXI pmax pmax
comp=Z,32nm,1.3s
TIXI Tiksi 47.92 3 LR LR 01 25 37.6
comp=Z,675nm,18.2s,baz=200,slow=39
BVAR Borovoye Array 48.12 321 P **P 01 02 57.5 +0.1**
comp=Z,2.4nm,0.5s,baz=117,slow=10,SNR=16
BVAR PcP **PcP 01 04 23.5 -1.3**
comp=Z,1.2nm,0.6s,baz=141,slow=5.7,SNR=1.9
BVAR LR LR 01 23 17.9
comp=Z,146nm,18.8s,baz=105,slow=36
comp=Z,2.4nm,0.5s
BRVK Borovoye 48.19 321 P **P 01 02 57.2 -0.7**
BRVK IAmb IAmb 01 03 06.2
comp=Z,15nm,1.2s
BRVK Borovoye 48.19 321*ce*P **P 01 02 59.1 +1.2**
BRVK pmax pmax
comp=Z,12nm,1.0s
SHEM Shemya Is, Ala 48.76 40 LR LR 01 21 15.2
comp=Z,54nm,21.7s,baz=216,slow=33
AS31 Alice Springs 48.80 165 P **P 01 03 00.9 -1.9**
ASAR Alice Springs 48.80 165 P **P 01 03 01.1 -1.7**
ASAR Alice Springs 48.80 165 P **P 01 03 01.1 -1.7**
ASAR Alice Springs 48.80 165 P **P 01 03 02.1 -0.7**
comp=Z,7.1nm,0.9s,baz=346,slow=6.9,SNR=28
ASAR LR LR 01 25 05.1
comp=Z,128nm,18.6s,baz=0.5,slow=38
comp=Z,7.1nm,0.9s
NRIK Noril'sk 49.75 345 P **P 01 03 08.8 -0.7**
NRIK IAmb IAmb 01 03 13.7
comp=Z,18nm,1.6s
NRIK Noril'sk 49.75 345*ce*P **P 01 03 10.7 +1.2**
NRIK pmax pmax
comp=Z,14nm,1.5s
NRIK Noril'sk 49.75 345 P **P 01 03 08.1 -1.4**
comp=Z,3.9nm,0.9s,baz=136,slow=7.6,SNR=7.2
NRIK LR LR 01 25 18.0
comp=Z,372nm,19.9s,baz=147,slow=37

comp=Z,3.9nm,0.9s
CTA Charters Tower 49.91 149 LR LR 01 22 15.6
comp=Z,373nm,21.8s,baz=280,slow=34
HNR Honiara 50.01 127 LR LR 01 22 42.8
comp=Z,2µm,20.4s,baz=130,slow=34
BILL Bilibino 51.78 20 P P 01 03 23.9 -1.0
BILL Bilibino 51.78 20 *i* P P 01 03 24.5 -0.4
HRA Herat 52.25 296 P P 01 03 26.7 -2.5
ABKAR Akbulak array 53.90 314 P P 01 03 40.6 -0.3
SVE Sverdlovsk 54.48 324 *e*P P 01 03 46.3 +1.3
SVE pmax pmax
comp=Z,22nm,1.5s
SVE MLR MLR
comp=Z,673nm,11.0s
FORT Forrest 54.75 173 P P 01 03 44.9 -2.3
AKTO Aktyubinsk 55.23 316 LR LR 01 31 04.8
comp=Z,214nm,18.5s,baz=61,slow=40
GEYT Alibeck 55.27 301 P P 01 03 49.3 -1.8
GEYT IAmb IAmb 01 04 02.8
comp=Z,11nm,1.1s
GEYT Alibeck 55.27 301 P P 01 03 49.3 -1.8
GEYT pmax pmax
comp=Z,11nm,1.1s
GEYT Alibeck 55.27 301 P P 01 03 51.7 +0.6
comp=Z,4.8nm,1.0s,baz=90,slow=4.6,SNR=7.9
GEYT LR LR 01 30 10.9
comp=Z,373nm,21.2s,baz=100,slow=39
comp=Z,4.8nm,1.0s
ARU Arti 55.55 323 P P 01 03 51.6 -1.1
ARU IAmb IAmb 01 03 57.1
comp=Z,9.4nm,0.8s
ARU Arti 55.55 323 *d* *i* P P 01 03 52.2 -0.5
ARU S S 01 11 40.8 +3.3
ARU SS SS 01 15 19.1 -3.1
ARU pmax pmax
comp=Z,23nm,1.7s
ARU Arti 55.55 323 LR LR 01 29 25.0
comp=Z,214nm,18.3s,baz=84,slow=38
NWAO Narrogin (SRO) 56.70 184 LR LR 01 29 44.7
comp=Z,41nm,19.8s,baz=344,slow=38
BBOO Buckleboo 58.09 166 P P 01 04 09.6 -1.2
BBOO IAmb IAmb 01 04 13.7
comp=Z,16nm,0.9s
GAMB Gambell 58.50 29 P P 01 04 14.4 +0.9
baz=260
STKA Stephens Creek 58.69 160 P P 01 04 13.2 -1.9
STKA Stephens Creek 58.69 160 *i* P P 01 04 14.2 -0.9
STKA Stephens Creek 58.69 160 P P 01 04 14.5 -0.7
comp=Z,2.8nm,0.5s,baz=329,slow=8.2,SNR=6.5
STKA LR LR 01 29 35.5
comp=Z,84nm,21.6s,baz=19,slow=36
comp=Z,2.8nm,0.5s
P08K Saint George I 58.74 37 P P 01 04 16.2 +1.0
baz=266
TNA Tin City 60.38 27 P P 01 04 27.2 +0.8
baz=263
KIRV Kirov 60.65 325 *ce*P P 01 04 28.6 +0.2
KIRV Kirov 60.65 325 LR LR 01 34 19.1
comp=Z,219nm,18.9s,baz=90,slow=40
M11K Mekoryuk 60.70 33 P P 01 04 30.5 +1.9
baz=267
F14K Arctic Creek 61.03 27 P P 01 04 32.3 +1.5
baz=264
C16K Lisburne Hills 61.71 24 P P 01 04 34.9 -0.5
C16K IAmb IAmb 01 04 43.9
comp=Z,9.7nm,1.1s
C16K Lisburne Hills 61.71 24 P P 01 04 36.3 +0.9
baz=264
F15K North Star Dit 61.74 27 P P 01 04 37.2 +1.5
baz=266
BELG Belogornoye 61.75 318 LR LR 01 31 38.7
comp=Z,206nm,19.7s,baz=126,slow=36
G15K Niukluk 61.95 28 P P 01 04 38.1 +1.0
baz=267
J14K Nanvaranak Lak 62.06 30 P P 01 04 38.9 +1.1
baz=268
M13K Dall Lake 62.12 33 P P 01 04 39.8 +1.5
baz=270
L14K Kuka Creek 62.45 32 P P 01 04 41.4 +1.0
baz=270
D17K Noatak River 62.51 25 P P 01 04 42.1 +1.3
baz=266
C17K DeLong Mountai 62.53 24 P P 01 04 42.3 +1.4
baz=266
G16K Koyuk River 62.68 27 P P 01 04 43.0 +1.1
baz=268
H16K Elim 62.70 28 P P 01 04 42.5 +0.4
baz=268,SNR=6.8
MAK Makhachkala 62.76 307 *e*P P 01 04 37.4 -5.5
MAK *e* 01 06 55.7
MAK *e*S S 01 13 04.4 -6.9
MAK *e*SS SS 01 17 15.4 -0.5
MAK pmax pmax
comp=Z,51nm,0.9s
MAK MLR MLR
comp=Z,186nm,13.0s
M14K Bethel 62.80 32 P P 01 04 43.0 +0.2
M14K Bethel 62.80 32 P P 01 04 43.8 +1.0
baz=271
N14K Kuskokwak Cree 62.96 33 P P 01 04 44.9 +1.0
baz=271
E17K Hotham Inlet 62.96 25 P P 01 04 44.9 +1.1
baz=268
K15K Wolf Creek Mou 63.00 31 P P 01 04 44.8 +0.7
baz=270
L15K Ungalak Mounta 63.02 31 P P 01 04 45.1 +0.8
baz=271
B18K Kokolik River 63.09 23 P P 01 04 45.5 +0.8
baz=266
F17K Baldwin Pennin 63.17 26 P P 01 04 47.0 +1.9
baz=268
DZM Mont Dzumac 63.17 133 *e*PP PP 01 07 00.3 -4.8
comp=Z,35nm,22.9s
DZM *e*S S 01 13 20.5 +3.5
comp=Z,148nm,27.6s
DZM *e*SS SS 01 17 23.1 -0.5
comp=Z,100nm,24.5s
DZM Mont Dzumac 63.17 133 LR LR 01 27 37.0
comp=Z,155nm,20.7s,baz=350,slow=32
O14K Tigyukauivet M 63.19 34 P P 01 04 44.9 -0.5
baz=272
C18K Utukok River 63.27 24 P P 01 04 47.2 +1.3
baz=267
I17K Unalakleet 63.37 29 P P 01 04 46.5 -0.1
I17K Unalakleet 63.37 29 P P 01 04 47.5 +1.0
baz=270,SNR=7.4
G17K Kiwalik Mounta 63.39 27 P P 01 04 47.9 +1.2
baz=269
J16K Anvik River 63.42 30 P P 01 04 47.6 +0.7
baz=271
M15K Kasigluk River 63.43 33 P P 01 04 47.5 +0.5
baz=272
E18K Tukpahlearik C 63.45 25 P P 01 04 48.4 +1.3
baz=268
H17K Granite Mounta 63.70 28 P P 01 04 50.1 +1.3
baz=270
N15K Kwethluk River 63.75 33 P P 01 04 50.4 +1.3
baz=273
F18K Selawik 63.81 26 P P 01 04 50.8 +1.4
baz=270,SNR=12
C19K Lookout Ridge 63.87 23 P P 01 04 51.4 +1.5
baz=269
O15K Ungalikthiuk R 63.93 34 P P 01 04 50.8 +0.4
baz=273
L16K Owhat River 63.98 31 P P 01 04 51.1 +0.5
baz=272
G18K Tagagawik 64.22 27 P P 01 04 53.2 +1.0
baz=271
M16K Timber Creek 64.26 32 P P 01 04 53.3 +0.7
baz=273
H18K Honhosa River 64.36 27 P P 01 04 53.6 +0.5
baz=272
N16K Nishlik Lake 64.39 33 P P 01 04 54.2 +0.8
baz=274
D19K Kuna River 64.40 24 P P 01 04 54.1 +0.7
baz=270
CHNA Chernabura Isl 64.40 39 P P 01 04 54.2 +0.7
baz=276
K17K Iditarod 64.48 30 P P 01 04 55.0 +1.1
baz=273
L17K Donlin 64.52 31 P P 01 04 55.4 +1.2
baz=273
F19K Shaleruckik Mo 64.55 26 P P 01 04 55.4 +1.1
baz=271
E19K Redstone River 64.75 25 P P 01 04 56.3 +0.7
baz=272
O16K Kokwok River B 64.79 34 P P 01 04 57.0 +1.1
baz=274
G19K Purcell Mounta 64.85 26 P P 01 04 57.7 +1.4
baz=272
CHGN Chignik 64.92 37 P P 01 04 56.0 -0.9
D20K Etivluk River 64.94 24 P P 01 04 57.7 +0.8
baz=272
M17K Holitna River 64.97 32 P P 01 04 57.9 +0.7
baz=274
GCSA Galena City Sc 65.01 28 P P 01 04 58.5 +1.2
baz=273
E20K Nigu River 65.12 24 P P 01 04 58.8 +0.8
baz=272
H19K Roundabout Mou 65.14 27 P P 01 04 59.2 +1.1
baz=273
J18K Innoko River 65.16 29 P P 01 04 59.7 +1.3
baz=274
N17K Nushagak Hills 65.17 33 P P 01 04 59.4 +1.0
baz=272
L18K Granite Mounta 65.26 31 P P 01 04 60.0 +1.0
baz=274
GNI Garni 65.28 305 *i* P P 01 05 01.9 +2.2
GNI pmax pmax
comp=Z,7.0nm,1.1s
GNI Garni 65.28 305 LR LR 01 36 52.6
comp=Z,130nm,22.0s,baz=82,slow=39
O17K Koliganek Bris 65.28 33 P P 01 04 59.3 +0.2
baz=275
F20K Avaarat Lake 65.35 25 P P 01 04 59.6 +0.1
baz=273,SNR=9.7
ZEI Tsey 65.40 308 *e*P P 01 04 58.7 -1.8
ZEI pmax pmax
comp=Z,12nm,1.3s
VRH Novokhopyorsk 65.51 317 *e*P P 01 05 01.5 +0.7
VRH pmax pmax
comp=Z,10.0nm,0.6s
TTA Tatalina 65.52 30 P P 01 05 00.8 +0.1
TTA Tatalina 65.52 30 P P 01 05 01.2 +0.4
baz=275,SNR=11
TTA Tatalina 65.52 30 P P 01 05 00.8 +0.1
TTA pmax pmax
comp=Z,38nm,1.5s
C21K Knifeblade Rid 65.59 23 P P 01 05 02.1 +1.1
baz=273
KLMR Klimovskoe 65.59 328 *e*P P 01 05 00.1 -1.0
KLMR pmax pmax
comp=Z,23nm,1.4s
J19K Poorman 65.60 29 P P 01 05 02.2 +1.0
baz=275
B21K Ikpikpuk River 65.62 22 P P 01 05 01.8 +0.6
baz=273,SNR=23
P17K Kvichak River 65.67 34 P P 01 05 02.0 +0.4
baz=276
M18K Stony River 65.74 31 P P 01 05 03.0 +1.0
baz=276
ONI Oni 65.76 308 P P 01 05 00.8 -1.9
ONI IAmb IAmb 01 05 09.7
comp=Z,17nm,1.3s
ONI Oni 65.76 308 P P 01 05 00.8 -1.9
ONI pmax pmax
comp=Z,17nm,1.3s
N18K Kilae Creek 65.79 32 P P 01 05 02.8 +0.3
baz=276
H20K Anotleneega Mo 65.80 27 P P 01 05 03.3 +0.9
baz=275
SVW2 Sparrevohn 65.89 32 P P 01 05 02.4 -0.8
E21K Killik River 65.93 24 P P 01 05 03.8 +0.5
baz=274
KBZ Khabaz 65.95 309 *i* P P 01 05 04.2 +0.5
KBZ pmax pmax
comp=Z,9.0nm,1.0s
KBZ Khabaz 65.95 309 P P 01 05 02.1 -1.6
comp=Z,3.1nm,0.8s,baz=79,slow=6.9,SNR=8.6
KBZ LR LR 01 35 41.8
comp=Z,123nm,19.1s,baz=69,slow=38
comp=Z,3.1nm,0.8s
I20K Naaghedeneel 66.03 28 P P 01 05 04.9 +1.1
baz=275,SNR=6.7
KIV Kislovodsk 66.06 309 P P 01 05 03.2 -1.4
KIV IAmb IAmb 01 05 10.8
comp=Z,21nm,1.2s
KIV Kislovodsk 66.06 309 *e*P P 01 05 06.3 +1.7
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,90nm,17.0s
Q17K Contact Creek 66.06 35 P P 01 05 05.1 +0.7
baz=277
L19K White Mountain 66.12 31 P P 01 05 05.4 +0.8
baz=276
F21K Alatna River 66.21 25 P P 01 05 05.6 +0.5
baz=275
O18K Koktuh Hills 66.22 33 P P 01 05 05.9 +0.7
baz=277,SNR=5.8
IMAR Indian Mountai 66.22 26 P P 01 05 04.8 -0.4
J20K Nowinta River 66.23 28 P P 01 05 06.4 +1.1
baz=276
P18K Big Mountain, 66.26 34 P P 01 05 06.3 +0.8
baz=277
G21K Allakaket 66.27 26 P P 01 05 06.7 +1.3
baz=275
K20K Telida 66.35 29 P P 01 05 07.1 +1.1
baz=276,SNR=11
D22K Ayikyak River 66.36 23 P P 01 05 07.2 +1.2
baz=275
M19K Big River Lodg 66.37 31 P P 01 05 06.3 +0.1
baz=277,SNR=6.0
N19K Bonanza Creek 66.46 32 P P 01 05 07.4 +0.5
baz=277
L20K Farewell, AK 66.54 30 P P 01 05 07.4 +0.1
baz=277
O19K Port Alsworth 66.62 33 P P 01 05 08.6 +0.9
baz=277
H21K Melozitna Rive 66.64 27 P P 01 05 09.3 +1.5
baz=276
R18K Karluk 66.92 36 P P 01 05 10.1 +0.4
baz=278
M20K Styx River 66.97 31 P P 01 05 10.8 +0.7
baz=278
VORR Voronezh 66.99 318 *e*P P 01 05 10.4 +0.1
VORR pmax pmax
comp=Z,20nm,0.4s
LPSR Galich'ya Gora 67.01 319 *e*P P 01 05 09.3 -1.1
LPSR pmax pmax
comp=Z,20nm,1.5s
G22K Bettles 67.01 25 P P 01 05 10.7 +0.6
baz=277
I21K Tanana 67.04 27 P P 01 05 12.0 +1.6
baz=277,SNR=13
VORD Divnogorie 67.06 317 *e*P P 01 05 10.1 -0.6
VORD pmax pmax
comp=Z,10.0nm,1.4s
CHUM Lake Minchumin 67.07 29 P P 01 05 11.7 +1.1
baz=278,SNR=12
VSR Storozhevoye 67.10 317 *e*P P 01 05 09.6 -1.4
VSR pmax pmax
comp=Z,10.0nm,1.0s
H22K Ishtalitna Cre 67.20 26 P P 01 05 11.9 +0.5
baz=278
SII Sitkinak Islan 67.21 37 P P 01 05 11.9 +0.3
baz=279
CAST Castle Rocks 67.23 29 P P 01 05 11.8 +0.2
CAST Castle Rocks 67.23 29 P P 01 05 13.2 +1.5
baz=278,SNR=17
P19K Oil Pt 67.24 33 P P 01 05 12.6 +0.8
baz=279
PPLA Purkeypile 67.26 30 P P 01 05 12.8 +0.8
baz=278
O20K Slope Mountain 67.47 33 P P 01 05 14.6 +1.3
baz=279
COLD Coldfoot 67.48 25 P P 01 05 14.6 +1.5
baz=278,SNR=5.8
N20K Mount Spurr 67.50 32 P P 01 05 14.1 +0.6
baz=273,SNR=12
TOLK Tozilk Lake Re 67.52 23 P P 01 05 13.8 +0.5
baz=278,SNR=8.9
E23K Chandalar 67.58 24 P P 01 05 15.0 +1.1
baz=278
MLY Manley 67.58 27 P P 01 05 14.7 +0.8
baz=278,SNR=15
OHAK Old Harbor 67.59 36 P P 01 05 14.5 +0.6
baz=280
G23K Bananza Creek 67.62 25 P P 01 05 15.0 +0.9
baz=278
C24K Franklin Bluff 67.67 22 P P 01 05 15.0 +0.8
baz=278
SKT Skwentna 67.70 31 P P 01 05 14.4 -0.2
baz=279,SNR=6.6
D24K Happy Valley 67.71 23 P P 01 05 15.2 +0.6
baz=278
KDAK Kodiak Island 67.87 35 P P 01 05 15.9 +0.2
baz=280
OBN Obninsk 67.95 322 LR LR 01 37 15.3
comp=Z,220nm,18.6s,baz=96,slow=38
TRF Thorofare Moun 68.03 29 P P 01 05 17.3 +0.4
baz=280
CAPN Captain Cook N 68.08 32 P P 01 05 17.6 +0.6
baz=280
I23K Minto, Yukon-K 68.14 27 P P 01 05 17.9 +0.6
baz=280,SNR=11
SUA Susitna One 68.16 31 P P 01 05 17.0 -0.6
SUA Susitna One 68.16 31 P P 01 05 17.8 +0.2
baz=280,SNR=15
CUT Chulitna 68.21 30 P P 01 05 18.2 +0.4
baz=280
F24K Squaw Lake 68.32 24 P P 01 05 18.7 +0.3
baz=280
NEA2 Nenana 68.36 28 P P 01 05 18.0 -0.8
NEA2 Nenana 68.36 28 P P 01 05 19.0 +0.3
baz=280,SNR=9.8
BRSE Bradley Lake S 68.47 33 P P 01 05 19.5 +0.1
baz=281
D25K Kavik River 68.54 22 P P 01 05 20.1 +0.3
baz=281
MCK McKinley 68.57 29 P P 01 05 20.5 +0.4
baz=281,SNR=10
G24K Hadweenzic Riv 68.62 25 P P 01 05 21.3 +1.0
baz=281
H24K Noodor Dome 68.63 26 P P 01 05 21.0 +0.6
baz=281,SNR=12
MDM Murphy Dome 68.65 27 P P 01 05 20.0 -0.5
RC01 Rabbit Creek A 68.70 31 P P 01 05 21.3 +0.4
baz=281
RAYN Ar Rayn 68.81 287 P P 01 05 20.7 -1.6
RAYN IAmb IAmb 01 05 34.1
comp=Z,9.7nm,1.1s
RAYN Ar Rayn 68.81 287 P P 01 05 20.7 -1.6
RAYN pmax pmax
comp=Z,10.0nm,1.1s
COLA College 68.82 27 P P 01 05 21.8 +0.3
baz=281
PMR Palmer 68.89 31 P P 01 05 22.7 +0.6
baz=281
WAT1 Susitna Watana 68.92 29 P P 01 05 23.0 +0.8
baz=281
MARD Mardin 68.93 302 P P 01 05 21.5 -1.4
MARD IAmb IAmb 01 05 37.2
comp=Z,10nm,0.7s
POKR Poker Plat Res 68.95 27 P P 01 05 23.1 +0.7
baz=281,SNR=8.7
GHO Glory Hole Cre 68.95 31 P P 01 05 21.4 -1.1
GHO IAmb IAmb 01 05 34.3
comp=Z,16nm,1.0s
SEW Seward 69.03 32 P P 01 05 24.0 +1.0
baz=282
E25K Arctic Village 69.07 24 P P 01 05 24.1 +1.0
baz=282,SNR=9.2
G25K Bearman Lake 69.15 25 P P 01 05 24.1 +0.6
baz=282
F25K Christian Rive 69.15 24 P P 01 05 24.6 +0.9
baz=282
SML Sawmill 69.22 31 P P 01 05 23.2 -1.0
SML Sawmill 69.22 31 P P 01 05 25.5 +1.3
baz=282
KNK Knik Glacier 69.24 31 P P 01 05 25.3 +1.0
baz=282,SNR=9.4
ILAR Eielson Array 69.25 27 P P 01 05 23.1 -1.1
ILAR Eielson Array 69.25 27 P P 01 05 23.1 -1.1
ILAR Eielson Array 69.25 27 P P 01 05 22.9 -1.3
comp=Z,1.7nm,0.5s,baz=279,slow=5.5,SNR=23
ILAR LR LR 01 38 56.1
comp=Z,132nm,18.4s,baz=124,slow=39
comp=Z,1.7nm,0.5s
HDA Harding Lake 69.30 28 P P 01 05 25.6 +1.1
baz=282,SNR=6.1
WAT6 Susitna Watana 69.33 30 P P 01 05 25.9 +0.9
baz=282,SNR=7.5
DHY Denali Highway 69.39 29 P P 01 05 25.8 +0.5
baz=282
M23K Glacier View 69.51 30 P P 01 05 27.0 +1.1
baz=282
BMAR Burnt Mountain 69.58 24 P P 01 05 26.2 -0.1
PRP Porcupine Dome 69.65 26 P P 01 05 27.8 +0.9
baz=283,SNR=12
SCM Sheep Creek Mo 69.68 30 P P 01 05 28.6 +1.5
baz=283,SNR=6.1
F26K Sheenjek River 69.69 24 P P 01 05 27.8 +0.8
baz=283
SPITS Spitsbergen Ar 69.81 348 LR LR 01 40 01.1
comp=Z,315nm,19.3s,baz=20,slow=39
J25K Salcha River, 69.92 27 P P 01 05 28.5 +0.1
baz=283
ARCES ARCESS Array B 69.92 338 LR LR 01 42 46.0
comp=Z,150nm,19.1s,baz=95,slow=42
K24K Donnelly Dome 69.93 28 P P 01 05 28.8 +0.3
baz=283,SNR=13
G26K Porcupine Rive 70.00 25 P P 01 05 29.7 +0.9
baz=284
M24K Tolsona, Glenn 70.15 30 P P 01 05 30.5 +0.6
baz=284
PAX Paxson 70.26 29 P P 01 05 31.3 +0.7
baz=284
RIDG Independent Ri 70.35 28 P P 01 05 31.7 +0.6
baz=284,SNR=6.6
KLU Klutina 70.41 31 P P 01 05 31.9 +0.3
baz=284
D27M Malcolm River 70.43 22 P P 01 05 32.4 +0.8
baz=286
HARP HAARP 70.54 30 P P 01 05 32.8 +0.5
baz=284
SCRK Sand Creek 70.66 28 P P 01 05 33.7 +0.6
baz=285,SNR=11
I26K Coal Creek Min 70.66 26 P P 01 05 33.6 +0.7
baz=285,SNR=15
J26L Joseph Creek 70.70 27 P P 01 05 34.1 +0.8
baz=285
EYAK Cordova Ski Ar 70.73 32 P P 01 05 34.1 +0.8
baz=284
N25K Chitina, Valde 71.00 30 P P 01 05 36.6 +1.5
baz=285
H27K Steamboat Moun 71.06 25 P P 01 05 36.3 +0.9
baz=286,SNR=22
E28M Babbage River 71.11 23 P P 01 05 36.6 +0.9
baz=287
BMRM Bremner River 71.16 31 P P 01 05 37.4 +1.3
baz=285
L26K Log Cabin Wild 71.18 29 P P 01 05 37.3 +1.1
baz=286,SNR=8.4
I27K Kandik River 71.20 26 P P 01 05 36.9 +0.6
baz=286
F28M Old Crow 71.28 24 P P 01 05 36.4 -0.3
F28M IAmb IAmb 01 05 40.0
comp=Z,20nm,1.1s
F28M Old Crow 71.28 24 P P 01 05 37.3 +0.6
baz=287
K27K Chicken 71.45 27 P P 01 05 38.3 +0.6
baz=286,SNR=20
M26K Nabesna, AK 71.51 29 P P 01 05 38.7 +0.5
baz=286
EGAK Eagle 71.62 27 P P 01 05 38.0 -0.7
EGAK IAmb IAmb 01 05 41.3
comp=Z,16nm,1.0s
EGAK Eagle 71.62 27 P P 01 05 39.4 +0.7
baz=287,SNR=11
E29M Blow River 71.75 23 P P 01 05 40.1 +0.6
baz=289
MCARA McCarthy VSAT 71.79 30 P P 01 05 40.8 +1.0
baz=286
L27K Beaver Creek, 71.84 28 P P 01 05 39.9 -0.2
baz=287
BCAR Beaver Creek A 71.86 28 P P 01 05 40.4 +0.1
FINES FINESS Array B 71.86 330 P P 01 05 39.4 -0.9
FINES FINESS Array B 71.86 330 *i* P P 01 05 40.9 +0.7
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 71.86 330 P P 01 05 39.8 -0.4
comp=Z,2.4nm,0.8s,baz=42,slow=6.4,SNR=6.5
FINES LR LR 01 40 13.8
comp=Z,676nm,18.1s,baz=72,slow=38
comp=Z,2.4nm,0.8s
CRQM Cirque 71.91 31 P P 01 05 40.4 -0.4
CRQM IAmb IAmb 01 05 49.9
comp=Z,27nm,1.0s
I28M Miner Creek 71.91 26 P P 01 05 41.2 +0.6
baz=288
CRQE Cirque 71.93 31 P P 01 05 41.1 +0.2

baz=287
M27K Edge Creek, AK 72.02 29 P P 01 05 41.6 +0.2
baz=287
H29M Whitestone 72.28 25 P P 01 05 43.2 +0.5
baz=289
DAWY Dawson 72.57 27 P P 01 05 43.8 -0.7
DAWY IAmb IAmb 01 05 47.4
comp=Z,19nm,0.9s
DAWY Dawson 72.57 27 P P 01 05 45.2 +0.7
baz=289
MESA MESA 72.64 31 P P 01 05 45.4 +0.2
baz=288
CTG Chitna Glacier 72.69 30 P P 01 05 45.4 0.0
baz=288
F30M Barrier River 72.77 23 P P 01 05 45.7 +0.1
baz=291
G30M tAoh Zraii Nji 72.83 24 P P 01 05 45.3 -0.7
baz=290
YUK3 Moose Creek 72.84 30 P P 01 05 46.6 +0.2
baz=288
EPYK Eagle Plains 72.86 24 P P 01 05 46.5 +0.4
baz=290,SNR=12
J29N Klondike Camp 72.93 27 P P 01 05 47.6 +0.9
baz=290,SNR=13
MNK Minsk 72.97 323 *i* P **P 01 05 45.4 -1.6**
MNK *i* 01 08 27.3
MNK *i* PPP PPP 01 10 12.1
MNK *i* S **S 01 15 14.1 +0.9**
MNK *i* SS **SS 01 19 55.6 +2.5**
MNK pmax pmax
comp=Z,9.0nm,0.8s
MNK pmax pmax
comp=E,11nm,1.2s
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK MLR MLR
comp=E,138nm,14.0s
MNK MLR MLR
comp=Z,407nm,20.0s
MNK MLR MLR
comp=N,176nm,10.0s
INK Inuvik 73.30 22 P **P 01 05 47.9 -0.7**
INK IAmb IAmb 01 05 51.0
comp=Z,20nm,1.0s
INK Inuvik 73.30 22 P **P 01 05 49.0 +0.3**
baz=292,SNR=20
INK Inuvik 73.30 22 P **P 01 05 47.9 -0.7**
INK pmax pmax
comp=Z,20nm,1.0s
INK Inuvik 73.30 22 LR LR 01 41 44.1
comp=Z,108nm,18.3s,baz=194,slow=39
YUK8 Steele Glacier 73.31 30 P **P 01 05 49.4 +0.2**
baz=289
AKASG Malin Array Be 73.32 318 P **P 01 05 47.1 -2.0**
comp=Z,0.6nm,0.5s,baz=63,slow=4.8,SNR=7.4
AKASG LR LR 01 39 28.2
comp=Z,180nm,20.3s,baz=48,slow=37
comp=Z,0.6nm,0.5s
I30M Mount Dempster 73.40 25 P **P 01 05 49.5 0.0**
baz=291
L29M L29M 73.42 28 P **P 01 05 49.4 -0.1**
baz=290,SNR=13
K29M Barlow Dome 73.42 27 P **P 01 05 49.9 +0.3**
baz=290
PINM Pinnacle 73.48 31 P **P 01 05 50.1 +0.2**
baz=289
M29M Somme Creek 73.50 29 P **P 01 05 50.5 +0.4**
baz=290
F31M Tsiigehtchic 73.56 23 P **P 01 05 49.7 -0.4**
baz=293,SNR=21
G31M Satah River 73.57 23 P **P 01 05 50.4 +0.2**
baz=292
BRTR Keskin Array B 73.65 307 P **P 01 05 51.0 -0.5**
BRTR Keskin Array B 73.65 307 P **P 01 05 51.0 -0.5**
BRTR Keskin Array B 73.65 307 P **P 01 05 51.5 0.0**
comp=Z,1.5nm,0.7s,baz=96,slow=7.2,SNR=3.3
BRTR LR LR 01 42 41.8
comp=Z,130nm,19.1s,baz=75,slow=40
comp=Z,1.5nm,0.7s
J30M Hart River 73.65 26 P **P 01 05 51.3 +0.4**
baz=291
YUK4 Talbot Arm 73.80 30 P **P 01 05 52.2 +0.2**
baz=290
YUK6 Outpost Mounta 74.07 30 P **P 01 05 53.8 +0.2**
baz=290
M30M Minto, Yukon 74.18 28 P **P 01 05 54.1 +0.1**
baz=291,SNR=13
O29M Mount Kennedy 74.19 31 P **P 01 05 54.7 +0.4**
baz=290
A36M Sachs Harbour 74.24 17 P **P 01 05 53.0 -1.1**
A36M IAmb IAmb 01 05 58.0
comp=Z,16nm,1.2s
A36M Sachs Harbour 74.24 17 P **P 01 05 54.3 +0.2**
baz=299
MMAI Mount Meron Ar 74.37 299 P **P 01 05 56.3 +0.6**
comp=Z,0.3nm,0.2s,baz=72,slow=4.7,SNR=2.0
MMAI LR LR 01 43 48.7
comp=Z,109nm,19.1s,baz=41,slow=40
comp=Z,0.3nm,0.2s
HYT Haines Junctio 74.50 30 P **P 01 05 56.7 +0.6**
baz=291
P29M Windy Craggy 74.83 31 P **P 01 05 58.3 +0.5**
baz=291
P30M Million Dollar 75.01 31 P **P 01 05 59.4 +0.5**
baz=292
N31M Braeburn, Yuko 75.03 29 P **P 01 06 00.2 +1.2**
baz=292
O30N Mendenhall 75.17 30 P **P 01 06 00.3 +0.5**
baz=292
M31M Drury Creek, Y 75.36 28 P **P 01 06 01.3 +0.4**
baz=293,SNR=6.5
PLBC Pleasant Camp 75.54 31 P **P 01 06 01.9 0.0**
baz=292
WHY Whitehorse 75.76 30 P **P 01 06 02.9 -0.4**
WHY Whitehorse 75.76 30 P **P 01 06 02.4 -0.8**
baz=293
FARO Faro, Yukon 75.80 28 P **P 01 06 03.2 -0.1**
FARO IAmb IAmb 01 06 09.2
comp=Z,42nm,1.4s
FARO Faro, Yukon 75.80 28 P **P 01 06 03.1 -0.3**
baz=294,SNR=11
EIL Elat 75.83 296 LR LR 01 43 09.2
comp=Z,87nm,19.1s,baz=67,slow=39
C36M Paulatuk 75.90 19 P **P 01 06 02.8 -0.9**
baz=301,SNR=13
SKAG Skagway 76.03 31 P **P 01 06 04.4 -0.2**
baz=293
N32M Quiet Lake 76.36 29 P **P 01 06 06.3 -0.3**
baz=295
P32M Atlin 76.73 30 P **P 01 06 08.5 -0.2**
baz=295
BURAR Bucovina Array 76.82 316 P **P 01 06 08.5 -1.0**
P33M Teslin, Yukon 76.88 30 P **P 01 06 09.6 0.0**
baz=295
MLR Muntele Rosu 77.11 314 P **P 01 06 10.1 -1.1**
MLR IAmb IAmb 01 06 13.7
comp=Z,40nm,2.0s
MLR Muntele Rosu 77.11 314 P **P 01 06 10.1 -1.1**
MLR pmax pmax
comp=Z,40nm,2.0s
MLR Muntele Rosu 77.11 314 LR LR 01 44 37.8
comp=Z,185nm,19.2s,baz=52,slow=39
S32K Killisnoo 77.20 33 P **P 01 06 11.6 +0.3**
baz=294
KWP Kalwaria Pacla 77.63 319 *e*P **P 01 06 18.6 +4.7**
KWP Kalwaria Pacla 77.63 319 P **P 01 06 13.2 -0.7**
KWP Kalwaria Pacla 77.63 319 P **P 01 06 13.2 -0.7**
KWP pmax pmax
comp=Z,52nm,1.8s
Q32M Nakina River 77.67 31 P **P 01 06 14.6 +0.4**
baz=296
HFS Hagfors 77.98 331 P **P 01 06 14.7 -1.0**
comp=Z,2.4nm,0.8s,baz=91,slow=12,SNR=2.4
HFS LR LR 01 43 45.6
comp=Z,579nm,19.9s,baz=61,slow=38
comp=Z,2.4nm,0.8s
R33M Jennings River 78.08 30 P **P 01 06 16.8 +0.5**
baz=297
KOLS Kolonicke sedl 78.16 318 *e*P **P 01 06 21.3 +4.4**
KOLS Kolonicke sedl 78.16 318 *e*P **P 01 06 21.3 +4.4**
TGTN Hyland Airport 78.26 27 P **P 01 06 17.6 +0.4**
baz=299
NC405 NORSAR Array S 78.38 332 P **P 01 06 16.8 -1.1**
NB2 NORSAR Subarra 78.63 332 P **P 01 06 17.8 -1.5**
comp=Z,4.4nm,0.9s,baz=61,slow=5.6
NOA NORSAR Array B 78.63 332 P **P 01 06 18.1 -1.2**
comp=Z,0.9nm,0.7s,baz=67,slow=4.8,SNR=4.0
NOA LR LR 01 43 43.7
comp=Z,301nm,19.1s,baz=60,slow=38
comp=Z,0.9nm,0.7s
S34M Telegraph Cree 78.67 31 P **P 01 06 20.3 +0.8**
baz=297
WTLY Watson Lake, Y 78.72 29 P **P 01 06 20.1 +0.4**
baz=298
RES Resolute Bay 78.84 9 LR LR 01 44 17.5
comp=Z,103nm,18.9s,baz=356,slow=38
DLBC Dease Lake 78.95 31 P **P 01 06 21.9 +0.7**
baz=298
DLBC Dease Lake 78.95 31 LR LR 01 46 05.9
comp=Z,60nm,18.3s,baz=288,slow=39
JMIC Jan Mayen 79.17 345 LR LR 01 46 39.6
comp=Z,161nm,18.4s,baz=82,slow=40
WRGLY Wrigley 79.33 25 P **P 01 06 24.1 +1.2**
baz=302
T35M Bob Quinn 79.53 32 P **P 01 06 25.3 +1.1**
baz=298
KOTAN Kotaneelee Air 80.75 28 P **P 01 06 31.7 +0.9**
baz=302
URZ Urewera 80.83 139 LR LR 01 40 19.2
comp=Z,78nm,20.0s,baz=121,slow=34
RPZ Rata Peaks 81.16 146 LR LR 01 40 14.0
comp=Z,92nm,20.4s,baz=298,slow=34
VRAC Vranov 81.39 320 LR LR 01 46 38.4
comp=Z,238nm,18.9s,baz=50,slow=39
IDI Anoyia 81.71 305 LR LR 01 51 05.2
comp=Z,45nm,18.8s,baz=88,slow=42
CONA Conrad Observa 82.45 319 *e*P **P 01 06 38.0 -2.2**
comp=Z,7.8nm,1.4s
CLL Collm 82.49 323 *e*P **P 01 06 41.0 +0.9**
CLL *i* 01 06 49.8
CLL MLR MLR
comp=Z,500nm,18.2s
CLL Collm 82.49 323 *e*P **P 01 06 41.0 +0.9**
CLL *i* x x 01 06 49.8
comp=Z,14nm,1.5s
CLL AMS AMS 01 46 00.0
comp=N,300nm,19.6s
CLL AMS AMS 01 46 00.0
comp=E,200nm,21.0s
CLL AMS AMS 01 47 00.0
comp=Z,500nm,18.2s
YKA Yellowknife Ar 83.04 23 P **P 01 06 41.9 -0.8**
YKA Yellowknife Ar 83.04 23 *i* P **P 01 06 42.2 -0.5**
YKA pmax pmax
comp=Z,8.0nm,0.9s
YKA Yellowknife Ar 83.04 23 P **P 01 06 41.8 -0.9**
comp=Z,7.4nm,0.8s,baz=314,slow=4.8,SNR=94
YKA LR LR 01 48 11.0
comp=Z,102nm,18.1s,baz=23,slow=39
comp=Z,7.4nm,0.8s
GERES GERESS Array B 83.29 321 P **P 01 06 43.9 -0.5**
comp=Z,0.8nm,0.7s,baz=93,slow=8.3,SNR=4.5
GERES LR LR 01 47 02.4
comp=Z,215nm,18.6s,baz=46,slow=38
comp=Z,0.8nm,0.7s
MOA Molln 83.44 320 *e*pP **P 01 06 45.9 +0.8**
comp=Z,7.5nm,1.4s
BIOA Bad Ischl, Aus 83.89 320 *e*P **P 01 06 47.3 -0.1**
comp=Z,4.9nm,0.9s
OBKA Obir 83.91 318 *e*P **P 01 06 47.0 -0.7**
comp=Z,20nm,1.6s
LESA Schwarzleotal 84.58 320 *e*P **P 01 06 50.2 -0.9**
comp=Z,8.2nm,1.2s
ABTA Abfaltersbach 85.02 319 *e*PcP **PcP 01 06 55.1 -1.4**
comp=Z,8.0nm,1.7s
WTTA Wattenberg 85.28 320 *e*PcP **PcP 01 06 57.1 -0.7**
comp=Z,10nm,2.0s
RETA Reutte 85.67 321 *i* pP **P 01 06 57.7 +1.2**
comp=Z,11nm,1.8s
FETA Feichten 85.93 320 *e*pP **P 01 06 58.8 +0.9**
comp=Z,9.4nm,1.9s
FUORN Ofenpass-Fuorn 86.42 320 P **P 01 06 59.7 -0.7**
FUORN IAmb IAmb 01 07 34.0
comp=Z,11nm,1.5s
DAVOX Davos/Dischmat 86.56 320 LR LR 01 50 55.3
comp=Z,190nm,18.2s,baz=32,slow=39
BORG Borgarnes 87.07 345 LR LR 01 51 44.0
comp=Z,166nm,18.0s,baz=33,slow=40
RAR Rarotonga 88.64 114 LR LR 01 39 24.8
comp=Z,79nm,21.9s,baz=322,slow=31
EDM Edmonton 89.62 30 P **P 01 07 14.4 -0.9**
EDM Edmonton 89.62 30 P **P 01 07 14.4 -0.9**
EDM pmax pmax
comp=Z,84nm,1.8s
BUCK Buck Mountain 90.11 41 P **P 01 07 16.4 -1.4**
HAWA Hanford 90.82 37 P **P 01 07 20.9 -0.1**
G06A Carlson Farm, 90.88 39 P **P 01 07 21.1 -0.3**
NEW Newport 90.97 35 P **P 01 07 21.2 -0.5**
NEW Newport 90.97 35 P **P 01 07 22.5 +0.8**
baz=309
NEW Newport 90.97 35 P **P 01 07 21.2 -0.5**
NEW pmax pmax
comp=Z,28nm,1.6s
HUMO Hull Mountain 91.02 42 P **P 01 07 21.5 -0.5**
HUMO IAmb IAmb 01 07 32.7
comp=Z,12nm,1.3s
MBAR Mbarara 91.06 270 LR LR 01 49 08.6
comp=Z,72nm,19.7s,baz=50,slow=36
YBH Yreka Blue Hor 91.66 42 LR LR 01 43 25.1
comp=Z,30nm,21.0s,baz=326,slow=32
FRB Frobisher Bay 92.25 5 LR LR 01 52 00.2
comp=Z,137nm,20.0s,baz=10.0,slow=38
FCC Fort Churchill 92.45 18 P **P 01 07 27.3 -0.9**
FCC IAmb IAmb 01 07 31.2
comp=Z,9.0nm,1.1s
FCC Fort Churchill 92.45 18 P **P 01 07 27.3 -0.9**
FCC pmax pmax
comp=Z,9.0nm,1.1s
FFC Flin Flon 93.19 24 P **P 01 07 31.2 -0.6**
FFC IAmb IAmb 01 07 36.7
comp=Z,13nm,1.2s
FFC Flin Flon 93.19 24 P **P 01 07 31.2 -0.6**
FFC pmax pmax
comp=Z,13nm,1.2s
AFDM Forest Hills D 94.34 44 P **P 01 07 35.5 -1.9**
AFDM IAmb IAmb 01 07 42.9
comp=Z,6.8nm,1.2s
EGMT Eagleton 94.84 32 P **P 01 07 40.0 +0.4**
baz=314
HLID Hailey 95.42 37 P **P 01 07 42.9 +0.4**
baz=310
PPT Papeete 95.89 107 LR LR 01 42 13.2
comp=Z,145nm,19.6s,baz=236,slow=30
PPT2 Papete2 95.90 107 *e*LR LR 01 38 32.3
comp=Z,339nm,25.8s
PPT2 *e*LR LR 01 38 44.9
comp=Z,360nm,25.0s
NVAR Mina Array Bea 96.33 43 P **P 01 07 45.9 -1.0**
NVAR Mina Array Bea 96.33 43 P **P 01 07 47.9 +1.1**
comp=Z,1.2nm,0.8s,baz=290,slow=3.7,SNR=11
NVAR LR LR 01 44 46.4
comp=Z,52nm,21.8s,baz=304,slow=31
comp=Z,1.2nm,0.8s
RLMT Red Lodge 97.10 34 P **P 01 07 49.6 -0.6**
baz=314
R11B Troy Canyon, C 98.06 42 P **P 01 07 54.0 -0.6**
baz=309
TBI Tubuai 98.22 112 *e*LR LR 01 39 41.7
comp=Z,935nm,29.8s
MPMC Manual Prospec 98.29 45 P **P 01 07 54.6 -1.1**
baz=308
LRMC Laurel Mtn Rad 98.51 45 P **P 01 07 56.2 -0.4**
baz=307
DUG Dugway, Tooele 98.52 39 P **P 01 07 56.4 -0.2**
baz=311
ESDC Sonseca Array 98.89 321 LR LR 01 57 17.6
comp=Z,154nm,20.2s,baz=30,slow=38
ULM Lac du Bonnet 99.01 23 LR LR 01 55 56.4
comp=Z,119nm,19.1s,baz=6.0,slow=37
LSZ Lusaka 99.13 257 LR LR 01 49 36.6
comp=Z,112nm,18.1s,baz=142,slow=34
PFO Pinyon Flats O 100.45 46 P **Pdif 01 08 05.1 -0.2**
baz=308
TPFO Pinon Flats 100.45 46 P **Pdif 01 08 05.2 -0.1**
baz=308
SDV Santo Domingo 145.25 22 *e*P **PKPbc 01 13 54.9 -1.1**
CBOC Ciudad Bolivar 145.74 32 *e*P **PKPbc 01 13 57.6 0.0**
PTBC PUERTO BERRIO 145.88 29 *e*P **PKPdf 01 13 52.5 -4.8**
PAMC Pamplona, Colo 145.91 26 *e*P **PKPdf 01 13 56.4 -1.6**
BARC Barichara 146.39 27 *e*P **PKiKP 01 14 01.8 -1.0**
PLMC San Jos del P 146.43 34 *e*P **PKPbc 01 13 59.4 -0.2**
GUY2C Guyana, Caldas 146.61 32 *e*P **PKPdf 01 13 57.3 -1.9**
SPBC San Pablo de B 146.84 29 *e*P **PKPab 01 14 02.0 0.0**
TAMC Tame, Arauca 147.09 25 *e*P **PKiKP 01 14 05.0 +1.0**
YOTC Yotoco, Valle 147.19 35 *e*P **PKPbc 01 14 02.2 +0.4**
JAMC Jamundi, Valle 147.66 36 *e*P **PKPab 01 14 06.7 +1.3**
ORTC Ortega, Tolima 147.81 33 *e*P **PKPdf 01 14 01.9 +1.3**
POPC Popayan, Colom 148.22 37 *e*P **PKPbc 01 14 05.3 +0.5**
VILC Villavicencio, 148.38 30 *e*P **PKiKP 01 14 06.5 -0.2**
OTAV Otavalo 149.06 42 *e*P **PKiKP 01 14 08.8 +0.3**
GARC Garzon, Huila 149.15 35 *e*P **PKPab 01 14 12.0 +0.6**
PIAT Ana Tenorio 150.14 43 *e*P **PKiKP 01 14 11.6 +0.9**
PTLC Puerto Leguiza 151.22 36 *e*P **PKiKP 01 14 13.9 +1.4**
MCRA Macar, Loja 151.51 50 *e*P **PKPbc 01 14 10.7 -2.0**

IDC ***08*** *00:59:25.8±0.9,24°.02N×122°.09E,h0km,mb3.6/10, mbtmp3.7/10,Error ellipse: s-maj=29.4km s-min=19.6km az=75.0*
ASIES ***08*** *00:59:27.9,23°.98N×121°.57E,h9km,ML4.3,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.54; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.36; $M_{\theta\phi}$-0.31; $M_{\phi r}$1.09; Fault plane solution: $M_0$1.28157×10^{22} NP1:ϕ_s21.57000°, δ77.84000°,λ79.51000°. NP2:ϕ_s242.90000°,δ16.01000°, λ130.21000°. Principal axes: T Plg55.9570°, Azm278.2680°; N Plg10.2570°, Azm23.8040°; P Plg32.0560°, Azm120.3100°;*
TAP ***08*** *00:59:27.9,23°.98N×121°.57E,h9km,ML4.3,B*
NEIC ***08*** *00:59:28.1±0.8,23°.95N±0°.02×121°.60E±0°.03,h7km±5km, mb4.5/9,Error ellipse: s-maj=4.8km s-min=1.8km az=123.0*
JMA ***08*** *00:59:28.1±0.1,24°.0N±0°.2×121°.6E±0°.8,h4km,MV3.5/13, TAIWAN REGION*

ISC 08 00:59:28.0±0.7,23°.96N±0°.01×121°.63E±0°.01,h10km±4km, n161,σ0°80/281,mb3.8/15,4C-27D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**303**	*i*	P	**Pg**	**00 59 29.9**	**+0.1**
HWA	baz=99			*i*	S	**Sg**	**00 59 31.6**	**+0.5**
TWD	**Chiawan**	**0.12**	**344**	⇓*i*	P	**Pg**	**00 59 30.9**	**0.0**
TWD	baz=19			*i*	S	**Sg**	**00 59 32.9**	**-0.1**
ETM	**Tongmen**	**0.13**	**272**	*i*	P	**Pg**	**00 59 30.4**	**-0.7**
ETM	baz=256			*i*	S	**Sg**	**00 59 31.9**	**-1.2**
SHUL	**Shoufeng**	**0.18**	**200**	*i*	P	**Pg**	**00 59 32.4**	**+0.5**
SHUL	baz=181				S	**Sg**	**00 59 36.1**	**+1.6**
ETL	**Fush Village**	**0.20**	**358**	⇓*i*	P	**Pg**	**00 59 32.2**	**0.0**
ETL	baz=16			*i*	S	**Sg**	**00 59 35.0**	**0.0**
LXIB	**Xiulin Townshi**	**0.21**	**287**	⇓*i*	P	**Pg**	**00 59 31.7**	**-0.7**
LXIB	baz=285				S	**Sg**	**00 59 34.9**	**-0.5**
NACB	**Ninganchiao**	**0.21**	**351**		Pg	**Pg**	**00 59 32.1**	**-0.3**
NACB					Sg	**Sg**	**00 59 35.5**	**0.0**
NACB	**Ninganchiao**	**0.21**	**351**		P	**Pg**	**00 59 32.2**	**-0.3**
NACB	**Ninganchiao**	**0.21**	**351**	⇓*i*	P	**Pg**	**00 59 32.3**	**-0.2**
NACB	baz=8.0			*i*	S	**Sg**	**00 59 35.1**	**-0.4**
ESL	**Shilin**	**0.23**	**231**	⇓*i*	P	**Pg**	**00 59 32.1**	**-0.7**
ESL	baz=214			*i*	S	**Sg**	**00 59 35.1**	**-0.9**
TEGC	**Jichi Village**	**0.26**	**199**		P	**Pb**	**00 59 34.2**	**-0.6**
TEGC	baz=184			*e*	S	**Sb**	**00 59 39.3**	**-0.2**
ETLH	**Xiulin Townshi**	**0.28**	**331**	⇓*i*	P	**Pg**	**00 59 33.4**	**-0.4**
ETLH	baz=341			*i*	S	**Sg**	**00 59 36.8**	**-0.8**
WARBT	**Fenglin Townsh**	**0.33**	**223**	*i*	P	**Pg**	**00 59 33.9**	**-0.7**
WARBT	baz=212			*e*	S	**Sg**	**00 59 37.9**	**-1.1**
EGFH	**Guangfu**	**0.35**	**213**	*i*	P	**Pg**	**00 59 34.6**	**-0.3**
EGFH	baz=202			*e*	S	**Sg**	**00 59 39.0**	**-0.4**
EHP	**Heping Village**	**0.36**	**16**	*e*	P	**Pb**	**00 59 35.5**	**-1.1**
EHP	baz=27			*e*	S	**Sb**	**00 59 40.7**	**-1.7**
EAHA	**Aohua**	**0.38**	**15**	⇓*i*	P	**Pg**	**00 59 35.6**	**0.0**
EAHA	baz=25			*e*	S	**Sg**	**00 59 41.0**	**+0.4**
WHF	**Hehuan Shan**	**0.38**	**299**	*i*	P	**Pg**	**00 59 35.0**	**-0.7**
WHF	baz=301				S	**Sg**	**00 59 40.5**	**-0.3**
OWD	**Renai**	**0.42**	**269**	*i*	P	**Pg**	**00 59 35.7**	**-0.5**
OWD	baz=266				S	**Sg**	**00 59 41.4**	**-0.4**
CHGB	**Renai**	**0.43**	**283**	⇓*i*	P	**Pg**	**00 59 36.2**	**-0.4**
CHGB	baz=282			*i*	S	**Sg**	**00 59 42.3**	**+0.1**
FUSS	**Fushou**	**0.46**	**309**	⇓*i*	P	**Pg**	**00 59 36.7**	**-0.3**
FUSS	baz=312			*e*	S	**Sg**	**00 59 43.0**	**-0.1**
WUSB	**Renai**	**0.47**	**274**	⇓*i*	P	**Pg**	**00 59 37.0**	**-0.3**
WUSB	baz=271				S	**Sg**	**00 59 43.1**	**-0.4**
ENA	**Nanau**	**0.48**	**12**	⇓*i*	P	**Pb**	**00 59 37.4**	**-1.1**
ENA	baz=21				S	**Sb**	**00 59 44.2**	**-1.4**
EWUT	**Wuta**	**0.50**	**15**	*i*	P	**Pb**	**00 59 37.9**	**-1.1**
EWUT	baz=23			*e*	S	**Sg**	**00 59 44.8**	**+0.4**
HGSD	**Ruisui**	**0.50**	**202**	*e*	P	**Pb**	**00 59 38.7**	**-0.3**
HGSD	baz=195			*e*	S	**Sb**	**00 59 47.7**	**+1.3**
TWT	**Tachien**	**0.51**	**305**	⇓	P	**Pg**	**00 59 38.0**	**0.0**
TWT	baz=306			*e*	S	**Sg**	**00 59 44.5**	**-0.2**
NNSB	**Datong**	**0.52**	**334**	⇓*i*	P	**Pg**	**00 59 38.1**	**-0.1**
NNSB	baz=339			*e*	S	**Sg**	**00 59 44.7**	**-0.3**
NNSH	**Datong**	**0.52**	**334**		P	**Pg**	**00 59 38.1**	**0.0**
NNSH	baz=339			*e*	S	**Sg**	**00 59 44.6**	**-0.5**
TDCB	**Techi**	**0.52**	**304**	⇓	P	**Pg**	**00 59 38.0**	**-0.2**
TDCB	baz=306			*e*	S	**Sg**	**00 59 45.0**	**-0.1**
NNS	**Nan Shan**	**0.53**	**334**	⇓*i*	P	**Pg**	**00 59 38.4**	**-0.1**
NNS	baz=340			*e*	S	**Sg**	**00 59 45.1**	**-0.4**
EHY	**Hungye**	**0.53**	**212**	*i*	P	**Pg**	**00 59 38.0**	**-0.4**
EHY	baz=205			*e*	S	**Sg**	**00 59 45.3**	**-0.2**
LATG	**Datong**	**0.58**	**350**	⇓	P	**Pg**	**00 59 39.2**	**-0.1**
LATG	baz=356			*e*	S	**Sg**	**00 59 47.0**	**0.0**
WPL	**Puli Township**	**0.62**	**275**	*e*	P	**Pg**	**00 59 40.0**	**0.0**
WPL	baz=273			*e*	S	**Sg**	**00 59 48.2**	**0.0**
ESAO	**Su ao**	**0.64**	**17**	*e*	P	**Pb**	**00 59 40.5**	**-0.8**
ESAO	baz=23			*e*	S	**Sb**	**00 59 49.7**	**-0.7**
SSLB	**Suanglung**	**0.64**	**255**			**Pg**	**00 59 40.0**	**-0.5**
SSLB					Sg	**Sg**	**00 59 47.5**	**-1.5**
SSLB	**Suanglung**	**0.64**	**255**		P	**Pg**	**00 59 40.1**	**-0.5**
SSLB	**Suanglung**	**0.64**	**255**	⇓	P	**Pg**	**00 59 40.1**	**-0.5**

baz=251
SSLB eS Sg 00 59 47.7 -1.3
baz=251
YULB Yu-li 0.64 209 Pg Pg 00 59 40.1 -0.5
YULB Yu-li 0.64 209 P Pb 00 59 41.5 +0.1
YULB Yu-li 0.64 209 P Pg 00 59 40.0 -0.5
baz=203
YULB eS Sg 00 59 49.2 +0.3
baz=203
EOS4 EOS4 0.65 76 eP Pn 00 59 42.4 -0.6
baz=79
EOS4 eS Sn 00 59 52.9 -0.2
baz=79
NDT Datong Townshi 0.65 350 ⇓P Pb 00 59 40.7 -0.8
baz=355
NDT eS Sg 00 59 49.1 0.0
baz=355
DPDB Guoxing 0.65 277⇓eP Pg 00 59 40.6 0.0
baz=275
DPDB eS Sg 00 59 49.6 +0.4
baz=275
ECBN Changbin 0.66 195 eP Pb 00 59 41.0 -0.7
baz=189
ECBN eS Sn 00 59 53.6 -0.4
baz=189
WCS Beigang Elemen 0.67 278 eP Pg 00 59 40.8 -0.1
baz=277
WCS eS Sg 00 59 49.6 0.0
baz=277
NDS Dongshan 0.67 6 eP Pb 00 59 41.2 -0.7
baz=12
NDS eS Sb 00 59 50.4 -1.0
baz=12
EYUL Yuli 0.68 205 eP Pg 00 59 40.9 -0.1
baz=200
EYUL eS Sb 00 59 50.9 -0.4
baz=200
SMLT Sun Moon Lake 0.68 264⇓eP Pg 00 59 40.9 -0.2
baz=261
SMLT eS Sg 00 59 49.4 -0.6
baz=261
TWC Suao 0.68 17⇓eP Pb 00 59 41.2 -0.7
baz=23
TWC eS Sb 00 59 50.4 -1.0
baz=23
ENTT Nioudou 0.68 355⇓eP Pb 00 59 41.3 -0.7
baz=1.0
ENTT eS Sb 00 59 51.0 -0.5
baz=1.0
TWF1 Yuli 0.68 207 eP Pg 00 59 40.6 -0.5
baz=201
TWF1 eS Sg 00 59 50.1 0.0
baz=201
WHP Taichung City 0.70 297⇓eP Pb 00 59 42.2 -0.2
baz=297
WHP eS Sb 00 59 51.6 -0.7
baz=297
EOS3 EOS3 0.70 62 eP Pn 00 59 44.3 +0.3
baz=66
EOS3 eS Sn 00 59 56.0 +1.2
baz=66
TYC Yuchr 0.71 266 eP Pg 00 59 41.4 -0.4
baz=263
TYC eS Sg 00 59 50.7 -0.4
baz=263
EOS2 EOS2 0.71 50 eP Pn 00 59 45.2 +1.2
baz=54
EOS2 eS Sg 00 59 59.2 +4.1
baz=54
YHNB Yeheng 0.74 342 Pg Pb 00 59 42.5 -0.6
YHNB Yeheng 0.74 342 P Pb 00 59 42.6 -0.6
YHNB Yeheng 0.74 342⇓eP Pb 00 59 42.6 -0.6
baz=346
YHNB eS Sg 00 59 52.0 -0.1
baz=346
NSK Sanguang 0.76 341⇓eP Pb 00 59 42.8 -0.6
baz=345
NSK eS Sg 00 59 52.2 -0.3
baz=345
WHYT Xinyi Township 0.76 250 eP Pg 00 59 42.5 -0.2
baz=246
WHYT eS Sg 00 59 52.4 -0.3
baz=246
CHKH Chenggong 0.80 196 eP Pb 00 59 43.9 -0.1
baz=191
CHKH eS Sn 00 59 56.7 -0.6
baz=191
FUSB Fushanzhiwuyua 0.80 357⇓eP Pb 00 59 43.5 -0.5
baz=1.0
FUSB eS Sb 00 59 54.1 -0.8
baz=1.0
ILA Ilan 0.81 7 eP Pb 00 59 44.3 +0.1
baz=13
ILA eS Sb 00 59 55.0 -0.2
baz=13
NFF Wufeng Townshi 0.82 325 eP Pb 00 59 43.9 -0.4
baz=328
NFF eS Sg 00 59 54.3 -0.2
baz=328
FULB Fuli 0.82 202 eP Pn 00 59 45.1 -0.6
baz=198
FULB eS Sn 00 59 58.6 +0.7
baz=198
NWLT Wulai 0.82 352 eP Pb 00 59 43.9 -0.5
baz=356
NWLT eS Sg 00 59 54.4 -0.2
baz=356
WJS Zhushan 0.84 261 eP Pb 00 59 45.1 +0.4
baz=258
WJS eS Sn 00 59 57.6 -0.8
baz=258
WWF Wufeng 0.86 276 eP Pn 00 59 45.8 -0.4
baz=274
WWF eS Sn 00 59 58.9 +0.1
baz=274
WNT Mingjian 0.87 265 eP Pn 00 59 45.7 -0.7
baz=263
WNT eS Sb 00 59 57.0 0.0
baz=263
WNT1 Nantou City 0.87 267 eP Pn 00 59 46.2 -0.2
baz=265
WNT1 eS Sn 00 59 59.2 0.0
baz=265
TWQ1 Liyutan 0.87 296 eP Pb 00 59 45.5 +0.2
baz=297
TWQ1 eS Sb 00 59 57.0 -0.2
baz=297
ALS Alishan 0.88 240 eP Pb 00 59 45.0 -0.6
baz=236
ALS eS Sb 00 59 58.0 +0.4
baz=236
NSTT Nanjuang 0.88 319⇓eP Pb 00 59 45.3 -0.1
baz=322
NSTT eS Sb 00 59 56.6 -0.7
baz=322
LIOB Emei 0.88 321 eP Pb 00 59 45.6 0.0
baz=323
LIOB eS Sb 00 59 57.1 -0.3
baz=323
CHKT Chengkung 0.89 196 eP Pb 00 59 45.1 -0.5
baz=191
CHKT eS Sn 00 59 59.1 -0.5
baz=191
TCU Taichung 0.89 282 eP Pn 00 59 46.2 -0.5
baz=281
TCU eS Sn 00 59 59.8 +0.1
baz=281
EHD Haiduan 0.90 206 eP Pg 00 59 44.9 -0.5
baz=202
EHD eS Sb 00 59 57.3 -0.5
baz=202
NSY Sanyi 0.92 300 eP Pn 00 59 46.8 -0.3
baz=301
NSY eS Sn 00 59 59.5 -0.8
baz=301
NJD Zhudong 0.92 327 eP Pn 00 59 46.6 -0.4
baz=330
NJD eS Sn 00 59 59.3 -1.0
baz=330
ECS Chishang 0.94 204 eP Pn 00 59 47.2 -0.1
baz=200
ECS eS Sn 01 00 01.2 +0.3
baz=200
CHN5 Tsauling 0.95 248 eP Pb 00 59 46.8 +0.2
baz=245
CHN5 eS Sn 01 00 00.6 -0.5
baz=245
ELDTW Lidau 0.95 216 eP Pg 00 59 45.4 -1.0
baz=212
ELDTW eS Sg 00 59 58.6 -0.2
baz=212
NMLH Miaoli 0.96 307 eP Pn 00 59 47.5 -0.1
baz=308
NMLH eS Sb 01 00 00.3 +0.8
baz=308
WYL Yuanlin Townsh 0.96 270 eP Pn 00 59 47.3 -0.3
baz=269
WYL eS Sn 01 00 01.5 +0.1
baz=269
WCHH Zhanghua 0.99 277 eP Pn 00 59 48.3 +0.3
baz=276
WCHH eS Sn 01 00 02.9 +0.8
baz=276
NHDH Xindian Distri 1.00 354 eP Pn 00 59 47.7 -0.5
baz=358
NHDH eS Sb 01 00 00.2 -0.6
baz=358
TWA Mucha 1.02 358 eP Pn 00 59 48.1 -0.3
baz=1.0
TWA eS Sg 00 59 59.9 -0.9
baz=1.0
SBCB Hsinchu 1.02 325 eP Pn 00 59 49.0 +0.6
baz=327
SBCB eS Sn 01 00 02.6 -0.2
baz=327
TATO Taipei 1.02 353 Pg Pn 00 59 48.0 -0.4
TATO Taipei 1.02 353 P Pn 00 59 48.2 -0.2
TATO Taipei 1.02 353⇑eP Pn 00 59 48.2 -0.2
baz=356
TATO eS Sb 01 00 00.7 -0.6
baz=356
TIPB Shuangxi 1.02 10 eP Pb 00 59 47.9 0.0
baz=13
TIPB eS Sb 01 00 00.8 -0.6
baz=13
EDH Donghe 1.03 197 eP Pg 00 59 45.7 -2.1
baz=194
EDH eS Sb 01 00 02.2 +0.7
baz=194
HSN Hsinchu 1.03 324 eP Pn 00 59 49.4 +0.8
baz=329
HSN eS Sn 01 00 03.7 +0.5
baz=329
WDLH Douliu 1.04 255 eP Pn 00 59 48.9 +0.2
baz=253
WDLH eS Sn 01 00 03.5 +0.2
baz=253
WCKO Fanlu 1.08 241⇑eP Pn 00 59 49.2 0.0
baz=238
WCKO eS Sn 01 00 04.5 +0.2
baz=238
NCUH Zhongli 1.08 338 eP Pn 00 59 50.2 +0.9
baz=340
NCUH eS Sn 01 00 05.7 +1.3
baz=340
NCU National Centr 1.08 338 eP Pn 00 59 50.1 +0.8
baz=341
NCU eS Sn 01 00 04.5 +0.1
baz=341
TWB1 Santiao Chiao 1.09 17 eP Pn 00 59 49.1 -0.3
baz=21
TWB1 eS Sb 01 00 02.9 -0.5
baz=21
STYH Taoyuan 1.11 225 eP Pg 00 59 48.9 -0.5
baz=222
STYH eS Sg 01 00 03.1 -0.7
baz=222
NWF Wu-fen Shan 1.11 7⇑eP Pn 00 59 50.0 +0.1
baz=10.0
NWF eS Sb 01 00 03.6 -0.4
baz=10.0
WFSB Wu-fen Shan 1.11 7 eP Pn 00 59 50.0 +0.2
baz=10.0
WFSB eS Sb 01 00 03.5 -0.4
baz=10.0
STYT Tauyuan 1.13 226 eP Pb 00 59 49.6 -0.1
baz=222
STYT eS Sb 01 00 05.1 +0.6
baz=222
CHN4 Tsaushan 1.13 238 eP Pn 00 59 50.1 +0.2
baz=235
CHN4 eS Sn 01 00 06.1 +0.6
baz=235
TPUB Ta-pu 1.13 235 Pg Pb 00 59 49.5 -0.2
TPUB Ta-pu 1.13 235 P Pn 00 59 50.0 0.0
TPUB Ta-pu 1.13 235⇑eP Pn 00 59 49.9 -0.1
baz=232
TPUB eS Sn 01 00 05.7 +0.1
baz=232
CHN2 Minshiung 1.14 248 eP Pn 00 59 51.3 +1.2
baz=246
CHN2 eS Sn 01 00 06.8 +0.9
baz=246
LONT Longtian 1.15 204 eP Pg 00 59 49.1 -0.9
baz=201
LONT eS Sn 01 00 07.9 +2.0
baz=201
SXI1 Grass Mountain 1.15 11 eP Pn 00 59 50.6 +0.3
baz=14
SXI1 eS Sb 01 00 04.8 -0.3
baz=14
WRL Guolierlin Hig 1.15 267 eP Pn 00 59 50.1 -0.1
baz=266
WRL eS Sn 01 00 06.0 0.0
baz=266
TWS1 Kuangyinshan 1.15 350 eP Pn 00 59 51.1 +0.9
baz=353
TWS1 eS Sn 01 00 08.3 +2.2
baz=353
RLNB Erlin 1.17 267 eP Pn 00 59 51.0 +0.6
baz=265
RLNB eS Sn 01 00 07.2 +0.8
baz=265
WTP Ta-pu 1.17 233 eP Pn 00 59 50.8 +0.2
baz=230
WTP eS Sn 01 00 06.5 -0.2
baz=230
YM01 YM01 1.18 357 eP Pn 00 59 51.6 +0.9
YM01 eS Sn 01 00 07.5 +0.6
TNOU National Taiwa 1.19 6 eP Pn 00 59 51.4 +0.6
baz=9.0
TNOU eS Sg 01 00 05.8 -0.6
baz=9.0
NTST Danshui 1.21 352 eP Pn 00 59 52.0 +0.9
baz=355
NTST eS Sn 01 00 09.7 +2.2
baz=355
YM08 YM08 1.22 358 eP Pn 00 59 52.1 +0.8
baz=1.0
YM08 eS Sn 01 00 07.8 0.0
baz=1.0
ANP Anpu 1.23 355 eP Pn 00 59 51.7 +0.4
baz=358
ANP eS Sn 01 00 08.6 +0.6
baz=358
TWGBT Beinan 1.25 204 P Pg 00 59 53.2 +1.2
TWK Hsinying 1.26 237 eP Pg 00 59 52.3 +0.1
baz=234
TWK eS Sn 01 00 09.4 +0.7
baz=234
JYNG Yonagunijimaku 1.29 68 P Pg 00 59 52.4 -0.5
JYNG eS Sb 01 00 08.2 -1.0
SGST Jiashian 1.30 228 eP Pn 00 59 51.9 -0.4
baz=225
SGST eS Sn 01 00 10.6 +0.8
baz=225
SLGT Liugui 1.32 223 eP Pn 00 59 52.6 0.0
baz=221
SLGT eS Sn 01 00 10.4 +0.2
baz=221
YOJ Yonaguni jima 1.35 68 Pb 00 59 53.3 -0.3
YOJ Yonaguni jima 1.35 68 P Pb 00 59 53.2 -0.3
YOJ Yonaguni jima 1.35 68 eP Pb 00 59 53.2 -0.3
baz=70
YOJ eS Sn 01 00 12.6 +1.5
baz=70
YOJ Yonaguni jima 1.35 68 P Pb 00 59 53.2 -0.3
YOJ eS Sg 01 00 10.9 -0.7
MASBT Mashibuluo 1.63 215 eP Pn 00 59 56.7 -0.1
baz=212
MASBT eS Sg 01 00 20.9 +0.5
baz=212
IRIF Iriomote-Funau 1.95 79 P Pn 01 00 01.7 +0.4
IRIF eS Sn 01 00 26.7 +0.9
HATJ Hateruma jima 1.99 87 eP Pn 01 00 02.4 +0.6
HATJ eS Sb 01 00 28.2 -1.0
JKRS Kuro-shima 2.19 82 eP Pb 01 00 06.0 -1.7
JKRS S Sb 01 00 34.0 -0.9
JIJ Ishigaki jima 2.33 80 P Pn 01 00 06.4 -0.1
JIJ S Sn 01 00 36.5 +1.3
JISG Ishigakijimahi 2.52 75 P Pn 01 00 09.1 0.0
JISG S Sn 01 00 41.4 +1.4
JTJ Tarama 2.88 76 eS Sn 01 00 50.1 +1.3
KNMB Chin-men Tao 3.00 280 Pn 01 00 15.6 -0.1
JOW Kunigami 6.65 63 Pn Pn 01 01 04.7 -1.2
PZH PanZhiHua 18.17 282 P P 01 03 41.7 +0.7
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,230nm,6.2s
HHC Hu-ho-hao-te 18.84 336 eP Pn 01 03 48.9 +0.2
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,330nm,6.7s
CMAR Chiang Mai Arr 21.84 260 P P 01 04 26.3 +5.4
comp=Z,0.6nm,0.3s,baz=60,slow=7.4,SNR=4.4
comp=Z,0.6nm,0.3s
KLR Kul'dur 26.45 15 P P 01 05 03.7 -1.3
comp=Z,0.7nm,0.5s,baz=203,slow=13,SNR=2.8
comp=Z,0.7nm,0.5s
SONM Songino Array 26.73 337 P P 01 05 07.9 +0.1
comp=Z,0.5nm,0.5s,baz=153,slow=9.7,SNR=1.7
comp=Z,0.5nm,0.5s
MK31 Makanchi Array 38.78 316 P P 01 06 53.1 +0.3
MKAR Makanchi Array 38.78 316 P P 01 06 52.8 -0.1
MKAR Makanchi Array 38.78 316 P P 01 06 53.3 +0.4
comp=Z,0.7nm,0.8s,baz=109,slow=8.9,SNR=2.5
comp=Z,0.7nm,0.8s
PEA0B Petropavlovsk- 39.82 34 P P 01 07 01.9 +0.5
PEA0B IAmb IAmb 01 07 12.0
comp=Z,8.2nm,1.0s
ZALV Zalesovo Beam 40.65 327 P P 01 07 07.7 -0.5
ZALV Zalesovo Beam 40.65 327 P P 01 07 07.5 -0.7
comp=Z,0.8nm,0.7s,baz=112,slow=9.5,SNR=3.1
comp=Z,0.8nm,0.7s
WB0 Warramunga Arr 45.21 163 P P 01 07 45.1 -0.4
WB0 IAmb IAmb 01 07 58.9
comp=Z,9.6nm,1.2s
WRA Warramunga Arr 45.36 163 P P 01 07 44.4 -2.3
comp=Z,1.3nm,0.8s,baz=344,slow=8.7,SNR=5.9
comp=Z,1.3nm,0.8s
WR0 Warramunga Arr 45.43 163 P P 01 07 46.3 -1.0
WR0 IAmb IAmb 01 08 05.7
comp=Z,11nm,1.4s
BVAR Borovoye Array 48.10 321 P P 01 08 09.1 +1.2
comp=Z,0.4nm,0.4s,baz=90,slow=12,SNR=2.7
comp=Z,0.4nm,0.4s
ASAR Alice Springs 48.82 165 P P 01 08 12.9 -0.8
comp=Z,0.7nm,0.7s,baz=338,slow=6.6,SNR=5.2
comp=Z,0.7nm,0.7s
ABKAR Akbulak array 53.89 314 P P 01 08 52.0 +0.5
ABKAR Akbulak array 53.89 314 P P 01 08 52.0 +0.5
ABKAR IAmb IAmb 01 08 53.8
comp=Z,2.2nm,1.1s
F17K Baldwin Pennin 63.14 26 P P 01 09 56.1 +0.4
F17K IAmb IAmb 01 10 09.3
comp=Z,5.1nm,1.4s
F24K Squaw Lake 68.30 24 P P 01 10 29.3 +0.2
F24K IAmb IAmb 01 10 35.8
comp=Z,3.3nm,0.8s
SML Sawmill 69.20 31 P P 01 10 35.5 +0.7
ILAR Eielson Array 69.22 27 P P 01 10 32.7 -2.1
comp=Z,0.3nm,0.8s,baz=267,slow=5.1,SNR=5.5
comp=Z,0.3nm,0.8s
BMAR Burnt Mountain 69.56 24 P P 01 10 37.4 +0.5
SCM Sheep Creek Mo 69.66 30 P P 01 10 37.6 -0.1
YKA Yellowknife Ar 83.02 23 P P 01 11 52.3 -1.0
comp=Z,0.8nm,0.8s,baz=314,slow=4.9,SNR=9.8
comp=Z,0.8nm,0.8s

KRNET 08 01:12:00.2±0.1, 42°.53N×79°.82E, h35km, mb2.3
SOME 08 01:12:01.1, 42°.55N×79°.52E, h15km
NNC 08 01:12:02.1±1.0, 42°.57N×79°.55E, h0km, mb3.0, mpv2.7,
Error ellipse: s-maj=6.7km s-min=4.0km az=146.0
ISC 08 01:12:00.4±2.0, 42°.57N±0°.06×79°.74E±0°.08, h16km±10km,
n20, σ0.61/37, 9C-5D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHLS Shalkode 0.63 341 P Pn 01 12 14.3 -0.5
23nm,0.1s
SHLS S Sn 01 12 23.8 -0.8
12nm,0.2s
SHLS Shalkode 0.63 341 eP Pn 01 12 14.3 -0.5
23nm,0.1s
SHLS eS Sn 01 12 23.8 -0.8
11nm,0.1s
PDGK Podgornoye 0.79 347 P Pn 01 12 16.2 -0.8
1.7nm,0.2s
PDGK S Sb 01 12 27.0 +0.7
0.2nm,0.1s
PDGK Podgornoye 0.79 347 ⇓P Pn 01 12 16.1 -0.8
1.9nm,0.4s
PDGK ⇑S Sb 01 12 27.0 +0.7
0.4nm,0.3s
UZB Uzynbulak 0.79 318 P Pg 01 12 15.5 -0.3
5.0nm,0.2s
UZB S Sg 01 12 25.8 -0.4
14nm,0.2s
UZB Uzynbulak 0.79 318 eP Pg 01 12 15.5 -0.3
4.5nm,0.1s
UZB eS Sg 01 12 25.8 -0.4
14nm,0.2s
PRZ Przheval'sk 0.99 266⇓eP Pg 01 12 19.8 +0.1
baz=69
PRZ ⇓eS Sn 01 12 34.2 +0.5
baz=69
KPKS Kokpek 1.19 320 eP Pb 01 12 22.5 -0.2
1.1nm,0.1s
KPKS eS Sb 01 12 37.8 0.0
4.7nm,0.1s
ANVS Anan'yevo 1.54 279⇑eP Pb 01 12 28.1 -0.7
baz=80
ANVS ⇑eS Sn 01 12 47.9 +0.6
baz=80
TARG Taragay, Kyrgy 1.66 241⇓eP Pn 01 12 28.9 -0.4
baz=43
TARG ⇓eS Sn 01 12 50.5 0.0
baz=43
DJR Jarkent 1.77 1 P Pg 01 12 34.4 0.0
1.8nm,0.2s
DJR S Sg 01 12 58.2 +0.9
1.9nm,0.2s
DJR Jarkent 1.77 1 eP Pg 01 12 34.4 0.0
1.8nm,0.2s
DJR eS Sg 01 12 58.2 +0.9
1.9nm,0.2s
KNOS Konyrlen 1.84 347 P Pg 01 12 35.2 -0.5
1.5nm,0.1s
KNOS S Sg 01 12 60.0 +0.3
2.2nm,0.2s
KDJ Kajisay 1.95 258⇑eP Pn 01 12 33.1 +0.1
baz=59
KDJ ⇑eS Sn 01 12 56.8 -0.4
baz=59
MDOK Medeo 2.07 288 ⇑Pg Pb 01 12 37.9 +0.2
0.8nm,0.2s
MDOK ⇑Lg Lg 01 13 03.5
1.1nm,0.2s
TNSS Tian-Shan 2.11 284 Pg Pb 01 12 38.0 -0.5
2.2nm,0.2s
TNSS Lg Lg 01 13 04.7
8.6nm,1.2s
TNSS Tian-Shan 2.11 284 eP Pb 01 12 38.0 -0.5
2.2nm,0.2s
TNSS eS Sb 01 13 04.7 +0.1
8.6nm,1.2s
ARXS Arharly 2.16 320 Pg Pb 01 12 39.7 +0.6
0.7nm,0.3s
ARXS Lg Lg 01 13 07.4
5.1nm,0.4s
ARXS Arharly 2.16 320 eP Pb 01 12 39.7 +0.6
0.7nm,0.3s
ARXS eS Sb 01 13 07.4 +1.7
5.1nm,0.4s
NRN Naryn 3.01 249⇑eP Pn 01 12 47.9 +0.2
baz=50
NRN ⇑iS Sn 01 13 23.1 -0.5
baz=50

TAP 08 01:17:28.3,23.97N×121.58E,h16km,ML1.7,2C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
HWA	**Hwalien**	**0.03**	**81**	*i*	P	Pg	01 17 31.1	-0.1
	baz=87							
HWA				*i*	S	Sg	01 17 33.1	0.0
	baz=87							
ETM	**Tongmen**	**0.08**	**264**		P	Pg	01 17 31.5	0.0
	baz=264							
ETM				*e*	S	Sg	01 17 33.0	-0.6
	baz=264							
TWD	**Chiawan**	**0.11**	**10**		P	Pg	01 17 31.9	+0.1
	baz=13							
TWD					S	Sg	01 17 33.9	-0.3
	baz=13							
LXIB	**Xiulin Townshi**	**0.16**	**288**	⇑	*i* P	Pg	01 17 32.3	-0.3
	baz=287							
LXIB					S	Sg	01 17 35.0	-0.5
	baz=287							
SHUL	**Shoufeng**	**0.18**	**184**		*i* P	Pg	01 17 32.7	-0.1
	baz=183							
SHUL					*e* S	Sb	01 17 36.6	0.0
	baz=183							
ETL	**Fush Village**	**0.19**	**13**		P	Pg	01 17 32.9	0.0
	baz=13							
ETL					*i* S	Sg	01 17 36.0	-0.1
	baz=13							
NACB	**Ninganchiao**	**0.20**	**5**		P	Pg	01 17 33.3	+0.2
	baz=4.0							
NACB					*i* S	Sg	01 17 36.3	0.0
	baz=4.0							
ESL	**Shilin**	**0.20**	**220**		P	Pg	01 17 33.1	-0.1
	baz=217							
ESL					S	Sg	01 17 36.5	+0.1
	baz=217							
ETLH	**Xiulin Townshi**	**0.25**	**340**	⇓	P	Pg	01 17 33.9	0.0
	baz=339							
ETLH					S	Sg	01 17 38.0	+0.3
	baz=339							
WARBT	**Fenglin Townsh**	**0.31**	**214**		*i* P	Pg	01 17 34.7	-0.2
	baz=214							
WARBT					S	Sg	01 17 39.6	+0.3
	baz=214							
EGFH	**Guangfu**	**0.33**	**204**		*e* P	Pg	01 17 34.6	-0.6
	baz=204							
EGFH					S	Sg	01 17 40.3	+0.3
	baz=204							
WHF	**Hehuan Shan**	**0.33**	**301**		P	Pg	01 17 34.7	-0.8
	baz=301							
WHF					S	Sg	01 17 40.1	-0.3
	baz=301							
OWD	**Renai**	**0.37**	**267**		P	Pg	01 17 35.4	-0.5
	baz=267							
OWD					*i* S	Sg	01 17 41.2	+0.1
	baz=267							
CHGB	**Renai**	**0.38**	**283**	⇓	P	Pg	01 17 35.7	-0.5
	baz=283							
CHGB					S	Sg	01 17 41.7	+0.2
	baz=283							
EAHA	**Aohua**	**0.39**	**23**		*i* P	Pg	01 17 36.1	-0.1
	baz=22							
EAHA					*e* S	Sb	01 17 42.1	-0.3
	baz=22							
FUSS	**Fushou**	**0.41**	**312**		P	Pg	01 17 36.1	-0.7
	baz=312							
TDCB	**Techi**	**0.47**	**306**		P	Pg	01 17 37.2	-0.6
	baz=306							
ENA	**Nanau**	**0.48**	**18**		P	Pg	01 17 37.4	-0.4
	baz=19							
ENA	**Nanau**	**0.48**	**18**	⇑	*e* P	Pg	01 17 37.4	-0.5
	baz=149							
HGSD	**Ruisui**	**0.50**	**196**		P	Pg	01 17 37.7	-0.5
	baz=196							
NNS	**Nan Shan**	**0.50**	**338**		*i* S	Sg	01 17 44.9	-0.2
	baz=338							
EWUT	**Wuta**	**0.51**	**21**		*i* S	Sg	01 17 45.1	0.0
	baz=21							
WPL	**Puli Township**	**0.57**	**274**		P	Pg	01 17 38.9	-0.7
	baz=274							
WPL					*e* S	Sg	01 17 47.0	-0.1
	baz=274							

TAP 08 01:17:32.3,24.58N×121.65E,h9km,ML1.8,7C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NDS	**Dongshan**	**0.08**	**50**	*i*	P	Pg	01 17 35.3	+0.8
	baz=50							
NDS				*i*	S	Sg	01 17 36.9	+0.8
	baz=50							
ENTT	**Nioudou**	**0.09**	**308**	⇑	*i* P	Pg	01 17 35.5	+0.8
	baz=308							
ENTT				*i*	S	Sg	01 17 37.0	+0.5
	baz=308							
LATG	**Datong**	**0.12**	**247**	⇓	*i* P	Pg	01 17 36.1	+0.9
	baz=247							
LATG				*i*	S	Sg	01 17 37.9	+0.7
	baz=247							
NDT	**Datong Townshi**	**0.12**	**279**	⇑	P	Pg	01 17 36.1	+1.0
	baz=279							
NDT				*i*	S	Sg	01 17 38.1	+0.9
	baz=279							
ESAO	**Su ao**	**0.18**	**92**		*e* P	Pg	01 17 36.8	+0.8
	baz=92							
ESAO					*e* S	Sg	01 17 39.2	+0.6
	baz=92							
EWUT	**Wuta**	**0.18**	**139**		*e* P	Pg	01 17 37.3	+1.2
	baz=139							
EWUT					*e* S	Sg	01 17 39.7	+1.1
	baz=139							
FUSB	**Fushanzhiwuyua**	**0.18**	**343**	⇑	*i* P	Pg	01 17 37.4	+1.2
	baz=342							
FUSB					S	Sg	01 17 40.2	+1.3
	baz=342							
TWC	**Suao**	**0.18**	**82**	⇑	P	Pg	01 17 37.2	+1.1
	baz=82							
TWC				*i*	S	Sg	01 17 39.8	+1.1
	baz=82							
NWLT	**Wulai**	**0.23**	**326**	⇑	P	Pg	01 17 38.3	+1.2
	baz=325							
NWLT					S	Sg	01 17 41.4	+1.1
	baz=325							
YHNB	**Yeheng**	**0.26**	**289**	⇑	*i* P	Pb	01 17 38.8	-0.5
	baz=289							
YHNB					S	Sg	01 17 42.2	+1.0
	baz=289							
EAHA	**Aohua**	**0.27**	**162**		*e* P	Pb	01 17 38.9	-0.3
	baz=161							
NSK	**Sanguang**	**0.28**	**290**	⇑	*i* P	Pb	01 17 39.0	-0.6
	baz=289							
NSK					S	Sg	01 17 42.4	+0.7
	baz=289							
NNSB	**Datong**	**0.29**	**238**		P	Pg	01 17 38.8	+0.8
	baz=237							
NNSB					*e* S	Sg	01 17 42.9	+1.0
	baz=237							
NNS	**Nan Shan**	**0.29**	**241**		*e* P	Pb	01 17 39.0	-0.8
	baz=239							
ETLH	**Xiulin Townshi**	**0.40**	**202**		*e* P	Pb	01 17 41.3	-0.4
	baz=202							
ETLH					*e* S	Sb	01 17 47.3	-0.7
	baz=202							
NACB	**Ninganchiao**	**0.41**	**187**		*e* P	Pb	01 17 41.3	-0.4
	baz=186							
NACB					*e* S	Sb	01 17 46.9	-1.1
	baz=186							
TIPB	**Shuangxi**	**0.42**	**23**	⇓	*e* P	Pb	01 17 41.7	-0.2
	baz=22							
TIPB					*e* S	Sb	01 17 47.3	-1.2
	baz=22							
ETL	**Fush Village**	**0.42**	**183**		*e* P	Pb	01 17 41.4	-0.6
	baz=183							
ETL					*i* S	Sb	01 17 48.2	-0.2
	baz=183							
NFF	**Wufeng Townshi**	**0.48**	**276**		*e* P	Pb	01 17 43.1	+0.1
	baz=275							
FUSS	**Fushou**	**0.50**	**228**		*e* P	Pb	01 17 42.9	-0.4
	baz=227							
FUSS					*e* S	Sb	01 17 51.0	+0.2
	baz=227							
TWD	**Chiawan**	**0.50**	**185**		*e* P	Pb	01 17 43.6	+0.3
	baz=184							
TWD					*e* S	Sb	01 17 50.2	-0.5
	baz=184							
TWB1	**Santiao Chiao**	**0.53**	**36**		*e* P	Pb	01 17 44.4	+0.7
	baz=36							
SXI1	**Grass Mountain**	**0.55**	**22**		*e* P	Pb	01 17 44.4	+0.2
	baz=22							
SXI1					*e* S	Sb	01 17 51.8	-0.4
	baz=22							
TDCB	**Techi**	**0.55**	**234**		*e* P	Pb	01 17 44.3	+0.1
	baz=233							
TDCB					*e* S	Sb	01 17 52.8	+0.4
	baz=233							
EOS2	**EOS2**	**0.56**	**107**		*e* P	Pb	01 17 44.8	+0.7
	baz=107							
YM01	**YM01**	**0.57**	**353**		*e* P	Pb	01 17 44.5	+0.1
	baz=352							
YM01					*e* S	Sb	01 17 52.0	-0.6
	baz=352							
LIOB	**Emei**	**0.58**	**276**		*e* P	Pb	01 17 45.1	+0.5
	baz=276							
LIOB					*e* S	Sb	01 17 53.4	+0.4
	baz=276							
NSTT	**Nanjuang**	**0.59**	**275**		*e* P	Pb	01 17 45.2	+0.4
	baz=274							
NSTT					*e* S	Sb	01 17 53.3	0.0
	baz=274							

*SOME **08** 01:17:46.2,39.43N×73.82E,h10km*
*KRNET **08** 01:17:50.6±0.1,39.53N×73.73E,h13km,mb3.2*
*ISU **08** 01:17:51.1,39.52N×72.76E,h30km*
*NNC **08** 01:17:52.9±2.9,39.63N×73.69E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=24.2km s-min=11.8km az=165.0*

ISC 08 01:17:47.1±1.5,39.49N±0.06×73.82E±0.03,h18km±10km, n43,σ2s08/71,23C-22D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
SFK	**Sufi-Kurgan**	**0.58**	**335**	⇓	*i* P	Pn	01 18 00.9	+0.1
	baz=41							
SFK				⇓	*i* S	Sb	01 18 08.3	+1.3
	baz=41							
OHH	**Osh**	**1.31**	**323**	⇑	*i* P	Pg	01 18 14.0	+1.6
	baz=24							
OHH				⇑	*i* S	Sg	01 18 31.2	+1.7
	baz=24							
TSTA	**Tashata**	**1.50**	**317**		P	Pn	01 18 11.8	-1.5
TSTA					S	Sn	01 18 27.7	-4.8
DRK	**Karamyk**	**1.56**	**270**	⇓	*e* P	Pg	01 18 18.7	+1.4
	baz=69							
DRK				⇓	*e* S	Sg	01 18 39.6	+1.9
	baz=69							
FRG	**Fergana**	**1.80**	**300**		P	Pn	01 18 12.8	-4.6
FRG					S	Sn	01 18 29.3	-11
CHMI	**Chimion**	**1.93**	**295**		P	Pn	01 18 13.8	-5.4
CHMI					S	Sn	01 18 31.5	-12
ARSB	**Arslanbob**	**1.94**	**341**	⇓	*i* P	Pg	01 18 25.7	+1.2
	baz=43							
ARSB				⇓	*i* S	Sg	01 18 51.2	+1.4
	baz=43							
BTK	**Batken**	**2.38**	**285**	⇑	*i* P	Pg	01 18 31.7	-1.2
	baz=84							
BTK				⇑	*i* S	Sg	01 19 01.8	-2.0
	baz=84							
MINT	**Mingtut**	**2.40**	**295**		P	Pn	01 18 22.1	-3.5
MINT					S	Sn	01 18 45.5	-9.0
ARLS	**Aral**	**2.40**	**9**	⇓	*i* P	Pg	01 18 32.8	-0.5
	baz=11							
ARLS				⇓	*i* S	Sg	01 19 03.5	-1.0
	baz=11							
NRN	**Naryn**	**2.56**	**40**	⇑	*i* P	Pg	01 18 35.4	-0.9
	baz=41							
NRN				⇑	*i* S	Sg	01 19 08.2	-1.3
	baz=41							
ARK	**Arkit**	**2.71**	**329**	⇑	*i* P	Pb	01 18 36.3	+1.1
	baz=30							
ARK				⇑	*i* S	Sb	01 19 09.9	+1.8
	baz=30							
UCH	**Uchtor**	**2.79**	**11**	⇑	*i* P	Pb	01 18 38.4	+1.6
	baz=12							
UCH				⇑	*i* S	Sb	01 19 13.5	+2.7
	baz=12							
TRKS	**Terek-Say**	**2.89**	**316**	⇓	*i* P	Pb	01 18 37.9	-0.4
	baz=16							
TRKS				⇓	*i* S	Sb	01 19 12.6	-0.8
	baz=16							
MNAS	**Manas**	**3.16**	**342**	⇑	*i* P	Pb	01 18 43.0	+0.1
	baz=43							
MNAS				⇑	*i* S	Sb	01 19 21.3	+0.2
	baz=43							
EKS2	**Erkin-Say**	**3.17**	**359**	⇓	*i* P	Pb	01 18 43.3	+0.2
	baz=1.0							
EKS2				⇓	*i* S	Sb	01 19 22.0	+0.5
	baz=1.0							
AAK	**Ala-Archa**	**3.19**	**9**	⇑	*i* P	Pb	01 18 43.7	+0.3
	baz=10.0							
AAK				⇑	*i* S	Sb	01 19 22.6	+0.6
	baz=10.0							
MRKS	**Merke**	**3.29**	**352**		*e* P	Pb	01 18 46.5	+1.5
	6.5nm,0.2s							
MRKS					*e* S	Sg	01 19 30.2	-2.5
	60nm,0.5s							
ULHL	**Ulahol**	**3.31**	**33**	⇑	*i* P	Pb	01 18 46.0	+0.5
	baz=34							
ULHL				⇑	*i* S	Sb	01 19 26.6	+1.0
	baz=34							
FRU1	**Bishkek**	**3.38**	**10**	⇓	*i* P	Pb	01 18 46.7	+0.2
	baz=11							
FRU1				⇓	*i* S	Sb	01 19 27.5	+0.2
	baz=11							
CHMS	**Chumysh**	**3.58**	**11**	⇓	*i* P	Pb	01 18 49.1	-0.9
	baz=12							
CHMS				⇓	*i* S	Sb	01 19 32.0	-1.1
	baz=12							
TKM2	**Tokmak 2**	**3.68**	**21**	⇑	Pn	Pb	01 18 53.0	+1.2
	3.4nm,0.5s							
TKM2				⇑	Lg	Lg	01 19 49.3	
	13nm,0.8s							
TKM2	**Tokmak 2**	**3.68**	**21**	⇑	*i* P	Pb	01 18 50.8	-1.1
	baz=22							
TKM2				⇑	*i* S	Sb	01 19 35.1	-1.2
	baz=22							
USP	**Ospenovka**	**3.81**	**7**	⇓	*i* P	Pb	01 18 52.4	-1.5
	baz=9.0							
USP				⇓	*i* S	Sb	01 19 37.1	-2.7
	baz=9.0							
IUG	**Iuzhnay**	**3.92**	**314**		Pg	Pg	01 18 59.6	-2.6
	8.9nm,0.3s							
IUG					Lg	Lg	01 19 52.9	
	37nm,0.7s							
IUG	**Iuzhnay**	**3.92**	**314**		*e* P	Pg	01 18 59.6	-2.6
	9.9nm,0.2s							
IUG					*e* S	Sg	01 19 52.9	0.0
	37nm,0.5s							
DGS	**Degeres**	**4.03**	**21**		*e* P	Pg	01 19 01.8	-2.5
	4.1nm,0.5s							
DGS					*e* S	Sg	01 19 56.7	+0.1
	9.4nm,0.8s							
TNSS	**Tian-Shan**	**4.26**	**33**		Pg	Pg	01 19 08.6	-0.1
	9.9nm,1.0s							
TNSS					Lg	Lg	01 20 07.7	
	11nm,1.2s							
TNSS	**Tian-Shan**	**4.26**	**33**		*e* P	Pg	01 19 08.6	-0.1
	9.9nm,1.0s							
TNSS					*e* S	Sg	01 20 07.7	+3.8
	11nm,1.2s							
KK31	**Karatay Array**	**4.39**	**326**	⇓	Pn	Pb	01 19 00.8	-3.0
	0.5nm,0.3s,baz=137,slow=13,SNR=8.7							
KK31				⇓	Pg	Pg	01 19 13.1	+1.9
	2.5nm,0.7s,baz=143,slow=14,SNR=4.7							
KK31				⇑	Lg	Lg	01 20 06.5	
	8.5nm,0.7s,baz=136,slow=28,SNR=8.2							
KKAR	**Karatay Array**	**4.39**	**326**	⇓	*i* P	Pb	01 18 59.7	-4.1
	baz=27							
KKAR				⇓	*i* S	Sn	01 19 50.3	+6.6
	baz=27							
KTBS	**Karatobe**	**4.74**	**26**		Pg	Pg	01 19 16.3	-1.5
	5.1nm,0.6s							
KTBS					Lg	Lg	01 20 21.1	
	14nm,0.4s							
KTBS	**Karatobe**	**4.74**	**26**		*e* P	Pg	01 19 16.3	-1.5
	5.1nm,0.6s							
KTBS					*e* S	Sg	01 20 21.1	+2.0
	14nm,0.4s							
KUU	**Kurty**	**4.79**	**22**		Pg	Pg	01 19 17.1	-1.8
	5.0nm,0.5s							
KUU					Lg	Lg	01 20 22.4	
	15nm,0.3s							
KUU	**Kurty**	**4.79**	**22**		*e* P	Pg	01 19 17.1	-1.8
	5.0nm,0.5s							
KUU					*e* S	Sg	01 20 22.4	+1.5
	15nm,0.3s							
CHKK	**Chushkaly**	**4.97**	**27**		Pg	Pg	01 19 20.3	-1.9
	2.8nm,0.5s							
CHKK					Lg	Lg	01 20 28.0	
	6.9nm,0.6s							
CHKK	**Chushkaly**	**4.97**	**27**		*e* P	Pg	01 19 20.3	-1.9
	2.8nm,0.5s							
CHKK					*e* S	Sg	01 20 28.1	+1.5
	6.9nm,0.6s							
BTLS	**Baital**	**5.55**	**2**		Pg	Pg	01 19 29.8	-3.6
	2.8nm,0.5s							
BTLS					Lg	Lg	01 20 44.6	
	6.4nm,0.6s							
BTLS	**Baital**	**5.55**	**2**		*e* P	Pg	01 19 29.8	-3.6
	2.8nm,0.5s							
BTLS					*e* S	Sg	01 20 44.6	-0.8
	6.4nm,0.6s							
ARXS	**Arharly**	**5.59**	**31**		Pg	Pg	01 19 31.6	-2.6
	6.7nm,0.6s							
ARXS					Lg	Lg	01 20 47.6	
	5.5nm,0.7s							
ARXS	**Arharly**	**5.59**	**31**		*e* P	Pg	01 19 31.6	-2.6
	6.7nm,0.6s							
ARXS					*e* S	Sg	01 20 47.6	+1.0
	5.5nm,0.7s							
AB31	**Akbulak array**	**13.90**	**319**	⇑	P	Pn	01 21 06.5	+3.2
	0.4nm,0.7s,baz=131,slow=14,SNR=4.4							
AKTO	**Aktyubinsk**	**15.62**	**320**	⇑	P	P	01 21 30.3	0.0
	1.2nm,0.8s							

*NEIC **08** 01:33:24.7±1.9,2.45S±0.1×127.1E±0.1,h45km±9km, mb4.2/11,Error ellipse: s-maj=22.2km s-min=16.1km az=47.0*
*DJA **08** 01:33:27.9±0.5,3.5S×127.8E±*,h14km±7km,M4.4/9, mb4.7/1,MLv4.2/9*
*IDC **08** 01:33:34.4±4.2,3.2S×126.95E,h64km±39km,mb3.7/7, mbtmp4.1/8,ML4.4/1,MS3.2/1,Error ellipse: s-maj=88.6km s-min=11.3km az=68.0*

ISC 08 01:33:30.2±0.8,3.14S±0.06×127.46E±0.05,h35km,n32, σ1s52/28,mb4.1/8,Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NLAI	**Namlea**	**0.37**	**254**		P	Pn	01 33 37.0	-2.1
SANI	**Sanana**	**1.82**	**306**		P	Pn	01 33 58.0	-1.1
LBMI	**Labuha**	**2.48**	**1**		P	Pn	01 34 07.6	-0.6
BNDI	**Bandanaira**	**2.80**	**120**		P	Pn	01 34 10.3	-2.2
SWI	**Sorong**	**4.42**	**59**		P	Pn	01 34 32.7	-2.1
SWI					S	Sn	01 35 24.8	-0.2
FAKI	**Fak Fak**	**4.79**	**88**			Pn	01 34 39.0	-0.8
FAKI	**Fak Fak**	**4.79**	**88**		P	Pn	01 34 39.9	+0.1
FAKI					S	Sn	01 35 33.6	-0.5
MTN	**Manton Dam**	**10.30**	**160**			Pn	01 36 00.9	+5.3
KNRA	**Kununurra**	**12.53**	**174**		Pn	Pn	01 36 29.6	+3.5
WB0	**Warramunga Arr**	**17.86**	**158**		P	P	01 37 38.5	+2.1
WB0					IAmb	IAmb	01 37 45.2	
	comp=Z,8.9nm,0.6s							
WRAB	**Tennant Creek**	**18.00**	**159**		P	P	01 37 40.5	+2.5
WRAB					IAmb	IAmb	01 37 43.7	
	comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**	**18.00**	**159**		P	P	01 37 39.0	+1.0
WRA	**Warramunga Arr**	**18.00**	**159**		P	P	01 37 39.0	+1.0
	comp=Z,1.2nm,0.3s,baz=341,slow=12,SNR=40							
WRA					S	S	01 41 01.9	-0.9
	comp=Z,0.7nm,0.8s,baz=348,slow=22,SNR=2.6							
	comp=Z,9.8nm,0.7s							
WB2	**Warramunga Arr**	**18.01**	**159**		P	P	01 37 39.4	+1.3
WB2					IAmb	IAmb	01 37 43.8	
	comp=Z,12nm,0.8s							
WR0	**Warramunga Arr**	**18.09**	**158**		P	P	01 37 40.5	+1.5
WR0					IAmb	IAmb	01 37 58.5	
	comp=Z,14nm,0.6s							
COEN	**Coen**	**18.88**	**126**		P	Pn	01 37 48.3	-0.1
COEN					IAmb	IAmb	01 37 53.0	
	comp=Z,19nm,1.3s							
LEM	**Lembang**	**20.10**	**259**		LR	LR	01 45 55.7	
	comp=Z,77nm,21.3s,baz=210,slow=38							
AS31	**Alice Springs**	**21.34**	**164**		P	P	01 38 17.0	+2.6
AS31					IAmb	IAmb	01 38 21.0	
	comp=Z,3.7nm,0.5s							
ASAR	**Alice Springs**	**21.34**	**164**		P	P	01 38 17.7	+3.3
ASAR	**Alice Springs**	**21.34**	**164**		P	P	01 38 16.4	+1.9
	comp=Z,5.0nm,0.5s,baz=342,slow=12,SNR=43							
ASAR					S	S	01 42 10.1	+0.4
	comp=Z,0.9nm,0.6s,baz=349,slow=23,SNR=5.4							
	comp=Z,5.0nm,0.5s							
BBOO	**Buckleboo**	**30.60**	**166**		P	P	01 39 41.7	+0.8
STKA	**Stephens Creek**	**31.53**	**157**		P	P	01 39 52.1	+3.0
	comp=Z,1.7nm,0.5s,baz=338,slow=14,SNR=4.1							
	comp=Z,1.7nm,0.5s							
MRNZ	**Matariki Terra**	**55.65**	**140**		P	P	01 43 01.9	-1.0
MKAR	**Makanchi Array**	**63.63**	**327**		P	P	01 43 58.8	+1.0
	comp=Z,1.5nm,0.8s,baz=142,slow=5.4,SNR=6.6							
	comp=Z,1.5nm,0.8s							
ZALV	**Zalesovo Beam**	**67.03**	**334**		P	P	01 44 19.3	-0.2
	comp=Z,0.4nm,0.6s,baz=139,slow=3.1,SNR=1.6							
	comp=Z,0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**67.92**	**329**		P	P	01 44 25.2	0.0
	comp=Z,1.6nm,0.9s,baz=130,slow=5.4,SNR=9.5							
	comp=Z,1.6nm,0.9s							
KURK	**Kurchatov**	**67.92**	**329**		P	P	01 44 12.8	-13
BVAR	**Borovoye Array**	**73.47**	**328**		P	P	01 44 59.3	+0.2
	comp=Z,1.6nm,0.8s,baz=120,slow=5.5,SNR=4.4							
	comp=Z,1.6nm,0.8s							
ABKAR	**Akbulak array**	**77.93**	**322**		P	P	01 45 12.8	-12
ABKAR	**Akbulak array**	**77.93**	**322**		P	P	01 45 12.2	-12
ABKAR					IAmb	IAmb	01 45 31.6	
	comp=Z,1.2nm,0.9s							
ILAR	**Eielson Array**	**90.96**	**25**		P	P	01 46 32.8	+2.5
	comp=Z,0.2nm,0.7s,baz=243,slow=6.0,SNR=2.1							
	comp=Z,0.2nm,0.7s							
CPUP	**Villa Florida**	**150.34**	**171**		PKPbc	**PKiKP**	01 53 19.1	-0.3
	comp=Z,1.5nm,0.8s,baz=207,slow=2.3,SNR=2.9							

*MOS **08** 01:33:49.8±0.9,42.94N×146.79E,h49km,mb4.9/24,Error ellipse: s-maj=10.1km s-min=6.0km az=110.6*
MOS Felt (II) at Yuzhno-Kuril'sk.
*SKHL **08** 01:33:50.9±0.2,43.00N×146.90E,h59km±4km,mb5.3/2*
*JMA **08** 01:33:50.7±0.2,43.0N±0.6×14.7E±*,h57km±2km, MD4.2/40,MV4.6/40,OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
*NIED **08** 01:33:50.7,42.97N×146.75E,h57km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.44; Mθθ0.38; Mφφ-0.82; Mrθ1.53; Mθφ-0.49; Mφr0.58; Fault plane solution: M0 1.84000×10^15^ NP1:φs62.00000°, δ83.00000°,λ116.00000°. NP2:φs166.00000°,δ26.00000°, λ16.00000°.*
*IDC **08** 01:33:52.7±2.6,42.96N×146.71E,h59km±23km,mb4.1/26, mbtmp4.3/28,ML3.5/3,MS3.2/10 Error ellipse: s-maj=14.3km s-min=12.7km az=119.0*
*NEIC **08** 01:33:52.2±1.1,42.67N±0.10×146.8E±0.1,h65km±8km, mb4.5/99,Error ellipse: s-maj=15.8km s-min=12.7km az=129.0*

ISC 08 01:33:51.2±0.9,42.95N±0.05×146.82E±0.05,h47km±7km, n379,σ1s05/386,mb4.5/92,MS3.4/5,15C-3D,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NEM2	**Nemuro 2**	**0.89**	**298**	*i*	P	Pn	01 34 06.6	-0.6
NEM2					*e* S	Sn	01 34 18.1	-0.9
NEM2	**Nemuro 2**	**0.89**	**298**		A	A	01 34 06.6	
	comp=E,20nm,0.5s,comp=N,17nm,0.7s							
NMR	**Nemuro--Hokkai**	**0.90**	**298**	*d*	PN	Pn	01 34 06.7	-0.7
NMR				*i*	S	Sn	01 34 18.2	-1.1
NMR	**Nemuro--Hokkai**	**0.90**	**298**	*i*	P	Pn	01 34 06.7	-0.7
NMR				*i*	S	Sn	01 34 18.2	-1.1
SHO	**Shikotan**	**0.92**	**1**	*i*	PN	Pn	01 34 07.2	-0.4
SHO				*i*	S	Sn

comp=E,9µm,0.5s
JKHN Kushirohamanak 1.22 277 *i* P **Pn** **01 34 11.3 -0.5**
JKHN *e*S **Sn** **01 34 26.7 -0.4**
JKHN Kushirohamanak 1.22 277 A A 01 34 11.3
comp=E,12nm,0.7s,comp=N,7.0nm,0.4s
YUK Yuzh-Kuril'sk 1.28 328*c* *i* PN **Pn** **01 34 11.7 -1.0**
YUK *i* S **Sn** **01 34 27.0 -1.7**
YUK pmax pmax
comp=Z,976nm,0.2s
YUK pmax pmax
comp=E,508nm,0.1s
YUK pmax pmax
comp=N,387nm,0.2s
YUK smax smax
comp=N,21µm,0.4s
YUK smax smax
comp=E,32µm,0.4s
YUK Yuzh-Kuril'sk 1.28 328 *i* P **Pn** **01 34 11.7 -1.0**
YUK AMB AMB 01 34 13.8
comp=E,960nm,0.2s
YUK *i* S **Sn** **01 34 27.0 -1.7**
YUK A A 01 34 31.0
comp=E,31µm,0.6s
YUK A A 01 34 31.0
comp=E,23µm,0.6s
AKK Akkeshi 1.45 273 *e*P **Pn** **01 34 14.3 -0.6**
AKK *e*S **Sn** **01 34 31.7 -1.1**
JNSB Nemuroshibetsu 1.56 302 P **Pn** **01 34 15.6 -0.8**
JNSB *e*S **Sn** **01 34 35.2 -0.1**
JNSB Nemuroshibetsu 1.56 302 A A 01 34 15.6
comp=E,5.0nm,0.5s,comp=N,9.0nm,0.7s
JAK Akkeshi 1.56 272 *e*P **Pn** **01 34 15.8 -0.6**
JAK *e*S **Sn** **01 34 34.5 -0.9**
JAK Akkeshi 1.56 272 A A 01 34 15.8
comp=E,11nm,1.4s,comp=N,4.0nm,2.9s
JRA Rausu 1.58 309 *e*P **Pn** **01 34 16.2 -0.4**
JRA *e*S **Sn** **01 34 35.0 -0.8**
JRA Rausu 1.58 309 A A 01 34 16.2
comp=E,4.0nm,1.6s,comp=N,6.0nm,1.4s
RUSJ Misakicho 1.62 316*d* *i* PN **Pn** **01 34 16.9 -0.3**
RUSJ *e*S **Sn** **01 34 36.0 -0.9**
JNK Nakash 1.66 293 *e*P **Pn** **01 34 16.9 -0.9**
JNK *e*S **Sn** **01 34 36.0 -1.9**
JNK Nakash 1.66 293 A A 01 34 16.9
comp=E,12nm,0.6s,comp=N,8.0nm,0.9s
JOB Onbets 2.19 270 *e*P **Pn** **01 34 24.6 -0.4**
JOB *e*S **Sn** **01 34 49.8 -1.1**
JAR Ashorobuto 2.26 280 *e*P **Pn** **01 34 25.8 -0.2**
JAR *e*S **Sn** **01 34 51.9 -0.7**
JAR Ashorobuto 2.26 280 A A 01 34 25.8
comp=E,4.0nm,1.1s,comp=N,5.0nm,0.7s
JTKR Abashiri--Toko 2.35 297 *e*P **Pn** **01 34 27.6 +0.4**
JTKR *e*S **Sn** **01 34 54.6 -0.2**
KUR Kuril'sk 2.40 18 *e*PN **Pn** **01 34 27.9 0.0**
KUR *i* S **Sn** **01 34 55.5 -0.6**
KUR pmax pmax
comp=Z,271nm,0.6s
KUR smax smax
comp=N,1µm,0.3s
KUR smax smax
comp=E,580nm,0.5s
KUR Kuril'sk 2.40 18 *e*P **Pn** **01 34 27.4 -0.5**
KUR AMB AMB 01 34 32.4
comp=E,240nm,0.3s
KUR *i* S **Sn** **01 34 54.9 -1.2**
KUR A A 01 34 59.1
comp=E,1µm,0.3s
KUR A A 01 34 59.1
comp=E,790nm,0.3s
JCH Churui 2.57 264 *e*P **Pn** **01 34 29.6 -0.6**
JCH *e*S **Sn** **01 34 58.3 -1.8**
JMP Maruseppu 2.73 294 *e*P **Pn** **01 34 33.0 +0.5**
JEM Erimo 2.87 252 P **Pn** **01 34 35.7 +1.4**
JEM Erimo 2.87 252 *e*P **Pn** **01 34 35.7 +1.4**
ERM Erimo 2.87 252 **Pn** **01 34 35.6 +1.3**
ERM Erimo 2.87 252 P **Pn** **01 34 35.7 +1.4**
ERM Erimo 2.87 252 *i* PN **Pn** **01 34 35.8 +1.4**
JNBK Urakawa-nobuka 3.08 259 *e*P **Pn** **01 34 36.6 -0.5**
JFR Furan 3.10 275 *e*P **Pn** **01 34 37.9 +0.3**
JFR *e*S **Sn** **01 35 13.1 -0.3**
JKK2 Kamakawa 2 3.10 289 *e*P **Pn** **01 34 38.3 +0.7**
JKA Kamikawa-asahi 3.28 292 **Pn** **01 34 40.9 +0.9**
JKA Kamikawa-asahi 3.28 292 *e*P **Pn** **01 34 41.4 +1.4**
ASAJ Asahikawa 3.28 292 P **Pn** **01 34 41.4 +1.3**
comp=E,11nm,0.3s,baz=98,slow=13,SNR=37
ASAJ S **Sn** **01 35 21.4 +3.6**
comp=E,166nm,0.6s,baz=286,slow=33,SNR=8.7
ASAJ LR LR 01 36 12.7
comp=E,276nm,21.8s,baz=142,slow=44
comp=E,42nm,0.5s
JTM Tenmabayashi 4.81 245 Pn **Pn** **01 35 00.7 -0.3**
JTM Tenmabayashi 4.81 245 P **Pn** **01 35 00.9 -0.1**
YSS Yuzh-Sakhalins 4.93 326 Pn **Pn** 01 35 10.6 +7.9
YSS Yuzh-Sakhalins 4.93 326 *e*PN **Pn** **01 35 03.5 +0.9**
YSS pmax pmax
comp=Z,300nm,0.5s
YSS MLR MLR
comp=Z,400nm,13.0s
YSS Yuzh-Sakhalins 4.93 326 *e*P **Pn** **01 35 03.5 +0.9**
YSS AMB AMB 01 35 12.0
comp=Z,30nm,0.5s
YSS *e*S **Sn** **01 35 56.6 -1.7**
YSS A A 01 36 00.0
comp=Z,80nm,0.7s
YSS A A 01 36 00.0
comp=Z,20nm,0.7s
JMM Marumori 6.85 224 Pn **Pn** **01 35 26.7 -2.3**
JMM Marumori 6.85 224 P **Pn** **01 35 27.4 -1.6**
TYV Tymovskoe 8.41 342 *e*PN **Pn** **01 35 51.3 +1.0**
TYV pmax pmax
comp=Z,100nm,3.6s
TYV pmax pmax
comp=Z,11nm,1.1s
TYV Tymovskoe 8.41 342 *e*P **Pn** **01 35 51.3 +1.0**
TYV AMB AMB 01 35 52.0
comp=Z,100nm,4.0s
TYV AMB AMB 01 35 52.4
comp=Z,10.0nm,0.6s
TYV *e*S **Sn** **01 37 21.7 -2.0**
TYV A A 01 37 25.0
comp=Z,300nm,5.0s
TYV A A 01 37 26.7
MJAR Matsushiro Arr 9.21 229 P **Pn** **01 36 01.1 -0.3**
comp=Z,0.1nm,0.3s,baz=38,slow=12,SNR=4.0
MJAR S **Sn** **01 37 42.8 -0.9**
comp=Z,1.2nm,0.5s,baz=318,slow=26,SNR=1.6
comp=Z,0.9nm,0.4s
JGF Kuroka 10.37 228 P **Pn** **01 36 16.4 -0.9**
JHJ Hachijo jima 2 11.27 212 LR LR 01 40 48.9
comp=Z,102nm,21.5s,baz=320,slow=37
KLR Kul'dur 12.19 306 *i* PN Pn 01 36 47.5 +5.5
KLR pmax pmax
comp=Z,3.0nm,1.0s
KLR Kul'dur 12.19 306 P **Pn** **01 36 44.6 +2.6**
comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=2.1
KLR LR LR 01 41 44.9
comp=Z,101nm,19.5s,baz=110,slow=39
PETK Petropavlovsk- 12.48 32 P **Pn** **01 36 43.6 -2.4**
comp=Z,3.4nm,0.5s,baz=190,slow=10.0,SNR=16
PETK LR LR 01 40 58.7
comp=Z,65nm,19.7s,baz=252,slow=34
MDJ Mudanjiang 12.56 283 P **Pn** **01 36 50.4 +3.3**
MDJ pmax pmax
comp=Z,9.0nm,2.4s
MDJ pmax pmax
comp=Z,200nm,4.3s
KSRS Korea Array 15.44 256 LR LR 01 42 35.3
comp=Z,23nm,18.6s,baz=20,slow=34
MA2 Magadan 16.82 7 LR LR 01 43 26.6
comp=Z,63nm,21.2s,baz=113,slow=34
SEY Seymchan 20.28 7*c* *e*P **P** **01 38 22.5 0.0**
SEY pmax pmax
comp=Z,8.0nm,0.9s
SEY Seymchan 20.28 7 P **P** **01 38 20.0 -2.5**
comp=Z,4.5nm,0.7s,baz=184,slow=19,SNR=11
SEY Seymchan 20.28 7 *e*P **P** **01 38 22.5 0.0**
NJ2 Nanjing 24.60 253 *e*P **P** **01 39 01.8 -5.1**
NJ2 pmax pmax
comp=Z,12nm,0.5s
HHC Hu-ho-hao-te 26.21 278 *e*P **P** **01 39 22.5 +1.0**
HHC pP sP 01 39 43.2 +4.9
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,23nm,4.2s

ULN Ulaanbaatar 28.12 294 P **P** **01 39 38.9 +0.2**
ULN IAmb IAmb 01 39 39.9
comp=Z,7.6nm,0.7s
ULN Ulaanbaatar 28.12 294*c* *e*P **P** **01 39 39.2 +0.5**
ULN pmax pmax
comp=Z,14nm,1.3s
ULN Ulaanbaatar 28.12 294 *e*P **P** **01 39 39.2 +0.5**
SONM Songino Array 28.56 294 P **P** **01 39 43.1 +0.5**
SONM IAmb IAmb 01 39 43.8
comp=Z,12nm,0.7s
SONM Songino Array 28.56 294 P **P** **01 39 43.1 +0.5**
SONM pmax pmax
comp=Z,12nm,0.7s
SONM Songino Array 28.56 294 P **P** **01 39 42.9 +0.3**
comp=Z,13nm,0.7s,baz=88,slow=8.4,SNR=41
SONM LR LR 01 51 53.0
comp=Z,81nm,19.0s,baz=332,slow=38
comp=Z,13nm,0.7s
H11N2 WAKE ISLAND Hy 28.67 138 T T 02 10 38.6
baz=329,slow=75,SNR=367
H11N1 WAKE ISLAND Hy 28.68 138 T T 02 10 39.5
baz=329,slow=75,SNR=223
H11N3 WAKE ISLAND Hy 28.68 138 T T 02 10 32.1
baz=329,slow=75,SNR=12
H11S1 WAKE ISLAND Hy 29.61 139 T T 02 11 49.5
baz=330,slow=76,SNR=528
H11S3 WAKE ISLAND Hy 29.62 139 T T 02 11 40.4
baz=330,slow=76,SNR=474
H11S2 WAKE ISLAND Hy 29.63 139 T T 02 11 50.9
baz=330,slow=76,SNR=393
TIXI Tiksi 30.09 349 LR LR 01 51 17.4
comp=Z,45nm,20.9s,baz=107,slow=35
ZAK Zakamensk 30.42 299 *e*P **P** **01 39 59.0 0.0**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
ZAK Zakamensk 30.42 299 *e*P **P** **01 39 59.0 0.0**
GAMB Gambell 31.50 34 P **P** **01 40 09.2 +1.0**
baz=248
TNA Tin City 33.65 32 P **P** **01 40 27.7 +0.7**
baz=250
F14K Arctic Creek 34.25 33 P **P** **01 40 33.1 +1.0**
baz=252
J14K Nanvaranak Lak 34.75 38 P **P** **01 40 37.4 +1.0**
J14K Nanvaranak Lak 34.75 38 P **P** **01 40 37.6 +1.1**
baz=258
F15K North Star Dit 34.99 33 P **P** **01 40 39.6 +1.0**
baz=253
G15K Niukluk 35.04 34 P **P** **01 40 40.5 +1.5**
baz=255
N14K Kuskokwak Cree 35.24 43 P **P** **01 40 41.1 +0.4**
baz=264
C16K Lisburne Hills 35.55 28 P **P** **01 40 43.0 -0.2**
C16K IAmb IAmb 01 40 44.0
comp=Z,4.7nm,0.8s
C16K Lisburne Hills 35.55 28 P **P** **01 40 44.1 +0.8**
baz=249
H16K Elim 35.71 35 P **P** **01 40 45.4 +0.7**
baz=257
M15K Kasigluk River 35.80 42 P **P** **01 40 45.9 +0.3**
baz=264
G16K Koyuk River 35.83 34 P **P** **01 40 46.6 +0.9**
G16K IAmb IAmb 01 40 49.7
comp=Z,4.9nm,0.9s
G16K Koyuk River 35.83 34 P **P** **01 40 46.8 +1.0**
baz=256
D17K Noatak River 36.17 30 P **P** **01 40 49.2 +0.6**
baz=252
CHNA Chinabura Isl 36.30 52 P **P** **01 40 49.2 -0.7**
baz=273
C17K DeLong Mountai 36.37 28 P **P** **01 40 50.9 +0.5**
baz=251
E17K Hotham Inlet 36.46 31 P **P** **01 40 51.9 +0.8**
baz=254
F17K Baldwin Pennin 36.52 32 P **P** **01 40 53.0 +1.4**
F17K Baldwin Pennin 36.52 32 P **P** **01 40 52.7 +1.1**
baz=256
G17K Kiwalik Mounta 36.55 34 P **P** **01 40 53.1 +1.2**
baz=258
N16K Nishlik Lake 36.73 42 P **P** **01 40 54.0 +0.4**
baz=266
H17K Granite Mounta 36.74 35 P **P** **01 40 53.8 +0.2**
H17K IAmb IAmb 01 40 56.3
comp=Z,4.1nm,0.6s
H17K Granite Mounta 36.74 35 P **P** **01 40 54.2 +0.6**
baz=259
E18K Tukpahlearik C 37.01 31 P **P** **01 40 56.7 +0.9**
E18K IAmb IAmb 01 40 57.5
comp=Z,3.3nm,0.7s
E18K Tukpahlearik C 37.01 31 P **P** **01 40 56.8 +1.1**
baz=255
P16K Nushagak River 37.08 45 P **P** **01 40 56.2 -0.2**
baz=269
C18K Utukok River 37.12 29 P **P** **01 40 56.8 0.0**
C18K Utukok River 37.12 29 P **P** **01 40 57.3 +0.5**
baz=253
B18K Kokolik River 37.13 27 P **P** **01 40 58.1 +1.3**
baz=251
K17K Iditarod 37.14 39 P **P** **01 40 59.0 +2.1**
F18K Selawik 37.18 32 P **P** **01 40 58.4 +1.3**
baz=257,SNR=5.6
H18K Honhosa River 37.43 35 P **P** **01 41 00.4 +1.0**
baz=260
G18K Tagagawik 37.44 33 P **P** **01 41 00.8 +1.3**
G18K Tagagawik 37.44 33 P **P** **01 41 00.2 +0.8**
baz=259
M17K Holitna River 37.44 41 P **P** **01 41 00.1 +0.6**
baz=266
C19K Lookout Ridge 37.81 28 P **P** **01 41 03.1 +0.5**
C19K IAmb IAmb 01 41 03.9
comp=Z,6.1nm,0.9s
C19K Lookout Ridge 37.81 28 P **P** **01 41 03.1 +0.5**
baz=254
J18K Innoko River 37.93 38 P **P** **01 41 04.0 +0.4**
baz=264
F19K Shaleruckik Mo 37.96 32 P **P** **01 41 04.5 +0.7**
F19K IAmb IAmb 01 41 05.3
comp=Z,7.7nm,0.8s
F19K Shaleruckik Mo 37.96 32 P **P** **01 41 04.3 +0.5**
baz=259
G19K Purcell Mounta 38.11 33 P **P** **01 41 05.9 +0.8**
G19K IAmb IAmb 01 41 06.7
comp=Z,5.2nm,0.8s
G19K Purcell Mounta 38.11 33 P **P** **01 41 05.5 +0.4**
baz=260
D19K Kuna River 38.17 29 P **P** **01 41 06.7 +1.0**
baz=256
TTA Tatalina 38.20 38 P **P** **01 41 07.3 +1.3**
TTA IAmb IAmb 01 41 31.2
comp=Z,6.9nm,1.2s
TTA Tatalina 38.20 38 P **P** **01 41 07.3 +1.3**
TTA pmax pmax
comp=Z,7.0nm,1.2s
H19K Roundabout Mou 38.28 34 P **P** **01 41 08.0 +1.5**
H19K Roundabout Mou 38.28 34 P **P** **01 41 07.2 +0.7**
baz=262,SNR=23
E19K Redstone River 38.28 31 P **P** **01 41 07.3 +0.7**
baz=259
J19K Poorman 38.46 37 P **P** **01 41 09.0 +0.9**
J19K IAmb IAmb 01 41 10.0
comp=Z,6.7nm,1.0s
J19K Poorman 38.46 37 P **P** **01 41 08.5 +0.4**
baz=264
P18K Big Mountain, 38.49 44 P **P** **01 41 08.9 +0.5**
baz=271
O18K Koktuh Hills 38.50 43 P **P** **01 41 08.6 +0.1**
baz=270
D20K Etivluk River 38.76 29 P **P** **01 41 11.0 +0.4**
baz=258
F20K Avaraart Lake 38.79 32 P **P** **01 41 11.5 +0.8**
baz=261
E20K Nigu River 38.82 30 P **P** **01 41 11.9 +0.8**
baz=259
H20K Anotleneega Mo 38.92 34 P **P** **01 41 12.9 +0.9**
baz=263,SNR=8.6
J20K Nowinta River 39.12 37 P **P** **01 41 14.7 +1.1**
J20K IAmb IAmb 01 41 15.8
comp=Z,5.7nm,0.8s
J20K Nowinta River 39.12 37 P **P** **01 41 14.2 +0.6**
baz=266
IMAR Indian Mountai 39.44 34 P **P** **01 41 17.2 +1.0**
C21K Knifeblade Rid 39.50 29 P **P** **01 41 17.5 +0.8**
baz=259
G21K Allakaket 39.59 33 P **P** **01 41 19.0 +1.5**
baz=263
B21K Ikpikpuk River 39.64 28 P **P** **01 41 18.8 +1.0**
B21K Ikpikpuk River 39.64 28 P **P** **01 41 18.9 +1.0**
baz=259

E21K Killik River 39.67 30 P **P** **01 41 19.0 +0.8**
baz=261
F21K Alatna River 39.68 32 P **P** **01 41 19.2 +1.0**
F21K IAmb IAmb 01 41 20.6
comp=Z,5.5nm,0.8s
F21K Alatna River 39.68 32 P **P** **01 41 19.0 +0.8**
baz=263
H21K Melozitna Rive 39.80 34 P **P** **01 41 20.3 +1.1**
H21K Melozitna Rive 39.80 34 P **P** **01 41 20.1 +0.9**
baz=265
CHUM Lake Minchumin 39.91 37 P **P** **01 41 21.4 +1.2**
baz=268
PPLA Purkeypile 39.95 39 P **P** **01 41 22.6 +1.9**
PPLA IAmb IAmb 01 41 37.5
comp=Z,18nm,1.5s
N20K Mount Spurr 39.95 41 P **P** **01 41 21.5 +0.8**
baz=271
KDAK Kodiak Island 39.97 47 P **P** **01 41 21.6 +0.9**
KDAK Kodiak Island 39.97 47 P **P** **01 41 20.7 0.0**
baz=275
KDAK Kodiak Island 39.97 47 P **P** **01 41 21.6 +0.9**
KDAK pmax pmax
comp=Z,51nm,1.4s
CAST Castle Rocks 40.00 38 P **P** **01 41 22.8 +1.8**
CAST IAmb IAmb 01 41 23.4
comp=Z,5.7nm,1.0s
CAST Castle Rocks 40.00 38 P **P** **01 41 22.0 +1.0**
baz=268
B22K Teshekpuk Lake 40.18 27 P **P** **01 41 22.5 +0.2**
B22K IAmb IAmb 01 41 22.9
comp=Z,6.1nm,0.5s
B22K Teshekpuk Lake 40.18 27 P **P** **01 41 22.7 +0.5**
baz=259
D22K Ayikyak River 40.20 29 P **P** **01 41 23.6 +1.1**
D22K IAmb IAmb 01 41 23.8
comp=Z,7.6nm,0.6s
D22K Ayikyak River 40.20 29 P **P** **01 41 23.0 +0.5**
baz=262
H22K Ishtalitna Cre 40.40 34 P **P** **01 41 25.2 +0.9**
baz=266
G22K Bettles 40.42 32 P **P** **01 41 25.2 +0.8**
baz=265
DGZ Jazzator, Alta 40.61 301 *i* P **P** **01 41 27.6 +1.2**
DGZ pmax pmax
comp=Z,5.0nm,1.1s
MLY Manley 40.63 35 P **P** **01 41 27.7 +1.5**
MLY Manley 40.63 35 P **P** **01 41 27.3 +1.1**
baz=268
TRF Thorofare Moun 40.81 38 P **P** **01 41 29.7 +1.9**
TRF Thorofare Moun 40.81 38 P **P** **01 41 28.2 +0.4**
baz=270
COLD Coldfoot 40.95 32 P **P** **01 41 29.5 +0.8**
baz=266
G23K Bananza Creek 40.99 33 P **P** **01 41 29.8 +0.7**
G23K Bananza Creek 40.99 33 P **P** **01 41 29.8 +0.7**
baz=267
RC01 Rabbit Creek A 41.16 41 P **P** **01 41 30.8 +0.3**
baz=273
I23K Minto, Yukon-K 41.22 35 P **P** **01 41 32.0 +1.1**
baz=269
E23K Chandalar 41.23 31 P **P** **01 41 31.9 +0.7**
baz=265
ZALV Zalesovo Beam 41.29 308 *i* P **P** **01 41 31.2 -0.5**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 41.29 308 P **P** **01 41 30.8 -0.9**
comp=Z,1.3nm,0.4s,baz=79,slow=7.6,SNR=8.0
ZALV PcP **PcP** **01 43 29.7 +0.3**
comp=Z,1.6nm,0.5s,baz=61,slow=2.2,SNR=7.7
comp=Z,1.3nm,0.4s
TOLK Toolik Lake Re 41.30 30 P **P** **01 41 32.5 +0.9**
TOLK IAmb IAmb 01 41 33.2
comp=Z,4.8nm,0.7s
TOLK Toolik Lake Re 41.30 30 P **P** **01 41 32.2 +0.6**
baz=265,SNR=6.1
NEA2 Nenana 41.34 36 P **P** **01 41 32.6 +0.6**
NEA2 Nenana 41.34 36 P **P** **01 41 32.6 +0.6**
baz=270
MCK McKinley 41.41 37 P **P** **01 41 32.9 +0.3**
baz=271
RND Reindeer 41.46 38 P **P** **01 41 33.2 +0.2**
RND Reindeer 41.46 38 P **P** **01 41 33.2 +0.2**
RND pmax pmax
comp=Z,9.0nm,1.4s
D24K Happy Valley 41.61 29 P **P** **01 41 35.1 +1.0**
D24K Happy Valley 41.61 29 P **P** **01 41 34.9 +0.8**
baz=265
WAT1 Susitna Watana 41.62 39 P **P** **01 41 34.4 +0.1**
baz=272
C24K Franklin Bluff 41.70 28 P **P** **01 41 35.3 +0.5**
baz=264
KNK Knik Glacier 41.75 41 P **P** **01 41 35.6 +0.2**
baz=274
WRH Wood River Hil 41.77 36 P **P** **01 41 36.3 +0.9**
H24K Noodor Dome 41.84 34 P **P** **01 41 36.2 +0.1**
baz=270
F24K Squaw Lake 41.86 32 P **P** **01 41 37.1 +0.8**
F24K Squaw Lake 41.86 32 P **P** **01 41 36.8 +0.6**
baz=268
G24K Hadweenzic Riv 42.01 33 P **P** **01 41 38.3 +0.9**
baz=269
POKR Poker Plat Res 42.03 35 P **P** **01 41 39.0 +1.4**
POKR IAmb IAmb 01 41 39.9
comp=Z,9.2nm,0.9s
POKR Poker Plat Res 42.03 35 P **P** **01 41 38.3 +0.6**
baz=271
DHY Denali Highway 42.14 38 P **P** **01 41 39.5 +0.8**
DHY IAmb IAmb 01 41 52.5
comp=Z,11nm,1.4s
DHY Denali Highway 42.14 38 P **P** **01 41 38.6 -0.2**
baz=273
HDA Harding Lake 42.26 36 P **P** **01 41 39.4 -0.1**
baz=272
IL31 42.27 36 P **P** **01 41 40.0 +0.5**
ILAR Eielson Array 42.27 36 P **P** **01 41 39.8 +0.2**
comp=Z,2.1nm,0.8s,baz=273,slow=9.3,SNR=18
comp=Z,2.1nm,0.8s
D25K Kavik River 42.49 29 P **P** **01 41 42.1 +0.8**
D25K IAmb IAmb 01 41 44.5
comp=Z,8.1nm,0.7s
D25K Kavik River 42.49 29 P **P** **01 41 41.9 +0.5**
baz=267
G25K Bearman Lake 42.55 33 P **P** **01 41 42.7 +0.9**
baz=270
F25K Christian Rive 42.73 31 P **P** **01 41 44.9 +1.6**
baz=270
E25K Arctic Village 42.76 31 P **P** **01 41 44.9 +1.4**
E25K IAmb IAmb 01 41 46.0
comp=Z,7.9nm,1.1s
E25K Arctic Village 42.76 31 P **P** **01 41 44.8 +1.4**
baz=269,SNR=7.4
PRP Porcupine Dome 42.82 35 P **P** **01 41 43.7 -0.5**
PRP Porcupine Dome 42.82 35 P **P** **01 41 45.4 +1.3**
baz=272,SNR=5.4
FYU Fort Yukon 42.90 33 P **P** **01 41 46.0 +1.4**
FYU IAmb IAmb 01 41 47.7
comp=Z,10.0nm,0.7s
J25K Salcha River, 42.93 36 P **P** **01 41 45.3 +0.3**
J25K Salcha River, 42.93 36 P **P** **01 41 45.4 +0.3**
baz=273
BMAR Burnt Mountain 43.14 32 P **P** **01 41 48.0 +1.4**
F26K Sheenjek River 43.30 31 P **P** **01 41 49.4 +1.5**
baz=271
G26K Porcupine Rive 43.46 32 P **P** **01 41 51.0 +1.9**
baz=272,SNR=7.8
SCRK Sand Creek 43.59 37 P **P** **01 41 50.6 +0.2**
SCRK IAmb IAmb 01 42 00.5
comp=Z,9.9nm,1.5s
SCRK Sand Creek 43.59 37 P **P** **01 41 50.3 0.0**
baz=275
BMRM Bremner River 43.66 41 P **P** **01 41 51.0 +0.2**
baz=278
J26L Joseph Creek 43.72 36 P **P** **01 41 51.5 +0.1**
L26K Log Cabin Wild 43.97 38 P **P** **01 41 53.8 +0.4**
baz=276
VRDI Verde Repeater 44.17 41 P **P** **01 41 56.0 +0.9**
VRDI IAmb IAmb 01 42 25.8
comp=Z,14nm,1.4s
M26K Nabesna, AK 44.22 39 P **P** **01 41 56.4 +1.0**
baz=277
H27K Steamboat Moun 44.41 33 P **P** **01 41 58.0 +1.2**
baz=275
D27M Malcolm River 44.42 29 P **P** **01 41 58.1 +1.3**
baz=272
K27K Chicken 44.42 37 P **P** **01 41 57.9 +1.0**
K27K IAmb IAmb 01 41 59.1
comp=Z,8.6nm,1.2s

K27K **Chicken** 44.42 37 P P 01 41 57.7 +0.9
baz=277
L27K **Beaver Creek,** 44.66 38 P P 01 41 59.4 +0.6
baz=278
BCAR **Beaver Creek A** 44.67 38 P P 01 42 00.7 +1.7
EGAK **Eagle** 44.72 35 P P 01 41 59.7 +0.5
baz=277
M27K **Edge Creek, AK** 44.74 39 P P 01 42 01.4 +1.9
MK31 **Makanchi Array** 44.74 298 P P 01 41 59.9 +0.2
MK31 IAmb IAmb 01 42 00.7
comp=Z,5.0nm,0.7s
MK31 **Makanchi Array** 44.74 298 *ce*P P 01 41 59.7 0.0
MKAR **Makanchi Array** 44.74 298 P P 01 41 59.8 0.0
comp=Z,3.3nm,0.5s,baz=74,slow=6.8,SNR=53
comp=Z,3.3nm,0.5s
F28M **Old Crow** 44.93 31 P P 01 42 02.6 +1.7
F28M IAmb IAmb 01 42 03.6
comp=Z,7.8nm,1.0s
F28M **Old Crow** 44.93 31 P P 01 42 02.3 +1.4
baz=275,SNR=5.4
MAKZ **Makanchi** 44.94 298 P P 01 42 01.6 +0.3
MAKZ IAmb IAmb 01 42 02.3
comp=Z,6.3nm,0.8s
MAKZ **Makanchi** 44.94 298 P P 01 42 01.6 +0.3
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
E28M **Babbage River** 44.97 30 P P 01 42 02.0 +0.8
E28M IAmb IAmb 01 42 03.5
comp=Z,6.9nm,1.0s
E28M **Babbage River** 44.97 30 P P 01 42 02.6 +1.4
baz=274
GRNC **Granite Creek** 45.07 41 P P 01 42 01.9 -0.5
I28M **Miner Creek** 45.15 34 P P 01 42 04.4 +1.7
I28M IAmb IAmb 01 42 04.8
comp=Z,4.4nm,0.6s
I28M **Miner Creek** 45.15 34 P P 01 42 03.6 +0.8
baz=277
BVCY **Beaver Creek** 45.20 39 P P 01 42 04.0 +0.9
baz=279
CTGM **Chitina Glacie** 45.23 41 P P 01 42 04.4 +0.8
CTGM IAmb IAmb 01 42 13.8
comp=Z,11nm,1.2s
DAWY **Dawson** 45.58 36 P P 01 42 06.7 +0.5
E29M **Blow River** 45.59 30 P P 01 42 07.6 +1.5
E29M **Blow River** 45.59 30 P P 01 42 07.6 +1.5
baz=276
H29M **Whitestone** 45.68 33 P P 01 42 08.2 +1.4
H29M IAmb IAmb 01 42 10.0
comp=Z,4.6nm,0.8s
H29M **Whitestone** 45.68 33 P P 01 42 08.5 +1.6
baz=278
KURK **Kurchatov** 45.78 305 P P 01 42 07.6 -0.2
KURK **Kurchatov** 45.78 305 *ce*P P 01 42 07.9 +0.1
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK **Kurchatov** 45.78 305 *e*P P 01 42 07.9 +0.1
KURBB **Kurchatov Arra** 45.86 304 P P 01 42 08.2 -0.3
baz=73,slow=8.5,SNR=73
KURBB PcP PcP 01 43 44.7 -0.3
comp=Z,0.8nm,0.5s,baz=85,slow=3.9,SNR=4.1
comp=Z,8.5nm,0.5s
M29M **Somme Creek** 46.29 38 P P 01 42 13.0 +1.2
L29M **L29M** 46.31 37 P P 01 42 12.3 +0.5
L29M IAmb IAmb 01 42 20.2
comp=Z,5.4nm,1.0s
L29M **L29M** 46.31 37 P P 01 42 13.1 +1.2
baz=281
EPYK **Eagle Plains** 46.32 33 P P 01 42 13.4 +1.5
EPYK **Eagle Plains** 46.32 33 P P 01 42 12.8 +0.9
baz=279
G30M **tAoh Zraii Nji** 46.42 32 P P 01 42 14.0 +1.3
G30M IAmb IAmb 01 42 15.1
comp=Z,4.3nm,0.8s
G30M **tAoh Zraii Nji** 46.42 32 P P 01 42 13.9 +1.3
baz=279
K29M **Barlow Dome** 46.43 36 P P 01 42 14.4 +1.4
K29M **Barlow Dome** 46.43 36 P P 01 42 14.0 +1.0
baz=281
F30M **Barrier River** 46.49 31 P P 01 42 15.1 +1.9
baz=278
I30M **Mount Dempster** 46.66 34 P P 01 42 15.9 +1.2
I30M IAmb IAmb 01 42 16.8
comp=Z,5.0nm,0.8s
I30M **Mount Dempster** 46.66 34 P P 01 42 15.7 +1.0
baz=280,SNR=6.9
J30M **Hart River** 46.80 35 P P 01 42 16.9 +1.1
J30M **Hart River** 46.80 35 P P 01 42 16.9 +1.1
baz=281
M30M **Minto, Yukon** 47.02 38 P P 01 42 18.6 +1.2
M30M **Minto, Yukon** 47.02 38 P P 01 42 18.6 +1.2
baz=282
HYT **Haines Junctio** 47.09 40 P P 01 42 19.7 +1.6
HYT IAmb IAmb 01 42 21.6
comp=Z,9.1nm,0.9s
HYT **Haines Junctio** 47.09 40 P P 01 42 19.6 +1.5
baz=283
G31M **Satah River** 47.19 32 P P 01 42 19.8 +1.2
G31M IAmb IAmb 01 42 21.2
comp=Z,3.6nm,0.5s
G31M **Satah River** 47.19 32 P P 01 42 20.6 +2.0
baz=280
INK **Inuvik** 47.21 30 P P 01 42 19.9 +1.2
INK **Inuvik** 47.21 30 P P 01 42 19.6 +0.8
baz=280,SNR=12
INK **Inuvik** 47.21 30 P P 01 42 20.0 +1.2
INK pmax pmax
comp=Z,9.0nm,0.7s
INK **Inuvik** 47.21 30 P P 01 42 19.9 +1.2
comp=Z,8.7nm,0.6s,baz=278,slow=5.2,SNR=62
comp=Z,8.7nm,0.6s
P29M **Windy Craggy** 47.27 42 P P 01 42 20.5 +1.0
baz=284
F31M **Tsiigehtchic** 47.29 31 P P 01 42 20.4 +1.0
F31M IAmb IAmb 01 42 21.5
comp=Z,9.7nm,1.2s
F31M **Tsiigehtchic** 47.29 31 P P 01 42 20.6 +1.2
baz=280,SNR=5.2
N31M **Braeburn, Yuko** 47.74 39 P P 01 42 24.0 +0.9
baz=284
M31M **Drury Creek, Y** 48.19 38 P P 01 42 26.8 +0.2
M31M **Drury Creek, Y** 48.19 38 P P 01 42 27.5 +1.0
baz=284
WHY **Whitehorse** 48.38 40 P P 01 42 30.0 +1.9
WHY IAmb IAmb 01 42 35.2
comp=Z,7.7nm,1.3s
FARO **Faro, Yukon** 48.66 38 P P 01 42 31.6 +1.5
FARO **Faro, Yukon** 48.66 38 P P 01 42 31.3 +1.2
baz=285
A36M **Sachs Harbour** 49.20 24 P P 01 42 35.1 +1.1
A36M IAmb IAmb 01 42 35.5
comp=Z,3.6nm,0.7s
A36M **Sachs Harbour** 49.20 24 P P 01 42 35.2 +1.2
baz=284
P33M **Teslin, Yukon** 49.49 40 P P 01 42 37.5 +0.9
baz=287
TARG **Taragay, Kyrgy** 49.68 294 P P 01 42 38.9 +0.2
TARG **Taragay, Kyrgy** 49.68 294 P P 01 42 38.9 +0.2
TARG pmax pmax
comp=Z,40nm,1.5s
BVAR **Borovoye Array** 49.82 310 P P 01 42 39.0 -0.1
comp=Z,5.3nm,0.5s,baz=86,slow=9.8,SNR=51
comp=Z,5.3nm,0.5s
BRVK **Borovoye** 49.87 310 P P 01 42 40.0 +0.5
BRVK IAmb IAmb 01 42 41.2
comp=Z,5.1nm,0.8s
BRVK **Borovoye** 49.87 310 *ce*P P 01 42 40.0 +0.5
BRVK pmax pmax
comp=Z,19nm,2.5s
C36M **Paulatuk** 50.30 27 P P 01 42 43.2 +0.8
C36M IAmb IAmb 01 42 43.4
comp=Z,5.5nm,0.8s
C36M **Paulatuk** 50.30 27 P P 01 42 43.2 +0.8
baz=287,SNR=7.4
BOOM **Boomskoye usch** 50.59 295 P P 01 42 45.9 +0.6
BOOM **Boomskoye usch** 50.59 295 P P 01 42 45.9 +0.6
BOOM pmax pmax
comp=Z,28nm,1.4s
S34M **Telegraph Cree** 51.07 43 P P 01 42 49.0 +0.6
baz=290
DLBC **Dease Lake** 51.43 42 P P 01 42 51.1 -0.1
comp=Z,1.1nm,0.4s,baz=311,slow=9.3,SNR=2.6
comp=Z,1.1nm,0.4s
AAK **Ala-Archa** 51.48 296 P P 01 42 52.1 +0.1
AAK IAmb IAmb 01 43 30.6
comp=Z,9.6nm,1.4s
AAK **Ala-Archa** 51.48 296 P P 01 42 52.1 +0.1
AAK pmax pmax
comp=Z,10.0nm,1.5s
AAK **Ala-Archa** 51.48 296 *e*P P 01 42 52.1 +0.1
KK31 **Karatay Array** 53.87 298 P P 01 43 08.8 -0.6
KK31 IAmb IAmb 01 43 12.5
comp=Z,3.2nm,0.7s
KK31 **Karatay Array** 53.87 298 P P 01 43 08.8 -0.6
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR **Karatay Array** 53.87 298 P P 01 43 08.9 -0.5
KKAR IAmb IAmb 01 43 12.5
comp=Z,3.2nm,0.7s
KKAR **Karatay Array** 53.87 298 P P 01 43 09.3 -0.2
KKAR **Karatay Array** 53.87 298 P P 01 43 09.0 -0.5
KKAR pmax pmax
comp=Z,3.0nm,0.7s
ARU **Arti** 54.76 317 P P 01 43 15.4 -0.2
ARU **Arti** 54.76 317 *c* iP P 01 43 15.2 -0.5
ARU 01 44 18.5
ARU S S 01 50 52.7 +0.1
ARU SS SS 01 54 38.4 +2.9
ARU pmax pmax
comp=Z,24nm,1.3s
ARU **Arti** 54.76 317 *e*P P 01 43 16.2 +0.5
BBB **Bella Bella** 54.98 49 LR LR 02 09 15.0
comp=Z,23nm,18.0s,baz=268,slow=39
SPITS **Spitsbergen Ar** 55.52 349 P P 01 43 21.0 +0.2
comp=Z,9.2nm,1.0s,baz=81,slow=8.9,SNR=1.6
comp=Z,9.2nm,1.0s
RES **Resolute Bay** 55.80 16 P P 01 43 22.9 +0.1
RES **Resolute Bay** 55.80 16 P P 01 43 22.9 +0.1
RES pmax pmax
comp=Z,12nm,0.6s
YKA **Yellowknife Ar** 56.60 33 *ce*P P 01 43 28.6 -0.1
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA **Yellowknife Ar** 56.60 33 P P 01 43 29.1 +0.4
comp=Z,0.7nm,0.7s,baz=298,slow=7.1,SNR=10
comp=Z,0.7nm,0.7s
ABKAR **Akbulak array** 57.38 309 P P 01 43 34.7 +0.3
ABKAR **Akbulak array** 57.38 309 P P 01 43 34.9 +0.4
ABKAR IAmb IAmb 01 43 36.7
comp=Z,8.0nm,0.5s
KIRV **Kirov** 58.07 322 *ce*P P 01 43 39.8 +0.7
NEEM **North Greenlan** 59.36 4 *i* P P 01 43 46.5 -1.7
ARA0 **ARCESS Array S** 59.91 340 *e*P P 01 43 51.6 -0.1
ARCES **ARCESS Array B** 59.91 340 P P 01 43 51.3 -0.5
comp=Z,1.8nm,0.4s,baz=41,slow=7.5,SNR=19
comp=Z,1.8nm,0.4s
KTK1 **Kautokeino** 60.85 340 *e*P P 01 43 57.4 -0.8
KLMR **Klimovskoe** 60.98 328 *e*P P 01 43 57.0 -2.1
KLMR pmax pmax
comp=Z,30nm,1.7s
JETT **Jettan, Norway** 61.15 341 *e*P P 01 44 00.4 +0.2
NEW **Newport** 63.04 48 P P 01 44 13.6 +0.4
baz=305
WRA **Warramunga Arr** 63.63 193 *i* P P 01 44 17.2 -0.1
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA **Warramunga Arr** 63.63 193 P P 01 44 17.0 -0.3
comp=Z,1.7nm,0.5s,baz=11,slow=6.7,SNR=13
comp=Z,1.7nm,0.5s
FAUS **Fauske** 64.03 341 *e*P P 01 44 19.1 -0.2
GEYT **Alibeck** 64.61 299 P P 01 44 23.9 +0.1
comp=Z,2.5nm,0.7s,baz=288,slow=1.4,SNR=6.1
comp=Z,2.5nm,0.7s
MOR8 **Moi Rana** 65.21 341 *e*P P 01 44 25.6 -1.5
FINES **FINESS Array B** 65.47 333 P P 01 44 28.4 -0.4
comp=Z,7.1nm,0.6s,baz=38,slow=7.7,SNR=38
comp=Z,7.1nm,0.6s
OBN **Obninsk** 65.81 324 ⇓ *e*P P 01 44 31.0 -0.1
OBN *e* 01 45 04.8
OBN *e* 01 46 52.4
OBN *e*S S 01 53 52.4 +38
OBN pmax pmax
comp=Z,14nm,1.7s
OBN MLR MLR
comp=Z,127nm,17.0s
OBN **Obninsk** 65.81 324 *e*P P 01 44 31.4 +0.3
EGMT **Eagleton** 67.12 45 P P 01 44 39.2 -0.6
baz=309
NSS **Namsos** 67.15 341 *e*P P 01 44 39.6 +0.1
ASAR **Alice Springs** 67.35 193 P P 01 44 41.8 +0.5
comp=Z,0.7nm,0.5s,baz=11,slow=5.7,SNR=12
comp=Z,0.7nm,0.5s
BOZ **Bozeman (W)** 67.65 48 P P 01 44 43.0 -0.2
baz=309
NVAR **Mina Array Bea** 68.21 57 P P 01 44 48.7 +1.7
comp=Z,0.8nm,0.7s,baz=287,slow=7.2,SNR=8.0
comp=Z,0.8nm,0.7s
R11B **Troy Canyon, C** 69.93 56 P P 01 44 56.5 -1.1
baz=309
DOMB **Dombas** 69.96 340 *e*P P 01 44 57.2 0.0
NC405 **NORSAR Array S** 70.06 339 P P 01 44 57.8 0.0
KIV **Kislovodsk** 70.11 312 P P 01 44 57.8 -0.7
KIV **Kislovodsk** 70.11 312 *e*P P 01 44 59.9 +1.4
KIV pmax pmax
comp=Z,9.0nm,1.0s
KBZ **Khabaz** 70.14 312 *ce*P P 01 45 00.3 +1.8
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ **Khabaz** 70.14 312 P P 01 44 58.9 +0.3
comp=Z,2.8nm,0.7s,baz=30,slow=7.4,SNR=13
KBZ LR LR 02 21 14.2
comp=Z,92nm,18.3s,baz=357,slow=40
comp=Z,2.8nm,0.7s
NC204 **NORSAR Array S** 70.18 339 P P 01 44 58.4 -0.1
NB201 **NORSAR Array S** 70.23 339 P P 01 44 58.8 -0.1
NB2 **NORSAR Subarra** 70.26 339 P P 01 44 58.8 -0.2
comp=Z,5.1nm,0.4s,baz=32,slow=6.5
NB2 **NORSAR Subarra** 70.26 339 P P 01 44 58.8 -0.2
baz=32,slow=6.5
NB2 **NORSAR Subarra** 70.26 339 P P 01 44 55.2 -3.8
NOA **NORSAR Array B** 70.26 339 P P 01 44 58.5 -0.5
comp=Z,4.5nm,0.5s,baz=40,slow=5.6,SNR=50
comp=Z,4.5nm,0.5s
HFS **Hagfors** 70.33 337 P P 01 44 59.1 -0.3
comp=Z,11nm,0.5s,baz=43,slow=6.7,SNR=66
comp=Z,11nm,0.5s
PDAR **Pinedale Array** 70.61 49 P P 01 45 02.0 +0.3
comp=Z,0.6nm,0.6s,baz=271,slow=2.0,SNR=8.0
comp=Z,0.6nm,0.6s
AKASG **Malin Array Be** 72.08 324 *ce*P P 01 45 09.8 -0.3
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG **Malin Array Be** 72.08 324 P P 01 45 09.7 -0.5
comp=Z,3.1nm,0.5s,baz=38,slow=5.8,SNR=14
comp=Z,3.1nm,0.5s
AKBB **Malin Array Si** 72.08 324 *ce*P P 01 45 10.7 +0.6
HMU **Henry Mountain** 73.10 54 P P 01 45 16.3 -0.5
GURO **Guroymak-BITLI** 74.07 308 P P 01 45 21.6 -0.7
STKA **Stephens Creek** 74.62 185 P P 01 45 25.5 +0.4
comp=Z,1.8nm,0.6s,baz=18,slow=16,SNR=4.5
comp=Z,1.8nm,0.6s
KWP **Kalwaria Pacla** 75.63 326 P P 01 45 31.1 +0.1
KWP IAmb IAmb 01 45 32.6
comp=Z,9.0nm,1.0s
KWP **Kalwaria Pacla** 75.63 326 P P 01 45 31.1 +0.1
KWP pmax pmax
comp=Z,9.0nm,1.0s
ARPR **Arapgir-MALATY** 75.80 310 P P 01 45 33.0 +0.7
ARPR IAmb IAmb 01 45 49.5
comp=Z,6.9nm,1.1s
BUR08 **Bucovina Ar. S** 76.12 324 P P 01 45 34.3 +0.4
BURAR **Bucovina Array** 76.13 324 P P 01 45 34.1 +0.1
ECSD **EROS Data Cent** 76.72 42 P P 01 45 37.3 0.0
MLR **Muntele Rosu** 77.43 322 P P 01 45 41.6 +0.2
MLR IAmb IAmb 01 46 07.3
comp=Z,6.7nm,1.2s
MLR **Muntele Rosu** 77.43 322 P P 01 45 41.6 +0.2
MLR pmax pmax
comp=Z,7.0nm,1.2s
CLL **Collm** 77.91 332 P P 01 45 43.8 +0.1
CLL IAmb IAmb 01 45 44.7
comp=Z,6.3nm,1.1s
CLL **Collm** 77.91 332 P P 01 45 43.8 +0.1
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL **Collm** 77.91 332 *e*P P 01 45 43.0 -0.7
comp=Z,8.0nm,1.2s
CLL *ep*P pwP 01 46 02.0 +2.6
EKA **Eskdalemuir Ar** 78.81 343 P P 01 45 48.5 -0.2
comp=Z,3.7nm,1.0s,baz=24,slow=4.9,SNR=5.0
comp=Z,3.7nm,1.0s
KHC **Kasperske Hory** 79.54 331 *ce*P P 01 45 54.3 +1.5
KHC pmax pmax
comp=Z,2.0nm,0.8s
MMAI **Mount Meron Ar** 81.78 308 P P 01 46 06.5 +1.4
comp=Z,2.0nm,0.6s,baz=46,slow=4.2,SNR=4.3
comp=Z,2.0nm,0.6s
FUORN **Ofenpass-Fuorn** 82.85 331 P P 01 46 10.6 -0.1
FUORN IAmb IAmb 01 46 13.4
comp=Z,8.8nm,1.5s
TXAR **Lajitas Array** 83.29 56 P P 01 46 14.6 +1.4
comp=Z,0.4nm,0.6s,baz=289,slow=2.8,SNR=5.3
comp=Z,0.4nm,0.6s
DGAR **Diego Garcia** 83.73 254 P P 01 46 12.6 -2.7
DGAR **Diego Garcia** 83.73 254 *ce*P P 01 46 12.9 -2.4
DGAR pmax pmax
comp=Z,101nm,2.5s
ESDC **Sonseca Array** 93.60 338 P P 01 47 01.8 -0.5
comp=Z,1.0nm,1.0s,baz=36,slow=1.8,SNR=2.6
comp=Z,1.0nm,1.0s
H03N2 **Juan Fernandez** 143.20 91 T T 04 33 58.1
baz=296
H03N3 **Juan Fernandez** 143.22 91 T T 04 33 56.2
baz=296
H03N1 **Juan Fernandez** 143.22 91 T T 04 33 51.8
baz=296

*TAP **08** 01:35:14.8, 23°.97N × 121°.58E, h8km, ML3.6, C*
*JMA **08** 01:35:14.7 ± 0.1, 24°.0N ± 0°.2 × 121°.6E ± 0.8, h3km, MV3.1/13,*
TAIWAN REGION
ISC 08 01:35:15.1 ± 0.8, **23°.96N** ± 0°.01 × **121°.61E** ± 0°.02, **h9**km ± 4km,
n120, σ 0 **67**/220, **2C-34D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.02**	**352**	⇑ *i*P		**Pg**	**01 35 16.8**	**0.0**
HWA	baz=86			*i* S		**Sg**	**01 35 18.2**	**+0.2**
ETM	**Tongmen**	**0.10**	**274**	*i* P		**Pg**	**01 35 17.4**	**-0.3**
ETM	baz=265			*i* S		**Sg**	**01 35 18.9**	**-0.6**
TWD	**Chiawan**	**0.12**	**355**	⇓ *i*P		**Pg**	**01 35 17.9**	**-0.1**
TWD	baz=11			*i* S		**Sg**	**01 35 19.8**	**-0.2**
SHUL	**Shoufeng**	**0.17**	**194**	⇑ *i*P		**Pg**	**01 35 19.4**	**+0.6**
SHUL	baz=193			*i* S		**Sg**	**01 35 22.8**	**+1.5**
LXIB	**Xiulin Townshi**	**0.19**	**289**	⇓ *i*P		**Pg**	**01 35 18.9**	**-0.3**
LXIB	baz=280			*i* S		**Sg**	**01 35 21.8**	**-0.1**
ETL	**Fush Village**	**0.20**	**4**	⇓ *i*P		**Pg**	**01 35 19.2**	**-0.1**
ETL	baz=11			*i* S		**Sg**	**01 35 21.9**	**-0.3**
ESL	**Shilin**	**0.21**	**228**	⇓ *i*P		**Pg**	**01 35 19.2**	**-0.3**
ESL	baz=226			*i* S		**Sg**	**01 35 22.0**	**-0.5**
NACB	**Ninganchiao**	**0.21**	**357**	⇓ *i*P		**Pg**	**01 35 19.4**	**-0.2**
NACB	baz=9.0			*i* S		**Sg**	**01 35 22.2**	**-0.3**
TEGC	**Jichi Village**	**0.26**	**194**	*i* P		**Pb**	**01 35 21.4**	**-0.5**
TEGC	baz=199			S		**Sb**	**01 35 26.7**	**+0.3**
ETLH	**Xiulin Townshi**	**0.27**	**335**	⇓ *i*P		**Pg**	**01 35 20.5**	**-0.2**
ETLH	baz=337			*i* S		**Sg**	**01 35 24.0**	**-0.4**
WARBT	**Fenglin Townsh**	**0.31**	**220**	⇓ *i*P		**Pg**	**01 35 21.0**	**-0.4**
WARBT	baz=225			*i* S		**Sg**	**01 35 25.0**	**-0.6**
EGFH	**Guangfu**	**0.33**	**210**	*i* P		**Pg**	**01 35 21.6**	**-0.1**
EGFH	baz=215			*e*S		**Sg**	**01 35 25.9**	**-0.2**
WHF	**Hehuan Shan**	**0.36**	**301**	⇓ *i*P		**Pg**	**01 35 22.2**	**-0.3**
WHF	baz=301			*e*S		**Sg**	**01 35 27.3**	**-0.1**
EHP	**Heping Village**	**0.37**	**19**	*e*P		**Pg**	**01 35 21.8**	**-0.6**
EHP	baz=31			*e*S		**Sg**	**01 35 27.7**	**+0.3**
EAHA	**Aohua**	**0.39**	**18**	⇓ *i*P		**Pg**	**01 35 22.5**	**-0.3**
EAHA	baz=31			*e*S		**Sg**	**01 35 28.0**	**+0.1**
OWD	**Renai**	**0.40**	**270**	⇓ *i*P		**Pg**	**01 35 22.9**	**-0.1**
OWD	baz=278			S		**Sg**	**01 35 27.9**	**-0.3**
CHGB	**Renai**	**0.41**	**284**	⇓ *i*P		**Pg**	**01 35 23.3**	**+0.1**
CHGB	baz=283			*e*S		**Sg**	**01 35 29.2**	**+0.5**
FUSS	**Fushou**	**0.44**	**311**	⇓ *i*P		**Pg**	**01 35 23.9**	**0.0**
FUSS	baz=321			*e*S		**Sg**	**01 35 29.9**	**+0.2**
WUSB	**Renai**	**0.45**	**274**	⇓ *i*P		**Pg**	**01 35 24.1**	**+0.2**
WUSB	baz=282			*e*S		**Sg**	**01 35 30.1**	**+0.2**
ENA	**Nanau**	**0.48**	**15**	⇓ *i*P		**Pg**	**01 35 24.4**	**-0.2**
ENA	baz=17			*e*S		**Sg**	**01 35 30.6**	**-0.3**
TWT	**Tachien**	**0.49**	**307**	⇓ *i*P		**Pb**	**01 35 25.1**	**-1.0**
TWT	baz=305			*e*S		**Sb**	**01 35 32.5**	**-0.9**
HGSD	**Ruisui**	**0.49**	**200**	P		**Pb**	**01 35 25.6**	**-0.4**
HGSD	baz=211			*e*S		**Sb**	**01 35 34.7**	**+1.4**
TDCB	**Techi**	**0.51**	**306**	⇓ P		**Pg**	**01 35 25.2**	**+0.2**
TDCB	baz=305			*e*S		**Sb**	**01 35 32.3**	**-1.4**
EWUT	**Wuta**	**0.51**	**18**	⇓ *i*P		**Pg**	**01 35 24.9**	**-0.2**
EWUT	baz=20			*e*S		**Sg**	**01 35 31.5**	**-0.3**
NNSB	**Datong**	**0.51**	**336**	⇓ P		**Pg**	**01 35 25.2**	**+0.1**
NNSB	baz=337			*e*S		**Sg**	**01 35 31.6**	**-0.3**
NNSH	**Datong**	**0.51**	**336**	⇓ *e*P		**Pg**	**01 35 25.1**	**0.0**
NNSH	baz=331			*e*S		**Sg**	**01 35 31.5**	**-0.4**
EHY	**Hungye**	**0.52**	**210**	P		**Pg**	**01 35 24.9**	**-0.3**
EHY	baz=218			*e*S		**Sb**	**01 35 32.9**	**-1.2**
NNS	**Nan Shan**	**0.53**	**336**	⇓ P		**Pg**	**01 35 25.4**	**0.0**
NNS	baz=337			*e*S		**Sg**	**01 35 31.9**	**-0.4**
LATG	**Datong**	**0.58**	**353**	⇓ P		**Pg**	**01 35 26.2**	**-0.2**
LATG	baz=344			*e*S		**Sg**	**01 35 34.4**	**+0.3**
WPL	**Puli Township**	**0.60**	**275**	*e*P		**Pb**	**01 35 27.1**	**-0.7**
WPL	baz=274			*e*S		**Sb**	**01 35 35.7**	**-0.6**
SSLB	**Suanglung**	**0.62**	**254**	⇓ P		**Pg**	**01 35 27.1**	**-0.1**
SSLB	baz=265			*e*S		**Sg**	**01 35 34.6**	**-0.8**
DPDB	**Guoxing**	**0.63**	**277**	⇓ P		**Pb**	**01 35 27.7**	**-0.6**
DPDB	baz=276			*e*S		**Sb**	**01 35 36.1**	**-1.1**
YULB	**Yu-li**	**0.63**	**207**	P		**Pg**	**01 35 27.0**	**-0.4**
YULB	baz=216			*e*S		**Sg**	**01 35 35.1**	**-0.5**
WCS	**Beigang Elemen**	**0.64**	**279**	⇓ P		**Pb**	**01 35 27.9**	**-0.6**
WCS	baz=278			*e*S		**Sb**	**01 35 36.4**	**-1.2**

baz=278
NDT Datong Townshi 0.65 352 ⇓P Pg 01 35 27.7 0.0
baz=344
NDT eS Sg **01 35 36.0 -0.1**
baz=344
ESAO Su ao 0.65 19 eP Pg 01 35 27.5 -0.3
baz=11
ESAO eS Sg **01 35 35.4 -0.8**
baz=11
SMLT Sun Moon Lake 0.65 264 ⇓P Pb 01 35 27.9 -0.8
baz=262
SMLT eS Sg **01 35 36.5 +0.1**
baz=262
ECBN Changbin 0.66 193 eP Pn 01 35 29.8 -0.7
baz=193
EYUL Yuli 0.66 204 eP Pb 01 35 28.2 -0.7
baz=214
EYUL eS Sb **01 35 37.7 -0.4**
baz=214
TWF1 Yuli 0.67 205 eP Pg 01 35 27.6 -0.5
baz=213
TWF1 eS Sg **01 35 36.7 0.0**
baz=213
EOS4 EOS4 0.67 76 P Pb 01 35 29.2 +0.5
baz=85
EOS4 eS Sn **01 35 39.9 -0.9**
baz=85
ENTT Nioudou 0.68 357 ⇓P Pg 01 35 28.4 +0.1
baz=358
ENTT eS Sg **01 35 37.5 +0.3**
baz=358
NDS Dongshan 0.68 8 eP Pg 01 35 28.3 0.0
baz=10.0
NDS eS Sg **01 35 37.6 +0.4**
baz=10.0
WHP Taichung City 0.68 298⇓eP Pb 01 35 29.3 +0.1
baz=288
WHP eS Sb **01 35 39.1 +0.2**
baz=288
TWC Suao 0.68 19 ⇓P Pg 01 35 28.3 -0.1
baz=12
TWC eS Sg **01 35 37.9 +0.6**
baz=12
TYC Yuchr 0.69 266 eP Pg 01 35 28.4 0.0
baz=265
TYC eS Sg **01 35 37.3 -0.1**
baz=265
EOS3 EOS3 0.73 63 eP Pb 01 35 30.5 +0.7
baz=61
EOS2 EOS2 0.73 51 eP Pn 01 35 31.5 0.0
baz=35
WHYT Xinyi Township 0.74 249 eP Pg 01 35 29.3 -0.1
baz=249
WHYT eS Sb **01 35 39.4 -1.0**
baz=249
YHNB Yeheng 0.74 343⇓eP Pb 01 35 29.6 -0.6
baz=344
YHNB eS Sg **01 35 38.7 -0.4**
baz=344
NSK Sanguang 0.75 342⇓eP Pb 01 35 29.7 -0.7
baz=343
NSK eS Sg **01 35 39.2 -0.3**
baz=343
CHKH Chenggong 0.79 194 eP Pb 01 35 30.9 -0.1
baz=185
CHKH eS Sn **01 35 43.3 -1.0**
baz=185
FUSB Fushanzhiwuyua 0.80 359⇓eP Pg 01 35 30.6 0.0
baz=359
FUSB eS Sg **01 35 41.2 +0.3**
baz=359
NFF Wufeng Townshi 0.81 326⇓eP Pb 01 35 31.0 -0.4
baz=326
NFF eS Sb **01 35 41.8 -0.6**
baz=326
FULB Fuli 0.81 201 eP Pb 01 35 31.6 +0.3
baz=217
WJS Zhushan 0.82 261 eP Pn 01 35 32.3 -0.5
baz=260
WJS eS Sn **01 35 44.3 -0.7**
baz=260
NWLT Wulai 0.82 353⇓eP Pb 01 35 31.0 -0.6
baz=354
NWLT eS Sg **01 35 41.2 -0.5**
baz=354
WWF Wufeng 0.84 276 eP Pn 01 35 32.6 -0.4
baz=281
WNT Mingjian 0.85 265 eP Pn 01 35 32.7 -0.5
baz=264
WNT eS Sn **01 35 44.9 -0.9**
baz=264
WNT1 Nantou City 0.85 267 eP Pn 01 35 33.4 +0.1
baz=266
WNT1 eS Sn **01 35 46.5 +0.7**
baz=266
TWQ1 Liyutan 0.86 297 eP Pb 01 35 32.2 +0.1
baz=297
TWQ1 eS Sb **01 35 44.6 +0.8**
baz=297
ALS Alishan 0.86 239 eP Pb 01 35 31.9 -0.4
baz=239
ALS eS Sb **01 35 43.8 -0.3**
baz=239
NSTT Nanjuang 0.87 321 eP Pb 01 35 32.4 0.0
baz=321
NSTT eS Sb **01 35 43.8 -0.3**
baz=321
LIOB Emei 0.87 322 eP Pb 01 35 32.7 +0.2
baz=322
LIOB eS Sb **01 35 44.6 +0.4**
baz=322
TCU Taichung 0.87 283 eP Pn 01 35 33.1 -0.4
baz=276
CHKT Chengkung 0.88 195 eP Pb 01 35 32.2 -0.5
baz=196
CHKT eS Sn **01 35 46.5 -0.2**
baz=196
EHD Haiduan 0.89 205 eP Pg 01 35 31.9 -0.3
baz=216
EHD eS Sb **01 35 45.2 +0.6**
baz=216
NSY Sanyi 0.90 301 eP Pb 01 35 32.9 0.0
baz=300
NSY eS Sn **01 35 46.9 -0.2**
baz=300
NJD Zhudong 0.91 329 eP Pn 01 35 33.8 -0.3
baz=328
NJD eS Sn **01 35 46.6 -0.7**
baz=328
CHN5 Tsauling 0.93 247 eP Pb 01 35 33.6 +0.3
baz=236
CHN5 eS Sn **01 35 47.6 -0.2**
baz=236
ECS Chishang 0.93 203 eP Pn 01 35 35.9 +1.5
baz=205
ELDTW Lidau 0.94 215 eP Pg 01 35 32.8 -0.4
baz=208
ELDTW eS Sb **01 35 46.2 0.0**
baz=208
NMLH Miaoli 0.94 308 eP Pn 01 35 34.6 +0.1
baz=307
NMLH eS Sn **01 35 48.1 0.0**
baz=307
WCHH Zhanghua 0.97 277 eP Pn 01 35 35.5 +0.6
baz=276
WCHH eS Sn **01 35 51.0 +2.3**
baz=276
WGK Gukeng 0.99 254 eP Pn 01 35 35.7 +0.4
baz=255
NHDH Xindian Distri 1.00 356 eP Pg 01 35 33.9 -0.5
baz=356
NHDH eS Sg **01 35 47.5 0.0**
baz=356
SBCB Hsinchu 1.01 326 eP Pn 01 35 36.1 +0.7
baz=325
WDLH Douliu 1.02 255 eP Pn 01 35 36.0 +0.5
baz=255
WDLH eS Sn **01 35 50.0 +0.1**
baz=255
TWA Mucha 1.02 359 eP Pb 01 35 35.1 +0.2
baz=348
TWA eS Sg **01 35 47.1 -0.8**
baz=348
TATO Taipei 1.02 354 eP Pb 01 35 35.2 +0.3
baz=354
TATO eS Sg **01 35 47.6 -0.4**
baz=354
EDH Donghe 1.02 196 eP Pg 01 35 33.6 -1.2
baz=198
EDH eS Sb **01 35 48.9 +0.5**
baz=198
HSN Hsinchu 1.02 325 eP Pn 01 35 36.4 +0.8
baz=328
HSN eS Sn **01 35 50.7 +0.6**
baz=328
TIPB Shuangxi 1.03 11 eP Pg 01 35 34.8 -0.2
baz=2.0
TIPB eS Sg **01 35 47.8 -0.5**
baz=2.0
WCKO Fanlu 1.05 241 eP Pn 01 35 36.2 +0.1
baz=237
WCKO eS Sn **01 35 51.8 +0.9**
baz=237
NCUH Zhongli 1.08 339 eP Pn 01 35 37.0 +0.6
baz=338
NCU National Centr 1.08 339 eP Pn 01 35 37.8 +1.4
baz=349
NCU eS Sn **01 35 53.6 +2.1**
baz=349
STYH Taoyuan 1.09 224 eP Pb 01 35 36.0 -0.2
baz=226
STYH eS Sn **01 35 51.4 -0.4**
baz=226
TWB1 Santiao Chiao 1.10 18 eP Pb 01 35 36.4 +0.1
baz=10.0
TWB1 eS Sb **01 35 51.2 +0.4**
baz=10.0
CHN4 Tsaushan 1.11 237 eP Pn 01 35 37.3 +0.4
baz=230
CHN4 eS Sn **01 35 53.0 +0.8**
baz=230
TPUB Ta-pu 1.11 234 eP Pn 01 35 37.0 +0.1
baz=235
TPUB eS Sn **01 35 52.5 +0.2**
baz=235
STYT Tauyuan 1.11 225 eP Pn 01 35 36.8 -0.1
baz=226
STYT eS Sb **01 35 51.8 +0.6**
baz=226
NWF Wu-fen Shan 1.12 8 eP Pn 01 35 36.9 -0.1
baz=8.0
NWF eS Sg **01 35 50.9 -0.3**
baz=8.0
WFSB Wu-fen Shan 1.12 8 eP Pn 01 35 37.0 0.0
baz=8.0
WFSB eS Sg **01 35 50.9 -0.3**
baz=8.0
WRL Guolierlin Hig 1.13 267 eP Pn 01 35 37.4 +0.3
baz=267
WRL eS Sn **01 35 53.3 +0.6**
baz=267
LONT Longtian 1.14 203 eP Pb 01 35 36.8 -0.1
baz=213
LONT eS Sn **01 35 53.5 +0.6**
baz=213
RLNB Erlin 1.14 267 eP Pn 01 35 37.8 +0.5
baz=267
RLNB eS Sn **01 35 54.2 +1.2**
baz=267
WTK Tuku 1.15 257 eP Pn 01 35 38.9 +1.6
baz=258
TWS1 Kuangyinshan 1.15 351 eP Pn 01 35 38.1 +0.8
baz=360
TWS1 eS Sn **01 35 55.1 +1.8**
baz=360
WTP Ta-pu 1.16 232 eP Pn 01 35 37.7 +0.2
baz=233
WTP eS Sn **01 35 54.4 +1.0**
baz=233
SXI1 Grass Mountain 1.16 12 eP Pn 01 35 37.5 -0.1
baz=3.0
SXI1 eS Sn **01 35 53.3 -0.3**
baz=3.0
YM01 YM01 1.18 358 eP Pn 01 35 38.5 +0.6
baz=349
YM01 eS Sn **01 35 54.2 +0.1**
baz=349
TNOU National Taiwa 1.20 7 eP Pn 01 35 38.5 +0.5
baz=5.0
YM08 YM08 1.22 359 eP Pn 01 35 38.9 +0.4
baz=7.0
ANP Anpu 1.23 356 eP Pn 01 35 38.8 +0.3
baz=354
TWG Pinlang 1.23 204 eP Pg 01 35 38.0 -0.9
baz=215
TWGBT Beinan 1.23 203 eP Pg 01 35 38.0 -0.9
baz=215
TWK Hsinying 1.24 236 eP Pn 01 35 39.1 +0.5
baz=230
TWK eS Sn **01 35 56.1 +0.6**
baz=230
CHN1 Nanshi 1.25 232 eP Pn 01 35 39.5 +0.6
baz=237
CHN1 eS Sn **01 35 57.6 +1.8**
baz=237
SNST Tainan City 1.26 234 eP Pn 01 35 40.2 +1.4
baz=236
SNST eS Sn **01 35 57.1 +1.2**
baz=236
SGST Jiashian 1.28 227 eP Pn 01 35 38.8 -0.5
baz=229
SGST eS Sn **01 35 58.2 +1.6**
baz=229
SLGT Liugui 1.30 223 eP Pg 01 35 40.8 +0.6
baz=225
SLGT eS Sn **01 35 59.6 +2.6**
baz=225
JYNG Yonagunijimaku 1.32 68 S Sn 01 35 58.6 +1.2
ICHU Yijhu 1.36 244 eP Pg 01 35 41.6 +0.4
baz=247
YOJ Yonaguni jima 1.38 68 eP Pn 01 35 40.2 -0.3
baz=66
YOJ eS Sg **01 35 59.3 -0.1**
baz=66
YOJ Yonaguni jima 1.38 68 P Pn 01 35 40.2 -0.3
YOJ eS Sb **01 35 58.7 +0.1**
PHUB P'eng-hu 1.92 257 eP Pn 01 35 48.7 +0.7
baz=257
PHUB eS Sb **01 36 13.5 -0.8**
baz=257
IRIF Iriomote-Funau 1.98 79 S Sn 01 36 14.9 +1.3
JKRS Kuro-shima 2.21 82 eS Sn 01 36 20.7 +1.2
JIJ Ishigaki jima 2.35 80 P Pn 01 35 53.2 -0.7
JIJ S Sn **01 36 21.8 -1.1**
JISG Ishigakijimahi 2.54 75 P Pn 01 35 56.0 -0.6
JISG eS Sn **01 36 26.8 -0.8**

*IDC **08** 01:54:58.7±3.3,5.°33S×145.°59E,h40km±29km,mb4.0/15, mbtmp4.2/17,ML4.0/1,MS3.6/8,Error ellipse: s-maj=25.8km s-min=11.3km az=100.0*
*NEIC **08** 01:54:59.1±1.9,5.°33S±0.°09×145.°6E±0.°1,h35km±1km, mb4.5/38,Error ellipse: s-maj=21.4km s-min=15.2km az=86.0*
*DJA **08** 01:55:08.0±1.1,6.°S±10.°×14.°5E±1.°1,h118km±12km, M4.6/6,mb4.5/6,MLv4.7/1*
ISC 08 01:54:59.9±0.7,5.°48S±0.°07×145.°60E±0.°09,h35km,n81, σ2s08/43,mb4.5/32,MS3.6/6,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.20**	**158**	Pn	**Pn**	**01 56 03.0**	**+1.6**
PMG	**Port Moresby**	**4.20**	**158**	Pn	**Pn**	**01 56 02.8**	**+1.4**
	27nm,0.4s,baz=358,slow=11,SNR=13						
PMG				Sn	**Sn**	**01 56 49.9**	**+0.7**
	12nm,0.3s,baz=350,slow=6.1,SNR=1.8						
COEN	**Coen**	**8.75**	**196**		**Pn**	**01 57 06.7**	**+2.6**
CTA	**Charters Tower**	**14.53**	**178**	Pn	**P**	**01 58 30.1**	**+0.8**
	0.3nm,0.3s,baz=27,slow=17,SNR=3.6						
CTA				LR	LR	02 04 42.6	
	comp=Z,195nm,18.5s,baz=28,slow=40						
SWI	**Sorong**	**15.03**	**287**	P	**Pn**	**01 58 32.8**	**+3.0**
	53nm,0.9s						
MTN	**Manton Dam**	**16.04**	**242**	Pn	**Pn**	**01 58 43.8**	**+0.9**
MTN				IAmb	IAmb	01 58 50.8	
	comp=Z,27nm,1.0s						
WB0	**Warramunga Arr**	**17.90**	**217**		**Pn**	**01 59 07.1**	**+0.8**
WR0	**Warramunga Arr**	**17.96**	**216**		**Pn**	**01 59 07.9**	**+0.9**
WRAB	**Tennant Creek**	**18.06**	**216**	P	**Pn**	**01 59 08.9**	**+0.7**
WB2	**Warramunga Arr**	**18.06**	**216**	P	**Pn**	**01 59 08.5**	**+0.2**
WRA	**Warramunga Arr**	**18.07**	**216**	P	**Pn**	**01 59 06.3**	**-2.1**
WRA	**Warramunga Arr**	**18.07**	**216**	P	**Pn**	**01 59 07.8**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=39,slow=12,SNR=37						
WRA				S	**Sn**	**02 02 24.3**	**-4.8**
	comp=Z,0.8nm,0.8s,baz=45,slow=26,SNR=3.0						
WRA				PcP	**PcP**	**02 03 39.1**	**-2.8**
	comp=Z,2.1nm,0.8s,baz=9.6,slow=1.8,SNR=7.8						
	comp=Z,5.5nm,0.7s						
GUMO	**Guam**	**18.96**	**358**	LR	LR	02 06 47.1	
	comp=Z,182nm,18.2s,baz=156,slow=38						
KNRA	**Kununurra**	**19.38**	**237**	P	**P**	**01 59 23.1**	**+0.2**
SANI	**Sanana**	**19.86**	**279**	P	**P**	**01 59 27.4**	**-0.8**
EIDS	**Eidsvold**	**20.46**	**166**	P	**P**	**01 59 35.0**	**+0.3**
EIDS				IAmb	IAmb	01 59 44.5	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	**21.30**	**211**	P	**P**	**01 59 43.8**	**+0.1**
ASAR	**Alice Springs**	**21.30**	**211**	P	**P**	**01 59 44.9**	**+1.2**
ASAR	**Alice Springs**	**21.30**	**211**	P	**P**	**01 59 43.8**	**0.0**
	comp=Z,2.8nm,0.8s,baz=43,slow=8.6,SNR=18						
ASAR				S	**S**	**02 03 40.2**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=25,slow=27,SNR=5.7						
	comp=Z,2.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.18**	**236**	P	**P**	**02 00 00.4**	**-3.3**
STKA	**Stephens Creek**	**26.52**	**188**	P	**P**	**02 00 34.4**	**+0.1**
STKA	**Stephens Creek**	**26.52**	**188**	P	**P**	**02 00 33.9**	**-0.5**
	comp=Z,7.0nm,0.8s,baz=350,slow=12,SNR=13						
STKA				LR	LR	02 13 43.8	
	comp=Z,136nm,19.1s,baz=14,slow=42						
	comp=Z,7.0nm,0.8s						
BBOO	**Buckleboo**	**28.61**	**197**	P	**P**	**02 00 52.2**	**-0.8**
BBOO				IAmb	IAmb	02 01 21.4	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**30.09**	**211**	P	**P**	**02 01 04.9**	**-1.2**
H11S3	**WAKE ISLAND Hy**	**31.62**	**41**	T	T	02 34 35.9	
	baz=222						
H11S2	**WAKE ISLAND Hy**	**31.63**	**41**	T	T	02 34 32.2	
	baz=222						
H11S1	**WAKE ISLAND Hy**	**31.64**	**41**	T	T	02 34 34.8	
	baz=222						
JOW	**Kunigami**	**36.24**	**333**	LR	LR	02 14 10.2	
	comp=Z,108nm,20.5s,baz=132,slow=32						
NWAO	**Narrogin (SRO)**	**37.99**	**220**	LR	LR	02 19 03.7	
	comp=Z,257nm,18.6s,baz=355,slow=38						
JNU	**Nakatsue**	**40.85**	**341**	LR	LR	02 18 25.9	
	comp=Z,49nm,18.8s,baz=123,slow=35						
URZ	**Urewera**	**43.40**	**143**	LR	LR	02 20 37.1	
	comp=Z,117nm,18.9s,baz=121,slow=35						
RTZ	**Ruatahuna**	**43.55**	**144**	P	P	02 02 59.2	-1.4
KSRS	**Korea Array**	**45.78**	**340**	LR	LR	02 20 26.9	
	comp=Z,33nm,18.7s,baz=355,slow=34						
USRK	**Ussuriysk Ar.**	**50.95**	**347**	P	P	02 03 55.8	-2.1
	comp=Z,2.1nm,0.7s,baz=171,slow=9.8,SNR=4.3						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**51.78**	**299**	P	P	02 04 01.7	-2.9
	comp=Z,1.3nm,0.3s,baz=119,slow=7.9,SNR=7.6						
	comp=Z,1.3nm,0.3s						
PZH	**PanZhiHua**	**53.05**	**309**	P	**P**	**02 04 12.8**	**-1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,6.8s						
HHC	**Hu-ho-hao-te**	**55.67**	**329**	⇓P	P	02 04 28.3	-4.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
KLR	**Kul'dur**	**55.81**	**349**	P	P	02 04 31.6	-1.9
	comp=Z,1.6nm,0.8s,baz=155,slow=9.0,SNR=6.2						
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**59.26**	**8**	P	P	02 04 56.0	-1.8
PETK	**Petropavlovsk-**	**59.26**	**8**	P	P	02 04 54.5	-3.2
	comp=Z,7.2nm,1.0s,baz=173,slow=13,SNR=4.7						
	comp=Z,7.2nm,1.0s						
VNDA	**Vanda**	**72.51**	**176**	P	P	02 06 20.7	-2.0
VNDA				IAmb	IAmb	02 06 29.4	
	comp=Z,5.2nm,1.1s						
VNDA	**Vanda**	**72.51**	**176**	P	**P**	**02 06 21.6**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=21,slow=8.6,SNR=3.9						
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	**76.21**	**321**	P	P	02 06 42.6	-2.2
	comp=Z,0.7nm,0.7s,baz=110,slow=6.7,SNR=7.7						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**77.83**	**328**	P	P	02 06 51.4	-2.3
ZALV	**Zalesovo Beam**	**77.83**	**328**	P	P	02 06 50.2	-3.4
	comp=Z,1.2nm,0.8s,baz=110,slow=7.8,SNR=4.7						
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**79.98**	**323**	P	P	02 07 03.2	-2.4
	comp=Z,0.6nm,0.8s,baz=107,slow=4.8,SNR=5.2						
	comp=Z,0.6nm,0.8s						
K17K	**Iditarod**	**80.12**	**23**	P	P	02 07 04.4	-1.6
F17K	**Baldwin Pennin**	**81.20**	**19**	P	P	02 07 09.9	-1.8
F17K				IAmb	IAmb	02 07 12.0	
	comp=Z,3.2nm,0.9s						
G18K	**Tagagawik**	**81.75**	**20**	P	P	02 07 13.4	-1.2
G18K				IAmb	IAmb	02 07 14.5	
	comp=Z,4.8nm,1.0s						
J19K	**Poorman**	**81.82**	**22**	P	P	02 07 13.7	-1.4
J19K				IAmb	IAmb	02 07 25.0	
	comp=Z,3.6nm,1.2s						
E18K	**Tukpahlearik C**	**81.98**	**18**	P	P	02 07 14.6	-1.3
E18K				IAmb	IAmb	02 07 16.1	
	comp=Z,7.8nm,1.1s						
MAW	**Mawson**	**82.19**	**203**	P	**P**	**02 07 15.8**	**-1.1**
MAW				IAmb	IAmb	02 07 33.8	
	comp=Z,8.3nm,1.4s						
G19K	**Purcell Mounta**	**82.42**	**20**	P	**P**	**02 07 17.1**	**-1.1**
G19K				IAmb	IAmb	02 07 18.5	
	comp=Z,4.1nm,0.9s						
SKT	**Skwentna**	**82.49**	**25**	P	P	02 07 16.5	-2.2
SKT				IAmb	IAmb	02 07 42.8	
	comp=Z,9.6nm,1.4s						
C18K	**Utukok River**	**82.53**	**17**	P	P	02 07 17.0	-1.8
RC01	**Rabbit Creek A**	**82.88**	**26**	P	P	02 07 18.7	-2.0
E19K	**Redstone River**	**83.08**	**19**	P	P	02 07 20.1	-1.5
E19K				IAmb	IAmb	02 07 22.2	
	comp=Z,4.8nm,0.8s						
C19K	**Lookout Ridge**	**83.27**	**17**	P	**P**	**02 07 22.0**	**-0.6**
D19K	**Kuna River**	**83.37**	**18**	P	P	02 07 21.4	-1.7
D19K				IAmb	IAmb	02 07 22.9	
	comp=Z,6.5nm,1.1s						
IMAR	**Indian Mountai**	**83.51**	**21**	P	**P**	**02 07 22.9**	**-0.9**
MLY	**Manley**	**84.17**	**22**	P	**P**	**02 07 26.3**	**-1.0**
MLY				IAmb	IAmb	02 07 26.9	
	comp=Z,4.6nm,0.9s						
RND	**Reindeer**	**84.22**	**24**	P	P	02 07 25.7	-1.9
NRIK	**Noril'sk**	**84.36**	**342**	P	P	02 07 25.6	-2.5
	comp=Z,4.5nm,0.9s,baz=96,slow=6.0,SNR=6.3						
	comp=Z,4.5nm,0.9s						
QSPA	**South Pole Qui**	**84.48**	**180**	P	**P**	**02 07 27.9**	**-1.1**
QSPA	**South Pole Qui**	**84.48**	**180**	P	**P**	**02 07 28.0**	**-1.0**
	comp=Z,4.2nm,0.6s,baz=295,slow=1.3,SNR=11						
	comp=Z,4.2nm,0.6s						
DHY	**Denali Highway**	**84.70**	**25**	P	**P**	**02 07 29.1**	**-1.0**
DHY				IAmb	IAmb	02 07 36.4	
	comp=Z,2.9nm,0.8s						
CCB	**Clear Creek Bu**	**85.15**	**23**	P	P	02 07 28.7	-3.4
CCB				IAmb	IAmb	02 07 30.9	
	comp=Z,4.3nm,0.8s						
G23K	**Bananza Creek**	**85.18**	**21**	P	**P**	**02 07 32.1**	**-0.3**
G23K				IAmb	IAmb	02 07 32.3	
	comp=Z,2.4nm,0.9s						
D22K	**Ayikyak River**	**85.27**	**19**	P	P	02 07 30.0	-2.7
D22K				IAmb	IAmb	02 07 33.1	
	comp=Z,3.0nm,0.9s						
N25K	**Chitina, Valde**	**85.36**	**27**	P	P	02 07 28.3	-5.1
HDA	**Harding Lake**	**85.40**	**24**	P	P	02 07 30.4	-3.1
HDA				IAmb	IAmb	02 07 52.3	
	comp=Z,3.2nm,1.1s						
BVAR	**Borovoye Array**	**85.53**	**324**	P	P	02 07 31.9	-2.4
	comp=Z,1.0nm,0.7s,baz=109,slow=5.2,SNR=7.4						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**85.56**	**23**	P	P	02 07 30.9	-3.3
ILAR	**Eielson Array**	**85.56**	**23**	P	P	02 07 31.4	-2.8
	comp=Z,3.6nm,0.8s,baz=250,slow=5.0,SNR=38						
	comp=Z,3.6nm,0.8s						
ABKAR	**Akbulak array**	**91.28**	**319**	P	P	02 07 59.1	-2.7
YKA	**Yellowknife Ar**	**99.36**	**28**	P	**Pdif**	**02 08 35.0**	**-3.4**
	comp=Z,0.3nm,0.8s,baz=262,slow=4.3,SNR=3.9						
	comp=Z,0.3nm,0.8s						
PLCA	**Paso Flores**	**123.31**	**148**	PKP	**PKPdf**	**02 13 53.4**	**-0.4**
	comp=Z,1.8nm,1.0s,baz=249,slow=3.8,SNR=5.3						
CPUP	**Villa Florida**	**141.35**	**146**	PKP	**PKPdf**	**02 14 25.4**	**-2.5**
	comp=Z,1.7nm,0.6s,baz=212,slow=2.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**143.61**	**285**	PKP	PKPab	02 14 27.5	-1.2
	comp=Z,2.2nm,0.3s,baz=84,slow=2.8,SNR=1.5						
DBIC	**Dimbokro**	**150.60**	**274**	PKPbc	**PKPdf**	**02 14 48.2**	**+4.4**
	comp=Z,14nm,0.8s,baz=150,slow=4.5,SNR=12						
BDFB	**Brasilia**	**155.06**	**147**	PKPbc	**PKPdf**	**02 14 57.4**	**+7.0**
	comp=Z,2.6nm,0.6s,baz=189,slow=5.1,SNR=6.1						

JMA ***08*** *02:02:00.4±0.1, 24°.2N±0°.3×121°.8E±0°.4, h0km, TAIWAN REGION*
TAP ***08*** *02:02:00.1, 24°.23N×121°.75E, h6km, ML3.1, D*
ISC 08 02:02:00.7±0.9**, 24°22N**±0°.02×**121°.77E**±0°.03**, h9**km±6km**, n62, σ0°.54**/105**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=2.0	**0.09**	**346**	*i* P	**Pg**		**02 02 03.1**	**-0.1**
EAHA	**Aohua** baz=356	**0.11**	**348**	P	**Pg**		**02 02 03.3**	**0.0**
EAHA	baz=356			*e*S	**Sg**		**02 02 05.9**	**+0.7**
ETL	**Fush Village** baz=237	**0.14**	**245**	P	**Pg**		**02 02 03.8**	**-0.1**
ETL	baz=237			*i* S	**Sg**		**02 02 06.3**	**+0.2**
NACB	**Ninganchiao** baz=247	**0.16**	**254**	P	**Pg**		**02 02 04.0**	**-0.1**
NACB	baz=247			*i* S	**Sg**		**02 02 06.7**	**+0.1**
ENA	**Nanau** baz=1.0	**0.21**	**354**	P	**Pg**		**02 02 05.0**	**0.0**
ENA	baz=1.0			*e*S	**Sg**		**02 02 07.4**	**-0.5**
TWD	**Chiawan** baz=220	**0.21**	**228**	*e*P	**Pg**		**02 02 04.6**	**-0.4**
TWD	baz=220			*e*S	**Sg**		**02 02 07.9**	**0.0**
EWUT	**Wuta** baz=8.0	**0.23**	**3**	*i* P	**Pg**		**02 02 05.3**	**0.0**
EWUT	baz=8.0			*i* S	**Sg**		**02 02 08.8**	**+0.4**
ETLH	**Xiulin Townshi** baz=264	**0.26**	**267**	*i* P	**Pg**		**02 02 05.9**	**0.0**
ETLH	baz=264			*e*S	**Sg**		**02 02 09.2**	**-0.3**
ETM	**Tongmen** baz=221	**0.35**	**225**	*e*P	**Pg**		**02 02 07.3**	**-0.4**
ESAO	**Su ao** baz=14	**0.36**	**11**	P	**Pg**		**02 02 07.7**	**-0.2**
ESAO	baz=14			S	**Sg**		**02 02 13.3**	**+0.6**
LXIB	**Xiulin Townshi** baz=235	**0.38**	**238**	P	**Pg**		**02 02 07.7**	**-0.5**
LXIB	baz=235			*e*S	**Sb**		**02 02 14.2**	**-1.5**
LATG	**Datong** baz=326	**0.38**	**325**	P	**Pg**		**02 02 08.5**	**+0.2**
LATG	baz=326			S	**Sb**		**02 02 14.9**	**-0.9**
TWC	**Suao** baz=15	**0.40**	**11**	P	**Pg**		**02 02 08.4**	**-0.1**
TWC	baz=15			*e*S	**Sb**		**02 02 15.0**	**-1.0**
NNSB	**Datong** baz=300	**0.41**	**301**	P	**Pg**		**02 02 09.1**	**+0.4**
NNSB	baz=300			S	**Sg**		**02 02 14.9**	**+0.8**
NDS	**Dongshan** baz=356	**0.41**	**354**	P	**Pg**		**02 02 09.1**	**+0.3**
NDS	baz=356			S	**Sb**		**02 02 15.7**	**-1.0**
NNS	**Nan Shan** baz=301	**0.42**	**302**	P	**Pg**		**02 02 09.3**	**+0.4**
NDT	**Datong Townshi** baz=330	**0.45**	**329**	P	**Pg**		**02 02 09.8**	**+0.4**
NDT	baz=330			*e*S	**Sb**		**02 02 17.0**	**-0.5**
ENTT	**Nioudou** baz=338	**0.46**	**337**	P	**Pg**		**02 02 10.0**	**+0.4**
ENTT	baz=338			*e*S	**Sb**		**02 02 16.9**	**-1.0**
WHF	**Hehuan Shan** baz=258	**0.46**	**261**	P	**Pg**		**02 02 10.1**	**+0.2**
WHF	baz=258			S	**Sg**		**02 02 16.4**	**+0.4**
SHUL	**Shoufeng** baz=200	**0.47**	**203**	*e*P	**Pb**		**02 02 11.0**	**-0.1**
SHUL	baz=200			*e*S	**Sb**		**02 02 19.8**	**+1.7**
FUSS	**Fushou** baz=272	**0.48**	**273**	P	**Pb**		**02 02 10.5**	**-0.9**
ESL	**Shilin** baz=213	**0.51**	**217**	*e*P	**Pb**		**02 02 10.8**	**-0.9**
ESL	baz=213			S	**Sb**		**02 02 20.2**	**+1.0**
TWT	**Tachien** baz=272	**0.54**	**274**	*e*P	**Pb**		**02 02 11.9**	**-0.5**
TWT	baz=272			*e*S	**Sb**		**02 02 19.7**	**-0.7**
ILA	**Ilan** baz=1.0	**0.54**	**358**	*e*S	**Sb**		**02 02 20.5**	**+0.2**
TEGC	**Jichi Village** baz=199	**0.55**	**202**	*e*P	**Pb**		**02 02 11.9**	**-0.6**
TEGC	baz=199			*e*S	**Sb**		**02 02 21.4**	**+0.9**
TDCB	**Techi** baz=272	**0.56**	**274**	*i* P	**Pb**		**02 02 12.1**	**-0.6**
TDCB	baz=272			S	**Sb**		**02 02 19.9**	**-0.9**
FUSB	**Fushanzhiwuyua** baz=344	**0.56**	**343**	P	**Pb**		**02 02 12.0**	**-0.7**
FUSB	baz=344			S	**Sb**		**02 02 20.3**	**-0.6**
CHGB	**Renai** baz=252	**0.56**	**254**	P	**Pb**		**02 02 11.9**	**-1.0**
CHGB	baz=252			S	**Sb**		**02 02 20.4**	**-0.7**
YHNB	**Yeheng** baz=322	**0.57**	**322**	*i* P	**Pb**		**02 02 12.5**	**-0.4**
YHNB	baz=322			S	**Sb**		**02 02 20.6**	**-0.6**
NSK	**Sanguang** baz=322	**0.59**	**321**	P	**Pb**		**02 02 12.7**	**-0.5**
NSK	baz=322			*e*S	**Sb**		**02 02 21.0**	**-0.6**
OWD	**Renai** baz=242	**0.60**	**244**	*e*P	**Pb**		**02 02 12.6**	**-0.9**
OWD	baz=242			*e*S	**Sb**		**02 02 22.1**	**0.0**
NWLT	**Wulai** baz=337	**0.60**	**337**	P	**Pb**		**02 02 13.0**	**-0.5**
NWLT	baz=337			*e*S	**Sb**		**02 02 21.9**	**-0.2**
WARBT	**Fenglin Townsh** baz=212	**0.61**	**215**	P	**Pg**		**02 02 12.5**	**0.0**
WARBT	baz=212			*e*S	**Sb**		**02 02 22.5**	**+0.3**
EGFH	**Guangfu** baz=207	**0.63**	**209**	*e*P	**Pb**		**02 02 13.4**	**-0.4**
WUSB	**Renai** baz=247	**0.63**	**249**	P	**Pb**		**02 02 13.1**	**-0.9**
WUSB	baz=247			*e*S	**Sb**		**02 02 22.5**	**-0.5**
NFF	**Wufeng Townshi** baz=305	**0.72**	**305**	*e*P	**Pb**		**02 02 15.3**	**-0.1**
NFF	baz=305			*e*S	**Sb**		**02 02 25.0**	**-0.4**
WHP	**Taichung City** baz=273	**0.75**	**275**	*e*P	**Pb**		**02 02 16.0**	**0.0**
WHP	baz=273			*e*S	**Sb**		**02 02 26.7**	**+0.3**
TIPB	**Shuangxi** baz=5.0	**0.75**	**4**	*e*P	**Pg**		**02 02 15.2**	**0.0**
NHDH	**Xindian Distri** baz=344	**0.77**	**344**	*e*P	**Pb**		**02 02 16.3**	**0.0**
TWA	**Mucha** baz=349	**0.78**	**348**	*e*P	**Pb**		**02 02 16.3**	**-0.1**
DPDB	**Guoxing** baz=255	**0.79**	**257**	*e*P	**Pb**		**02 02 16.4**	**-0.2**
DPDB	baz=255			*e*S	**Sb**		**02 02 27.6**	**+0.1**
HGSD	**Ruisui** baz=201	**0.79**	**203**	P	**Pb**		**02 02 16.4**	**-0.2**
WCS	**Beigang Elemen** baz=257	**0.80**	**258**	*e*P	**Pb**		**02 02 16.4**	**-0.3**
WCS	baz=257			*e*S	**Sb**		**02 02 27.4**	**-0.1**
LIOB	**Emei** baz=302	**0.80**	**302**	*e*P	**Pb**		**02 02 17.4**	**+0.5**
LIOB	baz=302			S	**Sb**		**02 02 28.7**	**+0.8**
NSTT	**Nanjuang** baz=300	**0.81**	**301**	P	**Pb**		**02 02 17.0**	**+0.1**
NSTT	baz=300			S	**Sb**		**02 02 28.6**	**+0.7**
EHY	**Hungye** baz=207	**0.82**	**210**	*e*P	**Pb**		**02 02 16.8**	**-0.3**
EHY	baz=207			*e*S	**Sb**		**02 02 28.1**	**-0.2**
SSLB	**Suanglung** baz=238	**0.86**	**240**	P	**Pg**		**02 02 16.9**	**-0.3**
SSLB	baz=238			*e*S	**Sb**		**02 02 30.0**	**+0.6**
SMLT	**Sun Moon Lake** baz=245	**0.86**	**247**	P	**Pb**		**02 02 17.6**	**-0.3**
SMLT	baz=245			*e*S	**Sb**		**02 02 29.9**	**+0.4**
TYC	**Yuchr** baz=248	**0.89**	**249**	*e*P	**Pb**		**02 02 17.8**	**-0.5**
TYC	baz=248			*e*S	**Sb**		**02 02 30.5**	**+0.3**
YULB	**Yu-li** baz=206	**0.93**	**208**	*e*P	**Pg**		**02 02 18.0**	**-0.6**
EYUL	**Yuli** baz=203	**0.96**	**205**	*e*P	**Pn**		**02 02 19.9**	**-0.4**
WHYT	**Xinyi Township** baz=236	**0.98**	**238**	*e*P	**Pb**		**02 02 20.0**	**+0.1**
CHKH	**Chenggong** baz=197	**1.08**	**198**	*e*S	**Sn**		**02 02 36.9**	**-0.2**
FULB	**Fuli** baz=201	**1.10**	**203**	*e*P	**Pb**		**02 02 21.9**	**-0.1**
FULB	baz=201			*e*S	**Sn**		**02 02 37.9**	**+0.2**
ALS	**Alishan** baz=229	**1.13**	**231**	*e*P	**Pb**		**02 02 22.4**	**-0.1**
ALS	baz=229			*e*S	**Sn**		**02 02 38.4**	**-0.3**
YOJ	**Yonaguni jima**	**1.16**	**78**	P	**Pg**		**02 02 22.8**	**-0.2**
CHN5	**Tsauling** baz=237	**1.17**	**238**	*e*P	**Pn**		**02 02 24.1**	**+0.8**
CHKT	**Chengkung** baz=196	**1.17**	**198**	*e*S	**Sn**		**02 02 39.7**	**+0.3**
EHD	**Haiduan** baz=204	**1.18**	**206**	*e*P	**Pn**		**02 02 23.9**	**+0.4**
ELDTW	**Lidau** baz=212	**1.23**	**214**	*e*P	**Pg**		**02 02 23.9**	**-0.5**
ELDTW	baz=212			*e*S	**Sn**		**02 02 41.0**	**-0.1**
STYH	**Taoyuan** baz=220	**1.38**	**221**	P	**Pn**		**02 02 26.4**	**+0.2**
STYH	baz=220			S	**Sb**		**02 02 44.8**	**+0.3**
JISG	**Ishigakijimahi**	**2.35**	**81**	S	**Sn**		**02 03 08.8**	**+0.4**

SKHL ***08*** *02:03:03.7±0.3, 45°.70N×153°.20E, h47km±2km, mb4.5/3*
IDC ***08*** *02:03:07.7±8.3, 47°.17N×152°.38E, h56km±57km, mb3.5/7, mbtmp3.8/8, ML1.9/1, MS2.9/1, Error ellipse: s-maj=87.3km s-min=39.7km az=146.0*
ISC 08 02:03:02.9±2.2**, 46°.6N**±0°.3×**152°.8E**±0°.3**, h50**km**, n22, σ2°.27/19, mb3.9/7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.70**	**250**	*e*P		**Pn**	**02 03 59.6**	**+2.0**
KUR	60nm,0.4s			AMB		AMB	02 04 03.1	
KUR				*e*S		**Sn**	**02 04 41.7**	**+1.8**
KUR	170nm,0.5s			A		A	02 04 50.3	
KUR	80nm,0.5s			A		A	02 04 50.3	
YUK	**Yuzh-Kuril'sk**	**5.53**	**244**	*e*P		**Pn**	**02 04 23.7**	**+1.1**
YUK	50nm,0.5s			AMB		AMB	02 04 27.4	
YUK				*e*S		**Sn**	**02 05 23.5**	**-1.2**
YUK	160nm,0.6s			A		A	02 05 34.9	
YUK	110nm,0.6s			A		A	02 05 34.9	
NMR	**Nemuro--Hokkai**	**5.97**	**239**	*e*P		**Pn**	**02 04 28.4**	**-0.3**
NMR	10.0nm,0.2s			AMB		AMB	02 04 29.1	
NMR				*e*S		**Sn**	**02 05 31.6**	**-4.1**
NMR	20nm,0.2s			A		A	02 05 37.6	
NMR	10.0nm,0.2s			A		A	02 05 37.6	
AKK	**Akkeshi**	**6.70**	**240**	*e*P		**Pn**	**02 04 38.2**	**-0.5**
AKK				*e*S		**Sn**	**02 05 49.2**	**-4.5**
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=207,slow=12,SNR=1.7	**7.22**	**24**	P		**Pn**	**02 04 47.1**	**+1.4**
PETK	1.7nm,0.9s,baz=271,slow=26,SNR=1.4 3.9nm,1.0s			S		**Sn**	**02 06 00.9**	**-5.3**
KLR	**Kul'dur** comp=Z,48nm,18.0s,baz=34,slow=42	**14.33**	**288**	LR		LR	02 12 49.2	
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=10	**29.22**	**152**	T		T	02 40 11.0	
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=30	**29.24**	**152**	T		T	02 40 32.3	
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=27	**29.24**	**152**	T		T	02 40 32.3	
H11S1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=47	**30.30**	**153**	T		T	02 41 52.0	
H11S3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=46	**30.31**	**153**	T		T	02 41 42.5	
H11S2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=42	**30.32**	**153**	T		T	02 41 51.5	
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=68,slow=8.1,SNR=4.4	**46.79**	**297**	P		**P**	**02 11 27.3**	**0.0**
MKAR	0.3nm,0.7s,baz=50,slow=4.5,SNR=2.8 0.2nm,0.5s			PcP		**PcP**	**02 13 01.1**	**+1.4**
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=68,slow=8.1,SNR=3.3 0.4nm,0.7s	**47.33**	**304**	P		**P**	**02 11 30.1**	**-1.2**
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=49,slow=6.5,SNR=2.3	**50.76**	**309**	P		**P**	**02 11 57.6**	**+0.1**
BVAR	0.5nm,0.7s,baz=90,slow=5.8,SNR=2.5 0.3nm,0.4s			PcP		**PcP**	**02 13 14.8**	**+0.9**
FINES	**FINESS Array B** 1.5nm,0.7s,baz=38,slow=7.0,SNR=7.2 1.5nm,0.7s	**64.05**	**335**	P		**P**	**02 13 31.4**	**+0.4**
NOA	**NORSAR Array B** 1.1nm,0.9s,baz=31,slow=5.1,SNR=4.2 1.1nm,0.9s	**68.26**	**341**	P		**P**	**02 13 58.4**	**+0.3**
HFS	**Hagfors** 2.9nm,0.8s,baz=48,slow=4.5,SNR=10 2.9nm,0.8s	**68.49**	**339**	P		**P**	**02 14 00.3**	**+0.9**
AKASG	**Malin Array Be** 1.2nm,0.5s,baz=33,slow=5.9,SNR=4.3 1.2nm,0.5s	**71.52**	**326**	P		**P**	**02 14 18.7**	**+0.6**
H03N2	**Juan Fernandez** baz=308,slow=77,SNR=3.8	**138.98**	**90**	T		T	04 57 54.5	
H03N3	**Juan Fernandez** baz=308,slow=77,SNR=2.7	**138.99**	**90**	T		T	04 57 53.0	
H03N1	**Juan Fernandez** baz=308,slow=77,SNR=5.2	**139.00**	**90**	T		T	04 57 41.4	

DNK ***08*** *02:29:12.4±5.1, 80°.14N×1°.54E, h0km±179km, ML3.7*
NEIC ***08*** *02:29:14.9, 79°.78N×2°.06E, h10km*
IPGP ***08*** *02:29:14.0, 79°.81N×2°.03E, h14km, Mw5.6, Fault plane solution: NP1:ϕs127.00000°,δ70.00000°,λ175.00000°. NP2:ϕs219.00000°,δ85.00000°,λ20.00000°.*
NEIC ***08*** *02:29:14.9, 79°.88N×2°.63E, h24km, Moment Tensor Solution. Duration: 3s2 Moment tensor: Scale 10¹⁷Nm; Mrr-0.53; Mθθ-2.93; Mϕϕ3.47; Mrθ-0.38; Mθϕ-1.01; Mϕr-2.47; Fault plane solution: Mo4.04000×10¹⁷ NP1: ϕs214.70000°,δ87.11000°,λ32.78000°. NP2: ϕs122.84000°,δ57.27000°,λ176.57000°. Principal axes: T 4.7174, Plg25.0000°, Azm84.0000°; N -1.3487, Plg57.0000°, Azm219.0000°; P -3.3687, Plg20.0000°, Azm344.0000°;*
NEIC ***08*** *02:29:14.9, 79°.78N×2°.06E, h24km*
NAO ***08*** *02:29:14.6±5.7, 79°.94N×3°.76E, ML5.8*
MOS ***08*** *02:29:15.8±1.0, 79°.66N×2°.48E, h10km, mb5.8/69, MS5.0/55, Error ellipse: s-maj=22.7km s-min=3.2km az=93.2*
NEIC ***08*** *02:29:16.9±1.5, 79°.76N±0°.09×2°.9E±0°.4, h10km±1km, mb5.4/230, Ms_20 5.1/442, Mwb5.6/81, Mww5.7/31, Error ellipse: s-maj=16.2km s-min=10.1km az=208.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.16; Mθθ-2.62; Mϕϕ2.78; Mrθ-0.05; Mθϕ-0.99; Mϕr-0.50; Fault plane solution: Mo2.92000×10¹⁷ NP1: ϕs124.66000°,δ81.83000°,λ176.01000°. NP2: ϕs215.23000°,δ86.06000°,λ8.19000°. Principal axes: T 3.0262, Plg9.0000°, Azm80.0000°; N -0.2265, Plg81.0000°, Azm241.0000°; P -2.7997, Plg3.0000°, Azm350.0000°;*
BJI ***08*** *02:29:16.0±0.0, 79°.90N×3°.70E, h10km, mb5.5/81, mB5.5/65, Ms5.8/87, Ms7 5.5/84*
IDC ***08*** *02:29:16.0±0.3, 79°.76N×2°.46E, h0km, mb5.0/41, mbtmp5.0/44, ML4.1/3, MS5.1/91, Error ellipse: s-maj=10.0km s-min=6.8km az=35.0*
GCMT ***08*** *02:29:17.9±0.1, 79°.79N±0°.01×2°.25E±0°.03, h18km, MW5.7/159, Moment Tensor Solution. s142,c250; s159,c332; Duration: 1s6 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.47±.04; Mθθ-3.18±.04; Mϕϕ3.65±.04; Mrθ0.34±.09; Mθϕ-1.19±.03; Mϕr-1.26±.09; Best double couple: Mo3.79900×10¹⁷ NP1:ϕs124.00000°,δ81.00000°, λ167.00000°. NP2:ϕs217.00000°,δ77.00000°,λ9.00000°. Principal axes: T 4.2110, Plg15.0000°, Azm80.0000°; N -0.8280, Plg74.0000°, Azm270.0000°; P -3.3870, Plg3.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KOLA ***08*** *02:29:19.8, 79°.30N×3°.68E, h0km, ML3.8, Greenland sea,Knipovich ridge, north*
FCIAR ***08*** *02:29:19.0, 79°.53N×3°.99E, h10km, station ZFI2 has station magnitude of 5.90 station OMEGA has station magnitude of 5.90 station KLMR has station magnitude of 6.42 station PRGR has station magnitude of 6.47*
BGR ***08*** *02:29:20.6, 80°.06N×3°.56E, h10km, mb5.1, Ms4.7*
BER ***08*** *02:29:22.7±5.0, 79°.41N×5°.11E, h10km, mb(Pn)5.5, ML5.8(NAO)*
ISC 08 02:29:19.9±0.5**, 79°.58N**±0°.03×**4°.35E**±0°.03**, h10**km±2km**, h9**km**:pP-P, n1586, σ2°.09/995, mb5.4/324, MS5.1/365, 122C-53D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.57**	**111**			**Pn**	**02 29 46.7**	**-1.0**
KBS	**Kingsbay**	**1.57**	**111**	P		**Pn**	**02 29 46.1**	**-1.7**
KBS				S		**Sg**	**02 30 07.7**	**-2.6**
KBS	**Kingsbay**	**1.57**	**111**	⇑*i*P		**Pn**	**02 29 46.8**	**-1.0**
KBS				*e*S		**Sg**	**02 30 07.4**	**-2.8**
KBS	comp=Z,6μm,0.6s			IAML			02 30 17.1	
KBS	**Kingsbay**	**1.57**	**111**	*ce*P		**Pn**	**02 29 46.7**	**-1.0**
KBS	**Kingsbay**	**1.57**	**111**	Pn		**Pn**	**02 29 46.8**	**-1.0**
KBS				Sn		**Sg**	**02 30 07.1**	**-3.1**
KBS	**Kingsbay**	**1.57**	**111**	⇑*i*P		**Pn**	**02 29 46.8**	**-1.0**
KBS				*e*S		**Sg**	**02 30 06.9**	**-3.3**
BRBB	**Barentsburg B**	**2.43**	**123**	P		**Pn**	**02 29 58.9**	**-0.7**
BRBB				S		**Sb**	**02 30 29.5**	**-4.1**
BRBB	**Barentsburg B**	**2.43**	**123**	Pn		**Pn**	**02 29 59.5**	**-0.1**
BRBB				Sn		**Sb**	**02 30 30.2**	**-3.4**
BRBA	**Barentsburg A**	**2.45**	**124**	Pn		**Pn**	**02 29 59.7**	**-0.2**
BRBA				Sn		**Sb**	**02 30 31.5**	**-2.8**
SPA0	**Spitsbergen Ar** baz=310,slow=7.4	**2.72**	**115**	Pn		**Pn**	**02 30 03.5**	**-0.1**
SPA0	baz=325,slow=22			Sn		**Sn**	**02 30 36.5**	**0.0**
SPA0	**Spitsbergen Ar** baz=310,slow=7.4	**2.72**	**115**	Pn		**Pn**	**02 30 03.5**	**-0.1**
SPA0	baz=325,slow=22			Sn		**Sn**	**02 30 36.5**	**0.0**
SPA0	**Spitsbergen Ar**	**2.72**	**115**	⇑*i*P		**Pn**	**02 30 03.5**	**-0.1**
SPA0				*i* S		**Sn**	**02 30 35.8**	**-0.7**
SPITS	**Spitsbergen Ar**	**2.72**	**115**	P		**Pn**	**02 30 05.0**	**+1.4**
SPITS				S		**Sb**	**02 30 36.8**	**-5.2**
SPITS	**Spitsbergen Ar** comp=Z,1μm,0.3s,baz=324,slow=8.9	**2.72**	**115**	Pn		**Pn**	**02 30 03.5**	**-0.1**
SPITS	baz=318,slow=14			Sn		**Sn**	**02 30 35.5**	**-1.1**
SPB2	**Spitsbergen Ar**	**2.72**	**115**			**Pn**	**02 30 03.5**	**-0.2**
HSPB	**Hornsund (broa**	**3.44**	**133**	*e*P		**Pn**	**02 30 12.9**	**-0.7**
HSPB				*e*S		**Sn**	**02 30 53.3**	**-1.0**
HSPB	**Hornsund (broa**	**3.44**	**133**	P		**Pn**	**02 30 12.9**	**-0.7**
HSPB				S		**Sn**	**02 30 51.4**	**-3.0**
HSPB	**Hornsund (broa**	**3.44**	**133**	*e*P		**Pn**	**02 30 13.0**	**-0.5**
HSPB				*e*S		**Sn**	**02 30 53.7**	**-0.7**
HSPB	comp=Z,1μm,0.6s			IAML			02 31 00.1	
HSPB	**Hornsund (broa**	**3.44**	**133**	Pn		**Pn**	**02 30 13.2**	**-0.4**
HSPB				Sn		**Sn**	**02 30 52.9**	**-1.4**
HOPEN	**Hopen**	**5.25**	**115**	⇑*i*P		**Pn**	**02 30 37.0**	**-1.4**
HOPEN				*e*S		**Sn**	**02 31 37.4**	**-1.5**
HOPEN	comp=Z,626nm,0.5s			IAML			02 31 40.4	
HOPEN	**Hopen**	**5.25**	**115**	Pn		**Pn**	**02 30 37.2**	**-1.2**
HOPEN				Sn		**Sn**	**02 31 37.4**	**-1.5**
HOPEN	**Hopen**	**5.25**	**115**	⇑*i*P		**Pn**	**02 30 36.8**	**-1.5**
HOPEN				*i* S		**Sn**	**02 31 34.7**	**-4.2**
BJO1	**Bjornoya**	**6.05**	**140**	*e*P		**Pn**	**02 30 49.7**	**+0.5**
BJO1				*e*S		**Sn**	**02 31 55.1**	**-3.2**
BJO1	comp=Z,204nm,0.5s			IAML			02 32 03.1	
BJO1	**Bjornoya**	**6.05**	**140**	Pn		**Pn**	**02 30 49.2**	**0.0**
BJO1				Sn		**Sn**	**02 31 55.9**	**-2.5**
ZFI2	**Zemlya Franca-**	**7.34**	**60**	⇑*i*P		Pn	02 31 03.5	-3.5
ZFI2	comp=Z,3μm,1.0s			*e*S		Sn	02 32 22.2	-8.0
OMEGA	**Omega**	**7.36**	**60**	⇑*i*P		Pn	02 31 03.6	-3.6
OMEGA	comp=Z,3μm,0.6s			*e*S		Sn	02 32 22.3	-8.4
JNE	**Jan Mayen East**	**9.18**	**207**	*e*P		Pn	02 31 28.8	-3.3
JNE				*e*			02 33 05.5	
JMIC	**Jan Mayen**	**9.20**	**207**	*e*P		Pn	02 31 28.4	-4.1
JMIC				*e*S		Sn	02 33 02.6	-13
JMIC	**Jan Mayen** comp=Z,480nm,0.3s,baz=21,slow=3.9,SNR=51	**9.20**	**207**	Pn		Pn	02 31 28.4	-4.0
JMIC	comp=Z,99nm,0.3s,baz=58,slow=23,SNR=4.9			Sn		Sn	02 33 02.2	-14
JMIC	comp=Z,5μm,20.0s,baz=41,slow=30			LR		LR	02 33 52.4	
JMIC	**Jan Mayen**	**9.20**	**207**	Pn		**Pn**	**02 31 29.5**	**-2.9**
JMIC				Sn		Sn	02 33 03.0	-13
JMI	**Jan Mayen**	**9.27**	**208**	*e*P		Pn	02 31 29.9	-3.5
JMI	**Jan Mayen**	**9.27**	**208**	Pn		**Pn**	**02 31 30.4**	**-3.0**
JMI				Sn		Sn	02 33 07.3	-10
HAMF	**Hammerfest**	**10.17**	**141**	*e*P		**Pn**	**02 31 45.1**	**-0.6**
HAMF	**Hammerfest**	**10.17**	**141**	Pn		**Pn**	**02 31 45.9**	**+0.2**
TRO	**Tromso**	**10.66**	**152**	*e*P		**Pn**	**02 31 52.9**	**+0.4**
TRO	**Tromso**	**10.66**	**152**	Pn		**Pn**	**02 31 52.6**	**+0.2**
NEEM	**North Greenlan**	**10.86**	**287**	*e*P		Pn	02 31 43.4	-12
NEEM	comp=Z,646nm,0.4s			IAML			02 33 38.8	
JETT	**Jettan, Norway**	**10.87**	**149**	Pn		**Pn**	**02 31 55.3**	**-0.1**
JETT	**Jettan, Norway**	**10.87**	**149**	Pn		**Pn**	**02 31 55.3**	**-0.1**
SCO	**Scoresbysund**	**11.20**	**230**	*e*P		Pn	02 31 53.3	-6.5
SCO	comp=Z,50nm,0.4s			IAML			02 33 56.3	
VADS	**Vadso**	**11.36**	**133**	P		**Pn**	**02 32 00.9**	**-1.0**
VADS				S		**Sn**	**02 34 03.1**	**-5.6**
VADS	**Vadso**	**11.36**	**133**	*e*P		**Pn**	**02 32 01.4**	**-0.6**
VADS				*e*S		**Sn**	**02 34 02.5**	**-6.2**
KEV	**Kevo**	**11.40**	**137**	Pn		**Pn**	**02 32 02.6**	**+0.1**
KEV	**Kevo**	**11.40**	**137**	P		**Pn**	**02 32 02.6**	**+0.1**
KEV	**Kevo**	**11.40**	**137**	Pn		**Pn**	**02 32 03.3**	**+0.8**
KEV				Sn		**Sn**	**02 34 06.0**	**-3.7**
ARA0	**ARCESS Array S**	**11.43**	**140**	*e*P		**Pn**	**02 32 03.4**	**+0.4**
ARA0	baz=355,slow=22			Sn		**Sn**	**02 34 06.9**	**-3.5**
ARA0	**ARCESS Array S** baz=349,slow=14	**11.43**	**140**	Pn		**Pn**	**02 32 03.1**	**+0.2**
ARA0	baz=355,slow=22			Sn		**Sn**	**02 34 06.9**	**-3.5**
ARCES	**ARCESS Array B**	**11.43**	**140**	Pn		**Pn**	**02 32 02.2**	**-0.7**
ARCES	**ARCESS Array B**	**11.43**	**140**	P		**Pn**	**02 32 02.8**	**-0.1**
ARCES				S		**Sn**	**02 34 05.2**	**-5.2**
ARCES	**ARCESS Array B** comp=Z,5.7nm,0.3s,baz=334,slow=11,SNR=180	**11.43**	**140**	Pn		**Pn**	**02 32 02.8**	**-0.1**
ARCES	comp=Z,2.1nm,0.3s,baz=341,slow=19,SNR=2.1			Sn		**Sn**	**02 34 06.1**	**-4.3**
ARCES	comp=Z,8μm,19.3s,baz=340,slow=37			LR		LR	02 36 30.9	
KIF	**Kilpisjarvi**	**11.44**	**149**	Pn		**Pn**	**02 32 03.9**	**+0.9**
KTK1	**Kautokeino**	**11.68**	**145**	*e*P		**Pn**	**02 32 08.2**	**+1.9**
LOF	**Lofoten**	**11.76**	**163**	⇓*i*P		**Pn**	**02 32 09.1**	**+1.6**
LOF	**Lofoten**	**11.76**	**163**	Pn		**Pn**	**02 32 09.2**	**+1.7**
STEI	**Steigen**	**12.06**	**160**	*e*P		**Pn**	**02 32 13.9**	**+2.4**
SUMG	**Summit**	**12.08**	**258**	Pn		**Pn**	02 32 03.0	-9.3
SUMG	**Summit**	**12.08**	**258**	P		Pn	02 32 03.0	-9.2

SUMG Summit 12.08 258 *e*P Pn 02 32 03.0 -9.2
SUMG IAML 02 34 16.9
comp=Z,114nm,0.4s
HEF Hetta 12.30 145 Pn **Pn** **02 32 16.3 +1.4**
FAUS Fauske 12.61 160 P **Pn** **02 32 21.6 +2.7**
FAUS Fauske 12.61 160 *e*P **Pn** **02 32 21.8 +2.8**
TERR Teriberka 13.02 126 P **Pn** **02 32 20.0 -4.6**
TERR S Sn 02 34 40.0 -9.2
KONS Konsvik 13.37 165 *e*P **Pn** **02 32 31.5 +2.2**
KONS Konsvik 13.37 165 Pn **Pn** **02 32 31.6 +2.2**
STOK Stokkvaagen 13.53 165 *e*P **Pn** **02 32 33.9 +2.3**
STOK Stokkvaagen 13.53 165 Pn **Pn** **02 32 33.4 +1.8**
SGF Sodankyl 13.54 142 P **Pn** **02 32 32.2 +0.5**
MOR8 Moi Rana 13.76 163 *e*P **Pn** **02 32 36.0 +1.2**
LVZ Lovozero 14.15 129 Pn **Pn** **02 32 38.5 -1.7**
LVZ Lovozero 14.15 129 P **Pn** **02 32 39.6 -0.5**
LVZ S **Sn** **02 35 09.7 -7.3**
LVZ Lovozero 14.15 129 *ce*P **Pn** **02 32 39.2 -1.0**
LVZ pmax pmax
comp=Z,163nm,0.8s
APA0 Apatity Array 14.20 132 P **Pn** **02 32 38.1 -2.6**
APA0 S **Sn** **02 35 09.4 -8.5**
APA0 Apatity Array 14.20 132 P **Pn** **02 32 38.3 -2.4**
baz=349,slow=12
APA0 Apatity Array 14.20 132 P **Pn** **02 32 38.3 -2.4**
baz=349,slow=12
APA Apatity 14.29 131 P **Pn** **02 32 40.1 -1.8**
APA S **Sn** **02 35 13.1 -7.1**
APA Apatity 14.29 131 ⇓ *i*P **Pn** **02 32 38.9 -3.0**
APA pmax pmax
comp=Z,225nm,0.8s
APA MLR MLR
comp=Z,12μm,12.0s
TULEG Thule 14.47 296 Pn 02 32 30.9 -14
TULEG Thule 14.47 296 *e*P Pn 02 32 30.2 -14
TULEG IAML 02 35 05.1
comp=Z,149nm,0.4s
SOEG Soedalen 14.69 239 *e*P Pn 02 32 41.4 -5.9
UPNV Upernavik 15.12 277 *i* P Pn 02 32 37.4 -16
ICESG Greenland Ices 15.26 251 *i* P Pn 02 32 44.6 -11
NSS Namsos 15.28 167 *e*P **P** **02 32 58.2 -2.0**
SVZ Severnaya Zeml 15.94 43 *e*P Pn 02 32 59.5 -4.3
comp=Z,190nm,1.2s
SVZ *e*S Sn 02 35 41.3 -19
UMMG Uummannaq 16.12 268 *i* P Pn 02 32 51.2 -15
TBLU Trondheim 16.50 171 *e*P **Pn** **02 33 09.2 -1.9**
BORG Borgarnes 16.54 221 Pn **Pn** **02 33 08.0 -3.6**
BORG IAmb IAmb 02 33 10.4
comp=Z,523nm,1.7s
BORG Borgarnes 16.54 221 P **Pn** **02 33 08.0 -3.6**
BORG pmax pmax
comp=Z,523nm,1.7s
BORG Borgarnes 16.54 221 Pn **Pn** **02 33 09.3 -2.3**
comp=Z,1.0nm,0.3s,baz=339,slow=13,SNR=1.7
BORG Sn **Sn** **02 36 08.3 -6.7**
comp=Z,1.4nm,0.3s,baz=19,slow=14,SNR=2.2
comp=Z,53nm,1.1s
AMDE Amderma 17.05 93 *e*P **Pn** **02 33 12.9 -5.1**
comp=Z,529nm,1.1s
AMDE *e*S Sn 02 36 11.8 -15
MOL Molde 17.12 175 *e*P **Pn** **02 33 20.0 +1.0**
MOL Molde 17.12 175 P **Pn** **02 33 19.4 +0.4**
ILULI Ilulissat 17.19 264 Pn Pn 02 33 05.4 -14
ILULI IAmb IAmb 02 33 17.3
comp=Z,255nm,0.8s
ILULI Ilulissat 17.19 264 P Pn 02 33 05.4 -14
ILULI pmax pmax
comp=Z,255nm,0.8s
ILULI Ilulissat 17.19 264 *e*P Pn 02 33 05.3 -14
ILULI IAML 02 36 14.6
comp=Z,42nm,0.4s
VAF Ylistaro 17.45 151 P **Pn** **02 33 22.7 -0.3**
AKN Aaknes 17.51 176 P **P** **02 33 25.2 +0.3**
AKN Aaknes 17.51 176 P **P** **02 33 25.2 +0.3**
DOMB Dombas 17.68 173 *e*P **Pn** **02 33 25.6 -0.4**
ANGG Ammassalik, Gr 18.06 244 *e*P Pn 02 33 24.0 -6.5
FOO Floro 18.08 179 *e*P **P** **02 33 34.9 +3.8**
ISOG Isortoq, Green 18.34 245 *i* P P 02 33 25.8 -8.3
NC204 NORSAR Array S 18.50 170 P **P** **02 33 36.7 +0.8**
NC204 NORSAR Array S 18.50 170 *e*P **P** **02 33 36.9 +1.0**
HYA Hoyanger 18.52 177 *e*P **P** **02 33 38.5 +2.6**
NC303 NORSAR Array S 18.57 169 P **P** **02 33 37.8 +1.2**
NC303 IAmb IAmb 02 33 45.0
comp=Z,141nm,0.8s
NC303 NORSAR Array S 18.57 169 *e*P **P** **02 33 38.2 +1.6**
SUE Sulen 18.62 179 *e*P **Pn** **02 33 38.2 +0.9**
LSH Leshukonskoye 18.65 118 *e*P P 02 33 28.9 -8.5
comp=Z,1μm,1.6s
LSH S Sn 02 36 38.7 -27
NC405 NORSAR Array S 18.69 169 P **P** **02 33 38.0 +0.1**
NB201 NORSAR Array S 18.74 169 P **P** **02 33 38.7 +0.1**
NB201 IAmb IAmb 02 33 47.8
comp=Z,194nm,0.9s
NBO00 NORSAR Array S 18.74 170 P **P** **02 33 37.6 -0.9**
NBO00 IAmb IAmb 02 33 47.8
comp=Z,242nm,1.3s
NBO00 NORSAR Array S 18.74 170 *e*P **P** **02 33 39.0 +0.5**
DY2G Dye2 18.75 255 *e*P P 02 33 30.5 -8.3
DY2G IAML 02 36 52.8
comp=Z,20nm,0.4s
NB2 NORSAR Subarra 18.75 170 P **Pn** **02 33 39.5 +0.5**
baz=355,slow=10
NB2 NORSAR Subarra 18.75 170 P **Pn** **02 33 39.5 +0.5**
baz=355,slow=10
NOA NORSAR Array B 18.75 170 P **P** **02 33 37.6 -1.0**
NOA NORSAR Array B 18.75 170 P **P** **02 33 37.6 -1.0**
comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=38
NOA LR LR 02 40 02.6
comp=Z,5μm,18.5s,baz=355,slow=34
comp=Z,20nm,1.0s
NAO01 NORSAR Array S 18.93 170 P **P** **02 33 41.3 +0.7**
NAO01 NORSAR Array S 18.93 170 *e*P **Pn** **02 33 41.7 +0.5**
SKAR Skarslia 19.03 174 *e*P **P** **02 33 41.1 -0.6**
SFJD Kangerlussuaq 19.05 260 P P 02 33 32.3 -10
SFJD IAmb IAmb 02 33 34.8
comp=Z,220nm,0.6s
SFJD Kangerlussuaq 19.05 260 P P 02 33 32.3 -9.5
SFJD pmax pmax
comp=Z,220nm,0.6s
SFJD Kangerlussuaq 19.05 260 *e*P P 02 33 30.8 -11
SFJD IAML 02 36 53.9
comp=Z,53nm,0.5s
SFJD Kangerlussuaq 19.05 260 P P 02 33 31.0 -11
comp=Z,216nm,0.6s,baz=29,slow=13,SNR=76
SFJD S Sn 02 36 47.7 -28
comp=Z,34nm,0.4s,baz=126,slow=17,SNR=3.1
SFJD LR LR 02 41 03.7
comp=Z,7μm,21.2s,baz=33,slow=38
NC602 NORSAR Array S 19.07 169 P **P** **02 33 41.8 -0.2**
NC602 IAmb IAmb 02 33 53.3
comp=Z,242nm,1.2s
NC602 NORSAR Array S 19.07 169 *e*P **P** **02 33 42.8 +0.8**
NRA0 NORESS Array S 19.07 169 P **Pn** **02 33 42.9 +0.1**
baz=357,slow=16
NRA0 NORESS Array S 19.07 169 P **Pn** **02 33 42.9 +0.1**
baz=357,slow=16
ASK Askoy 19.20 179 *e*P Pn 02 33 52.0 +7.7
BER Bergen 19.30 179 *e*P **P** **02 33 45.2 +0.7**
BER Bergen 19.30 179 P **Pn** **02 33 45.8 +0.3**
FIA1 FINESS Array S 19.34 148 P **P** **02 33 45.4 +0.4**
FIA0 FINESS Array S 19.34 148 P **P** **02 33 45.4 +0.4**
slow=8.6
FINES FINESS Array B 19.34 148 P **P** **02 33 45.4 +0.4**
FINES FINESS Array B 19.34 148 P **P** **02 33 45.4 +0.4**
FINES FINESS Array B 19.34 148 P **P** **02 33 43.1 -1.8**
comp=Z,193nm,0.7s,baz=345,slow=10,SNR=268
FINES S **Sn** **02 37 20.1 -2.4**
comp=Z,7.1nm,0.7s,baz=332,slow=24,SNR=1.2
FINES LR LR 02 40 57.3
comp=Z,10μm,21.1s,baz=352,slow=36
RAF Rauma 19.37 154 *e*P **Pn** **02 33 46.3 -0.1**
LRW Lerwick 19.61 188 *e*P **P** **02 33 48.5 +0.5**
LRW IAmb IAmb 02 33 49.7
comp=Z,132nm,1.1s
LRW Lerwick 19.61 188 P **P** **02 33 48.7 +0.7**
HFS Hagfors 19.75 166 P **P** **02 33 49.6 +0.1**
comp=Z,116nm,1.0s,baz=10,slow=8.8,SNR=38
HFS LR LR 02 40 17.5
comp=Z,5μm,18.5s,baz=8.0,slow=33
comp=Z,116nm,1.0s
HFS Hagfors 19.75 166 P **P** **02 33 50.2 +0.7**
baz=356,slow=11
ODD1 Odda 19.78 177 *e*P **P** **02 33 50.6 +0.7**
OSL Oslo 19.84 171 *e*P **Pn** **02 33 53.8 +1.8**

RES Resolute Bay 19.92 310 P P 02 33 41.5 -10
RES Resolute Bay 19.92 310 P P 02 33 41.5 -10
RES pmax pmax
comp=Z,73nm,1.5s
RES Resolute Bay 19.92 310 P P 02 33 40.8 -11
comp=Z,11nm,0.6s,baz=39,slow=14,SNR=31
RES S S 02 37 07.4 -28
comp=Z,9.7nm,0.6s,baz=38,slow=5.5,SNR=2.1
RES LR LR 02 40 57.2
comp=Z,9μm,19.4s,baz=40,slow=36
VALR Valaam 19.93 141 *i* P **P** **02 33 51.7 +0.3**
VALR pmax pmax
comp=Z,604nm,1.0s
KONO Kongsberg 20.10 172 P **P** **02 33 52.6 -0.6**
KONO IAmb IAmb 02 34 06.1
comp=Z,203nm,1.1s
KONO Kongsberg 20.10 172 IAMs_20 IAMs_20 02 40 51.6
comp=Z,5μm,19.0s
KONO Kongsberg 20.10 172 *e*P **P** **02 33 53.6 +0.4**
KONO Kongsberg 20.10 172 *ce*P **P** **02 33 54.5 +1.3**
KONO pmax pmax
comp=Z,175nm,1.7s
BLS5 Blasjo 20.27 177 *e*P Pn 02 33 58.2 +1.1
MEF Metsahovi 20.39 151 *e*P Pn 02 33 58.1 -0.3
STRU Stroemstad 20.76 170 *e*P **P** **02 34 00.6 +0.2**
PUL Pulkovo 21.42 143 *ce*P **P** **02 34 08.6 +1.1**
PUL pmax pmax
comp=Z,2μm,1.3s
HOMB Homborsund 21.45 174 *e*P **P** **02 34 10.8 +2.9**
HOMB Homborsund 21.45 174 *e*P **P** **02 34 10.0 +2.1**
KLMR Klimovskoe 21.52 130 *c* *i*P **P** **02 34 09.2 +0.6**
KLMR S Sn 02 38 10.2 -4.9
KLMR pmax pmax
comp=Z,1μm,1.3s
KLMR pmax pmax
comp=Z,2μm,1.4s
KLMR MLR MLR
comp=Z,6μm,15.0s
KLMR Klimovskoe 21.52 130 ⇑ *i*P **P** **02 34 09.2 +0.6**
comp=Z,1μm,1.3s
KLMR *e*S **S** **02 37 57.7 -9.2**
PRGR Permogore 21.68 121 ⇑ *i*P **P** **02 34 10.6 +0.3**
comp=Z,1μm,0.8s
LINV Loch Inver, As 21.75 194 *e*P **P** **02 34 10.7 -0.3**
LINV IAmb IAmb 02 34 16.7
comp=Z,394nm,1.6s
TJOU Tjoern 21.77 170 *e*P **P** **02 34 13.6 +2.3**
NUUK Nuuk 21.80 258 *e*P P 02 34 04.1 -7.5
MTSE Matsula 21.82 152 *e*P **P** **02 34 13.8 +1.9**
NRIK Noril'sk 22.04 70 P **P** **02 34 13.7 -0.4**
NRIK IAMs_20 IAMs_20 02 43 16.4
comp=Z,4μm,19.0s
NRIK Noril'sk 22.04 70 *ce*P **P** **02 34 13.8 -0.3**
NRIK pmax pmax
comp=Z,880nm,1.4s
NRIK Noril'sk 22.04 70 P **P** **02 34 14.0 -0.2**
comp=Z,280nm,1.1s,baz=344,slow=7.8,SNR=240
NRIK S **S** **02 38 13.5 -3.3**
comp=Z,10nm,0.9s,baz=299,slow=23,SNR=1.2
NRIK LR LR 02 43 37.5
comp=Z,4μm,19.8s,baz=346,slow=39
comp=Z,280nm,1.1s
BORU Boraas 22.21 168 *e*P **P** **02 34 16.0 0.0**
MCD Coleburn Disti 22.23 191 *e*P **P** **02 34 15.2 -1.1**
VSU Vasula 22.34 148 *ce*P **P** **02 34 17.9 +0.6**
VSU pmax pmax
comp=Z,2μm,1.3s
VSU Vasula 22.34 148 *e*P **P** **02 34 18.1 +0.7**
ONAU Onsala 22.42 169 *e*P **P** **02 34 16.9 -1.3**
KPL Plockton 22.57 194 *e*P **P** **02 34 19.4 -0.5**
SLIT Slitere, Latvi 22.77 155 *e*P **P** **02 34 23.7 +1.7**
FABU Falkenberg 22.84 168 *e*P **P** **02 34 21.0 -1.8**
DRUM Mains of Drumt 22.88 190 *e*P **P** **02 34 22.0 -1.1**
MUD Monsted U'grnd 23.29 173 *e*P **P** **02 34 28.9 +1.6**
INVG Invergeldie, C 23.42 192 *e*P **P** **02 34 27.1 -1.5**
DEL Delary 23.42 167 *e*P **P** **02 34 27.0 -1.6**
NRS Narsarsuaq 23.51 248 *e*P P 02 34 23.7 -5.8
LAWE Loch Awe, Argy 23.64 194 *e*P **P** **02 34 29.4 -1.4**
BLEU Blekinge 23.68 164 *i* P **P** **02 34 29.6 -1.6**
EDI Edinburgh 23.89 191 *e*P **P** **02 34 31.3 -2.0**
PGBU Glenifferbraes 24.05 192 *e*P **P** **02 34 33.0 -1.8**
LUNU Lund 24.24 167 *e*P **P** **02 34 36.1 -0.4**
PBUR Paburge 24.34 156 *e*P **P** **02 34 38.0 +0.5**
EKA Eskdalemuir Ar 24.48 190 P **P** **02 34 37.1 -1.6**
comp=Z,7.3nm,0.6s,baz=0.3,slow=10.0,SNR=20
comp=Z,7.3nm,0.6s
EKA Eskdalemuir Ar 24.48 190 P **P** **02 34 38.3 -0.4**
ESK Eskdalemuir 24.50 190 P **P** **02 34 35.5 -3.4**
ESK Eskdalemuir 24.50 190 *e*P **P** **02 34 37.3 -1.6**
ESK Eskdalemuir 24.50 190 P **P** **02 34 35.5 -3.4**
ESK pmax pmax
comp=Z,263nm,1.8s
VSVD Vaisvydziai 24.54 153 *e*P **P** **02 34 40.0 +0.8**
NEWG New Galloway 24.74 192 *e*P **P** **02 34 39.5 -1.6**
BSD Bornholm Skovb 24.82 165 *e*P **P** **02 34 40.3 -1.4**
EDMD Edmundbyers 24.95 189 *e*P **P** **02 34 41.9 -1.1**
IZAR Zarasai 24.97 150 *e*P **P** **02 34 45.0 +1.9**
PABE Paberze 25.01 153 P **P** **02 34 43.4 -0.1**
PABE IAMs_20 IAMs_20 02 44 07.5
comp=Z,4μm,20.0s
PABE Paberze 25.01 153 *e*P **P** **02 34 44.0 +0.6**
ISAL Salakas 25.13 150 *e*P **P** **02 34 46.4 +1.8**
KIRV Kirov 25.18 119 P **P** **02 34 45.1 +0.2**
comp=Z,1μm,0.8s,baz=350,slow=5.2,SNR=254
KIRV LR LR 02 45 52.8
comp=Z,9μm,18.8s,baz=344,slow=39
KESW Keswick, Cumbr 25.23 190 *e*P **P** **02 34 46.0 +0.6**
FRB Frobisher Bay 25.24 275 P P 02 34 39.7 -5.8
comp=Z,52nm,1.0s,baz=24,slow=12,SNR=64
FRB S **S** **02 39 05.9 -4.7**
comp=Z,2.8nm,0.5s,baz=82,slow=12,SNR=1.3
FRB LR LR 02 44 31.2
comp=Z,3μm,19.2s,baz=24,slow=37
comp=Z,52nm,1.0s
RGN Rugen 25.32 168 P P **02 34 45.5 -0.7**
RGN IAMs_20 IAMs_20 02 43 45.9
comp=Z,6μm,18.0s
RGN Rugen 25.32 168 *e*P **P** **02 34 50.0 +3.7**
RGN Rugen 25.32 168 *e*P **P** **02 34 49.6 +3.3**
comp=Z,142nm,1.0s,baz=357,slow=8.8
IIGN Ignalina 25.36 150 *e*P **P** **02 34 46.7 0.0**
IDID Didziasalis 25.44 150 *e*P **P** **02 34 45.8 -1.6**
BSEG Bad Segeberg 25.84 172 *e*P **P** **02 34 52.2 +1.3**
comp=Z,76nm,0.9s,baz=357,slow=8.8
TIXI Tiksi 25.84 37 P **P** **02 34 49.0 -1.8**
TIXI IAmb IAmb 02 35 12.7
comp=Z,79nm,1.2s
TIXI Tiksi 25.84 37 *ce*P **P** **02 34 50.7 -0.2**
TIXI pmax pmax
comp=Z,41nm,1.3s
NACGM Naroch 25.86 150 ⇑ *i*P **P** **02 34 52.0 +0.9**
comp=Z,388nm,1.0s,baz=352
A36M Sachs Harbour 26.05 327 P P 02 34 45.2 -7.6
A36M Sachs Harbour 26.05 327 P P 02 34 47.7 -5.1
baz=19,SNR=176
MOS Moscow 26.23 135 *e*P **P** **02 34 52.4 -2.1**
MOS *e* 02 35 35.8
MOS *e*S **S** **02 39 28.2 +1.9**
MOS pmax pmax
comp=Z,400nm,1.6s
MOS pmax pmax
comp=Z,242nm,1.4s
MOS MLR MLR
comp=Z,4μm,14.0s
MOS MLR MLR
comp=N,4μm,14.0s
MNK Minsk 26.36 148 *i* P **P** **02 34 55.6 -0.1**
comp=E,47nm,1.1s
MNK *i* P **P** **02 34 55.6 -0.1**
comp=N,446nm,0.9s
MNK *i* P **P** **02 34 55.6 -0.1**
comp=Z,608nm,0.9s,baz=350
MNK *i* PP **PnPn** **02 35 36.0 +1.3**
MNK *i* S **S** **02 39 32.0 +3.6**
MNK *i* SS **SnSn** **02 40 35.5 +7.5**
MNK *i* LQ LQ 02 42 53.8
MNK *i* LR LR 02 43 58.9
MNK *i* LRM MLR 02 44 20.8
comp=E,2μm,17.4s
MNK *i* LRM MLR 02 44 51.1
comp=N,5μm,20.0s
MNK *i* LRM MLR 02 44 55.6
comp=Z,7μm,21.3s
MNK Minsk 26.36 148 *i* P **P** **02 34 55.6 -0.1**
MNK *i* 02 35 36.0

MNK *i* S **S** **02 39 31.9 +3.6**
MNK *i* SS **SnSn** **02 40 35.5 +7.5**
MNK pmax pmax
comp=Z,608nm,0.9s
MNK pmax pmax
comp=N,446nm,0.9s
MNK pmax pmax
comp=E,47nm,1.1s
MNK MLR MLR
comp=E,2μm,17.0s
MNK MLR MLR
comp=N,5μm,20.0s
MNK MLR MLR
comp=Z,7μm,21.0s
LBWR Ladybower, Pea 26.37 188 *e*P **P** **02 34 56.5 +0.6**
LBWR IAmb IAmb 02 35 01.4
comp=Z,79nm,1.0s
SUW Suwalki 26.43 155 *e*P **P** **02 34 55.9 -0.4**
SUW Suwalki 26.43 155 P **P** **02 34 55.5 -0.9**
SUW Suwalki 26.43 155 P **P** **02 34 55.5 -0.9**
SUW pmax pmax
comp=Z,179nm,1.1s
SUW MLR MLR
comp=Z,3μm,22.0s
SUW Suwalki 26.43 155 *e*P **P** **02 34 56.4 0.0**
OBN Obninsk 26.71 137 ⇑ P **P** **02 34 59.1 +0.3**
OBN Obninsk 26.71 137 P **P** **02 34 57.9 -1.0**
OBN Obninsk 26.71 137 *c* *i*P **P** **02 34 59.0 +0.2**
OBN *e* 02 35 42.3
OBN *i* S **S** **02 39 41.5 +7.6**
OBN pmax pmax
comp=Z,620nm,1.7s
OBN MLR MLR
comp=Z,6μm,18.0s
OBN Obninsk 26.71 137 P **P** **02 34 58.7 -0.1**
comp=Z,196nm,0.9s,baz=348,slow=4.8,SNR=3.7
OBN S **S** **02 39 40.0 +6.2**
comp=Z,16nm,0.7s,baz=42,slow=23,SNR=1.5
OBN LR LR 02 45 53.4
comp=Z,7μm,18.3s,baz=352,slow=37
GKP Gorka Klasztor 26.78 163 *e*P **P** **02 34 59.8 +0.3**
GKP Gorka Klasztor 26.78 163 *e*P **P** **02 35 01.0 +1.5**
FOEL Foel Wylfa 26.93 190 *e*P **P** **02 35 01.2 +0.3**
NRDL Niedersach Rie 27.27 172 *e*P **P** **02 35 05.3 +1.4**
comp=Z,62nm,1.1s,baz=357,slow=8.8
RUE Ruedersdorf 27.41 167 *e*P **P** **02 35 09.2 +4.1**
RUE Ruedersdorf 27.41 167 *e*P **P** **02 35 06.1 +0.9**
comp=Z,52nm,1.1s,baz=357,slow=8.8
FLTG Flechtingen 27.47 171 *e*P **P** **02 35 06.9 +1.2**
comp=Z,37nm,0.9s,baz=357,slow=8.8
ASSE Asse, Remlinge 27.65 172 *e*P **P** **02 35 11.2 +3.9**
comp=Z,41nm,1.3s,baz=357,slow=8.8
MCH1 Michaelchurch 27.82 190 *e*P **P** **02 35 09.2 +0.4**
MCH1 IAmb IAmb 02 35 14.4
comp=Z,121nm,1.4s
CLZ Clausthal 27.93 172 *e*P **P** **02 35 12.0 +2.1**
comp=Z,48nm,1.1s,baz=357,slow=8.8
MONM Monmouth 27.97 189 *e*P **P** **02 35 10.6 +0.4**
MONM IAmb IAmb 02 35 16.6
comp=Z,104nm,1.2s
BEL Belsk 28.42 158 *e*P **P** **02 35 14.9 +0.7**
C36M Paulatuk 28.45 324 P P 02 35 06.7 -7.6
C36M IAmb IAmb 02 35 09.8
comp=Z,68nm,1.4s
C36M Paulatuk 28.45 324 P P 02 35 09.2 -5.2
baz=18,SNR=27
KASTN Kahler Asten 28.53 175 *e*P **P** **02 35 15.0 -0.3**
comp=Z,20nm,0.9s,baz=357,slow=8.8
CLL Collm 28.55 169 P **P** **02 35 14.5 -0.8**
CLL IAmb IAmb 02 35 56.5
comp=Z,68nm,1.3s
CLL IAMs_20 IAMs_20 02 45 53.8
comp=Z,5μm,20.0s
CLL Collm 28.55 169 *e*P **P** **02 35 15.0 -0.3**
CLL *e* 02 35 24.0
CLL *e*S **S** **02 40 03.0 +0.1**
CLL pmax pmax
comp=Z,29nm,1.2s
CLL MLR MLR
comp=Z,5μm,19.8s
CLL Collm 28.55 169 *e*P **P** **02 35 15.0 -0.3**
CLL *i* Pmax 02 35 18.9
comp=Z,29nm,1.2s
CLL *i* x x 02 35 33.5
comp=Z,93nm,1.5s
CLL *i* x x 02 35 54.5
CLL *i* (PP) 02 36 02.3
CLL *i* x x 02 36 10.9
CLL *e*PPPP 02 36 25.0
CLL *e*S **S** **02 40 03.0 +0.1**
CLL AMS AMS 02 45 00.0
comp=N,4μm,19.0s
CLL AMS AMS 02 45 00.0
comp=E,1μm,19.8s
CLL AMS AMS 02 45 00.0
comp=Z,5μm,19.8s
CLL AMS AMS 02 46 00.0
CLL Collm 28.55 169 *e*P **P** **02 35 15.2 -0.2**
comp=Z,21nm,0.9s,baz=357,slow=8.8
NEUB Neuenburg 28.61 170 *e*P **P** **02 35 16.3 +0.5**
comp=Z,36nm,0.9s,baz=357,slow=8.8
SVE Sverdlovsk 28.73 108 *d* *i*P **P** **02 35 18.2 +1.3**
SVE *e*S **S** **02 40 13.1 +7.5**
SVE pmax pmax
comp=Z,369nm,1.3s
SVE MLR MLR
comp=Z,11μm,16.0s
ARU Arti 28.75 110 P **P** **02 35 16.9 -0.2**
ARU Arti 28.75 110 *c* *i*P **P** **02 35 18.3 +1.2**
ARU 02 36 13.7
ARU S **S** **02 40 12.2 +6.2**
ARU SS SS 02 41 45.8 -21
ARU pmax pmax
comp=Z,546nm,1.8s
ARU MLR MLR
comp=Z,7μm,15.0s
ARU Arti 28.75 110 P **P** **02 35 18.3 +1.2**
comp=Z,71nm,0.6s,baz=335,slow=6.3,SNR=147
ARU S S 02 40 17.4 +11
comp=Z,8.9nm,0.6s,baz=291,slow=22,SNR=1.6
comp=Z,71nm,0.6s
A21K Barrow 28.91 347 P P 02 35 14.5 -3.9
baz=7.8,SNR=9.7
BEBN Eben Emael 28.91 178 *dx* **P** **02 35 21.2 +2.7**
BEBN *dx* x 02 35 38.8
UBBA Unterbreizbach 28.95 173 *e*P **P** **02 35 18.9 +0.1**
comp=Z,18nm,1.1s,baz=357,slow=8.8
BRG Berggiesshubel 29.02 167 *e*P **P** **02 35 20.2 +0.7**
BRG Amp 02 35 24.6
comp=Z,47nm,1.3s
BRG Berggiesshubel 29.02 167 P P 02 35 29.9 +10
BRG Amp 02 35 33.0
comp=Z,33nm,1.1s
BRG Berggiesshubel 29.02 167 *e*P **P** **02 35 20.2 +0.7**
BRG S **S** **02 40 16.0 +5.7**
BRG pmax pmax
comp=Z,47nm,1.3s
BRG Berggiesshubel 29.02 167 *e*P **P** **02 35 20.2 +0.7**
comp=Z,19nm,0.9s,baz=357,slow=8.8
MEM Membach 29.10 178 *d*P **P** **02 35 17.3 -2.9**
MEM *d*PP **PnPn** **02 36 03.6 -8.6**
BSTI Sart Tilman 29.12 178 *dx* **P** **02 35 18.9 -1.5**
BSTI *dx* x 02 36 02.0
BSTI *d*PP **PnPn** **02 36 07.7 -4.8**
BTNL Ternell 29.12 178 *dx* **P** **02 35 22.9 +2.4**
BTNL *dx* x 02 35 53.5
BTNL *d*PP **PnPn** **02 36 07.9 -4.7**
KSP Ksiaz 29.15 164 *e*P **P** **02 35 21.1 +0.4**
MOX Moxa 29.17 170 *e*P **P** **02 35 22.0 +1.1**
comp=Z,39nm,0.9s,baz=357,slow=8.8
MOX *e*L L 02 46 33.9
comp=Z,2μm,18.0s
AHRW Bad Neuenahr-A 29.18 176 *e*P **P** **02 35 21.4 +0.5**
comp=Z,19nm,0.9s,baz=357,slow=8.8
HSKC Hora Svate Kat 29.26 168 *e*P **P** **02 35 22.3 +0.5**
HSKC AMS AMS 02 46 20.0
comp=Z,5μm,18.9s
BCLA Clavier 29.28 179 *d*P **P** **02 35 21.9 +0.1**
comp=Z,18nm,1.2s
BCLA *d*PP **PnPn** **02 36 10.8 -4.0**
BGES Gesves 29.32 179 *dx* **P** **02 35 26.9 +4.7**
BGES *dx* x 02 35 52.5
BGES *d*PP **PnPn** **02 36 09.3 -5.9**
BHOU Houvegnez 29.35 178 *dx* **P** **02 35 25.7 +3.2**
BHOU *d*PP **PnPn** **02 36 11.8 -3.9**

RICC Richard 29.35 167 AMS AMS 02 46 20.0
comp=Z,4µm,16.6s
PVCC Panska Ves 29.39 167 eP **P** **02 35 24.0 +1.2**
PVCC Panska Ves 29.39 167 eP **P** **02 35 24.0 +1.2**
CHVC Chvalec 29.39 165 eP **P** **02 35 26.6 +3.7**
CHVC Chvalec 29.39 165 eP **P** **02 35 26.6 +3.7**
BMRD Maredsous 29.40 179 dx **P** **02 35 22.5 -0.4**
TANN Tannenbergstha 29.42 169 eP **P** **02 35 24.1 +0.9**
comp=Z,25nm,0.9s,baz=357,slow=8.8
OSTC Ostas 29.43 165 AMS AMS 02 46 20.0
comp=Z,4µm,18.5s
LPSR Galich'ya Gora 29.47 135 eP **P** **02 35 23.8 +0.3**
LPSR i 02 35 24.3
LPSR pmax pmax
comp=Z,630nm,1.0s
LPSR pmax pmax
comp=Z,760nm,1.0s
LPSR MLR MLR
comp=Z,4µm,17.0s
UPC Upice 29.47 165 eP **P** **02 35 28.1 +4.5**
UPC AMS AMS 02 46 20.0
comp=Z,4µm,16.3s
UPC Upice 29.47 165 eP **P** **02 35 28.1 +4.5**
UPC MLR MLR
comp=Z,4µm,16.3s
TNS Taunus Mts 29.51 175 eP **P** **02 35 25.8 +1.8**
comp=Z,24nm,1.1s,baz=357,slow=8.8
RCHB Rochefort 29.55 179 dx **P** **02 35 23.8 -0.4**
GIVF Givet 29.60 179 P **P** **02 35 26.9 +2.2**
NKC Novy Kostel 29.60 169 eP **P** **02 35 26.1 +1.3**
NKC eS **S** **02 40 22.5 +2.9**
NKC AMS AMS 02 46 40.0
comp=Z,3µm,18.3s
NKC Novy Kostel 29.60 169 eP **P** **02 35 26.1 +1.3**
NKC eS **S** **02 40 22.5 +2.9**
NKC MLR MLR
comp=Z,3µm,18.3s
DOU Dourbes 29.61 180 dP P 02 35 20.8 -4.0
DOU dx x 02 35 28.1
DOU dPP **PnPn** **02 36 15.8 -3.3**
BAIF Baives 29.64 180 P **P** **02 35 24.9 -0.2**
DPC Dobruska-Polom 29.65 164 eP **P** **02 35 25.9 +0.7**
DPC ex x 02 35 34.5
DPC eS **S** **02 40 25.8 +5.5**
DPC AMS AMS 02 46 30.0
comp=Z,3µm,15.2s
DPC Dobruska-Polom 29.65 164 eP **P** **02 35 25.9 +0.7**
DPC e 02 35 34.5
DPC eS **S** **02 40 25.8 +5.5**
DPC MLR MLR
comp=Z,3µm,15.2s
B22K Teshekpuk Lake 29.75 345 P P 02 35 22.2 -3.5
baz=8.7
PRA Prague 29.84 167 AMS AMS 02 46 30.0
comp=Z,4µm,17.8s
PRU Pruhonice 29.93 167 eP **P** **02 35 28.9 +1.3**
PRU ex x 02 35 39.0
PRU eS **S** **02 40 31.2 +6.6**
PRU AMS AMS 02 46 30.0
comp=Z,4µm,18.9s
PRU Pruhonice 29.93 167 eP **P** **02 35 28.9 +1.3**
PRU eS **S** **02 40 31.2 +6.6**
PRU MLR MLR
comp=Z,4µm,18.9s
PRU smax smax
comp=N,17nm,0.4s
KRLC Kraliky 29.94 164 eP **P** **02 35 28.4 +0.6**
KRLC AMS AMS 02 46 50.0
comp=N,3µm,15.3s
KRLC Kraliky 29.94 164 eP **P** **02 35 28.4 +0.6**
KRLC MLR MLR
comp=Z,3µm,15.3s
OJC Ojcow 29.97 160 eP **P** **02 35 28.5 +0.6**
OJC Ojcow 29.97 160 P **P** **02 35 26.4 -1.6**
OJC IAmb IAmb 02 36 20.0
comp=Z,72nm,1.0s
OJC Ojcow 29.97 160 P **P** **02 35 26.4 -1.6**
OJC pmax pmax
comp=Z,72nm,1.0s
GOPC GO Pecny, Ondr 30.01 166 eP **P** **02 35 29.8 +1.4**
GOPC AMS AMS 02 46 40.0
comp=Z,4µm,19.7s
GOPC GO Pecny, Ondr 30.01 166 eP **P** **02 35 29.8 +1.4**
GOPC MLR MLR
comp=Z,4µm,19.7s
WLF Walferdange 30.04 178 P **P** **02 35 26.7 -1.9**
WLF IAMs_20 IAMs_20 02 46 11.7
comp=Z,2µm,22.0s
WLF Walferdange 30.04 178 dx **P** **02 35 30.4 +1.7**
WLF Walferdange 30.04 178 P **P** **02 35 31.8 +3.2**
WLF Walferdange 30.04 178 P **P** **02 35 26.7 -1.9**
WLF pmax pmax
comp=Z,35nm,1.2s
WLF MLR MLR
comp=Z,2µm,22.0s
WLF Walferdange 30.04 178 eP **P** **02 35 30.4 +1.7**
comp=Z,13nm,1.0s,baz=357,slow=8.8
ROTZ Rotzenmuhle 30.06 170 eP **P** **02 35 30.0 +1.2**
comp=Z,6.8nm,0.9s,baz=357,slow=8.8
D27M Malcolm River 30.08 336 P P 02 35 24.5 -4.3
baz=12
GRA1 Grafenberg Arr 30.11 171 P **P** **02 35 26.7 -2.5**
GRA1 IAmb IAmb 02 36 12.6
comp=Z,98nm,1.4s
GRF Grafenberg Arr 30.11 171 P **P** **02 35 26.7 -2.5**
GRF pmax pmax
comp=Z,98nm,1.4s
GRF MLR MLR
comp=Z,2µm,20.0s
GRF Grafenberg Arr 30.11 171 eP **P** **02 35 30.8 +1.6**
comp=Z,26nm,0.9s,baz=357,slow=8.8
GRF eL L 02 45 41.6
comp=Z,2µm,21.2s
GRFO Grafenberg 30.11 171 P **P** **02 35 28.6 -0.6**
GRFO IAmb IAmb 02 36 12.5
comp=Z,92nm,1.4s
GRFO Grafenberg 30.11 171 P **P** **02 35 28.6 -0.6**
GRFO pmax pmax
comp=Z,92nm,1.4s
GRFO MLR MLR
comp=Z,2µm,20.0s
C24K Franklin Bluff 30.12 342 P P 02 35 25.7 -3.3
baz=10
AKASG Malin Array Be 30.24 148 P **P** **02 35 30.0 -0.4**
AKASG Malin Array Be 30.24 148 P **P** **02 35 29.9 -0.4**
comp=Z,23nm,0.7s,baz=346,slow=9.0,SNR=84
AKASG S **S** **02 40 29.6 +0.1**
comp=Z,0.9nm,0.5s,baz=221,slow=22,SNR=1.7
AKASG LR LR 02 47 29.0
comp=Z,7µm,21.6s,baz=354,slow=36
comp=Z,23nm,0.7s
AKBB Malin Array Si 30.24 148 IAMs_20 IAMs_20 02 47 17.6
comp=Z,8µm,21.0s
AKBB Malin Array Si 30.24 148 ceP **P** **02 35 30.1 -0.3**
KIEV Kiev 30.25 148 ⇑P **P** **02 35 30.3 -0.1**
KIEV Kiev 30.25 148 P **P** **02 35 28.8 -1.6**
KIEV Kiev 30.25 148 IAMs_20 IAMs_20 02 47 17.1
comp=Z,7µm,20.0s
KIEV Kiev 30.25 148 i P **P** **02 35 30.1 -0.3**
SNR=34
KIEV Kiev 30.25 148 P **P** **02 35 28.8 -1.6**
KIEV pmax pmax
comp=Z,190nm,1.5s
KIEV MLR MLR
comp=Z,7µm,20.0s
OKC Ostrava-Krasne 30.25 162 eP **P** **02 35 31.6 +1.1**
OKC eS **S** **02 40 34.4 +4.7**
OKC AMS AMS 02 47 00.0
comp=Z,4µm,18.3s
OKC Ostrava-Krasne 30.25 162 eP **P** **02 35 31.6 +1.1**
OKC eS **S** **02 40 34.4 +4.7**
OKC MLR MLR
comp=Z,4µm,18.3s
MORC Moravsky Berou 30.28 163 ⇑P **P** **02 35 32.1 +1.3**
MORC Moravsky Berou 30.28 163 P **P** **02 35 30.9 +0.1**
MORC IAmb IAmb 02 36 17.7
comp=Z,115nm,1.4s
MORC IAMs_20 IAMs_20 02 47 13.5
comp=Z,3µm,18.0s
MORC Moravsky Berou 30.28 163 eP **P** **02 35 31.1 +0.3**
MORC Moravsky Berou 30.28 163 P **P** **02 35 30.9 +0.1**
MORC pmax pmax
comp=Z,115nm,1.4s
MORC MLR MLR
comp=Z,3µm,18.0s

D25K Kavik River 30.37 340 P P 02 35 27.6 -3.8
baz=11,SNR=31
INK Inuvik 30.39 330 P P 02 35 24.2 -7.3
INK IAmb IAmb 02 35 27.5
comp=Z,43nm,1.1s
INK Inuvik 30.39 330 P P 02 35 26.1 -5.3
baz=14,SNR=35
INK Inuvik 30.39 330 P P 02 35 24.2 -7.3
INK pmax pmax
comp=Z,43nm,1.1s
INK Inuvik 30.39 330 LR LR 02 50 13.7
comp=Z,3µm,18.9s,baz=6.0,slow=42
VORR Voronezh 30.41 135 eP **P** **02 35 30.0 -1.9**
VORR e 02 35 31.3
VORR pmax pmax
comp=Z,310nm,1.6s
VORR pmax pmax
comp=Z,350nm,1.4s
VORR MLR MLR
comp=Z,730nm,7.0s
ZVC Zvikov 30.46 167 eP **P** **02 35 33.5 +1.2**
ZVC eS **S** **02 40 38.3 +5.3**
ZVC AMS AMS 02 47 00.0
comp=Z,5µm,18.6s
B21K Ikpikpuk River 30.52 346 P P 02 35 29.3 -3.3
baz=8.1
E28M Babbage River 30.60 335 P P 02 35 29.2 -4.2
baz=13
TREC Trest 30.66 166 eP **P** **02 35 35.4 +1.3**
TREC eS **S** **02 40 42.9 +6.8**
TREC AMS AMS 02 47 00.0
comp=Z,4µm,18.2s
TREC Trest 30.66 166 eP **P** **02 35 35.4 +1.3**
TREC eS **S** **02 40 42.9 +6.8**
TREC MLR MLR
comp=Z,4µm,18.2s
LVV L'vov 30.66 155 eP **P** **02 35 34.2 +0.1**
LVV e 02 36 41.0
LVV eS **S** **02 40 35.0 -1.2**
LVV pmax pmax
comp=Z,250nm,1.4s
LVV MLR MLR
comp=E,1µm,16.0s
LVV MLR MLR
comp=N,3µm,15.0s
LVV MLR MLR
comp=Z,3µm,14.0s
E29M Blow River 30.68 334 P P 02 35 29.7 -4.4
baz=13
D24K Happy Valley 30.68 342 IAMs_20 IAMs_20 02 46 22.8
comp=Z,3µm,21.0s
D24K Happy Valley 30.68 342 P P 02 35 30.6 -3.6
baz=9.9
VRAC Vranov 30.70 164 ⇑P **P** **02 35 35.6 +1.1**
VRAC Vranov 30.70 164 eP **P** **02 35 34.9 +0.5**
VRAC Vranov 30.70 164 P **P** **02 35 35.5 +1.1**
VRAC Vranov 30.70 164 LR LR 02 47 35.7
comp=Z,4µm,18.5s,baz=342,slow=36
MAUC Maruska 30.71 163 eP **P** **02 35 36.2 +1.7**
WET Wettzell 30.71 169 eP **P** **02 35 36.0 +1.5**
comp=Z,15nm,1.0s,baz=357,slow=8.8
KHC Kasperske Hory 30.75 168 P **P** **02 35 34.1 -0.8**
KHC IAmb IAmb 02 36 29.3
comp=Z,71nm,1.7s
KHC IAMs_20 IAMs_20 02 47 21.0
comp=Z,4µm,19.0s
KHC Kasperske Hory 30.75 168 eP **P** **02 35 36.6 +1.7**
KHC eS **S** **02 40 40.6 +3.1**
KHC AMS AMS 02 47 10.0
comp=Z,5µm,19.8s
KHC Kasperske Hory 30.75 168 ceP **P** **02 35 36.9 +2.0**
KHC pmax pmax
comp=Z,36nm,1.0s
KWP Kalwaria Pacla 30.75 156 eP **P** **02 35 35.7 +0.8**
KWP Kalwaria Pacla 30.75 156 P **P** **02 35 34.5 -0.4**
KWP IAMs_20 IAMs_20 02 47 13.5
comp=Z,4µm,18.0s
KWP Kalwaria Pacla 30.75 156 P **P** **02 35 34.5 -0.4**
KWP pmax pmax
comp=Z,198nm,1.2s
KWP MLR MLR
comp=Z,4µm,18.0s
NIE Niedzica 30.80 159 eP **P** **02 35 36.2 +0.8**
VSR Storozhevoye 30.86 136 eP **P** **02 35 35.2 -0.6**
VSR e 02 35 35.7
VSR pmax pmax
comp=Z,240nm,1.1s
VSR pmax pmax
comp=Z,280nm,1.1s
VSR MLR MLR
comp=Z,4µm,14.0s
STHS Stebnicka Huta 30.86 158 eP **P** **02 35 36.4 +0.5**
STHS pmax pmax
comp=Z,89nm,1.0s
STHS Stebnicka Huta 30.86 158 eP **P** **02 35 36.4 +0.5**
BELG Belogornoye 30.88 125 ⇑iP **P** **02 35 36.3 +0.4**
BELG pmax pmax
comp=Z,145nm,1.0s
BELG Belogornoye 30.88 125 P **P** **02 35 36.5 +0.5**
comp=Z,594nm,0.9s,baz=276,slow=1.6,SNR=204
BELG LR LR 02 48 34.8
comp=Z,5µm,18.2s,baz=343,slow=37
KRUC Moravsky 30.94 165 eP **P** **02 35 37.2 +0.7**
STU Stuttgart 30.98 174 P **P** **02 35 35.2 -1.7**
STU IAmb IAmb 02 35 58.5
comp=Z,56nm,1.0s
STU IAMs_20 IAMs_20 02 47 22.1
comp=Z,3µm,20.0s
STU Stuttgart 30.98 174 P **P** **02 35 35.2 -1.7**
STU pmax pmax
comp=Z,56nm,1.0s
STU MLR MLR
comp=Z,3µm,20.0s
STU Stuttgart 30.98 174 eP **P** **02 35 38.2 +1.3**
comp=Z,100nm,0.9s,baz=357,slow=8.8
C21K Knifeblade Rid 30.99 346 P P 02 35 33.6 -3.2
baz=7.9,SNR=58
GEC2 GERESS Array S 31.04 168 P **P** **02 35 37.1 -0.4**
GEC2 IAmb IAmb 02 35 58.9
comp=Z,32nm,0.9s
GEC2 GERESS Array S 31.04 168 eP **P** **02 35 39.0 +1.4**
comp=Z,28nm,0.9s,baz=357,slow=8.8
GERES GERESS Array B 31.04 168 P **P** **02 35 36.5 -1.0**
GERES GERESS Array B 31.04 168 P **P** **02 35 38.4 +0.9**
comp=Z,24nm,1.1s,baz=8.7,slow=9.1,SNR=23
GERES LR LR 02 47 50.5
comp=Z,4µm,18.6s,baz=9.0,slow=36
comp=Z,24nm,1.1s
B18K Kokolik River 31.04 351 P P 02 35 34.3 -3.0
baz=5.6
CKRC Cesky Krumlov 31.08 167 eP **P** **02 35 39.3 +1.4**
CKRC AMS AMS 02 47 20.0
comp=Z,5µm,19.0s
CKRC Cesky Krumlov 31.08 167 eP **P** **02 35 39.3 +1.4**
CKRC MLR MLR
comp=Z,5µm,19.0s
D22K Ayikyak River 31.16 344 IAMs_20 IAMs_20 02 46 38.2
comp=Z,2µm,20.0s
D22K Ayikyak River 31.16 344 P P 02 35 35.0 -3.4
baz=8.5,SNR=50
JAVC Velka Javorina 31.20 163 eP **P** **02 35 40.0 +1.1**
VRH Novokhopyorsk 31.20 133 eP **P** **02 35 38.5 -0.3**
VRH e 02 35 38.9
VRH pmax pmax
comp=Z,610nm,0.8s
VRH pmax pmax
comp=Z,700nm,1.0s
VRH MLR MLR
comp=Z,15µm,15.0s
C19K Lookout Ridge 31.23 349 IAMs_20 IAMs_20 02 45 58.9
comp=Z,3µm,21.0s
C19K Lookout Ridge 31.23 349 P P 02 35 36.1 -2.9
baz=6.3
TOLK Toolik Lake Re 31.24 342 P P 02 35 30.9 -8.2
TOLK IAmb IAmb 02 35 36.7
comp=Z,68nm,1.0s
TOLK Toolik Lake Re 31.24 342 P P 02 35 35.2 -3.8
baz=9.5,SNR=46
F31M Tsiigehtchic 31.25 330 P P 02 35 33.9 -5.2
baz=14,SNR=29
F30M Barrier River 31.27 332 P P 02 35 34.4 -4.9
baz=14,SNR=27
CRVS Cervenica-Dubn 31.39 158 eP **P** **02 35 41.1 +0.6**
CRVS pmax pmax
comp=Z,103nm,1.4s
CRVS Cervenica-Dubn 31.39 158 eP **P** **02 35 41.1 +0.6**

BFO Black Forest 31.41 175 P **P** **02 35 39.9 -0.8**
BFO IAMs_20 IAMs_20 02 48 23.2
comp=Z,3µm,18.0s
BFO Black Forest 31.41 175 P **P** **02 35 39.9 -0.8**
BFO pmax pmax
comp=Z,25nm,1.1s
BFO MLR MLR
comp=Z,3µm,18.0s
BFO Black Forest 31.41 175 eP **P** **02 35 40.9 +0.2**
comp=Z,14nm,1.0s,baz=357,slow=8.8
KOLS Kolonicke sedl 31.41 157 eP **P** **02 35 41.7 +0.9**
KOLS pmax pmax
comp=Z,64nm,1.0s
KOLS Kolonicke sedl 31.41 157 eP **P** **02 35 41.7 +0.9**
ECH Echery 31.50 176 P **P** **02 35 39.6 -1.9**
ECH IAMs_20 IAMs_20 02 49 22.5
comp=Z,3µm,19.0s
ECH Echery 31.50 176 P **P** **02 35 39.6 -1.9**
ECH pmax pmax
comp=Z,32nm,1.1s
ECH MLR MLR
comp=Z,3µm,19.0s
E25K Arctic Village 31.51 339 P P 02 35 34.1 -7.3
E25K Arctic Village 31.51 339 P P 02 35 37.3 -4.1
baz=11,SNR=69
D20K Etivluk River 31.51 347 P P 02 35 38.1 -3.4
baz=7.2
SMOL Smolenice 31.54 163 eP **P** **02 35 43.5 +1.7**
SMOL pmax pmax
comp=Z,56nm,1.2s
F28M Old Crow 31.60 335 P P 02 35 34.9 -7.3
F28M IAmb IAmb 02 35 39.0
comp=Z,35nm,0.8s
F28M Old Crow 31.60 335 P P 02 35 37.6 -4.6
baz=12,SNR=41
E21K Killik River 31.66 345 P P 02 35 38.7 -4.1
baz=8.0,SNR=13
MODS Modra-Piesok 31.67 163 eP **P** **02 35 44.3 +1.3**
MODS pmax pmax
comp=Z,189nm,1.2s
MODS Modra-Piesok 31.67 163 eP **P** **02 35 44.3 +1.3**
CLF Chambon-Foret 31.69 183 P **P** **02 35 43.2 +0.1**
C18K Utukok River 31.74 350 IAMs_20 IAMs_20 02 47 00.0
comp=Z,2µm,20.0s
C18K Utukok River 31.74 350 P P 02 35 40.3 -3.2
baz=5.7,SNR=83
KECS Kecovo 31.74 159 eP **P** **02 35 44.7 +1.1**
KECS pmax pmax
comp=Z,44nm,1.0s
KECS Kecovo 31.74 159 eP **P** **02 35 44.7 +1.1**
D19K Kuna River 31.79 348 P P 02 35 40.2 -3.7
baz=6.7
G31M Satah River 31.81 330 IAMs_20 IAMs_20 02 50 30.5
comp=Z,3µm,21.0s
G31M Satah River 31.81 330 P P 02 35 38.6 -5.4
baz=14,SNR=34
E23K Chandalar 31.82 342 P P 02 35 40.5 -3.7
baz=9.3
F26K Sheenjek River 31.83 338 P P 02 35 40.0 -4.3
baz=11,SNR=23
ZST Bratislava 31.84 164 eP **P** **02 35 46.4 +2.0**
ZST pmax pmax
comp=Z,262nm,1.3s
ZST Bratislava 31.84 164 eP **P** **02 35 46.4 +2.0**
G30M tAoh Zraii Nji 31.92 332 IAMs_20 IAMs_20 02 50 26.6
comp=Z,3µm,22.0s
G30M tAoh Zraii Nji 31.92 332 P P 02 35 39.7 -5.4
baz=13,SNR=24
E20K Nigu River 31.95 346 P P 02 35 41.8 -3.6
baz=7.2
C17K DeLong Mountai 31.97 351 P P 02 35 42.5 -3.0
baz=5.0
SLE Schleitheim 31.97 175 P **P** **02 35 47.1 +1.4**
F25K Christian Rive 32.03 339 P P 02 35 41.9 -4.2
baz=10,SNR=39
CONA Conrad Observa 32.04 165 i pP **P** **02 35 46.2 -0.2**
comp=Z,25nm,0.9s,SNR=7.9
MOA Molln 32.05 167 i pP **P** **02 35 47.7 +1.3**
comp=Z,24nm,1.0s,SNR=7.0
UBR Ueberruh 32.09 173 eP **P** **02 35 48.2 +1.5**
comp=Z,10nm,0.8s,baz=357,slow=8.8
BMAR Burnt Mountain 32.13 338 P P 02 35 41.0 -5.9
BIOA Bad Ischl, Aus 32.19 168 i pP **P** **02 35 47.7 +0.1**
comp=Z,11nm,1.3s
BILL Bilibino 32.22 13 P P 02 35 42.6 -5.1
BILL IAmb IAmb 02 35 46.1
comp=Z,62nm,1.1s
BILL IAMs_20 IAMs_20 02 48 26.6
comp=Z,2µm,19.0s
BILL Bilibino 32.22 13 eP P 02 35 44.7 -2.9
C16K Lisburne Hills 32.23 353 IAMs_20 IAMs_20 02 48 39.8
comp=Z,2µm,18.0s
C16K Lisburne Hills 32.23 353 P P 02 35 44.6 -3.1
baz=4.2
F24K Squaw Lake 32.25 340 P P 02 35 44.0 -4.0
baz=9.7
PSZ Piszkesteto 32.27 160 ⇑P **P** **02 35 49.6 +1.3**
PSZ Piszkesteto 32.27 160 P **P** **02 35 47.3 -1.0**
PSZ IAmb IAmb 02 35 54.3
comp=Z,73nm,1.1s
PSZ IAMs_20 IAMs_20 02 48 37.5
comp=Z,4µm,18.0s
PSZ Piszkesteto 32.27 160 P **P** **02 35 47.3 -1.0**
PSZ pmax pmax
comp=Z,73nm,1.1s
PSZ MLR MLR
comp=Z,4µm,18.0s
SRO Srobarova 32.28 162 eP **P** **02 35 50.1 +1.8**
SRO pmax pmax
comp=Z,65nm,1.3s
SRO Srobarova 32.28 162 eP **P** **02 35 50.1 +1.8**
RONA Rosalia, Austr 32.29 165 i pP **P** **02 35 49.6 +1.1**
comp=Z,58nm,1.2s,SNR=9.8
RETA Reutte 32.30 172 epP **P** **02 35 48.4 -0.2**
comp=Z,21nm,1.1s,SNR=5.4
RDOG Red Dog Mine 32.39 351 P P 02 35 44.0 -5.1
RDOG Red Dog Mine 32.39 351 P P 02 35 45.7 -3.4
baz=5.0,SNR=54
LESA Schwarzleotal 32.42 169 i pP **P** **02 35 50.7 +1.1**
comp=Z,8.9nm,1.3s
MOTA Moosalm 32.45 171 i pP **P** **02 35 50.7 +0.7**
comp=Z,34nm,1.1s,SNR=12
WATA Walderalm 32.47 171 i pP **P** **02 35 51.9 +1.7**
comp=Z,16nm,1.0s,SNR=6.9
DAVA Damuels 32.48 173 i pP **P** **02 35 50.0 -0.3**
comp=Z,17nm,1.1s,SNR=5.5
G26K Porcupine Rive 32.54 337 P P 02 35 46.8 -3.7
baz=11,SNR=83
WTTA Wattenberg 32.55 171 i pP **P** **02 35 51.8 +0.9**
comp=Z,9.2nm,1.0s
EPYK Eagle Plains 32.56 332 P P 02 35 46.0 -4.8
EPYK IAMs_20 IAMs_20 02 50 45.6
comp=Z,2µm,20.0s
EPYK Eagle Plains 32.56 332 P P 02 35 45.6 -5.1
baz=13,SNR=21
SQTA Sankt Quirin 32.58 171 i pP **P** **02 35 52.8 +1.7**
comp=Z,9.4nm,1.0s
SSF Saint Saulge 32.64 181 P **P** **02 35 50.9 -0.6**
COLD Coldfoot 32.68 342 P P 02 35 47.5 -4.1
baz=8.9,SNR=72
ARSA Arzberg 32.70 166 i pP **P** **02 35 53.6 +1.6**
comp=Z,23nm,1.4s
SORM Soroca 32.70 150 ⇓P **P** **02 35 52.2 +0.1**
SORM Soroca 32.70 150 P **P** **02 35 52.1 +0.1**
D17K Noatak River 32.75 351 P P 02 35 48.9 -3.3
baz=4.9
FETA Feichten 32.76 172 i pP **P** **02 35 53.1 +0.3**
comp=Z,10nm,1.0s
KBA Koelnbreinsper 32.79 169 i pP **P** **02 35 54.6 +1.6**
comp=Z,15nm,1.0s
E19K Redstone River 32.79 347 P P 02 35 48.9 -3.7
baz=6.7
H29M Whitestone 32.85 333 P P 02 35 48.4 -4.8
baz=12
F21K Alatna River 32.85 344 P P 02 35 49.4 -3.9
baz=7.9,SNR=49
G25K Bearman Lake 32.88 339 P P 02 35 50.4 -3.0
baz=10
AVF Avril sur Loir 32.91 181 P **P** **02 35 53.2 -0.7**
BUR08 Bucovina Ar. S 32.92 154 P **P** **02 35 53.5 -0.6**
BUR08 IAmb IAmb 02 35 55.9
comp=Z,68nm,1.1s
BURAR Bucovina Array 32.95 154 ⇑P **P** **02 35 54.8 +0.4**
BURAR Bucovina Array 32.95 154 P **P** **02 35 54.7 +0.4**
BURAR IAmb IAmb 02 35 56.5
comp=Z,63nm,1.1s

BURAR Bucovina Array 32.95 154 P P 02 35 54.7 +0.4
E18K Tukpahlearik C 32.95 349 IAMs_20 IAMs_20 02 47 17.8
comp=Z,2µm,21.0s
E18K Tukpahlearik C 32.95 349 P P 02 35 50.6 -3.5
baz=5.7
DAVOX Davos/Dischmat 32.98 173 LR LR 02 48 36.5
comp=Z,3µm,21.5s,baz=5.0,slow=35
FYU Fort Yukon 33.02 338 P P 02 35 48.3 -6.4
G24K Hadweenzic Riv 33.04 340 P P 02 35 51.5 -3.3
baz=9.6
G22K Bettles 33.05 343 P P 02 35 50.6 -4.2
baz=8.4,SNR=47
SMF Signal de Mont 33.06 181 P P 02 35 56.2 +1.0
ABTA Abfaltersbach 33.09 170 *i* pP P 02 35 57.1 +1.6
comp=Z,11nm,1.1s
H27K Steamboat Moun 33.09 335 P P 02 35 51.6 -3.8
baz=11
F20K Avaraart Lake 33.13 346 IAMs_20 IAMs_20 02 50 25.3
comp=Z,2µm,18.0s
F20K Avaraart Lake 33.13 346 P P 02 35 51.5 -4.1
baz=7.1
MFF Saint Martin d 33.14 186 P P 02 35 54.0 -1.9
BGF Bois d'Agland 33.15 182 P P 02 35 55.4 -0.6
FUORN Ofenpass-Fuorn 33.15 173 P P 02 35 56.1 -0.2
G23K Bananza Creek 33.18 342 P P 02 35 51.8 -4.3
baz=8.8
MYKA Terra Mystica 33.25 168 *i* pP P 02 35 59.0 +2.1
comp=Z,21nm,1.2s
SOKA Soboth 33.25 167 *i* pP P 02 35 58.2 +1.2
comp=Z,30nm,1.1s,SNR=7.1
TUE Stuetta 33.28 174 P P 02 35 56.1 -1.2
TUE IAmb IAmb 02 36 19.0
comp=Z,48nm,1.1s
TUE IAMs_20 IAMs_20 02 48 24.1
comp=Z,3µm,21.0s
SCHQ Schefferville 33.28 266 P P 02 35 51.6 -5.5
SCHQ Schefferville 33.28 266 P P 02 35 51.6 -5.5
comp=Z,2.4nm,0.6s,baz=11,slow=6.1,SNR=9.3
SCHQ S S 02 41 10.0 -6.9
comp=Z,2.5nm,0.7s,baz=265,slow=4.2,SNR=2.0
SCHQ LR LR 02 49 32.0
comp=Z,4µm,18.1s,baz=32,slow=37
comp=Z,2.4nm,0.6s
PRAR RASCA 33.28 153 ⇑P P 02 35 57.7 +0.6
E17K Hotham Inlet 33.33 350 P P 02 35 53.6 -3.7
baz=5.2,SNR=66
SENIN Lac Senin/Sane 33.36 176 P P 02 35 55.3 -2.7
CLUD Cludinico 33.39 169 P P 02 35 57.5 -0.6
CLUD IAmb IAmb 02 36 27.1
comp=Z,40nm,1.0s
CLUD IAMs_20 IAMs_20 02 49 16.8
comp=Z,2µm,19.0s
OBKA Obir 33.40 167 *i* pP P 02 35 59.8 +1.6
comp=Z,78nm,1.2s,SNR=9.2
OBKA Obir 33.40 167 *e*P P 02 35 57.3 -1.0
PRED Cave del Predi 33.43 168 P P 02 35 57.6 -0.9
PRED IAmb IAmb 02 37 04.9
comp=Z,75nm,1.7s
PRED IAMs_20 IAMs_20 02 49 17.9
comp=Z,4µm,19.0s
F19K Shaleruckim Mo 33.44 347 P P 02 35 54.0 -4.2
baz=6.5
G21K Allakaket 33.56 344 P P 02 35 55.5 -3.8
baz=7.7
DRGR 33.58 157 ⇑P P 02 36 00.7 +0.9
DRGR 33.58 157 P P 02 36 00.7 +0.9
STAL STALIGIAL 33.58 169 P P 02 35 58.8 -1.0
STAL IAmb IAmb 02 36 20.9
comp=Z,36nm,1.1s
STAL IAMs_20 IAMs_20 02 49 23.8
comp=Z,2µm,18.0s
I30M Mount Dempster 33.66 331 IAMs_20 IAMs_20 02 51 22.5
comp=Z,2µm,19.0s
I30M Mount Dempster 33.66 331 P P 02 35 55.1 -5.2
baz=12,SNR=46
I27K Kandik River 33.72 335 P P 02 35 57.1 -3.7
baz=11,SNR=34
MARR Marisel-Cluj 33.72 156 ⇑P P 02 36 01.6 +0.5
I28M Miner Creek 33.74 334 IAMs_20 IAMs_20 02 51 52.6
comp=Z,2µm,20.0s
I28M Miner Creek 33.74 334 P P 02 35 56.1 -4.9
baz=12,SNR=23
F18K Selawik 33.74 349 P P 02 35 57.2 -3.7
baz=5.8,SNR=142
CTI Castel Tesino 33.76 171 P P 02 36 00.4 -1.0
CTI Castel Tesino 33.76 171 P P 02 36 00.4 -1.0
CTI pmax pmax
comp=Z,141nm,1.7s
CTI MLR MLR
comp=Z,2µm,20.0s
KIS Kishinev 33.87 149 ⇑*i* P P 02 36 01.8 -0.4
comp=Z,90nm,1.0s
KIS *i* S S 02 41 28.0 +1.9
comp=Z,790nm,11.5s
KIS *e*L L 02 47 13.0
KIS LRM MLR 02 49 44.0
comp=Z,2µm,15.5s
KIS Kishinev 33.87 149 *c i* P P 02 36 01.8 -0.4
KIS *i* S S 02 41 28.0 +1.9
KIS *e* 02 41 33.0
KIS pmax pmax
comp=Z,90nm,1.0s
KIS pmax pmax
comp=N,800nm,11.5s
KIS MLR MLR
comp=Z,2µm,15.5s
MORH Mrgy, Hungar 33.89 162 ⇑P P 02 36 03.1 +0.7
SABO M.te Sabotino 33.89 168 P P 02 36 02.3 -0.2
SABO IAmb IAmb 02 36 23.2
comp=Z,50nm,0.8s
SABO IAMs_20 IAMs_20 02 49 33.1
comp=Z,3µm,19.0s
YKA Yellowknife Ar 33.91 313 P P 02 35 56.4 -6.0
YKA Yellowknife Ar 33.91 313 P P 02 35 56.5 -5.8
comp=Z,4.7nm,0.9s,baz=11,slow=8.7,SNR=80
YKA PcP PcP 02 38 34.0 -6.3
comp=Z,1.1nm,0.8s,baz=44,slow=3.7,SNR=3.9
YKA LR LR 02 49 19.6
comp=Z,9µm,19.0s,baz=16,slow=36
comp=Z,4.7nm,0.9s
H24K Noodor Dome 33.92 340 P P 02 35 59.3 -3.2
baz=9.3
F17K Baldwin Pennin 33.95 350 P P 02 35 59.0 -3.7
baz=5.3,SNR=40
MILM Milestii Mici 33.95 149 ⇑*i* P P 02 36 02.0 -0.9
comp=Z,230nm,1.3s
MILM Milestii Mici 33.95 149 ⇓P P 02 36 02.8 -0.1
MILM Milestii Mici 33.95 149 *i* P P 02 36 02.0 -0.9
MILM *e* 02 37 36.0
MILM *i* S S 02 41 29.0 +1.7
MILM pmax pmax
comp=Z,230nm,1.3s
MILM smax smax
comp=E,1µm,5.2s
BRVK Borovoye 34.02 100 P P 02 36 03.6 +0.1
BRVK Borovoye 34.02 100 *ce*P P 02 36 04.6 +1.1
BRVK pmax pmax
comp=Z,149nm,1.0s
BRVK Borovoye 34.02 100 P P 02 36 04.3 +0.8
SIRR Siria 34.03 158 ⇑P P 02 36 05.0 +1.4
H22K Ishtalitna Cre 34.07 342 P P 02 36 00.5 -3.3
baz=8.2,SNR=53
BVA0 Borovoye Array 34.08 100 *i* P P 02 36 05.0 +1.0
BVAR Borovoye Array 34.08 100 P P 02 36 04.7 +0.8
comp=Z,91nm,0.9s,baz=339,slow=7.7,SNR=294
BVAR PcP PcP 02 38 40.8 -0.2
comp=Z,11nm,0.9s,baz=324,slow=9.1,SNR=1.3
BVAR S S 02 41 36.0 +6.9
comp=Z,0.9nm,0.7s,baz=66,slow=44,SNR=1.4
BVAR LR LR 02 53 06.0
comp=Z,10µm,18.2s,baz=331,slow=42
comp=Z,91nm,0.9s
PRP Porcupine Dome 34.08 338 P P 02 35 59.3 -4.7
PRP Porcupine Dome 34.08 338 P P 02 36 01.0 -3.0
baz=9.9,SNR=43
G19K Purcell Mounta 34.10 347 P P 02 36 00.2 -3.8
baz=6.5,SNR=23
IMAR Indian Mountai 34.10 344 P P 02 35 59.4 -4.7
CRES Cresnjev 34.12 166 *e*P P 02 36 04.3 -0.1
I26K Coal Creek Min 34.12 336 P P 02 36 00.9 -3.3
baz=10
VASR Vaslui 34.13 151 ⇑P P 02 36 05.4 +0.9
TESR Tescani 34.16 152 ⇑P P 02 36 05.0 +0.3
CEY Cerknica 34.17 167 *e*P P 02 36 04.8 0.0
LPL La Plagne 34.20 177 P P 02 36 06.6 +1.2
J30M Hart River 34.29 331 P P 02 36 01.0 -4.9
baz=12
WRGLY Wrigley 34.30 321 P P 02 35 59.9 -5.8
WRGLY IAmb IAmb 02 36 01.9
comp=Z,72nm,1.1s
WRGLY Wrigley 34.30 321 P P 02 36 00.3 -5.4
baz=15,SNR=31
H21K Melozitna Rive 34.38 343 IAMs_20 IAMs_20 02 49 38.6
comp=Z,2µm,19.0s
H21K Melozitna Rive 34.38 343 P P 02 36 03.2 -3.3
baz=7.8
FCC Fort Churchill 34.38 294 P P 02 35 59.3 -7.2
FCC Fort Churchill 34.38 294 P P 02 35 59.3 -7.2
FCC pmax pmax
comp=Z,38nm,1.6s
G18K Tagagawik 34.41 348 P P 02 36 02.8 -3.9
baz=6.0
AKTO Aktyubinsk 34.42 114 P P 02 36 08.0 +1.0
AKTO Aktyubinsk 34.42 114 P P 02 36 08.0 +1.0
comp=Z,133nm,0.9s,baz=345,slow=7.5,SNR=288
AKTO LR LR 02 52 29.2
comp=Z,5µm,18.2s,baz=348,slow=40
comp=Z,133nm,0.9s
SSB Saint Sauveur 34.42 180 P P 02 36 05.5 -1.6
SSB IAmb IAmb 02 36 35.4
comp=Z,86nm,1.8s
SSB Saint Sauveur 34.42 180 IAMs_20 IAMs_20 02 52 42.2
comp=Z,2µm,18.0s
SSB Saint Sauveur 34.42 180 P P 02 36 05.5 -1.6
SSB pmax pmax
comp=Z,86nm,1.8s
SSB MLR MLR
comp=Z,2µm,18.0s
BOJS Bojanci 34.44 166 *e*P P 02 36 05.8 -1.3
TEOL Teolo 34.45 171 P P 02 36 06.7 -0.6
EGAK Eagle 34.50 335 P P 02 36 02.0 -5.4
EGAK Eagle 34.50 335 P P 02 36 03.1 -4.3
baz=11,SNR=20
TURR Turia 34.56 153 ⇑P P 02 36 09.7 +1.4
SURR Surduc 34.57 158 ⇑P P 02 36 09.7 +1.4
J29N Klondike Camp 34.58 332 P P 02 36 01.4 -6.9
J29N IAmb IAmb 02 36 05.1
comp=Z,49nm,1.1s
J29N IAMs_20 IAMs_20 02 47 50.8
comp=Z,806nm,20.0s
J29N Klondike Camp 34.58 332 P P 02 36 03.8 -4.5
baz=12
DOPR Dopca 34.60 154 ⇓P P 02 36 09.9 +1.3
POKR Poker Plat Res 34.61 339 P P 02 36 01.8 -6.7
POKR Poker Plat Res 34.61 339 P P 02 36 05.5 -2.9
baz=9.2,SNR=27
H20K Anoflenenega Mo 34.65 345 P P 02 36 05.5 -3.3
baz=7.1,SNR=89
BNI Bardonecchia 34.66 177 P P 02 36 07.8 -1.5
BNI IAmb IAmb 02 36 30.8
comp=Z,115nm,1.8s
BNI IAMs_20 IAMs_20 02 50 10.0
comp=Z,3µm,19.0s
BNI Bardonecchia 34.66 177 P P 02 36 07.8 -1.5
BNI pmax pmax
comp=Z,115nm,1.8s
BNI MLR MLR
comp=Z,3µm,19.0s
BZS Buzias 34.67 159 ⇑P P 02 36 10.3 +1.2
BZS Buzias 34.67 159 P P 02 36 10.3 +1.2
GHRR 34.68 151 ⇓P P 02 36 10.8 +1.6
H19K Roundabout Mou 34.68 346 P P 02 36 05.8 -3.2
baz=6.6,SNR=33
I23K Minto, Yukon-K 34.69 341 P P 02 36 03.0 -6.2
I23K IAmb IAmb 02 36 07.5
comp=Z,64nm,0.9s
I23K Minto, Yukon-K 34.69 341 P P 02 36 05.9 -3.2
baz=8.7,SNR=41
F15K North Star Dit 34.79 352 IAMs_20 IAMs_20 02 48 49.5
comp=Z,2µm,21.0s
F15K North Star Dit 34.79 352 P P 02 36 07.4 -2.6
baz=4.2
COVR Voineasa-Covas 34.79 153 ⇓P P 02 36 12.0 +1.8
ORIF Oris-en-Rattie 34.79 178 P P 02 36 10.2 -0.1
I21K Tanana 34.81 343 P P 02 36 05.0 -5.1
I21K IAmb IAmb 02 36 08.1
comp=Z,90nm,1.3s
I21K IAMs_20 IAMs_20 02 48 55.5
comp=Z,2µm,21.0s
I21K Tanana 34.81 343 P P 02 36 07.0 -3.1
baz=7.9,SNR=32
VRI Vrincioaia 34.81 152 ⇑P P 02 36 11.1 +0.7
VRI Vrincioaia 34.81 152 P P 02 36 11.1 +0.7
MDM Murphy Dome 34.81 340 P P 02 36 04.7 -5.6
PLOR Plostina 34.82 152 ⇑P P 02 36 11.2 +0.7
PLOR Plostina 34.82 152 P P 02 36 11.2 +0.7
PANC Panciu 34.84 152 ⇓P P 02 36 11.9 +1.3
VIVF Saint-Julien-l 34.85 180 P P 02 36 11.5 +0.7
COLA College 34.87 340 P P 02 36 04.2 -6.4
COLA College 34.87 340 P P 02 36 07.6 -3.1
COLA College 34.87 340 P P 02 36 07.4 -3.3
baz=9.1
COLA College 34.87 340 P P 02 36 04.3 -6.4
COLA pmax pmax
comp=Z,254nm,1.8s
COLA MLR MLR
comp=Z,2µm,21.0s
G17K Kiwalik Mounta 34.87 349 P P 02 36 07.1 -3.6
baz=5.4
VARL Varlezi 34.88 151 ⇑P P 02 36 11.5 +0.6
MLY Manley 34.89 342 P P 02 36 05.3 -5.7
MLY IAmb IAmb 02 36 08.4
comp=Z,65nm,1.4s
MLY Manley 34.89 342 P P 02 36 07.8 -3.2
baz=8.2,SNR=19
IL31 34.91 339 P P 02 36 05.2 -5.8
IL31 IAmb IAmb 02 36 08.3
comp=Z,64nm,1.3s
ILAR Eielson Array 34.91 339 P P 02 36 04.8 -6.3
ILAR Eielson Array 34.91 339 P P 02 36 07.3 -3.7
comp=Z,16nm,0.9s,baz=3.7,slow=7.4,SNR=134
ILAR PcP PcP 02 38 40.1 -3.2
comp=Z,2.3nm,0.6s,baz=337,slow=4.0,SNR=11
ILAR S S 02 41 37.1 -4.8
comp=Z,0.1nm,0.5s,baz=84,slow=14,SNR=1.5
ILAR LR LR 02 49 52.7
comp=Z,954nm,20.6s,baz=10,slow=36
comp=Z,16nm,0.9s
ODBI Odobesti 34.94 152 ⇑P P 02 36 13.6 +2.1
J26L Joseph Creek 34.95 336 P P 02 36 07.7 -3.8
baz=10,SNR=18
VLDR Vladesti 34.95 151 ⇑P P 02 36 12.0 +0.5
J25K Salcha River, 34.97 338 P P 02 36 08.3 -3.4
baz=9.7,SNR=24
GZR Gura Zlata 34.97 157 ⇑P P 02 36 13.0 +1.1
GZR Gura Zlata 34.97 157 P P 02 36 13.0 +1.1
MBDF Montbardon 34.99 177 P P 02 36 13.6 +1.5
LOT Lotru 34.99 156 ⇓P P 02 36 12.9 +0.9
A051A Mrakovica 35.00 164 *e*P P 02 36 16.6 +4.5
TNA Tin City 35.00 354 P P 02 36 08.6 -3.3
baz=3.1,SNR=7.3
FRGS Fruska Gora 35.02 161 ⇓P P 02 36 13.6 +1.4
FRGS Fruska Gora 35.02 161 *e*P P 02 36 12.8 +0.6
G16K Koyuk River 35.04 350 P P 02 36 09.5 -2.6
baz=4.8
F14K Arctic Creek 35.06 353 P P 02 36 09.6 -2.7
baz=3.6,SNR=11
CCB Clear Creek Bu 35.10 340 P P 02 36 07.4 -5.2
CCB IAmb IAmb 02 36 09.6
comp=Z,52nm,1.3s
VOIR 35.10 154 ⇑P P 02 36 13.5 +0.5
VOIR 35.10 154 P P 02 36 13.5 +0.5
K29M Barlow Dome 35.12 332 P P 02 36 08.9 -4.1
baz=12,SNR=37
MLR Muntele Rosu 35.12 153 ⇑P P 02 36 14.2 +1.0
MLR Muntele Rosu 35.12 153 P P 02 36 13.1 -0.1
MLR IAmb IAmb 02 36 20.3
comp=Z,32nm,0.9s
MLR IAMs_20 IAMs_20 02 50 58.9
comp=Z,6µm,20.0s
MLR Muntele Rosu 35.12 153 P P 02 36 13.1 -0.1
MLR pmax pmax
comp=Z,32nm,0.9s
MLR Muntele Rosu 35.12 153 LR LR 02 51 01.6
comp=Z,6µm,18.4s,baz=5.0,slow=37
ARR Arges 35.14 155 ⇓P P 02 36 14.9 +1.6
H18K Honhosa River 35.14 347 P P 02 36 09.8 -3.2
baz=6.0
YAK Yakutsk 35.16 42 P P 02 36 10.4 -2.8
YAK Yakutsk 35.16 42 IAMs_20 IAMs_20 02 51 57.8
comp=Z,2µm,18.0s
YAK Yakutsk 35.16 42 *c i* P P 02 36 11.1 -2.1
YAK *e* 02 37 28.3
YAK *eS* S 02 41 43.5 -2.2
YAK pmax pmax
comp=Z,100nm,0.9s
YAK pmax pmax
comp=N,61nm,1.2s
YAK pmax pmax
comp=E,19nm,1.0s
YAK pmax pmax
comp=Z,136nm,2.1s
YAK pmax pmax
comp=N,134nm,2.3s
YAK pmax pmax
comp=E,115nm,3.0s
YAK smax smax
comp=N,499nm,4.5s
YAK smax smax
comp=E,486nm,5.9s
YAK MLR MLR
comp=Z,2µm,19.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK Yakutsk 35.16 42 LR LR 02 52 15.0
comp=N,2µm,18.4s,baz=345,slow=39
TATR Tatarca 35.19 151 ⇓P P 02 36 14.3 +0.6
MAYO Mayo, Yukon 35.22 330 P P 02 36 06.9 -6.8
MAYO IAmb IAmb 02 36 11.5
comp=Z,54nm,0.9s
MAYO Mayo, Yukon 35.22 330 P P 02 36 09.0 -4.8
baz=12
NEA2 Nenana 35.23 340 P P 02 36 05.7 -8.1
NEA2 IAmb IAmb 02 36 10.8
comp=Z,47nm,1.3s
NEA2 Nenana 35.23 340 P P 02 36 10.3 -3.5
baz=8.7,SNR=11
SCHL Schela 35.27 151 ⇓P P 02 36 14.5 +0.2
HDA Harding Lake 35.28 339 P P 02 36 07.0 -7.2
HDA IAmb IAmb 02 36 11.1
comp=Z,57nm,1.2s
HDA Harding Lake 35.28 339 P P 02 36 10.4 -3.8
baz=9.2,SNR=23
BLY Banja Luka 35.28 164 *e*P P 02 36 18.8 +4.4
WRH Wood River Hil 35.29 340 IAmb IAmb 02 36 11.4
comp=Z,64nm,1.3s
SCHLR Schela 35.30 151 ⇓P P 02 36 15.2 +0.7
K27K Chicken 35.31 335 IAMs_20 IAMs_20 02 52 55.2
comp=Z,2µm,20.0s
K27K Chicken 35.31 335 P P 02 36 10.9 -3.5
baz=10
GRER 35.31 152 ⇓P P 02 36 17.3 +2.5
I20K Naaghedeneel 35.32 344 P P 02 36 12.0 -2.6
baz=7.1
H17K Granite Mounta 35.41 349 P P 02 36 12.1 -3.3
baz=5.5,SNR=32
MSSA Maissana 35.44 174 IAMs_20 IAMs_20 02 52 31.2
comp=Z,2µm,20.0s
GCSA Galena City Sc 35.48 346 P P 02 36 13.2 -2.7
baz=6.4,SNR=15
G15K Niukluk 35.49 352 P P 02 36 13.2 -2.8
baz=4.3
SCRK Sand Creek 35.50 337 P P 02 36 12.3 -4.0
baz=9.9,SNR=12
MDVR Moldovita 35.51 159 ⇓P P 02 36 17.8 +1.3
A050A Klekovaca 35.51 165 *e*P P 02 36 17.5 +1.0
MGRS Mrkonjic Grad 35.60 164 *e*P P 02 36 19.9 +2.6
TEKS Tekeris 35.60 161 *e*P P 02 36 16.0 -1.2
VLC Villacollemand 35.62 173 P P 02 36 20.1 +2.8
CFR Carcaliu 35.62 151 ⇑P P 02 36 17.4 +0.1
CFR Carcaliu 35.62 151 P P 02 36 17.4 +0.1
TLCR 35.67 150 ⇓P P 02 36 18.2 +0.5
TLCR 35.67 150 P P 02 36 18.2 +0.5
BWN Browne 35.67 341 IAmb IAmb 02 36 14.6
comp=Z,73nm,1.3s
DJES Djerdap 35.68 158 ⇑P P 02 36 18.9 +1.1
H16K Elim 35.79 350 P P 02 36 15.6 -3.0
baz=4.8,SNR=29
RIDG Independent Ri 35.80 337 IAmb IAmb 02 36 40.4
comp=Z,44nm,1.2s
RIDG Independent Ri 35.80 337 P P 02 36 15.3 -3.5
baz=9.7,SNR=7.4
K24K Donnelly Dome 35.80 338 P P 02 36 15.1 -3.7
baz=9.4,SNR=10
ZALV Zalesovo Beam 35.81 85 P P 02 36 18.8 -0.1
comp=Z,24nm,0.8s,baz=339,slow=7.9,SNR=66
ZALV PP PnPn 02 37 36.9 -1.8
comp=Z,33nm,1.1s,baz=332,slow=12,SNR=4.2
ZALV S S 02 41 54.9 -0.9
comp=Z,1.8nm,1.0s,baz=281,slow=39,SNR=1.7
ZALV LR LR 02 54 41.8
comp=Z,4µm,18.8s,baz=336,slow=42
comp=Z,24nm,0.8s
SBF Sospel 35.86 176 P P 02 36 21.3 +1.8
AB31 Akbulak array 35.88 113 *i* P P 02 36 20.4 +0.9
ABKAR Akbulak array 35.88 113 P P 02 36 19.4 -0.1
ABKAR Akbulak array 35.88 113 IAmb IAmb 02 36 21.8
comp=Z,122nm,1.0s
L29M L29M 35.89 332 P P 02 36 15.4 -4.2
baz=11
J20K Nowinta River 35.92 344 IAMs_20 IAMs_20 02 50 37.0
comp=Z,2µm,18.0s
J20K Nowinta River 35.92 344 P P 02 36 16.8 -2.9
baz=7.1,SNR=16
SULR 35.95 153 ⇓P P 02 36 20.9 +0.8
TPGR Topolog 35.96 150 ⇑P P 02 36 20.8 +0.5
HUMR Humele 36.00 155 ⇑P P 02 36 21.2 +0.6
HAPS Han Pijesak,Bl 36.03 162 *e*P P 02 36 21.1 +0.1
MCK McKinley 36.08 340 P P 02 36 17.1 -4.0
baz=8.5,SNR=7.8
HARR Harsova 36.08 151 ⇑P P 02 36 21.5 +0.2
HARR Harsova 36.08 151 P P 02 36 21.4 +0.2
CHUM Lake Minchumin 36.12 343 P P 02 36 18.1 -3.3
baz=7.6,SNR=29
J19K Poorman 36.18 345 P P 02 36 19.1 -2.9
baz=6.6,SNR=31
TLBR Topalu 36.24 151 ⇑P P 02 36 23.4 +0.8
L27K Beaver Creek, 36.24 335 P P 02 36 19.2 -3.4
baz=10
BBLS Lazići 36.28 161 *e*P P 02 36 23.5 +0.4
M30M Minto, Yukon 36.30 331 IAmb IAmb 02 36 20.3
comp=Z,70nm,1.1s
M30M Minto, Yukon 36.30 331 P P 02 36 18.9 -4.2
baz=12,SNR=41
FARO Faro, Yukon 36.32 328 IAmb IAmb 02 36 21.0
comp=Z,53nm,0.9s
FARO Faro, Yukon 36.32 328 P P 02 36 19.4 -3.8
baz=12,SNR=35
TIRR Tirgusor 36.35 150 ⇑P P 02 36 24.0 +0.3
TIRR Tirgusor 36.35 150 P P 02 36 23.9 +0.3
KTH Kantishna Hill 36.37 342 IAmb IAmb 02 36 21.3
comp=Z,70nm,1.3s
KTH IAMs_20 IAMs_20 02 49 55.7
comp=Z,2µm,22.0s
L26K Log Cabin Wild 36.40 336 IAmb IAmb 02 36 22.2
comp=Z,116nm,1.6s
L26K Log Cabin Wild 36.40 336 P P 02 36 20.6 -3.2
baz=9.9,SNR=17
ERBR Yeremizino-Bor 36.43 136 *e*P P 02 36 23.3 -0.9
ERBR *e**PP pP 02 36 25.8 -0.5
ERBR *eS* S 02 42 07.9 +2.5
ERBR pmax pmax
comp=Z,310nm,1.0s
ERBR MLR MLR
comp=N,15µm,16.0s
ERBR MLR MLR
comp=Z,5µm,13.0s
ERBR MLR MLR
comp=E,3µm,12.0s
SIM Simferopol' 36.43 144 *e*P P 02 36 24.9 +0.6
SIM *eS* S 02 42 06.6 +1.1
SIM *eSS* SnSn 02 44 29.4 -3.7
SIM pmax pmax
comp=Z,87nm,1.2s
TRF Thorofare Moun 36.44 341 IAMs_20 IAMs_20 02 50 20.4
comp=Z,2µm,21.0s
TRF Thorofare Moun 36.44 341 P P 02 36 20.4 -3.9
baz=8.1,SNR=6.6
M31M Drury Creek, Y 36.45 329 IAmb IAmb 02 36 21.4
comp=Z,50nm,1.2s
M31M IAMs_20 IAMs_20 02 52 36.1
comp=Z,4µm,18.0s
M31M Drury Creek, Y 36.45 329 P P 02 36 20.7 -3.6
baz=12,SNR=25
VLAD Vladila 36.48 155 ⇑P P 02 36 25.1 +0.4
TGTN Hyland Airport 36.49 324 P P 02 36 21.1 -3.6
baz=13,SNR=20

I17K	**Unalakleet**	**36.49**	**349**	IAmb	IAmb	02 36 22.3			
	comp=Z,58nm,1.3s								
I17K	**Unalakleet**	**36.49**	**349**	P	P	02 36 21.5	-3.1		
	baz=5.1,SNR=9.7								
MENT	**Mentasta**	**36.51**	**336**	P	P	02 36 21.7	-3.1		
SEY	**Seymchan**	**36.51**	**24** *ce*	P	P	02 36 23.3	-1.5		
SEY				pmax	pmax				
	comp=Z,52nm,1.7s								
SEY	**Seymchan**	**36.51**	**24**	LR	LR	02 49 43.2			
	comp=Z,1µm,21.2s,baz=354,slow=34								
RUDO	**Rudo**	**36.52**	**162**	*e* P	**P**	**02 36 24.9**	**-0.2**		
MURB	**Monte Urbino**	**36.57**	**170**	IAmb	IAmb	02 36 48.1			
	comp=Z,67nm,0.9s								
MURB				IAMs_20	IAMs_20	02 51 34.8			
	comp=Z,3µm,18.0s								
CAST	**Castle Rocks**	**36.57**	**342**	IAmb	IAmb	02 36 22.6			
	comp=Z,88nm,1.2s								
CAST				IAMs_20	IAMs_20	02 51 24.0			
	comp=Z,2µm,19.0s								
CAST	**Castle Rocks**	**36.57**	**342**	P	P	02 36 21.8	-3.5		
	baz=7.5,SNR=39								
M29M	**Somme Creek**	**36.58**	**332**	P	P	02 36 22.1	-3.4		
	baz=11,SNR=24								
PAX	**Paxson**	**36.60**	**337**	P	P	02 36 21.6	-4.1		
	baz=9.3,SNR=17								
DHY	**Denali Highway**	**36.63**	**339**	P	P	02 36 22.1	-3.9		
	baz=8.8,SNR=22								
EPF	**Esparros**	**36.70**	**185**	P	**P**	**02 36 25.9**	**-0.8**		
BLKB	**Belogradchik**	**36.73**	**158**	⇑P	**P**	**02 36 26.9**	**0.0**		
K20K	**Telida**	**36.74**	**344**	IAMs_20	IAMs_20	02 51 03.0			
	comp=Z,2µm,18.0s								
K20K	**Telida**	**36.74**	**344**	P	P	02 36 23.5	-3.3		
	baz=7.0								
J18K	**Innoko River**	**36.76**	**346**	P	P	02 36 24.0	-2.9		
	baz=6.2,SNR=18								
GUMA	**Gualdo di Mace**	**36.80**	**169**	IAMs_20	IAMs_20	02 51 29.9			
	comp=Z,2µm,20.0s								
BVCY	**Beaver Creek**	**36.81**	**334**	P	P	02 36 24.0	-3.3		
	baz=10,SNR=7.6								
FDMO	**Fiordimonte**	**36.82**	**169**	IAmb	IAmb	02 36 50.9			
	comp=Z,60nm,1.0s								
FDMO				IAMs_20	IAMs_20	02 51 41.4			
	comp=Z,2µm,20.0s								
GAMB	**Gambell**	**36.85**	**357**	P	P	02 36 24.4	-3.2		
	baz=1.9								
SJES	**Sjenica**	**36.91**	**161**	*e* P	**P**	**02 36 29.2**	**+0.7**		
M27K	**Edge Creek, AK**	**36.94**	**334**	P	P	02 36 25.4	-3.2		
	baz=10								
WAT1	**Susitna Watana**	**36.95**	**340**	P	P	02 36 23.9	-4.7		
	baz=8.4								
ANN	**Anapa**	**36.95**	**140**	*e* P	**P**	**02 36 25.6**	**-3.1**		
ANN				*e** PP	**pP**	**02 36 28.2**	**-2.6**		
ANN				*e*		02 37 49.7			
ANN				*e*		02 38 47.2			
ANN				*e*S	**S**	**02 42 11.6**	**-1.8**		
ANN				*e*SS	**SnSn**	**02 44 43.1**	**-2.6**		
ANN				pmax	pmax				
	comp=Z,195nm,1.1s								
ANN				MLR	MLR				
	comp=E,318nm,13.0s								
ANN				MLR	MLR				
	comp=Z,3µm,13.0s								
ANN				MLR	MLR				
	comp=N,2µm,15.0s								
M26K	**Nabesna, AK**	**36.99**	**335**	P	P	02 36 25.5	-3.4		
	baz=9.8								
CASP	**Castiglione de**	**36.99**	**172**	IAMs_20	IAMs_20	02 51 18.6			
	comp=Z,2µm,20.0s								
NRCA	**Norcia**	**37.02**	**169**	IAmb	IAmb	02 36 51.1			
	comp=Z,92nm,1.0s								
BOD	**Bodaibo**	**37.07**	**57**	*e* P	**P**	**02 36 27.5**	**-2.1**		
BOD				pmax	pmax				
	comp=Z,91nm,1.7s								
J16K	**Anvik River**	**37.09**	**349**	P	P	02 36 26.6	-3.1		
	baz=5.1								
PPLA	**Purkeypile**	**37.10**	**342**	P	P	02 36 26.3	-3.7		
	baz=7.4,SNR=11								
PLVB	**Pleven**	**37.10**	**155**	⇑P	**P**	**02 36 30.2**	**+0.1**		
WAT6	**Susitna Watana**	**37.15**	**339**	P	P	02 36 25.8	-4.6		
	baz=8.6,SNR=9.9								
HARP	**HAARP**	**37.15**	**337**	P	P	02 36 27.2	-3.0		
	baz=9.3								
FLDN	**Fort Liard**	**37.20**	**319**	P	P	02 36 26.3	-4.4		
	baz=14								
CESX	**Cesi**	**37.23**	**170**	IAMs_20	IAMs_20	02 52 07.1			
	comp=Z,3µm,18.0s								
TTA	**Tatalina**	**37.26**	**345**	P	P	02 36 25.9	-5.4		
TTA				IAmb	IAmb	02 36 29.7			
	comp=Z,159nm,2.0s								
TTA	**Tatalina**	**37.26**	**345**	P	P	02 36 28.5	-2.7		
TTA	**Tatalina**	**37.26**	**345**	P	P	02 36 28.2	-3.0		
	baz=6.4,SNR=13								
TTA	**Tatalina**	**37.26**	**345**	P	P	02 36 25.9	-5.3		
TTA				pmax	pmax				
	comp=Z,159nm,2.0s								
EJON	**La Jonquera**	**37.26**	**182**	P	**P**	**02 36 33.6**	**+2.2**		
LOZB	**Loznitsa**	**37.28**	**153**	⇓P	**P**	**02 36 31.3**	**-0.2**		
N31M	**Braeburn, Yuko**	**37.28**	**329**	IAmb	IAmb	02 36 28.7			
	comp=Z,50nm,1.1s								
N31M				IAMs_20	IAMs_20	02 52 15.2			
	comp=Z,2µm,18.0s								
N31M	**Braeburn, Yuko**	**37.28**	**329**	P	P	02 36 27.4	-4.1		
	baz=12,SNR=9.4								
CAMP	**Campotosto**	**37.33**	**169**	IAmb	IAmb	02 37 03.0			
	comp=Z,71nm,1.1s								
N32M	**Quiet Lake**	**37.35**	**327**	P	P	02 36 27.6	-4.5		
	baz=12								
KOTAN	**Kotaneelee Air**	**37.38**	**320**	P	P	02 36 27.8	-4.4		
	baz=14,SNR=21								
GOF	**Gofitskoye**	**37.41**	**133** *ce*	P	**P**	**02 36 33.2**	**+0.6**		
BRZS	**Berezniki**	**37.41**	**99** ⇑ *i*	P	**P**	**02 36 33.4**	**+0.9**		
	comp=Z,98nm,1.1s,baz=98								
BRZS				*e*S	**S**	**02 42 24.8**	**+4.5**		
	baz=98								
BRZS	**Berezniki**	**37.41**	**99** *c i*	P	**P**	**02 36 33.4**	**+0.9**		
BRZS				*e*S	**S**	**02 42 24.8**	**+4.5**		
BRZS				pmax	pmax				
	comp=Z,99nm,1.1s								
YUK3	**Moose Creek**	**37.41**	**333**	P	P	02 36 28.9	-3.8		
	baz=10,SNR=10								
CUT	**Chulitna**	**37.48**	**341**	IAmb	IAmb	02 36 30.6			
	comp=Z,85nm,1.1s								
CUT				IAMs_20	IAMs_20	02 51 02.8			
	comp=Z,2µm,21.0s								
CUT	**Chulitna**	**37.48**	**341**	P	P	02 36 28.2	-4.8		
	baz=7.9,SNR=9.9								
M24K	**Tolsona, Glenn**	**37.51**	**338**	IAmb	IAmb	02 36 36.1			
	comp=Z,102nm,1.5s								
M24K	**Tolsona, Glenn**	**37.51**	**338**	P	P	02 36 29.7	-3.7		
	baz=8.9,SNR=5.1								
LABN	**Labinsk**	**37.51**	**136**	*e* P	**P**	**02 36 32.4**	**-1.1**		
LABN				*e** PP	**pP**	**02 36 35.3**	**-0.3**		
LABN				*e*S	**S**	**02 42 23.6**	**+1.6**		
LABN				pmax	pmax				
	comp=Z,335nm,0.9s								
LABN				MLR	MLR				
	comp=Z,6µm,13.0s								
LABN				MLR	MLR				
	comp=N,1µm,10.0s								
LABN				MLR	MLR				
	comp=E,9µm,13.0s								
K17K	**Iditarod**	**37.57**	**347**	P	P	02 36 30.4	-3.4		
	baz=5.7,SNR=12								
L20K	**Farewell, AK**	**37.60**	**344**	P	P	02 36 30.5	-3.6		
	baz=6.9,SNR=57								
YUK4	**Talbot Arm**	**37.68**	**332**	P	P	02 36 30.2	-4.7		
	baz=11,SNR=11								
J14K	**Nanvaranak Lak**	**37.72**	**351**	IAMs_20	IAMs_20	02 50 19.7			
	comp=Z,2µm,22.0s								
J14K	**Nanvaranak Lak**	**37.72**	**351**	P	P	02 36 32.0	-3.0		
	baz=4.2,SNR=9.2								
KURK	**Kurchatov**	**37.78**	**93** *ce*	P	**P**	**02 36 36.1**	**+0.4**		
KURK				pmax	pmax				
	comp=Z,495nm,1.3s								
KURK	**Kurchatov**	**37.78**	**93**	P	**P**	**02 36 36.1**	**+0.4**		
KURK				P	**P**	**02 36 36.1**	**+0.4**		
KURK				S	**S**	**02 42 27.0**	**+1.2**		
KURK				S	**S**	**02 42 27.0**	**+1.2**		
YUK8	**Steele Glacier**	**37.83**	**333**	P	P	02 36 32.8	-3.5		
	baz=10,SNR=10								
KURBB	**Kurchatov Arra**	**37.85**	**93**	P	**P**	**02 36 36.4**	**+0.2**		
KURBB	**Kurchatov Arra**	**37.85**	**93**	P	**P**	**02 36 36.7**	**+0.5**		
	comp=Z,185nm,1.0s,baz=340,slow=7.9,SNR=602								
KURBB				PP	**PP**	**02 37 59.1**	**-3.2**		
	comp=Z,30nm,1.0s,baz=342,slow=12,SNR=5.4								
KURBB				S	**S**	**02 42 28.1**	**+1.2**		
	comp=Z,1.4nm,1.0s,baz=338,slow=31,SNR=1.9								
KURBB				LR	LR	02 55 43.3			
	comp=Z,6µm,18.4s,baz=324,slow=42								
	comp=Z,185nm,1.0s								
SCM	**Sheep Creek Mo**	**37.86**	**338**	P	P	02 36 32.5	-3.8		
	baz=8.6,SNR=13								
INTR	**Introdacqua**	**37.87**	**168**	IAmb	IAmb	02 37 04.3			
	comp=Z,58nm,1.2s								
N25K	**Chitina, Valde**	**37.90**	**336**	P	P	02 36 32.7	-4.0		
	baz=9.2,SNR=12								
M23K	**Glacier View**	**37.93**	**339**	P	P	02 36 32.4	-4.5		
	baz=8.4,SNR=9.8								
WTLY	**Watson Lake, Y**	**37.93**	**324**	P	P	02 36 32.5	-4.4		
	baz=13,SNR=9.8								
DRME	**Dracevica, Mon**	**37.94**	**162**	*e* P	**P**	**02 36 35.8**	**-1.3**		
L19K	**White Mountain**	**37.95**	**344**	IAMs_20	IAMs_20	02 51 33.1			
	comp=Z,1µm,18.0s								
L19K	**White Mountain**	**37.95**	**344**	P	P	02 36 33.4	-3.6		
	baz=6.6								
SML	**Sawmill**	**37.95**	**339**	IAmb	IAmb	02 36 34.1			
	comp=Z,73nm,1.1s								
SML	**Sawmill**	**37.95**	**339**	P	P	02 36 32.8	-4.2		
	baz=8.3,SNR=11								
SKT	**Skwentna**	**37.98**	**342**	IAmb	IAmb	02 36 33.8			
	comp=Z,78nm,1.0s								
SKT				IAMs_20	IAMs_20	02 50 57.1			
	comp=Z,2µm,21.0s								
SKT	**Skwentna**	**37.98**	**342**	P	P	02 36 32.5	-4.8		
	baz=7.5,SNR=28								
MCARA	**McCarthy VSAT**	**38.00**	**335**	P	P	02 36 33.5	-3.9		
	baz=9.6,SNR=9.0								
ECAL	**Calabor**	**38.00**	**193**	P	**P**	**02 36 35.0**	**-2.8**		
L18K	**Granite Mounta**	**38.00**	**346**	P	P	02 36 34.6	-2.8		
	baz=6.1								
GLB	**Gilahina Butte**	**38.00**	**336**	IAmb	IAmb	02 36 35.3			
	comp=Z,51nm,1.1s								
WHY	**Whitehorse**	**38.01**	**329**	P	P	02 36 33.2	-4.5		
	baz=12,SNR=16								
O30N	**Mendenhall**	**38.02**	**330**	IAmb	IAmb	02 36 34.7			
	comp=Z,64nm,0.8s								
O30N				IAMs_20	IAMs_20	02 51 51.6			
	comp=Z,2µm,22.0s								
O30N	**Mendenhall**	**38.02**	**330**	P	P	02 36 33.4	-4.2		
	baz=11,SNR=31								
PGAV	**Gavieira, Arco**	**38.04**	**195**	*e* P	**P**	**02 36 39.5**	**+1.4**		
	comp=Z,77nm,1.7s								
YUK6	**Outpost Mounta**	**38.05**	**331**	P	P	02 36 34.9	-3.2		
	baz=11,SNR=17								
HYT	**Haines Junctio**	**38.09**	**331**	IAmb	IAmb	02 36 35.9			
	comp=Z,54nm,0.9s								
HYT	**Haines Junctio**	**38.09**	**331**	P	P	02 36 34.4	-3.9		
	baz=11,SNR=34								
K15K	**Wolf Creek Mou**	**38.12**	**349**	P	P	02 36 35.2	-3.1		
	baz=4.7,SNR=5.5								
PUK	**Puka**	**38.12**	**161**	IAMs_20	IAMs_20	02 54 30.3			
	comp=Z,2µm,19.0s								
PBRG	**Braganca**	**38.13**	**193**	*e* P	**P**	**02 36 40.3**	**+1.5**		
	comp=Z,128nm,1.8s								
L17K	**Donlin**	**38.15**	**347**	P	P	02 36 35.9	-2.8		
	baz=5.6								
M20K	**Styx River**	**38.16**	**343**	IAMs_20	IAMs_20	02 53 31.0			
	comp=Z,2µm,18.0s								
M20K	**Styx River**	**38.16**	**343**	P	P	02 36 34.6	-4.3		
	baz=7.0,SNR=13								
SGRT	**San Giovanni R**	**38.20**	**166**	IAMs_20	IAMs_20	02 52 23.5			
	comp=Z,4µm,19.0s								
M19K	**Big River Lodg**	**38.20**	**344**	IAMs_20	IAMs_20	02 52 17.3			
	comp=Z,2µm,19.0s								
M19K	**Big River Lodg**	**38.20**	**344**	P	P	02 36 35.5	-3.6		
	baz=6.7								
PMR	**Palmer**	**38.22**	**340**	P	P	02 36 34.9	-4.3		
PMR	**Palmer**	**38.22**	**340**	P	P	02 36 34.2	-5.0		
	baz=8.0								
P33M	**Teslin, Yukon**	**38.25**	**327**	IAmb	IAmb	02 36 36.9			
	comp=Z,59nm,0.9s								
P33M				IAMs_20	IAMs_20	02 54 59.8			
	comp=Z,2µm,18.0s								
P33M	**Teslin, Yukon**	**38.25**	**327**	P	P	02 36 35.6	-4.1		
	baz=12,SNR=33								
CTG	**Chitna Glacier**	**38.28**	**334**	P	P	02 36 36.3	-3.7		
	baz=9.9,SNR=6.9								
SKO	**Skopje**	**38.29**	**159**	*i* P	**P**	**02 36 40.6**	**+0.5**		
KNK	**Knik Glacier**	**38.35**	**339**	P	P	02 36 36.2	-4.2		
	baz=8.2,SNR=7.8								
SEM	**Semipalatinsk**	**38.37**	**91** ⇑ *i*	P	**P**	**02 36 41.1**	**+0.2**		
	comp=Z,137nm,1.1s,baz=90								
SEM				LR	LR	02 53 04.6			
	comp=Z,3µm,14.6s,baz=90								
SEM	**Semipalatinsk**	**38.37**	**91** *c i*	P	**P**	**02 36 41.1**	**+0.2**		
SEM				pmax	pmax				
	comp=Z,137nm,1.1s								
SEM				MLR	MLR				
	comp=Z,3µm,15.0s								
SOC	**Sochi**	**38.43**	**137**	*e* P	**P**	**02 36 39.4**	**-1.8**		
SOC				*e*S	**S**	**02 42 36.8**	**+1.0**		
SOC				*e*SS	**SnSn**	**02 45 20.2**	**-1.1**		
SOC				*e*SSS	SSS	02 45 52.5			
SOC				pmax	pmax				
	comp=Z,31nm,0.9s								
SOC				MLR	MLR				
	comp=Z,4µm,20.0s								
KIV	**Kislovodsk**	**38.44**	**134**	⇑P	**P**	**02 36 43.1**	**+1.6**		
KIV	**Kislovodsk**	**38.44**	**134**	P	**P**	**02 36 41.3**	**-0.1**		
KIV				IAmb	IAmb	02 38 07.1			
	comp=Z,67nm,0.9s								
KIV	**Kislovodsk**	**38.44**	**134**	*i* P	**P**	**02 36 42.5**	**+1.1**		
	SNR=16								
KIV	**Kislovodsk**	**38.44**	**134**	*e* P	**P**	**02 36 42.1**	**+0.7**		
KIV				*e*		02 38 11.1			
KIV				*e*S	**S**	**02 42 39.9**	**+3.7**		
KIV				pmax	pmax				
	comp=Z,65nm,1.1s								
KIV				pmax	pmax				
	comp=Z,131nm,4.2s								
KIV				MLR	MLR				
	comp=Z,2µm,16.0s								
KIV	**Kislovodsk**	**38.44**	**134**	P	**P**	**02 36 41.8**	**+0.4**		
KIV				S	**S**	**02 42 35.4**	**-0.8**		
SUA	**Susitna One**	**38.44**	**341**	IAmb	IAmb	02 36 38.3			
	comp=Z,111nm,1.1s								
SUA				IAMs_20	IAMs_20	02 51 33.4			
	comp=Z,2µm,21.0s								
SUA	**Susitna One**	**38.44**	**341**	P	P	02 36 36.9	-4.4		
	baz=7.6,SNR=35								
BMRM	**Bremner River**	**38.53**	**336**	P	P	02 36 37.2	-4.7		
	baz=9.1,SNR=5.7								
PEHC	**Pehovo**	**38.58**	**158**	*i* P	**P**	**02 36 42.1**	**-0.5**		
POLO	**Lamas de Olo**	**38.61**	**195**	*e* P	**P**	**02 36 45.4**	**+2.5**		
	comp=Z,61nm,1.8s								
L16K	**Owhat River**	**38.62**	**348**	P	P	02 36 39.6	-3.1		
	baz=5.2								
CRQE	**Cirque**	**38.63**	**335**	P	P	02 36 38.4	-4.5		
	baz=9.5								
M18K	**Stony River**	**38.69**	**345**	P	P	02 36 39.3	-3.8		
	baz=6.2,SNR=9.9								
KBZ	**Khabaz**	**38.69**	**134** *ce*	P	**P**	**02 36 44.9**	**+1.6**		
KBZ				pmax	pmax				
	comp=Z,197nm,0.8s								
KBZ	**Khabaz**	**38.69**	**134**	P	**P**	**02 36 45.0**	**+1.6**		
	comp=Z,196nm,0.8s,baz=339,slow=3.7,SNR=364								
KBZ				PP	**PP**	**02 38 11.8**	**+0.1**		
	comp=Z,70nm,0.9s,baz=82,slow=6.7,SNR=4.3								
O29M	**Mount Kennedy**	**38.70**	**331**	P	P	02 36 39.6	-4.0		
	baz=10								
PVRL	**Vila Real**	**38.71**	**195**	*e* P	**P**	**02 36 45.9**	**+2.3**		
	comp=Z,104nm,1.7s								
L15K	**Ungalak Mounta**	**38.73**	**349**	P	P	02 36 40.5	-3.1		
	baz=4.7								
P30M	**Million Dollar**	**38.74**	**330**	P	P	02 36 39.7	-4.0		
	baz=11								
RC01	**Rabbit Creek A**	**38.76**	**340**	P	P	02 36 39.3	-4.5		
	baz=7.8,SNR=6.7								
MVO	**Moncorvo**	**38.79**	**194**	*e* P	**P**	**02 36 44.4**	**+0.1**		
	comp=Z,92nm,1.3s								
N20K	**Mount Spurr**	**38.79**	**342**	P	P	02 36 39.1	-5.1		
	baz=7.1,SNR=9.1								
TIR	**Tirane**	**38.81**	**161**	IAMs_20	IAMs_20	02 55 40.6			
	comp=Z,2µm,18.0s								
M17K	**Holitna River**	**38.85**	**346**	P	P	02 36 40.8	-3.7		
	baz=5.8								
R33M	**Jennings River**	**38.87**	**325**	IAMs_20	IAMs_20	02 53 18.0			
	comp=Z,3µm,21.0s								
R33M	**Jennings River**	**38.87**	**325**	P	P	02 36 41.0	-3.9		
	baz=12,SNR=10								
P32M	**Atlin**	**38.95**	**327**	IAmb	IAmb	02 36 42.3			
	comp=Z,48nm,0.8s								
P32M	**Atlin**	**38.95**	**327**	P	P	02 36 40.9	-4.6		
	baz=12,SNR=20								
VAY	**Valandovo**	**39.01**	**158**	*i* P	**P**	**02 36 46.7**	**+0.6**		
OTUK	**Ortayu**	**39.02**	**100**	P	**P**	**02 36 46.4**	**+0.3**		
EYAK	**Cordova Ski Ar**	**39.03**	**337**	P	P	02 36 41.5	-4.6		
	baz=8.7								
BERG	**Berg Lake**	**39.03**	**335**	IAmb	IAmb	02 36 43.2			
	comp=Z,91nm,1.3s								
PINM	**Pinnacle**	**39.05**	**333**	P	P	02 36 42.6	-3.7		
	baz=10.0								
SVW2	**Sparrevohn**	**39.07**	**345**	IAmb	IAmb	02 36 44.4			
	comp=Z,58nm,1.0s								
SVW2	**Sparrevohn**	**39.07**	**345**	P	P	02 36 43.0	-3.4		
OHR	**Ohrid**	**39.10**	**160**	P	**P**	**02 36 47.8**	**+0.8**		
OHR	**Ohrid**	**39.10**	**160**	*i* P	**P**	**02 36 47.8**	**+0.8**		
L14K	**Kuka Creek**	**39.11**	**350**	P	P	02 36 43.3	-3.3		
	baz=4.3,SNR=5.8								
MESA	**MESA**	**39.11**	**334**	P	P	02 36 43.5	-3.5		
	baz=9.6								
RAGM	**Ragged Mountai**	**39.11**	**336**	IAmb	IAmb	02 36 44.8			
	comp=Z,166nm,1.5s								
NEUR	**Neytrino**	**39.12**	**134**	*i* P	**P**	**02 36 48.7**	**+1.4**		
HMT	**Hamilton**	**39.13**	**336**	IAmb	IAmb	02 36 44.8			
	comp=Z,85nm,1.0s								
CAPN	**Captain Cook N**	**39.16**	**341**	IAMs_20	IAMs_20	02 52 06.8			
	comp=Z,2µm,20.0s								
CAPN	**Captain Cook N**	**39.16**	**341**	P	P	02 36 43.8	-3.3		
	baz=7.4								
SNH	**Sunshine Point**	**39.18**	**335**	IAmb	IAmb	02 36 45.9			
	comp=Z,129nm,1.2s								
SKAG	**Skagway**	**39.24**	**329**	P	P	02 36 43.5	-4.3		
	baz=11								
SRS	**Serrai**	**39.29**	**157**	P	**P**	**02 36 48.4**	**0.0**		
P29M	**Windy Craggy**	**39.29**	**330**	P	P	02 36 44.4	-4.0		
	baz=10								
M16K	**Timber Creek**	**39.29**	**347**	IAMs_20	IAMs_20	02 51 28.3			
	comp=Z,2µm,21.0s								
M16K	**Timber Creek**	**39.29**	**347**	P	P	02 36 45.7	-2.6		
	baz=5.3,SNR=25								
N19K	**Bonanza Creek**	**39.30**	**344**	IAMs_20	IAMs_20	02 54 07.2			
	comp=Z,1µm,18.0s								
N19K	**Bonanza Creek**	**39.30**	**344**	P	P	02 36 44.4	-4.0		
	baz=6.5,SNR=5.2								
PLBC	**Pleasant Camp**	**39.34**	**329**	P	P	02 36 45.0	-3.6		
	baz=11,SNR=6.9								
SUCK	**Suckling Hills**	**39.35**	**335**	IAMs_20	IAMs_20	02 55 11.2			
	comp=Z,2µm,18.0s								
O22K	**Cooper Landing**	**39.36**	**340**	IAmb	IAmb	02 37 01.1			
	comp=Z,68nm,1.1s								
O22K	**Cooper Landing**	**39.36**	**340**	P	P	02 36 44.1	-4.7		
	baz=7.7								
PNL	**Peninsula**	**39.40**	**332**	P	P	02 36 45.1	-4.1		
	baz=10								
Q32M	**Nakina River**	**39.43**	**326**	IAMs_20	IAMs_20	02 53 48.8			
	comp=Z,5µm,22.0s								
Q32M	**Nakina River**	**39.43**	**326**	P	P	02 36 45.8	-3.9		
	baz=12,SNR=17								
FNA	**Florina**	**39.47**	**160**	IAMs_20	IAMs_20	02 53 35.2			
	comp=Z,1µm,19.0s								
N18K	**Kilae Creek**	**39.50**	**345**	P	P	02 36 46.4	-3.6		
	baz=6.1								
UCM	**Universidad Co**	**39.50**	**189**	P	**P**	**02 36 48.7**	**-1.6**		
FFC	**Flin Flon**	**39.53**	**299**	P	P	02 36 45.2	-5.2		
FFC	**Flin Flon**	**39.53**	**299**	P	P	02 36 45.2	-5.1		
FFC				pmax	pmax				
	comp=Z,27nm,1.3s								
KAIM	**Kayak Island**	**39.55**	**336**	P	P	02 36 47.1	-3.3		
	baz=8.9								
MTE	**Manteigas**	**39.57**	**194**	*e* P	**P**	**02 36 53.8**	**+2.9**		
	comp=Z,79nm,1.6s								
MTE	**Manteigas**	**39.57**	**194**	IAMs_20	IAMs_20	02 51 36.1			
	comp=Z,2µm,19.0s								
KBN	**Korca**	**39.59**	**160**	IAMs_20	IAMs_20	02 53 46.3			
	comp=Z,3µm,19.0s								
M14K	**Bethel**	**39.67**	**350**	P	P	02 36 48.4	-3.0		
	baz=4.4,SNR=5.8								
M15K	**Kasigluk River**	**39.69**	**349**	P	P	02 36 48.3	-3.3		
	baz=4.8,SNR=10								
ALN	**Alexandroupoli**	**39.69**	**154**	IAMs_20	IAMs_20	02 54 15.8			
	comp=Z,3µm,18.0s								
P23K	**Montague Islan**	**39.69**	**338**	P	P	02 36 47.4	-4.2		
	baz=8.2								
DLBC	**Dease Lake**	**39.71**	**324**	IAmb	IAmb	02 36 50.1			
	comp=Z,104nm,1.4s								
DLBC	**Dease Lake**	**39.71**	**324**	P	P	02 36 48.0	-3.9		
	baz=12,SNR=16								
DLBC	**Dease Lake**	**39.71**	**324**	LR	LR	02 54 02.7			
	comp=Z,3µm,18.6s,baz=22,slow=38								
N17K	**Nushagak Hills**	**39.71**	**346**	P	P	02 36 49.1	-2.7		
	baz=5.7								
MA2	**Magadan**	**39.71**	**26**	P	P	02 36 47.9	-3.9		
MA2				IAmb	IAmb	02 37 10.3			
	comp=Z,88nm,1.3s								
MA2				IAMs_20	IAMs_20	02 51 03.0			
	comp=Z,2µm,22.0s		

comp=Z,1µm,20.0s
JIS Juneau Island 40.31 327 IAmb IAmb 02 36 53.8
comp=Z,70nm,1.2s
JIS IAMs_20 IAMs_20 02 53 56.3
comp=Z,2µm,20.0s
JIS Juneau Island 40.31 327 P P 02 36 53.4 -3.3
R32K Eaglecrest 40.33 328 IAMs_20 IAMs_20 02 53 55.6
comp=Z,1µm,20.0s
R32K Eaglecrest 40.33 328 P P 02 36 53.5 -3.4
baz=11,SNR=5.5
S34M Telegraph Cree 40.34 325 IAmb IAmb 02 36 55.3
comp=Z,74nm,1.3s
S34M IAMs_20 IAMs_20 02 55 51.9
comp=Z,2µm,19.0s
S34M Telegraph Cree 40.34 325 P P 02 36 53.5 -3.5
baz=12,SNR=13
DGZ Jazzator, Alta 40.35 85⇑*i*P **P 02 36 58.2 +0.8**
DGZ pmax pmax
comp=Z,81nm,1.3s
BATG Bathurst New B 40.39 262 P P 02 36 53.2 -4.3
P19K Oil Pt 40.39 343 IAMs_20 IAMs_20 02 53 46.0
comp=Z,2µm,18.0s
P19K Oil Pt 40.39 343 P P 02 36 52.4 -5.1
baz=6.6
CNPM China Poot 40.40 341 IAMs_20 IAMs_20 02 52 58.2
comp=Z,2µm,20.0s
KEK Kerkira 40.44 162 IAMs_20 IAMs_20 02 54 09.5
comp=Z,2µm,20.0s
O17K Koliganek Bris 40.46 346 P P 02 36 54.9 -3.1
baz=5.6,SNR=5.7
N14K Kuskokwak Cree 40.49 349 P P 02 36 55.0 -3.2
baz=4.4
PMRV Marv??o 40.53 194 *e*P **P 02 37 01.8 +3.0**
comp=Z,115nm,1.7s
O16K Kokwok River B 40.69 346 IAMs_20 IAMs_20 02 52 23.0
comp=Z,1µm,21.0s
O16K Kokwok River B 40.69 346 P P 02 36 56.1 -3.7
baz=5.4
P18K Big Mountain, 40.75 344 P P 02 36 54.9 -5.5
P18K IAmb IAmb 02 36 58.1
comp=Z,97nm,1.2s
P18K IAMs_20 IAMs_20 02 55 31.7
comp=Z,1µm,18.0s
P18K Big Mountain, 40.75 344 P P 02 36 56.0 -4.4
baz=6.1,SNR=10
BCA Borcka 40.77 136⇓P **P 02 37 02.1 +1.3**
S31K Pelican 40.80 329 IAmb IAmb 02 36 57.4
comp=Z,69nm,1.3s
S31K IAMs_20 IAMs_20 02 54 23.2
comp=Z,2µm,21.0s
S31K Pelican 40.80 329 P P 02 36 56.7 -4.0
baz=10
TIP Timpagrande 40.81 165⇑P **P 02 37 02.0 +0.8**
TIP Timpagrande 40.81 165 IAmb IAmb 02 37 21.9
comp=Z,73nm,1.2s
TIP IAMs_20 IAMs_20 02 54 11.8
comp=Z,4µm,20.0s
MOY Mondy 40.87 71 *e*P **P 02 37 02.1 +0.5**
MOY *e* 02 38 39.2
MOY pmax pmax
comp=Z,390nm,2.0s
IRK Irkutsk 40.87 68 *e*P **P 02 36 59.8 -1.7**
IRK *e* 02 38 32.4
IRK pmax pmax
comp=Z,339nm,1.9s
LMQ La Malbaie 40.90 266 P P 02 36 57.6 -4.2
LMQ IAmb IAmb 02 37 08.2
comp=Z,93nm,1.5s
PMTG Montargil 40.93 195 *e*P **P 02 37 01.4 -0.7**
comp=Z,86nm,1.4s
KTUT Trabzon 40.99 138⇓P **P 02 37 03.9 +1.3**
P17K Kvichak River 41.01 345 P P 02 36 59.5 -2.9
baz=5.8,SNR=10
AKH Akhalkalaki 41.05 134 P **P 02 37 02.9 -0.4**
AKH Akhalkalaki 41.05 134 P **P 02 37 02.9 -0.4**
AKH pmax pmax
comp=Z,547nm,1.1s
BALB Balikesir 41.09 152 IAmb IAmb 02 37 05.4
comp=Z,109nm,1.0s
BALB IAMs_20 IAMs_20 02 55 35.2
comp=Z,2µm,19.0s
PMAFR Mafra 41.09 196 P **P 02 37 00.7 -2.8**
PESTR Estremoz 41.10 194 *e*P **P 02 37 05.4 +1.9**
comp=Z,81nm,2.1s
PESTR Estremoz 41.10 194 P **P 02 37 00.8 -2.7**
PESTR IAmb IAmb 02 37 15.4
comp=Z,147nm,1.7s
PESTR Estremoz 41.10 194 P **P 02 37 04.3 +0.8**
D62A Allapoint, All 41.12 265 P P 02 36 58.4 -5.1
ETOB Tobarra 41.12 187 P **P 02 37 03.7 0.0**
S32K Killisnoo 41.13 327 IAMs_20 IAMs_20 02 54 19.8
comp=Z,1µm,21.0s
S32K Killisnoo 41.13 327 P P 02 36 59.2 -4.3
baz=11
Q19K Cape Douglas, 41.13 343 IAMs_20 IAMs_20 02 54 01.7
comp=Z,1µm,18.0s
Q19K Cape Douglas, 41.13 343 P P 02 37 00.1 -3.5
baz=6.4
O14K Tigyukauivet M 41.15 349 P P 02 37 00.3 -3.3
baz=4.5
T35M Bob Quinn 41.16 324 IAMs_20 IAMs_20 02 54 45.6
comp=Z,3µm,20.0s
T35M Bob Quinn 41.16 324 P P 02 37 00.2 -3.6
baz=12,SNR=10.0
O15K Ungalikthiuk R 41.17 348 P P 02 37 00.9 -2.9
baz=4.9
EBAD Badajoz 41.19 194 P **P 02 37 03.2 -1.0**
P16K Nushagak River 41.24 346 P P 02 37 01.1 -3.3
baz=5.3,SNR=8.9
ANTO Ankara 41.32 146⇑P **P 02 37 06.4 +1.1**
ANTO Ankara 41.32 146 P **P 02 37 04.9 -0.5**
ANTO IAmb IAmb 02 37 07.6
comp=Z,75nm,0.9s
ANTO Ankara 41.32 146 P **P 02 37 04.9 -0.5**
ANTO pmax pmax
comp=Z,75nm,0.9s
ANTO Ankara 41.32 146 P **P 02 37 06.6 +1.3**
ANTO S **S 02 43 21.4 +2.1**
PQI Presque Isle 41.33 264 IAMs_20 IAMs_20 02 53 33.1
comp=Z,3µm,20.0s
BR231 Keskin MP Arra 41.35 146 IAmb IAmb 02 37 07.9
comp=Z,81nm,0.9s
SYI Shuyak Island 41.38 342 IAMs_20 IAMs_20 02 55 30.2
comp=Z,2µm,20.0s
Q16K King Salmon 41.54 345 P P 02 37 03.6 -3.2
baz=5.6,SNR=13
BR131 Keskin Array S 41.55 145 IAmb IAmb 02 37 09.7
comp=Z,74nm,1.0s
BR131 Keskin Array S 41.55 145 *i*P **P 02 37 07.6 +0.3**
BR131 Keskin Array S 41.55 145 P **P 02 37 08.4 +1.1**
SNR=21
BRTR Keskin Array B 41.55 145 P **P 02 37 07.1 -0.3**
BRTR Keskin Array B 41.55 145 P **P 02 37 07.1 -0.3**
BRTR Keskin Array B 41.55 145 P **P 02 37 08.4 +1.1**
comp=Z,38nm,0.9s,baz=338,slow=5.7,SNR=77
BRTR PP **PP 02 38 45.4 +2.3**
comp=Z,16nm,0.9s,baz=1.3,slow=7.8,SNR=5.6
BRTR LR LR 02 56 03.2
comp=Z,2µm,19.7s,baz=5.0,slow=38
comp=Z,38nm,0.9s
CEL Celeste 41.69 166 IAMs_20 IAMs_20 02 55 18.8
comp=Z,2µm,18.0s
PBAR Barrancos 41.77 194 *e*P **P 02 37 10.3 +1.4**
comp=Z,127nm,1.8s
PNCL Nicolau / Gran 41.90 195 *e*P **P 02 37 09.8 -0.2**
Q17K Contact Creek 41.91 344 P P 02 37 05.5 -4.6
baz=5.8
WRAK Wrangell Islan 41.94 325 IAMs_20 IAMs_20 02 55 32.2
comp=Z,3µm,19.0s
WRAK Wrangell Islan 41.94 325 P P 02 37 06.1 -4.0
baz=11
PBEJ Beja 41.95 194 *e*P **P 02 37 12.0 +1.5**
comp=Z,139nm,1.7s
ZSN Zaisan 42.05 88⇑*i*P **P 02 37 11.7 +0.5**
comp=Z,129nm,1.0s,baz=87
ZSN Zaisan 42.05 88 *c i*P **P 02 37 11.7 +0.5**
ZSN pmax pmax
comp=Z,129nm,1.0s
MAKZ Makanchi 42.15 91 IAMs_20 IAMs_20 02 57 38.1
comp=Z,4µm,18.0s
MAKZ Makanchi 42.15 91 P **P 02 37 12.4 +0.4**
MESJ Messejana 42.16 195 *e*P **P 02 37 14.9 +2.8**
CART Cartagena 42.16 186 IAMs_20 IAMs_20 02 54 06.2
comp=Z,2µm,20.0s
U35K Hyder 42.19 323 IAMs_20 IAMs_20 02 56 01.7
comp=Z,2µm,19.0s
MK31 Makanchi Array 42.22 91 P **P 02 37 12.3 -0.2**
MK31 IAmb IAmb 02 37 14.2
comp=Z,96nm,0.9s
MK31 Makanchi Array 42.22 91 *i*P **P 02 37 12.7 +0.1**
MK31 pmax pmax
comp=Z,129nm,0.8s
MKAR Makanchi Array 42.22 91 P **P 02 37 12.3 -0.3**
MKAR Makanchi Array 42.22 91 P **P 02 37 12.3 -0.3**
MKAR Makanchi Array 42.22 91 P **P 02 37 12.8 +0.2**
comp=Z,77nm,0.8s,baz=346,slow=6.5,SNR=560
MKAR PP **PP 02 38 54.9 +4.9**
comp=Z,22nm,1.0s,baz=353,slow=6.3,SNR=3.6
MKAR S **S 02 43 28.5 -3.9**
comp=Z,2.9nm,1.1s,baz=52,slow=23,SNR=1.7
MKAR LR LR 02 59 49.3
comp=Z,4µm,18.8s,baz=342,slow=43
comp=Z,77nm,0.8s
KDAK Kodiak Island 42.22 342 P P 02 37 07.8 -4.6
KDAK Kodiak Island 42.22 342 P P 02 37 08.2 -4.2
baz=6.6
KDAK Kodiak Island 42.22 342 P P 02 37 07.8 -4.6
KDAK pmax pmax
comp=Z,93nm,0.8s
KDAK Kodiak Island 42.22 342 LR LR 02 53 47.0
comp=Z,2µm,21.9s,baz=50,slow=35
U33K Whale Pass 42.32 326 IAMs_20 IAMs_20 02 55 45.2
comp=Z,3µm,20.0s
U33K Whale Pass 42.32 326 P P 02 37 09.3 -3.9
baz=11
PCVE Castro Verde 42.35 195 *e*P P 02 37 22.9 +9.2
comp=Z,72nm,1.8s
VAE Valguarnera 42.41 168 LR LR 02 55 32.9
comp=Z,3µm,18.4s,baz=6.5,slow=37
BTLS Baital 42.42 100⇑*i*P **P 02 37 15.4 +1.1**
comp=Z,64nm,0.9s,baz=98
BTLS Baital 42.42 100 *c i*P **P 02 37 15.3 +1.1**
BTLS pmax pmax
comp=Z,64nm,0.9s
BRLDA Berland Lookou 42.43 312 IAmb IAmb 02 37 28.5
comp=Z,95nm,1.4s
GNI Garni 42.46 133 IAMs_20 IAMs_20 02 56 10.7
comp=Z,2µm,20.0s
GNI Garni 42.46 133 P **P 02 37 16.4 +1.6**
GNI Garni 42.46 133 *ce*P **P 02 37 16.4 +1.6**
GNI pmax pmax
comp=Z,107nm,1.3s
GNI Garni 42.46 133 P **P 02 37 15.9 +1.1**
comp=Z,42nm,0.8s,baz=16,slow=2.1,SNR=53
GNI PP **PP 02 38 54.4 +1.6**
comp=Z,84nm,1.1s,baz=241,slow=7.9,SNR=5.4
GNI S S 02 43 45.7 +9.4
comp=Z,3.0nm,0.8s,baz=144,slow=14,SNR=1.2
GNI LR LR 02 55 53.9
comp=Z,2µm,18.6s,baz=353,slow=37
comp=Z,42nm,0.8s
GNI Garni 42.46 133 P **P 02 37 15.2 +0.4**
GNI S **S 02 43 38.6 +2.3**
ZAK Zakamensk 42.50 69 *e*P **P 02 37 13.5 -1.4**
ZAK pmax pmax
comp=Z,33nm,1.7s
CIT Chita 42.60 60 *e*P **P 02 37 15.0 -0.7**
CIT *e* 02 38 51.2
CIT pmax pmax
comp=Z,189nm,2.3s
R16K Pilot Point 42.69 346 P P 02 37 12.1 -4.1
baz=5.3
ARPR Arapgir-MALATY 42.69 140 IAMs_20 IAMs_20 02 57 03.9
comp=Z,2µm,18.0s
EDM Edmonton 42.71 308 IAmb IAmb 02 37 22.0
comp=Z,168nm,1.9s
PBDV Barranco-do-Ve 42.74 194 *e*P **P 02 37 20.9 +4.0**
OHAK Old Harbor 42.82 342 IAmb IAmb 02 37 14.7
comp=Z,100nm,1.2s
OHAK Old Harbor 42.82 342 P P 02 37 13.5 -3.8
OHAK Old Harbor 42.82 342 P P 02 37 13.1 -4.2
baz=6.3,SNR=13
ULM Lac du Bonnet 42.85 292 *i*P P 02 37 12.8 -4.8
ULM Lac du Bonnet 42.85 292 P P 02 37 12.2 -5.4
comp=Z,3.9nm,0.7s,baz=18,slow=5.7,SNR=8.9
ULM S S 02 43 26.9 -15
comp=Z,1.7nm,0.9s,baz=349,slow=22,SNR=1.8
ULM LR LR 02 55 08.2
comp=Z,6µm,19.4s,baz=14,slow=37
comp=Z,3.9nm,0.7s
PKME Peaks-Kenny Pk 42.91 264 IAMs_20 IAMs_20 02 55 49.1
comp=Z,4µm,18.0s
PKME Peaks-Kenny Pk 42.91 264 P P 02 37 14.6 -3.6
baz=14
ZEA Zeya 42.92 47 *e*P **P 02 37 18.0 -0.2**
ZEA *e* 02 38 56.9
ZEA *e*S **S 02 43 44.9 +2.3**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA pmax pmax
comp=E,100nm,5.6s
ZEA pmax pmax
comp=N,200nm,6.9s
ZEA pmax pmax
comp=Z,200nm,6.8s
ZEA pmax pmax
comp=N,300nm,3.9s
ZEA pmax pmax
comp=Z,300nm,3.1s
ZEA smax smax
comp=N,400nm,6.3s
ZEA smax smax
comp=E,700nm,11.8s
ZEA MLR MLR
comp=E,800nm,15.0s
V35K Ketchikan 42.94 324 IAMs_20 IAMs_20 02 56 31.5
comp=Z,3µm,18.0s
V35K Ketchikan 42.94 324 P P 02 37 14.2 -4.0
baz=11
CRAG Craig 42.95 326 P P 02 37 13.5 -4.9
baz=11
EMMW East Machias 43.12 262 IAMs_20 IAMs_20 02 55 22.8
comp=Z,2µm,18.0s
ISP Isparta 43.13 149 IAMs_20 IAMs_20 02 56 17.9
comp=Z,2µm,18.0s
ISP Isparta 43.13 149 *ce*P **P 02 37 21.2 +1.0**
ISP pmax pmax
comp=Z,93nm,1.7s
TDK Taldyqorghan 43.24 95⇑*i*P **P 02 37 22.2 +1.3**
comp=Z,131nm,1.1s,baz=94
TDK LR LR 02 55 49.1
comp=Z,3µm,15.3s,baz=94
TDK Taldyqorghan 43.24 95 *c i*P **P 02 37 22.2 +1.3**
TDK pmax pmax
comp=Z,131nm,1.1s
TDK MLR MLR
comp=Z,3µm,15.0s
SFS San Fernando 43.44 192 IAMs_20 IAMs_20 02 55 49.8
comp=Z,3µm,18.0s
APE Apeiranthos 43.45 155⇑P **P 02 37 23.5 +0.7**
APE Apeiranthos 43.45 155 P **P 02 37 23.4 +0.7**
SII Sitkinak Islan 43.53 343 IAmb IAmb 02 37 20.0
comp=Z,96nm,1.3s
SII IAMs_20 IAMs_20 02 55 08.9
comp=Z,2µm,20.0s
SII Sitkinak Islan 43.53 343 P P 02 37 19.7 -3.4
SII Sitkinak Islan 43.53 343 P P 02 37 19.5 -3.5
baz=6.0
WVL Waterville 43.66 264 IAMs_20 IAMs_20 02 56 02.8
comp=Z,4µm,18.0s
KK31 Karatay Array 43.66 104 *i*P **P 02 37 25.5 +1.2**
KUU Kurty 43.94 98⇑*i*P **P 02 37 27.1 +0.6**
baz=96
KUU LR LR 02 56 08.8
comp=Z,3µm,14.4s,baz=96
KUU Kurty 43.94 98 *c i*P **P 02 37 27.1 +0.6**
KUU MLR MLR
comp=Z,3µm,14.0s
KEST Kesra 44.01 174 IAMs_20 IAMs_20 02 55 59.9
comp=Z,2µm,19.0s
KEST Kesra 44.01 174 P **P 02 37 27.0 -0.2**
comp=Z,8.4nm,0.9s,baz=341,slow=3.0,SNR=8.4
KEST S S 02 44 08.1 +9.2
comp=Z,2.6nm,1.0s,baz=162,slow=22,SNR=1.1
KEST LR LR 02 56 11.0
comp=Z,1µm,19.0s,baz=328,slow=36
comp=Z,8.4nm,0.9s
DZA Taraz 44.02 103 *e*P **P 02 37 28.7 +1.5**
comp=Z,50nm,1.1s,baz=102
DZA Taraz 44.02 103 *e*P **P 02 37 28.6 +1.5**
DZA pmax pmax
comp=Z,50nm,1.1s
S14K Fog Glacier 44.05 347 P P 02 37 22.8 -4.6
baz=4.7
SGDS Sogindy 44.06 100⇑*i*P **P 02 37 28.8 +1.2**
baz=98
SGDS Sogindy 44.06 100 *c i*P **P 02 37 28.8 +1.2**
CHKK Chushkaly 44.10 97⇑*i*P **P 02 37 28.7 +0.8**
baz=96
CHKK Chushkaly 44.10 97⇑*i*P **P 02 37 28.6 +0.8**
SANT Santorini 44.14 155 IAMs_20 IAMs_20 02 56 37.4
comp=Z,3µm,20.0s
USP Ospenovka 44.22 100 P **P 02 37 29.6 +0.8**
SNR=23
EYMN Ely 44.32 287 P P 02 37 24.6 -4.9
EYMN Ely 44.32 287 P P 02 37 24.6 -4.9
baz=15,SNR=8.5
CHIR Chirikof Islan 44.34 344 P P 02 37 24.4 -5.2
CHIR Chirikof Islan 44.34 344 P P 02 37 25.6 -3.9
baz=5.6,SNR=6.3
LBNH Lisbon 44.38 267 IAMs_20 IAMs_20 02 54 54.0
comp=Z,3µm,20.0s
LBNH Lisbon 44.38 267 P P 02 37 26.5 -3.6
baz=14
VT1 Waterbury 44.45 267 IAMs_20 IAMs_20 02 56 01.8
comp=Z,4µm,18.0s
LONY Lake Ozonia 44.50 269 P P 02 37 27.5 -3.5
baz=14
IUG Iuzhnay 44.51 105⇑*i*P **P 02 37 32.4 +1.2**
baz=103
IUG Iuzhnay 44.51 105 *c i*P **P 02 37 32.4 +1.2**
CHMS Chumysh 44.52 100 P P 02 37 33.1 +1.8
SNR=63
EKS2 Erkin-Say 44.67 101 P **P 02 37 34.1 +1.6**
SNR=15
TKM2 Tokmak 2 44.75 99 P **P 02 37 34.4 +1.1**
SNR=16
TKM2 Tokmak 2 44.75 99 *i*P **P 02 37 33.8 +0.5**
TKM2 pmax pmax
comp=Z,119nm,1.1s
MDOK Medeo 44.78 97 *i*P **P 02 37 34.6 +1.1**
baz=96
MDOK LR LR 02 56 19.1
comp=Z,2µm,13.8s,baz=96
MDOK Medeo 44.78 97 *i*P **P 02 37 34.5 +1.1**
MDOK MLR MLR
comp=Z,2µm,14.0s
KPKS Kokpek 44.78 96⇑*i*P **P 02 37 34.3 +0.9**
comp=Z,47nm,1.0s,baz=94
KPKS Kokpek 44.78 96 *c i*P **P 02 37 34.2 +0.9**
KPKS pmax pmax
comp=Z,47nm,1.0s
AAK Ala-Archa 44.83 100 P **P 02 37 35.2 +1.4**
SNR=38
AAK Ala-Archa 44.83 100 P **P 02 37 33.0 -0.8**
AAK Ala-Archa 44.83 100 *i*P **P 02 37 35.6 +1.8**
SNR=40
AAK Ala-Archa 44.83 100 *ce*P **P 02 37 35.6 +1.8**
AAK pmax pmax
comp=Z,178nm,1.3s
AAK Ala-Archa 44.83 100 P **P 02 37 35.5 +1.8**
comp=Z,75nm,0.9s,baz=332,slow=5.8,SNR=115
AAK PP PP 02 39 28.0 +10
comp=Z,60nm,1.2s,baz=350,slow=10,SNR=8.6
AAK S **S 02 44 19.8 +8.9**
comp=Z,1.9nm,0.8s,baz=93,slow=21,SNR=1.4
AAK LR LR 02 59 13.2
comp=Z,8µm,18.5s,baz=343,slow=40
comp=Z,75nm,0.9s
AAK Ala-Archa 44.83 100 P **P 02 37 34.6 +0.8**
TNSS Tian-Shan 44.88 97⇑*i*P **P 02 37 35.2 +0.6**
baz=96
TNSS Tian-Shan 44.88 97⇑*i*P **P 02 37 35.1 +0.6**
KBK Karagaybulak 44.89 100 P **P 02 37 36.1 +1.8**
SNR=9.0
HNH Hanover 44.97 267 IAMs_20 IAMs_20 02 56 09.4
comp=Z,3µm,19.0s
ZHN Zhinishke 45.02 96⇑*i*P **P 02 37 36.5 +1.2**
comp=Z,115nm,1.0s,baz=95
ZHN Zhinishke 45.02 96 *c i*P **P 02 37 36.5 +1.2**
ZHN pmax pmax
comp=Z,115nm,1.0s
SDPT Sand Point 45.03 348 P P 02 37 32.2 -2.8
baz=4.4
PDGK Podgornoye 45.06 95 P **P 02 37 36.7 +1.1**
NKL Nikolayevsk 45.12 36 *e*P **P 02 37 36.0 +0.2**
NKL *e*S **S 02 44 13.0 -1.5**
NKL pmax pmax
comp=N,68nm,1.0s
NKL pmax pmax
comp=Z,121nm,2.0s
NKL smax smax
comp=N,232nm,5.2s
NKL smax smax
comp=E,379nm,5.2s
NKL MLR MLR
comp=E,7µm,13.0s
NKL MLR MLR
comp=N,10µm,24.0s
NKL MLR MLR
comp=Z,11µm,23.0s
SATY Saty 45.12 96⇑*i*P **P 02 37 37.3 +1.1**
comp=Z,178nm,1.3s,baz=95
SATY Saty 45.12 96 *c i*P **P 02 37 37.2 +1.1**
SATY pmax pmax
comp=Z,178nm,1.3s
UZB Uzynbulak 45.15 95⇑*i*P **P 02 37 37.0 +0.7**
comp=Z,54nm,1.5s,baz=94
UZB Uzynbulak 45.15 95 *c i*P **P 02 37 37.0 +0.7**
UZB pmax pmax
comp=Z,54nm,1.5s
IDI Anoyia 45.17 156 LR LR 02 57 22.2
comp=Z,1µm,19.8s,baz=352,slow=37
SADO Sadowa 45.18 274 LR LR 02 56 45.6
comp=Z,3µm,19.2s,baz=26,slow=37
SHLS Shalkode 45.22 95⇑*i*P **P 02 37 38.9 +2.0**
comp=Z,104nm,1.0s,baz=93
SHLS Shalkode 45.22 95 *c i*P **P 02 37 38.9 +2.0**
SHLS pmax pmax
comp=Z,104nm,1.0s
UCH Uchtor 45.23 100 P **P 02 37 39.7 +2.4**
SNR=59
SONM Songino Array 45.49 68 P **P 02 37 37.1 -1.9**
SONM Songino Array 45.49 68 P **P 02 37 37.1 -1.9**
SONM pmax pmax
comp=Z,100nm,1.4s
SONM Songino Array 45.49 68 P **P 02 37 38.5 -0.4**
comp=Z,31nm,1.1s,baz=329,slow=6.7,SNR=67
SONM PP **PP 02 39 27.6 +2.5**
comp=Z,21nm,1.1s,baz=346,slow=7.4,SNR=6.6
SONM S **S 02 44 18.2 -2.1**
comp=Z,0.4nm,0.5s,baz=32,slow=47,SNR=1.7
SONM LR LR 02 58 56.2
comp=Z,5µm,18.5s,baz=346,slow=39
comp=Z,31nm,1.1s
CNBA Chernabura Isl 45.52 347 IAMs_20 IAMs_20 02 56 34.6
comp=Z,2µm,20.0s
ULN Ulaanbaatar 45.57 67 P **P 02 37 38.4 -1.3**
ULN Ulaanbaatar 45.57 67 *ce*P **P 02 37 39.4 -0.3**
ULN pmax pmax
comp=Z,256nm,1.7s
ULN Ulaanbaatar 45.57 67 P **P 02 37 39.0 -0.7**
ULN P **P 02 37 39.0 -0.7**
ULN S **S 02 44 20.5 -1.0**
ULN S **S 02 44 20.5 -1.0**
BBB Bella Bella 45.64 321 LR LR 02 58 00.8
comp=Z,1µm,18.8s,baz=21,slow=38
COWI Conover 45.69 284 IAMs_20 IAMs_20 02 56 10.9
comp=Z,2µm,20.0s
MDND Maddock 45.80 294 P P 02 37 36.2 -5.1
baz=14
DGMT Dagmar 45.94 299 IAmb IAmb 02 37 48.2
comp=Z,71nm,1.6s
DGMT Dagmar 45.94 299 P P 02 37 37.8 -4.6
baz=14
HRV Adam Dziewonsk 45.99 266 IAMs_20 IAMs_20 02 57 25.4
comp=Z,3µm,18.0s
HRV Adam Dziewonsk 45.99 266 P P 02 37 39.9 -3.0
baz=14
WES Weston 46.07 265 IAMs_20 IAMs_20 02 57 25.5
comp=Z,4µm,18.0s
WMQ Urumqi 46.07 87 *e*P **P 02 37 44.5 +0.9**
WMQ sP pwP 02 37 50.3 +0.8
WMQ PP **PP 02 39 30.9 -0.3**
WMQ S **S 02 44 34.2 +5.5**
WMQ pmax pmax
comp=Z,120nm,1.1s

WMQ pmax pmax
comp=Z,360nm,3.7s
WMQ LR LR
comp=Z,7μm,16.9s
WMQ LR LR
comp=Z,6μm,16.9s
WMQ LR LR
comp=Z,4μm,19.3s
BCX Boston College 46.09 265 IAMs_20 IAMs_20 02 57 19.0
comp=Z,4μm,18.0s
GLMI Grayling 46.12 279 IAMs_20 IAMs_20 02 56 34.6
comp=Z,4μm,20.0s
GLMI Grayling 46.12 279 P P 02 37 40.0 -3.8
baz=14
TRY Troy 46.16 268 IAMs_20 IAMs_20 02 56 54.9
comp=Z,4μm,18.0s
HIA Hailar 46.22 55 IAMs_20 IAMs_20 02 58 01.2
comp=Z,3μm,18.0s
HIA Hailar 46.22 55 P **P 02 37 44.7 +0.1**
CSS Mathiatis 46.23 147 IAmb IAmb 02 37 45.8
comp=Z,31nm,1.0s
CSS IAMs_20 IAMs_20 02 57 14.4
comp=Z,2μm,22.0s
L61B Northampton 46.25 267 IAMs_20 IAMs_20 02 57 07.5
comp=Z,4μm,18.0s
HEH HeiHe 46.35 48 *e*P **P 02 37 44.2 -1.4**
HEH pP **pP 02 37 48.1 +0.4**
HEH PP **PP 02 39 31.5 -2.5**
HEH S **S 02 44 31.9 -0.5**
HEH ScS **ScS 02 47 39.2 -0.9**
HEH pmax pmax
comp=Z,42nm,1.1s
HEH pmax pmax
comp=Z,360nm,4.2s
HEH LR LR
comp=Z,3μm,16.1s
HEH LR LR
comp=Z,3μm,15.4s
HEH LR LR
comp=Z,5μm,17.0s
QUA2 Belchertown 46.36 266 IAMs_20 IAMs_20 02 57 18.3
comp=Z,4μm,19.0s
GEYT Alibeck 46.61 119 P **P 02 37 49.2 +1.4**
comp=Z,130nm,0.9s,baz=335,slow=6.4,SNR=230
GEYT PP **PP 02 39 40.7 +3.6**
comp=Z,18nm,0.9s,baz=327,slow=11,SNR=3.6
GEYT S **S 02 44 36.4 0.0**
comp=Z,0.8nm,0.5s,baz=184,slow=19,SNR=2.0
GEYT LR LR 03 00 05.9
comp=Z,2μm,19.3s,baz=56,slow=39
comp=Z,130nm,0.9s
PEA0B Petropavlovsk- 46.65 22 IAMs_20 IAMs_20 02 54 10.1
comp=Z,1μm,22.0s
PETK Petropavlovsk- 46.65 22 P P 02 37 44.8 -3.1
comp=Z,3.7nm,0.9s,baz=15,slow=6.0,SNR=2.3
PETK S **S 02 44 35.5 -1.1**
comp=Z,2.4nm,0.9s,baz=116,slow=13,SNR=1.1
comp=Z,3.7nm,0.9s
UNV Unalaska Valle 46.72 353 P P 02 37 45.8 -2.6
baz=2.8
M65A Busby, Falmout 46.74 264 IAMs_20 IAMs_20 02 57 39.4
comp=Z,4μm,18.0s
PET Petropavlovsk 46.80 21 *e*P **P 02 37 51.6 +2.6**
PET *e* 02 39 30.7
PET *e*S S 02 44 33.6 -5.0
PET *e*SS **ScS 02 47 49.4 +6.5**
PET MLR MLR
comp=Z,1μm,16.0s
GRNR Gornyy 46.99 40⇓ *i*P **P 02 37 49.0 -1.6**
GRNR pmax pmax
comp=Z,4.0nm,1.2s
GRNR MLR MLR
comp=N,610nm,15.0s
MDT Midelt 47.02 190 LR LR 02 56 06.9
comp=N,961nm,21.8s,baz=14,slow=34
BINY Binghamton 47.10 270 P P 02 37 48.2 -3.4
baz=14
SPMN Marine on St. 47.18 287 P P 02 37 47.6 -4.5
baz=14
EGMT Eagleton 47.24 303 P P 02 37 47.4 -5.3
baz=13
YLE Yale 47.40 267 IAMs_20 IAMs_20 02 58 08.6
comp=Z,4μm,18.0s
TYV Tymovskoe 47.59 35 *e*P **P 02 37 54.5 -0.7**
TYV *e*S **S 02 44 51.0 +1.1**
TYV pmax pmax
comp=Z,23nm,1.1s
TYV pmax pmax
comp=Z,300nm,3.5s
TYV smax smax
comp=N,600nm,5.6s
TYV smax smax
comp=E,700nm,5.6s
SHEM Shemya Is, Ala 47.81 8 LR LR 02 58 35.7
comp=E,703nm,18.3s,baz=317,slow=37
PAL Palisades 47.88 267 P P 02 37 53.8 -3.7
baz=14
ERPA Erie 47.91 274 IAMs_20 IAMs_20 02 57 58.4
comp=Z,3μm,20.0s
KLR Kul'dur 47.93 45*ce*P **P 02 37 56.8 -1.1**
KLR pmax pmax
comp=Z,18nm,1.7s
KLR Kul'dur 47.93 45 LR LR 02 59 33.1
comp=Z,2μm,18.7s,baz=348,slow=38
LAO LASA Array 48.00 300 P P 02 37 54.0 -4.5
baz=13
NEW Newport 48.08 310 P P 02 37 53.7 -5.5
NEW IAmb IAmb 02 38 10.8
comp=Z,35nm,1.4s
NEW Newport 48.08 310 P P 02 37 54.7 -4.5
baz=12,SNR=8.4
NEW Newport 48.08 310 P P 02 37 53.7 -5.5
NEW pmax pmax
comp=Z,35nm,1.5s
NEW MLR MLR
comp=Z,7μm,19.0s
NEW Newport 48.08 310 P P 02 37 54.3 -4.8
comp=Z,6.9nm,0.9s,baz=7.8,slow=8.4,SNR=12
NEW S S 02 44 52.2 -5.0
comp=Z,0.5nm,0.5s,baz=37,slow=16,SNR=1.7
NEW LR LR 02 57 50.7
comp=Z,7μm,19.9s,baz=16,slow=36
comp=Z,6.9nm,0.9s
KSH Kashi 48.12 100 P **P 02 38 02.9 +3.3**
KSH PP **PP 02 39 56.4 +4.9**
KSH S **S 02 45 03.6 +5.6**
KSH pmax pmax
comp=Z,51nm,1.3s
KSH pmax pmax
comp=Z,550nm,9.5s
KSH LR LR
comp=Z,6μm,20.3s
KSH LR LR
comp=Z,7μm,18.6s
KSH LR LR
comp=Z,9μm,19.6s
MMAI Mount Meron Ar 48.38 145 P **P 02 38 02.2 +0.6**
comp=Z,26nm,0.7s,baz=6.8,slow=8.4,SNR=40
MMAI PP **PP 02 39 54.7 +0.8**
comp=Z,13nm,1.0s,baz=22,slow=12,SNR=5.1
MMAI S **S 02 45 07.5 +5.9**
comp=Z,0.4nm,0.3s,baz=327,slow=48,SNR=2.1
MMAI LR LR 03 01 32.4
comp=Z,1μm,18.2s,baz=320,slow=40
comp=Z,26nm,0.7s
AAM Ann Arbor 48.39 277 IAMs_20 IAMs_20 02 58 45.9
comp=Z,3μm,18.0s
AAM Ann Arbor 48.39 277 P P 02 37 57.6 -3.9
baz=14
I37A Lemond, Waseca 48.46 287 IAmb IAmb 02 38 15.5
comp=Z,34nm,1.1s
M53A WI Miller and 48.69 274 IAMs_20 IAMs_20 02 58 33.0
comp=Z,3μm,20.0s
M53A WI Miller and 48.69 274 P P 02 37 59.8 -4.1
baz=14
K43A Burlington 48.84 282 IAmb IAmb 02 38 17.5
comp=Z,43nm,0.8s
SSPA Standing Stone 48.96 271 IAMs_20 IAMs_20 02 57 44.6
comp=Z,2μm,20.0s
SSPA Standing Stone 48.96 271 P P 02 38 02.2 -3.8
baz=14
JFWS Jewell Farm 48.98 284 IAMs_20 IAMs_20 02 58 36.8
comp=Z,4μm,18.0s
JFWS Jewell Farm 48.98 284 IAmb IAmb 02 38 20.9
comp=Z,24nm,0.8s
JFWS Jewell Farm 48.98 284 P P 02 38 01.3 -4.7
baz=14
SUSD Miller 48.99 293 P P 02 38 01.1 -5.0
baz=13
L44A Lake County Fo 49.27 281 P P 02 38 04.8 -3.5
baz=14
ECSD EROS Data Cent 49.29 290 P P 02 38 03.9 -4.5
ECSD IAmb IAmb 02 38 16.6
comp=Z,46nm,0.9s
ASF Jabal al Asfar 49.37 143 LR LR 03 01 47.8
comp=Z,1μm,19.0s,baz=333,slow=39
HQIL Hanson Quary C 49.63 281 IAMs_20 IAMs_20 02 58 58.3
comp=Z,4μm,20.0s
BOZ Bozeman (W) 49.90 304 P P 02 38 07.7 -5.5
baz=12
O53A New Philadelph 49.94 274 IAMs_20 IAMs_20 02 59 22.2
comp=Z,3μm,19.0s
O53A New Philadelph 49.94 274 P P 02 38 09.3 -4.1
baz=13
RLMT Red Lodge 50.00 302 P P 02 38 09.3 -4.7
baz=13,SNR=5.5
GHAJ Ghor Haditha 50.09 145 IAMs_20 IAMs_20 03 02 14.4
comp=Z,1μm,20.0s
E08A Dider Farm, El 50.09 311 IAmb IAmb 02 38 20.2
comp=Z,69nm,1.7s
E07A Sunnyside 50.13 312 IAmb IAmb 02 38 21.5
comp=Z,78nm,1.9s
RSSD Black Hills 50.15 297 P P 02 38 09.9 -5.3
baz=13
LON Longmire 50.20 314 IAmb IAmb 02 38 21.2
comp=Z,79nm,1.6s
HAWA Hanford 50.25 312 IAmb IAmb 02 38 21.6
comp=Z,93nm,1.9s
MCWV Mont Chateau 50.27 273 IAMs_20 IAMs_20 02 59 40.9
comp=Z,3μm,18.0s
MCWV Mont Chateau 50.27 273 P P 02 38 11.9 -3.9
baz=13
ACSO Alum Creek Sta 50.28 276 IAMs_20 IAMs_20 02 59 22.9
comp=Z,2μm,18.0s
ACSO Alum Creek Sta 50.28 276 P P 02 38 11.9 -4.1
baz=13
SCIA State Center 50.48 286 P P 02 38 13.3 -4.1
baz=13
E03A Lebam 50.63 315 IAmb IAmb 02 39 03.6
comp=Z,38nm,1.0s
O48B Farmland 50.65 278 IAMs_20 IAMs_20 02 59 14.4
comp=Z,3μm,20.0s
O48B Farmland 50.65 278 P P 02 38 14.4 -4.4
baz=13
P52A Corning 50.70 275 IAMs_20 IAMs_20 02 59 54.3
comp=Z,4μm,19.0s
P52A Corning 50.70 275 P P 02 38 15.6 -3.6
baz=13
BNX BinXian 50.77 49⇑ P **P 02 38 17.8 -1.8**
BNX pP **pP 02 38 22.3 +0.5**
BNX sP **sP 02 38 24.8 +2.2**
BNX PP **PP 02 40 17.7 +2.4**
BNX S **S 02 45 33.9 -0.9**
BNX sS **sS 02 45 42.8 +4.5**
BNX pmax pmax
comp=Z,39nm,1.0s
BNX pmax pmax
comp=Z,320nm,5.5s
BNX LR LR
comp=Z,810nm,15.1s
BNX LR LR
comp=Z,750nm,13.6s
BNX LR LR
comp=Z,2μm,18.8s
SFIN Lafayette 50.88 280 P P 02 38 16.3 -4.2
baz=13
XLT XiLinHaoTe 50.90 60 *e*P **P 02 38 19.3 -1.4**
XLT S **S 02 45 37.8 +1.1**
XLT sS sS 02 45 44.6 +4.3
XLT ScS **ScS 02 48 07.5 -3.4**
XLT pmax pmax
comp=Z,40nm,1.4s
XLT pmax pmax
comp=Z,310nm,3.8s
XLT LR LR
comp=Z,9μm,16.5s
XLT LR LR
comp=Z,2μm,18.4s
H17A Grant Village 50.91 303 P P 02 38 16.8 -4.3
baz=12
HDIL Hopedale 51.10 282 P P 02 38 17.9 -4.2
baz=13
CBN Corbin Frederi 51.23 270 IAMs_20 IAMs_20 03 00 10.7
comp=Z,3μm,21.0s
FLWY Flagg Ranch 51.23 303 IAmb IAmb 02 38 31.3
comp=Z,109nm,1.8s
G08A Pilot Rock 51.25 311 IAmb IAmb 02 38 29.9
comp=Z,99nm,1.9s
P49A Miami Univ. Ec 51.27 278 IAMs_20 IAMs_20 02 59 45.0
comp=Z,3μm,20.0s
P49A Miami Univ. Ec 51.27 278 P P 02 38 19.0 -4.4
baz=13
YSS Yuzh-Sakhalins 51.46 36 IAMs_20 IAMs_20 02 59 08.1
comp=Z,1μm,21.0s
YSS Yuzh-Sakhalins 51.46 36 *e*P **P 02 38 24.9 +0.2**
YSS *e* 02 40 22.0
YSS *e*S **S 02 45 42.0 -2.2**
YSS *e*PS SPn 02 45 46.8 -4.9
YSS pmax pmax
comp=Z,200nm,3.7s
YSS pmax pmax
comp=Z,50nm,1.3s
YSS pmax pmax
comp=Z,300nm,3.7s
YSS pmax pmax
comp=N,100nm,3.6s
YSS pmax pmax
comp=E,100nm,4.4s
YSS MLR MLR
comp=Z,1μm,15.0s
YSS MLR MLR
comp=E,400nm,14.0s
G06A Carlson Farm, 51.53 312 IAmb IAmb 03 38 32.1
comp=Z,91nm,2.0s
EIL Elat 51.64 146 LR LR 03 01 28.4
comp=Z,1μm,21.6s,baz=348,slow=37
LOHW Long Hollow 51.68 303 IAmb IAmb 02 38 33.0
comp=Z,84nm,2.0s
KBL Kabul 51.74 108 P **P 02 38 28.0 +0.7**
KBL SNR=48 P **P 02 38 28.0 +0.7**
SNR=48
KBU Kabul Universi 51.78 108 P **P 02 38 25.5 -2.1**
BGNE Belgrade 51.81 291 P P 02 38 22.2 -5.3
baz=13
K22A Casper 51.98 299 P P 02 38 23.4 -5.5
baz=12
MDJ Mudanjiang 52.17 48 P P 02 38 24.4 -5.7
MDJ PP **PP 02 40 23.8 -4.2**
MDJ S **S 02 45 53.2 -0.9**
MDJ ScS **ScS 02 48 14.6 -4.9**
MDJ pmax pmax
comp=Z,37nm,1.1s
MDJ pmax pmax
comp=Z,380nm,6.4s
MDJ LR LR
comp=Z,3μm,18.9s
MDJ LR LR
comp=Z,2μm,13.7s
MDJ LR LR
comp=Z,3μm,17.5s
MDJ Mudanjiang 52.17 48 IAMs_20 IAMs_20 03 01 48.7
comp=Z,2μm,19.0s
MDJ Mudanjiang 52.17 48 P **P 02 38 29.1 -1.0**
HLID Hailey 52.30 306 P P 02 38 26.2 -5.1
baz=12,SNR=9.8
BW06 Boulder Array 52.34 302 P P 02 38 26.3 -5.4
baz=12,SNR=8.7
PDAR Pinedale Array 52.34 302 P P 02 38 26.3 -5.4
comp=Z,2.3nm,1.1s,baz=30,slow=5.6,SNR=17
PDAR S S 02 45 51.3 -5.7
comp=Z,0.1nm,0.5s,baz=73,slow=31,SNR=1.4
PDAR LR LR 03 00 34.3
comp=Z,4μm,18.4s,baz=16,slow=36
comp=Z,2.3nm,1.1s
CN2 Changchun 52.40 51 *e*P **P 02 38 30.0 -1.8**
CN2 *es*P sP 02 38 38.9 +4.1
CN2 *e*S **S 02 45 51.0 -6.2**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 LR LR
comp=Z,880nm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,950nm,13.0s
I07A Izee 52.51 311 IAmb IAmb 02 38 40.0
comp=Z,96nm,1.9s
COR Corvallis 52.52 315 IAMs_20 IAMs_20 03 00 39.2
comp=Z,3μm,20.0s
GTA Gaotai 52.53 76⇑ P **P 02 38 32.7 -0.3**
GTA pP sP 02 38 38.6 +2.6
GTA sP pwP 02 38 41.4 +2.3
GTA PP **PP 02 40 32.1 +0.6**
GTA S **S 02 45 57.1 -2.3**
GTA sS pS 02 46 03.8 +1.8
GTA pmax pmax
comp=Z,89nm,1.3s
GTA pmax pmax
comp=Z,570nm,4.3s
GTA LR LR
comp=Z,4μm,15.6s
GTA LR LR
comp=Z,4μm,17.1s
GTA LR LR
comp=Z,5μm,18.5s
TEY Ternei 52.66 41 *e*P P 02 38 31.3 -2.4
TEY *e* 02 46 07.9
BLA Blacksburg 52.75 273 IAMs_20 IAMs_20 03 00 10.6
comp=Z,3μm,19.0s
BLA Blacksburg 52.75 273 P P 02 38 31.6 -2.9
baz=13
WCI Wyandotte Cave 52.82 279 IAMs_20 IAMs_20 03 00 32.0
comp=Z,3μm,21.0s
WCI Wyandotte Cave 52.82 279 P P 02 38 29.8 -5.2
baz=13
USA0B Ussuriysk Arra 52.90 46 *i*P P 02 38 32.9 -2.6
USRK Ussuriysk Ar. 52.90 46 P **P 02 38 33.9 -1.7**
comp=Z,12nm,0.9s,baz=2.2,slow=7.5,SNR=14
USRK S **S 02 46 02.9 -1.1**
comp=Z,1.0nm,0.6s,baz=142,slow=42,SNR=1.4
USRK LR LR 03 00 50.2
comp=Z,852nm,20.1s,baz=349,slow=36
comp=Z,12nm,0.9s
OGNE Ogallala 52.91 294 P P 02 38 30.4 -5.3
baz=12
BTO Baotou 53.12 66 *e*P **P 02 38 35.0 -2.4**
BTO pP **pP 02 38 40.2 +0.7**
BTO sP **sP 02 38 42.4 +2.1**
BTO PP **PP 02 40 34.8 -2.0**
BTO S **S 02 46 05.8 -1.6**
BTO SS **SS 02 49 44.9 -1.1**
BTO pmax pmax
comp=Z,89nm,1.6s
BTO pmax pmax
comp=Z,830nm,5.0s
BTO LR LR
comp=Z,3μm,19.8s
BTO LR LR
comp=Z,13μm,16.3s
BTO LR LR
comp=Z,2μm,19.3s
HHC Hu-ho-hao-te 53.14 65⇑ *i*P **P 02 38 36.9 -0.6**
HHC pP pP 02 38 41.6 +2.0
HHC PP **PP 02 40 36.8 -0.2**
HHC S **S 02 46 10.3 +2.6**
HHC sS sS 02 46 16.8 +5.5
HHC ScS **ScS 02 48 25.9 -0.8**
HHC SS **SS 02 49 47.5 +1.2**
HHC pmax pmax
comp=Z,50nm,1.6s
HHC pmax pmax
comp=Z,240nm,3.6s
HHC LR LR
comp=Z,4μm,19.8s
HHC LR LR
comp=Z,1μm,15.5s
HHC LR LR
comp=Z,6μm,20.8s
I04A Tendick Farm, 53.19 314 IAmb IAmb 02 38 43.5
comp=Z,80nm,1.9s
N23A Red Feather La 53.60 298 P P 02 38 36.3 -4.8
baz=12,SNR=12
KBD Kabd 53.65 132 P **P 02 38 44.6 +3.4**
KSU1 Kansas State U 53.79 289 IAmb IAmb 02 38 49.5
comp=Z,32nm,1.0s
KSU1 Kansas State U 53.79 289 P P 02 38 36.9 -5.3
baz=13
CCM Cathedral Cave 53.87 283 P P 02 38 37.7 -5.1
CCM Cathedral Cave 53.87 283 P P 02 38 36.8 -5.9
baz=13
CCM Cathedral Cave 53.87 283 P P 02 38 37.7 -5.0
CCM pmax pmax
comp=Z,12nm,0.8s
CCM MLR MLR
comp=Z,5μm,19.0s
TZTN Tazewell 53.96 276 IAMs_20 IAMs_20 03 02 11.5
comp=Z,2μm,19.0s
TZTN Tazewell 53.96 276 P P 02 38 39.3 -4.1
baz=13
SNY Shenyang 54.06 54⇑ P **P 02 38 43.0 -1.1**
SNY S **S 02 46 20.8 +1.0**
SNY pmax pmax
comp=Z,85nm,1.1s
SNY pmax pmax
comp=Z,140nm,3.6s
SNY LR LR
comp=Z,880nm,19.0s
SNY LR LR
comp=Z,1μm,18.4s
SNY LR LR
comp=Z,1μm,19.0s
CNNC Cliffs of the 54.20 270 P P 02 38 41.1 -4.1
baz=12
ASAJ Asahikawa 54.25 36 LR LR 03 03 48.2
comp=Z,2μm,18.6s,baz=354,slow=38
JKA Kamikawa-asahi 54.25 36 IAMs_20 IAMs_20 03 01 53.0
comp=Z,2μm,20.0s
HUMO Hull Mountain 54.42 314 IAMs_20 IAMs_20 02 59 49.5
comp=Z,4μm,22.0s
CBKS Cedar Bluff 54.61 292 P P 02 38 43.4 -4.8
baz=12
ISCO Idaho Springs 54.62 297 P P 02 38 43.8 -4.7
baz=12,SNR=5.1
BBSR BB Station 54.62 256 IAMs_20 IAMs_20 03 02 04.1
comp=Z,3μm,19.0s
BJI Beijing 54.68 61 P **P 02 38 47.8 -0.8**
BJI S **S 02 46 29.9 +1.7**
BJI SS **SS 02 50 09.9 -0.4**
BJI pmax pmax
comp=Z,19nm,1.3s
BJI pmax pmax
comp=Z,210nm,3.8s
BJI LR LR
comp=Z,970nm,15.4s
BJI LR LR
comp=Z,4μm,15.3s
BJI LR LR
comp=Z,2μm,15.0s
BJT Baijiatuau 54.70 61 IAMs_20 IAMs_20 03 04 06.9
comp=Z,3μm,19.0s
BJT Baijiatuau 54.70 61 P **P 02 38 48.4 -0.3**
O20A White River Ci 54.71 300 P P 02 38 44.0 -5.0
baz=12,SNR=33
GOMU GeErMu 54.76 82 P **P 02 38 49.5 -0.2**
GOMU pP pP 02 38 53.2 +1.4
GOMU sP pwP 02 38 56.7 +0.9
GOMU PP **PP 02 40 51.2 -0.7**
GOMU S S 02 46 20.0 -10
GOMU SS **SS 02 50 08.2 -4.3**
GOMU pmax pmax
comp=Z,98nm,1.1s
GOMU LR LR
comp=Z,7μm,19.2s
GOMU LR LR
comp=Z,7μm,18.2s
GOMU LR LR
comp=Z,4μm,19.2s
KSCO Kaye Shedlock' 54.90 294 P P 02 38 45.7 -4.7
baz=12
KMSC Kings Mountain 54.92 273 P P 02 38 46.1 -4.3
baz=12
WVT Waverly 55.14 280 IAMs_20 IAMs_20 03 01 53.2
comp=Z,3μm,20.0s
WVT Waverly 55.14 280 P P 02 38 47.9 -4.0
baz=13
ELK Elko 55.18 306 P P 02 38 46.6 -5.9
comp=Z,3.6nm,0.9s,baz=350,slow=7.1,SNR=17
ELK S S 02 46 31.9 -3.6
comp=Z,0.2nm,0.3s,baz=18,slow=8.7,SNR=1.4
ELK LR LR 03 02 43.1

comp=Z,6µm,18.3s,baz=14,slow=37
comp=Z,3.6nm,0.9s
DHRM DHARAMSHALA 55.25 101 *e*P **P 02 38 53.6 +0.5**
DHRM IAmb IAmb 02 39 09.2
comp=Z,493nm,1.9s
YBH Yreka Blue Hor 55.25 313 IAMs_20 IAMs_20 03 02 15.4
comp=Z,3µm,19.0s
YBH Yreka Blue Hor 55.25 313 P P 02 38 47.5 -5.3
comp=Z,1.6nm,0.9s,baz=51,slow=8.8,SNR=4.8
YBH S S 02 46 30.1 -5.9
comp=Z,0.4nm,0.3s,baz=201,slow=13,SNR=1.2
YBH LR LR 03 02 35.4
comp=Z,3µm,18.7s,baz=4.5,slow=36
DUG Dugway, Tooele 55.36 304 P P 02 38 49.0 -4.6
baz=11
Q24A Divide 55.36 297 P P 02 38 49.3 -4.6
baz=12,SNR=12
PLAL Pickwick Lake 56.30 280 IAMs_20 IAMs_20 03 02 28.0
comp=Z,3µm,22.0s
TIY Taiyuan 56.35 65 P **P 02 39 00.5 -0.2**
TIY S **S 02 46 53.5 +2.8**
TIY ScS **ScS 02 48 48.3 -1.2**
TIY pmax pmax
comp=Z,87nm,1.0s
TIY pmax pmax
comp=Z,510nm,3.7s
TIY LR LR
comp=Z,3µm,19.2s
TIY LR LR
comp=Z,2µm,16.5s
TIY LR LR
comp=Z,4µm,19.9s
OK051 E0350 and S346 56.36 288 IAMs_20 IAMs_20 03 02 47.9
comp=Z,3µm,20.0s
JEM Erimo 56.38 36 IAMs_20 IAMs_20 03 05 56.0
comp=Z,2µm,20.0s
JEM Erimo 56.38 36 P **P 02 39 00.1 -0.7**
ERM Erimo 56.38 36 P **P 02 39 00.2 -0.5**
ERM Erimo 56.38 36 *ce*P **P 02 39 00.3 -0.5**
ERM pmax pmax
comp=Z,74nm,1.3s
LZH Lanzhou 56.47 73 ⇑P **P 02 39 01.4 -0.3**
LZH S **S 02 46 52.2 -0.4**
LZH SS **SS 02 50 42.7 +3.7**
LZH pmax pmax
comp=Z,76nm,1.2s
LZH pmax pmax
comp=Z,590nm,5.3s
LZH LR LR
comp=Z,4µm,17.9s
LZH LR LR
comp=Z,8µm,16.4s
LZH LR LR
comp=Z,4µm,16.3s
OK035 E0210 Rd and N 56.48 290 IAMs_20 IAMs_20 03 03 11.0
comp=Z,3µm,20.0s
SMLA Simla 56.50 101 *e*P **P 02 39 02.2 +0.4**
SMLA IAmb IAmb 02 39 03.3
comp=Z,249nm,1.1s
SDCO Great Sand Dun 56.61 297 P P 02 38 58.0 -4.8
baz=12,SNR=20
DL2 Dalian 56.64 56 P **P 02 39 01.6 -1.0**
DL2 S **S 02 46 56.4 +2.1**
DL2 pmax pmax
comp=Z,180nm,4.7s
DL2 LR LR
comp=Z,1µm,18.4s
DL2 LR LR
comp=Z,2µm,16.9s
DL2 LR LR
comp=Z,2µm,17.1s
NHSC New Hope 56.70 271 P P 02 39 00.3 -2.8
baz=12
TUL3 Leonard 56.76 287 P P 02 38 59.6 -3.9
baz=12
S22A 4UR Ranch, Cre 56.82 298 P P 02 38 59.7 -4.6
baz=12,SNR=12
TAM Tamanrasset 56.86 179 IAMs_20 IAMs_20 03 00 48.4
comp=Z,764nm,20.0s
GOGA Godfrey 57.00 275 P P 02 39 01.4 -3.9
baz=12
OXF Oxford 57.00 281 P P 02 39 01.8 -3.4
baz=12
T25A Trinidad 57.02 296 P P 02 39 01.7 -4.0
baz=12
HNS HongShan 57.03 63 ⇑P **P 02 39 05.3 -0.1**
HNS PP **PP 02 41 10.5 -1.1**
HNS S **S 02 47 01.9 +2.4**
HNS pmax pmax
comp=Z,440nm,5.9s
HNS LR LR
comp=Z,4µm,15.2s
HNS LR LR
comp=Z,1µm,12.3s
HNS LR LR
comp=Z,3µm,15.9s
SAKB Bahrain 57.19 129 P **P 02 39 06.9 +0.2**
SAKB S **S 02 47 03.9 +2.0**
ORV Oroville 57.23 312 IAMs_20 IAMs_20 03 03 16.8
comp=Z,3µm,21.0s
JTM Tenmabayashi 57.37 38 P **P 02 39 08.9 +1.1**
SHMA Al-Shehemyia 57.37 129 P **P 02 39 08.0 +0.1**
SNR=24
SHMA S **S 02 47 06.2 +2.0**
DDI Dehra Dun 57.44 100 *e*P **P 02 39 09.7 +1.2**
R11B Troy Canyon, C 57.58 306 P P 02 39 04.8 -4.8
baz=11,SNR=10
MVCO Mesa Verde 57.61 299 P P 02 39 05.4 -4.5
baz=11,SNR=9.4
MIAR Mount Ida 57.70 285 P P 02 39 06.3 -4.0
baz=12,SNR=9.3
NVAR Mina Array Bea 57.89 309 P P 02 39 06.9 -4.9
comp=Z,4.4nm,0.9s,baz=21,slow=5.3,SNR=16
NVAR S S 02 47 05.5 -5.9
comp=Z,0.2nm,0.3s,baz=44,slow=4.5,SNR=0.6
NVAR LR LR 03 03 57.9
comp=Z,3µm,18.3s,baz=12,slow=36
comp=Z,4.4nm,0.9s
LRAL Lakeview Retre 58.00 278 IAMs_20 IAMs_20 03 03 44.1
comp=Z,3µm,20.0s
LRAL Lakeview Retre 58.00 278 P P 02 39 08.9 -3.4
baz=12
BANOM Banah 58.09 123 P **P 02 39 14.2 +1.1**
UMQ Umm Al-Quwin 58.38 124 P **P 02 39 16.2 +1.1**
JASK Jask - Hormozg 58.39 122 P **P 02 39 15.8 +0.7**
SNR=10
WMOK Wichita Mounta 58.42 290 IAMs_20 IAMs_20 03 04 22.3
comp=Z,3µm,20.0s
WMOK Wichita Mounta 58.42 290 P P 02 39 11.1 -4.2
baz=12
SMRA Abu-Samra 58.45 129 P **P 02 39 15.4 -0.1**
SNR=38
TRNA Turayna 58.51 129 P **P 02 39 16.1 +0.2**
SNR=38
JRN Qarnain Island 58.54 127 P **P 02 39 16.3 +0.2**
SNR=21
TIA Tai'an 58.58 61 P **P 02 39 15.6 -0.7**
TIA S **S 02 47 21.0 +1.1**
TIA pmax pmax
comp=Z,61nm,1.0s
TIA pmax pmax
comp=Z,280nm,3.9s
TIA LR LR
comp=Z,820nm,19.8s
TIA LR LR
comp=Z,3µm,16.4s
TIA LR LR
comp=Z,1µm,19.9s
MASF Masafi 58.61 124 P **P 02 39 17.4 +0.7**
SNR=32
MSFE Esma-Masafi 58.62 124 *i* P **P 02 39 17.5 +0.7**
SNR=67
MDH Madha 58.70 123 *i* P **P 02 39 17.2 -0.1**
SNR=15
MDH Madha 58.70 123 P **P 02 39 17.4 +0.1**
SNR=14
MLAC Mammoth, Mammo 58.75 309 P P 02 39 14.3 -3.5
baz=10
INCN Inchon 58.77 52 IAMs_20 IAMs_20 03 05 26.8
comp=Z,2µm,20.0s
AMTX Amarillo 58.77 292 P P 02 39 14.5 -3.3
baz=12
MCCM Marconi Confer 58.80 313 IAMs_20 IAMs_20 03 04 24.4
comp=Z,2µm,22.0s
NAZ Nazwa, Dubai 58.91 124 *i* P **P 02 39 18.8 +0.1**
SNR=50
NAZ Nazwa, Dubai 58.91 124 P **P 02 39 19.2 +0.4**
SNR=26
RAYN Ar Rayn 58.93 135 *i* P **P 02 39 19.4 +0.3**
SNR=85
TIGA Tifton 58.94 274 P P 02 39 15.5 -3.4
baz=12
KSRS Korea Array 58.98 51 P **P 02 39 17.6 -1.4**
comp=Z,8.1nm,1.0s,baz=352,slow=6.2,SNR=17
KSRS S **S 02 47 24.4 -0.6**
KSRS comp=Z,0.5nm,0.4s,baz=122,slow=8.8,SNR=1.1
KSRS LR LR 03 06 11.4
comp=Z,2µm,18.0s,baz=340,slow=38
comp=Z,8.1nm,1.0s
UOSS Minazif 59.04 124 *i* P **P 02 39 19.5 -0.1**
SNR=24
TPNV Topopah Spring 59.05 306 P P 02 39 15.0 -4.9
baz=11
FAQ Al Faqa, Dubai 59.14 124 *i* P **P 02 39 20.4 0.0**
SNR=24
FAQ Al Faqa, Dubai 59.14 124 P **P 02 39 20.3 0.0**
SNR=16
HATD Hatta, Dubai 59.14 124 *i* P **P 02 39 20.7 +0.3**
SNR=94
HATD Hatta, Dubai 59.14 124 P **P 02 39 20.9 +0.5**
SNR=56
GRAC Grapevine Rang 59.17 308 P P 02 39 16.9 -3.6
baz=10
ASUD Al Ashush, Dub 59.22 125 *i* P **P 02 39 21.2 +0.3**
SNR=14
ASUD Al Ashush, Dub 59.22 125 P **P 02 39 21.1 +0.3**
SNR=9.5
AJN Ajban 59.23 125 *i* P **P 02 39 20.9 0.0**
SNR=13
AJN Ajban 59.23 125 P **P 02 39 20.8 -0.2**
SNR=9.5
SLWR Sila 59.23 129 P **P 02 39 21.2 +0.2**
SLWR S **S 02 47 31.5 +3.0**
TIN Tinemaha, Big 59.23 308 P P 02 39 17.2 -3.8
baz=10
ASHO Ashiyiah 59.27 124 *i* P **P 02 39 21.4 +0.1**
SNR=62
ASHO Ashiyiah 59.27 124 P **P 02 39 21.6 +0.3**
SNR=36
XAN Xi'an 59.35 69 ⇑P **P 02 39 20.7 -1.1**
XAN pP pP 02 39 25.2 +1.3
XAN S **S 02 47 31.7 +1.7**
XAN ScS **ScS 02 49 10.9 -0.6**
XAN pmax pmax
comp=Z,110nm,1.2s
XAN pmax pmax
comp=Z,650nm,3.5s
XAN LR LR
comp=Z,4µm,14.3s
XAN LR LR
comp=Z,6µm,13.7s
XAN LR LR
comp=Z,7µm,17.7s
NGCH Negor - Chabah 59.40 118 P **P 02 39 23.0 +0.9**
SNR=6.1
VBMS Vicksburg 59.43 281 P P 02 39 18.6 -3.7
baz=12
LYN LuoYang 59.44 66 ⇑P **P 02 39 21.7 -0.6**
LYN pP pP 02 39 26.0 +1.5
LYN sP sP 02 39 28.5 +3.2
LYN S **S 02 47 30.2 -0.9**
LYN SS **SS 02 51 28.7 +3.4**
LYN pmax pmax
comp=Z,87nm,1.5s
LYN pmax pmax
comp=Z,650nm,3.6s
LYN LR LR
comp=Z,5µm,16.1s
LYN LR LR
comp=Z,4µm,16.2s
LYN LR LR
comp=Z,8µm,19.5s
ANMO Albuquerque 59.50 297 P P 02 39 18.5 -4.5
baz=11
ANMO Albuquerque 59.50 297 P P 02 39 17.9 -5.1
comp=Z,4.0nm,1.0s,baz=0.0,slow=2.0,SNR=12
ANMO S S 02 47 27.0 -5.3
comp=Z,0.3nm,0.3s,baz=36,slow=8.3,SNR=1.6
ANMO LR LR 03 05 14.9
comp=Z,5µm,19.7s,baz=112,slow=36
comp=Z,4.0nm,1.0s
GHWR Ruwais 59.51 127 P **P 02 39 23.1 +0.2**
FURC Furnace Creek, 59.61 307 P P 02 39 18.4 -5.1
baz=10
WUAZ Wupatki 59.72 302 P P 02 39 20.2 -4.3
baz=11,SNR=9.9
CWC Cottonwood Cre 59.81 308 P P 02 39 21.4 -3.7
baz=10
BRAL Brewton 59.83 278 IAMs_20 IAMs_20 03 04 51.7
comp=Z,2µm,18.0s
ALNE Al Ain 59.84 124 *i* P **P 02 39 25.5 +0.3**
SNR=24
ALNE Al Ain 59.84 124 P **P 02 39 25.6 +0.3**
SNR=48
ALNE P **P 02 39 25.6 +0.3**
SNR=48
MSTX Muleshoe 59.85 293 P P 02 39 20.4 -4.9
baz=12
MZWR Madinat Zayed 59.85 126 P **P 02 39 25.0 -0.2**
W18A Petrified Fore 59.85 300 P P 02 39 20.9 -4.5
baz=11,SNR=5.3
SOHO SOHO 59.88 123 *i* P **P 02 39 25.1 -0.4**
SNR=60
SOHO SOHO 59.88 123 P **P 02 39 24.9 -0.6**
SOHO P **P 02 39 24.9 -0.6**
TJN Taejon 59.96 51 P **P 02 39 25.1 -0.8**
SHOC Shoshone, Teco 60.08 306 P P 02 39 22.7 -4.1
baz=10
MPMC Manual Prospec 60.10 307 P P 02 39 23.4 -3.7
baz=10,SNR=14
VOG Valley Oaks Go 60.12 309 P P 02 39 22.7 -4.2
baz=10
JMM Marumori 60.22 39 P **P 02 39 29.5 +1.8**
LSA Lhasa 60.42 87 IAMs_20 IAMs_20 03 08 30.2
comp=Z,1µm,20.0s
LSA Lhasa 60.42 87 *i* P **P 02 39 30.3 +0.6**
SNR=17
LSA Lhasa 60.42 87 P **P 02 39 30.5 +0.8**
Y22F Passcal Instru 60.43 297 P P 02 39 26.3 -3.0
baz=11
Y22D IRIS PASSCAL I 60.43 297 P P 02 39 25.0 -4.3
baz=11
TUQ Turquoise Moun 60.49 306 P P 02 39 25.2 -4.5
baz=10
MZR Muzera 60.54 127 *i* P **P 02 39 30.4 +0.4**
SNR=7.0
MZR Muzera 60.54 127 P **P 02 39 30.7 +0.6**
SNR=5.7
VES Vestal, Richgr 60.55 309 P P 02 39 25.6 -4.3
baz=10
NATX Nacogdoches 60.61 285 P P 02 39 26.0 -4.4
baz=12
ABTX Abilene, Hawle 60.63 290 P P 02 39 27.1 -3.4
baz=12
ISA Isabella, Lake 60.63 308 P P 02 39 26.3 -4.4
baz=10,SNR=5.4
ARQ Araqi 60.66 124 P **P 02 39 30.9 0.0**
SNR=40
LRMC Laurel Mtn Rad 60.70 308 P P 02 39 27.2 -3.9
baz=10,SNR=5.1
BIDO Bidbid 60.73 122 P **P 02 39 31.4 +0.2**
SNR=43
GSC Goldstone, Bar 60.75 307 P P 02 39 27.5 -3.9
baz=10,SNR=7.3
WHTX Lake Whitney, 60.87 288 P P 02 39 28.7 -3.4
baz=12
NEE2 Needles Airpor 60.95 305 P P 02 39 28.4 -4.2
baz=10
WSAR Wadi Sarin 61.08 121 LR LR 03 11 01.0
comp=Z,1µm,19.1s,baz=14,slow=41
WSAR Wadi Sarin 61.08 121 P **P 02 39 33.9 +0.1**
SNR=20
GMRC Granite Mounta 61.09 305 P P 02 39 29.9 -3.9
baz=10
HEC Hector,Ludlow 61.14 306 P P 02 39 30.2 -3.9
baz=10
SMDO Samad 61.17 122 P **P 02 39 34.3 -0.1**
SNR=42
SMMC Simmler 61.19 310 P P 02 39 30.0 -4.4
baz=9.9
ARVC Arvin 61.21 308 P P 02 39 30.1 -4.3
baz=10
MAJO Matsushiro 61.23 41 IAMs_20 IAMs_20 03 05 39.1
comp=Z,842nm,19.0s
MJAR Matsushiro Arr 61.23 41 P **P 02 39 33.0 -1.5**
comp=Z,20nm,1.1s,baz=357,slow=5.8,SNR=13
MJAR LR LR 03 05 51.5
comp=Z,690nm,21.5s,baz=356,slow=36
comp=Z,20nm,1.1s
PDMCI Parker Dam,Lak 61.33 304 P P 02 39 31.7 -3.6
baz=10
EDW2 Edwards Air Fo 61.33 308 P P 02 39 31.7 -3.7
baz=10
BSY Bisya 61.35 123 P **P 02 39 35.1 -0.4**
SNR=26
CD2 Chengdu 61.51 75 P **P 02 39 35.7 -0.9**
CD2 PP **PP 02 41 52.3 +0.8**
CD2 S **S 02 47 57.7 0.0**
CD2 ScS **SKKSac 02 49 23.5 -4.2**
CD2 SS **SS 02 51 56.4 -1.6**
CD2 pmax pmax
comp=Z,70nm,1.2s
CD2 pmax pmax
comp=Z,260nm,5.0s
CD2 LR LR
comp=Z,2µm,13.3s
CD2 LR LR
comp=Z,1µm,12.8s
CD2 LR LR
comp=Z,2µm,17.3s
PKM Mcpherson Peak 61.59 309 P P 02 39 33.0 -4.2
baz=9.9
IRM Iron Mountain 61.63 305 P P 02 39 33.3 -4.0
baz=10
OSI Osito Audit: C 61.70 308 P P 02 39 33.9 -3.9
baz=10.0
WBK Wadi Bani Khal 61.75 121 P **P 02 39 38.3 0.0**
SNR=18
BBRC Big Bear Solar 61.79 307 P P 02 39 34.5 -4.1
baz=10
DWPF Disney Wildern 61.79 271 P P 02 39 34.7 -3.7
baz=12
JMDO Jabal Madar 61.85 122 P **P 02 39 38.6 -0.4**
SNR=29
BELC Belle Mtn. Jos 61.91 306 P P 02 39 35.2 -4.2
baz=10
BFSC Mount Baldy Ra 61.92 307 P P 02 39 35.0 -4.3
baz=10
DECC Green Verdugo 62.00 308 P P 02 39 35.4 -4.4
baz=10.0
SBC Santa Barbara 62.01 309 P P 02 39 35.9 -3.9
baz=9.9
435B Jarrell 62.07 288 P P 02 39 36.1 -4.2
baz=12
121A Cookes Peak, D 62.08 298 P P 02 39 36.0 -4.5
baz=11
BC3 Big Chuckawall 62.16 305 P P 02 39 36.3 -4.8
baz=10
JLN Jalan Bani Buh 62.27 121 P **P 02 39 41.8 +0.1**
SNR=30
PFO Pinyon Flats O 62.36 306 P P 02 39 37.2 -5.2
baz=10
PFO Pinyon Flats O 62.36 306 P P 02 39 36.9 -5.5
comp=Z,2.3nm,0.7s,baz=338,slow=19,SNR=3.9
PFO LR LR 03 07 55.2
comp=Z,1µm,19.1s,baz=316,slow=37
comp=Z,2.3nm,0.7s
TPFO Pinon Flats 62.36 306 P P 02 39 37.3 -5.1
baz=10
MNTX Cornudas Mount 62.50 295 IAMs_20 IAMs_20 03 06 55.9
comp=Z,3µm,20.0s
MNTX Cornudas Mount 62.50 295 P P 02 39 38.1 -5.0
baz=11,SNR=7.6
FMP Fort Macarthur 62.52 308 P P 02 39 38.9 -4.4
baz=10.0
EPT El Paso 62.61 296 IAMs_20 IAMs_20 03 04 11.8
comp=Z,2µm,20.0s
JCT Junction City 62.75 290 P P 02 39 40.4 -4.5
baz=11
TUC Tucson 62.77 300 P P 02 39 41.0 -4.1
baz=11
CIS Catalina Islan 62.85 308 P P 02 39 41.5 -4.0
baz=9.9
SWSC Sam W. Stewart 62.91 305 P P 02 39 41.8 -4.1
baz=10
NJ2 Nanjing 62.92 60 ⇓*i*P **P 02 39 44.5 -1.4**
NJ2 pP **pP 02 39 47.1 -1.0**
NJ2 PP **PP 02 42 00.9 -3.0**
NJ2 S **S 02 48 15.2 -0.2**
NJ2 sS **pS 02 48 21.1 +3.0**
NJ2 ScS **ScS 02 49 38.8 +0.5**
NJ2 SS **SS 02 52 25.5 +5.6**
NJ2 pmax pmax
comp=Z,55nm,0.9s
NJ2 LR LR
comp=Z,2µm,14.0s
NJ2 LR LR
comp=Z,7µm,16.8s
NJ2 LR LR
comp=Z,2µm,16.1s
MONP2 Monument Peak 63.06 306 P P 02 39 43.0 -4.1
baz=10
ENH Enshi 63.12 69 P **P 02 39 46.7 -0.7**
109C Camp Elliot, M 63.16 306 P P 02 39 43.8 -3.7
baz=10.0
MHTO MHTO 63.19 123 P **P 02 39 47.3 -0.6**
SNR=42
MHTO P **P 02 39 47.3 -0.6**
SNR=42
IKP In-Ko-Pah, Jac 63.25 305 P P 02 39 44.4 -3.8
baz=10
SCI2 San Clemente I 63.28 308 P P 02 39 44.2 -4.2
baz=9.9
214A Organ Pipe Nat 63.43 302 P P 02 39 44.9 -4.5
baz=10
JNU Nakatsue 63.65 49 P **P 02 39 50.1 -0.7**
JNU Nakatsue 63.65 49 S **S 02 48 23.0 -1.6**
comp=Z,5.2nm,0.9s,baz=147,slow=19,SNR=1.1
JNU LR LR 03 08 05.6
comp=Z,492nm,18.4s,baz=358,slow=36
WHN Wuhan 63.67 65 P **P 02 39 49.7 -1.2**
WHN pmax pmax
comp=Z,390nm,1.3s
DQM DQM 64.16 123 P **P 02 39 53.0 -1.3**
SNR=10
SSE Sheshan 64.22 58 P P 02 39 50.3 -4.2
SSE S **S 02 48 26.8 -4.8**
SSE pmax pmax
comp=Z,31nm,1.2s
SSE pmax pmax
comp=Z,120nm,3.5s
SSE LR LR
comp=Z,1µm,18.2s
SSE LR LR
comp=Z,2µm,17.8s
MOKO MOKOCHONG 64.33 85 *e*P **P 02 39 55.5 0.0**
MOKO IAmb IAmb 02 39 56.4
comp=Z,238nm,1.2s
TXAR Lajitas Array 64.53 293 P P 02 39 52.1 -4.6
comp=Z,2.6nm,0.6s,baz=37,slow=5.1,SNR=17
TXAR S S 02 48 28.9 -6.7
comp=Z,0.1nm,0.4s,baz=278,slow=34,SNR=1.9
TXAR LR LR 03 08 38.9
comp=Z,3µm,18.2s,baz=7.5,slow=37
TXAR PKP2bc **P'P'bc 03 08 50.2 -2.1**
comp=Z,1.7nm,1.1s,baz=228,slow=3.5,SNR=6.0
comp=Z,2.6nm,0.6s
SHL Shillong 64.59 87 *e*P **P 02 39 55.8 -1.4**
SHL IAmb IAmb 02 39 56.9
comp=Z,115nm,1.2s
SHL Shillong 64.59 87 P **P 02 39 56.3 -0.9**
SNR=40
833A Chaparral WMA, 64.79 289 P P 02 39 54.6 -3.7
baz=11
JHJ Hachijo jima 2 64.79 41 LR LR 03 08 51.3
comp=Z,701nm,21.0s,baz=275,slow=37
KOHI KOHIMA 64.84 85 *e*P **P 02 39 58.1 -0.7**
KOHI IAmb IAmb 02 39 59.2
comp=Z,73nm,1.0s
DOK Doka 64.94 127 P **P 02 39 59.1 -0.3**
SNR=16
BOK Bokaro 65.22 94 *e*P **P 02 40 00.6 -0.6**
BOK IAmb IAmb 02 40 01.7
comp=Z,107nm,1.2s
PZH PanZhiHua 65.45 78 P **P 02 40 01.1 -1.7**
PZH S **S 02 48 45.2 -1.9**
PZH SS **SS 02 53 05.0 +5.2**
PZH pmax pmax
comp=Z,80nm,1.0s
PZH pmax pmax
comp=Z,250nm,3.7s
PZH LR LR

comp=Z,2µm,21.0s
PZH LR LR
comp=Z,4µm,20.4s
PZH LR LR
comp=Z,3µm,19.4s
WHFO Wadi Hawf 65.58 127 P **P** **02 40 02.7 -0.9**
SNR=16
BBTS Babate 65.67 202 LR LR 03 06 43.8
comp=Z,434nm,18.1s,baz=320,slow=34
IMP Imphal 65.68 86 *e*P **P** **02 40 04.1 -0.1**
IMP IAmb IAmb 02 40 05.0
comp=Z,208nm,1.3s
CNSH ChangSha 65.75 67 ⇑P **P** **02 40 03.6 -0.9**
CNSH S **S** **02 48 50.7 +0.3**
CNSH pmax pmax
comp=Z,75nm,1.0s
CNSH LR LR
comp=Z,700nm,21.6s
CNSH LR LR
comp=Z,5µm,23.8s
CNSH LR LR
comp=Z,3µm,19.4s
SHAO Shalim 65.75 125 *i* P **P** **02 40 04.0 -0.7**
SNR=7.4
SHAO Shalim 65.75 125 P **P** **02 40 03.8 -0.8**
DMTO DMTO 65.95 126 P **P** **02 40 04.4 -1.5**
RBK Rabkut 66.05 127 P **P** **02 40 05.6 -1.0**
SNR=9.8
ABTO Aybut 66.07 128 P **P** **02 40 06.2 -0.5**
SNR=18
TNCH TengChong 66.31 81 P **P** **02 40 08.1 -0.3**
TNCH pP pP 02 40 11.3 +0.7
TNCH PP **PP** **02 42 35.7 +1.7**
TNCH S **S** **02 48 57.5 -0.3**
TNCH ScS **SKSac** **02 50 01.6 -3.0**
TNCH SS **SS** **02 53 16.2 +2.8**
TNCH pmax pmax
comp=Z,110nm,1.1s
TNCH pmax pmax
comp=Z,510nm,3.0s
TNCH LR LR
comp=Z,1µm,17.4s
TNCH LR LR
comp=Z,830nm,15.8s
TNCH LR LR
comp=Z,3µm,19.2s
GYA Guiyang 66.36 73 ⇓*i*P **P** **02 40 08.0 -0.6**
GYA PP **PP** **02 42 32.5 -1.8**
GYA S **S** **02 48 56.5 -1.7**
GYA SS **SS** **02 53 11.1 -2.8**
GYA pmax pmax
comp=Z,120nm,1.1s
GYA pmax pmax
comp=Z,280nm,10.6s
GYA LR LR
comp=Z,1µm,18.4s
GYA LR LR
comp=Z,3µm,19.8s
GYA LR LR
comp=Z,1µm,20.7s
TOC7 Torodi Ar. Sit 66.44 183 IAMs_20 IAMs_20 03 08 47.7
comp=Z,1µm,19.0s
TOB1 Torodi Ar. Sit 66.45 183 IAMs_20 IAMs_20 03 09 40.8
comp=Z,2µm,18.0s
TOB5 Torodi Ar. Sit 66.45 183 IAMs_20 IAMs_20 03 09 41.0
comp=Z,2µm,18.0s
TOB2 Torodi Ar. Sit 66.46 183 IAMs_20 IAMs_20 03 09 39.0
comp=Z,1µm,18.0s
TOA0 Torodi Ar. Sit 66.46 183 P **P** **02 40 07.8 -1.4**
SNR=8.9
TOA2 Torodi Ar. Sit 66.46 183 IAMs_20 IAMs_20 03 09 41.1
comp=Z,2µm,18.0s
TOC6 Torodi Ar. Sit 66.46 183 IAMs_20 IAMs_20 03 09 41.1
comp=Z,1µm,19.0s
TORD Torodi Ar. Bea 66.46 183 P **P** **02 40 07.0 -2.2**
comp=Z,30nm,0.6s,baz=358,slow=6.0,SNR=7.0
TORD S **S** **02 48 54.6 -4.7**
comp=Z,2.2nm,0.3s,baz=162,slow=2.8,SNR=1.2
TORD LR LR 03 09 09.7
comp=Z,1µm,18.3s,baz=360,slow=36
comp=Z,30nm,0.6s
TOA3 Torodi Ar. Sit 66.47 183 IAMs_20 IAMs_20 03 08 48.3
comp=Z,1µm,19.0s
TOB4 Torodi Ar. Sit 66.47 183 IAMs_20 IAMs_20 03 09 40.4
comp=Z,1µm,18.0s
TOB3 Torodi Ar. Sit 66.47 183 IAMs_20 IAMs_20 03 09 40.4
comp=Z,1µm,18.0s
TOC3 Torodi Ar. Sit 66.47 183 IAMs_20 IAMs_20 03 08 49.4
comp=Z,1µm,20.0s
TOC4 Torodi Ar. Sit 66.49 183 IAMs_20 IAMs_20 03 08 49.8
comp=Z,1µm,19.0s
AZL Aizawl 66.52 87 *e*P **P** **02 40 09.0 -0.6**
AZL IAmb IAmb 02 40 10.3
comp=Z,119nm,1.1s
KMI Kunming 66.98 77 ⇑P **P** **02 40 10.8 -1.9**
KMI PP **PP** **02 42 41.0 +1.2**
KMI S **S** **02 49 00.0 -5.9**
KMI SKS **SKSac** **02 50 05.0 -4.7**
KMI SS **SS** **02 53 28.6 +4.9**
KMI pmax pmax
comp=Z,36nm,1.2s
KMI pmax pmax
comp=Z,420nm,7.1s
KMI LR LR
comp=Z,590nm,19.3s
KMI LR LR
comp=Z,6µm,22.0s
KMI LR LR
comp=Z,3µm,18.2s
BRDH Bariadhala 67.36 88 LR LR 03 15 17.3
comp=Z,2µm,18.5s,baz=80,slow=41
SAIH SAIHA 67.79 87 *e*P **P** **02 40 17.2 -0.5**
SAIH IAmb IAmb 02 40 18.2
comp=Z,199nm,1.1s
GULI GuiLin 68.14 70 P P 02 40 15.8 -4.0
POO Poona 68.22 107 *e*P **P** **02 40 20.1 -0.3**
POO IAmb IAmb 02 40 20.9
comp=Z,157nm,1.3s
SMRT St. Maarten 68.33 251 IAMs_20 IAMs_20 03 06 01.9
comp=Z,1µm,22.0s
SABA Saba 68.78 251 IAMs_20 IAMs_20 03 09 42.8
comp=Z,2µm,20.0s
SJG San Juan 68.80 254 IAMs_20 IAMs_20 03 07 09.1
comp=Z,1µm,22.0s
SJG San Juan 68.80 254 LR LR 03 10 14.4
comp=Z,677nm,19.6s,baz=18,slow=36
MND Mandalay 68.82 84 P **P** **02 40 22.5 -1.5**
SEUS St. Eustatius 68.86 251 IAMs_20 IAMs_20 03 10 14.0
comp=Z,1µm,19.0s
JOW Kunigami 69.47 52 P P 02 40 25.9 -2.1
comp=Z,20nm,0.7s,baz=352,slow=3.7,SNR=4.9
JOW LR LR 03 12 22.7
comp=Z,2µm,19.8s,baz=48,slow=37
comp=Z,20nm,0.7s
HYB Hyderabad 70.13 102 *e*P **P** **02 40 31.5 -0.7**
HYB *es*P **pP** **02 40 36.3 +1.8**
HYB *e*PcP **PcP** **02 40 52.5 -1.7**
HYB *e*S **S** **02 49 45.0 +1.9**
HYB IVMs_BB IVMs_BB 03 13 32.3
comp=Z,791nm,18.7s
TATO Taipei 70.27 59 IAMs_20 IAMs_20 03 13 50.5
comp=Z,2µm,18.0s
KNMB Chin-men Tao 70.28 62 IAMs_20 IAMs_20 03 12 58.7
comp=Z,2µm,20.0s
ATD Arta Tunnel 70.43 140 IAMs_20 IAMs_20 03 12 03.7
comp=Z,678nm,21.0s
ATD Arta Tunnel 70.43 140 LR LR 03 12 26.2
comp=Z,28nm,21.8s,baz=12,slow=37
YHNB Yeheng 70.56 59 IAMs_20 IAMs_20 03 12 03.0
comp=Z,2µm,19.0s
TEIG Tepich 70.72 276 LR LR 03 13 19.1
comp=Z,23µm,19.4s,baz=160,slow=38
MTDJ Mount Denham 70.73 265 IAMs_20 IAMs_20 03 13 30.4
comp=Z,953nm,21.0s
LPIG La Paz 70.74 298 LR LR 03 12 27.4
comp=Z,5µm,18.2s,baz=11,slow=37
JCJ Chichijima 71.02 39 LR LR 03 15 42.6
comp=Z,243nm,18.1s,baz=352,slow=39
FDF Fort de France 71.25 248 IAMs_20 IAMs_20 03 08 10.6
comp=Z,1µm,22.0s
SSLB Suanglung 71.35 60 P **P** **02 40 39.5 -0.1**
TPUB Ta-pu 71.78 60 IAMs_20 IAMs_20 03 11 23.6
comp=Z,2µm,20.0s
TPUB Ta-pu 71.78 60 P **P** **02 40 42.3 +0.1**
YULB Yu-li 71.80 60 IAMs_20 IAMs_20 03 15 39.9
comp=Z,2µm,20.0s
CHTO Chiang Mai 72.46 82 IAMs_20 IAMs_20 03 16 41.4
comp=Z,2µm,19.0s
CHTO Chiang Mai 72.46 82 P **P** **02 40 44.5 -1.8**
CHTO Chiang Mai 72.46 82 P **P** **02 40 44.9 -1.3**
FURI Furi 72.56 144 IAMs_20 IAMs_20 03 15 08.2
comp=Z,766nm,19.0s
CM31 Chiang Mai Arr 72.81 82 P **P** **02 40 47.0 -1.4**
SNR=30
CMAR Chiang Mai Arr 72.81 82 P **P** **02 40 47.0 -1.3**
comp=Z,50nm,1.0s,baz=344,slow=7.1,SNR=183
CMAR PP **PP** **02 43 37.0 +7.0**
comp=Z,1.5nm,0.4s,baz=337,slow=8.7,SNR=4.0
CMAR S **S** **02 50 14.4 +0.4**
comp=Z,1.7nm,0.3s,baz=58,slow=43,SNR=1.5
CMAR LR LR 03 16 53.3
comp=Z,2µm,19.7s,baz=330,slow=39
comp=Z,50nm,1.0s
DBIC Dimbokro 73.03 190 P **P** **02 40 47.6 -2.0**
comp=Z,4.6nm,0.7s,baz=325,slow=15,SNR=4.0
DBIC S **S** **02 50 17.8 +1.4**
comp=Z,2.7nm,0.9s,baz=331,slow=2.1,SNR=1.8
DBIC LR LR 03 13 25.0
comp=Z,722nm,18.3s,baz=360,slow=36
comp=Z,4.6nm,0.7s
TIC Toumodi 73.06 190 ⇑*e*P **P** **02 40 47.5 -2.3**
KIC Kosan Boka 73.33 189 ⇑*e*P **P** **02 40 49.5 -1.9**
comp=Z,48nm,1.0s
LIC Lamto 73.47 190 ⇑*e*P **P** **02 40 50.4 -1.9**
comp=Z,61nm,1.1s
UNM Universidad Na 73.54 287 IAMs_20 IAMs_20 03 12 46.0
comp=Z,2µm,20.0s
NONG Nongkai 73.94 78 P **P** **02 40 53.7 -1.3**
QIZ Qiongzhong 74.17 71 P P 02 40 52.9 -3.5
QIZ S **SKiKP** **02 50 27.7 +4.3**
QIZ SS **SS** **02 55 15.5 +1.5**
QIZ LR LR
comp=Z,3µm,16.1s
QIZ LR LR
comp=Z,3µm,23.1s
QIZ LR LR
comp=Z,3µm,15.1s
MDRS Chennai 74.68 102 *e*P **P** **02 40 59.3 -0.1**
MDRS IAmb IAmb 02 41 00.3
comp=Z,120nm,1.2s
CMIG Matias Romero 74.97 282 P P 02 40 56.2 -4.8
CMIG Matias Romero 74.97 282 P P 02 40 56.2 -4.8
comp=Z,1.5nm,0.8s,baz=42,slow=15,SNR=2.5
CMIG S **S** **02 50 37.5 -0.9**
comp=Z,0.3nm,0.3s,baz=324,slow=22,SNR=1.2
CMIG LR LR 03 16 57.4
comp=Z,848nm,19.9s,baz=338,slow=38
comp=Z,1.5nm,0.8s
APG El Apazote 76.22 277 LR LR 03 17 01.0
comp=Z,202nm,18.4s,baz=40,slow=38
PCRV Puerto La Cruz 76.30 251 LR LR 03 13 10.1
comp=Z,1µm,20.6s,slow=35
TGUH Tegucigalpa,Un 76.57 274 IAMs_20 IAMs_20 03 14 23.4
comp=Z,2µm,22.0s
TGUH Tegucigalpa,Un 76.57 274 *e*P P 02 41 06.7 -3.6
DGPR DIGLIPUR 76.87 89 *e*P **P** **02 41 10.4 -1.4**
DGPR IAmb IAmb 02 41 12.2
comp=Z,156nm,1.2s
NAYO Nakonayok 77.28 81 P **P** **02 41 13.2 -0.9**
SNET Serv Nac Est T 77.28 276 IAMs_20 IAMs_20 03 16 07.2
comp=Z,1µm,19.0s
MATN Matagalpa 77.42 273 IAMs_20 IAMs_20 03 15 18.3
comp=Z,742nm,20.0s
LODK Lowar 77.64 148 P **P** **02 41 16.9 +0.7**
SDV Santo Domingo 78.61 257 IAMs_20 IAMs_20 03 13 19.6
comp=Z,2µm,22.0s
SDV Santo Domingo 78.61 257 LR LR 03 14 16.3
comp=Z,1µm,21.9s,baz=8.0,slow=34
SDV Santo Domingo 78.61 257 *e*P P 02 41 18.0 -3.8
SDV Santo Domingo 78.61 257 *e*P P 02 41 15.7 -6.1
MDP Montagnes des 79.30 238 LR LR 03 13 01.8
comp=Z,286nm,20.8s,baz=352,slow=33
HMDM Hanimaadhoo 79.60 110 IAMs_20 IAMs_20 03 21 20.5
comp=Z,2µm,19.0s
JTS Las Juntas de 79.82 271 LR LR 03 18 44.3
comp=Z,1µm,18.1s,baz=344,slow=37
HDC Heredia 79.95 270 IAMs_20 IAMs_20 03 17 49.6
comp=Z,2µm,21.0s
PALK Pallekele 80.43 102 LR LR 03 21 47.2
comp=Z,2µm,19.2s,baz=97,slow=39
PALK Pallekele 80.43 102 P **P** **02 41 31.1 -0.4**
UREC San Jos de Ur 80.59 261 *e*P P 02 41 21.2 -11
TGY Tagaytay City 80.85 62 LR LR 03 21 25.0
comp=Z,1µm,18.8s,baz=340,slow=39
MBAR Mbarara 81.21 153 LR LR 03 23 13.1
comp=Z,272nm,18.5s,baz=352,slow=40
MBAR Mbarara 81.21 153 P **P** **02 41 36.0 +0.2**
TAMC Tame, Arauca 81.21 258 *e*P P 02 41 24.9 -11
BARC Barichara 81.31 259 *e*P P 02 41 30.2 -6.2
DBBC Dabeiba 81.43 262 *e*P **P** **02 41 40.3 +3.4**
PTBC PUERTO BERRIO, 81.58 260 *e*P P 02 41 30.2 -7.5
SURA Surathani 82.00 83 P **P** **02 41 38.5 -1.3**
SPBC San Pablo de B 82.38 260 *e*P P 02 41 34.4 -7.5
CBOC Ciudad Bolivar 82.53 262 *e*P P 02 41 39.7 -3.0
SRIT Nakonsritamara 82.56 83 P **P** **02 41 41.1 -1.6**
GUY2C Guyana, Caldas 83.03 261 *e*P P 02 41 42.4 -3.3
BOAV Boa Vista 83.22 246 *e*P P 02 41 42.7 -3.4
ROSC El Rosal 83.22 260 P P 02 41 41.6 -5.1
comp=Z,5.0nm,0.3s,baz=319,slow=20,SNR=3.7
ROSC LR LR 03 18 00.6
comp=Z,731nm,21.1s,baz=19,slow=35
comp=Z,5.0nm,0.3s
PLMC San Jos del P 83.51 262 *e*P P 02 41 44.5 -3.2
KIBK Kibwezi 83.60 146 P **P** **02 41 49.4 +1.2**
VILC Villavicencio, 83.82 259 *e*P P 02 41 42.7 -6.7
ORTC Ortega, Tolima 84.30 260 *e*P P 02 41 45.0 -6.7
YOTC Yotoco, Valle 84.42 262 *e*P P 02 41 46.1 -6.4
PRAC Prado 84.42 260 *e*P P 02 41 50.2 -2.1
GUMO Guam 84.67 38 LR LR 03 20 45.5
comp=Z,190nm,21.9s,baz=2.0,slow=36
JAMC Jamundi, Valle 85.23 262 *e*P P 02 41 54.5 -2.1
LHMI Lhok Sumawe 85.36 87 IAMs_20 IAMs_20 03 20 56.1
comp=Z,2µm,22.0s
KAAM Kaadhehdhoo 85.72 111 P **P** **02 41 58.0 -0.8**
MACC Macarena, Meta 85.77 259 *e*P P 02 41 50.8 -8.2
POPC Popayan, Colom 85.89 262 *e*P P 02 41 55.5 -4.4
TMAB Tom-Au,PA,Br 85.96 233 *e*P P 02 41 57.4 -2.6
MALB Monte Alegre 86.38 239 *e*P P 02 41 59.2 -2.8
BBAC Balboa, Cauca 86.50 262 *e*P P 02 41 59.9 -3.1
IPM Ipoh 86.83 83 P **P** **02 42 02.4 -1.9**
KCSI Kotacane, Aceh 87.18 86 P P 02 42 01.6 -4.4
comp=Z,24nm,1.0s
GCUF Volcan Galeras 87.30 262 *e*P **P** **02 42 11.3 +4.2**
RCBR Riachuelo 87.76 220 LR LR 03 14 58.5
comp=Z,341nm,19.1s,baz=12,slow=31
RCBR Riachuelo 87.76 220 *e*P P 02 42 05.9 -2.9
PTLC Puerto Leguiza 87.87 259 *e*P P 02 42 04.9 -4.4
TULM Tulcn-Chalpat 87.87 262 *e*P **P** **02 42 08.6 -1.3**
SNSI Sinabang, Aceh 88.01 88 P P **02 42 08.8 -1.1**
comp=Z,148nm,1.1s
BONI La Bonita 88.08 262 *e*P **P** **02 42 12.0 +1.3**
PSI Prapat 88.09 85 P P **02 42 08.6 -1.9**
RPSI Rantau Prapat 88.20 85 IAMs_20 IAMs_20 03 23 16.0
comp=Z,446nm,20.0s
OTAV Otavalo 88.46 263 IAMs_20 IAMs_20 03 22 10.7
comp=Z,830nm,21.0s
OTAV Otavalo 88.46 263 *e*P P 02 42 09.3 -3.3
DAV Davao City (W) 88.48 58 LR LR 03 26 12.8
comp=Z,703nm,18.6s,baz=330,slow=38
MACA Manacapuru-AM 88.69 245 *e*P P 02 42 09.9 -3.2
ITTB Itaituba 89.08 240 *e*P P 02 42 10.8 -4.2
GSI Gunungsitoli 89.31 87 P **P** **02 42 14.9 -1.2**
GSI Gunungsitoli 89.31 87 P **P** **02 42 13.8 -2.3**
comp=Z,72nm,1.1s,comp=Z,3µm
TEFE Tefe 89.69 249 *e*P P 02 42 13.8 -4.0
SBUM Sibu 90.81 72 IAMs_20 IAMs_20 03 30 57.0
comp=Z,495nm,19.0s
COHC Cohancay 91.25 263 *e*P P 02 42 10.4 -15
NPGB Novo Progresso 91.64 239 *e*P P 02 42 23.7 -3.2
PDSI Padang 92.00 84 P P 02 42 25.1 -3.5
comp=Z,17nm,0.8s
SAML Samuel 94.78 246 *e*P P 02 42 38.0 -3.3
BKB Balikpapan 95.24 68 IAMs_20 IAMs_20 03 32 17.0
comp=Z,1µm,19.0s
ATAH Atahualpa 95.65 262 LR LR 03 26 03.6
comp=Z,1µm,21.8s,baz=28,slow=36
LUWI Luwuk 95.99 62 IAMs_20 IAMs_20 03 29 43.9
comp=Z,461nm,22.0s
ETMB Extrema 96.14 249 *e*P P 02 42 44.6 -2.8
PDRB Porto dos Gac 96.34 240 *e*P P 02 42 45.1 -3.4
TSUM Tsumeb 98.86 167 LR LR 03 31 31.5
comp=Z,542nm,19.0s,baz=6.5,slow=38
BDFB Brasilia 99.00 231 LR LR 03 24 07.1
comp=Z,469nm,18.3s,baz=334,slow=33
LEM Lembang 99.07 78 LR LR 03 31 52.1
comp=Z,1µm,21.9s,baz=316,slow=38
FAKI Fak Fak 99.29 53 IAMs_20 IAMs_20 03 30 40.9
comp=Z,559nm,20.0s
NNA Nana 100.12 259 LR LR 03 28 26.1
comp=Z,445nm,21.8s,baz=350,slow=36
JAGI Jajag, Banyuwa 101.82 72 IAMs_20 IAMs_20 03 34 54.1
comp=Z,949nm,22.0s
MMRI Maumere 103.35 64 IAMs_20 IAMs_20 03 35 04.5
comp=Z,484nm,21.0s
SOEI Soe 104.77 62 IAMs_20 IAMs_20 03 41 00.7
comp=Z,615nm,21.0s
TAOE Nuku Hiva Isla 107.27 323 *e*LR LR 03 18 37.1
comp=Z,1µm,35.7s
WRA Warramunga Arr 116.32 54 PKP **PKPdf** **02 48 00.0 -2.9**
comp=Z,0.9nm,1.0s,baz=338,slow=2.3,SNR=2.5
PPT2 Papeete2 116.83 332 *e*SS SS 03 05 02.0 -17
comp=Z,301nm,31.2s
PPT2 Papeete2 116.83 332 *e*LR LR 03 23 02.5
comp=Z,746nm,26.8s
PPT2 *e*LR LR 03 23 09.1
comp=Z,538nm,36.5s
ASAR Alice Springs 119.92 55 PKP **PKPdf** **02 48 06.8 -3.0**
comp=Z,1.1nm,0.7s,baz=360,slow=1.8,SNR=11
ASAR PP **PP** **02 49 39.5 +5.4**
comp=Z,1.9nm,0.9s,baz=349,slow=5.5,SNR=4.6
DZM Mont Dzumac 121.87 20 *e*LR LR 03 25 41.2
comp=Z,1µm,26.7s
TBI Tubuai 122.52 331 *e*SS SS 03 06 07.9 -24
comp=Z,804nm,35.5s
TBI Tubuai 122.52 331 *e*LR LR 03 25 39.6
comp=Z,1µm,27.2s
TBI *e*LR LR 03 25 40.7
comp=Z,3µm,26.8s
PLCA Paso Flores 127.09 247 PKP **PKPdf** **02 48 20.6 -2.5**
comp=Z,1.4nm,0.8s,baz=310,slow=3.6,SNR=2.2
VNA2 Neumayer--Watz 150.46 188 ⇓P **PKPdf** **02 49 07.7 +3.6**
baz=2.1,slow=3.8
MAW Mawson 150.67 138 PKPbc **PKPdf** **02 49 07.2 +2.8**
comp=Z,15nm,0.9s,baz=295,slow=16,SNR=2.6
VNA3 Neumayer Olymp 150.84 189 ⇓P **PKPdf** **02 49 08.5 +3.7**
SNAA Sanae 151.12 185 ⇓P **PKPdf** **02 49 09.5 +4.3**
SNAA Sanae 151.12 185 PKPbc **PKPdf** **02 49 08.9 +3.7**
comp=Z,11nm,0.8s,baz=193,slow=0.3,SNR=20
TROLL Troll, Antarti 151.41 181 ⇓P **PKPdf** **02 49 10.6 +4.9**
comp=Z,2µm,1.0s
ELIB Princess Elisa 151.72 168 *d*PKiKP **PKPdf** **02 49 11.1 +4.9**

*NEIC **08** 02:39:09.8±1.1, 19.3°N±0.2°×64.4°W±0.1, h35km±2km, ML2.7/16, Md3.5/4(RSPR), Error ellipse: s-maj=34.5km s-min=3.6km az=153.0*
RSPR 08 02:39:10.6, 19.17°N×64.37°W, h64km±21km, MD3.5/4, 5C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.74**	**234**	⇑*e*P		Pn	02 39 38.0	-0.5
HUMP	**Col San Antoni**	**1.74**	**234**	*e*S		Sn	02 39 58.7	-1.0
HUMP	**Col San Antoni**	**1.74**	**234**			Pn	02 39 38.0	-0.5
HUMP						Sn	02 39 58.7	-1.0
GCPR	**Guaynabo City**	**1.84**	**242**		Pn	Pn	02 39 38.5	-1.4
IGPR	**InterUniversit**	**2.04**	**234**	⇑*e*P		Pn	02 39 42.5	-0.1
IGPR	**InterUniversit**	**2.04**	**234**	*e*S		Sn	02 40 11.1	+4.1
IGPR	**InterUniversit**	**2.04**	**234**			Pn	02 39 42.3	-0.3
IGPR					IAML		02 40 14.5	
	comp=E,65nm,0.3s							
IGPR					IAML		02 40 14.5	
	comp=N,53nm,0.2s							
CELP	**Cerrillos**	**2.36**	**243**	⇓*e*P		Pn	02 39 46.2	-0.8
CELP	**Cerrillos**	**2.36**	**243**	*e*S		Sn	02 40 14.7	-0.3
CELP	**Cerrillos**	**2.36**	**243**			Pn	02 39 46.2	-0.8
CELP					IAML		02 41 08.4	
	comp=E,28nm,3.0s							
CELP	**Cerrillos**	**2.36**	**243**		IAML		02 40 11.5	
	comp=N,31nm,4.3s							
CELP	**Cerrillos**	**2.36**	**243**			Sn	02 40 14.7	-0.3
OBIP	**Obispado Ponce**	**2.40**	**242**	⇓*e*P		Pn	02 39 46.4	-1.1
OBIP	**Obispado Ponce**	**2.40**	**242**	*e*S		Sn	02 40 15.4	-0.4
OBIP	**Obispado Ponce**	**2.40**	**242**			Pn	02 39 45.9	-1.6
OBIP					IAML		02 40 22.1	
	comp=E,36nm,2.5s							
OBIP					IAML		02 40 30.8	
	comp=N,34nm,3.6s							
OBIP	**Obispado Ponce**	**2.40**	**242**			Sn	02 40 15.4	-0.4
AOPR	**Arecibo Observ**	**2.40**	**250**	⇓*e*P		Pn	02 39 47.1	-0.5
AOPR	**Arecibo Observ**	**2.40**	**250**	*e*S		Sn	02 40 15.4	-0.5
AOPR	**Arecibo Observ**	**2.40**	**250**			Pn	02 39 46.6	-1.0
AOPR						Sn	02 40 14.8	-1.1
AOPR					IAML		02 40 36.5	
	comp=N,53nm,1.4s							
UUPR	**Utuado, UPR, P**	**2.41**	**248**	⇑*e*P		Pn	02 39 46.5	-1.1
UUPR	**Utuado, UPR, P**	**2.41**	**248**			Pn	02 39 46.5	-1.1
LSP	**Las Mesas**	**2.76**	**249**	⇑*e*P		Pn	02 39 52.3	-0.2
LSP	**Las Mesas**	**2.76**	**249**			Pn	02 39 52.3	-0.2
CRPR	**Cabo Rojo, PR**	**2.85**	**246**	⇑*e*P		Pn	02 39 53.2	-0.3
CRPR	**Cabo Rojo, PR**	**2.85**	**246**			Pn	02 39 53.2	-0.3
CRPR	**Cabo Rojo, PR**	**2.85**	**246**	IAML			02 41 21.2	
	comp=N,41nm,2.6s							

*NIED **08** 02:41:20.4, 24.71°N×121.73°E, h17km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr6.15; Mθθ-2.26; Mφφ-3.89; Mrθ3.93; Mrφ-2.19; Mθφ4.47; Fault plane solution: M0 8.29000×10^14 NP1:φs39.00000°, δ68.00000°, λ93.00000°. NP2:φs212.00000°, δ22.00000°, λ83.00000°.*
*TAP **08** 02:41:20.5, 24.17°N×121.75°E, h13km, ML4.2, B*
*ASIES **08** 02:41:20.5, 24.17°N×121.75°E, h13km, ML4.2, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr3.36; Mθθ-0.04; Mφφ-0.46; Mrθ0.91; Mrφ-1.54; Mθφ4.00; Fault plane solution: M0 4.99675×10^21 NP1:φs17.79000°, δ75.08000°, λ75.88000°. NP2:φs242.13000°, δ20.43000°, λ132.48000°. Principal axes: T Plg57.6360°, Azm268.9920°; N Plg13.6350°, Azm21.4970°; P Plg28.7240°, Azm119.1370°;*
*JMA **08** 02:41:20.4±0.1, 24.1°N±0.3°×121.7°E±0.5, h17km, MV3.6/13, TAIWAN REGION*
*IDC **08** 02:41:25.9±4.8, 24.30°N×121.93°E, h62km±47km, mb3.5/8, mbtmp3.8/10, ML3.5/2, Error ellipse: s-maj=33.2km s-min=18.8km az=59.0*
ISC 08 02:41:20.3±0.7, 24.17°N±0.01°×121.77°E±0.02, h15km±4km, n190, σθ69/288, mb3.7/8, 18C-32D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.13**	**268**	⇓*i*P		**Pg**	**02 41 24.0**	**0.0**
	baz=263							
ETL				*i* S		**Sg**	**02 41 26.6**	**+0.1**
	baz=263							
EHP	**Heping Village**	**0.15**	**351**	*i* P		**Pg**	**02 41 24.2**	**0.0**
	baz=359							
EHP				*i* S		**Sg**	**02 41 27.0**	**+0.2**
	baz=359							
NACB	**Ninganchiao**	**0.16**	**273**	P		**Pg**	**02 41 24.3**	**0.0**
NACB	**Ninganchiao**	**0.16**	**273**	⇓*i*P		**Pg**	**02 41 24.3**	**0.0**
	baz=271							
NACB				*i* S		**Sg**	**02 41 27.1**	**+0.1**
	baz=271							
EAHA	**Aohua**	**0.17**	**351**	⇓*i*P		**Pg**	**02 41 24.5**	**+0.1**
	baz=355							
EAHA				*i* S		**Sg**	**02 41 27.4**	**+0.2**
	baz=355							
TWD	**Chiawan**	**0.18**	**242**	⇓*i*P		**Pg**	**02 41 24.7**	**+0.1**
	baz=243							
TWD				*i* S		**Sg**	**02 41 27.8**	**+0.3**
	baz=243							
HWA	**Hwalien**	**0.24**	**219**	*i* P		**Pb**	**02 41 26.6**	**+0.2**
	baz=224							
ENA	**Nanau**	**0.26**	**355**	⇓*i*P		**Pg**	**02 41 26.1**	**+0.1**
	baz=359							
ENA				*i* S		**Sg**	**02 41 30.2**	**+0.3**
	baz=359							
ETLH	**Xiulin Townshi**	**0.26**	**279**	⇓*i*P		**Pg**	**02 41 26.1**	**+0.1**
	baz=278							
ETLH				*i* S		**Sg**	**02 41 30.2**	**+0.2**
	baz=278							
EWUT	**Wuta**	**0.28**	**2**	⇓*i*P		**Pg**	**02 41 26.5**	**+0.2**
	baz=5.0							
EWUT				S		**Sg**	**02 41 30.8**	**+0.4**
	baz=5.0							

ETM **Tongmen** 0.32 232⇓*i*P Pg 02 41 27.1 +0.2
baz=230
ETM *i* S Sg 02 41 32.0 +0.5
baz=230
LXIB **Xiulin Townshi** 0.35 246⇓*i*P Pg 02 41 27.6 -0.1
baz=245
LXIB *i* S Sg 02 41 32.8 +0.2
baz=245
ESAO **Su ao** 0.41 10⇓*i*P Pg 02 41 28.9 +0.2
baz=8.0
ESAO *i* S Sg 02 41 34.6 +0.2
baz=8.0
SHUL **Shoufeng** 0.42 207 P Pb 02 41 29.9 +0.4
baz=196
SHUL *e*S Sn 02 41 38.3 -1.1
baz=196
LATG **Datong** 0.43 329⇓*i*P Pg 02 41 29.2 +0.2
baz=330
LATG *i* S Sb 02 41 35.3 -0.8
baz=330
NNSB **Datong** 0.44 307⇓*i*P Pg 02 41 29.3 +0.1
baz=307
NNSB *i* S Sb 02 41 35.4 -0.9
baz=307
NNSH **Datong** 0.44 307⇓*i*P Pg 02 41 29.3 +0.1
baz=306
NNSH S Sb 02 41 35.4 -0.9
baz=306
TWC **Suao** 0.45 10⇓*i*P Pg 02 41 29.6 +0.3
baz=5.0
TWC *i* S Sg 02 41 35.9 +0.5
baz=5.0
NNS **Nan Shan** 0.45 307⇓*i*P Pg 02 41 29.5 +0.1
baz=308
NNS *i* S Sb 02 41 36.2 -0.6
baz=308
WHF **Hehuan Shan** 0.46 268⇓*i*P Pg 02 41 29.8 +0.1
baz=267
WHF *i* S Sg 02 41 36.0 +0.1
baz=267
ESL **Shilin** 0.46 221⇓*i*P Pg 02 41 29.7 +0.2
baz=226
ESL *e*S Sb 02 41 38.3 +1.3
baz=226
NDS **Dongshan** 0.47 354⇓*i*P Pb 02 41 30.1 -0.3
baz=355
NDS *i* S Sb 02 41 36.6 -0.6
baz=355
FUSS **Fushou** 0.48 280⇓*i*P Pb 02 41 30.3 -0.4
baz=280
FUSS S Sg 02 41 36.9 +0.2
baz=280
EOS2 **EOS2** 0.49 59 *e*P Pb 02 41 31.8 +1.2
baz=47
NDT **Datong Townshi** 0.49 332⇓*i*P Pb 02 41 30.5 -0.3
baz=332
NDT *i* S Sb 02 41 37.1 -0.7
baz=332
TEGC **Jichi Village** 0.50 205 P Pb 02 41 31.1 +0.3
baz=196
TEGC *e*S Sn 02 41 41.1 -0.2
baz=196
EOS4 **EOS4** 0.51 95 *e*P Pb 02 41 31.9 +1.2
baz=95
ENTT **Nioudou** 0.51 339⇓*i*P Pb 02 41 30.7 -0.3
baz=340
ENTT *i* S Sb 02 41 37.9 -0.4
baz=340
EOS3 **EOS3** 0.52 76 *e*P Pn 02 41 32.9 -0.2
baz=74
TWT **Tachien** 0.55 279⇓*i*P Pb 02 41 31.8 +0.1
baz=279
TWT *i* S Sb 02 41 39.4 -0.1
baz=279
CHGB **Renai** 0.55 259⇓*i*P Pb 02 41 31.6 -0.3
baz=254
CHGB *i* S Sb 02 41 39.3 -0.4
baz=254
TDCB **Techi** 0.56 279⇓*i*P Pb 02 41 31.9 -0.1
baz=279
TDCB *i* S Sg 02 41 38.9 -0.1
baz=279
WARBT **Fenglin Townsh** 0.56 218⇑*i*P Pg 02 41 31.4 -0.1
baz=223
WARBT *i* S Sb 02 41 40.3 +0.4
baz=223
OWD **Renai** 0.58 249 *e*P Pg 02 41 31.7 -0.1
baz=248
EGFH **Guangfu** 0.58 212 *e*P Pg 02 41 31.6 -0.2
baz=219
ILA **Ilan** 0.60 358 *e*P Pb 02 41 32.5 0.0
baz=352
FUSB **Fushanzhiwuyua** 0.61 345⇓*i*P Pg 02 41 32.5 +0.1
baz=345
FUSB *i* S Sg 02 41 40.4 -0.3
baz=345
YHNB **Yeheng** 0.62 325 P Pb 02 41 32.8 -0.2
YHNB **Yeheng** 0.62 325⇓*i*P Pb 02 41 32.7 -0.2
baz=325
YHNB *i* S Sb 02 41 40.9 -0.6
baz=325
WUSB **Renai** 0.62 254⇓*i*P Pb 02 41 32.9 -0.1
baz=249
WUSB S Sg 02 41 40.9 +0.1
baz=249
NSK **Sanguang** 0.63 324⇓*i*P Pg 02 41 32.8 0.0
baz=324
NSK *i* S Sb 02 41 41.3 -0.6
baz=324
NWLT **Wulai** 0.66 338 P Pb 02 41 33.4 -0.1
baz=339
NWLT *i* S Sg 02 41 41.8 -0.1
baz=339
VWDT **VWDT** 0.70 235⇓*i*P Pb 02 41 34.4 0.0
baz=235
VWDT *e*S Sn 02 41 45.1 -1.3
baz=235
HGSD **Ruisui** 0.74 205 *e*P Pg 02 41 35.3 +0.5
baz=195
NFF **Wufeng Townshi** 0.75 308 *e*P Pb 02 41 35.2 0.0
baz=308
NFF S Sb 02 41 45.4 0.0
baz=308
WPL **Puli Township** 0.76 259 *e*P Pg 02 41 35.1 0.0
baz=259
WPL *e*S Sb 02 41 45.8 +0.4
baz=259
WHP **Taichung City** 0.76 279 P Pb 02 41 35.5 +0.2
baz=279
WHP S Sb 02 41 45.9 +0.4
baz=279
EHY **Hungye** 0.77 212⇑*e*P Pb 02 41 34.3 -1.2
baz=223
EHY *e*S Sg 02 41 46.8 +1.2
baz=223
DPDB **Guoxing** 0.78 261⇑*i*P Pg 02 41 35.8 +0.3
baz=261
WCS **Beigang Elemen** 0.79 262 *e*P Pg 02 41 35.8 +0.1
baz=263
TIPB **Shuangxi** 0.81 4 ⇓P Pg 02 41 36.3 +0.2
baz=4.0
TIPB *e*S Sb 02 41 46.0 -0.9
baz=4.0
NHDH **Xindian Distri** 0.82 345 *e*P Pn 02 41 37.1 -0.3
baz=345
TWA **Mucha** 0.83 348 *e*P Pg 02 41 36.9 +0.4
baz=348
TWA *e*S Sg 02 41 47.5 +0.2
baz=348
SSLB **Suanglung** 0.83 243 P Pg 02 41 36.6 0.0
SSLB **Suanglung** 0.83 243⇑*i*P Pg 02 41 36.5 0.0
baz=253
SSLB S Sb 02 41 46.5 -1.1
baz=253
LIOB **Emei** 0.84 305 ⇑P Pn 02 41 37.1 -0.5
baz=305
LIOB *e*S Sg 02 41 47.9 +0.3
baz=305
NSTT **Nanjuang** 0.84 304 P Pn 02 41 37.0 -0.7
baz=304
NSTT S Sb 02 41 47.3 -0.5
baz=304
NJD **Zhudong** 0.84 313 *e*P Pn 02 41 37.6 -0.1
baz=318
SMLT **Sun Moon Lake** 0.84 251⇑*i*P Pg 02 41 36.8 +0.1
baz=251
SMLT S Sg 02 41 48.2 +0.4
baz=251

TATO **Taipei** 0.85 343 P Pn 02 41 37.7 -0.1
TATO **Taipei** 0.85 343 P Pn 02 41 37.2 -0.6
baz=342
TATO S Sg 02 41 47.9 0.0
baz=342
TWB1 **Santiao Chiao** 0.86 13 *e*P Pg 02 41 37.3 +0.2
baz=8.0
TWB1 S Sb 02 41 48.0 -0.5
baz=8.0
TYC **Yuchr** 0.87 253⇑*i*P Pb 02 41 37.1 -0.1
baz=253
TYC *e*S Sb 02 41 48.4 -0.3
baz=253
BACT **New Taipei Cit** 0.88 340 *e*P Pn 02 41 38.1 -0.2
baz=340
YULB **Yu-li** 0.88 209 P Pb 02 41 36.8 -0.6
YULB **Yu-li** 0.88 209 *e*P Pb 02 41 36.0 -1.4
baz=220
YULB *e*S Sg 02 41 49.7 +0.7
baz=220
ECBN **Changbin** 0.89 199 *e*P Pb 02 41 37.0 -0.6
baz=200
ECBN *e*S Sn 02 41 50.4 -0.7
baz=200
NWF **Wu-fen Shan** 0.90 1 ⇑P Pn 02 41 38.3 -0.3
baz=352
NWF *e*S Sg 02 41 49.6 -0.1
baz=352
WFSB **Wu-fen Shan** 0.90 1 ⇑P Pn 02 41 38.5 0.0
baz=354
WFSB *e*S Sb 02 41 49.1 -0.5
baz=354
TAP **Taipei** 0.90 345 *e*P Pn 02 41 38.5 0.0
baz=345
EYUL **Yuli** 0.91 207 *e*P Pg 02 41 38.2 +0.2
baz=222
HSN1 **Hsinchu** 0.92 312 *e*P Pn 02 41 39.0 +0.3
baz=312
TWF1 **Yuli** 0.92 208 *e*P Pb 02 41 36.5 -1.5
baz=220
TWF1 *e*S Sn 02 41 51.7 0.0
baz=220
TWQ1 **Liyutan** 0.93 282 *e*P Pn 02 41 39.0 +0.2
baz=282
TWQ1 *e*S Sn 02 41 52.6 +0.7
baz=282
SXI1 **Grass Mountain** 0.93 6⇓*i*P Pn 02 41 38.8 -0.2
baz=353
NTY **Taoyuan** 0.94 333 *e*P Pn 02 41 38.7 -0.3
baz=333
NTY *e*S Sn 02 41 52.4 +0.3
baz=333
SBCB **Hsinchu** 0.95 311 ⇑P Pn 02 41 39.6 +0.4
baz=311
SBCB *e*S Sn 02 41 53.4 +1.0
baz=311
NSY **Sanyi** 0.95 285 *e*P Pn 02 41 39.8 +0.5
baz=286
NSY *e*S Sn 02 41 54.3 +1.7
baz=286
WHYT **Xinyi Township** 0.96 241 ⇑P Pg 02 41 39.0 +0.1
baz=248
WHYT *e*S Sn 02 41 53.4 +0.6
baz=248
NCU **National Centr** 0.96 327 P Pn 02 41 39.4 0.0
baz=326
NCU *e*S Sn 02 41 53.1 +0.3
baz=326
NCUH **Zhongli** 0.96 327 *e*P Pn 02 41 39.4 0.0
baz=326
NCUH *e*S Sn 02 41 53.7 +1.0
baz=326
HSN **Hsinchu** 0.96 311 *e*P Pn 02 41 39.6 +0.3
baz=306
HSN *e*S Sn 02 41 53.6 +0.7
baz=306
NMLH **Miaoli** 0.96 293 *e*P Pn 02 41 39.9 +0.5
baz=293
NMLH S Sn 02 41 53.4 +0.5
baz=293
NJN **Zhunan** 0.97 302 *e*P Pn 02 41 39.5 +0.1
baz=303
TNOU **National Taiwa** 0.98 0 *e*P Pb 02 41 39.1 +0.1
baz=346
TWS1 **Kuangyinshan** 0.98 341 *e*P Pn 02 41 40.1 +0.5
baz=349
TWS1 *e*S Sn 02 41 54.4 +1.0
baz=349
WWF **Wufeng** 0.98 263 P Pn 02 41 40.6 +0.9
baz=259
WWF *e*S Sn 02 41 56.3 +3.0
baz=259
YM01 **YM01** 0.99 350 *e*P Pn 02 41 39.9 +0.1
baz=349
YM01 S Sn 02 41 53.7 0.0
baz=349
TCU **Taichung** 1.00 269 *e*P Pg 02 41 40.5 +0.9
baz=270
TCU *e*S Sn 02 41 55.0 +1.3
baz=270
WJS **Zhushan** 1.01 250 P Pg 02 41 40.2 +0.3
baz=247
WJS *e*S Sn 02 41 55.2 +1.2
baz=247
CHKH **Chenggong** 1.03 199 *e*P Pb 02 41 39.4 -0.4
baz=200
CHKH *e*S Sn 02 41 54.8 +0.5
baz=200
WNT1 **Nantou City** 1.03 256 *e*P Pg 02 41 40.9 +0.7
baz=253
WNT1 *e*S Sn 02 41 56.6 +2.3
baz=253
WNT **Mingjian** 1.03 254 *e*P Pg 02 41 40.8 +0.5
baz=252
WNT *e*S Sn 02 41 56.6 +2.1
baz=252
YM08 **YM08** 1.03 351 *e*P Pn 02 41 40.1 -0.3
baz=350
YM08 *e*S Sn 02 41 54.6 0.0
baz=350
NTST **Danshui** 1.04 344 *e*P Pn 02 41 40.2 -0.2
baz=343
ANP **Anpu** 1.04 348 *e*P Pb 02 41 40.1 0.0
baz=347
WDJ **Dajia District** 1.04 280 *e*P Pg 02 41 41.3 +0.8
baz=281
FULB **Fuli** 1.05 204 *e*P Pb 02 41 39.8 -0.5
baz=219
NHW **Xinwu Township** 1.06 322 *e*P Pn 02 41 40.6 -0.2
baz=321
NHW S Sn 02 41 56.8 +1.5
baz=321
ALS **Alishan** 1.10 234⇑*i*P Pn 02 41 41.4 -0.1
baz=225
ALS *e*S Sn 02 41 57.7 +1.2
baz=225
WYL **Yuanlin Townsh** 1.10 260 *e*P Pg 02 41 42.0 +0.4
baz=260
WCHH **Zhanghua** 1.11 266 *e*P Pg 02 41 42.2 +0.4
baz=266
JYNG **Yonagunijimaku** 1.11 75 P Pb 02 41 41.6 +0.3
JYNG S Sg 02 41 57.5 +1.2
TWY **Chenhua** 1.12 352 *e*P Pg 02 41 42.6 +0.7
baz=337
CHKT **Chengkung** 1.12 199 *e*P Pn 02 41 41.0 -0.5
baz=193
CHKT *e*S Sg 02 41 57.6 +0.9
baz=193
EHD **Haiduan** 1.14 207 *e*P Pn 02 41 40.2 -1.6
baz=208
CHN5 **Tsauling** 1.15 241 ⇑P Pg 02 41 42.4 -0.1
baz=242
CHN5 S Sg 02 41 58.6 +1.1
baz=242
YOJ **Yonaguni jima** 1.17 75 P Pb 02 41 42.7 +0.4
YOJ **Yonaguni jima** 1.17 75 P Pn 02 41 42.5 +0.2
baz=92
YOJ *e*S Sn 02 41 58.3 +0.4
baz=92
YOJ **Yonaguni jima** 1.17 75 P Pn 02 41 42.4 +0.2
YOJ S Sb 02 41 57.5 +0.1
ECS **Chishang** 1.18 205 *e*P Pb 02 41 42.4 0.0
baz=206
ELDTW **Lidau** 1.19 215 *e*P Pn 02 41 42.1 -0.5
baz=205
ELDTW *e*S Sn 02 41 58.5 -0.1
baz=205
WGK **Gukeng** 1.20 247 *e*P Pb 02 41 43.0 +0.2
baz=248
WDLH **Douliu** 1.22 247 *e*P Pb 02 41 43.5 +0.3
baz=231
EDH **Donghe** 1.26 200 *e*P Pn 02 41 42.1 -1.3
baz=188
WCKO **Fanlu** 1.29 236 *e*P Pg 02 41 44.7 -0.4
baz=237
WCKO *e*S Sg 02 42 03.7 +1.7
baz=237
WRL **Guolierlin Hig** 1.30 259 ⇑P Pb 02 41 44.7 +0.2
baz=260
RLNB **Erlin** 1.32 258 *e*P Pb 02 41 45.0 +0.2
baz=260
RLNB *e*S Sg 02 42 03.6 +0.7
baz=260
CHN2 **Minshiung** 1.34 242 *e*P Pg 02 41 46.1 -0.1
baz=243
STYH **Taoyuan** 1.34 223 *e*P Pn 02 41 44.8 +0.2
baz=224
CHN4 **Tsaushan** 1.35 233 *e*P Pb 02 41 45.8 +0.5
baz=234
CHN4 *e*S Sg 02 42 04.9 +1.1
baz=234
WTK **Tuku** 1.35 250 *e*P Pb 02 41 45.7 +0.4
baz=236
TPUB **Ta-pu** 1.35 231 P Pb 02 41 45.5 +0.1
TPUB **Ta-pu** 1.35 231 ⇑P Pb 02 41 45.2 -0.2
baz=221
TPUB S Sg 02 42 04.0 0.0
baz=221
STYT **Tauyuan** 1.36 223⇑*i*P Pn 02 41 45.0 +0.1
baz=224
STYT S Sg 02 42 04.5 +0.2
baz=224
LONT **Longtian** 1.38 205 *e*P Pn 02 41 43.8 -1.3
baz=206
CHY **Chiayi** 1.40 242 *e*P Pg 02 41 47.4 +0.2
baz=243
WTP **Ta-pu** 1.40 229⇑*e*P Pb 02 41 46.1 -0.1
baz=229
WTP *e*S Sg 02 42 06.0 +0.5
baz=229
TWK **Hsinying** 1.48 233 P Pb 02 41 47.6 +0.1
baz=233
TWK *e*S Sg 02 42 08.1 +0.2
baz=233
TWG **Pinlang** 1.48 206 *e*P Pn 02 41 45.1 -1.4
baz=190
TWGBT **Beinan** 1.48 205 P Pn 02 41 45.1 -1.4
TWGBT **Beinan** 1.48 205 *e*P Pn 02 41 44.9 -1.6
baz=190
PCYT **Pengchaiyu** 1.48 11 *e*P Pb 02 41 47.4 -0.3
baz=8.0
SNST **Tainan City** 1.50 231 *e*P Pb 02 41 47.6 -0.3
baz=232
CHN1 **Nanshi** 1.50 230 P Pb 02 41 47.9 0.0
baz=230
CHN1 S Sg 02 42 08.8 +0.2
baz=230
WSF **Szhu** 1.51 250 *e*P Pb 02 41 47.5 -0.6
baz=251
LDUT **Ludao** 1.51 191 *e*P Pn 02 41 47.4 +0.5
baz=180
SGST **Jiashian** 1.53 225⇓*e*P Pn 02 41 47.7 +0.5
baz=226
SGST *e*S Sg 02 42 08.7 -1.0
baz=226
WSL **Shuilin Townsh** 1.55 246 *e*P Pb 02 41 48.6 -0.1
baz=248
WSL *e*S Sg 02 42 11.1 +0.9
baz=248
SLGT **Liugui** 1.56 222 *e*P Pb 02 41 48.5 -0.3
baz=222
SLGT *e*S Sg 02 42 11.1 +0.6
baz=222
ICHU **Yijhu** 1.58 240 *e*P Pb 02 41 49.0 -0.3
baz=241
ICHU *e*S Sg 02 42 12.0 +0.7
baz=241
CHN8 **Yiju** 1.64 241 P Pb 02 41 49.9 -0.4
baz=241
CHN8 *e*S Sg 02 42 12.6 -0.7
baz=241
CHN3 **Shinhua** 1.68 230 *e*P Pb 02 41 50.9 -0.2
baz=230
SCST **Cishan** 1.73 223 *e*P Pb 02 41 51.3 -0.6
baz=223
ECL **Taimali** 1.73 206 *e*P Pb 02 41 51.4 -0.5
baz=192
SHHT **Tainan City** 1.73 229 *e*P Pb 02 41 52.0 +0.2
baz=229
SCLT **Jiali** 1.75 236 *e*P Pb 02 41 51.1 -1.0
baz=237
SSD **Sandimen** 1.75 217 *e*P Pn 02 41 50.4 +0.2
baz=230
SSD *e*S Sb 02 42 14.4 +0.3
baz=230
TSMG **Majia** 1.78 216⇑*e*P Pb 02 41 51.8 -0.9
baz=200
IRIF **Iriomote-Funau** 1.80 84 P Pn 02 41 50.8 0.0
IRIF *e*S Sn 02 42 14.5 +1.0
TWM1 **Shoushan** 1.82 223 *e*P Pb 02 41 52.5 -0.9
baz=223
TSCK **Chigu Township** 1.84 237 *e*P Pb 02 41 52.6 -1.2
baz=237
MASBT **Mashibuluo** 1.86 214 *e*P Pn 02 41 52.6 +0.9
baz=213
MASBT *e*S Sb 02 42 17.2 -0.1
baz=213
SNJT **Kaohsiung City** 1.93 223 *e*P Pb 02 41 54.6 -0.6
baz=223
EAST **Anshuo** 1.96 206 *e*P Pn 02 41 54.4 +1.2
baz=194
TAWH **Dawu Township** 1.99 204 *e*P Pn 02 41 54.4 +1.0
baz=193
JKRS **Kuro-shima** 2.05 88 P Pn 02 41 55.0 +0.7
SCZT **Fangliau** 2.07 211 *e*P Pn 02 41 55.8 +1.2
baz=196
PNG **Penghu** 2.11 254 *e*P Pn 02 41 55.8 +0.6
baz=256
PHUB **P'eng-hu** 2.11 253 P Pn 02 41 55.6 +0.4
baz=256
PHUB *e*S Sb 02 42 23.0 -1.4
baz=256
WDGT **Dungji** 2.13 245 P Pn 02 41 56.2 +0.8
baz=247
SLIU **Shizi** 2.13 205 *e*P Pn 02 41 56.0 +0.5
baz=194
LYUB **Lan-yu** 2.16 185 *e*P Pn 02 41 53.6 -2.2
baz=186
JIJ **Ishigaki jima** 2.18 84 P Pn 02 41 56.1 +0.1
JIJ S Sn 02 42 22.8 0.0
VWUC **VWUC** 2.27 292 *e*P Pn 02 41 56.8 -0.5
baz=291
VCHM **Qimei** 2.34 247 *e*P Pn 02 41 59.2 +0.8
baz=232
JISG **Ishigakijimahi** 2.36 79 P Pn 02 41 58.3 -0.3
JISG *e*S Sn 02 42 27.4 +0.2
TWKBT **Hengchun** 2.38 202 *e*P Pn 02 42 00.7 +1.8
baz=190
PTMZ **Houxiangcun** 2.56 290 *e*P Pn 02 42 01.2 -0.2
baz=290
MATB **Ma-tsu** 2.58 321 *e*P Pn 02 42 00.9 -0.7
baz=318
LYJJ **Jianjiangzhen** 2.99 323 *e*P Pn 02 42 06.6 -0.6
baz=321
KNM **Kinmen** 3.05 275 *e*P Pn 02 42 10.2 +2.1
baz=276
KNMB **Chin-men Tao** 3.10 276 *e*P Pn 02 42 08.5 -0.2
baz=277
XPSS **Dashiqiu** 3.10 333 *e*P Pn 02 42 08.7 0.0
baz=330
MHZQ **Yeshan** 3.14 308 *e*P Pn 02 42 10.1 +0.8
baz=307
AXDP **Jialang** 3.54 283 *e*P Pn 02 42 14.9 +0.2
baz=282
ZPLA **Ao Xicun** 3.68 267 *e*P Pn 02 42 16.8 +0.1
baz=268
DSXP **Dongshan** 4.00 264 *e*P Pn 02 42 21.1 0.0
baz=265
SXFK **Yanhouchang** 4.34 302 *e*P Pn 02 42 27.3 +1.4
baz=300
JOW **Kunigami** 6.45 64 P Pn 02 42 54.6 -0.3
JOW **Kunigami** 6.45 64 P Pn 02 42 54.4 -0.5
3.1nm,0.3s,baz=155,slow=28,SNR=8.6
JOW S Sn 02 44 07.4 -0.8
4.2nm,0.5s,baz=119,slow=26,SNR=1.1
5.6nm,0.3s

KSRS	Korea Array 0.2nm,0.3s,baz=201,slow=11,SNR=1.8 0.4nm,0.4s	14.26	20	P	Pn	02 44 42.4	+0.7	
MKAR	Makanchi Array 0.7nm,0.6s,baz=100,slow=9.3,SNR=8.7 0.7nm,0.6s	38.72	316	P	P	02 48 44.1	+0.2	
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=114,slow=8.1,SNR=4.9 0.7nm,0.4s	40.55	327	P	P	02 48 58.1	-0.9	
KURBB	Kurchatov Arra 1.2nm,1.0s,baz=109,slow=9.7,SNR=3.8 1.2nm,1.0s	42.47	320	P	P	02 49 15.0	+0.3	
WRA	Warramunga Arr 1.1nm,0.8s,baz=344,slow=8.7,SNR=4.7 1.1nm,0.8s	45.52	163	P	P	02 49 39.5	-0.1	
BVAR	Borovoye Array 0.8nm,0.6s,baz=105,slow=9.9,SNR=4.2 0.8nm,0.6s	48.03	321	P	P	02 49 59.1	+0.3	
ASAR	Alice Springs 0.4nm,0.5s,baz=342,slow=6.7,SNR=1.4 0.4nm,0.5s	48.98	165	P	P	02 50 08.0	+1.5	
FINES	FINESS Array B 3.6nm,1.1s,baz=90,slow=6.9,SNR=3.9 3.6nm,1.1s	71.73	330	P	P	02 52 40.7	-0.9	
YKA	Yellowknife Ar 0.3nm,0.6s,baz=312,slow=5.1,SNR=6.9 0.3nm,0.6s	82.78	23	P	P	02 53 41.8	-1.8	

JMA ***08*** *03:06:03.9±0.1,23.9N±0.2×121.6E±0.9,h2km,MD4.3/15, MV4.3/15,TAIWAN REGION*

NEIC ***08*** *03:06:03.4±1.0,23.91N±0.02×121.65E±0.03,h10km±1km, mb4.7/19,Error ellipse: s-maj=5.1km s-min=2.9km az=288.0*

TAP ***08*** *03:06:04.1,23.96N×121.60E,h9km,ML4.8,B*

ASIES ***08*** *03:06:04.1,23.96N×121.60E,h9km,ML4.8,Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr2.32; Mθθ0.25; Mφφ-1.65; Mrθ1.11; Mθφ-0.42; Mφr0.69; Fault plane solution: M₀2.44163×10²² NP1:φs32.73000°, δ60.58000°, λ111.49000°. NP2:φs174.02000°, δ35.86000°, λ57.00000°. Principal axes: T Plg66.9960°, Azm344.2380°; N Plg18.6060°, Azm201.7780°; P Plg13.0430°, Azm107.3060°;*

BJI ***08*** *03:06:04.0±0.0,23.93N×121.67E,h8km,mb4.3/40, mB5.4/10,ML4.4/11,Ms4.7/11,Ms7 4.5/13*

IDC ***08*** *03:06:08.8±3.5,23.98N×121.71E,h46km±35km,mb3.9/19, mbtmp4.1/21,ML3.8/1,Error ellipse: s-maj=20.5km s-min=14.2km az=64.0*

ISC 08 03:06:04.9±0.6,23.95N±0.01×121.65E±0.02,h12km±3km, n281,σ1s36/455,mb4.3/38,17C-45D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	Hwalien baz=38	0.05	301	⇑*i*	P		Pg	03 06 06.0	-1.3
HWA				*i*	S		Sg	03 06 07.6	-1.4
TWD	Chiawan baz=1.0	0.14	339	⇓*i*	P		Pg	03 06 07.3	-1.0
TWD				*i*	S		Sg	03 06 09.5	-1.2
ETM	Tongmen baz=275	0.14	275	*i*	P		Pg	03 06 06.8	-1.6
ETM				*i*	S		Sg	03 06 08.9	-2.0
SHUL	Shoufeng baz=200	0.18	206	⇑*i*	P		Pg	03 06 08.7	-0.3
SHUL				*i*	S		Sg	03 06 12.4	+0.6
ETL	Fush Village baz=5.0	0.21	353	*i*	P		Pg	03 06 08.7	-0.8
ETL				*i*	S		Sg	03 06 11.7	-0.9
LXIB	Xiulin Townshi baz=284	0.23	288	⇓*i*	P		Pg	03 06 08.5	-1.4
LXIB				*i*	S		Sg	03 06 11.6	-1.6
NACB	Ninganchiao	0.23	347				Pg	03 06 07.9	-1.9
NACB					Sg		Sg	03 06 11.9	-1.1
NACB	Ninganchiao	0.23	347		P		Pg	03 06 09.1	-0.7
NACB	Ninganchiao baz=358	0.23	347	⇓*i*	P		Pg	03 06 08.8	-1.0
NACB				*i*	S		Sg	03 06 12.1	-1.0
ESL	Shilin baz=232	0.24	235	⇓*i*	P		Pg	03 06 08.6	-1.4
ESL					S		Sg	03 06 11.8	-1.6
TEGC	Jichi Village baz=194	0.26	203	*i*	P		Pb	03 06 10.6	-1.0
TEGC					S		Sb	03 06 15.5	-0.5
ETLH	Xiulin Townshi baz=335	0.30	329	⇓*i*	P		Pg	03 06 10.0	-1.1
ETLH				*i*	S		Sg	03 06 13.9	-1.3
WARBT	Fenglin Townsh baz=230	0.34	226	⇓*i*	P		Pg	03 06 10.5	-1.3
WARBT				*i*	S		Sg	03 06 14.7	-1.6
EGFH	Guangfu baz=219	0.35	216	⇓*i*	P		Pg	03 06 11.0	-1.0
EGFH				*i*	S		Sg	03 06 15.7	-0.9
EHP	Heping Village baz=20	0.37	13		P		Pb	03 06 12.3	-1.0
EHP					S		Sb	03 06 17.6	-1.5
EAHA	Aohua baz=25	0.39	12	⇑*i*	P		Pg	03 06 12.0	-0.6
EAHA					S		Sb	03 06 17.9	-1.7
WHF	Hehuan Shan baz=302	0.40	299	⇓*i*	P		Pg	03 06 11.8	-1.3
WHF				*i*	S		Sg	03 06 17.2	-1.4
OWD	Renai baz=281	0.43	270		P		Pg	03 06 12.4	-1.2
OWD					*e*S		Sg	03 06 18.5	-0.9
CHGB	Renai baz=285	0.45	284	⇓*i*	P		Pg	03 06 12.9	-1.0
CHGB					*e*S		Sg	03 06 18.9	-1.0
FUSS	Fushou baz=311	0.47	308	⇓*i*	P		Pg	03 06 13.5	-0.9
FUSS				*i*	S		Sg	03 06 19.7	-1.0
ENA	Nanau baz=15	0.48	10		P		Pg	03 06 13.9	-0.5
ENA					*e*S		Sb	03 06 20.9	-1.5
WUSB	Renai baz=284	0.49	275	⇓*i*	P		Pg	03 06 13.7	-0.9
WUSB					S		Sg	03 06 20.0	-1.1
HGSD	Ruisui baz=212	0.50	204	⇓	P		Pb	03 06 14.8	-0.8
HGSD					*e*S		Sb	03 06 24.0	+1.1
EWUT	Wuta baz=17	0.51	13	⇑	P		Pg	03 06 14.3	-0.5
EWUT					*e*S		Sb	03 06 21.6	-1.4
VWDT	VWDT baz=247	0.51	247	⇓*i*	P		Pg	03 06 14.0	-0.8
VWDT					*e*S		Sg	03 06 21.0	-0.5
TWT	Tachien baz=306	0.53	305	⇓*e*	P		Pg	03 06 14.7	-0.6
TWT					*e*S		Sg	03 06 22.0	-0.4
NNSB	Datong baz=336	0.53	333	⇓	P		Pg	03 06 14.8	-0.7
NNSB					*e*S		Sg	03 06 21.4	-1.1
NNSH	Datong baz=330	0.53	333	⇓*e*	P		Pg	03 06 14.8	-0.7
NNSH					*e*S		Sg	03 06 21.5	-1.1
EHY	Hungye baz=221	0.54	214	⇓	P		Pg	03 06 14.3	-1.1
EHY					S		Sg	03 06 21.2	-1.4
TDCB	Techi baz=306	0.54	304	⇓*i*	P		Pg	03 06 14.8	-0.8
TDCB					S		Sg	03 06 22.0	-0.8
NNS	Nan Shan baz=336	0.55	333	⇓	P		Pg	03 06 15.0	-0.7
NNS					*e*S		Sg	03 06 22.1	-1.0
LATG	Datong baz=352	0.59	349	⇓	P		Pg	03 06 15.8	-0.7
LATG					S		Sb	03 06 24.2	-1.4
EOS4	EOS4 baz=94	0.63	74	*e*	P		Pn	03 06 18.1	-1.2
EOS4					*e*S		Sn	03 06 27.7	-1.5
WPL	Puli Township baz=276	0.64	276	⇓	P		Pg	03 06 16.7	-0.7
WPL					*e*S		Sg	03 06 24.8	-0.9
YULB	Yu-li	0.64	210				Pg	03 06 15.9	-1.5
YULB						Sg	Sg	03 06 23.0	-2.9
YULB	Yu-li	0.64	210		P		Pg	03 06 16.7	-0.8
YULB	Yu-li baz=218	0.64	210		P		Pg	03 06 16.1	-1.3
YULB					*e*S		Sg	03 06 23.8	-2.1
ESAO	Su ao baz=9.0	0.65	16	⇑	P		Pb	03 06 17.0	-1.1
ESAO					*e*S		Sb	03 06 26.1	-1.0
ECBN	Changbin baz=182	0.66	196	*e*	P		Pb	03 06 18.0	-0.3
ECBN					*e*S		Sn	03 06 29.4	-0.9
SSLB	Suanglung	0.66	256				Pg	03 06 15.9	-1.8
SSLB						Sg	Sg	03 06 24.4	-2.0
SSLB	Suanglung	0.66	256		P		Pg	03 06 17.0	-0.7
SSLB	Suanglung baz=265	0.66	256	⇓*i*	P		Pg	03 06 16.7	-1.1
SSLB					S		Sg	03 06 24.6	-1.8
NDT	Datong Townshi baz=352	0.66	349	⇓	P		Pb	03 06 17.4	-1.0
NDT					S		Sg	03 06 25.6	-0.8
DPDB	Guoxing baz=278	0.67	277	⇓	P		Pg	03 06 17.3	-0.6
DPDB					*e*S		Sg	03 06 25.9	-0.8
EYUL	Yuli baz=219	0.67	207	*e*	P		Pg	03 06 17.4	-0.6
EYUL					*e*S		Sb	03 06 27.8	-0.1
TWC	Suao baz=10.0	0.68	15	⇑	P		Pb	03 06 17.8	-0.9
TWC					*e*S		Sb	03 06 27.1	-1.0
TWF1	Yuli baz=218	0.68	209	*e*	P		Pg	03 06 16.8	-1.4
TWF1					*e*S		Sb	03 06 27.2	-0.9
NDS	Dongshan baz=8.0	0.68	5	P			Pb	03 06 17.9	-0.9
NDS					*e*S		Sb	03 06 27.5	-0.7
WCS	Beigang Elemen baz=280	0.68	279	⇓	P		Pg	03 06 17.5	-0.7
WCS					*e*S		Sg	03 06 26.1	-1.1
ENTT	Nioudou baz=357	0.69	354		P		Pb	03 06 18.0	-0.9
ENTT					*e*S		Sb	03 06 27.4	-1.0
SMLT	Sun Moon Lake baz=265	0.69	264	⇓	P		Pg	03 06 17.5	-0.9
SMLT					*e*S		Sg	03 06 26.9	-0.5
EOS3	EOS3 baz=58	0.69	61	*e*	P		Pn	03 06 20.2	-0.2
EOS3					*e*S		Sn	03 06 31.0	0.0
EOS2	EOS2 baz=60	0.71	49	*e*	P		Pn	03 06 21.3	+0.7
WHP	Taichung City baz=290	0.72	297	⇓*e*	P		Pb	03 06 18.9	-0.6
WHP					*e*S		Sb	03 06 28.6	-0.7
TYC	Yuchr baz=267	0.73	266	⇓	P		Pg	03 06 18.0	-1.0
TYC					*e*S		Sg	03 06 27.4	-1.2
YHNB	Yeheng	0.76	341				Pg	03 06 18.8	-0.8
YHNB						Sg	Sg	03 06 28.7	-0.8
YHNB	Yeheng	0.76	341		P		Pb	03 06 19.9	-0.2
YHNB	Yeheng baz=343	0.76	341	⇓	P		Pb	03 06 19.3	-0.8
YHNB					*e*S		Sg	03 06 28.8	-0.8
NSK	Sanguang baz=343	0.77	340	⇓*e*	P		Pb	03 06 19.4	-0.9
NSK					*e*S		Sg	03 06 29.1	-0.8
WHYT	Xinyi Township baz=251	0.77	251	⇓	P		Pg	03 06 18.9	-1.0
WHYT					*e*S		Sg	03 06 29.1	-0.9
CHKH	Chenggong baz=186	0.79	197	*e*	P		Pb	03 06 20.2	-0.4
CHKH					*e*S		Sb	03 06 31.9	+0.6
FUSB	Fushanzhiwuyua baz=358	0.81	356	⇑*e*	P		Pb	03 06 20.2	-0.7
FUSB					*e*S		Sb	03 06 30.7	-1.1
ILA	Ilan baz=9.0	0.81	6	*e*	P		Pb	03 06 20.9	-0.2
ILA					*e*S		Sb	03 06 31.7	-0.3
FULB	Fuli baz=219	0.82	204	*e*	P		Pb	03 06 20.5	-0.6
FULB					*e*S		Sn	03 06 33.9	-0.4
NFF	Wufeng Townshi baz=326	0.83	324	⇓*e*	P		Pb	03 06 20.6	-0.7
NFF					*e*S		Sg	03 06 30.9	-1.1
NWLT	Wulai baz=353	0.83	351	⇑*e*	P		Pb	03 06 20.5	-0.8
NWLT					*e*S		Sg	03 06 30.7	-1.3
WJS	Zhushan baz=262	0.85	261	⇓*e*	P		Pb	03 06 21.2	-0.5
WJS					*e*S		Sn	03 06 34.0	-1.1
WWF	Wufeng baz=282	0.88	276	*e*	P		Pn	03 06 22.2	-0.8
WWF					*e*S		Sn	03 06 35.5	-0.2
WNT	Mingjian baz=266	0.89	265	*e*	P		Pb	03 06 22.1	-0.2
WNT					*e*S		Sb	03 06 34.6	+0.5
CHKT	Chengkung baz=197	0.89	197	⇑	P		Pg	03 06 21.4	-0.7
CHKT					*e*S		Sn	03 06 35.4	-0.5
WNT1	Nantou City baz=273	0.89	267	*e*	P		Pn	03 06 22.4	-0.8
WNT1					*e*S		Sn	03 06 35.4	-0.6
ALS	Alishan baz=241	0.89	241	⇓	P		Pg	03 06 21.4	-0.7
ALS					*e*S		Sb	03 06 33.9	-0.5
TWQ1	Liyutan baz=298	0.89	296	⇓*e*	P		Pb	03 06 22.1	-0.2
TWQ1					*e*S		Sn	03 06 34.9	-1.3
EHD	Haiduan baz=218	0.90	207	*e*	P		Pg	03 06 20.7	-1.5
EHD					*e*S		Sg	03 06 32.9	-1.1
NSTT	Nanjuang baz=321	0.90	319	⇓*e*	P		Pb	03 06 22.1	-0.4
NSTT					*e*S		Sg	03 06 33.3	-0.7
LIOB	Emei baz=322	0.90	320	⇓*e*	P		Pb	03 06 22.3	-0.2
LIOB					*e*S		Sb	03 06 33.8	-0.7
TCU	Taichung baz=278	0.91	283	⇓*e*	P		Pn	03 06 22.9	-0.7
TCU					*e*S		Sn	03 06 36.7	+0.1
NTC	Toucheng baz=2.0	0.91	10	*e*	P		Pg	03 06 21.7	-0.9
NTC					*e*S		Sb	03 06 34.7	-0.1
NJD	Zhudong baz=328	0.93	327	*e*	P		Pn	03 06 23.7	-0.2
NJD					*e*S		Sn	03 06 36.3	-0.8
NSY	Sanyi baz=313	0.93	300	⇓*e*	P		Pn	03 06 23.4	-0.5
NSY					*e*S		Sn	03 06 37.1	-0.1
ECS	Chishang baz=206	0.94	205	*e*	P		Pn	03 06 23.5	-0.4
ELDTW	Lidau baz=218	0.96	218	*e*	P		Pg	03 06 21.4	-2.0
ELDTW					*e*S		Sg	03 06 34.9	-1.0
CHN5	Tsauling baz=239	0.96	249	⇓*e*	P		Pb	03 06 23.2	-0.3
CHN5					*e*S		Sn	03 06 37.7	-0.1
NMLH	Miaoli baz=319	0.98	307	*e*	P		Pn	03 06 24.3	-0.1
NMLH					*e*S		Sn	03 06 38.0	-0.2
WYL	Yuanlin Townsh baz=257	0.98	271	*e*	P		Pn	03 06 24.4	-0.1
WYL					*e*S		Sn	03 06 39.0	+0.8
WDJ	Dajia District baz=294	1.00	293	*e*	P		Pn	03 06 24.9	+0.1
WDJ					*e*S		Sn	03 06 39.8	+1.0
HSN1	Hsinchu baz=326	1.00	325	*e*	P		Pn	03 06 25.2	+0.3
HSN1					*e*S		Sn	03 06 40.0	+1.1
WCHH	Zhanghua baz=279	1.01	277	*e*	P		Pn	03 06 24.9	+0.1
WCHH					*e*S		Sn	03 06 39.7	+0.8
NHDH	Xindian Distri baz=355	1.01	354	*e*	P		Pn	03 06 24.4	-0.5
NHDH					*e*S		Sb	03 06 37.1	-0.6
NJN	Zhunan baz=324	1.02	316	*e*	P		Pn	03 06 25.8	+0.8
EDH	Donghe baz=176	1.02	198	*e*	P		Pg	03 06 22.0	-2.7
EDH					*e*S		Sn	03 06 38.9	-0.5
TWA	Mucha baz=349	1.03	357	*e*	P		Pn	03 06 24.7	-0.4
TWA					*e*S		Sb	03 06 37.7	-0.4
TIPB	Shuangxi baz=1.0	1.03	9	*e*	P		Pb	03 06 24.2	-0.4
TIPB					*e*S		Sb	03 06 37.4	-0.8
TATO	Taipei	1.03	352				Pn	03 06 24.5	-0.7
TATO						Sg	Sb	03 06 37.4	-0.8
TATO	Taipei baz=353	1.03	352	⇑*e*	P		Pn	03 06 24.9	-0.3
TATO					*e*S		Sb	03 06 37.3	-0.8
WGK	Gukeng baz=257	1.03	255	*e*	P		Pn	03 06 24.9	-0.2
WGK					*e*S		Sn	03 06 40.3	+0.8
SBCB	Hsinchu baz=334	1.03	324	*e*	P		Pn	03 06 25.5	+0.3
SBCB					*e*S		Sn	03 06 38.8	-0.8
HSN	Hsinchu baz=328	1.05	324	*e*	P		Pn	03 06 26.1	+0.7
HSN					*e*S		Sn	03 06 40.6	+0.6
WDLH	Douliu baz=258	1.05	256	*e*	P		Pn	03 06 25.2	-0.2
WDLH					*e*S		Sn	03 06 40.3	+0.3
BACT	New Taipei Cit baz=351	1.06	350	*e*	P		Pn	03 06 26.0	+0.5
BACT					*e*S		Sn	03 06 39.4	-0.8
NHY	Taipei baz=349	1.08	356	*e*	P		Pn	03 06 26.1	+0.2
NHY					*e*S		Sn	03 06 40.5	-0.3
WCKO	Fanlu baz=235	1.09	242	⇓*e*	P		Pn	03 06 25.6	-0.3
WCKO					*e*S		Sn	03 06 41.1	+0.2
TAP	Taipei baz=354	1.09	353	*e*	P		Pn	03 06 26.1	+0.1
TAP					*e*S		Sn	03 06 40.0	-1.0
NTY	Taoyuan baz=344	1.09	343	*e*	P		Pn	03 06 26.7	+0.6
NTY					*e*S		Sn	03 06 41.4	+0.3
TWB1	Santiao Chiao baz=9.0	1.10	16	*e*	P		Pn	03 06 25.6	-0.4
TWB1					*e*S		Sb	03 06 39.9	-0.2
NCUH	Zhongli baz=348	1.10	337	⇑*e*	P		Pn	03 06 26.6	+0.5
NCUH					*e*S		Sn	03 06 41.2	+0.1
NCU	National Centr baz=349	1.10	337	⇑*e*	P		Pn	03 06 26.7	+0.6
NCU					*e*S		Sn	03 06 41.3	+0.1
STYH	Taoyuan baz=228	1.12	226	*e*	P		Pg	03 06 24.9	-1.5
STYH					*e*S		Sn	03 06 41.1	-0.5
NWF	Wu-fen Shan baz=7.0	1.12	6	*e*	P		Pn	03 06 26.5	0.0
NWF					*e*S		Sn	03 06 41.0	-0.8
WFSB	Wu-fen Shan baz=7.0	1.12	6	⇑*e*	P		Pn	03 06 26.5	+0.1
WFSB					*e*S		Sb	03 06 40.7	0.0
STYT	Tauyuan baz=228	1.14	226	*e*	P		Pg	03 06 25.4	-1.4
STYT					*e*S		Sn	03 06 42.0	-0.2
CHN4	Tsaushan baz=229	1.14	239	⇑*e*	P		Pn	03 06 26.5	-0.2
CHN4					*e*S		Sn	03 06 43.9	+1.7
TPUB	Ta-pu	1.14	235				Pg	03 06 24.8	-2.0
TPUB	Ta-pu baz=237	1.14	235	⇑*e*	P		Pn	03 06 26.2	-0.5
TPUB					*e*S		Sn	03 06 42.0	-0.2
LONT	Longtian baz=216	1.15	205	*e*	P		Pb	03 06 24.6	-2.1
LONT					*e*S		Sn	03 06 42.9	+0.5
CHN2	Minshiung baz=265	1.16	249	*e*	P		Pn	03 06 27.4	+0.5
CHN2					*e*S		Sn	03 06 44.1	+1.5
SXI1	Grass Mountain baz=4.0	1.16	10	⇑*e*	P		Pn	03 06 26.8	-0.2
SXI1					*e*S		Sn	03 06 41.9	-0.9
TWS1	Kuangyinshan baz=359	1.16	350	*e*	P		Pn	03 06 26.8	-0.2
TWS1					*e*S		Sn	03 06 44.3	+1.5
WRL	Guolierlin Hig baz=270	1.17	268	*e*	P		Pn	03 06 26.8	-0.3
WRL					*e*S		Sn	03 06 43.1	+0.2
WTP	Ta-pu baz=236	1.18	234	*e*	P		Pb	03 06 26.7	-0.6
WTP					*e*S		Sn	03 06 43.7	+0.4

RLNB Erlin 1.18 267 eP Pn 03 06 27.4 +0.1
baz=269
RLNB eS Sn 03 06 44.0 +0.7
baz=269
NHW Xinwu Township 1.19 333 eP Pn 03 06 28.1 +0.8
baz=333
NHW eS Sn 03 06 44.5 +1.1
baz=333
WTK Tuku 1.19 257 eP Pn 03 06 27.1 -0.1
baz=260
WTK eS Sn 03 06 43.7 +0.4
baz=260
YM01 YM01 1.19 357 eP Pn 03 06 27.0 -0.4
baz=348
YM01 eS Sn 03 06 43.1 -0.5
baz=348
TNOU National Taiwa 1.20 5 eP Pb 03 06 26.2 -1.3
baz=4.0
CHY Chiayi 1.21 248 eP Pg 03 06 27.9 -0.3
baz=264
CHY eS Sn 03 06 45.0 +1.1
baz=264
NTST Danshui 1.22 351 eP Pg 03 06 27.9 -0.5
baz=360
NTST eS Sn 03 06 46.0 +1.7
baz=360
YM08 YM08 1.23 357 eP Pn 03 06 27.4 -0.6
baz=345
YM08 eS Sg 03 06 43.5 -1.2
baz=345
ANP Anpu 1.23 355 eP Pb 03 06 27.5 -0.7
baz=355
ANP eS Sn 03 06 45.4 +0.6
baz=355
TWG Pinlang 1.25 205 Pn Pn 03 06 25.3 -2.9
TWG Pinlang 1.25 205 eP Pn 03 06 25.5 -2.6
baz=206
TWGBT Beinan 1.25 205 eP Pn 03 06 25.4 -2.7
baz=215
TWGBT eS Sn 03 06 46.3 +1.5
baz=215
NWRT Kuosheng 1.25 0 eP Pg 03 06 28.9 0.0
baz=1.0
NWRT eS Sn 03 06 45.6 +0.8
baz=1.0
WTCT Ta-ch'eng 1.26 266 eP Pg 03 06 28.5 -0.5
baz=268
WTCT eS Sn 03 06 45.5 +0.5
baz=268
TWK Hsinying 1.27 238 eP Pg 03 06 28.6 -0.7
baz=229
TWK eS Sn 03 06 46.5 +1.1
baz=229
TTN Taitung 1.28 201 eP Pn 03 06 27.3 -1.3
baz=204
TTN eS Sn 03 06 45.7 +0.1
baz=204
CHN1 Nanshi 1.28 234 eP Pg 03 06 28.8 -0.8
baz=236
CHN1 eS Sn 03 06 46.6 +0.9
baz=236
JYNG Yonagunijimaku 1.28 67 P Pb 03 06 28.3 -0.6
JYNG Yonagunijimaku 1.28 67 A A 03 06 28.3
comp=E,8.0nm,2.4s,comp=N,12nm,2.9s
LDUT Ludao 1.28 187 eP Pn 03 06 26.0 -2.7
baz=171
LDUT eS Sb 03 06 44.6 -0.9
baz=171
SNST Tainan City 1.28 236 eP Pg 03 06 28.8 -0.8
baz=228
SNST eS Sn 03 06 46.6 +0.8
baz=228
SGST Jiashian 1.31 229 eP Pn 03 06 28.1 -0.9
baz=231
SGST eS Sg 03 06 47.3 +0.2
baz=231
TWY Chenhua 1.32 358 eP Pg 03 06 29.1 -1.2
baz=346
TWY eS Sb 03 06 46.0 -0.5
baz=346
SLGT Liugui 1.33 224 eP Pn 03 06 28.9 -0.3
baz=227
SLGT eS Sg 03 06 48.7 +1.0
baz=227
YOJ Yonaguni jima 1.34 68 Pn Pn 03 06 28.4 -1.0
YOJ Yonaguni jima 1.34 68 eP Pg 03 06 29.7 -1.0
baz=66
YOJ eS Sg 03 06 47.6 -0.5
baz=66
YOJ Yonaguni jima 1.34 68 P Pg 03 06 29.8 -1.0
YOJ Yonaguni jima 1.34 68 A A 03 06 29.8
comp=E,8.0nm,2.7s,comp=N,10.0nm,1.7s
WSF Szhu 1.34 257 eP Pg 03 06 29.7 -1.0
baz=259
WSF eS Sg 03 06 49.1 +0.8
baz=259
WSL Shuilin Townsh 1.37 252 eP Pg 03 06 30.4 -0.8
baz=268
WSL eS Sg 03 06 49.2 +0.1
baz=268
ICHU Yijhu 1.39 245 eP Pb 03 06 30.5 -0.2
baz=249
ICHU eS Sg 03 06 50.0 +0.3
baz=249
CHN8 Yiju 1.45 246 eP Pg 03 06 31.8 -1.0
baz=249
CHN8 eS Sg 03 06 52.0 +0.3
baz=249
CHN3 Shinhua 1.47 234 eP Pg 03 06 33.4 +0.3
baz=237
CHN3 eS Sg 03 06 54.5 +2.3
baz=237
SSHA Shanhua 1.49 237 eP Pg 03 06 33.7 +0.1
baz=240
ECL Taimali 1.49 206 eP Pb 03 06 32.1 -0.5
baz=190
SCST Cishan 1.50 225 eP Pg 03 06 33.0 -0.8
baz=230
SCST eS Sg 03 06 55.8 +2.5
baz=230
SHHT Tainan City 1.51 232 eP Pg 03 06 34.2 +0.2
baz=237
SHHT eS Sg 03 06 54.0 +0.4
baz=237
SSD Sandimen 1.52 218 eP Pn 03 06 31.1 -0.9
baz=222
SSD eS Sb 03 06 52.1 -0.2
baz=222
SCLT Jiali 1.54 240 eP Pg 03 06 34.3 -0.3
baz=243
TSMG Majia 1.55 217 eP Pb 03 06 32.5 -1.0
baz=222
TSMG eS Sg 03 06 54.7 -0.1
baz=222
TWM1 Shoushan 1.59 225 eP Pg 03 06 34.8 -0.7
baz=228
SGLT Jiouru 1.62 221 eP Pg 03 06 36.0 -0.1
baz=212
MASBT Mashibuluo 1.63 215 eP Pn 03 06 32.9 -0.5
baz=221
MASBT eS Sb 03 06 55.0 -0.4
baz=221
TSCK Chigu Township 1.64 241 eP Pb 03 06 34.2 -1.0
baz=246
TSCK eS Sg 03 06 57.3 -0.5
baz=246
TSPT Pingtung City 1.65 220 eP Pg 03 06 36.2 -0.4
baz=211
SNJT Kaohsiung City 1.70 226 eP Pg 03 06 37.6 +0.1
baz=229
PCYT Pengchaiyu 1.71 13 eP Pn 03 06 34.6 0.0
baz=354
PCYT eS Sg 03 06 58.9 -1.2
baz=354
EAST Anshuo 1.73 205 eP Pn 03 06 33.5 -1.3
baz=194
TAW Tawu 1.73 204 eP Pb 03 06 35.7 -0.9
baz=190
TAWH Dawu Township 1.75 204 eP Pn 03 06 33.8 -1.2
baz=191
WSSB Gushan 1.82 225 eP Pb 03 06 38.2 0.0
baz=228
SCZT Fangliau 1.84 211 eP Pb 03 06 37.4 -1.0
baz=201
SLIU Shizi 1.90 205 eP Pb 03 06 38.5 -1.0
baz=192
LAY Lan-yu 1.91 183 eP Pn 03 06 34.4 -2.8
baz=165
LAY eS Sn 03 06 58.6 -2.5
baz=165
IRIF Iriomote-Funau 1.94 78 P Pn 03 06 37.5 -0.1
IRIF eS Sb 03 07 03.3 -1.0
IRIF Iriomote-Funau 1.94 78 A A 03 06 37.5
comp=E,5.0nm,2.2s,comp=N,7.0nm,7.0s
LYUB Lan-yu 1.94 182 eP Pn 03 06 36.1 -1.6
baz=168
WDGT Dungji 1.95 250 eP Pn 03 06 38.1 +0.3
baz=240
WDGT eS Sb 03 07 04.7 +0.1
baz=240
PHUB P'eng-hu 1.95 258 eP Pn 03 06 38.1 +0.3
baz=261
PHUB eS Sb 03 07 03.5 -1.2
baz=261
PNG Penghu 1.96 259 eP Pn 03 06 38.1 +0.2
baz=263
PNG eS Sn 03 07 02.9 +0.5
baz=263
HATJ Hateruma jima 1.97 87 eP Pn 03 06 37.1 -1.1
TWP Hsiaoliuchiu 1.99 217 eP Pg 03 06 41.9 -1.2
baz=220
HEN Hengchun 2.11 204 eP Pb 03 06 42.3 -0.8
baz=192
TWK1 Hengchun 2.15 201 eP Pb 03 06 43.0 -0.7
baz=206
TWKBT Hengchun 2.15 201 eP Pb 03 06 42.2 -1.5
baz=206
VCHM Qimei 2.17 250 eP Pn 03 06 41.2 +0.4
baz=255
VCHM eS Sb 03 07 09.3 -1.6
baz=255
JKRS Kuro-shima 2.17 82 P Pn 03 06 41.8 +0.9
JKRS S Sb 03 07 09.4 -1.7
VWUC VWUC 2.26 298 eP Pn 03 06 41.0 -1.0
baz=299
VWUC eS Sn 03 07 07.5 -2.3
baz=299
JIJ Ishigaki jima 2.31 79 P Pn 03 06 42.2 -0.6
JIJ eS Sn 03 07 10.9 -0.3
JISG Ishigakijimahi 2.51 75 P Pn 03 06 44.9 -0.6
JISG S Sn 03 07 15.1 -0.9
PTMZ Houxiangcun 2.55 296 eP Pn 03 06 45.2 -0.8
baz=297
PTMZ eS Sn 03 07 16.1 -0.9
baz=297
MATB Ma-tsu 2.68 325 eP Pn 03 06 47.1 -0.7
baz=311
MATB eS Sn 03 07 18.9 -1.3
baz=311
MSUT Lienchiang 2.71 325 eP Pn 03 06 49.0 +0.8
baz=311
MSUT eS Sn 03 07 19.8 -1.1
baz=311
JTJ Tarama 2.87 76 eP Pn 03 06 51.9 +1.5
QZH Quanzhou 2.96 290 iPn Pn 03 06 50.9 -0.8
QZH Sn Sn 03 07 25.0 -2.1
QZH smax smax
comp=N,1μm,0.5s
QZH smax smax
comp=N,900nm,1.2s
KNM Kinmen 2.97 280 eP Pn 03 06 53.1 +1.2
baz=281
KNM eS Sn 03 07 30.5 +3.0
baz=281
KNMB Chin-men Tao 3.02 280 Pn Pn 03 06 52.0 -0.6
KNMB Chin-men Tao 3.02 280 eP Pn 03 06 52.1 -0.4
baz=283
KNMB eS Sn 03 07 26.9 -1.8
baz=283
LYJJ Jianjiangzhen 3.10 327 eP Pn 03 06 53.3 -0.4
baz=313
LYJJ eS Sn 03 07 29.5 -1.1
baz=313
MHZQ Yeshan 3.20 313 eP Pn 03 06 55.2 +0.3
baz=312
MHZQ eS Sn 03 07 31.1 -1.9
baz=312
XPSS Dashiqiu 3.25 336 eP Pn 03 06 54.8 -0.8
baz=336
XPSS eS Sn 03 07 33.2 -1.0
baz=336
JMJ Miyako jima 2 3.43 75 eP Pn 03 07 00.5 +2.4
baz=74
JMJ eS Sn 03 07 39.7 +0.9
baz=74
AXDP Jialang 3.48 286 eP Pn 03 06 58.6 -0.3
baz=288
AXDP eS Sn 03 07 38.4 -1.7
baz=288
ZPLA Ao Xicun 3.57 270 eP Pn 03 06 59.6 -0.4
baz=273
ZPLA eS Sn 03 07 41.0 -1.1
baz=273
DSXP Dongshan 3.88 267 eP Pn 03 07 04.4 +0.1
baz=270
DSXP eS Sn 03 07 49.2 -0.6
baz=270
SXFK Yanhouchang 4.37 305 eP Pn 03 07 10.8 -0.4
baz=305
SXFK eS Sn 03 08 00.0 -2.0
baz=305
SSE Sheshan 7.13 357 Pn Pn 03 07 47.8 -1.2
SSE Sn Sn 03 09 10.7 +0.8
SSE smax smax
comp=N,83nm,1.0s
SSE smax smax
comp=N,78nm,0.9s
SSE LR LR
comp=N,1μm,15.7s
SSE LR LR
comp=N,600nm,16.3s
GZH Guangzhou 7.67 265 Pn Pn 03 07 51.9 -4.6
GZH Sn Sn 03 09 16.0 -7.3
GZH smax smax
comp=N,350nm,1.2s
GZH smax smax
comp=N,230nm,0.9s
NJ2 Nanjing 8.44 344 iP Pn 03 08 05.8 -1.2
NJ2 S Sn 03 09 38.8 -3.4
NJ2 pmax pmax
comp=N,30nm,0.6s
NJ2 smax smax
comp=N,230nm,0.9s
NJ2 smax smax
comp=N,240nm,1.2s
NJ2 LR LR
comp=N,2μm,8.9s
NJ2 LR LR
comp=N,2μm,8.2s
NJ2 LR LR
comp=N,2μm,10.0s
CNSH ChangSha 8.90 300 eP Pn 03 08 09.9 -3.4
CNSH S Sn 03 09 48.2 -5.3
CNSH smax smax
comp=N,400nm,1.1s
CNSH smax smax
comp=E,370nm,1.0s
WHN Wuhan 9.23 317 P Pn 03 08 17.6 -0.3
WHN S Sn 03 09 56.7 -5.0
WHN pmax pmax
comp=E,52nm,0.8s
WHN LR LR
comp=E,6μm,9.8s
WHN LR LR
comp=E,6μm,11.6s
WHN LR LR
comp=E,8μm,12.0s
GULI GuiLin 10.35 280 P Pn 03 08 36.2 +2.9
GULI S Sn 03 10 26.2 -3.1
GULI LR LR
comp=E,3μm,18.4s
GULI LR LR
comp=E,3μm,13.0s
GULI LR LR
comp=E,4μm,15.2s
QIZ Qiongzhong 12.03 248 P Pn 03 08 54.9 -1.4
QIZ S Sn 03 11 07.9 -2.6
QIZ LR LR
comp=E,3μm,19.2s
QIZ LR LR
comp=E,2μm,15.1s
QIZ LR LR
comp=E,4μm,18.7s
JNU Nakatsue 12.21 40 P Pn 03 08 59.4 +0.6
comp=E,0.4nm,0.3s,baz=204,slow=18,SNR=1.8
comp=E,2.2nm,0.4s
GYA Guiyang 13.79 284 iP Pn 03 09 21.6 +1.1
GYA pmax pmax
comp=E,16nm,0.9s
KSRS Korea Array 14.49 20 P P 03 09 37.2 +0.7
comp=E,11nm,0.5s,baz=202,slow=12,SNR=34
HNS HongShan 14.67 338 iP P 03 09 37.3 -1.1
HNS pmax pmax
comp=E,10.0nm,1.1s
XAN Xi'an 14.99 315 P Pn 03 09 37.0 +0.4
XAN S Sn 03 12 23.4 +0.8
XAN pmax pmax
comp=E,13nm,1.0s
CD2 Chengdu 17.32 298 P P 03 10 09.2 +1.2
CD2 pmax pmax
comp=E,20nm,0.9s
PZH PanZhiHua 18.19 282 P Pn 03 10 15.8 -1.7
PZH pmax pmax
comp=E,10.0nm,0.5s
HHC Hu-ho-hao-te 18.86 336 eP Pn 03 10 25.3 -0.2
HHC pmax pmax
comp=E,8.0nm,0.7s
MJAR Matsushiro Arr 18.99 45 P P 03 10 25.7 -0.7
comp=E,0.8nm,0.6s,baz=218,slow=9.5,SNR=1.9
BTO Baotou 19.27 332 eP Pn 03 10 31.7 +1.3
BTO pP sP 03 10 35.0 +0.6
BTO sP pP 03 10 38.8 +5.9
BTO PP PnPn 03 10 49.1 +5.7
BTO S S 03 14 13.5 +6.0
BTO pmax pmax
comp=E,14nm,0.6s
BTO pmax pmax
comp=E,3μm,10.4s
BTO LR LR
comp=E,2μm,10.7s
BTO LR LR
comp=E,2μm,14.1s
BTO LR LR
comp=E,3μm,12.0s
LZH Lanzhou 19.56 312 eP Pn 03 10 37.4 +3.4
LZH pP sP 03 10 44.6 +6.9
LZH pmax pmax
comp=E,17nm,1.0s
SGSI Sangihe 20.49 169 P Pn 03 10 44.7 -0.3
comp=E,219nm,0.5s,comp=E,9μm
MDJ Mudanjiang 21.61 16 P P 03 10 56.1 +1.4
MDJ PP PnPn 03 11 16.7 +1.3
MDJ S S 03 14 57.0 +3.1
MDJ SS SnSn 03 15 22.6 +4.6
MDJ PcS PcS 03 18 34.4 -0.1
MDJ ScS ScS 03 22 16.7 -0.7
MDJ pmax pmax
comp=E,17nm,0.9s
MDJ pmax pmax
comp=E,130nm,3.8s
MDJ LR LR
comp=E,780nm,15.1s
MDJ LR LR
comp=E,560nm,15.5s
MDJ LR LR
comp=E,790nm,16.1s
CMAR Chiang Mai Arr 21.85 260 P P 03 10 58.7 +1.1
comp=E,1.0nm,0.3s,baz=61,slow=8.4,SNR=12
comp=E,1.0nm,0.3s
USRK Ussuriysk Ar. 21.90 20 P P 03 10 57.4 -0.4
comp=E,2.0nm,0.7s,baz=206,slow=9.5,SNR=4.0
comp=E,2.0nm,0.7s
MRSI Marisa 23.34 179 P P 03 11 15.6 +2.5
comp=E,25nm,0.5s,comp=E,2μm
MPSI Mapaga 23.54 184 P P 03 11 17.7 +2.6
comp=E,19nm,1.6s
GTA Gaotai 24.05 315 P P 03 11 24.1 +4.0
GTA pP sP 03 11 30.8 +5.5
GTA pmax pmax
comp=E,6.0nm,1.8s
BKB Balikpapan 25.48 191 P P 03 11 33.8 +0.7
comp=E,56nm,0.6s
ULN Ulaanbaatar 26.54 338 P P 03 11 40.4 -2.2
HEH HeiHe 26.64 8 eP P 03 11 45.0 +1.7
HEH pmax pmax
comp=E,7.0nm,0.8s
SONM Songino Array 26.75 337 P P 03 11 44.3 -0.2
comp=E,2.4nm,0.7s,baz=155,slow=7.8,SNR=6.8
comp=E,2.4nm,0.7s
WMQ Urumqi 34.12 314 eP P 03 12 44.3 -5.4
WMQ pP sP 03 12 52.5 -2.4
WMQ pmax pmax
comp=E,5.0nm,1.1s
WMQ LR LR
comp=Z,400nm,15.5s
MK31 Makanchi Array 38.80 316 P P 03 13 28.2 -1.3
MKAR Makanchi Array 38.80 316 P P 03 13 28.2 -1.3
MKAR Makanchi Array 38.80 316 P P 03 13 29.5 0.0
comp=Z,3.4nm,0.8s,baz=102,slow=10,SNR=27
comp=Z,3.4nm,0.8s
MAKZ Makanchi 39.01 316 P P 03 13 30.0 -1.2
MAKZ IAmb IAmb 03 13 36.8
comp=Z,6.8nm,0.8s
ZAA0 Zalesovo Array 40.67 327 P P 03 13 43.9 -1.0
ZALV Zalesovo Beam 40.67 327 P P 03 13 43.7 -1.2
ZALV Zalesovo Beam 40.67 327 P P 03 13 44.0 -1.0
comp=Z,4.7nm,0.8s,baz=119,slow=8.3,SNR=14
comp=Z,4.7nm,0.8s
KSH Kashi 41.38 303 P P 03 13 54.8 +3.6
KSH pmax pmax
comp=Z,5.0nm,1.0s
H11N1 WAKE ISLAND Hy 42.08 87 T T 03 59 22.9
baz=275
H11N2 WAKE ISLAND Hy 42.08 87 T T 03 59 22.8
baz=275,slow=74
H11N3 WAKE ISLAND Hy 42.09 87 T T 03 59 24.6
baz=275,slow=74
H11S3 WAKE ISLAND Hy 42.20 88 T T 03 58 58.6
baz=282
H11S1 WAKE ISLAND Hy 42.21 88 T T 03 58 59.3
baz=282,slow=74
H11S2 WAKE ISLAND Hy 42.22 88 T T 03 58 60.0
baz=282,slow=74
KURK Kurchatov 42.54 320 P P 03 13 59.1 -1.2
KURBB Kurchatov Arra 42.56 320 P P 03 13 59.9 -0.5
comp=Z,1.5nm,0.6s,baz=114,slow=8.3,SNR=13
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 45.35 163 P P 03 14 21.7 -1.5
comp=Z,1.6nm,0.7s,baz=344,slow=8.6,SNR=8.6
comp=Z,1.6nm,0.7s
TIXI Tiksi 47.90 3 P P 03 14 41.5 -1.0
BVAR Borovoye Array 48.12 321 P P 03 14 44.4 -0.2
comp=Z,1.9nm,0.7s,baz=86,slow=7.9,SNR=8.5
comp=Z,1.9nm,0.7s
BRVK Borovoye 48.19 321 P P 03 14 43.8 -1.3
BRVK IAmb IAmb 03 14 47.4
comp=Z,4.8nm,1.1s
ASAR Alice Springs 48.81 165 P P 03 14 49.9 -0.2
comp=Z,2.2nm,1.1s,baz=339,slow=6.7,SNR=8.6
comp=Z,2.2nm,1.1s
NRIK Noril'sk 49.74 345 P P 03 14 56.3 -0.4
comp=Z,1.6nm,0.5s,baz=164,slow=5.3,SNR=2.2
comp=Z,1.6nm,0.5s
ABKAR Akbulak array 53.91 314 P P 03 15 27.2 -0.9
ABKAR Akbulak array 53.91 314 P P 03 15 26.3 -1.8
ABKAR IAmb IAmb 03 15 31.1
comp=Z,3.4nm,0.9s
GEYT Alibeck 55.28 301 P P 03 15 38.2 -0.1
comp=Z,1.2nm,0.6s,baz=63,slow=7.6,SNR=5.9
comp=Z,1.2nm,0.6s
STKA Stephens Creek 58.70 160 P P 03 16 01.8 -0.6
comp=Z,1.7nm,0.6s,baz=358,slow=6.9,SNR=3.1
comp=Z,1.7nm,0.6s
C19K Lookout Ridge 63.85 23 P P 03 16 36.0 -0.9
C19K IAmb IAmb 03 16 44.4
comp=Z,3.1nm,0.8s
H19K Roundabout Mou 65.12 27 P P 03 16 44.8 -0.4
KBZ Khabaz 65.96 309 P P 03 16 50.8 -0.2
comp=Z,1.5nm,0.8s,baz=72,slow=6.4,SNR=4.6
comp=Z,1.5nm,0.8s
G21K Allakaket 66.25 26 P P 03 16 51.3 -1.2
TOLK Toolik Lake Re 67.49 23 P P 03 16 58.8 -1.7
TOLK IAmb IAmb 03 17 37.9
comp=Z,6.8nm,0.9s
D25K Kavik River 68.52 22 P P 03 17 05.8 -1.1
D25K IAmb IAmb 03 17 13.1
comp=Z,5.5nm,0.8s
E25K Arctic Village 69.05 24 P P 03 17 09.9 -0.3
E25K IAmb IAmb 03 17 40.5
comp=Z,6.1nm,0.9s
E29M Blow River 71.73 23 P P 03 17 25.1 -1.5
E29M IAmb IAmb 03 18 07.6

comp=Z,7.6nm,0.7s
FINES FINESS Array B 71.86 330 P **P** **03 17 25.7 -1.7**
comp=Z,5.9nm,1.1s,baz=56,slow=8.5,SNR=4.7
comp=Z,5.9nm,1.1s
INK Inuvik 73.28 22 P **P** **03 17 33.4 -2.3**
F31M Tsiigehtchic 73.54 23 P **P** **03 17 35.9 -1.4**
F31M IAmb IAmb 03 17 53.0
comp=Z,12nm,0.8s
BRTR Keskin Array B 73.65 307 P **P** **03 17 38.5 -0.3**
comp=Z,0.5nm,0.5s,baz=63,slow=6.8,SNR=1.4
comp=Z,0.5nm,0.5s
C36M Paulatuk 75.88 19 P **P** **03 17 49.5 -1.3**
C36M IAmb IAmb 03 18 32.8
comp=Z,8.3nm,1.0s
HFS Hagfors 77.97 331 P **P** **03 18 00.7 -2.1**
comp=Z,2.7nm,0.9s,baz=107,slow=7.7,SNR=2.0
comp=Z,2.7nm,0.9s
NOA NORSAR Array B 78.63 332 P **P** **03 18 04.4 -2.1**
comp=Z,0.7nm,0.8s,baz=64,slow=5.1,SNR=1.7
comp=Z,0.7nm,0.8s
CRVS Cervenica-Dubn 78.67 319 *eP* **P** **03 18 07.9 +1.0**
YKA Yellowknife Ar 83.02 23 P **P** **03 18 29.1 -0.7**
comp=Z,2.2nm,0.8s,baz=313,slow=5.0,SNR=37
comp=Z,2.2nm,0.8s
LON Longmire 89.31 38 P **P** **03 18 59.0 -2.2**
LON IAmb IAmb 03 19 29.6
comp=Z,4.9nm,0.9s
NVAR Mina Array Bea 96.31 43 P **P** **03 19 34.3 +0.3**
comp=Z,0.4nm,0.7s,baz=285,slow=1.4,SNR=4.0
comp=Z,0.4nm,0.7s

TAP 08 03:07:23.7, 23.98N×121.58E, h6km±1km, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.02**	**93**	*i* P	Pg	03 07 25.2	+0.4
	baz=96						
HWA				*e*S	Sg	03 07 26.7	+1.0
	baz=96						
ETM	**Tongmen**	**0.08**	**262**	*i* P	Pg	03 07 26.3	+0.7
	baz=261						
ETM				*i* S	Sg	03 07 28.1	+1.1
	baz=261						
TWD	**Chiawan**	**0.10**	**6**	*e*P	Pg	03 07 26.7	+0.7
	baz=10.0						
LXIB	**Xiulin Townshi**	**0.16**	**285**	*e*P	Pg	03 07 27.9	+0.8
	baz=285						

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*IDC **08** 03:14:23.4±0.8, 55.72N×149.18W, h0km, mb4.2/24, mbtmp4.2/28, ML3.9/4, MS3.5/2, Error ellipse: s-maj=20.2km s-min=12.9km az=30.0*
*NEIC **08** 03:14:23.6±1.5, 55.71N±0.07×149.26W±0.10, h6km±5km, mb4.4/35, ML4.4/46, ML4.2(AEIC), Error ellipse: s-maj=10.5km s-min=7.9km az=175.0*
*AEIC **08** 03:14:28.1±1.7, 55.67N±0.04×149.19W±0.08, h12km±5km, Error ellipse: s-maj=9.3km s-min=1.7km az=134.0*
ISC 08 03:14:24.8±0.5, 55.77N±0.06×149.23W±0.05, h10km, n468, σ0.96/445, mb4.4/44, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.68**	**305**		**Pn**	**03 15 07.1**	**-0.9**
OHAK	**Old Harbor**	**2.68**	**305**		**Sn**	**03 15 37.5**	**-2.9**
OHAK	**Old Harbor**	**2.68**	**305**	P	**Pn**	**03 15 06.9**	**-1.1**
OHAK	**Old Harbor**	**2.68**	**305**	P	**Pn**	**03 15 07.0**	**-0.9**
	baz=123						
OHAK				S	**Sn**	**03 15 37.5**	**-2.9**
	baz=123						
KDAK	**Kodiak Island**	**2.73**	**319**		**Pn**	**03 15 08.3**	**-0.5**
KDAK	**Kodiak Island**	**2.73**	**319**	Pn	**Pn**	**03 15 08.1**	**-0.6**
	46nm,0.3s,baz=130,slow=7.9,SNR=110						
KDAK				Sn	**Sn**	**03 15 39.6**	**-2.2**
	32nm,0.3s,baz=312,slow=22,SNR=6.9						
KDAK				LR	LR	03 16 27.7	
	comp=Z,661nm,20.9s,baz=146,slow=45						
	103nm,0.3s						
SII	**Sitkinak Islan**	**2.88**	**288**	Pn	**Pn**	**03 15 09.5**	**-1.2**
SII				IAML		03 15 46.7	
	comp=N,943nm,0.6s						
SII				IAML		03 15 54.1	
	comp=E,1μm,0.5s						
SII	**Sitkinak Islan**	**2.88**	**288**		**Sn**	**03 15 42.7**	**-2.7**
SII	**Sitkinak Islan**	**2.88**	**288**	P	**Pn**	**03 15 09.6**	**-1.2**
SII	**Sitkinak Islan**	**2.88**	**288**	P	**Pn**	**03 15 09.6**	**-1.1**
	baz=106						
SII				S	**Sn**	**03 15 42.7**	**-2.7**
	baz=106						
Q20K	**Shuyak Island**	**3.33**	**330**	P	**Pn**	**03 15 16.5**	**-0.4**
	baz=148						
Q20K				S	**Sn**	**03 15 56.0**	**-0.5**
	baz=148						
SYI	**Shuyak Island**	**3.33**	**330**	Pn	**Pn**	**03 15 16.6**	**-0.2**
SYI	**Shuyak Island**	**3.33**	**330**		**Sn**	**03 15 56.0**	**-0.5**
CHIR	**Chirikof Islan**	**3.61**	**273**		Pn	03 15 19.2	-1.5
CHIR					**Sn**	**03 15 58.5**	**-4.8**
CHIR	**Chirikof Islan**	**3.61**	**273**	IAML		03 16 01.5	
	comp=N,317nm,0.5s						
CHIR	**Chirikof Islan**	**3.61**	**273**	P	Pn	03 15 19.2	-1.5
	baz=90						
CHIR				S	**Sn**	**03 15 58.5**	**-4.8**
	baz=90						
CNPM	**China Poot**	**3.92**	**345**		**Pn**	**03 15 24.3**	**-0.7**
CNPM					**Sn**	**03 16 09.8**	**-1.3**
Q19K	**Cape Douglas,**	**3.97**	**325**		**Pn**	**03 15 25.7**	**0.0**
Q19K	**Cape Douglas,**	**3.97**	**325**	P	**Pn**	**03 15 25.7**	**0.0**
	baz=142						
KAHG	**Katmai Hook Gl**	**3.98**	**316**		**Pn**	**03 15 26.6**	**+0.6**
Q23K	**Middleton Isla**	**3.99**	**22**		**Pn**	**03 15 24.8**	**-1.1**
Q23K	**Middleton Isla**	**3.99**	**22**	IAML		03 16 12.5	
	comp=N,496nm,2.5s						
Q23K				IAML		03 16 30.9	
	comp=E,354nm,2.4s						
Q23K	**Middleton Isla**	**3.99**	**22**	P	**Pn**	**03 15 24.8**	**-1.1**
	baz=203						
MID	**Middleton Isla**	**3.99**	**22**		**Pn**	**03 15 25.0**	**-0.9**
MID	**Middleton Isla**	**3.99**	**22**	IAML		03 16 12.5	
	comp=N,437nm,2.3s						
MID				IAML		03 16 30.9	
	comp=E,328nm,2.4s						
MID	**Middleton Isla**	**3.99**	**22**	P	**Pn**	**03 15 25.3**	**-0.6**
BRSE	**Bradley Lake S**	**4.07**	**349**		**Pn**	**03 15 26.2**	**-0.9**
BRSE					**Sn**	**03 16 12.7**	**-2.0**
BRSE	**Bradley Lake S**	**4.07**	**349**	P	**Pn**	**03 15 26.2**	**-0.9**
	baz=168						
BRSE				S	**Sn**	**03 16 12.7**	**-2.0**
	baz=168						
KCE	**Katmai Mt Cerb**	**4.09**	**310**		**Pn**	**03 15 28.0**	**+0.6**
BRLK	**Bradley Lake**	**4.10**	**348**	Pn	**Pn**	**03 15 26.3**	**-1.2**
BRLK				IAML		03 16 16.4	
	comp=E,289nm,0.6s						
BRLK				IAML		03 16 19.5	
	comp=N,227nm,0.7s						
BRLK	**Bradley Lake**	**4.10**	**348**		**Sn**	**03 16 13.1**	**-2.6**
HOM	**Homer**	**4.11**	**343**		**Pn**	**03 15 27.1**	**-0.5**
HOM				IAML		03 16 25.2	
	comp=N,594nm,0.6s						
HOM				IAML		03 16 25.4	
	comp=E,502nm,0.6s						
ACHA	**Angle Creek He**	**4.13**	**309**		**Pn**	**03 15 28.3**	**+0.3**
ANCK	**Angle Creek**	**4.20**	**308**		**Pn**	**03 15 29.5**	**+0.5**
KVTA	**Katmai Vly 10**	**4.22**	**311**		**Pn**	**03 15 30.1**	**+1.0**
AU22	**Augustine Moun**	**4.24**	**330**		**Pn**	**03 15 29.6**	**+0.3**
AUCH	**Augustine Cone**	**4.26**	**330**		**Pn**	**03 15 30.0**	**+0.3**
KAHC	**Katmai Hardscr**	**4.27**	**315**		**Pn**	**03 15 30.2**	**+0.3**
KAHC	**Katmai Hardscr**	**4.27**	**315**	P	**Pn**	**03 15 30.2**	**+0.3**
	baz=131						
AUL	**Augustine Lava**	**4.27**	**330**		**Pn**	**03 15 30.4**	**+0.5**
PLK3	**Peulik 3**	**4.33**	**299**		**Pn**	**03 15 30.8**	**+0.2**
SEW	**Seward**	**4.35**	**359**		**Pn**	**03 15 29.8**	**-1.1**
SEW	**Seward**	**4.35**	**359**	P	**Pn**	**03 15 29.8**	**-1.1**
	baz=178						
P23K	**Montague Islan**	**4.35**	**12**		**Pn**	**03 15 29.9**	**-1.0**
P23K	**Montague Islan**	**4.35**	**12**	P	**Pn**	**03 15 29.9**	**-1.0**
	baz=193						
CNTC	**Contact Creek**	**4.41**	**307**		**Pn**	**03 15 32.0**	**+0.2**
Q17K	**Contact Creek**	**4.41**	**307**	P	**Pn**	**03 15 32.0**	**+0.2**
	baz=123						
KELA	**Mount Kelaz**	**4.45**	**310**		**Pn**	**03 15 32.5**	**+0.2**
P19K	**Oil Pt**	**4.45**	**333**		**Pn**	**03 15 32.4**	**+0.1**
P19K				IAML		03 16 33.9	
	comp=E,452nm,0.5s						
P19K				IAML		03 16 41.4	
	comp=N,397nm,0.6s						
P19K	**Oil Pt**	**4.45**	**333**	P	**Pn**	**03 15 32.2**	**-0.1**
	baz=150						
PLK1	**Peulik 1**	**4.54**	**300**		**Pn**	**03 15 33.7**	**+0.2**
O20K	**Slope Mountain**	**4.69**	**339**		**Pn**	**03 15 34.8**	**-0.9**
O20K	**Slope Mountain**	**4.69**	**339**	P	**Pn**	**03 15 34.8**	**-0.9**
	baz=156						
IVE	**Iliamna Volcan**	**4.71**	**336**		**Pn**	**03 15 35.2**	**-0.8**
O22K	**Cooper Landing**	**4.74**	**357**		**Pn**	**03 15 35.5**	**-0.6**
O22K	**Cooper Landing**	**4.74**	**357**	P	**Pn**	**03 15 36.0**	**-0.2**
	baz=176						
SLKM	**Skilak Lake**	**4.78**	**354**		**Pn**	**03 15 35.9**	**-1.0**
P18K	**Big Mountain,**	**4.86**	**321**	Pn	**Pn**	**03 15 37.3**	**-0.6**
P18K	**Big Mountain,**	**4.86**	**321**	P	**Pn**	**03 15 37.4**	**-0.6**
	baz=136						
HIN	**Hinchinbrook I**	**4.86**	**16**		**Pn**	**03 15 37.7**	**-0.3**
HIN				IAML		03 16 31.6	
	comp=E,431nm,0.6s						
KAIM	**Kayak Island**	**4.90**	**30**		**Pn**	**03 15 38.0**	**-0.4**
KAIM				IAML		03 16 39.3	
	comp=E,360nm,0.5s						
KAIM	**Kayak Island**	**4.90**	**30**	P	**Pn**	**03 15 37.4**	**-1.1**
	baz=213						
Q16K	**King Salmon**	**4.98**	**309**		**Pn**	**03 15 39.7**	**+0.2**
Q16K	**King Salmon**	**4.98**	**309**	P	**Pn**	**03 15 39.7**	**+0.2**
	baz=124						
RED	**Redoubt Volcan**	**5.03**	**340**		Pn	03 15 38.6	-1.7
RSO	**Redoubt South**	**5.06**	**340**		**Pn**	**03 15 40.0**	**-0.9**
RDT	**Redoubt**	**5.10**	**342**		**Pn**	**03 15 39.8**	**-1.6**
RDWB	**Redoubt West**	**5.11**	**340**		**Pn**	**03 15 40.1**	**-1.3**
CAPN	**Captain Cook N**	**5.12**	**349**		**Pn**	**03 15 41.9**	**+0.5**
CAPN	**Captain Cook N**	**5.12**	**349**	IAML		03 16 47.7	
	comp=E,419nm,0.5s						
CAPN	**Captain Cook N**	**5.12**	**349**	P	**Pn**	**03 15 41.9**	**+0.5**
	baz=168						
EYAK	**Cordova Ski Ar**	**5.14**	**20**		**Pn**	**03 15 41.5**	**-0.2**
EYAK	**Cordova Ski Ar**	**5.14**	**20**	P	**Pn**	**03 15 41.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.14**	**20**	P	**Pn**	**03 15 41.5**	**-0.2**
	baz=202						
DFR	**Drift River**	**5.17**	**341**		**Pn**	**03 15 41.4**	**-0.9**
CHGN	**Chignik**	**5.18**	**280**		**Pn**	**03 15 41.0**	**-1.2**
CHGN	**Chignik**	**5.18**	**280**	IAML		03 16 40.1	
	comp=E,233nm,0.5s						
CHGN				IAML		03 16 42.9	
	comp=N,326nm,0.4s						
CHGN	**Chignik**	**5.18**	**280**	P	**Pn**	**03 15 41.0**	**-1.2**
	baz=93						
P17K	**Kvichak River**	**5.19**	**314**		**Pn**	**03 15 42.8**	**+0.4**
P17K	**Kvichak River**	**5.19**	**314**	P	**Pn**	**03 15 42.8**	**+0.4**
	baz=129						
NCT	**North Crescent**	**5.19**	**339**		**Pn**	**03 15 41.4**	**-1.1**
RDJH	**Redoubt Jeurge**	**5.19**	**340**		**Pn**	**03 15 41.5**	**-1.1**
O18K	**Koktuh Hills**	**5.19**	**325**	Pn	**Pn**	**03 15 42.0**	**-0.5**
O18K				IAML		03 16 49.2	
	comp=E,106nm,0.8s						
O18K				IAML		03 16 49.5	
	comp=N,94nm,1.3s						
O18K	**Koktuh Hills**	**5.19**	**325**	P	**Pn**	**03 15 42.1**	**-0.4**
	baz=140						
O19K	**Port Alsworth**	**5.20**	**331**		**Pn**	**03 15 41.6**	**-0.9**
O19K	**Port Alsworth**	**5.20**	**331**	IAML		03 16 44.3	
	comp=N,446nm,0.4s						
O19K				IAML		03 16 49.6	
	comp=E,411nm,0.5s						
O19K	**Port Alsworth**	**5.20**	**331**	P	**Pn**	**03 15 41.6**	**-0.9**
	baz=147						
SUCK	**Suckling Hills**	**5.20**	**32**		**Pn**	**03 15 42.4**	**-0.3**
SUCK				IAML		03 16 41.9	
	comp=E,301nm,0.7s						
SUCK				IAML		03 16 53.2	
	comp=N,312nm,0.7s						
RAGM	**Ragged Mountai**	**5.22**	**26**		**Pn**	**03 15 42.6**	**-0.3**
NICHA	**Nichawak Mount**	**5.28**	**30**		**Pn**	**03 15 43.8**	**0.0**
HMT	**Hamilton**	**5.29**	**28**		**Pn**	**03 15 43.7**	**-0.1**
RC01	**Rabbit Creek A**	**5.34**	**357**	Pn	**Pn**	**03 15 43.9**	**-0.6**
RC01	**Rabbit Creek A**	**5.34**	**357**	P	**Pn**	**03 15 43.8**	**-0.7**
	baz=177						
GOAT	**Goat Mountain**	**5.38**	**24**		**Pn**	**03 15 45.0**	**-0.1**
BGLC	**Bering Glacier**	**5.39**	**34**		**Pn**	**03 15 44.9**	**-0.3**
BGLC	**Bering Glacier**	**5.39**	**34**	P	**Pn**	**03 15 44.9**	**-0.3**
	baz=218						
FIS	**Fire Island**	**5.42**	**355**		**Pn**	**03 15 44.8**	**-0.7**
BERG	**Berg Lake**	**5.49**	**30**		**Pn**	**03 15 46.1**	**-0.4**
GRIN	**Grindle Hills**	**5.51**	**32**		**Pn**	**03 15 46.7**	**-0.2**
SNH	**Sunshine Point**	**5.58**	**35**		**Pn**	**03 15 47.5**	**-0.3**
CYK	**Cape Yakataga**	**5.62**	**37**		**Pn**	**03 15 47.8**	**-0.6**
KHIT	**Khitrov Hills**	**5.66**	**32**		**Pn**	**03 15 48.5**	**-0.5**
CKT	**Bend**	**5.67**	**345**		**Pn**	**03 15 47.7**	**-1.4**
N20K	**Mount Spurr**	**5.67**	**345**	P	**Pn**	**03 15 47.8**	**-1.3**
	baz=163						
SPCR	**Spurr Chakacha**	**5.67**	**345**		**Pn**	**03 15 47.8**	**-1.3**
KNK	**Knik Glacier**	**5.68**	**4**		**Pn**	**03 15 48.6**	**-0.5**
KNK	**Knik Glacier**	**5.68**	**4**	P	**Pn**	**03 15 48.7**	**-0.5**
	baz=184						
SPCN	**Chakachatna No**	**5.69**	**345**		**Pn**	**03 15 48.5**	**-0.8**
SPCP	**Crater Peak Br**	**5.72**	**346**		**Pn**	**03 15 49.6**	**-0.3**
SPCG	**Spurr Capps Gl**	**5.73**	**346**		**Pn**	**03 15 49.0**	**-1.0**
SPBG	**Spurr Blockage**	**5.75**	**345**		**Pn**	**03 15 49.9**	**-0.3**
BMRM	**Bremner River**	**5.75**	**23**		**Pn**	**03 15 49.7**	**-0.5**
BMRM	**Bremner River**	**5.75**	**23**	P	**Pn**	**03 15 49.7**	**-0.5**
	baz=206						
P16K	**Nushagak River**	**5.75**	**308**		**Pn**	**03 15 50.1**	**-0.1**
P16K	**Nushagak River**	**5.75**	**308**	P	**Pn**	**03 15 50.1**	**-0.1**
	baz=122						
N19K	**Bonanza Creek**	**5.77**	**333**		**Pn**	**03 15 49.4**	**-1.0**
N19K	**Bonanza Creek**	**5.77**	**333**	P	**Pn**	**03 15 49.4**	**-1.0**
	baz=149						
SUA	**Susitna One**	**5.77**	**353**		**Pn**	**03 15 49.4**	**-1.1**
SUA	**Susitna One**	**5.77**	**353**	P	**Pn**	**03 15 49.4**	**-1.1**
	baz=171						
WAX	**Waxell Ridge**	**5.79**	**33**		**Pn**	**03 15 50.3**	**-0.4**
S14K	**Fog Glacier**	**5.81**	**279**	P	**Pn**	**03 15 50.6**	**-0.4**
	baz=92						
VNFG	**Fog Glacier, M**	**5.81**	**279**		**Pn**	**03 15 50.6**	**-0.4**
O17K	**Koliganek Bris**	**5.81**	**317**		**Pn**	**03 15 50.7**	**-0.2**
O17K	**Koliganek Bris**	**5.81**	**317**	P	**Pn**	**03 15 50.7**	**-0.2**
	baz=131						
VNSW	**Veniaminof 7**	**5.81**	**277**		**Pn**	**03 15 50.6**	**-0.5**
PMR	**Palmer**	**5.84**	**0**		**Pn**	**03 15 51.2**	**-0.1**
PMR	**Palmer**	**5.84**	**0**	P	**Pn**	**03 15 51.1**	**-0.3**
PMR	**Palmer**	**5.84**	**0**	P	**Pn**	**03 15 51.3**	**-0.1**
	baz=180						
BARK	**Barkley Ridge**	**5.86**	**35**		**Pn**	**03 15 50.8**	**-1.0**
MESA	**MESA**	**5.88**	**38**		**Pn**	**03 15 51.7**	**-0.4**
MESA	**MESA**	**5.88**	**38**	P	**Pn**	**03 15 51.7**	**-0.4**
	baz=224						
SPNN	**North Nagishla**	**5.90**	**344**		**Pn**	**03 15 51.8**	**-0.5**
STLK	**Strandline Lak**	**5.91**	**348**		**Pn**	**03 15 51.6**	**-0.7**
CRQM	**Cirque**	**5.95**	**30**		**Pn**	**03 15 52.2**	**-0.7**
CRQE	**Cirque**	**5.96**	**30**	P	**Pn**	**03 15 52.3**	**-0.8**
	baz=215						
KLU	**Klutina**	**6.00**	**15**		**Pn**	**03 15 53.9**	**+0.3**
KLU	**Klutina**	**6.00**	**15**	P	**Pn**	**03 15 53.9**	**+0.3**
	baz=198						
GHO	**Glory Hole Cre**	**6.03**	**1**		**Pn**	**03 15 54.2**	**+0.3**
TGL	**Tana Glacier**	**6.03**	**31**		**Pn**	**03 15 53.5**	**-0.6**
N18K	**Kilae Creek**	**6.05**	**327**		**Pn**	**03 15 53.7**	**-0.5**
N18K	**Kilae Creek**	**6.05**	**327**	P	**Pn**	**03 15 53.5**	**-0.8**
	baz=142						
BAGL	**Bagley Icefiel**	**6.06**	**36**		**Pn**	**03 15 53.9**	**-0.4**
ISLE	**Juniper Island**	**6.06**	**34**		**Pn**	**03 15 53.7**	**-0.9**
SML	**Sawmill**	**6.08**	**4**		**Pn**	**03 15 54.7**	**+0.1**
SML	**Sawmill**	**6.08**	**4**	P	**Pn**	**03 15 54.7**	**+0.1**
	baz=184						
O16K	**Kokwok River B**	**6.11**	**313**		**Pn**	**03 15 54.9**	**-0.1**
O16K	**Kokwok River B**	**6.11**	**313**	P	**Pn**	**03 15 54.9**	**-0.1**
	baz=126						
SCM	**Sheep Creek Mo**	**6.16**	**8**		**Pn**	**03 15 56.1**	**+0.2**
SCM	**Sheep Creek Mo**	**6.16**	**8**	P	**Pn**	**03 15 56.6**	**+0.8**
	baz=190						
VRDI	**Verde Repeater**	**6.26**	**27**		**Pn**	**03 15 56.8**	**-0.4**
SAMH	**Samovar Hills**	**6.27**	**42**		**Pn**	**03 15 57.7**	**+0.3**
SVW2	**Sparrevohn**	**6.30**	**331**	Pn	Pn	03 15 55.8	-1.8
SVW2	**Sparrevohn**	**6.30**	**331**	P	**Pn**	**03 15 56.8**	**-0.8**
KIAG	**Kiagna River**	**6.31**	**32**		**Pn**	**03 15 57.5**	**-0.5**
N25K	**Chitina, Valde**	**6.33**	**20**		**Pn**	**03 15 58.3**	**0.0**
N25K	**Chitina, Valde**	**6.33**	**20**	P	**Pn**	**03 15 58.7**	**+0.5**
	baz=204						
SKT	**Skwentna**	**6.34**	**350**		**Pn**	**03 15 58.0**	**-0.3**
SKT	**Skwentna**	**6.34**	**350**	P	**Pn**	**03 15 58.0**	**-0.3**
	baz=168						
TABL	**Table Mountain**	**6.35**	**39**		**Pn**	**03 15 58.0**	**-0.6**
GRNC	**Granite Creek**	**6.35**	**35**		**Pn**	**03 15 58.1**	**-0.5**
GLB	**Gilahina Butte**	**6.36**	**24**	Pn	**Pn**	**03 15 58.2**	**-0.3**
N17K	**Nushagak Hills**	**6.36**	**322**		**Pn**	**03 15 58.0**	**-0.5**
N17K	**Nushagak Hills**	**6.36**	**322**	P	**Pn**	**03 15 58.0**	**-0.5**
	baz=136						
SDPT	**Sand Point**	**6.39**	**271**		Pn	03 15 57.5	-1.5
SDPT	**Sand Point**	**6.39**	**271**	P	**Pn**	**03 15 58.1**	**-0.9**
SDPT	**Sand Point**	**6.39**	**271**	P	Pn	03 15 57.5	-1.5
	baz=82						
PCA	**Pinnacle**	**6.45**	**44**		**Pn**	**03 15 59.7**	**-0.2**
PINM	**Pinnacle**	**6.46**	**44**	P	**Pn**	**03 15 59.7**	**-0.2**
	baz=231						
M20K	**Styx River**	**6.46**	**343**		**Pn**	**03 15 58.4**	**-1.5**
M20K	**Styx River**	**6.46**	**343**	P	**Pn**	**03 15 58.4**	**-1.5**
	baz=160						
PTPK	**Patty Peak**	**6.49**	**30**		**Pn**	**03 16 00.3**	**-0.2**
MCARA	**McCarthy VSAT**	**6.50**	**27**		**Pn**	**03 16 00.5**	**0.0**
MCARA	**McCarthy VSAT**	**6.50**	**27**	P	**Pn**	**03 16 00.5**	**0.0**
	baz=212						
M24K	**Tolsona, Glenn**	**6.55**	**13**		**Pn**	**03 16 01.9**	**+0.7**
M24K	**Tolsona, Glenn**	**6.55**	**13**	P	**Pn**	**03 16 01.9**	**+0.7**
	baz=195						
PNL	**Peninsula**	**6.56**	**49**		**Pn**	**03 16 01.0**	**-0.3**
PNL	**Peninsula**	**6.56**	**49**	P	**Pn**	**03 16 01.2**	**-0.1**
PNL	**Peninsula**	**6.56**	**49**	P	**Pn**	**03 16 01.0**	**-0.3**
	baz=237						
BCPM	**Bancas Point**	**6.62**	**47**		**Pn**	**03 16 02.2**	**+0.2**
BARN	**Barnard Glacie**	**6.63**	**34**		**Pn**	**03 16 02.2**	**-0.1**
O15K	**Ungalikthiuk R**	**6.66**	**305**		**Pn**	**03 16 02.7**	**+0.1**
O15K	**Ungalikthiuk R**	**6.66**	**305**	P	**Pn**	**03 16 02.7**	**+0.1**
	baz=117						
CTG	**Chitna Glacier**	**6.66**	**35**	P	**Pn**	**03 16 02.2**	**-0.5**
	baz=221						
CTGM	**Chitina Glacie**	**6.66**	**35**		**Pn**	**03 16 02.2**	**-0.6**
LOGN	**Logan Glacier**	**6.67**	**37**		**Pn**	**03 16 02.2**	**-0.7**
CUT	**Chulitna**	**6.68**	**356**		**Pn**	**03 16 02.7**	**-0.2**
M18K	**Stony River**	**6.69**	**332**		Pn	03 16 01.4	-1.6
M18K	**Stony River**	**6.69**	**332**	P	Pn	03 16 01.4	-1.6
	baz=146						
M19K	**Big River Lodg**	**6.71**	**339**		**Pn**	**03 16 02.6**	**-0.7**
M19K	**Big River Lodg**	**6.71**	**339**	P	**Pn**	**03 16 02.6**	**-0.7**
	baz=154						
WASW	**Wrangell South**	**6.71**	**21**		**Pn**	**03 16 02.9**	**-0.6**
WACK	**Wrangell Chich**	**6.73**	**20**		**Pn**	**03 16 04.2**	**+0.3**
WAT6	**Susitna Watana**	**6.88**	**6**		**Pn**	**03 16 05.7**	**0.0**
WAT6	**Susitna Watana**	**6.88**	**6**	P	**Pn**	**03 16 05.7**	**0.0**
	baz=187						
N16K	**Nishlik Lake**	**6.91**	**317**		**Pn**	**03 16 05.7**	**-0.3**
N16K	**Nishlik Lake**	**6.91**	**317**	P	**Pn**	**03 16 05.7**	**-0.3**
	baz=129						
HARP	**HAARP**	**6.97**	**16**		**Pn**	**03 16 06.9**	**0.0**
HARP	**HAARP**	**6.97**	**16**	P	**Pn**	**03 16 06.9**	**0.0**
	baz=199						
L19K	**White Mountain**	**7.06**	**338**	Pn	**Pn**	**03 16 07.2**	**-0.9**
L19K	**White Mountain**	**7.06**	**338**	P	**Pn**	**03 16 06.9**	**-1.2**
	baz=153						
M17K	**Holitna River**	**7.09**	**326**	Pn	**Pn**	**03 16 08.0**	**-0.4**
M17K	**Holitna River**	**7.09**	**326**	P	**Pn**	**03 16 08.1**	**-0.4**
	baz=140						
WAT7	**Susitna Watana**	**7.09**	**1**		**Pn**	**03 16 08.7**	**+0.1**
WAT1	**Susitna Watana**	**7.09**	**3**		**Pn**	**03 16 09.1**	**+0.5**
WAT1	**Susitna Watana**	**7.09**	**3**	P	**Pn**	**03 16 09.1**	**+0.5**
	baz=183						
L20K	**Farewell, AK**	**7.14**	**342**		**Pn**	**03 16 07.8**	**-1.5**
L20K	**Farewell, AK**	**7.14**	**342**	P	**Pn**	**03 16 07.8**	**-1.5**
	baz=158						
O29M	**Mount Kennedy**	**7.25**	**47**		**Pn**	**03 16 10.6**	**-0.3**
O29M	**Mount Kennedy**	**7.25**	**47**	P	**Pn**	**03 16 10.6**	**-0.3**
	baz=235						
N15K	**Kwethluk River**	**7.26**	**312**		**Pn**	**03 16 11.6**	**+0.7**
N15K	**Kwethluk River**	**7.26**	**312**	P	**Pn**	**03 16 11.6**	**+0.7**
	baz=123						
P29M	**Windy Craggy**	**7.27**	**53**		**Pn**	**03 16 10.7**	**-0.3**
P29M	**Windy Craggy**	**7.27**	**53**	P	**Pn**	**03 16 10.7**	**-0.3**
	baz=242						
PPLA	**Purkeypile**	**7.31**	**349**		**Pn**	**03 16 12.7**	**+1.0**
PPLA	**Purkeypile**	**7.31**	**349**	P	**Pn**	**03 16 12.7**	**+1.0**
	baz=167						
M16K	**Timber Creek**	**7.33**	**320**		**Pn**	**03 16 11.9**	**0.0**
M16K	**Timber Creek**	**7.33**	**320**	P	**Pn**	**03 16 11.9**	**0.0**
	baz=132						
O14K	**Tigyukauivet M**	**7.36**	**303**	Pn	**Pn**	**03 16 11.9**	**-0.3**
O14K	**Tigyukauivet M**	**7.36**	**303**	P	**Pn**	**03 16 12.6**	**+0.4**
	baz=114						
M26K	**Nabesna, AK**	**7.38**	**23**		**Pn**	**03 16 12.7**	**+0.1**
DHY	**Denali Highway**	**7.39**	**7**		**Pn**	**03 16 12.7**	**-0.1**
DHY	**Denali Highway**	**7.39**	**7**	P	**Pn**	**03 16 12.7**	**-0.1**
	baz=188			

S32K	**Killisnoo**	**8.26**	**72**	P		Pn	03 16 21.9	-2.6
	baz=264							
RIDG	**Independent Ri**	**8.30**	**14**			**Pn**	**03 16 25.8**	**+0.7**
RIDG	**Independent Ri**	**8.30**	**14**	P		**Pn**	**03 16 25.8**	**+0.7**
	baz=197							
BESE	**Bessie Mountai**	**8.30**	**64**			**Pn**	**03 16 23.6**	**-1.6**
SKAG	**Skagway**	**8.33**	**58**			**Pn**	**03 16 25.2**	**-0.2**
SKAG	**Skagway**	**8.33**	**58**	P		**Pn**	**03 16 25.6**	**+0.1**
SKAG	**Skagway**	**8.33**	**58**	P		**Pn**	**03 16 25.2**	**-0.2**
	baz=249							
M14K	**Bethel**	**8.36**	**312**			**Pn**	**03 16 25.8**	**-0.1**
K17K	**Iditarod**	**8.37**	**330**			Pn	03 16 24.4	-1.6
K17K	**Iditarod**	**8.37**	**330**	P		Pn	03 16 24.5	-1.6
	baz=142							
R32K	**Eaglecrest**	**8.41**	**67**			**Pn**	**03 16 26.7**	**+0.1**
BWN	**Browne**	**8.43**	**359**	Pn		**Pn**	**03 16 27.2**	**+0.3**
JIS	**Juneau Island**	**8.48**	**67**	P		**Pn**	**03 16 27.8**	**+0.2**
O30N	**Mendenhall**	**8.54**	**49**			**Pn**	**03 16 27.6**	**-0.9**
O30N	**Mendenhall**	**8.54**	**49**	P		**Pn**	**03 16 27.6**	**-0.9**
	baz=239							
J18K	**Innoko River**	**8.60**	**337**	Pn		**Pn**	**03 16 28.4**	**-0.7**
SCRK	**Sand Creek**	**8.64**	**16**	Pn		**Pn**	**03 16 29.5**	**-0.5**
M29M	**Somme Creek**	**8.68**	**35**			**Pn**	**03 16 30.2**	**-0.2**
M29M	**Somme Creek**	**8.68**	**35**	P		**Pn**	**03 16 30.2**	**-0.2**
	baz=224							
L15K	**Ungalak Mounta**	**8.69**	**318**			**Pn**	**03 16 30.8**	**+0.4**
L15K	**Ungalak Mounta**	**8.69**	**318**	P		**Pn**	**03 16 30.8**	**+0.4**
	baz=128							
HDA	**Harding Lake**	**8.74**	**7**			**Pn**	**03 16 31.4**	**+0.3**
WRH	**Wood River Hil**	**8.75**	**3**			**Pn**	**03 16 30.8**	**-0.4**
J20K	**Nowinta River**	**8.79**	**346**			**Pn**	**03 16 30.4**	**-1.3**
J20K	**Nowinta River**	**8.79**	**346**	P		**Pn**	**03 16 30.5**	**-1.3**
	baz=162							
M13K	**Dall Lake**	**8.80**	**308**	Pn		**Pn**	**03 16 32.2**	**+0.3**
M13K	**Dall Lake**	**8.80**	**308**	P		**Pn**	**03 16 32.4**	**+0.5**
	baz=116							
J19K	**Poorman**	**8.85**	**341**			Pn	03 16 31.0	-1.6
J19K	**Poorman**	**8.85**	**341**	P		Pn	03 16 31.0	-1.6
	baz=156							
NEA2	**Nenana**	**8.86**	**0**	Pn		**Pn**	**03 16 32.2**	**-0.5**
CCB	**Clear Creek Bu**	**8.94**	**4**			**Pn**	**03 16 33.3**	**-0.5**
L14K	**Kuka Creek**	**8.97**	**314**	Pn		**Pn**	**03 16 34.4**	**+0.2**
WHY	**Whitehorse**	**9.02**	**51**			**Pn**	**03 16 34.3**	**-0.7**
WHY	**Whitehorse**	**9.02**	**51**	P		**Pn**	**03 16 34.3**	**-0.7**
	baz=243							
K27K	**Chicken**	**9.03**	**20**			**Pn**	**03 16 35.4**	**+0.4**
N31M	**Braeburn, Yuko**	**9.05**	**45**			**Pn**	**03 16 35.5**	**+0.1**
N31M	**Braeburn, Yuko**	**9.05**	**45**	P		**Pn**	**03 16 35.5**	**+0.1**
	baz=236							
U33K	**Whale Pass**	**9.05**	**81**			Pn	03 16 31.4	-4.0
U33K	**Whale Pass**	**9.05**	**81**	P		Pn	03 16 31.4	-4.0
	baz=274							
J25K	**Salcha River,**	**9.08**	**11**			**Pn**	**03 16 35.5**	**-0.3**
J25K	**Salcha River,**	**9.08**	**11**	P		**Pn**	**03 16 35.5**	**-0.3**
	baz=194							
K15K	**Wolf Creek Mou**	**9.10**	**321**			**Pn**	**03 16 35.7**	**-0.3**
IL31		**9.11**	**6**			**Pn**	**03 16 36.8**	**+0.7**
ILAR	**Eielson Array**	**9.11**	**6**	Pn		**Pn**	**03 16 36.1**	**0.0**
ILAR	**Eielson Array**	**9.11**	**6**	Pn		**Pn**	**03 16 35.7**	**-0.5**
	comp=N,1.2nm,0.3s,baz=189,slow=13,SNR=43							
ILAR				Sn		Sn	03 18 11.9	-6.7
	comp=N,1.4nm,0.3s,baz=184,slow=22,SNR=11							
	comp=N,3.6nm,0.5s							
P32M	**Atlin**	**9.15**	**59**			**Pn**	**03 16 35.8**	**-0.9**
P32M	**Atlin**	**9.15**	**59**	P		**Pn**	**03 16 36.0**	**-0.8**
	baz=251							
COLA	**College**	**9.16**	**4**			**Pn**	**03 16 37.5**	**+0.7**
COLA	**College**	**9.16**	**4**	P		**Pn**	**03 16 38.5**	**+1.6**
J26L	**Joseph Creek**	**9.20**	**16**			**Pn**	**03 16 38.2**	**+0.7**
J26L	**Joseph Creek**	**9.20**	**16**	P		**Pn**	**03 16 38.2**	**+0.7**
	baz=200							
MDM	**Murphy Dome**	**9.24**	**3**			**Pn**	**03 16 38.2**	**+0.2**
L29M	**L29M**	**9.27**	**33**			**Pn**	**03 16 38.4**	**0.0**
L29M	**L29M**	**9.27**	**33**	P		**Pn**	**03 16 38.4**	**0.0**
	baz=222							
MLY	**Manley**	**9.32**	**356**			**Pn**	**03 16 38.7**	**-0.4**
MLY	**Manley**	**9.32**	**356**	P		**Pn**	**03 16 38.7**	**-0.4**
	baz=175							
M30M	**Minto, Yukon**	**9.33**	**38**			**Pn**	**03 16 39.0**	**-0.3**
M30M	**Minto, Yukon**	**9.33**	**38**	P		**Pn**	**03 16 39.0**	**-0.3**
	baz=228							
I23K	**Minto, Yukon-K**	**9.41**	**360**			**Pn**	**03 16 39.7**	**-0.6**
I23K	**Minto, Yukon-K**	**9.41**	**360**	P		**Pn**	**03 16 39.7**	**-0.6**
	baz=179							
J16K	**Anvik River**	**9.48**	**327**			**Pn**	**03 16 40.3**	**-1.0**
I21K	**Tanana**	**9.54**	**353**			**Pn**	**03 16 42.5**	**+0.4**
I21K	**Tanana**	**9.54**	**353**	P		**Pn**	**03 16 42.5**	**+0.4**
	baz=170							
DAWY	**Dawson**	**9.67**	**27**			**Pn**	**03 16 44.0**	**+0.2**
Q32M	**Nakina River**	**9.70**	**64**			**Pn**	**03 16 44.3**	**-0.2**
P33M	**Teslin, Yukon**	**9.78**	**56**	Pn		**Pn**	**03 16 44.7**	**-0.7**
P33M	**Teslin, Yukon**	**9.78**	**56**	P		**Pn**	**03 16 44.7**	**-0.7**
	baz=250							
EGAK	**Eagle**	**9.88**	**21**			**Pn**	**03 16 47.6**	**+0.9**
PRP	**Porcupine Dome**	**9.95**	**9**			**Pn**	**03 16 47.3**	**-0.5**
M31M	**Drury Creek, Y**	**10.00**	**44**			**Pn**	**03 16 48.7**	**+0.4**
K29M	**Barlow Dome**	**10.00**	**31**	Pn		**Pn**	**03 16 48.8**	**+0.3**
I26K	**Coal Creek Min**	**10.02**	**15**			**Pn**	**03 16 48.9**	**+0.2**
N32M	**Quiet Lake**	**10.02**	**51**			**Pn**	**03 16 48.8**	**+0.1**
H21K	**Melozitna Rive**	**10.07**	**352**			**Pn**	**03 16 48.5**	**-0.9**
J14K	**Nanvaranak Lak**	**10.12**	**320**	Pn		**Pn**	**03 16 50.1**	**+0.2**
H24K	**Noodor Dome**	**10.13**	**3**	Pn		**Pn**	**03 16 50.8**	**+0.7**
J29N	**Klondike Camp**	**10.28**	**28**			**Pn**	**03 16 52.2**	**-0.1**
MAYO	**Mayo, Yukon**	**10.33**	**35**			**Pn**	**03 16 53.0**	**+0.1**
FARO	**Faro, Yukon**	**10.42**	**45**	Pn		**Pn**	**03 16 54.7**	**+0.5**
H18K	**Honhosa River**	**10.42**	**338**			**Pn**	**03 16 53.3**	**-0.8**
R33M	**Jennings River**	**10.45**	**62**			**Pn**	**03 16 53.7**	**-1.0**
IMAR	**Indian Mountai**	**10.48**	**350**	Pn		Pn	03 16 51.8	-3.1
H17K	**Granite Mounta**	**10.59**	**335**			**Pn**	**03 16 56.0**	**-0.4**
I28M	**Miner Creek**	**10.72**	**21**			**Pn**	**03 16 58.4**	**+0.1**
DLBC	**Dease Lake**	**10.78**	**68**	Pn		**Pn**	**03 16 58.3**	**-0.8**
DLBC	**Dease Lake**	**10.78**	**68**	Pn		**Pn**	**03 16 58.6**	**-0.4**
	comp=N,0.7nm,0.3s,baz=288,slow=9.9,SNR=7.5							
DLBC				Sn		**Sn**	**03 18 53.5**	**-6.1**
	comp=N,0.1nm,0.3s,baz=54,slow=24,SNR=0.8							
DLBC				LR		LR	03 20 24.3	
	comp=N,355nm,21.2s,baz=310,slow=34							
	comp=N,1.5nm,0.3s							
J30M	**Hart River**	**10.90**	**31**	Pn		**Pn**	**03 17 01.5**	**+0.7**
G23K	**Bananza Creek**	**10.99**	**358**	Pn		**Pn**	**03 17 02.0**	**0.0**
FYU	**Fort Yukon**	**11.00**	**8**	Pn		**Pn**	**03 17 02.5**	**+0.4**
G24K	**Hadweenzic Riv**	**11.00**	**4**			**Pn**	**03 17 02.3**	**+0.2**
G18K	**Tagagawik**	**11.13**	**340**			**Pn**	**03 17 03.2**	**-0.7**
I30M	**Mount Dempster**	**11.38**	**28**			**Pn**	**03 17 07.5**	**+0.2**
F21K	**Alatna River**	**11.67**	**352**	Pn		**Pn**	**03 17 11.1**	**-0.1**
H29M	**Whitestone**	**11.71**	**22**			**Pn**	**03 17 11.1**	**-0.6**
F20K	**Avaraart Lake**	**11.73**	**347**			**Pn**	**03 17 12.0**	**+0.1**
F19K	**Shaleruckik Mo**	**11.82**	**343**	Pn		**Pn**	**03 17 13.7**	**+0.5**
BMAR	**Burnt Mountain**	**11.90**	**9**	Pn		**Pn**	**03 17 13.7**	**-0.7**
E19K	**Redstone River**	**12.31**	**345**			Pn	03 17 18.2	-1.8
F28M	**Old Crow**	**12.67**	**17**	Pn		**Pn**	**03 17 23.5**	**-1.3**
G30M	**tAoh Zraii Nji**	**12.82**	**24**			**Pn**	**03 17 27.1**	**+0.1**
E18K	**Tukpahlearik C**	**12.85**	**340**			**Pn**	**03 17 27.4**	**+0.2**
TOLK	**Toolik Lake Re**	**12.92**	**359**			**Pn**	**03 17 28.1**	**-0.2**
G31M	**Satah River**	**13.24**	**26**	Pn		**Pn**	**03 17 32.9**	**+0.4**
D27M	**Malcolm River**	**14.03**	**12**			**Pn**	**03 17 43.9**	**+0.4**
FLDN	**Fort Liard**	**14.32**	**61**			**Pn**	**03 17 46.4**	**-1.0**
C16K	**Lisburne Hills**	**14.57**	**336**			**Pn**	**03 17 50.5**	**-0.3**
WRGLY	**Wrigley**	**14.98**	**50**			**Pn**	**03 17 56.1**	**-0.2**
WRGLY				IAmb		IAmb	03 18 11.6	
	comp=Z,30nm,1.2s							
C36M	**Paulatuk**	**17.67**	**30**	Pn		**Pn**	**03 18 29.6**	**-1.1**
E03A	**Lebam**	**18.46**	**109**			**P**	**03 18 41.1**	**+0.7**
YKA	**Yellowknife Ar**	**18.81**	**55**	P		**P**	**03 18 43.8**	**-0.4**
YKA	**Yellowknife Ar**	**18.81**	**55**	P		**P**	**03 18 44.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=266,slow=11,SNR=14							
	comp=Z,2.5nm,0.9s							
A36M	**Sachs Harbour**	**19.14**	**23**			**P**	**03 18 48.1**	**+0.3**
A36M				IAmb		IAmb	03 19 00.8	
	comp=Z,27nm,0.9s							
HOOD	**Mount Hood Mea**	**20.27**	**109**	P		**P**	**03 18 59.3**	**-1.1**
HOOD				IAmb		IAmb	03 19 01.1	
	comp=Z,10nm,0.7s							
H04A	**Detroit Lake**	**20.41**	**112**			**P**	**03 19 02.5**	**+0.7**
H04A				IAmb		IAmb	03 19 13.9	
	comp=Z,22nm,1.3s							
I04A	**Tendick Farm,**	**20.91**	**114**	P		**P**	**03 19 06.3**	**-0.9**
DBO	**Dodson Butte**	**20.96**	**116**	P		**P**	**03 19 08.0**	**+0.2**
NEW	**Newport**	**20.99**	**97**	P		**P**	**03 19 07.8**	**-0.3**
NEW	**Newport**	**20.99**	**97**	P		**P**	**03 19 08.2**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=287,slow=13,SNR=3.0							
	comp=Z,2.0nm,0.9s							
K02D	**Willamette Mer**	**21.05**	**118**	P		**P**	**03 19 08.7**	**-0.2**
K02D				IAmb		IAmb	03 19 18.5	
	comp=Z,18nm,1.1s							
HUMO	**Hull Mountain**	**21.48**	**117**	P		**P**	**03 19 11.3**	**-2.0**
HUMO				IAmb		IAmb	03 19 24.5	
	comp=Z,11nm,1.1s							
PINE	**Pine Mountain**	**21.67**	**112**	P		**P**	**03 19 13.2**	**-2.5**
PINE				IAmb		IAmb	03 19 29.5	
	comp=Z,16nm,1.1s							
J05D	**Fort Rock, OR**	**21.87**	**113**	P		**P**	**03 19 14.1**	**-3.6**
J05D				IAmb		IAmb	03 19 33.2	
	comp=Z,16nm,1.2s							
I07A	**Izee**	**22.24**	**109**	P		**P**	**03 19 20.6**	**-1.1**
BILL	**Bilibino**	**23.65**	**319**	P		**P**	**03 19 34.9**	**-0.9**
BILL				IAmb		IAmb	03 19 37.8	
	comp=Z,23nm,1.3s							
PNTR	**Pine Nut**	**25.80**	**118**	P		**P**	**03 19 56.2**	**+0.1**
PNTR				IAmb		IAmb	03 20 05.4	
	comp=Z,5.1nm,0.8s							
YERR	**Yerington**	**26.05**	**117**	P		**P**	**03 19 57.6**	**-0.8**
KVN	**Kaiserville**	**26.58**	**116**	P		**P**	**03 20 03.2**	**0.0**
NVAR	**Mina Array Bea**	**26.95**	**117**	P		**P**	**03 20 06.7**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=307,slow=7.8,SNR=7.2							
	comp=Z,2.1nm,0.9s							
PDAR	**Pinedale Array**	**28.54**	**100**	P		**P**	**03 20 18.8**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=300,slow=7.2,SNR=2.1							
	comp=Z,0.2nm,0.6s							
PETK	**Petropavlovsk-**	**30.35**	**288**	P		**P**	**03 20 35.5**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=72,slow=14,SNR=4.4							
	comp=Z,1.1nm,0.6s							
X16A	**Lo Mia Camp, P**	**33.55**	**114**	P		**P**	**03 21 04.9**	**0.0**
X16A				IAmb		IAmb	03 21 14.8	
	comp=Z,3.2nm,1.0s							
TIXI	**Tiksi**	**36.12**	**328**	P		**P**	**03 21 25.3**	**-1.1**
TIXI				IAmb		IAmb	03 21 28.5	
	comp=Z,5.9nm,1.1s							
TXAR	**Lajitas Array**	**41.62**	**110**	P		**P**	**03 22 13.2**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=3.9,slow=4.0,SNR=4.2							
	comp=Z,0.6nm,0.9s							
SCHQ	**Schefferville**	**44.26**	**55**	P		**P**	**03 22 33.5**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=293,slow=4.3,SNR=4.8							
	comp=Z,3.9nm,0.9s							
SPA1	**Spitsbergen Ar**	**46.02**	**4**	P		**P**	**03 22 47.8**	**0.0**
SPB1	**Spitsbergen Ar**	**46.02**	**4**	P		**P**	**03 22 47.0**	**-0.7**
SPA0	**Spitsbergen Ar**	**46.02**	**4**	P		**P**	**03 22 48.0**	**+0.2**
SPITS	**Spitsbergen Ar**	**46.02**	**4**	P		**P**	**03 22 47.4**	**-0.3**
	comp=Z,12nm,0.9s,baz=353,slow=7.4,SNR=2.6							
	comp=Z,12nm,0.9s							
NRIK	**Noril'sk**	**48.59**	**337**	P		**P**	**03 23 08.1**	**+0.2**
NRIK				IAmb		IAmb	03 23 09.6	
	comp=Z,15nm,1.3s							
NRIK	**Noril'sk**	**48.59**	**337**	P		**P**	**03 23 07.8**	**0.0**
	comp=Z,5.1nm,0.6s,baz=43,slow=7.9,SNR=9.5							
	comp=Z,5.1nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**48.65**	**240**	T		T	04 15 41.0	
	baz=31,slow=76,SNR=6.7							
H11N3	**WAKE ISLAND Hy**	**48.66**	**240**	T		T	04 16 00.7	
	baz=31,slow=76,SNR=6.8							
H11N1	**WAKE ISLAND Hy**	**48.67**	**240**	T		T	04 15 53.3	
	baz=31,slow=76,SNR=7.0							
MVL	**Millersville**	**49.01**	**77**	P		**P**	**03 23 11.1**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**49.79**	**240**	T		T	04 17 53.7	
	baz=28,slow=76,SNR=10							
H11S2	**WAKE ISLAND Hy**	**49.80**	**240**	T		T	04 17 51.4	
	baz=28,slow=76,SNR=5.5							
H11S3	**WAKE ISLAND Hy**	**49.80**	**240**	T		T	04 17 46.0	
	baz=28,slow=76,SNR=4.9							
KEV	**Kevo**	**54.75**	**2**	P		**P**	**03 23 53.7**	**-0.1**
ARCES	**ARCESS Array B**	**54.94**	**2**	P		**P**	**03 23 54.7**	**-0.5**
ARCES				IAmb		IAmb	03 24 20.2	
	comp=Z,17nm,1.4s							
ARCES	**ARCESS Array B**	**54.94**	**2**	P		**P**	**03 23 54.7**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=343,slow=3.8,SNR=18							
	comp=Z,2.7nm,0.5s							
SONM	**Songino Array**	**58.99**	**310**	P		**P**	**03 24 23.2**	**-1.2**
SONM				IAmb		IAmb	03 24 26.7	
	comp=Z,6.1nm,1.2s							
SONM	**Songino Array**	**58.99**	**310**	P		**P**	**03 24 25.2**	**+0.8**
	comp=Z,3.2nm,0.9s,baz=57,slow=5.5,SNR=5.6							
	comp=Z,3.2nm,0.9s							
ZALV	**Zalesovo Beam**	**62.01**	**327**	P		**P**	**03 24 45.3**	**+0.6**
ZALV	**Zalesovo Beam**	**62.01**	**327**	P		**P**	**03 24 45.4**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=25,slow=6.0,SNR=15							
	comp=Z,3.2nm,0.7s							
HHC	**Hu-ho-hao-te**	**62.03**	**302**	*eP*		**P**	**03 24 49.0**	**+3.8**
HHC				pmax		pmax		
	comp=Z,11nm,0.5s							
HHC				pmax		pmax		
	comp=Z,140nm,5.0s							
NC405	**NORSAR Array S**	**62.49**	**10**	P		**P**	**03 24 48.4**	**+0.5**
NB2	**NORSAR Subarra**	**62.52**	**11**	P		**P**	**03 24 48.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=347,slow=6.9							
NOA	**NORSAR Array B**	**62.52**	**11**	P		**P**	**03 24 48.3**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=349,slow=6.8,SNR=3.7							
	comp=Z,1.3nm,0.7s							
FIA1	**FINESS Array B**	**63.07**	**3**	P		**P**	**03 24 52.3**	**+0.7**
FINES	**FINESS Array B**	**63.07**	**3**	P		**P**	**03 24 52.0**	**+0.4**
FINES	**FINESS Array B**	**63.07**	**3**	P		**P**	**03 24 52.2**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=0.3,slow=9.4,SNR=30							
	comp=Z,4.5nm,0.6s							
HFS	**Hagfors**	**63.65**	**9**	P		**P**	**03 24 55.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=191,slow=4.5,SNR=6.1							
	comp=Z,1.2nm,0.6s							
BVAR	**Borovoye Array**	**66.76**	**335**	P		**P**	**03 25 16.6**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=37,slow=7.8,SNR=14							
	comp=Z,3.8nm,0.7s							
KURBB	**Kurchatov Arra**	**66.80**	**329**	P		**P**	**03 25 16.5**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=27,slow=6.2,SNR=7.9							
	comp=Z,1.9nm,0.6s							
MK31	**Makanchi Array**	**69.03**	**325**	P		**P**	**03 25 30.8**	**+0.5**
MK31				IAmb		IAmb	03 25 31.6	
	comp=Z,2.5nm,1.0s							
MKAR	**Makanchi Array**	**69.03**	**325**	P		**P**	**03 25 30.5**	**+0.3**
MKAR	**Makanchi Array**	**69.03**	**325**	P		**P**	**03 25 30.7**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=30,slow=6.1,SNR=14							
	comp=Z,2.2nm,0.5s							
MAKZ	**Makanchi**	**69.12**	**325**	P		**P**	**03 25 30.7**	**-0.1**
MAKZ				IAmb		IAmb	03 25 31.8	
	comp=Z,3.9nm,0.8s							
CLL	**Collm**	**72.28**	**12**	*eP*		**P**	**03 25 50.0**	**+0.1**
ABKAR	**Akbulak array**	**72.55**	**340**	P		**P**	**03 25 52.3**	**+0.8**
ABKAR	**Akbulak array**	**72.55**	**340**	P		**P**	**03 25 52.4**	**+0.9**
ABKAR				IAmb		IAmb	03 25 53.2	
	comp=Z,3.5nm,0.7s							
AKASG	**Malin Array Be**	**73.89**	**1**	P		**P**	**03 25 60.0**	**+0.5**
	comp=Z,5.4nm,0.7s,baz=359,slow=5.8,SNR=17							
	comp=Z,5.4nm,0.7s							
MORC	**Moravsky Berou**	**74.25**	**9**	*eP*		**P**	**03 26 02.4**	**+0.8**
VRAC	**Vranov**	**74.63**	**10**	*eP*		**P**	**03 26 04.8**	**+1.0**
GERES	**GERESS Array B**	**74.78**	**12**	P		**P**	**03 26 05.8**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=355,slow=6.7,SNR=8.8							
	comp=Z,1.5nm,0.6s							
CONA	**Conrad Observa**	**75.92**	**10**	*i* P		**P**	**03 26 13.1**	**+1.7**
	comp=Z,0.4nm,0.3s							
MOTA	**Mosalm**	**75.94**	**14**	*i* pP		**P**	**03 26 15.4**	**+3.8**
	comp=Z,1.2nm,0.6s							
SQTA	**Sankt Quirin**	**76.08**	**14**	*eP*		**P**	**03 26 12.9**	**+0.6**
	comp=Z,1.1nm,0.3s							
WTTA	**Wattenberg**	**76.09**	**13**	*i* P		**P**	**03 26 13.8**	**+1.4**
	comp=Z,2.7nm,0.6s							
FETA	**Feichten**	**76.21**	**14**	*i* P		**P**	**03 26 14.6**	**+1.5**
	comp=Z,2.3nm,0.9s							
KBA	**Koelnbreinsper**	**76.48**	**12**	*i* P		**P**	**03 26 16.1**	**+1.4**
	comp=Z,3.5nm,0.6s							
SOKA	**Soboth**	**77.07**	**11**	*i* P		**P**	**03 26 19.0**	**+1.1**
	comp=Z,1.1nm,0.4s							
OBKA	**Obir**	**77.18**	**11**	*i* P		**P**	**03 26 19.7**	**+1.1**
	comp=Z,4.2nm,0.5s							
PZH	**PanZhiHua**	**78.40**	**300**	P		P	03 26 31.4	+5.7
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
KBZ	**Khabaz**	**80.34**	**351**	P		**P**	**03 26 36.8**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=8.7,slow=6.8,SNR=10							
	comp=Z,3.2nm,0.8s							
ESDC	**Sonseca Array**	**80.44**	**26**	P		**P**	**03 26 37.3**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=340,slow=5.1,SNR=7.6							
	comp=Z,1.7nm,0.9s							
GEYT	**Alibeck**	**83.80**	**339**	P		**P**	**03 26 55.2**	**+1.1**
	comp=Z,2.4nm,0.5s,baz=25,slow=4.9,SNR=6.5							
	comp=Z,2.4nm,0.5s							
BRTR	**Keskin Array B**	**84.84**	**358**	P		**P**	**03 27 00.6**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=332,slow=2.5,SNR=7.5							
	comp=Z,1.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**86.55**	**298**	P		**P**	**03 27 08.8**	**+0.6**
	comp=Z,2.3nm,0.4s,baz=11,slow=5.4,SNR=10							
	comp=Z,2.3nm,0.4s							
QSPA	**South Pole Qui**	**145.56**	**180**	PKPbc		**PKPdf**	**03 34 01.7**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=24,slow=1.6,SNR=5.1							
BOSA	**Boshof**	**152.58**	**11**	PKPbc		**PKPdf**	**03 34 20.0**	**+5.8**
	comp=Z,1.2nm,0.8s,baz=342,slow=3.2,SNR=4.3							

TAP 08 03:15:21.6, 23.99N × 121.57E, h8km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**109**	*i* P	Pg	03 15 23.4	+0.3
	baz=108						
HWA				S	Sg	03 15 24.9	+0.7
	baz=108						
ETM	**Tongmen**	**0.08**	**254**	*i* P	Pg	03 15 24.1	+0.4
	baz=254						
ETM				S	Sg	03 15 25.7	+0.6
	baz=254						
TWD	**Chiawan**	**0.10**	**13**	*i* P	Pg	03 15 24.4	+0.5
	baz=17						
TWD				*i* S	Sg	03 15 26.2	+0.7
	baz=17						
LXIB	**Xiulin Townshi**	**0.15**	**283**	*i* P	Pg	03 15 25.6	+0.7
	baz=283						
ETL	**Fush Village**	**0.18**	**15**	P	Pg	03 15 25.7	+0.4
	baz=15						
ETL				*e*S	Sg	03 15 28.7	+0.9
	baz=15						
NACB	**Ninganchiao**	**0.19**	**6**	*e*P	Pg	03 15 25.9	+0.4
	baz=6.0						
ESL	**Shilin**	**0.21**	**217**	*e*P	Pg	03 15 26.1	+0.1
	baz=214						
ETLH	**Xiulin Townshi**	**0.23**	**339**	P	Pg	03 15 27.1	+0.7
	baz=339						

IDC ***08*** *03:15:23.4±1.0, 23.79N × 121.69E, h0km, mb3.6/7, mbtmp3.7/9, ML3.7/2, Error ellipse: s-maj=24.2km s-min=22.5km az=73.0*
JMA ***08*** *03:15:24.7±0.2, 24.0N±0.2 × 121.6E±0.8, h2km±2km, MV3.7/15, TAIWAN REGION*
ASIES ***08*** *03:15:25.1, 23.97N × 121.60E, h7km, ML4.2, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.55; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-0.73; $M_{r\theta}$1.56; $M_{\theta\phi}$-0.47; $M_{\phi r}$2.93; Fault plane solution: $M_0$3.41152×10^{22} NP1:ϕ_s28.13000°, δ83.76000°, λ92.11000°. NP2:ϕ_s189.38000°, δ6.59000°, λ71.37000°. Principal axes: T Plg51.2000°, Azm300.5110°; N Plg2.1010°, Azm207.8950°; P Plg38.7220°, Azm116.2100°;*
TAP ***08*** *03:15:25.1, 23.97N × 121.60E, h7km, ML4.2, B*
ISC 08 03:15:25.6±0.8, 23.96N±0.01 × 121.64E±0.01, h7km±5km, n184, σ0881/300, mb3.7/8, 1C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**302**	⇑ *i* P

LATG	**Datong**	**0.59**	**350**	P		**Pg**	03 15 36.5	-0.5
	baz=353								
LATG				*e*S		**Sg**	03 15 45.4	+0.8
	baz=353								
WPL	**Puli Township**	**0.63**	**275**	*e*P		**Pg**	03 15 37.5	-0.2
	baz=275								
WPL				*e*S		**Sg**	03 15 46.3	+0.4
	baz=275								
EOS4	**EOS4**	**0.64**	**75**	*e*P		**Pb**	03 15 39.4	+0.5
	baz=96								
EOS4				*e*S		**Sn**	03 15 49.9	-1.1
	baz=96								
YULB	**Yu-li**	**0.64**	**210**	P		**Pg**	03 15 38.2	+0.2
YULB	**Yu-li**	**0.64**	**210**	P		**Pg**	03 15 37.8	-0.2
	baz=217								
YULB				*e*S		**Sg**	03 15 46.4	0.0
	baz=217								
ESAO	**Su ao**	**0.65**	**16**	*e*P		**Pg**	03 15 38.1	+0.1
	baz=20								
ESAO				*e*S		**Sb**	03 15 48.1	-0.3
	baz=20								
SSLB	**Suanglung**	**0.65**	**255**	P		**Pg**	03 15 37.6	-0.6
SSLB	**Suanglung**	**0.65**	**255**	⇓*i*P		**Pg**	03 15 37.5	-0.6
	baz=255								
SSLB				S		**Sg**	03 15 45.6	-1.0
	baz=255								
NDT	**Datong Townshi**	**0.66**	**350**	⇓*e*P		**Pg**	03 15 38.0	-0.3
	baz=343								
NDT				*e*S		**Sg**	03 15 47.3	+0.6
	baz=343								
ECBN	**Changbin**	**0.66**	**196**	*e*P		**Pb**	03 15 39.0	-0.4
	baz=181								
ECBN				*e*S		**Sb**	03 15 50.1	+1.3
	baz=181								
DPDB	**Guoxing**	**0.66**	**277**	P		**Pg**	03 15 38.2	-0.1
	baz=277								
DPDB				*e*S		**Sg**	03 15 47.3	+0.3
	baz=277								
EYUL	**Yuli**	**0.67**	**206**	*e*P		**Pg**	03 15 38.6	+0.1
	baz=216								
EYUL				*e*S		**Sb**	03 15 48.7	-0.5
	baz=216								
WCS	**Beigang Elemen**	**0.68**	**279**	⇓*e*P		**Pg**	03 15 38.3	-0.3
	baz=279								
WCS				*e*S		**Sg**	03 15 47.4	-0.1
	baz=279								
TWC	**Suao**	**0.68**	**16**	*e*P		**Pg**	03 15 38.4	-0.3
	baz=11								
TWC				*e*S		**Sb**	03 15 48.6	-0.8
	baz=11								
NDS	**Dongshan**	**0.68**	**6**	*e*P		**Pg**	03 15 38.5	-0.2
	baz=8.0								
NDS				*e*S		**Sb**	03 15 48.5	-0.9
	baz=8.0								
TWF1	**Yuli**	**0.68**	**208**	*e*P		**Pg**	03 15 38.1	-0.6
	baz=217								
TWF1				*e*S		**Sb**	03 15 48.6	-0.8
	baz=217								
SMLT	**Sun Moon Lake**	**0.68**	**264**	⇓P		**Pg**	03 15 38.4	-0.4
	baz=264								
SMLT				*e*S		**Sg**	03 15 47.7	0.0
	baz=264								
ENTT	**Nioudou**	**0.69**	**354**	⇓P		**Pg**	03 15 38.6	-0.2
	baz=357								
ENTT				*e*S		**Sb**	03 15 48.7	-0.9
	baz=357								
EOS3	**EOS3**	**0.70**	**62**	*e*P		**Pb**	03 15 40.7	+0.7
	baz=60								
WHP	**Taichung City**	**0.71**	**297**	⇓P		**Pg**	03 15 39.2	-0.1
	baz=289								
WHP				*e*S		**Sb**	03 15 49.7	-0.8
	baz=289								
TYC	**Yuchr**	**0.72**	**266**	*e*P		**Pg**	03 15 38.8	-0.6
	baz=266								
TYC				*e*S		**Sg**	03 15 49.0	+0.2
	baz=266								
YHNB	**Yeheng**	**0.75**	**341**	P		**Pg**	03 15 40.4	+0.3
YHNB	**Yeheng**	**0.75**	**341**	⇓*e*P		**Pg**	03 15 39.9	-0.2
	baz=344								
YHNB				*e*S		**Sg**	03 15 50.0	+0.1
	baz=344								
NSK	**Sanguang**	**0.76**	**340**	⇓*e*P		**Pg**	03 15 40.0	-0.2
	baz=335								
NSK				*e*S		**Sg**	03 15 50.3	0.0
	baz=335								
WHYT	**Xinyi Township**	**0.77**	**251**	*e*P		**Pg**	03 15 40.1	-0.3
	baz=258								
WHYT				*e*S		**Sg**	03 15 50.7	+0.4
	baz=258								
CHKH	**Chenggong**	**0.79**	**197**	*e*P		**Pg**	03 15 41.0	+0.2
	baz=184								
CHKH				*e*S		**Sn**	03 15 54.1	-1.2
	baz=184								
FUSB	**Fushanzhiwuyua**	**0.80**	**356**	*e*P		**Pg**	03 15 41.0	-0.1
	baz=359								
FUSB				*e*S		**Sb**	03 15 52.5	-0.6
	baz=359								
ILA	**Ilan**	**0.81**	**7**	*e*P		**Pb**	03 15 42.1	0.0
	baz=10.0								
ILA				*e*S		**Sn**	03 15 54.6	-1.2
	baz=10.0								
FULB	**Fuli**	**0.82**	**203**	*e*P		**Pg**	03 15 41.8	+0.5
	baz=218								
NFF	**Wufeng Townshi**	**0.83**	**325**	⇓*e*P		**Pg**	03 15 41.4	-0.1
	baz=326								
NFF				*e*S		**Sg**	03 15 52.4	+0.1
	baz=326								
NWLT	**Wulai**	**0.83**	**351**	*e*P		**Pg**	03 15 41.3	-0.2
	baz=353								
NWLT				*e*S		**Sg**	03 15 52.5	+0.2
	baz=353								
WJS	**Zhushan**	**0.85**	**261**	*e*P		**Pb**	03 15 42.4	-0.2
	baz=261								
WJS				*e*S		**Sb**	03 15 54.3	0.0
	baz=261								
WWF	**Wufeng**	**0.87**	**276**	*e*P		**Pn**	03 15 43.9	-0.4
	baz=275								
WNT	**Mingjian**	**0.88**	**265**	*e*P		**Pb**	03 15 43.4	+0.2
	baz=257								
WNT1	**Nantou City**	**0.88**	**267**	*e*P		**Pn**	03 15 44.1	-0.4
	baz=267								
ALS	**Alishan**	**0.89**	**240**	*e*P		**Pg**	03 15 42.4	-0.3
	baz=240								
ALS				*e*S		**Sg**	03 15 54.5	+0.4
	baz=240								
TWQ1	**Liyutan**	**0.89**	**296**	*e*P		**Pb**	03 15 43.2	-0.1
	baz=297								
CHKT	**Chengkung**	**0.89**	**197**	*e*P		**Pg**	03 15 42.5	-0.1
	baz=197								
CHKT				*e*S		**Sn**	03 15 56.9	-0.8
	baz=197								
NSTT	**Nanjuang**	**0.89**	**319**	⇓*e*P		**Pg**	03 15 42.8	0.0
	baz=321								
NSTT				*e*S		**Sg**	03 15 54.4	+0.1
	baz=321								
LIOB	**Emei**	**0.90**	**320**	*e*P		**Pb**	03 15 43.1	-0.4
	baz=322								
LIOB				*e*S		**Sb**	03 15 55.5	-0.2
	baz=322								
EHD	**Haiduan**	**0.90**	**207**	*e*P		**Pg**	03 15 42.1	-0.7
	baz=217								
EHD				*e*S		**Sb**	03 15 55.4	-0.3
	baz=217								
TCU	**Taichung**	**0.91**	**282**	*e*P		**Pb**	03 15 44.1	+0.4
	baz=282								
NJD	**Zhudong**	**0.93**	**327**	*e*P		**Pn**	03 15 44.7	-0.4
	baz=335								
NSY	**Sanyi**	**0.93**	**300**	*e*P		**Pb**	03 15 44.3	+0.2
	baz=301								
NSY				*e*S		**Sb**	03 15 57.0	+0.4
	baz=301								
ECS	**Chishang**	**0.94**	**205**	*e*P		**Pn**	03 15 45.2	-0.1
	baz=207								
CHN5	**Tsauling**	**0.95**	**248**	⇓*e*P		**Pg**	03 15 44.1	+0.2
	baz=248								
ELDTW	**Lidau**	**0.95**	**217**	*e*P		**Pg**	03 15 43.3	-0.6
	baz=209								
ELDTW				*e*S		**Sg**	03 15 56.2	-0.2
	baz=209								
NMLH	**Miaoli**	**0.97**	**307**	*e*P		**Pn**	03 15 45.3	-0.4
	baz=308								
NMLH				*e*S		**Sn**	03 15 59.0	-0.8
	baz=308								
WYL	**Yuanlin Townsh**	**0.97**	**271**	*e*P		**Pn**	03 15 45.4	-0.2
	baz=271								
WYL				*e*S		**Sn**	03 16 00.2	+0.4
	baz=271								
WDJ	**Dajia District**	**1.00**	**293**	*e*P		**Pn**	03 15 46.1	0.0
	baz=294								
WCHH	**Zhanghua**	**1.00**	**277**	*e*P		**Pb**	03 15 45.5	+0.2
	baz=278								
NHDH	**Xindian Distri**	**1.01**	**354**	*e*P		**Pb**	03 15 45.1	-0.3
	baz=356								
NHDH				*e*S		**Sg**	03 15 58.3	+0.2
	baz=356								
TWA	**Mucha**	**1.02**	**357**	*e*P		**Pb**	03 15 45.4	-0.3
	baz=348								
TWA				*e*S		**Sb**	03 15 58.9	-0.5
	baz=348								
EDH	**Donghe**	**1.03**	**198**	*e*P		**Pg**	03 15 43.5	-1.8
	baz=200								
EDH				*e*S		**Sb**	03 16 00.1	+0.7
	baz=200								
TATO	**Taipei**	**1.03**	**352**	P		**Pb**	03 15 45.6	-0.1
TATO	**Taipei**	**1.03**	**352**	*e*P		**Pb**	03 15 45.5	-0.2
	baz=354								
TATO				*e*S		**Sg**	03 15 58.6	0.0
	baz=354								
TIPB	**Shuangxi**	**1.03**	**9**	*e*P		**Pg**	03 15 45.1	-0.2
	baz=2.0								
TIPB				*e*S		**Sb**	03 15 59.0	-0.4
	baz=2.0								
WGK	**Gukeng**	**1.03**	**255**	*e*P		**Pn**	03 15 46.2	-0.3
	baz=256								
WGK				*e*S		**Sn**	03 16 01.6	+0.5
	baz=256								
SBCB	**Hsinchu**	**1.03**	**324**	*e*P		**Pn**	03 15 47.0	+0.5
	baz=326								
SBCB				*e*S		**Sn**	03 16 00.8	-0.3
	baz=326								
HSN	**Hsinchu**	**1.04**	**324**	*e*P		**Pn**	03 15 47.2	+0.5
	baz=328								
HSN				*e*S		**Sn**	03 16 00.8	-0.8
	baz=328								
WDLH	**Douliu**	**1.05**	**256**	*e*P		**Pn**	03 15 46.4	-0.3
	baz=257								
WDLH				*e*S		**Sn**	03 16 01.4	-0.2
	baz=257								
WCKO	**Fanlu**	**1.08**	**242**	*e*P		**Pb**	03 15 46.7	+0.1
	baz=244								
WCKO				*e*S		**Sn**	03 16 02.6	+0.1
	baz=244								
TAP	**Taipei**	**1.09**	**353**	*e*P		**Pg**	03 15 45.6	-0.9
	baz=355								
TAP				*e*S		**Sb**	03 16 01.2	0.0
	baz=355								
NCUH	**Zhongli**	**1.09**	**338**	*e*P		**Pn**	03 15 47.5	+0.2
	baz=349								
NCUH				*e*S		**Sn**	03 16 04.9	+2.2
	baz=349								
NCU	**National Centr**	**1.09**	**338**	*e*P		**Pn**	03 15 47.9	+0.5
	baz=349								
NCU				*e*S		**Sn**	03 16 03.3	+0.6
	baz=349								
TWB1	**Santiao Chiao**	**1.09**	**17**	*e*P		**Pb**	03 15 46.8	-0.1
	baz=10.0								
TWB1				*e*S		**Sb**	03 16 01.6	+0.2
	baz=10.0								
STYH	**Taoyuan**	**1.11**	**226**	*e*P		**Pg**	03 15 46.7	-0.3
	baz=227								
STYH				*e*S		**Sg**	03 16 01.8	+0.3
	baz=227								
NWF	**Wu-fen Shan**	**1.12**	**6**	*e*P		**Pb**	03 15 47.2	-0.2
	baz=8.0								
NWF				*e*S		**Sb**	03 16 01.8	-0.3
	baz=8.0								
WFSB	**Wu-fen Shan**	**1.12**	**6**	*e*P		**Pn**	03 15 47.7	0.0
	baz=8.0								
WFSB				*e*S		**Sb**	03 16 01.8	-0.2
	baz=8.0								
STYT	**Tauyuan**	**1.13**	**226**	*e*P		**Pg**	03 15 47.0	-0.3
	baz=227								
STYT				*e*S		**Sn**	03 16 03.3	-0.5
	baz=227								
CHN4	**Tsaushan**	**1.14**	**238**	*e*P		**Pb**	03 15 47.6	0.0
	baz=227								
CHN4				*e*S		**Sn**	03 16 03.5	-0.3
	baz=227								
TPUB	**Ta-pu**	**1.14**	**235**	P		**Pg**	03 15 47.5	+0.1
TPUB	**Ta-pu**	**1.14**	**235**	*e*P		**Pg**	03 15 47.2	-0.1
	baz=236								
TPUB				*e*S		**Sn**	03 16 03.9	+0.1
	baz=236								
LONT	**Longtian**	**1.15**	**204**	*e*P		**Pg**	03 15 45.9	-1.6
	baz=208								
CHN2	**Minshiung**	**1.15**	**249**	*e*P		**Pn**	03 15 48.8	+0.6
	baz=265								
CHN2				*e*S		**Sn**	03 16 04.9	+0.7
	baz=265								
SXI1	**Grass Mountain**	**1.15**	**10**	*e*P		**Pn**	03 15 48.3	0.0
	baz=357								
TWS1	**Kuangyinshan**	**1.16**	**350**	*e*P		**Pn**	03 15 48.5	+0.2
	baz=360								
TWS1				*e*S		**Sn**	03 16 04.3	-0.1
	baz=360								
WRL	**Guolierlin Hig**	**1.16**	**268**	*e*P		**Pg**	03 15 47.7	-0.1
	baz=269								
WRL				*e*S		**Sn**	03 16 04.4	0.0
	baz=269								
RLNB	**Erlin**	**1.18**	**267**	*e*P		**Pn**	03 15 48.7	+0.3
	baz=268								
RLNB				*e*S		**Sn**	03 16 05.6	+0.8
	baz=268								
WTP	**Ta-pu**	**1.18**	**233**	*e*P		**Pg**	03 15 47.9	-0.3
	baz=235								
WTP				*e*S		**Sn**	03 16 05.5	+0.5
	baz=235								
NHW	**Xinwu Township**	**1.18**	**333**	*e*P		**Pn**	03 15 49.5	+1.0
	baz=334								
NHW				*e*S		**Sn**	03 16 05.9	+0.9
	baz=334								
WTK	**Tuku**	**1.18**	**257**	*e*P		**Pn**	03 15 48.4	-0.1
	baz=259								
WTK				*e*S		**Sn**	03 16 06.0	+1.1
	baz=259								
YM01	**YM01**	**1.19**	**357**	*e*P		**Pn**	03 15 48.6	-0.2
	baz=349								
YM01				*e*S		**Sn**	03 16 04.5	-0.7
	baz=349								
TNOU	**National Taiwa**	**1.20**	**6**	*e*P		**Pn**	03 15 48.8	0.0
	baz=7.0								
TNOU				*e*S		**Sb**	03 16 04.1	-0.2
	baz=7.0								
NTST	**Danshui**	**1.22**	**352**	*e*P		**Pn**	03 15 49.5	+0.4
	baz=1.0								
NTST				*e*S		**Sn**	03 16 06.1	+0.3
	baz=1.0								
YM08	**YM08**	**1.23**	**358**	*e*P		**Pb**	03 15 49.0	-0.2
	baz=345								
YM08				*e*S		**Sb**	03 16 05.1	-0.2
	baz=345								
ANP	**Anpu**	**1.23**	**355**	*e*P		**Pn**	03 15 49.2	-0.2
	baz=356								
ANP				*e*S		**Sn**	03 16 06.4	+0.1
	baz=356								
TWG	**Pinlang**	**1.25**	**205**	*e*P		**Pn**	03 15 46.7	-2.7
	baz=208								
TWGBT	**Beinan**	**1.25**	**205**	P		**Pg**	03 15 49.8	+0.3
TWGBT	**Beinan**	**1.25**	**205**	*e*P		**Pn**	03 15 46.6	-2.8
	baz=208								
TWK	**Hsinying**	**1.26**	**237**	*e*P		**Pg**	03 15 50.0	+0.2
	baz=227								
TWK				*e*S		**Sn**	03 16 07.8	+0.8
	baz=227								
CHN1	**Nanshi**	**1.28**	**233**	*e*P		**Pn**	03 15 49.9	-0.1
	baz=236								
CHN1				*e*S		**Sn**	03 16 08.1	+0.8
	baz=236								
SNST	**Tainan City**	**1.28**	**235**	*e*P		**Pg**	03 15 50.3	+0.1
	baz=238								
SNST				*e*S		**Sn**	03 16 07.6	+0.2
	baz=238								
LDUT	**Ludao**	**1.28**	**187**	*e*P		**Pn**	03 15 46.4	-3.6
	baz=172								
LDUT				*e*S		**Sb**	03 16 06.0	-0.8
	baz=172								
JYNG	**Yonagunijimaku**	**1.29**	**67**	P		**Pb**	03 15 49.9	-0.2
SGST	**Jiashian**	**1.30**	**228**	*e*P		**Pn**	03 15 49.6	-0.7
	baz=231								
SGST				*e*S		**Sn**	03 16 09.2	+1.2
	baz=231								
TWY	**Chenhua**	**1.32**	**358**	*e*P		**Pg**	03 15 50.7	-0.1
	baz=346								
SLGT	**Liugui**	**1.32**	**224**	*e*P		**Pn**	03 15 50.4	-0.2
	baz=227								
SLGT				*e*S		**Sn**	03 16 10.1	+1.7
	baz=227								
WSF	**Szhu**	**1.34**	**257**	*e*P		**Pb**	03 15 51.0	0.0
	baz=258								
WSF				*e*S		**Sn**	03 16 10.0	+1.2
	baz=258								
YOJ	**Yonaguni jima**	**1.35**	**68**	P		**Pg**	03 15 51.4	0.0
YOJ	**Yonaguni jima**	**1.35**	**68**	*e*P		**Pn**	03 15 50.5	-0.3
	baz=65								
YOJ				*e*S		**Sn**	03 16 11.1	+2.1
	baz=65								
YOJ	**Yonaguni jima**	**1.35**	**68**	P		**Pn**	03 15 50.4	-0.5
WSL	**Shuilin Townsh**	**1.37**	**252**	*e*P		**Pg**	03 15 51.9	+0.1
	baz=267								
WSL				*e*S		**Sg**	03 16 11.9	+2.4
	baz=267								
ICHU	**Yijhu**	**1.38**	**245**	*e*P		**Pg**	03 15 52.1	0.0
	baz=248								
ICHU				*e*S		**Sg**	03 16 11.3	+1.2
	baz=248								
CHN8	**Yiju**	**1.45**	**246**	*e*P		**Pg**	03 15 53.3	0.0
	baz=249								
CHN8				*e*S		**Sg**	03 16 13.4	+1.3
	baz=249								
SCST	**Cishan**	**1.50**	**225**	*e*P		**Pg**	03 15 54.5	+0.2
	baz=230								
SCST				*e*S		**Sg**	03 16 16.4	+2.6
	baz=230								
SHHT	**Tainan City**	**1.51**	**232**	*e*P		**Pg**	03 15 55.1	+0.6
	baz=237								
SSD	**Sandimen**	**1.52**	**218**	*e*P		**Pn**	03 15 52.5	-0.7
	baz=222								
SSD				*e*S		**Sb**	03 16 13.7	+0.1
	baz=222								
TSMG	**Majia**	**1.55**	**217**	*e*P		**Pn**	03 15 54.0	+0.5
	baz=216								
TSMG				*e*S		**Sg**	03 16 16.3	+1.1
	baz=216								
TWM1	**Shoushan**	**1.59**	**225**	*e*P		**Pg**	03 15 56.3	+0.2
	baz=229								
MASBT	**Mashibuluo**	**1.63**	**215**	*e*P		**Pn**	03 15 53.9	-0.8
	baz=214								
MASBT				*e*S		**Sb**	03 16 17.3	+0.5
	baz=214								
TSCK	**Chigu Township**	**1.64**	**241**	*e*P		**Pb**	03 15 55.7	-0.5
	baz=246								
TSCK				*e*S		**Sg**	03 16 18.2	-0.1
	baz=246								
EAST	**Anshuo**	**1.73**	**205**	*e*P		**Pn**	03 15 54.0	-2.1
	baz=197								
TAWH	**Dawu Township**	**1.75**	**204**	*e*P		**Pb**	03 15 57.5	-0.6
	baz=194								
SCZT	**Fangliau**	**1.83**	**211**	*e*P		**Pn**	03 15 57.7	+0.2
	baz=204								
SCZT				*e*S		**Sg**	03 16 24.3	-0.3
	baz=204								
IRIF	**Iriomote-Funau**	**1.94**	**78**	*e*P		**Pn**	03 15 59.0	0.0
IRIF				S		**Sb**	03 16 24.6	-1.2
PHUB	**P'eng-hu**	**1.95**	**257**	*e*P		**Pn**	03 15 59.5	+0.4
	baz=260								
PHUB				*e*S		**Sb**	03 16 25.6	-0.3
	baz=260								
PNG	**Penghu**	**1.95**	**259**	*e*P		**Pn**	03 15 59.2	0.0
	baz=262								
PNG				*e*S		**Sn**	03 16 24.8	+0.8
	baz=262								
HATJ	**Hateruma jima**	**1.98**	**87**	P		**Pn**	03 15 59.5	-0.1
VCHM	**Qimei**	**2.16**	**250**	*e*P		**Pn**	03 16 02.4	+0.3
	baz=255								
JKRS	**Kuro-shima**	**2.18**	**82**	P		**Pn**	03 16 02.0	-0.3
JKRS				*e*S		**Sn**	03 16 30.6	+1.0
VWUC	**VWUC**	**2.25**	**298**	*e*P		**Pn**	03 16 02.3	-0.9
	baz=297								
JIJ	**Ishigaki jima**	**2.32**	**79**	P		**Pn**	03 16 03.4	-0.8
JIJ				S		**Sn**	03 16 32.0	-1.1
JISG	**Ishigakijimahi**	**2.51**	**75**	P		**Pn**	03 16 06.2	-0.7
JISG				S		**Sn**	03 16 37.2	-0.6
PTMZ	**Houxiangcun**	**2.54**	**296**	*e*P		**Pn**	03 16 07.0	-0.2
	baz=296								
PTMZ				*e*S		**Sn**	03 16 38.2	-0.2
	baz=296								
MATB	**Ma-tsu**	**2.67**	**325**	*e*P		**Pn**	03 16 08.8	-0.3
	baz=310								
MATB				*e*S		**Sn**	03 16 41.1	-0.7
	baz=310								
JTJ	**Tarama**	**2.87**	**76**	*e*S		**Sn**	03 16 48.3	+1.6
QZH	**Quanzhou**	**2.95**	**290**	Sn		**Sn**	03 16 47.6	-1.0
QZH	**Quanzhou**	**2.95**	**290**	smax	smax			
	comp=N,220nm,0.7s							
QZH	**Quanzhou**	**2.95**	**290**	smax	smax			
	comp=E,200nm,1.2s							
QZH	**Quanzhou**	**2.95**	**290**	Pn		**Pn**	03 16 12.9	0.0
KNMB	**Chin-men Tao**	**3.02**	**280**	*e*P		**Pn**	03 16 13.5	-0.3
	baz=282								
KNMB				*e*S		**Sn**	03 16 49.1	-1.1
	baz=282								
LYJJ	**Jianjiangzhen**	**3.10**	**327**	*e*P		**Pn**	03 16 14.7	-0.2
	baz=326								
LYJJ				*e*S		**Sn**	03 16 50.8	-1.4
	baz=326								
MHZQ	**Yeshan**	**3.19**	**313**	*e*P		**Pn**	03 16 16.2	0.0
	baz=311								
XPSS	**Dashiqiu**	**3.24**	**336**	*e*P		**Pn**	03 16 16.2	-0.7
	baz=336								
XPSS				*e*S		**Sn**	03 16 54.7	-1.1
	baz=336								
AXDP	**Jialang**	**3.48**	**286**	*e*P		**Pn**	03 16 19.8	-0.3
	baz=286								
ZPLA	**Ao Xicun**	**3.56**	**270**	*e*P		**Pn**	03 16 20.8	-0.5
	baz=271								
JOW	**Kunigami**	**6.64**	**63**	Pn		**Pn**	03 17 02.6	-1.1
	comp=E,4.8nm,0.3s,baz=158,slow=12,SNR=13							
JOW				Sn		**Sn**	03 18 22.4	+2.6
	comp=E,0.3nm,0.3s,baz=106,slow=27,SNR=1.6							
	comp=E,10.0nm,0.2s							
KSRS	**Korea Array**	**14.49**	**20**	Pn		**Pn**	03 18 53.0	+1.9
	comp=E,0.1nm,0.3s,baz=198,slow=12,SNR=3.9							
	comp=E,0.7nm,0.5s							
HHC	**Hu-ho-hao-te**	**18.85**	**336**	*e*P		**Pn**	03 19 47.2	+0.4
HHC				pmax	pmax			
	comp=Z,13nm,0.5s							
HHC				pmax	pmax			
	comp=Z,220nm,5.3s							
CMAR	**Chiang Mai Arr**	**21.85**	**260**	P		**P**	03 20 18.3	-0.7
	comp=Z,1.8nm,0.3s,baz=66,slow=9.0,SNR=1.1							
	comp=Z,1.8nm,0.3s							
GTA	**Gaotai**	**24.04**	**315**	*e*P		**P**	03 20 46.5	+5.0
GTA				pmax	pmax			
	comp=Z,3.0nm,1.5s							
ZALV	**Zalesovo Beam**	**40.66**	**327**	P		**P**	03 23 06.0	-0.4
	comp=Z,0.8nm,0.5s,baz=108,slow=8.4,SNR=2.3							
	comp=Z,0.8nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**42.08**	**87**	T		T	04 08 37.4	
	baz=275,slow=75,SNR=26							
H11N2	**WAKE ISLAND Hy**	**42.08**	**87**	T		T	04 08 37.4	
	baz=275,slow=75,SNR=23							
H11N3	**WAKE ISLAND Hy**	**42.10**	**87**	T		T	04 08 38.6	
	baz=275,slow=75,SNR=21							
H11S3	**WAKE ISLAND Hy**	**42.20**	**88**	T		T	04 08 21.3	
	baz=284,slow=74,SNR=45							
H11S1	**WAKE ISLAND

MK31 ⇑Sn Sn 03 22 02.3 +0.9
0.5nm,0.3s,baz=115,slow=26,SNR=4.8
MK31 ⇑Lg Lg 03 22 34.8
2.6nm,0.6s,baz=120,slow=28,SNR=4.3
MAKZ Makanchi 6.04 302 ⇑Pn Pn 03 20 56.9 +0.6
0.7nm,0.3s
MAKZ ⇑Sn Sn 03 22 05.8 -0.4
0.9nm,0.3s
MAKZ ⇓Lg Lg 03 22 40.8
3.0nm,0.8s
KURBB Kurchatov Arra 10.06 317 ⇑Pn Pn 03 21 51.1 -0.3
1.4nm,0.6s
KURBB ⇓Lg Lg 03 24 48.1
5.9nm,0.7s
KURK Kurchatov 10.08 317 ⇓Pn Pn 03 21 50.7 -0.8
1.0nm,0.3s
KURK ⇑Lg Lg 03 24 49.2
4.5nm,1.2s

*JMA **08** 03:23:38.1±0.1,24.0N±0.2×121.6E±0.8,h3km,MV3.3/11, TAIWAN REGION*
*TAP **08** 03:23:38.1,23.97N×121.58E,h8km,ML3.8,B*
ISC 08 03:23:38.5±0.8,**23.95N**±0.01×**121.61E**±0.02,**h8**km±4km, **n136,σ0.66/253,23C-28D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
HWA	**Hwalien**	**0.02**	**348**	⇓*i*P		**Pg**	**03 23 40.0**	**0.0**
	baz=74							
HWA				*i* S		**Sg**	**03 23 41.6**	**+0.5**
	baz=74							
ETM	**Tongmen**	**0.11**	**276**	*i* P		**Pg**	**03 23 40.6**	**-0.4**
	baz=270							
ETM				*i* S		**Sg**	**03 23 42.2**	**-0.6**
	baz=270							
TWD	**Chiawan**	**0.13**	**354**	⇓*i*P		**Pg**	**03 23 41.1**	**-0.2**
	baz=10.0							
TWD				*i* S		**Sg**	**03 23 43.3**	**+0.1**
	baz=10.0							
SHUL	**Shoufeng**	**0.17**	**195**	⇑*i*P		**Pg**	**03 23 42.7**	**+0.6**
	baz=194							
SHUL				*e*S		**Sg**	**03 23 47.2**	**+2.7**
	baz=194							
LXIB	**Xiulin Townshi**	**0.19**	**290**	*i* P		**Pg**	**03 23 42.2**	**-0.2**
	baz=283							
LXIB				*i* S		**Sg**	**03 23 44.7**	**-0.6**
	baz=283							
ETL	**Fush Village**	**0.20**	**3**	⇓*i*P		**Pg**	**03 23 42.6**	**-0.1**
	baz=11							
ETL				*i* S		**Sg**	**03 23 45.6**	**+0.1**
	baz=11							
ESL	**Shilin**	**0.21**	**229**	⇑*i*P		**Pg**	**03 23 42.5**	**-0.4**
	baz=227							
ESL				*e*S		**Sg**	**03 23 45.4**	**-0.3**
	baz=227							
NACB	**Ninganchiao**	**0.22**	**356**	P		**Pg**	**03 23 42.6**	**-0.3**
NACB	**Ninganchiao**	**0.22**	**356**	⇓*i*P		**Pg**	**03 23 42.7**	**-0.2**
	baz=10.0							
NACB				*i* S		**Sg**	**03 23 45.8**	**-0.1**
	baz=10.0							
TEGC	**Jichi Village**	**0.25**	**195**	P		**Pb**	**03 23 44.4**	**-0.9**
	baz=194							
TEGC				*e*S		**Sb**	**03 23 50.5**	**+0.7**
	baz=194							
ETLH	**Xiulin Townshi**	**0.28**	**335**	⇓*i*P		**Pg**	**03 23 43.9**	**-0.2**
	baz=338							
ETLH				S		**Sg**	**03 23 47.2**	**-0.6**
	baz=338							
WARBT	**Fenglin Townsh**	**0.31**	**221**	⇑*i*P		**Pg**	**03 23 44.3**	**-0.4**
	baz=226							
WARBT				*e*S		**Sg**	**03 23 48.2**	**-0.6**
	baz=226							
EGFH	**Guangfu**	**0.33**	**211**	⇑*i*P		**Pg**	**03 23 44.9**	**-0.1**
	baz=216							
EGFH				*e*S		**Sb**	**03 23 51.3**	**-0.7**
	baz=216							
WHF	**Hehuan Shan**	**0.37**	**301**	⇓*i*P		**Pg**	**03 23 45.5**	**-0.3**
	baz=302							
WHF				*i* S		**Sg**	**03 23 50.5**	**-0.3**
	baz=302							
EHP	**Heping Village**	**0.37**	**19**	*e*P		**Pb**	**03 23 46.3**	**-1.1**
	baz=31							
EHP				*e*S		**Sb**	**03 23 51.9**	**-1.4**
	baz=31							
EAHA	**Aohua**	**0.39**	**18**	⇓*i*P		**Pg**	**03 23 45.9**	**-0.3**
	baz=31							
EAHA				S		**Sg**	**03 23 51.8**	**+0.4**
	baz=31							
OWD	**Renai**	**0.40**	**270**	⇑P		**Pg**	**03 23 46.2**	**-0.1**
	baz=280							
OWD				S		**Sg**	**03 23 51.4**	**-0.1**
	baz=280							
CHGB	**Renai**	**0.41**	**285**	⇑*i*P		**Pg**	**03 23 46.7**	**+0.1**
	baz=284							
CHGB				S		**Sg**	**03 23 52.1**	**+0.1**
	baz=284							
FUSS	**Fushou**	**0.44**	**311**	⇓*i*P		**Pg**	**03 23 47.3**	**0.0**
	baz=321							
FUSS				S		**Sg**	**03 23 53.0**	**-0.1**
	baz=321							
WUSB	**Renai**	**0.45**	**275**	⇑*i*P		**Pg**	**03 23 47.5**	**+0.1**
	baz=283							
WUSB				S		**Sg**	**03 23 53.3**	**0.0**
	baz=283							
ENA	**Nanau**	**0.49**	**14**	⇓*i*P		**Pg**	**03 23 47.8**	**-0.1**
	baz=17							
ENA				S		**Sg**	**03 23 54.6**	**+0.3**
	baz=17							
HGSD	**Ruisui**	**0.49**	**200**	⇑P		**Pb**	**03 23 48.6**	**-0.7**
	baz=212							
HGSD				*e*S		**Sb**	**03 23 57.6**	**+1.0**
	baz=212							
TWT	**Tachien**	**0.50**	**307**	⇓P		**Pb**	**03 23 48.5**	**-1.1**
	baz=306							
TWT				*e*S		**Sg**	**03 23 55.2**	**+0.5**
	baz=306							
TDCB	**Techi**	**0.51**	**306**	⇓P		**Pg**	**03 23 48.5**	**+0.1**
	baz=306							
TDCB				*e*S		**Sg**	**03 23 55.3**	**+0.2**
	baz=306							
EWUT	**Wuta**	**0.51**	**17**	⇓P		**Pg**	**03 23 48.3**	**-0.2**
	baz=19							
EWUT				*e*S		**Sg**	**03 23 55.2**	**0.0**
	baz=19							
NNSB	**Datong**	**0.52**	**336**	⇓P		**Pg**	**03 23 48.6**	**0.0**
	baz=329							
NNSB				*e*S		**Sg**	**03 23 54.9**	**-0.4**
	baz=329							
NNSH	**Datong**	**0.52**	**336**	⇓P		**Pg**	**03 23 48.6**	**+0.1**
	baz=337							
NNSH				*e*S		**Sg**	**03 23 55.0**	**-0.3**
	baz=337							
EHY	**Hungye**	**0.52**	**211**	⇑*i*P		**Pg**	**03 23 48.2**	**-0.3**
	baz=218							
EHY				*e*S		**Sg**	**03 23 55.0**	**-0.4**
	baz=218							
NNS	**Nan Shan**	**0.53**	**336**	⇓P		**Pg**	**03 23 48.8**	**0.0**
	baz=329							
NNS				*e*S		**Sg**	**03 23 55.7**	**-0.1**
	baz=329							
LATG	**Datong**	**0.58**	**352**	⇓*i*P		**Pg**	**03 23 49.6**	**-0.2**
	baz=344							
LATG				*e*S		**Sb**	**03 23 58.6**	**-0.9**
	baz=344							
WPL	**Puli Township**	**0.60**	**276**	⇑*e*P		**Pb**	**03 23 50.4**	**-0.8**
	baz=275							
WPL				*e*S		**Sg**	**03 23 58.1**	**+0.1**
	baz=275							
SSLB	**Suanglung**	**0.62**	**255**	P		**Pg**	**03 23 50.5**	**0.0**
SSLB	**Suanglung**	**0.62**	**255**	⇑*i*P		**Pg**	**03 23 50.5**	**0.0**
	baz=254							
SSLB				*e*S		**Sg**	**03 23 57.8**	**-0.9**
	baz=254							
YULB	**Yu-li**	**0.63**	**207**	P		**Pg**	**03 23 50.5**	**-0.1**
YULB	**Yu-li**	**0.63**	**207**	⇑*i*P		**Pg**	**03 23 50.3**	**-0.4**
	baz=216							
YULB				*e*S		**Sg**	**03 23 58.7**	**-0.1**
	baz=216							
DPDB	**Guoxing**	**0.63**	**277**	⇑*e*P		**Pb**	**03 23 51.1**	**-0.7**
	baz=277							
DPDB				*e*S		**Sg**	**03 23 59.2**	**+0.3**
	baz=277							
WCS	**Beigang Elemen**	**0.65**	**279**	⇑*e*P		**Pb**	**03 23 51.3**	**-0.7**
	baz=279							
WCS				*e*S		**Sg**	**03 23 59.4**	**0.0**
	baz=279							
ECBN	**Changbin**	**0.65**	**193**	*e*P		**Pb**	**03 23 52.0**	**-0.1**
	baz=181							
ECBN				*e*S		**Sn**	**03 24 03.2**	**-1.2**
	baz=181							
NDT	**Datong Townshi**	**0.65**	**352**	⇓*i*P		**Pg**	**03 23 51.1**	**0.0**
	baz=344							
NDT				*e*S		**Sg**	**03 23 59.5**	**-0.1**
	baz=344							
SMLT	**Sun Moon Lake**	**0.65**	**264**	⇑P		**Pb**	**03 23 51.3**	**-0.9**
	baz=263							
SMLT				*e*S		**Sg**	**03 23 59.6**	**-0.1**
	baz=263							
ESAO	**Su ao**	**0.66**	**19**	⇓P		**Pg**	**03 23 50.9**	**-0.2**
	baz=9.0							
ESAO				*e*S		**Sg**	**03 23 59.9**	**+0.2**
	baz=9.0							
EYUL	**Yuli**	**0.66**	**204**	*e*P		**Pg**	**03 23 51.2**	**-0.1**
	baz=215							
EYUL				*e*S		**Sb**	**03 24 03.0**	**+1.4**
	baz=215							
TWF1	**Yuli**	**0.66**	**206**	P		**Pg**	**03 23 51.0**	**-0.4**
	baz=214							
TWF1				*e*S		**Sg**	**03 24 00.5**	**+0.5**
	baz=214							
EOS4	**EOS4**	**0.67**	**75**	*i* P		**Pb**	**03 23 52.6**	**+0.4**
	baz=87							
EOS4				*e*S		**Sn**	**03 24 03.7**	**-0.7**
	baz=87							
NDS	**Dongshan**	**0.68**	**8**	⇓*e*P		**Pg**	**03 23 51.7**	**0.0**
	baz=9.0							
NDS				*e*S		**Sb**	**03 24 01.5**	**-0.8**
	baz=9.0							
ENTT	**Nioudou**	**0.68**	**357**	⇓P		**Pg**	**03 23 51.8**	**0.0**
	baz=358							
ENTT				*e*S		**Sb**	**03 24 01.4**	**-0.9**
	baz=358							
WHP	**Taichung City**	**0.69**	**298**	*e*P		**Pb**	**03 23 52.7**	**0.0**
	baz=289							
WHP				*e*S		**Sb**	**03 24 01.8**	**-0.7**
	baz=289							
TWC	**Suao**	**0.69**	**18**	⇓P		**Pg**	**03 23 51.6**	**-0.1**
	baz=10.0							
TWC				*e*S		**Sg**	**03 24 01.1**	**+0.3**
	baz=10.0							
TYC	**Yuchr**	**0.69**	**266**	⇑*e*P		**Pg**	**03 23 51.8**	**0.0**
	baz=265							
TYC				*e*S		**Sg**	**03 24 00.4**	**-0.4**
	baz=265							
EOS3	**EOS3**	**0.73**	**63**	*e*P		**Pn**	**03 23 54.4**	**-0.5**
	baz=61							
EOS2	**EOS2**	**0.73**	**51**	*e*P		**Pn**	**03 23 54.8**	**-0.2**
	baz=64							
WHYT	**Xinyi Township**	**0.74**	**250**	*e*P		**Pb**	**03 23 52.8**	**-0.8**
	baz=249							
WHYT				*e*S		**Sg**	**03 24 02.3**	**-0.1**
	baz=249							
YHNB	**Yeheng**	**0.74**	**343**	P		**Pb**	**03 23 53.2**	**-0.5**
YHNB	**Yeheng**	**0.74**	**343**	⇓*e*P		**Pb**	**03 23 53.0**	**-0.7**
	baz=344							
YHNB				*e*S		**Sg**	**03 24 02.9**	**+0.3**
	baz=344							
NSK	**Sanguang**	**0.76**	**342**	⇓P		**Pb**	**03 23 53.2**	**-0.7**
	baz=344							
NSK				*e*S		**Sg**	**03 24 03.1**	**+0.2**
	baz=344							
CHKH	**Chenggong**	**0.78**	**195**	*e*P		**Pb**	**03 23 54.1**	**-0.2**
	baz=185							
CHKH				*e*S		**Sn**	**03 24 07.2**	**-0.5**
	baz=185							
FUSB	**Fushanzhiwuyua**	**0.80**	**359**	⇓P		**Pg**	**03 23 54.0**	**0.0**
	baz=359							
FUSB				*e*S		**Sb**	**03 24 05.6**	**-0.1**
	baz=359							
FULB	**Fuli**	**0.81**	**201**	*e*P		**Pb**	**03 23 54.2**	**-0.6**
	baz=217							
FULB				*e*S		**Sn**	**03 24 07.5**	**-0.8**
	baz=217							
NFF	**Wufeng Townshi**	**0.81**	**326**	⇓P		**Pb**	**03 23 54.4**	**-0.5**
	baz=327							
NFF				*e*S		**Sg**	**03 24 04.6**	**-0.1**
	baz=327							
ILA	**Ilan**	**0.82**	**9**	*e*P		**Pb**	**03 23 54.3**	**-0.6**
	baz=10.0							
ILA				*e*S		**Sb**	**03 24 06.5**	**+0.4**
	baz=10.0							
WJS	**Zhushan**	**0.82**	**261**	*e*P		**Pb**	**03 23 54.9**	**-0.1**
	baz=261							
WJS				*e*S		**Sb**	**03 24 07.0**	**+0.8**
	baz=261							
NWLT	**Wulai**	**0.82**	**353**	⇓P		**Pb**	**03 23 54.4**	**-0.7**
	baz=354							
NWLT				*e*S		**Sg**	**03 24 05.1**	**0.0**
	baz=354							
WWF	**Wufeng**	**0.84**	**276**	*e*P		**Pn**	**03 23 56.1**	**-0.4**
	baz=276							
WWF				*e*S		**Sb**	**03 24 07.0**	**+0.2**
	baz=276							
TWQ1	**Liyutan**	**0.86**	**297**	*e*P		**Pn**	**03 23 56.1**	**-0.8**
	baz=297							
TWQ1				*e*S		**Sb**	**03 24 07.1**	**-0.2**
	baz=297							
ALS	**Alishan**	**0.86**	**239**	⇑*e*P		**Pb**	**03 23 55.2**	**-0.6**
	baz=240							
ALS				*e*S		**Sb**	**03 24 07.4**	**-0.2**
	baz=240							
NSTT	**Nanjuang**	**0.87**	**321**	⇓*e*P		**Pb**	**03 23 55.8**	**-0.1**
	baz=321							
NSTT				*e*S		**Sb**	**03 24 07.3**	**-0.5**
	baz=321							
TCU	**Taichung**	**0.88**	**283**	*e*P		**Pn**	**03 23 57.0**	**-0.1**
	baz=277							
TCU				*e*S		**Sn**	**03 24 09.1**	**-0.9**
	baz=277							
LIOB	**Emei**	**0.88**	**322**	*e*P		**Pb**	**03 23 56.1**	**+0.1**
	baz=322							
LIOB				*e*S		**Sb**	**03 24 07.8**	**-0.1**
	baz=322							
CHKT	**Chengkung**	**0.88**	**195**	*e*P		**Pg**	**03 23 55.2**	**-0.3**
	baz=186							
CHKT				*e*S		**Sn**	**03 24 09.3**	**-0.8**
	baz=186							
EHD	**Haiduan**	**0.88**	**205**	*e*P		**Pg**	**03 23 55.0**	**-0.4**
	baz=217							
EHD				*e*S		**Sb**	**03 24 08.7**	**+0.6**
	baz=217							
NSY	**Sanyi**	**0.90**	**301**	*e*P		**Pn**	**03 23 57.5**	**+0.1**
	baz=301							
NSY				*e*S		**Sn**	**03 24 10.9**	**+0.2**
	baz=301							
CHN5	**Tsauling**	**0.93**	**248**	⇑*e*P		**Pb**	**03 23 57.0**	**+0.2**
	baz=237							
CHN5				*e*S		**Sn**	**03 24 11.2**	**-0.1**
	baz=237							
ECS	**Chishang**	**0.93**	**203**	*e*P		**Pn**	**03 23 57.5**	**-0.3**
	baz=206							
ELDTW	**Lidau**	**0.94**	**216**	*e*P		**Pg**	**03 23 56.0**	**-0.5**
	baz=208							
ELDTW				*e*S		**Sb**	**03 24 09.0**	**-0.7**
	baz=208							
NMLH	**Miaoli**	**0.95**	**308**	*e*P		**Pn**	**03 23 58.1**	**0.0**
	baz=307							
NMLH				*e*S		**Sn**	**03 24 11.1**	**-0.7**
	baz=307							
WDJ	**Dajia District**	**0.97**	**294**	*e*P		**Pn**	**03 23 59.0**	**+0.6**
	baz=294							
WDJ				*e*S		**Sn**	**03 24 12.9**	**+0.6**
	baz=294							
WCHH	**Zhanghua**	**0.97**	**278**	*e*P		**Pn**	**03 23 58.7**	**+0.3**
	baz=277							
WGK	**Gukeng**	**1.00**	**255**	*e*P		**Pn**	**03 23 58.8**	**+0.1**
	baz=255							
WGK				*e*S		**Sn**	**03 24 13.3**	**+0.3**
	baz=255							
NHDH	**Xindian Distri**	**1.01**	**356**	*e*P		**Pb**	**03 23 58.0**	**-0.2**
	baz=356							
NHDH				*e*S		**Sb**	**03 24 11.8**	**+0.2**
	baz=356							
SBCB	**Hsinchu**	**1.01**	**326**	*e*P		**Pn**	**03 23 59.5**	**+0.5**
	baz=325							
EDH	**Donghe**	**1.02**	**196**	*e*P		**Pg**	**03 23 56.3**	**-1.7**
	baz=199							
EDH				*e*S		**Sb**	**03 24 12.6**	**+0.8**
	baz=199							
WDLH	**Douliu**	**1.02**	**255**	*e*P		**Pn**	**03 23 59.2**	**+0.2**
	baz=256							
WDLH				*e*S		**Sn**	**03 24 13.5**	**0.0**
	baz=256							
TWA	**Mucha**	**1.02**	**359**	⇑*e*P		**Pb**	**03 23 58.6**	**+0.1**
	baz=348							
TWA				*e*S		**Sb**	**03 24 12.2**	**+0.1**
	baz=348							
TATO	**Taipei**	**1.02**	**354**	P		**Pn**	**03 23 58.8**	**-0.3**
TATO	**Taipei**	**1.02**	**354**	*e*P		**Pb**	**03 23 58.4**	**-0.1**
	baz=354							
TATO				*e*S		**Sb**	**03 24 12.1**	**+0.1**
	baz=354							
HSN	**Hsinchu**	**1.03**	**325**	*e*P		**Pn**	**03 24 00.1**	**+0.9**
	baz=328							
HSN				*e*S		**Sn**	**03 24 15.0**	**+1.2**
	baz=328							
TIPB	**Shuangxi**	**1.03**	**11**	⇓*e*P		**Pg**	**03 23 58.2**	**-0.2**
	baz=2.0							
TIPB				*e*S		**Sb**	**03 24 12.6**	**+0.3**
	baz=2.0							
WCKO	**Fanlu**	**1.05**	**241**	⇑*e*P		**Pn**	**03 23 59.4**	**-0.2**
	baz=237							
WCKO				*e*S		**Sn**	**03 24 15.0**	**+0.5**
	baz=237							
NCUH	**Zhongli**	**1.08**	**339**	*e*P		**Pn**	**03 24 00.3**	**+0.4**
	baz=337							
NCU	**National Centr**	**1.08**	**339**	*e*P		**Pn**	**03 24 00.9**	**+1.0**
	baz=349							
NCU				*e*S		**Sn**	**03 24 17.4**	**+2.3**
	baz=349							
STYH	**Taoyuan**	**1.09**	**225**	*e*P		**Pb**	**03 23 59.4**	**-0.2**
	baz=227							
STYH				*e*S		**Sb**	**03 24 14.2**	**+0.2**
	baz=227							
TWB1	**Santiao Chiao**	**1.10**	**18**	*e*P		**Pb**	**03 23 59.7**	**-0.2**
	baz=10.0							
TWB1				*e*S		**Sb**	**03 24 14.4**	**0.0**
	baz=10.0							
CHN4	**Tsaushan**	**1.11**	**237**	⇑*e*P		**Pn**	**03 24 00.4**	**+0.1**
	baz=231							
CHN4				*e*S		**Sn**	**03 24 17.4**	**+1.6**
	baz=231							
STYT	**Tauyuan**	**1.11**	**225**	*e*P		**Pb**	**03 23 59.6**	**-0.4**
	baz=227							
STYT				*e*S		**Sn**	**03 24 15.7**	**-0.2**
	baz=227							
TPUB	**Ta-pu**	**1.11**	**234**	P		**Pn**	**03 24 00.3**	**0.0**
TPUB	**Ta-pu**	**1.11**	**234**	⇑*e*P		**Pn**	**03 24 00.1**	**-0.2**
	baz=236							
TPUB				*e*S		**Sn**	**03 24 15.8**	**0.0**
	baz=236							
NWF	**Wu-fen Shan**	**1.12**	**8**	*e*P		**Pb**	**03 24 00.3**	**0.0**
	baz=8.0							
NWF				*e*S		**Sb**	**03 24 14.6**	**-0.4**
	baz=8.0							
WFSB	**Wu-fen Shan**	**1.12**	**8**	*e*P		**Pn**	**03 24 00.3**	**-0.2**
	baz=8.0							
WFSB				*e*S		**Sb**	**03 24 14.5**	**-0.4**
	baz=8.0							
WRL	**Guolierlin Hig**	**1.13**	**268**	*e*P		**Pn**	**03 24 00.6**	**0.0**
	baz=268							
WRL				*e*S		**Sn**	**03 24 16.4**	**+0.1**
	baz=268							
LONT	**Longtian**	**1.13**	**203**	*e*P		**Pg**	**03 23 59.1**	**-1.1**
	baz=207							
RLNB	**Erlin**	**1.15**	**267**	*e*P		**Pn**	**03 24 01.1**	**+0.3**
	baz=267							
RLNB				*e*S		**Sn**	**03 24 17.3**	**+0.7**
	baz=267							
WTK	**Tuku**	**1.15**	**257**	*e*P		**Pn**	**03 24 01.3**	**+0.4**
	baz=258							
WTK				*e*S		**Sn**	**03 24 17.0**	**+0.3**
	baz=258							
WTP	**Ta-pu**	**1.15**	**233**	⇑*e*P		**Pn**	**03 24 00.9**	**0.0**
	baz=238							
WTP				*e*S		**Sn**	**03 24 17.5**	**+0.5**
	baz=238							
TWS1	**Kuangyinshan**	**1.16**	**351**	*e*P		**Pn**	**03 24 01.8**	**+0.8**
	baz=360							
TWS1				*e*S		**Sn**	**03 24 18.6**	**+1.6**
	baz=360							
SXI1	**Grass Mountain**	**1.16**	**12**	*e*P		**Pb**	**03 24 00.8**	**0.0**
	baz=3.0							
SXI1				*e*S		**Sn**	**03 24 17.9**	**+0.7**
	baz=3.0							
YM01	**YM01**	**1.19**	**358**	*e*P		**Pn**	**03 24 01.9**	**+0.5**
	baz=349							
YM01				*e*S		**Sn**	**03 24 18.3**	**+0.5**
	baz=349							
TNOU	**National Taiwa**	**1.20**	**7**	*e*P		**Pn**	**03 24 01.7**	**+0.2**
	baz=7.0							
TNOU				*e*S		**Sn**	**03 24 18.8**	**+0.8**
	baz=7.0							
YM08	**YM08**	**1.23**	**359**	*e*P		**Pn**	**03 24 02.3**	**+0.3**
	baz=7.0							
ANP	**Anpu**	**1.23**	**356**	*e*P		**Pn**	**03 24 02.6**	**+0.6**
	baz=356							
ANP				*e*S		**Sn**	**03 24 18.9**	**-0.1**
	baz=356							
TWG	**Pinlang**	**1.23**	**204**	*e*P		**Pg**	**03 24 01.0**	**-1.2**
	baz=214							
TWG				*e*S		**Sn**	**03 24 20.0**	**+1.1**
	baz=214							
TWGBT	**Beinan**	**1.23**	**203**	P		**Pn**	**03 24 02.2**	**+0.2**
TWGBT	**Beinan**	**1.23**	**203**	*e*P		**Pg**	**03 24 01.0**	**-1.2**
	baz=214							
TWGBT				*e*S		**Sn**	**03 24 19.9**	**+1.1**
	baz=214							
TWK	**Hsinying**	**1.24**	**237**	*e*P		**Pn**	**03 24 02.6**	**+0.5**
	baz=238							
TWK				*e*S		**Sn**	**03 24 18.9**	**-0.1**
	baz=238							
CHN1	**Nanshi**	**1.25**	**233**	*e*P		**Pn**	**03 24 03.0**	**+0.7**
	baz=238							
CHN1				*e*S		**Sn**	**03 24 21.4**	**+2.0**
	baz=238							
SNST	**Tainan City**	**1.26**	**235**	*e*P		**Pn**	**03 24 03.2**	**+0.9**
	baz=236							
SNST				*e*S		**Sn**	**03 24 20.3**	**+0.9**
	baz=236							
LDUT	**Ludao**	**1.28**	**186**	*e*P		**Pn**	**03 24 00.0**	**-2.6**
	baz=172							
LDUT				*e*S		**Sg**	**03 24 19.4**	**-0.4**
	baz=172							
SGST	**Jiashian**	**1.28**	**228**	*e*P		**Pn**	**03 24 02.2**	**-0.4**
	baz=230							
SGST				*e*S		**Sn**	**03 24 20.9**	**+0.8**
	baz=230							
SLGT	**Liugui**	**1.30**	**223**	*e*P		**Pg**	**03 24 03.1**	**-0.4**
	baz=226							
SLGT				*e*S		**Sn**	**03 24 21.0**	**+0.4**
	baz=226							
JYNG	**Yonaguni jima**	**1.32**	**68**	*e*P		**Pn**	**03 24 03.0**	**-0.1**
ICHU	**Yiju**	**1.36**	**244**	*e*P		**Pg**	**03 24 04.8**	**+0.3**
	baz=247							
ICHU				*e*S		**Sn**	**03 24 23.4**	**+1.6**
	baz=247							
YOJ	**Yonaguni jima**	**1.38**	**68**	P		**Pg**	**03 24 06.4**	**+1.5**
YOJ	**Yonaguni jima**	**1.38**	**68**	*e*P		**Pn**	**03 24 03.8**	**-0.2**
	baz=65							
YOJ				*e*S		**Sn**	**03 24 23.2**	**+0.8**
	baz=65							
YOJ	**Yonaguni jima**	**1.38**	**68**	P		**Pn**	**03 24 03.6**	**-0.4**
YOJ				S		**Sb**	**03 24 22.4**	**+0.2**
CHN8	**Yiju**	**1.42**	**245**	*e*P		**Pn**	**03 24 04.2**	**-0.4**
	baz=247							
CHN8				*e*S		**Sg**	**03 24 25.8**	**+1.7**
	baz=247							
SCST	**Cishan**	**1.48**	**224**	*e*P		**Pg**	**03 24 07.2**	**+0.4**
	baz=229							
SCST				*e*S		**Sg**	**03 24 28.5**	**+2.4**
	baz=229							
ECL	**Taimali**	**1.48**	**204**	*e*P		**Pb**	**03 24 05.8**	**-0.4**
	baz=196							
ECL				*e*S		**Sg**	**03 24 26.3**	**+0.2**
	baz=196							
SSD	**Sandimen**	**1.50**	**217**	*e*P		**Pn**	**03 24 05.1**	**-0.6**
	baz=222							
SSD				*e*S		**Sg**	**03 24 27.6**	**+0.8**
	baz=222							
TSMG	**Majia**	**1.53**	**216**	*e*P		**Pb**	**03 24 06.6**	**-0.4**
	baz=221							
TSMG				*e*S		**Sg**	**03 24 28.4**	**+0.8**
	baz=221							
MASBT	**Mashibuluo**	**1.61**	**214**	*e*P		**Pn**	**03 24 07.0**	**-0.2**
	baz=220							
MASBT				*e*S		**Sb**	**03 24 28.

	baz=197								
SCZT	**Fangliau**	**1.82**	**210**	*e*P		**Pn**	**03 24 10.9**	**+0.8**
	baz=235								
SCZT				*e*S		**Sb**	**03 24 35.7**	**+0.7**
	baz=235								
PHUB	**P'eng-hu**	**1.92**	**257**	*e*P		**Pb**	**03 24 12.4**	**-1.3**
	baz=257								
PHUB				*e*S		**Sn**	**03 24 36.6**	**+0.9**
	baz=257								
JKRS	**Kuro-shima**	**2.21**	**82**	*e*P		**Pn**	**03 24 15.9**	**+0.5**
JIJ	**Ishigaki jima**	**2.35**	**79**	P		**Pn**	**03 24 16.8**	**-0.6**
JIJ				*e*S		**Sn**	**03 24 45.8**	**-0.6**
JISG	**Ishigakijimahi**	**2.54**	**75**	P		**Pn**	**03 24 19.6**	**-0.4**
JISG				S		**Sn**	**03 24 50.6**	**-0.6**

*FUNV **08** 03:31:00.8, 10˚.75N×62˚.29W, h26km, MW3.4*
*TRN **08** 03:31:00.2, 10˚.80N×62˚.33W, h71km, MD3.1, North of the Paria peninsula.*

ISC 08 03:30:58.6±1.4, 10˚.75N±0˚.05×62˚.30W±0˚.04, h91km±15km, n14, σ1°41/22, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.89**	**96**	*e*P			**Pn**	**03 31 18.2**	**+1.0**
TRN				*e*S			**Sn**	**03 31 30.6**	**-0.5**
CRUV	**Carupano**	**0.92**	**266**	⇓*i*P			**Pn**	**03 31 17.7**	**+0.2**
CRUV				*e*S			**Sn**	**03 31 30.6**	**-1.0**
TPP	**Pointe-a-Pierr**	**0.94**	**117**	*e*P			**Pn**	**03 31 19.2**	**+1.5**
GRFF	**Grenada Fort F**	**1.41**	**23**	*e*P			**Pn**	**03 31 23.4**	**+0.1**
GRFF				*e*S			**Sn**	**03 31 40.7**	**-1.2**
GRGR	**Grenville**	**1.52**	**25**	*e*P			**Pn**	**03 31 25.1**	**+0.4**
GRGR				*e*S			**Sn**	**03 31 43.5**	**-0.9**
GRHS	**Sauteurs**	**1.60**	**24**	*e*S			**Sn**	**03 31 46.4**	**+0.1**
CUMV	**Cumana_UDO**	**1.89**	**260**	*e*P			**Pn**	**03 31 30.7**	**+1.4**
GCMP	**Grenada, Carri**	**1.93**	**26**	*e*P			**Pn**	**03 31 30.7**	**+0.7**
GCMP				*e*S			**Sn**	**03 31 52.7**	**-1.1**
PCRV	**Puerto La Cruz**	**2.36**	**256**	*e*P			**Pn**	**03 31 37.5**	**+1.8**
PCRV				*e*S			**Sn**	**03 32 03.5**	**-0.6**
LUEV	**Luepa**	**4.94**	**170**	*e*P			**Pn**	**03 32 11.5**	**+0.8**
LUEV				*e*S			**Sn**	**03 33 04.4**	**-2.3**
CACV	**CAICARA DEL OR**	**5.24**	**233**	*e*P			Pn	03 32 10.1	-4.5
CACV				*e*S			Sn	03 33 02.6	-11
BENV	**Beln**	**5.27**	**262**	*e*P			**Pn**	**03 32 16.9**	**+1.9**
BAUV	**El Baul**	**5.93**	**253**	*e*P			**Pn**	**03 32 24.3**	**+0.4**
BAUV				*e*S			**Sn**	**03 33 28.3**	**-2.3**
BAUV	**El Baul**	**5.93**	**253**	*e*P			**Pn**	**03 32 25.8**	**+1.9**
BAUV				*e*S			**Sn**	**03 33 28.8**	**-1.8**

TAP 08 03:38:35.2, 23˚.77N×121˚.42E, h25km, ML1.6, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.05**	**18**	*i*P			Pb	03 38 40.1	+0.4
	baz=27								
ESL				*i*S			Sb	03 38 43.3	+0.7
	baz=27								
WARBT	**Fenglin Townsh**	**0.06**	**209**	⇓*i*P			Pb	03 38 40.2	+0.5
	baz=209								
WARBT				*i*S			Sb	03 38 43.4	+0.7
	baz=209								
EGFH	**Guangfu**	**0.10**	**174**	*e*P			Pb	03 38 39.5	-0.4
	baz=173								
EGFH				*e*S			Sb	03 38 43.6	+0.6
	baz=173								
SHUL	**Shoufeng**	**0.14**	**81**	*e*P			Pb	03 38 40.8	+0.6
	baz=81								
ETM	**Tongmen**	**0.21**	**20**	*e*P			Pb	03 38 41.5	+0.4
	baz=19								
VWDT	**VWDT**	**0.25**	**267**	*e*P			Pn	03 38 42.5	-0.8
	baz=267								
VWDT				*e*S			Sb	03 38 47.0	+1.1
	baz=267								
LXIB	**Xiulin Townshi**	**0.25**	**359**	*e*P			Pb	03 38 42.1	+0.3
	baz=359								
LXIB				*e*S			Sb	03 38 46.1	-0.1
	baz=359								
EHY	**Hungye**	**0.27**	**198**	P			Pb	03 38 42.4	+0.5
	baz=196								
EHY				*e*S			Sb	03 38 47.7	+1.3
	baz=196								
WUSB	**Renai**	**0.35**	**309**	P			Pb	03 38 43.8	+0.7
	baz=309								
CHGB	**Renai**	**0.37**	**323**	*e*P			Pb	03 38 43.9	+0.4
	baz=322								
YULB	**Yu-li**	**0.39**	**196**	P			Pb	03 38 44.2	+0.5
	baz=196								
YULB				*e*S			Sb	03 38 50.4	+1.0
	baz=196								
SSLB	**Suanglung**	**0.42**	**273**	*e*P			Pb	03 38 44.2	0.0
	baz=272								

*TRN **08** 03:41:01.0, 10˚.97N×62˚.23W, h101km, MD3.3, North of the Paria peninsula.*
*FUNV **08** 03:41:02.8, 10˚.96N×62˚.25W, h85km, MW3.2*

ISC 08 03:40:59.2±1.6, 10˚.92N±0˚.05×62˚.25W±0˚.05, h113km±14km, n13, σ1°86/22, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.88**	**108**	*e*P			**Pn**	**03 41 21.1**	**+1.8**
TRN				*e*S			**Sn**	**03 41 34.5**	**-0.1**
CRUV	**Carupano**	**1.00**	**256**	⇓*i*P			**Pn**	**03 41 21.2**	**+0.7**
CRUV				*e*S			**Sn**	**03 41 35.3**	**-1.4**
GRFF	**Grenada Fort F**	**1.23**	**24**	*e*P			**Pn**	**03 41 23.6**	**+0.5**
GRFF				*e*S			**Sn**	**03 41 39.7**	**-1.5**
TBH	**Brigand Hill**	**1.24**	**110**	*e*P			**Pn**	**03 41 23.4**	**+0.2**
GRGR	**Grenville**	**1.34**	**26**	*e*P			**Pn**	**03 41 24.2**	**-0.2**
GRGR				*e*S			**Sn**	**03 41 42.6**	**-0.8**
GRHS	**Sauteurs**	**1.43**	**25**	*e*P			**Pn**	**03 41 25.5**	**+0.2**
GRHS				*e*S			**Sn**	**03 41 44.5**	**-0.7**
GCMP	**Grenada, Carri**	**1.75**	**27**	*e*P			**Pn**	**03 41 30.3**	**+1.1**
GCMP				*e*S			**Sn**	**03 41 51.7**	**-0.5**
CUMV	**Cumana_UDO**	**1.97**	**256**	*e*P			**Pn**	**03 41 34.4**	**+2.5**
PCRV	**Puerto La Cruz**	**2.46**	**253**	*e*P			**Pn**	**03 41 40.0**	**+1.8**
LUEV	**Luepa**	**5.11**	**171**	*e*P			**Pn**	**03 42 15.6**	**+1.9**
LUEV				*e*S			**Sn**	**03 43 09.9**	**-1.7**
CACV	**CAICARA DEL OR**	**5.39**	**232**	*e*P			**Pn**	**03 42 14.3**	**-3.0**
CACV				*e*S			Sn	03 43 07.7	-10
BAUV	**El Baul**	**6.03**	**251**	*e*P			**Pn**	**03 42 28.8**	**+2.8**
BAUV				*e*S			**Sn**	**03 43 31.4**	**-2.4**
BAUV	**El Baul**	**6.03**	**251**	*e*P			**Pn**	**03 42 29.1**	**+3.0**
BAUV				*e*S			**Sn**	**03 43 31.9**	**-1.9**

*JMA **08** 03:42:26.0±0.1, 24˚.4N±0˚.3×123˚.7E±0˚.2, h8km, MV1.7/10, NEAR ISHIGAKIJIMA ISLAND*

ISC 08 03:42:26.1±1.2, 24˚.37N±0˚.06×123˚.69E±0˚.03, h8km±8km, n8, σ0°46/16, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.05**	**132**	P			**Pg**	**03 42 27.6**	**-0.2**
IRIF				S			**Sg**	**03 42 29.0**	**+0.1**
JKRS	**Kuro-shima**	**0.32**	**114**	P			**Pg**	**03 42 32.5**	**+0.1**
JKRS				S			**Sg**	**03 42 37.4**	**+0.8**
HATJ	**Hateruma jima**	**0.33**	**161**	P			**Pg**	**03 42 32.4**	**-0.2**
HATJ				S			**Sg**	**03 42 37.1**	**+0.2**
JIJ	**Ishigaki jima**	**0.41**	**90**	P			**Pg**	**03 42 33.9**	**-0.2**
JIJ				S			**Sg**	**03 42 40.0**	**+0.4**
JISG	**Ishigakijimahi**	**0.60**	**69**	P			**Pg**	**03 42 38.0**	**+0.1**
JISG				S			**Sb**	**03 42 46.6**	**-1.1**
YOJ	**Yonaguni jima**	**0.63**	**279**	P			**Pg**	**03 42 38.3**	**+0.1**
YOJ				S			**Sg**	**03 42 46.9**	**+0.4**
JYNG	**Yonagunijimaku**	**0.69**	**277**	P			**Pg**	**03 42 39.1**	**-0.2**
JYNG				*e*S			**Sg**	**03 42 48.7**	**+0.4**
JTJ	**Tarama**	**0.96**	**73**	P			**Pg**	**03 42 44.5**	**-0.1**
JTJ				S			**Sb**	**03 42 58.0**	**+0.1**

TAP 08 03:42:52.0, 24˚.25N×121˚.69E, h9km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**214**	P			Pg	03 42 54.9	+0.2
	baz=213								
ETL				S			Sg	03 42 57.5	+1.0
	baz=213								
NACB	**Ninganchiao**	**0.12**	**229**	P			Pg	03 42 54.2	-0.6
	baz=221								
NACB				S			Sg	03 42 57.6	+0.9
	baz=221								
ENA	**Nanau**	**0.18**	**15**	P			Pg	03 42 56.2	+0.3
	baz=17								
ENA				S			Sg	03 42 58.4	-0.2
	baz=17								
TWD	**Chiawan**	**0.19**	**207**	*i*P			Pg	03 42 56.3	+0.3
	baz=205								
TWD				*i*S			Sg	03 42 59.3	+0.6
	baz=205								
ETLH	**Xiulin Townshi**	**0.19**	**257**	P			Pg	03 42 57.0	+0.9
	baz=258								
ETLH				*i*S			Sg	03 43 00.0	+1.1
	baz=258								
EWUT	**Wuta**	**0.21**	**23**	*i*P			Pg	03 42 56.7	+0.3
	baz=22								
EWUT				*i*S			Sg	03 42 59.8	+0.4
	baz=22								
LATG	**Datong**	**0.32**	**332**	*i*P			Pg	03 42 59.1	+0.6
	baz=332								
LATG				S			Sg	03 43 04.0	+1.2
	baz=332								
NNSB	**Datong**	**0.33**	**303**	P			Pg	03 42 59.2	+0.6
	baz=302								
NNSB				S			Sb	03 43 04.5	-1.2
	baz=302								
ETM	**Tongmen**	**0.34**	**212**	*i*P			Pg	03 42 58.7	+0.1
	baz=213								
ETM				S			Sg	03 43 03.4	+0.2
	baz=213								
LXIB	**Xiulin Townshi**	**0.34**	**228**	*e*P			Pg	03 42 58.8	0.0
	baz=228								
LXIB				*e*S			Sg	03 43 04.1	+0.7
	baz=228								
NNS	**Nan Shan**	**0.34**	**303**	*e*P			Pg	03 42 59.6	+0.6
	baz=303								
NNS				*e*S			Sg	03 43 04.7	+1.1
	baz=303								
NDT	**Datong Townshi**	**0.39**	**335**	P			Pb	03 43 00.4	-0.7
	baz=335								
NDT				*e*S			Sb	03 43 06.2	-1.0
	baz=335								
TWC	**Suao**	**0.39**	**22**	*e*P			Pg	03 42 59.8	+0.2
	baz=16								
TWC				*e*S			Sg	03 43 05.2	+0.4
	baz=16								
WHF	**Hehuan Shan**	**0.40**	**255**	*e*P			Pg	03 43 00.6	+0.5
	baz=255								
WHF				S			Sg	03 43 05.4	+0.1
	baz=255								
ENTT	**Nioudou**	**0.40**	**344**	P			Pg	03 43 00.7	+0.7
	baz=344								
ENTT				S			Sg	03 43 06.5	+1.1
	baz=344								
FUSS	**Fushou**	**0.41**	**270**	*e*P			Pb	03 43 01.0	-0.5
	baz=270								
FUSS				*e*S			Sg	03 43 06.3	+0.9
	baz=270								
YHNB	**Yeheng**	**0.51**	**326**	*e*P			Pg	03 43 02.3	+0.4
	baz=325								
YHNB				S			Sb	03 43 09.8	-0.8
	baz=325								
CHGB	**Renai**	**0.51**	**248**	*e*P			Pg	03 43 02.3	+0.4
	baz=241								
CHGB				*e*S			Sg	03 43 09.4	+0.7
	baz=241								
FUSB	**Fushanzhiwuyua**	**0.52**	**350**	*e*P			Pg	03 43 02.0	0.0
	baz=349								
FUSB				*e*S			Sg	03 43 09.4	+0.5
	baz=349								
EOS2	**EOS2**	**0.52**	**71**	S			Sg	03 43 09.2	+0.2
	baz=64								
NWLT	**Wulai**	**0.55**	**342**	*e*P			Pg	03 43 03.3	+0.5
	baz=341								
NWLT				*e*S			Sg	03 43 10.6	+0.6
	baz=341								
WUSB	**Renai**	**0.58**	**244**	*e*S			Sg	03 43 11.4	+0.4
	baz=236								
WARBT	**Fenglin Townsh**	**0.60**	**208**	P			Pg	03 43 03.7	+0.1
	baz=218								
WARBT				S			Sg	03 43 11.6	+0.1
	baz=218								
VWDT	**VWDT**	**0.70**	**226**	*e*S			Sb	03 43 16.6	+0.4
	baz=217								

NOU 08 03:54:02.5, 16˚.09S×168˚.17E, h267km, MLv3.6/4, Vanuatu Islands, Vanuatu Islands

*IDC **08** 03:57:60.0±0.7, 55˚.99N×150˚.24W, h0km, mb4.2/24, mbtmp4.2/29, ML4.2/5, MS4.0/68, Error ellipse: s-maj=18.6km s-min=11.3km az=34.0*
*NEIC **08** 03:58:01.3±1.7, 56˚.00N±0˚.07×150˚.24W±0˚.07, h18km±1km, mb4.5/103, ML4.6/56, Mwr4.6/82, Mww4.8/42, ML4.5(AEIC), Error ellipse: s-maj=11.3km s-min=6.9km az=177.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.17; Mθθ 0.16; Mϕϕ 0.01; Mrθ 0.58; Mθϕ 0.94; Mϕr 0.38; Fault plane solution: M₀ 1.18000×10¹⁶ NP1: ϕs 358.51000°, δ62.71000°, λ171.97000°. NP2: ϕs 92.21000°, δ82.86000°, λ27.52000°. Principal axes: T 1.3386, Plg24.0000°, Azm319.0000°; N -0.4539, Plg62.0000°, Azm106.0000°; P -0.8847, Plg14.0000°, Azm222.0000°;*
*NEIC **08** 03:58:01.3, 56˚.01N×150˚.24W, h18km*
*NEIC **08** 03:58:02.6, 56˚.07N×150˚.31W, h12km*
*NEIC **08** 03:58:02.6, 55˚.87N×150˚.13W, h12km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10¹⁶Nm; Mrr 0.11; Mθθ -0.24; Mϕϕ 0.35; Mrθ -0.11; Mθϕ 1.78; Mϕr -0.25; Fault plane solution: M₀ 1.82000×10¹⁶ NP1: ϕs 175.11000°, δ86.69000°, λ172.79000°. NP2: ϕs 265.53000°, δ82.80000°, λ3.34000°. Principal axes: T 1.8920, Plg7.0000°, Azm130.0000°; N -0.1435, Plg82.0000°, Azm331.0000°; P -1.7485, Plg3.0000°, Azm220.0000°;*
*AEIC **08** 03:58:03.6±3.2, 55˚.89N±0˚.06×150˚.09W±0˚.09, h12km±4km Error ellipse: s-maj=9.6km s-min=6.0km az=141.0*
*GCMT **08** 03:58:03.3±0.3, 55˚.97N±0˚.02×150˚.04W±0˚.03, h18km±1km, MW4.9/106, Moment Tensor Solution. s14, c16; s106, c150; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 0.20±.12; Mθθ -0.65±.10; Mϕϕ 0.45±.10; Mrθ 0.71±.26; Mθϕ 2.48±.09; Mϕr 0.20±.26; Best double couple: M₀ 2.65000×10¹⁶ NP1: ϕs 84.00000°, δ86.00000°, λ16.00000°. NP2: ϕs 353.00000°, δ74.00000°, λ176.00000°. Principal axes: T 2.5960, Plg14.0000°, Azm310.0000°; N 0.1070, Plg73.0000°, Azm98.0000°; P -2.7040, Plg9.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 03:58:02.5±0.5, 56˚.05N±0˚.06×150˚.12W±0˚.04, h18km, n506, σ1°34/442, mb4.5/94, MS4.1/66, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.11**	**305**				**Pn**	**03 58 35.0**	**-1.9**
OHAK	**Old Harbor**	**2.11**	**305**				**Sn**	**03 58 59.8**	**-2.8**
OHAK	**Old Harbor**	**2.11**	**305**	P			**Pn**	**03 58 35.2**	**-1.7**
OHAK	**Old Harbor**	**2.11**	**305**	P			**Pn**	**03 58 34.9**	**-2.0**
	baz=126								
OHAK				S			**Sn**	**03 58 59.8**	**-2.8**
	baz=126								
KDAK	**Kodiak Island**	**2.20**	**323**				**Pn**	**03 58 36.8**	**-1.4**
KDAK	**Kodiak Island**	**2.20**	**323**	S			**Sn**	**03 59 03.1**	**-1.9**
	baz=143								
KDAK	**Kodiak Island**	**2.20**	**323**	Pn			**Pn**	**03 58 37.0**	**-1.1**
	105nm,0.3s,baz=157,slow=4.7,SNR=1686								
KDAK				Sn			**Sn**	**03 59 03.0**	**-1.9**
	71nm,0.3s,baz=289,slow=21,SNR=20								
KDAK				LR			LR	03 59 27.2	
	comp=Z,2μm,18.3s,baz=181,slow=40								
	266nm,0.4s								
SII	**Sitkinak Islan**	**2.32**	**284**	Pn			**Pn**	**03 58 37.1**	**-2.8**
SII				IAML				03 59 06.2	
	comp=E,2μm,0.7s								
SII	**Sitkinak Islan**	**2.32**	**284**				**Sn**	**03 59 04.9**	**-3.0**
SII	**Sitkinak Islan**	**2.32**	**284**	P			**Pn**	**03 58 37.6**	**-2.2**
SII	**Sitkinak Islan**	**2.32**	**284**	P			**Pn**	**03 58 37.2**	**-2.7**
	baz=105								
SII				S			**Sn**	**03 59 04.9**	**-3.0**
	baz=105								
SYI	**Shuyak Island**	**2.85**	**335**				**Pn**	**03 58 46.0**	**-1.0**
SYI	**Shuyak Island**	**2.85**	**335**				**Sn**	**03 59 20.2**	**-0.6**
	baz=154								
Q20K	**Shuyak Island**	**2.85**	**335**	P			**Pn**	**03 58 46.2**	**-0.8**
	baz=154								
Q20K				S			**Sn**	**03 59 20.2**	**-0.6**
	baz=154								
CHIR	**Chirikof Islan**	**3.10**	**268**	Pn			**Pn**	**03 58 47.2**	**-3.3**
CHIR				IAML				03 59 23.5	
	comp=N,1μm,0.5s								
CHIR	**Chirikof Islan**	**3.10**	**268**	P			**Pn**	**03 58 47.2**	**-3.3**
	baz=86								
KAHG	**Katmai Hook Gl**	**3.43**	**317**				**Pn**	**03 58 55.3**	**+0.1**
Q19K	**Cape Douglas,**	**3.46**	**328**				**Pn**	**03 58 55.0**	**-0.4**
Q19K	**Cape Douglas,**	**3.46**	**328**				**Sn**	**03 59 34.9**	**-1.0**
Q19K	**Cape Douglas,**	**3.46**	**328**	P			**Pn**	**03 58 55.3**	**-0.1**
	baz=146								
Q19K				S			**Sn**	**03 59 34.9**	**-1.0**
	baz=146								
KCE	**Katmai Mt Cerb**	**3.53**	**311**				**Pn**	**03 58 56.2**	**-0.2**
CNPM	**China Poot**	**3.54**	**351**				**Pn**	**03 58 55.2**	**-1.4**
CNPM				IAML				03 59 39.0	
	comp=E,1μm,0.5s								
CNPM				IAML				03 59 39.2	
	comp=N,910nm,0.5s								
CNPM	**China Poot**	**3.54**	**351**				**Sn**	**03 59 36.2**	**-1.6**
ACHA	**Angle Creek He**	**3.57**	**310**				**Pn**	**03 58 56.4**	**-0.6**
ANCK	**Angle Creek**	**3.64**	**309**				**Pn**	**03 58 57.2**	**-0.7**
HOM	**Homer**	**3.71**	**348**				**Pn**	**03 58 58.0**	**-0.9**
HOM				IAML				03 59 45.6	
	comp=N,2μm,0.7s								
HOM	**Homer**	**3.71**	**348**	P			**Pn**	**03 58 57.8**	**-1.1**
	baz=167								
KAHC	**Katmai Hardscr**	**3.71**	**317**				**Pn**	**03 58 58.9**	**-0.1**
KAHC	**Katmai Hardscr**	**3.71**	**317**	P			**Pn**	**03 58 58.9**	**-0.1**
	baz=134								
BRSE	**Bradley Lake S**	**3.72**	**355**				**Sn**	**03 59 39.5**	**-2.8**
BRSE	**Bradley Lake S**	**3.72**	**355**	P			**Pn**	**03 58 57.5**	**-1.5**
	baz=175								
BRSE				S			**Sn**	**03 59 39.5**	**-2.8**
	baz=175								
BRLK	**Bradley Lake**	**3.75**	**354**	Pn			**Pn**	**03 58 57.6**	**-1.9**
BRLK							**Pn**	**03 58 58.1**	**-1.3**
BRLK				IAML				03 59 45.5	
	comp=N,517nm,0.5s								
BRLK				IAML				03 59 46.8	
	comp=E,652nm,0.8s								
BRLK	**Bradley Lake**	**3.75**	**354**				**Sn**	**03 59 41.2**	**-1.9**
AU22	**Augustine Moun**	**3.76**	**334**				**Pn**	**03 58 59.1**	**-0.4**
AUL	**Augustine Lava**	**3.79**	**333**				**Pn**	**03 58 59.8**	**-0.2**
Q17K	**Contact Creek**	**3.85**	**308**	P			**Pn**	**03 59 00.2**	**-0.7**
	baz=124								
Q23K	**Middleton Isla**	**3.95**	**29**	Pn			**Pn**	**03 59 00.6**	**-1.5**
Q23K				IAML				03 59 56.1	
	comp=E,530nm,2.0s								
Q23K	**Middleton Isla**	**3.95**	**29**	P			**Pn**	**03 59 00.7**	**-1.4**
	baz=211								
MID	**Middleton Isla**	**3.95**	**29**	Pn			**Pn**	**03 59 00.9**	**-1.3**
MID				IAML				03 59 56.1	
	comp=E,497nm,2.2s								
MID	**Middleton Isla**	**3.95**	**29**	P			**Pn**	**03 59 01.1**	**-1.0**
PLK1	**Peulik 1**	**3.96**	**299**				**Pn**	**03 59 01.3**	**-1.1**
P19K	**Oil Pt**	**3.98**	**337**				**Pn**	**03 59 01.4**	**-1.2**
P19K				IAML				03 59 54.8	
	comp=E,1μm,0.7s								
P19K	**Oil Pt**	**3.98**	**337**	P			**Pn**	**03 59 01.8**	**-0.8**
	baz=155								
SEW	**Seward**	**4.08**	**5**				**Pn**	**03 59 01.9**	**-2.1**
SEW	**Seward**	**4.08**	**5**	P			**Pn**	**03 59 02.5**	**-1.5**
	baz=185								
P23K	**Montague Islan**	**4.22**	**19**	P			**Pn**	**03 59 04.8**	**-1.1**
	baz=200								
O20K	**Slope Mountain**	**4.26**	**343**	P			**Pn**	**03 59 05.5**	**-0.9**
	baz=161								
P18K	**Big Mountain,**	**4.33**	**323**	Pn			**Pn**	**03 59 06.0**	**-1.5**
P18K				IAML				03 59 57.8	
	comp=N,391nm,0.4s								
P18K	**Big Mountain,**	**4.33**	**323**	P			**Pn**	**03 59 06.4**	**-1.1**
	baz=140								
R16K	**Pilot Point**	**4.37**	**293**				**Pn**	**03 59 06.5**	**-1.4**
R16K				IAML				04 01 08.2	
	comp=E,427nm,2.6s								
R16K				IAML				04 01 27.2	
	comp=N,472nm,2.5s								
R16K	**Pilot Point**	**4.37**	**293**	P			**Pn**	**03 59 06.5**	**-1.4**
	baz=109								
Q16K	**King Salmon**	**4.41**	**309**				**Pn**	**03 59 07.6**	**-0.9**
Q16K	**King Salmon**	**4.41**	**309**	P			**Pn**	**03 59 07.6**	**-0.9**
	baz=125								
O22K	**Cooper Landing**	**4.45**	**3**				**Pn**	**03 59 08.1**	**-0.9**
O22K	**Cooper Landing**	**4.45**	**3**	P			**Pn**	**03 59 07.9**	**-1.1**
	baz=182								
ANNW	**Aniakchak Nort**	**4.58**	**285**				**Pn**	**03 59 08.9**	**-2.0**
P17K	**Kvichak River**	**4.63**	**316**				**Pn**	**03 59 11.1**	**-0.4**
P17K	**Kvichak River**	**4.63**	**316**	P			**Pn**	**03 59 11.1**	**-0.4**
	baz=131								
RSO	**Redoubt South**	**4.64**	**344**				**Pn**	**03 59 10.2**	**-1.7**
CHGN	**Chignik**	**4.64**	**277**	Pn			**Pn**	**03 59 09.5**	**-2.2**
CHGN	**Chignik**	**4.64**	**277**	P			**Pn**	**03 59 09.2**	**-2.5**
	baz=92								
RDWB	**Redoubt West**	**4.68**	**343**				**Pn**	**03 59 10.3**	**-2.0**
O18K	**Koktuh Hills**	**4.68**	**327**	Pn			**Pn**	**03 59 10.9**	**-1.3**
O18K				IAML				04 00 08.7	
	comp=E,422nm,0.6s								
O18K				IAML				04 00 12.7	
	comp=N,296nm,0.9s								
O18K	**Koktuh Hills**	**4.68**	**327**	P			**Pn**	**03 59 11.2**	**-1.0**
	baz=143								
O19K	**Port Alsworth**	**4.72**	**334**				**Pn**	**03 59 11.4**	**-1.3**
O19K	**Port Alsworth**	**4.72**	**334**	P			**Pn**	**03 59 12.0**	**-0.7**
	baz=151								
DFR	**Drift River**	**4.75**	**345**				**Pn**	**03 59 11.7**	**-1.6**
HIN	**Hinchinbrook I**	**4.76**	**22**				**Pn**	**03 59 12.3**	**-1.0**
HIN				IAML				04 00 11.6	
	comp=E,557nm,1.0s								
HIN				IAML				04 00 15.8	
	comp=N,566nm,0.9s								
CAPN	**Captain Cook N**	**4.76**	**354**				**Pn**	**03 59 12.9**	**-0.5**
CAPN	**Captain Cook N**	**4.76**	**354**	P			**Pn**	**03 59 13.4**	**0.0**
	baz=173								
RDJH	**Redoubt Jeurge**	**4.77**	**344**				**Pn**	**03 59 12.2**	**-1.4**
KAIM

baz=153
NICHA Nichawak Mount 5.32 35 Pn 03 59 20.1 -0.9
SPCP Crater Peak Br 5.34 349 Pn 03 59 20.0 -1.4
SPCG Spurr Capps Gl 5.35 350 Pn 03 59 20.2 -1.3
SPBG Spurr Blockage 5.36 348 Pn 03 59 20.2 -1.4
GOAT Goat Mountain 5.36 30 Pn 03 59 21.2 -0.4
SUA Susitna One 5.44 357 Pn Pn 03 59 20.7 -2.1
SUA Susitna One 5.44 357 P Pn 03 59 20.9 -1.9
baz=176
KNK Knik Glacier 5.45 8 Pn 03 59 21.5 -1.3
KNK Knik Glacier 5.45 8 P Pn 03 59 21.5 -1.3
baz=189
BGLC Bering Glacier 5.46 39 Pn 03 59 22.2 -0.6
BGLC Bering Glacier 5.46 39 P Pn 03 59 22.2 -0.6
baz=223
SPNN North Nagishla 5.50 347 Pn 03 59 21.9 -1.7
BERG Berg Lake 5.52 35 Pn 03 59 22.4 -1.3
CNBA Chernabura Isl 5.53 261 Pn Pn 03 59 20.6 -3.3
STLK Strandline Lak 5.54 351 Pn 03 59 22.5 -1.5
O16K Kokwok River B 5.55 313 Pn Pn 03 59 22.5 -1.6
O16K Kokwok River B 5.55 313 P Pn 03 59 23.5 -0.6
baz=128
N18K Kilae Creek 5.55 329 Pn 03 59 22.2 -1.9
N18K Kilae Creek 5.55 329 P Pn 03 59 23.0 -1.1
baz=145
GRIN Grindle Hills 5.56 37 Pn 03 59 23.3 -1.0
DIV Divide 5.58 22 Pn 03 59 23.6 -1.0
PMR Palmer 5.58 5 Pn Pn 03 59 23.5 -1.1
PMR Palmer 5.58 5 P Pn 03 59 25.3 +0.7
PMR Palmer 5.58 5 P Pn 03 59 23.5 -1.1
baz=185
SNH Sunshine Point 5.66 40 Pn 03 59 24.8 -0.9
KHIT Khitrov Hills 5.71 37 Pn 03 59 25.3 -1.0
BMRM Bremner River 5.72 28 Pn 03 59 25.8 -0.7
BMRM Bremner River 5.72 28 P Pn 03 59 25.8 -0.7
baz=212
CYK Cape Yakataga 5.72 42 Pn 03 59 25.4 -1.1
GHO Glory Hole Cre 5.78 6 Pn 03 59 26.7 -0.6
SVW2 Sparrevohn 5.81 333 Pn Pn 03 59 26.5 -1.3
SVW2 Sparrevohn 5.81 333 P Pn 03 59 26.8 -1.0
N17K Nushagak Hills 5.83 323 Pn Pn 03 59 26.8 -1.2
N17K Nushagak Hills 5.83 323 P Pn 03 59 27.0 -1.0
baz=138
WAX Waxell Ridge 5.85 38 Pn 03 59 27.1 -1.2
SML Sawmill 5.85 8 Pn Pn 03 59 27.6 -0.6
SML Sawmill 5.85 8 P Pn 03 59 27.7 -0.6
baz=190
KLU Klutina 5.88 20 Pn 03 59 27.8 -1.0
KLU Klutina 5.88 20 P Pn 03 59 28.3 -0.4
baz=203
M23K Glacier View 5.89 11 Pn 03 59 28.4 -0.5
M23K Glacier View 5.89 11 P Pn 03 59 28.4 -0.5
baz=193
SDPT Sand Point 5.90 267 Pn 03 59 27.4 -1.5
SDPT Sand Point 5.90 267 P Pn 03 59 26.9 -2.0
baz=80
CRQM Cirque 5.98 35 Pn 03 59 29.3 -0.9
SCM Sheep Creek Mo 5.98 13 Pn 03 59 29.9 -0.3
SCM Sheep Creek Mo 5.98 13 P Pn 03 59 29.7 -0.4
baz=195
CRQE Cirque 5.99 35 P Pn 03 59 29.3 -1.0
baz=220
MESA MESA 5.99 43 Pn 03 59 29.3 -1.1
MESA MESA 5.99 43 P Pn 03 59 29.3 -1.1
baz=229
SKT Skwentna 6.00 354 Pn Pn 03 59 28.9 -1.4
SKT Skwentna 6.00 354 P Pn 03 59 28.9 -1.4
baz=172
M20K Styx River 6.05 346 Pn 03 59 29.9 -1.3
M20K Styx River 6.05 346 P Pn 03 59 29.4 -1.7
baz=164
TGL Tana Glacier 6.08 36 Pn 03 59 30.6 -0.9
O15K Ungalikthiuk R 6.08 305 Pn 03 59 30.8 -0.7
O15K Ungalikthiuk R 6.08 305 P Pn 03 59 30.8 -0.7
baz=118
ISLE Juniper Island 6.13 39 Pn 03 59 31.1 -1.2
M18K Stony River 6.21 334 P Pn 03 59 31.6 -1.6
baz=150
VRDI Verde Repeater 6.25 31 Pn Pn 03 59 32.8 -1.2
N25K Chitina, Valde 6.27 25 Pn 03 59 33.6 -0.4
N25K Chitina, Valde 6.27 25 P Pn 03 59 33.7 -0.3
baz=209
M19K Big River Lodg 6.27 341 Pn 03 59 33.0 -1.0
M19K Big River Lodg 6.27 341 P Pn 03 59 32.8 -1.2
baz=158
GLB Gilahina Butte 6.33 29 Pn 03 59 34.0 -0.8
KIAG Kiagna River 6.36 37 Pn 03 59 34.4 -1.0
N16K Nishlik Lake 6.36 318 Pn 03 59 34.9 -0.4
N16K Nishlik Lake 6.36 318 P Pn 03 59 34.9 -0.4
baz=131
CUT Chulitna 6.38 359 Pn 03 59 33.0 -2.5
M24K Tolsona, Glenn 6.41 17 Pn 03 59 35.8 -0.2
M24K Tolsona, Glenn 6.41 17 P Pn 03 59 35.8 -0.2
baz=200
SAMH Samovar Hills 6.42 47 Pn 03 59 35.9 -0.3
GRNC Granite Creek 6.43 40 Pn 03 59 35.8 -0.7
TABL Table Mountain 6.47 43 Pn 03 59 36.0 -0.9
MCARA McCarthy VSAT 6.50 32 Pn 03 59 36.5 -0.7
MCARA McCarthy VSAT 6.50 32 P Pn 03 59 36.5 -0.7
baz=217
M17K Holitna River 6.58 328 Pn 03 59 37.7 -0.5
M17K Holitna River 6.58 328 P Pn 03 59 37.7 -0.5
baz=142
PS1A Pavlof South-1 6.59 269 Pn 03 59 36.9 -1.6
L19K White Mountain 6.62 340 Pn 03 59 37.2 -1.6
L19K White Mountain 6.62 340 P Pn 03 59 37.2 -1.6
baz=157
PCA Pinnacle 6.62 48 Pn 03 59 37.8 -1.0
PINM Pinnacle 6.62 48 P Pn 03 59 37.8 -1.1
baz=235
WACK Wrangell Chich 6.66 24 Pn 03 59 39.1 -0.5
WAT6 Susitna Watana 6.67 10 Pn 03 59 39.1 -0.5
WAT6 Susitna Watana 6.67 10 P Pn 03 59 39.1 -0.5
baz=191
BARN Barnard Glacie 6.69 38 Pn 03 59 39.1 -0.9
N15K Kwethluk River 6.70 312 Pn 03 59 40.0 0.0
N15K Kwethluk River 6.70 312 P Pn 03 59 40.0 0.0
baz=125
CTG Chitna Glacier 6.74 39 P Pn 03 59 39.8 -0.8
baz=226
CTGM Chitina Glacie 6.74 39 Pn 03 59 39.8 -0.9
LOGN Logan Glacier 6.77 41 Pn 03 59 40.0 -1.0
PNL Peninsula 6.77 53 Pn 03 59 40.1 -0.8
PNL Peninsula 6.77 53 P Pn 03 59 40.5 -0.5
PNL Peninsula 6.77 53 P Pn 03 59 40.1 -0.8
baz=241
WAZA Wrangell Mount 6.78 24 Pn 03 59 40.9 -0.3
O14K Tigyukauivet M 6.79 303 Pn 03 59 40.5 -0.6
O14K Tigyukauivet M 6.79 303 P Pn 03 59 40.4 -0.6
baz=114
M16K Timber Creek 6.80 321 Pn 03 59 40.9 -0.4
M16K Timber Creek 6.80 321 P Pn 03 59 40.9 -0.4
baz=134
BCPM Bancas Point 6.81 51 Pn 03 59 40.9 -0.5
WAT7 Susitna Watana 6.84 5 Pn 03 59 41.2 -0.7
WAT1 Susitna Watana 6.85 6 Pn 03 59 41.7 -0.3
WAT1 Susitna Watana 6.85 6 P Pn 03 59 41.7 -0.3
baz=187
HARP HAARP 6.86 20 Pn 03 59 41.5 -0.6
HARP HAARP 6.86 20 P Pn 03 59 41.5 -0.6
baz=203
L18K Granite Mounta 7.05 334 Pn 03 59 43.1 -1.6
L18K Granite Mounta 7.05 334 P Pn 03 59 43.1 -1.6
baz=149
DHY Denali Highway 7.18 10 Pn 03 59 46.2 -0.5
DHY Denali Highway 7.18 10 P Pn 03 59 46.2 -0.5
baz=192
M15K Kasigluk River 7.25 314 Pn 03 59 46.4 -1.0
M15K Kasigluk River 7.25 314 P Pn 03 59 46.4 -1.0
baz=126
N14K Kuskokwak Cree 7.27 307 Pn 03 59 47.4 -0.3
N14K Kuskokwak Cree 7.27 307 P Pn 03 59 47.4 -0.3
baz=118
PAX Paxson 7.33 17 Pn 03 59 48.7 0.0
PAX Paxson 7.33 17 P Pn 03 59 48.7 0.0
baz=200
M26K Nabesna, AK 7.34 27 Pn 03 59 48.4 -0.3
M26K Nabesna, AK 7.34 27 P Pn 03 59 48.4 -0.3
baz=212
L17K Donlin 7.41 329 Pn 03 59 48.6 -1.0
L17K Donlin 7.41 329 P Pn 03 59 48.6 -1.0
baz=142
RND Reindeer 7.41 4 Pn 03 59 49.3 -0.4
TRF Thorofare Moun 7.43 359 Pn 03 59 49.6 -0.4

TRF Thorofare Moun 7.43 359 P Pn 03 59 49.6 -0.4
baz=179
O29M Mount Kennedy 7.44 50 Pn 03 59 49.5 -0.7
O29M Mount Kennedy 7.44 50 P Pn 03 59 49.5 -0.7
baz=239
CAST Castle Rocks 7.46 353 Pn 03 59 49.9 -0.4
CAST Castle Rocks 7.46 353 P Pn 03 59 49.9 -0.4
baz=172
L16K Owhat River 7.46 323 Pn 03 59 49.3 -1.0
L16K Owhat River 7.46 323 P Pn 03 59 49.3 -1.0
baz=136
YUK2 White River 7.49 36 Pn 03 59 50.7 -0.1
P29M Windy Craggy 7.52 56 Pn 03 59 49.8 -1.4
P29M Windy Craggy 7.52 56 P Pn 03 59 49.8 -1.4
baz=246
TTA Tatalina 7.52 339 Pn 03 59 49.6 -1.6
TTA Tatalina 7.52 339 P Pn 03 59 49.3 -2.0
TTA Tatalina 7.52 339 P Pn 03 59 49.7 -1.6
baz=154
KTH Kantishna Hill 7.54 357 Pn 03 59 50.6 -0.9
K20K Telida 7.60 346 P Pn 03 59 51.0 -1.3
baz=163
M27K Edge Creek, AK 7.61 30 Pn 03 59 51.9 -0.6
M27K Edge Creek, AK 7.61 30 P Pn 03 59 51.9 -0.6
baz=217
YUK3 Moose Creek 7.61 37 Pn 03 59 51.4 -1.2
YUK3 Moose Creek 7.61 37 P Pn 03 59 51.4 -1.2
baz=224
MENT Mentasta 7.64 23 P Pn 03 59 53.3 +0.5
YUK7 Dusty Glacier 7.74 50 Pn 03 59 54.4 0.0
L26K Log Cabin Wild 7.79 23 Pn 03 59 55.1 +0.1
L26K Log Cabin Wild 7.79 23 P Pn 03 59 55.1 +0.1
baz=209
M14K Bethel 7.80 312 Pn 03 59 54.5 -0.5
M14K Bethel 7.80 312 P Pn 03 59 54.5 -0.5
baz=123
S31K Pelican 7.82 70 Pn 03 59 52.2 -3.0
S31K Pelican 7.82 70 P Pn 03 59 52.2 -3.0
baz=261
ISLZ Isanotski Laza 7.85 266 Pn 03 59 53.7 -2.1
ISNN Isanotski Nort 7.86 267 Pn 03 59 53.7 -2.2
K17K Iditarod 7.88 331 Pn 03 59 54.7 -1.3
K17K Iditarod 7.88 331 P Pn 03 59 54.7 -1.3
baz=145
CHUM Lake Minchumin 7.94 353 Pn 03 59 57.0 +0.1
CHUM Lake Minchumin 7.94 353 P Pn 03 59 57.0 +0.1
baz=171
BVCY Beaver Creek 7.95 33 Pn 03 59 57.0 0.0
BVCY Beaver Creek 7.95 33 P Pn 03 59 57.0 0.0
baz=220
SSLS Shishaldin Sou 8.02 266 Pn 03 59 56.2 -1.9
P30M Million Dollar 8.08 54 Pn 03 59 57.9 -1.0
P30M Million Dollar 8.08 54 P Pn 03 59 57.9 -1.0
baz=244
K24K Donnelly Dome 8.08 14 Pn 03 59 59.4 +0.6
K24K Donnelly Dome 8.08 14 P Pn 03 59 59.4 +0.6
baz=197
PLBC Pleasant Camp 8.11 59 P Pn 03 59 58.5 -0.7
baz=250
L15K Ungalak Mounta 8.15 318 Pn 03 59 59.4 -0.4
L15K Ungalak Mounta 8.15 318 P Pn 03 59 59.4 -0.4
baz=129
R31K City Hall, Gus 8.15 67 Pn 03 59 58.0 -1.8
R31K City Hall, Gus 8.15 67 P Pn 03 59 58.0 -1.8
baz=258
HYT Haines Junctio 8.16 49 Pn 03 59 59.9 -0.2
HYT Haines Junctio 8.16 49 P Pn 03 59 60.0 -0.2
baz=239
L27K Beaver Creek, 8.19 27 Pn 03 59 59.9 -0.5
L27K Beaver Creek, 8.19 27 P Pn 03 59 59.9 -0.5
baz=214
M13K Dall Lake 8.23 308 Pn 04 00 00.6 -0.3
M13K Dall Lake 8.23 308 P Pn 04 00 00.6 -0.3
baz=117
J20K Nowinta River 8.40 348 Pn 04 00 01.4 -1.7
J20K Nowinta River 8.40 348 P Pn 04 00 01.4 -1.7
baz=164
L14K Kuka Creek 8.41 314 Pn 04 00 02.9 -0.5
L14K Kuka Creek 8.41 314 P Pn 04 00 02.9 -0.5
baz=124
J19K Poorman 8.43 343 Pn 04 00 01.8 -1.8
J19K Poorman 8.43 343 P Pn 04 00 01.8 -1.8
baz=159
SCRK Sand Creek 8.52 19 Pn 04 00 03.9 -1.1
SCRK Sand Creek 8.52 19 P Pn 04 00 03.9 -1.1
baz=203
K15K Wolf Creek Mou 8.57 322 Pn 04 00 05.4 -0.1
K15K Wolf Creek Mou 8.57 322 P Pn 04 00 05.4 -0.1
baz=132
SKAG Skagway 8.61 61 P Pn 04 00 05.4 -0.7
BESE Bessie Mountai 8.64 67 Pn 04 00 04.7 -1.9
S32K Killisnoo 8.66 74 Pn 04 00 04.0 -2.8
S32K Killisnoo 8.66 74 P Pn 04 00 04.0 -2.8
baz=266
CCB Clear Creek Bu 8.70 7 Pn 04 00 07.5 +0.1
O30N Mendenhall 8.75 51 P Pn 04 00 07.5 -0.5
baz=242
M29M Somme Creek 8.75 38 Pn 04 00 07.9 -0.3
M29M Somme Creek 8.75 38 P Pn 04 00 07.9 -0.3
baz=227
ILAR Eielson Array 8.90 9 Pn Pn 04 00 08.7 -1.3
comp=N,1.2nm,0.3s,baz=190,slow=13,SNR=50
ILAR Sn Sn 04 01 46.1 -3.5
comp=N,4.6nm,0.3s,baz=341,slow=14,SNR=8.9
ILAR LR LR 04 03 49.3
comp=N,703nm,21.3s,baz=222,slow=39
comp=N,8.0nm,0.8s
COLA College 8.93 6 Pn 04 00 10.8 +0.5
COLA College 8.93 6 P Pn 04 00 11.2 +0.8
J16K Anvik River 8.98 328 P Pn 04 00 10.1 -1.0
baz=140
MLY Manley 9.02 358 P Pn 04 00 12.1 +0.4
baz=178
I23K Minto, Yukon-K 9.14 2 Pn 04 00 12.8 -0.5
I23K Minto, Yukon-K 9.14 2 P Pn 04 00 12.8 -0.5
baz=182
POKR Poker Plat Res 9.19 7 Pn 04 00 14.5 +0.4
POKR Poker Plat Res 9.19 7 P Pn 04 00 14.5 +0.4
baz=189
N31M Braeburn, Yuko 9.22 48 Pn 04 00 14.3 -0.2
N31M Braeburn, Yuko 9.22 48 P Pn 04 00 14.3 -0.2
baz=239
WHY Whitehorse 9.24 54 Pn Pn 04 00 14.3 -0.5
M30M Minto, Yukon 9.43 41 Pn 04 00 16.9 -0.5
M30M Minto, Yukon 9.43 41 P Pn 04 00 16.9 -0.5
baz=231
P32M Atlin 9.44 61 P Pn 04 00 16.5 -1.0
baz=254
PRP Porcupine Dome 9.76 11 Pn 04 00 22.1 +0.1
PRP Porcupine Dome 9.76 11 P Pn 04 00 22.0 +0.1
baz=195
P33M Teslin, Yukon 10.05 58 Pn Pn 04 00 24.7 -1.1
IMAR Indian Mountai 10.12 352 Pn Pn 04 00 25.8 -1.0
H17K Granite Mounta 10.12 336 Pn Pn 04 00 26.0 -0.8
FARO Faro, Yukon 10.59 47 Pn Pn 04 00 33.4 +0.2
DLBC Dease Lake 11.14 69 Pn Pn 04 00 40.9 +0.1
comp=N,0.9nm,0.3s,baz=236,slow=11,SNR=6.1
DLBC LR LR 04 04 12.2
comp=N,1μm,18.9s,baz=272,slow=33
comp=N,1.8nm,0.3s
BMAR Burnt Mountain 11.71 11 Pn Pn 04 00 48.5 0.0
F28M Old Crow 12.55 18 Pn Pn 04 00 59.4 -0.5
D22K Ayikyak River 12.93 356 Pn Pn 04 01 05.2 0.0
BBB Bella Bella 13.46 98 LR LR 04 04 44.7
comp=N,622nm,20.5s,baz=312,slow=30
INK Inuvik 14.46 25 Pn Pn 04 01 25.9 0.0
INK Inuvik 14.46 25 Pn Pn 04 01 26.1 +0.2
comp=N,0.7nm,0.3s,baz=209,slow=15,SNR=41
INK LR LR 04 07 28.4
comp=N,870nm,18.1s,baz=185,slow=39
comp=N,33nm,1.0s
WRGLY Wrigley 15.18 51 IAmb IAmb 04 01 41.2
comp=Z,22nm,1.1s
C36M Paulatuk 17.68 31 IAmb IAmb 04 02 12.1
comp=Z,36nm,0.8s
YKA Yellowknife Ar 19.06 56 P Pn 04 02 24.5 +0.2
comp=Z,0.6nm,0.3s,baz=264,slow=10,SNR=63
YKA LR LR 04 09 37.6
comp=Z,618nm,18.4s,baz=255,slow=36
comp=Z,7.1nm,0.8s
A36M Sachs Harbour 19.08 24 Pn Pn 04 02 24.6 +0.1
A36M pP 04 02 25.4 -1.9
LTY Liberty 20.14 103 IAmb IAmb 04 02 47.5
comp=Z,31nm,1.4s
MXC Moxie City 20.76 105 IAmb IAmb 04 02 55.7

comp=Z,34nm,1.6s
H04D Lebanon 20.80 112 IAmb IAmb 04 02 56.3
comp=Z,20nm,1.1s
HOOD Mount Hood Mea 20.83 109 IAmb IAmb 04 02 46.2
comp=Z,14nm,1.1s
BUCK Buck Mountain 20.90 113 IAmb IAmb 04 02 56.8
comp=Z,30nm,1.2s
SHEM Shemya Is, Ala 20.95 276 LR LR 04 10 46.8
comp=Z,294nm,21.1s,baz=326,slow=37
H04A Detroit Lake 20.98 111 IAmb IAmb 04 02 57.9
comp=Z,38nm,1.3s
D08A Wollman Farm, 21.22 102 P P 04 02 46.4 -0.7
D08A IAmb IAmb 04 02 56.5
comp=Z,13nm,1.1s
EDM Edmonton 21.31 82 IAmb IAmb 04 03 00.2
comp=Z,15nm,1.1s
I04A Tendick Farm, 21.48 113 IAmb IAmb 04 03 06.6
comp=Z,18nm,1.2s
NEW Newport 21.52 97 P P 04 02 51.1 +0.7
comp=Z,4.9nm,0.9s,baz=309,slow=7.7,SNR=4.6
NEW LR LR 04 10 01.4
comp=Z,314nm,19.7s,baz=302,slow=33
comp=Z,4.9nm,0.9s
DBO Dodson Butte 21.53 116 IAmb IAmb 04 03 03.6
comp=Z,14nm,0.9s
K02D Willamette Mer 21.63 117 IAmb IAmb 04 03 01.2
comp=Z,14nm,1.2s
I05D Terrebonne, OR 21.66 111 IAmb IAmb 04 03 01.5
comp=Z,18nm,1.2s
HUMO Hull Mountain 22.05 116 P P 04 02 55.0 -1.1
PINE Pine Mountain 22.24 111 IAmb IAmb 04 03 12.8
comp=Z,30nm,1.1s
J05D Fort Rock, OR 22.44 112 IAmb IAmb 04 03 12.2
comp=Z,20nm,1.1s
L04D Klamath Falls 22.66 116 IAmb IAmb 04 03 12.4
comp=Z,18nm,1.3s
F10A Beach Ranch, E 22.81 102 IAmb IAmb 04 03 14.2
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 22.82 117 P P 04 03 05.0 +0.7
comp=Z,3.3nm,1.0s,baz=356,slow=5.2,SNR=6.0
YBH LR LR 04 09 40.6
comp=Z,768nm,21.2s,baz=321,slow=31
comp=Z,3.3nm,1.0s
BILL Bilibino 23.11 319 P P 04 03 04.4 -2.5
BILL IAmb IAmb 04 03 09.5
comp=Z,14nm,1.0s
J08A Circle Bar Ran 23.84 109 IAmb IAmb 04 03 16.9
comp=Z,36nm,2.0s
WVOR Wild Horse Val 24.40 111 IAmb IAmb 04 03 30.0
comp=Z,10nm,1.1s
ORV Oroville 25.07 119 P P 04 03 25.1 -0.6
AFDM Forest Hills D 25.80 119 IAmb IAmb 04 03 34.9
comp=Z,14nm,1.8s
MPK Martis Peak 26.00 117 IAmb IAmb 04 03 44.4
comp=Z,17nm,1.2s
PAHR Pah Rah Range 26.01 116 IAmb IAmb 04 03 46.2
comp=Z,13nm,1.5s
PNTR Pine Nut 26.37 117 IAmb IAmb 04 03 53.3
comp=Z,6.5nm,0.8s
WAKR Walker 26.90 118 IAmb IAmb 04 04 13.6
comp=Z,24nm,1.9s
ELK Elko 27.39 109 LR LR 04 12 37.5
comp=Z,346nm,21.1s,baz=314,slow=32
NVAR Mina Array Bea 27.52 116 P P 04 03 46.1 -2.0
NVAR Mina Array Bea 27.52 116 P P 04 03 48.6 +0.4
comp=Z,2.0nm,0.8s,baz=298,slow=10,SNR=15
NVAR LR LR 04 12 54.4
comp=Z,693nm,18.3s,baz=316,slow=32
comp=Z,2.0nm,0.8s
LHV Little Huntoon 27.56 117 P P 04 03 46.8 -1.3
LHV IAmb IAmb 04 03 58.6
comp=Z,9.9nm,1.2s
NV11 Mina Array Sit 27.59 116 P P 04 03 46.9 -1.8
NV11 IAmb IAmb 04 03 55.2
comp=Z,14nm,1.6s
MDPB Devils Postpil 27.75 118 P P 04 03 48.9 -1.4
MDPB IAmb IAmb 04 03 53.4
comp=Z,10nm,1.5s
RES Resolute Bay 27.99 28 P P 04 03 51.0 -0.7
RES IAmb IAmb 04 04 35.6
comp=Z,6.2nm,1.0s
RES Resolute Bay 27.99 28 P P 04 03 52.1 +0.5
comp=Z,1.6nm,0.4s,baz=243,slow=7.2,SNR=8.0
RES LR LR 04 15 41.7
comp=Z,361nm,19.6s,baz=211,slow=38
comp=Z,1.6nm,0.4s
DSP Deep Springs 28.51 117 IAmb IAmb 04 03 59.4
comp=Z,24nm,2.0s
Q12A Willow Creek R 28.85 111 P P 04 03 58.3 -1.6
Q12A IAmb IAmb 04 04 10.1
comp=Z,10nm,1.1s
SEY Seymchan 29.07 307 LR LR 04 16 55.3
comp=Z,728nm,18.6s,baz=70,slow=39
PDAR Pinedale Array 29.08 100 P P 04 04 02.3 +0.3
comp=Z,0.8nm,0.9s,baz=317,slow=4.7,SNR=5.1
PDAR LR LR 04 14 09.4
comp=Z,134nm,19.1s,baz=326,slow=33
comp=Z,0.8nm,0.9s
SPR3 Spring Creek 3 29.14 111 P P 04 04 01.0 -1.6
SPR3 IAmb IAmb 04 04 13.6
comp=Z,8.4nm,1.1s
S11A Rachel 29.42 114 P P 04 04 04.2 -0.8
FCC Fort Churchill 29.56 61 P P 04 04 05.1 -0.6
FCC IAmb IAmb 04 04 09.1
comp=Z,13nm,1.2s
WCT Wildcat Mounta 29.63 116 P P 04 04 05.3 -1.5
TPNV Topopah Spring 29.70 116 P P 04 04 06.5 -0.9
TPNV IAmb IAmb 04 04 17.0
comp=Z,8.4nm,1.3s
PETK Petropavlovsk- 29.79 287 P P 04 04 07.4 -0.6
comp=Z,1.4nm,0.5s,baz=67,slow=11,SNR=2.3
PETK LR LR 04 17 06.3
comp=Z,145nm,19.0s,baz=81,slow=38
comp=Z,1.4nm,0.5s
PRN Pahroc Range 29.96 114 P P 04 04 08.8 -0.9
PRN IAmb IAmb 04 04 27.8
comp=Z,11nm,1.1s
GWY Greenwater Val 30.08 117 P P 04 04 11.9 +1.0
GWY IAmb IAmb 04 04 20.8
comp=Z,5.3nm,1.1s
QSM Queen of Sheba 30.16 118 P P 04 04 09.9 -1.4
QSM IAmb IAmb 04 04 21.6
comp=Z,5.3nm,1.1s
MVU Marysvale 30.62 109 P P 04 04 14.4 -1.3
MSU Marysvale 30.63 109 P P 04 04 14.8 -0.9
MA2 Magadan 30.78 301 LR LR 04 18 12.7
comp=Z,580nm,18.3s,baz=90,slow=39
SZCU Shurtz Canyon 30.84 111 P P 04 04 16.3 -1.3
MTPU Mount Pierson 30.98 109 P P 04 04 17.9 -1.1
SRU San Rafael Swe 31.08 106 P P 04 04 17.7 -1.9
SRU IAmb IAmb 04 04 22.8
comp=Z,7.2nm,1.0s
LCMT Little Creek M 31.19 112 P P 04 04 19.3 -1.3
V12A Nelson 31.36 115 P P 04 04 21.2 -0.8
V12A IAmb IAmb 04 04 32.6
comp=Z,7.2nm,1.1s
O20A White River Ci 31.60 102 P P 04 04 21.9 -2.4
O20A IAmb IAmb 04 04 33.4
comp=Z,5.3nm,0.8s
HMU Henry Mountain 31.82 108 P P 04 04 25.7 -0.6
HMU IAmb IAmb 04 04 29.2
comp=Z,11nm,1.3s
PFO Pinyon Flats O 32.24 120 LR LR 04 15 53.1
comp=Z,439nm,18.2s,baz=336,slow=33
ULM Lac du Bonnet 32.31 77 P P 04 04 30.3 +0.1
comp=Z,1.7nm,1.0s,baz=291,slow=14,SNR=2.0
comp=Z,1.7nm,1.0s
W13A Hualapai Mount 32.34 115 P P 04 04 29.4 -1.4
W13A IAmb IAmb 04 04 41.0
comp=Z,5.2nm,1.2s
WUAZ Wupatki 33.31 112 P P 04 04 37.5 -1.7
WUAZ IAmb IAmb 04 04 42.3
comp=Z,6.8nm,1.1s
Y14A Wickenburg 33.70 115 P P 04 04 41.2 -1.3
Y14A IAmb IAmb 04 04 52.6
comp=Z,6.2nm,1.0s
X16A Lo Mia Camp, P 34.12 113 P P 04 04 44.4 -1.9
X16A IAmb IAmb 04 04 57.1
comp=Z,8.0nm,1.0s
TIXI Tiksi 35.62 328 LR LR 04 21 26.6
comp=Z,149nm,19.5s,baz=34,slow=40
ANMO Albuquerque 36.35 107 LR LR 04 19 19.1
comp=Z,189nm,18.6s,baz=54,slow=35
NEEM North Greenlan 37.96 21 *i* P P 04 05 19.6 +0.7
NEEM IAmb IAmb 04 05 22.9
comp=Z,8.4nm,0.8s
UPNV Upernavik 38.87 28 *i* P P 04 05 28.5 +2.4

UPNV IAmb IAmb 04 05 29.7
comp=Z,5.8nm,0.7s
FRB Frobisher Bay 38.93 44 LR LR 04 21 37.1
comp=Z,778nm,19.2s,baz=330,slow=36
YAK Yakutsk 39.19 313 LR LR 04 24 29.5
comp=Z,230nm,18.2s,baz=78,slow=41
VHRN Van Horn 40.34 110 P **P** **04 05 38.5 -0.5**
WMOK Wichita Mounta 40.69 99 P **P** **04 05 40.3 -1.5**
WMOK IAmb IAmb 04 05 51.8
comp=Z,9.0nm,1.1s
HDIL Hopedale 41.88 85 P **P** **04 05 51.6 +0.1**
TXAR Lajitas Array 42.19 110 P **P** **04 05 55.4 +1.2**
comp=Z,2.5nm,0.9s,baz=327,slow=6.0,SNR=15
TXAR LR LR 04 22 47.2
comp=Z,212nm,18.0s,baz=324,slow=35
comp=Z,2.5nm,0.9s
OZNA Ozona 42.30 106 P **P** **04 05 55.1 +0.1**
SAND Sanderson 42.52 107 P **P** **04 05 56.1 -0.7**
SAND IAmb IAmb 04 06 06.9
comp=Z,7.6nm,1.2s
ASAJ Asahikawa 43.09 283 LR LR 04 25 48.8
comp=Z,49nm,19.1s,baz=354,slow=39
LPIG La Paz 43.11 121 LR LR 04 21 23.7
comp=Z,219nm,20.4s,baz=346,slow=32
JCT Junction City 43.36 105 P **P** **04 06 03.4 -0.2**
JCT IAmb IAmb 04 06 13.3
comp=Z,14nm,1.0s
SUMG Summit 43.37 24 P **P** **04 06 03.2 -0.5**
SUMG Summit 43.37 24 *i* P **P** **04 06 04.0 +0.4**
SUMG IAmb IAmb 04 06 07.8
comp=Z,9.0nm,0.9s
SFJD Kangerlussuaq 43.55 34 LR LR 04 23 58.0
comp=Z,383nm,19.6s,baz=320,slow=36
DRIO Del Rio 43.74 106 P **P** **04 06 06.4 -0.2**
DRIO IAmb IAmb 04 06 15.7
comp=Z,8.6nm,0.9s
SCHQ Schefferville 44.51 55 P **P** **04 06 13.2 +0.7**
comp=Z,1.0nm,0.7s,baz=285,slow=11,SNR=1.3
SCHQ LR LR 04 24 49.6
comp=Z,280nm,18.7s,baz=293,slow=36
comp=Z,1.0nm,0.7s
SADO Sadowa 44.66 73 LR LR 04 22 27.1
comp=Z,82nm,21.5s,baz=94,slow=33
DY2G Dye2 45.23 33 *i* P **P** **04 06 17.4 -1.0**
DY2G IAmb IAmb 04 06 21.5
comp=Z,4.2nm,0.9s
ICESG Greenland Ices 45.40 28 *i* P **P** **04 06 20.4 +0.6**
ICESG IAmb IAmb 04 06 24.0
comp=Z,8.9nm,1.0s
KLR Kul'dur 45.51 296 LR LR 04 27 31.0
comp=Z,136nm,18.7s,baz=53,slow=39
SPITS Spitsbergen Ar 45.77 4 LR LR 04 27 26.8
comp=Z,149nm,18.1s,baz=308,slow=38
NRIK Noril'sk 48.13 336 P **P** **04 06 39.7 -1.0**
NRIK Noril'sk 48.13 336 P **P** **04 06 40.7 0.0**
comp=Z,2.8nm,0.4s,baz=47,slow=7.9,SNR=7.6
NRIK LR LR 04 30 06.1
comp=Z,338nm,18.8s,baz=44,slow=40
comp=Z,2.8nm,0.4s
H11N2 WAKE ISLAND Hy 48.36 239 T T 04 58 45.3
baz=34,slow=74
H11N3 WAKE ISLAND Hy 48.36 239 T T 04 58 45.6
baz=34,slow=74
H11N1 WAKE ISLAND Hy 48.38 239 T T 04 58 46.7
baz=34
USRK Ussuriysk Ar. 48.72 291 LR LR 04 27 01.0
comp=Z,122nm,21.6s,baz=58,slow=36
H11S1 WAKE ISLAND Hy 49.50 239 T T 05 00 10.2
baz=28,slow=76,SNR=16
H11S2 WAKE ISLAND Hy 49.51 239 T T 05 00 10.2
baz=28,slow=76,SNR=13
H11S3 WAKE ISLAND Hy 49.52 239 T T 05 00 10.2
baz=28,slow=76,SNR=17
MDJ Mudanjiang 49.68 293 P **P** **04 06 51.1 -1.9**
MDJ pP pP 04 06 55.7 -1.4
MDJ sP sP 04 06 58.1 -0.6
MDJ PcP **PcP** **04 08 10.6 -3.3**
MDJ PP **PP** **04 08 46.6 -0.6**
MDJ S **S** **04 14 01.5 +0.9**
MDJ sS sS 04 14 09.6 +2.2
MDJ ScS **ScS** **04 16 41.8 -1.5**
MDJ pmax pmax
comp=Z,6.0nm,2.0s
MDJ pmax pmax
comp=Z,120nm,4.8s
MDJ LR LR
comp=N,340nm,19.6s
MDJ LR LR
comp=E,300nm,14.8s
MDJ LR LR
comp=Z,290nm,22.7s
MJAR Matsushiro Arr 50.74 279 LR LR 04 30 31.0
comp=Z,32nm,18.6s,baz=58,slow=38
BORG Borgarnes 53.35 25 LR LR 04 31 21.8
comp=Z,255nm,18.5s,baz=307,slow=38
ARCES ARCESS Array B 54.68 2 LR LR 04 29 45.1
comp=Z,67nm,21.5s,baz=2.5,slow=35
JCJ Chichijima 55.61 268 LR LR 04 29 41.7
comp=Z,29nm,21.4s,baz=160,slow=34
KSRS Korea Array 55.69 287 LR LR 04 31 21.3
comp=Z,56nm,19.9s,baz=60,slow=36
CMIG Matias Romero 56.79 110 LR LR 04 32 00.9
comp=Z,162nm,18.9s,baz=328,slow=36
JNU Nakatsue 57.32 282 LR LR 04 33 45.5
comp=Z,50nm,19.4s,baz=35,slow=38
SONM Songino Array 58.43 310 P **P** **04 07 55.5 -1.4**
SONM IAmb IAmb 04 08 01.0
comp=Z,6.7nm,1.2s
SONM Songino Array 58.43 310 P **P** **04 07 56.2 -0.7**
comp=Z,2.9nm,0.9s,baz=74,slow=6.3,SNR=6.0
SONM LR LR 04 35 41.4
comp=Z,331nm,18.4s,baz=12,slow=39
comp=Z,2.9nm,0.9s
HHC Hu-ho-hao-te 61.46 301 *eP* **P** **04 08 18.9 +1.1**
HHC pP sP 04 08 23.2 -0.4
HHC *eS* **S** **04 16 44.3 +6.3**
HHC sS sS 04 16 53.6 +8.7
HHC ScS **ScS** **04 18 10.0 +1.8**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.5s
HHC LR LR
comp=N,220nm,14.5s
HHC LR LR
comp=E,190nm,17.3s
HHC LR LR
comp=Z,340nm,15.9s
ZAA0 Zalesovo Array 61.50 327 P **P** **04 08 16.5 -1.2**
ZALV Zalesovo Beam 61.50 327 P **P** **04 08 17.1 -0.6**
ZALV Zalesovo Beam 61.50 327 P **P** **04 08 18.0 +0.3**
comp=Z,2.1nm,0.6s,baz=32,slow=7.4,SNR=11
ZALV LR LR 04 36 47.1
comp=Z,118nm,19.8s,baz=24,slow=38
comp=Z,2.1nm,0.6s
NB2 NORSAR Subarra 62.33 10 P **P** **04 08 23.8 +0.6**
comp=Z,2.9nm,0.7s,baz=348,slow=6.9
NOA NORSAR Array B 62.33 10 P **P** **04 08 23.6 +0.4**
comp=Z,3.3nm,0.9s,baz=349,slow=6.7,SNR=5.5
NOA LR LR 04 36 11.8
comp=Z,47nm,21.0s,baz=350,slow=37
comp=Z,3.3nm,0.9s
FINES FINESS Array B 62.81 2 P **P** **04 08 27.1 +0.8**
comp=Z,3.6nm,0.8s,baz=356,slow=7.6,SNR=8.6
comp=Z,3.6nm,0.8s
HFS Hagfors 63.45 9 P **P** **04 08 30.8 +0.2**
comp=Z,1.9nm,0.6s,baz=35,slow=3.6,SNR=7.6
HFS LR LR 04 35 37.2
comp=Z,48nm,21.1s,baz=340,slow=36
comp=Z,1.9nm,0.6s
NJ2 Nanjing 64.62 290 *eP* **P** **04 08 41.6 +2.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
KIRV Kirov 64.65 349 LR LR 04 40 48.1
comp=Z,118nm,18.2s,baz=13,slow=40
ARU Arti 65.49 343 P **P** **04 08 44.0 0.0**
ARU Arti 65.49 343 LR LR 04 40 48.2
comp=Z,129nm,19.2s,baz=4.0,slow=39
EKA Eskdalemuir Ar 65.76 20 P **P** **04 08 46.8 +1.1**
comp=Z,4.5nm,0.8s,baz=356,slow=7.5,SNR=5.0
comp=Z,4.5nm,0.8s
BRVK Borovoye 66.29 335 P **P** **04 08 49.1 -0.1**
BVAR Borovoye Array 66.30 335 P **P** **04 08 50.5 +1.3**
comp=Z,1.5nm,0.6s,baz=40,slow=7.7,SNR=7.7
BVAR LR LR 04 44 24.7
comp=Z,164nm,18.1s,baz=19,slow=42
comp=Z,1.5nm,0.6s

KURBB Kurchatov Arra 66.30 329 P **P** **04 08 49.3 0.0**
comp=Z,0.9nm,0.5s,baz=30,slow=6.4,SNR=8.5
KURBB LR LR 04 42 22.4
comp=Z,218nm,18.0s,baz=167,slow=40
comp=Z,0.9nm,0.5s
MK31 Makanchi Array 68.51 324 P **P** **04 09 02.4 -1.1**
MKAR Makanchi Array 68.51 324 P **P** **04 09 03.1 -0.3**
MKAR Makanchi Array 68.51 324 P **P** **04 09 03.3 -0.1**
comp=Z,1.2nm,0.5s,baz=31,slow=5.9,SNR=20
MKAR LR LR 04 43 14.3
comp=Z,200nm,18.9s,baz=38,slow=40
comp=Z,1.2nm,0.5s
MAKZ Makanchi 68.60 324 P **P** **04 09 03.7 -0.3**
WMQ Urumqi 69.22 319 *eP* **P** **04 09 08.0 +0.1**
WMQ PcP **PcP** **04 09 34.7 +3.1**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
BELG Belogornoye 70.93 349 LR LR 04 44 39.7
comp=Z,158nm,18.6s,baz=136,slow=39
AKTO Aktyubinsk 71.34 341 LR LR 04 45 21.9
comp=Z,118nm,18.8s,baz=35,slow=40
CLL Collm 72.10 11 *i* P **P** **04 09 27.2 +2.0**
comp=Z,8.0nm,1.2s
ABKAR Akbulak array 72.11 340 P **P** **04 09 25.1 -0.2**
ABKAR Akbulak array 72.11 340 P **P** **04 09 26.1 +0.7**
ABKAR IAmb IAmb 04 09 28.4
comp=Z,9.4nm,1.1s
BRG Berggiesshubel 72.63 11 *eP* **P** **04 09 31.1 +2.7**
BRG Amp 04 09 32.8
comp=Z,7.5nm,1.2s
NKC Novy Kostel 73.10 12 *e*P **P** **04 09 32.7 +1.5**
DPC Dobruska-Polom 73.37 9 *e*P **P** **04 09 34.6 +1.7**
AKASG Malin Array Be 73.62 0 P **P** **04 09 34.5 +0.2**
comp=Z,5.0nm,0.9s,baz=0.2,slow=6.0,SNR=11
AKASG LR LR 04 44 37.3
comp=Z,67nm,19.7s,baz=25,slow=38
comp=Z,5.0nm,0.9s
KIEV Kiev 73.62 0 P **P** **04 09 33.5 -0.8**
KRLC Kraliky 73.68 9 *e*P **P** **04 09 36.0 +1.3**
ZVC Zvikov 74.07 11 *e*P **P** **04 09 38.8 +1.9**
KHC Kasperske Hory 74.31 11 P **P** **04 09 38.6 +0.2**
KHC Kasperske Hory 74.31 11 *e*P **P** **04 09 40.0 +1.6**
VRAC Vranov 74.43 9 *e*P **P** **04 09 40.8 +1.8**
VRAC Vranov 74.43 9 LR LR 04 44 03.8
comp=Z,45nm,18.2s,baz=344,slow=37
GEC2 GERESS Array S 74.61 11 P **P** **04 09 40.3 +0.1**
GERES GERESS Array B 74.61 11 P **P** **04 09 41.3 +1.1**
comp=Z,1.5nm,0.8s,baz=357,slow=5.3,SNR=5.9
GERES LR LR 04 46 03.5
comp=Z,52nm,18.0s,baz=335,slow=39
comp=Z,1.5nm,0.8s
KRUC Moravsky 74.66 9 *e*P **P** **04 09 41.7 +1.4**
STHS Stebnicka Huta 74.66 6 *e*P **P** **04 09 43.3 +2.9**
AAK Ala-Archa 74.70 327 LR LR 04 44 21.2
comp=Z,184nm,19.5s,baz=22,slow=37
MODS Modra-Piesok 75.42 9 *e*P **P** **04 09 48.0 +3.2**
KKAR Karatay Array 75.42 330 P **P** **04 09 44.3 -0.6**
RETA Reutte 75.60 13 *i* PcP **PcP** **04 09 57.2 -1.6**
comp=Z,8.3nm,1.8s
MOA Molln 75.65 11 *e*pP pP 04 09 53.0 +2.7
comp=Z,5.1nm,1.2s
CONA Conrad Observa 75.73 10 *e*P **P** **04 09 49.5 +2.8**
comp=Z,8.1nm,1.3s
BIOA Bad Ischl, Aus 75.74 11 *i* P **P** **04 09 49.0 +2.3**
comp=Z,6.9nm,1.3s
MOTA Moosalm 75.78 13 *e*P **P** **04 09 48.3 +1.2**
comp=Z,11nm,1.7s
WATA Walderalm 75.85 13 *i* P **P** **04 09 50.4 +3.0**
comp=Z,17nm,1.4s
LESA Schwarzleotal 75.89 12 *i* P **P** **04 09 50.3 +2.6**
comp=Z,6.3nm,1.2s
SQTA Sankt Quirin 75.92 13 *i* P **P** **04 09 50.1 +2.4**
comp=Z,11nm,1.2s
WTTA Wattenberg 75.93 13 *i* pP pP 04 09 51.2 -1.0
comp=Z,8.7nm,1.0s
RONA Rosalia, Austr 76.00 9 *e*pP pP 04 09 55.8 +3.4
comp=Z,4.8nm,1.2s
FETA Feichten 76.05 13 *i* P **P** **04 09 51.7 +3.0**
comp=Z,4.4nm,0.9s
KBA Koelnbreinsper 76.31 12 *e*P **P** **04 09 52.3 +2.2**
comp=Z,12nm,1.2s
ARSA Arzberg 76.37 10 *e*P **P** **04 09 51.6 +1.4**
comp=Z,4.4nm,0.9s
ABTA Abfaltersbach 76.54 12 *e*P **P** **04 09 53.4 +2.1**
comp=Z,4.2nm,1.0s
MYKA Terra Mystica 76.79 11 *e*P **P** **04 09 54.3 +1.6**
comp=Z,12nm,1.5s
SOKA Soboth 76.89 10 *i* P **P** **04 09 55.4 +2.1**
comp=Z,9.3nm,1.3s
OBKA Obir 77.00 11 *e*P **P** **04 09 55.2 +1.3**
comp=Z,11nm,1.0s
KSH Kashi 77.08 325 P P 04 10 00.3 +5.8
KSH pmax pmax
comp=Z,6.0nm,1.8s
KSH LR LR
comp=N,330nm,16.8s
KSH LR LR
comp=E,340nm,18.2s
KSH LR LR
comp=Z,360nm,17.9s
HNR Honiara 77.20 231 LR LR 04 37 51.7
comp=Z,2μm,19.1s,baz=52,slow=31
RAR Rarotonga 77.39 189 LR LR 04 36 36.8
comp=Z,102nm,20.4s,baz=182,slow=30
PZH PanZhiHua 77.83 299 P **P** **04 10 00.7 +1.8**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,70nm,6.6s
SIMJ Simiganj 79.97 330 P **P** **04 10 09.5 -1.0**
SIMJ IAmb IAmb 04 10 21.6
comp=Z,5.4nm,0.9s
KBZ Khabaz 79.99 350 P **P** **04 10 11.8 +1.6**
comp=Z,3.7nm,0.8s,baz=19,slow=6.2,SNR=8.6
KBZ LR LR 04 50 10.1
comp=Z,70nm,18.1s,baz=354,slow=39
comp=Z,3.7nm,0.8s
ESDC Sonseca Array 80.40 26 P **P** **04 10 12.8 0.0**
ESDC Sonseca Array 80.40 26 P **P** **04 10 14.0 +1.3**
comp=Z,3.4nm,1.0s,baz=333,slow=5.7,SNR=9.0
ESDC LR LR 04 46 38.3
comp=Z,143nm,18.2s,baz=314,slow=36
comp=Z,3.4nm,1.0s
PMG Port Moresby 83.15 242 LR LR 04 40 37.0
comp=Z,71nm,20.4s,baz=229,slow=31
GNI Garni 83.34 349 LR LR 04 53 39.8
comp=Z,79nm,18.4s,baz=19,slow=40
GEYT Ailbeck 83.35 338 LR LR 04 54 40.2
comp=Z,86nm,18.6s,baz=6.0,slow=41
BRTR Keskin Array B 84.54 357 LR LR 04 49 45.5
comp=Z,63nm,21.7s,baz=0.5,slow=37
VAE Valguarnera 85.91 12 LR LR 04 54 11.3
comp=Z,82nm,18.3s,baz=130,slow=39
CMAR Chiang Mai Arr 85.97 297 P **P** **04 10 42.5 +0.8**
comp=Z,1.6nm,0.3s,baz=26,slow=4.4,SNR=1.9
CMAR LR LR 04 54 07.9
comp=Z,74nm,18.6s,baz=195,slow=39
comp=Z,1.6nm,0.3s
DZM Mont Dzumac 86.06 220 *e*LR LR 04 37 53.1
comp=Z,222nm,22.4s
DZM Mont Dzumac 86.06 220 LR LR 04 41 24.7
comp=Z,142nm,20.7s,baz=50,slow=30
MDT Midelt 86.73 29 LR LR 04 49 42.9
comp=Z,153nm,18.3s,baz=334,slow=36
KEST Kesra 86.92 17 LR LR 04 51 53.8
comp=Z,60nm,19.3s,baz=326,slow=37
RPN Rapa Nui 89.82 144 LR LR 04 41 34.1
comp=Z,72nm,19.7s,baz=24,slow=29
CTA Charters Tower 92.77 237 LR LR 04 47 41.6
comp=Z,68nm,19.7s,baz=86,slow=32
URZ Urewera 97.99 205 LR LR 04 49 22.9
comp=Z,107nm,19.5s,baz=122,slow=32
QSPA South Pole Qui 145.84 180 PKPbc **PKPab** **04 17 39.2 -0.4**
comp=Z,1.4nm,0.6s,baz=114,slow=0.7,SNR=7.6

IDC 08 03:59:38.1±3.2, 53°54N×87°88E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=30.8km s-min=16.4km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**284**	I	I			04 10 25.0	
	0.1nm,1.1s,baz=100,slow=342,SNR=11								
ZALV	**Zalesovo Beam**	**1.86**	**284**	Pg	Pn			04 00 11.3	0.0
	1.5nm,0.3s,baz=99,slow=15,SNR=16								
ZALV						Lg	Lg	04 00 37.6	
	2.0nm,0.3s,baz=100,slow=24,SNR=13								
KURBB	**Kurchatov Arra**	**6.46**	**247**	Pn		Pn		04 01 15.2	+0.8
	0.1nm,0.3s,baz=62,slow=14,SNR=7.0								
	0.7nm,0.4s								
MKAR	**Makanchi Array**	**7.65**	**210**	Pn		Pn		04 01 31.9	+1.2
	0.1nm,0.3s,baz=28,slow=13,SNR=7.4								
MKAR						Lg	Lg	04 03 37.4	
	baz=21,slow=22,SNR=2.7								
	0.2nm,0.3s								

*JMA **08** 04:23:33.3±0.1, 24.°0N±0.°4×12.°2E±°, h3km, MV3.1/12, TAIWAN REGION*
*ASIES **08** 04:23:33.3, 23.°96N×121.°60E, h10km, ML3.6, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.62; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-1.15; $M_{r\theta}$0.73; $M_{r\phi}$-0.40; $M_{\theta\phi}$0.81; Fault plane solution: $M_0$1.47903×10^{21} NP1:ϕ_s37.60000°, δ70.91000°, λ107.95000°. NP2:ϕ_s172.88000°, δ25.97000°, λ48.33000°. Principal axes: T Plg60.1120°, Azm333.5160°; N Plg16.9260°, Azm211.5450°; P Plg23.8540°, Azm113.8120°;*
*TAP **08** 04:23:33.3, 23.°96N×121.°60E, h10km, ML3.6, B*
ISC 08 04:23:34.1±0.9, 23.°95N±0.°01×121.°65E±0.°02, h5km±6km, n129,$_n$0°64/240, 2C-30D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**302**	⇑ *i*	P		**Pg**	**04 23 35.3**	**-0.1**
	baz=46								
HWA				*i*	S		**Sg**	**04 23 37.1**	**+0.8**
	baz=46								
TWD	**Chiawan**	**0.14**	**340**	⇓ *i*	P		**Pg**	**04 23 36.6**	**-0.3**
	baz=2.0								
TWD				*i*	S		**Sg**	**04 23 38.8**	**0.0**
	baz=2.0								
ETM	**Tongmen**	**0.14**	**275**	*i*	P		**Pg**	**04 23 36.2**	**-0.8**
	baz=273								
ETM				*i*	S		**Sg**	**04 23 38.2**	**-0.8**
	baz=273								
SHUL	**Shoufeng**	**0.18**	**205**	⇑ *i*	P		**Pg**	**04 23 38.0**	**+0.3**
	baz=200								
SHUL					S		**Sg**	**04 23 42.1**	**+2.0**
	baz=200								
ETL	**Fush Village**	**0.21**	**354**	⇓ *i*	P		**Pg**	**04 23 37.9**	**-0.3**
	baz=5.0								
ETL				*i*	S		**Sg**	**04 23 40.9**	**0.0**
	baz=5.0								
LXIB	**Xiulin Townshi**	**0.22**	**288**	⇓ *i*	P		**Pg**	**04 23 37.8**	**-0.7**
	baz=283								
LXIB					S		**Sg**	**04 23 41.3**	**-0.2**
	baz=283								
NACB	**Ninganchiao**	**0.23**	**348**		P		**Pg**	**04 23 38.3**	**-0.2**
NACB	**Ninganchiao**	**0.23**	**348**	⇓ *i*	P		**Pg**	**04 23 38.1**	**-0.4**
	baz=4.0								
NACB				*i*	S		**Sg**	**04 23 41.2**	**-0.3**
	baz=4.0								
ESL	**Shilin**	**0.24**	**235**	⇓ *i*	P		**Pg**	**04 23 37.9**	**-0.9**
	baz=232								
ESL				*i*	S		**Sg**	**04 23 41.1**	**-0.9**
	baz=232								
TEGC	**Jichi Village**	**0.26**	**202**		P		**Pg**	**04 23 40.0**	**+0.8**
	baz=194								
TEGC					S		**Sb**	**04 23 45.5**	**-0.6**
	baz=194								
ETLH	**Xiulin Townshi**	**0.29**	**329**	⇓ *i*	P		**Pg**	**04 23 39.3**	**-0.5**
	baz=335								
ETLH				*i*	S		**Sg**	**04 23 43.2**	**-0.6**
	baz=335								
WARBT	**Fenglin Townsh**	**0.33**	**226**	⇓ *i*	P		**Pg**	**04 23 39.7**	**-0.9**
	baz=229								
WARBT				*i*	S		**Sg**	**04 23 44.0**	**-1.0**
	baz=229								
EGFH	**Guangfu**	**0.35**	**216**	⇓ *i*	P		**Pg**	**04 23 40.3**	**-0.6**
	baz=219								
EGFH					S		**Sg**	**04 23 45.0**	**-0.4**
	baz=219								
EAHA	**Aohua**	**0.38**	**13**		P		**Pg**	**04 23 41.1**	**-0.4**
	baz=25								
EAHA					*e*S		**Sg**	**04 23 47.2**	**+0.5**
	baz=25								
WHF	**Hehuan Shan**	**0.40**	**299**	⇓ *i*	P		**Pg**	**04 23 41.1**	**-0.8**
	baz=301								
WHF					S		**Sg**	**04 23 46.4**	**-0.8**
	baz=301								
OWD	**Renai**	**0.43**	**270**	⇓ *i*	P		**Pg**	**04 23 41.8**	**-0.7**
	baz=270								
OWD					*e*S		**Sg**	**04 23 48.3**	**+0.1**
	baz=270								
CHGB	**Renai**	**0.45**	**284**	⇓ *i*	P		**Pg**	**04 23 42.2**	**-0.5**
	baz=285								
CHGB					*e*S		**Sg**	**04 23 48.8**	**+0.2**
	baz=285								
FUSS	**Fushou**	**0.47**	**309**	⇓ *i*	P		**Pg**	**04 23 42.9**	**-0.4**
	baz=311								
FUSS					*e*S		**Sg**	**04 23 49.1**	**-0.3**
	baz=311								
ENA	**Nanau**	**0.48**	**10**		P		**Pg**	**04 23 43.3**	**-0.1**
	baz=15								
ENA					*e*S		**Sg**	**04 23 50.1**	**+0.5**
	baz=15								
WUSB	**Renai**	**0.49**	**275**	⇓ *i*	P		**Pg**	**04 23 43.0**	**-0.5**
	baz=284								
WUSB					*e*S		**Sg**	**04 23 49.4**	**-0.4**
	baz=284								
HGSD	**Ruisui**	**0.50**	**204**	*e*P			**Pg**	**04 23 44.1**	**+0.4**
	baz=216								
HGSD					*e*S		**Sb**	**04 23 52.8**	**-0.2**
	baz=216								
EWUT	**Wuta**	**0.51**	**14**		P		**Pg**	**04 23 43.7**	**-0.1**
	baz=17								
EWUT					*e*S		**Sg**	**04 23 51.6**	**+1.2**
	baz=17								
TWT	**Tachien**	**0.53**	**305**	*e*P			**Pg**	**04 23 44.1**	**-0.2**
	baz=306								
TWT					*e*S		**Sg**	**04 23 51.2**	**+0.1**
	baz=306								
NNSB	**Datong**	**0.53**	**333**	⇓	P		**Pg**	**04 23 44.0**	**-0.3**
	baz=336								
NNSB					*e*S		**Sg**	**04 23 50.6**	**-0.8**
	baz=336								
NNSH	**Datong**	**0.53**	**333**	*e*P			**Pg**	**04 23 44.1**	**-0.2**
	baz=330								
NNSH					*e*S		**Sg**	**04 23 50.6**	**-0.7**
	baz=330								
EHY	**Hungye**	**0.54**	**214**	⇓ *e*P			**Pg**	**04 23 43.6**	**-0.8**
	baz=220								
EHY					*e*S		**Sg**	**04 23 50.7**	**-0.6**
	baz=220								
TDCB	**Techi**	**0.54**	**304**	⇓ *e*P			**Pg**	**04 23 44.1**	**-0.3**
	baz=306								
TDCB					*e*S		**Sg**	**04 23 51.3**	**-0.2**
	baz=306								
NNS	**Nan Shan**	**0.55**	**333**	⇓ *e*P			**Pg**	**04 23 44.3**	**-0.4**
	baz=336								
NNS					*e*S		**Sg**	**04 23 51.4**	**-0.4**
	baz=336								
LATG	**Datong**	**0.59**	**349**	⇓	P		**Pg**	**04 23 45.1**	**-0.4**
	baz=353								
LATG					*e*S		**Sg**	**04 23 53.2**	**0.0**
	baz=353								
WPL	**Puli Township**	**0.63**	**275**	⇓ *e*P			**Pg**	**04 23 46.0**	**-0.3**
	baz=276								
WPL					*e*S		**Sg**	**04 23 54.5**	**0.0**
	baz=276								
EOS4	**EOS4**	**0.64**	**75**		P		**Pb**	**04 23 47.5**	**0.0**
	baz=94								
EOS4					*e*S		**Sb**	**04 23 57.6**	**+1.1**
	baz=94								
YULB	**Yu-li**	**0.64**	**210**		P		**Pg**	**04 23 46.4**	**-0.1**
YULB	**Yu-li**	**0.64**	**210**	*e*P			**Pg**	**04 23 45.8**	**-0.7**
	baz=218								
YULB					*e*S		**Sg**	**04 23 54.1**	**-0.8**
	baz=218								
ESAO	**Su ao**	**0.65**	**16**	*e*P			**Pg**	**04 23 46.7**	**+0.2**
	baz=10.0								
ESAO					*e*S		**Sb**	**04 23 56.5**	**-0.6**
	baz=10.0								
SSLB	**Suanglung**	**0.66**	**256**		P		**Pg**	**04 23 46.3**	**-0.4**
SSLB	**Suanglung**	**0.66**	**256**	⇓	P		**Pg**	**04 23 46.0**	**-0.7**
	baz=265								
SSLB					*e*S		**Sg**	**04 23 54.3**	**-1.0**
	baz=265								
ECBN	**Changbin**	**0.66**	**196**	*e*P			**Pg**	**04 23 47.5**	**+0.8**
	baz=182								
ECBN					*e*S		**Sb**	**04 23 58.5**	**+1.1**
	baz=182								
NDT	**Datong Townshi**	**0.66**	**349**		P		**Pg**	**04 23 46.6**	**-0.2**

baz=352
NDT eS Sg 04 23 55.4 0.0
baz=352
DPDB Guoxing 0.66 277 ⇓P Pg 04 23 46.6 -0.2
baz=278
DPDB eS Sg 04 23 55.5 0.0
baz=278
EYUL Yuli 0.67 207 eP Pg 04 23 46.8 -0.3
baz=218
EYUL eS Sg 04 23 57.1 +1.3
baz=218
TWF1 Yuli 0.68 208 eP Pg 04 23 46.6 -0.5
baz=217
TWF1 eS Sg 04 23 56.6 +0.7
baz=217
TWC Suao 0.68 16 eP Pg 04 23 47.2 0.0
baz=10.0
TWC eS Sg 04 23 57.2 +1.2
baz=10.0
NDS Dongshan 0.68 5 eP Pg 04 23 47.1 -0.1
baz=8.0
NDS eS Sb 04 23 57.5 -0.7
baz=8.0
WCS Beigang Elemen 0.68 279 ⇓eP Pg 04 23 46.9 -0.3
baz=279
WCS eS Sg 04 23 56.5 +0.5
baz=279
SMLT Sun Moon Lake 0.69 264 ⇓eP Pg 04 23 46.9 -0.4
baz=273
SMLT eS Sg 04 23 57.2 +0.9
baz=273
ENTT Nioudou 0.69 354 ⇓P Pg 04 23 47.2 -0.1
baz=357
ENTT eS Sg 04 23 56.7 +0.4
baz=357
EOS3 EOS3 0.70 61 eP Pb 04 23 49.4 +0.8
baz=59
EOS3 eS Sn 04 24 00.7 -0.8
baz=59
EOS2 EOS2 0.71 49 eP Pn 04 23 50.2 -0.4
baz=61
WHP Taichung City 0.72 297 ⇓eP Pg 04 23 48.3 +0.4
baz=291
WHP eS Sg 04 23 57.8 +0.6
baz=291
TYC Yuchr 0.72 266 ⇓eP Pg 04 23 47.4 -0.7
baz=266
TYC eS Sg 04 23 58.1 +0.6
baz=266
YHNB Yeheng 0.76 341 P Pg 04 23 48.9 +0.3
YHNB Yeheng 0.76 341 eP Pg 04 23 48.6 -0.1
baz=343
YHNB eS Sg 04 23 59.0 +0.6
baz=343
NSK Sanguang 0.77 340 eP Pg 04 23 48.7 -0.1
baz=343
NSK eS Sg 04 23 58.7 -0.2
baz=343
WHYT Xinyi Township 0.77 251 eP Pg 04 23 48.3 -0.6
baz=257
WHYT eS Sg 04 23 58.7 -0.2
baz=257
CHKH Chenggong 0.79 197 eP Pg 04 23 49.6 +0.3
baz=186
CHKH eS Sb 04 24 01.6 +0.3
baz=186
FUSB Fushanzhiwuyua 0.81 356 eP Pg 04 23 49.7 +0.1
baz=358
FUSB eS Sg 04 24 00.7 +0.6
baz=358
FULB Fuli 0.82 203 eP Pg 04 23 50.0 +0.3
baz=218
FULB eS Sn 04 24 04.2 -0.5
baz=218
NFF Wufeng Townshi 0.83 325 ⇓eP Pg 04 23 50.0 -0.1
baz=326
NFF eS Sg 04 24 00.2 -0.6
baz=326
NWLT Wulai 0.83 351 eP Pg 04 23 50.0 -0.1
baz=353
NWLT eS Sg 04 24 00.5 -0.4
baz=353
WJS Zhushan 0.85 261 eP Pg 04 23 50.7 +0.2
baz=256
WWF Wufeng 0.87 276 eP Pg 04 23 51.6 +0.7
baz=282
WNT Mingjian 0.89 265 eP Pg 04 23 51.8 +0.7
baz=266
WNT1 Nantou City 0.89 267 eP Pg 04 23 51.5 +0.4
baz=273
WNT1 eS Sn 04 24 05.7 -0.7
baz=273
ALS Alishan 0.89 240 ⇓eP Pg 04 23 50.7 -0.5
baz=240
ALS eS Sg 04 24 02.5 -0.2
baz=240
CHKT Chengkung 0.89 197 eP Pg 04 23 50.7 -0.4
baz=196
CHKT eS Sb 04 24 05.0 +0.9
baz=196
TWQ1 Liyutan 0.89 296 eP Pb 04 23 52.4 +0.4
baz=298
TWQ1 eS Sg 04 24 03.6 +0.9
baz=298
EHD Haiduan 0.90 207 eP Pg 04 23 50.6 -0.7
baz=217
EHD eS Sb 04 24 05.3 +1.0
baz=217
NSTT Nanjuang 0.90 319 eP Pg 04 23 51.4 +0.1
baz=321
NSTT eS Sg 04 24 02.8 -0.2
baz=321
LIOB Emei 0.90 320 eP Pg 04 23 51.7 +0.4
baz=322
LIOB eS Sg 04 24 03.8 +0.7
baz=322
TCU Taichung 0.91 283 eP Pg 04 23 52.3 +0.7
baz=278
TCU eS Sb 04 24 05.6 +0.9
baz=278
NSY Sanyi 0.93 300 eP Pb 04 23 53.0 +0.2
baz=313
NSY eS Sn 04 24 06.6 -1.0
baz=313
ECS Chishang 0.94 205 eP Pn 04 23 54.5 +0.5
baz=204
ELDTW Lidau 0.95 217 eP Pg 04 23 52.1 -0.3
baz=209
ELDTW eS Sg 04 24 04.9 0.0
baz=209
CHN5 Tsauling 0.96 248 ⇓eP Pg 04 23 52.5 +0.1
baz=238
CHN5 eS Sb 04 24 07.1 +0.9
baz=238
NMLH Miaoli 0.97 307 eP Pb 04 23 54.0 +0.6
baz=308
NMLH eS Sb 04 24 07.6 +0.9
baz=308
WCHH Zhanghua 1.00 277 eP Pg 04 23 53.6 +0.2
baz=277
NHDH Xindian Distri 1.01 354 eP Pg 04 23 53.4 -0.2
baz=355
NHDH eS Sg 04 24 06.7 0.0
baz=355
EDH Donghe 1.02 198 eP Pg 04 23 52.6 -1.1
baz=199
EDH eS Sb 04 24 08.5 +0.5
baz=199
TWA Mucha 1.02 357 eP Pg 04 23 53.9 +0.1
baz=349
TWA eS Sg 04 24 07.2 +0.1
baz=349
TIPB Shuangxi 1.03 9 eP Pg 04 23 53.7 -0.1
baz=1.0
TIPB eS Sg 04 24 07.2 0.0
baz=1.0
TATO Taipei 1.03 352 eP Pg 04 23 54.4 +0.5
baz=353
TATO eS Sg 04 24 06.8 -0.5
baz=353
WGK Gukeng 1.03 255 eP Pg 04 23 54.3 +0.5
baz=257
WGK eS Sn 04 24 10.1 +0.2
baz=257
SBCB Hsinchu 1.03 324 eP Pb 04 23 54.6 +0.2
baz=335
SBCB eS Sg 04 24 08.0 +0.7
baz=335
HSN Hsinchu 1.05 324 eP Pn 04 23 56.0 +0.6
baz=337
HSN eS Sn 04 24 10.1 -0.3
baz=337
WDLH Douliu 1.05 256 eP Pg 04 23 54.7 +0.5
baz=257
WDLH eS Sn 04 24 09.9 -0.5
baz=257
WCKO Fanlu 1.08 242 eP Pg 04 23 55.0 +0.1
baz=235
WCKO eS Sn 04 24 11.0 -0.3
baz=235
NCUH Zhongli 1.09 337 eP Pn 04 23 56.1 +0.1
baz=348
NCUH eS Sn 04 24 11.7 +0.1
baz=348
NCU National Centr 1.10 338 eP Pn 04 23 56.2 +0.2
baz=349
NCU eS Sn 04 24 12.0 +0.3
baz=349
TWB1 Santiao Chiao 1.10 16 eP Pg 04 23 55.5 +0.3
baz=11
TWB1 eS Sn 04 24 11.0 -0.6
baz=11
STYH Taoyuan 1.12 226 eP Pg 04 23 54.7 -0.8
baz=227
STYH eS Sg 04 24 10.4 +0.4
baz=227
NWF Wu-fen Shan 1.12 6 eP Pb 04 23 56.2 +0.2
baz=7.0
NWF eS Sg 04 24 10.6 +0.5
baz=7.0
WFSB Wu-fen Shan 1.12 6 eP Pb 04 23 56.2 +0.3
baz=7.0
WFSB eS Sg 04 24 10.2 +0.1
baz=7.0
STYT Tauyuan 1.13 226 eP Pg 04 23 55.5 -0.3
baz=227
STYT eS Sg 04 24 11.2 +0.6
baz=227
CHN4 Tsaushan 1.14 238 ⇓eP Pg 04 23 55.9 0.0
baz=232
CHN4 eS Sn 04 24 13.6 +1.0
baz=232
TPUB Ta-pu 1.14 235 P Pg 04 23 55.8 -0.1
TPUB Ta-pu 1.14 235 eP Pg 04 23 55.7 -0.2
baz=236
TPUB eS Sn 04 24 12.1 -0.6
baz=236
LONT Longtian 1.15 205 eP Pg 04 23 55.3 -0.8
baz=204
CHN2 Minshiung 1.15 249 eP Pn 04 23 57.2 +0.4
baz=265
CHN2 eS Sn 04 24 13.8 +0.8
baz=265
SXI1 Grass Mountain 1.16 10 eP Pg 04 23 56.2 -0.1
baz=4.0
SXI1 eS Sb 04 24 12.2 +0.3
baz=4.0
TWS1 Kuangyinshan 1.16 350 eP Pn 04 23 57.0 +0.1
baz=359
TWS1 eS Sn 04 24 13.5 +0.3
baz=359
WRL Guolierlin Hig 1.16 268 eP Pg 04 23 56.6 +0.2
baz=269
WRL eS Sb 04 24 12.6 +0.6
baz=269
RLNB Erlin 1.18 267 eP Pb 04 23 56.2 -0.7
baz=269
RLNB eS Sn 04 24 13.7 +0.1
baz=269
WTP Ta-pu 1.18 234 eP Pg 04 23 55.9 -0.8
baz=235
WTP eS Sg 04 24 12.6 +0.5
baz=235
WTK Tuku 1.18 257 eP Pb 04 23 57.0 0.0
baz=259
WTK eS Sn 04 24 13.9 +0.2
baz=259
YM01 YM01 1.19 357 eP Pb 04 23 57.4 +0.3
baz=348
YM01 eS Sn 04 24 14.1 +0.1
baz=348
TNOU National Taiwa 1.20 5 eP Pb 04 23 57.4 +0.2
baz=5.0
NTST Danshui 1.22 352 eP Pg 04 23 58.0 +0.4
baz=351
YM08 YM08 1.23 358 eP Pb 04 23 57.9 +0.1
baz=349
YM08 eS Sn 04 24 15.2 +0.3
baz=349
ANP Anpu 1.23 355 eP Pg 04 23 58.2 +0.4
baz=356
ANP eS Sn 04 24 15.2 +0.1
baz=356
TWG Pinlang 1.24 205 eP Pn 04 23 56.1 -2.0
baz=214
TWG eS Sb 04 24 14.3 -0.1
baz=214
TWGBT Beinan 1.24 205 P Pg 04 23 59.9 +1.9
TWGBT Beinan 1.24 205 eP Pn 04 23 56.1 -2.0
baz=214
TWGBT eS Sb 04 24 14.3 -0.1
baz=214
TWK Hsinying 1.26 238 eP Pn 04 23 57.9 -0.5
baz=233
TWK eS Sn 04 24 15.9 +0.1
baz=233
CHN1 Nanshi 1.28 234 eP Pn 04 23 58.5 -0.1
baz=235
CHN1 eS Sn 04 24 16.4 +0.2
baz=235
SNST Tainan City 1.28 236 eP Pn 04 23 58.4 -0.2
baz=227
SNST eS Sn 04 24 16.2 0.0
baz=227
JYNG Yonagunijimaku 1.28 67 eP Pn 04 23 58.6 -0.1
JYNG eS Sg 04 24 15.8 +0.3
SGST Jiashian 1.31 229 eP Pn 04 23 57.4 -1.6
baz=230
SGST eS Sn 04 24 17.4 +0.6
baz=230
SLGT Liugui 1.32 224 eP Pn 04 23 58.4 -0.9
baz=226
SLGT eS Sn 04 24 17.8 +0.5
baz=226
YOJ Yonaguni jima 1.34 68 eP Pn 04 23 58.5 -0.9
baz=68
YOJ eS Sg 04 24 18.3 +1.0
baz=68
YOJ Yonaguni jima 1.34 68 eP Pn 04 23 59.0 -0.5
YOJ eS Sg 04 24 17.9 +0.6
ICHU Yijhu 1.39 245 eP Pb 04 24 00.8 +0.4
baz=245
SCST Cishan 1.50 225 eP Pb 04 24 02.6 +0.2
baz=229
SCST eS Sg 04 24 24.8 +2.4
baz=229
SSD Sandimen 1.52 218 eP Pn 04 24 01.4 -0.6
baz=221
SSD eS Sn 04 24 21.7 -0.3
baz=221
MASBT Mashibuluo 1.63 215 eP Pn 04 24 03.1 -0.3
baz=204
EAST Anshuo 1.73 205 eP Pn 04 24 04.1 -0.7
baz=192
PHUB P'eng-hu 1.95 257 eP Pn 04 24 07.7 -0.1
baz=261
PHUB eS Sn 04 24 32.3 -0.4
baz=261
JKRS Kuro-shima 2.18 82 P Pn 04 24 10.5 -0.4
JKRS S Sn 04 24 37.2 -1.1
JIJ Ishigaki jima 2.32 79 eP Pn 04 24 12.8 0.0
JIJ eS Sn 04 24 39.9 -1.8
JISG Ishigakijimahi 2.51 75 eP Pn 04 24 13.8 -1.8
JISG eS Sn 04 24 44.6 -1.9

IDC 08 04:36:55.3±2.2, 6.76S×128.77E, h0km, mb3.3/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=117.9km s-min=33.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.18**	**158**	Pn	Pn	04 40 18.1	+0.6
	0.2nm,0.3s,baz=337,slow=12,SNR=8.0						
WRA				Sn	Sn	04 42 40.9	-15
	0.5nm,0.3s,baz=334,slow=22,SNR=7.8						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.52**	**164**	P	Pn	04 41 00.8	-0.5
	0.3nm,0.3s,baz=341,slow=11,SNR=14						
ASAR				S	Sn	04 44 01.4	-16
	0.4nm,0.8s,baz=343,slow=22,SNR=2.5						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	04 47 52.5	0.0
	0.2nm,0.6s,baz=119,slow=8.1,SNR=2.0						
	0.2nm,0.6s						

*NEIC **08** 04:45:41.9±1.6, 55.83N±0.05×150.1W±0.1, h6km±8km, ML3.4/28, ML3.2(AEIC), Error ellipse: s-maj=9.4km s-min=6.4km az=107.0*
*AEIC **08** 04:45:48.1±2.0, 55.88N±0.10×150.3W±0.1, h9km±8km, Error ellipse: s-maj=15.0km s-min=8.6km az=153.0*
ISC 08 04:45:42.0±1.8, 55.90N±0.09×150.19W±0.05, h10km, n83, σ1s49/86, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.17**	**309**		Pn	**04 46 18.8**	**+0.7**
OHAK					Sn	**04 46 43.5**	**-1.5**
OHAK	**Old Harbor**	**2.17**	**309**	P	Pn	**04 46 18.8**	**+0.7**
	baz=128						
OHAK				S	Sn	**04 46 43.5**	**-1.5**
	baz=128						
KDAK	**Kodiak Island**	**2.31**	**326**		Pn	**04 46 20.7**	**+0.7**
KDAK					Sn	**04 46 46.8**	**-1.6**
KDAK	**Kodiak Island**	**2.31**	**326**	IAML		04 46 42.2	
	38nm,3.0s						
KDAK				IAML		04 46 56.2	
	48nm,2.8s						
SII	**Sitkinak Islan**	**2.33**	**288**		Pn	**04 46 21.1**	**+0.8**
SII					Sn	**04 46 48.2**	**-0.8**
SII	**Sitkinak Islan**	**2.33**	**288**	IAML		04 46 56.0	
	comp=E,127nm,0.4s						
SII	**Sitkinak Islan**	**2.33**	**288**	P	Pn	**04 46 21.1**	**+0.8**
	baz=106						
SII				S	Sn	**04 46 48.2**	**-0.8**
	baz=106						
SYI	**Shuyak Island**	**2.97**	**337**		Pn	**04 46 29.8**	**+0.6**
SYI					Sn	**04 47 03.7**	**-1.1**
Q20K	**Shuyak Island**	**2.97**	**337**	P	Pn	**04 46 29.8**	**+0.6**
	baz=156						
Q20K				S	Sn	**04 47 03.7**	**-1.1**
	baz=156						
CHIR	**Chirikof Islan**	**3.06**	**271**		Pn	**04 46 31.0**	**+0.6**
CHIR					Sn	**04 47 04.2**	**-2.9**
CHIR	**Chirikof Islan**	**3.06**	**271**	IAML		04 47 06.5	
	comp=N,63nm,0.5s						
CHIR				IAML		04 47 15.3	
	comp=E,79nm,2.8s						
KAHG	**Katmai Hook Gl**	**3.52**	**319**		Pn	**04 46 39.1**	**+2.3**
Q19K	**Cape Douglas,**	**3.57**	**330**		Pn	**04 46 39.2**	**+1.8**
Q19K	**Cape Douglas,**	**3.57**	**330**	IAML		04 47 25.9	
	comp=N,155nm,0.8s						
Q19K	**Cape Douglas,**	**3.57**	**330**	P	Pn	**04 46 39.2**	**+1.8**
	baz=148						
KCE	**Katmai Mt Cerb**	**3.60**	**313**		Pn	**04 46 40.1**	**+2.3**
ACHA	**Angle Creek He**	**3.64**	**312**		Pn	**04 46 40.1**	**+1.7**
CNPM	**China Poot**	**3.68**	**352**		Pn	**04 46 39.1**	**+0.1**
CNPM					Sn	**04 47 20.4**	**-2.0**
CNPM	**China Poot**	**3.68**	**352**	IAML		04 47 22.5	
	comp=N,53nm,0.5s						
CNPM				IAML		04 47 22.6	
	comp=E,60nm,0.4s						
ANCK	**Angle Creek**	**3.71**	**311**		Pn	**04 46 41.5**	**+2.2**
ANCK					Sn	**04 47 20.9**	**-2.2**
KVTA	**Katmai Vly 10**	**3.74**	**314**		Pn	**04 46 41.7**	**+2.0**
KAHC	**Katmai Hardscr**	**3.80**	**319**		Pn	**04 46 42.9**	**+2.2**
KAHC	**Katmai Hardscr**	**3.80**	**319**	P	Pn	**04 46 42.9**	**+2.2**
	baz=135						
BRSE	**Bradley Lake S**	**3.87**	**356**		Pn	**04 46 42.0**	**+0.5**
BRSE					Sn	**04 47 25.0**	**-2.0**
BRSE	**Bradley Lake S**	**3.87**	**356**	P	Pn	**04 46 42.0**	**+0.5**
	baz=176						
BRSE				S	Sn	**04 47 25.0**	**-2.0**
	baz=176						
BRLK	**Bradley Lake**	**3.90**	**355**		Pn	**04 46 42.4**	**+0.5**
BRLK	**Bradley Lake**	**3.90**	**355**	IAML		04 47 17.0	
	comp=N,33nm,2.8s						
BRLK				IAML		04 47 34.2	
	comp=E,31nm,1.7s						
CNTC	**Contact Creek**	**3.91**	**310**		Pn	**04 46 43.6**	**+1.5**
Q17K	**Contact Creek**	**3.91**	**310**	P	Pn	**04 46 43.6**	**+1.5**
	baz=126						
PLK1	**Peulik 1**	**4.01**	**301**		Pn	**04 46 45.0**	**+1.6**
Q23K	**Middleton Isla**	**4.10**	**29**		Pn	**04 46 45.1**	**+0.5**
Q23K	**Middleton Isla**	**4.10**	**29**	P	Pn	**04 46 45.1**	**+0.5**
	baz=212						
P23K	**Montague Islan**	**4.37**	**19**		Pn	**04 46 48.6**	**+0.2**
P23K	**Montague Islan**	**4.37**	**19**	P	Pn	**04 46 48.6**	**+0.2**
	baz=202						
IVE	**Iliamna Volcan**	**4.40**	**341**		Pn	**04 46 49.3**	**+0.5**
P18K	**Big Mountain,**	**4.43**	**324**		Pn	**04 46 50.3**	**+1.1**
P18K	**Big Mountain,**	**4.43**	**324**	IAML		04 47 44.0	
	comp=E,20nm,2.1s						
P18K	**Big Mountain,**	**4.43**	**324**	P	Pn	**04 46 50.3**	**+1.1**
	baz=141						
P17K	**Kvichak River**	**4.72**	**317**		Pn	**04 46 55.2**	**+2.0**
P17K	**Kvichak River**	**4.72**	**317**	P	Pn	**04 46 55.2**	**+2.0**
	baz=132						
RSO	**Redoubt South**	**4.78**	**345**	Pn	Pn	**04 46 56.7**	**+2.6**
O18K	**Koktuh Hills**	**4.79**	**328**		Pn	**04 46 55.1**	**+1.0**
O18K	**Koktuh Hills**	**4.79**	**328**	IAML		04 47 52.4	
	comp=E,19nm,0.7s						
O18K				IAML		04 48 13.1	
	comp=N,25nm,3.0s						
O18K	**Koktuh Hills**	**4.79**	**328**	P	Pn	**04 46 55.1**	**+1.0**
	baz=144						
O19K	**Port Alsworth**	**4.84**	**335**		Pn	**04 46 56.3**	**+1.6**
O19K	**Port Alsworth**	**4.84**	**335**	P	Pn	**04 46 56.3**	**+1.6**
	baz=152						
HIN	**Hinchinbrook I**	**4.92**	**22**		Pn	**04 46 56.5**	**+0.6**
HIN	**Hinchinbrook I**	**4.92**	**22**	IAML		04 48 14.0	
	comp=N,69nm,2.4s						
HIN				IAML		04 49 26.7	
	comp=E,64nm,2.5s						
KAIM	**Kayak Island**	**5.08**	**35**		Pn	**04 46 58.7**	**+0.6**
KAIM	**Kayak Island**	**5.08**	**35**	P	Pn	**04 46 58.7**	**+0.6**
	baz=220						
EYAK	**Cordova Ski Ar**	**5.22**	**25**		Pn	**04 47 00.7**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.22**	**25**	P	Pn	**04 47 00.7**	**+0.7**
	baz=209						
P16K	**Nushagak River**	**5.25**	**310**		Pn	**04 47 02.4**	**+1.9**
P16K	**Nushagak River**	**5.25**	**310**	P	Pn	**04 47 02.4**	**+1.9**
	baz=124						
O17K	**Koliganek Bris**	**5.36**	**319**		Pn	**04 47 03.4**	**+1.5**
O17K	**Koliganek Bris**	**5.36**	**319**	P	Pn	**04 47 03.4**	**+1.5**
	baz=134						
SUCK	**Suckling Hills**	**5.40**	**37**		Pn	**04 47 03.4**	**+0.9**
HMT	**Hamilton**	**5.45**	**33**		Pn	**04 47 04.2**	**+0.9**
BERG	**Berg Lake**	**5.67**	**35**		Pn	**04 47 07.3**	**+1.1**
GRIN	**Grindle Hills**	**5.71**	**37**		Pn	**04 47 08.5**	**+1.7**
BMRM	**Bremner River**	**5.87**	**28**		Pn	**04 47 10.0**	**+1.0**
BMRM	**Bremner River**	**5.87**	**28**	P	Pn	**04 47 10.0**	**+1.0**
	baz=213						
BARK	**Barkley Ridge**	**6.08**	**39**		Pn	**04 47 12.7**	**+0.7**
SKT	**Skwentna**	**6.14**	**354**	Pn	Pn	**04 47 13.3**	**+0.6**
TGL	**Tana Glacier**	**6.22**	**35**		Pn	**04 47 14.7**	**+0.7**
ISLE	**Juniper Island**	**6.28**	**38**		Pn	**04 47 15.3**	**+0.6**
BAGL	**Bagley Icefiel**	**6.29**	**40**		Pn	**04 47 15.5**	**+0.9**
N25K	**Chitina, Valde**	**6.42**	**25**		Pn	**04 47 17.3**	**+0.7**
KIAG	**Kiagna River**	**6.50**	**36**		Pn	**04 47 19.7**	**+1.9**
GRNC	**Granite Creek**	**6.57**	**39**		Pn	**04 47 19.4**	**+0.5**
TABL	**Table Mountain**	**6.61**	**43**		Pn	**04 47 19.9**	**+0.7**
MCARA	**McCarthy VSAT**	**6.65**	**31**		Pn	**04 47 20.8**	**+1.1**
MCARA	**McCarthy VSAT**	**6.65**	**31**	P	Pn	**04 47 21.4**	**+1.7**
	baz=218						
PTPK	**Patty Peak**	**6.67**	**34**		Pn	**04 47 21.5**	**+1.4**
M17K	**Holitna River**	**6.69**	**329**		Pn	**04 47 21.8**	**+1.6**
PCA	**Pinnacle**	**6.75**	**47**		Pn	**04 47 22.5**	**+1.4**
PINM	**Pinnacle**	**6.75**	**47**	P	Pn	**04 47 23.5**	**+2.4**
	baz=236						
N15K	**Kwethluk River**	**6.78**	**313**		Pn	**04 47 23.8**	**+2.3**
P29M	**Windy Craggy**	**7.63**	**56**		Pn	**04 47 34.2**	**+1.0**
KTH	**Kantishna Hill**	**7.69**	**358**	Pn	Pn	**04 47 36.2**	**+2.2**
YUK4	**Talbot Arm**	**8.12**	**43**	P	Pn	**04 47 43.5**	**+3.4**
	baz=233						
M29M	**Somme Creek**	**8.90**	**38**		Pn	**04 47 51.6**	**+1.1**
M29M	**Somme Creek**	**8.90**	**38**	P	Pn	**04 47 52.6**	**+2.1**
	baz=228						

TAP 08 05:04:15.5, 24.75N×121.78E, h85km, ML2.5, 10C-11D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ILA	**Ilan**	**0.03**	**290**	*eP*		Pn	05 04 28.0	+0.6
	baz=311							
NTC	**Toucheng**	**0.11**	**23**	*i* P		Pn	05 04 28.3	+0.7
	baz=38							
NTC				S		Sn	05 04 37.4	+0.9
	baz=38							
NDS	**Dongshan**	**0.14**	**207**	*i* P		Pn	05 04 28.5	+0.8
	baz=218							
NDS				*eS*		Sn	05 04 38.3	+1.6
	baz=218							
TWC	**Suao**	**0.16**	**157**	⇓P		Pn	05 04 28.6	+0.8
	baz=153							
TWC				S		Sn	05 04 38.2	+1.5
	baz=153							
FUSB	**Fushanzhiwuyua**	**0.18**	**272**	⇑P		Pn	05 04 28.1	+0.2
	baz=272							
FUSB				*eS*		Sn	05 04 36.9	-0.2
	baz=272							
ESAO	**Su ao**	**0.19**	**163**	⇓*i*P		Pn	05 04 28.8	+0.9
	baz=162							
ESAO				S		Sn	05 04 38.3	+1.4
	baz=162							
TIPB	**Shuangxi**	**0.22**	**10**	⇑*i*P		Pn	05 04 28.4	+0.4
TIPB				S		Sn	05 04 37.8	+0.5
ENTT	**Nioudou**	**0.23**	**240**	⇓*i*P		Pn	05 04 28.5	+0.5
	baz=250							
ENTT				*eS*		Sn	05 04 37.2	0.0
	baz=250							
NWLT	**Wulai**	**0.26**	**275**	⇑P		Pn	05 04 28.2	+0.1
	baz=274							
NWLT				*eS*		Sn	05 04 37.1	-0.4
	baz=274							
NDT	**Datong Townshi**	**0.29**	**239**	⇓P		Pn	05 04 28.7	+0.4
	baz=248							
NDT				*eS*		Sn	05 04 37.9	+0.2
	baz=248							
EWUT	**Wuta**	**0.31**	**181**	⇑*i*P		Pn	05 04 29.4	+1.1
	baz=188							
EWUT				*i* S		Sn	05 04 39.3	+1.5
	baz=188							
TWB1	**Santiao Chiao**	**0.31**	**36**	⇑P		Pn	05 04 28.7	+0.3
	baz=46							
TWB1				*eS*		Sn	05 04 38.3	+0.4
	baz=46							
LATG	**Datong**	**0.32**	**227**	⇑*i*P		Pn	05 04 29.0	+0.4
	baz=235							
LATG				*eS*		Sn	05 04 39.9	+1.7
	baz=235							
ENA	**Nanau**	**0.33**	**187**	⇓P		Pn	05 04 29.7	+1.2
	baz=194							
ENA				*eS*		Sn	05 04 40.0	+1.9
	baz=194							
SXI1	**Grass Mountain**	**0.35**	**14**	⇑*i*P		Pn	05 04 29.0	+0.2
	baz=16							
SXI1				*eS*		Sn	05 04 39.1	+0.6
	baz=16							
YHNB	**Yeheng**	**0.38**	**257**	⇑P		Pn	05 04 28.9	-0.1
	baz=257							
YHNB				*eS*		Sn	05 04 38.4	-0.4
	baz=257							
NSK	**Sanguang**	**0.39**	**259**	⇑P		Pn	05 04 28.9	-0.1
	baz=258							
NSK				*eS*		Sn	05 04 38.5	-0.5
	baz=258							
TNOU	**National Taiwa**	**0.39**	**359**	*i* P		Pn	05 04 29.3	+0.3
	baz=359							
TNOU				*eS*		Sn	05 04 39.6	+0.7
	baz=359							
YM01	**YM01**	**0.44**	**334**	⇑P		Pn	05 04 29.8	+0.5
	baz=326							
YM01				*eS*		Sn	05 04 40.2	+0.8
	baz=326							
YM08	**YM08**	**0.47**	**338**	*i* P		Pn	05 04 29.5	0.0
	baz=330							
YM08				*eS*		Sn	05 04 40.0	+0.2
	baz=330							
NNSB	**Datong**	**0.49**	**228**	⇓P		Pn	05 04 30.2	+0.4
	baz=230							
NNSB				S		Sn	05 04 40.8	+0.4
	baz=230							
NACB	**Ninganchiao**	**0.60**	**197**	*eP*		Pn	05 04 31.9	+1.2
	baz=203							
NACB				*eS*		Sn	05 04 43.2	+1.4
	baz=203							
ETLH	**Xiulin Townshi**	**0.61**	**207**	*eP*		Pn	05 04 30.8	-0.1
	baz=213							
NFF	**Wufeng Townshi**	**0.62**	**259**	*i* P		Pn	05 04 31.0	+0.2
	baz=265							
NFF				*i* S		Sn	05 04 42.2	0.0
	baz=265							
FUSS	**Fushou**	**0.70**	**224**	*eS*		Sn	05 04 45.0	+1.0
	baz=223							
LIOB	**Emei**	**0.71**	**261**	*i* P		Pn	05 04 32.0	+0.3
	baz=254							
LIOB				*i* S		Sn	05 04 43.6	-0.1
	baz=254							
NSTT	**Nanjuang**	**0.72**	**260**	P		Pn	05 04 32.2	+0.4
	baz=260							
NSTT				S		Sn	05 04 44.1	+0.2
	baz=260							
TDCB	**Techi**	**0.76**	**229**	⇓*eP*		Pn	05 04 33.4	+1.0
	baz=222							
TDCB				*eS*		Sn	05 04 45.9	+1.1
	baz=222							
WHF	**Hehuan Shan**	**0.77**	**218**	⇓*eP*		Pn	05 04 33.7	+1.0
	baz=210							
WHF				*i* S		Sn	05 04 45.9	+0.4
	baz=210							
CHGB	**Renai**	**0.89**	**219**	⇓*i*P		Pn	05 04 34.6	+0.8
	baz=218							
CHGB				*eS*		Sn	05 04 48.7	+1.3
	baz=218							
WHP	**Taichung City**	**0.90**	**238**	*eP*		Pn	05 04 35.1	+1.3
	baz=239							
WHP				*eS*		Sn	05 04 48.7	+1.3
	baz=239							
WUSB	**Renai**	**0.97**	**219**	⇓*i*P		Pn	05 04 35.7	+1.0
	baz=218							
WUSB				S		Sn	05 04 49.9	+0.9
	baz=218							
VWDT	**VWDT**	**1.16**	**211**	⇓P		Pn	05 04 37.8	+1.1
	baz=219							
VWDT				*eS*		Sn	05 04 54.8	+2.2
	baz=219							

IDC 08 05:30:13.8±3.3, 54.32N×86.56E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=26.7km s-min=15.3km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.09**	**251**	I		I	05 37 05.0	
	0.1nm,1.2s,baz=68,slow=338,SNR=2.9							
ZALV	**Zalesovo Beam**	**1.09**	**251**	Pg		Pg	05 30 34.1	-0.6
	0.4nm,0.3s,baz=67,slow=17,SNR=9.4							
ZALV				Lg		Lg	05 30 49.9	
	0.7nm,0.3s,baz=71,slow=28,SNR=4.5							
KURBB	**Kurchatov Arra**	**6.14**	**236**	Pn		Pn	05 31 46.8	+1.0
	baz=52,slow=14,SNR=6.5							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**8.01**	**202**	Pn		Pn	05 32 12.0	+0.6
	baz=20,slow=11,SNR=1.8							
MKAR				Lg		Lg	05 34 26.5	
	baz=16,slow=27,SNR=1.5							
	0.1nm,0.5s							

*VAO **08** 05:39:49.4±0.7, 17.50S×69.96W, h10km, mb4.8*
*NEIC **08** 05:40:04.0±2.6, 17.62S±0.06×69.47W±0.09, h133km±6km, mb4.5/44, Error ellipse: s-maj=12.8km s-min=8.7km az=89.0*
*IDC **08** 05:40:04.2±0.7, 17.50S×69.33W, h137km±5km, mb3.9/15, mbtmp4.3/18, Error ellipse: s-maj=16.5km s-min=10.9km az=70.0*
*GUC **08** 05:40:05.5±0.7, 17.69S×69.59W, h142km±2km, ML4.0*
ISC 08 05:40:03.6±0.4, 17.58S±0.04×69.45W±0.05, h135km±4km, n165, σ1§41/184, mb4.5/33, 14C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PB18	**Visviri**	**0.03**	**245**	⇑*i*P		Pn	05 40 25.0	+2.5
PB18				*i* S		**Sn**	**05 40 40.6**	**+3.8**
PB18				IAML			05 40 41.8	
	comp=N,3μm,0.6s							
PB16	**IPOC Station P**	**0.76**	**184**	Pn		**Pn**	**05 40 27.7**	**+2.0**
PB16				Sn		**Sn**	**05 40 44.7**	**+2.4**
PB16	**IPOC Station P**	**0.76**	**184**	⇑*i*P		**Pn**	**05 40 27.5**	**+1.8**
PB16				*i* S		**Sn**	**05 40 44.8**	**+2.5**
AP01	**Chacalluta**	**1.16**	**227**			**Sn**	**05 40 28.5**	**+0.1**
AP01				Sn		**Sn**	**05 40 47.0**	**-0.3**
AP01	**Chacalluta**	**1.16**	**227**	⇑*i*P		**Pn**	**05 40 28.6**	**+0.1**
AP01				*i* S		**Sn**	**05 40 47.1**	**-0.3**
PB12	**IPOC Station P**	**1.33**	**219**	Pn		**Pn**	**05 40 30.0**	**-0.3**
PB12				Sn		**Sn**	**05 40 49.5**	**-1.1**
PB12	**IPOC Station P**	**1.33**	**219**	⇑*i*P		**Pn**	**05 40 30.0**	**-0.3**
PB12				*i* S		**Sn**	**05 40 49.5**	**-1.1**
PB12				IAML			05 40 54.9	
	comp=N,2μm,0.4s							
PX02	**IPOC Station P**	**1.55**	**207**	*eP*		**Pn**	**05 40 32.5**	**-0.3**
PX02				*i* S		**Sn**	**05 40 53.2**	**-1.8**
PX02				IAML			05 40 54.9	
	comp=N,1μm,0.5s							
LPAZ	**La Paz**	**1.80**	**45**	Pn		Pn	05 40 38.9	+2.8
GO01	**Chusmiza**	**2.10**	**173**			**Pn**	**05 40 40.9**	**+1.5**
GO01	**Chusmiza**	**2.10**	**173**	⇑*i*P		**Pn**	**05 40 41.1**	**+1.6**
GO01				*i* S		**Sn**	**05 41 09.3**	**+2.3**
GO01				IAML			05 41 15.7	
	comp=E,2μm,0.1s							
PB11	**IPOC Station P**	**2.18**	**185**	Pn		**Pn**	**05 40 40.8**	**+0.6**
PB11	**IPOC Station P**	**2.18**	**185**	⇑*i*P		**Pn**	**05 40 40.6**	**+0.4**
PB11				*i* S		**Sn**	**05 41 08.0**	**-0.4**
PB11				IAML			05 41 12.4	
	comp=N,1μm,0.5s							
PB08	**IPOC Station P**	**2.57**	**174**			**Pn**	**05 40 46.6**	**+1.3**
PB08	**IPOC Station P**	**2.57**	**174**	⇑*i*P		**Pn**	**05 40 46.5**	**+1.3**
PB08				*i* S		**Sn**	**05 41 17.2**	**-0.1**
PB08				IAML			05 41 19.8	
	comp=E,845nm,0.4s							
TA02	**Huaiquique**	**2.75**	**193**			**Pn**	**05 40 46.9**	**-0.4**
TA02	**Huaiquique**	**2.75**	**193**	*eP*		**Pn**	**05 40 46.7**	**-0.5**
TA02				*i* S		**Sn**	**05 41 18.4**	**-2.6**
TA01	**Diego Aracena**	**3.05**	**193**	Pn		**Pn**	**05 40 50.4**	**-0.7**
TA01	**Diego Aracena**	**3.05**	**193**	⇓*i*P		**Pn**	**05 40 50.1**	**-1.0**
TA01				*i* S		**Sn**	**05 41 24.1**	**-3.6**
TA01				IAML			05 41 30.5	
	comp=E,395nm,0.3s							
PATCX	**Punta Patache**	**3.29**	**191**			**Pn**	**05 40 53.8**	**-0.5**
PATCX	**Punta Patache**	**3.29**	**191**	*eP*		**Pn**	**05 40 53.8**	**-0.5**
PB01	**IPOC Station P**	**3.45**	**181**			**Pn**	**05 40 56.3**	**0.0**
PB01	**IPOC Station P**	**3.45**	**181**	*eP*		**Pn**	**05 40 56.4**	**0.0**
PB02	**IPOC Station P**	**3.75**	**186**			**Pn**	**05 40 60.0**	**-0.2**
PB02	**IPOC Station P**	**3.75**	**186**	*eP*		**Pn**	**05 40 59.8**	**-0.4**
PB07	**IPOC Station P**	**4.15**	**186**			**Pn**	**05 41 05.6**	**0.0**
PB07	**IPOC Station P**	**4.15**	**186**	*eP*		**Pn**	**05 41 05.3**	**-0.3**
PB09	**IPOC Station P**	**4.20**	**177**			**Pn**	**05 41 06.5**	**+0.2**
PB09	**IPOC Station P**	**4.20**	**177**	*eP*		**Pn**	**05 41 06.7**	**+0.4**
PB04	**IPOC Station P**	**4.78**	**188**			**Pn**	**05 41 13.2**	**-0.8**
PB04	**IPOC Station P**	**4.78**	**188**	*eP*		**Pn**	**05 41 13.2**	**-0.8**
LVC	**Limon Verde**	**5.03**	**174**	Pn		**Pn**	**05 41 18.3**	**+0.7**
LVC	**Limon Verde**	**5.03**	**174**	P		**Pn**	**05 41 18.1**	**+0.6**
	comp=E,46nm,0.3s,baz=358,slow=8.9,SNR=186							
LVC				S		**Sn**	**05 42 11.8**	**-3.3**
	comp=E,56nm,0.5s,baz=301,slow=11,SNR=3.1							
PB06	**IPOC Station P**	**5.10**	**181**			**Pn**	**05 41 17.5**	**-0.8**
PB06	**IPOC Station P**	**5.10**	**181**	*eP*		**Pn**	**05 41 17.5**	**-0.8**
PB03	**IPOC Station P**	**5.30**	**188**	Pn		**Pn**	**05 41 18.6**	**-1.3**
AF01	**San Pedro de A**	**5.48**	**168**			**Pn**	**05 41 24.7**	**+1.2**
PB15	**IPOC Station P**	**5.60**	**180**			**Pn**	**05 41 24.6**	**-0.4**
PB10	**IPOC Station P**	**6.00**	**190**			**Pn**	**05 41 28.5**	**-1.6**
PB14	**IPOC Station P**	**7.07**	**187**	Pn		**Pn**	**05 41 42.1**	**-2.7**
GO02	**Mina Guanaco**	**7.55**	**181**	Pn		**Pn**	**05 41 49.8**	**-1.4**
SIV	**San Ignacio**	**8.18**	**80**	P		**Pn**	**05 41 58.0**	**-1.5**
	comp=E,39nm,0.3s,baz=257,slow=7.8,SNR=302							
SIV				S		**Sn**	**05 43 22.0**	**-8.5**
	comp=E,14nm,0.4s,baz=297,slow=18,SNR=1.3							
ETMB	**Extrema**	**8.33**	**23**			**Pn**	**05 42 01.1**	**-0.4**
NNA	**Nana**	**9.05**	**307**			**Pn**	**05 42 10.1**	**-1.2**
NNA	**Nana**	**9.05**	**307**	P		**Pn**	**05 42 09.8**	**-1.4**
	comp=E,30nm,0.4s,baz=140,slow=13,SNR=15							
NNA				S		**Sn**	**05 43 45.1**	**-6.6**
	comp=E,36nm,0.6s,baz=224,slow=21,SNR=8.6							
AC02	**Maricunga**	**9.22**	**178**			**Pn**	**05 42 12.2**	**-1.6**
VILB	**Vilhena**	**10.04**	**64**			**Pn**	**05 42 23.6**	**-0.9**
PTLB	**Pontes e Lacer**	**10.12**	**79**	Pn		**Pn**	**05 42 23.9**	**-1.5**
SAML	**Samuel**	**10.52**	**36**			**Pn**	**05 42 29.4**	**-1.5**
AC04	**Llanos de Chal**	**10.68**	**188**	Pn		Pn	05 42 27.7	-5.3
AC05	**El Transito**	**11.23**	**184**			**Pn**	**05 42 36.9**	**-3.4**
LCO	**Las Campanas**	**11.44**	**186**	Pn		Pn	05 42 38.6	-4.6
MURT	**Porto Murtinho**	**11.87**	**112**	*eP*		**Pn**	**05 42 46.3**	**-2.4**
BDQN	**Bodoquena, MS**	**12.35**	**105**	*eP*		**Pn**	**05 42 53.2**	**-1.7**
CO01	**Juntas del Tor**	**12.36**	**183**			**Pn**	**05 42 52.6**	**-2.6**
CO03	**El Pedregal**	**13.25**	**185**	Pn		Pn	05 43 01.9	-4.7
SALV	**Santo Antonio**	**13.28**	**85**	*eP*		**Pn**	**05 43 06.3**	**-0.7**
TBTG	**Tabatinga, AM**	**13.31**	**358**	Pn		**Pn**	**05 43 07.3**	**-0.1**
AQDB	**Aquidauana**	**13.32**	**105**			**Pn**	**05 43 08.5**	**+1.0**
AQDB	**Aquidauana**	**13.32**	**105**	*eP*		**Pn**	**05 43 06.4**	**-1.0**
RVDE	**Rio Verde (Bra**	**13.86**	**98**	*eP*		**Pn**	**05 43 13.7**	**-0.7**
PP1B	**Ponte de Pedra**	**13.90**	**92**	*eP*		**Pn**	**05 43 12.8**	**-2.1**
CPUP	**Villa Florida**	**14.22**	**130**			**Pn**	**05 43 17.6**	**-1.2**
CPUP	**Villa Florida**	**14.22**	**130**	P		**Pn**	**05 43 17.2**	**-1.6**
	comp=E,4.0nm,0.8s,baz=310,slow=13,SNR=9.4							
CPUP	**Villa Florida**	**14.22**	**130**	*eP*		**Pn**	**05 43 17.1**	**-1.8**
VA03	**San Esteban**	**15.15**	**184**			**Pn**	**05 43 28.9**	**-1.8**
VA03				IAmb		IAmb	05 43 35.3	
	comp=Z,18nm,0.7s							
RPRD	**Ribas do Rio P**	**15.17**	**103**	*eP*		**Pn**	**05 43 30.9**	**0.0**
MT02	**Curacav**	**15.69**	**185**			**Pn**	**05 43 36.9**	**-0.4**
MT02				IAmb		IAmb	05 43 52.2	
	comp=Z,39nm,1.4s							
MT16	**CCHEN**	**15.81**	**183**	Pn		**Pn**	**05 43 38.1**	**-0.7**
MT16				IAmb		IAmb	05 43 48.0	
	comp=Z,29nm,1.1s							
MCR1	**Marechal Candi**	**15.93**	**118**	*eP*		**Pn**	**05 43 40.1**	**-0.2**
MT09	**Talagante**	**16.19**	**185**			**Pn**	**05 43 42.9**	**-0.6**
TRCB	**Terra Rica**	**16.61**	**111**			**P**	**05 43 48.7**	**-0.1**
MCRA	**Macar, Loja**	**16.68**	**321**	P		**Pn**	**05 43 49.1**	**-0.4**
MACA	**Manacapuru-AM**	**16.71**	**32**	P		**P**	**05 43 49.8**	**0.0**
MACA				IAmb		IAmb	05 43 51.7	
	comp=Z,25nm,0.6s							
ITQB	**Itaqui**	**16.81**	**138**	P		**Pn**	**05 43 50.2**	**-0.6**
ITQB				IAmb		IAmb	05 43 52.1	
	comp=Z,35nm,1.1s							
ITQB	**Itaqui**	**16.81**	**138**	*eP*		**Pn**	**05 43 50.8**	**-0.1**
BO01	**Tunca**	**16.81**	**185**	P		**Pn**	**05 43 50.5**	**-0.4**
BO01				IAmb		IAmb	05 43 54.7	
	comp=Z,12nm,0.8s							
BOSC	**San Juan Bosco**	**16.86**	**327**	P		**Pn**	**05 43 50.7**	**-1.1**
BO02	**Sierra Bellavi**	**17.19**	**184**	P		**P**	**05 43 56.0**	**+0.9**
BO02				IAmb		IAmb	05 44 11.9	
	comp=Z,14nm,0.7s							
NPGB	**Novo Progresso**	**17.28**	**54**	*eP*		**Pn**	**05 43 55.8**	**-1.0**
CRSM	**Crissiumal (Br**	**17.30**	**127**	*eP*		**P**	**05 43 56.6**	**+0.3**
FRBT	**Francisco Belt**	**17.35**	**122**	*eP*		**P**	**05 43 56.8**	**-0.1**
ARNL	**Arenillas**	**17.40**	**322**	P		**Pn**	**05 43 59.0**	**+0.8**
ARNL				IAmb		IAmb	05 44 00.9	
	comp=Z,18nm,0.8s							
UNIS	**Unistalda (Bra**	**17.45**	**134**	*eP*		**P**	**05 43 57.5**	**-0.4**
PCMB	**Pacaembu**	**17.60**	**106**	*eP*		**P**	**05 43 59.7**	**+0.1**
PTGB	**Pitanga**	**17.70**	**117**	*eP*		**P**	**05 44 00.7**	**0.0**
COHC	**Cochancay**	**17.84**	**326**	P		**Pn**	**05 44 03.5**	**+0.1**
RODS	**Rosario do Sul**	**18.18**	**137**	*eP*		**P**	**05 44 05.8**	**0.0**
ITRB	**Iturama**	**18.22**	**100**	*eP*		**Pn**	**05 44 07.1**	**-0.8**
SNDB	**Serra Nova Dou**	**18.41**	**75**	*eP*		**Pn**	**05 44 09.0**	**-1.3**
TBOT	**Tacuaremb**	**18.63**	**141**	*eP*		**P**	**05 44 10.7**	**-0.1**
ITAB	**Concordia**	**18.66**	**124**	P		**P**	**05 44 10.8**	**-0.4**
ALGR	**Alto Alegre (B**	**18.76**	**129**	*eP*		**P**	**05 44 11.7**	**-0.6**
ITTB	**Itaituba**	**18.79**	**47**	*eP*		**P**	**05 44 12.5**	**-0.1**
SLOR	**San Lorenzo -**	**18.96**	**331**	P		**P**	**05 44 15.3**	**+0.3**
CPSB	**Cacapava Do Su**	**19.39**	**134**	*eP*		**P**	**05 44 18.8**	**-0.3**
OTAV	**Otavalo**	**19.80**	**332**	P		**P**	**05 44 24.8**	**+0.7**
TULM	**Tulcn-Chalpat**	**19.95**	**335**			**P**	**05 44 25.5**	**-0.2**
PLTB	**Pedras Altas**	**20.14**	**137**	P		**P**	**05 44 26.0**	**-1.1**
BDFB	**Brasilia**	**20.63**	**88**	P		**P**	**05 44 31.8**	**-0.9**
BDFB	**Brasilia**	**20.63**	**88**	P		**P**	**05 44 31.3**	**-1.4**
	comp=Z,25nm,0.4s,baz=252,slow=7.5,SNR=27							
	comp=Z,25nm,0.4s							
TRQA	**Tornquist**	**21.43**	**164**	P		**P**	**05 44 40.8**	**-0.1**
SPB	**Sao Paulo**	**21.45**	**110**	P		**P**	**05 44 40.1**	**-1.2**
SPB				IAmb		IAmb	05 44 41.0	
	comp=Z,12nm,0.7s							

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MALB	**Monte Alegre**	**21.61**	**45**	*eP*		**P**	**05 44 42.3**	**-0.7**
BOAV	**Boa Vista**	**21.71**	**25**	P		**P**	**05 44 43.8**	**-0.3**
BOAV	**Boa Vista**	**21.71**	**25**	*eP*		**P**	**05 44 43.7**	**-0.3**
PET01	**Itanhaem-SP**	**21.75**	**112**	*eP*		**P**	**05 44 46.3**	**+1.9**
LR05	**Currie**	**22.68**	**185**	P		**P**	**05 44 53.2**	**-0.4**
LR05				IAmb		IAmb	05 44 55.9	
	comp=Z,25nm,1.4s							
ROSC	**El Rosal**	**22.79**	**347**	P		**P**	**05 44 54.0**	**-1.3**
ROSC	**El Rosal**	**22.79**	**347**	P		**P**	**05 44 54.0**	**-1.3**
	comp=Z,3.1nm,0.3s,baz=163,slow=19,SNR=3.9							
	comp=Z,3.1nm,0.3s							
PLCA	**Paso Flores**	**23.10**	**182**	P		**P**	**05 44 57.5**	**-0.1**
PLCA	**Paso Flores**	**23.10**	**182**	P		**P**	**05 44 58.3**	**+0.8**
	comp=Z,7.4nm,0.7s,baz=359,slow=11,SNR=26							
	comp=Z,7.4nm,0.7s							
PLCA	**Paso Flores**	**23.10**	**182**	*eP*		**P**	**05 44 58.2**	**+0.7**
MCPB	**Macapa, AP**	**24.20**	**47**	*eP*		**P**	**05 45 07.3**	**-0.4**
SDV	**Santo Domingo**	**26.32**	**357**	P		**P**	**05 45 27.5**	**+0.3**
BAUV	**El Baul**	**26.39**	**3**	P		**P**	**05 45 26.9**	**-0.6**
BAUV				IAmb		IAmb	05 45 29.3	
	comp=Z,17nm,1.1s							
ALF01	**Guarapari-ES**	**27.30**	**101**	*eP*		**P**	**05 45 38.4**	**+2.7**
EFI	**East Falkland**	**35.20**	**168**	P		**P**	**05 46 45.5**	**+1.0**
CELP	**Cerrillos**	**35.54**	**5**	P		**P**	**05 46 48.2**	**+0.4**
TEIG	**Tepich**	**41.87**	**333**	P		**P**	**05 47 41.5**	**+1.0**
HBVL	**Hebbronville**	**52.66**	**327**	P		**P**	**05 49 06.0**	**+2.0**
833A	**Chaparral WMA,**	**54.05**	**327**	P		**P**	**05 49 14.4**	**+0.2**
833A				IAmb		IAmb	05 49 15.7	
	comp=Z,7.8nm,0.7s							
W50A	**Signal Mountai**	**54.60**	**344**	P		**P**	**05 49 21.6**	**+3.4**
W50A				IAmb		IAmb	05 49 38.6	
	comp=Z,7.0nm,1.1s							
HNDO	**Hondo**	**54.97**	**328**	P		**P**	**05 49 21.8**	**+1.0**
WHTX	**Lake Whitney,**	**56.12**	**331**	P		**P**	**05 49 30.0**	**+1.0**
WHTX				IAmb		IAmb	05 49 30.5	
	comp=Z,5.0nm,0.6s							
TXAR	**Lajitas Array**	**57.15**	**324**	P		**P**	**05 49 36.6**	**+0.2**
TXAR	**Lajitas Array**	**57.15**	**324**	P		**P**	**05 49 35.9**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=157,slow=7.9,SNR=6.3							
TXAR				pP		**pP**	**05 50 09.9**	**0.0**
	comp=Z,0.6nm,0.7s,baz=159,slow=11,SNR=3.3							
	comp=Z,0.5nm,0.6s							
PLPT	**Palo Pinto**	**57.21**	**331**	P		**P**	**05 49 37.5**	**+0.8**
PLPT				IAmb		IAmb	05 49 37.9	
	comp=Z,3.2nm,0.5s							
VHRN	**Van Horn**	**58.99**	**324**	P		**P**	**05 49 49.9**	**+0.6**
VHRN				IAmb		IAmb	05 49 50.4	
	comp=Z,3.0nm,0.6s							
VNA3	**Neumayer Olymp**	**63.94**	**162**	⇑P		**P**	**05 50 22.4**	**+0.6**
	comp=Z,9.5nm,0.9s							
VNA2	**Neumayer--Watz**	**64.51**	**161**	⇑P		**P**	**05 50 26.5**	**+1.0**
	comp=Z,6.3nm,0.5s,baz=290,slow=6.4							
BATG	**Bathurst New B**	**64.62**	**3**	P		**P**	**05 50 26.2**	**-0.2**
BATG				IAmb		IAmb	05 50 32.3	
	comp=Z,16nm,1.4s							
SDCO	**Great Sand Dun**	**64.63**	**329**	P		**P**	**05 50 28.4**	**+1.3**
SDCO				IAmb		IAmb	05 50 29.3	
	comp=Z,5.8nm,1.4s							
K30B	**Basset**	**66.08**	**336**	P		**P**	**05 50 36.7**	**+0.7**
K30B				IAmb		IAmb	05 50 38.0	
	comp=Z,7.5nm,0.7s							
SNAA	**Sanae**	**66.14**	**161**	P		**P**	**05 50 37.2**	**+1.1**
SNAA	**Sanae**	**66.14**	**161**	⇑P		**P**	**05 50 37.0**	**+0.8**
	comp=Z,168nm,0.5s							
SNAA	**Sanae**	**66.14**	**161**	P		**P**	**05 50 36.9**	**+0.8**
	comp=Z,8.2nm,0.6s,baz=264,slow=6.3,SNR=33							
	comp=Z,8.2nm,0.6s							
LIC	**Lamto**	**67.85**	**76**	⇑*i*P		**P**	**05 50 47.1**	**-0.7**
	comp=Z,37nm,0.6s							
TROLL	**Troll, Antarti**	**67.85**	**161**	⇑P		**P**	**05 50 48.2**	**+1.2**
	comp=Z,728nm,0.6s							
TIC	**Toumodi**	**68.01**	**75**	⇑*i*P		**P**	**05 50 49.0**	**+0.2**
	comp=Z,5.8nm,0.5s							
KIC	**Kosan Boka**	**68.16**	**76**	⇑*i*P		**P**	**05 50 49.3**	**-0.4**
	comp=Z,84nm,0.6s							
DBIC	**Dimbokro**	**68.17**	**75**	P		**P**	**05 50 49.8**	**+0.1**
DBIC	**Dimbokro**	**68.17**	**75**	P		**P**	**05 50 49.5**	**-0.2**
	comp=Z,56nm,0.6s,baz=240,slow=6.3,SNR=87							
PDAR	**Pinedale Array**

n151,σ1ŝ20/230,mb3.6/6,5C-14D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=243	**0.15**	**263**	⇓*i*P	**Pg**	**05 51 28.8**	**-0.1**
HWA				*e*S	**Sg**	**05 51 33.4**	**+2.0**
TWD	**Chiawan** baz=291	**0.18**	**299**	⇓*i*P	**Pg**	**05 51 28.4**	**-0.9**
TWD				*i* S	**Sg**	**05 51 31.9**	**-0.2**
ETL	**Fush Village** baz=315	**0.21**	**322**	*i* P	**Pg**	**05 51 29.0**	**-1.0**
ETL				S	**Sg**	**05 51 32.8**	**-0.2**
NACB	**Ninganchiao**	**0.24**	**319**	P	**Pg**	**05 51 29.8**	**-0.6**
NACB	**Ninganchiao** baz=313	**0.24**	**319**	⇓*i*P	**Pg**	**05 51 29.4**	**-1.0**
NACB				*i* S	**Sg**	**05 51 33.2**	**-0.6**
ETM	**Tongmen** baz=267	**0.25**	**263**	⇓*i*P	**Pg**	**05 51 30.3**	**-0.4**
ETM				S	**Sg**	**05 51 35.1**	**+1.0**
SHUL	**Shoufeng** baz=219	**0.28**	**222**	⇑*i*P	**Pb**	**05 51 32.0**	**-0.3**
SHUL				*e*S	**Sb**	**05 51 37.9**	**+1.0**
LXIB	**Xiulin Townshi** baz=270	**0.32**	**275**	⇓*i*P	**Pg**	**05 51 31.4**	**-0.6**
LXIB				S	**Sb**	**05 51 37.8**	**-0.6**
ETLH	**Xiulin Townshi** baz=305	**0.33**	**309**	⇓*i*P	**Pg**	**05 51 31.3**	**-0.9**
ETLH				S	**Sg**	**05 51 37.0**	**+0.3**
EAHA	**Aohua** baz=355	**0.33**	**356**	P	**Pg**	**05 51 31.8**	**-0.4**
EAHA				S	**Sg**	**05 51 37.1**	**+0.4**
TEGC	**Jichi Village** baz=213	**0.35**	**216**	*e*P	**Pb**	**05 51 33.6**	**+0.1**
TEGC				*e*S	**Sb**	**05 51 40.6**	**+1.5**
ESL	**Shilin** baz=243	**0.35**	**239**	P	**Pg**	**05 51 32.4**	**-0.1**
ESL				S	**Sb**	**05 51 38.7**	**-0.4**
ENA	**Nanau** baz=357	**0.43**	**357**	*e*P	**Pg**	**05 51 33.8**	**-0.1**
ENA				*e*S	**Sg**	**05 51 39.9**	**+0.2**
WARBT	**Fenglin Townsh** baz=238	**0.44**	**232**	⇑*i*P	**Pg**	**05 51 34.2**	**0.0**
WARBT				S	**Sb**	**05 51 41.9**	**+0.1**
EWUT	**Wuta** baz=359	**0.45**	**2**	*e*P	**Pg**	**05 51 34.0**	**-0.2**
WHF	**Hehuan Shan** baz=285	**0.48**	**288**	P	**Pg**	**05 51 34.4**	**-0.6**
WHF				S	**Sb**	**05 51 42.1**	**-1.2**
EOS4	**EOS4** baz=79	**0.52**	**76**	*e*P	**Pb**	**05 51 37.3**	**+1.0**
FUSS	**Fushou** baz=295	**0.54**	**298**	*e*P	**Pg**	**05 51 35.8**	**-0.2**
FUSS				*e*S	**Sb**	**05 51 44.1**	**-0.6**
OWD	**Renai** baz=274	**0.54**	**266**	*e*P	**Pb**	**05 51 35.9**	**-0.9**
OWD				*e*S	**Sb**	**05 51 44.0**	**-0.7**
CHGB	**Renai** baz=274	**0.54**	**277**	⇓P	**Pg**	**05 51 35.9**	**-0.2**
CHGB				*e*S	**Sb**	**05 51 44.4**	**-0.4**
NNSH	**Datong** baz=318	**0.55**	**321**	*e*P	**Pg**	**05 51 35.8**	**-0.5**
NNSH				*e*S	**Sg**	**05 51 43.2**	**-0.5**
NNSB	**Datong** baz=319	**0.56**	**321**	*e*P	**Pg**	**05 51 35.8**	**-0.5**
NNSB				S	**Sg**	**05 51 43.6**	**-0.1**
NNS	**Nan Shan** baz=319	**0.57**	**321**	*e*P	**Pg**	**05 51 36.0**	**-0.5**
NNS				*e*S	**Sb**	**05 51 44.4**	**-1.2**
LATG	**Datong** baz=336	**0.58**	**338**	⇓P	**Pg**	**05 51 36.2**	**-0.6**
LATG				*e*S	**Sb**	**05 51 45.8**	**0.0**
EOS3	**EOS3** baz=67	**0.58**	**60**	*e*P	**Pb**	**05 51 38.7**	**+1.2**
ESAO	**Su ao** baz=4.0	**0.58**	**7**	*e*P	**Pb**	**05 51 37.3**	**-0.3**
HGSD	**Ruisui** baz=198	**0.59**	**212**	*e*P	**Pb**	**05 51 37.8**	**+0.1**
WUSB	**Renai** baz=277	**0.59**	**270**	⇓*e*P	**Pb**	**05 51 36.9**	**-0.9**
WUSB				S	**Sb**	**05 51 46.3**	**+0.1**
TWT	**Tachien** baz=292	**0.60**	**296**	P	**Pb**	**05 51 37.2**	**-0.6**
TWT				*e*S	**Sb**	**05 51 46.3**	**0.0**
EOS2	**EOS2** baz=55	**0.60**	**45**	*e*P	**Pn**	**05 51 39.5**	**-0.1**
TDCB	**Techi** baz=292	**0.61**	**295**	P	**Pb**	**05 51 37.4**	**-0.7**
TDCB				S	**Sb**	**05 51 46.2**	**-0.6**
TWC	**Suao** baz=359	**0.62**	**7**	*e*P	**Pb**	**05 51 37.6**	**-0.5**
VWDT	**VWDT** baz=255	**0.62**	**247**	⇓*i*P	**Pb**	**05 51 37.8**	**-0.3**
VWDT				S	**Sb**	**05 51 46.8**	**0.0**
EHY	**Hungye** baz=204	**0.63**	**220**	*e*P	**Pb**	**05 51 37.8**	**-0.6**
EHY				*e*S	**Sb**	**05 51 48.5**	**+1.3**
NDS	**Dongshan** baz=4.0	**0.64**	**356**	*e*P	**Pb**	**05 51 37.9**	**-0.6**
NDT	**Datong Townshi** baz=338	**0.65**	**339**	*e*P	**Pg**	**05 51 37.4**	**-0.6**
NDT				*e*S	**Sb**	**05 51 47.2**	**-0.4**
ENTT	**Nioudou** baz=331	**0.67**	**344**	*e*P	**Pg**	**05 51 38.1**	**-0.2**
ENTT				*e*S	**Sb**	**05 51 48.2**	**-0.1**
ECBN	**Changbin** baz=202	**0.73**	**203**	*e*P	**Pb**	**05 51 40.1**	**0.0**
ECBN				*e*S	**Sb**	**05 51 51.6**	**+1.5**
YULB	**Yu-li**	**0.74**	**216**	P	**Pb**	**05 51 41.0**	**+0.8**
YULB	**Yu-li** baz=214	**0.74**	**216**	P	**Pg**	**05 51 39.5**	**-0.2**
YULB				*e*S	**Sn**	**05 51 52.2**	**-0.6**
WPL	**Puli Township** baz=269	**0.74**	**271**	*e*P	**Pb**	**05 51 39.7**	**-0.5**
WPL				*e*S	**Sb**	**05 51 51.0**	**+0.7**
YHNB	**Yeheng**	**0.76**	**332**	P	**Pb**	**05 51 40.3**	**-0.3**
YHNB	**Yeheng** baz=320	**0.76**	**332**	⇓*e*P	**Pb**	**05 51 40.0**	**-0.6**
YHNB				*e*S	**Sb**	**05 51 51.3**	**+0.4**
EYUL	**Yuli** baz=230	**0.76**	**212**	*e*P	**Pn**	**05 51 41.6**	**-0.4**
DPDB	**Guoxing** baz=271	**0.77**	**273**	*e*P	**Pb**	**05 51 40.6**	**-0.1**
DPDB				*e*S	**Sb**	**05 51 51.4**	**+0.3**
SSLB	**Suanglung**	**0.77**	**255**	P	**Pb**	**05 51 40.7**	**0.0**
SSLB	**Suanglung** baz=264	**0.77**	**255**	P	**Pb**	**05 51 40.3**	**-0.4**
SSLB				S	**Sb**	**05 51 50.9**	**-0.3**
TWF1	**Yuli** baz=229	**0.77**	**214**	*e*P	**Pg**	**05 51 40.0**	**-0.3**
TWF1				*e*S	**Sn**	**05 51 53.2**	**-0.4**
NSK	**Sanguang** baz=330	**0.77**	**331**	⇓*e*P	**Pg**	**05 51 40.1**	**-0.2**
NSK				*e*S	**Sb**	**05 51 51.9**	**+0.6**
FUSB	**Fushanzhiwuyua** baz=337	**0.78**	**348**	⇑P	**Pb**	**05 51 40.8**	**-0.1**
FUSB				S	**Sb**	**05 51 51.5**	**0.0**
WCS	**Beigang Elemen** baz=272	**0.78**	**275**	*e*P	**Pb**	**05 51 40.6**	**-0.4**
SMLT	**Sun Moon Lake** baz=271	**0.80**	**262**	⇑P	**Pb**	**05 51 41.0**	**-0.3**
SMLT				*e*S	**Sb**	**05 51 53.0**	**+0.9**
WHP	**Taichung City** baz=288	**0.80**	**291**	⇓*e*P	**Pb**	**05 51 41.1**	**-0.2**
WHP				*e*S	**Sb**	**05 51 52.9**	**+0.8**
NWLT	**Wulai** baz=342	**0.81**	**343**	*e*P	**Pb**	**05 51 41.2**	**-0.3**
NWLT				*e*S	**Sb**	**05 51 52.0**	**-0.5**
TYC	**Yuchr** baz=271	**0.83**	**264**	⇑*e*P	**Pb**	**05 51 41.7**	**-0.1**
TYC				*e*S	**Sb**	**05 51 53.3**	**+0.3**
NFF	**Wufeng Townshi** baz=315	**0.87**	**317**	*e*P	**Pb**	**05 51 42.1**	**-0.3**
NFF				*e*S	**Sb**	**05 51 54.3**	**+0.3**
CHKH	**Chenggong** baz=205	**0.87**	**203**	*e*P	**Pg**	**05 51 42.0**	**-0.2**
WHYT	**Xinyi Township** baz=257	**0.89**	**251**	*e*P	**Pb**	**05 51 42.9**	**+0.2**
WHYT				*e*S	**Sb**	**05 51 55.5**	**+1.0**
FULB	**Fuli** baz=225	**0.90**	**209**	*e*P	**Pb**	**05 51 43.1**	**+0.1**
FULB				*e*S	**Sn**	**05 51 57.5**	**+0.6**
LIOB	**Emei** baz=312	**0.94**	**314**	*e*P	**Pb**	**05 51 43.6**	**0.0**
LIOB				*e*S	**Sb**	**05 51 56.6**	**+0.5**
NSTT	**Nanjuang** baz=311	**0.94**	**312**	*e*P	**Pb**	**05 51 44.0**	**+0.3**
NSTT				*e*S	**Sb**	**05 51 55.8**	**-0.3**
CHKT	**Chengkung** baz=201	**0.96**	**202**	*e*P	**Pb**	**05 51 43.9**	**-0.1**
CHKT				*e*S	**Sn**	**05 51 58.7**	**+0.3**
WJS	**Zhushan** baz=265	**0.96**	**260**	*e*P	**Pn**	**05 51 45.2**	**+0.5**
WJS				*e*S	**Sn**	**05 51 59.9**	**+1.5**
TWQ1	**Liyutan** baz=302	**0.97**	**291**	*e*P	**Pn**	**05 51 45.1**	**+0.3**
TWQ1				*e*S	**Sn**	**05 51 59.7**	**+1.1**
TIPB	**Shuangxi** baz=353	**0.97**	**3**	*e*P	**Pb**	**05 51 44.5**	**+0.2**
TIPB				*e*S	**Sb**	**05 51 57.2**	**+0.1**
WWF	**Wufeng** baz=271	**0.98**	**273**	*e*P	**Pn**	**05 51 45.7**	**+0.8**
EHD	**Haiduan** baz=227	**0.99**	**211**	*e*P	**Pg**	**05 51 43.9**	**-0.5**
NHDH	**Xindian Distri** baz=336	**0.99**	**347**	*e*P	**Pg**	**05 51 43.9**	**-0.6**
NHDH				*e*S	**Sb**	**05 51 57.9**	**+0.4**
TWA	**Mucha** baz=350	**0.99**	**351**	*e*P	**Pb**	**05 51 44.9**	**+0.3**
TWA				*e*S	**Sb**	**05 51 58.9**	**+1.2**
WNT	**Mingjian** baz=268	**0.99**	**263**	*e*P	**Pn**	**05 51 45.2**	**+0.1**
WNT				*e*S	**Sn**	**05 52 01.0**	**+1.8**
WNT1	**Nantou City** baz=270	**1.00**	**265**	*e*P	**Pn**	**05 51 45.9**	**+0.8**
WNT1				*e*S	**Sn**	**05 52 00.9**	**+1.8**
ALS	**Alishan** baz=239	**1.00**	**241**	P	**Pb**	**05 51 45.3**	**+0.4**
ALS				*e*S	**Sn**	**05 52 01.0**	**+1.2**
TCU	**Taichung** baz=271	**1.01**	**279**	*e*P	**Pn**	**05 51 46.4**	**+1.0**
TCU				*e*S	**Sn**	**05 52 02.0**	**+2.6**
NSY	**Sanyi** baz=305	**1.01**	**295**	*e*P	**Pn**	**05 51 46.0**	**+0.6**
NSY				*e*S	**Sn**	**05 52 01.9**	**+2.4**
TATO	**Taipei**	**1.01**	**346**	P	**Pn**	**05 51 45.4**	**0.0**
TATO	**Taipei** baz=333	**1.01**	**346**	*e*P	**Pb**	**05 51 45.0**	**+0.2**
TATO				*e*S	**Sb**	**05 51 58.4**	**+0.4**
ECS	**Chishang** baz=227	**1.03**	**209**	*e*P	**Pb**	**05 51 45.1**	**0.0**
TWB1	**Santiao Chiao** baz=2.0	**1.03**	**11**	*e*P	**Pb**	**05 51 45.7**	**+0.6**
TWB1				*e*S	**Sn**	**05 52 00.9**	**+0.9**
NMLH	**Miaoli** baz=298	**1.04**	**301**	*e*P	**Pn**	**05 51 46.1**	**+0.3**
ELDTW	**Lidau** baz=221	**1.05**	**221**	*e*P	**Pg**	**05 51 45.2**	**-0.6**
SBCB	**Hsinchu** baz=315	**1.06**	**318**	*e*P	**Pn**	**05 51 46.9**	**+0.8**
CHN5	**Tsauling** baz=235	**1.07**	**249**	P	**Pn**	**05 51 46.3**	**0.0**
CHN5				*e*S	**Sn**	**05 52 03.6**	**+2.5**
NWF	**Wu-fen Shan** baz=351	**1.07**	**1**	*e*P	**Pn**	**05 51 46.6**	**+0.3**
NWF				*e*S	**Sb**	**05 52 00.6**	**+0.7**
WFSB	**Wu-fen Shan** baz=351	**1.07**	**1**	*e*P	**Pn**	**05 51 46.4**	**+0.2**
WFSB				*e*S	**Sb**	**05 52 00.2**	**+0.4**
HSN	**Hsinchu** baz=319	**1.08**	**318**	*e*P	**Pn**	**05 51 47.1**	**+0.7**
HSN				*e*S	**Sn**	**05 52 03.1**	**+1.8**
WYL	**Yuanlin Townsh** baz=251	**1.08**	**268**	*e*P	**Pg**	**05 51 44.6**	**-1.7**
WDJ	**Dajia District** baz=299	**1.08**	**289**	*e*P	**Pn**	**05 51 47.2**	**+0.8**
WDJ				*e*S	**Sn**	**05 52 03.5**	**+2.1**
SXI1	**Grass Mountain** baz=5.0	**1.10**	**5**	P	**Pn**	**05 51 47.4**	**+0.7**
SXI1				*e*S	**Sn**	**05 52 03.2**	**+1.4**
EDH	**Donghe** baz=184	**1.10**	**203**	*e*P	**Pg**	**05 51 45.0**	**-1.6**
EDH				*e*S	**Sn**	**05 52 02.0**	**+0.2**
NCUH	**Zhongli** baz=328	**1.10**	**332**	*e*P	**Pn**	**05 51 47.6**	**+0.9**
TWS1	**Kuangyinshan** baz=343	**1.15**	**344**	*e*P	**Pn**	**05 51 48.4**	**+1.2**
TWS1				*e*S	**Sn**	**05 52 04.6**	**+1.8**
TNOU	**National Taiwa** baz=358	**1.15**	**0**	*e*P	**Pn**	**05 51 47.7**	**+0.4**
YM01	**YM01** baz=350	**1.16**	**351**	*e*P	**Pn**	**05 51 48.2**	**+0.7**
YM01				*e*S	**Sb**	**05 52 03.4**	**+0.9**
WDLH	**Douliu** baz=254	**1.16**	**255**	*e*P	**Pn**	**05 51 48.5**	**+1.0**
JYNG	**Yonagunijimaku**	**1.17**	**67**	P	**Pg**	**05 51 47.8**	**-0.1**
YM08	**YM08** baz=349	**1.20**	**352**	*e*P	**Pn**	**05 51 48.5**	**+0.5**
WCKO	**Fanlu** baz=241	**1.20**	**243**	*e*P	**Pn**	**05 51 49.0**	**+1.0**
WCKO				*e*S	**Sn**	**05 52 07.9**	**+3.7**
ANP	**Anpu** baz=334	**1.21**	**349**	*e*P	**Pn**	**05 51 49.4**	**+1.2**
STYH	**Taoyuan** baz=212	**1.22**	**228**	*e*P	**Pn**	**05 51 49.0**	**+0.7**
STYH				*e*S	**Sn**	**05 52 07.8**	**+3.0**
YOJ	**Yonaguni jima**	**1.23**	**68**	P	**Pn**	**05 51 51.5**	**+3.1**
YOJ	**Yonaguni jima** baz=71	**1.23**	**68**	P	**Pg**	**05 51 48.5**	**-0.5**
YOJ				*e*S	**Sn**	**05 52 06.9**	**+1.9**
YOJ	**Yonaguni jima**	**1.23**	**68**	P	**Pg**	**05 51 48.6**	**-0.4**
LONT	**Longtian** baz=210	**1.23**	**208**	*e*P	**Pg**	**05 51 47.4**	**-1.7**
STYT	**Tauyuan** baz=212	**1.24**	**228**	⇓*i*P	**Pb**	**05 51 48.8**	**-0.1**
STYT				*e*S	**Sn**	**05 52 06.5**	**+1.2**
TPUB	**Ta-pu**	**1.25**	**237**	P	**Pn**	**05 51 50.1**	**+1.4**
TPUB	**Ta-pu** baz=235	**1.25**	**237**	*e*P	**Pn**	**05 51 49.4**	**+0.7**
TPUB				*e*S	**Sn**	**05 52 07.5**	**+2.0**
CHN4	**Tsaushan** baz=237	**1.25**	**239**	P	**Pn**	**05 51 49.5**	**+0.8**
CHN4				*e*S	**Sn**	**05 52 08.6**	**+3.1**
WRL	**Guolierlin Hig** baz=266	**1.27**	**266**	*e*P	**Pn**	**05 51 50.1**	**+1.1**
WRL				*e*S	**Sn**	**05 52 08.9**	**+2.9**
TWY	**Chenhua** baz=334	**1.28**	**353**	*e*P	**Pg**	**05 51 48.9**	**-1.2**
RLNB	**Erlin** baz=265	**1.29**	**266**	*e*P	**Pn**	**05 51 50.0**	**+0.8**
RLNB				*e*S	**Sn**	**05 52 09.5**	**+3.1**
WTP	**Ta-pu** baz=222	**1.29**	**235**	*e*P	**Pn**	**05 51 50.1**	**+0.8**
WTK	**Tuku** baz=256	**1.30**	**257**	*e*P	**Pn**	**05 51 50.5**	**+1.2**
TWGBT	**Beinan** baz=194	**1.33**	**208**	*e*P	**Pn**	**05 51 48.2**	**-1.6**
TWG	**Pinlang** baz=207	**1.33**	**209**	*e*P	**Pn**	**05 51 48.2**	**-1.6**
TWG				*e*S	**Sg**	**05 52 06.8**	**-1.5**
LDUT	**Ludao** baz=179	**1.34**	**192**	*e*P	**Pn**	**05 51 48.8**	**-1.2**
TWK	**Hsinying** baz=237	**1.38**	**238**	*e*P	**Pg**	**05 51 51.6**	**-0.3**
TWK				*e*S	**Sn**	**05 52 11.6**	**+3.0**
CHN1	**Nanshi** baz=232	**1.39**	**235**	*e*P	**Pg**	**05 51 51.9**	**-0.2**
CHN1				*e*S	**Sn**	**05 52 13.9**	**+4.9**
SNST	**Tainan City** baz=234	**1.40**	**237**	*e*P	**Pg**	**05 51 52.2**	**0.0**
SNST				*e*S	**Sn**	**05 52 14.2**	**+5.1**
SGST	**Jiashian** baz=212	**1.42**	**230**	*e*P	**Pn**	**05 51 51.1**	**+0.2**
SGST				*e*S	**Sn**	**05 52 13.1**	**+3.5**
SLGT	**Liugui** baz=211	**1.43**	**226**	*e*P	**Pg**	**05 51 52.3**	**-0.6**
SLGT				*e*S	**Sn**	**05 52 14.9**	**+5.0**
WSF	**Szhu** baz=255	**1.46**	**256**	*e*P	**Pg**	**05 51 53.2**	**-0.2**
ICHU	**Yijhu** baz=245	**1.50**	**245**	*e*P	**Pg**	**05 51 54.0**	**-0.3**
ICHU				*e*S	**Sg**	**05 52 15.5**	**+1.8**
CHN8	**Yiju** baz=245	**1.56**	**246**	*e*P	**Pn**	**05 51 52.7**	**-0.3**
SCST	**Cishan** baz=215	**1.61**	**227**	*e*P	**Pg**	**05 51 56.1**	**-0.1**
SSD	**Sandimen** baz=218	**1.62**	**220**	*e*P	**Pn**	**05 51 53.9**	**+0.1**
SSD				S	**Sg**	**05 52 16.9**	**-0.6**
TSMG	**Majia** baz=211	**1.65**	**219**	*e*P	**Pb**	**05 51 55.4**	**-0.3**
PCYT	**Pengchaiyu** baz=8.0	**1.65**	**10**	*e*P	**Pn**	**05 51 54.6**	**+0.4**
TWM1	**Shoushan** baz=229	**1.70**	**227**	*e*P	**Pg**	**05 51 58.1**	**+0.1**
MASBT	**Mashibuluo** baz=217	**1.73**	**217**	*e*P	**Pn**	**05 51 56.3**	**+1.0**
MASBT				*e*S	**Sg**	**05 52 20.9**	**-0.1**
EAST	**Anshuo** baz=200	**1.81**	**208**	*e*P	**Pn**	**05 51 56.6**	**+0.1**
TAWH	**Dawu Township** baz=198	**1.83**	**206**	*e*P	**Pn**	**05 51 57.5**	**+0.8**
HATJ	**Hateruma jima**	**1.87**	**88**	S	**Sn**	**05 52 22.5**	**+1.9**
SCZT	**Fangliau** baz=201	**1.93**	**213**	*e*P	**Pb**	**05 51 59.6**	**-0.9**
JKRS	**Kuro-shima**	**2.06**	**83**	*e*P	**Pn**	**05 52 00.9**	**+1.0**
JIJ	**Ishigaki jima**	**2.20**	**80**	P	**Pn**	**05 52 01.9**	**+0.1**
JISG	**Ishigakijimahi**	**2.40**	**75**	P	**Pn**	**05 52 04.4**	**0.0**
JISG				S	**Sn**	**05 52 35.5**	**+1.7**
JOW	**Kunigami** 1.0nm,0.3s,baz=238,slow=19,SNR=1.4 3.8nm,0.2s	**6.53**	**63**	Pn	**Pn**	**05 53 00.2**	**-1.0**
KSRS	**Korea Array** 0.2nm,0.3s,baz=201,slow=11,SNR=2.4 1.5nm,0.8s	**14.42**	**20**	Pn	**Pn**	**05 54 50.1**	**+0.8**
GUMO	**Guam** comp=Z,19nm,21.7s,baz=55,slow=31	**24.16**	**111**	LR	LR	06 03 56.3	
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=99,slow=11,SNR=5.6 0.6nm,0.7s	**38.84**	**316**	P	**P**	**05 58 51.2**	**+0.8**
ZALV	**Zalesovo Beam** 1.3nm,0.6s,baz=109,slow=7.8,SNR=1.2 1.3nm,0.6s	**40.69**	**327**	P	**P**	**05 59 05.6**	**0.0**
H11N1	**WAKE ISLAND Hy** baz=279	**41.97**	**87**	T	T	06 44 18.5	
H11N2	**WAKE ISLAND Hy** baz=279	**41.97**	**87**	T	T	06 44 17.3	
H11N3	**WAKE ISLAND Hy** baz=279	**41.98**	**87**	T	T	06 44 17.3	
H11S3	**WAKE ISLAND Hy** baz=279,slow=75	**42.09**	**89**	T	T	06 44 30.6	
H11S1	**WAKE ISLAND Hy** baz=279,slow=75	**42.10**	**89**	T	T	06 44 26.0	
H11S2	**WAKE ISLAND Hy** baz=279,slow=75	**42.11**	**89**	T	T	06 44 28.3	
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=344,slow=8.7,SNR=6.8 0.4nm,0.6s	**45.36**	**163**	P	**P**	**05 59 42.3**	**-1.4**
BVAR	**Borovoye Array** 0.4nm,0.5s,baz=106,slow=11,SNR=2.9 0.4nm,0.5s	**48.16**	**321**	P	**P**	**06 00 05.5**	**+0.2**
ASAR	**Alice Springs** 0.5nm,0.9s,baz=349,slow=7.5,SNR=3.2 0.5nm,0.9s	**48.82**	**165**	P	**P**	**06 00 07.4**	**-3.4**
YKA	**Yellowknife Ar** 0.4nm,0.9s,baz=308,slow=5.3,SNR=4.9 0.4nm,0.9s	**82.94**	**23**	P	**P**	**06 03 47.7**	**-2.2**

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*IDC **08** 05:54:21.6±2.8,53°.47N×87°.60E,h0km,mbtmp2.8/2, ML2.5/2,Error ellipse: s-maj=22.9km s-min=13.9km az=64.0*

*NNC **08** 05:54:22.0±3.7,53°.35N×87°.65E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=27.6km s-min=14.7km az=71.0, Suspected Mining explosion.*

ISC 08 05:54:21.8±3.1,53°.5N±0°.1×87°.6E±0°.2,h0km,n8,σ1ŝ89/13, 6C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,1.2s,baz=102,slow=344,SNR=2.8	**1.69**	**286**	I	I	06 04 15.0	
ZAA0	**Zalesovo Array** 0.2nm,0.3s	**1.69**	**286**	⇑P	**Pb**	**05 54 53.4**	**-0.3**
ZAA0	1.5nm,0.5s			⇑S	**Sg**	**05 55 18.9**	**+2.9**
ZALV	**Zalesovo Beam** 1.3nm,0.3s,baz=102,slow=16,SNR=13	**1.69**	**286**	Pg	**Pn**	**05 54 51.9**	**-0.7**
ZALV	2.2nm,0.3s,baz=106,slow=26,SNR=10			Lg	Lg	05 55 16.5	
KURK	**Kurchatov** 2.3nm,1.2s	**6.18**	**247**	⇑Pn	**Pn**	**05 55 51.8**	**-2.4**
KURK	1.1nm,0.7s			⇓Sn	**Sn**	**05 57 04.9**	**-0.7**
KURK	5.2nm,1.2s			⇑Lg	Lg	05 57 38.7	
KURBB	**Kurchatov Arra** 1.4nm,0.8s	**6.28**	**246**	⇑Pn	**Pn**	**05 55 56.0**	**+0.3**
KURBB	1.7nm,0.6s			⇑Sn	**Sn**	**05 57 07.4**	**-0.7**

KURBB				⇓Lg	Lg	05 57 42.6			
	6.2nm,0.8s								
KURBB	**Kurchatov Arra**	**6.28**	**246**	Pn	**Pn**	**05 55 56.6**	**+0.9**		
	0.1nm,0.3s,baz=63,slow=13,SNR=4.5								
KURBB				Sn	**Sn**	**05 57 06.4**	**-1.7**		
	0.1nm,0.3s,baz=62,slow=24,SNR=3.7								
KURBB				Lg	Lg	05 57 41.1			
	baz=59,slow=30,SNR=4.7								
	0.4nm,0.4s								
MK31	**Makanchi Array**	**7.54**	**209**	Pn	**Pn**	**05 56 15.0**	**+2.1**		
	0.2nm,0.5s,baz=26,slow=10,SNR=7.0								
MK31				⇓Sn	**Sn**	**05 57 39.4**	**+0.4**		
	0.4nm,0.7s								
MK31				⇓Lg	Lg	05 58 19.7			
	2.7nm,1.1s								
MKAR	**Makanchi Array**	**7.54**	**209**	Pn	**Pn**	**05 56 13.6**	**+0.7**		
	0.1nm,0.3s,baz=28,slow=13,SNR=8.1								
MKAR				Sn	**Sn**	**05 57 35.8**	**-3.3**		
	baz=31,slow=26,SNR=1.7								
MKAR				Lg	Lg	05 58 20.4			
	0.1nm,0.3s,baz=26,slow=30,SNR=6.7								
	0.3nm,0.4s								

IDC 08 05:59:23.1±3.5, 54°24N×87°25E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=31.8km s-min=19.6km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	I	I	06 07 12.2	
	0.1nm,1.4s,baz=78,slow=339,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg	Pn	05 59 49.4	-1.3
	0.8nm,0.3s,baz=78,slow=16,SNR=13						
ZALV				Lg	Lg	06 00 09.8	
	0.7nm,0.3s,baz=77,slow=27,SNR=3.6						
KURBB	**Kurchatov Arra**	**6.44**	**239**	Pn	Pn	06 00 59.7	+0.6
	0.1nm,0.3s,baz=53,slow=14,SNR=2.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	Pn	06 01 23.0	+1.2
	baz=27,slow=13,SNR=1.6						
	0.1nm,0.3s						

*IDC **08** 06:00:15.1±2.4, 54°22N×87°20E, h0km, mb4.4/1, mbtmp3.5/5, ML2.9/4, MS3.2/1, Error ellipse: s-maj=24.1km s-min=16.6km az=71.0*

ISC 08 06:00:17.8±1.9, 54°3N±0°1×86°8E±0°2, h10km, n7, σ1s56/7, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.23**	**254**	Pg	**Pn**	**06 00 39.5**	**-1.6**
	4.4nm,0.3s,baz=76,slow=17,SNR=16						
ZALV				Lg	Lg	06 01 00.7	
	3.1nm,0.3s,baz=78,slow=29,SNR=6.5						
KURBB	**Kurchatov Arra**	**6.26**	**237**	Pn	**Pn**	**06 01 50.9**	**+0.8**
	0.1nm,0.3s,baz=53,slow=14,SNR=11						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**8.05**	**203**	Pn	**Pn**	**06 02 14.6**	**-0.2**
	0.1nm,0.3s,baz=25,slow=14,SNR=6.6						
MKAR				Sn	**Sn**	**06 03 44.2**	**-1.6**
	baz=25,slow=24,SNR=1.9						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**9.84**	**269**	Pn	**Pn**	**06 02 40.1**	**+1.0**
	baz=71,slow=16,SNR=3.3						
	0.5nm,0.3s						
NRIK	**Noril'sk**	**15.09**	**1**	Pn	**Pn**	**06 03 49.8**	**-1.0**
	0.2nm,0.3s,baz=176,slow=14,SNR=1.4						
	0.7nm,0.4s						
GEYT	**Alibeck**	**25.51**	**242**	P	**P**	**06 05 47.7**	**+1.5**
	1.8nm,0.2s,baz=52,slow=9.5,SNR=2.8						
	1.8nm,0.2s						
MMAI	**Mount Meron Ar**	**41.71**	**261**	LR	LR	06 29 38.5	
	comp=Z,28nm,19.2s,baz=263,slow=42						

IDC 08 06:05:31.3±2.9, 54°20N×86°43E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=22.9km s-min=11.9km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**256**	I	I	06 11 00.0	
	0.2nm,0.9s,baz=75,slow=342,SNR=4.9						
ZALV	**Zalesovo Beam**	**0.98**	**256**	Pg	Pg	06 05 48.6	-1.5
	1.3nm,0.3s,baz=74,slow=17,SNR=11						
ZALV				Lg	Lg	06 06 04.8	
	1.7nm,0.3s,baz=76,slow=30,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.01**	**237**	Pn	Pn	06 07 02.0	+0.5
	0.1nm,0.3s,baz=53,slow=13,SNR=3.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.87**	**201**	Pn	Pn	06 07 28.4	+1.4
	0.1nm,0.3s,baz=25,slow=13,SNR=4.7						
MKAR				Sn	Sn	06 08 56.5	-0.2
	0.1nm,0.3s,baz=18,slow=24,SNR=2.2						
MKAR				Lg	Lg	06 09 41.7	
	baz=18,slow=29,SNR=3.0						
	0.2nm,0.4s						

IDC 08 06:07:55.4±1.6, 52°36S×13°34E, h0km, mb3.7/3, mbtmp3.8/3, MS3.6/15, Error ellipse: s-maj=53.5km s-min=45.0km az=47.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.67**	**194**	P	P	06 12 36.3	-0.2
	2.3nm,0.8s,baz=34,slow=13,SNR=1.6						
SNAA				LR	LR	06 18 17.8	
	comp=Z,184nm,22.0s,baz=345,slow=30						
	2.3nm,0.8s						
SUR	**Sutherland**	**20.69**	**18**	LR	LR	06 18 30.2	
	comp=Z,130nm,21.3s,baz=186,slow=31						
BOSA	**Boshof**	**25.32**	**25**	LR	LR	06 21 06.4	
	comp=Z,119nm,21.8s,baz=204,slow=31						
MAW	**Mawson**	**28.10**	**142**	LR	LR	06 22 15.0	
	comp=Z,147nm,21.6s,baz=300,slow=31						
LBTB	**Lobatse**	**28.85**	**24**	LR	LR	06 23 12.2	
	comp=Z,81nm,21.7s,baz=194,slow=32						
TSUM	**Tsumeb**	**33.26**	**7**	LR	LR	06 26 34.4	
	comp=Z,134nm,18.4s,baz=150,slow=34						
QSPA	**South Pole Qui**	**37.88**	**180**	LR	LR	06 31 49.0	
	comp=Z,66nm,18.1s,baz=225,slow=38						
LSZ	**Lusaka**	**38.84**	**23**	LR	LR	06 30 14.9	
	comp=Z,85nm,18.1s,baz=196,slow=34						
VNDA	**Vanda**	**48.91**	**171**	LR	LR	06 36 18.9	
	comp=Z,86nm,19.3s,baz=207,slow=35						
MBAR	**Mbarara**	**53.60**	**22**	LR	LR	06 39 21.2	
	comp=Z,94nm,18.2s,baz=156,slow=35						
CPUP	**Villa Florida**	**57.95**	**268**	P	P	06 17 49.5	+0.1
	0.4nm,0.4s,baz=136,slow=6.8,SNR=1.4						
	0.4nm,0.4s						
DBIC	**Dimbokro**	**60.82**	**339**	LR	LR	06 40 47.7	
	comp=Z,33nm,18.8s,baz=358,slow=32						
RPZ	**Rata Peaks**	**82.39**	**164**	LR	LR	06 55 22.3	
	comp=Z,65nm,19.0s,baz=204,slow=35						
EIL	**Elat**	**83.84**	**19**	LR	LR	06 57 38.0	
	comp=Z,42nm,18.5s,baz=254,slow=36						
MMAI	**Mount Meron Ar**	**87.18**	**18**	LR	LR	07 00 07.8	
	comp=Z,38nm,18.2s,baz=208,slow=36						
ASAR	**Alice Springs**	**88.32**	**128**	P	P	06 20 49.0	+0.1
	0.6nm,0.9s,baz=212,slow=4.4,SNR=4.3						
ASAR				LR	LR	06 56 27.5	
	comp=Z,34nm,18.8s,baz=268,slow=33						
	0.6nm,0.9s						
YKA	**Yellowknife Ar**	**151.01**	**311**	PKPbc	PKPbc	06 27 48.3	-0.4
	0.9nm,0.9s,baz=88,slow=1.9,SNR=11						

*IDC **08** 06:19:27.8±2.9, 53°58N×90°55E, h0km, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=25.1km s-min=18.5km az=55.0*

*NNC **08** 06:19:28.2±1.6, 53°64N×90°49E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=11.9km s-min=7.9km az=58.0, Suspected Mining explosion.*

ISC 08 06:19:29.4±3.9, 53°7N±0°1×90°2E±0°2, h0km, n9, σ1s94/15, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.19**	**276**	I	I	06 41 35.3	
	0.3nm,1.1s,baz=93,slow=341,SNR=18						
ZAA0	**Zalesovo Array**	**3.19**	**276**	⇑Pg	**Pg**	**06 20 29.7**	**-0.7**
	1.7nm,0.8s						
ZAA0				⇑Lg	Lg	06 21 15.4	
	8.7nm,0.8s						
ZALV	**Zalesovo Beam**	**3.19**	**276**	Pn	**Pn**	**06 20 22.5**	**+1.7**
	1.4nm,0.4s,baz=96,slow=16,SNR=2.5						
ZALV				Pg	**Pb**	**06 20 27.2**	**+0.4**
	1.9nm,0.3s,baz=94,slow=15,SNR=18						
ZALV				Lg	Lg	06 21 17.2	
	0.9nm,0.3s,baz=95,slow=25,SNR=2.2						
KURK	**Kurchatov**	**7.72**	**252**	⇑Pn	**Pn**	**06 21 24.4**	**+1.4**
	1.3nm,0.6s						
KURK				⇓Sn	**Sn**	**06 22 54.2**	**+3.2**
	8.5nm,0.8s						
KURK				⇓Lg	Lg	06 23 38.8	
	22nm,1.2s						
KURBB	**Kurchatov Arra**	**7.81**	**251**	Pn	**Pn**	**06 21 24.6**	**+0.3**
	0.2nm,0.3s,baz=65,slow=14,SNR=5.9						
KURBB				Sn	**Sn**	**06 22 54.0**	**+0.7**
	baz=66,slow=26,SNR=5.4						
KURBB				Lg	Lg	06 23 41.1	
	baz=63,slow=34						
	2.2nm,0.8s						
MK31	**Makanchi Array**	**8.59**	**219**	⇓Pn	**Pn**	**06 21 34.5**	**-0.5**
	0.5nm,0.5s,baz=36,slow=12,SNR=14						
MK31				⇑Sn	**Sn**	**06 23 14.6**	**+2.1**
	0.8nm,0.5s,baz=42,slow=28,SNR=4.3						
MK31				⇓Lg	Lg	06 24 01.2	
	4.2nm,0.8s						
MKAR	**Makanchi Array**	**8.59**	**219**	Pn	**Pn**	**06 21 34.0**	**-1.0**
	0.3nm,0.3s,baz=38,slow=13,SNR=15						
MKAR				Sn	**Sn**	**06 23 11.2**	**-1.3**
	0.1nm,0.3s,baz=34,slow=25,SNR=2.7						
MKAR				Lg	Lg	06 24 01.2	
	baz=28,slow=31,SNR=1.6						
	1.0nm,0.5s						
MAKZ	**Makanchi**	**8.70**	**220**	⇓Pn	**Pn**	**06 21 35.1**	**-1.4**
	0.8nm,0.6s						
MAKZ				⇓Sn	**Sn**	**06 23 16.8**	**+1.6**
	1.2nm,0.7s						
MAKZ				⇑Lg	Lg	06 24 05.1	
	4.0nm,1.1s						
BVAR	**Borovoye Array**	**11.84**	**275**	Pn	**Pn**	**06 22 20.0**	**+0.6**
	0.2nm,0.3s,baz=77,slow=9.0,SNR=1.5						
BVAR				Sn	**Sn**	**06 24 28.1**	**-4.0**
	baz=84,slow=20,SNR=1.1						
BVAR				Lg	Lg	06 25 51.7	
	baz=76,slow=24						

IDC 08 06:20:47.3±1.1, 7°52N×126°69E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=76.9km s-min=25.8km az=74.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.31**	**165**	P	P	06 26 42.7	-0.2
	0.4nm,0.9s,baz=343,slow=10,SNR=1.5						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**31.79**	**167**	P	P	06 27 13.8	+0.1
	0.2nm,0.4s,baz=343,slow=7.4,SNR=4.9						
ASAR				PcP	PcP	06 30 05.0	-0.2
	0.4nm,0.6s,baz=344,slow=1.9,SNR=7.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**54.46**	**324**	P	P	06 30 16.9	+0.1
	0.4nm,0.5s,baz=120,slow=7.7,SNR=5.5						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**81.72**	**26**	P	P	06 33 07.3	-0.3
	0.3nm,0.7s,baz=271,slow=5.1,SNR=4.3						
	0.3nm,0.7s						

*NEIC **08** 06:31:43.3±0.2, 36°032N±0°010×97°910W±0°007, h5km±5km, Error ellipse: s-maj=1.5km s-min=0.7km az=165.0*

TUL 08 06:31:43.5±0.2, 36°04N±0°01×97°90W±0°01, h6km±5km, ML2.3, mb_Lg2.2/10(NEIC), ML2.5/62(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=187.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**123**	Pg	Pg	06 31 52.1	+0.2
OK029				Sg	Sg	06 31 58.3	+0.7
OK029				IAML		06 31 58.5	
	382nm,0.4s						
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	06 31 52.9	+0.2
CROK				Sg	Sg	06 31 59.6	+0.8
ADOK	**Arcadia Dam**	**0.58**	**132**	Pg	Pg	06 31 54.7	+0.1
ADOK				Sg	Sg	06 32 02.9	+0.7
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	Pg	06 31 57.4	-0.2
OKCSW				Sg	Sg	06 32 07.8	+0.6
OKCSW				IAML		06 32 08.0	
	comp=N,250nm,0.3s						
CSTR	**Hydro, Custer**	**0.75**	**239**		Pg	06 31 58.0	+0.1
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	06 31 58.4	-0.1
OK033				IAML		06 32 01.6	
	comp=N,194nm,0.1s						
OK033				IAML		06 32 15.9	
	comp=N,277nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**342**		Pg	06 31 58.8	-0.2
OK032				IAML		06 32 10.8	
	comp=N,170nm,0.2s						
OK032				IAML		06 32 14.0	
	comp=N,199nm,0.2s						
OK038	**West end E0370**	**0.81**	**303**	Pg	Pg	06 31 58.9	-0.1
GC02	**Grant County #**	**0.81**	**2**	Pg	Pg	06 31 59.0	-0.2
OK048	**Pawnee Station**	**0.86**	**64**	Pg	Pg	06 31 59.8	-0.2
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	06 31 60.0	-0.4
OK052	**Battle Ridge R**	**0.89**	**92**	Pg	Pg	06 32 00.4	-0.2
OK052				IAML		06 32 19.1	
	comp=N,102nm,0.2s						
OK052				IAML		06 32 21.0	
	comp=N,95nm,0.1s						
BLOK	**Blackwell**	**0.91**	**37**	Pg	Pg	06 32 00.7	-0.3
BLOK				IAML		06 32 15.2	
	comp=N,206nm,0.2s						
KAN14	**Manchester OK**	**0.92**	**357**	Pg	Pg	06 32 00.8	-0.4
KAN14				IAML		06 32 15.7	
	comp=N,121nm,0.1s						
KAN14				IAML		06 32 16.7	
	comp=E,134nm,0.1s						
OK035	**E0210 Rd and N**	**0.94**	**316**	Pg	Pg	06 32 01.1	-0.3
OK035				IAML		06 32 20.1	
	comp=E,126nm,0.3s						
U32A	**Winter Ranch,**	**0.95**	**291**	Pg	Pg	06 32 01.4	-0.4
U32A				IAML		06 32 17.4	
	comp=N,174nm,0.3s						
U32A				IAML		06 32 19.9	
	comp=E,125nm,0.2s						
QUOK	**Quay**	**0.98**	**82**	Pg	Pg	06 32 01.9	-0.3
QUOK				IAML		06 32 18.9	
	comp=E,104nm,0.2s						
QUOK				IAML		06 32 21.4	
	comp=N,99nm,0.2s						
OK051	**E0350 and S346**	**0.98**	**61**	Pg	Pg	06 32 01.9	-0.4
OK051				IAML		06 32 20.8	
	comp=N,174nm,0.2s						
OK051				IAML		06 32 21.2	
	comp=N,138nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**		Pg	06 32 02.5	-0.4
KAN17				IAML		06 32 18.5	
	comp=N,181nm,0.2s						
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	06 32 03.0	-0.3
KAN05	**Bluff City Nor**	**1.07**	**1**		Pg	06 32 03.6	-0.4
KAN05				IAML		06 32 20.6	
	comp=N,134nm,0.2s						
KAN05				IAML		06 32 23.6	
	comp=E,115nm,0.1s						
KAN10	**Anthony SW Sta**	**1.10**	**352**	Pg	Pg	06 32 04.0	-0.5
KAN10				IAML		06 32 24.4	
	comp=E,90nm,0.1s						
KAN10				IAML		06 32 27.2	
	comp=N,73nm,0.2s						
KAN01	**Argonia South**	**1.12**	**6**	Pg	Pg	06 32 04.5	-0.5
KAN01				IAML		06 32 20.2	
	comp=E,129nm,0.2s						
KAN01				IAML		06 32 21.0	
	comp=N,81nm,0.1s						
KAN09	**Caldwell North**	**1.12**	**12**		Pg	06 32 04.5	-0.5
DEOK	**Depew**	**1.16**	**99**	Pg	Pg	06 32 04.8	-0.8
DEOK				IAML		06 32 23.1	
	comp=N,100nm,0.5s						
DEOK				IAML		06 32 25.3	
	comp=E,100nm,0.1s						
KAN06	**Argonia West S**	**1.21**	**2**		Pg	06 32 06.1	-0.6
KAN06				IAML		06 32 22.7	
	comp=N,74nm,0.3s						
KAN06				IAML		06 32 22.8	
	comp=E,80nm,0.2s						
W35A	**Tecumseh**	**1.22**	**136**		Pg	06 32 05.8	-1.1
W35A				IAML		06 32 26.8	
	comp=N,91nm,0.3s						
ELIS	**Ellis County**	**1.23**	**272**	Pg	Pg	06 32 05.9	-1.2
ELIS				IAML		06 32 28.2	
	comp=E,103nm,0.2s						
KS21	**Milan North St**	**1.26**	**9**	Pg	Pn	06 32 07.0	-0.7
T35A	**Sooner Cattle**	**1.42**	**52**		Pn	06 32 09.8	-0.1
X34A	**Smith Ranch, M**	**1.43**	**178**		Pn	06 32 10.0	-0.1
TUL3	**Leonard**	**1.72**	**94**		Pn	06 32 13.9	0.0
TUL3				IAmb_Lg		06 32 39.0	
	comp=Z,12nm,0.8s						
R32A	**Long Quarter,**	**2.47**	**345**	IAmb_Lg		06 33 05.4	
	comp=Z,6.3nm,0.8s						
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		06 33 39.7	
	comp=Z,7.2nm,0.7s						
X40A	**Basin Creek Fa**	**4.42**	**109**	IAmb_Lg		06 34 07.9	
	comp=Z,5.8nm,0.9s						
P38A	**Dawn**	**4.98**	**43**	IAmb_Lg		06 34 27.2	
	comp=Z,5.9nm,0.7s						
FVM	**French Village**	**6.29**	**70**	IAmb_Lg		06 35 15.5	
	comp=Z,5.9nm,1.1s						

*IDC **08** 06:44:47.4±4.0, 15°99N×122°11E, h106km±38km, mb3.5/8, mbtmp3.8/9, MS3.2/7, Error ellipse: s-maj=45.9km s-min=16.0km az=62.0*

ISC 08 06:44:46.9±1.0, 15°99N±0°10×122°2E±0°2, h100km, n20, σ1s19/10, mb3.8/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.23**	**213**	P	**Pn**	**06 45 22.2**	**-0.4**
	426nm,0.5s,baz=342,slow=16,SNR=11						
TGY				S	**Sn**	**06 45 50.6**	**+0.8**
	1µm,0.5s,baz=145,slow=23,SNR=7.0						
DAV	**Davao City (W)**	**9.47**	**159**	LR	LR	06 51 04.8	
	comp=Z,135nm,18.4s,baz=344,slow=40						
JNU	**Nakatsue**	**18.79**	**23**	LR	LR	06 56 20.5	
	comp=Z,37nm,19.8s,baz=98,slow=37						
GUMO	**Guam**	**22.07**	**93**	LR	LR	06 57 05.7	
	comp=Z,42nm,18.9s,baz=50,slow=33						
CMAR	**Chiang Mai Arr**	**22.33**	**280**	P	**P**	**06 49 37.0**	**+0.4**
	0.9nm,0.3s,baz=101,slow=8.0,SNR=6.9						
CMAR				LR	LR	06 58 35.0	
	comp=Z,75nm,18.8s,baz=105,slow=37						
	0.9nm,0.3s						
SONM	**Songino Array**	**34.32**	**341**	P	**P**	**06 51 25.3**	**+1.3**
	1.4nm,0.6s,baz=178,slow=8.7,SNR=2.2						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**37.66**	**161**	P	**P**	**06 51 51.8**	**-0.8**
	0.9nm,0.8s,baz=340,slow=9.5,SNR=4.7						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**41.05**	**164**	P	**P**	**06 52 20.9**	**+0.2**
	1.3nm,0.9s,baz=336,slow=6.6,SNR=9.1						
	1.3nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**42.50**	**80**	T	T	07 37 55.1	
	baz=274,slow=75						
H11S1	**WAKE ISLAND Hy**	**42.52**	**80**	T	T	07 37 56.8	
	baz=274,slow=75						
H11S2	**WAKE ISLAND Hy**	**42.52**	**80**	T	T	07 37 56.7	
	baz=274,slow=75						
H11N1	**WAKE ISLAND Hy**	**42.63**	**78**	T	T	07 38 08.1	
	baz=275,slow=74						
H11N2	**WAKE ISLAND Hy**	**42.64**	**78**	T	T	07 38 06.9	
	baz=275,slow=74						
H11N3	**WAKE ISLAND Hy**	**42.65**	**78**	T	T	07 38 04.4	
	baz=275,slow=74						
MKAR	**Makanchi Array**	**45.09**	**322**	P	**P**	**06 52 51.7**	**-1.5**
	0.6nm,0.8s,baz=110,slow=10,SNR=5.5						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**47.73**	**331**	P	**P**	**06 53 11.9**	**-1.7**
	1.3nm,0.9s,baz=111,slow=7.1,SNR=3.7						
	1.3nm,0.9s						
MA2	**Magadan**	**48.28**	**19**	LR	LR	07 16 23.1	
	comp=Z,17nm,18.0s,baz=356,slow=39						
KURBB	**Kurchatov Arra**	**49.13**	**324**	P	**P**	**06 53 23.4**	**-0.9**
	2.4nm,0.8s,baz=122,slow=7.9,SNR=19						
KURBB				LR	LR	07 16 07.3	
	comp=Z,44nm,18.3s,baz=171,slow=38						
	2.4nm,0.8s						
GEYT	**Alibeck**	**59.98**	**305**	LR	LR	07 25 27.4	
	comp=Z,52nm,18.0s,baz=141,slow=41						
YKA	**Yellowknife Ar**	**90.12**	**23**	P	**P**	**06 57 36.4**	**+0.8**
	0.4nm,0.8s,baz=303,slow=4.7,SNR=7.6						
	0.4nm,0.8s						

IDC 08 06:45:11.1±2.9, 54°24N×85°94E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=20.3km s-min=10.0km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.72**	**246**	I	I	06 49 42.4	
	0.1nm,1.1s,baz=63,slow=340,SNR=4.8						
ZALV	**Zalesovo Beam**	**0.72**	**246**	Pg	Pg	06 45 23.9	-1.0
	0.5nm,0.3s,baz=63,slow=17,SNR=6.8						
ZALV				Lg	Lg	06 45 35.5	
	1.1nm,0.3s,baz=69,slow=30,SNR=6.1						
KURBB	**Kurchatov Arra**	**5.80**	**234**	Pn	Pn	06 46 39.8	+1.5
	0.1nm,0.3s,baz=52,slow=13,SNR=1.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.81**	**199**	Pn	Pn	06 47 06.8	+0.8
	0.1nm,0.3s,baz=22,slow=13,SNR=2.7						
MKAR				Lg	Lg	06 49 18.2	
	baz=23,slow=33,SNR=2.9						
	0.1nm,0.2s						

IDC 08 06:59:13.9±3.2, 53°57N×87°65E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=29.5km s-min=16.0km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**284**	I	I	07 08 05.9	
	0.2nm,1.1s,baz=100,slow=346,SNR=10						
ZALV	**Zalesovo Beam**	**1.73**	**284**	Pg	Pn	06 59 45.2	0.0
	2.3nm,0.3s,baz=100,slow=16,SNR=28						
ZALV				Lg	Lg	07 00 08.8	
	1.6nm,0.3s,baz=102,slow=32,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.35**	**246**	Pn	Pn	07 00 49.4	+0.7
	0.1nm,0.3s,baz=61,slow=14,SNR=4.9						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	07 01 06.9	+1.0
	0.1nm,0.3s,baz=27,slow=11,SNR=4.9						
MKAR				Lg	Lg	07 03 13.8	
	baz=20,slow=22,SNR=2.1						
	0.2nm,0.4s						

IDC 08 07:01:16.6±2.5, 2°59N×124°25E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=334.0km s-min=27.8km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.49**	**157**	P	P	07 06 38.0	+0.2
	0.8nm,0.9s,baz=336,slow=9.6,SNR=4.6						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**27.74**	**161**	P	P	07 07 06.9	-0.3
	0.3nm,0.9s,baz=344,slow=9.6,SNR=1.6						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**57.11**	**327**	P	P	07 11 05.0	0.0
	0.2nm,0.4s,baz=122,slow=8.2,SNR=5.0						
	0.2nm,0.4s						

**IDC 08 07:04

*IDC **08** 07:16:04.2±1.0,23˚.93N×122˚.01E,h0km,mb3.5/8, mbtmp3.5/10,ML3.3/1,MS3.0/2,Error ellipse: s-maj=35.2km s-min=20.1km az=65.0*
*TAP **08** 07:16:05.5,24˚.03N×121˚.83E,h6km,ML4.0,C*
*ASIES **08** 07:16:05.5,24˚.03N×121˚.83E,h6km,ML4.0,Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr=0.84; Mθθ 0.13; Mφφ 0.69; Mrθ 4.50; Mθφ 0.14; Mφr 2.74; Fault plane solution: M0 5.33082×10²¹ NP1: φs=238.05000°,δ86.62000°,λ-86.63000°. NP2:φs 13.10000°, δ4.77000°,λ-134.85000°. Principal axes: T Plg41.5270°, Azm324.8680°; N Plg3.3620°, Azm57.8510°; P Plg48.2750°, Azm151.6280°;*
*JMA **08** 07:16:06.1±0.2,24˚.0N±0˚.6×121˚.8E±0˚.6,h0km,MV3.5/14, TAIWAN REGION*
ISC 08 07:16:06.5±0.9,24˚.01N±0˚.01×121˚.85E±0˚.02,h12km±6km, n181,σ0 95/243,mb3.5/8,34C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=252	**0.23**	**261**	⇑P			**Pg**	**07 16 11.8**	**+0.5**
HWA	baz=252			*e*S			**Sg**	**07 16 16.7**	**+2.1**
TWD	**Chiawan** baz=283	**0.24**	**286**	⇑*i*P			**Pg**	**07 16 10.9**	**-0.6**
TWD	baz=283			*i* S			**Sg**	**07 16 15.0**	**0.0**
ETL	**Fush Village** baz=305	**0.25**	**305**	⇑*i*P			**Pg**	**07 16 11.1**	**-0.7**
ETL	baz=305			*i* S			**Sg**	**07 16 15.1**	**-0.3**
NACB	**Ninganchiao**	**0.28**	**305**	P			**Pb**	**07 16 11.7**	**-1.8**
NACB	**Ninganchiao** baz=304	**0.28**	**305**	⇑*i*P			**Pg**	**07 16 11.5**	**-0.8**
NACB	baz=304			*i* S			**Sb**	**07 16 15.8**	**-2.3**
EHP	**Heping Village** baz=348	**0.31**	**342**	P			**Pb**	**07 16 12.4**	**-1.6**
EHP	baz=348			S			**Sb**	**07 16 18.4**	**-0.6**
EAHA	**Aohua** baz=348	**0.33**	**342**	P			**Pb**	**07 16 12.8**	**-1.5**
EAHA	baz=348			*e*S			**Sb**	**07 16 19.1**	**-0.5**
ETM	**Tongmen** baz=256	**0.33**	**262**	⇑*i*P			**Pb**	**07 16 12.9**	**-1.3**
ETM	baz=256			*i* S			**Sb**	**07 16 18.3**	**-1.2**
SHUL	**Shoufeng** baz=221	**0.35**	**229**	⇓P			**Pb**	**07 16 14.6**	**0.0**
SHUL	baz=221			*e*S			**Sb**	**07 16 21.4**	**+1.5**
ETLH	**Xiulin Townshi** baz=299	**0.39**	**300**	⇑*i*P			**Pg**	**07 16 13.5**	**-0.8**
ETLH	baz=299			S			**Sb**	**07 16 19.8**	**-1.5**
LXIB	**Xiulin Townshi** baz=267	**0.40**	**271**	⇑*i*P			**Pb**	**07 16 14.0**	**-1.5**
LXIB	baz=267			*e*S			**Sb**	**07 16 20.0**	**-1.7**
TEGC	**Jichi Village** baz=201	**0.41**	**223**	*e*P			**Pb**	**07 16 15.7**	**0.0**
TEGC	baz=201			*e*S			**Sb**	**07 16 25.1**	**+3.2**
ENA	**Nanau** baz=354	**0.42**	**347**	⇑*i*P			**Pb**	**07 16 14.6**	**-1.3**
ESL	**Shilin** baz=234	**0.43**	**243**	P			**Pb**	**07 16 14.9**	**-1.1**
ESL	baz=234			*e*S			**Sb**	**07 16 21.9**	**-0.4**
EWUT	**Wuta** baz=347	**0.43**	**351**	⇑*i*P			**Pb**	**07 16 15.0**	**-1.1**
EWUT	baz=347			*e*S			**Sb**	**07 16 23.0**	**+0.5**
EOS4	**EOS4** baz=79	**0.44**	**76**	⇓*e*P			**Pn**	**07 16 17.4**	**-0.9**
EOS3	**EOS3** baz=59	**0.51**	**57**	*e*P			**Pn**	**07 16 18.9**	**-0.4**
WARBT	**Fenglin Townsh** baz=213	**0.52**	**235**	⇓*i*P			**Pb**	**07 16 16.6**	**-0.9**
WARBT	baz=213			S			**Sb**	**07 16 24.6**	**-0.2**
EGFH	**Guangfu** baz=220	**0.52**	**228**	*e*P			**Pb**	**07 16 16.8**	**-0.7**
EOS2	**EOS2** baz=52	**0.53**	**41**	*e*P			**Pn**	**07 16 19.1**	**-0.6**
WHF	**Hehuan Shan** baz=282	**0.55**	**284**	⇑*i*P			**Pb**	**07 16 16.8**	**-1.5**
WHF	baz=282			S			**Sb**	**07 16 24.7**	**-1.5**
ESAO	**Su ao** baz=358	**0.56**	**359**	⇑*i*P			**Pb**	**07 16 17.4**	**-0.8**
ESAO	baz=358			*e*S			**Sb**	**07 16 26.6**	**+0.4**
NNSB	**Datong** baz=316	**0.59**	**314**	⇑*i*P			**Pb**	**07 16 17.7**	**-1.2**
NNSB	baz=316			*i* S			**Sb**	**07 16 26.4**	**-0.8**
NNSH	**Datong** baz=315	**0.59**	**314**	*i* P			**Pb**	**07 16 17.6**	**-1.2**
NNSH	baz=315			*i* S			**Sb**	**07 16 26.6**	**-0.7**
TWC	**Suao** baz=355	**0.59**	**360**	⇑*i*P			**Pb**	**07 16 18.0**	**-0.8**
TWC	baz=355			*e*S			**Sb**	**07 16 28.1**	**+1.0**
LATG	**Datong** baz=333	**0.60**	**331**	⇑*i*P			**Pb**	**07 16 17.8**	**-1.1**
LATG	baz=333			*i* S			**Sb**	**07 16 26.4**	**-0.9**
FUSS	**Fushou** baz=292	**0.60**	**293**	⇑*e*P			**Pb**	**07 16 17.9**	**-1.1**
FUSS	baz=292			*e*S			**Sb**	**07 16 26.6**	**-1.0**
NNS	**Nan Shan** baz=316	**0.61**	**314**	⇑*i*P			**Pb**	**07 16 17.8**	**-1.3**
NNS	baz=316			*i* S			**Sb**	**07 16 26.9**	**-0.8**
CHGB	**Renai** baz=272	**0.62**	**274**	⇑*i*P			**Pb**	**07 16 18.4**	**-1.0**
CHGB	baz=272			*i* S			**Sb**	**07 16 27.4**	**-0.7**
OWD	**Renai** baz=261	**0.62**	**265**	P			**Pb**	**07 16 18.7**	**-0.6**
OWD	baz=261			S			**Sb**	**07 16 27.4**	**-0.5**
NDS	**Dongshan** baz=353	**0.63**	**349**	⇑P			**Pb**	**07 16 18.7**	**-0.7**
NDS	baz=353			*e*S			**Sb**	**07 16 28.7**	**+0.5**
HGSD	**Ruisui** baz=211	**0.65**	**217**	P			**Pb**	**07 16 19.9**	**+0.2**
HGSD	baz=211			*e*S			**Sn**	**07 16 31.8**	**+0.2**
TWT	**Tachien** baz=289	**0.66**	**291**	P			**Pb**	**07 16 19.2**	**-0.8**
TWT	baz=289			S			**Sb**	**07 16 28.9**	**-0.3**
NDT	**Datong Townshi** baz=335	**0.66**	**332**	⇑*i*P			**Pb**	**07 16 19.3**	**-0.7**
NDT	baz=335			*i* S			**Sb**	**07 16 29.2**	**+0.1**
WUSB	**Renai** baz=265	**0.67**	**268**	⇑*i*P			**Pb**	**07 16 19.4**	**-0.7**
WUSB	baz=265			*i* S			**Sb**	**07 16 28.7**	**-0.7**
ENTT	**Nioudou** baz=341	**0.68**	**338**	⇑*i*P			**Pb**	**07 16 19.4**	**-0.7**
ENTT	baz=341			*e*S			**Sb**	**07 16 29.7**	**+0.2**
TDCB	**Techi** baz=290	**0.68**	**291**	⇑*i*P			**Pb**	**07 16 19.4**	**-0.9**
TDCB	baz=290			S			**Sb**	**07 16 28.8**	**-0.8**
VWDT	**VWDT** baz=243	**0.70**	**248**	P			**Pb**	**07 16 20.2**	**-0.3**
EHY	**Hungye** baz=217	**0.70**	**224**	*e*P			**Pb**	**07 16 19.9**	**-0.6**
FUSB	**Fushanzhiwuyua** baz=335	**0.78**	**342**	⇑*i*P			**Pb**	**07 16 21.4**	**-0.7**
FUSB	baz=335			S			**Sb**	**07 16 32.8**	**+0.2**
YHNB	**Yeheng**	**0.78**	**327**	P			**Pb**	**07 16 21.5**	**-0.6**
YHNB	**Yeheng** baz=329	**0.78**	**327**	⇑*i*P			**Pb**	**07 16 21.4**	**-0.6**
YHNB	baz=329			S			**Sb**	**07 16 32.9**	**+0.3**
ECBN	**Changbin** baz=201	**0.78**	**208**	*e*P			**Pb**	**07 16 21.8**	**-0.2**
NSK	**Sanguang** baz=329	**0.80**	**326**	⇑*i*P			**Pb**	**07 16 21.6**	**-0.7**
NSK	baz=329			S			**Sb**	**07 16 32.9**	**-0.2**
YULB	**Yu-li**	**0.80**	**219**	P			**Pb**	**07 16 22.3**	**0.0**
YULB	**Yu-li** baz=213	**0.80**	**219**	*e*P			**Pb**	**07 16 21.5**	**-0.8**
YULB	baz=213			*e*S			**Sn**	**07 16 34.5**	**-0.8**
WPL	**Puli Township** baz=267	**0.82**	**270**	*e*P			**Pb**	**07 16 22.1**	**-0.5**
WPL	baz=267			*e*S			**Sb**	**07 16 32.8**	**-0.8**
EYUL	**Yuli** baz=196	**0.82**	**216**	*e*P			**Pn**	**07 16 23.1**	**-0.7**
NWLT	**Wulai** baz=341	**0.82**	**337**	⇑P			**Pb**	**07 16 22.2**	**-0.5**
NWLT	baz=341			S			**Sb**	**07 16 34.0**	**+0.2**
TWF1	**Yuli** baz=211	**0.83**	**218**	*e*P			**Pb**	**07 16 22.1**	**-0.7**
TWF1	baz=211			*e*S			**Sn**	**07 16 37.6**	**+1.4**
DPDB	**Guoxing** baz=268	**0.84**	**272**	*e*P			**Pb**	**07 16 22.6**	**-0.5**
SSLB	**Suanglung**	**0.85**	**255**	P			**Pb**	**07 16 23.1**	**-0.1**
SSLB	**Suanglung** baz=264	**0.85**	**255**	⇑P			**Pb**	**07 16 22.5**	**-0.7**
SSLB	baz=264			S			**Sb**	**07 16 33.4**	**-1.1**
WCS	**Beigang Elemen** baz=270	**0.86**	**273**	*e*P			**Pb**	**07 16 22.9**	**-0.4**
WHP	**Taichung City** baz=287	**0.87**	**288**	⇑P			**Pb**	**07 16 23.1**	**-0.4**
WHP	baz=287			S			**Sb**	**07 16 35.2**	**+0.1**
SMLT	**Sun Moon Lake** baz=258	**0.88**	**262**	⇓*i*P			**Pb**	**07 16 23.6**	**-0.1**
SMLT	baz=258			S			**Sb**	**07 16 35.5**	**0.0**
NFF	**Wufeng Townshi** baz=304	**0.91**	**313**	P			**Pb**	**07 16 23.7**	**-0.4**
TYC	**Yuchr** baz=260	**0.91**	**263**	*e*P			**Pb**	**07 16 23.8**	**-0.5**
TYC	baz=260			S			**Sb**	**07 16 36.2**	**-0.2**
CHKH	**Chenggong** baz=180	**0.92**	**207**	*e*P			**Pg**	**07 16 23.4**	**-0.7**
TIPB	**Shuangxi** baz=354	**0.95**	**359**	⇑*i*P			**Pn**	**07 16 24.9**	**-0.9**
TIPB	baz=354			*e*S			**Sn**	**07 16 40.3**	**+1.1**
FULB	**Fuli** baz=194	**0.96**	**212**	*e*P			**Pn**	**07 16 25.2**	**-0.6**
WHYT	**Xinyi Township** baz=246	**0.96**	**251**	*e*P			**Pn**	**07 16 26.4**	**+0.5**
LIOB	**Emei** baz=311	**0.99**	**310**	⇑P			**Pn**	**07 16 25.5**	**-0.7**
LIOB	baz=311			*e*S			**Sn**	**07 16 39.6**	**-0.4**
NSTT	**Nanjuang** baz=310	**0.99**	**309**	⇑*i*P			**Pn**	**07 16 25.4**	**-0.8**
NSTT	baz=310			S			**Sn**	**07 16 39.1**	**-1.0**
NHDH	**Xindian Distri** baz=348	**0.99**	**343**	*e*P			**Pn**	**07 16 25.4**	**-0.8**
TWA	**Mucha** baz=340	**0.99**	**346**	P			**Pn**	**07 16 25.9**	**-0.4**
TWB1	**Santiao Chiao** baz=5.0	**1.00**	**7**	P			**Pn**	**07 16 26.3**	**0.0**
NJD	**Zhudong** baz=318	**1.00**	**316**	*e*P			**Pn**	**07 16 26.1**	**-0.2**
CHKT	**Chengkung** baz=178	**1.01**	**206**	*e*P			**Pn**	**07 16 26.0**	**-0.4**
TATO	**Taipei**	**1.01**	**341**	P			**Pn**	**07 16 26.1**	**-0.4**
TATO	**Taipei** baz=345	**1.01**	**341**	P			**Pn**	**07 16 25.7**	**-0.8**
TATO	baz=345			*e*S			**Sn**	**07 16 40.1**	**-0.5**
TWQ1	**Liyutan** baz=301	**1.04**	**289**	*e*P			**Pn**	**07 16 26.5**	**-0.3**
TWQ1	baz=301			*e*S			**Sn**	**07 16 41.7**	**+0.4**
EHD	**Haiduan** baz=195	**1.04**	**215**	*e*P			**Pg**	**07 16 25.1**	**-1.5**
WJS	**Zhushan** baz=256	**1.04**	**260**	*e*P			**Pn**	**07 16 27.3**	**+0.4**
WWF	**Wufeng** baz=269	**1.05**	**272**	*e*P			**Pn**	**07 16 27.9**	**+0.8**
NWF	**Wu-fen Shan** baz=354	**1.05**	**357**	P			**Pn**	**07 16 27.1**	**0.0**
WFSB	**Wu-fen Shan** baz=354	**1.05**	**357**	⇑*i*P			**Pn**	**07 16 27.0**	**0.0**
WFSB	baz=354			*e*S			**Sn**	**07 16 42.6**	**+0.9**
TAP	**Taipei** baz=349	**1.07**	**343**	*e*P			**Pn**	**07 16 27.2**	**0.0**
NSY	**Sanyi** baz=291	**1.07**	**292**	*e*P			**Pn**	**07 16 27.5**	**+0.2**
WNT	**Mingjian** baz=259	**1.07**	**263**	*e*P			**Pn**	**07 16 27.1**	**-0.2**
WNT1	**Nantou City** baz=261	**1.07**	**265**	*e*P			**Pn**	**07 16 26.9**	**-0.4**
SXI1	**Grass Mountain** baz=360	**1.08**	**1**	⇑*e*P			**Pn**	**07 16 27.5**	**+0.1**
SXI1	baz=360			*e*S			**Sn**	**07 16 43.3**	**+1.0**
ALS	**Alishan** baz=237	**1.08**	**243**	*e*P			**Pn**	**07 16 27.5**	**-0.1**
ALS	baz=237			*e*S			**Sn**	**07 16 43.5**	**+0.8**
ECS	**Chishang** baz=185	**1.08**	**212**	*e*P			**Pn**	**07 16 28.0**	**+0.6**
TCU	**Taichung** baz=275	**1.08**	**277**	*e*P			**Pn**	**07 16 28.1**	**+0.8**
JYNG	**Yonaguni jima**	**1.09**	**66**	P			**Pn**	**07 16 27.4**	**-0.1**
JYNG				*e*S			**Sn**	**07 16 42.9**	**+0.3**
NMLH	**Miaoli** baz=298	**1.10**	**299**	*e*P			**Pn**	**07 16 28.3**	**+0.6**
NMLH	baz=298			*e*S			**Sn**	**07 16 44.0**	**+1.3**
NTY	**Taoyuan** baz=338	**1.10**	**333**	*e*P			**Pn**	**07 16 27.1**	**-0.6**
SBCB	**Hsinchu** baz=316	**1.10**	**315**	*e*P			**Pn**	**07 16 28.3**	**+0.6**
SBCB	baz=316			*e*S			**Sn**	**07 16 44.4**	**+1.5**
ELDTW	**Lidau** baz=215	**1.12**	**223**	*e*P			**Pg**	**07 16 26.8**	**-1.3**
HSN	**Hsinchu** baz=319	**1.12**	**315**	*e*P			**Pn**	**07 16 27.6**	**-0.3**
NCU	**National Centr** baz=330	**1.13**	**328**	*e*P			**Pn**	**07 16 29.0**	**+1.0**
NCU	baz=330			*e*S			**Sn**	**07 16 44.6**	**+1.2**
NCUH	**Zhongli** baz=332	**1.13**	**328**	*e*P			**Pn**	**07 16 28.2**	**+0.2**
TNOU	**National Taiwa** baz=355	**1.13**	**357**	P			**Pn**	**07 16 28.5**	**+0.4**
TNOU	baz=355			*e*S			**Sn**	**07 16 45.6**	**+2.0**
CHN5	**Tsauling** baz=244	**1.15**	**249**	⇑*i*P			**Pn**	**07 16 28.8**	**+0.3**
CHN5	baz=244			*e*S			**Sn**	**07 16 46.7**	**+2.6**
YOJ	**Yonaguni jima**	**1.15**	**67**	P			**Pn**	**07 16 28.7**	**+0.4**
YOJ	**Yonaguni jima** baz=72	**1.15**	**67**	P			**Pb**	**07 16 27.9**	**-0.4**
YOJ	**Yonaguni jima**	**1.15**	**67**	P			**Pn**	**07 16 28.5**	**+0.2**
YOJ				*e*S			**Sn**	**07 16 44.1**	**+0.1**
EDH	**Donghe** baz=179	**1.15**	**206**	*e*P			**Pg**	**07 16 25.7**	**-2.9**
TWS1	**Kuangyinshan** baz=348	**1.15**	**340**	*e*P			**Pn**	**07 16 28.4**	**0.0**
WDJ	**Dajia District** baz=286	**1.15**	**287**	*e*P			**Pn**	**07 16 29.5**	**+1.1**
YM01	**YM01** baz=357	**1.16**	**347**	*e*P			**Pn**	**07 16 28.5**	**+0.1**
YM08	**YM08** baz=334	**1.19**	**349**	*e*P			**Pn**	**07 16 29.4**	**+0.4**
NTST	**Danshui** baz=349	**1.20**	**342**	*e*P			**Pn**	**07 16 29.6**	**+0.6**
ANP	**Anpu** baz=353	**1.21**	**346**	*e*P			**Pn**	**07 16 28.8**	**-0.4**
WGK	**Gukeng** baz=249	**1.22**	**255**	*e*P			**Pn**	**07 16 31.0**	**+1.7**
WDLH	**Douliu** baz=250	**1.24**	**255**	*e*P			**Pn**	**07 16 30.5**	**+0.9**
WCKO	**Fanlu** baz=238	**1.28**	**244**	*e*P			**Pg**	**07 16 30.9**	**-0.1**
TWY	**Chenhua** baz=335	**1.28**	**350**	*e*P			**Pg**	**07 16 31.2**	**+0.1**
LONT	**Longtian** baz=185	**1.28**	**211**	*e*P			**Pn**	**07 16 30.1**	**-0.1**
STYH	**Taoyuan** baz=207	**1.29**	**230**	*e*P			**Pg**	**07 16 30.4**	**-1.0**
STYT	**Tauyuan** baz=209	**1.31**	**230**	*e*P			**Pg**	**07 16 30.7**	**-1.0**
STYT	baz=209			S			**Sn**	**07 16 48.7**	**+0.6**
TPUB	**Ta-pu**	**1.32**	**238**	P			**Pg**	**07 16 31.8**	**-0.2**
TPUB	**Ta-pu** baz=231	**1.32**	**238**	*e*P			**Pg**	**07 16 31.7**	**-0.2**
TPUB	baz=231			S			**Sn**	**07 16 50.5**	**+2.1**
CHN4	**Tsaushan** baz=233	**1.33**	**240**	*e*P			**Pg**	**07 16 31.7**	**-0.3**
CHN4	baz=233			*e*S			**Sn**	**07 16 50.6**	**+2.2**
WRL	**Guolierlin Hig** baz=246	**1.35**	**266**	*e*P			**Pg**	**07 16 31.7**	**-0.7**
WTP	**Ta-pu** baz=228	**1.37**	**236**	*e*P			**Pg**	**07 16 31.8**	**-0.9**
WTP	baz=228			*e*S			**Sn**	**07 16 51.0**	**+1.6**
RLNB	**Erlin** baz=261	**1.37**	**265**	*e*P			**Pg**	**07 16 32.1**	**-0.7**
WTK	**Tuku** baz=251	**1.38**	**257**	*e*P			**Pg**	**07 16 32.9**	**0.0**
TWGBT	**Beinan**	**1.38**	**211**	P			**Pn**	**07 16 31.6**	**0.0**
TWGBT	**Beinan** baz=203	**1.38**	**211**	*e*P			**Pg**	**07 16 32.1**	**-1.0**
TWG	**Pinlang** baz=203	**1.39**	**211**	*e*P			**Pg**	**07 16 32.1**	**-1.0**
TWK	**Hsinying** baz=232	**1.45**	**240**	P			**Pg**	**07 16 33.6**	**-0.8**
TWK	baz=232			S			**Sg**	**07 16 54.5**	**+1.2**
CHN1	**Nanshi** baz=229	**1.47**	**236**	*e*P			**Pg**	**07 16 34.1**	**-0.6**
CHN1	baz=229			*e*S			**Sg**	**07 16 54.8**	**+1.1**
SNST	**Tainan City** baz=231	**1.47**	**238**	*e*P			**Pn**	**07 16 34.2**	**-0.5**
SGST	**Jiashian** baz=208	**1.49**	**232**	*e*P			**Pn**	**07 16 33.0**	**0.0**
SLGT	**Liugui** baz=219	**1.50**	**228**	*e*P			**Pb**	**07 16 34.0**	**-0.3**
ICHU	**Yijhu** baz=239	**1.58**	**246**	*e*P			**Pg**	**07 16 35.4**	**-1.4**
PCYT	**Pengchaiyu** baz=19	**1.62**	**7**	*e*P			**Pb**	**07 16 35.9**	**-0.5**
ECL	**Taimali** baz=187	**1.63**	**210**	*e*P			**Pn**	**07 16 34.6**	**-0.4**
CHN8	**Yiju** baz=240	**1.64**	**246**	*e*P			**Pb**	**07 16 35.8**	**-0.8**
SCST	**Cishan** baz=219	**1.68**	**228**	*e*P			**Pg**	**07 16 37.2**	**-1.4**
SSD	**Sandimen** baz=203	**1.69**	**222**	*e*P			**Pn**	**07 16 35.6**	**-0.1**
SHHT	**Tainan City** baz=228	**1.69**	**235**	*e*P			**Pg**	**07 16 37.7**	**-1.4**
TSMG	**Majia** baz=209	**1.71**	**221**	*e*P			**Pb**	**07 16 37.5**	**-0.3**
TSMG	baz=209			*e*S			**Sg**	**07 17 01.4**	**-0.1**
IRIF	**Iriomote-Funau**	**1.75**	**79**	P			**Pn**	**07 16 37.3**	**+0.7**
TWM1	**Shoushan** baz=219	**1.77**	**228**	*e*P			**Pg**	**07 16 39.9**	**-0.5**
MASBT	**Mashibuluo** baz=207	**1.79**	**219**	P			**Pb**	**07 16 38.4**	**-0.8**
MASBT	baz=207			S			**Sg**	**07 17 03.2**	**-0.8**
HATJ	**Hateruma jima**	**1.79**	**88**	P			**Pn**	**07 16 37.3**	**+0.2**
EAST	**Anshuo** baz=185	**1.87**	**210**	*e*P			**Pb**	**07 16 40.1**	**-0.4**
TAWH	**Dawu Township** baz=199	**1.89**	**208**	*e*P			**Pb**	**07 16 40.3**	**-0.5**
JKRS	**Kuro-shima**	**1.99**	**83**	*e*P			**Pn**	**07 16 40.7**	**+0.8**
JKRS				*e*S			**Sb**	**07 17 06.7**	**-0.6**
SCZT	**Fangliau** baz=190	**1.99**	**215**	*e*P			**Pb**	**07 16 41.8**	**-0.7**
LYUB	**Lan-yu** baz=178	**2.02**	**187**	*e*P			**Pn**	**07 16 37.5**	**-2.7**
SLIU	**Shizi** baz=186	**2.03**	**209**	*e*P			**Pn**	**07 16 40.9**	**+0.3**
JIJ	**Ishigaki jima**	**2.12**	**80**	P			**Pn**	**07 16 41.9**	**+0.2**
JIJ				*e*S			**Sn**	**07 17 08.6**	**+0.6**
WDGT	**Dungji** baz=244	**2.14**	**250**	*e*P			**Pn**	**07 16 42.3**	**+0.3**
PHUB	**P'eng-hu** baz=250	**2.15**	**257**	*e*P			**Pn**	**07 16 42.7**	**+0.6**
PHUB	baz=250			*e*S			**Sb**	**07 17 10.4**	**-1.4**
PNG	**Penghu** baz=253	**2.15**	**259**	*e*P			**Pb**	**07 16 44.0**	**-1.3**
TWKBT	**Hengchun** baz=185	**2.27**	**205**	*e*P			**Pn**	**07 16 45.4**	**+1.6**
JISG	**Ishigakijimahi**	**2.32**	**75**	P			**Pn**	**07 16 44.7**	**+0.3**
JISG				*e*S			**Sn**	**07 17 14.0**	**+1.2**
VCHM	**Qimei** baz=245	**2.36**	**251**	*e*P			**Pn**	**07 16 45.4**	**+0.4**
VWUC	**VWUC** baz=291	**2.39**	**294**	*e*P			**Pn**	**07 16 45.6**	**+0.2**
JTJ	**Tarama**	**2.68**	**76**	*e*S			**Sn**	**07 17 24.3**	**+2.7**
PTMZ	**Houxiangcun** baz=288	**2.69**	**293**	*e*P			**Pn**	**07 16 50.2**	**+0.7**
MATB	**Ma-tsu** baz=320	**2.74**	**321**	*e*P			**Pn**	**07 16 50.9**	**+0.7**
LYJJ	**Jianjiangzhen** baz=322	**3.15**	**324**	*e*P			**Pn**	**07 16 57.2**	**+1.3**
KNMB	**Chin-men Tao** baz=272	**3.19**	**279**	*e*P			**Pn**	**07 16 57.0**	**+0.6**
XPSS	**Dashiqiu** baz=335	**3.27**	**333**	*e*P			**Pn**	**07 16 58.8**	**+1.3**
MHZQ	**Yeshan** baz=305	**3.29**	**310**	*e*P			**Pn**	**07 16 59.3**	**+1.5**
AXDP	**Jialang** baz=278	**3.64**	**285**	*e*P			**Pn**	**07 17 03.8**	**+1.1**
ZPLA	**Ao Xicun** baz=262	**3.75**	**270**	*e*P			**Pn**	**07 17 05.1**	**+0.9**
SXFK	**Yanhouchang** baz=294	**4.49**	**303**	*e*P			**Pn**	**07 17 15.1**	**+0.8**
JOW	**Kunigami**	**6.45**	**63**	P			**Pn**	**07 17 40.6**	**-0.7**
JOW	**Kunigami** 1.4nm,0.3s,baz=146,slow=14,SNR=6.0 5.0nm,0.3s	**6.45**	**63**	Pn			**Pn**	**07 17 40.0**	**-1.2**
KSRS	**Korea Array** 0.3nm,0.3s,baz=196,slow=11,SNR=1.2	**14.37**	**20**	Pn			**Pn**	**07 19 30.6**	**+0.9**
KSRS	comp=Z,24nm,18.1s,baz=175,slow=40			LR			LR	07 25 39.7	
SONM	**Songino Array** 0.9nm,0.5s,baz=160,slow=8.9,SNR=1.9 0.9nm,0.5s	**26.76**	**337**	P			**P**	**07 21 46.5**	**+0.3**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=114,slow=6.6,SNR=2.7 0.3nm,0.5s	**38.88**	**316**	P			**P**	**07 23 31.9**	**+0.1**
PETK	**Petropavlovsk-** comp=Z,43nm,18.0s,baz=340,slow=38	**39.67**	**34**	LR			LR	07 41 23.9	
ZALV	**Zalesovo Beam** 0.6nm,0.6s,baz=120,slow=5.8,SNR=1.8 0.6nm,0.6s	**40.72**	**327**	P			**P**	**07 23 48.3**	**+1.5**
H11N1	**WAKE ISLAND Hy** baz=283	**41.89**	**87**	T			T	08 09 06.6	
H11N2	**WAKE ISLAND Hy** baz=283	**41.89**	**87**	T			T	08 09 03.8	
H11N3	**WAKE ISLAND Hy** baz=283	**41.91**	**87**	T			T	08 09 06.1	
H11S3	**WAKE ISLAND Hy** baz=286	**42.02**	**89**	T			T	08 09 12.0	
H11S1	**WAKE ISLAND Hy** baz=286	**42.02**	**89**	T			T	08 09 10.6	
H11S2	**WAKE ISLAND Hy** baz=286	**42.03**	**89**	T			T	08 09 13.9	
KURBB	**Kurchatov Arra** 0.4nm,0.8s,baz=99,slow=9.6,SNR=2.8 0.4nm,0.8s	**42.63**	**320**	P			**P**	**07 24 04.0**	**+1.4**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=345,slow=8.6,SNR=2.1 0.3nm,0.5s	**45.35**	**163**	P			**P**	**07 24 22.9**	**-1.8**
BVAR	**Borovoye Array** 0.3nm,0.5s,baz=95,slow=7.2,SNR=2.2 0.3nm,0.5s	**48.19**	**321**	P			**P**	**07 24 47.8**	**+1.2**

ASAR	**Alice Springs**	**48.82**	**165**	P		**P**	07 24 50.8	-0.9	
	0.2nm,0.4s,baz=337,slow=7.1,SNR=5.7								
	0.2nm,0.4s								
YKA	**Yellowknife Ar**	**82.89**	**23**	P		**P**	07 28 29.6	-1.1	
	0.1nm,0.6s,baz=309,slow=5.0,SNR=4.6								
	0.1nm,0.6s								

IDC 08 07:17:36.8±10.0, 19°49S×179°08W, h439km±122km, mb3.0/3, mbtmp3.9/4, Error ellipse: s-maj=59.4km s-min=30.9km az=179.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.00**	**189**	P		P	07 21 30.0	+0.5
	5.3nm,0.8s,baz=76,slow=22,SNR=1.3							
WRA	**Warramunga Arr**	**43.75**	**261**	P		P	07 25 02.0	0.0
	0.7nm,0.5s,baz=98,slow=7.0,SNR=10							
WRA				PcP		PcP	07 26 40.2	+0.5
	0.7nm,0.9s,baz=104,slow=5.2,SNR=2.6							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**43.77**	**256**	P		P	07 25 01.7	-0.6
	1.0nm,0.6s,baz=94,slow=7.6,SNR=13							
	1.0nm,0.6s							
NVAR	**Mina Array Bea**	**81.00**	**44**	P		P	07 29 04.6	-0.3
	0.4nm,0.7s,baz=225,slow=7.9,SNR=4.6							
	0.4nm,0.7s							

*OSPL **08** 07:17:46.1±0.7, 18°16N×67°44W, h12km±149km, ML2.5*
*NEIC **08** 07:17:46.2±1.8, 18°18N±0.07°×67°33W±0.03, h28km±10km, ML2.7/26, Md2.7/16(RSPR), Error ellipse: s-maj=10.7km s-min=3.6km az=194.0*
*SDD **08** 07:17:46.6±1.9, 18°17N×67°36W, h21km±17km, MD3.1, ML2.6, MW2.8*
*RSPR **08** 07:17:46.8, 18°17N×67°33W, h5km±1km, MD2.7/16*
ISC 08 07:17:46.2±0.9, 18°17N±0.04×67°35W±0.02, h25km±6km, n62, σ0°61/78, 20C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.25**	**332**	⇓*e*P		Pb	07 17 52.3	-0.2
IDE	**Isla Desecheo**	**0.25**	**332**	*e*S		Sb	07 17 56.8	-0.1
IDE	**Isla Desecheo**	**0.25**	**332**			Pb	07 17 52.3	-0.2
IDE						Sb	07 17 56.8	-0.1
LSP	**Las Mesas**	**0.25**	**88**	⇑*e*P		Pb	07 17 52.5	-0.1
LSP	**Las Mesas**	**0.25**	**88**	*e*S		Sb	07 17 57.4	+0.4
LSP	**Las Mesas**	**0.25**	**88**			Pb	07 17 52.5	-0.1
LSP						Sb	07 17 57.4	+0.4
CRPR	**Cabo Rojo, PR**	**0.28**	**125**	⇑*e*P		Pb	07 17 52.9	+0.1
CRPR	**Cabo Rojo, PR**	**0.28**	**125**			Pb	07 17 52.9	+0.1
CRPR						Sb	07 17 57.9	+0.4
CRPR	**Cabo Rojo, PR**	**0.28**	**125**	⇑*e*Pg		Pb	07 17 53.0	+0.1
CRPR				⇑*e*Sg		Sb	07 17 57.4	-0.1
CRPR					IAML		07 17 58.0	
	comp=E,382nm,0.3s							
CRPR					IAML		07 17 58.2	
	comp=N,488nm,0.1s							
CRPR	**Cabo Rojo, PR**	**0.28**	**125**	*i* P		Pb	07 17 53.0	+0.1
CRPR				*e*S		Sb	07 17 57.1	-0.4
CRPR					IAML		07 17 58.3	
	comp=Z,604nm,0.1s							
MLPR	**Magueyes Islan**	**0.35**	**124**	⇑*e*P		Pb	07 17 52.8	-1.1
MLPR	**Magueyes Islan**	**0.35**	**124**	*e*S		Sb	07 17 58.5	-0.8
MLPR	**Magueyes Islan**	**0.35**	**124**			Pb	07 17 52.8	-1.1
MLPR						Sb	07 17 58.5	-0.8
MLPR	**Magueyes Islan**	**0.35**	**124**		IAML		07 17 58.9	
	comp=N,814nm,0.3s							
MLPR					IAML		07 17 58.9	
	comp=E,509nm,0.2s							
AGPR	**Aguadilla, PR**	**0.38**	**37**	⇑*e*P		Pb	07 17 54.1	-0.3
AGPR	**Aguadilla, PR**	**0.38**	**37**	*e*S		Sb	07 18 00.1	+0.1
AGPR	**Aguadilla, PR**	**0.38**	**37**			Pb	07 17 54.1	-0.3
AGPR						Sb	07 18 00.1	+0.1
AGPR	**Aguadilla, PR**	**0.38**	**37**	⇓*e*Pg		Pb	07 17 54.2	-0.2
AGPR				⇑*e*Sg		Sb	07 18 00.0	+0.1
AGPR					IAML		07 18 00.1	
	comp=E,943nm,0.2s							
AGPR					IAML		07 18 00.2	
	comp=N,1μm,0.1s							
AGPR	**Aguadilla, PR**	**0.38**	**37**	*i* P		Pb	07 17 54.1	-0.3
AGPR				*e*S		Sb	07 17 59.9	-0.1
AGPR					IAML		07 18 01.7	
	comp=Z,498nm,0.2s							
GBPR	**Guanica, Bosqu**	**0.49**	**113**	⇓*e*P		Pb	07 17 56.3	+0.2
GBPR	**Guanica, Bosqu**	**0.49**	**113**			Pb	07 17 56.3	+0.2
AOPR	**Arecibo Observ**	**0.59**	**72**	⇓*e*P		Pb	07 17 57.2	-0.7
AOPR	**Arecibo Observ**	**0.59**	**72**	*e*S		Sb	07 18 06.1	0.0
AOPR	**Arecibo Observ**	**0.59**	**72**			Pb	07 17 57.2	-0.7
AOPR						Sb	07 18 06.1	0.0
AOPR	**Arecibo Observ**	**0.59**	**72**	⇓*e*Pg		Pb	07 17 57.3	-0.7
AOPR				⇓*e*Sg		Sb	07 18 05.0	-1.1
AOPR					IAML		07 18 07.9	
	comp=E,450nm,0.3s							
AOPR					IAML		07 18 08.1	
	comp=N,353nm,0.1s							
UUPR	**Utuado, UPR, P**	**0.60**	**82**	⇑*e*P		Pb	07 17 57.5	-0.7
UUPR	**Utuado, UPR, P**	**0.60**	**82**	*e*S		Sb	07 18 06.0	-0.3
UUPR	**Utuado, UPR, P**	**0.60**	**82**			Pb	07 17 57.5	-0.7
UUPR						Sb	07 18 06.0	-0.3
OBIP	**Obispado Ponce**	**0.72**	**100**	⇑*e*P		Pb	07 17 59.4	-0.7
OBIP	**Obispado Ponce**	**0.72**	**100**	*e*S		Sb	07 18 10.1	+0.6
OBIP	**Obispado Ponce**	**0.72**	**100**			Pb	07 17 59.4	-0.7
OBIP						Sb	07 18 10.1	+0.6
CELP	**Cerrillos**	**0.74**	**97**	⇑*e*P		Pb	07 17 59.6	-0.8
CELP	**Cerrillos**	**0.74**	**97**	*e*S		Sb	07 18 10.3	+0.1
CELP	**Cerrillos**	**0.74**	**97**			Pb	07 17 59.6	-0.8
CELP						Sb	07 18 10.3	+0.1
CELP	**Cerrillos**	**0.74**	**97**	⇑*e*Pg		Pb	07 17 59.7	-0.8
CELP				⇑*e*Sg		Sb	07 18 09.6	-0.5
CELP					IAML		07 18 10.9	
	comp=N,207nm,0.1s							
EMPR	**Esperanza - Ma**	**0.84**	**68**	⇑*e*P		Pb	07 18 01.7	-0.4
EMPR	**Esperanza - Ma**	**0.84**	**68**	*e*S		Sn	07 18 14.3	+0.4
EMPR	**Esperanza - Ma**	**0.84**	**68**			Pb	07 18 01.7	-0.4
EMPR						Sn	07 18 14.3	+0.4
EMPR	**Esperanza - Ma**	**0.84**	**68**		IAML		07 18 16.0	
	comp=E,326nm,0.1s							
EMPR					IAML		07 18 16.5	
	comp=N,306nm,0.2s							
PCDR	**Punta Cana, DR**	**1.04**	**290**	⇑*e*P		Pn	07 18 04.8	-0.4
PCDR	**Punta Cana, DR**	**1.04**	**290**	*e*S		Sb	07 18 19.8	+1.0
PCDR	**Punta Cana, DR**	**1.04**	**290**			Pn	07 18 04.8	-0.4
PCDR						Sb	07 18 19.8	+1.0
PCDR	**Punta Cana, DR**	**1.04**	**290**		IAML		07 18 20.6	
	comp=E,125nm,2.9s							
PCDR					IAML		07 18 24.7	
	comp=N,209nm,1.9s							
PCDR	**Punta Cana, DR**	**1.04**	**290**	*i* P		Pn	07 18 02.9	-2.3
PCDR					IAML		07 18 20.9	
	comp=Z,116nm,2.2s							
SJG	**San Juan**	**1.14**	**93**	⇑*e*P		Pn	07 18 06.5	-0.1
SJG	**San Juan**	**1.14**	**93**	*e*S		Sb	07 18 21.7	0.0
SJG	**San Juan**	**1.14**	**93**			Pn	07 18 06.5	-0.1
SJG	**San Juan**	**1.14**	**93**	Pn		Pn	07 18 06.3	-0.3
SJG	**San Juan**	**1.14**	**93**		IAML		07 18 24.3	
	comp=Z,131nm,0.3s							
SJG					IAML		07 18 25.5	
	comp=Z,148nm,0.2s							
SJG	**San Juan**	**1.14**	**93**	⇑*e*Pg		Pn	07 18 06.5	-0.1
SJG				⇑*i*Sg		Sn	07 18 22.3	+0.9
IGPR	**InterUniversit**	**1.20**	**99**	⇑*e*P		Pn	07 18 07.9	+0.6
IGPR	**InterUniversit**	**1.20**	**99**	*e*S		Sn	07 18 23.4	+0.6
IGPR	**InterUniversit**	**1.20**	**99**			Pn	07 18 07.9	+0.6
IGPR						Sn	07 18 23.4	+0.6
IGPR	**InterUniversit**	**1.20**	**99**		IAML		07 18 27.1	
	comp=E,173nm,0.3s							
IGPR					IAML		07 18 29.5	
	comp=N,98nm,0.3s							
GCPR	**Guaynabo City**	**1.21**	**83**	⇑*e*P		Pn	07 18 07.9	+0.4
GCPR	**Guaynabo City**	**1.21**	**83**	*e*S		Sn	07 18 23.9	+0.8
GCPR	**Guaynabo City**	**1.21**	**83**		IAML		07 18 25.5	
	comp=E,161nm,0.2s							
GCPR					IAML		07 18 25.8	
	comp=N,112nm,0.1s							
GCPR	**Guaynabo City**	**1.21**	**83**			Pn	07 18 07.9	+0.4
GCPR						Sn	07 18 23.9	+0.8
HUMP	**Col San Antoni**	**1.43**	**91**	⇑*e*P		Pb	07 18 11.7	-0.4
HUMP	**Col San Antoni**	**1.43**	**91**	*e*S		Sb	07 18 30.9	+1.1
HUMP	**Col San Antoni**	**1.43**	**91**			Pn	07 18 10.2	-0.3
HUMP						Sb	07 18 29.4	-0.5
HUMP					IAML		07 18 33.2	
	comp=N,116nm,0.2s							

HATOM	**Hato Mayor del**	**2.02**	**288**	⇓*e*Pg		**Pb**	**07 18 22.0**	**-0.3**	
HATOM				⇓*e*Sg		**Sn**	**07 18 44.3**	**+1.0**	
HATOM					IAML		07 18 57.6		
	comp=E,21nm,2.1s								
HATOM					IAML		07 19 29.6		
	comp=N,26nm,1.9s								

TAP 08 07:19:12.0, 24°14N×121°71E, h7km, ML3.1, 21C-21D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**282**	⇓P		Pg	07 19 14.3	+0.3
	baz=282							
ETL				S		Sg	07 19 16.0	+0.6
	baz=282							
NACB	**Ninganchiao**	**0.11**	**287**	⇓P		Pg	07 19 14.6	+0.2
	baz=280							
NACB				S		Sg	07 19 16.5	+0.4
	baz=280							
TWD	**Chiawan**	**0.12**	**239**	⇓P		Pg	07 19 14.7	+0.1
	baz=248							
TWD				*e*S		Sg	07 19 16.7	+0.3
	baz=248							
EHP	**Heping Village**	**0.17**	**10**	⇑*i*P		Pg	07 19 15.9	+0.4
	baz=10.0							
EHP				*i* S		Sg	07 19 19.1	+1.3
	baz=10.0							
EAHA	**Aohua**	**0.19**	**8**	P		Pg	07 19 16.1	+0.2
	baz=5.0							
EAHA				*i* S		Sg	07 19 19.3	+0.9
	baz=5.0							
HWA	**Hwalien**	**0.19**	**210**	P		Pg	07 19 16.9	+1.1
	baz=223							
HWA				*e*S		Sg	07 19 21.5	+3.1
	baz=223							
ETLH	**Xiulin Townshi**	**0.22**	**287**	⇑P		Pg	07 19 16.7	+0.4
	baz=280							
ETLH				S		Sg	07 19 19.9	+0.5
	baz=280							
ETM	**Tongmen**	**0.27**	**229**	⇓*e*P		Pg	07 19 17.1	-0.1
	baz=232							
ETM				*e*S		Sg	07 19 21.6	+0.9
	baz=232							
ENA	**Nanau**	**0.29**	**6**	⇑P		Pg	07 19 17.9	+0.3
	baz=5.0							
ENA				S		Sg	07 19 22.3	+0.8
	baz=5.0							
LXIB	**Xiulin Townshi**	**0.30**	**246**	⇓*e*P		Pg	07 19 17.6	-0.2
	baz=248							
LXIB				*e*S		Sg	07 19 22.4	+0.6
	baz=248							
EWUT	**Wuta**	**0.31**	**12**	⇑P		Pg	07 19 18.4	+0.4
	baz=9.0							
EWUT				*e*S		Sg	07 19 22.8	+0.7
	baz=9.0							
SHUL	**Shoufeng**	**0.38**	**201**	⇓P		Pb	07 19 20.6	-0.4
	baz=213							
WHF	**Hehuan Shan**	**0.41**	**271**	⇑P		Pg	07 19 20.2	+0.2
	baz=271							
WHF				S		Sg	07 19 26.1	+0.7
	baz=271							
ESL	**Shilin**	**0.41**	**218**	⇑*e*P		Pg	07 19 19.7	-0.3
	baz=231							
ESL				*e*S		Sg	07 19 26.3	+0.8
	baz=231							
NNSB	**Datong**	**0.41**	**314**	⇑P		Pg	07 19 20.5	+0.4
	baz=313							
NNSB				*i* S		Sg	07 19 26.6	+1.1
	baz=313							
LATG	**Datong**	**0.43**	**337**	⇑P		Pg	07 19 20.6	+0.3
	baz=335							
LATG				S		Sg	07 19 26.7	+0.7
	baz=335							
NNS	**Nan Shan**	**0.43**	**314**	⇑P		Pg	07 19 20.7	+0.3
	baz=314							
NNS				S		Sg	07 19 27.0	+1.0
	baz=314							
FUSS	**Fushou**	**0.44**	**284**	⇓*i*P		Pg	07 19 21.2	+0.6
	baz=284							
FUSS				S		Sg	07 19 27.3	+0.9
	baz=284							
ESAO	**Su ao**	**0.45**	**16**	⇓P		Pg	07 19 20.9	+0.2
	baz=14							
ESAO				S		Sg	07 19 27.8	+1.2
	baz=14							
TEGC	**Jichi Village**	**0.46**	**200**	P		Pb	07 19 22.3	0.0
	baz=189							
TEGC				*e*S		Sb	07 19 30.2	+0.8
	baz=189							
TWC	**Suao**	**0.48**	**15**	⇑P		Pg	07 19 21.7	+0.4
	baz=14							
TWC				*e*S		Sg	07 19 27.2	-0.5
	baz=14							
NDS	**Dongshan**	**0.49**	**1**	⇓P		Pg	07 19 21.9	+0.4
	baz=358							
NDS				S		Sg	07 19 28.9	+1.0
	baz=358							
NDT	**Datong Townshi**	**0.49**	**339**	⇑P		Pg	07 19 22.2	+0.6
	baz=337							
NDT				S		Sb	07 19 29.2	-1.2
	baz=337							
CHGB	**Renai**	**0.50**	**261**	⇓P		Pg	07 19 21.9	+0.2
	baz=254							
CHGB				S		Sg	07 19 29.1	+0.9
	baz=254							
TWT	**Tachien**	**0.50**	**283**	⇓P		Pb	07 19 22.7	-0.5
	baz=282							
TWT				S		Sb	07 19 29.8	-1.0
	baz=282							
ENTT	**Nioudou**	**0.51**	**345**	⇑P		Pg	07 19 22.5	+0.6
	baz=344							
ENTT				S		Sg	07 19 29.8	+1.2
	baz=344							
TDCB	**Techi**	**0.52**	**282**	⇑P		Pg	07 19 22.7	+0.7
	baz=283							
TDCB				S		Sg	07 19 29.8	+1.0
	baz=283							
WARBT	**Fenglin Townsh**	**0.52**	**215**	⇓*e*P		Pg	07 19 21.5	-0.4
	baz=228							
WARBT				*e*S		Sg	07 19 29.5	+0.8
	baz=228							
OWD	**Renai**	**0.52**	**249**	P		Pg	07 19 22.2	+0.1
	baz=251							
OWD				*e*S		Sg	07 19 29.3	+0.3
	baz=251							
EGFH	**Guangfu**	**0.54**	**209**	P		Pb	07 19 23.3	-0.5
	baz=222							
EGFH				*e*S		Sb	07 19 32.9	+1.2
	baz=222							
EOS4	**EOS4**	**0.56**	**92**	*e*P		Pn	07 19 25.7	-0.3
	baz=88							
EOS4				*e*S		Sn	07 19 33.6	-1.6
	baz=88							
WUSB	**Renai**	**0.56**	**255**	⇓P		Pg	07 19 23.1	+0.2
	baz=256							
WUSB				S		Sb	07 19 31.5	-1.0
	baz=256							
EOS3	**EOS3**	**0.57**	**75**	*e*P		Pn	07 19 25.8	-0.6
	baz=53							
YHNB	**Yeheng**	**0.61**	**330**	⇑P		Pg	07 19 24.4	+0.6
	baz=329							
YHNB				S		Sb	07 19 32.8	-1.0
	baz=329							
NSK	**Sanguang**	**0.62**	**329**	⇑P		Pg	07 19 24.5	+0.5
	baz=328							
NSK				S		Sg	07 19 32.7	+0.6
	baz=328							
ILA	**Ilan**	**0.62**	**3**	P		Pb	07 19 24.9	-0.3
	baz=2.0							
ILA				*e*S		Sg	07 19 32.8	+0.7
	baz=2.0							
FUSB	**Fushanzhiwuyua**	**0.62**	**350**	⇑P		Pg	07 19 24.6	+0.6
	baz=348							
FUSB				S		Sb	07 19 33.3	-1.0
	baz=348							
NWLT	**Wulai**	**0.66**	**343**	⇑P		Pb	07 19 25.4	-0.5
	baz=341							
NWLT				S		Sg	07 19 34.1	+0.8
	baz=341							
HGSD	**Ruisui**	**0.70**	**202**	⇑P		Pb	07 19 26.2	-0.2
	baz=222							
WHP	**Taichung City**	**0.71**	**281**	*e*P		Pb	07 19 26.7	0.0
	baz=281							
WHP				*e*S		Sb	07 19 37.0	+0.2
	baz=281							
EHY	**Hungye**	**0.73**	**209**	⇑*e*P		Pg	07 19 25.6	-0.4
	baz=221							
EHY				S		Sb	07 19 37.2	+0.1
	baz=221							
NFF	**Wufeng Townshi**	**0.73**	**312**	*e*P		Pb	07 19 27.0	0.0
	baz=311							
NFF				S		Sg	07 19 36.3	+0.8
	baz=311							
WCS	**Beigang Elemen**	**0.73**	**264**	⇓P		Pg	07 19 26.2	+0.1
	baz=257							
WCS				*e*S		Sg	07 19 35.6	0.0
	baz=257							
SSLB	**Suanglung**	**0.78**	**243**	⇓P		Pg	07 19 26.7	-0.2
	baz=257							
SSLB				*e*S		Sg	07 19 37.0	0.0
	baz=257							
SMLT	**Sun Moon Lake**	**0.78**	**251**	⇑P		Pg	07 19 27.4	+0.3
	baz=253							
SMLT				S		Sb	07 19 38.6	-0.3
	baz=253							
LIOB	**Emei**	**0.81**	**309**	P		Pb	07 19 28.6	+0.2
	baz=308							
LIOB				S		Sb	07 19 39.1	-0.4
	baz=308							
NSTT	**Nanjuang**	**0.81**	**307**	⇓P		Pb	07 19 28.4	0.0
	baz=307							
NSTT				S		Sg	07 19 38.8	+0.7
	baz=307							
TYC	**Yuchr**	**0.81**	**253**	⇓P		Pg	07 19 27.9	+0.2
	baz=246							
TYC				S		Sb	07 19 39.0	-0.7
	baz=246							
TIPB	**Shuangxi**	**0.83**	**7**	⇓P		Pb	07 19 28.5	-0.3
	baz=355							
TIPB				*e*S		Sb	07 19 40.1	-0.1
	baz=355							
NHDH	**Xindian Distri**	**0.83**	**348**	⇓P		Pb	07 19 28.8	0.0
	baz=346							
NHDH				S		Sb	07 19 39.8	-0.4
	baz=346							
YULB	**Yu-li**	**0.84**	**207**	P		Pg	07 19 28.0	0.0
	baz=222							
YULB				*e*S		Sb	07 19 41.3	+1.0
	baz=222							
TWA	**Mucha**	**0.84**	**352**	*e*P		Pb	07 19 29.4	+0.5
	baz=350							
TWA				S		Sb	07 19 40.0	-0.5
	baz=350							
TWF1	**Yuli**	**0.87**	**206**	⇓P		Pg	07 19 28.7	0.0
	baz=222							
TWF1				*e*S		Sn	07 19 42.5	-1.1
	baz=222							
TWQ1	**Liyutan**	**0.88**	**284**	*e*P		Pn	07 19 31.3	+0.5
	baz=296							
TWQ1				*e*S		Sn	07 19 44.3	+0.5
	baz=296							
TWB1	**Santiao Chiao**	**0.90**	**16**	P		Pb	07 19 30.2	+0.3
	baz=5.0							
TWB1				S		Sb	07 19 42.7	+0.6
	baz=5.0							
WHYT	**Xinyi Township**	**0.90**	**241**	P		Pb	07 19 30.2	+0.2
	baz=251							
WHYT				*e*S		Sb	07 19 42.8	+0.6
	baz=251							
NSY	**Sanyi**	**0.91**	**288**	*e*P		Pn	07 19 32.2	+1.1
	baz=288							
SBCB	**Hsinchu**	**0.93**	**315**	*e*P		Pn	07 19 31.5	+0.1
	baz=314							
SBCB				*e*S		Sb	07 19 43.6	+0.8
	baz=314							
NMLH	**Miaoli**	**0.93**	**295**	*e*P		Pn	07 19 32.7	+1.3
	baz=295							
NMLH				*e*S		Sn	07 19 44.8	-0.2
	baz=295							
NWF	**Wu-fen Shan**	**0.93**	**4**	*e*P		Pb	07 19 30.9	+0.4
	baz=353							
NWF				*e*S		Sb	07 19 42.9	-0.1
	baz=353							
WFSB	**Wu-fen Shan**	**0.93**	**4**	*e*P		Pb	07 19 30.8	+0.4
	baz=353							
WFSB				*e*S		Sb	07 19 42.7	-0.3
	baz=353							
TCU	**Taichung**	**0.94**	**271**	*e*P		Pn	07 19 32.6	+1.0
	baz=266							
NCUH	**Zhongli**	**0.95**	**330**	*e*P		Pb	07 19 31.1	+0.3
	baz=328							
NCUH				*e*S		Sn	07 19 47.1	+1.5
	baz=328							
WJS	**Zhushan**	**0.95**	**251**	P		Pb	07 19 30.9	+0.1
	baz=246							
WJS				*e*S		Sn	07 19 46.1	+0.5
	baz=246							
SXI1	**Grass Mountain**	**0.96**	**9**	⇓P		Pb	07 19 31.1	0.0
	baz=352							
SXI1				*e*S		Sb	07 19 44.5	+0.6
	baz=352							
WNT	**Mingjian**	**0.97**	**255**	*e*P		Pn	07 19 32.8	+0.7
	baz=251							
WNT				*e*S		Sn	07 19 47.0	+0.8
	baz=251							
CHKH	**Chenggong**	**0.99**	**197**	P		Pg	07 19 30.8	-0.2
	baz=191							
CHKH				S		Sn	07 19 45.9	-0.6
	baz=191							
TWS1	**Kuangyinshan**	**0.99**	**344**	*e*P		Pn	07 19 33.0	+0.7
	baz=343							
TWS1				*e*S		Sn	07 19 48.2	+1.7
	baz=343							
WDJ	**Dajia District**	**1.00**	**282**	*e*P		Pn	07 19 33.7	+1.3
	baz=283							
TNOU	**National Taiwa**	**1.00**	**3**	P		Pg	07 19 31.5	+0.2
TNOU						*e*S	07 19 44.0	-0.4
YM01	**YM01**	**1.01**	**353**	*e*P		Pn	07 19 32.4	-0.2
	baz=350							
YM01				*e*S		Sn	07 19 46.4	-0.7
	baz=350							
FULB	**Fuli**	**1.01**	**202**	P		Pg	07 19 31.5	0.0
	baz=224							
FULB				*e*S		Sb	07 19 45.4	-0.1
	baz=224							
ALS	**Alishan**	**1.04**	**233**	⇑P		Pb	07 19 32.7	+0.2
	baz=236							
ALS				S		Sb	07 19 46.9	+0.4
	baz=236							
NTST	**Danshui**	**1.04**	**347**	*e*P		Pn	07 19 33.8	+0.7
	baz=354							
NTST				*e*S		Sn	07 19 48.8	+0.9
	baz=354							
YM08	**YM08**	**1.05**	**354**	*e*P		Pb	07 19 32.5	+0.1
	baz=351							
YM08				S		Sb	07 19 47.1	+0.7
	baz=351							
ANP	**Anpu**	**1.05**	**351**	*e*P		Pn	07 19 33.4	+0.1
	baz=348							
ANP				*e*S		Sn	07 19 48.8	+0.5
	baz=348							
CHKT	**Chengkung**	**1.08**	**197**	P		Pg	07 19 32.8	-0.1
	baz=192							
CHKT				S		Sn	07 19 48.9	+0.1
	baz=192							
CHN5	**Tsauling**	**1.09**	**240**	P		Pn	07 19 33.9	+0.1
	baz=243							
CHN5				S		Sn	07 19 49.1	0.0
	baz=243							
EHD	**Haiduan**	**1.09**	**205**	*e*S		Sg	07 19 45.8	-1.3
	baz=222							
ECS	**Chishang**	**1.14**	**203**	*e*P		Pg	07 19 32.9	-0.8
	baz=224							
ECS				*e*S		Sn	07 19 50.8	+0.7
	baz=224							
ELDTW	**Lidau**	**1.14**	**214**	*e*P		Pg	07 19 31.9	-2.0
	baz=229							
ELDTW				*e*S		Sb	07 19 49.8	+0.6
	baz=229							
WGK	**Gukeng**	**1.14**	**247**	P		Pg	07 19 34.0	0.0
	baz=249							
WGK				*e*S		Sn	07 19 49.9	-0.5
	baz=249							
WDLH	**Douliu**	**1.16**	**247**	P		Pg	07 19 34.1

WRL	**Guolierlin Hig** baz=260	**1.24**	**259**	*e*P	Pg	07 19 36.8	+1.0
WRL				*e*S	Sn	07 19 53.8	+1.0
CHN4	**Tsaushan** baz=240	**1.29**	**233**	*e*P	Pg	07 19 38.5	+1.7
WTK	**Tuku** baz=252	**1.29**	**250**	*e*P	Pn	07 19 35.6	-0.8
WTK				*e*S	Sb	07 19 53.0	-0.3
STYH	**Taoyuan** baz=227	**1.29**	**222**	*e*P	Pg	07 19 37.5	+0.8
STYH				S	Sg	07 19 53.5	0.0
TPUB	**Ta-pu** baz=223	**1.30**	**230**	*e*P	Pg	07 19 37.4	+0.5
TPUB				S	Sn	07 19 55.0	+0.8
LONT	**Longtian** baz=210	**1.34**	**204**	*e*P	Pn	07 19 35.5	-1.6
LONT				*e*S	Sn	07 19 55.7	+0.5
WTP	**Ta-pu** baz=233	**1.34**	**229**	*e*P	Pg	07 19 38.6	+0.9
WTP				*e*S	Sn	07 19 56.9	+1.6
TWK	**Hsinying** baz=237	**1.42**	**232**	P	Pg	07 19 39.5	+0.3
TWK				*e*S	Sg	07 19 59.0	+1.3
TWG	**Pinlang** baz=211	**1.44**	**204**	*e*P	Pn	07 19 38.1	-0.4
TWG				S	Sn	07 19 57.4	-0.3
TWGBT	**Beinan** baz=211	**1.44**	**204**	*e*P	Pn	07 19 38.3	-0.2
TWGBT				S	Sn	07 19 57.4	-0.2
SNST	**Tainan City** baz=235	**1.44**	**231**	*e*P	Pn	07 19 38.2	-0.3
SNST				*e*S	Sb	07 19 57.8	+0.1
CHN1	**Nanshi** baz=234	**1.44**	**229**	*e*P	Pg	07 19 39.6	-0.1
CHN1				*e*S	Sg	07 19 59.5	+1.1
WSF	**Szhu** baz=252	**1.45**	**250**	*e*P	Pg	07 19 40.3	+0.5
WSF				*e*S	Sg	07 19 59.9	+1.2
TTN	**Taitung** baz=207	**1.48**	**201**	*e*P	Pn	07 19 38.5	-0.5
TTN				S	Sn	07 19 58.3	-0.2
SGST	**Jiashian** baz=229	**1.48**	**225**	P	Pn	07 19 39.1	+0.1
SGST				*e*S	Sg	07 20 01.1	+1.6
LDUT	**Ludao** baz=183	**1.48**	**189**	*e*P	Pn	07 19 38.2	-0.8
LDUT				*e*S	Sn	07 19 58.5	0.0
WSL	**Shuilin Townsh** baz=248	**1.49**	**246**	*e*P	Pb	07 19 40.0	0.0
WSL				*e*S	Sb	07 19 59.1	0.0
SLGT	**Liugui** baz=226	**1.50**	**221**	P	Pb	07 19 40.2	-0.1
SLGT				*e*S	Sg	07 20 01.8	+1.4
PCYT	**Pengchaiyu** baz=9.0	**1.52**	**12**	P	Pn	07 19 39.6	0.0
PCYT				*e*S	Sn	07 19 59.4	-0.2
ICHU	**Yijhu** baz=246	**1.52**	**240**	*e*P	Pn	07 19 39.2	-0.4
MASBT	**Mashibuluo** baz=215	**1.82**	**213**	*e*P	Pn	07 19 44.4	+0.8
TAWH	**Dawu Township** baz=211	**1.95**	**203**	*e*P	Pn	07 19 44.6	-0.9
TAWH				*e*S	Sn	07 20 10.3	+0.2
PNG	**Penghu** baz=256	**2.05**	**254**	*e*P	Pb	07 19 48.3	-1.3
PNG				*e*S	Sb	07 20 14.4	-1.0
PHUB	**P'eng-hu** baz=255	**2.06**	**253**	*e*P	Pn	07 19 48.2	+1.3
PHUB				*e*S	Sb	07 20 14.8	-0.6
WDGT	**Dungji** baz=235	**2.07**	**245**	*e*P	Pn	07 19 47.1	-0.1
WDGT				*e*S	Sn	07 20 13.0	-0.3
SLIU	**Shizi** baz=199	**2.09**	**204**	*e*P	Pn	07 19 48.7	+1.2
SLIU				*e*S	Sb	07 20 15.8	-0.6
LYUB	**Lan-yu** baz=192	**2.13**	**183**	*e*P	Pn	07 19 48.2	+0.1
LYUB				*e*S	Sn	07 20 15.0	+0.2
VWUC	**VWUC** baz=292	**2.23**	**293**	*e*P	Pn	07 19 48.9	-0.3
VWUC				*e*S	Sn	07 20 16.4	-0.6
VCHM	**Qimei** baz=236	**2.29**	**246**	*e*P	Pn	07 19 50.4	+0.2
VCHM				*e*S	Sn	07 20 19.1	+0.5
PTMZ	**Houxiangcun** baz=291	**2.52**	**291**	*e*P	Pn	07 19 53.0	-0.3
MATB	**Ma-tsu** baz=319	**2.56**	**322**	*e*P	Pn	07 19 53.4	-0.5
LYJJ	**Jianjiangzhen** baz=321	**2.98**	**324**	*e*P	Pn	07 19 59.4	-0.2

TAP 08 07:23:56.1, 23°.88N×121°.50E, h11km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=352	**0.09**	**353**	*e*P	Pg	07 24 00.2	+1.5
ESL	**Shilin** baz=220	**0.09**	**224**	*i* S	Sg	07 24 01.7	+1.1
SHUL	**Shoufeng** baz=150	**0.11**	**150**	*i* S	Sg	07 24 02.2	+1.3
HWA	**Hwalien** baz=46	**0.13**	**44**	*i* P	Pb	07 24 00.2	-0.5
HWA				*i* S	Sg	07 24 03.1	+1.5
LXIB	**Xiulin Townshi** baz=329	**0.16**	**329**	P	Pb	07 24 00.8	-0.4
LXIB				*e*S	Sg	07 24 03.3	+0.8
TEGC	**Jichi Village** baz=167	**0.17**	**169**	*i* P	Pb	07 24 00.9	-0.5
WARBT	**Fenglin Townsh** baz=213	**0.20**	**214**	P	Pg	07 24 00.9	+0.6
WARBT				S	Sg	07 24 04.5	+1.3
TWD	**Chiawan** baz=24	**0.21**	**23**	P	Pb	07 24 01.5	-0.6
TWD				*i* S	Sg	07 24 05.7	+2.0
OWD	**Renai** baz=283	**0.31**	**284**	*i* P	Pb	07 24 03.4	-0.3
OWD				S	Sb	07 24 09.0	+0.1
WHF	**Hehuan Shan** baz=320	**0.34**	**320**	*e*P	Pg	07 24 03.4	+0.2
WHF				*i* S	Sb	07 24 09.4	-0.7
CHGB	**Renai** baz=300	**0.35**	**301**	*i* P	Pb	07 24 04.2	-0.3
CHGB				S	Sb	07 24 09.8	-0.4
VWDT	**VWDT** baz=249	**0.36**	**249**	*e*P	Pb	07 24 05.3	+0.8
VWDT				*e*S	Sb	07 24 10.9	+0.9
WUSB	**Renai** baz=287	**0.37**	**287**	P	Pb	07 24 04.9	+0.1
WUSB				S	Sb	07 24 10.5	-0.2
HGSD	**Ruisui** baz=190	**0.39**	**191**	*i* P	Pb	07 24 05.0	-0.2
HGSD				*e*S	Sb	07 24 10.4	-0.8
EHY	**Hungye** baz=203	**0.41**	**204**	P	Pb	07 24 05.3	-0.1
EHY				S	Sb	07 24 11.5	-0.1
FUSS	**Fushou** baz=326	**0.44**	**327**	*i* P	Pb	07 24 05.8	-0.2
FUSS				*i* S	Sb	07 24 12.6	-0.1
TDCB	**Techi** baz=319	**0.49**	**320**	P	Pb	07 24 06.7	-0.1
TDCB				*e*S	Sb	07 24 14.3	+0.2
NNSB	**Datong** baz=348	**0.56**	**349**	*e*P	Pg	07 24 07.1	+0.1
NNSB				*e*S	Sg	07 24 14.6	+0.1
NNS	**Nan Shan** baz=348	**0.57**	**348**	P	Pb	07 24 08.5	+0.2
NNS				S	Sb	07 24 16.3	-0.1
EWUT	**Wuta** baz=24	**0.61**	**24**	*e*P	Pb	07 24 09.7	+0.7

IDC 08 07:24:37.6±3.3, 53°.43N×87°.22E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=32.5km s-min=17.5km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=108,slow=336,SNR=2.3	**1.52**	**291**	I	I	07 33 10.0	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=108,slow=15,SNR=3.0	**1.52**	**291**	Pg	Pg	07 25 06.9	+0.2
ZALV	0.5nm,0.3s,baz=108,slow=23,SNR=4.0			Lg	Lg	07 25 25.3	
KURBB	**Kurchatov Arra** baz=64,slow=13,SNR=4.0 0.2nm,0.3s	**6.05**	**246**	Pn	Pn	07 26 08.4	+0.1
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=26,slow=16,SNR=2.0 0.1nm,0.3s	**7.36**	**207**	Pn	Pn	07 26 27.4	+1.2

IDC 08 07:30:03.0±3.6, 54°.23N×87°.32E, h0km, mbtmp2.5/2, ML1.5/1, Error ellipse: s-maj=31.7km s-min=20.3km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,1.0s,baz=79,slow=342,SNR=5.9	**1.50**	**260**	I	I	07 37 34.4	
ZALV	**Zalesovo Beam** 1.2nm,0.3s,baz=79,slow=18,SNR=4.0	**1.50**	**260**	Pg	Pn	07 30 29.0	-2.2
ZALV	0.7nm,0.3s,baz=83,slow=35,SNR=2.7			Lg	Lg	07 30 50.8	
KURBB	**Kurchatov Arra** baz=55,slow=14,SNR=4.2 0.4nm,0.5s	**6.47**	**240**	Pn	Pn	07 31 40.7	+1.2
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=20,slow=12,SNR=1.4	**8.10**	**205**	Pn	Pn	07 32 02.7	+0.9
MKAR	baz=25,slow=28,SNR=1.8			Lg	Lg	07 34 21.2	

TAP 08 07:34:39.1, 24°.12N×121°.64E, h8km, ML0.8, 3D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=339	**0.05**	**340**	⇓P	Pg	07 34 41.4	+0.5
ETL				S	Sg	07 34 43.0	+0.9
TWD	**Chiawan** baz=223	**0.05**	**229**	*i* P	Pg	07 34 41.4	+0.5
TWD				*i* S	Sg	07 34 43.0	+0.9
NACB	**Ninganchiao** baz=324	**0.07**	**325**	⇓P	Pg	07 34 41.7	+0.6
NACB				S	Sg	07 34 43.7	+1.1
ETLH	**Xiulin Townshi** baz=302	**0.17**	**302**	⇓*e*P	Pg	07 34 43.6	+0.9
ETLH				*e*S	Sg	07 34 47.0	+1.8
	baz=302						

*JMA **08** 07:34:41.9±0.1, 24°.2N±0°.3×121°.8E±0°.3, h0km, MV3.2/11, TAIWAN REGION*
*TAP **08** 07:34:42.0, 24°.20N×121°.79E, h11km, ML3.7, C*
*ASIES **08** 07:34:42.0, 24°.20N×121°.79E, h11km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-0.46; $M_{r\theta}$1.17; $M_{\theta\phi}$-0.98; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.73037×10^{21} NP1:ϕ_s76.14000°, δ70.10000°, λ121.94000°. NP2:ϕ_s194.77000°, δ37.07000°, λ34.38000°. Principal axes: T Plg53.5990°, Azm25.2210°; N Plg29.8340°, Azm244.1570°; P Plg18.8760°, Azm142.8490°;*

ISC 08 07:34:42.2±0.8, 24°.20N±0°.01×121°.79E±0°.02, h8km±6km, n148, σ0^{s}95/274, 31C-36D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=343	**0.12**	**338**	⇓P	**Pg**	**07 34 45.0**	**+0.1**
EHP				*i* S	**Sg**	**07 34 47.6**	**+0.7**
EAHA	**Aohua** baz=342	**0.14**	**341**	⇓*i*P	**Pg**	**07 34 45.3**	**+0.1**
EAHA				*e*S	**Sg**	**07 34 47.9**	**+0.5**
ETL	**Fush Village** baz=255	**0.16**	**255**	⇑P	**Pg**	**07 34 45.5**	**-0.1**
ETL				S	**Sg**	**07 34 48.4**	**+0.6**
NACB	**Ninganchiao**	**0.18**	**262**	P	**Pg**	**07 34 45.7**	**-0.2**
NACB	**Ninganchiao** baz=262	**0.18**	**262**	⇓P	**Pg**	**07 34 45.8**	**-0.2**
NACB				*i* S	**Sg**	**07 34 48.7**	**+0.2**
TWD	**Chiawan** baz=241	**0.21**	**236**	⇑*e*P	**Pg**	**07 34 46.3**	**-0.2**
TWD				S	**Sg**	**07 34 50.2**	**+0.7**
ENA	**Nanau** baz=352	**0.23**	**349**	*i* P	**Pg**	**07 34 47.0**	**+0.1**
ENA				S	**Sg**	**07 34 50.6**	**+0.5**
EWUT	**Wuta** baz=358	**0.25**	**358**	⇓P	**Pg**	**07 34 47.2**	**0.0**
EWUT				*i* S	**Sg**	**07 34 51.0**	**+0.5**
HWA	**Hwalien** baz=225	**0.28**	**217**	*e*P	**Pb**	**07 34 49.1**	**-0.3**
HWA				S	**Sb**	**07 34 53.5**	**-0.7**
ETLH	**Xiulin Townshi** baz=272	**0.28**	**272**	P	**Pg**	**07 34 47.6**	**-0.3**
ETLH				*e*S	**Sg**	**07 34 51.9**	**+0.3**
ETM	**Tongmen** baz=230	**0.36**	**229**	⇓*e*P	**Pg**	**07 34 49.0**	**-0.3**
ETM				*e*S	**Sg**	**07 34 54.3**	**+0.3**
ESAO	**Su ao** baz=4.0	**0.38**	**8**	⇓*i*P	**Pg**	**07 34 49.6**	**-0.1**
ESAO				*i* S	**Sg**	**07 34 55.0**	**+0.3**
LXIB	**Xiulin Townshi** baz=244	**0.39**	**243**	⇑*e*P	**Pg**	**07 34 49.4**	**-0.4**
LXIB				*e*S	**Sg**	**07 34 55.5**	**+0.5**
LATG	**Datong** baz=325	**0.41**	**324**	⇓*i*P	**Pg**	**07 34 50.4**	**0.0**
LATG				*e*S	**Sb**	**07 34 57.0**	**-1.3**
TWC	**Suao** baz=9.0	**0.41**	**8**	⇓P	**Pg**	**07 34 50.3**	**0.0**
TWC				*e*S	**Sg**	**07 34 56.5**	**+0.8**
NNSB	**Datong** baz=303	**0.43**	**302**	*e*P	**Pg**	**07 34 50.8**	**+0.1**
NNSB				*i* S	**Sg**	**07 34 56.9**	**+0.4**
NDS	**Dongshan** baz=352	**0.44**	**351**	⇓P	**Pg**	**07 34 50.9**	**+0.1**
NDS				*i* S	**Sb**	**07 34 57.7**	**-1.2**
NNS	**Nan Shan** baz=303	**0.45**	**302**	⇓P	**Pg**	**07 34 50.9**	**-0.1**
NNS				*i* S	**Sg**	**07 34 57.3**	**+0.3**
SHUL	**Shoufeng** baz=195	**0.46**	**207**	P	**Pb**	**07 34 52.6**	**+0.1**
EOS2	**EOS2** baz=43	**0.46**	**61**	*e*P	**Pb**	**07 34 52.7**	**+0.2**
NDT	**Datong Townshi** baz=328	**0.47**	**328**	⇓P	**Pg**	**07 34 51.7**	**+0.2**
NDT				S	**Sg**	**07 34 58.2**	**+0.5**
WHF	**Hehuan Shan** baz=265	**0.48**	**264**	P	**Pg**	**07 34 51.5**	**-0.2**
WHF				*e*S	**Sg**	**07 34 58.0**	**-0.1**
ENTT	**Nioudou** baz=336	**0.48**	**335**	*e*P	**Pg**	**07 34 51.8**	**+0.2**
ENTT				*i* S	**Sg**	**07 34 58.8**	**+0.7**
EOS4	**EOS4** baz=96	**0.49**	**99**	*e*P	**Pn**	**07 34 54.3**	**-0.8**
EOS4				*e*S	**Sb**	**07 35 03.8**	**+3.8**
FUSS	**Fushou** baz=277	**0.50**	**276**	⇓*i*P	**Pg**	**07 34 52.0**	**0.0**
FUSS				S	**Sg**	**07 34 58.8**	**+0.2**
ESL	**Shilin** baz=229	**0.50**	**220**	⇑*e*P	**Pg**	**07 34 51.6**	**-0.4**
ESL				*e*S	**Sg**	**07 34 59.4**	**+0.8**
TEGC	**Jichi Village** baz=195	**0.54**	**205**	P	**Pb**	**07 34 53.5**	**-0.3**
TEGC				*e*S	**Sn**	**07 35 04.2**	**-1.2**
ILA	**Ilan** baz=352	**0.56**	**356**	P	**Pg**	**07 34 53.6**	**+0.4**
ILA				S	**Sb**	**07 35 01.7**	**-0.9**
TDCB	**Techi** baz=276	**0.58**	**275**	⇓*e*P	**Pg**	**07 34 53.5**	**+0.1**
TDCB				*e*S	**Sg**	**07 35 01.2**	**+0.1**
CHGB	**Renai** baz=249	**0.58**	**256**	⇓P	**Pg**	**07 34 53.5**	**0.0**
CHGB				*e*S	**Sg**	**07 35 01.4**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=342	**0.59**	**342**	⇓*i*P	**Pg**	**07 34 53.8**	**+0.2**
FUSB				S	**Sg**	**07 35 02.1**	**+0.8**
YHNB	**Yeheng**	**0.60**	**321**	P	**Pg**	**07 34 54.3**	**+0.4**
YHNB	**Yeheng** baz=322	**0.60**	**321**	⇓P	**Pg**	**07 34 54.1**	**+0.3**
YHNB				S	**Sg**	**07 35 02.3**	**+0.5**
WARBT	**Fenglin Townsh** baz=226	**0.60**	**218**	⇑*e*P	**Pg**	**07 34 53.5**	**-0.5**
WARBT				*e*S	**Sb**	**07 35 03.5**	**-0.3**
OWD	**Renai** baz=247	**0.61**	**247**	⇓*e*P	**Pg**	**07 34 53.9**	**-0.2**
OWD				*e*S	**Sg**	**07 35 02.6**	**+0.5**
NSK	**Sanguang** baz=322	**0.62**	**320**	P	**Pg**	**07 34 54.4**	**+0.2**
NSK				S	**Sg**	**07 35 02.5**	**+0.3**
EGFH	**Guangfu** baz=229	**0.62**	**212**	⇓*e*P	**Pg**	**07 34 54.4**	**+0.1**
EGFH				*e*S	**Sb**	**07 35 05.0**	**+0.7**
NWLT	**Wulai** baz=336	**0.63**	**336**	⇓*e*P	**Pg**	**07 34 54.6**	**+0.2**
NWLT				S	**Sg**	**07 35 03.4**	**+0.6**
WUSB	**Renai** baz=245	**0.65**	**252**	*e*P	**Pg**	**07 34 54.9**	**+0.1**
WUSB				*e*S	**Sg**	**07 35 03.3**	**0.0**
NTC	**Toucheng** baz=3.0	**0.65**	**3**	P	**Pg**	**07 34 54.7**	**-0.2**
NTC				S	**Sb**	**07 35 04.5**	**-0.6**
VWDT	**VWDT** baz=234	**0.74**	**233**	⇓P	**Pg**	**07 34 56.5**	**0.0**
VWDT				*e*S	**Sb**	**07 35 08.2**	**+0.6**
NFF	**Wufeng Townshi** baz=306	**0.75**	**305**	⇑P	**Pg**	**07 34 56.9**	**+0.2**
NFF				*i* S	**Sg**	**07 35 07.0**	**+0.5**
TIPB	**Shuangxi** baz=3.0	**0.77**	**2**	⇓P	**Pg**	**07 34 57.2**	**+0.1**
TIPB				*e*S	**Sg**	**07 35 07.6**	**+0.5**
WHP	**Taichung City** baz=277	**0.77**	**276**	⇓P	**Pg**	**07 34 57.4**	**+0.2**
WHP				S	**Sb**	**07 35 08.4**	**-0.3**
HGSD	**Ruisui** baz=194	**0.78**	**205**	⇓P	**Pb**	**07 34 57.7**	**-0.3**
HGSD				S	**Sn**	**07 35 10.0**	**-1.3**
NHDH	**Xindian Distri** baz=343	**0.80**	**343**	⇓*e*P	**Pb**	**07 34 58.0**	**-0.4**
NHDH				S	**Sb**	**07 35 08.6**	**-0.7**
TWA	**Mucha** baz=347	**0.80**	**347**	⇑*e*P	**Pb**	**07 34 58.0**	**-0.4**
TWA				S	**Sg**	**07 35 08.4**	**+0.3**
EHY	**Hungye** baz=224	**0.81**	**212**	⇑*e*P	**Pg**	**07 34 57.4**	**-0.5**
EHY				*e*S	**Sn**	**07 35 11.1**	**-1.1**
WCS	**Beigang Elemen** baz=261	**0.81**	**260**	⇓P	**Pg**	**07 34 58.0**	**+0.1**
WCS				S	**Sg**	**07 35 08.9**	**+0.4**
TATO	**Taipei**	**0.82**	**341**	P	**Pb**	**07 34 58.5**	**-0.2**
TWB1	**Santiao Chiao** baz=13	**0.83**	**13**	⇑P	**Pg**	**07 34 58.0**	**-0.1**
TWB1				*e*S	**Sg**	**07 35 09.2**	**+0.3**
LIOB	**Emei** baz=303	**0.83**	**302**	⇑*e*P	**Pb**	**07 34 58.9**	**-0.1**
LIOB				*i* S	**Sb**	**07 35 09.7**	**-0.7**
NSTT	**Nanjuang** baz=302	**0.84**	**301**	⇓*e*P	**Pg**	**07 34 58.5**	**+0.2**
NSTT				S	**Sb**	**07 35 09.9**	**-0.5**
SSLB	**Suanglung**	**0.87**	**242**	P	**Pg**	**07 34 58.9**	**0.0**
SSLB	**Suanglung** baz=252	**0.87**	**242**	⇑*e*P	**Pg**	**07 34 58.6**	**-0.3**
SSLB				*e*S	**Sg**	**07 35 09.8**	**-0.4**
NWF	**Wu-fen Shan** baz=353	**0.87**	**360**	⇑P	**Pb**	**07 34 59.4**	**-0.2**
NWF				S	**Sb**	**07 35 11.1**	**-0.4**
WFSB	**Wu-fen Shan** baz=353	**0.87**	**360**	⇑P	**Pb**	**07 34 59.5**	**0.0**
WFSB				*e*S	**Sb**	**07 35 10.9**	**-0.5**
SMLT	**Sun Moon Lake** baz=250	**0.87**	**249**	⇑P	**Pg**	**07 34 59.2**	**+0.1**
SMLT				*e*S	**Sg**	**07 35 10.4**	**0.0**
TAP	**Taipei** baz=344	**0.88**	**343**	*e*P	**Pg**	**07 34 57.8**	**-1.3**
TAP				S	**Sb**	**07 35 11.5**	**0.0**
SXI1	**Grass Mountain** baz=12	**0.90**	**5**	⇓*i*P	**Pb**	**07 34 59.7**	**-0.4**
SXI1				*e*S	**Sg**	**07 35 11.1**	**0.0**
TYC	**Yuchr** baz=244	**0.90**	**251**	⇓*e*P	**Pg**	**07 34 59.7**	**+0.2**
TYC				*e*S	**Sg**	**07 35 11.2**	**-0.1**
YULB	**Yu-li**	**0.92**	**209**	P	**Pg**	**07 34 59.6**	**-0.4**
YULB	**Yu-li**	**0.92**	**209**	⇓*e*P	**Pg**	**07 34 59.5**	**-0.4**

baz=221
YULB eS Sg 07 35 12.3 +0.3
baz=221
ECBN Changbin 0.93 199 eP Pg 07 34 59.6 -0.6
baz=200
ECBN eS Sg 07 35 11.9 -0.3
baz=200
TWQ1 Liyutan 0.94 279 eP Pb 07 35 00.8 +0.1
baz=280
TWQ1 S Sg 07 35 12.7 +0.2
baz=280
SBCB Hsinchu 0.94 309 eP Pn 07 35 01.3 -0.4
baz=310
SBCB eS Sn 07 35 15.2 -0.2
baz=310
NCUH Zhongli 0.94 324⇑eP Pn 07 35 01.2 -0.5
baz=325
NCUH eS Sn 07 35 16.1 +0.7
baz=325
TNOU National Taiwa 0.95 359 ⇑P Pb 07 35 00.8 -0.1
baz=359
TNOU eS Sg 07 35 12.5 -0.3
baz=359
EYUL Yuli 0.95 207 eP Pb 07 35 00.8 -0.2
baz=224
EYUL eS Sg 07 35 12.4 -0.5
baz=224
TWF1 Yuli 0.96 208⇓eP Pg 07 35 00.0 -0.6
baz=222
TWF1 eS Sn 07 35 16.2 +0.4
baz=222
HSN Hsinchu 0.96 309 eP Pg 07 34 59.6 -1.1
baz=303
HSN eS Sn 07 35 16.8 +1.0
baz=303
TWS1 Kuangyinshan 0.96 339⇑eP Pn 07 35 01.9 -0.1
baz=340
TWS1 eS Sn 07 35 16.9 +1.1
baz=340
YM01 YM01 0.96 348⇑*i*P Pb 07 35 01.3 +0.1
baz=348
YM01 S Sb 07 35 13.9 -0.2
baz=348
NMLH Miaoli 0.97 291⇑eP Pn 07 35 02.8 +0.6
baz=291
NMLH eS Sn 07 35 16.8 +0.7
baz=291
WHYT Xinyi Township 0.99 240⇓eP Pb 07 35 01.9 +0.2
baz=249
WHYT eS Sn 07 35 16.0 -0.7
baz=249
YM08 YM08 1.00 350 ⇑P Pb 07 35 01.6 -0.2
baz=350
YM08 eS Sn 07 35 16.6 -0.3
baz=350
NTST Danshui 1.01 342⇑*i*P Pn 07 35 02.2 -0.4
baz=342
NTST eS Sn 07 35 18.3 +1.3
baz=342
ANP Anpu 1.01 346 ⇑P Pb 07 35 02.1 0.0
baz=347
ANP S Sg 07 35 14.5 -0.5
baz=347
TCU Taichung 1.02 267⇑eP Pn 07 35 03.2 +0.5
baz=268
TCU eS Sn 07 35 18.0 +0.8
baz=268
WJS Zhushan 1.04 249⇑eP Pn 07 35 03.2 +0.1
baz=244
WJS S Sn 07 35 17.2 -0.7
baz=244
WDJ Dajia District 1.06 278 ⇑P Pn 07 35 04.1 +0.7
baz=280
WDJ eS Sn 07 35 20.1 +1.8
baz=280
WNT Mingjian 1.06 253 ⇓P Pn 07 35 03.9 +0.5
baz=249
WNT eS Sn 07 35 19.7 +1.4
baz=249
CHKH Chenggong 1.06 200⇓eP Pg 07 35 02.0 -0.7
baz=200
CHKH eS Sb 07 35 17.3 +0.3
baz=200
JYNG Yonagunijimaku 1.08 76 P Pb 07 35 03.4 +0.1
JYNG eS Sn 07 35 19.3 +0.4
TWY Chenhua 1.09 351⇑eP Pn 07 35 04.3 +0.6
baz=336
FULB Fuli 1.09 205 P Pg 07 35 02.6 -0.7
baz=222
FULB eS Sb 07 35 17.6 -0.2
baz=222
WCHH Zhanghua 1.13 264 eP Pg 07 35 03.6 -0.4
baz=266
WCHH eS Sn 07 35 22.8 +2.7
baz=266
ALS Alishan 1.13 233 ⇑P Pb 07 35 04.3 +0.1
baz=243
YOJ Yonaguni jima 1.15 77 P Pg 07 35 04.3 +0.1
YOJ Yonaguni jima 1.15 77 ⇓P Pb 07 35 04.1 -0.1
baz=65
YOJ eS Sb 07 35 19.7 +0.5
baz=65
YOJ Yonaguni jima 1.15 77 P Pb 07 35 04.2 -0.1
YOJ eS Sn 07 35 21.6 +1.2
CHKT Chengkung 1.16 200 eP Pb 07 35 02.0 -2.6
baz=217
CHKT eS Sn 07 35 22.7 +2.0
baz=217
EHD Haiduan 1.17 207⇑eP Pn 07 35 05.0 0.0
baz=210
EHD eS Sn 07 35 21.8 +0.6
baz=210
CHN5 Tsauling 1.18 240 eP Pn 07 35 05.7 +0.6
baz=242
CHN5 eS Sn 07 35 23.1 +1.7
baz=242
ELDTW Lidau 1.23 215 eP Pb 07 35 04.3 -1.5
baz=206
ELDTW eS Sg 07 35 21.8 0.0
baz=206
WGK Gukeng 1.23 246 eP Pn 07 35 05.2 -0.5
baz=248
WGK eS Sn 07 35 24.6 +2.0
baz=248
WDLH Douliu 1.25 246⇓eP Pg 07 35 07.1 +0.8
baz=249
WDLH eS Sn 07 35 23.1 +0.1
baz=249
EDH Donghe 1.30 200 eP Pn 07 35 04.4 -2.2
baz=186
EDH eS Sn 07 35 25.1 +0.9
baz=186
WCKO Fanlu 1.32 235 eP Pn 07 35 04.6 -2.4
baz=238
WCKO eS Sg 07 35 27.5 +2.7
baz=238
WRL Guolierlin Hig 1.32 257 ⇑P Pg 07 35 07.5 -0.1
baz=259
WRL eS Sg 07 35 26.2 +1.4
baz=259
CHN2 Minshiung 1.37 241 eP Pg 07 35 10.5 +1.9
baz=244
CHN2 eS Sg 07 35 29.7 +3.2
baz=244
WTK Tuku 1.38 249 P Pg 07 35 09.0 +0.3
baz=252
WTK eS Sg 07 35 30.0 +3.4
baz=252
STYH Taoyuan 1.38 222 ⇓P Pb 07 35 08.2 -0.1
baz=225
STYH eS Sg 07 35 28.3 +1.6
baz=225
CHN4 Tsaushan 1.38 233 eP Pg 07 35 09.6 +0.8
baz=236
CHN4 eS Sg 07 35 30.5 +3.8
baz=236
TPUB Ta-pu 1.39 230 eP Pg 07 35 09.9 +1.0
baz=221
TPUB eS Sg 07 35 30.0 +3.0
baz=221
LONT Longtian 1.42 205 eP Pn 07 35 06.5 -1.8
baz=208
LONT eS Sn 07 35 25.8 -1.4
baz=208
WTP Ta-pu 1.44 229⇑*i*P Pg 07 35 09.5 -0.2
baz=232
WTP eS Sg 07 35 31.8 +3.4
baz=232

PCYT Pengchaiyu 1.45 10 ⇑P Pb 07 35 09.2 -0.2
baz=9.0
PCYT eS Sg 07 35 30.1 +1.3
baz=9.0
TWK Hsinying 1.51 232 *i* P Pb 07 35 10.6 +0.1
baz=235
TWK eS Sg 07 35 33.4 +2.6
baz=235
TWGBT Beinan 1.52 205 P Pg 07 35 11.2 -0.2
TWGBT Beinan 1.52 205 P Pn 07 35 08.8 -0.9
baz=208
TWGBT *i* S Sn 07 35 29.2 -0.5
baz=208
TWG Pinlang 1.52 206 P Pn 07 35 08.9 -0.8
baz=208
TWG eS Sb 07 35 30.0 -0.1
baz=208
SNST Tainan City 1.53 231 eS Sg 07 35 33.5 +2.0
baz=234
CHN1 Nanshi 1.54 229 P Pb 07 35 11.2 +0.3
baz=232
CHN1 eS Sg 07 35 34.1 +2.5
baz=232
WSF Szhu 1.54 249 eP Pb 07 35 11.1 +0.1
baz=262
WSF eS Sg 07 35 31.6 -0.2
baz=262
LDUT Ludao 1.55 191 eP Pn 07 35 09.4 -0.7
baz=182
LDUT eS Sn 07 35 29.6 -0.7
baz=182
SGST Jiashian 1.57 225 eP Pb 07 35 11.1 -0.4
baz=228
SGST eS Sg 07 35 35.0 +2.3
baz=228
SLGT Liugui 1.59 221 P Pb 07 35 11.7 -0.2
baz=225
SLGT S Sg 07 35 33.5 0.0
baz=225
ICHU Yijhu 1.61 239 P Pb 07 35 12.3 +0.1
baz=243
ICHU S Sg 07 35 35.9 +1.7
baz=243
CHN8 Yiju 1.68 240 eP Pg 07 35 14.3 -0.1
baz=243
CHN8 S Sg 07 35 37.7 +1.5
baz=243
SCST Cishan 1.77 223 eP Pn 07 35 12.2 -0.9
baz=226
SCST eS Sb 07 35 36.9 -0.2
baz=226
TSMG Majia 1.82 215 eP Pb 07 35 15.3 -0.5
baz=232
TSMG eS Sb 07 35 38.0 -0.8
baz=232
HATJ Hateruma jima 1.85 94 eS Sn 07 35 36.7 -1.0
TSCK Chigu Township 1.88 236 eP Pn 07 35 13.8 -0.8
baz=240
TSCK eS Sg 07 35 41.8 -0.9
baz=240
MASBT Mashibuluo 1.90 214 eP Pn 07 35 14.6 -0.4
baz=217
MASBT eS Sb 07 35 41.5 +0.4
baz=217
EAST Anshuo 2.00 206 eP Pb 07 35 18.4 -0.5
baz=195
EAST eS Sb 07 35 44.3 +0.3
baz=195
JKRS Kuro-shima 2.03 88 eP Pn 07 35 17.2 +0.5
TAWH Dawu Township 2.03 204 eS Sb 07 35 44.3 -0.4
baz=208
SCZT Fangliau 2.11 211 S Sb 07 35 47.7 +0.6
baz=213
PNG Penghu 2.14 253 eP Pb 07 35 19.7 -1.5
baz=258
PNG eS Sb 07 35 47.2 -0.7
baz=258
PHUB P'eng-hu 2.14 252 eP Pn 07 35 19.4 +1.1
baz=257
PHUB S Sb 07 35 47.4 -0.6
baz=257
JIJ Ishigaki jima 2.15 85 P Pn 07 35 18.2 -0.2
JIJ eS Sn 07 35 44.8 -0.5
WDGT Dungji 2.16 245 P Pn 07 35 19.5 +0.9
baz=249
WDGT eS Sb 07 35 48.9 +0.3
baz=249
SLIU Shizi 2.17 205 P Pn 07 35 19.2 +0.5
baz=195
SLIU eS Sn 07 35 44.9 -0.9
baz=195
LYUB Lan-yu 2.19 185 eS Sn 07 35 46.0 -0.3
baz=179
VWUC VWUC 2.27 291 eP Pn 07 35 19.1 -0.9
baz=292
VWUC eS Sn 07 35 47.7 -0.5
baz=292
VCHM Qimei 2.38 246 eP Pn 07 35 20.7 -0.8
baz=233
VCHM eS Sb 07 35 53.4 -1.4
baz=233
MATB Ma-tsu 2.56 320 eP Pn 07 35 23.3 -0.7
baz=320
PTMZ Houxiangcun 2.57 290 eP Pn 07 35 23.3 -0.8
baz=291
PTMZ eS Sn 07 35 54.5 -1.0
baz=291
LYJJ Jianjiangzhen 2.98 322 eP Pn 07 35 29.3 -0.4
baz=322
LYJJ eS Sn 07 36 04.9 -0.7
baz=322
KNM Kinmen 3.07 275 eP Pn 07 35 32.6 +1.6
baz=276
KNM eS Sn 07 36 09.5 +1.6
baz=276
XPSS Dashiqiu 3.08 332 eP Pn 07 35 31.2 0.0
baz=331
XPSS eS Sn 07 36 06.9 -1.2
baz=331
KNMB Chin-men Tao 3.11 276 eP Pn 07 35 30.9 -0.7
baz=277
KNMB eS Sn 07 36 07.9 -1.1
baz=277
MHZQ Yeshan 3.14 308 eP Pn 07 35 31.6 -0.3
baz=308
AXDP Jialang 3.55 282 eP Pn 07 35 37.3 -0.3
baz=284
ZPLA Ao Xicun 3.70 267 eS Sn 07 36 22.9 -0.6
baz=269
DSXP Dongshan 4.02 264 eP Pn 07 35 44.4 +0.3
baz=267
SXFK Yanhouchang 4.34 301 eP Pn 07 35 48.1 -0.5
baz=302
SXFK eS Sn 07 36 38.3 -1.1
baz=302

IDC ***08*** *08:05:55.7±0.7,28.°00N×128.°04E,h0km,mb3.7/10, mbtmp3.7/13,ML2.6/2,MS3.6/27,Error ellipse: s-maj=32.1km s-min=11.9km az=75.0*

NIED ***08*** *08:05:57.4,28.°10N×128.°07E,h16km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.68; Mθθ2.18; Mϕϕ-1.49; Mrθ-2.25; Mθϕ2.07; Mϕr0.18; Fault plane solution: M₀3.54000×10¹⁵ NP1: ϕs106.00000°,δ85.00000°,λ-41.00000°. NP2: ϕs200.00000°,δ49.00000°,λ-174.00000°.*

JMA ***08*** *08:05:57.4±0.3,28.°1N±0.°5×128.°1E±0.°6,h16km±2km, MD4.2/21,MV4.0/21,NW OFF OKINAWAJIMA IS*

ISC 08 08:05:57.2±1.6,28.°01N±0.°04×128.°10E±0.°05,h9km±11km, n58,σ0°93/39,mb3.7/10,MS3.6/23,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOKE	**Okinoerabujima**	**0.77**	**147**	*i* P	**Pn**	**08 06 13.6**	**-0.6**
JOKE	**Okinoerabujima**	**0.77**	**147**	A	A	08 06 13.6	
comp=E,6.0nm,2.1s,comp=N,9.0nm,1.2s							
JTK	**Tokunoshima**	**0.79**	**106**	*i* P	**Pb**	**08 06 13.0**	**0.0**
JTK				eS	**Sb**	**08 06 24.4**	**+0.7**
JTK	**Tokunoshima**	**0.79**	**106**	A	A	08 06 13.0	
comp=E,11nm,0.6s,comp=N,13nm,0.8s							
JAMN	**Amaminishikomi**	**0.98**	**76**	*i* P	**Pg**	**08 06 15.7**	**-0.3**
JAMN				eS	**Sb**	**08 06 29.2**	**-0.1**
JAMN	**Amaminishikomi**	**0.98**	**76**	A	A	08 06 15.7	
comp=E,4.0nm,3.2s,comp=N,9.0nm,3.1s							
JIH	**Iheya**	**0.98**	**187**	*i* P	**Pn**	**08 06 17.0**	**-0.1**
JIH				eS	**Sn**	**08 06 30.8**	**-0.3**
JIH	**Iheya**	**0.98**	**187**	A	A	08 06 17.0	
comp=E,25nm,1.2s,comp=N,21nm,0.6s							
JYRO	**Yoronjima**	**1.03**	**162**	*i* P	**Pn**	**08 06 18.0**	**+0.2**
JYRO				eS	**Sn**	**08 06 32.2**	**-0.1**
JOW	**Kunigami**	**1.19**	**172**	*i* P	**Pn**	**08 06 20.4**	**+0.4**
JOW				eS	**Sn**	**08 06 37.0**	**+0.8**
JOW	**Kunigami**	**1.19**	**172**	A	A	08 06 20.4	
comp=E,10.0nm,2.0s,comp=N,8.0nm,2.5s							
JOW	**Kunigami**	**1.19**	**172**	Pn	**Pn**	**08 06 20.2**	**+0.3**
comp=N,359nm,0.3s,baz=343,slow=13,SNR=341							
JOW				Sn	**Sn**	**08 06 36.4**	**+0.3**
comp=N,173nm,0.3s,baz=81,slow=28,SNR=12							
JAM	**Amami Oshima**	**1.39**	**73**	P	**Pn**	**08 06 22.2**	**-0.5**
JAM	**Amami Oshima**	**1.39**	**73**	A	A	08 06 22.2	
comp=E,3.0nm,1.3s,comp=N,6.0nm,2.4s							
JNTH	**Nagotoyohara**	**1.49**	**183**	*e*P	**Pb**	**08 06 25.0**	**0.0**
JNTH				eS	**Sg**	**08 06 44.9**	**-0.2**
JTAJ	**Takarajima**	**1.50**	**40**	P	**Pn**	**08 06 22.8**	**-1.4**
JAGN	**Aguni-jima**	**1.61**	**209**	*e*P	**Pb**	**08 06 26.7**	**-0.4**
JZK	**Kikaishima**	**1.68**	**79**	*e*P	**Pb**	**08 06 27.8**	**-0.5**
JZK	**Kikaishima**	**1.68**	**79**	A	A	08 06 27.8	
comp=E,22nm,1.7s,comp=N,23nm,2.3s							
JJT3	**Tamagusuku3**	**1.88**	**189**	*e*P	**Pb**	**08 06 32.1**	**+0.3**
JJT3				S	**Sb**	**08 06 54.7**	**-0.6**
JJT3	**Tamagusuku3**	**1.88**	**189**	A	A	08 06 32.1	
comp=E,10.0nm,2.7s,comp=N,14nm,1.9s							
JKE	**Kume jima 2**	**2.05**	**215**	*e*P	**Pn**	**08 06 32.1**	**+0.3**
JYAK	**Yakushimahirau**	**3.06**	**43**	*e*P	**Pn**	**08 06 45.9**	**+0.2**
JMZ	**Minamidaito 2**	**3.54**	**127**	*e*P	**Pn**	**08 06 52.3**	**-0.1**
JNU	**Nakatsue**	**5.63**	**25**	Pn	**Pn**	**08 07 25.0**	**+3.9**
comp=N,5.2nm,0.3s,baz=202,slow=5.9,SNR=38							
KSRS	**Korea Array**	**9.42**	**359**	Pn	**Pn**	**08 08 13.8**	**+0.8**
comp=N,0.1nm,0.3s,baz=176,slow=13,SNR=1.7							
KSRS				LR	LR	08 11 52.8	
comp=N,285nm,19.2s,baz=175,slow=38							
comp=N,0.4nm,0.3s							
MJAR	**Matsushiro Arr**	**12.06**	**43**	Pn	**Pn**	**08 08 50.5**	**+1.3**
baz=240,slow=14,SNR=2.1							
MJAR				LR	LR	08 14 06.6	
comp=N,82nm,18.7s,baz=223,slow=41							
comp=N,0.5nm,0.4s							
JCJ	**Chichijima**	**12.53**	**91**	LR	LR	08 13 29.6	
comp=N,95nm,19.0s,baz=134,slow=36							
TGY	**Tagaytay City**	**15.36**	**207**	LR	LR	08 15 37.8	
comp=N,167nm,19.4s,baz=247,slow=38							
USRK	**Ussuriysk Ar.**	**16.45**	**10**	Pn	**Pn**	**08 09 48.8**	**+0.6**
comp=N,1.1nm,0.8s,baz=196,slow=9.0,SNR=2.9							
DAV	**Davao City (W)**	**20.96**	**187**	LR	LR	08 18 25.7	
comp=N,48nm,21.5s,baz=1.0,slow=36							
GUMO	**Guam**	**21.21**	**129**	LR	LR	08 17 44.2	
comp=N,107nm,19.8s,baz=342,slow=33							
KLR	**Kul'dur**	**21.37**	**7**	P	**P**	**08 10 45.4**	**+0.5**
comp=N,0.9nm,0.8s,baz=197,slow=7.0,SNR=1.9							
KLR				LR	LR	08 18 46.0	
comp=N,73nm,19.3s,baz=184,slow=36							
comp=N,0.9nm,0.8s							
SONM	**Songino Array**	**26.01**	**325**	P	**P**	**08 11 30.0**	**-0.6**
comp=N,0.6nm,0.3s,baz=131,slow=8.2,SNR=2.0							
comp=N,0.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**28.37**	**257**	LR	LR	08 24 37.7	
comp=N,60nm,18.1s,baz=65,slow=40							
PETK	**Petropavlovsk-**	**33.26**	**33**	LR	LR	08 26 21.3	
comp=N,32nm,19.4s,baz=227,slow=37							
YAK	**Yakutsk**	**34.04**	**1**	LR	LR	08 26 37.3	
comp=N,107nm,19.7s,baz=149,slow=36							
MA2	**Magadan**	**35.18**	**20**	LR	LR	08 27 53.6	
comp=N,52nm,18.0s,baz=94,slow=37							
SEY	**Seymchan**	**38.36**	**18**	LR	LR	08 29 14.0	
comp=N,47nm,19.8s,baz=322,slow=36							
MKAR	**Makanchi Array**	**40.28**	**310**	P	**P**	**08 13 34.4**	**-0.2**
comp=N,0.8nm,0.7s,baz=102,slow=9.8,SNR=8.3							
MKAR				PcP	**PcP**	**08 15 39.6**	**+1.4**
comp=N,0.2nm,0.5s,baz=102,slow=1.1,SNR=2.1							
MKAR				LR	LR	08 32 58.3	
comp=N,62nm,19.0s,baz=42,slow=40							
comp=N,0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**40.77**	**322**	P	**P**	**08 13 37.6**	**-0.9**
comp=N,0.4nm,0.4s,baz=109,slow=7.9,SNR=1.5							
ZALV				LR	LR	08 32 12.3	
comp=N,60nm,18.4s,baz=76,slow=39							
comp=N,0.4nm,0.4s							
PMG	**Port Moresby**	**41.52**	**151**	LR	LR	08 28 09.9	
comp=N,83nm,21.2s,baz=142,slow=32							
KURBB	**Kurchatov Arra**	**43.50**	**315**	P	**P**	**08 14 00.0**	**-0.8**
comp=N,1.2nm,0.8s,baz=102,slow=8.9,SNR=8.5							
KURBB				LR	LR	08 33 35.7	
comp=N,102nm,19.3s,baz=168,slow=38							
comp=N,1.2nm,0.8s							
WRA	**Warramunga Arr**	**48.05**	**172**	P	**P**	**08 14 36.6**	**-0.4**
comp=N,2.0nm,0.7s,baz=354,slow=8.2,SNR=10.0							
comp=N,2.0nm,0.7s							
HNR	**Honiara**	**48.32**	**136**	LR	LR	08 34 30.5	
comp=N,404nm,19.0s,baz=12,slow=36							
BVAR	**Borovoye Array**	**48.88**	**317**	P	**P**	**08 14 42.6**	**-0.5**
comp=N,1.0nm,0.8s,baz=81,slow=9.2,SNR=4.2							
BVAR				LR	LR	08 37 35.1	
comp=N,84nm,19.6s,baz=99,slow=39							
comp=N,1.0nm,0.8s							
CTA	**Charters Tower**	**50.94**	**158**	LR	LR	08 36 33.8	
comp=N,37nm,19.7s,baz=256,slow=36							
ASAR	**Alice Springs**	**51.68**	**173**	P	**P**	**08 15 05.2**	**+0.6**
comp=N,0.6nm,0.5s,baz=4.9,slow=13,SNR=14							
comp=N,0.6nm,0.5s							
KIRV	**Kirov**	**60.73**	**324**	LR	LR	08 45 35.8	
comp=N,115nm,18.1s,baz=255,slow=39							
STKA	**Stephens Creek**	**60.93**	**167**	P	**P**	**08 16 09.1**	**-1.3**
comp=N,0.9nm,0.5s,baz=340,slow=9.7,SNR=5.4							
comp=N,0.9nm,0.5s							
BELG	**Belogornoye**	**62.69**	**317**	LR	LR	08 45 23.0	
comp=N,117nm,19.5s,baz=155,slow=38							
ARCES	**ARCESS Array B**	**68.31**	**338**	LR	LR	08 51 06.3	
comp=N,53nm,19.3s,baz=221,slow=40							
OBN	**Obninsk**	**68.36**	**322**	LR	LR	08 49 22.8	
comp=N,152nm,20.1s,baz=138,slow=38							
FINES	**FINESS Array B**	**71.26**	**330**	LR	LR	08 51 15.3	
comp=N,146nm,19.0s,baz=349,slow=38							
AKASG	**Malin Array Be**	**74.11**	**319**	LR	LR	08 50 57.3	
comp=N,103nm,20.3s,baz=36,slow=36							
YKA	**Yellowknife Ar**	**76.97**	**25**	P	**P**	**08 17 49.0**	**-0.9**
comp=N,0.4nm,0.9s,baz=301,slow=5.9,SNR=3.3							
comp=N,0.4nm,0.9s							
NOA	**NORSAR Array B**	**77.67**	**334**	LR	LR	08 53 54.7	
comp=N,39nm,18.8s,baz=275,slow=37							
FRB	**Frobisher Bay**	**87.61**	**7**	LR	LR	08 57 58.4	
comp=N,55nm,21.7s,baz=44,slow=36							

IDC 08 08:15:08.3±3.2,3.°41S×130.°14E,h0km,mb3.3/2, mbtmp3.4/3,ML3.2/1,MS3.4/1,Error ellipse: s-maj=223.5km s-min=30.7km az=70.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.93**	**166**	Pn	Pn	08 19 06.2	-0.6
0.1nm,0.3s,baz=350,slow=11,SNR=1.2							
WRA				Sn	Sn	08 22 03.4	-12
baz=354,slow=24,SNR=1.2							
0.5nm,0.6s							
ASAR	**Alice Springs**	**20.46**	**170**	P	P	08 19 47.9	+0.2
0.9nm,0.4s,baz=353,slow=9.8,SNR=16							
0.9nm,0.4s							
URZ	**Urewera**	**55.06**	**135**	LR	LR	08 48 34.1	
comp=Z,30nm,18.4s,baz=301,slow=36							
MKAR	**Makanchi Array**	**65.33**	**326**	P	P	08 25 52.4	0.0
0.2nm,0.6s,baz=110,slow=6.9,SNR=2.4							
0.2nm,0.6s							

IDC ***08*** *08:25:19.0±3.1,53.°34N×87.°52E,h0km,mbtmp2.5/2, ML2.6/1,Error ellipse: s-maj=30.3km s-min=16.5km az=66.0*

NNC ***08*** *08:26:22.6±2.5,51.°65N×75.°35E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=164.8km s-min=15.9km az=25.0, Suspected Mining explosion.*

ISC 08 08:25:24.9±4.1,53.°2N±0.°1×86.°9E±0.°3,h10km,n8,σ1s08/5, 3C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**301**	I	I	08 34 30.0	
baz=108,slow=340,SNR=1.5							
ZALV	**Zalesovo Beam**	**1.40**	**301**	Pn	**Pb**	**08 25 50.6**	**-0.5**
0.5nm,0.3s,baz=114,slow=12,SNR=15							
ZALV				Lg	Lg	08 26 13.6	
0.7nm,0.3s,baz=109,slow=26,SNR=3.9							
KURK	**Kurchatov**	**5.68**	**247**	⇑Pg	**Pb**	**08 27 03.7**	**-0.3**
3.4nm,0.9s							
KURK				⇑Lg	Lg	08 27 32.4	

4.6nm,0.6s
KURBB **Kurchatov Arra 5.78 246** ⇓Pg **Pb 08 27 04.7 -0.9**
4.4nm,0.8s
KURBB ⇓Lg Lg 08 27 34.7
9.9nm,0.8s
KURBB **Kurchatov Arra 5.78 246** Pn **Pn 08 26 51.6 +1.0**
0.1nm,0.3s,baz=62,slow=14,SNR=1.1
MK31 Makanchi Array 7.09 206 ⇓Lg Lg 08 29 50.4
1.2nm,0.7s,baz=323,slow=28,SNR=2.9
MKAR Makanchi Array 7.09 206 Pn **Pn 08 27 08.9 +0.2**
0.1nm,0.3s,baz=27,slow=14,SNR=5.2
MKAR Lg Lg 08 29 12.8
baz=24,slow=32,SNR=2.4
0.1nm,0.3s
BVA0 Borovoye Array 9.90 275 ⇑Lg Lg 08 28 07.8
3.9nm,0.8s

IDC 08 08:30:18.8±2.8, 54.13N×87.27E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=23.1km s-min=16.5km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**264**	I		I	08 38 27.7	
	0.1nm,1.5s,baz=81,slow=343,SNR=4.4							
ZALV	**Zalesovo Beam**	**1.46**	**264**	Pg		Pn	08 30 45.0	-1.3
	1.4nm,0.3s,baz=82,slow=15,SNR=21							
ZALV				Lg		Lg	08 31 05.2	
	0.8nm,0.3s,baz=80,slow=30,SNR=4.7							
KURBB	**Kurchatov Arra**	**6.40**	**240**	Pn		Pn	08 31 55.4	+1.2
	0.1nm,0.3s,baz=53,slow=14,SNR=4.0							
KURBB				Sn		Sn	08 33 07.5	-0.4
	baz=46,slow=22,SNR=1.8							
KURBB				Lg		Lg	08 33 42.1	
	baz=62,slow=36,SNR=1.4							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**8.00**	**205**	Pn		Pn	08 32 17.3	+1.1
	baz=25,slow=13,SNR=9.8							
MKAR				Sn		Sn	08 33 46.3	-1.1
	baz=19,slow=18,SNR=1.2							
MKAR				Lg		Lg	08 34 31.4	
	baz=26,slow=30,SNR=1.7							
	0.1nm,0.2s							

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*IDC **08** 08:31:34.4±2.9, 8.88S×114.07E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=160.7km s-min=29.7km az=48.0*
*DJA **08** 08:31:40.4±0.8, 9.5S±5.1×114.4E±., h10km, M3.6/6, MLv3.6/6*
ISC 08 08:31:36.9±1.9, 9.42S±0.09×113.61E±0.10, h10km, n11, σ1s12/10, mb3.2/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.08**	**30**	P		**Pg**	**08 31 57.8**	**0.0**
JAGI				S		**Sg**	**08 32 10.5**	**-1.4**
GMJI	**Gumukmas**	**1.15**	**352**	P		**Pg**	**08 31 58.3**	**-0.7**
GMJI				S		**Sg**	**08 32 13.3**	**-0.6**
BLJI	**Banyuglugur**	**1.66**	**360**	P		**Pn**	**08 32 07.7**	**+1.6**
BLJI				S		**Sg**	**08 32 29.9**	**-0.5**
SRBI	**Singaraja**	**2.07**	**50**	P		**Pn**	**08 32 12.7**	**+1.0**
SRBI				S		**Sn**	**08 32 38.4**	**+0.8**
PLAI	**Plampang**	**4.16**	**82**	P		**Pn**	**08 32 41.2**	**+0.7**
WRA	**Warramunga Arr**	**22.59**	**120**	P		P	08 36 35.2	-2.7
	0.3nm,0.6s,baz=295,slow=12,SNR=1.2							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**24.02**	**129**	P		**P**	**08 36 51.2**	**-1.0**
	0.4nm,0.6s,baz=309,slow=9.1,SNR=4.9							
	0.4nm,0.6s							
H08S2	**Diego Garcia H**	**40.68**	**269**	T		T	09 22 26.7	
	baz=95							
H08S3	**Diego Garcia H**	**40.69**	**269**	T		T	09 22 35.6	
	baz=95							
H08S1	**Diego Carcia H**	**40.70**	**269**	T		T	09 22 47.0	
	baz=95							
MKAR	**Makanchi Array**	**62.54**	**336**	P		P	08 41 58.0	-3.0
	0.2nm,0.5s,baz=162,slow=7.1,SNR=1.9							
	0.2nm,0.5s							

IDC 08 08:33:59.4±1.8, 0.62N×125.51E, h0km, mb3.4/4, mbtmp3.5/4, MS2.9/2, Error ellipse: s-maj=192.2km s-min=23.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.19**	**158**	P		P	08 38 56.7	-0.8
	0.7nm,0.7s,baz=336,slow=11,SNR=6.2							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**25.48**	**162**	P		P	08 39 30.0	+0.5
	0.3nm,0.4s,baz=347,slow=12,SNR=8.4							
ASAR				LR		LR	08 51 25.4	
	comp=Z,31nm,19.4s,baz=138,slow=41							
	0.3nm,0.4s							
JCJ	**Chichijima**	**30.81**	**30**	LR		LR	08 52 56.5	
	comp=Z,22nm,19.2s,baz=3.5,slow=37							
MKAR	**Makanchi Array**	**59.44**	**327**	P		P	08 44 03.5	-0.5
	0.2nm,0.4s,baz=111,slow=6.3,SNR=2.7							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**63.71**	**329**	P		P	08 44 33.1	+0.4
	0.4nm,0.5s,baz=134,slow=6.6,SNR=2.1							
	0.4nm,0.5s							

IDC 08 08:34:19.4±3.0, 53.96N×86.71E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=26.0km s-min=15.1km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**270**	I		I	08 40 12.5	
	baz=89,slow=348,SNR=3.1							
ZALV	**Zalesovo Beam**	**1.12**	**270**	Pg		Pg	08 34 39.9	-0.9
	0.5nm,0.3s,baz=87,slow=20,SNR=4.5							
ZALV				Lg		Lg	08 34 56.4	
	1.0nm,0.3s,baz=90,slow=30,SNR=6.9							
KURBB	**Kurchatov Arra**	**6.03**	**240**	Pn		Pn	08 35 50.6	+0.9
	baz=59,slow=13,SNR=5.0							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.71**	**203**	Pn		Pn	08 36 13.9	+1.0
	0.1nm,0.3s,baz=24,slow=14,SNR=5.8							
	0.1nm,0.2s							

IDC 08 08:36:08.2±289.0, 54.02N×43.06E, h0km, Error ellipse: s-maj=121.7km s-min=85.1km az=142.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.29**	**311**	I		I	09 02 25.0	
	0.1nm,0.9s,baz=126,slow=326,SNR=3.5							
I31KZ	**AKTYUBINSK INF**	**9.88**	**105**	I		I	09 32 10.0	
	0.1nm,0.6s,baz=298,slow=331,SNR=2.8							
I46RU	**ZALESOVO INFRA**	**24.30**	**73**	I		I	11 07 10.0	
	baz=283,slow=333,SNR=0.9							

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*IDC **08** 08:40:50.9±1.2, 23.96N×121.11E, h0km, mb3.4/5, mbtmp3.4/6, ML3.5/1, MS3.0/7, Error ellipse: s-maj=59.0km s-min=24.2km az=70.0*
*ASIES **08** 08:40:54.2, 24.10N×121.74E, h7km, ML4.0, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.51; $M_{\theta\theta}$-4.17; $M_{\phi\phi}$2.66; $M_{r\theta}$5.35; $M_{\theta\phi}$0.23; $M_{r\lambda}$3.84; Fault plane solution: $M_0$7.53682×10^{21} NP1:ϕ_s55.71000°, δ83.20000°, λ64.34000°. NP2:ϕ_s311.87000°, δ26.49000°, λ164.60000°. Principal axes: T Plg45.7770°, Azm299.6740°; N Plg25.4690°, Azm58.9760°; P Plg33.3060°, Azm167.2140°;*
*JMA **08** 08:40:54.4±0.1, 24.1N±0.5×121.7E±0.6, h0km, MV3.6/12, TAIWAN REGION*
*TAP **08** 08:40:54.2, 24.10N×121.74E, h7km, ML4.0, C*
*NIED **08** 08:40:54.4, 24.09N×121.73E, h0km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.17; $M_{\theta\theta}$-6.07; $M_{\phi\phi}$6.24; $M_{r\theta}$-4.04; $M_{\theta\phi}$-1.39; $M_{r\lambda}$-1.60; Fault plane solution: $M_0$7.51000×10^{14} NP1: ϕ_s37.00000°, δ80.00000°, λ-28.00000°. NP2:ϕ_s133.00000°, δ62.00000°, λ-168.00000°.*
ISC 08 08:40:54.0±0.8, 24.11N±0.01×121.78E±0.02, h11km±5km, n185, σ1s42/310, mb3.4/5, MS3.0/5, 43C-28D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ETL	**Fush Village**	**0.15**	**288**	⇑*iP*		**Pg**	**08 40 57.5**	**0.0**
	baz=300							
ETL				S		**Sg**	**08 40 59.6**	**-0.3**
	baz=300							
TWD	**Chiawan**	**0.17**	**260**	⇑P		**Pg**	**08 40 57.4**	**-0.4**
	baz=272							
TWD				S		**Sg**	**08 40 59.7**	**-0.8**
	baz=272							
NACB	**Ninganchiao**	**0.18**	**290**	P		**Pg**	**08 40 57.8**	**-0.1**
NACB	**Ninganchiao**	**0.18**	**290**	P		**Pg**	**08 40 57.8**	**-0.1**
	baz=300							
NACB				S		**Sg**	**08 41 00.4**	**-0.3**
	baz=300							
EHP	**Heping Village**	**0.20**	**349**	*i* P		**Pg**	**08 40 59.2**	**+0.9**
	baz=358							
EHP				S		**Sg**	**08 41 03.1**	**+1.8**
	baz=358							
EAHA	**Aohua**	**0.22**	**350**	⇑P		**Pg**	**08 40 59.6**	**+0.9**
	baz=355							
EAHA				*i* S		**Sg**	**08 41 03.5**	**+1.7**
	baz=355							
ETLH	**Xiulin Townshi**	**0.29**	**289**	⇑*i*P		**Pg**	**08 40 59.9**	**-0.1**
	baz=294							
ETLH				*e*S		**Sg**	**08 41 03.8**	**-0.1**
	baz=294							
ETM	**Tongmen**	**0.30**	**241**	P		**Pg**	**08 40 59.9**	**-0.2**
	baz=246							
ETM				*i* S		**Sg**	**08 41 04.6**	**+0.4**
	baz=246							
ENA	**Nanau**	**0.32**	**353**	⇓*e*P		**Pb**	**08 41 01.3**	**-0.4**
	baz=357							
ENA				*e*S		**Sb**	**08 41 06.6**	**-0.3**
	baz=357							
EWUT	**Wuta**	**0.33**	**359**	⇓*e*P		**Pb**	**08 41 01.7**	**-0.3**
	baz=1.0							
EWUT				*e*S		**Sb**	**08 41 07.4**	**+0.1**
	baz=1.0							
LXIB	**Xiulin Townshi**	**0.35**	**255**	⇑*e*P		**Pg**	**08 41 00.5**	**-0.5**
	baz=259							
LXIB				S		**Sg**	**08 41 06.2**	**+0.5**
	baz=259							
SHUL	**Shoufeng**	**0.38**	**212**	⇑P		**Pb**	**08 41 02.6**	**-0.2**
	baz=225							
SHUL				S		**Sb**	**08 41 09.2**	**+0.5**
	baz=225							
ESL	**Shilin**	**0.44**	**227**	⇑*e*P		**Pg**	**08 41 02.0**	**-0.5**
	baz=240							
ESL				S		**Sg**	**08 41 08.9**	**+0.5**
	baz=240							
TEGC	**Jichi Village**	**0.46**	**209**	*i* P		**Pb**	**08 41 04.0**	**0.0**
	baz=213							
TEGC				*e*S		**Sb**	**08 41 12.0**	**+1.1**
	baz=213							
ESAO	**Su ao**	**0.47**	**7**	⇓P		**Pb**	**08 41 04.3**	**0.0**
	baz=360							
ESAO				S		**Sb**	**08 41 12.0**	**+0.8**
	baz=360							
WHF	**Hehuan Shan**	**0.47**	**274**	P		**Pg**	**08 41 03.2**	**-0.2**
	baz=278							
WHF				S		**Sg**	**08 41 09.6**	**-0.2**
	baz=278							
LATG	**Datong**	**0.48**	**331**	⇓*e*P		**Pg**	**08 41 04.2**	**+0.7**
	baz=332							
LATG				*e*S		**Sg**	**08 41 10.8**	**+0.9**
	baz=332							
NNSB	**Datong**	**0.48**	**311**	⇓*i*P		**Pg**	**08 41 03.9**	**+0.5**
	baz=313							
NNSB				*i* S		**Sg**	**08 41 10.8**	**+0.9**
	baz=313							
NNSH	**Datong**	**0.48**	**311**	⇓P		**Pg**	**08 41 03.9**	**+0.5**
	baz=312							
NNSH				S		**Sg**	**08 41 10.3**	**+0.4**
	baz=312							
EOS4	**EOS4**	**0.49**	**89**	*e*P		**Pn**	**08 41 08.4**	**+1.8**
	baz=91							
EOS4				*e*S		**Sb**	**08 41 17.7**	**+6.3**
	baz=91							
NNS	**Nan Shan**	**0.50**	**311**	⇓*i*P		**Pg**	**08 41 04.2**	**+0.4**
	baz=314							
NNS				S		**Sg**	**08 41 11.0**	**+0.7**
	baz=314							
TWC	**Suao**	**0.50**	**7**	⇓P		**Pb**	**08 41 05.0**	**+0.2**
	baz=358							
TWC				S		**Sb**	**08 41 13.2**	**+1.1**
	baz=358							
FUSS	**Fushou**	**0.51**	**286**	⇑*i*P		**Pg**	**08 41 04.2**	**+0.1**
	baz=289							
FUSS				*e*S		**Sg**	**08 41 09.7**	**-1.1**
	baz=289							
EOS2	**EOS2**	**0.51**	**53**	*e*P		**Pn**	**08 41 07.8**	**+0.7**
	baz=28							
EOS3	**EOS3**	**0.52**	**70**	*e*P		**Pn**	**08 41 08.6**	**+1.4**
	baz=66							
NDS	**Dongshan**	**0.52**	**353**	⇑P		**Pb**	**08 41 05.5**	**+0.2**
	baz=352							
NDS				*e*S		**Sb**	**08 41 14.0**	**+1.1**
	baz=352							
WARBT	**Fenglin Townsh**	**0.53**	**223**	⇓*e*P		**Pg**	**08 41 04.0**	**-0.4**
	baz=236							
WARBT				*e*S		**Sg**	**08 41 13.2**	**+1.7**
	baz=236							
EGFH	**Guangfu**	**0.55**	**216**	⇓P		**Pg**	**08 41 05.1**	**+0.4**
	baz=232							
EGFH				*e*S		**Sb**	**08 41 14.5**	**+1.0**
	baz=232							
NDT	**Datong Townshi**	**0.55**	**333**	*e*P		**Pb**	**08 41 05.7**	**+0.1**
	baz=333							
NDT				*e*S		**Sg**	**08 41 12.7**	**+0.8**
	baz=333							
CHGB	**Renai**	**0.56**	**265**	⇑P		**Pg**	**08 41 04.9**	**-0.1**
	baz=269							
CHGB				S		**Sg**	**08 41 12.6**	**+0.3**
	baz=269							
ENTT	**Nioudou**	**0.56**	**339**	*i* P		**Pb**	**08 41 06.0**	**+0.1**
	baz=339							
ENTT				*i* S		**Sb**	**08 41 14.4**	**+0.4**
	baz=339							
TWT	**Tachien**	**0.57**	**284**	P		**Pg**	**08 41 05.8**	**+0.6**
	baz=287							
TWT				S		**Sg**	**08 41 13.3**	**+0.6**
	baz=287							
OWD	**Renai**	**0.58**	**254**	⇑P		**Pg**	**08 41 05.0**	**-0.2**
	baz=259							
OWD				*e*S		**Sg**	**08 41 12.5**	**-0.4**
	baz=259							
TDCB	**Techi**	**0.59**	**284**	⇑*e*P		**Pg**	**08 41 05.8**	**+0.4**
	baz=287							
TDCB				S		**Sg**	**08 41 13.6**	**+0.3**
	baz=287							
WUSB	**Renai**	**0.62**	**259**	⇑*e*P		**Pg**	**08 41 06.0**	**-0.1**
	baz=262							
WUSB				*e*S		**Sg**	**08 41 13.6**	**-0.7**
	baz=262							
ILA	**Ilan**	**0.65**	**357**	*e*P		**Pn**	**08 41 09.7**	**+0.5**
	baz=357							
ILA				*e*S		**Sn**	**08 41 19.5**	**0.0**
	baz=357							
YHNB	**Yeheng**	**0.67**	**326**	P		**Pb**	**08 41 08.1**	**+0.3**
YHNB	**Yeheng**	**0.67**	**326**	*e*P		**Pb**	**08 41 07.9**	**+0.2**
	baz=327							
YHNB				S		**Sg**	**08 41 17.2**	**+1.4**
	baz=327							
FUSB	**Fushanzhiwuyua**	**0.67**	**345**	P		**Pb**	**08 41 08.2**	**+0.5**
	baz=344							
FUSB				S		**Sb**	**08 41 17.9**	**+0.7**
	baz=344							
NSK	**Sanguang**	**0.68**	**326**	⇓P		**Pb**	**08 41 08.1**	**+0.1**
	baz=326							
NSK				S		**Sg**	**08 41 17.5**	**+1.2**
	baz=326							
VWDT	**VWDT**	**0.69**	**239**	⇑P		**Pg**	**08 41 07.1**	**-0.2**
	baz=242							
VWDT				*e*S		**Sb**	**08 41 18.2**	**+0.7**
	baz=242							
HGSD	**Ruisui**	**0.70**	**208**	P		**Pb**	**08 41 08.1**	**-0.1**
	baz=198							
HGSD				*e*S		**Sg**	**08 41 17.9**	**+1.2**
	baz=198							
NWLT	**Wulai**	**0.71**	**339**	⇓*i*P		**Pb**	**08 41 08.9**	**+0.4**
	baz=339							
NWLT				*e*S		**Sb**	**08 41 18.7**	**+0.5**
	baz=339							
EHY	**Hungye**	**0.74**	**215**	⇑*e*P		**Pg**	**08 41 07.6**	**-0.7**
	baz=233							
EHY				S		**Sg**	**08 41 18.9**	**+1.0**
	baz=233							
WPL	**Puli Township**	**0.76**	**263**	⇓P		**Pg**	**08 41 09.0**	**+0.3**
	baz=266							
WPL				*e*S		**Sg**	**08 41 19.1**	**+0.4**
	baz=266							
WHP	**Taichung City**	**0.78**	**282**	*e*P		**Pb**	**08 41 10.3**	**+0.6**
	baz=285							
WHP				*e*S		**Sg**	**08 41 20.8**	**+1.4**
	baz=285							
DPDB	**Guoxing**	**0.79**	**265**	⇑P		**Pg**	**08 41 09.4**	**+0.2**
	baz=258							
DPDB				*e*S		**Sg**	**08 41 21.3**	**+1.8**
	baz=258							
NFF	**Wufeng Townshi**	**0.80**	**311**	*e*P		**Pb**	**08 41 10.3**	**+0.3**
	baz=311							
NFF				S		**Sg**	**08 41 21.0**	**+1.1**
	baz=311							
WCS	**Beigang Elemen**	**0.80**	**266**	P		**Pg**	**08 41 09.6**	**+0.2**
	baz=262							
WCS				*e*S		**Sg**	**08 41 20.1**	**+0.2**
	baz=262							
SSLB	**Suanglung**	**0.82**	**247**	P		**Pg**	**08 41 09.6**	**-0.3**
SSLB	**Suanglung**	**0.82**	**247**	*e*P		**Pg**	**08 41 09.6**	**-0.3**
	baz=262							
SSLB				*e*S		**Sg**	**08 41 21.0**	**+0.3**
	baz=262							
SMLT	**Sun Moon Lake**	**0.84**	**254**	⇑P		**Pg**	**08 41 10.0**	**-0.2**
	baz=258							
SMLT				*e*S		**Sg**	**08 41 21.9**	**+0.7**
	baz=258							
YULB	**Yu-li**	**0.84**	**212**	P		**Pg**	**08 41 10.6**	**+0.3**
YULB	**Yu-li**	**0.84**	**212**	⇓*e*P		**Pg**	**08 41 09.4**	**-0.9**
	baz=230							
YULB				*e*S		**Sg**	**08 41 22.2**	**+1.0**
	baz=230							
ECBN	**Changbin**	**0.85**	**201**	P		**Pb**	**08 41 10.7**	**0.0**
	baz=206							
ECBN				*e*S		**Sb**	**08 41 23.3**	**+1.2**
	baz=206							
TIPB	**Shuangxi**	**0.86**	**3**	⇓*i*P		**Pn**	**08 41 11.8**	**-0.3**
	baz=360							
TIPB				*e*S		**Sb**	**08 41 23.8**	**+1.3**
	baz=360							
EYUL	**Yuli**	**0.87**	**209**	*e*P		**Pb**	**08 41 11.5**	**+0.3**
	baz=234							
EYUL				*e*S		**Sb**	**08 41 24.4**	**+1.5**
	baz=234							
TWF1	**Yuli**	**0.88**	**211**	*e*P		**Pg**	**08 41 11.2**	**+0.3**
	baz=229							
TWF1				S		**Sb**	**08 41 24.1**	**+1.1**
	baz=229							
LIOB	**Emei**	**0.88**	**307**	⇑*e*P		**Pb**	**08 41 12.1**	**+0.8**
	baz=308							
LIOB				*e*S		**Sb**	**08 41 24.2**	**+1.1**
	baz=308							
NHDH	**Xindian Distri**	**0.88**	**345**	⇓*e*P		**Pn**	**08 41 12.5**	**+0.2**
	baz=343							
NHDH				*e*S		**Sb**	**08 41 24.5**	**+1.4**
	baz=343							
NSTT	**Nanjuang**	**0.88**	**306**	P		**Pb**	**08 41 11.9**	**+0.6**
	baz=307							
NSTT				*e*S		**Sg**	**08 41 24.0**	**+1.5**
	baz=307							
TWA	**Mucha**	**0.88**	**348**	⇓*e*P		**Pn**	**08 41 12.4**	**0.0**
	baz=346							
TWA				*i* S		**Sb**	**08 41 24.4**	**+1.1**
	baz=346							
NJD	**Zhudong**	**0.89**	**315**	*e*P		**Pn**	**08 41 12.8**	**+0.3**
	baz=315							
NJD				*e*S		**Sb**	**08 41 25.2**	**+1.9**
	baz=315							
TATO	**Taipei**	**0.90**	**343**	P		**Pn**	**08 41 12.9**	**+0.3**
TATO	**Taipei**	**0.90**	**343**	⇓P		**Pn**	**08 41 12.6**	**0.0**
	baz=331							
TATO				S		**Sb**	**08 41 24.7**	**+1.0**
	baz=331							
TWB1	**Santiao Chiao**	**0.91**	**12**	⇑P		**Pn**	**08 41 13.0**	**+0.2**
	baz=1.0							
TWB1				*e*S		**Sn**	**08 41 25.9**	**-0.1**
	baz=1.0							
WHYT	**Xinyi Township**	**0.95**	**244**	*i* P		**Pg**	**08 41 12.0**	**-0.2**
	baz=256							
WHYT				*e*S		**Sb**	**08 41 26.9**	**+1.8**
	baz=256							
TWQ1	**Liyutan**	**0.95**	**285**	*e*P		**Pb**	**08 41 13.4**	**+0.9**
	baz=286							
NWF	**Wu-fen Shan**	**0.95**	**360**	⇓P		**Pn**	**08 41 13.9**	**+0.5**
	baz=348							
NWF				*e*S		**Sn**	**08 41 27.4**	**+0.2**
	baz=348							
WFSB	**Wu-fen Shan**	**0.95**	**360**	⇓P		**Pn**	**08 41 13.9**	**+0.5**
	baz=349							
WFSB				S		**Sn**	**08 41 26.8**	**-0.3**
	baz=349							
TAP	**Taipei**	**0.96**	**345**	⇓*e*P		**Pg**	**08 41 12.2**	**-0.2**
	baz=342							
TAP				*e*S		**Sn**	**08 41 27.5**	**+0.4**
	baz=342							
HSN1	**Hsinchu**	**0.96**	**314**	*e*P		**Pn**	**08 41 14.9**	**+1.4**
	baz=313							
HSN1				*e*S		**Sn**	**08 41 28.3**	**+1.1**
	baz=313							
NSY	**Sanyi**	**0.98**	**288**	P		**Pn**	**08 41 14.4**	**+0.7**
	baz=289							
CHKH	**Chenggong**	**0.98**	**201**	P		**Pg**	**08 41 13.0**	**+0.1**
	baz=207							
CHKH				S		**Sb**	**08 41 26.8**	**+0.8**
	baz=207							
SXI1	**Grass Mountain**	**0.98**	**5**	⇓*e*P		**Pn**	**08 41 14.2**	**+0.4**
	baz=340							
SXI1				*e*S		**Sn**	**08 41 28.6**	**+0.8**
	baz=340							
NTY	**Taoyuan**	**0.99**	**334**	*e*P		**Pn**	**08 41 15.5**	**+1.7**
	baz=332							
NTY				*e*S		**Sn**	**08 41 28.8**	**+1.0**
	baz=332							
WWF	**Wufeng**	**0.99**	**266**	*e*P		**Pn**	**08 41 14.8**	**+0.9**
	baz=263							
SBCB	**Hsinchu**	**0.99**	**313**	⇑*e*P		**Pn**	**08 41 15.9**	**+2.0**
	baz=311							
NMLH	**Miaoli**	**1.00**	**295**	⇑*e*P		**Pn**	**08 41 15.1**	**+1.1**
	baz=296							
NMLH				*e*S		**Sb**	**08 41 27.8**	**+1.3**
	baz=296							
WJS	**Zhushan**	**1.01**	**254**	⇑P		**Pb**	**08 41 14.3**	**+0.8**
	baz=258							
WJS				S		**Sb**	**08 41 28.2**	**+1.5**
	baz=258							
HSN	**Hsinchu**	**1.01**	**313**	*e*P		**Pg**	**08 41 14.0**	**+0.5**
	baz=313							
TCU	**Taichung**	**1.01**	**272**	⇑*e*P		**Pn**	**08 41 15.3**	**+1.1**
	baz=270							
TCU				*e*S		**Sn**	**08 41 30.8**	**+2.4**
	baz=270							
NCUH	**Zhongli**	**1.01**	**328**	⇑*e*P		**Pn**	**08 41 15.7**	**+1.6**
	baz=326							
NCUH				*e*S		**Sn**	**08 41 32.4**	**+4.0**
	baz=326							
FULB	**Fuli**	**1.01**	**206**	⇑P		**Pb**	**08 41 13.9**	**+0.3**
	baz=231							
FULB				S		**Sb**	**08 41 27.9**	**+1.0**
	baz=231							
WNT1	**Nantou City**	**1.03**	**259**	*e*S		**Sn**	**08 41 31.2**	**+2.4**
	baz=262							
WNT	**Mingjian**	**1.03**	**257**	⇓*e*P		**Pn**	**08 41 15.2**	**+0.8**
	baz=261							
WNT				*e*S		**Sn**	**08 41 30.3**	**+1.5**
	baz=261							
TNOU	**National Taiwa**	**1.03**	**360**	⇑P		**Pn**	**08 41 15.3**	**+0.8**
	baz=356							
TNOU				*e*S		**Sn**	**08 41 29.8**	**+0.9**
	baz=356							
TWS1	**Kuangyinshan**	**1.04**	**341**	⇑*e*P		**Pn**	**08 41 16.0**	**+1.5**
	baz=337							
YM01	**YM01**	**1.05**	**349**	⇑P		**Pn**	**08 41 15.8**	**+1.1**
	baz=346							
YM01				S		**Sn**	**08 41 29.6**	**+0.2**
	baz=346							
WDJ	**Dajia District**	**1.07**	**283**	*e*P		**Pn**	**08 41 16.1**	**+1.2**
	baz=294							
WDJ				*e*S		**Sn**	**08 41 32.8**	**+3.0**
	baz=294							
ALS	**Alishan**	**1.08**	**236**	⇓P		**Pg**	**08 41 14.8**	**+0.1**
	baz=

YM08 eS Sn 08 41 32.4 +2.2
baz=348
NTST Danshui 1.09 344 ⇑P Pn 08 41 17.2 +1.9
baz=349
NTST eS Sn 08 41 32.9 +2.6
baz=349
NWRT Kuosheng 1.09 354 eP Pn 08 41 17.3 +2.1
baz=341
NWRT eS Sn 08 41 33.4 +3.0
baz=341
EHD Haiduan 1.09 209 ⇑P Pg 08 41 14.3 -0.8
baz=217
EHD eS Sb 08 41 30.4 +1.2
baz=217
ANP Anpu 1.10 347 P Pn 08 41 16.8 +1.3
baz=345
ANP S Sn 08 41 32.2 +1.6
baz=345
WYL Yuanlin Townsh 1.11 262 eP Pg 08 41 15.4 +0.1
baz=267
WYL eS Sg 08 41 30.5 +0.7
baz=267
JYNG Yonagunijimaku 1.11 72 A A 08 41 16.9
comp=E,3.0nm,8.9s,comp=N,4.0nm,4.3s
NHW Xinwu Township 1.11 323 eP Pb 08 41 15.8 +0.5
baz=322
NHW eS Sn 08 41 33.7 +2.8
baz=322
WCHH Zhanghua 1.12 269 eP Pg 08 41 15.1 -0.5
baz=272
WCHH eS Sg 08 41 30.1 0.0
baz=272
ECS Chishang 1.14 207 eP Pg 08 41 15.8 0.0
baz=217
ELDTW Lidau 1.16 218 P Pg 08 41 14.9 -1.4
baz=224
YOJ Yonaguni jima 1.17 72 P Pn 08 41 20.4 +4.0
YOJ Yonaguni jima 1.17 72 ⇑P Pn 08 41 17.8 +1.4
baz=64
YOJ eS Sn 08 41 39.5 +7.1
baz=64
YOJ Yonaguni jima 1.17 72 P Pn 08 41 17.6 +1.2
YOJ Yonaguni jima 1.17 72 A A 08 41 17.6
comp=E,3.0nm,2.2s,comp=N,4.0nm,2.5s
WGK Gukeng 1.20 249 ⇑P Pn 08 41 17.8 +1.1
baz=255
WGK eS Sn 08 41 35.3 +2.4
baz=255
WDLH Douliu 1.21 250 eP Pn 08 41 18.3 +1.4
baz=256
WDLH eS Sn 08 41 36.2 +2.8
baz=256
EDH Donghe 1.22 201⇑eP Pg 08 41 15.4 -1.9
baz=227
EDH eS Sb 08 41 34.0 +1.3
baz=227
WCKO Fanlu 1.27 238 ⇓P Pg 08 41 18.9 +0.5
baz=245
WCKO eS Sn 08 41 38.1 +3.3
baz=245
WRL Guolierlin Hig 1.30 261 ⇑P Pn 08 41 19.1 +1.0
baz=266
WRL eS Sn 08 41 38.6 +3.1
baz=266
STYH Taoyuan 1.31 225 P Pn 08 41 18.2 -0.1
baz=233
STYH eS Sb 08 41 35.4 -0.2
baz=233
RLNB Erlin 1.32 261 P Pg 08 41 19.8 +0.4
baz=266
RLNB eS Sn 08 41 38.4 +2.4
baz=266
CHN4 Tsaushan 1.33 235 ⇑P Pb 08 41 19.6 +0.7
baz=243
CHN4 eS Sn 08 41 40.0 +3.8
baz=243
CHN2 Minshiung 1.33 245 eP Pn 08 41 18.5 0.0
baz=251
CHN2 eS Sn 08 41 39.6 +3.4
baz=251
TPUB Ta-pu 1.33 233 P Pg 08 41 19.8 +0.3
TPUB Ta-pu 1.33 233 ⇑P Pn 08 41 19.3 +0.7
baz=240
TPUB S Sb 08 41 37.1 +1.1
baz=240
STYT Tauyuan 1.33 225 ⇑P Pn 08 41 18.6 0.0
baz=233
STYT eS Sb 08 41 36.8 +0.6
baz=233
LONT Longtian 1.34 207 eP Pg 08 41 20.9 +1.2
baz=216
LONT eS Sb 08 41 36.7 +0.4
baz=216
WTK Tuku 1.34 252 ⇓P Pb 08 41 20.1 +0.8
baz=258
WTK S Sn 08 41 39.2 +2.6
baz=258
WTP Ta-pu 1.38 231 ⇑P Pg 08 41 20.8 +0.4
baz=239
WTP eS Sn 08 41 41.1 +3.7
baz=239
WTCT Ta-ch'eng 1.40 260 eP Pn 08 41 19.3 -0.2
baz=264
TWGBT Beinan 1.44 207 P Pg 08 41 21.9 +0.2
TWGBT Beinan 1.44 207 eP Pn 08 41 20.4 +0.3
baz=216
TWGBT eS Sb 08 41 39.5 +0.2
baz=216
TWG Pinlang 1.44 207 P Pn 08 41 20.3 +0.3
baz=216
TWG eS Sb 08 41 39.3 +0.1
baz=216
TWK Hsinying 1.45 235 eP Pb 08 41 21.9 +0.8
baz=242
TWK eS Sb 08 41 41.3 +1.6
baz=242
LDUT Ludao 1.46 191 eP Pn 08 41 20.9 +0.5
baz=184
LDUT eS Sb 08 41 40.4 +0.6
baz=184
CHN1 Nanshi 1.47 232 eP Pb 08 41 21.9 +0.5
baz=240
SNST Tainan City 1.48 233 ⇑P Pb 08 41 21.9 +0.4
baz=241
SNST S Sg 08 41 42.8 +1.3
baz=241
SGST Jiashian 1.50 227 P Pn 08 41 22.1 +1.2
baz=236
SGST eS Sn 08 41 41.0 +0.4
baz=236
WSF Szhu 1.50 252 eP Pn 08 41 20.6 -0.3
baz=258
WSF eS Sg 08 41 43.9 +1.5
baz=258
SLGT Liugui 1.52 223⇓eP Pn 08 41 21.8 +0.5
baz=232
SLGT eS Sn 08 41 40.6 -0.5
baz=232
PCYT Pengchaiyu 1.53 10 ⇓P Pg 08 41 23.8 +0.3
baz=344
PCYT eS Sg 08 41 44.0 +0.6
baz=344
WSL Shuilin Townsh 1.54 248 P Pb 08 41 23.3 +0.8
baz=254
WSL eS Sg 08 41 46.1 +2.5
baz=254
ICHU Yijhu 1.57 242 ⇑P Pn 08 41 23.0 +1.2
baz=249
ICHU eS Sg 08 41 46.7 +2.2
baz=249
CHN8 Yiju 1.63 242 P Pb 08 41 24.5 +0.4
baz=250
CHN8 S Sb 08 41 46.6 +1.9
baz=250
ECL Taimali 1.69 207 eP Pn 08 41 23.5 0.0
baz=218
ECL eS Sn 08 41 46.0 +0.9
baz=218
SCST Cishan 1.70 224 eP Pb 08 41 26.1 +0.8
baz=233
SCST eS Sg 08 41 51.4 +2.7
baz=233
SHHT Tainan City 1.71 231 eS Sg 08 41 53.3 +4.4
baz=239
SSD Sandimen 1.72 218 eP Pn 08 41 24.1 +0.2
baz=219
SCLT Jiali 1.73 238⇑eP Pn 08 41 23.6 -0.4
baz=245

TSMG Majia 1.75 217 eP Pb 08 41 25.8 -0.3
baz=226
TSMG eS Sg 08 41 50.6 +0.4
baz=226
IRIF Iriomote-Funau 1.79 82 eS Sg 08 41 52.5 +0.8
TSCK Chigu Township 1.83 239 eP Pn 08 41 25.9 +0.6
baz=246
MASBT Mashibuluo 1.83 216 eP Pn 08 41 26.1 +0.7
baz=224
MASBT eS Sn 08 41 49.6 +1.0
baz=224
EAST Anshuo 1.92 207 eS Sn 08 41 51.9 +1.0
baz=218
TAWH Dawu Township 1.95 205 eP Pn 08 41 28.1 +1.1
baz=217
TAWH eS Sn 08 41 52.9 +1.4
baz=217
SCZT Fangliau 2.04 212 P Pn 08 41 29.8 +1.6
baz=220
SCZT eS Sn 08 41 55.1 +1.5
baz=220
JKRS Kuro-shima 2.04 86 eP Pg 08 41 33.0 -0.1
SLIU Shizi 2.09 206 eS Sn 08 41 57.5 +2.5
baz=206
LYUB Lan-yu 2.11 185 eP Pn 08 41 30.4 +1.2
baz=181
LYUB eS Sn 08 41 55.9 +0.4
baz=181
PHUB P'eng-hu 2.11 254 eP Pn 08 41 31.3 +2.0
baz=260
PHUB eS Sn 08 41 58.7 +3.2
baz=260
PNG Penghu 2.11 256 eP Pn 08 41 31.2 +1.9
baz=262
PNG eS Sn 08 41 58.6 +3.1
baz=262
WDGT Dungji 2.12 247 eP Pn 08 41 30.6 +1.2
baz=240
WDGT eS Sn 08 41 59.1 +3.3
baz=240
JIJ Ishigaki jima 2.17 83 eP Pb 08 41 32.0 -1.3
VWUC VWUC 2.30 293 eP Pn 08 41 32.4 +0.6
baz=293
VWUC eS Sn 08 41 59.5 -0.7
baz=293
VCHM Qimei 2.34 248 eP Pn 08 41 33.9 +1.5
baz=240
VCHM eS Sn 08 42 01.4 +0.3
baz=240
TWK1 Hengchun 2.34 203 eP Pn 08 41 33.7 +1.3
baz=214
TWK1 eS Sn 08 42 03.1 +1.9
baz=214
TWKBT Hengchun 2.34 203 eP Pn 08 41 34.0 +1.6
baz=214
TWKBT eS Sn 08 42 01.4 +0.2
baz=214
TSEB Hengchuen, Pin 2.35 200 eP Pn 08 41 33.8 +1.3
baz=205
JISG Ishigakijimahi 2.35 78 eP Pb 08 41 33.9 -2.6
PTMZ Houxiangcun 2.59 291 eP Pn 08 41 35.5 -0.4
baz=291
PTMZ eS Sn 08 42 07.5 +0.1
baz=291
MATB Ma-tsu 2.63 321 eP Pn 08 41 38.0 +1.6
baz=316
MATB eS Sn 08 42 09.4 +1.1
baz=316
MSUT Lienchiang 2.65 321 eP Pn 08 41 38.7 +2.0
baz=317
MSUT eS Sn 08 42 11.7 +2.8
baz=317
LYJJ Jianjiangzhen 3.04 323 eP Pn 08 41 42.6 +0.6
baz=318
LYJJ eS Sn 08 42 20.3 +1.8
baz=318
KNM Kinmen 3.07 276 eP Pn 08 41 45.1 +2.6
baz=279
KNMB Chin-men Tao 3.12 277 eP Pn 08 41 44.6 +1.5
baz=279
XPSS Dashiqiu 3.15 333 eP Pn 08 41 44.6 +1.0
baz=327
XPSS eS Sn 08 42 23.6 +2.3
baz=327
MHZQ Yeshan 3.19 309 eP Pn 08 41 45.0 +0.9
baz=304
AXDP Jialang 3.56 284 eP Pn 08 41 50.2 +1.0
baz=284
AXDP eS Sn 08 42 30.4 -0.9
baz=284
SXFK Yanhouchang 4.38 302 eP Pn 08 42 01.4 +0.8
baz=300
SXFK eS Sn 08 42 52.3 +0.6
baz=300
JNU Nakatsue 12.01 40 LR LR 08 49 00.9
comp=N,82nm,18.5s,baz=230,slow=39
KSRS Korea Array 14.30 20 Pn P 08 44 21.4 -2.3
comp=N,0.2nm,0.3s,baz=205,slow=11,SNR=3.7
KSRS LR LR 08 50 15.4
comp=N,58nm,19.7s,baz=210,slow=39
comp=N,0.4nm,0.6s
JHJ Hachijo jima 2 18.15 56 LR LR 08 53 06.9
comp=N,37nm,19.0s,baz=129,slow=39
CMAR Chiang Mai Arr 22.00 260 LR LR 08 54 08.6
comp=N,17nm,18.3s,baz=260,slow=37
ASAJ Asahikawa 26.23 35 LR LR 08 55 43.9
comp=N,30nm,22.0s,baz=3.0,slow=33
KLR Kul'dur 26.27 15 LR LR 08 58 01.0
comp=N,46nm,20.5s,baz=205,slow=39
YAK Yakutsk 38.28 6 LR LR 09 06 52.0
comp=N,32nm,19.0s,baz=116,slow=40
MKAR Makanchi Array 38.77 316 P P 08 48 15.0 -3.5
comp=N,0.5nm,1.0s,baz=101,slow=9.8,SNR=2.7
comp=N,0.5nm,1.0s
ZALV Zalesovo Beam 40.60 327 P P 08 48 29.9 -3.7
comp=N,0.3nm,0.3s,baz=114,slow=6.5,SNR=1.4
comp=N,0.3nm,0.3s
WRA Warramunga Arr 45.47 163 P P 08 49 11.7 -1.6
comp=N,0.6nm,0.9s,baz=345,slow=9.3,SNR=1.0
comp=N,0.6nm,0.9s
ASAR Alice Springs 48.93 165 P P 08 49 39.6 -0.7
comp=N,0.4nm,1.0s,baz=347,slow=12,SNR=2.7
comp=N,0.4nm,1.0s
DZM Mont Dzumac 63.19 133 LR LR 09 14 57.7
comp=N,176nm,21.8s,baz=29,slow=32
YKA Yellowknife Ar 82.82 23 P P 08 53 18.1 0.0
comp=N,0.2nm,0.7s,baz=307,slow=5.0,SNR=2.5
comp=N,0.2nm,0.7s

IDC 08 08:50:16.9±2.5, 53°.72N×86°.91E, h0km, mbtmp3.3/2, ML2.5/2, Error ellipse: s-maj=20.8km s-min=12.9km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**282**	I	I	08 57 16.7	
	0.1nm,1.0s,baz=101,slow=346,SNR=10						
ZALV	**Zalesovo Beam**	**1.26**	**282**	Pg	Pg	08 50 40.2	-0.8
	0.8nm,0.3s,baz=99,slow=17,SNR=12						
ZALV				Lg	Lg	08 50 57.1	
	1.2nm,0.3s,baz=101,slow=30,SNR=15						
KURBB	**Kurchatov Arra**	**6.01**	**242**	Pn	Pn	08 51 47.8	+0.8
	0.1nm,0.3s,baz=58,slow=14,SNR=3.0						
KURBB				Sn	Sn	08 52 58.0	+1.5
	0.1nm,0.3s,baz=76,slow=16,SNR=3.4						
KURBB				Lg	Lg	08 53 25.9	
	0.1nm,0.3s,baz=57,slow=29,SNR=2.2						
	2.5nm,0.2s						
MKAR	**Makanchi Array**	**7.53**	**205**	Pn	Pn	08 52 09.2	+1.3
	0.1nm,0.3s,baz=24,slow=16,SNR=7.9						
MKAR				Sn	Sn	08 53 33.6	-0.4
	0.1nm,0.3s,baz=28,slow=28,SNR=3.7						
MKAR				Lg	Lg	08 54 14.6	
	baz=18,slow=35,SNR=2.6						
	0.2nm,0.2s						

IDC 08 08:51:21.3±4.0, 54°.07N×87°.68E, h0km, mbtmp2.3/1, Error ellipse: s-maj=30.9km s-min=18.9km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**267**	I	I	09 00 15.1	
	baz=85,slow=342,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.69**	**267**	Pg	Pn	08 51 50.6	-1.6
	baz=87,slow=14						
ZALV				Lg	Lg	08 52 15.9	
	3.5nm,0.3s,baz=86,slow=26,SNR=8.4						
MKAR	**Makanchi Array**	**8.06**	**207**	Pn	Pn	08 53 21.0	+1.5
	0.1nm,0.6s,baz=26,slow=11,SNR=1.2						
MKAR				Lg	Lg	08 55 37.0	
	baz=23,slow=24,SNR=2.2						

*IDC **08** 08:57:31.9±3.0, 55°.74N×150°.11W, h0km, mb3.3/1, mbtmp3.5/6, ML3.3/5, MS3.4/2, Error ellipse: s-maj=41.0km s-min=29.9km az=5.0*
*NEIC **08** 08:57:32.6±1.6, 55°.91N±0°.09×150°.2W±0°.1, h6km±6km, mb3.9/2, ML3.8/42, ML3.6(AEIC), Error ellipse: s-maj=13.6km s-min=8.0km az=159.0*
*AEIC **08** 08:57:37.6±1.6, 55°.88N±0°.08×150°.1W±0°.1, h12km±6km, Error ellipse: s-maj=12.1km s-min=7.5km az=148.0*
ISC 08 08:57:33.5±1.2, 55°.97N±0°.08×150°.22W±0°.05, h10km, n198, σ0.99/197, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.11**	**308**		**Pn**	**08 58 08.5**	**-0.4**
OHAK	**Old Harbor**	**2.11**	**308**		**Sn**	**08 58 33.7**	**-1.5**
OHAK	**Old Harbor**	**2.11**	**308**	P	**Pn**	**08 58 08.6**	**-0.2**
OHAK	**Old Harbor**	**2.11**	**308**	P	**Pn**	**08 58 08.7**	**-0.2**
	baz=126						
OHAK				S	**Sn**	**08 58 33.7**	**-1.5**
	baz=126						
KDAK	**Kodiak Island**	**2.24**	**325**		**Pn**	**08 58 10.6**	**0.0**
KDAK	**Kodiak Island**	**2.24**	**325**		**Sn**	**08 58 36.7**	**-1.5**
KDAK	**Kodiak Island**	**2.24**	**325**	Pn	**Pn**	**08 58 10.8**	**+0.3**
	10nm,0.3s,baz=150,slow=4.9,SNR=214						
KDAK				Sn	**Sn**	**08 58 33.7**	**-4.5**
	8.5nm,0.3s,baz=227,slow=5.0,SNR=6.8						
KDAK				LR	LR	08 59 21.8	
	comp=Z,275nm,18.4s,baz=187,slow=45						
	59nm,0.5s						
SII	**Sitkinak Islan**	**2.29**	**287**		**Pn**	**08 58 10.6**	**-0.8**
SII				IAML		08 58 49.2	
	comp=N,384nm,0.5s						
SII				IAML		08 58 50.9	
	comp=E,282nm,0.8s						
SII	**Sitkinak Islan**	**2.29**	**287**		**Sn**	**08 58 37.9**	**-1.7**
SII	**Sitkinak Islan**	**2.29**	**287**	P	**Pn**	**08 58 10.5**	**-0.8**
SII	**Sitkinak Islan**	**2.29**	**287**	P	**Pn**	**08 58 10.8**	**-0.5**
	baz=105						
SII				S	**Sn**	**08 58 37.9**	**-1.7**
	baz=105						
Q20K	**Shuyak Island**	**2.90**	**337**	P	**Pn**	**08 58 19.9**	**+0.2**
	baz=155						
Q20K				S	**Sn**	**08 58 53.4**	**-1.2**
	baz=155						
SYI	**Shuyak Island**	**2.90**	**337**	Pn	**Pn**	**08 58 20.0**	**+0.3**
SYI	**Shuyak Island**	**2.90**	**337**		**Sn**	**08 58 53.4**	**-1.1**
CHIR	**Chirikof Islan**	**3.05**	**270**	Pn	**Pn**	**08 58 20.3**	**-1.3**
CHIR	**Chirikof Islan**	**3.05**	**270**	P	**Pn**	**08 58 21.0**	**-0.7**
	baz=87						
CHIR				S	**Sn**	**08 58 55.2**	**-2.9**
	baz=87						
KAHG	**Katmai Hook Gl**	**3.46**	**319**		**Pn**	**08 58 29.1**	**+1.7**
Q19K	**Cape Douglas,**	**3.50**	**329**		**Sn**	**08 58 28.8**	**+0.9**
Q19K	**Cape Douglas,**	**3.50**	**329**	P	**Pn**	**08 58 29.0**	**+1.1**
	baz=147						
KCE	**Katmai Mt Cerb**	**3.54**	**312**		**Pn**	**08 58 30.4**	**+1.8**
ACHA	**Angle Creek He**	**3.58**	**311**		**Pn**	**08 58 30.0**	**+0.9**
CNPM	**China Poot**	**3.61**	**352**		**Pn**	**08 58 29.2**	**-0.3**
CNPM				IAML		08 59 12.9	
	comp=E,143nm,1.0s						
CNPM				IAML		08 59 13.2	
	comp=N,112nm,0.6s						
CNPM	**China Poot**	**3.61**	**352**		**Sn**	**08 59 10.5**	**-1.6**
ANCK	**Angle Creek**	**3.65**	**310**		**Pn**	**08 58 31.1**	**+1.1**
KVTA	**Katmai Vly 10**	**3.67**	**313**		**Pn**	**08 58 31.7**	**+1.4**
KAHC	**Katmai Hardscr**	**3.74**	**318**		**Pn**	**08 58 32.8**	**+1.5**
KAHC	**Katmai Hardscr**	**3.74**	**318**	P	**Pn**	**08 58 32.8**	**+1.5**
	baz=134						
BRSE	**Bradley Lake S**	**3.80**	**356**		**Pn**	**08 58 31.3**	**-0.7**
BRSE					**Sn**	**08 59 14.6**	**-2.1**
BRSE	**Bradley Lake S**	**3.80**	**356**	P	**Pn**	**08 58 31.3**	**-0.7**
	baz=175						
BRSE				S	**Sn**	**08 59 14.6**	**-2.1**
	baz=175						
AUCH	**Augustine Cone**	**3.82**	**334**		**Pn**	**08 58 33.4**	**+1.0**
BRLK	**Bradley Lake**	**3.83**	**355**	Pn	**Pn**	**08 58 31.1**	**-1.3**
BRLK				IAML		08 59 19.2	
	comp=E,79nm,0.8s						
CNTC	**Contact Creek**	**3.85**	**309**		**Pn**	**08 58 33.8**	**+0.9**
Q17K	**Contact Creek**	**3.85**	**309**	P	**Pn**	**08 58 33.8**	**+0.9**
	baz=125						
KELA	**Mount Kelaz**	**3.90**	**312**		**Pn**	**08 58 34.1**	**+0.7**
P19K	**Oil Pt**	**4.03**	**338**		**Pn**	**08 58 35.5**	**+0.3**
P19K				IAML		08 59 27.9	
	comp=E,277nm,0.5s						
P19K	**Oil Pt**	**4.03**	**338**	P	**Pn**	**08 58 36.3**	**+1.0**
	baz=155						
Q23K	**Middleton Isla**	**4.04**	**29**	Pn	**Pn**	**08 58 34.2**	**-1.1**
Q23K	**Middleton Isla**	**4.04**	**29**	P	**Pn**	**08 58 34.6**	**-0.7**
	baz=211						
MID	**Middleton Isla**	**4.05**	**29**	Pn	**Pn**	**08 58 34.0**	**-1.4**
MID	**Middleton Isla**	**4.05**	**29**	P	**Pn**	**08 58 33.5**	**-1.9**
P23K	**Montague Islan**	**4.31**	**19**		**Pn**	**08 58 38.5**	**-0.6**
P23K	**Montague Islan**	**4.31**	**19**	P	**Pn**	**08 58 38.4**	**-0.6**
	baz=200						
O20K	**Slope Mountain**	**4.32**	**344**		**Pn**	**08 58 39.2**	**0.0**
O20K	**Slope Mountain**	**4.32**	**344**	P	**Pn**	**08 58 39.2**	**0.0**
	baz=162						
IVE	**Iliamna Volcan**	**4.33**	**341**		**Pn**	**08 58 39.4**	**0.0**
P18K	**Big Mountain,**	**4.36**	**324**	Pn	**Pn**	**08 58 39.8**	**0.0**
P18K				IAML		08 59 31.7	
	comp=N,54nm,0.5s						
P18K	**Big Mountain,**	**4.36**	**324**	P	**Pn**	**08 58 40.2**	**+0.4**
	baz=140						
Q16K	**King Salmon**	**4.42**	**311**		**Pn**	**08 58 41.1**	**+0.6**
Q16K	**King Salmon**	**4.42**	**311**	P	**Pn**	**08 58 41.1**	**+0.6**
	baz=126						
Q22K	**Cooper Landing**	**4.54**	**3**	Pn	**Pn**	**08 58 41.8**	**-0.3**
Q22K				IAML		08 59 40.6	
	comp=E,162nm,0.7s						
Q22K				IAML		08 59 44.9	
	comp=N,190nm,0.9s						
SLKM	**Skilak Lake**	**4.55**	**360**		**Pn**	**08 58 41.5**	**-0.9**
CHGN	**Chignik**	**4.60**	**278**		**Pn**	**08 58 43.0**	**0.0**
CHGN				IAML		08 59 40.4	
	comp=N,60nm,0.7s						
CHGN				IAML		08 59 42.0	
	comp=E,54nm,1.0s						
P17K	**Kvichak River**	**4.66**	**317**		**Pn**	**08 58 45.0**	**+1.2**
P17K	**Kvichak River**	**4.66**	**317**	P	**Pn**	**08 58 45.0**	**+1.2**
	baz=132						
RED	**Redoubt Volcan**	**4.67**	**344**		**Pn**	**08 58 43.1**	**-0.8**
RSO	**Redoubt South**	**4.70**	**344**	Pn	**Pn**	**08 58 44.6**	**-0.1**
O18K	**Koktuh Hills**	**4.72**	**328**	Pn	**Pn**	**08 58 44.7**	**0.0**
O18K				IAML		08 59 42.7	
	comp=E,57nm,0.6s						
O18K				IAML		08 59 57.0	
	comp=N,39nm,1.1s						
O18K	**Koktuh Hills**	**4.72**	**328**	P	**Pn**	**08 58 45.1**	**+0.4**
	baz=144						
O19K	**Port Alsworth**	**4.77**	**335**		**Pn**	**08 58 45.7**	**+0.5**
O19K	**Port Alsworth**	**4.77**	**335**	IAML		08 59 45.2	
	comp=N,119nm,0.4s						
O19K	**Port Alsworth**	**4.77**	**335**	P	**Pn**	**08 58 45.7**	**+0.5**
	baz=151						
HIN	**Hinchinbrook I**	**4.86**	**22**	Pn	**Pn**	**08 58 46.6**	**0.0**
HIN				IAML		08 59 43.3	
	comp=N,104nm,1.3s						
HIN				IAML		08 59 45.5	
	comp=E,100nm,1.6s						
KAIM	**Kayak Island**	**5.03**	**35**	Pn	**Pn**	**08 58 48.2**	**-0.7**
KAIM				IAML		09 01 14.8	
	comp=E,143nm,3.3s						
KAIM	**Kayak Island**	**5.03**	**35**	P	**Pn**	**08 58 48.4**	**-0.5**
	baz=219						
RC01	**Rabbit Creek A**	**5.14**	**3**		**Pn**	**08 58 50.0**	**-0.5**
RC01	**Rabbit Creek A**	**5.14**	**3**	IAML		08 59 52.0	
	comp=E,48nm,0.5s						
RC01				IAML		08 59 55.0	
	comp=N,35nm,0.6s						
RC01	**Rabbit Creek A**	**5.14**	**3**	P	**Pn**	**08 58 49.9**	**-0.5**
	baz=182						
EYAK	**Cordova Ski Ar**	**5.16**	**25**		**Pn**	**08 58 50.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.16**	**25**	P	**Pn**	**08 58 50.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.16**	**25**	P	**Pn**	**08 58 50.6**	**-0.1**
	baz=208						
P16K	**Nushagak River**	**5.20**	**309**		**Pn**	**08 58 52.2**	**+1.0**

P16K	**Nushagak River**	**5.20**	**309**	P		**Pn**	**08 58 52.2**	**+1.0**
	baz=123							
O17K	**Koliganek Bris**	**5.29**	**319**			**Pn**	**08 58 53.1**	**+0.6**
O17K	**Koliganek Bris**	**5.29**	**319**	P		**Pn**	**08 58 53.1**	**+0.6**
	baz=133							
RAGM	**Ragged Mountai**	**5.31**	**31**			**Pn**	**08 58 52.3**	**-0.6**
RAGM				IAML			09 00 06.3	
	comp=E,92nm,2.1s							
N20K	**Mount Spurr**	**5.35**	**350**	P		**Pn**	**08 58 52.8**	**-0.6**
	baz=168							
SPCR	**Spurr Chakacha**	**5.35**	**350**			**Pn**	**08 58 52.8**	**-0.6**
N19K	**Bonanza Creek**	**5.35**	**337**	Pn		**Pn**	**08 58 53.8**	**+0.4**
N19K	**Bonanza Creek**	**5.35**	**337**	P		**Pn**	**08 58 53.3**	**-0.2**
	baz=153							
SUCK	**Suckling Hills**	**5.35**	**37**			**Pn**	**08 58 53.1**	**-0.3**
SUCK				IAML			09 00 10.0	
	comp=E,70nm,2.5s							
SUCK				IAML			09 00 14.8	
	comp=N,76nm,2.8s							
HMT	**Hamilton**	**5.40**	**33**			**Pn**	**08 58 53.7**	**-0.3**
SPCP	**Crater Peak Br**	**5.41**	**350**			**Pn**	**08 58 54.1**	**-0.2**
NICHA	**Nichawak Mount**	**5.41**	**35**			**Pn**	**08 58 53.9**	**-0.3**
GOAT	**Goat Mountain**	**5.46**	**30**			**Pn**	**08 58 55.0**	**+0.2**
KNK	**Knik Glacier**	**5.54**	**9**			**Pn**	**08 58 57.2**	**+1.3**
O16K	**Kokwok River B**	**5.56**	**314**			**Pn**	**08 58 57.2**	**+1.0**
O16K	**Kokwok River B**	**5.56**	**314**	P		**Pn**	**08 58 57.2**	**+1.0**
	baz=128							
N18K	**Kilae Creek**	**5.59**	**330**			**Pn**	**08 58 56.9**	**+0.3**
N18K	**Kilae Creek**	**5.59**	**330**	P		**Pn**	**08 58 56.9**	**+0.3**
	baz=145							
BERG	**Berg Lake**	**5.62**	**35**			**Pn**	**08 58 56.2**	**-0.8**
GRIN	**Grindle Hills**	**5.66**	**37**			**Pn**	**08 58 57.4**	**-0.2**
PMR	**Palmer**	**5.67**	**5**	P		**Pn**	**08 58 58.8**	**+1.1**
SNH	**Sunshine Point**	**5.76**	**40**			**Pn**	**08 58 59.0**	**0.0**
KHIT	**Khitrov Hills**	**5.80**	**36**			**Pn**	**08 58 59.1**	**-0.6**
BMRM	**Bremner River**	**5.81**	**28**			**Pn**	**08 58 59.6**	**-0.2**
BMRM	**Bremner River**	**5.81**	**28**	P		**Pn**	**08 58 59.6**	**-0.2**
	baz=212							
SVW2	**Sparrevohn**	**5.86**	**334**	Pn		**Pn**	**08 59 00.5**	**+0.1**
SVW2	**Sparrevohn**	**5.86**	**334**	P		**Pn**	**08 59 00.8**	**+0.5**
GHO	**Glory Hole Cre**	**5.86**	**6**			**Pn**	**08 59 01.2**	**+0.8**
N17K	**Nushagak Hills**	**5.87**	**324**			**Pn**	**08 59 01.1**	**+0.7**
N17K	**Nushagak Hills**	**5.87**	**324**	P		**Pn**	**08 59 01.1**	**+0.7**
	baz=138							
WAX	**Waxell Ridge**	**5.95**	**38**			**Pn**	**08 59 01.3**	**-0.3**
KLU	**Klutina**	**5.97**	**20**			**Pn**	**08 59 01.6**	**-0.3**
KLU	**Klutina**	**5.97**	**20**	P		**Pn**	**08 59 01.8**	**-0.1**
	baz=203							
BARK	**Barkley Ridge**	**6.04**	**39**			**Pn**	**08 59 02.5**	**-0.4**
SCM	**Sheep Creek Mo**	**6.07**	**13**			**Pn**	**08 59 03.7**	**+0.4**
SCM	**Sheep Creek Mo**	**6.07**	**13**	P		**Pn**	**08 59 03.7**	**+0.4**
	baz=195							
CRQM	**Cirque**	**6.08**	**35**			**Pn**	**08 59 03.1**	**-0.4**
CRQE	**Cirque**	**6.09**	**35**	P		**Pn**	**08 59 03.1**	**-0.5**
	baz=220							
O15K	**Ungalikthiuk R**	**6.09**	**306**			**Pn**	**08 59 04.5**	**+1.0**
O15K	**Ungalikthiuk R**	**6.09**	**306**	P		**Pn**	**08 59 04.5**	**+1.0**
	baz=118							
TGL	**Tana Glacier**	**6.18**	**36**			**Pn**	**08 59 04.5**	**-0.2**
ISLE	**Juniper Island**	**6.23**	**39**			**Pn**	**08 59 05.0**	**-0.5**
BAGL	**Bagley Icefiel**	**6.24**	**40**			**Pn**	**08 59 05.0**	**-0.5**
M18K	**Stony River**	**6.26**	**335**			**Pn**	**08 59 05.6**	**-0.2**
M18K	**Stony River**	**6.26**	**335**	P		**Pn**	**08 59 05.6**	**-0.2**
	baz=150							
VRDI	**Verde Repeater**	**6.35**	**31**	Pn		**Pn**	**08 59 06.5**	**-0.7**
N25K	**Chitina, Valde**	**6.36**	**25**			**Pn**	**08 59 07.5**	**+0.2**
N25K	**Chitina, Valde**	**6.36**	**25**	P		**Pn**	**08 59 07.2**	**0.0**
	baz=209							
N16K	**Nishlik Lake**	**6.39**	**319**			**Pn**	**08 59 09.0**	**+1.4**
N16K	**Nishlik Lake**	**6.39**	**319**	P		**Pn**	**08 59 09.0**	**+1.4**
	baz=132							
GLB	**Gilahina Butte**	**6.42**	**29**	Pn		**Pn**	**08 59 08.1**	**0.0**
KIAG	**Kiagna River**	**6.46**	**36**			**Pn**	**08 59 08.2**	**-0.4**
M24K	**Tolsona, Glenn**	**6.50**	**17**			**Pn**	**08 59 10.5**	**+1.4**
M24K	**Tolsona, Glenn**	**6.50**	**17**	P		**Pn**	**08 59 09.9**	**+0.8**
	baz=200							
SAMH	**Samovar Hills**	**6.52**	**46**			**Pn**	**08 59 09.8**	**+0.4**
GRNC	**Granite Creek**	**6.53**	**39**			**Pn**	**08 59 09.3**	**-0.4**
TABL	**Table Mountain**	**6.56**	**43**			**Pn**	**08 59 09.7**	**-0.4**
MCARA	**McCarthy VSAT**	**6.60**	**32**	Pn		**Pn**	**08 59 10.4**	**-0.1**
MCARA	**McCarthy VSAT**	**6.60**	**32**	P		**Pn**	**08 59 10.3**	**-0.1**
	baz=217							
PTPK	**Patty Peak**	**6.62**	**35**			**Pn**	**08 59 10.6**	**-0.3**
L19K	**White Mountain**	**6.67**	**341**	P		**Pn**	**08 59 11.4**	**-0.1**
	baz=157							
PCA	**Pinnacle**	**6.71**	**48**			**Pn**	**08 59 11.8**	**-0.3**
PINM	**Pinnacle**	**6.71**	**48**	P		**Pn**	**08 59 11.8**	**-0.3**
	baz=235							
N15K	**Kwethluk River**	**6.72**	**313**			**Pn**	**08 59 13.7**	**+1.6**
N15K	**Kwethluk River**	**6.72**	**313**	P		**Pn**	**08 59 13.7**	**+1.6**
	baz=125							
WASW	**Wrangell South**	**6.75**	**25**			**Pn**	**08 59 13.7**	**+1.0**
WACK	**Wrangell Chich**	**6.76**	**24**			**Pn**	**08 59 13.9**	**+1.1**
O14K	**Tigyukauivet M**	**6.79**	**304**			**Pn**	**08 59 14.6**	**+1.6**
O14K	**Tigyukauivet M**	**6.79**	**304**	P		**Pn**	**08 59 14.6**	**+1.6**
	baz=115							
BARN	**Barnard Glacie**	**6.79**	**38**			**Pn**	**08 59 13.1**	**-0.1**
M16K	**Timber Creek**	**6.83**	**322**			**Pn**	**08 59 14.9**	**+1.3**
M16K	**Timber Creek**	**6.83**	**322**	P		**Pn**	**08 59 14.9**	**+1.3**
	baz=134							
CTG	**Chitna Glacier**	**6.84**	**39**	P		**Pn**	**08 59 13.5**	**-0.3**
	baz=226							
CTGM	**Chitina Glacie**	**6.84**	**39**	Pn		**Pn**	**08 59 13.2**	**-0.7**
LOGN	**Logan Glacier**	**6.87**	**41**			**Pn**	**08 59 13.4**	**-0.8**
PNL	**Peninsula**	**6.87**	**53**			**Pn**	**08 59 13.8**	**-0.3**
PNL	**Peninsula**	**6.87**	**53**	P		**Pn**	**08 59 13.9**	**-0.3**
	baz=241							
BCPM	**Bancas Point**	**6.90**	**50**			**Pn**	**08 59 14.5**	**-0.1**
HARP	**HAARP**	**6.95**	**20**			**Pn**	**08 59 16.3**	**+1.0**
HARP	**HAARP**	**6.95**	**20**	P		**Pn**	**08 59 16.3**	**+1.0**
	baz=204							
M15K	**Kasigluk River**	**7.27**	**315**			**Pn**	**08 59 20.6**	**+1.0**
M15K	**Kasigluk River**	**7.27**	**315**	P		**Pn**	**08 59 20.5**	**+1.0**
	baz=126							
DHY	**Denali Highway**	**7.28**	**10**			**Pn**	**08 59 20.6**	**+0.7**
N14K	**Kuskokwak Cree**	**7.28**	**308**			**Pn**	**08 59 20.9**	**+1.2**
N14K	**Kuskokwak Cree**	**7.28**	**308**	P		**Pn**	**08 59 20.9**	**+1.2**
	baz=118							
L17K	**Donlin**	**7.45**	**329**			**Pn**	**08 59 23.2**	**+1.0**
L17K	**Donlin**	**7.45**	**329**	P		**Pn**	**08 59 23.2**	**+1.0**
	baz=142							
L16K	**Owhat River**	**7.49**	**324**			**Pn**	**08 59 23.7**	**+1.0**
L16K	**Owhat River**	**7.49**	**324**	P		**Pn**	**08 59 23.5**	**+0.8**
	baz=136							
O29M	**Mount Kennedy**	**7.54**	**50**			**Pn**	**08 59 23.4**	**0.0**
O29M	**Mount Kennedy**	**7.54**	**50**	P		**Pn**	**08 59 23.4**	**0.0**
	baz=239							
TTA	**Tatalina**	**7.58**	**340**	P		**Pn**	**08 59 24.9**	**+0.9**
P29M	**Windy Craggy**	**7.61**	**56**			**Pn**	**08 59 23.6**	**-0.8**
P29M	**Windy Craggy**	**7.61**	**56**	P		**Pn**	**08 59 23.6**	**-0.8**
	baz=246							
M14K	**Bethel**	**7.81**	**313**			**Pn**	**08 59 28.2**	**+1.2**
L26K	**Log Cabin Wild**	**7.89**	**23**			**Pn**	**08 59 29.0**	**+0.8**
YUK6	**Outpost Mounta**	**7.96**	**46**			**Pn**	**08 59 29.6**	**+0.3**
YUK6	**Outpost Mounta**	**7.96**	**46**	P		**Pn**	**08 59 29.6**	**+0.3**
	baz=236							
BVCY	**Beaver Creek**	**8.05**	**33**			**Pn**	**08 59 31.3**	**+1.0**
BVCY	**Beaver Creek**	**8.05**	**33**	P		**Pn**	**08 59 31.3**	**+1.0**
	baz=220							
YUK4	**Talbot Arm**	**8.08**	**43**	P		**Pn**	**08 59 32.8**	**+1.9**
	baz=232							
P30M	**Million Dollar**	**8.17**	**54**			**Pn**	**08 59 32.7**	**+0.7**
P30M	**Million Dollar**	**8.17**	**54**	P		**Pn**	**08 59 32.7**	**+0.7**
	baz=244							
HYT	**Haines Junctio**	**8.26**	**49**	Pn		**Pn**	**08 59 33.5**	**+0.2**
ILAR	**Eielson Array**	**8.99**	**9**	Pn		**Pn**	**08 59 44.2**	**+1.1**
	comp=N,0.2nm,0.3s,baz=190,slow=13,SNR=8.5							
ILAR				Sn		**Sn**	**09 01 19.9**	**-4.4**
	comp=N,0.4nm,0.3s,baz=201,slow=16,SNR=8.3							
	comp=N,0.4nm,0.5s							
N31M	**Braeburn, Yuko**	**9.31**	**48**			**Pn**	**08 59 47.7**	**0.0**
WHY	**Whitehorse**	**9.33**	**53**			**Pn**	**08 59 48.6**	**+0.6**
P33M	**Teslin, Yukon**	**10.13**	**58**			**Pn**	**08 59 58.4**	**-0.6**
M31M	**Drury Creek, Y**	**10.25**	**46**			**Pn**	**09 00 01.2**	**+0.8**
DLBC	**Dease Lake**	**11.22**	**69**	Pn		**Pn**	**09 00 14.4**	**+0.6**
	comp=N,0.2nm,0.3s,baz=262,slow=12,SNR=2.0							
	comp=N,0.7nm,0.3s							
RDOG	**Red Dog Mine**	**13.47**	**339**			**Pn**	**09 00 45.3**	**+0.9**
F31M	**Tsiigehtchic**	**13.84**	**27**	Pn		**Pn**	**09 00 49.2**	**-0.2**
INK	**Inuvik**	**14.55**	**25**	Pn		**Pn**	**09 00 59.3**	**+0.1**
INK	**Inuvik**	**14.55**	**25**	Pn		**Pn**	**09 01 00.2**	**+1.1**
	baz=202,slow=16,SNR=6.9							
	comp=N,1.5nm,0.8s							
C36M	**Paulatuk**	**17.78**	**31**			**Pn**	**09 01 41.0**	**+0.3**
C36M				IAmb		IAmb	09 01 45.6	
	comp=Z,9.3nm,1.1s							
YKAB2	**New Yellowknif**	**19.15**	**56**	P		**P**	**09 01 56.8**	**+0.2**
YKA	**Yellowknife Ar**	**19.15**	**55**			**P**	**09 01 56.4**	**-0.2**
YKA	**Yellowknife Ar**	**19.15**	**55**	P		**P**	**09 01 57.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=265,slow=10,SNR=22							
	comp=Z,1.0nm,0.8s							
A36M	**Sachs Harbour**	**19.18**	**24**	P		**P**	**09 01 58.3**	**+1.5**
A36M				IAmb		IAmb	09 02 00.4	
	comp=Z,8.0nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**48.27**	**239**	T		T	09 58 52.0	
	baz=28							
H11N3	**WAKE ISLAND Hy**	**48.28**	**239**	T		T	09 59 03.8	
	baz=28							
H11N1	**WAKE ISLAND Hy**	**48.29**	**239**	T		T	09 58 53.4	
	baz=28							
H11S1	**WAKE ISLAND Hy**	**49.41**	**239**	T		T	10 00 22.9	
	baz=29							
H11S2	**WAKE ISLAND Hy**	**49.42**	**239**	T		T	10 00 24.7	
	baz=29							
H11S3	**WAKE ISLAND Hy**	**49.43**	**239**	T		T	10 00 23.5	
	baz=29							
CMIG	**Matias Romero**	**56.81**	**110**	LR		LR	09 29 47.2	
	comp=Z,91nm,18.3s,baz=213,slow=34							
MKAR	**Makanchi Array**	**68.55**	**324**	P		**P**	**09 08 37.0**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=48,slow=7.8,SNR=2.5							
	comp=Z,0.2nm,0.5s							

IDC 08 09:00:34.5±3.3, 53°.63N×87°.89E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=31.3km s-min=16.8km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**281**	I	I	09 11 10.0	
	baz=98,slow=346,SNR=9.1						
ZALV	**Zalesovo Beam**	**1.85**	**281**	Pg	Pn	09 01 07.5	0.0
	0.6nm,0.3s,baz=99,slow=15,SNR=12						
ZALV				Lg	Lg	09 01 34.1	
	1.1nm,0.3s,baz=100,slow=25,SNR=8.8						
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn	Pn	09 02 11.6	+0.3
	baz=63,slow=14,SNR=3.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.73**	**210**	Pn	Pn	09 02 29.6	+1.4
	0.1nm,0.3s,baz=28,slow=14,SNR=3.6						
MKAR				Lg	Lg	09 04 39.9	
	baz=20,slow=31,SNR=1.7						
	0.1nm,0.4s						

*IDC **08** 09:00:42.9±2.0, 6°.73S×147°.69E, h65km±19km, mb3.8/13, mbtmp4.1/16, MS3.7/19, Error ellipse: s-maj=29.9km s-min=11.9km az=104.0*
*NEIC **08** 09:00:46.2±1.0, 6°.98S±0°.06×147°.37E±0°.10, h65km±5km, mb4.3/21, Error ellipse: s-maj=14.2km s-min=9.2km az=97.0*

ISC 08 09:00:43.6±0.6, 6°.70S±0°.06×147°.4E±0°.1, h63km, n79, σ1821/60, mb4.3/19, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.70**	**186**	Pn	**Pn**	**09 01 23.0**	**-1.7**
PMG	**Port Moresby**	**2.70**	**186**	P	**Pn**	**09 01 24.0**	**-0.7**
PMG	**Port Moresby**	**2.70**	**186**	P	**Pn**	**09 01 24.1**	**-0.7**
PMG	**Port Moresby**	**2.70**	**186**	P	**Pn**	**09 01 24.0**	**-0.7**
	457nm,0.6s,baz=38,slow=5.6,SNR=50						
PMG				S	**Sn**	**09 01 56.8**	**+0.6**
	1µm,0.7s,baz=57,slow=16,SNR=7.3						
MANU	**Manus Island**	**4.63**	**359**	Pn	Pn	09 01 57.6	+6.5
RABL	**Rabaul**	**5.33**	**62**		Pn	09 02 05.5	+4.9
COEN	**Coen**	**8.34**	**210**		**Pn**	**09 02 40.2**	**-1.7**
COEN	**Coen**	**8.34**	**210**	P	**Pn**	**09 02 40.9**	**-1.0**
MTSU	**Mount Surprise**	**11.76**	**195**	P	**Pn**	**09 03 28.6**	**-0.1**
CTA	**Charters Tower**	**13.36**	**185**	P	**Pn**	**09 03 49.5**	**-0.9**
	5.9nm,0.7s,baz=30,slow=14,SNR=4.2						
CTAO	**Charters Tower**	**13.36**	**185**	Pn	**Pn**	**09 03 47.1**	**-3.3**
FAKI	**Fak Fak**	**15.59**	**283**	Pn	**P**	**09 04 22.0**	**-0.7**
FAKI				IAmb	IAmb	09 04 38.0	
	comp=Z,39nm,1.3s						
QIS	**Mount Isa**	**15.73**	**208**	P	**Pn**	**09 04 22.6**	**+1.2**
KDU	**Kakadu**	**15.90**	**247**	P	**Pn**	**09 04 24.0**	**+0.4**
MTN	**Manton Dam**	**17.18**	**248**	P	**Pn**	**09 04 39.4**	**-0.3**
MTN				IAmb	IAmb	09 05 14.3	
	comp=Z,24nm,1.4s						
WB0	**Warramunga Arr**	**18.14**	**223**	P	**P**	**09 04 50.2**	**-0.7**
WR0	**Warramunga Arr**	**18.18**	**222**	P	**P**	**09 04 50.3**	**-1.0**
WR0				IAmb	IAmb	09 05 16.3	
	comp=Z,16nm,0.9s						
WB2	**Warramunga Arr**	**18.29**	**223**		**P**	**09 04 51.9**	**-0.7**
WB2				IAmb	IAmb	09 05 19.1	
	comp=Z,29nm,1.4s						
WRA	**Warramunga Arr**	**18.30**	**223**		**P**	**09 04 52.8**	**+0.1**
WRA	**Warramunga Arr**	**18.30**	**223**	P	**P**	**09 04 51.9**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=47,slow=11,SNR=11						
WRA				PcP	**PcP**	**09 09 20.9**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=33,slow=1.6,SNR=2.4						
EIDS	**Eidsvold**	**18.89**	**170**	Pn	**Pn**	**09 04 59.8**	**-0.4**
EIDS				IAmb	IAmb	09 05 08.5	
	comp=Z,28nm,1.4s						
EIDS	**Eidsvold**	**18.89**	**170**	P	**Pn**	**09 05 00.8**	**+0.6**
QLP	**Quilpie**	**20.00**	**188**	P	**P**	**09 05 11.8**	**+0.6**
GUMO	**Guam**	**20.32**	**353**	LR	LR	09 13 23.1	
	comp=Z,220nm,18.1s,baz=168,slow=37						
KNRA	**Kununurra**	**20.36**	**242**		**P**	**09 05 14.6**	**-0.6**
KNRA				IAmb	IAmb	09 05 18.5	
	comp=Z,25nm,1.0s						
KNRA	**Kununurra**	**20.36**	**242**	P	**P**	**09 05 15.2**	**0.0**
AS01	**Alice Springs**	**21.27**	**216**	P	**P**	**09 05 25.5**	**+0.5**
AS31	**Alice Springs**	**21.30**	**216**	P	**P**	**09 05 24.2**	**-1.1**
ASAR	**Alice Springs**	**21.30**	**216**	P	**P**	**09 05 25.8**	**+0.6**
ASAR	**Alice Springs**	**21.30**	**216**	P	**P**	**09 05 24.3**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=48,slow=9.1,SNR=29						
ASAR				S	**S**	**09 09 21.4**	**+2.7**
	comp=Z,2.2nm,1.0s,baz=29,slow=23,SNR=5.9						
ASAR				LR	LR	09 14 07.8	
	comp=Z,193nm,20.1s,baz=50,slow=38						
	comp=Z,2.1nm,0.5s						
INKA	**Innaminka**	**21.87**	**196**	P	**P**	**09 05 32.0**	**+0.8**
OOD	**Oodnadatta**	**23.75**	**207**	P	**P**	**09 05 51.4**	**+1.1**
ARMA	**Armidale**	**23.92**	**171**	P	**P**	**09 05 51.6**	**-0.4**
ARMA				IAmb	IAmb	09 06 11.6	
	comp=Z,27nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.08**	**240**	P	**P**	**09 05 52.9**	**-0.6**
LCRK	**Leigh Creek**	**25.16**	**199**	P	**P**	**09 06 04.0**	**+0.9**
STKA	**Stephens Creek**	**25.63**	**192**	P	**P**	**09 06 06.6**	**-0.9**
STKA	**Stephens Creek**	**25.63**	**192**	P	**P**	**09 06 06.5**	**-0.9**
	comp=Z,9.6nm,0.9s,baz=354,slow=9.1,SNR=19						
	comp=Z,9.6nm,0.9s						
BBOO	**Buckleboo**	**28.05**	**201**	P	**P**	**09 06 28.1**	**-1.1**
BBOO				IAmb	IAmb	09 06 30.4	
	comp=Z,12nm,1.1s						
FORT	**Forrest**	**30.07**	**215**	P	**P**	**09 06 47.0**	**0.0**
PSA00	**Pilbara Seismi**	**30.49**	**238**	P	**P**	**09 06 49.3**	**-1.6**
PSA00				IAmb	IAmb	09 06 51.7	
	comp=Z,4.2nm,1.0s						
JCJ	**Chichijima**	**33.98**	**352**	LR	LR	09 19 23.5	
	comp=Z,92nm,21.7s,baz=92,slow=33						
MORW	**Morawa**	**37.04**	**229**	P	**P**	**09 07 47.2**	**-0.5**
JOW	**Kunigami**	**38.16**	**332**	LR	LR	09 20 21.3	
	comp=Z,115nm,20.7s,baz=118,slow=31						
NWAO	**Narrogin (SRO)**	**38.31**	**223**	P	**P**	**09 07 58.8**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.31**	**223**	LR	LR	09 26 25.1	
	comp=Z,72nm,18.3s,baz=24,slow=40						
LEM	**Lembang**	**39.54**	**267**	LR	LR	09 27 33.3	
	comp=Z,47nm,18.7s,baz=166,slow=40						
URZ	**Urewera**	**41.33**	**144**	LR	LR	09 25 35.1	
	comp=Z,130nm,18.3s,baz=121,slow=36						
LTZ	**Lake Taylor**	**42.09**	**153**	P	**P**	**09 08 28.9**	**-0.6**
MRZ	**Mangatainoka R**	**42.14**	**148**	P	**P**	**09 08 30.7**	**+0.8**
RPZ	**Rata Peaks**	**42.29**	**154**	LR	LR	09 25 13.2	
	comp=Z,141nm,18.6s,baz=320,slow=35						
JNU	**Nakatsue**	**42.62**	**339**	LR	LR	09 23 27.7	
	comp=Z,54nm,20.1s,baz=140,slow=32						
MJAR	**Matsushiro Arr**	**43.88**	**349**	LR	LR	09 25 34.8	
	comp=Z,66nm,19.3s,baz=148,slow=34						
KSRS	**Korea Array**	**47.56**	**339**	P	**P**	**09 09 12.9**	**0.0**
	comp=Z,1.3nm,0.6s,baz=165,slow=10,SNR=6.7						
KSRS				LR	LR	09 26 59.9	
	comp=Z,71nm,21.4s,baz=145,slow=33						
	comp=Z,1.3nm,0.6s						
ASAJ	**Asahikawa**	**50.77**	**355**	LR	LR	09 26 54.5	
	comp=Z,26nm,20.5s,baz=124,slow=31						
USRK	**Ussuriysk Ar.**	**52.55**	**346**	LR	LR	09 30 39.6	
	comp=Z,50nm,18.7s,baz=185,slow=34						
CMAR	**Chiang Mai Arr**	**53.97**	**298**	P	**P**	**09 10 03.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=121,slow=5.4,SNR=1.8						
	comp=Z,1.0nm,0.3s						
PZH	**PanZhiHua**	**55.23**	**309**	P	P	09 10 17.0	+6.3
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,6.1s						
HHC	**Hu-ho-hao-te**	**57.66**	**328**	*e*P	P	09 10 34.4	+6.7
HHC				sP	sP	09 10 58.4	+6.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
PETK	**Petropavlovsk-**	**60.22**	**7**	P	**P**	**09 10 44.9**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=152,slow=6.5,SNR=1.0						
	comp=Z,4.2nm,0.9s						
MA2	**Magadan**	**66.12**	**2**	LR	LR	09 36 05.9	
	comp=Z,38nm,21.7s,baz=142,slow=32						
VNDA	**Vanda**	**71.19**	**177**	P	**P**	**09 11 55.8**	**+0.4**
VNDA				IAmb	IAmb	09 12 25.4	
	comp=Z,9.5nm,1.4s						
VNDA	**Vanda**	**71.19**	**177**	P	**P**	**09 11 53.5**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=315,slow=3.4,SNR=3.7						
	comp=Z,1.6nm,0.8s						
WMQ	**Urumqi**	**73.61**	**319**	*e*P	P	09 12 15.9	+5.5
MKAR	**Makanchi Array**	**78.31**	**320**	P	**P**	**09 12 40.9**	**+3.9**
MKAR	**Makanchi Array**	**78.31**	**320**	P	**P**	**09 12 36.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=110,slow=6.9,SNR=4.0						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**79.83**	**328**	P	**P**	**09 12 44.8**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=111,slow=7.9,SNR=1.0						
	comp=Z,0.8nm,0.4s						
KDAK	**Kodiak Island**	**80.31**	**28**	LR	LR	09 41 20.2	
	comp=Z,70nm,21.3s,baz=291,slow=30						
KURBB	**Kurchatov Arra**	**82.05**	**323**	P	**P**	**09 12 56.5**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=114,slow=4.3,SNR=4.0						
	comp=Z,0.4nm,0.6s						
RC01	**Rabbit Creek A**	**83.16**	**26**	P	**P**	**09 13 05.9**	**+3.3**
RC01				IAmb	IAmb	09 13 50.0	
	comp=Z,3.6nm,1.1s						
QSPA	**South Pole Qui**	**83.27**	**180**	P	**P**	**09 13 02.5**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=7.3,slow=2.1,SNR=8.6						
	comp=Z,3.5nm,0.6s						
ILAR	**Eielson Array**	**85.95**	**23**	P	**P**	**09 13 15.6**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=246,slow=5.2,SNR=2.5						
	comp=Z,0.4nm,0.8s						
NRIK	**Noril'sk**	**86.07**	**342**	P	**P**	**09 13 16.2**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=195,slow=5.0,SNR=1.2						
	comp=Z,0.7nm,0.3s						
BVAR	**Borovoye Array**	**87.59**	**324**	P	**P**	**09 13 24.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=118,slow=5.7,SNR=4.0						
	comp=Z,0.7nm,0.5s						
YBH	**Yreka Blue Hor**	**94.30**	**49**	LR	LR	09 50 49.9	
	comp=Z,78nm,19.3s,baz=304,slow=32						
PFO	**Pinyon Flats O**	**98.74**	**57**	LR	LR	09 52 00.1	
	comp=Z,65nm,20.6s,baz=278,slow=31						
SNAA	**Sanae**	**99.38**	**189**	LR	LR	09 57 30.5	
	comp=Z,106nm,21.5s,baz=166,slow=34						
ELK	**Elko**	**99.88**	**50**	LR	LR	09 54 35.7	
	comp=Z,63nm,18.9s,baz=22,slow=32						
TORD	**Torodi Ar. Bea**	**145.68**	**283**	PKPbc	**PKPab**	**09

0.3nm,0.3s
MKAR **Makanchi Array** 7.97 205 Pn Pn 09 13 04.3 +1.8
0.1nm,0.3s,baz=26,slow=14,SNR=1.6
MKAR Sn Sn 09 14 30.2 -3.2
0.1nm,0.3s,baz=14,slow=18,SNR=1.9
MKAR Lg Lg 09 15 20.7
baz=25,slow=25,SNR=2.4
0.1nm,0.4s

NEIC ***08*** *09:15:09.4±2.1,55°.86N×0°.07×150°.2W±0°.1, h5km±8km, ML3.7/44,ML3.6(AEIC), Error ellipse: s-maj=11.9km s-min=7.9km az=139.0*

IDC ***08*** *09:15:11.7±2.4,55°.93N×149°.96W, h0km, mb3.3/2, mbtmp3.6/7,ML3.2/5,MS3.3/12, Error ellipse: s-maj=39.9km s-min=21.2km az=61.0*

AEIC ***08*** *09:15:15.0±1.9,55°.87N±0°.07×150°.1W±0°.1, h11km±8km, Error ellipse: s-maj=13.9km s-min=2.8km az=137.0*

ISC 08 09:15:11.4±1.0,55°.99N±0°.07×150°.20W±0°.05,h10km, n248,σ0°96/236,MS3.1/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.10**	**307**	Pn	**Pn**	**09 15 46.4**	**-0.3**
OHAK	**Old Harbor**	**2.10**	**307**		**Sn**	**09 16 11.2**	**-1.7**
OHAK	**Old Harbor**	**2.10**	**307**	P	**Pn**	**09 15 46.3**	**-0.3**
OHAK	**Old Harbor**	**2.10**	**307**	P	**Pn**	**09 15 46.3**	**-0.3**
baz=126							
OHAK				S	**Sn**	**09 16 11.2**	**-1.7**
baz=126							
KDAK	**Kodiak Island**	**2.22**	**325**		**Pn**	**09 15 48.4**	**+0.2**
KDAK					**Sn**	**09 16 14.6**	**-1.1**
KDAK	**Kodiak Island**	**2.22**	**325**	Pn	**Pn**	**09 15 48.4**	**+0.2**
12nm,0.3s,baz=152,slow=18,SNR=25							
KDAK				Sn	**Sn**	**09 16 13.8**	**-1.9**
8.9nm,0.3s,baz=286,slow=20,SNR=2.7							
KDAK				LR	LR	09 17 00.1	
comp=Z,512nm,20.6s,baz=185,slow=46 39nm,0.3s							
SII	**Sitkinak Islan**	**2.29**	**286**	Pn	**Pn**	**09 15 48.5**	**-0.7**
SII				IAML		09 16 28.6	
comp=E,367nm,0.6s							
SII				IAML		09 16 29.3	
comp=N,462nm,0.7s							
SII	**Sitkinak Islan**	**2.29**	**286**		**Sn**	**09 16 15.8**	**-1.7**
SII	**Sitkinak Islan**	**2.29**	**286**	P	**Pn**	**09 15 48.6**	**-0.7**
SII	**Sitkinak Islan**	**2.29**	**286**	P	**Pn**	**09 15 48.5**	**-0.7**
baz=105							
SII				S	**Sn**	**09 16 15.8**	**-1.7**
baz=105							
Q20K	**Shuyak Island**	**2.88**	**337**	P	**Pn**	**09 15 57.5**	**+0.2**
baz=155							
Q20K				S	**Sn**	**09 16 32.2**	**+0.2**
baz=155							
SYI	**Shuyak Island**	**2.88**	**337**		**Pn**	**09 15 57.5**	**+0.2**
SYI					**Sn**	**09 16 32.2**	**+0.2**
CHIR	**Chirikof Islan**	**3.06**	**269**		**Sn**	**09 16 33.9**	**-2.4**
CHIR				IAML		09 16 40.6	
comp=E,162nm,1.1s							
CHIR				IAML		09 16 40.6	
comp=N,167nm,0.7s							
CHIR	**Chirikof Islan**	**3.06**	**269**		**Pn**	**09 15 58.5**	**-1.3**
CHIR	**Chirikof Islan**	**3.06**	**269**	P	**Pn**	**09 15 58.5**	**-1.3**
baz=87							
KAHG	**Katmai Hook Gl**	**3.44**	**319**		**Pn**	**09 16 06.8**	**+1.7**
Q19K	**Cape Douglas,**	**3.48**	**329**		**Pn**	**09 16 07.0**	**+1.4**
Q19K					**Sn**	**09 16 45.0**	**-1.9**
Q19K	**Cape Douglas,**	**3.48**	**329**	P	**Pn**	**09 16 07.0**	**+1.4**
baz=147							
Q19K				S	**Sn**	**09 16 45.0**	**-1.9**
baz=147							
KCE	**Katmai Mt Cerb**	**3.53**	**312**		**Pn**	**09 16 08.1**	**+1.7**
ACHA	**Angle Creek He**	**3.57**	**311**		**Pn**	**09 16 07.8**	**+0.9**
CNPM	**China Poot**	**3.59**	**352**		**Pn**	**09 16 06.7**	**-0.3**
CNPM	**China Poot**	**3.59**	**352**	IAML		09 16 50.7	
comp=E,80nm,0.9s							
ANCK	**Angle Creek**	**3.64**	**310**		**Pn**	**09 16 09.0**	**+1.2**
KVTA	**Katmai Vly 10**	**3.66**	**313**		**Pn**	**09 16 09.5**	**+1.4**
KAHC	**Katmai Hardscr**	**3.72**	**318**		**Pn**	**09 16 10.3**	**+1.3**
KAHC	**Katmai Hardscr**	**3.72**	**318**	P	**Pn**	**09 16 10.3**	**+1.3**
baz=134							
HOM	**Homer**	**3.76**	**349**		**Pn**	**09 16 10.1**	**+0.7**
HOM	**Homer**	**3.76**	**349**	P	**Pn**	**09 16 10.1**	**+0.7**
baz=167							
BRSE	**Bradley Lake S**	**3.77**	**356**		**Pn**	**09 16 09.0**	**-0.6**
BRSE					**Sn**	**09 16 52.4**	**-1.6**
BRSE	**Bradley Lake S**	**3.77**	**356**	P	**Pn**	**09 16 09.0**	**-0.6**
baz=175							
BRSE				S	**Sn**	**09 16 52.4**	**-1.6**
baz=175							
AUCH	**Augustine Cone**	**3.80**	**334**		**Pn**	**09 16 11.0**	**+0.9**
BRLK	**Bradley Lake**	**3.80**	**355**		**Pn**	**09 16 09.2**	**-0.8**
CNTC	**Contact Creek**	**3.84**	**309**		**Pn**	**09 16 11.4**	**+0.8**
Q17K	**Contact Creek**	**3.84**	**309**	P	**Pn**	**09 16 11.4**	**+0.8**
baz=125							
PLK1	**Peulik 1**	**3.95**	**300**		**Pn**	**09 16 13.2**	**+1.1**
P19K	**Oil Pt**	**4.01**	**337**		**Pn**	**09 16 13.9**	**+1.0**
P19K	**Oil Pt**	**4.01**	**337**	IAML		09 17 05.3	
comp=E,158nm,0.5s							
P19K				IAML		09 17 05.4	
comp=N,144nm,0.5s							
P19K	**Oil Pt**	**4.01**	**337**	P	**Pn**	**09 16 13.9**	**+1.0**
baz=155							
Q23K	**Middleton Isla**	**4.02**	**29**		**Pn**	**09 16 12.3**	**-0.6**
Q23K	**Middleton Isla**	**4.02**	**29**	IAML		09 16 55.0	
comp=E,162nm,1.1s							
Q23K				IAML		09 17 07.8	
comp=N,126nm,1.3s							
Q23K	**Middleton Isla**	**4.02**	**29**	P	**Pn**	**09 16 12.3**	**-0.6**
baz=211							
MID	**Middleton Isla**	**4.02**	**29**	Pn	**Pn**	**09 16 11.9**	**-1.0**
MID				IAML		09 17 07.7	
comp=N,157nm,1.3s							
MID				IAML		09 18 53.6	
comp=E,172nm,1.4s							
MID	**Middleton Isla**	**4.02**	**29**	P	**Pn**	**09 16 12.6**	**-0.3**
SEW	**Seward**	**4.14**	**5**		**Pn**	**09 16 14.0**	**-0.7**
SEW	**Seward**	**4.14**	**5**	P	**Pn**	**09 16 14.0**	**-0.7**
baz=185							
P23K	**Montague Islan**	**4.28**	**19**		**Pn**	**09 16 15.8**	**-0.8**
P23K	**Montague Islan**	**4.28**	**19**	P	**Pn**	**09 16 15.8**	**-0.8**
baz=200							
O20K	**Slope Mountain**	**4.30**	**344**		Pn	09 16 15.2	-1.7
O20K	**Slope Mountain**	**4.30**	**344**	P	Pn	09 16 15.2	-1.7
baz=161							
P18K	**Big Mountain,**	**4.34**	**324**		**Pn**	**09 16 17.3**	**-0.2**
P18K	**Big Mountain,**	**4.34**	**324**	P	**Pn**	**09 16 17.3**	**-0.2**
baz=140							
Q16K	**King Salmon**	**4.41**	**310**		**Pn**	**09 16 19.2**	**+0.8**
Q16K	**King Salmon**	**4.41**	**310**	P	**Pn**	**09 16 19.2**	**+0.8**
baz=126							
O22K	**Cooper Landing**	**4.51**	**3**		**Pn**	**09 16 19.6**	**-0.1**
O22K	**Cooper Landing**	**4.51**	**3**	P	**Pn**	**09 16 19.6**	**-0.1**
baz=183							
CHGN	**Chignik**	**4.60**	**277**		**Sn**	**09 17 13.3**	**-1.1**
CHGN				IAML		09 17 19.3	
comp=E,76nm,1.4s							
CHGN				IAML		09 17 19.8	
comp=N,65nm,1.3s							
CHGN	**Chignik**	**4.60**	**277**		**Pn**	**09 16 20.7**	**-0.3**
CHGN	**Chignik**	**4.60**	**277**	P	**Pn**	**09 16 20.7**	**-0.3**
baz=92							
P17K	**Kvichak River**	**4.64**	**316**		**Pn**	**09 16 22.4**	**+0.9**
P17K	**Kvichak River**	**4.64**	**316**	P	**Pn**	**09 16 22.4**	**+0.9**
baz=132							
RSO	**Redoubt South**	**4.68**	**344**		Pn	09 16 17.5	-4.7
O18K	**Koktuh Hills**	**4.70**	**328**		**Pn**	**09 16 22.7**	**+0.3**
O18K	**Koktuh Hills**	**4.70**	**328**	IAML		09 17 18.6	
comp=N,38nm,1.1s							
O18K				IAML		09 17 34.0	
comp=E,29nm,0.9s							
O18K	**Koktuh Hills**	**4.70**	**328**	P	**Pn**	**09 16 22.7**	**+0.3**
baz=144							
O19K	**Port Alsworth**	**4.75**	**334**	Pn	**Pn**	**09 16 24.0**	**+1.1**
O19K				IAML		09 17 19.8	
comp=N,107nm,0.4s							
O19K	**Port Alsworth**	**4.75**	**334**	P	**Pn**	**09 16 23.7**	**+0.8**
baz=151							
CAPN	**Captain Cook N**	**4.82**	**354**		**Pn**	**09 16 24.8**	**+0.9**
CAPN	**Captain Cook N**	**4.82**	**354**	P	**Pn**	**09 16 24.8**	**+0.9**
baz=173							
HIN	**Hinchinbrook I**	**4.83**	**22**		**Pn**	**09 16 23.8**	**-0.3**
HIN	**Hinchinbrook I**	**4.83**	**22**	IAML		09 17 52.8	
comp=N,77nm,1.4s							
KAIM	**Kayak Island**	**5.00**	**36**		**Pn**	**09 16 25.7**	**-0.8**
KAIM	**Kayak Island**	**5.00**	**36**	IAML		09 17 22.7	
comp=E,53nm,1.2s							
KAIM	**Kayak Island**	**5.00**	**36**	P	**Pn**	**09 16 25.7**	**-0.8**
baz=219							
RC01	**Rabbit Creek A**	**5.12**	**3**		**Pn**	**09 16 27.6**	**-0.4**
RC01	**Rabbit Creek A**	**5.12**	**3**	IAML		09 17 28.1	
comp=N,24nm,0.4s							
RC01				IAML		09 17 29.3	
comp=E,26nm,0.7s							
RC01	**Rabbit Creek A**	**5.12**	**3**	P	**Pn**	**09 16 27.6**	**-0.4**
baz=182							
EYAK	**Cordova Ski Ar**	**5.14**	**25**		**Pn**	**09 16 28.4**	**+0.1**
EYAK	**Cordova Ski Ar**	**5.14**	**25**	P	**Pn**	**09 16 28.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**5.14**	**25**	P	**Pn**	**09 16 28.4**	**+0.1**
baz=208							
FIS	**Fire Island**	**5.17**	**360**	Pn	**Pn**	**09 16 29.9**	**+1.2**
FIS				IAML		09 17 31.7	
comp=N,47nm,0.8s							
FIS				IAML		09 17 33.4	
comp=E,57nm,1.4s							
P16K	**Nushagak River**	**5.19**	**309**		**Pn**	**09 16 29.5**	**+0.5**
P16K	**Nushagak River**	**5.19**	**309**	P	**Pn**	**09 16 29.5**	**+0.5**
baz=123							
O17K	**Koliganek Bris**	**5.28**	**319**		**Pn**	**09 16 31.2**	**+0.9**
O17K	**Koliganek Bris**	**5.28**	**319**	P	**Pn**	**09 16 31.2**	**+0.9**
baz=133							
RAGM	**Ragged Mountai**	**5.29**	**31**		**Pn**	**09 16 30.4**	**-0.1**
SUCK	**Suckling Hills**	**5.33**	**37**		**Pn**	**09 16 30.8**	**-0.2**
N19K	**Bonanza Creek**	**5.33**	**337**		**Pn**	**09 16 31.1**	**0.0**
N19K	**Bonanza Creek**	**5.33**	**337**	P	**Pn**	**09 16 31.1**	**0.0**
baz=153							
HMT	**Hamilton**	**5.37**	**33**		**Pn**	**09 16 31.5**	**0.0**
NICHA	**Nichawak Mount**	**5.39**	**35**		**Pn**	**09 16 31.5**	**-0.3**
GOAT	**Goat Mountain**	**5.43**	**30**		**Pn**	**09 16 32.2**	**-0.2**
CHNA	**Chernabura Isl**	**5.47**	**262**	P	**Pn**	**09 16 32.3**	**-0.6**
baz=75							
CNBA	**Chernabura Isl**	**5.47**	**261**		**Pn**	**09 16 32.3**	**-0.6**
SUA	**Susitna One**	**5.50**	**357**		**Pn**	**09 16 32.7**	**-0.7**
SUA	**Susitna One**	**5.50**	**357**	P	**Pn**	**09 16 32.7**	**-0.7**
baz=176							
KNK	**Knik Glacier**	**5.51**	**9**		**Pn**	**09 16 33.2**	**-0.3**
KNK	**Knik Glacier**	**5.51**	**9**	P	**Pn**	**09 16 33.2**	**-0.3**
baz=190							
BGLC	**Bering Glacier**	**5.53**	**39**		**Pn**	**09 16 33.8**	**+0.1**
BGLC	**Bering Glacier**	**5.53**	**39**	P	**Pn**	**09 16 33.8**	**+0.1**
baz=223							
O16K	**Kokwok River B**	**5.55**	**314**		**Pn**	**09 16 34.7**	**+0.7**
O16K	**Kokwok River B**	**5.55**	**314**	P	**Pn**	**09 16 34.7**	**+0.7**
baz=128							
N18K	**Kilae Creek**	**5.57**	**330**		**Pn**	**09 16 34.5**	**+0.2**
N18K	**Kilae Creek**	**5.57**	**330**	P	**Pn**	**09 16 34.5**	**+0.2**
baz=145							
BERG	**Berg Lake**	**5.59**	**35**		**Pn**	**09 16 34.0**	**-0.6**
PMR	**Palmer**	**5.64**	**5**		**Pn**	**09 16 35.1**	**-0.1**
PMR	**Palmer**	**5.64**	**5**	P	**Pn**	**09 16 35.4**	**+0.2**
SNH	**Sunshine Point**	**5.73**	**40**		**Pn**	**09 16 36.3**	**-0.2**
KHIT	**Khitrov Hills**	**5.78**	**37**		**Pn**	**09 16 36.4**	**-0.8**
BMRM	**Bremner River**	**5.79**	**28**		**Pn**	**09 16 37.0**	**-0.3**
BMRM	**Bremner River**	**5.79**	**28**	P	**Pn**	**09 16 37.0**	**-0.3**
baz=212							
GHO	**Glory Hole Cre**	**5.83**	**6**		**Pn**	**09 16 38.2**	**+0.3**
SVW2	**Sparrevohn**	**5.84**	**333**	Pn	**Pn**	**09 16 38.6**	**+0.6**
SVW2	**Sparrevohn**	**5.84**	**333**	P	**Pn**	**09 16 38.2**	**+0.2**
SDPT	**Sand Point**	**5.85**	**268**	Pn	**Pn**	**09 16 36.6**	**-1.5**
SDPT	**Sand Point**	**5.85**	**268**	P	**Pn**	**09 16 37.9**	**-0.2**
N17K	**Nushagak Hills**	**5.85**	**324**		**Pn**	**09 16 38.6**	**+0.5**
N17K	**Nushagak Hills**	**5.85**	**324**	P	**Pn**	**09 16 38.6**	**+0.5**
baz=138							
SML	**Sawmill**	**5.91**	**9**		**Pn**	**09 16 39.2**	**+0.2**
SML	**Sawmill**	**5.91**	**9**	P	**Pn**	**09 16 39.2**	**+0.2**
baz=190							
WAX	**Waxell Ridge**	**5.92**	**38**		**Pn**	**09 16 38.4**	**-0.7**
KLU	**Klutina**	**5.95**	**20**		**Pn**	**09 16 39.4**	**-0.1**
KLU	**Klutina**	**5.95**	**20**	P	**Pn**	**09 16 39.4**	**-0.1**
baz=203							
BARK	**Barkley Ridge**	**6.01**	**39**		**Pn**	**09 16 39.9**	**-0.6**
SCM	**Sheep Creek Mo**	**6.04**	**13**		**Pn**	**09 16 41.2**	**+0.3**
SCM	**Sheep Creek Mo**	**6.04**	**13**	P	**Pn**	**09 16 41.2**	**+0.3**
baz=195							
SKT	**Skwentna**	**6.04**	**354**	Pn	**Pn**	**09 16 40.3**	**-0.5**
CRQM	**Cirque**	**6.05**	**35**		**Pn**	**09 16 40.6**	**-0.5**
CRQE	**Cirque**	**6.06**	**35**	P	**Pn**	**09 16 40.6**	**-0.6**
baz=220							
MESA	**MESA**	**6.06**	**43**		**Pn**	**09 16 40.5**	**-0.7**
MESA	**MESA**	**6.06**	**43**	P	**Pn**	**09 16 40.5**	**-0.7**
baz=229							
O15K	**Ungalikthiuk R**	**6.08**	**306**		**Pn**	**09 16 41.9**	**+0.6**
O15K	**Ungalikthiuk R**	**6.08**	**306**	P	**Pn**	**09 16 41.9**	**+0.6**
baz=118							
M20K	**Styx River**	**6.10**	**347**	Pn	**Pn**	**09 16 42.7**	**+1.1**
TGL	**Tana Glacier**	**6.15**	**36**		**Pn**	**09 16 41.7**	**-0.6**
ISLE	**Panipei Island**	**6.21**	**39**		**Pn**	**09 16 42.7**	**-0.4**
M18K	**Stony River**	**6.24**	**334**		**Pn**	**09 16 43.3**	**-0.1**
M18K	**Stony River**	**6.24**	**334**	P	**Pn**	**09 16 43.3**	**-0.1**
baz=150							
VRDI	**Verde Repeater**	**6.32**	**31**		**Pn**	**09 16 44.3**	**-0.4**
N25K	**Chitina, Valde**	**6.34**	**25**		**Pn**	**09 16 44.9**	**0.0**
N25K	**Chitina, Valde**	**6.34**	**25**	P	**Pn**	**09 16 44.9**	**0.0**
baz=209							
N16K	**Nishlik Lake**	**6.37**	**318**		**Pn**	**09 16 46.1**	**+0.8**
N16K	**Nishlik Lake**	**6.37**	**318**	P	**Pn**	**09 16 46.1**	**+0.8**
baz=132							
GLB	**Gilahina Butte**	**6.40**	**29**		**Pn**	**09 16 45.3**	**-0.4**
KIAG	**Kiagna River**	**6.43**	**37**		**Pn**	**09 16 44.9**	**-1.3**
M24K	**Tolsona, Glenn**	**6.47**	**17**		**Pn**	**09 16 47.6**	**+0.9**
M24K	**Tolsona, Glenn**	**6.47**	**17**	P	**Pn**	**09 16 47.6**	**+0.9**
baz=200							
SAMH	**Samovar Hills**	**6.49**	**46**		**Pn**	**09 16 45.9**	**-1.2**
GRNC	**Granite Creek**	**6.50**	**40**		**Pn**	**09 16 46.8**	**-0.5**
TABL	**Table Mountain**	**6.54**	**43**		**Pn**	**09 16 47.1**	**-0.6**
MCARA	**McCarthy VSAT**	**6.57**	**32**		**Pn**	**09 16 47.9**	**-0.1**
MCARA	**McCarthy VSAT**	**6.57**	**32**	P	**Pn**	**09 16 47.9**	**-0.1**
baz=217							
PTPK	**Patty Peak**	**6.59**	**35**		**Pn**	**09 16 48.2**	**-0.2**
M17K	**Holitna River**	**6.60**	**328**		**Pn**	**09 16 49.2**	**+0.8**
M17K	**Holitna River**	**6.60**	**328**	P	**Pn**	**09 16 49.2**	**+0.8**
baz=142							
L19K	**White Mountain**	**6.65**	**341**		**Pn**	**09 16 48.8**	**-0.3**
L19K	**White Mountain**	**6.65**	**341**	P	**Pn**	**09 16 48.8**	**-0.3**
baz=157							
PCA	**Pinnacle**	**6.69**	**48**		**Pn**	**09 16 49.7**	**-0.1**
PINM	**Pinnacle**	**6.69**	**48**	P	**Pn**	**09 16 49.7**	**-0.1**
baz=235							
N15K	**Kwethluk River**	**6.71**	**313**		**Pn**	**09 16 51.4**	**+1.5**
N15K	**Kwethluk River**	**6.71**	**313**	P	**Pn**	**09 16 51.3**	**+1.5**
baz=125							
WASW	**Wrangell South**	**6.72**	**25**		**Pn**	**09 16 51.2**	**+0.9**
WACK	**Wrangell Chich**	**6.73**	**24**		**Pn**	**09 16 51.2**	**+0.8**
BARN	**Barnard Glacie**	**6.77**	**38**		**Pn**	**09 16 51.0**	**+0.2**
O14K	**Tigyukauivet M**	**6.78**	**303**		**Pn**	**09 16 52.0**	**+1.2**
O14K	**Tigyukauivet M**	**6.78**	**303**	P	**Pn**	**09 16 52.0**	**+1.2**
baz=115							
CTG	**Chitna Glacier**	**6.81**	**39**	P	**Pn**	**09 16 51.4**	**-0.1**
baz=226							
M16K	**Timber Creek**	**6.81**	**321**		**Pn**	**09 16 52.7**	**+1.4**
M16K	**Timber Creek**	**6.81**	**321**	P	**Pn**	**09 16 52.7**	**+1.4**
baz=134							
CTGM	**Chitina Glacie**	**6.81**	**39**		**Pn**	**09 16 51.4**	**-0.1**
LOGN	**Logan Glacier**	**6.84**	**41**		**Pn**	**09 16 51.4**	**-0.5**
PNL	**Peninsula**	**6.84**	**53**		**Pn**	**09 16 51.3**	**-0.4**
PNL	**Peninsula**	**6.84**	**53**	P	**Pn**	**09 16 51.5**	**-0.3**
PNL	**Peninsula**	**6.84**	**53**	P	**Pn**	**09 16 51.3**	**-0.4**
baz=241							
BCPM	**Bancas Point**	**6.88**	**50**		**Pn**	**09 16 51.9**	**-0.3**
WAT7	**Susitna Watana**	**6.90**	**5**		**Pn**	**09 16 53.8**	**+1.3**
HARP	**HAARP**	**6.93**	**20**		**Pn**	**09 16 53.9**	**+1.0**
HARP	**HAARP**	**6.93**	**20**	P	**Pn**	**09 16 53.9**	**+1.0**
baz=203							
DHY	**Denali Highway**	**7.25**	**10**		**Pn**	**09 16 58.2**	**+0.7**
DHY	**Denali Highway**	**7.25**	**10**	P	**Pn**	**09 16 58.2**	**+0.7**
baz=192							
M15K	**Kasigluk River**	**7.25**	**315**		**Pn**	**09 16 58.3**	**+1.0**
M15K	**Kasigluk River**	**7.25**	**315**	P	**Pn**	**09 16 58.3**	**+1.0**
baz=126							
N14K	**Kuskokwak Cree**	**7.26**	**308**		**Pn**	**09 16 58.8**	**+1.4**
N14K	**Kuskokwak Cree**	**7.26**	**308**	P	**Pn**	**09 16 58.8**	**+1.4**
baz=118							
L17K	**Donlin**	**7.43**	**329**		**Pn**	**09 17 00.9**	**+1.1**
L17K	**Donlin**	**7.43**	**329**	P	**Pn**	**09 17 00.9**	**+1.1**
baz=142							
RND	**Reindeer**	**7.47**	**5**	Pn	**Pn**	**09 17 01.2**	**+0.8**
L16K	**Owhat River**	**7.48**	**324**		**Pn**	**09 17 01.4**	**+1.0**
L16K	**Owhat River**	**7.48**	**324**	P	**Pn**	**09 17 01.4**	**+1.0**
baz=136							
CAST	**Castle Rocks**	**7.51**	**354**	Pn	**Pn**	**09 17 01.8**	**+0.9**
O29M	**Mount Kennedy**	**7.51**	**50**		**Pn**	**09 17 01.3**	**+0.3**
O29M	**Mount Kennedy**	**7.51**	**50**	P	**Pn**	**09 17 01.3**	**+0.3**
baz=239							
TTA	**Tatalina**	**7.56**	**339**	Pn	**Pn**	**09 17 01.8**	**+0.2**
TTA	**Tatalina**	**7.56**	**339**	P	**Pn**	**09 17 02.9**	**+1.3**
YUK2	**White River**	**7.56**	**36**		**Pn**	**09 17 02.4**	**+0.7**
P29M	**Windy Craggy**	**7.59**	**56**		**Pn**	**09 17 01.5**	**-0.5**
P29M	**Windy Craggy**	**7.59**	**56**	P	**Pn**	**09 17 01.5**	**-0.5**
baz=246							
KTH	**Kantishna Hill**	**7.59**	**358**	Pn	**Pn**	**09 17 03.7**	**+1.7**
KTH					**Sn**	**09 18 28.2**	**+0.1**
YUK8	**Steele Glacier**	**7.60**	**41**		**Pn**	**09 17 02.8**	**+0.5**
YUK8	**Steele Glacier**	**7.60**	**41**	P	**Pn**	**09 17 02.8**	**+0.5**
baz=229							
M27K	**Edge Creek, AK**	**7.68**	**30**		**Pn**	**09 17 04.1**	**+0.8**
M27K	**Edge Creek, AK**	**7.68**	**30**	P	**Pn**	**09 17 04.1**	**+0.8**
baz=217							
MENT	**Mentasta**	**7.71**	**23**	Pn	**Pn**	**09 17 04.5**	**+0.9**
M14K	**Bethel**	**7.80**	**313**		**Pn**	**09 17 06.3**	**+1.5**
M14K	**Bethel**	**7.80**	**313**	P	**Pn**	**09 17 06.3**	**+1.5**
baz=123							
K17K	**Iditarod**	**7.91**	**332**		**Pn**	**09 17 07.1**	**+0.8**
K17K	**Iditarod**	**7.91**	**332**	P	**Pn**	**09 17 07.1**	**+0.8**
baz=145							
YUK6	**Outpost Mounta**	**7.94**	**46**		**Pn**	**09 17 07.7**	**+0.7**
YUK6	**Outpost Mounta**	**7.94**	**46**	P	**Pn**	**09 17 07.7**	**+0.7**
baz=236							
P30M	**Million Dollar**	**8.15**	**54**		**Pn**	**09 17 09.8**	**+0.1**
P30M	**Million Dollar**	**8.15**	**54**	P	**Pn**	**09 17 09.8**	**+0.1**
baz=244							
L15K	**Ungalak Mounta**	**8.16**	**319**		**Pn**	**09 17 11.1**	**+1.3**
L15K	**Ungalak Mounta**	**8.16**	**319**	P	**Pn**	**09 17 11.0**	**+1.3**
baz=130							
J18K	**Innoko River**	**8.18**	**339**		**Pn**	**09 17 12.4**	**+2.3**
J18K	**Innoko River**	**8.18**	**339**	P	**Pn**	**09 17 12.4**	**+2.3**
baz=153							
M13K	**Dall Lake**	**8.23**	**308**		**Pn**	**09 17 12.3**	**+1.6**
M13K	**Dall Lake**	**8.23**	**308**	P	**Pn**	**09 17 12.3**	**+1.6**
baz=117							
BCAR	**Beaver Creek A**	**8.28**	**28**	Pn	**Pn**	**09 17 12.5**	**+1.0**
SIT	**Sitka**	**8.30**	**76**	P	Pn	09 17 08.3	-3.3
L14K	**Kuka Creek**	**8.42**	**315**		**Pn**	**09 17 14.8**	**+1.5**
L14K	**Kuka Creek**	**8.42**	**315**	P	**Pn**	**09 17 14.8**	**+1.5**
baz=124							
IL31		**8.96**	**9**		**Pn**	**09 17 20.6**	**-0.1**
ILAR	**Eielson Array**	**8.96**	**9**	Pn	**Pn**	**09 17 21.7**	**+1.0**
ILAR	**Eielson Array**	**8.96**	**9**	Pn	**Pn**	**09 17 20.6**	**-0.1**
comp=E,0.1nm,0.3s,baz=193,slow=10,SNR=10							
ILAR				Sn	**Sn**	**09 18 56.2**	**-5.3**
comp=E,0.1nm,0.3s,baz=200,slow=21,SNR=1.1							
ILAR				LR	LR	09 20 49.9	
comp=E,101nm,19.9s,baz=259,slow=38 comp=E,1.2nm,0.7s							
MDM	**Murphy Dome**	**9.05**	**5**	Pn	**Pn**	**09 17 22.1**	**+0.1**
L29M	**L29M**	**9.39**	**36**		**Pn**	**09 17 27.4**	**+0.7**
DAWY	**Dawson**	**9.72**	**29**	Pn	**Pn**	**09 17 32.5**	**+1.2**
K29M	**Barlow Dome**	**10.11**	**34**	Pn	**Pn**	**09 17 37.4**	**+0.8**
P33M	**Teslin, Yukon**	**10.12**	**58**		**Pn**	**09 17 36.5**	**-0.1**
IMAR	**Indian Mountai**	**10.17**	**352**	Pn	**Pn**	**09 17 38.7**	**+1.5**
M31M	**Drury Creek, Y**	**10.22**	**46**		**Pn**	**09 17 38.9**	**+0.9**
DLBC	**Dease Lake**	**11.20**	**69**	Pn	**Pn**	**09 17 50.8**	**-0.7**
comp=E,0.1nm,0.3s,baz=334,slow=25,SNR=1.8							
DLBC				LR	LR	09 21 23.5	
comp=E,112nm,19.0s,baz=64,slow=34 comp=E,0.7nm,0.3s							
BBB	**Bella Bella**	**13.50**	**97**	LR	LR	09 21 55.9	
comp=E,77nm,19.0s,baz=336,slow=30							
INK	**Inuvik**	**14.53**	**25**	Pn	**Pn**	**09 18 38.3**	**+1.6**
comp=E,0.1nm,0.3s,baz=213,slow=16,SNR=8.1							
INK				LR	LR	09 24 32.2	
comp=E,104nm,18.1s,baz=174,slow=39 comp=E,4.8nm,1.1s							
YKA	**Yellowknife Ar**	**19.13**	**56**	P	**P**	**09 19 35.6**	**+1.4**
comp=E,0.1nm,0.3s,baz=262,slow=10,SNR=19 comp=E,2.3nm,1.0s					

*AEIC **08** 09:25:49.0±1.8,55.8N±0.1×149.2W±0.1,h10km±8km, Error ellipse: s-maj=15.6km s-min=8.1km az=164.0*

ISC 08 09:25:45.4±0.7,**55.87N**±0.07×**149.24W**±0.05,**h10**km, **n205**,σ0689/202,**mb4.1**/12,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.62**	**303**		**Pn**	**09 26 27.2**	**-0.5**
OHAK	**Old Harbor**	**2.62**	**303**		**Sn**	**09 26 57.8**	**-1.7**
OHAK	**Old Harbor** baz=121	**2.62**	**303**	P	**Pn**	**09 26 27.1**	**-0.5**
OHAK	baz=121			S	**Sn**	**09 26 57.8**	**-1.7**
KDAK	**Kodiak Island** 6.8nm,0.3s,baz=174,slow=5.7,SNR=49	**2.66**	**318**	Pn	**Pn**	**09 26 28.1**	**-0.1**
KDAK	2.9nm,0.3s,baz=148,slow=5.2,SNR=4.1 16nm,0.3s			Sn	**Sn**	**09 26 58.6**	**-1.8**
SII	**Sitkinak Islan**	**2.85**	**286**		**Pn**	**09 26 29.9**	**-0.9**
SII	comp=N,130nm,0.4s			IAML		09 27 06.7	
SII	comp=E,139nm,0.5s			IAML		09 27 10.2	
SII	**Sitkinak Islan**	**2.85**	**286**		**Sn**	**09 27 03.0**	**-2.2**
SII	**Sitkinak Islan** baz=104	**2.85**	**286**	P	**Pn**	**09 26 29.9**	**-0.9**
SII	baz=104			S	**Sn**	**09 27 03.0**	**-2.2**
SYI	**Shuyak Island**	**3.24**	**329**		**Pn**	**09 26 35.8**	**-0.4**
SYI					**Sn**	**09 27 13.0**	**-1.7**
Q20K	**Shuyak Island** baz=148	**3.24**	**329**	P	**Pn**	**09 26 36.4**	**+0.2**
Q20K	baz=148			S	**Sn**	**09 27 13.0**	**-1.8**
CHIR	**Chirikof Islan**	**3.60**	**272**		**Pn**	09 26 39.6	-1.5
CHIR	**Chirikof Islan** comp=E,63nm,0.6s	**3.60**	**272**	IAML		09 27 21.5	
CNPM	**China Poot**	**3.82**	**345**		**Pn**	**09 26 44.0**	**-0.3**
CNPM					**Sn**	**09 27 28.5**	**-0.7**
Q19K	**Cape Douglas,**	**3.88**	**324**		**Pn**	**09 26 45.9**	**+0.7**
Q19K	**Cape Douglas,** comp=N,130nm,1.2s	**3.88**	**324**	IAML		09 27 38.1	
Q19K	**Cape Douglas,** baz=141	**3.88**	**324**	P	**Pn**	**09 26 45.9**	**+0.7**
Q23K	**Middleton Isla**	**3.90**	**22**		**Pn**	**09 26 45.2**	**+0.1**
Q23K					**Sn**	**09 27 29.1**	**-1.8**
Q23K	**Middleton Isla** comp=E,158nm,1.4s	**3.90**	**22**	IAML		09 27 37.1	
Q23K	comp=N,124nm,1.5s			IAML		09 28 50.8	
Q23K	**Middleton Isla** baz=204	**3.90**	**22**	P	**Pn**	**09 26 45.2**	**+0.1**
Q23K	baz=204			S	**Sn**	**09 27 29.1**	**-1.8**
MID	**Middleton Isla**	**3.90**	**22**		**Pn**	**09 26 45.1**	**-0.1**
MID	**Middleton Isla** comp=E,179nm,1.5s	**3.90**	**22**	IAML		09 27 37.2	
MID	comp=N,143nm,1.5s			IAML		09 28 00.4	
KAHG	**Katmai Hook Gl**	**3.91**	**315**		**Pn**	**09 26 46.3**	**+0.8**
BRSE	**Bradley Lake S**	**3.97**	**349**		**Pn**	**09 26 45.7**	**-0.6**
BRSE	**Bradley Lake S** baz=168	**3.97**	**349**	P	**Pn**	**09 26 45.7**	**-0.6**
BRLK	**Bradley Lake**	**4.00**	**348**		**Pn**	**09 26 46.1**	**-0.7**
BRLK	**Bradley Lake** comp=N,43nm,0.7s	**4.00**	**348**	IAML		09 27 35.6	
BRLK	comp=E,53nm,0.5s			IAML		09 27 36.4	
HOM	**Homer**	**4.01**	**342**	Pn	**Pn**	**09 26 48.0**	**+1.1**
ACHA	**Angle Creek He**	**4.07**	**308**		**Pn**	**09 26 48.0**	**+0.4**
ANCK	**Angle Creek**	**4.14**	**307**		**Pn**	**09 26 49.8**	**+1.2**
KAHC	**Katmai Hardscr**	**4.19**	**314**		**Pn**	**09 26 50.2**	**+0.8**
KAHC	**Katmai Hardscr** baz=130	**4.19**	**314**	P	**Pn**	**09 26 50.2**	**+0.8**
SEW	**Seward**	**4.25**	**359**		**Pn**	**09 26 50.1**	**0.0**
SEW	**Seward** baz=178	**4.25**	**359**	P	**Pn**	**09 26 50.1**	**0.0**
P23K	**Montague Islan**	**4.26**	**13**		**Pn**	**09 26 50.0**	**-0.2**
P23K	**Montague Islan** baz=194	**4.26**	**13**	P	**Pn**	**09 26 50.0**	**-0.2**
Q17K	**Contact Creek** baz=122	**4.35**	**306**	P	**Pn**	**09 26 52.1**	**+0.6**
P19K	**Oil Pt**	**4.36**	**332**		**Pn**	**09 26 51.9**	**+0.3**
P19K	**Oil Pt** comp=E,58nm,1.0s	**4.36**	**332**	IAML		09 27 51.8	
P19K	comp=N,63nm,0.8s			IAML		09 28 00.8	
P19K	**Oil Pt** baz=149	**4.36**	**332**	P	**Pn**	**09 26 51.9**	**+0.3**
O20K	**Slope Mountain**	**4.59**	**338**		**Pn**	**09 26 55.1**	**+0.2**
O20K	**Slope Mountain** baz=156	**4.59**	**338**	P	**Pn**	**09 26 55.1**	**+0.2**
IVE	**Iliamna Volcan**	**4.62**	**336**		**Pn**	**09 26 55.3**	**+0.1**
O22K	**Cooper Landing**	**4.63**	**357**		**Pn**	**09 26 55.6**	**+0.3**
SLKM	**Skilak Lake**	**4.68**	**354**		**Pn**	**09 26 56.3**	**+0.2**
HIN	**Hinchinbrook I**	**4.77**	**17**		**Pn**	**09 26 57.0**	**-0.2**
HIN	**Hinchinbrook I** comp=E,91nm,1.3s	**4.77**	**17**	IAML		09 27 52.4	
HIN	comp=N,104nm,0.9s			IAML		09 27 53.8	
P18K	**Big Mountain,**	**4.78**	**320**		**Pn**	**09 26 57.2**	**-0.2**
P18K	**Big Mountain,** baz=136	**4.78**	**320**	P	**Pn**	**09 26 57.2**	**-0.2**
KAIM	**Kayak Island**	**4.81**	**30**		**Pn**	**09 26 58.0**	**+0.2**
KAIM	**Kayak Island** comp=E,80nm,1.3s	**4.81**	**30**	IAML		09 27 58.2	
KAIM	**Kayak Island** baz=214	**4.81**	**30**	P	**Pn**	**09 26 58.0**	**+0.2**
R16K	**Pilot Point**	**4.89**	**294**		**Pn**	**09 26 59.2**	**+0.3**
R16K	**Pilot Point** comp=E,76nm,1.4s	**4.89**	**294**	IAML		09 27 38.5	
R16K	comp=N,71nm,1.4s			IAML		09 28 18.8	
R16K	**Pilot Point** baz=108	**4.89**	**294**	P	**Pn**	**09 26 59.2**	**+0.3**
Q16K	**King Salmon**	**4.91**	**308**		**Pn**	**09 26 59.2**	**+0.1**
Q16K	**King Salmon** baz=123	**4.91**	**308**	P	**Pn**	**09 26 59.2**	**+0.1**
RSO	**Redoubt South**	**4.97**	**339**		**Pn**	**09 26 59.9**	**-0.2**
CAPN	**Captain Cook N**	**5.02**	**349**	Pn	**Pn**	**09 27 01.6**	**+1.1**
EYAK	**Cordova Ski Ar** baz=203	**5.04**	**20**	P	**Pn**	**09 27 01.6**	**+0.7**
O19K	**Port Alsworth**	**5.11**	**330**		**Pn**	**09 27 01.4**	**-0.4**
O19K	**Port Alsworth** comp=N,85nm,0.5s	**5.11**	**330**	IAML		09 28 05.1	
O19K	**Port Alsworth** baz=146	**5.11**	**330**	P	**Pn**	**09 27 01.4**	**-0.4**
O18K	**Koktuh Hills**	**5.11**	**324**		**Pn**	**09 27 01.7**	**-0.2**
O18K	**Koktuh Hills** baz=139	**5.11**	**324**	P	**Pn**	**09 27 01.7**	**-0.2**
P17K	**Kvichak River**	**5.11**	**314**		**Pn**	**09 27 02.6**	**+0.7**
P17K	**Kvichak River** baz=128	**5.11**	**314**	P	**Pn**	**09 27 02.6**	**+0.7**
SUCK	**Suckling Hills**	**5.12**	**32**		**Pn**	**09 27 02.2**	**+0.2**
SUCK	**Suckling Hills** comp=E,50nm,1.3s	**5.12**	**32**	IAML		09 28 06.0	
SUCK	comp=N,61nm,1.5s			IAML		09 28 08.5	
RAGM	**Ragged Mountai**	**5.14**	**26**		**Pn**	**09 27 02.6**	**+0.3**
CHGN	**Chignik**	**5.16**	**279**		**Pn**	**09 27 01.8**	**-0.7**
CHGN	**Chignik**	**5.16**	**279**		**Sn**	**09 28 01.3**	**-0.7**
CHGN	comp=N,61nm,0.4s			IAML		09 28 02.1	
CHGN	comp=E,54nm,0.6s			IAML		09 28 02.2	
CHGN	**Chignik** baz=92	**5.16**	**279**	P	**Pn**	**09 27 01.8**	**-0.7**
NICHA	**Nichawak Mount**	**5.20**	**30**		**Pn**	**09 27 03.6**	**+0.4**
HMT	**Hamilton**	**5.20**	**28**		**Pn**	**09 27 03.9**	**+0.7**
RC01	**Rabbit Creek A**	**5.24**	**357**		**Pn**	**09 27 03.5**	**-0.3**
RC01	**Rabbit Creek A** comp=N,26nm,0.8s	**5.24**	**357**	IAML		09 28 04.6	
RC01	comp=E,31nm,0.4s			IAML		09 28 05.1	
RC01	**Rabbit Creek A** baz=177	**5.24**	**357**	P	**Pn**	**09 27 03.5**	**-0.3**
BGLC	**Bering Glacier**	**5.31**	**34**		**Pn**	**09 27 04.5**	**-0.2**
BGLC	**Bering Glacier** baz=219	**5.31**	**34**	P	**Pn**	**09 27 04.5**	**-0.2**
FIS	**Fire Island**	**5.32**	**355**	Pn	**Pn**	**09 27 06.7**	**+2.0**
FIS	comp=E,65nm,0.9s			IAML		09 28 13.1	
FIS	comp=N,71nm,1.3s			IAML		09 28 13.6	
BERG	**Berg Lake**	**5.40**	**31**		**Pn**	**09 27 05.7**	**-0.3**
SNH	**Sunshine Point**	**5.50**	**36**		**Pn**	**09 27 07.5**	**+0.1**
N20K	**Mount Spurr** baz=163	**5.57**	**345**	P	**Pn**	**09 27 08.0**	**-0.3**
SPCR	**Spurr Chakacha**	**5.57**	**345**		**Pn**	**09 27 08.0**	**-0.3**
KHIT	**Khitrov Hills**	**5.58**	**32**		**Pn**	**09 27 08.2**	**-0.2**
KNK	**Knik Glacier**	**5.58**	**4**	Pn	**Pn**	**09 27 08.8**	**+0.5**
BMRM	**Bremner River**	**5.66**	**24**		**Pn**	**09 27 09.8**	**+0.3**
BMRM	**Bremner River** baz=207	**5.66**	**24**	P	**Pn**	**09 27 09.8**	**+0.3**
SUA	**Susitna One**	**5.67**	**353**		**Pn**	**09 27 09.5**	**-0.2**
SUA	**Susitna One** baz=171	**5.67**	**353**	P	**Pn**	**09 27 09.5**	**-0.2**
N19K	**Bonanza Creek**	**5.67**	**333**		**Pn**	**09 27 09.4**	**-0.4**
N19K	**Bonanza Creek** baz=149	**5.67**	**333**	P	**Pn**	**09 27 09.4**	**-0.4**
P16K	**Nushagak River**	**5.69**	**307**		**Pn**	**09 27 10.5**	**+0.7**
P16K	**Nushagak River** baz=121	**5.69**	**307**	P	**Pn**	**09 27 10.5**	**+0.7**
WAX	**Waxell Ridge**	**5.70**	**34**	Pn	**Pn**	**09 27 10.3**	**+0.2**
O17K	**Koliganek Bris**	**5.74**	**316**		**Pn**	**09 27 10.9**	**+0.4**
O17K	**Koliganek Bris** baz=130	**5.74**	**316**	P	**Pn**	**09 27 10.9**	**+0.4**
PMR	**Palmer**	**5.74**	**1**		**Pn**	**09 27 11.0**	**+0.5**
PMR	**Palmer** baz=181	**5.74**	**1**	P	**Pn**	**09 27 11.0**	**+0.5**
BARK	**Barkley Ridge**	**5.78**	**35**		**Pn**	**09 27 11.6**	**+0.3**
S14K	**Fog Glacier** baz=91	**5.79**	**278**	P	**Pn**	**09 27 11.6**	**+0.3**
VNFG	**Fog Glacier, M**	**5.79**	**278**		**Pn**	**09 27 11.6**	**+0.3**
MESA	**MESA**	**5.80**	**39**		**Pn**	**09 27 11.6**	**0.0**
MESA	**MESA** baz=224	**5.80**	**39**	P	**Pn**	**09 27 11.6**	**0.0**
STLK	**Strandline Lak**	**5.81**	**348**		**Pn**	**09 27 11.4**	**-0.1**
CRQM	**Cirque**	**5.86**	**31**		**Pn**	**09 27 12.4**	**0.0**
CRQE	**Cirque** baz=216	**5.87**	**31**	P	**Pn**	**09 27 12.4**	**0.0**
KLU	**Klutina**	**5.90**	**16**		**Pn**	**09 27 13.3**	**+0.5**
KLU	**Klutina** baz=198	**5.90**	**16**	P	**Pn**	**09 27 13.3**	**+0.5**
GHO	**Glory Hole Cre**	**5.92**	**1**		**Pn**	**09 27 14.0**	**+0.8**
TGL	**Tana Glacier**	**5.95**	**32**		**Pn**	**09 27 13.5**	**0.0**
N18K	**Kilae Creek** baz=142	**5.96**	**327**	P	**Pn**	**09 27 13.6**	**0.0**
SML	**Sawmill**	**5.98**	**4**		**Pn**	**09 27 14.2**	**+0.4**
SML	**Sawmill** baz=185	**5.98**	**4**	P	**Pn**	**09 27 14.2**	**+0.4**
BAGL	**Bagley Icefiel**	**5.98**	**36**		**Pn**	**09 27 13.8**	**0.0**
ISLE	**Juniper Island**	**5.98**	**35**		**Pn**	**09 27 14.3**	**+0.3**
M23K	**Glacier View**	**6.00**	**7**		**Pn**	**09 27 15.7**	**+1.6**
M23K	**Glacier View** baz=188	**6.00**	**7**	P	**Pn**	**09 27 15.7**	**+1.6**
O16K	**Kokwok River B**	**6.03**	**312**		**Pn**	**09 27 15.1**	**+0.5**
O16K	**Kokwok River B** baz=125	**6.03**	**312**	P	**Pn**	**09 27 15.1**	**+0.5**
SCM	**Sheep Creek Mo**	**6.07**	**9**		**Pn**	**09 27 16.8**	**+1.7**
VRDI	**Verde Repeater**	**6.17**	**27**		**Pn**	**09 27 16.7**	**+0.1**
SAMH	**Samovar Hills**	**6.20**	**43**		**Pn**	**09 27 17.7**	**+0.7**
SVW2	**Sparrevohn**	**6.21**	**330**	Pn	**Pn**	**09 27 16.7**	**-0.3**
KIAG	**Kiagna River**	**6.23**	**33**		**Pn**	**09 27 17.3**	**-0.1**
N25K	**Chitina, Valde**	**6.24**	**21**		**Pn**	**09 27 18.1**	**+0.6**
N25K	**Chitina, Valde** baz=204	**6.24**	**21**	P	**Pn**	**09 27 18.1**	**+0.6**
SKT	**Skwentna**	**6.24**	**350**	Pn	**Pn**	**09 27 19.0**	**+1.5**
GLB	**Gilahina Butte**	**6.27**	**25**		**Pn**	**09 27 17.9**	**+0.1**
GRNC	**Granite Creek**	**6.27**	**36**		**Pn**	**09 27 18.0**	**-0.1**
TABL	**Table Mountain**	**6.27**	**40**		**Pn**	**09 27 18.2**	**+0.2**
N17K	**Nushagak Hills**	**6.28**	**321**		**Pn**	**09 27 18.4**	**+0.5**
N17K	**Nushagak Hills** baz=135	**6.28**	**321**	P	**Pn**	**09 27 18.4**	**+0.5**
M20K	**Styx River**	**6.36**	**343**	Pn	**Pn**	**09 27 19.0**	**-0.1**
PCA	**Pinnacle**	**6.39**	**45**		**Pn**	**09 27 19.8**	**+0.3**
PINM	**Pinnacle** baz=232	**6.39**	**45**	P	**Pn**	**09 27 19.8**	**+0.3**
SDPT	**Sand Point**	**6.39**	**270**	Pn	**Pn**	**09 27 18.7**	**-0.7**
PTPK	**Patty Peak**	**6.41**	**31**		**Pn**	**09 27 20.4**	**+0.6**
MCARA	**McCarthy VSAT**	**6.41**	**28**		**Pn**	**09 27 20.6**	**+0.8**
MCARA	**McCarthy VSAT** baz=213	**6.41**	**28**	P	**Pn**	**09 27 20.6**	**+0.8**
M24K	**Tolsona, Glenn**	**6.46**	**13**		**Pn**	**09 27 22.3**	**+1.9**
M24K	**Tolsona, Glenn** baz=195	**6.46**	**13**	P	**Pn**	**09 27 22.3**	**+1.9**
PNL	**Peninsula**	**6.50**	**50**		**Pn**	**09 27 21.0**	**+0.1**
PNL	**Peninsula** baz=238	**6.50**	**50**	P	**Pn**	**09 27 21.0**	**+0.1**
BARN	**Barnard Glacie**	**6.55**	**34**		**Pn**	**09 27 22.0**	**+0.1**
BCPM	**Bancas Point**	**6.55**	**47**		**Pn**	**09 27 22.0**	**+0.3**
CTG	**Chitna Glacier** baz=222	**6.58**	**36**	P	**Pn**	**09 27 22.4**	**+0.2**
CTGM	**Chitina Glacie**	**6.58**	**36**		**Pn**	**09 27 22.4**	**+0.2**
LOGN	**Logan Glacier**	**6.59**	**38**		**Pn**	**09 27 22.5**	**+0.1**
O15K	**Ungalikthiuk R**	**6.59**	**305**		**Pn**	**09 27 22.5**	**+0.3**
O15K	**Ungalikthiuk R** baz=116	**6.59**	**305**	P	**Pn**	**09 27 22.5**	**+0.3**
M18K	**Stony River**	**6.60**	**331**		**Pn**	**09 27 21.8**	**-0.5**
M18K	**Stony River** baz=146	**6.60**	**331**	P	**Pn**	**09 27 21.8**	**-0.5**
M19K	**Big River Lodg**	**6.61**	**338**	Pn	**Pn**	**09 27 22.2**	**-0.4**
N16K	**Nishlik Lake**	**6.83**	**316**		**Pn**	**09 27 26.3**	**+0.8**
N16K	**Nishlik Lake** baz=129	**6.83**	**316**	P	**Pn**	**09 27 26.3**	**+0.8**
HARP	**HAARP**	**6.88**	**16**		**Pn**	**09 27 27.6**	**+1.4**
HARP	**HAARP** baz=199	**6.88**	**16**	P	**Pn**	**09 27 27.6**	**+1.4**
L19K	**White Mountain**	**6.96**	**338**	Pn	**Pn**	**09 27 26.8**	**-0.5**
M17K	**Holitna River**	**7.00**	**326**		**Pn**	**09 27 27.9**	**0.0**
M17K	**Holitna River** baz=139	**7.00**	**326**	P	**Pn**	**09 27 27.9**	**0.0**
O29M	**Mount Kennedy**	**7.19**	**47**		**Pn**	**09 27 30.7**	**+0.2**
O29M	**Mount Kennedy** baz=236	**7.19**	**47**	P	**Pn**	**09 27 30.7**	**+0.2**
P29M	**Windy Craggy**	**7.22**	**54**		**Pn**	**09 27 30.4**	**-0.4**
P29M	**Windy Craggy** baz=243	**7.22**	**54**	P	**Pn**	**09 27 30.5**	**-0.4**
DHY	**Denali Highway**	**7.29**	**7**		**Pn**	**09 27 33.0**	**+1.0**
TRF	**Thorofare Moun**	**7.62**	**356**	Pn	**Pn**	**09 27 37.6**	**+1.0**
YUK6	**Outpost Mounta** baz=233	**7.65**	**44**	P	**Pn**	**09 27 38.0**	**+1.1**
CAST	**Castle Rocks**	**7.71**	**350**	Pn	**Pn**	**09 27 39.2**	**+1.7**
KTH	**Kantishna Hill**	**7.76**	**354**	Pn	**Pn**	**09 27 39.9**	**+1.6**
PLBC	**Pleasant Camp** baz=248	**7.78**	**57**	P	**Pn**	**09 27 39.6**	**+1.1**
YUK4	**Talbot Arm** baz=229	**7.79**	**41**	P	**Pn**	**09 27 42.0**	**+3.2**
BVCY	**Beaver Creek** baz=217	**7.85**	**30**	P	**Pn**	**09 27 41.7**	**+2.3**
TTA	**Tatalina**	**7.88**	**337**	Pn	**Pn**	**09 27 40.6**	**+0.7**
HYT	**Haines Junctio**	**7.92**	**46**	Pn	**Pn**	**09 27 41.2**	**+0.7**
BCAR	**Beaver Creek A**	**8.15**	**25**	Pn	**Pn**	**09 27 44.1**	**+0.4**
SKAG	**Skagway**	**8.28**	**59**	Pn	**Pn**	**09 27 45.7**	**+0.4**
O30N	**Mendenhall**	**8.48**	**49**	Pn	**Pn**	**09 27 47.9**	**-0.3**
HDA	**Harding Lake**	**8.64**	**7**		**Pn**	**09 27 51.0**	**+0.6**
IL31		**9.01**	**6**	Pn	**Pn**	**09 27 56.9**	**+1.6**
ILAR	**Eielson Array**	**9.01**	**6**	Pn	**Pn**	**09 27 57.4**	**+2.0**
ILAR	**Eielson Array** comp=N,0.2nm,0.3s,baz=188,slow=13,SNR=14	**9.01**	**6**	Pn	**Pn**	**09 27 56.6**	**+1.3**
ILAR	comp=N,0.3nm,0.3s,baz=183,slow=23,SNR=6.3			Sn	**Sn**	**09 29 32.4**	**-4.3**
ILAR	comp=N,36nm,18.4s,baz=12,slow=38 comp=N,0.9nm,0.5s			LR	LR	09 31 31.4	
P32M	**Atlin**	**9.10**	**59**	Pn	**Pn**	**09 27 56.9**	**+0.3**
P32M	**Atlin** baz=252	**9.10**	**59**	P	**Pn**	**09 27 56.7**	**+0.1**
MLY	**Manley**	**9.22**	**356**	Pn	**Pn**	**09 27 58.9**	**+0.6**
M30M	**Minto, Yukon** baz=229	**9.26**	**38**	P	**Pn**	**09 27 59.7**	**+0.9**
DAWY	**Dawson**	**9.58**	**27**	Pn	**Pn**	**09 28 04.5**	**+1.3**
P33M	**Teslin, Yukon**	**9.73**	**57**	Pn	**Pn**	**09 28 05.8**	**+0.5**
PRP	**Porcupine Dome**	**9.85**	**9**	Pn	**Pn**	**09 28 08.3**	**+1.3**
DLBC	**Dease Lake** comp=N,0.2nm,0.3s,baz=301,slow=25,SNR=1.9 comp=N,0.6nm,0.3s	**10.74**	**68**	Pn	**Pn**	**09 28 19.6**	**+0.4**
BMAR	**Burnt Mountain**	**11.81**	**9**	Pn	**Pn**	**09 28 35.0**	**+1.3**
INK	**Inuvik** comp=N,0.1nm,0.3s,baz=190,slow=14,SNR=9.1	**14.41**	**24**	Pn	**Pn**	**09 29 10.6**	**+1.4**
INK	comp=N,50nm,19.4s,baz=129,slow=36 comp=N,2.8nm,0.9s			LR	LR	09 34 36.1	
YKA	**Yellowknife Ar** baz=266,slow=10,SNR=9.4	**18.76**	**55**	P	**P**	**09 30 04.8**	**+0.6**
YKA	comp=N,0.2nm,0.9s,baz=279,slow=1.2,SNR=4.6 comp=N,0.5nm,0.8s			PcP	**PcP**	**09 34 30.2**	**-0.9**
NVAR	**Mina Array Bea** comp=N,0.2nm,0.5s,baz=322,slow=12,SNR=2.7 comp=N,0.2nm,0.5s	**27.00**	**117**	P	**P**	**09 31 26.0**	**-1.5**
PDAR	**Pinedale Array** comp=N,0.2nm,0.6s,baz=319,slow=9.5,SNR=1.6 comp=N,0.2nm,0.6s	**28.57**	**100**	P	**P**	**09 31 41.0**	**-0.5**
PETK	**Petropavlovsk-** comp=N,1.7nm,0.9s,baz=66,slow=12,SNR=1.3 comp=N,1.7nm,0.9s	**30.32**	**287**	P	**P**	**09 31 56.9**	**+0.3**
ARCES	**ARCESS Array B** comp=N,4.9nm,0.9s,baz=352,slow=7.4,SNR=4.2 comp=N,4.9nm,0.9s	**54.84**	**2**	P	**P**	**09 35 14.8**	**-0.2**
ZALV	**Zalesovo Beam** comp=N,0.6nm,0.5s,baz=28,slow=6.5,SNR=1.7 comp=N,0.6nm,0.5s	**61.92**	**327**	P	**P**	**09 36 05.4**	**+0.8**
FINES	**FINESS Array B** comp=N,1.7nm,0.6s,baz=357,slow=9.2,SNR=6.2 comp=N,1.7nm,0.6s	**62.97**	**3**	P	**P**	**09 36 12.2**	**+0.7**
BVAR	**Borovoye Array** comp=N,0.8nm,0.6s,baz=64,slow=6.8,SNR=4.9 comp=N,0.8nm,0.6s	**66.67**	**335**	P	**P**	**09 36 36.8**	**+1.0**
KURBB	**Kurchatov Arra** comp=N,2.0nm,0.2s,baz=44,slow=4.1,SNR=0.9 comp=N,2.0nm,0.2s	**66.71**	**329**	P	**P**	**09 36 36.3**	**+0.3**
MKAR	**Makanchi Array** comp=N,0.5nm,0.6s,baz=46,slow=6.2,SNR=5.5 comp=N,0.5nm,0.6s	**68.95**	**325**	P	**P**	**09 36 50.8**	**+0.5**
AKASG	**Malin Array Be** comp=N,1.2nm,0.6s,baz=2.5,slow=6.0,SNR=5.0 comp=N,1.2nm,0.6s	**73.79**	**1**	P	**P**	**09 37 19.6**	**+0.2**
GERES	**GERESS Array B** comp=N,0.7nm,0.6s,baz=35,slow=5.1,SNR=2.8 comp=N,0.7nm,0.6s	**74.69**	**12**	P	**P**	**09 37 26.1**	**+1.3**
CMAR	**Chiang Mai Arr** comp=N,0.9nm,0.3s,baz=14,slow=3.3,SNR=5.2 comp=N,0.9nm,0.3s	**86.50**	**298**	P	**P**	**09 38 28.9**	**+0.4**
QSPA	**South Pole Qui** comp=N,3.4nm,1.2s,baz=250,slow=0.7,SNR=5.0	**145.66**	**180**	PKPbc	**PKPdf**	**09 45 21.5**	**-0.9**

TAP 08 09:26:54.1,24.23N×121.75E,h10km±1km,ML2.0,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua** baz=352	**0.10**	**353**	*i* P	Pg	09 26 57.5	+0.7
ETL	**Fush Village** baz=240	**0.14**	**241**	P	Pg	09 26 57.9	+0.6
ETL	baz=240			*e*S	Sg	09 27 01.0	+1.5
NACB	**Ninganchiao** baz=250	**0.15**	**251**	*i* P	Pb	09 26 58.4	-0.7
NACB	baz=250			S	Sg	09 27 01.1	+1.1
ENA	**Nanau** baz=358	**0.20**	**357**	P	Pg	09 26 59.1	+0.7
ENA	baz=358			*e*S	Sg	09 27 03.3	+1.9
TWD	**Chiawan** baz=223	**0.20**	**225**	*e*P	Pg	09 26 59.0	+0.6
EWUT	**Wuta** baz=5.0	**0.22**	**6**	*e*P	Pg	09 26 59.4	+0.6
EWUT	baz=5.0			*e*S	Sg	09 27 03.1	+1.2
ETLH	**Xiulin Townshi** baz=265	**0.25**	**266**	*i* P	Pb	09 27 00.4	-0.4
ETLH	baz=265			S	Sg	09 27 04.5	+1.8
LATG	**Datong** baz=326	**0.37**	**326**	*e*P	Pb	09 27 02.5	-0.4
LATG	baz=326			*e*S	Sb	09 27 08.6	-0.2
ESL	**Shilin** baz=214	**0.50**	**216**	*e*P	Pb	09 27 05.3	+0.2

*NNC **08** 09:27:21.7±2.5,54.37N×86.96E,h0km,mb3.4,mpv3.2, Error ellipse: s-maj=20.5km s-min=12.7km az=9.0, Suspected Mining explosion.*

*IDC **08** 09:27:23.2±2.5,54.32N×86.84E,h0km,mbtmp3.5/3, ML3.1/3,Error ellipse: s-maj=21.6km s-min=14.1km az=62.0*

ISC 08 09:27:23.0±4.0,**54.4N**±0.2×**86.8E**±0.2,**h0**km,**n10**, σ1§12/16,**9C-5D**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.3nm,1.2s,baz=71,slow=342,SNR=1.2	**1.21**	**250**	I	I	09 34 18.4	
ZAA0	**Zalesovo Array** 1.1nm,0.4s	**1.21**	**250**	⇑P	**Pg**	**09 27 45.4**	**-0.8**
ZAA0	1.3nm,0.4s			⇑S	**Sn**	**09 28 05.4**	**+1.1**
ZALV	**Zalesovo Beam** 6.5nm,0.3s,baz=70,slow=16,SNR=84	**1.21**	**250**	Pg	**Pb**	**09 27 45.6**	**-1.2**
ZALV	3.4nm,0.3s,baz=74,slow=22,SNR=7.7			Lg	Lg	09 28 03.9	
KURK	**Kurchatov** 1.8nm,0.7s	**6.17**	**237**	⇑Pn	**Pn**	**09 28 55.9**	**+0.7**
KURK	0.9nm,0.5s			⇓Sn	**Sn**	**09 30 07.6**	**+1.2**
KURK	1.1nm,0.5s			⇓Lg	Lg	09 30 42.8	
KURBB	**Kurchatov Arra** 3.6nm,0.3s	**6.27**	**236**	⇑Pn	**Pn**	**09 28 57.7**	**+1.1**
KURBB	2.7nm,0.4s			⇓Sn	**Sn**	**09 30 10.1**	**+1.2**
KURBB	2.5nm,0.5s			⇑Lg	Lg	09 30 45.8	
KURBB	**Kurchatov Arra** 0.5nm,0.3s,baz=56,slow=14,SNR=13	**6.27**	**236**	Pn	**Pn**	**09 28 58.1**	**+1.4**
KURBB	baz=43,slow=23			Sn	**Sn**	**09 30 08.5**	**-0.4**
KURBB	baz=60,slow=32 3.0nm,0.3s			Lg	Lg	09 30 44.0	
MK31	**Makanchi Array** 0.3nm,0.3s,baz=29,slow=12,SNR=32	**8.11**	**202**	⇑Pn	**Pn**	**09 29 22.6**	**+0.8**
MK31	0.3nm,0.4s,baz=183,slow=17,SNR=4.8			⇑Sn	**Sn**	**09 30 54.5**	**+0.4**
MK31	0.7nm,0.7s			⇓Lg	Lg	09 31 38.1	
MKAR	**Makanchi Array** 0.7nm,0.3s,baz=26,slow=13,SNR=39	**8.11**	**202**	Pn	**Pn**	**09 29 22.8**	**+0.9**
MKAR	0.1nm,0.3s,baz=23,slow=26,SNR=4.1			Sn	**Sn**	**09 30 52.3**	**-1.9**
MKAR	baz=21,slow=28,SNR=1.9 1.2nm,0.4s			Lg	Lg	09 31 39.6	
MAKZ	**Makanchi** 1.2nm,0.6s	**8.16**	**204**	⇑Pn	**Pn**	**09 29 23.5**	**+0.8**
MAKZ	0.6nm,0.6s			⇑Sn	**Sn**	**09 30 56.3**	**+0.7**
MAKZ	1.5nm,0.8s			⇓Lg	Lg	09 31 40.3	
**BV

TGBT	**Tuxtla Gutierr**	**2.12**	**37**	*e*P		**Pb**	**09 28 44.0**	**-0.5**
TGBT				*e*S		**Sb**	**09 29 09.7**	**-1.3**
PAVE	**Pavencul**	**2.17**	**86**	*e*P		**Pn**	**09 28 43.0**	**+0.7**
PAVE				*e*S		**Sn**	**09 29 06.8**	**-2.6**
CHUJ	**Union Juarez**	**2.23**	**89**	*e*P		**Pn**	**09 28 44.1**	**+1.0**
CHUJ				*e*S		**Sn**	**09 29 08.6**	**-2.4**
UXUV	**UXUV**	**2.25**	**7**	*e*P		**Pb**	**09 28 45.8**	**-0.8**
UXUV				*e*S		**Sb**	**09 29 12.0**	**-2.6**
CCIG	**Comitan**	**2.51**	**61**	*e*P		**Pb**	**09 28 50.0**	**-1.1**
CCIG				*e*S		**Sb**	**09 29 20.1**	**-2.1**
SMSP	**San Marcos**	**2.55**	**92**	*e*P		**Pb**	**09 28 51.4**	**-0.5**
SMSP				*e*S		**Sn**	**09 29 18.4**	**-0.5**
RTAL	**Retalhuleu**	**2.69**	**101**	*e*P		**Pb**	**09 28 52.7**	**-1.4**
RTAL				*e*S		**Sn**	**09 29 20.0**	**-2.0**
PEIG	**Puerto Escondi**	**2.79**	**290**	*e*P		**Pn**	**09 28 52.4**	**+1.7**
PEIG				*e*S		**Sn**	**09 29 20.6**	**-3.9**
HUEH	**Huehuetenango**	**2.83**	**85**	*e*P		**Pn**	**09 28 53.8**	**+2.4**
HUEH				*e*S		**Sn**	**09 29 27.1**	**+1.5**
NEUV	**Arroyo Zacate**	**2.95**	**333**	*e*P		**Pn**	**09 28 54.7**	**+1.9**
NEUV				*e*S		**Sn**	**09 29 29.1**	**+0.8**
TUIG	**Tuzandepetl**	**2.95**	**360**	*e*P		**Pn**	**09 28 54.9**	**+2.1**
TUIG				*e*S		**Sn**	**09 29 28.0**	**-0.4**
VHO	**Vista Hermosa**	**2.99**	**312**	*e*P		**Pb**	**09 28 57.4**	**-1.9**
VHO				*e*S		**Sn**	**09 29 30.1**	**+0.4**
YOIG	**Yosondua**	**3.50**	**301**	*e*P		**Pn**	**09 29 04.7**	**+4.1**
YOIG				*e*S		**Sn**	**09 29 41.5**	**-0.8**
PNIG	**Pinotepa**	**3.81**	**291**	*e*P		**Pn**	**09 29 07.2**	**+2.6**
PNIG				*e*S		**Sn**	**09 29 45.8**	**-3.9**
TXIG	**Tlaxiaco**	**3.88**	**304**	*e*P		**Pn**	**09 29 10.7**	**+4.7**
TXIG				*e*S		**Sn**	**09 29 52.3**	**+0.4**
TOIG	**Toxpalan**	**3.94**	**320**	*e*P		**Pb**	**09 29 11.9**	**-3.6**
TOIG				*e*S		**Sn**	**09 29 53.0**	**0.0**
HLIG	**Huajuapan de L**	**4.25**	**311**	*e*P		**Pn**	09 29 15.9	+5.0
HLIG				*e*S		**Sn**	**09 30 01.9**	**+0.9**
TPIG	**Tehuac#an**	**4.37**	**320**	*e*P		**Pb**	**09 29 19.0**	**-3.8**
TPIG				*e*S		**Sb**	**09 30 12.4**	**-3.3**
FTIG	**Fresnillo de T**	**4.55**	**309**	*e*P		**Pn**	**09 29 19.7**	**+4.8**
FTIG				*e*S		**Sn**	**09 30 07.5**	**-0.5**
MGIG	**Malinaltepec**	**4.59**	**299**	*e*P		**Pn**	**09 29 19.9**	**+4.4**
MGIG				*e*S		**Sn**	**09 30 08.1**	**-1.1**
TLIG	**Tlapa**	**4.69**	**302**	*e*P		**Pn**	**09 29 21.7**	**+4.7**
TLIG				*e*S		**Sn**	**09 30 10.7**	**-1.0**
PETF	**Flores**	**4.75**	**67**	*e*P		**Pn**	**09 29 20.1**	**+2.6**
PETF				*e*S		**Sn**	**09 30 11.2**	**-1.6**
CRIG	**Cruz Grande**	**4.83**	**291**	*e*P		**Pn**	**09 29 21.6**	**+2.9**
CRIG				*e*S		Sn	09 30 09.4	-5.4
JAUV	**Jalcomulco**	**4.84**	**332**	*e*P		**Pn**	**09 29 20.4**	**+1.5**
JAUV				*e*S		**Sn**	**09 30 12.7**	**-2.6**
SCIG	**Sabancuy**	**4.96**	**38**	*e*P		**Pn**	**09 29 22.4**	**+1.9**
SCIG				*e*S		**Sn**	**09 30 14.7**	**-3.3**
MEIG	**Mezcala**	**5.74**	**300**	*e*P		Pn	09 29 36.8	+5.4
MEIG				*e*S		**Sn**	**09 30 36.9**	**-0.6**
YAIG	**Yautepec**	**5.83**	**311**	*e*P		Pn	09 29 38.7	+6.0
YAIG				*e*S		**Sn**	**09 30 37.5**	**-2.3**
PLIG	**Platanillo**	**5.89**	**305**	*e*P		Pn	09 29 39.4	+6.0
PLIG				*e*S		**Sn**	**09 30 37.0**	**-4.1**
CAIG	**El Cayaco**	**5.96**	**290**	*e*P		**Pn**	**09 29 37.9**	**+3.7**
CAIG				*e*S		Sn	09 30 35.7	-7.0
ARIG	**Puente Sto Nin**	**6.52**	**300**	*e*P		Pn	09 29 47.5	+5.5
ARIG				*e*S		Sn	09 30 50.6	-6.0
MMIG	**Aquila**	**9.13**	**292**	*e*P		**Pn**	**09 30 21.5**	**+3.6**
TXAR	**Lajitas Array**	**16.57**	**331**	P		**P**	**09 32 04.9**	**+3.8**
	0.4nm,0.8s,baz=148,slow=13,SNR=2.8							
NVAR	**Mina Array Bea**	**31.39**	**322**	P		**P**	**09 34 29.6**	**+2.2**
	0.2nm,0.6s,baz=131,slow=11,SNR=2.9							
	0.2nm,0.6s							
YKA	**Yellowknife Ar**	**49.47**	**348**	P		**P**	**09 36 54.1**	**-2.1**
	0.1nm,0.6s,baz=157,slow=7.3,SNR=4.9							
	0.1nm,0.6s							
ILAR	**Eielson Array**	**60.95**	**337**	P		**P**	**09 38 19.3**	**+0.3**
	0.2nm,0.5s,baz=136,slow=6.6,SNR=4.9							
	0.2nm,0.5s							

IDC 08 09:38:07.5±2.0, 32°.17N×95°.40E, h0km, mb3.6/4, mbtmp3.6/5, ML3.1/1, MS3.4/1, Error ellipse: s-maj=211.6km s-min=22.3km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.73**	**329**	P	Pn	09 42 14.9	-0.8
	0.1nm,0.3s,baz=141,slow=13,SNR=7.5						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**22.27**	**331**	P	P	09 43 06.8	+0.8
	2.6nm,0.2s,baz=137,slow=11,SNR=4.1						
	2.6nm,0.2s						
ZALV	**Zalesovo Beam**	**23.05**	**344**	P	P	09 43 13.9	-0.3
	0.6nm,0.7s,baz=145,slow=8.6,SNR=1.4						
	0.6nm,0.7s						
NRIK	**Noril'sk**	**37.48**	**355**	LR	LR	10 01 56.8	
	comp=Z,62nm,20.0s,baz=322,slow=38						
WRA	**Warramunga Arr**	**63.84**	**139**	P	P	09 48 41.7	-0.2
	0.4nm,0.9s,baz=330,slow=7.1,SNR=2.5						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**66.61**	**142**	P	P	09 49 00.0	+0.1
	0.3nm,0.9s,baz=324,slow=6.5,SNR=4.3						
	0.3nm,0.9s						

*SOME **08** 09:44:04.1, 39°.12N×72°.28E, h15km*
*NNC **08** 09:44:11.9±8.1, 38°.72N×72°.01E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=69.5km s-min=42.6km az=171.0*

ISC 08 09:44:14.1±3.6, 38°.6N±0°.2×71°.8E±0°.1, h10km, n7, σ2≥54/8, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.76**	**340**	*e*P	**Pn**	**09 45 11.3**	**-1.0**
	10nm,0.3s						
IUG				*e*S	**Sn**	**09 45 59.4**	**+2.7**
	22nm,0.5s						
MRKS	**Merke**	**4.25**	**14**	*e*P	Pn	09 45 10.7	-8.4
	3.0nm,0.2s						
MRKS				*e*S	Sn	09 45 57.7	-11
	20nm,0.3s						
KK31	**Karatay Array**	**4.57**	**348**	⇓P	**Pn**	**09 45 20.7**	**-2.7**
	1.1nm,0.2s,baz=132,slow=11,SNR=39						
KK31				⇑S	**Sn**	**09 46 15.7**	**-0.8**
	4.3nm,0.7s,baz=160,slow=29,SNR=12						
TKM2	**Tokmak 2**	**5.17**	**33**	⇓P	Pn	09 45 27.5	-4.2
	0.7nm,0.5s						
TKM2				⇑S	**Sn**	**09 46 29.0**	**-2.5**
	4.9nm,0.8s						
KRBS	**Karabastau**	**5.85**	**29**	*e*P	**Pn**	**09 45 41.1**	**+0.2**
	0.4nm,0.2s						
KRBS				*e*S	**Sn**	**09 46 50.8**	**+2.7**
	2.9nm,0.5s						
AB31	**Akbulak array**	**13.61**	**325**	⇓P	Pn	09 47 23.6	-3.5
	0.3nm,0.3s,baz=127,slow=12,SNR=4.5						
AKTO	**Aktyubinsk**	**15.32**	**325**	⇓P	**P**	**09 47 56.6**	**+1.5**
	0.3nm,0.4s						

TAP 08 09:51:32.2, 24°.13N×121°.77E, h15km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**284**	*i* P	Pb	09 51 36.6	-0.1
	baz=283						
TWD	**Chiawan**	**0.17**	**255**	*i* P	Pb	09 51 36.9	-0.3
	baz=254						
TWD				S	Sb	09 51 40.4	+0.1
	baz=254						
NACB	**Ninganchiao**	**0.17**	**287**	P	Pb	09 51 36.9	-0.3
	baz=286						
EAHA	**Aohua**	**0.21**	**351**	*i* P	Pb	09 51 37.6	-0.2
	baz=351						
EAHA				*e*S	Sb	09 51 41.8	+0.4
	baz=351						
ETLH	**Xiulin Townshi**	**0.28**	**287**	*i* P	Pb	09 51 39.0	-0.1
	baz=287						
ETLH				S	Sb	09 51 44.0	+0.3
	baz=287						
LXIB	**Xiulin Townshi**	**0.35**	**253**	*e*S	Sb	09 51 45.2	-0.3
	baz=252						

TAP 08 09:51:36.0, 24°.00N×121°.60E, h8km, ML1.6, 3C-4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.08**	**0**	P	Pg	09 51 38.8	+0.8
	baz=6.0						
ETM	**Tongmen**	**0.10**	**249**	⇑*i*P	Pg	09 51 39.1	+0.7
	baz=248						
ETM				S	Sg	09 51 40.8	+0.8
	baz=248						
ETL	**Fush Village**	**0.16**	**9**	P	Pg	09 51 40.2	+1.0
	baz=9.0						
ETL				S	Sg	09 51 42.6	+1.0
	baz=9.0						
LXIB	**Xiulin Townshi**	**0.17**	**277**	⇓*i*P	Pg	09 51 40.4	+0.9
	baz=276						
LXIB				*i* S	Sg	09 51 43.5	+1.6
	baz=276						
NACB	**Ninganchiao**	**0.17**	**360**	*i* P	Pg	09 51 40.4	+0.9
	baz=359						
NACB				S	Sg	09 51 43.2	+1.2
	baz=359						
SHUL	**Shoufeng**	**0.22**	**188**	P	Pg	09 51 41.8	+1.5
	baz=188						
SHUL				*e*S	Sg	09 51 46.5	+3.3
	baz=188						
ETLH	**Xiulin Townshi**	**0.23**	**333**	*i* P	Pg	09 51 41.6	+1.0
	baz=332						
ETLH				*e*S	Sg	09 51 45.0	+1.2
	baz=332						
ESL	**Shilin**	**0.24**	**219**	P	Pg	09 51 41.0	+0.2
	baz=216						
ESL				*e*S	Sg	09 51 44.5	+0.5
	baz=216						
EHP	**Heping Village**	**0.33**	**23**	*e*P	Pb	09 51 44.3	+0.1
	baz=24						
EHP				*i* S	Sb	09 51 49.2	-0.5
	baz=24						
WHF	**Hehuan Shan**	**0.33**	**295**	P	Pb	09 51 43.7	-0.8
	baz=295						
WHF				S	Sb	09 51 48.8	-1.4
	baz=295						
WARBT	**Fenglin Townsh**	**0.34**	**214**	*e*P	Pg	09 51 43.1	+0.4
	baz=214						
WARBT				*e*S	Sb	09 51 48.6	-1.3
	baz=214						
EAHA	**Aohua**	**0.35**	**22**	*i* P	Pb	09 51 44.0	-0.5
	baz=21						
EAHA				S	Sb	09 51 50.2	0.0
	baz=21						
EGFH	**Guangfu**	**0.37**	**205**	P	Pb	09 51 44.0	-0.7
	baz=204						
EGFH				*i* S	Sb	09 51 50.3	-0.3
	baz=204						
OWD	**Renai**	**0.39**	**263**	*i* P	Pb	09 51 44.6	-0.6
	baz=262						
OWD				*e*S	Sb	09 51 50.1	-1.2
	baz=262						
CHGB	**Renai**	**0.39**	**279**	⇓P	Pb	09 51 44.9	-0.4
	baz=278						
CHGB				*e*S	Sb	09 51 51.9	+0.3
	baz=278						
FUSS	**Fushou**	**0.40**	**307**	⇓*e*P	Pb	09 51 45.5	-0.1
	baz=307						
FUSS				S	Sb	09 51 51.4	-0.7
	baz=307						
WUSB	**Renai**	**0.44**	**269**	P	Pb	09 51 45.8	-0.3
	baz=268						
WUSB				S	Sb	09 51 52.8	-0.1
	baz=268						
ENA	**Nanau**	**0.44**	**17**	*i* P	Pb	09 51 45.7	-0.4
	baz=18						
ENA				*e*S	Sb	09 51 51.8	-1.2
	baz=18						
NNSB	**Datong**	**0.47**	**335**	⇑*e*P	Pb	09 51 46.6	0.0
	baz=335						
NNSB				*e*S	Sb	09 51 52.8	-0.9
	baz=335						
NNSH	**Datong**	**0.47**	**335**	P	Pb	09 51 46.3	-0.3
	baz=335						
NNSH				S	Sb	09 51 53.3	-0.4
	baz=335						
TDCB	**Techi**	**0.47**	**302**	*e*P	Pb	09 51 46.4	-0.2
	baz=301						
TDCB				S	Sb	09 51 53.6	-0.3
	baz=301						
NNS	**Nan Shan**	**0.48**	**335**	*i* P	Pb	09 51 46.3	-0.5
	baz=335						
NNS				*e*S	Sb	09 51 53.5	-0.6
	baz=335						
VWDT	**VWDT**	**0.48**	**239**	⇓P	Pb	09 51 46.7	-0.1
	baz=239						
VWDT				*e*S	Sb	09 51 53.9	-0.2
	baz=239						
HGSD	**Ruisui**	**0.53**	**197**	P	Pb	09 51 47.2	-0.3
	baz=197						
HGSD				*i* S	Sb	09 51 55.7	+0.3
	baz=197						
LATG	**Datong**	**0.54**	**353**	P	Pb	09 51 47.3	-0.4
	baz=353						
LATG				S	Sb	09 51 56.1	+0.4
	baz=353						
EHY	**Hungye**	**0.55**	**207**	*e*P	Pg	09 51 47.1	+0.5
	baz=206						
EHY				*e*S	Sb	09 51 55.9	-0.1
	baz=206						
NDT	**Datong Townshi**	**0.60**	**353**	*e*P	Pb	09 51 48.4	-0.4
	baz=352						
NDT				S	Sb	09 51 57.8	+0.3
	baz=352						
DPDB	**Guoxing**	**0.61**	**273**	*i* P	Pb	09 51 48.8	-0.2
	baz=272						
SSLB	**Suanglung**	**0.62**	**250**	⇑*i*P	Pb	09 51 49.1	-0.1
	baz=250						
SSLB				*e*S	Sg	09 51 56.7	+0.5
	baz=250						
WCS	**Beigang Elemen**	**0.63**	**275**	*e*P	Pb	09 51 49.8	+0.6
	baz=274						
WCS				S	Sb	09 51 59.0	+0.8
	baz=274						
ENTT	**Nioudou**	**0.64**	**358**	P	Pb	09 51 49.3	-0.1
	baz=358						
ENTT				*i* S	Sb	09 51 58.8	+0.3
	baz=358						
SMLT	**Sun Moon Lake**	**0.65**	**260**	*e*P	Pb	09 51 49.9	+0.3
	baz=259						
SMLT				S	Sb	09 51 59.4	+0.6
	baz=259						
WHP	**Taichung City**	**0.65**	**295**	*e*P	Pb	09 51 50.2	+0.5
	baz=294						
WHP				*e*S	Sb	09 52 00.5	+1.4
	baz=294						
YULB	**Yu-li**	**0.67**	**204**	*e*P	Pg	09 51 48.9	+0.1
	baz=204						
YULB				*e*S	Sb	09 51 59.0	-0.3
	baz=204						
TYC	**Yuchr**	**0.68**	**262**	*i* P	Pb	09 51 50.0	-0.2
	baz=261						
TYC				S	Sb	09 52 00.5	+0.7
	baz=261						
YHNB	**Yeheng**	**0.69**	**343**	P	Pb	09 51 50.8	+0.3
	baz=343						
YHNB				*e*S	Sb	09 51 59.8	-0.4
	baz=343						
TWF1	**Yuli**	**0.70**	**203**	P	Pb	09 51 50.1	-0.4
	baz=202						
TWF1				S	Sb	09 52 00.7	+0.4
	baz=202						
NSK	**Sanguang**	**0.70**	**342**	*e*P	Pb	09 51 51.4	+0.8
	baz=342						
NSK				*e*S	Sb	09 52 00.6	+0.1
	baz=342						
FUSB	**Fushanzhiwuyua**	**0.75**	**359**	*e*P	Pg	09 51 50.8	+0.3
	baz=359						
FUSB				*i* S	Sb	09 52 02.7	+0.8
	baz=359						
NWLT	**Wulai**	**0.78**	**354**	*e*P	Pb	09 51 52.4	+0.6
	baz=353						
NWLT				S	Sb	09 52 03.1	+0.6
	baz=353						

*MOS **08** 09:52:45.6±1.8, 4°.63N×95°.96E, h18km, mb5.1/40, MS5.0/7, Error ellipse: s-maj=9.6km s-min=4.6km az=117.3*
*IDC **08** 09:52:46.6±1.9, 4°.84N×96°.18E, h15km±11km, mb4.4/39, mbtmp4.5/40, ML4.7/1, MS4.5/73, Error ellipse: s-maj=17.7km s-min=10.2km az=50.0*
*NEIC **08** 09:52:47.6, 4°.85N×96°.32E, h20km, Moment Tensor Solution. Duration: 2≥1 Moment tensor: Scale 10^16^Nm; Mrr-1.15; Mθθ-6.06; Mϕϕ7.21; Mrθ-5.34; Mθϕ0.60; Mϕr1.88; Fault plane solution: M0 8.63000×10^16^ NP1: ϕs140.20000°, δ77.45000°, λ-145.41000°. NP2: ϕs41.68000°, δ56.34000°, λ-15.13000°. Principal axes: T 7.6398, Plg14.0000°, Azm267.0000°; N 1.9800, Plg53.0000°, Azm158.0000°; P -9.6198, Plg33.0000°, Azm6.0000°;*
*NEIC **08** 09:52:47.0±2.2, 4°.75N±0°.06×96°.19E±0°.06, h10km±1km, mb5.1/75, Mww5.2/20 Error ellipse: s-maj=11.3km s-min=8.8km az=132.0*
*NEIC **08** 09:52:47.6, 4°.75N×96°.22E, h20km*
*DJA **08** 09:52:48.3±0.1, 5°.N±1°×9°.6E±°, h10km, M5.1/56, mB5.6/25, mb5.2/56, MLv5.3/14, Mw(mB)5.0/25, MwMwp4.8/6, Mwp5.1/6*
*GCMT **08** 09:52:50.0±0.1, 4°.82N±0°.01×96°.19E±0°.01, h19km, MW5.2/125, Moment Tension Solution. s82,c110; s125,c206; Duration: 1≥0 Moment tensor: Scale 10^17^ Nm; Mrr-0.07±.01; Mθθ-0.70±.01; Mϕϕ0.77±.01; Mrθ-0.17±.03; Mθϕ0.12±.01; Mϕr0.00±.03; Best double couple: M0 0.77000×10^17^ NP1:ϕs49.00000°, δ81.00000°, λ-11.00000°. NP2:ϕs141.00000°, δ79.00000°, λ-171.00000°. Principal axes: T 0.7850, Plg1.0000°, Azm95.0000°; N -0.0310, Plg76.0000°, Azm188.0000°; P -0.7540, Plg14.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 09:52:48.6±0.4, 4°.65N±0°.03×96°.10E±0°.04, h20km±3km, h21km: pP-P, n476, σ2≥23/495, mb5.0/170, MS4.7/102, 27C-30D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.49**	**141**	P	**Pb**	**09 52 56.6**	**-2.0**
LHMI	**Lhok Sumawe**	**1.02**	**56**		**Pb**	**09 53 04.0**	**-3.7**
LHMI	**Lhok Sumawe**	**1.02**	**56**	P	**Pb**	**09 53 04.6**	**-3.1**
LHMI	**Lhok Sumawe**	**1.02**	**56**	P	**Pb**	**09 53 04.0**	**-3.7**
LHMI				S	**Sb**	**09 53 17.3**	**-3.4**
KCSI	**Kotacane, Aceh**	**2.01**	**124**	P	**Pb**	**09 53 23.1**	**-1.5**
KCSI				S	**Sb**	**09 53 50.5**	**+1.3**
SNSI	**Sinabang, Aceh**	**2.24**	**174**	P	**Pn**	**09 53 25.0**	**+0.4**
SNSI				S	**Sn**	**09 53 53.0**	**+1.4**
PSI	**Prapat**	**3.37**	**123**	P	**Pn**	**09 53 42.3**	**+2.1**
PSI	**Prapat**	**3.37**	**123**	P	**Pn**	**09 53 41.1**	**+0.9**
RPSI	**Rantau Prapat**	**3.43**	**124**		**Pn**	**09 53 41.1**	**+0.2**
GSI	**Gunungsitoli**	**3.64**	**156**		**Pn**	**09 53 44.4**	**+0.6**
GSI	**Gunungsitoli**	**3.64**	**156**	P	**Pn**	**09 53 44.7**	**+0.9**
GSI	**Gunungsitoli**	**3.64**	**156**	P	**Pn**	**09 53 44.2**	**+0.4**
GSI				S	**Sn**	**09 54 27.3**	**+1.1**
KULM	**Kulim**	**4.58**	**82**		**Pn**	**09 53 54.8**	**-2.0**
IPM	**Ipoh**	**4.92**	**92**		**Pn**	**09 53 59.3**	**-2.1**
IPM	**Ipoh**	**4.92**	**92**	P	**Pn**	**09 53 59.7**	**-1.7**
SKLT	**Songkhla**	**5.15**	**61**	P	**Pn**	**09 54 02.9**	**-1.7**
PBSI	**Pulau Batu**	**5.16**	**155**	P	**Pn**	**09 54 04.9**	**+0.2**
	245nm,0.9s,4μm9μm1.8nm						
PBSI				S	**Sn**	**09 55 03.3**	**-0.4**
	245nm,0.9s,4μm9μm1.8nm						
SRIT	**Nakonsritamara**	**5.24**	**41**	Pn	**Pn**	**09 54 03.5**	**-2.3**
SURA	**Surathani**	**5.69**	**38**	P	**Pn**	**09 54 10.5**	**-1.6**
BKNI	**Bangkinang**	**6.55**	**131**		**Pn**	**09 54 23.3**	**-0.5**
BKNI	**Bangkinang**	**6.55**	**131**	P	**Pn**	**09 54 23.3**	**-0.5**
	336nm,0.7s,15μm3μm2.3nm						
SISI	**Saibi**	**6.65**	**153**	P	**Pn**	**09 54 26.3**	**+1.1**
	108nm,0.9s,2μm0.8nm						
PDSI	**Padang**	**7.04**	**142**	P	**Pn**	**09 54 31.8**	**+1.2**
	138nm,0.9s,7μm2μm0.6nm						
MYKOM	**Kota Tinggi**	**8.25**	**110**		**Pn**	**09 54 45.9**	**-1.3**
PPSI	**Pulau Pagai**	**8.34**	**152**	P	**Pn**	**09 54 49.0**	**+0.6**
	99nm,0.9s						
KRJI	**Kerinci**	**8.58**	**141**	P	Pn	09 55 02.8	+11
DGPR	**DIGLIPUR**	**9.03**	**340**	*e*P	Pn	09 54 52.8	-5.1
DGPR				IAmb	IAmb	09 55 15.6	
	comp=Z,109nm,1.2s						
TPRI	**Tanjung Pinang**	**9.20**	**114**	P	**Pn**	**09 54 56.2**	**-4.1**
	comp=Z,71nm,0.8s,comp=Z,22μm						
NAYO	**Nakonayok**	**10.90**	**28**	P	**Pn**	**09 55 22.9**	**-0.6**
PPBI	**Pangkal Pinang**	**12.10**	**124**	P	**Pn**	**09 55 38.5**	**-1.5**
	comp=Z,35nm,0.7s,comp=Z,28μm						
KASI	**Kota Agung**	**13.14**	**140**	P	**Pn**	**09 55 51.5**	**-2.7**
	comp=Z,49nm,0.7s,comp=Z,800nm						
CMAR	**Chiang Mai Arr**	**14.00**	**11**	Pn	**Pn**	**09 56 06.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**14.00**	**11**	*i* P	**Pn**	**09 56 07.3**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.00**	**11**	Pn	**Pn**	**09 56 06.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=199,slow=13,SNR=10						
CMAR				Lg	Lg	10 00 02.6	
	comp=Z,0.4nm,0.3s,baz=198,slow=31,SNR=4.6						
CMAR				LR	LR	10 01 57.1	
	comp=Z,2μm,18.2s,baz=195,slow=40						
UBPT	**Khong Chiam**	**14.02**	**40**	Pn	**Pn**	**09 56 04.8**	**-1.5**
KSM	**Kuching**	**14.54**	**102**		**Pn**	**09 56 12.0**	**-1.4**
PALK	**Pallekele**	**15.53**	**280**	*d* i P	**P**	**09 56 29.3**	**-1.5**
PALK	**Pallekele**	**15.53**	**280**	Pn	**Pn**	**09 56 28.6**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=211,slow=14,SNR=2.7						
PALK				Sn	Sn	09 59 02.8	-15
	comp=Z,0.6nm,0.3s,baz=140,slow=22,SNR=1.4						
PALK				LR	LR	10 01 46.5	
	comp=Z,1μm,21.4s,baz=202,slow=35						
SKJI	**Sukabumi**	**15.59**	**138**	P	**Pn**	**09 56 25.4**	**-2.0**
	comp=Z,223nm,0.9s						
STKI	**Sintang**	**16.03**	**106**	P	**Pn**	**09 56 33.2**	**+0.2**
	comp=Z,86nm,1.3s						
LEM	**Lembang**	**16.20**	**135**	Pn	**Pn**	**09 56 35.0**	**-0.3**
	comp=Z,3.0nm,0.3s,baz=117,slow=24,SNR=1.9						
LEM				LR	LR	10 02 29.4	
	comp=Z,3μm,20.1s,baz=299,slow=36						
	comp=Z,14nm,0.3s						
MDRS	**Chennai**	**17.74**	**299**	*e*P	**P**	**09 56 56.4**	**+1.1**
MDRS				*e*S	Sn	09 59 59.9	-12
SAIH	**SAIHA**	**17.99**	**351**	*e*P	**P**	**09 56 58.7**	**+0.6**
SAIH				IAmb	IAmb	09 57 06.0	
	comp=Z,306nm,1.2s						
VIS	**Vishakhapatnam**	**18.02**	**317**	*e*P	**Pn**	**09 56 58.2**	**+0.2**
VIS				IAmb	IAmb	09 57 08.5	
	comp=Z,136nm,1.2s						
BRDH	**Bariadhala**	**18.43**	**347**	P	**Pn**	**09 57 03.3**	**+0.4**
	comp=Z,121nm,0.3s,baz=270,slow=17,SNR=2.2						
BRDH				LR	LR	10 06 15.1	
	comp=Z,3μm,18.1s,baz=105,slow=44						
SALM	**Salem**	**19.02**	**293**	*e*P	**Pn**	**09 57 12.7**	**+2.5**
RAGD	**RAYAGADA**	**19.04**	**321**	*e*P	**Pn**	**09 57 10.2**	**-0.2**
RAGD				IAmb	IAmb	09 57 26.7	
	comp=Z,43nm,0.8s						
UGM	**Wanagama**	**19.05**	**131**	P	**P**	**09 57 07.9**	**-1.9**
	comp=Z,89nm,1.8s						
VJD	**Vijayawada**	**19.20**	**309**	*e*P	**Pn**	**09 57 14.4**	**+2.0**
**AZL

comp=Z,336nm,0.9s
SHL Shillong 21.18 349 P **P** **09 57 33.0 -0.1**
SHL Shillong 21.18 349 P **P** **09 57 33.0 -0.1**
SHL pmax pmax
comp=Z,303nm,1.0s
SHL Shillong 21.18 349 *e*P **P** **09 57 32.5 -0.6**
SHL IAmb IAmb 09 57 39.0
comp=Z,323nm,1.1s
SHL Shillong 21.18 349 P **P** **09 57 29.9 -3.2**
SNR=126
KMI Kunming 21.33 17 ⇑P **P** **09 57 37.5 +2.8**
KMI S **S** **10 01 33.0 +2.0**
KMI pmax pmax
comp=Z,67nm,1.3s
KMI pmax pmax
comp=Z,520nm,3.4s
KMI LR LR
comp=Z,3μm,18.0s
KMI LR LR
comp=Z,2μm,14.0s
KMI LR LR
comp=Z,4μm,14.3s
HYB Hyderabad 21.36 308 *e*P **P** **09 57 35.5 +0.7**
HYB *e*S **S** **10 01 34.5 +3.2**
HYB IVMs_BB IVMs_BB 10 06 21.2
comp=Z,395nm,15.8s
BLJI Banyuglugur 21.37 125 P **P** **09 57 38.2 +3.3**
comp=Z,129nm,1.2s,comp=Z,2μm
BOK Bokaro 21.43 334 *e*P **P** **09 57 33.5 -2.0**
MOKO MOKOCHONG 21.60 356 *e*P **P** **09 57 37.5 0.0**
MOKO IAmb IAmb 09 57 45.8
comp=Z,244nm,0.9s
GUWA GUWAHATI 21.83 349 *e*P **P** **09 57 40.8 +1.0**
GUWA IAmb IAmb 09 57 44.4
comp=Z,188nm,1.0s
BLSP Bilaspur 22.02 323 *e*P **P** **09 57 42.0 +0.1**
PZH PanZhiHua 22.39 13 P **P** **09 57 46.8 +0.8**
PZH pP **pP** **09 57 50.8 -1.2**
PZH SS **SnSn** **10 02 25.5 +5.5**
PZH pmax pmax
comp=Z,70nm,1.6s
PZH pmax pmax
comp=Z,840nm,4.2s
PZH LR LR
comp=Z,4μm,14.8s
PZH LR LR
comp=Z,3μm,14.8s
PZH LR LR
comp=Z,4μm,14.3s
ITAN ITANAGAR 22.48 354 *e*P **P** **09 57 46.4 -0.4**
SRBI Singaraja 22.89 123 P **P** **09 57 52.1 +0.9**
comp=Z,146nm,1.3s,comp=Z,2μm
GYA Guiyang 23.93 24 ⇓*i*P **P** **09 58 02.6 +1.1**
GYA S **S** **10 02 18.8 +1.6**
GYA pmax pmax
comp=Z,21nm,1.2s
GYA pmax pmax
comp=Z,610nm,4.0s
GYA LR LR
comp=Z,1μm,13.5s
GYA LR LR
comp=Z,2μm,16.8s
GYA LR LR
comp=Z,2μm,18.3s
MPSI Mapaga 24.16 100 P **P** **09 58 03.9 +0.2**
comp=Z,96nm,1.6s,comp=Z,1μm
AKL Akola 24.46 312 *e*P **P** **09 58 07.7 +1.3**
AKL IAmb IAmb 09 58 16.9
comp=Z,103nm,0.9s
TWSI Taliwang, Sumb 24.63 123 P **P** **09 58 12.7 +4.7**
GULI GuiLin 24.68 32 P **P** **09 58 06.2 -2.1**
GULI S **S** **10 02 29.5 +0.5**
GULI LR LR
comp=Z,2μm,11.4s
GULI LR LR
comp=Z,3μm,14.6s
GULI LR LR
comp=Z,3μm,11.9s
KAD Karad 24.88 302 *e*P **P** **09 58 11.8 +1.6**
KAD IAmb IAmb 09 58 24.5
comp=Z,36nm,0.8s
TTSI Tana Toraja 24.91 107 P **P** **09 58 13.2 +2.7**
comp=Z,55nm,1.0s,comp=Z,713nm
LSA Lhasa 25.35 350 IAmb IAmb 09 58 30.3
comp=Z,68nm,1.1s
LSA Lhasa 25.35 350 P **P** **09 58 08.5 -6.4**
LSA P **P** **09 58 08.5 -6.4**
KAPI Kappang 25.50 112 P **P** **09 58 15.4 -0.5**
KAPI IAmb IAmb 09 58 36.3
comp=Z,55nm,1.1s
KAPI Kappang 25.50 112 P **P** **09 58 15.4 -0.5**
KAPI pmax pmax
comp=Z,55nm,1.1s
NRDN NARMADA NAGAR 25.64 316 *e*P **P** **09 58 18.9 +1.8**
POO Poona 25.74 304 *e*P **P** **09 58 20.1 +2.1**
POO IAmb IAmb 09 58 24.9
comp=Z,80nm,1.3s
BKSI Bulukumba 25.96 112 P **P** **09 58 24.8 +4.7**
comp=Z,80nm,0.8s,comp=Z,731nm
MRSI Marisa 26.14 98 P **P** **09 58 25.4 +3.7**
comp=Z,70nm,1.0s
TGY Tagaytay City 26.22 67 LR LR 10 07 23.4
comp=Z,652nm,21.8s,baz=272,slow=34
H08S2 Diego Garcia H 26.53 243 T T 10 25 40.5
baz=60,slow=75,SNR=3890
H08S3 Diego Garcia H 26.53 243 T T 10 25 50.3
baz=60,slow=75,SNR=3557
H08S1 Diego Carcia H 26.55 243 T T 10 25 51.6
baz=60,slow=75,SNR=2487
CD2 Chengdu 27.10 15 P **P** **09 58 32.5 +2.3**
CD2 S **S** **10 03 09.6 +2.1**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 pmax pmax
comp=Z,220nm,3.6s
CD2 LR LR
comp=Z,2μm,12.6s
CD2 LR LR
comp=Z,2μm,11.3s
CD2 LR LR
comp=Z,4μm,13.4s
LUWI Luwuk 27.25 101 P **P** **09 58 32.7 +1.0**
LUWI Luwuk 27.25 101 P **P** **09 58 33.0 +1.3**
comp=Z,137nm,1.1s,comp=Z,2μm
CNSH ChangSha 28.35 33 ⇑P **P** **09 58 44.8 +3.4**
CNSH S **S** **10 03 35.6 +8.4**
CNSH pmax pmax
comp=Z,22nm,1.4s
CNSH LR LR
comp=Z,2μm,15.5s
CNSH LR LR
comp=Z,3μm,15.0s
CNSH LR LR
comp=Z,3μm,15.4s
ENH Enshi 28.45 25 P **P** **09 58 40.9 -1.4**
ENH IAmb IAmb 09 58 54.5
comp=Z,60nm,1.4s
DAV Davao City (W) 29.43 84 LR LR 10 12 16.9
comp=Z,518nm,20.4s,baz=216,slow=40
SANI Sanana 30.60 102 P **P** **09 59 04.3 +2.8**
comp=Z,42nm,1.1s
WHN Wuhan 30.98 32 P P 09 59 09.3 +4.7
WHN pP sP 09 59 13.8 0.0
WHN S **S** **10 04 13.2 +4.9**
WHN pmax pmax
comp=Z,90nm,1.1s
WHN pmax pmax
comp=Z,810nm,3.8s
WHN LR LR
comp=Z,8μm,15.8s
WHN LR LR
comp=Z,7μm,12.9s
WHN LR LR
comp=Z,6μm,15.3s
GOMU GeErMu 31.42 358 P **P** **09 59 08.4 -0.5**
GOMU pP pP 09 59 11.9 -3.5
GOMU sP sP 09 59 15.5 -2.6
GOMU S **S** **10 04 21.9 +6.1**
GOMU pmax pmax
comp=Z,5.0nm,1.2s
GOMU LR LR
comp=Z,1μm,14.0s
GOMU LR LR
comp=Z,820nm,14.8s
GOMU LR LR
comp=Z,1μm,14.6s

XAN Xi'an 31.58 21 ⇓P **P** **09 59 12.5 +2.5**
XAN pP pP 09 59 16.4 0.0
XAN S **S** **10 04 17.9 +0.1**
XAN pmax pmax
comp=Z,62nm,1.1s
XAN pmax pmax
comp=Z,270nm,3.8s
XAN LR LR
comp=Z,2μm,11.5s
XAN LR LR
comp=Z,4μm,13.7s
XAN LR LR
comp=Z,2μm,15.9s
LZH Lanzhou 32.09 12 *e*P **P** **09 59 17.8 +3.2**
LZH sP sP 09 59 26.5 +2.8
LZH ScP **ScP** **10 05 43.1 -3.4**
LZH pmax pmax
comp=Z,41nm,1.2s
LZH pmax pmax
comp=Z,270nm,4.7s
LZH LR LR
comp=Z,1μm,15.0s
LZH LR LR
comp=Z,3μm,16.0s
LZH LR LR
comp=Z,2μm,15.5s
LYN LuoYang 33.40 25 ⇑P **P** **09 59 28.6 +2.7**
LYN sP sP 09 59 35.0 -0.3
LYN S **S** **10 04 48.0 +1.9**
LYN sS pS 10 04 53.6 -0.2
LYN pmax pmax
comp=Z,60nm,1.2s
LYN pmax pmax
comp=Z,420nm,3.6s
LYN LR LR
comp=Z,2μm,16.5s
LYN LR LR
comp=Z,3μm,18.8s
LYN LR LR
comp=Z,2μm,16.8s
NJ2 Nanjing 34.61 35 *e*P **P** **09 59 35.5 -0.9**
NJ2 sP **pP** **09 59 42.3 -0.6**
NJ2 sS **sS** **10 05 14.6 -0.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 LR LR
comp=Z,2μm,17.8s
NJ2 LR LR
comp=Z,3μm,17.1s
NJ2 LR LR
comp=Z,3μm,13.7s
GTA Gaotai 34.77 5 P **P** **09 59 37.3 -0.5**
GTA sP sP 09 59 47.4 +0.4
GTA PcP **PcP** **10 02 15.4 +4.2**
GTA ScP **ScP** **10 05 54.9 -0.8**
GTA pmax pmax
comp=Z,13nm,0.9s
GTA LR LR
comp=Z,450nm,16.0s
GTA LR LR
comp=Z,1μm,16.0s
GTA LR LR
comp=Z,1μm,13.5s
SSE Sheshan 35.34 39 P **P** **09 59 42.4 -0.3**
SSE S **S** **10 05 16.8 +0.7**
SSE pmax pmax
comp=Z,6.0nm,0.7s
SSE pmax pmax
comp=Z,94nm,5.2s
SSE LR LR
comp=Z,660nm,15.7s
SSE LR LR
comp=Z,760nm,15.5s
SWI Sorong 35.56 98 P **P** **09 59 47.7 +2.9**
comp=Z,102nm,1.0s
NIL Nilore 35.84 326 P **P** **09 59 44.6 -2.4**
NIL Nilore 35.84 326 P **P** **09 59 44.6 -2.4**
NIL pmax pmax
comp=Z,65nm,0.8s
NIL Nilore 35.84 326 P **P** **09 59 44.7 -2.4**
NIL P **P** **09 59 44.7 -2.4**
HNS HongShan 36.77 25 ⇓P **P** **09 59 57.7 +2.8**
HNS pmax pmax
comp=Z,67nm,1.1s
HNS LR LR
comp=Z,1μm,16.7s
HNS LR LR
comp=Z,1μm,15.1s
FITZ Fitzroy Crossi 36.88 129 P **P** **09 59 53.7 -2.4**
baz=37,SNR=8.5
FITZ Fitzroy Crossi 36.88 129 P **P** **09 59 55.0 -1.1**
TIA Tai'an 36.89 29 P **P** **09 59 55.9 0.0**
TIA pmax pmax
comp=Z,7.0nm,1.2s
TIA pmax pmax
comp=Z,55nm,3.5s
TIA LR LR
comp=Z,870nm,12.4s
TIA LR LR
comp=Z,810nm,13.1s
TIA LR LR
comp=Z,600nm,17.3s
FAKI Fak Fak 36.90 101 P **P** **09 59 53.6 -2.7**
FAKI IAmb IAmb 10 00 01.3
comp=Z,26nm,0.9s
FAKI Fak Fak 36.90 101 P **P** **09 59 57.2 +0.9**
comp=Z,34nm,1.1s
JOW Kunigami 37.81 51 LR LR 10 14 43.8
comp=Z,723nm,21.7s,baz=270,slow=35
BTO Baotou 37.92 17 *e*P **P** **10 00 07.7 +2.9**
BTO pP **pP** **10 00 12.4 +1.1**
BTO sP **sP** **10 00 18.0 +4.0**
BTO PP **PnPn** **10 01 38.2 +5.3**
BTO S **S** **10 06 02.8 +7.2**
BTO pmax pmax
comp=Z,37nm,0.8s
BTO pmax pmax
comp=Z,340nm,3.7s
BTO LR LR
comp=Z,4μm,13.5s
BTO LR LR
comp=Z,9μm,13.6s
BTO LR LR
comp=Z,2μm,15.2s
MEEK Meekatharra 37.98 146 P **P** **10 00 05.6 +0.2**
baz=38,SNR=3.2
HHC Hu-ho-hao-te 38.63 19 ⇑P **P** **10 00 14.1 +3.4**
HHC sP sP 10 00 22.2 +2.3
HHC PP **PnPn** **10 01 42.8 +1.4**
HHC S **S** **10 06 10.0 +3.8**
HHC sS sS 10 06 18.4 +1.8
HHC pmax pmax
comp=Z,29nm,1.3s
HHC pmax pmax
comp=Z,310nm,4.6s
HHC LR LR
comp=Z,3μm,14.3s
HHC LR LR
comp=Z,2μm,12.9s
HHC LR LR
comp=Z,3μm,13.8s
KBL Kabul 38.90 323 P **P** **10 00 11.8 -1.4**
KBL Kabul 38.90 323 P **P** **10 00 11.8 -1.4**
KBL pmax pmax
comp=Z,11nm,0.7s
KBL Kabul 38.90 323 P **P** **10 00 10.7 -2.5**
KBL P **P** **10 00 10.7 -2.5**
MTN Manton Dam 38.91 117 P **P** **10 00 11.6 -1.7**
baz=39,SNR=3.7
KSH Kashi 39.19 335 P **P** **10 00 14.3 -1.2**
KSH pP pP 10 00 19.3 -2.7
KSH pmax pmax
comp=Z,7.0nm,0.6s
KSH LR LR
comp=Z,690nm,17.9s
KSH LR LR
comp=Z,2μm,19.6s
KSH LR LR
comp=Z,1μm,23.0s
NGCH Negor - Chabah 39.34 305 P **P** **10 00 19.7 +2.9**
JLN Jalan Bani Buh 39.53 300 P **P** **10 00 19.7 +1.3**
SNR=5.2
JLN P **P** **10 00 19.7 +1.3**
SNR=5.2
BJI Beijing 39.62 24 P **P** **10 00 23.4 +4.6**
BJI sP **sP** **10 00 28.7 +0.6**

BJI sS **sS** **10 06 31.2 0.0**
BJI pmax pmax
comp=Z,18nm,1.1s
BJI pmax pmax
comp=Z,97nm,3.5s
BJI LR LR
comp=Z,540nm,13.0s
BJI LR LR
comp=Z,410nm,17.0s
BJI LR LR
comp=Z,850nm,14.4s
WMQ Urumqi 39.71 350 *e*P **P** **10 00 18.0 -1.6**
WMQ pP pP 10 00 24.5 -1.6
WMQ pmax pmax
comp=Z,12nm,1.9s
WMQ LR LR
comp=Z,630nm,10.9s
WMQ LR LR
comp=Z,990nm,18.7s
WMQ LR LR
comp=Z,440nm,23.7s
WBK Wadi Bani Khal 40.08 300 P **P** **10 00 25.2 +2.2**
WBK P **P** **10 00 25.2 +2.2**
MHTO MHTO 40.41 297 P **P** **10 00 26.7 +0.9**
MHTO P **P** **10 00 26.7 +0.9**
DQM DQM 40.48 295 P P 10 00 33.9 +7.6
WSAR Wadi Sarin 40.59 301 P **P** **10 00 26.4 -0.9**
comp=Z,3.8nm,0.6s,baz=143,slow=7.1,SNR=4.4
WSAR LR LR 10 18 12.9
comp=Z,448nm,19.1s,baz=122,slow=38
comp=Z,3.8nm,0.6s
WSAR Wadi Sarin 40.59 301 P **P** **10 00 29.6 +2.3**
JMDO Jabal Madar 40.75 299 P P 10 00 33.6 +5.0
JMDO P **P** 10 00 33.6 +5.0
SMDO Samad 41.03 300 P **P** **10 00 31.0 0.0**
SMDO P **P** **10 00 31.0 0.0**
BIDO Bidbid 41.13 301 P **P** **10 00 34.1 +2.5**
SNR=14
MUN Mundaring 41.15 154 P **P** **10 00 32.9 +1.2**
baz=41,SNR=5.4
KLBR Kellerberrin 41.54 152 P **P** **10 00 35.6 +0.7**
baz=42,SNR=11
MSEY Mahe Island 41.62 258 P P 10 00 44.2 +8.4
MSEY P sP 10 00 44.3 -0.6
BSY Bisya 41.66 299 P **P** **10 00 37.0 +0.9**
SNR=13
BSY P **P** **10 00 37.0 +0.9**
SNR=13
SHAO Shalim 41.73 292 P P 10 00 42.0 +5.4
SHAO P P 10 00 42.0 +5.4
HOQ Hoqain 41.85 301 P **P** **10 00 40.0 +2.4**
SNR=10
HOQ P **P** **10 00 40.0 +2.4**
SNR=10
SIMJ Simiganj 41.85 328 P **P** **10 00 35.6 -1.9**
ARSB Arslanbob 41.97 334 P **P** **10 00 37.6 -0.9**
ARSB Arslanbob 41.97 334 P **P** **10 00 37.6 -0.9**
ARSB pmax pmax
comp=Z,9.0nm,1.0s
BTK Batken 41.98 331 P **P** **10 00 36.1 -2.3**
BTK IAmb IAmb 10 01 06.8
comp=Z,26nm,0.8s
BTK Batken 41.98 331 P **P** **10 00 36.2 -2.3**
BTK pmax pmax
comp=Z,26nm,0.9s
DMTO DMTO 42.29 291 P **P** **10 00 42.7 +1.5**
DMTO P **P** **10 00 42.7 +1.5**
NWAO Narrogin (SRO) 42.41 153 P **P** **10 00 43.1 +1.1**
baz=42,SNR=4.9
NWAO P **P** **10 00 43.1 +1.1**
baz=42,SNR=4.9
NWAO Narrogin (SRO) 42.41 153 P **P** **10 00 42.2 +0.2**
NWAO IAmb IAmb 10 00 50.4
comp=Z,23nm,0.8s
NWAO Narrogin (SRO) 42.41 153 P **P** **10 00 42.2 +0.2**
NWAO Narrogin (SRO) 42.41 153 P **P** **10 00 42.2 +0.2**
NWAO pmax pmax
comp=Z,81nm,0.9s
NWAO Narrogin (SRO) 42.41 153 LR LR 10 17 20.1
comp=Z,763nm,20.8s,baz=334,slow=35
NWAO Narrogin (SRO) 42.41 153 P P 10 00 31.2 -11
AAK Ala-Archa 42.42 336 P **P** **10 00 42.6 +0.5**
AAK Ala-Archa 42.42 336 *de*P **P** **10 00 43.0 +0.9**
AAK pmax pmax
comp=Z,16nm,1.3s
AAK Ala-Archa 42.42 336 P **P** **10 00 39.7 -2.4**
comp=Z,3.3nm,0.8s,baz=115,slow=20,SNR=5.8
AAK LR LR 10 19 44.0
comp=Z,2μm,21.2s,baz=155,slow=38
comp=Z,3.3nm,0.8s
AAK Ala-Archa 42.42 336 P **P** **10 00 40.6 -1.5**
AAK P **P** **10 00 40.6 -1.5**
ARQ Araqi 42.45 300 P **P** **10 00 43.7 +1.2**
ARQ P **P** **10 00 43.7 +1.2**
TJN Taejon 42.68 38 ⇑*e*P **P** **10 00 45.3 +1.2**
SOHO SOHO 42.71 301 P **P** **10 00 46.3 +1.7**
SOHO P **P** **10 00 46.3 +1.7**
XLT XiLinHaoTe 42.88 21 *e*P P 10 00 50.8 +5.1
XLT pP sP 10 00 55.3 +0.3
XLT sP pP 10 00 56.5 +4.2
XLT S **S** **10 07 16.1 +6.7**
XLT pmax pmax
comp=Z,11nm,1.3s
XLT LR LR
comp=Z,1μm,18.7s
XLT LR LR
comp=Z,1μm,18.2s
RBK Rabkut 42.93 291 P **P** **10 00 49.5 +3.0**
RBK P **P** **10 00 49.5 +3.0**
WRKA Warakurna 43.01 135 P **P** **10 00 46.4 -0.6**
baz=43,SNR=9.6
JNU Nakatsue 43.05 45 LR LR 10 19 24.9
comp=Z,641nm,19.7s,baz=232,slow=37
DOK Doka 43.25 292 P **P** **10 00 50.4 +1.4**
SNR=8.0
DOK P **P** **10 00 50.4 +1.4**
SNR=8.0
UOSS Minazif 43.28 302 P **P** **10 00 51.9 +2.8**
HATD Hatta, Dubai 43.30 302 P **P** **10 00 52.8 +3.5**
ASHO Ashiyiah 43.31 301 P **P** **10 00 53.1 +3.6**
ALNE Al Ain 43.35 300 P **P** **10 00 51.6 +1.9**
SNR=10
ALNE P **P** **10 00 51.6 +1.9**
SNR=10
WHFO Wadi Hawf 43.42 291 P **P** **10 00 52.1 +1.6**
WHFO P **P** **10 00 52.1 +1.6**
UMZA Um Al Zommool 43.43 298 P **P** **10 00 52.7 +2.3**
UMZA P **P** **10 00 52.7 +2.3**
KMBL Kambalda 43.45 147 P **P** **10 00 50.2 -0.2**
baz=44,SNR=15
MASF Masafi 43.47 302 P **P** **10 00 53.5 +2.7**
MK31 Makanchi Array 43.65 346 P **P** **10 00 49.5 -2.3**
MK31 Makanchi Array 43.65 346 *di*P **P** **10 00 49.9 -1.9**
MKAR Makanchi Array 43.65 346 P **P** **10 00 49.5 -2.3**
MKAR Makanchi Array 43.65 346 P **P** **10 00 49.5 -2.3**
MKAR Makanchi Array 43.65 346 P **P** **10 00 49.1 -2.7**
comp=Z,3.4nm,0.8s,baz=161,slow=7.7,SNR=19
MKAR ScP **ScP** **10 06 28.9 -0.7**
comp=Z,0.7nm,0.9s,baz=142,slow=7.2,SNR=2.8
MKAR LR LR 10 22 10.7
comp=Z,430nm,18.9s,baz=176,slow=41
comp=Z,3.4nm,0.8s
KSRS Korea Array 43.72 37 P **P** **10 00 50.2 -2.3**
comp=Z,0.7nm,0.6s,baz=224,slow=8.7,SNR=3.0
KSRS LR LR 10 19 45.0
comp=Z,193nm,19.3s,baz=240,slow=37
comp=Z,0.7nm,0.6s
MAKZ Makanchi 43.74 346 P **P** **10 00 50.7 -1.8**
MAKZ Makanchi 43.74 346 P **P** **10 00 50.7 -1.8**
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
ABTO Aybut 43.75 290 P **P** **10 00 54.2 +1.1**
ABTO P **P** **10 00 54.2 +1.1**
ASUD Al Ashush, Dub 43.91 301 P **P** **10 00 56.0 +1.7**
SONM Songino Array 43.92 10 P **P** **10 00 52.6 -1.6**
SONM Songino Array 43.92 10 P **P** **10 00 52.6 -1.6**
SONM pmax pmax
comp=Z,11nm,0.9s
SONM Songino Array 43.92 10 P **P** **10 00 51.6 -2.5**
comp=Z,2.7nm,0.7s,baz=190,slow=8.6,SNR=20
SONM LR LR 10 20 08.6
comp=Z,645nm,20.6s,baz=193,slow=38
comp=Z,2.7nm,0.7s
ULN Ulaanbaatar 44.07 11 P **P** **10 00 54.0 -1.3**
ULN Ulaanbaatar 44.07 11 *de*P **P** **10 00 54.8 -0.6**

ULN pmax pmax
comp=Z,8.0nm,0.8s
AJN Ajban 44.18 301 P **P** **10 00 58.3 +1.9**
KK31 Karatay Array 44.50 333 P **P** **10 00 57.2 -1.5**
KK31 IAmb IAmb 10 01 44.4
comp=Z,35nm,1.6s
KK31 Karatay Array 44.50 333 P **P** **10 00 57.2 -1.5**
KK31 pmax pmax
comp=Z,35nm,1.6s
KKAR Karatay Array 44.50 333 P **P** **10 00 57.3 -1.4**
KKAR IAmb IAmb 10 01 44.4
comp=Z,34nm,1.6s
KKAR Karatay Array 44.50 333 P **P** **10 00 57.3 -1.4**
KKAR pmax pmax
comp=Z,35nm,1.6s
WB0 Warramunga Arr 44.80 124 P **P** **10 00 59.3 -2.1**
WB0 IAmb IAmb 10 01 25.0
comp=Z,13nm,0.7s
WRA Warramunga Arr 44.84 124 P **P** **10 00 59.6 -2.1**
WRA Warramunga Arr 44.84 124 P **P** **10 00 59.6 -2.1**
WRA pmax pmax
comp=Z,1.0nm,1.2s
WRA Warramunga Arr 44.84 124 P **P** **10 00 59.9 -1.8**
comp=Z,2.8nm,0.3s,baz=302,slow=9.3,SNR=32
WRA PcP **PcP** **10 02 42.7 -0.8**
comp=Z,1.9nm,0.7s,baz=316,slow=3.2,SNR=1.1
WRA ScP **ScP** **10 06 33.7 -1.3**
comp=Z,1.3nm,0.8s,baz=309,slow=3.8,SNR=5.3
comp=Z,2.8nm,0.3s
WRAB Tennant Creek 44.84 124 P **P** **10 01 00.6 -1.2**
WRAB IAmb IAmb 10 01 42.8
comp=Z,18nm,0.8s
WRAB Tennant Creek 44.84 124 P **P** **10 01 00.6 -1.2**
WRAB pmax pmax
comp=Z,18nm,0.9s
WB2 Warramunga Arr 44.84 124 IAmb IAmb 10 01 42.8
comp=Z,20nm,0.9s
WR0 Warramunga Arr 45.01 124 IAmb IAmb 10 01 44.2
comp=Z,23nm,0.9s
DGZ Jazzator, Alta 45.49 352⇓ *e*P **P** **10 01 05.8 -0.8**
DGZ pmax pmax
comp=Z,12nm,1.6s
ZAK Zakamensk 45.97 6 *e*P **P** **10 01 12.4 +2.0**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
JRN Qarnain Island 46.14 300 P **P** **10 01 11.5 -0.5**
JRN P **P** **10 01 11.5 -0.5**
ASAR Alice Springs 46.38 129 P **P** **10 01 12.1 -1.8**
comp=Z,12nm,0.8s,baz=301,slow=7.6,SNR=103
ASAR PcP **PcP** **10 02 48.6 -0.3**
comp=Z,5.1nm,0.9s,baz=308,slow=4.5,SNR=2.0
ASAR ScP **ScP** **10 06 40.1 -1.3**
comp=Z,1.1nm,0.7s,baz=302,slow=4.8,SNR=4.6
ASAR S **S** **10 07 56.2 -4.5**
comp=Z,0.4nm,0.8s,baz=292,slow=13,SNR=1.8
ASAR LR LR 10 20 45.1
comp=Z,839nm,21.4s,baz=296,slow=36
comp=Z,12nm,0.8s
AS31 Alice Springs 46.38 129 P **P** **10 01 12.7 -1.3**
FORT Forrest 46.62 141 P **P** **10 01 16.3 +0.7**
baz=47,SNR=9.5
FORT Forrest 46.62 141 P **P** **10 01 16.1 +0.4**
CN2 Changchun 46.79 29 *e*P **P** **10 01 18.9 +2.1**
CN2 *es*P sP 10 01 27.7 +1.5
CN2 *e*PP **PP** **10 03 08.7 +1.6**
CN2 *e*S **S** **10 08 07.4 +1.4**
CN2 *es*S sS 10 08 17.4 +0.7
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=Z,540nm,14.0s
CN2 LR LR
comp=Z,210nm,14.0s
CN2 LR LR
comp=Z,450nm,14.0s
SLWR Sila 46.88 299 P **P** **10 01 20.3 +2.5**
SLWR P **P** **10 01 20.3 +2.5**
TRNA Turayna 47.49 299 P **P** **10 01 23.1 +0.6**
SNR=5.9
SMRA Abu-Samra 47.83 299 P **P** **10 01 26.6 +1.4**
SNR=5.8
GEYT Alibeck 47.89 319 P **P** **10 01 23.4 -2.1**
comp=Z,11nm,0.9s,baz=146,slow=8.0,SNR=11
GEYT ScP **ScP** **10 06 47.5 0.0**
comp=Z,0.9nm,0.5s,baz=118,slow=3.9,SNR=1.7
GEYT LR LR 10 23 21.9
comp=Z,1μm,20.2s,baz=141,slow=38
comp=Z,11nm,0.9s
GYA0B ALIBECK ARRAY 47.89 319 IAmb IAmb 10 01 32.0
comp=Z,27nm,0.9s
OTUK Ortayu 47.95 339 P **P** **10 01 22.7 -3.1**
SHMA Al-Shehemyia 48.05 301 P **P** **10 01 28.9 +2.0**
KURBB Kurchatov Arra 48.13 345 P **P** **10 01 24.6 -2.5**
comp=Z,2.9nm,0.6s,baz=162,slow=7.6,SNR=12
KURBB ScP **ScP** **10 06 47.3 -0.8**
comp=Z,1.6nm,0.7s,baz=160,slow=3.9,SNR=2.9
KURBB LR LR 10 25 20.6
comp=Z,440nm,18.3s,baz=188,slow=41
comp=Z,2.9nm,0.6s
KURK Kurchatov 48.20 345 P **P** **10 01 26.4 -1.2**
KURK IAmb IAmb 10 02 14.9
comp=Z,28nm,1.1s
KURK Kurchatov 48.20 345*ce*P **P** **10 01 28.3 +0.7**
KURK pmax pmax
comp=Z,22nm,1.9s
SAKB Bahrain 48.45 301 P **P** **10 01 31.0 +1.0**
GUMO Guam 48.89 76 LR LR 10 23 38.0
comp=Z,101nm,19.3s,baz=262,slow=38
BNX BinXian 49.16 29⇓P **P** **10 01 37.0 +1.9**
BNX PP **PP** **10 03 32.6 +3.6**
BNX S **S** **10 08 44.1 +4.6**
BNX pmax pmax
comp=Z,13nm,1.2s
BNX pmax pmax
comp=Z,140nm,3.5s
BNX LR LR
comp=Z,740nm,14.4s
BNX LR LR
comp=Z,730nm,11.0s
BNX LR LR
comp=Z,910nm,13.9s
JCJ Chichijima 49.25 58 LR LR 10 20 00.6
comp=Z,130nm,20.8s,baz=280,slow=33
MDJ Mudanjiang 49.46 31 P **P** **10 01 37.4 0.0**
MDJ pP pP 10 01 40.1 -4.0
MDJ PP **PP** **10 03 31.0 -0.7**
MDJ S **S** **10 08 44.9 +1.2**
MDJ sS pS 10 08 50.3 -1.6
MDJ ScS **ScS** **10 11 27.5 -0.8**
MDJ SS **SS** **10 12 15.0 -0.8**
MDJ pmax pmax
comp=Z,4.0nm,1.0s
MDJ pmax pmax
comp=Z,180nm,3.6s
MDJ LR LR
comp=Z,890nm,19.9s
MDJ LR LR
comp=Z,2μm,21.3s
MDJ LR LR
comp=Z,1μm,24.0s
QIS Mount Isa 49.51 122 P **P** **10 01 37.3 -0.9**
baz=49,SNR=5.9
JHJ Hachijo jima 2 49.56 50 LR LR 10 23 00.1
comp=Z,283nm,18.7s,baz=294,slow=37
MAJO Matsushiro 49.97 45⇓ *e*P **P** **10 01 44.2 +2.7**
MAJO pmax pmax
comp=Z,21nm,1.2s
MJAR Matsushiro Arr 49.97 45 P **P** **10 01 39.9 -1.6**
comp=Z,1.8nm,0.8s,baz=236,slow=8.3,SNR=4.0
MJAR LR LR 10 24 27.8
comp=Z,948nm,20.3s,baz=238,slow=38
comp=Z,1.8nm,0.8s
ZAA0 Zalesovo Array 50.00 351 IAmb IAmb 10 02 00.9
comp=Z,19nm,1.1s
ZALV Zalesovo Beam 50.00 351 *i* P **P** **10 01 39.7 -1.6**
ZALV pmax pmax
comp=Z,5.0nm,0.5s
ZALV Zalesovo Beam 50.00 351 P **P** **10 01 39.4 -2.0**
comp=Z,5.2nm,0.5s,baz=185,slow=6.7,SNR=6.0
ZALV ScP **ScP** **10 06 54.1 -1.9**
comp=Z,0.4nm,0.4s,baz=151,slow=3.3,SNR=2.1
ZALV LR LR 10 27 17.5
comp=Z,327nm,18.2s,baz=179,slow=42
comp=Z,5.2nm,0.5s
USRK Ussuriysk Ar. 50.45 33 P **P** **10 01 45.3 +0.3**
USRK Ussuriysk Ar. 50.45 33 P **P** **10 01 45.3 +0.3**
USRK Ussuriysk Ar. 50.45 33 P **P** **10 01 42.9 -2.1**
comp=Z,1.1nm,0.7s,baz=217,slow=6.5,SNR=2.7
USRK LR LR 10 24 46.3
comp=Z,711nm,18.3s,baz=220,slow=38
comp=Z,1.1nm,0.7s
RAYN Ar Rayn 52.21 296 P **P** **10 01 58.9 +0.3**
HEH HeiHe 52.53 25 *e*P **P** **10 02 00.7 +0.3**
HEH pmax pmax
comp=Z,6.0nm,1.5s
HEH pmax pmax
comp=Z,180nm,4.6s
HEH LR LR
comp=Z,400nm,14.8s
HEH LR LR
comp=Z,1μm,15.8s
HEH LR LR
comp=Z,990nm,13.5s
BVA0 Borovoye Array 52.65 341 *i* P **P** **10 02 01.6 +0.3**
BVAR Borovoye Array 52.65 341 P **P** **10 01 57.6 -3.7**
comp=Z,4.9nm,0.8s,baz=139,slow=8.9,SNR=6.8
BVAR ScP **ScP** **10 07 05.5 -1.9**
comp=Z,1.1nm,0.7s,baz=140,slow=7.0,SNR=2.5
BVAR LR LR 10 27 19.7
comp=Z,568nm,18.8s,baz=154,slow=40
comp=Z,4.9nm,0.8s
BRVK Borovoye 52.71 341 P **P** **10 02 02.4 +0.7**
BRVK Borovoye 52.71 341*d* *i*P **P** **10 02 02.1 +0.4**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
PMG Port Moresby 52.77 105 LR LR 10 28 06.7
comp=Z,387nm,18.7s,baz=278,slow=40
ATD Arta Tunnel 53.09 281 P **P** **10 02 03.9 -1.4**
comp=Z,0.5nm,0.8s,baz=274,slow=22,SNR=1.9
ATD LR LR 10 22 00.6
comp=Z,5.5nm,21.5s,baz=73,slow=33
BBOO Buckleboo 53.14 137 P **P** **10 02 03.9 -1.3**
baz=53,SNR=11
BBOO Buckleboo 53.14 137 P **P** **10 02 03.5 -1.7**
BBOO IAmb IAmb 10 02 12.0
comp=Z,29nm,0.8s
KLR Kul'dur 53.72 28*d* *i*P **P** **10 02 12.6 +3.4**
KLR pmax pmax
comp=Z,17nm,1.2s
KLR Kul'dur 53.72 28 LR LR 10 26 22.2
comp=Z,694nm,18.2s,baz=224,slow=38
AB31 Akbulak array 53.97 331 *i* P **P** **10 02 08.1 -2.9**
ABKAR Akbulak array 53.97 331 P **P** **10 02 08.7 -2.3**
ABKAR IAmb IAmb 10 02 44.5
comp=Z,27nm,1.1s
ABKAR Akbulak array 53.97 331 P **P** **10 02 08.7 -2.3**
BOD Bodaibo 54.86 12 *e*P **P** **10 02 20.0 +2.7**
BOD pmax pmax
comp=Z,18nm,1.3s
CTA Charters Tower 55.06 118 LR LR 10 27 43.1
comp=Z,446nm,20.8s,baz=284,slow=38
ZEA Zeya 55.14 22 *e*P **P** **10 02 23.5 +4.0**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
HTT Hallett 55.45 136 P **P** **10 02 21.2 -0.9**
baz=55,SNR=9.2
AKTO Aktyubinsk 55.69 331 P **P** **10 02 20.6 -2.8**
comp=Z,2.2nm,0.4s,baz=107,slow=5.9,SNR=7.4
AKTO LR LR 10 29 17.0
comp=Z,555nm,18.7s,baz=139,slow=39
comp=Z,2.2nm,0.4s
QLP Quilpie 55.96 126 P **P** **10 02 24.6 -1.2**
baz=56,SNR=6.5
STKA Stephens Creek 56.49 133 P **P** **10 02 28.7 -0.9**
baz=56,SNR=9.8
STKA Stephens Creek 56.49 133 P **P** **10 02 28.3 -1.3**
STKA Stephens Creek 56.49 133*ce*P **P** **10 02 28.3 -1.3**
STKA Stephens Creek 56.49 133 P **P** **10 02 27.9 -1.6**
comp=Z,11nm,0.7s,baz=313,slow=7.8,SNR=32
STKA LR LR 10 31 27.6
comp=Z,448nm,18.4s,baz=299,slow=41
comp=Z,11nm,0.7s
ASAJ Asahikawa 56.63 39 LR LR 10 28 37.7
comp=Z,463nm,18.4s,baz=291,slow=38
MAK Makhachkala 57.41 319 *e*P P 10 02 30.7 -5.1
MAK *e* 10 04 39.5
MAK *e*S **S** **10 10 25.9 -5.8**
MAK *e*SS **SS** **10 14 17.8 -3.7**
MAK pmax pmax
comp=Z,120nm,0.9s
GNI Garni 58.07 315 P **P** **10 02 40.4 -0.4**
GNI IAmb IAmb 10 03 15.8
comp=Z,32nm,1.2s
GNI Garni 58.07 315*d* *i*P **P** **10 02 39.6 -1.1**
GNI pmax pmax
comp=Z,27nm,1.3s
GNI Garni 58.07 315 P **P** **10 02 39.7 -1.1**
comp=Z,21nm,1.1s,baz=172,slow=2.0,SNR=6.7
GNI LR LR 10 32 01.0
comp=Z,393nm,18.8s,baz=99,slow=41
comp=Z,21nm,1.1s
GNI Garni 58.07 315 P **P** **10 02 40.2 -0.6**
GNI P **P** **10 02 40.2 -0.6**
YSS Yuzh-Sakhalins 58.18 36 *e*P **P** **10 02 44.6 +3.5**
YSS *e* 10 04 48.0
YSS *e*S **S** **10 10 42.8 +1.1**
YSS *e*PS **PnS** **10 10 52.0 -2.3**
YSS *e*SS **SS** **10 14 39.3 +5.8**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,600nm,14.0s
YSS MLR MLR
comp=E,400nm,14.0s
KIBK Kibwezi 58.41 264 P P 10 02 49.5 +6.0
SVE Sverdlovsk 59.09 338 *e*P **P** **10 02 46.7 -0.7**
SVE pmax pmax
comp=Z,31nm,1.2s
SVE MLR MLR
comp=Z,2μm,22.0s
CMSA Cobar Meteorol 59.36 131 P **P** **10 02 48.8 -0.8**
baz=59,SNR=44
GURO Guroymak-BITLI 59.42 312 IAmb IAmb 10 02 53.7
comp=Z,18nm,1.3s
AKH Akhalkalaki 59.44 316 P **P** **10 02 49.0 -1.3**
AKH Akhalkalaki 59.44 316 P **P** **10 02 49.0 -1.3**
AKH pmax pmax
comp=Z,50nm,1.1s
ARU Arti 59.60 337*c* *i*P **P** **10 02 51.4 +0.6**
ARU 10 04 56.9
ARU S **S** **10 11 04.2 +4.4**
ARU SS **SS** **10 14 59.3 +3.8**
ARU MLR MLR
comp=Z,1μm,21.0s
ARU Arti 59.60 337 P **P** **10 02 47.5 -3.4**
comp=Z,8.2nm,0.2s,baz=286,slow=18,SNR=1.3
ARU LR LR 10 30 23.3
comp=Z,1μm,21.0s,baz=138,slow=38
comp=Z,8.2nm,0.2s
ZEI Tsey 59.71 318 *e*P **P** **10 02 49.2 -3.0**
ZEI pmax pmax
comp=Z,14nm,1.0s
LODK Lodwar 60.58 271 P **P** **10 03 01.7 +3.2**
NEUR Neytrino 60.71 318 *e*P **P** **10 02 58.7 -0.3**
KBZ Khabaz 60.77 318*de*P **P** **10 02 57.5 -1.6**
KBZ pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 60.77 318 P **P** **10 02 57.7 -1.4**
comp=Z,4.4nm,0.9s,baz=60,slow=14,SNR=4.8
KBZ ScP **ScP** **10 07 41.6 -1.8**
comp=Z,3.6nm,1.0s,baz=124,slow=4.7,SNR=3.3
KBZ LR LR 10 33 26.7
comp=Z,240nm,18.7s,baz=116,slow=40
comp=Z,4.4nm,0.9s
KIV Kislovodsk 61.00 318 *e*P **P** **10 02 58.9 -1.9**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,223nm,17.0s
ASF Jabal al Asfar 61.60 304 P **P** **10 03 03.9 -1.2**
comp=Z,1.9nm,0.7s,baz=232,slow=7.9,SNR=7.4
ASF LR LR 10 35 16.5
comp=Z,329nm,18.2s,baz=155,slow=41
comp=Z,1.9nm,0.7s
BELG Belogornoye 62.05 329*de*P **P** **10 03 07.9 +0.3**
BELG pmax pmax
comp=Z,4.0nm,0.9s
BELG Belogornoye 62.05 329 P **P** **10 03 06.1 -1.5**
comp=Z,17nm,0.7s,baz=285,slow=1.1,SNR=7.4
BELG LR LR 10 33 29.0
comp=Z,775nm,21.2s,baz=130,slow=39
comp=Z,17nm,0.7s
YAK Yakutsk 62.45 17 *e*P **P** **10 03 13.0 +2.9**
YAK *e**PP **sP** **10 03 21.2 +1.7**
YAK *e* 10 05 27.9
YAK *e*S **S** **10 11 37.4 +1.4**
YAK *e**SS **sS** **10 11 48.7 +1.3**
YAK pmax pmax
comp=Z,27nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,28nm,2.3s
YAK pmax pmax
comp=N,56nm,2.8s
YAK smax smax
comp=E,74nm,2.8s
YAK MLR MLR
comp=Z,2μm,17.0s
YAK MLR MLR
comp=N,772nm,16.0s
YAK MLR MLR
comp=E,883nm,15.0s
YAK Yakutsk 62.45 17 LR LR 10 31 37.0
comp=E,654nm,20.2s,baz=214,slow=37
EIL Elat 62.72 301 P **P** **10 03 11.0 -1.6**
comp=E,4.1nm,0.8s,baz=310,slow=22,SNR=1.9
EIL LR LR 10 32 19.8
comp=E,290nm,18.5s,baz=74,slow=38
comp=E,4.1nm,0.8s
SOC Sochi 62.84 317 *e*P **P** **10 03 08.9 -4.2**
SOC *e*S **S** **10 11 37.4 -4.2**
SOC *e*SS **SS** **10 15 43.2 -3.7**
SOC pmax pmax
comp=Z,11nm,0.8s
SOC MLR MLR
comp=Z,201nm,20.0s
MMAI Mount Meron Ar 63.02 305 P **P** **10 03 13.1 -1.5**
comp=Z,0.9nm,0.2s,baz=104,slow=9.1,SNR=3.3
MMAI LR LR 10 34 38.2
comp=Z,404nm,19.7s,baz=61,slow=40
comp=Z,0.9nm,0.2s
CAN Canberra 63.56 133 P **P** **10 03 17.6 -0.5**
CAN Canberra 63.56 133 P **P** **10 03 17.6 -0.5**
CAN pmax pmax
comp=Z,67nm,1.5s
H04N2 CROZET ISLANDS 64.03 213 T T 11 13 10.9
baz=50,slow=75,SNR=466
H04N1 CROZET ISLANDS 64.04 213 T T 11 13 11.6
baz=50,slow=75,SNR=545
H04N3 CROZET ISLANDS 64.05 213 T T 11 13 10.2
baz=50,slow=75,SNR=618
H04S1 CROZET ISLANDS 64.40 212 T T 11 13 08.2
baz=57,slow=72,SNR=13
H04S3 CROZET ISLANDS 64.41 212 T T 11 13 14.6
baz=57,slow=72,SNR=19
H04S2 CROZET ISLANDS 64.42 212 T T 11 13 09.1
baz=57,slow=72,SNR=13
VRH Novokhopyorsk 64.67 326 *e*P **P** **10 03 24.5 -0.5**
VRH pmax pmax
comp=Z,20nm,1.0s
KIRV Kirov 64.73 335⇑ *e*P **P** **10 03 27.4 +2.2**
KIRV Kirov 64.73 335 LR LR 10 34 56.9
comp=Z,745nm,18.6s,baz=135,slow=39
NRIK Noril'sk 64.84 357*ce*P **P** **10 03 27.5 +1.7**
NRIK Noril'sk 64.84 357 P **P** **10 03 23.7 -2.1**
comp=Z,2.6nm,0.5s,baz=111,slow=2.7,SNR=4.5
NRIK LR LR 10 35 45.7
comp=Z,478nm,19.6s,baz=178,slow=40
comp=Z,2.6nm,0.5s
CSS Mathiatis 65.13 306 P **P** **10 03 27.7 -0.7**
HNR Honiara 65.15 103 LR LR 10 36 41.1
comp=Z,2μm,18.1s,baz=288,slow=40
MBAR Mbarara 65.50 267⇓ *e*P **P** **10 03 33.3 +2.0**
MBAR pmax pmax
comp=Z,16nm,1.2s
MBAR Mbarara 65.50 267 LR LR 10 29 10.3
comp=Z,389nm,20.3s,baz=56,slow=33
MBAR Mbarara 65.50 267 P **P** **10 03 34.6 +3.3**
BR131 Keskin Array S 66.00 312 IAmb IAmb 10 03 43.4
comp=Z,10nm,0.8s
BR131 Keskin Array S 66.00 312⇑ *e*P **P** **10 03 35.1 +1.0**
BR131 Keskin Array S 66.00 312 P **P** **10 03 35.3 +1.3**
SNR=5.0
BR131 P **P** **10 03 35.3 +1.3**
SNR=5.0
BRTR Keskin Array B 66.00 312 P **P** **10 03 31.8 -2.2**
BRTR Keskin Array B 66.00 312 P **P** **10 03 31.8 -2.2**
BRTR Keskin Array B 66.00 312 P **P** **10 03 31.6 -2.5**
comp=Z,3.7nm,0.6s,baz=127,slow=8.2,SNR=6.6
BRTR LR LR 10 36 26.2
comp=Z,188nm,18.4s,baz=108,slow=40
comp=Z,3.7nm,0.6s
VSR Storozhevoye 66.13 325 *e*P **P** **10 03 33.3 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 66.29 325 *e*P **P** **10 03 35.9 +0.4**
VORR pmax pmax
comp=Z,50nm,0.4s
ANTO Ankara 66.67 312 P **P** **10 03 37.9 -0.3**
ANTO IAmb IAmb 10 03 44.1
comp=Z,19nm,1.1s
ANTO Ankara 66.67 312 P **P** **10 03 37.9 -0.3**
ANTO pmax pmax
comp=Z,19nm,1.1s
ANTO Ankara 66.67 312 P **P** **10 03 35.5 -2.8**
ANTO P **P** **10 03 35.5 -2.8**
LPSR Galich'ya Gora 66.83 326 *e*P **P** **10 03 38.4 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
MA2 Magadan 68.73 26 LR LR 10 36 12.4
comp=Z,352nm,18.9s,baz=243,slow=38
OBN Obninsk 69.12 328⇓ *e*P **P** **10 03 52.7 -0.5**
OBN *e* 10 04 18.5
OBN *e* 10 06 28.0
OBN *e*S **S** **10 12 49.3 -8.3**
OBN *e*SS **SS** **10 17 18.4 -5.5**
OBN pmax pmax
comp=Z,52nm,1.9s
OBN MLR MLR
comp=Z,663nm,18.0s
OBN Obninsk 69.12 328 LR LR 10 38 57.2
comp=Z,617nm,18.5s,baz=140,slow=40
PETK Petropavlovsk- 69.51 34 P **P** **10 03 53.9 -1.8**
comp=Z,3.1nm,0.9s,baz=229,slow=8.8,SNR=2.1
PETK LR LR 10 37 42.8
comp=Z,394nm,18.0s,baz=236,slow=39
comp=Z,3.1nm,0.9s
TIXI Tiksi 70.01 11 P **P** **10 03 56.5 -1.9**
TIXI IAmb IAmb 10 04 42.5
comp=Z,8.8nm,0.8s
TIXI Tiksi 70.01 11⇑ *e*P **P** **10 03 58.5 +0.1**
TIXI pmax pmax
comp=Z,21nm,1.6s
TIXI Tiksi 70.01 11 LR LR 10 37 20.7
comp=Z,794nm,19.4s,baz=222,slow=38
LSZ Lusaka 70.08 252 LR LR 10 31 16.8
comp=Z,424nm,19.9s,baz=105,slow=33
LSZ Lusaka 70.08 252 P **P** **10 04 01.9 +1.9**
LSZ P **P** **10 04 01.9 +1.9**
KLMR Klimovskoe 70.18 334 *e*P **P** **10 03 55.8 -3.9**
KLMR pmax pmax
comp=Z,33nm,1.8s
TIRR Tirgusor 70.90 315⇓P **P** **10 04 02.1 -2.3**
TIRR Tirgusor 70.90 315⇓P **P** **10 04 02.1 -2.3**
SEY Seymchan 71.05 24 LR LR 10 39 34.4
comp=Z,484nm,18.4s,baz=265,slow=40
SORM Soroca 71.78 319⇑P **P** **10 04 06.2 -3.4**
SORM Soroca 71.78 319⇑P **P** **10 04 06.2 -3.4**
AKASG Malin Array Be 71.87 322 P **P** **10 04 06.7 -3.5**
comp=Z,0.3nm,0.2s,baz=89,slow=4.9,SNR=2.3
AKASG LR LR 10 40 40.0
comp=Z,300nm,18.2s,baz=94,slow=40
comp=Z,0.3nm,0.2s
AKBB Malin Array Si 71.87 322⇓ *e*P **P** **10 04 10.4 +0.3**
AKBB pmax pmax
comp=Z,19nm,2.0s
IDI Anoyia 72.00 305 LR LR 10 42 42.7
comp=Z,107nm,18.0s,baz=100,slow=42
VRI Vrincioaia 72.36 317⇓P **P** **10 04 11.8 -1.4**
VRI Vrincioaia 72.36 317⇓P **P** **10 04 11.8 -1.4**
PLOR Plostina 72.41 317⇑P **P** **10 04 11.8 -1.8**
PLOR Plostina 72.41 317⇑P **P** **10 04 11.8 -1.8**
TESR Tescani 72.55 317⇑P **P** **10 04 12.5 -1.8**
MLR Muntele Rosu 72.82 316⇓P **P** **10 04 13.0 -3.1**
MLR Muntele Rosu 72.82 316 P **P** **10 04 15.7 -0.5**
MLR IAmb IAmb 10 04 36.4

comp=Z,23nm,1.0s
MLR Muntele Rosu 72.82 316 P **P 10 04 15.7 -0.5**
MLR pmax pmax
comp=Z,23nm,1.0s
MLR Muntele Rosu 72.82 316 LR LR 10 42 45.7
comp=Z,345nm,18.4s,baz=77,slow=41
TURR Turia 72.88 317 ⇑P **P 10 04 13.2 -3.1**
VOIR 73.43 316 ⇓P **P 10 04 16.7 -3.0**
VOIR 73.43 316 ⇓P **P 10 04 16.7 -3.0**
MNK Minsk 73.67 326 *i* P **P 10 04 17.9 -2.8**
MNK *i* 10 07 01.3
MNK *i* PPP PPP 10 08 46.6
MNK *i* S **SKiKP 10 13 49.4 -0.4**
MNK *i* SS **SS 10 18 33.9 +0.3**
MNK pmax pmax
comp=N,33nm,1.1s
MNK pmax pmax
comp=E,11nm,1.1s
MNK pmax pmax
comp=Z,27nm,1.1s
MNK MLR MLR
comp=Z,591nm,18.0s
MNK MLR MLR
comp=E,321nm,19.0s
MNK MLR MLR
comp=N,258nm,14.0s
DZM Mont Dzumac 73.69 114 *e*S **SKiKP 10 13 48.0 -2.9**
DZM *e*SS **SS 10 18 38.1 +2.4**
comp=N,140nm,33.6s
DZM *e*LR LR 10 26 50.0
comp=N,2μm,28.1s
BURAR Bucovina Array 73.73 318 ⇑P **P 10 04 19.4 -2.0**
BURAR Bucovina Array 73.73 318 P **P 10 04 20.4 -1.0**
BURAR Bucovina Array 73.73 318 ⇑P **P 10 04 19.4 -2.0**
LOT Lotru 74.32 316 ⇑P **P 10 04 22.9 -2.1**
LBTB Lobatse 74.45 243 LR LR 10 32 57.4
comp=N,314nm,19.6s,baz=76,slow=32
BLKB Belogradchik 74.81 314 ⇑P **P 10 04 25.9 -1.8**
HERR Herculane 75.18 315 ⇓P **P 10 04 28.0 -1.8**
SURR Surduc 75.51 316 ⇑P **P 10 04 28.4 -3.2**
APA Apatity 75.53 339 ⇓ *i*P **P 10 04 28.0 -3.3**
APA pmax pmax
comp=Z,11nm,1.0s
BOSA Boshof 75.57 239 P **P 10 04 33.6 +1.1**
comp=Z,1.8nm,0.5s,baz=136,slow=18,SNR=2.5
BOSA LR LR 10 33 39.6
comp=Z,135nm,21.5s,baz=68,slow=32
comp=Z,1.8nm,0.5s
KWP Kalwaria Pacla 75.73 320 IAmb IAmb 10 04 42.6
comp=Z,33nm,1.2s
MAW Mawson 75.81 193 LR LR 10 33 33.8
comp=Z,212nm,18.4s,baz=42,slow=32
BZS Buzias 75.84 316 ⇑P **P 10 04 30.1 -3.5**
BZS Buzias 75.84 316 ⇑P **P 10 04 30.1 -3.5**
KOLS Kolonicke sedl 75.89 319 *e*P **P 10 04 36.7 +2.9**
KOLS pmax pmax
comp=Z,13nm,0.8s
KOLS Kolonicke sedl 75.89 319 *e*P **P 10 04 36.7 +2.9**
CRVS Cervenica-Dubn 76.42 319 *e*P **P 10 04 37.8 +1.0**
CRVS pmax pmax
comp=Z,26nm,1.1s
CRVS Cervenica-Dubn 76.42 319 *e*P **P 10 04 37.8 +1.0**
FINES FINESS Array B 76.45 332 *i* P **P 10 04 36.7 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 76.45 332 P **P 10 04 34.3 -2.4**
comp=Z,2.5nm,0.7s,baz=112,slow=6.9,SNR=7.6
FINES LR LR 10 42 35.8
comp=Z,264nm,20.5s,baz=116,slow=39
comp=Z,2.5nm,0.7s
STHS Stebnicka Huta 76.64 320 *e*P **P 10 04 41.1 +3.1**
STHS pmax pmax
comp=Z,11nm,0.9s
STHS Stebnicka Huta 76.64 320 *e*P **P 10 04 41.1 +3.1**
OJC Ojcow 77.68 320 P **P 10 04 42.6 -1.2**
OJC IAmb IAmb 10 05 04.6
comp=Z,26nm,1.3s
OJC Ojcow 77.68 320 P **P 10 04 42.6 -1.2**
OJC pmax pmax
comp=Z,26nm,1.3s
MORH Mrgy, Hungar 77.97 316 ⇓P P 10 04 40.7 -4.8
JAVC Velka Javorina 78.90 319 *e*P **P 10 04 50.7 0.0**
ARCES ARCESS Array B 78.94 340 P **P 10 04 48.3 -2.1**
comp=Z,0.9nm,0.3s,baz=98,slow=6.8,SNR=1.3
ARCES LR LR 10 42 32.0
comp=Z,1μm,21.3s,baz=110,slow=38
comp=Z,0.9nm,0.3s
MORC Moravsky Berou 79.07 320 P **P 10 04 50.7 -0.9**
MORC Moravsky Berou 79.07 320 *e*P **P 10 04 51.0 -0.6**
MORC Moravsky Berou 79.07 320 P **P 10 04 50.7 -0.9**
MORC pmax pmax
comp=Z,8.0nm,1.0s
MODS Modra-Piesok 79.11 318 *e*P **P 10 04 53.3 +1.5**
MODS Modra-Piesok 79.11 318 *e*P **P 10 04 53.3 +1.5**
KRLC Kraliky 79.59 320 *e*P **P 10 04 54.4 0.0**
KRLC Kraliky 79.59 320 *e*P **P 10 04 54.4 0.0**
VRAC Vranov 79.64 319 LR LR 10 47 28.8
comp=Z,163nm,18.0s,baz=85,slow=41
DPC Dobruska-Polom 79.91 320 *e*P **P 10 04 59.5 +3.4**
DPC Dobruska-Polom 79.91 320 *e*P **P 10 04 59.5 +3.4**
OSTC Ostas 79.99 320 *e*P **P 10 05 00.9 +4.3**
OSTC Ostas 79.99 320 *e*P **P 10 05 00.9 +4.3**
CHVC Chvalec 80.10 320 *e*P **P 10 05 00.3 +3.2**
CHVC Chvalec 80.10 320 *e*P **P 10 05 00.3 +3.2**
SUR Sutherland 80.14 236 LR LR 10 34 52.2
comp=Z,231nm,20.4s,baz=82,slow=31
SUR Sutherland 80.14 236 P **P 10 04 59.0 +1.1**
ARSA Arzberg 80.20 317 *i* P **P 10 04 58.1 +0.3**
comp=Z,8.4nm,1.4s
SOKA Soboth 80.50 316 *i* P **P 10 04 59.2 -0.3**
comp=Z,15nm,1.6s
VAE Valguarnera 80.59 307 LR LR 10 48 12.6
comp=Z,102nm,18.1s,baz=16,slow=41
TSUM Tsumeb 80.72 250 LR LR 10 37 02.3
comp=Z,186nm,20.0s,baz=156,slow=33
OBKA Obir 80.82 316 *i* pP **P 10 05 04.2 +3.0**
comp=Z,9.4nm,1.4s
GOPC GO Pecny, Ondr 80.86 320 *e*P **P 10 05 03.9 +2.6**
GOPC GO Pecny, Ondr 80.86 320 *e*P **P 10 05 03.9 +2.6**
CKRC Cesky Krumlov 81.11 319 *e*P **P 10 05 05.2 +2.6**
CKRC Cesky Krumlov 81.11 319 *e*P **P 10 05 05.2 +2.6**
MYKA Terra Mystica 81.45 316 *e*pP **P 10 05 06.6 +2.1**
comp=Z,3.9nm,0.6s
BRG Berggiesshubel 81.46 321 *e*P **P 10 05 06.7 +2.3**
BRG Amp 10 05 07.4
comp=Z,4.7nm,1.0s
BRG Berggiesshubel 81.46 321 *e*P **P 10 05 06.6 +2.3**
BRG pmax pmax
comp=Z,5.0nm,1.0s
PRED Cave del Predi 81.50 316 IAmb IAmb 10 05 24.0
comp=Z,13nm,0.9s
BIOA Bad Ischl, Aus 81.50 317 *e*pP **P 10 05 06.7 +2.0**
comp=Z,5.5nm,0.8s
GERES GERESS Array B 81.51 319 P **P 10 05 03.4 -1.4**
comp=Z,1.7nm,0.5s,baz=77,slow=7.0,SNR=9.6
GERES LR LR 10 47 53.2
comp=Z,173nm,18.5s,baz=72,slow=41
comp=Z,1.7nm,0.5s
GUMA Gualdo di Mace 81.55 313 IAmb IAmb 10 07 59.5
comp=Z,53nm,0.6s
KHC Kasperske Hory 81.60 319 *e*P **P 10 05 07.6 +2.4**
KHC *ex* x 10 05 15.6
KHC Kasperske Hory 81.60 319 ⇑ *e*P **P 10 05 06.8 +1.6**
KHC pmax pmax
comp=Z,10.0nm,1.0s
KBA Koelnbreinsper 81.68 317 *i* pP **P 10 05 07.6 +1.8**
comp=Z,4.9nm,0.9s
CLUD Cludinico 81.97 316 IAmb IAmb 10 05 18.1
comp=Z,17nm,0.8s
CLL Collm 82.07 321 *e*P P 10 05 15.0 +7.4
STAL STALIGIAL 82.09 316 IAmb IAmb 10 05 21.2
comp=Z,15nm,0.9s
LESA Schwarzleotal 82.14 317 *e*P **P 10 05 09.8 +1.6**
comp=Z,4.0nm,0.5s
HFS Hagfors 82.20 330 P P 10 05 02.8 -5.3
comp=Z,2.0nm,0.6s,baz=90,slow=6.2,SNR=2.7
HFS LR LR 10 46 57.2
comp=Z,762nm,18.1s,baz=94,slow=40
ABTA Abfaltersbach 82.24 316 *e*pP **P 10 05 11.0 +2.3**
comp=Z,3.6nm,0.7s
RPZ Rata Peaks 82.41 135 P **P 10 05 09.7 +0.2**
comp=Z,13nm,1.1s,baz=22,slow=20,SNR=2.7
RPZ LR LR 10 43 43.1
comp=Z,295nm,18.6s,baz=278,slow=37
comp=Z,13nm,1.1s
WTTA Wattenberg 82.85 317 *i* pP **P 10 05 13.7 +1.7**
comp=Z,5.8nm,0.5s
WATA Walderalm 82.89 317 *e*P **P 10 05 13.7 +1.5**
comp=Z,3.1nm,0.6s
SQTA Sankt Quirin 83.14 317 *e*pP **P 10 05 15.4 +2.0**
comp=Z,4.5nm,0.5s
MOTA Moosalm 83.21 317 *e*pP **P 10 05 15.5 +1.7**
comp=Z,9.7nm,0.8s
SPITS Spitsbergen Ar 83.37 348 P **P 10 05 11.7 -2.1**
comp=Z,7.2nm,1.0s,baz=93,slow=10,SNR=1.5
SPITS LR LR 10 48 50.8
comp=Z,554nm,18.9s,baz=72,slow=40
comp=Z,7.2nm,1.0s
RETA Reutte 83.44 317 *e*pP **P 10 05 16.8 +1.8**
comp=Z,6.7nm,0.5s
FETA Feichten 83.46 317 *i* P **P 10 05 16.4 +1.2**
comp=Z,4.8nm,0.9s
NB2 NORSAR Subarra 83.47 331 P **P 10 05 19.3 +4.6**
comp=Z,1.3nm,0.6s,baz=88,slow=5.1
NOA NORSAR Array B 83.47 331 P **P 10 05 13.1 -1.7**
comp=Z,1.9nm,0.9s,baz=94,slow=5.4,SNR=2.6
NOA LR LR 10 47 13.0
comp=Z,522nm,19.4s,baz=105,slow=39
comp=Z,1.9nm,0.9s
DAVA Damuels 84.04 317 *e*pP **P 10 05 20.2 +2.1**
comp=Z,11nm,1.2s
DAVOX Davos/Dischmat 84.05 316 LR LR 10 48 51.0
comp=Z,203nm,19.6s,baz=62,slow=40
KEST Kesra 84.67 305 P **P 10 05 21.1 -0.3**
comp=Z,8.8nm,0.8s,baz=209,slow=14,SNR=3.0
comp=Z,8.8nm,0.8s
KEST Kesra 84.67 305 P P **10 05 21.2 -0.3**
BFO Black Forest 85.07 318 P P **10 05 23.7 +0.6**
BFO Black Forest 85.07 318 P P **10 05 23.7 +0.6**
BFO pmax pmax
comp=Z,6.0nm,0.9s
URZ Urewera 85.82 129 P **P 10 05 25.5 -1.5**
comp=Z,12nm,0.9s,baz=298,slow=22,SNR=2.5
URZ LR LR 10 46 38.8
comp=Z,308nm,18.5s,baz=304,slow=38
comp=Z,12nm,0.9s
BMRD Maredsous 87.31 320 *d*P **P 10 05 32.9 -1.1**
RAO Raoul Island 88.75 119 LR LR 10 47 43.0
comp=Z,250nm,18.6s,baz=128,slow=37
ELIB Princess Elisa 89.11 197 *d*P **P 10 05 42.7 +0.4**
comp=Z,9.2nm,1.2s
VNDA Vanda 89.40 169 P **P 10 05 43.0 -0.4**
comp=Z,1.6nm,0.7s,baz=322,slow=4.5,SNR=6.0
VNDA LR LR 10 41 51.4
comp=Z,173nm,18.8s,baz=307,slow=33
comp=Z,1.6nm,0.7s
E18K Tukpahlearik C 90.82 22 IAmb IAmb 10 06 34.0
comp=Z,10nm,1.1s
EKA Eskdalemuir Ar 91.46 326 P **P 10 05 52.0 -1.4**
comp=Z,0.6nm,0.5s,baz=80,slow=5.8,SNR=2.4
comp=Z,0.6nm,0.5s
E19K Redstone River 92.06 22 P P **10 05 58.5 +2.5**
E19K IAmb IAmb 10 06 29.8
comp=Z,5.4nm,0.8s
B21K Ikpikpuk River 92.29 19 IAmb IAmb 10 06 02.5
comp=Z,7.7nm,0.9s
D22K Ayikyak River 93.19 20 IAmb IAmb 10 06 28.2
comp=Z,10nm,1.2s
TOA0 Torodi Ar. Sit 93.23 283 P **P 10 06 02.1 -0.3**
TOA0 IAmb IAmb 10 06 12.6
comp=Z,8.4nm,1.1s
TOA0 Torodi Ar. Sit 93.23 283 P **P 10 06 02.4 0.0**
TORD Torodi Ar. Bea 93.23 283 P **P 10 06 02.1 -0.4**
comp=Z,4.2nm,0.3s,baz=82,slow=6.0,SNR=1.0
TORD LR LR 10 47 30.0
comp=Z,181nm,18.5s,baz=90,slow=35
G21K Allakaket 93.75 22 IAmb IAmb 10 06 43.8
comp=Z,9.9nm,1.4s
I20K Naaghedeneel 93.97 24 P **P 10 06 03.7 -1.1**
QSPA South Pole Qui 94.57 180 P **P 10 06 08.8 +1.2**
comp=Z,0.8nm,0.5s,baz=247,slow=21,SNR=1.9
QSPA LR LR 10 44 51.5
comp=Z,236nm,19.3s,baz=304,slow=33
comp=Z,0.8nm,0.5s
ESDC Sonseca Array 94.77 310 P **P 10 06 08.3 -0.9**
comp=Z,0.7nm,0.7s,baz=62,slow=3.3,SNR=2.4
comp=Z,0.7nm,0.7s
D25K Kavik River 95.07 18 IAmb IAmb 10 06 36.6
comp=Z,5.9nm,0.9s
NIUE Niue 95.25 109 P **P 10 06 10.6 -1.1**
baz=95,SNR=4.3
ILAR Eielson Array 96.97 23 PP **PP 10 10 12.7 -1.0**
comp=Z,1.1nm,1.1s,baz=242,slow=5.4,SNR=4.3
BORG Borgarnes 97.13 337 LR LR 10 52 38.1
comp=Z,374nm,19.1s,baz=61,slow=37
YKA Yellowknife Ar 109.06 15 PKiKP **PKiKP 10 11 15.3 -1.3**
comp=Z,0.1nm,0.7s,baz=320,slow=2.0,SNR=2.1
YKA PP **PP 10 11 39.7 -4.3**
comp=Z,0.4nm,0.8s,baz=329,slow=6.1,SNR=4.0
TBI Tubuai 114.26 113 *e*LR LR 10 45 30.9
comp=Z,1μm,28.5s
PPT2 Papeete2 114.57 107 *e*LR LR 10 45 43.7
comp=Z,282nm,24.8s
PPT2 *e*LR LR 10 45 47.2
comp=Z,212nm,26.2s
SCHQ Schefferville 119.05 349 PKP **PKPdf 10 11 34.3 -1.6**
comp=Z,2.0nm,0.7s,baz=81,slow=18,SNR=1.3
PLID Pearl Lake 122.77 27 PKPdf **PKPdf 10 11 41.2 -2.5**
TAOE Nuku Hiva Isla 124.03 98 *e*LR LR 10 50 09.5
comp=Z,255nm,23.7s
ULM Lac du Bonnet 124.35 9 PKP **PKPdf 10 11 44.0 -2.2**
comp=Z,4.0nm,0.8s,baz=29,slow=3.8,SNR=3.8
NVAR Mina Array Bea 126.59 34 PKP **PKPdf 10 11 50.8 -0.4**
comp=Z,1.0nm,0.6s,baz=293,slow=2.0,SNR=13
NVAR PKKPab **PKKPab 10 21 22.1 +0.8**
comp=Z,0.4nm,0.7s,baz=137,slow=8.3,SNR=6.1
PDAR Pinedale Array 127.38 24 PKP **PKPdf 10 11 51.1 -1.5**
comp=Z,0.4nm,0.5s,baz=69,slow=3.0,SNR=2.4
R11B Troy Canyon, C 128.11 32 PKPdf **PKPdf 10 11 53.2 -0.9**
TKX Tecate 131.69 38 PKPpre 10 11 53.2
TXAR Lajitas Array 141.24 28 PKhKP PKPpre 10 12 13.4
comp=Z,0.5nm,0.7s,baz=262,slow=0.2,SNR=5.7
PLCA Paso Flores 142.12 197 PKhKP PKPpre 10 12 15.9
comp=Z,0.9nm,0.6s,baz=330,slow=22,SNR=1.9
BDFB Brasilia 143.09 250 PKP **PKPdf 10 12 22.8 +0.4**
comp=Z,1.9nm,0.4s,baz=59,slow=6.6,SNR=2.4
CPUP Villa Florida 146.67 227 PKPbc **PKPbc 10 12 29.0 -0.7**
comp=Z,4.5nm,0.8s,baz=106,slow=3.1,SNR=8.0
AQDB Aquidauana 148.38 238 PKiKP 10 12 36.4 +0.2
CELP Cerrillos 151.68 323 PKPdf 10 12 38.2 +1.9
PB06 IPOC Station P 157.32 216 PKPdf 10 12 40.9 -3.4
PB07 IPOC Station P 158.25 217 PKPdf 10 12 43.9 -1.6

*NNC **08** 09:53:38.7±1.8,51°.81N×75°.51E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=22.9km s-min=9.7km az=14.0, Suspected Mining explosion.*
*IDC **08** 09:53:40.7±0.9,51°.62N×75°.53E, h0km, mbtmp2.5/4, ML1.9/4, Error ellipse: s-maj=24.0km s-min=7.2km az=29.0*
ISC 08 09:53:40.0±1.0, 51°.64N±0°.09×75°.48E±0°.05, h0km, n10, σ1s48/12, 8C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.18**	**117**	⇓Pg	**Pb**	**09 54 20.6**	**+0.3**
	1.8nm,0.2s						
KURBB				⇑Lg	Lg	09 54 50.9	
	27nm,0.6s						
KURBB	**Kurchatov Arra**	**2.18**	**117**	Pn	**Pn**	**09 54 18.3**	**+0.8**
	0.4nm,0.3s,baz=302,slow=18,SNR=14						
KURBB				Lg	Lg	09 54 47.2	
	0.8nm,0.3s,baz=298,slow=32,SNR=10						
	1.2nm,0.3s						
KURK	**Kurchatov**	**2.19**	**114**	⇑Pg	**Pn**	**09 54 18.8**	**+1.3**
	1.7nm,0.5s						
KURK				⇑Lg	Lg	09 54 48.5	
	6.4nm,0.5s						
BVA0	**Borovoye Array**	**3.41**	**296**	⇑Pg	**Pb**	**09 54 40.2**	**-1.1**
	2.1nm,0.8s,baz=113,slow=15,SNR=8.3						
BVA0				⇑Lg	Lg	09 55 23.8	
	6.4nm,0.5s,baz=117,slow=27,SNR=9.2						
BVAR	**Borovoye Array**	**3.41**	**296**	Pn	**Pn**	**09 54 35.4**	**+1.0**
	baz=111,slow=11,SNR=3.6						
BVAR				Pg	**Pb**	**09 54 40.4**	**-0.9**
	0.1nm,0.3s,baz=112,slow=16,SNR=9.2						
BVAR				Sn	**Sn**	**09 55 18.0**	**+2.4**
	0.1nm,0.3s,baz=110,slow=28,SNR=3.6						
	0.5nm,0.4s						
OTUK	**Ortayu**	**3.96**	**212**	⇑Pg	**Pg**	**09 54 55.6**	**-0.3**
	0.9nm,0.7s						
OTUK				⇓Lg	Lg	09 55 46.6	
	6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**6.12**	**64**	Pn	**Pn**	**09 55 11.1**	**-0.5**
	0.3nm,0.3s,baz=249,slow=15,SNR=4.3						
ZALV				Lg	Lg	09 56 54.5	
	0.1nm,0.3s,baz=254,slow=35,SNR=1.6						
	0.8nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.12**	**64**	I	I	10 33 00.0	
	baz=250,slow=327,SNR=3.2						
MK31	**Makanchi Array**	**6.59**	**135**	⇑Sn	**Sn**	**09 56 34.6**	**+0.6**
	0.4nm,0.5s,baz=343,slow=27,SNR=2.6						
MK31				⇑Lg	Lg	09 57 07.0	
	1.2nm,0.6s,baz=321,slow=27,SNR=5.2						
MKAR	**Makanchi Array**	**6.59**	**135**	Pn	**Pn**	**09 55 17.8**	**-0.4**
	0.1nm,0.3s,baz=327,slow=13,SNR=4.5						
MKAR				Sn	**Sn**	**09 56 31.2**	**-2.8**
	0.1nm,0.3s,baz=316,slow=20,SNR=1.7						
MKAR				Lg	Lg	09 57 07.4	
	0.3nm,0.3s,baz=326,slow=28,SNR=9.2						
	0.3nm,0.6s						

*IDC **08** 09:55:32.5±3.6, 9°.31S×118°.36E, h0km, mb3.3/2, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=292.7km s-min=29.6km az=50.0*
*DJA **08** 09:55:44.4±1.2, 9°.2S×118°.9E±°, h27km±12km, M3.8/6, mb4.2/1, MLv3.6/6*
ISC 08 09:55:44.6±1.1, 9°.2S±0°.1×119°.02E±0°.04, h50km, n11, σ1s34/13, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.28**	**287**	P	**Pn**	**09 56 06.1**	**0.0**
PLAI				S	**Sn**	**09 56 23.4**	**+1.2**
BASI	**Baing, Sumba**	**1.84**	**124**	P	**Pn**	**09 56 14.2**	**+0.3**
TWSI	**Taliwang, Sumb**	**2.16**	**282**	P	**Pn**	**09 56 18.7**	**+0.6**
TWSI				S	**Sn**	**09 56 44.9**	**+1.2**
EDFI	**Ende, Flores**	**2.68**	**81**	P	**Pn**	**09 56 25.9**	**+0.5**
EDFI				S	**Sn**	**09 56 58.6**	**+1.8**
BKSI	**Bulukumba**	**4.00**	**16**	P	**Pn**	**09 56 42.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**4.86**	**278**	P	**Pn**	**09 56 54.9**	**-0.4**
SOEI	**Soe**	**5.21**	**97**	P	**Pn**	**09 57 01.4**	**+1.2**
GMJI	**Gumukmas**	**5.58**	**279**	P	**Pn**	**09 57 06.0**	**+0.8**
WRA	**Warramunga Arr**	**18.26**	**127**	P	**P**	**09 59 53.1**	**-1.1**
	0.1nm,0.3s,baz=305,slow=11,SNR=5.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**20.24**	**137**	P	**P**	**10 00 13.3**	**-2.6**
	0.3nm,0.5s,baz=310,slow=10,SNR=11						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**64.64**	**333**	P	P	10 06 10.8	-6.4
	0.7nm,1.0s,baz=151,slow=7.2,SNR=1.3						
	0.7nm,1.0s						

*HEL **08** 09:58:55.6±0.3, 67°.26N×20°.42E, h0km, ML0.7, Suspected explosion*
UPP 08 09:58:56.9±0.0, 67°.19N×20°.67E, h0km, ML2.6, Confirmed Induced event, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.08**	**209**	P	Pg	09 58 58.8	+0.3
DUNU				S	Sg	09 59 00.0	+0.5
MASU	**Masugnsbyn**	**0.58**	**62**	P	Pg	09 59 08.0	0.0
RATU	**Laukkuluspa**	**0.76**	**327**	P	Pg	09 59 11.2	-0.2
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	09 59 11.2	-0.6
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	09 59 13.4	0.0
PAJU	**Pajala**	**0.97**	**99**	P	Pg	09 59 14.8	-0.6
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	09 59 14.9	-0.6
PAJU				SG	Sb	09 59 28.9	-0.9
LANU	**Lannavaara**	**1.00**	**30**	P	Pg	09 59 15.4	-0.5
LANU	**Lannavaara**	**1.00**	**30**	PB	Pg	09 59 15.5	-0.5
KLF	**Kolari**	**1.28**	**87**	PG	Pg	09 59 20.5	-1.0
	baz=282						
KLF				MSG		09 59 37.1	
	comp=Z,0.4nm,0.2s						
KLF				SB	Sg	09 59 38.1	+0.1
HEF	**Hetta**	**1.67**	**42**	MSG		09 59 45.9	
	comp=Z,0.5nm,0.2s						
HEF				SN	Sn	09 59 49.3	0.0
KALU	**Kalix**	**1.72**	**140**	SG	Sg	09 59 52.3	+0.3
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	09 59 28.2	0.0
TOF	**Tornio**	**1.84**	**126**	PG	Pb	09 59 30.8	-0.4
	baz=303						
TOF				MSG		09 59 53.9	
	comp=Z,0.4nm,0.2s						
TOF				SG	Sb	09 59 55.2	+0.5
RNF	**Rovaniemi**	**2.19**	**103**	PG	Pb	09 59 36.6	-0.7
RNF				SG	Sg	10 00 06.0	-1.0
SGF	**Sodankyl**	**2.28**	**81**	SG	Sb	10 00 08.8	+1.2

IDC 08 10:05:15.0±4.5, 18°.53S×175°.95W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=322.0km s-min=29.8km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.82**	**260**	P	P	10 13 47.0	0.0
	0.5nm,0.9s,baz=94,slow=8.1,SNR=8.4						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**46.88**	**255**	P	P	10 13 47.1	-0.3
	0.6nm,0.8s,baz=94,slow=8.6,SNR=6.3						
	0.6nm,0.8s						
NVAR	**Mina Array Bea**	**78.27**	**43**	P	P	10 17 17.2	0.0
	0.7nm,0.7s,baz=225,slow=7.3,SNR=7.8						
	0.7nm,0.7s						

*TAP **08** 10:09:13.6,24°.24N×121°.71E, h12km, ML3.1, C*
*JMA **08** 10:09:13.7±0.2,24°.2N±0°.7×12°.2E±°, h8km±4km, TAIWAN REGION*
ISC 08 10:09:13.8±0.8, 24°.23N±0°.01×121°.73E±0°.02, h12km±4km, n106, σ0s67/210, 6C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**10**	⇓P	**Pg**	**10 09 16.5**	**+0.1**
	baz=26						
EHP				S	**Sg**	**10 09 18.6**	**+0.2**
	baz=26						
EAHA	**Aohua**	**0.10**	**7**	⇓P	**Pg**	**10 09 16.6**	**-0.1**
	baz=15						
EAHA				S	**Sg**	**10 09 18.6**	**-0.1**
	baz=15						
ETL	**Fush Village**	**0.12**	**232**	P	**Pg**	**10 09 16.9**	**0.0**
	baz=225						
ETL				S	**Sg**	**10 09 19.5**	**+0.3**
	baz=225						
NACB	**Ninganchiao**	**0.13**	**244**	⇓P	**Pg**	**10 09 16.9**	**-0.2**
	baz=230						
NACB				S	**Sg**	**10 09 19.4**	**-0.1**
	baz=230						
TWD	**Chiawan**	**0.19**	**218**	⇑ *i*P	**Pg**	**10 09 18.1**	**0.0**
	baz=212						
TWD				*i* S	**Sg**	**10 09 21.0**	**0.0**
	baz=212						
ENA	**Nanau**	**0.19**	**4**	⇓ *i*P	**Pg**	**10 09 18.1**	**-0.1**
	baz=10.0						
ENA				*i* S	**Sg**	**10 09 20.9**	**-0.2**
	baz=10.0						
EWUT	**Wuta**	**0.22**	**13**	P	**Pg**	**10 09 18.4**	**-0.1**
	baz=16						
EWUT				S	**Sg**	**10 09 21.6**	**-0.1**
	baz=16						
ETLH	**Xiulin Townshi**	**0.23**	**263**	⇓P	**Pg**	**10 09 18.4**	**-0.3**
	baz=261						
ETLH				S	**Sg**	**10 09 21.9**	**-0.1**
	baz=261						
ETM	**Tongmen**	**0.34**	**219**	P	**Pg**	**10 09 20.0**	**-0.8**
	baz=217						
ETM				S	**Sg**	**10 09 24.9**	**-0.4**
	baz=217						
LATG	**Datong**	**0.35**	**329**	⇓P	**Pg**	**10 09 20.9**	**-0.1**
	baz=329						
LATG				S	**Sg**	**10 09 25.8**	**0.0**
	baz=329						
LXIB	**Xiulin Townshi**	**0.35**	**234**	⇑P	**Pg**	**10 09 20.5**	**-0.5**
	baz=232						
LXIB				S	**Sg**	**10 09 25.8**	**-0.1**
	baz=232						
ESAO	**Su ao**	**0.36**	**17**	P	**Pg**	**10 09 20.9**	**-0.2**
	baz=19						
ESAO				S	**Sg**	**10 09 25.5**	**-0.4**
	baz=19						
NNSH	**Datong**	**0.37**	**302**	⇓P	**Pg**	**10 09 21.2**	**-0.1**
	baz=301						

NNSH				S		Sg	10 09 26.1	-0.1	
	baz=301								
NNSB	**Datong**	0.37	302	⇓P		Pg	10 09 21.1	-0.1	
	baz=301								
NNSB				S		Sg	10 09 26.2	-0.1	
	baz=301								
NNS	**Nan Shan**	0.38	303	⇓*i*P		Pg	10 09 21.4	-0.2	
	baz=303								
NNS				*i* S		Sg	10 09 26.7	0.0	
	baz=303								
TWC	**Suao**	0.39	17	⇑*i*P		Pg	10 09 21.5	-0.1	
	baz=12								
TWC				*i* S		Sg	10 09 26.6	-0.3	
	baz=12								
NDS	**Dongshan**	0.40	359	P		Pg	10 09 21.8	0.0	
	baz=360								
NDS				S		Sg	10 09 27.1	0.0	
	baz=360								
NDT	**Datong Townshi**	0.42	332	⇓P		Pg	10 09 22.2	0.0	
	baz=332								
NDT				S		Sg	10 09 27.8	+0.1	
	baz=332								
ENTT	**Nioudou**	0.43	340	⇓*i*P		Pg	10 09 22.4	0.0	
	baz=341								
ENTT				*i* S		Sg	10 09 28.2	0.0	
	baz=341								
WHF	**Hehuan Shan**	0.43	258	⇓*i*P		Pg	10 09 22.2	-0.3	
	baz=257								
WHF				*i* S		Sg	10 09 28.0	-0.4	
	baz=257								
FUSS	**Fushou**	0.44	272	P		Pg	10 09 22.6	0.0	
	baz=271								
FUSS				S		Sg	10 09 28.6	0.0	
	baz=271								
SHUL	**Shoufeng**	0.47	199	P		Pb	10 09 23.7	-0.3	
	baz=204								
SHUL				S		Sb	10 09 32.4	+1.5	
	baz=204								
TWE	**Neicheng**	0.49	354	*i* P		Pg	10 09 23.4	0.0	
	baz=2.0								
TWE				*i* S		Sg	10 09 29.8	-0.2	
	baz=2.0								
ESL	**Shilin**	0.50	213	⇑*i*P		Pg	10 09 23.0	-0.6	
	baz=220								
ESL				*i* S		Sg	10 09 29.5	-0.7	
	baz=220								
TWT	**Tachien**	0.50	272	*i* P		Pb	10 09 24.1	-0.7	
	baz=271								
TWT				*i* S		Sg	10 09 30.8	+0.3	
	baz=271								
TDCB	**Techi**	0.52	272	P		Pg	10 09 24.1	+0.1	
	baz=271								
TDCB				S		Sg	10 09 30.9	-0.1	
	baz=271								
ILA	**Ilan**	0.53	2	*e*P		Pg	10 09 24.0	-0.2	
	baz=3.0								
ILA				S		Sb	10 09 32.5	-0.3	
	baz=3.0								
CHGB	**Renai**	0.53	251	⇓P		Pg	10 09 24.2	-0.1	
	baz=243								
CHGB				S		Sg	10 09 31.3	-0.2	
	baz=243								
FUSB	**Fushanzhiwuyua**	0.54	346	P		Pg	10 09 24.5	+0.1	
	baz=346								
FUSB				S		Sg	10 09 31.3	-0.4	
	baz=346								
YHNB	**Yeheng**	0.54	324	⇓P		Pg	10 09 24.4	-0.1	
	baz=323								
YHNB				S		Sg	10 09 31.4	-0.3	
	baz=323								
TEGC	**Jichi Village**	0.55	198	P		Pb	10 09 26.0	+0.6	
	baz=190								
TEGC				*e*S		Sn	10 09 35.4	-1.1	
	baz=190								
NSK	**Sanguang**	0.55	323	⇓*i*P		Pg	10 09 24.5	-0.2	
	baz=323								
NSK				*i* S		Sg	10 09 31.7	-0.4	
	baz=323								
OWD	**Renai**	0.57	241	P		Pg	10 09 24.9	-0.2	
	baz=232								
OWD				S		Sg	10 09 32.6	-0.1	
	baz=232								
NWLT	**Wulai**	0.58	339	P		Pg	10 09 25.2	0.0	
	baz=345								
NWLT				S		Sg	10 09 32.4	-0.5	
	baz=345								
WARBT	**Fenglin Townsh**	0.60	211	P		Pg	10 09 24.8	-0.8	
	baz=218								
WARBT				S		Sg	10 09 32.5	-1.0	
	baz=218								
WUSB	**Renai**	0.61	247	⇑P		Pg	10 09 25.6	-0.1	
	baz=238								
WUSB				S		Sg	10 09 33.2	-0.6	
	baz=238								
EGFH	**Guangfu**	0.62	206	P		Pg	10 09 25.6	-0.4	
	baz=213								
EGFH				S		Sg	10 09 33.8	-0.4	
	baz=213								
NFF	**Wufeng Townshi**	0.68	306	P		Pg	10 09 27.1	0.0	
	baz=305								
NFF				S		Sb	10 09 36.4	-0.8	
	baz=305								
WHP	**Taichung City**	0.71	274	P		Pb	10 09 28.3	0.0	
	baz=273								
WHP				S		Sb	10 09 37.4	-0.7	
	baz=273								
VWDT	**VWDT**	0.72	228	⇑P		Pg	10 09 27.4	-0.4	
	baz=228								
VWDT				S		Sb	10 09 38.0	0.0	
	baz=228								
WPL	**Puli Township**	0.74	253	P		Pg	10 09 27.9	-0.2	
	baz=252								
WPL				*e*S		Sg	10 09 37.9	+0.1	
	baz=252								
TIPB	**Shuangxi**	0.74	7	P		Pg	10 09 28.1	-0.1	
	baz=359								
TIPB				S		Sg	10 09 37.2	-0.8	
	baz=359								
NHDH	**Xindian Distri**	0.75	346	P		Pg	10 09 27.6	-0.8	
	baz=346								
NHDH				S		Sg	10 09 38.0	-0.3	
	baz=346								
TWA	**Mucha**	0.76	350	*e*P		Pg	10 09 28.2	-0.3	
	baz=351								
TWA				S		Sg	10 09 38.0	-0.4	
	baz=351								
DPDB	**Guoxing**	0.76	255	P		Pg	10 09 28.5	-0.1	
	baz=254								
DPDB				S		Sg	10 09 38.1	-0.4	
	baz=254								
WCS	**Beigang Elemen**	0.76	257	P		Pg	10 09 28.5	-0.1	
	baz=256								
WCS				S		Sg	10 09 38.6	0.0	
	baz=256								
LIOB	**Emei**	0.77	303	P		Pb	10 09 29.1	-0.1	
	baz=302								
LIOB				S		Sb	10 09 40.1	+0.5	
	baz=302								
NJD	**Zhudong**	0.77	311	*e*P		Pb	10 09 29.0	-0.2	
	baz=310								
NJD				*e*S		Sb	10 09 39.5	-0.1	
	baz=310								
NSTT	**Nanjuang**	0.77	301	*i* P		Pg	10 09 28.4	-0.4	
	baz=301								
NSTT				S		Sb	10 09 39.2	-0.4	
	baz=301								
TATO	**Taipei**	0.77	344	P		Pb	10 09 29.0	-0.2	
	baz=344								
TATO				S		Sg	10 09 38.4	-0.5	
	baz=344								
HGSD	**Ruisui**	0.79	201	P		Pb	10 09 29.5	0.0	
	baz=214								
HGSD				*e*S		Sb	10 09 41.4	+1.3	
	baz=214								
TWB1	**Santiao Chiao**	0.81	17	*i* P		Pg	10 09 29.3	-0.2	
	baz=18								
TWB1				*i* S		Sg	10 09 39.1	-1.0	
	baz=18								
EHY	**Hungye**	0.81	207	*i* P		Pg	10 09 28.9	-0.7	
	baz=212								
EHY				*i* S		Sg	10 09 40.3	0.0	
	baz=212								
SMLT	**Sun Moon Lake**	0.83	245	*i* P		Pg	10 09 29.9	-0.1	
	baz=235								
SMLT				S		Sb	10 09 41.2	-0.3	
	baz=235								
SSLB	**Suanglung**	0.83	238	P		Pg	10 09 29.5	-0.4	
	baz=238								
SSLB				S		Sg	10 09 40.0	-0.9	
	baz=238								
NWF	**Wu-fen Shan**	0.84	3	*i* P		Pn	10 09 31.2	-0.4	
	baz=354								
NWF				*i* S		Sg	10 09 41.0	0.0	
	baz=354								
WFSB	**Wu-fen Shan**	0.84	3	P		Pn	10 09 31.6	+0.1	
	baz=356								
WFSB				S		Sg	10 09 40.8	-0.1	
	baz=356								
TYC	**Yuchr**	0.86	248	*i* P		Pg	10 09 29.8	-0.6	
	baz=238								
TYC				S		Sb	10 09 41.7	-0.5	
	baz=238								
SXI1	**Grass Mountain**	0.87	9	P		Pb	10 09 30.8	-0.2	
	baz=357								
SXI1				S		Sb	10 09 42.6	0.0	
	baz=357								
SBCB	**Hsinchu**	0.88	310	*e*P		Pn	10 09 31.9	-0.1	
	baz=309								
SBCB				*e*S		Sb	10 09 43.4	+0.8	
	baz=309								
TWQ1	**Liyutan**	0.88	278	*i* P		Pn	10 09 31.5	-0.5	
	baz=277								
TWQ1				*e*S		Sb	10 09 42.9	+0.2	
	baz=277								
NSY	**Sanyi**	0.90	282	P		Pn	10 09 32.5	+0.1	
	baz=281								
NSY				*e*S		Sn	10 09 44.3	-1.0	
	baz=281								
NMLH	**Miaoli**	0.91	290	*e*P		Pg	10 09 30.0	-1.3	
	baz=289								
NMLH				*e*S		Sn	10 09 45.2	-0.2	
	baz=289								
TWS1	**Kuangyinshan**	0.91	342	*i* P		Pn	10 09 32.2	-0.3	
	baz=350								
TWS1				*i* S		Sn	10 09 45.3	-0.2	
	baz=350								
TNOU	**National Taiwa**	0.91	3	*e*P		Pn	10 09 31.4	-0.2	
	baz=2.0								
TNOU				*e*S		Sg	10 09 42.7	-0.8	
	baz=2.0								
YM01	**YM01**	0.92	351	P		Pg	10 09 31.3	-0.3	
	baz=336								
YM01				S		Sb	10 09 44.3	+0.3	
	baz=336								
YULB	**Yu-li**	0.92	205	P		Pg	10 09 30.0	-1.7	
	baz=214								
YULB				S		Sb	10 09 43.9	-0.2	
	baz=214								
EYUL	**Yuli**	0.96	203	P		Pg	10 09 32.0	-0.4	
	baz=213								
EYUL				S		Sb	10 09 45.2	+0.2	
	baz=213								
YM08	**YM08**	0.96	353	P		Pb	10 09 32.5	+0.1	
	baz=338								
YM08				*e*S		Sb	10 09 45.5	+0.4	
	baz=338								
NTST	**Danshui**	0.96	345	P		Pn	10 09 33.6	+0.4	
	baz=352								
NTST				*e*S		Sb	10 09 45.1	0.0	
	baz=352								
TWF1	**Yuli**	0.96	204	*i* P		Pg	10 09 31.7	-0.7	
	baz=214								
TWF1				*i* S		Sb	10 09 45.9	+0.7	
	baz=214								
WHYT	**Xinyi Township**	0.96	236	P		Pb	10 09 32.7	+0.2	
	baz=236								
WHYT				S		Sb	10 09 45.3	+0.2	
	baz=236								
TCU	**Taichung**	0.96	265	P		Pn	10 09 33.2	0.0	
	baz=265								
TCU				S		Sn	10 09 47.1	+0.3	
	baz=265								
ANP	**Anpu**	0.97	349	*e*P		Pg	10 09 31.9	-0.6	
	baz=349								
ANP				*e*S		Sb	10 09 45.1	-0.3	
	baz=349								
WJS	**Zhushan**	1.00	246	P		Pb	10 09 33.1	-0.1	
	baz=241								
WJS				S		Sn	10 09 48.6	+0.8	
	baz=241								
WNT	**Mingjian**	1.02	250	P		Pg	10 09 32.3	-1.2	
	baz=246								
WNT				*i* S		Sn	10 09 49.6	+1.4	
	baz=246								
TWY	**Chenhua**	1.04	354	P		Pn	10 09 34.9	+0.5	
	baz=354								
TWY				S		Sb	10 09 47.9	+0.4	
	baz=354								
CHKH	**Chenggong**	1.08	196	*e*P		Pb	10 09 33.6	-0.9	
	baz=187								
CHKH				S		Sn	10 09 51.0	+1.3	
	baz=187								
FULB	**Fuli**	1.10	201	P		Pb	10 09 33.6	-1.2	
	baz=217								
FULB				S		Sn	10 09 50.6	+0.2	
	baz=217								
ALS	**Alishan**	1.11	230	*i* P		Pg	10 09 34.7	-0.5	
	baz=230								
ALS				S		Sn	10 09 50.3	-0.5	
	baz=230								
JYNG	**Yonagunijimaku**	1.13	79	*e*P		Pb	10 09 35.4	0.0	
CHN5	**Tsauling**	1.15	237	*i* P		Pn	10 09 36.1	+0.3	
	baz=237								
CHN5				*i* S		Sn	10 09 53.1	+1.5	
	baz=237								
EHD	**Haiduan**	1.18	204	P		Pb	10 09 35.7	-0.5	
	baz=206								
EHD				S		Sn	10 09 52.0	-0.2	
	baz=206								
YOJ	**Yonaguni jima**	1.19	79	P		Pb	10 09 36.4	0.0	
	baz=67								
YOJ				S		Sn	10 09 54.2	+1.6	
	baz=67								
ELDTW	**Lidau**	1.23	212	*i* P		Pn	10 09 35.6	-1.3	
	baz=213								
ELDTW				*i* S		Sb	10 09 52.6	-0.2	
	baz=213								
WRL	**Guolierlin Hig**	1.28	255	*e*P		Pg	10 09 38.3	-0.1	
	baz=270								
WRL				*e*S		Sg	10 09 55.5	+0.5	
	baz=270								
WCKO	**Fanlu**	1.30	233	P		Pg	10 09 38.7	-0.1	
	baz=234								
WCKO				S		Sg	10 09 58.4	+2.8	
	baz=234								
EDH	**Donghe**	1.31	197	P		Pn	10 09 35.4	-2.6	
	baz=216								
EDH				*e*S		Sg	10 09 56.1	-0.1	
	baz=216								
WTK	**Tuku**	1.34	246	P		Pn	10 09 38.1	-0.3	
	baz=258								
WTK				S		Sg	10 09 57.8	+0.8	
	baz=258								
CHN4	**Tsaushan**	1.36	230	*i* P		Pg	10 09 40.3	+0.3	
	baz=231								
CHN4				*i* S		Sg	10 09 59.1	+1.4	
	baz=231								
TPUB	**Ta-pu**	1.37	227	P		Pg	10 09 39.6	-0.5	
	baz=218								
TPUB				S		Sg	10 09 59.1	+1.2	
	baz=218								
STYH	**Taoyuan**	1.37	220	P		Pb	10 09 39.2	-0.2	
	baz=221								
STYH				S		Sg	10 09 58.2	+0.1	
	baz=221								
WTP	**Ta-pu**	1.42	226	*i* P		Pb	10 09 40.1	-0.1	
	baz=217								
WTP				*i* S		Sg	10 10 01.1	+1.6	
	baz=217								
TWK	**Hsinying**	1.49	230	*i* P		Pn	10 09 40.8	+0.3	
	baz=231								
TWK				S		Sg	10 10 03.4	+1.6	
	baz=231								
SNST	**Tainan City**	1.51	228	*e*P		Pb	10 09 42.2	+0.3	
	baz=230								
SNST				S		Sg	10 10 04.5	+1.9	
	baz=230								
CHN1	**Nanshi**	1.52	227	*i* P		Pg	10 09 43.1	+0.1	
	baz=229								
CHN1				S		Sg	10 10 03.3	+0.6	
	baz=229								
TWG	**Pinlang**	1.53	203	*e*P		Pn	10 09 41.4	+0.4	
	baz=206								
TWG				S		Sn	10 10 01.0	+0.2	
	baz=206								
TWGBT	**Beinan**	1.53	203	*e*P		Pn	10 09 41.4	+0.4	
	baz=206								
TWGBT				*e*S		Sb	10 10 01.6	+0.1	
	baz=206								
SGST	**Jiashian**	1.55	223	*i* P		Pb	10 09 42.1	-0.5	
	baz=212								
SGST				S		Sg	10 10 05.7	+1.8	
	baz=212								
SLGT	**Liugui**	1.58	219	P		Pn	10 09 42.3	+0.6	
	baz=221								
SLGT				S		Sg	10 10 05.7	+0.8	
	baz=221								
ICHU	**Yijhu**	1.58	237	*e*P		Pn	10 09 41.5	-0.3	
	baz=222								
ICHU				S		Sg	10 10 05.6	+0.7	
	baz=222								
TSMG	**Majia**	1.82	213	P		Pn	10 09 45.4	+0.5	
	baz=218								
TSMG				S		Sg	10 10 11.2	-1.1	
	baz=218								
TSCK	**Chigu Township**	1.85	235	P		Pn	10 09 46.2	+0.7	
	baz=222								
TSCK				*e*S		Sg	10 10 11.9	-1.5	
	baz=222								
MASBT	**Mashibuluo**	1.90	212	P		Pb	10 09 47.4	-1.1	
	baz=217								
MASBT				*e*S		Sg	10 10 13.8	-1.2	
	baz=217								
PHUB	**P'eng-hu**	2.10	250	*e*P		Pn	10 09 49.5	+0.7	
	baz=251								
PHUB				*e*S		Sn	10 10 16.3	+1.4	
	baz=251								
JISG	**Ishigakijimahi**	2.38	81	*e*S		Sn	10 10 23.8	+1.9	

GCG ***08*** *10:14:35.8±0.8, 13°.73N×91°.12W, h88km±17km, MD4.2*
CATAC ***08*** *10:14:38.6±0.5, 13°.79N×91°.19W, h38km±19km, ML4.4*
SNET ***08*** *10:14:38.4±0.9, 13°.85N×91°.10W, h25km, ML4.3*

ISC 08 10:14:37.9±1.5, 13°.81N±0°.05×91°.14W±0°.04, h16km±10km, n87, σ1$37/121, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
SULM	**Suchitepequez,**	0.64	320	*i* P			**10 14 52.9**	**+0.5**	
SULM				*i* S			**10 15 04.9**	**+2.7**	
FUG	**Fuego 3**	0.70	25	*i* P			**10 14 53.0**	**-0.3**	
PCG	**Pacaya**	0.78	42	*i* P			**10 14 54.3**	**-0.1**	
PCG				*i* S			**10 15 10.7**	**+4.7**	
RTAL	**Retalhuleu**	0.89	323	*i* P			**10 14 54.6**	**-0.6**	
RTAL				*i* S			**10 15 07.1**	**+0.4**	
RTAL					IAML		10 15 19.0		
	comp=Z,2μm,1.0s								
CHTG	**Tecpan**	0.96	9	*i* P			**10 14 55.9**	**-0.7**	
CHTG				*i* S			**10 15 09.8**	**+0.9**	
CHTG					IAML		10 15 10.6		
	comp=Z,18μm,1.0s								
GUMI	**Mixco**	0.96	32	*i* P			**10 14 56.6**	**+0.2**	
GUMI				*i* S			**10 15 10.4**	**-0.1**	
GUMI					IAML		10 15 11.8		
	comp=Z,16μm,1.0s								
GCG4	**OSOP**	0.97	37	*i* P			**10 14 56.6**	**+0.1**	
GCG4				*i* S			**10 15 11.5**	**+0.8**	
GCG4					IAML		10 15 15.4		
	comp=Z,6μm,1.0s								
STG3	**Santiaguito 3,**	0.99	335	*i* P			**10 14 56.3**	**-0.5**	
STG3				*i* S			**10 15 13.5**	**+2.4**	
NBG	**Las Nubes**	1.09	45	*i* P			**10 14 59.4**	**+0.6**	
NBG				*i* S			**10 15 15.3**	**+1.5**	
GUNB	**GUNB**	1.10	45	*i* P			**10 14 58.1**	**-0.6**	
GUNB				*i* S			**10 15 13.6**	**-0.1**	
GUNB					IAML		10 15 14.1		
	comp=Z,5μm,1.0s								
SMSP	**San Marcos**	1.31	332	*i* P			**10 15 00.6**	**-1.3**	
SMSP				*i* S			**10 15 17.1**	**-2.0**	
SMSP					IAML		10 15 24.3		
	comp=Z,9μm,1.0s								
NUBE	**Las Nubes**	1.32	86	*e*P			**10 15 00.7**	**-1.2**	
NUBE				*e*S			**10 15 17.4**	**-2.0**	
NUBE	**Las Nubes**	1.32	86	*i* S			**10 15 00.8**	**-1.1**	
LOAL	**Lomas de Alarc**	1.33	82	*i* S			**10 15 01.2**	**-0.8**	
SLOZ	**Alcaldia de Sa**	1.34	81	*e*P			**10 15 01.1**	**-0.8**	
SLOZ				*e*S			**10 15 18.8**	**-0.7**	
SMCA	**Catarina**	1.38	319	*i* P			**10 15 00.9**	**-1.6**	
SMCA				*i* S			**10 15 17.7**	**-2.8**	
SMCA					IAML		10 15 23.2		
	comp=Z,2μm,1.0s								
RTR	**El Retiro**	1.46	86	*e*P			**10 15 03.4**	**-0.3**	
QUIS	**Sacapulas**	1.47	2	*i* P			**10 15 03.8**	**-0.1**	
QUIS				*i* S			**10 15 23.6**	**+0.6**	
QUIS					IAML		10 15 28.1		
	comp=Z,2μm,1.0s								
CEVE	**Cerro Verde**	1.47	89	*e*P			**10 15 03.2**	**-0.8**	
CEVE				*e*S			**10 15 22.4**	**-0.8**	
CEVE	**Cerro Verde**	1.47	89	*i* P			**10 15 22.5**	**-0.6**	
SBLS	**San Blas**	1.48	89	*e*P			**10 15 03.2**	**-0.8**	
SNJE	**San Jose**	1.49	88	*e*P			**10 15 03.7**	**-0.6**	
SNJE				*e*S			**10 15 22.7**	**-0.8**	
HUEH	**Huehuetenango**	1.54	347	*i* P			**10 15 04.8**	**-0.1**	
HUEH					IAML		10 15 28.3		
	comp=Z,3μm,1.0s								
UNIC	**Universidad Ca**	1.56	84	*i* P			**10 15 04.2**	**-0.8**	
UNIC					IAML		10 15 04.7		
	comp=Z,720nm,1.0s								
UNIC				*i* S			**10 15 24.3**	**-0.6**	
JAYA	**Jayaque - finc**	1.65	95	*e*P			**10 15 05.1**	**-1.3**	
JAYA	**Jayaque - finc**	1.65	95	*i* P			**10 15 05.3**	**-1.1**	
JAYA				*i* S			**10 15 24.2**	**-3.2**	
JAYA					IAML		10 15 28.1		
	comp=Z,8μm,1.0s								
CEDA	**San Andres**	1.70	90	*i* P			**10 15 06.6**	**-0.3**	
CEDA				*i* S			**10 15 28.0**	**-0.3**	
CEDA					IAML		10 15 47.3		
	comp=Z,4μm,1.0s								
PMON	**Piamonte**	1.78	93	*i* P			**10 15 07.4**	**-0.7**	
PMON				*i* S			**10 15 30.6**	**+0.2**	
PMON					IAML		10 15 39.4		
	comp=Z,4μm,1.0s								
LALI	**Alcalda de L**	1.80	100	*e*P			**10 15 07.3**	**-1.0**	
LALI	**Alcalda de L**	1.80	100	*i* P			**10 15 07.3**	**-1.0**	
LALI				*i* S			**10 15 29.5**	**-1.3**	
LALI					IAML		10 15 37.1		
	comp=Z,590nm,1.0s								
BOQS	**Boqueron**	1.81	92	*e*P			**10 15 08.2**	**-0.5**	
ITCA	**Escuela Especi**	1.81	94	*i* P			**10 15 08.0**	**-0.6**	
ITCA				*i* S			**10 15 30.7**	**-0.7**	
ITCA					IAML		10 15 40.5		
	comp=Z,6μm,1.0s								
QUEZ	**Alcaldia de Qu**	1.82	89	*i* P			**10 15 08.0**	**-0.6**	
QUEZ				*i* S			**10 15 31.1**	**-0.2**	
QUEZ					IAML		10 15 35.4		
	comp=Z,5μm,1.0s								
MTO3	**Montecristo**	1.82	71	*e*P			**10 15 07.5**	**-1.4**	
MTO3	**Montecristo**	1.82	71	*i* P			**10 15 07.5**	**-1.4**	
MTO3				*i* S			**10 15 30.4**	**-1.4**	
MTO3					IAML		10 15 35.3		
	comp=Z,880nm,1.0s								
UEES	**Universidad Ev**	1.85	93	*i* P			**10 15 08.7**	**-0.4**	
UEES				*i* S			**10 15 32.0**	**-0.2**	
UEES					IAML		10 15 37.0		
	comp=Z,2μm,1.0s								
SNET	**Serv Nac Est T**	1.86	94	*i* P			**10 15 08.3**	**-0.9**	
SNET				*i* S			**10 15 31.7**	**-0.7**	
SNET					IAML		10 15 41.1		
	comp=Z,6μm,1.0s								
SEMO	**Seminario San**	1.87	93	*i* P			**10 15 08.9**	**-0.4**	
SEMO				*i* S			**10 15 31.9**	**-0.7**	
SEMO					IAML		10 15 37.8		
	comp=Z,7μm,1.0s								
UTEC	**Universidad Te**	1.89	93	*i* P			**10 15 09.4**	**-0.2**	
UTEC				*i* S			**10 15 33.4**	**+0.3**	
UTEC					IAML		10 15 45.9		
	comp=Z,2μm,1.0s								
ESQI	**Esquipulas**	1.90	67	*i* P			**10 15 08.8**	**-1.0**	
ESQI				*i* S			**10 15 32.6**	**-0.8**	
ESQI					IAML		10 15 41.0		
	comp=Z,820nm,1.0s								
PANCS	**Alcalda de**	1.92	96	*i* P			**10 15 09.2**	**-0.8**	
PANCS				*i* S			**10 15 32.4

LOMA	**Loma Larga**	**1.92**	**95**	*i* P	**Pn**	**10 15 09.6**	**-0.6**
LOMA				*i* S	**Sn**	**10 15 33.5**	**-0.5**
LOMA				IAML		10 15 40.3	
	comp=Z,2μm,1.0s						
LFRS	**El Faro**	**2.03**	**95**	*e*P	**Pn**	**10 15 11.3**	**-0.2**
SJTE	**Alcalda de S**	**2.08**	**95**	*i* P	**Pn**	**10 15 11.8**	**-0.5**
SJTE				*i* S	**Sn**	**10 15 37.8**	**-0.2**
SJTE				IAML		10 15 45.5	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**2.14**	**92**	*i* P	**Pn**	**10 15 12.3**	**-0.8**
PAVA				IAML		10 15 54.7	
	comp=Z,1μm,1.0s						
LLGN	**La Laguna**	**2.16**	**80**	*i* P	**Pn**	**10 15 11.9**	**-1.5**
LLGN				IAML		10 15 54.9	
	comp=Z,660nm,1.0s						
COEG	**Centro de Oper**	**2.21**	**95**	*e*P	**Pn**	**10 15 13.4**	**-0.6**
COEG	**Centro de Oper**	**2.21**	**95**	*i* P	**Pn**	**10 15 13.5**	**-0.5**
COEG				*i* S	**Sn**	**10 15 42.1**	**+1.1**
COEG				IAML		10 15 50.6	
	comp=Z,2μm,1.0s						
UESV	**Universidad de**	**2.29**	**94**	*i* P	**Pn**	**10 15 16.0**	**+0.9**
UESV				*i* S	**Sn**	**10 15 44.1**	**+1.0**
TECO	**Alcaldia de Te**	**2.31**	**96**	*i* S	**Sn**	**10 15 42.0**	**-1.5**
SCLA	**Alcaldia de Sa**	**2.35**	**92**	*e*P	**Pn**	**10 15 15.2**	**-0.6**
SCLA	**Alcaldia de Sa**	**2.35**	**92**	*i* P	**Pn**	**10 15 15.3**	**-0.6**
SCLA				IAML		10 15 52.3	
	comp=Z,470nm,1.0s						
PQSS	**Presa 15 de Se**	**2.52**	**94**	*i* P	**Pn**	**10 15 17.5**	**-0.6**
PQSS				IAML		10 15 55.0	
	comp=Z,500nm,1.0s						
CCIG	**Comitan**	**2.64**	**339**	*i* P	**Pn**	**10 15 20.9**	**+0.9**
PACA	**Pacayal**	**2.76**	**97**	*i* P	**Pn**	**10 15 22.5**	**+0.9**
CNRM	**Centro Naciona**	**2.91**	**96**	*i* P	**Pg**	**10 15 36.3**	**+2.6**
LCND	**La Caada**	**3.20**	**99**	*e*P	**Pn**	**10 15 26.9**	**-0.7**
LCND	**La Caada**	**3.20**	**99**	*i* P	**Pn**	**10 15 26.9**	**-0.7**
LCND				IAML		10 16 18.1	
	comp=Z,550nm,1.0s						
CNCH	**Conchagua**	**3.26**	**99**	*e*P	**Pn**	**10 15 27.8**	**-0.7**
CNCH	**Conchagua**	**3.26**	**99**	*i* P	**Pn**	**10 15 27.9**	**-0.7**
CNCH				IAML		10 16 16.1	
	comp=Z,2μm,1.0s						
TGUH	**Tegucigalpa,Un**	**3.76**	**86**	*i* P	**Pn**	**10 15 34.5**	**-1.0**
TGUH				IAML		10 16 39.2	
	comp=Z,140nm,1.0s						
CRIN	**San Cristobal**	**4.13**	**105**	*i* P	**Pn**	**10 15 41.1**	**+0.6**
CRIN				IAML		10 16 46.9	
	comp=Z,1μm,1.0s						
HERN	**Volcan Telica**	**4.36**	**105**	*i* P	**Pn**	**10 15 42.5**	**-1.2**
HERN				IAML		10 16 47.4	
	comp=Z,510nm,1.0s						
CNGA	**Al SSO del Vol**	**4.52**	**106**	*i* P	**Pn**	**10 15 46.2**	**+0.4**
CNGA				IAML		10 16 47.4	
	comp=Z,280nm,1.0s						
CNGN	**Cerro Negro**	**4.52**	**106**	*i* P	**Pn**	**10 15 46.1**	**+0.3**
CNGN				IAML		10 16 48.2	
	comp=Z,360nm,1.0s						
MACN	**El Madrono**	**4.55**	**107**	*i* P	**Pn**	**10 15 46.4**	**+0.2**
MACN				IAML		10 16 56.7	
	comp=Z,160nm,1.0s						
MOMN	**Momotombo**	**4.69**	**107**	*i* P	**Pn**	**10 15 47.9**	**-0.3**
MOMN				IAML		10 16 52.1	
	comp=Z,10.0nm,1.0s						
LIMN	**Finca el Limon**	**4.71**	**99**	*i* P	**Pn**	**10 15 47.6**	**-0.8**
LIMN				IAML		10 17 01.8	
	comp=Z,85nm,1.0s						
COPN	**Copaltepe**	**4.72**	**110**	*i* P	**Pn**	**10 15 47.9**	**-0.6**
COPN				IAML		10 16 57.7	
	comp=Z,460nm,1.0s						
SAPS	**Ciudad Sandino**	**4.90**	**109**	*i* P	**Pn**	**10 15 54.3**	**+3.4**
TISN	**Laguna Tiscapa**	**5.03**	**109**	*i* P	**Pn**	**10 15 53.4**	**+0.6**
UNAN	**Cigeo UNAN**	**5.04**	**109**	*i* P	**Pn**	**10 15 56.6**	**+3.7**
NANN	**Nandasmo**	**5.24**	**110**	*i* P	**Pn**	**10 15 57.0**	**+1.4**
BOAB	**BOACO BROADBAN**	**5.50**	**104**	*i* P	**Pn**	**10 15 58.1**	**-1.2**
SIUN	**Universidad Ur**	**6.19**	**90**	*i* P	Pn	10 16 02.7	-6.0
HZTE	**Horizontes, Gu**	**6.23**	**119**	*i* P	**Pn**	**10 16 10.3**	**+1.0**
SAJU	**San Juanillo,**	**6.49**	**124**	*i* P	**Pn**	**10 16 13.6**	**+0.8**
ORTG	**Ortega, Santa**	**6.53**	**121**	*i* P	**Pn**	**10 16 10.3**	**-3.1**
DUNO	**Dulce Nombre,**	**6.65**	**123**	*i* P	**Pn**	**10 16 16.3**	**+1.2**
INDI	**Punta indio, G**	**6.77**	**125**	*i* P	**Pn**	**10 16 17.7**	**+1.0**
JACO	**JACO, Garabito**	**7.57**	**122**	*i* P	**Pn**	**10 16 31.0**	**+3.4**
LCR2	**La Lucha 2**	**8.07**	**119**	*i* P	**Pn**	**10 16 38.1**	**+3.3**
RIMA	**Rio Macho**	**8.18**	**119**	*i* P	**Pn**	**10 16 39.0**	**+2.8**
CDM	**Cerro de Muert**	**8.37**	**120**	*i* P	**Pn**	**10 16 41.4**	**+2.3**
PLAN	**Los Planes de**	**8.92**	**124**	*i* P	**Pn**	**10 16 50.0**	**+3.7**

IDC 08 10:30:43.2±49.0, 12°82.5S×167°27.6E, h192km±172km, mb3.4/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=1000.0km s-min=99.4km az=62.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.24**	**185**	P	Pn	10 32 52.7	0.0
	0.3nm,0.3s,baz=115,slow=19,SNR=6.9						
DZM				S	Sn	10 34 24.6	-12
	5.4nm,0.9s,baz=312,slow=20,SNR=1.6						
	4.4nm,0.6s						
STKA	**Stephens Creek**	**30.26**	**227**	P	P	10 36 36.4	+0.2
	1.2nm,0.4s,baz=53,slow=8.1,SNR=6.6						
	1.2nm,0.4s						
WRA	**Warramunga Arr**	**32.34**	**253**	P	P	10 36 54.6	0.0
	0.9nm,1.0s,baz=85,slow=8.6,SNR=2.6						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**33.39**	**246**	P	P	10 37 03.5	-0.2
	0.7nm,0.4s,baz=75,slow=9.0,SNR=22						
	0.7nm,0.4s						

*NNC **08** 10:36:55.5±0.3, 50.°01N×78.°74E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=5.0km s-min=1.6km az=81.0, Suspected Mining explosion.*

*IDC **08** 10:36:56.4±0.8, 50.°08N×78.°82E, h0km, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=12.3km s-min=5.7km az=58.0.*

ISC 08 10:36:56.9±0.8, 50°13N±0.°04×78°80E±0.°05, h0km, n27, σ1s07/39, 14C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.49**	**338**	⇓P	**Pg**	**10 37 06.9**	**+0.5**
KUR07				⇑S	**Sb**	**10 37 15.3**	**-0.9**
KUR14	**Kurchatov Arra**	**0.51**	**345**	⇑P	**Pg**	**10 37 07.2**	**+0.6**
KUR14				⇑S	**Sb**	**10 37 15.9**	**-0.8**
KUR06	**Kurchatov Arra**	**0.51**	**340**	⇑P	**Pg**	**10 37 07.3**	**+0.6**
KUR06				⇑S	**Sb**	**10 37 16.5**	**-0.2**
KUR15	**Kurchatov Arra**	**0.52**	**343**	⇑P	**Pg**	**10 37 07.4**	**+0.6**
KUR15				⇓S	**Sb**	**10 37 16.5**	**-0.3**
KURBB	**Kurchatov Arra**	**0.53**	**341**	⇑P	**Pg**	**10 37 07.6**	**+0.6**
	28nm,0.3s						
KURBB				⇓S	**Sb**	**10 37 16.6**	**-0.6**
	27nm,0.3s						
KURBB	**Kurchatov Arra**	**0.53**	**341**	Pg	**Pg**	**10 37 06.6**	**-0.4**
	2.9nm,0.3s,baz=164,slow=19,SNR=113						
KURBB				Lg	Lg	10 37 16.8	
	2.8nm,0.3s,baz=164,slow=31,SNR=11						
KUR16	**Kurchatov Arra**	**0.54**	**339**	⇓P	**Pg**	**10 37 07.8**	**+0.6**
KUR16				⇓S	**Sb**	**10 37 17.0**	**-0.5**
KUR05	**Kurchatov Arra**	**0.54**	**342**	⇓P	**Pg**	**10 37 07.8**	**+0.5**
KUR05				⇑S	**Sb**	**10 37 17.0**	**-0.7**
KUR17	**Kurchatov Arra**	**0.55**	**337**	⇓P	**Pg**	**10 37 08.1**	**+0.6**
KUR17				⇓S	**Sb**	**10 37 17.6**	**-0.3**
KUR04	**Kurchatov Arra**	**0.56**	**343**	⇑P	**Pg**	**10 37 08.3**	**+0.7**
KUR04				⇓S	**Sb**	**10 37 17.9**	**-0.3**
KURK	**Kurchatov**	**0.60**	**349**	⇑P	**Pg**	**10 37 09.0**	**+0.6**
	8.7nm,0.3s						
KURK				⇓S	**Sb**	**10 37 19.3**	**0.0**
	14nm,0.4s						
MAKZ	**Makanchi**	**3.94**	**146**	⇑Pg	**Pb**	**10 38 06.6**	**-0.5**
	0.9nm,0.3s						
MAKZ				⇓Lg	Lg	10 38 55.5	
	5.2nm,0.7s						
BRZS	**Berezniki**	**3.95**	**270**	Pg	**Pb**	**10 38 06.5**	**-0.8**
	1.7nm,0.4s						
BRZS				Lg	Lg	10 38 57.6	
	5.7nm,0.5s						
MK31	**Makanchi Array**	**4.06**	**144**	⇑Pn	**Pn**	**10 37 59.7**	**-0.7**
	0.1nm,0.1s,baz=300,slow=50,SNR=74						
MK31				⇑Pg	**Pb**	**10 38 08.8**	**-0.5**
	0.9nm,0.3s,baz=315,slow=16,SNR=25						
MK31				⇓Lg	Lg	10 39 03.0	
	3.8nm,0.4s,baz=332,slow=29,SNR=21						
MKAR	**Makanchi Array**	**4.06**	**144**	Pn	**Pn**	**10 37 59.9**	**-0.5**
	0.6nm,0.3s,baz=322,slow=10,SNR=61						
MKAR				Pg	**Pb**	**10 38 06.0**	**-3.3**
	1.2nm,0.3s,baz=323,slow=14,SNR=18						
MKAR				Sn	**Sn**	**10 38 48.0**	**-0.6**
	0.7nm,0.3s,baz=331,slow=15,SNR=2.0						
MKAR				Lg	Lg	10 39 01.1	
	2.3nm,0.3s,baz=329,slow=27,SNR=15						
	0.6nm,0.3s						
OTUK	**Ortayu**	**4.64**	**249**	Pg	**Pb**	**10 38 19.7**	**+0.6**
	0.9nm,0.3s						
OTUK				Lg	Lg	10 39 19.9	
	2.9nm,0.3s						
OTUK	**Ortayu**	**4.64**	**249**	⇑Pn	**Pn**	**10 38 07.1**	**-1.1**
	0.9nm,0.1s						
OTUK				⇓Lg	Lg	10 39 20.6	
	3.9nm,0.5s						
KAPS	**Kapalarasan**	**4.86**	**175**	Lg	Lg	10 39 23.5	
	9.6nm,0.7s						
ZALV	**Zalesovo Beam**	**5.33**	**42**	Pn	**Pn**	**10 38 19.5**	**+1.8**
	1.1nm,0.3s,baz=232,slow=14,SNR=16						
ZALV				Sn	**Sn**	**10 39 21.0**	**+1.2**
	0.3nm,0.3s,baz=223,slow=30,SNR=1.7						
ZALV				Lg	Lg	10 39 43.5	
	0.1nm,0.3s,baz=226,slow=30,SNR=1.6						
	2.0nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.33**	**42**	I	I	11 13 30.0	
	baz=223,slow=333,SNR=2.0						
DJR	**Jarkent**	**5.84**	**173**	Pg	**Pb**	**10 38 39.4**	**-0.1**
	0.4nm,0.1s						
DJR				Lg	Lg	10 39 53.7	
	5.0nm,0.5s						
ARXS	**Arharly**	**5.95**	**187**	Pg	**Pb**	**10 38 43.4**	**+1.8**
	0.8nm,0.3s						
ARXS				Lg	Lg	10 40 00.4	
	13nm,0.6s						
BVAR	**Borovoye Array**	**5.99**	**302**	Pn	**Pn**	**10 38 27.1**	**+0.3**
	baz=105,slow=15,SNR=1.9						
BVAR				Sn	**Sn**	**10 39 34.4**	**-1.7**
	baz=121,slow=23,SNR=3.9						
BVAR				Lg	Lg	10 40 03.9	
	baz=116,slow=26,SNR=2.6						
	0.3nm,0.3s						
BLB	**Baldybastay**	**6.04**	**182**	Pg	**Pb**	**10 38 44.2**	**+1.2**
	2.5nm,0.1s						
BLB				Lg	Lg	10 40 01.8	
	8.8nm,0.6s						
KUU	**Kurty**	**6.46**	**196**	Pg	**Pb**	**10 38 51.3**	**+1.1**
	0.9nm,0.6s						
KUU				Lg	Lg	10 40 14.3	
	6.4nm,0.7s						
KPKS	**Kokpek**	**6.66**	**181**	Pg	**Pb**	**10 38 56.2**	**+2.6**
	1.4nm,0.3s						
KPKS				Lg	Lg	10 40 22.4	
	9.0nm,0.6s						
AAK	**Ala-Archa**	**8.06**	**203**	Lg	Lg	10 41 08.3	
	0.1nm,0.3s,baz=104,slow=16,SNR=2.2						

*IDC **08** 10:51:57.4±0.9, 30.°18N×87.°93E, h0km, mb3.8/11, mbtmp3.8/13, ML3.9/2, MS4.2/4, Error ellipse: s-maj=42.1km s-min=17.5km az=55.0*

ISC 08 10:51:58.7±0.9, 30°2N±0.°2×88°0E±0.°2, h10km, n18, σ0s70/14, mb3.9/12, MS4.4/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.36**	**137**	Pn	**Pn**	**10 55 34.7**	**-1.0**
	0.3nm,0.3s,baz=321,slow=10,SNR=1.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**17.16**	**347**	P	**Pn**	**10 55 57.9**	**-0.7**
	0.1nm,0.3s,baz=160,slow=13,SNR=9.6						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**21.61**	**344**	P	**P**	**10 56 47.5**	**-1.2**
	1.0nm,0.2s,baz=162,slow=10,SNR=6.7						
	1.0nm,0.2s						
ZALV	**Zalesovo Beam**	**23.86**	**355**	P	**P**	**10 57 12.2**	**+0.2**
	1.5nm,0.7s,baz=183,slow=10,SNR=7.3						
	1.5nm,0.7s						
GEYT	**Alibeck**	**25.83**	**295**	P	**P**	**10 57 29.5**	**-0.8**
	1.1nm,0.3s,baz=160,slow=4.7,SNR=2.2						
	1.1nm,0.3s						
BVAR	**Borovoye Array**	**26.19**	**336**	P	**P**	**10 57 33.5**	**+0.1**
	0.9nm,0.5s,baz=139,slow=7.1,SNR=2.5						
	0.9nm,0.5s						
WSAR	**Wadi Sarin**	**27.05**	**262**	LR	LR	11 11 25.0	
	comp=Z,47nm,18.1s,baz=45,slow=43						
MJAR	**Matsushiro Arr**	**42.05**	**68**	LR	LR	11 17 18.0	
	comp=Z,229nm,19.8s,baz=68,slow=36						
ASAJ	**Asahikawa**	**44.93**	**56**	LR	LR	11 18 07.3	
	comp=Z,865nm,20.4s,baz=107,slow=35						
JCJ	**Chichijima**	**47.32**	**80**	LR	LR	11 22 20.6	
	comp=Z,765nm,19.0s,baz=100,slow=38						
FINES	**FINESS Array B**	**50.59**	**327**	P	**P**	**11 00 58.2**	**+0.8**
	1.3nm,0.5s,baz=106,slow=10,SNR=5.4						
	1.3nm,0.5s						
ARCES	**ARCESS Array B**	**52.47**	**337**	P	**P**	**11 01 12.1**	**+0.7**
	3.8nm,0.8s,baz=12,slow=6.2,SNR=4.9						
	3.8nm,0.8s						
HFS	**Hagfors**	**56.59**	**325**	P	**P**	**11 01 41.7**	**+0.3**
	1.6nm,0.6s,baz=101,slow=7.6,SNR=6.6						
	1.6nm,0.6s						
NOA	**NORSAR Array B**	**57.75**	**326**	P	**P**	**11 01 49.9**	**+0.2**
	0.7nm,0.5s,baz=85,slow=6.8,SNR=2.4						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**66.90**	**132**	P	**P**	**11 02 52.0**	**+0.6**
	0.5nm,0.7s,baz=325,slow=6.5,SNR=2.9						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**69.37**	**135**	P	**P**	**11 03 07.3**	**+0.4**
	0.6nm,0.8s,baz=319,slow=6.7,SNR=7.0						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.33**	**280**	P	**P**	**11 04 10.7**	**+0.1**
	12nm,0.4s,baz=54,slow=5.2,SNR=1.7						
YKA	**Yellowknife Ar**	**85.88**	**10**	P	**P**	**11 04 38.7**	**+0.3**
	0.1nm,0.7s,baz=327,slow=5.0,SNR=3.7						
	0.1nm,0.7s						

*BJI **08** 11:03:58.4±0.0, 52.°79N×179.°38W, h211km, mb4.8/81, mB5.1/52*

*IDC **08** 11:04:01.8±0.3, 52.°46N×179.°36W, h224km±2km, mb5.0/37, mbtmp5.6/42, Error ellipse: s-maj=7.7km s-min=5.8km az=162.0*

*NEIC **08** 11:04:01.4, 52.°25N×179.°42W, h200km, Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 10^{17}Nm; M_{rr}0.13; $M_{\theta\theta}$-1.69; $M_{\phi\phi}$1.56; $M_{r\theta}$3.52; $M_{\theta\phi}$-0.61; $M_{\phi r}$-1.45; Fault plane solution: $M_0$4.15000×10^{17} NP1: ϕ_s116.20000°, δ87.84000°, λ113.39000°. NP2: ϕ_s211.17000°, δ23.49000°, λ5.42000°. Principal axes: T 3.8664, Plg42.0000°, Azm49.0000°; N 0.5771, Plg23.0000°, Azm295.0000°; P -4.4435, Plg38.0000°, Azm185.0000°;*

*NEIC **08** 11:04:01.4±1.8, 52.°59N±0.°07×179.°38W±0.°08, h211km±3km, mb5.9/892, Mwb5.7/77, Mww5.7/68, ML5.7(AEIC) Error ellipse: s-maj=10.4km s-min=7.4km az=178.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.21; $M_{\theta\theta}$-1.58; $M_{\phi\phi}$1.37; $M_{r\theta}$4.29; $M_{\theta\phi}$-0.64; $M_{\phi r}$-1.39; Fault plane solution: $M_0$4.79000×10^{17} NP1:ϕ_s110.72000°, δ87.12000°, λ107.64000°. NP2: ϕ_s209.69000°, δ17.87000°, λ9.41000°. Principal axes: T 4.4175, Plg45.0000°, Azm38.0000°; N 0.6677, Plg18.0000°, Azm290.0000°; P -5.0853, Plg40.0000°, Azm185.0000°;*

*MOS **08** 11:04:01.6±0.9, 52.°56N×179.°38W, h237km, mb5.5/81, MS4.4/6 Error ellipse: s-maj=7.4km s-min=5.0km az=110.7*

*NEIC **08** 11:04:01, 52.°60N×179.°42W, h208km*

*NEIC **08** 11:04:01.4, 52.°55N×179.°42W, h200km*

*IPGP **08** 11:04:01.0, 52.°57N×179.°45W, h220km, Mw5.8, Fault plane solution: NP1:ϕ_s115.00000°, δ85.00000°, λ113.00000°. NP2:ϕ_s216.00000°, δ23.00000°, λ12.00000°.*

*GCMT **08** 11:04:03.4±0.1, 52.°56N±0.°01×179.°31W±0.°01, h223km, MW5.8/172, Moment Tensor Solution. s159,cs319; s172,cs373; Duration: 1s9 Moment tensor: Scale 10^{17}Nm; M_{rr}0.26±.04; $M_{\theta\theta}$-2.41±.06; $M_{\phi\phi}$2.15±.05; $M_{r\theta}$5.11±.04; $M_{\theta\phi}$-0.66±.05; $M_{\phi r}$-1.99±.04; Best double couple: $M_0$5.91700×10^{17} NP1:ϕ_s115.00000°, δ87.00000°, λ111.00000°. NP2:ϕ_s213.00000°, δ22.00000°, λ8.00000°. Principal axes: T 5.4180, Plg44.0000°, Azm46.0000°; N 0.9980, Plg21.0000°, Azm294.0000°; P -6.4150, Plg38.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*AEIC **08** 11:04:03.2±3.1, 52.°20N±0.°08×179.°26W±0.°08, h225km±4km Error ellipse: s-maj=11.8km s-min=7.0km az=175.0*

*BGR **08** 11:04:04.9, 52.°67N×179.°20E, h252km±7km, mb5.5*

ISC 08 11:04:02.1±0.2, 52°48N±0.°03×179°45W±0.°02, h229km±1km, h229km:pP-P, n1915, σ1s57/2242, mb5.8/696, 104C-63D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEPE	**Semis' Perret**	**0.76**	**228**		**Pn**	**11 04 33.5**	**-0.1**
CEAP	**Semis' Anvil P**	**0.77**	**232**		**Pn**	**11 04 33.5**	**-0.1**
GANO	**Gareloi North**	**0.77**	**149**		**Pn**	**11 04 31.9**	**-1.9**
GANE	**Gareloi Northe**	**0.78**	**148**		**Pn**	**11 04 32.2**	**-1.6**
GAEA	**Gareloi East**	**0.82**	**148**		**Pn**	**11 04 32.6**	**-1.4**
CESW	**Semis' Southwe**	**0.84**	**227**		**Pn**	**11 04 33.3**	**-0.7**
TANO	**Tanaga North**	**0.99**	**124**		**Pn**	**11 04 33.9**	**-0.9**
TASE	**Tanaga Southea**	**1.08**	**126**		**Pn**	**11 04 34.1**	**-1.4**
TAFL	**Tanaga Flats**	**1.20**	**126**		**Pn**	**11 04 34.7**	**-1.5**
TAFL					**S**	**11 04 59.0**	**-3.8**
LSPA	**Little Sitkin**	**1.32**	**248**		**Pn**	**11 04 37.3**	**+0.2**
LSSE	**Little Sitkin**	**1.34**	**247**		**Pn**	**11 04 37.4**	**+0.2**
AMKA	**Amchitka**	**1.34**	**216**		**Pn**	**11 04 36.3**	**-1.0**
AMKA				Sn	**S**	**11 05 01.4**	**-3.2**
KICM	**Kanaga Island**	**1.50**	**111**		**Pn**	**11 04 37.3**	**-1.1**
KIWB	**Kanaga Island**	**1.55**	**113**		**Pn**	**11 04 37.2**	**-1.6**
KIRH	**Kanaga Island**	**1.56**	**111**		**Pn**	**11 04 37.8**	**-1.2**
ADK	**Adak**	**1.80**	**108**		**Pn**	**11 04 39.4**	**-1.6**
ADK	**Adak**	**1.80**	**108**	P	**Pn**	**11 04 39.2**	**-1.8**
ADK	**Adak**	**1.80**	**108**	P	**Pn**	**11 04 39.4**	**-1.6**
GSCK	**Great Sitkin C**	**2.07**	**102**		**Pn**	**11 04 41.9**	**-1.7**
GSMY	**Great Sitkin M**	**2.13**	**100**		**Pn**	**11 04 42.5**	**-1.6**
KOKL	**Mount Kliuchef**	**3.22**	**91**		**Pn**	**11 04 54.4**	**-1.5**
ATKA	**Atka Island**	**3.23**	**93**		**Pn**	**11 04 54.1**	**-1.8**
ATKA	**Atka Island**	**3.23**	**93**	P	**Pn**	**11 04 54.5**	**-1.4**
SHEM	**Shemya Is, Ala**	**3.94**	**276**	P	**Pn**	**11 05 03.8**	**-0.4**
	2μm,0.4s,baz=43,slow=4.3,SNR=144						
SHEM				S	**S**	**11 05 52.2**	**-0.9**
	2μm,0.4s,baz=290,slow=19,SNR=23						
CLES	**Cleveland East**	**5.83**	**83**		**Pn**	**11 05 27.2**	**-0.3**
CLCO	**Concord Point,**	**5.93**	**83**		**Pn**	**11 05 29.5**	**+0.7**
NIKH	**Nikolski High**	**6.46**	**81**		**Pn**	**11 05 35.2**	**-0.3**
NIKH	**Nikolski High**	**6.46**	**81**	P	**Pn**	**11 05 35.1**	**-0.4**
NIKH	**Nikolski High**	**6.46**	**81**	P	**Pn**	**11 05 34.5**	**-1.0**
	baz=267,SNR=19						
NIKH				S	**S**	**11 06 44.4**	**-5.6**
	baz=267						
P08K	**Saint George I**	**7.09**	**50**		**Pn**	**11 05 44.7**	**+1.3**
P08K	**Saint George I**	**7.09**	**50**	P	**Pn**	**11 05 44.5**	**+1.0**
	baz=236,SNR=32						
P08K				S	**S**	**11 07 03.7**	**-0.7**
	baz=236						
SPIA	**Saint Paul Isl**	**7.10**	**45**		**Pn**	**11 05 45.1**	**+1.5**
SPIA	**Saint Paul Isl**	**7.10**	**45**	P	**Pn**	**11 05 43.8**	**+0.2**
SPIA	**Saint Paul Isl**	**7.10**	**45**	P	**Pn**	**11 05 44.7**	**+1.1**
	baz=230						
SPIA				S	**S**	**11 07 03.8**	**-0.9**
	baz=230						
MAPS	**Pakushin South**	**7.64**	**75**		**Pn**	**11 05 50.5**	**-0.1**
MSW	**Makushin Switc**	**7.74**	**74**		**Pn**	**11 05 51.2**	**-0.8**
MNAT	**Makushin Natee**	**7.80**	**75**		**Pn**	**11 05 52.0**	**-0.7**
UNV	**Unalaska Valle**	**7.90**	**75**		**Pn**	**11 05 52.8**	**-1.1**
UNV	**Unalaska Valle**	**7.90**	**75**	P	**Pn**	**11 05 54.1**	**+0.2**
UNV	**Unalaska Valle**	**7.90**	**75**	P	**Pn**	**11 05 52.6**	**-1.3**
	baz=263,SNR=18						
AKRB	**Akutan Reef Bi**	**8.19**	**73**		**Pn**	**11 05 58.1**	**+0.5**
LVA	**Lava Point**	**8.21**	**73**		**Pn**	**11 05 57.7**	**-0.2**
ZRO	**Akutan Zero**	**8.23**	**73**		**Pn**	**11 05 58.8**	**+0.5**
AKV	**Akutan Volcano**	**8.25**	**73**		**Pn**	**11 05 58.7**	**+0.3**
AKBBA	**Akutan Broad B**	**8.26**	**73**		**Pn**	**11 05 58.3**	**-0.3**
AHB	**Akutan Harbor**	**8.33**	**73**		**Pn**	**11 06 00.2**	**+0.7**
AKUT	**Akutan**	**8.36**	**73**		**Pn**	**11 05 58.7**	**-1.1**
AKUT	**Akutan**	**8.36**	**73**	P	**Pn**	**11 05 59.5**	**-0.3**
AKSA	**Akutan Strait**	**8.40**	**73**		**Pn**	**11 05 60.0**	**-0.4**
WESE	**West Dahl East**	**9.09**	**71**		**Pn**	**11 06 09.5**	**+0.3**
BRPK	**Brown Peak**	**9.60**	**71**		**Pn**	**11 06 15.0**	**-0.7**
ISLZ	**Isanotski Laza**	**9.62**	**70**		**Pn**	**11 06 15.2**	**-0.8**
FALS	**False Pass**	**9.81**	**70**		**Pn**	**11 06 18.4**	**+0.1**
FALS	**False Pass**	**9.81**	**70**	P	**Pn**	**11 06 19.1**	**+0.8**
FALS	**False Pass**	**9.81**	**70**	P	**Pn**	**11 06 18.9**	**+0.6**
	baz=260,SNR=15						
DT1	**Dutton Round H**	**10.49**	**69**		**Pn**	**11 06 26.7**	**-0.3**
M11K	**Mekoryuk**	**10.78**	**37**	P	**Pn**	**11 06 32.0**	**+1.5**
	baz=227,SNR=87						
M11K				S	**S**	**11 08 33.5**	**+2.5**
	baz=227						
SDPT	**Sand Point**	**11.55**	**68**		**Pn**	**11 06 38.6**	**-1.7**
SDPT	**Sand Point**	**11.55**	**68**	P	**Pn**	**11 06 40.2**	**-0.1**
SDPT	**Sand Point**	**11.55**	**

baz=226
L15K **Ungalak Mounta** 13.38 39 P P 11 07 04.6 -0.4
baz=233
L15K S S 11 09 33.1 +2.2
baz=233
L15K ScP ScP 11 15 22.0 -1.3
baz=233
R16K **Pilot Point** 13.52 59 P P 11 07 05.8 -0.7
baz=256,SNR=18
P16K **Nushagak River** 13.71 53 P P 11 07 08.1 -0.5
baz=249,SNR=235
P16K S S 11 09 37.9 -0.6
baz=249
K15K **Wolf Creek Mou** 13.73 37 P P 11 07 09.1 +0.3
baz=231,SNR=698
K15K ScP ScP 11 15 23.2 -0.7
baz=231
PEA0B **Petropavlovsk-** 13.83 282 P P 11 07 09.7 -0.4
PEA0B **Petropavlovsk-** 13.83 282 *c iP* P 11 07 09.8 -0.3
PETK **Petropavlovsk-** 13.83 282 P P 11 07 09.6 -0.5
PETK **Petropavlovsk-** 13.83 282 P Pn 11 07 09.0 +0.2
PETK **Petropavlovsk-** 13.83 282 P Pn 11 07 08.9 +0.2
comp=Z,67nm,0.8s,baz=87,slow=15,SNR=121
PETK S S 11 09 41.1 -0.5
comp=Z,13nm,0.5s,baz=98,slow=16,SNR=1.8
O16K **Kokwok River B** 13.86 51 P Pn 11 07 09.4 +0.4
O16K **Kokwok River B** 13.86 51 P Pn 11 07 09.5 +0.5
baz=247,SNR=440
O16K S S 11 09 42.2 +0.3
baz=247
O16K ScP ScP 11 15 23.8 -0.2
baz=247,SNR=7.7
N16K **Nishlik Lake** 13.90 47 P P 11 07 10.3 -0.5
baz=243,SNR=314
N16K S S 11 09 43.4 +0.3
baz=243
N16K ScP ScP 11 15 23.0 -1.2
baz=243
M16K **Timber Creek** 14.07 45 P P 11 07 12.4 -0.2
baz=240,SNR=180
M16K S S 11 09 46.5 -0.4
baz=240
M16K ScP ScP 11 15 21.6 -2.8
baz=240
L16K **Owhat River** 14.20 42 P P 11 07 14.2 +0.3
L16K **Owhat River** 14.20 42 P P 11 07 14.3 +0.3
baz=237,SNR=233
L16K S S 11 09 52.5 +2.6
baz=237
Q16K **King Salmon** 14.26 55 P P 11 07 15.1 +0.3
baz=253,SNR=439
CHIR **Chirikof Islan** 14.33 67 P Pn 11 07 13.1 -1.7
CHIR **Chirikof Islan** 14.33 67 P Pn 11 07 13.4 -1.4
baz=265,SNR=102
TNA **Tin City** 14.36 20 P P 11 07 17.4 +1.7
baz=209,SNR=81
TNA S S 11 09 56.9 +3.3
baz=209
TNA ScP ScP 11 15 23.9 -0.9
baz=209,SNR=13
O17K **Koliganek Bris** 14.39 51 P P 11 07 16.1 -0.1
baz=248,SNR=316
O17K S S 11 09 56.9 +2.5
baz=248
O17K ScP ScP 11 15 24.4 -0.6
baz=248
P17K **Kvichak River** 14.52 53 P P 11 07 18.2 +0.6
baz=251,SNR=270
P17K ScP ScP 11 15 24.0 -1.2
baz=251
Q17K **Contact Creek** 14.55 57 P P 11 07 17.8 -0.2
baz=255,SNR=176
Q17K S S 11 09 57.6 -0.7
baz=255
Q17K ScP ScP 11 15 23.6 -1.9
baz=255
F14K **Arctic Creek** 14.63 22 P P 11 07 20.7 +1.9
baz=212
F14K S S 11 10 02.2 +2.2
baz=212
F14K ScP ScP 11 15 24.4 -1.0
baz=212
N17K **Nushagak Hills** 14.64 48 P P 11 07 19.4 +0.6
baz=245,SNR=419
N17K S S 11 10 00.9 +0.8
baz=245
N17K ScP ScP 11 15 25.1 -0.3
baz=245,SNR=5.1
J16K **Anvik River** 14.68 35 P P 11 07 20.6 +1.3
J16K **Anvik River** 14.68 35 P P 11 07 20.6 +1.3
baz=230,SNR=235
J16K S S 11 10 03.1 +1.9
baz=230
J16K ScP ScP 11 15 24.4 -1.1
baz=230
G15K **Niukluk** 14.82 26 P P 11 07 22.7 +1.9
baz=218,SNR=195
G15K ScP ScP 11 15 24.3 -1.4
baz=218
L17K **Donlin** 14.90 41 P P 11 07 23.2 +1.5
baz=238,SNR=578
L17K S S 11 10 07.8 +1.8
baz=238
L17K ScP ScP 11 15 25.9 0.0
baz=238
M17K **Holitna River** 14.90 45 P P 11 07 22.9 +1.2
baz=242,SNR=546
M17K S S 11 10 09.6 +3.5
baz=242
M17K ScP ScP 11 15 25.7 -0.2
baz=242
I17K **Unalakleet** 15.04 33 P P 11 07 25.0 +1.8
I17K **Unalakleet** 15.04 33 P P 11 07 25.2 +2.0
baz=228,SNR=210
I17K S S 11 10 11.4 +2.3
baz=228
I17K ScP ScP 11 15 24.5 -1.6
baz=228
H16K **Elim** 15.06 29 P Pn 11 07 25.4 +1.8
baz=223,SNR=262
H16K S S 11 10 12.8 +3.0
baz=223
H16K ScP ScP 11 15 25.6 -0.5
baz=223
P18K **Big Mountain,** 15.17 53 P Pn 11 07 25.3 +0.3
P18K **Big Mountain,** 15.17 53 P Pn 11 07 26.1 +1.1
baz=252,SNR=492
P18K S S 11 10 13.6 +1.3
baz=252
P18K ScP ScP 11 15 25.1 -1.4
baz=252
SII **Sitkinak Islan** 15.19 64 P P 11 07 22.0 -3.0
SII **Sitkinak Islan** 15.19 64 P P 11 07 23.2 -1.8
SII **Sitkinak Islan** 15.19 64 P P 11 07 22.0 -3.0
baz=264,SNR=123
SII ScP ScP 11 15 25.9 -0.7
baz=264
K17K **Iditarod** 15.20 39 P Pn 11 07 26.8 +1.6
baz=236,SNR=535
K17K ScP ScP 11 15 25.3 -1.1
baz=236
F15K **North Star Dit** 15.23 24 P Pn 11 07 27.9 +2.4
baz=216,SNR=664
F15K S S 11 10 14.7 +1.4
baz=216
F15K ScP ScP 11 15 24.8 -1.6
baz=216
SKR **Severo-Kuril's** 15.28 273 *eP* Pn 11 07 28.5 +2.3
SKR *eS* S 11 10 06.2 -8.5
SKR pmax pmax
comp=Z,2μm,6.0s
SKR MLR MLR
comp=Z,1μm,12.0s
N18K **Kilae Creek** 15.29 48 P Pn 11 07 27.7 +1.4
baz=247,SNR=320
N18K S S 11 10 17.7 +3.0
baz=247
N18K ScP ScP 11 15 26.7 +0.1
baz=247,SNR=9.8
O18K **Koktuh Hills** 15.32 52 P Pn 11 07 27.8 +1.1
O18K **Koktuh Hills** 15.32 52 P Pn 11 07 28.0 +1.3
baz=251,SNR=451
O18K S S 11 10 19.2 +3.7
baz=251
O18K ScP ScP 11 15 24.8 -1.9
baz=251
SVW2 **Sparrevohn** 15.59 47 P Pn 11 07 31.1 +1.3
SVW2 **Sparrevohn** 15.59 47 P Pn 11 07 30.6 +0.7

G16K **Koyuk River** 15.59 27 P Pn 11 07 31.7 +1.9
baz=221,SNR=704
G16K S S 11 10 24.6 +3.5
baz=221
G16K ScP ScP 11 15 26.4 -0.7
baz=221
L18K **Granite Mounta** 15.60 42 P Pn 11 07 31.4 +1.4
baz=240,SNR=382
L18K S S 11 10 23.8 +2.4
baz=240
L18K ScP ScP 11 15 27.3 +0.1
baz=240
M18K **Stony River** 15.64 46 P Pn 11 07 31.7 +1.2
baz=244
M18K S S 11 10 25.0 +2.7
baz=244
M18K ScP ScP 11 15 26.4 -0.8
baz=244
OHAK **Old Harbor** 15.75 62 P P 11 07 28.3 -2.8
OHAK **Old Harbor** 15.75 62 P P 11 07 28.2 -2.8
baz=262,SNR=142
OHAK ScP ScP 11 15 25.8 -1.7
baz=262
Q19K **Cape Douglas,** 15.85 56 P P 11 07 30.8 -1.4
Q19K **Cape Douglas,** 15.85 56 P P 11 07 30.3 -1.9
baz=256,SNR=68
Q19K S S 11 10 27.7 +0.9
baz=256
Q19K ScP ScP 11 15 25.4 -2.3
baz=256
O19K **Port Alsworth** 15.85 51 P Pn 11 07 34.1 +1.1
baz=251,SNR=536
O19K S S 11 10 28.4 +1.6
baz=251
O19K ScP ScP 11 15 26.5 -1.1
baz=251,SNR=7.4
N19K **Bonanza Creek** 15.98 49 P Pn 11 07 35.9 +1.2
baz=248
N19K S S 11 10 32.6 +2.9
baz=248
N19K ScP ScP 11 15 27.5 -0.6
baz=248
H17K **Granite Mounta** 15.99 31 P Pn 11 07 36.2 +1.6
baz=227
H17K S S 11 10 35.4 +5.7
baz=227
H17K ScP ScP 11 15 26.1 -1.8
baz=227
G17K **Kiwalik Mounta** 16.16 29 P Pn 11 07 37.5 +0.9
baz=224,SNR=400
G17K S S 11 10 36.8 +3.8
baz=224
G17K ScP ScP 11 15 27.2 -1.0
baz=224
KDAK **Kodiak Island** 16.19 60 P P 11 07 33.4 -2.6
KDAK **Kodiak Island** 16.19 60 P P 11 07 33.4 -2.6
baz=261
KDAK S S 11 10 37.2 +3.3
baz=261
KDAK ScP ScP 11 15 27.2 -1.1
baz=261
KDAK **Kodiak Island** 16.19 60 *c iP* P 11 07 33.2 -2.8
KDAK pmax pmax
comp=Z,2μm,1.1s
KDAK **Kodiak Island** 16.19 60 P P 11 07 33.9 -2.0
comp=Z,963nm,1.0s,baz=284,slow=5.0,SNR=577
KDAK S S 11 10 24.7 -9.2
comp=Z,72nm,0.8s,baz=330,slow=20,SNR=1.7
KDAK ScP ScP 11 15 27.5 -0.8
comp=Z,27nm,1.1s,baz=163,slow=2.6,SNR=3.6
TTA **Tatalina** 16.21 41 P Pn 11 07 37.5 +0.1
TTA **Tatalina** 16.21 41 P Pn 11 07 37.8 +0.4
TTA **Tatalina** 16.21 41 P Pn 11 07 38.1 +0.7
baz=240,SNR=543
TTA S S 11 10 36.9 +2.4
baz=240
TTA ScP ScP 11 15 27.9 -0.6
baz=240,SNR=5.8
TTA **Tatalina** 16.21 41 P Pn 11 07 37.5 +0.1
J18K **Innoko River** 16.21 38 P Pn 11 07 37.9 +0.5
baz=237,SNR=761
J18K S S 11 10 37.9 +3.6
baz=237
J18K ScP ScP 11 15 27.9 -0.4
baz=237
P19K **Oil Pt** 16.22 53 P P 11 07 36.5 +0.1
P19K **Oil Pt** 16.22 53 P Pn 11 07 37.6 +0.1
baz=254,SNR=309
P19K S S 11 10 37.1 +2.5
baz=254
P19K ScP ScP 11 15 26.9 -1.6
baz=254
L19K **White Mountain** 16.35 44 P Pn 11 07 39.5 +0.6
baz=244,SNR=398
L19K S S 11 10 38.7 +1.7
baz=244
L19K ScP ScP 11 15 28.5 -0.2
baz=244,SNR=6.4
Q20K **Shuyak Island** 16.42 57 P P 11 07 36.2 -2.2
baz=259,SNR=33
Q20K ScP ScP 11 15 28.7 -0.1
baz=259
M19K **Big River Lodg** 16.43 45 P Pn 11 07 40.6 +0.7
baz=245
M19K S S 11 10 40.3 +1.7
baz=245
M19K ScP ScP 11 15 29.0 +0.2
baz=245
H18K **Honhosa River** 16.63 32 P Pn 11 07 43.0 +0.7
baz=229,SNR=522
H18K S S 11 10 46.6 +4.0
baz=229
H18K ScP ScP 11 15 27.7 -1.4
baz=229
O20K **Slope Mountain** 16.63 52 P Pn 11 07 41.8 -0.6
baz=254,SNR=342
O20K S S 11 10 47.1 +4.4
baz=254
O20K ScP ScP 11 15 28.1 -1.2
baz=254,SNR=5.2
F17K **Baldwin Pennin** 16.67 26 P Pn 11 07 43.3 +0.7
F17K **Baldwin Pennin** 16.67 26 P Pn 11 07 43.7 +1.0
baz=221,SNR=335
F17K S S 11 10 48.1 +4.8
baz=221
F17K ScP ScP 11 15 28.1 -1.0
baz=221
RSO **Redoubt South** 16.67 51 P Pn 11 07 42.3 -0.7
GCSA **Galena City Sc** 16.88 35 P Pn 11 07 45.0 -0.1
baz=233,SNR=348
GCSA S S 11 10 51.1 +3.7
baz=233
L20K **Farewell, AK** 16.88 44 P Pn 11 07 45.2 -0.1
baz=244,SNR=503
L20K S S 11 10 51.6 +3.9
baz=244
L20K ScP ScP 11 15 28.5 -1.2
baz=244
J19K **Poorman** 16.91 38 P Pn 11 07 45.3 -0.2
baz=237,SNR=797
J19K S S 11 10 52.1 +4.1
baz=237
J19K ScP ScP 11 15 28.8 -0.9
baz=237
M20K **Styx River** 16.97 46 P Pn 11 07 46.7 +0.3
baz=247,SNR=549
M20K S S 11 10 52.9 +3.4
baz=247
M20K ScP ScP 11 15 30.2 +0.2
baz=247
HOM **Homer** 17.01 54 P P 11 07 45.4 +0.5
HOM **Homer** 17.01 54 P P 11 07 44.1 -0.8
baz=256,SNR=21
E17K **Hotham Inlet** 17.01 24 P Pn 11 07 47.4 +0.7
baz=218,SNR=1000
E17K S S 11 10 54.6 +4.6
baz=218
E17K ScP ScP 11 15 29.4 -0.4
baz=218,SNR=7.0
G18K **Tagagawik** 17.03 30 P Pn 11 07 47.0 +0.1
baz=227,SNR=469
G18K S S 11 10 54.4 +4.0
baz=227
G18K ScP ScP 11 15 28.6 -1.3
baz=227
BILL **Bilibino** 17.06 342 P Pn 11 07 47.4 +0.2
BILL **Bilibino** 17.06 342 *eP* P 11 07 45.4 0.0
N20K **Mount Spurr** 17.15 49 P Pn 11 07 48.6 +0.1

baz=251,SNR=789
N20K S S 11 10 56.3 +3.2
baz=251
N20K ScP ScP 11 15 29.5 -0.9
baz=251
K20K **Telida** 17.19 41 P Pn 11 07 48.6 -0.3
baz=242
K20K S S 11 10 56.7 +2.9
baz=242
K20K ScP ScP 11 15 30.5 +0.2
baz=242
F18K **Selawik** 17.23 27 P Pn 11 07 49.3 +0.1
baz=224,SNR=388
F18K ScP ScP 11 15 28.8 -1.5
baz=224
C16K **Lisburne Hills** 17.23 18 P Pn 11 07 49.5 +0.3
baz=210
BRSE **Bradley Lake S** 17.47 54 P P 11 07 48.4 -1.7
baz=257,SNR=87
BRSE S S 11 11 03.7 +4.3
baz=257
BRSE ScP ScP 11 15 29.2 -1.8
baz=257,SNR=5.8
H19K **Roundabout Mou** 17.49 33 P Pn 11 07 51.4 -0.9
baz=232
CAPN **Captain Cook N** 17.52 51 P P 11 07 51.2 +0.8
CAPN **Captain Cook N** 17.52 51 P P 11 07 51.4 +1.0
baz=253,SNR=40
CAPN ScP ScP 11 15 30.4 -0.6
baz=253
RDOG **Red Dog Mine** 17.54 21 P Pn 11 07 52.0 -0.8
RDOG **Red Dog Mine** 17.54 21 P Pn 11 07 52.6 -0.2
baz=215,SNR=227
RDOG S S 11 11 05.6 +5.0
baz=215
RDOG ScP ScP 11 15 30.5 -0.5
baz=215,SNR=5.4
J20K **Nowinta River** 17.56 38 P Pn 11 07 52.4 -0.7
baz=239
J20K S S 11 11 04.5 +3.5
baz=239
J20K ScP ScP 11 15 29.9 -1.1
baz=239
E18K **Tukpahlearik C** 17.58 24 P Pn 11 07 53.4 0.0
baz=220,SNR=779
E18K ScP ScP 11 15 29.3 -1.7
baz=220
G19K **Purcell Mounta** 17.67 31 P Pn 11 07 53.4 -1.1
baz=229,SNR=747
G19K ScP ScP 11 15 30.3 -0.9
baz=229
SKT **Skwentna** 17.71 47 P Pn 11 07 54.3 -0.7
SKT **Skwentna** 17.71 47 P Pn 11 07 54.7 -0.3
baz=249,SNR=1000
SKT ScP ScP 11 15 29.5 -2.0
baz=249
I20K **Naaghedeneel** 17.76 36 P Pn 11 07 54.5 -0.9
baz=237,SNR=324
PPLA **Purkeypile** 17.77 43 P Pn 11 07 55.5 -0.2
baz=246,SNR=409
PPLA ScP ScP 11 15 30.0 -1.7
baz=246
C17K **DeLong Mountai** 17.83 20 P Pn 11 07 55.8 -0.5
baz=213,SNR=668
C17K ScP ScP 11 15 29.1 -2.4
baz=213
SUA **Susitna One** 17.90 49 P P 11 07 54.8 0.0
SUA **Susitna One** 17.90 49 P P 11 07 54.7 0.0
baz=252,SNR=491
SUA ScP ScP 11 15 30.1 -1.9
baz=252,SNR=11
F19K **Shaleruckik Mo** 17.93 28 P Pn 11 07 56.4 -0.9
baz=226,SNR=939
F19K ScP ScP 11 15 31.5 -0.3
baz=226,SNR=8.7
MA2 **Magadan** 17.98 305 P Pn 11 07 57.0 -1.1
MA2 **Magadan** 17.98 305 P Pn 11 07 58.0 -0.1
MA2 **Magadan** 17.98 305 *c iP* Pn 11 07 57.6 -0.5
MA2 pmax pmax
comp=Z,183nm,1.7s
MA2 **Magadan** 17.98 305 P Pn 11 07 57.1 -1.0
comp=Z,30nm,0.7s,baz=99,slow=11,SNR=22
MA2 S S 11 11 04.7 -4.6
comp=Z,14nm,1.0s,baz=326,slow=14,SNR=1.3
MA2 ScP ScP 11 15 29.3 -2.7
comp=Z,20nm,0.8s,baz=134,slow=3.8,SNR=10
MA2 ScS ScS 11 19 08.9 -3.4
comp=Z,4.5nm,0.8s,baz=256,slow=23,SNR=2.1
H20K **Anotleneega Mo** 18.00 34 P P 11 07 56.9 +1.2
baz=234,SNR=1000
H20K ScP ScP 11 15 31.5 -0.5
baz=234
CAST **Castle Rocks** 18.02 42 P Pn 11 07 57.4 -1.3
CAST **Castle Rocks** 18.02 42 P Pn 11 07 57.9 -0.8
baz=244,SNR=991
CAST ScP ScP 11 15 30.1 -1.9
baz=244
FIS **Fire Island** 18.06 50 P P 11 07 56.1 -0.2
O22K **Cooper Landing** 18.13 52 P P 11 07 55.8 -1.3
O22K **Cooper Landing** 18.13 52 P P 11 07 56.2 -0.8
baz=256,SNR=257
O22K ScP ScP 11 15 31.0 -1.3
baz=256
CHUM **Lake Minchumin** 18.13 40 P Pn 11 07 59.1 -0.7
baz=243,SNR=784
CHUM ScP ScP 11 15 31.3 -1.0
baz=243
SEY **Seymchan** 18.16 316 *eP* P 11 07 57.9 +0.5
SEY pmax pmax
comp=Z,855nm,1.2s
SEY **Seymchan** 18.16 316 P Pn 11 07 59.9 -0.4
comp=Z,487nm,1.1s,baz=111,slow=9.3,SNR=402
SEY S S 11 11 12.5 -0.5
comp=Z,27nm,1.2s,baz=228,slow=16,SNR=1.5
SEY ScP ScP 11 15 29.9 -2.4
comp=Z,26nm,0.8s,baz=133,slow=3.8,SNR=16
SEW **Seward** 18.18 53 P P 11 07 55.9 -1.8
baz=258,SNR=149
SEW ScP ScP 11 15 31.9 -0.5
baz=258
RC01 **Rabbit Creek A** 18.27 50 P P 11 07 56.9 -1.7
RC01 **Rabbit Creek A** 18.27 50 P P 11 07 57.3 -1.3
baz=254,SNR=263
RC01 ScP ScP 11 15 32.1 -0.5
baz=254,SNR=8.8
C18K **Utukok River** 18.40 21 P Pn 11 08 01.9 -1.1
baz=217,SNR=1000
C18K ScP ScP 11 15 31.3 -1.6
baz=217
CUT **Chulitna** 18.41 46 P P 11 08 00.3 +0.2
CUT **Chulitna** 18.41 46 P P 11 08 00.5 +0.4
baz=250,SNR=178
CUT ScP ScP 11 15 31.2 -1.7
baz=250
E19K **Redstone River** 18.51 27 P P 11 08 02.6 +1.5
baz=226,SNR=995
E19K ScP ScP 11 15 31.2 -1.8
baz=226
F20K **Avaraart Lake** 18.67 30 P P 11 08 04.2 +1.3
baz=229,SNR=509
PMR **Palmer** 18.68 49 P P 11 08 02.1 -0.9
PMR **Palmer** 18.68 49 P P 11 08 02.3 -0.7
PMR **Palmer** 18.68 49 P P 11 08 01.0 -2.0
baz=254,SNR=217
PMR ScP ScP 11 15 32.8 -0.6
baz=254,SNR=12
PMR **Palmer** 18.68 49 P P 11 08 02.1 -0.9
TRF **Thorofare Moun** 18.78 43 P P 11 08 05.2 +0.9
baz=247,SNR=675
TRF ScP ScP 11 15 32.8 -1.1
baz=247
H21K **Melozitna Rive** 18.81 35 P P 11 08 06.1 +1.7
baz=237,SNR=1000
H21K ScP ScP 11 15 33.1 -0.6
baz=237
B18K **Kokolik River** 18.85 19 P Pn 11 08 06.7 -1.4
baz=214,SNR=813
B18K ScP ScP 11 15 32.1 -1.7
baz=214
I21K **Tanana** 18.87 37 P Pn 11 08 06.8 -1.6
baz=240,SNR=727
I21K ScP ScP 11 15 33.5 -0.3
baz=240,SNR=6.8
KNK **Knik Glacier** 18.95 50 P P 11 08 05.4 -0.5
baz=255,SNR=770
KNK ScP ScP 11 15 33.8 -0.3
baz=255,SNR=8.0
D19K **Kuna River** 19.01 24 P P 11 08 08.1 +1.5

	baz=222,SNR=848								
D19K					ScP	**ScP**	**11 15 32.6**	**-1.6**	
	baz=222								
G21K	**Allakaket**	**19.05**	**32**		P	**P**	**11 08 08.3**	**+1.4**	
	baz=234,SNR=983								
G21K					ScP	**ScP**	**11 15 33.0**	**-1.3**	
	baz=234,SNR=6.6								
SML	**Sawmill**	**19.11**	**49**		P	**P**	**11 08 06.9**	**-0.8**	
	baz=254,SNR=379								
SML					ScP	**ScP**	**11 15 33.4**	**-1.2**	
	baz=254,SNR=5.8								
C19K	**Lookout Ridge**	**19.12**	**22**		P	**P**	**11 08 09.2**	**+1.5**	
	baz=219,SNR=520								
C19K					ScP	**ScP**	**11 15 34.3**	**-0.1**	
	baz=219								
P23K	**Montague Islan**	**19.18**	**54**		P	**P**	**11 08 07.6**	**-0.7**	
	baz=260,SNR=145								
P23K					ScP	**ScP**	**11 15 32.5**	**-2.1**	
	baz=260,SNR=5.1								
MLY	**Manley**	**19.26**	**38**		P	**P**	**11 08 10.6**	**+1.3**	
	baz=242,SNR=633								
MLY					ScP	**ScP**	**11 15 33.7**	**-1.1**	
	baz=242,SNR=14								
WAT1	**Susitna Watana**	**19.30**	**45**		P	**P**	**11 08 09.4**	**-0.4**	
	baz=251								
WAT1					ScP	**ScP**	**11 15 33.7**	**-1.2**	
	baz=251								
E20K	**Nigu River**	**19.35**	**26**		P	**P**	**11 08 11.2**	**+1.0**	
	baz=226,SNR=627								
E20K					ScP	**ScP**	**11 15 34.1**	**-0.9**	
	baz=226								
M23K	**Glacier View**	**19.38**	**49**		P	**P**	**11 08 10.3**	**-0.3**	
	baz=255,SNR=312								
M23K					ScP	**ScP**	**11 15 34.0**	**-1.2**	
	baz=255,SNR=8.0								
H22K	**Ishtalitna Cre**	**19.44**	**35**		P	**P**	**11 08 12.6**	**+1.5**	
	baz=239,SNR=547								
H22K					ScP	**ScP**	**11 15 34.0**	**-1.2**	
	baz=239								
MCK	**McKinley**	**19.45**	**43**		P	**P**	**11 08 10.9**	**-0.3**	
	baz=248,SNR=906								
MCK					ScP	**ScP**	**11 15 33.5**	**-1.8**	
	baz=248,SNR=5.6								
F21K	**Alatna River**	**19.47**	**31**		P	**P**	**11 08 12.9**	**+1.4**	
	baz=233								
F21K					ScP	**ScP**	**11 15 34.3**	**-1.0**	
	baz=233								
D20K	**Etivluk River**	**19.55**	**25**		P	**P**	**11 08 13.3**	**+1.0**	
	baz=224,SNR=1000								
D20K					ScP	**ScP**	**11 15 34.2**	**-1.2**	
	baz=224								
SCM	**Sheep Creek Mo**	**19.58**	**49**		P	**P**	**11 08 12.5**	**-0.2**	
	baz=255,SNR=366								
SCM					ScP	**ScP**	**11 15 35.3**	**-0.3**	
	baz=255								
WAT6	**Susitna Watana**	**19.59**	**47**		P	**P**	**11 08 12.3**	**-0.6**	
	baz=253,SNR=927								
WAT6					ScP	**ScP**	**11 15 34.1**	**-1.7**	
	baz=253								
Q23K	**Middleton Isla**	**19.63**	**56**		P	**P**	**11 08 11.5**	**-1.7**	
	baz=263,SNR=15								
MID	**Middleton Isla**	**19.64**	**56**		P	**P**	**11 08 14.8**	**+1.6**	
NEA2	**Nenana**	**19.72**	**40**		P	**P**	**11 08 14.6**	**+0.5**	
	baz=246,SNR=561								
NEA2					ScP	**ScP**	**11 15 34.6**	**-1.3**	
	baz=246,SNR=7.3								
I23K	**Minto, Yukon-K**	**19.84**	**39**		P	**P**	**11 08 16.2**	**+0.9**	
	baz=244,SNR=215								
I23K					ScP	**ScP**	**11 15 37.4**	**+1.4**	
	baz=244								
DHY	**Denali Highway**	**19.89**	**45**		P	**P**	**11 08 16.2**	**0.0**	
	baz=252,SNR=1000								
DHY					ScP	**ScP**	**11 15 36.0**	**-0.4**	
	baz=252								
G22K	**Bettles**	**19.93**	**33**		P	**P**	**11 08 17.0**	**+0.6**	
	baz=236								
G22K					ScP	**ScP**	**11 15 35.6**	**-0.6**	
	baz=236								
EYAK	**Cordova Ski Ar**	**20.07**	**53**		P	**P**	**11 08 18.1**	**+0.2**	
EYAK	**Cordova Ski Ar**	**20.07**	**53**		P	**P**	**11 08 16.8**	**-1.2**	
	baz=260,SNR=246								
EYAK					ScP	**ScP**	**11 15 36.5**	**-0.2**	
	baz=260,SNR=5.9								
E21K	**Killik River**	**20.08**	**28**		P	**P**	**11 08 18.5**	**+0.5**	
	baz=229								
KLU	**Klutina**	**20.16**	**50**		P	**P**	**11 08 18.3**	**-0.6**	
	baz=258,SNR=334								
KLU					ScP	**ScP**	**11 15 36.5**	**-0.5**	
	baz=258,SNR=6.1								
M24K	**Tolsona, Glenn**	**20.17**	**48**		P	**P**	**11 08 19.5**	**+0.4**	
	baz=256,SNR=636								
M24K					ScP	**ScP**	**11 15 36.6**	**-0.4**	
	baz=256								
MDM	**Murphy Dome**	**20.19**	**40**		P	**P**	**11 08 19.5**	**+0.3**	
COLA	**College**	**20.31**	**40**		P	**P**	**11 08 19.8**	**-0.6**	
COLA	**College**	**20.31**	**40**		P	**P**	**11 08 19.8**	**-0.6**	
COLA	**College**	**20.31**	**40**		P	**P**	**11 08 20.0**	**-0.4**	
	baz=247								
COLA					ScP	**ScP**	**11 15 34.9**	**-2.3**	
	baz=247								
COLA	**College**	**20.31**	**40**		P	**P**	**11 08 19.8**	**-0.6**	
G23K	**Bananza Creek**	**20.33**	**34**		P	**P**	**11 08 21.5**	**+0.9**	
	baz=239,SNR=1000								
G23K					ScP	**ScP**	**11 15 35.3**	**-2.0**	
	baz=239								
C21K	**Knifeblade Rid**	**20.34**	**25**		P	**P**	**11 08 21.5**	**+0.8**	
	baz=227								
HDA	**Harding Lake**	**20.50**	**42**		P	**P**	**11 08 20.6**	**-1.9**	
	baz=249,SNR=354								
HDA					ScP	**ScP**	**11 15 37.0**	**-0.7**	
	baz=249								
HDA					ScP	**ScP**	**11 15 37.0**	**-0.7**	
	baz=249								
E22K	**Anaktuvuk Pass**	**20.53**	**30**		P	**P**	**11 08 23.3**	**+0.5**	
	baz=233								
E22K					ScP	**ScP**	**11 15 37.2**	**-0.6**	
	baz=233								
COLD	**Coldfoot**	**20.53**	**33**		P	**P**	**11 08 23.0**	**+0.2**	
	baz=238,SNR=632								
COLD					ScP	**ScP**	**11 15 37.2**	**-0.5**	
	baz=238								
POKR	**Poker Plat Res**	**20.57**	**40**		P	**P**	**11 08 22.7**	**-0.5**	
POKR	**Poker Plat Res**	**20.57**	**40**		P	**P**	**11 08 22.7**	**-0.5**	
	baz=246,SNR=318								
POKR					ScP	**ScP**	**11 15 36.3**	**-1.6**	
	baz=246								
ILAR	**Eielson Array**	**20.66**	**41**		P	**P**	**11 08 22.9**	**-1.2**	
	comp=Z,99nm,0.6s,baz=244,slow=9.7,SNR=314								
ILAR					S	**S**	**11 12 00.3**	**-0.6**	
	comp=Z,5.7nm,1.0s,baz=230,slow=3.9,SNR=0.8								
ILAR					ScP	**ScP**	**11 15 35.4**	**-2.7**	
	comp=Z,12nm,0.6s,baz=284,slow=3.3,SNR=28								
ILAR					ScS	**ScS**	**11 19 16.9**	**-4.2**	
	comp=Z,1.3nm,0.9s,baz=252,slow=4.6,SNR=2.1								
ILAR					P3KPbc		11 42 22.2		
	comp=Z,2.3nm,0.9s,baz=54,slow=3.8,SNR=23								
ILAR					P3KP		11 43 17.9		
	comp=Z,1.3nm,0.9s,baz=54,slow=2.7,SNR=6.7								
	comp=Z,99nm,0.6s								
KAIM	**Kayak Island**	**20.66**	**55**		P	**P**	**11 08 23.2**	**-1.0**	
KAIM	**Kayak Island**	**20.66**	**55**		P	**P**	**11 08 23.0**	**-1.1**	
	baz=264,SNR=57								
KAIM					ScP	**ScP**	**11 15 38.1**	**-0.1**	
	baz=264								
H24K	**Noodor Dome**	**20.69**	**38**		P	**P**	**11 08 25.0**	**+0.4**	
	baz=244,SNR=981								
H24K					ScP	**ScP**	**11 15 37.9**	**-0.3**	
	baz=244								
BMRM	**Bremner River**	**20.69**	**52**		P	**P**	**11 08 23.4**	**-1.2**	
	baz=261,SNR=551								
BMRM					ScP	**ScP**	**11 15 37.5**	**-0.8**	
	baz=261,SNR=10.0								
PAX	**Paxson**	**20.70**	**46**		P	**P**	**11 08 24.2**	**-0.5**	
	baz=254,SNR=744								
PAX					ScP	**ScP**	**11 15 37.8**	**-0.5**	
	baz=254,SNR=6.4								
B21K	**Ikpikpuk River**	**20.70**	**25**		P	**P**	**11 08 24.8**	**+0.3**	
	baz=226,SNR=741								
B21K					ScP	**ScP**	**11 15 36.3**	**-1.8**	
	baz=226								
HARP	**HAARP**	**20.70**	**48**		P	**P**	**11 08 24.9**	**+0.2**	
	baz=256,SNR=332								
HARP					ScP	**ScP**	**11 15 37.8**	**-0.5**	
	baz=256								
D22K	**Ayikyak River**	**20.73**	**27**		P	**P**	**11 08 25.5**	**+0.6**	
	baz=230,SNR=1000								
D22K					ScP	**ScP**	**11 15 37.9**	**-0.3**	
	baz=230								
K24K	**Donnelly Dome**	**20.79**	**44**		P	**P**	**11 08 24.9**	**-0.8**	
	baz=252,SNR=588								
K24K					ScP	**ScP**	**11 15 38.0**	**-0.4**	
	baz=252								
N25K	**Chitina, Valde**	**20.80**	**50**		P	**P**	**11 08 25.4**	**-0.3**	
	baz=259,SNR=674								
N25K					ScP	**ScP**	**11 15 38.2**	**-0.4**	
	baz=259								
E23K	**Chandalar**	**21.16**	**31**		P	**P**	**11 08 30.0**	**+0.6**	
	baz=237								
E23K					ScP	**ScP**	**11 15 39.8**	**+0.5**	
	baz=237								
RIDG	**Independent Ri**	**21.17**	**44**		P	**P**	**11 08 28.7**	**-0.9**	
	baz=253,SNR=117								
RIDG					ScP	**ScP**	**11 15 38.6**	**-0.8**	
	baz=253								
G24K	**Hadweenzic Riv**	**21.21**	**36**		P	**P**	**11 08 30.6**	**+0.8**	
	baz=243,SNR=1000								
G24K					ScP	**ScP**	**11 15 39.0**	**-0.4**	
	baz=243								
J25K	**Salcha River,**	**21.21**	**42**		P	**P**	**11 08 27.6**	**-2.3**	
	baz=250,SNR=445								
J25K					ScP	**ScP**	**11 15 39.1**	**-0.5**	
	baz=250								
BGLC	**Bering Glacier**	**21.24**	**55**		P	**P**	**11 08 30.0**	**-0.1**	
	baz=264,SNR=12								
VRDI	**Verde Repeater**	**21.28**	**52**		P	**P**	**11 08 30.3**	**-0.5**	
CRQE	**Cirque**	**21.40**	**53**		P	**P**	**11 08 30.8**	**-1.0**	
	baz=263								
F24K	**Squaw Lake**	**21.45**	**33**		P	**P**	**11 08 33.1**	**+0.8**	
	baz=240,SNR=1000								
F24K					ScP	**ScP**	**11 15 39.4**	**-0.6**	
	baz=240								
PRP	**Porcupine Dome**	**21.46**	**39**		P	**P**	**11 08 31.0**	**-1.5**	
PRP	**Porcupine Dome**	**21.46**	**39**		P	**P**	**11 08 31.0**	**-1.5**	
	baz=248,SNR=581								
PRP					ScP	**ScP**	**11 15 38.8**	**-1.5**	
	baz=248								
MENT	**Mentasta**	**21.47**	**47**		P	**P**	**11 08 32.7**	**+0.3**	
A21K	**Barrow**	**21.48**	**20**		P	**P**	**11 08 32.7**	**+0.3**	
	baz=220,SNR=56								
TOLK	**Toolik Lake Re**	**21.50**	**30**		P	**P**	**11 08 33.3**	**+0.6**	
	baz=236,SNR=454								
TOLK					ScP	**ScP**	**11 15 40.6**	**+0.5**	
	baz=236								
MCARA	**McCarthy VSAT**	**21.51**	**51**		P	**P**	**11 08 32.6**	**-0.3**	
	baz=261,SNR=384								
MCARA					ScP	**ScP**	**11 15 40.5**	**+0.3**	
	baz=261,SNR=5.4								
SCRK	**Sand Creek**	**21.60**	**44**		P	**P**	**11 08 32.8**	**-1.0**	
	baz=254,SNR=811								
SCRK					ScP	**ScP**	**11 15 40.5**	**-0.1**	
	baz=254,SNR=6.9								
L26K	**Log Cabin Wild**	**21.65**	**47**		P	**P**	**11 08 34.7**	**+0.5**	
	baz=257,SNR=693								
L26K					ScP	**ScP**	**11 15 40.0**	**-0.6**	
	baz=257								
G25K	**Bearman Lake**	**21.73**	**36**		P	**P**	**11 08 35.8**	**+0.9**	
	baz=244								
G25K					ScP	**ScP**	**11 15 39.5**	**-1.1**	
	baz=244								
MESA	**MESA**	**21.91**	**55**		P	**P**	**11 08 37.0**	**+0.1**	
	baz=265,SNR=184								
MESA					ScP	**ScP**	**11 15 41.0**	**-0.5**	
	baz=265								
J26L	**Joseph Creek**	**21.92**	**43**		P	**P**	**11 08 35.9**	**-1.0**	
	baz=253,SNR=1000								
J26L					ScP	**ScP**	**11 15 39.8**	**-1.5**	
	baz=253								
D24K	**Happy Valley**	**22.01**	**29**		P	**P**	**11 08 38.3**	**+0.8**	
	baz=236,SNR=666								
D24K					ScP	**ScP**	**11 15 40.9**	**-0.4**	
	baz=236								
M27K	**Edge Creek, AK**	**22.19**	**49**		P	**P**	**11 08 40.0**	**+0.6**	
	baz=260,SNR=672								
M27K					ScP	**ScP**	**11 15 41.5**	**-0.6**	
	baz=260								
F25K	**Christian Rive**	**22.25**	**34**		P	**P**	**11 08 41.0**	**+1.2**	
	baz=243								
F25K					ScP	**ScP**	**11 15 41.9**	**-0.2**	
	baz=243								
CTG	**Chitna Glacier**	**22.27**	**53**		P	**P**	**11 08 40.5**	**+0.3**	
	baz=264,SNR=760								
CTG					ScP	**ScP**	**11 15 41.5**	**-0.9**	
	baz=264,SNR=11								
I26K	**Coal Creek Min**	**22.33**	**41**		P	**P**	**11 08 38.8**	**-1.6**	
	baz=252								
L27K	**Beaver Creek,**	**22.34**	**47**		P	**P**	**11 08 41.3**	**+0.6**	
	baz=258,SNR=1000								
L27K					ScP	**ScP**	**11 15 42.0**	**-0.4**	
	baz=258,SNR=7.7								
C24K	**Franklin Bluff**	**22.37**	**28**		P	**P**	**11 08 41.7**	**+1.0**	
	baz=235,SNR=648								
C24K					ScP	**ScP**	**11 15 40.8**	**-1.4**	
	baz=235								
K27K	**Chicken**	**22.43**	**44**		P	**P**	**11 08 42.3**	**+0.9**	
	baz=256								
E25K	**Arctic Village**	**22.51**	**33**		P	**P**	**11 08 43.3**	**+1.1**	
	baz=242,SNR=1000								
E25K					ScP	**ScP**	**11 15 41.9**	**-0.9**	
	baz=242								
KUR	**Kuril'sk**	**22.55**	**264**	⇑	*iP*	**P**	**11 08 44.7**	**+2.1**	
KUR					*eS*	**S**	**11 12 34.5**	**+2.3**	
KUR							11 19 30.0		
KUR					pmax	pmax			
	comp=Z,531nm,1.1s								
KUR					pmax	pmax			
	comp=Z,3μm,5.7s								
BMAR	**Burnt Mountain**	**22.55**	**35**		P	**P**	**11 08 43.5**	**+0.9**	
G26K	**Porcupine Rive**	**22.65**	**37**		P	**P**	**11 08 44.2**	**+0.9**	
	baz=247								
G26K					ScP	**ScP**	**11 15 43.4**	**+0.4**	
	baz=247								
BVCY	**Beaver Creek**	**22.67**	**49**		P	**P**	**11 08 44.0**	**+0.4**	
	baz=261,SNR=832								
BVCY					ScP	**ScP**	**11 15 43.2**	**-0.1**	
	baz=261,SNR=8.6								
PINM	**Pinnacle**	**22.75**	**55**		P	**P**	**11 08 44.5**	**+0.1**	
	baz=267,SNR=358								
PINM					ScP	**ScP**	**11 15 42.2**	**-1.3**	
	baz=267								
YUK3	**Moose Creek**	**22.78**	**51**		P	**P**	**11 08 44.8**	**0.0**	
	baz=263,SNR=1000								
YUK3					ScP	**ScP**	**11 15 42.4**	**-1.4**	
	baz=263,SNR=6.7								
F26K	**Sheenjek River**	**22.81**	**35**		P	**P**	**11 08 45.9**	**+1.0**	
	baz=245,SNR=1000								
F26K					ScP	**ScP**	**11 15 42.9**	**-0.7**	
	baz=245								
D25K	**Kavik River**	**22.84**	**30**		P	**P**	**11 08 46.1**	**+1.0**	
	baz=239								
EGAK	**Eagle**	**23.00**	**43**		P	**P**	**11 08 46.8**	**+0.3**	
	baz=255,SNR=1000								
EGAK					ScP	**ScP**	**11 15 43.1**	**-0.9**	
	baz=255								
I27K	**Kandik River**	**23.03**	**41**		P	**P**	**11 08 45.8**	**-1.1**	
	baz=253,SNR=159								
I27K					ScP	**ScP**	**11 15 42.5**	**-1.6**	
	baz=253								
YUK8	**Steele Glacier**	**23.06**	**52**		P	**P**	**11 08 47.9**	**+0.5**	
	baz=265,SNR=798								
YUK8					ScP	**ScP**	**11 15 43.3**	**-1.2**	
	baz=265,SNR=6.3								
PNL	**Peninsula**	**23.18**	**56**		P	**P**	**11 08 48.4**	**+0.2**	
PNL	**Peninsula**	**23.18**	**56**		P	**P**	**11 08 48.0**	**-0.2**	
	baz=269,SNR=104								
PNL					ScP	**ScP**	**11 15 45.0**	**+0.4**	
	baz=269								
H27K	**Steamboat Moun**	**23.25**	**39**		P	**P**	**11 08 47.7**	**-1.2**	
	baz=252,SNR=243								
H27K					ScP	**ScP**	**11 15 43.5**	**-1.3**	
	baz=252								
TYV	**Tymovskoe**	**23.38**	**281**		*eP*	**P**	**11 08 51.6**	**+1.5**	
TYV					pmax	pmax			
	comp=Z,39nm,1.3s								
TYV					pmax	pmax			
	comp=Z,200nm,3.6s								
O29M	**Mount Kennedy**	**23.60**	**54**		P	**P**	**11 08 52.3**	**+0.1**	
	baz=268								
O29M					ScP	**ScP**	**11 15 45.0**	**-0.9**	
	baz=268								
YUK4	**Talbot Arm**	**23.61**	**52**		P	**P**	**11 08 53.1**	**+0.8**	
	baz=266,SNR=867								
YUK4					ScP	**ScP**	**11 15 44.7**	**-1.3**	
	baz=266,SNR=9.2								
I28M	**Miner Creek**	**23.66**	**41**		P	**P**	**11 08 52.6**	**0.0**	
	baz=255,SNR=937								
I28M					ScP	**ScP**	**11 15 45.0**	**-0.9**	
	baz=255								
YUK6	**Outpost Mounta**	**23.72**	**53**		P	**P**	**11 08 53.5**	**+0.1**	
	baz=267,SNR=208								
M29M	**Somme Creek**	**23.78**	**49**		P	**P**	**11 08 54.2**	**+0.4**	
	baz=263,SNR=477								
M29M					ScP	**ScP**	**11 15 46.3**	**0.0**	
	baz=263								
NKL	**Nikolayevsk**	**23.90**	**288**		*eP*	**P**	**11 08 54.2**	**-0.6**	
NKL					*eS*	**S**	**11 12 52.6**	**-1.1**	
NKL					pmax	pmax			
	comp=N,35nm,1.4s								
NKL					pmax	pmax			
	comp=E,95nm,1.4s								
NKL					pmax	pmax			
	comp=Z,164nm,1.4s								
NKL					smax	smax			
	comp=E,303nm,3.1s								
NKL					smax	smax			
	comp=N,523nm,4.7s								
NKL					MLR	MLR			
	comp=N,7μm,17.0s								
NKL					MLR	MLR			
	comp=Z,12μm,26.0s								
L29M	**L29M**	**24.01**	**48**		P	**P**	**11 08 56.1**	**+0.3**	
	baz=262,SNR=267								
L29M					ScP	**ScP**	**11 15 47.0**	**+0.2**	
	baz=262,SNR=7.9								
P29M	**Windy Craggy**	**24.02**	**56**		P	**P**	**11 08 56.1**	**+0.2**	
	baz=270								
P29M					ScP	**ScP**	**11 15 46.6**	**-0.4**	
	baz=270								
HYT	**Haines Junctio**	**24.14**	**53**		P	**P**	**11 08 57.5**	**+0.5**	
	baz=268,SNR=450								
HYT					ScP	**ScP**	**11 15 46.7**	**-0.6**	
	baz=268,SNR=11								
J29N	**Klondike Camp**	**24.17**	**44**		P	**P**	**11 08 58.0**	**+0.8**	
	baz=259,SNR=117								
J29N					ScP	**ScP**	**11 15 47.5**	**+0.3**	
	baz=259,SNR=9.1								
MIDW	**Midway**	**24.29**	**176**		P	**P**	**11 08 58.9**	**+0.4**	
MIDW	**Midway**	**24.29**	**176**		P	**P**	**11 09 00.6**	**+2.1**	
F28M	**Old Crow**	**24.30**	**36**		P	**P**	**11 08 59.4**	**+1.1**	
	baz=250,SNR=1000								
F28M					ScP	**ScP**	**11 15 46.2**	**-1.3**	
	baz=250								
K29M	**Barlow Dome**	**24.37**	**46**		IAmb	IAmb	11 09 04.4		
	comp=Z,383nm,0.9s								
K29M	**Barlow Dome**	**24.37**	**46**		P	**P**	**11 08 59.6**	**+0.4**	
	baz=261,SNR=331								
K29M					ScP	**ScP**	**11 15 46.9**	**-1.0**	
	baz=261								
YUK	**Yuzh-Kuril'sk**	**24.39**	**264**		*eP*	**P**	**11 08 59.8**	**+0.4**	
YUK					*eS*	**S**	**11 13 04.3**	**+2.6**	
YUK					pmax	pmax			
	comp=E,372nm,1.0s								
YUK					pmax	pmax			
	comp=Z,517nm,1.0s								
YUK					pmax	pmax			
	comp=N,469nm,1.1s								
YUK					pmax	pmax			
	comp=Z,496nm,1.6s								
YUK					MLR	MLR			
	comp=Z,2μm,19.0s								
P30M	**Million Dollar**	**24.40**	**55**		P	**P**	**11 08 59.6**	**+0.2**	
	baz=270								
P30M					ScP	**ScP**	**11 15 46.6**	**-1.4**	
	baz=270								
H29M	**Whitestone**	**24.48**	**40**		IAmb	IAmb	11 09 04.1		
	comp=Z,299nm,0.8s								
H29M	**Whitestone**	**24.48**	**40**		P	**P**	**11 08 59.9**	**-0.1**	
	baz=255								
H29M					ScP	**ScP**	**11 15 46.3**	**-1.7**	
	baz=255								
D27M	**Malcolm River**	**24.52**	**32**		P	**P**	**11 09 02.0**	**+1.7**	
	baz=246								
M30M	**Minto, Yukon**	**24.56**	**49**		IAmb	IAmb	11 09 05.6		
	comp=Z,408nm,0.8s								
M30M	**Minto, Yukon**	**24.56**	**49**		P	**P**	**11 09 00.8**	**0.0**	
	baz=265,SNR=427								
M30M					ScP	**ScP**	**11 15 46.8**	**-1.6**	
	baz=265,SNR=8.5								
PLBC	**Pleasant Camp**	**24.73**	**57**		P	**P**	**11 09 02.3**	**+0.1**	
	baz=272,SNR=54								
E28M	**Babbage River**	**24.76**	**34**		P	**P**	**11 09 03.8**	**+1.4**	
	baz=249,SNR=564								
E28M					ScP	**ScP**	**11 15 47.6**	**-1.2**	
	baz=249								
O30N	**Mendenhall**	**24.83**	**53**		IAmb	IAmb	11 09 05.0		
	comp=Z,326nm,1.1s								
O30N	**Mendenhall**	**24.83**	**53**		P	**P**	**11 09 03.5**	**+0.3**	
	baz=269,SNR=153								
O30N					ScP	**ScP**	**11 15 48.3**	**-0.8**	
	baz=269,SNR=6.7								
YSS	**Yuzh-Sakhalins**	**24.85**	**272**		P	**P**	**11 09 04.3**	**+0.8**	
YSS	**Yuzh-Sakhalins**	**24.85**	**272**		P	**P**	**11 09 05.2**	**+1.8**	
YSS	**Yuzh-Sakhalins**	**24.85**	**272**	⇓	*eP*	**P**	**11 09 05.6**	**+2.2**	
YSS					*e*PP*	**pwP**	**11 09 48.7**	**-1.0**	
YSS					*e*SP*	**sP**	**11 10 17.1**	**+3.9**	
YSS					*e*		11 12 32.7		
YSS					*eS*	**S**	**11 13 10.1**	**+1.3**	
YSS					*e*SS*	**sS**	**11 14 25.2**	**-3.4**	
YSS					*e*		11 19 34.6		
YSS					pmax	pmax			
	comp=Z,300nm,2.0s								
YSS					pmax	pmax			
	comp=Z,60nm,0.9s								
YSS					smax	smax			
	comp=N,2μm,7.3s								
YSS					smax	smax			
	comp=E,600nm,7.0s								
YSS					MLR	MLR			
	comp=Z,900nm,12.0s								
YSS					MLR	MLR			
	comp=E,500nm,13.0s								
S31K	**Pelican**	**24.91**	**60**		IAmb	IAmb	11 09 05.2		
	comp=Z,235nm,1.1s								
S31K	**Pelican**	**24.91**	**60**		P	**P**	**11 09 04.0**	**+0.2**	
	baz=275,SNR=35								
N31M	**Braeburn, Yuko**	**24.99**	**52**		IAmb	IAmb	11 09 10.1		
	comp=Z,392nm,0.9s								
N31M	**Braeburn, Yuko**	**24.99**	**52**		P	**P**	**11 09 05.3**	**+0.7**	
	baz=268,SNR=135								
N31M					ScP	**ScP**	**11 15 49.8**	**+0.2**	
	baz=268								
J30M	**Hart River**	**24.99**	**44**		P	**P**	**11 09 05.5**	**+0.8**	
	baz=261,SNR=675								
J30M					ScP	**ScP**	**11 15 49.8**	**+0.1**	
	baz=261								
MAYO	**Mayo, Yukon**	**25.06**	**47**		IAmb	IAmb	11 09 43.1		
	comp=Z,441nm,0.9s								
MAYO	**Mayo, Yukon**	**25.06**	**47**		P	**P**	**11 09 05.6**	**+0.4**	
	baz=264,SNR=46								
MAYO					ScP	**ScP**	**11 15 48.8**	**-0.9**	
	baz=264								
I30M	**Mount Dempster**	**25.08**	**43**		P	**P**	**11 09 05.3**	**-0.2**	
	baz=260,SNR=539								
I30M					ScP

SIT IAmb IAmb 11 09 11.1
comp=Z,358nm,1.2s
SIT Sitka 25.51 62 P **P** **11 09 10.3 +1.0**
SIT Sitka 25.51 62 P **P** **11 09 09.9 +0.6**
baz=278,SNR=20
SIT ScP **ScP** **11 15 50.6 -0.5**
baz=278
SIT Sitka 25.51 62 P **P** **11 09 09.3 0.0**
SIT pmax pmax
comp=Z,359nm,1.2s
M31M Drury Creek, Y 25.66 50 IAmb IAmb 11 09 16.2
comp=Z,294nm,0.8s
M31M Drury Creek, Y 25.66 50 P **P** **11 09 11.1 +0.4**
baz=268,SNR=241
M31M ScP **ScP** **11 15 50.4 -1.1**
baz=268
R32K Eaglecrest 25.78 59 IAmb IAmb 11 09 13.4
comp=Z,286nm,1.1s
R32K Eaglecrest 25.78 59 P **P** **11 09 12.0 +0.2**
baz=276,SNR=19
R32K ScP **ScP** **11 15 51.6 -0.3**
baz=276
F30M Barrier River 25.80 37 P **P** **11 09 13.1 +1.3**
baz=255
F30M ScP **ScP** **11 15 50.2 -1.6**
baz=255
JIS Juneau Island 25.85 59 P **P** **11 09 13.4 +1.1**
S32K Killisnoo 25.85 61 P **P** **11 09 12.4 0.0**
S32K Killisnoo 25.85 61 P **P** **11 09 13.2 +0.9**
baz=278,SNR=37
H31M Peel River 26.01 42 P **P** **11 09 13.7 0.0**
baz=260
P32M Atlin 26.07 56 P **P** **11 09 15.2 +0.8**
baz=274,SNR=173
P32M ScP **ScP** **11 15 52.3 -0.5**
baz=274,SNR=6.7
FARO Faro, Yukon 26.15 50 IAmb IAmb 11 09 17.2
comp=Z,510nm,1.3s
FARO Faro, Yukon 26.15 50 P **P** **11 09 15.5 +0.4**
baz=269,SNR=234
FARO ScP **ScP** **11 15 52.1 -0.8**
baz=269,SNR=9.0
G31M Satah River 26.23 39 P **P** **11 09 15.7 +0.1**
baz=258
G31M ScP **ScP** **11 15 51.9 -1.1**
baz=258
N32M Quiet Lake 26.29 52 P **P** **11 09 17.1 +0.8**
baz=271
N32M ScP **ScP** **11 15 53.4 0.0**
baz=271
JKA Kamikawa-asahi 26.34 267 P **P** **11 09 17.2 +0.4**
JKA IAmb IAmb 11 10 13.7
comp=Z,290nm,1.0s
ASAJ Asahikawa 26.34 267 P **P** **11 09 17.2 +0.3**
ASAJ pmax pmax
comp=Z,290nm,1.0s
ASAJ Asahikawa 26.34 267 ScP **ScP** **11 15 52.1 -1.6**
comp=Z,23nm,0.9s,baz=70,slow=7.6,SNR=6.7
P33M Teslin, Yukon 26.47 55 P **P** **11 09 18.8 +0.8**
baz=273,SNR=320
P33M ScP **ScP** **11 15 52.9 -1.0**
baz=273
F31M Tsiigehtchic 26.53 38 P **P** **11 09 18.8 +0.4**
baz=258,SNR=350
F31M ScP **ScP** **11 15 52.7 -1.2**
baz=258
INK Inuvik 26.80 36 P **P** **11 09 21.3 +0.6**
INK Inuvik 26.80 36 P **P** **11 09 21.7 +1.1**
baz=256,SNR=381
INK ScP **ScP** **11 15 54.3 -0.3**
baz=256
INK Inuvik 26.80 36 P **P** **11 09 21.3 +0.6**
INK pmax pmax
comp=Z,2μm,1.3s
INK Inuvik 26.80 36 P **P** **11 09 20.8 +0.1**
comp=Z,142nm,0.6s,baz=246,slow=8.2,SNR=519
INK S **S** **11 13 39.0 -0.1**
comp=Z,11nm,0.9s,baz=291,slow=20,SNR=1.6
INK ScP **ScP** **11 15 52.8 -1.8**
comp=Z,17nm,0.9s,baz=283,slow=4.0,SNR=5.7
comp=Z,142nm,0.6s
T33K Petersburg 26.84 62 P **P** **11 09 22.0 +0.9**
baz=280,SNR=16
Q32M Nakina River 26.87 57 P **P** **11 09 23.2 +1.5**
baz=276,SNR=117
Q32M ScP **ScP** **11 15 53.8 -1.5**
baz=276
U33K Whale Pass 26.88 64 IAmb IAmb 11 09 23.8
comp=Z,246nm,1.2s
U33K Whale Pass 26.88 64 P **P** **11 09 22.5 +0.9**
baz=281,SNR=16
U33K ScP **ScP** **11 15 54.0 -1.1**
baz=281
CRAG Craig 27.02 65 IAmb IAmb 11 09 25.0
comp=Z,278nm,1.3s
CRAG Craig 27.02 65 P **P** **11 09 23.0 +0.2**
CRAG Craig 27.02 65 P **P** **11 09 23.2 +0.4**
baz=282,SNR=11
CRAG ScP **ScP** **11 15 53.5 -2.0**
baz=282
GRNR Gornyy 27.14 284⇑ *i*P **P** **11 09 24.5 +0.6**
GRNR *e* 11 10 08.3
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=E,470nm,12.0s
GRNR MLR MLR
comp=N,970nm,10.0s
WRAK Wrangell Islan 27.24 63 IAmb IAmb 11 09 27.1
comp=Z,441nm,1.5s
WRAK Wrangell Islan 27.24 63 P **P** **11 09 25.9 +1.2**
baz=281,SNR=24
WRAK ScP **ScP** **11 15 53.8 -2.4**
baz=281
R33M Jennings River 27.48 56 P **P** **11 09 28.4 +1.4**
baz=276,SNR=228
R33M ScP **ScP** **11 15 55.8 -1.3**
baz=276
S34M Telegraph Cree 27.61 59 IAmb IAmb 11 09 30.6
comp=Z,229nm,1.1s
S34M Telegraph Cree 27.61 59 P **P** **11 09 29.4 +1.4**
baz=279,SNR=57
S34M ScP **ScP** **11 15 56.4 -1.0**
baz=279
V35K Ketchikan 27.89 65 IAmb IAmb 11 09 32.5
comp=Z,306nm,1.3s
V35K Ketchikan 27.89 65 P **P** **11 09 31.2 +0.8**
baz=284,SNR=19
DLBC Dease Lake 28.10 58 P **P** **11 09 34.0 +1.6**
baz=279,SNR=86
DLBC ScP **ScP** **11 15 57.3 -1.7**
baz=279
DLBC Dease Lake 28.10 58 P **P** **11 09 33.3 +0.9**
comp=Z,149nm,0.8s,baz=286,slow=6.9,SNR=245
DLBC ScP **ScP** **11 15 56.5 -2.4**
comp=Z,5.5nm,1.1s,baz=333,slow=1.5,SNR=4.6
comp=Z,149nm,0.8s
T35M Bob Quinn 28.26 61 IAmb IAmb 11 09 36.6
comp=Z,289nm,1.1s
T35M Bob Quinn 28.26 61 P **P** **11 09 35.3 +1.5**
baz=281,SNR=85
T35M ScP **ScP** **11 15 58.0 -1.4**
baz=281
YAK Yakutsk 28.40 310 P **P** **11 09 34.9 0.0**
YAK Yakutsk 28.40 310 *e*P **P** **11 09 32.8 -2.1**
YAK *e**PP **pP** **11 10 19.3 0.0**
YAK *e* 11 10 47.3
YAK *e*S **S** **11 14 01.4 -2.9**
YAK *e**SS **sS** **11 15 20.7 -4.8**
YAK *e* 11 19 45.6
YAK pmax pmax
comp=Z,64nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,26nm,1.0s
YAK pmax pmax
comp=Z,244nm,2.6s
YAK pmax pmax
comp=N,131nm,1.9s
YAK smax smax
comp=E,201nm,2.3s
YAK smax smax
comp=N,211nm,2.0s
WTLY Watson Lake, Y 28.48 54 P **P** **11 09 36.7 +1.0**
baz=277,SNR=265
WTLY ScP **ScP** **11 15 59.5 -0.6**
baz=277,SNR=5.2

U35K Hyder 28.62 63 P **P** **11 09 38.0 +1.1**
baz=283,SNR=21
RUBB Prince Rupert 28.92 66 P **P** **11 09 40.0 +0.5**
GRNB Grenville Isla 29.23 67 P **P** **11 09 42.3 -0.1**
TIXI Tiksi 29.48 330 P **P** **11 09 44.9 +0.6**
TIXI Tiksi 29.48 330*c i*P **P** **11 09 45.0 +0.6**
TIXI pmax pmax
comp=Z,120nm,1.7s
TEY Ternei 29.53 273⇓ *e*P **P** **11 09 45.4 +0.3**
TEY *e* 11 10 31.5
TEY *e* 11 14 12.1
TEY pmax pmax
comp=E,10.0nm,1.4s
TEY pmax pmax
comp=Z,20nm,1.2s
TEY pmax pmax
comp=N,10.0nm,1.1s
A36M Sachs Harbour 30.32 30 P **P** **11 09 53.3 +1.5**
A36M Sachs Harbour 30.32 30 P **P** **11 09 53.6 +1.8**
baz=259,SNR=610
A36M ScP **ScP** **11 16 04.6 -1.1**
baz=259,SNR=12
C36M Paulatuk 30.35 35 P **P** **11 09 53.0 +1.0**
baz=264,SNR=110
C36M ScP **ScP** **11 16 04.3 -1.5**
baz=264,SNR=7.9
KLR Kul'dur 30.51 284*c i*P **P** **11 09 53.6 -0.1**
KLR pmax pmax
comp=Z,60nm,1.6s
KLR Kul'dur 30.51 284 ScS ScS 11 20 01.8 -1.5
comp=Z,0.7nm,0.7s,baz=355,slow=23,SNR=1.6
WRGLY Wrigley 30.65 47 P **P** **11 09 56.1 +1.4**
baz=275,SNR=337
KOTAN Kotaneelee Air 30.82 54 P **P** **11 09 57.8 +1.5**
baz=280,SNR=553
BBB Bella Bella 30.83 70 IAmb IAmb 11 09 58.1
comp=Z,258nm,1.2s
BBB Bella Bella 30.83 70 P **P** **11 09 56.1 -0.3**
comp=Z,149nm,1.1s,baz=308,slow=9.2,SNR=14
BBB PcP **PcP** **11 12 47.5 +0.2**
comp=Z,34nm,1.1s,baz=171,slow=8.7,SNR=3.1
comp=Z,149nm,1.1s
FLDN Fort Liard 31.09 53 P **P** **11 09 59.8 +1.2**
baz=280,SNR=125
JMM Marumori 31.16 258 P **P** **11 09 59.9 +0.4**
ZEA Zeya 31.40 294 *e*P **P** **11 10 01.6 +0.2**
ZEA *e**PP **pwP** **11 10 51.2 -0.1**
ZEA *e* 11 11 12.9
ZEA *e*S **S** **11 14 49.1 -2.3**
ZEA *e* 11 16 13.2
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA pmax pmax
comp=E,300nm,3.9s
ZEA pmax pmax
comp=Z,400nm,4.7s
ZEA smax smax
comp=E,300nm,5.0s
ZEA smax smax
comp=N,700nm,8.7s
ZEA MLR MLR
comp=N,600nm,15.0s
ZEA MLR MLR
comp=Z,500nm,10.0s
HEH HeiHe 32.63 288⇑ P **P** **11 10 11.2 -1.0**
HEH pP **pP** **11 10 55.4 -1.7**
HEH PcP **PcP** **11 12 48.5 -3.7**
HEH S **S** **11 15 08.2 -2.4**
HEH ScP **ScP** **11 16 11.7 -2.2**
HEH sS **sS** **11 16 27.8 -4.6**
HEH ScS **ScS** **11 20 10.4 -3.5**
HEH pmax pmax
comp=Z,44nm,1.2s
HEH pmax pmax
comp=Z,220nm,4.6s
USRK Ussuriysk Ar. 32.78 275 P **P** **11 10 13.9 +0.4**
USRK Ussuriysk Ar. 32.78 275 P **P** **11 10 13.2 -0.3**
comp=Z,5.9nm,0.6s,baz=62,slow=7.7,SNR=9.2
USRK pP **pP** **11 10 58.2 -0.3**
comp=Z,17nm,0.9s,baz=62,slow=7.1,SNR=3.6
USRK PcP **PcP** **11 12 53.5 +0.7**
comp=Z,12nm,0.7s,baz=51,slow=2.1,SNR=7.0
USRK pPcP 11 13 50.0
comp=Z,13nm,0.9s,baz=72,slow=1.6,SNR=8.2
USRK ScP **ScP** **11 16 13.2 -1.3**
comp=Z,1.5nm,0.4s,baz=30,slow=2.6,SNR=6.4
USRK ScS **ScS** **11 20 14.1 -0.8**
comp=Z,3.7nm,1.2s,baz=130,slow=18,SNR=1.1
CBB Campbell River 33.28 72 IAmb IAmb 11 10 19.7
comp=Z,302nm,1.4s
MJAR Matsushiro Arr 33.58 259 P **P** **11 10 21.7 +1.1**
comp=Z,19nm,0.6s,baz=43,slow=6.8,SNR=50
MJAR pP **pP** **11 11 05.5 -1.1**
comp=Z,16nm,0.9s,baz=46,slow=7.9,SNR=4.3
MJAR PcP **PcP** **11 12 55.9 +0.7**
comp=Z,17nm,0.9s,baz=35,slow=1.8,SNR=8.9
MJAR pPcP 11 13 52.8
comp=Z,9.0nm,0.9s,baz=65,slow=2.8,SNR=5.7
MJAR ScP **ScP** **11 16 17.1 -0.4**
comp=Z,20nm,1.2s,baz=40,slow=1.5,SNR=9.4
comp=Z,19nm,0.6s
MAJO Matsushiro 33.58 259 P **P** **11 10 21.5 +0.9**
MAJO Matsushiro 33.58 259 P **P** **11 10 22.1 +1.5**
MAJO Matsushiro 33.58 259⇑ *i*P **P** **11 10 21.7 +1.1**
MAJO pmax pmax
comp=Z,50nm,0.6s
MAJO Matsushiro 33.58 259 P **P** **11 10 22.2 +1.6**
MAJO pP **pP** **11 11 08.7 +2.0**
MAJO PcP **PcP** **11 12 55.7 +0.5**
MAJO ScP **ScP** **11 16 17.3 -0.2**
OZB Mount Ozzard 33.68 74 P **P** **11 10 22.2 +0.9**
OZB IAmb IAmb 11 10 23.1
comp=Z,404nm,1.2s
MDJ Mudanjiang 34.01 277 P **P** **11 10 23.6 -0.6**
MDJ pP pP 11 11 06.6 -2.7
MDJ PP **PP** **11 11 43.4 -2.7**
MDJ PcP **PcP** **11 12 58.4 +2.1**
MDJ S **S** **11 15 32.3 +0.3**
MDJ sS sS 11 16 50.3 -3.8
MDJ ScS **ScS** **11 20 24.4 +3.1**
MDJ pmax pmax
comp=Z,9.0nm,1.1s
MDJ pmax pmax
comp=Z,190nm,8.4s
KEKH Kekaha 34.02 146 IAmb IAmb 11 10 27.1
comp=Z,330nm,1.0s
MSHR Mys Shultsa 34.17 273*ce*P **P** **11 10 27.4 +1.9**
MSHR pmax pmax
comp=Z,90nm,1.1s
H11N2 WAKE ISLAND Hy 34.37 203 P **P** **11 10 28.9 +1.7**
baz=322,slow=5.1,SNR=12
H11N2 T T 11 48 00.1
baz=18,slow=76,SNR=106
H11N3 WAKE ISLAND Hy 34.38 203 P **P** **11 10 29.0 +1.7**
baz=322,slow=5.1,SNR=22
H11N3 T T 11 48 00.8
baz=18,slow=76,SNR=155
H11N1 WAKE ISLAND Hy 34.39 203 P **P** **11 10 28.8 +1.5**
baz=322,slow=5.1,SNR=13
H11N1 T T 11 47 55.2
baz=18,slow=76,SNR=89
CLRS Cowichan Lake 34.54 73 IAmb IAmb 11 10 30.3
comp=Z,226nm,0.9s
JGF Kuroka 34.73 258 P **P** **11 10 31.6 +1.2**
JGF Kuroka 34.73 258 P **P** **11 10 32.7 +2.3**
BNX BinXian 34.75 281⇓ P **P** **11 10 30.2 -0.3**
BNX pP **pP** **11 11 15.0 -0.8**
BNX sP **sP** **11 11 37.0 -4.5**
BNX S **S** **11 15 43.1 -0.1**
BNX sS **sS** **11 16 59.1 -6.4**
BNX pmax pmax
comp=Z,26nm,1.0s
BNX pmax pmax
comp=Z,150nm,4.3s
BNX LR LR
comp=Z,3μm,18.3s
BNX LR LR
comp=Z,1μm,18.4s
BNX LR LR
comp=Z,840nm,12.9s
YKA Yellowknife Ar 34.77 47 P **P** **11 10 31.1 +0.7**
comp=Z,290nm,0.9s,baz=284,slow=8.5,SNR=1918
YKA pP **pP** **11 11 15.2 -0.6**
comp=Z,2.2nm,0.5s,baz=261,slow=23,SNR=0.8
YKA PcP **PcP** **11 12 58.4 +0.3**
comp=Z,4.8nm,0.5s,baz=194,slow=2.8,SNR=3.9

YKA ScP **ScP** **11 16 20.0 -1.3**
comp=Z,21nm,1.0s,baz=283,slow=3.4,SNR=13
YKA P3KPbc 11 41 19.3
comp=Z,0.6nm,0.8s,baz=96,slow=5.2,SNR=12
comp=Z,290nm,0.9s
WAKE Wake Island 34.86 203 P **P** **11 10 32.4 +0.8**
WAKE Wake Island 34.86 203 P **P** **11 10 33.0 +1.4**
WAKE Wake Island 34.86 203 P **P** **11 10 32.7 +1.1**
PGC Sidney 35.02 73 P **P** **11 10 32.8 +0.1**
INU Inuyama 35.10 258 P **P** **11 10 36.1 +2.5**
KIP Kipapa 35.14 144 P **P** **11 10 35.1 +1.1**
KIP Kipapa 35.14 144 P **P** **11 10 36.1 +2.1**
KIP Kipapa 35.14 144*d i*P **P** **11 10 36.1 +2.1**
KIP pmax pmax
comp=Z,1μm,1.3s
KIP Kipapa 35.14 144 P **P** **11 10 36.1 +2.1**
KIP PcP **PcP** **11 13 01.2 +1.4**
HON Honolulu 35.23 144 P **P** **11 10 36.2 +1.4**
HON Honolulu 35.23 144 P **P** **11 10 36.2 +1.4**
HON pmax pmax
comp=Z,657nm,0.9s
NLWA Neilton Lookou 35.37 76 IAmb IAmb 11 10 38.1
comp=Z,520nm,1.2s
WISH Wishkah 35.57 76 IAmb IAmb 11 10 40.0
comp=Z,385nm,1.1s
H11S1 WAKE ISLAND Hy 35.59 203 P **P** **11 10 39.4 +1.7**
baz=353,slow=3.5,SNR=30
H11S1 T T 11 49 29.6
baz=18,slow=76,SNR=188
H11S2 WAKE ISLAND Hy 35.61 203 P **P** **11 10 39.5 +1.6**
baz=353,slow=3.5,SNR=16
H11S2 T T 11 49 32.1
baz=18,slow=76,SNR=207
H11S3 WAKE ISLAND Hy 35.61 203 P **P** **11 10 39.5 +1.6**
baz=353,slow=3.5,SNR=11
H11S3 T T 11 49 32.0
baz=18,slow=76,SNR=205
RADR Rader Ridge 35.90 77 P **P** **11 10 40.5 +0.2**
RADR IAmb IAmb 11 10 42.6
comp=Z,494nm,1.4s
GNW Green Mountain 35.91 75 P **P** **11 10 40.8 +0.5**
GNW IAmb IAmb 11 10 42.3
comp=Z,236nm,0.8s
E03A Lebam 35.98 77 P **P** **11 10 41.4 +0.6**
KHLH Kahului Airpor 36.21 142 IAmb IAmb 11 10 46.4
comp=Z,324nm,0.8s
F03A Seaside 36.30 77 IAmb IAmb 11 10 45.8
comp=Z,353nm,0.9s
HLK Haleakala 36.40 142 P **P** **11 10 46.0 +1.0**
HLK IAmb IAmb 11 10 47.9
comp=Z,446nm,1.0s
JOHN Johnston Islan 36.52 164 P **P** **11 10 46.8 +1.1**
JOHN IAmb IAmb 11 10 47.7
comp=Z,398nm,0.9s
JOHN Johnston Islan 36.52 164 P **P** **11 10 47.2 +1.5**
JOHN Johnston Islan 36.52 164 P **P** **11 10 47.2 +1.5**
HEBO Mount Hebo 36.55 79 IAmb IAmb 11 10 48.2
comp=Z,351nm,1.2s
G03D McMinnville, O 36.85 78 IAmb IAmb 11 10 50.4
comp=Z,517nm,1.4s
CN2 Changchun 36.96 279 *e*P **P** **11 10 48.6 -0.6**
CN2 *e*pP pP 11 11 31.7 -3.3
CN2 *e*S **S** **11 16 17.0 +0.1**
CN2 *es*S sS 11 17 32.7 -7.0
CN2 pmax pmax
comp=Z,10.0nm,1.7s
CN2 LR LR
comp=Z,360nm,12.0s
CN2 LR LR
comp=Z,310nm,12.0s
CN2 LR LR
comp=Z,470nm,13.0s
F04A Amboy 36.97 77 IAmb IAmb 11 10 50.9
comp=Z,334nm,0.7s
BOD Bodaibo 37.01 305 *e*P **P** **11 10 49.2 -0.2**
BOD pmax pmax
comp=Z,58nm,1.2s
COR Corvallis 37.16 79 P **P** **11 10 51.7 +0.8**
COR IAmb IAmb 11 10 53.5
comp=Z,327nm,0.9s
COR Corvallis 37.16 79 P **P** **11 10 51.7 +0.8**
COR pmax pmax
comp=Z,327nm,1.0s
COR Corvallis 37.16 79⇑ P **P** **11 10 52.0 +1.1**
COR pP **pwP** **11 11 42.0 +0.4**
COR PcP **PcP** **11 13 07.2 +1.6**
COR ScP **ScP** **11 16 30.1 -0.3**
LTY Liberty 37.33 74 IAmb IAmb 11 10 53.4
comp=Z,431nm,1.4s
KEBM Edson Butte 37.49 82 P **P** **11 10 54.7 +0.9**
HIA Hailar 37.52 290 P **P** **11 10 54.3 +0.4**
HUH Hualalai 37.53 142 IAmb IAmb 11 10 57.5
comp=Z,307nm,0.8s
H04D Lebanon 37.53 79 IAmb IAmb 11 10 55.7
comp=Z,177nm,0.8s
B08A Colville Reser 37.56 72 IAmb IAmb 11 10 55.4
comp=Z,158nm,0.8s
BUCK Buck Mountain 37.56 80 P **P** **11 10 55.2 +0.9**
BUCK IAmb IAmb 11 10 57.1
comp=Z,314nm,1.1s
J01E Myrtle Point 37.57 82 IAmb IAmb 11 10 57.0
comp=Z,519nm,1.4s
POHA Pohakuloa 37.58 141 P **P** **11 10 56.1 +1.2**
POHA Pohakuloa 37.58 141 P **P** **11 10 57.2 +2.3**
POHA Pohakuloa 37.58 141 P **P** **11 10 56.6 +1.7**
I03D Drain, OR 37.62 80 P **P** **11 10 55.6 +0.9**
HMH Humu'ula Sheep 37.74 141 IAmb IAmb 11 10 59.4
comp=Z,249nm,0.9s
MLOA Mauna Loa Obse 37.77 141 IAmb IAmb 11 11 00.6
comp=Z,614nm,1.4s
H04A Detroit Lake 37.78 78 P **P** **11 10 56.5 +0.4**
H04A IAmb IAmb 11 10 57.9
comp=Z,404nm,1.0s
MLH Mauna Loa 37.88 141 IAmb IAmb 11 11 00.3
comp=Z,368nm,0.8s
MXC Moxie City 37.90 75 IAmb IAmb 11 10 58.5
comp=Z,393nm,1.4s
HHU Hamhung 37.94 272 P **P** **11 10 58.6 +1.2**
K02D Willamette Mer 37.99 82 IAmb IAmb 11 11 00.6
comp=Z,329nm,1.2s
G05A Wamic 38.00 77 IAmb IAmb 11 11 05.0
comp=Z,295nm,1.0s
DBO Dodson Butte 38.01 81 P **P** **11 10 59.1 +1.0**
DBO IAmb IAmb 11 11 00.9
comp=Z,388nm,1.2s
KHU Kahuku 38.02 142 IAmb IAmb 11 11 01.5
comp=Z,431nm,1.0s
HLP Hilina Pali 38.09 141 IAmb IAmb 11 11 01.9
comp=Z,358nm,0.9s
I04A Tendick Farm, 38.13 80 P **P** **11 10 59.3 +0.2**
I04A IAmb IAmb 11 11 01.2
comp=Z,517nm,1.2s
E07A Sunnyside 38.17 74 IAmb IAmb 11 11 00.9
comp=Z,648nm,1.5s
JCJ Chichijima 38.19 244 P **P** **11 11 01.2 +1.5**
JCJ Chichijima 38.19 244 ScP **ScP** **11 16 30.3 -4.3**
comp=Z,63nm,0.9s,baz=71,slow=4.0,SNR=4.9
KSXB Camp Six Broad 38.36 83 IAmb IAmb 11 11 03.9
comp=Z,368nm,1.0s
L02F Cave Junction 38.38 83 IAmb IAmb 11 11 03.9
comp=Z,374nm,1.0s
HAWA Hanford 38.44 74 IAmb IAmb 11 11 03.0
comp=Z,336nm,0.8s
C09A Chrisman Ranch 38.45 72 IAmb IAmb 11 11 02.5
comp=Z,635nm,1.4s
D08A Wollman Farm, 38.46 73 IAmb IAmb 11 11 02.6
comp=Z,489nm,1.4s
F07A Phinny Hill Vi 38.47 75 IAmb IAmb 11 11 03.4
comp=Z,303nm,0.8s
HUMO Hull Mountain 38.47 82 P **P** **11 11 02.6 +0.7**
HUMO IAmb IAmb 11 11 04.6
comp=Z,453nm,1.4s
I05D Terrebonne, OR 38.47 78 IAmb IAmb 11 11 03.8
comp=Z,358nm,1.2s
KRMB Red Mountain 38.52 84 IAmb IAmb 11 11 05.4
comp=Z,571nm,1.3s
E08A Dider Farm, El 38.67 74 IAmb IAmb 11 11 04.6
comp=Z,243nm,0.9s
NEW Newport 38.88 70 IAmb IAmb 11 11 06.1
comp=Z,376nm,0.8s
NEW Newport 38.88 70 P **P** **11 11 04.8 -0.5**
baz=300,SNR=277
NEW ScP **ScP** **11 16 35.6 -1.4**
baz=300,SNR=9.5
RES Resolute Bay 38.91 25 IAmb IAmb 11 11 07.6
comp=Z,362nm,1.1s

PINE Pine Mountain 39.02 79 IAmb IAmb 11 11 08.9
comp=Z,304nm,1.2s
J05D Fort Rock, OR 39.13 80 IAmb IAmb 11 11 10.0
comp=Z,453nm,1.1s
YBH Yreka Blue Hor 39.13 83 IAmb IAmb 11 11 10.4
comp=Z,394nm,1.0s
E09A Wood Farm, Sta 39.20 73 IAmb IAmb 11 11 08.8
comp=Z,616nm,1.3s
SNY Shenyang 39.22 278 ⇑P **P** **11 11 09.4 +1.4**
SNY S **S** **11 16 51.6 +0.9**
SNY pmax pmax
comp=Z,49nm,1.4s
SNY pmax pmax
comp=Z,230nm,6.3s
SNY LR LR
comp=Z,350nm,15.3s
SNY LR LR
comp=Z,300nm,17.1s
SNY LR LR
comp=Z,490nm,16.1s
KSRS Korea Array 39.24 269 P **P** **11 11 10.1 +1.9**
comp=Z,31nm,1.0s,baz=58,slow=7.9,SNR=64
KSRS pP **pP** **11 11 54.4 -0.4**
comp=Z,6.0nm,0.9s,baz=59,slow=6.4,SNR=2.2
KSRS PcP **PcP** **11 13 13.2 +1.0**
comp=Z,7.5nm,0.8s,baz=58,slow=4.9,SNR=4.9
KSRS pPcP 11 14 09.5
comp=Z,4.5nm,0.7s,baz=0.0,slow=3.5,SNR=7.2
KSRS ScP **ScP** **11 16 39.0 +0.6**
comp=Z,4.4nm,0.9s,baz=54,slow=4.3,SNR=6.5
comp=Z,31nm,1.0s
PYAG Pyongyang 39.56 273 P **P** **11 11 12.2 +1.3**
PYAG pP **pP** **11 11 59.2 +2.0**
PYAG S **S** **11 16 57.6 +1.8**
PYAG AmB
comp=Z,333nm,2.2s
PYAG AMS AMS
comp=Z,187nm,3.2s
SUJ Sinuiju 39.69 275 P **P** **11 11 12.9 +1.1**
SUJ S **S** **11 16 59.9 +2.2**
SUJ AmB
comp=Z,365nm,2.4s
SUJ AMS AMS
comp=Z,224nm,2.8s
I07A Izee 39.71 77 IAmb IAmb 11 11 13.9
comp=Z,275nm,1.0s
INCN Inchon 40.01 270 P **P** **11 11 16.2 +1.6**
INCN Inchon 40.01 270 P **P** **11 11 16.6 +1.9**
INCN Inchon 40.01 270 P **P** **11 11 16.2 +1.6**
INCN pmax pmax
comp=Z,56nm,1.0s
INCN Inchon 40.01 270 P **P** **11 11 16.8 +2.1**
INCN Inchon 40.01 270 P **P** **11 11 16.5 +1.9**
HJU Haeju 40.21 271 P **P** **11 11 17.5 +1.3**
HJU S **S** **11 17 07.6 +2.1**
HJU AmB
comp=Z,701nm,2.7s
HJU AMS AMS
comp=Z,248nm,4.0s
TJN Taejon 40.27 268 P **P** **11 11 18.2 +1.4**
TJN IAmb IAmb 11 11 19.4
comp=Z,284nm,0.9s
TJN Taejon 40.27 268 P **P** **11 11 19.0 +2.2**
TJN Taejon 40.27 268*d* *i*P **P** **11 11 18.2 +1.4**
JNU Nakatsue 40.32 261 P **P** **11 11 18.3 +1.0**
JNU Nakatsue 40.32 261 P **P** **11 11 19.1 +1.8**
JNU Nakatsue 40.32 261 ScP **ScP** **11 16 41.8 -1.1**
comp=Z,18nm,1.1s,baz=134,slow=5.3,SNR=4.1
JNU S **S** **11 17 08.8 +1.4**
comp=Z,3.1nm,0.9s,baz=295,slow=18,SNR=1.2
HOPS Hopland Field 40.56 86 P **P** **11 11 19.9 +0.8**
BMO Blue Mountains 40.59 75 IAmb IAmb 11 11 20.7
comp=Z,217nm,0.9s
J08A Circle Bar Ran 40.74 78 P **P** **11 11 20.4 -0.2**
ORV Oroville 41.17 84 IAmb IAmb 11 11 25.7
comp=Z,390nm,0.9s
WVOR Wild Horse Val 41.18 79 IAmb IAmb 11 11 26.0
comp=Z,294nm,1.1s
MCCM Marconi Confer 41.21 87 IAmb IAmb 11 11 26.3
comp=Z,512nm,1.1s
PLID Pearl Lake 41.23 74 P **P** **11 11 23.8 -1.0**
ALE Alert 41.61 10 P **P** **11 11 28.2 +1.1**
AFDM Forest Hills D 41.87 85 P **P** **11 11 30.1 +0.4**
AFDM IAmb IAmb 11 11 31.8
comp=Z,453nm,1.1s
XLT XiLinHaoTe 42.51 285 ⇓*i*P **P** **11 11 36.3 +1.4**
XLT pP pP 11 12 23.7 +1.9
XLT S **S** **11 17 40.2 +0.8**
XLT sS sS 11 19 03.3 -0.5
XLT ScS **ScS** **11 21 10.1 -0.6**
XLT pmax pmax
comp=Z,26nm,1.9s
XLT LR LR
comp=Z,110nm,16.9s
XLT LR LR
comp=Z,870nm,15.3s
XLT LR LR
comp=Z,1μm,13.3s
CMB Columbia Colle 42.80 85 IAmb IAmb 11 11 39.6
comp=Z,575nm,1.2s
HLID Hailey 43.03 75 P **P** **11 11 39.2 -0.1**
HLID IAmb IAmb 11 11 40.6
comp=Z,407nm,1.1s
HLID Hailey 43.03 75 P **P** **11 11 39.1 -0.2**
baz=305,SNR=460
HLID ScP **ScP** **11 16 53.0 -0.7**
baz=305,SNR=16
WAKR Walker 43.08 84 IAmb IAmb 11 11 42.2
comp=Z,614nm,1.0s
EGMT Eagleton 43.21 67 IAmb IAmb 11 11 41.0
comp=Z,353nm,0.9s
EGMT Eagleton 43.21 67 P **P** **11 11 39.8 -0.7**
baz=303,SNR=170
EGMT ScP **ScP** **11 16 52.6 -1.6**
baz=303
BMN Battle Mountai 43.23 80 IAmb IAmb 11 11 42.6
comp=Z,418nm,1.2s
NRIK Noril'sk 43.26 329*c* *i*P **P** **11 11 41.2 +0.8**
NRIK pmax pmax
comp=Z,205nm,1.3s
NRIK Noril'sk 43.26 329 P **P** **11 11 41.5 +1.1**
comp=Z,88nm,1.1s,baz=74,slow=7.1,SNR=85
NRIK pP **pP** **11 12 27.8 -0.1**
comp=Z,42nm,1.1s,baz=88,slow=6.5,SNR=3.8
NRIK S **S** **11 17 50.0 +0.6**
comp=Z,0.9nm,0.4s,baz=335,slow=19,SNR=1.5
NRIK ScS **ScS** **11 21 13.7 -0.7**
comp=Z,0.9nm,0.3s,baz=316,slow=23,SNR=5.9
comp=Z,88nm,1.1s
BOZ Bozeman (W) 43.49 71 IAmb IAmb 11 11 43.5
comp=Z,403nm,0.8s
BOZ Bozeman (W) 43.49 71 P **P** **11 11 42.1 -0.7**
baz=304,SNR=560
BOZ ScP **ScP** **11 16 54.0 -1.5**
baz=304,SNR=9.0
KVN Kaiserville 43.55 83 IAmb IAmb 11 11 45.5
comp=Z,569nm,1.2s
RYN Ryan 43.56 83 IAmb IAmb 11 11 45.5
comp=Z,476nm,1.0s
PMPB Monarch Peak 43.72 88 IAmb IAmb 11 11 54.5
comp=Z,339nm,0.9s
NVAR Mina Array Bea 43.82 83 P **P** **11 11 46.2 +0.6**
comp=Z,365nm,0.9s,baz=293,slow=7.5,SNR=1695
NVAR PcP **PcP** **11 13 28.6 +0.9**
comp=Z,11nm,0.7s,baz=336,slow=2.0,SNR=1.7
NVAR ScP **ScP** **11 16 55.8 -1.2**
comp=Z,17nm,1.0s,baz=282,slow=4.1,SNR=9.2
NVAR S **S** **11 17 58.5 -0.3**
comp=Z,0.3nm,0.6s,baz=32,slow=42,SNR=2.4
NVAR ScS **ScS** **11 21 17.1 -2.4**
comp=Z,0.1nm,0.5s,baz=315,slow=57,SNR=0.9
FFC Flin Flon 43.83 55 P **P** **11 11 44.6 -0.6**
FFC Flin Flon 43.83 55 P **P** **11 11 44.6 -0.6**
FFC pmax pmax
comp=Z,205nm,1.1s
FFC Flin Flon 43.83 55 P **P** **11 11 44.6 -0.6**
FFC ScP **ScP** **11 16 54.5 -1.9**
NV11 Mina Array Sit 43.91 83 IAmb IAmb 11 11 45.0
comp=Z,414nm,1.1s
MLAC Mammoth, Mammo 44.00 85 P **P** **11 11 48.8 +1.7**
baz=310,SNR=70
MLAC ScP **ScP** **11 16 59.6 +1.8**
baz=310
TULEG Thule 44.06 18 P **P** **11 11 47.2 +0.5**
TULEG IAmb IAmb 11 11 48.7
comp=Z,557nm,1.6s
TULEG Thule 44.06 18 *i*P **P** **11 11 47.0 +0.3**
TULEG IAmb IAmb 11 11 48.3
comp=Z,603nm,1.6s
YHL Hebgen Lake 44.18 71 P **P** **11 11 48.0 -0.5**
YHL IAmb IAmb 11 11 49.4
comp=Z,641nm,1.1s
IRK Irkutsk 44.51 302 *e*P **P** **11 11 49.9 -0.8**
IRK *e* 11 12 41.9
IRK pmax pmax
comp=Z,61nm,1.4s
VOG Valley Oaks Go 44.52 87 P **P** **11 11 51.7 +0.8**
baz=311,SNR=35
YNR Norris Junctio 44.55 71 IAmb IAmb 11 11 52.8
comp=Z,442nm,1.0s
YFT Old Faithful 44.61 72 IAmb IAmb 11 11 53.8
comp=Z,312nm,0.8s
DSP Deep Springs 44.70 84 IAmb IAmb 11 11 55.0
comp=Z,700nm,1.1s
TIN Tinemaha, Big 44.74 85 P **P** **11 11 54.2 +1.4**
baz=310,SNR=146
TIN ScP **ScP** **11 17 00.3 -0.4**
baz=310
BJI Beijing 44.76 281 P **P** **11 11 54.0 +1.3**
BJI pP **pP** **11 12 42.4 +2.3**
BJI sP **sP** **11 13 05.3 -0.1**
BJI PcP **PcP** **11 13 30.8 +0.2**
BJI S **S** **11 18 13.6 +1.7**
BJI sS **sS** **11 19 34.8 -2.2**
BJI ScS **ScS** **11 21 22.9 -2.0**
BJI pmax pmax
comp=Z,11nm,1.2s
BJI pmax pmax
comp=Z,360nm,5.8s
BJI LR LR
comp=Z,500nm,22.6s
BJI LR LR
comp=Z,290nm,17.6s
BJI LR LR
comp=Z,310nm,19.1s
BJT Baijiatuao 44.78 281 P **P** **11 11 54.1 +1.2**
BJT Baijiatuao 44.78 281 P **P** **11 11 54.0 +1.2**
BJT pP **pP** **11 12 42.6 +2.3**
BJT PcP **PcP** **11 13 31.0 +0.3**
H17A Grant Village 44.80 72 IAmb IAmb 11 11 55.6
comp=Z,599nm,1.1s
H17A Grant Village 44.80 72 P **P** **11 11 54.5 +1.2**
baz=306,SNR=276
H17A ScP **ScP** **11 17 02.1 +1.1**
baz=306,SNR=18
LKWY Lake 44.80 71 IAmb IAmb 11 11 55.4
comp=Z,299nm,1.1s
SMMC Simmler 44.80 88 P **P** **11 11 54.5 +1.3**
baz=311,SNR=135
SMMC ScP **ScP** **11 16 59.9 -1.0**
baz=311
YMP Mirror Lake Pl 44.84 71 IAmb IAmb 11 11 54.8
comp=Z,393nm,1.3s
MZP Montezuma Peak 44.84 84 P **P** **11 11 54.0 +0.2**
FLWY Flagg Ranch 44.91 72 IAmb IAmb 11 11 55.6
comp=Z,350nm,0.8s
VES Vestal, Richgr 45.01 87 P **P** **11 11 55.1 +0.3**
baz=311,SNR=575
VES ScP **ScP** **11 17 00.4 -1.2**
baz=311
HVU Hansel Valley 45.07 76 IAmb IAmb 11 11 56.7
comp=Z,324nm,1.1s
TPAW Teton Pass 45.11 73 IAmb IAmb 11 11 57.5
comp=Z,496nm,1.8s
RLMT Red Lodge 45.13 70 P **P** **11 11 55.6 -0.2**
baz=305,SNR=38
RLMT ScP **ScP** **11 17 01.5 -0.8**
baz=305,SNR=6.7
PKM Mcpherson Peak 45.20 88 P **P** **11 11 57.7 +1.2**
baz=312,SNR=136
PKM ScP **ScP** **11 17 02.0 -0.7**
baz=312
CWC Cottonwood Cre 45.23 85 P **P** **11 11 57.6 +0.8**
baz=311
CWC ScP **ScP** **11 17 00.6 -2.2**
baz=311
GRAC Grapevine Rang 45.31 84 IAmb IAmb 11 11 59.6
comp=Z,949nm,1.4s
GRAC Grapevine Rang 45.31 84 P **P** **11 11 58.1 +1.0**
baz=310,SNR=25
BCW Bitter Crk WRg 45.41 88 IAmb IAmb 11 12 00.6
comp=Z,493nm,0.9s
ULN Ulaanbaatar 45.42 295 P **P** **11 11 58.6 +0.5**
ULN Ulaanbaatar 45.42 295*c* *i*P **P** **11 11 58.5 +0.5**
ULN pmax pmax
comp=Z,59nm,1.7s
ULN Ulaanbaatar 45.42 295 P **P** **11 11 59.3 +1.2**
ULN Ulaanbaatar 45.42 295 P **P** **11 11 58.7 +0.5**
ULN pP **pwP** **11 12 48.7 -1.8**
ULN ScP **ScP** **11 17 01.9 -1.4**
FCC Fort Churchill 45.49 47 P **P** **11 11 58.2 0.0**
FCC IAmb IAmb 11 11 59.7
comp=Z,417nm,0.9s
FCC Fort Churchill 45.49 47 P **P** **11 11 58.2 0.0**
FCC pmax pmax
comp=Z,417nm,1.0s
ISA Isabella, Lake 45.50 87 P **P** **11 11 58.5 -0.2**
ISA IAmb IAmb 11 12 00.1
comp=Z,428nm,1.2s
ISA Isabella, Lake 45.50 87 P **P** **11 11 58.6 -0.2**
baz=311,SNR=273
ISA ScP **ScP** **11 17 01.3 -2.5**
baz=311,SNR=5.0
ISA Isabella, Lake 45.50 87 P **P** **11 11 58.5 -0.2**
ISA pmax pmax
comp=Z,428nm,1.3s
R11B Troy Canyon, C 45.52 82 IAmb IAmb 11 12 00.6
comp=Z,528nm,1.2s
R11B Troy Canyon, C 45.52 82 P **P** **11 11 59.0 0.0**
baz=309,SNR=632
R11B ScP **ScP** **11 17 02.8 -1.1**
baz=309,SNR=5.8
Q12A Willow Creek R 45.54 80 IAmb IAmb 11 12 01.0
comp=Z,700nm,1.6s
SBC Santa Barbara 45.56 89 P **P** **11 12 00.4 +1.3**
baz=312,SNR=27
SBC ScP **ScP** **11 17 02.2 -1.7**
baz=312
ARVC Arvin 45.64 87 P **P** **11 12 00.2 +0.4**
baz=312,SNR=52
ARVC ScP **ScP** **11 17 02.9 -1.4**
baz=312
SONM Songino Array 45.80 295 P **P** **11 12 01.9 +0.9**
comp=Z,13nm,0.9s,baz=54,slow=7.8,SNR=76
SONM pP **pP** **11 12 48.4 -0.2**
comp=Z,10nm,0.8s,baz=58,slow=7.6,SNR=4.3
SONM pPcP 11 14 31.0
comp=Z,14nm,0.8s,baz=72,slow=1.9,SNR=7.0
SONM ScP **ScP** **11 17 03.6 -1.3**
comp=Z,9.6nm,0.9s,baz=68,slow=2.4,SNR=8.2
SONM S **S** **11 18 27.6 +0.7**
comp=Z,1.0nm,0.8s,baz=6.6,slow=3.8,SNR=1.9
SONM ScS **ScS** **11 21 28.0 -3.7**
comp=Z,0.7nm,0.4s,baz=30,slow=40,SNR=2.2
comp=Z,13nm,0.9s
MPMC Manual Prospec 45.84 85 P **P** **11 12 02.0 +0.4**
baz=311,SNR=482
MPMC ScP **ScP** **11 17 04.7 -0.7**
baz=311,SNR=8.9
SPR3 Spring Creek 3 45.86 80 IAmb IAmb 11 12 04.2
comp=Z,661nm,1.6s
S11A Rachel 45.87 82 IAmb IAmb 11 12 05.8
comp=Z,583nm,1.1s
WCT Wildcat Mounta 45.89 84 IAmb IAmb 11 12 03.6
comp=Z,325nm,1.1s
LAO LASA Array 45.95 67 IAmb IAmb 11 12 03.2
comp=Z,640nm,1.2s
LAO LASA Array 45.95 67 P **P** **11 12 02.0 0.0**
baz=305,SNR=113
LAO ScP **ScP** **11 17 04.9 -0.6**
baz=305
FURC Furnace Creek, 45.96 85 P **P** **11 12 02.8 +0.7**
baz=311,SNR=622
FURC ScP **ScP** **11 17 05.3 -0.2**
baz=311,SNR=6.1
TPNV Topopah Spring 46.02 84 P **P** **11 12 03.3 +0.5**
baz=310,SNR=1000
TPNV ScP **ScP** **11 17 05.3 -0.7**
baz=310,SNR=5.3
DUG Dugway, Tooele 46.02 78 IAmb IAmb 11 12 04.5
comp=Z,814nm,1.3s
DUG Dugway, Tooele 46.02 78 P **P** **11 12 02.9 +0.1**
baz=308,SNR=468
DUG ScP **ScP** **11 17 05.4 -0.6**
baz=308,SNR=5.9
DGMT Dagmar 46.04 63 IAmb IAmb 11 12 03.4
comp=Z,406nm,1.1s
DGMT Dagmar 46.04 63 P **P** **11 12 02.1 -0.7**
baz=304,SNR=90
DGMT ScP **ScP** **11 17 04.2 -1.6**
baz=304
OSI Osito Audit: C 46.05 88 P **P** **11 12 04.0 +1.0**
baz=312,SNR=27
ZAK Zakamensk 46.05 300 *e*P **P** **11 12 02.6 -0.2**
ZAK pmax pmax
comp=Z,45nm,1.4s
LRMC Laurel Mtn Rad 46.11 86 P **P** **11 12 03.6 +0.1**
baz=311,SNR=214
LRMC ScP **ScP** **11 17 05.0 -1.4**
baz=311,SNR=11
GWY Greenwater Val 46.26 85 IAmb IAmb 11 12 06.4
comp=Z,478nm,0.9s
QSM Queen of Sheba 46.28 85 IAmb IAmb 11 12 06.6
comp=Z,605nm,1.2s
TCUT Toone Canyon 46.28 76 IAmb IAmb 11 12 06.3
comp=Z,388nm,1.2s
EDW2 Edwards Air Fo 46.32 87 P **P** **11 12 05.3 +0.2**
baz=312,SNR=162
EDW2 ScP **ScP** **11 17 06.1 -1.1**
baz=312,SNR=8.2
CTU Camp Tracy 46.34 76 P **P** **11 12 05.2 -0.1**
BW06 Boulder Array 46.36 73 IAmb IAmb 11 12 06.3
comp=Z,462nm,1.1s
BW06 Boulder Array 46.36 73 P **P** **11 12 04.8 -0.7**
baz=307,SNR=476
BW06 ScP **ScP** **11 17 05.5 -2.0**
baz=307,SNR=8.0
PD31 Pinedale Array 46.36 73 IAmb IAmb 11 12 06.3
comp=Z,416nm,1.1s
PDAR Pinedale Array 46.36 73 P **P** **11 12 05.2 -0.3**
comp=Z,206nm,0.8s,baz=306,slow=3.6,SNR=1435
PDAR ScP **ScP** **11 17 05.3 -2.1**
comp=Z,10nm,0.9s,baz=337,slow=1.9,SNR=6.5
PDAR S **S** **11 18 32.4 -2.8**
comp=Z,1.6nm,1.0s,baz=334,slow=9.9,SNR=2.0
PDAR ScS **ScS** **11 21 33.0 -2.7**
comp=Z,0.1nm,0.5s,baz=219,slow=52,SNR=2.1
comp=Z,206nm,0.8s
JOW Kunigami 46.40 257 P **P** **11 12 06.0 +0.3**
JOW Kunigami 46.40 257 P **P** **11 12 08.6 +2.9**
JOW Kunigami 46.40 257 ScP **ScP** **11 17 07.4 -0.2**
comp=Z,41nm,1.1s,baz=152,slow=3.6,SNR=3.9
JOW S **S** **11 18 35.7 +0.1**
comp=Z,9.7nm,0.8s,baz=5.8,slow=29,SNR=1.6
JOW ScS **ScS** **11 21 33.8 -2.1**
comp=Z,6.8nm,0.5s,baz=273,slow=27,SNR=1.3
NEEM North Greenlan 46.46 14 *i*P **P** **11 12 05.1 -0.8**
NEEM IAmb IAmb 11 12 08.1
comp=Z,503nm,0.9s
NEEM North Greenlan 46.46 14 *i*P **P** **11 12 05.3 -0.6**
NEEM IAmb IAmb 11 12 07.7
comp=Z,1μm,1.0s
MOY Mondy 46.53 302 *e*P **P** **11 12 06.6 +0.1**
MOY *e* 11 12 57.3
MOY pmax pmax
comp=Z,35nm,1.8s
DECC Green Verdugo 46.53 88 P **P** **11 12 07.3 +0.7**
baz=312,SNR=32
NLU North Lily Min 46.61 78 P **P** **11 12 07.3 -0.2**
PASC Pasadena Art C 46.68 88 IAmb IAmb 11 12 09.4
comp=Z,572nm,1.3s
SHOC Shoshone, Teco 46.69 85 P **P** **11 12 08.3 +0.5**
baz=311,SNR=465
SHOC ScP **ScP** **11 17 08.0 -0.6**
baz=311,SNR=6.1
GSC Goldstone, Bar 46.76 86 P **P** **11 12 09.1 +0.6**
baz=312,SNR=961
GSC ScP **ScP** **11 17 07.9 -1.2**
baz=312,SNR=9.9
FMP Fort Macarthur 46.92 88 P **P** **11 12 09.8 +0.2**
baz=312,SNR=11
RRX Edison Barstow 46.93 86 P **P** **11 12 10.7 +0.9**
baz=312,SNR=20
BFSC Mount Baldy Ra 46.95 87 P **P** **11 12 10.4 +0.4**
baz=312,SNR=163
BFSC ScP **ScP** **11 17 08.0 -2.0**
baz=312
HHC Hu-ho-hao-te 47.01 285 ⇑P **P** **11 12 12.0 +1.6**
HHC pP pwP 11 13 01.4 -1.8
HHC sP sP 11 13 24.0 +0.6
HHC S **S** **11 18 45.2 +1.1**
HHC sS sS 11 20 05.7 -4.3
HHC ScS **ScS** **11 21 37.9 -1.9**
HHC pmax pmax
comp=Z,31nm,1.4s
HHC pmax pmax
comp=Z,230nm,5.2s
CIS Catalina Islan 47.06 89 P **P** **11 12 11.1 +0.3**
baz=313,SNR=43
CIS ScP **ScP** **11 17 08.6 -1.7**
baz=313
TUQ Turquoise Moun 47.21 85 P **P** **11 12 12.5 +0.5**
baz=311,SNR=65
TUQ ScP **ScP** **11 17 10.0 -1.0**
baz=311,SNR=6.3
TCRU Three Creeks R 47.24 79 IAmb IAmb 11 12 14.4
comp=Z,982nm,1.9s
SCI2 San Clemente I 47.26 89 P **P** **11 12 12.8 +0.5**
baz=313,SNR=24
HNS HongShan 47.33 279 ⇑P **P** **11 12 14.2 +1.5**
HNS pP **pP** **11 13 02.9 +2.2**
HNS PcP **PcP** **11 13 41.1 +1.5**
HNS ScP **ScP** **11 17 11.6 +0.3**
HNS S **S** **11 18 48.0 -0.4**
HNS sS **sS** **11 20 12.7 -1.6**
HNS ScS **ScS** **11 21 41.2 -0.5**
HNS pmax pmax
comp=Z,58nm,1.3s
HNS pmax pmax
comp=Z,290nm,5.0s
HNS LR LR
comp=Z,460nm,20.4s
HNS LR LR
comp=Z,460nm,14.7s
HNS LR LR
comp=Z,620nm,17.7s
HEC Hector,Ludlow 47.36 86 P **P** **11 12 13.6 +0.4**
baz=312,SNR=179
HEC ScP **ScP** **11 17 10.0 -1.6**
baz=312,SNR=11
BBRC Big Bear Solar 47.39 87 P **P** **11 12 14.2 +0.6**
baz=312,SNR=158
BBRC ScP **ScP** **11 17 10.2 -1.7**
baz=312,SNR=6.3
MVU Marysvale 47.45 79 IAmb IAmb 11 12 15.9
comp=Z,731nm,1.1s
ELS Elsinore Mount 47.49 88 IAmb IAmb 11 12 15.9
comp=Z,728nm,1.5s
TMUT Trail Mountain 47.55 78 IAmb IAmb 11 12 16.3
comp=Z,333nm,0.8s
SSE Sheshan 47.63 268 P **P** **11 12 15.3 +0.2**
SSE S **S** **11 18 54.3 +1.6**
SSE pmax pmax
comp=Z,31nm,1.2s
SSE pmax pmax
comp=Z,220nm,3.7s
SSE LR LR
comp=Z,330nm,18.2s
SSE LR LR
comp=Z,210nm,18.5s
SSE Sheshan 47.63 268 P **P** **11 12 16.8 +1.7**
SSE pP **pP** **11 13 06.2 +2.3**
SSE sP **sP** **11 13 32.4 +3.2**
MURC Murrieta 47.67 88 P **P** **11 12 15.8 +0.3**
baz=313,SNR=124
MURC ScP **ScP** **11 17 11.8 -1.0**
baz=313,SNR=6.8
V12A Nelson 47.67 84 IAmb IAmb 11 12 17.5
comp=Z,529nm,1.4s
RDMU Red Mountain 47.72 75 IAmb IAmb 11 12 17.3
comp=Z,715nm,1.1s
MTPU Mount Pierson 47.77 80 IAmb IAmb 11 12 18.7
comp=Z,644nm,1.6s
LCMT Little Creek M 47.80 81 IAmb IAmb 11 12 18.6
comp=Z,584nm,1.2s
GMRC Granite Mounta 47.80 85 P **P** **11 12 16.8 +0.2**
baz=312,SNR=498
GMRC ScP **ScP** **11 17 12.5 -1.1**
baz=312,SNR=7.6
Q16A Castle Valley 47.81 78 IAmb IAmb 11 12 18.4

comp=Z,826nm,1.7s
SRU San Rafael Swe 48.08 77 IAmb IAmb 11 12 20.2
comp=Z,268nm,0.7s
BTO Baotou 48.08 285 *e*P **P** **11 12 19.8 +1.2**
BTO pP **pP** **11 13 08.1 +1.4**
BTO sP **sP** **11 13 32.0 +0.2**
BTO PP **PP** **11 14 14.9 +2.2**
BTO S **S** **11 19 01.5 +2.4**
BTO sS **sS** **11 20 25.9 +0.6**
BTO pmax pmax
comp=Z,100nm,1.0s
BTO pmax pmax
comp=Z,640nm,4.1s
BTO LR LR
comp=Z,3µm,19.5s
BTO LR LR
comp=Z,2µm,10.8s
BTO LR LR
comp=Z,670nm,9.2s
PKCU Pink Cliffs 48.08 80 IAmb IAmb 11 12 21.1
comp=Z,562nm,1.4s
GUMO Guam 48.10 230 P **P** **11 12 18.4 -0.5**
GUMO IAmb IAmb 11 12 18.4
comp=Z,496nm,1.2s
GUMO Guam 48.10 230 P **P** **11 12 18.4 -0.5**
GUMO pmax pmax
comp=Z,496nm,1.3s
GUMO Guam 48.10 230 P **P** **11 12 16.0 -2.9**
comp=Z,100nm,0.4s,baz=53,slow=3.6,SNR=7.4
PFO Pinyon Flats O 48.11 87 P **P** **11 12 19.0 +0.1**
PFO Pinyon Flats O 48.11 87 P **P** **11 12 19.1 +0.1**
baz=313,SNR=96
PFO ScP **ScP** **11 17 13.6 -1.3**
baz=313,SNR=12
PFO Pinyon Flats O 48.11 87*c* *i*P **P** **11 12 19.1 +0.1**
PFO pmax pmax
comp=Z,459nm,1.4s
PFO Pinyon Flats O 48.11 87 P **P** **11 12 19.0 +0.1**
PFO PcP **PcP** **11 13 43.3 +0.6**
PFO ScP **ScP** **11 17 13.5 -1.4**
TPFO Pinon Flats 48.12 87 P **P** **11 12 19.1 +0.1**
baz=313,SNR=117
TPFO ScP **ScP** **11 17 13.6 -1.3**
baz=313,SNR=8.9
BELC Belle Mtn. Jos 48.13 86 P **P** **11 12 18.9 -0.2**
baz=312,SNR=186
BELC ScP **ScP** **11 17 12.7 -2.3**
baz=312,SNR=8.4
K22A Casper 48.20 71 P **P** **11 12 18.6 -1.0**
baz=308,SNR=98
K22A ScP **ScP** **11 17 12.3 -2.9**
baz=308,SNR=5.8
109C Camp Elliot, M 48.21 88 IAmb IAmb 11 12 21.5
comp=Z,488nm,1.0s
109C Camp Elliot, M 48.21 88 P **P** **11 12 20.3 +0.8**
baz=313,SNR=50
NJ2 Nanjing 48.39 270⇓ *i*P **P** **11 12 21.7 +0.8**
NJ2 pP **pwP** **11 13 12.1 -0.1**
NJ2 sP **sP** **11 13 33.3 -1.6**
NJ2 S **S** **11 19 04.3 +0.9**
NJ2 sS **sS** **11 20 28.0 -1.7**
NJ2 ScS **ScS** **11 21 43.8 -5.1**
NJ2 SS **SS** **11 22 38.7 +2.8**
NJ2 pmax pmax
comp=Z,33nm,0.9s
NJ2 LR LR
comp=Z,750nm,9.7s
NJ2 LR LR
comp=Z,730nm,10.2s
NJ2 LR LR
comp=Z,740nm,16.8s
RWWY Rawlins 48.40 73 IAmb IAmb 11 12 21.6
comp=Z,354nm,1.2s
NEE2 Needles Airpor 48.45 85 P **P** **11 12 21.5 +0.1**
baz=312,SNR=19
TIY Taiyuan 48.49 281⇓ P **P** **11 12 23.8 +2.0**
TIY pP **pwP** **11 13 12.7 -2.2**
TIY S **S** **11 19 08.4 +3.4**
TIY pmax pmax
comp=Z,35nm,0.8s
IRM Iron Mountain 48.54 86 P **P** **11 12 22.3 +0.2**
baz=312,SNR=390
IRM ScP **ScP** **11 17 16.6 0.0**
baz=312,SNR=9.3
BAR Barrett 48.62 88 IAmb IAmb 11 12 24.4
comp=Z,439nm,1.1s
MONP2 Monument Peak 48.62 88 P **P** **11 12 23.3 +0.3**
baz=313,SNR=168
MONP2 ScP **ScP** **11 17 16.6 -0.6**
baz=313,SNR=6.1
KBS Kingsbay 48.68 357 P **P** **11 12 23.0 +0.5**
KBS IAmb IAmb 11 12 25.4
comp=Z,382nm,0.9s
KBS Kingsbay 48.68 357 *e*P **P** **11 12 24.6 +2.1**
KBS IAmb IAmb 11 12 25.2
comp=Z,355nm,0.9s
KBS Kingsbay 48.68 357*c* *i*P **P** **11 12 24.0 +1.5**
KBS pmax pmax
comp=Z,551nm,1.3s
KBS Kingsbay 48.68 357 *i* P **P** **11 12 23.3 +0.8**
KBS Kingsbay 48.68 357 *i* P **P** **11 12 23.0 +0.5**
KBS Kingsbay 48.68 357 P **P** **11 12 24.0 +1.5**
KBS PcP **PcP** **11 13 44.7 +0.8**
BC3 Big Chuckawall 48.69 86 P **P** **11 12 23.3 -0.1**
baz=313,SNR=78
BC3 ScP **ScP** **11 17 16.7 -0.6**
baz=313,SNR=7.3
HMU Henry Mountain 48.70 79 IAmb IAmb 11 12 25.0
comp=Z,368nm,0.8s
RSSD Black Hills 48.72 68 P **P** **11 12 22.4 -1.2**
RSSD Black Hills 48.72 68 P **P** **11 12 22.3 -1.2**
baz=308
RSSD ScP **ScP** **11 17 15.3 -2.1**
baz=308
RSSD Black Hills 48.72 68 P **P** **11 12 22.4 -1.2**
RSSD pmax pmax
comp=Z,298nm,1.5s
RSSD Black Hills 48.72 68 ⇑P **P** **11 12 22.5 -1.0**
RSSD PcP **PcP** **11 13 44.9 0.0**
RSSD ScP **ScP** **11 17 15.3 -2.1**
TKX Tecate 48.73 88 IAmb IAmb 11 12 25.3
comp=Z,440nm,1.3s
U15A North Rim 48.76 81 IAmb IAmb 11 12 26.1
comp=Z,726nm,1.3s
O20A White River Ci 48.77 75 IAmb IAmb 11 12 24.7
comp=Z,599nm,1.3s
O20A White River Ci 48.77 75 P **P** **11 12 23.3 -0.7**
baz=309,SNR=171
O20A ScP **ScP** **11 17 16.8 -0.9**
baz=309
MDND Maddock 48.90 62 P **P** **11 12 24.4 -0.2**
baz=307,SNR=126
SWSC Sam W. Stewart 48.97 87 P **P** **11 12 25.1 -0.2**
baz=313,SNR=64
SWSC ScP **ScP** **11 17 17.5 -0.8**
baz=313
IKP In-Ko-Pah, Jac 48.98 88 P **P** **11 12 26.0 +0.4**
baz=313,SNR=112
IKP ScP **ScP** **11 17 17.9 -0.6**
baz=313,SNR=7.0
PDMCI Parker Dam,Lak 49.05 85 P **P** **11 12 25.9 0.0**
baz=312,SNR=200
PDMCI ScP **ScP** **11 17 17.6 -1.1**
baz=312,SNR=5.9
UPNV Upernavik 49.06 19 *i* P **P** **11 12 24.0 -1.4**
UPNV IAmb IAmb 11 12 27.1
comp=Z,160nm,0.7s
UPNV Upernavik 49.06 19 *i* P **P** **11 12 24.6 -0.8**
UPNV IAmb IAmb 11 12 27.0
comp=Z,468nm,1.1s
E28A Huff 49.08 64 IAmb IAmb 11 12 26.8
comp=Z,393nm,1.1s
CCX Cicese 49.18 89 IAmb IAmb 11 12 28.7
comp=Z,276nm,1.0s
BLYC Blythe 49.20 86 IAmb IAmb 11 12 28.6
comp=Z,467nm,1.0s
SPA0 Spitsbergen Ar 49.25 356 P **P** **11 12 27.2 +0.4**
SPA0 IAmb IAmb 11 12 28.9
comp=Z,714nm,1.1s
SPA0 Spitsbergen Ar 49.25 356 *e*P **P** **11 12 27.8 +1.0**
SPA0 IAmb IAmb 11 12 28.7
comp=Z,744nm,1.1s
SPITS Spitsbergen Ar 49.25 356 P **P** **11 12 27.5 +0.6**
SPITS pmax pmax
comp=Z,618nm,1.0s
SPITS Spitsbergen Ar 49.25 356 P **P** **11 12 27.3 +0.4**
comp=Z,436nm,0.8s,baz=51,slow=6.6,SNR=324
SPITS pP **pP** **11 13 15.6 -0.4**
comp=Z,43nm,0.9s,baz=33,slow=8.6,SNR=1.3
comp=Z,436nm,0.8s
SPB2 Spitsbergen Ar 49.25 356 IAmb IAmb 11 12 28.9
comp=Z,472nm,0.8s
ULM Lac du Bonnet 49.42 57 IAmb IAmb 11 12 29.1
comp=Z,580nm,1.4s
ULM Lac du Bonnet 49.42 57 P **P** **11 12 27.8 -0.7**
comp=Z,128nm,0.6s,baz=306,slow=8.1,SNR=277
ULM ScP **ScP** **11 17 17.9 -2.1**
comp=Z,12nm,0.9s,baz=223,slow=2.2,SNR=2.3
comp=Z,128nm,0.6s
ESJX Sierra Juarez 49.52 88 IAmb IAmb 11 12 31.6
comp=Z,547nm,1.5s
CPBX Cerro Prieto 49.63 87 IAmb IAmb 11 12 32.1
comp=Z,387nm,1.2s
N23A Red Feather La 49.64 73 IAmb IAmb 11 12 31.8
comp=Z,508nm,1.7s
N23A Red Feather La 49.64 73 P **P** **11 12 30.4 -0.2**
baz=309,SNR=66
N23A ScP **ScP** **11 17 20.6 -0.9**
baz=309
GUVIX Guadalupe Vict 49.85 87 IAmb IAmb 11 12 33.9
comp=Z,700nm,1.2s
WUAZ Wupatki 49.92 82 IAmb IAmb 11 12 34.7
comp=Z,766nm,1.4s
WUAZ Wupatki 49.92 82 P **P** **11 12 33.1 +0.4**
baz=312,SNR=231
WUAZ ScP **ScP** **11 17 22.1 -0.5**
baz=312,SNR=7.1
Y14A Wickenburg 49.99 84 P **P** **11 12 33.4 +0.2**
Y14A IAmb IAmb 11 12 34.7
comp=Z,397nm,1.3s
HOPEN Hopen 50.33 353 *eP* **P** **11 12 36.3 +1.3**
HSPB Hornsund (broa 50.44 356 *i* P **P** **11 12 36.9 +1.1**
HSPB Hornsund (broa 50.44 356 *eP* **P** **11 12 37.3 +1.5**
MVCO Mesa Verde 50.52 78 P **P** **11 12 36.8 -0.4**
baz=311,SNR=129
MVCO ScP **ScP** **11 17 24.1 -1.2**
baz=311
ISCO Idaho Springs 50.54 73 P **P** **11 12 37.3 -0.1**
ISCO Idaho Springs 50.54 73 P **P** **11 12 37.4 -0.1**
baz=310,SNR=132
ISCO ScP **ScP** **11 17 24.6 -0.8**
baz=310
ISCO Idaho Springs 50.54 73 P **P** **11 12 37.3 -0.1**
ISCO pmax pmax
comp=Z,157nm,1.1s
LYN LuoYang 50.57 278 ⇑P **P** **11 12 38.6 +1.2**
LYN pP pP 11 13 28.2 +2.1
LYN sP PcP 11 13 52.2 +0.6
LYN ScP **ScP** **11 17 24.2 -1.0**
LYN S **S** **11 19 33.1 -0.6**
LYN pmax pmax
comp=Z,61nm,0.9s
LYN pmax pmax
comp=Z,440nm,3.5s
AGMN Agassiz Nation 50.62 59 P **P** **11 12 36.7 -0.8**
baz=308
X16A Lo Mia Camp, P 50.62 83 IAmb IAmb 11 12 40.1
comp=Z,395nm,1.2s
D32A Dogwood Acres, 50.72 61 IAmb IAmb 11 12 38.4
comp=Z,288nm,0.9s
BRIGG Briggsdale 50.79 72 IAmb IAmb 11 12 40.5
comp=Z,512nm,1.5s
S22A 4UR Ranch, Cre 51.16 76 P **P** **11 12 42.4 +0.3**
S22A IAmb IAmb 11 12 44.0
comp=Z,289nm,1.2s
S22A 4UR Ranch, Cre 51.16 76 P **P** **11 12 42.4 +0.3**
baz=311,SNR=186
S22A ScP **ScP** **11 17 27.6 -0.6**
baz=311,SNR=6.7
W18A Petrified Fore 51.18 81 IAmb IAmb 11 12 44.0
comp=Z,690nm,1.4s
W18A Petrified Fore 51.18 81 P **P** **11 12 42.5 +0.4**
baz=312,SNR=183
TARA Tarawa 51.34 190 P **P** **11 12 45.0 +1.8**
TARA Tarawa 51.34 190 P **P** **11 12 44.7 +1.4**
TARA ScP **ScP** **11 17 26.2 -2.5**
PIX Pinacate 51.35 87 P **P** **11 12 43.0 -0.2**
Q24A Divide 51.35 74 P **P** **11 12 43.5 0.0**
baz=311,SNR=29
Q24A ScP **ScP** **11 17 27.6 -1.3**
baz=311
SUSD Miller 51.36 65 IAmb IAmb 11 12 43.8
comp=Z,502nm,0.9s
SUSD Miller 51.36 65 P **P** **11 12 42.2 -0.9**
baz=309,SNR=38
SUSD ScP **ScP** **11 17 27.8 -0.7**
baz=309
X18A Snowflake 51.45 81 IAmb IAmb 11 12 46.3
comp=Z,853nm,1.6s
214A Organ Pipe Nat 51.47 86 P **P** **11 12 44.3 +0.2**
214A IAmb IAmb 11 12 45.7
comp=Z,444nm,1.2s
214A Organ Pipe Nat 51.47 86 P **P** **11 12 44.4 +0.2**
baz=314,SNR=194
214A ScP **ScP** **11 17 28.5 -0.7**
baz=314,SNR=5.0
UMMG Uummannaq 51.50 20 *i* P **P** **11 12 41.9 -1.7**
UMMG IAmb IAmb 11 12 46.1
comp=Z,51nm,0.7s
UMMG Uummannaq 51.50 20 *i* P **P** **11 12 42.9 -0.7**
UMMG IAmb IAmb 11 12 45.1
comp=Z,214nm,1.1s
B35A Bob, Littlefor 51.69 58 IAmb IAmb 11 12 45.9
comp=Z,311nm,0.9s
OGNE Ogallala 51.87 70 P **P** **11 12 46.8 -0.2**
baz=310,SNR=35
OGNE ScP **ScP** **11 17 29.3 -1.5**
baz=310
SDCO Great Sand Dun 51.95 75 IAmb IAmb 11 12 49.5
comp=Z,345nm,1.2s
SDCO Great Sand Dun 51.95 75 P **P** **11 12 47.9 0.0**
baz=311,SNR=262
SDCO ScP **ScP** **11 17 29.3 -2.2**
baz=311,SNR=5.5
WHN Wuhan 52.20 272⇓ *i*P **P** **11 12 50.2 +0.8**
WHN pP **pwP** **11 13 41.0 -1.5**
WHN sP **sP** **11 14 03.5 0.0**
WHN PP **PP** **11 14 55.4 +5.4**
WHN S **S** **11 19 56.0 +0.1**
WHN sS **sS** **11 21 24.3 +1.0**
WHN SS **SS** **11 23 36.2 +0.1**
SUMG Summit 52.33 14 P **P** **11 12 50.8 +0.5**
SUMG IAmb IAmb 11 12 52.6
comp=Z,450nm,1.1s
SUMG Summit 52.33 14 P **P** **11 12 50.8 +0.5**
SUMG pmax pmax
comp=Z,450nm,1.1s
SUMG Summit 52.33 14 *i* P **P** **11 12 49.0 -1.3**
SUMG IAmb IAmb 11 12 53.4
comp=Z,156nm,0.9s
SUMG Summit 52.33 14 *i* P **P** **11 12 51.0 +0.7**
SUMG IAmb IAmb 11 12 52.3
comp=Z,427nm,1.1s
TUC Tucson 52.46 84 P **P** **11 12 51.8 +0.4**
TUC IAmb IAmb 11 12 53.3
comp=Z,362nm,1.1s
TUC Tucson 52.46 84 P **P** **11 12 51.9 +0.4**
baz=314
TUC ScP **ScP** **11 17 32.2 -1.4**
baz=314
TUC Tucson 52.46 84 P **P** **11 12 51.8 +0.4**
TUC pmax pmax
comp=Z,362nm,1.2s
TUC Tucson 52.46 84 P **P** **11 12 51.9 +0.4**
TUC pP **pwP** **11 13 43.5 -1.8**
TUC sP **sP** **11 14 11.4 +6.1**
TUC ScP **ScP** **11 17 32.4 -1.2**
BJO1 Bjornoya 52.70 354 *eP* **P** **11 12 53.9 +1.5**
KSCO Kaye Shedlock' 52.80 72 IAmb IAmb 11 12 55.4
comp=Z,591nm,1.1s
KSCO Kaye Shedlock' 52.80 72 P **P** **11 12 54.2 +0.3**
baz=311,SNR=76
KSCO ScP **ScP** **11 17 35.2 +0.3**
baz=311
ILULI Ilulissat 52.88 21 P **P** **11 12 54.2 +0.4**
ILULI IAmb IAmb 11 12 55.2
comp=Z,192nm,0.9s
ILULI Ilulissat 52.88 21 P **P** **11 12 54.2 +0.4**
ILULI pmax pmax
comp=Z,192nm,0.9s
ILULI Ilulissat 52.88 21 *i* P **P** **11 12 53.0 -0.9**
ILULI IAmb IAmb 11 12 55.0
comp=Z,97nm,0.7s
ILULI Ilulissat 52.88 21 *i* P **P** **11 12 52.8 -1.1**
ILULI IAmb IAmb 11 12 54.8
comp=Z,176nm,0.9s
ZALV Zalesovo Beam 52.99 313 P **P** **11 12 54.5 -0.4**
comp=Z,1.7nm,0.9s,baz=74,slow=6.3,SNR=9.9
ZALV pP **pP** **11 13 44.4 +0.3**
comp=Z,3.0nm,0.8s,baz=76,slow=6.3,SNR=2.9
ZALV PcP **PcP** **11 14 00.8 +0.5**
comp=Z,17nm,0.8s,baz=58,slow=4.4,SNR=14
ZALV pPcP 11 14 56.7
comp=Z,3.6nm,0.7s,baz=71,slow=6.9,SNR=2.2
ZALV ScP **ScP** **11 17 34.0 -1.3**
comp=Z,7.6nm,0.8s,baz=44,slow=5.9,SNR=5.6
T25A Trinidad 53.00 75 P **P** **11 12 55.4 -0.1**
baz=312,SNR=38
XAN Xi'an 53.07 280 ⇑P **P** **11 12 56.1 +0.3**
XAN pP pwP 11 13 48.2 -1.5
XAN PcP **PcP** **11 14 02.4 +1.4**
XAN sP sP 11 14 11.3 +1.5
XAN S **S** **11 20 06.4 -1.3**
XAN sS sS 11 21 33.2 -2.2
XAN SS **SS** **11 23 51.2 +1.3**
XAN pmax pmax
comp=Z,58nm,1.3s
XAN pmax pmax
comp=Z,380nm,3.5s
XAN LR LR
comp=Z,540nm,17.5s
XAN LR LR
comp=Z,1µm,19.2s
XAN LR LR
comp=Z,620nm,14.4s
XAN Xi'an 53.07 280 P **P** **11 12 56.2 +0.3**
XAN pP **pwP** **11 13 47.4 -2.2**
EYMN Ely 53.11 57 P **P** **11 12 55.4 -0.5**
baz=310,SNR=287
YULB Yu-li 53.16 261 P **P** **11 12 57.9 +1.4**
ANMO Albuquerque 53.27 79 P **P** **11 12 57.5 0.0**
ANMO Albuquerque 53.27 79 P **P** **11 12 57.4 -0.1**
baz=313
ANMO ScP **ScP** **11 17 36.2 -1.0**
baz=313
ANMO Albuquerque 53.27 79*c* *i*P **P** **11 12 57.2 -0.2**
ANMO pmax pmax
comp=Z,134nm,1.3s
ANMO Albuquerque 53.27 79 P **P** **11 12 57.3 -0.1**
ANMO pP **pwP** **11 13 50.3 -1.2**
ANMO PcP **PcP** **11 14 02.8 +0.9**
ANMO ScP **ScP** **11 17 35.4 -1.7**
DUN6 Lazy B Ranch 53.32 83 IAmb IAmb 11 12 59.7
comp=Z,429nm,1.0s
XMAS Kiritimati 53.50 152 P **P** **11 13 00.0 +1.0**
XMAS IAmb IAmb 11 13 01.3
comp=Z,414nm,1.1s
XMAS Kiritimati 53.50 152 P **P** **11 13 02.1 +3.0**
XMAS Kiritimati 53.50 152 P **P** **11 12 60.0 +1.0**
Y22D IRIS PASSCAL I 53.59 80 P **P** **11 13 00.6 +0.9**
baz=313,SNR=18
Y22F Passcal Instru 53.59 80 P **P** **11 13 00.9 +1.2**
baz=313,SNR=18
QZH Quanzhou 53.64 264 *e*P **P** **11 13 01.1 +1.1**
QZH pP **pP** **11 13 52.1 +2.1**
QZH sP **sP** **11 14 14.2 -0.8**
QZH S **S** **11 20 18.7 +3.2**
QZH sS **sS** **11 21 43.1 -0.3**
QZH ScS **ScS** **11 22 25.8 +0.3**
QZH SS **SS** **11 24 02.8 +3.7**
BGNE Belgrade 53.78 67 P **P** **11 13 00.2 -0.7**
baz=311,SNR=22
319A Douglas 54.03 84 IAmb IAmb 11 13 04.7
comp=Z,451nm,1.1s
121A Cookes Peak, D 54.13 82 IAmb IAmb 11 13 05.5
comp=Z,463nm,1.6s
121A Cookes Peak, D 54.13 82 P **P** **11 13 04.2 +0.5**
baz=314,SNR=88
121A ScP **ScP** **11 17 37.8 -3.1**
baz=314
SPMN Marine on St. 54.20 60 IAmb IAmb 11 13 04.5
comp=Z,398nm,1.2s
SPMN Marine on St. 54.20 60 P **P** **11 13 03.0 -0.7**
baz=311,SNR=73
L34A Svendsen Farm, 54.40 66 IAmb IAmb 11 13 05.4
comp=Z,418nm,0.9s
RTBA Rita Blanca 54.46 75 IAmb IAmb 11 13 07.0
comp=Z,400nm,1.1s
DGZ Jazzator, Alta 54.55 307⇑ *i*P **P** **11 13 05.6 -0.8**
DGZ pmax pmax
comp=Z,21nm,1.3s
CBKS Cedar Bluff 54.61 71 P **P** **11 13 06.8 -0.1**
baz=312,SNR=105
CBKS ScP **ScP** **11 17 39.5 -3.2**
baz=312
N33A J Bar K, Exete 54.62 67 IAmb IAmb 11 13 07.2
comp=Z,318nm,1.1s
HSIG 54.68 87 IAmb IAmb 11 13 08.9
comp=Z,526nm,1.4s
LZH Lanzhou 54.70 285 ⇑P **P** **11 13 09.0 +1.3**
LZH pP pwP 11 14 00.6 -1.0
LZH sP sP 11 14 20.6 -1.4
LZH ScP **ScP** **11 17 42.7 -0.7**
LZH S **S** **11 20 30.9 +1.1**
LZH sS sS 11 21 53.4 -4.6
LZH ScS **ScS** **11 22 31.1 -2.1**
LZH pmax pmax
comp=Z,60nm,1.2s
LZH pmax pmax
comp=Z,280nm,4.6s
LZH LR LR
comp=Z,1µm,20.1s
LZH LR LR
comp=Z,1µm,20.1s
LZH LR LR
comp=Z,620nm,21.3s
SFJD Kangerlussuaq 54.78 22 P **P** **11 13 07.5 -0.1**
SFJD IAmb IAmb 11 13 09.1
comp=Z,268nm,1.2s
SFJD Kangerlussuaq 54.78 22 P **P** **11 13 07.5 -0.1**
SFJD pmax pmax
comp=Z,268nm,1.3s
SFJD Kangerlussuaq 54.78 22 *i* P **P** **11 13 05.9 -1.7**
SFJD IAmb IAmb 11 13 08.8
comp=Z,53nm,0.8s
SFJD Kangerlussuaq 54.78 22 *i* P **P** **11 13 06.5 -1.1**
SFJD IAmb IAmb 11 13 08.7
comp=Z,285nm,1.3s
SFJD Kangerlussuaq 54.78 22 P **P** **11 13 07.8 +0.2**
SFJD pP **pwP** **11 14 02.4 +0.4**
GTA Gaotai 54.79 291 ⇑P **P** **11 13 08.1 -0.2**
GTA pP pP 11 14 00.0 +2.2
GTA ScP **ScP** **11 17 42.7 -1.0**
GTA S **S** **11 20 30.3 -0.6**
GTA sS sS 11 21 56.8 -2.3
GTA ScS **ScS** **11 22 30.4 -3.3**
GTA SS **SS** **11 24 12.1 -4.9**
GTA pmax pmax
comp=Z,38nm,1.2s
GTA pmax pmax
comp=Z,97nm,4.5s
GTA LR LR
comp=Z,1µm,19.3s
GTA LR LR
comp=Z,950nm,19.6s
GTA LR LR
comp=Z,540nm,18.2s
SRIG Santa Rosalia 55.11 90 P **P** **11 13 10.7 +0.1**
SRIG IAmb IAmb 11 13 11.7
comp=Z,167nm,1.0s
ICESG Greenland Ices 55.20 16 *i* P **P** **11 13 09.9 -1.1**
ICESG IAmb IAmb 11 13 12.2
comp=Z,140nm,0.7s
ICESG Greenland Ices 55.20 16 *i* P **P** **11 13 09.7 -1.3**
ICESG IAmb IAmb 11 13 12.1
comp=Z,214nm,0.8s
ENH Enshi 55.35 276 P **P** **11 13 13.4 +1.1**
ENH Enshi 55.35 276 P **P** **11 13 12.3 +0.1**
ENH pP **pP** **11 14 03.5 +1.6**
R32A Long Quarter, 55.46 70 IAmb IAmb 11 13 13.4
comp=Z,407nm,1.1s
COWI Conover 55.54 58 IAmb IAmb 11 13 14.0
comp=Z,252nm,0.9s
G40A Rib Lake 55.54 59 IAmb IAmb 11 13 14.1
comp=Z,452nm,1.3s
VADS Vadso 55.94 349 *eP* **P** **11 13 16.6 +0.8**
VADS IAmb IAmb 11 13 17.1

comp=Z,170nm,1.0s
HAMF Hammerfest 56.06 351 *e*P **P** **11 13 16.9 +0.3**
HAMF IAmb IAmb 11 13 18.1
comp=Z,168nm,1.1s
MSTX Muleshoe 56.14 77 P **P** **11 13 17.6 -0.3**
MSTX Muleshoe 56.14 77 P **P** **11 13 17.6 -0.3**
baz=314,SNR=65
AMTX Amarillo 56.16 75 IAmb IAmb 11 13 19.2
comp=Z,271nm,1.1s
AMTX Amarillo 56.16 75 P **P** **11 13 18.0 0.0**
baz=314
AMTX ScP **ScP** **11 17 48.7 -1.0**
baz=314
MNTX Cornudas Mount 56.16 81 P **P** **11 13 18.2 +0.2**
baz=315,SNR=311
MNTX ScP **ScP** **11 17 47.8 -1.9**
baz=315
DY2G Dye2 56.18 21 *i* P **P** **11 13 15.9 -2.0**
DY2G IAmb IAmb 11 13 19.8
comp=Z,55nm,0.6s
DY2G Dye2 56.18 21 *i* P **P** **11 13 16.7 -1.2**
DY2G IAmb IAmb 11 13 19.3
comp=Z,284nm,1.3s
SCIA State Center 56.19 64 P **P** **11 13 17.5 -0.5**
baz=312,SNR=68
KSU1 Kansas State U 56.20 68 IAmb IAmb 11 13 18.3
comp=Z,385nm,1.1s
KSU1 Kansas State U 56.20 68 P **P** **11 13 17.1 -1.1**
baz=313,SNR=77
KSU1 ScP **ScP** **11 17 48.1 -1.6**
baz=313
I40A Norwalk 56.25 60 IAmb IAmb 11 13 19.1
comp=Z,306nm,0.9s
SCO Scoresbysund 56.27 9 *i* P **P** **11 13 16.9 -1.3**
SCO IAmb IAmb 11 13 20.2
comp=Z,38nm,0.8s
SCO Scoresbysund 56.27 9 *i* P **P** **11 13 18.0 -0.2**
SCO IAmb IAmb 11 13 20.8
comp=Z,389nm,1.5s
KEV Kevo 56.56 349 P **P** **11 13 20.7 +0.5**
KEV Kevo 56.56 349 P **P** **11 13 20.7 +0.5**
KEV pmax pmax
comp=Z,189nm,1.5s
KEV Kevo 56.56 349 P **P** **11 13 20.6 +0.4**
KAN12 Harper NE Stat 56.64 71 IAmb IAmb 11 13 21.4
comp=Z,272nm,1.2s
ELIS Ellis County 56.67 73 IAmb IAmb 11 13 22.5
comp=Z,234nm,1.1s
U32A Winter Ranch, 56.69 72 IAmb IAmb 11 13 22.3
comp=Z,314nm,0.9s
KAN10 Anthony SW Sta 56.71 71 IAmb IAmb 11 13 21.9
comp=Z,227nm,1.3s
KAN08 Anthony NE Sta 56.71 71 IAmb IAmb 11 13 21.8
comp=Z,295nm,1.3s
KAN06 Argonia West S 56.76 71 IAmb IAmb 11 13 22.3
comp=Z,282nm,1.4s
OK038 West end E0370 56.78 72 IAmb IAmb 11 13 22.9
comp=Z,262nm,1.0s
NUUK Nuuk 56.81 24 *i* P **P** **11 13 20.6 -1.4**
NUUK IAmb IAmb 11 13 23.6
comp=Z,45nm,0.8s
NUUK Nuuk 56.81 24 *i* P **P** **11 13 21.4 -0.6**
NUUK IAmb IAmb 11 13 23.6
comp=Z,884nm,2.0s
KAN05 Bluff City Nor 56.84 71 IAmb IAmb 11 13 22.9
comp=Z,387nm,1.3s
SMWD Samnorwood 56.85 74 IAmb IAmb 11 13 24.0
comp=Z,263nm,1.0s
OK032 Salt Plains WL 56.86 71 IAmb IAmb 11 13 23.3
comp=Z,319nm,1.2s
KAN14 Manchester OK 56.90 71 IAmb IAmb 11 13 23.2
comp=Z,176nm,1.2s
ARA0 ARCESS Array S 56.94 350 *e*P **P** **11 13 23.6 +0.7**
ARA0 IAmb IAmb 11 13 24.9
comp=Z,196nm,1.3s
ARCES ARCESS Array B 56.94 350 P **P** **11 13 23.3 +0.5**
comp=Z,46nm,0.8s,baz=20,slow=7.6,SNR=49
comp=Z,46nm,0.8s
VHRN Van Horn 57.05 81 IAmb IAmb 11 13 26.1
comp=Z,261nm,1.2s
JFWS Jewell Farm 57.11 61 P **P** **11 13 23.3 -1.1**
JFWS Jewell Farm 57.11 61 P **P** **11 13 23.4 -1.1**
baz=313,SNR=107
JFWS Jewell Farm 57.11 61 P **P** **11 13 23.3 -1.1**
JFWS pmax pmax
comp=Z,396nm,0.9s
LVZ Lovozero 57.27 345 P **P** **11 13 25.2 -0.1**
LVZ IAmb IAmb 11 14 27.2
comp=Z,156nm,0.8s
LVZ Lovozero 57.27 345*c* *i*P **P** **11 13 25.1 -0.2**
LVZ pmax pmax
comp=Z,249nm,1.1s
LVZ Lovozero 57.27 345 P **P** **11 13 25.3 +0.1**
SOEG Soedalen 57.31 14 *i* P **P** **11 13 24.9 -0.5**
SOEG IAmb IAmb 11 13 26.8
comp=Z,41nm,0.7s
SOEG Soedalen 57.31 14 *i* P **P** **11 13 25.0 -0.5**
SOEG IAmb IAmb 11 13 26.7
comp=Z,97nm,0.9s
JETT Jettan, Norway 57.41 352 *e*P **P** **11 13 27.4 +1.1**
JETT IAmb IAmb 11 13 27.8
comp=Z,254nm,1.1s
DKNS Dickens 57.45 76 IAmb IAmb 11 13 28.2
comp=Z,256nm,0.9s
SEM Semipalatinsk 57.45 312 *e*P **P** **11 13 25.7 -1.4**
baz=312
SEM *e*pP **pP** **11 14 17.2 +0.1**
baz=312
SEM Semipalatinsk 57.45 312 *e*P **P** **11 13 25.6 -1.4**
SEM *e**PP **pP** **11 14 17.2 +0.1**
TRO Tromso 57.46 352 *e*P **P** **11 13 27.1 +0.6**
TRO IAmb IAmb 11 13 28.7
comp=Z,233nm,1.2s
BLOK Blackwell 57.47 71 IAmb IAmb 11 13 27.5
comp=Z,446nm,1.3s
POST Post 57.53 77 IAmb IAmb 11 13 28.6
comp=Z,346nm,0.9s
ODSA Odessa 57.57 78 IAmb IAmb 11 13 28.8
comp=Z,223nm,1.1s
P38A Dawn 57.58 66 P **P** **11 13 26.5 -1.3**
KTK1 Kautokeino 57.68 351 *e*P **P** **11 13 28.6 +0.5**
KTK1 IAmb IAmb 11 13 29.3
comp=Z,470nm,1.7s
T35A Sooner Cattle 57.76 70 IAmb IAmb 11 13 29.3
comp=Z,325nm,1.2s
APA Apatity 57.77 346 ⇓*i*P **P** **11 13 27.2 -1.4**
APA *i* 11 14 26.0
APA *i* 11 15 37.0
APA *i* S **S** **11 21 05.0 -3.8**
APA *i* 11 22 53.0
APA pmax pmax
comp=Z,24nm,1.2s
OK048 Pawnee Station 57.86 71 IAmb IAmb 11 13 30.2
comp=Z,328nm,1.1s
OK051 E0350 and S346 57.86 71 IAmb IAmb 11 13 30.1
comp=Z,241nm,1.1s
WMOK Wichita Mounta 57.97 73 IAmb IAmb 11 13 31.7
comp=Z,187nm,1.1s
WMOK Wichita Mounta 57.97 73 P **P** **11 13 30.4 -0.2**
baz=314,SNR=123
KURK Kurchatov 57.97 313 P **P** **11 13 30.1 -0.3**
KURK Kurchatov 57.97 313*c* *i*P **P** **11 13 29.6 -0.7**
KURK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 57.97 313 P **P** **11 13 30.5 +0.1**
KURK Kurchatov 57.97 313 P **P** **11 13 30.1 -0.3**
KURK PcP **PcP** **11 14 19.5 -0.2**
KURK pP **pwP** **11 14 23.8 -0.8**
KURK ScP **ScP** **11 17 55.7 -1.6**
MNHN Monahans 58.00 79 IAmb IAmb 11 13 31.7
comp=Z,252nm,0.9s
SN01 Snyder 1 58.04 76 IAmb IAmb 11 13 31.9
comp=Z,144nm,0.9s
KURBB Kurchatov Arra 58.08 313 P **P** **11 13 30.9 -0.2**
comp=Z,10nm,0.9s,baz=44,slow=6.8,SNR=41
KURBB pP **pP** **11 14 20.9 -0.4**
comp=Z,17nm,0.8s,baz=45,slow=6.6,SNR=3.7
KURBB ScP **ScP** **11 17 56.2 -1.6**
comp=Z,4.5nm,0.7s,baz=40,slow=4.1,SNR=4.8
KURBB S **S** **11 21 11.7 -1.7**
comp=Z,0.7nm,0.3s,baz=0.5,slow=22,SNR=1.7
KURBB ScS **ScS** **11 22 53.0 -3.9**
comp=Z,0.4nm,0.3s,baz=321,slow=42,SNR=1.7
KURBB PKPPKP **P'P'df** **11 43 08.2 -3.3**
comp=Z,0.4nm,0.4s,baz=247,slow=3.6,SNR=4.2
KURBB PKP2bc **P'P'bc** **11 43 20.9 -2.2**
comp=Z,1.6nm,0.8s,baz=233,slow=4.1,SNR=6.8
comp=Z,10nm,0.9s
OK033 Mehan 58.12 71 IAmb IAmb 11 13 32.1
comp=Z,407nm,1.2s
QUOK Quay 58.17 71 IAmb IAmb 11 13 32.3
comp=Z,239nm,1.1s
CD2 Chengdu 58.37 281 P **P** **11 13 34.5 +1.1**
CD2 pP pP 11 14 25.2 +1.6
CD2 sP sP 11 14 47.4 -0.8
CD2 S **S** **11 21 17.7 0.0**
CD2 sS sS 11 22 43.0 -2.7
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 pmax pmax
comp=Z,140nm,4.5s
CD2 LR LR
comp=Z,210nm,9.6s
CD2 LR LR
comp=Z,330nm,10.0s
CD2 LR LR
comp=Z,340nm,12.6s
GULI GuiLin 58.41 271 ⇓P **P** **11 13 32.0 -1.7**
GULI pP **pP** **11 14 23.4 -1.0**
GULI S **S** **11 21 15.0 -3.3**
WMQ Urumqi 58.41 302 *e*P **P** **11 13 33.9 +0.3**
WMQ sP sP 11 14 45.8 -2.8
WMQ S **S** **11 21 17.2 -0.8**
WMQ sS sS 11 22 45.7 -0.4
WMQ pmax pmax
comp=Z,23nm,1.1s
WMQ LR LR
comp=Z,2μm,17.5s
WMQ LR LR
comp=Z,1μm,18.3s
WMQ LR LR
comp=Z,260nm,22.7s
ISOG Isortoq, Green 58.47 18 *i* P **P** **11 13 31.9 -1.6**
ISOG IAmb IAmb 11 13 34.5
comp=Z,140nm,0.8s
ISOG Isortoq, Green 58.47 18 *i* P **P** **11 13 32.2 -1.2**
ISOG IAmb IAmb 11 13 34.0
comp=Z,334nm,1.0s
X34A Smith Ranch, M 58.62 73 IAmb IAmb 11 13 36.7
comp=Z,415nm,1.3s
ANGG Ammassalik, Gr 58.66 17 *i* P **P** **11 13 32.8 -2.0**
ANGG IAmb IAmb 11 13 35.2
comp=Z,77nm,0.7s
ANGG Ammassalik, Gr 58.66 17 *i* P **P** **11 13 32.8 -2.0**
ANGG IAmb IAmb 11 13 35.0
comp=Z,291nm,1.2s
GLMI Grayling 58.73 56 P **P** **11 13 35.9 +0.2**
baz=314,SNR=49
SGF Sodankyl 58.82 349 P **P** **11 13 36.8 +0.9**
WTFS Witchita Falls 58.83 74 IAmb IAmb 11 13 37.6
comp=Z,452nm,1.3s
L44A Lake County Fo 58.87 60 P **P** **11 13 36.2 -0.4**
baz=314,SNR=65
TUL3 Leonard 58.88 70 IAmb IAmb 11 13 37.5
comp=Z,398nm,1.1s
TUL3 Leonard 58.88 70 P **P** **11 13 36.0 -0.8**
baz=314,SNR=92
TX31 Lajitas Ar. Si 58.88 81 IAmb IAmb 11 13 38.5
comp=Z,422nm,1.3s
TXAR Lajitas Array 58.88 81 P **P** **11 13 37.2 +0.1**
comp=Z,104nm,0.7s,baz=308,slow=5.0,SNR=1067
TXAR PcP **PcP** **11 14 21.9 -1.9**
comp=Z,12nm,0.5s,baz=294,slow=4.3,SNR=4.4
TXAR ScP **ScP** **11 18 00.0 -1.9**
comp=Z,8.3nm,1.0s,baz=252,slow=2.5,SNR=4.6
TXAR S **S** **11 21 23.8 -0.7**
comp=Z,0.4nm,0.9s,baz=225,slow=57,SNR=1.8
TXAR ScS **ScS** **11 23 02.7 -1.0**
comp=Z,0.2nm,0.7s,baz=212,slow=33,SNR=1.7
TXAR PKP2bc **P'P'bc** **11 43 17.3 -2.6**
comp=Z,0.8nm,1.0s,baz=143,slow=9.4,SNR=5.1
TXAR P4KPbc 11 50 44.5
comp=Z,0.7nm,0.9s,baz=317,slow=3.7,SNR=5.4
comp=Z,104nm,0.7s
ABTX Abilene, Hawle 58.95 76 P **P** **11 13 37.2 -0.1**
baz=315,SNR=234
MK31 Makanchi Array 59.04 308*c* *i*P **P** **11 13 36.9 -0.9**
MKAR Makanchi Array 59.04 308 P **P** **11 13 36.9 -0.9**
comp=Z,2.4nm,0.6s,baz=57,slow=6.3,SNR=28
MKAR pP **pP** **11 14 28.3 +0.1**
comp=Z,19nm,0.9s,baz=54,slow=6.5,SNR=6.4
MKAR ScS **ScS** **11 22 59.0 -5.2**
comp=Z,0.4nm,0.8s,baz=90,slow=1.3,SNR=1.3
MKAR PKP2bc **P'P'bc** **11 43 18.2 -2.6**
comp=Z,1.1nm,0.9s,baz=261,slow=2.3,SNR=5.0
RLO Rose Lookout 59.14 70 IAmb IAmb 11 13 38.9
comp=Z,418nm,1.6s
SLBS Sierra La Lagu 59.18 91 P **P** **11 13 39.4 +0.3**
SLBS IAmb IAmb 11 13 41.1
comp=Z,247nm,1.0s
SLBS Sierra La Lagu 59.18 91 P **P** **11 13 39.8 +0.7**
SLBS pP **pwP** **11 14 33.9 -0.2**
MAKZ Makanchi 59.18 308 P **P** **11 13 37.9 -0.9**
MAKZ Makanchi 59.18 308 P **P** **11 13 37.9 -0.9**
MAKZ pmax pmax
comp=Z,33nm,1.0s
MAKZ Makanchi 59.18 308 P **P** **11 13 37.7 -1.0**
MAKZ pP **pP** **11 14 30.6 +1.4**
R40A Maddies Statio 59.21 66 IAmb IAmb 11 13 38.5
comp=Z,254nm,1.0s
HDIL Hopedale 59.26 62 P **P** **11 13 38.6 -0.7**
HDIL Hopedale 59.26 62 P **P** **11 13 38.5 -0.9**
baz=314,SNR=110
OZNA Ozona 59.27 78 IAmb IAmb 11 13 40.5
comp=Z,219nm,1.1s
U38A Gravette 59.31 69 IAmb IAmb 11 13 39.7
comp=Z,167nm,1.0s
LOF Lofoten 59.32 354 *e*P **P** **11 13 39.9 +0.6**
SCHQ Schefferville 59.39 38 P **P** **11 13 39.8 -0.3**
SCHQ IAmb IAmb 11 13 41.3
comp=Z,344nm,1.1s
SCHQ Schefferville 59.39 38 P **P** **11 13 39.9 -0.1**
comp=Z,176nm,0.9s,baz=323,slow=7.0,SNR=220
comp=Z,176nm,0.9s
HPIG 59.41 85 IAmb IAmb 11 13 42.2
comp=Z,193nm,1.1s
STEI Steigen 59.41 354 *e*P **P** **11 13 40.5 +0.6**
STEI IAmb IAmb 11 13 40.8
comp=Z,63nm,0.9s
FW03 Perrin-Whitt E 59.58 74 IAmb IAmb 11 13 42.8
comp=Z,368nm,1.3s
PLPT Palo Pinto 59.60 75 IAmb IAmb 11 13 42.9
comp=Z,398nm,1.2s
HHAR Hobbs 59.68 69 IAmb IAmb 11 13 42.0
comp=Z,225nm,1.3s
BVAO Borovoye Array 59.79 319 *i* P **P** **11 13 42.3 -0.5**
BVAR Borovoye Array 59.79 319 P **P** **11 13 43.1 +0.3**
comp=Z,5.0nm,0.4s,baz=49,slow=6.8,SNR=40
BVAR PcP **PcP** **11 14 27.1 +0.2**
comp=Z,9.7nm,0.6s,baz=55,slow=4.7,SNR=7.2
BVAR pP **pP** **11 14 33.5 +0.1**
comp=Z,28nm,0.8s,baz=46,slow=7.8,SNR=4.8
BVAR ScS **ScS** **11 23 06.2 -3.3**
comp=Z,0.4nm,0.4s,baz=217,slow=41,SNR=1.8
BVAR PKPPKP **P'P'df** **11 43 09.2 +0.1**
comp=Z,1.7nm,0.8s,baz=191,slow=3.8,SNR=6.1
comp=Z,5.0nm,0.4s
BRVK Borovoye 59.81 319 P **P** **11 13 43.3 +0.4**
BRVK Borovoye 59.81 319*c* *i*P **P** **11 13 43.1 +0.2**
BRVK pmax pmax
comp=Z,44nm,1.3s
BRVK Borovoye 59.81 319 P **P** **11 13 43.5 +0.6**
BRVK Borovoye 59.81 319 P **P** **11 13 43.3 +0.4**
BRVK PcP **PcP** **11 14 26.9 -0.1**
BRVK pP **pwP** **11 14 37.6 +0.3**
GYA Guiyang 59.82 275 ⇓*i*P **P** **11 13 44.6 +1.1**
GYA pP pP 11 14 33.8 -0.4
GYA S **S** **11 21 34.4 -2.2**
GYA pmax pmax
comp=Z,47nm,1.0s
GYA pmax pmax
comp=Z,210nm,3.5s
GYA LR LR
comp=Z,340nm,16.3s
GYA LR LR
comp=Z,310nm,20.9s
GYA LR LR
comp=Z,240nm,19.4s
Z35A Perchaven, San 59.85 74 IAmb IAmb 11 13 44.3
comp=Z,248nm,0.9s
VLDQ Val d'Or 59.87 49 P **P** **11 13 41.0 -2.3**
VLDQ IAmb IAmb 11 13 42.4
comp=Z,342nm,1.1s
GOMU GeErMu 59.87 291 P **P** **11 13 43.5 -0.6**
GOMU S **S** **11 21 32.4 -5.1**
GOMU pmax pmax
comp=Z,11nm,0.9s
GOMU LR LR
comp=Z,1μm,19.4s
GOMU LR LR
comp=Z,970nm,19.6s
GOMU LR LR
comp=Z,900nm,19.0s
FW06 Azle 59.93 74 IAmb IAmb 11 13 45.2
comp=Z,285nm,1.1s
CCM Cathedral Cave 59.95 66 P **P** **11 13 42.6 -1.5**
CCM Cathedral Cave 59.95 66 P **P** **11 13 42.7 -1.5**
baz=315
CCM Cathedral Cave 59.95 66 P **P** **11 13 42.6 -1.5**
CCM pmax pmax
comp=Z,817nm,1.8s
CCM Cathedral Cave 59.95 66 P **P** **11 13 42.5 -1.6**
FAUS Fauske 59.95 353 *e*P **P** **11 13 44.5 +0.9**
FAUS IAmb IAmb 11 13 45.8
comp=Z,182nm,1.1s
FW07 Weatherford 59.99 74 IAmb IAmb 11 13 45.7
comp=Z,469nm,1.3s
O44A Mansfield 59.99 62 IAmb IAmb 11 13 44.7
comp=Z,180nm,0.8s
MGMO Mountain Grove 60.01 67 IAmb IAmb 11 13 43.9
comp=Z,221nm,1.0s
BRDY Brady 60.28 76 IAmb IAmb 11 13 47.6
comp=Z,328nm,1.4s
KAVG Kavieng 60.32 215 P **P** **11 13 48.5 +1.7**
JCT Junction City 60.38 78 P **P** **11 13 46.6 -0.6**
JCT IAmb IAmb 11 13 47.9
comp=Z,177nm,1.0s
JCT Junction City 60.38 78 P **P** **11 13 46.5 -0.6**
baz=316,SNR=76
JCT Junction City 60.38 78 P **P** **11 13 46.6 -0.6**
JCT pmax pmax
comp=Z,177nm,1.0s
FW13 Cleburne 60.45 74 IAmb IAmb 11 13 48.7
comp=Z,313nm,1.1s
SVE Sverdlovsk 60.45 327*d* *i*P **P** **11 13 48.6 +1.4**
SVE pmax pmax
comp=Z,115nm,1.4s
FVM French Village 60.45 65 IAmb IAmb 11 13 47.8
comp=Z,630nm,1.7s
FW14 Alvarado 60.55 74 IAmb IAmb 11 13 49.4
comp=Z,267nm,1.2s
SFIN Lafayette 60.57 61 P **P** **11 13 47.8 -0.4**
SFIN Lafayette 60.57 61 P **P** **11 13 48.0 -0.2**
baz=315,SNR=99
WHTX Lake Whitney, 60.69 75 IAmb IAmb 11 13 50.4
comp=Z,503nm,1.4s
WHTX Lake Whitney, 60.69 75 P **P** **11 13 48.7 -0.5**
baz=316,SNR=69
NRS Narsarsuaq 60.94 24 *i* P **P** **11 13 48.6 -1.7**
NRS IAmb IAmb 11 13 51.5
comp=Z,66nm,0.8s
N47A Urbana 60.96 60 IAmb IAmb 11 13 51.0
comp=Z,259nm,0.9s
TREL Terrell 60.97 73 IAmb IAmb 11 13 52.1
comp=Z,440nm,1.4s
KONS Konsvik 60.97 354 *e*P **P** **11 13 51.2 +0.7**
AAM Ann Arbor 61.01 58 IAmb IAmb 11 13 52.1
comp=Z,233nm,0.8s
AAM Ann Arbor 61.01 58 P **P** **11 13 50.7 -0.4**
baz=316,SNR=9.8
MANU Manus Island 61.08 219 IAmb IAmb 11 13 53.9
comp=Z,233nm,1.2s
MANU Manus Island 61.08 219 P **P** **11 13 53.2 +1.2**
BRZS Berezniki 61.12 315⇑ *i*P **P** **11 13 51.4 -0.4**
baz=315
BRZS *i* pP **pwP** **11 14 46.4 -0.2**
baz=315
BRZS *e*sP **sP** **11 15 06.6 -0.5**
baz=315
BRZS Berezniki 61.12 315*c* *i*P **P** **11 13 51.4 -0.4**
BRZS *i**PP **pwP** **11 14 46.4 -0.2**
BRZS *e**SP **sP** **11 15 06.6 -0.5**
MIAR Mount Ida 61.12 70 P **P** **11 13 51.7 -0.3**
baz=316,SNR=346
STOK Stokkvaagen 61.14 354 *e*P **P** **11 13 51.0 -0.6**
STOK IAmb IAmb 11 13 53.6
comp=Z,247nm,1.1s
OUL Oulu 61.15 348 P **P** **11 13 52.3 +0.6**
K50A Casco 61.20 57 IAmb IAmb 11 13 53.4
comp=Z,292nm,0.9s
MOR8 Moi Rana 61.21 354 *e*P **P** **11 13 51.7 -0.4**
MOR8 IAmb IAmb 11 13 52.3
comp=Z,89nm,1.0s
S44A Carbondale 61.31 65 IAmb IAmb 11 13 53.5
comp=Z,195nm,0.9s
SIUC Southern Illin 61.32 65 IAmb IAmb 11 13 53.5
comp=Z,196nm,0.9s
WHAR Wooly Hollow 61.33 69 IAmb IAmb 11 13 53.6
comp=Z,328nm,1.0s
RABL Rabaul 61.36 213 IAmb IAmb 11 13 55.2
comp=Z,211nm,1.2s
LCAR Lake Charles 61.41 67 IAmb IAmb 11 13 53.5
comp=Z,143nm,1.0s
ARU Arti 61.46 328 P **P** **11 13 54.6 +0.6**
ARU Arti 61.46 328*c* *i*P **P** **11 13 54.5 +0.6**
ARU 11 14 32.1
ARU *PP **pP** **11 14 44.8 0.0**
ARU 11 16 15.3
ARU PPP PPP 11 17 50.6
ARU S **S** **11 21 59.1 +2.9**
ARU 11 23 16.8
ARU pmax pmax
comp=Z,154nm,1.5s
ARU Arti 61.46 328 P **P** **11 13 54.5 +0.6**
ARU PcP **PcP** **11 14 34.0 +0.4**
435B Jarrell 61.48 76 P **P** **11 13 54.7 +0.1**
baz=316
SADO Sadowa 61.49 53 IAmb IAmb 11 13 55.0
comp=Z,245nm,1.1s
X40A Basin Creek Fa 61.59 70 IAmb IAmb 11 13 54.8
comp=Z,231nm,1.1s
237A Washetta, Mont 61.65 74 IAmb IAmb 11 13 56.6
comp=Z,340nm,1.1s
UALR University of 61.67 69 IAmb IAmb 11 13 56.2
comp=Z,324nm,1.3s
O48B Farmland 61.69 60 P **P** **11 13 54.6 -1.2**
baz=316,SNR=47
BLO Bloomington 61.74 62 IAmb IAmb 11 13 56.7
comp=Z,356nm,1.1s
M50A Fremont 61.97 58 IAmb IAmb 11 13 58.2
comp=Z,218nm,0.8s
P48A Milroy 62.12 61 P **P** **11 13 57.7 -1.0**
O49A Covington 62.18 60 IAmb IAmb 11 13 59.5
comp=Z,243nm,0.9s
833A Chaparral WMA, 62.19 79 IAmb IAmb 11 14 00.9
comp=Z,276nm,1.2s
833A Chaparral WMA, 62.19 79 P **P** **11 13 59.5 +0.3**
baz=317,SNR=40
TDK Taldyqorghan 62.21 308 *e*P **P** **11 13 59.1 -0.1**
baz=308
TDK Taldyqorghan 62.21 308 *e*P **P** **11 13 59.1 -0.1**
KIRV Kirov 62.41 334*c* *i*P **P** **11 14 01.1 +0.9**
DELO Deloro Mine 62.41 52 P **P** **11 13 59.9 -0.6**
DELO IAmb IAmb 11 14 01.3
comp=Z,409nm,1.3s
P49A Miami Univ. Ec 62.45 60 P **P** **11 13 59.9 -0.9**
baz=316,SNR=21
Z41A Richland Creek 62.50 71 IAmb IAmb 11 14 02.2
comp=Z,257nm,1.0s
NATX Nacogdoches 62.50 73 P **P** **11 14 01.3 0.0**
NATX Nacogdoches 62.50 73 P **P** **11 14 01.1 -0.2**
baz=316,SNR=28
HALT Halls 62.55 66 P **P** **11 14 00.9 -0.6**
WCI Wyandotte Cave 62.55 62 P **P** **11 14 00.6 -0.8**
WCI IAmb IAmb 11 14 02.1
comp=Z,286nm,0.9s
WCI Wyandotte Cave 62.55 62 P **P** **11 14 00.9 -0.6**
baz=316
WCI Wyandotte Cave 62.55 62 P **P** **11 14 00.6 -0.8**
WCI pmax pmax
comp=Z,286nm,1.0s
WCI Wyandotte Cave 62.55 62 P **P** **11 14 00.7 -0.8**
WCI PcP **PcP** **11 14 38.2 -0.1**
TRQ Mont Tremblant 62.60 49 IAmb IAmb 11 14 01.7
comp=Z,239nm,1.0s
M52A Chesterland 62.74 57 IAmb IAmb 11 14 03.5
comp=Z,246nm,0.8s
PZH PanZhiHua 62.77 279 P **P** **11 14 04.1 +0.8**

PZH pP **pP** **11 14 51.1 -3.2**
PZH sP **sP** **11 15 19.4 +0.6**
PZH S **S** **11 22 13.9 +0.1**
PZH ScS **ScS** **11 23 27.0 -6.1**
PZH pmax pmax
comp=Z,100nm,1.3s
PZH pmax pmax
comp=Z,110nm,4.2s
KLMR Klimovskoe 62.80 340*c* iP **P** **11 14 03.1 +0.3**
KLMR *e**PP **pP** **11 14 52.8 -1.6**
KLMR pmax pmax
comp=Z,252nm,1.3s
ACSO Alum Creek Sta 62.85 59 P **P** **11 14 02.8 -0.7**
baz=317,SNR=51
PDGK Podgornoye 62.92 306 P **P** **11 14 02.4 -1.6**
NSS Namsos 62.99 354 *e*P **P** **11 14 04.6 +0.6**
NSS IAmb IAmb 11 14 05.3
comp=Z,189nm,1.5s
ERPA Erie 63.01 55 P **P** **11 14 04.5 0.0**
baz=317,SNR=77
SHLS Shalkode 63.06 306 *e*P **P** **11 14 03.6 -1.3**
comp=Z,21nm,1.5s,baz=306
SHLS Shalkode 63.06 306 *e*P **P** **11 14 03.6 -1.3**
SHLS pmax pmax
comp=Z,21nm,1.5s
ARXS Arharly 63.07 308 *e*P **P** **11 14 03.2 -1.7**
R49A Shelbyville 63.11 62 IAmb IAmb 11 14 06.1
comp=Z,418nm,1.6s
HKT Hockley 63.13 75 P **P** **11 14 05.6 +0.3**
HKT Hockley 63.13 75 P **P** **11 14 05.6 +0.3**
HKT pmax pmax
comp=Z,438nm,1.4s
HKT Hockley 63.13 75 P **P** **11 14 05.6 +0.3**
M53A WI Miller and 63.16 56 P **P** **11 14 05.3 -0.2**
baz=317,SNR=82
KMI Kunming 63.19 277 ⇑P **P** **11 14 07.0 +0.9**
KMI pP pP 11 14 58.7 +1.5
KMI sP sP 11 15 22.4 +0.7
KMI S **S** **11 22 19.0 -0.1**
KMI ScS **SKKSac** **11 23 34.5 -2.0**
KMI pmax pmax
comp=Z,43nm,1.4s
KMI LR LR
comp=Z,190nm,19.6s
KMI LR LR
comp=Z,440nm,16.7s
KMI LR LR
comp=Z,360nm,22.9s
KPKS Kokpek 63.21 307 *e*P **P** **11 14 06.0 0.0**
comp=Z,17nm,1.3s,baz=307
KPKS *i* pP **pwP** **11 15 00.7 0.0**
baz=307
KPKS Kokpek 63.21 307 *e*P **P** **11 14 05.9 0.0**
KPKS *i* *PP **pwP** **11 15 00.6 -0.1**
KPKS pmax pmax
comp=Z,17nm,1.3s
WVT Waverly 63.23 65 P **P** **11 14 05.3 -0.7**
WVT IAmb IAmb 11 14 06.7
comp=Z,227nm,1.0s
WVT Waverly 63.23 65 P **P** **11 14 05.5 -0.5**
baz=316
WVT Waverly 63.23 65 P **P** **11 14 05.3 -0.7**
WVT pmax pmax
comp=Z,227nm,1.0s
WVT Waverly 63.23 65 P **P** **11 14 05.4 -0.7**
ALLY Alegheny Colle 63.28 56 P **P** **11 14 06.1 -0.2**
UZB Uzynbulak 63.28 307 *e*P **P** **11 14 06.3 -0.1**
comp=Z,21nm,1.6s,baz=307
UZB Uzynbulak 63.28 307 *e*P **P** **11 14 06.3 -0.1**
UZB pmax pmax
comp=Z,21nm,1.6s
P51A Williamsport 63.36 59 IAmb IAmb 11 14 07.2
comp=Z,158nm,0.8s
QIZ Qiongzhong 63.41 267 P **P** **11 14 07.8 +0.4**
QIZ pP **pP** **11 14 56.8 -2.3**
QIZ sP **sP** **11 15 23.1 -0.5**
QIZ S **S** **11 22 24.9 +3.3**
QIZ ScS **ScS** **11 23 39.5 +1.7**
QIZ sS **sS** **11 23 49.9 -1.6**
QIZ pmax pmax
comp=Z,31nm,1.4s
LMQ La Malbaie 63.50 46 IAmb IAmb 11 14 08.0
comp=Z,219nm,0.9s
OXF Oxford 63.52 67 P **P** **11 14 07.5 -0.4**
baz=317,SNR=151
ZHN Zhinishke 63.55 307 *e*P **P** **11 14 08.1 -0.1**
baz=307
ZHN *e*S **S** **11 22 24.5 +1.5**
baz=307
ZHN Zhinishke 63.55 307 *e*P **P** **11 14 08.1 -0.1**
ZHN *e*S **S** **11 22 24.4 +1.5**
DAV Davao City (W) 63.57 245 P **P** **11 14 09.2 +0.8**
comp=Z,51nm,0.3s,baz=276,slow=4.8,SNR=0.8
comp=Z,51nm,0.3s
MNTQ Montreal, Queb 63.57 49 IAmb IAmb 11 14 07.7
comp=Z,350nm,1.5s
SATY Saty 63.65 307 *e*P **P** **11 14 08.9 +0.1**
baz=307
SATY Saty 63.65 307 *e*P **P** **11 14 08.9 +0.1**
P52A Corning 63.74 59 IAmb IAmb 11 14 09.6
comp=Z,218nm,0.8s
P52A Corning 63.74 59 P **P** **11 14 08.4 -0.8**
baz=317,SNR=40
CHKK Chushkaly 63.74 308 *e*P **P** **11 14 08.2 -1.1**
baz=308
CHKK Chushkaly 63.74 308 *e*P **P** **11 14 08.2 -1.1**
O53A New Philadelph 63.76 58 IAmb IAmb 11 14 09.9
comp=Z,270nm,1.0s
O53A New Philadelph 63.76 58 P **P** **11 14 08.6 -0.8**
baz=317,SNR=35
LONY Lake Ozonia 63.79 50 P **P** **11 14 08.1 -1.4**
baz=318,SNR=13
PLAL Pickwick Lake 63.93 66 IAmb IAmb 11 14 10.9
comp=Z,293nm,1.0s
VALR Valaam 63.97 344*d* iP **P** **11 14 11.2 +0.9**
VALR pmax pmax
comp=Z,160nm,1.1s
J57A Williamstown 64.02 52 IAmb IAmb 11 14 11.8
comp=Z,398nm,1.3s
KUU Kurty 64.02 309 *e*P **P** **11 14 09.7 -1.4**
baz=309
KUU Kurty 64.02 309 *e*P **P** **11 14 09.7 -1.4**
V48A Smith Brothers 64.07 65 IAmb IAmb 11 14 12.1
comp=Z,259nm,1.1s
U49A Red Boiling Sp 64.08 63 IAmb IAmb 11 14 12.3
comp=Z,226nm,1.1s
FRNY Flat Rock 64.09 50 IAmb IAmb 11 14 10.8
comp=Z,233nm,1.6s
441A DeRidder 64.10 73 IAmb IAmb 11 14 13.6
comp=Z,227nm,1.0s
HNR Honiara 64.15 203 P **P** **11 14 13.8 +1.7**
comp=Z,3µm,0.9s,baz=227,slow=5.1,SNR=5.4
T50A Nancy 64.22 62 IAmb IAmb 11 14 13.3
comp=Z,259nm,0.9s
MDOK Medeo 64.23 308 *e*P **P** **11 14 12.4 -0.2**
baz=308
MDOK *i* sP **sP** **11 15 27.5 -0.9**
baz=308
MDOK Medeo 64.23 308 *e*P **P** **11 14 12.4 -0.2**
MDOK *i* *SP **sP** **11 15 27.5 -0.9**
BTLS Baital 64.23 311 ⇑*i*P **P** **11 14 11.6 -0.8**
baz=311
BTLS *e*pP **pwP** **11 15 06.8 -0.9**
baz=311
BTLS Baital 64.23 311*c* *i*P **P** **11 14 11.6 -0.8**
BTLS *e**PP **pwP** **11 15 06.7 -0.9**
AAA Alma-Ata 64.26 308 *e*P **P** **11 14 12.8 0.0**
baz=308
AAA Alma-Ata 64.26 308 *e*P **P** **11 14 12.7 0.0**
ZAIG Zacatecas 64.37 86 P **P** **11 14 14.2 +0.2**
ZAIG IAmb IAmb 11 14 15.7
comp=Z,257nm,1.1s
J58A Remsen 64.40 52 IAmb IAmb 11 14 14.1
comp=Z,414nm,1.4s
D62A Allapoint, All 64.41 45 IAmb IAmb 11 14 14.3
comp=Z,215nm,0.9s
S51A Beattyville 64.43 61 IAmb IAmb 11 14 14.5
comp=Z,128nm,0.9s
GENI Genyem 64.54 226 P **P** **11 14 16.4 +1.7**
GENI Genyem 64.54 226 P **P** **11 14 15.9 +1.2**
comp=Z,240nm,1.1s,comp=Z,4µmcomp=Z,2µm
VBMS Vicksburg 64.57 70 P **P** **11 14 14.5 -0.2**
baz=317,SNR=32
FINES FINESS Array B 64.62 347 P **P** **11 14 14.5 0.0**
FINES FINESS Array B 64.62 347 *i* P **P** **11 14 14.6 0.0**
FINES pmax pmax
comp=Z,56nm,0.9s
FINES FINESS Array B 64.62 347 P **P** **11 14 14.7 +0.1**
comp=Z,56nm,0.9s,baz=36,slow=7.1,SNR=59
FINES pP **pP** **11 15 06.2 -0.5**
comp=Z,16nm,1.0s,baz=33,slow=7.3,SNR=2.6
FINES PKPPKP **P'P'df** **11 42 59.4 -2.3**
comp=Z,3.0nm,0.8s,baz=142,slow=5.1,SNR=5.3
comp=Z,56nm,0.9s
J59A Piesco 64.69 51 IAmb IAmb 11 14 15.5
comp=Z,364nm,1.5s
VT1 Waterbury 64.86 49 IAmb IAmb 11 14 16.8
comp=Z,256nm,1.3s
X48A Hartselle 64.89 66 IAmb IAmb 11 14 16.9
comp=Z,212nm,1.2s
Q54A Coxs Mills 64.90 58 IAmb IAmb 11 14 17.7
comp=Z,268nm,1.2s
MCWV Mont Chateau 64.91 57 IAmb IAmb 11 14 17.6
comp=Z,146nm,1.0s
MCWV Mont Chateau 64.91 57 P **P** **11 14 16.5 -0.4**
baz=318,SNR=16
BINY Binghamton 64.94 53 P **P** **11 14 16.9 -0.1**
baz=319,SNR=30
SWET Sewanee 64.95 64 IAmb IAmb 11 14 17.4
comp=Z,246nm,1.0s
TKM2 Tokmak 2 65.11 309 P **P** **11 14 18.5 +0.1**
SNR=9.4
ACCN Adirondack Com 65.15 51 IAmb IAmb 11 14 18.7
comp=Z,218nm,1.0s
MOL Molde 65.16 356 *e*P **P** **11 14 19.0 +0.9**
MOL IAmb IAmb 11 14 19.7
comp=Z,353nm,1.7s
SSPA Standing Stone 65.17 55 P **P** **11 14 17.9 -0.6**
SSPA Standing Stone 65.17 55 P **P** **11 14 18.1 -0.4**
baz=318
SSPA Standing Stone 65.17 55 P **P** **11 14 18.0 -0.6**
PQI Presque Isle 65.18 45 IAmb IAmb 11 14 18.1
comp=Z,91nm,0.8s
G62A West of Eustis 65.20 47 IAmb IAmb 11 14 19.2
comp=Z,202nm,0.8s
TZTN Tazewell 65.27 62 IAmb IAmb 11 14 20.3
comp=Z,376nm,1.3s
TZTN Tazewell 65.27 62 P **P** **11 14 18.9 -0.3**
baz=318,SNR=34
W50A Signal Mountai 65.30 64 IAmb IAmb 11 14 20.1
comp=Z,358nm,1.1s
LBNH Lisbon 65.31 49 IAmb IAmb 11 14 19.9
comp=Z,186nm,1.1s
LBNH Lisbon 65.31 49 P **P** **11 14 18.4 -0.9**
baz=320,SNR=13
USP Ospenovka 65.37 309 P **P** **11 14 20.3 +0.5**
SNR=8.8
V51A Loudon 65.38 63 IAmb IAmb 11 14 20.6
comp=Z,312nm,1.1s
L59A Walton 65.40 52 IAmb IAmb 11 14 20.8
comp=Z,252nm,0.9s
F63A Nahmakanta, Br 65.46 46 IAmb IAmb 11 14 20.9
comp=Z,252nm,1.1s
KSPA Keystone Colle 65.53 53 IAmb IAmb 11 14 21.6
comp=Z,202nm,0.9s
BATG Bathurst New B 65.54 43 IAmb IAmb 11 14 21.7
comp=Z,398nm,1.5s
CPCT Cooper Cave 65.55 63 IAmb IAmb 11 14 21.6
comp=Z,394nm,1.4s
HNH Hanover 65.56 50 IAmb IAmb 11 14 21.4
comp=Z,138nm,1.0s
PUL Pulkovo 65.56 344 ⇓*i*P **P** **11 14 21.3 +0.7**
PUL pmax pmax
comp=Z,95nm,1.1s
AKN Aaknes 65.58 357 *e*P **P** **11 14 22.0 +1.3**
AKN IAmb IAmb 11 14 22.7
comp=Z,166nm,1.1s
RAF Rauma 65.58 349 *e*P **P** **11 14 21.4 +0.6**
KBK Karagaybulak 65.62 309 P **P** **11 14 22.1 +0.4**
SNR=5.5
FPAL Fort Paine 65.62 65 IAmb IAmb 11 14 22.0
comp=Z,305nm,1.0s
DOMB Dombas 65.63 356 *e*P **P** **11 14 21.8 +0.6**
DOMB IAmb IAmb 11 14 22.0
comp=Z,124nm,1.1s
TRY Troy 65.65 51 IAmb IAmb 11 14 22.0
comp=Z,300nm,1.5s
F64A Sherman 65.67 46 IAmb IAmb 11 14 22.1
comp=Z,226nm,0.8s
Y49A Blount Mountai 65.69 66 IAmb IAmb 11 14 22.1
comp=Z,300nm,1.4s
J61A Chester 65.70 50 IAmb IAmb 11 14 22.4
comp=Z,205nm,1.0s
PKME Peaks-Kenny Pk 65.72 47 IAmb IAmb 11 14 22.6
comp=Z,336nm,1.4s
PKME Peaks-Kenny Pk 65.72 47 P **P** **11 14 20.6 -1.3**
baz=321,SNR=10.0
V52A Sevierville 65.76 62 IAmb IAmb 11 14 23.3
comp=Z,267nm,1.1s
R55A Marlinton 65.79 58 IAmb IAmb 11 14 23.6
comp=Z,218nm,1.1s
TNCH TengChong 65.81 280 P **P** **11 14 24.7 +1.7**
TNCH pP pwP 11 15 17.1 -1.3
TNCH sP sP 11 15 40.0 +1.0
TNCH S **S** **11 22 51.5 +0.4**
TNCH ScS **SKSac** **11 23 55.7 -0.6**
TNCH pmax pmax
comp=Z,72nm,1.3s
TNCH pmax pmax
comp=Z,330nm,4.3s
TNCH LR LR
comp=Z,330nm,12.2s
TNCH LR LR
comp=Z,310nm,18.6s
TNCH LR LR
comp=Z,330nm,15.4s
AAK Ala-Archa 65.85 309 P **P** **11 14 23.5 +0.4**
SNR=9.4
AAK Ala-Archa 65.85 309 P **P** **11 14 23.1 0.0**
AAK Ala-Archa 65.85 309*c* *i*P **P** **11 14 23.1 0.0**
AAK pmax pmax
comp=Z,29nm,1.7s
AAK Ala-Archa 65.85 309 P **P** **11 14 23.9 +0.8**
AAK Ala-Archa 65.85 309 P **P** **11 14 23.4 +0.4**
AAK pP **pwP** **11 15 17.4 -1.2**
LRAL Lakeview Retre 65.97 67 P **P** **11 14 22.2 -1.5**
baz=318,SNR=34
P57A Homestead Farm 65.97 56 IAmb IAmb 11 14 24.4
comp=Z,188nm,1.2s
X51A Calhoun 66.02 64 IAmb IAmb 11 14 24.6
comp=Z,298nm,1.1s
MEF Metsahovi 66.03 347 *e*P **P** **11 14 24.3 +0.6**
I63A Otisfield 66.08 48 IAmb IAmb 11 14 25.0
comp=Z,218nm,0.8s
WVL Waterville 66.09 47 IAmb IAmb 11 14 24.6
comp=Z,142nm,1.0s
W52A Murphy 66.14 63 IAmb IAmb 11 14 25.6
comp=Z,296nm,1.1s
EKS2 Erkin-Say 66.17 309 P **P** **11 14 25.7 +0.7**
SNR=7.2
U54A Nelsons Funny 66.21 61 IAmb IAmb 11 14 26.5
comp=Z,439nm,1.3s
NC204 NORSAR Array S 66.30 355 IAmb IAmb 11 14 27.3
comp=Z,157nm,1.1s
V53A Saluda 66.31 62 IAmb IAmb 11 14 27.0
comp=Z,270nm,1.2s
NC303 NORSAR Array S 66.32 354 IAmb IAmb 11 14 27.5
comp=Z,224nm,1.2s
L61B Northampton 66.33 51 P **P** **11 14 24.9 -1.0**
baz=320,SNR=8.9
K62A Royalston 66.38 50 IAmb IAmb 11 14 26.2
comp=Z,139nm,0.9s
NC405 NORSAR Array S 66.41 354 P **P** **11 14 26.6 +0.5**
NC405 IAmb IAmb 11 14 28.0
comp=Z,364nm,1.5s
MVL Millersville 66.42 55 IAmb IAmb 11 14 27.2
comp=Z,156nm,0.9s
BLA Blacksburg 66.44 59 IAmb IAmb 11 14 27.6
comp=Z,329nm,1.3s
BLA Blacksburg 66.44 59 P **P** **11 14 26.1 -0.6**
baz=318,SNR=25
ODNJ Ogdensburg 66.46 53 IAmb IAmb 11 14 27.2
comp=Z,143nm,1.0s
TABU Tabubil 66.48 223 P **P** **11 14 29.7 +2.5**
NB201 NORSAR Array S 66.50 354 IAmb IAmb 11 14 28.5
comp=Z,148nm,1.0s
NB2 NORSAR Subarra 66.51 354 P **P** **11 14 27.0 +0.2**
comp=Z,210nm,1.2s,baz=7.1,slow=6.5
NB2 NORSAR Subarra 66.51 354 P pP 11 15 12.0 -6.8
comp=Z,3.7nm,0.6s,baz=6.9,slow=6.5
NB2 NORSAR Subarra 66.51 354 P **P** **11 14 27.0 +0.2**
baz=7.1,slow=6.5
NB2 NORSAR Subarra 66.51 354 P **P** **11 14 23.0 -3.8**
NOA NORSAR Array B 66.51 354 P **P** **11 14 27.1 +0.4**
comp=Z,47nm,0.9s,baz=6.3,slow=6.4,SNR=65
NOA PcP **PcP** **11 14 54.5 +0.1**
NOA comp=Z,7.8nm,0.9s,baz=359,slow=3.0,SNR=3.9
NOA pP **pP** **11 15 18.8 0.0**
NOA comp=Z,14nm,1.0s,baz=2.5,slow=6.3,SNR=3.5
NOA PKPPKP **P'P'df** **11 42 55.4 -3.4**
comp=Z,1.5nm,0.9s,baz=154,slow=2.0,SNR=2.7
comp=Z,47nm,0.9s
G65A Princeton 66.53 46 IAmb IAmb 11 14 27.7
comp=Z,205nm,1.0s
AKTO Aktyubinsk 66.56 324 P **P** **11 14 27.9 +0.7**
comp=Z,53nm,0.9s,baz=14,slow=3.6,SNR=65
comp=Z,53nm,0.9s
HYA Hoyanger 66.62 357 *e*P **P** **11 14 27.8 +0.5**
HYA IAmb IAmb 11 14 28.5
comp=Z,193nm,1.2s
QUA2 Belchertown 66.62 51 IAmb IAmb 11 14 28.0
comp=Z,251nm,1.5s
LSA Lhasa 66.70 289 P **P** **11 14 30.8 +1.8**
LSA Lhasa 66.70 289 P **P** **11 14 30.5 +1.5**
LSA pP **pwP** **11 15 24.5 0.0**
BG3 Lake Jocassee 66.76 63 IAmb IAmb 11 14 29.7
comp=Z,377nm,1.1s
Z51A Franklin 66.78 65 IAmb IAmb 11 14 28.8
comp=Z,203nm,1.1s
S57A Dark Hollow, R 66.79 58 IAmb IAmb 11 14 29.9
comp=Z,219nm,1.2s
NC602 NORSAR Array S 66.80 354 IAmb IAmb 11 14 30.2
comp=Z,117nm,1.2s
NC602 NORSAR Array S 66.80 354 *e*P **P** **11 14 28.8 +0.3**
NC602 IAmb IAmb 11 14 30.5
comp=Z,129nm,1.3s
HRV Adam Dziewonsk 66.82 50 P **P** **11 14 28.7 -0.3**
HRV IAmb IAmb 11 14 29.6
comp=Z,228nm,1.2s
HRV Adam Dziewonsk 66.82 50 P **P** **11 14 28.1 -0.9**
baz=320
HRV Adam Dziewonsk 66.82 50 P **P** **11 14 28.7 -0.3**
HRV Adam Dziewonsk 66.82 50 P **P** **11 14 28.6 -0.3**
AB31 Akbulak array 66.82 322 *i* P **P** **11 14 28.5 -0.3**
ABKAR Akbulak array 66.82 322 P **P** **11 14 29.4 +0.5**
PAL Palisades 66.85 52 IAmb IAmb 11 14 29.8
comp=Z,182nm,0.8s
PAL Palisades 66.85 52 P **P** **11 14 28.7 -0.5**
baz=320,SNR=18
GGN Saint George 66.91 45 IAmb IAmb 11 14 30.0
comp=Z,301nm,0.9s
Y52A Lilburn 66.98 64 IAmb IAmb 11 14 30.7
comp=Z,234nm,1.0s
CPNY Central Park 66.99 53 IAmb IAmb 11 14 30.8
comp=Z,216nm,0.8s
WSPT Westport, CT 67.01 52 IAmb IAmb 11 14 30.5
comp=Z,179nm,1.0s
SKAR Skarslia 67.02 356 *e*P **P** **11 14 31.1 +1.1**
SKAR IAmb IAmb 11 14 31.7
comp=Z,86nm,0.9s
WES Weston 67.02 50 IAmb IAmb 11 14 30.7
comp=Z,199nm,0.7s
V55A Taylorsville 67.04 61 IAmb IAmb 11 14 31.4
comp=Z,284nm,1.2s
ITAN ITANAGAR 67.10 285 *e*P **P** **11 14 32.7 +1.7**
ITAN IAmb IAmb 11 14 33.3
comp=Z,273nm,1.0s
U56A King 67.11 60 IAmb IAmb 11 14 31.8
comp=Z,287nm,1.2s
BCX Boston College 67.13 50 IAmb IAmb 11 14 31.4
comp=Z,241nm,1.4s
DZA Taraz 67.14 311 *e*P **P** **11 14 30.9 -0.1**
baz=311
DZA Taraz 67.14 311 *e*P **P** **11 14 30.8 -0.2**
250A Grady 67.16 67 P **P** **11 14 30.4 -0.8**
R58B Mineral 67.19 57 IAmb IAmb 11 14 32.3
comp=Z,182nm,1.2s
T57A Hurt 67.21 59 IAmb IAmb 11 14 32.1
comp=Z,143nm,1.0s
SWI Sorong 67.23 235 P **P** **11 14 31.7 -0.1**
comp=Z,347nm,1.2s,comp=Z,4µm
MOKO MOKOCHONG 67.24 284 *e*P **P** **11 14 33.4 +1.4**
MOKO IAmb IAmb 11 14 34.3
comp=Z,198nm,1.2s
HFS Hagfors 67.24 353 P **P** **11 14 31.6 +0.3**
comp=Z,64nm,1.0s,baz=29,slow=6.8,SNR=38
HFS pP **pP** **11 15 23.7 0.0**
comp=Z,13nm,0.9s,baz=323,slow=2.2,SNR=1.3
comp=Z,64nm,1.0s
CBN Corbin Frederi 67.27 57 IAmb IAmb 11 14 32.5
comp=Z,267nm,1.3s
CBN Corbin Frederi 67.27 57 P **P** **11 14 31.4 -0.4**
baz=319,SNR=7.7
DRLN Deer Lake 67.32 37 P **P** **11 14 31.7 -0.2**
DRLN IAmb IAmb 11 14 33.0
comp=Z,273nm,1.1s
BRAL Brewton 67.33 68 P **P** **11 14 32.2 -0.1**
baz=318,SNR=11
KK31 Karatay Array 67.35 312 P **P** **11 14 32.2 0.0**
KK31 Karatay Array 67.35 312 P **P** **11 14 32.3 0.0**
KK31 pmax pmax
comp=Z,28nm,0.9s
KKAR Karatay Array 67.35 312 P **P** **11 14 32.1 -0.2**
KKAR Karatay Array 67.35 312 P **P** **11 14 32.1 -0.2**
KKAR pmax pmax
comp=Z,28nm,0.9s
VSU Vasula 67.39 345*c* *i*P **P** **11 14 32.6 +0.4**
VSU pmax pmax
comp=Z,210nm,1.3s
VSU Vasula 67.39 345 *e*P **P** **11 14 32.8 +0.6**
M63A Gales Ferry 67.44 51 IAmb IAmb 11 14 33.2
comp=Z,368nm,1.0s
PAULI Pauline 67.49 62 IAmb IAmb 11 14 34.0
comp=Z,341nm,1.3s
KMSC Kings Mountain 67.51 61 P **P** **11 14 32.6 -0.8**
baz=319,SNR=53
152A Waverly Hall 67.51 65 IAmb IAmb 11 14 33.3
comp=Z,249nm,1.4s
KSH Kashi 67.52 306 P **P** **11 14 37.5 +3.9**
KSH pP pwP 11 15 30.6 +1.4
KSH S **S** **11 23 16.7 +5.5**
KSH ScS **ScS** **11 24 11.3 +1.9**
KSH sS sS 11 24 46.3 +4.9
KSH pmax pmax
comp=Z,27nm,1.3s
KSH LR LR
comp=Z,540nm,16.1s
KSH LR LR
comp=Z,630nm,13.4s
KSH LR LR
comp=Z,430nm,16.5s
MTSE Matsula 67.57 347 *e*P **P** **11 14 34.4 +1.1**
OSL Oslo 67.64 354 *e*P **P** **11 14 35.1 +1.3**
GOGA Godfrey 67.65 64 IAmb IAmb 11 14 34.5
comp=Z,206nm,1.1s
GOGA Godfrey 67.65 64 P **P** **11 14 33.0 -1.3**
baz=319,SNR=39
HODGE Hodges 67.69 63 IAmb IAmb 11 14 35.3
comp=Z,227nm,0.9s
BRLS Borolday 67.71 312 *e*P **P** **11 14 35.9 +1.3**
baz=312
BRLS Borolday 67.71 312 *e*P **P** **11 14 35.9 +1.3**
ODD1 Odda 67.86 357 *e*P **P** **11 14 36.4 +1.2**
MOS Moscow 67.89 338 *e*P **P** **11 14 33.7 -1.7**
MOS *e* 11 14 59.2
MOS *e* 11 17 04.9
MOS eS **S** **11 23 12.0 -2.6**
MOS pmax pmax
comp=Z,800nm,1.9s
MOS pmax pmax
comp=Z,359nm,1.6s
MOS pmax pmax
comp=N,151nm,1.1s
KOHI KOHIMA 67.93 284 *e*P **P** **11 14 36.3 0.0**
KOHI IAmb IAmb 11 14 41.2
comp=Z,96nm,1.2s
PMG Port Moresby 67.95 216 P **P** **11 14 39.1 +2.9**
PMG Port Moresby 67.95 216 P **P** **11 14 38.7 +2.5**
PMG Port Moresby 67.95 216*d* *i*P **P** **11 14 36.9 +0.7**
PMG pmax pmax
comp=Z,64nm,1.0s
PMG Port Moresby 67.95 216 P **P** **11 14 37.0 +0.7**
M65A Busby, Falmout 67.98 50 P **P** **11 14 34.2 -2.0**
baz=321
KONO Kongsberg 67.99 355 P **P** **11 14 36.5 +0.5**
KONO Kongsberg 67.99 355 *e*P **P** **11 14 37.1 +1.2**
KONO Kongsberg 67.99 355 P **P** **11 14 36.5 +0.5**
KONO pmax pmax
comp=Z,112nm,1.0s

KONO Kongsberg 67.99 355 P **P** **11 14 37.0 +1.0**
KONO pwP **pwP** **11 15 36.7 +6.4**
T59A Double "B" Far 68.11 58 IAmb IAmb 11 14 38.1
comp=Z,174nm,0.9s
V58A Windy Hill, Pi 68.19 59 IAmb IAmb 11 14 38.5
comp=Z,335nm,1.2s
JSC Jenkinsville 68.20 62 IAmb IAmb 11 14 38.5
comp=Z,180nm,0.9s
NONG Nongkai 68.24 272 P **P** **11 14 39.9 +1.7**
CRAI Chiangrai 68.29 275 P **P** **11 14 39.4 +1.0**
BELG Belogornoye 68.29 331*c iP* **P** **11 14 38.3 +0.4**
BELG pmax pmax
comp=Z,51nm,1.2s
IUG luzhnay 68.32 311 *eP* **P** **11 14 38.8 +0.3**
comp=Z,20nm,1.2s,baz=312
IUG luzhnay 68.32 311 *eP* **P** **11 14 38.7 +0.3**
IUG pmax pmax
comp=Z,20nm,1.2s
BIRD Birdtown, Kers 68.35 61 IAmb IAmb 11 14 39.3
comp=Z,154nm,1.0s
BLS5 Blasjo 68.35 357 *eP* **P** **11 14 39.3 +1.1**
CHM Chimkent 68.38 312 *eP* **P** **11 14 38.9 +0.2**
baz=312
CHM Chimkent 68.38 312 *eP* **P** **11 14 38.9 +0.2**
U59A Littleton 68.46 58 IAmb IAmb 11 14 40.3
comp=Z,539nm,1.9s
FAKI Fak Fak 68.51 233 P **P** **11 14 40.3 +0.5**
FAKI IAmb IAmb 11 14 41.8
comp=Z,311nm,1.3s
FAKI Fak Fak 68.51 233 P **P** **11 14 41.2 +1.4**
FAKI Fak Fak 68.51 233 P **P** **11 14 39.6 -0.2**
comp=Z,245nm,1.6s,comp=Z,3μmcomp=Z,2μm
KMY Karmoy 68.60 357 *eP* **P** **11 14 40.5 +0.8**
HAL Halifax 68.68 44 IAmb IAmb 11 14 41.1
comp=Z,325nm,1.3s
IMP Imphal 68.70 283 *eP* **P** **11 14 41.3 +0.3**
OBN Obninsk 68.70 339 P **P** **11 14 40.8 +0.4**
OBN IAmb IAmb 11 14 42.2
comp=Z,285nm,1.2s
OBN Obninsk 68.70 339*c iP* **P** **11 14 40.9 +0.5**
OBN *e**PP **pP** **11 15 32.3 -0.5**
OBN *e* 11 17 13.7
OBN *eS* **S** **11 23 15.7 -8.4**
OBN pmax pmax
comp=Z,380nm,1.7s
Y57A Sumter 68.86 62 IAmb IAmb 11 14 42.6
comp=Z,304nm,1.2s
TAVE Taveuni 68.89 180 P **P** **11 14 43.9 +1.9**
GBN Guysborough 68.92 42 IAmb IAmb 11 14 43.1
comp=Z,426nm,1.3s
YSA Yasawairara 68.93 183 P **P** **11 14 44.3 +2.1**
UBPT Khong Chiam 68.95 268 P **P** **11 14 44.0 +1.4**
X58A Rowland 69.02 60 IAmb IAmb 11 14 43.6
comp=Z,155nm,0.9s
W59A Clinton 69.03 59 IAmb IAmb 11 14 43.8
comp=Z,222nm,0.9s
UNM Universidad Na 69.03 85 P **P** **11 14 43.2 -0.1**
UNM Universidad Na 69.03 85 P **P** **11 14 43.2 -0.1**
UNM pmax pmax
comp=Z,942nm,1.7s
TIGA Tifton 69.07 66 IAmb IAmb 11 14 43.7
comp=Z,332nm,1.4s
TIGA Tifton 69.07 66 P **P** **11 14 42.3 -0.8**
baz=319,SNR=6.8
CNNC Cliffs of the 69.26 59 IAmb IAmb 11 14 45.2
comp=Z,257nm,1.1s
CNNC Cliffs of the 69.26 59 P **P** **11 14 43.8 -0.4**
baz=320,SNR=5.9
Y58A Scranton 69.34 61 IAmb IAmb 11 14 45.6
comp=Z,303nm,0.8s
SHL Shillong 69.37 285 IAmb IAmb 11 15 40.7
comp=Z,238nm,1.2s
SHL Shillong 69.37 285 P **P** **11 14 45.2 -0.1**
SHL Shillong 69.37 285 *eP* **P** **11 14 45.4 +0.1**
SHL IAmb IAmb 11 14 47.2
comp=Z,54nm,0.9s
SHL Shillong 69.37 285 P **P** **11 14 45.2 -0.1**
SNR=37
SNART Snartemo 69.41 356 *eP* **P** **11 14 46.0 +1.3**
SNART Snartemo 69.41 356 *iP* **P** **11 14 45.5 +0.8**
HOMB Homborsund 69.42 356 *eP* **P** **11 14 45.9 +1.1**
HOMB IAmb IAmb 11 14 46.0
comp=Z,69nm,0.9s
HOMB Homborsund 69.42 356 *iP* **P** **11 14 45.0 +0.2**
TJOU Tjoern 69.48 354 *iP* **P** **11 14 44.9 -0.2**
MND Mandalay 69.52 280 P **P** **11 14 46.7 +0.7**
553A Crawfordville 69.54 67 IAmb IAmb 11 14 47.1
comp=Z,317nm,1.1s
NHSC New Hope 69.67 62 P **P** **11 14 47.0 +0.3**
baz=320,SNR=31
BORU Boraas 69.79 353 *iP* **P** **11 14 46.4 -0.7**
Y60A Bolivia 70.04 60 IAmb IAmb 11 14 49.5
comp=Z,224nm,0.8s
ONAU Onsala 70.09 353 *iP* **P** **11 14 48.1 -0.8**
VSVD Vaisvydziai 70.20 346 *eP* **P** **11 14 49.7 +0.2**
CHTO Chiang Mai 70.23 275 P **P** **11 14 50.8 +0.4**
CHTO Chiang Mai 70.23 275 P **P** **11 14 51.6 +1.2**
CHTO Chiang Mai 70.23 275 P **P** **11 14 50.8 +0.4**
CHTO pmax pmax
comp=Z,57nm,1.2s
CHTO Chiang Mai 70.23 275 P **P** **11 14 51.1 +0.7**
CHTO Chiang Mai 70.23 275 P **P** **11 14 50.8 +0.4**
CHTO pP **pP** **11 15 44.0 +1.2**
CHTO sP **sP** **11 16 08.9 +1.9**
ISAL Salakas 70.26 345 *eP* **P** **11 14 51.7 +1.7**
AZL Aizawl 70.27 283 *eP* **P** **11 14 50.1 -0.5**
AZL IAmb IAmb 11 14 52.4
comp=Z,84nm,1.2s
IDID Didziasalis 70.41 344 *eP* **P** **11 14 49.4 -1.5**
FABU Falkenberg 70.43 353 *iP* **P** **11 14 50.3 -0.6**
IIGN Ignalina 70.45 345 *eP* **P** **11 14 51.7 +0.5**
LPSR Galich'ya Gora 70.46 336 *eP* **P** **11 14 48.8 -2.4**
LPSR pmax pmax
comp=Z,70nm,1.1s
CM31 Chiang Mai Arr 70.51 275 P **P** **11 14 52.1 0.0**
SNR=17
CMAR Chiang Mai Arr 70.51 275 P **P** **11 14 52.7 +0.7**
comp=Z,32nm,0.9s,baz=26,slow=7.2,SNR=149
CMAR PcP **PcP** **11 15 12.2 +0.4**
comp=Z,7.0nm,0.8s,baz=14,slow=4.8,SNR=6.8
CMAR pP **pP** **11 15 45.2 +0.7**
comp=Z,22nm,0.8s,baz=26,slow=7.1,SNR=8.9
CMAR S **S** **11 23 46.9 +0.6**
comp=Z,0.6nm,0.3s,baz=191,slow=24,SNR=1.0
CMAR ScS **ScS** **11 24 33.2 0.0**
comp=Z,0.3nm,0.3s,baz=47,slow=23,SNR=1.3
CMAR PKPPKP **P'P'df** **11 42 49.8 +0.2**
comp=Z,3.6nm,0.8s,baz=235,slow=4.7,SNR=20
comp=Z,32nm,0.9s
PABE Paberze 70.65 346 P **P** **11 14 52.6 +0.3**
PABE IAmb IAmb 11 14 53.9
comp=Z,175nm,1.0s
PABE Paberze 70.65 346 *eP* **P** **11 14 53.0 +0.7**
TLIG Tlapa 70.75 86 IAmb IAmb 11 14 56.2
comp=Z,540nm,1.5s
BLEU Blekinge 70.86 351 *iP* **P** **11 14 52.6 -0.9**
DEL Delary 70.86 352 *iP* **P** **11 14 52.8 -0.8**
SANI Sanana 70.95 239 P **P** **11 14 55.9 +1.2**
SANI Sanana 70.95 239 P **P** **11 14 54.7 0.0**
comp=Z,102nm,1.0s,comp=Z,1μmcomp=Z,2μm
MNK Minsk 70.99 344 *iP* **P** **11 14 54.9 +0.5**
MNK *i* 11 17 34.2
MNK *i* PPP PPP 11 19 19.2
MNK *iS* **S** **11 23 52.6 +1.7**
MNK *iSS* **SS** **11 28 31.0 +3.6**
MNK pmax pmax
comp=E,16nm,1.2s
MNK pmax pmax
comp=Z,127nm,0.9s
MNK pmax pmax
comp=N,114nm,1.2s
MNK MLR MLR
comp=N,170nm,12.0s
MNK MLR MLR
comp=E,111nm,15.0s
MNK MLR MLR
comp=Z,375nm,19.0s
VRH Novokhopyorsk 71.02 334 *eP* **P** **11 14 54.6 0.0**
VRH pmax pmax
comp=Z,148nm,1.2s
MRSI Marisa 71.03 245 P **P** **11 14 54.9 -0.3**
comp=Z,161nm,1.3s,comp=Z,3μm
SAIH SAIHA 71.04 282 *eP* **P** **11 14 55.5 +0.2**
SAIH IAmb IAmb 11 14 56.6
comp=Z,56nm,0.8s

MUD Monsted U'grnd 71.20 355 *iP* **P** **11 14 55.6 0.0**
MUD IAmb IAmb 11 14 58.2
comp=Z,36nm,1.0s
MUD Monsted U'grnd 71.20 355 *iP* **P** **11 14 56.1 +0.5**
MUD IAmb IAmb 11 14 57.8
comp=Z,187nm,1.3s
656A Willston 71.23 66 IAmb IAmb 11 14 57.6
comp=Z,388nm,1.2s
VORR Voronezh 71.24 336 *eP* **P** **11 14 55.0 -0.9**
VORR pmax pmax
comp=Z,60nm,1.0s
BJUU Bjuv 71.32 353 *iP* **P** **11 14 56.1 -0.2**
SIMJ Simiganj 71.56 310 P **P** **11 14 58.1 -0.1**
SIMJ PcP **PcP** **11 15 15.4 -0.8**
SIMJ pP **pP** **11 15 52.1 +1.5**
SIMJ pwP **pwP** **11 15 57.4 +3.0**
VSR Storozhevoye 71.67 336 *eP* **P** **11 14 56.6 -1.9**
VSR pmax pmax
comp=Z,70nm,1.0s
LUNU Lund 71.73 352 *iP* **P** **11 14 58.3 -0.4**
LUWI Luwuk 71.83 243 P **P** **11 14 59.1 -0.8**
LUWI IAmb IAmb 11 15 00.7
comp=Z,479nm,1.4s
LUWI Luwuk 71.83 243 P **P** **11 15 01.3 +1.3**
LUWI Luwuk 71.83 243 P **P** **11 14 59.3 -0.7**
comp=Z,254nm,1.0s,comp=Z,4μmcomp=Z,3μm
VORD Divnogorie 71.87 335 *eP* **P** **11 14 57.9 -1.7**
VORD pmax pmax
comp=Z,70nm,1.0s
BSD Bornholm Skovb 72.11 351 *iP* **P** **11 15 00.3 -0.8**
BSD IAmb IAmb 11 15 02.5
comp=Z,20nm,0.8s
BSD Bornholm Skovb 72.11 351 *iP* **P** **11 15 00.2 -0.9**
BSD IAmb IAmb 11 15 01.6
comp=Z,47nm,1.0s
SUW Suwalki 72.22 346 *iP* **P** **11 15 01.2 -0.4**
SUW Suwalki 72.22 346 IAmb IAmb 11 15 02.7
comp=Z,192nm,1.1s
SUW Suwalki 72.22 346 P **P** **11 15 01.5 -0.2**
SUW Suwalki 72.22 346 *eP* **P** **11 15 02.0 +0.3**
NAYO Nakonayok 72.23 270 P **P** **11 15 04.3 +2.0**
MPSI Mapaga 72.28 246 P **P** **11 15 03.7 +1.1**
comp=Z,89nm,0.9s,comp=Z,2μm
EKA Eskdalemuir Ar 72.51 2 P **P** **11 15 04.1 +0.7**
comp=Z,48nm,0.8s,baz=357,slow=4.4,SNR=58
EKA pP **pP** **11 15 56.5 +0.2**
comp=Z,12nm,0.9s,baz=12,slow=5.4,SNR=3.5
comp=Z,48nm,0.8s
ESK Eskdalemuir 72.53 2 P **P** **11 15 04.3 +0.8**
ESK Eskdalemuir 72.53 2 P **P** **11 15 04.3 +0.8**
ESK pmax pmax
comp=Z,96nm,1.1s
DWPF Disney Wildern 72.81 66 P **P** **11 15 05.9 +0.3**
DWPF IAmb IAmb 11 15 06.9
comp=Z,209nm,0.8s
DWPF Disney Wildern 72.81 66 P **P** **11 15 05.7 +0.1**
baz=320
RGN Rugen 72.81 352 IAmb IAmb 11 15 07.7
comp=Z,218nm,1.0s
RGN Rugen 72.81 352 *eP* **P** **11 15 06.6 +1.5**
RGN Rugen 72.81 352 *eP* **P** **11 15 06.2 +1.1**
comp=Z,114nm,0.9s,baz=7.7,slow=5.6
DHRM DHARAMSHALA 72.99 301 *eP* **P** **11 15 07.1 +0.2**
SAUI Saumlaki 73.36 232 P **P** **11 15 11.0 +2.1**
SAUI Saumlaki 73.36 232 P **P** **11 15 11.0 +2.1**
SAUI Saumlaki 73.36 232 P **P** **11 15 11.1 +2.2**
comp=Z,800nm,1.0s,comp=Z,8μm
SMLA Simla 73.41 299 *eP* **P** **11 15 09.0 -0.1**
NIL Nilore 73.46 304 P **P** **11 15 10.0 +0.6**
NIL Nilore 73.46 304 P **P** **11 15 10.0 +0.6**
NIL pmax pmax
comp=Z,107nm,1.0s
SRDT SRDT 73.55 272 P **P** **11 15 11.6 +1.5**
COEN Coen 73.60 218 P **P** **11 15 10.9 +0.7**
COEN Coen 73.60 218 P **P** **11 15 11.7 +1.4**
BSEG Bad Segeberg 73.64 354 *eP* **P** **11 15 11.1 +1.1**
comp=Z,79nm,0.9s,baz=7.7,slow=5.6
BSEG epP **pP** **11 16 09.9 +6.7**
KOUNC Koumac, New Ca 74.09 196 P **P** **11 15 14.1 +1.2**
KOUNC IAmb IAmb 11 15 16.3
comp=Z,370nm,1.8s
KOUNC Koumac, New Ca 74.09 196 P **P** **11 15 15.1 +2.2**
BOK Bokaro 74.23 288 *eP* **P** **11 15 14.0 +0.1**
060A Indiantown 74.24 66 IAmb IAmb 11 15 15.6
comp=Z,229nm,1.1s
AKASG Malin Array Be 74.38 342 IAmb IAmb 11 15 15.8
comp=Z,181nm,1.1s
AKASG Malin Array Be 74.38 342 P **P** **11 15 14.4 +0.1**
comp=Z,55nm,0.6s,baz=18,slow=5.7,SNR=215
AKASG pP **pP** **11 16 07.2 -0.6**
comp=Z,3.8nm,0.4s,baz=19,slow=6.0,SNR=1.8
AKASG S **S** **11 24 28.3 -0.8**
comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=5.2
comp=Z,55nm,0.6s
AKBB Malin Array Si 74.38 342 IAmb IAmb 11 15 15.9
comp=Z,263nm,1.2s
AKBB Malin Array Si 74.38 342*d iP* **P** **11 15 13.4 -0.9**
AKBB pmax pmax
comp=Z,276nm,1.4s
KIEV Kiev 74.39 342 P **P** **11 15 14.4 0.0**
KIEV IAmb IAmb 11 15 15.9
comp=Z,236nm,1.2s
KIEV Kiev 74.39 342 P **P** **11 15 14.4 0.0**
BEL Belsk 74.67 347 P **P** **11 15 17.4 +1.4**
RUE Ruedersdorf 74.83 352 *eP* **P** **11 15 17.9 +1.1**
RUE Ruedersdorf 74.83 352 *eP* **P** **11 15 17.4 +0.5**
comp=Z,38nm,0.7s,baz=7.7,slow=5.6
061Z Ochoppi 74.85 67 IAmb IAmb 11 15 19.0
comp=Z,293nm,1.1s
KBL Kabul 74.85 307 P **P** **11 15 16.6 -1.0**
KBL Kabul 74.85 307 P **P** **11 15 16.6 -1.0**
KBL pmax pmax
comp=Z,83nm,1.3s
KBL Kabul 74.85 307 P **P** **11 15 16.7 -0.9**
SNR=7.7
TEIG Tepich 74.92 76 P **P** **11 15 18.2 +0.3**
NRDL Niedersach Rie 75.09 354 *eP* **P** **11 15 19.0 +0.7**
comp=Z,57nm,1.0s,baz=7.7,slow=5.6
NRDL epP **pP** **11 16 17.8 +6.1**
TTSI Tana Toraja 75.12 244 P **P** **11 15 19.8 +0.8**
comp=Z,83nm,0.9s,comp=Z,2μm
FLTG Flechtingen 75.18 353 *eP* **P** **11 15 19.1 +0.2**
comp=Z,34nm,0.8s,baz=7.7,slow=5.6
DZM Mont Dzumac 75.25 194 IAmb IAmb 11 15 23.1
comp=Z,267nm,1.5s
BKB Balikpapan 75.28 248 P **P** **11 15 21.5 +1.5**
comp=Z,58nm,0.7s,comp=Z,4μmcomp=Z,4μm
IBBN Ibbenburen 75.41 355 *eP* **P** **11 15 21.2 +1.0**
comp=Z,112nm,0.9s,baz=7.7,slow=5.6
ASSE Asse, Remlinge 75.42 354 *eP* **P** **11 15 20.9 +0.8**
comp=Z,83nm,1.3s,baz=7.7,slow=5.6
ONTNC Ouen Toro 75.48 193 P **P** **11 15 23.1 +2.3**
CCIG Comitan 75.64 82 IAmb IAmb 11 15 24.8
comp=Z,191nm,1.3s
CLZ Clausthal 75.73 354 *eP* **P** **11 15 23.1 +1.0**
comp=Z,78nm,1.0s,baz=7.7,slow=5.6
CLZ epP **pwP** **11 16 20.6 +3.0**
SOR Soroa 76.03 71 IAmb IAmb 11 15 25.4
comp=Z,341nm,1.5s
GTTG Gottingen 76.05 354 *eP* **P** **11 15 24.7 +0.9**
comp=Z,102nm,1.1s,baz=7.7,slow=5.6
GTTG epP **pwP** **11 16 24.2 +4.9**
CLL Collm 76.06 352 *iP* **P** **11 15 23.7 -0.2**
CLL *e**PP **pP** **11 16 16.0 -1.6**
CLL *eS* **S** **11 24 49.0 +1.4**
CLL pmax pmax
comp=Z,190nm,2.0s
CLL Collm 76.06 352 *eP* **P** **11 15 23.9 0.0**
comp=Z,19nm,0.9s,baz=7.7,slow=5.6
LVV L'vov 76.15 345 *eP* **P** **11 15 24.8 +0.3**
LVV *e* 11 15 23.8
KSP Ksiaz 76.20 350 *iP* **P** **11 15 24.5 -0.2**
GOF Gofitskoye 76.21 330*c eP* **P** **11 15 25.6 +0.7**
NEUB Neuenburg 76.25 353 *eP* **P** **11 15 25.5 +0.5**
comp=Z,96nm,1.0s,baz=7.7,slow=5.6
NEUB epP **pwP** **11 16 24.6 +3.9**
BUG Bochum--Univer 76.30 356 *eP* **P** **11 15 25.7 +0.5**
comp=Z,34nm,0.8s,baz=7.7,slow=5.6
ERBR Yeremizino-Bor 76.36 332 *eP* **P** **11 15 26.8 +1.1**
ERBR *e**PP **pP** **11 16 18.8 -0.1**
ERBR *eS* **S** **11 24 54.0 +2.9**
ERBR pmax pmax
comp=Z,255nm,1.1s
BRG Berggiesshubel 76.40 351 *iP* **P** **11 15 26.1 +0.2**
BRG Amp 11 15 27.6
comp=Z,44nm,1.1s
BRG ⇑PP **PcP** **11 15 36.2 -0.4**
BRG Amp 11 15 37.7
comp=Z,14nm,1.1s
BRG pP **pP** **11 16 19.0 -0.7**
BRG Amp 11 16 29.2
comp=Z,22nm,1.0s
BRG Berggiesshubel 76.40 351 sS sS 11 26 34.0 +10
BRG Berggiesshubel 76.40 351 SS SS 11 29 56.0 +6.5
BRG Berggiesshubel 76.40 351 *iP* **P** **11 15 26.0 +0.2**
BRG 11 15 36.1
BRG 11 16 18.9
BRG 11 18 20.2
BRG pmax pmax
comp=Z,44nm,1.1s
BRG Berggiesshubel 76.40 351 *eP* **P** **11 15 26.0 +0.2**
comp=Z,39nm,1.1s,baz=7.7,slow=5.6
CHVC Chvalec 76.47 350 *eP* **P** **11 15 26.6 +0.3**
CHVC Chvalec 76.47 350 *eP* **P** **11 15 26.6 +0.3**
KASTN Kahler Asten 76.48 355 *eP* **P** **11 15 27.1 +0.8**
comp=Z,30nm,1.0s,baz=7.7,slow=5.6
OSTC Ostas 76.49 350 *eP* **P** **11 15 27.3 +0.9**
OSTC Ostas 76.49 350 *eP* **P** **11 15 27.3 +0.9**
OSTC smax smax
comp=N,9.0nm,0.3s
KWP Kalwaria Pacla 76.54 345 *iP* **P** **11 15 27.7 +1.0**
KWP Kalwaria Pacla 76.54 345 IAmb IAmb 11 15 29.0
comp=Z,270nm,1.0s
UPC Upice 76.56 350 *eP* **P** **11 15 27.6 +0.9**
UPC Upice 76.56 350 *eP* **P** **11 15 27.6 +0.9**
UPC smax smax
comp=N,15nm,0.4s
MAK Makhachkala 76.66 327 *eP* **P** **11 15 27.8 +0.4**
MAK *e**PP **pP** **11 16 19.8 -0.9**
MAK *e* 11 18 26.9
MAK *eS* **S** **11 24 56.2 +1.8**
MAK *eSS* **SS** **11 30 00.4 +6.6**
MAK pmax pmax
comp=Z,344nm,1.8s
MAK MLR MLR
comp=Z,627nm,17.0s
DPC Dobruska-Polom 76.68 350 *eP* **P** **11 15 28.6 +1.1**
DPC Dobruska-Polom 76.68 350 *eP* **P** **11 15 28.6 +1.1**
PVCC Panska Ves 76.69 351 *eP* **P** **11 15 28.4 +1.0**
PVCC Panska Ves 76.69 351 *eP* **P** **11 15 28.4 +1.0**
HSKC Hora Svate Kat 76.71 352 *eP* **P** **11 15 27.9 +0.3**
RICC Richard 76.72 351 *eP* **P** **11 15 28.7 +1.1**
CAMR Camarioca 76.76 70 IAmb IAmb 11 15 29.9
comp=Z,249nm,0.9s
UBBA Unterbreizbach 76.77 354 *eP* **P** **11 15 28.4 +0.7**
comp=Z,155nm,1.6s,baz=7.7,slow=5.6
KAPI Kappang 76.79 243 P **P** **11 15 29.7 +1.2**
KAPI Kappang 76.79 243 P **P** **11 15 29.7 +1.2**
KAPI pmax pmax
comp=Z,98nm,1.4s
MOX Moxa 76.83 353 *eP* **P** **11 15 28.7 +0.4**
comp=Z,31nm,1.0s,baz=7.7,slow=5.6
MOX epP **pP** **11 16 27.3 +5.4**
BKSI Bulukumba 76.84 243 P **P** **11 15 29.7 +1.0**
comp=Z,122nm,1.9s,comp=Z,2μm
KRLC Kraliky 76.90 349 *eP* **P** **11 15 29.5 +0.8**
KRLC epP **pP** **11 16 22.0 -0.5**
KRLC Kraliky 76.90 349 *eP* **P** **11 15 29.5 +0.8**
KRLC *e**PP **pP** **11 16 22.0 -0.5**
KDU Kakadu 76.93 228 P **P** **11 15 30.3 +1.1**
STHS Stebnicka Huta 76.97 346 *eP* **P** **11 15 29.9 +0.8**
STHS pmax pmax
comp=Z,98nm,1.4s
STHS Stebnicka Huta 76.97 346 *eP* **P** **11 15 29.9 +0.8**
STHS epP **pP** **11 16 30.3 +7.3**
STHS ePP **pP** **11 16 27.8 +3.0**
OKC Ostrava-Krasne 76.97 348 *eP* **P** **11 15 30.1 +1.1**
OKC Ostrava-Krasne 76.97 348 *eP* **P** **11 15 30.1 +1.1**
TANN Tannenbergstha 76.99 352 *eP* **P** **11 15 29.8 +0.6**
comp=Z,18nm,1.0s,baz=7.7,slow=5.6
SORM Soroca 77.00 341 ⇑P **P** **11 15 30.2 +1.0**
SORM Soroca 77.00 341 P **P** **11 15 30.1 +0.9**
GEYT Alibeck 77.00 317 P **P** **11 15 29.9 +0.4**
comp=Z,16nm,1.1s,baz=350,slow=3.5,SNR=25
GEYT pP **pP** **11 16 23.7 +0.9**
comp=Z,17nm,1.1s,baz=46,slow=8.5,SNR=3.4
GEYT PP **PP** **11 18 25.0 -0.5**
comp=Z,4.2nm,0.8s,baz=57,slow=9.0,SNR=1.8
GEYT S **S** **11 25 00.4 +1.9**
comp=Z,0.7nm,0.3s,baz=106,slow=42,SNR=1.4
comp=Z,16nm,1.1s
BEBN Eben Emael 77.01 357 *dP* **P** **11 15 29.7 +0.5**
MTSU Mount Surprise 77.03 215 P **P** **11 15 31.6 +1.9**
MORC Moravsky Berou 77.11 349 ⇑P **P** **11 15 30.8 +1.0**
MORC Moravsky Berou 77.11 349 *eP* **P** **11 15 30.1 +0.2**
MORC *e* 11 16 27.9
MORC Moravsky Berou 77.11 349 P **P** **11 15 30.4 +0.5**
NKC Novy Kostel 77.17 352 *eP* **P** **11 15 31.0 +0.8**
NKC *ex* x 11 16 29.7
NKC Novy Kostel 77.17 352 *eP* **P** **11 15 31.7 +0.8**
NKC *e**PP **pP** **11 15 29.7 +5.8**
MEM Membach 77.19 356 *dP* **P** **11 15 30.8 +0.6**
MEM *dpP* **pP** **11 16 23.5 -0.4**
BTNL Ternell 77.20 356 *dP* **P** **11 15 31.1 +0.8**
comp=Z,51nm,1.2s
BTNL *dpP* **pP** **11 16 24.7 +0.6**
AHRW Bad Neuenahr-A 77.21 356 *eP* **P** **11 15 31.2 +0.9**
comp=Z,60nm,0.9s,baz=7.7,slow=5.6
PRU Pruhonice 77.22 351 *eP* **P** **11 15 31.2 +0.8**
PRU *ex* x 11 16 31.7
PRU Pruhonice 77.22 351 *eP* **P** **11 15 31.2 +0.8**
PRU *e**PP **pP** **11 16 31.7 +7.4**
BSTI Sart Tilman 77.23 357 *dP* **P** **11 15 31.1 +0.7**
BSTI *dpP* **pP** **11 16 23.9 -0.2**
TV1H Townsville Har 77.23 213 P **P** **11 15 32.4 +1.7**
SURA Surathani 77.26 268 P **P** **11 15 33.1 +1.9**
RTAL Retalhuleu 77.27 83 IAmb IAmb 11 15 32.8
comp=Z,296nm,1.0s
LABN Labinsk 77.27 332 *eP* **P** **11 15 32.2 +1.4**
LABN *eS* **S** **11 25 04.9 +3.9**
LABN pmax pmax
comp=Z,164nm,1.0s
GOPC GO Pecny, Ondr 77.27 351 *eP* **P** **11 15 31.7 +0.9**
GOPC GO Pecny, Ondr 77.27 351 *eP* **P** **11 15 31.7 +0.9**
KOLS Kolonicke sedl 77.29 346 *eP* **P** **11 15 32.1 +1.2**
KOLS pmax pmax
comp=Z,73nm,0.9s
KOLS Kolonicke sedl 77.29 346 *eP* **P** **11 15 32.1 +1.2**
KIV Kislovodsk 77.31 330 ⇓P **P** **11 15 32.1 +0.9**
KIV Kislovodsk 77.31 330 P **P** **11 15 31.9 +0.8**
KIV Kislovodsk 77.31 330 *eP* **P** **11 15 32.0 +0.8**
KIV *e**PP **pP** **11 16 24.1 -0.6**
KIV *eS* **S** **11 25 03.6 +1.9**
KIV pmax pmax
comp=Z,86nm,1.1s
KIV Kislovodsk 77.31 330 P **P** **11 15 32.1 +0.9**
BCLA Clavier 77.40 357 *dP* **P** **11 15 31.9 +0.5**
comp=Z,39nm,1.0s
BCLA *d*PcP **PcP** **11 15 40.0 -0.9**
BHOU Houvegnez 77.44 356 *dP* **P** **11 15 32.1 +0.5**
BHOU *d*PcP **PcP** **11 15 40.7 -0.5**
BHOU *ds*P **sP** **11 16 45.1 -4.4**
BGES Gesves 77.44 357 *dP* **P** **11 15 30.4 -1.3**
CRVS Cervenica-Dubn 77.44 346 *eP* **P** **11 15 32.5 +0.8**
CRVS pmax pmax
comp=Z,429nm,2.2s
CRVS Cervenica-Dubn 77.44 346 *eP* **P** **11 15 32.5 +0.8**
CRVS *ep*P pP 11 16 33.6 +7.9
MANZ Manzenberg 77.44 352 *eP* **P** **11 15 32.1 +0.4**
comp=Z,5.9nm,1.0s,baz=7.7,slow=5.6
KBZ Khabaz 77.45 330*c iP* **P** **11 15 32.7 +0.9**
KBZ pmax pmax
comp=Z,75nm,1.1s
KBZ Khabaz 77.45 330 P **P** **11 15 33.0 +1.2**
comp=Z,37nm,0.9s,baz=45,slow=3.1,SNR=52
KBZ S **S** **11 25 04.5 +1.6**
comp=Z,1.6nm,0.9s,baz=332,slow=21,SNR=6.2
comp=Z,37nm,0.9s
TNS Taunus Mts 77.46 355 *eP* **P** **11 15 32.3 +0.5**
comp=Z,35nm,0.9s,baz=7.7,slow=5.6
TNS epP **pP** **11 16 32.1 +6.4**
LANS Liptovska Anna 77.48 347 *eP* **P** **11 15 33.8 +1.9**
LANS pmax pmax
comp=Z,70nm,1.2s
LANS Liptovska Anna 77.48 347 *eP* **P** **11 15 33.8 +1.9**
LANS *ep*P pP 11 16 34.5 +8.6
BMRD Maredsous 77.53 357 *dP* **P** **11 15 32.8 +0.6**
BMRD *dp*P **pP** **11 16 26.4 +0.6**

ROTZ Rotzenmuhle 77.65 352 *e*P **P 11 15 33.5 +0.6**
comp=Z,10nm,1.1s,baz=7.7,slow=5.6
RCHB Rochefort 77.67 357 *d*P **P 11 15 33.3 +0.4**
comp=Z,41nm,1.1s
VRAC Vranov 77.68 349 ⇓P **P 11 15 34.4 +1.4**
VRAC Vranov 77.68 349 *e*P **P 11 15 33.3 +0.3**
VRAC *e* 11 16 30.9
VRAC Vranov 77.68 349 P **P 11 15 33.6 +0.6**
MTN Manton Dam 77.68 229 P **P 11 15 34.0 +0.6**
MTN lAmb lAmb 11 15 35.4
comp=Z,249nm,1.1s
MTN Manton Dam 77.68 229 P **P 11 15 34.7 +1.4**
SRIT Nakonsritamara 77.72 268 P **P 11 15 36.7 +3.0**
GIVF Givet 77.73 357 P **P 11 15 33.0 -0.2**
DOU Dourbes 77.75 357 *d*P **P 11 15 33.8 +0.5**
comp=Z,48nm,1.2s
BAIF Baives 77.79 358 P **P 11 15 33.7 +0.1**
ZVC Zvikov 77.80 351 *e*P **P 11 15 34.6 +0.9**
GRF Grafenberg Arr 77.80 353 *e*P **P 11 15 34.6 +0.9**
comp=Z,64nm,0.9s,baz=7.7,slow=5.6
GRFO Grafenberg 77.81 353 P **P 11 15 34.5 +0.8**
GRFO Grafenberg 77.81 353 P **P 11 15 34.5 +0.8**
GRFO pmax pmax
comp=Z,143nm,1.2s
NEUR Neytrino 77.94 330 *i* P **P 11 15 36.0 +1.3**
KRUC Moravsky 77.94 349 *e*P **P 11 15 34.6 +0.2**
KRUC *e* 11 16 32.6
KECS Kecovo 77.99 347 *e*P **P 11 15 35.9 +1.2**
KECS pmax pmax
comp=Z,81nm,1.1s
KECS Kecovo 77.99 347 *e*P **P 11 15 35.9 +1.2**
KECS *e*pP **pP 11 16 36.2 +7.4**
ZEI Tsey 77.99 329 *e*P **P 11 15 32.7 -2.4**
ZEI pmax pmax
comp=Z,100nm,1.1s
KIS Kishinev 77.99 341 ⇑*i*P **P 11 15 34.0 -0.7**
comp=Z,390nm,1.6s
KIS *e*sP **sP 11 16 47.0 -5.9**
KIS *i* S **S 11 25 12.0 +3.4**
KIS *e*SS SS 11 30 49.0 +35
KIS Kishinev 77.99 341*c i*P **P 11 15 34.0 -0.7**
KIS *i* 11 16 35.0
KIS *i* S **S 11 25 12.0 +3.4**
KIS pmax pmax
comp=Z,390nm,1.7s
JAVC Velka Javorina 77.99 349 *e*P **P 11 15 36.3 +1.5**
JAVC *e* 11 16 34.7
ANN Anapa 78.04 334 *e*P **P 11 15 33.2 -1.8**
ANN *e**PP **pP 11 16 26.1 -2.6**
ANN *e*S **S 11 25 07.7 -1.5**
ANN pmax pmax
comp=Z,110nm,1.1s
IAS Iasi 78.06 342 P **P 11 15 36.4 +1.3**
MILM Milestii Mici 78.07 341 ⇑*i*P **P 11 15 35.0 -0.1**
comp=Z,640nm,1.8s
MILM *i* sP **sP 11 16 50.0 -3.4**
MILM *i* S **S 11 25 10.0 +0.6**
comp=Z,1μm,9.3s
MILM *e*SS SS 11 30 55.0 +40
MILM Milestii Mici 78.07 341 ⇑P **P 11 15 36.0 +0.9**
MILM Milestii Mici 78.07 341 *i*P **P 11 15 35.0 -0.1**
MILM *i* S **S 11 25 10.0 +0.6**
MILM pmax pmax
comp=Z,640nm,1.8s
MILM smax smax
comp=N,1μm,9.3s
MILM smax smax
comp=E,2μm,9.1s
BURAR Bucovina Array 78.08 343 ⇓P **P 11 15 36.8 +1.4**
BURAR Bucovina Array 78.08 343 lAmb lAmb 11 15 38.0
comp=Z,130nm,0.9s
BURAR Bucovina Array 78.08 343 P **P 11 15 36.1 +0.7**
WLF Walferdange 78.12 356 *d*P **P 11 15 36.8 +1.4**
comp=Z,34nm,1.1s
WLF Walferdange 78.12 356 P **P 11 15 36.7 +1.3**
WLF Walferdange 78.12 356 *e*P **P 11 15 36.5 +1.1**
comp=Z,42nm,1.0s,baz=7.7,slow=5.6
KHC Kasperske Hory 78.16 351 *e*P **P 11 15 36.3 +0.5**
KHC *ex* x 11 16 35.9
KHC Kasperske Hory 78.16 351*c i*P **P 11 15 36.2 +0.5**
KHC pmax pmax
comp=Z,161nm,1.3s
BBSR BB Station 78.18 52 P **P 11 15 35.5 -0.5**
CTA Charters Tower 78.18 213 P **P 11 15 36.9 +0.9**
CTA Charters Tower 78.18 213 P **P 11 15 36.9 +0.9**
comp=Z,50nm,1.0s,baz=10,slow=6.6,SNR=17
CTA pP **pP 11 16 28.8 -1.2**
comp=Z,32nm,0.8s,baz=23,slow=6.5,SNR=7.6
comp=Z,50nm,1.0s
CTAO Charters Tower 78.18 213 P **P 11 15 37.0 +1.0**
CTAO Charters Tower 78.18 213 P **P 11 15 37.4 +1.4**
CTAO Charters Tower 78.18 213 P **P 11 15 37.0 +1.0**
CTAO pmax pmax
comp=Z,137nm,1.3s
WET Wettzell 78.21 352 P **P 11 15 36.7 +0.7**
WET Wettzell 78.21 352 *e*P **P 11 15 36.6 +0.7**
comp=Z,28nm,1.1s,baz=7.7,slow=5.6
SKLT Songkhla 78.22 266 P **P 11 15 38.1 +1.7**
DGPR DIGLIPUR 78.23 276 *e*P **P 11 15 36.9 +0.4**
ONI Oni 78.31 329 P **P 11 15 37.9 +1.2**
BMR Baia Mare 78.32 344 P **P 11 15 38.3 +1.8**
SMOL Smolenice 78.36 349 *e*P **P 11 15 38.2 +1.4**
SMOL pmax pmax
comp=Z,46nm,1.2s
SOEI Soe 78.38 237 P **P 11 15 39.2 +1.9**
SOEI Soe 78.38 237 P **P 11 15 37.5 +0.2**
comp=Z,123nm,0.8s,comp=Z,2μm
CKRC Cesky Krumlov 78.40 351 *e*P **P 11 15 37.4 +0.4**
CKRC Cesky Krumlov 78.40 351 *e*P **P 11 15 37.4 +0.4**
GEC2 GERESS Array S 78.44 351 *e*P **P 11 15 37.5 +0.3**
comp=Z,14nm,0.8s,baz=7.7,slow=5.6
GERES GERESS Array B 78.44 351 P **P 11 15 37.6 +0.4**
comp=Z,13nm,0.8s,baz=19,slow=5.7,SNR=48
GERES pP **pP 11 16 29.9 -1.5**
comp=Z,3.1nm,0.9s,baz=132,slow=3.8,SNR=2.3
comp=Z,13nm,0.8s
MMRI Maumere 78.48 239 P **P 11 15 38.0 +0.2**
comp=Z,99nm,1.8s,comp=Z,3μmcomp=Z,2μm
MODS Modra-Piesok 78.52 349 *e*P **P 11 15 39.0 +1.4**
MODS pmax pmax
comp=Z,259nm,1.4s
MODS Modra-Piesok 78.52 349 *e*P **P 11 15 39.0 +1.4**
MODS *e*pP **pP 11 16 36.8 +5.2**
SOC Sochi 78.53 332 *e*P **P 11 15 36.5 -1.2**
SOC *e**PP **pP 11 16 29.3 -2.3**
SOC *e*PPP PPP 11 20 28.3
SOC *e*S **S 11 25 14.5 0.0**
SOC *e*SS **SS 11 30 23.9 +2.2**
SOC *e*SSS SSS 11 33 49.1
SOC pmax pmax
comp=Z,52nm,1.0s
VASR Vaslui 78.54 341 ⇑P **P 11 15 39.1 +1.4**
PSZ Piszkesteto 78.63 347 ⇑P **P 11 15 39.5 +1.1**
PSZ Piszkesteto 78.63 347 P **P 11 15 39.4 +1.1**
ESQI Esquipulas 78.67 81 lAmb lAmb 11 15 42.8
comp=Z,231nm,1.2s
ZST Bratislava 78.72 349 P **P 11 15 40.5 +1.8**
ZST Bratislava 78.72 349 *e*P **P 11 15 40.3 +1.6**
ZST *e*pP pP 11 16 40.7 +8.0
ARCR ARCALIA 78.75 344 ⇓P **P 11 15 41.1 +2.3**
SIM Simferopol' 78.75 336 *e*P **P 11 15 38.6 -0.3**
SIM *e*S **S 11 25 15.1 -1.7**
SIM *e*SS **SS 11 30 27.2 +2.3**
SIM pmax pmax
comp=Z,135nm,1.3s
SIM pmax pmax
comp=E,185nm,14.6s
STU Stuttgart 78.86 354 P **P 11 15 40.1 +0.7**
STU Stuttgart 78.86 354 *e*P **P 11 15 39.7 +0.3**
comp=E,67nm,0.9s,baz=7.7,slow=5.6
EDFI Ende, Flores 78.87 240 P **P 11 15 39.6 -0.4**
comp=E,92nm,1.8s,comp=E,2μmcomp=E,1μm
TESR Tescani 78.88 342 ⇑P **P 11 15 40.9 +1.3**
MESR Meseseni 78.92 345 ⇓P **P 11 15 41.2 +1.4**
SRO Srobarova 78.94 348 *e*P **P 11 15 41.7 +1.8**
SRO pmax pmax
comp=Z,131nm,1.6s
SRO Srobarova 78.94 348 *e*P **P 11 15 41.7 +1.8**
SRO *e*pP **pP 11 16 41.3 +7.2**
CONA Conrad Observa 79.12 350 *i* PcP **P 11 15 41.8 +0.8**
comp=Z,55nm,1.1s,SNR=29
CONA *i* pP **pP 11 16 42.1 +7.0**
comp=Z,47nm,1.7s
BUD Budapest 79.17 347 P **P 11 15 42.7 +1.6**

GHRR 79.17 341 ⇓P **P 11 15 43.1 +2.0**
VLDR Vladesti 79.25 341 ⇑P **P 11 15 43.3 +1.8**
RONA Rosalia, Austr 79.30 349 *i* PcP **P 11 15 43.0 +1.1**
comp=Z,47nm,1.3s,SNR=13
RONA *i* pP **pP 11 16 42.4 +6.3**
comp=Z,40nm,1.7s
DRGR 79.30 345 ⇑P **P 11 15 43.1 +1.2**
DRGR 79.30 345 P **P 11 15 42.8 +0.8**
FUR Furstenfeldbru 79.32 353 *e*P **P 11 15 42.4 +0.5**
comp=Z,42nm,0.8s,baz=7.7,slow=5.6
MARR Marisel-Cluj 79.35 344 ⇑P **P 11 15 43.5 +1.2**
BFO Black Forest 79.35 355 P **P 11 15 42.4 +0.2**
BFO Black Forest 79.35 355 P **P 11 15 42.4 +0.2**
BFO pmax pmax
comp=Z,149nm,1.7s
BFO Black Forest 79.35 355 *e*P **P 11 15 42.5 +0.3**
comp=Z,21nm,1.0s,baz=7.7,slow=5.6
AKH Akhalkalaki 79.37 329 lAmb lAmb 11 15 45.2
comp=Z,275nm,1.1s
MOA Molln 79.37 351 *i* pP pP 11 16 43.1 +6.7
comp=Z,28nm,1.4s
PANC Panciu 79.40 341 ⇓P **P 11 15 44.6 +2.2**
TURR Turia 79.44 342 ⇓P **P 11 15 44.9 +2.2**
OZUR 79.45 342 ⇑P **P 11 15 44.7 +1.9**
BOSR Bodos 79.49 343 ⇑P **P 11 15 45.2 +2.3**
VRI Vrincioaia 79.49 342 ⇓P **P 11 15 44.3 +1.4**
VRI Vrincioaia 79.49 342 P **P 11 15 44.3 +1.4**
PLOR Plostina 79.52 342 ⇓P **P 11 15 44.5 +1.4**
PLOR Plostina 79.52 342 P **P 11 15 44.2 +1.1**
ODBI Odobesti 79.53 341 ⇓P **P 11 15 45.2 +2.2**
BIOA Bad Ischl, Aus 79.58 351 *i* PcP **P 11 15 43.8 +0.3**
comp=Z,80nm,1.3s,SNR=19
BIOA *i* pP **pP 11 16 44.8 +7.1**
comp=Z,54nm,1.5s,SNR=6.0
IZVR Izvoarele 79.60 341 ⇑P **P 11 15 45.1 +1.7**
COVR Voineasa-Covas 79.61 342 ⇑P **P 11 15 45.9 +2.3**
RJOB Jochberg 79.62 352 *e*P **P 11 15 44.3 +0.7**
comp=Z,18nm,0.8s,baz=7.7,slow=5.6
DOPR Dopca 79.64 343 ⇑P **P 11 15 46.0 +2.3**
TLCR 79.72 340 ⇓P **P 11 15 45.2 +1.0**
TLCR 79.72 340 P **P 11 15 45.1 +1.0**
BISRR Bisoca 79.80 342 ⇑P **P 11 15 46.5 +1.9**
ARSA Arzberg 79.83 350 *i* PcP **P 11 15 45.5 +0.7**
comp=Z,50nm,1.1s,SNR=23
ARSA *i* pP **pP 11 16 45.3 +6.4**
comp=Z,22nm,1.1s
CLF Chambon-Foret 79.86 359 lAmb lAmb 11 15 47.4
comp=Z,279nm,1.1s
CFR Carcaliu 79.87 341 ⇓P **P 11 15 46.2 +1.3**
CFR Carcaliu 79.87 341 P **P 11 15 45.9 +1.0**
UBR Ueberruh 79.89 353 *e*P **P 11 15 45.6 +0.5**
comp=Z,35nm,1.1s,baz=7.7,slow=5.6
UBR *e*pP **pP 11 16 45.7 +6.5**
BCA Borcka 79.92 330 ⇑P **P 11 15 45.7 +0.4**
QUIF Quistinic 79.93 3 P **P 11 15 46.2 +1.0**
LESA Schwarzleotal 79.94 352 *e*PcP **P 11 15 45.8 +0.4**
comp=Z,19nm,0.9s
LESA *i* pP **pP 11 16 45.5 +6.0**
comp=Z,33nm,2.0s
HINF Hinteralfeld 79.94 356 P **P 11 15 44.7 -0.6**
RK1H Rockhampton Ha 79.97 208 P **P 11 15 47.2 +1.6**
SIRR Siria 79.98 345 ⇑P **P 11 15 45.7 +0.1**
MLR Muntele Rosu 80.00 342 ⇓P **P 11 15 48.0 +2.2**
MLR Muntele Rosu 80.00 342 lAmb lAmb 11 15 49.3
comp=Z,166nm,1.2s
MLR Muntele Rosu 80.00 342 P **P 11 15 46.8 +1.0**
RETA Reutte 80.03 353 *i* PcP **P 11 15 46.8 +0.9**
comp=Z,37nm,1.2s,SNR=11
RETA *i* pP **pP 11 16 47.2 +7.2**
comp=Z,22nm,1.3s
IPM Ipoh 80.08 264 P **P 11 15 47.5 +0.9**
GNI Garni 80.10 327 P **P 11 15 48.0 +1.5**
GNI Garni 80.10 327*c i*P **P 11 15 48.0 +1.5**
GNI pmax pmax
comp=Z,123nm,1.4s
GNI Garni 80.10 327 P **P 11 15 48.1 +1.6**
comp=Z,36nm,1.0s,baz=174,slow=1.2,SNR=32
comp=Z,36nm,1.0s
GNI Garni 80.10 327 P **P 11 15 48.4 +1.9**
WATA Walderalm 80.12 352 *i* PcP **P 11 15 46.7 +0.3**
comp=Z,89nm,1.1s,SNR=26
WATA *i* pP **pP 11 16 46.8 +6.2**
comp=Z,57nm,1.1s,SNR=5.3
TPGR Topolog 80.12 340 ⇓P **P 11 15 47.2 +0.9**
MOTA Moosalm 80.15 353 *i* PcP **P 11 15 46.9 +0.3**
comp=Z,112nm,1.3s,SNR=39
MOTA *i* pP **pP 11 16 47.3 +6.6**
comp=Z,56nm,1.2s,SNR=5.5
WTTA Wattenberg 80.19 352 *i* PcP **P 11 15 47.5 +0.6**
comp=Z,84nm,0.9s,SNR=28
WTTA *i* pP **pP 11 16 47.6 +6.7**
comp=Z,73nm,1.5s
VOIR 80.22 343 ⇓P **P 11 15 48.7 +1.8**
VOIR 80.22 343 P **P 11 15 48.3 +1.4**
KBA Koelnbreinsper 80.22 351 *i* PcP **P 11 15 48.1 +1.1**
comp=Z,146nm,0.8s,SNR=68
KBA *i* pP **pP 11 16 47.8 +6.5**
comp=Z,92nm,1.2s
SQTA Sankt Quirin 80.26 353 *i* PcP **P 11 15 47.5 +0.3**
comp=Z,70nm,1.1s,SNR=31
SQTA *e*pP **pP 11 16 47.1 +5.8**
comp=Z,43nm,1.1s
DAVA Damuels 80.29 354 *i* PcP **P 11 15 47.7 +0.3**
comp=Z,49nm,1.2s,SNR=12
DAVA *i* pP **pP 11 16 47.4 +5.9**
comp=Z,24nm,1.2s
TGUH Tegucigalpa,Un 80.31 80 P **P 11 15 48.6 +0.7**
ARR Arges 80.36 343 ⇓P **P 11 15 49.0 +1.4**
SURR Surduc 80.41 345 ⇑P **P 11 15 49.3 +1.5**
LOT Lotru 80.43 344 ⇓P **P 11 15 48.7 +0.6**
SOKA Soboth 80.45 350 *i* PcP **P 11 15 48.9 +0.8**
comp=Z,100nm,1.1s,SNR=89
SOKA *i* pP **pP 11 16 46.5 +4.1**
comp=Z,74nm,1.3s,SNR=6.2
MORH Mrgy, Hungar 80.47 347 ⇓P **P 11 15 48.7 +0.6**
FETA Feichten 80.50 353 *i* PcP **P 11 15 49.1 +0.6**
comp=Z,78nm,1.1s,SNR=31
FETA *i* pP **pP 11 16 49.1 +6.4**
comp=Z,38nm,1.1s
TIRR Tirgusor 80.50 340 lAmb lAmb 11 15 50.5
comp=Z,188nm,1.0s
KOGS Kog 80.54 349 *i* P **P 11 15 49.0 +0.5**
LOR Lormes 80.59 358 P **P 11 15 48.7 -0.1**
GROS Grobnik 80.61 350 *i* P **P 11 15 49.4 +0.4**
BZS Buzias 80.62 345 ⇑P **P 11 15 50.1 +1.1**
BZS Buzias 80.62 345 P **P 11 15 49.4 +0.5**
ABTA Abfaltersbach 80.62 352 *i* PcP **P 11 15 49.4 +0.4**
comp=Z,97nm,1.1s,SNR=30
ABTA *i* pP **pP 11 16 48.8 +5.6**
comp=Z,52nm,1.1s,SNR=7.1
MYKA Terra Mystica 80.64 351 *i* PcP **P 11 15 49.3 +0.2**
comp=Z,40nm,1.5s,SNR=13
MYKA *i* pP **pP 11 16 48.3 +4.8**
comp=Z,34nm,1.5s
GZR Gura Zlata 80.65 344 ⇑P **P 11 15 50.7 +1.5**
GZR Gura Zlata 80.65 344 P **P 11 15 49.9 +0.7**
OBKA Obir 80.66 350 *i* PcP **P 11 15 49.9 +0.6**
comp=Z,61nm,0.9s,SNR=27
OBKA *i* pP **pP 11 16 49.7 +6.1**
comp=Z,48nm,1.8s
OBKA Obir 80.66 350 ⇑*i*P **P 11 15 49.7 +0.4**
BASI Baing, Sumba 80.69 240 P **P 11 15 49.5 -0.1**
comp=Z,176nm,0.8s,comp=Z,3μmcomp=Z,2μm
SSF Saint Saulge 80.81 358 P **P 11 15 49.7 -0.2**
KALN Kalnik 80.83 349 *i* P **P 11 15 50.3 +0.2**
KTUT Trabzon 80.90 331 ⇓P **P 11 15 51.6 +1.1**
GORS Gorjuse 80.91 351 *i* P **P 11 15 50.4 -0.2**
QIS Mount Isa 80.98 218 P **P 11 15 51.4 +0.3**
PLAI Plampang 81.03 243 P **P 11 15 50.3 -1.1**
comp=Z,82nm,1.0s,comp=Z,2μmcomp=Z,2μm
AVF Avril sur Loir 81.08 358 P **P 11 15 51.0 -0.3**
HERR Herculane 81.21 344 ⇓P **P 11 15 53.1 +1.1**
SMF Signal de Mont 81.22 358 P **P 11 15 51.8 -0.3**
SGRR Singureni 81.22 342 ⇓P **P 11 15 53.0 +0.9**
CRES Cresnjev 81.24 350 *e*P **P 11 15 52.5 +0.3**
KNRA Kununurra 81.26 230 P **P 11 15 54.2 +1.7**
SABO M.te Sabotino 81.28 351 lAmb lAmb 11 15 53.5
comp=Z,45nm,1.1s
MFF Saint Martin d 81.30 0 P **P 11 15 52.3 -0.2**
FRGS Fruska Gora 81.34 346 ⇓P **P 11 15 53.6 +0.8**
FRGS Fruska Gora 81.34 346 *e*P **P 11 15 53.4 +0.6**
SENIN Lac Senin/Sane 81.37 355 lAmb lAmb 11 15 55.5
comp=Z,291nm,1.6s
DJES Djerdap 81.40 344 ⇑P **P 11 15 54.0 +0.9**
MDVR Moldovita 81.42 345 ⇑P **P 11 15 54.1 +0.9**

CEY Cerknica 81.44 350 ⇑*i*P **P 11 15 52.6 -0.7**
TWSI Taliwang, Sumb 81.44 244 P **P 11 15 54.2 +0.6**
comp=Z,25nm,0.9s,comp=Z,888nm
BOJS Bojanci 81.58 350 ⇑*i*P **P 11 15 54.0 0.0**
EIDS Eidsvold 81.68 207 lAmb lAmb 11 15 57.3
comp=Z,321nm,1.9s
EIDS Eidsvold 81.68 207 P **P 11 15 58.4 +3.8**
VLAD Vladila 81.72 343 ⇓P **P 11 15 56.2 +1.4**
RAZG Razgrad 81.75 341 ⇑P **P 11 15 55.7 +0.7**
DSRI Dabo 81.86 259 P **P 11 15 56.5 +0.7**
comp=Z,66nm,1.2s
A051A Mrakovica 81.87 348 ⇑*i*P **P 11 15 56.1 +0.5**
LOZB Loznitsa 81.92 341 ⇓P **P 11 15 56.5 +0.7**
TEKS Tekeris 81.98 346 ⇑*i*P **P 11 15 56.6 +0.5**
LHMI Lhok Sumawe 81.98 268 lAmb lAmb 11 15 59.9
comp=Z,281nm,0.9s
LHMI Lhok Sumawe 81.98 268 P **P 11 15 58.8 +2.3**
LHMI Lhok Sumawe 81.98 268 P **P 11 15 59.0 +2.5**
comp=Z,366nm,1.0s,comp=Z,4μm
TEOL Teolo 82.07 352 lAmb lAmb 11 15 58.8
comp=Z,258nm,0.8s
BLY Banja Luka 82.10 348 *e*P **P 11 15 57.2 +0.5**
SMRN Sveta Marina 82.16 350 *i* P **P 11 15 56.5 -0.5**
LPL La Plagne 82.24 356 P **P 11 15 58.2 +0.5**
LPG La Plagne 82.26 356 P **P 11 15 58.5 +0.6**
PLVB Pleven 82.28 343 ⇑P **P 11 15 58.9 +1.2**
RABC Rab 82.38 350 *i* P **P 11 15 56.9 -1.2**
MGRS Mrkonjic Grad 82.44 348 ⇑*i*P **P 11 15 59.4 +0.9**
A050A Klekovaca 82.44 349 *e*P **P 11 15 59.2 +0.6**
ELND Elena 82.48 342 ⇓P **P 11 15 59.5 +0.8**
HAPS Han Pijesak,Bl 82.51 347 ⇑*i*P **P 11 15 59.9 +0.9**
WRAB Tennant Creek 82.52 223 P **P 11 15 59.4 +0.3**
WRAB Tennant Creek 82.52 223 P **P 11 15 59.4 +0.3**
WRAB pmax pmax
comp=Z,87nm,1.0s
BOAB BOACO BROADBAN 82.53 79 lAmb lAmb 11 16 00.4
comp=Z,230nm,1.2s
WRA Warramunga Arr 82.53 223 *i* P **P 11 15 59.2 0.0**
WRA pmax pmax
comp=Z,48nm,0.8s
WRA Warramunga Arr 82.53 223 P **P 11 15 59.3 +0.2**
comp=Z,46nm,0.8s,baz=31,slow=5.9,SNR=160
WRA pP **pP 11 16 52.0 -2.0**
comp=Z,32nm,0.9s,baz=36,slow=6.1,SNR=9.9
WRA PKIKP **PKiKP 11 21 17.1 -0.9**
comp=Z,0.3nm,0.4s,baz=349,slow=1.9,SNR=5.8
WRA S **S 11 25 55.2 -1.1**
comp=Z,8.9nm,1.4s,baz=36,slow=11,SNR=8.9
WRA PKKPbc **PKKPbc 11 34 22.1 +0.4**
comp=Z,1.0nm,0.8s,baz=225,slow=2.3,SNR=7.3
comp=Z,46nm,0.8s
BOVS Bovan 82.54 345 ⇓P **P 11 15 59.5 +0.5**
SSB Saint Sauveur 82.56 357 P **P 11 15 59.8 +0.6**
BBLS Lazići 82.67 346 *e*P **P 11 16 00.9 +1.1**
PSI Prapat 82.68 265 P **P 11 16 02.3 +2.0**
MTDJ Mount Denham 82.77 70 lAmb lAmb 11 16 01.9
comp=Z,294nm,1.1s
ORIF Oris-en-Rattie 82.87 356 P **P 11 16 02.3 +1.5**
RUDO Rudo 82.91 346 ⇑*i*P **P 11 16 01.5 +0.5**
LFF La Frestale 82.96 360 P **P 11 16 01.1 0.0**
VIVF Saint-Julien-l 82.98 357 P **P 11 16 01.4 +0.1**
ARPR Arapgir-MALATY 83.07 331 lAmb lAmb 11 16 04.6
comp=Z,158nm,1.1s
MLSI Meulaboh, Aceh 83.07 268 P **P 11 16 01.1 -1.0**
comp=Z,26nm,0.8s
ZCCA Zocca 83.13 352 lAmb lAmb 11 16 05.7
comp=Z,575nm,1.9s
MORI Morici 83.15 349 *i* P **P 11 16 01.7 -0.4**
SJES Sjenica 83.17 346 ⇑*i*P **P 11 16 03.4 +1.0**
RICI Ricice 83.34 348 *i* P **P 11 16 03.0 -0.2**
BKNI Bangkinang 83.35 262 lAmb lAmb 11 16 05.9
comp=Z,154nm,1.0s
BKNI Bangkinang 83.35 262 P **P 11 16 05.2 +1.7**
BKNI Bangkinang 83.35 262 P **P 11 16 04.4 +0.9**
comp=Z,80nm,0.5s,comp=Z,3μm
ZIRJ Zirje 83.36 349 *i* P **P 11 16 03.1 -0.1**
UPM Unac-Piva 83.39 347 *e*P **P 11 16 04.2 +0.6**
NEVS Nevesinje 83.40 347 *e*P **P 11 16 04.1 +0.6**
HYB Hyderabad 83.46 290 *e*P **P 11 16 05.1 +1.0**
HYB epP **pP 11 16 56.5 -1.9**
HYB ePP **PP 11 19 21.0 +1.7**
MAKA Makarska 83.56 348 *i* P **P 11 16 03.8 -0.4**
MDUB Mudurnu 83.68 337 lAmb lAmb 11 16 07.0
comp=Z,397nm,1.2s
GC1S Gold Coast 1 S 83.71 204 P **P 11 16 07.6 +2.7**
BRY Bratogost 83.73 347 *e*P **P 11 16 05.3 0.0**
HVAR Hvar 83.74 348 *i* P **P 11 16 04.7 -0.4**
BR131 Keskin Array S 83.78 335 P **P 11 16 05.8 +0.2**
BR131 Keskin Array S 83.78 335 P **P 11 16 05.8 +0.2**
BR131 pmax pmax
comp=Z,70nm,1.0s
BR131 Keskin Array S 83.78 335 P **P 11 16 06.2 +0.6**
SNR=22
BRTR Keskin Array B 83.78 335 P **P 11 16 05.7 +0.1**
BRTR Keskin Array B 83.78 335 P **P 11 16 05.7 +0.1**
BRTR Keskin Array B 83.78 335 P **P 11 16 06.5 +0.9**
comp=Z,39nm,0.9s,baz=56,slow=3.1,SNR=80
BRTR pP **pP 11 16 59.6 -0.6**
comp=Z,1.0nm,0.5s,baz=312,slow=38,SNR=1.1
BRTR PP **PP 11 19 22.2 +1.1**
comp=Z,3.7nm,1.1s,baz=35,slow=5.3,SNR=2.0
comp=Z,39nm,0.9s
SBF Sospel 83.85 355 P **P 11 16 05.3 -0.5**
ANTO Ankara 83.86 336 P **P 11 16 06.6 +0.7**
ANTO Ankara 83.86 336 P **P 11 16 06.6 +0.7**
ANTO pmax pmax
comp=Z,120nm,1.1s
ANTO Ankara 83.86 336 P **P 11 16 07.8 +1.9**
STON Ston 83.88 347 *i* P **P 11 16 05.0 -0.8**
STON Ston 83.88 347 ⇑*i*P **P 11 16 05.2 -0.6**
TREB Trebinje 83.94 347 *e*P **P 11 16 06.0 -0.2**
BNN Bunyan 84.00 333 lAmb lAmb 11 16 08.7
comp=Z,291nm,1.0s
DBRK Dubrovnik 84.02 347 *i* P **P 11 16 05.7 -0.9**
MURB Monte Urbino 84.08 351 lAmb lAmb 11 16 10.1
comp=Z,211nm,1.0s
LSTV Lastovo 84.08 348 *i* P **P 11 16 05.2 -1.6**
HCY Herceg Novi 84.19 347 *e*P **P 11 16 07.2 -0.2**
GUMA Gualdo di Mace 84.20 351 lAmb lAmb 11 16 10.0
comp=Z,305nm,1.2s
SKO Skopje 84.20 344 *i* P **P 11 16 08.2 +0.7**
ORTG Ortega, Santa 84.29 81 lAmb lAmb 11 16 09.6
comp=Z,140nm,1.1s
DRME Dracevica, Mon 84.34 346 ⇑*i*P **P 11 16 08.1 -0.1**
LMR La Mourre 84.43 356 P **P 11 16 08.4 -0.2**
NRCA Norcia 84.45 351 lAmb lAmb 11 16 11.2
comp=Z,212nm,1.1s
SNSI Sinabang, Aceh 84.58 267 P **P 11 16 11.4 +1.7**
comp=Z,88nm,0.9s
VAY Valandovo 84.65 344 *i* P **P 11 16 10.7 +1.0**
GSI Gunungsitoli 84.68 265 P **P 11 16 12.7 +2.4**
GSI Gunungsitoli 84.68 265 P **P 11 16 10.9 +0.6**
comp=Z,73nm,1.2s
CAMP Campotosto 84.71 350 lAmb lAmb 11 16 12.4
comp=Z,220nm,1.1s
CESX Cesi 84.72 351 lAmb lAmb 11 16 11.6
comp=Z,263nm,1.6s
FITZ Fitzroy Crossi 84.83 231 P **P 11 16 11.6 +0.8**
EPF Esparros 84.87 0 P **P 11 16 10.0 -0.9**
QLP Quilpie 84.88 212 P **P 11 16 14.1 +3.2**
PGF Pioggiola 85.07 354 P **P 11 16 11.5 -0.5**
LEM Lembang 85.13 252 P **P 11 16 12.7 0.0**
comp=Z,27nm,1.0s
OHR Ohrid 85.15 345 *i* P P 11 16 04.4 -7.9
SGRT San Giovanni R 85.23 349 lAmb lAmb 11 16 14.2
comp=Z,164nm,1.1s
POO Poona 85.23 294 *e*P **P 11 16 12.6 -0.5**
JACO JACO, Garabito 85.32 80 lAmb lAmb 11 16 15.0
comp=Z,185nm,0.9s
SRBC Serra Branca 85.53 22 *e*P **P 11 16 14.7 +0.6**
PGAV Gavieira, Arco 85.62 7 *e*P **P 11 16 15.6 +0.9**
comp=Z,81nm,1.7s
PCED Cedros 85.76 23 *e*P **P 11 16 16.3 +1.0**
comp=Z,192nm,1.3s
ROSA Rosais 85.78 22 *e*P **P 11 16 16.4 +1.0**
comp=Z,178nm,1.5s
CALA Caldeira 85.81 23 *e*P **P 11 16 16.4 +0.8**
comp=Z,310nm,1.5s
SISI Saibi 85.84 262 P **P 11 16 16.4 +0.4**
comp=Z,41nm,1.1s
PBRG Braganca 85.88 5 *e*P **P 11 16 15.1 -0.8**
comp=Z,47nm,1.7s
PMAN Manadas 85.90 22 *e*P **P 11 16 17.4 +1.4**
comp=Z,344nm,1.5s

KASI Kota Agung 85.92 256 P P 11 16 15.8 -0.5
comp=Z,31nm,1.1s
PICO Pico 85.95 22 eP P 11 16 17.4 +1.1
comp=Z,322nm,1.4s
AS01 Alice Springs 86.01 222 P P 11 16 18.0 +1.4
PPNO Prainha do Nor 86.02 22 eP P 11 16 17.8 +1.2
comp=Z,279nm,1.2s
ASAR Alice Springs 86.03 222 P P 11 16 17.4 +0.7
comp=Z,86nm,0.9s,baz=29,slow=4.6,SNR=357
ASAR pP pP 11 17 09.3 -2.6
comp=Z,18nm,0.8s,baz=30,slow=5.2,SNR=5.5
ASAR S SKSac 11 26 19.1 -1.1
comp=Z,0.3nm,0.9s,baz=139,slow=49,SNR=3.3
ASAR PKKPbc PKKPbc 11 34 14.2 +0.6
comp=Z,0.7nm,0.8s,baz=211,slow=1.7,SNR=5.8
ASAR PKPPKP P'P'df 11 42 21.8 +2.8
comp=Z,0.7nm,0.9s,baz=158,slow=2.1,SNR=5.1
comp=Z,86nm,0.9s
PID Ribeirinha 86.08 22 eP P 11 16 17.6 +0.7
comp=Z,223nm,1.4s
POLO Lamas de Olo 86.25 6 eP P 11 16 17.8 +0.1
comp=Z,20nm,1.9s
ARMA Armidale 86.34 205 IAmb IAmb 11 16 21.6
comp=Z,165nm,1.1s
ARMA Armidale 86.34 205 P P 11 16 20.4 +2.3
PVRL Vila Real 86.35 6 eP P 11 16 18.5 +0.3
comp=Z,62nm,1.8s
AULRC Lightning Ridg 86.39 208 P P 11 16 21.7 +3.5
DRK0 Durika 86.49 79 IAmb IAmb 11 16 20.6
comp=Z,172nm,0.9s
MVO Moncorvo 86.50 6 eP P 11 16 19.1 +0.1
comp=Z,68nm,1.0s
INKA Innaminka 87.12 215 P P 11 16 25.3 +3.5
AUPHS Peel High Scho 87.17 205 P P 11 16 24.1 +2.1
MTE Manteigas 87.23 6 eP P 11 16 22.6 +0.1
comp=Z,58nm,0.9s
PDA Ponta Delgada 87.29 21 eP P 11 16 23.8 +1.1
CMLA Cha da Macela 87.30 20 eP P 11 16 24.1 +1.3
COI Coimbra 87.36 7 eP P 11 16 23.5 +0.5
comp=Z,144nm,1.1s
PCAS Casmilo, Conde 87.51 7 eP P 11 16 23.6 -0.1
comp=Z,71nm,1.3s
PCBR Castelo Branco 87.79 6 eP P 11 16 24.8 -0.2
comp=Z,50nm,1.1s
ESDC Sonseca Array 88.14 3 P P 11 16 26.3 -0.5
comp=Z,32nm,1.1s,baz=352,slow=3.8,SNR=71
ESDC pP pP 11 17 20.3 -1.6
comp=Z,5.9nm,0.9s,baz=352,slow=4.2,SNR=3.9
ESDC PP PP 11 19 58.4 +2.4
comp=Z,4.5nm,1.1s,baz=345,slow=6.0,SNR=4.4
ESDC PKKPbc PKKPbc 11 34 08.0 +0.5
comp=Z,0.6nm,0.9s,baz=186,slow=1.3,SNR=4.0
comp=Z,32nm,1.1s
PMRV Marv??o 88.21 6 eP P 11 16 26.7 -0.3
comp=Z,93nm,1.8s
PAB San Pablo 88.25 4 P P 11 16 27.0 -0.3
PMTG Montargil 88.51 7 eP P 11 16 27.7 -0.7
comp=Z,50nm,1.5s
PMAFR Mafra 88.54 8 eP P 11 16 28.9 +0.3
MDH Madha 88.59 312 P P 11 16 29.2 +0.1
AOPR Arecibo Observ 88.66 61 IAmb IAmb 11 16 30.2
comp=Z,110nm,1.1s
PESTR Estremoz 88.75 6 eP P 11 16 29.3 -0.3
comp=Z,71nm,1.6s
AUDCS Dubbo College 88.85 207 P P 11 16 32.0 +2.2
CELP Cerrillos 88.98 61 IAmb IAmb 11 16 32.0
comp=Z,102nm,1.0s
OBIP Obispado Ponce 88.99 61 IAmb IAmb 11 16 31.1
comp=Z,195nm,1.2s
OOD Oodnadatta 89.02 219 P P 11 16 32.5 +1.8
CMSA Cobar Meteorol 89.04 209 P P 11 16 32.9 +2.2
GCPR Guaynabo City 89.05 61 IAmb IAmb 11 16 32.1
comp=Z,230nm,1.1s
EVO Evora 89.06 7 eP P 11 16 30.8 -0.2
comp=Z,62nm,1.4s
MGCD Mangrove Creek 89.12 204 P P 11 16 33.6 +2.5
SJG San Juan 89.18 61 P P 11 16 31.9 0.0
SJG IAmb IAmb 11 16 33.0
comp=Z,99nm,1.0s
SJG San Juan 89.18 61 P P 11 16 31.9 0.0
SJG pmax pmax
comp=Z,99nm,1.0s
ASHO Ashiyiah 89.23 311 P P 11 16 31.3 -0.8
WSAR Wadi Sarin 89.26 309 P P 11 16 32.8 +0.6
SNR=5.3
IGPR InterUniversit 89.32 61 IAmb IAmb 11 16 33.5
comp=Z,158nm,1.0s
PBAR Barrancos 89.48 6 eP P 11 16 32.9 -0.1
comp=Z,98nm,1.5s
SOHO SOHO 89.48 311 P P 11 16 32.5 -0.7
PBEJ Beja 89.57 7 eP P 11 16 33.5 +0.1
comp=Z,53nm,1.5s
MMAI Mount Meron Ar 89.58 331 P P 11 16 33.8 +0.2
comp=Z,21nm,1.0s,baz=32,slow=7.9,SNR=14
MMAI pP pP 11 17 28.2 -0.8
comp=Z,1.0nm,0.3s,baz=309,slow=39,SNR=1.5
comp=Z,21nm,1.0s
ASUD Al Ashush, Dub 89.61 312 P P 11 16 34.1 +0.3
WRKA Warakurna 89.62 226 P P 11 16 35.1 +1.5
WBK Wadi Bani Khal 89.63 308 P P 11 16 34.0 0.0
CLTB Caltabellotta 89.64 350 IAmb IAmb 11 16 35.1
comp=Z,197nm,1.3s
RIV Riverview 89.70 204 P P 11 16 35.9 +2.2
SYDH Sydney Hard Ro 89.74 204 P P 11 16 36.0 +2.1
ALNE Al Ain 89.91 311 P P 11 16 36.2 +1.0
SNR=5.3
TOZ Tahuroa Road 89.94 184 IAmb IAmb 11 16 37.4
comp=Z,305nm,1.7s
PCVE Castro Verde 89.95 7 eP P 11 16 35.2 0.0
PAYG Puerto Ayora 90.02 91 P P 11 16 36.3 +0.5
PAYG IAmb IAmb 11 16 38.7
comp=Z,302nm,1.8s
ARQ Araqi 90.17 310 P P 11 16 37.0 +0.5
SNR=5.6
PALK Pallekele 90.25 282 P P 11 16 37.6 +0.7
PALK Pallekele 90.25 282 P P 11 16 37.6 +0.7
PALK pmax pmax
comp=Z,34nm,1.2s
PALK Pallekele 90.25 282 P P 11 16 36.8 -0.2
JMDO Jabal Madar 90.25 309 P P 11 16 36.6 -0.3
BSY Bisya 90.36 310 P P 11 16 36.7 -0.7
LCRK Leigh Creek 90.48 216 P P 11 16 39.0 +1.5
PSA00 Pilbara Seismi 90.61 234 IAmb IAmb 11 17 33.9
comp=Z,24nm,0.9s
PSA00 Pilbara Seismi 90.61 234 P P 11 16 38.8 +0.5
STKA Stephens Creek 90.64 212 P P 11 16 39.8 +1.6
STKA Stephens Creek 90.64 212 d iP P 11 16 39.3 +1.1
STKA Stephens Creek 90.64 212 P P 11 16 38.8 +0.7
comp=Z,48nm,1.0s,baz=6.7,slow=5.7,SNR=64
STKA pP pP 11 17 33.0 -0.7
comp=Z,52nm,1.0s,baz=6.2,slow=7.2,SNR=9.5
STKA S SKSac 11 26 43.5 -3.6
comp=Z,0.9nm,0.8s,baz=226,slow=23,SNR=1.4
comp=Z,48nm,1.0s
HIZ Hauiti 90.75 184 IAmb IAmb 11 17 35.0
comp=Z,247nm,1.4s
YNG Young 90.86 206 P P 11 16 41.5 +2.3
UMZA Um Al Zommool 91.34 311 P P 11 16 41.1 -0.8
MHTO MHTO 91.50 308 P P 11 16 42.1 -0.5
SMRA Abu-Samra 91.50 316 P P 11 16 41.8 -0.8
CNB Canberra Magne 91.57 205 P P 11 16 45.5 +3.0
CAN Canberra 91.67 205 P P 11 16 44.2 +1.3
CAN Canberra 91.67 205 P P 11 16 45.1 +2.2
CAN Canberra 91.67 205 P P 11 16 44.2 +1.3
CAN pmax pmax
comp=Z,30nm,0.9s
KEST Kesra 91.82 353 P P 11 16 44.4 +0.4
comp=Z,26nm,1.1s,baz=298,slow=3.1,SNR=12
KEST PP PP 11 20 26.7 +1.5
comp=Z,19nm,1.0s,baz=300,slow=4.1,SNR=6.0
comp=Z,26nm,1.1s
KEST Kesra 91.82 353 P P 11 16 44.0 0.0
MULG Mulgathing 91.87 219 P P 11 16 47.0 +3.1
HTT Hallett 92.95 214 P P 11 16 51.2 +2.3
BBOO Buckleboo 93.39 216 P P 11 16 52.6 +1.7
SDV Santo Domingo 94.22 70 P P 11 16 55.0 -0.5
SDV Santo Domingo 94.22 70 eP P 11 16 55.0 -0.5
FORT Forrest 94.72 223 IAmb IAmb 11 16 58.7
comp=Z,37nm,0.8s
FORT Forrest 94.72 223 P P 11 16 58.2 +1.2
TOO Toolangi 94.73 207 P P 11 16 58.6 +1.7
RAYN Ar Rayn 94.78 319 P P 11 16 56.9 -0.8
RAYN Ar Rayn 94.78 319 P P 11 16 56.9 -0.8
RAYN pmax pmax
comp=Z,24nm,1.1s
RAYN Ar Rayn 94.78 319 P P 11 16 57.4 -0.4

BRAT Ballarat 95.16 208 P P 11 17 00.8 +2.0
ROSC El Rosal 95.32 75 PP PP 11 20 53.9 -0.1
comp=Z,7.2nm,0.4s,baz=294,slow=20,SNR=4.7
ROSC S SKSac 11 27 13.7 -1.1
comp=Z,6.1nm,0.5s,baz=195,slow=19,SNR=5.7
MEEK Meekatharra 95.47 233 P P 11 17 01.3 +0.8
RPZ Rata Peaks 96.16 187 P P 11 17 04.1 +0.8
OTAV Otavalo 96.51 81 P P 11 17 06.0 -0.1
OTAV Otavalo 96.51 81 P P 11 17 06.1 -0.1
OTAV pmax pmax
comp=Z,19nm,1.4s
OTAV Otavalo 96.51 81 eP P 11 17 06.8 +0.6
TULM Tulcn-Chalpat 96.53 80 IAmb IAmb 11 17 08.2
comp=Z,45nm,1.2s
CHSH Refugio Sur-Vo 97.63 83 IAmb IAmb 11 18 11.8
comp=Z,29nm,0.9s
CZSB Cruzeiro do Su 106.28 81 eP Pdif 11 17 49.9 +0.8
MALB Monte Alegre 112.19 62 eP Pdif 11 18 16.4 +1.0
TORD Torodi Ar. Bea 114.64 359 PKP PKiKP 11 22 13.1 -2.1
comp=Z,16nm,0.6s,baz=357,slow=3.4,SNR=1.5
TORD PP PP 11 23 16.9 +2.0
comp=Z,22nm,0.4s,baz=4.1,slow=6.1,SNR=3.6
TORD PKKPbc PKKPbc 11 32 49.5 -2.0
comp=Z,12nm,0.3s,baz=132,slow=4.1,SNR=1.5
TORD PKKPab PKKPab 11 32 59.4 -3.6
comp=Z,12nm,0.3s,baz=187,slow=3.7,SNR=1.6
LVC Limon Verde 120.05 88 eP PKiKP 11 22 26.8 +1.0
PTLB Pontes e Lacer 120.47 75 PKPdf 11 22 25.6 -0.6
PTLB Pontes e Lacer 120.47 75 eP PKiKP 11 22 26.8 +0.5
DBIC Dimbokro 120.90 6 PKP PKPdf 11 22 26.3 -0.9
comp=Z,8.4nm,0.5s,baz=5.2,slow=2.5,SNR=19
DBIC PKKPbc PKKPbc 11 32 29.4 +0.1
comp=Z,4.8nm,0.8s,baz=238,slow=3.3,SNR=2.8
TIC Toumodi 120.92 6⇑ ePKIKP PKPdf 11 22 26.3 -1.0
comp=Z,42nm,0.9s
BBSD Serra de San D 120.95 78 eP PKPdf 11 22 26.6 -0.6
KIC Kosan Boka 121.22 6⇑ iPKIKP PKPdf 11 22 26.9 -1.0
comp=Z,31nm,0.8s
LIC Lamto 121.33 6⇑ ePKIKP PKPdf 11 22 27.0 -1.1
comp=Z,18nm,0.7s
H03N2 Juan Fernandez 121.82 105 T T 13 35 24.2
baz=317,slow=77,SNR=39
H03N1 Juan Fernandez 121.83 105 T T 13 35 25.4
baz=317,slow=77,SNR=35
H03N3 Juan Fernandez 121.84 105 T T 13 35 25.4
baz=317,slow=77,SNR=56
SNDB Serra Nova Dou 122.20 65 eP PKiKP 11 22 30.1 +0.2
BBRB Robore, Bolivi 122.28 78 eP PKPdf 11 22 29.6 0.0
SALV Santo Antonio 122.85 72 eP PKPdf 11 22 30.7 -0.1
PP1B Ponte de Pedra 124.66 73 eP PKiKP 11 22 34.5 -0.1
CO01 Juntas del Tor 124.69 95 PKiKP 11 22 34.8 +0.1
BDQN Bodoquena, MS 125.78 77 eP PKiKP 11 22 36.6 -0.2
SDBA SAO DESIDERIO 126.02 59 eP PKPdf 11 22 36.4 -0.7
MURT Porto Murtinho 126.19 78 eP PKPdf 11 22 36.4 -0.7
AQDB Aquidauana 126.42 76 eP PKPdf 11 22 37.4 -0.1
BDFB Brasilia 127.01 65 PKP PKPdf 11 22 37.7 -1.2
comp=Z,12nm,0.8s,baz=36,slow=14,SNR=12
BDFB pPKP pPKPdf 11 23 36.3 -0.1
comp=Z,7.7nm,0.9s,baz=359,slow=1.6,SNR=3.2
BDFB PP PP 11 24 38.8 -1.3
comp=Z,6.5nm,1.0s,baz=358,slow=6.8,SNR=3.6
ANTJ Antonio Joao (127.41 77 eP PKPdf 11 22 38.8 -0.6
RPRD Ribas do Rio P 127.60 74 eP PKPdf 11 22 39.4 -0.4
TICA Tres Isletas 128.04 85 eP PKiKP 11 22 41.5 +0.4
ESFA Espinillo Form 128.14 82 eP PKiKP 11 22 41.7 +0.4
JANB Januaria 128.54 61 eP PKPdf 11 22 38.8 +3.0
VACA Villa Angela C 128.76 86 eP PKiKP 11 22 42.9 +0.4
IPMB Ipameri, GO 128.79 67 eP PKPdf 11 22 42.1 -0.1
ITRB Iturama 128.94 70 eP PKPdf 11 22 42.7 +0.3
CPUP Villa Florida 129.86 82 PKPdf 11 22 43.9 0.0
CPUP Villa Florida 129.86 82 PKP PKPdf 11 22 43.1 -0.8
comp=Z,21nm,1.1s,baz=342,slow=2.1,SNR=25
CPUP pPKP pPKPdf 11 23 41.7 +0.4
comp=Z,8.2nm,1.1s,baz=20,slow=3.0,SNR=3.1
CPUP SKPbc SKPab 11 25 42.2 -2.1
comp=Z,37nm,1.1s,baz=320,slow=4.0,SNR=20
CPUP Villa Florida 129.86 82 eP PKPdf 11 22 44.3 +0.4
PCMB Pacaembu 129.91 72 eP PKPdf 11 22 44.3 +0.1
PMNB Patos De Minas 130.23 65 eP PKPdf 11 22 45.1 +0.2
VNDA Vanda 130.25 185 SKPbc SKPbc 11 25 44.2 0.0
comp=Z,32nm,1.2s,baz=356,slow=4.9,SNR=22
MCR1 Marechal Candi 130.45 77 eP PKPdf 11 22 45.5 +0.4
OPO Ambohidratompo 130.45 295 PKP PKiKP 11 22 46.0 -0.4
comp=Z,2.6nm,0.6s,baz=52,slow=9.6,SNR=2.5
OPO pPKP pPKPdf 11 23 43.9 +0.2
comp=Z,5.0nm,0.8s,baz=46,slow=8.3,SNR=2.9
OPO SKPbc SKPbc 11 25 45.6 -1.5
comp=Z,15nm,0.9s,baz=32,slow=4.8,SNR=10.0
BB19B Bebedouro 131.06 69 eP PKPdf 11 22 46.8 +0.3
DIAM Diamantina, MG 131.55 62 eP PKPdf 11 22 47.6 0.0
PLCA Paso Flores 131.67 106 PKiKP 11 22 48.0 -0.1
PLCA Paso Flores 131.67 106 PKP PKPdf 11 22 47.5 +0.5
comp=Z,22nm,0.9s,baz=301,slow=2.8,SNR=28
PLCA pPKP pPKPdf 11 23 45.0 +0.6
comp=Z,13nm,1.0s,baz=276,slow=1.4,SNR=5.7
PLCA SKPbc SKPbc 11 25 49.1 -1.6
comp=Z,42nm,0.9s,baz=301,slow=3.9,SNR=27
PLCA Paso Flores 131.67 106 eP PKiKP 11 22 47.6 -0.5
PTGB Pitanga 131.81 76 eP PKPdf 11 22 47.8 0.0
FRBE Francisco Belt 132.16 74 eP PKPdf 11 22 48.2 -0.2
GUA01 Guaratinga, BA 132.17 57 eP PKPdf 11 22 48.4 -0.2
FRTB Fartura 132.24 72 eP PKPdf 11 22 48.8 +0.2
CRSM Crissiumal (Br 132.69 80 eP PKPdf 11 22 49.2 -0.1
ITQB Itaqui 132.70 84 eP PKPdf 11 22 49.4 +0.2
BSCB Bom Sucesso 133.13 66 eP PKPdf 11 22 50.2 -0.1
UNIS Unistalda (Bra 133.22 82 eP PKPdf 11 22 50.4 +0.2
SJMB Sao Joao De Ma 133.22 60 eP PKPdf 11 22 50.0 -0.5
ITAB Concordia 133.65 78 PKPdf 11 22 51.1 0.0
ITAB Concordia 133.65 78 eP PKPdf 11 22 50.6 -0.4
SPB Sao Paulo 133.66 70 eP PKiKP 11 22 52.5 0.0
RODS Rosario do Sul 134.05 84 eP PKPdf 11 22 52.3 +0.5
ALGR Alto Alegre (B 134.26 80 eP PKPdf 11 22 52.9 +0.6
PET01 Itanhaem-SP 134.29 71 eP PKPdf 11 22 52.7 +0.3
PARB Paraibuna 134.50 68 eP PKPdf 11 22 52.9 0.0
TBOT Tacuaremb 134.54 86 eP PKPdf 11 22 52.9 +0.3
VAS01 Vassouras-RJ 134.89 65 eP PKPdf 11 22 53.7 +0.1
TRQA Tornquist 135.10 97 PKPdf 11 22 53.7 +0.2
TRQA Tornquist 135.10 97 PKiKP PKPdf 11 22 53.7 +0.2
CPSB Cacapava Do Su 135.16 82 eP PKPdf 11 22 54.3 +0.5
CNLB Canela 135.94 79 eP PKPdf 11 22 55.3 0.0
PLTB Pedras Altas 136.02 84 eP PKPdf 11 22 56.1 +0.8
LSZ Lusaka 136.90 319 PKP PKPdf 11 22 57.3 -0.3
comp=Z,2.3nm,0.4s,baz=18,slow=2.9,SNR=5.4
LSZ pPKP pPKPdf 11 23 56.2 +0.3
comp=Z,1.5nm,0.3s,baz=358,slow=3.0,SNR=1.7
LSZ SKPbc SKPbc 11 26 06.4 -2.1
comp=Z,4.4nm,0.8s,baz=57,slow=3.9,SNR=5.1
GO10 Punta Arenas 138.40 121 PKPdf 11 23 00.1 +0.9
QSPA South Pole Qui 142.23 180 PKhKP PKPpre 11 23 01.7
comp=Z,19nm,0.6s,baz=60,slow=0.1,SNR=37
QSPA SKPbc SKPbc 11 26 19.9 -1.2
comp=Z,40nm,0.9s,baz=315,slow=0.9,SNR=10
QSPA SKKPbc SKKPab 11 34 37.7 -1.8
comp=Z,7.6nm,1.1s,baz=237,slow=2.6,SNR=5.0
TSUM Tsumeb 144.23 332 PKP PKPbc 11 23 09.5 -0.1
comp=Z,25nm,0.7s,baz=14,slow=5.4,SNR=39
TSUM pPKP pPKPdf 11 24 08.0 -0.9
comp=Z,34nm,0.9s,baz=24,slow=4.4,SNR=6.1
TSUM SKPbc SKPbc 11 26 25.5 -2.1
comp=Z,2.4nm,0.7s,baz=26,slow=7.1,SNR=3.3
TSUM SKKPab SKKPab 11 34 30.6 -0.9
comp=Z,8.1nm,0.9s,baz=193,slow=3.7,SNR=10
EFI East Falkland 144.82 113 PKPbc 11 23 10.1 -0.2
EFI East Falkland 144.82 113 PKiKP PKPbc 11 23 10.1 -0.1
PMSA Palmer Station 145.82 136 eP PKPbc 11 23 13.3 +0.4
LBTB Lobatse 146.66 316 PKPbc PKPbc 11 23 17.0 +0.3
comp=Z,51nm,0.8s,baz=19,slow=1.9,SNR=32
LBTB pPKPbc pPKPab 11 24 14.8 +0.1
comp=Z,44nm,0.9s,baz=11,slow=2.3,SNR=7.9
MAW Mawson 147.10 219 PKPbc 11 23 17.2 +0.7
MAW Mawson 147.10 219 PKPbc PKPbc 11 23 17.3 +0.9
comp=Z,98nm,1.1s,baz=63,slow=2.5,SNR=28
MAW pPKPbc pPKPdf 11 24 12.4 -0.1
comp=Z,55nm,1.0s,baz=50,slow=8.0,SNR=4.0
MAW SKPbc SKiKP 11 26 32.4 0.0
comp=Z,16nm,1.0s,baz=315,slow=4.6,SNR=1.8
WIN Windhoek 147.55 331 PKPbc 11 23 19.7 +0.4
WIN Windhoek 147.55 331 PKP2 PKPbc 11 23 19.7 +0.4
BOSA Boshof 149.94 313 PKiKP 11 23 25.6 -0.3
BOSA Boshof 149.94 313 PKPbc PKPbc 11 23 24.8 -0.3
comp=Z,49nm,0.9s,baz=49,slow=1.8,SNR=35
BOSA pPKPbc pPKPbc 11 24 22.1 -0.8
comp=Z,28nm,0.9s,baz=19,slow=1.2,SNR=5.8
ELIB Princess Elisa 158.05 199 dPKP PKPab 11 24 03.6 -1.3

TROLL Troll, Antarti 160.38 182 ⇑PKPab PKPab 11 24 14.9 -0.1
comp=Z,2µm,0.8s
TROLL ⇑PKPdf PKPdf 11 23 32.5 -0.2
comp=Z,373nm,0.9s
TROLL ⇑pPKPab pPKPab 11 25 09.8 -1.1
comp=Z,582nm,1.0s
VNA3 Neumayer Olymp 160.62 170 ⇑PKPab PKPab 11 24 16.2 +0.2
comp=Z,43nm,0.7s
VNA3 ⇑PKPdf PKPdf 11 23 32.5 -0.3
comp=Z,11nm,1.1s
VNA3 ⇑pPKPab pPKPab 11 25 09.4 -2.4
comp=Z,24nm,1.0s
SNAA Sanae 160.68 177 ⇑PKPab PKPab 11 24 16.2 -0.1
comp=Z,299nm,0.9s
SNAA ⇑PKPdf PKPdf 11 23 32.0 -1.0
comp=Z,67nm,0.8s
SNAA ⇑pPKPab pPKPab 11 25 09.7 -2.3
comp=Z,242nm,1.3s
SNAA Sanae 160.68 177 PKPab PKPab 11 24 14.5 -1.8
comp=Z,14nm,0.9s,baz=177,slow=3.7,SNR=12
SNAA pPKPab pPKPab 11 25 09.9 -2.2
comp=Z,17nm,1.2s,baz=206,slow=8.2,SNR=4.0
VNA2 Neumayer--Watz 161.14 172 ⇑PKPab PKPab 11 24 18.9 +0.6
comp=Z,63nm,0.8s,baz=192,slow=2.3
VNA2 ⇑PKPdf PKPdf 11 23 33.8 +0.4
comp=Z,8.4nm,0.8s,baz=192,slow=2.3
VNA2 ⇑pPKPab pPKPab 11 25 12.0 -2.0
comp=Z,15nm,0.7s,baz=302,slow=4.7
VNA1 Neumayer--Stat 161.33 171 ⇑PKPab PKPab 11 24 19.7 +0.7
comp=Z,57nm,0.9s
VNA1 ⇑pPKPab pPKPab 11 25 11.4 -3.4
comp=Z,57nm,1.1s

TAP 08 11:11:37.8, 24.11N×121.64E, h9km, ML1.6, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**235**	⇑P		Pg	11 11 39.6	-0.1
	baz=230							
TWD				*i* S		Sg	11 11 41.1	+0.1
	baz=230							
ETL	**Fush Village**	**0.05**	**343**	P		Pg	11 11 39.6	-0.2
	baz=343							
ETL				S		Sg	11 11 41.1	-0.1
	baz=343							
NACB	**Ninganchiao**	**0.08**	**328**	P		Pg	11 11 39.8	-0.2
	baz=327							
NACB				S		Sg	11 11 41.5	-0.2
	baz=327							
HWA	**Hwalien**	**0.13**	**194**	P		Pg	11 11 41.1	+0.3
	baz=190							
HWA				*e*S		Sg	11 11 44.3	+1.4
	baz=190							
ETLH	**Xiulin Townshi**	**0.17**	**304**	*e*P		Pg	11 11 41.5	-0.1
	baz=304							
ETLH				*i* S		Sg	11 11 44.1	0.0
	baz=304							
ETM	**Tongmen**	**0.20**	**224**	P		Pg	11 11 41.6	-0.2
	baz=223							
ETM				*e*S		Sg	11 11 44.3	-0.3
	baz=223							
LXIB	**Xiulin Townshi**	**0.23**	**247**	*i* P		Pg	11 11 42.1	-0.4
	baz=247							
LXIB				*i* S		Sg	11 11 45.9	+0.3
	baz=247							
EAHA	**Aohua**	**0.24**	**22**	*e*P		Pg	11 11 42.4	-0.2
	baz=22							
EAHA				*e*S		Sg	11 11 46.0	+0.1
	baz=22							
WHF	**Hehuan Shan**	**0.34**	**276**	*e*P		Pb	11 11 45.7	-0.6
	baz=275							
WHF				*i* S		Sg	11 11 49.3	-0.1
	baz=275							
ESL	**Shilin**	**0.35**	**213**	*e*P		Pg	11 11 44.2	-0.5
	baz=211							
ESL				*e*S		Sg	11 11 49.1	-0.2
	baz=211							
EWUT	**Wuta**	**0.36**	**21**	P		Pg	11 11 45.0	+0.1
	baz=20							
EWUT				*e*S		Sg	11 11 49.1	-0.6
	baz=20							
FUSS	**Fushou**	**0.39**	**291**	P		Pg	11 11 45.5	0.0
	baz=291							
FUSS				S		Sg	11 11 51.1	+0.4
	baz=291							
NNSB	**Datong**	**0.40**	**324**	*e*P		Pg	11 11 45.7	+0.1
	baz=323							
NNSB				S		Sg	11 11 51.1	+0.2
	baz=323							
NNS	**Nan Shan**	**0.41**	**324**	*e*P		Pg	11 11 45.9	-0.1
	baz=324							
NNS				S		Sg	11 11 51.4	0.0
	baz=324							
CHGB	**Renai**	**0.43**	**264**	*e*P		Pg	11 11 46.3	+0.1
	baz=263							
LATG	**Datong**	**0.44**	**346**	*i* P		Pg	11 11 46.3	-0.1
	baz=346							
LATG				*e*S		Sg	11 11 52.5	+0.2
	baz=346							
OWD	**Renai**	**0.45**	**250**	*e*P		Pg	11 11 46.5	-0.1
	baz=250							
OWD				*e*S		Sg	11 11 52.8	+0.2
	baz=250							
NDT	**Datong Townshi**	**0.51**	**347**	P		Pg	11 11 47.8	+0.1
	baz=346							
NDT				S		Sg	11 11 55.0	+0.6
	baz=346							
ENTT	**Nioudou**	**0.53**	**353**	P		Pg	11 11 48.3	+0.1
	baz=353							

*IDC **08** 11:13:37.9±1.0, 54.31N×169.00E, h0km, mb3.8/8, mbtmp3.9/10, ML3.5/2, Error ellipse: s-maj=37.0km s-min=18.6km az=10.0*

*KRSC **08** 11:13:41.5±1.6, 53.88N×168.58E, h20km±30km, Ml4.3*
ISC 08 11:13:40.9±0.8, 53.97N±0.10×169.05E±0.06, h25km, n43, σ1s87/47, mb3.7/8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.18**	**306**	*e*P		**Pn**	**11 14 14.6**	**-0.9**
BKI				*e*S		**Sn**	**11 14 40.6**	**-1.0**
SHEM	**Shemya Is, Ala**	**3.27**	**110**	Pn		**Pn**	**11 14 31.1**	**+0.6**
	14nm,0.3s,baz=37,slow=5.3,SNR=9.1							
SHEM				Sn		**Sn**	**11 15 08.8**	**+0.2**
	8.3nm,0.3s,baz=296,slow=22,SNR=1.9							
	61nm,0.5s							
SMKR	**Semkarok**	**5.06**	**304**	*e*P		**Pn**	**11 14 56.9**	**+1.6**
TUMD	**Tumrok D**	**5.18**	**287**	*e*P		**Pn**	**11 14 58.7**	**+1.9**
BDR	**Baidarnaya**	**5.18**	**303**	*e*P		**Pn**	**11 14 59.7**	**+2.8**
BZMR	**Bezymyannaya**	**5.31**	**295**	*e*P		**Pn**	**11 15 01.0**	**+2.3**
BZWR	**Bezymyannyi-We**	**5.32**	**296**	*e*P		**Pn**	**11 15 01.8**	**+3.0**
TUMR	**Tumrok**	**5.34**	**288**	*e*P		**Pn**	**11 15 01.9**	**+2.9**
KLY	**Klyuchi**	**5.36**	**299**	*e*P		**Pn**	**11 15 01.4**	**+2.2**
KMNR	**Kamenistaya**	**5.39**	**293**	*e*P		**Pn**	**11 15 01.9**	**+2.1**
SPN	**Mys Shipunski**	**5.45**	**264**	*e*P		**Pn**	**11 15 01.2**	**+0.7**
SPN				*e*S		**Sn**	**11 16 01.2**	**-1.2**
KPT	**Kopyto**	**5.46**	**295**	*e*P		**Pn**	**11 15 03.8**	**+3.0**
KII	**Karymskiy**	**5.66**	**275**	*e*P		**Pn**	**11 15 05.0**	**+1.5**
KII				*e*S		**Sn**	**11 16 06.4**	**-1.3**
UGLR	**Uglovaya**	**6.14**	**267**	*e*P		**Pn**	**11 15 11.8**	**+1.8**
SMAR	**Somma**	**6.14**	**268**	*e*P		**Pn**	**11 15 11.3**	**+1.1**
AVH	**Avacha**	**6.18**	**268**	*e*P		**Pn**	**11 15 12.4**	**+1.9**
KRX	**Arik**	**6.21**	**269**	*e*P		**Pn**	**11 15 12.5**	**+1.4**
KRX				*e*S		**Sn**	**11 16 20.8**	**-0.5**
DALK	**Dalny**	**6.21**	**265**	*e*P		**Pn**	**11 15 12.7**	**+1.7**
KOK	**Koryaka**	**6.23**	**268**	*e*P		**Pn**	**11 15 13.1**	**+1.8**
PET	**Petropavlovsk**	**6.28**	**266**	*e*P		**Pn**	**11 15 13.6**	**+1.8**
PET				*e*S		**Sn**	**11 16 23.2**	**+0.6**
ESO	**Esso**	**6.28**	**292**	*e*P		**Pn**	**11 15 14.8**	**+3.0**
RUS	**Russkaya**	**6.51**	**261**	*e*P		**Pn**	**11 15 16.8**	**+1.7**
GNL	**Ganaly**	**6.58**	**272**	*e*P		**Pn**	**11 15 18.4**	**+2.3**
KRMR	**Karymshinskiy**	**6.63**	**265**	*e*P		**Pn**	**11 15 18.7**	**+2.0**
KRMR				*e*S		**Sn**	**11 16 30.0**	**-1.4**
MTVR	**Mutnovka**	**6.69**	**262**	*e*P		**Pn**	**11 15 19.8**	**+2.1**
MTVR				*e*S		**Sn**	**11 16 31.8**	**-1.3**
GRL	**Gorelyy**	**6.74**	**262**	*e*P		**Pn**	**11 15 21.0**	**+2.8**
PETK	**Petropavlovsk-**	**6.82**	**267**	Pn		**Pn**	**11 15 19.8**	**+0.5**
	1.6nm,0.3s,baz=72,slow=18,SNR=46							
PETK				Sn		**Sn**	**11 16 35.6**	**-0.5**
	1.4nm,0.3s,baz=106,slow=19,SNR=1.6							
	20nm,0.8s							
ASAK	**Asacha**	**6.89**	**261**	*e*P		**Pn**	**11 15 22.5**	**+2.2**
KDTR	**Khodutka, Kamc**	**6.98**	**256**	*e*P		**Pn**	**11 15 22.6**	**+1.1**

KDTR				*e*S		**Sn**	**11 16 37.1**	**-2.9**
H11N2	**WAKE ISLAND Hy**	**34.22**	**184**	T		T	11 56 54.2	
	baz=2.1,slow=74							
H11N3	**WAKE ISLAND Hy**	**34.23**	**184**	T		T	11 56 57.1	
	baz=2.1							
H11N1	**WAKE ISLAND Hy**	**34.23**	**184**	T		T	11 56 57.5	
	baz=2.1,slow=74							
H11S1	**WAKE ISLAND Hy**	**35.44**	**184**	T		T	11 58 19.0	
	baz=2.5,slow=76							
H11S3	**WAKE ISLAND Hy**	**35.45**	**184**	T		T	11 58 23.4	
	baz=2.5,slow=76							
H11S2	**WAKE ISLAND Hy**	**35.46**	**184**	T		T	11 58 20.3	
	baz=2.5,slow=76							
SONM	**Songino Array**	**38.83**	**287**	P		**P**	**11 21 02.3**	**-1.4**
	0.5nm,0.4s,baz=49,slow=9.7,SNR=2.0							
	0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**51.79**	**306**	P		**P**	**11 22 44.4**	**-1.8**
	0.7nm,0.3s,baz=56,slow=6.8,SNR=1.6							
	0.7nm,0.3s							
PDAR	**Pinedale Array**	**52.34**	**67**	P		**P**	**11 22 50.1**	**-0.6**
	0.4nm,0.7s,baz=316,slow=4.1,SNR=1.8							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**52.47**	**300**	P		**P**	**11 22 50.2**	**-1.1**
	0.5nm,0.7s,baz=53,slow=7.4,SNR=2.4							
	0.5nm,0.7s							
BVAR	**Borovoye Array**	**53.90**	**312**	P		**P**	**11 23 01.2**	**-0.5**
	1.3nm,0.4s,baz=55,slow=5.8,SNR=5.7							
	1.3nm,0.4s							
ARCES	**ARCESS Array B**	**53.98**	**345**	P		**P**	**11 23 00.5**	**-1.5**
	5.2nm,1.0s,baz=20,slow=8.2,SNR=4.6							
	5.2nm,1.0s							
TXAR	**Lajitas Array**	**65.31**	**74**	P		**P**	**11 24 21.8**	**+1.0**
	0.5nm,0.6s,baz=304,slow=4.9,SNR=12							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**83.05**	**212**	P		**P**	**11 26 07.0**	**+3.0**
	0.3nm,0.8s,baz=23,slow=5.0,SNR=1.4							
	0.3nm,0.8s							

PRU 08 11:25:24.9,51.45N×16.07E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**167**	*e*Pg	Pg	11 25 36.6	-0.3
KSP				*e*Sg	Sg	11 25 45.1	+0.2
CHVC	**Chvalec**	**0.86**	**181**	*e*Pg	Pg	11 25 41.2	-0.2
CHVC				*e*SG	Sg	11 25 53.0	+0.4
CHVC	**Chvalec**	**0.86**	**181**	*e*	Sg	11 25 53.0	+0.4
OSTC	**Ostas**	**0.90**	**174**	*e*PG	Pg	11 25 41.8	-0.3
OSTC				*e*SG	Sg	11 25 54.2	+0.5
	comp=Z,8.6nm,0.3s						
OSTC	**Ostas**	**0.90**	**174**	*e*	Sg	11 25 54.2	+0.5
UPC	**Upice**	**0.94**	**182**	*e*PG	Pg	11 25 41.6	-1.4
UPC				*e*SG	Sg	11 25 55.2	0.0
	comp=Z,15nm,0.4s						
UPC	**Upice**	**0.94**	**182**	*e*	Sg	11 25 55.2	0.0
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*PG	Pg	11 25 44.9	-1.3
DPC				*e*SG	Sg	11 25 59.5	-1.1
	comp=Z,6.3nm,0.4s						
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*	Sg	11 25 59.5	-1.1
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*	Pg	11 25 44.9	-1.3
PVCC	**Panska Ves**	**1.32**	**226**	*e*SG	Sb	11 26 08.1	0.0
	comp=Z,22nm,0.4s						
PVCC	**Panska Ves**	**1.32**	**226**	*e*	Sg	11 26 08.1	+0.7
KRLC	**Kraliky**	**1.45**	**162**	*e*PG	Pn	11 25 51.4	-1.0
KRLC				*e*SG	Sg	11 26 10.2	-1.2
BRG	**Berggiesshubel**	**1.46**	**248**	Pg	Pn	11 25 52.5	0.0
BRG				Sg	Sn	11 26 12.3	0.0
BRG				Amp		11 26 14.3	
	comp=Z,11nm,0.4s						
HSKC	**Hora Svate Kat**	**1.87**	**244**	*e*SG	Sb	11 26 23.2	-0.6
	comp=Z,7.7nm,0.4s						
MORC	**Moravsky Berou**	**1.92**	**150**	*e*PN	Pn	11 25 54.0	-4.9
MORC				*e*SG	Sn	11 26 23.0	-0.7
NKC	**Novy Kostel**	**2.60**	**243**	*e*SG	Sg	11 26 47.8	-0.6
KHC	**Kasperske Hory**	**2.82**	**216**	*e*SN	Sn	11 26 44.8	-1.1
KHC				*e*SG	Sg	11 26 54.0	-1.4

DJA ***08*** *11:41:46.3±0.4,8˚S±6˚×11˚0E±˚,h75km±8km,M3.4/10, MLv3.4/10*

ISC 08 11:41:46.5±1.4,**8˚35S**±0˚08×**110˚30E**±0˚04,**h77**km,**n15,** σ1**9**02/18,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.49**	**27**	P	**Pn**	**11 42 00.7**	**+0.8**
UGM	**Wanagama**	**0.49**	**27**	P	**Pn**	**11 42 00.3**	**+0.4**
UGM				S	**Sn**	**11 42 11.7**	**+1.9**
SMRI	**Semarang**	**1.30**	**6**	P	**Pn**	**11 42 07.8**	**-1.4**
SMRI	**Semarang**	**1.30**	**6**	P	**Pn**	**11 42 07.7**	**-1.4**
SMRI				S	**Sn**	**11 42 25.4**	**-0.8**
NGJI	**Ngawi**	**1.51**	**50**	P	**Pn**	**11 42 12.1**	**+0.3**
KPJI	**Karang Pucung**	**1.69**	**307**	P	**Pn**	**11 42 14.3**	**+0.1**
KPJI				S	**Sn**	**11 42 36.0**	**+0.8**
CMJI	**Cimerak**	**1.92**	**287**	P	**Pn**	**11 42 16.8**	**-0.4**
CMJI				S	**Sn**	**11 42 40.9**	**+0.3**
BBJI	**Bungbulang**	**2.77**	**288**	P	**Pn**	**11 42 29.6**	**+0.9**
GMJI	**Gumukmas**	**3.11**	**89**	P	**Pn**	**11 42 32.4**	**-0.9**
CNJI	**Cibinong**	**3.31**	**288**	P	**Pn**	**11 42 35.8**	**-0.2**
BLJI	**Banyuglugur**	**3.32**	**80**	P	**Pn**	**11 42 34.8**	**-1.3**
JAGI	**Jajag, Banyuwa**	**3.81**	**92**	P	**Pn**	**11 42 43.5**	**+0.6**
XMI	**Christmas Isla**	**5.00**	**245**	P	**Pn**	**11 42 57.9**	**-1.2**
XMIS	**Christmas Isla**	**5.05**	**245**	P	**Pn**	**11 42 59.2**	**-0.6**
KSM	**Kuching**	**9.76**	**0**	P	Pn	11 43 55.1	-9.0

GCG ***08*** *12:04:49.2±1.3,13˚90N×92˚65W,h86km±58km,MD4.6*
IDC ***08*** *12:04:50.4±1.6,14˚34N×91˚70W,h0km,mb4.2/8, mbtmp4.2/12,ML3.8/4,MS3.9/3,Error ellipse: s-maj=58.0km s-min=17.1km az=37.0*
CATAC ***08*** *12:04:52.2±0.5,13˚81N×92˚24W,h5km,ML4.5*
MEX ***08*** *12:04:53.7±0.5,13˚89N×92˚36W,h4km±12km,MD4.5*
NEIC ***08*** *12:04:56.2±2.1,13˚94N±0˚07×92˚27W±0˚06,h36km±11km, mb4.4/100,Md4.5/28(MEX),Error ellipse: s-maj=10.2km s-min=7.9km az=205.0*
SNET ***08*** *12:04:56.8±1.0,13˚91N×92˚03W,h84km±70km,ML4.0*

ISC 08 12:04:53.4±1.4,**13˚87N**±0˚05×**92˚30W**±0˚04,**h30**km±10km, **n195,** σ1**983**/211,**mb4.4**/45,**Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.83**	**59**	*i* P	**Pn**	**12 05 10.7**	**+1.6**
RTAL	**Retalhuleu**	**0.88**	**42**		**Pn**	**12 05 09.6**	**-0.1**
RTAL				Sn	**Sb**	**12 05 21.1**	**-0.4**
RTAL	**Retalhuleu**	**0.88**	**42**	*e*P	**Pn**	**12 05 09.5**	**-0.1**
RTAL				*e*S	**Sb**	**12 05 20.9**	**-0.5**
RTAL	**Retalhuleu**	**0.88**	**42**	*i* P	**Pn**	**12 05 09.7**	**0.0**
RTAL				IAML		12 05 25.7	
	comp=Z,12μm,1.0s						
SMCA	**Catarina**	**1.00**	**12**	*i* P	**Pn**	**12 05 10.7**	**-0.8**
SMCA				*i* S	**Sn**	**12 05 25.1**	**+0.5**
SMCA				IAML		12 05 44.9	
	comp=Z,6μm,1.0s						
THIG		**1.03**	**2**		**Pn**	**12 05 11.2**	**-0.6**
THIG					**Sb**	**12 05 25.7**	**-0.2**
THIG		**1.03**	**2**	*e*P	**Pn**	**12 05 11.2**	**-0.6**
THIG				*e*S	**Sn**	**12 05 24.3**	**-1.0**
STG3	**Santiaguito 3,**	**1.09**	**40**	*i* P	**Pn**	**12 05 13.0**	**+0.1**
STG3				*i* S	**Sb**	**12 05 32.2**	**+4.4**
SMSP	**San Marcos**	**1.21**	**24**	*e*P	**Pn**	**12 05 13.8**	**-0.7**
SMSP				*i* S	**Sn**	**12 05 29.4**	**-0.7**
SMSP	**San Marcos**	**1.21**	**24**	*i* P	**Pn**	**12 05 14.2**	**-0.3**
SMSP				IAML		12 05 39.3	
	comp=Z,24μm,1.0s						
CHUJ	**Union Juarez**	**1.23**	**9**	*e*P	**Pn**	**12 05 13.5**	**-1.3**
CHUJ				*e*S	**Sn**	**12 05 29.1**	**-1.4**
PATR	**El Naranjo**	**1.24**	**3**	*e*P	**Pn**	**12 05 13.8**	**-1.1**
PATR				*e*S	**Sn**	**12 05 30.1**	**-0.7**
PAVE	**Pavencul**	**1.32**	**5**	*i* P	**Pn**	**12 05 15.2**	**-0.9**
PAVE				*e*S	**Sn**	**12 05 32.4**	**-0.4**
FUG	**Fuego 3**	**1.52**	**68**	*i* P	**Pn**	**12 05 19.3**	**+0.5**
CHTG	**Tecpan**	**1.55**	**55**	*i* P	**Pn**	**12 05 20.1**	**+0.9**
CHTG				IAML		12 05 42.7	
	comp=Z,8μm,1.0s						
HUEH	**Huehuetenango**	**1.63**	**28**		**Pn**	**12 05 21.4**	**+1.1**
HUEH				Sn	**Sb**	**12 05 43.5**	**+0.2**
HUEH	**Huehuetenango**	**1.63**	**28**	*e*P	**Pn**	**12 05 21.4**	**+1.1**
HUEH				*e*S	**Sb**	**12 05 43.2**	**-0.1**
HUEH	**Huehuetenango**	**1.63**	**28**	*i* P	**Pb**	**12 05 21.6**	**-1.4**
HUEH				*i* S	**Sb**	**12 05 44.6**	**+1.3**
HUEH				IAML		12 05 45.2	
	comp=Z,13μm,1.0s						

PCG	**Pacaya**	**1.72**	**72**	*i* P		**Pn**	**12 05 22.6**	**+1.0**
GUMI	**Mixco**	**1.80**	**65**	*i* P		**Pn**	**12 05 23.5**	**+0.9**
GUMI				IAML			12 05 23.9	
	comp=Z,10μm,1.0s							
QUIS	**Sacapulas**	**1.83**	**39**	*i* P		**Pb**	**12 05 24.6**	**-1.7**
QUIS				IAML			12 05 27.0	
	comp=Z,6μm,1.0s							
QUIS				*i* S		**Sb**	**12 05 50.1**	**+1.1**
GCG4	**OSOP**	**1.85**	**67**	*i* P		**Pn**	**12 05 24.3**	**+1.0**
GCG4				*i* S		**Sb**	**12 05 48.4**	**-1.2**
GCG4				IAML			12 05 50.5	
	comp=Z,6μm,1.0s							
NBG	**Las Nubes**	**2.02**	**69**	*i* P		**Pb**	**12 05 28.0**	**-1.6**
NBG				*i* S		**Sb**	**12 05 56.4**	**+1.8**
GUNB	**GUNB**	**2.03**	**69**	*i* P		**Pn**	**12 05 27.1**	**+1.3**
GUNB				*i* S		**Sb**	**12 05 54.0**	**-0.7**
GUNB				IAML			12 05 55.4	
	comp=Z,2μm,1.0s							
PCIG		**2.03**	**334**			**Pn**	**12 05 24.8**	**-0.7**
PCIG		**2.03**	**334**	*e*P		**Pn**	**12 05 24.8**	**-0.7**
PCIG				*i* S		**Sn**	**12 05 48.8**	**-1.1**
CCIG	**Comitan**	**2.40**	**4**			**Pb**	**12 05 34.4**	**-1.7**
CCIG	**Comitan**	**2.40**	**4**	*e*P		**Pb**	**12 05 33.6**	**-2.5**
CCIG				*e*S		**Sb**	**12 06 02.7**	**-2.7**
CCIG	**Comitan**	**2.40**	**4**	*i* P		**Pb**	**12 05 34.2**	**-1.9**
CCIG				*i* S		**Sb**	**12 06 04.6**	**-0.8**
CCIG				IAML			12 06 14.7	
	comp=Z,4μm,1.0s							
NUBE	**Las Nubes**	**2.45**	**89**	*e*P		**Pn**	**12 05 30.9**	**-0.5**
NUBE				*e*S		**Sn**	**12 05 57.8**	**-2.6**
NUBE				IAML			12 06 02.9	
	comp=Z,521nm,0.5s							
NUBE	**Las Nubes**	**2.45**	**89**	*i* P		**Pn**	**12 05 30.9**	**-0.5**
NUBE				*i* S		**Sn**	**12 06 01.0**	**+0.6**
NUBE				IAML			12 06 02.8	
	comp=Z,1μm,1.0s							
SLOZ	**Alcaldia de Sa**	**2.45**	**86**	*e*P		**Pn**	**12 05 32.3**	**+1.0**
SLOZ				*e*S		**Sn**	**12 05 58.4**	**-1.8**
SLOZ				*i* S		**Sn**	**12 05 59.4**	**-0.9**
LOAL	**Lomas de Alarc**	**2.45**	**87**	*i* P		**Pn**	**12 05 32.4**	**+1.1**
LOAL				*i* S		**Sn**	**12 06 01.7**	**+1.4**
LOAL				IAML			12 06 19.1	
	comp=Z,2μm,1.0s							
RTR	**El Retiro**	**2.58**	**89**	*e*P		**Pn**	**12 05 34.4**	**+1.1**
CEVE	**Cerro Verde**	**2.60**	**91**	*e*P		**Pn**	**12 05 33.8**	**+0.2**
CEVE				*e*S		**Sn**	**12 06 03.7**	**-0.6**
CEVE				IAML			12 06 12.3	
	comp=Z,2μm,0.2s							
CEVE	**Cerro Verde**	**2.60**	**91**	*i* P		**Pn**	**12 05 33.8**	**+0.2**
CEVE				IAML			12 06 23.1	
	comp=Z,2μm,1.0s							
SBLS	**San Blas**	**2.60**	**90**	*e*P		**Pn**	**12 05 34.5**	**+0.9**
SNJE	**San Jose**	**2.62**	**90**	*e*P		**Pn**	**12 05 34.2**	**+0.5**
SNJE				*e*P		**Pn**	**12 05 34.2**	**+0.5**
SNJE				IAML			12 06 13.9	
	comp=Z,348nm,0.5s							
UNIC	**Universidad Ca**	**2.67**	**87**	*i* P		**Pn**	**12 05 35.2**	**+0.8**
UNIC				IAML			12 06 15.3	
	comp=Z,700nm,1.0s							
JAYA	**Jayaque - finc**	**2.78**	**94**	*e*P		**Pn**	**12 05 36.0**	**0.0**
JAYA				*e*S		**Sn**	**12 06 07.0**	**-1.6**
JAYA	**Jayaque - finc**	**2.78**	**94**	*i* P		**Pn**	**12 05 35.9**	**0.0**
JAYA				*i* S		**Sn**	**12 06 09.6**	**+1.0**
JAYA				IAML			12 06 18.5	
	comp=Z,3μm,1.0s							
MRL	**Marmol**	**2.80**	**64**	*i* P		**Pb**	**12 05 41.2**	**-1.8**
CARR	**Arriaga**	**2.83**	**327**	*e*P		**Pn**	**12 05 37.2**	**+0.7**
CARR				*i* S		**Sn**	**12 06 10.5**	**+0.8**
MTO3	**Montecristo**	**2.90**	**79**			**Pn**	**12 05 38.0**	**+0.3**
MTO3	**Montecristo**	**2.90**	**79**	*e*P		**Pn**	**12 05 38.0**	**+0.3**
MTO3	**Montecristo**	**2.90**	**79**	*i* P		**Pn**	**12 05 38.0**	**+0.3**
MTO3				IAML			12 06 26.2	
	comp=Z,380nm,1.0s							
PMON	**Piamonte**	**2.90**	**93**	*i* P		**Pn**	**12 05 38.3**	**+0.6**
PMON				IAML			12 06 25.1	
	comp=Z,1μm,1.0s							
LALI	**Alcalda de L**	**2.92**	**97**	*i* P		**Pn**	**12 05 37.9**	**+0.1**
LALI				IAML			12 06 22.2	
	comp=Z,310nm,1.0s							
ESQI	**Esquipulas**	**2.95**	**76**			**Pn**	**12 05 39.8**	**+1.5**
SNET	**Serv Nac Est T**	**2.98**	**93**	Pn		**Pn**	**12 05 39.4**	**+0.7**
TGIG		**3.00**	**345**			**Pn**	**12 05 39.7**	**+0.8**
TGIG						**Sn**	**12 06 15.6**	**+1.6**
TGIG		**3.00**	**345**	*e*P		**Pn**	**12 05 39.7**	**+0.8**
TGIG				*e*S		**Sn**	**12 06 13.8**	**-0.2**
PANCS	**Alcalda de**	**3.04**	**94**	*i* P		**Pn**	**12 05 37.7**	**-1.8**
LOMA	**Loma Larga**	**3.05**	**94**	*i* P		**Pn**	**12 05 40.3**	**+0.6**
LOMA				IAML			12 06 35.1	
	comp=Z,750nm,1.0s							
LFRS	**El Faro**	**3.15**	**94**	*e*P		**Pn**	**12 05 41.6**	**+0.5**
SJTE	**Alcalda de S**	**3.21**	**94**	*e*P		**Pn**	**12 05 42.4**	**+0.6**
SJTE				*e*S		**Sn**	**12 06 17.3**	**-1.8**
SJTE	**Alcalda de S**	**3.21**	**94**	*i* P		**Pn**	**12 05 43.7**	**+1.9**
SJTE				*i* S		**Sn**	**12 06 20.7**	**+1.6**
SJTE				IAML			12 06 32.4	
	comp=Z,530nm,1.0s							
LLGN	**La Laguna**	**3.27**	**84**	*i* P		**Pn**	**12 05 43.0**	**+0.3**
LLGN				IAML			12 06 21.1	
	comp=Z,660nm,1.0s							
PAVA	**Las Pavas**	**3.27**	**92**	*i* P		**Pn**	**12 05 43.5**	**+0.8**
PAVA				IAML			12 06 37.5	
	comp=Z,1μm,1.0s							
COEG	**Centro de Oper**	**3.33**	**94**	*e*P		**Pn**	**12 05 44.1**	**+0.6**
COEG	**Centro de Oper**	**3.33**	**94**	*i* P		**Pn**	**12 05 44.8**	**+1.3**
COEG				IAML			12 06 44.3	
	comp=Z,520nm,1.0s							
TECO	**Alcaldia de Te**	**3.43**	**95**	*i* P		**Pn**	**12 05 47.0**	**+2.1**
TECO				*i* S		**Sn**	**12 06 27.2**	**+2.6**
SCLA	**Alcaldia de Sa**	**3.47**	**92**	*e*P		**Pn**	**12 05 46.1**	**+0.7**
SCLA	**Alcaldia de Sa**	**3.47**	**92**	*i* P		**Pn**	**12 05 46.5**	**+1.1**
SCLA				IAML			12 06 42.2	
	comp=Z,250nm,1.0s							
NILT	**Santiago Nilte**	**3.49**	**320**	*e*P		**Pn**	**12 05 46.0**	**+0.3**
NILT				*i* S		**Sn**	**12 06 26.5**	**+0.5**
PQSS	**Presa 15 de Se**	**3.64**	**93**	*i* P		**Pn**	**12 05 48.7**	**+1.0**
PQSS				IAML			12 06 45.1	
	comp=Z,190nm,1.0s							
PETF	**Flores**	**3.83**	**37**			**Pn**	**12 05 52.5**	**+2.1**
PETF	**Flores**	**3.83**	**37**	*e*P		Pn	12 05 45.2	-5.1
PETF				*i* S		**Sb**	**12 06 45.4**	**-0.9**
PETF	**Flores**	**3.83**	**37**	*i* P		**Pn**	**12 05 52.7**	**+2.4**
PETF				IAML			12 07 00.4	
	comp=Z,490nm,1.0s							
UXUV	**UXUV**	**3.86**	**333**	*e*P		**Pn**	**12 05 52.0**	**+1.3**
UXUV				*e*S		**Sn**	**12 06 33.7**	**-1.5**
CMIG	**Matias Romero**	**4.06**	**322**			**Pn**	**12 05 53.0**	**-0.5**
CMIG						**Sn**	**12 06 41.0**	**+1.0**
CMIG	**Matias Romero**	**4.06**	**322**	Pn		**Pn**	**12 05 53.9**	**+0.5**
	comp=Z,6.9nm,0.3s,baz=158,slow=14,SNR=55							
CMIG				Sn		**Sn**	**12 06 41.8**	**+1.7**
	comp=Z,27nm,0.3s,baz=75,slow=22,SNR=5.2							
	comp=Z,30nm,0.4s							
CMIG	**Matias Romero**	**4.06**	**322**	*e*P		**Pn**	**12 05 53.0**	**-0.5**
CMIG				*i* S		**Sn**	**12 06 40.2**	**+0.2**
HUIG	**Huatulco**	**4.14**	**298**	*e*P		**Pn**	**12 05 54.1**	**-0.4**
HUIG				*e*S		**Sn**	**12 06 37.8**	**-4.2**
LCND	**La Caada**	**4.32**	**97**	*e*P		**Pn**	**12 05 57.4**	**+0.4**
LCND	**La Caada**	**4.32**	**97**	*i* P		**Pn**	**12 05 58.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**4.88**	**87**			**Pn**	**12 06 07.3**	**+2.4**
NEUV	**Arroyo Zacate**	**5.10**	**319**	*e*P		**Pn**	**12 06 07.7**	**0.0**
NEUV				*i* S		**Sn**	**12 06 46.4**	**+0.8**
PEIG	**Puerto Escondi**	**5.14**	**295**	*e*P		**Pn**	**12 06 07.8**	**-0.6**
PEIG				*e*S		**Sn**	**12 07 01.6**	**-5.2**
SCIG	**Sabancuy**	**5.18**	**12**	*e*P		Pn	12 06 03.2	-5.6
SCIG				*e*S		**Sn**	**12 07 06.2**	**-1.4**
CRIN	**San Cristobal**	**5.24**	**102**			**Pn**	**12 06 11.7**	**+1.9**
TELN	**Telica**	**5.47**	**103**	*i* P		**Pb**	**12 06 29.0**	**+0.7**
TELN				*i* S		Sn	12 06 41.4	-34
TELN				IAML			12 06 42.9	
	comp=Z,73nm,1.0s							
CNGN	**Cerro Negro**	**5.62**	**103**			**Pn**	**12 06 17.3**	**+2.3**
YOIG	**Yosondua**	**5.87**	**301**	*e*P		**Pn**	**12 06 21.0**	**+2.4**
YOIG				*e*S		**Sn**	**12 07 20.4**	**-4.7**
PNIG	**Pinotepa**	**6.16**	**295**	*e*P		**Pn**	**12 06 23.0**	**+0.6**
PNIG				*e*S		**Sn**	**12 07 28.1**	**-3.8**
TOIG	**Toxpalan**	**6.22**	**313**	*e*P		**Pn**	**12 06 23.6**	**+0.3**
TOIG				*e*S		**Sn**	**12 07 31.6**	**-1.8**
TXIG	**Tlaxiaco**	**6.25**	**303**	*e*P		**Pn**	**12 06 26.6**	**+2.7**
TXIG				*e*S		**Sn**	**12 07 36.0**	**+1.4**
MATN	**Matagalpa**	**6.27**	**98**			**Pn**	**12 06 25.3**	**+1.3**
HLIG	**Huajuapan de L**	**6.60**	**307**	*e*P		**Pn**	**12 06 30.7**	**+2.1**
HLIG				*e*S		**Sn**	**12 07 49.7**	**+6.7**

BOAB	**BOACO BROADBAN**	**6.61**	**102**			**Pn**	**12 06 29.2**	**+0.7**
TPIG	**Tehuac#an**	**6.64**	**314**	*e*P		**Pn**	**12 06 31.7**	**+2.6**
TPIG				*e*S		Sn	12 07 34.6	-9.4
FTIG	**Fresnillo de T**	**6.90**	**306**	*e*P		**Pn**	**12 06 35.9**	**+3.2**
FTIG				*e*S		**Sn**	**12 07 44.1**	**-6.2**
MGIG	**Malinaltepec**	**6.96**	**300**	*e*P		**Pn**	**12 06 36.1**	**+2.6**
MGIG				*e*S		**Sn**	**12 07 54.0**	**+2.1**
JAUV	**Jalcomulco**	**6.97**	**322**	*e*P		**Pn**	**12 06 32.3**	**-1.1**
JAUV				*e*S		**Sn**	**12 07 46.3**	**-5.4**
TLIG	**Tlapa**	**7.07**	**302**			**Pn**	**12 06 38.4**	**+3.5**
TLIG	**Tlapa**	**7.07**	**302**	*e*P		**Pn**	**12 06 32.6**	**-2.3**
TLIG				*e*S		**Sn**	**12 07 55.4**	**+1.1**
HZTE	**Horizontes, Gu**	**7.26**	**115**	Pn		**Pn**	**12 06 39.6**	**+2.1**
TEIG	**Tepich**	**7.40**	**31**	Pn		**Pn**	**12 06 41.4**	**+2.0**
TEIG	**Tepich**	**7.40**	**31**	LR		LR	12 09 55.5	
	comp=Z,4μm,21.9s,baz=1.5,slow=46							
SAJU	**San Juanillo,**	**7.47**	**120**	*i* P		**Pn**	**12 06 42.9**	**+2.5**
SAJU				IAML			12 07 02.0	
	comp=Z,68nm,1.0s							
ORTG	**Ortega, Santa**	**7.54**	**117**			**Pn**	**12 06 43.5**	**+2.1**
ORTG	**Ortega, Santa**	**7.54**	**117**	*i* P		**Pn**	**12 06 44.7**	**+3.3**
ORTG				IAML			12 06 57.0	
	comp=Z,73nm,1.0s							
DUNO	**Dulce Nombre,**	**7.65**	**119**			**Pn**	**12 06 45.5**	**+2.6**
DUNO	**Dulce Nombre,**	**7.65**	**119**	*i* P		**Pn**	**12 06 46.0**	**+3.2**
DUNO				IAML			12 07 48.2	
	comp=Z,130nm,1.0s							
INDI	**Punta indio, G**	**7.75**	**120**	*i* P		**Pn**	**12 06 47.7**	**+3.5**
INDI				IAML			12 07 06.3	
	comp=Z,77nm,1.0s							
PPM	**Popocatepetl**	**7.97**	**311**	*e*P		Pn	12 06 52.9	+5.2
PPM				*e*S		**Sn**	**12 08 23.6**	**+6.4**
JTS	**Las Juntas de**	**8.02**	**116**	Pn		**Pn**	**12 06 46.0**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=142,slow=20,SNR=2.0							
JTS				Pg		Pb	12 07 05.8	-5.8
	comp=Z,1.8nm,0.3s,baz=215,slow=4.9,SNR=7.1							
JTS				Sn		**Sn**	**12 08 13.9**	**-3.7**
	comp=Z,0.9nm,0.3s,baz=306,slow=21,SNR=0.9							
	comp=Z,4.5nm,0.6s							
JACO	**JACO, Garabito**	**8.57**	**118**	Pn		**Pn**	**12 06 58.2**	**+2.8**
RIMA	**Rio Macho**	**9.21**	**115**	*i* P		**Pn**	**12 07 08.1**	**+3.7**
RIMA				IAML			12 07 16.8	
	comp=Z,39nm,1.0s							
CDM	**Cerro de Muert**	**9.39**	**116**	*i* P		Pn	12 07 13.2	+6.0
BRU2	**Volcan**	**10.68**	**117**	Pn		**Pn**	**12 07 25.3**	**+0.7**
SOR	**Soroa**	**12.51**	**43**	Pn		**Pn**	**12 07 50.0**	**+0.7**
833A	**Chaparral WMA,**	**15.82**	**336**	Pn		**Pn**	**12 08 35.2**	**+1.1**
HNDO	**Hondo**	**16.87**	**339**			**Pn**	**12 08 48.2**	**+0.8**
DRIO	**Del Rio**	**17.29**	**335**	P		**P**	**12 08 54.3**	**+0.4**
GTBY	**Guantanamo Bay**	**17.51**	**68**	P		**Pn**	**12 08 55.0**	**-0.4**
435B	**Jarrell**	**17.52**	**345**	P		**P**	**12 08 58.6**	**+2.2**
656A	**Willston**	**17.88**	**29**	P		**P**	**12 09 01.2**	**+0.8**
656A				IAmb		IAmb	12 09 06.5	
	comp=Z,48nm,0.9s							
HPIG		**18.03**	**318**	P		**P**	**12 09 04.8**	**+2.5**
BRDY	**Brady**	**18.40**	**342**	P		**Pn**	**12 09 07.6**	**+1.3**
SAND	**Sanderson**	**18.40**	**332**	P		**Pn**	**12 09 08.7**	**+2.3**
TXAR	**Lajitas Array**	**18.65**	**327**	P		**P**	**12 09 09.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=154,slow=10,SNR=24							
	comp=Z,4.1nm,1.0s

PLID	**Pearl Lake**	**37.05**	**332**	IAmb	IAmb	12 12 03.6	
	comp=Z,8.5nm,1.3s						
I07A	**Izee**	**38.04**	**328**	IAmb	IAmb	12 12 14.4	
	comp=Z,3.7nm,1.0s						
F10A	**Beach Ranch, E**	**38.29**	**332**	IAmb	IAmb	12 12 18.7	
	comp=Z,6.4nm,0.8s						
H04A	**Detroit Lake**	**39.86**	**326**	IAmb	IAmb	12 12 27.0	
	comp=Z,5.8nm,1.0s						
LON	**Longmire**	**41.05**	**329**	P	**P**	**12 12 36.1**	**+1.9**
LON				IAmb	IAmb	12 12 39.1	
	comp=Z,4.2nm,0.8s						
EDM	**Edmonton**	**42.66**	**341**	P	**P**	**12 12 47.9**	**+0.7**
EDM				IAmb	IAmb	12 12 48.1	
	comp=Z,5.4nm,0.5s						
YKA	**Yellowknife Ar**	**51.09**	**347**	P	**P**	**12 13 53.4**	**+0.5**
YKA	**Yellowknife Ar**	**51.09**	**347**	P	**P**	**12 13 52.5**	**-0.3**
	comp=Z,3.8nm,0.7s,baz=149,slow=7.5,SNR=81						
YKA				PcP	**PcP**	**12 15 07.2**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=145,slow=3.7,SNR=8.7 comp=Z,3.8nm,0.7s						
SFJD	**Kangerlussuaq**	**59.73**	**18**	LR	LR	12 41 21.4	
	comp=Z,100nm,19.1s,baz=147,slow=37						
F31M	**Tsiigehtchic**	**59.96**	**343**	IAmb	IAmb	12 14 58.2	
	comp=Z,5.4nm,0.9s						
N25K	**Chitina, Valde**	**60.45**	**334**	P	**P**	**12 15 02.7**	**+2.5**
INK	**Inuvik**	**60.48**	**344**	P	**P**	**12 15 01.2**	**+1.1**
J26L	**Joseph Creek**	**61.46**	**337**	IAmb	IAmb	12 15 27.2	
	comp=Z,6.4nm,1.3s						
IL31		**62.84**	**337**	IAmb	IAmb	12 15 24.3	
	comp=Z,7.5nm,1.3s						
ILAR	**Eielson Array**	**62.84**	**337**	P	**P**	**12 15 17.3**	**+1.2**
ILAR	**Eielson Array**	**62.84**	**337**	P	**P**	**12 15 16.2**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=151,slow=4.4,SNR=19 comp=Z,1.3nm,0.9s						
RND	**Reindeer**	**63.02**	**335**	P	**P**	**12 15 19.5**	**+2.0**
SUA	**Susitna One**	**63.07**	**333**	P	**P**	**12 15 19.6**	**+1.8**
MLY	**Manley**	**64.44**	**336**	IAmb	IAmb	12 15 28.9	
	comp=Z,4.3nm,0.7s						
J19K	**Poorman**	**66.05**	**334**	IAmb	IAmb	12 15 38.9	
	comp=Z,4.2nm,0.8s						
G21K	**Allakaket**	**66.07**	**337**	IAmb	IAmb	12 15 41.5	
	comp=Z,3.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**78.24**	**36**	P	**P**	**12 16 47.4**	**-2.8**
	comp=Z,1.7nm,0.6s,baz=280,slow=5.8,SNR=8.1 comp=Z,1.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**80.27**	**11**	P	**P**	**12 16 59.6**	**-1.3**
	comp=Z,3.9nm,0.7s,baz=264,slow=1.4,SNR=4.3 comp=Z,3.9nm,0.7s						
ARCES	**ARCESS Array B**	**86.35**	**18**	P	**P**	**12 17 31.6**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=282,slow=6.3,SNR=1.4 comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**146.02**	**341**	PKPbc	**PKPab**	**12 24 31.8**	**+0.1**
	comp=Z,6.4nm,0.7s,baz=340,slow=3.7,SNR=39						

*MEX **08** 12:14:43.6±0.8, 13°.81N×92°.23W, h70km, MD4.2*
*GCG **08** 12:14:46.3±0.4, 14°.15N×91°.99W, h100km±3km, MD3.6*
ISC 08 12:14:44.4±2.4, 13°.9N±0°.1×92°.28W±0°.06, h15km±11km, n16, σ2§01/23, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.80**	**61**	*i* P	**Pg**	**12 15 01.7**	**+1.7**
SULM				*i* S	**Sb**	**12 15 13.7**	**+3.2**
RTAL	**Retalhuleu**	**0.83**	**43**	*e*P	**Pg**	**12 14 59.9**	**-0.8**
RTAL				*e*S	**Sg**	**12 15 11.4**	**-0.2**
THIG		**0.99**	**1**	*e*P	**Pb**	**12 15 02.0**	**-1.2**
THIG				*e*S	**Sb**	**12 15 16.5**	**+0.5**
STG3	**Santiaguito 3,**	**1.05**	**41**	*i* P	**Pb**	**12 15 04.5**	**+0.1**
STG3				*i* S	**Sb**	**12 15 15.2**	**-2.8**
CHUJ	**Union Juarez**	**1.18**	**8**	*e*P	Pn	12 15 04.5	-2.1
CHUJ				*e*S	**Sb**	**12 15 19.9**	**-2.0**
PATR	**El Naranjo**	**1.20**	**2**	*e*P	Pn	12 15 04.7	-2.1
PATR				*e*S	**Sb**	**12 15 21.2**	**-1.1**
PAVE	**Pavencul**	**1.27**	**5**	*e*P	Pn	12 15 06.1	-1.8
PAVE				*e*S	**Sb**	**12 15 21.6**	**-2.9**
FUG	**Fuego 3**	**1.49**	**69**	*i* P	**Pn**	**12 15 10.3**	**-0.6**
FUG				*i* S	**Sn**	**12 15 26.9**	**-3.2**
HUEH	**Huehuetenango**	**1.58**	**28**	*e*P	**Pn**	**12 15 12.7**	**+0.5**
HUEH				*e*S	**Sn**	**12 15 33.7**	**+1.2**
PCG	**Pacaya**	**1.69**	**74**	*i* P	Pn	12 15 12.1	-1.5
NBG	**Las Nubes**	**1.99**	**70**	*i* P	Pn	12 15 15.4	-2.4
PCIG		**2.00**	**333**	*e*P	Pn	12 15 16.3	-1.3
PCIG				*e*S	**Sn**	**12 15 40.8**	**-1.5**
CCIG	**Comitan**	**2.36**	**3**	*e*P	**Pn**	**12 15 24.5**	**+1.7**
CCIG				*e*S	**Sn**	**12 15 55.3**	**+3.8**
TGIG		**2.96**	**344**	*e*P	**Pn**	**12 15 31.0**	**+0.1**
TGIG				*e*S	**Sn**	**12 16 07.5**	**+1.4**
UXUV	**UXUV**	**3.83**	**332**	*e*P	**Pn**	**12 15 43.8**	**+0.9**
UXUV				*e*S	**Sn**	**12 16 29.6**	**+2.0**
CMIG	**Matias Romero**	**4.03**	**322**	*e*P	**Pn**	**12 15 45.0**	**-0.6**
CMIG				*e*S	Sn	12 16 25.8	-6.8

*IDC **08** 12:23:26.5±4.3, 36°.30N×71°.02E, h236km±30km, mb3.4/4, mbtmp4.0/10, Error ellipse: s-maj=57.3km s-min=21.5km az=151.0*
ISC 08 12:23:23.8±2.3, 36°.4N±0°.2×70°.7E±0°.2, h200km, n11, σ1§62/12, mb3.9/4, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.94**	**24**	P	**Pn**	**12 25 06.0**	**+2.7**
	5.3nm,0.5s,baz=359,slow=22,SNR=7.4						
AAK				S	**Sn**	**12 26 21.0**	**-1.4**
	3.1nm,0.4s,baz=328,slow=22,SNR=11						
GEYT	**Alibeck**	**10.14**	**283**	P	**P**	**12 25 50.6**	**-2.1**
	1.7nm,0.5s,baz=82,slow=15,SNR=2.2						
MKAR	**Makanchi Array**	**13.57**	**36**	P	**P**	**12 26 29.0**	**-1.7**
	1.1nm,0.4s,baz=211,slow=10,SNR=5.0						
KURBB	**Kurchatov Arra**	**15.35**	**19**	P	**Pn**	**12 26 49.0**	**-1.1**
	2.4nm,0.9s,baz=210,slow=11,SNR=7.7						
BVAR	**Borovoye Array**	**16.68**	**359**	P	**Pn**	**12 27 05.5**	**-0.5**
	1.9nm,0.4s,baz=164,slow=10,SNR=19						
AKTO	**Aktyubinsk**	**16.78**	**331**	P	**Pn**	**12 27 07.8**	**+0.5**
	1.6nm,0.3s,baz=140,slow=6.3,SNR=7.5						
ZALV	**Zalesovo Beam**	**20.17**	**25**	P	**P**	**12 27 42.1**	**-0.6**
	1.6nm,0.3s,baz=219,slow=10,SNR=13 1.6nm,0.3s						
FINES	**FINESS Array B**	**37.46**	**326**	P	**P**	**12 30 18.4**	**+0.9**
	2.5nm,1.0s,baz=145,slow=7.0,SNR=6.1 2.5nm,1.0s						
ARCES	**ARCESS Array B**	**41.18**	**338**	P	**P**	**12 30 48.7**	**+0.4**
	3.4nm,0.8s,baz=116,slow=8.2,SNR=1.7 3.4nm,0.8s						
HFS	**Hagfors**	**43.02**	**322**	P	**P**	**12 31 05.2**	**+2.0**
	1.5nm,0.6s,baz=101,slow=10,SNR=2.1 1.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.44**	**268**	P	**P**	**12 33 46.0**	**+0.5**
	1.3nm,0.3s,baz=49,slow=6.2,SNR=0.7						

*NEIC **08** 12:28:55.8±0.1, 36°.035N±0°.010×97°.90W±0°.01, h5km±1km, Error ellipse: s-maj=2.7km s-min=1.7km az=221.0*
TUL 08 12:28:55.8±0.2, 36°.04N±0°.01×97°.90W±0°.02, h4km±24km, ML3.0, mb_Lg2.9/96(NEIC), ML3.2/54(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=57.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.43**	**124**	Sg	Sg	12 29 10.8	+1.1
CROK	**Carrier**	**0.47**	**351**		Pg	12 29 05.3	+0.5
CROK				Sg	Sg	12 29 12.1	+1.2
CROK				IAML		12 29 13.8	
	comp=N,1μm,0.2s						
ADOK	**Arcadia Dam**	**0.58**	**132**		Pg	12 29 07.2	+0.3
ADOK				Sg	Sg	12 29 15.4	+1.0
OKCSW	**OKLAHOMA CITY**	**0.74**	**150**		Pg	12 29 09.9	0.0
OKCSW				IAmb_Lg		12 29 19.1	
	comp=Z,126nm,1.0s						
OKCSW				Sg	Sg	12 29 20.2	+0.7
OKCSW				IAML		12 29 20.6	
	comp=N,1μm,0.4s						
OK033	**Mehan**	**0.78**	**90**		Pg	12 29 10.8	+0.1
OK033				IAML		12 29 24.1	
	comp=N,686nm,0.2s						
OK033				IAML		12 29 25.8	
	comp=N,640nm,0.2s						
OK032	**Salt Plains WL**	**0.80**	**342**		Pg	12 29 11.2	0.0
OK032				IAML		12 29 23.2	
	comp=N,886nm,0.2s						
OK032				IAML		12 29 23.9	
	comp=N,941nm,0.2s						
GC02	**Grant County #**	**0.81**	**2**		Pg	12 29 11.4	+0.1
OK038	**West end E0370**	**0.81**	**303**		Pg	12 29 11.4	0.0
OK048	**Pawnee Station**	**0.85**	**64**		Pg	12 29 12.3	+0.1
FNO	**Franklin**	**0.88**	**153**		Pg	12 29 12.5	-0.2
OK052	**Battle Ridge R**	**0.89**	**93**		Pg	12 29 12.8	0.0
OK052				IAML		12 29 27.8	
	comp=N,572nm,0.2s						
OK052				IAML		12 29 30.8	
	comp=N,575nm,0.2s						
BLOK	**Blackwell**	**0.90**	**37**		Pg	12 29 13.2	+0.1
KAN14	**Manchester OK**	**0.92**	**357**		Pg	12 29 13.2	-0.2
KAN14				IAML		12 29 28.0	
	comp=N,828nm,0.1s						
KAN14				IAML		12 29 31.6	
	comp=E,673nm,0.1s						
U32A	**Winter Ranch,**	**0.96**	**291**		Pg	12 29 13.9	-0.2
U32A				IAML		12 29 29.9	
	comp=E,513nm,0.4s						
U32A				IAML		12 29 29.9	
	comp=N,1μm,0.4s						
QUOK	**Quay**	**0.97**	**82**		Pg	12 29 14.3	-0.1
QUOK				IAML		12 29 33.4	
	comp=N,673nm,0.2s						
QUOK				IAML		12 29 35.9	
	comp=E,564nm,0.2s						
OK051	**E0350 and S346**	**0.97**	**61**		Pg	12 29 14.3	-0.1
OK051				IAML		12 29 32.6	
	comp=E,960nm,0.1s						
OK051				IAML		12 29 32.8	
	comp=E,971nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**		Pg	12 29 14.9	-0.2
KAN17				IAML		12 29 31.4	
	comp=N,1μm,0.2s						
KAN13	**South Haven SW**	**1.03**	**19**		Pg	12 29 15.4	-0.1
KAN05	**Bluff City Nor**	**1.06**	**1**		Pg	12 29 15.9	-0.3
KAN05				IAML		12 29 35.2	
	comp=N,843nm,0.2s						
KAN05				IAML		12 29 36.3	
	comp=E,1μm,0.2s						
KAN10	**Anthony SW Sta**	**1.09**	**352**		Pg	12 29 16.4	-0.4
KAN10				IAML		12 29 33.5	
	comp=N,372nm,0.2s						
KAN10				IAML		12 29 37.0	
	comp=E,461nm,0.1s						
KAN01	**Argonia South**	**1.11**	**6**		Pg	12 29 16.9	-0.3
KAN01				IAML		12 29 34.0	
	comp=N,531nm,0.1s						
KAN09	**Caldwell North**	**1.11**	**11**		Pg	12 29 16.9	-0.3
DEOK	**Depew**	**1.15**	**100**		Pg	12 29 17.2	-0.7
DEOK				IAML		12 29 37.9	
	comp=E,479nm,0.2s						
DEOK				IAML		12 29 38.2	
	comp=N,490nm,0.3s						
KAN08	**Anthony NE Sta**	**1.18**	**357**		Pg	12 29 18.0	-0.5
KAN08				IAML		12 29 37.0	
	comp=N,302nm,0.1s						
KAN06	**Argonia West S**	**1.21**	**1**		Pg	12 29 18.5	-0.4
KAN06				IAML		12 29 35.3	
	comp=E,550nm,0.2s						
KAN06				IAML		12 29 37.6	
	comp=N,498nm,0.2s						
W35A	**Tecumseh**	**1.22**	**137**		Pg	12 29 18.3	-0.8
W35A				IAML		12 29 39.4	
	comp=N,642nm,0.3s						
T35A	**Sooner Cattle**	**1.42**	**52**		Pn	12 29 22.1	-0.3
X34A	**Smith Ranch, M**	**1.44**	**178**		Pn	12 29 22.6	-0.1
WMOK	**Wichita Mounta**	**1.49**	**209**		Pn	12 29 22.9	-0.4
TUL3	**Leonard**	**1.71**	**94**		Pn	12 29 26.5	+0.1
TUL3				IAmb_Lg		12 29 51.5	
	comp=Z,97nm,0.9s						
RLO	**Rose Lookout**	**2.33**	**86**	Pn	Pn	12 29 35.4	+0.4
Z35A	**Perchaven, San**	**2.75**	**169**	Pn	Pn	12 29 39.6	-1.2
U38A	**Gravette**	**2.86**	**81**	Pn	Pn	12 29 41.8	-0.5
AMTX	**Amarillo**	**3.30**	**251**	IAmb_Lg		12 30 42.6	
	comp=Z,29nm,0.8s						
DKNS	**Dickens**	**3.44**	**227**	IAmb_Lg		12 30 49.4	
	comp=Z,43nm,0.8s						
FW16	**Waxahatchie**	**3.65**	**167**	IAmb_Lg		12 30 52.3	
	comp=Z,21nm,0.8s						
Z38A	**Mt. Pleasant**	**3.67**	**138**	IAmb_Lg		12 31 02.0	
	comp=Z,32nm,0.8s						
ABTX	**Abilene, Hawle**	**3.70**	**203**	IAmb_Lg		12 30 54.3	
	comp=Z,23nm,0.7s						
MIAR	**Mount Ida**	**3.83**	**112**		Pn	12 29 57.1	+1.5
MIAR				IAmb_Lg		12 31 02.5	
	comp=Z,33nm,0.8s						
RTBA	**Rita Blanca**	**3.93**	**277**		Pn	12 29 57.7	+0.6
S39A	**Bolivar**	**4.02**	**64**	IAmb_Lg		12 31 01.9	
	comp=Z,29nm,0.9s						
WHTX	**Lake Whitney,**	**4.06**	**175**	Pn	Pn	12 29 57.9	-0.8
POST	**Post**	**4.20**	**226**	IAmb_Lg		12 31 18.7	
	comp=Z,31nm,0.8s						
X40A	**Basin Creek Fa**	**4.42**	**109**	IAmb_Lg		12 31 26.7	
	comp=Z,29nm,0.8s						
WLAR	**White Oak Lake**	**4.58**	**119**	IAmb_Lg		12 31 30.1	
	comp=Z,22nm,0.8s						
WHAR	**Wooly Hollow**	**4.63**	**98**	IAmb_Lg		12 31 34.1	
	comp=Z,20nm,0.8s						
MGMO	**Mountain Grove**	**4.66**	**75**	IAmb_Lg		12 31 21.7	
	comp=Z,18nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.68**	**90**	IAmb_Lg		12 31 37.3	
	comp=Z,16nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.79**	**310**	Pn	Pn	12 30 07.5	-1.4
SGCY	**Sterling City**	**4.91**	**214**	IAmb_Lg		12 31 41.3	
	comp=Z,27nm,0.9s						
P38A	**Dawn**	**4.97**	**43**	IAmb_Lg		12 31 35.1	
	comp=Z,27nm,0.7s						
R40A	**Maddies Statio**	**5.02**	**62**	Pn	Pn	12 30 12.1	+0.1
R40A				IAmb_Lg		12 31 44.3	
	comp=Z,20nm,0.7s						
Z41A	**Richland Creek**	**5.03**	**122**	IAmb_Lg		12 31 48.0	
	comp=Z,26nm,0.8s						
BGNE	**Belgrade**	**5.36**	**358**	IAmb_Lg		12 31 46.6	
	comp=Z,23nm,0.8s						
CCM	**Cathedral Cave**	**5.69**	**67**	IAmb_Lg		12 32 04.5	
	comp=Z,16nm,0.7s						
OZNA	**Ozona**	**5.78**	**209**	IAmb_Lg		12 32 01.3	
	comp=Z,21nm,0.8s						
OGNE	**Ogallala**	**5.87**	**328**	IAmb_Lg		12 32 09.0	
	comp=Z,25nm,0.7s						
PBMO	**Poplar Bluff**	**6.07**	**81**	IAmb_Lg		12 32 11.2	
	comp=Z,24nm,0.8s						
MNHN	**Monahans**	**6.20**	**222**	IAmb_Lg		12 32 20.9	
	comp=Z,13nm,0.8s						
Q24A	**Divide**	**6.46**	**299**	IAmb_Lg		12 32 28.3	
	comp=Z,14nm,0.8s						
HNDO	**Hondo**	**6.60**	**191**	IAmb_Lg		12 32 30.4	
	comp=Z,19nm,0.8s						
SLM	**Saint Louis**	**6.63**	**65**	IAmb_Lg		12 32 26.1	
	comp=Z,20nm,0.8s						
CGM3	**Cape Girardeau**	**6.74**	**77**	IAmb_Lg		12 32 27.3	
	comp=Z,21nm,1.2s						
K30B	**Basset**	**6.76**	**349**	IAmb_Lg		12 32 33.0	
	comp=Z,13nm,0.7s						
PECS	**Pecos**	**6.82**	**229**	IAmb_Lg		12 32 32.0	
	comp=Z,15nm,1.0s						
DRIO	**Del Rio**	**6.99**	**200**	IAmb_Lg		12 32 53.9	
	comp=Z,10nm,0.8s						
ISCO	**Idaho Springs**	**7.16**	**304**	IAmb_Lg		12 32 48.0	
	comp=Z,10nm,0.8s						
ALPN	**Alpine**	**7.42**	**222**	IAmb_Lg		12 32 53.2	
	comp=Z,10nm,1.0s						
ECSD	**EROS Data Cent**	**7.75**	**7**	IAmb_Lg		12 33 05.6	
	comp=Z,8.6nm,1.1s						
PHWY	**Pilot Hill**	**7.91**	**314**	IAmb_Lg		12 33 20.2	
	comp=Z,11nm,0.9s						
VHRN	**Van Horn**	**7.91**	**231**	IAmb_Lg		12 33 12.2	
	comp=Z,9.6nm,1.0s						
OLIL	**Olney**	**8.25**	**68**	IAmb_Lg		12 33 28.8	
	comp=Z,11nm,0.8s						
O44A	**Mansfield**	**8.49**	**58**	IAmb_Lg		12 33 41.1	
	comp=Z,12nm,0.8s						
I37A	**Lemond, Waseca**	**8.68**	**22**	IAmb_Lg		12 33 31.8	
	comp=Z,7.3nm,0.7s						
K22A	**Casper**	**9.39**	**317**	IAmb_Lg		12 34 12.0	
	comp=Z,9.4nm,0.9s						
SPMN	**Marine on St.**	**9.95**	**21**	IAmb_Lg		12 34 26.2	
	comp=Z,7.8nm,1.0s						

*HEL **08** 12:31:45.7±0.1, 63°.98N×28°.12E, h0km, ML1.9, Suspected explosion*
*UPP **08** 12:31:45.9±2.4, 63°.84N×28°.01E, h0km, ML2.0*
*IDC **08** 12:31:46.0±1.8, 63°.84N×28°.58E, h0km, mbtmp3.2/4, ML2.3/4, Error ellipse: s-maj=29.0km s-min=7.7km az=102.0*
ISC 08 12:31:45.1±0.8, 63°.93N±0°.03×28°.08E±0°.03, h0km, n44, σ1§47/72, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.56**	**193**	PG	**Pb**	**12 31 56.6**	**-1.1**
	baz=13						
NIF				SG	**Sb**	**12 32 05.1**	**-1.1**
RMF	**Romuvaara**	**0.86**	**70**	PB	**Pg**	**12 32 01.6**	**0.0**
RMF				MSG		12 32 11.4	
	comp=Z,16nm,0.2s						
RMF				SB	**Sg**	**12 32 12.3**	**-0.5**
OUL	**Oulu**	**1.50**	**322**	PN	**Pn**	**12 32 13.0**	**-0.1**
	baz=135						
OUL				SN	**Sn**	**12 32 32.7**	**-0.6**
SUF	**Sumiainen**	**1.50**	**216**	PG	**Pb**	**12 32 13.8**	**+0.1**
SUF				MSG		12 32 32.1	
	comp=Z,4.4nm,0.2s						
OUF	**Merijarvi**	**1.53**	**288**	PG	**Pn**	**12 32 13.2**	**-0.5**
OUF				MSG		12 32 31.6	
	comp=Z,10nm,0.2s						
OUF				SN	**Sn**	**12 32 33.9**	**-0.3**
OBF4	**Vikkela, Lumij**	**1.57**	**306**	PN	**Pn**	**12 32 14.3**	**+0.1**
OBF4				MSG		12 32 32.4	
	comp=Z,11nm,0.2s						
OBF4				SN	**Sn**	**12 32 35.5**	**+0.3**
JOF	**Joensuu**	**1.77**	**124**	PG	**Pb**	**12 32 17.8**	**-0.6**
	baz=305						
JOF				SN	**Sg**	**12 32 41.0**	**-0.9**
OBF0	**Syolatti, Pyha**	**1.77**	**290**	PG	**Pn**	**12 32 17.9**	**+0.9**
OBF0				MSG		12 32 38.6	
	comp=Z,15nm,0.2s						
OBF0				SG	**Sn**	**12 32 41.3**	**+1.1**
KAF	**Kangasniemi**	**2.00**	**205**	PG	**Pb**	**12 32 22.0**	**-0.2**
	baz=22						
KAF				MSG		12 32 46.6	
	comp=Z,9.7nm,0.2s						
KAF				SG	**Sg**	**12 32 49.7**	**+0.6**
MSF	**Maaselka**	**2.03**	**11**	PG	**Pn**	**12 32 21.1**	**+0.6**
	baz=191						
MSF				SG	**Sn**	**12 32 47.3**	**+0.7**
OBF8	**Ulkokalla**	**2.07**	**283**	PG	**Pn**	**12 32 22.8**	**+1.7**
OBF8				MSG		12 32 47.4	
	comp=Z,5.5nm,0.2s						
OBF8				SG	**Sb**	**12 32 50.8**	**+1.0**
RANF	**Ranua**	**2.16**	**346**	PG	**Pn**	**12 32 23.8**	**+1.5**
RANF				SG	**Sn**	**12 32 51.1**	**+1.3**
KU6	**Riekki**	**2.24**	**19**	PG	**Pn**	**12 32 24.9**	**+1.5**
	baz=201						
KU6				MSG		12 32 50.5	
	comp=Z,4.0nm,0.2s						
KU6				SG	**Sn**	**12 32 52.9**	**+1.2**
KEF	**Keuruu**	**2.30**	**221**	PG	**Pb**	**12 32 26.7**	**-0.6**
KEF				MSG		12 32 55.1	
	comp=Z,9.1nm,0.2s						
KEF				SG	**Sg**	**12 32 58.3**	**-0.4**
OLKF	**Oulanka, Finla**	**2.46**	**13**	PG	**Pn**	**12 32 28.8**	**+2.3**
OLKF				MSG		12 32 57.0	
	comp=Z,6.8nm,0.2s						
OLKF				SG	**Sn**	**12 32 59.8**	**+2.5**
RUF	**Ruokolahti**	**2.55**	**171**	PG	**Pb**	**12 32 31.3**	**-0.3**
RUF				MSG		12 33 02.1	
	comp=Z,6.4nm,0.2s						
RUF				SG	**Sg**	**12 33 05.5**	**-1.3**
VAF	**Ylistaro**	**2.58**	**252**	PB	**Pb**	**12 32 31.2**	**-1.1**
VAF				MSG		12 33 02.9	
	comp=Z,3.9nm,0.2s						
VAF				SG	**Sb**	**12 33 05.0**	**+0.6**
FIA0	**FINESS Array S**	**2.66**	**201**	PB	**Pb**	**12 32 32.2**	**-1.3**
FIA0				MSG		12 33 05.8	
	comp=Z,3.9nm,0.2s						
FIA0				SG	**Sg**	**12 33 07.7**	**-2.8**
FINES	**FINESS Array B**	**2.66**	**201**	Pn	**Pb**	**12 32 32.3**	**-1.3**
	comp=Z,1.7nm,0.3s,baz=23,slow=16,SNR=64						
FINES				Lg	Lg	12 33 08.4	
	comp=Z,2.1nm,0.3s,baz=24,slow=27,SNR=18 comp=Z,9.7nm,0.5s						
TOF	**Tornio**	**2.68**	**325**	PB	**Pn**	**12 32 30.6**	**+1.2**
	baz=138						
TOF				SB	**Sn**	**12 33 02.4**	**-0.2**
TOF				MSG		12 33 03.7	
	comp=Z,3.1nm,0.2s						
KALU	**Kalix**	**2.79**	**316**	P	**Pn**	**12 32 32.2**	**+1.3**
KALU				S	**Sn**	**12 33 06.7**	**+1.4**
KALU	**Kalix**	**2.79**	**316**	PB	**Pn**	**12 32 32.7**	**+1.7**
KALU				SB	**Sn**	**12 33 06.7**	**+1.4**
RNF	**Rovaniemi**	**2.83**	**343**	PG	**Pn**	**12 32 34.6**	**+3.2**
RNF				SB	**Sn**	**12 33 06.6**	**+0.4**
BURU	**Burvik**	**3.00**	**286**	P	**Pn**	**12 32 34.5**	**+0.7**
BURU				S	**Sn**	**12 33 11.2**	**+0.9**
BURU	**Burvik**	**3.00**	**286**	PN	**Pn**	**12 32 35.0**	**+1.3**
	baz=100						
BURU				SB	**Sn**	**12 33 11.7**	**+1.3**
SJUU	**Sjulsmark**	**3.20**	**303**	P	**Pn**	**12 32 38.1**	**+1.6**
ODEU	**Stanfors**	**3.26**	**282**	P	**Pn**	**12 32 37.5**	**+0.1**
UMAU	**Umeaa**	**3.27**	**272**	P	**Pn**	**12 32 38.1**	**+0.6**
UMAU	**Umeaa**	**3.27**	**272**	PN	**Pn**	**12 32 38.4**	**+0.9**
UMAU				SG	**Sb**	**12 33 25.8**	**+1.6**
VJF	**Virojoki**	**3.41**	**184**	SG	**Sg**	**12 33 32.4**	**-2.2**
KPF	**Kankaanpaa**	**3.46**	**235**	PB	**Pn**	**12 32 43.5**	**+3.4**
	baz=49						
SGF	**Sodankyl**	**3.58**	**350**	PB	**Pn**	**12 32 43.8**	**+2.0**
KLF	**Kolari**	**3.73**	**335**	PN	**Pn**	**12 32 45.1**	**+1.3**
KLF				SN	**Sn**	**12 33 27.4**	**-1.0**
PAJU	**Pajala**	**3.73**	**329**	PN	**Pn**	**12 32 45.2**	**+1.3**
PAJU				SN	**Sn**	**12 33 28.4**	**-0.1**
SVAU	**Svanoeiden**	**3.76**	**282**	P	**Pn**	**12 32 44.7**	**+0.5**
LILU	**Lilltraesk**	**3.80**	**295**	P	**Pn**	**12 32 45.6**	**+0.9**
LILU				S	**Sn**	**12 33 30.4**	**+0.4**
VRF	**Varrio**	**3.88**	**9**	PN	**Pn**	**12 32 45.8**	**-0.1**
**RA

comp=Z,101nm,0.3s,baz=207,slow=23,SNR=9.4
ROSC El Rosal 1.93 206 ⇑*i*P Pn **12 43 14.3 +0.7**
ROSC *e*S Sn **12 43 37.9 -0.8**
ROSC *i* 12 43 44.7
comp=Z,93nm,0.3s
CVER Cruz Verde, Cu 2.13 196 ⇑*e*P Pn **12 43 16.8 +0.5**
CVER *e*S Sn **12 43 44.3 +0.8**
CVER *i* 12 43 46.7
comp=Z,86nm,0.4s
GUY2C Guyana, Caldas 2.31 234 *e*P Pn **12 43 18.2 -0.3**
GUY2C *e*S Sn **12 43 47.8 +0.3**
GUY2C *i* 12 43 50.4
comp=Z,132nm,0.3s
UREC San Jos de Ur 2.34 300 *e*P Pn **12 43 17.5 -0.9**
UREC *e*S Sn **12 43 46.7 -0.7**
UREC *i* 12 43 58.5
comp=Z,96nm,0.2s
VILC Villavicencio, 2.47 185 *e*P Pn **12 43 19.8 -0.3**
VILC *e*S Sn **12 43 50.6 +0.1**
VILC *i* 12 43 53.5
comp=Z,100nm,0.6s
NIZA Niza - Manizal 2.50 233 *e*P Pn **12 43 22.0 +1.4**
CBOC Ciudad Bolivar 2.62 254 *e*P Pn **12 43 22.9 +0.9**
CBOC *e*S Sn **12 43 54.3 +0.3**
CBOC *i* 12 43 58.0
comp=Z,45nm,0.6s
PTGC Puerto Gaitan, 2.72 150 *e*P Pn **12 43 22.3 -1.0**
PTGC *e*S Sn **12 43 54.3 -1.9**
PTGC *i* 12 44 20.5
comp=Z,64nm,0.4s
DBBC Dabeiba 2.75 279 *e*P Pn **12 43 23.7 +0.1**
DBBC *e*S Sn **12 43 57.1 +0.3**
DBBC *i* 12 43 58.8
comp=Z,44nm,0.2s
PRAC Prado 3.18 206 *e*P Pn **12 43 28.6 -0.8**
PRAC *e*S Sn **12 44 08.1 +1.2**
PRAC *i* 12 44 10.4
comp=Z,47nm,0.2s
ORTC Ortega, Tolima 3.19 214 *e*P Pn **12 43 29.3 -0.1**
ORTC *e*S Sn **12 44 09.0 +1.8**
PLMC San Jos del P 3.25 239 *e*P Pn **12 43 30.1 -0.2**
PLMC *e*S Sn **12 44 07.3 -1.3**
PLMC *i* 12 44 11.4
comp=Z,37nm,0.3s
ARGC Ariguani, Magd 3.34 347 *e*P Pn **12 43 34.5 +3.1**
ARGC *e*S Sn **12 44 09.7 -1.0**
ARGC *i* 12 44 27.1
comp=Z,48nm,0.3s
APAC Apartado, Choc 3.34 293 *e*P Pn **12 43 31.4 0.0**
APAC *e*S Sn **12 44 12.7 +2.0**
APAC *i* 12 44 16.6
comp=Z,23nm,0.4s
SDV Santo Domingo 3.63 51 P Pn **12 43 36.1 +0.7**
comp=Z,51nm,0.3s,baz=184,slow=3.4,SNR=127
SDV S Sn **12 44 17.8 0.0**
comp=Z,53nm,0.4s,baz=32,slow=17,SNR=26
SDV Santo Domingo 3.63 51 *e*P Pn **12 43 35.8 +0.4**
SDV *e*S Sn **12 44 17.1 -0.7**
SDV *i* 12 44 22.1
comp=Z,47nm,0.5s
SJCC San Jacinto, C 3.69 333 *e*P Pn **12 43 35.1 -1.1**
SJCC *e*S Sn **12 44 17.5 -1.7**
SJCC *i* 12 44 21.6
comp=Z,31nm,0.5s
YOTC Yotoco, Valle 3.85 228 *e*P Pn **12 43 37.4 -0.9**
YOTC *i* 12 44 35.9
comp=Z,4.2nm,0.5s
CAPC Capurgana 4.34 298 *e*P Pn **12 43 42.9 -1.9**
CAPC *e*S Sn **12 44 30.6 -4.0**
CRJC Cerrejon, Guaj 4.45 8 *e*P Pn **12 43 46.2 0.0**
CRJC *e*S Sn **12 44 37.2 +0.1**
CRJC *i* 12 44 47.0
comp=Z,50nm,0.4s
SMRC Santa Marta, M 4.61 351 *e*P Pn **12 43 49.5 +1.2**
SMRC *e*S Sn **12 44 40.6 -0.3**
SMRC *i* 12 44 53.5
comp=Z,14nm,0.2s
GARC Garzon, Huila 4.81 205 *e*P Pn **12 43 50.1 -1.2**
GARC *e*S Sn **12 44 42.3 -3.9**
GARC *i* 12 44 48.0
comp=Z,25nm,0.3s
URIC Uribia, Colomb 5.29 16 *e*P Pn **12 43 57.3 -0.2**
URIC *e*S Sn **12 44 55.7 -1.7**
URIC *i* 12 45 00.4
comp=Z,7.7nm,0.4s
PCRV Puerto La Cruz 9.45 67 P Pn **12 44 53.0 -0.8**
comp=Z,7.0nm,0.8s,baz=170,slow=16,SNR=1.1
PCRV S Sn **12 46 35.3 -2.9**
comp=Z,18nm,1.0s,baz=228,slow=7.7,SNR=1.9
YKA Yellowknife Ar 63.36 340 P P **12 52 56.4 -0.4**
comp=Z,0.2nm,0.6s,baz=133,slow=6.3,SNR=6.6
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 122.66 20 PKP PKPdf 13 01 17.3 -5.1
comp=Z,0.1nm,0.4s,baz=345,slow=3.3,SNR=2.0
WRA Warramunga Arr 149.91 241 PKPbc **PKPdf 13 02 15.6 +2.8**
comp=Z,0.5nm,0.9s,baz=108,slow=3.1,SNR=5.7

*TEH **08** 12:49:53.9,34°.57N×46°.83E,h8km±40km,ML3.5*
*ISN **08** 12:49:53.7±1.0,34°.51N×46°.73E,h10km±60km,ML3.4*
ISC 08 12:49:54.7±0.9,**34°.55N**±0°.03×**46°.73E**±0°.03,**h10km**,**n27,**
σ1§**87**/30,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**0.26**	**211**	Pg	**Pb**	**12 50 01.4**	**-0.3**
IDHR	**Dehrash**	**0.32**	**297**	Pg	**Pg**	**12 50 01.7**	**+0.5**
KCHF	**Cheshme Sefid,**	**0.38**	**137**	Pg	**Pg**	**12 50 01.9**	**-0.3**
ILIN	**Lien**	**0.41**	**27**	Pg	**Pg**	**12 50 02.4**	**-0.4**
IBZA	**Bozab**	**0.94**	**95**	Pg	**Pg**	**12 50 11.5**	**-1.2**
KGS1	**Ghasr-e-Shirin**	**0.95**	**267**	Pg	**Pn**	**12 50 15.2**	**+1.1**
ILBA	**Ilam Banvizeh**	**1.02**	**205**	Pg	**Pn**	**12 50 15.3**	**+0.1**
IALM	**Almabolaq**	**1.22**	**75**	Pg	**Pb**	**12 50 17.2**	**-0.9**
IKFM	**Kafar-mosalman**	**1.38**	**138**	Pg	**Pg**	**12 50 21.5**	**+0.2**
IDOB	**Doab**	**1.42**	**122**	Pg	**Pn**	**12 50 20.9**	**+0.1**
HSAM	**Samen**	**1.58**	**102**	Pg	**Pn**	**12 50 23.6**	**+0.5**
IBDR	**Badra**	**1.59**	**205**	*e*Pn	**Pb**	**12 50 24.0**	**-0.1**
IBDR				*e*Sn	**Sg**	**12 50 46.0**	**+0.2**
SDS1	**Sardasht. Az.**	**1.89**	**328**	Pn	**Pg**	**12 50 30.8**	**-0.1**
HAGD	**Aghdareh**	**2.00**	**82**	Pn	**Pb**	**12 50 30.4**	**-0.9**
BHD	**Baghdad**	**2.34**	**237**	*e*Pn	**Pn**	**12 50 35.0**	**+1.8**
BHD				*e*Sn	**Sb**	**12 51 05.0**	**-0.8**
BHD				AML	AML	12 51 09.6	
comp=E,331nm,0.4s							
RAFI	**Al-Rafai**	**2.87**	**191**	*e*Pn	**Pn**	**12 50 42.0**	**+1.5**
RAFI				*e*Sn	**Sb**	**12 51 18.0**	**-3.2**
IAZR	**Azarshahr**	**3.18**	**349**	Pn	**Pb**	**12 50 48.5**	**-2.9**
IPIR	**Pirpir**	**3.94**	**117**	Pn	**Pn**	**12 50 57.6**	**+2.1**
QAMS	**Qamsar**	**3.95**	**101**	Pn	**Pn**	**12 50 58.4**	**+2.7**
JHBN	**Jahan bin**	**4.02**	**124**	Pn	**Pn**	**12 50 59.1**	**+2.4**
IVRN	**Varamin**	**4.13**	**82**	Pn	**Pn**	**12 51 00.7**	**+2.7**
ZNGN	**Zangian**	**4.22**	**124**	Pn	**Pn**	**12 51 01.6**	**+2.2**
GRMI	**Germi**	**4.35**	**12**	Pn	**Pn**	**12 51 03.9**	**+2.9**
KRSH	**Karshahi**	**4.51**	**96**	Pn	**Pn**	**12 51 06.0**	**+2.7**
ISFB	**Sefidab**	**4.55**	**91**	Pn	**Pn**	**12 51 06.3**	**+2.5**
IZEF	**Zefreh**	**4.95**	**108**	Pn	**Pn**	**12 51 11.7**	**+2.3**
IRAM	**Ramesheh**	**5.47**	**118**	Pn	**Pn**	**12 51 19.0**	**+2.5**

*HEL **08** 13:05:47.5±0.3,59°.22N×27°.78E,h0km,ML2.2,Suspected explosion*
*EST **08** 13:05:47.1±0.1,59°.22N×27°.84E,h0km,ML2.0(HEL),Explosion*
*LVSN **08** 13:05:47.7±1.2,59°.10N×28°.06E,h0km±18km,ML2.0*
*IDC **08** 13:05:51.9±2.4,59°.50N×27°.30E,h0km,mbtmp3.4/3,ML2.2/3,Error ellipse: s-maj=22.5km s-min=12.6km az=106.0*
ISC 08 13:05:46.1±0.9,**59°.23N**±0°.03×**27°.81E**±0°.04,**h0km**,**n33,**
σ0§**96**/55,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE03	**Tooma soojaam,**	**0.87**	**247**	*e*P	**Pg**	**13 06 02.7**	**-0.1**
EE03				*e*S	**Sg**	**13 06 14.0**	**-0.1**
VSU	**Vasula**	**0.95**	**217**	*e*P	**Pg**	**13 06 04.0**	**-0.3**
VSU	**Vasula**	**0.95**	**217**	*e*P	**Pg**	**13 06 04.4**	**+0.1**
VSU				*e*S	**Sg**	**13 06 16.7**	**+0.1**
VSU				AML	AML	13 06 24.5	
comp=N,43nm,0.1s							
VSU				AML	AML	13 06 25.5	
comp=E,40nm,0.2s							
VSU				AML	AML	13 06 40.1	
comp=Z,26nm,0.7s							
VSU	**Vasula**	**0.95**	**217**	*e*P	**Pg**	**13 06 04.3**	**0.0**
VSU				*e*S	**Sg**	**13 06 16.6**	**0.0**
ARBE	**Arbavere**	**0.96**	**284**	*e*P	**Pg**	**13 06 04.7**	**+0.2**
ARBE				*e*S	**Sg**	**13 06 16.5**	**-0.5**
VJF	**Virojoki**	**1.32**	**354**	*e*P	**Pg**	**13 06 10.8**	**-0.7**
VJF				*e*SB	**Sg**	**13 06 28.8**	**+0.1**
VJF				MSG		13 06 34.4	
comp=Z,7.8nm,0.1s							
EE07	**Piusa Caves, O**	**1.40**	**188**	*e*P	**Pg**	**13 06 12.5**	**-0.5**
EE07				*e*PN	**Pb**	**13 06 13.6**	**+0.5**
EE07				*e*S	**Sg**	**13 06 30.1**	**-1.0**
EE08	**Sarghaua, Vand**	**1.45**	**248**	*e*P	**Pn**	**13 06 13.1**	**-0.5**
EE08				*e*S	**Sg**	**13 06 31.7**	**-1.0**
EE08				*e*SN	**Sn**	**13 06 34.9**	**+1.6**
EE02	**Kiisa, Saku**	**1.60**	**270**	*e*P	**Pb**	**13 06 16.2**	**-0.4**
EE02				*e*S	**Sb**	**13 06 37.0**	**-0.3**
PVF	**Pernaja**	**1.65**	**324**	*e*PG	**Pn**	**13 06 17.0**	**+0.7**
PVF				MSG		13 06 36.8	
comp=Z,15nm,0.2s							
PVF				*e*SG	**Sn**	**13 06 38.1**	**-0.1**
HEL1	**Helsinki**	**1.77**	**304**	*e*PG	**Pb**	**13 06 19.4**	**0.0**
HEL1				*e*SG	**Sb**	**13 06 42.0**	**-0.1**
HEL1				MSG		13 06 42.4	
comp=Z,10nm,0.1s							
MEF	**Metsahovi**	**2.00**	**301**	*e*P	**Pb**	**13 06 23.3**	**0.0**
MEF	**Metsahovi**	**2.00**	**301**	*e*P	**Pb**	**13 06 23.3**	**0.0**
MEF				AML	AML	13 06 23.9	
comp=Z,18nm,0.2s							
MEF				*e*S	**Sb**	**13 06 49.0**	**+0.3**
MEF				AML	AML	13 06 49.6	
comp=N,57nm,0.3s							
MEF				AML	AML	13 06 49.6	
comp=E,31nm,0.2s							
MEF	**Metsahovi**	**2.00**	**301**	*e*PG	**Pb**	**13 06 23.1**	**-0.2**
MEF				*e*SG	**Sb**	**13 06 48.7**	**0.0**
MEF				MSG		13 06 49.8	
comp=Z,10nm,0.1s							
NUR	**Nurmijrvi**	**2.05**	**310**	*e*PG	**Pb**	**13 06 23.7**	**-0.5**
NUR				*e*SG	**Sb**	**13 06 50.4**	**+0.1**
NUR				MSG		13 06 51.3	
comp=Z,9.3nm,0.1s							
MTSE	**Matsula**	**2.13**	**258**	*e*P	**Pb**	**13 06 24.9**	**-0.7**
MTSE	**Matsula**	**2.13**	**258**	*e*P	**Pb**	**13 06 24.4**	**-1.2**
MTSE				*e*S	**Sb**	**13 06 51.4**	**-1.2**
MTSE	**Matsula**	**2.13**	**258**	*e*PB	**Pb**	**13 06 24.5**	**-1.1**
MTSE				*e*SG	**Sb**	**13 06 52.9**	**+0.3**
EE01	**Perakula, Nova**	**2.16**	**271**	*e*PB	**Pb**	**13 06 25.3**	**-0.7**
EE01				*e*SB	**Sb**	**13 06 52.9**	**-0.3**
RUF	**Ruokolahti**	**2.28**	**14**	*e*P	**Pn**	**13 06 25.9**	**+0.9**
RUF				MSG		13 06 55.1	
comp=Z,9.0nm,0.2s							
RUF				*e*SG	**Sb**	**13 06 57.2**	**+0.4**
FIA0	**FINESS Array S**	**2.39**	**340**	*e*P	**Pn**	**13 06 27.4**	**+0.8**
FIA0				*e*SG	**Sb**	**13 07 00.8**	**+0.9**
FIA0				MSG		13 07 01.9	
comp=Z,6.2nm,0.1s							
FIA1	**FINESS Array S**	**2.39**	**340**	*e*P	**Pn**	**13 06 27.4**	**+1.0**
FIA1				*e*PB	**Pb**	**13 06 28.7**	**-1.2**
FIA1				*e*SG	**Sb**	**13 07 01.1**	**+1.2**
FIA1				MSG		13 07 01.9	
comp=Z,5.9nm,0.1s							
FINES	**FINESS Array B**	**2.39**	**340**	Pg	**Pn**	**13 06 27.3**	**+0.8**
comp=Z,0.3nm,0.3s,baz=160,slow=16,SNR=14							
FINES				Lg	Lg	13 06 56.6	
comp=Z,1.0nm,0.3s,baz=163,slow=23,SNR=14							
KAF	**Kangasniemi**	**2.99**	**346**	*e*PB	**Pb**	**13 06 38.7**	**-1.6**
KAF				MSG		13 07 21.6	
comp=Z,3.0nm,0.1s							
SLIT	**Slitere, Latvi**	**3.32**	**244**	*e*P	**Pn**	**13 06 39.4**	**+0.2**
RAF	**Rauma**	**3.52**	**303**	*e*P	**Pn**	**13 06 44.2**	**+2.1**
RAF	**Rauma**	**3.52**	**303**	*e*P	**Pn**	**13 06 44.1**	**+2.1**
RAF				AML	AML	13 07 43.8	
comp=Z,6.0nm,1.0s							
RAF				AML	AML	13 07 44.0	
comp=N,8.3nm,0.2s							
RAF				AML	AML	13 07 45.3	
comp=E,6.9nm,0.7s							
RAF	**Rauma**	**3.52**	**303**	*e*P	**Pn**	**13 06 44.1**	**+2.1**
RAF				MSG		13 07 28.0	
comp=Z,2.0nm,0.1s							
KPF	**Kankaanpaa**	**3.86**	**315**	*e*P	**Pn**	**13 06 48.9**	**+2.2**
JOF	**Joensuu**	**4.08**	**23**	*e*P	**Pn**	**13 06 50.8**	**+1.2**
HFS	**Hagfors**	**7.21**	**283**	Pn	**Pn**	**13 07 30.8**	**-1.8**
comp=Z,0.1nm,0.3s,baz=106,slow=12,SNR=2.2							
comp=Z,1.6nm,0.7s							
NOA	**NORSAR Array B**	**8.48**	**289**	Pn	**Pn**	**13 07 48.6**	**-1.5**
baz=101,slow=18,SNR=4.3							
NOA				Sn	Sn	13 09 12.6	-14
baz=127,slow=23,SNR=1.6							
NOA				Lg	Lg	13 10 08.0	
baz=67,slow=14,SNR=1.6							
comp=Z,0.6nm,0.7s							
ARCES	**ARCES Array B**	**10.40**	**356**	Pn	**Pn**	**13 08 15.3**	**-1.0**
baz=170,slow=15,SNR=5.7							
comp=Z,3.5nm,0.9s							

*NEIC **08** 13:20:32.4±0.3,36°.032N×0°.004×97°.91W±0°.01,h3km±5km, Error ellipse: s-maj=1.6km s-min=0.3km az=69.0*
TUL 08 13:20:32.6±0.4,**36°.036N**×0°.010×**97°.90W**±0°.01,**h5km**±5km, **ML3.0,mb_Lg3.0**/95(NEIC),**ML3.1**/60(NEIC),**Error ellipse: s-maj=1.7km s-min=0.9km az=221.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**123**	Pg	Pg	13 20 41.2	+0.3
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	13 20 42.0	+0.3
CROK				Sg	Sg	13 20 48.9	+1.0
CROK				IAML		13 20 51.1	
comp=N,1μm,0.2s							
ADOK	**Arcadia Dam**	**0.58**	**132**	Pg	Pg	13 20 43.8	+0.2
ADOK				Sg	Sg	13 20 52.2	+1.0
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	Pg	13 20 46.5	-0.1
OKCSW				Sg	Sg	13 20 56.7	+0.5
CSTR	**Hydro, Custer**	**0.75**	**239**		Pg	13 20 47.3	+0.3
CSTR				Sg	Sg	13 20 57.7	+0.9
OK033	**Mehan**	**0.78**	**89**		Pg	13 20 47.6	0.0
OK033				Sg	Sg	13 20 58.5	+0.8
OK032	**Salt Plains WL**	**0.81**	**342**		Pg	13 20 47.9	-0.2
OK032				IAML		13 20 59.4	
comp=N,954nm,0.2s							
OK038	**West end E0370**	**0.81**	**303**		Pg	13 20 48.0	-0.2
GC02	**Grant County #**	**0.81**	**2**		Pg	13 20 48.1	-0.1
OK048	**Pawnee Station**	**0.86**	**64**		Pg	13 20 49.2	0.0
OK048				IAML		13 21 06.5	
comp=N,471nm,0.2s							
FNO	**Franklin**	**0.88**	**152**		Pg	13 20 49.2	-0.2
FNO				IAML		13 21 03.9	
comp=E,448nm,0.6s							
FNO				IAML		13 21 06.6	
comp=N,429nm,0.7s							
OK052	**Battle Ridge R**	**0.89**	**92**		Pg	13 20 49.6	-0.1
OK052				IAML		13 21 08.6	
comp=N,425nm,0.2s							
BLOK	**Blackwell**	**0.91**	**37**		Pg	13 20 49.9	-0.2
KAN14	**Manchester OK**	**0.92**	**357**		Pg	13 20 49.9	-0.3
KAN14				IAML		13 21 07.4	
comp=E,439nm,0.1s							
KAN14				IAML		13 21 09.9	
comp=N,530nm,0.2s							
U32A	**Winter Ranch,**	**0.95**	**291**		Pg	13 20 50.6	-0.3
U32A				IAML		13 21 06.5	
comp=E,362nm,0.4s							
U32A				IAML		13 21 06.7	
comp=N,370nm,0.4s							
QUOK	**Quay**	**0.97**	**82**		Pg	13 20 51.1	-0.2
QUOK				IAML		13 21 04.7	
comp=N,578nm,0.3s							
QUOK				IAML		13 21 17.4	
comp=E,508nm,0.3s							
OK051	**E0350 and S346**	**0.98**	**61**		Pg	13 20 51.2	-0.1
KAN17	**Caldwell West**	**1.01**	**6**		Pg	13 20 51.7	-0.4
KAN17				IAML		13 21 08.0	
comp=E,703nm,0.3s							
KAN13	**South Haven SW**	**1.03**	**19**		Pg	13 20 52.1	-0.3
KAN05	**Bluff City Nor**	**1.07**	**1**		Pg	13 20 52.6	-0.5
KAN05				IAML		13 21 08.8	
comp=N,828nm,0.2s							
KAN05				IAML		13 21 11.7	
comp=E,552nm,0.2s							
KAN10	**Anthony SW Sta**	**1.10**	**352**		Pg	13 20 53.1	-0.5
KAN10				IAML		13 21 12.2	
comp=N,372nm,0.3s							
KAN10				IAML		13 21 12.4	
comp=E,431nm,0.4s							
KAN01	**Argonia South**	**1.12**	**6**		Pg	13 20 53.7	-0.4
KAN01				IAML		13 21 10.2	
comp=N,397nm,0.2s							
KAN09	**Caldwell North**	**1.12**	**12**		Pg	13 20 53.5	-0.6
DEOK	**Depew**	**1.15**	**99**	Pg	Pg	13 20 53.9	-0.9
DEOK				IAML		13 21 14.7	
comp=N,303nm,0.5s							
DEOK				IAML		13 21 17.9	
comp=E,337nm,0.3s							
KAN06	**Argonia West S**	**1.21**	**2**		Pg	13 20 55.3	-0.5
KAN06				IAML		13 21 12.0	
comp=N,313nm,0.3s							
KAN06				IAML		13 21 16.3	
comp=E,336nm,0.4s							
W35A	**Tecumseh**	**1.22**	**136**	Pg	Pg	13 20 55.0	-0.9
W35A				IAML		13 21 15.8	
comp=N,461nm,0.3s							
KAN12	**Harper NE Stat**	**1.26**	**356**		Pg	13 20 56.2	-0.6
KAN12				IAML		13 21 22.5	
comp=E,609nm,0.4s							
KAN12				IAML		13 21 23.1	
comp=N,496nm,0.4s							
KS21	**Milan North St**	**1.26**	**9**		Pg	13 20 56.2	-0.6
KS21	**Milan North St**	**1.26**	**9**	IAML		13 21 13.8	
comp=N,481nm,0.3s							
KS21				IAML		13 21 16.8	
comp=N,392nm,0.4s							
T35A	**Sooner Cattle**	**1.42**	**51**		Pn	13 20 59.1	0.0
WMOK	**Wichita Mounta**	**1.48**	**209**		Pn	13 20 59.4	-0.6
TUL3	**Leonard**	**1.71**	**94**		Pn	13 21 02.8	-0.3
TUL3				IAmb_Lg		13 21 30.6	
comp=Z,81nm,0.8s							
LOOK	**Love County**	**2.12**	**164**		Pn	13 21 08.2	-0.5
SMWD	**Samnorwood**	**2.12**	**245**	IAmb_Lg		13 21 43.3	
comp=Z,67nm,0.7s							
R32A	**Long Quarter,**	**2.47**	**345**	IAmb_Lg		13 21 56.5	
comp=Z,51nm,0.7s							
HHAR	**Hobbs**	**3.21**	**84**	IAmb_Lg		13 22 20.2	
comp=Z,32nm,0.7s							
AMTX	**Amarillo**	**3.29**	**251**	IAmb_Lg		13 22 14.6	
comp=Z,52nm,0.8s							
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		13 22 24.7	
comp=Z,53nm,0.7s							
Z38A	**Mt. Pleasant**	**3.67**	**138**	IAmb_Lg		13 22 34.8	
comp=Z,42nm,0.9s							
MIAR	**Mount Ida**	**3.84**	**112**		Pn	13 21 32.8	+0.5
RTBA	**Rita Blanca**	**3.93**	**277**	Pn	Pn	13 21 34.2	+0.5
SN05	**Snyder 5**	**4.00**	**219**	IAmb_Lg		13 22 44.5	
comp=Z,34nm,0.8s							
SN01	**Snyder 1**	**4.02**	**219**	IAmb_Lg		13 22 44.6	
comp=Z,33nm,0.8s							
S39A	**Bolivar**	**4.03**	**64**	IAmb_Lg		13 22 43.1	
comp=Z,38nm,0.7s							
X40A	**Basin Creek Fa**	**4.42**	**109**	Pn	Pn	13 21 40.1	-0.2
MSTX	**Muleshoe**	**4.50**	**244**	IAmb_Lg		13 23 06.0	
comp=Z,18nm,1.1s							
WLAR	**White Oak Lake**	**4.58**	**119**	IAmb_Lg		13 23 02.9	
comp=Z,19nm,0.7s							
WHAR	**Wooly Hollow**	**4.63**	**98**	Pn	Pn	13 21 43.1	-0.1
WHAR				IAmb_Lg		13 23 10.0	
comp=Z,27nm,1.1s							
MGMO	**Mountain Grove**	**4.67**	**75**	IAmb_Lg		13 23 07.7	
comp=Z,37nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.69**	**90**	Pn	Pn	13 21 44.0	0.0
FCAR				IAmb_Lg		13 23 05.0	
comp=Z,17nm,0.7s							
KSCO	**Kaye Shedlock'**	**4.79**	**310**	IAmb_Lg		13 23 13.6	
comp=Z,29nm,1.0s							
SGCY	**Sterling City**	**4.91**	**214**	IAmb_Lg		13 23 17.5	
comp=Z,38nm,1.0s							
P38A	**Dawn**	**4.98**	**43**	IAmb_Lg		13 23 19.3	
comp=Z,23nm,0.9s							
Z41A	**Richland Creek**	**5.03**	**122**	IAmb_Lg		13 23 19.5	
comp=Z,21nm,0.9s							
435B	**Jarrell**	**5.25**	**177**	IAmb_Lg		13 23 20.1	
comp=Z,26nm,0.8s							
T25A	**Trinidad**	**5.35**	**284**	IAmb_Lg		13 23 24.0	
comp=Z,25nm,0.8s							
BGNE	**Belgrade**	**5.37**	**358**	IAmb_Lg		13 23 35.6	
comp=Z,27nm,0.8s							
LCAR	**Lake Charles**	**5.47**	**88**	IAmb_Lg		13 23 32.3	
comp=Z,14nm,0.7s							
JCT	**Junction City**	**5.77**	**197**	IAmb_Lg		13 23 46.4	
comp=Z,20nm,0.7s							
OZNA	**Ozona**	**5.77**	**209**	IAmb_Lg		13 23 41.7	
comp=Z,13nm,0.7s							
P40A	**Paris**	**5.80**	**51**	IAmb_Lg		13 23 35.5	
comp=Z,29nm,0.7s							
L34A	**Svendsen Farm,**	**6.04**	**11**	IAmb_Lg		13 23 49.8	
comp=Z,30nm,0.8s							
PBMO	**Poplar Bluff**	**6.07**	**81**	IAmb_Lg		13 23 55.3	
comp=Z,23nm,0.8s							
MNHN	**Monahans**	**6.19**	**222**	IAmb_Lg		13 23 48.5	
comp=Z,16nm,0.9s							
FVM	**French Village**	**6.29**	**70**	IAmb_Lg		13 23 51.9	
comp=Z,26nm,0.8s							
SDCO	**Great Sand Dun**	**6.33**	**288**	Pn	Pn	13 22 06.9	+0.1
Q24A	**Divide**	**6.46**	**299**	IAmb_Lg		13 23 59.0	
comp=Z,13nm,0.8s							
HNDO	**Hondo**	**6.59**	**191**	IAmb_Lg		13 24 10.8	
comp=Z,14nm,0.8s							
K30B	**Basset**	**6.76**	**349**	IAmb_Lg		13 24 21.1	
comp=Z,25nm,0.8s							
BRIGG	**Briggsdale**	**6.79**	**314**	IAmb_Lg		13 24 21.3	
comp=Z,16nm,0.9s							
PECS	**Pecos**	**6.81**	**229**	IAmb_Lg		13 24 16.3	
comp=Z,14nm,0.8s							
SAND	**Sanderson**	**7.03**	**212**		Pn	13 22 15.6	-0.6
SAND				IAmb_Lg		13 24 24.8	
comp=Z,11nm,0.7s							
ALPN	**Alpine**	**7.42**	**222**	IAmb_Lg		13 24 28.7	
comp=Z,10nm,0.8s							
VHRN	**Van Horn**	**7.90**	**231**	IAmb_Lg		13 24 48.4	
comp=Z,9.1nm,0.9s							
PHWY	**Pilot Hill**	**7.91**	**314**	IAmb_Lg		13 24 54.1	
comp=Z,9.4nm,0.9s							
L40A	**Anamoose**	**7.95**	**39**	IAmb_Lg		13 24 48.9	
comp=Z,16nm,0.8s							
RSSD	**Black Hills**	**9.34**	**332**	IAmb_Lg		13 25 39.6	
comp=Z,11nm,1.1s							
K22A	**Casper**	**9.39**	**317**	IAmb_Lg		13 25 39.0	
comp=Z,10nm,0.9s							

*IDC **08** 13:28:14.9±1.0,44°.08N×92°.70E,h0km,mb3.6/4,mbtmp3.6/10,ML3.4/5,MS3.0/1,Error ellipse: s-maj=23.0km s-min=13.4km az=35.0*
*NNC **08** 13:28:21.1±9.9,44°.94N×92°.93E,h28km±86km,mb4.1,mpv3.9,Error ellipse: s-maj=71.7km s-min=67.7km az=140.0*
ISC 08 13:28:16.4±0.9,**44°.1N**±0°.1×**92°.65E**±0°.07,**h10km**,**n16,**
σ1§**66**/20,**mb3.6**/4,**6C-8D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**7.76**	**294**	⇑Pn	**Pn

0.3nm,0.3s,baz=160,slow=24,SNR=3.6
ZALV LR LR 13 35 05.5
comp=Z,76nm,18.1s,baz=320,slow=37
KURK Kurchatov 11.56 310 ⇓Pn **Pn 13 31 01.2 -0.1**
1.9nm,0.5s
KURK ⇑Lg Lg 13 34 25.1
32nm,0.9s
KURBB Kurchatov Arra 11.56 309 ⇓Pn **Pn 13 31 01.4 0.0**
2.2nm,0.5s
KURBB ⇓Lg Lg 13 34 32.1
59nm,0.8s
KURBB Kurchatov Arra 11.56 309 Pn **Pn 13 31 01.4 0.0**
0.3nm,0.3s,baz=116,slow=14,SNR=32
KURBB Sn **Sn 13 33 08.2 -2.3**
0.1nm,0.3s,baz=115,slow=28,SNR=1.8
KURBB Lg Lg 13 34 24.8
0.2nm,0.3s,baz=126,slow=32,SNR=5.6
1.3nm,0.3s
TKM2 Tokmak 2 12.44 270 ⇑Pn Pn 13 31 24.1 +10
2.1nm,0.8s
TKM2 ⇓Sn **Sn 13 33 36.6 +4.2**
1.9nm,0.7s
TKM2 ⇑Lg Lg 13 34 55.7
5.9nm,0.8s
AAK Ala-Archa 13.29 270 Pn **Pn 13 31 24.8 -0.5**
0.1nm,0.3s,baz=94,slow=19,SNR=1.2
0.3nm,0.3s
BVAR Borovoye Array 17.16 309 Pn **Pn 13 32 13.5 -2.6**
0.1nm,0.3s,baz=108,slow=12,SNR=12
1.1nm,0.4s
NRIK Noril'sk 25.42 356 P **P 13 33 44.4 +0.6**
1.9nm,0.5s,baz=180,slow=3.0,SNR=1.1
1.9nm,0.5s
CMAR Chiang Mai Arr 26.12 166 P **P 13 33 49.6 -1.0**
0.2nm,0.3s,baz=348,slow=8.3,SNR=2.0
0.2nm,0.3s
ILAR Eielson Array 61.95 25 P **P 13 38 35.7 -0.2**
0.3nm,0.9s,baz=304,slow=5.1,SNR=2.0
0.3nm,0.9s
ASAR Alice Springs 77.32 142 P **P 13 40 11.2 0.0**
0.3nm,0.5s,baz=336,slow=5.5,SNR=11
0.3nm,0.5s

IDC 08 13:35:36.2±1.5, 3°.13N×128°.05E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=133.8km s-min=20.4km az=67.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.75**	**165**	P	P	13 40 50.6	+0.2
	2.5nm,0.8s,baz=345,slow=11,SNR=34						
	2.5nm,0.8s						
ASAR	**Alice Springs**	**27.24**	**168**	P	P	13 41 22.4	+0.1
	0.2nm,0.4s,baz=337,slow=7.2,SNR=2.5						
ASAR				PcP	PcP	13 44 42.7	+0.1
	0.3nm,0.5s,baz=357,slow=2.0,SNR=6.2						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**37.12**	**161**	P	P	13 42 48.0	-0.8
	1.0nm,0.5s,baz=340,slow=9.0,SNR=4.0						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**58.79**	**325**	P	P	13 45 37.6	+1.2
	0.4nm,0.5s,baz=116,slow=6.6,SNR=5.0						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**62.95**	**327**	P	P	13 46 03.4	-1.2
	0.2nm,0.4s,baz=127,slow=5.9,SNR=4.8						
	0.2nm,0.4s						

*KRNET **08** 13:36:08.2±0.1, 41°.06N×69°.49E, mb2.9*
*SOME **08** 13:36:11.6, 40°.85N×70°.00E, h10km*
ISC 08 13:36:13.0±1.5, 41°.00N±0°.03×70°.04E±0°.05, h2km±11km, n17, σ2²48/34, 8C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.98**	**57**	⇓*e*P	**Pn**	**13 36 33.4**	**-0.6**
	baz=72						
TRKS				⇓*e*S	**Sn**	**13 36 51.8**	**+3.1**
	baz=72						
BTK	**Batken**	**1.11**	**148**	⇑*e*P	**Pn**	**13 36 35.0**	**-0.7**
	baz=34						
BTK				⇑*e*S	**Sn**	**13 36 54.6**	**+2.9**
	baz=34						
IUG	**Iuzhnay**	**1.15**	**360**	*e*P	**Pn**	**13 36 35.6**	**-0.6**
	34nm,0.1s						
IUG				*e*S	**Sb**	**13 36 52.8**	**+1.8**
	61nm,0.3s						
CHM	**Chimkent**	**1.36**	**346**	*e*P	**Pb**	**13 36 39.5**	**+0.3**
	122nm,0.2s						
CHM				*e*S	**Sg**	**13 36 60.0**	**+3.3**
	222nm,0.2s						
ARK	**Arkit**	**1.65**	**60**	⇓*e*P	**Pg**	**13 36 45.3**	**+0.6**
	baz=67						
ARK				⇓*e*S	**Sg**	**13 37 12.2**	**+6.1**
	baz=67						
DRK	**Karamyk**	**2.03**	**138**	⇑*e*P	**Pg**	**13 36 50.9**	**-1.0**
	baz=31						
DRK				⇑*e*S	**Sg**	**13 37 21.7**	**+3.5**
	baz=31						
BRLS	**Borolday**	**2.04**	**356**	*e*P	**Pn**	**13 36 46.4**	**-2.0**
	30nm,0.2s						
BRLS				*e*S	**Sn**	**13 37 11.3**	**-3.1**
KK31	**Karatay Array**	**2.13**	**9**	Pn	**Pb**	**13 36 52.7**	**+0.3**
	2.7nm,0.2s,baz=203,slow=15,SNR=129						
KK31				⇓Sn	**Sb**	**13 37 22.6**	**+3.3**
	8.8nm,0.3s,baz=199,slow=25,SNR=19						
KKAR	**Karatay Array**	**2.13**	**9**	⇓*e*P	**Pn**	**13 36 47.6**	**-2.1**
	baz=20						
KKAR				⇓*e*S	**Sn**	**13 37 16.4**	**-0.4**
	baz=20						
OHH	**Osh**	**2.14**	**102**	⇑*e*P	**Pg**	**13 36 52.8**	**-1.2**
	baz=1.0						
OHH				⇑*e*S	**Sg**	**13 37 25.1**	**+3.4**
	baz=1.0						
ARSB	**Arslanbob**	**2.25**	**81**	⇑*e*P	**Pb**	**13 36 54.2**	**-0.2**
	baz=83						
ARSB				⇑*e*S	**Sg**	**13 37 27.6**	**+2.5**
	baz=83						
MNAS	**Manas**	**2.37**	**50**	⇓*e*P	**Pb**	**13 36 54.7**	**-1.8**
	baz=57						
MNAS				⇓*e*S	**Sb**	**13 37 28.5**	**+2.3**
	baz=57						
SFK	**Sufi-Kurgan**	**2.82**	**109**	⇓*e*P	**Pb**	**13 37 02.7**	**-1.5**
	baz=8.0						
SFK				⇓*e*S	**Sg**	**13 37 41.8**	**-1.7**
	baz=8.0						
MRKS	**Merke**	**2.95**	**53**	*e*P	**Pb**	**13 37 08.1**	**+1.7**
	2.9nm,0.3s						
MRKS				*e*S	**Sg**	**13 37 49.2**	**+1.4**
	5.9nm,0.4s						
ARLS	**Aral**	**3.33**	**74**	⇓*e*P	**Pb**	**13 37 09.1**	**-3.9**
	baz=76						
ARLS				⇓*e*S	**Sb**	**13 37 53.5**	**-0.5**
	baz=76						
KST	**Kastek**	**4.86**	**63**	*e*P	**Pg**	**13 37 42.8**	**-3.3**
	0.7nm,0.2s						
KST				*e*S	**Sg**	**13 38 48.2**	**-1.0**
	3.0nm,0.5s						
BTLS	**Baital**	**4.99**	**35**	*e*P	**Pg**	**13 37 46.3**	**-2.4**
	1.4nm,0.2s						
BTLS				*e*S	**Sg**	**13 38 53.9**	**+0.6**
	3.5nm,0.7s						

*IDC **08** 13:49:42.4±2.1, 6°.51S×129°.30E, h0km, mb3.5/1, mbtmp3.6/3, ML3.5/2, MS4.0/1, Error ellipse: s-maj=141.0km s-min=30.9km az=68.0*
ISC 08 13:49:56.8±1.3, 6°.91S±0°.08×129°.6E±0°.2, h150km, n13, σ3²42/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.99**	**123**	P	**Pn**	**13 50 34.5**	**+2.8**
FAKI	**Fak Fak**	**4.75**	**34**	P	**Pn**	**13 51 04.6**	**-2.4**
MTN	**Manton Dam**	**6.09**	**166**	P	**Pn**	**13 51 26.7**	**+2.0**
KDU	**Kakadu**	**6.40**	**154**	P	**Pn**	**13 51 30.2**	**+1.4**
KNRA	**Kununurra**	**8.76**	**185**	P	**Pn**	**13 52 01.2**	**+0.9**
WRA	**Warramunga Arr**	**13.75**	**161**	Pn	**Pn**	**13 53 04.4**	**-1.2**
	0.2nm,0.3s,baz=343,slow=13,SNR=14						
WRA				Sn	**Sn**	**13 55 32.3**	**-5.6**
	0.7nm,0.3s,baz=334,slow=22,SNR=7.3						
	0.6nm,0.4s						
COEN	**Coen**	**15.06**	**119**	P	**P**	**13 53 25.5**	**+1.7**
QIS	**Mount Isa**	**16.67**	**145**	P	**Pn**	**13 53 44.4**	**+2.6**
ASAR	**Alice Springs**	**17.17**	**167**	P	**Pn**	**13 53 50.2**	**+2.4**
	0.3nm,0.3s,baz=343,slow=9.0,SNR=25						
ASAR				S	**S**	**13 56 51.5**	**-6.9**
	0.3nm,0.7s,baz=351,slow=28,SNR=2.0						
	1.4nm,0.6s						
AS01	**Alice Springs**	**17.18**	**166**	P	**Pn**	**13 53 50.8**	**+2.9**
WRKA	**Warakurna**	**18.07**	**184**	P	**Pn**	**13 54 00.3**	**+1.8**
HNR	**Honiara**	**30.13**	**97**	LR	LR	14 10 08.0	
	comp=Z,267nm,20.8s,baz=36,slow=40						
MKAR	**Makanchi Array**	**67.94**	**327**	P	**P**	**14 00 40.0**	**+0.5**
	0.2nm,0.4s,baz=118,slow=6.8,SNR=7.5						
	0.2nm,0.4s						

*SJA **08** 14:00:25.7±0.7, 23°.96S×67°.06W, h206km±6km, ML3.2, MW3.5*
*GUC **08** 14:00:27.9±0.6, 23°.98S×67°.32W, h215km±9km, ML3.4*
ISC 08 14:00:25.0±1.9, 23°.99S±0°.04×67°.11W±0°.05, h213km±16km, n36, σ1²56/62, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.63**	**117**	*e*P	**Pn**	**14 01 01.7**	**+0.4**
LVC	**Limon Verde**	**2.15**	**309**	*e*P	**Pn**	**14 01 07.7**	**+1.2**
LVC				*e*S	**Sn**	**14 01 38.5**	**-0.3**
LVC				IAML		14 01 41.6	
	comp=Z,47nm,1.0s						
LVC	**Limon Verde**	**2.15**	**309**	*e*P	**Pn**	**14 01 07.5**	**+1.1**
LVC				*i* S	**Sn**	**14 01 37.7**	**-1.1**
PB15	**IPOC Station P**	**2.30**	**289**	*e*P	**Pn**	**14 01 09.1**	**+1.3**
PB15				*e*S	**Sn**	**14 01 41.1**	**-0.2**
PB15	**IPOC Station P**	**2.30**	**289**	⇑*i*P	**Pn**	**14 01 09.2**	**+1.4**
PB15				*i* S	**Sn**	**14 01 40.3**	**-0.9**
YJA	**Yavi**	**2.33**	**39**	*e*P	**Pn**	**14 01 09.2**	**+0.9**
YJA				*e*S	**Sn**	**14 01 40.8**	**-1.4**
FSA	**Cafayete**	**2.35**	**154**	*e*P	**Pn**	**14 01 08.9**	**+0.6**
GO02	**Mina Guanaco**	**2.54**	**242**	*e*P	**Pn**	**14 01 11.9**	**+1.4**
GO02				*e*S	**Sn**	**14 01 46.3**	**+0.2**
GO02	**Mina Guanaco**	**2.54**	**242**	⇑*i*P	**Pn**	**14 01 12.0**	**+1.4**
GO02				*i* S	**Sn**	**14 01 45.8**	**-0.3**
GO02				IAML		14 01 47.0	
	comp=N,140nm,0.5s						
PB06	**IPOC Station P**	**2.60**	**299**	*e*P	**Pn**	**14 01 12.4**	**+1.4**
PB06				*e*S	**Sn**	**14 01 46.1**	**-0.9**
PB06				IAML		14 01 47.6	
	comp=Z,100nm,0.1s						
PB06	**IPOC Station P**	**2.60**	**299**	⇑*i*P	**Pn**	**14 01 12.4**	**+1.4**
PB06				*i* S	**Sn**	**14 01 45.6**	**-1.3**
PB06				IAML		14 01 47.7	
	comp=E,172nm,0.1s						
PB09	**IPOC Station P**	**2.94**	**318**	*e*P	**Pn**	**14 01 16.9**	**+2.1**
PB09				*e*S	**Sn**	**14 01 54.0**	**+0.2**
PB09				IAML		14 02 02.3	
	comp=Z,32nm,0.4s						
PB09	**IPOC Station P**	**2.94**	**318**	⇓*i*P	**Pn**	**14 01 16.9**	**+2.1**
PB09				*i* S	**Sn**	**14 01 53.5**	**-0.4**
PB05	**IPOC Station P**	**3.06**	**291**	*e*P	**Pn**	**14 01 17.3**	**+1.1**
PB05				*e*S	**Sn**	**14 01 54.9**	**-1.4**
PB05				IAML		14 02 03.0	
	comp=Z,29nm,0.4s						
PB05	**IPOC Station P**	**3.06**	**291**	⇑*i*P	**Pn**	**14 01 17.5**	**+1.3**
PB05				*i* S	**Sn**	**14 01 54.1**	**-2.2**
PB05				IAML		14 01 56.2	
	comp=E,40nm,0.5s						
PB14	**IPOC Station P**	**3.07**	**257**	*e*P	**Pn**	**14 01 17.7**	**+1.2**
PB14				*e*S	**Sn**	**14 01 55.4**	**-1.5**
PB14				IAML		14 01 57.2	
	comp=Z,22nm,1.0s						
PB10	**IPOC Station P**	**3.19**	**278**	*e*P	**Pn**	**14 01 19.3**	**+1.7**
PB10				*e*S	**Sn**	**14 01 58.1**	**-0.8**
PB10				IAML		14 02 10.5	
	comp=Z,23nm,1.1s						
PB10	**IPOC Station P**	**3.19**	**278**	*i* P	**Pn**	**14 01 18.9**	**+1.3**
PB10				*i* S	**Sn**	**14 01 57.0**	**-1.8**
PB10				IAML		14 01 59.8	
	comp=E,33nm,0.4s						
AHML	**Horco Molle**	**3.21**	**150**	*e*P	**Pn**	**14 01 19.1**	**+1.2**
PB04	**IPOC Station P**	**3.25**	**300**	*e*S	**Sn**	**14 01 58.5**	**-1.8**
PB04				IAML		14 02 02.9	
	comp=Z,46nm,0.1s						
PB04	**IPOC Station P**	**3.25**	**300**	*i* P	**Pn**	**14 01 19.9**	**+1.4**
PB04				*i* S	**Sn**	**14 01 58.6**	**-1.8**
AC02	**Maricunga**	**3.37**	**212**	*e*P	**Pn**	**14 01 21.6**	**+1.4**
AC02	**Maricunga**	**3.37**	**212**	*e*P	**Pn**	**14 01 22.1**	**+1.9**
PB07	**IPOC Station P**	**3.41**	**311**	*e*P	**Pn**	**14 01 21.3**	**+1.0**
PB07				*e*S	**Sn**	**14 02 01.8**	**-2.0**
PB07				IAML		14 02 05.8	
	comp=Z,76nm,0.4s						
PB07	**IPOC Station P**	**3.41**	**311**	*i* P	**Pn**	**14 01 21.4**	**+1.0**
PB07				*i* S	**Sn**	**14 02 01.4**	**-2.4**
PB01	**IPOC Station P**	**3.66**	**323**	*e*P	**Pn**	**14 01 24.6**	**+1.3**
PB01				*e*S	**Sn**	**14 02 09.3**	**+0.1**
PB01				IAML		14 02 10.3	
	comp=Z,33nm,0.2s						
PB01	**IPOC Station P**	**3.66**	**323**	*i* S	**Sn**	**14 02 06.7**	**-2.5**
PB02	**IPOC Station P**	**3.70**	**315**	*i* P	**Pn**	**14 01 25.6**	**+1.8**
PB02				*i* S	**Sn**	**14 02 07.2**	**-2.7**
AC01	**Pan de Azucar**	**3.83**	**235**	*e*P	**Pn**	**14 01 25.8**	**+0.6**
AC01				*e*S	**Sn**	**14 02 10.4**	**-2.1**
AC01				IAML		14 02 25.2	
	comp=Z,22nm,2.3s						
AC01	**Pan de Azucar**	**3.83**	**235**	*i* P	**Pn**	**14 01 25.7**	**+0.6**
AC01				*i* S	**Sn**	**14 02 15.6**	**-1.9**
PATCX	**Punta Patache**	**4.23**	**318**	*e*P	Pn	14 01 35.4	+5.2
PATCX	**Punta Patache**	**4.23**	**318**	*e*P	**Pn**	**14 01 32.3**	**+2.1**
PATCX				*e*S	**Sn**	**14 02 18.1**	**-3.5**
PB08	**IPOC Station P**	**4.27**	**333**	*e*P	**Pn**	**14 01 33.1**	**+2.0**
PB08				*e*S	**Sn**	**14 02 23.4**	**+0.3**
PB08				IAML		14 02 26.4	
	comp=Z,18nm,0.4s						
PB08	**IPOC Station P**	**4.27**	**333**	*i* P	**Pn**	**14 01 33.0**	**+2.0**
PB08				*i* S	**Sn**	**14 02 22.7**	**-0.4**
TA01	**Diego Aracena**	**4.44**	**320**	*e*S	**Sn**	**14 02 23.9**	**-2.3**
PB11	**IPOC Station P**	**4.83**	**330**	*e*P	**Pn**	**14 01 38.2**	**+0.5**
PB11				*e*S	**Sn**	**14 02 32.8**	**-2.4**
PB11				IAML		14 02 37.2	
	comp=Z,20nm,0.3s						

*IDC **08** 14:02:43.1±0.7, 56°.09N×149°.82W, h0km, mb4.0/17, mbtmp4.0/22, ML3.5/5, MS3.6/31, Error ellipse: s-maj=19.8km s-min=12.5km az=28.0*
*NEIC **08** 14:02:43.5±1.6, 56°.01N±0°.04×149°.81W±0°.09, h10km±1km, mb4.4/15, ML3.9/48, ML3.8(AEIC), Error ellipse: s-maj=9.1km s-min=5.8km az=106.0*
*AEIC **08** 14:02:47.8±1.9, 55°.99N±0°.08×149°.8W±0°.1, h12km±5km, Error ellipse: s-maj=11.3km s-min=8.4km az=182.0*
ISC 08 14:02:44.4±0.5, 56°.08N±0°.07×149°.77W±0°.04, h10km, n363, σ0²96/324, mb4.3/29, MS3.6/26, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.25**	**302**	Pn	**Pn**	**14 03 20.5**	**-1.1**
OHAK	**Old Harbor**	**2.25**	**302**		**Sn**	**14 03 46.4**	**-3.1**
OHAK	**Old Harbor**	**2.25**	**302**	IAML		14 03 53.3	
	comp=E,252nm,1.3s						
OHAK				IAML		14 03 55.6	
	comp=N,218nm,1.2s						
OHAK	**Old Harbor**	**2.25**	**302**	P	**Pn**	**14 03 20.9**	**-0.7**
OHAK	**Old Harbor**	**2.25**	**302**	P	**Pn**	**14 03 20.6**	**-1.0**
	baz=121						
OHAK				S	**Sn**	**14 03 46.4**	**-3.1**
	baz=121						
KDAK	**Kodiak Island**	**2.30**	**319**	Pn	**Pn**	**14 03 21.9**	**-0.3**
KDAK	**Kodiak Island**	**2.30**	**319**	Pn	Pn	14 03 20.2	-2.1
	comp=N,10nm,0.3s,baz=126,slow=4.4,SNR=287						
KDAK				Sn	**Sn**	**14 03 47.2**	**-3.5**
	comp=N,11nm,0.3s,baz=102,slow=20,SNR=4.9						
KDAK				LR	LR	14 04 33.3	
	comp=N,2μm,19.5s,baz=199,slow=48						
	comp=N,43nm,0.2s						
SII	**Sitkinak Islan**	**2.50**	**283**	Pn	Pn	14 03 23.6	-1.5
SII	**Sitkinak Islan**	**2.50**	**283**		**Sn**	**14 03 52.2**	**-3.5**
SII	**Sitkinak Islan**	**2.50**	**283**	IAML		14 04 01.0	
	comp=N,451nm,0.9s						
SII				IAML		14 04 08.8	
	comp=E,438nm,0.9s						
SII	**Sitkinak Islan**	**2.50**	**283**	P	Pn	14 03 23.7	-1.4
SII	**Sitkinak Islan**	**2.50**	**283**	P	Pn	14 03 23.6	-1.5
	baz=101						
SII				S	**Sn**	**14 03 52.4**	**-3.3**
	baz=101						
Q20K	**Shuyak Island**	**2.91**	**332**	P	**Pn**	**14 03 30.0**	**-0.7**
	baz=150						
Q20K				S	**Sn**	**14 04 03.7**	**-1.9**
	baz=150						
SYI	**Shuyak Island**	**2.91**	**332**		**Pn**	**14 03 30.2**	**-0.4**
SYI	**Shuyak Island**	**2.91**	**332**		**Sn**	**14 04 03.3**	**-2.3**
SYI	**Shuyak Island**	**2.91**	**332**	IAML		14 04 06.5	
	comp=N,154nm,1.1s						
SYI				IAML		14 04 06.9	
	comp=E,127nm,0.8s						
CHIR	**Chirikof Islan**	**3.30**	**268**	Pn	Pn	14 03 34.7	-1.3
CHIR				IAML		14 04 11.7	
	comp=E,350nm,0.9s						
CHIR				IAML		14 04 14.1	
	comp=N,250nm,1.0s						
CHIR	**Chirikof Islan**	**3.30**	**268**	P	Pn	14 03 34.2	-1.8
	baz=85						
Q19K	**Cape Douglas,**	**3.54**	**325**		**Pn**	**14 03 40.1**	**+0.8**
Q19K	**Cape Douglas,**	**3.54**	**325**	P	**Pn**	**14 03 39.7**	**+0.3**
	baz=143						
CNPM	**China Poot**	**3.54**	**348**	Pn	**Pn**	**14 03 38.4**	**-1.0**
CNPM	**China Poot**	**3.54**	**348**		**Sn**	**14 04 19.2**	**-2.2**
CNPM	**China Poot**	**3.54**	**348**	IAML		14 04 26.6	
	comp=E,122nm,1.0s						
CNPM				IAML		14 04 30.7	
	comp=N,70nm,1.0s						
KAHG	**Katmai Hook Gl**	**3.55**	**315**		**Pn**	**14 03 40.1**	**+0.6**
ACHA	**Angle Creek He**	**3.70**	**308**		**Pn**	**14 03 41.7**	**0.0**
BRSE	**Bradley Lake S**	**3.71**	**352**		**Pn**	**14 03 40.3**	**-1.3**
BRSE					**Sn**	**14 04 24.3**	**-1.1**
BRSE	**Bradley Lake S**	**3.71**	**352**	P	**Pn**	**14 03 40.3**	**-1.3**
	baz=172						
BRSE				S	**Sn**	**14 04 24.3**	**-1.1**
	baz=172						
HOM	**Homer**	**3.73**	**345**	Pn	**Pn**	**14 03 42.3**	**+0.5**
HOM				IAML		14 04 57.5	
	comp=N,294nm,0.9s						
BRLK	**Bradley Lake**	**3.74**	**351**	Pn	**Pn**	**14 03 40.8**	**-1.3**
ANCK	**Angle Creek**	**3.77**	**307**		**Pn**	**14 03 43.0**	**+0.4**
KVTA	**Katmai Vly 10**	**3.79**	**310**		**Pn**	**14 03 43.2**	**+0.5**
Q23K	**Middleton Isla**	**3.83**	**27**		**Pn**	**14 03 42.7**	**-0.5**
Q23K	**Middleton Isla**	**3.83**	**27**	IAML		14 04 30.9	
	comp=E,149nm,1.2s						
Q23K				IAML		14 05 44.6	
	comp=N,126nm,1.5s						
Q23K	**Middleton Isla**	**3.83**	**27**	P	**Pn**	**14 03 43.7**	**+0.5**
	baz=209						
MID	**Middleton Isla**	**3.83**	**27**		**Pn**	**14 03 42.4**	**-0.8**
MID	**Middleton Isla**	**3.83**	**27**	IAML		14 04 29.8	
	comp=N,122nm,1.4s						
MID				IAML		14 04 30.9	
	comp=E,154nm,1.3s						
MID	**Middleton Isla**	**3.83**	**27**	P	**Pn**	**14 03 42.3**	**-1.0**
KAHC	**Katmai Hardscr**	**3.83**	**314**		**Pn**	**14 03 43.9**	**+0.5**
KAHC	**Katmai Hardscr**	**3.83**	**314**	P	**Pn**	**14 03 43.9**	**+0.5**
	baz=131						
AUCH	**Augustine Cone**	**3.84**	**331**		**Pn**	**14 03 44.3**	**+0.8**
CNTC	**Contact Creek**	**3.98**	**306**		**Pn**	**14 03 45.4**	**-0.1**
Q17K	**Contact Creek**	**3.98**	**306**	P	**Pn**	**14 03 45.4**	**-0.1**
	baz=122						
KELA	**Mount Kelaz**	**4.01**	**309**		**Pn**	**14 03 46.0**	**+0.1**
P19K	**Oil Pt**	**4.03**	**334**		**Pn**	**14 03 46.1**	**0.0**
P19K				IAML		14 04 38.6	
	comp=E,257nm,0.6s						
P19K	**Oil Pt**	**4.03**	**334**	P	**Pn**	**14 03 46.3**	**+0.2**
	baz=152						
SEW	**Seward**	**4.04**	**2**		**Pn**	**14 03 44.7**	**-1.5**
SEW	**Seward**	**4.04**	**2**	P	**Pn**	**14 03 44.7**	**-1.5**
	baz=182						
PLK1	**Peulik 1**	**4.12**	**298**		**Pn**	**14 03 46.9**	**-0.4**
P23K	**Montague Islan**	**4.13**	**17**		**Pn**	**14 03 46.4**	**-1.0**
P23K	**Montague Islan**	**4.13**	**17**	P	**Pn**	**14 03 46.3**	**-1.0**
	baz=198						
O20K	**Slope Mountain**	**4.29**	**341**		**Pn**	**14 03 48.8**	**-0.9**
O20K	**Slope Mountain**	**4.29**	**341**	P	**Pn**	**14 03 48.8**	**-0.9**
	baz=158						
IVE	**Iliamna Volcan**	**4.31**	**338**		**Pn**	**14 03 48.9**	**-1.1**
P18K	**Big Mountain,**	**4.42**	**321**		**Pn**	**14 03 51.0**	**-0.5**
P18K	**Big Mountain,**	**4.42**	**321**	P	**Pn**	**14 03 51.0**	**-0.5**
	baz=137						
SLKM	**Skilak Lake**	**4.45**	**357**		**Pn**	**14 03 50.3**	**-1.6**
R16K	**Pilot Point**	**4.54**	**292**		**Pn**	**14 03 52.9**	**-0.1**
R16K	**Pilot Point**	**4.54**	**292**	IAML		14 06 15.4	
	comp=E,104nm,1.4s						
R16K	**Pilot Point**	**4.54**	**292**	P	**Pn**	**14 03 52.9**	**-0.1**
	baz=107						
Q16K	**King Salmon**	**4.54**	**308**		**Pn**	**14 03 53.2**	**+0.1**
Q16K	**King Salmon**	**4.54**	**308**	P	**Pn**	**14 03 53.2**	**+0.1**
	baz=123						
RED	**Redoubt Volcan**	**4.63**	**341**		Pn	14 03 52.7	-1.7
HIN	**Hinchinbrook I**	**4.66**	**20**		**Pn**	**14 03 54.7**	**0.0**
HIN				IAML		14 04 54.4	
	comp=E,151nm,0.9s						
HIN				IAML		14 04 55.5	
	comp=N,97nm,1.0s						
RSO	**Redoubt South**	**4.67**	**342**		**Pn**	**14 03 54.8**	**-0.2**
P17K	**Kvichak River**	**4.75**	**314**		**Pn**	**14 03 55.7**	**-0.3**
P17K	**Kvichak River**	**4.75**	**314**	P	**Pn**	**14 03 55.7**	**-0.3**
	baz=129						
CAPN	**Captain Cook N**	**4.76**	**352**		**Pn**	**14 03 56.4**	**+0.4**
O18K	**Koktuh Hills**	**4.76**	**325**		**Pn**	**14 03 55.7**	**-0.4**
O18K				IAML		14 04 51.6	
	comp=N,80nm,1.1s						
O18K				IAML		14 05 05.0	
	comp=E,57nm,1.4s						
O18K	**Koktuh Hills**	**4.76**	**325**	P	**Pn**	**14 03 55.0**	**-1.2**
	baz=141						
O19K	**Port Alsworth**	**4.78**	**332**		**Pn**	**14 03 55.4**	**-1.0**
O19K				IAML		14 04 42.6	
	comp=N,110nm,0.5s						
O19K	**Port Alsworth**	**4.78**	**332**	P	**Pn**	**14 03 55.3**	**-1.0**
	baz=148						
KAIM	**Kayak Island**	**4.79**	**34**		**Pn**	**14 03 55.4**	**-1.2**
KAIM				IAML		14 04 58.1	
	comp=E,151nm,1.4s						
KAIM				IAML		14 05 21.9	
	comp=N,156nm,1.5s						
KAIM	**Kayak Island**	**4.79**	**34**	P	**Pn**	**14 03 55.7**	**-0.8**
	baz=218						
CHGN	**Chignik**	**4.83**	**276**	Pn	**Pn**	**14 03 57.0**	**-0.1**
CHGN				IAML		14 05 00.5	
	comp=N,87nm,1.5s						
CHGN				IAML		14 05 11.8	
	comp=E,67nm,1.1s						
EYAK	**Cordova Ski Ar**	**4.96**	**24**		**Pn**	**14 03 57.3**	**-1.4**
EYAK	**Cordova Ski Ar**	**4.96**	**24**	P	**Pn**	**14 03 58.2**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.96**	**24**	P	**Pn**	**14 03 57.3**	**-1.4**
	baz=207						
RC01	**Rabbit Creek A**	**5.03**	**0**		**Pn**	**14 03 58.8**	**-0.9

SNH	Sunshine Point	5.51	39			Pn	14 04 06.4	0.0
SPNN	North Nagishla	5.52	345			Pn	14 04 05.7	-1.0
PMR	Palmer	5.54	3		Pn	Pn	14 04 07.1	+0.4
PMR	Palmer	5.54	3	P		Pn	14 04 07.1	+0.4
STLK	Strandline Lak	5.54	350			Pn	14 04 05.7	-1.2
KHIT	Khitrov Hills	5.57	35			Pn	14 04 06.4	-0.9
BMRM	Bremner River	5.60	27			Pn	14 04 07.0	-0.7
BMRM	Bremner River baz=211	5.60	27	P		Pn	14 04 07.0	-0.7
N18K	Kilae Creek	5.62	328			Pn	14 04 07.1	-0.9
N18K	Kilae Creek baz=143	5.62	328	P		Pn	14 04 07.1	-0.9
O16K	Kokwok River B	5.67	312			Pn	14 04 08.0	-0.6
O16K	Kokwok River B baz=126	5.67	312	P		Pn	14 04 08.0	-0.6
WAX	Waxell Ridge	5.70	37			Pn	14 04 09.1	0.0
CNBA	Chernabura Isl	5.73	261		Pn	Pn	14 04 08.0	-1.3
GHO	Glory Hole Cre	5.73	4			Pn	14 04 09.5	+0.1
KLU	Klutina	5.79	19			Pn	14 04 09.8	-0.4
KLU	Klutina baz=202	5.79	19	P		Pn	14 04 09.8	-0.4
BARK	Barkley Ridge	5.79	39			Pn	14 04 10.3	-0.1
SML	Sawmill	5.79	7			Pn	14 04 10.3	0.0
SML	Sawmill baz=188	5.79	7	P		Pn	14 04 10.3	0.0
M23K	Glacier View	5.83	10			Pn	14 04 10.5	-0.2
M23K	Glacier View baz=191	5.83	10	P		Pn	14 04 10.5	-0.2
MESA	MESA	5.83	42			Pn	14 04 09.8	-1.2
MESA	MESA baz=228	5.83	42	P		Pn	14 04 09.9	-1.2
CRQM	Cirque	5.84	34			Pn	14 04 10.7	-0.4
CRQE	Cirque baz=219	5.85	34	P		Pn	14 04 10.7	-0.5
SVW2	Sparrevohn	5.88	331			Pn	14 04 10.6	-0.8
SVW2	Sparrevohn	5.88	331	P		Pn	14 04 10.6	-0.8
SCM	Sheep Creek Mo	5.91	11			Pn	14 04 11.8	-0.1
SCM	Sheep Creek Mo baz=193	5.91	11	P		Pn	14 04 11.8	-0.1
N17K	Nushagak Hills	5.93	322			Pn	14 04 11.7	-0.5
N17K	Nushagak Hills baz=136	5.93	322	P		Pn	14 04 11.7	-0.5
TGL	Tana Glacier	5.94	35			Pn	14 04 11.3	-1.0
ISLE	Juniper Island	5.99	38			Pn	14 04 12.5	-0.5
SKT	Skwentna	5.99	352			Pn	14 04 12.3	-0.6
SKT	Skwentna baz=171	5.99	352	P		Pn	14 04 12.3	-0.6
BAGL	Bagley Icefiel	6.00	39			Pn	14 04 12.1	-0.9
M20K	Styx River	6.07	345			Pn	14 04 13.3	-0.9
SDPT	Sand Point	6.09	268			Pn	14 04 12.3	-2.1
SDPT	Sand Point	6.09	268	P		Pn	14 04 13.9	-0.5
SDPT	Sand Point baz=80	6.09	268	P		Pn	14 04 13.3	-1.1
VRDI	Verde Repeater	6.12	30			Pn	14 04 14.6	-0.4
N25K	Chitina, Valde	6.16	24			Pn	14 04 15.1	-0.3
N25K	Chitina, Valde baz=208	6.16	24	P		Pn	14 04 15.1	-0.3
GLB	Gilahina Butte	6.21	27			Pn	14 04 15.8	-0.2
KIAG	Kiagna River	6.22	36			Pn	14 04 15.5	-0.7
O15K	Ungalikthiuk R	6.23	304			Pn	14 04 16.1	-0.1
O15K	Ungalikthiuk R baz=116	6.23	304	P		Pn	14 04 16.1	-0.1
SAMH	Samovar Hills	6.26	46			Pn	14 04 16.5	-0.2
M18K	Stony River	6.27	332			Pn	14 04 15.8	-1.1
M18K	Stony River baz=148	6.27	332	P		Pn	14 04 15.7	-1.1
GRNC	Granite Creek	6.28	39			Pn	14 04 16.6	-0.6
M19K	Big River Lodg	6.31	340			Pn	14 04 16.8	-0.6
TABL	Table Mountain	6.31	43			Pn	14 04 17.1	-0.5
M24K	Tolsona, Glenn	6.32	16			Pn	14 04 17.5	-0.1
MCARA	McCarthy VSAT	6.37	31			Pn	14 04 18.1	-0.1
MCARA	McCarthy VSAT baz=216	6.37	31	P		Pn	14 04 18.1	-0.1
PCA	Pinnacle	6.45	47			Pn	14 04 19.3	-0.1
PINM	Pinnacle baz=235	6.46	47	P		Pn	14 04 19.3	-0.1
N16K	Nishlik Lake	6.47	317			Pn	14 04 20.1	+0.5
N16K	Nishlik Lake baz=130	6.47	317	P		Pn	14 04 20.1	+0.5
BARN	Barnard Glacie	6.55	37			Pn	14 04 20.3	-0.6
WACK	Wrangell Chich	6.55	23			Pn	14 04 21.0	+0.1
CTG	Chitna Glacier baz=225	6.59	39	P		Pn	14 04 20.9	-0.4
CTGM	Chitina Glacie	6.59	39			Pn	14 04 20.9	-0.5
PNL	Peninsula	6.60	53			Pn	14 04 20.6	-0.7
PNL	Peninsula	6.60	53	P		Pn	14 04 20.8	-0.5
PNL	Peninsula baz=241	6.60	53	P		Pn	14 04 20.6	-0.7
WAT6	Susitna Watana	6.61	8			Pn	14 04 21.3	-0.3
WAT6	Susitna Watana baz=190	6.61	8	P		Pn	14 04 21.3	-0.3
LOGN	Logan Glacier	6.62	40			Pn	14 04 21.4	-0.3
BCPM	Bancas Point	6.64	50			Pn	14 04 21.3	-0.5
L19K	White Mountain	6.65	339		Pn	Pn	14 04 21.5	-0.6
M17K	Holitna River	6.66	326			Pn	14 04 21.7	-0.5
M17K	Holitna River baz=140	6.66	326	P		Pn	14 04 21.7	-0.5
L20K	Farewell, AK	6.75	344			Pn	14 04 22.8	-0.7
L20K	Farewell, AK baz=160	6.75	344	P		Pn	14 04 22.8	-0.7
WAT7	Susitna Watana	6.79	4			Pn	14 04 23.8	-0.3
N15K	Kwethluk River	6.83	311			Pn	14 04 25.4	+0.9
M16K	Timber Creek	6.90	320			Pn	14 04 25.6	+0.1
M16K	Timber Creek baz=132	6.90	320	P		Pn	14 04 25.6	+0.1
O14K	Tigyukauivet M	6.94	302			Pn	14 04 25.9	0.0
O14K	Tigyukauivet M baz=113	6.94	302	P		Pn	14 04 25.9	0.0
L18K	Granite Mounta	7.11	333		Pn	Pn	14 04 27.4	-0.9
DHY	Denali Highway	7.12	9			Pn	14 04 29.2	+0.6
DHY	Denali Highway baz=191	7.12	9	P		Pn	14 04 29.4	+0.7
O29M	Mount Kennedy	7.27	50			Pn	14 04 30.6	-0.1
O29M	Mount Kennedy baz=239	7.27	50	P		Pn	14 04 30.6	-0.1
P29M	Windy Craggy	7.34	56			Pn	14 04 30.7	-0.8
P29M	Windy Craggy baz=246	7.34	56	P		Pn	14 04 30.7	-0.8
M15K	Kasigluk River	7.37	313			Pn	14 04 32.6	+0.8
M15K	Kasigluk River baz=125	7.37	313	P		Pn	14 04 32.6	+0.8
RND	Reindeer	7.37	3			Pn	14 04 32.3	+0.4
TRF	Thorofare Moun	7.40	358			Pn	14 04 32.9	+0.4
TRF	Thorofare Moun baz=178	7.40	358	P		Pn	14 04 32.3	-0.2
N14K	Kuskokwak Cree	7.41	306			Pn	14 04 32.8	+0.4
N14K	Kuskokwak Cree baz=117	7.41	306	P		Pn	14 04 32.8	+0.4
CAST	Castle Rocks	7.46	352			Pn	14 04 34.3	+1.3
CAST	Castle Rocks baz=170	7.46	352	P		Pn	14 04 34.3	+1.3
YUK3	Moose Creek	7.47	36			Pn	14 04 34.3	+0.8
YUK3	Moose Creek baz=224	7.47	36	P		Pn	14 04 34.3	+0.8
M27K	Edge Creek, AK	7.48	29			Pn	14 04 33.8	+0.2
M27K	Edge Creek, AK baz=216	7.48	29	P		Pn	14 04 33.8	+0.2
L17K	Donlin	7.49	328			Pn	14 04 33.9	+0.4
L17K	Donlin baz=141	7.49	328	P		Pn	14 04 33.9	+0.4
KTH	Kantishna Hill	7.52	356			Pn	14 04 34.1	+0.1
L16K	Owhat River	7.55	322		Pn	Pn	14 04 34.5	+0.1
L16K	Owhat River baz=134	7.55	322	P		Pn	14 04 34.7	+0.4
TTA	Tatalina	7.57	338		Pn	Pn	14 04 34.7	0.0
TTA	Tatalina	7.57	338	P		Pn	14 04 34.8	+0.2
YUK7	Dusty Glacier	7.58	49			Pn	14 04 35.0	+0.1
K20K	Telida	7.62	345			Pn	14 04 34.1	-1.1
K20K	Telida baz=162	7.62	345	P		Pn	14 04 34.1	-1.1
L26K	Log Cabin Wild	7.69	22			Pn	14 04 37.5	+1.3
BVCY	Beaver Creek	7.82	32			Pn	14 04 38.4	+0.4
BVCY	Beaver Creek baz=219	7.82	32	P		Pn	14 04 38.4	+0.4
YUK4	Talbot Arm baz=232	7.83	43	P		Pn	14 04 40.9	+2.5
M14K	Bethel	7.92	311			Pn	14 04 41.0	+1.6
M14K	Bethel baz=121	7.92	311	P		Pn	14 04 40.0	+0.5
PLBC	Pleasant Camp	7.92	59			Pn	14 04 38.9	-0.6
PLBC	Pleasant Camp baz=250	7.92	59	P		Pn	14 04 38.9	-0.6
K17K	Iditarod	7.95	330			Pn	14 04 39.2	-0.5
HYT	Haines Junctio	8.00	48			Pn	14 04 41.3	+0.7
SIT	Sitka	8.04	77		Pn	Pn	14 04 38.3	-2.8
L27K	Beaver Creek,	8.08	27		Pn	Pn	14 04 41.5	-0.1
J18K	Innoko River	8.19	338			Pn	14 04 42.5	-0.6
M13K	Dall Lake	8.37	307			Pn	14 04 42.6	-3.0
J20K	Nowinta River	8.41	347		Pn	Pn	14 04 46.3	+0.1
SKAG	Skagway	8.43	60		Pn	Pn	14 04 47.2	+0.9
J19K	Poorman	8.46	342			Pn	14 04 46.1	-0.7
WRH	Wood River Hil	8.46	5		Pn	Pn	14 04 45.7	-1.1
HDA	Harding Lake	8.47	8			Pn	14 04 47.5	+0.5
O30N	Mendenhall	8.57	51			Pn	14 04 48.0	-0.4
JIS	Juneau Island	8.64	69		Pn	Pn	14 04 46.9	-2.4
K15K	Wolf Creek Mou	8.66	321			Pn	14 04 50.0	+0.3
J25K	Salcha River,	8.83	12			Pn	14 04 51.9	-0.1
ILAR	Eielson Array	8.84	8		Pn	Pn	14 04 52.7	+0.8
ILAR	Eielson Array comp=N,0.3nm,0.3s,baz=190,slow=13,SNR=25	8.84	8		Pn	Pn	14 04 49.4	-2.6
ILAR	comp=N,0.3nm,0.3s,baz=197,slow=23,SNR=6.0				Sn	Sn	14 06 25.3	-6.2
ILAR	comp=N,93nm,19.5s,baz=182,slow=40 comp=N,1.3nm,0.7s				LR	LR	14 08 34.5	
K27K	Chicken	8.85	23		Pn	Pn	14 04 52.6	+0.5
COLA	College	8.88	5			Pn	14 04 53.9	+1.5
MDM	Murphy Dome	8.94	4		Pn	Pn	14 04 53.7	+0.3
J26L	Joseph Creek	8.99	17			Pn	14 04 54.1	0.0
MLY	Manley	8.99	357		Pn	Pn	14 04 52.8	-1.4
N31M	Braeburn, Yuko	9.05	48		Pn	Pn	14 04 55.0	0.0
J16K	Anvik River	9.05	327		Pn	Pn	14 04 54.4	-0.6
WHY	Whitehorse	9.06	53			Pn	14 04 56.1	+0.9
POKR	Poker Plat Res	9.14	6		Pn	Pn	14 04 56.7	+0.6
L29M	L29M	9.18	35			Pn	14 04 57.1	+0.4
P32M	Atlin	9.25	61		Pn	Pn	14 04 56.6	-1.2
P32M	Atlin baz=254	9.25	61		P	Pn	14 04 57.3	-0.4
M30M	Minto, Yukon	9.28	40			Pn	14 04 57.3	-0.8
M30M	Minto, Yukon baz=231	9.28	40		P	Pn	14 04 58.1	-0.1
U33K	Whale Pass	9.31	83		Pn	Pn	14 04 55.2	-3.2
DAWY	Dawson	9.53	29			Pn	14 05 02.0	+0.5
K13K	Kusilvak Mount	9.65	314			Pn	14 05 03.0	-0.1
J14K	Nanvaranak Lak	9.68	319			Pn	14 05 03.5	0.0
WRAK	Wrangell Islan	9.71	81		Pn	Pn	14 05 02.1	-1.8
H21K	Melozitna Rive	9.72	353			Pn	14 05 02.7	-1.4
H24K	Noodor Dome	9.84	5			Pn	14 05 06.4	+0.7
Q32M	Nakina River	9.84	66		Pn	Pn	14 05 06.3	+0.4
P33M	Teslin, Yukon	9.86	58			Pn	14 05 04.8	-1.3
UNV	Unalaska Valle	9.88	264		P	Pn	14 05 05.3	-0.9
K29M	Barlow Dome	9.90	33			Pn	14 05 06.9	+0.3
M31M	Drury Creek, Y	9.99	46			Pn	14 05 08.6	+0.8
H18K	Honhosa River	10.02	339			Pn	14 05 07.5	-0.7
IMAR	Indian Mountai	10.12	351		Pn	Pn	14 05 09.3	-0.3
H17K	Granite Mounta	10.18	335		Pn	Pn	14 05 07.5	-2.8
FARO	Faro, Yukon	10.43	47		Pn	Pn	14 05 15.4	+1.7
G21K	Allakaket	10.62	352			Pn	14 05 16.7	+0.3
G23K	Bananza Creek	10.67	359		Pn	Pn	14 05 18.0	+0.9
G24K	Hadweenzic Riv	10.71	5			Pn	14 05 17.9	+0.3
FYU	Fort Yukon	10.74	10			Pn	14 05 18.1	+0.1
DLBC	Dease Lake	10.95	69		Pn	Pn	14 05 20.9	0.0
DLBC	Dease Lake comp=N,0.4nm,0.3s,baz=252,slow=8.8,SNR=9.4	10.95	69		Pn	Pn	14 05 20.1	-0.8
DLBC	baz=286,slow=20,SNR=1.2				Sn	Sn	14 07 17.9	-5.4
DLBC	comp=N,228nm,20.6s,baz=287,slow=32 comp=N,0.9nm,0.3s				LR	LR	14 08 37.7	
F21K	Alatna River	11.32	353			Pn	14 05 25.6	-0.3
F20K	Avaraak Lake	11.36	348			Pn	14 05 26.4	0.0
F24K	Squaw Lake	11.52	4			Pn	14 05 29.8	+1.2
BMAR	Burnt Mountain	11.65	10		Pn	Pn	14 05 31.0	+0.5
E19K	Redstone River	11.94	346			Pn	14 05 34.0	-0.4
F15K	North Star Dit	12.03	329		Pn	Pn	14 05 34.9	-0.8
E22K	Anaktuvuk Pass	12.14	356		Pn	Pn	14 05 37.0	-0.1
E25K	Arctic Village	12.24	7			Pn	14 05 40.1	+1.5
F28M	Old Crow	12.46	18			Pn	14 05 41.6	+0.1
TOLK	Toolik Lake Re	12.61	0		Pn	Pn	14 05 44.5	+0.9
D22K	Ayikyak River	12.92	355		Pn	Pn	14 05 47.4	-0.4
G31M	Satah River	13.10	28		Pn	Pn	14 05 51.7	+1.5
BBB	Bella Bella comp=N,310nm,20.6s,baz=310,slow=32	13.27	98		LR	LR	14 09 45.1	
D25K	Kavik River	13.38	5		Pn	Pn	14 05 53.5	-0.6
F31M	Tsiigehtchic	13.63	27		Pn	Pn	14 05 57.7	+0.3
C19K	Atukok River	13.64	342		Pn	Pn	14 05 58.2	+0.5
D27M	Malcolm River	13.79	13		Pn	Pn	14 05 59.3	-0.4
INK	Inuvik	14.35	25			Pn	14 06 07.7	+0.6
INK	Inuvik comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=6.3 comp=N,3.6nm,1.1s	14.35	25		Pn	Pn	14 06 06.0	-1.1
ADK	Adak	16.33	266		Pn	Pn	14 06 32.7	-0.7
KIWB	Kanaga Island	16.60	267		Pn	Pn	14 06 36.0	-1.0
CLRS	Cowichan Lake	17.16	104		Pn	Pn	14 06 42.5	-1.5
CLRS	comp=Z,39nm,1.3s				IAmb	IAmb	14 07 02.2	
HILA	High Level	17.76	68		Pn	Pn	14 06 49.5	-1.9
YKA	Yellowknife Ar	18.88	56		P	P	14 07 03.9	-0.6
YKA	Yellowknife Ar comp=Z,0.2nm,0.3s,baz=265,slow=9.6,SNR=21	18.88	56		P	P	14 07 05.6	+1.1
YKA	comp=Z,83nm,19.4s,baz=312,slow=34 comp=Z,1.1nm,0.8s				LR	LR	14 13 32.4	
A36M	Sachs Harbour	18.98	23		P	P	14 07 07.5	+2.0
A36M	comp=Z,20nm,0.8s				IAmb	IAmb	14 07 16.7	
SHEM	Shemya Is, Ala comp=Z,59nm,18.7s,baz=149,slow=40	21.14	276		LR	LR	14 16 37.4	
NEW	Newport comp=Z,4.5nm,0.9s,baz=353,slow=2.3,SNR=5.1	21.33	98		P	P	14 07 31.6	+0.3
NEW	comp=Z,141nm,20.4s,baz=268,slow=34 comp=Z,4.5nm,0.9s				LR	LR	14 14 40.0	
J05D	Fort Rock, OR	22.27	113		P	P	14 07 40.7	-0.9
J05D	comp=Z,13nm,1.2s				IAmb	IAmb	14 07 56.4	
YBH	Yreka Blue Hor comp=Z,262nm,21.5s,baz=318,slow=31	22.66	118		LR	LR	14 14 19.4	
PLID	Pearl Lake	23.85	103		P	P	14 07 58.1	+0.3
WVOR	Wild Horse Val	24.23	111		P	P	14 07 59.6	-1.6
ELK	Elko comp=Z,106nm,21.2s,baz=356,slow=32	27.22	110		LR	LR	14 17 28.2	
NVAR	Mina Array Bea	27.36	117		P	P	14 08 28.8	-0.9
NVAR	Mina Array Bea comp=Z,0.7nm,0.7s,baz=304,slow=8.5,SNR=6.7	27.36	117		P	P	14 08 30.8	+1.1
NVAR	comp=Z,246nm,18.1s,baz=331,slow=32 comp=Z,0.7nm,0.7s				LR	LR	14 17 32.7	
PDAR	Pinedale Array comp=Z,0.3nm,0.5s,baz=326,slow=4.5,SNR=4.6	28.90	100		P	P	14 08 43.0	-0.4
PDAR	comp=Z,35nm,18.6s,baz=347,slow=35 comp=Z,0.3nm,0.5s				LR	LR	14 19 44.4	
SEY	Seymchan comp=Z,262nm,18.4s,baz=6.0,slow=39	29.21	307		LR	LR	14 21 42.2	
PETK	Petropavlovsk-comp=Z,76nm,21.5s,baz=95,slow=36	29.97	287		LR	LR	14 20 25.1	
MA2	Magadan comp=Z,160nm,18.0s,baz=86,slow=39	30.93	301		LR	LR	14 22 50.5	
PFO	Pinyon Flats O comp=Z,159nm,20.5s,baz=348,slow=31	32.09	120		LR	LR	14 19 23.9	
ULM	Lac du Bonnet comp=Z,1.6nm,0.8s,baz=262,slow=8.1,SNR=4.2	32.12	77		P	P	14 09 12.7	+1.2
ULM	comp=Z,136nm,19.1s,baz=194,slow=36 comp=Z,1.6nm,0.8s				LR	LR	14 21 45.1	
X16A	Lo Mia Camp, P	33.95	113		P	P	14 09 29.5	+1.6
X16A	comp=Z,3.7nm,1.0s				IAmb	IAmb	14 09 38.3	
X18A	Snowflake	34.64	112			PcP	14 12 07.7	-0.2
TIXI	Tiksi comp=Z,34nm,18.2s,baz=24,slow=39	35.70	328		LR	LR	14 26 10.5	
ANMO	Albuquerque comp=Z,69nm,19.4s,baz=72,slow=33	36.17	107		LR	LR	14 22 46.9	
FRB	Frobisher Bay comp=Z,80nm,18.9s,baz=46,slow=37	38.77	45		LR	LR	14 26 31.1	
YAK	Yakutsk comp=Z,66nm,20.4s,baz=110,slow=41	39.31	313		LR	LR	14 29 18.0	
TX31	Lajitas Ar. Si	42.01	110		P	P	14 10 34.6	-1.2
TXAR	Lajitas Array	42.01	110		P	P	14 10 34.7	-1.0
TXAR	Lajitas Array comp=Z,0.8nm,0.9s,baz=318,slow=5.6,SNR=7.8	42.01	110		P	P	14 10 36.4	+0.6
TXAR	comp=Z,71nm,18.1s,baz=350,slow=35 comp=Z,0.8nm,0.9s				LR	LR	14 27 24.8	
LPIG	La Paz comp=Z,91nm,18.7s,baz=6.0,slow=32	42.96	122		LR	LR	14 25 53.0	
SADO	Sadowa	44.47	74		LR	LR	14 28 11.6	
HEH	HeiHe comp=Z,95nm,19.5s,baz=96,slow=34	47.16	300	*e*P		P	14 11 17.1	+0.6
HEH	comp=Z,4.0nm,1.1s				pmax	pmax		
HEH	comp=Z,200nm,5.4s				pmax	pmax		
H11N2	WAKE ISLAND Hy baz=31,slow=76,SNR=16	48.54	240		T	T	15 03 45.7	
H11N3	WAKE ISLAND Hy baz=31,slow=76,SNR=20	48.55	240		T	T	15 04 01.0	
H11N1	WAKE ISLAND Hy baz=31,slow=76,SNR=16	48.56	240		T	T	15 03 47.2	
H11S1	WAKE ISLAND Hy baz=28,slow=76,SNR=40	49.68	239		T	T	15 05 43.2	
H11S2	WAKE ISLAND Hy baz=28,slow=76,SNR=27	49.70	239		T	T	15 05 53.0	
H11S3	WAKE ISLAND Hy baz=28,slow=76,SNR=28	49.70	239		T	T	15 05 53.4	
MJAR	Matsushiro Arr comp=Z,2.5nm,0.8s,baz=42,slow=7.2,SNR=4.6 comp=Z,2.5nm,0.8s	50.93	279		P	P	14 11 45.7	+0.1
TEIG	Tepich comp=Z,407nm,18.4s,baz=317,slow=38	57.60	102		LR	LR	14 39 11.4	
SONM	Songino Array comp=Z,2.1nm,0.8s,baz=50,slow=6.4,SNR=12	58.56	310		P	P	14 12 42.2	+1.3
SONM	comp=Z,103nm,20.3s,baz=90,slow=36 comp=Z,2.1nm,0.8s				LR	LR	14 38 05.1	
ZAA0	Zalesovo Array	61.58	327		P	P	14 13 00.6	-0.7
ZALV	Zalesovo Beam	61.58	327		P	P	14 13 01.8	+0.5
ZALV	Zalesovo Beam comp=Z,2.1nm,0.7s,baz=23,slow=7.1,SNR=11 comp=Z,2.1nm,0.7s	61.58	327		P	P	14 13 01.6	+0.3
HHC	Hu-ho-hao-te	61.61	302	*e*P		P	14 12 59.7	-2.2
HHC					sP	sP	14 13 10.3	+6.1
HHC	comp=Z,8.0nm,0.6s				pmax	pmax		
HHC	comp=Z,99nm,5.0s				pmax	pmax		
NOA	NORSAR Array B comp=Z,1.2nm,0.8s,baz=37,slow=6.9,SNR=2.4 comp=Z,1.2nm,0.8s	62.26	10		P	P	14 13 05.1	-0.8
FINES	FINESS Array B comp=Z,2.1nm,0.8s,baz=355,slow=9.6,SNR=4.9 comp=Z,2.1nm,0.8s	62.77	2		P	P	14 13 08.6	-0.6
ARU	Arti comp=Z,72nm,18.5s,baz=303,slow=38	65.52	343		LR	LR	14 44 28.2	
KURK	Kurchatov	66.26	329		P	P	14 13 33.3	+1.1
KURK	comp=Z,2.3nm,0.8s				IAmb	IAmb	14 13 33.6	
BRVK	Borovoye	66.35	335		P	P	14 13 32.0	-0.7
BRVK	comp=Z,5.2nm,1.1s				IAmb	IAmb	14 13 34.8	
BVAR	Borovoye Array comp=Z,4.5nm,0.8s,baz=35,slow=8.1,SNR=19	66.35	335		P	P	14 13 33.0	+0.2
BVAR	comp=Z,93nm,19.2s,baz=331,slow=42 comp=Z,4.5nm,0.8s				LR	LR	14 48 59.6	
KURBB	Kurchatov Arra comp=Z,1.4nm,0.7s,baz=30,slow=6.6,SNR=11	66.37	329		P	P	14 13 31.9	-1.0
KURBB	comp=Z,69nm,18.5s,baz=162,slow=40 comp=Z,1.4nm,0.7s				LR	LR	14 46 39.4	
MK31	Makanchi Array	68.60	324		P	P	14 13 47.3	+0.2
MK31	comp=Z,2.5nm,1.0s				IAmb	IAmb	14 13 56.3	
MKAR	Makanchi Array	68.60	324		P	P	14 13 47.2	+0.1
MKAR	Makanchi Array comp=Z,1.4nm,0.8s,baz=42,slow=6.4,SNR=13	68.60	324		P	P	14 13 46.5	-0.7
MKAR	comp=Z,86nm,18.0s,baz=34,slow=40 comp=Z,1.4nm,0.8s				LR	LR	14 48 03.0	
MAKZ	Makanchi	68.69	325		P	P	14 13 48.6	+0.9
MAKZ	comp=Z,4.7nm,1.1s				IAmb	IAmb	14 13 49.2	
WMQ	Urumqi	69.32	319	*e*P		P	14 13 52.3	+0.6
WMQ	comp=Z,8.0nm,0.7s				pmax	pmax		
ABKAR	Akbulak array	72.15	340		P	P	14 14 09.3	+0.6
GERES	GERESS Array B comp=Z,0.6nm,0.6s,baz=356,slow=5.6,SNR=3.5 comp=Z,0.6nm,0.6s	74.54	11		P	P	14 14 25.0	+2.1
AAK	Ala-Archa	74.78	328		P	P	14 14 26.4	+1.9
AAK	comp=Z,7.7nm,1.4s				IAmb	IAmb	14 14 27.3	
SDV	Santo Domingo comp=Z,26nm,21.3s,baz=54,slow=36	76.62	94		LR	LR	14 49 03.6	
KSH	Kashi comp=Z,4.0nm,1.7s	77.16	325		P	P	14 14 40.9	+2.8
KSH					pmax	pmax		
PZH	PanZhiHua comp=Z,10.0nm,0.6s	77.98	300		P	P	14 14 42.8	-0.1
PZH					pmax	pmax		
PZH	comp=Z,120nm,5.4s				pmax	pmax		
ESDC	Sonseca Array comp=Z,1.2nm,0.8s,baz=320,slow=4.4,SNR=6.5 comp=Z,1.2nm,0.8s	80.29	26		P	P	14 14 56.5	+1.3
GEYT	Alibeck comp=Z,2.3nm,0.7s,baz=278,slow=10,SNR=6.0 comp=Z,2.3nm,0.7s	83.39	338		P	P	14 15 13.5	+1.9
CMAR	Chiang Mai Arr comp=Z,0.6nm,0.4s,baz=19,slow=4.6,SNR=9.0	86.14	298		P	P	14 15 25.9	+0.3
CMAR	comp=Z,23nm,18.5s,baz=125,slow=40 comp=Z,0.6nm,0.4s				LR	LR	14 59 39.5	
QSPA	South Pole Qui comp=Z,7.9nm,1.1s,baz=86,slow=1.0,SNR=13	145.87	180		PKPbc	PKPdf	14 22 21.3	-0.4

IDC 08 14:04:02.1±6.7, 7°.38S×120°.93E, h152^{km}±70^{km}, mb3.0/3, mbtmp3.6/4, Error ellipse: s-maj=151.2km s-min=14.7km az=51.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
WRA	Warramunga Arr 1.0nm,0.3s,baz=315,slow=12,SNR=23	18.02	135	P P	14 08 01.3	-0.3
WRA				S S	14 11 21.3	+0.7
ASAR	0.2nm,0.4s,baz=311,slow=24,SNR=1.5 Alice Springs 0.2nm,0.3s,baz=320,slow=8.3,SNR=14	20.43	144	P P	14 08 27.8	+0.2
MKAR

JNSB	**Nemuroshibetsu**	**2.39**	**255**	*eP*		**Pb**	**14 05 41.5**	**-1.5**
JKHN	**Kushirohamanak**	**2.58**	**240**	*eS*		**Sn**	**14 06 14.0**	**+0.4**
JNK	**Nakash**	**2.64**	**253**	*eP*		**Pn**	**14 05 44.7**	**+1.9**
JNK				*eS*		**Sn**	**14 06 17.5**	**+2.2**
AKK	**Akkeshi**	**2.81**	**241**	*eP*		**Pn**	**14 05 45.8**	**+0.7**
AKK				*eS*		**Sn**	**14 06 18.9**	**-0.5**
JAK	**Akkeshi**	**2.91**	**242**	*eP*		**Pn**	**14 05 47.2**	**+0.8**
JAK				*eS*		**Sn**	**14 06 22.2**	**+0.4**
JTKR	**Abashiri--Toko**	**3.11**	**263**	*eP*		**Pb**	**14 05 53.1**	**-2.3**
JAR	**Ashorobuto**	**3.39**	**252**	*eS*		**Sn**	**14 06 36.3**	**+2.5**
JCH	**Churui**	**3.95**	**244**	*eP*		**Pn**	**14 06 02.3**	**+1.4**
JKK2	**Kamakawa 2**	**3.96**	**264**	*eP*		**Pn**	**14 06 04.7**	**+3.8**
JNBK	**Urakawa-nobuka**	**4.51**	**243**	*eP*		**Pn**	**14 06 10.4**	**+1.9**
YSS	**Yuzh-Sakhalins**	**4.57**	**305**	*eP*		**Pn**	**14 06 09.6**	**+0.3**
YSS					AMB	AMB	14 06 16.3	
	20nm,0.6s							
JOT	**Ohata**	**6.06**	**242**	*eP*		**Pn**	**14 06 31.0**	**+1.2**

*ROM **08** 14:11:56.5±0.5,43˚.12N±0˚.02×6˚.77E±0˚.04,h0km, ML2.2/30,Error ellipse: s-maj=3.5km s-min=2.4km az=243.0*
*STR **08** 14:11:58.2±1.1,43˚N±8˚×±˚,h0km,MLv2.7/27,Error ellipse: s-maj=0.0km s-min=0.0km az=167.2,preliminary*
ISC 08 14:11:57.1±1.4,43.17N±0˚.07×6.78E±0˚.03,h0km,n68, σ0s51/60,Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FLAF	**Flassans-sur-I**	**0.44**	**299**	Pg	**Pg**	**14 12 06.1**	**+0.6**
CALF	**Calern**	**0.59**	**10**	Pg	**Pg**	**14 12 09.4**	**+1.0**
TRIGF	**Trigance**	**0.64**	**335**	Pg	**Pg**	**14 12 09.7**	**+0.5**
SALSA	**La sagne**	**0.71**	**355**	Pg	**Pg**	**14 12 11.3**	**+0.5**
MVIF	**Mont Vial**	**0.77**	**20**	Pg	**Pb**	**14 12 13.1**	**-0.4**
MVIF	**Mont Vial**	**0.77**	**20**	P	**Pb**	**14 12 13.6**	**+0.1**
ESCA	**l'Escarene**	**0.79**	**33**	Pg	**Pb**	**14 12 13.6**	**-0.1**
ESCA	**l'Escarene**	**0.79**	**33**	P	**Pb**	**14 12 14.1**	**+0.4**
ARTF	**Artigues**	**0.82**	**301**	Pg	**Pg**	**14 12 13.3**	**+0.4**
BURY	**Giardini Botan**	**0.83**	**43**	P	**Pb**	**14 12 14.9**	**+0.5**
BURY				AML	AML		
	comp=E,107μm,0.5s						
BURY				AML	AML		
	comp=E,107μm,0.5s						
BURY				AML	AML		
	comp=N,126μm,0.6s						
BURY				AML	AML		
	comp=N,103μm,0.2s						
BURY				AML	AML		
	comp=E,92μm,0.4s						
BURY	**Giardini Botan**	**0.83**	**43**	P	**Pb**	**14 12 14.9**	**+0.5**
LEPF	**PUYLOUBIER**	**0.86**	**294**	Pg	**Pg**	**14 12 14.0**	**+0.4**
ENAUX	**Enaux**	**0.94**	**360**	Pg	**Pg**	**14 12 15.6**	**+0.5**
ENAUX				Sn	**Sn**	**14 12 31.3**	**-0.5**
BLAF	**les Blancs**	**0.94**	**326**	Pg	**Pg**	**14 12 15.4**	**+0.2**
BLAF				Sg	**Sg**	**14 12 27.9**	**+0.5**
SPIF	**crte de Spivo**	**0.94**	**20**	Pg	**Pb**	**14 12 16.0**	**-0.4**
SAOF	**Saorge**	**0.99**	**34**	P	**Pb**	**14 12 17.5**	**+0.3**
SAOF				AML	AML		
	comp=E,78μm,0.4s						
SAOF				AML	AML		
	comp=N,128μm,0.3s						
SAOF				AML	AML		
	comp=N,128μm,0.3s						
SAOF				AML	AML		
	comp=E,78μm,0.4s						
SAOF	**Saorge**	**0.99**	**34**	Pg	**Pb**	**14 12 17.3**	**+0.1**
SAOF	**Saorge**	**0.99**	**34**	P	**Pb**	**14 12 17.4**	**+0.3**
OGDI	**Digne**	**1.00**	**340**	Pg	**Pb**	**14 12 17.0**	**-0.3**
OGDI	**Digne**	**1.00**	**340**	P	**Pb**	**14 12 17.0**	**-0.3**
ISO	**Isola**	**1.03**	**11**	Pg	**Pg**	**14 12 17.2**	**+0.4**
ISO	**Isola**	**1.03**	**11**	P	**Pb**	**14 12 17.8**	**0.0**
BSTF	**la Bastide-des**	**1.09**	**311**	Pg	**Pg**	**14 12 17.6**	**-0.3**
IMI	**Imperia**	**1.10**	**47**	P	**Pb**	**14 12 18.7**	**-0.3**
IMI				AML	AML		
	comp=E,110μm,0.6s						
IMI				AML	AML		
	comp=N,89μm,1.5s						
IMI				AML	AML		
	comp=E,110μm,0.6s						
IMI				AML	AML		
	comp=N,89μm,0.5s						
IMI				AML	AML		
	comp=E,72μm,0.2s						
IMI				AML	AML		
	comp=N,84μm,0.5s						
IMI	**Imperia**	**1.10**	**47**	P	**Pb**	**14 12 18.7**	**-0.3**
STV	**Sant Anna di V**	**1.14**	**20**	P	**Pb**	**14 12 19.7**	**-0.1**
STV				AML	AML		
	comp=E,102μm,1.4s						
STV				AML	AML		
	comp=N,120μm,0.8s						
STV				AML	AML		
	comp=E,102μm,0.6s						
STV				AML	AML		
	comp=N,120μm,1.2s						
STV				AML	AML		
	comp=E,65μm,0.2s						
STV				AML	AML		
	comp=N,107μm,0.4s						
STV	**Sant Anna di V**	**1.14**	**20**	P	**Pb**	**14 12 19.7**	**-0.1**
ENR	**Entracque**	**1.15**	**24**	P	**Pb**	**14 12 20.0**	**+0.1**
ENR				AML	AML		
	comp=E,247μm,0.4s						
ENR				AML	AML		
	comp=N,183μm,0.5s						
ENR				AML	AML		
	comp=E,247μm,1.6s						
ENR				AML	AML		
	comp=E,247μm,0.4s						
ENR				AML	AML		
	comp=N,143μm,0.4s						
ENR	**Entracque**	**1.15**	**24**	P	**Pb**	**14 12 20.0**	**+0.1**
JAUF	**Jausiers**	**1.26**	**359**	Pg	**Pg**	**14 12 21.5**	**+0.3**
OGAG	**Argentiere**	**1.29**	**352**	Pn	Pn	14 12 27.8	+5.2
OGAG	**Argentiere**	**1.29**	**352**	P	Pn	14 12 27.9	+5.3
SURF	**Saint Ours**	**1.31**	**1**	Pg	**Pn**	**14 12 22.9**	**0.0**
SURF	**Saint Ours**	**1.31**	**1**	P	**Pb**	**14 12 22.6**	**-0.1**
GBOS	**Grotte di Boss**	**1.32**	**35**	P	**Pn**	**14 12 22.9**	**0.0**
GBOS				AML	AML		
	comp=E,52μm,0.1s						
GBOS				AML	AML		
	comp=N,45μm,0.4s						
GBOS	**Grotte di Boss**	**1.32**	**35**	P	**Pb**	**14 12 22.8**	**0.0**
RORO	**Rocca Rossa**	**1.32**	**44**	P	**Pg**	**14 12 22.2**	**-0.3**
RORO				AML	AML		
	comp=N,47μm,0.1s						
RORO				AML	AML		
	comp=E,59μm,0.1s						
RORO	**Rocca Rossa**	**1.32**	**44**	P	**Pg**	**14 12 22.2**	**-0.3**
PZZ	**Stroppo**	**1.36**	**10**	P	**Pn**	**14 12 23.4**	**0.0**
PZZ				AML	AML		
	comp=N,180μm,1.6s						
PZZ				AML	AML		
	comp=N,180μm,0.4s						
PZZ				AML	AML		
	comp=E,142μm,0.2s						
PZZ				AML	AML		
	comp=E,142μm,0.2s						
PZZ				AML	AML		
	comp=N,166μm,0.4s						
PZZ	**Stroppo**	**1.36**	**10**	Pn	**Pn**	**14 12 23.4**	**0.0**
PZZ	**Stroppo**	**1.36**	**10**	P	**Pn**	**14 12 23.4**	**0.0**
CREF	**Crivaux**	**1.38**	**355**	Pg	**Pb**	**14 12 24.1**	**+0.2**
SAUF	**chteau de Sau**	**1.44**	**303**	Pn	**Pb**	**14 12 25.1**	**+0.4**
CANO	**Canova, Maglio**	**1.48**	**45**	P	**Pn**	**14 12 24.6**	**-0.5**
CANO				AML	AML		
	comp=N,50μm,0.6s						
CANO				AML	AML		
	comp=E,151μm,1.2s						
CANO	**Canova, Maglio**	**1.48**	**45**	P	**Pn**	**14 12 24.6**	**-0.5**
BHB	**Bricherasio**	**1.71**	**12**	P	**Pn**	**14 12 28.5**	**+0.3**
BHB				AML	AML		
	comp=E,38μm,0.4s						
BHB				AML	AML		
	comp=N,58μm,0.2s						
BHB	**Bricherasio**	**1.71**	**12**	Pn	**Pn**	**14 12 28.4**	**+0.3**
PGF	**Pioggiola**	**1.75**	**110**	AML	AML		
	comp=N,81μm,2.3s						
PGF				AML	AML		
	comp=E,71μm,1.9s						
RRL	**Rocca Remolon**	**1.75**	**0**	P	**Pb**	**14 12 30.0**	**-0.2**
RRL				AML	AML		
	comp=N,61μm,0.8s						
RRL				AML	AML		
	comp=E,46μm,0.4s						
RRL	**Rocca Remolon**	**1.75**	**0**	Pn	**Pb**	**14 12 29.7**	**-0.4**
PCP	**Piancastagn**	**1.87**	**42**	P	**Pn**	**14 12 30.8**	**+0.3**
PCP				AML	AML		
	comp=E,32μm,40.4s						
PCP				AML	AML		
	comp=N,60μm,2.0s						
BNI	**Bardonecchia**	**1.88**	**358**	P	**Pn**	**14 12 31.5**	**+0.9**
AJAC	**Base Areonaval**	**1.92**	**130**	P	**Pn**	**14 12 31.2**	**+0.1**
RSP	**Reno Superiore**	**2.01**	**10**	P	**Pn**	**14 12 32.9**	**+0.5**
RSP				AML	AML		
	comp=N,57μm,0.5s						
RSP				AML	AML		
	comp=E,29μm,0.4s						
RSP				AML	AML		
	comp=N,28μm,0.4s						
RSP				AML	AML		
	comp=E,47μm,1.1s						
RSP	**Reno Superiore**	**2.01**	**10**	Pn	**Pn**	**14 12 32.9**	**+0.5**
LSD	**Lago del Serru**	**2.30**	**6**	AML	AML		
	comp=E,22μm,0.5s						
LSD				AML	AML		
	comp=N,29μm,2.4s						
LSD	**Lago del Serru**	**2.30**	**6**	Pn	**Pb**	**14 12 38.4**	**-1.2**
RSL	**Roselend**	**2.52**	**358**	Pn	**Pn**	**14 12 40.9**	**+1.4**
OGSM	**Saint Maurice**	**2.56**	**343**	Pn	**Pn**	**14 12 39.6**	**-0.2**
EUCT	**Pavia**	**2.64**	**39**	AML	AML		
	comp=N,908μm,0.1s						
EUCT				AML	AML		
	comp=E,939μm,0.3s						
EUCT				AML	AML		
	comp=N,1044μm,0.3s						
EUCT				AML	AML		
	comp=E,827μm,0.1s						
MAIM	**Mastiano**	**2.80**	**73**	AML	AML		
	comp=N,56μm,1.6s						
MAIM				AML	AML		
	comp=E,64μm,1.5s						
COLF	**Collangettes**	**3.22**	**318**	Pn	**Pn**	**14 12 48.4**	**-0.7**
LBL	**Lubilhac**	**3.27**	**310**	Pn	**Pn**	**14 12 48.9**	**-0.8**
SF01	**Poggio Prataccomp=N,93μm,1.6s**	**3.53**	**94**	AML	AML		
SF01				AML	AML		
	comp=E,89μm,1.6s						
SF01				AML	AML		
	comp=N,70μm,1.1s						
SF01				AML	AML		
	comp=E,74μm,1.4s						
TUE	**Stuetta**	**3.77**	**28**	AML	AML		
	comp=E,9μm,1.1s						
TUE				AML	AML		
	comp=N,23μm,1.2s						
TUE				AML	AML		
	comp=E,31μm,1.3s						
TUE				AML	AML		
	comp=N,13μm,1.0s						
SACS	**San Casciano d**	**3.78**	**93**	AML	AML		
	comp=N,45μm,2.0s						
SACS				AML	AML		
	comp=N,49μm,1.3s						
SACS				AML	AML		
	comp=E,71μm,2.8s						
SACS				AML	AML		
	comp=E,88μm,2.4s						
CAFI	**Castiglion Fio**	**3.79**	**86**	AML	AML		
	comp=E,28μm,1.6s						
CAFI				AML	AML		
	comp=N,30μm,0.6s						
CAFI				AML	AML		
	comp=N,29μm,0.1s						
CAFI				AML	AML		
	comp=N,86μm,0.9s						
CAFI				AML	AML		
	comp=E,49μm,1.1s						
CAFI				AML	AML		
	comp=E,28μm,1.8s						
CLL	**Collm**	**9.17**	**25**	*eP*	**Pn**	**14 14 09.0**	**-1.6**

*CATAC **08** 14:32:56.5±0.2,8˚.74N×83˚.46W,h9km±2km,ML3.5*
*UPA **08** 14:32:56.7±1.5,8˚.76N×83˚.38W,h0km±8km,ML3.7,MW3.8*
*UCR **08** 14:32:57.3±1.1,8˚.74N×83˚.43W,h21km±3km,MW3.9*
ISC 08 14:32:56.7±1.0,8.76N±0˚.03×83.44W±0˚.02,h20km±2km, n73,σ1s04/106,5C-14D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDPN	**Palmar Norte**	**0.21**	**355**	⇓*iP*	**Pb**	**14 33 02.4**	**0.0**
EDPN				*eS*	**Sb**	**14 33 07.0**	**+0.7**
JIME	**Puerto Jimenez**	**0.24**	**152**	⇑*iP*	**Pb**	**14 33 02.6**	**-0.1**
JIME				*eS*	**Sb**	**14 33 08.0**	**+1.2**
PLAN	**Los Planes de**	**0.25**	**251**	*iP*	**Pb**	**14 33 02.2**	**-0.6**
PLAN				*iS*	**Sb**	**14 33 06.7**	**-0.3**
PLAN				IAML		14 33 09.4	
	comp=Z,20μm,1.0s						
PTJ1	**Puerto Jimnez**	**0.26**	**148**	⇑*iP*	**Pb**	**14 33 02.7**	**-0.2**
PTJ1				*eS*	**Sb**	**14 33 08.2**	**+1.1**
EDAD	**Golfito**	**0.29**	**111**	⇑*eP*	**Pb**	**14 33 02.7**	**-0.6**
FITO	**Golfito**	**0.31**	**115**	*eP*	**Pb**	**14 33 02.7**	**-0.8**
PIRO	**Carate, Puerto**	**0.36**	**164**	⇑*iP*	**Pb**	**14 33 04.4**	**0.0**
PIRO	**Carate, Puerto**	**0.36**	**164**	*iP*	**Pb**	**14 33 04.2**	**-0.2**
PIRO				*iS*	**Sb**	**14 33 10.9**	**+1.3**
PIRO				IAML		14 33 13.9	
	comp=Z,7μm,1.0s						
OCHAL	**Ojochal**	**0.40**	**329**	*iP*	**Pb**	**14 33 04.6**	**-0.4**
OCHAL				*iS*	**Sb**	**14 33 10.6**	**0.0**
OCHAL				IAML		14 33 14.5	
	comp=Z,34nm,1.0s						
BURE	**Buenos Aires**	**0.43**	**14**	⇓*iP*	**Pn**	**14 33 06.4**	**-1.4**
POTG	**Potrero Grande**	**0.43**	**47**	⇓*iP*	**Pn**	**14 33 06.3**	**-1.6**
POTG	**Potrero Grande**	**0.43**	**47**	*iP*	**Pb**	**14 33 05.9**	**+0.2**
POTG				*iS*	**Sn**	**14 33 13.9**	**-1.3**
POTG				IAML		14 33 21.4	
	comp=Z,6μm,1.0s						
EDBA	**Buenos Aires**	**0.44**	**22**	⇓*iP*	**Pb**	**14 33 06.2**	**+0.5**
VITO	**San Vito**	**0.47**	**82**	*eP*	**Pn**	**14 33 07.0**	**-1.4**
SRBA	**San Rafael, Bu**	**0.48**	**9**	⇓*iP*	**Pb**	**14 33 06.8**	**+0.2**
SRBA	**San Rafael, Bu**	**0.48**	**9**	*iP*	**Pb**	**14 33 06.4**	**-0.2**
SRBA				*iS*	**Sn**	**14 33 14.7**	**-1.8**
SRBA				IAML		14 33 15.5	
	comp=Z,3μm,1.0s						
DRK0	**Durika**	**0.54**	**21**	⇓*iP*	**Pn**	**14 33 07.9**	**-1.6**
CCOL	**Caracol de Cor**	**0.58**	**127**	*eP*	**Pb**	**14 33 08.1**	**-0.1**
CCOL	**Caracol de Cor**	**0.58**	**127**	*iP*	**Pn**	**14 33 08.8**	**-1.0**
CCOL				*iS*	**Sn**	**14 33 17.9**	**-0.7**
CCOL				IAML		14 33 25.0	
	comp=Z,7μm,1.0s						
CDITO	**Canoas**	**0.59**	**108**	*eP*	**Pb**	**14 33 08.1**	**-0.4**
CDITO				AMP		14 33 08.4	
	comp=Z,6μm,0.1s						
CDITO				*eS*	**Sb**	**14 33 16.7**	**+0.3**
CDITO	**Canoas**	**0.59**	**108**	*iP*	**Pb**	**14 33 07.8**	**-0.6**
CDITO				*iS*	**Sn**	**14 33 16.9**	**-2.0**
CDITO				IAML		14 33 24.5	
	comp=Z,2μm,1.0s						
MLIR3	**Monte Lirio, C**	**0.61**	**86**	⇓*eP*	**Pn**	**14 33 09.4**	**-0.9**
MLIR3				*eS*	**Sn**	**14 33 21.0**	**+1.4**
PEZE	**Perez Zeledon,**	**0.67**	**339**	*eP*	**Pb**	**14 33 09.5**	**-0.3**
PEZE	**Perez Zeledon,**	**0.67**	**339**	*iP*	**Pb**	**14 33 09.4**	**-0.4**
PEZE				*iS*	**Sn**	**14 33 19.6**	**-1.4**
PEZE				IAML		14 33 27.6	
	comp=Z,930nm,1.0s						
BRU2	**Volcan**	**0.74**	**87**	⇓*eP*	**Pn**	**14 33 11.2**	**-1.0**
BRU2				*eS*	**Sn**	**14 33 22.6**	**-0.4**
BRU2	**Volcan**	**0.74**	**87**	⇓*iP*	**Pn**	**14 33 11.2**	**-1.0**
BRU2	**Volcan**	**0.74**	**87**	*iP*	**Pn**	**14 33 11.1**	**-1.0**
BRU2				*iS*	**Sn**	**14 33 22.4**	**-0.5**
BRU2				IAML		14 33 25.4	
	comp=Z,2μm,1.0s						
PTPM	**Petroterminale**	**0.78**	**135**	*eP*	**Pn**	**14 33 12.0**	**-0.5**
PTPM				*eS*	**Sn**	**14 33 25.2**	**+1.6**
BUS1	**Rivas**	**0.85**	**339**	⇓*iP*	**Pb**	**14 33 12.8**	**-0.3**
CDM	**Cerro de Muert**	**0.86**	**338**	*eP*	**Pb**	**14 33 13.1**	**-0.1**
CDM	**Cerro de Muert**	**0.86**	**338**	*iP*	**Pb**	**14 33 12.8**	**-0.4**
CDM				*iS*	**Sn**	**14 33 25.9**	**-0.3**
CDM				IAML		14 33 27.3	
	comp=Z,760nm,1.0s						
BCO2	**Palmira**	**0.90**	**92**	*eP*	**Pb**	**14 33 13.7**	**0.0**
BCO2				*eS*	**Sn**	**14 33 27.4**	**+0.4**
PTAR3	**Potrerillos Ar**	**0.94**	**94**	*eS*	**Sn**	**14 33 29.7**	**+2.0**
LLNJ	**Naranjito**	**0.97**	**318**	*eP*	**Pb**	**14 33 14.7**	**-0.1**
DVD	**David**	**1.03**	**108**	*eS*	**Sb**	**14 33 31.4**	**+2.5**
LCR2	**La Lucha 2**	**1.13**	**330**	⇓*iP*	**Pb**	**14 33 17.3**	**-0.4**
LCR2	**La Lucha 2**	**1.13**	**330**	*iP*	**Pb**	**14 33 17.3**	**-0.4**
LCR2				*iS*	**Sb**	**14 33 32.8**	**+0.8**
LCR2				IAML		14 33 37.4	
	comp=Z,440nm,1.0s						
REPA	**Paraso**	**1.15**	**338**	*eP*	**Pb**	**14 33 18.8**	**+0.8**
CNI2	**El Empalme, Bo**	**1.17**	**55**	*eP*	**Pb**	**14 33 17.8**	**-0.4**
CNI2				*eS*	**Sb**	**14 33 33.9**	**+1.1**
TURIB	**Turrialba**	**1.17**	**348**	⇑*iP*	**Pb**	**14 33 18.2**	**-0.1**
VERB	**Verbena**	**1.21**	**348**	*eP*	**Pb**	**14 33 19.0**	**0.0**
PCAYA	**Pacayas**	**1.21**	**342**	⇓*iP*	**Pb**	**14 33 19.1**	**0.0**
RVSTA	**Santa Teresita**	**1.23**	**350**	*eP*	**Pb**	**14 33 19.3**	**-0.1**
OCM	**Ochomogo**	**1.24**	**336**	*eP*	**Pb**	**14 33 19.3**	**-0.4**
OCM	**Ochomogo**	**1.24**	**336**	*iP*	**Pb**	**14 33 19.0**	**-0.7**
OCM				*iS*	**Sb**	**14 33 36.7**	**+1.3**
OCM				IAML		14 33 39.3	
	comp=Z,590nm,1.0s						
RAFA	**San Farael, Vo**	**1.25**	**343**	*eP*	**Pb**	**14 33 19.7**	**-0.2**
VTCV	**VTCV, Calle Va**	**1.25**	**347**	*iP*	**Pb**	**14 33 19.5**	**-0.3**
VTCV				*iS*	**Sb**	**14 33 37.4**	**+1.8**
VTCV				IAML		14 33 41.8	
	comp=Z,1μm,1.0s						
ACOS	**Acosta**	**1.26**	**325**	*eP*	**Pb**	**14 33 19.8**	**0.0**
CVTV	**Tajo**	**1.28**	**346**	*eP*	**Pb**	**14 33 19.8**	**-0.5**
VIRE	**VIRE**	**1.29**	**339**	*iP*	**Pb**	**14 33 20.0**	**-0.5**
VIRE				*iS*	**Sb**	**14 33 38.7**	**+2.0**
VIRE				IAML		14 33 44.6	
	comp=Z,2μm,1.0s						
VTRT	**Volcan Turrial**	**1.29**	**344**	*eP*	**Pb**	**14 33 20.2**	**-0.3**
VTRT	**Volcan Turrial**	**1.29**	**344**	*iP*	**Pb**	**14 33 20.0**	**-0.5**
VTRT				*iS*	**Sb**	**14 33 38.2**	**+1.5**
VTRT				IAML		14 33 39.2	
	comp=Z,1μm,1.0s						
CHGR2	**Aguacate**	**1.29**	**82**	*eP*	**Pb**	**14 33 19.8**	**-0.6**
CHGR2				*eS*	**Sb**	**14 33 37.9**	**+1.3**
VTLO	**VTLO**	**1.31**	**348**	⇓*eP*	**Pb**	**14 33 20.6**	**-0.3**
LCOCO	**El Coco**	**1.33**	**355**	*eP*	**Pb**	**14 33 20.8**	**-0.2**
RVLA	**Villa Bonita**	**1.35**	**354**	⇓*iP*	**Pb**	**14 33 21.8**	**+0.3**
SANTA	**Santa Ana**	**1.38**	**328**	*eP*	**Pb**	**14 33 22.4**	**+0.4**
HDC3	**Heredia 3**	**1.41**	**332**	*eP*	**Pb**	**14 33 23.3**	**+0.9**
HDC3	**Heredia 3**	**1.41**	**332**	*iP*	**Pb**	**14 33 22.8**	**+0.4**
HDC3				*iS*	**Sb**	**14 33 42.0**	**+2.1**
HDC3				IAML		14 33 47.5	
	comp=Z,1μm,1.0s						
JACO	**JACO, Garabito**	**1.50**	**307**	*eP*	**Pn**	**14 33 22.1**	**-0.5**
JACO	**JACO, Garabito**	**1.50**	**307**	*iP*	**Pb**	**14 33 23.7**	**-0.3**
JACO				*iS*	**Sb**	**14 33 44.6**	**+1.9**
JACO				IAML		14 33 53.2	
	comp=Z,200nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.62**	**343**	*eP*	**Pb**	**14 33 26.6**	**+0.6**
RIFO	**Rio Frio, Sara**	**1.62**	**343**	*iP*	**Pb**	**14 33 26.0**	**0.0**
RIFO				*iS*	**Sb**	**14 33 48.3**	**+2.2**
RIFO				IAML		14 34 03.7	
	comp=Z,340nm,1.0s						
CPMI	**Catarata Coope**	**1.78**	**329**	*eP*	**Pb**	**14 33 27.9**	**-0.9**
TRT1	**Tortuguero**	**1.85**	**352**	*eP*	**Pb**	**14 33 28.6**	**-1.3**
SOCE	**Pocosol**	**1.99**	**324**	*eP*	**Pb**	**14 33 31.5**	**-0.8**
SOCE	**Pocosol**	**1.99**	**324**	*iP*	**Pb**	**14 33 31.5**	**-0.8**
SOCE				IAML		14 33 36.7	
	comp=Z,150nm,1.0s						
SOCE				*iS*	**Sb**	**14 33 57.6**	**+0.9**
ARE1	**Arenal 1**	**2.11**	**323**	*eP*	**Pb**	**14 33 33.6**	**-0.8**
INDI	**Punta indio, G**	**2.32**	**299**	*iP*	**Pn**	**14 33 32.2**	**-1.5**
INDI				*iS*	**Sn**	**14 33 59.9**	**-1.7**
INDI				IAML		14 34 25.9	
	comp=Z,180nm,1.0s						
ORTG	**Ortega, Santa**	**2.55**	**309**	*eP*	**Pn**	**14 33 38.4**	**+1.4**
ORTG	**Ortega, Santa**	**2.55**	**309**	*iP*	**Pn**	**14 33 38.5**	**+1.4**
ORTG				*iS*	**Sn**	**14 34 07.4**	**-0.2**
ORTG				IAML		14 34 32.0	
	comp=Z,71nm,1.0s						
SAJU	**San Juanillo,**	**2.59**	**300**	*iP*	**Pn**	**14 33 37.9**	**+0.4**
SAJU				*iS*	**Sn**	**14 34 06.5**	**-2.0**
SAJU				IAML		14 34 27.9	
	comp=Z,110nm,1.0s						
HZTE	**Horizontes, Gu**	**2.88**	**313**	*iP*	**Pb**	**14 33 46.0**	**-1.5**
HZTE				*iS*	**Sn**	**14 34 18.4**	**+2.8**

*NEIC **08** 14:33:47.1±0.4,36˚.025N±0˚.008×97˚.91W±0˚.01,h5km±5km, Error ellipse: s-maj=2.0km s-min=0.6km az=56.0*
TUL 08 14:33:47.1±0.2,36˚.03N±0˚.01×97˚.91W±0˚.02,h4km±5km, ML2.4,mb_Lg2.4/16(NEIC),ML2.5/46(NEIC),Error ellipse: s-maj=1.8km s-min=1.4km az=68.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.44**	**122**	Pg	Pg	14 33 55.8	+0.3
OK029				Sg	Sg	14 34 02.3	+1.1
OK029				IAML		14 34 02.4	
	371nm,0.4s						
CROK	**Carrier**	**0.48**	**353**	Pg	Pg	14 33 56.8	+0.4
CROK				IAML		14 34 03.9	
	comp=E,324nm,0.3s						
CROK				IAML		14 34 08.5	
	comp=N,294nm,0.3s						
CSTR	**Hydro, Custer**	**0.74**	**239**	Pg	Pg	14 34 01.6	+0.4
OK033	**Mehan**	**0.79**	**89**		Pg	14 34 02.4	+0.1
OK033				IAML		14 34 17.1	
	comp=N,165nm,0.1s						
OK038	**West end E0370**	**0.81**	**304**	Pg	Pg	14 34 02.6	0.0
OK032	**Salt Plains WL**	**0.81**	**343**		Pg	14 34 02.5	-0.1
OK032				Sg	Sg	14 34 13.8	+0.6
OK032				IAML		14 34 14.2	
	comp=N,273nm,0.2s						
OK032				IAML		14 34 18.1	
	comp=N,273nm,0.2s						
GC02	**Grant County #**	**0.82**	**3**		Pg	14 34 02.8	-0.1
FNO	**Franklin**	**0.88**	**151**	Pg	Pg	14 34 03.8	-0.1
FNO				IAML		14 34 17.4	
	comp=E,145nm,0.1s						
OK052	**Battle Ridge R**	**0.90**	**92**		Pg	14 34 04.3	0.0
BLOK	**Blackwell**	**0.92**	**37**	Pg	Pg	14 34 04.7	0.0
KAN14	**Manchester OK**	**0.93**	**357**		Pg	14 34 04.8	-0.1
KAN14				IAML		14 34 21.6	
	comp=E,126nm,0.1s						
KAN14				IAML		14 34 28.5	
	comp=N,95nm,0.1s						
OK035	**E0210 Rd and N**	**0.94**	**317**	Pg	Pg	14 34 05.0	0.0
OK035				IAML		14 34 20.7	
	comp=N,202nm,0.4s						
U32A	**Winter Ranch,

DKNS	**Dickens**	**3.42**	**227**	IAmb_Lg		14 35 38.9
	comp=Z,9.9nm,0.7s					
POST	**Post**	**4.18**	**226**	IAmb_Lg		14 36 05.8
	comp=Z,8.2nm,0.7s					
P38A	**Dawn**	**4.99**	**43**	IAmb_Lg		14 36 36.2
	comp=Z,9.5nm,1.2s					
N38A	**Joes South For**	**6.01**	**36**	IAmb_Lg		14 37 10.4
	comp=Z,10nm,0.9s					

MOS ***08*** *14:34:18.3±1.1,36˚.03N×139˚.31E,h60km,mb4.6/15,Error ellipse: s-maj=11.6km s-min=6.3km az=104.5*

JMA ***08*** *14:34:20.2±0.1,36˚.1N±0˚.3×139˚.4E±0.4,h55km,MD4.2/35, MW4.4/35,WESTERN SAITAMA PREF*

JMA Felt II J1 at WESTERN SAITAMA PREF .

IDC ***08*** *14:34:20.4±0.8,35˚.97N×139˚.25E,h68km±7km,mb3.8/20, mbtmp4.1/25,MS3.3/21,Error ellipse: s-maj=14.4km s-min=6.7km az=68.0*

NIED ***08*** *14:34:21.5±1.7,36˚.00N±0˚.05×139˚.25E±0˚.08,h73km±8km, mb4.5/79 Error ellipse: s-maj=9.1km s-min=7.7km az=108.0*

ISC 08 14:34:20.3±0.5,36˚01N±0˚04×139˚33E±0˚05,h64km±4km, n226,σ1°26/200,mb4.5/72,8C-18D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	**Hanno**	**0.17**	**195**	*i* P	**Pn**	**14 34 29.3**	**-0.8**
JHU				S	**Sn**	**14 34 35.9**	**-1.3**
JHU	**Hanno**	**0.17**	**195**	A	A	14 34 29.3	
	comp=E,47nm,0.8s,comp=N,58nm,0.9s						
JRY	**Ryogami san**	**0.35**	**271**	*i* P	**Pn**	**14 34 30.2**	**-1.1**
JRY				S	**Sn**	**14 34 37.4**	**-1.9**
JRY	**Ryogami san**	**0.35**	**271**	A	A	14 34 30.2	
	comp=E,16nm,0.6s,comp=N,19nm,1.6s						
JSGW	**Sagamiharawaka**	**0.42**	**194**	A	A	14 34 31.4	
	comp=E,43nm,1.6s,comp=N,33nm,0.8s						
JAG	**Ashikaga**	**0.42**	**13**	⇓*i* P	**Pn**	**14 34 30.9**	**-1.0**
JAG	**Ashikaga**	**0.42**	**13**	A	A	14 34 30.9	
	comp=E,18nm,0.5s,comp=N,66nm,1.0s						
TOK	**Tokyo**	**0.47**	**133**	A	A	14 34 31.8	
	comp=E,114nm,0.7s,comp=N,65nm,1.3s						
JYT	**Yasato**	**0.73**	**73**	A	A	14 34 34.4	
	comp=E,31nm,0.4s,comp=N,24nm,0.4s						
JKT	**Katashina**	**0.76**	**355**	⇓*i* P	**Pn**	**14 34 34.6**	**-1.0**
JKT				⇓S	**Sn**	**14 34 45.4**	**-1.4**
JKT	**Katashina**	**0.76**	**355**	A	A	14 34 34.6	
	comp=E,38nm,0.3s,comp=N,39nm,0.2s						
JOD2	**Odawara 2**	**0.77**	**195**	⇓P	**Pn**	**14 34 34.9**	**-0.8**
JOD2				⇓S	**Sn**	**14 34 46.6**	**-0.4**
JOD2	**Odawara 2**	**0.77**	**195**	A	A	14 34 34.9	
	comp=E,22nm,2.2s,comp=N,27nm,2.2s						
JGK	**Kuni**	**0.79**	**315**	A	A	14 34 35.1	
	comp=E,12nm,0.8s,comp=N,10.0nm,2.5s						
JYN	**Shimob**	**0.82**	**232**	⇓*i* P	**Pn**	**14 34 36.2**	**-0.1**
JYN				⇓S	**Sn**	**14 34 48.4**	**+0.2**
JYN	**Shimob**	**0.82**	**232**	A	A	14 34 36.2	
	comp=E,29nm,1.2s,comp=N,20nm,0.4s						
JYO	**Yokosk**	**0.83**	**161**	A	A	14 34 36.5	
	comp=E,46nm,0.9s,comp=N,18nm,3.1s						
JCN	**Nagara**	**0.92**	**130**	A	A	14 34 37.5	
	comp=E,19nm,2.8s,comp=N,18nm,5.3s						
JIHU	**Itakohorinouch**	**0.97**	**92**	A	A	14 34 37.7	
	comp=E,13nm,5.0s,comp=N,14nm,2.5s						
JFNN	**Fujinakano**	**0.97**	**213**	⇓P	**Pn**	**14 34 38.2**	**0.0**
JFNN				⇓S	**Sn**	**14 34 52.1**	**+0.7**
JFNN	**Fujinakano**	**0.97**	**213**	A	A	14 34 38.2	
	comp=E,19nm,1.8s,comp=N,16nm,5.5s						
JSMT	**Sammumatsuo**	**0.98**	**112**	A	A	14 34 38.0	
	comp=E,21nm,3.7s,comp=N,15nm,4.2s						
JNT	**Takato**	**0.98**	**262**	A	A	14 34 38.4	
	comp=E,12nm,0.9s,comp=N,10.0nm,1.1s						
MJAR	**Matsushiro Arr**	**1.05**	**301**	P	**Pn**	**14 34 37.6**	**-1.6**
	comp=N,174nm,0.3s,baz=118,slow=15,SNR=892						
MJAR				S	**Sn**	**14 34 53.2**	**-0.1**
	comp=N,361nm,0.5s,baz=288,slow=24,SNR=8.5						
MJAR				LR	LR	14 35 18.3	
	comp=N,330nm,21.7s,baz=69,slow=56						
MAJO	**Matsushiro**	**1.05**	**301**		**Pn**	**14 34 38.4**	**-0.9**
MAJO	**Matsushiro**	**1.05**	**301**	*d* P	**Pn**	**14 34 38.6**	**-0.6**
MAT	**Matsushiro**	**1.05**	**301**	*i* P	**Pn**	**14 34 38.6**	**-0.6**
MAT				*e*S	**Sn**	**14 34 51.8**	**-1.5**
MJB9	**Matsu-Tunnel**	**1.06**	**301**		**Pn**	**14 34 39.6**	**+0.3**
JSB	**Shiboa**	**1.06**	**26**	A	A	14 34 38.6	
	comp=E,10.0nm,6.3s,comp=N,14nm,2.8s						
JNG	**Nsakai**	**1.07**	**292**	A	A	14 34 39.2	
	comp=E,5.0nm,2.5s,comp=N,7.0nm,2.7s						
TATJ	**Tateyama 2**	**1.08**	**155**	A	A	14 34 39.9	
	comp=E,31nm,3.8s,comp=N,24nm,2.1s						
JHTM	**Izuhatsuma**	**1.08**	**194**	A	A	14 34 40.0	
	comp=E,22nm,0.8s,comp=N,23nm,1.4s						
JKUC	**kamogawauchiur**	**1.10**	**140**	A	A	14 34 40.1	
	comp=E,11nm,1.0s,comp=N,10.0nm,2.7s						
JIM2	**Oshima 3**	**1.29**	**176**	A	A	14 34 43.0	
	comp=E,10.0nm,1.2s,comp=N,8.0nm,1.4s						
SHZ3	**Shizuoka 3**	**1.31**	**224**	A	A	14 34 43.2	
	comp=E,11nm,0.8s,comp=N,10.0nm,0.9s						
JNY	**Yasuok**	**1.36**	**242**	A	A	14 34 43.7	
	comp=E,6.0nm,1.1s,comp=N,7.0nm,2.2s						
JFY	**Yanaizu**	**1.42**	**12**	A	A	14 34 43.6	
	comp=E,6.0nm,1.2s,comp=N,4.0nm,1.9s						
JJN	**Nakama**	**1.44**	**319**	A	A	14 34 44.1	
	comp=E,4.0nm,3.7s,comp=N,4.0nm,4.3s						
JFFD	**Fukushimafurud**	**1.46**	**42**	A	A	14 34 44.2	
	comp=E,11nm,1.0s,comp=N,7.0nm,1.3s						
ONAJ	**Iwakimizuishiy**	**1.60**	**47**	A	A	14 34 46.4	
	comp=E,11nm,0.4s,comp=N,8.0nm,0.3s						
JSG	**Sagara**	**1.63**	**215**		**Pn**	**14 34 47.5**	**+0.6**
JSG	**Sagara**	**1.63**	**215**	A	A	14 34 47.8	
	comp=E,9.0nm,4.1s,comp=N,8.0nm,9.7s						
JGF	**Kuroka**	**1.66**	**256**		**Pn**	**14 34 47.3**	**0.0**
JKKS	**Kakegawashinom**	**1.67**	**222**	A	A	14 34 48.2	
	comp=E,8.0nm,4.9s,comp=N,9.0nm,1.3s						
HMMJ	**Hamamatsu 2**	**1.75**	**229**	A	A	14 34 49.4	
	comp=E,2.0nm,1.5s,comp=N,4.0nm,1.2s						
JAO	**Obara**	**1.85**	**247**	A	A	14 34 50.6	
	comp=E,7.0nm,1.0s,comp=N,5.0nm,1.2s						
INU	**Inuyama**	**2.00**	**251**		**Pn**	**14 34 52.4**	**+0.6**
JMM	**Marumori**	**2.19**	**32**		**Pn**	**14 34 55.4**	**+1.1**
JHJ	**Hachijo jima 2**	**2.91**	**173**	P	**Pn**	**14 35 04.5**	**+0.3**
	comp=N,953nm,0.3s,baz=59,slow=23,SNR=212						
JHJ				S	**Sn**	**14 35 37.5**	**-0.5**
	comp=N,670nm,0.3s,baz=261,slow=21,SNR=14						
JHJ				LR	LR	14 36 26.3	
	comp=N,372nm,20.3s,baz=70,slow=44						
JHJ2	**Mitsune**	**2.92**	**172**	Pn	**Pn**	**14 35 04.6**	**+0.2**
JTM	**Tenmabayashi**	**4.96**	**15**		**Pn**	**14 35 36.0**	**+3.8**
JMN	**Monobe**	**5.03**	**245**		**Pn**	**14 35 32.9**	**-0.4**
ERM	**Erimo**	**6.69**	**25**	Pn	**Pn**	**14 35 54.9**	**-1.0**
ERM	**Erimo**	**6.69**	**25**	P	**Pn**	**14 35 54.9**	**-1.0**
JNU	**Nakatsue**	**7.55**	**250**	Pn	**Pn**	**14 36 07.5**	**-0.2**
JNU	**Nakatsue**	**7.55**	**250**	P	**Pn**	**14 36 05.7**	**-2.0**
	comp=N,3.7nm,0.8s,baz=22,slow=23,SNR=2.3						
JNU				LR	LR	14 39 03.0	
	comp=N,87nm,21.9s,baz=72,slow=38						
ASAJ	**Asahikawa**	**8.47**	**16**	P	**Pn**	**14 36 19.2**	**-1.0**
	comp=N,11nm,1.1s,baz=219,slow=15,SNR=27						
ASAJ				S	**Sn**	**14 37 55.7**	**+1.4**
	comp=N,7.3nm,0.9s,baz=268,slow=11,SNR=1.3						
ASAJ				LR	LR	14 39 57.5	
	comp=N,152nm,21.0s,baz=182,slow=40						
JKA	**Kamikawa-asahi**	**8.47**	**16**	Pn	**Pn**	**14 36 22.1**	**+1.8**
KSRS	**Korea Array**	**9.27**	**282**	P	**Pn**	**14 36 34.1**	**+2.9**
	comp=N,3.0nm,0.5s,baz=97,slow=14,SNR=11						
KSRS				LR	LR	14 40 03.2	
	comp=N,97nm,22.0s,baz=90,slow=37						
SHO	**Shikotan**	**9.73**	**34**	P	Pn	14 36 45.3	+7.9
SHO				*e*S	**Sn**	**14 38 19.0**	**-6.0**
USA0B	**Ussuriysk Arra**	**9.92**	**328**	⇓*i* P	**Pn**	**14 36 44.2**	**+4.2**
USRK	**Ussuriysk Ar.**	**9.92**	**328**	P	**Pn**	**14 36 39.1**	**-0.9**
	comp=N,0.9nm,0.5s,baz=138,slow=13,SNR=2.0						
USRK				LR	LR	14 40 15.8	
	comp=N,130nm,18.9s,baz=146,slow=36						
YSS	**Yuzh-Sakhalins**	**11.23**	**12**	*e*P	**Pn**	**14 36 59.4**	**+1.6**
YSS				*e*S	**Sn**	**14 39 02.1**	**+0.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=N,10.0nm,0.7s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS				MLR	MLR		
	comp=E,100nm,14.0s						
MDJ	**Mudanjiang**	**11.36**	**322**	P	**Pn**	**14 36 59.3**	**-0.3**
MDJ				pmax	pmax		
	comp=E,5.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.4s						
JOW	**Kunigami**	**13.14**	**229**	LR	LR	14 42 08.7	
	comp=Z,107nm,19.9s,baz=127,slow=36						
BNX	**BinXian**	**13.25**	**321**	⇓P	**Pn**	**14 37 26.4**	**+1.0**
BNX				pmax	pmax		
	comp=E,5.0nm,1.3s						
BNX				pmax	pmax		
	comp=Z,99nm,4.6s						
KLR	**Kul'dur**	**14.33**	**340**	⇑*e*P	**Pn**	**14 37 39.0**	**-0.7**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KLR	**Kul'dur**	**14.33**	**340**	P	**Pn**	**14 37 39.3**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=185,slow=6.5,SNR=4.3						
KLR				LR	LR	14 43 03.9	
	comp=Z,92nm,19.2s,baz=165,slow=36						
TYV	**Tymovskoe**	**15.04**	**8**	*e*P	**P**	**14 37 52.2**	**-0.7**
TYV				*e*S	**Sn**	**14 40 40.4**	**+6.2**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,4.2s						
TYV				smax	smax		
	comp=N,200nm,4.8s						
TYV				smax	smax		
	comp=E,200nm,4.8s						
HEH	**HeiHe**	**16.65**	**332**	*e*P	**Pn**	**14 38 08.6**	**-0.7**
HEH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NJ2	**Nanjing**	**17.43**	**263**	*e*P	**Pn**	**14 38 18.7**	**-0.3**
NJ2				sP	**sP**	**14 38 43.9**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZEA	**Zeya**	**19.64**	**338**	*e*P	**P**	**14 38 43.2**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**22.24**	**291**	*e*P	**P**	**14 39 10.1**	**-1.7**
HHC				pP	pP	14 39 23.1	-2.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,5.6s						
GUMO	**Guam**	**22.88**	**166**	LR	LR	14 47 07.2	
	comp=Z,64nm,21.5s,baz=20,slow=34						
MA2	**Magadan**	**24.73**	**14**	P	**P**	**14 39 34.2**	**-1.2**
MA2				IAmb	IAmb	14 39 38.0	
	comp=Z,13nm,0.8s						
MA2	**Magadan**	**24.73**	**14**	⇑*i* P	**P**	**14 39 36.6**	**+1.3**
MA2				pmax	pmax		
	comp=Z,52nm,2.5s						
MA2	**Magadan**	**24.73**	**14**	LR	LR	14 50 07.3	
	comp=Z,48nm,18.1s,baz=213,slow=38						
YAK	**Yakutsk**	**26.74**	**350**	P	**P**	**14 39 52.5**	**-1.0**
YAK				IAmb	IAmb	14 39 53.8	
	comp=Z,14nm,0.9s						
YAK	**Yakutsk**	**26.74**	**350**	*c i* P	**P**	**14 39 53.1**	**-0.4**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK	**Yakutsk**	**26.74**	**350**	LR	LR	14 50 21.6	
	comp=Z,67nm,21.0s,baz=290,slow=36						
SONM	**Songino Array**	**27.00**	**306**	P	**P**	**14 39 54.4**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=92,slow=7.1,SNR=2.4						
SONM				PcP	**PcP**	**14 43 15.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=103,slow=3.1,SNR=2.3						
	comp=Z,0.4nm,0.6s						
SEY	**Seymchan**	**28.14**	**13**	LR	LR	14 52 24.6	
	comp=Z,69nm,18.2s,baz=343,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.13**	**116**	T	T	15 10 09.1	
	baz=308,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**29.14**	**116**	T	T	15 10 06.5	
	baz=308,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**29.15**	**116**	T	T	15 10 33.8	
	baz=308,slow=75,SNR=15						
GYA	**Guiyang**	**29.40**	**260**	⇓P	**P**	**14 40 19.7**	**+1.9**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**29.78**	**119**	T	T	15 11 24.3	
	baz=314,slow=76,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**29.78**	**119**	T	T	15 11 24.4	
	baz=314,slow=76,SNR=3.0						
H11S2	**WAKE ISLAND Hy**	**29.79**	**119**	T	T	15 11 28.5	
	baz=314,slow=76,SNR=3.7						
DAV	**Davao City (W)**	**31.44**	**207**	LR	LR	14 52 50.9	
	comp=Z,30nm,21.2s,baz=350,slow=35						
PZH	**PanZhiHua**	**33.33**	**264**	P	**P**	**14 40 51.9**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,4.4s						
BILL	**Bilibino**	**35.49**	**17**	*e*P	**P**	**14 41 12.7**	**+2.4**
TIXI	**Tiksi**	**36.12**	**354**	P	**P**	**14 41 14.7**	**-1.0**
TIXI				IAmb	IAmb	14 41 16.4	
	comp=Z,2.8nm,0.6s						
TIXI	**Tiksi**	**36.12**	**354**	⇓*e*P	**P**	**14 41 14.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ATKA	**Atka Island**	**36.39**	**49**	P	**P**	**14 41 17.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.61**	**255**	PcP	**PcP**	**14 43 52.5**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=346,slow=1.4,SNR=6.0						
DGZ	**Jazzator, Alta**	**39.65**	**307**	⇑*i* P	**P**	**14 41 46.9**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,17nm,3.9s						
WMQ	**Urumqi**	**39.82**	**298**	*e*P	**P**	**14 41 46.4**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZALV	**Zalesovo Beam**	**41.38**	**313**	*i* P	**P**	**14 41 59.7**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.38**	**313**	P	**P**	**14 41 59.5**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=92,slow=6.7,SNR=3.8						
ZALV				PcP	**PcP**	**14 43 56.3**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=155,slow=1.1,SNR=6.4						
ZALV				LR	LR	14 59 07.5	
	comp=Z,26nm,19.6s,baz=346,slow=36						
	comp=Z,0.5nm,0.3s						
MK31	**Makanchi Array**	**43.25**	**303**	P	**P**	**14 42 14.2**	**-1.1**
MK31	**Makanchi Array**	**43.25**	**303**	P	**P**	**14 42 14.2**	**-1.1**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**43.25**	**303**	P	**P**	**14 42 14.6**	**-0.7**
MKAR	**Makanchi Array**	**43.25**	**303**	*i* P	**P**	**14 42 14.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**43.25**	**303**	P	**P**	**14 42 14.4**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=88,slow=10,SNR=11						
MKAR				PcP	**PcP**	**14 44 02.5**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=66,slow=5.9,SNR=3.6						
	comp=Z,0.9nm,0.7s						
NRIK	**Noril'sk**	**43.51**	**336**	*ce*P	**P**	**14 42 17.9**	**+0.9**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NRIK	**Noril'sk**	**43.51**	**336**	P	**P**	**14 42 15.7**	**-1.3**
	comp=Z,2.7nm,0.5s,baz=82,slow=3.2,SNR=2.1						
	comp=Z,2.7nm,0.5s						
J14K	**Nanvaranak Lak**	**43.75**	**34**	P	**P**	**14 42 21.6**	**+2.6**
J14K				IAmb	IAmb	14 42 52.6	
	comp=Z,11nm,1.4s						
F15K	**North Star Dit**	**43.91**	**30**	P	**P**	**14 42 22.6**	**+2.3**
F15K				IAmb	IAmb	14 42 28.8	
	comp=Z,8.9nm,1.4s						
KURK	**Kurchatov**	**45.25**	**309**	P	**P**	**14 42 29.6**	**-1.5**
KURK				IAmb	IAmb	14 42 34.7	
	comp=Z,3.9nm,0.6s						
KURK	**Kurchatov**	**45.25**	**309**	*d* P	**P**	**14 42 30.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**45.32**	**309**	P	**P**	**14 42 30.4**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=81,slow=7.4,SNR=15						
KURBB				PcP	**PcP**	**14 44 09.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=86,slow=4.1,SNR=4.5						
	comp=Z,2.1nm,0.7s						
L16K	**Owhat River**	**45.51**	**36**	P	**P**	**14 42 35.3**	**+2.3**
L16K				IAmb	IAmb	14 43 09.6	
	comp=Z,17nm,1.4s						
M16K	**Timber Creek**	**45.70**	**37**	P	**P**	**14 42 33.8**	**-0.7**
C18K	**Utukok River**	**45.93**	**26**	P	**P**	**14 42 37.4**	**+1.1**
O16K	**Kokwok River B**	**46.06**	**39**	P	**P**	**14 42 38.5**	**+1.2**
K17K	**Iditarod**	**46.15**	**34**	P	**P**	**14 42 38.9**	**+0.9**
H18K	**Honhosa River**	**46.39**	**31**	P	**P**	**14 42 40.1**	**+0.2**
H18K				IAmb	IAmb	14 42 52.6	
	comp=Z,16nm,1.5s						
M17K	**Holitna River**	**46.46**	**36**	P	**P**	**14 42 42.2**	**+1.6**
C19K	**Lookout Ridge**	**46.60**	**26**	P	**P**	**14 42 43.0**	**+1.4**
D19K	**Kuna River**	**47.01**	**27**	P	**P**	**14 42 46.3**	**+1.5**
D19K				IAmb	IAmb	14 43 09.2	
	comp=Z,12nm,1.4s						
G19K	**Purcell Mounta**	**47.04**	**30**	P	**P**	**14 42 45.1**	**+0.1**
E19K	**Redstone River**	**47.16**	**28**	P	**P**	**14 42 46.5**	**+0.6**
J19K	**Poorman**	**47.45**	**33**	P	**P**	**14 42 49.1**	**+0.9**
J19K				IAmb	IAmb	14 43 19.2	
	comp=Z,8.5nm,1.4s						
P18K	**Big Mountain,**	**47.52**	**39**	P	**P**	**14 42 50.0**	**+1.2**
O18K	**Koktuh Hills**	**47.52**	**38**	P	**P**	**14 42 49.7**	**+0.9**
J20K	**Nowinta River**	**48.11**	**33**	P	**P**	**14 42 53.1**	**-0.2**
SII	**Sitkinak Islan**	**48.20**	**43**	P	**P**	**14 42 52.0**	**-2.1**
B21K	**Ikpikpuk River**	**48.43**	**25**	P	**P**	**14 42 56.6**	**+0.9**
B21K				IAmb	IAmb	14 42 58.6	
	comp=Z,4.4nm,0.9s						
G21K	**Allakaket**	**48.52**	**30**	P	**P**	**14 42 56.0**	**-0.4**
F21K	**Alatna River**	**48.58**	**29**	P	**P**	**14 42 56.9**	**0.0**
OHAK	**Old Harbor**	**48.64**	**42**	P	**P**	**14 42 56.4**	**-1.0**
D22K	**Ayikyak River**	**49.03**	**26**	P	**P**	**14 43 01.4**	**+1.1**
D22K				IAmb	IAmb	14 43 03.3	
	comp=Z,5.4nm,0.9s						
HNR	**Honiara**	**49.20**	**153**	LR	LR	15 08 52.7	
	comp=Z,209nm,18.1s,baz=356,slow=42						
SKT	**Skwentna**	**49.28**	**36**	P	**P**	**14 43 03.0**	**+0.7**
SKT				IAmb	IAmb	14 43 41.5	
	comp=Z,8.9nm,1.4s						
E22K	**Anaktuvuk Pass**	**49.28**	**27**	P	**P**	**14 43 04.2**	**+1.9**
E22K				IAmb	IAmb	14 43 05.2	
	comp=Z,5.3nm,0.9s						
KSH	**Kashi**	**49.29**	**294**	P	**P**	**14 43 06.4**	**+3.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.6s						
SUA	**Susitna One**	**49.67**	**36**	P	**P**	**14 43 05.6**	**+0.1**
SUA				IAmb	IAmb	14 43 09.2	
	comp=Z,5.2nm,1.0s						
TRF	**Thorofare Moun**	**49.81**	**34**	P	**P**	**14 43 07.3**	**+0.7**
TRF				IAmb	IAmb	14 43 20.6	
	comp=Z,9.0nm,1.3s						
BVAR	**Borovoye Array**	**50.02**	**313**	P	**P**	**14 43 07.6**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=101,slow=9.7,SNR=10.0						
BVAR				PcP	**PcP**	**14 44 27.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=64,slow=3.4,SNR=3.6						
	comp=Z,0.6nm,0.3s						
O22K	**Cooper Landing**	**50.23**	**38**	P	**P**	**14 43 09.6**	**+0.1**
RND	**Reindeer**	**50.46**	**34**	P	**P**	**14 43 12.3**	**+1.0**
RND				IAmb	IAmb	14 43 13.3	
	comp=Z,4.0nm,0.9s						
RND	**Reindeer**	**50.46**	**34**	P	**P**	**14 43 12.3**	**+1.0**
RND				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GHO	**Glory Hole Cre**	**50.52**	**36**	P	**P**	**14 43 12.3**	**+0.4**
GHO				IAmb	IAmb	14 43 22.8	
	comp=Z,7.8nm,1.0s						
MDM	**Murphy Dome**	**50.67**	**32**	P	**P**	**14 43 14.8**	**+2.0**
MDM				IAmb	IAmb	14 43 15.8	
	comp=Z,7.4nm,0.9s						
F24K	**Squaw Lake**	**50.75**	**28**	P	**P**	**14 43 14.4**	**+1.0**
H24K	**Noodor Dome**	**50.79**	**30**	P	**P**	**14 43 12.9**	**-0.8**
SML	**Sawmill**	**50.80**	**36**	P	**P**	**14 43 14.7**	**+0.8**
IL31		**51.25**	**32**	P	**P**	**14 43 16.9**	**-0.2**
ILAR	**Eielson Array**	**51.25**	**32**	P	**P**	**14 43 16.2**	**-0.9**
ILAR	**Eielson Array**	**51.25**	**32**	P	**P**	**14 43 17.6**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=278,slow=6.4,SNR=22						
	comp=Z,1.9nm,0.8s						
SCM	**Sheep Creek Mo**	**51.28**	**36**	P	**P**	**14 43 17.0**	**-0.5**
SCM	**Sheep Creek Mo**	**51.28**	**36**	P	**P**	**14 43 17.0**	**-0.5**
SCM				pmax	pmax		
	comp=Z,15nm,1.4s						
D25K	**Kavik River**	**51.31**	**26**	P	**P**	**14 43 17.9**	**+0.4**
D25K				IAmb	IAmb	14 43 19.6	
	comp=Z,4.9nm,1.1s						
M24K	**Tolsona, Glenn**	**51.79**	**35**	P	**P**	**14 43 22.1**	**+0.8**
J25K	**Salcha River,**	**51.91**	**32**	P	**P**	**14 43 21.4**	**-0.7**
KLU	**Klutina**	**51.98**	**36**	P	**P**	**14 43 22.8**	**+0.1**
KLU				IAmb	IAmb	14 43 30.9	
	comp=Z,9.4nm,1.4s						
RIDG	**Independent Ri**	**52.22**	**33**	P	**P**	**14 43 25.0**	**+0.5**
KNRA	**Kununurra**	**52.37**	**193**	P	**P**	**14 43 25.5**	**-0.5**
SCRK	**Sand Creek**	**52.58**	**33**	P	**P**	**14 43 28.1**	**+1.0**
SCRK				IAmb	IAmb	14 43 29.3	
	comp=Z,4.2nm,0.9s						
N25K	**Chitina, Valde**	**52.59**	**36**	P	**P**	**14 43 28.8**	**+1.5**
N25K				IAmb	IAmb	14 43 55.1	
	comp=Z,7.8nm,1.4s						
J26L	**Joseph Creek**	**52.70**	**32**	P	**P**	**14 43 28.1**	**+0.1**
J26L				IAmb	IAmb	14 43 30.5	
	comp=Z,5.2nm,1.2s						
GLB	**Gilahina Butte**	**52.99**	**36**	P	**P**	**14 43 29.2**	**-1.0**
GLB				IAmb	IAmb	14 43 34.1	
	comp=Z,6.1n

comp=Z,15nm,19.8s,baz=173,slow=36
ABKAR Akbulak array 57.31 310 P P 14 43 59.7 -1.7
ABKAR Akbulak array 57.31 310 P P 14 44 00.3 -1.1
ABKAR IAmb IAmb 14 44 02.2
comp=Z,3.7nm,1.0s
FARO Faro, Yukon 57.66 34 P P 14 44 04.8 +1.1
C36M Paulatuk 59.05 24 P P 14 44 14.0 +0.8
C36M IAmb IAmb 14 44 15.8
comp=Z,5.9nm,1.0s
STCH Steam Cracks 59.34 87 P P 14 44 16.0 0.0
ASAR Alice Springs 59.58 186 P P 14 44 17.1 -0.3
comp=Z,1.5nm,0.9s,baz=4.5,slow=6.0,SNR=8.3
ASAR LR LR 15 09 57.0
comp=Z,29nm,18.1s,baz=31,slow=36
comp=Z,1.5nm,0.9s
RES Resolute Bay 64.00 14 LR LR 15 15 48.6
comp=Z,80nm,18.0s,baz=14,slow=39
ARCES ARCESS Array B 64.36 339 P P 14 44 48.2 -0.7
comp=Z,3.6nm,0.8s,baz=50,slow=6.6,SNR=9.4
comp=Z,3.6nm,0.8s
YKA Yellowknife Ar 65.53 29 *ce* **P P 14 44 57.4 +0.8**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 65.53 29 P P 14 44 56.2 -0.4
comp=Z,0.8nm,0.8s,baz=303,slow=6.8,SNR=13
comp=Z,0.8nm,0.8s
STKA Stephens Creek 67.57 178 LR LR 15 15 25.7
comp=Z,32nm,18.5s,baz=18,slow=36
FINES FINESS Array B 68.93 332 *i* **P P 14 45 18.1 0.0**
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 68.93 332 P P 14 45 17.7 -0.4
comp=Z,4.7nm,0.7s,baz=66,slow=5.8,SNR=15
comp=Z,4.7nm,0.7s
KBZ Khabaz 70.29 310 ⇓ *e* **P P 14 45 27.1 +0.3**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
GNI Garni 70.96 306 LR LR 15 20 35.0
comp=Z,48nm,18.6s,baz=352,slow=39
AKASG Malin Array Be 74.07 322 P P 14 45 48.5 -0.7
comp=Z,2.5nm,0.6s,baz=49,slow=5.8,SNR=10.0
comp=Z,2.5nm,0.6s
AKBB Malin Array Si 74.07 322 ⇓ *i* **P P 14 45 48.7 -0.5**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
HFS Hagfors 74.32 335 P P 14 45 50.5 0.0
comp=Z,4.3nm,0.8s,baz=96,slow=3.0,SNR=4.5
comp=Z,4.3nm,0.8s
NB2 NORSAR Subarra 74.47 337 P P 14 45 51.1 -0.3
comp=Z,0.9nm,0.4s,baz=42,slow=5.9
NB2 NORSAR Subarra 74.47 337 P P 14 45 51.4 0.0
NOA NORSAR Array B 74.47 337 P P 14 45 50.9 -0.5
comp=Z,5.1nm,1.0s,baz=41,slow=5.8,SNR=6.5
NOA LR LR 15 21 03.2
comp=Z,32nm,18.7s,baz=275,slow=38
comp=Z,5.1nm,1.0s
NVAR Mina Array Bea 76.94 52 P P 14 46 06.8 +0.5
comp=Z,1.2nm,0.8s,baz=286,slow=5.9,SNR=10
comp=Z,1.2nm,0.8s
FRB Frobisher Bay 78.14 12 P P 14 46 12.1 0.0
BR131 Keskin Array S 78.26 311 ⇑ *e* **P P 14 46 14.5 +1.1**
BRTR Keskin Array B 78.26 311 *ce* **P P 14 46 14.1 +0.7**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 78.26 311 P P 14 46 13.2 -0.2
comp=Z,2.4nm,0.8s,baz=81,slow=8.0,SNR=5.7
comp=Z,2.4nm,0.8s
PDAR Pinedale Array 79.57 44 P P 14 46 21.8 +1.1
comp=Z,1.2nm,0.9s,baz=270,slow=3.0,SNR=7.5
comp=Z,1.2nm,0.9s
CLL Collm 81.13 329 *i* **P P 14 46 28.5 -0.1**
CLL *i* *SP **sP 14 46 54.0 +0.7**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 81.13 329 *i* **P P 14 46 28.5 -0.1**
comp=Z,5.0nm,0.9s
CLL *i* (sP) **sP 14 46 54.0 +0.7**
CLL *e* PP **PP 14 49 32.0 -1.7**
MMAI Mount Meron Ar 81.17 304 LR LR 15 26 09.9
comp=Z,32nm,18.4s,baz=330,slow=38
ULM Lac du Bonnet 81.27 32 P P 14 46 30.4 +1.1
comp=Z,2.6nm,0.9s,baz=309,slow=6.6,SNR=3.1
comp=Z,2.6nm,0.9s
MODS Modra-Piesok 81.41 325 *eP* **P 14 46 29.4 -0.8**
MODS Modra-Piesok 81.41 325 *eP* **P 14 46 29.4 -0.8**
TXAR Lajitas Array 92.07 51 P P 14 47 23.5 +0.7
comp=Z,0.6nm,0.7s,baz=287,slow=3.3,SNR=7.4
comp=Z,0.6nm,0.7s

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*ASIES **08** 14:42:52.0,24.05N×121.78E,h9km,ML3.8,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.32; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-0.88; $M_{r\theta}$0.03; $M_{\theta\phi}$-1.16; $M_{\phi r}$1.16; Fault plane solution: $M_0$2.00791×10^{21} NP1:ϕ_s15.68000°, δ65.00000°, λ62.77000°. NP2:ϕ_s246.30000°, δ36.31000°, λ134.46000°. Principal axes: T Plg60.3030°, Azm244.9090°; N Plg24.5040°, Azm27.9640°; P Plg15.7210°, Azm125.3350°;*
*TAP **08** 14:42:52.0,24.05N×121.78E,h9km,ML3.8,C*
*JMA **08** 14:42:52.4±0.3,24.0N±0.3×121.7E±0.6,h1km±2km, MV3.2/13,TAIWAN REGION*
ISC 08 14:42:52.6±0.9,24.04N±0.01×121.78E±0.01,h9km±6km, n172,σ1°18/334,11C-39D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=256	**0.17**	**250**	⇓ *i*	P	**Pg**	**14 42 56.9**	**+0.7**
HWA				*i*	S	**Sg**	**14 43 01.0**	**+2.3**
TWD	**Chiawan** baz=280	**0.17**	**285**	⇓ *i*	P	**Pg**	**14 42 56.0**	**-0.3**
TWD				*i*	S	**Sg**	**14 42 58.5**	**-0.3**
ETL	**Fush Village** baz=305	**0.19**	**311**	⇓	P	**Pg**	**14 42 56.3**	**-0.3**
ETL				*e*	S	**Sg**	**14 43 00.1**	**+0.7**
NACB	**Ninganchiao**	**0.22**	**310**		P	**Pg**	**14 42 56.6**	**-0.5**
NACB	**Ninganchiao** baz=304	**0.22**	**310**	⇓	P	**Pg**	**14 42 56.7**	**-0.4**
NACB				*e*	S	**Sg**	**14 43 00.0**	**-0.1**
ETM	**Tongmen** baz=252	**0.27**	**255**	⇓	P	**Pg**	**14 42 58.0**	**0.0**
ETM					S	**Sb**	**14 43 02.8**	**-1.5**
EHP	**Heping Village** baz=350	**0.28**	**353**	*e*	P	**Pb**	**14 42 58.3**	**-1.5**
EHP				*e*	S	**Sb**	**14 43 03.4**	**-1.1**
EAHA	**Aohua** baz=350	**0.29**	**353**	⇓	P	**Pg**	**14 42 58.4**	**-0.2**
EAHA					S	**Sb**	**14 43 03.5**	**-1.7**
SHUL	**Shoufeng** baz=219	**0.32**	**219**	⇓	P	**Pb**	**14 43 00.6**	**+0.1**
SHUL					S	**Sb**	**14 43 06.9**	**+1.3**
ETLH	**Xiulin Townshi** baz=299	**0.32**	**302**	⇓	P	**Pg**	**14 42 58.6**	**-0.4**
ETLH					S	**Sg**	**14 43 03.6**	**+0.2**
LXIB	**Xiulin Townshi** baz=265	**0.33**	**268**	⇓	P	**Pg**	**14 42 59.1**	**-0.3**
LXIB					S	**Sb**	**14 43 05.2**	**-1.1**
ESL	**Shilin** baz=244	**0.38**	**235**	⇑	P	**Pg**	**14 43 00.5**	**+0.3**
ESL				*i*	S	**Sb**	**14 43 06.8**	**-0.9**
TEGC	**Jichi Village** baz=214	**0.39**	**214**		P	**Pb**	**14 43 01.9**	**+0.2**
TEGC					S	**Sb**	**14 43 09.2**	**+1.4**
ENA	**Nanau** baz=353	**0.39**	**355**	⇓ *i*	P	**Pb**	**14 43 00.3**	**-1.4**
ENA					S	**Sb**	**14 43 07.3**	**-0.6**
EWUT	**Wuta** baz=357	**0.41**	**0**	⇓	P	**Pb**	**14 43 00.7**	**-1.3**
EWUT				*e*	S	**Sb**	**14 43 07.0**	**-1.4**
WARBT	**Fenglin Townsh** baz=240	**0.48**	**229**	⇑	P	**Pb**	**14 43 02.3**	**-0.9**
WARBT					S	**Sb**	**14 43 10.7**	**+0.4**
WHF	**Hehuan Shan** baz=280	**0.48**	**283**	⇓ *i*	P	**Pg**	**14 43 01.8**	**-0.3**
WHF					S	**Sb**	**14 43 09.2**	**-1.6**
EGFH	**Guangfu** baz=223	**0.48**	**221**	⇑	P	**Pb**	**14 43 02.7**	**-0.6**
EGFH					S	**Sb**	**14 43 11.5**	**+0.9**
EOS4	**EOS4** baz=83	**0.50**	**80**	*e*	P	**Pn**	**14 43 05.7**	**+0.1**
EOS4				*e*	S	**Sn**	**14 43 16.0**	**+5.3**
FUSS	**Fushou** baz=290	**0.53**	**294**	⇓	P	**Pg**	**14 43 03.0**	**-0.1**
FUSS				*e*	S	**Sb**	**14 43 12.5**	**+0.3**
NNSB	**Datong** baz=313	**0.53**	**317**	⇓	P	**Pb**	**14 43 02.9**	**-1.3**
NNSB					S	**Sb**	**14 43 10.6**	**-1.5**
NNSH	**Datong** baz=313	**0.53**	**317**	⇓	P	**Pb**	**14 43 02.9**	**-1.3**
NNSH					S	**Sb**	**14 43 10.5**	**-1.5**
ESAO	**Su ao** baz=358	**0.54**	**6**		P	**Pb**	**14 43 03.3**	**-1.0**
ESAO					S	**Sb**	**14 43 12.4**	**+0.2**
NNS	**Nan Shan** baz=313	**0.55**	**318**	⇓ *i*	P	**Pb**	**14 43 03.1**	**-1.4**
NNS				*i*	S	**Sb**	**14 43 10.8**	**-1.7**
LATG	**Datong** baz=331	**0.55**	**335**	⇓	P	**Pb**	**14 43 03.2**	**-1.3**
LATG				*e*	S	**Sb**	**14 43 11.3**	**-1.2**
CHGB	**Renai** baz=261	**0.55**	**273**	⇓	P	**Pb**	**14 43 03.5**	**-1.1**
CHGB					S	**Sb**	**14 43 12.2**	**-0.6**
EOS3	**EOS3** baz=64	**0.55**	**63**	*e*	P	**Pn**	**14 43 07.1**	**+0.6**
EOS3				*e*	S	**Sn**	**14 43 20.4**	**+4.6**
OWD	**Renai** baz=260	**0.56**	**262**		P	**Pg**	**14 43 03.4**	**0.0**
OWD					S	**Sb**	**14 43 11.8**	**-1.0**
EOS2	**EOS2** baz=53	**0.56**	**47**	*e*	P	**Pn**	**14 43 06.9**	**+0.2**
EOS2				*e*	S	**Sn**	**14 43 20.1**	**+4.1**
TWC	**Suao** baz=359	**0.58**	**6**	*i*	P	**Pb**	**14 43 04.0**	**-0.8**
TWC					S	**Sb**	**14 43 12.4**	**-0.8**
TWT	**Tachien** baz=288	**0.59**	**292**	⇓ *i*	P	**Pb**	**14 43 04.4**	**-0.9**
TWT					S	**Sb**	**14 43 13.6**	**-0.2**
NDS	**Dongshan** baz=352	**0.60**	**355**		P	**Pb**	**14 43 04.4**	**-0.9**
NDS					S	**Sb**	**14 43 14.1**	**+0.3**
WUSB	**Renai** baz=264	**0.60**	**266**	⇓	P	**Pb**	**14 43 04.6**	**-0.9**
WUSB					S	**Sb**	**14 43 13.8**	**-0.3**
TDCB	**Techi** baz=289	**0.61**	**291**	⇓	P	**Pb**	**14 43 04.5**	**-1.0**
TDCB				*e*	S	**Sb**	**14 43 13.1**	**-1.1**
NDT	**Datong Townshi** baz=324	**0.61**	**337**	⇓	P	**Pb**	**14 43 04.7**	**-0.9**
NDT					S	**Sb**	**14 43 13.8**	**-0.6**
HGSD	**Ruisui** baz=212	**0.63**	**211**		P	**Pb**	**14 43 06.2**	**+0.4**
HGSD				*e*	S	**Sn**	**14 43 16.3**	**-1.6**
ENTT	**Nioudou** baz=330	**0.63**	**342**	⇓ *i*	P	**Pb**	**14 43 05.0**	**-0.8**
ENTT				*i*	S	**Sb**	**14 43 14.3**	**-0.6**
VWDT	**VWDT** baz=244	**0.65**	**244**		P	**Pb**	**14 43 05.5**	**-0.6**
VWDT					S	**Sb**	**14 43 14.7**	**-0.5**
EHY	**Hungye** baz=208	**0.67**	**219**	⇑ *i*	P	**Pg**	**14 43 05.5**	**-0.1**
EHY					S	**Sb**	**14 43 17.3**	**+1.4**
TWE	**Neicheng** baz=350	**0.69**	**352**	⇓ *i*	P	**Pb**	**14 43 06.2**	**-0.7**
TWE				*i*	S	**Sb**	**14 43 16.9**	**+0.4**
ILA	**Ilan** baz=350	**0.73**	**358**		P	**Pn**	**14 43 07.5**	**-1.6**
ILA					S	**Sb**	**14 43 17.4**	**-0.2**
YHNB	**Yeheng**	**0.73**	**330**		P	**Pb**	**14 43 07.0**	**-0.6**
YHNB	**Yeheng** baz=319	**0.73**	**330**	⇓	P	**Pb**	**14 43 06.9**	**-0.6**
YHNB					S	**Sb**	**14 43 16.6**	**-1.1**
FUSB	**Fushanzhiwuyua** baz=335	**0.74**	**347**	⇓	P	**Pb**	**14 43 07.2**	**-0.6**
FUSB					S	**Sb**	**14 43 18.2**	**+0.2**
NSK	**Sanguang** baz=318	**0.74**	**329**	⇓ *i*	P	**Pb**	**14 43 07.1**	**-0.7**
NSK					S	**Sb**	**14 43 17.8**	**-0.3**
WPL	**Puli Township** baz=267	**0.75**	**268**		P	**Pb**	**14 43 07.2**	**-0.7**
WPL					S	**Sb**	**14 43 17.7**	**-0.5**
ECBN	**Changbin** baz=205	**0.78**	**203**		P	**Pb**	**14 43 08.5**	**+0.2**
ECBN					S	**Sn**	**14 43 21.0**	**-0.5**
YULB	**Yu-li**	**0.78**	**215**		P	**Pb**	**14 43 07.8**	**-0.5**
YULB	**Yu-li** baz=217	**0.78**	**215**		P	**Pg**	**14 43 07.6**	**0.0**
YULB				*e*	S	**Sb**	**14 43 19.6**	**+0.6**
DPDB	**Guoxing** baz=268	**0.78**	**270**	⇓	P	**Pb**	**14 43 08.0**	**-0.3**
DPDB				*e*	S	**Sb**	**14 43 18.6**	**-0.5**
NWLT	**Wulai** baz=339	**0.78**	**341**	⇓	P	**Pb**	**14 43 07.9**	**-0.5**
NWLT					S	**Sb**	**14 43 18.5**	**-0.7**
WCS	**Beigang Elemen** baz=263	**0.79**	**272**	⇓	P	**Pb**	**14 43 08.1**	**-0.5**
WCS				*e*	S	**Sb**	**14 43 18.6**	**-0.8**
SSLB	**Suanglung**	**0.79**	**252**		P	**Pb**	**14 43 08.1**	**-0.5**
SSLB	**Suanglung** baz=260	**0.79**	**252**	⇓	P	**Pb**	**14 43 08.1**	**-0.5**
SSLB					S	**Sb**	**14 43 19.1**	**-0.4**
WHP	**Taichung City** baz=286	**0.80**	**288**	⇓	P	**Pb**	**14 43 08.4**	**-0.3**
WHP					S	**Sn**	**14 43 20.9**	**-1.3**
EYUL	**Yuli** baz=232	**0.80**	**212**		P	**Pn**	**14 43 09.2**	**-0.9**
EYUL				*e*	S	**Sn**	**14 43 21.6**	**-0.6**
TWF1	**Yuli** baz=231	**0.81**	**213**	*i*	P	**Pb**	**14 43 08.5**	**-0.4**
TWF1					S	**Sb**	**14 43 20.4**	**+0.5**
SMLT	**Sun Moon Lake** baz=258	**0.82**	**260**	⇓ *i*	P	**Pb**	**14 43 08.7**	**-0.4**
SMLT				*i*	S	**Sb**	**14 43 20.0**	**-0.2**
NFF	**Wufeng Townshi** baz=303	**0.85**	**315**	⇓	P	**Pb**	**14 43 09.1**	**-0.5**
NFF					S	**Sn**	**14 43 22.3**	**-1.1**
TYC	**Yuchr** baz=260	**0.85**	**261**	⇓ *i*	P	**Pb**	**14 43 09.0**	**-0.6**
TYC				*i*	S	**Sb**	**14 43 21.0**	**-0.1**
CHKH	**Chenggong** baz=188	**0.91**	**203**		P	**Pb**	**14 43 10.1**	**-0.4**
CHKH					S	**Sn**	**14 43 24.5**	**-0.3**
WHYT	**Xinyi Township** baz=255	**0.91**	**248**		P	**Pn**	**14 43 10.8**	**-0.9**
WHYT					S	**Sn**	**14 43 24.5**	**-0.4**
LIOB	**Emei** baz=308	**0.92**	**311**	⇓	P	**Pn**	**14 43 10.9**	**-0.9**
LIOB					S	**Sn**	**14 43 24.5**	**-0.7**
NSTT	**Nanjuang** baz=307	**0.92**	**310**	⇓ *i*	P	**Pn**	**14 43 10.8**	**-1.0**
NSTT					S	**Sb**	**14 43 23.3**	**+0.1**
TIPB	**Shuangxi** baz=351	**0.93**	**3**	⇑	P	**Pn**	**14 43 11.1**	**-0.9**
TIPB				*e*	S	**Sn**	**14 43 24.5**	**-1.0**
NJD	**Zhudong** baz=314	**0.94**	**318**		P	**Pn**	**14 43 11.8**	**-0.2**
NJD				*e*	S	**Sn**	**14 43 24.8**	**-0.8**
FULB	**Fuli** baz=227	**0.94**	**208**		P	**Pb**	**14 43 10.9**	**-0.3**
FULB					S	**Sn**	**14 43 26.1**	**+0.4**
NHDH	**Xindian Distri** baz=342	**0.95**	**346**		P	**Pn**	**14 43 11.3**	**-0.8**
NHDH					S	**Sn**	**14 43 25.7**	**-0.2**
TWA	**Mucha** baz=337	**0.96**	**349**	⇓ *i*	P	**Pn**	**14 43 11.2**	**-1.1**
TWA				*i*	S	**Sn**	**14 43 26.0**	**0.0**
TWQ1	**Liyutan** baz=297	**0.97**	**289**	⇑ *i*	P	**Pn**	**14 43 12.1**	**-0.4**
TWQ1					S	**Sn**	**14 43 26.8**	**+0.5**
TATO	**Taipei**	**0.97**	**344**		P	**Pn**	**14 43 12.1**	**-0.4**
TATO	**Taipei** baz=341	**0.97**	**344**		P	**Pn**	**14 43 11.7**	**-0.8**
TATO					S	**Sn**	**14 43 25.3**	**-1.1**
WJS	**Zhushan** baz=263	**0.98**	**258**		P	**Pn**	**14 43 12.6**	**-0.1**
WJS				*e*	S	**Sn**	**14 43 26.9**	**+0.3**
WWF	**Wufeng** baz=263	**0.99**	**271**		P	**Pn**	**14 43 13.5**	**+0.8**
WWF					S	**Sn**	**14 43 30.1**	**+3.4**
TWB1	**Santiao Chiao** baz=6.0	**0.99**	**11**	⇑ *i*	P	**Pn**	**14 43 12.8**	**+0.1**
TWB1					S	**Sn**	**14 43 28.0**	**+1.2**
NSY	**Sanyi** baz=289	**1.00**	**292**	⇓ *i*	P	**Pn**	**14 43 13.1**	**+0.2**
NSY					S	**Sn**	**14 43 27.9**	**+0.8**
CHKT	**Chengkung** baz=188	**1.00**	**202**	*i*	P	**Pg**	**14 43 11.2**	**-0.7**
CHKT					S	**Sn**	**14 43 26.8**	**-0.3**
WNT	**Mingjian** baz=259	**1.01**	**261**	*i*	P	**Pn**	**14 43 13.2**	**+0.2**
WNT				*i*	S	**Sn**	**14 43 28.7**	**+1.3**
HSN1	**Hsinchu** baz=313	**1.01**	**317**		P	**Pn**	**14 43 13.4**	**+0.4**
HSN1				*e*	S	**Sn**	**14 43 26.6**	**-0.8**
EHD	**Haiduan** baz=226	**1.03**	**211**		P	**Pg**	**14 43 11.6**	**-0.8**
EHD				*e*	S	**Sb**	**14 43 26.4**	**+0.3**
NMLH	**Miaoli** baz=295	**1.03**	**299**		P	**Pn**	**14 43 13.4**	**+0.1**
NMLH				*e*	S	**Sn**	**14 43 28.3**	**+0.5**
TAP	**Taipei** baz=339	**1.03**	**346**		P	**Pn**	**14 43 13.2**	**0.0**
TAP				*i*	S	**Sn**	**14 43 27.4**	**-0.4**
NWF	**Wu-fen Shan** baz=349	**1.03**	**0**	*i*	P	**Pn**	**14 43 13.1**	**-0.3**
NWF				*i*	S	**Sn**	**14 43 27.5**	**-0.4**
WFSB	**Wu-fen Shan** baz=351	**1.03**	**0**		P	**Pn**	**14 43 13.2**	**0.0**
WFSB					S	**Sn**	**14 43 27.6**	**-0.2**
ALS	**Alishan** baz=240	**1.03**	**240**	⇑ *i*	P	**Pb**	**14 43 12.7**	**-0.1**
ALS				*i*	S	**Sn**	**14 43 28.2**	**0.0**
SBCB	**Hsinchu** baz=313	**1.04**	**316**		P	**Pn**	**14 43 14.0**	**+0.6**
SBCB				*e*	S	**Sn**	**14 43 29.5**	**+1.3**
NJN	**Zhunan** baz=305	**1.05**	**308**		P	**Pn**	**14 43 14.3**	**+0.8**
NJN				*e*	S	**Sn**	**14 43 29.0**	**+0.7**
NTY	**Taoyuan** baz=323	**1.06**	**336**		P	**Pn**	**14 43 14.3**	**+0.7**
NTY					S	**Sn**	**14 43 28.5**	**0.0**
SXI1	**Grass Mountain** baz=352	**1.06**	**5**		P	**Pn**	**14 43 13.6**	**-0.2**
SXI1					S	**Sn**	**14 43 31.1**	**+2.5**
HSN	**Hsinchu** baz=300	**1.06**	**316**	*i*	P	**Pn**	**14 43 14.3**	**+0.7**
HSN					S	**Sn**	**14 43 28.3**	**-0.2**
ECS	**Chishang** baz=228	**1.07**	**209**		P	**Pn**	**14 43 13.4**	**-0.4**
ECS				*e*	S	**Sn**	**14 43 28.8**	**+0.1**
NCUH	**Zhongli** baz=320	**1.07**	**330**		P	**Pn**	**14 43 14.1**	**+0.2**
NCUH					S	**Sn**	**14 43 29.5**	**+0.6**
NCU	**National Centr** baz=323	**1.08**	**330**		P	**Pn**	**14 43 14.4**	**+0.5**
NCU					S	**Sn**	**14 43 30.6**	**+1.6**
WDJ	**Dajia District** baz=282	**1.08**	**287**		P	**Pn**	**14 43 15.0**	**+1.0**
WDJ					S	**Sn**	**14 43 31.2**	**+2.1**
ELDTW	**Lidau** baz=210	**1.09**	**220**	*i*	P	**Pg**	**14 43 12.2**	**-1.4**
ELDTW				*i*	S	**Sn**	**14 43 29.1**	**-0.4**
CHN5	**Tsauling** baz=233	**1.10**	**247**	⇑ *i*	P	**Pn**	**14 43 14.3**	**0.0**
CHN5				*i*	S	**Sn**	**14 43 31.5**	**+1.9**
TNOU	**National Taiwa** baz=334	**1.11**	**360**		P	**Pn**	**14 43 14.5**	**+0.1**
TNOU				*e*	S	**Sn**	**14 43 30.6**	**+0.8**
TWS1	**Kuangyinshan** baz=336	**1.11**	**343**	*i*	P	**Pn**	**14 43 15.0**	**+0.7**
TWS1				*e*	S	**Sn**	**14 43 31.0**	**+1.2**
WCHH	**Zhanghua** baz=268	**1.12**	**273**		P	**Pn**	**14 43 15.3**	**+0.9**
WCHH				*e*	S	**Sn**	**14 43 31.1**	**+1.2**
YM01	**YM01** baz=326	**1.12**	**350**		P	**Pn**	**14 43 14.8**	**+0.2**
YM01					S	**Sn**	**14 43 31.3**	**+1.2**
EDH	**Donghe** baz=192	**1.14**	**202**		P	**Pb**	**14 43 11.9**	**-2.6**
EDH					S	**Sn**	**14 43 29.9**	**-0.6**
JYNG	**Yonagunijimaku**	**1.14**	**68**		P	**Pn**	**14 43 15.0**	**+0.2**
JYNG				*e*	S	**Sn**	**14 43 32.6**	**+2.1**
YM08	**YM08** baz=328	**1.16**	**352**		P	**Pn**	**14 43 15.3**	**+0.2**
YM08					S	**Sn**	**14 43 31.7**	**+0.6**
NTST	**Danshui**	**1.16**	**345**		P	**Pn**	**14 43 15.6**	**+0.5**

baz=338
NTST S Sn 14 43 33.1 +2.0
baz=338
WGK Gukeng 1.17 253 *i* P Pn 14 43 15.7 +0.6
baz=252
WGK S Sn 14 43 33.3 +2.2
baz=252
ANP Anpu 1.17 348 *i* P Pn 14 43 15.3 +0.1
baz=342
ANP S Sn 14 43 31.8 +0.4
baz=342
WDLH Douliu 1.19 253 P Pg 14 43 16.0 +0.5
baz=252
WDLH S Sn 14 43 35.0 +3.4
baz=252
YOJ Yonaguni jima 1.20 69 P Pg 14 43 16.0 +0.2
YOJ Yonaguni jima 1.20 69 P Pg 14 43 15.7 0.0
baz=73
YOJ *e*S Sn 14 43 32.3 +0.2
baz=73
YOJ Yonaguni jima 1.20 69 *e*P Pg 14 43 15.8 0.0
WCKO Fanlu 1.23 241 P Pg 14 43 16.5 +0.3
baz=242
WCKO S Sn 14 43 35.0 +2.3
baz=242
TWY Chenhua 1.25 353 *i* P Pg 14 43 16.9 +0.3
baz=328
TWY *e*S Sn 14 43 34.2 +1.1
baz=328
STYH Taoyuan 1.26 227 P Pb 14 43 16.2 -0.3
baz=218
STYH S Sn 14 43 35.0 +1.6
baz=218
LONT Longtian 1.27 208 P Pn 14 43 15.2 -1.4
baz=223
LONT *e*S Sg 14 43 33.3 -0.3
baz=223
STYT Tauyuan 1.28 227 *i* P Pb 14 43 16.4 -0.4
baz=218
STYT *i* S Sn 14 43 34.5 +0.6
baz=218
TPUB Ta-pu 1.28 235 P Pg 14 43 17.2 -0.1
TPUB Ta-pu 1.28 235 ⇑P Pg 14 43 16.8 -0.5
baz=237
TPUB S Sn 14 43 34.9 +0.9
baz=237
CHN4 Tsaushan 1.28 238 *i* P Pg 14 43 17.4 +0.1
baz=239
CHN4 *e*S Sn 14 43 36.1 +2.1
baz=239
WRL Guolierlin Hig 1.29 264 P Pg 14 43 17.3 0.0
baz=261
WRL S Sn 14 43 35.6 +1.5
baz=261
CHN2 Minshiung 1.29 248 *i* P Pg 14 43 18.7 +1.2
baz=247
CHN2 S Sn 14 43 37.0 +2.8
baz=247
RLNB Erlin 1.30 264 P Pg 14 43 18.2 +0.5
baz=261
RLNB S Sg 14 43 36.7 +2.0
baz=261
WTK Tuku 1.32 255 P Pg 14 43 17.7 -0.3
baz=253
WTK S Sg 14 43 37.7 +2.6
baz=253
WTP Ta-pu 1.32 234⇑ *i*P Pg 14 43 17.7 -0.3
baz=235
WTP *i* S Sg 14 43 37.2 +1.9
baz=235
CHY Chiayi 1.35 247 *e*P Pg 14 43 18.7 +0.1
baz=246
CHY *e*S Sg 14 43 37.5 +1.4
baz=246
TWG Pinlang 1.37 208 *i* P Pn 14 43 15.6 -2.4
baz=213
TWG S Sb 14 43 35.9 -0.2
baz=213
TWGBT Beinan 1.37 208 P Pn 14 43 16.2 -1.7
TWGBT Beinan 1.37 208 P Pn 14 43 15.7 -2.2
baz=213
TWGBT *e*S Sb 14 43 35.9 -0.2
baz=213
WTCT Ta-ch'eng 1.38 263 *e*P Pg 14 43 19.6 +0.4
baz=260
WTCT *e*S Sg 14 43 38.6 +1.5
baz=260
LDUT Ludao 1.38 192 P Pn 14 43 15.6 -2.5
baz=185
LDUT S Sb 14 43 34.3 -2.2
baz=185
TWK Hsinying 1.41 237 *i* P Pg 14 43 19.1 -0.6
baz=238
TWK *i* S Sg 14 43 40.2 +2.3
baz=238
CHN1 Nanshi 1.43 234 *i* P Pg 14 43 19.8 -0.2
baz=235
CHN1 *i* S Sg 14 43 40.2 +1.7
baz=235
SNST Tainan City 1.43 236 P Pg 14 43 19.4 -0.6
baz=237
SNST S Sg 14 43 41.2 +2.6
baz=237
SGST Jiashian 1.45 229 *i* P Pn 14 43 18.9 -0.1
baz=232
SGST *i* S Sg 14 43 40.9 +1.6
baz=232
SLGT Liugui 1.47 225 P Pb 14 43 19.9 -0.2
baz=228
SLGT S Sg 14 43 41.9 +2.0
baz=228
WSF Szhu 1.48 255 *i* P Pg 14 43 20.7 -0.3
baz=253
WSF S Sg 14 43 40.7 +0.5
baz=253
WSL Shuilin Townsh 1.51 251 P Pg 14 43 21.0 -0.6
baz=249
WSL S Sg 14 43 43.9 +2.7
baz=249
ICHU Yijhu 1.53 244 P Pb 14 43 20.9 -0.2
baz=244
ICHU S Sg 14 43 43.7 +1.8
baz=244
CHN8 Yiju 1.59 245 *i* P Pb 14 43 21.7 -0.5
baz=244
CHN8 *i* S Sg 14 43 45.8 +1.9
baz=244
CHN3 Shinhua 1.61 234 *i* P Pg 14 43 23.2 -0.3
baz=236
CHN3 *e*S Sg 14 43 46.4 +2.0
baz=236
PCYT Pengchaiyu 1.61 9 *e*P Pn 14 43 21.0 -0.2
baz=2.0
PCYT *e*S Sg 14 43 44.3 -0.2
baz=2.0
ECL Taimali 1.62 208 *i* P Pn 14 43 19.9 -1.4
baz=213
ECL *e*S Sn 14 43 41.6 -0.7
baz=213
SSHA Shanhua 1.63 237 *e*P Pg 14 43 23.9 -0.1
baz=238
SSHA *e*S Sg 14 43 46.3 +1.1
baz=238
SCST Cishan 1.64 226 P Pg 14 43 23.3 -0.9
baz=230
SCST S Sg 14 43 48.2 +2.7
baz=230
SHHT Tainan City 1.66 233 P Pg 14 43 24.1 -0.3
baz=235
SHHT S Sg 14 43 49.0 +3.2
baz=235
SSD Sandimen 1.66 220 *i* P Pn 14 43 21.9 0.0
baz=224
SSD *i* S Sg 14 43 45.4 -0.6
baz=224
TSMG Majia 1.68 218 P Pb 14 43 23.3 -0.5
baz=223
TSMG S Sg 14 43 46.5 -0.2
baz=223
SCLT Jiali 1.69 240 *e*P Pb 14 43 23.7 -0.1
baz=240
SCLT S Sg 14 43 48.0 +1.1
baz=240
TWM1 Shoushan 1.73 226 P Pb 14 43 24.6 -0.1
baz=230
TWM1 *e*S Sg 14 43 49.0 +0.7
baz=230
SGLT Jiouru 1.76 222 *e*P Pg 14 43 26.2 -0.2
baz=227
SGLT *e*S Sg 14 43 50.1 +0.9
baz=227
MASBT Mashibuluo 1.76 217 P Pn 14 43 23.0 -0.3
baz=222
MASBT S Sg 14 43 49.6 +0.2
baz=222
TSCK Chigu Township 1.79 241 P Pb 14 43 24.2 -1.3
baz=241
TSCK S Sg 14 43 49.6 -0.5
baz=241
EAST Anshuo 1.85 208 *i* P Pn 14 43 23.1 -1.5
baz=213
EAST *e*S Sn 14 43 48.2 0.0
baz=213
HATJ Hateruma jima 1.85 89 *e*S Sb 14 43 49.4 -0.6
TAWH Dawu Township 1.88 206 P Pn 14 43 24.1 -0.8
baz=212
TAWH *e*S Sn 14 43 48.1 -0.5
baz=212
WSSB Gushan 1.97 225 P Pb 14 43 27.4 -1.2
baz=230
WSSB *e*S Sg 14 43 54.5 -1.3
baz=230
SCZT Fangliau 1.97 213 *i* P Pb 14 43 27.3 -1.3
baz=220
SCZT S Sb 14 43 54.1 +0.9
baz=220
SLIU Shizi 2.02 207 P Pn 14 43 27.1 +0.2
baz=213
SLIU *e*S Sb 14 43 55.4 +0.5
baz=213
LYUB Lan-yu 2.03 185 P Pn 14 43 24.1 -2.9
baz=193
LYUB S Sn 14 43 48.4 -4.1
baz=193
JKRS Kuro-shima 2.05 84 P Pb 14 43 28.0 -2.0
JKRS *e*S Sb 14 43 55.7 +0.2
PHUB P'eng-hu 2.09 256 P Pn 14 43 28.4 +0.6
baz=252
PHUB S Sb 14 43 56.2 -0.4
baz=252
PNG Penghu 2.09 258 *i* P Pn 14 43 28.2 +0.4
baz=253
PNG S Sn 14 43 54.0 +0.1
baz=253
WDGT Dungji 2.09 249 *i* P Pn 14 43 26.7 -1.1
baz=233
WDGT S Sb 14 43 55.8 -0.9
baz=233
JIJ Ishigaki jima 2.18 81 P Pn 14 43 29.2 +0.1
JIJ *e*S Sn 14 43 56.1 -0.2
HEN Hengchun 2.23 206 *e*P Pn 14 43 31.0 +1.2
baz=200
HEN *e*S Sn 14 43 59.0 +1.5
baz=200
TWKBT Hengchun 2.27 203 *e*P Pb 14 43 31.9 -1.8
baz=199
TWKBT *e*S Sn 14 43 59.6 +1.3
baz=199
VCHM Qimei 2.31 250 P Pn 14 43 30.7 -0.1
baz=236
VCHM S Sb 14 44 01.3 -1.7
baz=236
VWUC VWUC 2.33 295 P Pn 14 43 30.9 -0.2
baz=286
VWUC *e*S Sn 14 44 00.3 +0.5
baz=286
JISG Ishigakijimahi 2.38 76 P Pn 14 43 31.9 +0.1
JISG *e*S Sb 14 44 02.7 -2.3
PTMZ Houxiangcun 2.62 293 P Pn 14 43 34.8 -0.3
baz=284
PTMZ S Sn 14 44 08.2 +1.2
baz=284
MATB Ma-tsu 2.68 322 P Pn 14 43 35.7 -0.3
baz=310
MATB *e*S Sn 14 44 10.0 +1.3
baz=310
LYJJ Jianjiangzhen 3.10 324 P Pn 14 43 41.8 +0.1
baz=313
LYJJ *e*S Sn 14 44 21.5 +2.6
baz=313
XPSS Dashiqiu 3.22 334 P Pn 14 43 43.4 0.0
baz=322
XPSS *e*S Sn 14 44 23.5 +1.7
baz=322

IDC ***08*** *14:44:23.4±6.0, 17°.78N×99°.30W, h0km, mb3.3/3, mbtmp3.3/4, ML3.2/1, MS3.0/4, Error ellipse: s-maj=143.7km s-min=19.3km az=23.0*
MEX ***08*** *14:44:25.3±1.1, 17°.02N×99°.69W, h36km±5km, MD4.3*
ISC 08 14:44:23.7±0.9, 17°.03N±0°.03×99°.65W±0.02, h33km±4km, n44, σ2ş36/73, mb3.3/3, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAIG	**Los Arroyos**	**0.01**	**214**	*i* P		**Pb**		**14 44 29.2**	**0.0**
DAIG				*e*S		**Sb**		**14 44 33.3**	**+0.4**
ACP2	**Acapulco**	**0.28**	**236**	*i* P		**Pn**		**14 44 30.8**	**-0.7**
ACP2				*i* S		**Sb**		**14 44 36.3**	**0.0**
CRIG	**Cruz Grande**	**0.57**	**121**	*i* P		**Pn**		**14 44 35.2**	**-0.4**
CRIG				*e*S		**Sn**		**14 44 43.9**	**+0.1**
CAIG	**El Cayaco**	**0.60**	**272**	*i* P		**Pn**		**14 44 34.5**	**-1.4**
CAIG				*e*S		**Sn**		**14 44 42.9**	**-1.5**
ATYC	**Atoyac**	**0.78**	**284**	*i* P		**Pn**		**14 44 37.0**	**-1.4**
ATYC				*i* S		**Sn**		**14 44 47.4**	**-1.5**
MEIG	**Mezcala**	**0.89**	**2**	*i* P		**Pn**		**14 44 39.2**	**-0.9**
MEIG				*e*S		**Sn**		**14 44 51.0**	**-0.9**
MGIG	**Malinaltepec**	**0.99**	**78**	*i* P		**Pn**		**14 44 41.7**	**+0.2**
MGIG				*i* S		**Sn**		**14 44 55.2**	**+0.8**
TLIG	**Tlapa**	**1.16**	**63**	*e*P		**Pn**		**14 44 44.1**	**+0.3**
TLIG				*e*S		**Sn**		**14 44 59.4**	**+0.8**
HMTT	**Tlapaneco**	**1.29**	**53**	*i* P		**Pn**		**14 44 45.7**	**+0.2**
HMTT				*i* S		**Sn**		**14 45 03.6**	**+1.9**
PLIG	**Platanillo**	**1.36**	**6**	*i* P		**Pn**		**14 44 46.3**	**-0.3**
PLIG				*e*S		**Sn**		**14 45 04.1**	**+0.5**
ARIG	**Puente Sto Nin**	**1.41**	**332**	*e*P		**Pn**		**14 44 46.8**	**-0.4**
ARIG				*i* S		**Sn**		**14 45 04.9**	**+0.2**
PNIG	**Pinotepa**	**1.59**	**113**	*e*P		**Pn**		**14 44 49.5**	**-0.1**
PNIG				*e*S		**Sb**		**14 45 13.5**	**+1.3**
PET2	**Petatlan**	**1.63**	**288**	*e*P		**Pn**		**14 44 50.6**	**+0.5**
PET2				*i* S		**Sn**		**14 45 10.5**	**+0.6**
FTIG	**Fresnillo de T**	**1.69**	**59**	*e*P		**Pn**		**14 44 51.4**	**+0.4**
FTIG				*e*S		**Sb**		**14 45 15.3**	**+0.1**
TXIG	**Tlaxiaco**	**1.81**	**83**	*e*P		**Pn**		**14 44 53.6**	**+0.7**
TXIG				*e*S		**Sn**		**14 45 16.6**	**+1.8**
YAIG	**Yautepec**	**1.90**	**17**	*e*P		**Pn**		**14 44 53.6**	**-0.5**
YAIG				*e*S		**Sn**		**14 45 18.5**	**+1.5**
TEJU	**Tejupilco**	**1.93**	**345**	*i* P		**Pn**		**14 44 55.5**	**+1.1**
TEJU				*i* S		**Sn**		**14 45 19.0**	**+1.4**
HLIG	**Huajuapan de L**	**1.93**	**65**	*e*P		**Pn**		**14 44 54.9**	**+0.4**
HLIG				*e*S		**Sn**		**14 45 20.9**	**+3.2**
YOIG	**Yosondua**	**2.02**	**95**	*e*P		**Pn**		**14 44 56.6**	**+0.9**
PPM	**Popocatepetl**	**2.25**	**25**	*e*P		**Pn**		**14 44 59.0**	**-0.1**
PPM				*e*S		**Sb**		**14 45 31.4**	**-0.2**
UON	**La Union**	**2.27**	**295**	*i* P		**Pn**		**14 45 01.3**	**+2.3**
UON				*i* S		**Sb**		**14 45 32.5**	**+0.7**
UNM	**Universidad Na**	**2.33**	**11**	*i* P		**Pn**		**14 45 03.0**	**+2.9**
UNM				*e*S		**Sn**		**14 45 30.4**	**+2.7**
TPIG	**Tehuac#an**	**2.58**	**57**	*i* P		**Pn**		**14 45 03.7**	**+0.3**
TPIG				*e*S		**Sb**		**14 45 42.9**	**+2.1**
PEIG	**Puerto Escondi**	**2.61**	**113**	*e*P		**Pn**		**14 45 04.5**	**+0.9**
PEIG				*e*S		**Sb**		**14 45 42.8**	**+1.3**
TOIG	**Toxpalan**	**2.68**	**66**	*e*P		**Pn**		**14 45 05.0**	**+0.3**
TOIG				*e*S		**Sb**		**14 45 45.0**	**+1.3**
VHO	**Vista Hermosa**	**2.79**	**89**	*e*P		**Pn**		**14 45 07.7**	**+1.4**
VHO				*e*S		**Sb**		**14 45 47.7**	**+1.0**
MOIG	**Morelia**	**3.01**	**331**	*e*P		**Pn**		**14 45 13.0**	**+3.6**
MOIG				*i* S		**Sn**		**14 45 37.6**	**-6.9**
DEIG	**Demacu**	**3.30**	**10**	*e*P		**Pb**		**14 45 18.7**	**-3.2**
DEIG				*e*				14 46 05.8	
JRQG	**Juriquilla Cam**	**3.73**	**348**	*i* P		**Pb**		**14 45 27.1**	**-2.1**
JRQG				*e*S		**Sn**		**14 45 59.1**	**-3.2**
JRQG				*i*				14 46 19.6	
COIG	**Colima**	**4.40**	**300**	*e*P		**Pn**		**14 45 29.9**	**+1.5**
COIG				*e*S		**Sn**		**14 46 15.3**	**-3.2**
JUBC	**Volcan de Coli**	**4.47**	**304**	*e*P		**Pn**		**14 45 30.8**	**+1.3**
JUBC				*i* S		**Sn**		**14 46 27.5**	**+6.9**
EZ5V		**4.48**	**304**	*e*P		**Pn**		**14 45 31.8**	**+2.2**
EZ5V				*i* S		**Sn**		**14 46 23.4**	**+2.6**
MNGA	**Volcan de Coli**	**4.49**	**303**	*i* P		**Pn**		**14 45 32.0**	**+2.3**
MNGA				*e*S		**Sn**		**14 46 28.6**	**+7.7**
SOMAC	**Volcano de Col**	**4.53**	**304**	*e*P		**Pn**		**14 45 32.8**	**+2.5**
SOMAC				*i* S		**Sn**		**14 46 29.3**	**+7.2**
CMIG	**Matias Romero**	**4.55**	**89**	Pn		**Pn**		**14 45 30.4**	**0.0**
	1.2nm,0.3s,baz=281,slow=13,SNR=14								
CMIG				Sn		**Sn**		**14 46 18.6**	**-3.6**
	3.0nm,0.3s,baz=288,slow=16,SNR=2.3								
CMIG				Lg		Lg		14 46 39.9	
	2.9nm,0.3s,baz=351,slow=19,SNR=4.9								
CMIG				LR		LR		14 47 35.1	
	comp=Z,103nm,20.1s,baz=354,slow=45 2.9nm,0.3s								
CDAR	**Ciudad de Arme**	**4.57**	**295**	*e*P		**Pn**		**14 45 31.0**	**+0.4**
CDAR				*e*S		Sn		14 46 11.4	-11
CDAR				*i* S		**Sn**		**14 46 26.5**	**+4.0**
ANMO	**Albuquerque**	**18.85**	**342**	LR		LR		14 54 60.0	
	comp=Z,35nm,21.2s,baz=209,slow=35								
NVAR	**Mina Array Bea**	**26.86**	**326**	P		**P**		**14 50 01.9**	**+0.1**
	0.5nm,0.7s,baz=148,slow=10,SNR=4.8 0.5nm,0.7s								
PDAR	**Pinedale Array**	**27.01**	**344**	P		**P**		**14 50 03.0**	**0.0**
	0.2nm,0.6s,baz=161,slow=11,SNR=2.3								
PDAR				LR		LR		15 01 03.2	
	comp=Z,34nm,19.0s,baz=72,slow=38 0.2nm,0.6s								
ELK	**Elko**	**27.20**	**333**	LR		LR		15 00 39.4	
	comp=Z,74nm,18.4s,baz=58,slow=37								
YKA	**Yellowknife Ar**	**46.61**	**351**	P		**P**		**14 52 47.0**	**-1.5**
	0.6nm,0.9s,baz=157,slow=7.5,SNR=5.9 0.6nm,0.9s								
H03N2	**Juan Fernandez**	**53.94**	**159**	T		T		15 51 31.5	
	baz=338,slow=77,SNR=8.1								
H03N1	**Juan Fernandez**	**53.95**	**159**	T		T		15 51 37.0	
	baz=338,slow=77,SNR=7.9								
H03N3	**Juan Fernandez**	**53.96**	**159**	T		T		15 51 31.8	
	baz=338,slow=77,SNR=13								

IDC ***08*** *15:01:06.3±2.8, 30°.21S×177°.90W, h132km±15km, mb3.2/3, mbtmp3.7/4, Error ellipse: s-maj=62.8km s-min=35.6km az=126.0*
ISC 08 15:01:04.7±1.9, 30°.5S±0°.1×178°.0W±0°.3, h100km, n7, σ2ş29/9, mb3.5/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.27**	**2**	P		**P**		**15 01 30.4**	**+2.2**
	240nm,0.3s,baz=105,slow=20,SNR=1.3								
RAO				S		**Sn**		**15 01 46.1**	**+0.2**
	497nm,0.3s,baz=108,slow=23,SNR=2.2								
URZ	**Urewera**	**8.72**	**207**	P		**Pn**		**15 03 08.2**	**+0.2**
	8.1nm,0.9s,baz=30,slow=20,SNR=1.6								
URZ				S		**Sn**		**15 04 45.5**	**+1.0**
	4.7nm,0.3s,baz=60,slow=20,SNR=8.5								
RPZ	**Rata Peaks**	**15.79**	**211**	P		**P**		**15 04 44.1**	**+1.0**
	4.0nm,0.8s,baz=63,slow=4.5,SNR=3.0								
STKA	**Stephens Creek**	**34.49**	**257**	P		**P**		**15 07 44.3**	**+1.2**
	2.1nm,1.0s,baz=137,slow=19,SNR=2.3 2.1nm,1.0s								
ASAR	**Alice Springs**	**43.14**	**267**	P		**P**		**15 08 53.8**	**-1.7**
	0.8nm,1.1s,baz=102,slow=7.4,SNR=5.2 0.8nm,1.1s								
WRA	**Warramunga Arr**	**44.14**	**272**	P		**P**		**15 09 01.7**	**-1.8**
	0.2nm,0.3s,baz=111,slow=8.0,SNR=12 0.2nm,0.3s								
FINES	**FINESS Array B**	**145.28**	**340**	PKPbc		**PKPdf**		**15 20 25.8**	**-4.1**
	1.7nm,0.9s,baz=58,slow=3.4,SNR=5.7								

NEIC ***08*** *15:21:47.0±1.8, 17°.2S±0°.2×175°.51W±0°.10, h10km±2km, mb4.8/13, Error ellipse: s-maj=34.5km s-min=7.2km az=23.0*
IDC ***08*** *15:22:12.2±2.2, 17°.35S×177°.55W, h110km±7km, mb3.6/5, mbtmp3.9/5, Error ellipse: s-maj=107.5km s-min=18.7km az=143.0*
ISC 08 15:22:08.2±0.9, 18°.4S±0°.2×176°.7W±0°.2, h100km, n21, σ1ş84/23, mb4.4/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.44**	**97**	Pn		Pn		15 23 10.6	-30
MRZ	**Mangatainoka R**	**23.15**	**195**	P		**P**		**15 27 08.2**	**+2.3**
MRZ				IAmb		IAmb		15 27 27.7	
	comp=Z,18nm,1.2s								
KHZ	**Kahutara**	**25.33**	**197**	P		**P**		**15 27 23.9**	**-1.7**
PPTF	**Pamatai, Papee**	**25.80**	**92**	P		P		15 27 08.2	-22
CTAO	**Charters Tower**	**34.98**	**261**	P		**P**		**15 28 52.6**	**+1.4**
TOO	**Toolangi**	**38.14**	**232**	P		**P**		**15 29 19.2**	**+1.4**
TOO				IAmb		IAmb		15 30 28.2	
	comp=Z,31nm,1.6s								
COEN	**Coen**	**38.75**	**271**	P		**P**		**15 29 24.2**	**+1.1**
COEN				IAmb		IAmb		15 30 42.6	
	comp=Z,52nm,1.7s								
STKA	**Stephens Creek**	**39.83**	**242**	P		**P**		**15 29 32.6**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=85,slow=8.9,SNR=6.5								
STKA				pP		**pwP**		**15 29 59.0**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=92,slow=7.5,SNR=2.3 comp=Z,1.2nm,0.5s								
BBOO	**Buckleboo**	**44.60**	**242**	P		**P**		**15 30 08.9**	**-1.8**
BBOO				IAmb		IAmb		15 31 52.5	
	comp=Z,19nm,1.2s								
WRAB	**Tennant Creek**	**46.14**	**260**	P		**P**		**15 30 21.2**	**-1.9**
WRAB				IAmb		IAmb		15 31 04.4	
	comp=Z,20nm,1.8s								
WRA	**Warramunga Arr**	**46.15**	**260**	P		**P**		**15 30 20.9**	**-2.3**
WRA	**Warramunga Arr**	**46.15**	**260**	P		**P**		**15 30 21.4**	**-1.7**
	comp=Z,1.5nm,0.4s,baz=98,slow=6.4,SNR=88								
WRA				pP		**pP**		**15 30 47.4**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=98,slow=7.3,SNR=7.6 comp=Z,1.5nm,0.4s								
AS31	**Alice Springs**	**46.23**	**255**	P		**P**		**15 30 22.1**	**-1.7**
ASAR	**Alice Springs**	**46.23**	**255**	P		**P**		**15 30 21.6**	**-2.2**
ASAR	**Alice Springs**	**46.23**	**255**	P		**P**		**15 30 22.1**	**-1.6**
	comp=Z,3.4nm,0.7s,baz=89,slow=7.8,SNR=86								
ASAR				pP		**pP**		**15 30 48.1**	**+1.5**
	comp=Z,2.1nm,0.7s,baz=88,slow=7.9,SNR=6.3 comp=Z,3.4nm,0.7s								
KNRA	**Kununurra**	**52.07**	**264**	P		**P**		**15 31 05.8**	**-2.5**
FITZ	**Fitzroy Crossi**	**54.56**	**261**	P		**P**		**15 31 24.1**	**-2.4**
FITZ				IAmb		IAmb		15 32 32.5	
	comp=Z,11nm,1.9s								
QSPA	**South Pole Qui**	**71.64**	**180**	P		**P**		**15 33 17.5**	**-1.4**
QSPA				IAmb		IAmb		15 33 21.6	
	comp=Z,29nm,2.0s								
NVAR	**Mina Array Bea**	**78.66**	**43**	P		**P**		**15 34 01.7**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=239,slow=4.9,SNR=1.4 comp=Z,0.2nm,0.5s								
ILAR	**Eielson Array**	**86.02**	**12**	P		**P**		**15 34 36.4**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=225,slow=4.3,SNR=6.2								
ILAR				pP		**pP**		**15 35 02.8**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=198,slow=4.9,SNR=2.3 comp=Z,0.2nm,0.4s								
ESDC	**Sonseca Array**	**157.90**	**15**	PKPab		**PKPab**		**15 42 25.3**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=323,slow=2.1,SNR=2.2								

HEL 08 15:25:18.0±0.3, 67°.17N×20°.64E, h0km, ML1.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAJU	**Pajala**	**0.98**	**97**	PG		Pg		15 25 35.6	-1.1
PAJU				SB		Sg		15 25 48.9	-0.5
LANU	**Lannavaara**	**1.02**	**30**	PG		Pg		15 25 36.5	-1.1
LANU				SB		Sg		15 25 51.4	+0.6
KLF	**Kolari**	**1.30**	**86**	PG		Pg		15 25 41.4	-1.4
KLF				MSG				15 25 57.1	
	comp=Z,0.6nm,0.2s								
KLF				SG		Sg		15 25 58.4	-1.1
HEF	**Hetta**	**1.69**	**41**	PG		Pn		15 25 48.5	-0.3
	baz=224								
HEF				MSG				15 26 08.5	
	comp=Z,1.1nm,0.2s								
HEF				SG		Sn		15 26 09.6	-1.6
KALU	**Kalix**	**1.71**	**139**	PG		Pn		15 25 49.1	+0.2
	baz=323								
KALU				SN		Sg		15 26 13.9	+1.1
TOF	**Tornio**	**1.83**	**125**	PG		Pn		15 25 51.1	+0.5
TOF				MSG				15 26 12.7	
	comp=Z,0.9nm,0.2s								
TOF				SG		Sg		15 26 16.3	-0.4
KIF	**Kilpisjarvi**	**1.84**	**2**	SB		Sn		15 26 11.6	-3.2
KIF				MSG				15 26 14.0	
	comp=Z,3.4nm,0.2s								
KTK1	**Kautokeino**	**2.09**	**27**	PG		Pn		15 25 55.5	+1.2
KTK1				SG		Sb		15 26 22.5	-0.8
RNF	**Rovaniemi**	**2.19**	**102**	PG		Pn		15 25 56.8	+1.1
RNF				SG		Sb		15 26 25.9	-0.3

SGF	**Sodankyl**	**2.30**	**80**	PG	Pb	15 25 59.5	-0.8
SGF				SG	Sb	15 26 28.9	-0.3
RANF	**Ranua**	**2.71**	**112**	SG	Sb	15 26 40.7	-0.5
ARA0	**ARCESS Array S**	**2.98**	**35**	PB	Pn	15 26 08.7	+2.2
ARA0				SB	Sb	15 26 46.2	-2.7
KEV	**Kevo**	**3.50**	**39**	SN	Sn	15 26 55.0	-0.7

*IDC **08** 15:38:25.4±1.3,24°.17S×66°.98W,h166^{km}±12^{km},mb3.1/4, mbtmp3.6/9,Error ellipse: s-maj=20.6km s-min=16.2km az=28.0*
*SJA **08** 15:38:25.2±0.8,24°.27S×67°.23W,h198^{km}±6^{km},ML3.7, MW3.7*
*GUC **08** 15:38:28.0±0.8,24°.19S×67°.51W,h208^{km}±10^{km},ML4.0*

ISC 08 15:38:26.6±0.7,24°.22S±0°.03×67°.26W±0°.04,h183^{km}±7^{km}, n46,σ1°09/71,mb3.3/4,7C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.68**	**108**	*eP*	**Pn**	**15 39 01.0**	**+0.3**
SLA				*eS*	**Sn**	**15 39 26.6**	**-0.6**
LVC	**Limon Verde**	**2.21**	**316**	*eP*	**Pn**	**15 39 07.4**	**+0.8**
LVC				*eS*	**Sn**	**15 39 38.4**	**+0.8**
LVC				IAML		15 39 39.6	
	comp=Z,130nm,0.5s						
LVC	**Limon Verde**	**2.21**	**316**	P	**Pn**	**15 39 06.4**	**-0.2**
	comp=Z,72nm,0.4s,baz=134,slow=7.8,SNR=146						
LVC				S	**Sn**	**15 39 37.7**	**+0.1**
	comp=Z,76nm,0.3s,baz=119,slow=3.3,SNR=7.8						
LVC	**Limon Verde**	**2.21**	**316**	↑*iP*	**Pn**	**15 39 07.4**	**+0.8**
LVC				*eS*	**Sn**	**15 39 37.5**	**0.0**
LVC				IAML		15 39 38.8	
	comp=Z,970nm,0.3s						
FSA	**Cafayete**	**2.21**	**149**	*eP*	**Pn**	**15 39 06.2**	**-0.2**
PB15	**IPOC Station P**	**2.26**	**296**	*eP*	**Pn**	**15 39 07.5**	**+0.5**
PB15	**IPOC Station P**	**2.26**	**296**	↑*iP*	**Pn**	**15 39 08.0**	**+1.0**
GO02	**Mina Guanaco**	**2.31**	**246**	*eP*	**Pn**	**15 39 08.0**	**+0.3**
GO02	**Mina Guanaco**	**2.31**	**246**	↑*iP*	**Pn**	**15 39 08.6**	**+1.0**
GO02				*eS*	**Sn**	**15 39 40.5**	**+1.0**
GO02				IAML		15 39 41.7	
	comp=E,571nm,0.3s						
YJA	**Yavi**	**2.60**	**39**	*eP*	**Pn**	**15 39 11.8**	**+0.7**
YJA				*eS*	**Sn**	**15 39 46.5**	**+0.9**
PB06	**IPOC Station P**	**2.60**	**305**	*eP*	**Pn**	**15 39 11.2**	**+0.3**
PB06				*eS*	**Sn**	**15 39 45.1**	**-0.2**
PB06				IAML		15 39 50.2	
	comp=Z,253nm,0.3s						
PB06	**IPOC Station P**	**2.60**	**305**	↑*iP*	**Pn**	**15 39 11.7**	**+0.8**
PB06				*eS*	**Sn**	**15 39 44.6**	**-0.7**
PB06				IAML		15 39 47.2	
	comp=N,527nm,0.4s						
PB14	**IPOC Station P**	**2.89**	**261**	*eP*	**Pn**	**15 39 14.7**	**+0.3**
PB14				*eS*	**Sn**	**15 39 51.7**	**+0.1**
PB14				IAML		15 40 01.8	
	comp=Z,95nm,0.3s						
PB14	**IPOC Station P**	**2.89**	**261**	*eP*	**Pn**	**15 39 14.6**	**+0.2**
PB14				*eS*	**Sn**	**15 39 50.2**	**-1.3**
PB14				IAML		15 39 52.5	
	comp=E,88nm,0.4s						
PB05	**IPOC Station P**	**3.02**	**296**	*eP*	**Pn**	**15 39 16.2**	**+0.4**
PB05				*eS*	**Sn**	**15 39 53.3**	**-0.8**
PB05				IAML		15 39 55.8	
	comp=Z,118nm,0.2s						
PB05	**IPOC Station P**	**3.02**	**296**	↑*iP*	**Pn**	**15 39 16.3**	**+0.5**
PB05				*eS*	**Sn**	**15 39 52.6**	**-1.6**
PB05				IAML		15 39 56.8	
	comp=E,193nm,0.3s						
PB09	**IPOC Station P**	**3.03**	**323**	*eP*	**Pn**	**15 39 17.0**	**+1.0**
PB09				*eS*	**Sn**	**15 39 54.8**	**+0.4**
PB09				IAML		15 39 55.2	
	comp=Z,193nm,0.9s						
AHML	**Horco Molle**	**3.09**	**146**	*eP*	**Pn**	**15 39 17.1**	**+0.6**
AHML				*eS*	**Sn**	**15 39 54.8**	**-0.7**
PB10	**IPOC Station P**	**3.09**	**283**	*eP*	**Pn**	**15 39 17.4**	**+0.9**
PB10				*eS*	**Sn**	**15 39 55.7**	**+0.2**
PB10				IAML		15 39 59.4	
	comp=Z,158nm,0.7s						
PB10	**IPOC Station P**	**3.09**	**283**	↑*iP*	**Pn**	**15 39 17.2**	**+0.7**
PB10				*eS*	**Sn**	**15 39 55.7**	**+0.2**
PB10				IAML		15 39 58.6	
	comp=E,157nm,0.5s						
AC02	**Maricunga**	**3.10**	**213**	*eP*	**Pn**	**15 39 18.0**	**+0.9**
AC02				*eS*	Sn	15 40 11.0	+14
AC02				IAML		15 40 11.2	
	comp=Z,236nm,0.9s						
PB04	**IPOC Station P**	**3.25**	**305**	*eP*	**Pn**	**15 39 19.4**	**+0.8**
PB04				*eS*	**Sn**	**15 39 58.3**	**-0.9**
PB04				IAML		15 40 00.8	
	comp=Z,180nm,0.1s						
PB04	**IPOC Station P**	**3.25**	**305**	*eP*	**Pn**	**15 39 18.9**	**+0.3**
PB04				*eS*	**Sn**	**15 39 57.5**	**-1.7**
PB04				IAML		15 40 01.3	
	comp=E,383nm,0.6s						
PB07	**IPOC Station P**	**3.47**	**315**	*eP*	**Pn**	**15 39 21.4**	**+0.1**
PB07				*eS*	**Sn**	**15 40 02.1**	**-2.0**
PB07				IAML		15 40 05.1	
	comp=Z,239nm,0.5s						
PB07	**IPOC Station P**	**3.47**	**315**	↑*iP*	**Pn**	**15 39 21.6**	**+0.2**
PB07				*eS*	**Sn**	**15 40 01.7**	**-2.4**
AC01	**Pan de Azucar**	**3.58**	**237**	*eP*	**Pn**	**15 39 21.9**	**-0.6**
AC01				*eS*	**Sn**	**15 40 04.7**	**-1.5**
AC01				IAML		15 40 08.2	
	comp=Z,74nm,0.3s						
AC01	**Pan de Azucar**	**3.58**	**237**	*eP*	**Pn**	**15 39 22.1**	**-0.4**
AC01				*eS*	**Sn**	**15 40 04.4**	**-1.8**
PB01	**IPOC Station P**	**3.77**	**327**	*eP*	**Pn**	**15 39 24.8**	**-0.3**
PB01				*eS*	**Sn**	**15 40 09.8**	**-1.0**
PB01				IAML		15 40 11.3	
	comp=Z,81nm,0.6s						
PB01	**IPOC Station P**	**3.77**	**327**	*eP*	**Pn**	**15 39 24.8**	**-0.3**
PB02	**IPOC Station P**	**3.78**	**319**	*eP*	**Pn**	**15 39 26.1**	**+0.9**
PB02				*eS*	**Sn**	**15 40 08.0**	**-2.9**
GO03	**Copiap**	**4.29**	**218**	*eP*	**Pn**	**15 39 30.8**	**-0.8**
GO03				*eS*	**Sn**	**15 40 20.9**	**-1.6**
TA01	**Diego Aracena**	**4.53**	**323**	*eP*	**Pn**	**15 39 33.9**	**-0.8**
TA01				*eS*	Sn	15 40 42.0	+14
GO01	**Chusmiza**	**4.88**	**338**	*eP*	**Pn**	**15 39 39.9**	**+0.3**
GO01				*eS*	**Sn**	**15 40 36.0**	**-0.7**
ACLC	**CERRO LA CRUZ**	**5.19**	**177**	*eP*	**Pn**	**15 39 43.8**	**+0.5**
CPUP	**Villa Florida**	**9.23**	**105**	P	Pn	15 40 30.0	-6.1
	comp=Z,0.7nm,0.4s,baz=288,slow=1.4,SNR=1.6						
SIV	**San Ignacio**	**10.04**	**36**	P	**Pn**	**15 40 43.3**	**-3.5**
	comp=Z,1.6nm,0.4s,baz=208,slow=12,SNR=10						
SIV				S	Sn	15 42 25.3	-13
	comp=Z,0.5nm,0.5s,baz=248,slow=13,SNR=1.8						
PLCA	**Paso Flores**	**16.69**	**189**	P	**Pn**	**15 42 10.3**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=18,slow=16,SNR=3.3						
BDFB	**Brasilia**	**19.99**	**68**	P	**P**	**15 42 43.8**	**-1.5**
	comp=Z,7.6nm,0.8s,baz=255,slow=7.1,SNR=8.3						
TXAR	**Lajitas Array**	**63.72**	**325**	P	**P**	**15 48 40.8**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=129,slow=7.1,SNR=2.5						
	comp=Z,0.2nm,0.5s						
QSPA	**South Pole Qui**	**65.98**	**180**	P	**P**	**15 48 54.5**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=207,slow=0.6,SNR=9.2						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**77.22**	**329**	P	**P**	**15 50 02.2**	**+1.7**
	comp=Z,0.1nm,0.5s,baz=125,slow=11,SNR=1.7						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**94.25**	**340**	P	**P**	**15 51 23.4**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=126,slow=4.7,SNR=4.3						
	comp=Z,0.1nm,0.5s						
ASAR	**Alice Springs**	**128.15**	**205**	PKP	**PKiKP**	**15 57 12.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=144,slow=1.6,SNR=7.7						
WRA	**Warramunga Arr**	**131.32**	**207**	PKP	**PKiKP**	**15 57 18.9**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=153,slow=1.7,SNR=7.8						
ZALV	**Zalesovo Beam**	**143.70**	**28**	PKP	**PKPdf**	**15 57 38.3**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=322,slow=6.1,SNR=2.8						
MKAR	**Makanchi Array**	**146.85**	**40**	PKPbc	**PKPbc**	**15 57 46.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=294,slow=3.2,SNR=9.1						

IDC 08 15:39:46.4±2.6,6°.25S×130°.31E,h0^{km},mb3.0/1, mbtmp3.1/3,ML3.1/2,Error ellipse: s-maj=153.7km s-min=33.3km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.16**	**164**	Pn	Pn	15 43 08.8	+0.3
	0.1nm,0.3s,baz=345,slow=9.4,SNR=8.3						
WRA				Sn	Sn	15 45 33.1	-13
	0.2nm,0.3s,baz=342,slow=24,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**17.66**	**169**	P	Pn	15 43 53.8	-0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=8.3						
ASAR				S	Sn	15 46 55.1	-16
	0.4nm,1.0s,baz=342,slow=36,SNR=1.6						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	15 50 46.1	0.0
	0.1nm,0.6s,baz=117,slow=8.2,SNR=1.6						
	0.1nm,0.6s						

*RSPR **08** 15:52:11.8,18°.93N×67°.56W,h4^{km}±2^{km},MD2.7/6*
*SDD **08** 15:52:15.9±0.6,18°.32N×68°.01W,h17^{km}±111^{km},MD2.9, ML1.9,MW2.2*

ISC 08 15:52:10.2±1.5,18°.9N±0°.1×67°.66W±0°.07,h10^{km},n13, σ1°16/16,5C,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.68**	**129**	↑*eP*	**Pg**	**15 52 22.8**	**-0.4**
AGPR	**Aguadilla, PR**	**0.68**	**129**	*eS*	**Sg**	**15 52 32.8**	**+0.6**
LSP	**Las Mesas**	**0.91**	**143**	↑*eP*	**Pg**	**15 52 27.5**	**-0.1**
AOPR	**Arecibo Observ**	**1.02**	**122**	↑*eP*	**Pg**	**15 52 29.6**	**-0.2**
AOPR	**Arecibo Observ**	**1.02**	**122**	*eS*	**Sg**	**15 52 41.9**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.03**	**149**	↑*eP*	**Pg**	**15 52 30.1**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.03**	**149**	*eS*	**Sg**	**15 52 43.3**	**-0.2**
MLPR	**Magueyes Islan**	**1.10**	**148**	↑*eP*	**Pg**	**15 52 30.1**	**-1.1**
MLPR	**Magueyes Islan**	**1.10**	**148**	*eS*	**Sg**	**15 52 45.5**	**-0.1**
MLPR	**Magueyes Islan**	**1.10**	**148**	*e*Pg	**Pn**	**15 52 33.2**	**+1.6**
MLPR				*e*Sg	**Sg**	**15 52 45.9**	**+0.3**
MLPR				IAML		15 53 04.1	
	comp=N,22nm,3.5s						
UUPR	**Utuado, UPR, P**	**1.10**	**126**	*eS*	**Sg**	**15 52 44.3**	**-1.4**
MIDR	**Miches**	**1.32**	**274**	*e*Pg	**Pn**	**15 52 36.2**	**+1.5**
MIDR				*e*Sg	**Sn**	**15 52 52.2**	**-0.1**
MIDR				IAML		15 53 34.7	
	comp=N,34nm,3.1s						
HATOM	**Hato Mayor del**	**1.63**	**266**	*e*Pg	**Pn**	**15 52 40.0**	**+0.9**
HATOM				*e*Sg	**Sn**	**15 52 57.7**	**-2.5**
HATOM				IAML		15 53 24.1	
	comp=N,19nm,1.9s						

*NOU **08** 16:26:13.4,20°.57S×166°.67E,h0^{km},MLv4.5/9,Loyalty Islands*
*IDC **08** 16:26:14.2±0.7,20°.62S×166°.55E,h0^{km},mb4.3/13, mbtmp4.3/13,MS3.5/10,Error ellipse: s-maj=25.3km s-min=12.0km az=91.0*
*NEIC **08** 16:26:17.5±1.6,20°.71S±0°.06×166°.51E±0°.08,h16^{km}±4^{km}, mb4.9/43,Error ellipse: s-maj=11.8km s-min=7.2km az=53.0*

ISC 08 16:26:16.2±0.5,20°.70S±0°.05×166°.51E±0°.07,h10^{km},n98, σ0°.99/87,mb4.7/28,MS3.4/9,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**1.36**	**183**		**Pn**	**16 26 40.3**	**-1.1**
DZM				Sn	**Sb**	**16 26 59.3**	**-0.2**
DZM	**Mont Dzumac**	**1.36**	**183**	P	**Pn**	**16 26 40.8**	**-0.6**
DZM	**Mont Dzumac**	**1.36**	**183**	Pg	**Pn**	**16 26 40.5**	**-0.9**
	259nm,0.3s,baz=302,slow=10,SNR=586						
DZM				Lg	Lg	16 27 01.3	
	243nm,0.3s,baz=300,slow=20,SNR=6.5						
DZM				LR	LR	16 27 18.5	
	comp=Z,671nm,18.9s,baz=296,slow=44						
YATNC	**Mamie plateau,**	**1.40**	**165**	P	Pn	16 26 39.3	-2.5
ONTNC	**Ouen Toro**	**1.60**	**182**		**Pn**	**16 26 44.6**	**0.0**
ONTNC				Sn	**Sn**	**16 27 04.8**	**-0.6**
ONTNC	**Ouen Toro**	**1.60**	**182**	P	**Pn**	**16 26 44.8**	**+0.2**
OUENC	**Ouen Island, N**	**1.74**	**170**		**Pn**	**16 26 46.2**	**-0.3**
OUENC				Sn	**Sn**	**16 27 09.4**	**+0.7**
OUENC	**Ouen Island, N**	**1.74**	**170**	P	**Pn**	**16 26 46.4**	**-0.1**
KOUNC	**Koumac, New Ca**	**2.09**	**274**		**Pn**	**16 26 51.2**	**-0.1**
KOUNC	**Koumac, New Ca**	**2.09**	**274**	P	**Pn**	**16 26 51.4**	**+0.1**
PINNC	**Pines Island,**	**2.09**	**156**		**Pn**	**16 26 50.9**	**-0.4**
PINNC	**Pines Island,**	**2.09**	**156**	P	**Pn**	**16 26 51.2**	**-0.2**
EIDS	**Eidsvold**	**14.94**	**249**	Pn	**Pn**	**16 29 48.2**	**+0.6**
ARMA	**Armidale**	**16.54**	**231**		**Pn**	**16 30 12.3**	**+3.9**
CTA	**Charters Tower**	**19.00**	**268**	LR	LR	16 37 20.6	
	comp=Z,147nm,18.1s,baz=100,slow=35						
URZ	**Urewera**	**19.75**	**155**	LR	LR	16 36 59.0	
	comp=Z,129nm,20.4s,baz=109,slow=32						
RTZ	**Ruatahuna**	**20.01**	**155**	P	**P**	**16 30 51.6**	**+2.4**
CAN	**Canberra**	**21.19**	**223**	P	**P**	**16 31 02.2**	**+0.3**
CAN				IAmb	IAmb	16 31 15.5	
	comp=Z,57nm,1.9s						
MRZ	**Mangatainoka R**	**21.34**	**161**	P	**P**	**16 31 04.0**	**+0.4**
TCW	**Tory Channel**	**21.48**	**164**	P	**P**	**16 31 05.7**	**+0.7**
TUWZ	**Tuamarina**	**21.61**	**165**	P	**P**	**16 31 08.8**	**+2.5**
THZ	**Tophouse**	**21.68**	**167**	P	**P**	**16 31 09.7**	**+2.5**
THZ				IAmb	IAmb	16 31 16.3	
	comp=Z,137nm,2.0s						
PMG	**Port Moresby**	**21.77**	**298**	P	**P**	**16 31 10.8**	**+2.5**
PMG				IAmb	IAmb	16 31 17.1	
	comp=Z,95nm,1.5s						
PMG	**Port Moresby**	**21.77**	**298**	LR	LR	16 37 53.3	
	comp=Z,179nm,20.8s,baz=124,slow=32						
BSWZ	**Blackbirch Sta**	**21.86**	**165**	P	**P**	**16 31 09.3**	**+0.3**
FOZ	**Fox Glacier**	**22.93**	**174**	P	**P**	**16 31 20.6**	**+0.2**
OXZ	**Oxford**	**23.03**	**170**	P	**P**	**16 31 20.1**	**-1.4**
OXZ				IAmb	IAmb	16 31 32.5	
	comp=Z,66nm,1.7s						
RPZ	**Rata Peaks**	**23.26**	**172**	LR	LR	16 38 47.0	
	comp=Z,120nm,19.0s,baz=19,slow=32						
LBZ	**Lake Benmore**	**23.82**	**173**	P	**P**	**16 31 28.7**	**-0.6**
LBZ				IAmb	IAmb	16 31 45.6	
	comp=Z,81nm,1.8s						
TOO	**Toolangi**	**24.80**	**223**	P	**P**	**16 31 37.6**	**-0.9**
STKA	**Stephens Creek**	**24.90**	**238**	P	**P**	**16 31 36.5**	**-2.9**
STKA	**Stephens Creek**	**24.90**	**238**	P	**P**	**16 31 39.7**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=88,slow=13,SNR=5.9						
STKA				LR	LR	16 40 31.2	
	comp=Z,107nm,19.4s,baz=34,slow=34						
	comp=Z,1.9nm,0.6s						
BBOO	**Buckleboo**	**29.64**	**240**	P	**P**	**16 32 21.4**	**-0.6**
BBOO				IAmb	IAmb	16 32 24.8	
	comp=Z,67nm,1.9s						
WB0	**Warramunga Arr**	**30.12**	**266**	P	**P**	**16 32 26.1**	**-0.3**
WB0				IAmb	IAmb	16 33 11.0	
	comp=Z,19nm,1.6s						
WRAB	**Tennant Creek**	**30.14**	**266**	P	**P**	**16 32 25.9**	**-0.7**
WRAB				IAmb	IAmb	16 33 21.6	
	comp=Z,37nm,2.0s						
WRA	**Warramunga Arr**	**30.15**	**266**	P	**P**	**16 32 26.2**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=90,slow=8.4,SNR=15						
WRA				PcP	**PcP**	**16 35 27.8**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=99,slow=2.8,SNR=3.3						
	comp=Z,1.9nm,0.6s						
AS31	**Alice Springs**	**30.30**	**258**	P	**P**	**16 32 27.8**	**-0.2**
ASAR	**Alice Springs**	**30.30**	**258**	P	**P**	**16 32 28.3**	**+0.3**
ASAR	**Alice Springs**	**30.30**	**258**	P	**P**	**16 32 27.7**	**-0.3**
	comp=Z,5.9nm,0.7s,baz=84,slow=8.6,SNR=73						
ASAR				PcP	**PcP**	**16 35 28.4**	**0.0**
	comp=Z,0.6nm,0.8s,baz=114,slow=1.8,SNR=3.6						
ASAR				LR	LR	16 43 58.1	
	comp=Z,94nm,20.3s,baz=88,slow=35						
	comp=Z,5.9nm,0.7s						
RAR	**Rarotonga**	**31.46**	**97**	LR	LR	16 42 38.1	
	comp=Z,40nm,20.0s,baz=278,slow=31						
MTN	**Manton Dam**	**34.70**	**277**	P	P	16 33 05.1	-1.5
FORT	**Forrest**	**35.91**	**246**	P	**P**	**16 33 16.1**	**-0.7**
FORT				IAmb	IAmb	16 33 20.7	
	comp=Z,16nm,0.7s						
KNRA	**Kununurra**	**36.15**	**272**	P	**P**	**16 33 18.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**38.57**	**267**	P	**P**	**16 33 39.2**	**-0.3**
WAKE	**Wake Island**	**39.74**	**0**	P	**P**	**16 33 48.8**	**-0.3**
PSA00	**Pilbara Seismi**	**43.41**	**260**	P	**P**	**16 34 19.7**	**+0.3**
PSA00				IAmb	IAmb	16 34 38.3	
	comp=Z,20nm,1.2s						
NWAO	**Narrogin (SRO)**	**45.27**	**244**	P	**P**	**16 34 33.8**	**-0.3**
NWAO	**Narrogin (SRO)**	**45.27**	**244**	P	**P**	**16 34 34.0**	**-0.2**
NWAO				IAmb	IAmb	16 34 37.6	
	comp=Z,84nm,1.9s						
NWAO	**Narrogin (SRO)**	**45.27**	**244**	LR	LR	16 52 31.2	
	comp=Z,48nm,21.5s,baz=206,slow=35						
GIRL	**Giralia**	**48.42**	**258**	P	**P**	**16 34 58.1**	**-0.8**
DAV	**Davao City (W)**	**48.77**	**300**	LR	LR	16 54 20.5	
	comp=Z,27nm,21.0s,baz=176,slow=35						
JOW	**Kunigami**	**60.05**	**320**	LR	LR	17 00 32.3	
	comp=Z,40nm,18.8s,baz=322,slow=34						
JMN	**Monobe**	**62.43**	**330**	P	**P**	**16 36 39.1**	**-0.5**
TPUB	**Ta-pu**	**62.55**	**312**	P	P	16 36 37.3	-3.3
MJAR	**Matsushiro Arr**	**62.90**	**335**	P	**P**	**16 36 41.7**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=170,slow=7.1,SNR=5.9						
	comp=Z,2.6nm,0.8s						
KSRS	**Korea Array**	**68.31**	**328**	P	P	16 37 16.0	-1.6
	comp=Z,1.0nm,0.8s,baz=143,slow=6.9,SNR=3.6						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**16 37 23.7**	**-0.3**
QSPA				IAmb	IAmb	16 37 25.9	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**16 37 23.8**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=63,slow=3.1,SNR=5.9						
	comp=Z,1.7nm,0.8s						
KULM	**Kulim**	**69.57**	**284**	P	**P**	**16 37 25.5**	**-0.5**
KULM				IAmb	IAmb	16 38 59.7	
	comp=Z,26nm,1.5s						
USRK	**Ussuriysk Ar.**	**71.90**	**335**	P	**P**	**16 37 39.6**	**+0.2**
USRK	**Ussuriysk Ar.**	**71.90**	**335**	P	**P**	**16 37 38.9**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=144,slow=3.5,SNR=12						
	comp=Z,4.7nm,0.8s						
PETK	**Petropavlovsk-**	**73.89**	**354**	P	**P**	**16 37 51.9**	**+0.8**
PETK	**Petropavlovsk-**	**73.89**	**354**	P	**P**	**16 37 51.4**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=99,slow=4.7,SNR=2.2						
	comp=Z,4.8nm,0.9s						
ENH	**Enshi**	**74.66**	**311**	P	**P**	**16 37 55.7**	**-0.5**
ENH				IAmb	IAmb	16 37 59.5	
	comp=Z,9.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**76.79**	**296**		**P**	**16 38 08.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**76.79**	**296**	P	**P**	**16 38 09.2**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=136,slow=4.3,SNR=13						
	comp=Z,1.5nm,0.8s						
CHTO	**Chiang Mai**	**76.95**	**296**	P	**P**	**16 38 10.1**	**+0.6**
N15K	**Kwethluk River**	**85.04**	**16**	P	**P**	**16 38 51.5**	**-0.1**
M14K	**Bethel**	**85.08**	**15**	P	**P**	**16 38 52.0**	**+0.2**
P18K	**Big Mountain,**	**85.74**	**19**	P	**P**	**16 38 55.1**	**-0.2**
M16K	**Timber Creek**	**86.06**	**16**	P	**P**	**16 38 57.6**	**+0.9**
ULN	**Ulaanbaatar**	**86.53**	**324**	P	**P**	**16 38 59.5**	**-0.1**
ULN				IAmb	IAmb	16 39 03.5	
	comp=Z,7.8nm,1.0s						
SONM	**Songino Array**	**86.87**	**324**	P	**P**	**16 39 01.0**	**-0.2**
SONM				IAmb	IAmb	16 39 02.3	
	comp=Z,4.6nm,1.1s						
SONM	**Songino Array**	**86.87**	**324**	P	**P**	**16 39 00.7**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=136,slow=6.4,SNR=14						
	comp=Z,2.2nm,0.8s						
YAK	**Yakutsk**	**87.51**	**344**	P	**P**	**16 39 03.0**	**-0.8**
SNAA	**Sanae**	**87.58**	**183**	P	**P**	**16 39 03.5**	**-0.8**
SNAA	**Sanae**	**87.58**	**183**	P	**P**	**16 39 03.7**	**-0.6**
	comp=Z,12nm,1.0s,baz=209,slow=5.8,SNR=8.4						
	comp=Z,12nm,1.0s						
J16K	**Anvik River**	**87.60**	**14**	P	**P**	**16 39 04.6**	**+0.4**
ISA	**Isabella, Lake**	**90.39**	**52**	P	**P**	**16 39 18.5**	**+0.4**
ISA				IAmb	IAmb	16 39 20.1	
	comp=Z,7.4nm,1.1s						
USHA	**Ushuaia**	**91.40**	**152**	LR	LR	17 10 19.7	
	comp=Z,3µm,21.7s,baz=214,slow=29						
DSP	**Deep Springs**	**91.48**	**51**	P	**P**	**16 39 23.8**	**+0.8**
DSP				IAmb	IAmb	16 39 27.7	
	comp=Z,3.8nm,1.2s						
NVAR	**Mina Array Bea**	**91.69**	**49**	P	**P**	**16 39 23.9**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=228,slow=8.6,SNR=6.5						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**92.40**	**18**	P	P	16 39 25.1	-1.6
	comp=Z,0.9nm,0.7s,baz=241,slow=5.0,SNR=19						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**100.98**	**316**	P	**Pdif**	**16 40 03.8**	**-2.2**
	comp=Z,0.2nm,0.7s,baz=95,slow=3.0,SNR=2.4						
RONA	**Rosalia, Austr**	**143.90**	**325**	*e*PKP	PKPbc	16 45 53.2	+3.6
	comp=Z,4.2nm,1.0s						
CONA	**Conrad Observa**	**143.99**	**326**	*e*PKP	PKPab	16 45 50.9	+1.5
	comp=Z,6.8nm,1.4s						
GERES	**GERESS Array B**	**144.48**	**329**	PKP	**PKPab**	**16 45 51.8**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=31,slow=6.2,SNR=4.1						
ARSA	**Arzberg**	**144.59**	**325**	*e*PKP	**PKPab**	**16 45 52.8**	**+1.2**
	comp=Z,3.3nm,0.7s						
MOA	**Molln**	**144.86**	**327**	*e*PKP	**PKPab**	**16 45 53.2**	**+0.7**
	comp=Z,8.9nm,1.2s						
SOKA	**Soboth**

comp=Z,1.8nm,0.8s
MAKZ **Makanchi** **82.31 319** P **P** **17 13 32.0 -0.5**
MAKZ IAmb IAmb 17 13 34.4
comp=Z,4.4nm,0.9s
ILAR **Eielson Array** **82.82 22** LR LR 17 51 46.5
comp=Z,30nm,18.0s,baz=51,slow=36
ZALV **Zalesovo Beam** **82.89 326** P **P** **17 13 35.4 +0.1**
comp=Z,1.7nm,0.7s,baz=106,slow=5.5,SNR=9.6
comp=Z,1.7nm,0.7s
KURK **Kurchatov** **85.53 322** **P** **17 13 48.8 0.0**
KURBB **Kurchatov Arra** **85.56 322** P **P** **17 13 49.2 +0.3**
comp=Z,1.1nm,0.6s,baz=112,slow=3.6,SNR=14
comp=Z,1.1nm,0.6s
YBH **Yreka Blue Hor** **88.92 48** LR LR 17 49 47.7
comp=Z,46nm,18.9s,baz=353,slow=32
BVAR **Borovoye Array** **91.00 323** P **P** **17 14 14.4 -0.5**
comp=Z,2.8nm,0.8s,baz=98,slow=5.1,SNR=14
comp=Z,2.8nm,0.8s
BRVK **Borovoye** **91.06 323** **P** **17 14 14.6 -0.5**
NOA **NORSAR Array B** **118.50 340** PKP **PKiKP** **17 19 58.7 +0.3**
comp=Z,0.7nm,0.7s,baz=84,slow=8.0,SNR=3.3
TORD **Torodi Ar. Bea** **151.90 287** PKPbc **PKiKP** **17 21 07.2 0.0**
comp=Z,2.6nm,0.4s,baz=90,slow=1.4,SNR=0.9

IDC 08 17:06:36.5±2.2, 4.74S×129.53E, h0km, mb3.4/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=118.0km s-min=31.4km az=69.0, Banda Sea

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.82 163**	Pn			Pn	17 10 22.7	+1.8
	0.2nm,0.3s,baz=343,slow=11,SNR=13							
WRA			Sn			Sn	17 13 08.9	-8.2
	baz=122,slow=36,SNR=2.0							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**19.29 168**	P			P	17 11 02.5	-0.7
	0.4nm,0.3s,baz=349,slow=12,SNR=26							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**66.09 327**	P			P	17 17 25.6	0.0
	0.4nm,0.9s,baz=116,slow=5.8,SNR=2.2							
	0.4nm,0.9s							

*JMA **08** 17:18:03.0±0.3, 24.°00N±0.°7×12°2E±°, h0km, TAIWAN REGION*
*TAP **08** 17:18:03.1, 24.°00N×121.°73E, h8km, ML3.3, B*
ISC 08 17:18:03.6±0.9, 23.°99N±0.°02×121.°76E±0.°02, h13km±6km, n79, σ0°63/111, 12C-2D, Taiwan

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.14 265**	⇑*i*P			**Pg**	**17 18 07.1**	**0.0**
	baz=256							
TWD	**Chiawan**	**0.17 301**	⇓P			**Pg**	**17 18 07.1**	**-0.5**
	baz=304							
TWD			S			**Sg**	**17 18 10.6**	**+0.2**
	baz=304							
ETL	**Fush Village**	**0.21 324**	P			**Pg**	**17 18 07.7**	**-0.5**
	baz=327							
ETL			S			**Sg**	**17 18 11.8**	**+0.4**
	baz=327							
NACB	**Ninganchiao**	**0.24 321**	⇓P			**Pg**	**17 18 08.1**	**-0.6**
	baz=324							
NACB			S			**Sg**	**17 18 12.2**	**+0.1**
	baz=324							
ETM	**Tongmen**	**0.24 264**	⇑P			**Pg**	**17 18 08.4**	**-0.4**
	baz=260							
ETM			S			**Sg**	**17 18 12.7**	**+0.4**
	baz=260							
SHUL	**Shoufeng**	**0.27 222**	*i* P			**Pb**	**17 18 10.0**	**-0.4**
	baz=216							
LXIB	**Xiulin Townshi**	**0.32 276**	⇑P			**Pg**	**17 18 09.6**	**-0.6**
	baz=274							
LXIB			S			**Sb**	**17 18 15.3**	**-1.1**
	baz=274							
ETLH	**Xiulin Townshi**	**0.33 311**	⇑P			**Pg**	**17 18 10.0**	**-0.4**
	baz=311							
ETLH			*e*S			**Sb**	**17 18 15.7**	**-1.1**
	baz=311							
EAHA	**Aohua**	**0.34 357**	*e*P			**Pb**	**17 18 10.8**	**-0.7**
	baz=1.0							
EAHA			*e*S			**Sb**	**17 18 16.1**	**-0.9**
	baz=1.0							
TEGC	**Jichi Village**	**0.34 216**	*e*P			**Pb**	**17 18 11.0**	**-0.7**
	baz=210							
ESL	**Shilin**	**0.34 240**	*e*P			**Pg**	**17 18 10.1**	**-0.6**
	baz=234							
ESL			*e*S			**Sb**	**17 18 16.3**	**-0.8**
	baz=234							
WARBT	**Fenglin Townsh**	**0.43 232**	⇑*e*P			**Pg**	**17 18 11.7**	**-0.6**
	baz=228							
WARBT			*e*S			**Sg**	**17 18 18.6**	**+0.5**
	baz=228							
ENA	**Nanau**	**0.44 358**	*e*P			**Pg**	**17 18 12.1**	**-0.2**
	baz=2.0							
ENA			*e*S			**Sb**	**17 18 18.8**	**-0.9**
	baz=2.0							
EGFH	**Guangfu**	**0.44 223**	*e*P			**Pg**	**17 18 12.2**	**-0.1**
	baz=220							
EWUT	**Wuta**	**0.45 2**	*e*P			**Pb**	**17 18 12.6**	**-1.0**
	baz=5.0							
WHF	**Hehuan Shan**	**0.48 289**	⇑P			**Pg**	**17 18 12.8**	**-0.3**
	baz=288							
WHF			*e*S			**Sb**	**17 18 20.2**	**-1.1**
	baz=288							
EOS4	**EOS4**	**0.53 76**	S			**Sn**	**17 18 25.0**	**-0.2**
	baz=77							
OWD	**Renai**	**0.53 266**	*e*P			**Pg**	**17 18 14.1**	**-0.1**
	baz=264							
OWD			*e*S			**Sb**	**17 18 22.1**	**-0.5**
	baz=264							
FUSS	**Fushou**	**0.54 299**	⇑P			**Pb**	**17 18 14.2**	**-0.9**
	baz=298							
FUSS			*e*S			**Sb**	**17 18 22.8**	**-0.1**
	baz=298							
CHGB	**Renai**	**0.54 278**	*e*P			**Pg**	**17 18 14.0**	**-0.3**
	baz=276							
CHGB			*e*S			**Sb**	**17 18 22.6**	**-0.3**
	baz=276							
NNSB	**Datong**	**0.56 322**	*e*P			**Pg**	**17 18 14.4**	**-0.2**
	baz=323							
NNSB			*e*S			**Sb**	**17 18 22.9**	**-0.4**
	baz=323							
NNS	**Nan Shan**	**0.57 322**	*e*P			**Pg**	**17 18 14.7**	**-0.2**
	baz=323							
NNS			*e*S			**Sb**	**17 18 23.1**	**-0.6**
	baz=323							
LATG	**Datong**	**0.58 339**	P			**Pg**	**17 18 14.9**	**-0.2**
	baz=340							
HGSD	**Ruisui**	**0.58 212**	*e*P			**Pb**	**17 18 15.7**	**0.0**
	baz=209							
WUSB	**Renai**	**0.59 270**	⇑*e*P			**Pb**	**17 18 15.3**	**-0.6**
	baz=269							
WUSB			*e*S			**Sb**	**17 18 24.2**	**+0.1**
	baz=269							
ESAO	**Su ao**	**0.59 8**	*e*P			**Pb**	**17 18 15.3**	**-0.5**
	baz=10.0							
ESAO			*e*S			**Sb**	**17 18 24.7**	**+0.5**
	baz=10.0							
TWT	**Tachien**	**0.59 296**	*e*P			**Pb**	**17 18 15.6**	**-0.5**
	baz=295							
TDCB	**Techi**	**0.61 296**	*e*P			**Pb**	**17 18 15.6**	**-0.6**
	baz=295							
VWDT	**VWDT**	**0.61 247**	*e*P			**Pb**	**17 18 15.7**	**-0.5**
	baz=245							
TWC	**Suao**	**0.62 8**	*e*P			**Pb**	**17 18 16.1**	**-0.4**
	baz=10.0							
EHY	**Hungye**	**0.63 220**	*e*P			**Pg**	**17 18 15.2**	**-0.7**
	baz=216							
NDS	**Dongshan**	**0.64 357**	*e*P			**Pb**	**17 18 16.5**	**-0.3**
	baz=358							
NDS			*e*S			**Sb**	**17 18 26.0**	**+0.3**
	baz=358							
NDT	**Datong Townshi**	**0.65 340**	*e*P			**Pb**	**17 18 16.6**	**-0.3**
	baz=341							
NDT			*e*S			**Sb**	**17 18 25.2**	**-0.7**
	baz=341							
ENTT	**Nioudou**	**0.67 345**	⇑*e*P			**Pb**	**17 18 16.9**	**-0.4**
	baz=347							
ECBN	**Changbin**	**0.73 203**	*e*P			**Pg**	**17 18 17.8**	**0.0**
	baz=200							
ECBN			*e*S			**Sb**	**17 18 29.1**	**+1.0**
	baz=200							
YULB	**Yu-li**	**0.73 215**	*e*P			**Pg**	**17 18 17.7**	**-0.1**
	baz=213							
YULB			*e*S			**Sb**	**17 18 29.2**	**+1.0**
	baz=213							
TWE	**Neicheng**	**0.73 354**	⇑*e*P			**Pb**	**17 18 18.1**	**-0.2**
	baz=356							
TWE			*e*S			**Sb**	**17 18 28.6**	**+0.3**
	baz=356							
EYUL	**Yuli**	**0.76 212**	*e*P			**Pb**	**17 18 18.5**	**-0.2**
	baz=210							
YHNB	**Yeheng**	**0.76 333**	⇑*e*P			**Pb**	**17 18 18.5**	**-0.4**
	baz=334							
YHNB			*e*S			**Sb**	**17 18 29.0**	**-0.2**
	baz=334							
SSLB	**Suanglung**	**0.76 255**	*e*P			**Pg**	**17 18 18.1**	**-0.3**
	baz=253							
SSLB			*e*S			**Sg**	**17 18 28.2**	**-0.3**
	baz=253							
TWF1	**Yuli**	**0.76 214**	*e*P			**Pg**	**17 18 17.4**	**-1.0**
	baz=211							
NSK	**Sanguang**	**0.77 332**	*e*P			**Pb**	**17 18 18.6**	**-0.4**
	baz=333							
NSK			*e*S			**Sb**	**17 18 29.7**	**+0.1**
	baz=333							
WCS	**Beigang Elemen**	**0.78 275**	*e*P			**Pb**	**17 18 19.1**	**0.0**
	baz=274							
FUSB	**Fushanzhiwuyua**	**0.78 349**	⇑*e*P			**Pb**	**17 18 18.9**	**-0.3**
	baz=350							
FUSB			*e*S			**Sb**	**17 18 30.4**	**+0.6**
	baz=350							
SMLT	**Sun Moon Lake**	**0.79 262**	*e*P			**Pb**	**17 18 19.2**	**-0.2**
	baz=261							
SMLT			*e*S			**Sb**	**17 18 29.8**	**-0.3**
	baz=261							
WHP	**Taichung City**	**0.80 291**	*e*P			**Pb**	**17 18 19.3**	**-0.1**
	baz=291							
NWLT	**Wulai**	**0.82 343**	*e*P			**Pb**	**17 18 19.6**	**-0.2**
	baz=344							
TYC	**Yuchr**	**0.83 264**	*e*P			**Pg**	**17 18 19.0**	**-0.7**
	baz=263							
TYC			*e*S			**Sb**	**17 18 31.1**	**+0.1**
	baz=263							
CHKH	**Chenggong**	**0.86 203**	*e*P			**Pg**	**17 18 19.8**	**-0.5**
	baz=200							
NFF	**Wufeng Townshi**	**0.87 318**	*e*P			**Pg**	**17 18 19.7**	**-0.7**
	baz=318							
NFF			*e*S			**Sb**	**17 18 33.0**	**+0.8**
	baz=318							
FULB	**Fuli**	**0.90 208**	*e*P			**Pb**	**17 18 21.0**	**-0.1**
	baz=206							
LIOB	**Emei**	**0.94 314**	*e*P			**Pb**	**17 18 22.4**	**+0.5**
	baz=314							
NSTT	**Nanjuang**	**0.94 313**	*e*P			**Pn**	**17 18 22.4**	**-0.2**
	baz=313							
CHKT	**Chengkung**	**0.96 202**	*e*P			**Pg**	**17 18 21.4**	**-0.7**
	baz=200							
WJS	**Zhushan**	**0.96 260**	*e*P			**Pb**	**17 18 22.7**	**+0.5**
	baz=259							
TWQ1	**Liyutan**	**0.97 292**	*e*P			**Pn**	**17 18 23.0**	**0.0**
	baz=291							
EHD	**Haiduan**	**0.98 211**	*e*P			**Pg**	**17 18 21.1**	**-1.4**
	baz=209							
TIPB	**Shuangxi**	**0.98 4**	*e*P			**Pb**	**17 18 22.8**	**+0.2**
	baz=5.0							
WNT	**Mingjian**	**0.99 264**	*e*P			**Pn**	**17 18 23.4**	**+0.1**
	baz=262							
WNT			*e*S			**Sn**	**17 18 38.1**	**+1.0**
	baz=262							
NHDH	**Xindian Distri**	**0.99 348**	*e*P			**Pn**	**17 18 23.3**	**0.0**
	baz=348							
ALS	**Alishan**	**0.99 242**	*e*P			**Pb**	**17 18 22.9**	**0.0**
	baz=239							
TWA	**Mucha**	**1.00 351**	*e*P			**Pn**	**17 18 24.3**	**+0.8**
	baz=352							
NSY	**Sanyi**	**1.00 295**	*e*P			**Pn**	**17 18 24.1**	**+0.6**
	baz=295							
TWB1	**Santiao Chiao**	**1.03 12**	*e*P			**Pb**	**17 18 23.7**	**+0.2**
	baz=13							
ELDTW	**Lidau**	**1.05 221**	*e*P			**Pg**	**17 18 22.2**	**-1.7**
	baz=218							
CHN5	**Tsauling**	**1.06 249**	*e*P			**Pb**	**17 18 24.5**	**+0.5**
	baz=247							
NWF	**Wu-fen Shan**	**1.08 1**	*e*P			**Pn**	**17 18 25.4**	**+0.8**
	baz=2.0							
SXI1	**Grass Mountain**	**1.10 6**	*e*P			**Pn**	**17 18 25.3**	**+0.4**
	baz=5.0							
WGK	**Gukeng**	**1.14 255**	*e*P			**Pn**	**17 18 25.8**	**+0.5**
	baz=253							
YM01	**YM01**	**1.16 352**	*e*P			**Pn**	**17 18 26.2**	**+0.4**
	baz=352							
YM01			*e*S			**Sn**	**17 18 43.7**	**+2.2**
	baz=352							
JYNG	**Yonagunijimaku**	**1.18 67**	*e*S			**Sb**	**17 18 41.3**	**+0.3**
WCKO	**Fanlu**	**1.19 243**	*e*P			**Pn**	**17 18 27.1**	**+1.0**
	baz=241							
YM08	**YM08**	**1.20 353**	*e*P			**Pn**	**17 18 26.6**	**+0.4**
	baz=353							
ANP	**Anpu**	**1.21 350**	*e*P			**Pn**	**17 18 26.8**	**+0.3**
	baz=351							
STYH	**Taoyuan**	**1.22 228**	*e*P			**Pb**	**17 18 26.7**	**+0.1**
	baz=226							
YOJ	**Yonaguni jima**	**1.24 67**	*e*S			**Sb**	**17 18 43.0**	**+0.2**
JKRS	**Kuro-shima**	**2.07 83**	*e*S			**Sn**	**17 19 04.6**	**+0.7**
JIJ	**Ishigaki jima**	**2.21 80**	*e*S			**Sn**	**17 19 05.5**	**-1.8**
JISG	**Ishigakijimahi**	**2.40 75**	*e*S			**Sn**	**17 19 11.8**	**-0.3**

*IDC **08** 17:33:47.1±1.1, 23.°75N×121.°20E, h0km, mb3.3/6, mbtmp3.4/7, ML3.2/1, MS3.1/1, Error ellipse: s-maj=56.3km s-min=21.4km az=69.0*
*NIED **08** 17:33:47.8, 24.°05N×121.°78E, h0km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr-1.30; Mθθ-1.11; Mϕϕ2.40; Mrθ5.80; Mθϕ-0.24; Mϕr2.41; Fault plane solution: M0 6.41000×10^14 NP1: ϕs242.00000°, δ88.00000°, λ-78.00000°. NP2: ϕs341.00000°, δ12.00000°, λ-170.00000°.*
*ASIES **08** 17:33:47.9, 24.°10N×121.°79E, h7km, ML3.8, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr1.22; Mθθ-0.72; Mϕϕ-0.50; Mrθ1.72; Mθϕ-0.52; Mϕr1.93; Fault plane solution: M0 2.84610×10^21 NP1:ϕs42.58000°, δ77.88000°, λ86.85000°. NP2:ϕs237.26000°, δ12.52000°, λ104.35000°. Principal axes: T Plg57.0130°, Azm308.4830°; N Plg3.0800°, Azm43.2380°; P Plg32.8050°, Azm135.2250°;*
*TAP **08** 17:33:47.9, 24.°10N×121.°79E, h7km, ML3.8, C*
*JMA **08** 17:33:47.8±0.1, 24.°1N±0.°2×121.°8E±0.°2, h0km, MV3.5/14, TAIWAN REGION*
ISC 08 17:33:47.5±1.0, 24.°12N±0.°01×121.°87E±0.°01, h4km±7km, n170, σ0°81/260, mb3.2/6, 14C-32D, Taiwan

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.23 328**	*e*P			**Pg**	**17 33 53.0**	**+1.0**
	baz=349							
ETL	**Fush Village**	**0.23 281**	⇓*i*P			**Pg**	**17 33 52.0**	**0.0**
	baz=291							
ETL			S			**Sg**	**17 33 55.2**	**+0.1**
	baz=291							
EAHA	**Aohua**	**0.24 330**	⇓*i*P			**Pg**	**17 33 53.3**	**+1.0**
	baz=347							
EAHA			S			**Sg**	**17 33 57.3**	**+1.8**
	baz=347							
TWD	**Chiawan**	**0.25 262**	⇓*i*P			**Pg**	**17 33 52.4**	**0.0**
	baz=277							
TWD			S			**Sg**	**17 33 55.7**	**-0.1**
	baz=277							
NACB	**Ninganchiao**	**0.26 283**	P			**Pg**	**17 33 52.3**	**-0.3**
NACB	**Ninganchiao**	**0.26 283**	⇓*i*P			**Pg**	**17 33 52.5**	**-0.1**
	baz=293							
NACB			S			**Sg**	**17 33 56.0**	**0.0**
	baz=293							
HWA	**Hwalien**	**0.28 240**	*i* P			**Pg**	**17 33 54.0**	**+1.1**
	baz=249							
HWA			*e*S			**Sb**	**17 33 59.2**	**-0.9**
	baz=249							
ENA	**Nanau**	**0.33 339**	⇓*i*P			**Pb**	**17 33 55.1**	**-0.9**
	baz=353							
EWUT	**Wuta**	**0.34 345**	⇓*i*P			**Pb**	**17 33 55.5**	**-0.7**
	baz=356							
EWUT			S			**Sb**	**17 34 01.0**	**-0.9**
	baz=356							
ETLH	**Xiulin Townshi**	**0.37 284**	⇓*i*P			**Pg**	**17 33 54.6**	**-0.1**
	baz=291							
ETLH			*e*S			**Sg**	**17 33 59.1**	**-0.4**
	baz=291							
ETM	**Tongmen**	**0.38 247**	⇓*i*P			**Pg**	**17 33 54.9**	**+0.1**
	baz=248							
EOS4	**EOS4**	**0.41 89**	*e*P			**Pn**	**17 33 59.9**	**0.0**
	baz=97							
LXIB	**Xiulin Townshi**	**0.43 257**	⇓*i*P			**Pg**	**17 33 55.6**	**-0.2**
	baz=258							
LXIB			*e*S			**Sg**	**17 34 01.4**	**0.0**
	baz=258							
SHUL	**Shoufeng**	**0.43 221**	P			**Pb**	**17 33 57.3**	**-0.4**
	baz=215							
SHUL			*e*S			**Sb**	**17 34 04.3**	**-0.3**
	baz=215							
EOS3	**EOS3**	**0.44 67**	*e*P			**Pn**	**17 34 01.1**	**+0.6**
	baz=64							
EOS2	**EOS2**	**0.45 47**	*e*P			**Pn**	**17 34 00.4**	**-0.2**
	baz=61							
ESAO	**Su ao**	**0.46 357**	*e*P			**Pb**	**17 33 57.9**	**-0.3**
	baz=357							
ESAO			*e*S			**Sb**	**17 34 04.8**	**-0.5**
	baz=357							
TWC	**Suao**	**0.49 358**	⇓P			**Pb**	**17 33 58.5**	**-0.2**
	baz=360							
ESL	**Shilin**	**0.50 233**	⇑P			**Pg**	**17 33 57.4**	**+0.2**
	baz=242							
ESL			*e*S			**Sg**	**17 34 04.5**	**+0.7**
	baz=242							
TEGC	**Jichi Village**	**0.51 217**	*e*P			**Pb**	**17 33 58.6**	**-0.4**
	baz=212							
TEGC			*e*S			**Sb**	**17 34 06.9**	**+0.3**
	baz=212							
LATG	**Datong**	**0.52 323**	⇓P			**Pb**	**17 33 58.3**	**-1.1**
	baz=340							
NDS	**Dongshan**	**0.53 345**	⇓*i*P			**Pb**	**17 33 59.1**	**-0.4**
	baz=352							
NNSB	**Datong**	**0.54 305**	⇓*i*P			**Pg**	**17 34 00.4**	**+0.3**
	baz=312							
NNSB			S			**Sg**	**17 34 05.5**	**+0.4**
	baz=312							
NNSH	**Datong**	**0.54 305**	⇓P			**Pg**	**17 33 58.2**	**+0.2**
	baz=311							
NNSH			*e*S			**Sg**	**17 34 05.4**	**+0.3**
	baz=311							
WHF	**Hehuan Shan**	**0.56 273**	⇓P			**Pg**	**17 33 58.0**	**-0.2**
	baz=277							
WHF			*e*S			**Sg**	**17 34 05.6**	**+0.1**
	baz=277							
NNS	**Nan Shan**	**0.56 305**	⇓*i*P			**Pg**	**17 33 58.5**	**+0.2**
	baz=312							
NNS			*e*S			**Sg**	**17 34 05.9**	**+0.4**
	baz=312							
NDT	**Datong Townshi**	**0.58 326**	⇓*i*P			**Pb**	**17 33 59.7**	**-0.6**
	baz=332							
NDT			S			**Sb**	**17 34 08.0**	**-1.0**
	baz=332							
FUSS	**Fushou**	**0.59 283**	⇓*i*P			**Pg**	**17 33 59.0**	**+0.1**
	baz=298							
ENTT	**Nioudou**	**0.59 332**	⇓*i*P			**Pb**	**17 33 59.9**	**-0.6**
	baz=338							
ENTT			S			**Sb**	**17 34 08.2**	**-1.0**
	baz=338							
WARBT	**Fenglin Townsh**	**0.60 228**	⇑*i*P			**Pg**	**17 33 59.1**	**+0.1**
	baz=237							
WARBT			S			**Sg**	**17 34 07.8**	**+1.1**
	baz=237							
EGFH	**Guangfu**	**0.60 222**	*e*P			**Pg**	**17 33 59.6**	**+0.4**
	baz=233							
EGFH			S			**Sb**	**17 34 09.0**	**-0.5**
	baz=233							
TWE	**Neicheng**	**0.63 343**	⇓*i*P			**Pb**	**17 34 00.9**	**-0.2**
	baz=349							
TWE			S			**Sb**	**17 34 10.2**	**0.0**
	baz=349							
CHGB	**Renai**	**0.64 265**	⇓*i*P			**Pg**	**17 33 59.8**	**0.0**
	baz=265							
TWT	**Tachien**	**0.65 282**	⇓*i*P			**Pg**	**17 34 00.4**	**+0.4**
	baz=285							
TWT			*e*S			**Sg**	**17 34 09.0**	**+0.5**
	baz=285							
ILA	**Ilan**	**0.66 350**	*e*P			**Pn**	**17 34 02.0**	**-1.6**
	baz=348							
OWD	**Renai**	**0.66 256**	⇓*i*P			**Pg**	**17 34 00.0**	**-0.2**
	baz=267							
OWD			*e*S			**Sg**	**17 34 09.2**	**+0.5**
	baz=267							
TDCB	**Techi**	**0.67 282**	⇓*i*P			**Pg**	**17 34 00.5**	**+0.1**
	baz=285							
TDCB			S			**Sg**	**17 34 08.6**	**-0.4**
	baz=285							
FUSB	**Fushanzhiwuyua**	**0.69 338**	⇓*i*P			**Pb**	**17 34 02.0**	**-0.2**
	baz=343							
FUSB			S			**Sb**	**17 34 11.6**	**-0.5**
	baz=343							
WUSB	**Renai**	**0.70 260**	⇓*i*P			**Pg**	**17 34 01.0**	**0.0**
	baz=261							
WUSB			*e*S			**Sg**	**17 34 10.1**	**0.0**
	baz=261							
YHNB	**Yeheng**	**0.71 321**	P			**Pb**	**17 34 02.2**	**-0.4**
YHNB	**Yeheng**	**0.71 321**	⇓*i*P			**Pb**	**17 34 02.1**	**-0.4**
	baz=326							
YHNB			S			**Sb**	**17 34 11.9**	**-0.8**
	baz=326							
NSK	**Sanguang**	**0.73 320**	⇓*i*P			**Pb**	**17 34 02.3**	**-0.5**
	baz=325							
NSK			*e*S			**Sb**	**17 34 12.1**	**-1.0**
	baz=325							
NWLT	**Wulai**	**0.74 333**	P			**Pb**	**17 34 02.8**	**-0.1**
	baz=338							
NWLT			*e*S			**Sb**	**17 34 12.5**	**-0.9**
	baz=338							
HGSD	**Ruisui**	**0.74 213**	*e*P			**Pb**	**17 34 02.9**	**-0.2**
	baz=197							
HGSD			*e*S			**Sb**	**17 34 14.9**	**+1.3**
	baz=197							
VWDT	**VWDT**	**0.76 242**	⇑*i*P			**Pg**	**17 34 02.4**	**+0.3**
	baz=250							
VWDT			*e*S			**Sg**	**17 34 12.1**	**+0.1**
	baz=250							
EHY	**Hungye**	**0.79 220**	*e*P			**Pg**	**17 34 02.2**	**-0.4**
	baz=215							
WPL	**Puli Township**	**0.84 263**	P			**Pg**	**17 34 03.5**	**-0.2**
	baz=265							
WPL			*e*S			**Sg**	**17 34 14.1**	**-0.5**
	baz=265							
TIPB	**Shuangxi**	**0.85 357**	⇑P			**Pn**	**17 34 05.7**	**-0.6**
	baz=359							
TIPB			*e*S			**Sn**	**17 34 17.3**	**-2.0**
	baz=359							
NFF	**Wufeng Townshi**	**0.86 307**	*e*P			**Pb**	**17 34 04.5**	**-0.5**
	baz=311							
NFF			*e*S			**Sg**	**17 34 15.1**	**-0.1**
	baz=311							
WHP	**Taichung City**	**0.86 281**	*e*P			**Pg**	**17 34 04.5**	**+0.4**
	baz=284							
WHP			*e*S			**Sg**	**17 34 15.8**	**+0.5**
	baz=284							
DPDB	**Guoxing**	**0.87 265**	P			**Pg**	**17 34 04.4**	**+0.2**
	baz=264							
WCS	**Beigang Elemen**	**0.88 266**	*e*P			**Pg**	**17 34 04.5**	**0.0**
	baz=266							
ECBN	**Changbin**	**0.89 206**	*e*P			**Pg**	**17 34 04.7**	**+0.2**
	baz=203							
ECBN			*e*S			**Sb**	**17 34 17.6**	**0.0**
	baz=203							
YULB	**Yu-li**	**0.89 216**	P			**Pg**	**17 34 04.2**	**-0.5**
YULB	**Yu-li**	**0.89 216**	P			**Pg**	**17 34 05.1**	**+0.4**
YULB	**Yu-li**	**0.89 216**	*e*P			**Pg**	**17 34 03.7**	**-0.9**
	baz=227							
YULB			*e*S			**Sb**	**17 34 17.8**	**0.0**
	baz=227							
TWB1	**Santiao Chiao**	**0.89 7**	*e*P			**Pn**	**17 34 06.5**	**-0.4**
TWB1			*e*S			**Sn**	**17 34 19.6**	**-0.6**
TWA	**Mucha**	**0.90 343**	*e*P			**Pn**	**17 34 06.3**	**-0.7**
	baz=339							
NHDH	**Xindian Distri**	**0.90 340**	*e*P			**Pn**	**17 34 06.2**	**-0.8**
	baz=344							
SSLB	**Suanglung**	**0.90 249**	P			**Pg**	**17 34 04.8**	**0.0**
SSLB	**Suanglung**	**0.90 249**

	baz=341								
TWF1	**Yuli**	**0.93**	**215**	*eP*	**Pg**	**17 34 04.4**	**-0.9**		
	baz=232								
TWF1				*eS*	**Sb**	**17 34 19.3**	**+0.5**		
	baz=232								
LIOB	**Emei**	**0.94**	**304**	*eP*	**Pb**	**17 34 06.5**	**0.0**		
	baz=311								
NJD	**Zhudong**	**0.94**	**311**	*eP*	**Pn**	**17 34 06.8**	**-0.8**		
	baz=323								
NSTT	**Nanjuang**	**0.94**	**303**	⇓P	**Pb**	**17 34 06.3**	**-0.2**		
	baz=307								
NSTT				*eS*	**Sg**	**17 34 18.1**	**+0.1**		
	baz=307								
TYC	**Yuchr**	**0.95**	**257**	⇑*iP*	**Pg**	**17 34 05.5**	**-0.3**		
	baz=256								
NWF	**Wu-fen Shan**	**0.95**	**355**	⇑P	**Pn**	**17 34 07.8**	**0.0**		
	baz=349								
NWF				*eS*	**Sn**	**17 34 20.8**	**-1.1**		
	baz=349								
WFSB	**Wu-fen Shan**	**0.95**	**355**	*eP*	**Pn**	**17 34 07.8**	**+0.1**		
	baz=359								
BACT	**New Taipei Cit**	**0.96**	**336**	*eP*	**Pn**	**17 34 06.8**	**-0.9**		
	baz=341								
SXI1	**Grass Mountain**	**0.97**	**0**	⇑P	**Pn**	**17 34 08.2**	**+0.2**		
	baz=354								
SXI1				*eS*	**Sn**	**17 34 22.9**	**+0.5**		
	baz=354								
CHKH	**Chenggong**	**1.02**	**205**	*eP*	**Pg**	**17 34 07.3**	**+0.2**		
	baz=203								
CHKH				*eS*	**Sb**	**17 34 22.2**	**+0.7**		
	baz=203								
HSN1	**Hsinchu**	**1.02**	**310**	*eP*	**Pn**	**17 34 08.1**	**-0.5**		
	baz=317								
WHYT	**Xinyi Township**	**1.02**	**246**	⇑P	**Pg**	**17 34 07.2**	**0.0**		
	baz=255								
WHYT				*eS*	**Sg**	**17 34 20.2**	**-0.2**		
	baz=255								
NTY	**Taoyuan**	**1.02**	**329**	*eP*	**Pn**	**17 34 08.5**	**-0.1**		
	baz=335								
TWQ1	**Liyutan**	**1.03**	**283**	*eP*	**Pn**	**17 34 08.2**	**-0.6**		
	baz=287								
TNOU	**National Taiwa**	**1.03**	**355**	*eP*	**Pn**	**17 34 09.0**	**+0.2**		
	baz=349								
TNOU				*eS*	**Sn**	**17 34 24.4**	**+0.7**		
	baz=349								
JYNG	**Yonagunijimaku**	**1.03**	**71**	P	**Pn**	**17 34 09.9**	**+1.1**		
JYNG				*eS*	**Sn**	**17 34 25.6**	**+1.9**		
SBCB	**Hsinchu**	**1.05**	**310**	*eP*	**Pn**	**17 34 09.3**	**+0.3**		
	baz=316								
NCUH	**Zhongli**	**1.05**	**324**	⇓P	**Pn**	**17 34 09.6**	**+0.5**		
	baz=327								
NCUH				*eS*	**Sn**	**17 34 24.8**	**+0.6**		
	baz=327								
FULB	**Fuli**	**1.06**	**210**	*eP*	**Pg**	**17 34 07.7**	**-0.1**		
	baz=223								
NSY	**Sanyi**	**1.06**	**287**	*eP*	**Pn**	**17 34 09.2**	**0.0**		
	baz=293								
YM01	**YM01**	**1.06**	**345**	*eP*	**Pn**	**17 34 09.4**	**+0.2**		
	baz=346								
YM01				*eS*	**Sn**	**17 34 24.3**	**-0.2**		
	baz=346								
TWS1	**Kuangyinshan**	**1.06**	**337**	*eP*	**Pn**	**17 34 10.0**	**+0.8**		
	baz=339								
TWS1				*eS*	**Sn**	**17 34 24.9**	**+0.5**		
	baz=339								
HSN	**Hsinchu**	**1.07**	**310**	*eP*	**Pn**	**17 34 09.6**	**+0.4**		
	baz=316								
HSN				*eS*	**Sn**	**17 34 23.8**	**-0.7**		
	baz=316								
NMLH	**Miaoli**	**1.07**	**293**	*eP*	**Pn**	**17 34 09.3**	**0.0**		
	baz=299								
NJN	**Zhunan**	**1.07**	**302**	*eP*	**Pn**	**17 34 09.1**	**-0.2**		
	baz=307								
WWF	**Wufeng**	**1.07**	**266**	*eP*	**Pn**	**17 34 09.1**	**-0.3**		
	baz=266								
WJS	**Zhushan**	**1.09**	**255**	*eP*	**Pb**	**17 34 09.0**	**+0.1**		
	baz=256								
WJS				*eS*	**Sb**	**17 34 23.8**	**+0.4**		
	baz=256								
YOJ	**Yonaguni jima**	**1.09**	**71**	P	**Pn**	**17 34 11.1**	**+1.5**		
YOJ	**Yonaguni jima**	**1.09**	**71**	⇓P	**Pn**	**17 34 10.7**	**+1.1**		
	baz=71								
YOJ				*eS*	**Sn**	**17 34 27.7**	**+2.5**		
	baz=71								
YOJ	**Yonaguni jima**	**1.09**	**71**	P	**Pn**	**17 34 10.9**	**+1.3**		
YOJ				*eS*	**Sn**	**17 34 27.2**	**+2.0**		
YM08	**YM08**	**1.10**	**347**	*eP*	**Pn**	**17 34 09.4**	**-0.3**		
	baz=336								
WNT1	**Nantou City**	**1.11**	**259**	*eP*	**Pg**	**17 34 08.6**	**-0.2**		
	baz=238								
WNT	**Mingjian**	**1.11**	**258**	⇑*iP*	**Pb**	**17 34 09.4**	**+0.1**		
	baz=259								
WNT				*eS*	**Sb**	**17 34 24.4**	**+0.2**		
	baz=259								
ANP	**Anpu**	**1.11**	**343**	*eP*	**Pn**	**17 34 10.2**	**+0.2**		
	baz=345								
ANP				*eS*	**Sn**	**17 34 25.6**	**-0.2**		
	baz=345								
NTST	**Danshui**	**1.11**	**340**	*eP*	**Pn**	**17 34 10.2**	**+0.4**		
	baz=341								
NTST				*eS*	**Sn**	**17 34 27.1**	**+1.5**		
	baz=341								
CHKT	**Chengkung**	**1.11**	**205**	*eP*	**Pg**	**17 34 08.4**	**-0.5**		
	baz=181								
EHD	**Haiduan**	**1.14**	**212**	*eP*	**Pg**	**17 34 08.9**	**-0.5**		
	baz=212								
EHD				*eS*	**Sg**	**17 34 24.4**	**+0.2**		
	baz=212								
WDJ	**Dajia District**	**1.15**	**282**	*eP*	**Pn**	**17 34 10.7**	**+0.3**		
	baz=295								
WDJ				*eS*	**Sb**	**17 34 25.7**	**+0.6**		
	baz=295								
ALS	**Alishan**	**1.15**	**239**	⇑P	**Pg**	**17 34 09.3**	**-0.3**		
	baz=239								
ALS				*eS*	**Sg**	**17 34 24.3**	**-0.2**		
	baz=239								
NHW	**Xinwu Township**	**1.16**	**320**	*eP*	**Pn**	**17 34 10.2**	**-0.3**		
	baz=326								
TWY	**Chenhua**	**1.18**	**348**	*eP*	**Pn**	**17 34 11.7**	**+0.9**		
	baz=338								
WYL	**Yuanlin Townsh**	**1.19**	**263**	*eP*	**Pn**	**17 34 10.7**	**-0.2**		
	baz=261								
WCHH	**Zhanghua**	**1.20**	**269**	*eP*	**Pn**	**17 34 11.2**	**+0.1**		
	baz=266								
CHN5	**Tsauling**	**1.21**	**245**	⇑P	**Pg**	**17 34 10.8**	**+0.1**		
	baz=231								
CHN5				*eS*	**Sn**	**17 34 28.2**	**+0.1**		
	baz=231								
ELDTW	**Lidau**	**1.21**	**220**	*eP*	**Pg**	**17 34 08.8**	**-2.0**		
	baz=202								
EDH	**Donghe**	**1.25**	**205**	*eP*	**Pn**	**17 34 09.7**	**-2.1**		
	baz=188								
EDH				*eS*	**Sg**	**17 34 27.5**	**-0.3**		
	baz=188								
WGK	**Gukeng**	**1.27**	**251**	*eP*	**Pn**	**17 34 11.9**	**-0.2**		
	baz=252								
WGK				*eS*	**Sn**	**17 34 30.5**	**+0.9**		
	baz=252								
WDLH	**Douliu**	**1.29**	**251**	*eP*	**Pn**	**17 34 12.3**	**-0.1**		
	baz=248								
WCKO	**Fanlu**	**1.34**	**240**	*eP*	**Pb**	**17 34 13.2**	**-0.1**		
	baz=242								
WCKO				*eS*	**Sn**	**17 34 32.1**	**+0.8**		
	baz=242								
STYH	**Taoyuan**	**1.38**	**227**	⇓P	**Pn**	**17 34 12.6**	**-0.9**		
	baz=214								
STYH				*eS*	**Sb**	**17 34 31.2**	**-0.5**		
	baz=214								
WRL	**Guolierlin Hig**	**1.38**	**261**	*eP*	**Pb**	**17 34 14.0**	**0.0**		
	baz=263								
WRL				*eS*	**Sn**	**17 34 32.5**	**+0.2**		
	baz=263								
STYT	**Tauyuan**	**1.40**	**227**	P	**Pn**	**17 34 12.9**	**-0.9**		
	baz=214								
STYT				*eS*	**Sb**	**17 34 30.7**	**-1.6**		
	baz=214								
CHN4	**Tsaushan**	**1.40**	**237**	*eP*	**Pn**	**17 34 13.9**	**+0.1**		
	baz=239								
CHN4				*eS*	**Sg**	**17 34 33.9**	**+1.5**		
	baz=239								
TPUB	**Ta-pu**	**1.40**	**235**	P	**Pn**	**17 34 13.8**	**0.0**		
TPUB	**Ta-pu**	**1.40**	**235**	P	**Pn**	**17 34 13.9**	**+0.1**		
TPUB	**Ta-pu**	**1.40**	**235**	*eP*	**Pn**	**17 34 13.4**	**-0.4**		
	baz=236								
TPUB				*eS*	**Sb**	**17 34 32.9**	**+0.5**		
	baz=236								
RLNB	**Erlin**	**1.40**	**261**	*eP*	**Pn**	**17 34 13.8**	**0.0**		
	baz=258								
WTK	**Tuku**	**1.42**	**253**	*eP*	**Pb**	**17 34 14.5**	**-0.1**		
	baz=255								
WTK				*eS*	**Sg**	**17 34 35.0**	**+1.7**		
	baz=255								
WTP	**Ta-pu**	**1.44**	**233**	*eP*	**Pn**	**17 34 14.3**	**-0.1**		
	baz=234								
WTP				*eS*	**Sb**	**17 34 34.3**	**+0.6**		
	baz=234								
LDUT	**Ludao**	**1.48**	**194**	*eP*	**Pn**	**17 34 12.2**	**-2.8**		
	baz=177								
TWGBT	**Beinan**	**1.48**	**209**	P	**Pn**	**17 34 14.2**	**-0.8**		
TWGBT	**Beinan**	**1.48**	**209**	*eP*	**Pn**	**17 34 12.9**	**-2.1**		
	baz=206								
TWG	**Pinlang**	**1.48**	**210**	*eP*	**Pn**	**17 34 12.8**	**-2.2**		
	baz=206								
PCYT	**Pengchaiyu**	**1.52**	**7**	*eP*	**Pg**	**17 34 16.9**	**+0.2**		
	baz=7.0								
TWK	**Hsinying**	**1.52**	**237**	*eP*	**Pn**	**17 34 15.8**	**+0.2**		
	baz=223								
TWK				*eS*	**Sb**	**17 34 36.6**	**+0.5**		
	baz=223								
CHN1	**Nanshi**	**1.54**	**233**	*eP*	**Pb**	**17 34 16.2**	**-0.4**		
	baz=235								
CHN1				*eS*	**Sg**	**17 34 37.8**	**+0.6**		
	baz=235								
SNST	**Tainan City**	**1.54**	**235**	*eP*	**Pn**	**17 34 16.2**	**+0.4**		
	baz=237								
SNST				*eS*	**Sg**	**17 34 37.7**	**+0.5**		
	baz=237								
SGST	**Jiashian**	**1.57**	**229**	*eP*	**Pn**	**17 34 15.7**	**-0.5**		
	baz=230								
SGST				*eS*	**Sb**	**17 34 38.1**	**+0.8**		
	baz=230								
WSF	**Szhu**	**1.58**	**253**	*eP*	**Pn**	**17 34 16.7**	**+0.4**		
	baz=255								
WSF				*eS*	**Sb**	**17 34 38.4**	**+0.7**		
	baz=255								
SLGT	**Liugui**	**1.58**	**225**	*eP*	**Pn**	**17 34 16.4**	**+0.1**		
	baz=227								
SLGT				*eS*	**Sb**	**17 34 38.4**	**+0.6**		
	baz=227								
WSL	**Shuilin Townsh**	**1.62**	**249**	*eP*	**Pb**	**17 34 17.3**	**-0.6**		
	baz=251								
WSL				*eS*	**Sg**	**17 34 40.2**	**+0.7**		
	baz=251								
ICHU	**Yijhu**	**1.64**	**243**	*eP*	**Pn**	**17 34 17.6**	**+0.5**		
	baz=245								
ICHU				*eS*	**Sg**	**17 34 40.9**	**+0.6**		
	baz=245								
IRIF	**Iriomote-Funau**	**1.71**	**82**	*eP*	**Pg**	**17 34 20.8**	**+0.4**		
IRIF				*eS*	**Sg**	**17 34 43.9**	**+1.4**		
ECL	**Taimali**	**1.73**	**209**	*eP*	**Pn**	**17 34 17.6**	**-0.8**		
	baz=206								
SCST	**Cishan**	**1.76**	**226**	*eP*	**Pb**	**17 34 20.1**	**-0.2**		
	baz=229								
SCST				*eS*	**Sg**	**17 34 44.2**	**0.0**		
	baz=229								
SCLT	**Jiali**	**1.80**	**239**	*eS*	**Sb**	**17 34 44.3**	**+0.3**		
	baz=240								
TSMG	**Majia**	**1.80**	**219**	*eP*	**Pb**	**17 34 20.2**	**-0.8**		
	baz=206								
TWM1	**Shoushan**	**1.85**	**226**	*eP*	**Pb**	**17 34 22.1**	**+0.2**		
	baz=223								
MASBT	**Mashibuluo**	**1.88**	**217**	*eP*	**Pn**	**17 34 20.2**	**-0.2**		
	baz=221								
MASBT				*eS*	**Sn**	**17 34 45.5**	**+0.9**		
	baz=221								
JKRS	**Kuro-shima**	**1.96**	**86**	P	**Pg**	**17 34 23.7**	**-1.3**		
JKRS				S	**Sg**	**17 34 50.5**	**0.0**		
SCZT	**Fangliau**	**2.08**	**214**	*eP*	**Pn**	**17 34 24.3**	**+1.1**		
	baz=198								
JIJ	**Ishigaki jima**	**2.09**	**83**	P	**Pb**	**17 34 24.3**	**-1.7**		
JIJ				*eS*	**Sb**	**17 34 51.5**	**-0.8**		
PHUB	**P'eng-hu**	**2.19**	**255**	*eP*	**Pn**	**17 34 24.3**	**-0.3**		
	baz=255								
PHUB				*eS*	**Sn**	**17 34 52.3**	**+0.1**		
	baz=255								
PNG	**Penghu**	**2.19**	**256**	*eP*	**Pn**	**17 34 24.1**	**-0.6**		
	baz=256								
PNG				*eS*	**Sn**	**17 34 52.5**	**+0.2**		
	baz=256								
WDGT	**Dungji**	**2.20**	**248**	*eP*	**Pn**	**17 34 24.6**	**-0.2**		
	baz=234								
WDGT				*eS*	**Sn**	**17 34 52.4**	**0.0**		
	baz=234								
JISG	**Ishigakijimahi**	**2.27**	**78**	P	**Pb**	**17 34 26.7**	**-2.4**		
JISG				*eS*	**Sb**	**17 34 56.0**	**-1.6**		
VWUC	**VWUC**	**2.37**	**292**	*eP*	**Pn**	**17 34 26.5**	**-0.7**		
	baz=301								
VCHM	**Qimei**	**2.41**	**249**	*eP*	**Pn**	**17 34 27.6**	**-0.1**		
	baz=243								
JTJ	**Tarama**	**2.63**	**78**	*eS*	**Sb**	**17 35 06.7**	**-1.2**		
PTMZ	**Houxiangcun**	**2.67**	**291**	*eP*	**Pn**	**17 34 30.3**	**-1.0**		
	baz=295								
PTMZ				*eS*	**Sn**	**17 35 01.9**	**-2.1**		
	baz=295								
MATB	**Ma-tsu**	**2.67**	**320**	*eP*	**Pn**	**17 34 30.9**	**-0.5**		
	baz=324								
KNM	**Kinmen**	**3.15**	**276**	*eP*	**Pn**	**17 34 39.0**	**+1.0**		
	baz=272								
XPSS	**Dashiqiu**	**3.19**	**332**	*eP*	**Pn**	**17 34 37.7**	**-0.7**		
	baz=335								
KNMB	**Chin-men Tao**	**3.20**	**277**	*eP*	**Pn**	**17 34 37.4**	**-1.1**		
	baz=274								
AXDP	**Jialang**	**3.64**	**283**	*eP*	**Pn**	**17 34 43.9**	**-0.7**		
	baz=280								
KSRS	**Korea Array**	**14.27**	**20**	Pn	**P**	**17 37 18.1**	**+0.3**		
	0.1nm,0.3s,baz=202,slow=12,SNR=4.6								
	0.9nm,0.7s								
SONM	**Songino Array**	**26.68**	**336**	P	**P**	**17 39 27.6**	**-0.1**		
	0.2nm,0.4s,baz=145,slow=10,SNR=2.3								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**38.82**	**316**	P	**P**	**17 41 13.3**	**-0.2**		
	0.3nm,0.6s,baz=103,slow=10,SNR=6.6								
	0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**40.64**	**327**	P	**P**	**17 41 27.6**	**-1.0**		
	0.3nm,0.4s,baz=121,slow=7.4,SNR=2.1								
	0.3nm,0.4s								
WRA	**Warramunga Arr**	**45.45**	**163**	P	**P**	**17 42 05.1**	**-2.7**		
	0.9nm,1.1s,baz=343,slow=8.7,SNR=2.2								
	0.9nm,1.1s								
SHEM	**Shemya Is, Ala**	**48.48**	**40**	LR	LR	18 02 21.1			
	comp=Z,21nm,21.6s,baz=284,slow=35								
ASAR	**Alice Springs**	**48.91**	**165**	P	**P**	**17 42 34.3**	**-0.5**		
	0.1nm,0.3s,baz=342,slow=6.4,SNR=4.8								
	0.1nm,0.3s								
YKA	**Yellowknife Ar**	**82.79**	**23**	P	**P**	**17 46 16.4**	**+3.8**		
	0.1nm,0.5s,baz=315,slow=4.8,SNR=3.9								
	0.1nm,0.5s								

TAP ***08*** *17:38:57.8,23°.95N×121°.73E,h7km,ML3.1,C*
JMA ***08*** *17:38:57.6±0.2,23°.9N±0°.3×12°2E±°,h0km,TAIWAN REGION*
ISC 08 17:38:58.4±0.9,**23°.94N**±0°.01×**121°.76E**±0°.03,**h10**km±6km,
n87,σ0**963**/156,**23C-5D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.14**	**283**	⇑*iP*		**Pg**	**17 39 01.1**	**-0.4**
HWA	baz=280			*i* S		**Sg**	**17 39 04.4**	**+0.6**
TWD	**Chiawan**	**0.20**	**313**	⇑*iP*		**Pg**	**17 39 02.1**	**-0.4**
TWD	baz=303			*i* S		**Sg**	**17 39 05.5**	**+0.1**
SHUL	**Shoufeng**	**0.24**	**229**	*eP*		**Pg**	**17 39 03.8**	**+0.6**
SHUL	baz=222			*eS*		**Sg**	**17 39 09.3**	**+2.9**
ETM	**Tongmen**	**0.24**	**275**	⇑*iP*		**Pg**	**17 39 02.8**	**-0.6**
ETM	baz=271			*eS*		**Sg**	**17 39 06.3**	**-0.4**
ETL	**Fush Village**	**0.25**	**330**	⇓P		**Pg**	**17 39 03.2**	**-0.2**
ETL	baz=321			S		**Sg**	**17 39 07.5**	**+0.6**
NACB	**Ninganchiao**	**0.27**	**327**	⇑*iP*		**Pg**	**17 39 03.4**	**-0.5**
NACB	baz=318			*eS*		**Sg**	**17 39 07.7**	**+0.1**
TEGC	**Jichi Village**	**0.31**	**221**	*eP*		**Pb**	**17 39 05.5**	**-0.5**
TEGC	baz=214			S		**Sb**	**17 39 12.1**	**+1.0**
ESL	**Shilin**	**0.32**	**247**	⇑*iP*		**Pg**	**17 39 04.4**	**-0.4**
ESL	baz=251			S		**Sg**	**17 39 09.2**	**+0.1**
LXIB	**Xiulin Townshi**	**0.32**	**284**	⇑*iP*		**Pg**	**17 39 04.2**	**-0.7**
ETLH	**Xiulin Townshi**	**0.36**	**316**	⇑*iP*		**Pg**	**17 39 05.2**	**-0.4**
ETLH	baz=315			*eS*		**Sg**	**17 39 10.2**	**-0.2**
EAHA	**Aohua**	**0.38**	**358**	*eP*		**Pb**	**17 39 06.3**	**-1.0**
EAHA	baz=345			*eS*		**Sb**	**17 39 12.8**	**-0.5**
WARBT	**Fenglin Townsh**	**0.41**	**237**	⇑*iP*		**Pg**	**17 39 06.1**	**-0.3**
WARBT	baz=232			*i* S		**Sg**	**17 39 12.3**	**+0.5**
EGFH	**Guangfu**	**0.41**	**228**	*eP*		**Pg**	**17 39 06.6**	**+0.2**
EGFH	baz=234			*eS*		**Sb**	**17 39 13.4**	**-0.7**
ENA	**Nanau**	**0.48**	**358**	⇓P		**Pb**	**17 39 08.1**	**-0.9**
ENA	baz=345			S		**Sb**	**17 39 15.6**	**-0.7**
WHF	**Hehuan Shan**	**0.49**	**294**	⇑P		**Pg**	**17 39 07.5**	**-0.6**
EWUT	**Wuta**	**0.50**	**2**	⇓P		**Pb**	**17 39 08.5**	**-0.8**
EWUT	baz=352			*eS*		**Sb**	**17 39 16.1**	**-0.6**
OWD	**Renai**	**0.53**	**271**	*eP*		**Pg**	**17 39 08.3**	**-0.4**
OWD	baz=277			*eS*		**Sg**	**17 39 16.2**	**+0.4**
EOS4	**EOS4**	**0.54**	**71**	*eP*		**Pn**	**17 39 11.0**	**-0.8**
EOS4	baz=81			*eS*		**Sn**	**17 39 21.4**	**+0.5**
HGSD	**Ruisui**	**0.54**	**214**	*eP*		**Pb**	**17 39 09.7**	**-0.4**
CHGB	**Renai**	**0.55**	**282**	⇑*iP*		**Pg**	**17 39 08.7**	**-0.3**
CHGB	baz=278			S		**Sg**	**17 39 16.4**	**+0.1**
FUSS	**Fushou**	**0.56**	**303**	⇑P		**Pg**	**17 39 09.1**	**-0.2**
WUSB	**Renai**	**0.59**	**275**	⇑P		**Pg**	**17 39 09.5**	**-0.3**
WUSB	baz=280			*eS*		**Sg**	**17 39 18.5**	**+0.9**
EHY	**Hungye**	**0.59**	**223**	*eP*		**Pg**	**17 39 09.8**	**-0.1**
EHY	baz=206			*eS*		**Sb**	**17 39 18.5**	**-0.8**
NNSB	**Datong**	**0.59**	**325**	⇑*iP*		**Pg**	**17 39 09.7**	**-0.2**
NNSB	baz=324			S		**Sg**	**17 39 17.9**	**+0.1**
VWDT	**VWDT**	**0.59**	**252**	⇑*iP*		**Pg**	**17 39 09.9**	**0.0**
VWDT	baz=257			*eS*		**Sb**	**17 39 18.5**	**-0.9**
NNS	**Nan Shan**	**0.61**	**325**	⇑*iP*		**Pg**	**17 39 09.9**	**-0.2**
NNS	baz=325			S		**Sg**	**17 39 18.6**	**+0.5**
TWT	**Tachien**	**0.61**	**300**	⇑P		**Pg**	**17 39 10.4**	**0.0**
TWT	baz=298			*eS*		**Sg**	**17 39 18.9**	**+0.4**
LATG	**Datong**	**0.63**	**340**	*eP*		**Pg**	**17 39 10.5**	**-0.1**
LATG	baz=326			S		**Sb**	**17 39 20.0**	**-0.5**
TDCB	**Techi**	**0.63**	**299**	⇑*iP*		**Pg**	**17 39 10.4**	**-0.2**
TDCB	baz=298			*eS*		**Sg**	**17 39 19.0**	**+0.1**
ESAO	**Su ao**	**0.63**	**7**	*eP*		**Pb**	**17 39 11.2**	**-0.4**
ESAO	baz=356			*eS*		**Sb**	**17 39 20.5**	**-0.1**
TWC	**Suao**	**0.67**	**7**	*eP*		**Pb**	**17 39 11.9**	**-0.3**
NDS	**Dongshan**	**0.69**	**357**	*eP*		**Pb**	**17 39 12.3**	**-0.2**
NDS	baz=346			*eS*		**Sb**	**17 39 22.9**	**+0.8**
YULB	**Yu-li**	**0.69**	**218**	*eP*		**Pg**	**17 39 11.5**	**-0.2**
YULB	baz=215			*eS*		**Sb**	**17 39 21.7**	**-0.5**
NDT	**Datong Townshi**	**0.69**	**341**	*eP*		**Pb**	**17 39 12.1**	**-0.5**
NDT	baz=330			*eS*		**Sb**	**17 39 22.0**	**-0.3**
ENTT	**Nioudou**	**0.71**	**346**	*eP*		**Pb**	**17 39 12.5**	**-0.5**
ENTT	baz=335			*eS*		**Sb**	**17 39 22.8**	**-0.1**
EYUL	**Yuli**	**0.72**	**214**	*eP*		**Pb**	**17 39 12.6**	**-0.4**
TWF1	**Yuli**	**0.72**	**216**	*eP*		**Pb**	**17 39 12.7**	**-0.4**
TWF1	baz=229			*eS*		**Sb**	**17 39 23.9**	**+0.8**
SSLB	**Suanglung**	**0.75**	**258**	⇑*iP*		**Pg**	**17 39 12.5**	**-0.4**
SSLB	baz=265			*eS*		**Sg**	**17 39 22.3**	**-0.4**
TWE	**Neicheng**	**0.78**	**354**	*eP*		**Pb**	**17 39 14.0**	**0.0**
TWE	baz=345			*eS*		**Sb**	**17 39 25.0**	**+0.3**
WCS	**Beigang Elemen**	**0.78**	**278**	*eP*		**Pg**	**17 39 13.3**	**-0.1**
SMLT	**Sun Moon Lake**	**0.79**	**266**	⇑P		**Pg**	**17 39 13.4**	**-0.2**
YHNB	**Yeheng**	**0.80**	**334**	⇑*iP*		**Pb**	**17 39 14.1**	**-0.5**
YHNB	baz=333			*eS*		**Sb**	**17 39 24.8**	**-0.7**
WHP	**Taichung City**	**0.81**	**294**	*eP*		**Pb**	**17 39 14.2**	**-0.5**
WHP	baz=284			*eS*		**Sb**	**17 39 26.1**	**+0.3**
NSK	**Sanguang**	**0.81**	**334**	⇑*iP*		**Pb**	**17 39 14.1**	**-0.6**
NSK	baz=333			*eS*		**Sb**	**17 39 25.3**	**-0.5**
CHKH	**Chenggong**	**0.82**	**204**	*eP*		**Pb**	**17 39 14.2**	**-0.5**
CHKH	baz=202			*eS*		**Sn**	**17 39 27.9**	**-0.4**
TYC	**Yuchr**	**0.82**	**267**	⇑*eP*		**Pg**	**17 39 13.9**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.83**	**349**	*eP*		**Pb**	**17 39 14.7**	**-0.2**
FUSB	baz=339			*eS*		**Sb**	**17 39 25.6**	**-0.6**
FULB	**Fuli**	**0.85**	**210**	*eP*		**Pn**	**17 39 15.7**	**-0.9**
FULB	baz=223			*eS*		**Sn**	**17 39 29.5**	**+0.3**
NWLT	**Wulai**	**0.86**	**344**	*eP*		**Pb**	**17 39 15.3**	**-0.2**
NWLT	baz=330			*eS*		**Sb**	**17 39 26.7**	**-0.5**
WHYT	**Xinyi Township**	**0.86**	**254**	*eP*		**Pg**	**17 39 14.9**	**-0.1**
WHYT	baz=258			*eS*		**Sg**	**17 39 26.6**	**+0.3**
NFF	**Wufeng Townshi**	**0.90**	**320**	*eP*		**Pb**	**17 39 15.8**	**-0.3**
NFF	baz=317			*eS*		**Sb**	**17 39 28.2**	**-0.1**
CHKT	**Chengkung**	**0.91**	**203**	*eP*		**Pb**	**17 39 16.1**	**-0.3**
CHKT	baz=201			*eS*		**Sn**	**17 39 30.1**	**-0.5**
EHD	**Haiduan**	**0.94**	**213**	*eP*		**Pg**	**17 39 16.0**	**-0.5**
WJS	**Zhushan**	**0.95**	**263**	*eP*		**Pn**	**17 39 17.3**	**-0.5**
WJS	baz=266			*eS*		**Sn**	**17 39 31.6**	**+0.1**
NSTT	**Nanjuang**	**0.97**	**315**	⇑P		**Pb**	**17 39 17.3**	**0.0**
	baz=312							

NSTT				*e*S	**Sg**	**17 39 29.9**	**+0.2**
	baz=312							
LIOB	**Emei**	**0.97**	**316**	*e*P	**Pn**	**17 39 17.5**	**-0.7**
	baz=313							
LIOB				*e*S	**Sb**	**17 39 30.9**	**+0.5**
	baz=313							
ALS	**Alishan**	**0.97**	**244**⇓	*e*P	**Pb**	**17 39 17.3**	**-0.2**
	baz=239							
ALS				*e*S	**Sb**	**17 39 30.9**	**+0.2**
	baz=239							
WNT	**Mingjian**	**0.98**	**266**	*e*P	**Pn**	**17 39 18.1**	**-0.2**
	baz=270							
WNT				*e*S	**Sn**	**17 39 32.5**	**+0.2**
	baz=270							
ELDTW	**Lidau**	**1.01**	**222**	*e*P	**Pg**	**17 39 16.8**	**-1.1**
	baz=219							
NSY	**Sanyi**	**1.02**	**298**	*e*P	**Pn**	**17 39 19.2**	**+0.3**
	baz=305							
NSY				*e*S	**Sn**	**17 39 34.3**	**+0.9**
	baz=305							
TIPB	**Shuangxi**	**1.03**	**3**	*e*P	**Pn**	**17 39 18.8**	**-0.1**
	baz=353							
TIPB				*e*S	**Sn**	**17 39 33.0**	**-0.4**
	baz=353							
TWA	**Mucha**	**1.04**	**351**	*e*P	**Pn**	**17 39 19.1**	**-0.1**
	baz=340							
TWA				*e*S	**Sn**	**17 39 33.2**	**-0.6**
	baz=340							
CHN5	**Tsauling**	**1.05**	**251**	⇓P	**Pn**	**17 39 19.2**	**-0.1**
	baz=235							
CHN5				*e*S	**Sn**	**17 39 34.1**	**+0.1**
	baz=235							
EDH	**Donghe**	**1.05**	**203**	*e*P	**Pg**	**17 39 16.9**	**-1.7**
	baz=202							
EDH				*e*S	**Sb**	**17 39 32.7**	**+0.1**
	baz=202							
NMLH	**Miaoli**	**1.06**	**304**	*e*P	**Pn**	**17 39 19.8**	**+0.4**
	baz=300							
TWB1	**Santiao Chiao**	**1.08**	**11**	*e*P	**Pn**	**17 39 19.7**	**0.0**
	baz=5.0							
TWB1				*e*S	**Sn**	**17 39 35.3**	**+0.6**
	baz=5.0							
WFSB	**Wu-fen Shan**	**1.12**	**1**	*e*P	**Pn**	**17 39 20.8**	**+0.5**
	baz=351							
WFSB				*e*S	**Sn**	**17 39 36.0**	**+0.2**
	baz=351							
WGK	**Gukeng**	**1.12**	**257**	*e*P	**Pn**	**17 39 20.4**	**+0.1**
	baz=251							
WGK				*e*S	**Sn**	**17 39 37.3**	**+1.5**
	baz=251							
SXI1	**Grass Mountain**	**1.15**	**5**	*e*P	**Pn**	**17 39 21.1**	**+0.4**
	baz=6.0							
SXI1				*e*S	**Sn**	**17 39 38.6**	**+2.0**
	baz=6.0							
WCKO	**Fanlu**	**1.17**	**245**	*e*P	**Pn**	**17 39 21.2**	**+0.3**
	baz=241							
STYH	**Taoyuan**	**1.19**	**230**	*e*P	**Pb**	**17 39 20.2**	**-0.8**
	baz=232							
STYH				*e*S	**Sg**	**17 39 36.5**	**-0.1**
	baz=232							
YM01	**YM01**	**1.21**	**352**	*e*P	**Pg**	**17 39 22.2**	**+0.5**
	baz=347							
TPUB	**Ta-pu**	**1.22**	**238**	*e*P	**Pg**	**17 39 21.6**	**-0.2**
	baz=235							
TPUB				*e*S	**Sn**	**17 39 38.6**	**+0.5**
	baz=235							
ANP	**Anpu**	**1.26**	**350**	*e*P	**Pg**	**17 39 22.8**	**+0.3**
	baz=346							
WTP	**Ta-pu**	**1.26**	**237**	*e*P	**Pg**	**17 39 22.4**	**-0.2**
	baz=231							
WTP				*e*S	**Sn**	**17 39 40.1**	**+0.9**
	baz=231							
WRL	**Guolierlin Hig**	**1.26**	**268**	*e*P	**Pg**	**17 39 22.5**	**-0.2**
	baz=263							
WRL				*e*S	**Sn**	**17 39 40.6**	**+1.4**
	baz=263							
TWK	**Hsinying**	**1.34**	**240**	*e*P	**Pb**	**17 39 23.5**	**-0.3**
	baz=234							
TWK				*e*S	**Sg**	**17 39 43.0**	**+1.3**
	baz=234							
CHN1	**Nanshi**	**1.36**	**236**	*e*P	**Pg**	**17 39 24.6**	**+0.1**
	baz=232							
CHN1				*e*S	**Sg**	**17 39 43.7**	**+1.6**
	baz=232							
SNST	**Tainan City**	**1.36**	**238**	*e*P	**Pg**	**17 39 24.0**	**-0.5**
	baz=233							
SNST				*e*S	**Sg**	**17 39 43.3**	**+1.1**
	baz=233							
SGST	**Jiashian**	**1.38**	**232**	*e*P	**Pb**	**17 39 23.7**	**-0.6**
	baz=213							
SGST				*e*S	**Sg**	**17 39 44.1**	**+1.3**
	baz=213							
SLGT	**Liugui**	**1.39**	**227**	*e*P	**Pg**	**17 39 24.6**	**-0.4**
	baz=211							
SLGT				*e*S	**Sg**	**17 39 43.9**	**+0.8**
	baz=211							
ICHU	**Yijhu**	**1.47**	**247**	*e*P	**Pg**	**17 39 26.3**	**-0.4**
	baz=242							
SCST	**Cishan**	**1.57**	**228**	*e*P	**Pg**	**17 39 28.1**	**-0.4**
	baz=213							
TSMG	**Majia**	**1.60**	**220**	*e*P	**Pb**	**17 39 27.9**	**-0.2**
	baz=208							
MASBT	**Mashibuluo**	**1.68**	**218**	*e*P	**Pb**	**17 39 28.5**	**-0.9**
	baz=204							
MASBT				*e*S	**Sg**	**17 39 52.4**	**-0.1**
	baz=204							
TSCK	**Chigu Township**	**1.73**	**243**	*e*P	**Pb**	**17 39 29.3**	**-0.9**
	baz=236							
TSCK				*e*S	**Sg**	**17 39 53.4**	**-0.6**
	baz=236							
JISG	**Ishigakijimahi**	**2.42**	**74**	P	**Pn**	**17 39 38.8**	**+0.8**
JISG				S	**Sn**	**17 40 08.7**	**+1.0**

TAP 08 17:46:25.3,23.94N×121.57E,h10km,ML1.6,1C-2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**43**	*e*P	Pg	17 46 28.0	+0.7
	baz=49						
HWA				S	Sg	17 46 29.8	+1.1
	baz=49						
ETM	**Tongmen**	**0.07**	**287**	P	Pg	17 46 28.1	+0.5
	baz=288						
ETM				*i* S	Sg	17 46 29.5	+0.2
	baz=288						
TWD	**Chiawan**	**0.14**	**10**	P	Pg	17 46 29.1	+0.6
	baz=11						
TWD				*i* S	Sg	17 46 31.2	+0.5
	baz=11						
TWD	**Chiawan**	**0.14**	**10**	*i* P	Pg	17 46 29.1	+0.6
	baz=222						
TWD				*i* S	Sg	17 46 31.2	+0.5
	baz=222						
SHUL	**Shoufeng**	**0.15**	**183**	P	Pg	17 46 29.5	+0.7
	baz=192						
SHUL				S	Sg	17 46 32.2	+1.1
	baz=192						
LXIB	**Xiulin Townshi**	**0.16**	**298**⇓	*i*P	Pg	17 46 29.7	+0.6
	baz=291						
ESL	**Shilin**	**0.18**	**225**⇑	*i*P	Pg	17 46 29.4	+0.2
	baz=231						
ESL				S	Sg	17 46 31.7	-0.1
	baz=231						
WARBT	**Fenglin Townsh**	**0.28**	**217**	P	Pg	17 46 31.2	+0.1
	baz=224						
WARBT				S	Sg	17 46 34.5	-0.4
	baz=224						
EGFH	**Guangfu**	**0.30**	**206**	P	Pg	17 46 31.8	+0.4
	baz=217						
EGFH				S	Sg	17 46 35.5	+0.1
	baz=217						
WHF	**Hehuan Shan**	**0.34**	**306**	*e*P	Pb	17 46 33.1	-0.7
	baz=306						
OWD	**Renai**	**0.36**	**272**	*e*P	Pb	17 46 33.5	-0.4
	baz=273						
OWD				*e*S	Sg	17 46 38.3	+1.0
	baz=273						
CHGB	**Renai**	**0.38**	**288**	P	Pb	17 46 34.0	-0.3
	baz=288						
CHGB				*e*S	Sb	17 46 39.6	-0.8
	baz=288						
WUSB	**Renai**	**0.42**	**277**	⇓P	Pb	17 46 34.7	-0.1
	baz=278						
WUSB				S	Sg	17 46 40.1	+1.0
	baz=278						
FUSS	**Fushou**	**0.43**	**315**	*e*P	Pb	17 46 35.0	-0.2
	baz=321						
FUSS				*e*S	Sb	17 46 42.0	+0.3
	baz=321						
VWDT	**VWDT**	**0.44**	**244**	P	Pb	17 46 34.8	-0.3
	baz=247						
VWDT				S	Sg	17 46 40.3	+0.7
	baz=247						
SSLB	**Suanglung**	**0.59**	**255**	P	Pb	17 46 37.7	0.0
	baz=266						
SSLB				*e*S	Sg	17 46 44.8	+0.4
	baz=266						
SMLT	**Sun Moon Lake**	**0.62**	**265**	*e*P	Pb	17 46 38.9	+0.6
	baz=275						
SMLT				S	Sb	17 46 46.9	-0.2
	baz=275						

TAP 08 17:46:27.1,24.13N×121.65E,h8km,ML1.4,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**326**	*i* P	Pg	17 46 29.2	+0.4
	baz=325						
ETL				*i* S	Sg	17 46 30.6	+0.6
	baz=325						
NACB	**Ninganchiao**	**0.07**	**315**	*i* P	Pg	17 46 29.6	+0.6
	baz=314						
NACB				*i* S	Sg	17 46 31.3	+0.9
	baz=314						
ETLH	**Xiulin Townshi**	**0.17**	**298**	P	Pg	17 46 31.6	+0.9
	baz=342						
ETLH				S	Sg	17 46 34.8	+1.6
	baz=342						
ETLH	**Xiulin Townshi**	**0.17**	**298**	P	Pg	17 46 31.6	+0.9
	baz=298						
ETLH				*e*S	Sg	17 46 34.8	+1.6
	baz=298						
ETM	**Tongmen**	**0.21**	**222**	*e*P	Pg	17 46 32.4	+1.0
	baz=221						
LXIB	**Xiulin Townshi**	**0.24**	**244**	*e*P	Pg	17 46 32.7	+0.8
	baz=244						

*NEIC **08** 17:50:33.7±1.9, 17.68S±0.1×178.6W±0.1, h570km±8km, mb4.3/35, Error ellipse: s-maj=18.4km s-min=15.2km az=120.0*
*IDC **08** 17:50:38.5±2.9, 17.68S×178.91W, h625km±35km, mb3.1/7, mbtmp4.1/8, Error ellipse: s-maj=25.2km s-min=18.4km az=163.0*

ISC 08 17:50:33.9±0.6, 17.5S±0.1×178.5W±0.1, h600km, n60, σ1§32/47, mb4.2/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.31**	**102**	P	**P**	**17 52 34.9**	**-1.3**
RAO	**Raoul Island**	**11.67**	**177**	P	P	17 53 14.7	+5.5
	777nm,0.3s,baz=270,slow=20,SNR=6.0						
PINNC	**Pines Island,**	**14.11**	**247**	P	**P**	**17 53 33.5**	**-0.4**
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**17 53 40.4**	**-0.4**
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**17 53 41.3**	**+0.5**
	3.1nm,0.4s,baz=112,slow=21,SNR=10						
KOUNC	**Koumac, New Ca**	**16.52**	**257**	P	**P**	**17 53 55.1**	**-1.0**
EIDS	**Eidsvold**	**29.29**	**249**	P	**P**	**17 55 48.9**	**-0.8**
EIDS				IAmb	IAmb	17 55 49.0	
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	**30.03**	**239**	P	**P**	**17 55 55.7**	**-0.3**
ARMA				IAmb	IAmb	17 55 56.8	
	comp=Z,6.0nm,0.7s						
CTAO	**Charters Tower**	**33.40**	**260**	P	**P**	**17 56 24.2**	**-0.5**
PMG	**Port Moresby**	**34.29**	**279**	P	**P**	**17 56 32.0**	**-0.1**
COEN	**Coen**	**36.99**	**270**	P	**P**	**17 56 55.0**	**+0.5**
TOO	**Toolangi**	**37.32**	**230**	P	**P**	**17 56 56.8**	**0.0**
TOO				IAmb	IAmb	17 56 57.2	
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**17 57 08.3**	**+0.2**
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**17 57 08.4**	**+0.3**
	comp=Z,5.7nm,0.4s,baz=90,slow=7.1,SNR=21						
	comp=Z,5.7nm,0.4s						
BBOO	**Buckleboo**	**43.49**	**241**	P	**P**	**17 57 45.7**	**-0.1**
BBOO				IAmb	IAmb	17 57 46.4	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**44.40**	**259**	P	**P**	**17 57 52.3**	**-0.7**
WR0				IAmb	IAmb	17 58 33.2	
	comp=Z,13nm,1.5s						
WB0	**Warramunga Arr**	**44.56**	**259**	P	**P**	**17 57 53.0**	**-1.2**
WB0				IAmb	IAmb	17 57 54.0	
	comp=Z,6.4nm,1.0s						
WB2	**Warramunga Arr**	**44.58**	**259**	P	**P**	**17 57 53.7**	**-0.7**
WB2				IAmb	IAmb	17 57 56.5	
	comp=Z,4.6nm,0.7s						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**17 57 53.4**	**-1.1**
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**17 57 53.8**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=92,slow=6.9,SNR=86						
WRA				PcP	**PcP**	**17 59 25.9**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=96,slow=3.0,SNR=4.9						
	comp=Z,2.9nm,0.5s						
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**17 57 55.8**	**-0.1**
AS31				IAmb	IAmb	17 57 56.5	
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**17 57 56.0**	**0.0**
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**17 57 55.7**	**-0.2**
	comp=Z,37nm,0.6s,baz=89,slow=7.8,SNR=1524						
ASAR				PcP	**PcP**	**17 59 26.4**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=101,slow=4.0,SNR=5.7						
FORT	**Forrest**	**50.06**	**244**	P	**P**	**17 58 34.4**	**-0.7**
FAKI	**Fak Fak**	**50.40**	**281**	P	**P**	**17 58 38.8**	**+1.0**
FAKI				IAmb	IAmb	17 58 57.4	
	comp=Z,20nm,1.0s						
KNRA	**Kununurra**	**50.42**	**264**	P	**P**	**17 58 37.8**	**-0.1**
KNRA				IAmb	IAmb	17 58 38.5	
	comp=Z,10nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.98**	**260**	P	**P**	**17 58 57.0**	**+0.7**
SOEI	**Soe**	**55.96**	**270**	P	P	17 59 18.8	+1.5
SOEI				IAmb	IAmb	17 59 20.4	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**17 59 30.2**	**0.0**
PSA00	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**17 59 29.9**	**-0.3**
PSA00				IAmb	IAmb	17 59 31.1	
	comp=Z,13nm,0.8s						
MORW	**Morawa**	**60.53**	**246**	P	**P**	**17 59 47.5**	**-0.2**
MORW				IAmb	IAmb	18 00 19.2	
	comp=Z,28nm,1.5s						
GIRL	**Giralia**	**62.89**	**253**	P	P	18 00 04.4	+1.3
JTM	**Tenmabayashi**	**69.10**	**328**	P	P	18 00 44.2	+3.2
UGM	**Wanagama**	**69.55**	**268**	P	P	**18 00 44.6**	**+0.3**
QSPA	**South Pole Qui**	**72.51**	**180**	P	**P**	**18 01 02.1**	**+1.2**
QSPA				IAmb	IAmb	18 01 16.5	
	comp=Z,7.9nm,1.4s						
QSPA	**South Pole Qui**	**72.51**	**180**	P	**P**	**18 01 02.0**	**+1.2**
	comp=Z,3.0nm,0.8s,baz=306,slow=1.0,SNR=14						
	comp=Z,3.0nm,0.8s						
P18K	**Big Mountain,**	**78.99**	**12**	P	**P**	**18 01 38.9**	**+2.5**
P18K				IAmb	IAmb	18 01 39.0	
	comp=Z,9.9nm,1.2s						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	P	18 01 42.9	+4.5
NVAR	**Mina Array Bea**	**79.24**	**44**	P	P	18 01 42.6	+4.2
	comp=Z,0.6nm,0.6s,baz=224,slow=8.4,SNR=6.2						
	comp=Z,0.6nm,0.6s						
O18K	**Koktuh Hills**	**79.42**	**12**	P	P	18 01 41.6	+3.0
O18K				IAmb	IAmb	18 02 11.9	
	comp=Z,20nm,1.4s						
KVN	**Kaiserville**	**79.70**	**43**	P	P	18 01 45.2	+4.4
J05D	**Fort Rock, OR**	**80.11**	**39**	P	P	18 01 47.5	+4.7
BELA	**Belgrano 2**	**82.54**	**173**	P	**P**	**18 01 54.8**	**+0.3**
BELA				IAmb	IAmb	18 01 59.0	
	comp=Z,8.4nm,1.2s						
N25K	**Chitina, Valde**	**83.38**	**16**	P	P	18 02 02.1	+3.2
N25K				IAmb	IAmb	18 02 09.1	
	comp=Z,6.9nm,1.4s						
TRF	**Thorofare Moun**	**83.68**	**12**	P	P	18 02 03.3	+2.9
P29M	**Windy Craggy**	**83.74**	**20**	P	P	18 02 03.6	+3.0
P29M				IAmb	IAmb	18 02 30.3	
	comp=Z,4.2nm,0.9s						
RND	**Reindeer**	**83.94**	**13**		P	18 02 05.0	+3.5
ILAR	**Eielson Array**	**85.56**	**13**	P	**P**	**18 02 11.8**	**+2.6**
	comp=Z,0.2nm,0.4s,baz=224,slow=5.3,SNR=5.0						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.89**	**58**	P	P	18 02 16.7	+4.9
	comp=Z,0.4nm,0.7s,baz=212,slow=4.4,SNR=3.5						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**87.16**	**43**	P	P	18 02 21.4	+3.7
	comp=Z,0.4nm,0.5s,baz=210,slow=2.7,SNR=5.6						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**108.80**	**314**	PKiKP	**PKiKP**	**18 07 56.6**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=115,slow=0.2,SNR=5.7						
BVAR	**Borovoye Array**	**116.49**	**321**	PKP	**PKiKP**	**18 08 12.1**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=117,slow=2.4,SNR=7.8						
BUR08	**Bucovina Ar. S**	**144.22**	**332**		**PKiKP**	**18 09 04.6**	**-1.8**
BURAR	**Bucovina Array**	**144.24**	**332**	PKPdf	**PKiKP**	**18 09 04.8**	**-1.7**
BRTR	**Keskin Array B**	**144.45**	**315**	PKPdf	**PKiKP**	**18 09 05.5**	**-1.7**
BRTR	**Keskin Array B**	**144.45**	**315**	PKP	**PKiKP**	**18 09 05.3**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=104,slow=3.0,SNR=4.2						
MMAI	**Mount Meron Ar**	**145.85**	**303**	PKPbc	**PKiKP**	**18 09 09.5**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=88,slow=5.1,SNR=6.3						
GERES	**GERESS Array B**	**147.23**	**345**	PKPbc	**PKPab**	**18 09 13.8**	**-0.9**
GERES	**GERESS Array B**	**147.23**	**345**	PKPbc	**PKPab**	**18 09 13.1**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=73,slow=4.5,SNR=3.5						
FUORN	**Ofenpass-Fuorn**	**150.10**	**348**	PKPbc	**PKPab**	**18 09 21.9**	**-4.9**

*IDC **08** 17:55:39.0±0.6, 55.98N×162.01E, h0km, mb3.9/19, mbtmp3.9/20, ML3.1/1, MS3.1/8, Error ellipse: s-maj=18.7km s-min=14.2km az=147.0*
*KRSC **08** 17:55:41.1±0.7, 55.85N×162.49E, h25km±11km, Ml4.5, Felt [II-III] at Ust-Kamchatsk.*
*MOS **08** 17:55:43.0±0.8, 55.93N×162.44E, h30km, mb4.2/10, Error ellipse: s-maj=8.2km s-min=4.4km az=69.8*
*NEIC **08** 17:55:47.4±2.3, 55.9N±0.1×162.0E±0.2, h69km±10km, mb4.2/71, Error ellipse: s-maj=22.5km s-min=14.6km az=152.0*

ISC 08 17:55:44.2±1.0, 56.00N±0.03×162.32E±0.03, h31km±7km, n206, σ1§47/213, mb4.2/66, MS3.0/3, 6C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.34**	**40**	PN	**Pb**	**17 55 50.6**	**-1.6**
KBG				S	**Sn**	**17 55 56.8**	**-1.9**
KBG	**Krutoberegovo**	**0.34**	**40**	*i* P	**Pb**	**17 55 50.6**	**-1.6**
KBG				*e*S	**Sn**	**17 55 56.8**	**-1.9**
SMKR	**Semkarok**	**0.75**	**321**	PN	**Pn**	**17 55 58.1**	**-0.6**
SMKR	**Semkarok**	**0.75**	**321**	*i* P	**Pn**	**17 55 58.1**	**-0.6**
BDR	**Baidarnaya**	**0.84**	**313**	PN	**Pn**	**17 55 59.7**	**-0.2**
BDR	**Baidarnaya**	**0.84**	**313**	*i* P	**Pn**	**17 55 59.7**	**-0.2**
ZLN	**Zelenaya**	**0.85**	**272**	PN	**Pn**	**17 55 59.9**	**-0.1**
ZLN	**Zelenaya**	**0.85**	**272**	*e*P	**Pn**	**17 55 59.9**	**-0.1**
CIRR	**Tsirk**	**0.89**	**278**	PN	**Pn**	**17 56 00.6**	**0.0**
CIRR	**Tsirk**	**0.89**	**278**	*e*P	**Pn**	**17 56 00.6**	**0.0**
SRKR	**Sorokina**	**0.92**	**316**	PN	**Pn**	**17 56 00.7**	**-0.3**
SRKR	**Sorokina**	**0.92**	**316**	*e*P	**Pn**	**17 56 00.7**	**-0.3**
KLY	**Klyuchi**	**0.98**	**289**	PN	**Pn**	**17 56 00.0**	**-1.7**
KLY				S	**Sn**	**17 56 12.8**	**-1.8**
KLY	**Klyuchi**	**0.98**	**289**	*e*P	**Pn**	**17 56 00.0**	**-1.7**
KLY				*e*S	**Sn**	**17 56 12.8**	**-1.8**
KRSR	**Krestovskiy**	**1.00**	**283**	PN	**Pn**	**17 56 01.6**	**-0.6**
KRSR	**Krestovskiy**	**1.00**	**283**	*e*P	**Pn**	**17 56 01.6**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.02**	**269**	PN	**Pn**	**17 56 02.7**	**+0.2**
BZWR	**Bezymyannyi-We**	**1.02**	**269**	*e*P	**Pn**	**17 56 02.7**	**+0.2**
BZMR	**Bezymyannaya**	**1.03**	**267**	PN	**Pn**	**17 56 02.4**	**-0.1**
BZMR	**Bezymyannaya**	**1.03**	**267**	*e*P	**Pn**	**17 56 02.4**	**-0.1**
KIRR	**Kirishev**	**1.11**	**268**	PN	**Pn**	**17 56 03.9**	**+0.2**
KIRR	**Kirishev**	**1.11**	**268**	*e*P	**Pn**	**17 56 03.9**	**+0.2**
KPT	**Kopyto**	**1.18**	**269**	PN	**Pn**	**17 56 04.9**	**+0.4**
KPT	**Kopyto**	**1.18**	**269**	*e*P	**Pn**	**17 56 04.9**	**+0.4**
KMNR	**Kamenistaya**	**1.20**	**259**	PN	**Pn**	**17 56 05.0**	**+0.2**
KMNR				S	**Sb**	**17 56 22.0**	**+0.5**
KMNR	**Kamenistaya**	**1.20**	**259**	*e*P	**Pn**	**17 56 05.0**	**+0.2**
KMNR				*e*S	**Sb**	**17 56 22.0**	**+0.5**
TUMD	**Tumrok D**	**1.35**	**234**	*e*P	**Pn**	**17 56 06.5**	**-0.3**
TUMD				*e*S	**Sn**	**17 56 24.3**	**+0.6**
KOZ	**Kozyrevsk**	**1.37**	**273**	PN	**Pn**	**17 56 08.4**	**+1.3**
KOZ	**Kozyrevsk**	**1.37**	**273**	*e*P	**Pn**	**17 56 08.4**	**+1.3**
TUMR	**Tumrok**	**1.42**	**241**	PN	**Pn**	**17 56 06.5**	**-1.5**
TUMR				S	**Sn**	**17 56 24.3**	**-1.4**
TUMR	**Tumrok**	**1.42**	**241**	*e*P	**Pn**	**17 56 08.5**	**+0.6**
ESO	**Esso**	**2.03**	**269**	PN	**Pn**	**17 56 17.1**	**+0.8**
ESO	**Esso**	**2.03**	**269**	*e*P	**Pn**	**17 56 17.1**	**+0.8**
BKI	**Bering**	**2.22**	**110**	PN	**Pn**	**17 56 18.5**	**-0.3**
BKI				S	**Sn**	**17 56 44.2**	**-1.0**
BKI	**Bering**	**2.22**	**110**	*e*P	**Pn**	**17 56 18.5**	**-0.3**
BKI				*e*S	**Sn**	**17 56 44.2**	**-1.0**
KII	**Karymskiy**	**2.57**	**221**	PN	**Pn**	**17 56 24.0**	**+0.3**
KII	**Karymskiy**	**2.57**	**221**	*e*P	**Pn**	**17 56 24.0**	**+0.3**
TIGL	**Tigil**	**2.67**	**313**	*e*P	**Pn**	**17 56 28.6**	**+3.6**
SPN	**Mys Shipunski**	**3.20**	**206**	PN	**Pn**	**17 56 30.9**	**-1.4**
SPN				S	**Sn**	**17 57 08.1**	**-1.2**
SPN	**Mys Shipunski**	**3.20**	**206**	*e*P	**Pn**	**17 56 30.9**	**-1.4**
SPN				*e*S	**Sn**	**17 57 08.1**	**-1.2**
OSSR	**Ossora**	**3.28**	**7**	PN	**Pn**	**17 56 34.9**	**+1.5**
OSSR	**Ossora**	**3.28**	**7**	*e*P	**Pn**	**17 56 34.9**	**+1.5**
PALN	**Palana**	**3.35**	**339**	PN	**Pb**	**17 56 39.5**	**-3.2**
PALN	**Palana**	**3.35**	**339**	*e*P	**Pb**	**17 56 39.5**	**-3.2**
KRX	**Arik**	**3.40**	**220**	PN	**Pn**	**17 56 35.9**	**+0.8**
KRX	**Arik**	**3.40**	**220**	*e*P	**Pn**	**17 56 35.9**	**+0.8**
SMAR	**Somma**	**3.42**	**218**	PN	**Pn**	**17 56 35.5**	**0.0**
SMAR	**Somma**	**3.42**	**218**	*e*P	**Pn**	**17 56 35.5**	**0.0**
GNL	**Ganaly**	**3.42**	**229**	PN	**Pn**	**17 56 36.7**	**+1.3**
GNL	**Ganaly**	**3.42**	**229**	*e*P	**Pn**	**17 56 36.7**	**+1.3**
AVH	**Avacha**	**3.44**	**219**	PN	**Pn**	**17 56 36.5**	**+0.8**
AVH	**Avacha**	**3.44**	**219**	*e*P	**Pn**	**17 56 36.5**	**+0.8**
KOK	**Koryaka**	**3.45**	**220**	PN	**Pn**	**17 56 36.5**	**+0.6**
KOK	**Koryaka**	**3.45**	**220**	*e*P	**Pn**	**17 56 36.5**	**+0.6**
UGLR	**Uglovaya**	**3.46**	**217**	PN	**Pn**	**17 56 36.2**	**+0.3**
UGLR	**Uglovaya**	**3.46**	**217**	*e*P	**Pn**	**17 56 36.2**	**+0.3**
DALK	**Dalny**	**3.63**	**216**	PN	**Pn**	**17 56 38.1**	**0.0**
DALK	**Dalny**	**3.63**	**216**	*e*P	**Pn**	**17 56 38.1**	**0.0**
PET	**Petropavlovsk**	**3.67**	**217**	Pn	**Pn**	**17 56 38.0**	**-0.6**
PET	**Petropavlovsk**	**3.67**	**217**	*e*PN	**Pn**	**17 56 38.2**	**-0.5**
PET				*e*S	**Sn**	**17 57 20.7**

TIXI	**Tiksi**	**21.07**	**331**	⇑*i*P	**P**	**18 00 29.0**	**+3.8**		
TIXI				pmax	pmax				
	comp=Z,10.0nm,0.9s								
TIXI	**Tiksi**	**21.07**	**331**	P	**P**	**18 00 29.1**	**+3.8**		
	comp=Z,7.8nm,0.7s,baz=126,slow=9.5,SNR=33								
TIXI				LR	LR	18 09 37.6			
	comp=Z,58nm,19.2s,baz=193,slow=40								
G19K	**Purcell Mounta**	**21.68**	**46**	P	**P**	**18 00 34.7**	**+2.8**		
G19K				IAmb	IAmb	18 00 36.5			
	comp=Z,13nm,1.5s								
D19K	**Kuna River**	**21.77**	**39**	P	**P**	**18 00 34.7**	**+1.8**		
E19K	**Redstone River**	**21.85**	**42**	P	**P**	**18 00 34.7**	**+1.0**		
TTA	**Tatalina**	**21.93**	**55**	P	**P**	**18 00 37.2**	**+2.5**		
TTA				IAmb	IAmb	18 00 56.0			
	comp=Z,8.6nm,1.3s								
TTA	**Tatalina**	**21.93**	**55**	P	**P**	**18 00 37.3**	**+2.5**		
TTA				pmax	pmax				
	comp=Z,9.0nm,1.3s								
J19K	**Poorman**	**22.12**	**52**	P	**P**	**18 00 37.2**	**+0.6**		
J19K				IAmb	IAmb	18 00 57.9			
	comp=Z,9.2nm,1.4s								
N18K	**Kilae Creek**	**22.14**	**61**	P	**P**	**18 00 38.0**	**+1.1**		
N18K				IAmb	IAmb	18 01 18.6			
	comp=Z,16nm,1.5s								
L19K	**White Mountain**	**22.50**	**56**	P	**P**	**18 00 42.3**	**+1.5**		
L19K				IAmb	IAmb	18 01 04.8			
	comp=Z,8.7nm,1.4s								
J20K	**Nowinta River**	**22.77**	**51**	P	**P**	**18 00 44.0**	**+0.5**		
K20K	**Telida**	**22.81**	**53**	P	**P**	**18 00 44.3**	**+0.3**		
IMAR	**Indian Mountai**	**23.02**	**47**	P	**P**	**18 00 47.0**	**+0.9**		
G21K	**Allakaket**	**23.16**	**45**	P	**P**	**18 00 48.6**	**+1.1**		
G21K				IAmb	IAmb	18 01 19.5			
	comp=Z,12nm,1.5s								
JMM	**Marumori**	**23.18**	**228**	P	**P**	**18 00 45.7**	**-2.2**		
B21K	**Ikpikpuk River**	**23.27**	**37**	P	**P**	**18 00 50.4**	**+1.8**		
B21K				IAmb	IAmb	18 00 51.7			
	comp=Z,5.4nm,0.6s								
M20K	**Styx River**	**23.33**	**57**	P	**P**	**18 00 49.3**	**-0.1**		
M20K				IAmb	IAmb	18 01 16.1			
	comp=Z,15nm,1.5s								
H21K	**Melozitna Rive**	**23.38**	**47**	P	**P**	**18 00 51.3**	**+1.5**		
D22K	**Ayikyak River**	**23.79**	**39**	P	**P**	**18 00 55.0**	**+1.3**		
D22K				IAmb	IAmb	18 01 28.7			
	comp=Z,9.0nm,1.3s								
SKT	**Skwentna**	**24.08**	**57**	P	**P**	**18 00 56.2**	**-0.1**		
OHAK	**Old Harbor**	**24.14**	**69**	P	**P**	**18 00 56.8**	**-0.2**		
KDAK	**Kodiak Island**	**24.36**	**67**	P	**P**	**18 00 57.6**	**-1.3**		
KDAK	**Kodiak Island**	**24.36**	**67**	P	**P**	**18 00 57.6**	**-1.3**		
KDAK				pmax	pmax				
	comp=Z,33nm,1.5s								
TRF	**Thorofare Moun**	**24.50**	**53**	P	**P**	**18 01 01.2**	**+0.8**		
TRF				IAmb	IAmb	18 01 18.3			
	comp=Z,12nm,1.2s								
SUA	**Susitna One**	**24.52**	**58**	P	**P**	**18 01 01.0**	**+0.5**		
SUA				IAmb	IAmb	18 01 43.4			
	comp=Z,12nm,1.4s								
G23K	**Bananza Creek**	**24.56**	**45**	P	**P**	**18 01 00.5**	**-0.3**		
TOLK	**Toolik Lake Re**	**24.88**	**40**	P	**P**	**18 01 04.1**	**+0.4**		
TOLK				IAmb	IAmb	18 01 16.9			
	comp=Z,4.1nm,0.8s								
RND	**Reindeer**	**25.15**	**53**	P	**P**	**18 01 06.9**	**+0.7**		
RND	**Reindeer**	**25.15**	**53**	P	**P**	**18 01 06.9**	**+0.7**		
RND				pmax	pmax				
	comp=Z,6.0nm,1.3s								
MJA0	**Matsu Arr-Jizo**	**25.37**	**230**	*e*P	**P**	**18 01 08.4**	**0.0**		
MJA0				pmax	pmax				
	comp=Z,1.0nm,0.5s								
MJAR	**Matsushiro Arr**	**25.39**	**230**	P	**P**	**18 01 06.8**	**-1.8**		
	comp=Z,1.1nm,0.7s,baz=46,slow=7.5,SNR=4.5								
MJAR				LR	LR	18 11 59.1			
	comp=Z,51nm,18.2s,baz=25,slow=39								
	comp=Z,1.1nm,0.7s								
WRH	**Wood River Hil**	**25.39**	**50**	P	**P**	**18 01 08.3**	**0.0**		
WRH				IAmb	IAmb	18 01 20.3			
	comp=Z,6.7nm,1.0s								
CCB	**Clear Creek Bu**	**25.51**	**50**	P	**P**	**18 01 10.3**	**+1.0**		
CCB				IAmb	IAmb	18 01 13.8			
	comp=Z,3.6nm,0.7s								
KNK	**Knik Glacier**	**25.61**	**57**	P	**P**	**18 01 10.2**	**-0.1**		
KNK				IAmb	IAmb	18 01 33.3			
	comp=Z,21nm,1.4s								
IL31		**25.89**	**50**	P	**P**	**18 01 12.9**	**+0.2**		
ILAR	**Eielson Array**	**25.89**	**50**	P	**P**	**18 01 13.5**	**+0.7**		
ILAR	**Eielson Array**	**25.89**	**50**	*e*P	**P**	**18 01 13.0**	**+0.2**		
ILAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ILAR	**Eielson Array**	**25.89**	**50**	P	**P**	**18 01 12.7**	**-0.1**		
	comp=Z,1.3nm,0.8s,baz=261,slow=8.6,SNR=16								
	comp=Z,1.3nm,0.8s								
SCM	**Sheep Creek Mo**	**26.07**	**56**	P	**P**	**18 01 15.0**	**+0.5**		
SCM				IAmb	IAmb	18 01 56.6			
	comp=Z,11nm,1.2s								
SCM	**Sheep Creek Mo**	**26.07**	**56**	P	**P**	**18 01 15.0**	**+0.5**		
SCM				pmax	pmax				
	comp=Z,11nm,1.2s								
D25K	**Kavik River**	**26.09**	**39**	P	**P**	**18 01 14.7**	**+0.1**		
PRP	**Porcupine Dome**	**26.41**	**48**	P	**P**	**18 01 18.4**	**+0.7**		
PRP				IAmb	IAmb	18 01 19.5			
	comp=Z,6.7nm,1.3s								
M24K	**Tolsona, Glenn**	**26.55**	**55**	P	**P**	**18 01 20.2**	**+1.3**		
M24K				IAmb	IAmb	18 01 59.0			
	comp=Z,19nm,1.2s								
BMAR	**Burnt Mountain**	**26.70**	**43**	P	**P**	**18 01 20.7**	**+0.5**		
SCRK	**Sand Creek**	**27.23**	**51**	P	**P**	**18 01 24.4**	**-0.7**		
SCRK				IAmb	IAmb	18 01 26.1			
	comp=Z,11nm,1.4s								
KSRS	**Korea Array**	**29.55**	**246**	LR	LR	18 13 05.0			
	comp=Z,25nm,19.4s,baz=5.0,slow=36								
HHC	**Hu-ho-hao-te**	**36.03**	**267**	*e*P	**P**	**18 02 43.8**	**+1.3**		
HHC				pP	sP	18 03 00.1	+4.8		
HHC				PP	**PP**	**18 04 13.4**	**+8.9**		
HHC				pmax	pmax				
	comp=Z,15nm,0.6s								
HHC				pmax	pmax				
	comp=Z,100nm,5.6s								
H11N2	**WAKE ISLAND Hy**	**36.38**	**173**	T	T	18 41 18.2			
	baz=356,slow=76,SNR=42								
H11N3	**WAKE ISLAND Hy**	**36.39**	**173**	T	T	18 41 22.2			
	baz=356,slow=76,SNR=33								
H11N1	**WAKE ISLAND Hy**	**36.39**	**173**	T	T	18 41 19.0			
	baz=356,slow=76,SNR=36								
YKA	**Yellowknife Ar**	**40.17**	**46**	P	**P**	**18 03 17.1**	**+0.2**		
	comp=Z,0.6nm,0.7s,baz=299,slow=7.9,SNR=9.0								
	comp=Z,0.6nm,0.7s								
DGZ	**Jazzator, Alta**	**43.59**	**295**	⇑*e*P	**P**	**18 03 44.7**	**-0.5**		
DGZ				pmax	pmax				
	comp=Z,1.0nm,0.7s								
SPITS	**Spitsbergen Ar**	**44.48**	**351**	P	**P**	**18 03 52.1**	**+0.3**		
	comp=Z,3.9nm,0.6s,baz=73,slow=9.7,SNR=12								
	comp=Z,3.9nm,0.6s								
SPB2	**Spitsbergen Ar**	**44.48**	**351**	P	**P**	**18 03 52.7**	**+0.9**		
KEBM	**Edson Butte**	**47.22**	**74**	P	**P**	**18 04 16.0**	**+2.1**		
WMQ	**Urumqi**	**47.26**	**288**	*e*P	**P**	**18 04 13.7**	**-0.5**		
WMQ				pP	sP	18 04 33.0	+5.7		
WMQ				pmax	pmax				
	comp=Z,8.0nm,0.7s								
KURK	**Kurchatov**	**47.33**	**301**	⇑*e*P	**P**	**18 04 13.1**	**-1.4**		
KURK				pmax	pmax				
	comp=Z,3.0nm,1.7s								
KURBB	**Kurchatov Arra**	**47.43**	**301**	P	**P**	**18 04 14.1**	**-1.2**		
	comp=Z,0.3nm,0.4s,baz=56,slow=8.0,SNR=3.4								
	comp=Z,0.3nm,0.4s								
MK31	**Makanchi Array**	**48.09**	**295**	P	**P**	**18 04 18.9**	**-1.7**		
MK31	**Makanchi Array**	**48.09**	**295**	P	**P**	**18 04 18.9**	**-1.7**		
MK31				pmax	pmax				
	comp=Z,1.0nm,1.2s								
MKAR	**Makanchi Array**	**48.09**	**295**	P	**P**	**18 04 18.1**	**-2.5**		
MKAR	**Makanchi Array**	**48.09**	**295**	P	**P**	**18 04 18.9**	**-1.6**		
	comp=Z,0.2nm,0.4s,baz=67,slow=6.1,SNR=7.5								
	comp=Z,0.2nm,0.4s								
L04D	**Klamath Falls**	**48.76**	**73**	P	**P**	**18 04 27.1**	**+1.2**		
BVAR	**Borovoye Array**	**49.62**	**308**	P	**P**	**18 04 30.9**	**-1.2**		
	comp=Z,0.2nm,0.4s,baz=57,slow=10,SNR=2.3								
BVAR				PcP	**PcP**	**18 05 51.5**	**-1.7**		
	comp=Z,0.3nm,0.4s,baz=68,slow=3.6,SNR=3.9								
	comp=Z,0.2nm,0.4s								
PLID	**Pearl Lake**	**50.10**	**66**	P	**P**	**18 04 37.5**	**+1.3**		
PLID				IAmb	IAmb	18 04 59.0			
	comp=Z,3.8nm,1.5s								
PZH	**PanZhiHua**	**52.08**	**262**	P	**P**	**18 04 47.9**	**-3.3**		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
PZH				pmax	pmax				
	comp=Z,80nm,5.9s								
KMI	**Kunming**	**52.61**	**260**	⇑P	P	18 04 47.6	-7.6		
KMI				sP	sP	18 05 19.1	+11		
KMI				pmax	pmax				
	comp=Z,10.0nm,0.8s								
NVAR	**Mina Array Bea**	**53.60**	**74**	P	**P**	**18 05 03.2**	**+0.9**		
	comp=Z,1.0nm,0.7s,baz=305,slow=7.3,SNR=10								
	comp=Z,1.0nm,0.7s								
MZP	**Montezuma Peak**	**54.63**	**74**	P	**P**	**18 05 11.0**	**+1.1**		
MZP				IAmb	IAmb	18 05 11.8			
	comp=Z,1.2nm,0.5s								
GMN	**Gold Mountain**	**54.99**	**74**	P	**P**	**18 05 14.3**	**+1.8**		
GMN				IAmb	IAmb	18 05 15.2			
	comp=Z,2.1nm,0.8s								
PDAR	**Pinedale Array**	**55.02**	**64**	P	**P**	**18 05 13.8**	**+1.1**		
	comp=Z,0.9nm,0.7s,baz=330,slow=2.8,SNR=8.0								
	comp=Z,0.9nm,0.7s								
R11B	**Troy Canyon, C**	**55.12**	**72**	P	**P**	**18 05 14.2**	**+0.8**		
SPR3	**Spring Creek 3**	**55.31**	**70**	P	**P**	**18 05 17.4**	**+2.5**		
SPR3				IAmb	IAmb	18 05 18.2			
	comp=Z,3.8nm,0.9s								
ULM	**Lac du Bonnet**	**55.91**	**49**	P	**P**	**18 05 19.9**	**+1.3**		
	comp=Z,2.0nm,0.4s,baz=318,slow=8.1,SNR=6.9								
	comp=Z,2.0nm,0.4s								
PRN	**Pahroc Range**	**56.10**	**72**	P	**P**	**18 05 22.4**	**+2.0**		
PRN				IAmb	IAmb	18 05 23.1			
	comp=Z,5.0nm,1.0s								
GWY	**Greenwater Val**	**56.13**	**74**	P	**P**	**18 05 22.3**	**+1.7**		
GWY				IAmb	IAmb	18 05 23.0			
	comp=Z,3.1nm,0.8s								
QSM	**Queen of Sheba**	**56.19**	**75**	P	**P**	**18 05 22.6**	**+1.7**		
QSM				IAmb	IAmb	18 05 22.9			
	comp=Z,2.0nm,0.6s								
GSC	**Goldstone, Bar**	**56.72**	**75**	P	**P**	**18 05 26.2**	**+1.5**		
GSC				IAmb	IAmb	18 05 27.1			
	comp=Z,4.3nm,1.1s								
GSC	**Goldstone, Bar**	**56.72**	**75**	P	**P**	**18 05 26.2**	**+1.5**		
GSC				pmax	pmax				
	comp=Z,4.0nm,1.2s								
TMUT	**Trail Mountain**	**56.73**	**68**	P	**P**	**18 05 26.7**	**+1.7**		
TMUT				IAmb	IAmb	18 05 28.7			
	comp=Z,4.6nm,1.2s								
SRU	**San Rafael Swe**	**57.22**	**68**	P	**P**	**18 05 29.9**	**+1.5**		
SRU	**San Rafael Swe**	**57.22**	**68**	P	**P**	**18 05 29.9**	**+1.5**		
SRU				pmax	pmax				
	comp=Z,3.0nm,0.7s								
O20A	**White River Ci**	**57.63**	**65**	P	**P**	**18 05 32.5**	**+1.3**		
FINES	**FINESS Array B**	**57.96**	**337**	P	**P**	**18 05 32.0**	**-0.9**		
	comp=Z,2.1nm,0.6s,baz=27,slow=8.7,SNR=9.5								
	comp=Z,2.1nm,0.6s								
HMU	**Henry Mountain**	**57.98**	**69**	P	**P**	**18 05 35.0**	**+1.2**		
B35A	**Bob, Littlefor**	**58.26**	**50**	P	**P**	**18 05 36.1**	**+0.8**		
B35A				IAmb	IAmb	18 06 00.6			
	comp=Z,5.7nm,1.4s								
ISCO	**Idaho Springs**	**59.22**	**64**	P	**P**	**18 05 44.2**	**+1.8**		
ISCO	**Idaho Springs**	**59.22**	**64**	P	**P**	**18 05 44.2**	**+1.8**		
ISCO				pmax	pmax				
	comp=Z,4.0nm,0.9s								
EYMN	**Ely**	**59.53**	**49**	P	**P**	**18 05 44.9**	**+0.8**		
S22A	**4UR Ranch, Cre**	**60.16**	**66**	P	**P**	**18 05 51.0**	**+2.0**		
S22A				IAmb	IAmb	18 05 51.8			
	comp=Z,2.8nm,0.8s								
ECSD	**EROS Data Cent**	**60.55**	**55**	P	**P**	**18 05 51.5**	**+0.3**		
ECSD				IAmb	IAmb	18 05 52.0			
	comp=Z,2.8nm,0.7s								
E38A	**The Farm, Brul**	**60.55**	**50**	P	**P**	**18 05 51.2**	**+0.1**		
SDCO	**Great Sand Dun**	**60.84**	**65**	P	**P**	**18 05 55.2**	**+1.7**		
NOA	**NORSAR Array B**	**61.10**	**344**	P	**P**	**18 05 54.4**	**-0.2**		
	comp=Z,0.3nm,0.5s,baz=16,slow=6.0,SNR=1.9								
	comp=Z,0.3nm,0.5s								
HFS	**Hagfors**	**61.56**	**343**	P	**P**	**18 05 57.0**	**-0.7**		
	comp=Z,1.3nm,0.6s,baz=48,slow=4.3,SNR=1.5								
	comp=Z,1.3nm,0.6s								
RTBA	**Rita Blanca**	**63.25**	**64**	P	**P**	**18 06 10.3**	**+0.7**		
VHRN	**Van Horn**	**66.51**	**70**	P	**P**	**18 06 32.1**	**+1.3**		
VHRN				IAmb	IAmb	18 06 32.7			
	comp=Z,2.4nm,0.7s								
WMOK	**Wichita Mounta**	**66.57**	**62**	P	**P**	**18 06 31.4**	**+0.4**		
WMOK	**Wichita Mounta**	**66.57**	**62**	P	**P**	**18 06 31.4**	**+0.4**		
WMOK				pmax	pmax				
	comp=Z,12nm,1.5s								
AKASG	**Malin Array Be**	**66.77**	**330**	P	**P**	**18 06 29.7**	**-2.3**		
	comp=Z,0.5nm,0.3s,baz=27,slow=6.5,SNR=2.7								
	comp=Z,0.5nm,0.3s								
MGMO	**Mountain Grove**	**67.78**	**56**	P	**P**	**18 06 38.4**	**-0.2**		
TX31	**Lajitas Ar. Si**	**68.36**	**70**	P	**P**	**18 06 43.5**	**+1.0**		
TX31				IAmb	IAmb	18 06 44.5			
	comp=Z,3.6nm,0.7s								
TXAR	**Lajitas Array**	**68.36**	**70**	P	**P**	**18 06 43.6**	**+1.1**		
	comp=Z,2.8nm,0.6s,baz=297,slow=4.7,SNR=35								
	comp=Z,2.8nm,0.6s								
EKA	**Eskdalemuir Ar**	**68.39**	**351**	P	**P**	**18 06 42.1**	**-0.1**		
	comp=Z,2.0nm,0.9s,baz=17,slow=6.1,SNR=2.2								
	comp=Z,2.0nm,0.9s								
DRIO	**Del Rio**	**69.88**	**67**	P	**P**	**18 06 51.6**	**-0.2**		
DRIO				IAmb	IAmb	18 06 52.9			
	comp=Z,4.0nm,0.8s								
BUR08	**Bucovina Ar. S**	**70.66**	**331**	P	**P**	**18 06 56.2**	**-0.3**		
BURAR	**Bucovina Array**	**70.68**	**331**	P	**P**	**18 06 55.7**	**-0.9**		
W52A	**Murphy**	**73.27**	**52**	P	**P**	**18 07 12.3**	**+0.1**		
BG3	**Lake Jocassee**	**73.79**	**51**	P	**P**	**18 07 15.4**	**+0.2**		
WRA	**Warramunga Arr**	**79.27**	**207**	P	**P**	**18 07 45.1**	**-1.0**		
	comp=Z,0.7nm,0.7s,baz=25,slow=6.2,SNR=4.9								
	comp=Z,0.7nm,0.7s								
ASAR	**Alice Springs**	**82.94**	**206**	P	**P**	**18 08 05.0**	**-0.7**		
	comp=Z,0.5nm,0.6s,baz=18,slow=4.9,SNR=14								
	comp=Z,0.5nm,0.6s								
ESDC	**Sonseca Array**	**83.98**	**349**	P	**P**	**18 08 10.2**	**-0.9**		
	comp=Z,0.4nm,0.5s,baz=349,slow=10,SNR=4.2								
	comp=Z,0.4nm,0.5s								
QSPA	**South Pole Qui**	**145.75**	**180**	PKPbc	**PKPdf**	**18 15 16.3**	**-1.6**		
	comp=Z,1.1nm,0.5s,baz=299,slow=1.4,SNR=11								

TAP 08 17:57:58.0,24°04′N×121°64′E,h14km,ML1.1,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.06**	**313**	*i* P	Pg	17 58 01.4	+0.7
	baz=319						
ETL	**Fush Village**	**0.12**	**351**	P	Pb	17 58 02.0	-0.2
	baz=351						
NACB	**Ninganchiao**	**0.14**	**341**	P	Pb	17 58 02.1	-0.4
	baz=341						
ETLH	**Xiulin Townshi**	**0.22**	**318**	*e*P	Pg	17 58 03.5	+0.5
	baz=318						
SHUL	**Shoufeng**	**0.26**	**197**	*e*P	Pb	17 58 04.5	0.0
	baz=196						
WHF	**Hehuan Shan**	**0.36**	**287**	P	Pb	17 58 06.3	-0.3
	baz=287						
WHF				S	Sb	17 58 11.9	-0.4
	baz=287						
ENA	**Nanau**	**0.40**	**13**	*e*P	Pb	17 58 06.5	-0.4
	baz=14						
WARBT	**Fenglin Townsh**	**0.40**	**216**	*e*S	Sg	17 58 12.1	+0.6
	baz=216						
EGFH	**Guangfu**	**0.42**	**208**	*e*P	Pb	17 58 08.2	+0.9
	baz=208						
EGFH				S	Sb	17 58 13.3	-0.2
	baz=208						
FUSS	**Fushou**	**0.42**	**300**	*e*P	Pb	17 58 07.1	-0.3
	baz=299						
FUSS				*e*S	Sb	17 58 14.3	+0.5
	baz=299						
EWUT	**Wuta**	**0.42**	**17**	*e*P	Pb	17 58 07.2	-0.1
	baz=16						
CHGB	**Renai**	**0.43**	**273**	*e*P	Pb	17 58 07.2	-0.4
	baz=272						
OWD	**Renai**	**0.44**	**259**	*e*P	Pb	17 58 07.7	0.0
	baz=258						
WUSB	**Renai**	**0.48**	**265**	*e*P	Pb	17 58 08.8	+0.4
	baz=264						
WUSB				*e*S	Sb	17 58 15.5	0.0
	baz=264						
VWDT	**VWDT**	**0.54**	**238**	*e*P	Pb	17 58 09.3	-0.1
	baz=238						

TAP 08 17:59:54.7,24°36N×121°76E,h8km,ML1.5,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.03**	**215**	P	Pg	17 59 56.8	+0.5
	baz=215						
EAHA				S	Sg	17 59 58.0	+0.7
	baz=215						
ENA	**Nanau**	**0.07**	**347**	P	Pg	17 59 57.5	+0.7
	baz=352						
ENA				S	Sg	17 59 59.0	+0.8
	baz=352						
EWUT	**Wuta**	**0.09**	**11**	P	Pg	17 59 57.6	+0.6
	baz=11						
EWUT				S	Sg	17 59 59.4	+0.8
	baz=11						
ETL	**Fush Village**	**0.23**	**212**	*e*P	Pg	18 00 00.6	+1.2
	baz=212						
ETL				*e*S	Sg	18 00 04.3	+1.8
	baz=212						
NACB	**Ninganchiao**	**0.23**	**220**	P	Pg	18 00 01.2	+1.8
	baz=219						
NACB				*i* S	Sg	18 00 04.5	+1.9
	baz=219						
NACB	**Ninganchiao**	**0.23**	**220**	*i* P	Pg	18 00 01.4	+2.0
	baz=244						
NACB				*i* S	Sg	18 00 04.5	+1.9
	baz=244						
TWC	**Suao**	**0.27**	**18**	P	Pb	18 00 01.1	-0.7
	baz=19						
NDS	**Dongshan**	**0.28**	**352**	*e*P	Pb	18 00 01.4	-0.6
	baz=352						
ETLH	**Xiulin Townshi**	**0.29**	**240**	*e*P	Pg	18 00 00.9	+0.3
	baz=239						
TWD	**Chiawan**	**0.31**	**209**	*e*P	Pb	18 00 01.7	-0.8
	baz=207						
ENTT	**Nioudou**	**0.33**	**328**	*e*P	Pb	18 00 02.6	-0.4
	baz=329						

TAP 08 17:59:57.2,24°25N×121°76E,h8km,ML1.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**343**	*e*P	Pg	17 59 59.6	+0.5
	baz=348						
EAHA	**Aohua**	**0.08**	**346**	P	Pg	18 00 00.2	+0.9
	baz=345						
EAHA				S	Sg	18 00 02.6	+1.7
	baz=345						
ETL	**Fush Village**	**0.15**	**235**	*e*P	Pg	18 00 01.2	+0.7
	baz=234						
ENA	**Nanau**	**0.18**	**354**	*i* P	Pg	18 00 01.8	+0.8
	baz=356						
ENA				*i* S	Sg	18 00 05.2	+1.7
	baz=356						
EWUT	**Wuta**	**0.20**	**4**	*i* P	Pg	18 00 01.9	+0.7
	baz=4.0						
EWUT				*i* S	Sg	18 00 05.4	+1.4
	baz=4.0						
TWD	**Chiawan**	**0.23**	**222**	P	Pg	18 00 03.0	+1.2
	baz=220						
TWD				S	Sg	18 00 06.4	+1.6
	baz=220						
ETLH	**Xiulin Townshi**	**0.26**	**261**	*e*P	Pb	18 00 03.8	-0.4
	baz=260						
ETLH				S	Sb	18 00 07.9	-1.0
	baz=260						
HWA	**Hwalien**	**0.31**	**208**	*e*P	Pb	18 00 04.4	-0.6
	baz=206						
ESAO	**Su ao**	**0.34**	**13**	*e*S	Sb	18 00 09.7	-1.3
	baz=12						
LATG	**Datong**	**0.36**	**323**	P	Pb	18 00 05.5	-0.5
	baz=323						
LATG				S	Sb	18 00 11.0	-0.8
	baz=323						
TWC	**Suao**	**0.37**	**12**	P	Pg	18 00 05.2	+0.7
	baz=13						
TWC				S	Sb	18 00 10.7	-1.2
	baz=13						
NDS	**Dongshan**	**0.39**	**354**	*e*P	Pb	18 00 06.3	0.0
	baz=353						
NDS				*e*S	Sb	18 00 12.1	-0.4
	baz=353						
NNSB	**Datong**	**0.39**	**298**	*e*P	Pb	18 00 06.7	+0.2
	baz=297						
NNSB				*i* S	Sb	18 00 12.2	-0.5
	baz=297						
LXIB	**Xiulin Townshi**	**0.39**	**235**	*e*P	Pg	18 00 05.1	+0.2
	baz=234						
NNS	**Nan Shan**	**0.40**	**298**	P	Pb	18 00 06.7	0.0
	baz=298						
NNS				S	Sb	18 00 12.5	-0.6
	baz=298						
NDT	**Datong Townshi**	**0.42**	**327**	P	Pb	18 00 06.6	-0.3
	baz=327						
NDT				S	Sb	18 00 13.8	+0.3
	baz=327						
ENTT	**Nioudou**	**0.43**	**335**	P	Pb	18 00 07.0	-0.1
	baz=336						
ENTT				S	Sb	18 00 13.4	-0.3
	baz=336						
TWE	**Neicheng**	**0.48**	**350**	*e*P	Pb	18 00 07.8	-0.1
	baz=351						
TWE				*e*S	Sb	18 00 15.3	+0.2
	baz=351						
SHUL	**Shoufeng**	**0.49**	**202**	*e*P	Pb	18 00 08.3	+0.1
	baz=201						
ESL	**Shilin**	**0.53**	**215**	*e*P	Pb	18 00 09.4	+0.7
	baz=214						
FUSB	**Fushanzhiwuyua**	**0.53**	**343**	*e*P	Pb	18 00 09.1	+0.2
	baz=342						
FUSB				*i* S	Sb	18 00 16.8	0.0
	baz=342						
YHNB	**Yeheng**	**0.55**	**320**	*e*P	Pb	18 00 09.1	0.0
	baz=320						
YHNB				*i* S	Sb	18 00 17.4	+0.2
	baz=320						
NSK	**Sanguang**	**0.56**	**319**	*e*P	Pb	18 00 09.6	+0.2
	baz=319						
NSK				*e*S	Sb	18 00 17.6	0.0
	baz=319						
NWLT	**Wulai**	**0.58**	**336**	*e*P

SGF	**Sodankyl**	**2.19**	**78**	PG	**Pb**	**18 00 56.8**	**-1.2**
SGF				SG	**Sg**	**18 01 26.8**	**-1.0**
BURU	**Burvik**	**2.53**	**176**	PG	**Pn**	**18 01 00.9**	**+1.0**
RANF	**Ranua**	**2.57**	**112**	PB	**Pn**	**18 01 01.9**	**+1.5**
	baz=297						
RANF				SB	**Sb**	**18 01 38.2**	**+1.6**
OUL	**Oulu**	**2.85**	**133**	PB	**Pn**	**18 01 06.1**	**+1.9**
OUL				SB	**Sb**	**18 01 44.6**	**+0.1**
OBF4	**Vikkela, Lumij**	**2.85**	**142**	PB	**Pn**	**18 01 05.7**	**+1.4**
OBF4				MSG		18 01 42.7	
	comp=Z,3.4nm,0.2s						
OBF0	**Syolatti, Pyha**	**2.94**	**151**	PG	**Pb**	**18 01 10.2**	**-0.6**
OBF0				MSG		18 01 44.5	
	comp=Z,4.0nm,0.2s						
OBF8	**Ulkokalla**	**2.96**	**159**	PG	**Pb**	**18 01 10.5**	**-0.7**
	baz=337						
OBF8				MSG		18 01 44.5	
	comp=Z,3.8nm,0.2s						
ARCES	**ARCESS Array B**	**2.97**	**32**	Pn	**Pn**	**18 01 07.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=211,slow=13,SNR=47						
ARCES				Lg	Lg	18 01 47.2	
	comp=Z,0.6nm,0.3s,baz=212,slow=27,SNR=8.8						
	comp=Z,0.9nm,0.2s						
RAJF	**Raja-Jooseppi**	**3.12**	**60**	PB	**Pn**	**18 01 10.8**	**+2.9**
RAJF				SG	**Sg**	**18 01 55.5**	**-2.1**
OUF	**Merijarvi**	**3.15**	**149**	PB	**Pn**	**18 01 09.9**	**+1.5**
	baz=326						
UMAU	**Umeaa**	**3.23**	**182**	PB	**Pn**	**18 01 10.3**	**+0.8**
	baz=358						
VRF	**Varrio**	**3.40**	**75**	PB	**Pb**	**18 01 16.5**	**-2.2**
	baz=263						
HUSU	**Husum**	**3.84**	**192**	PB	**Pn**	**18 01 19.5**	**+1.6**
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**18 01 50.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=7.3						
FINES				Sn	**Sn**	**18 02 58.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=345,slow=26,SNR=5.0						
FINES				Lg	Lg	18 03 29.7	
	comp=Z,0.2nm,0.3s,baz=338,slow=23,SNR=1.0						
	comp=Z,2.5nm,0.9s						
NOA	**NORSAR Array B**	**7.42**	**220**	Pn	**Pn**	**18 02 07.2**	**+0.1**
	baz=340,slow=15,SNR=1.1						
NOA				Lg	Lg	18 04 16.0	
	baz=30,slow=11,SNR=0.9						
	comp=Z,0.7nm,0.8s						
HFS	**Hagfors**	**7.70**	**208**	Pn	**Pn**	**18 02 10.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=1.5						
	comp=Z,1.1nm,0.7s						

TAP 08 18:00:56.7, 23.33N×120.95E, h2km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.15**	**156**	*i* P	Pg	18 01 00.4	+0.8
ELDTW	baz=154			*i* S	Sg	18 01 02.5	+1.0
STYH	**Taoyuan**	**0.22**	**226**	*i* P	Pg	18 01 01.6	+0.7
STYH	baz=225			*e* S	Sg	18 01 04.4	+0.5
ALS	**Alishan**	**0.23**	**324**	*i* P	Pg	18 01 02.0	+0.9
ALS	baz=325			*i* S	Sg	18 01 05.9	+1.8
EHD	**Haiduan**	**0.29**	**127**	*i* P	Pg	18 01 03.3	+0.9
EHD	baz=127			*i* S	Sg	18 01 07.3	+1.1
TPUB	**Ta-pu**	**0.30**	**265**	*i* P	Pg	18 01 03.5	+1.2
TPUB	baz=279			*i* S	Sg	18 01 08.0	+1.8
TWF1	**Yuli**	**0.32**	**85**	*i* P	Pg	18 01 03.9	+1.1
TWF1	baz=86			*i* S	Sg	18 01 08.1	+1.2
WTP	**Ta-pu**	**0.32**	**256**	*i* P	Pb	18 01 04.1	-1.1
WTP	baz=268			*i* S	Sg	18 01 08.8	+1.9
YULB	**Yu-li**	**0.33**	**78**	*i* P	Pg	18 01 03.7	+0.8
YULB	baz=79			*i* S	Sg	18 01 07.9	+0.7
CHN4	**Tsaushan**	**0.33**	**274**	P	Pb	18 01 04.5	-0.9
CHN4	baz=274			S	Sb	18 01 09.9	-1.2
ECS	**Chishang**	**0.34**	**133**	P	Pb	18 01 04.4	-1.1
ECS	baz=133			S	Sb	18 01 09.5	-1.8
WCKO	**Fanlu**	**0.34**	**289**	P	Pb	18 01 04.5	-1.0
WCKO	baz=289			S	Sb	18 01 10.5	-0.9
EYUL	**Yuli**	**0.34**	**86**	P	Pg	18 01 04.1	+0.9
EYUL	baz=87			*i* S	Sg	18 01 08.6	+1.0
FULB	**Fuli**	**0.34**	**112**	P	Pb	18 01 04.6	-0.9
CHN5	baz=113 **Tsauling**	**0.37**	**317**	*i* P	Pb	18 01 05.2	-0.8
CHN5	baz=317			*i* S	Sb	18 01 10.5	-1.8
WHYT	**Xinyi Township**	**0.38**	**346**	*i* P	Pg	18 01 04.8	+0.9
WHYT	baz=359			*i* S	Sg	18 01 10.3	+1.4
EHY	**Hungye**	**0.39**	**62**	P	Pb	18 01 05.3	-1.0
EHY	baz=75			S	Sg	18 01 09.8	+0.7
CHN1	**Nanshi**	**0.41**	**250**	*i* P	Pb	18 01 06.5	-0.3
CHN1	baz=249			*i* S	Sb	18 01 12.7	-0.9
SGST	**Jiashian**	**0.42**	**234**	P	Pg	18 01 05.2	+0.5
SGST	baz=243			*e* S	Sg	18 01 11.4	+1.3
SNST	**Tainan City**	**0.43**	**256**	*i* P	Pb	18 01 06.7	-0.4
SNST	baz=255			*i* S	Sb	18 01 13.4	-0.6
TWK	**Hsinying**	**0.43**	**262**	*i* P	Pb	18 01 06.4	-0.6
TWK	baz=260			*i* S	Sb	18 01 13.0	-1.1
SLGT	**Liugui**	**0.43**	**220**	P	Pb	18 01 06.3	-0.8
SLGT	baz=213			S	Sb	18 01 12.6	-1.5
LONT	**Longtian**	**0.45**	**158**	*i* P	Pg	18 01 06.2	+0.9
LONT	baz=158			*i* S	Sg	18 01 11.9	+0.8
SSLB	**Suanglung**	**0.46**	**0**	*i* P	Pg	18 01 05.8	+0.3
SSLB	baz=1.0			*e* S	Sg	18 01 11.7	+0.2
VWDT	**VWDT**	**0.46**	**22**	*i* P	Pg	18 01 06.0	+0.5
HGSD	baz=23 **Ruisui**	**0.47**	**69**	*e* P	Pb	18 01 07.3	-0.3
HGSD	baz=70			*e* S	Sb	18 01 13.4	-1.6
WARBT	**Fenglin Townsh**	**0.56**	**46**	*e* S	Sg	18 01 14.8	+0.1
TYC	baz=47 **Yuchr**	**0.58**	**351**	P	Pg	18 01 08.5	+0.7
TYC	baz=1.0			*e* S	Sb	18 01 18.2	-0.2
WUSB	**Renai**	**0.68**	**13**	*e* P	Pg	18 01 09.4	-0.3
WUSB	baz=14			*e* S	Sg	18 01 17.8	-0.7
	baz=14						

*JMA **08** 18:06:39.4±0.1, 24.0N±0.2×121.8E±0.4, h0km, MV2.9/14, TAIWAN REGION*
*TAP **08** 18:06:39.6, 24.00N×121.77E, h6km, ML3.4, C*
ISC 08 18:06:40.1±0.9, **23.97N**±0.01×**121.79E**±0.02, **h10**km±6km, **n136**, σ1s**10**/227, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.17**	**272**	*i* P	**Pg**	**18 06 44.1**	**+0.3**
HWA	baz=252			*i* S	**Sg**	**18 06 48.3**	**+1.9**
TWD	**Chiawan**	**0.21**	**301**	*i* P	**Pg**	**18 06 44.0**	**-0.4**
TWD	baz=300			*i* S	**Sg**	**18 06 47.4**	**0.0**
ETL	**Fush Village**	**0.24**	**321**	*i* P	**Pg**	**18 06 44.6**	**-0.5**
NACB	baz=321 **Ninganchiao**	**0.27**	**318**	*i* P	**Pg**	**18 06 45.0**	**-0.5**
NACB	baz=318			*i* S	**Sg**	**18 06 49.0**	**-0.3**
ETM	**Tongmen**	**0.27**	**269**	*i* P	**Pg**	**18 06 45.3**	**-0.4**
ETM	baz=262			*i* S	**Sb**	**18 06 49.7**	**-2.0**
SHUL	**Shoufeng**	**0.28**	**229**	*i* P	**Pb**	**18 06 46.6**	**-0.5**
SHUL	baz=220			*e* S	**Sb**	**18 06 52.8**	**+1.0**
LXIB	**Xiulin Townshi**	**0.35**	**278**	*e* P	**Pg**	**18 06 46.5**	**-0.6**
LXIB	baz=274			*i* S	**Sb**	**18 06 52.4**	**-1.7**
TEGC	**Jichi Village**	**0.35**	**221**	*i* P	**Pb**	**18 06 48.0**	**-0.4**
TEGC	baz=214			*e* S	**Sb**	**18 06 55.5**	**+1.7**
EAHA	**Aohua**	**0.36**	**353**	*i* P	**Pg**	**18 06 47.1**	**-0.2**
EAHA	baz=356			*i* S	**Sb**	**18 06 52.8**	**-1.4**
ESL	**Shilin**	**0.36**	**244**	*i* P	**Pg**	**18 06 46.9**	**-0.4**
ESL	baz=246			*i* S	**Sb**	**18 06 53.4**	**-0.9**
ETLH	**Xiulin Townshi**	**0.37**	**310**	*i* P	**Pg**	**18 06 46.8**	**-0.6**
ETLH	baz=317			*e* S	**Sg**	**18 06 52.1**	**-0.2**
WARBT	**Fenglin Townsh**	**0.45**	**236**	*i* P	**Pg**	**18 06 48.8**	**-0.1**
WARBT	baz=230			*i* S	**Sb**	**18 06 57.2**	**+0.4**
EGFH	baz=230 **Guangfu**	**0.45**	**228**	P	**Pg**	**18 06 49.0**	**+0.1**
ENA	baz=224 **Nanau**	**0.46**	**354**	*i* P	**Pb**	**18 06 49.0**	**-1.2**
ENA	baz=358			*i* S	**Sb**	**18 06 55.9**	**-1.2**
EWUT	**Wuta**	**0.47**	**359**	*i* P	**Pb**	**18 06 49.5**	**-0.9**
EWUT	baz=1.0			*i* S	**Sb**	**18 06 56.6**	**-0.8**
WHF	**Hehuan Shan**	**0.51**	**290**	*i* P	**Pg**	**18 06 49.6**	**-0.6**
WHF	baz=288			*i* S	**Sb**	**18 06 57.2**	**-1.8**
OWD	**Renai**	**0.56**	**268**	*i* P	**Pg**	**18 06 50.8**	**-0.3**
OWD	baz=276			*i* S	**Sb**	**18 06 58.8**	**-1.4**
CHGB	**Renai**	**0.57**	**279**	*i* P	**Pb**	**18 06 51.1**	**-1.2**
CHGB	baz=277			*i* S	**Sb**	**18 06 59.6**	**-0.9**
FUSS	**Fushou**	**0.57**	**299**	*i* P	**Pb**	**18 06 51.0**	**-1.3**
FUSS	baz=298			*i* S	**Sb**	**18 06 59.0**	**-1.5**
HGSD	**Ruisui**	**0.58**	**215**	*i* P	**Pb**	**18 06 52.3**	**0.0**
NNSB	baz=197 **Datong**	**0.59**	**321**	*i* P	**Pb**	**18 06 51.2**	**-1.3**
NNSB	baz=321			*i* S	**Sb**	**18 06 59.5**	**-1.4**
NNS	**Nan Shan**	**0.60**	**321**	*i* P	**Pg**	**18 06 51.4**	**-0.4**
NNS	baz=322			*i* S	**Sb**	**18 07 00.2**	**-1.2**
ESAO	**Su ao**	**0.60**	**5**	*i* P	**Pb**	**18 06 52.1**	**-0.6**
ESAO	baz=359			*e* S	**Sb**	**18 07 01.8**	**+0.5**
LATG	**Datong**	**0.61**	**337**	P	**Pg**	**18 06 51.5**	**-0.4**
LATG	baz=338			S	**Sb**	**18 07 01.1**	**-0.5**
WUSB	**Renai**	**0.62**	**272**	*i* P	**Pb**	**18 06 52.0**	**-0.9**
WUSB	baz=280			*i* S	**Sb**	**18 07 01.1**	**-0.7**
TWT	**Tachien**	**0.63**	**297**	*i* P	**Pb**	**18 06 52.6**	**-0.6**
TWT	baz=294			*i* S	**Sb**	**18 07 01.4**	**-0.7**
EHY	**Hungye**	**0.63**	**223**	*i* P	**Pg**	**18 06 52.1**	**-0.2**
VWDT	baz=220 **VWDT**	**0.63**	**250**	*i* P	**Pb**	**18 06 52.5**	**-0.6**
VWDT	baz=246			*e* S	**Sb**	**18 07 03.8**	**+1.7**
TWC	**Suao**	**0.64**	**5**	*i* P	**Pb**	**18 06 52.8**	**-0.5**
TWC				*e* S	**Sb**	**18 07 03.8**	**+1.5**
TDCB	**Techi**	**0.64**	**296**	*i* P	**Pb**	**18 06 52.5**	**-0.9**
TDCB	baz=295			*i* S	**Sb**	**18 07 01.5**	**-1.0**
NDS	baz=295 **Dongshan**	**0.66**	**354**	*i* P	**Pb**	**18 06 53.3**	**-0.5**
NDS	baz=356			*i* S	**Sb**	**18 07 03.3**	**+0.3**
NDT	**Datong Townshi**	**0.68**	**338**	*i* P	**Pb**	**18 06 53.3**	**-0.7**
NDT	baz=327			*i* S	**Sb**	**18 07 03.6**	**+0.2**
ENTT	baz=327 **Nioudou**	**0.70**	**343**	*i* P	**Pb**	**18 06 53.4**	**-0.9**
ENTT	baz=333			*i* S	**Sb**	**18 07 04.2**	**+0.2**
ECBN	**Changbin**	**0.72**	**206**	*i* P	**Pb**	**18 06 54.7**	**0.0**
ECBN	baz=202			*i* S	**Sb**	**18 07 06.2**	**+1.6**
YULB	**Yu-li**	**0.73**	**218**	P	**Pb**	**18 06 54.6**	**-0.3**
YULB	**Yu-li**	**0.73**	**218**	*i* P	**Pb**	**18 06 54.4**	**-0.5**
YULB	baz=215			*e* S	**Sb**	**18 07 06.5**	**+1.5**
TWE	baz=215 **Neicheng**	**0.76**	**351**	*i* P	**Pb**	**18 06 55.1**	**-0.2**
TWE	baz=354			*i* S	**Sb**	**18 07 06.0**	**+0.4**
EYUL	baz=354 **Yuli**	**0.76**	**215**	*i* P	**Pb**	**18 06 55.3**	**0.0**
TWF1	baz=202 **Yuli**	**0.77**	**216**	*i* P	**Pg**	**18 06 54.5**	**-0.3**
SSLB	baz=231 **Suanglung**	**0.79**	**257**	P	**Pg**	**18 06 54.9**	**-0.4**
SSLB	**Suanglung**	**0.79**	**257**	*i* P	**Pg**	**18 06 54.8**	**-0.4**
SSLB	baz=265			*i* S	**Sb**	**18 07 05.7**	**-0.9**
YHNB	baz=265 **Yeheng**	**0.79**	**332**	P	**Pb**	**18 06 55.4**	**-0.6**
YHNB	**Yeheng**	**0.79**	**332**	*i* P	**Pb**	**18 06 55.0**	**-1.0**
YHNB	baz=332			*i* S	**Sb**	**18 07 06.4**	**-0.4**
NSK	baz=332 **Sanguang**	**0.81**	**331**	*i* P	**Pb**	**18 06 55.7**	**-0.4**
NSK	baz=332			*i* S	**Sb**	**18 07 07.2**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.81**	**347**	*i* P	**Pb**	**18 06 56.0**	**-0.2**
FUSB	baz=338			*i* S	**Sb**	**18 07 07.4**	**+0.3**
WCS	baz=338 **Beigang Elemen**	**0.81**	**276**	*i* P	**Pb**	**18 06 55.8**	**-0.4**
SMLT	baz=274 **Sun Moon Lake**	**0.82**	**264**	*i* P	**Pb**	**18 06 55.7**	**-0.8**
SMLT	baz=271			*i* S	**Sb**	**18 07 07.5**	**-0.1**
WHP	baz=271 **Taichung City**	**0.83**	**292**	*i* P	**Pb**	**18 06 56.7**	**+0.1**
WHP	baz=290			*e* S	**Sb**	**18 07 08.8**	**+0.9**

NWLT	baz=290 **Wulai**	**0.84**	**342**	*i* P	**Pb**	**18 06 56.5**	**-0.4**
NWLT	baz=343			*i* S	**Sb**	**18 07 08.2**	**-0.1**
CHKH	**Chenggong**	**0.86**	**205**	P	**Pg**	**18 06 56.5**	**-0.1**
CHKH	baz=202			*e* S	**Sn**	**18 07 10.8**	**+0.1**
TYC	**Yuchr**	**0.86**	**266**	*i* P	**Pb**	**18 06 56.2**	**-0.8**
TYC	baz=263			*i* S	**Sb**	**18 07 07.9**	**-0.7**
FULB	baz=263 **Fuli**	**0.89**	**211**	P	**Pb**	**18 06 57.6**	**-0.1**
NFF	baz=197 **Wufeng Townshi**	**0.90**	**317**	*i* P	**Pb**	**18 06 57.4**	**-0.4**
NFF	baz=317			*i* S	**Sb**	**18 07 09.9**	**+0.1**
WHYT	**Xinyi Township**	**0.90**	**252**	P	**Pb**	**18 06 57.6**	**-0.2**
CHKT	baz=250 **Chengkung**	**0.95**	**204**	*e* P	**Pg**	**18 06 58.3**	**-0.1**
LIOB	baz=203 **Emei**	**0.97**	**314**	*i* P	**Pb**	**18 06 59.1**	**+0.1**
LIOB	baz=314			S	**Sb**	**18 07 11.6**	**-0.4**
NSTT	**Nanjuang**	**0.97**	**313**	*i* P	**Pb**	**18 06 58.9**	**-0.2**
NSTT	baz=313			*e* S	**Sn**	**18 07 12.8**	**-0.8**
EHD	baz=313 **Haiduan**	**0.98**	**213**	*e* P	**Pg**	**18 06 58.0**	**-0.9**
WJS	baz=225 **Zhushan**	**0.98**	**262**	P	**Pn**	**18 06 59.6**	**-0.3**
WJS	baz=265			*e* S	**Sn**	**18 07 15.2**	**+1.3**
TIPB	baz=265 **Shuangxi**	**1.00**	**2**	P	**Pb**	**18 06 59.3**	**-0.1**
TIPB	baz=353			*e* S	**Sn**	**18 07 13.9**	**-0.4**
TWQ1	**Liyutan**	**1.00**	**292**	P	**Pn**	**18 07 00.7**	**+0.5**
ALS	baz=282 **Alishan**	**1.01**	**243**	*e* P	**Pb**	**18 06 59.9**	**0.0**
ALS	baz=238			*e* S	**Sn**	**18 07 15.8**	**+0.8**
NHDH	baz=238 **Xindian Distri**	**1.02**	**346**	*i* P	**Pn**	**18 06 60.0**	**-0.4**
WNT	baz=345 **Mingjian**	**1.02**	**265**	P	**Pn**	**18 07 00.1**	**-0.2**
WNT	baz=269			S	**Sn**	**18 07 15.5**	**+0.9**
ECS	baz=269 **Chishang**	**1.02**	**211**	*e* P	**Pb**	**18 06 59.9**	**+0.1**
TWA	baz=198 **Mucha**	**1.02**	**349**	*i* P	**Pn**	**18 07 00.5**	**0.0**
TWA	baz=351			*i* S	**Sn**	**18 07 14.9**	**0.0**
TATO	baz=351 **Taipei**	**1.04**	**345**	P	**Pn**	**18 07 00.3**	**-0.3**
TWB1	**Santiao Chiao**	**1.05**	**10**	P	**Pn**	**18 07 00.5**	**-0.3**
ELDTW	baz=2.0 **Lidau**	**1.05**	**222**	*e* P	**Pg**	**18 06 58.9**	**-1.4**
ELDTW	baz=206			*e* S	**Sb**	**18 07 14.8**	**+0.5**
NMLH	baz=206 **Miaoli**	**1.07**	**302**	P	**Pn**	**18 07 01.8**	**+0.6**
NMLH	baz=301			S	**Sn**	**18 07 15.9**	**-0.1**
NHY	baz=301 **Taipei**	**1.08**	**349**	*e* P	**Pn**	**18 07 03.5**	**+2.2**
CHN5	baz=349 **Tsauling**	**1.08**	**250**	*e* P	**Pn**	**18 07 01.5**	**+0.1**
CHN5	baz=234			*e* S	**Sn**	**18 07 18.1**	**+1.7**
EDH	baz=234 **Donghe**	**1.09**	**204**	*e* P	**Pg**	**18 06 59.1**	**-2.0**
EDH	baz=185			*e* S	**Sg**	**18 07 13.1**	**-2.2**
NWF	baz=185 **Wu-fen Shan**	**1.09**	**360**	*e* P	**Pn**	**18 07 02.1**	**+0.6**
NWF	baz=352			*e* S	**Sn**	**18 07 18.1**	**+1.3**
WFSB	baz=352 **Wu-fen Shan**	**1.09**	**360**	*e* P	**Pn**	**18 07 01.7**	**+0.3**
WFSB	baz=352			*e* S	**Sn**	**18 07 16.4**	**-0.2**
SXI1	**Grass Mountain**	**1.12**	**4**	*e* P	**Pn**	**18 07 02.1**	**+0.3**
SXI1	baz=5.0			*e* S	**Sn**	**18 07 19.2**	**+1.9**
WCHH	baz=5.0 **Zhanghua**	**1.13**	**276**	*e* P	**Pn**	**18 07 02.1**	**+0.2**
NCUH	baz=273 **Zhongli**	**1.14**	**331**	*e* P	**Pb**	**18 07 01.6**	**-0.2**
JYNG	baz=329 **Yonagunijimaku**	**1.16**	**65**	P	**Pb**	**18 07 02.5**	**+0.3**
JYNG				S	**Sb**	**18 07 18.5**	**+1.3**
WGK	**Gukeng**	**1.16**	**256**	*e* P	**Pn**	**18 07 02.5**	**+0.2**
TNOU	baz=253 **National Taiwa**	**1.17**	**359**	*e* P	**Pn**	**18 07 03.1**	**+0.6**
TWS1	baz=359 **Kuangyinshan**	**1.17**	**343**	*e* P	**Pn**	**18 07 03.7**	**+1.2**
TWS1	baz=344			*e* S	**Sn**	**18 07 21.6**	**+3.0**
WDLH	baz=344 **Douliu**	**1.18**	**256**	*e* P	**Pn**	**18 07 03.2**	**+0.6**
YM01	baz=253 **YM01**	**1.19**	**350**	*e* P	**Pn**	**18 07 03.0**	**+0.2**
YM01	baz=351			*e* S	**Sn**	**18 07 21.2**	**+2.2**
WCKO	baz=351 **Fanlu**	**1.21**	**244**	*e* P	**Pn**	**18 07 03.4**	**+0.4**
WCKO	baz=240			*e* S	**Sn**	**18 07 22.1**	**+2.6**
YOJ	baz=240 **Yonaguni jima**	**1.22**	**66**	P	**Pn**	**18 07 03.9**	**+0.8**
YOJ	**Yonaguni jima**	**1.22**	**66**	*e* P	**Pg**	**18 07 02.3**	**-1.1**
YOJ	baz=70			*e* S	**Sn**	**18 07 20.5**	**+0.9**
YOJ	baz=70 **Yonaguni jima**	**1.22**	**66**	P	**Pg**	**18 07 02.8**	**-0.6**
YOJ				S	**Sb**	**18 07 20.1**	**+1.2**
LONT	**Longtian**	**1.22**	**210**	*e* P	**Pg**	**18 07 01.1**	**-2.5**
YM08	baz=221 **YM08**	**1.23**	**351**	*e* P	**Pg**	**18 07 02.4**	**-1.2**
STYH	baz=351 **Taoyuan**	**1.23**	**230**	*e* P	**Pg**	**18 07 02.6**	**-1.0**
STYH	baz=231			*e* S	**Sn**	**18 07 20.6**	**+0.7**
NTST	baz=231 **Danshui**	**1.23**	**345**	*e* P	**Pn**	**18 07 04.6**	**+1.3**
NTST	baz=346			*e* S	**Sn**	**18 07 21.3**	**+1.5**
ANP	baz=346 **Anpu**	**1.23**	**349**	*e* P	**Pn**	**18 07 03.8**	**+0.4**
TPUB	baz=336 **Ta-pu**	**1.26**	**238**	P	**Pn**	**18 07 03.9**	**+0.2**
TPUB	**Ta-pu**	**1.26**	**238**	*e* P	**Pn**	**18 07 03.8**	**+0.2**
TPUB	baz=234			*e* S	**Sn**	**18 07 22.8**	**+2.2**
CHN4	baz=234 **Tsaushan**	**1.26**	**241**	*e* P	**Pn**	**18 07 04.2**	**+0.5**
CHN4	baz=242			*e* S	**Sn**	**18 07 23.0**	**+2.4**
WRL	**Guolierlin Hig**	**1.29**	**267**	*e* P	**Pn**	**18 07 04.3**	**+0.1**
WRL	baz=263			*e* S	**Sn**	**18 07 22.8**	**+1.3**
WTP	baz=263 **Ta-pu**	**1.30**	**236**	*e* P	**Pn**	**18 07 04.8**	**+0.5**
WTP	baz=231			*e* S	**Sn**	**18 07 25.1**	**+3.4**
TWY	baz=231 **Chenhua**	**1.31**	**352**	*e* P	**Pb**	**18 07 05.7**	**+1.0**
WTK	baz=350 **Tuku**	**1.31**	**258**	*e* P	**Pb**	**18 07 05.2**	**+0.3**
WTK	baz=253			*e* S	**Sn**	**18 07 25.1**	**+3.1**
TWGBT	baz=253 **Beinan**	**1.32**	**210**	P	**Pn**	**18 07 04.1**	**-0.5**
TWGBT	**Beinan**	**1.32**	**210**	*e* P	**Pn**	**18 07 02.4**	**-2.1**
TWGBT	baz=207			*e* S	**Sg**	**18 07 20.9**	**-1.7**
TWG	baz=207 **Pinlang**	**1.32**	**210**	*e* P	**Pn**	**18 07 02.2**	**-2.4**
TWG	baz=207			*e* S	**Sg**	**18 07 20.5**	**-2.2**

	baz=207							
LDUT	**Ludao**	**1.33**	**193**	*eP*	**Pn**	**18 07 01.6**	**-3.0**
	baz=178							
LDUT				*eS*	**Sg**	**18 07 19.7**	**-3.1**
	baz=178							
TWK	**Hsinying**	**1.39**	**240**	*eP*	**Pb**	**18 07 06.1**	**0.0**
	baz=237							
CHN1	**Nanshi**	**1.40**	**236**	*eP*	**Pg**	**18 07 06.5**	**-0.5**
	baz=232							
CHN1				*eS*	**Sn**	**18 07 26.7**	**+2.5**
	baz=232							
SNST	**Tainan City**	**1.40**	**238**	*eP*	**Pb**	**18 07 06.2**	**-0.2**
	baz=233							
SNST				*eS*	**Sn**	**18 07 26.8**	**+2.6**
	baz=233							
SGST	**Jiashian**	**1.42**	**232**	*eP*	**Pn**	**18 07 05.6**	**-0.3**
	baz=213							
SGST				*eS*	**Sn**	**18 07 27.4**	**+2.7**
	baz=213							
SLGT	**Liugui**	**1.43**	**227**	*eP*	**Pn**	**18 07 06.5**	**+0.4**
	baz=211							
SLGT				*eS*	**Sn**	**18 07 27.1**	**+2.1**
	baz=211							
WSF	**Szhu**	**1.47**	**257**	*eP*	**Pg**	**18 07 08.2**	**-0.2**
	baz=251							
WSF				*eS*	**Sg**	**18 07 29.1**	**+1.6**
	baz=251							
WSL	**Shuilin Townsh**	**1.50**	**253**	*eP*	**Pg**	**18 07 07.9**	**-1.0**
	baz=247							
WSL				*eS*	**Sg**	**18 07 29.9**	**+1.5**
	baz=247							
ICHU	**Yijhu**	**1.51**	**247**	*eP*	**Pb**	**18 07 07.7**	**-0.6**
	baz=243							
ECL	**Taimali**	**1.57**	**210**	*eP*	**Pn**	**18 07 06.7**	**-1.3**
	baz=196							
SCST	**Cishan**	**1.61**	**228**	*eP*	**Pg**	**18 07 10.1**	**-0.9**
	baz=210							
SCST				*eS*	**Sg**	**18 07 33.8**	**+2.0**
	baz=210							
SHHT	**Tainan City**	**1.63**	**235**	*eP*	**Pg**	**18 07 11.0**	**-0.3**
	baz=233							
TSMG	**Majia**	**1.64**	**220**	*eP*	**Pb**	**18 07 09.9**	**-0.5**
	baz=207							
TSMG				*eS*	**Sg**	**18 07 32.5**	**-0.4**
	baz=207							
PCYT	**Pengchaiyu**	**1.67**	**9**	*eP*	**Pb**	**18 07 10.7**	**-0.2**
	baz=7.0							
TWM1	**Shoushan**	**1.70**	**228**	*eP*	**Pg**	**18 07 12.3**	**-0.4**
	baz=214							
MASBT	**Mashibuluo**	**1.72**	**218**	*eP*	**Pn**	**18 07 09.8**	**-0.2**
	baz=209							
MASBT				*eS*	**Sb**	**18 07 34.0**	**+0.6**
	baz=209							
TSCK	**Chigu Township**	**1.77**	**243**	*eP*	**Pn**	**18 07 11.0**	**+0.3**
	baz=238							
TSCK				*eS*	**Sb**	**18 07 35.2**	**+0.4**
	baz=238							
SCZT	**Fangliau**	**1.92**	**214**	*eP*	**Pb**	**18 07 14.4**	**-0.8**
	baz=210							
SCZT				*eS*	**Sb**	**18 07 40.4**	**+1.1**
	baz=210							
JKRS	**Kuro-shima**	**2.04**	**82**	P	**Pn**	**18 07 15.1**	**+0.6**
JKRS				*eS*	**Sn**	**18 07 41.6**	**+1.6**
PHUB	**P'eng-hu**	**2.08**	**258**	P	**Pn**	**18 07 15.7**	**+0.7**
	baz=253							
PHUB				*eS*	**Sn**	**18 07 42.4**	**+1.4**
	baz=253							
PNG	**Penghu**	**2.09**	**259**	*eP*	**Pn**	**18 07 15.3**	**+0.2**
	baz=254							
PNG				*eS*	**Sb**	**18 07 43.0**	**-1.0**
	baz=254							
JIJ	**Ishigaki jima**	**2.18**	**79**	P	**Pn**	**18 07 15.9**	**-0.6**
JIJ				S	**Sn**	**18 07 43.2**	**-0.3**
VCHM	**Qimei**	**2.29**	**251**	*eP*	**Pn**	**18 07 18.0**	**+0.1**
	baz=247							
VCHM				*eS*	**Sn**	**18 07 47.2**	**+1.0**
	baz=247							
VWUC	**VWUC**	**2.36**	**296**	*eP*	**Pn**	**18 07 18.7**	**-0.1**
	baz=294							
VWUC				*eS*	**Sn**	**18 07 48.3**	**+0.4**
	baz=294							
JISG	**Ishigakijimahi**	**2.38**	**75**	P	**Pn**	**18 07 18.6**	**-0.5**
JISG				S	**Sn**	**18 07 48.2**	**-0.1**
PTMZ	**Houxiangcun**	**2.66**	**294**	*eP*	**Pn**	**18 07 22.8**	**-0.1**
	baz=291							
PTMZ				*eS*	**Sn**	**18 07 54.2**	**-0.9**
	baz=291							
JTJ	**Tarama**	**2.74**	**75**	*eS*	**Sn**	**18 07 59.1**	**+1.9**
KNM	**Kinmen**	**3.10**	**279**	*eP*	**Pn**	**18 07 30.1**	**+1.1**
	baz=273							
KNMB	**Chin-men Tao**	**3.14**	**280**	*eP*	**Pn**	**18 07 28.9**	**-0.8**
	baz=275							
MHZQ	**Yeshan**	**3.28**	**311**	*eP*	**Pn**	**18 07 31.2**	**-0.3**
	baz=304							
XPSS	**Dashiqiu**	**3.28**	**334**	*eP*	**Pn**	**18 07 32.3**	**+0.8**
	baz=327							
JMJ2	**Miyako jima3**	**3.32**	**76**	*eS*	**Sn**	**18 08 13.3**	**+1.8**
AXDP	**Jialang**	**3.60**	**286**	*eP*	**Pn**	**18 07 35.6**	**-0.3**
	baz=277							

*MEX **08** 18:24:55.2±0.8, 13°.70N×92°.29W, h18km±40km, MD4.1*
*GCG **08** 18:25:05.4±0.3, 14°.34N×91°.76W, h50km, MD3.5*
ISC 08 18:24:57.2±2.7,**13°.9N**±0°.1×**92°.28W**±0°.07,**h28**km±16km,
n11,σ1§13/19,**Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
SULM	**Suchitepequez,**	**0.78**	**62**	*eP*		**Pn**	**18 25 13.6**	**+1.3**
SULM				*eS*		**Sb**	**18 25 22.5**	**+0.2**
THIG		**0.96**	**1**	*eS*		**Sn**	**18 25 28.0**	**+0.4**
STG3	**Santiaguito 3,**	**1.02**	**42**	*eP*		**Pb**	**18 25 16.3**	**-0.1**
CHUJ	**Union Juarez**	**1.16**	**8**	*i* P		**Pn**	**18 25 16.3**	**-1.5**
CHUJ				*i* S		**Sn**	**18 25 32.7**	**-0.1**
PATR	**El Naranjo**	**1.17**	**2**	*i* P		**Pn**	**18 25 16.9**	**-1.0**
PATR				*i* S		**Sb**	**18 25 33.9**	**+0.2**
PAVE	**Pavencul**	**1.25**	**4**	*i* P		**Pn**	**18 25 17.9**	**-1.1**
PAVE				*i* S		**Sn**	**18 25 35.9**	**+0.9**
FUG	**Fuego 3**	**1.48**	**70**	*eP*		**Pn**	**18 25 22.3**	**+0.2**
FUG				*eS*		**Sn**	**18 25 38.5**	**-2.1**
PCIG		**1.98**	**333**	*eP*		**Pn**	**18 25 28.1**	**-0.7**
PCIG				*eS*		**Sn**	**18 25 52.5**	**-0.2**
TGIG		**2.94**	**344**	*i* S		**Sn**	**18 26 17.8**	**+1.3**
UXUV	**UXUV**	**3.81**	**332**	*i* P		**Pn**	**18 25 55.3**	**+1.3**
UXUV				*i* S		**Sn**	**18 26 39.4**	**+1.5**
CMIG	**Matias Romero**	**4.01**	**322**	*eP*		**Pn**	**18 25 55.8**	**-1.1**
CMIG				*eS*		**Sn**	**18 26 43.0**	**-0.1**

*BER **08** 18:29:25.9±2.8, 80°.48N×2°.61E, h10km, mb(Pn)3.8, ML3.1(NAO), Confirmed Earthquake*
*KOLA **08** 18:29:27.0, 80°.42N×4°.02E, h0km, ML2.5, Error ellipse: s-maj=68.9km s-min=26.8km az=50.0, Greenland sea*
*FCIAR **08** 18:29:29.0, 79°.77N×1°.92E, h10km, station ZFI2 has station magnitude of 3.70*
ISC 08 18:29:30.4±3.6,**80°.11N**±0°.07×**4°.0E**±0°.2,**h10**km,**n19**,
σ1§**20**/**37**,**North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
KBS	**Kingsbay**	**1.88**	**126**	P		**Pn**	**18 30 00.7**	**-1.9**
KBS				S		**Sn**	**18 30 25.3**	**-0.9**
KBS	**Kingsbay**	**1.88**	**126**	*eP*		**Pn**	**18 30 01.7**	**-0.8**
KBS				*eS*		**Sn**	**18 30 27.0**	**+0.8**
KBS				IAML			18 30 28.5	
	comp=Z,50nm,0.3s							
KBS	**Kingsbay**	**1.88**	**126**	Pn		**Pn**	**18 30 01.7**	**-0.8**
KBS				Sn		**Sn**	**18 30 27.2**	**+1.0**
KBS	**Kingsbay**	**1.88**	**126**	*eP*		**Pn**	**18 30 01.3**	**-1.2**
KBS				*eS*		**Sn**	**18 30 26.2**	**0.0**
BRBB	**Barentsburg B**	**2.80**	**131**	P		**Pn**	**18 30 15.2**	**+0.1**
BRBB				S		**Sn**	**18 30 51.0**	**+2.0**
BRBB	**Barentsburg B**	**2.80**	**131**	*eP*		**Pn**	**18 30 15.4**	**+0.2**
BRBB				*eS*		**Sn**	**18 30 51.9**	**+2.9**
BRBB	**Barentsburg B**	**2.80**	**131**	Pn		**Pn**	**18 30 15.4**	**+0.2**
BRBB				Sn		**Sn**	**18 30 52.2**	**+3.2**
SPA0	**Spitsbergen Ar**	**3.04**	**124**	Pn		**Pn**	**18 30 18.4**	**-0.1**
	baz=327,slow=10							
SPA0				Sn		**Sn**	**18 30 56.0**	**+1.2**
	baz=330,slow=18							
SPA0	**Spitsbergen Ar**	**3.04**	**124**	Pn		**Pn**	**18 30 18.4**	**-0.1**
	baz=327,slow=10							
SPA0				Sn		**Sn**	**18 30 56.0**	**+1.2**
	baz=330,slow=18							
SPA0	**Spitsbergen Ar**	**3.04**	**124**	*eP*		**Pn**	**18 30 18.1**	**-0.3**
SPA0				*eS*		**Sn**	**18 30 54.8**	**0.0**
SPITS	**Spitsbergen Ar**	**3.04**	**124**	P		**Pn**	**18 30 18.1**	**-0.3**
SPITS				S		**Sn**	**18 30 56.3**	**+1.5**
HSPB	**Hornsund (broa**	**3.87**	**138**	P		**Pn**	**18 30 29.0**	**-0.8**
HSPB				S		**Sn**	**18 31 14.8**	**-0.4**
HSPB	**Hornsund (broa**	**3.87**	**138**	*eP*		**Pn**	**18 30 29.1**	**-0.8**
HSPB				*eS*		**Sn**	**18 31 15.3**	**+0.1**
HSPB				IAML			18 31 17.6	
	comp=Z,19nm,0.5s							
HSPB	**Hornsund (broa**	**3.87**	**138**	Pn		**Pn**	**18 30 29.2**	**-0.7**
HSPB				Sn		**Sn**	**18 31 15.4**	**+0.1**
HOPEN	**Hopen**	**5.55**	**120**	*eS*		**Sn**	**18 31 56.8**	**+0.1**
HOPEN	**Hopen**	**5.55**	**120**	Pn		**Pn**	**18 30 52.4**	**-0.6**
HOPEN				Sn		**Sn**	**18 31 56.1**	**-0.6**
HOPEN	**Hopen**	**5.55**	**120**	*eP*		**Pn**	**18 30 52.7**	**-0.3**
HOPEN				*eS*		**Sn**	**18 31 54.0**	**-2.8**
ZFI2	**Zemlya Franca-**	**7.14**	**63**	P		**Pn**	**18 31 15.6**	**+0.9**
ZFI2				S		**Sn**	**18 32 35.1**	**-0.6**
	comp=Z,21nm,3.0s							
OMEGA	**Omega**	**7.16**	**63**	P		**Pn**	**18 31 15.4**	**+0.4**
OMEGA				S		**Sn**	**18 32 35.7**	**-0.5**

*KRNET **08** 18:32:04.5±0.1, 39°.35N×71°.70E, mb3.1*
*SOME **08** 18:32:10.9, 39°.58N×72°.02E, h15km*
*NNC **08** 18:32:12.6±5.0, 39°.81N×71°.99E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=39.3km s-min=19.6km az=1.0*
ISC 08 18:32:07.7±1.1,**39°.50N**±0°.05×**71°.86E**±0°.03,**h10**km,**n28**,
σ2§**37**/50,**18C-19D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**0.05**	**250**	⇓*eP*		**Pg**	**18 32 07.5**	**-2.5**
DRK				⇓*eS*		**Sg**	**18 32 10.8**	**-0.9**
	baz=31							
BTK	**Batken**	**0.98**	**305**	⇑*iP*		**Pg**	**18 32 22.8**	**-3.7**
BTK	baz=17			⇑*iS*		**Sg**	**18 32 36.6**	**-2.7**
	baz=17							
OHH	**Osh**	**1.25**	**34**	⇓*iP*		**Pn**	**18 32 30.9**	**-0.4**
OHH	baz=35			⇓*iS*		**Sn**	**18 32 51.0**	**+2.8**
	baz=35							
ARSB	**Arslanbob**	**2.02**	**25**	⇓*iP*		**Pb**	**18 32 43.7**	**-0.8**
	baz=26							
ARSB				⇓*iS*		**Sg**	**18 33 12.2**	**-0.3**
	baz=26							
TRKS	**Terek-Say**	**2.10**	**345**	⇑*iP*		**Pn**	**18 32 43.1**	**0.0**
	baz=49							
TRKS				⇑*iS*		**Sb**	**18 33 11.1**	**-1.2**
	baz=49							
ARK	**Arkit**	**2.30**	**2**	⇑*iP*		**Pn**	**18 32 47.4**	**+1.6**
	baz=5.0							
ARK				⇑*iS*		**Sb**	**18 33 18.5**	**+0.6**
	baz=5.0							
IUG	**Iuzhnay**	**2.99**	**333**	Pg		**Pb**	**18 33 01.4**	**+0.3**
IUG				Lg		**Lg**	**18 33 41.4**	
IUG	**Iuzhnay**	**2.99**	**333**	*eP*		**Pg**	**18 33 04.9**	**0.0**
	36nm,0.3s							
IUG				*eS*		**Sg**	**18 33 43.7**	**+0.1**
	90nm,0.6s							
ARLS	**Aral**	**3.02**	**38**	⇓*iP*		**Pn**	**18 32 57.7**	**+2.1**
	baz=38							
ARLS				⇓*iS*		**Sb**	**18 33 36.4**	**-2.1**
	baz=38							
MNAS	**Manas**	**3.03**	**9**	⇑*iP*		**Pn**	**18 32 57.7**	**+1.9**
	baz=11							
MNAS				⇑*iS*		**Sb**	**18 33 36.3**	**-2.5**
	baz=11							
UCH	**Uchtor**	**3.39**	**36**	⇑*iP*		**Pn**	**18 33 03.1**	**+2.0**
	baz=36							
UCH				⇑*iS*		**Sb**	**18 33 45.7**	**-3.9**
	baz=36							
MRKS	**Merke**	**3.41**	**17**	Pg		**Pb**	**18 33 05.5**	**-2.7**
	4.5nm,0.4s							
MRKS				Lg		**Lg**	**18 33 48.6**	
	14nm,0.5s							
MRKS	**Merke**	**3.41**	**17**	*eP*		**Pg**	**18 33 11.0**	**-1.9**
	4.2nm,0.5s							
MRKS				*eS*		**Sg**	**18 33 54.4**	**-2.6**
	11nm,0.5s							
EKS2	**Erkin-Say**	**3.48**	**24**	⇓*iP*		**Pn**	**18 33 04.0**	**+2.0**
	baz=25							
EKS2				⇓*iS*		**Sn**	**18 33 47.4**	**+4.1**
	baz=25							
NRN	**Naryn**	**3.70**	**57**	⇑*iP*		**Pn**	**18 33 06.8**	**+1.5**
	baz=56							
NRN				⇑*iS*		**Sn**	**18 33 51.9**	**+2.8**
	baz=56							
AAK	**Ala-Archa**	**3.72**	**32**	⇓*eP*		**Pn**	**18 33 07.5**	**+2.2**
	baz=32							
AAK				⇓*iS*		**Sn**	**18 33 53.2**	**+4.0**
	baz=32							
KK31	**Karatay Array**	**3.74**	**345**	⇓Pg		**Pg**	**18 33 18.9**	**-0.4**
	3.2nm,0.5s,baz=165,slow=15,SNR=12							
KK31				⇑Lg		**Lg**	**18 34 07.8**	
	7.8nm,0.5s,baz=160,slow=29,SNR=9.3							
KKAR	**Karatay Array**	**3.74**	**345**	⇓*iP*		**Pn**	**18 33 06.8**	**+1.3**
	baz=47							
KKAR				⇓*iS*		**Sn**	**18 33 51.9**	**+2.2**
	baz=47							
FRU1	**Bishkek**	**3.92**	**31**	⇑*iP*		**Pn**	**18 33 10.2**	**+2.3**
	baz=32							
FRU1				⇑*iS*		**Sn**	**18 33 57.9**	**+3.9**
	baz=32							
CHMS	**Chumysh**	**4.12**	**31**	⇓*iP*		**Pn**	**18 33 13.0**	**+2.3**
	baz=31							
CHMS				⇓*iS*		**Sn**	**18 34 02.8**	**+3.8**
	baz=31							
TKM2	**Tokmak 2**	**4.43**	**38**	⇑Pn		**Pn**	**18 33 19.2**	**+4.1**
	1.2nm,0.4s							
TKM2				⇓Pg		**Pg**	**18 33 31.5**	**-1.1**
	4.1nm,0.8s							
TKM2				⇓Sn		**Sn**	**18 34 06.1**	**-0.9**
	3.3nm,0.7s							
TKM2				⇑Lg		**Lg**	**18 34 29.8**	
	6.7nm,0.8s							
DGS	**Degeres**	**4.76**	**37**	*eP*		**Pg**	**18 33 37.2**	**-1.6**
	2.1nm,0.5s							
DGS				*eS*		**Sg**	**18 34 39.1**	**-1.4**
	5.7nm,0.8s							
KUU	**Kurty**	**5.53**	**36**	Pg		**Pb**	**18 33 45.1**	**+0.9**
	1.1nm,0.5s							
KUU				Lg		**Lg**	**18 34 57.9**	
	6.4nm,0.7s							
KUU	**Kurty**	**5.53**	**36**	*eP*		**Pg**	**18 33 50.8**	**-2.6**
	1.9nm,0.4s							
KUU				*eS*		**Sg**	**18 35 02.9**	**-2.2**
	6.4nm,0.7s							
KTBS	**Karatobe**	**5.55**	**39**	Pg		**Pb**	**18 33 46.3**	**+1.6**
	1.1nm,0.6s							
KTBS				Lg		**Lg**	**18 34 59.4**	
	5.0nm,0.7s							
KTBS	**Karatobe**	**5.55**	**39**	*eP*		**Pg**	**18 33 50.3**	**-3.6**
	0.9nm,0.6s							
KTBS				*eS*		**Sg**	**18 35 01.7**	**-4.1**
	5.0nm,0.7s							
AB31	**Akbulak array**	**12.94**	**323**	P		**Pn**	**18 35 12.4**	**+0.9**
	0.8nm,0.7s,baz=136,slow=13,SNR=10.0							
AKTO	**Aktyubinsk**	**14.66**	**323**	⇑P		**P**	**18 35 42.0**	**+0.7**
	1.3nm,0.8s							

*IDC **08** 18:33:26.9±0.6, 6°.08S×153°.98E, h0km, mb4.4/18, mbtmp4.5/21, ML3.2/3, MS4.3/54, Error ellipse: s-maj=21.7km s-min=13.6km az=94.0*
*MOS **08** 18:33:27.7±1.0, 6°.10S×154°.02E, h13km, mb5.2/27, Error ellipse: s-maj=11.2km s-min=7.4km az=125.8*
*BJI **08** 18:33:27.0±0.0, 6°.10S×153°.90E, h10km, mb4.8/67, mB5.2/41, Ms4.8/39, Ms7 4.5/41*
*NEIC **08** 18:33:29.2±2.5, 6°.03S±0°.07×153°.99E±0°.08, h13km±4km, mb5.0/64, Error ellipse: s-maj=12.2km s-min=9.5km az=47.0*
*DJA **08** 18:33:33.7±1.5, 6°.3S±3°×15°.3E±°, h11km±10km, M4.9/20, mb4.8/20, mB6.1/3, MLv4.8/3, Mw(mB)5.8/3, MwMwp5.0/1, Mwp5.2/1*
*GCMT **08** 18:33:35.2±0.2, 6°.22S±0°.01×153°.81E±0°.01, h17km, MW5.1/113, Moment Tensor Solution. s69,c97; s113,c164; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.91±.12; Mθθ-2.30±.08; Mϕϕ-1.61±.09; Mrθ2.49±.22; Mθϕ1.71±.06; Mϕr-1.96±.24; Best double couple: Mo4.95200×10¹⁶ NP1:ϕs129.00000°, δ65.00000°, λ89.00000°. NP2:ϕs310.00000°, δ25.00000°, λ91.00000°. Principal axes: T 5.0570, Plg70.0000°, Azm37.0000°; N -0.2110, Plg0.0000°, Azm129.0000°; P -4.8460, Plg20.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 18:33:30.0±0.7,**6°.07S**±0°.04×**153°.93E**±0°.05,**h17**km±3km,
n258,σ1§73/255,**mb5.0**/87,**MS4.4**/71,**8C-9D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**2.57**	**317**			**Pn**	**18 34 10.3**	**-0.5**
RABL	**Rabaul**	**2.57**	**317**	P		**Pn**	**18 34 12.5**	**+1.7**
HNR	**Honiara**	**6.83**	**120**	Pn		**Pn**	**18 35 08.5**	**-0.9**
HNR	**Honiara**	**6.83**	**120**	P		**Pn**	**18 35 08.5**	**-0.9**
HNR	**Honiara**	**6.83**	**120**	Pn		**Pn**	**18 35 11.4**	**+1.9**
	39nm,0.3s,baz=354,slow=5.9,SNR=1.5							
HNR				Lg		**Lg**	**18 36 47.7**	
	23nm,0.3s,baz=308,slow=19,SNR=1.6							
PMG	**Port Moresby**	**7.49**	**243**	Pn		**Pn**	**18 35 19.3**	**+0.8**
PMG	**Port Moresby**	**7.49**	**243**	P		**Pn**	**18 35 21.1**	**+2.6**
PMG	**Port Moresby**	**7.49**	**243**	P		**Pn**	**18 35 21.0**	**+2.6**
PMG	**Port Moresby**	**7.49**	**243**	*deP*		**Pn**	**18 35 20.5**	**+2.0**
PMG	**Port Moresby**	**7.49**	**243**	Pn		**Pn**	**18 35 18.3**	**-0.2**
	5.6nm,0.3s,baz=45,slow=5.6,SNR=14							
PMG				Sn		**Sn**	**18 36 42.9**	**-0.2**
	5.7nm,0.3s,baz=3.3,slow=22,SNR=9.3							
PMG				LR		LR	18 38 37.4	
	comp=Z,3μm,18.3s,baz=44,slow=41							
	99nm,0.8s							
MANU	**Manus Island**	**7.67**	**301**	Pn		**Pn**	**18 35 21.6**	**+0.5**
COEN	**Coen**	**13.17**	**233**	Pn		**Pn**	**18 36 37.3**	**+0.8**
PATS	**Pohnpei**	**13.54**	**19**	Pn		**Pn**	**18 36 39.1**	**-2.3**
TV1H	**Townsville Har**	**14.84**	**207**	P		**P**	**18 37 07.6**	**+2.7**
SMPI	**Sarmi**	**15.71**	**284**	P		Pn	18 37 03.9	-6.8
	27nm,1.3s							
CTA	**Charters Tower**	**15.81**	**207**	P		**P**	**18 37 18.2**	**+2.6**
CTA	**Charters Tower**	**15.81**	**207**	Pn		**Pn**	**18 37 10.7**	**-1.2**
	0.2nm,0.3s,baz=64,slow=8.4,SNR=1.9							
CTA				LR		LR	18 43 23.0	
	comp=Z,2μm,18.5s,baz=24,slow=38							
	8.3nm,1.1s							
CTAO	**Charters Tower**	**15.81**	**207**	Pn		**Pn**	**18 37 12.9**	**+1.0**
CTAO	**Charters Tower**	**15.81**	**207**	P		**P**	**18 37 18.3**	**+2.6**
CTAO	**Charters Tower**	**15.81**	**207**	P		**Pn**	**18 37 12.9**	**+1.0**
CTAO				pmax		pmax		
	comp=Z,29nm,0.9s							
KOUNC	**Koumac, New Ca**	**17.55**	**146**	P		**P**	**18 37 33.8**	**-1.2**
EIDS	**Eidsvold**	**19.39**	**188**			**P**	**18 37 53.4**	**-1.7**
DZM	**Mont Dzumac**	**19.98**	**144**	P		**Pn**	**18 38 02.2**	**-1.3**
DZM				IAmb		IAmb	18 38 08.4	
	comp=Z,48nm,1.2s							
DZM	**Mont Dzumac**	**19.98**	**144**	*eP*		**P**	**18 38 01.4**	**-0.4**
	comp=Z,119nm,1.2s							
DZM				*eS*		**Sn**	**18 41 50.8**	**+2.7**
DZM				*eLR*		LR	18 42 45.0	
	comp=Z,2μm,21.2s							
DZM	**Mont Dzumac**	**19.98**	**144**	P		**P**	**18 38 01.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=284,slow=18,SNR=3.9							
	comp=Z,18nm,1.0s							
OUENC	**Ouen Island, N**	**20.48**	**144**	P		**P**	**18 38 07.0**	**-0.1**
OUENC				IAmb		IAmb	18 38 24.0	
	comp=Z,55nm,1.3s							
GUMO	**Guam**	**21.50**	**335**	LR		LR	18 47 27.9	
	comp=Z,399nm,18.1s,baz=141,slow=39							
FAKI	**Fak Fak**	**21.84**	**277**	P		**P**	**18 38 19.8**	**-2.1**
SAUI	**Saumlaki**	**22.54**	**264**	P		**P**	**18 38 26.7**	**-2.7**
SWI	**Sorong**	**23.21**	**282**	P		**P**	**18 38 29.5**	**-6.9**
	comp=Z,36nm,1.3s							
WB0	**Warramunga Arr**	**23.37**	**233**	P		**P**	**18 38 35.9**	**-2.1**
WB0				IAmb		IAmb	18 39 01.5	
	comp=Z,44nm,1.3s							
MTN	**Manton Dam**	**23.46**	**252**	P		**P**	**18 38 38.7**	**-0.2**
MTN				IAmb		IAmb	18 38 38.7	
	comp=Z,113nm,1.7s							
WRAB	**Tennant Creek**	**23.50**	**232**	P		**P**	**18 38 38.4**	**-0.8**
WRAB	**Tennant Creek**	**23.50**	**232**	P		**P**	**18 38 38.4**	**-0.8**
WRAB				pmax		pmax		
	comp=Z,21nm,1.2s							
WB2	**Warramunga Arr**	**23.50**	**232**	P		**P**	**18 38 38.1**	**-1.1**
WRA	**Warramunga Arr**	**23.51**	**232**	P		**P**	**18 38 37.7**	**-1.7**
WRA	**Warramunga Arr**	**23.51**	**232**	*i* P		**P**	**18 38 42.0**	**+2.7**
WRA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
WRA	**Warramunga Arr**	**23.51**	**232**	P		**P**	**18 38 37.6**	**-1.7**
	comp=Z,3.4nm,0.8s,baz=50,slow=10.0,SNR=4.5							
WRA				PcP		**PcP**	**18 42 26.0**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=56,slow=2.4,SNR=3.8							
WRA				S		**S**	**18 42 50.1**	**-2.6**
	comp=Z,4.2nm,1.3s,baz=54,slow=15,SNR=4.8							
	comp=Z,3.4nm,0.8s							
BNDI	**Bandanaira**	**23.98**	**273**	P		**P**	**18 38 41.0**	**-2.8**
	comp=Z,238nm,1.0s							
ARMA	**Armidale**	**24.32**	**185**	P		**P**	**18 38 45.8**	**-1.2**
ARMA				IAmb		IAmb	18 39 04.0	
	comp=Z,31nm,1.4s							
INKA	**Innaminka**	**24.93**	**209**	P		**P**	**18 38 54.1**	**+1.7**
LHI	**Lord Howe Isla**	**25.77**	**170**	P		**P**	**18 38 59.3**	**-0.7**
AS31	**Alice Springs**	**26.02**	**226**	P		**P**	**18 39 00.2**	**-2.3**
ASAR	**Alice Springs**	**26.03**	**226**	P		**P**	**18 39 01.2**	**-1.3**
ASAR	**Alice Springs**	**26.03**	**226**	P		**P**	**18 39 01.2**	**-1.3**
ASAR	**Alice Springs**	**26.03**	**226**	P		**P**	**18 39 01.6**	**-0.9**
	comp=Z,14nm,0.8s,baz=60,slow=8.7,SNR=78							
ASAR				PcP		**PcP**	**18 42 31.0**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=49,slow=2.5,SNR=5.1							
ASAR				ScP		**ScP**	**18 46 11.5**	**+1.8**
	comp=Z,0.6nm,0.9s,baz=48,slow=3.2,SNR=3.0				

JOW Kunigami 41.08 324 LR LR 18 55 01.9
comp=Z,373nm,21.7s,baz=134,slow=32
JHJ Hachijo jima 2 41.23 342 LR LR 18 59 46.5
comp=Z,218nm,18.0s,baz=180,slow=38
MORW Morawa 42.46 233 P **P** **18 41 22.5 -1.8**
MORW IAmb IAmb 18 41 27.8
comp=Z,15nm,0.8s
NWAO Narrogin (SRO) 43.33 227 LR LR 19 00 06.3
comp=Z,1µm,18.2s,baz=36,slow=37
SSLB Suanglung 43.77 314 P **P** **18 41 35.3 +0.3**
JNU Nakatsue 44.70 332 P **P** **18 41 41.9 -0.5**
JNU IAmb IAmb 18 41 43.9
comp=Z,21nm,0.9s
JNU Nakatsue 44.70 332 LR LR 18 59 14.7
comp=Z,168nm,19.1s,baz=154,slow=35
MJAR Matsushiro Arr 44.88 342 P **P** **18 41 41.8 -1.9**
comp=Z,0.6nm,0.4s,baz=95,slow=9.9,SNR=1.7
MJAR LR LR 19 00 11.8
comp=Z,235nm,18.6s,baz=169,slow=36
comp=Z,0.6nm,0.4s
LEM Lembang 46.02 266 LR LR 19 06 17.1
comp=Z,99nm,18.3s,baz=164,slow=43
QZH Quanzhou 46.18 313 *e*P **P** **18 41 55.9 +1.8**
RAR Rarotonga 47.24 113 LR LR 18 59 43.1
comp=Z,175nm,19.7s,baz=300,slow=33
TJN Taejon 49.02 331 P **P** **18 42 15.8 -0.2**
TJN Taejon 49.02 331*c i*P **P** **18 42 16.0 0.0**
KSRS Korea Array 49.64 333 P **P** **18 42 20.3 -0.4**
comp=Z,4.6nm,0.8s,baz=144,slow=8.4,SNR=20
KSRS LR LR 19 02 17.8
comp=Z,109nm,19.0s,baz=140,slow=35
comp=Z,4.6nm,0.8s
KSAR Wonju Array Be 49.64 333 P **P** **18 42 20.1 -0.6**
KSAR Wonju Array Be 49.64 333 P **P** **18 42 20.2 -0.6**
QIZ Qiongzhong 50.08 301 P **P** **18 42 24.7 +0.3**
QIZ S **S** **18 49 36.9 +1.5**
QIZ LR LR
comp=Z,290nm,7.1s
QIZ LR LR
comp=Z,240nm,12.6s
QIZ LR LR
comp=Z,320nm,11.6s
INCN Inchon 50.26 332 P **P** **18 42 24.1 -1.4**
INCN Inchon 50.26 332 P **P** **18 42 24.1 -1.4**
INCN pmax pmax
comp=Z,44nm,1.1s
NJ2 Nanjing 50.53 321 *e*P **P** **18 42 28.0 +0.4**
NJ2 pP **pP** **18 42 30.8 +0.1**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 LR LR
comp=Z,430nm,14.7s
NJ2 LR LR
comp=Z,250nm,14.7s
NJ2 LR LR
comp=Z,460nm,20.4s
ASAJ Asahikawa 50.99 350 LR LR 19 01 51.3
comp=Z,276nm,20.9s,baz=174,slow=33
YSS Yuzh-Sakhalins 53.72 351 *e*P **P** **18 42 50.8 -0.2**
YSS *e*S S 18 50 15.7 -8.7
YSS *e*SS **SKiKP** **18 53 58.4 -6.8**
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=Z,300nm,13.0s
USRK Ussuriysk Ar. 53.81 341 P **P** **18 42 51.5 -0.2**
comp=Z,2.7nm,0.7s,baz=181,slow=9.5,SNR=5.6
USRK LR LR 19 02 04.9
comp=Z,126nm,21.6s,baz=151,slow=32
comp=Z,2.7nm,0.7s
KULM Kulim 54.38 281 P **P** **18 42 56.4 -0.1**
KULM IAmb IAmb 18 44 40.5
comp=Z,37nm,1.6s
TIA Tai'an 54.40 323 P **P** **18 42 56.4 +0.2**
TIA pmax pmax
comp=Z,8.0nm,0.7s
MDJ Mudanjiang 55.00 339 P **P** **18 43 01.3 +0.9**
MDJ PP **PP** **18 45 05.0 +1.2**
MDJ S **S** **18 50 46.5 +4.7**
MDJ ScS **ScS** **18 52 50.7 +1.7**
MDJ pmax pmax
comp=Z,12nm,1.7s
MDJ pmax pmax
comp=Z,150nm,10.3s
MDJ LR LR
comp=Z,230nm,16.8s
MDJ LR LR
comp=Z,170nm,16.5s
MDJ LR LR
comp=Z,270nm,18.9s
ENH Enshi 55.84 313 P **P** **18 43 06.6 -0.2**
CN2 Changchun 55.91 335 *e*P **P** **18 43 08.0 +1.0**
CN2 *e*S **S** **18 50 50.0 -4.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,160nm,12.0s
CN2 LR LR
comp=Z,170nm,12.0s
GYA Guiyang 56.06 307 ⇓P **P** **18 43 10.9 +2.4**
GYA S **S** **18 51 00.2 +3.3**
GYA pmax pmax
comp=Z,8.0nm,1.0s
GYA pmax pmax
comp=Z,97nm,5.8s
GYA LR LR
comp=Z,290nm,16.8s
GYA LR LR
comp=Z,330nm,19.5s
GYA LR LR
comp=Z,390nm,14.8s
SRIT Nakonsritamara 56.09 285 P **P** **18 43 06.8 -2.0**
SLVN Son La 56.11 301 P **P** **18 43 07.7 -1.2**
LYN LuoYang 56.23 319 ⇓P **P** **18 43 11.6 +2.1**
LYN S **S** **18 50 58.7 0.0**
LYN pmax pmax
comp=Z,29nm,0.6s
LYN pmax pmax
comp=Z,180nm,7.9s
LYN LR LR
comp=Z,320nm,17.2s
LYN LR LR
comp=Z,580nm,15.8s
LYN LR LR
comp=Z,800nm,21.1s
PPT Papeete 56.27 107 LR LR 19 05 54.1
comp=Z,155nm,18.2s,baz=228,slow=35
PPT2 Papeete2 56.27 107 *e*P **P** **18 43 09.3 -0.9**
comp=Z,48nm,25.8s
PPT2 *e*S **S** **18 50 56.5 -3.4**
comp=Z,64nm,24.5s
PPT2 *e*SS **SS** **18 54 51.9 +5.0**
comp=Z,74nm,26.8s
PPT2 *e*LR LR 18 59 34.4
comp=Z,238nm,22.2s
PPT2 *e*LR LR 18 59 38.0
comp=Z,219nm,23.2s
HNS HongShan 56.63 323 ⇑P **P** **18 43 13.2 +0.9**
HNS S **S** **18 51 07.4 +3.6**
HNS pmax pmax
comp=Z,31nm,1.5s
HNS LR LR
comp=Z,270nm,19.1s
HNS LR LR
comp=Z,320nm,15.9s
BNX BinXian 56.76 338 ⇓P **P** **18 43 12.5 -0.5**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,130nm,6.1s
TBI Tubuai 57.01 114 *e*LQ LQ 18 57 23.4
comp=Z,3µm,29.0s
TBI *e*LR LR 18 59 55.5
comp=Z,2µm,23.2s
BJT Baijiatuau 57.56 326 P **P** **18 43 19.1 +0.4**
BJT Baijiatuau 57.56 326 P **P** **18 43 19.2 +0.4**
BJT pmax pmax
comp=Z,7.0nm,1.0s
BJI Beijing 57.57 326 P **P** **18 43 19.6 +0.8**
BJI S **S** **18 51 13.9 -2.2**
BJI pmax pmax
comp=Z,3.0nm,1.1s
BJI LR LR
comp=Z,110nm,20.3s
BJI LR LR
comp=Z,93nm,20.0s
BJI LR LR
comp=Z,140nm,21.7s
XAN Xi'an 58.31 316 P **P** **18 43 25.9 +1.6**
XAN pP pP 18 43 30.1 +2.6
XAN S **S** **18 51 29.2 +3.0**
XAN pmax pmax
comp=Z,33nm,1.8s
XAN LR LR
comp=Z,440nm,20.6s
XAN LR LR
comp=Z,600nm,21.0s
XAN LR LR
comp=Z,940nm,20.2s
KLR Kul'dur 58.38 343 ⇓*i*P **P** **18 43 25.2 +0.9**
KLR pmax pmax
comp=Z,11nm,1.4s
KLR Kul'dur 58.38 343 LR LR 19 07 05.3
comp=Z,128nm,20.8s,baz=163,slow=35
KMI Kunming 58.63 304 ⇑P **P** **18 43 28.3 +1.4**
KMI S **S** **18 51 32.0 +1.0**
KMI pmax pmax
comp=Z,9.0nm,1.2s
KMI LR LR
comp=Z,230nm,19.9s
KMI LR LR
comp=Z,230nm,19.2s
KMI LR LR
comp=Z,200nm,24.0s
CRAI Chiangrai 58.76 298 P **P** **18 43 28.1 +0.4**
CRAI IAmb IAmb 18 43 44.5
comp=Z,19nm,1.4s
PETK Petropavlovsk- 59.04 3 P **P** **18 43 28.1 -0.8**
comp=Z,7.9nm,1.0s,baz=199,slow=12,SNR=3.9
PETK LR LR 19 04 49.8
comp=Z,162nm,21.6s,baz=190,slow=32
comp=Z,7.9nm,1.0s
CMAR Chiang Mai Arr 59.44 295 P **P** **18 43 32.1 -0.2**
CMAR Chiang Mai Arr 59.44 295 *i*P **P** **18 43 35.0 +2.7**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 59.44 295 P **P** **18 43 32.7 +0.4**
comp=Z,2.5nm,0.9s,baz=109,slow=5.0,SNR=17
CMAR LR LR 19 07 47.0
comp=Z,70nm,20.7s,baz=145,slow=35
comp=Z,2.5nm,0.9s
CHTO Chiang Mai 59.55 296 P **P** **18 43 32.5 -0.5**
CHTO IAmb IAmb 18 44 02.8
comp=Z,11nm,1.4s
CHTO Chiang Mai 59.55 296 P **P** **18 43 32.6 -0.5**
CHTO pmax pmax
comp=Z,11nm,1.4s
PZH PanZhiHua 60.02 305 P **P** **18 43 37.0 +0.6**
PZH pP **pP** **18 43 40.1 +0.5**
PZH PcP **PcP** **18 44 26.2 +3.8**
PZH S **S** **18 51 48.6 -0.2**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,150nm,8.7s
PZH LR LR
comp=Z,150nm,18.0s
PZH LR LR
comp=Z,210nm,17.7s
PZH LR LR
comp=Z,290nm,20.8s
XLT XiLinHaoTe 60.33 329 *e*P **P** **18 43 38.7 +0.6**
XLT pmax pmax
comp=Z,12nm,0.7s
XLT pmax pmax
comp=Z,190nm,7.6s
CD2 Chengdu 60.41 311 P **P** **18 43 41.4 +2.5**
CD2 S **S** **18 51 51.5 -2.0**
CD2 ScS SKKSac 18 53 24.8 -4.4
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,260nm,6.3s
CD2 LR LR
comp=Z,460nm,17.0s
HEH HeiHe 60.62 341 *e*P **P** **18 43 39.9 +0.1**
HEH pmax pmax
comp=Z,8.0nm,0.8s
HEH pmax pmax
comp=Z,210nm,5.5s
HEH LR LR
comp=Z,120nm,15.3s
HEH LR LR
comp=Z,160nm,13.7s
HEH LR LR
comp=Z,290nm,14.1s
HHC Hu-ho-hao-te 60.73 324 *e*P **P** **18 43 42.4 +1.5**
HHC sP pwP 18 43 53.9 +0.3
HHC PcP **PcP** **18 44 22.4 -2.5**
HHC S **S** **18 52 03.4 +6.1**
HHC ScS SKKSac 18 53 25.8 -5.5
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,98nm,5.1s
HHC LR LR
comp=Z,180nm,21.0s
HHC LR LR
comp=Z,280nm,15.1s
HHC LR LR
comp=Z,300nm,20.1s
SHEM Shemya Is, Ala 61.03 14 LR LR 19 06 43.7
comp=Z,333nm,21.1s,baz=152,slow=33
BTO Baotou 61.49 323 *e*P **P** **18 43 48.9 +2.9**
BTO PP **PP** **18 46 03.6 +2.0**
BTO S **S** **18 52 08.4 +1.4**
BTO ScS **SKKSac** **18 53 35.8 -1.3**
BTO pmax pmax
comp=Z,30nm,1.0s
BTO pmax pmax
comp=Z,430nm,6.3s
BTO LR LR
comp=Z,460nm,16.4s
BTO LR LR
comp=Z,430nm,13.2s
BTO LR LR
comp=Z,520nm,13.7s
TNCH TengChong 62.10 302 P **P** **18 43 52.4 +1.8**
TNCH S **S** **18 52 10.7 -4.7**
TNCH pmax pmax
comp=Z,8.0nm,1.2s
TNCH pmax pmax
comp=Z,110nm,5.1s
TNCH LR LR
comp=Z,110nm,11.8s
TNCH LR LR
comp=Z,130nm,15.7s
TNCH LR LR
comp=Z,220nm,19.2s
LZH Lanzhou 62.92 316 *e*P **P** **18 43 57.6 +1.8**
LZH pP pwP 18 44 03.0 -5.5
LZH S **S** **18 52 27.4 +2.0**
LZH SS **SS** **18 56 29.9 -1.1**
LZH pmax pmax
comp=Z,34nm,1.4s
LZH pmax pmax
comp=Z,280nm,6.5s
LZH LR LR
comp=Z,270nm,18.1s
LZH LR LR
comp=Z,270nm,18.1s
LZH LR LR
comp=Z,410nm,18.9s
ZEA Zeya 63.68 343 *e*P **P** **18 44 01.6 +1.3**
ZEA *e* 18 44 32.3
ZEA pmax pmax
comp=Z,10.0nm,1.2s
TAOE Nuku Hiva Isla 65.35 97 *e*LR LR 19 03 44.2
comp=Z,221nm,24.5s
MA2 Magadan 65.48 358 P **P** **18 44 10.9 -1.1**
MA2 Magadan 65.48 358 P **P** **18 44 10.9 -1.1**
MA2 pmax pmax
comp=Z,49nm,1.8s
MA2 Magadan 65.48 358 LR LR 19 10 40.4
comp=Z,48nm,20.1s,baz=158,slow=34
GTA Gaotai 67.35 317 P **P** **18 44 26.3 +1.8**
GTA S **S** **18 53 22.9 +3.3**
GTA pmax pmax
comp=Z,20nm,1.7s
GTA pmax pmax
comp=Z,160nm,5.8s
GTA LR LR
comp=Z,190nm,17.8s
GTA LR LR
comp=Z,250nm,18.9s
GTA LR LR
comp=Z,300nm,19.3s
ULN Ulaanbaatar 67.66 328 P **P** **18 44 26.2 -0.2**
ULN IAmb IAmb 18 44 29.5
comp=Z,11nm,1.0s
ULN Ulaanbaatar 67.66 328*c i*P **P** **18 44 27.6 +1.3**
ULN pmax pmax
comp=Z,12nm,1.0s
SHL Shillong 67.92 301 P **P** **18 44 28.3 -0.1**
SHL Shillong 67.92 301 P **P** **18 44 28.3 -0.1**
SHL pmax pmax
comp=Z,13nm,0.4s
SONM Songino Array 67.99 328 P **P** **18 44 29.2 +0.8**
SONM IAmb IAmb 18 44 31.4
comp=Z,11nm,1.2s
SONM Songino Array 67.99 328 P **P** **18 44 29.2 +0.8**
SONM pmax pmax
comp=Z,11nm,1.2s
SONM Songino Array 67.99 328 P **P** **18 44 28.9 +0.5**
comp=Z,3.4nm,0.7s,baz=140,slow=5.8,SNR=23
SONM LR LR 19 12 46.6
comp=Z,242nm,21.2s,baz=149,slow=35
comp=Z,3.4nm,0.7s
LSA Lhasa 69.88 305 P **P** **18 44 39.9 -1.1**
LSA Lhasa 69.88 305 P **P** **18 44 39.9 -1.1**
LSA pmax pmax
comp=Z,6.0nm,1.0s
YAK Yakutsk 70.44 348 LR LR 19 14 36.8
comp=Z,72nm,20.8s,baz=120,slow=35
ZAK Zakamensk 71.16 328 *e*P **P** **18 44 48.7 +0.9**
ZAK pmax pmax
comp=Z,13nm,1.1s
VNDA Vanda 71.53 178 P **P** **18 44 50.1 +0.5**
comp=Z,2.3nm,0.8s,baz=322,slow=9.0,SNR=3.8
VNDA LR LR 19 10 12.6
comp=Z,104nm,18.9s,baz=329,slow=31
comp=Z,2.3nm,0.8s
MOY Mondy 73.08 329 *e*P **P** **18 45 00.4 +1.1**
MOY pmax pmax
comp=Z,29nm,2.6s
PALK Pallekele 74.25 279 LR LR 19 22 47.9
comp=Z,74nm,18.5s,baz=203,slow=40
BILL Bilibino 74.45 5 P **P** **18 45 06.3 -0.6**
BILL Bilibino 74.45 5 *i*P **P** **18 45 07.0 +0.1**
KDAK Kodiak Island 76.80 26 LR LR 19 17 50.1
comp=Z,220nm,18.8s,baz=257,slow=35
WMQ Urumqi 77.43 317 *e*P **P** **18 45 25.5 +1.0**
HYB Hyderabad 77.97 289 *e*P **P** **18 45 27.5 -0.6**
HYB *es*P **sP** **18 45 33.3 +0.7**
HYB *e*S **S** **18 55 21.9 +0.5**
TIXI Tiksi 79.30 352 LR LR 19 17 52.7
comp=Z,107nm,21.9s,baz=197,slow=34
DGZ Jazzator, Alta 79.77 323*c i*P **P** **18 45 38.3 +0.9**
DGZ pmax pmax
comp=Z,19nm,1.0s
ZSN Zaisan 80.56 320 *e*P **P** **18 45 42.8 +1.3**
comp=Z,29nm,1.5s,baz=320
ZSN Zaisan 80.56 320 *e*P **P** **18 45 42.8 +1.3**
ZSN pmax pmax
comp=Z,29nm,1.5s
RND Reindeer 81.46 22 P **P** **18 45 47.0 +1.0**
RND IAmb IAmb 18 46 36.1
comp=Z,35nm,2.0s
RND Reindeer 81.46 22 P **P** **18 45 47.0 +1.0**
RND pmax pmax
comp=Z,35nm,2.0s
MK31 Makanchi Array 82.02 319 P **P** **18 45 49.6 +0.3**
MK31 IAmb IAmb 18 45 52.0
comp=Z,11nm,1.0s
MK31 Makanchi Array 82.02 319*c i*P **P** **18 45 50.1 +0.8**
MKAR Makanchi Array 82.02 319 P **P** **18 45 49.0 -0.3**
MKAR Makanchi Array 82.02 319 *i*P **P** **18 45 50.0 +0.7**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 82.02 319 P **P** **18 45 49.7 +0.4**
comp=Z,5.4nm,0.7s,baz=103,slow=5.8,SNR=59
MKAR LR LR 19 22 13.3
comp=Z,182nm,19.7s,baz=103,slow=36
comp=Z,5.4nm,0.7s
MAKZ Makanchi 82.23 319 P **P** **18 45 51.0 +0.6**
MAKZ IAmb IAmb 18 45 53.1
comp=Z,18nm,1.1s
MAKZ Makanchi 82.23 319 P **P** **18 45 51.0 +0.6**
MAKZ pmax pmax
comp=Z,19nm,1.1s
ZAA0 Zalesovo Array 82.83 326 IAmb IAmb 18 45 57.7
comp=Z,14nm,1.2s
ZALV Zalesovo Beam 82.83 326 P **P** **18 45 52.7 -0.6**
ZALV Zalesovo Beam 82.83 326 *i*P **P** **18 45 53.5 +0.2**
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV Zalesovo Beam 82.83 326 P **P** **18 45 52.9 -0.4**
comp=Z,5.2nm,0.7s,baz=112,slow=5.5,SNR=26
ZALV LR LR 19 23 01.0
comp=Z,118nm,19.8s,baz=99,slow=36
comp=Z,5.2nm,0.7s
ILAR Eielson Array 82.91 22 P **P** **18 45 52.1 -1.4**
comp=Z,1.1nm,1.0s,baz=250,slow=5.1,SNR=7.9
ILAR LR LR 19 22 11.1
comp=Z,414nm,19.0s,baz=238,slow=35
comp=Z,1.1nm,1.0s
SHLS Shalkode 82.92 315 *e*P **P** **18 45 53.6 -0.6**
comp=Z,24nm,2.2s,baz=315
SHLS Shalkode 82.92 315 *e*P **P** **18 45 53.6 -0.6**
SHLS pmax pmax
comp=Z,24nm,2.2s
UZB Uzynbulak 83.23 315 *e*P **P** **18 45 56.6 +0.8**
comp=Z,36nm,2.6s,baz=315
UZB Uzynbulak 83.23 315 *e*P **P** **18 45 56.6 +0.8**
UZB pmax pmax
comp=Z,36nm,2.6s
J25K Salcha River, 83.39 22 IAmb IAmb 18 46 35.5
comp=Z,8.9nm,1.3s
KPKS Kokpek 83.55 315 *e*P **P** **18 45 58.6 +1.1**
baz=315
KPKS Kokpek 83.55 315 *e*P **P** **18 45 58.5 +1.1**
SATY Saty 83.64 314 *e*P **P** **18 45 58.9 +0.8**
comp=Z,15nm,2.2s,baz=314
SATY Saty 83.64 314 *e*P **P** **18 45 58.8 +0.8**
SATY pmax pmax
comp=Z,15nm,2.2s
QSPA South Pole Qui 83.90 180 P **P** **18 45 59.1 +0.3**
comp=Z,12nm,0.7s,baz=11,slow=2.9,SNR=14
QSPA LR LR 19 20 21.8
comp=Z,97nm,20.3s,baz=14,slow=34
comp=Z,12nm,0.7s
TDK Taldyqorghan 84.13 316 *e*P **P** **18 46 01.7 +1.4**
baz=316
TDK Taldyqorghan 84.13 316 *e*P **P** **18 46 01.7 +1.4**
ARXS Arharly 84.33 315 *e*P **P** **18 46 02.1 +0.7**
SEM Semipalatinsk 84.37 322 *e*P **P** **18 46 02.0 +0.3**
baz=322
SEM Semipalatinsk 84.37 322 *e*P **P** **18 46 01.9 +0.3**
KSH Kashi 84.61 311 P **P** **18 46 06.7 +3.7**
KSH sP pwP 18 46 15.6 0.0
KSH pmax pmax
comp=Z,11nm,0.9s
MDOK Medeo 84.63 314 *e*P **P** **18 46 04.3 +1.3**
baz=314
MDOK *e*S **SKSac** **18 56 27.6 +0.9**
baz=314
MDOK Medeo 84.63 314 *e*P **P** **18 46 04.3 +1.3**
MDOK *e*S **SKSac** **18 56 27.6 +0.9**
TNSS Tian-Shan 84.68 314 *e*P **P** **18 46 04.9 +1.2**
baz=314
TNSS Tian-Shan 84.68 314 *e*P **P** **18 46 04.8 +1.2**
CHKK Chushkaly 84.84 315 *e*P **P** **18 46 04.2 +0.3**
baz=315
CHKK Chushkaly 84.84 315 *e*P **P** **18 46 04.1 +0.3**
MAW Mawson 84.84 203 LR LR 19 20 37.5
comp=Z,166nm,20.9s,baz=91,slow=33
NRN Naryn 85.00 312 P **P** **18 46 05.2 0.0**
NRN Naryn 85.00 312 P **P** **18 46 05.2 0.0**
NRN pmax pmax
comp=Z,30nm,1.6s
KUU Kurty 85.30 315 *e*P **P** **18 46 06.6 +0.4**
baz=315
KUU *e*S **SKSac** **18 56 30.9 +0.2**
baz=315
KUU Kurty 85.30 315 *e*P **P** **18 46 06.6 +0.4**
KUU *e*S **SKSac** **18 56 30.9 +0.2**
KURK Kurchatov 85.46 322 P **P** **18 46 06.4 -0.3**
KURK Kurchatov 85.46 322⇑ *e*P **P** **18 46 06.8 0.0**

KURK				pmax	pmax		
	comp=Z,41nm,1.7s						
KURBB	**Kurchatov Arra**	**85.49**	**322**	P	**P**	**18 46 06.8**	**-0.1**
	comp=Z,5.1nm,0.8s,baz=112,slow=3.5,SNR=52						
KURBB				LR	LR	19 24 41.3	
	comp=Z,152nm,20.6s,baz=158,slow=36						
	comp=Z,5.1nm,0.8s						
SKAG	**Skagway**	**85.57**	**29**	P	**P**	**18 46 07.8**	**+0.7**
TKM2	**Tokmak 2**	**85.62**	**314**	P	**P**	**18 46 10.8**	**+2.7**
	SNR=7.9						
CHMS	**Chumysh**	**86.24**	**314**	P	**P**	**18 46 13.4**	**+2.5**
	SNR=6.9						
UCH	**Uchtor**	**86.26**	**313**	P	**P**	**18 46 12.4**	**+0.9**
	SNR=9.7						
AAK	**Ala-Archa**	**86.35**	**313**	P	**P**	**18 46 11.2**	**-0.4**
AAK				IAmb	IAmb	18 46 14.6	
	comp=Z,18nm,1.4s						
AAK	**Ala-Archa**	**86.35**	**313**	*c iP*	**P**	**18 46 12.6**	**+1.0**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
AAK	**Ala-Archa**	**86.35**	**313**	LR	LR	19 25 48.6	
	comp=Z,177nm,20.1s,baz=110,slow=36						
USP	**Ospenovka**	**86.48**	**314**	P	**P**	**18 46 14.7**	**+2.6**
	SNR=7.3						
EKS2	**Erkin-Say**	**86.88**	**313**	P	**P**	**18 46 16.6**	**+2.5**
	SNR=6.8						
BTLS	**Baital**	**87.15**	**316**	*eP*	**P**	**18 46 16.2**	**+0.9**
	comp=Z,8.7nm,1.2s,baz=316						
BTLS	**Baital**	**87.15**	**316**	*eP*	**P**	**18 46 16.2**	**+0.9**
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BBB	**Bella Bella**	**87.42**	**37**	LR	LR	19 23 45.4	
	comp=Z,310nm,18.1s,baz=238,slow=34						
NRIK	**Noril'sk**	**87.52**	**341**	⇓*eP*	**P**	**18 46 17.5**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NRIK	**Noril'sk**	**87.52**	**341**	P	**P**	**18 46 17.0**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=134,slow=2.4,SNR=4.0						
NRIK				LR	LR	19 22 37.3	
	comp=Z,134nm,21.8s,baz=92,slow=34						
	comp=Z,1.4nm,0.4s						
DLBC	**Dease Lake**	**87.89**	**31**	LR	LR	19 24 13.6	
	comp=Z,128nm,18.1s,baz=276,slow=35						
BTK	**Batken**	**88.61**	**310**	IAmb	IAmb	18 46 25.8	
	comp=Z,13nm,1.2s						
DZA	**Taraz**	**88.69**	**313**	*eP*	**P**	**18 46 23.9**	**+1.2**
	baz=313						
DZA	**Taraz**	**88.69**	**313**	*eP*	**P**	**18 46 23.9**	**+1.2**
YBH	**Yreka Blue Hor**	**89.06**	**48**	LR	LR	19 24 22.7	
	comp=Z,500nm,18.0s,baz=292,slow=34						
INK	**Inuvik**	**89.23**	**21**	LR	LR	19 26 39.4	
	comp=Z,289nm,19.0s,baz=182,slow=36						
KK31	**Karatay Array**	**89.32**	**313**	P	**P**	**18 46 25.1**	**-0.6**
KK31				IAmb	IAmb	18 46 29.6	
	comp=Z,29nm,2.0s						
KK31	**Karatay Array**	**89.32**	**313**	P	**P**	**18 46 25.1**	**-0.6**
KK31				pmax	pmax		
	comp=Z,29nm,2.0s						
KKAR	**Karatay Array**	**89.32**	**313**	P	**P**	**18 46 24.7**	**-0.9**
KKAR				IAmb	IAmb	18 46 29.6	
	comp=Z,29nm,2.0s						
KKAR	**Karatay Array**	**89.32**	**313**	P	**P**	**18 46 24.7**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,29nm,2.0s						
IUG	**luzhnay**	**89.52**	**312**	*eP*	**P**	**18 46 27.2**	**+0.5**
	baz=312						
IUG	**luzhnay**	**89.52**	**312**	*eP*	**P**	**18 46 27.2**	**+0.5**
BRLS	**Boroldaу**	**89.80**	**313**	*eP*	**P**	**18 46 28.5**	**+0.6**
	comp=Z,18nm,2.9s,baz=313						
BRLS	**Boroldaу**	**89.80**	**313**	*eP*	**P**	**18 46 28.5**	**+0.6**
BRLS				pmax	pmax		
	comp=Z,18nm,2.9s						
CHM	**Chimkent**	**89.86**	**312**	*eP*	**P**	**18 46 29.2**	**+1.0**
	baz=312						
CHM	**Chimkent**	**89.86**	**312**	*eP*	**P**	**18 46 29.2**	**+1.0**
BVAR	**Borovoye Array**	**90.93**	**323**	P	**P**	**18 46 32.7**	**-0.2**
	comp=Z,11nm,0.9s,baz=103,slow=4.7,SNR=37						
BVAR				LR	LR	19 26 19.4	
	comp=Z,114nm,21.1s,baz=58,slow=35						
	comp=Z,11nm,0.9s						
BRVK	**Borovoye**	**91.00**	**323**	P	**P**	**18 46 32.2**	**-1.0**
BRVK				IAmb	IAmb	18 46 35.0	
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	**91.00**	**323**	*de*P	**P**	**18 46 32.2**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,15nm,1.1s						
NVAR	**Mina Array Bea**	**91.98**	**52**	P	**P**	**18 46 38.5**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=271,slow=4.3,SNR=4.4						
NVAR				LR	LR	19 25 38.7	
	comp=Z,288nm,18.0s,baz=284,slow=34						
	comp=Z,0.7nm,0.8s						
PFO	**Pinyon Flats O**	**92.99**	**57**	LR	LR	19 24 42.9	
	comp=Z,544nm,18.2s,baz=250,slow=33						
PMD	**Palm Desert**	**93.06**	**57**	P	**P**	**18 46 39.6**	**-3.7**
PMD				IAmb	IAmb	18 46 42.0	
	comp=Z,4.7nm,0.8s						
RPN	**Rapa Nui**	**93.23**	**118**	LR	LR	19 21 03.1	
	comp=Z,160nm,20.8s,baz=12,slow=31						
NEW	**Newport**	**93.78**	**42**	LR	LR	19 26 53.0	
	comp=Z,605nm,18.1s,baz=228,slow=34						
ELK	**Elko**	**94.54**	**50**	LR	LR	19 22 29.3	
	comp=Z,179nm,21.3s,baz=292,slow=31						
ELIB	**Princess Elisa**	**95.85**	**194**	*dP*	**P**	**18 46 54.4**	**-1.0**
YKA	**Yellowknife Ar**	**96.02**	**28**	LR	LR	19 31 46.6	
	comp=Z,160nm,18.0s,baz=308,slow=36						
ABKAR	**Akbulak array**	**97.16**	**319**	P	**P**	**18 46 58.6**	**-3.0**
LPIG	**La Paz**	**97.69**	**67**	LR	LR	19 26 44.6	
	comp=Z,350nm,18.7s,baz=226,slow=33						
ARU	**Arti**	**97.99**	**326**	*d iP*	**P**	**18 47 04.8**	**-0.4**
ARU						18 51 03.9	
ARU				S	**SKSac**	**18 57 42.5**	**+0.4**
ARU	**Arti**	**97.99**	**326**	LR	LR	19 32 21.4	
	comp=Z,236nm,20.1s,baz=94,slow=36						
GEYT	**Alibeck**	**98.28**	**307**	LR	LR	19 33 28.8	
	comp=Z,89nm,19.4s,baz=117,slow=37						
PDAR	**Pinedale Array**	**98.86**	**48**	LR	LR	19 28 37.2	
	comp=Z,287nm,18.5s,baz=284,slow=34						
CLL	**Collm**	**124.50**	**331**	*e*PKIKP	**PKiKP**	**18 52 30.0**	**+1.3**
CLL	**Collm**	**124.50**	**331**	*e*PKPdf	**PKiKP**	**18 52 30.0**	**+1.3**
GERES	**GERESS Array B**	**125.72**	**329**	PKP	**PKiKP**	**18 52 31.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=3.8						
BDFB	**Brasilia**	**149.38**	**135**	PKPbc	**PKPdf**	**18 53 16.4**	**+1.5**
	comp=Z,5.6nm,0.6s,baz=230,slow=3.3,SNR=8.2						
TORD	**Torodi Ar. Bea**	**151.76**	**286**	PKPbc	**PKPbc**	**18 53 24.9**	**0.0**
	comp=Z,10nm,0.6s,baz=51,slow=2.4,SNR=2.3						

CATAC ***08*** *18:57:42.8±0.9, 14°.99N×89°.50W, h8km, ML3.2*
GCG ***08*** *18:57:44.2±0.5, 15°.13N×89°.61W, h2km, MD2.9*

ISC 08 18:57:42.6±1.8, 15°.02N±0°.07×89°.49W±0°.07, h6km±12km, n10, σ0°57/18, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.20**	**289**	⇑*eP*			**Pg**	**18 57 46.8**	**+0.1**
MRL				*eS*			**Sg**	**18 57 49.1**	**-0.4**
ESQI	**Esquipulas**	**0.47**	**163**	*i P*			**Pg**	**18 57 52.2**	**+0.4**
ESQI				*i* S			**Sg**	**18 57 58.5**	**+0.5**
ESQI				IAML				18 58 04.2	
	comp=Z,890nm,1.0s								
MTO3	**Montecristo**	**0.62**	**169**	*i* P			**Pg**	**18 57 54.5**	**-0.2**
MTO3				*i* S			**Sg**	**18 58 03.1**	**+0.2**
MTO3				IAML				18 58 05.3	
	comp=Z,540nm,1.0s								
GUNB	**GUNB**	**0.93**	**243**	*i* P			**Pg**	**18 58 00.0**	**-0.6**
GUNB				*i* S			**Sg**	**18 58 12.6**	**-0.1**
GUNB				IAML				18 58 17.2	
	comp=Z,3μm,1.0s								
NBG	**Las Nubes**	**0.94**	**243**	*eP*			**Pg**	**18 58 00.9**	**+0.3**
NBG				*eS*			**Sn**	**18 58 17.0**	**+0.5**
LOAL	**Lomas de Alarc**	**1.05**	**196**	*i* P			**Pg**	**18 58 02.2**	**-0.6**
LOAL				*i* S			**Sg**	**18 58 17.5**	**+1.0**
LOAL				IAML				18 58 49.2	
	comp=Z,2μm,1.0s								
NUBE	**Las Nubes**	**1.14**	**195**	*i* P			**Pg**	**18 58 03.9**	**-0.7**
NUBE				IAML				18 58 04.1	
	comp=Z,430nm,1.0s								
NUBE				*i* S			**Sg**	**18 58 19.5**	**0.0**
CEVE	**Cerro Verde**	**1.19**	**187**	*i* P			**Pg**	**18 58 04.9**	**-0.6**
CEVE				IAML				18 58 39.1	
	comp=Z,320nm,1.0s								
PMON	**Piamonte**	**1.31**	**173**	*i* P			**Pn**	**18 58 07.4**	**-0.2**
PMON				IAML				18 58 28.5	
	comp=Z,720nm,1.0s								
FUG	**Fuego 3**	**1.43**	**247**	*eP*			**Pb**	**18 58 09.7**	**-0.1**
FUG				*eS*			**Sg**	**18 58 29.6**	**+1.0**

IDC ***08*** *19:11:03.2±1.3, 24°.02N×121°.91E, h0km, mb3.7/8, mbtmp3.7/10, ML3.5/2, MS3.3/7, Error ellipse: s-maj=28.0km s-min=25.8km az=41.0*
BJI ***08*** *19:11:05.0±0.0, 24°.12N×121°.85E, h7km, mb3.7/4, mB4.5/2, ML3.8/3, Ms4.2/2, Ms7 4.3/2*
TAP ***08*** *19:11:05.5, 24°.09N×121°.82E, h11km, ML4.4, C*
JMA ***08*** *19:11:05.8±0.2, 24°.1N±0°.7×121°.8E±0°.6, h0km, MV3.6/15, TAIWAN REGION*
ASIES ***08*** *19:11:05.5, 24°.09N×121°.82E, h11km, ML4.4, Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr1.09; Mθθ-0.61; Mφφ-0.48; Mrθ0.54; Mθφ-0.72; Mφr1.40; Fault plane solution: M₀1.91604×10²² NP1:φs26.95000°, δ72.00000°, λ74.85000°. NP2:φs248.17000°, δ23.37000°, λ128.81000°. Principal axes: T Plg60.1880°, Azm275.1190°; N Plg14.3950°, Azm31.7310°; P Plg25.5010°, Azm128.7630°;*
NIED ***08*** *19:11:05.8, 24°.08N×121°.81E, h0km, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.76; Mθθ-1.36; Mφφ-0.40; Mrθ1.40; Mθφ-0.85; Mφr1.22; Fault plane solution: M₀2.59000×10¹⁵ NP1:φs52.00000°, δ68.00000°, λ84.00000°. NP2:φs248.00000°, δ23.00000°, λ105.00000°.*

ISC 08 19:11:06.1±0.8, 24°.10N±0°.01×121°.81E±0°.02, h14km±5km, n186, σ0°60/233, mb3.6/8, MS3.2/4, 4C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.18**	**290**	*i* P			**Pg**	**19 11 10.1**	**-0.3**
	baz=297								
ETL				*eS*			**Sg**	**19 11 13.8**	**+0.6**
	baz=297								
TWD	**Chiawan**	**0.19**	**264**	⇓*i* P			**Pg**	**19 11 10.5**	**-0.1**
	baz=272								
TWD				*i* S			**Sg**	**19 11 14.3**	**+0.8**
	baz=272								
NACB	**Ninganchiao**	**0.21**	**291**	P			**Pg**	**19 11 10.8**	**0.0**
NACB	**Ninganchiao**	**0.21**	**291**	⇓*i* P			**Pg**	**19 11 10.5**	**-0.3**
	baz=291								
NACB				*i* S			**Sg**	**19 11 13.9**	**0.0**
	baz=291								
EHP	**Heping Village**	**0.22**	**344**	⇓*i* P			**Pg**	**19 11 10.8**	**-0.2**
	baz=342								
EHP				*i* S			**Sb**	**19 11 15.5**	**-0.3**
	baz=342								
HWA	**Hwalien**	**0.22**	**236**	*eP*			**Pb**	**19 11 12.0**	**+0.1**
	baz=238								
HWA				*eS*			**Sb**	**19 11 17.3**	**+1.5**
	baz=238								
EAHA	**Aohua**	**0.24**	**345**	⇓*i* P			**Pg**	**19 11 11.3**	**0.0**
	baz=341								
EAHA				*i* S			**Sg**	**19 11 15.4**	**+0.6**
	baz=341								
ETLH	**Xiulin Townshi**	**0.31**	**290**	⇓*i* P			**Pg**	**19 11 12.6**	**-0.1**
	baz=285								
ETLH				*eS*			**Sg**	**19 11 17.5**	**+0.3**
	baz=285								
ETM	**Tongmen**	**0.32**	**245**	P			**Pg**	**19 11 12.9**	**+0.3**
	baz=247								
ETM				*eS*			**Sb**	**19 11 19.1**	**+0.5**
	baz=247								
ENA	**Nanau**	**0.33**	**350**	⇓*i* P			**Pg**	**19 11 12.9**	**0.0**
	baz=348								
ENA				S			**Sg**	**19 11 18.5**	**+0.9**
	baz=348								
EWUT	**Wuta**	**0.34**	**356**	⇓*i* P			**Pg**	**19 11 13.3**	**+0.1**
	baz=345								
EWUT				S			**Sb**	**19 11 19.1**	**-0.4**
	baz=345								
LXIB	**Xiulin Townshi**	**0.37**	**258**	⇓*i* P			**Pg**	**19 11 13.7**	**0.0**
	baz=249								
LXIB				*i* S			**Sb**	**19 11 20.2**	**0.0**
	baz=249								
SHUL	**Shoufeng**	**0.38**	**216**	*eP*			**Pb**	**19 11 15.1**	**+0.4**
	baz=219								
SHUL				*eS*			**Sb**	**19 11 21.9**	**+1.4**
	baz=219								
ESL	**Shilin**	**0.44**	**230**	P			**Pg**	**19 11 15.2**	**+0.2**
	baz=241								
ESL				*eS*			**Sb**	**19 11 22.8**	**+0.6**
	baz=241								
TEGC	**Jichi Village**	**0.46**	**212**	*eP*			**Pb**	**19 11 16.4**	**+0.4**
	baz=213								
EOS4	**EOS4**	**0.47**	**87**	*eP*			**Pn**	**19 11 17.2**	**-1.0**
	baz=93								
ESAO	**Su ao**	**0.47**	**4**	*eP*			**Pg**	**19 11 15.5**	**-0.1**
	baz=357								
WHF	**Hehuan Shan**	**0.50**	**275**	*eP*			**Pg**	**19 11 16.4**	**+0.4**
	baz=274								
WHF				*eS*			**Sb**	**19 11 24.1**	**-0.1**
	baz=274								
EOS2	**EOS2**	**0.50**	**51**	*eP*			**Pb**	**19 11 17.5**	**+0.8**
	baz=58								
EOS3	**EOS3**	**0.50**	**68**	*eP*			**Pn**	**19 11 18.5**	**-0.3**
	baz=64								
LATG	**Datong**	**0.50**	**330**	⇓*i* P			**Pg**	**19 11 16.1**	**0.0**
	baz=328								
LATG				*eS*			**Sg**	**19 11 23.3**	**+0.4**
	baz=328								
NNSB	**Datong**	**0.51**	**310**	⇓*i* P			**Pg**	**19 11 16.3**	**+0.1**
	baz=310								
NNSB				*eS*			**Sg**	**19 11 22.9**	**-0.1**
	baz=310								
NNSH	**Datong**	**0.51**	**310**	⇓P			**Pg**	**19 11 16.2**	**0.0**
	baz=311								
TWC	**Suao**	**0.51**	**4**	⇓*i* P			**Pg**	**19 11 16.3**	**+0.1**
	baz=356								
TWC				*eS*			**Sg**	**19 11 23.2**	**+0.1**
	baz=356								
NNS	**Nan Shan**	**0.52**	**311**	⇓*i* P			**Pg**	**19 11 16.5**	**0.0**
	baz=311								
NNS				S			**Sb**	**19 11 24.4**	**-0.3**
	baz=311								
FUSS	**Fushou**	**0.53**	**286**	⇓*i* P			**Pg**	**19 11 17.0**	**+0.3**
	baz=284								
FUSS				*eS*			**Sb**	**19 11 25.4**	**+0.2**
	baz=284								
NDS	**Dongshan**	**0.54**	**351**	⇓*i* P			**Pg**	**19 11 17.0**	**+0.2**
	baz=350								
WARBT	**Fenglin Townsh**	**0.54**	**225**	⇑*i* P			**Pg**	**19 11 16.9**	**+0.1**
	baz=235								
WARBT				S			**Sb**	**19 11 25.8**	**+0.7**
	baz=235								
EGFH	**Guangfu**	**0.55**	**219**	⇑*eP*			**Pb**	**19 11 17.5**	**-0.1**
	baz=220								
NDT	**Datong Townshi**	**0.57**	**332**	⇓*i* P			**Pg**	**19 11 17.6**	**+0.3**
	baz=331								
NDT				S			**Sb**	**19 11 26.5**	**+0.6**
	baz=331								
CHGB	**Renai**	**0.58**	**266**	⇓*i* P			**Pg**	**19 11 17.8**	**+0.2**
	baz=259								
CHGB				S			**Sb**	**19 11 26.5**	**+0.1**
	baz=259								
ENTT	**Nioudou**	**0.58**	**338**	⇓*i* P			**Pg**	**19 11 17.8**	**+0.2**
	baz=337								
ENTT				S			**Sb**	**19 11 26.9**	**+0.6**
	baz=337								
OWD	**Renai**	**0.59**	**256**	*eP*			**Pg**	**19 11 18.1**	**+0.3**
	baz=256								
TWT	**Tachien**	**0.59**	**285**	P			**Pg**	**19 11 18.4**	**+0.6**
	baz=283								
TWT				*eS*			**Sb**	**19 11 27.1**	**+0.3**
	baz=283								
TDCB	**Techi**	**0.61**	**285**	⇓*i* P			**Pg**	**19 11 18.6**	**+0.4**
	baz=284								
TDCB				*eS*			**Sg**	**19 11 26.9**	**+0.6**
	baz=284								
TWE	**Neicheng**	**0.63**	**348**	⇓*i* P			**Pg**	**19 11 18.7**	**+0.2**
	baz=347								
TWE				S			**Sb**	**19 11 28.3**	**+0.5**
	baz=347								
WUSB	**Renai**	**0.64**	**260**	⇓*i* P			**Pg**	**19 11 19.1**	**+0.4**
	baz=261								
WUSB				S			**Sb**	**19 11 28.5**	**+0.5**
	baz=261								
ILA	**Ilan**	**0.67**	**355**	*eP*			**Pg**	**19 11 19.0**	**-0.2**
	baz=346								
FUSB	**Fushanzhiwuyua**	**0.69**	**343**	⇓*i* P			**Pb**	**19 11 20.1**	**+0.1**
	baz=333								
FUSB				*eS*			**Sg**	**19 11 28.4**	**-0.2**
	baz=333								
YHNB	**Yeheng**	**0.69**	**325**	P			**Pb**	**19 11 20.5**	**+0.5**
YHNB	**Yeheng**	**0.69**	**325**	⇓*i* P			**Pb**	**19 11 20.1**	**+0.1**
	baz=324								
YHNB				S			**Sb**	**19 11 29.8**	**+0.3**
	baz=324								
HGSD	**Ruisui**	**0.70**	**210**	*eP*			**Pb**	**19 11 20.3**	**+0.1**
	baz=213								
HGSD				*eS*			**Sn**	**19 11 31.4**	**-0.9**
	baz=213								
VWDT	**VWDT**	**0.70**	**241**	P			**Pb**	**19 11 20.2**	**+0.1**
	baz=242								
VWDT				*eS*			**Sb**	**19 11 30.3**	**+0.7**
	baz=242								
NSK	**Sanguang**	**0.70**	**325**	⇓*i* P			**Pg**	**19 11 20.2**	**+0.3**
	baz=318								
NSK				S			**Sb**	**19 11 30.3**	**+0.4**
	baz=318								
NWLT	**Wulai**	**0.73**	**338**	*eP*			**Pb**	**19 11 20.5**	**-0.2**
	baz=336								
NWLT				*eS*			**Sg**	**19 11 30.6**	**+0.7**
	baz=336								
EHY	**Hungye**	**0.74**	**217**	*eP*			**Pb**	**19 11 20.4**	**-0.4**
	baz=229								
WPL	**Puli Township**	**0.78**	**264**	*eP*			**Pg**	**19 11 21.7**	**+0.4**
	baz=256								
WPL				*eS*			**Sg**	**19 11 32.8**	**+1.2**
	baz=256								
WHP	**Taichung City**	**0.81**	**283**	*eP*			**Pg**	**19 11 22.4**	**+0.6**
	baz=281								
WHP				*eS*			**Sg**	**19 11 33.8**	**+1.4**
	baz=281								
DPDB	**Guoxing**	**0.81**	**265**	*eP*			**Pb**	**19 11 22.0**	**0.0**
	baz=265								
WCS	**Beigang Elemen**	**0.82**	**267**	*eP*			**Pb**	**19 11 22.0**	**-0.1**
	baz=266								
NFF	**Wufeng Townshi**	**0.82**	**310**	*eP*			**Pb**	**19 11 22.2**	**0.0**
	baz=311								
SSLB	**Suanglung**	**0.84**	**248**	P			**Pg**	**19 11 23.0**	**+0.6**
SSLB	**Suanglung**	**0.84**	**248**	⇑*i* P			**Pb**	**19 11 22.2**	**-0.3**
	baz=257								
SSLB				*i* S			**Sb**	**19 11 33.7**	**0.0**
	baz=257								
YULB	**Yu-li**	**0.84**	**214**	P			**Pg**	**19 11 22.8**	**+0.3**
YULB	**Yu-li**	**0.84**	**214**	*eP*			**Pb**	**19 11 22.4**	**-0.2**
	baz=225								
ECBN	**Changbin**	**0.84**	**203**	*eP*			**Pb**	**19 11 22.4**	**-0.2**
	baz=191								
SMLT	**Sun Moon Lake**	**0.86**	**256**	⇓*i* P			**Pg**	**19 11 23.2**	**+0.4**
	baz=255								
SMLT				*i* S			**Sg**	**19 11 34.9**	**+0.9**
	baz=255								
TIPB	**Shuangxi**	**0.87**	**1**	⇓*i* P			**Pb**	**19 11 23.1**	**0.0**
	baz=358								
TIPB				*eS*			**Sb**	**19 11 34.0**	**-0.6**
	baz=358								
EYUL	**Yuli**	**0.87**	**211**	*eP*			**Pn**	**19 11 23.8**	**-0.3**
	baz=229								
TWF1	**Yuli**	**0.88**	**212**	*eP*			**Pg**	**19 11 23.4**	**+0.2**
	baz=224								
TYC	**Yuchr**	**0.89**	**258**	*eP*			**Pb**	**19 11 23.3**	**-0.1**
	baz=257								
TYC				S			**Sg**	**19 11 35.5**	**+0.5**
	baz=257								
NHDH	**Xindian Distri**	**0.90**	**344**	*eP*			**Pg**	**19 11 23.8**	**+0.2**
	baz=343								
TWA	**Mucha**	**0.90**	**347**	⇓P			**Pg**	**19 11 23.8**	**+0.2**
	baz=338								
LIOB	**Emei**	**0.90**	**307**	*eP*			**Pn**	**19 11 24.3**	**-0.2**
	baz=308								
NSTT	**Nanjuang**	**0.91**	**306**	*eP*			**Pb**	**19 11 23.8**	**+0.1**
	baz=307								
NJD	**Zhudong**	**0.91**	**314**	*eP*			**Pn**	**19 11 24.9**	**+0.3**
	baz=321								
TATO	**Taipei**	**0.92**	**342**	P			**Pn**	**19 11 24.9**	**+0.2**
TATO	**Taipei**	**0.92**	**342**	⇓P			**Pg**	**19 11 24.2**	**+0.2**
	baz=339								
TATO				*eS*			**Sb**	**19 11 36.0**	**0.0**
	baz=339								
TWB1	**Santiao Chiao**	**0.92**	**10**	*eP*			**Pb**	**19 11 23.1**	**-0.8**
	baz=3.0								
BACT	**New Taipei Cit**	**0.95**	**340**	*eP*			**Pg**	**19 11 25.0**	**+0.4**
	baz=339								
NHY	**Taipei**	**0.96**	**347**	*eP*			**Pg**	**19 11 25.0**	**+0.3**
	baz=346								
WHYT	**Xinyi Township**	**0.96**	**245**	*eP*			**Pg**	**19 11 24.9**	**+0.2**
	baz=236								
NWF	**Wu-fen Shan**	**0.97**	**359**	*eP*			**Pg**	**19 11 25.0**	**+0.2**
	baz=345								
WFSB	**Wu-fen Shan**	**0.97**	**359**	⇓P			**Pn**	**19 11 25.4**	**0.0**
	baz=345								
TAP	**Taipei**	**0.97**	**344**	⇑*eP*			**Pg**	**19 11 25.8**	**+0.8**
	baz=336								
TWQ1	**Liyutan**	**0.97**	**285**	*eP*			**Pg**	**19 11 26.5**	**+1.5**
	baz=283								
CHKH	**Chenggong**	**0.98**	**203**	*eP*			**Pb**	**19 11 24.9**	**0.0**
	baz=194								
HSN1	**Hsinchu**	**0.99**	**313**	*eP*			**Pg**	**19 11 26.2**	**+1.0**
	baz=314								
SXI1	**Grass Mountain**	**0.99**	**4**	⇓*eP*			**Pb**	**19 11 25.4**	**+0.1**
	baz=350								
NTY	**Taoyuan**	**1.01**	**333**	*eP*			**Pg**	**19 11 26.0**	**+0.4**
	baz=333								
FULB	**Fuli**	**1.01**	**208**	*eP*			**Pb**	**19 11 25.5**	**0.0**
	baz=200								
WWF	**Wufeng**	**1.01**	**267**	*eP*			**Pg**	**19 11 26.7**	**+1.0**
	baz=266								
SBCB	**Hsinchu**	**1.02**	**313**	P			**Pg**	**19 11 26.8**	**+1.0**
	baz=313								
SBCB				*eS*			**Sg**	**19 11 39.6**	**+0.5**
	baz=313								
NMLH	**Miaoli**	**1.02**	**295**	*eP*			**Pg**	**19 11 27.4**	**+1.5**
	baz=296								
WJS	**Zhushan**	**1.02**	**255**	*eP*			**Pn**	**19 11 26.1**	**0.0**
	baz=246								
NJN	**Zhunan**	**1.03**	**304**	*eP*			**Pg**	**19 11 27.5**	**+1.4**
	baz=305								
NCUH	**Zhongli**	**1.03**	**327**	*eP*			**Pg**	**19 11 26.8**	**+0.7**
	baz=327								
TCU	**Taichung**	**1.03**	**273**	*eP*			**Pg

baz=249
EDH Donghe 1.21 202 *e*P **Pn 19 11 27.5 -1.2**
baz=187
WDLH Douliu 1.23 251 *e*P **Pg 19 11 30.3 +0.5**
baz=249
WCKO Fanlu 1.28 239 *e*P **Pg 19 11 31.1 +0.3**
baz=239
WRL Guolierlin Hig 1.32 262 *e*P **Pb 19 11 31.1 +0.4**
baz=260
STYH Taoyuan 1.32 226 *e*P **Pn 19 11 30.3 +0.1**
baz=212
CHN4 Tsaushan 1.34 236 *e*P **Pg 19 11 32.0 +0.1**
baz=250
RLNB Erlin 1.34 261 *e*P **Pg 19 11 31.8 -0.1**
baz=259
STYT Tauyuan 1.34 226 P **Pn 19 11 30.3 -0.3**
baz=218
STYT *e*S **Sg 19 11 49.3 0.0**
baz=218
LONT Longtian 1.34 208 *e*P **Pn 19 11 30.6 +0.1**
baz=209
TPUB Ta-pu 1.34 234 P **Pb 19 11 31.5 +0.4**
TPUB Ta-pu 1.34 234 *e*P **Pb 19 11 31.5 +0.4**
baz=220
CHN2 Minshiung 1.34 245 *e*P **Pg 19 11 32.3 +0.3**
baz=244
WTK Tuku 1.36 253 *e*P **Pb 19 11 31.7 +0.3**
baz=251
WTP Ta-pu 1.38 232 *e*P **Pb 19 11 31.9 +0.1**
baz=232
WTCT Ta-ch'eng 1.41 261 *e*P **Pb 19 11 32.7 +0.4**
baz=258
TWG Pinlang 1.44 208 *e*P **Pn 19 11 31.5 -0.3**
baz=209
TWGBT Beinan 1.44 208 P **Pg 19 11 34.8 +1.0**
TWGBT Beinan 1.44 208 *e*P **Pn 19 11 30.4 -1.5**
baz=209
LDUT Ludao 1.45 192 *e*P **Pn 19 11 31.6 -0.4**
baz=179
TWK Hsinying 1.47 236 *e*P **Pb 19 11 33.6 +0.4**
baz=235
CHN1 Nanshi 1.48 232 *e*P **Pb 19 11 34.0 +0.5**
baz=232
SNST Tainan City 1.48 234 *e*P **Pb 19 11 33.8 +0.3**
baz=234
SGST Jiashian 1.51 228 *e*P **Pn 19 11 33.4 +0.5**
baz=216
WSF Szhu 1.52 253 *e*P **Pn 19 11 32.5 -0.5**
baz=251
SLGT Liugui 1.53 224 *e*P **Pb 19 11 34.6 +0.3**
baz=214
PCYT Pengchaiyu 1.54 9 *e*P **Pn 19 11 33.3 0.0**
baz=6.0
WSL Shuilin Townsh 1.56 249 *e*P **Pb 19 11 34.9 +0.2**
baz=247
ICHU Yijhu 1.58 243 *e*P **Pb 19 11 35.4 +0.2**
baz=241
CHN8 Yiju 1.64 243 *e*P **Pb 19 11 35.5 -0.8**
baz=242
CHN3 Shinhua 1.67 233 *e*P **Pg 19 11 37.7 -0.5**
baz=232
ECL Taimali 1.69 208 *e*P **Pn 19 11 35.7 +0.4**
baz=209
SCST Cishan 1.71 225 *e*P **Pb 19 11 37.2 -0.1**
baz=225
SHHT Tainan City 1.71 232 *e*P **Pg 19 11 39.2 +0.1**
baz=231
SSD Sandimen 1.73 219 *e*P **Pn 19 11 36.2 +0.5**
baz=219
TSMG Majia 1.75 218 *e*P **Pb 19 11 38.0 0.0**
baz=219
IRIF Iriomote-Funau 1.77 82 *e*P **Pn 19 11 36.3 -0.1**
TWM1 Shoushan 1.80 225 *e*P **Pb 19 11 39.4 +0.5**
baz=225
MASBT Mashibuluo 1.83 216 *e*P **Pn 19 11 38.2 +1.0**
baz=211
EAST Anshuo 1.92 207 *e*P **Pn 19 11 39.2 +0.7**
baz=199
JKRS Kuro-shima 2.02 86 P **Pn 19 11 40.5 +0.8**
SCZT Fangliau 2.04 213 *e*P **Pb 19 11 42.2 -0.8**
baz=201
PHUB P'eng-hu 2.13 255 *e*P **Pn 19 11 41.9 +0.7**
baz=252
PNG Penghu 2.13 256 *e*P **Pn 19 11 42.1 +0.9**
baz=253
WDGT Dungji 2.14 247 *e*P **Pn 19 11 42.4 +0.9**
baz=245
JIJ Ishigaki jima 2.15 83 P **Pn 19 11 41.8 +0.2**
JIJ *e*S **Sn 19 12 08.6 +0.5**
VWUC VWUC 2.32 293 *e*P **Pn 19 11 44.2 +0.2**
baz=288
JISG Ishigakijimahi 2.34 77 P **Pn 19 11 44.8 +0.6**
JISG *e*S **Sn 19 12 13.9 +1.2**
VCHM Qimei 2.35 248 *e*P **Pn 19 11 45.0 +0.6**
baz=246
PTMZ Houxiangcun 2.62 292 *e*P **Pn 19 11 48.3 +0.2**
baz=286
MATB Ma-tsu 2.65 321 *e*P **Pn 19 11 48.4 -0.1**
baz=318
JTJ Tarama 2.70 78 *e*P **Pn 19 11 50.0 +0.9**
JTJ *e*S **Sn 19 12 23.3 +1.7**
QZH Quanzhou 3.04 287 ǁ *i*Pn **Pn 19 11 54.0 +0.1**
QZH Sn **Sn 19 12 28.9 -1.3**
QZH smax smax
comp=N,340nm,1.2s
QZH smax smax
comp=E,200nm,0.8s
QZH LR LR
comp=E,2μm,12.0s
QZH LR LR
comp=Z,2μm,9.7s
LYJJ Jianjiangzhen 3.06 323 *e*P **Pn 19 11 54.8 +0.7**
baz=320
KNMB Chin-men Tao 3.14 277 *e*P **Pn 19 11 55.9 +0.7**
baz=272
JIRB Irabujima 3.15 76 *e*P **Pn 19 11 56.1 +0.7**
XPSS Dashiqiu 3.17 333 *e*P **Pn 19 11 55.6 -0.1**
baz=329
MHZQ Yeshan 3.21 309 *e*P **Pn 19 11 56.6 +0.4**
baz=307
AXDP Jialang 3.58 284 *e*P **Pn 19 12 02.2 +0.8**
baz=277
ZPLA Ao Xicun 3.71 268 *e*P **Pn 19 12 03.6 +0.5**
baz=263
DSXP Dongshan 4.03 265 *e*P **Pn 19 12 07.9 +0.4**
baz=260
JOW Kunigami 6.45 64 Pn **Pn 19 12 40.1 -0.6**
2.8nm,0.3s,baz=129,slow=23,SNR=20
6.1nm,0.2s
KSRS Korea Array 14.31 20 Pn **Pn 19 14 27.3 -1.0**
0.1nm,0.3s,baz=200,slow=11,SNR=4.4
KSRS LR LR 19 20 57.3
comp=Z,53nm,21.5s,baz=180,slow=42
1.9nm,0.8s
JCJ Chichijima 18.62 76 LR LR 19 22 38.0
comp=Z,108nm,18.0s,baz=3.5,slow=38
MJAR Matsushiro Arr 18.79 45 LR LR 19 22 38.4
comp=Z,71nm,18.6s,baz=218,slow=37
CMAR Chiang Mai Arr 22.02 260 P **P 19 16 00.6 +0.3**
0.3nm,0.3s,baz=61,slow=9.4,SNR=2.5
CMAR LR LR 19 24 42.2
comp=Z,50nm,18.0s,baz=105,slow=37
0.3nm,0.3s
GUMO Guam 24.16 111 LR LR 19 26 38.9
comp=Z,36nm,18.6s,baz=30,slow=39
SONM Songino Array 26.67 336 P **P 19 16 45.7 +0.9**
0.8nm,0.5s,baz=155,slow=8.7,SNR=7.0
SONM LR LR 19 28 46.4
comp=Z,140nm,19.1s,baz=170,slow=40
0.8nm,0.5s
MKAR Makanchi Array 38.79 316 P **P 19 18 30.7 +0.3**
0.9nm,0.7s,baz=104,slow=9.2,SNR=8.8
MKAR LR LR 19 35 36.0
comp=Z,82nm,19.7s,baz=328,slow=38
0.9nm,0.7s
ZALV Zalesovo Beam 40.62 327 P **P 19 18 45.4 -0.2**
1.8nm,0.7s,baz=108,slow=9.5,SNR=8.9
1.8nm,0.7s
KURBB Kurchatov Arra 42.54 320 P **P 19 19 01.5 +0.3**
1.2nm,1.0s,baz=109,slow=7.4,SNR=5.5
1.2nm,1.0s
ASAR Alice Springs 48.91 165 P **P 19 19 50.5 -1.4**
0.3nm,0.8s,baz=342,slow=6.9,SNR=2.8
0.3nm,0.8s
FINES FINESS Array B 71.80 330 P **P 19 22 27.2 -0.8**
3.6nm,1.1s,baz=22,slow=4.9,SNR=1.5
3.6nm,1.1s
YKA Yellowknife Ar 82.83 23 P **P 19 23 28.6 -1.2**
0.4nm,0.9s,baz=314,slow=5.0,SNR=6.2
0.4nm,0.9s

TAP 08 19:11:14.7, 23.78N×120.92E, h15km±1km, ML0.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SSLB	**Suanglung** baz=80	**0.04**	**80**	*i* P	Pg	19 11 17.9	+0.3
SSLB	baz=80			*i* S	Sg	19 11 20.1	+0.7
SMLT	**Sun Moon Lake** baz=356	**0.10**	**352**	P	Pb	19 11 18.5	+0.1
WHYT	**Xinyi Township** baz=213	**0.10**	**214**	*e*P	Pb	19 11 18.2	-0.1
WHYT	baz=213			*e*S	Sb	19 11 21.4	+0.6
TYC	**Yuchr** baz=341	**0.13**	**337**	*e*P	Pb	19 11 18.7	-0.2

IDC 08 19:17:20.7±1.4, 2.68S×128.49E, h0km, mb3.4/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=131.0km s-min=21.3km az=69.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=341,slow=11,SNR=6.2 1.7nm,0.9s	**18.08**	**162**	P	Pn	19 21 33.4	-0.1
ASAR	**Alice Springs** 0.6nm,0.3s,baz=345,slow=12,SNR=22 0.6nm,0.3s	**21.51**	**166**	P	P	19 22 10.9	-0.5
STKA	**Stephens Creek** 0.8nm,0.7s,baz=331,slow=12,SNR=3.3 0.8nm,0.7s	**31.56**	**158**	P	P	19 23 44.5	-0.4
SONM	**Songino Array** 0.3nm,0.9s,baz=134,slow=6.2,SNR=3.7 0.3nm,0.9s	**53.90**	**342**	P	P	19 26 46.3	+0.4
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=112,slow=8.0,SNR=4.2 0.1nm,0.5s	**63.81**	**326**	P	P	19 27 55.1	+0.3

*AEIC **08** 19:56:36.4±1.8, 53.25N±0.04×165.70W±0.06, h26km±7km, Error ellipse: s-maj=6.6km s-min=5.3km az=182.0*
NEIC 08 19:56:37.8±1.1, 53.29N±0.05×165.80W±0.07, h35km±10km, ML3.6(AEIC), **Error ellipse: s-maj=7.1km s-min=5.5km az=147.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UNV	**Unalaska Vale**	**0.70**	**323**	Pn	Pn	19 56 50.7	-0.5
UNV				Sn	Sn	19 57 00.6	-0.2
MNAT	**Makushin Natee**	**0.80**	**319**		Pn	19 56 52.3	-0.3
MNAT					Sn	19 57 03.9	+0.7
ZRO	**Akutan Zero**	**0.81**	**353**		Pn	19 56 52.2	-0.7
MGOD	**Makushin Gods**	**0.82**	**309**		Pn	19 56 52.5	-0.4
AHB	**Akutan Harbor**	**0.83**	**359**		Pn	19 56 52.3	-0.8
AKV	**Akutan Volcano**	**0.84**	**354**		Pn	19 56 52.6	-0.7
AKV					Sn	19 57 05.1	+0.6
AKSA	**Akutan Strait**	**0.85**	**4**		Pn	19 56 52.5	-0.9
AKSA					Sn	19 57 04.3	-0.2
MAPS	**Pakushin South**	**0.86**	**308**		Pn	19 56 53.1	-0.3
AKRB	**Akutan Reef Bi**	**0.86**	**349**		Pn	19 56 53.0	-0.5
LVA	**Lava Point**	**0.89**	**351**		Pn	19 56 53.2	-0.6
LVA					Sn	19 57 06.6	+1.1
OKFG	**Magazine Ridge**	**1.27**	**276**		Pn	19 56 58.8	-0.2
WESE	**West Dahl East**	**1.39**	**31**		Pn	19 57 00.2	-0.5
OKRE	**Okmok R'deer P**	**1.43**	**280**		Pn	19 57 01.7	+0.4
WEBT	**Westdahl Beart**	**1.45**	**25**		Pn	19 57 01.4	-0.1
WEBT					Sn	19 57 20.8	+1.5
OKWE	**Okmok W'ng Wal**	**1.47**	**278**		Pn	19 57 02.1	+0.3
SSLS	**Shishaldin Sou**	**1.78**	**36**		Pn	19 57 05.4	-0.8
BRPK	**Brown Peak**	**1.82**	**41**		Pn	19 57 05.7	-1.1
NIKH	**Nikolski High**	**1.87**	**261**		Pn	19 57 07.4	+0.1
NIKH					Sn	19 57 30.4	+0.8
ISNN	**Isanotski Nort**	**1.95**	**37**		Pn	19 57 08.6	+0.1
FALS	**False Pass**	**2.11**	**41**		Pn	19 57 09.9	-0.7
PVV	**Pavlof Volcano**	**3.14**	**47**		Pn	19 57 24.8	0.0
SDPT	**Sand Point**	**3.74**	**54**		Pn	19 57 32.5	-0.5
KOFP	**Korovin Flat P**	**5.14**	**262**		Pn	19 57 53.9	+1.6
ATKA	**Atka Island**	**5.21**	**261**		Pn	19 57 54.5	+1.3
CHGN	**Chignik**	**5.23**	**52**	Pn	Pn	19 57 52.9	-0.5
GSMY	**Great Sitkin M**	**6.36**	**263**		Pn	19 58 10.3	+1.3
GSCK	**Great Sitkin C**	**6.43**	**263**		Pn	19 58 11.1	+1.1
O14K	**Tigyukauivet M**	**6.49**	**21**		Pn	19 58 11.9	+1.2
O15K	**Ungalikthiuk R**	**6.78**	**27**		Pn	19 58 15.4	+0.7
ADK	**Adak**	**6.78**	**262**		Pn	19 58 15.8	+1.0
KIWB	**Kanaga Island**	**7.07**	**263**		Pn	19 58 19.9	+1.2
M11K	**Mekoryuk**	**7.12**	**358**		Pn	19 58 20.7	+1.4
M13K	**Dall Lake**	**7.27**	**10**		Pn	19 58 22.8	+1.4
N15K	**Kwethluk River**	**7.58**	**22**	Pn	Pn	19 58 26.5	+0.8
M14K	**Bethel**	**7.77**	**14**	Pn	Pn	19 58 27.5	-0.7
L14K	**Kuka Creek**	**8.25**	**11**	Pn	Pn	19 58 35.9	+1.1

*IDC **08** 19:57:32.3±1.0, 55.78N×149.99W, h0km, mb3.6/9, mbtmp3.7/14, ML3.3/5, MS3.5/26, Error ellipse: s-maj=24.9km s-min=15.2km az=32.0*
*NEIC **08** 19:57:34.4±1.5, 56.13N±0.04×149.98W±0.04, h10km±2km, mb4.3/5, ML4.1/58, ML3.7(AEIC), Error ellipse: s-maj=6.5km s-min=3.4km az=158.0*
*AEIC **08** 19:57:37.7±2.6, 56.01N±0.10×149.76W±0.10, h11km±6km, Error ellipse: s-maj=14.3km s-min=7.0km az=161.0*
ISC 08 19:57:34.6±0.7, 56.14N±0.06×149.87W±0.05, h10km, n150, σ1s14/126, mb3.7/11, MS3.5/20, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.17**	**301**	Pn	**Pn**	**19 58 10.1**	**-0.7**
OHAK	**Old Harbor**	**2.17**	**301**		**Sn**	**19 58 35.1**	**-2.6**
OHAK					**Sn**	**19 58 39.3**	**+1.5**
OHAK	**Old Harbor**	**2.17**	**301**	P	**Pn**	**19 58 10.3**	**-0.5**
OHAK	**Old Harbor** baz=122	**2.17**	**301**	P	**Pn**	**19 58 10.3**	**-0.5**
OHAK	baz=122			S	**Sn**	**19 58 39.3**	**+1.5**
KDAK	**Kodiak Island**	**2.22**	**319**	Pn	**Pn**	**19 58 10.7**	**-0.7**
KDAK	**Kodiak Island**	**2.22**	**319**		**Sn**	**19 58 38.2**	**-0.6**
KDAK					**Sb**	**19 58 41.1**	**-1.1**
KDAK	**Kodiak Island** 7.0nm,0.3s,baz=174,slow=9.1,SNR=8.3	**2.22**	**319**	Pn	**Pn**	**19 58 11.1**	**-0.3**
KDAK	35nm,0.3s,baz=22,slow=21,SNR=10			Sn	**Sn**	**19 58 41.2**	**+2.4**
KDAK	comp=Z,1μm,20.5s,baz=227,slow=46 81nm,0.6s			LR	LR	19 59 25.2	
SII	**Sitkinak Islan**	**2.44**	**282**	Pn	Pn	19 58 12.9	-1.5
SII	**Sitkinak Islan**	**2.44**	**282**		**Sn**	**19 58 41.5**	**-2.8**
SII					**Sn**	**19 58 44.9**	**+0.6**
SII	**Sitkinak Islan**	**2.44**	**282**	P	**Pn**	**19 58 14.2**	**-0.2**
SII	**Sitkinak Islan** baz=103	**2.44**	**282**	P	Pn	19 58 12.9	-1.6
SII	baz=103			S	**Sn**	**19 58 44.9**	**+0.6**
Q20K	**Shuyak Island** baz=149	**2.83**	**332**	P	**Pn**	**19 58 19.7**	**0.0**
Q20K	baz=149			S	**Sn**	**19 58 55.5**	**+1.7**
SYI	**Shuyak Island**	**2.83**	**332**		**Pn**	**19 58 19.8**	**0.0**
SYI	**Shuyak Island**	**2.83**	**332**		**Sn**	**19 58 51.4**	**-2.4**
SYI					**Sb**	**19 58 55.5**	**-4.2**
R18K	**Karluk**	**2.89**	**301**		**Pn**	**19 58 20.5**	**-0.2**
R18K	comp=N,359nm,0.5s			IAML		19 59 04.8	
R18K	comp=E,384nm,0.5s			IAML		19 59 14.9	
R18K	**Karluk** baz=120	**2.89**	**301**	P	**Pn**	**19 58 20.6**	**0.0**
CHIR	**Chirikof Islan**	**3.25**	**267**	Pn	**Pn**	**19 58 25.2**	**-0.3**
CHIR	comp=N,662nm,0.5s			IAML		19 59 04.8	
Q19K	**Cape Douglas,**	**3.46**	**326**	Pn	**Pn**	**19 58 28.9**	**+0.5**
Q19K	**Cape Douglas,** baz=142	**3.46**	**326**	P	**Pn**	**19 58 29.4**	**+1.0**
KAHG	**Katmai Hook Gl**	**3.46**	**315**		**Pn**	**19 58 29.8**	**+1.2**
CNPM	**China Poot**	**3.47**	**348**	Pn	**Pn**	**19 58 28.3**	**-0.4**
CNPM	**China Poot**	**3.47**	**348**		**Sn**	**19 59 09.0**	**-0.8**
CNPM					Sb	19 59 12.5	-5.8
KCE	**Katmai Mt Cerb**	**3.58**	**308**		**Pn**	**19 58 30.9**	**+0.7**
ACHA	**Angle Creek He**	**3.62**	**307**		**Pn**	**19 58 31.5**	**+0.7**
BRSE	**Bradley Lake S**	**3.64**	**353**		**Pn**	**19 58 30.4**	**-0.6**
BRSE					**Sn**	**19 59 12.6**	**-1.3**
BRSE					Sb	19 59 16.1	-7.1
BRSE	**Bradley Lake S** baz=170	**3.64**	**353**	P	**Pn**	**19 58 30.4**	**-0.6**
BRSE	baz=170			S	**Sn**	**19 59 16.1**	**+2.2**
HOM	**Homer**	**3.65**	**346**	Pn	Pn	19 58 29.9	-1.2
HOM	comp=N,412nm,0.4s			IAML		19 59 20.6	
HOM	comp=E,450nm,1.3s			IAML		19 59 28.1	
BRLK	**Bradley Lake**	**3.67**	**352**	Pn	**Pn**	**19 58 30.7**	**-0.8**
BRLK	comp=N,174nm,1.2s			IAML		19 59 21.5	
ANCK	**Angle Creek**	**3.69**	**306**		**Pn**	**19 58 32.5**	**+0.8**
KVTA	**Katmai Vly 10**	**3.70**	**310**		**Pn**	**19 58 32.6**	**+0.7**
KAHC	**Katmai Hardscr**	**3.75**	**314**		**Pn**	**19 58 33.4**	**+0.8**
KAHC	**Katmai Hardscr** baz=131	**3.75**	**314**	P	**Pn**	**19 58 33.4**	**+0.8**
Q23K	**Middleton Isla**	**3.80**	**28**	Pn	**Pn**	**19 58 33.1**	**0.0**
Q23K	comp=E,194nm,1.5s			IAML		19 59 32.2	
Q23K	comp=N,149nm,1.0s			IAML		19 59 32.3	
Q23K	**Middleton Isla** baz=207	**3.80**	**28**	P	**Pn**	**19 58 32.5**	**-0.6**
MID	**Middleton Isla**	**3.80**	**28**	Pn	**Pn**	**19 58 33.2**	**+0.2**
MID	comp=E,164nm,1.1s			IAML		19 59 29.0	
MID	comp=N,152nm,1.1s			IAML		19 59 30.0	
MID	**Middleton Isla**	**3.80**	**28**	P	**Pn**	**19 58 33.3**	**+0.2**
Q17K	**Contact Creek** baz=122	**3.90**	**306**	P	**Pn**	**19 58 34.9**	**+0.2**
KELA	**Mount Kelaz**	**3.93**	**308**		**Pn**	**19 58 35.3**	**+0.3**
P19K	**Oil Pt**	**3.95**	**334**		**Pn**	**19 58 35.5**	**+0.2**
P19K	comp=N,250nm,0.7s			IAML		19 59 30.5	
P19K	comp=E,283nm,0.9s			IAML		19 59 31.4	
P19K	**Oil Pt** baz=151	**3.95**	**334**	P	**Pn**	**19 58 35.9**	**+0.6**
P23K	**Montague Islan**	**4.08**	**18**		**Pn**	**19 58 36.7**	**-0.3**
P23K	**Montague Islan** baz=196	**4.08**	**18**	P	**Pn**	**19 58 36.7**	**-0.3**
O20K	**Slope Mountain**	**4.21**	**341**		**Pn**	**19 58 38.6**	**-0.3**
O20K	**Slope Mountain** baz=157	**4.21**	**341**	P	**Pn**	**19 58 38.6**	**-0.3**
IVE	**Iliamna Volcan**	**4.23**	**338**		**Pn**	**19 58 38.8**	**-0.3**
P18K	**Big Mountain,**	**4.34**	**321**	Pn	**Pn**	**19 58 40.3**	**-0.3**
P18K	**Big Mountain,** baz=197	**4.34**	**321**	P	**Pn**	**19 58 40.2**	**-0.5**
O22K	**Cooper Landing**	**4.35**	**1**		**Pn**	**19 58 40.6**	**-0.1**
SLKM	**Skilak Lake**	**4.38**	**358**		**Pn**	**19 58 40.6**	**-0.5**
RSO	**Redoubt South**	**4.59**	**342**		**Pn**	**19 58 44.5**	**+0.3**
HIN	**Hinchinbrook I**	**4.62**	**21**		**Pn**	**19 58 44.9**	**+0.4**
HIN	comp=N,158nm,1.0s			IAML		19 59 43.0	
HIN	comp=E,203nm,1.1s			IAML		19 59 48.6	
P17K	**Kvichak River**	**4.67**	**314**		**Pn**	**19 58 45.7**	**+0.7**
P17K	**Kvichak River** baz=129	**4.67**	**314**	P	**Pn**	**19 58 45.7**	**+0.7**
O18K	**Koktuh Hills**	**4.68**	**325**		**Pn**	**19 58 45.2**	**-0.1**
O18K	comp=N,184nm,0.8s			IAML		19 59 45.7	
O18K	**Koktuh Hills** baz=140	**4.68**	**325**	P	**Pn**	**19 58 45.1**	**-0.1**
CAPN	**Captain Cook N**	**4.69**	**352**	Pn	Pn	19 58 43.4	-1.9
O19K	**Port Alsworth**	**4.70**	**332**		**Pn**	**19 58 45.9**	**+0.5**
O19K	comp=N,252nm,0.4s			IAML		19 59 52.1	
O19K	comp=E,252nm,0.5s			IAML		19 59 57.3	
CHGN	**Chignik**	**4.77**	**275**		Pn	19 58 44.5	-2.0
CHGN	comp=N,156nm,0.6s			IAML		19 59 47.1	
CHGN	comp=E,146nm,0.7s			IAML		19 59 47.9	
KAIM	**Kayak Island**	**4.77**	**35**	Pn	**Pn**	**19 58 46.7**	**+0.2**
KAIM	comp=E,168nm,0.9s			IAML		19 59 53.6	
KAIM	comp=N,207nm,0.8s			IAML		19 59 54.0	
EYAK	**Cordova Ski Ar**	**4.92**	**24**	P	**Pn**	**19 58 49.4**	**+0.9**
RC01	**Rabbit Creek A**	**4.96**	**1**		**Pn**	**19 58 48.2**	**-0.9**
RC01	comp=E,99nm,0.6s			IAML		19 59 53.9	
RC01	comp=N,94nm,0.3s			IAML		19 59 54.1	
FIS	**Fire Island**	**5.02**	**358**	Pn	**Pn**	**19 58 49.2**	**-0.7**
FIS	comp=E,186nm,0.6s			IAML		19 59 58.6	
RAGM	**Ragged Mountai**	**5.06**	**31**		**Pn**	**19 58 51.1**	**+0.5**
SUCK	**Suckling Hills**	**5.10**	**37**		**Pn**	**19 58 51.3**	**+0.4**
SUCK	comp=N,146nm,0.3s			IAML		19 59 54.0	
SUCK	comp=E,168nm,1.3s			IAML		20 00 00.8	
HMT	**Hamilton**	**5.14**	**33**		**Pn**	**19 58 51.5**	**-0.2**
N19K	**Bonanza Creek**	**5.27**	**335**		**Pn**	**19 58 52.5**	**-1.0**
KNK	**Knik Glacier**	**5.34**	**7**		**Pn**	**19 58 53.3**	**-1.0**
KNK	comp=N,53nm,0.8s			IAML		20 00 14.1	
KNK	comp=E,62nm,1.0s			IAML		20 00 14.7	
SUA	**Susitna One**	**5.36**	**355**	Pn	**Pn**	**19 58 54.1**	**-0.5**
SUA	comp=N,60nm,1.3s			IAML		20 00 02.3	
SUA	comp=E,76nm,1.1s			IAML		20 00 04.5	
BERG	**Berg Lake**	**5.36**	**35**	Pn	**Pn**	**19 58 53.6**	**-1.0**
PMR	**Palmer**	**5.48**	**4**		**Pn**	**19 58 55.9**	**-0.3**
SNH	**Sunshine Point**	**5.50**	**40**		**Pn**	**19 58 56.6**	**+0.1**
N18K	**Kilae Creek**	**5.54**	**328**		**Pn**	**19 58 56.6**	**-0.5**
O16K	**Kokwok River B**	**5.59**	**312**	Pn	Pn	19 58 56.5	-1.2
GHO	**Glory Hole Cre**	**5.67**	**5**	Pn	Pn	**19 58 59.1**	**+0.2**
CNBA	**Chernabura Isl**	**5.68**	**261**	Pn	Pn	19 58 57.0	-2.0
WAX	**Waxell Ridge**	**5.69**	**38**		**Pn**	**19 58 59.7**	**+0.5**
SML	**Sawmill**	**5.74**	**7**	Pn	**Pn**	**19 58 59.7**	**-0.1**
KLU	**Klutina**	**5.74**	**19**		**Pn**	**19 59 00.6**	**+0.7**
SVW2	**Sparrevohn**	**5.79**	**331**	Pn	**Pn**	**19 59 00.2**	**-0.3**
CRQM	**Cirque**	**5.82**	**35**		**Pn**	**19 59 01.5**	**+0.4**
N17K	**Nushagak Hills**	**5.84**	**322**	Pn	Pn	19 58 59.5	-1.7
SCM	**Sheep Creek Mo**	**5.86**	**12**		**Pn**	**19 59 02.6**	**+1.1**
SKT	**Skwentna**	**5.92**	**352**	Pn	**Pn**	**19 59 02.3**	**0.0**
TGL	**Tana Glacier**	**5.92**	**36**		**Pn**	**19 59 02.6**	**+0.2**
ISLE	**Juniper Island**	**5.97**	**38**		**Pn**	**19 59 04.0**	**+0.9**
M20K	**Styx River**	**6.00**	**345**	Pn	**Pn**	**19 59 03.0**	**-0.5**
VRDI	**Verde Repeater**	**6.10**	**31**	Pn	**Pn**	**19 59 05.5**	**+0.6**
M19K	**Big River Lodg**	**6.23**	**340**	Pn	**Pn**	**19 59 07.4**	**+0.8**
M24K	**Tolsona, Glenn**	**6.28**	**16**	Pn	**Pn**	**19 59 08.3**	**+1.1**
TABL	**Table Mountain**	**6.30**	**43**		**Pn**	**19 59 07.6**	**-0.1**
MCARA	**McCarthy VSAT**	**6.35**	**31**		**Pn**	**19 59 08.9**	**+0.7**
CTGM	**Chitina Glacie**	**6.58**	**39**	Pn	**Pn**	**19 59 12.4**	**+1.0**
LOGN	**Logan Glacier**	**6.61**	**41**		**Pn**	**19 59 11.7**	**-0.1**
PNL	**Peninsula**	**6.61**	**53**	P	**Pn**	**19 59 13.0**	**+1.3**
BCPM	**Bancas Point**	**6.64**	**51**		**Pn**	**19 59 12.4**	**+0.2**
M14K	**Bethel**	**7.84**	**311**		**Pn**	19 59 27.1	-1.4
HYT	**Haines Junctio**	**8.00**	**49**		**Pn**	**19 59 31.1**	**+0.3**
SIT	**Sitka** comp=E,22nm,1.6s	**8.08**	**77**	P	Pn	19 59 38.0	+6.1
L14K	**Kuka Creek**	**8.45**	**313**	Pn	**Pn**	**19 59 37.1**	**+0.2**
ILAR	**Eielson Array** comp=E,0.2nm,0.3s,baz=188,slow=14,SNR=4.3	**8.78**	**8**	Pn	**Pn**	**19 59 43.0**	**+1.5**
ILAR	comp=E,1.1nm,0.3s,baz=15,slow=6.2,SNR=7.0			Sn	**Sn**	**20 01 21.0**	**+0.6**
ILAR	comp=E,136nm,20.2s,baz=234,slow=36 comp=E,0.8nm,0.4s			LR	LR	20 03 01.4	
H21K	**Melozitna Rive**	**9.65**	**353**		**Pn**	**19 59 53.7**	**+0.3**
P33M	**Teslin, Yukon**	**9.88**	**59**	Pn	**Pn**	**19 59 56.9**	**+0.3**
M31M	**Drury Creek, Y**	**9.98**	**46**		**Pn**	**19 59 57.9**	**-0.1**
G21K	**Allakaket**	**10.55**	**352**		**Pn**	**20 00 05.7**	**0.0**
R33M	**Jennings River**	**10.60**	**64**		**Pn**	**20 00 08.0**	**+1.5**
G23K	**Bananza Creek**	**10.61**	**360**	Pn	**Pn**	**20 00 05.7**	**-0.8**
DLBC	**Dease Lake** comp=E,0.2nm,0.3s,baz=309,slow=14,SNR=2.2	**10.97**	**70**	Pn	**Pn**	**20 00 14.5**	**+2.9**
DLBC	comp=E,275nm,21.1s,baz=279,slow=34 comp=E,1.2nm,0.4s			LR	LR	20 03 46.1	
MMPY	**Sheldon Lake,**	**11.46**	**48**		**Pn**	**20 00 18.1**	**-0.1**
G31M	**Satah River**	**13.07**	**28**		**Pn**	**20 00 43.7**	**+3.7**

BBB	**Bella Bella**	**13.33**	**98**	LR	LR	20 04 40.7			
	comp=E,127nm,20.5s,baz=323,slow=32								
C16K	**Lisburne Hills**	**14.08**	**336**		Pn	20 00 48.0	-5.9		
INK	**Inuvik**	**14.31**	**25**	Pn	Pn	20 00 51.2	-5.8		
INK	**Inuvik**	**14.31**	**25**	Pn	**Pn**	**20 00 59.7**	**+2.8**		
	comp=E,0.1nm,0.3s,baz=203,slow=16,SNR=7.6								
INK				LR	LR	20 06 52.0			
	comp=E,199nm,19.9s,baz=180,slow=38								
	comp=E,7.8nm,1.0s								
C36M	**Paulatuk**	**17.53**	**31**	P	**Pn**	**20 01 38.0**	**-0.8**		
YKA	**Yellowknife Ar**	**18.89**	**56**	P	**P**	**20 01 56.9**	**+2.0**		
	comp=E,0.1nm,0.3s,baz=265,slow=9.7,SNR=17								
YKA				LR	LR	20 09 02.0			
	comp=E,150nm,19.5s,baz=198,slow=36								
	comp=E,2.4nm,0.9s								
A36M	**Sachs Harbour**	**18.94**	**24**		**P**	**20 01 56.7**	**+1.4**		
BUCK	**Buck Mountain**	**20.81**	**114**	P	**P**	**20 02 12.6**	**-3.3**		
BUCK				IAmb	IAmb	20 02 34.7			
	comp=Z,21nm,1.2s								
NEW	**Newport**	**21.40**	**98**	LR	LR	20 09 36.2			
	comp=Z,95nm,18.8s,baz=320,slow=34								
ELK	**Elko**	**27.29**	**110**	LR	LR	20 12 11.9			
	comp=Z,92nm,18.6s,baz=313,slow=32								
NVAR	**Mina Array Bea**	**27.44**	**117**	P	**P**	**20 03 18.7**	**-2.0**		
	comp=Z,0.2nm,0.3s,baz=352,slow=13,SNR=7.0								
NVAR				LR	LR	20 12 09.8			
	comp=Z,127nm,20.3s,baz=308,slow=32								
	comp=Z,0.2nm,0.3s								
RES	**Resolute Bay**	**27.84**	**28**	LR	LR	20 15 15.4			
	comp=Z,145nm,18.4s,baz=72,slow=38								
R11B	**Troy Canyon, C**	**28.88**	**113**	P	**P**	**20 03 34.0**	**+0.6**		
R11B				IAmb	IAmb	20 03 40.8			
	comp=Z,3.0nm,1.1s								
PDAR	**Pinedale Array**	**28.96**	**100**	P	**P**	**20 03 32.5**	**-1.8**		
PDAR	**Pinedale Array**	**28.96**	**100**	P	**P**	**20 03 33.1**	**-1.1**		
	comp=Z,0.3nm,0.8s,baz=334,slow=6.0,SNR=2.4								
PDAR				LR	LR	20 13 07.7			
	comp=Z,95nm,19.0s,baz=28,slow=32								
	comp=Z,0.3nm,0.8s								
SEY	**Seymchan**	**29.13**	**307**	LR	LR	20 16 42.4			
	comp=Z,148nm,18.2s,baz=312,slow=39								
PETK	**Petropavlovsk-**	**29.90**	**287**	LR	LR	20 16 08.5			
	comp=Z,45nm,19.1s,baz=77,slow=37								
MA2	**Magadan**	**30.85**	**301**	LR	LR	20 18 10.0			
	comp=Z,87nm,18.3s,baz=66,slow=40								
RSSD	**Black Hills**	**31.16**	**93**	P	P	20 03 51.2	-2.4		
RSSD				IAmb	IAmb	20 04 18.1			
	comp=Z,8.1nm,1.5s								
PFO	**Pinyon Flats O**	**32.17**	**120**	LR	LR	20 14 19.9			
	comp=Z,129nm,19.2s,baz=360,slow=31								
FRB	**Frobisher Bay**	**38.76**	**45**	LR	LR	20 21 08.9			
	comp=Z,271nm,18.4s,baz=332,slow=36								
YAK	**Yakutsk**	**39.23**	**313**	LR	LR	20 23 51.2			
	comp=Z,75nm,18.8s,baz=58,slow=40								
TXAR	**Lajitas Array**	**42.09**	**110**	P	**P**	**20 05 25.6**	**-1.0**		
	comp=Z,0.4nm,0.9s,baz=311,slow=5.9,SNR=3.2								
TXAR				LR	LR	20 21 09.6			
	comp=Z,52nm,18.7s,baz=348,slow=34								
	comp=Z,0.4nm,0.9s								
LPIG	**La Paz**	**43.04**	**121**	LR	LR	20 19 33.6			
	comp=Z,63nm,20.4s,baz=26,slow=31								
SFJD	**Kangerlussuaq**	**43.40**	**34**	LR	LR	20 23 51.0			
	comp=Z,117nm,18.8s,baz=4.0,slow=36								
KLR	**Kul'dur**	**45.60**	**296**	P	**P**	**20 05 53.9**	**-0.6**		
	comp=Z,0.5nm,0.5s,baz=311,slow=9.3,SNR=2.1								
KLR				LR	LR	20 27 12.0			
	comp=Z,46nm,18.3s,baz=32,slow=39								
	comp=Z,0.5nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**48.53**	**239**	T	T	20 59 04.4			
	baz=29,slow=76,SNR=4.6								
H11N3	**WAKE ISLAND Hy**	**48.53**	**239**	T	T	20 59 17.0			
	baz=29,slow=76,SNR=5.0								
H11N1	**WAKE ISLAND Hy**	**48.55**	**239**	T	T	20 59 01.8			
	baz=29,slow=76,SNR=3.2								
H11S1	**WAKE ISLAND Hy**	**49.67**	**239**	T	T	21 00 35.1			
	baz=29,slow=76,SNR=8.6								
H11S2	**WAKE ISLAND Hy**	**49.68**	**239**	T	T	21 00 39.7			
	baz=29,slow=76,SNR=7.4								
H11S3	**WAKE ISLAND Hy**	**49.69**	**239**	T	T	21 00 36.4			
	baz=29,slow=76,SNR=8.8								
MJAR	**Matsushiro Arr**	**50.86**	**279**	LR	LR	20 26 36.5			
	comp=Z,32nm,20.9s,baz=112,slow=34								
JHJ	**Hachijo jima 2**	**52.51**	**275**	LR	LR	20 28 01.6			
	comp=Z,27nm,20.0s,baz=357,slow=35								
KSRS	**Korea Array**	**55.79**	**288**	LR	LR	20 31 58.0			
	comp=Z,20nm,18.9s,baz=350,slow=37								
CMIG	**Matias Romero**	**56.69**	**110**	LR	LR	20 30 44.2			
	comp=Z,81nm,18.6s,baz=12,slow=35								
SONM	**Songino Array**	**58.48**	**310**	P	**P**	**20 07 31.8**	**+1.2**		
	comp=Z,0.6nm,0.8s,baz=36,slow=6.4,SNR=7.3								
SONM				LR	LR	20 31 52.8			
	comp=Z,82nm,19.4s,baz=3.0,slow=35								
	comp=Z,0.6nm,0.8s								
ZALV	**Zalesovo Beam**	**61.50**	**327**	P	**P**	**20 07 52.6**	**+1.6**		
	comp=Z,0.4nm,0.5s,baz=20,slow=4.6,SNR=2.9								
	comp=Z,0.4nm,0.5s								
BVAR	**Borovoye Array**	**66.27**	**335**	P	**P**	**20 08 23.9**	**+1.4**		
	comp=Z,0.9nm,0.8s,baz=37,slow=11,SNR=5.4								
	comp=Z,0.9nm,0.8s								
KURBB	**Kurchatov Arra**	**66.29**	**329**	P	**P**	**20 08 23.3**	**+0.7**		
	comp=Z,0.5nm,0.2s,baz=21,slow=8.1,SNR=6.4								
	comp=Z,0.5nm,0.2s								
MKAR	**Makanchi Array**	**68.52**	**324**	P	**P**	**20 08 37.5**	**+0.6**		
	comp=Z,0.3nm,0.6s,baz=22,slow=4.4,SNR=4.6								
	comp=Z,0.3nm,0.6s								

TRN 08 20:00:41.7, 11˚.14N×59˚.88W, h86km, MD3.7, East of Tobago., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**1.58**	**252**	*e*P	Pn	20 01 08.5	+0.3
GRGR	**Grenville**	**2.00**	**300**	*e*P	Pn	20 01 13.8	0.0
GRGR				*e*S	Sn	20 01 37.6	-0.8
BBGH	**Gun Hill**	**2.02**	**9**	*e*P	Pn	20 01 14.4	+0.4
GCMP	**Grenada, Carri**	**2.02**	**312**	*e*P	Pn	20 01 13.6	-0.5
GCMP				*e*S	Sn	20 01 38.9	0.0
GRFF	**Grenada Fort F**	**2.04**	**297**	*e*P	Pn	20 01 15.3	+1.1
GRHS	**Sauteurs**	**2.04**	**302**	*e*P	Pn	20 01 14.2	-0.1
GRHS				*e*S	Sn	20 01 38.3	-0.8
SVOC	**Richmond Hill,**	**2.40**	**327**	*e*P	Pn	20 01 19.0	-0.1
SVT	**Saint Vincent**	**2.42**	**327**	*e*P	Pn	20 01 19.4	0.0
SVT				*e*S	Sn	20 01 47.2	-1.1
SVB	**Belmont**	**2.51**	**328**	*e*P	Pn	20 01 20.5	-0.1
SVB				*e*S	Sn	20 01 49.7	-0.8
SSV	**Crater Summit**	**2.53**	**330**	*e*P	Pn	20 01 22.4	+1.5
SLBI	**Saint Lucia, B**	**3.06**	**340**	*e*P	Pn	20 01 28.3	+0.3
MPOM	**Morne Pois Mar**	**3.42**	**344**	*e*P	Pn	20 01 33.1	+0.2
MPOM				*e*S	Sn	20 02 10.6	-1.9
BIM	**Bigot**	**3.56**	**341**	*e*P	Pn	20 01 34.8	+0.1
BIM				*e*S	Sn	20 02 14.2	-1.6
SVN	**Savane Anatole**	**3.89**	**341**	*e*P	Pn	20 01 39.9	+0.6
SVN				*e*S	Sn	20 02 22.4	-1.6
CBE	**Ff, Capester**	**5.18**	**341**	*e*P	Pn	20 01 57.3	+0.5
CBE				*e*S	Sn	20 02 55.7	+0.3
ANBD	**Bethesda, Anti**	**6.16**	**343**	*e*P	Pn	20 02 10.2	+0.2
ANBD				*e*S	Sn	20 03 10.3	-8.8

TAP ***08*** *20:03:36.7, 24˚.07N×121˚.70E, h8km, ML3.2, C*
JMA ***08*** *20:03:37.4±0.3, 24˚.1N±0˚.5×12˚2E±˚, h5km±3km, TAIWAN REGION*

ISC 08 20:03:36.9±0.9**, 24˚07N**±0˚.01×**121˚72E**±0˚.02**, h7**km±6km, n132, σ0s85/254, 11C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.11**	**275**	P	**Pg**	**20 03 38.9**	**-0.4**
	baz=276						
TWD				S	**Sg**	**20 03 40.9**	**-0.1**
	baz=276						
ETL	**Fush Village**	**0.12**	**316**	*i*P	**Pg**	**20 03 39.6**	**0.0**
	baz=318						
ETL				S	**Sg**	**20 03 41.4**	**-0.1**
	baz=318						
HWA	**Hwalien**	**0.14**	**227**	*i* P	**Pg**	**20 03 40.4**	**+0.6**
	baz=230						
HWA				*e*S	**Sg**	**20 03 42.3**	**+0.6**
	baz=230						
NACB	**Ninganchiao**	**0.15**	**313**	*i*P	**Pg**	**20 03 40.0**	**0.0**
	baz=316						
NACB				*i* S	**Sg**	**20 03 42.0**	**-0.2**
	baz=316						
ETM	**Tongmen**	**0.23**	**243**	P	**Pg**	**20 03 41.2**	**-0.3**
	baz=244						
ETM				S	**Sg**	**20 03 44.8**	**+0.2**
	baz=244						
EHP	**Heping Village**	**0.24**	**6**	*i* S	**Sg**	**20 03 46.2**	**+1.2**
	baz=357						
ETLH	**Xiulin Townshi**	**0.25**	**303**	⇓P	**Pg**	**20 03 41.8**	**-0.2**
	baz=308						
ETLH				S	**Sg**	**20 03 45.3**	**0.0**
	baz=308						
EAHA	**Aohua**	**0.26**	**5**	⇓*i*P	**Pg**	**20 03 42.3**	**+0.3**
	baz=3.0						
EAHA				S	**Sg**	**20 03 46.0**	**+0.5**
	baz=3.0						
LXIB	**Xiulin Townshi**	**0.28**	**260**	P	**Pg**	**20 03 42.5**	**0.0**
	baz=253						
LXIB				*e*S	**Sg**	**20 03 46.5**	**+0.2**
	baz=253						
SHUL	**Shoufeng**	**0.31**	**206**	⇑P	**Pg**	**20 03 43.5**	**+0.4**
	baz=216						
SHUL				S	**Sb**	**20 03 48.8**	**-1.3**
	baz=216						
ENA	**Nanau**	**0.36**	**4**	⇓*i*P	**Pg**	**20 03 44.1**	**+0.2**
	baz=4.0						
ENA				S	**Sg**	**20 03 49.0**	**+0.4**
	baz=4.0						
ESL	**Shilin**	**0.36**	**225**	⇑P	**Pg**	**20 03 43.6**	**-0.3**
	baz=234						
ESL				S	**Sg**	**20 03 48.8**	**0.0**
	baz=234						
EWUT	**Wuta**	**0.38**	**9**	⇓P	**Pg**	**20 03 44.6**	**+0.3**
	baz=7.0						
EWUT				S	**Sg**	**20 03 49.7**	**+0.4**
	baz=7.0						
TEGC	**Jichi Village**	**0.39**	**204**	P	**Pg**	**20 03 45.4**	**+0.8**
	baz=206						
TEGC				*e*S	**Sb**	**20 03 51.7**	**-0.7**
	baz=206						
WHF	**Hehuan Shan**	**0.42**	**280**	P	**Pg**	**20 03 44.8**	**-0.4**
	baz=281						
WHF				*i* S	**Sg**	**20 03 50.8**	**+0.1**
	baz=281						
WARBT	**Fenglin Townsh**	**0.46**	**221**	⇑P	**Pg**	**20 03 45.4**	**-0.5**
	baz=233						
WARBT				S	**Sg**	**20 03 52.1**	**+0.2**
	baz=233						
FUSS	**Fushou**	**0.47**	**292**	P	**Pg**	**20 03 46.1**	**+0.1**
	baz=292						
FUSS				S	**Sg**	**20 03 52.6**	**+0.5**
	baz=292						
NNSB	**Datong**	**0.47**	**320**	⇓P	**Pg**	**20 03 46.1**	**+0.1**
	baz=318						
NNSB				S	**Sg**	**20 03 52.5**	**+0.3**
	baz=318						
EGFH	**Guangfu**	**0.48**	**213**	*e*P	**Pg**	**20 03 46.1**	**-0.1**
	baz=226						
EGFH				S	**Sb**	**20 03 53.7**	**-1.2**
	baz=226						
NNS	**Nan Shan**	**0.48**	**320**	*i* P	**Pg**	**20 03 46.3**	**0.0**
	baz=319						
NNS				*i* S	**Sg**	**20 03 52.8**	**+0.2**
	baz=319						
LATG	**Datong**	**0.49**	**340**	P	**Pg**	**20 03 46.7**	**+0.2**
	baz=337						
LATG				*e*S	**Sg**	**20 03 53.1**	**+0.1**
	baz=337						
CHGB	**Renai**	**0.49**	**269**	⇓P	**Pg**	**20 03 46.3**	**-0.2**
	baz=262						
CHGB				S	**Sg**	**20 03 53.1**	**+0.1**
	baz=262						
OWD	**Renai**	**0.51**	**257**	P	**Pg**	**20 03 47.0**	**+0.3**
	baz=259						
OWD				*e*S	**Sb**	**20 03 54.7**	**-1.1**
	baz=259						
ESAO	**Su Ao**	**0.52**	**13**	P	**Pg**	**20 03 47.1**	**+0.2**
	baz=10.0						
ESAO				S	**Sg**	**20 03 53.9**	**+0.2**
	baz=10.0						
TWT	**Tachien**	**0.53**	**290**	P	**Pb**	**20 03 47.6**	**-0.9**
	baz=289						
TWT				S	**Sb**	**20 03 55.1**	**-1.3**
	baz=289						
TDCB	**Techi**	**0.54**	**290**	⇓P	**Pg**	**20 03 47.6**	**+0.2**
	baz=290						
TDCB				S	**Sg**	**20 03 54.6**	**+0.2**
	baz=290						
TWC	**Suao**	**0.55**	**13**	⇑*i*P	**Pg**	**20 03 47.8**	**+0.3**
	baz=5.0						
TWC				S	**Sg**	**20 03 55.7**	**+0.9**
	baz=5.0						
WUSB	**Renai**	**0.55**	**262**	P	**Pg**	**20 03 47.9**	**+0.3**
	baz=264						
WUSB				*i* S	**Sg**	**20 03 55.0**	**+0.2**
	baz=264						
NDS	**Dongshan**	**0.56**	**0**	⇑P	**Pg**	**20 03 48.2**	**+0.5**
	baz=357						
NDS				*e*S	**Sb**	**20 03 56.4**	**-0.8**
	baz=357						
NDT	**Datong Townshi**	**0.56**	**341**	⇓P	**Pg**	**20 03 48.1**	**+0.4**
	baz=338						
NDT				S	**Sg**	**20 03 55.7**	**+0.6**
	baz=338						
ENTT	**Nioudou**	**0.58**	**347**	*i* P	**Pg**	**20 03 48.5**	**+0.4**
	baz=346						
ENTT				*i* S	**Sg**	**20 03 56.0**	**+0.2**
	baz=346						
VWDT	**VWDT**	**0.61**	**239**	⇑P	**Pg**	**20 03 49.1**	**+0.4**
	baz=241						
VWDT				*e*S	**Sb**	**20 03 58.6**	**-0.1**
	baz=241						
HGSD	**Ruisui**	**0.63**	**205**	P	**Pb**	**20 03 50.5**	**+0.2**
	baz=194						
HGSD				*e*S	**Sb**	**20 04 00.8**	**+1.5**
	baz=194						
TWE	**Neicheng**	**0.65**	**356**	⇓*i*P	**Pg**	**20 03 49.8**	**+0.4**
	baz=356						
TWE				*e*S	**Sb**	**20 03 59.5**	**-0.3**
	baz=356						
EHY	**Hungye**	**0.67**	**213**	*i* P	**Pg**	**20 03 49.9**	**+0.2**
	baz=229						
EHY				*i* S	**Sb**	**20 03 59.6**	**-0.7**
	baz=229						
YHNB	**Yeheng**	**0.67**	**333**	*e*P	**Pg**	**20 03 50.0**	**+0.1**
	baz=331						
YHNB				*e*S	**Sb**	**20 03 59.5**	**-1.0**
	baz=331						
NSK	**Sanguang**	**0.69**	**332**	P	**Pg**	**20 03 50.5**	**+0.4**
	baz=331						
NSK				S	**Sg**	**20 03 59.3**	**+0.2**
	baz=331						
ILA	**Ilan**	**0.69**	**2**	P	**Pg**	**20 03 50.3**	**+0.1**
	baz=352						
ILA				S	**Sb**	**20 04 00.6**	**-0.4**
	baz=352						
NWLT	**Wulai**	**0.73**	**345**	P	**Pg**	**20 03 51.4**	**+0.4**
	baz=343						
NWLT				S	**Sg**	**20 04 00.3**	**-0.1**
	baz=343						
WHP	**Taichung City**	**0.73**	**287**	*e*P	**Pb**	**20 03 52.2**	**+0.2**
	baz=287						
WHP				*e*S	**Sb**	**20 04 02.0**	**-0.3**
	baz=287						
WCS	**Beigang Elemen**	**0.73**	**269**	⇑*i*P	**Pb**	**20 03 51.5**	**-0.5**
	baz=262						
WCS				S	**Sb**	**20 04 00.9**	**-1.3**
	baz=262						
SSLB	**Suanglung**	**0.75**	**248**	*i* P	**Pg**	**20 03 51.2**	**-0.1**
	baz=260						
SSLB				*e*S	**Sb**	**20 04 01.7**	**-1.1**
	baz=260						
SMLT	**Sun Moon Lake**	**0.77**	**256**	⇓P	**Pb**	**20 03 52.0**	**-0.6**
	baz=258						
SMLT				*e*S	**Sb**	**20 04 03.6**	**+0.2**
	baz=258						
YULB	**Yu-li**	**0.78**	**210**	P	**Pg**	**20 03 51.4**	**-0.4**
	baz=225						
YULB				S	**Sb**	**20 04 03.2**	**-0.2**
	baz=225						
NFF	**Wufeng Townshi**	**0.78**	**316**	*e*P	**Pb**	**20 03 52.5**	**-0.4**
	baz=315						
NFF				S	**Sg**	**20 04 02.3**	**+0.2**
	baz=315						
ECBN	**Changbin**	**0.79**	**198**	P	**Pg**	**20 03 52.6**	**+0.6**
	baz=189						
ECBN				*e*S	**Sb**	**20 04 04.6**	**+0.8**
	baz=189						
TYC	**Yuchr**	**0.80**	**258**	P	**Pg**	**20 03 52.0**	**-0.3**
	baz=260						
TYC				S	**Sg**	**20 04 02.4**	**-0.4**
	baz=260						
EYUL	**Yuli**	**0.81**	**207**	*e*P	**Pn**	**20 03 54.6**	**0.0**
	baz=225						
TWF1	**Yuli**	**0.81**	**208**	*e*P	**Pn**	**20 03 54.3**	**-0.4**
	baz=225						
TWF1				*e*S	**Sb**	**20 04 04.3**	**-0.1**
	baz=225						
LIOB	**Emei**	**0.86**	**312**	⇓*e*P	**Pb**	**20 03 54.3**	**+0.2**
	baz=311						
LIOB				S	**Sg**	**20 04 04.0**	**-0.5**
	baz=311						
NSTT	**Nanjuang**	**0.86**	**311**	⇑*e*P	**Pb**	**20 03 54.2**	**+0.1**
	baz=310						
NSTT				S	**Sb**	**20 04 05.0**	**-0.8**
	baz=310						
WHYT	**Xinyi Township**	**0.87**	**245**	⇑*e*P	**Pn**	**20 03 55.2**	**-0.4**
	baz=254						
WHYT				S	**Sb**	**20 04 05.9**	**-0.3**
	baz=254						
TIPB	**Shuangxi**	**0.90**	**6**	⇑*e*P	**Pb**	**20 03 54.8**	**-0.1**
	baz=354						
TIPB				S	**Sg**	**20 04 06.4**	**+0.4**
	baz=354						
TWQ1	**Liyutan**	**0.90**	**288**	*e*P	**Pn**	**20 03 56.6**	**+0.6**
	baz=299						
TWQ1				*e*S	**Sb**	**20 04 06.0**	**-1.1**
	baz=299						
NHDH	**Xindian Distri**	**0.91**	**349**	P	**Pb**	**20 03 55.0**	**+0.1**
	baz=336						
NHDH				S	**Sg**	**20 04 06.3**	**+0.3**
	baz=336						
TWA	**Mucha**	**0.91**	**353**	P	**Pb**	**20 03 55.1**	**0.0**
	baz=349						
TWA				S	**Sb**	**20 04 06.8**	**-0.6**
	baz=349						
CHKH	**Chenggong**	**0.92**	**199**	*e*P	**Pb**	**20 03 55.3**	**+0.1**
	baz=192						
CHKH				*e*S	**Sn**	**20 04 09.1**	**-0.6**
	baz=192						
WJS	**Zhushan**	**0.94**	**255**	P	**Pn**	**20 03 56.0**	**-0.5**
	baz=257						
WJS				*e*S	**Sn**	**20 04 10.1**	**+0.1**
	baz=257						
NSY	**Sanyi**	**0.94**	**292**	*e*P	**Pn**	**20 03 56.6**	**+0.1**
	baz=302						
NSY				*e*S	**Sg**	**20 04 06.9**	**-0.2**
	baz=302						
FULB	**Fuli**	**0.95**	**204**	*e*P	**Pn**	**20 03 56.5**	**-0.1**
	baz=226						
FULB				*e*S	**Sn**	**20 04 10.9**	**+0.4**
	baz=226						
WNT	**Mingjian**	**0.96**	**259**	*e*P	**Pn**	**20 03 57.0**	**+0.2**
	baz=260						
WNT				*e*S	**Sn**	**20 04 11.3**	**+0.6**
	baz=260						
NMLH	**Miaoli**	**0.96**	**299**	*e*P	**Pn**	**20 03 58.3**	**+1.5**
	baz=298						
NMLH				S	**Sn**	**20 04 10.0**	**-0.7**
	baz=298						
TWB1	**Santiao Chiao**	**0.97**	**15**	P	**Pb**	**20 03 56.1**	**+0.2**
	baz=3.0						
TWB1				S	**Sb**	**20 04 08.8**	**-0.1**
	baz=3.0						
SBCB	**Hsinchu**	**0.98**	**317**	*e*P	**Pn**	**20 03 58.4**	**+1.4**
	baz=315						
TAP	**Taipei**	**0.98**	**349**	*e*P	**Pg**	**20 03 54.6**	**-1.2**
	baz=337						
TAP				*e*S	**Sb**	**20 04 09.4**	**0.0**
	baz=337						
NWF	**Wu-fen Shan**	**1.00**	**3**	P	**Pb**	**20 03 56.8**	**+0.3**
	baz=350						
NWF				*e*S	**Sg**	**20 04 09.3**	**+0.2**
	baz=350						
WFSB	**Wu-fen Shan**	**1.00**	**3**	*e*P	**Pn**	**20 03 57.1**	**-0.2**
	baz=350						
WFSB				*e*S	**Sg**	**20 04 09.0**	**-0.1**
	baz=350						
ALS	**Alishan**	**1.00**	**236**	⇑P	**Pb**	**20 03 56.9**	**+0.1**
	baz=240						
ALS				*e*S	**Sb**	**20 04 11.0**	**+0.8**
	baz=240						
NCUH	**Zhongli**	**1.02**	**332**	*e*P	**Pn**	**20 03 58.1**	**+0.5**
	baz=329						
NCUH				*e*S	**Sn**	**20 04 13.1**	**+1.0**
	baz=329						
CHKT	**Chengkung**	**1.02**	**198**	*e*P	**Pg**	**20 03 54.8**	**-1.6**
	baz=193						
CHKT				*e*S	**Sb**	**20 04 10.4**	**0.0**
	baz=193						
EHD	**Haiduan**	**1.03**	**207**	P	**Pg**	**20 03 56.5**	**-0.1**
	baz=224						
EHD				S	**Sb**	**20 04 11.1**	**+0.4**
	baz=224						
SXI1	**Grass Mountain**	**1.03**	**8**	P	**Pb**	**20 03 57.6**	**+0.5**
	baz=350						
SXI1				*e*S	**Sn**	**20 04 12.2**	**-0.3**
	baz=350						
WCHH	**Zhanghua**	**1.06**	**271**	*e*P	**Pn**	**20 03 59.3**	**+1.2**
	baz=272						
WCHH				*e*S	**Sn**	**20 04 14.7**	**+1.6**
	baz=272						
CHN5	**Tsauling**	**1.06**	**244**	*e*P	**Pn**	**20 03 59.1**	**+0.9**
	baz=238						
CHN5				*e*S	**Sn**	**20 04 14.4**	**+1.2**
	baz=238						
TWS1	**Kuangyinshan**	**1.06**	**345**	*e*P	**Pg**	**20 03 55.7**	**-1.6**
	baz=342						
TWS1				*e*S	**Sg**	**20 04 11.0**	**-0.1**
	baz=342						
ECS	**Chishang**	**1.07**	**205**	*e*P	**Pn**	**20 03 59.3**	**+1.0**
	baz=222						
ECS				*e*S	**Sn**	**20 04 14.2**	**+0.8**
	baz=222						
TNOU	**National Taiwa**	**1.08**	**3**	*i* P	**Pb**	**20 03 58.2**	**+0.4**
	baz=359						
TNOU				*e*S	**Sb**	**20 04 12.1**	**0.0**
	baz=359						
YM01	**YM01**	**1.08**	**353**	*e*P	**Pn**	**20 03 58.5**	**0.0**
	baz=359						
YM01				*i* S	**Sb**	**20 04 12.6**	**+0.4**
	baz=359						
ELDTW	**Lidau**	**1.09**	**216**	*e*P	**Pb**	**20 03 58.1**	**+0.1**
	baz=209						
ELDTW				*e*S	**Sb**	**20 04 13.2**	**+0.7**
	baz=209						
NTST	**Danshui**	**1.12**	**348**	*e*P	**Pn**	**20 03 59.9**	**+1.0**
	baz=352						
NTST				*e*S	**Sn**	**20 04 15.0**	**+0.5**
	baz=352						
YM08	**YM08**	**1.12**	**354**	P	**Pn**	**20 03 59.1**	**+0.1**
	baz=335						
YM08				S	**Sb**	**20 04 13.2**	**-0.1**
	baz=335						
WGK	**Gukeng**	**1.12**	**250**	*e*P	**Pn**	**20 03 59.8**	**+0.8**
	baz=253						
WGK				*e*S	**Sn**	**20 04 16.6**	**+2.0**
	baz=253						
ANP	**Anpu**	**1.13**	**351**	*e*P	**Pn**	**20 03 59.6**	**+0.4**
	baz=356						
ANP				S	**Sb**	**20 04 13.4**	**-0.2**
	baz=356						
WDLH	**Douliu**	**1.14**	**251**	*e*P	**Pn**	**20 04 00.9**	**+1.7**
	baz=254						
WDLH				S	**Sn**	**20 04 15.8**	**+0.7**
	baz=254						
EDH	**Donghe**

TPUB	**Ta-pu**	**1.26 233**	P	**Pn**	**20 04 01.2**	**+0.3**
	baz=237					
TPUB			*e*S	**Sn**	**20 04 19.4**	**+1.4**
	baz=237					
WTK	**Tuku**	**1.27 253**	*e*P	**Pg**	**20 04 02.6**	**+1.3**
	baz=256					
WTK			S	**Sn**	**20 04 19.5**	**+1.2**
	baz=256					
LONT	**Longtian**	**1.28 205**	*e*P	**Pg**	**20 04 02.0**	**+0.6**
	baz=221					
LONT			*e*S	**Sb**	**20 04 18.0**	**+0.2**
	baz=221					
WTP	**Ta-pu**	**1.30 231**	P	**Pg**	**20 04 02.3**	**+0.4**
	baz=236					
WTP			*e*S	**Sn**	**20 04 21.9**	**+2.8**
	baz=236					
TWGBT	**Beinan**	**1.38 205**	P	**Pn**	**20 04 01.3**	**-1.2**
	baz=211					
TWGBT			S	**Sb**	**20 04 20.3**	**-0.4**
	baz=211					
TWG	**Pinlang**	**1.38 206**	*e*P	**Pn**	**20 04 01.9**	**-0.6**
	baz=211					
TWG			*e*S	**Sb**	**20 04 20.3**	**-0.4**
	baz=211					
TWK	**Hsinying**	**1.38 235**	*e*P	**Pg**	**20 04 03.6**	**+0.2**
	baz=239					
TWK			*e*S	**Sn**	**20 04 22.9**	**+1.8**
	baz=239					
CHN1	**Nanshi**	**1.40 231**	*e*P	**Pg**	**20 04 04.1**	**+0.3**
	baz=236					
CHN1			*e*S	**Sg**	**20 04 24.0**	**+2.0**
	baz=236					
SNST	**Tainan City**	**1.40 233**	*e*P	**Pg**	**20 04 04.5**	**+0.8**
	baz=238					
SNST			*i* S	**Sg**	**20 04 22.9**	**+1.0**
	baz=238					
LDUT	**Ludao**	**1.41 189**	*e*P	**Pn**	**20 04 00.6**	**-2.3**
	baz=182					
LDUT			*e*S	**Sb**	**20 04 20.5**	**-1.2**
	baz=182					
TTN	**Taitung**	**1.41 202**	*e*S	**Sb**	**20 04 21.2**	**-0.4**
	baz=201					
SGST	**Jiashian**	**1.43 227**	*i* P	**Pb**	**20 04 03.9**	**+0.1**
	baz=232					
SGST			*e*S	**Sg**	**20 04 24.7**	**+1.8**
	baz=232					
WSF	**Szhu**	**1.43 253**	*e*P	**Pg**	**20 04 04.2**	**-0.1**
	baz=256					
WSF			*e*S	**Sg**	**20 04 24.7**	**+1.7**
	baz=256					
SLGT	**Liugui**	**1.45 223**	P	**Pg**	**20 04 04.6**	**-0.1**
	baz=227					
WSL	**Shuilin Townsh**	**1.47 248**	*e*P	**Pg**	**20 04 05.6**	**+0.5**
	baz=252					
WSL			*e*S	**Sg**	**20 04 27.0**	**+2.9**
	baz=252					
ICHU	**Yijhu**	**1.49 242**	*e*P	**Pg**	**20 04 05.3**	**-0.2**
	baz=246					
ICHU			*e*S	**Sg**	**20 04 26.5**	**+1.5**
	baz=246					
CHN8	**Yiju**	**1.56 243**	*e*P	**Pb**	**20 04 06.1**	**+0.1**
	baz=247					
CHN8			*e*S	**Sg**	**20 04 29.7**	**+2.7**
	baz=247					
PCYT	**Pengchaiyu**	**1.59 12**	*e*P	**Pn**	**20 04 05.0**	**-0.4**
	baz=344					
PCYT			*e*S	**Sn**	**20 04 25.8**	**-0.3**
	baz=344					
ECL	**Taimali**	**1.62 206**	*e*P	**Pn**	**20 04 05.1**	**-0.8**
	baz=212					
ECL			*e*S	**Sb**	**20 04 27.9**	**+0.1**
	baz=212					
SCST	**Cishan**	**1.63 224**	*e*P	**Pg**	**20 04 08.8**	**+0.7**
	baz=229					
SCST			*i* S	**Sg**	**20 04 30.7**	**+1.5**
	baz=229					
SHHT	**Tainan City**	**1.63 231**	*e*P	**Pn**	**20 04 06.3**	**+0.3**
	baz=236					
SHHT			*e*S	**Sg**	**20 04 28.6**	**-0.8**
	baz=236					
TSMG	**Majia**	**1.68 216**	P	**Pb**	**20 04 07.8**	**-0.2**
	baz=236					
TSMG			*e*S	**Sg**	**20 04 30.3**	**-0.5**
	baz=236					
TSCK	**Chigu Township**	**1.75 239**	*e*P	**Pb**	**20 04 09.6**	**+0.2**
	baz=244					
TSCK			*e*S	**Sb**	**20 04 31.9**	**+0.3**
	baz=244					
MASBT	**Mashibuluo**	**1.76 215**	*e*P	**Pn**	**20 04 08.1**	**+0.3**
	baz=217					
MASBT			*e*S	**Sg**	**20 04 33.4**	**-0.1**
	baz=217					
SCZT	**Fangliau**	**1.97 211**	P	**Pb**	**20 04 12.3**	**-0.8**
	baz=213					
SCZT			*e*S	**Sg**	**20 04 39.6**	**-0.5**
	baz=213					
SLIU	**Shizi**	**2.03 205**	P	**Pb**	**20 04 13.3**	**-0.8**
	baz=213					
SLIU			*e*S	**Sb**	**20 04 39.4**	**-0.1**
	baz=213					
PHUB	**P'eng-hu**	**2.04 255**	*e*P	**Pb**	**20 04 13.1**	**-1.2**
	baz=258					
PHUB			*e*S	**Sb**	**20 04 39.8**	**0.0**
	baz=258					
PNG	**Penghu**	**2.04 256**	P	**Pn**	**20 04 12.4**	**+0.8**
	baz=260					
PNG			*e*S	**Sb**	**20 04 39.3**	**-0.5**
	baz=260					
LYUB	**Lan-yu**	**2.06 183**	*i* P	**Pn**	**20 04 09.8**	**-2.1**
	baz=190					
LYUB			*i* S	**Sn**	**20 04 35.2**	**-2.6**
	baz=190					
JIJ	**Ishigaki jima**	**2.24 82**	S	**Sn**	**20 04 42.1**	**-0.1**
VWUC	**VWUC**	**2.26 294**	*e*S	**Sn**	**20 04 41.4**	**-1.3**
	baz=293					
VCHM	**Qimei**	**2.27 248**	*e*P	**Pn**	**20 04 14.3**	**-0.4**
	baz=238					
VCHM			*e*S	**Sb**	**20 04 45.7**	**-0.6**
	baz=238					
JISG	**Ishigakijimahi**	**2.42 77**	P	**Pn**	**20 04 17.7**	**+0.8**
JISG			*e*S	**Sn**	**20 04 48.4**	**+1.7**
PTMZ	**Houxiangcun**	**2.55 293**	*e*P	**Pn**	**20 04 18.0**	**-0.7**
	baz=292					
PTMZ			*e*S	**Sn**	**20 04 48.6**	**-1.3**
	baz=292					
MATB	**Ma-tsu**	**2.62 323**	*e*P	**Pn**	**20 04 19.8**	**+0.2**
	baz=318					
MATB			*e*S	**Sn**	**20 04 50.5**	**-1.2**
	baz=318					
LYJJ	**Jianjiangzhen**	**3.04 325**	*e*P	**Pn**	**20 04 25.5**	**+0.2**
	baz=320					
LYJJ			*e*S	**Sn**	**20 05 00.6**	**-1.4**
	baz=320					
KNMB	**Chin-men Tao**	**3.06 278**	*e*P	**Pn**	**20 04 25.4**	**-0.3**
	baz=279					
KNMB			*e*S	**Sn**	**20 05 00.8**	**-1.7**
	baz=279					
MHZQ	**Yeshan**	**3.16 310**	*e*P	**Pn**	**20 04 26.9**	**-0.2**
	baz=307					
MHZQ			*e*S	**Sn**	**20 05 03.8**	**-1.2**
	baz=307					
XPSS	**Dashiqiu**	**3.16 334**	*e*P	**Pn**	**20 04 26.5**	**-0.6**
	baz=328					
XPSS			*e*S	**Sn**	**20 05 04.5**	**-0.6**
	baz=328					
AXDP	**Jialang**	**3.51 284**	*e*P	**Pn**	**20 04 31.1**	**-0.8**
	baz=285					
SXFK	**Yanhouchang**	**4.35 303**	*e*P	**Pn**	**20 04 43.5**	**+0.1**
	baz=302					

*NEIC **08** 20:05:10.4±0.4,36.03N±0.01×97.90W±0.01,h3km±3km, Error ellipse: s-maj=2.0km s-min=1.4km az=54.0*

TUL 08 20:05:10.8±0.4,36.04N±0.01×97.90W±0.01,h6km±1km, ML2.9,mb_Lg2.6/42(NEIC),ML3.0/62(NEIC),Error ellipse: s-maj=1.7km s-min=1.4km az=49.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**123**		Pg	20 05 19.4	+0.2
OK029				Sg	Sg	20 05 25.8	+1.0
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	20 05 20.1	+0.2
CROK				Sg	Sg	20 05 26.8	+0.7
CROK				IAML		20 05 30.2	
	comp=N,1μm,0.2s						
ADOK	**Arcadia Dam**	**0.57**	**132**		Pg	20 05 21.8	-0.1
ADOK				Sg	Sg	20 05 30.3	+0.9
CSTR	**Hydro, Custer**	**0.75**	**239**		Pg	20 05 25.0	-0.2
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	20 05 25.6	-0.2
OK033				IAML		20 05 36.8	
	comp=N,421nm,0.3s						
OK033				IAML		20 05 38.2	
	comp=N,390nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**342**		Pg	20 05 26.1	-0.2
OK032				IAML		20 05 37.4	
	comp=N,716nm,0.3s						
OK038	**West end E0370**	**0.81**	**303**	Pg	Pg	20 05 26.1	-0.3
GC02	**Grant County #**	**0.81**	**2**	Pg	Pg	20 05 26.2	-0.3
OK048	**Pawnee Station**	**0.86**	**64**	Pg	Pg	20 05 26.8	-0.5
FNO	**Franklin**	**0.88**	**152**		Pg	20 05 27.2	-0.4
FNO				IAML		20 05 40.3	
	comp=E,306nm,0.1s						
OK052	**Battle Ridge R**	**0.89**	**92**	Pg	Pg	20 05 27.7	-0.2
BLOK	**Blackwell**	**0.91**	**37**		Pg	20 05 28.0	-0.2
KAN14	**Manchester OK**	**0.92**	**357**	Pg	Pg	20 05 27.9	-0.5
KAN14				IAML		20 05 42.5	
	comp=E,534nm,0.1s						
KAN14				IAML		20 05 47.8	
	comp=N,373nm,0.1s						
OK035	**E0210 Rd and N**	**0.94**	**316**	Pg	Pg	20 05 28.5	-0.3
OK035				IAML		20 05 47.1	
	comp=N,552nm,0.3s						
U32A	**Winter Ranch,**	**0.96**	**291**	Pg	Pg	20 05 28.7	-0.5
QUOK	**Quay**	**0.97**	**82**	Pg	Pg	20 05 29.2	-0.2
QUOK				IAML		20 05 42.6	
	comp=N,439nm,0.3s						
QUOK				IAML		20 05 45.8	
	comp=E,320nm,0.2s						
OK051	**E0350 and S346**	**0.98**	**61**	Pg	Pg	20 05 29.3	-0.2
OK051				IAML		20 05 48.9	
	comp=E,560nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**	Pg	Pg	20 05 29.8	-0.4
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	20 05 30.3	-0.4
KAN13				IAML		20 05 49.0	
	comp=E,441nm,0.2s						
KAN10	**Anthony SW Sta**	**1.10**	**352**	Pg	Pg	20 05 31.5	-0.3
KAN10				IAmb_Lg		20 05 47.0	
	comp=Z,67nm,0.8s						
KAN10				IAML		20 05 49.9	
	comp=N,283nm,0.2s						
KAN10				IAML		20 05 51.2	
	comp=E,352nm,0.1s						
KAN01	**Argonia South**	**1.12**	**6**	Pg	Pg	20 05 31.6	-0.7
KAN01				IAML		20 05 49.4	
	comp=N,312nm,0.1s						
KAN01				IAML		20 05 50.5	
	comp=E,229nm,0.1s						
KAN09	**Caldwell North**	**1.12**	**12**	Pg	Pg	20 05 31.8	-0.5
DEOK	**Depew**	**1.15**	**99**		Pg	20 05 32.2	-0.7
DEOK				IAML		20 05 56.1	
	comp=N,202nm,0.3s						
KAN08	**Anthony NE Sta**	**1.19**	**357**	Pg	Pg	20 05 33.0	-0.6
KAN08				IAML		20 05 52.6	
	comp=N,182nm,0.1s						
KAN08				IAML		20 05 55.8	
	comp=E,178nm,0.1s						
KAN06	**Argonia West S**	**1.21**	**1**		Pg	20 05 33.4	-0.6
KAN06				IAML		20 05 50.1	
	comp=E,343nm,0.3s						
KAN06				IAML		20 05 51.1	
	comp=N,292nm,0.1s						
W35A	**Tecumseh**	**1.21**	**136**	Pg	Pg	20 05 33.2	-0.9
W35A				IAML		20 05 53.9	
	comp=E,369nm,0.4s						
W35A				IAML		20 05 54.0	
	comp=N,292nm,0.2s						
ELIS	**Ellis County**	**1.23**	**272**	Pg	Pg	20 05 33.8	-0.7
ELIS				IAML		20 05 56.3	
	comp=N,310nm,0.3s						
ELIS				IAML		20 05 59.3	
	comp=E,271nm,0.3s						
KAN12	**Harper NE Stat**	**1.26**	**356**	Pg	Pg	20 05 33.8	-1.2
KAN12				IAML		20 05 57.2	
	comp=N,316nm,0.4s						
KAN12				IAML		20 06 00.9	
	comp=E,355nm,0.3s						
KS21	**Milan North St**	**1.26**	**9**	Pg	Pg	20 05 33.8	-1.2
T35A	**Sooner Cattle**	**1.42**	**51**	Pg	Pn	20 05 37.2	0.0
X34A	**Smith Ranch, M**	**1.43**	**178**	Pg	Pn	20 05 37.5	+0.2
WMOK	**Wichita Mounta**	**1.48**	**209**		Pn	20 05 37.6	-0.5
TUL3	**Leonard**	**1.71**	**94**	Pg	Pn	20 05 41.3	+0.1
TUL3				IAmb_Lg		20 06 06.4	
	comp=Z,47nm,0.9s						
LOOK	**Love County**	**2.12**	**164**	Pn	Pn	20 05 46.8	0.0
SMWD	**Samnorwood**	**2.12**	**245**		Pn	20 05 48.0	+1.1
SMWD				IAmb_Lg		20 06 21.1	
	comp=Z,40nm,0.8s						
WTFS	**Witchita Falls**	**2.31**	**192**		Pn	20 05 50.1	+0.7
RLO	**Rose Lookout**	**2.33**	**86**		Pn	20 05 50.7	+1.0
R32A	**Long Quarter,**	**2.47**	**345**	IAmb_Lg		20 06 35.3	
	comp=Z,20nm,0.8s						
X37A	**Clayton**	**2.52**	**124**		Pn	20 05 51.4	-0.9
U38A	**Gravette**	**2.87**	**81**		Pn	20 05 57.2	+0.1
FW03	**Perrin-Whitt E**	**2.99**	**183**	Pn	Pn	20 05 59.3	+0.5
CBKS	**Cedar Bluff**	**3.14**	**333**	IAmb_Lg		20 06 48.7	
	comp=Z,14nm,1.0s						
HHAR	**Hobbs**	**3.21**	**84**		Pn	20 06 02.2	+0.4
KSU1	**Kansas State U**	**3.23**	**18**		Pn	20 06 01.9	-0.2
PLPT	**Palo Pinto**	**3.23**	**186**		Pn	20 06 02.8	+0.6
APMT	**Aspermont**	**3.27**	**215**		Pn	20 06 03.0	+0.4
AMTX	**Amarillo**	**3.29**	**251**	IAmb_Lg		20 06 58.0	
	comp=Z,22nm,0.7s						
DKNS	**Dickens**	**3.43**	**227**	Pg	Pb	20 06 13.2	+1.2
DKNS				IAmb_Lg		20 07 02.8	
	comp=Z,23nm,0.7s						
Z38A	**Mt. Pleasant**	**3.67**	**138**	IAmb_Lg		20 07 08.7	
	comp=Z,13nm,0.8s						
ABTX	**Abilene, Hawle**	**3.70**	**203**		Pn	20 06 08.3	-0.2
MIAR	**Mount Ida**	**3.83**	**112**	Pn	Pn	20 06 11.6	+1.2
RTBA	**Rita Blanca**	**3.93**	**277**		Pn	20 06 12.2	+0.4
RTBA				IAmb_Lg		20 07 20.3	
	comp=Z,10nm,1.1s						
SN05	**Snyder 5**	**4.00**	**219**	IAmb_Lg		20 07 19.8	
	comp=Z,12nm,0.8s						
SN01	**Snyder 1**	**4.02**	**219**	IAmb_Lg		20 07 23.7	
	comp=Z,20nm,1.0s						
POST	**Post**	**4.20**	**226**	IAmb_Lg		20 07 27.0	
	comp=Z,19nm,0.8s						
X40A	**Basin Creek Fa**	**4.42**	**109**		Pn	20 06 18.1	-0.3
X40A				IAmb_Lg		20 07 32.0	
	comp=Z,8.8nm,1.1s						
WHAR	**Wooly Hollow**	**4.63**	**98**		Pn	20 06 20.8	-0.5
MGMO	**Mountain Grove**	**4.67**	**75**	IAmb_Lg		20 07 45.8	
	comp=Z,16nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.69**	**90**	IAmb_Lg		20 07 47.6	
	comp=Z,9.2nm,0.7s						
P38A	**Dawn**	**4.98**	**43**	IAmb_Lg		20 07 59.8	
	comp=Z,8.9nm,0.7s						
T42A	**Van Buren**	**5.57**	**78**	IAmb_Lg		20 08 09.9	
	comp=Z,10nm,0.8s						
JCT	**Junction City**	**5.77**	**197**	IAmb_Lg		20 08 23.0	
	comp=Z,10.0nm,1.0s						
PBMO	**Poplar Bluff**	**6.07**	**81**	IAmb_Lg		20 08 24.6	
	comp=Z,11nm,0.7s						
Q24A	**Divide**	**6.46**	**299**	IAmb_Lg		20 08 40.4	
	comp=Z,5.1nm,0.8s						
SAND	**Sanderson**	**7.03**	**212**	IAmb_Lg		20 09 03.0	
	comp=Z,4.6nm,0.7s						

TAP 08 20:14:00.3,23.31N×120.32E,h2km±1km,ML1.3,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ICHU	**Yijhu**	**0.07**	**327**	*i* P	Pg	20 14 02.1	+0.5
	baz=328						
ICHU				*i* S	Sg	20 14 04.0	+1.5
	baz=328						
CHN8	**Yiju**	**0.11**	**293**	P	Pg	20 14 03.0	+0.6
	baz=295						
CHN8				S	Sg	20 14 05.8	+2.0
	baz=295						
TWK	**Hsinying**	**0.16**	**104**	*e*P	Pg	20 14 05.0	+1.6
	baz=104						
SSHA	**Shanhua**	**0.17**	**189**	*e*P	Pg	20 14 04.7	+1.1
	baz=188						
CHN4	**Tsaushan**	**0.26**	**80**	*e*P	Pg	20 14 06.1	+0.8
	baz=83						
CHN4				*e*S	Sb	20 14 11.6	-1.0
	baz=83						

*IDC **08** 20:14:03.2±1.5,0.86N×126.23E,h0km,mb3.9/5, mbtmp4.0/5,MS4.6/1,Error ellipse: s-maj=169.5km s-min=19.5km az=65.0*

*DJA **08** 20:14:09.5±1.0,1.7N±3.3×12.6E±.1,h18km±8km,M3.8/6, MLv3.8/6*

*NEIC **08** 20:14:12.0±1.3,0.9N±0.1×126.52E±0.05,h69km±12km, mb4.0/10,Error ellipse: s-maj=20.8km s-min=7.6km az=174.0*

ISC 08 20:14:11.4±1.0,0.81N±0.05×126.41E±0.05,h63km±12km, n27,σ1§20/31,mb4.0/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.96**	**92**	Pn	**Pn**	**20 14 28.7**	**-0.4**
TNTI	**Ternate**	**0.96**	**92**	P	**Pn**	**20 14 28.5**	**-0.6**
TNTI				S	**Sn**	**20 14 42.3**	**+0.1**
LBMI	**Labuha**	**1.81**	**143**	P	**Pn**	**20 14 40.6**	**+0.2**
LBMI				S	**Sn**	**20 15 04.8**	**+2.5**
KMSI	**Cibinong**	**2.44**	**264**	P	**Pn**	**20 14 48.6**	**-0.3**
KMSI				S	**Sn**	**20 15 17.1**	**-0.5**
SANI	**Sanana**	**2.87**	**188**	P	**Pn**	**20 14 53.9**	**-0.9**
SANI				S	**Sn**	**20 15 26.7**	**-1.5**
SGSI	**Sangihe**	**2.99**	**343**	P	**Pn**	**20 14 56.2**	**-0.2**
SGSI				S	**Sn**	**20 15 32.4**	**+1.3**
LUWI	**Luwuk**	**4.07**	**243**	Pn	**Pn**	**20 15 13.9**	**+2.6**
LUWI	**Luwuk**	**4.07**	**243**	P	**Pn**	**20 15 11.0**	**-0.3**
WB0	**Warramunga Arr**	**21.90**	**159**	P	**P**	**20 18 58.9**	**-0.6**
WB0				IAmb	IAmb	20 19 12.6	
	comp=Z,10nm,1.3s						
WRAB	**Tennant Creek**	**22.04**	**160**	P	**P**	**20 19 00.6**	**-0.3**
WRAB				IAmb	IAmb	20 19 39.6	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	**22.04**	**160**	P	**P**	**20 19 00.0**	**-1.0**
WRA	**Warramunga Arr**	**22.04**	**160**	P	**P**	**20 19 00.9**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=338,slow=11,SNR=35						
	comp=Z,1.7nm,0.4s						
WB2	**Warramunga Arr**	**22.05**	**160**	P	**P**	**20 19 00.7**	**-0.4**
WB2				IAmb	IAmb	20 19 04.4	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**22.13**	**159**	P	**P**	**20 19 01.7**	**-0.2**
WR0				IAmb	IAmb	20 19 14.1	
	comp=Z,7.9nm,1.3s						
AS31	**Alice Springs**	**25.40**	**164**	P	**P**	**20 19 36.0**	**+2.9**
AS31				IAmb	IAmb	20 19 36.8	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**25.40**	**164**	P	**P**	**20 19 35.6**	**+2.4**
ASAR	**Alice Springs**	**25.40**	**164**	P	**P**	**20 19 33.5**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=347,slow=12,SNR=32						
	comp=Z,1.0nm,0.4s						
FORT	**Forrest**	**31.46**	**177**	P	**P**	**20 20 27.8**	**+0.8**
BBOO	**Buckleboo**	**34.66**	**166**	P	**P**	**20 20 55.0**	**0.0**
HNR	**Honiara**	**34.91**	**108**	LR	LR	20 35 21.1	
	comp=Z,807nm,19.1s,baz=87,slow=36						
STKA	**Stephens Creek**	**35.55**	**157**	P	**P**	**20 21 03.0**	**+0.3**
STKA	**Stephens Creek**	**35.55**	**157**	P	**P**	**20 21 03.1**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=330,slow=9.9,SNR=4.7						
	comp=Z,1.0nm,0.5s						
MK31	**Makanchi Array**	**59.77**	**326**	P	**P**	**20 24 09.1**	**-0.9**
MK31				IAmb	IAmb	20 24 38.0	
	comp=Z,2.2nm,1.4s						
MKAR	**Makanchi Array**	**59.77**	**326**	P	**P**	**20 24 08.9**	**-1.1**
MKAR	**Makanchi Array**	**59.77**	**326**	P	**P**	**20 24 09.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=124,slow=7.1,SNR=10						
	comp=Z,0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**64.02**	**328**	P	**P**	**20 24 38.0**	**-0.4**
	comp=Z,0.9nm,0.2s,baz=139,slow=6.1,SNR=2.3						
	comp=Z,0.9nm,0.2s						
ABKAR	**Akbulak array**	**74.20**	**321**	P	**P**	**20 25 41.1**	**-0.3**

*IDC **08** 20:14:12.3±1.1,24.02N×121.88E,h0km,mb3.5/6, mbtmp3.6/7,ML3.2/1,Error ellipse: s-maj=38.7km s-min=21.9km az=62.0*

*TAP **08** 20:14:13.9,24.02N×121.82E,h6km,ML4.1,C*

*ASIES **08** 20:14:13.9,24.02N×121.82E,h6km,ML4.1,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-2.29; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$3.22; $M_{r\theta}$2.11; $M_{\theta\phi}$0.06; $M_{r\phi}$2.28; Fault plane solution: $M_0$4.24074×10^{21} NP1: ϕ_s210.68000°,δ71.78000°,λ-62.71000°. NP2: ϕ_s331.90000°,δ32.42000°,λ-144.32000°. Principal axes: T Plg22.0730°, Azm280.2020°; N Plg25.8160°, Azm21.5150°; P Plg54.8860°, Azm154.9840°;*

*JMA **08** 20:14:14.5±0.1,24.0N±0.4×121.8E±0.5,h0km,MV3.7/16, TAIWAN REGION*

ISC 08 20:14:15.2±0.9,24.01N±0.01×121.84E±0.02,h14km±6km, n175,σ0§77/239,mb3.6/6,36C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.22**	**263**	⇑P	**Pb**	**20 14 20.3**	**-0.7**
	baz=248						
HWA				*e*S	**Sb**	**20 14 25.0**	**+0.1**
	baz=248						
TWD	**Chiawan**	**0.24**	**288**	⇑*i*P	**Pg**	**20 14 19.4**	**-1.0**
	baz=286						
TWD				*i* S	**Sg**	**20 14 23.2**	**-0.7**
	baz=286						
ETL	**Fush Village**	**0.25**	**307**	*i* P	**Pg**	**20 14 19.6**	**-1.1**
	baz=307						
ETL				*i* S	**Sg**	**20 14 24.1**	**-0.3**
	baz=307						
NACB	**Ninganchiao**	**0.28**	**307**	P	**Pg**	**20 14 20.0**	**-1.2**
NACB	**Ninganchiao**	**0.28**	**307**	⇑*i*P	**Pg**	**20 14 20.0**	**-1.2**
	baz=306						
NACB				*i* S	**Sg**	**20 14 24.6**	**-0.7**
	baz=306						
EHP	**Heping Village**	**0.32**	**343**	*e*P	**Pg**	**20 14 21.3**	**-0.5**
	baz=348						
ETM	**Tongmen**	**0.32**	**263**	⇑*i*P	**Pg**	**20 14 21.4**	**-0.5**
	baz=257						
ETM				*i* S	**Sg**	**20 14 26.8**	**+0.3**
	baz=257						
EAHA	**Aohua**	**0.34**	**344**	P	**Pg**	**20 14 21.6**	**-0.6**
	baz=348						
EAHA				*e*S	**Sb**	**20 14 28.2**	**-0.1**
	baz=348						
SHUL	**Shoufeng**	**0.34**	**230**	*e*P	**Pb**	**20 14 23.1**	**+0.1**
	baz=222						
SHUL				*e*S	**Sn**	**20 14 30.2**	**-2.1**
	baz=222						
ETLH	**Xiulin Townshi**	**0.39**	**301**	⇑P	**Pg**	**20 14 22.0**	**-1.1**
	baz=301						
ETLH				*e*S	**Sg**	**20 14 28.2**	**-0.2**
	baz=301						
LXIB	**Xiulin Townshi**	**0.39**	**272**	⇑*i*P	**Pg**	**20 14 22.4**	**-0.8**
	baz=268						
LXIB				*i* S	**Sg**	**20 14 28.7**	**0.0**
	baz=268						
TEGC	**Jichi Village**	**0.41**	**223**	*e*P	**Pb**	**20 14 24.2**	**+0.1**
	baz=201						
ESL	**Shilin**	**0.42**	**243**	*e*P	**Pg**	**20 14 23.5**	**-0.2**
	baz=235						
ESL				*e*S	**Sb**	**20 14 30.3**	**-0.4**
	baz=235						
ENA	**Nanau**	**0.43**	**348**	P	**Pg**	**20 14 23.2**	**-0.7**
	baz=354						
ENA				*e*S	**Sb**	**20 14 30.2**	**-0.7**
	baz=354						
EWUT	**Wuta**	**0.44**	**352**	⇑P	**Pg**	**20 14 23.7**	**-0.4**
	baz=348						
EWUT				*e*S	**Sb**	**20 14 31.4**	**+0.1**
	baz=348						
EOS4	**EOS4**	**0.45**	**75**	*e*P	**Pn**	**20 14 26.2**	**-0.7**
	baz=78						
WARBT	**Fenglin Townsh**	**0.51**	**236**	P	**Pg**	**20 14 25.1**	**-0.2**
	baz=214						
WARBT				*e*S	**Sb**	**20 14 33.0**	**-0.2**
	baz=214						
EOS3	**EOS3**	**0.52**	**57**	*e*P	**Pn**	**20 14 27.1**	**-0.9**

NNSH	**Datong**	baz=316	**0.59**	**315**	P	**Pg**	20 14 26.4	-0.6
NNSH		baz=316			*e*S	**Sg**	20 14 34.7	-0.2
FUSS	**Fushou**	baz=293	**0.60**	**294**⇑	*i*P	**Pg**	20 14 26.4	-0.7
FUSS		baz=293			S	**Sb**	20 14 35.3	-0.7
LATG	**Datong**	baz=334	**0.60**	**331**⇑	*i*P	**Pg**	20 14 26.3	-0.8
LATG		baz=334			*i* S	**Sg**	20 14 34.9	-0.2
TWC	**Suao**	baz=355	**0.60**	**1**⇑	*i*P	**Pg**	20 14 26.8	-0.3
TWC		baz=355			*e*S	**Sb**	20 14 36.1	+0.3
NNS	**Nan Shan**	baz=317	**0.61**	**315**⇑	*i*P	**Pg**	20 14 26.4	-0.8
NNS		baz=317			*i* S	**Sb**	20 14 35.6	-0.6
OWD	**Renai**	baz=275	**0.61**	**265** ⇑	P	**Pg**	20 14 26.9	-0.4
OWD		baz=275			*e*S	**Sg**	20 14 35.5	0.0
CHGB	**Renai**	baz=273	**0.61**	**275**⇑	*i*P	**Pg**	20 14 26.8	-0.5
CHGB		baz=273			*i* S	**Sg**	20 14 35.3	-0.2
NDS	**Dongshan**	baz=353	**0.64**	**350**⇑	*e*P	**Pg**	20 14 27.4	-0.3
NDS		baz=353			*e*S	**Sb**	20 14 37.2	+0.3
HGSD	**Ruisui**	baz=211	**0.64**	**217**	*e*P	**Pb**	20 14 28.3	+0.1
HGSD		baz=211			*e*S	**Sn**	20 14 40.1	+0.4
TWT	**Tachien**	baz=290	**0.66**	**292**⇑	*i*P	**Pg**	20 14 27.8	-0.4
TWT		baz=290			*e*S	**Sb**	20 14 37.4	-0.3
WUSB	**Renai**	baz=266	**0.66**	**269**⇑	*i*P	**Pg**	20 14 27.9	-0.3
WUSB		baz=266			S	**Sg**	20 14 37.0	-0.1
NDT	**Datong Townshi**	baz=336	**0.67**	**333**⇑	*i*P	**Pg**	20 14 27.9	-0.4
NDT		baz=336			S	**Sg**	20 14 37.2	0.0
TDCB	**Techi**	baz=291	**0.67**	**292** ⇑	P	**Pg**	20 14 27.8	-0.6
TDCB		baz=291			*e*S	**Sg**	20 14 36.9	-0.5
ENTT	**Nioudou**	baz=342	**0.68**	**338**⇑	*i*P	**Pg**	20 14 28.1	-0.5
ENTT		baz=342			*e*S	**Sb**	20 14 37.6	-0.5
EHY	**Hungye**	baz=217	**0.69**	**224**	*e*P	**Pb**	20 14 29.2	+0.1
VWDT	**VWDT**	baz=244	**0.69**	**249**⇑	*i*P	**Pb**	20 14 28.8	-0.2
VWDT		baz=244			S	**Sb**	20 14 38.7	+0.4
TWE	**Neicheng**	baz=352	**0.73**	**347**⇑	*i*P	**Pg**	20 14 29.2	-0.3
TWE		baz=352			*e*S	**Sb**	20 14 40.0	+0.4
ECBN	**Changbin**	baz=201	**0.77**	**208**	*e*P	**Pb**	20 14 30.3	-0.2
YHNB	**Yeheng**		**0.79**	**327**	P	**Pg**	20 14 30.2	-0.4
YHNB	**Yeheng**	baz=329	**0.79**	**327**⇑	*i*P	**Pg**	20 14 29.9	-0.6
YHNB		baz=329			*i* S	**Sg**	20 14 40.4	-0.6
YULB	**Yu-li**		**0.79**	**219**	P	**Pb**	20 14 30.9	+0.2
YULB	**Yu-li**	baz=214	**0.79**	**219**⇓	*e*P	**Pb**	20 14 30.7	-0.1
YULB		baz=214			*e*S	**Sn**	20 14 43.4	-0.2
NSK	**Sanguang**	baz=329	**0.80**	**327**⇑	*i*P	**Pg**	20 14 30.1	-0.8
NSK		baz=329			*e*S	**Sg**	20 14 40.5	-0.9
WPL	**Puli Township**	baz=267	**0.81**	**271**	*e*P	**Pb**	20 14 30.8	-0.3
EYUL	**Yuli**	baz=194	**0.81**	**216**	*e*P	**Pb**	20 14 31.4	+0.3
TWF1	**Yuli**	baz=212	**0.82**	**218**	*i* P	**Pb**	20 14 31.2	-0.1
TWF1		baz=212			*e*S	**Sn**	20 14 45.7	+1.4
NWLT	**Wulai**	baz=341	**0.83**	**338**⇑	*i*P	**Pg**	20 14 30.8	-0.6
NWLT		baz=341			*i* S	**Sb**	20 14 42.7	+0.2
DPDB	**Guoxing**	baz=269	**0.84**	**272** ⇑	P	**Pg**	20 14 31.2	-0.4
DPDB		baz=269			*e*S	**Sb**	20 14 42.4	-0.3
SSLB	**Suanglung**		**0.84**	**255**	P	**Pb**	20 14 31.5	-0.2
SSLB	**Suanglung**	baz=265	**0.84**	**255**	P	**Pb**	20 14 31.5	-0.2
SSLB		baz=265			*i* S	**Sg**	20 14 41.7	-1.0
WCS	**Beigang Elemen**	baz=271	**0.85**	**274**	*e*P	**Pb**	20 14 31.6	-0.2
WHP	**Taichung City**	baz=287	**0.86**	**288**⇑	*i*P	**Pg**	20 14 31.6	-0.4
WHP		baz=287			*i* S	**Sb**	20 14 43.8	+0.2
SMLT	**Sun Moon Lake**	baz=258	**0.87**	**262**⇑	*i*P	**Pg**	20 14 31.8	-0.4
SMLT		baz=258			*i* S	**Sb**	20 14 44.0	+0.2
TYC	**Yuchr**	baz=260	**0.91**	**264** ⇑	P	**Pb**	20 14 32.2	-0.5
TYC		baz=260			S	**Sb**	20 14 44.1	-0.5
CHKH	**Chenggong**	baz=200	**0.91**	**207**	*e*P	**Pg**	20 14 32.8	0.0
NFF	**Wufeng Townshi**	baz=305	**0.91**	**313**⇑	*i*P	**Pb**	20 14 32.2	-0.6
FULB	**Fuli**	baz=194	**0.95**	**212**	*e*P	**Pn**	20 14 33.8	-0.3
WHYT	**Xinyi Township**	baz=246	**0.96**	**251**	*e*P	**Pg**	20 14 33.7	-0.1
TIPB	**Shuangxi**	baz=355	**0.96**	**359** ⇑	P	**Pb**	20 14 33.3	-0.4
LIOB	**Emei**	baz=311	**0.99**	**310**⇑	*i*P	**Pg**	20 14 34.1	-0.2
LIOB		baz=311			*e*S	**Sn**	20 14 48.3	-0.1
NSTT	**Nanjuang**	baz=310	**0.99**	**309** ⇑	P	**Pb**	20 14 33.9	-0.3
NSTT		baz=310			S	**Sg**	20 14 47.5	+0.2
NHDH	**Xindian Distri**	baz=348	**1.00**	**343**	*e*P	**Pb**	20 14 33.7	-0.5
TWA	**Mucha**	baz=340	**1.00**	**346**	P	**Pb**	20 14 34.0	-0.3
NJD	**Zhudong**	baz=319	**1.00**	**317**	*e*P	**Pb**	20 14 34.0	-0.3
CHKT	**Chengkung**	baz=178	**1.00**	**206**	*e*P	**Pb**	20 14 33.8	-0.5
TWB1	**Santiao Chiao**	baz=5.0	**1.01**	**8**	*e*P	**Pb**	20 14 34.4	-0.1
TATO	**Taipei**		**1.02**	**342**	P	**Pg**	20 14 34.8	-0.2
TATO	**Taipei**	baz=345	**1.02**	**342**	P	**Pg**	20 14 34.8	-0.2
TATO		baz=345			*e*S	**Sg**	20 14 48.5	+0.2
EHD	**Haiduan**	baz=194	**1.03**	**215**	*e*P	**Pb**	20 14 33.9	-1.0
TWQ1	**Liyutan**	baz=288	**1.03**	**289**	*e*P	**Pb**	20 14 34.8	-0.2
WJS	**Zhushan**	baz=256	**1.04**	**260**	*e*P	**Pn**	20 14 35.2	-0.2
WWF	**Wufeng**	baz=269	**1.05**	**272**	*e*P	**Pn**	20 14 35.9	+0.4
NWF	**Wu-fen Shan**	baz=354	**1.06**	**357**	*e*P	**Pb**	20 14 35.3	-0.1
WFSB	**Wu-fen Shan**	baz=354	**1.06**	**357**	*e*P	**Pb**	20 14 35.0	-0.4
WNT	**Mingjian**	baz=259	**1.07**	**263**	*e*P	**Pg**	20 14 35.7	-0.2
WNT1	**Nantou City**	baz=261	**1.07**	**265**	*e*P	**Pg**	20 14 36.1	+0.2
NSY	**Sanyi**	baz=292	**1.07**	**293**	P	**Pg**	20 14 35.6	-0.3
ALS	**Alishan**	baz=237	**1.07**	**243**	*e*P	**Pg**	20 14 35.8	-0.2
ALS		baz=237			*e*S	**Sn**	20 14 51.0	+0.1
ECS	**Chishang**	baz=190	**1.07**	**212**	*e*P	**Pb**	20 14 35.5	-0.1
TAP	**Taipei**	baz=349	**1.07**	**343**	*e*P	**Pn**	20 14 35.6	-0.3
HSN1	**Hsinchu**	baz=318	**1.08**	**316**	*e*P	**Pb**	20 14 35.2	-0.4
TCU	**Taichung**	baz=275	**1.08**	**278**	*e*P	**Pg**	20 14 36.7	+0.6
SXI1	**Grass Mountain**	baz=360	**1.08**	**2**⇑	*e*P	**Pn**	20 14 35.9	-0.2
SXI1		baz=360			*e*S	**Sn**	20 14 50.9	0.0
NMLH	**Miaoli**	baz=299	**1.10**	**299**	*e*P	**Pg**	20 14 36.9	+0.5
JYNG	**Yonagunijimaku**		**1.10**	**66**	P	**Pg**	20 14 36.5	0.0
JYNG					S	**Sn**	20 14 51.4	+0.2
SBCB	**Hsinchu**	baz=317	**1.11**	**315**	*e*P	**Pb**	20 14 35.8	-0.3
ELDTW	**Lidau**	baz=215	**1.11**	**223**	P	**Pb**	20 14 35.2	-1.1
ELDTW		baz=215			*e*S	**Sn**	20 14 52.3	+0.6
NJN	**Zhunan**	baz=308	**1.11**	**307**	*e*P	**Pg**	20 14 36.4	-0.4
HSN	**Hsinchu**	baz=320	**1.12**	**315**	*e*P	**Pb**	20 14 36.1	-0.4
NCUH	**Zhongli**	baz=333	**1.13**	**328**	*e*P	**Pg**	20 14 36.8	-0.3
NCU	**National Centr**	baz=333	**1.13**	**328**	*e*P	**Pb**	20 14 35.7	-0.8
EDH	**Donghe**	baz=179	**1.14**	**206**	*e*P	**Pb**	20 14 34.6	-2.1
TNOU	**National Taiwa**	baz=353	**1.14**	**357**	*e*P	**Pb**	20 14 36.6	-0.2
TNOU		baz=353			*e*S	**Sn**	20 14 54.0	+1.8
CHN5	**Tsauling**	baz=244	**1.14**	**249**	*e*P	**Pg**	20 14 37.0	-0.3
CHN5		baz=244			*e*S	**Sn**	20 14 54.1	+1.8
WDJ	**Dajia District**	baz=286	**1.15**	**287**	*e*P	**Pg**	20 14 37.6	+0.2
WYL	**Yuanlin Townsh**	baz=247	**1.16**	**268**	*e*P	**Pn**	20 14 36.8	-0.2
TWS1	**Kuangyinshan**	baz=345	**1.16**	**341**	*e*P	**Pg**	20 14 37.5	-0.1
TWS1		baz=345			*e*S	**Sg**	20 14 54.3	+1.6
YOJ	**Yonaguni jima**		**1.16**	**67**	P	**Pg**	20 14 37.5	-0.1
YOJ	**Yonaguni jima**	baz=72	**1.16**	**67**	*e*P	**Pn**	20 14 36.9	-0.1
YOJ	**Yonaguni jima**		**1.16**	**67**	*e*P	**Pg**	20 14 37.4	-0.2
YOJ					*e*S	**Sg**	20 14 53.0	+0.2
YM01	**YM01**	baz=354	**1.16**	**348**	P	**Pg**	20 14 37.4	-0.3
WCHH	**Zhanghua**	baz=270	**1.18**	**274**	*e*P	**Pg**	20 14 37.9	-0.1
YM08	**YM08**	baz=358	**1.20**	**349**	*e*P	**Pb**	20 14 37.6	-0.2
NTST	**Danshui**	baz=351	**1.21**	**343**	*e*P	**Pg**	20 14 38.3	-0.3
ANP	**Anpu**	baz=353	**1.21**	**346**	*e*P	**Pb**	20 14 38.0	0.0
WGK	**Gukeng**	baz=249	**1.22**	**255**	*e*P	**Pg**	20 14 38.6	-0.1
NHW	**Xinwu Township**	baz=328	**1.23**	**324**	*e*P	**Pb**	20 14 38.2	-0.1
WCKO	**Fanlu**	baz=237	**1.27**	**244**	*e*P	**Pb**	20 14 38.8	-0.1
LONT	**Longtian**	baz=183	**1.27**	**211**	*e*P	**Pg**	20 14 39.8	0.0
STYH	**Taoyuan**	baz=207	**1.28**	**230**	*e*P	**Pn**	20 14 38.6	-0.2
TWY	**Chenhua**	baz=335	**1.28**	**350**	*e*P	**Pg**	20 14 39.5	-0.5
STYT	**Tauyuan**	baz=208	**1.30**	**230**	P	**Pb**	20 14 39.2	-0.4
STYT		baz=208			S	**Sg**	20 14 56.6	-0.7
TPUB	**Ta-pu**		**1.31**	**238**	P	**Pg**	20 14 40.2	-0.4
TPUB	**Ta-pu**	baz=232	**1.31**	**238**	⇑P	**Pb**	20 14 39.9	+0.2
TPUB		baz=232			S	**Sg**	20 14 57.7	0.0
CHN4	**Tsaushan**	baz=214	**1.32**	**241**	*e*P	**Pg**	20 14 40.4	-0.2
CHN2	**Minshiung**	baz=244	**1.34**	**250**	*e*P	**Pg**	20 14 41.0	0.0
WRL	**Guolierlin Hig**	baz=262	**1.34**	**266**	*e*P	**Pb**	20 14 40.2	0.0
WTP	**Ta-pu**	baz=228	**1.36**	**236**	*e*P	**Pb**	20 14 40.3	-0.1
WTP		baz=228			*e*S	**Sb**	20 14 57.8	+0.1
RLNB	**Erlin**	baz=261	**1.36**	**266**	*e*P	**Pb**	20 14 40.4	-0.1
WTK	**Tuku**	baz=252	**1.37**	**257**	*e*P	**Pg**	20 14 41.0	-0.6
WTK		baz=252			*e*S	**Sg**	20 15 00.6	+1.1
LDUT	**Ludao**	baz=186	**1.37**	**195**	*e*P	**Pn**	20 14 37.9	-2.0
TWGBT	**Beinan**	baz=203	**1.37**	**211**	*e*P	**Pn**	20 14 38.2	-1.7
TWG	**Pinlang**	baz=203	**1.38**	**211**	*e*P	**Pn**	20 14 38.0	-2.0
TWK	**Hsinying**	baz=232	**1.44**	**240**	*e*P	**Pb**	20 14 42.1	+0.2
CHN1	**Nanshi**	baz=228	**1.46**	**236**	*e*P	**Pg**	20 14 42.9	-0.4
CHN1		baz=228			*e*S	**Sg**	20 15 04.7	+2.5
SNST	**Tainan City**	baz=231	**1.46**	**238**	*e*P	**Pb**	20 14 41.9	-0.3
SGST	**Jiashian**	baz=210	**1.48**	**232**	*e*P	**Pn**	20 14 41.8	+0.3
SGST		baz=210			*e*S	**Sg**	20 15 03.2	+0.4
SLGT	**Liugui**	baz=219	**1.49**	**228**	*e*P	**Pb**	20 14 42.3	-0.4
WSF	**Szhu**	baz=252	**1.53**	**256**	*e*P	**Pb**	20 14 43.2	-0.1
WSF		baz=252			*e*S	**Sg**	20 15 05.4	+0.9
ICHU	**Yijhu**	baz=239	**1.57**	**246**	*e*P	**Pn**	20 14 43.1	+0.5
ECL	**Taimali**	baz=185	**1.62**	**210**	*e*P	**Pn**	20 14 42.2	-1.2
CHN8	**Yiju**	baz=240	**1.63**	**247**	*e*P	**Pb**	20 14 44.4	-0.8
CHN3	**Shinhua**	baz=229	**1.64**	**236**	*e*P	**Pb**	20 14 45.1	-0.1
SCST	**Cishan**	baz=207	**1.67**	**228**	*e*P	**Pb**	20 14 46.0	+0.3
SSD	**Sandimen**	baz=212	**1.68**	**222**	*e*P	**Pn**	20 14 43.8	-0.3
SHHT	**Tainan City**	baz=227	**1.69**	**235**	*e*P	**Pb**	20 14 46.6	+0.6
TSMG	**Majia**	baz=202	**1.70**	**221**	*e*P	**Pn**	20 14 45.1	+0.7
IRIF	**Iriomote-Funau**		**1.75**	**79**	*e*P	**Pb**	20 14 46.7	-0.5
IRIF					*e*S	**Sb**	20 15 09.9	+0.9
TWM1	**Shoushan**	baz=220	**1.76**	**228**	*e*P	**Pb**	20 14 47.9	+0.7
MASBT	**Mashibuluo**	baz=196	**1.78**	**219**	*e*P	**Pb**	20 14 46.6	-1.0
HATJ	**Hateruma jima**		**1.79**	**88**	*e*S	**Sb**	20 15 10.0	-0.3
EAST	**Anshuo**	baz=185	**1.86**	**210**	*e*P	**Pn**	20 14 46.7	0.0
SCZT	**Fangliau**	baz=190	**1.98**	**215**	*e*P	**Pb**	20 14 50.6	-0.4
JKRS	**Kuro-shima**	JKRS	**1.99**	**83**	*e*P	**Pn**	20 14 49.4	+0.9
					*e*S	**Sb**	20 15 16.1	+0.1
LYUB	**Lan-yu**	baz=178	**2.01**	**187**	*e*P	**Pn**	20 14 44.9	-3.8
SLIU	**Shizi**	baz=186	**2.02**	**209**	*e*P	**Pn**	20 14 50.1	+1.2
JIJ	**Ishigaki jima**	JIJ	**2.13**	**80**	P	**Pn**	20 14 50.5	+0.1
JIJ					*e*S	**Sn**	20 15 17.6	+1.0
PHUB	**P'eng-hu**	baz=252	**2.14**	**257**	*e*P	**Pn**	20 14 51.5	+1.0
PNG	**Penghu**	baz=253	**2.14**	**259**	*e*P	**Pn**	20 14 51.0	+0.5
JISG	**Ishigakijimahi**	JISG	**2.33**	**75**	P	**Pn**	20 14 53.4	+0.4
					*e*S	**Sn**	20 15 22.5	+1.1
VCHM	**Qimei**	baz=245	**2.35**	**251**	*e*P	**Pn**	20 14 55.0	+1.6
VWUC	**VWUC**	baz=291	**2.39**	**295**	*e*P	**Pn**	20 14 53.4	-0.5
PTMZ	**Houxiangcun**	baz=288	**2.69**	**293**	*e*P	**Pn**	20 14 57.8	-0.2
MATB	**Ma-tsu**	baz=320	**2.74**	**322**	*e*P	**Pn**	20 14 58.6	-0.2
KNM	**Kinmen**	baz=270	**3.14**	**278**	*e*P	**Pn**	20 15 06.1	+1.8
LYJJ	**Jianjiangzhen**	baz=322	**3.16**	**324**	*e*P	**Pn**	20 15 04.6	+0.1
KNMB	**Chin-men Tao**	baz=272	**3.19**	**279**	*e*P	**Pn**	20 15 05.3	+0.4
JMJ2	**Miyako jima3**		**3.26**	**76**	*e*S	**Sn**	20 15 47.7	+3.2
XPSS	**Dashiqiu**	baz=335	**3.27**	**333**	*e*P	**Pn**	20 15 05.8	-0.3
MHZQ	**Yeshan**	baz=305	**3.29**	**310**	*e*P	**Pn**	20 15 07.0	+0.6
JOGS	**Gusukube**		**3.33**	**76**	*e*P	**Pn**	20 15 05.1	-1.9
AXDP	**Jialang**	baz=278	**3.64**	**285**	*e*P	**Pn**	20 15 10.9	-0.2
ZPLA	**Ao Xicun**	baz=262	**3.75**	**270**	*e*P	**Pn**	20 15 12.5	-0.1
DSXP	**Dongshan**	baz=260	**4.05**	**267**	*e*P	**Pn**	20 15 16.1	-0.7
SXFK	**Yanhouchang**	baz=295	**4.49**	**303**	*e*P	**Pn**	20 15 23.1	+0.2
JOW	**Kunigami**	1.2nm,0.3s,baz=143,slow=14,SNR=7.6 4.2nm,0.3s	**6.46**	**63**	Pn	**Pn**	20 15 49.0	-1.0
KSRS	**Korea Array**	0.1nm,0.3s,baz=195,slow=12,SNR=1.7	**14.38**	**20**	Pn	**Pn**	20 17 41.0	+2.7
MKAR	**Makanchi Array**	0.5nm,0.6s,baz=101,slow=10.0,SNR=7.1 0.5nm,0.6s	**38.88**	**316**	P	**P**	20 21 40.3	+0.1
ZALV	**Zalesovo Beam**	1.0nm,0.7s,baz=112,slow=6.9,SNR=2.2 1.0nm,0.7s	**40.72**	**327**	P	**P**	20 21 53.3	-2.1
WRA	**Warramunga Arr**	0.5nm,0.5s,baz=344,slow=8.7,SNR=3.9 0.5nm,0.5s	**45.35**	**163**	P	**P**	20 22 31.7	-1.4
BVAR	**Borovoye Array**	0.5nm,0.5s,baz=110,slow=7.8,SNR=2.8 0.5nm,0.5s	**48.19**	**321**	P	**P**	20 22 54.8	-0.3
ASAR	**Alice Springs**	0.2nm,0.4s,baz=342,slow=7.4,SNR=4.4 0.2nm,0.4s	**48.81**	**165**	P	**P**	20 23 00.0	-0.2
YKA	**Yellowknife Ar**	0.1nm,0.5s,baz=311,slow=5.1,SNR=2.3 0.1nm,0.5s	**82.90**	**23**	P	**P**	20 26 38.0	-1.2

IDC ***08*** *20:37:02.2±1.1,26˚.14N×128˚.56E,h0km,mb3.8/11, mbtmp3.8/12,ML3.6/1,Error ellipse: s-maj=36.8km s-min=13.8km az=78.0*

NEIC ***08*** *20:37:02.8±2.1,25˚.94N±0˚.06×128˚.51E±0˚.08,h10km±1km, mb4.2/10,Error ellipse: s-maj=12.8km s-min=9.3km az=67.0*

NIED ***08*** *20:37:05.7,26˚.11N×128˚.58E,h38km,MW3.9,Moment Tension Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}7.00; $M_{\theta\theta}$-2.40; $M_{\phi\phi}$-4.60; $M_{r\theta}$2.23; $M_{\theta\phi}$-5.54; $M_{\phi r}$1.23; Fault plane solution: $M_0$8.50000×10^{14} NP1:φs49.00000°, δ54.00000°,λ102.00000°. NP2:φs209.00000°,δ38.00000°, λ74.00000°.*

JMA ***08*** *20:37:05.7±0.3,26˚.1N±1˚.0×12˚9E±˚,h38km±4km, MV3.5/13,NEAR OKINAWAJIMA ISLAND*

ISC 08 20:37:02.1±1.8,26˚.03N±0˚.05×128˚.63E±0˚.04,h7km±11km, n42,σ1ᵠ22/54,mb3.9/16,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.73**	**311**	P		**Pn**	**20 37 18.0**	**-0.9**
JNTH				*e*S		**Sb**	**20 37 27.1**	**-0.4**
JJT3	**Tamagusuku3**	**0.77**	**278**	P		**Pn**	**20 37 19.6**	**+0.1**
JJT3				*e*S		**Sn**	**20 37 29.9**	**-1.5**
JOW	**Kunigami**	**0.86**	**338**			**Pn**	**20 37 20.3**	**-0.3**
JOW	**Kunigami**	**0.86**	**338**	P		**Pn**	**20 37 20.4**	**-0.3**
JOW				*e*S		**Sb**	**20 37 30.7**	**-0.5**
JOW	**Kunigami** comp=E,3.0nm,2.0s,comp=N,3.0nm,0.4s	**0.86**	**338**	A		A	20 37 20.4	
JOW	**Kunigami** comp=N,493nm,0.3s,baz=130,slow=24,SNR=2038	**0.86**	**338**	Pn		**Pn**	**20 37 20.2**	**-0.5**
JOW					Sn	**Sb**	**20 37 31.0**	**-0.1**
JYRO	**Yoronjima** comp=N,517nm,0.3s,baz=106,slow=19,SNR=8.8	**1.00**	**351**	P		**Pn**	**20 37 22.5**	**-0.2**
JYRO				*e*S		**Sb**	**20 37 35.2**	**-0.1**
JIH	**Iheya**	**1.16**	**329**	P		**Pn**	**20 37 25.1**	**+0.2**
JIH				*e*S		**Sg**	**20 37 39.2**	**-0.4**
JOKE	**Okinoerabujima**	**1.32**	**358**	P		**Pg**	**20 37 27.5**	**0.0**
JOKE				*e*S		**Sb**	**20 37 42.8**	**-1.7**
JAGN	**Aguni-jima**	**1.37**	**294**	P		**Pg**	**20 37 28.2**	**-0.2**
JAGN				*e*S		**Sb**	**20 37 43.5**	**-2.3**
JAGN	**Aguni-jima** comp=N,3.0nm,1.0s	**1.37**	**294**	A		A	20 37 28.2	
JKE	**Kume jima 2**	**1.69**	**280**	*i* P		**Pn**	**20 37 31.9**	**-0.2**
JKE				*e*S		**Sn**	**20 37 52.4**	**-1.5**
JTK	**Tokunoshima**	**1.77**	**9**	P		**Pn**	**20 37 33.8**	**+0.5**
JTK				*e*S		**Sn**	**20 37 54.1**	**-1.9**
JMZ	**Minamidaito 2**	**2.34**	**95**			**Pn**	**20 37 41.1**	**0.0**
JMZ					Sn	**Sn**	**20 38 07.5**	**-2.6**
JMZ	**Minamidaito 2**	**2.34**	**95**	P		**Pn**	**20 37 41.3**	**+0.2**
JMZ				S		**Sn**	**20 38 07.4**	**-2.7**
JKDJ	**Kitadaitoujima**	**2.40**	**91**	P		**Pn**	**20 37 42.3**	**+0.4**
JKDJ				S		**Sn**	**20 38 09.0**	**-2.5**
JNU	**Nakatsue**	**7.33**	**15**	Pn		**Pn**	**20 38 51.7**	**+2.0**
JNU	**Nakatsue** comp=N,0.9nm,0.3s,baz=0.3,slow=0.8,SNR=7.8	**7.33**	**15**	Pn		**Pn**	**20 38 51.5**	**+1.9**
JNU					Sn	**Sn**	**20 40 11.3**	**-1.8**
TPUB	**Ta-pu** comp=N,0.3nm,0.3s,baz=127,slow=20,SNR=1.6 comp=N,4.2nm,0.5s	**7.77**	**251**	Pn		**Pn**	**20 38 53.9**	**-1.9**
SONM	**Songino Array**	**27.91**	**327**			**P**	**20 42 54.7**	**+1.6**
SONM				IAmb		IAmb	20 42 56.5	
SONM	**Songino Array** comp=Z,3.6nm,1.3s comp=Z,1.1nm,0.8s,baz=147,slow=12,SNR=7.4 comp=Z,1.1nm,0.8s	**27.91**	**327**	P		**P**	**20 42 54.5**	**+1.5**
CMAR	**Chiang Mai Arr** comp=Z,0.8nm,1.0s,baz=55,slow=6.7,SNR=5.1 comp=Z,0.8nm,1.0s	**28.45**	**261**	P		**P**	**20 42 59.1**	**+1.2**
MK31	**Makanchi Array**	**41.94**	**312**	P		**P**	**20 44 52.6**	**-0.9**
MKAR	**Makanchi Array**	**41.94**	**312**	P		**P**	**20 44 52.6**	**-0.9**
MKAR	**Makanchi Array** comp=Z,0.6nm,0.6s,baz=95,slow=9.6,SNR=13 comp=Z,0.6nm,0.6s	**41.94**	**312**	P		**P**	**20 44 53.2**	**-0.3**
MAKZ	**Makanchi** comp=Z,3.2nm,1.2s	**42.15**	**312**	P		**P**	**20 44 54.6**	**-0.7**
MAKZ					IAmb	IAmb	20 44 56.7	
ZALV	**Zalesovo Beam**	**42.62**	**323**	P		**P**	**20 44 58.6**	**-0.4**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.6s,baz=117,slow=8.2,SNR=3.9 comp=Z,0.7nm,0.6s	**42.62**	**323**	P		**P**	**20 44 58.4**	**-0.6**
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.4s,baz=104,slow=8.7,SNR=4.3 comp=Z,0.7nm,0.4s	**45.24**	**317**	P		**P**	**20 45 19.9**	**-0.2**
WB0	**Warramunga Arr**	**45.87**	**172**	P		**P**	**20 45 26.5**	**+1.2**
WB0					IAmb	IAmb	20 45 46.8	
WRAB	**Tennant Creek** comp=Z,9.2nm,1.4s	**46.03**	**173**	P		**P**	**20 45 27.7**	**+1.1**
WRA	**Warramunga Arr**	**46.04**	**173**	P		**P**	**20 45 27.1**	**+0.4**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.5s,baz=353,slow=8.4,SNR=6.0 comp=Z,0.6nm,0.5s	**46.04**	**173**	P		**P**	**20 45 28.0**	**+1.3**
WB2	**Warramunga Arr**	**46.04**	**173**	P		**P**	**20 45 28.0**	**+1.3**
WR0	**Warramunga Arr**	**46.08**	**172**	P		**P**	**20 45 27.5**	**+0.5**
WR0					IAmb	IAmb	20 45 37.4	
ASAR	**Alice Springs** comp=Z,6.8nm,1.1s	**49.67**	**174**	P		**P**	**20 45 56.6**	**+1.7**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.6s,baz=6.2,slow=14,SNR=7.6 comp=Z,0.5nm,0.6s	**50.66**	**318**	P		**P**	**20 46 02.1**	**+0.1**
BRVK	**Borovoye** comp=Z,0.8nm,0.5s,baz=88,slow=9.3,SNR=4.8 comp=Z,0.8nm,0.5s	**50.73**	**318**	P		**P**	**20 46 01.7**	**-0.9**
BRVK					IAmb	IAmb	20 46 15.9	
ABKAR	**Akbulak array** comp=Z,2.2nm,0.9s	**57.04**	**313**	P		**P**	**20 46 48.7**	**-0.1**
ABKAR					IAmb	IAmb	20 46 50.4	
FINES	**FINESS Array B** comp=Z,1.9nm,0.7s	**73.21**	**331**	P		**P**	**20 48 33.7**	**+0.1**
AKASG	**Malin Array Be** comp=Z,2.4nm,0.9s,baz=97,slow=9.8,SNR=6.1 comp=Z,2.4nm,0.9s	**75.92**	**320**	P		**P**	**20 48 49.5**	**0.0**

comp=Z,0.7nm,0.5s,baz=60,slow=6.7,SNR=2.7
comp=Z,0.7nm,0.5s
BRTR Keskin Array B 77.44 308 P **P** **20 48 59.4 +0.8**
comp=Z,0.9nm,0.8s,baz=88,slow=3.8,SNR=4.8
comp=Z,0.9nm,0.8s

TAP 08 20:38:35.1, 23°.91N × 121°.56E, h19km, ML1.7, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**33**	*eP*	Pg	20 38 38.6	-0.1
	baz=37						
ETM	**Tongmen**	**0.08**	**309**	*eP*	Pg	20 38 38.9	+0.1
	baz=309						
ETM				*eS*	Sg	20 38 41.4	+0.2
	baz=309						
SHUL	**Shoufeng**	**0.13**	**179**	P	Pg	20 38 39.8	+0.7
	baz=183						
SHUL				S	Sg	20 38 43.3	+1.4
	baz=183						
ESL	**Shilin**	**0.15**	**230**	*iP*	Pg	20 38 39.4	-0.1
	baz=235						
ESL				S	Sg	20 38 42.7	+0.2
	baz=235						
TWD	**Chiawan**	**0.17**	**11**	P	Pg	20 38 39.9	+0.2
	baz=5.0						
TWD				S	Sg	20 38 43.4	+0.6
	baz=5.0						
LXIB	**Xiulin Townshi**	**0.17**	**308**	P	Pg	20 38 39.9	0.0
	baz=308						
LXIB				S	Sg	20 38 43.3	+0.1
	baz=308						
ETL	**Fush Village**	**0.25**	**13**	*eP*	Pb	20 38 40.9	0.0
	baz=7.0						
ETL				S	Sg	20 38 45.5	+0.6
	baz=7.0						
WARBT	**Fenglin Townsh**	**0.25**	**219**	*eP*	Pb	20 38 40.6	-0.3
	baz=225						
WARBT				*eS*	Sg	20 38 45.0	0.0
	baz=225						
NACB	**Ninganchiao**	**0.26**	**7**	*eP*	Pb	20 38 40.9	-0.1
	baz=6.0						
NACB				*eS*	Sg	20 38 45.5	+0.4
	baz=6.0						
EGFH	**Guangfu**	**0.27**	**207**	*eP*	Pb	20 38 41.1	-0.2
	baz=212						
ETLH	**Xiulin Townshi**	**0.30**	**346**	*eP*	Pb	20 38 42.1	+0.2
	baz=345						
ETLH				*eS*	Sb	20 38 46.6	+0.1
	baz=345						
OWD	**Renai**	**0.35**	**277**	P	Pg	20 38 42.8	+0.1
	baz=281						
OWD				S	Sb	20 38 48.1	-0.1
	baz=281						
WHF	**Hehuan Shan**	**0.35**	**310**	*eP*	Pg	20 38 42.8	-0.1
	baz=311						
CHGB	**Renai**	**0.38**	**292**	P	Pb	20 38 43.4	-0.1
	baz=296						
CHGB				S	Sb	20 38 49.4	+0.2
	baz=296						
WUSB	**Renai**	**0.41**	**281**	P	Pb	20 38 43.9	-0.1
	baz=285						
VWDT	**VWDT**	**0.42**	**248**	P	Pb	20 38 43.9	0.0
	baz=245						
FUSS	**Fushou**	**0.44**	**319**	P	Pg	20 38 44.4	+0.1
	baz=327						
FUSS				S	Sb	20 38 51.0	+0.1
	baz=327						
EHY	**Hungye**	**0.46**	**208**	*eP*	Pg	20 38 43.5	-1.1
	baz=210						
TWT	**Tachien**	**0.49**	**314**	*eP*	Pg	20 38 44.9	-0.2
	baz=312						
ENA	**Nanau**	**0.54**	**18**	*i* P	Pb	20 38 45.7	-0.2
	baz=6.0						
ENA				*i* S	Sg	20 38 54.1	+0.9
	baz=6.0						
NNSB	**Datong**	**0.54**	**342**	*eP*	Pb	20 38 45.8	-0.2
	baz=341						
NNSB				S	Sg	20 38 53.0	-0.3
	baz=341						
NNS	**Nan Shan**	**0.55**	**342**	*i* P	Pb	20 38 46.0	-0.1
	baz=342						
NNS				*i* S	Sb	20 38 53.5	-0.2
	baz=342						
SSLB	**Suanglung**	**0.57**	**257**	Pn	Pb	20 38 46.2	-0.2
SSLB	**Suanglung**	**0.57**	**257**	*eP*	Pb	20 38 46.2	-0.2
	baz=266						
SSLB				*eS*	Sb	20 38 53.8	-0.3
	baz=266						
YULB	**Yu-li**	**0.57**	**205**	Pn	Pb	20 38 44.7	-1.7
YULB	**Yu-li**	**0.57**	**205**	*eP*	Pb	20 38 44.6	-1.8
	baz=212						
LATG	**Datong**	**0.62**	**357**	*eP*	Pb	20 38 47.1	-0.3
	baz=354						
WHP	**Taichung City**	**0.67**	**303**	*eP*	Pg	20 38 48.7	+0.3
	baz=296						
NDT	**Datong Townshi**	**0.69**	**356**	*eS*	Sg	20 38 58.6	+0.7
	baz=348						

*IDC **08** 20:39:49.0±0.9, 15°.90S × 173°.91W, h0km, mb3.9/8, mbtmp3.9/8, MS3.5/3, Error ellipse: s-maj=47.2km s-min=20.1km az=144.0*
ISC 08 20:40:03.3±0.9, 15°.9S±0°.3 × 174°.1W±0°.2, h115km, n18, σ0§15/9, mb3.7/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**19.44**	**249**	LR	LR	20 50 50.2	
	comp=Z,48nm,18.5s,baz=204,slow=34						
HNR	**Honiara**	**26.16**	**281**	LR	LR	20 54 38.0	
	comp=Z,378nm,19.6s,baz=92,slow=34						
CTA	**Charters Tower**	**37.93**	**258**	LR	LR	21 00 32.4	
	comp=Z,38nm,18.6s,baz=59,slow=33						
H11S2	**WAKE ISLAND Hy**	**39.07**	**330**	T	T	21 28 27.1	
	baz=146,slow=75						
H11S3	**WAKE ISLAND Hy**	**39.09**	**330**	T	T	21 28 27.9	
	baz=146,slow=75						
H11S1	**WAKE ISLAND Hy**	**39.09**	**330**	T	T	21 28 31.1	
	baz=146,slow=75						
H11N3	**WAKE ISLAND Hy**	**40.04**	**331**	T	T	21 29 13.2	
	baz=140						
H11N1	**WAKE ISLAND Hy**	**40.04**	**331**	T	T	21 29 14.7	
	baz=140						
H11N2	**WAKE ISLAND Hy**	**40.05**	**331**	T	T	21 29 19.1	
	baz=140						
STKA	**Stephens Creek**	**43.25**	**240**	P	**P**	**20 47 53.6**	**+0.1**
	3.2nm,0.9s,baz=74,slow=11,SNR=5.7						
	3.2nm,0.9s						
WRA	**Warramunga Arr**	**49.13**	**257**	P	**P**	**20 48 39.8**	**+0.1**
	0.7nm,0.6s,baz=90,slow=6.9,SNR=10						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**49.37**	**252**	P	**P**	**20 48 41.3**	**-0.3**
	1.8nm,0.5s,baz=87,slow=8.1,SNR=21						
	1.8nm,0.5s						
QSPA	**South Pole Qui**	**74.15**	**180**	P	**P**	**20 51 27.2**	**+0.1**
	2.9nm,0.8s,baz=41,slow=1.3,SNR=4.3						
	2.9nm,0.8s						
NVAR	**Mina Array Bea**	**75.11**	**42**	P	**P**	**20 51 33.1**	**-0.1**
	0.3nm,0.5s,baz=217,slow=8.6,SNR=3.9						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**81.40**	**56**	P	**P**	**20 52 07.9**	**0.0**
	0.9nm,1.0s,baz=235,slow=4.4,SNR=5.0						
	0.9nm,1.0s						
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**20 52 16.3**	**-0.1**
	0.7nm,0.7s,baz=198,slow=3.4,SNR=5.2						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**83.05**	**11**	P	**P**	**20 52 15.7**	**+0.2**
	0.3nm,0.7s,baz=233,slow=6.3,SNR=6.9						
	0.3nm,0.7s						
BRTR	**Keskin Array B**	**146.14**	**320**	PKPbc	**PKPab**	**20 59 31.4**	**0.0**
	0.5nm,0.8s,baz=46,slow=4.2,SNR=3.6						

*IDC **08** 20:55:22.1±3.9, 31°.18N × 141°.11E, h0km, mb3.7/3, mbtmp3.6/4, ML2.5/1, MS2.4/1, Error ellipse: s-maj=157.5km s-min=23.4km az=73.0*
*JMA **08** 20:55:23.7±0.3, 31°.N±1°×14°.2E±°, h43km, MV3.5/25, NEAR TORISHIMA IS*
ISC 08 20:55:23.7±1.2, 31°.49N±0°.06 × 142°.4E±0°.2, h50km, n15, σ1§98/21, mb3.8/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.38**	**340**	*eP*	**Pn**	**20 56 15.6**	**+2.2**
BSO1				*eS*	**Sn**	**20 56 53.8**	**+1.9**
BSO3	**Boso 3**	**3.67**	**335**	*eP*	**Pn**	**20 56 19.2**	**+1.5**
CBIJ	**Chichi jima**	**4.38**	**183**	P	**Pn**	**20 56 27.1**	**-0.6**
CBIJ				*eS*	**Sn**	**20 57 15.4**	**-2.0**
JOD2	**Odawara 2**	**4.68**	**325**	*eP*	**Pn**	**20 56 32.6**	**+0.9**
JHU	**Hanno**	**5.07**	**330**	*eP*	**Pn**	**20 56 38.5**	**+1.4**
JHU				*eS*	**Sn**	**20 57 33.5**	**-0.9**
JHO	**Hitachi**	**5.33**	**344**	*eP*	**Pn**	**20 56 40.1**	**-0.7**
JHO				*eS*	**Sn**	**20 57 40.7**	**-0.2**
JRY	**Ryogami san**	**5.38**	**328**	*eP*	**Pn**	**20 56 43.3**	**+1.9**
JAG	**Ashikaga**	**5.50**	**334**	*eP*	**Pn**	**20 56 43.3**	**+0.2**
JAG				*eS*	**Sn**	**20 57 45.9**	**+0.9**
JFK	**Kawauchi**	**6.00**	**348**	*eS*	**Sn**	**20 57 53.6**	**-3.8**
MJAR	**Matsushiro Arr**	**6.13**	**327**	Pn	**Pn**	**20 56 49.9**	**-1.8**
	0.1nm,0.3s,baz=160,slow=12,SNR=9.2						
MJAR				Sn	**Sn**	**20 57 56.0**	**-4.4**
	baz=236,slow=18,SNR=1.3						
	0.9nm,0.3s						
JMK	**Ichinoseki**	**7.51**	**353**	*eP*	**Pn**	**20 57 10.0**	**-0.6**
JMK				S	**Sn**	**20 58 32.0**	**-2.3**
KSRS	**Korea Array**	**13.34**	**300**	LR	LR	21 03 23.7	
	comp=Z,17nm,20.7s,baz=280,slow=38						
MKAR	**Makanchi Array**	**47.92**	**307**	P	**P**	**21 03 57.4**	**+0.4**
	0.7nm,0.7s,baz=92,slow=8.1,SNR=0.9						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**51.72**	**190**	P	**P**	**21 04 27.5**	**+1.5**
	0.5nm,0.3s,baz=6.3,slow=7.7,SNR=15						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**55.44**	**189**	P	**P**	**21 04 54.8**	**+1.6**
	0.3nm,0.5s,baz=1.2,slow=5.6,SNR=3.5						
	0.3nm,0.5s						

*IDC **08** 20:56:27.3±0.7, 30°.18N × 87°.80E, h0km, mb4.0/22, mbtmp4.0/25, ML3.7/3, MS3.6/2, Error ellipse: s-maj=21.1km s-min=13.4km az=40.0*
*NDI **08** 20:56:29.4±3.7, 30°.42N × 87°.55E, h10km, mb4.3, MW4.3, mb4.2(NEIC)*
*NEIC **08** 20:56:30.1±1.9, 30°.39N±0°.08 × 87°.8E±0°.1, h10km±1km, mb4.2/39, Error ellipse: s-maj=15.6km s-min=12.3km az=59.0*
ISC 08 20:56:29.7±0.4, 30°.29N±0°.05 × 87°.63E±0°.06, h10km, n100, σ1§45/87, mb4.0/33, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**3.08**	**164**	*eP*	**Pn**	**20 57 19.6**	**+1.1**
GTK				*eS*	**Sn**	**20 57 59.3**	**+3.8**
LSA	**Lhasa**	**3.11**	**100**	Pn	**Pn**	**20 57 22.8**	**+3.6**
GUWA	**GUWAHATI**	**5.43**	**138**	*eP*	**Pn**	**20 57 51.0**	**+0.3**
GUWA				IAmb	IAmb	20 57 56.9	
	comp=Z,140nm,1.0s						
GUWA				*eS*	**Sn**	**20 58 54.0**	**+0.8**
SHL	**Shillong**	**6.03**	**140**	Pn	Pn	20 57 57.9	-1.1
SHL	**Shillong**	**6.03**	**140**	*eP*	**Pn**	**20 57 58.3**	**-0.8**
ZIRO	**ZIRO**	**6.11**	**115**	*eP*	**Pn**	**20 58 02.5**	**+2.3**
BOK	**Bokaro**	**6.65**	**194**	*eP*	**Pn**	**20 58 08.4**	**+0.9**
BOK				IAmb	IAmb	20 58 10.0	
	comp=Z,64nm,0.7s						
KOHI	**KOHIMA**	**7.32**	**127**	*eP*	**Pn**	**20 58 18.3**	**+1.5**
KOHI				IAmb	IAmb	20 58 22.4	
	comp=Z,56nm,0.8s						
IMP	**Imphal**	**7.81**	**133**	*eP*	**Pn**	**20 58 24.8**	**+1.3**
IMP				IAmb	IAmb	20 58 29.2	
	comp=Z,18nm,0.9s						
SAIH	**SAIHA**	**9.13**	**147**	*eP*	**Pn**	**20 58 40.8**	**-0.9**
SAIH				IAmb	IAmb	20 58 46.9	
	comp=Z,9.9nm,0.7s						
DHRM	**DHARAMSHALA**	**9.89**	**284**	*eP*	**Pn**	**20 58 51.0**	**-1.1**
DHRM				IAmb	IAmb	20 58 59.2	
	comp=Z,21nm,0.7s						
MND	**Mandalay**	**11.22**	**135**		Pn	20 59 08.2	-1.9
NIL	**Nilore**	**12.66**	**289**		Pn	20 59 27.5	-2.3
NIL				Sn	Sn	21 01 42.7	-8.1
KSH	**Kashi**	**13.26**	**317**	P	**Pn**	**20 59 39.1**	**+1.0**
KSH				sP	P	20 59 49.4	+1.3
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				LR	LR		
	comp=N,590nm,16.8s						
KSH				LR	LR		
	comp=E,560nm,16.1s						
KSH				LR	LR		
	comp=Z,300nm,12.0s						
WMQ	**Urumqi**	**13.51**	**0**	*eP*	**Pn**	**20 59 44.5**	**+3.1**
WMQ				sP	P	20 59 55.3	+4.6
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				LR	LR		
	comp=N,1μm,9.7s						
WMQ				LR	LR		
	comp=E,820nm,11.3s						
WMQ				LR	LR		
	comp=Z,410nm,12.9s						
TARG	**Taragay, Kyrgy**	**13.90**	**328**	Pn	**Pn**	**20 59 48.2**	**+1.1**
NRN	**Naryn**	**14.56**	**323**		**Pn**	**20 59 56.3**	**+0.3**
HYB	**Hyderabad**	**15.26**	**215**	*eP*	**P**	**21 00 12.4**	**+2.2**
CRAI	**Chiangrai**	**15.26**	**128**	Pn	**Pn**	**21 00 02.3**	**-3.0**
CRAI				IAmb	IAmb	21 00 14.1	
	comp=Z,10nm,1.0s						
CHTO	**Chiang Mai**	**15.37**	**135**	Pn	**Pn**	**21 00 06.0**	**-0.7**
CHTO				IAmb	IAmb	21 00 14.5	
	comp=Z,14nm,0.9s						
CM31	**Chiang Mai Arr**	**15.64**	**136**	Pn	**Pn**	**21 00 08.9**	**-1.4**
CM31				IAmb	IAmb	21 00 18.9	
	comp=Z,41nm,1.4s						
CMAR	**Chiang Mai Arr**	**15.64**	**136**		**Pn**	**21 00 09.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**15.64**	**136**	Pn	**Pn**	**21 00 08.6**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=315,slow=14,SNR=17						
	comp=Z,2.3nm,0.8s						
ARSB	**Arslanbob**	**16.17**	**317**		**Pn**	**21 00 16.3**	**-0.9**
AAK	**Ala-Archa**	**16.21**	**323**		**Pn**	**21 00 18.6**	**+1.1**
AAK	**Ala-Archa**	**16.21**	**323**	Pn	**Pn**	**21 00 20.0**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=170,slow=14,SNR=7.4						
	comp=Z,2.2nm,0.9s						
KBL	**Kabul**	**16.25**	**290**	Pn	Pn	21 00 14.2	-4.1
KBL				IAmb	IAmb	21 00 25.8	
	comp=Z,18nm,0.6s						
FRU1	**Bishkek**	**16.26**	**324**	Pn	**Pn**	**21 00 14.7**	**-3.5**
FRU1				IAmb	IAmb	21 00 24.7	
	comp=Z,16nm,1.2s						
BTK	**Batken**	**16.82**	**310**	Pn	Pn	21 00 21.3	-4.1
MK31	**Makanchi Array**	**16.99**	**347**		**Pn**	**21 00 25.6**	**-1.8**
MKAR	**Makanchi Array**	**16.99**	**347**		**Pn**	**21 00 26.6**	**-0.8**
MKAR	**Makanchi Array**	**16.99**	**347**	P	**Pn**	**21 00 28.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=14						
	comp=Z,1.3nm,0.6s						
MAKZ	**Makanchi**	**17.07**	**347**	P	**Pn**	**21 00 28.8**	**+0.4**
SLVN	**Son La**	**17.14**	**118**		**Pn**	**21 00 27.2**	**-2.2**
SIMJ	**Simiganj**	**17.45**	**304**	Pn	Pn	21 00 29.2	-4.1
SIMJ				IAmb	IAmb	21 00 37.6	
	comp=Z,12nm,0.8s						
DGPR	**DIGLIPUR**	**17.72**	**163**	*eP*	**Pn**	**21 00 35.5**	**-1.1**
DGPR				IAmb	IAmb	21 00 43.2	
	comp=Z,25nm,0.9s						
KK31	**Karatay Array**	**18.71**	**318**	P	**P**	**21 00 48.0**	**-0.3**
KKAR	**Karatay Array**	**18.71**	**318**	P	**P**	**21 00 48.1**	**-0.2**
KKAR	**Karatay Array**	**18.71**	**318**	P	**P**	**21 00 48.7**	**+0.4**
KKAR				IAmb	IAmb	21 00 52.7	
	comp=Z,4.5nm,0.8s						
ENH	**Enshi**	**18.88**	**85**	P	**P**	**21 00 48.7**	**-1.6**
ENH				IAmb	IAmb	21 01 14.3	
	comp=Z,26nm,1.5s						
KURBB	**Kurchatov Arra**	**21.43**	**344**	P	**P**	**21 01 18.2**	**+0.5**
	comp=Z,6.6nm,1.2s,baz=160,slow=10,SNR=19						
	comp=Z,6.6nm,1.2s						
KURK	**Kurchatov**	**21.49**	**344**	P	**P**	**21 01 16.1**	**-2.3**
KURK				IAmb	IAmb	21 01 21.1	
	comp=Z,7.5nm,1.1s						
HRA	**Herat**	**21.81**	**287**	P	**P**	**21 01 20.3**	**-2.0**
HRA				IAmb	IAmb	21 01 27.6	
	comp=Z,4.1nm,0.7s						
SONM	**Songino Array**	**22.69**	**34**	P	**P**	**21 01 31.3**	**-0.1**
SONM				IAmb	IAmb	21 01 36.6	
	comp=Z,8.2nm,1.3s						
SONM	**Songino Array**	**22.69**	**34**	P	**P**	**21 01 31.6**	**+0.1**
	comp=Z,3.6nm,1.1s,baz=224,slow=10,SNR=18						
SONM				PcP	**PcP**	**21 05 23.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=199,slow=4.0,SNR=1.6						
	comp=Z,3.6nm,1.1s						
ULN	**Ulaanbaatar**	**23.03**	**35**	P	**P**	**21 01 32.5**	**-2.5**
ZAA0	**Zalesovo Array**	**23.73**	**356**	P	**P**	**21 01 41.6**	**-0.2**
ZAA0				IAmb	IAmb	21 01 44.8	
	comp=Z,5.9nm,1.0s						
ZALV	**Zalesovo Beam**	**23.73**	**356**	P	**P**	**21 01 39.4**	**-2.4**
ZALV	**Zalesovo Beam**	**23.73**	**356**	P	**P**	**21 01 43.2**	**+1.4**
	comp=Z,3.6nm,0.7s,baz=182,slow=11,SNR=19						
	comp=Z,3.6nm,0.7s						
GEYT	**Alibeck**	**25.52**	**295**	P	**P**	**21 01 59.1**	**+0.7**
GEYT				IAmb	IAmb	21 02 31.0	
	comp=Z,3.8nm,0.8s						
GEYT	**Alibeck**	**25.52**	**295**	P	**P**	**21 02 00.1**	**+1.7**
	comp=Z,1.6nm,0.5s,baz=84,slow=15,SNR=5.3						
	comp=Z,1.6nm,0.5s						
BVAR	**Borovoye Array**	**25.98**	**336**	P	**P**	**21 02 03.5**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=138,slow=12,SNR=10						
	comp=Z,1.9nm,0.6s						
BRVK	**Borovoye**	**26.05**	**336**	P	**P**	**21 02 02.0**	**-0.9**
BRVK				IAmb	IAmb	21 02 12.5	
	comp=Z,3.5nm,0.9s						
WSAR	**Wadi Sarin**	**26.78**	**262**	LR	LR	21 13 05.3	
	comp=Z,58nm,20.4s,baz=85,slow=37						
ABKAR	**Akbulak array**	**28.24**	**320**	P	**P**	**21 02 23.3**	**+0.6**
ABKAR				IAmb	IAmb	21 02 29.1	
	comp=Z,2.3nm,0.8s						
ABKAR	**Akbulak array**	**28.24**	**320**	P	**P**	**21 02 22.9**	**+0.2**
AKTO	**Aktyubinsk**	**29.92**	**321**	P	**P**	**21 02 38.6**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=123,slow=6.5,SNR=2.6						
	comp=Z,1.6nm,0.7s						
ARU	**Arti**	**33.15**	**330**	P	**P**	**21 03 05.0**	**-0.9**
KSRS	**Korea Array**	**34.02**	**67**	P	P	21 03 12.0	-1.7
	comp=Z,0.6nm,0.7s,baz=270,slow=8.5,SNR=2.2						
	comp=Z,0.6nm,0.7s						
GNI	**Garni**	**36.09**	**298**	LR	LR	21 19 59.0	
	comp=Z,151nm,18.2s,baz=356,slow=39						
NRIK	**Noril'sk**	**39.09**	**360**	P	**P**	**21 03 56.6**	**0.0**
NRIK				IAmb	IAmb	21 03 60.0	
	comp=Z,13nm,1.4s						
NRIK	**Noril'sk**	**39.09**	**360**	P	**P**	**21 03 56.8**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=149,slow=5.9,SNR=4.0						
	comp=Z,1.2nm,0.3s						
ARPR	**Arapgir-MALATY**	**41.05**	**296**	P	**P**	**21 04 15.0**	**+1.6**
ARPR				IAmb	IAmb	21 04 18.2	
	comp=Z,14nm,1.1s						
MJAR	**Matsushiro Arr**	**42.29**	**68**	P	P	21 04 21.3	-2.2
	comp=Z,2.0nm,0.9s,baz=298,slow=5.4,SNR=3.0						
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**44.63**	**297**	P	**P**	**21 04 44.3**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=94,slow=8.5,SNR=4.8						
	comp=Z,0.9nm,0.6s						
TIXI	**Tiksi**	**47.00**	**17**	P	P	21 04 59.4	-1.1
TIXI				IAmb	IAmb	21 05 02.6	
	comp=Z,2.9nm,0.8s						
AKASG	**Malin Array Be**	**47.51**	**313**	P	**P**	**21 05 06.0**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=79,slow=7.2,SNR=8.7						
	comp=Z,0.4nm,0.3s						
KIEV	**Kiev**	**47.52**	**313**	P	**P**	**21 05 04.5**	**-0.4**
ELL	**Elmali**	**47.93**	**294**	P	**P**	**21 05 07.8**	**-0.7**
NACGM	**Naroch**	**49.23**	**318**	*eP*	**P**	**21 05 20.2**	**+2.2**
	comp=Z,16nm,0.8s,baz=94						
MLR	**Muntele Rosu**	**49.81**	**306**	P	**P**	**21 05 21.5**	**-1.4**
BURAR	**Bucovina Array**	**50.16**	**309**	P	**P**	**21 05 26.2**	**+0.7**
BURAR				IAmb	IAmb	21 05 28.5	
	comp=Z,1.9nm,1.1s						
FINES	**FINESS Array B**	**50.35**	**327**	P	**P**	**21 05 28.2**	**+1.7**
FINES	**FINESS Array B**	**50.35**	**327**	P	**P**	**21 05 26.4**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=90,slow=5.6,SNR=13						
	comp=Z,2.7nm,0.6s						
PABE	**Paberze**	**50.87**	**319**	P	**P**	**21 05 32.3**	**+1.8**
ARCES	**ARCESS Array B**	**52.26**	**337**	P	**P**	**21 05 40.2**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=106,slow=7.7,SNR=11						
	comp=Z,1.9nm,0.6s						
HFS	**Hagfors**	**56.34**	**325**	P	**P**	**21 06 10.7**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=92,slow=8.0,SNR=13						
	comp=Z,5.0nm,0.7s						
NB2	**NORSAR Subarra**	**57.50**	**326**	P	**P**	**21 06 18.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=90,slow=6.9						
NOA	**NORSAR Array B**	**57.50**	**326**	P	**P**	**21 06 18.4**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=86,slow=7.2,SNR=5.3						
	comp=Z,1.8nm,0.7s						
GERES	**GERESS Array B**	**57.66**	**311**	P	**P**	**21 06 21.4**	**+1.1**
GERES	**GERESS Array B**	**57.66**	**311**	P	**P**	**21 06 20.4**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=81,slow=8.2,SNR=6.2						
	comp=Z,1.2nm,0.8s						
CLL	**Collm**	**57.68**	**314**	*eP*	**P**	**21 06 19.0**	**-1.2**
MBAR	**Mbarara**	**62.14**	**251**	P	**P**	**21 06 52.1**	**+0.5**
MBAR				IAmb	IAmb	21 06 54.5	
	comp=Z,4.5nm,1.1s						
EKA	**Eskdalemuir Ar**	**66.11**	**321**	P	**P**	**21 07 16.9**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=82,slow=5.1,SNR=3.6						
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**67.18**	**132**	P	P	21 07 22.6	-1.5
	comp=Z,1.7nm,0.8s,baz=324,slow=6.3,SNR=7.0						
	comp=Z,1.7nm,0.8s						
WB2	**Warramunga Arr**	**67.19**	**132**	P	P	21 07 22.7	-1.4
AS31	**Alice Springs**	**69.64**	**135**	P	**P**	**21 07 38.4**	**-1.1**
ASAR	**Alice Springs**	**69.64**	**135**	P	P	21 07 38.3	-1.2
ASAR	**Alice Springs**	**69.64**	**135**	P	P	21 07 37.8	-1.8
	comp=Z,1.7nm,0.8s,baz=319,slow=6.1,SNR=22						
	comp=Z,1.7nm,0.8s						
ESDC	**Sonseca Array**	**72.51**	**306**	P	**P**	**21 07 57.3**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=48,slow=5.7,SNR=3.3						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**76.22**	**21**	P	**P**	**21 08 17.3**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=282,slow=5.0,SNR=5.0						
	comp=Z,0.5nm,0.9s						
SML	**Sawmill**	**77.78**	**24**		**P**	**21 08 27.7**	**+0.9**
CNPM	**China Poot**	**78.24**	**26**	P	**P**	**21 08 29.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**80.03**	**279**	P	**P**	**21 08 40.2**	**+0.3**
	comp=Z,3.9nm,0.4s,baz=60,slow=7.4,SNR=1.4						
YKA	**Yellowknife Ar**	**85.83**	**10**	P	P	21 09 07.9	-1.2
	comp=Z,0.5nm,0.7s,baz=332,slow=4.6,SNR=8.8						
	comp=Z,0.5nm,0.7s						
ITAB	**Concordia**	**144.72**	**265**	PKPdf	**PKPab**	**21 16 05.7**	**-0.2**
SAML	**Samuel**	**145.45**	**302**	PKPdf	**PKPbc**	**21 16 07.0

PZH **PanZhiHua** 9.64 128 P **Pn** **21 01 06.9 0.0**
PZH S **Sn** **21 02 57.0 +1.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,70nm,4.7s
PZH LR LR
comp=N,1µm,11.1s
PZH LR LR
comp=E,1µm,9.8s
PZH LR LR
comp=Z,1µm,11.2s
BRDH Bariadhala 10.15 189 Pn **Pn** **21 01 14.2 +0.3**
68nm,0.3s,baz=271,slow=10,SNR=6.5
BRDH Sn **Sn** **21 03 06.3 -1.5**
30nm,0.3s,baz=90,slow=20,SNR=1.3
SAIH SAIHA 10.24 182 *eP* **Pn** **21 01 15.6 +0.5**
SAIH *eS* **Sn** **21 03 06.4 -3.6**
MND Mandalay 10.99 166 Pn **Pn** **21 01 24.2 -1.1**
KMI Kunming 11.24 130 ⇑P **Pn** **21 01 27.7 -1.2**
KMI pmax pmax
comp=Z,10.0nm,1.0s
KMI LR LR
comp=N,1µm,9.2s
KMI LR LR
comp=E,910nm,8.1s
KMI LR LR
comp=Z,1µm,10.0s
WMQ Urumqi 11.88 340 *eP* **Pn** **21 01 38.1 +0.6**
WMQ pP 21 01 49.1
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ LR LR
comp=N,1µm,8.3s
WMQ LR LR
comp=E,750nm,8.7s
WMQ LR LR
comp=Z,430nm,12.7s
XAN Xi'an 13.12 80 P **Pn** **21 01 54.3 -0.2**
XAN S **Sn** **21 04 25.6 +5.1**
XAN pmax pmax
comp=Z,12nm,1.2s
XAN LR LR
comp=N,510nm,9.1s
XAN LR LR
comp=E,440nm,9.7s
XAN LR LR
comp=Z,580nm,11.1s
CRAI Chiangrai 13.99 151 Pn **Pn** **21 02 07.1 +0.7**
ENH Enshi 14.04 96 **Pn** **21 02 06.3 -0.7**
SLVN Son La 14.79 138 Pn **Pn** **21 02 17.1 -0.1**
CHTO Chiang Mai 14.79 159 Pn **Pn** **21 02 17.5 +0.3**
SHLS Shalkode 15.04 318 *eP* **Pn** **21 02 18.3 -2.3**
23nm,1.8s,baz=318
CMAR Chiang Mai Arr 15.12 159 Pn **Pn** **21 02 19.2 -2.6**
CMAR Chiang Mai Arr 15.12 159 Pn **Pn** **21 02 19.9 -1.9**
0.5nm,0.3s,baz=330,slow=12,SNR=7.0
1.7nm,0.7s
TARG Taragay, Kyrgy 15.22 310 **Pn** **21 02 23.5 +0.1**
PRZ Przheval'sk 15.26 314 **Pn** **21 02 23.5 -0.1**
SATY Saty 15.59 316 *eP* **Pn** **21 02 29.1 +1.3**
baz=316
KPKS Kokpek 15.67 317 *eP* **Pn** **21 02 29.8 +0.9**
baz=317
ZSN Zaisan 16.01 339 *eP* **P** **21 02 34.7 -2.0**
baz=339
NRN Naryn 16.27 307 **Pn** **21 02 37.2 +0.4**
MK31 Makanchi Array 16.34 332 **Pn** **21 02 35.8 -1.6**
MKAR Makanchi Array 16.34 332 Pn **Pn** **21 02 36.2 -1.3**
MKAR Makanchi Array 16.34 332 Pn **Pn** **21 02 36.3 -1.1**
0.2nm,0.3s,baz=144,slow=14,SNR=8.9
MKAR LR LR 21 08 48.2
comp=Z,118nm,20.2s,baz=154,slow=37
2.8nm,0.9s
MDOK Medeo 16.46 314 *i* P **Pn** **21 02 40.3 +1.1**
baz=314
MAKZ Makanchi 16.48 332 **Pn** **21 02 38.5 -0.7**
ULHL Ulahol 16.49 310 P P 21 02 49.4 +7.2
SNR=5.6
HHC Hu-ho-hao-te 16.69 56 *eP* **Pn** **21 02 41.9 -0.1**
HHC pP pP 21 02 45.9 -2.7
HHC PP **PnPn** **21 02 55.9 +4.6**
HHC *eS* **Sn** **21 05 40.4 -7.0**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,140nm,5.4s
HHC LR LR
comp=N,460nm,8.8s
HHC LR LR
comp=E,380nm,9.2s
HHC LR LR
comp=Z,260nm,10.0s
NIL Nilore 16.80 278 Pn **Pn** **21 02 43.4 0.0**
NIL IAmb IAmb 21 02 47.2
comp=Z,46nm,0.8s
TDK Taldyqorghan 16.81 321 *eP* **P** **21 02 45.2 -0.4**
comp=Z,36nm,1.0s,baz=321
CHKK Chushkaly 16.89 316 *eP* **Pn** **21 02 45.1 +0.7**
baz=316
TKM2 Tokmak 2 17.24 311 P **P** **21 02 53.3 +2.8**
SNR=7.4
KUU Kurty 17.30 315 *eP* **Pn** **21 02 50.2 +0.6**
comp=Z,50nm,1.1s,baz=315
KBK Karagaybulak 17.52 310 P **P** **21 02 56.5 +2.8**
SNR=9.9
UCH Uchtor 17.61 308 P **P** **21 02 57.6 +2.7**
SNR=14
FRU1 Bishkek 17.80 310 **Pn** **21 02 54.4 -1.5**
AAK Ala-Archa 17.81 309 P **P** **21 02 60.0 +3.1**
SNR=17
AAK Ala-Archa 17.81 309 P **P** **21 02 57.0 +0.1**
AAK Ala-Archa 17.81 309 P **P** **21 02 59.6 +2.7**
comp=Z,19nm,0.9s,baz=112,slow=3.8,SNR=24
AAK LR LR 21 11 01.9
comp=Z,382nm,18.5s,baz=98,slow=41
CHMS Chumysh 17.82 310 P **P** **21 02 58.7 +2.0**
SNR=9.8
SONM Songino Array 18.03 30 P **Pn** **21 02 57.1 -1.6**
SONM Songino Array 18.03 30 P **P** **21 02 58.6 -0.5**
comp=Z,0.3nm,0.3s,baz=214,slow=12,SNR=14
comp=Z,6.0nm,1.0s
EKS2 Erkin-Say 18.29 308 P **P** **21 03 04.9 +2.8**
SNR=16
ARSB Arslanbob 18.30 304 P **P** **21 03 02.7 +0.5**
ULN Ulaanbaatar 18.33 31 P **Pn** **21 03 00.2 -2.2**
BTLS Baital 19.30 315 *eP* **Pn** **21 03 14.6 +0.6**
baz=315
BTK Batken 19.47 298 **P** **21 03 14.9 -0.1**
DZA Taraz 20.03 307 *eP* **P** **21 03 21.9 +0.9**
baz=307
SEM Semipalatinsk 20.10 335 *eP* **P** **21 03 22.1 +0.2**
baz=335
QIZ Qiongzhong 20.18 129 P Pn 21 03 24.6 0.0
QIZ S Sn 21 07 12.3 +0.4
QIZ LR LR
comp=Z,460nm,8.8s
QIZ LR LR
comp=Z,390nm,9.4s
QIZ LR LR
comp=Z,690nm,8.4s
UBPT Khong Chiam 20.62 145 P **P** **21 03 28.3 +0.7**
UBPT IAmb IAmb 21 03 33.2
comp=Z,37nm,1.1s
IUG Iuzhnay 20.65 304 *eP* **P** **21 03 29.2 +1.3**
comp=Z,38nm,1.3s,baz=304
KK31 Karatay Array 20.66 307 P **P** **21 03 28.0 +0.1**
KKAR Karatay Array 20.66 307 P **P** **21 03 28.2 +0.3**
KKAR Karatay Array 20.66 307 P **P** **21 03 28.0 +0.1**
KKAR IAmb IAmb 21 03 36.9
comp=Z,30nm,1.1s
KURBB Kurchatov Arra 20.91 333 P **P** **21 03 30.8 +0.4**
comp=Z,22nm,1.0s,baz=143,slow=11,SNR=46
comp=Z,22nm,1.0s
KURK Kurchatov 20.95 333 P **P** **21 03 31.1 +0.3**
BRLS Borolday 21.10 306 *eP* **P** **21 03 33.2 +0.7**
baz=305
ZALV Zalesovo Beam 22.02 347 P **P** **21 03 42.7 +0.3**
ZALV Zalesovo Beam 22.02 347 P **P** **21 03 42.8 +0.5**
comp=Z,8.0nm,0.9s,baz=160,slow=11,SNR=14
comp=Z,8.0nm,0.9s
BRZS Berezniki 23.01 324 *eP* **P** **21 03 54.1 +1.1**
comp=Z,27nm,1.4s,baz=324
HIA Hailar 25.70 42 P **P** **21 04 14.9 -3.3**
BVAR Borovoye Array 26.10 328 P **P** **21 04 23.1 +1.4**
comp=Z,2.0nm,0.5s,baz=133,slow=11,SNR=11

BVAR PcP **PcP** **21 07 48.2 -0.9**
comp=Z,0.7nm,0.6s,baz=100,slow=3.4,SNR=3.2
BVAR LR LR 21 16 06.1
comp=Z,129nm,18.2s,baz=118,slow=40
comp=Z,2.0nm,0.5s
BRVK Borovoye 26.17 328 P **P** **21 04 22.6 +0.2**
BRVK IAmb IAmb 21 04 31.8
comp=Z,19nm,1.1s
NACB Ninganchiao 26.25 102 P **P** **21 04 22.0 -1.4**
KSRS Korea Array 28.61 71 P **P** **21 04 44.8 +0.3**
comp=Z,1.5nm,0.7s,baz=265,slow=10,SNR=5.2
comp=Z,1.5nm,0.7s
GEYT Alibeck 29.04 290 P **P** **21 04 49.4 +1.0**
comp=Z,3.6nm,0.7s,baz=169,slow=3.0,SNR=4.9
GEYT LR LR 21 18 33.9
comp=Z,208nm,18.9s,baz=108,slow=41
comp=Z,3.6nm,0.7s
AKTO Aktyubinsk 31.36 315 P **P** **21 05 09.4 +0.7**
comp=Z,4.3nm,0.7s,baz=101,slow=5.9,SNR=6.8
AKTO LR LR 21 19 14.0
comp=Z,241nm,18.6s,baz=261,slow=39
comp=Z,4.3nm,0.7s
WSAR Wadi Sarin 31.92 262 P **P** **21 05 13.7 -0.2**
comp=Z,4.8nm,1.0s,baz=96,slow=13,SNR=2.6
comp=Z,4.8nm,1.0s
USRK Ussurisyk Ar. 32.09 58 LR LR 21 18 48.8
comp=Z,85nm,18.7s,baz=284,slow=37
ARU Arti 33.64 325 P **P** **21 05 27.2 -1.3**
ARU Arti 33.64 325 LR LR 21 21 42.1
comp=Z,123nm,18.3s,baz=203,slow=41
NRIK Noril'sk 36.77 357 P **P** **21 05 55.2 -0.1**
NRIK IAmb IAmb 21 05 57.2
comp=Z,16nm,1.1s
NRIK Noril'sk 36.77 357 P **P** **21 05 55.9 +0.6**
comp=Z,6.5nm,0.6s,baz=173,slow=4.8,SNR=8.4
comp=Z,6.5nm,0.6s
KIRV Kirov 39.02 325 LR LR 21 23 29.3
comp=Z,220nm,20.4s,baz=329,slow=38
GNI Garni 39.34 295 P **P** **21 06 19.5 +1.9**
GNI IAmb IAmb 21 06 29.9
comp=Z,20nm,0.9s
GNI Garni 39.34 295 P **P** **21 06 17.8 +0.2**
comp=Z,6.3nm,0.9s,baz=152,slow=11,SNR=5.2
comp=Z,6.3nm,0.9s
ONI Oni 40.14 299 P **P** **21 06 24.5 +0.4**
ONI IAmb IAmb 21 06 31.9
comp=Z,17nm,0.8s
AKH Akhalkalaki 40.18 297 P **P** **21 06 25.5 +0.9**
KBZ Khabaz 40.50 301 P **P** **21 06 27.0 0.0**
comp=Z,1.7nm,0.8s,baz=71,slow=16,SNR=2.9
comp=Z,1.7nm,0.8s
GURO Guroymak-BITLI 41.61 293 P **P** **21 06 37.9 +1.5**
RAYN Ar Rayn 42.83 270 P **P** **21 06 45.2 -1.2**
TIXI Tiksi 43.29 16 P **P** **21 06 47.1 -2.2**
ARPR Arapgir-MALATY 44.38 294 P **P** **21 06 57.6 -1.2**
ARPR IAmb IAmb 21 07 01.6
comp=Z,14nm,1.2s
GAZ Gaziantep 45.61 292 IAmb IAmb 21 07 14.8
comp=Z,13nm,0.9s
BR131 Keskin Array S 47.84 296 IAmb IAmb 21 07 31.4
comp=Z,8.4nm,1.1s
BRTR Keskin Array B 47.84 296 P **P** **21 07 25.9 -0.3**
comp=Z,3.1nm,0.9s,baz=104,slow=7.8,SNR=7.4
comp=Z,3.1nm,0.8s
MMAI Mount Meron Ar 48.06 287 P **P** **21 07 26.7 -1.0**
comp=Z,0.5nm,0.5s,baz=56,slow=16,SNR=2.2
comp=Z,0.5nm,0.5s
BALJ Balqa 48.13 286 IAmb IAmb 21 07 30.1
comp=Z,12nm,0.7s
GHAJ Ghor Haditha 48.43 285 P **P** **21 07 30.0 -0.5**
GHAJ IAmb IAmb 21 07 37.0
comp=Z,4.7nm,0.7s
ANTO Ankara 48.45 296 P **P** **21 07 30.4 -0.4**
AKASG Malin Array Be 49.46 311 P **P** **21 07 37.8 -0.4**
comp=Z,1.0nm,0.5s,baz=74,slow=7.1,SNR=4.8
comp=Z,1.0nm,0.5s
PETK Petropavlovsk- 49.52 46 P **P** **21 07 39.4 +0.8**
comp=Z,2.7nm,0.7s,baz=277,slow=7.0,SNR=2.2
comp=Z,2.7nm,0.7s
FINES FINESS Array B 51.01 325 P **P** **21 07 50.3 +0.5**
comp=Z,1.4nm,0.5s,baz=102,slow=6.4,SNR=9.3
comp=Z,1.4nm,0.5s
SOEI Soe 51.58 140 P **P** **21 07 54.7 0.0**
ARCES ARCESS Array B 51.96 336 P **P** **21 07 56.8 0.0**
comp=Z,5.9nm,1.1s,baz=96,slow=8.3,SNR=1.4
ARCES PcP **PcP** **21 09 08.8 -0.4**
comp=Z,3.2nm,0.8s,baz=76,slow=4.7,SNR=4.4
comp=Z,5.9nm,1.1s
MLR Muntele Rosu 52.33 305 IAmb IAmb 21 08 07.0
comp=Z,11nm,1.0s
BURAR Bucovina Array 52.45 308 P **P** **21 08 00.1 -0.7**
BUR08 Bucovina Ar. S 52.46 308 P **P** **21 08 01.0 0.0**
BUR08 IAmb IAmb 21 08 51.9
comp=Z,29nm,1.9s
BILL Bilibino 53.71 26 P **P** **21 08 09.1 -0.7**
BILL IAmb IAmb 21 08 11.3
comp=Z,12nm,0.9s
KWP Kalwaria Pacla 53.75 310 IAmb IAmb 21 08 11.5
comp=Z,15nm,1.0s
KOLS Kolonicke sedl 54.16 310 *eP* **P** **21 08 17.9 +4.6**
STHS Stebnicka Huta 54.73 310 *eP* **P** **21 08 18.2 +0.7**
SPITS Spitsbergen Ar 55.51 346 P **P** **21 08 23.2 +0.6**
comp=Z,4.2nm,0.7s,baz=117,slow=11,SNR=4.7
comp=Z,4.2nm,0.7s
MORC Moravsky Berou 57.01 311 *eP* P 21 08 38.8 +5.0
HFS Hagfors 57.15 324 P **P** **21 08 34.8 +0.2**
comp=Z,4.1nm,0.8s,baz=68,slow=9.7,SNR=6.8
comp=Z,4.1nm,0.8s
KRLC Kraliky 57.42 312 *eP* **P** **21 08 37.1 +0.4**
KRLC *epP* **pP** **21 08 40.1 -1.4**
MODS Modra-Piesok 57.51 310 *eP* **P** **21 08 39.7 +2.3**
DPC Dobruska-Polom 57.64 312 *eP* **P** **21 08 38.8 +0.5**
DPC *epP* **pP** **21 08 43.6 +0.5**
VRAC Vranov 57.72 311 *eP* **P** **21 08 39.6 +0.8**
CHVC Chvalec 57.75 313 *eP* **P** **21 08 41.6 +2.6**
KRUC Moravsky 57.91 311 *eP* **P** **21 08 41.0 +0.9**
NB2 NORSAR Subarra 58.20 325 P **P** **21 08 41.7 -0.3**
comp=Z,2.5nm,0.8s,baz=79,slow=7.4
NOA NORSAR Array B 58.20 325 P **P** **21 08 41.6 -0.4**
comp=Z,2.1nm,0.9s,baz=66,slow=7.8,SNR=4.9
NOA LR LR 21 37 31.7
comp=Z,82nm,20.3s,baz=305,slow=40
comp=Z,2.1nm,0.9s
CONA Conrad Observa 58.54 310 *eP* **P** **21 08 44.6 -0.1**
comp=Z,3.5nm,0.8s
PRU Pruhonice 58.84 312 *eP* **P** **21 08 48.1 +1.5**
ZVC Zvikov 59.20 312 *eP* **P** **21 08 49.8 +0.7**
CKRC Cesky Krumlov 59.30 311 *eP* **P** **21 08 50.5 +0.7**
SOKA Soboth 59.43 308 *eP* **P** **21 08 50.3 -0.6**
comp=Z,2.5nm,0.9s
CLL Collm 59.44 314 *eP* **P** **21 08 51.0 +0.3**
comp=Z,7.0nm,1.3s
CLL *ePP* **PP** **21 11 00.0 -1.7**
MOA Molln 59.59 310 *eP* **P** **21 08 51.3 -0.6**
comp=Z,1.9nm,0.7s
KHC Kasperske Hory 59.67 312 *eP* **P** **21 08 52.9 +0.4**
KHC *epP* **pP** **21 08 57.2 -0.1**
GERES GERESS Array B 59.67 311 P **P** **21 08 52.6 +0.1**
comp=Z,1.4nm,0.6s,baz=32,slow=7.8,SNR=6.1
comp=Z,1.4nm,0.6s
BIOA Bad Ischl, Aus 60.05 310 *eP* **P** **21 08 55.0 0.0**
comp=Z,1.8nm,0.8s
LESA Schwarzleotal 60.75 310 *eP* **P** **21 08 58.7 -1.2**
comp=Z,4.2nm,1.0s
WTTA Wattenberg 61.47 310 *eP* **P** **21 09 04.3 -0.6**
comp=Z,6.7nm,1.4s
WATA Walderalm 61.48 310 *eP* **P** **21 09 04.1 -0.9**
comp=Z,9.4nm,1.5s
SQTA Sankt Quirin 61.76 310 *eP* **P** **21 09 06.6 -0.2**
comp=Z,2.6nm,0.8s
MOTA Moosalm 61.79 310 *eP* **P** **21 09 06.5 -0.6**
comp=Z,5.4nm,1.3s
NRCA Norcia 61.93 305 P **P** **21 09 07.4 -0.6**
NRCA IAmb IAmb 21 11 10.7
comp=Z,13nm,1.4s
FETA Feichten 62.13 310 *eP* **P** **21 09 08.5 -0.9**
comp=Z,6.7nm,1.3s
MURB Monte Urbino 62.19 305 P **P** **21 09 08.6 -1.1**
TUE Stuetta 63.21 310 P **P** **21 09 14.4 -2.3**
TUE IAmb IAmb 21 09 28.7
comp=Z,5.8nm,0.9s
GAMB Gambell 63.26 30 P **P** **21 09 16.8 +0.5**
baz=290
C16K Lisburne Hills 64.02 24 IAmb IAmb 21 09 22.2
comp=Z,5.5nm,0.8s
C16K Lisburne Hills 64.02 24 P **P** **21 09 21.6 +0.3**
baz=293

TNA Tin City 64.14 27 P **P** **21 09 22.2 +0.2**
baz=292
SENIN Lac Senin/Sane 64.58 310 P **P** **21 09 25.4 -0.2**
C17K DeLong Mountai 64.67 23 P **P** **21 09 26.2 +0.6**
baz=295
B18K Kokolik River 64.74 22 P **P** **21 09 27.3 +1.3**
baz=296
F14K Arctic Creek 64.78 27 P **P** **21 09 27.0 +0.6**
baz=294
C18K Utukok River 65.25 23 IAmb IAmb 21 09 30.9
comp=Z,6.8nm,0.9s
C18K Utukok River 65.25 23 P **P** **21 09 30.0 +0.6**
baz=297
F15K North Star Dit 65.32 26 P **P** **21 09 30.8 +0.9**
baz=295
WB0 Warramunga Arr 65.36 137 P **P** **21 09 32.8 +2.0**
A21K Barrow 65.38 19 P **P** **21 09 31.2 +1.1**
baz=300
WRAB Tennant Creek 65.47 137 P **P** **21 09 33.5 +2.1**
WRA Warramunga Arr 65.47 137 P **P** **21 09 31.1 -0.3**
comp=Z,6.6nm,0.9s,baz=306,slow=12,SNR=20
comp=Z,6.6nm,0.9s
ANM Nome 65.53 28 P **P** **21 09 31.4 +0.2**
baz=295
C19K Lookout Ridge 65.56 22 IAmb IAmb 21 09 34.5
comp=Z,7.0nm,0.8s
C19K Lookout Ridge 65.56 22 P **P** **21 09 32.3 +0.9**
baz=298
E17K Hotham Inlet 65.74 25 P **P** **21 09 33.3 +0.7**
baz=297,SNR=5.2
G15K Niukluk 65.86 27 P **P** **21 09 33.7 +0.4**
baz=296
B20K Meade River 65.87 21 IAmb IAmb 21 09 35.2
comp=Z,9.0nm,0.9s
B20K Meade River 65.87 21 P **P** **21 09 34.4 +1.1**
baz=300
E18K Tukpaehearik C 66.01 24 P **P** **21 09 34.7 +0.4**
baz=298
F17K Baldwin Pennin 66.24 25 P **P** **21 09 36.5 +0.8**
baz=298,SNR=5.3
G16K Koyuk River 66.32 26 **P** **21 09 37.2 +0.9**
G16K IAmb IAmb 21 09 37.8
comp=Z,4.9nm,0.9s
G16K Koyuk River 66.32 26 P **P** **21 09 36.9 +0.6**
baz=297
D19K Kuna River 66.32 22 P **P** **21 09 36.4 +0.1**
baz=299
D20K Etivluk River 66.69 22 P **P** **21 09 38.9 +0.2**
baz=300
H16K Elim 66.71 27 P **P** **21 09 39.1 +0.3**
baz=297
F18K Selawik 66.73 25 P **P** **21 09 39.4 +0.5**
baz=299
B21K Ikpikpuk River 66.83 21 IAmb IAmb 21 09 41.3
comp=Z,9.6nm,1.1s
B21K Ikpikpuk River 66.83 21 P **P** **21 09 40.4 +0.9**
baz=302
G17K Kiwalik Mounta 66.90 26 P **P** **21 09 40.1 +0.1**
baz=298
C21K Knifeblade Rid 67.03 21 P **P** **21 09 41.8 +1.1**
baz=302
J14K Nanvaranak Lak 67.05 29 P **P** **21 09 41.2 +0.2**
baz=297
E20K Nigu River 67.06 22 P **P** **21 09 41.5 +0.4**
baz=301
E19K Redstone River 67.13 23 IAmb IAmb 21 09 42.7
comp=Z,7.8nm,0.8s
E19K Redstone River 67.13 23 P **P** **21 09 41.6 +0.2**
baz=300
EKA Eskdalemuir Ar 67.18 322 P **P** **21 09 41.1 -0.8**
comp=Z,1.6nm,0.7s,baz=68,slow=5.7,SNR=7.1
comp=Z,1.6nm,0.7s
F19K Shaleruckik Mo 67.26 24 P **P** **21 09 42.2 -0.1**
baz=300
KEST Kesra 67.33 299 P **P** **21 09 42.6 -0.7**
comp=Z,5.3nm,1.0s,baz=30,slow=3.4,SNR=4.2
comp=Z,5.3nm,1.0s
G18K Tagagawik 67.43 25 P **P** **21 09 43.1 -0.3**
baz=300
H17K Granite Mounta 67.44 26 IAmb IAmb 21 09 45.1
comp=Z,7.0nm,0.9s
H17K Granite Mounta 67.44 26 P **P** **21 09 43.9 +0.4**
baz=299
I17K Unalakleet 67.66 27 P **P** **21 09 45.4 +0.6**
baz=299
E21K Killik River 67.66 22 P **P** **21 09 44.8 -0.1**
baz=303
D22K Ayikyak River 67.81 21 IAmb IAmb 21 09 47.1
comp=Z,6.2nm,0.8s
D22K Ayikyak River 67.81 21 P **P** **21 09 46.5 +0.7**
baz=304
F20K Avaraart Lake 67.84 23 IAmb IAmb 21 09 47.0
comp=Z,5.1nm,0.9s
F20K Avaraart Lake 67.84 23 P **P** **21 09 46.1 +0.2**
baz=302
G19K Purcell Mounta 67.85 24 P **P** **21 09 46.3 +0.3**
baz=301
C23K Itkillik River 67.87 20 P **P** **21 09 46.7 +0.6**
baz=305
H18K Honhosa River 67.91 26 P **P** **21 09 46.6 +0.2**
baz=300
J16K Anvik River 67.99 28 P **P** **21 09 47.3 +0.4**
baz=299
L14K Kuka Creek 68.07 30 P **P** **21 09 47.9 +0.4**
baz=298
K15K Wolf Creek Mou 68.10 29 P **P** **21 09 48.1 +0.5**
baz=299
AS31 Alice Springs 68.19 140 P **P** **21 09 46.3 -2.5**
AS31 IAmb IAmb 21 09 52.3
comp=Z,2.5nm,0.6s
ASAR Alice Springs 68.19 140 P **P** **21 09 48.8 0.0**
comp=Z,7.0nm,0.6s,baz=327,slow=6.6,SNR=54
comp=Z,7.0nm,0.6s
M13K Dall Lake 68.22 31 P **P** **21 09 49.0 +0.7**
baz=298
H19K Roundabout Mou 68.40 25 P **P** **21 09 49.9 +0.5**
baz=302
L15K Ungalak Mounta 68.41 30 P **P** **21 09 50.1 +0.5**
baz=299
C24K Franklin Bluff 68.48 19 P **P** **21 09 49.8 -0.1**
baz=307
F21K Alatna River 68.49 23 IAmb IAmb 21 09 51.5
comp=Z,5.9nm,0.9s
F21K Alatna River 68.49 23 P **P** **21 09 50.5 +0.4**
baz=304,SNR=10
E22K Anaktuvuk Pass 68.50 21 IAmb IAmb 21 09 51.6
comp=Z,7.5nm,1.0s
E22K Anaktuvuk Pass 68.50 21 P **P** **21 09 50.7 +0.6**
baz=305
M14K Bethel 68.66 31 P **P** **21 09 51.6 +0.4**
baz=299
D24K Happy Valley 68.79 20 IAmb IAmb 21 09 53.1
comp=Z,5.3nm,0.9s
D24K Happy Valley 68.79 20 P **P** **21 09 52.1 +0.2**
baz=307
G21K Allakaket 68.87 23 IAmb IAmb 21 09 53.4
comp=Z,6.1nm,0.9s
G21K Allakaket 68.87 23 P **P** **21 09 52.6 +0.2**
baz=304
TOLK Toolik Lake Re 68.88 20 P **P** **21 09 52.8 +0.4**
baz=306,SNR=10
H20K Anotleneega Mo 68.97 25 P **P** **21 09 53.3 +0.2**
baz=303
K17K Iditarod 69.18 28 P **P** **21 09 55.2 +0.8**
baz=301
E23K Chandalar 69.21 21 P **P** **21 09 55.1 +0.4**
baz=307
L16K Owhat River 69.23 29 P **P** **21 09 55.0 +0.3**
baz=301
M15K Kasigluk River 69.24 30 P **P** **21 09 55.7 +1.0**
baz=300
G22K Bettles 69.30 22 P **P** **21 09 55.3 +0.3**
baz=305
D25K Kavik River 69.37 19 IAmb IAmb 21 09 57.0
comp=Z,6.1nm,1.1s
D25K Kavik River 69.37 19 P **P** **21 09 56.0 +0.5**
baz=309
J18K Innoko River 69.40 27 IAmb IAmb 21 09 57.0
comp=Z,8.2nm,1.1s
J18K Innoko River 69.40 27 P **P** **21 09 56.7 +0.9**
baz=302
L17K Donlin 69.49 28 P **P** **21 09 56.9 +0.6**
baz=301
I20K Naaghedeneel 69.50 25 P **P** **21 09 57.0 +0.8**
baz=304
J19K Poorman 69.53 26 P **P** **21 09 57.2 +0.7**
baz=303
COLD Coldfoot 69.53 22 P **P** **21 09 57.1 +0.6**

	baz=306,SNR=7.1								
H21K	**Melozitna Rive**	69.60	24	P		P	21 09 57.6	+0.7	
	baz=305								
O14K	**Tigyukauivet M**	69.71	32	P		P	21 09 58.6	+0.9	
	baz=300								
N15K	**Kwethluk River**	69.76	31	P		P	21 09 58.9	+0.8	
	baz=301								
M16K	**Timber Creek**	69.80	30	P		P	21 09 59.4	+1.2	
	baz=301								
G23K	**Bananza Creek**	69.89	22	P		P	21 09 59.6	+0.8	
	baz=307								
H22K	**Ishtalitna Cre**	69.94	23	P		P	21 09 59.4	+0.3	
	baz=306								
J20K	**Nowinta River**	69.96	26	P		P	21 10 00.1	+0.9	
	baz=304								
F24K	**Squaw Lake**	70.06	21	IAmb		IAmb	21 10 01.5		
	comp=Z,17nm,1.6s								
F24K	**Squaw Lake**	70.06	21	P		P	21 10 00.4	+0.6	
	baz=308								
I21K	**Tanana**	70.15	24	P		P	21 10 01.0	+0.6	
	baz=306								
M17K	**Holitna River**	70.22	29	P		P	21 10 01.7	+0.9	
	baz=302								
E25K	**Arctic Village**	70.36	20	P		P	21 10 02.1	+0.4	
	baz=310								
K20K	**Telida**	70.45	26	P		P	21 10 03.4	+1.2	
	baz=304								
MLY	**Manley**	70.67	24	P		P	21 10 04.1	+0.5	
	baz=307								
F25K	**Christian Rive**	70.69	20	P		P	21 10 04.7	+1.0	
	baz=310								
G24K	**Hadweenzic Riv**	70.70	22	IAmb		IAmb	21 10 05.0		
	comp=Z,8.6nm,1.1s								
G24K	**Hadweenzic Riv**	70.70	22	P		P	21 10 04.4	+0.7	
	baz=309								
L19K	**White Mountain**	70.82	27	P		P	21 10 05.6	+1.1	
	baz=304								
M18K	**Stony River**	70.83	28	P		P	21 10 05.2	+0.7	
	baz=304								
D27M	**Malcolm River**	70.87	18	P		P	21 10 05.5	+0.7	
	baz=314								
O16K	**Kokwok River B**	70.92	31	P		P	21 10 06.3	+1.2	
	baz=302								
F26K	**Sheenjek River**	71.05	20	P		P	21 10 06.6	+0.8	
	baz=311								
I23K	**Minto, Yukon-K**	71.06	23	P		P	21 10 06.7	+0.9	
	baz=308								
H24K	**Noodor Dome**	71.12	22	P		P	21 10 06.7	+0.4	
	baz=309								
CAST	**Castle Rocks**	71.15	26	P		P	21 10 06.8	+0.3	
N18K	**Kilae Creek**	71.25	29	P		P	21 10 07.8	+0.7	
	baz=304								
P16K	**Nushagak River**	71.27	31	P		P	21 10 08.2	+1.0	
	baz=303								
D28M	**Stokes Point**	71.37	17	P		P	21 10 08.3	+0.6	
	baz=316								
NEA2	**Nenana**	71.50	24	P		P	21 10 09.0	+0.4	
	baz=308								
G26K	**Porcupine Rive**	71.65	20	P		P	21 10 10.5	+1.1	
	baz=312								
M20K	**Styx River**	71.66	27	P		P	21 10 10.5	+0.8	
	baz=306								
E28M	**Babbage River**	71.69	18	IAmb		IAmb	21 10 10.9		
	comp=Z,6.0nm,0.9s								
E28M	**Babbage River**	71.69	18	P		P	21 10 10.2	+0.5	
	baz=315								
POKR	**Poker Plat Res**	71.72	23	IAmb		IAmb	21 10 11.2		
	comp=Z,15nm,1.4s								
POKR	**Poker Plat Res**	71.72	23	P		P	21 10 10.3	+0.4	
	baz=309								
COLA	**College**	71.73	23	P		P	21 10 10.6	+0.7	
	baz=309								
N19K	**Bonanza Creek**	71.74	29	P		P	21 10 11.4	+1.2	
	baz=305								
P17K	**Kvichak River**	71.84	31	P		P	21 10 12.0	+1.3	
	baz=304								
PRP	**Porcupine Dome**	72.07	22	P		P	21 10 12.8	+0.6	
PRP				IAmb		IAmb	21 10 13.9		
	comp=Z,5.6nm,0.9s								
PRP	**Porcupine Dome**	72.07	22	P		P	21 10 12.9	+0.7	
	baz=311								
ILAR	**Eielson Array**	72.12	23	P		P	21 10 11.7	-0.5	
	comp=Z,3.2nm,0.8s,baz=297,slow=5.5,SNR=34								
	comp=Z,3.2nm,0.8s								
A36M	**Sachs Harbour**	72.13	12	P		P	21 10 12.5	+0.3	
	baz=326,SNR=6.1								
O19K	**Port Alsworth**	72.17	29	P		P	21 10 13.3	+0.7	
	baz=305								
SKT	**Skwentna**	72.21	27	P		P	21 10 13.2	+0.3	
	baz=307								
R16K	**Pilot Point**	72.25	32	P		P	21 10 12.4	-0.7	
	baz=303								
E29M	**Blow River**	72.26	18	IAmb		IAmb	21 10 14.5		
	comp=Z,6.2nm,0.9s								
E29M	**Blow River**	72.26	18	P		P	21 10 13.5	+0.5	
	baz=316								
F28M	**Old Crow**	72.30	19	IAmb		IAmb	21 10 14.7		
	comp=Z,5.9nm,1.0s								
F28M	**Old Crow**	72.30	19	P		P	21 10 13.7	+0.3	
	baz=315								
CUT	**Chulitna**	72.42	26	P		P	21 10 13.7	-0.4	
	baz=308								
CHGN	**Chignik**	72.56	34	P		P	21 10 14.3	-0.7	
	baz=303								
J25K	**Salcha River,**	72.72	23	P		P	21 10 15.0	-0.9	
	baz=311								
WAT1	**Susitna Watana**	72.78	25	P		P	21 10 15.8	-0.5	
	baz=309								
H27K	**Steamboat Moun**	72.81	20	P		P	21 10 17.1	+0.7	
	baz=314,SNR=7.7								
SUA	**Susitna One**	72.82	27	P		P	21 10 16.9	+0.2	
	baz=308								
O20K	**Slope Mountain**	72.92	29	P		P	21 10 17.6	+0.4	
	baz=306								
I26K	**Coal Creek Min**	72.95	21	IAmb		IAmb	21 10 18.8		
	comp=Z,6.5nm,1.0s								
I26K	**Coal Creek Min**	72.95	21	P		P	21 10 18.0	+0.8	
	baz=313								
DHY	**Denali Highway**	73.04	25	P		P	21 10 16.7	-1.3	
DHY	**Denali Highway**	73.04	25	P		P	21 10 17.9	-0.1	
	baz=310								
K24K	**Donnelly Dome**	73.12	23	P		P	21 10 17.9	-0.4	
	baz=311								
I27K	**Kandik River**	73.22	21	P		P	21 10 19.8	+0.9	
	baz=314								
WAT6	**Susitna Watana**	73.23	25	P		P	21 10 19.8	+0.7	
	baz=310								
PMR	**Palmer**	73.35	26	P		P	21 10 19.3	-0.3	
	baz=309								
J26L	**Joseph Creek**	73.37	22	IAmb		IAmb	21 10 20.5		
	comp=Z,4.5nm,0.8s								
J26L	**Joseph Creek**	73.37	22	P		P	21 10 19.5	-0.3	
	baz=313								
F30M	**Barrier River**	73.38	18	P		P	21 10 20.2	+0.5	
	baz=318								
INK	**Inuvik**	73.40	16	IAmb		IAmb	21 10 21.2		
	comp=Z,7.8nm,1.1s								
INK	**Inuvik**	73.40	16	P		P	21 10 19.6	-0.2	
	baz=320,SNR=6.6								
RC01	**Rabbit Creek A**	73.44	27	P		P	21 10 19.8	-0.4	
	baz=308								
RIDG	**Independent Ri**	73.47	23	P		P	21 10 19.7	-0.7	
	baz=312								
SML	**Sawmill**	73.51	26	P		P	21 10 20.6	-0.1	
	baz=309								
SCRK	**Sand Creek**	73.59	23	IAmb		IAmb	21 10 21.9		
	comp=Z,10nm,0.9s								
SCRK	**Sand Creek**	73.59	23	P		P	21 10 21.2	0.0	
	baz=312								
KNK	**Knik Glacier**	73.72	26	P		P	21 10 21.8	0.0	
	baz=309								
H29M	**Whitestone**	73.72	19	P		P	21 10 21.7	0.0	
	baz=316								
G30M	**tAoh Zraii Nji**	73.74	18	IAmb		IAmb	21 10 22.7		
	comp=Z,8.2nm,0.8s								
G30M	**tAoh Zraii Nji**	73.74	18	P		P	21 10 21.7	-0.2	
	baz=318,SNR=6.8								
M23K	**Glacier View**	73.74	26	P		P	21 10 22.6	+0.6	
	baz=310								
PAX	**Paxson**	73.77	24	P		P	21 10 22.1	-0.2	
	baz=311								
O22K	**Cooper Landing**	73.82	27	P		P	21 10 21.4	-1.0	
	baz=309								
I28M	**Miner Creek**	73.82	20	IAmb		IAmb	21 10 28.4		
	comp=Z,11nm,1.4s								
I28M	**Miner Creek**	73.82	20	P		P	21 10 22.5	0.0	
	baz=315								
SCM	**Sheep Creek Mo**	73.86	25	P		P	21 10 22.8	+0.1	
	baz=310								
BRSE	**Bradley Lake S**	73.88	28	P		P	21 10 22.2	-0.6	
	baz=308								
Q20K	**Shuyak Island**	73.90	30	P		P	21 10 22.4	-0.4	
	baz=307								
F31M	**Tsiigehtchic**	74.02	17	P		P	21 10 23.6	+0.2	
	baz=320								
EPYK	**Eagle Plains**	74.06	19	P		P	21 10 23.4	-0.4	
	baz=318								
M24K	**Tolsona, Glenn**	74.10	25	P		P	21 10 24.2	+0.1	
	baz=311								
SEW	**Seward**	74.17	28	P		P	21 10 25.1	+0.7	
	baz=309								
K27K	**Chicken**	74.17	22	P		P	21 10 25.0	+0.6	
	baz=314								
HARP	**HAARP**	74.26	24	P		P	21 10 25.1	+0.1	
	baz=312								
G31M	**Satah River**	74.28	18	IAmb		IAmb	21 10 25.6		
	comp=Z,6.7nm,0.8s								
G31M	**Satah River**	74.28	18	P		P	21 10 24.8	-0.2	
	baz=320								
C36M	**Paulatuk**	74.58	13	IAmb		IAmb	21 10 27.1		
	comp=Z,9.8nm,1.0s								
C36M	**Paulatuk**	74.58	13	P		P	21 10 26.1	-0.5	
	baz=328,SNR=8.7								
KLU	**Klutina**	74.59	25	IAmb		IAmb	21 10 28.8		
	comp=Z,13nm,1.0s								
KLU	**Klutina**	74.59	25	P		P	21 10 27.3	+0.3	
	baz=311								
ESDC	**Sonseca Array**	74.91	308	P		P	21 10 29.1	-0.2	
	comp=Z,1.7nm,0.9s,baz=56,slow=5.8,SNR=11								
	comp=Z,1.7nm,0.9s								
L27K	**Beaver Creek,**	74.93	23	IAmb		IAmb	21 10 30.8		
	comp=Z,8.7nm,1.0s								
L27K	**Beaver Creek,**	74.93	23	P		P	21 10 29.6	+0.8	
	baz=314								
DAWY	**Dawson**	74.98	21	P		P	21 10 28.4	-0.8	
	baz=316								
N25K	**Chitina, Valde**	74.99	25	P		P	21 10 29.7	+0.4	
	baz=312								
I30M	**Mount Dempster**	75.01	19	IAmb		IAmb	21 10 30.0		
	comp=Z,8.9nm,0.8s								
I30M	**Mount Dempster**	75.01	19	P		P	21 10 29.3	-0.1	
	baz=318								
J29N	**Klondike Camp**	75.05	21	P		P	21 10 30.1	+0.5	
	baz=317								
H31M	**Peel River**	75.12	18	IAmb		IAmb	21 10 30.6		
	comp=Z,17nm,1.3s								
H31M	**Peel River**	75.12	18	P		P	21 10 29.8	-0.2	
	baz=320								
M27K	**Edge Creek, AK**	75.41	23	IAmb		IAmb	21 10 59.9		
	comp=Z,16nm,1.6s								
M27K	**Edge Creek, AK**	75.41	23	P		P	21 10 32.5	+0.8	
	baz=314								
BMRM	**Bremner River**	75.42	25	P		P	21 10 32.1	+0.3	
	baz=312								
J30M	**Hart River**	75.51	20	P		P	21 10 32.4	0.0	
	baz=318								
MCARA	**McCarthy VSAT**	75.69	24	P		P	21 10 34.0	+0.7	
	baz=314								
BVCY	**Beaver Creek**	75.70	23	P		P	21 10 34.2	+0.9	
	baz=315								
K29M	**Barlow Dome**	75.71	21	IAmb		IAmb	21 10 34.7		
	comp=Z,7.5nm,0.9s								
K29M	**Barlow Dome**	75.71	21	P		P	21 10 33.8	+0.3	
	baz=318								
L29M	**L29M**	76.07	21	IAmb		IAmb	21 10 36.9		
	comp=Z,9.9nm,1.2s								
L29M	**L29M**	76.07	21	P		P	21 10 36.3	+0.8	
	baz=317								
CRQE	**Cirque**	76.11	25	P		P	21 10 36.5	+0.7	
	baz=314								
YUK3	**Moose Creek**	76.29	23	P		P	21 10 35.9	-1.0	
	baz=316								
M29M	**Somme Creek**	76.45	22	P		P	21 10 38.4	+0.7	
	baz=317								
CTG	**Chitna Glacier**	76.57	24	P		P	21 10 38.9	+0.4	
	baz=315								
YUK8	**Steele Glacier**	76.88	23	P		P	21 10 40.9	+0.6	
	baz=316								
MESA	**MESA**	76.91	25	P		P	21 10 41.4	+1.0	
	baz=315								
YUK6	**Outpost Mounta**	77.59	23	P		P	21 10 44.5	+0.2	
	baz=317								
N30M	**Aishikik Lake**	77.62	22	P		P	21 10 44.7	+0.4	
	baz=318								
M31M	**Drury Creek, Y**	77.89	21	P		P	21 10 45.9	+0.2	
	baz=320								
HYT	**Haines Junctio**	77.96	23	P		P	21 10 46.8	+0.6	
	baz=318								
O29M	**Mount Kennedy**	77.99	24	P		P	21 10 46.7	+0.3	
	baz=317								
N31M	**Braeburn, Yuko**	78.01	22	P		P	21 10 46.9	+0.6	
	baz=319								
O30N	**Mendenhall**	78.46	22	P		P	21 10 49.6	+0.7	
	baz=319								
MMPY	**Sheldon Lake,**	78.46	19	IAmb		IAmb	21 10 51.1		
	comp=Z,14nm,1.4s								
MMPY	**Sheldon Lake,**	78.46	19	P		P	21 10 49.5	+0.7	
	baz=323								
STKA	**Stephens Creek**	78.83	140	P		P	21 10 50.7	-0.4	
	comp=Z,1.7nm,0.8s,baz=346,slow=17,SNR=2.7								
	comp=Z,1.7nm,0.8s								
N32M	**Quiet Lake**	79.10	21	P		P	21 10 53.0	+0.6	
	baz=322								
PLBC	**Pleasant Camp**	79.37	23	P		P	21 10 54.4	+0.5	
	baz=319								
SKAG	**Skagway**	79.71	23	P		P	21 10 56.6	+0.9	
	baz=320								
P33M	**Teslin, Yukon**	79.92	21	P		P	21 10 57.4	+0.5	
	baz=322								
P32M	**Atlin**	80.13	22	P		P	21 10 58.8	+0.8	
	baz=321								
TGTN	**Hyland Airport**	80.18	19	P		P	21 10 59.0	+0.8	
	baz=325								
R33M	**Jennings River**	81.14	21	P		P	21 11 04.4	+0.9	
	baz=324								
DLBC	**Dease Lake**	82.20	21	P		P	21 11 10.1	+1.0	
	baz=324								
S34M	**Telegraph Cree**	82.28	22	P		P	21 11 10.0	+0.6	
	baz=324								
YKA	**Yellowknife Ar**	82.46	13	P		P	21 11 09.8	-0.4	
	comp=Z,2.1nm,0.8s,baz=328,slow=5.2,SNR=25								
	comp=Z,2.1nm,0.8s								
FCC	**Fort Churchill**	88.61	4	IAmb		IAmb	21 11 41.6		
	comp=Z,6.4nm,1.1s								
BOSA	**Boshof**	88.83	235	P		P	21 11 42.5	0.0	
	comp=Z,2.6nm,1.0s,baz=32,slow=9.5,SNR=1.6								
	comp=Z,2.6nm,1.0s								
SCHQ	**Schefferville**	91.10	349	P		P	21 11 52.0	-0.7	
	comp=Z,1.1nm,0.6s,baz=65,slow=19,SNR=1.1								
	comp=Z,1.1nm,0.6s								
FFC	**Flin Flon**	91.88	9	P		P	21 11 55.4	-0.9	
FFC				IAmb		IAmb	21 11 56.9		
	comp=Z,6.4nm,1.0s								
LONY	**Lake Ozonia**	102.20	351	P		Pdif	21 12 42.3	-0.9	
	baz=10								
O53A	**New Philadelph**	107.17	356	P		PKiKP	21 17 14.4	-0.1	
	baz=4.7								
GOGA	**Godfrey**	114.11	357	P		PKiKP	21 17 27.4	-0.4	
	baz=2.9								
TXAR	**Lajitas Array**	116.18	16	PKP		PKiKP	21 17 31.1	-0.9	
	comp=Z,0.5nm,0.8s,baz=350,slow=2.8,SNR=3.6								
SIV	**San Ignacio**	151.41	300	PKPbc		PKPbc	21 18 41.6	-1.1	
	comp=Z,3.8nm,0.8s,baz=97,slow=3.6,SNR=13								

*ISK **08** 21:01:54.6, 42°.41N×42°.95E, h5km, ML2.7/12*
*NORS **08** 21:01:54.8, 42°.28N×43°.00E, h10km, MPVA3.4*
*TIF **08** 21:01:55.0, 42°.35N×43°.07E, h5km*
*AFAD **08** 21:01:55.5±0.0, 42°.41N×42°.84E, h7km±1km, ML2.5*
*MOS **08** 21:01:56.3, 42°.34N×43°.02E, h4km, MPVA3.6*

ISC 08 21:01:55.5±0.8, **42°.34N**±0°.01×**43°.02E**±0°.02, **h4**km±5km, **n74**, σ1s**26**/132, **1C**, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TKB	**Tkibuli**	0.02	304	P	**Pg**	21 01 56.5	+0.2
TKB				S	**Sg**	21 01 57.7	+0.7
TKB	**Tkibuli**	0.02	304	*i* Pg	**Pg**	21 01 56.5	+0.2
TKB				*i* Sg	**Sg**	21 01 57.7	+0.7
ONI	**Oni**	0.41	52	Pg	**Pg**	21 02 03.6	+0.3
ONI				Sg	**Sb**	21 02 10.8	-1.1
ONI	**Oni**	0.41	52	P	**Pg**	21 02 03.7	+0.3
ONI				S	**Sb**	21 02 10.0	-1.9
ONI	**Oni**	0.41	52	*e*Pg	**Pg**	21 02 03.7	+0.3
ONI				*e*Sg	**Sb**	21 02 10.4	-1.5
ALIG	**Mtskhetisjvari**	0.53	116	P	**Pg**	21 02 05.7	+0.2
ALIG				S	**Sg**	21 02 13.2	+0.9
ALIG	**Mtskhetisjvari**	0.53	116	*e*Pg	**Pg**	21 02 05.7	+0.2
ALIG				*e*Sg	**Sg**	21 02 13.2	+0.9
ABS	**Abastumani**	0.60	195	P	**Pb**	21 02 08.2	-0.5
ABS				S	**Sb**	21 02 17.4	-0.2
ABS	**Abastumani**	0.60	195	*e*Pg	**Pb**	21 02 08.2	-0.5
ABS				*e*Sg	**Sb**	21 02 17.4	-0.2
DIGR	**Digorskoe uzhe**	0.70	36	*e*Pg	**Pg**	21 02 08.9	+0.1
DIGR				*e*Sg	**Sb**	21 02 19.9	-0.5
ZEI	**Tsey**	0.79	55	*e*Pg	**Pg**	21 02 10.9	+0.2
ZEI				*e*Sg	**Sb**	21 02 22.6	-0.6
EPOS	**Posof**	0.86	195	P	**Pb**	21 02 12.8	-0.2
EPOS				*i* AML	AML	21 02 34.0	
	comp=E,56nm,0.5s						
EPOS				*i* AML	AML	21 02 35.0	
	comp=N,120nm,1.4s						
BRNG	**Burnasheti**	0.94	140	P	**Pb**	21 02 14.1	-0.2
NEUR	**Neytrino**	0.95	346	*e*Pg	**Pb**	21 02 14.2	-0.4
NEUR				*e*Sg	**Sn**	21 02 28.1	-1.8
AKH	**Akhalkalaki**	0.99	159	Pg	**Pb**	21 02 15.5	+0.2
AKH	**Akhalkalaki**	0.99	159	P	**Pb**	21 02 15.2	-0.2
AKH				S	**Sb**	21 02 29.4	+0.6
AKH	**Akhalkalaki**	0.99	159	*e*Pg	**Pn**	21 02 15.6	-0.7
AKH				*e*Sg	**Sb**	21 02 29.4	+0.6
LACR	**Lac**	1.06	62	*e*Pg	**Pb**	21 02 16.4	-0.1
LACR				*e*Sg	**Sb**	21 02 31.1	+0.3
KORR	**Kora**	1.07	46	*e*Pg	**Pn**	21 02 16.6	-0.8
KORR				*e*Sg	**Sn**	21 02 32.3	-0.5
GUDG	**Gudauri**	1.09	83	*e*Pg	**Pb**	21 02 16.4	-0.5
GUDG				*e*Sg	**Sn**	21 02 32.6	-0.7
LSNR	**Lesken**	1.11	32	*e*Pg	**Pn**	21 02 17.6	-0.2
LSNR				*e*Sg	**Sn**	21 02 35.2	+1.6
TRLG	**Trialeti**	1.14	134	P	**Pb**	21 02 17.4	-0.4
TRLG				S	**Sb**	21 02 33.4	+0.4
TRLG	**Trialeti**	1.14	134	*e*Pg	**Pb**	21 02 17.4	-0.4
TRLG				*e*Sg	**Sb**	21 02 33.4	+0.4
MTEO	**Meteo**	1.17	73	P	**Pg**	21 02 17.9	0.0
AHAN	**Ardahan-Merkez**	1.21	194	P	**Pn**	21 02 19.5	+0.2
AHAN				S	**Sn**	21 02 37.8	+1.4
AHAN				*i* AML	AML	21 02 38.0	
	comp=N,84nm,0.6s						
AHAN				*i* AML	AML	21 02 49.0	
	comp=E,120nm,0.9s						
BATM	**Batumi**	1.23	234	Pn	**Pn**	21 02 19.2	-0.3
BATM				Sn	**Sn**	21 02 37.4	+0.9
BATM	**Batumi**	1.23	234	P	**Pn**	21 02 19.1	-0.3
BATM				S	**Sn**	21 02 37.0	+0.5
BATM	**Batumi**	1.23	234	*e*Pg	**Pn**	21 02 19.1	-0.3
BATM				*e*Sg	**Sn**	21 02 37.0	+0.5
NCK	**Nalchik**	1.23	20	*e*Pg	**Pn**	21 02 20.2	+0.8
NCK				*e*Sg	**Sn**	21 02 38.0	+1.5
ARNR	**Ardon**	1.25	48	*e*Pg	**Pn**	21 02 20.7	+0.9
ARNR				*e*Sg	**Sn**	21 02 39.9	+2.8
STDR	**Stavd-Durt**	1.28	36	*e*Pg	**Pb**	21 02 22.1	+1.9
STDR				*e*Sg	**Sn**	21 02 42.3	+4.4
DMNI	**Dmanisi**	1.34	139	P	**Pn**	21 02 20.2	-0.8
DMNI				S	**Sn**	21 02 39.1	-0.2
DMNI	**Dmanisi**	1.34	139	*e*Pg	**Pn**	21 02 20.2	-0.8
DMNI				*e*Sg	**Sn**	21 02 39.1	-0.2
BCA	**Borcka**	1.37	230	IP	**Pg**	21 02 21.9	+0.1
BCA	**Borcka**	1.37	230	Pn	**Pn**	21 02 21.5	-0.3
BCA				Sn	**Sn**	21 02 41.5	+1.5
KBZ	**Khabaz**	1.39	356	*e*Pg	**Pg**	21 02 22.6	+0.5
KBZ				*e*Sg	**Sb**	21 02 39.0	-1.1
DOMR	**Dombai**	1.40	313	*e*Pg	**Pg**	21 02 23.0	+0.7
DOMR				*e*Sg	**Sn**	21 02 42.3	+1.3
CHRG	**Chargali**	1.42	90	P	**Pn**	21 02 21.8	-0.3
CHRG				S	**Sb**	21 02 40.7	-0.2
SHA1	**Shidzhatmaz**	1.42	349	*e*Pg	**Pg**	21 02 22.8	0.0
SHA1				*e*Sg	**Sn**	21 02 43.1	+1.5
SEAG	**Tbilisi Sea**	1.45	113	P	**Pb**	21 02 22.7	-0.3
SEAG				S	**Sg**	21 02 42.3	+0.3
KBTC	**Kuba-Taba**	1.50	11	*e*Pg	**Pn**	21 02 22.5	-0.8
KBTC				*e*Sg	**Sg**	21 02 45.1	+1.3
DAGI	**Agillar**	1.51	214	P	**Pg**	21 02 24.2	-0.1
DAGI				S	**Sg**	21 02 45.5	+1.6
DAGI				*i* AML	AML	21 02 51.0	
	comp=N,63nm,0.8s						
DAGI				*i* AML	AML	21 02 51.0	
	comp=E,45nm,0.6s						
BTKR	**Batakoyurt**	1.52	47	*e*Pg	**Pg**	21 02 25.9	+1.2
BTKR				*e*Sg	**Sb**	21 02 43.4	-0.6
GOLE	**Ardahan-G¶le**	1.54	192	P	**Pg**	21 02 25.4	+0.6
GOLE				S	**Sg**	21 02 47.9	+3.2
GOLE				*i* AML	AML	21 02 48.0	
	comp=N,53nm,0.7s						
GOLE				*i* AML	AML	21 02 49.0	
	comp=E,48nm,0.5s						
SHTL	**Shatili**	1.61	78	P	**Pb**	21 02 25.0	-0.8
KIV	**Kislovodsk**	1.63	352	*e*Pg	**Pg**	21 02 26.6	-0.1
KIV				*e*Sg	**Sg**	21 02 50.7	+2.8
DBAD	**Bademkaya**	1.65	217	P	**Pg**	21 02 26.5	-0.6
DBAD				S	**Sg**	21 02 49.3	+0.9
DBAD				*i* AML	AML	21 02 51.0	
	comp=E,107nm,0.4s						
DBAD				*i* AML	AML	21 02 54.0	
	comp=N,132nm,0.4s						
BEYR	**Belyy Ugol+**	1.68	355	*e*Pg	**Pg**	21 02 29.0	+1.3
BEYR				*e*Sg	**Sg**	21 02 51.5	+2.2
PRTR	**Priterechnaya**	1.69	33	*e*Pg	**Pn**	21 02 25.8	0.0
PRTR				*e*Sg	**Sg**	21 02 49.2	+0.2
EAK	**Akyaka**	1.71	165	P	**Pb**	21 02 27.3	-0.3
EAK				S	**Sg**	21 02 50.7	+0.3
KARS	**Kars**	1.71	178	Pn	**Pg**	21 02 28.3	+0.1
KARS				Sn	**Sg**	21 02 52.5	+2.1
PYA1	**P

ISC 08 21:12:05.8±0.7, 8°62S±0.08×123°38E±0.06, h133km, n59, σ1°73/61, mb4.0/8, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.13**	**269**	Pn	**Pn**	**21 12 28.6**	**-1.6**
MMRI				Sn	**Sn**	**21 12 45.9**	**-2.8**
MMRI	**Maumere**	**1.13**	**269**	P	**Pn**	**21 12 29.6**	**-0.6**
MMRI	**Maumere**	**1.13**	**269**	P	**Pn**	**21 12 29.3**	**-0.9**
MMRI				S	**Sn**	**21 12 46.5**	**-2.2**
SOEI	**Soe**	**1.43**	**142**	Pn	**Pn**	**21 12 32.2**	**-1.3**
SOEI				Sn	**Sn**	**21 12 53.4**	**-1.2**
SOEI	**Soe**	**1.43**	**142**	P	**Pn**	**21 12 34.9**	**+1.4**
SOEI				S	**Sn**	**21 12 54.5**	**-0.1**
EDFI	**Ende, Flores**	**1.67**	**265**	P	**Pn**	**21 12 35.6**	**-0.6**
BASI	**Baing, Sumba**	**3.19**	**240**	P	**Pn**	**21 12 55.2**	**+0.2**
PLAI	**Plampang**	**5.54**	**267**	P	**Pn**	**21 13 27.0**	**+0.8**
PLAI	**Plampang**	**5.54**	**267**	P	**Pn**	**21 13 27.1**	**+0.8**
	30nm,0.8s,2µm0.3nm						
TWSI	**Taliwang, Sumb**	**6.42**	**268**	P	**Pn**	**21 13 38.1**	**0.0**
	53nm,0.4s,1µm0.3nm						
MTN	**Manton Dam**	**8.70**	**120**		**Pn**	**21 14 08.0**	**-0.7**
MTN				Sn	**Sn**	**21 15 40.9**	**-4.3**
MTN	**Manton Dam**	**8.70**	**120**	P	**Pn**	**21 14 08.6**	**-0.1**
KNRA	**Kununurra**	**8.77**	**144**	Pn	**Pn**	**21 14 08.2**	**-1.5**
KNRA	**Kununurra**	**8.77**	**144**	P	**Pn**	**21 14 08.3**	**-1.3**
JAGI	**Jajag, Banyuwa**	**9.12**	**270**	Pn	**Pn**	**21 14 12.8**	**-1.6**
JAGI	**Jajag, Banyuwa**	**9.12**	**270**	P	**Pn**	**21 14 14.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**9.68**	**167**	Pn	**Pn**	**21 14 19.6**	**-2.2**
FITZ	**Fitzroy Crossi**	**9.68**	**167**	P	**Pn**	**21 14 20.8**	**-1.0**
KDU	**Kakadu**	**9.81**	**115**	P	**Pn**	**21 14 22.6**	**-1.0**
UGM	**Wanagama**	**12.74**	**272**	Pn	**Pn**	**21 15 00.1**	**-2.3**
UGM	**Wanagama**	**12.74**	**272**	P	**Pn**	**21 15 02.2**	**-0.2**
PSA00	**Pilbara Seismi**	**13.32**	**194**	P	**Pn**	**21 15 11.4**	**+1.6**
WB0	**Warramunga Arr**	**15.38**	**137**		**Pn**	**21 15 34.3**	**-1.5**
WB0				IAmb	IAmb	21 15 37.1	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**15.47**	**138**		**Pn**	**21 15 35.9**	**-1.0**
WRA	**Warramunga Arr**	**15.47**	**138**	P	**Pn**	**21 15 35.2**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=315,slow=13,SNR=40						
WRA				S	Sn	21 18 16.7	-12
	comp=Z,1.6nm,0.6s,baz=322,slow=24,SNR=4.7						
	comp=Z,1.0nm,0.3s						
WRAB	**Tennant Creek**	**15.47**	**138**		**Pn**	**21 15 35.6**	**-1.4**
WRAB				IAmb	IAmb	21 15 46.5	
	comp=Z,9.4nm,1.4s						
WB2	**Warramunga Arr**	**15.47**	**138**		**Pn**	**21 15 36.0**	**-1.1**
WB2				IAmb	IAmb	21 15 50.8	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**15.61**	**137**		**Pn**	**21 15 37.6**	**-1.2**
WR0				IAmb	IAmb	21 15 43.1	
	comp=Z,5.8nm,0.3s						
WRKA	**Warakurna**	**16.99**	**165**	P	**Pn**	**21 15 57.6**	**+2.0**
AS31	**Alice Springs**	**18.04**	**147**		**Pn**	**21 16 08.7**	**+0.5**
ASAR	**Alice Springs**	**18.04**	**147**	Pn	**Pn**	**21 16 09.2**	**+1.0**
ASAR	**Alice Springs**	**18.04**	**147**	S	**S**	**21 19 20.8**	**-6.3**
	comp=Z,1.1nm,0.6s,baz=312,slow=22,SNR=4.9						
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**18.04**	**147**	P	**Pn**	**21 16 09.7**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=330,slow=12,SNR=20						
AS01	**Alice Springs**	**18.07**	**147**	P	**Pn**	**21 16 10.4**	**+1.9**
MEEK	**Meekatharra**	**18.48**	**194**	P	**Pn**	**21 16 14.1**	**+0.7**
QIS	**Mount Isa**	**19.66**	**129**	P	**Pn**	**21 16 27.8**	**+0.6**
COEN	**Coen**	**20.12**	**107**	P	**P**	**21 16 29.4**	**-0.1**
COEN				IAmb	IAmb	21 16 34.7	
	comp=Z,17nm,1.2s						
COEN	**Coen**	**20.12**	**107**	P	Pn	21 16 32.7	+0.1
MORW	**Morawa**	**21.48**	**198**	P	**P**	**21 16 42.8**	**-1.1**
MORW				IAmb	IAmb	21 16 50.5	
	comp=Z,19nm,1.4s						
OOD	**Oodnadatta**	**22.34**	**150**	P	**P**	**21 16 55.5**	**+2.7**
FORT	**Forrest**	**22.48**	**169**	P	**P**	**21 16 56.0**	**+1.9**
BLDU	**Ballidu**	**22.75**	**195**	P	**P**	**21 16 57.7**	**+0.9**
KLBR	**Kellerberrin**	**23.45**	**192**	P	**P**	**21 17 04.8**	**+1.5**
MULG	**Mulgathing**	**23.76**	**157**	P	**P**	**21 17 08.4**	**+2.3**
NWAO	**Narrogin (SRO)**	**24.85**	**192**	P	**P**	**21 17 15.1**	**-0.9**
NWAO	**Narrogin (SRO)**	**24.85**	**192**	P	**P**	**21 17 17.4**	**+1.5**
BBOO	**Buckleboo**	**26.78**	**156**	P	**P**	**21 17 33.9**	**+0.5**
BBOO				IAmb	IAmb	21 17 35.7	
	comp=Z,11nm,1.2s						
BBOO	**Buckleboo**	**26.78**	**156**	P	**P**	**21 17 35.6**	**+2.2**
HTT	**Hallett**	**28.56**	**152**	P	**P**	**21 17 52.2**	**+2.9**
STKA	**Stephens Creek**	**28.67**	**146**	P	**P**	**21 17 51.2**	**+0.9**
STKA	**Stephens Creek**	**28.67**	**146**				
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**28.67**	**146**	P	**P**	**21 17 51.5**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=315,slow=11,SNR=4.7						
YULB	**Yu-li**	**31.88**	**356**	P	**P**	**21 18 18.8**	**+0.3**
MKAR	**Makanchi Array**	**66.18**	**330**	P	**P**	**21 22 40.9**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=134,slow=7.0,SNR=15						
	comp=Z,0.5nm,0.4s						
PETK	**Petropavlovsk-**	**68.06**	**21**	P	P	21 22 36.1	-15
	comp=Z,6.0nm,0.9s,baz=234,slow=5.9,SNR=5.4						
	comp=Z,6.0nm,0.9s						
ZALV	**Zalesovo Beam**	**70.31**	**337**	P	**P**	**21 23 04.5**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=128,slow=5.7,SNR=3.4						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**70.62**	**332**	P	**P**	**21 23 08.2**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=141,slow=5.4,SNR=4.2						
	comp=Z,0.1nm,0.3s						
VNDA	**Vanda**	**71.72**	**172**	P	**P**	**21 23 13.9**	**+1.0**
VNDA				IAmb	IAmb	21 23 22.3	
	comp=Z,3.8nm,1.1s						
SBA	**Scott Base**	**72.68**	**171**	P	**P**	**21 23 19.0**	**+0.4**

WEL 08 21:16:22.4±1.1, 35°S±15'×17°9E±1°7, h180km±24km, M3.6/6, ML3.9/11, MLv3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=123.4, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.40**	**196**	P	Pn	21 17 03.4	-0.4
MXZ				S	Sn	21 17 35.7	-0.6
WMGZ	**Waiomatatini S**	**2.63**	**193**	P	Pn	21 17 07.1	+0.6
WMGZ				S	Sn	21 17 42.2	+1.2
HAZ	**Te Kaha**	**2.73**	**203**	P	Pn	21 17 07.5	-0.1
HAZ				S	Sn	21 17 43.5	+0.5
PKGZ	**Pakihiroa**	**2.77**	**198**	P	Pn	21 17 08.4	+0.2
PKGZ				S	Sn	21 17 44.5	+0.5
PUZ	**Puketiti**	**2.90**	**194**	P	Pn	21 17 09.7	-0.1
PUZ				S	Sn	21 17 46.3	-0.6
RUGZ	**Raukumara Rang**	**2.95**	**203**	P	Pn	21 17 10.5	0.0
RUGZ				S	Sn	21 17 48.6	+0.5
MWZ	**Matawai**	**3.33**	**202**	P	Pn	21 17 15.3	+0.1
MWZ				S	Sn	21 17 56.0	-0.4
TKGZ	**Te Karaka**	**3.34**	**198**	P	Pn	21 17 15.2	+0.1
TKGZ				S	Sn	21 17 56.7	+0.2
URZ	**Urewera**	**3.41**	**208**	P	Pn	21 17 16.3	+0.3
URZ				S	Sn	21 17 57.1	-0.9
RAGZ	**Rawiri**	**3.52**	**203**	P	Pn	21 17 17.5	0.0
RAGZ				S	Sn	21 18 01.9	+1.3
RIGZ	**Rimuhau**	**3.62**	**197**	P	Pn	21 17 18.4	-0.3
RIGZ				S	Sn	21 18 03.2	+0.5
MKAZ	**Moumakai**	**3.71**	**239**	P	Pn	21 17 20.2	+0.4
RTZ	**Ruatahuna**	**3.77**	**207**	P	Pn	21 17 19.9	-0.8
SNGZ	**Shannon Statio**	**3.80**	**202**	P	Pn	21 17 20.9	-0.1
SNGZ				S	Sn	21 18 07.5	+0.6
RAHZ	**Arahi**	**4.01**	**203**	P	Pn	21 17 23.1	-0.5
RAHZ				S	Sn	21 18 12.0	+0.5
MRHZ	**Matea Rd**	**4.18**	**210**	P	Pn	21 17 24.9	-0.9
NMHZ	**Naumai**	**4.26**	**205**	P	Pn	21 17 26.8	-0.1
NMHZ				S	Sn	21 18 18.9	+1.4
BKZ	**Black Stump Fm**	**4.44**	**208**	P	Pn	21 17 28.4	-0.7
BKZ				S	Sn	21 18 20.4	-1.1
MCHZ	**McNeill Hill**	**4.61**	**204**	P	Pn	21 17 30.3	-0.9
MCHZ				S	Sn	21 18 26.0	+0.6
KWHZ	**Kaweka Forest**	**4.69**	**207**	P	Pn	21 17 30.0	-2.4
KWHZ				S	Sn	21 18 25.9	-1.4
NTVZ	**North Tongarir**	**4.73**	**215**	P	Pn	21 17 31.6	-1.3
TMVZ	**Te Maari**	**4.73**	**214**	P	Pn	21 17 32.2	-0.7
ETVZ	**East Tongariro**	**4.74**	**214**	P	Pn	21 17 31.0	-2.1
WTVZ	**West Tongariro**	**4.78**	**215**	P	Pn	21 17 33.3	-0.2
OTVZ	**Oturere**	**4.79**	**214**	P	Pn	21 17 33.4	-0.3
KAHZ	**Kahuranaki**	**4.88**	**201**	P	Pn	21 17 33.4	-1.3
KAHZ				S	Sn	21 18 31.2	-0.4
BHHZ	**Black Hill Sta**	**4.88**	**209**	P	Pn	21 17 33.7	-1.2
BHHZ				S	Sn	21 18 31.5	-0.3
KRHZ	**Kereru**	**4.90**	**206**	P	Pn	21 17 33.3	-1.7
KRHZ				S	Sn	21 18 29.8	-2.4
FWVZ	**Far West T-bar**	**4.91**	**214**	P	Pn	21 17 34.9	-0.5
TRVZ	**Turoa**	**4.95**	**214**	P	Pn	21 17 35.4	-0.4
PNHZ	**Pukenui**	**5.20**	**206**	P	Pn	21 17 36.4	-2.6
PNHZ				S	Sn	21 18 36.9	-2.3

*SJA **08** 21:19:16.4±0.9, 37°41S×74°68W, h11km±26km, ML5.4, MW5.6*

*IDC **08** 21:19:23.8±0.4, 37°44S×73°77W, h0km, mb5.0/15, mbtmp4.9/19, ML4.3/4, MS5.1/34, Error ellipse: s-maj=19.4km s-min=11.4km az=73.0*

*IPGP **08** 21:19:23.0, 37°42S×74°04W, h14km, Mw5.6, Fault plane solution: NP1:ϕs179.00000°, δ67.00000°, λ.74.00000°. NP2:ϕs36.00000°, δ27.00000°, λ123.00000°.*

*MOS **08** 21:19:24.7±1.0, 37°31S×73°71W, h9km, mb5.5/53, MS5.2/43, Error ellipse: s-maj=11.0km s-min=6.1km az=95.3*

*GUC **08** 21:19:24.3±0.8, 37°45S×74°18W, h23km±4km, ML5.5*

*NEIC **08** 21:19:24.8±2.1, 37°44S±0°04×73°98W±0°07, h4km±2km, mb5.3/460, Ms_20 5.2/373, Mwb5.6/48, Mwr5.5/54, Mww5.6/22, Error ellipse: s-maj=8.4km s-min=5.8km az=112.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.35; Mθθ0.54; Mϕϕ-2.90; Mrθ-0.46; Mθϕ-0.54; Mϕr-2.45; Fault plane solution: Mo3.69000×10¹⁷ NP1:ϕs190.30000°, δ66.54000°, λ.91.55000°. NP2: ϕs6.42000°, δ23.51000°, λ86.44000°. Principal axes: T 3.3345, Plg68.0000°, Azm103.0000°; N 0.6246, Plg1.0000°, Azm10.0000°; P -3.9591, Plg22.0000°, Azm279.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr1.04; Mθθ-0.23; Mϕϕ-0.81; Mrθ-0.29; Mθϕ-0.86; Mϕr-2.08; Fault plane solution: Mo2.45000×10¹⁷ NP1:ϕs62.61000°, δ21.05000°, λ139.20000°. NP2:ϕs191.47000°, δ76.43000°, λ73.76000°. Principal axes: T 2.4058, Plg56.0000°, Azm81.0000°; N 0.0911, Plg16.0000°, Azm195.0000°; P -2.4969, Plg30.0000°, Azm295.0000°;*

*NEIC **08** 21:19:25.8, 37°43S×73°93W, h12km*

*NEIC **08** 21:19:25.8, 37°43S×73°93W, h12km*

*NEIC **08** 21:19:25.8, 37°53S×74°06W, h12km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10¹⁷Nm; Mrr1.41; Mθθ0.21; Mϕϕ-1.62; Mrθ-0.47; Mθϕ-0.54; Mϕr-2.52; Fault plane solution: Mo3.01000×10¹⁷ NP1: ϕs190.96000°, δ74.18000°, λ87.06000°. NP2:ϕs21.62000°, δ16.08000°, λ100.25000°. Principal axes: T 2.8397, Plg61.0000°, Azm97.0000°; N 0.3493, Plg3.0000°, Azm192.0000°; P -3.1890, Plg29.0000°, Azm283.0000°;*

*NEIC **08** 21:19:25.8, 37°43S×73°93W, h12km*

*VAO **08** 21:19:26.9±0.5, 37°38S×73°67W, h10km, mb5.3*

*GCMT **08** 21:19:27.8±0.1, 37°58S±0°01×74°19W±0°01, h12km, MW5.5/143, Moment Tensor Solution. s103,c177; s143,c261; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr1.28±.03; Mθθ0.09±.02; Mϕϕ-1.37±.02; Mrθ-0.14±.05; Mθϕ-0.41±.01; Mϕr-2.18±.12; Best double couple: Mo2.58600×10¹⁷ NP1:ϕs185.00000°, δ74.00000°, λ84.00000°. NP2:ϕs27.00000°, δ17.00000°, λ111.00000°. Principal axes: T 2.5090, Plg60.0000°, Azm86.0000°; N 0.1540, Plg6.0000°, Azm187.0000°; P -2.6630, Plg29.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **08** 21:19:27.0±0.0, 37°40S×73°90W, h20km, mB5.6/32, Ms5.6/41, Ms7 5.4/41*

ISC 08 21:19:24.8±0.6, 37°44S±0°02×74°05W±0°03, h12km±3km, h12km:pP-P,n1050,σ1°59/966, mb5.3/253, MS5.2/230, 54C-18D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**0.97**	**45**		**Pb**	**21 19 42.7**	**-1.0**
BI05				Sn	**Sn**	**21 20 01.4**	**+3.3**
BI05	**Punta Hualpn**	**0.97**	**45**	*eP*	**Pg**	**21 19 42.4**	**-1.2**
BI05				*eS*	**Sn**	**21 19 55.9**	**-2.2**
BI05				IAML		21 20 07.3	
	comp=E,171µm,0.4s						
BI04	**Isla Mocha**	**0.97**	**173**	*iP*	**Pg**	**21 19 41.6**	**-2.0**
BI04				*eS*	**Sg**	**21 19 54.2**	**-2.2**
BI04				IAML		21 20 06.3	
	comp=N,226µm,0.6s						
LC02	**Puerto Saavedr**	**1.44**	**159**		**Pn**	**21 19 48.6**	**-2.2**
LC02	**Puerto Saavedr**	**1.44**	**159**	*eP*	**Pn**	**21 19 48.6**	**-2.2**
LC02				*eS*	**Sn**	**21 20 07.1**	**-2.6**
LC02				IAML		21 20 18.7	
	comp=N,237µm,0.8s						
BI02	**San Fabin de**	**2.35**	**71**	*iP*	**Pn**	**21 20 02.8**	**-0.6**
BI02				*eS*	**Sn**	**21 20 31.9**	**-0.3**
BI02				*e*SN5		21 20 42.8	
BI02				IAML		21 20 43.8	
	comp=E,17µm,0.6s						
CANA	**Caviahue**	**2.41**	**102**	*eP*	**Pn**	**21 20 05.1**	**+0.9**
CANA				*eS*	**Sg**	**21 20 43.3**	**+1.1**
CANA				IAML		21 20 55.6	
	comp=Z,6µm,0.8s						
LR04	**Corral**	**2.48**	**169**		**Pn**	**21 20 02.6**	**-2.5**
LR04	**Corral**	**2.48**	**169**	*i* P	**Pn**	**21 20 03.1**	**-1.9**
LR04				*eS*	**Sn**	**21 20 32.9**	**-2.4**
LR04				IAML		21 20 55.3	
	comp=E,28µm,0.6s						
LR03	**Panguipulli**	**2.56**	**149**		**Pn**	**21 20 05.6**	**-0.6**
LR03	**Panguipulli**	**2.56**	**149**	*iP*	**Pn**	**21 20 05.6**	**-0.6**
LR03				*eS*	**Sg**	**21 20 45.3**	**-1.8**
ML02	**Panimavida**	**2.70**	**52**		**Pn**	**21 20 07.4**	**-0.7**
ML02	**Panimavida**	**2.70**	**52**	*iP*	**Pn**	**21 20 07.7**	**-0.4**
ML02				*eS*	**Sn**	**21 20 41.5**	**+0.8**
ML02				IAML		21 20 56.5	
	comp=E,28µm,0.5s						
GO06	**Curarrehue**	**2.94**	**137**		**Pn**	**21 20 10.4**	**-1.1**
GO06	**Curarrehue**	**2.94**	**137**	*iP*	**Pn**	**21 20 11.1**	**-0.4**
GO06				*eS*	**Sn**	**21 20 47.7**	**+0.9**
GO05	**Huala**	**2.97**	**36**		**Pn**	**21 20 10.4**	**-1.5**
GO05	**Huala**	**2.97**	**36**	*eP*	**Pn**	**21 20 11.1**	**-0.7**
GO05				*eS*	**Sg**	**21 21 00.3**	**0.0**
GO05	**Huala**	**2.97**	**36**	*iP*	**Pn**	**21 20 10.0**	**-1.8**
GO05				*eS*	**Sn**	**21 20 48.2**	**+0.8**
GO05				IAML		21 21 11.7	
	comp=E,10µm,0.7s						
LR05	**Currie**	**3.21**	**151**		**Pn**	**21 20 14.8**	**-0.3**
LR05	**Currie**	**3.21**	**151**	*eP*	**Pn**	**21 20 14.7**	**-0.3**
LR05				*eS*	**Sn**	**21 20 51.6**	**-1.6**
LR05				IAML		21 21 14.8	
	comp=E,21µm,0.6s						
BO02	**Sierra Bellavi**	**3.74**	**46**		**Pn**	**21 20 21.8**	**-0.6**
BO02	**Sierra Bellavi**	**3.74**	**46**	*eP*	**Pn**	**21 20 22.1**	**-0.3**
BO02				*eS*	**Sb**	**21 21 13.8**	**-2.4**
BO02				*e*Sg	**Sg**	**21 21 27.1**	**+2.2**
BO02				IAML		21 21 29.3	
	comp=Z,6µm,1.1s						
BO02	**Sierra Bellavi**	**3.74**	**46**	*i* P	**Pn**	**21 20 22.1**	**-0.3**
BO01	**Tunca**	**3.88**	**39**		**Pn**	**21 20 23.3**	**-1.0**
BO01	**Tunca**	**3.88**	**39**	*eP*	**Pn**	**21 20 23.8**	**-0.5**
BO01				*e*Sg	**Sg**	**21 21 26.8**	**-2.6**
BO01				IAML		21 21 35.5	
	comp=Z,5µm,0.8s						
LL05	**Los Muermos**	**3.98**	**174**		**Pn**	**21 20 24.4**	**-1.3**
MT01	**Popeta**	**4.23**	**33**		**Pn**	**21 20 27.7**	**-1.5**
MT01	**Popeta**	**4.23**	**33**	*eP*	**Pn**	**21 20 27.9**	**-1.3**
MT01				*e*Sg	**Sg**	**21 21 41.6**	**+0.8**
PLCA	**Paso Flores**	**4.26**	**141**	*eP*	**Pn**	**21 20 29.9**	**+0.2**
PLCA				IAML		21 21 47.1	
	comp=Z,3µm,2.5s						
PLCA	**Paso Flores**	**4.26**	**141**	Pn	**Pn**	**21 20 28.9**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=315,slow=14,SNR=79						
PLCA				Sn	**Sn**	**21 21 17.0**	**-2.4**
	comp=Z,53nm,0.3s,baz=298,slow=16,SNR=3.3						
PLCA				Lg	Lg	21 21 36.1	
	baz=260,slow=12						
	comp=Z,130nm,1.0s						
PLCA	**Paso Flores**	**4.26**	**141**	*eP*	**Pn**	**21 20 29.9**	**+0.2**
VA05	**Santo Domingo**	**4.27**	**28**		**Pn**	**21 20 27.8**	**-1.8**
MT09	**Talagante**	**4.43**	**35**		**Pn**	**21 20 30.7**	**-1.2**
BO04	**La Punta**	**4.44**	**40**		**Pn**	**21 20 31.1**	**-1.0**
LMEL	**Las Melosas**	**4.76**	**42**		**Pn**	**21 20 36.2**	**-0.4**
LL06	**Loncomilla**	**4.78**	**176**		**Pn**	**21 20 34.9**	**-1.7**
MT13	**San Alfonso**	**4.80**	**41**		**Pn**	**21 20 36.0**	**-1.0**
MT02	**Curacav**	**4.80**	**31**		**Pn**	**21 20 35.3**	**-1.8**
MT02	**Curacav**	**4.80**	**31**	*eP*	**Pn**	**21 20 35.5**	**-1.5**
MT02				*e*Sg	**Sg**	**21 21 55.6**	**-3.5**
MT02				IAML		21 22 17.3	
	comp=Z,2µm,2.8s						
VA01	**Torpederas**	**4.83**	**25**		**Pn**	**21 20 35.3**	**-2.0**
MT05	**Renca**	**4.86**	**35**		**Pn**	**21 20 35.8**	**-2.1**
MT05	**Renca**	**4.86**	**35**	*eP*	**Pn**	**21 20 37.2**	**-0.6**
MT05				*e*Sg	**Sg**	**21 21 55.0**	**-6.0**
MT05				IAML		21 22 08.7	
	comp=Z,4µm,1.1s						
MT03	**Universidad Ad**	**4.88**	**37**		**Pn**	**21 20 37.2**	**-1.0**
MT03	**Universidad Ad**	**4.88**	**37**	*eP*	**Pn**	**21 20 37.4**	**-0.8**
MT03				*e*Sg	**Sg**	**21 22 03.0**	**+1.4**
MT03				IAML		21 22 09.9	
	comp=Z,5µm,2.3s						
MT16	**CCHEN**	**4.93**	**37**		**Pn**	**21 20 38.0**	**-0.9**
LL01	**San Ignacio de**	**5.09**	**166**		**Pn**	**21 20 40.3**	**-0.5**
LL01	**San Ignacio de**	**5.09**	**166**	*eP*	**Pn**	**21 20 41.2**	**+0.3**
LL01				IAML		21 22 25.3	
	comp=Z,1µm,1.4s						
PEL	**Peldehue**	**5.09**	**34**		**Pn**	**21 20 39.5**	**-1.6**
PEL	**Peldehue**	**5.09**	**34**	P	**Pn**	**21 20 39.5**	**-1.6**
RFA	**San Rafael**	**5.25**	**61**	*eP*	**Pn**	**21 20 43.7**	**+0.5**
RFA				IAML		21 22 23.0	
	comp=Z,1µm,3.0s						
H03S1	**Juan Fernandez**	**5.34**	**311**	Pn	**Pn**	**21 20 42.5**	**-1.7**
	baz=303,slow=74						
H03S1				Sn	**Sn**	**21 21 38.2**	**-7.3**
H03S1				T	T	21 26 19.5	
	baz=130,slow=74,SNR=859						
H03S3	**Juan Fernandez**	**5.36**	**311**	Pn	**Pn**	**21 20 43.8**	**-0.6**
H03S3				Sn	**Sn**	**21 21 39.7**	**-6.2**
H03S3				T	T	21 26 27.0	
	baz=130,slow=74,SNR=794						
H03S2	**Juan Fernandez**	**5.36**	**311**	Pn	**Pn**	**21 20 42.4**	**-2.0**
	baz=118,slow=74						
H03S2				Sn	**Sn**	**21 21 39.2**	**-6.7**
H03S2				T	T	21 26 19.2	
	baz=130,slow=74,SNR=1034						
VA06	**Catapilco**	**5.37**	**26**		**Pn**	**21 20 41.9**	**-2.8**
LL07	**Hotel Espejo d**	**5.40**	**176**	Pn	**Pn**	**21 20 44.5**	**-0.7**
VA04	**Juan Fernndez**	**5.44**	**313**		**Pn**	**21 20 44.5**	**-1.3**
H03N3	**Juan Fernandez**	**5.63**	**314**	Pn	**Pn**	**21 20 47.2**	**-0.9**
	baz=62,slow=78						
H03N3				Sn	**Sn**	**21 21 49.0**	**-3.6**
H03N3				T	T	21 26 42.7	
	baz=110,slow=76						
H03N1	**Juan Fernandez**	**5.63**	**314**	Pn	**Pn**	**21 20 47.2**	**-1.0**
	baz=62,slow=78						
H03N1				Sn	**Sn**	**21 21 48.0**	**-4.6**
H03N1				T	T	21 26 45.4	
	baz=110,slow=76						
H03N2	**Juan Fernandez**	**5.64**	**314**	Pn	**Pn**	**21 20 47.3**	**-1.0**
	baz=62,slow=78						
H03N2				Sn	**Sn**	**21 21 48.9**	**-4.0**
H03N2				T	T	21 26 45.5	
	baz=110,slow=76						
LL02	**Futaleuf**	**5.98**	**164**		**Pn**	**21 20 53.4**	**+0.2**
GO04	**Tololo Observa**	**7.74**	**21**	Pn	**Pn**	**21 21 16.0**	**-1.5**
COYC	**Coyhaique**	**8.25**	**170**	Pn	**Pn**	**21 21 24.8**	**+0.5**
LCO	**Las Campanas**	**8.86**	**19**	Pn	**Pn**	**21 21 31.4**	**-1.6**
LCO	**Las Campanas**	**8.86**	**19**	P	**Pn**	**21 21 31.4**	**-1.6**
AC05	**El Transito**	**9.15**	**21**	Pn	**Pn**	**21 21 33.3**	**-3.5**
TRQA	**Tornquist**	**9.58**	**97**	Pn	**Pn**	**21 21 42.7**	**+0.1**
TRQA	**Tornquist**	**9.58**	**97**	P	**Pn**	**21 21 42.7**	**+0.1**
GO08	**Villa O'Higgin**	**11.07**	**175**	Pn	**Pn**	**21 22 04.5**	**+1.5**
LPA	**La Plata**	**13.26**	**84**	*ceP*	**Pn**	21 22 25.6	-7.3
LPA				PP	**PgPg**	**21 23 33.8**	**-5.1**
LPA				S	**Sn**	**21 24 58.9**	**-1.4**
LPA				SSS	SSS	21 26 12.1	
LPA				SS	**SgSg**	**21 26 40.8**	**+10**
LPA				SCS	**ScS**	**21 35 12.3**	**-0.3**
PB06	**IPOC Station P**	**15.19**	**16**	IAmb	IAmb	21 23 06.6	
	comp=Z,146nm,1.6s						
PB04	**IPOC Station P**	**15.43**	**14**	IAmb	IAmb	21 23 09.8	
	comp=Z,201nm,1.0s						
LVC	**Limon Verde**	**15.43**	**18**	Pn	**Pn**	**21 23 00.0**	**-2.8**
LVC	**Limon Verde**	**15.43**	**18**	P	**Pn**	**21 23 00.0**	**-2.8**
LVC				pmax	pmax		
	comp=Z,39nm,1.1s						
LVC	**Limon Verde**	**15.43**	**18**	Pn	**Pn**	**21 23 01.5**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=6.8						
LVC				Sn	**Sn**	**21 25 49.9**	**-3.9**
	comp=Z,0.5nm,0.3s,baz=89,slow=7.8,SNR=1.7						
LVC				Lg	Lg	21 27 22.7	
	comp=Z,0.8nm,0.3s,baz=166,slow=17,SNR=3.2						
LVC				LR	LR	21 29 04.4	
	comp=Z,7µm,20.2s,baz=202,slow=38						
	comp=Z,

comp=Z,42nm,1.1s
RPRD Ribas do Rio P 24.46 52 *e*P **P 21 24 43.6 -0.1**
RVDE Rio Verde (Bra 24.81 48 *e*P **P 21 24 46.8 -0.1**
PCMB Pacaembu 25.24 58 *e*P **P 21 24 49.7 -1.2**
FRTB Fartura 25.27 63 *e*P **P 21 24 49.7 -1.4**
NNA Nana 25.47 354 P **P 21 24 51.9 -1.1**
NNA Nana 25.47 354 P **P 21 24 53.9 +1.0**
comp=Z,8.5nm,0.3s,baz=235,slow=12,SNR=1.6
comp=Z,8.5nm,0.3s
PTLB Pontes e Lacer 25.58 35 P **P 21 24 53.8 -0.1**
PTLB Pontes e Lacer 25.58 35 *e*P **P 21 24 54.1 +0.2**
PP1B Ponte de Pedra 25.97 46 *e*P **P 21 24 57.3 -0.1**
PET01 Itanhaem-SP 26.35 68 *e*P **P 21 25 01.0 +0.1**
SPB Sao Paulo 26.65 66 P **P 21 25 03.9 +0.3**
SPB IAMs_20 IAMs_20 21 35 32.5
comp=Z,7µm,18.0s
SPB Sao Paulo 26.65 66 *e*P **P 21 25 03.8 +0.2**
SALV Santo Antonio 26.91 42 *e*P **P 21 25 05.4 -0.5**
ITRB Iturama 27.17 56 *e*P **P 21 25 07.4 -0.9**
RCLB Rio Claro- Sao 27.30 64 *e*P **P 21 25 08.2 -1.3**
VILB Vilhena 27.35 31 P **P 21 25 09.1 -0.8**
VILB Vilhena 27.35 31 *e*P **P 21 25 10.2 +0.3**
BB19B Bebedouro 27.48 61 *e*P **P 21 25 10.2 -0.8**
PMSA Palmer Station 28.01 171 LR LR 21 37 00.2
comp=Z,6µm,18.2s,baz=338,slow=38
PARB Paraibuna 28.13 68 *e*P **P 21 25 17.5 +0.6**
ETMB Extrema 28.40 16 P **P 21 25 19.6 +0.3**
ETMB Extrema 28.40 16 *e*P **P 21 25 20.4 +1.1**
CZSB Cruzeiro do Su 29.60 3 P **P 21 25 29.6 -0.4**
CZSB IAmb IAmb 21 25 33.7
comp=Z,62nm,1.1s
CZSB Cruzeiro do Su 29.60 3 *e*P **P 21 25 31.6 +1.7**
IPMB Ipameri, GO 29.82 57 *e*P **P 21 25 30.4 -1.5**
SAML Samuel 30.02 22 IAMs_20 IAMs_20 21 39 24.4
comp=Z,4µm,21.0s
SAML Samuel 30.02 22 *e*P **P 21 25 35.3 +1.6**
PDRB Porto dos Gac 30.05 36 *e*P **P 21 25 34.5 +0.5**
BSCB Bom Sucesso 30.18 65 *e*P **P 21 25 34.9 -0.3**
VAS01 Vassouras-RJ 30.38 69 *e*P **P 21 25 37.7 +0.9**
ATAH Atahualpa 30.43 351 P **P 21 25 37.8 +0.1**
comp=Z,3.0nm,0.6s,baz=175,slow=8.0,SNR=8.8
ATAH LR LR 21 36 08.6
comp=Z,1µm,20.6s,baz=176,slow=33
comp=Z,3.0nm,0.6s
PMNB Patos De Minas 30.63 60 *e*P **P 21 25 39.3 +0.2**
HOPE Hope Point 30.64 135 P **P 21 25 37.7 -1.1**
HOPE Hope Point 30.64 135 IAMs_20 IAMs_20 21 37 33.3
comp=Z,4µm,19.0s
HOPE Hope Point 30.64 135 P **P 21 25 37.7 -1.1**
HOPE pmax pmax
comp=Z,112nm,1.1s
HOPE MLR MLR
comp=Z,4µm,19.0s
SMAI San Martin Ant 30.98 175 IAMs_20 IAMs_20 21 37 38.1
comp=Z,7µm,18.0s
CLDB Colider 31.13 37 *e*P **P 21 25 43.4 -0.1**
DUB01 Friburgo-RJ 31.29 70 *e*P **P 21 25 46.2 +1.3**
RPN Rapa Nui 31.40 279 LR LR 21 34 50.9
comp=Z,3µm,21.7s,baz=130,slow=29
BDFB Brasilia 31.65 54 P **P 21 25 47.7 -0.5**
BDFB IAmb IAmb 21 25 49.0
comp=Z,84nm,1.3s
BDFB IAMs_20 IAMs_20 21 38 33.4
comp=Z,6µm,20.0s
BDFB Brasilia 31.65 54 P **P 21 25 47.7 -0.5**
BDFB pmax pmax
comp=Z,84nm,1.3s
BDFB MLR MLR
comp=Z,6µm,20.0s
BDFB Brasilia 31.65 54 P **P 21 25 46.8 -1.4**
comp=Z,23nm,0.9s,baz=218,slow=6.5,SNR=25
BDFB LR LR 21 39 47.5
comp=Z,7µm,18.3s,baz=228,slow=39
comp=Z,23nm,0.9s
SNDB Serra Nova Dou 32.54 45 *e*P **P 21 25 56.3 +0.4**
DIAM Diamantina, MG 32.72 63 *e*P **P 21 25 58.3 +0.7**
TBTG Tabatinga, AM 33.31 8 P **P 21 26 03.4 +0.8**
TBTG Tabatinga, AM 33.31 8 *e*P **P 21 26 03.1 +0.5**
MCRA Macar, Loja 33.36 349 P **P 21 26 03.0 0.0**
MCRA Macar, Loja 33.36 349 *e*P **P 21 26 03.8 +0.7**
SJMB Sao Joao De Ma 34.24 66 *e*P **P 21 26 10.8 +0.1**
BOSC San Juan Bosco 34.37 352 P **P 21 26 13.3 +1.4**
RIB01 Linhares ES 34.44 68 *e*P **P 21 26 11.6 -0.8**
JANB Januaria 34.51 58 *e*P **P 21 26 14.1 +0.9**
NPGB Novo Progresso 34.70 34 *e*P **P 21 26 13.7 -1.1**
TEFE Tefe 34.86 17 *e*P **P 21 26 17.3 +1.3**
COHC Cochancay 35.14 351 P **P 21 26 20.6 +2.2**
COHC IAmb IAmb 21 26 29.9
comp=Z,80nm,1.9s
COHC Cochancay 35.14 351 *e*P **P 21 26 19.9 +1.5**
CHSH Refugio Sur-Vo 36.05 352 P **P 21 26 29.4 +2.4**
CHSH IAmb IAmb 21 26 36.1
comp=Z,95nm,1.2s
SDBA SAO DESIDERIO 36.06 54 *e*P **P 21 26 25.4 -1.1**
MACA Manacapuru-AM 36.26 23 P **P 21 26 27.0 -1.0**
MACA Manacapuru-AM 36.26 23 *e*P **P 21 26 28.6 +0.6**
PIAT Ana Tenorio 36.48 353 *e*P **P 21 26 33.3 +3.0**
GUA01 Guaratinga, BA 36.61 65 *e*P **P 21 26 31.0 -0.1**
SLOR San Lorenzo - 36.76 353 P **P 21 26 34.6 +1.7**
ITTB Itaituba 36.94 31 *e*P **P 21 26 33.4 -0.5**
PTLC Puerto Leguiza 37.43 359 *e*P **P 21 26 33.5 -4.6**
PULU Pululahua 37.51 353 P **P 21 26 41.9 +2.8**
OTAV Otavalo 37.72 353 P **P 21 26 42.3 +1.3**
OTAV IAmb IAmb 21 26 51.7
comp=Z,90nm,1.4s
OTAV Otavalo 37.72 353 P **P 21 26 42.3 +1.3**
OTAV pmax pmax
comp=Z,90nm,1.5s
OTAV MLR MLR
comp=Z,2µm,19.0s
OTAV Otavalo 37.72 353 *e*P **P 21 26 43.9 +3.0**
OTAV Otavalo 37.72 353 *e*P **P 21 26 43.1 +2.1**
IMBA Imbabura, San 37.73 353 P **P 21 26 42.4 +1.3**
IMBA IAmb IAmb 21 26 53.8
comp=Z,79nm,1.1s
TULM Tulcn-Chalpat 38.13 354 P **P 21 26 46.7 +2.3**
GCUF Volcan Galeras 38.60 355 *e*P **P 21 26 51.8 +3.3**
BBAC Balboa, Cauca 39.38 355 *e*P **P 21 26 55.3 +0.6**
GARC Garzon, Huila 39.45 358 *e*P **P 21 26 52.0 -3.4**
POPC Popayan, Colom 39.86 356 *e*P P 21 26 49.0 -10
GR1C Gorgona, Isla 40.42 354 *e*P **P 21 27 05.1 +2.1**
PRAC Prado 40.95 359 *e*P **P 21 27 10.0 +2.5**
ORTC Ortega, Tolima 41.16 358 *e*P **P 21 27 11.1 +2.0**
BOAV Boa Vista 41.58 21 P **P 21 27 09.6 -3.0**
BOAV IAmb IAmb 21 27 14.0
comp=Z,73nm,1.2s
BOAV Boa Vista 41.58 21 *e*P **P 21 27 12.6 0.0**
ANIL Santa Ana 41.74 358 *e*P **P 21 27 15.6 +1.3**
ROSC El Rosal 42.07 360 IAMs_20 IAMs_20 21 44 34.9
comp=Z,3µm,21.0s
ROSC El Rosal 42.07 360 P **P 21 27 19.3 +2.2**
comp=Z,19nm,1.0s,baz=90,slow=17,SNR=6.1
comp=Z,19nm,1.0s
ROSC El Rosal 42.07 360 *e*P **P 21 27 15.3 -1.7**
MCPB Macapa, AP 42.12 34 *e*P **P 21 27 17.4 +0.4**
TMAB Tom-Au,PA,Br 42.27 41 *e*P **P 21 27 19.5 +1.1**
GUY2C Guyana, Caldas 42.47 358 *e*P **P 21 27 22.0 +1.6**
SPBC San Pablo de B 42.87 360 *e*P P 21 27 18.2 -5.0
CBOC Ciudad Bolivar 43.12 357 *e*P P 21 27 20.5 -4.9
TAMC Tame, Arauca 43.70 3 *e*P P 21 27 25.0 -4.9
BELA Belgrano 2 43.80 169 P **P 21 27 29.4 -0.7**
BELA IAmb IAmb 21 27 32.9
comp=Z,79nm,1.4s
DBBC Dabeiba 44.27 357 *e*P **P 21 27 36.6 +2.1**
UREC San Jos de Ur 44.98 358 *e*P **P 21 27 39.6 -0.4**
SDV Santo Domingo 46.20 5 IAMs_20 IAMs_20 21 49 39.7
comp=Z,4µm,18.0s
SDV Santo Domingo 46.20 5 *e*P **P 21 27 49.7 -0.2**
BAUV El Baul 46.48 8 P **P 21 27 50.7 -1.2**
MDP Montagnes des 46.79 30 LR LR 21 49 58.1
comp=Z,4µm,18.1s,baz=200,slow=39
VNA3 Neumayer Olymp 46.83 156 ⇑P **P 21 27 54.9 +0.8**
comp=Z,53nm,1.0s
RCBR Riachuelo 46.86 57 P **P 21 27 55.0 -0.1**
RCBR Riachuelo 46.86 57 P **P 21 27 55.0 -0.1**
RCBR pmax pmax
comp=Z,207nm,1.9s
RCBR MLR MLR
comp=Z,21µm,19.0s
RCBR Riachuelo 46.86 57 LR LR 21 48 55.0
comp=Z,9µm,18.3s,baz=219,slow=38
RCBR Riachuelo 46.86 57 *e*P **P 21 27 55.8 +0.8**
SJCC San Jacinto, C 47.10 358 *e*P **P 21 27 54.2 -2.6**

SRBA San Rafael, Bu 47.24 347 P **P 21 27 58.4 +0.3**
SRBA IAmb IAmb 21 28 12.4
comp=Z,46nm,1.3s
RGM0 Gandoca 47.47 349 IAMs_20 IAMs_20 21 49 47.4
comp=Z,3µm,22.0s
VNA2 Neumayer--Watz 47.51 156 ⇑P **P 21 27 59.5 0.0**
comp=Z,53nm,0.9s,baz=286,slow=9.7
RIMA Rio Macho 47.85 347 P **P 21 28 03.4 +0.5**
RIMA IAmb IAmb 21 28 12.8
comp=Z,39nm,1.3s
LCR2 La Lucha 2 47.86 347 P **P 21 28 03.0 +0.1**
SNAA Sanae 49.05 157 P **P 21 28 11.3 -0.1**
SNAA IAMs_20 IAMs_20 21 49 51.9
comp=Z,2µm,18.0s
SNAA Sanae 49.05 157 ⇑P **P 21 28 11.7 +0.3**
comp=Z,1µm,0.9s
SNAA Sanae 49.05 157 *ce*P **P 21 28 11.3 -0.1**
SNAA pmax pmax
comp=Z,164nm,1.3s
SNAA Sanae 49.05 157 P **P 21 28 11.6 +0.3**
comp=Z,96nm,1.0s,baz=278,slow=6.5,SNR=46
SNAA LR LR 21 48 28.6
comp=Z,2µm,18.0s,baz=301,slow=36
comp=Z,96nm,1.0s
HATO Hato, Curacao 49.59 7 IAMs_20 IAMs_20 21 52 42.3
comp=Z,3µm,18.0s
GRGR Grenville 50.67 16 IAMs_20 IAMs_20 21 53 58.6
comp=Z,3µm,19.0s
TROLL Troll, Antarti 50.74 157 ⇑P **P 21 28 24.6 +0.3**
comp=Z,3µm,0.8s
QSPA South Pole Qui 52.80 180 P **P 21 28 41.1 +1.4**
QSPA South Pole Qui 52.80 180 IAMs_20 IAMs_20 21 50 30.6
comp=Z,2µm,18.0s
QSPA South Pole Qui 52.80 180 P **P 21 28 40.8 +1.0**
comp=Z,65nm,1.0s,baz=142,slow=3.1,SNR=60
comp=Z,65nm,1.0s
SVN Savane Anatole 53.40 16 IAMs_20 IAMs_20 21 55 32.0
comp=Z,3µm,18.0s
GDHS Morne Mazeau, 54.66 15 IAMs_20 IAMs_20 21 55 46.0
comp=Z,3µm,19.0s
GDSD La Dsirade Is 54.85 15 IAMs_20 IAMs_20 21 56 15.4
comp=Z,2µm,19.0s
ABD La Joyeuse, An 54.92 15 IAMs_20 IAMs_20 21 56 01.3
comp=Z,2µm,19.0s
MLPR Magueyes Islan 55.51 8 IAMs_20 IAMs_20 21 56 48.1
comp=Z,1µm,19.0s
IGPR InterUniversit 55.62 9 IAMs_20 IAMs_20 21 57 12.9
comp=Z,2µm,18.0s
CELP Cerrillos 55.67 9 IAMs_20 IAMs_20 21 57 28.2
comp=Z,2µm,19.0s
SJG San Juan 55.76 9 IAMs_20 IAMs_20 21 57 11.5
comp=Z,3µm,19.0s
HUMP Col San Antoni 55.82 9 IAMs_20 IAMs_20 21 57 08.4
comp=Z,2µm,19.0s
UUPR Utuado, UPR, P 55.83 8 IAMs_20 IAMs_20 21 57 33.5
comp=Z,2µm,19.0s
GCPR Guaynabo City 55.96 9 IAMs_20 IAMs_20 21 57 32.0
comp=Z,2µm,19.0s
SDDR Presa de Saban 56.18 3 IAMs_20 IAMs_20 21 56 36.0
comp=Z,3µm,19.0s
ELIB Princess Elisa 57.09 158 *d*P **P 21 29 10.7 -0.1**
comp=Z,35nm,1.1s
ELIB *dx* x 21 29 16.4
CMIG Matias Romero 57.68 336 LR LR 21 48 42.2
comp=Z,564nm,19.7s,baz=158,slow=30
TLIG Tlapa 59.39 333 IAMs_20 IAMs_20 21 51 56.6
comp=Z,1µm,20.0s
VNDA Vanda 60.41 192 P **P 21 29 33.5 0.0**
VNDA IAmb IAmb 21 29 45.6
comp=Z,42nm,1.4s
VNDA IAMs_20 IAMs_20 21 54 40.5
comp=Z,2µm,18.0s
VNDA Vanda 60.41 192 P **P 21 29 33.5 0.0**
VNDA pmax pmax
comp=Z,42nm,1.4s
VNDA MLR MLR
comp=Z,2µm,18.0s
SOR Soroa 60.50 350 P **P 21 29 35.5 +0.7**
SOR Soroa 60.50 350 P **P 21 29 35.5 +0.7**
SOR pmax pmax
comp=Z,55nm,1.1s
ASCN Ascension 61.25 77 P **P 21 29 39.6 -0.5**
SHEL Horse Pasture 63.35 90 P **P 21 29 55.0 +0.7**
SHEL Horse Pasture 63.35 90 P **P 21 29 55.0 +0.7**
SHEL pmax pmax
comp=Z,362nm,1.6s
ZAIG Zacatecas 65.64 331 P **P 21 30 11.8 +2.6**
PPT Papeete 68.20 264 LR LR 21 51 52.8
comp=Z,1µm,20.9s,baz=144,slow=28
SLBS Sierra La Lagu 69.56 325 IAMs_20 IAMs_20 21 53 56.2
comp=Z,1µm,21.0s
LPIG La Paz 70.08 325 LR LR 21 54 33.1
comp=Z,1µm,19.5s,baz=158,slow=30
MAW Mawson 70.34 164 P **P 21 30 38.0 +0.1**
comp=Z,24nm,1.0s,baz=215,slow=7.0,SNR=5.6
MAW LR LR 22 03 02.5
comp=Z,4µm,18.0s,baz=231,slow=37
comp=Z,24nm,1.0s
HPIG 70.59 330 IAMs_20 IAMs_20 21 56 41.5
comp=Z,1µm,18.0s
Y57A Sumter 71.34 354 IAMs_20 IAMs_20 22 04 02.7
comp=Z,986nm,20.0s
Z47A Carrollton 71.49 348 P **P 21 30 46.7 +1.5**
NATX Nacogdoches 71.49 342 P **P 21 30 45.9 +0.6**
NATX IAmb IAmb 21 30 57.9
comp=Z,42nm,1.1s
Y52A Lilburn 71.56 351 P **P 21 30 46.2 +0.6**
143A Socs Landing, 71.64 345 P **P 21 30 46.9 +0.8**
JSC Jenkinsville 71.68 354 P **P 21 30 46.7 +0.4**
JSC IAMs_20 IAMs_20 22 02 13.6
comp=Z,994nm,20.0s
JSC Jenkinsville 71.68 354 P **P 21 30 46.7 +0.4**
JSC pmax pmax
comp=Z,109nm,2.0s
JSC MLR MLR
comp=Z,1µm,20.0s
HODGE Hodges 71.72 353 P **P 21 30 47.6 +1.1**
HODGE IAmb IAmb 21 30 49.2
comp=Z,36nm,1.5s
HODGE IAMs_20 IAMs_20 22 01 21.8
comp=Z,967nm,21.0s
JCT Junction City 71.74 337 P **P 21 30 49.5 +2.7**
JCT IAmb IAmb 21 30 59.8
comp=Z,52nm,1.3s
JCT Junction City 71.74 337 P **P 21 30 49.6 +2.7**
JCT pmax pmax
comp=Z,52nm,1.3s
X58A Rowland 71.80 355 P **P 21 30 47.3 +0.2**
X58A IAmb IAmb 21 30 49.6
comp=Z,28nm,0.8s
X58A IAMs_20 IAMs_20 22 00 30.9
comp=Z,1µm,20.0s
Y49A Blount Mountai 71.87 349 P **P 21 30 48.0 +0.5**
Y49A IAmb IAmb 21 30 50.0
comp=Z,26nm,1.2s
BIRD Birdtown, Kers 71.97 354 P **P 21 30 49.1 +1.1**
TXAR Lajitas Array 72.00 333 P **P 21 30 50.0 +1.5**
TXAR Lajitas Array 72.00 333 P **P 21 30 49.7 +1.2**
comp=Z,5.2nm,1.1s,baz=156,slow=8.2,SNR=16
TXAR LR LR 21 56 42.8
comp=Z,439nm,20.3s,baz=140,slow=31
comp=Z,5.2nm,1.1s
TX31 Lajitas Ar. Si 72.00 333 P **P 21 30 49.8 +1.3**
TX31 IAmb IAmb 21 31 01.9
comp=Z,38nm,1.6s
237A Washetta, Mont 72.02 341 P **P 21 30 49.8 +1.4**
237A IAmb IAmb 21 31 01.1
comp=Z,30nm,0.9s
SAND Sanderson 72.02 335 P **P 21 30 50.0 +1.4**
SAND IAmb IAmb 21 31 01.1
comp=Z,30nm,1.3s
BRDY Brady 72.25 338 P **P 21 30 50.7 +0.9**
PAULI Pauline 72.26 353 P **P 21 30 50.2 +0.4**
PAULI IAmb IAmb 21 30 52.5
comp=Z,37nm,1.1s
X51A Calhoun 72.35 351 P **P 21 30 50.9 +0.5**
W59A Clinton 72.36 356 P **P 21 30 50.6 +0.3**
Y45A Yeager Farm, C 72.40 347 P **P 21 30 52.2 +1.5**
FPAL Fort Paine 72.42 350 P **P 21 30 51.2 +0.3**
FPAL IAmb IAmb 21 30 53.8
comp=Z,36nm,1.4s
W57A Gilead 72.44 355 P **P 21 30 51.7 +0.8**
W57A IAmb IAmb 21 31 36.0
comp=Z,78nm,1.8s
WHTX Lake Whitney, 72.45 339 P **P 21 30 52.4 +1.4**
WHTX IAmb IAmb 21 31 02.5

comp=Z,29nm,1.1s
Z41A Richland Creek 72.48 344 P **P 21 30 52.0 +0.8**
KMSC Kings Mountain 72.54 354 P **P 21 30 52.0 +0.5**
KMSC IAmb IAmb 21 30 53.9
comp=Z,38nm,1.2s
KMSC IAMs_20 IAMs_20 22 08 27.4
comp=Z,937nm,20.0s
BG3 Lake Jocassee 72.54 352 P **P 21 30 51.9 +0.4**
X48A Hartselle 72.55 349 P **P 21 30 52.6 +1.1**
X48A IAmb IAmb 21 30 54.1
comp=Z,42nm,1.1s
OZNA Ozona 72.58 336 P **P 21 30 53.5 +1.7**
OZNA IAmb IAmb 21 31 04.1
comp=Z,33nm,1.3s
W52A Murphy 72.75 352 P **P 21 30 53.5 +0.8**
FW14 Alvarado 72.77 340 P **P 21 30 54.5 +1.6**
TREL Terrell 72.78 341 P **P 21 30 53.8 +0.8**
FW13 Cleburne 72.79 339 P **P 21 30 53.8 +0.8**
FW13 IAmb IAmb 21 31 04.3
comp=Z,57nm,1.6s
CCAR Cane Creek 72.89 345 P **P 21 30 53.7 +0.1**
ALPN Alpine 72.93 333 IAmb IAmb 21 31 06.8
comp=Z,27nm,1.4s
WLAR White Oak Lake 72.96 343 P **P 21 30 54.6 +0.6**
WLAR IAmb IAmb 21 31 05.9
comp=Z,33nm,1.0s
Z38A Mt. Pleasant 73.00 342 P **P 21 30 56.7 +2.4**
OXF Oxford 73.00 347 P **P 21 30 55.4 +1.2**
OXF IAmb IAmb 21 31 05.9
comp=Z,46nm,1.1s
OXF Oxford 73.00 347 P **P 21 30 55.4 +1.2**
OXF pmax pmax
comp=Z,46nm,1.1s
W50A Signal Mountai 73.03 350 P **P 21 30 54.8 +0.4**
W50A IAmb IAmb 21 30 56.8
comp=Z,48nm,1.1s
CTZ Chatham Island 73.05 228 P **P 21 30 56.2 +1.5**
SWET Sewanee 73.13 350 P **P 21 30 55.6 +0.5**
CPCT Cooper Cave 73.17 351 P **P 21 30 55.1 -0.1**
CPCT IAmb IAmb 21 30 57.3
comp=Z,35nm,1.2s
V53A Saluda 73.20 353 P **P 21 30 55.5 +0.1**
V53A IAmb IAmb 21 31 20.6
comp=Z,49nm,1.5s
V53A IAMs_20 IAMs_20 22 06 13.0
comp=Z,979nm,19.0s
FW07 Weatherford 73.22 339 P **P 21 30 56.4 +0.9**
FW07 IAmb IAmb 21 31 08.2
comp=Z,16nm,0.6s
PLAL Pickwick Lake 73.23 348 P **P 21 30 56.6 +1.0**
V55A Taylorsville 73.23 354 P **P 21 30 56.0 +0.4**
V55A IAmb IAmb 21 30 57.5
comp=Z,58nm,1.4s
V55A IAMs_20 IAMs_20 21 58 11.7
comp=Z,990nm,20.0s
FW06 Azle 73.41 340 P **P 21 30 58.7 +2.0**
FW06 IAmb IAmb 21 31 08.7
comp=Z,54nm,1.4s
V52A Sevierville 73.45 352 P **P 21 30 56.8 -0.1**
V52A IAmb IAmb 21 30 58.0
comp=Z,35nm,1.2s
V52A IAMs_20 IAMs_20 22 06 05.7
comp=Z,1µm,20.0s
PLPT Palo Pinto 73.47 339 IAmb IAmb 21 31 08.5
comp=Z,36nm,1.2s
SGCY Sterling City 73.49 336 P **P 21 30 58.5 +1.2**
V51A Loudon 73.50 351 P **P 21 30 58.0 +0.9**
V51A IAmb IAmb 21 31 08.2
comp=Z,25nm,1.1s
MNHN Monahans 73.50 335 P **P 21 30 58.8 +1.5**
MNHN IAmb IAmb 21 31 09.5
comp=Z,28nm,1.3s
U59A Littleton 73.51 357 P **P 21 30 58.0 +0.9**
U59A IAmb IAmb 21 30 59.5
comp=Z,22nm,1.1s
FW03 Perrin-Whitt E 73.61 339 P **P 21 30 59.3 +1.4**
FW03 IAmb IAmb 21 33 04.8
comp=Z,32nm,0.8s
U56A King 73.66 355 P **P 21 30 58.1 0.0**
U56A IAmb IAmb 21 31 01.6
comp=Z,42nm,1.4s
Z35A Perchaven, San 73.66 340 P **P 21 30 59.9 +1.7**
X40A Basin Creek Fa 73.67 344 P **P 21 30 58.5 +0.3**
ABTX Abilene, Hawle 73.69 338 P **P 21 30 59.3 +1.0**
ABTX IAmb IAmb 21 31 10.4
comp=Z,32nm,1.1s
SRIG Santa Rosalia 73.73 325 IAMs_20 IAMs_20 21 56 42.7
comp=Z,1µm,18.0s
VHRN Van Horn 73.79 333 P **P 21 31 00.7 +1.5**
UALR University of 73.84 344 P **P 21 31 00.5 +1.3**
MIAR Mount Ida 73.89 343 P **P 21 30 59.5 0.0**
MIAR Mount Ida 73.89 343 P **P 21 30 59.5 0.0**
MIAR pmax pmax
comp=Z,31nm,1.5s
PECS Pecos 73.92 334 P **P 21 31 00.6 +0.7**
PECS IAmb IAmb 21 31 22.3
comp=Z,41nm,1.8s
U54A Nelsons Funny 73.95 353 P **P 21 30 59.8 -0.1**
U54A IAmb IAmb 21 31 02.2
comp=Z,68nm,1.5s
CLTN Cedars of Leba 74.05 350 P **P 21 31 01.4 +1.0**
CLTN IAmb IAmb 21 31 02.6
comp=Z,49nm,1.4s
T59A Double "B" Far 74.12 357 P **P 21 31 01.3 +0.6**
T59A IAmb IAmb 21 31 03.7
comp=Z,61nm,1.4s
TZTN Tazewell 74.14 352 P **P 21 31 01.2 +0.3**
TZTN IAmb IAmb 21 31 12.1
comp=Z,50nm,1.2s
RAR Rarotonga 74.15 255 LR LR 21 55 34.6
comp=Z,456nm,18.5s,baz=139,slow=29
T57A Hurt 74.23 356 P **P 21 31 01.7 +0.3**
T57A IAmb IAmb 21 31 04.0
comp=Z,57nm,1.5s
LOOK Love County 74.26 340 P **P 21 31 02.8 +1.2**
LOOK IAmb IAmb 21 31 13.6
comp=Z,47nm,1.3s
SN01 Snyder 1 74.29 337 P **P 21 31 02.2 +0.2**
SN01 IAmb IAmb 21 31 30.5
comp=Z,63nm,1.6s
SN05 Snyder 5 74.31 337 P **P 21 31 02.8 +0.8**
SN05 IAmb IAmb 21 31 13.9
comp=Z,49nm,1.7s
WVT Waverly 74.31 348 P **P 21 31 01.8 -0.1**
WVT IAmb IAmb 21 31 12.5
comp=Z,66nm,1.4s
WVT Waverly 74.31 348 P **P 21 31 01.8 -0.1**
WVT pmax pmax
comp=Z,66nm,1.5s
WHAR Wooly Hollow 74.32 345 P **P 21 31 03.3 +1.3**
WHAR IAmb IAmb 21 31 13.6
comp=Z,33nm,1.2s
MBO M'Bour 74.36 58 P **P 21 31 03.4 +0.8**
U49A Red Boiling Sp 74.39 350 P **P 21 31 02.5 +0.2**
U49A IAmb IAmb 21 31 32.8
comp=Z,49nm,1.5s
WTFS Witchita Falls 74.41 339 P **P 21 31 03.8 +1.3**
WTFS IAmb IAmb 21 31 14.4
comp=Z,36nm,1.2s
APMT Aspermont 74.48 338 P **P 21 31 04.7 +1.7**
APMT IAmb IAmb 21 31 14.4
comp=Z,62nm,1.6s
GNAR Gosnell 74.53 347 P **P 21 31 04.2 +1.1**
SUR Sutherland 74.59 119 P **P 21 31 04.6 +0.4**
SUR Sutherland 74.59 119 LR LR 22 01 16.0
comp=Z,1µm,18.8s,baz=234,slow=34
HSIG 74.62 327 P **P 21 31 05.5 +1.7**
HSIG IAmb IAmb 21 31 15.4
comp=Z,68nm,2.0s
PEBM Pemiscott Bayo 74.64 347 P **P 21 31 04.3 +0.5**
RCRC Randolf Colleg 74.66 356 P **P 21 31 04.2 +0.3**
UTMT University of 74.69 348 P **P 21 31 04.8 +0.7**
GLAT Glass 74.69 347 P **P 21 31 04.7 +0.6**
CLNB Carlsbad 74.73 334 P **P 21 31 06.7 +2.1**
MNTX Cornudas Mount 74.76 333 P **P 21 31 06.3 +1.7**
T50A Nancy 74.76 351 P **P 21 31 04.8 +0.3**
T50A IAmb IAmb 21 31 06.0
comp=Z,37nm,1.5s
CLN7 Carlsbad 7 74.84 334 P **P 21 31 06.7 +1.5**
GDL2 Guadalupe Moun 74.84 334 P **P 21 31 06.4 +1.1**
LCAR Lake Charles 74.84 346 P **P 21 31 05.6 +0.7**
JSRW J. Sargeant Re 74.85 357 P **P 21 31 05.6 +0.7**
FCAR Ozark Folk Cen 74.87 345 P **P 21 31 06.2 +1.1**
HICK Hickman 74.95 347 P **P 21 31 06.2 +0.7**

S57A **Dark Hollow, R** 74.97 356 P **P** **21 31 06.7 +1.1**
S57A IAmb IAmb 21 31 07.8
comp=Z,32nm,1.2s
X34A **Smith Ranch, M** 75.02 340 P **P** **21 31 07.8 +1.7**
X34A IAmb IAmb 21 31 45.6
comp=Z,22nm,0.8s
T47A **Sharon Grove** 75.04 349 P **P** **21 31 06.6 +0.5**
T47A IAmb IAmb 21 31 07.9
comp=Z,34nm,1.2s
DKNS **Dickens** 75.05 337 **P** **21 31 07.7 +1.4**
DKNS IAmb IAmb 21 31 25.2
comp=Z,62nm,1.9s
R58B **Mineral** 75.12 357 P **P** **21 31 07.2 +0.7**
PARMO **Parma** 75.16 347 P **P** **21 31 07.3 +0.5**
S54A **Dingess, Beckl** 75.17 354 P **P** **21 31 07.6 +0.7**
S54A IAmb IAmb 21 31 31.9
comp=Z,83nm,1.7s
S51A **Beattyville** 75.23 352 P **P** **21 31 07.1 -0.1**
W35A **Tecumseh** 75.28 341 P **P** **21 31 08.6 +1.0**
W35A IAmb IAmb 21 31 18.6
comp=Z,32nm,1.3s
T45A **Paducah** 75.31 348 P **P** **21 31 07.6 -0.1**
PBMO **Poplar Bluff** 75.39 346 IAmb IAmb 21 31 18.8
comp=Z,21nm,1.1s
WMOK **Wichita Mounta** 75.41 339 P **P** **21 31 09.3 +1.0**
WMOK **Wichita Mounta** 75.41 339 P **P** **21 31 09.3 +1.0**
WMOK pmax pmax
comp=Z,20nm,1.3s
FNO **Franklin** 75.52 340 P **P** **21 31 10.5 +1.6**
FNO IAmb IAmb 21 31 20.6
comp=Z,22nm,0.9s
R55A **Marlinton** 75.56 355 P **P** **21 31 10.0 +0.8**
R55A IAmb IAmb 21 31 18.3
comp=Z,50nm,1.2s
HHAR **Hobbs** 75.64 344 P **P** **21 31 11.1 +1.5**
HHAR IAmb IAmb 21 31 33.8
comp=Z,54nm,1.8s
TUL3 **Leonard** 75.72 342 P **P** **21 31 10.3 +0.2**
TUL3 IAmb IAmb 21 31 21.0
comp=Z,42nm,1.1s
R53A **Hurricane** 75.75 354 P **P** **21 31 10.8 +0.6**
R53A IAmb IAmb 21 31 35.4
comp=Z,59nm,1.5s
CGM3 **Cape Girardeau** 75.76 347 P **P** **21 31 10.4 +0.2**
CGM3 IAmb IAmb 21 31 21.3
comp=Z,25nm,1.3s
RLO **Rose Lookout** 75.78 343 P **P** **21 31 11.6 +1.2**
RLO IAmb IAmb 21 32 04.6
comp=Z,27nm,1.0s
DEOK **Depew** 75.83 341 P **P** **21 31 11.1 +0.4**
U38A **Gravette** 75.89 343 P **P** **21 31 11.5 +0.5**
U38A IAmb IAmb 21 31 29.1
comp=Z,56nm,2.0s
MSTX **Muleshoe** 75.92 336 P **P** **21 31 12.5 +1.2**
MSTX IAmb IAmb 21 31 23.4
comp=Z,64nm,1.6s
R50A **Paris** 75.95 352 P **P** **21 31 10.8 -0.5**
R50A IAmb IAmb 21 31 21.5
comp=Z,30nm,1.4s
319A **Douglas** 75.97 329 P **P** **21 31 13.4 +1.7**
319A IAmb IAmb 21 31 23.5
comp=Z,30nm,1.5s
OK029 **Liberty Lake** 76.04 341 P **P** **21 31 12.7 +0.8**
OK029 IAmb IAmb 21 31 23.5
comp=Z,47nm,1.2s
OK052 **Battle Ridge R** 76.06 341 P **P** **21 31 13.4 +1.5**
OK052 IAmb IAmb 21 31 23.7
comp=Z,54nm,1.2s
R49A **Shelbyville** 76.06 351 P **P** **21 31 11.9 0.0**
R49A IAmb IAmb 21 31 22.1
comp=Z,54nm,1.5s
S44A **Carbondale** 76.08 348 P **P** **21 31 12.0 0.0**
GSR **Geological Sur** 76.08 357 P **P** **21 31 12.9 +1.0**
USIN **University of** 76.08 349 P **P** **21 31 12.0 0.0**
USIN IAmb IAmb 21 31 22.0
comp=Z,37nm,1.1s
SIUC **Southern Illin** 76.09 348 P **P** **21 31 12.8 +0.7**
MGMO **Mountain Grove** 76.12 345 P **P** **21 31 13.1 +0.8**
MGMO IAmb IAmb 21 31 23.1
comp=Z,22nm,1.2s
OK033 **Mehan** 76.14 341 P **P** **21 31 12.8 +0.4**
WCI **Wyandotte Cave** 76.14 350 P **P** **21 31 11.4 -1.0**
WCI **Wyandotte Cave** 76.14 350 P **P** **21 31 11.4 -1.0**
WCI pmax pmax
comp=Z,11nm,0.8s
SMWD **Samnorwood** 76.17 338 P **P** **21 31 13.6 +0.8**
SMWD IAmb IAmb 21 31 24.1
comp=Z,53nm,1.4s
QUOK **Quay** 76.20 341 P **P** **21 31 14.5 +1.8**
QUOK IAmb IAmb 21 31 24.6
comp=Z,48nm,1.1s
CSTR **Hydro, Custer** 76.23 340 P **P** **21 31 14.3 +1.3**
SSFO **Shawnee State** 76.23 353 P **P** **21 31 13.0 +0.1**
121A **Cookes Peak, D** 76.40 331 P **P** **21 31 15.3 +1.0**
121A IAms_20 IAms_20 22 00 14.3
comp=Z,1µm,18.0s
AMTX **Amarillo** 76.41 337 P **P** **21 31 14.9 +0.8**
AMTX IAmb IAmb 21 31 25.7
comp=Z,45nm,1.2s
Q52A **Bidwell** 76.41 353 P **P** **21 31 14.1 +0.2**
Q52A IAmb IAmb 21 31 24.3
comp=Z,43nm,1.1s
OK048 **Pawnee Station** 76.49 341 P **P** **21 31 15.2 +0.7**
OK048 IAmb IAmb 21 31 26.2
comp=Z,50nm,1.2s
SDMD **Soldier's Deli** 76.52 358 P **P** **21 31 15.0 +0.5**
OK051 **E0350 and S346** 76.55 341 P **P** **21 31 15.6 +0.9**
OK051 IAms_20 IAms_20 22 01 50.9
comp=Z,842nm,19.0s
FVM **French Village** 76.56 347 P **P** **21 31 15.2 +0.4**
FVM IAmb IAmb 21 31 26.2
comp=Z,41nm,1.4s
FVM **French Village** 76.56 347 P **P** **21 31 15.2 +0.4**
FVM pmax pmax
comp=Z,41nm,1.4s
Q51A **Peebles** 76.58 353 P **P** **21 31 14.6 -0.3**
Q51A IAmb IAmb 21 31 23.5
comp=Z,15nm,0.8s
P57A **Homestead Farm** 76.64 357 P **P** **21 31 16.1 +0.9**
P57A IAmb IAmb 21 31 17.2
comp=Z,35nm,1.3s
CCM **Cathedral Cave** 76.79 346 P **P** **21 31 16.5 +0.5**
CCM **Cathedral Cave** 76.79 346 P **P** **21 31 16.5 +0.5**
CCM pmax pmax
comp=Z,62nm,1.3s
ELIS **Ellis County** 76.83 339 P **P** **21 31 16.9 +0.5**
ELIS IAmb IAmb 21 31 28.3
comp=Z,42nm,1.2s
CROK **Carrier** 76.85 340 P **P** **21 31 16.9 +0.4**
S39A **Bolivar** 76.86 344 P **P** **21 31 17.2 +0.7**
S39A IAmb IAmb 21 31 40.9
comp=Z,63nm,2.0s
T35A **Sooner Cattle** 76.86 342 P **P** **21 31 17.2 +0.7**
T35A IAmb IAmb 21 31 27.9
comp=Z,36nm,1.2s
BLOK **Blackwell** 76.89 341 P **P** **21 31 17.7 +1.0**
OLIL **Olney** 76.90 349 P **P** **21 31 16.9 +0.2**
OLIL IAmb IAmb 21 31 18.6
comp=Z,42nm,1.4s
OLIL IAMs_20 IAMs_20 22 07 49.1
comp=Z,839nm,21.0s
DUN6 **Lazy B Ranch** 76.93 330 P **P** **21 31 18.1 +0.9**
DUN6 IAmb IAmb 21 31 29.0
comp=Z,32nm,1.1s
P51A **Williamsport** 77.00 353 P **P** **21 31 17.1 -0.1**
U32A **Winter Ranch,** 77.01 340 P **P** **21 31 19.4 +2.0**
WUPA **West Chester U** 77.01 359 P **P** **21 31 17.0 -0.2**
WUPA IAmb IAmb 21 33 47.3
comp=Z,30nm,1.6s
P52A **Corning** 77.06 354 P **P** **21 31 16.8 -0.8**
MVL **Millersville** 77.10 358 P **P** **21 31 16.5 -1.2**
MVL IAmb IAmb 21 31 27.3
comp=Z,34nm,1.3s
BLO **Bloomington** 77.10 350 P **P** **21 31 18.1 +0.3**
BLO IAmb IAmb 21 31 19.2
comp=Z,31nm,1.2s
BLO **Bloomington** 77.10 350 P **P** **21 31 18.1 +0.3**
BLO pmax pmax
comp=Z,31nm,1.2s
SLM **Saint Louis** 77.16 347 P **P** **21 31 18.9 +0.8**
SLM IAmb IAmb 21 31 28.8
comp=Z,33nm,0.8s
SLM **Saint Louis** 77.16 347 P **P** **21 31 18.9 +0.8**
SLM pmax pmax
comp=Z,33nm,0.8s
OK032 **Salt Plains WL** 77.19 340 P **P** **21 31 19.9 +1.6**
OK032 IAmb IAmb 21 31 30.3
comp=Z,34nm,1.1s
R40A **Maddies Statio** 77.21 345 P **P** **21 31 19.5 +1.1**
R40A PcP **PcP** **21 31 28.8 -0.3**
Q44A **Meyer Farm, Va** 77.22 348 P **P** **21 31 18.4 -0.1**
Q44A IAmb IAmb 21 31 19.4
comp=Z,53nm,1.6s
NOKA **Waynoka** 77.23 340 P **P** **21 31 18.1 -0.5**
P49A **Miami Univ. Ec** 77.23 352 P **P** **21 31 19.1 +0.6**
P49A IAmb IAmb 21 31 28.6
comp=Z,46nm,1.4s
OK035 **E0210 Rd and N** 77.23 340 P **P** **21 31 21.2 +2.6**
OK035 PcP **PcP** **21 31 29.6 +0.3**
P48A **Milroy** 77.24 351 P **P** **21 31 18.4 -0.2**
P48A IAmb IAmb 21 31 19.9
comp=Z,35nm,1.1s
KAN14 **Manchester OK** 77.27 341 P **P** **21 31 19.6 +0.8**
KAN14 PcP **PcP** **21 31 28.7 -0.6**
KAN14 IAmb IAmb 21 31 30.2
comp=Z,39nm,1.0s
KAN17 **Caldwell West** 77.30 341 P **P** **21 31 21.1 +2.2**
KAN09 **Caldwell North** 77.35 341 P **P** **21 31 19.9 +0.6**
LIC **Lamto** 77.40 72⇑ *e*P **P** **21 31 20.1 0.0**
comp=Z,128nm,1.1s
TUC **Tucson** 77.41 329 P **P** **21 31 20.9 +1.1**
TUC **Tucson** 77.41 329 P **P** **21 31 20.9 +1.1**
TUC pmax pmax
comp=Z,26nm,1.7s
BNM **Barren Site** 77.42 333 P **P** **21 31 21.8 +1.8**
Y22D **IRIS PASSCAL I** 77.45 333 IAMs_20 IAMs_20 22 00 37.1
comp=Z,782nm,20.0s
WIN **Windhoek** 77.51 109 P **P** **21 31 21.3 +0.4**
WIN **Windhoek** 77.51 109 P **P** **21 31 21.3 +0.4**
WIN pmax pmax
comp=Z,95nm,1.2s
WIN MLR MLR
comp=Z,2µm,18.0s
KAN06 **Argonia West S** 77.52 341 P **P** **21 31 21.8 +1.6**
P46A **Rosedale** 77.64 350 P **P** **21 31 20.9 +0.1**
P46A IAmb IAmb 21 31 31.2
comp=Z,26nm,0.9s
TIC **Toumodi** 77.68 72⇑ *e*P **P** **21 31 21.8 +0.1**
comp=Z,80nm,1.0s
KIC **Kosan Boka** 77.70 72⇑ *e*P **P** **21 31 22.0 +0.2**
comp=Z,125nm,1.0s
ACSO **Alum Creek Sta** 77.73 353 P **P** **21 31 21.5 +0.2**
ACSO IAmb IAmb 21 31 29.9
comp=Z,28nm,0.9s
DBIC **Dimbokro** 77.82 72 P **P** **21 31 22.6 +0.2**
DBIC IAMs_20 IAMs_20 22 03 06.9
comp=Z,2µm,19.0s
DBIC **Dimbokro** 77.82 72 P **P** **21 31 22.6 +0.2**
DBIC pmax pmax
comp=Z,131nm,1.3s
DBIC MLR MLR
comp=Z,2µm,19.0s
DBIC **Dimbokro** 77.82 72 P **P** **21 31 21.6 -0.8**
comp=Z,39nm,0.9s,baz=211,slow=6.7,SNR=21
DBIC LR LR 22 03 27.7
comp=Z,1µm,18.8s,baz=214,slow=34
comp=Z,39nm,0.9s
O49A **Covington** 77.83 352 P **P** **21 31 21.4 -0.5**
O49A IAmb IAmb 21 31 31.9
comp=Z,34nm,1.2s
CPNY **Central Park** 77.86 0 P **P** **21 31 22.5 +0.5**
GRHM **Grahamstown, E** 77.88 123 P **P** **21 31 22.0 -0.6**
PIX **Pinacate** 77.90 326 P **P** **21 31 22.8 +0.3**
214A **Organ Pipe Nat** 77.96 327 P **P** **21 31 23.6 +0.8**
O48B **Farmland** 78.00 351 P **P** **21 31 22.1 -0.6**
O48B IAmb IAmb 21 31 32.1
comp=Z,32nm,1.2s
P43A **Skaggs, Pawnee** 78.02 348 P **P** **21 31 22.9 0.0**
ANMO **Albuquerque** 78.07 333 P **P** **21 31 24.2 +0.6**
ANMO IAmb IAmb 21 31 39.7
comp=Z,22nm,1.2s
ANMO **Albuquerque** 78.07 333⇓ *e*P **P** **21 31 22.7 -0.9**
ANMO pmax pmax
comp=Z,23nm,1.2s
ANMO **Albuquerque** 78.07 333 LR LR 22 00 28.5
comp=Z,458nm,21.5s,baz=246,slow=32
N53A **Lisbon** 78.12 355 P **P** **21 31 24.1 +0.7**
N53A IAmb IAmb 21 31 25.6
comp=Z,39nm,1.4s
RTBA **Rita Blanca** 78.17 337 P **P** **21 31 24.8 +0.8**
RTBA IAmb IAmb 21 31 35.0
comp=Z,32nm,1.6s
O44A **Mansfield** 78.35 349 P **P** **21 31 24.3 -0.4**
O44A IAmb IAmb 21 31 34.8
comp=Z,32nm,1.3s
N51A **Ashland** 78.36 354 P **P** **21 31 24.6 -0.2**
N51A IAmb IAmb 21 31 35.0
comp=Z,57nm,1.3s
P40A **Paris** 78.37 346 P **P** **21 31 25.7 +0.8**
P40A IAmb IAmb 21 31 36.3
comp=Z,38nm,0.9s
YLE **Yale** 78.39 1 P **P** **21 31 25.6 +0.7**
M57A **Sunshine Farm,** 78.45 358 P **P** **21 31 25.5 +0.2**
M57A IAmb IAmb 21 31 27.1
comp=Z,41nm,1.4s
N49A **Columbus Grove** 78.54 352 P **P** **21 31 25.6 -0.2**
N49A IAmb IAmb 21 31 36.0
comp=Z,42nm,1.2s
N47A **Urbana** 78.67 351 P **P** **21 31 25.2 -1.3**
N47A IAmb IAmb 21 31 36.2
comp=Z,40nm,1.2s
M53A **WI Miller and** 78.74 355 P **P** **21 31 27.0 +0.1**
M53A IAmb IAmb 21 31 29.4
comp=Z,86nm,1.8s
P38A **Dawn** 78.76 345 P **P** **21 31 28.0 +1.0**
P38A IAmb IAmb 21 31 37.6
comp=Z,38nm,1.4s
VTX **Valle De La Tr** 78.81 325 P **P** **21 31 26.9 -0.6**
R32A **Long Quarter,** 78.85 340 P **P** **21 31 28.9 +1.3**
R32A IAmb IAmb 21 31 39.8
comp=Z,51nm,1.1s
HDIL **Hopedale** 78.87 348 P **P** **21 31 28.4 +0.8**
HDIL IAmb IAmb 21 31 38.3
comp=Z,25nm,0.8s
M52A **Chesterland** 78.89 354 P **P** **21 31 27.9 +0.2**
M52A IAmb IAmb 21 31 38.2
comp=Z,34nm,1.2s
M50A **Fremont** 78.90 353 P **P** **21 31 27.9 +0.1**
M50A IAmb IAmb 21 31 29.3
comp=Z,68nm,1.5s
ALLY **Alegheny Colle** 78.91 355 P **P** **21 31 27.9 +0.1**
ALLY IAmb IAmb 21 31 29.5
comp=Z,46nm,1.4s
KSU1 **Kansas State U** 78.95 342 P **P** **21 31 29.3 +1.2**
X18A **Snowflake** 79.01 330 P **P** **21 31 29.0 +0.2**
113A **Mohawk Valley,** 79.07 327 P **P** **21 31 29.2 +0.3**
MQZ **McQueen's Vall** 79.13 223 IAMs_20 IAMs_20 21 59 50.4
comp=Z,1µm,19.0s
L59A **Walton** 79.26 359 P **P** **21 31 30.8 +1.0**
L59A IAmb IAmb 21 31 42.7
comp=Z,90nm,1.8s
L56A **Greenwood** 79.27 357 P **P** **21 31 30.8 +1.0**
L56A IAmb IAmb 21 32 38.1
comp=Z,85nm,1.7s
N41A **Harden Midland** 79.29 347 P **P** **21 31 30.6 +0.7**
N41A IAmb IAmb 21 31 32.1
comp=Z,38nm,1.2s
T25A **Trinidad** 79.35 336 P **P** **21 31 31.9 +1.4**
T25A IAmb IAmb 21 31 43.7
comp=Z,47nm,1.2s
ERPA **Erie** 79.37 356 P **P** **21 31 30.6 +0.3**
ERPA IAmb IAmb 21 32 06.7
comp=Z,111nm,1.9s
ESJX **Sierra Juarez** 79.40 325 P **P** **21 31 31.4 +0.5**
ESJX IAMs_20 IAMs_20 22 00 15.8
comp=Z,798nm,18.0s
W18A **Petrified Fore** 79.44 331 IAMs_20 IAMs_20 22 02 28.8
comp=Z,765nm,18.0s
CBKS **Cedar Bluff** 79.49 340 P **P** **21 31 31.6 +0.5**
CBKS IAmb IAmb 21 31 42.9
comp=Z,30nm,1.1s
CBKS **Cedar Bluff** 79.49 340 P **P** **21 31 31.6 +0.5**
CBKS pmax pmax
comp=Z,30nm,1.1s
WES **Weston** 79.49 2 P **P** **21 31 31.7 +0.8**
WES **Weston** 79.49 2 P **P** **21 31 31.7 +0.8**
WES pmax pmax
comp=Z,201nm,1.9s
M44A **Midewin, Midew** 79.49 349 P **P** **21 31 30.5 -0.4**
M44A IAmb IAmb 21 31 32.6
comp=Z,58nm,1.2s
MRZ **Mangatainoka R** 79.51 226 P **P** **21 31 31.9 +0.5**
X16A **Lo Mia Camp, P** 79.51 329 P **P** **21 31 32.6 +1.1**
L48A **N Adams** 79.58 352 P **P** **21 31 31.3 -0.2**
WVNY **West Valley, N** 79.58 357 P **P** **21 31 31.1 -0.3**
WVNY IAmb IAmb 21 33 44.7
comp=Z,123nm,2.0s
HRV **Adam Dziewonsk** 79.61 2 P **P** **21 31 32.2 +0.7**
HRV **Adam Dziewonsk** 79.61 2 P **P** **21 31 32.2 +0.7**
HRV pmax pmax
comp=Z,131nm,1.6s
UABX **UABC, Campus M** 79.69 325 IAMs_20 IAMs_20 21 58 13.6
comp=Z,756nm,20.0s
OXZ **Oxford** 79.72 223 P **P** **21 31 34.2 +1.6**
OXZ IAmb IAmb 21 31 46.1
comp=Z,59nm,1.5s
Y14A **Wickenburg** 79.74 328 P **P** **21 31 33.7 +1.1**
GLA **Glamis** 79.77 326 P **P** **21 31 34.0 +1.2**
GLA IAmb IAmb 21 31 53.3
comp=Z,54nm,1.9s
GLA **Glamis** 79.77 326 P **P** **21 31 34.0 +1.2**
GLA pmax pmax
comp=Z,54nm,1.9s
TRY **Troy** 79.80 0 P **P** **21 31 33.7 +1.1**
N38A **Joes South For** 79.82 345 P **P** **21 31 33.8 +1.0**
N38A IAmb IAmb 21 31 43.5
comp=Z,56nm,1.1s
TSUM **Tsumeb** 79.83 106 P **P** **21 31 33.5 -0.2**
TSUM IAmb IAmb 21 31 42.6
comp=Z,59nm,1.4s
TSUM **Tsumeb** 79.83 106 IAMs_20 IAMs_20 22 08 26.9
comp=Z,1µm,19.0s
TSUM **Tsumeb** 79.83 106 LR LR 22 05 10.8
comp=Z,734nm,18.4s,baz=225,slow=34
MXZ **Matakaoa Point** 79.88 230 P **P** **21 31 33.8 +0.4**
BOSA **Boshof** 79.90 118 P **P** **21 31 33.7 -0.2**
BOSA **Boshof** 79.90 118 P **P** **21 31 33.7 -0.2**
BOSA pmax pmax
comp=Z,72nm,1.1s
BOSA MLR MLR
comp=Z,2µm,19.0s
BOSA **Boshof** 79.90 118 P **P** **21 31 33.5 -0.4**
comp=Z,38nm,1.0s,baz=225,slow=5.4,SNR=29
BOSA LR LR 22 04 21.4
comp=Z,772nm,18.9s,baz=226,slow=34
comp=Z,38nm,1.0s
YUH **Yuha Desert** 79.93 325 P **P** **21 31 34.9 +1.3**
YUH IAMs_20 IAMs_20 22 00 24.7
comp=Z,850nm,20.0s
LTZ **Lake Taylor** 79.96 223 P **P** **21 31 34.7 +0.8**
LTZ IAmb IAmb 21 31 47.6
comp=Z,39nm,1.2s
LTZ IAMs_20 IAMs_20 21 59 12.3
comp=Z,1µm,19.0s
RPZ **Rata Peaks** 79.98 222 LR LR 22 00 04.6
comp=Z,1µm,18.7s,baz=128,slow=30
URZ **Urewera** 80.16 229 LR LR 21 59 12.7
comp=Z,747nm,19.6s,baz=273,slow=30
TKX **Tecate** 80.17 325 IAMs_20 IAMs_20 22 04 29.3
comp=Z,707nm,18.0s
K50A **Casco** 80.22 354 P **P** **21 31 34.9 0.0**
K50A IAmb IAmb 21 31 44.8
comp=Z,52nm,1.3s
BLYC **Blythe** 80.23 327 P **P** **21 31 37.1 +1.9**
L44A **Lake County Fo** 80.25 350 P **P** **21 31 34.5 -0.5**
L44A IAmb IAmb 21 33 46.0
comp=Z,37nm,1.1s
SDCO **Great Sand Dun** 80.26 335 P **P** **21 31 37.3 +1.7**
THZ **Tophouse** 80.30 224 P **P** **21 31 36.8 +1.0**
THZ IAmb IAmb 21 32 52.5
comp=Z,34nm,1.3s
BAR **Barrett** 80.30 325 IAMs_20 IAMs_20 22 00 52.6
comp=Z,742nm,19.0s
TJX **Tijuana** 80.33 324 IAMs_20 IAMs_20 22 00 45.5
comp=Z,899nm,21.0s
L42A **Oliver, Polo** 80.35 348 P **P** **21 31 35.8 +0.3**
L42A IAmb IAmb 21 31 37.1
comp=Z,31nm,1.2s
J56A **Wolcott** 80.38 358 P **P** **21 31 35.5 -0.2**
J56A IAmb IAmb 21 32 46.2
comp=Z,21nm,0.8s
N35A **Tabor** 80.40 344 P **P** **21 31 37.0 +1.1**
N35A IAmb IAmb 21 31 47.1
comp=Z,34nm,0.9s
WUAZ **Wupatki** 80.44 330 P **P** **21 31 38.3 +1.8**
ACCN **Adirondack Com** 80.45 0 P **P** **21 31 37.3 +1.2**
ACCN IAmb IAmb 21 31 40.8
comp=Z,60nm,1.5s
J59A **Piesco** 80.53 360 P **P** **21 31 38.2 +1.6**
J59A IAmb IAmb 21 31 48.3
comp=Z,46nm,1.4s
L40A **Anamosa** 80.67 347 P **P** **21 31 37.6 +0.3**
L40A IAmb IAmb 21 31 47.7
comp=Z,30nm,1.2s
109C **Camp Elliot, M** 80.67 324 IAMs_20 IAMs_20 22 01 12.5
comp=Z,1µm,18.0s
N33A **J Bar K, Exete** 80.71 342 P **P** **21 31 38.5 +0.9**
N33A IAmb IAmb 21 31 49.4
comp=Z,46nm,1.1s
S22A **4UR Ranch, Cre** 80.71 334 P **P** **21 31 39.7 +1.7**
S22A IAMs_20 IAMs_20 22 01 48.3
comp=Z,722nm,18.0s
K43A **Burlington** 80.83 349 P **P** **21 31 39.4 +1.3**
K43A IAmb IAmb 21 31 49.1
comp=Z,33nm,1.2s
MVCO **Mesa Verde** 80.83 333 P **P** **21 31 40.6 +2.0**
MVCO IAMs_20 IAMs_20 22 01 49.1
comp=Z,810nm,20.0s
SCIA **State Center** 80.89 346 P **P** **21 31 39.6 +1.1**
DSZ **Denniston Nort** 80.92 224 P **P** **21 31 40.2 +1.2**
DSZ IAmb IAmb 21 33 01.0
comp=Z,60nm,1.2s
PMD **Palm Desert** 80.97 325 P **P** **21 31 40.0 +0.9**
PFO **Pinyon Flats O** 80.98 325 P **P** **21 31 41.9 +2.5**
PFO **Pinyon Flats O** 80.98 325 IAMs_20 IAMs_20 22 00 54.5
comp=Z,792nm,20.0s
PFO **Pinyon Flats O** 80.98 325 P **P** **21 31 41.9 +2.5**
PFO pmax pmax
comp=Z,17nm,1.3s
PFO MLR MLR
comp=Z,800nm,20.0s
PFO **Pinyon Flats O** 80.98 325 LR LR 22 01 08.0
comp=Z,682nm,18.4s,baz=168,slow=31
W13A **Hualapai Mount** 81.11 328 P **P** **21 31 42.2 +2.0**
Q24A **Divide** 81.25 336 P **P** **21 31 42.9 +2.0**
Q24A IAmb IAmb 21 31 53.1
comp=Z,38nm,1.4s
JFWS **Jewell Farm** 81.33 348 P **P** **21 31 42.1 +1.3**
JFWS IAmb IAmb 21 31 51.5
comp=Z,30nm,1.2s
JFWS **Jewell Farm** 81.33 348 P **P** **21 31 42.1 +1.3**
JFWS pmax pmax
comp=Z,30nm,1.2s
ELS **Elsinore Mount** 81.45 325 IAMs_20 IAMs_20 22 01 20.2
comp=Z,1µm,18.0s
U15A **North Rim** 81.59 330 P **P** **21 31 44.7 +2.0**
U15A IAMs_20 IAMs_20 22 15 00.8
comp=Z,777nm,18.0s
L34A **Svendsen Farm,** 81.62 343 P **P** **21 31 43.4 +1.0**
L34A IAmb IAmb 21 32 10.2
comp=Z,33nm,1.1s
DELO **Deloro Mine** 81.65 357 P **P** **21 31 43.3 +0.8**
LONY **Lake Ozonia** 81.69 360 P **P** **21 31 43.8 +1.1**
LONY IAmb IAmb 21 31 52.8
comp=Z,61nm,1.4s
FRNY **Flat Rock** 81.90 0 P **P** **21 31 42.9 -0.9**
SADO **Sadowa** 81.96 356 P **P** **21 31 45.0 +0.8**
SADO IAmb IAmb 21 31 48.0
comp=Z,23nm,1.2s
SADO **Sadowa** 81.96 356 LR LR 22 11 37.2
comp=Z,466nm,19.5s,baz=166,slow=38
SMCO **Snowmass** 82.05 335 P **P** **21 31 47.8 +2.6**
SMCO IAmb IAmb 21 32 00.9
comp=Z,32nm,1.2s
V12A **Nelson** 82.05 328 P **P** **21 31 46.9 +1.9**
OGNE **Ogallala** 82.11 339 P **P** **21 31 46.1 +1.0**
ISCO **Idaho Springs** 82.16 336 P **P** **21 31 47.1 +1.4**
ISCO **Idaho Springs** 82.16 336 P **P** **21 31 47.1 +1.4**
ISCO pmax pmax
comp=Z,20nm,1.6s
PASC **Pasadena Art C** 82.24 324 IAMs_20 IAMs_20 22 02 18.9
comp=Z,750nm,18.0s
HMU **Henry Mountain** 82.30 332 P **P** **21 31 48.6 +2.1**
HMU IAmb IAmb 21 31 59.3
comp=Z,49nm,1.5s

HMU IAMs_20 IAMs_20 22 04 11.5
comp=Z,835nm,19.0s
KNB Kanab 82.31 330 P **P** **21 31 48.8 +2.4**
KNB IAmb IAmb 21 32 00.0
comp=Z,30nm,1.3s
KNB Kanab 82.31 330 P **P** **21 31 48.8 +2.4**
KNB pmax pmax
comp=Z,30nm,1.3s
KNB MLR MLR
comp=Z,700nm,22.0s
LBTB Lobatse 82.32 116 P **P** **21 31 46.0 -0.8**
LBTB Lobatse 82.32 116 P **P** **21 31 46.1 -0.8**
LBTB pmax pmax
comp=Z,66nm,1.1s
LBTB MLR MLR
comp=Z,2µm,19.0s
LBTB Lobatse 82.32 116 LR LR 22 06 56.4
comp=Z,1µm,18.3s,baz=232,slow=35
G62A West of Eustis 82.34 3 P **P** **21 31 47.2 +1.1**
GGN Saint George 82.44 5 P **P** **21 31 47.1 +0.6**
BRIGG Briggsdale 82.46 337 P **P** **21 31 48.7 +1.6**
BRIGG IAmb IAmb 21 32 16.2
comp=Z,30nm,1.4s
H43A Windswept, Lux 82.48 350 P **P** **21 31 47.1 +0.3**
H43A IAmb IAmb 21 33 48.4
comp=Z,47nm,1.4s
PKCU Pink Cliffs 82.48 330 P **P** **21 31 48.8 +1.4**
LCMT Little Creek M 82.48 329 P **P** **21 31 49.7 +2.4**
WTNK Soaring Height 82.52 328 P **P** **21 31 50.4 +3.1**
GSC Goldstone, Bar 82.55 326 P **P** **21 31 49.9 +2.3**
GSC Goldstone, Bar 82.55 326 P **P** **21 31 49.9 +2.3**
GSC pmax pmax
comp=Z,18nm,1.5s
GSC MLR MLR
comp=Z,500nm,22.0s
RAO Raoul Island 82.67 239 LR LR 21 57 44.2
comp=Z,199nm,21.8s,baz=100,slow=28
SHPR Sheep Range 82.85 328 P **P** **21 31 51.1 +2.0**
F63A Nahmakanta, Br 82.89 3 P **P** **21 31 49.6 +0.7**
SZCU Shurtz Canyon 82.92 330 P **P** **21 31 52.1 +2.5**
SZCU IAmb IAmb 21 32 03.3
comp=Z,42nm,1.6s
MTPU Mount Pierson 82.95 331 P **P** **21 31 51.5 +1.6**
MTPU IAmb IAmb 21 32 13.1
comp=Z,36nm,2.0s
I37A Lemond, Waseca 82.96 346 P **P** **21 31 50.1 +0.7**
CCAC Calif City Air 82.97 325 P **P** **21 31 52.4 +2.7**
CCAC IAMs_20 IAMs_20 22 02 35.4
comp=Z,881nm,18.0s
K30B Basset 83.07 341 P **P** **21 31 52.1 +2.1**
QSM Queen of Sheba 83.13 326 P **P** **21 31 52.2 +1.8**
GWY Greenwater Val 83.23 327 P **P** **21 31 53.4 +2.3**
SRU San Rafael Swe 83.25 332 P **P** **21 31 53.5 +2.3**
SRU San Rafael Swe 83.25 332 P **P** **21 31 53.5 +2.3**
SRU pmax pmax
comp=Z,10.0nm,1.1s
SRU MLR MLR
comp=Z,600nm,18.0s
N23A Red Feather La 83.26 336 P **P** **21 31 53.4 +2.0**
N23A IAmb IAmb 21 32 01.4
comp=Z,18nm,1.2s
TRQ Mont Tremblant 83.29 360 P **P** **21 31 51.0 -0.1**
Q16A Castle Valley 83.32 332 P **P** **21 31 53.5 +1.8**
Q16A IAmb IAmb 21 32 11.7
comp=Z,60nm,2.0s
LMN Caledonia Moun 83.33 6 P **P** **21 31 52.7 +1.5**
O20A White River Ci 83.34 334 P **P** **21 31 53.5 +1.8**
O20A IAmb IAmb 21 32 10.6
comp=Z,69nm,2.0s
MSU Marysvale 83.35 331 P **P** **21 31 54.2 +2.4**
MSU Marysvale 83.35 331 P **P** **21 31 54.2 +2.4**
MVU Marysvale 83.36 331 P **P** **21 31 53.8 +1.9**
BCW Bitter Crk WRg 83.44 324 P **P** **21 31 54.4 +2.2**
BCW IAMs_20 IAMs_20 22 01 52.8
comp=Z,675nm,19.0s
TCRU Three Creeks R 83.54 331 P **P** **21 31 54.7 +1.9**
TCRU IAmb IAmb 21 32 20.5
comp=Z,13nm,0.4s
PRN Pahroc Range 83.56 328 P **P** **21 31 55.3 +2.5**
PRN IAmb IAmb 21 32 12.7
comp=Z,21nm,1.2s
ISA Isabella, Lake 83.60 325 P **P** **21 31 54.9 +1.9**
ISA IAMs_20 IAMs_20 22 02 47.1
comp=Z,1µm,18.0s
ISA Isabella, Lake 83.60 325 P **P** **21 31 54.9 +1.9**
ISA pmax pmax
comp=Z,7.0nm,1.0s
ISA MLR MLR
comp=Z,1µm,18.0s
P18A Preston Nutter 83.60 333 P **P** **21 31 55.4 +2.3**
P18A IAmb IAmb 21 32 06.9
comp=Z,50nm,1.5s
G40A Rib Lake 83.61 349 P **P** **21 31 53.3 +0.6**
G40A IAmb IAmb 21 32 06.6
comp=Z,18nm,1.2s
P17A Butcher Ranch, 83.65 332 P **P** **21 31 55.3 +2.0**
P17A IAmb IAmb 21 32 05.2
comp=Z,27nm,1.5s
TMUT Trail Mountain 83.67 332 P **P** **21 31 54.7 +1.1**
TMUT IAmb IAmb 21 32 04.8
comp=Z,25nm,1.5s
TMUT IAMs_20 IAMs_20 22 05 55.6
comp=Z,665nm,18.0s
TPNV Topopah Spring 83.69 327 P **P** **21 31 55.1 +1.6**
TPNV IAMs_20 IAMs_20 22 02 07.3
comp=Z,691nm,20.0s
TPNV Topopah Spring 83.69 327 P **P** **21 31 55.1 +1.6**
TPNV pmax pmax
comp=Z,10.0nm,1.2s
TPNV MLR MLR
comp=Z,700nm,20.0s
WCT Wildcat Mounta 83.72 327 P **P** **21 31 55.6 +2.1**
E62A Clayton Lake 83.78 3 P **P** **21 31 54.4 +0.8**
F42A Maple Grove Fa 83.79 350 P **P** **21 31 55.5 +1.9**
F42A IAmb IAmb 21 32 03.9
comp=Z,19nm,1.1s
PQI Presque Isle 83.91 4 P **P** **21 31 55.0 +0.9**
E46A Sault Ste Mari 83.94 353 P **P** **21 31 54.2 -0.1**
E46A IAmb IAmb 21 32 21.1
comp=Z,36nm,1.2s
SPMN Marine on St. 84.01 347 P **P** **21 31 55.4 +0.6**
SPMN IAmb IAmb 21 31 56.4
comp=Z,25nm,1.4s
S11A Rachel 84.06 328 P **P** **21 31 56.8 +1.5**
S11A IAmb IAmb 21 32 14.0
comp=Z,38nm,1.5s
RDMU Red Mountain 84.19 334 P **P** **21 31 58.3 +2.3**
RDMU IAmb IAmb 21 32 08.6
comp=Z,26nm,1.2s
RDMU IAMs_20 IAMs_20 22 03 59.4
comp=Z,783nm,21.0s
GRAC Grapevine Rang 84.21 326 P **P** **21 31 59.6 +3.6**
GRAC IAmb IAmb 21 32 24.3
comp=Z,26nm,1.3s
E43A Lone Tree Farm 84.25 351 P **P** **21 31 57.8 +1.9**
D62A Allapoint, All 84.27 3 P **P** **21 31 57.1 +1.1**
GMN Gold Mountain 84.42 327 P **P** **21 31 59.8 +2.5**
MPU Maple Canyon 84.45 332 P **P** **21 31 59.1 +1.7**
MPU IAmb IAmb 21 32 17.2
comp=Z,54nm,1.9s
MPU IAMs_20 IAMs_20 22 05 42.4
comp=Z,787nm,18.0s
NLU North Lily Min 84.57 332 P **P** **21 31 60.0 +2.0**
NLU IAmb IAmb 21 32 11.2
comp=Z,24nm,1.5s
NLU IAMs_20 IAMs_20 22 05 09.5
comp=Z,738nm,20.0s
SUSD Miller 84.57 342 P **P** **21 31 59.3 +1.7**
SUSD IAmb IAmb 21 32 08.4
comp=Z,32nm,1.0s
R11B Troy Canyon, C 84.59 328 P **P** **21 31 59.6 +1.6**
R11B IAmb IAmb 21 32 12.5
comp=Z,45nm,1.9s
BSUT Blindstream Ca 84.59 333 P **P** **21 32 00.6 +2.4**
BSUT IAmb IAmb 21 32 11.2
comp=Z,20nm,1.3s
SPR3 Spring Creek 3 84.63 330 P **P** **21 32 00.1 +1.7**
SPR3 IAmb IAmb 21 32 11.4
comp=Z,28nm,1.4s
BATG Bathurst New B 84.64 5 P **P** **21 31 59.9 +2.0**
LMQ La Malbaie 84.68 3 P **P** **21 31 59.5 +1.5**
F36A Milaca 84.76 346 P **P** **21 31 59.1 +0.6**
F36A IAmb IAmb 21 32 09.0
comp=Z,23nm,1.2s
DSP Deep Springs 84.79 326 P **P** **21 32 00.9 +2.1**

MZP Montezuma Peak 84.81 327 P **P** **21 32 00.8 +1.5**
Q12A Willow Creek R 84.86 329 P **P** **21 32 02.2 +2.7**
K22A Casper 85.03 337 P **P** **21 32 02.1 +1.9**
K22A IAmb IAmb 21 34 33.1
comp=Z,17nm,0.7s
TPH Tonopah 85.05 327 P **P** **21 32 02.8 +2.4**
TPH Tonopah 85.05 327 P **P** **21 32 02.8 +2.4**
TPH pmax pmax
comp=Z,63nm,1.2s
TPH MLR MLR
comp=Z,2µm,19.0s
DUG Dugway, Tooele 85.06 331 P **P** **21 32 02.8 +2.5**
DUG IAmb IAmb 21 32 14.2
comp=Z,27nm,1.4s
DUG Dugway, Tooele 85.06 331 P **P** **21 32 02.8 +2.5**
DUG pmax pmax
comp=Z,27nm,1.4s
DUG MLR MLR
comp=Z,600nm,18.0s
LDAQ Lac Daran 85.07 2 P **P** **21 32 00.2 +0.1**
CTU Camp Tracy 85.09 332 IAMs_20 IAMs_20 22 06 13.2
comp=Z,650nm,18.0s
VLDQ Val d'Or 85.23 358 IAmb IAmb 21 32 11.7
comp=Z,25nm,1.3s
F33A 5 Mile Ranch, 85.29 345 P **P** **21 32 01.0 -0.2**
TCUT Toone Canyon 85.33 333 P **P** **21 32 02.5 +0.7**
MDPB Devils Postpil 85.50 326 P **P** **21 32 04.8 +2.0**
MDPB IAMs_20 IAMs_20 22 03 43.3
comp=Z,693nm,19.0s
BBGB Big Mountain B 85.54 324 IAMs_20 IAMs_20 22 05 39.4
comp=Z,628nm,18.0s
RSSD Black Hills 85.61 339 P **P** **21 32 03.9 +0.8**
RSSD Black Hills 85.61 339 P **P** **21 32 03.9 +0.8**
RSSD pmax pmax
comp=Z,109nm,1.7s
Q09A Carvers 85.67 328 IAMs_20 IAMs_20 22 07 37.7
comp=Z,829nm,18.0s
NV11 Mina Array Sit 85.75 327 P **P** **21 32 05.5 +1.6**
LHV Little Huntoon 85.76 326 P **P** **21 32 06.5 +2.9**
BGU Big Grassy Mou 85.77 331 P **P** **21 32 05.1 +1.2**
BGU IAMs_20 IAMs_20 22 06 34.2
comp=Z,655nm,18.0s
NVAR Mina Array Bea 85.81 327 P **P** **21 32 06.1 +1.8**
NVAR Mina Array Bea 85.81 327 P **P** **21 32 06.6 +2.3**
comp=Z,1.5nm,0.9s,baz=160,slow=5.8,SNR=7.9
NVAR LR LR 22 02 53.5
comp=Z,301nm,20.8s,baz=128,slow=30
comp=Z,1.5nm,0.9s
HWUT Hardware Ranch 85.82 333 P **P** **21 32 06.2 +2.0**
HWUT IAmb IAmb 21 32 16.7
comp=Z,32nm,1.2s
SPUT South Promonto 85.88 332 P **P** **21 32 06.4 +1.9**
SPUT IAmb IAmb 21 32 17.1
comp=Z,22nm,1.2s
SPUT IAMs_20 IAMs_20 22 06 10.3
comp=Z,642nm,18.0s
RYN Ryan 86.08 327 P **P** **21 32 07.1 +1.6**
BW06 Boulder Array 86.13 335 P **P** **21 32 06.9 +1.2**
BW06 IAMs_20 IAMs_20 22 05 27.7
comp=Z,772nm,20.0s
PD31 Pinedale Array 86.13 335 P **P** **21 32 07.6 +1.9**
PDAR Pinedale Array 86.13 335 P **P** **21 32 06.5 +0.7**
PDAR Pinedale Array 86.13 335 P **P** **21 32 07.3 +1.6**
comp=Z,8.6nm,1.2s,baz=149,slow=3.5,SNR=22
comp=Z,8.6nm,1.2s
KVN Kaiserville 86.24 327 P **P** **21 32 08.6 +2.3**
KVN Kaiserville 86.24 327 P **P** **21 32 08.6 +2.3**
KVN pmax pmax
comp=Z,13nm,1.3s
KVN MLR MLR
comp=Z,400nm,18.0s
WAKR Walker 86.38 326 P **P** **21 32 08.2 +1.1**
WAKR IAmb IAmb 21 32 28.1
comp=Z,38nm,1.7s
WAKR IAMs_20 IAMs_20 22 04 12.5
comp=Z,678nm,20.0s
HVU Hansel Valley 86.41 332 P **P** **21 32 08.3 +1.2**
HVU IAMs_20 IAMs_20 22 06 17.3
comp=Z,685nm,19.0s
HVU Hansel Valley 86.41 332 P **P** **21 32 08.3 +1.2**
HVU pmax pmax
comp=Z,11nm,1.2s
HVU MLR MLR
comp=Z,700nm,19.0s
CMB Columbia Colle 86.42 325 P **P** **21 32 08.8 +1.7**
CMB Columbia Colle 86.42 325 P **P** **21 32 08.8 +1.7**
CMB pmax pmax
comp=Z,13nm,1.7s
CMB MLR MLR
comp=Z,600nm,20.0s
EYMN Ely 86.43 348 P **P** **21 32 07.7 +0.9**
ELK Elko 86.48 330 P **P** **21 32 09.5 +2.0**
ELK Elko 86.48 330 P **P** **21 32 09.5 +2.0**
ELK pmax pmax
comp=Z,8.0nm,1.1s
ELK MLR MLR
comp=Z,400nm,21.0s
AHID Auburn Hatcher 86.67 334 P **P** **21 32 10.2 +1.9**
D32A Dogwood Acres, 86.68 345 P **P** **21 32 09.4 +1.4**
D32A IAmb IAmb 21 32 21.5
comp=Z,21nm,0.9s
YERR Yerington 86.69 326 P **P** **21 32 10.4 +1.9**
YERR IAMs_20 IAMs_20 22 04 45.7
comp=Z,707nm,19.0s
TOA0 Torodi Ar. Sit 86.90 71 P **P** **21 32 10.0 +0.2**
TORD Torodi Ar. Bea 86.90 71 P **P** **21 32 09.2 -0.7**
TORD IAMs_20 IAMs_20 22 10 35.5
comp=Z,1µm,19.0s
TORD Torodi Ar. Bea 86.90 71 LR LR 22 10 38.7
comp=Z,1µm,18.4s,baz=229,slow=36
PNTR Pine Nut 86.93 326 P **P** **21 32 11.4 +1.7**
PNTR IAMs_20 IAMs_20 22 04 51.1
comp=Z,657nm,20.0s
E28A Huff 86.99 342 P **P** **21 32 10.1 +0.5**
BMN Battle Mountai 87.02 328 IAMs_20 IAMs_20 22 06 47.5
comp=Z,594nm,18.0s
REDW Red Top Meadow 87.10 334 P **P** **21 32 12.1 +1.6**
SNOW Snow King Moun 87.16 334 P **P** **21 32 12.7 +2.0**
SNOW IAmb IAmb 21 32 44.9
comp=Z,24nm,1.4s
SNOW IAMs_20 IAMs_20 22 06 08.8
comp=Z,727nm,21.0s
LOHW Long Hollow 87.23 334 P **P** **21 32 12.6 +1.5**
LOHW IAMs_20 IAMs_20 22 06 12.0
comp=Z,875nm,21.0s
TPAW Teton Pass 87.25 334 P **P** **21 32 11.9 +0.7**
MPK Martis Peak 87.29 326 P **P** **21 32 13.6 +2.0**
MPK IAmb IAmb 21 32 25.9
comp=Z,23nm,1.4s
PAHR Pah Rah Range 87.34 327 P **P** **21 32 14.4 +2.8**
AFDM Forest Hills D 87.43 325 P **P** **21 32 14.0 +2.1**
AFDM IAMs_20 IAMs_20 22 05 12.3
comp=Z,624nm,18.0s
AGMN Agassiz Nation 87.55 346 IAmb IAmb 21 32 21.3
comp=Z,29nm,1.3s
FLWY Flagg Ranch 87.68 334 P **P** **21 32 15.3 +2.1**
FLWY IAmb IAmb 21 32 24.4
comp=Z,19nm,1.1s
FLWY IAMs_20 IAMs_20 22 06 28.8
comp=Z,686nm,20.0s
H17A Grant Village 87.91 335 IAMs_20 IAMs_20 22 06 49.9
comp=Z,2µm,20.0s
MDND Maddock 87.93 343 P **P** **21 32 15.7 +1.7**
YFT Old Faithful 88.05 335 IAMs_20 IAMs_20 22 07 14.6
comp=Z,965nm,21.0s
RLMT Red Lodge 88.12 336 P **P** **21 32 16.7 +1.4**
GDXM Geysers 88.16 324 P **P** **21 32 16.6 +1.2**
ORV Oroville 88.16 325 P **P** **21 32 18.8 +3.4**
ORV IAmb IAmb 21 32 28.2
comp=Z,25nm,1.6s
ORV IAMs_20 IAMs_20 22 04 59.8
comp=Z,683nm,18.0s
ORV Oroville 88.16 325 P **P** **21 32 18.8 +3.4**
ORV pmax pmax
comp=Z,25nm,1.7s
ORV MLR MLR
comp=Z,700nm,18.0s
YNR Norris Junctio 88.23 335 IAMs_20 IAMs_20 22 08 21.3
comp=Z,698nm,18.0s
YNM Yellowstone No 88.25 335 IAMs_20 IAMs_20 22 08 40.8
comp=Z,767nm,18.0s
YHH Holmes Hill 88.35 335 P **P** **21 32 18.1 +1.6**
HOPS Hopland Field 88.44 324 IAMs_20 IAMs_20 22 04 47.1
comp=Z,643nm,18.0s
HLID Hailey 88.56 332 P **P** **21 32 18.9 +1.5**

WVOR Wild Horse Val 89.28 329 P **P** **21 32 23.0 +2.3**
WVOR Wild Horse Val 89.28 329 P **P** **21 32 23.0 +2.3**
WVOR pmax pmax
comp=Z,18nm,1.4s
WVOR MLR MLR
comp=Z,500nm,18.0s
BOZ Bozeman (W) 89.33 335 **P** **21 32 22.5 +1.6**
BOZ Bozeman (W) 89.33 335 P **P** **21 32 22.5 +1.6**
BOZ pmax pmax
comp=Z,20nm,1.9s
ULM Lac du Bonnet 89.42 346 IAmb IAmb 21 32 31.8
comp=Z,32nm,1.3s
ULM Lac du Bonnet 89.42 346|| *e*P **P** **21 32 22.0 +1.0**
ULM Lac du Bonnet 89.42 346 P **P** **21 32 21.1 +0.1**
comp=Z,8.2nm,1.1s,baz=197,slow=4.1,SNR=7.7
comp=Z,8.2nm,1.1s
DGMT Dagmar 89.65 340 P **P** **21 32 23.7 +1.5**
DGMT IAmb IAmb 21 32 47.1
comp=Z,18nm,1.1s
KMRM Mail Ridge 89.71 324 P **P** **21 32 24.3 +1.6**
KMRM IAmb IAmb 21 32 37.7
comp=Z,28nm,1.3s
J08A Circle Bar Ran 89.98 329 P **P** **21 32 27.1 +3.2**
J08A IAmb IAmb 21 32 44.3
comp=Z,30nm,1.5s
KMPM Mount Pierce 90.06 324 P **P** **21 32 26.7 +2.3**
KMPM IAmb IAmb 21 32 38.2
comp=Z,20nm,1.2s
LSZ Lusaka 90.24 109 P **P** **21 32 27.2 +1.2**
LSZ Lusaka 90.24 109 P **P** **21 32 27.2 +1.2**
LSZ pmax pmax
comp=Z,52nm,1.2s
LSZ MLR MLR
comp=Z,2µm,18.0s
LSZ Lusaka 90.24 109 LR LR 22 10 55.5
comp=Z,502nm,18.9s,baz=215,slow=34
PLID Pearl Lake 90.46 332 P **P** **21 32 28.2 +1.9**
PLID IAmb IAmb 21 32 39.8
comp=Z,17nm,1.2s
LYMT Lyon Mountain 90.75 335 P **P** **21 32 29.3 +1.7**
K04D Chiloquin, OR 90.76 327 IAMs_20 IAMs_20 22 06 58.4
comp=Z,639nm,19.0s
BMO Blue Mountains 90.76 331 P **P** **21 32 29.9 +2.4**
BMO IAMs_20 IAMs_20 22 12 27.3
comp=Z,631nm,18.0s
BMO Blue Mountains 90.76 331 P **P** **21 32 29.9 +2.4**
BMO pmax pmax
comp=Z,6.0nm,1.3s
BMO MLR MLR
comp=Z,600nm,18.0s
EGMT Eagleton 90.85 337 P **P** **21 32 29.8 +1.9**
I07A Izee 91.00 329 P **P** **21 32 30.9 +2.2**
L02F Cave Junction 91.16 326 P **P** **21 32 31.4 +2.0**
PINE Pine Mountain 91.35 328 IAMs_20 IAMs_20 22 08 10.2
comp=Z,871nm,19.0s
G08A Pilot Rock 91.77 330 P **P** **21 32 33.5 +1.2**
G08A IAMs_20 IAMs_20 22 10 15.2
comp=Z,702nm,18.0s
I05D Terrebonne, OR 91.97 328 IAMs_20 IAMs_20 22 08 38.4
comp=Z,739nm,18.0s
E08A Dider Farm, El 92.81 331 IAMs_20 IAMs_20 22 09 11.5
comp=Z,557nm,19.0s
HAWA Hanford 92.91 330 P **P** **21 32 39.4 +2.1**
HAWA IAmb IAmb 21 32 50.9
comp=Z,20nm,1.4s
HAWA IAMs_20 IAMs_20 22 15 12.2
comp=Z,672nm,18.0s
D08A Wollman Farm, 93.22 331 P **P** **21 32 40.9 +2.2**
D08A IAmb IAmb 21 33 59.4
comp=Z,29nm,1.8s
MXC Moxie City 93.36 330 P **P** **21 32 42.3 +2.8**
MXC IAmb IAmb 21 32 51.8
comp=Z,9.9nm,0.7s
MXC IAMs_20 IAMs_20 22 12 58.3
comp=Z,603nm,18.0s
NEW Newport 93.55 333 LR LR 22 11 25.5
comp=Z,332nm,18.4s,baz=133,slow=33
LON Longmire 94.11 329 IAMs_20 IAMs_20 22 09 59.1
comp=Z,762nm,19.0s
STCH Steam Cracks 94.78 291 IAMs_20 IAMs_20 22 02 08.6
comp=Z,951nm,19.0s
MDT Midelt 95.23 52 LR LR 22 15 08.6
comp=Z,2µm,20.5s,baz=240,slow=35
NLWA Neilton Lookou 95.47 329 IAMs_20 IAMs_20 22 14 19.1
comp=Z,562nm,18.0s
TAM Tamanrasset 95.75 66 P **P** **21 32 51.6 +0.4**
TAM IAmb IAmb 21 32 53.5
comp=Z,21nm,1.2s
TAM IAMs_20 IAMs_20 22 12 33.3
comp=Z,1µm,20.0s
TAM Tamanrasset 95.75 66 P **P** **21 32 51.6 +0.4**
TAM pmax pmax
comp=Z,21nm,1.2s
TAM MLR MLR
comp=Z,1µm,20.0s
TOO Toolangi 96.90 211 IAMs_20 IAMs_20 22 09 06.6
comp=Z,1µm,19.0s
CAN Canberra 97.31 214 IAMs_20 IAMs_20 22 10 29.8
comp=Z,1µm,18.0s
DZM Mont Dzumac 97.90 235 LR LR 22 07 24.4
comp=Z,510nm,21.1s,baz=90,slow=29
PMRV Marv??o 97.97 46 *e*LR LR 22 13 00.2
comp=Z,1µm,20.0s
MTE Manteigas 98.54 45 *e*LR LR 22 11 46.4
comp=Z,2µm,20.0s
PGAV Gavieira, Arco 99.19 44 *e*LR LR 22 11 48.1
comp=Z,2µm,20.0s
MVO Moncorvo 99.34 45 *e*LR LR 22 12 14.8
comp=Z,2µm,20.0s
ARMA Armidale 100.10 219 IAMs_20 IAMs_20 22 11 33.9
comp=Z,918nm,19.0s
ESDC Sonseca Array 100.12 47 P **Pdif** **21 33 09.7 -0.6**
comp=Z,2.5nm,1.1s,baz=260,slow=3.3,SNR=8.5
ESDC LR LR 22 18 49.5
comp=Z,1µm,18.1s,baz=216,slow=36
comp=Z,2.5nm,1.1s
ES01 SONSECA Array 100.12 47 IAMs_20 IAMs_20 22 26 04.6
comp=Z,1µm,22.0s
CART Cartagena 100.56 51 IAMs_20 IAMs_20 22 16 55.2
comp=Z,641nm,22.0s
WTLY Watson Lake, Y 107.10 335 IAMs_20 IAMs_20 22 32 25.0
comp=Z,514nm,19.0s
R33M Jennings River 107.33 333 IAMs_20 IAMs_20 22 29 19.6
comp=Z,578nm,20.0s
WRGLY Wrigley 107.77 339 IAMs_20 IAMs_20 22 32 48.8
comp=E,653nm,22.0s
NWAO Narrogin (SRO) 109.20 190 IAMs_20 IAMs_20 22 21 13.0
comp=Z,831nm,18.0s
O30N Mendenhall 110.14 332 IAMs_20 IAMs_20 22 26 46.6
comp=Z,593nm,18.0s
N30M Aishikik Lake 110.96 333 IAMs_20 IAMs_20 22 27 18.9
comp=Z,607nm,19.0s
M30M Minto, Yukon 111.58 334 IAMs_20 IAMs_20 22 22 24.7
comp=Z,518nm,18.0s
MAYO Mayo, Yukon 111.94 335 IAMs_20 IAMs_20 22 31 22.0
comp=Z,540nm,18.0s
CESX Cesi 111.95 53 IAMs_20 IAMs_20 22 30 22.7
comp=Z,930nm,19.0s
L29M L29M 112.40 334 IAMs_20 IAMs_20 22 35 33.8
comp=Z,420nm,18.0s
J30M Hart River 112.72 336 IAMs_20 IAMs_20 22 22 13.4
comp=Z,520nm,19.0s
H31M Peel River 112.90 337 IAMs_20 IAMs_20 22 22 40.3
comp=Z,564nm,18.0s
I30M Mount Dempster 113.16 336 IAMs_20 IAMs_20 22 26 15.6
comp=Z,589nm,18.0s
RAGM Ragged Mountai 113.23 329 IAMs_20 IAMs_20 22 35 10.3
comp=Z,509nm,18.0s
L27K Beaver Creek, 113.70 333 IAMs_20 IAMs_20 22 26 34.2
comp=Z,456nm,18.0s
ASAR Alice Springs 113.77 208 PKKPbc PKKPbc 21 48 44.8 -0.8
comp=Z,0.9nm,0.8s,baz=336,slow=3.8,SNR=4.7
ASAR PKKPab **PKKPab 21 48 52.8 -3.3**
comp=Z,1.8nm,1.0s,baz=341,slow=4.9,SNR=7.7
F31M Tsiigehtchic 113.80 339 IAMs_20 IAMs_20 22 33 10.5
comp=Z,710nm,20.0s
EPYK Eagle Plains 114.00 337 IAMs_20 IAMs_20 22 37 15.4
comp=Z,661nm,19.0s
L26K Log Cabin Wild 114.24 332 IAMs_20 IAMs_20 22 37 42.9
comp=Z,578nm,18.0s
INK Inuvik 114.31 339 IAMs_20 IAMs_20 22 36 46.6
comp=Z,837nm,19.0s
K27K Chicken 114.36 333 IAMs_20 IAMs_20 22 32 39.3
comp=Z,448nm,20.0s
I28M Miner Creek 114.47 335 IAMs_20 IAMs_20 22 25 30.5
comp=Z,522nm,18.0s
A36M Sachs Harbour 114.85 345 IAMs_20 IAMs_20 22 32 03.5

comp=Z,882nm,19.0s
E29M Blow River 115.62 338 IAMs_20 IAMs_20 22 34 49.9
GERES GERESS Array B 115.71 47 PKP **PKPdf 21 38 06.5 -0.2**
comp=Z,3,8nm,1.1s,baz=338,slow=0.5,SNR=10
KHC Kasperske Hory 115.77 47⇓ *i* PKIKP **PKiKP 21 38 07.1 +0.4**
KHC pmax pmax
comp=Z,11nm,1.7s
M22K Willow 116.19 329 IAMs_20 IAMs_20 22 29 33.7
comp=Z,462nm,19.0s
E28M Babbage River 116.23 338 IAMs_20 IAMs_20 22 27 05.0
comp=Z,605nm,18.0s
CLL Collm 116.46 44 *i* PKIKP **PKiKP 21 38 09.6 +1.7**
CLL MLR MLR
comp=Z,1μm,20.9s
CLL Collm 116.46 44 *i* PKiKP **PKiKP 21 38 09.6 +1.7**
CLL *ex* x 21 38 18.0
CLL *e*PP **PP 21 39 17.0 +1.7**
CLL *e*PS **PS 21 49 00.0 +2.8**
CLL *e*PPS PPS 21 50 12.0
CLL *e*SS SS 21 55 12.0 -8.0
CLL AMS AMS 22 25 00.0
comp=Z,1μm,20.9s
ILAR Eielson Array 116.51 333 PKP **PKPdf 21 38 07.5 -0.1**
comp=Z,0.1nm,0.5s,baz=169,slow=4.8,SNR=3.0
BRG Berggiesshubel 116.79 45 *e*PKP **PKiKP 21 38 09.7 +1.1**
BRG Amp 21 38 11.3
comp=Z,8.9nm,1.4s
BRG Berggiesshubel 116.79 45 *e*PKIKP **PKiKP 21 38 09.7 +1.1**
BRG pmax pmax
comp=Z,9.0nm,1.4s
WRH Wood River Hil 116.80 332 IAMs_20 IAMs_20 22 37 35.5
comp=Z,622nm,19.0s
WR9 Warramunga Arr 116.88 210 IAMs_20 IAMs_20 22 29 00.7
comp=Z,963nm,20.0s
WR8 Warramunga Arr 116.89 210 IAMs_20 IAMs_20 22 18 05.9
comp=Z,915nm,22.0s
WR6 Warramunga Arr 116.91 210 IAMs_20 IAMs_20 22 21 03.4
comp=Z,823nm,20.0s
WR5 Warramunga Arr 116.92 210 IAMs_20 IAMs_20 22 21 03.7
comp=Z,799nm,19.0s
WC3 Warramunga Arr 116.94 210 IAMs_20 IAMs_20 22 18 19.2
comp=Z,1μm,22.0s
WR3 Warramunga Arr 116.94 210 IAMs_20 IAMs_20 22 22 01.3
comp=Z,823nm,20.0s
WR2 Warramunga Arr 116.95 210 IAMs_20 IAMs_20 22 18 18.6
comp=Z,1μm,22.0s
WR1 Warramunga Arr 116.97 210 IAMs_20 IAMs_20 22 18 07.9
comp=Z,1μm,22.0s
WRA Warramunga Arr 116.97 210 PKP **PKiKP 21 38 10.3 +0.3**
comp=Z,2.5nm,1.2s,baz=162,slow=1.9,SNR=3.6
WRAB Tennant Creek 116.97 210 IAMs_20 IAMs_20 22 22 02.9
comp=Z,744nm,20.0s
WC1 Warramunga Arr 116.98 210 IAMs_20 IAMs_20 22 18 42.3
comp=Z,891nm,22.0s
WB5 Warramunga Arr 117.02 210 IAMs_20 IAMs_20 22 18 09.2
comp=Z,875nm,21.0s
D27M Malcolm River 117.03 338 IAMs_20 IAMs_20 22 27 39.0
comp=Z,657nm,20.0s
WB6 Warramunga Arr 117.04 210 IAMs_20 IAMs_20 22 18 17.7
comp=Z,936nm,21.0s
WB7 Warramunga Arr 117.04 210 IAMs_20 IAMs_20 22 18 53.9
comp=Z,749nm,21.0s
WB0 Warramunga Arr 117.10 210 IAMs_20 IAMs_20 22 21 09.5
comp=Z,836nm,19.0s
KTH Kantishna Hill 117.41 331 IAMs_20 IAMs_20 22 39 48.9
comp=Z,528nm,18.0s
MORH Mrgy, Hungar 117.49 51⇑P **PKiKP 21 38 10.6 +0.5**
E25K Arctic Village 117.82 336 IAMs_20 IAMs_20 22 27 10.4
comp=Z,648nm,19.0s
F24K Squaw Lake 118.27 335 IAMs_20 IAMs_20 22 40 18.8
comp=Z,737nm,19.0s
D25K Kavik River 118.69 337 IAMs_20 IAMs_20 22 36 42.1
comp=Z,664nm,18.0s
BZS Buzias 119.10 53⇑P **PKiKP 21 38 13.7 +0.4**
BZS Buzias 119.10 53⇑PKIKP **PKiKP 21 38 13.7 +0.4**
SURR Surduc 119.48 53⇑P **PKiKP 21 38 14.7 +0.7**
GZR Gura Zlata 119.75 54⇑P **PKiKP 21 38 14.6 0.0**
GZR Gura Zlata 119.75 54⇑PKIKP **PKiKP 21 38 14.6 0.0**
E22K Anaktuvuk Pass 119.88 335 IAMs_20 IAMs_20 22 36 38.1
comp=Z,540nm,18.0s
ALN Alexandroupoli 120.04 60 IAMs_20 IAMs_20 22 32 00.7
comp=Z,821nm,19.0s
C23K Itkillik River 120.25 337 IAMs_20 IAMs_20 22 36 45.1
comp=Z,543nm,20.0s
DRGR 120.28 52⇑P **PKPdf 21 38 15.4 -0.1**
DRGR 120.28 52⇑PKIKP **PKPdf 21 38 15.4 -0.1**
MARR Marisel-Cluj 120.49 52⇑P **PKiKP 21 38 16.5 +0.4**
E21K Killik River 120.74 335 IAMs_20 IAMs_20 22 38 37.7
comp=Z,396nm,20.0s
ARR Arges 120.93 54⇑P **PKPdf 21 38 16.5 -0.4**
VOIR 121.23 54⇑P **PKiKP 21 38 17.7 +0.1**
VOIR 121.23 54⇑PKIKP **PKiKP 21 38 17.7 +0.1**
LOZB Loznitsa 121.43 57⇑P **PKiKP 21 38 18.4 +0.5**
DOPR Dopca 121.66 54⇑P **PKPdf 21 38 17.6 -0.5**
MLR Muntele Rosu 121.83 55⇑P **PKPdf 21 38 18.3 -0.3**
MLR Muntele Rosu 121.83 55⇑PKIKP **PKPdf 21 38 18.3 -0.3**
BURAR Bucovina Array 122.17 52⇑P **PKiKP 21 38 20.9 +1.5**
BURAR Bucovina Array 122.17 52 PKPdf **PKiKP 21 38 20.4 +1.0**
BURAR Bucovina Array 122.17 52⇑PKIKP **PKiKP 21 38 20.9 +1.5**
PLOR Plostina 122.43 54⇑P **PKiKP 21 38 20.9 +1.1**
PLOR Plostina 122.43 54⇑PKIKP **PKiKP 21 38 20.9 +1.1**
VRI Vrincioaia 122.48 54⇑P **PKPdf 21 38 17.0 -2.7**
VRI Vrincioaia 122.48 54⇑PKIKP **PKPdf 21 38 17.0 -2.7**
TESR Tescani 122.67 54⇑P **PKPdf 21 38 19.4 -0.7**
CSS Mathiatis 122.72 69 IAMs_20 IAMs_20 22 43 25.1
comp=Z,554nm,18.0s
CFR Carcaliu 123.14 56⇑P **PKPdf 21 38 20.3 -0.6**
CFR Carcaliu 123.14 56⇑PKIKP **PKPdf 21 38 20.3 -0.6**
BALJ Balqa 123.20 73 IAMs_20 IAMs_20 22 35 57.9
comp=Z,671nm,19.0s
MMAI Mount Meron Ar 123.43 72 PKP **PKiKP 21 38 22.4 +0.2**
comp=Z,6.2nm,0.9s,baz=270,slow=0.8,SNR=10
H11S2 WAKE ISLAND Hyd 124.05 268 T T 23 55 10.3
baz=117,slow=71,SNR=4.6
H11S1 WAKE ISLAND Hyd 124.06 268 T T 23 55 15.2
baz=117,slow=71,SNR=3.9
H11S3 WAKE ISLAND Hyd 124.07 268 T T 23 55 14.3
baz=117,slow=71,SNR=4.1
MILM Milestii Mici 124.21 54 *e*PKP **PKPdf 21 38 22.0 -0.9**
MILM *e*L L 22 34 05.0
MILM LRM MLR 22 35 13.0
comp=Z,1μm,17.5s
MILM Milestii Mici 124.21 54⇓P **PKPdf 21 38 21.4 -1.6**
MILM Milestii Mici 124.21 54 *e*PKIKP **PKPdf 21 38 22.0 -0.9**
MILM pmax pmax
comp=Z,90nm,1.7s
SORM Soroca 124.33 52⇓P **PKPdf 21 38 22.5 -0.6**
SORM Soroca 124.33 52⇓PKIKP **PKPdf 21 38 22.5 -0.6**
ANTO Ankara 124.33 63 IAMs_20 IAMs_20 22 34 46.5
comp=Z,889nm,21.0s
BR131 Keskin Array S 124.88 64*d* PKIKP **PKPdf 21 38 24.6 -0.1**
BRTR Keskin Array B 124.88 64 PKP **PKiKP 21 38 24.8 -0.3**
comp=Z,6.5nm,1.0s,baz=198,slow=3.3,SNR=21
KIEV Kiev 125.68 50⇑P **PKPdf 21 38 23.3 -2.3**
KIEV Kiev 125.68 50 PKPdf **PKPdf 21 38 25.3 -0.3**
KIEV Kiev 125.68 50 PKIKP **PKPdf 21 38 25.3 -0.3**
AKASG Malin Array Be 125.69 50 PKP **PKPdf 21 38 25.5 -0.2**
comp=Z,2.7nm,0.8s,baz=268,slow=2.5,SNR=10
AKASG PP **PP 21 40 14.9 -3.4**
comp=Z,2.2nm,0.8s,baz=256,slow=6.7,SNR=11
AKBB Malin Array Si 125.69 50⇑ *i* PKIKP **PKPdf 21 38 24.3 -1.4**
MNK Minsk 126.00 45 *i* PKIKP **PKPdf 21 38 25.4 -0.7**
MNK *i* 21 40 16.8
MNK *i* PPP PPP 21 42 58.7
MNK *i* 21 45 36.6
MNK *i* SS SS 21 57 20.9 -1.0
MNK *i* SSS SSS 22 02 00.6
MNK pmax pmax
comp=N,9.0nm,1.4s
MNK pmax pmax
comp=Z,19nm,1.1s
MNK pmax pmax
comp=E,3.0nm,1.1s
MNK MLR MLR
comp=N,415nm,17.0s
MNK MLR MLR
comp=Z,777nm,18.0s
MNK MLR MLR
comp=E,327nm,20.0s
VSU Vasula 126.39 40⇓ *i* PKIKP **PKiKP 21 38 27.1 -0.1**
VSU pmax pmax
comp=Z,32nm,1.0s
GAZ Gaziantep 126.49 68 IAMs_20 IAMs_20 22 36 45.8
comp=Z,653nm,21.0s
FINES FINESS Array B 126.74 36 PKP **PKiKP 21 38 27.7 -0.1**
comp=Z,8.5nm,1.1s,baz=276,slow=4.1,SNR=6.0
RAYN Ar Rayn 126.91 87 PKPdf **PKiKP 21 38 29.7 +0.3**
RAYN Ar Rayn 126.91 87 PKIKP **PKiKP 21 38 29.7 +0.3**
RAYN MLR MLR
comp=Z,1μm,19.0s
ARPR Arapgir-MALATY 128.03 66 IAMs_20 IAMs_20 22 44 46.4
comp=Z,481nm,19.0s
GURO Guroymak-BITLI 130.55 68 IAMs_20 IAMs_20 22 41 19.2
comp=Z,461nm,20.0s
APA Apatity 130.59 29⇓ *i* PKIKP **PKPdf 21 38 33.0 -1.5**
APA pmax pmax
comp=Z,11nm,1.0s
OBN Obninsk 131.03 45⇑ *i* PKIKP **PKiKP 21 38 36.9 +0.3**
OBN *e* 21 40 53.6
OBN *e*SS SS 21 58 52.7 +29
OBN pmax pmax
comp=Z,44nm,1.6s
OBN MLR MLR
comp=Z,1μm,19.0s
LVZ Lovozero 131.07 28 PKPdf **PKPdf 21 38 33.0 -2.4**
LVZ Lovozero 131.07 28*c* PKIKP **PKPdf 21 38 35.6 +0.1**
BCA Borcka 131.18 64⇑P **PKiKP 21 38 37.8 +0.4**
MMRI Maumere 131.69 202 PKPdf **PKPdf 21 38 36.3 -2.0**
MMRI IAMs_20 IAMs_20 22 45 11.9
comp=Z,467nm,18.0s
MOS Moscow 131.72 45 *i* PKIKP **PKPdf 21 38 35.6 -1.4**
MOS pmax pmax
comp=Z,77nm,1.7s
VSR Storozhevoye 131.91 51 *e*PKIKP **PKPdf 21 38 36.9 -0.6**
VSR pmax pmax
comp=Z,10.0nm,1.2s
LPSR Galich'ya Gora 132.01 49 *e*PKIKP **PKPdf 21 38 37.1 -0.5**
LPSR pmax pmax
comp=Z,30nm,1.5s
VORR Voronezh 132.02 50 *e*PKIKP **PKPdf 21 38 37.1 -0.6**
VORR pmax pmax
comp=Z,8.0nm,1.0s
NEUR Neytrino 132.46 62 *i* PKIKP **PKiKP 21 38 39.8 -0.4**
KIV Kislovodsk 132.63 61 PKPdf **PKiKP 21 38 41.6 +1.2**
KIV Kislovodsk 132.63 61 *i* PKIKP **PKiKP 21 38 40.2 -0.2**
KIV *e* 21 41 02.6
KIV *e*PS **PS 21 51 19.0 -1.7**
KIV pmax pmax
comp=Z,17nm,1.1s
KBZ Khabaz 132.72 62*c* PKIKP **PKPdf 21 38 39.6 +0.4**
KBZ Khabaz 132.72 62 PKP **PKPdf 21 38 39.4 +0.1**
comp=Z,6.2nm,1.0s,baz=261,slow=3.3,SNR=7.3
GNI Garni 133.05 67 PKPdf **PKiKP 21 38 42.0 +0.6**
GNI Garni 133.05 67 IAMs_20 IAMs_20 22 37 20.3
comp=Z,506nm,20.0s
GNI Garni 133.05 67*c* *i* PKIKP **PKiKP 21 38 41.6 +0.2**
KLMR Klimovskoe 133.13 38 *e*PKIKP **PKPdf 21 38 38.4 -1.1**
KLMR pmax pmax
comp=Z,41nm,1.5s
KLMR MLR MLR
comp=Z,1μm,17.0s
ZEI Tsey 133.18 63 *e*PKIKP **PKPdf 21 38 33.3 -7.2**
ZEI *e* 21 38 41.6
ZEI pmax pmax
comp=Z,4.0nm,1.3s
NAX Nakhchivan 133.31 68 PKIKP **PKiKP 21 38 41.7 -0.2**
VRH Novokhopyorsk 133.49 51 *e*PKIKP **PKPdf 21 38 40.9 +0.4**
VRH pmax pmax
comp=Z,10.0nm,1.2s
GANJ Ganja 134.35 67 PKIKP **PKiKP 21 38 43.5 -0.4**
ZKTA Zakatala 134.83 65 PKIKP **PKiKP 21 38 44.4 -0.4**
MNGR Mingechevir, A 134.94 67 PKIKP **PKiKP 21 38 44.6 -0.4**
SEKA Sheki 135.14 66 PKIKP **PKiKP 21 38 45.1 -0.4**
BILL Bilibino 135.17 332 PKPdf **PKiKP 21 38 46.3 +1.6**
BILL Bilibino 135.17 332 IAMs_20 IAMs_20 22 51 12.4
comp=Z,432nm,19.0s
BILL Bilibino 135.17 332 *e*PKIKP **PKiKP 21 38 45.0 +0.4**
LKRN Lenkeran, Azer 135.61 70 PKIKP **PKiKP 21 38 45.8 -0.6**
KAPI Kappang 135.85 200 IAMs_20 IAMs_20 22 40 23.9
comp=Z,402nm,18.0s
BELG Belogornoye 137.26 50⇓ *e*PKIKP **PKPdf 21 38 45.1 -2.3**
LUWI Luwuk 138.66 206 IAMs_20 IAMs_20 22 40 25.3
comp=Z,365nm,19.0s
PETK Petropavlovsk- 141.27 311 PKP **PKPdf 21 38 55.2 +0.4**
comp=Z,4.7nm,1.0s,baz=166,slow=6.7,SNR=2.2
SEY Seymchan 142.12 327⇑ *e*PKIKP **PKPdf 21 38 56.8 +0.8**
PALK Pallekele 142.21 136 PKPdf **PKPdf 21 38 54.5 -3.2**
PALK Pallekele 142.21 136 PKIKP **PKPdf 21 38 54.6 -3.2**
PALK MLR MLR
comp=Z,700nm,20.0s
GEYT Alibeck 142.47 74 PKhKP PKPpre 21 38 53.4
comp=Z,11nm,1.0s,baz=264,slow=7.0,SNR=17
GYA0B ALIBECK ARRAY 142.47 74 IAMs_20 IAMs_20 22 48 09.6
comp=Z,523nm,19.0s
BKNI Bangkinang 142.79 172 IAMs_20 IAMs_20 22 38 34.2
comp=Z,606nm,20.0s
GSI Gunungsitoli 143.22 166 PKPdf PKPbc 21 38 57.1 +0.7
ARU Arti 143.39 43 PKPpre 21 38 55.1
ARU Arti 143.39 43 *i* PKIKP PKPbc 21 38 55.6 0.0
ARU SS SS 22 00 42.2 -8.7
ARU MLR MLR
comp=Z,1μm,20.0s
ARU Arti 143.39 43 PKhKP PKPpre 21 38 55.4
comp=Z,7.1nm,0.7s,baz=268,slow=3.7,SNR=9.3
AKTO Aktyubinsk 143.75 53 PKhKP PKPpre 21 38 56.0
comp=Z,34nm,1.1s,baz=269,slow=3.1,SNR=37
TIXI Tiksi 143.75 348 PKPpre 21 38 55.9
TIXI Tiksi 143.75 348 IAMs_20 IAMs_20 22 49 18.0
comp=Z,466nm,21.0s
TIXI Tiksi 143.75 348 PKIKP PKPbc 21 38 55.9 -0.3
TIXI MLR MLR
comp=Z,500nm,21.0s
MA2 Magadan 143.95 322 PKPdf PKPbc 21 38 58.2 +1.0
MA2 Magadan 143.95 322⇓ *e*PKIKP PKPbc 21 38 58.0 +0.8
KSM Kuching 143.98 187 PKPdf **PKPdf 21 39 00.4 -0.5**
KSM IAMs_20 IAMs_20 22 51 01.4
comp=Z,555nm,19.0s
SVE Sverdlovsk 144.43 42 *i* PKIKP PKPbc 21 38 59.2 +0.4
SVE pmax pmax
comp=Z,41nm,1.5s
SVE MLR MLR
comp=Z,2μm,21.0s
MYKOM Kota Tinggi 144.47 176 IAMs_20 IAMs_20 22 44 58.2
comp=Z,630nm,19.0s
SBUM Sibu 144.70 191 PKPdf **PKPdf 21 39 02.2 +0.1**
SBUM IAMs_20 IAMs_20 22 42 02.8
comp=Z,281nm,20.0s
RPSI Rantau Prapat 144.82 168 PKPdf **PKPdf 21 39 02.2 -0.1**
PSI Prapat 144.92 168 PKIKP PKPbc 21 39 02.2 +0.4
PSI MLR MLR
comp=Z,300nm,19.0s
NRIK Noril'sk 146.51 12 PKPbc 21 39 05.0 0.0
NRIK Noril'sk 146.51 12⇓ *e*PKP2 **PKPbc 21 39 04.8 -0.1**
NRIK Noril'sk 146.51 12 PKPbc **PKPab 21 39 05.3 -0.6**
comp=Z,16nm,1.0s,baz=341,slow=2.3,SNR=20
IPM Ipoh 146.88 171 PKPdf **PKPdf 21 39 06.8 +0.9**
IPM IAMs_20 IAMs_20 22 41 14.2
comp=Z,572nm,19.0s
KKM Kota Kinabalu 147.38 199 PKPbc **PKPab 21 39 10.2 -0.7**
KKM IAMs_20 IAMs_20 22 44 38.3
comp=Z,422nm,21.0s
KULM Kulim 147.63 170 PKPbc 21 39 10.5 +0.7
HYB Hyderabad 148.73 122 *e*P **PKPdf 21 39 08.2 -0.6**
HYB *e*PKPbc **PKPbc 21 39 12.7 +0.1**
YUK Yuzh-Kuril'sk 149.28 295⇑ *i* PKP2 **PKiKP 21 39 14.1 -0.2**
KBL Kabul 150.12 84 PKPdf **PKPdf 21 39 12.1 +1.3**
KBL PKPbc **PKiKP 21 39 16.9 +0.2**
KBL IAMs_20 IAMs_20 22 52 19.1
comp=Z,542nm,20.0s
KBL Kabul 150.12 84 PKP2 **PKiKP 21 39 16.9 +0.2**
SRIT Nakonsritamara 150.71 167 PKPdf **PKPdf 21 39 11.2 -0.7**
SRIT **PKiKP 21 39 18.9 +0.7**
SRIT **pPKPab 21 39 26.1 -1.6**
BRVK Borovoye 150.80 46 PKPdf **PKPdf 21 39 12.4 +1.4**
BRVK Borovoye 150.80 46*c* *i* PKIKP **PKPdf 21 39 11.5 +0.6**
BVAR Borovoye Array 150.87 46 PKP **PKPdf 21 39 11.9 +0.8**
comp=Z,46nm,1.0s,baz=306,slow=3.5,SNR=15
BVAR PKPbc **PKiKP 21 39 17.5 +0.2**
comp=Z,46nm,1.0s,baz=306,slow=3.0,SNR=64
SIMJ Simiganj 151.00 76 PKPdf **PKPdf 21 39 13.0 +1.1**
SIMJ PKPbc **PKiKP 21 39 18.4 +0.2**
ERM Erimo 151.18 291 PKPdf **PKPdf 21 39 12.3 +0.5**
ERM PKPab **PKPab 21 39 27.2 +1.6**
ERM Erimo 151.18 291 PKIKP **PKPdf 21 39 12.3 +0.5**
ERM 21 39 27.2
YAK Yakutsk 151.33 337 PKiKP 21 39 17.7 -0.2
YAK Yakutsk 151.33 337⇓ *e*PKIKP **PKPdf 21 39 10.3 -1.1**
YSS Yuzh-Sakhalins 151.36 301 PKPbc **PKiKP 21 39 18.9 +0.4**
YSS Yuzh-Sakhalins 151.36 301 *i* PKIKP **PKiKP 21 39 18.9 +0.4**
YSS *e* 21 42 59.7
YSS *e*SS SS 22 02 29.3 +7.8
YSS pmax pmax
comp=Z,20nm,1.0s
BRLS Borolday 152.02 67 *e*PKP **PKPdf 21 39 13.6 +0.4**
baz=68
BRLS Borolday 152.02 67 *e*PKIKP **PKPdf 21 39 13.5 +0.4**
IUG Iuzhnay 152.14 69 *e*PKP **PKPdf 21 39 14.4 +0.9**
baz=69
IUG Iuzhnay 152.14 69 *e*PKIKP **PKPdf 21 39 14.4 +0.9**
KK31 Karatay Array 152.51 67 PKPdf **PKPdf 21 39 15.3 +1.5**
KK31 **PKiKP 21 39 21.1 0.0**
KK31 PKPab **PKPab 21 39 30.4 -0.8**
KK31 Karatay Array 152.51 67 PKIKP **PKiKP 21 39 21.1 0.0**
KK31 21 39 30.4
KKAR Karatay Array 152.51 67 PKPdf **PKPdf 21 39 14.8 +0.9**
KKAR Karatay Array 152.51 67 PKPbc **PKiKP 21 39 22.1 +1.0**
KKAR PKPab **PKPab 21 39 31.0 -0.3**
KKAR Karatay Array 152.51 67 PKIKP **PKPdf 21 39 14.8 +0.9**
BTK Batken 152.58 74 PKPdf **PKPdf 21 39 15.3 +1.1**
BTK PKPbc **PKiKP 21 39 22.8 +1.4**
BTK Batken 152.58 74 PKIKP **PKiKP 21 39 22.8 +1.4**
BTK MLR MLR
comp=Z,700nm,20.0s
DZA Taraz 153.11 67 *e*PKP **PKPdf 21 39 15.8 +1.0**
baz=67
DZA Taraz 153.11 67 *e*PKIKP **PKPdf 21 39 15.7 +1.0**
BRZS Berezniki 153.12 52 *e*PKP **PKPdf 21 39 15.6 +1.0**
baz=52
BRZS Berezniki 153.12 52 *e*PKIKP **PKPdf 21 39 15.5 +1.0**
NIL Nilore 153.20 88 PKPdf **PKPdf 21 39 16.3 +1.1**
NIL PKPbc **PKiKP 21 39 23.4 +0.6**
NIL PKPab **PKPab 21 39 35.7 +1.2**
NIL Nilore 153.20 88 PKIKP **PKiKP 21 39 23.4 +0.6**
NIL MLR MLR
comp=Z,700nm,18.0s
MJAR Matsushiro Arr 154.28 278 PKP **PKPdf 21 39 16.0 -0.7**
comp=Z,1.9nm,0.9s,baz=192,slow=2.2,SNR=4.7
MJAR PKPab **PKPab 21 39 40.4 +1.4**
comp=Z,5.6nm,1.1s,baz=132,slow=2.1,SNR=5.2
MAJO Matsushiro 154.29 278 IAMs_20 IAMs_20 23 04 54.3
comp=Z,358nm,19.0s
ARSB Arslanbob 154.31 71 PKPdf **PKPdf 21 39 18.3 +1.6**
ARSB Arslanbob 154.31 71 PKIKP **PKPdf 21 39 18.3 +1.6**
ARSB MLR MLR
comp=Z,200nm,20.0s
JGF Kuroka 154.75 275 PKPdf **PKPdf 21 39 17.2 -0.2**
JGF PKPab **PKPab 21 39 38.2 -2.8**
BTLS Baital 154.95 62 *e*PKP **PKPdf 21 39 18.4 +1.1**
baz=62
BTLS Baital 154.95 62 *e*PKIKP **PKPdf 21 39 18.4 +1.1**
INU Inuyama 154.96 275 IAMs_20 IAMs_20 22 38 19.9
comp=Z,480nm,20.0s
AAK Ala-Archa 155.44 68 PKPdf **PKPdf 21 39 19.7 +1.5**
AAK PKPbc pPKPbc 21 39 28.3 -2.5
AAK PKPab **PKPab 21 39 44.3 +0.3**
AAK IAMs_20 IAMs_20 23 02 16.8
comp=Z,519nm,21.0s
AAK Ala-Archa 155.44 68 PKP **PKPdf 21 39 18.4 +0.2**
comp=Z,5.2nm,1.0s,baz=225,slow=2.6,SNR=9.4
AAK PKPab **PKPab 21 39 44.0 0.0**
comp=Z,21nm,0.9s,baz=257,slow=4.5,SNR=12
FRU1 Bishkek 155.54 68 PKPdf **PKPdf 21 39 19.8 +1.6**
FRU1 PKPab **PKPab 21 39 44.4 +0.2**
FRU1 Bishkek 155.54 68 PKP2 **PKPab 21 39 44.4 +0.2**
FRU1 22 39 19.8
FRU1 MLR MLR
comp=Z,700nm,20.0s
KURBB Kurchatov Arra 156.45 47 PKP **PKPdf 21 39 19.0 0.0**
comp=Z,4.8nm,1.1s,baz=289,slow=2.0,SNR=20
KURBB PKPab **PKPab 21 39 48.4 +0.7**
comp=Z,14nm,1.1s,baz=292,slow=4.4,SNR=13
KURBB PP **PP 21 43 23.5 -2.4**
comp=Z,2.5nm,1.0s,baz=291,slow=6.8,SNR=6.0
KURK Kurchatov 156.46 47 PKPdf **PKPdf 21 39 20.2 +1.2**
KURK Kurchatov 156.46 47 PKIKP **PKPdf 21 39 19.0 -0.1**
KSH Kashi 156.49 76 PKP **PKPdf 21 39 20.7 +1.0**
KSH LR LR
comp=Z,570nm,21.0s
KSH LR LR
comp=Z,400nm,16.1s
KSH LR LR
comp=Z,890nm,20.3s
KUU Kurty 156.71 65 *e*PKP **PKPdf 21 39 19.8 +0.1**
baz=65
KUU Kurty 156.71 65 *e*PKIKP **PKPdf 21 39 19.7 +0.1**
CHKK Chushkaly 157.18 65 *e*PKP **PKPdf 21 39 20.9 +0.6**
baz=65
CHKK Chushkaly 157.18 65 *e*PKIKP **PKPdf 21 39 20.8 +0.6**
AAA Alma-Ata 157.19 66 *e*PKP **PKPdf 21 39 21.1 +0.7**
baz=66
AAA Alma-Ata 157.19 66 *e*PKIKP **PKPdf 21 39 21.0 +0.7**
TNSS Tian-Shan 157.23 67 *e*PKP **PKPdf 21 39 20.6 -0.3**
baz=67
TNSS Tian-Shan 157.23 67 *e*PKIKP **PKPdf 21 39 20.6 -0.3**
MDOK Medeo 157.29 66 *e*PKP **PKPdf 21 39 21.3 +0.6**
baz=66
MDOK Medeo 157.29 66 *e*PKIKP **PKPdf 21 39 21.2 +0.6**
TARG Taragay, Kyrgy 157.93 70 PKPdf **PKPdf 21 39 22.7 +0.9**
TARG **PKPab 21 39 55.0 0.0**
TARG Taragay, Kyrgy 157.93 70 PKIKP **PKPdf 21 39 22.7 +0.9**
ZAA0 Zalesovo Array 157.99 35 PKPdf **PKPdf 21 39 20.9 0.0**
ZAA0 PKPab **PKPab 21 39 55.5 +1.3**
ZALV Zalesovo Beam 157.99 35 PKPab **PKPab 21 39 55.1 +0.9**
ZALV Zalesovo Beam 157.99 35 PKP **PKPdf 21 39 20.4 -0.5**
comp=Z,13nm,1.0s,baz=278,slow=2.2,SNR=41
ZALV PKPab **PKPab 21 39 54.5 +0.3**
comp=Z,25nm,1.0s,baz=358,slow=0.8,SNR=5.0
TDK Taldyqorghan 158.02 61 *e*PKP **PKPdf 21 39 21.8 +0.5**
baz=61
TDK Taldyqorghan 158.02 61 *e*PKIKP **PKPdf 21 39 21.8 +0.5**
ZEA Zeya 158.05 325 *i* PKP2 **PKPab 21 39 57.4 +2.9**
ZEA *e* 21 43 43.7
ZEA *e* 22 03 36.8
ZEA pmax pmax
comp=Z,10.0nm,1.6s
ZEA pmax pmax
comp=Z,100nm,7.5s
SATY Saty 158.29 66 *e*PKP **PKPdf 21 39 22.5 +0.7**
baz=66
SATY Saty 158.29 66 *e*PKIKP **PKPdf 21 39 22.5 +0.7**
ZHN Zhinishke 158.30 66 *e*PKP **PKPdf 21 39 22.3 +0.4**
baz=66
ZHN Zhinishke 158.30 66 *e*PKIKP **PKPdf 21 39 22.2 +0.4**
KPKS Kokpek 158.45 65 *e*PKP **PKPdf 21 39 22.5 +0.6**
baz=65
KPKS Kokpek 158.45 65 *e*PKIKP **PKPdf 21 39 22.5 +0.6**
BOD Bodaibo 158.93 348 *e*PKP2 **PKPab 21 39 58.7 +0.6**
BOD pmax pmax
comp=Z,24nm,1.6s
SHLS Shalkode 159.05 66 *e*PKP **PKPdf 21 39 23.7 +0.9**
baz=66
SHLS Shalkode 159.05 66 *e*PKIKP **PKPdf 21 39 23.6 +0.9**
MAKZ Makanchi 159.97 55 PKPdf **PKPdf 21 39 23.7 +0.2**
MAKZ PKPab **PKPab 21 40 04.0 +0.8**
MAKZ Makanchi 159.97 55 PKIKP **PKPdf 21 39 23.7 +0.2**
HEH HeiHe 160.00 317 PKP **PKPdf 21 39 28.0 +4.6**
HEH LR LR
comp=Z,230nm,20.3s
HEH LR LR
comp=Z,450nm,19.4s
HEH LR LR
comp=Z,610nm,19.2s
CM31 Chiang Mai Arr 160.11 160 PKPdf **PKPdf 21 39 24.8 +0.3**
CM31 PKPab **PKPab 21 40 03.8 -0.5**
CMAR Chiang Mai Arr 160.11 160 PKPdf **PKPdf 21 39 25.5 +1.0**
CMAR **PKPab 21 40 04.0 -0.2**
CMAR Chiang Mai Arr 160.11 160 PKP **PKPdf 21 39 25.0 +0.5**
comp=Z,3.5nm,1.1s,baz=233,slow=2.6,SNR=15
CMAR PKPab **PKPab 21 40 04.5 +0.3**
comp=Z,5.3nm,1.1s,baz=217,slow=5.3,SNR=8.8
MK31 Makanchi Array 160.18 54 PKPab **PKPab 21 40 04.0 -0.1**
MK31 Makanchi Array 160.18 54 PKP2 **PKPab 21 40 04.0 -0.1**
MKAR Makanchi Array 160.18 54 PKPab **PKPab 21 40 04.3 +0.3**
MKAR Makanchi Array 160.18 54 PKP **PKPdf 21 39 23.8 0.0**
comp=Z,13nm,1.2s,baz=318,slow=1.6,SNR=26
MKAR PKPab **PKPab 21 40 04.5 +0.4**
comp=Z,7.4nm,0.9s,baz=285,slow=4.6,SNR=10
MKAR PP **PP 21 43 45.2 -1.3**
comp=Z,6.0nm,1.1s,baz=290,slow=3.6,SNR=9.5
CHTO Chiang Mai 160.45 160 PKPdf **PKPdf 21 39 25.7 +0.8**
CHTO **PKPab 21 40 06.0 +0.3**

CHTO	**Chiang Mai**	**160.45**	**160**	PKIKP	**PKPdf**	**21 39 25.7**	**+0.8**
CHTO						21 40 06.0	
MDJ	**Mudanjiang**	**160.82**	**299**	PKP	**PKPdf**	**21 39 23.9**	**-0.6**
MDJ				pPKP	pPKPdf	21 39 26.5	-1.5
MDJ				PP	**PP**	**21 43 49.3**	**-0.8**
MDJ				SKS	**SKSdf**	**21 46 30.6**	**+1.3**
MDJ				SS	**SS**	**22 04 03.3**	**-0.3**
MDJ				AMB	AMB		
	comp=Z,260nm,9.4s						
MDJ				LR	LR		
	comp=Z,310nm,16.1s						
MDJ				LR	LR		
	comp=Z,230nm,17.2s						
MDJ				LR	LR		
	comp=Z,640nm,21.3s						
QIZ	**Qiongzhong**	**161.34**	**192**	PKP	**PKPdf**	**21 39 23.4**	**-2.4**
QIZ				SS	SS	22 04 08.9	+2.1
QIZ				LR	LR		
	comp=Z,420nm,11.8s						
QIZ				LR	LR		
	comp=Z,350nm,13.3s						
QIZ				LR	LR		
	comp=Z,500nm,13.7s						
ZSN	**Zaisan**	**161.56**	**51**	*e*PKP	**PKPdf**	**21 39 26.2**	**+0.9**
	baz=50						
ZSN	**Zaisan**	**161.56**	**51**	*e*PKIKP	**PKPdf**	**21 39 26.1**	**+0.9**
BNX	**BinXian**	**161.98**	**304**	⇓PKP	**PKPdf**	**21 39 27.0**	**+1.3**
CRAI	**Chiangrai**	**162.17**	**163**		**PKPab**	**21 40 14.0**	**+0.7**
KSRS	**Korea Array**	**162.56**	**277**	PKP	**PKPdf**	**21 39 26.6**	**+0.1**
	comp=Z,1.8nm,1.0s,baz=163,slow=1.3,SNR=6.3						
KSRS				PKPab	**pPKPab**	**21 40 16.9**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=66,slow=2.9,SNR=2.9						
KSAR	**Wonju Array Be**	**162.59**	**277**		**PKPdf**	**21 39 26.1**	**-0.4**
KSAR	**Wonju Array Be**	**162.59**	**277**	PKIKP	**PKPdf**	**21 39 26.1**	**-0.4**
SHL	**Shillong**	**163.17**	**131**	PKPab	**PKPab**	**21 40 17.7**	**-0.2**
SHL	**Shillong**	**163.17**	**131**	PKP2	**PKPab**	**21 40 17.7**	**-0.2**
WMQ	**Urumqi**	**164.76**	**60**	PKP	**PKPdf**	**21 39 27.3**	**-1.2**
WMQ				pPKP	sPKPdf	21 39 36.7	+3.6
WMQ				PKPab	**PKPab**	**21 40 24.8**	**+0.5**
WMQ				PP	**PP**	**21 44 11.6**	**+0.5**
WMQ				AMB	AMB		
	comp=Z,880nm,8.3s						
WMQ				LR	LR		
	comp=Z,940nm,20.9s						
WMQ				LR	LR		
	comp=Z,650nm,17.5s						
WMQ				LR	LR		
	comp=Z,600nm,20.1s						
IRK	**Irkutsk**	**165.15**	**4**	*e*PKIKP	**PKPdf**	**21 39 28.8**	**+0.4**
IRK				*e*		21 40 26.8	
IRK				pmax	pmax		
	comp=Z,37nm,2.6s						
TNCH	**TengChong**	**166.09**	**151**	PKP	**PKPdf**	**21 39 27.1**	**-3.2**
TNCH				pPKP	pPKPdf	21 39 31.8	-2.0
TNCH				PKPab	**PKPab**	**21 40 31.0**	**+0.4**
TNCH				PP	**PP**	**21 44 18.4**	**+1.1**
TNCH				SS	SS	22 04 54.6	-2.2
TNCH				AMB	AMB		
	comp=Z,200nm,3.4s						
TNCH				LR	LR		
	comp=Z,200nm,14.8s						
TNCH				LR	LR		
	comp=Z,250nm,18.4s						
TNCH				LR	LR		
	comp=Z,480nm,18.8s						
ZAK	**Zakamensk**	**166.92**	**8**	*e*PKP2	**PKPab**	**21 40 33.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMI	**Kunming**	**167.42**	**167**	⇑PKP	**PKPdf**	**21 39 28.2**	**-3.2**
KMI				sPKP		21 39 36.6	
KMI				SKKS		21 51 15.6	
KMI				AMB	AMB		
	comp=Z,170nm,11.4s						
KMI				LR	LR		
	comp=Z,500nm,19.2s						
KMI				LR	LR		
	comp=Z,250nm,20.6s						
KMI				LR	LR		
	comp=Z,550nm,22.9s						
NJ2	**Nanjing**	**168.11**	**247**	*e*PKP	**PKPdf**	**21 39 30.0**	**-1.3**
PZH	**PanZhiHua**	**168.52**	**161**	PKP	**PKPdf**	**21 39 32.6**	**+0.6**
PZH				sPKP		21 39 39.6	
PZH				PKPab	**sPKPab**	**21 40 47.5**	**+1.7**
PZH				PP	**PP**	**21 44 34.5**	**+5.0**
PZH				SS	SS	22 05 17.4	-3.4
PZH				AMB	AMB		
	comp=Z,190nm,5.2s						
PZH				LR	LR		
	comp=Z,440nm,18.2s						
PZH				LR	LR		
	comp=Z,270nm,19.4s						
PZH				LR	LR		
	comp=Z,510nm,19.0s						
GYA	**Guiyang**	**169.03**	**183**	⇓PKP	**PKPdf**	**21 39 33.2**	**+0.9**
GYA				PP	**PP**	**21 44 33.4**	**+1.6**
GYA				SS	SS	22 05 31.6	+6.0
GYA				AMB	AMB		
	comp=Z,190nm,6.2s						
GYA				LR	LR		
	comp=Z,320nm,18.4s						
GYA				LR	LR		
	comp=Z,240nm,12.3s						
GYA				LR	LR		
	comp=Z,380nm,20.0s						
ULN	**Ulaanbaatar**	**169.55**	**356**	PKPab	**PKPab**	**21 40 48.0**	**+2.7**
ULN	**Ulaanbaatar**	**169.55**	**356**	PKP2	**PKPab**	**21 40 48.0**	**+2.7**
SONM	**Songino Array**	**169.61**	**358**	PKPdf	**PKPdf**	**21 39 31.5**	**-0.5**
SONM				PKPab	**pPKPab**	**21 40 47.2**	**-1.7**
SONM	**Songino Array**	**169.61**	**358**	PKP	**PKPdf**	**21 39 32.2**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=333,slow=0.3,SNR=7.0						
SONM				PKPab	**PKPab**	**21 40 46.2**	**+0.7**
	comp=Z,4.6nm,1.1s,baz=337,slow=3.5,SNR=9.9						
SONM				PP	**PP**	**21 44 35.3**	**+0.5**
	comp=Z,3.2nm,1.2s,baz=336,slow=3.3,SNR=4.7						
XLT	**XiLinHaoTe**	**169.97**	**313**	*e*PKP	**PKPdf**	**21 39 39.9**	**+7.7**
GOMU	**GeErMu**	**170.98**	**95**	PKP	**PKPdf**	**21 39 35.0**	**+1.6**
GOMU				PP	**PP**	**21 44 45.8**	**+2.1**
GOMU				AMB	AMB		
	comp=Z,560nm,8.0s						
GOMU				LR	LR		
	comp=Z,410nm,18.7s						
GOMU				LR	LR		
	comp=Z,600nm,18.2s						
GOMU				LR	LR		
	comp=Z,510nm,17.5s						
BJT	**Baijiatuau**	**171.61**	**291**	PKPdf	**PKPdf**	**21 39 33.3**	**+0.2**
BJT	**Baijiatuau**	**171.61**	**291**	PKIKP	**PKPdf**	**21 39 33.3**	**+0.2**
ENH	**Enshi**	**172.27**	**203**	PKPdf	**PKPdf**	**21 39 34.2**	**+0.4**
HNS	**HongShan**	**173.03**	**272**	⇓PKP	**PKPdf**	**21 39 35.0**	**+1.2**
HNS				PP	**PP**	**21 44 57.5**	**+4.2**
HNS				SKKS		21 51 41.4	
HNS				LR	LR		
	comp=Z,510nm,20.7s						
HNS				LR	LR		
	comp=Z,600nm,19.6s						
CD2	**Chengdu**	**173.23**	**164**	PKP	**PKPdf**	**21 39 35.6**	**+1.4**
CD2				PP	**PP**	**21 44 52.7**	**-0.1**
CD2				SS	SS	22 06 12.6	+5.6
CD2				LR	LR		
	comp=Z,370nm,17.7s						
CD2				LR	LR		
	comp=Z,150nm,13.1s						
CD2				LR	LR		
	comp=Z,700nm,19.4s						
HHC	**Hu-ho-hao-te**	**174.47**	**310**	*e*PKP	**PKPdf**	**21 39 34.0**	**-0.4**
HHC				pPKP	sPKPdf	21 39 44.0	+4.9
HHC				PKS	**PKSdf**	**21 43 04.3**	**-2.3**
HHC				PP	**PP**	**21 45 07.0**	**+7.2**
HHC				SKKS		21 51 44.0	
HHC				AMB	AMB		
	comp=Z,300nm,9.2s						
HHC				LR	LR		
	comp=Z,640nm,18.1s						
HHC				LR	LR		
	comp=Z,380nm,19.0s						
HHC				LR	LR		
	comp=Z,450nm,18.2s						
GTA	**Gaotai**	**174.79**	**66**	PKP	**PKPdf**	**21 39 35.5**	**+0.9**
GTA				pPKP	sPKPdf	21 39 42.7	+3.5
GTA				PKPab	**PKPab**	**21 41 09.8**	**+0.8**
GTA				PP	**PP**	**21 45 01.6**	**-0.2**
GTA				SKKS		21 51 47.2	
GTA				SS	**SS**	**22 06 20.5**	**-4.2**
GTA				AMB	AMB		
	comp=Z,570nm,7.3s						
GTA				LR	LR		
	comp=Z,500nm,19.3s						
GTA				LR	LR		
	comp=Z,390nm,18.2s						
GTA				LR	LR		
	comp=Z,530nm,21.8s						
TIY	**Taiyuan**	**174.85**	**275**	*e*PKP	**PKPdf**	**21 39 36.3**	**+1.7**
TIY				PP	**PP**	**21 45 09.7**	**+7.4**
TIY				SKKS		21 51 51.4	
TIY				SS	**SS**	**22 06 20.8**	**-4.8**
TIY				AMB	AMB		
	comp=Z,220nm,8.9s						
TIY				LR	LR		
	comp=Z,300nm,15.1s						
TIY				LR	LR		
	comp=Z,410nm,17.9s						
TIY				LR	LR		
	comp=Z,450nm,17.9s						
BTO	**Baotou**	**175.53**	**316**	*e*PKP	**PKPdf**	**21 39 29.5**	**-5.2**
BTO				pPKP	**sPKPdf**	**21 39 43.1**	**+3.7**
BTO				sPKP		21 39 48.3	
BTO				LR	LR		
	comp=Z,740nm,17.5s						
BTO				LR	LR		
	comp=Z,1μm,17.9s						
BTO				LR	LR		
	comp=Z,1μm,17.5s						
XAN	**Xi'an**	**175.83**	**216**	PKP	**PKPdf**	**21 39 36.6**	**+1.7**
XAN				PP	**PP**	**21 45 07.5**	**+1.6**
XAN				SS	SS	22 06 33.3	+0.4
XAN				AMB	AMB		
	comp=Z,440nm,5.0s						
XAN				LR	LR		
	comp=Z,750nm,18.6s						
XAN				LR	LR		
	comp=Z,340nm,19.4s						
XAN				LR	LR		
	comp=Z,1μm,20.0s						
LZH	**Lanzhou**	**177.83**	**128**	*e*PKP	**PKPdf**	**21 39 36.5**	**+1.1**
LZH				pPKP	sPKPdf	21 39 43.7	+3.7
LZH				PKPab	PKPab	21 41 22.0	-0.5
LZH				PP	**PP**	**21 45 13.5**	**-2.4**
LZH				SKKS		21 52 06.5	
LZH				SS	**SS**	**22 06 53.7**	**+0.7**
LZH				AMB	AMB		
	comp=Z,680nm,7.0s						
LZH				LR	LR		
	comp=Z,760nm,17.7s						
LZH				LR	LR		
	comp=Z,650nm,18.6s						
LZH				LR	LR		
	comp=Z,750nm,20.6s						

*ATH **08** 21:20:59.1, 34.93N×25.70E, h26km±3km, ML2.4/3, Error ellipse: s-maj=9.7km s-min=1.2km az=175.0*
*ISK **08** 21:20:59.4, 34.94N×25.68E, h4km, ML2.7/8*
ISC 08 21:21:00.5±1.4, 35.00N±0.08×25.71E±0.03, h23km±8km, n11, σ1§07/18, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.03**	**54**	P		**Pb**	**21 21 04.2**	**-0.4**
FRMA				S		**Sb**	**21 21 08.2**	**+0.9**
FRMA				AML	AML		21 21 09.0	
	comp=N,2520μm,0.4s							
FRMA				AML	AML		21 21 11.7	
	comp=E,1777μm,0.3s							
ZKR	**Zakros**	**0.43**	**74**	Pg		**Pb**	**21 21 08.9**	**-0.7**
ZKR				Sg		**Sb**	**21 21 16.6**	**+0.8**
ZKR	**Zakros**	**0.43**	**74**	P		**Pb**	**21 21 08.6**	**-1.0**
ZKR				S		**Sb**	**21 21 15.4**	**-0.3**
ZKR				AML	AML		21 21 17.8	
	comp=E,1751μm,0.5s							
ZKR				AML	AML		21 21 20.7	
	comp=N,690μm,0.4s							
HRKL	**Herakleio**	**0.59**	**302**	Pg		**Pb**	**21 21 12.0**	**-0.2**
HRKL				Sg		**Sb**	**21 21 20.6**	**+0.5**
IDI	**Anoyia**	**0.73**	**294**	Pg		**Pb**	**21 21 13.9**	**-0.7**
IDI				Sg		**Sn**	**21 21 24.7**	**-1.2**
IDI	**Anoyia**	**0.73**	**294**	P		**Pb**	**21 21 13.3**	**-1.4**
IDI				S		**Sb**	**21 21 23.5**	**-0.8**
IDI				AML	AML		21 21 26.1	
	comp=N,736μm,0.4s							
IDI				AML	AML		21 21 29.6	
	comp=E,466μm,0.4s							
KARP	**Karpathos**	**1.31**	**65**	Pn		**Pb**	**21 21 25.5**	**+1.0**
GVD	**Gavdhos**	**1.34**	**264**	Pn		**Pb**	**21 21 25.2**	**+0.2**
GVD				Sn		**Sb**	**21 21 43.9**	**+2.2**
SANT	**Santorini**	**1.38**	**352**	Pn		**Pb**	**21 21 27.1**	**+1.3**
IMMV	**Iera Moni Meta**	**1.49**	**289**	Pn		**Pb**	**21 21 27.9**	**+0.4**
APE	**Apeiranthos**	**2.07**	**356**	Pn		**Pb**	**21 21 36.9**	**-0.6**

*GUC **08** 21:37:05.7±0.6, 37.43S×74.40W, h25km±5km, ML4.3*
*IDC **08** 21:37:06.7±1.1, 37.41S×73.92W, h0km, mb4.2/4, mbtmp4.1/7, ML3.8/3, MS4.1/1, Error ellipse: s-maj=36.6km s-min=18.0km az=72.0*
*NEIC **08** 21:37:06.7±1.6, 37.44S±0.05×74.06W±0.08, h10km±2km, mb4.6/11, Error ellipse: s-maj=12.0km s-min=7.7km az=298.0*
ISC 08 21:37:07.0±0.7, 37.46S±0.04×74.10W±0.07, h10km, n90, σ1§11/81, mb4.5/7, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**0.96**	**170**	*e*P		**Pg**	**21 37 24.4**	**-1.1**
BI04				*e*S		**Sg**	**21 37 37.2**	**-0.8**
BI04				IAML			21 37 45.4	
	comp=E,10μm,0.5s							
BI05	**Punta Hualpn**	**1.02**	**46**	Pg		**Pg**	**21 37 25.4**	**-1.1**
BI05	**Punta Hualpn**	**1.02**	**46**	*e*P		**Pg**	**21 37 25.5**	**-1.1**
BI05				*e*S		**Sg**	**21 37 40.9**	**+1.2**
BI05				IAML			21 37 48.6	
	comp=E,8μm,0.4s							
LC02	**Puerto Saavedr**	**1.44**	**157**	Pn		**Pn**	**21 37 33.1**	**0.0**
LC02	**Puerto Saavedr**	**1.44**	**157**	*i* P		Pn	21 37 31.5	-1.7
LC02				*e*S		**Sn**	**21 37 51.7**	**-0.4**
BI02	**San Fabin de**	**2.40**	**71**	*e*P		**Pn**	**21 37 46.0**	**-0.4**
LR04	**Corral**	**2.47**	**168**			**Pn**	**21 37 46.4**	**-0.9**
LR04	**Corral**	**2.47**	**168**	*i* P		**Pn**	**21 37 46.3**	**-0.9**
LR04				*e*S		**Sn**	**21 38 12.4**	**-5.2**
LR03	**Panguipulli**	**2.57**	**148**	Pn		**Pn**	**21 37 48.3**	**-0.3**
LR03	**Panguipulli**	**2.57**	**148**	*e*P		**Pn**	**21 37 48.8**	**+0.1**
ML02	**Panimavida**	**2.74**	**53**			**Pn**	**21 37 50.4**	**-0.6**
ML02	**Panimavida**	**2.74**	**53**	IAML			21 38 41.7	
	comp=E,2μm,0.6s							
GO06	**Curarrehue**	**2.96**	**137**	Pn		**Pn**	**21 37 54.8**	**+0.7**
GO06	**Curarrehue**	**2.96**	**137**	⇑*i* P		**Pn**	**21 37 54.6**	**+0.5**
GO06				IAML			21 38 44.9	
	comp=N,740nm,1.1s							
GO05	**Huala**	**3.01**	**36**			**Pn**	**21 37 54.0**	**-0.7**
GO05	**Huala**	**3.01**	**36**	*i* P		**Pn**	**21 37 54.2**	**-0.5**
GO05				IAML			21 38 55.3	
	comp=E,498nm,0.7s							
LR05	**Currie**	**3.21**	**150**	Pn		**Pn**	**21 37 56.9**	**-0.5**
LR05	**Currie**	**3.21**	**150**	*e*P		**Pn**	**21 37 57.0**	**-0.5**
LR05				*e*S		**Sn**	**21 38 36.7**	**+0.9**
LR05				IAML			21 38 59.4	
	comp=E,837nm,0.2s							
BO03	**Pichilemu**	**3.43**	**31**	*e*P		**Pn**	**21 37 59.1**	**-1.3**
BO03				IAML			21 39 07.4	
	comp=N,205nm,0.6s							
BO02	**Sierra Bellavi**	**3.78**	**46**			**Pn**	**21 38 05.2**	**-0.1**
BO02	**Sierra Bellavi**	**3.78**	**46**	*e*P		**Pn**	**21 38 05.3**	**-0.1**
BO01	**Tunca**	**3.92**	**40**			**Pn**	**21 38 06.8**	**-0.4**
BO01	**Tunca**	**3.92**	**40**	*e*P		**Pn**	**21 38 06.6**	**-0.6**
LL05	**Los Muermos**	**3.97**	**173**			**Pn**	**21 38 07.9**	**+0.1**
MT01	**Popeta**	**4.27**	**34**			**Pn**	**21 38 11.1**	**-1.0**
MT01	**Popeta**	**4.27**	**34**	*e*P		**Pn**	**21 38 11.0**	**-1.0**
PLCA	**Paso Flores**	**4.28**	**141**	Pn		**Pn**	**21 38 11.9**	**-0.3**
PLCA	**Paso Flores**	**4.28**	**141**	Pn		**Pn**	**21 38 13.5**	**+1.3**
	comp=N,0.8nm,0.3s,baz=328,slow=16,SNR=5.0							
PLCA				Sn		**Sn**	**21 39 03.1**	**+0.9**
	comp=N,2.5nm,0.3s,baz=300,slow=16,SNR=3.4							
PLCA				Lg		Lg	21 39 20.1	
	comp=N,3.0nm,0.3s,baz=36,slow=18,SNR=2.8							
	comp=N,6.6nm,0.6s							
VA05	**Santo Domingo**	**4.30**	**29**			**Pn**	**21 38 11.1**	**-1.4**
MT09	**Talagante**	**4.46**	**35**			Pn	21 38 13.1	-1.7
MT09	**Talagante**	**4.46**	**35**	*i* P		**Pn**	**21 38 14.1**	**-0.8**
BO04	**La Punta**	**4.48**	**40**			**Pn**	**21 38 13.4**	**-1.5**
BO04	**La Punta**	**4.48**	**40**	*e*P		**Pn**	**21 38 14.3**	**-0.7**
MT12	**Pirque**	**4.71**	**39**	*i* P		Pn	21 38 16.1	-2.0
LMEL	**Las Melosas**	**4.80**	**42**			**Pn**	**21 38 18.1**	**-1.4**
LMEL	**Las Melosas**	**4.80**	**42**	*i* P		**Pn**	**21 38 19.5**	**0.0**
MT13	**San Alfonso**	**4.84**	**41**	Pn		**Pn**	**21 38 19.5**	**-0.4**
MT02	**Curacav**	**4.84**	**31**			Pn	21 38 18.2	-1.7
MT15	**Las Vizcachas**	**4.84**	**38**	*e*P		**Pn**	**21 38 18.9**	**-1.0**
VA01	**Torpederas**	**4.86**	**25**	Pn		**Pn**	**21 38 18.7**	**-1.4**
MT05	**Renca**	**4.90**	**35**			**Pn**	**21 38 20.4**	**-0.4**
MT03	**Universidad Ad**	**4.92**	**38**			Pn	21 38 19.4	-1.7
MT16	**CCHEN**	**4.97**	**37**			**Pn**	**21 38 21.0**	**-0.7**
LL01	**San Ignacio de**	**5.08**	**166**			**Pn**	**21 38 21.9**	**-1.2**
PEL	**Peldehue**	**5.13**	**34**			**Pn**	**21 38 23.6**	**-0.3**
PEL	**Peldehue**	**5.13**	**34**	*e*P		**Pn**	**21 38 23.1**	**-0.8**
FCH	**Farellones**	**5.17**	**38**	*e*P		**Pn**	**21 38 23.5**	**-1.1**
H03S1	**Juan Fernandez**	**5.32**	**311**	T		T	21 44 13.0	
	baz=130,slow=74,SNR=112							
H03S3	**Juan Fernandez**	**5.34**	**311**	T		T	21 44 16.7	
	baz=130,slow=74,SNR=93							
H03S2	**Juan Fernandez**	**5.34**	**311**	T		T	21 44 01.3	
	baz=130,slow=74,SNR=111							
VA06	**Catapilco**	**5.40**	**26**	Pn		**Pn**	**21 38 26.1**	**-1.5**
VA06	**Catapilco**	**5.40**	**26**	*e*P		Pn	21 38 25.7	-1.9
VA04	**Juan Fernndez**	**5.42**	**313**	Pn		**Pn**	**21 38 27.8**	**0.0**
VA03	**San Esteban**	**5.51**	**33**			**Pn**	**21 38 28.3**	**-1.0**
H03N3	**Juan Fernandez**	**5.61**	**314**	Pn		Pn	21 38 23.4	-6.8
	baz=358,slow=22							
H03N3				T		T	21 44 28.5	
	baz=122,slow=78,SNR=8.3							
H03N1	**Juan Fernandez**	**5.61**	**314**	Pn		**Pn**	**21 38 30.2**	**-0.1**
	baz=358,slow=22							
H03N1				T		T	21 44 24.0	
	baz=122,slow=78,SNR=6.4							
H03N2	**Juan Fernandez**	**5.63**	**314**	Pn		**Pn**	**21 38 30.5**	**+0.1**
	baz=358,slow=22							
H03N2				T		T	21 44 32.0	
	baz=122,slow=78,SNR=4.0							
GO07	**Milladeo Hill,**	**5.66**	**177**	Pn		**Pn**	**21 38 30.3**	**-0.7**
LL02	**Futaleuf**	**5.98**	**164**	Pn		Pn	21 38 34.0	-1.5
CO02	**Combarbal**	**6.75**	**23**			Pn	21 38 44.2	-2.0
CO06	**Fray Jorge**	**7.07**	**18**	Pn		**Pn**	**21 38 48.9**	**-1.6**
CO03	**El Pedregal**	**7.18**	**24**			Pn	21 38 50.2	-2.0
CO01	**Juntas del Tor**	**8.17**	**25**			**Pn**	**21 39 04.8**	**-1.1**
COYC	**Coyhaique**	**8.24**	**170**	Pn		**Pn**	**21 39 06.3**	**-0.3**
AC05	**El Transito**	**9.18**	**22**			**Pn**	**21 39 18.0**	**-1.6**
TRQA	**Tornquist**	**9.62**	**97**			**Pn**	**21 39 25.2**	**-0.2**
AY03	**Cochrane**	**9.85**	**174**			**Pn**	**21 39 29.2**	**+0.7**
LVC	**Limon Verde**	**15.46**	**18**	Pn		**Pn**	**21 40 45.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=270,slow=12,SNR=2.1							
	comp=N,3.6nm,0.9s							
PB07	**IPOC Station P**	**16.10**	**14**	P		**Pn**	**21 40 56.2**	**+2.6**
PB07				lAmb	lAmb		21 41 19.1	
	comp=Z,44nm,0.5s							
PB09	**IPOC Station P**	**16.17**	**16**			**Pn**	**21 40 53.7**	**-0.7**
PB09				lAmb	lAmb		21 41 11.1	
	comp=Z,82nm,0.9s							
PB01	**IPOC Station P**	**16.84**	**15**	P		**Pn**	**21 41 04.9**	**+1.9**
PB08	**IPOC Station P**	**17.79**	**15**			**Pn**	**21 41 14.7**	**-0.4**
PB08				lAmb	lAmb		21 41 17.9	
	comp=Z,11nm,0.5s							
CPUP	**Villa Florida**	**18.02**	**57**			**Pn**	**21 41 16.2**	**-1.4**
CPUP	**Villa Florida**	**18.02**	**57**	P		**Pn**	**21 41 17.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=229,slow=8.5,SNR=3.6							
	comp=Z,1.2nm,0.4s							
PB11	**IPOC Station P**	**18.06**	**14**			**Pn**	**21 41 17.9**	**-0.3**
PB11				lAmb	lAmb		21 41 38.3	
	comp=Z,53nm,1.1s							
GO01	**Chusmiza**	**18.24**	**15**			**Pn**	**21 41 20.6**	**-0.1**
LPAZ	**La Paz**	**21.74**	**16**	P		**P**	**21 41 59.0**	**-0.2**
AQDB	**Aquidauana**	**23.29**	**48**	P		**P**	**21 42 13.8**	**-1.1**
AQDB				lAmb	lAmb		21 42 25.9	
	comp=Z,12nm,0.9s							
TRCB	**Terra Rica**	**23.55**	**58**	P		**P**	**21 42 15.6**	**-2.0**
SIV	**San Ignacio**	**24.29**	**32**	LR		LR	21 53 34.8	
	comp=Z,482nm,21.3s,baz=196,slow=41							
PTLB	**Pontes e Lacer**	**25.62**	**35**	P		**P**	**21 42 36.8**	**+0.2**
PTLB				lAmb	lAmb		21 42 45.0	
	comp=Z,11nm,1.0s							
SPB	**Sao Paulo**	**26.70**	**66**	P		**P**	**21 42 46.0**	**-0.4**
SPB				lAmb	lAmb		21 42 48.5	
	comp=Z,33nm,1.4s							
SNAA	**Sanae**	**49.05**	**157**	P		**P**	**21 45 55.0**	**+1.2**
	comp=Z,5.5nm,0.9s,baz=328,slow=9.7,SNR=4.3							
	comp=Z,5.5nm,0.9s							
QSPA	**South Pole Qui**	**52.78**	**180**	P		**P**	**21 46 23.8**	**+1.8**
	comp=Z,4.7nm,1.0s,baz=154,slow=3.2,SNR=5.6							
	comp=Z,4.7nm,1.0s							
TXAR	**Lajitas Array**	**71.99**	**333**	P		**P**	**21 48 32.1**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=134,slow=5.2,SNR=2.9							
	comp=Z,0.2nm,0.3s							
DBIC	**Dimbokro**	**77.86**	**72**	P		**P**	**21 49 05.7**	**+0.6**
	comp=Z,7.5nm,1.2s,baz=234,slow=13,SNR=2.1							
	comp=Z,7.5nm,1.2s							
BVAR	**Borovoye Array**	**150.92**	**46**	PKPbc		**PKPbc**	**21 56 59.8**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=292,slow=4.7,SNR=8.1							
KURBB	**Kurchatov Arra**	**156.49**	**47**	PKPab		**PKPab**	**21 57 30.6**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=282,slow=4.9,SNR=4.3							
ZALV	**Zalesovo Beam**	**158.03**	**35**	PKPab		**PKPab**	**21 57 37.3**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=317,slow=8.3,SNR=4.7							
MKAR	**Makanchi Array**	**160.22**	**54**	PKPab		**PKPab**	**21 57 47.2**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=230,slow=3.0,SNR=6.2							

TAP 08 21:40:42.5, 24.25N×121.70E, h11km, ML1.9, 1C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.09**	**27**	P		Pg	21 40 45.4	+0.3
	baz=25							
EAHA				S		Sg	21 40 47.4	+0.4
	baz=25							
ETL	**Fush Village**	**0.11**	**216**	*e*P		Pg	21 40 45.7	+0.3
	baz=217							
NACB	**Ninganchiao**	**0.12**	**230**	*e*P		Pg	21 40 45.7	+0.2
	baz=223							
ENA	**Nanau**	**0.18**	**13**	⇓*i* P		Pg	21 40 46.8	+0.3
	baz=14							
ENA				*i* S		Sg	21 40 49.6	+0.4
	baz=14							
TWD	**Chiawan**	**0.19**	**208**	⇑*i* P		Pg	21 40

CHGB Renai 0.51 248 *eP* Pg 21 40 53.0 +0.5
baz=243
FUSB Fushanzhiwuyua 0.52 349 *eP* Pb 21 40 53.4 -0.2
baz=348
FUSB *eS* Sb 21 41 00.3 -0.8
baz=348
WARBT Fenglin Townsh 0.60 208 P Pb 21 40 55.1 +0.1
baz=216
WARBT *eS* Sb 21 41 03.2 -0.3
baz=216

IDC 08 21:41:21.4±3.2, 30.90S×179.52W, h0km, mb3.8/2, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=80.1km s-min=51.0km az=135.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**14.81**	**208**	Pn	Pn	21 44 51.6	-0.5
	0.8nm,0.3s,baz=178,slow=21,SNR=1.6						
	1.9nm,0.3s						
ASAR	**Alice Springs**	**41.78**	**268**	P	P	21 49 12.1	-0.8
	0.4nm,0.4s,baz=107,slow=7.5,SNR=4.7						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**42.81**	**274**	P	P	21 49 21.6	+0.4
	0.6nm,0.3s,baz=113,slow=8.0,SNR=19						
	0.6nm,0.3s						
XLT	**XiLinHaoTe**	**94.85**	**319**	SS	S	22 05 47.9	-12
XLT				LR	LR		
	comp=N,11nm,11.8s						
XLT				LR	LR		
	comp=E,370nm,20.1s						
XLT				LR	LR		
	comp=Z,290nm,22.6s						
FINES	**FINESS Array B**	**145.15**	**339**	PKPbc	PKPbc	22 00 58.8	-0.9
	comp=Z,2.1nm,0.8s,baz=50,slow=4.3,SNR=8.7						

*IDC **08** 21:43:37.4±1.4, 50.31N×174.54W, h0km, mb3.8/15, mbtmp3.8/16, ML2.8/1, MS4.6/6, Error ellipse: s-maj=40.6km s-min=17.2km az=7.0*
*NEIC **08** 21:43:41.5±1.5, 50.50N±0.06×174.60W±0.08, h24km±9km, mb3.8/67, ML3.6(AEIC), Error ellipse: s-maj=8.4km s-min=7.3km az=201.0*
*AEIC **08** 21:43:42.2±1.5, 50.54N±0.09×174.61W±0.08, h11km±3km, Error ellipse: s-maj=13.3km s-min=7.4km az=169.0*
ISC 08 21:43:40.7±4.4, 50.48N±0.09×174.55W±0.05, h18km±29km, n122, σ0s96/124, mb3.9/29, MS4.7/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.74**	**7**		**Pn**	**21 44 09.0**	**-0.9**
ATKA					**Sn**	**21 44 30.7**	**-1.0**
KOFP	**Korovin Flat P**	**1.82**	**9**		**Pn**	**21 44 10.9**	**-0.3**
KOFP					**Sn**	**21 44 33.8**	**+0.1**
GSMY	**Great Sitkin M**	**1.83**	**329**		**Pn**	**21 44 10.7**	**-0.6**
GSCK	**Great Sitkin C**	**1.84**	**327**		**Pn**	**21 44 10.8**	**-0.5**
GSCK					**Sn**	**21 44 33.6**	**-0.5**
KOKL	**Mount Kliuchef**	**1.86**	**7**		**Pn**	**21 44 11.4**	**-0.3**
KOKL					**Sn**	**21 44 34.7**	**-0.1**
GSTR	**Great Sitkin T**	**1.87**	**330**		**Pn**	**21 44 11.1**	**-0.8**
ADK	**Adak**	**1.94**	**317**		**Sn**	**21 44 34.5**	**-2.2**
ADK	**Adak**	**1.94**	**317**		**Pn**	**21 44 11.8**	**-1.0**
ADAG	**Mount Adagdak**	**1.98**	**320**		**Pn**	**21 44 13.2**	**-0.1**
KIWB	**Kanaga Island**	**2.14**	**311**		**Pn**	**21 44 15.0**	**-0.5**
KIRH	**Kanaga Island**	**2.14**	**313**		**Pn**	**21 44 15.2**	**-0.3**
KIKV	**Kanaga Island**	**2.16**	**311**		**Pn**	**21 44 15.5**	**-0.3**
KIKV					**Sn**	**21 44 41.9**	**-0.3**
KICM	**Kanaga Island**	**2.20**	**312**		**Pn**	**21 44 15.9**	**-0.5**
TAPA	**Tanaga Point A**	**2.45**	**304**		**Pn**	**21 44 19.6**	**-0.3**
TAFP	**Tanaga Falls P**	**2.59**	**305**		**Pn**	**21 44 21.8**	**+0.1**
TAFP					**Sn**	**21 44 52.2**	**-0.5**
TANO	**Tanaga North**	**2.67**	**304**		**Pn**	**21 44 23.4**	**+0.7**
GANE	**Gareloi Northe**	**2.98**	**298**		**Pn**	**21 44 27.1**	**0.0**
GANO	**Gareloi North**	**3.00**	**298**		**Pn**	**21 44 27.2**	**-0.1**
GANO					**Sn**	**21 45 02.3**	**-0.4**
AMKA	**Amchitka**	**3.99**	**285**		**Pn**	**21 44 40.3**	**-0.6**
NIKH	**Nikolski High**	**4.33**	**53**		**Pn**	**21 44 44.8**	**-0.7**
OKFG	**Magazine Ridge**	**5.04**	**52**		**Pn**	**21 44 56.0**	**+0.6**
MAPS	**Pakushin South**	**5.75**	**52**		**Pn**	**21 45 04.5**	**-0.5**
MSW	**Makushin Switc**	**5.88**	**51**		**Pn**	**21 45 06.8**	**-0.1**
UNV	**Unalaska Valle**	**5.99**	**53**		**Pn**	**21 45 08.3**	**+0.1**
SDPT	**Sand Point**	**9.79**	**55**	Pn	**Pn**	**21 46 00.4**	**-0.1**
N18K	**Kilae Creek**	**14.62**	**39**	Pn	**Pn**	**21 47 06.1**	**-0.4**
KDAK	**Kodiak Island**	**14.76**	**52**	Pn	**Pn**	**21 47 05.0**	**-3.3**
KDAK	**Kodiak Island**	**14.76**	**52**	Pn	**Pn**	**21 47 04.7**	**-3.6**
	0.4nm,0.3s,baz=54,slow=0.8,SNR=8.0						
J16K	**Anvik River**	**14.87**	**25**	P	**P**	**21 47 16.2**	**+0.8**
SVW2	**Sparrevohn**	**14.99**	**38**	Pn	**Pn**	**21 47 11.6**	**+0.1**
K17K	**Iditarod**	**15.11**	**30**		**Pn**	**21 47 15.8**	**+2.8**
N19K	**Bonanza Creek**	**15.27**	**40**	Pn	**Pn**	**21 47 14.7**	**-0.5**
L18K	**Granite Mounta**	**15.30**	**33**	Pn	**Pn**	**21 47 15.9**	**+0.4**
L18K				IAmb	IAmb	21 47 21.3	
	comp=Z,4.4nm,1.1s						
L19K	**White Mountain**	**15.93**	**35**		**Pn**	**21 47 22.9**	**-0.9**
L19K				IAmb	IAmb	21 47 25.5	
	comp=Z,6.4nm,1.3s						
M19K	**Big River Lodg**	**15.93**	**36**		**Pn**	**21 47 21.9**	**-1.9**
F15K	**North Star Dit**	**16.10**	**15**	Pn	**Pn**	**21 47 24.3**	**-1.6**
J18K	**Innoko River**	**16.15**	**30**	P	**P**	**21 47 29.3**	**-0.4**
BRLK	**Bradley Lake**	**16.33**	**46**	Pn	**Pn**	**21 47 26.9**	**-2.0**
BRLK				IAmb	IAmb	21 47 27.0	
	comp=Z,13nm,1.3s						
J19K	**Poorman**	**16.87**	**30**	P	**P**	**21 47 37.5**	**-0.1**
K20K	**Telida**	**16.96**	**33**		**Pn**	**21 47 36.5**	**-0.2**
H18K	**Honhosa River**	**16.96**	**24**	P	**P**	**21 47 39.7**	**+1.1**
SUA	**Susitna One**	**17.16**	**41**	Pn	**Pn**	**21 47 38.6**	**-0.8**
PETK	**Petropavlovsk-**	**17.32**	**289**	P	**Pn**	**21 47 42.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=85,slow=18,SNR=1.6						
	comp=Z,3.7nm,0.9s						
F17K	**Baldwin Pennin**	**17.38**	**18**	P	**P**	**21 47 43.9**	**+0.7**
F17K				IAmb	IAmb	21 47 57.3	
	comp=Z,9.4nm,1.4s						
RC01	**Rabbit Creek A**	**17.41**	**43**	Pn	**Pn**	**21 47 40.0**	**-2.5**
RC01				IAmb	IAmb	21 47 57.2	
	comp=Z,7.5nm,1.3s						
J20K	**Nowinta River**	**17.47**	**31**	P	**P**	**21 47 44.3**	**+0.1**
CAST	**Castle Rocks**	**17.70**	**34**	P	**P**	**21 47 48.0**	**+1.2**
GHO	**Glory Hole Cre**	**18.07**	**42**	Pn	**Pn**	**21 47 49.1**	**-1.5**
GHO				IAmb	IAmb	21 47 53.5	
	comp=Z,8.2nm,1.4s						
KTH	**Kantishna Hill**	**18.20**	**35**		**Pn**	**21 47 52.3**	**+0.1**
SML	**Sawmill**	**18.34**	**42**	P	**Pn**	**21 47 52.5**	**-1.4**
SML				IAmb	IAmb	21 47 55.7	
	comp=Z,9.2nm,1.3s						
HIN	**Hinchinbrook I**	**18.60**	**47**	P	**P**	**21 47 55.5**	**-1.3**
SCM	**Sheep Creek Mo**	**18.78**	**42**	P	**P**	**21 47 58.2**	**-0.6**
SCM				IAmb	IAmb	21 48 11.5	
	comp=Z,11nm,1.5s						
IMAR	**Indian Mountai**	**18.85**	**27**	P	**P**	**21 47 59.5**	**+0.1**
H21K	**Melozitna Rive**	**18.90**	**28**	P	**Pn**	**21 48 02.0**	**+1.3**
E19K	**Redstone River**	**19.09**	**21**	P	**P**	**21 48 02.5**	**+0.5**
KLU	**Klutina**	**19.26**	**44**	P	**P**	**21 48 02.2**	**-1.8**
KLU				IAmb	IAmb	21 48 14.2	
	comp=Z,8.7nm,1.4s						
C18K	**Utukok River**	**19.35**	**15**	P	**Pn**	**21 48 06.3**	**+0.3**
M24K	**Tolsona, Glenn**	**19.39**	**42**	Pn	**Pn**	**21 48 06.6**	**0.0**
I23K	**Minto, Yukon-K**	**19.68**	**32**		**P**	**21 48 09.4**	**+0.9**
I23K				IAmb	IAmb	21 48 23.1	
	comp=Z,5.5nm,1.2s						
D19K	**Kuna River**	**19.77**	**18**	P	**P**	**21 48 09.3**	**-0.2**
D19K				IAmb	IAmb	21 48 17.2	
	comp=Z,6.7nm,1.2s						
F21K	**Alatna River**	**19.82**	**24**	Pn	**Pn**	**21 48 11.7**	**0.0**
F21K				IAmb	IAmb	21 48 26.2	
	comp=Z,5.2nm,1.3s						
CCB	**Clear Creek Bu**	**19.95**	**35**	Pn	**Pn**	**21 48 13.0**	**-0.1**
MDM	**Murphy Dome**	**19.97**	**34**	P	**P**	**21 48 11.2**	**-0.4**
MDM				IAmb	IAmb	21 48 19.2	
	comp=Z,4.8nm,1.4s						
C19K	**Lookout Ridge**	**20.03**	**16**	P	**P**	**21 48 11.9**	**-0.4**
C19K				IAmb	IAmb	21 48 20.4	
	comp=Z,5.6nm,1.4s						
VRDI	**Verde Repeater**	**20.29**	**46**	P	**P**	**21 48 15.6**	**+0.2**
VRDI				IAmb	IAmb	21 48 34.3	
	comp=Z,3.4nm,1.0s						
CRQM	**Cirque**	**20.29**	**48**	P	**P**	**21 48 15.7**	**+0.2**
IL31		**20.35**	**35**	P	**P**	**21 48 16.2**	**+0.4**
ILAR	**Eielson Array**	**20.35**	**35**	P	**P**	**21 48 16.0**	**+0.2**
ILAR	**Eielson Array**	**20.35**	**35**	P	**P**	**21 48 16.3**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=228,slow=8.8,SNR=16						
	comp=Z,0.6nm,0.7s						
TGL	**Tana Glacier**	**20.44**	**48**		**P**	**21 48 16.0**	**-0.9**
G23K	**Bananza Creek**	**20.45**	**28**	Pn	**P**	**21 48 18.4**	**+1.5**
G23K				IAmb	IAmb	21 48 36.5	
	comp=Z,6.2nm,1.5s						
H24K	**Noodor Dome**	**20.59**	**32**	P	**P**	**21 48 18.3**	**-0.1**
H24K				IAmb	IAmb	21 48 30.7	
	comp=Z,3.9nm,1.1s						
J25K	**Salcha River,**	**20.83**	**36**	P	**P**	**21 48 20.0**	**-1.1**
J25K				IAmb	IAmb	21 48 22.4	
	comp=Z,8.5nm,1.4s						
E22K	**Anaktuvuk Pass**	**20.93**	**24**	P	**P**	**21 48 22.1**	**0.0**
E22K				IAmb	IAmb	21 48 26.8	
	comp=Z,4.4nm,1.2s						
L26K	**Log Cabin Wild**	**20.95**	**41**	P	**P**	**21 48 22.1**	**-0.3**
L26K				IAmb	IAmb	21 48 28.4	
	comp=Z,4.0nm,1.1s						
SCRK	**Sand Creek**	**21.08**	**39**	P	**P**	**21 48 23.7**	**-0.1**
SCRK				IAmb	IAmb	21 48 27.8	
	comp=Z,3.3nm,0.7s						
CTGM	**Chitina Glacie**	**21.20**	**48**	P	**P**	**21 48 25.0**	**-0.2**
CTGM				IAmb	IAmb	21 48 31.9	
	comp=Z,4.3nm,0.8s						
G24K	**Hadweenzic Riv**	**21.23**	**30**	P	**P**	**21 48 26.1**	**+0.8**
B20K	**Meade River**	**21.24**	**16**	P	**P**	**21 48 25.3**	**-0.1**
D22K	**Ayikyak River**	**21.27**	**22**	P	**P**	**21 48 26.0**	**+0.3**
D22K				IAmb	IAmb	21 48 34.5	
	comp=Z,7.8nm,1.5s						
M27K	**Edge Creek, AK**	**21.35**	**44**	P	**P**	**21 48 27.0**	**+0.2**
B21K	**Ikpikpuk River**	**21.41**	**19**	P	**P**	**21 48 26.0**	**-1.2**
B21K				IAmb	IAmb	21 48 29.7	
	comp=Z,1.8nm,0.7s						
J26L	**Joseph Creek**	**21.47**	**37**	P	**P**	**21 48 26.1**	**-1.9**
F24K	**Squaw Lake**	**21.61**	**28**	P	**P**	**21 48 30.1**	**+0.7**
F24K				IAmb	IAmb	21 48 32.4	
	comp=Z,5.4nm,1.3s						
TOLK	**Toolik Lake Re**	**21.88**	**25**	P	**P**	**21 48 32.0**	**-0.3**
I26K	**Coal Creek Min**	**21.99**	**36**	P	**P**	**21 48 32.4**	**-1.1**
I26K				IAmb	IAmb	21 48 34.5	
	comp=Z,4.7nm,1.4s						
O29M	**Mount Kennedy**	**22.39**	**50**	P	**P**	**21 48 38.2**	**+0.3**
BMAR	**Burnt Mountain**	**22.58**	**30**	P	**P**	**21 48 40.8**	**+1.0**
E25K	**Arctic Village**	**22.67**	**28**	P	**P**	**21 48 38.9**	**-1.9**
E25K				IAmb	IAmb	21 48 47.9	
	comp=Z,5.0nm,1.4s						
P29M	**Windy Craggy**	**22.70**	**52**		**P**	**21 48 40.9**	**-0.2**
DAWY	**Dawson**	**22.98**	**40**	P	**P**	**21 48 44.7**	**+0.6**
HYT	**Haines Junctio**	**23.00**	**49**	P	**P**	**21 48 45.3**	**+1.0**
L29M	**L29M**	**23.23**	**43**	P	**P**	**21 48 46.9**	**+0.4**
L29M				IAmb	IAmb	21 49 06.0	
	comp=Z,3.3nm,1.1s						
I28M	**Miner Creek**	**23.27**	**37**	P	**P**	**21 48 48.4**	**+1.3**
I28M				IAmb	IAmb	21 48 49.4	
	comp=Z,1.6nm,0.7s						
N30M	**Aishikik Lake**	**23.32**	**48**	P	**P**	**21 48 48.7**	**+1.2**
N30M				IAmb	IAmb	21 48 50.7	
	comp=Z,5.2nm,1.3s						
M30M	**Minto, Yukon**	**23.68**	**45**	P	**P**	**21 48 51.2**	**+0.1**
K29M	**Barlow Dome**	**23.70**	**42**	P	**P**	**21 48 52.1**	**+0.8**
K29M				IAmb	IAmb	21 49 07.1	
	comp=Z,5.0nm,1.2s						
J30M	**Hart River**	**24.41**	**40**	P	**P**	**21 48 58.0**	**+0.1**
J30M				IAmb	IAmb	21 49 11.9	
	comp=Z,6.5nm,1.5s						
I30M	**Mount Dempster**	**24.59**	**39**	P	**P**	**21 48 59.5**	**-0.1**
I30M				IAmb	IAmb	21 49 03.9	
	comp=Z,3.2nm,1.1s						
E29M	**Blow River**	**25.25**	**31**	P	**P**	**21 49 05.6**	**+0.3**
E29M				IAmb	IAmb	21 49 11.6	
	comp=Z,2.3nm,0.8s						
Q32M	**Nakina River**	**25.46**	**54**	P	**P**	**21 49 06.0**	**-1.5**
G31M	**Satah River**	**25.95**	**36**	P	**P**	**21 49 12.6**	**+0.9**
INK	**Inuvik**	**26.70**	**33**	P	**P**	**21 49 19.0**	**+0.6**
INK				IAmb	IAmb	21 49 20.2	
	comp=Z,4.0nm,1.4s						
YKA	**Yellowknife Ar**	**33.91**	**46**	P	**P**	**21 50 23.0**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=284,slow=14,SNR=7.8						
	comp=Z,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**40.97**	**85**	P	**P**	**21 51 22.3**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=318,slow=2.0,SNR=3.6						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**44.00**	**74**	P	**P**	**21 51 46.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=305,slow=5.0,SNR=5.3						
	comp=Z,0.5nm,0.5s						
SPITS	**Spitsbergen Ar**	**51.43**	**357**	P	**P**	**21 52 44.7**	**+0.7**
	comp=Z,9.1nm,1.0s,baz=89,slow=6.1,SNR=1.9						
	comp=Z,9.1nm,1.0s						
SFJD	**Kangerlussuaq**	**55.44**	**23**	LR	LR	22 22 11.8	
	comp=Z,456nm,18.6s,baz=196,slow=42						
TXAR	**Lajitas Array**	**56.10**	**84**	P	**P**	**21 53 18.2**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=295,slow=5.9,SNR=8.2						
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**61.66**	**316**	P	**P**	**21 53 57.8**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=42,slow=6.7,SNR=12						
	comp=Z,1.4nm,0.7s						
MKAR	**Makahi Array**	**62.67**	**311**	P	**P**	**21 54 04.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=31,slow=3.9,SNR=6.2						
	comp=Z,0.2nm,0.4s						
BORG	**Borgarnes**	**63.24**	**13**	LR	LR	22 26 10.4	
	comp=Z,381nm,18.0s,baz=221,slow=40						
BVAR	**Borovoye Array**	**63.28**	**322**	P	**P**	**21 54 08.8**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=53,slow=6.5,SNR=9.8						
	comp=Z,1.8nm,0.5s						
ARU	**Arti**	**64.75**	**331**	P	**P**	**21 54 18.1**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=308,slow=5.8,SNR=4.8						
	comp=Z,2.2nm,0.4s						
FINES	**FINESS Array B**	**67.21**	**349**	P	**P**	**21 54 33.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=21,slow=8.1,SNR=4.7						
	comp=Z,0.4nm,0.4s						
PMG	**Port Moresby**	**68.30**	**221**	LR	LR	22 19 29.3	
	comp=Z,449nm,20.4s,baz=127,slow=32						
NOA	**NOAR Array B**	**68.73**	**357**	P	**P**	**21 54 43.2**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=0.4,slow=5.8,SNR=2.6						
	comp=Z,0.9nm,0.8s						
HFS	**Hagfors**	**69.54**	**356**	P	**P**	**21 54 48.3**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=73,slow=5.4,SNR=4.8						
HFS				LR	LR	22 29 43.6	
	comp=Z,472nm,18.2s,baz=242,slow=40						
	comp=Z,1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.80**	**279**	P	**P**	**21 55 13.6**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=30,slow=5.7,SNR=4.3						
	comp=Z,0.4nm,0.5s						
AKASG	**Malin Array Be**	**77.18**	**345**	P	**P**	**21 55 33.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=14,slow=8.9,SNR=1.8						
	comp=Z,0.2nm,0.4s						
GNI	**Garni**	**83.39**	**331**	LR	LR	22 39 29.6	
	comp=Z,464nm,20.0s,baz=266,slow=40						
LEM	**Lembang**	**87.55**	**256**	LR	LR	22 39 23.5	
	comp=Z,340nm,18.1s,baz=189,slow=38						

*IDC **08** 21:58:36.8±0.8, 37.34S×73.45W, h0km, mb4.1/8, mbtmp4.1/9, ML3.5/1, MS4.0/5, Error ellipse: s-maj=34.0km s-min=20.8km az=87.0*
*NEIC **08** 21:58:36.8±1.7, 37.45S±0.04×74.17W±0.08, h10km±1km, mb4.4/26, Error ellipse: s-maj=12.0km s-min=5.4km az=293.0*
*GUC **08** 21:58:38.2±0.6, 37.45S×74.20W, h35km±4km, ML4.5*
ISC 08 21:58:37.1±0.5, 37.47S±0.04×74.04W±0.06, h10km, n97, σ1s03/99, mb4.3/13, MS4.0/3, 3C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**0.95**	**173**	*i* P	**Pg**	**21 58 55.4**	**0.0**
BI04				IAML		21 59 21.6	
	comp=N,23μm,0.8s						
BI05	**Punta Hualpn**	**0.98**	**44**		**Pg**	**21 58 56.3**	**+0.3**
BI05	**Punta Hualpn**	**0.98**	**44**	*i* P	**Pg**	**21 58 56.7**	**+0.7**
BI05				*i* S	**Sg**	**21 59 10.6**	**+1.8**
BI05				IAML		21 59 18.0	
	comp=E,35μm,0.3s						
LC02	**Puerto Saavedr**	**1.42**	**159**	Pn	**Pn**	**21 59 03.4**	**+0.4**
LC02	**Puerto Saavedr**	**1.42**	**159**	*eP*	**Pn**	**21 59 02.5**	**-0.4**
LC02				*eS*	**Sn**	**21 59 22.9**	**+1.2**
BI02	**San Fabin de**	**2.35**	**71**	*i* P	**Pn**	**21 59 17.1**	**+1.3**
BI02				*i* S	**Sn**	**21 59 43.8**	**-0.9**
BI02				IAML		22 00 03.1	
	comp=E,2μm,0.7s						
LR04	**Corral**	**2.46**	**169**		**Pn**	**21 59 16.6**	**-0.6**
LR04	**Corral**	**2.46**	**169**	IAML		22 00 10.8	
	comp=E,1μm,0.2s						
LR03	**Panguipulli**	**2.54**	**149**		**Pn**	**21 59 19.0**	**+0.7**
LR03	**Panguipulli**	**2.54**	**149**	*eP*	**Pn**	**21 59 19.4**	**+1.1**
ML02	**Panimavida**	**2.71**	**52**		**Pn**	**21 59 21.5**	**+0.9**
GO06	**Curarrehue**	**2.92**	**137**	Pn	**Pn**	**21 59 25.1**	**+1.5**
GO05	**Huala**	**2.98**	**35**		**Pn**	**21 59 25.1**	**+0.7**
GO05	**Huala**	**2.98**	**35**	*eP*	**Pn**	**21 59 24.4**	**0.0**
GO05				*eS*	**Sn**	**22 00 00.5**	**+0.2**
GO05				IAML		22 00 27.4	
	comp=E,3μm,0.4s						
LR05	**Currie**	**3.18**	**151**	Pn	**Pn**	**21 59 28.3**	**+1.1**
LR05	**Currie**	**3.18**	**151**	*eP*	**Pn**	**21 59 28.1**	**+0.9**
LR05				*i* S	**Sn**	**22 00 05.0**	**-0.2**
LR05				IAML		22 00 26.9	
	comp=E,2μm,0.4s						
BO02	**Sierra Bellavi**	**3.75**	**46**		**Pn**	**21 59 36.2**	**+1.2**
BO01	**Tunca**	**3.89**	**39**	Pn	**Pn**	**21 59 37.9**	**+1.0**
BO01	**Tunca**	**3.89**	**39**	*eP*	**Pn**	**21 59 37.8**	**+0.9**
LL05	**Los Muermos**	**3.96**	**174**		**Pn**	**21 59 38.1**	**+0.2**
PLCA	**Paso Flores**	**4.24**	**141**	Pn	**Pn**	**21 59 42.6**	**+0.8**
PLCA	**Paso Flores**	**4.24**	**141**	Pn	**Pn**	**21 59 43.0**	**+1.2**
	comp=E,1.3nm,0.3s,baz=310,slow=12,SNR=11						
PLCA				Lg	Lg	22 00 46.3	
	comp=E,3.1nm,0.3s,baz=346,slow=12,SNR=3.1						
MT01	**Popeta**	**4.25**	**33**		**Pn**	**21 59 42.0**	**+0.2**
MT01	**Popeta**	**4.25**	**33**	*eP*	**Pn**	**21 59 41.9**	**+0.1**
VA05	**Santo Domingo**	**4.28**	**28**		**Pn**	**21 59 42.0**	**-0.3**
MT09	**Talagante**	**4.44**	**35**		**Pn**	**21 59 45.1**	**+0.6**
MT09	**Talagante**	**4.44**	**35**	*eP*	**Pn**	**21 59 45.0**	**+0.4**
BO04	**La Punta**	**4.45**	**40**		**Pn**	**21 59 45.1**	**+0.5**
LL06	**Loncomilla**	**4.75**	**176**	Pn	**Pn**	**21 59 48.3**	**-0.5**
LMEL	**Las Melosas**	**4.77**	**42**		**Pn**	**21 59 50.3**	**+1.2**
MT13	**San Alfonso**	**4.81**	**41**		**Pn**	**21 59 50.5**	**+0.9**
VA01	**Torpederas**	**4.84**	**24**	Pn	**Pn**	**21 59 49.7**	**-0.3**
MT05	**Renca**	**4.87**	**34**		**Pn**	**21 59 50.7**	**+0.2**
MT03	**Universidad Ad**	**4.90**	**37**		**Pn**	**21 59 51.7**	**+0.9**
MT16	**CCHEN**	**4.94**	**36**		**Pn**	**21 59 51.5**	**0.0**
LL01	**San Ignacio de**	**5.06**	**166**		**Pn**	**21 59 52.1**	**-0.9**
PEL	**Peldehue**	**5.11**	**33**		**Pn**	**21 59 52.8**	**-0.9**
H03S1	**Juan Fernandez**	**5.36**	**311**	Pn	**Pn**	**21 59 57.0**	**+0.1**
	baz=96,slow=9.1						
H03S1				T	T	22 05 40.3	
	baz=129,slow=74,SNR=723						
H03S3	**Juan Fernandez**	**5.38**	**311**	Pn	**Pn**	**21 59 57.1**	**0.0**
	baz=96,slow=9.1						
H03S3				T	T	22 05 38.0	
	baz=129,slow=74,SNR=904						
H03S2	**Juan Fernandez**	**5.38**	**311**	Pn	**Pn**	**21 59 57.3**	**+0.2**
	baz=96,slow=9.1						
H03S2				T	T	22 05 36.6	
	baz=129,slow=74,SNR=830						
VA04	**Juan Fernndez**	**5.46**	**313**		**Pn**	**21 59 57.0**	**-1.5**
GO07	**Milladeo Hill,**	**5.65**	**177**	Pn	**Pn**	**22 00 01.4**	**+0.3**
LL02	**Futaleuf**	**5.96**	**164**		**Pn**	**22 00 04.8**	**-0.5**
CO02	**Combarbal**	**6.73**	**23**		**Pn**	**22 00 15.9**	**-0.2**
AY01	**Puyuhuapi**	**7.03**	**172**	Pn	**Pn**	**22 00 19.2**	**-0.7**
CO06	**Fray Jorge**	**7.06**	**17**		**Pn**	**22 00 19.0**	**-1.5**
GO04	**Tololo Observa**	**7.75**	**21**		**Pn**	**22 00 30.5**	**+0.3**
CO01	**Juntas del Tor**	**8.16**	**25**	Pn	**Pn**	**22 00 35.8**	**0.0**
COYC	**Coyhaique**	**8.23**	**170**	Pn	**Pn**	**22 00 35.8**	**-0.7**
AC05	**El Transito**	**9.16**	**21**		**Pn**	**22 00 48.8**	**-0.7**
TRQA	**Tornquist**	**9.57**	**97**	Pn	**Pn**	**22 00 56.0**	**+1.1**
AY03	**Cochrane**	**9.84**	**174**		**Pn**	**22 00 58.7**	**+0.2**
GO08	**Villa O'Higgin**	**11.05**	**175**	Pn	**Pn**	**22 01 14.8**	**-0.2**
AC02	**Maricunga**	**11.38**	**23**	Pn	**Pn**	**22 01 17.5**	**-2.7**
LVC	**Limon Verde**	**15.45**	**18**	Pn	**Pn**	**22 02 12.9**	**-2.6**
	comp=E,0.2nm,0.3s,baz=65,slow=19,SNR=1.9						
LVC				Lg	Lg	22 06 41.2	
	comp=E,0.1nm,0.3s,baz=337,slow=22,SNR=4.2						
LVC				LR	LR	22 08 42.2	
	comp=E,311nm,19.3s,baz=226,slow=40						
	comp=E,1.4nm,0.4s						
PB09	**IPOC Station P**	**16.16**	**16**		**Pn**	**22 02 23.2**	**-1.2**
PB09				IAmb	IAmb	22 02 40.0	
	comp=Z,41nm,1.2s						
ITQB	**Itaqui**	**16.45**	**67**	Pn	**Pn**	**22 02 27.6**	**-0.3**
ITQB				IAmb	IAmb	22 02 41.7	
	comp=Z,31nm,1.1s						
PB02	**IPOC Station P**	**16.48**	**14**		**Pn**	**22 02 27.4**	**-1.2**
PB02				IAmb	IAmb	22 02 48.5	
	comp=Z,32nm,1.1s						
PB01	**IPOC Station P**	**16.83**	**15**		**Pn**	**22 02 32.4**	**-0.6**

TUN 08 22:11:18.8,36°48N×9°01E,h11km±1km,MD2.3,Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRIT	**Krib**	**0.15**	**160**	*i* P	Pb	22 11 23.0	-0.7
KRIT	**Krib**	**0.15**	**160**	*i* P	Pg	22 11 22.9	+0.7
KRIT				*i* S	Sg	22 11 25.1	+0.3
BLIT	**Baltah**	**0.24**	**348**	*i* P	Pb	22 11 24.6	-0.5
BLIT				*i* S	Sg	22 11 32.8	+5.8
BLIT	**Baltah**	**0.24**	**348**	*i* P	Pg	22 11 24.0	+0.2
BLIT				*i* S	Sg	22 11 24.2	-2.9
GHAT	**Ghardimaou**	**0.57**	**272**	*i* P	Pg	22 11 29.1	-0.8
GHAT				*i* S	Sn	22 11 44.2	+1.9
GHAT	**Ghardimaou**	**0.57**	**272**	*i* P	Pg	22 11 29.6	-0.3
TROT	**Trozza**	**1.03**	**152**	*i* P	Pn	22 11 39.4	+0.2

*IDC **08** 22:25:15.8±1.0,30°11N×87°49E,h0km,mb3.7/10,*
mbtmp3.7/12,ML4.1/2,Error ellipse: s-maj=38.4km
s-min=17.9km az=56.0
ISC 08 22:25:21.2±0.9,30°2N±0°2×87°5E±0°2,h35km,n12,
σ0s65/13,mb3.6/10,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.62**	**136**	Pn	**Pn**	**22 28 59.0**	**+0.2**
	0.6nm,0.3s,baz=326,slow=13,SNR=7.3						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**17.08**	**348**	P	**Pn**	**22 29 17.3**	**+0.1**
	0.2nm,0.3s,baz=166,slow=11,SNR=12						
	0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**21.51**	**344**	P	**P**	**22 30 06.0**	**-0.9**
	0.6nm,0.6s,baz=155,slow=11,SNR=5.1						
	0.6nm,0.6s						
SONM	**Songino Array**	**22.83**	**34**	P	**P**	**22 30 21.5**	**+0.4**
	0.6nm,0.6s,baz=206,slow=9.9,SNR=5.0						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**23.84**	**356**	P	**P**	**22 30 31.3**	**+0.5**
	0.8nm,0.6s,baz=186,slow=10,SNR=4.7						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**26.05**	**336**	P	**P**	**22 30 51.9**	**+0.9**
	0.5nm,0.4s,baz=148,slow=12,SNR=4.9						
BVAR				PcP	**PcP**	**22 34 18.6**	**+0.4**
	0.3nm,0.6s,baz=127,slow=3.9,SNR=2.2						
	0.5nm,0.4s						
BRTR	**Keskin Array B**	**44.61**	**297**	P	**P**	**22 33 30.5**	**+0.3**
	0.6nm,0.8s,baz=109,slow=7.0,SNR=1.6						
	0.6nm,0.8s						
FINES	**FINESS Array B**	**50.40**	**327**	P	**P**	**22 34 14.7**	**0.0**
	2.6nm,1.0s,baz=90,slow=6.5,SNR=7.3						
	2.6nm,1.0s						
ARCES	**ARCESS Array B**	**52.33**	**337**	P	**P**	**22 34 27.7**	**-1.4**
	2.5nm,0.9s,baz=94,slow=12,SNR=1.7						
	2.5nm,0.9s						
HFS	**Hagfors**	**56.38**	**325**	P	**P**	**22 34 58.7**	**0.0**
	1.2nm,0.5s,baz=96,slow=11,SNR=5.7						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**67.17**	**132**	P	**P**	**22 36 11.5**	**-0.3**
	0.6nm,0.8s,baz=321,slow=6.5,SNR=3.1						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**69.63**	**135**	P	**P**	**22 36 26.7**	**-0.4**
	0.6nm,0.8s,baz=328,slow=6.2,SNR=5.6						
	0.6nm,0.8s						

*AFAD **08** 22:29:05.7±0.0,38°89N×26°44E,h7km±1km,ML2.1*
*ISK **08** 22:29:05.4,38°89N×26°45E,h11km,ML2.5/37*
*ATH **08** 22:29:06.0,38°90N×26°45E,h9km±2km,ML2.4/4,Error*
ellipse: s-maj=2.3km s-min=1.0km az=295.0
ISC 08 22:29:05.9±0.9,38°90N±0°02×26°44E±0°02,h12km±7km,
n56,σ0s51/81,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAG3	**Mitilini, Lesv**	**0.21**	**28**	P	**Pg**	**22 29 10.4**	**-0.2**
EAG3				S	**Sg**	**22 29 12.4**	**-1.4**
KARB	**zmir-Karabur**	**0.23**	**185**	P	**Pg**	**22 29 11.1**	**+0.2**
KARB				S	**Sg**	**22 29 14.7**	**+0.5**
KARB				*i* AML	AML	22 29 15.0	
	comp=N,404nm,0.4s						
KARB				*i* AML	AML	22 29 16.0	
	comp=E,327nm,0.3s						
CAND	**Candarli**	**0.29**	**78**	Pg	**Pg**	**22 29 11.9**	**0.0**
CAND				Sg	**Sg**	**22 29 16.3**	**+0.4**
FOCM	**Foa**	**0.29**	**129**	Pg	**Pg**	**22 29 11.8**	**-0.1**
FOCM				Sg	**Sg**	**22 29 16.3**	**+0.4**
PRK	**Paraskevi**	**0.37**	**339**	P	**Pg**	**22 29 13.3**	**-0.1**
PRK				S	**Sg**	**22 29 18.3**	**-0.2**
PRK				AML	AML	22 29 19.4	
	comp=E,3321μm,0.3s						
PRK				AML	AML	22 29 21.4	
	comp=N,1647μm,0.3s						
RFT7	**Candarli**	**0.38**	**81**	Pg	**Pg**	**22 29 13.4**	**-0.1**
RFT7				Sg	**Sg**	**22 29 18.5**	**-0.1**
IZMD	**zmir-Dikili-**	**0.39**	**77**	P	**Pg**	**22 29 13.7**	**-0.1**
IZMD				*i* AML	AML	22 29 19.0	
	comp=N,88nm,0.4s						
IZMD				*i* AML	AML	22 29 19.0	
	comp=N,146nm,0.3s						
IZMD				S	**Sg**	**22 29 19.2**	**+0.2**
DKL	**Dikili**	**0.40**	**64**	Pg	**Pg**	**22 29 13.9**	**-0.1**
DKL				Sg	**Sg**	**22 29 19.5**	**+0.2**
EAG2	**Marmaro, Chios**	**0.44**	**217**	P	**Pg**	**22 29 14.6**	**+0.1**
EAG2				S	**Sg**	**22 29 20.2**	**-0.2**
AYVA	**Ayvalik**	**0.46**	**25**	P	**Pg**	**22 29 14.7**	**-0.3**
AYVA				*i* AML	AML	22 29 25.0	
	comp=N,210nm,0.2s						
AYVA				*i* AML	AML	22 29 25.0	
	comp=N,99nm,0.3s						
ZEDA	**zmir-Bergama**	**0.50**	**82**	P	**Pg**	**22 29 15.6**	**-0.1**
ZEDA				S	**Sg**	**22 29 22.9**	**+0.4**
ZEDA				*i* AML	AML	22 29 23.0	
	comp=N,285nm,0.2s						
ZEDA				*i* AML	AML	22 29 23.0	
	comp=N,472nm,0.3s						
URLA	**Izmir**	**0.55**	**167**	Pg	**Pg**	**22 29 16.6**	**-0.1**
URLA				Sg	**Sb**	**22 29 24.7**	**-0.5**
URLA	**Izmir**	**0.55**	**167**	P	**Pg**	**22 29 16.4**	**-0.3**
URLA				S	**Sb**	**22 29 24.7**	**-0.5**
URLA				*i* AML	AML	22 29 26.0	
	comp=N,204nm,0.3s						
URLA				*i* AML	AML	22 29 26.0	
	comp=N,243nm,0.3s						
SIGR	**SIGRI**	**0.55**	**305**	Pg	**Pg**	**22 29 16.9**	**+0.1**
SIGR				Sg	**Sg**	**22 29 24.5**	**+0.4**
SIGR	**SIGRI**	**0.55**	**305**	P	**Pg**	**22 29 16.9**	**+0.1**
SIGR				S	**Sg**	**22 29 23.6**	**-0.5**
SIGR				AML	AML	22 29 25.0	
	comp=E,442μm,0.3s						
SIGR				AML	AML	22 29 27.6	
	comp=N,318μm,0.3s						
CESE	**eme**	**0.57**	**191**	Pg	**Pg**	**22 29 16.8**	**-0.4**
CHOS	**Chios island**	**0.59**	**211**	P	**Pg**	**22 29 17.5**	**0.0**
CHOS				S	**Sg**	**22 29 25.8**	**+0.5**
CHOS				AML	AML	22 29 29.9	
	comp=E,1420μm,0.2s						
CHOS				AML	AML	22 29 29.9	
	comp=N,690μm,0.2s						
GPNR	**Gulpinar-Canak**	**0.61**	**337**	Pg	**Pg**	**22 29 17.6**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**0.66**	**176**	P	**Pg**	**22 29 18.6**	**-0.1**
ZEYE				S	**Sb**	**22 29 29.8**	**+1.4**
ZEYE				*i* AML	AML	22 29 31.0	
	comp=N,325nm,0.5s						
ZEYE				*i* AML	AML	22 29 31.0	
	comp=N,362nm,0.5s						
BLCB	**Balcova**	**0.69**	**137**	Pg	**Pg**	**22 29 19.4**	**0.0**
PSRA	**Psara**	**0.77**	**243**	P	**Pb**	**22 29 21.3**	**+0.1**
PSRA				S	**Sg**	**22 29 30.9**	**-0.1**
BUHA	**Balikesir, Bur**	**0.78**	**39**	P	**Pg**	**22 29 20.2**	**-0.9**
BUHA				S	**Sb**	**22 29 33.3**	**+1.3**
BUHA				*i* AML	AML	22 29 35.0	
	comp=N,182nm,0.5s						
BUHA				*i* AML	AML	22 29 36.0	
	comp=N,80nm,0.5s						
GMLD	**Gumuldur**	**0.90**	**155**	Pg	**Pg**	**22 29 22.3**	**-1.0**
GMLD				Sg	**Sb**	**22 29 35.3**	**0.0**
DGB	**zmir**	**0.91**	**157**	P	**Pg**	**22 29 23.1**	**-0.5**
DGB				S	**Sg**	**22 29 35.2**	**-0.2**
DGB				*i* AML	AML	22 29 37.0	
	comp=N,64nm,0.4s						
DGB				*i* AML	AML	22 29 38.0	
	comp=N,83nm,0.2s						
EZN	**Ezine**	**0.93**	**355**	Pg	**Pb**	**22 29 24.2**	**+0.2**
EZN				Sg	**Sb**	**22 29 37.2**	**+0.9**
AKS	**Akhisar**	**1.07**	**90**	Pg	**Pb**	**22 29 26.3**	**-0.1**
AKHS	**Akhisar**	**1.07**	**90**	P	**Pg**	**22 29 26.1**	**-0.5**
AKHS				S	**Sn**	**22 29 42.2**	**+0.6**
AKHS				*i* AML	AML	22 29 44.0	
	comp=N,44nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.10**	**64**	P	**Pb**	**22 29 27.1**	**+0.2**
STEP				S	**Sn**	**22 29 42.2**	**-0.1**
STEP				*i* AML	AML	22 29 44.0	
	comp=N,144nm,0.4s						
STEP				*i* AML	AML	22 29 44.0	
	comp=N,112nm,0.3s						
COMU	**Canakkale**	**1.20**	**1**	Pn	**Pn**	**22 29 28.8**	**+0.3**
CANM	**Can-anakkale**	**1.21**	**23**	Pn	**Pb**	**22 29 27.6**	**-1.2**
SMG	**Samos**	**1.23**	**165**	P	**Pb**	**22 29 28.4**	**-0.6**
SMG				S	**Sb**	**22 29 44.5**	**-0.3**
SMG				AML	AML	22 29 48.5	
	comp=N,519μm,0.4s						
SMG				AML	AML	22 29 49.2	
	comp=E,422μm,0.6s						
BALB	**Balikesir**	**1.34**	**56**	Pn	**Pn**	**22 29 30.7**	**+0.3**
GCAM	**G?zelcaml?**	**1.35**	**152**	Pn	**Pn**	**22 29 30.1**	**-0.4**
GADA	**Gvkgeada**	**1.36**	**342**	Pn	**Pb**	**22 29 31.3**	**0.0**
LIA	**Limnos Island**	**1.40**	**316**	P	**Pn**	**22 29 30.8**	**-0.4**
LPK	**Lapseki**	**1.50**	**9**	Pn	**Pn**	**22 29 32.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.50**	**40**	Pn	**Pn**	**22 29 32.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.50**	**1**	Pn	**Pn**	**22 29 32.8**	**+0.2**
KRBG	**Karabiga-Canak**	**1.64**	**24**	Pn	**Pn**	**22 29 34.7**	**+0.2**
SMTH	**Samothraki Isl**	**1.72**	**336**	P	**Pn**	**22 29 36.1**	**+0.4**
SMTH				S	**Sn**	**22 29 56.1**	**-1.5**
ERIK	**Erikli-Kesan**	**1.77**	**2**	Pn	**Pn**	**22 29 36.9**	**+0.5**
KULA	**Kula-Manisa**	**1.78**	**102**	Pn	**Pn**	**22 29 36.5**	**0.0**
EDC	**Edincik**	**1.82**	**37**	Pn	**Pn**	**22 29 37.4**	**+0.4**
ENEZ	**Enez**	**1.85**	**353**	Pn	**Pn**	**22 29 37.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.88**	**17**	Pn	**Pn**	**22 29 38.5**	**+0.6**
MLSB	**Milas**	**1.91**	**146**	Pn	**Pn**	**22 29 38.5**	**+0.2**
MRMT	**Marmara Adasi**	**1.92**	**27**	Pn	**Pn**	**22 29 38.7**	**+0.2**
BODT	**Bodrum**	**1.96**	**159**	Pn	**Pn**	**22 29 39.3**	**+0.4**
SIMA	**Simav-Kutahya**	**1.99**	**84**	Pn	**Pn**	**22 29 39.8**	**+0.4**
KCTX	**Karacabey (Bur**	**2.02**	**47**	Pn	**Pn**	**22 29 39.9**	**+0.2**
ALN	**Alexandroupoli**	**2.02**	**351**	Pn	**Pn**	**22 29 40.2**	**+0.4**
RFTAA	**Mazikoy-Bodrum**	**2.16**	**151**	Pn	**Pn**	**22 29 42.1**	**+0.5**
UKOP	**Uzunkopru-Edir**	**2.23**	**4**	Pn	**Pn**	**22 29 43.5**	**+0.8**
GEDZ	**Gediz**	**2.32**	**85**	Pn	**Pn**	**22 29 44.6**	**+0.6**
TVSB	**Tavsanli**	**2.41**	**76**	Pn	**Pn**	**22 29 45.6**	**+0.3**
ARMT	**Armutlu**	**2.50**	**47**	Pn	**Pn**	**22 29 47.3**	**+0.9**

AUST 08 22:45:59.1±1.2,36°21S×149°04E,h4km±11km,Error
ellipse: s-maj=47.1km s-min=6.5km az=86.0,Near
southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUMHS	**Melrose High S**	**0.85**	**3**	P	Pg	22 46 15.8	+0.4
	baz=0.8						
AUMHS				S	Sg	22 46 27.2	+0.8
	baz=0.8						
AUMHS	**Melrose High S**	**0.85**	**3**	P	Pb	22 46 16.1	-0.3
	baz=0.8						
AUMHS				S	Sb	22 46 27.9	-0.3
	baz=0.8						
MILA	**Mila**	**0.85**	**174**	P	Pg	22 46 15.4	0.0
	baz=0.9						
MILA				S	Sb	22 46 27.8	-0.5
	baz=0.9						
MILA	**Mila**	**0.85**	**174**	P	Pg	22 46 15.5	+0.1
	baz=0.9						
MILA				S	Sg	22 46 27.1	+0.7
	baz=0.9						
AUMTS	**Mt Stromlo**	**0.89**	**358**	P	Pg	22 46 16.6	+0.4
	baz=0.9						
AUMTS				S	Sg	22 46 28.2	+0.5
	baz=0.9						
AUMTS	**Mt Stromlo**	**0.89**	**358**	P	Pb	22 46 16.6	-0.5
	baz=0.9						
AUMTS				S	Sg	22 46 28.1	+0.5
	baz=0.9						
CNB	**Canberra Magne**	**0.93**	**17**	P	Pg	22 46 16.1	-0.9
	baz=0.9						
CNB				S	Sg	22 46 28.2	-0.8
	baz=0.9						
CNB	**Canberra Magne**	**0.93**	**17**	P	Pg	22 46 16.1	-0.8
	baz=0.9						
AUUHS	**Ulladulla High**	**1.44**	**54**	P	Pn	22 46 23.3	-2.7
	baz=1.2						
AUUHS				S	Sb	22 46 38.6	-6.7
	baz=1.2						
YNG	**Young**	**1.98**	**344**	P	Pn	22 46 33.0	-0.5
	baz=2.0						
YNG				S	Sb	22 47 01.0	+0.3
	baz=2.0						
YNG	**Young**	**1.98**	**344**	P	Pn	22 46 33.3	-0.1
	baz=2.0						

*NEIC **08** 22:56:05.6±0.5,36°04N±0°01×97°90W±0°01,h3km±3km,*
Error ellipse: s-maj=1.6km s-min=1.3km az=216.0
TUL 08 22:56:06±0.5,36°03N±0°01×97°91W±0°01,h5km±4km,
ML2.7,mb_Lg2.6/30(NEIC),ML2.7/59(NEIC),Error
ellipse: s-maj=1.5km s-min=1.3km az=204.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**122**	Pg	Pg	22 56 14.4	0.0
OK029				Sg	Sg	22 56 20.8	+0.7
OK029				IAML		22 56 21.1	
	707nm,0.4s						
CROK	**Carrier**	**0.48**	**352**	Pg	Pg	22 56 15.3	+0.1
CROK				Sg	Sg	22 56 21.8	+0.3
ADOK	**Arcadia Dam**	**0.57**	**131**	Pg	Pg	22 56 17.3	+0.2
ADOK				Sg	Sg	22 56 25.3	+0.7
OKCSW	**OKLAHOMA CITY**	**0.73**	**148**	Pg	Pg	22 56 19.6	-0.4
OKCSW				Sg	Sg	22 56 30.2	+0.7
OKCSW				IAML		22 56 30.5	
	comp=N,521nm,0.2s						
OKCSW				IAML		22 56 34.6	
	comp=E,218nm,0.1s						
CSTR	**Hydro, Custer**	**0.74**	**239**	Pg	Pg	22 56 20.4	+0.1
CSTR				Sg	Sg	22 56 30.8	+0.9
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	22 56 20.9	-0.2
OK033				IAML		22 56 32.9	
	comp=E,209nm,0.1s						
OK033				IAML		22 56 33.4	
	comp=E,326nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**342**	Pg	Pg	22 56 21.2	-0.3
OK032				Sg	Sg	22 56 31.6	-0.5
OK032				IAML		22 56 36.5	
	comp=E,445nm,0.2s						
OK038	**West end E0370**	**0.81**	**304**	Pg	Pg	22 56 21.2	-0.4
OK038				Sg	Sg	22 56 32.5	+0.4
GC02	**Grant County #**	**0.82**	**3**	Pg	Pg	22 56 21.3	-0.5
OK048	**Pawnee Station**	**0.87**	**63**	Pg	Pg	22 56 22.2	-0.4
OK048				Sg	Sg	22 56 33.6	-0.3
FNO	**Franklin**	**0.87**	**152**	Pg	Pg	22 56 22.4	-0.4
FNO				Sg	Sg	22 56 34.3	+0.2
FNO				IAML		22 56 35.5	
	comp=E,188nm,0.1s						
OK052	**Battle Ridge R**	**0.90**	**92**	Pg	Pg	22 56 22.9	-0.3
OK052				Sg	Sg	22 56 34.6	-0.2
OK052				IAML		22 56 42.1	
	comp=E,161nm,0.3s						
OK052				IAML		22 56 42.5	
	comp=E,171nm,0.2s						
KAN14	**Manchester OK**	**0.93**	**357**	Pg	Pg	22 56 23.1	-0.7
KAN14				IAML		22 56 41.5	
	comp=E,239nm,0.1s						
KAN14				IAML		22 56 42.1	
	comp=N,178nm,0.2s						
OK035	**E0210 Rd and N**	**0.94**	**316**	Pg	Pg	22 56 23.4	-0.6
OK035				IAML		22 56 46.4	
	comp=N,328nm,0.2s						
U32A	**Winter Ranch,**	**0.95**	**292**	Pg	Pg	22 56 23.8	-0.5
U32A				IAML		22 56 39.9	
	comp=N,354nm,0.4s						
U32A				IAML		22 56 41.9	
	comp=E,230nm,0.1s						
QUOK	**Quay**	**0.98**	**81**	Pg	Pg	22 56 24.3	-0.5
QUOK				IAML		22 56 46.0	
	comp=N,198nm,0.2s						
QUOK				IAML		22 56 46.8	
	comp=E,178nm,0.2s						
OK051	**E0350 and S346**	**0.99**	**61**	Pg	Pg	22 56 24.2	-0.7
OK051				IAML		22 56 42.7	
	comp=E,344nm,0.2s						
KAN17	**Caldwell West**	**1.02**	**6**	Pg	Pg	22 56 24.9	-0.6
KAN13	**South Haven SW**	**1.04**	**19**	Pg	Pg	22 56 25.4	-0.6
KAN05	**Bluff City Nor**	**1.08**	**1**	Pg	Pg	22 56 26.0	-0.7
KAN05				IAML		22 56 44.0	
	comp=N,209nm,0.2s						
KAN05				IAML		22 56 46.5	
	comp=E,177nm,0.2s						
KAN10	**Anthony SW Sta**	**1.10**	**352**	Pg	Pg	22 56 26.4	-0.8
KAN10				IAML		22 56 45.8	
	comp=E,177nm,1.2s						
KAN10				IAML		22 56 52.9	
	comp=N,119nm,0.5s						
KAN01	**Argonia South**	**1.13**	**6**	Pg	Pg	22 56 26.7	-0.9
KAN01				IAML		22 56 42.9	
	comp=E,175nm,0.2s						
KAN01				IAML		22 56 43.8	
	comp=N,163nm,1.0s						
KAN09	**Caldwell North**	**1.13**	**12**	Pg	Pg	22 56 26.6	-1.0
DEOK	**Depew**	**1.16**	**99**	Pg	Pg	22 56 27.2	-1.0
DEOK				IAML		22 56 48.0	
	comp=N,179nm,0.3s						
DEOK				IAML		22 56 48.1	
	comp=E,148nm,0.2s						
KAN08	**Anthony NE Sta**	**1.20**	**357**	Pg	Pg	22 56 28.0	-0.9
W35A	**Tecumseh**	**1.21**	**136**	Pg	Pg	22 56 28.1	-1.1
W35A				IAML		22 56 46.6	
	comp=N,238nm,0.3s						
KAN06	**Argonia West S**	**1.22**	**2**	Pg	Pg	22 56 28.4	-0.9
KAN06				IAML		22 56 45.3	
	comp=N,126nm,0.3s						
KAN06				IAML		22 56 48.6	
	comp=E,119nm,0.2s						
ELIS	**Ellis County**	**1.23**	**272**	Pg	Pg	22 56 29.1	-0.4
ELIS				IAML		22 56 52.3	
	comp=E,217nm,0.2s						
ELIS				IAML		22 56 55.6	
	comp=N,238nm,0.3s						
X34A	**Smith Ranch, M**	**1.43**	**178**		Pn	22 56 32.5	-0.1
T35A	**Sooner Cattle**	**1.43**	**51**	Pg	Pn	22 56 32.2	-0.3
WMOK	**Wichita Mounta**	**1.48**	**209**		Pn	22 56 32.5	-0.7
TUL3	**Leonard**	**1.72**	**93**		Pn	22 56 36.0	-0.6
SMWD	**Samnorwood**	**2.12**	**245**	Pn	Pn	22 56 42.8	+0.7
LOOK	**Love County**	**2.12**	**163**	Pn	Pn	22 56 42.7	+0.6
R32A	**Long Quarter,**	**2.47**	**345**	Pn	Pn	22 56 46.9	-0.1
CBKS	**Cedar Bluff**	**3.14**	**333**	IAmb_Lg		22 57 43.8	
	comp=Z,9.9nm,0.7s						
AMTX	**Amarillo**	**3.29**	**251**	IAmb_Lg		22 57 58.6	
	comp=Z,11nm,0.7s						
DKNS	**Dickens**	**3.42**	**227**	IAmb_Lg		22 57 56.3	
	comp=Z,23nm,1.0s						
SN05	**Snyder 5**	**3.99**	**219**	IAmb_Lg		22 58 17.8	
	comp=Z,17nm,0.8s						
SN01	**Snyder 1**	**4.01**	**219**	IAmb_Lg		22 58 17.8	
	comp=Z,20nm,0.9s						
POST	**Post**	**4.19**	**226**	IAmb_Lg		22 58 25.7	
	comp=Z,16nm,0.8s						
X40A	**Basin Creek Fa**	**4.43**	**109**	IAmb_Lg		22 58 35.7	
	comp=Z,9.5nm,0.8s						
WLAR	**White Oak Lake**	**4.58**	**119**	IAmb_Lg		22 58 38.3	
	comp=Z,11nm,0.7s						
MGMO	**Mountain Grove**	**4.67**	**74**	IAmb_Lg		22 58 31.9	
	comp=Z,12nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.79**	**310**	IAmb_Lg		22 58 50.7	
	comp=Z,15nm,0.8s						
SGCY	**Sterling City**	**4.90**	**214**	IAmb_Lg		22 58 51.1	
	comp=Z,10nm,0.8s						
P38A	**Dawn**	**4.99**	**43**	IAmb_Lg		22 58 52.7	
	comp=Z,8.9nm,0.8s						
N35A	**Tabor**	**5.14**	**20**	IAmb_Lg		22 58 57.8	
	comp=Z,17nm,0.7s						
LCAR	**Lake Charles**	**5.47**	**88**	IAmb_Lg		22 59 03.3	
	comp=Z,7.7nm,1.1s						
Q24A	**Divide**	**6.46**	**299**	IAmb_Lg		22 59 38.7	
	comp=Z,6.5nm,0.8s						
HNDO	**Hondo**	**6.59**	**191**	IAmb_Lg		22 59 40.3	
	comp=Z,7.5nm,0.8s						

*IDC **08** 23:02:02.2±1.2,8°43S×105°20E,h0km,mb3.9/13,*
mbtmp3.9/14,ML4.2/1,Error ellipse: s-maj=32.6km
s-min=18.1km az=47.0
*NEIC **08** 23:02:04.2±1.8,8°44S±0°05×105°2E±0°1,h10km±1km,*
mb4.1/14,Error ellipse: s-maj=18.9km s-min=7.1km
az=285.0
*DJA **08** 23:02:05.6±1.0,8°S±2°×10°5E±°,h35km±17km,M4.1/12,*
mb4.3/1,MLv3.9/12
ISC 08 23:02:03.4±0.7,8°46S±0°06×105°18E±0°07,h10km,n48,
σ0s92/40,mb4.1/19,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.98**	**43**	P	Pn	23 02 34.9	-2.2
XMIS	**Christmas Isla**	**2.06**	**167**	Pn	**Pn**	**23 02 37.8**	**-0.4**
CNJI	**Cibinong**	**2.24**	**60**	P	Pn	23 02 38.4	-2.2
CNJI				S	**Sn**	**23 03 06.3**	**-2.1**
DBJI	**Dramaga**	**2.45**	**40**	P	**Pn**	**23 02 43.0**	**-0.5**
SBJI	**Serang**	**2.51**	**22**	P	**Pn**	**23 02 44.1**	**-0.2**
LEM	**Lembang**	**2.91**	**56**	Pn	**Pn**	**23 02 50.6**	**+0.6**
	32nm,0.3s,baz=240,slow=20,SNR=13						
LEM				Sn	**Sn**	**23 03 26.5**	**+1.5**
	23nm,0.3s,baz=288,slow=20,SNR=4.8						
	122nm,0.6s						
LEM	**Lembang**	**2.91**	**56**	P	**Pn**	**23 02 50.3**	**+0.4**
KASI	**Kota Agung**	**2.99**	**347**	P	**Pn**	**23 02 50.4**	**-0.6**
KASI				S	**Sn**	**23 03 26.6**	**-0.3**
CMJI	**Cimerak**	**3.30**	**79**	P	Pn	23 02 53.1	-2.1
LWLI	**Liwa**	**3.60**	**342**	P	**Pn**	**23 02 59.0**	**-0.4**
LWLI				S	**Sn**	**23 03 40.9**	**-1.1**
KPJI	**Karang Pucung**	**3.88**	**74**	P	**Pn**	**23 03 03.2**	**+0.1**
UGM	**Wanagama**	**5.32**	**85**	Pn	**Pn**	**23 03 22.0**	**-0.9**
UGM	**Wanagama**	**5.32**	**85**	P	**Pn**	**23 03 22.3**	**-0.6**
JAGI	**Jajag, Banyuwa**	**8.87**	**91**	Pn	**Pn**	**23 04 11.5**	**-0.4**
PSA00	**Pilbara Seismi**	**19.23**	**134**	P	**P**	**23 06 27.1**	**-0.8**
PSA00				IAmb	IAmb	23 06 32.9	
	comp=Z,10nm,1.1s						
FITZ	**Fitzroy Crossi**	**22.07**	**118**	P	**P**	**23 06 58.3**	**-0.5**
KNRA	**Kununurra**	**24.13**	**110**	P	**P**	**23 07 18.9**	**-0.9**
KNRA				IAmb	IAmb	23 07 29.9	
	comp=Z,8.6nm,1.0s						
NWAO	**Narrogin (SRO)**	**26.78**	**157**	P	**P**	**23 07 44.1**	**

comp=Z,1.2nm,0.5s
MK31 Makanchi Array 58.67 342 P **P** **23 12 02.1 +1.1**
MK31 IAmb IAmb 23 12 04.7
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 58.67 342 P **P** **23 12 01.9 +0.8**
comp=Z,1.2nm,0.7s,baz=156,slow=7.7,SNR=15
comp=Z,1.2nm,0.7s
H04N2 CROZET ISLANDS 58.99 221 T T 00 16 30.7
baz=67,slow=75,SNR=6.2
H04N1 CROZET ISLANDS 59.00 221 T T 00 16 27.3
baz=67,slow=75,SNR=6.0
H04N3 CROZET ISLANDS 59.01 221 T T 00 16 27.9
baz=67,slow=75,SNR=5.7
KLR Kul'dur 61.99 19 P **P** **23 12 22.3 -1.3**
comp=Z,0.7nm,0.5s,baz=271,slow=5.7,SNR=5.1
comp=Z,0.7nm,0.5s
KURBB Kurchatov Arra 63.22 341 P **P** **23 12 32.6 +0.8**
comp=Z,0.6nm,0.6s,baz=158,slow=5.9,SNR=6.9
comp=Z,0.6nm,0.6s
ZALV Zalesovo Beam 64.51 347 P **P** **23 12 40.7 +0.4**
ZALV Zalesovo Beam 64.51 347 P P 23 12 38.6 -1.7
comp=Z,1.2nm,0.4s,baz=154,slow=5.2,SNR=7.2
comp=Z,1.2nm,0.4s
BVAR Borovoye Array 68.02 338 P **P** **23 13 04.0 +1.2**
comp=Z,0.7nm,0.5s,baz=146,slow=8.9,SNR=6.5
comp=Z,0.7nm,0.5s
TXAR Lajitas Array 145.88 49 PKPbc **PKPdf** **23 21 45.3 +1.9**
comp=Z,0.5nm,1.0s,baz=358,slow=4.3,SNR=4.1

NEIC ***08*** *23:05:46.8±1.7,56.25N±0.09×149.3W±0.1,h23km±9km, ML3.4/62,ML3.2(AEIC),Error ellipse: s-maj=13.2km s-min=8.0km az=166.0*
AEIC ***08*** *23:05:49.4±1.9,56.33N±0.08×149.2W±0.1,h1km±7km, Error ellipse: s-maj=12.1km s-min=8.9km az=173.0*
IDC ***08*** *23:05:54.0±3.4,56.66N×148.65W,h0km,mb3.3/1, mbtmp3.1/3,ML3.0/2,Error ellipse: s-maj=57.0km s-min=41.5km az=118.0*
ISC 08 23:05:46.3±1.7,56.3N±0.1×149.39W±0.06,h10km,n198, σ0.78/187,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.27**	**311**		**Sn**	**23 06 50.8**	**-0.9**
KDAK	**Kodiak Island**	**2.27**	**311**		**Pn**	**23 06 24.2**	**+0.4**
OHAK	**Old Harbor**	**2.32**	**294**		**Pn**	**23 06 25.0**	**+0.5**
OHAK					**Sn**	**23 06 52.1**	**-0.9**
OHAK	**Old Harbor**	**2.32**	**294**	P	**Pn**	**23 06 25.0**	**+0.5**
baz=112							
OHAK				S	**Sn**	**23 06 52.1**	**-0.9**
baz=112							
SII	**Sitkinak Islan**	**2.67**	**277**		**Pn**	**23 06 29.8**	**+0.5**
SII	**Sitkinak Islan**	**2.67**	**277**	IAML		23 07 10.8	
comp=N,64nm,1.1s							
SYI	**Shuyak Island**	**2.80**	**326**		**Pn**	**23 06 31.6**	**+0.6**
SYI					**Sn**	**23 07 04.5**	**-0.3**
Q20K	**Shuyak Island**	**2.80**	**326**	P	**Pn**	**23 06 31.6**	**+0.5**
baz=142							
Q20K				S	**Sn**	**23 07 04.5**	**-0.3**
baz=142							
R18K	**Karluk**	**3.04**	**296**		**Pn**	**23 06 35.2**	**+0.9**
R18K	**Karluk**	**3.04**	**296**	IAML		23 07 12.0	
comp=N,117nm,0.4s							
R18K				IAML		23 07 18.3	
comp=E,108nm,0.4s							
R18K	**Karluk**	**3.04**	**296**	P	**Pn**	**23 06 35.2**	**+0.9**
baz=112							
CNPM	**China Poot**	**3.34**	**344**		**Pn**	**23 06 38.8**	**+0.3**
CNPM				IAML		23 07 27.7	
comp=E,34nm,0.5s							
CNPM	**China Poot**	**3.34**	**344**		**Sn**	**23 07 16.6**	**-1.8**
Q19K	**Cape Douglas,**	**3.46**	**320**	Pn	**Pn**	**23 06 41.4**	**+1.2**
Q19K				IAML		23 07 33.0	
comp=E,165nm,1.5s							
Q19K				IAML		23 07 35.5	
comp=N,111nm,0.8s							
BRSE	**Bradley Lake S**	**3.49**	**349**		**Pn**	**23 06 40.0**	**-0.6**
BRSE					**Sn**	**23 07 21.9**	**0.0**
BRSE	**Bradley Lake S**	**3.49**	**349**	P	**Pn**	**23 06 40.0**	**-0.6**
baz=166							
BRSE				S	**Sn**	**23 07 21.9**	**0.0**
baz=166							
Q23K	**Middleton Isla**	**3.50**	**26**		**Pn**	**23 06 39.3**	**-1.3**
Q23K	**Middleton Isla**	**3.50**	**26**	IAML		23 07 19.0	
comp=N,133nm,1.4s							
Q23K				IAML		23 07 31.5	
comp=E,141nm,1.4s							
Q23K	**Middleton Isla**	**3.50**	**26**	P	**Pn**	**23 06 39.9**	**-0.8**
baz=207							
MID	**Middleton Isla**	**3.50**	**26**		**Pn**	**23 06 39.3**	**-1.4**
MID	**Middleton Isla**	**3.50**	**26**	IAML		23 07 31.6	
comp=E,148nm,1.5s							
MID				IAML		23 08 48.6	
comp=N,107nm,1.5s							
BRLK	**Bradley Lake**	**3.53**	**348**		**Pn**	**23 06 40.8**	**-0.3**
BRLK				IAML		23 07 28.1	
comp=E,32nm,0.7s							
CHIR	**Chirikof Islan**	**3.53**	**264**	Pn	**Pn**	**23 06 41.6**	**+0.4**
CHIR				IAML		23 07 10.4	
comp=E,65nm,1.4s							
CHIR				IAML		23 09 03.5	
comp=N,70nm,1.4s							
SEW	**Seward**	**3.78**	**359**		**Pn**	**23 06 43.8**	**-0.6**
SEW	**Seward**	**3.78**	**359**	P	**Pn**	**23 06 43.8**	**-0.6**
baz=178							
P23K	**Montague Islan**	**3.82**	**15**		**Pn**	**23 06 44.2**	**-0.8**
P23K	**Montague Islan**	**3.82**	**15**	P	**Pn**	**23 06 44.2**	**-0.8**
baz=195							
P19K	**Oil Pt**	**3.90**	**330**		**Pn**	**23 06 46.7**	**+0.5**
P19K	**Oil Pt**	**3.90**	**330**	IAML		23 07 35.6	
comp=N,50nm,0.5s							
P19K				IAML		23 07 37.1	
comp=E,54nm,0.9s							
P19K	**Oil Pt**	**3.90**	**330**	P	**Pn**	**23 06 46.7**	**+0.5**
baz=146							
CNTC	**Contact Creek**	**4.02**	**301**		**Pn**	**23 06 49.7**	**+1.8**
Q17K	**Contact Creek**	**4.02**	**301**	P	**Pn**	**23 06 49.7**	**+1.7**
baz=116							
O20K	**Slope Mountain**	**4.12**	**337**		**Pn**	**23 06 48.8**	**-0.5**
O20K	**Slope Mountain**	**4.12**	**337**	P	**Pn**	**23 06 49.5**	**+0.2**
baz=153							
IVE	**Iliamna Volcan**	**4.16**	**334**		**Pn**	**23 06 49.9**	**0.0**
O22K	**Cooper Landing**	**4.16**	**358**		**Pn**	**23 06 49.8**	**+0.1**
O22K				IAML		23 07 49.8	
comp=N,91nm,0.7s							
O22K				IAML		23 07 49.9	
comp=E,96nm,0.8s							
SLKM	**Skilak Lake**	**4.20**	**354**		**Pn**	**23 06 49.7**	**-0.7**
HIN	**Hinchinbrook I**	**4.34**	**19**		**Pn**	**23 06 51.5**	**-0.8**
P18K	**Big Mountain,**	**4.37**	**317**	Pn	**Pn**	**23 06 53.3**	**+0.6**
KAIM	**Kayak Island**	**4.46**	**34**		**Pn**	**23 06 53.0**	**-0.8**
KAIM	**Kayak Island**	**4.46**	**34**	P	**Pn**	**23 06 53.2**	**-0.6**
baz=217							
RSO	**Redoubt South**	**4.50**	**338**		**Pn**	**23 06 53.4**	**-1.1**
RDT	**Redoubt**	**4.53**	**341**		**Pn**	**23 06 54.2**	**-0.7**
CAPN	**Captain Cook N**	**4.54**	**349**	Pn	**Pn**	**23 06 55.5**	**+0.6**
RDWB	**Redoubt West**	**4.54**	**338**		**Pn**	**23 06 54.6**	**-0.5**
NCT	**North Crescent**	**4.62**	**338**		**Pn**	**23 06 55.6**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.63**	**23**		**Pn**	**23 06 55.7**	**-0.5**
EYAK	**Cordova Ski Ar**	**4.63**	**23**	P	**Pn**	**23 06 55.7**	**-0.5**
baz=204							
O19K	**Port Alsworth**	**4.66**	**328**	Pn	**Pn**	**23 06 56.5**	**-0.1**
O19K				IAML		23 07 54.0	
comp=N,51nm,0.4s							
O19K				IAML		23 08 10.6	
comp=E,58nm,0.5s							
O18K	**Koktuh Hills**	**4.69**	**321**		**Pn**	**23 06 57.4**	**+0.4**
O18K	**Koktuh Hills**	**4.69**	**321**	IAML		23 08 08.8	
comp=N,13nm,1.4s							
O18K	**Koktuh Hills**	**4.69**	**321**	P	**Pn**	**23 06 57.4**	**+0.4**
baz=136							
RAGM	**Ragged Mountai**	**4.76**	**29**	Pn	**Pn**	**23 06 57.6**	**-0.4**
RC01	**Rabbit Creek A**	**4.77**	**358**		**Pn**	**23 06 57.5**	**-0.6**
RC01	**Rabbit Creek A**	**4.77**	**358**	IAML		23 07 52.9	
comp=N,20nm,0.7s							
RC01				IAML		23 07 59.4	
comp=E,24nm,0.7s							
RC01	**Rabbit Creek A**	**4.77**	**358**	P	**Pn**	**23 06 57.5**	**-0.6**
baz=176							
SUCK	**Suckling Hills**	**4.78**	**36**		**Pn**	**23 06 57.9**	**-0.4**
SUCK	**Suckling Hills**	**4.78**	**36**	IAML		23 08 10.3	
comp=E,39nm,1.4s							
HMT	**Hamilton**	**4.83**	**32**		**Pn**	**23 06 58.9**	**-0.1**
FIS	**Fire Island**	**4.84**	**355**		**Pn**	**23 06 59.5**	**+0.4**
FIS				IAML		23 08 00.8	
comp=E,46nm,1.5s							
FIS				IAML		23 08 08.6	
comp=N,41nm,0.5s							
NICHA	**Nichawak Mount**	**4.84**	**34**		**Pn**	**23 06 58.9**	**-0.3**
GOAT	**Goat Mountain**	**4.91**	**28**		**Pn**	**23 06 59.7**	**-0.4**
BERG	**Berg Lake**	**5.05**	**34**		**Pn**	**23 07 01.1**	**-0.8**
N20K	**Mount Spurr**	**5.09**	**344**	P	**Pn**	**23 07 01.9**	**-0.7**
baz=161							
SPCR	**Spurr Chakacha**	**5.09**	**344**		**Pn**	**23 07 01.9**	**-0.7**
KNK	**Knik Glacier**	**5.11**	**5**		**Pn**	**23 07 02.6**	**-0.2**
KNK				IAML		23 08 07.6	
comp=N,15nm,1.3s							
KNK				IAML		23 08 11.2	
comp=E,18nm,0.8s							
KNK	**Knik Glacier**	**5.11**	**5**	P	**Pn**	**23 07 02.7**	**-0.2**
baz=185							
SNH	**Sunshine Point**	**5.17**	**39**		**Pn**	**23 07 03.0**	**-0.7**
SNH	**Sunshine Point**	**5.17**	**39**	IAML		23 07 59.5	
comp=E,37nm,1.1s							
SNH				IAML		23 08 06.9	
comp=N,30nm,1.0s							
SUA	**Susitna One**	**5.19**	**353**		**Pn**	**23 07 03.4**	**-0.5**
SUA	**Susitna One**	**5.19**	**353**	IAML		23 08 17.9	
comp=E,9.3nm,1.5s							
SUA	**Susitna One**	**5.19**	**353**	P	**Pn**	**23 07 03.4**	**-0.5**
baz=171							
N19K	**Bonanza Creek**	**5.22**	**331**		**Pn**	**23 07 04.2**	**-0.2**
N19K	**Bonanza Creek**	**5.22**	**331**	P	**Pn**	**23 07 04.1**	**-0.2**
baz=147							
BMRM	**Bremner River**	**5.27**	**26**		**Pn**	**23 07 04.6**	**-0.4**
BMRM	**Bremner River**	**5.27**	**26**	P	**Pn**	**23 07 04.6**	**-0.4**
baz=209							
PMR	**Palmer**	**5.27**	**1**	Pn	**Pn**	**23 07 04.5**	**-0.4**
PMR				IAML		23 08 10.0	
comp=N,12nm,0.6s							
PMR				IAML		23 08 11.1	
comp=E,12nm,1.2s							
SPNN	**North Nagishla**	**5.33**	**343**		**Pn**	**23 07 05.6**	**-0.3**
WAX	**Waxell Ridge**	**5.37**	**37**		**Pn**	**23 07 05.8**	**-0.5**
BARK	**Barkley Ridge**	**5.46**	**39**		**Pn**	**23 07 06.9**	**-0.7**
GHO	**Glory Hole Cre**	**5.46**	**2**		**Pn**	**23 07 07.9**	**+0.3**
KLU	**Klutina**	**5.47**	**18**		**Pn**	**23 07 07.5**	**-0.3**
KLU	**Klutina**	**5.47**	**18**	P	**Pn**	**23 07 07.5**	**-0.3**
baz=199							
MESA	**MESA**	**5.50**	**42**		**Pn**	**23 07 07.5**	**-0.8**
MESA	**MESA**	**5.50**	**42**	P	**Pn**	**23 07 07.5**	**-0.8**
baz=227							
CRQM	**Cirque**	**5.50**	**34**		**Pn**	**23 07 08.0**	**-0.4**
SML	**Sawmill**	**5.51**	**5**		**Pn**	**23 07 08.7**	**+0.3**
SML	**Sawmill**	**5.51**	**5**	P	**Pn**	**23 07 08.7**	**+0.3**
baz=185							
CRQE	**Cirque**	**5.52**	**34**	P	**Pn**	**23 07 08.0**	**-0.5**
baz=218							
N18K	**Kilae Creek**	**5.53**	**325**		**Pn**	**23 07 08.6**	**+0.1**
N18K	**Kilae Creek**	**5.53**	**325**	P	**Pn**	**23 07 08.6**	**+0.1**
baz=139							
SCM	**Sheep Creek Mo**	**5.61**	**10**	Pn	**Pn**	**23 07 10.3**	**+0.6**
ISLE	**Juniper Island**	**5.65**	**38**		**Pn**	**23 07 09.8**	**-0.5**
BAGL	**Bagley Icefiel**	**5.66**	**40**		**Pn**	**23 07 09.4**	**-0.9**
O16K	**Kokwok River B**	**5.67**	**309**	Pn	**Pn**	**23 07 11.8**	**+1.4**
SVW2	**Sparrevohn**	**5.76**	**329**	Pn	**Pn**	**23 07 11.8**	**+0.1**
SKT	**Skwentna**	**5.76**	**350**		**Pn**	**23 07 11.7**	**-0.1**
SKT	**Skwentna**	**5.76**	**350**	P	**Pn**	**23 07 11.7**	**-0.1**
baz=167							
VRDI	**Verde Repeater**	**5.79**	**30**	Pn	**Pn**	**23 07 12.5**	**+0.2**
N25K	**Chitina, Valde**	**5.83**	**23**		**Pn**	**23 07 12.5**	**-0.3**
N25K	**Chitina, Valde**	**5.83**	**23**	P	**Pn**	**23 07 12.5**	**-0.3**
baz=206							
N17K	**Nushagak Hills**	**5.87**	**319**	Pn	**Pn**	**23 07 13.3**	**+0.2**
GLB	**Gilahina Butte**	**5.88**	**27**		**Pn**	**23 07 13.1**	**-0.2**
KIAG	**Kiagna River**	**5.88**	**36**		**Pn**	**23 07 12.9**	**-0.6**
M20K	**Styx River**	**5.88**	**342**		**Pn**	**23 07 13.1**	**-0.4**
M20K	**Styx River**	**5.88**	**342**	P	**Pn**	**23 07 13.1**	**-0.4**
baz=159							
SAMH	**Samovar Hills**	**5.92**	**47**		**Pn**	**23 07 13.7**	**-0.3**
TABL	**Table Mountain**	**5.97**	**43**		**Pn**	**23 07 14.5**	**-0.3**
M24K	**Tolsona, Glenn**	**6.01**	**15**	Pn	**Pn**	**23 07 16.4**	**+1.1**
MCARA	**McCarthy VSAT**	**6.04**	**30**		**Pn**	**23 07 15.6**	**0.0**
MCARA	**McCarthy VSAT**	**6.04**	**30**	P	**Pn**	**23 07 15.6**	**0.0**
baz=215							
PTPK	**Patty Peak**	**6.05**	**34**		**Pn**	**23 07 15.8**	**-0.1**
PCA	**Pinnacle**	**6.12**	**48**		**Pn**	**23 07 16.3**	**-0.4**
PINM	**Pinnacle**	**6.12**	**48**	P	**Pn**	**23 07 16.3**	**-0.4**
baz=235							
M19K	**Big River Lodg**	**6.15**	**337**	Pn	**Pn**	**23 07 16.6**	**-0.4**
M18K	**Stony River**	**6.15**	**330**		**Pn**	**23 07 16.9**	**-0.2**
M18K	**Stony River**	**6.15**	**330**	P	**Pn**	**23 07 16.8**	**-0.2**
baz=144							
BARN	**Barnard Glacie**	**6.21**	**37**		**Pn**	**23 07 18.1**	**0.0**
WASW	**Wrangell South**	**6.21**	**23**		**Pn**	**23 07 18.1**	**0.0**
WACK	**Wrangell Chich**	**6.23**	**23**		**Pn**	**23 07 19.0**	**+0.6**
CTG	**Chitna Glacier**	**6.25**	**39**	P	**Pn**	**23 07 17.9**	**-0.7**
baz=224							
CTGM	**Chitina Glacie**	**6.26**	**39**		**Pn**	**23 07 17.9**	**-0.8**
LOGN	**Logan Glacier**	**6.28**	**41**	Pn	**Pn**	**23 07 18.0**	**-1.0**
BCPM	**Bancas Point**	**6.30**	**51**		**Pn**	**23 07 18.9**	**-0.3**
WAT6	**Susitna Watana**	**6.32**	**7**		**Pn**	**23 07 19.6**	**+0.1**
WAT6	**Susitna Watana**	**6.32**	**7**	P	**Pn**	**23 07 19.6**	**+0.1**
baz=187							
WAZA	**Wrangell Mount**	**6.35**	**23**		**Pn**	**23 07 20.7**	**+0.7**
L19K	**White Mountain**	**6.49**	**337**	Pn	**Pn**	**23 07 21.1**	**-0.7**
M17K	**Holitna River**	**6.57**	**324**		**Pn**	**23 07 23.4**	**+0.6**
M17K	**Holitna River**	**6.57**	**324**	P	**Pn**	**23 07 23.4**	**+0.6**
baz=137							
N15K	**Kwethluk River**	**6.83**	**309**	Pn	**Pn**	**23 07 28.6**	**+2.3**
DHY	**Denali Highway**	**6.83**	**8**		**Pn**	**23 07 27.8**	**+1.3**
M16K	**Timber Creek**	**6.85**	**317**	Pn	**Pn**	**23 07 27.3**	**+0.7**
RND	**Reindeer**	**7.09**	**2**	Pn	**Pn**	**23 07 30.3**	**+0.2**
M27K	**Edge Creek, AK**	**7.15**	**29**	Pn	**Pn**	**23 07 31.5**	**+0.6**
TRF	**Thorofare Moun**	**7.15**	**357**		**Pn**	**23 07 31.5**	**+0.6**
TRF	**Thorofare Moun**	**7.15**	**357**	P	**Pn**	**23 07 31.5**	**+0.6**
baz=175							
CAST	**Castle Rocks**	**7.23**	**350**		**Pn**	**23 07 31.9**	**0.0**
KTH	**Kantishna Hill**	**7.28**	**355**	Pn	**Pn**	**23 07 32.7**	**+0.1**
K20K	**Telida**	**7.42**	**343**	Pn	**Pn**	**23 07 36.6**	**+2.1**
L16K	**Owhat River**	**7.49**	**320**	Pn	**Pn**	**23 07 35.8**	**+0.4**
HYT	**Haines Junctio**	**7.66**	**49**		Pn	23 07 33.6	-4.3
L27K	**Beaver Creek,**	**7.75**	**26**	Pn	**Pn**	**23 07 38.0**	**-1.0**
BCAR	**Beaver Creek A**	**7.76**	**26**	Pn	**Pn**	**23 07 39.7**	**+0.6**
K17K	**Iditarod**	**7.83**	**328**		**Pn**	**23 07 40.0**	**-0.2**
BWN	**Browne**	**7.86**	**360**	Pn	**Pn**	**23 07 40.4**	**-0.1**
J18K	**Innoko River**	**8.04**	**336**	Pn	**Pn**	**23 07 42.8**	**-0.1**
SKAG	**Skagway**	**8.11**	**62**	Pn	**Pn**	**23 07 44.0**	**0.0**
SCRK	**Sand Creek**	**8.12**	**17**	Pn	**Pn**	**23 07 43.3**	**-0.8**
N30M	**Aishikik Lake**	**8.17**	**46**	Pn	**Pn**	**23 07 43.8**	**-1.1**
WRH	**Wood River Hil**	**8.19**	**4**	Pn	**Pn**	**23 07 45.1**	**+0.2**
HDA	**Harding Lake**	**8.19**	**7**	Pn	**Pn**	**23 07 46.2**	**+1.3**
S32K	**Killisnoo**	**8.19**	**76**	Pn	Pn	23 07 41.8	-3.2
J20K	**Nowinta River**	**8.21**	**345**	Pn	**Pn**	**23 07 45.2**	**-0.1**
J19K	**Poorman**	**8.28**	**341**	Pn	**Pn**	**23 07 45.6**	**-0.6**
CCB	**Clear Creek Bu**	**8.37**	**5**	Pn	**Pn**	**23 07 47.7**	**+0.2**
M13K	**Dall Lake**	**8.39**	**305**	Pn	**Pn**	**23 07 48.1**	**+0.4**
L14K	**Kuka Creek**	**8.52**	**312**	Pn	**Pn**	**23 07 50.9**	**+1.4**
K27K	**Chicken**	**8.52**	**22**	Pn	**Pn**	**23 07 49.8**	**+0.2**
J25K	**Salcha River,**	**8.53**	**12**	Pn	**Pn**	**23 07 50.7**	**+0.9**
IL31		**8.55**	**7**	Pn	**Pn**	**23 07 50.8**	**+0.9**
ILAR	**Eielson Array**	**8.55**	**7**	Pn	**Pn**	**23 07 50.3**	**+0.4**
ILAR	**Eielson Array**	**8.55**	**7**	Pn	**Pn**	**23 07 51.0**	**+1.1**
comp=E,0.3nm,0.3s,baz=188,slow=13,SNR=14							
ILAR				Sn	Sn	23 09 18.9	-7.4
comp=E,0.2nm,0.3s,baz=204,slow=10,SNR=1.2							
comp=E,0.7nm,0.4s							
K15K	**Wolf Creek Mou**	**8.60**	**319**	Pn	**Pn**	**23 07 51.7**	**+1.0**
MDM	**Murphy Dome**	**8.67**	**3**	Pn	**Pn**	**23 07 52.4**	**+0.8**
J26L	**Joseph Creek**	**8.68**	**17**	Pn	**Pn**	**23 07 51.9**	**+0.1**
N31M	**Braeburn, Yuko**	**8.72**	**48**	Pn	**Pn**	**23 07 50.7**	**-1.6**
WHY	**Whitehorse**	**8.74**	**54**	Pn	**Pn**	**23 07 52.0**	**-0.6**
MLY	**Manley**	**8.75**	**356**	Pn	**Pn**	**23 07 52.9**	**+0.2**
I23K	**Minto, Yukon-K**	**8.84**	**0**	Pn	**Pn**	**23 07 53.3**	**-0.6**
L29M	**L29M**	**8.84**	**35**	Pn	**Pn**	**23 07 54.7**	**+0.7**
P32M	**Atlin**	**8.94**	**62**	Pn	**Pn**	**23 07 54.5**	**-0.9**
M30M	**Minto, Yukon**	**8.94**	**40**	Pn	**Pn**	**23 07 55.7**	**+0.3**
J16K	**Anvik River**	**8.96**	**326**	Pn	**Pn**	**23 07 55.4**	**-0.2**
U33K	**Whale Pass**	**9.07**	**85**	Pn	Pn	23 07 53.0	-4.1
I26K	**Coal Creek Min**	**9.49**	**16**	Pn	**Pn**	**23 08 03.5**	**+0.7**
H21K	**Melozitna Rive**	**9.49**	**351**	Pn	**Pn**	**23 08 02.8**	**-0.1**
Q32M	**Nakina River**	**9.54**	**67**	Pn	**Pn**	**23 08 02.1**	**-1.7**
P33M	**Teslin, Yukon**	**9.54**	**59**	Pn	**Pn**	**23 08 02.5**	**-1.1**
H24K	**Noodor Dome**	**9.56**	**4**	Pn	**Pn**	**23 08 06.0**	**+2.2**
K29M	**Barlow Dome**	**9.56**	**33**	Pn	**Pn**	**23 08 04.1**	**+0.2**
M31M	**Drury Creek, Y**	**9.65**	**46**	Pn	**Pn**	**23 08 05.0**	**-0.1**
H19K	**Roundabout Mou**	**9.83**	**343**	Pn	**Pn**	**23 08 08.2**	**+0.8**
H18K	**Honhosa River**	**9.86**	**337**	Pn	**Pn**	**23 08 06.2**	**-1.7**
IMAR	**Indian Mountai**	**9.90**	**350**	Pn	**Pn**	**23 08 08.8**	**+0.4**
S34M	**Telegraph Cree**	**10.05**	**73**	Pn	**Pn**	**23 08 07.7**	**-2.8**
I28M	**Miner Creek**	**10.22**	**23**	Pn	**Pn**	**23 08 12.9**	**+0.1**
R33M	**Jennings River**	**10.27**	**65**	Pn	**Pn**	**23 08 13.2**	**-0.5**
G21K	**Allakaket**	**10.40**	**351**	Pn	**Pn**	**23 08 16.2**	**+0.9**
G23K	**Bananza Creek**	**10.41**	**359**	Pn	**Pn**	**23 08 15.5**	**0.0**
G24K	**Hadweenzic Riv**	**10.44**	**4**	Pn	**Pn**	**23 08 17.0**	**+1.2**
J30M	**Hart River**	**10.45**	**33**	Pn	**Pn**	**23 08 17.1**	**+1.0**
T35M	**Bob Quinn**	**10.55**	**79**	Pn	**Pn**	**23 08 15.2**	**-2.2**
YKA	**Yellowknife Ar**	**18.56**	**56**	P	**Pn**	**23 10 05.4**	**+2.4**
comp=E,0.1nm,0.3s,baz=266,slow=12,SNR=3.3							
comp=E,0.2nm,0.6s							
H11S1	**WAKE ISLAND Hy**	**50.00**	**239**	T	T	00 09 29.7	
baz=29							
H11S2	**WAKE ISLAND Hy**	**50.02**	**239**	T	T	00 09 29.6	
baz=29							
H11S3	**WAKE ISLAND Hy**	**50.02**	**239**	T	T	00 09 34.5	
baz=29							
MKAR	**Makanchi Array**	**68.51**	**325**	P	P	23 16 57.5	+9.1
comp=E,0.2nm,0.6s,baz=47,slow=6.3,SNR=2.3							
comp=E,0.2nm,0.6s							

NEIC ***08*** *23:29:00.5±1.8,3.19S±0.09×150.34E±0.06,h10km±1km, mb4.7/54,Error ellipse: s-maj=15.3km s-min=9.4km az=205.0*
GCMT ***08*** *23:29:02.5±0.4,3.03S±0.02×150.62E±0.03,h14km±2km, MW4.8/89,Moment Tensor Solution. s12,c14; s89,c112; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.58±.13; Mθθ2.12±.12; Mϕϕ-1.54±.09; Mrθ-0.05±.18; Mrϕ0.44±.08; Mθϕ-0.48±.23; Best double couple: Mo1.97800×10^16 NP1:θs40.00000°,δ77.00000°,λ-163.00000°. NP2: ϕs306.00000°,δ73.00000°,λ-14.00000°. Principal axes: T 2.1760, Plg2.0000°, Azm173.0000°; N -0.4000, Plg68.0000°, Azm77.0000°; P -1.7800, Plg22.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***08*** *23:29:06.2±3.1,3.37S×150.98E,h92km±30km,mb3.7/16, mbtmp4.0/18,MS3.8/43 Error ellipse: s-maj=26.1km s-min=17.1km az=112.0*
ISC 08 23:28:60.0±0.4,3.28S±0.06×150.40E±0.07,h10km,n120, σ1.879/95,mb4.6/50,MS3.8/42,2D,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.98**	**117**	Pn	**Pn**	**23 29 34.9**	**+1.2**
MANU	**Manus Island**	**3.27**	**292**		**Pn**	**23 29 49.3**	**-2.0**
PMG	**Port Moresby**	**6.88**	**208**	Pn	**Pn**	**23 30 41.2**	**+0.2**
PMG	**Port Moresby**	**6.88**	**208**	P	Pn	23 30 47.1	+6.0
16nm,0.8s,baz=304,slow=22,SNR=2.0							
PMG				LR	LR	23 33 52.9	
comp=Z,599nm,18.7s,baz=38,slow=40							
HNR	**Honiara**	**11.29**	**123**	P	Pn	23 31 36.6	-4.9
1μm,0.5s,baz=251,slow=13,SNR=1.1							
CTA	**Charters Tower**	**17.19**	**193**	P	**P**	**23 33 02.7**	**+0.7**
5.5nm,0.9s,baz=308,slow=10,SNR=2.1							
CTA				LR	LR	23 39 13.5	
comp=Z,310nm,21.3s,baz=22,slow=35							
GUMO	**Guam**	**17.64**	**342**	LR	LR	23 39 08.3	
comp=Z,163nm,18.3s,baz=136,slow=34							
EIDS	**Eidsvold**	**21.97**	**178**	P	**P**	**23 33 55.0**	**+0.8**
EIDS				IAmb	IAmb	23 34 06.8	
comp=Z,28nm,1.4s							
WB0	**Warramunga Arr**	**22.64**	**222**	P	**P**	**23 34 02.5**	**+1.1**
WR0	**Warramunga Arr**	**22.68**	**222**	P	**P**	**23 34 02.9**	**+1.1**
WRAB	**Tennant Creek**	**22.78**	**222**	P	**P**	**23 34 01.0**	**-1.9**
WB2	**Warramunga Arr**	**22.79**	**222**	P	**P**	**23 34 02.9**	**-0.1**
WB2				IAmb	IAmb	23 34 12.2	
comp=Z,22nm,1.4s							
WRA	**Warramunga Arr**	**22.80**	**222**	P	**P**	**23 34 03.4**	**+0.3**
WRA	**Warramunga Arr**	**22.80**	**222**	P	**P**	**23 34 03.9**	**+0.8**
comp=Z,5.7nm,0.9s,baz=46,slow=8.7,SNR=23							
WRA				PcP	**PcP**	**23 37 49.6**	**-5.2**
comp=Z,0.4nm,0.8s,baz=46,sl

CMAR					LR	LR	00 00 58.5		
	comp=Z,28nm,21.2s,baz=250,slow=34								
	comp=Z,1.2nm,0.3s								
PZH	**PanZhiHua**	**55.54**	**305**		P	**P**	**23 38 39.5**	**+3.5**	
PZH					pmax	pmax			
	comp=Z,10.0nm,0.5s								
PZH					pmax	pmax			
	comp=Z,120nm,5.1s								
CD2	**Chengdu**	**55.94**	**311**		P	**P**	**23 38 38.5**	**-0.2**	
CD2					pmax	pmax			
	comp=Z,10.0nm,1.1s								
XLT	**XiLinHaoTe**	**56.16**	**331**	*eP*		**P**	**23 38 39.4**	**-0.7**	
XLT					pP	sP	23 38 44.0	+0.5	
XLT					pmax	pmax			
	comp=Z,7.0nm,1.1s								
HHC	**Hu-ho-hao-te**	**56.43**	**325**	*eP*		**P**	**23 38 41.5**	**-0.6**	
HHC					pP	pwP	23 38 47.0	-0.6	
HHC					PcP	PcP	23 39 30.7	-8.3	
HHC				*eS*		**S**	**23 46 39.2**	**+6.0**	
HHC					pmax	pmax			
	comp=Z,7.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,96nm,5.5s								
HHC					LR	LR			
	comp=N,170nm,14.7s								
HHC					LR	LR			
	comp=E,140nm,15.7s								
HHC					LR	LR			
	comp=Z,180nm,19.2s								
PETK	**Petropavlovsk-**	**56.52**	**5**	P		**P**	**23 38 38.4**	**-3.9**	
	comp=Z,3.1nm,0.9s,baz=166,slow=7.2,SNR=1.7								
PETK					LR	LR	23 58 21.1		
	comp=Z,93nm,20.8s,baz=186,slow=31								
	comp=Z,3.1nm,0.9s								
SHEM	**Shemya Is, Ala**	**59.28**	**17**		LR	LR	00 06 55.4		
	comp=Z,23nm,18.1s,baz=216,slow=38								
PPT	**Papeete**	**60.47**	**108**		LR	LR	00 01 46.2		
	comp=Z,35nm,20.1s,baz=232,slow=33								
GTA	**Gaotai**	**62.92**	**318**		P	**P**	**23 39 29.4**	**+2.5**	
GTA					sP	pwP	23 39 37.1	+4.6	
GTA					pmax	pmax			
	comp=Z,3.0nm,1.5s								
GTA					LR	LR			
	comp=N,94nm,19.6s								
GTA					LR	LR			
	comp=E,130nm,19.6s								
GTA					LR	LR			
	comp=Z,130nm,18.5s								
SONM	**Songino Array**	**63.78**	**329**		P	**P**	**23 39 30.1**	**-2.3**	
	comp=Z,0.6nm,0.7s,baz=111,slow=3.2,SNR=2.1								
SONM					LR	LR	00 06 51.9		
	comp=Z,104nm,20.5s,baz=161,slow=35								
	comp=Z,0.6nm,0.7s								
SEY	**Seymchan**	**66.05**	**1**		LR	LR	00 08 54.0		
	comp=Z,68nm,19.1s,baz=314,slow=36								
YAK	**Yakutsk**	**67.04**	**350**		LR	LR	00 08 05.7		
	comp=Z,56nm,20.1s,baz=134,slow=35								
WMQ	**Urumqi**	**73.01**	**318**	*eP*		**P**	**23 40 31.1**	**+0.9**	
WMQ					pmax	pmax			
	comp=Z,10.0nm,0.9s								
VNDA	**Vanda**	**74.44**	**177**		P	**P**	**23 40 38.5**	**+0.6**	
VNDA					IAmb	IAmb	23 40 54.1		
	comp=Z,12nm,1.5s								
ANM	**Nome**	**75.07**	**18**		P	**P**	**23 40 41.3**	**-0.5**	
ANM					IAmb	IAmb	23 40 50.8		
	comp=Z,7.9nm,1.2s								
KDAK	**Kodiak Island**	**75.93**	**28**		LR	LR	00 08 52.1		
	comp=Z,46nm,21.6s,baz=271,slow=32								
TIXI	**Tiksi**	**76.10**	**353**		LR	LR	00 17 48.0		
	comp=Z,36nm,18.0s,baz=183,slow=38								
MK31	**Makanchi Array**	**77.61**	**319**		P	**P**	**23 40 56.0**	**-0.7**	
MKAR	**Makanchi Array**	**77.61**	**319**		P	**P**	**23 40 55.4**	**-1.2**	
MKAR	**Makanchi Array**	**77.61**	**319**		P	**P**	**23 40 54.9**	**-1.7**	
	comp=Z,0.7nm,0.9s,baz=108,slow=4.7,SNR=4.0								
MKAR					LR	LR	00 13 35.1		
	comp=Z,67nm,21.9s,baz=341,slow=34								
	comp=Z,0.7nm,0.9s								
M20K	**Styx River**	**77.81**	**24**		P	**P**	**23 40 57.1**	**-0.4**	
M20K					IAmb	IAmb	23 41 01.9		
	comp=Z,14nm,1.3s								
MAKZ	**Makanchi**	**77.82**	**319**		P	**P**	**23 40 57.3**	**-0.5**	
ZALV	**Zalesovo Beam**	**78.57**	**327**		P	**P**	**23 40 59.3**	**-2.4**	
	comp=Z,0.6nm,0.4s,baz=92,slow=4.7,SNR=4.9								
ZALV					LR	LR	00 18 19.2		
	comp=Z,78nm,18.6s,baz=327,slow=37								
	comp=Z,0.6nm,0.4s								
G19K	**Purcell Mounta**	**78.75**	**19**		P	**P**	**23 41 02.5**	**+0.1**	
G19K					IAmb	IAmb	23 41 06.9		
	comp=Z,11nm,1.3s								
SML	**Sawmill**	**79.75**	**25**		P	**P**	**23 41 09.0**	**+0.9**	
IMAR	**Indian Mountai**	**79.78**	**20**		P	**P**	**23 41 07.8**	**-0.2**	
C19K	**Lookout Ridge**	**79.80**	**16**		P	**P**	**23 41 07.1**	**-1.1**	
C19K					IAmb	IAmb	23 41 13.5		
	comp=Z,7.9nm,1.2s								
I21K	**Tanana**	**79.97**	**21**		P	**P**	**23 41 08.7**	**-0.5**	
I21K					IAmb	IAmb	23 41 14.2		
	comp=Z,9.5nm,1.2s								
RND	**Reindeer**	**80.28**	**23**			**P**	**23 41 10.7**	**-0.3**	
RND					IAmb	IAmb	23 41 26.8		
	comp=Z,14nm,1.4s								
WRH	**Wood River Hil**	**81.08**	**23**		P	**P**	**23 41 14.2**	**-0.9**	
WRH					IAmb	IAmb	23 41 22.6		
	comp=Z,12nm,1.2s								
KURK	**Kurchatov**	**81.11**	**322**		P	**P**	**23 41 14.9**	**-0.6**	
KURBB	**Kurchatov Arra**	**81.13**	**322**		P	**P**	**23 41 13.8**	**-1.8**	
	comp=Z,0.5nm,0.6s,baz=106,slow=4.5,SNR=5.8								
	comp=Z,0.5nm,0.6s								
NIL	**Nilore**	**81.14**	**305**		P	**P**	**23 41 16.7**	**+0.5**	
NIL					IAmb	IAmb	23 41 23.0		
	comp=Z,8.7nm,0.8s								
MDM	**Murphy Dome**	**81.25**	**22**		P	**P**	**23 41 15.9**	**-0.1**	
MDM					IAmb	IAmb	23 41 22.9		
	comp=Z,6.9nm,1.4s								
CCB	**Clear Creek Bu**	**81.27**	**23**			**P**	**23 41 16.0**	**-0.1**	
CCB					IAmb	IAmb	23 41 19.3		
	comp=Z,10nm,1.4s								
GLB	**Gilahina Butte**	**81.56**	**26**		P	**P**	**23 41 17.6**	**-0.2**	
WAX	**Waxell Ridge**	**81.61**	**27**		P	**P**	**23 41 18.4**	**+0.3**	
POKR	**Poker Plat Res**	**81.62**	**22**		P	**P**	**23 41 19.0**	**+1.0**	
VRDI	**Verde Repeater**	**81.63**	**27**		P	**P**	**23 41 19.0**	**+0.6**	
IL31		**81.68**	**23**		P	**P**	**23 41 17.8**	**-0.4**	
IL31					IAmb	IAmb	23 41 21.3		
	comp=Z,5.7nm,1.2s								
ILAR	**Eielson Array**	**81.68**	**23**		P	**P**	**23 41 18.1**	**-0.2**	
ILAR	**Eielson Array**	**81.68**	**23**		P	**P**	**23 41 14.1**	**-4.1**	
	comp=Z,1.4nm,1.0s,baz=257,slow=5.2,SNR=10.0								
ILAR					LR	LR	00 13 57.3		
	comp=Z,62nm,21.4s,baz=238,slow=33								
	comp=Z,1.4nm,1.0s								
D22K	**Ayikyak River**	**81.69**	**18**		P	**P**	**23 41 18.4**	**+0.1**	
D22K					IAmb	IAmb	23 41 23.7		
	comp=Z,13nm,1.4s								
AAK	**Ala-Archa**	**81.89**	**314**		P	**P**	**23 41 19.8**	**-0.3**	
AAK	**Ala-Archa**	**81.89**	**314**		LR	LR	00 19 00.8		
	comp=Z,68nm,18.3s,baz=350,slow=36								
MENT	**Mentasta**	**82.18**	**25**		P	**P**	**23 41 20.6**	**-0.4**	
MENT					IAmb	IAmb	23 41 25.8		
	comp=Z,7.5nm,1.2s								
J25K	**Salcha River,**	**82.20**	**23**		P	**P**	**23 41 20.4**	**-0.7**	
J25K					IAmb	IAmb	23 41 25.0		
	comp=Z,12nm,1.2s								
F24K	**Squaw Lake**	**82.56**	**20**		P	**P**	**23 41 23.6**	**+0.6**	
F24K					IAmb	IAmb	23 41 28.3		
	comp=Z,11nm,1.4s								
NRIK	**Noril'sk**	**83.77**	**341**		P	**P**	**23 41 29.6**	**+0.6**	
NRIK	**Noril'sk**	**83.77**	**341**		P	**P**	**23 41 26.7**	**-2.3**	
	comp=Z,1.3nm,0.6s,baz=166,slow=4.2,SNR=2.8								
	comp=Z,1.3nm,0.6s								
D25K	**Kavik River**	**83.88**	**19**		P	**P**	**23 41 30.4**	**+0.6**	
D25K					IAmb	IAmb	23 41 34.2		
	comp=Z,5.4nm,1.3s								
KK31	**Karatay Array**	**84.85**	**314**			**P**	**23 41 35.1**	**-0.1**	
KK31					IAmb	IAmb	23 41 46.3		
	comp=Z,11nm,1.4s								
KKAR	**Karatay Array**	**84.85**	**314**		P	**P**	**23 41 34.7**	**-0.4**	
BVAR	**Borovoye Array**	**86.60**	**323**		P	**P**	**23 41 41.4**	**-2.2**	
	comp=Z,2.2nm,0.7s,baz=104,slow=5.6,SNR=10.0								
BVAR					LR	LR	00 21 44.5		
	comp=Z,99nm,19.4s,baz=8.7,slow=36								
	comp=Z,2.2nm,0.7s								
QSPA	**South Pole Qui**	**86.67**	**180**		LR	LR	00 20 01.6		
	comp=Z,68nm,18.7s,baz=11,slow=35								
INK	**Inuvik**	**87.91**	**21**			**P**	**23 41 50.0**	**+0.5**	
INK					IAmb	IAmb	23 41 53.0		
	comp=Z,8.3nm,1.4s								
INK	**Inuvik**	**87.91**	**21**		LR	LR	00 16 00.5		
	comp=Z,36nm,21.2s,baz=185,slow=32								
LTY	**Liberty**	**91.66**	**43**		P	**P**	**23 42 05.9**	**-1.8**	
MPK	**Martis Peak**	**91.72**	**51**		P	**P**	**23 42 09.0**	**+0.5**	
MPK					IAmb	IAmb	23 42 27.6		
	comp=Z,3.7nm,1.2s								
E07A	**Sunnyside**	**92.19**	**44**		P	**P**	**23 42 10.3**	**+0.2**	
YERR	**Yerington**	**92.33**	**51**		P	**P**	**23 42 10.8**	**-0.4**	
YERR					IAmb	IAmb	23 42 23.2		
	comp=Z,1.9nm,0.8s								
HAWA	**Hanford**	**92.40**	**44**		P	**P**	**23 42 09.4**	**-1.7**	
ARU	**Arti**	**93.73**	**326**		LR	LR	00 26 56.7		
	comp=Z,124nm,18.7s,baz=51,slow=37								
AKTO	**Aktyubinsk**	**94.03**	**320**		LR	LR	00 27 42.4		
	comp=Z,122nm,18.1s,baz=12,slow=37								
NEW	**Newport**	**94.08**	**42**		LR	LR	00 21 12.6		
	comp=Z,56nm,18.2s,baz=27,slow=33								
PFO	**Pinyon Flats O**	**94.42**	**57**		LR	LR	00 17 06.0		
	comp=Z,40nm,18.3s,baz=341,slow=31								
YKA	**Yellowknife Ar**	**95.21**	**28**		P	P	23 42 16.5	-7.1	
	comp=Z,0.1nm,0.5s,baz=272,slow=5.0,SNR=1.7								
	comp=Z,0.1nm,0.5s								
ELIB	**Princess Elisa**	**97.67**	**195**	*d*	P	**P**	**23 42 34.6**	**-0.3**	
KIRV	**Kirov**	**98.51**	**329**		LR	LR	00 32 06.2		
	comp=Z,94nm,18.0s,baz=325,slow=38								
PDAR	**Pinedale Array**	**99.60**	**47**		P	**Pdif**	**23 42 37.4**	**-6.8**	
	comp=Z,0.1nm,0.4s,baz=255,slow=2.7,SNR=2.0								
PDAR					LR	LR	00 22 34.8		
	comp=Z,50nm,18.7s,baz=14,slow=32								
	comp=Z,0.1nm,0.4s								
LPIG	**La Paz**	**99.81**	**66**		LR	LR	00 18 44.5		
	comp=Z,67nm,20.1s,baz=311,slow=30								

*TAP **08** 23:39:54.6,24.2N×121.7E,h9km,ML3.5,C*
*JMA **08** 23:39:54.8±0.1,24.2N±0.5×121.8E±0.8,h12km±1km,*
MV2.8/13,TAIWAN REGION
*ASIES **08** 23:39:54.6,24.2N×121.7E,h9km,ML3.5,Mw3.2,*
Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm;
M_{rr}-1.42; $M_{\theta\theta}$4.78; $M_{\phi\phi}$-3.35; $M_{r\theta}$6.06; $M_{r\phi}$-4.14; $M_{\theta\phi}$3.93;
Fault plane solution: $M_0$9.34908×10^{20} NP1:
ϕ_s249.04000°,δ83.78000°,λ-129.63000°. NP2:
ϕ_s151.58000°,δ40.04000°,λ-9.70000°. Principal axes: T
Plg27.6920°, Azm9.6590°; N Plg39.3550°, Azm254.1660°;
P Plg38.1700°, Azm124.0250°;

ISC 08 23:39:54.5±0.8,24.22N±0.01×121.79E±0.02,h9km±5km,
n130,σ0%64/215,1C-28D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**333**	*i*	P		**Pg**	**23 39 57.1**	**+0.1**
	baz=354								
EHP					S		**Sg**	**23 39 58.9**	**+0.2**
	baz=354								
EAHA	**Aohua**	**0.12**	**337**	⇓	P		**Pg**	**23 39 57.5**	**+0.2**
	baz=350								
EAHA					S		**Sg**	**23 39 59.4**	**+0.2**
	baz=350								
ETL	**Fush Village**	**0.16**	**248**	⇓	P		**Pg**	**23 39 58.1**	**0.0**
	baz=241								
ETL					S		**Sg**	**23 40 00.7**	**+0.2**
	baz=241								
NACB	**Ninganchiao**	**0.18**	**255**		P		**Pg**	**23 39 58.2**	**-0.2**
NACB	**Ninganchiao**	**0.18**	**255**	⇓	P		**Pg**	**23 39 58.3**	**-0.2**
	baz=242								
NACB					S		**Sg**	**23 40 00.7**	**-0.3**
	baz=242								
ENA	**Nanau**	**0.21**	**348**	⇓	P		**Pg**	**23 39 59.0**	**+0.2**
	baz=357								
ENA				*i*	S		**Sg**	**23 40 02.3**	**+0.5**
	baz=357								
EWUT	**Wuta**	**0.22**	**357**	⇓	P		**Pg**	**23 39 59.4**	**+0.2**
	baz=5.0								
EWUT					S		**Sg**	**23 40 02.8**	**+0.6**
	baz=5.0								
TWD	**Chiawan**	**0.23**	**231**	⇓	P		**Pg**	**23 39 59.0**	**-0.1**
	baz=231								
TWD					S		**Sg**	**23 40 02.3**	**+0.1**
	baz=231								
ETLH	**Xiulin Townshi**	**0.28**	**267**	⇓	P		**Pg**	**23 40 00.1**	**-0.1**
	baz=266								
ETLH					S		**Sg**	**23 40 04.2**	**+0.2**
	baz=266								
HWA	**Hwalien**	**0.30**	**215**	*e*	P		**Pb**	**23 40 02.0**	**0.0**
	baz=218								
ESAO	**Su ao**	**0.36**	**8**	*e*	P		**Pg**	**23 40 01.8**	**+0.2**
	baz=13								
ESAO				*e*	S		**Sg**	**23 40 06.6**	**+0.3**
	baz=13								
ETM	**Tongmen**	**0.37**	**227**		P		**Pg**	**23 40 01.8**	**-0.1**
	baz=228								
TWC	**Suao**	**0.39**	**8**		P		**Pg**	**23 40 02.5**	**+0.2**
	baz=10.0								
TWC					S		**Sg**	**23 40 07.7**	**+0.3**
	baz=10.0								
LATG	**Datong**	**0.39**	**323**	⇓	P		**Pg**	**23 40 02.5**	**+0.1**
	baz=325								
LATG				*e*	S		**Sg**	**23 40 07.5**	**0.0**
	baz=325								
LXIB	**Xiulin Townshi**	**0.40**	**240**	⇓	P		**Pg**	**23 40 02.0**	**-0.4**
	baz=238								
LXIB					S		**Sg**	**23 40 07.5**	**-0.1**
	baz=238								
NDS	**Dongshan**	**0.42**	**351**	⇓	P		**Pg**	**23 40 03.0**	**+0.3**
	baz=354								
NDS					S		**Sg**	**23 40 08.1**	**-0.1**
	baz=354								
NNSB	**Datong**	**0.42**	**299**	⇓	P		**Pg**	**23 40 03.0**	**+0.2**
	baz=300								
NNSB					S		**Sg**	**23 40 08.3**	**-0.2**
	baz=300								
NNS	**Nan Shan**	**0.44**	**300**	⇓	P		**Pg**	**23 40 03.2**	**+0.1**
	baz=301								
NNS					S		**Sg**	**23 40 09.0**	**+0.1**
	baz=301								
EOS2	**EOS2**	**0.45**	**64**		P		**Pb**	**23 40 04.7**	**+0.2**
	baz=57								
NDT	**Datong Townshi**	**0.46**	**326**	⇓	P		**Pg**	**23 40 03.9**	**+0.4**
	baz=329								
NDT					S		**Sg**	**23 40 09.9**	**+0.4**
	baz=329								
ENTT	**Nioudou**	**0.46**	**334**	⇓	P		**Pg**	**23 40 03.9**	**+0.3**
	baz=337								
ENTT					S		**Sg**	**23 40 10.4**	**+0.6**
	baz=337								
SHUL	**Shoufeng**	**0.48**	**206**	*e*	P		**Pb**	**23 40 05.7**	**+0.5**
	baz=212								
SHUL					S		**Sb**	**23 40 14.8**	**+2.4**
	baz=212								
WHF	**Hehuan Shan**	**0.48**	**261**	⇑	P		**Pg**	**23 40 04.1**	**0.0**
	baz=260								
WHF					S		**Sg**	**23 40 10.6**	**0.0**
	baz=260								
EOS3	**EOS3**	**0.49**	**82**	*e*	P		**Pn**	**23 40 07.1**	**-0.5**
	baz=82								
EOS4	**EOS4**	**0.49**	**102**		P		**Pn**	**23 40 06.6**	**-0.9**
	baz=88								
FUSS	**Fushou**	**0.50**	**273**		P		**Pg**	**23 40 04.5**	**+0.2**
	baz=273								
FUSS					S		**Sg**	**23 40 11.3**	**+0.4**
	baz=273								
TWE	**Neicheng**	**0.51**	**347**	⇓	P		**Pg**	**23 40 04.9**	**+0.4**
	baz=352								
TWE				*e*	S		**Sg**	**23 40 11.6**	**+0.4**
	baz=352								
ESL	**Shilin**	**0.52**	**219**	*e*	P		**Pg**	**23 40 04.6**	**0.0**
	baz=224								
ESL				*e*	S		**Sg**	**23 40 12.3**	**+0.8**
	baz=224								
ILA	**Ilan**	**0.54**	**356**	*e*	S		**Sb**	**23 40 13.3**	**-0.9**
	baz=360								
TEGC	**Jichi Village**	**0.56**	**204**	*e*	P		**Pb**	**23 40 06.7**	**+0.1**
	baz=201								
TEGC					S		**Sb**	**23 40 15.3**	**+0.7**
	baz=201								
TWT	**Tachien**	**0.56**	**273**	⇓	P		**Pb**	**23 40 05.9**	**-0.7**
	baz=273								
TWT					S		**Sg**	**23 40 13.4**	**+0.5**
	baz=273								
FUSB	**Fushanzhiwuyua**	**0.57**	**341**	⇓	P		**Pg**	**23 40 06.0**	**+0.4**
	baz=343								
FUSB					S		**Sg**	**23 40 13.0**	**0.0**
	baz=343								
TDCB	**Techi**	**0.58**	**273**	⇓	P		**Pg**	**23 40 06.0**	**+0.3**
	baz=273								
TDCB					S		**Sg**	**23 40 13.5**	**+0.1**
	baz=273								
YHNB	**Yeheng**	**0.58**	**320**		P		**Pg**	**23 40 06.3**	**+0.4**
YHNB	**Yeheng**	**0.58**	**320**	⇓	P		**Pg**	**23 40 06.4**	**+0.4**
	baz=321								
YHNB				*e*	S		**Sg**	**23 40 13.4**	**-0.2**
	baz=321								
CHGB	**Renai**	**0.58**	**254**	⇓	P		**Pg**	**23 40 06.0**	**+0.1**
	baz=246								
CHGB					S		**Sg**	**23 40 13.6**	**0.0**
	baz=246								
NSK	**Sanguang**	**0.60**	**319**	⇓	P		**Pg**	**23 40 06.5**	**+0.3**
	baz=321								
NSK				*e*	S		**Sg**	**23 40 13.8**	**-0.3**
	baz=321								
NWLT	**Wulai**	**0.61**	**335**		P		**Pb**	**23 40 06.8**	**-0.6**
	baz=337								
NWLT					S		**Sg**	**23 40 14.5**	**0.0**
	baz=337								
OWD	**Renai**	**0.62**	**245**	*e*	P		**Pg**	**23 40 06.6**	**0.0**
	baz=243								
OWD				*e*	S		**Sb**	**23 40 15.9**	**-0.6**
	baz=243								
WARBT	**Fenglin Townsh**	**0.62**	**216**	*e*	P		**Pg**	**23 40 06.4**	**-0.2**
	baz=222								
WARBT				*e*	S		**Sg**	**23 40 15.1**	**+0.4**
	baz=222								
EGFH	**Guangfu**	**0.64**	**211**		P		**Pb**	**23 40 07.7**	**-0.3**
	baz=216								
EGFH				*e*	S		**Sb**	**23 40 17.8**	**+0.8**
	baz=216								
WUSB	**Renai**	**0.66**	**250**	⇓	P		**Pg**	**23 40 07.2**	**0.0**
	baz=241								
WUSB				*e*	S		**Sg**	**23 40 15.6**	**-0.3**
	baz=241								
NFF	**Wufeng Townshi**	**0.74**	**304**	*e*	P		**Pb**	**23 40 09.2**	**-0.4**
	baz=304								
NFF				*e*	S		**Sg**	**23 40 18.0**	**-0.3**
	baz=304								
TIPB	**Shuangxi**	**0.75**	**3**		P		**Pb**	**23 40 09.5**	**-0.3**
	baz=5.0								
TIPB					S		**Sg**	**23 40 18.6**	**-0.1**
	baz=5.0								
VWDT	**VWDT**	**0.75**	**232**	⇓	P		**Pg**	**23 40 08.8**	**-0.3**
	baz=231								
VWDT				*e*	S		**Sg**	**23 40 18.8**	**-0.1**
	baz=231								
WHP	**Taichung City**	**0.77**	**274**	*e*	P		**Pb**	**23 40 09.9**	**-0.3**
	baz=274								
WHP				*e*	S		**Sg**	**23 40 19.9**	**+0.3**
	baz=274								
NHDH	**Xindian Distri**	**0.78**	**342**	*e*	P		**Pb**	**23 40 10.0**	**-0.2**
	baz=344								
TWA	**Mucha**	**0.78**	**346**	*e*	P		**Pb**	**23 40 10.1**	**-0.2**
	baz=348								
TWA				*e*	S		**Sg**	**23 40 20.0**	**+0.3**
	baz=348								
TATO	**Taipei**	**0.80**	**340**		P		**Pb**	**23 40 10.7**	**+0.1**
HGSD	**Ruisui**	**0.80**	**205**	⇓	P		**Pb**	**23 40 10.9**	**+0.2**
	baz=217								
TWB1	**Santiao Chiao**	**0.80**	**13**	*e*	P		**Pb**	**23 40 10.5**	**-0.2**
	baz=8.0								
WCS	**Beigang Elemen**	**0.82**	**259**	*e*	P		**Pg**	**23 40 10.5**	**+0.2**
	baz=258								
WCS				*e*	S		**Sg**	**23 40 20.7**	**-0.3**
	baz=258								
LIOB	**Emei**	**0.82**	**301**	*e*	P		**Pb**	**23 40 11.4**	**+0.4**
	baz=301								
LIOB				*e*	S		**Sb**	**23 40 22.1**	**-0.1**
	baz=301								
NSTT	**Nanjuang**	**0.83**	**300**	*e*	P		**Pb**	**23 40 11.1**	**0.0**
	baz=300								
NSTT				*e*	S		**Sg**	**23 40 21.2**	**0.0**
	baz=300								
EHY	**Hungye**	**0.83**	**211**	*e*	P		**Pb**	**23 40 10.9**	**-0.3**
	baz=217								
EHY				*e*	S		**Sb**	**23 40 22.9**	**+0.4**
	baz=217								
NWF	**Wu-fen Shan**	**0.85**	**359**	*e*	P		**Pb**	**23 40 11.6**	**+0.1**
	baz=352								
NWF				*e*	S		**Sg**	**23 40 21.7**	**-0.2**
	baz=352								
WFSB	**Wu-fen Shan**	**0.85**	**359**	*e*	P		**Pb**	**23 40 11.7**	**+0.3**
	baz=352								
WFSB				*e*	S		**Sg**	**23 40 22.1**	**+0.2**
	baz=352								
SXI1	**Grass Mountain**	**0.87**	**5**	*e*	P		**Pb**	**23 40 12.1**	**+0.2**
	baz=14								
SXI1				*e*	S		**Sg**	**23 40 22.3**	**-0.5**
	baz=14								
SSLB	**Suanglung**	**0.88**	**241**		P		**Pg**	**23 40 11.1**	**-0.4**
SSLB	**Suanglung**	**0.88**	**241**	⇓	P		**Pg**	**23 40 11.1**	**-0.4**
	baz=240								
SSLB				*e*	S		**Sg**	**23 40 22.3**	**-0.6**
	baz=240								
SMLT	**Sun Moon Lake**	**0.88**	**248**	⇓	P		**Pg**	**23 40 11.4**	**-0.1**
	baz=238								
SMLT				*e*	S		**Sg**	**23 40 22.7**	**-0.3**
	baz=238								
TYC	**Yuchr**	**0.91**	**250**	⇓	P		**Pg**	**23 40 11.7**	**-0.3**
	baz=240								
TYC				*e*	S		**Sg**	**23 40 23.3**	**-0.6**
	baz=240								
TNOU	**National Taiwa**	**0.92**	**359**	*e*	P		**Pb**	**23 40 12.7**	**-0.1**
	baz=1.0								
NCUH	**Zhongli**	**0.93**	**324**	*e*	P		**Pn**	**23 40 13.9**	**+0.1**
	baz=324								
NCUH				*e*	S		**Sn**	**23 40 28.0**	**+0.8**
	baz=324								
SBCB	**Hsinchu**	**0.93**	**308**	*e*	P		**Pb**	**23 40 12.9**	**+0.1**
	baz=308								
SBCB				*e*	S		**Sn**	**23 40 27.1**	**-0.1**
	baz=308								
TWQ1	**Liyutan**	**0.94**	**278**	*e*	P		**Pn**	**23 40 13.7**	**-0.3**
	baz=279								
TWS1	**Kuangyinshan**	**0.94**	**339**	*e*	P		**Pn**	**23 40 13.9**	**0.0**
	baz=340								
TWS1				*e*	S		**Sb**	**23 40 26.3**	**+0.7**
	baz=340						

YOJ	**Yonaguni jima**	**1.14**	**78**	*eP*	**Pb**	**23 40 16.7**	**+0.3**
ALS	**Alishan**	**1.15**	**232**	*eP*	**Pn**	**23 40 16.9**	**-0.2**
	baz=232						
CHKT	**Chengkung**	**1.18**	**199**	*eP*	**Pb**	**23 40 16.4**	**-0.8**
	baz=190						
CHKT				*eS*	**Sn**	**23 40 33.5**	**0.0**
	baz=190						
CHN5	**Tsauling**	**1.19**	**239**	*eP*	**Pn**	**23 40 18.1**	**+0.5**
	baz=239						
CHN5				*eS*	**Sn**	**23 40 35.5**	**+1.6**
	baz=239						
EHD	**Haiduan**	**1.19**	**207**	*eP*	**Pb**	**23 40 17.2**	**-0.2**
	baz=219						
ELDTW	**Lidau**	**1.25**	**215**	*eP*	**Pn**	**23 40 17.1**	**-1.2**
	baz=224						
ELDTW				*eS*	**Sb**	**23 40 34.3**	**-0.3**
	baz=224						
WDLH	**Douliu**	**1.26**	**245**	*eP*	**Pg**	**23 40 19.4**	**+0.6**
	baz=246						
WDLH				*eS*	**Sn**	**23 40 36.7**	**+1.2**
	baz=246						
EDH	**Donghe**	**1.32**	**200**	*eP*	**Pn**	**23 40 18.0**	**-1.2**
	baz=185						
WRL	**Guolierlin Hig**	**1.33**	**256**	*eS*	**Sg**	**23 40 38.8**	**+1.4**
	baz=257						
WCKO	**Fanlu**	**1.34**	**235**	*eP*	**Pg**	**23 40 20.8**	**+0.6**
	baz=235						
WCKO				*eS*	**Sg**	**23 40 40.0**	**+2.4**
	baz=235						
WTK	**Tuku**	**1.39**	**248**	*eP*	**Pb**	**23 40 20.8**	**+0.1**
	baz=260						
WTK				*eS*	**Sg**	**23 40 40.7**	**+1.5**
	baz=260						
CHN4	**Tsaushan**	**1.40**	**232**	*eP*	**Pg**	**23 40 21.4**	**0.0**
	baz=233						
CHN4				*eS*	**Sg**	**23 40 42.0**	**+2.4**
	baz=233						
STYH	**Taoyuan**	**1.40**	**222**	*eP*	**Pb**	**23 40 21.0**	**+0.2**
	baz=222						
STYH				*eS*	**Sg**	**23 40 40.2**	**+0.6**
	baz=222						
TPUB	**Ta-pu**	**1.40**	**229**	P	**Pg**	**23 40 21.6**	**+0.1**
TPUB	**Ta-pu**	**1.40**	**229**	*eP*	**Pg**	**23 40 21.3**	**-0.2**
	baz=218						
TPUB				*eS*	**Sg**	**23 40 40.1**	**+0.4**
	baz=218						
PCYT	**Pengchaiyu**	**1.43**	**10**	*eP*	**Pn**	**23 40 21.0**	**+0.3**
	baz=12						
WTP	**Ta-pu**	**1.45**	**228**	*eP*	**Pb**	**23 40 21.9**	**+0.2**
	baz=230						
TWK	**Hsinying**	**1.52**	**232**	*eP*	**Pb**	**23 40 23.0**	**0.0**
	baz=233						
TWK				*eS*	**Sg**	**23 40 44.4**	**+0.7**
	baz=233						
WSF	**Szhu**	**1.55**	**248**	*eS*	**Sg**	**23 40 45.1**	**+0.8**
	baz=260						
SNST	**Tainan City**	**1.55**	**230**	*eP*	**Pb**	**23 40 23.5**	**+0.1**
	baz=231						
SNST				*eS*	**Sg**	**23 40 45.3**	**+0.9**
	baz=231						
CHN1	**Nanshi**	**1.55**	**229**	*eP*	**Pb**	**23 40 23.5**	**0.0**
	baz=230						
CHN1				*eS*	**Sg**	**23 40 45.8**	**+1.4**
	baz=230						
SGST	**Jiashian**	**1.58**	**225**	*eP*	**Pb**	**23 40 23.7**	**-0.3**
	baz=225						
SGST				*eS*	**Sg**	**23 40 45.8**	**+0.3**
	baz=225						
WSL	**Shuilin Townsh**	**1.59**	**244**	*eS*	**Sg**	**23 40 47.5**	**+1.8**
	baz=245						
SLGT	**Liugui**	**1.61**	**221**	*eP*	**Pg**	**23 40 25.2**	**-0.2**
	baz=222						
SLGT				*eS*	**Sg**	**23 40 47.6**	**+1.3**
	baz=222						
ICHU	**Yijhu**	**1.63**	**239**	*eP*	**Pb**	**23 40 25.1**	**+0.3**
	baz=239						
ICHU				*eS*	**Sg**	**23 40 48.1**	**+1.2**
	baz=239						
CHN8	**Yiju**	**1.69**	**239**	*eS*	**Sg**	**23 40 50.0**	**+1.2**
	baz=240						
IRIF	**Iriomote-Funau**	**1.77**	**86**	*eP*	**Pb**	**23 40 27.5**	**+0.3**
SCST	**Cishan**	**1.78**	**222**	*eP*	**Pb**	**23 40 27.6**	**+0.1**
	baz=224						
SCST				*eS*	**Sg**	**23 40 52.4**	**+0.5**
	baz=224						
ECL	**Taimali**	**1.79**	**206**	*eP*	**Pn**	**23 40 25.1**	**-0.5**
	baz=192						
TSMG	**Majia**	**1.84**	**215**	*eP*	**Pb**	**23 40 27.6**	**-0.7**
	baz=230						
TSCK	**Chigu Township**	**1.89**	**236**	*eP*	**Pb**	**23 40 28.2**	**-1.1**
	baz=239						
TSCK				*eS*	**Sb**	**23 40 53.7**	**+0.6**
	baz=239						
MASBT	**Mashibuluo**	**1.92**	**214**	*eP*	**Pb**	**23 40 29.0**	**-0.8**
	baz=228						
MASBT				*eS*	**Sb**	**23 40 53.8**	**-0.1**
	baz=228						
EAST	**Anshuo**	**2.02**	**205**	*eP*	**Pb**	**23 40 30.6**	**-0.9**
	baz=194						
JKRS	**Kuro-shima**	**2.03**	**89**	*eP*	**Pn**	**23 40 29.8**	**+0.9**
PNG	**Penghu**	**2.15**	**253**	*eP*	**Pn**	**23 40 31.5**	**+0.9**
	baz=254						
PNG				*eS*	**Sn**	**23 40 58.5**	**+1.1**
	baz=254						
PHUB	**P'eng-hu**	**2.15**	**251**	*eS*	**Sn**	**23 40 56.5**	**-0.9**
	baz=253						
JIJ	**Ishigaki jima**	**2.15**	**86**	*eP*	**Pn**	**23 40 30.2**	**-0.4**
JIJ				*eS*	**Sn**	**23 40 56.0**	**-1.4**
VWUC	**VWUC**	**2.26**	**290**	*eP*	**Pn**	**23 40 31.9**	**-0.3**
	baz=290						
VWUC				*eS*	**Sn**	**23 40 59.3**	**-1.0**
	baz=290						
JISG	**Ishigakijimahi**	**2.33**	**80**	*eP*	**Pn**	**23 40 32.7**	**-0.3**
JISG				*eS*	**Sn**	**23 41 00.4**	**-1.4**
PTMZ	**Houxiangcun**	**2.56**	**289**	P	**Pn**	**23 40 35.8**	**-0.5**
	baz=289						
PTMZ				*eS*	**Sn**	**23 41 06.7**	**-0.9**
	baz=289						
XPSS	**Dashiqiu**	**3.06**	**332**	*eP*	**Pn**	**23 40 42.8**	**-0.3**
	baz=332						
KNMB	**Chin-men Tao**	**3.11**	**275**	*eP*	**Pn**	**23 40 43.0**	**-0.9**
	baz=276						
MHZQ	**Yeshan**	**3.12**	**307**	*eP*	**Pn**	**23 40 43.2**	**-0.7**
	baz=307						
MHZQ				*eS*	**Sn**	**23 41 19.5**	**-1.9**
	baz=307						
AXDP	**Jialang**	**3.54**	**282**	*eP*	**Pn**	**23 40 49.7**	**-0.1**
	baz=281						
AXDP				*eS*	**Sn**	**23 41 30.0**	**-1.8**
	baz=281						

*AFAD **08** 23:41:09.0±0.0, 37°.41N×44°.79E, h6^{km}±1^{km}, ML2.8*
*ISK **08** 23:41:11.8, 37°.36N×44°.65E, h6^{km}, ML2.4/6*
*TEH **08** 23:41:17.0, 37°.67N×44°.86E, h8^{km}±68^{km}, ML2.2*

ISC 08 23:41:12.3±1.3, 37°.44N±0°.06×44°.66E±0°.03, h1^{km}±12^{km}, n25, σ1°11/31, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOVA	**Hakkari_Yksek**	**0.33**	**297**	P		**Pg**	**23 41 17.9**	**-0.8**
YOVA				S		**Sg**	**23 41 21.2**	**-1.8**
YOVA				*i* AML		AML	23 41 25.0	
	comp=E,1μm,0.4s							
YOVA				*i* AML		AML	23 41 27.0	
	comp=N,816nm,0.4s							
HAKT	**HAKKARI**	**0.77**	**279**	P		**Pg**	**23 41 26.0**	**-1.0**
HAKT				S		**Sg**	**23 41 38.7**	**+1.8**
HAKT				*i* AML		AML	23 41 41.0	
	comp=N,296nm,0.4s							
HAKT				*i* AML		AML	23 41 41.0	
	comp=E,316nm,0.3s							
CUKT	**Cukurca**	**0.86**	**258**	Pg		**Pg**	**23 41 27.9**	**-0.9**
CUKT				Sg		**Sg**	**23 41 40.6**	**+0.7**
CUKT	**Cukurca**	**0.86**	**258**	P		**Pg**	**23 41 28.1**	**-0.7**
CUKT				S		**Sb**	**23 41 41.6**	**-0.5**
CUKT				*i* AML		AML	23 41 46.0	
	comp=N,186nm,0.4s							
CUKT				*i* AML		AML	23 41 46.0	
	comp=E,246nm,0.6s							
MAHB	**Mahabad**	**1.07**	**128**	Pg		Pn	23 41 38.7	+4.1
IAZR	**Azarshahr**	**1.08**	**77**	Pg		**Pn**	**23 41 34.8**	**0.0**
ISHB	**Shabestar**	**1.14**	**42**	Pg		**Pb**	**23 41 33.6**	**-1.3**
OZAP	**Van, Ozalp-Mer**	**1.33**	**337**	P		**Pn**	**23 41 37.3**	**-1.0**
ITBZ	**Tabriz**	**1.42**	**56**	Pg		**Pn**	**23 41 38.7**	**-0.7**
TVAN	**Van**	**1.47**	**318**	P		**Pn**	**23 41 40.1**	**-0.1**
TVAN				S		**Sn**	**23 42 00.5**	**+0.3**

IMRD	**Marand**	**1.52**	**33**	Pg		**Pn**	**23 41 41.5**	**+0.7**
VANB	**Van**	**1.53**	**319**	Pn		**Pn**	**23 41 39.9**	**-1.0**
VANB				Sn		**Sn**	**23 42 00.5**	**-1.0**
GEVA	**Gevas**	**1.54**	**305**	P		**Pn**	**23 41 40.0**	**-1.1**
AKDM	**Akdamar-Van**	**1.60**	**304**	Pn		**Pn**	**23 41 41.9**	**0.0**
PERV	**Siirt/Pervari-**	**1.75**	**287**	P		**Pn**	**23 41 44.6**	**+0.6**
PERV				S		**Sg**	**23 42 12.1**	**+3.4**
PERV				*i* AML		AML	23 42 13.0	
	comp=E,111nm,0.6s							
PERV				*i* AML		AML	23 42 18.0	
	comp=N,119nm,0.5s							
MAKU	**Maku**	**1.91**	**1**	Pg		**Pb**	**23 41 49.2**	**+1.0**
IHSH	**Hashtrud**	**2.08**	**93**	Pn		**Pg**	**23 41 52.4**	**+0.2**
GURO	**Guroymak-BITLI**	**2.35**	**299**	Pn		**Pn**	**23 41 52.6**	**+0.4**
MLAZ	**Malazgirt-MUS**	**2.38**	**316**	Pn		**Pn**	**23 41 53.1**	**+0.5**
ISRB	**Sarab**	**2.42**	**80**	Pn		**Pb**	**23 41 56.8**	**0.0**
AGRB	**Hanur-Agry**	**2.50**	**329**	Pn		**Pn**	**23 41 55.4**	**+1.1**
GNI	**Garni**	**2.71**	**1**	Pn		**Pn**	**23 41 58.2**	**+1.1**
SVAN	**Silvan-Diyarba**	**2.83**	**286**	Pn		**Pn**	**23 41 59.1**	**+0.4**
VRTB	**Varto-Mus**	**3.05**	**305**	Pn		**Pn**	**23 42 02.5**	**+0.7**
MAZI	**Mazidag**	**3.35**	**272**	Pn		**Pn**	**23 42 06.3**	**+0.4**

IDC 08 23:45:55.6±6.1, 6°.14S×131°.88E, h253^{km}±70^{km}, mb3.1/1, mbtmp3.3/3, Error ellipse: s-maj=192.7km s-min=21.6km az=77.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**13.93**	**170**	P		Pn	23 49 02.4	-0.4
	0.2nm,0.3s,baz=350,slow=13,SNR=1.3							
WRA				S		S	23 51 27.0	-10
	0.8nm,0.4s,baz=335,slow=22,SNR=8.8							
ASAR	**Alice Springs**	**17.53**	**174**	P		P	23 49 44.0	+0.9
	0.2nm,0.3s,baz=356,slow=14,SNR=1.6							
ASAR				S		S	23 52 52.0	-0.1
	0.2nm,0.3s,baz=357,slow=28,SNR=1.3							
MKAR	**Makanchi Array**	**68.55**	**326**	P		P	23 56 31.1	0.0
	0.3nm,0.4s,baz=118,slow=7.3,SNR=12							
	0.3nm,0.4s							

GUC 09 00:03:36.5±0.5, 37°.40S×74°.50W, h26^{km}±6^{km}, ML3.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BI04	**Isla Mocha**	**1.12**	**154**	*eP*		Pn	00 03 55.5	-1.0
BI04				IAML			00 04 17.6	
	comp=N,2μm,0.4s							
BI05	**Punta Hualpn**	**1.23**	**58**	*eP*		Pn	00 03 57.0	-1.0
BI05				*eS*		Sn	00 04 13.0	-0.8
BI05				IAML			00 04 21.1	
	comp=N,2μm,0.2s							
LC02	**Puerto Saavedr**	**1.64**	**148**	*eP*		Pn	00 04 03.8	+0.1
LC02				*eS*		Sn	00 04 24.3	+0.3
LR04	**Corral**	**2.61**	**162**	*eP*		Pn	00 04 17.5	+0.5
BI02	**San Fabin de**	**2.69**	**75**	*eP*		Pn	00 04 17.5	-0.6
GO05	**Huala**	**3.17**	**42**	*eP*		Pn	00 04 25.9	+1.3
GO05				IAML			00 05 26.6	
	comp=E,142nm,0.5s							
GO06	**Curarrehue**	**3.22**	**133**	*eP*		Pn	00 04 26.0	+0.5
BO03	**Pichilemu**	**3.56**	**36**	*eP*		Pn	00 04 30.6	+0.6
BO03				IAML			00 05 38.0	
	comp=E,62nm,0.8s							
BO02	**Sierra Bellavi**	**3.98**	**50**	*eP*		Pn	00 04 36.5	+0.6
BO02				*eS*		Sn	00 05 22.8	+1.1
BO01	**Tunca**	**4.09**	**44**	*eP*		Pn	00 04 38.0	+0.8
MT01	**Popeta**	**4.41**	**38**	*eP*		Pn	00 04 42.6	+0.8
MT09	**Talagante**	**4.61**	**39**	*eP*		Pn	00 04 45.6	+0.9
BO04	**La Punta**	**4.65**	**44**	*eP*		Pn	00 04 46.0	+0.9
LMEL	**Las Melosas**	**4.98**	**46**	*eP*		Pn	00 04 51.0	+1.2

*TRN **09** 00:07:10.4, 11°.05N×62°.23W, h98^{km}, MD3.3, North of the Paria peninsula.*
*FUNV **09** 00:07:11.0, 11°.03N×62°.09W, h99^{km}, MW3.0*

ISC 09 00:07:09.0±1.9, 11°.05N±0°.07×62°.19W±0°.08, h117^{km}±16^{km}, n12, σ1°15/22, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TRN	**Trinidad (W)**	**0.87**	**117**	*eP*		**Pn**	**00 07 30.5**	**+1.0**
TRN				*eS*		**Sn**	**00 07 43.8**	**-1.2**
GRFF	**Grenada Fort F**	**1.09**	**24**	*eP*		**Pn**	**00 07 32.0**	**+0.3**
GRFF				*eS*		**Sn**	**00 07 47.7**	**-1.1**
CRUV	**Carupano**	**1.09**	**250**	↑*iP*		**Pn**	**00 07 32.7**	**+1.0**
CRUV				*eS*		**Sn**	**00 07 48.3**	**-0.5**
GRGR	**Grenville**	**1.20**	**26**	*eP*		**Pn**	**00 07 33.1**	**+0.2**
GRGR				*eS*		**Sn**	**00 07 50.0**	**-0.8**
GRHS	**Sauteurs**	**1.28**	**25**	*eP*		**Pn**	**00 07 34.0**	**+0.3**
GRHS				*eS*		**Sn**	**00 07 51.8**	**-0.8**
GRSS	**Sisters**	**1.36**	**25**	*eP*		**Pn**	**00 07 36.3**	**+1.6**
GRSS				*eS*		**Sn**	**00 07 53.7**	**-0.5**
GCMP	**Grenada, Carri**	**1.61**	**28**	*eP*		**Pn**	**00 07 37.9**	**+0.3**
GCMP				*eS*		**Sn**	**00 07 58.2**	**-1.1**
SVB	**Belmont**	**2.39**	**23**	*eP*		**Pn**	**00 07 48.2**	**+0.9**
SVB				*eS*		**Sn**	**00 08 16.9**	**+0.2**
PCRV	**Puerto La Cruz**	**2.55**	**250**	*eP*		**Pn**	**00 07 51.5**	**+2.0**
PCRV				*eS*		**Sn**	**00 08 20.5**	**0.0**
SLBI	**Saint Lucia, B**	**3.18**	**22**	*eS*		**Sn**	**00 08 34.8**	**-0.3**
BAUV	**El Baul**	**6.13**	**251**	*eP*		**Pn**	**00 08 37.4**	**+0.1**
BAUV	**El Baul**	**6.13**	**251**	*eP*		**Pn**	**00 08 37.3**	**+0.1**
BAUV				*eS*		**Sn**	**00 09 43.2**	**-2.8**

ROM 09 00:16:22.4±0.0, 42°.911N±0°.003×13°.055E±0°.004, h11^{km}, ML0.7/2, Error ellipse: s-maj=0.3km s-min=0.2km az=233.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NRCA	**Norcia**	**0.09**	**151**	P		Pg	00 16 25.5	+0.4
NRCA				S		Sg	00 16 27.4	+0.4
FDMO	**Fiordimonte**	**0.13**	**11**	P		Pg	00 16 26.0	+0.5
FDMO				S		Sg	00 16 28.6	+0.8
CESI	**CESI - Serrava**	**0.14**	**310**	P		Pg	00 16 26.3	+0.5
CESI				S		Sg	00 16 29.0	+0.8
CESI				AML		AML		
	comp=E,35μm,0.5s							
CESI				AML		AML		
	comp=N,49μm,0.3s							
T1221	**Campello sul C**	**0.16**	**252**	P		Pg	00 16 26.6	+0.5
T1214	**Arquata del Tr**	**0.19**	**143**	P		Pg	00 16 27.2	+0.7
T1214				S		Sg	00 16 30.3	+0.9
MMO1	**Montemonaco**	**0.20**	**93**	P		Pg	00 16 27.2	+0.5
MMO1				S		Sg	00 16 30.7	+1.1

*IDC **09** 00:17:22.1±0.8, 49°.88N×19°.53E, h0^{km}, mbtmp3.5/6, ML2.9/7, Error ellipse: s-maj=13.7km s-min=6.8km az=159.0*
*VIE **09** 00:17:24.9±0.2, 50°.24N×19°.12E, h0^{km}, mb2.5/8, ml2.7/7, Error ellipse: s-maj=4.9km s-min=1.4km az=169.0, Suspected Mining induced.*
*PRU **09** 00:17:25.4, 50°.21N×19°.10E, h0^{km}*
*IPEC **09** 00:17:25.0±0.2, 50°.15N×19°.14E, h1^{km}, ML3.0/4, Error ellipse: s-maj=2.5km s-min=1.0km az=166.0*
*BGR **09** 00:17:26.0±0.3, 50°.17N×19°.15E, h1^{km}, ML3.1/10, Error ellipse: s-maj=6.7km s-min=3.3km az=177.0*

ISC 09 00:17:22.6±0.6, 50°.22N±0°.03×19°.21E±0°.02, h0^{km}, n86, σ1°44/123, 6C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OJC	**Ojcow**	**0.38**	**89**	*ePg*		**Pb**	**00 17 33.3**	**+1.1**
OJC				*eSg*		**Sb**	**00 17 39.5**	**+0.9**
OJC	**Ojcow**	**0.38**	**89**	*ePg*		**Pb**	**00 17 33.4**	**+1.2**
OJC				*eSg*		**Sb**	**00 17 39.6**	**+0.9**
RAC	**Raciborz**	**0.67**	**259**	*ePG*		**Pb**	**00 17 38.1**	**+1.0**
RAC				*eSG*		**Sb**	**00 17 47.8**	**+0.9**
OKC	**Ostrava-Krasne**	**0.78**	**241**	*ePG*		**Pb**	**00 17 39.2**	**+0.1**
OKC				*eSG*		**Sg**	**00 17 48.4**	**+0.7**
	comp=Z,159nm,0.8s							
OKC	**Ostrava-Krasne**	**0.78**	**241**	*ePg*		**Pb**	**00 17 39.3**	**+0.2**
OKC				*eSg*		**Sb**	**00 17 50.4**	**+0.2**
NIE	**Niedzica**	**1.07**	**138**	*ePg*		**Pn**	**00 17 44.7**	**-0.2**
NIE				*eSg*		**Sb**	**00 17 59.0**	**+0.6**
LANS	**Liptovska Anna**	**1.08**	**171**	*ePG*		**Pb**	**00 17 44.5**	**+0.3**
LANS				*eSG*		**Sb**	**00 17 58.3**	**-0.5**
LANS				*eLG*		Lg	00 17 58.8	
LANS	**Liptovska Anna**	**1.08**	**171**	*e*			00 20 25.9	

MORC	**Moravsky Berou**	**1.16**	**248**	↑*iP*		**Pb**	**00 17 45.8**	**+0.2**
MORC	**Moravsky Berou**	**1.16**	**248**	*ePg*		**Pn**	**00 17 46.0**	**-0.2**
	baz=70							
MORC				*eSg*		**Sg**	**00 17 59.3**	**-0.6**
	201nm,0.6s,baz=70							
MORC	**Moravsky Berou**	**1.16**	**248**	*ePg*		**Pn**	**00 17 46.1**	**-0.2**
MORC				*eSg*		**Sn**	**00 18 03.0**	**+0.2**
MAUC	**Maruska**	**1.23**	**227**	*ePG*		**Pn**	**00 17 47.5**	**+0.3**
STHS	**Stebnicka Huta**	**1.54**	**120**	*ePN*		**Pg**	**00 17 53.7**	**+1.5**
STHS				*eLG*		Lg	00 18 25.9	
KRLC	**Kraliky**	**1.57**	**266**	*ePG*		**Pb**	**00 17 52.3**	**-0.2**
KRLC				*eSG*		**Sg**	**00 18 13.1**	**+0.1**
JAVC	**Velka Javorina**	**1.69**	**217**	*ePn*		**Pb**	**00 17 54.1**	**-0.5**
	baz=36							
JAVC	**Velka Javorina**	**1.69**	**217**	*ePN*		**Pb**	**00 17 54.2**	**-0.4**
DPC	**Dobruska-Polom**	**1.86**	**275**	*ePG*		**Pb**	**00 17 57.5**	**0.0**
DPC				*eSG*		**Sg**	**00 18 22.8**	**+0.6**
	comp=Z,119nm,0.6s							
DPC	**Dobruska-Polom**	**1.86**	**275**	*ePn*		**Pb**	**00 17 57.5**	**0.0**
DPC				*ePg*		**Pg**	**00 17 59.2**	**+1.0**
DPC				*eSg*		**Sg**	**00 18 22.5**	**+0.3**
VRAC	**Vranov**	**1.92**	**243**	↑*iP*		Pg	00 18 24.9	+25
VRAC	**Vranov**	**1.92**	**243**	*ePn*		**Pb**	**00 17 57.8**	**-0.8**
	baz=62							
VRAC				*eSg*		**Sb**	**00 18 22.9**	**-0.2**
	85nm,0.8s,baz=62							
VRAC	**Vranov**	**1.92**	**243**	*ePN*		**Pb**	**00 17 57.9**	**-0.7**
VRAC				*eSG*		**Sb**	**00 18 23.0**	**-0.2**
VRAC	**Vranov**	**1.92**	**243**	Pn		**Pb**	**00 17 57.8**	**-0.8**
	9.2nm,0.3s,baz=54,slow=12,SNR=82							
VRAC				Lg		Lg	00 18 24.6	
	10.0nm,0.3s,baz=168,slow=18,SNR=13							
KECS	**Kecovo**	**1.92**	**154**	*ePN*		**Pn**	**00 17 57.3**	**+0.7**
KECS				*eSN*		**Sn**	**00 18 20.7**	**-0.8**
KECS				*eLG*		Lg	00 18 26.3	
KECS	**Kecovo**	**1.92**	**154**	*e*		Pg	00 18 10.3	+11
KECS	**Kecovo**	**1.92**	**154**	*ePKP*		Pg	00 18 04.8	+5.3
OSTC	**Ostas**	**1.95**	**281**	*ePG*		**Pb**	**00 17 58.9**	**-0.1**
OSTC				*eSG*		**Sg**	**00 18 26.1**	**+1.0**
	comp=Z,82nm,1.1s							
KSP	**Ksiaz**	**1.96**	**290**	*ePn*		**Pb**	**00 17 58.9**	**-0.4**
KSP				*ePg*		**Pg**	**00 18 02.0**	**+1.8**
KSP				*eSg*		**Sg**	**00 18 26.5**	**+0.8**
KSP	**Ksiaz**	**1.96**	**290**	*ePn*		**Pb**	**00 17 59.3**	**+0.1**
KSP				*ePg*		**Pg**	**00 18 02.2**	**+1.9**
KSP				*eSg*		**Sg**	**00 18 27.7**	**+2.0**
CRVS	**Cervenica-Dubn**	**1.97**	**131**	*ePG*		**Pg**	**00 18 01.6**	**+1.2**
CRVS				*eSG*		**Sg**	**00 18 28.9**	**+3.0**
CRVS	**Cervenica-Dubn**	**1.97**	**131**	*ePKP*		**Pg**	**00 18 02.5**	**+2.1**
CRVS				*e*			00 20 26.0	
CHVC	**Chvalec**	**2.05**	**282**	*ePG*		**Pb**	**00 18 00.1**	**-0.7**
UPC	**Upice**	**2.07**	**279**	*eSG*		**Sb**	**00 18 28.1**	**+0.8**
	comp=Z,52nm,0.6s							
KRUC	**Moravsky**	**2.16**	**239**	*ePn*		**Pn**	**00 18 01.1**	**+1.2**
	baz=58							
KRUC				*eSg*		**Sb**	**00 18 30.4**	**+0.4**
	71nm,0.8s,baz=58							
MODS	**Modra-Piesok**	**2.23**	**215**	*ePN*		**Pn**	**00 18 01.3**	**+0.4**
MODS				*eSN*		**Sn**	**00 18 28.7**	**-0.5**
MODS	**Modra-Piesok**	**2.23**	**215**	*ePKP*		**Pn**	**00 18 02.2**	**+1.3**
MODS				*e*			00 18 07.6	
MODS				*e*			00 18 16.4	
MODS				*e*			00 20 31.5	
PSZ	**Piszkesteto**	**2.34**	**169**	↑*iP*		**Pg**	**00 18 08.5**	**+1.0**
KOLS	**Kolonicke sedl**	**2.37**	**122**	*ePG*		**Pg**	**00 18 08.9**	**+0.8**
KOLS				*eSN*		**Sn**	**00 18 33.6**	**+1.0**
KOLS				*eLG*		Lg	00 18 53.3	
KOLS	**Kolonicke sedl**	**2.37**	**122**	*ePKP*		**Pn**	**00 18 01.8**	**-1.0**
KOLS				*e*			00 20 24.7	
ZST	**Bratislava**	**2.45**	**215**	*e*			00 20 33.3	
ZST	**Bratislava**	**2.45**	**215**	*ePKP*		Pg	00 18 17.2	+7.7
SRO	**Srobarova**	**2.48**	**194**	*e*			00 20 31.4	
SRO	**Srobarova**	**2.48**	**194**	*ePKP*		**Pb**	**00 18 07.7**	**-0.2**
SRO	**Srobarova**	**2.48**	**194**	*e*		Pg	00 18 16.4	+6.4
GOPC	**GO Pecny, Ondr**	**2.86**	**266**	*ePG*		**Pb**	**00 18 15.0**	**+0.4**
GOPC				*eSG*		**Sg**	**00 18 53.5**	**-1.1**
	comp=Z,30nm,0.7s							
PRU	**Pruhonice**	**3.01**	**267**	*ePN*		**Pn**	**00 18 12.7**	**+1.1**
PRU				*ePG*		**Pb**	**00 18 10.8**	**+0.9**
PRU				*eSG*		**Sg**	**00 18 58.6**	**-0.8**
	comp=Z,24nm,0.5s							
RONA	**Rosalia, Austr**	**3.17**	**218**	*i* Pn		**Pn**	**00 18 14.8**	**+1.1**
	2.4nm,0.3s							
CONA	**Conrad Observa**	**3.17**	**225**	*ePn*		**Pn**	**00 18 14.7**	**+0.8**
	0.5nm,0.2s							
ZVC	**Zvikov**	**3.34**	**258**	*ePG*		**Pb**	**00 18 24.0**	**+1.3**
LTVH	**Ltavrtes, Hu**	**3.34**	**147**	↓*iP*		**Sn**	**00 18 56.7**	**+0.1**
BRG	**Berggiesshubel**	**3.42**	**283**	Pg		**Pg**	**00 18 28.0**	**-0.2**
BRG				Sg		**Sg**	**00 19 10.5**	**-2.0**
BRG				Amp			00 19 24.1	
	comp=Z,18nm,0.5s							
BRG	**Berggiesshubel**	**3.42

DAVOX	**Davos/Dischmat**	**7.09**	**245**	Pn		**Pn**	**00 19 07.3**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=90,slow=10,SNR=3.9							
DAVOX				Sn		**Sn**	**00 20 28.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=152,slow=18,SNR=1.8							
DAVOX				Lg		Lg	00 21 08.6	
	comp=Z,0.4nm,0.3s,baz=76,slow=23,SNR=4.4							
	comp=Z,1.3nm,0.3s							
NOA	**NORSAR Array B**	**11.74**	**341**	Pn		**Pn**	**00 20 10.3**	**-1.0**
	baz=157,slow=12,SNR=1.3							
	comp=Z,0.8nm,0.9s							
FINES	**FINESS Array B**	**11.89**	**16**	Pn		**Pn**	**00 20 10.6**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=16							
FINES				Sn		**Sn**	**00 22 19.9**	**-6.5**
	comp=Z,0.2nm,0.3s,baz=203,slow=21,SNR=2.1							
	comp=Z,0.7nm,0.3s							
ARCES	**ARCESS Array B**	**19.62**	**7**	Pn		**P**	**00 21 51.9**	**-0.3**
	baz=188,slow=13,SNR=2.6							
	comp=Z,5.4nm,1.0s							

TAP 09 00:19:52.3, 24°28N × 121°91E, h6km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EAHA	**Aohua**	**0.16**	**287**	P		Pg	00 19 56.3	+0.8
	baz=286							
EAHA				*i* S		Sg	00 19 59.9	+2.1
	baz=286							
EWUT	**Wuta**	**0.20**	**324**	*i* P		Pg	00 19 57.4	+1.1
	baz=323							
EWUT				*i* S		Sg	00 20 00.9	+1.9
	baz=323							
ENA	**Nanau**	**0.21**	**313**	P		Pg	00 19 57.5	+1.0
	baz=314							
ENA				*i* S		Sg	00 20 01.1	+1.8
	baz=314							
ETL	**Fush Village**	**0.29**	**245**	P		Pg	00 19 58.9	+0.9
	baz=244							
ETL				*e*S		Sb	00 20 04.5	-0.5
	baz=244							
ESAO	**Su ao**	**0.30**	**349**	*e*P		Pg	00 19 58.5	+0.4
	baz=348							
ESAO				*e*S		Sb	00 20 04.1	-1.1
	baz=348							
NACB	**Ninganchiao**	**0.31**	**249**	*i* P		Pb	00 19 59.2	-1.0
	baz=249							
NACB				*i* S		Sb	00 20 05.0	-0.5
	baz=249							
EOS2	**EOS2**	**0.33**	**65**	*i* P		Pb	00 20 00.3	-0.1
	baz=65							
EOS2				S		Sb	00 20 06.7	+0.7
	baz=65							
TWC	**Suao**	**0.33**	**351**	*i* P		Pg	00 19 59.6	+0.9
	baz=352							
TWC				S		Sg	00 20 04.3	+1.2
	baz=352							
TWD	**Chiawan**	**0.35**	**235**	P		Pb	00 20 00.4	-0.6
	baz=234							
TWD				*e*S		Sb	00 20 06.6	-0.1
	baz=234							
EOS3	**EOS3**	**0.37**	**89**	*e*P		Pb	00 20 00.5	-0.8
	baz=89							
EOS3				*e*S		Sb	00 20 07.9	+0.6
	baz=89							
NDS	**Dongshan**	**0.39**	**333**	P		Pb	00 20 00.9	-0.7
	baz=333							
NDS				*e*S		Sb	00 20 06.9	-1.1
	baz=333							
ETLH	**Xiulin Townshi**	**0.40**	**259**	P		Pg	00 20 00.6	+0.5
	baz=258							
ETLH				*e*S		Sb	00 20 07.5	-0.7
	baz=258							
EOS4	**EOS4**	**0.41**	**113**	*e*S		Sb	00 20 07.3	-0.7
	baz=113							
LATG	**Datong**	**0.43**	**306**	P		Pb	00 20 01.6	-0.8
	baz=305							
LATG				*e*S		Sg	00 20 07.5	+1.2
	baz=305							
ENTT	**Nioudou**	**0.47**	**319**	P		Pb	00 20 02.5	-0.5
	baz=319							
ENTT				*e*S		Sb	00 20 10.0	-0.3
	baz=319							
NDT	**Datong Townshi**	**0.48**	**312**	P		Pb	00 20 02.8	-0.4
	baz=311							
NDT				*i* S		Sb	00 20 10.9	+0.4
	baz=311							
ETM	**Tongmen**	**0.49**	**230**	P		Pb	00 20 02.9	-0.5
	baz=230							
ETM				*e*S		Sb	00 20 11.4	+0.4
	baz=230							
NNSB	**Datong**	**0.50**	**287**	*i* P		Pb	00 20 03.4	-0.2
	baz=286							
NNSB				S		Sb	00 20 11.3	0.0
	baz=286							
NNS	**Nan Shan**	**0.51**	**288**	P		Pb	00 20 03.6	-0.2
	baz=287							
NNS				S		Sb	00 20 11.8	+0.2
	baz=287							
LXIB	**Xiulin Townshi**	**0.52**	**240**	*i* P		Pb	00 20 03.4	-0.6
	baz=240							
LXIB				S		Sb	00 20 11.8	-0.1
	baz=240							
FUSB	**Fushanzhiwuyua**	**0.56**	**328**	*i* P		Pb	00 20 04.3	-0.3
	baz=328							
FUSB				*i* S		Sb	00 20 13.3	+0.5
	baz=328							
SHUL	**Shoufeng**	**0.59**	**213**	P		Pb	00 20 05.9	+0.9
	baz=212							
SHUL				*e*S		Sn	00 20 15.7	-1.4
	baz=212							
WHF	**Hehuan Shan**	**0.60**	**257**	*i* P		Pb	00 20 04.9	-0.7
	baz=256							
WHF				*i* S		Sb	00 20 14.5	+0.1
	baz=256							
FUSS	**Fushou**	**0.61**	**267**	*i* P		Pb	00 20 05.5	0.0
	baz=266							
FUSS				*i* S		Sb	00 20 14.7	+0.3
	baz=266							
NWLT	**Wulai**	**0.61**	**323**	*i* P		Pb	00 20 06.0	+0.4
	baz=323							
NWLT				S		Sb	00 20 14.0	-0.4
	baz=323							
YHNB	**Yeheng**	**0.62**	**309**	P		Pb	00 20 05.9	+0.3
	baz=308							
YHNB				S		Sb	00 20 14.8	+0.2
	baz=308							
NSK	**Sanguang**	**0.64**	**308**	*i* P		Pb	00 20 06.0	+0.1
	baz=308							
NSK				*i* S		Sb	00 20 16.2	+1.1
	baz=308							
TWT	**Tachien**	**0.67**	**268**	*e*S		Sb	00 20 17.4	+1.3
	baz=267							
TDCB	**Techi**	**0.69**	**268**	P		Pb	00 20 06.5	-0.2
	baz=267							
TDCB				*e*S		Sb	00 20 16.8	+0.2
	baz=267							
TIPB	**Shuangxi**	**0.69**	**354**	P		Pb	00 20 06.8	0.0
	baz=353							
TIPB				S		Sb	00 20 17.2	+0.6
	baz=353							
CHGB	**Renai**	**0.71**	**252**	P		Pb	00 20 07.0	-0.2
	baz=251							
CHGB				S		Sb	00 20 18.1	+0.8
	baz=251							
WARBT	**Fenglin Townsh**	**0.74**	**220**	P		Pg	00 20 06.8	+0.3
	baz=220							
WARBT				*e*S		Sb	00 20 18.8	+0.8
	baz=220							
OWD	**Renai**	**0.74**	**244**	*e*P		Pb	00 20 07.7	-0.1
	baz=243							
OWD				*e*S		Sb	00 20 18.7	+0.4
	baz=243							
WUSB	**Renai**	**0.78**	**248**	P		Pb	00 20 08.4	0.0
	baz=248							
WUSB				*e*S		Sb	00 20 20.0	+0.7
	baz=248							
NFF	**Wufeng Townshi**	**0.80**	**296**	*e*P		Pb	00 20 08.8	+0.1
	baz=295							
NFF				*e*S		Sn	00 20 21.2	-1.3
	baz=295							
SXI1	**Grass Mountain**	**0.81**	**358**	*e*P		Pn	00 20 09.7	-0.7
	baz=357							
VWDT	**VWDT**	**0.88**	**233**	P		Pg	00 20 09.4	+0.3
	baz=233							
VWDT				*e*S		Sb	00 20 22.2	+0.3
	baz=233							
WHP	**Taichung City**	**0.88**	**270**	*e*P		Pn	00 20 11.6	+0.3
	baz=269							
WHP				S		Sb	00 20 23.2	+1.1
	baz=269							
HGSD	**Ruisui**	**0.90**	**209**	*e*P		Pb	00 20 10.3	-0.1
	baz=209							
HGSD				*e*S		Sn	00 20 25.2	+0.2
	baz=209							
YM01	**YM01**	**0.91**	**340**	*e*P		Pn	00 20 12.4	+0.6
	baz=340							
SSLB	**Suanglung**	**1.00**	**241**	P		Pg	00 20 11.3	-0.3
	baz=240							
SSLB				*e*S		Sg	00 20 24.9	+0.3
	baz=240							

JMA 09 00:20:42.2±0.2, 24°.1N±0°.8 × 122°.7E±0°.7, h0km, MV2.2/11, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.47**	**34**	*e*P		Pg	00 20 51.6	+0.5
JYNG				*e*S		Sg	00 20 58.6	+1.4
YOJ	**Yonaguni jima**	**0.51**	**39**	*e*P		Pg	00 20 52.6	+0.7
YOJ				*e*S		Sg	00 20 59.7	+1.1
IRIF	**Iriomote-Funau**	**1.01**	**74**	*e*P		Pb	00 21 02.5	-0.1
IRIF				*e*S		Sb	00 21 15.9	-0.5
JKRS	**Kuro-shima**	**1.24**	**82**	*e*S		Sn	00 21 23.7	-0.6
JIJ	**Ishigaki jima**	**1.38**	**77**	*e*P		Pg	00 21 08.4	-0.4
JIJ				*e*S		Sg	00 21 26.1	-0.6
JISG	**Ishigakijimahi**	**1.59**	**70**	*e*P		Pn	00 21 10.7	-0.9
JISG				*e*S		Sn	00 21 30.1	-2.8

IDC 09 00:24:15.3±6.8, 3°.97S × 134°.32E, h0km, mb3.1/1, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=370.1km s-min=34.4km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.88**	**180**	Pn		Pn	00 28 00.5	+0.2
	0.1nm,0.3s,baz=359,slow=13,SNR=1.7							
WRA				Sn		Sn	00 30 47.0	-10
	0.1nm,0.3s,baz=357,slow=23,SNR=2.1							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**19.59**	**181**	P		P	00 28 45.1	0.0
	0.1nm,0.3s,baz=4.0,slow=12,SNR=1.5							
ASAR				S		Sn	00 32 14.4	-13
	0.2nm,0.4s,baz=219,slow=39,SNR=1.4							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**68.18**	**324**	P		P	00 35 17.5	0.0
	0.1nm,0.4s,baz=122,slow=7.6,SNR=2.1							
	0.1nm,0.4s							

WEL 09 00:37:46.0±1.1, 32°.5S±30°.×18°.0W±6°.4, h434km±43km, M4.1/6, mB4.4/6, ML4.7/12, MLv4.6/6, Mw(mB)3.5/6, Error ellipse: s-maj=0.1km s-min=0.0km az=113.3, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HAZ	**Te Kaha**	**6.56**	**197**	P		P	00 39 25.1	-0.4
HAZ				S		S	00 40 48.4	+1.5
PKGZ	**Pakihiroa**	**6.61**	**195**	P		P	00 39 27.1	+0.8
RUGZ	**Raukumara Rang**	**6.78**	**197**	P		P	00 39 27.4	-0.7
TWGZ	**Tauwhareparae**	**6.91**	**195**	P		P	00 39 31.3	+1.9
TWGZ				S		S	00 40 50.4	-3.5
CNGZ	**Carnagh Statio**	**7.16**	**193**	P		P	00 39 33.1	+1.1
MWZ	**Matawai**	**7.17**	**197**	P		P	00 39 32.8	+0.6
MWZ				S		S	00 41 00.1	+1.1
URZ	**Urewera**	**7.21**	**200**	P		P	00 39 31.3	-1.3
URZ				S		S	00 41 02.1	+2.3
RAGZ	**Rawiri**	**7.35**	**198**	P		P	00 39 34.6	+0.4
RIGZ	**Rimuhau**	**7.47**	**195**	P		P	00 39 36.3	+1.0
MUGZ	**Murupara**	**7.52**	**201**	P		P	00 39 35.6	-0.3
RTZ	**Ruatahuna**	**7.58**	**200**	P		P	00 39 35.2	-1.4
RTZ				S		S	00 41 07.2	-0.1
RAHZ	**Arahi**	**7.83**	**198**	P		P	00 39 39.2	-0.1
MTHZ	**Maungataniwha**	**7.84**	**200**	P		P	00 39 39.5	0.0
NMHZ	**Naumai**	**8.08**	**199**	P		P	00 39 42.8	+0.8
BKZ	**Black Stump Fm**	**8.23**	**201**	P		P	00 39 42.3	-1.4
KWHZ	**Kaweka Forest**	**8.49**	**201**	P		P	00 39 45.8	-0.7
KWHZ				S		S	00 41 27.5	+1.8

*HEL **09** 00:50:59.6±0.1, 67°.81N × 20°.12E, h0km, ML1.7, Explosion*
*UPP **09** 00:50:59.9±0.0, 67°.83N × 20°.21E, h0km, ML1.9, Suspected explosion*
*IDC **09** 00:51:02.8±1.1, 67°.80N × 21°.20E, h0km, mbtmp2.7/3, ML1.9/3, Error ellipse: s-maj=18.6km s-min=6.9km az=119.0*
*BER **09** 00:51:02.7±2.0, 67°.85N × 20°.40E, h0km, ML1.6, Suspected explosion*

ISC 09 00:51:00.3±0.8, 67°.83N±0°.02 × 20°.29E±0°.02, h0km, n39, σ18°24/63, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**8**	P		**Pg**	**00 51 02.7**	**0.0**
KUA				S		**Sg**	**00 51 04.5**	**+0.1**
RATU	**Laukkuluspa**	**0.27**	**270**	P		**Pg**	**00 51 04.6**	**-0.8**
LANU	**Lannavaara**	**0.68**	**70**	P		**Pg**	**00 51 13.3**	**-0.1**
LANU	**Lannavaara**	**0.68**	**70**	PG		**Pg**	**00 51 13.0**	**-0.3**
LANU				SG		**Sg**	**00 51 22.8**	**+0.7**
DUNU	**Dundret**	**0.72**	**171**	P		**Pg**	**00 51 13.5**	**-0.5**
MASU	**Masugnsbyn**	**0.75**	**119**	P		**Pg**	**00 51 14.6**	**-0.1**
SALU	**Saltoluokta**	**0.82**	**238**	P		**Pg**	**00 51 14.8**	**-1.1**
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*P		**Pg**	**00 51 22.9**	**-0.3**
KIF	**Kilpisjarvi**	**1.20**	**9**	PN		**Pg**	**00 51 22.9**	**-0.3**
KIF				MSG			00 51 37.7	
	comp=Z,11nm,0.2s							
KIF				SN		**Sg**	**00 51 38.8**	**+0.1**
PAJU	**Pajala**	**1.36**	**125**	P		**Pg**	**00 51 25.3**	**-1.0**
PAJU				S		**Sg**	**00 51 43.9**	**+0.1**
PAJU	**Pajala**	**1.36**	**125**	PG		**Pg**	**00 51 24.6**	**-1.6**
	baz=301							
PAJU				SG		**Sg**	**00 51 43.7**	**-0.1**
HEF	**Hetta**	**1.39**	**64**	*e*P		**Pg**	**00 51 25.9**	**-1.1**
HEF				*e*S		**Sg**	**00 51 44.7**	**-0.2**
HEF	**Hetta**	**1.39**	**64**	PG		**Pg**	**00 51 25.8**	**-1.1**
HEF				MSG			00 51 43.4	
	comp=Z,9.0nm,0.2s							
HEF				SG		**Sg**	**00 51 44.5**	**-0.4**
KLF	**Kolari**	**1.53**	**111**	PG		**Pn**	**00 51 28.2**	**-0.7**
KLF				MSG			00 51 47.3	
	comp=Z,5.4nm,0.2s							
KLF				SN		**Sn**	**00 51 49.4**	**0.0**
KTK1	**Kautokeino**	**1.61**	**41**	*e*P		**Pn**	**00 51 29.6**	**-0.4**
KTK1				*e*S		**Sn**	**00 51 51.2**	**-0.3**
KTK1				IAML			00 51 54.8	
	comp=Z,9.1nm,0.4s							
KTK1	**Kautokeino**	**1.61**	**41**	PN		**Pn**	**00 51 29.6**	**-0.4**
KTK1				SN		**Sn**	**00 51 51.4**	**-0.1**
JETT	**Jettan, Norway**	**1.74**	**1**	*e*P		**Pn**	**00 51 31.4**	**-0.4**
JETT				*e*S		**Sn**	**00 51 53.8**	**-0.8**
JETT				IAML			00 52 01.5	
	comp=Z,18nm,0.4s							
TRO	**Tromso**	**1.88**	**345**	PG		**Pn**	**00 51 33.4**	**-0.2**
FAUS	**Fauske**	**1.97**	**259**	*e*P		**Pn**	**00 51 34.9**	**+0.1**
FAUS				*e*S		**Sb**	**00 51 01.8**	**-0.2**
FAUS				IAML			00 52 05.3	
	comp=Z,9.8nm,0.3s							
KALU	**Kalix**	**2.32**	**147**	PG		**Pn**	**00 51 40.4**	**+0.7**
	baz=328							
KALU				SG		**Sb**	**00 52 11.5**	**-0.5**
TOF	**Tornio**	**2.37**	**136**	PG		**Pn**	**00 51 41.6**	**+1.3**
TOF				MSG			00 52 10.6	
	comp=Z,2.4nm,0.2s							
TOF				SG		**Sb**	**00 52 13.5**	**+0.1**
SGF	**Sodankyl**	**2.42**	**96**	PB		**Pn**	**00 51 42.0**	**+1.0**
SGF				SB		**Sn**	**00 52 12.9**	**+1.7**
RNF	**Rovaniemi**	**2.54**	**116**	PB		**Pn**	**00 51 44.4**	**+1.7**
RNF				SB		**Sb**	**00 52 17.4**	**-1.0**
ARA0	**ARCESS Array S**	**2.56**	**46**	*e*P		**Pn**	**00 51 43.4**	**+0.4**
ARA0				IAML			00 52 20.7	
	comp=Z,3.4nm,0.8s							
ARA0	**ARCESS Array S**	**2.56**	**46**	PN		**Pn**	**00 51 43.3**	**+0.2**
	baz=227							
ARA0				SB		**Sb**	**00 52 18.3**	**-0.8**
ARCES	**ARCESS Array B**	**2.56**	**46**	Pn		**Pn**	**00 51 43.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=226,slow=14,SNR=50							
ARCES				Lg		Lg	00 52 16.3	
	comp=Z,0.9nm,0.3s,baz=226,slow=23,SNR=13							
	comp=Z,0.8nm,0.3s							
KMNF	**Kaamanen**	**2.81**	**59**	PB		**Pn**	**00 51 46.7**	**+0.3**
KMNF				SB		**Sn**	**00 52 22.5**	**+1.7**
RAJF	**Raja-Jooseppi**	**3.07**	**74**	PN		**Pn**	**00 51 50.1**	**+0.2**
RAJF				SB		**Sb**	**00 52 33.7**	**0.0**
KEV	**Kevo**	**3.12**	**48**	PB		**Pn**	**00 51 51.4**	**+0.8**
KEV				SN		**Sn**	**00 52 29.7**	**+1.2**
RANF	**Ranua**	**3.14**	**122**	PB		**Pb**	**00 51 54.2**	**-2.7**
RANF				SG		**Sb**	**00 52 37.0**	**+1.3**
BURU	**Burvik**	**3.29**	**172**	PB		**Pn**	**00 51 54.6**	**+1.6**
VRF	**Varrio**	**3.54**	**87**	PG		**Pb**	**00 52 04.0**	**+0.3**
OUL	**Oulu**	**3.56**	**138**	PG		**Pb**	**00 52 04.3**	**+0.3**
OLKF	**Oulanka, Finla**	**3.87**	**109**	PN		**Pn**	**00 52 02.1**	**+1.1**
MSF	**Maaselka**	**3.95**	**115**	SN		**Sn**	**00 52 50.2**	**+1.2**
UMAU	**Umeaa**	**3.96**	**178**	PB		**Pn**	**00 52 04.5**	**+2.3**
KU6	**Riekki**	**4.19**	**111**	PN		**Pn**	**00 52 06.3**	**+0.9**
	baz=303							
KU6				SG		**Sg**	**00 53 11.4**	**-3.3**
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**	**00 52 43.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=341,slow=12,SNR=1.3							
FINES				Sn		**Sn**	**00 53 57.6**	**-3.3**
	baz=342,slow=26,SNR=2.2							
FINES				Lg		Lg	00 54 33.4	
	comp=Z,0.1nm,0.3s,baz=345,slow=26,SNR=1.0							
	comp=Z,1.0nm,0.9s							
NOA	**NORSAR Array B**	**7.85**	**214**	Pn		**Pn**	**00 53 00.3**	**+4.7**
	baz=14,slow=19,SNR=1.1							
NOA				Sn		**Sn**	**00 54 25.2**	**0.0**
	baz=69,slow=19,SNR=1.6							
NOA				Lg		Lg	00 55 14.6	
	baz=54,slow=22,SNR=2.0							
	comp=Z,0.4nm,0.6s							

*IDC **09** 01:04:40.7±1.4, 59°.17N × 153°.35W, h52km±15km, mb3.9/24, mbtmp4.2/29, ML4.2/5, MS3.4/13, Error ellipse: s-maj=13.1km s-min=9.1km az=97.0*
*AEIC **09** 01:04:44.0±1.4, 59°.06N±0°.03 × 153°.08W±0°.06, h66km±3km, ML4.2, mb4.6/28(NEIC), ML4.4/148(NEIC), Mwr4.5/103(NEIC), Error ellipse: s-maj=4.5km s-min=4.0km az=119.0*
*NEIC **09** 01:04:43±1.4, 59°.06N±0°.03 × 153°.10W±0°.06, h74km±4km, Error ellipse: s-maj=4.7km s-min=4.1km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.72; $M_{\theta\theta}$-2.95; $M_{\phi\phi}$1.23; $M_{r\theta}$3.12; $M_{\theta\phi}$5.37; $M_{\phi r}$1.93; Fault plane solution: $M_0$6.99000×10^{15} NP1: ϕ_s344.78000°, δ58.88000°, λ163.07000°. NP2: ϕ_s83.72000°, δ75.56000°, λ32.25000°. Principal axes: T 7.0719, Plg33.0000°, Azm308.0000°; N -0.1576, Plg55.0000°, Azm105.0000°; P -6.9143, Plg11.0000°, Azm211.0000°;*
*NEIC **09** 01:04:43.9, 59°.06N × 153°.08W, h68km*

ISC 09 01:04:42.8±0.6, 59°.07N±0°.03 × 153°.12W±0°.03, h75km±5km, n579, σ0°83/569, mb4.4/47, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
Q19K	**Cape Douglas,**	**0.31**	**243**			**Pn**	**01 04 54.3**	**-0.2**
Q19K						**Sn**	**01 05 03.1**	**-0.1**
Q19K	**Cape Douglas,**	**0.31**	**243**	IAML			01 05 07.1	
	comp=E,15μm,0.9s							
Q19K				IAML			01 05 11.2	
	comp=N,17μm,0.8s							
Q19K	**Cape Douglas,**	**0.31**	**243**	P		**Pn**	**01 04 54.6**	**0.0**
	baz=66							
Q19K				S		**Sn**	**01 05 03.1**	**-0.1**
	baz=66							
AU22	**Augustine Moun**	**0.33**	**338**			**Pn**	**01 04 54.9**	**+0.2**
AU22						**Sn**	**01 05 03.8**	**+0.5**
AUCH	**Augustine Cone**	**0.34**	**331**			**Pn**	**01 04 55.0**	**+0.2**
AUCH						**Sn**	**01 05 04.3**	**+0.6**
AUL	**Augustine Lava**	**0.35**	**333**			**Pn**	**01 04 55.1**	**+0.3**
P19K	**Oil Pt**	**0.59**	**354**			**Pn**	**01 04 57.4**	**+0.4**
P19K						**Sn**	**01 05 08.3**	**+1.0**
P19K	**Oil Pt**	**0.59**	**354**	P		**Pn**	**01 04 57.2**	**+0.3**
	baz=173							
P19K				S		**Sn**	**01 05 08.5**	**+1.2**
	baz=173							
Q20K	**Shuyak Island**	**0.59**	**140**	P		**Pn**	**01 04 56.6**	**-0.2**
	baz=322							
Q20K				S		**Sn**	**01 05 07.1**	**-0.2**
	baz=322							
SYI	**Shuyak Island**	**0.59**	**140**			**Pn**	**01 04 56.8**	**-0.1**
SYI						**Sn**	**01 05 07.1**	**-0.2**
SYI	**Shuyak Island**	**0.59**	**140**	IAML			01 05 07.8	
	comp=E,13μm,0.7s							
SYI				IAML			01 05 08.8	
	comp=N,12μm,0.4s							
KAPH	**Katmai Pasha**	**0.79**	**234**			**Pn**	**01 04 59.4**	**+0.2**
KAHG	**Katmai Hook Gl**	**0.94**	**233**			**Pn**	**01 05 01.1**	**+0.2**
KAHG						**Sn**	**01 05 15.1**	**+0.8**
IVE	**Iliamna Volcan**	**0.95**	**3**			**Pn**	**01 05 01.0**	**-0.1**
IVE						**Sn**	**01 05 14.6**	**-0.1**
HOM	**Homer**	**0.96**	**51**			**Pn**	**01 05 01.6**	**+0.6**
HOM	**Homer**	**0.96**	**51**	P		**Pn**	**01 05 01.6**	**+0.6**
	baz=231							
O20K	**Slope Mountain**	**1.05**	**14**			**Pn**	**01 05 02.6**	**+0.4**
O20K						**Sn**	**01 05 17.8**	**+1.2**
O20K	**Slope Mountain**	**1.05**	**14**	P		**Pn**	**01 05 02.8**	**+0.7**
	baz=193							
O20K				S		**Sn**	**01 05 17.8**	**+1.2**
	baz=193							
KAHC	**Katmai Hardscr**	**1.07**	**248**			**Pn**	**01 05 02.5**	**+0.1**
KAHC	**Katmai Hardscr**	**1.07**	**248**	P		**Pn**	**01 05 02.5**	**+0.1**
	baz=67							
CNPM	**China Poot**	**1.07**	**64**			**Pn**	**01 05 02.6**	**+0.2**
CNPM						**Sn**	**01 05 18.2**	**+1.1**
CNPM	**China Poot**	**1.07**	**64**	IAML			01 05 19.7	
	comp=N,6μm,0.6s							
CNPM				IAML			01 05 20.0	
	comp=E,7μm,0.7s							
P18K	**Big Mountain,**	**1.13**	**288**			**Pn**	**01 05 02.9**	**-0.3**
P18K						**Sn**	**01 05 18.1**	**-0.4**
P18K	**Big Mountain,**	**1.13**	**288**	IAML			01 05 18.9	
	comp=N,4μm,1.4s							
P18K	**Big Mountain,**	**1.13**	**288**	P		**Pn**	**01 05 02.8**	**-0.4**
	baz=106							
P18K				S		**Sn**	**01 05 18.3**	**-0.2**
	baz=106							
O19K	**Port Alsworth**	**1.29**	**332**			**Pn**	**01 05 05.3**	**+0.3**
O19K						**Sn**	**01 05 22.3**	**+0.5**
O19K	**Port Alsworth**	**1.29**	**332**	P		**Pn**	**01 05 05.3**	**+0.3**
	baz=151							
O19K				S		**Sn**	**01 05 22.3**	**+0.5**
	baz=151							
KDAK	**Kodiak Island**	**1.32**	**167**			**Pn**	**01 05 05.3**	**-0.2**
KDAK				IAML			01 05 26.5	
	comp=N,6μm,0.8s							
KDAK				IAML			01 05 26.9	
	comp=N,8μm,0.7s							
KDAK	**Kodiak Island**	**1.32**	**167**			**Pn**	**01 05 22.3**	**-0.2**
KDAK	**Kodiak Island**	**1.32**	**167**	P		**

NCT Sn 01 05 27.5 +0.5
KELA Mount Kelaz 1.50 246 Pn 01 05 08.2 +0.2
ANCK Angle Creek 1.52 236 Pn 01 05 08.5 +0.4
RDJH Redoubt Jeurge 1.54 6 Pn 01 05 08.9 +0.5
DFR Drift River 1.54 8 Pn 01 05 08.9 +0.4
RDT Redoubt 1.55 13 Pn 01 05 08.7 +0.1
RDT Sn 01 05 28.3 +0.1
CNTC Contact Creek 1.65 242 Pn 01 05 10.2 +0.2
Q17K Contact Creek 1.66 242 P Pn 01 05 10.2 +0.2
baz=60
P17K Kvichak River 1.72 276 Pn 01 05 11.1 +0.4
P17K Kvichak River 1.72 276 P Pn 01 05 11.3 +0.6
baz=93
OHAK Old Harbor 1.85 183 Pn Pn 01 05 12.2 -0.3
OHAK IAML 01 05 39.7
comp=N,2µm,0.3s
OHAK IAML 01 05 44.8
comp=E,2µm,0.7s
OHAK Old Harbor 1.85 183 P Pn 01 05 12.2 -0.3
OHAK Old Harbor 1.85 183 P Pn 01 05 12.2 -0.3
baz=3.3
Q16K King Salmon 1.88 260 Pn 01 05 13.6 +0.8
Q16K King Salmon 1.88 260 P Pn 01 05 13.6 +0.8
baz=77
N19K Bonanza Creek 1.88 339 Pn 01 05 13.6 +0.6
N19K Sn 01 05 35.7 -0.3
N19K Bonanza Creek 1.88 339 P Pn 01 05 13.5 +0.5
baz=158
N19K S Sn 01 05 35.7 -0.3
baz=158
CAPN Captain Cook N 1.97 29 Pn 01 05 16.1 +2.0
SLKM Skilak Lake 2.06 44 Pn 01 05 14.9 -0.4
SEW Seward 2.14 59 Pn 01 05 15.3 -0.9
SEW Seward 2.14 59 P Pn 01 05 15.5 -0.8
baz=242
N18K Kilae Creek 2.14 320 Pn 01 05 16.8 +0.4
N18K Kilae Creek 2.14 320 P Pn 01 05 16.8 +0.4
baz=138
O17K Koliganek Bris 2.15 291 Pn 01 05 16.9 +0.4
O17K Sn 01 05 42.5 +0.3
O17K Koliganek Bris 2.15 291 P Pn 01 05 16.9 +0.4
baz=108
O17K S Sn 01 05 42.6 +0.3
baz=108
PLK3 Peulik 3 2.16 232 Pn 01 05 17.4 +0.8
N20K Mount Spurr 2.19 12 P Pn 01 05 17.7 +0.6
baz=192
SPCR Spurr Chakacha 2.19 12 Pn 01 05 17.7 +0.6
SPCN Chakachatna No 2.21 12 Pn 01 05 18.3 +0.9
O22K Cooper Landing 2.23 49 Pn 01 05 17.2 -0.3
O22K Cooper Landing 2.23 49 P Pn 01 05 17.4 -0.2
baz=231
PLK1 Peulik 1 2.23 237 Pn 01 05 18.5 +0.9
SPBG Spurr Blockage 2.23 9 Pn 01 05 18.5 +0.8
PLK5 Peulik 5 2.24 243 Pn 01 05 18.8 +1.1
SPCP Crater Peak Br 2.26 12 Pn 01 05 19.0 +0.9
SPCG Spurr Capps Gl 2.30 13 Pn 01 05 19.6 +1.0
SPNN North Nagishla 2.32 5 Pn 01 05 19.6 +0.7
SVW2 Sparrevohn 2.38 330 Pn Pn 01 05 19.8 +0.2
SVW2 Sparrevohn 2.38 330 P Pn 01 05 20.0 +0.4
P16K Nushagak River 2.52 271 Pn 01 05 22.3 +0.9
P16K Nushagak River 2.52 271 P Pn 01 05 22.3 +0.9
baz=87
STLK Strandline Lak 2.52 14 Pn 01 05 22.4 +0.8
N17K Nushagak Hills 2.52 307 Pn 01 05 21.9 +0.4
N17K Nushagak Hills 2.52 307 P Pn 01 05 21.9 +0.4
baz=124
FIS Fire Island 2.54 34 Pn 01 05 23.1 +1.4
SII Sitkinak Islan 2.58 193 Pn 01 05 22.1 -0.3
SII Sitkinak Islan 2.58 193 P Pn 01 05 22.5 +0.2
SII Sitkinak Islan 2.58 193 P Pn 01 05 22.0 -0.3
baz=13
O16K Kokwok River B 2.60 284 Pn 01 05 23.2 +0.6
O16K Kokwok River B 2.60 284 IAML 01 05 54.8
comp=E,1µm,0.7s
O16K IAML 01 06 08.1
comp=N,2µm,0.6s
O16K Kokwok River B 2.60 284 P Pn 01 05 23.2 +0.6
baz=100
RC01 Rabbit Creek A 2.64 38 Pn 01 05 23.2 +0.1
RC01 Rabbit Creek A 2.64 38 IAML 01 06 01.9
comp=E,1µm,0.6s
RC01 IAML 01 06 02.7
comp=N,1µm,0.6s
RC01 Rabbit Creek A 2.64 38 P Pn 01 05 23.6 +0.4
baz=221
SUA Susitna One 2.68 25 Pn Pn 01 05 24.3 +0.6
SUA Susitna One 2.68 25 P Pn 01 05 24.5 +0.8
baz=207
M18K Stony River 2.78 332 Pn 01 05 25.6 +0.6
M18K Stony River 2.78 332 P Pn 01 05 25.6 +0.6
baz=150
R16K Pilot Point 2.79 239 Pn 01 05 26.1 +1.0
R16K Pilot Point 2.79 239 IAML 01 06 01.3
comp=N,1µm,1.0s
R16K IAML 01 06 43.0
comp=E,1µm,1.0s
R16K Pilot Point 2.79 239 P Pn 01 05 26.3 +1.2
baz=56
M20K Styx River 2.83 360 Pn 01 05 26.9 +1.2
M20K Styx River 2.83 360 P Pn 01 05 26.7 +1.1
baz=180
M19K Big River Lodg 2.92 348 Pn 01 05 27.5 +0.7
M19K Big River Lodg 2.92 348 P Pn 01 05 27.5 +0.7
baz=167
SKT Skwentna 3.03 14 Pn Pn 01 05 28.7 +0.4
SKT IAML 01 06 10.5
comp=N,743nm,1.1s
SKT IAML 01 06 10.6
comp=E,917nm,1.0s
SKT Skwentna 3.03 14 P Pn 01 05 28.8 +0.4
baz=195
P23K Montague Islan 3.06 70 Pn 01 05 28.4 -0.3
P23K Montague Islan 3.06 70 P Pn 01 05 28.5 -0.3
baz=254
M22K Willow 3.08 28 Pn 01 05 29.7 +0.7
M22K Willow 3.08 28 P Pn 01 05 29.9 +0.9
baz=210
M17K Holitna River 3.18 319 Pn 01 05 31.4 +0.9
M17K Holitna River 3.18 319 IAML 01 06 09.2
comp=N,1µm,0.7s
M17K IAML 01 06 34.3
comp=E,1µm,0.7s
M17K Holitna River 3.18 319 P Pn 01 05 31.4 +0.9
baz=135
N16K Nishlik Lake 3.19 299 Pn 01 05 31.3 +0.8
N16K Nishlik Lake 3.19 299 P Pn 01 05 31.3 +0.8
baz=114
PMR Palmer 3.22 36 Pn Pn 01 05 30.4 -0.5
PMR IAML 01 06 17.1
comp=E,782nm,0.8s
PMR IAML 01 06 18.9
comp=N,605nm,0.7s
PMR Palmer 3.22 36 P Pn 01 05 30.7 -0.2
PMR Palmer 3.22 36 P Pn 01 05 30.5 -0.4
baz=219
L19K White Mountain 3.24 345 Pn 01 05 32.0 +0.8
L19K White Mountain 3.24 345 IAML 01 06 10.9
comp=E,874nm,0.6s
L19K White Mountain 3.24 345 P Pn 01 05 32.1 +0.8
baz=164
KNK Knik Glacier 3.31 43 Pn 01 05 31.7 -0.5
KNK IAML 01 06 22.0
comp=N,1µm,0.8s
KNK Knik Glacier 3.31 43 P Pn 01 05 31.6 -0.6
baz=226
GHO Glory Hole Cre 3.42 36 Pn 01 05 33.5 -0.3
L20K Farewell, AK 3.44 354 Pn 01 05 35.1 +1.1
L20K Farewell, AK 3.44 354 P Pn 01 05 35.1 +1.1
baz=173
O15K Ungalikthiuk R 3.46 275 Pn 01 05 35.4 +1.2
O15K Ungalikthiuk R 3.46 275 P Pn 01 05 35.4 +1.2
baz=89
Q23K Middleton Isla 3.50 81 Pn 01 05 34.2 -0.5
Q23K Middleton Isla 3.50 81 IAML 01 06 13.5
comp=E,513nm,0.8s
Q23K Middleton Isla 3.50 81 P Pn 01 05 34.2 -0.5
baz=267
MID Middleton Isla 3.50 81 Pn 01 05 34.1 -0.6
MID Middleton Isla 3.50 81 IAML 01 06 16.3
comp=E,522nm,0.4s
CHIR Chirikof Islan 3.52 204 Pn 01 05 34.6 -0.5
CHIR Chirikof Islan 3.52 204 IAML 01 06 29.1
comp=N,1µm,0.9s
CHIR IAML 01 06 29.9
comp=E,1µm,0.8s
CHIR Chirikof Islan 3.52 204 P Pn 01 05 34.8 -0.3
baz=22
M16K Timber Creek 3.52 306 Pn 01 05 36.1 +1.0
M16K Timber Creek 3.52 306 P Pn 01 05 36.2 +1.1
baz=121
HIN Hinchinbrook I 3.61 65 Pn 01 05 35.3 -0.9
L18K Granite Mounta 3.62 332 Pn 01 05 37.0 +0.6
L18K Granite Mounta 3.62 332 IAML 01 06 19.6
comp=N,743nm,0.5s
L18K Granite Mounta 3.62 332 P Pn 01 05 36.8 +0.5
baz=149
CUT Chulitna 3.63 21 Pn 01 05 36.9 +0.4
SML Sawmill 3.63 39 Pn Pn 01 05 36.1 -0.5
SML IAML 01 06 29.2
comp=E,730nm,1.3s
SML Sawmill 3.63 39 P Pn 01 05 36.0 -0.5
baz=222
N15K Kwethluk River 3.71 290 Pn 01 05 39.2 +1.5
N15K Kwethluk River 3.71 290 IAML 01 06 49.9
comp=N,764nm,0.8s
N15K IAML 01 06 50.8
comp=E,724nm,0.8s
N15K Kwethluk River 3.71 290 P Pn 01 05 39.1 +1.5
baz=104
M23K Glacier View 3.82 42 Pn 01 05 39.1 -0.1
M23K Glacier View 3.82 42 P Pn 01 05 39.1 -0.1
baz=226
PPLA Purkeypile 3.87 6 Pn 01 05 41.5 +1.6
PPLA Purkeypile 3.87 6 P Pn 01 05 41.5 +1.6
baz=187
CHGN Chignik 3.97 228 Pn 01 05 41.9 +0.8
CHGN Chignik 3.97 228 P Pn 01 05 41.7 +0.5
baz=44
SCM Sheep Creek Mo 3.99 43 Pn 01 05 41.4 -0.1
SCM Sheep Creek Mo 3.99 43 IAML 01 06 30.5
comp=E,765nm,0.8s
SCM Sheep Creek Mo 3.99 43 P Pn 01 05 41.6 +0.1
baz=228
L17K Donlin 4.00 323 Pn 01 05 42.0 +0.5
EYAK Cordova Ski Ar 4.01 65 Pn 01 05 40.4 -1.2
EYAK Cordova Ski Ar 4.01 65 P Pn 01 05 40.8 -0.8
EYAK Cordova Ski Ar 4.01 65 P Pn 01 05 40.9 -0.8
baz=251
L16K Owhat River 4.12 313 Pn Pn 01 05 43.6 +0.4
L16K Owhat River 4.12 313 P Pn 01 05 43.7 +0.5
baz=127
TTA Tatalina 4.12 341 Pn 01 05 44.0 +0.7
TTA Tatalina 4.12 341 P Pn 01 05 44.0 +0.7
TTA Tatalina 4.12 341 P Pn 01 05 44.0 +0.7
baz=159
M15K Kasigluk River 4.15 296 Pn 01 05 44.2 +0.6
M15K Kasigluk River 4.15 296 P Pn 01 05 44.2 +0.6
baz=110
O14K Tigyukauivet M 4.20 276 Pn 01 05 45.5 +1.3
O14K Tigyukauivet M 4.20 276 IAML 01 06 35.5
comp=E,475nm,0.8s
O14K IAML 01 06 47.8
comp=N,338nm,1.1s
O14K Tigyukauivet M 4.20 276 P Pn 01 05 45.5 +1.3
baz=89
DIV Divide 4.22 58 Pn 01 05 43.8 -0.8
WAT7 Susitna Watana 4.31 27 Pn 01 05 46.3 +0.4
VNHG Veniaminof 1 4.32 231 Pn 01 05 47.9 +1.8
K20K Telida 4.33 354 Pn 01 05 47.0 +0.9
K20K Telida 4.33 354 IAML 01 06 37.3
comp=E,241nm,0.6s
K20K IAML 01 06 37.9
comp=N,271nm,0.7s
K20K Telida 4.33 354 P Pn 01 05 47.2 +1.1
baz=173
KLU Klutina 4.33 53 Pn 01 05 45.5 -0.6
KLU IAML 01 06 36.5
comp=E,270nm,0.4s
KLU IAML 01 06 36.7
comp=N,599nm,0.4s
KLU Klutina 4.33 53 P Pn 01 05 45.5 -0.6
baz=239
WAT1 Susitna Watana 4.38 29 Pn 01 05 47.0 +0.2
WAT1 Susitna Watana 4.38 29 P Pn 01 05 47.0 +0.2
baz=212
CAST Castle Rocks 4.40 6 Pn 01 05 48.1 +1.1
CAST Castle Rocks 4.40 6 P Pn 01 05 48.1 +1.1
baz=187
WAT6 Susitna Watana 4.40 34 Pn 01 05 46.8 -0.3
WAT6 Susitna Watana 4.40 34 P Pn 01 05 46.8 -0.3
baz=219
S14K Fog Glacier 4.44 234 P Pn 01 05 49.0 +1.3
baz=49
VNFG Fog Glacier, M 4.44 234 Pn 01 05 49.2 +1.6
VNFG Fog Glacier, M 4.44 234 IAML 01 07 01.6
comp=N,422nm,0.8s
VNFG IAML 01 07 47.1
comp=E,569nm,1.1s
K17K Iditarod 4.45 328 Pn 01 05 48.3 +0.7
K17K Iditarod 4.45 328 IAML 01 07 06.2
comp=E,302nm,1.1s
K17K IAML 01 07 19.1
comp=N,326nm,1.0s
K17K Iditarod 4.45 328 P Pn 01 05 48.3 +0.7
baz=143
N14K Kuskokwak Cree 4.45 285 Pn 01 05 48.7 +1.0
N14K Kuskokwak Cree 4.45 285 P Pn 01 05 48.7 +1.0
baz=98
RAGM Ragged Mountai 4.47 69 Pn 01 05 47.3 -0.7
RAGM Ragged Mountai 4.47 69 IAML 01 06 41.0
comp=E,349nm,0.6s
RAGM IAML 01 07 03.6
comp=N,571nm,0.7s
GOAT Goat Mountain 4.50 67 Pn 01 05 47.5 -1.0
KAIM Kayak Island 4.52 75 Pn 01 05 48.7 +0.1
KAIM Kayak Island 4.52 75 IAML 01 06 44.3
comp=N,529nm,0.7s
KAIM IAML 01 06 47.9
comp=E,377nm,0.7s
KAIM Kayak Island 4.52 75 P Pn 01 05 48.9 +0.3
baz=263
M24K Tolsona, Glenn 4.58 45 Pn Pn 01 05 49.5 -0.1
M24K Tolsona, Glenn 4.58 45 P Pn 01 05 49.5 -0.1
baz=231
TRF Thorofare Moun 4.61 16 Pn Pn 01 05 50.7 +0.8
TRF IAML 01 07 15.6
comp=E,532nm,1.3s
TRF Thorofare Moun 4.61 16 P Pn 01 05 50.5 +0.5
baz=198
KTH Kantishna Hill 4.62 12 Pn 01 05 50.9 +0.7
KTH Kantishna Hill 4.62 12 IAML 01 06 51.0
comp=E,454nm,1.0s
HMT Hamilton 4.66 70 Pn 01 05 50.0 -0.7
HMT Hamilton 4.66 70 IAML 01 06 45.6
comp=N,504nm,0.4s
BMRM Bremner River 4.68 62 Pn 01 05 50.0 -0.9
BMRM Bremner River 4.68 62 P Pn 01 05 50.0 -0.9
baz=249
J18K Innoko River 4.74 340 Pn 01 05 52.7 +1.0
J18K Innoko River 4.74 340 P Pn 01 05 52.7 +1.0
baz=157
M14K Bethel 4.76 295 Pn Pn 01 05 53.2 +1.3
M14K IAML 01 07 14.6
comp=N,323nm,2.0s
M14K IAML 01 07 32.3
comp=E,246nm,1.6s
M14K Bethel 4.76 295 P Pn 01 05 53.4 +1.5
baz=107
NICHA Nichawak Mount 4.79 72 Pn 01 05 52.1 -0.2
RND Reindeer 4.82 24 Pn Pn 01 05 53.2 +0.5
RND IAML 01 07 07.2
comp=N,390nm,1.0s
RND IAML 01 07 10.8
comp=E,322nm,0.9s
CHUM Lake Minchumin 4.85 4 Pn 01 05 54.1 +1.1
CHUM Lake Minchumin 4.85 4 P Pn 01 05 54.1 +1.1
baz=185
SUCK Suckling Hills 4.86 74 Pn 01 05 53.1 -0.2
DHY Denali Highway 4.89 32 Pn 01 05 54.4 +0.5
DHY IAML 01 07 15.9
comp=N,383nm,1.0s
DHY IAML 01 07 18.1
comp=E,395nm,1.0s
DHY Denali Highway 4.89 32 P Pn 01 05 53.7 -0.2
baz=217
L15K Ungalak Mounta 4.91 306 Pn 01 05 54.9 +1.0
L15K Ungalak Mounta 4.91 306 P Pn 01 05 54.9 +1.0
baz=118
N25K Chitina, Valde 4.94 55 Pn Pn 01 05 54.1 -0.3
N25K IAML 01 06 54.6
comp=E,170nm,0.7s
N25K IAML 01 07 21.1
comp=N,168nm,0.8s
N25K Chitina, Valde 4.94 55 P Pn 01 05 53.7 -0.7
baz=242
BERG Berg Lake 4.95 70 Pn 01 05 53.9 -0.6
BERG Berg Lake 4.95 70 IAML 01 06 48.3
comp=N,381nm,0.4s
J19K Poorman 5.09 347 Pn 01 05 57.1 +0.7
J19K Poorman 5.09 347 P Pn 01 05 57.1 +0.7
baz=165
MCK McKinley 5.09 21 Pn 01 05 57.1 +0.7
MCK McKinley 5.09 21 P Pn 01 05 57.1 +0.7
baz=205
BGLC Bering Glacier 5.11 74 Pn 01 05 56.1 -0.5
BGLC Bering Glacier 5.11 74 P Pn 01 05 56.1 -0.5
baz=262
GRIN Grindle Hills 5.12 72 Pn 01 05 56.5 -0.2
HARP HAARP 5.14 46 Pn 01 05 57.2 +0.1
HARP HAARP 5.14 46 P Pn 01 05 57.2 +0.1
baz=233
J20K Nowinta River 5.15 355 Pn Pn 01 05 58.5 +1.2
J20K IAML 01 06 57.7
comp=N,222nm,0.5s
J20K Nowinta River 5.15 355 P Pn 01 05 57.9 +0.6
baz=174
KHIT Khitrov Hills 5.18 70 Pn 01 05 56.9 -0.8
GLB Gilahina Butte 5.21 59 Pn 01 05 57.6 -0.5
GLB IAML 01 06 57.6
comp=E,169nm,0.5s
GLB IAML 01 06 57.6
comp=N,180nm,0.9s
WACK Wrangell Chich 5.24 52 Pn 01 05 58.3 -0.3
K15K Wolf Creek Mou 5.25 312 Pn 01 05 59.6 +1.0
K15K Wolf Creek Mou 5.25 312 P Pn 01 05 59.6 +1.0
baz=124
WASW Wrangell South 5.27 53 Pn 01 05 58.8 -0.3
L14K Kuka Creek 5.29 300 Pn 01 06 00.5 +1.4
L14K Kuka Creek 5.29 300 IAML 01 07 35.8
comp=N,266nm,1.1s
L14K IAML 01 07 37.0
comp=E,201nm,0.9s
L14K Kuka Creek 5.29 300 P Pn 01 06 00.5 +1.4
baz=111
VRDI Verde Repeater 5.29 62 Pn 01 05 58.4 -0.9
CRQM Cirque 5.30 67 Pn 01 05 58.4 -1.0
CRQM Cirque 5.30 67 IAML 01 06 59.1
comp=N,356nm,0.8s
SNH Sunshine Point 5.34 74 Pn 01 05 59.8 0.0
SNH IAML 01 07 00.6
comp=N,179nm,0.5s
SNH IAML 01 07 01.6
comp=E,282nm,0.8s
M13K Dall Lake 5.35 289 Pn 01 06 01.6 +1.7
M13K Dall Lake 5.35 289 IAML 01 07 33.0
comp=N,276nm,3.0s
M13K IAML 01 07 45.0
comp=E,236nm,1.6s
WAZA Wrangell Mount 5.35 52 Pn 01 06 00.2 0.0
WAX Waxell Ridge 5.37 71 Pn 01 05 59.9 -0.5
PAX Paxson 5.40 40 Pn 01 06 00.4 -0.3
PAX Paxson 5.40 40 P Pn 01 06 00.4 -0.3
baz=227
BWN Browne 5.41 17 Pn Pn 01 06 01.5 +0.8
SDPT Sand Point 5.46 230 Pn 01 06 03.5 +2.0
CYK Cape Yakataga 5.50 75 Pn 01 06 01.8 -0.2
BARK Barkley Ridge 5.54 71 Pn 01 06 02.4 -0.3
MCARA McCarthy VSAT 5.54 61 Pn 01 06 02.1 -0.5
MCARA McCarthy VSAT 5.54 61 P Pn 01 06 02.1 -0.5
baz=250
J16K Anvik River 5.57 323 Pn 01 06 03.5 +0.6
J16K Anvik River 5.57 323 P Pn 01 06 03.5 +0.6
baz=136
ISLE Juniper Island 5.65 70 Pn 01 06 03.8 -0.4
KIAG Kiagna River 5.71 66 Pn 01 06 04.1 -1.0
PTPK Patty Peak 5.73 64 Pn 01 06 04.8 -0.6
BAGL Bagley Icefiel 5.75 71 Pn 01 06 05.3 -0.1
MESA MESA 5.78 74 Pn 01 06 05.8 -0.2
MESA MESA 5.78 74 P Pn 01 06 05.9 -0.1
baz=264
I20K Naaghedeneel 5.79 354 Pn 01 06 06.9 +1.0
I20K Naaghedeneel 5.79 354 P Pn 01 06 06.9 +1.0
baz=173
NEA2 Nenana 5.87 17 Pn 01 06 07.3 +0.3
NEA2 Nenana 5.87 17 P Pn 01 06 07.0 0.0
baz=201
K24K Donnelly Dome 5.91 33 Pn 01 06 08.9 +1.2
K24K Donnelly Dome 5.91 33 P Pn 01 06 08.9 +1.2
baz=220
WRH Wood River Hil 5.92 22 Pn 01 06 07.7 -0.1
PS1A Pavlof South-1 5.94 236 Pn 01 06 08.9 +0.9
GCSA Galena City Sc 5.97 344 Pn 01 06 09.1 +0.7
GCSA Galena City Sc 5.97 344 P Pn 01 06 09.3 +1.0
baz=161
PVV Pavlof Volcano 5.99 236 Pn 01 06 09.9 +1.2
MENT Mentasta 6.00 46 Pn 01 06 09.7 +0.9
MENT Mentasta 6.00 46 P Pn 01 06 10.1 +1.3
I17K Unalakleet 6.04 326 Pn Pn 01 06 10.6 +1.3
I17K Unalakleet 6.04 326 P Pn 01 06 10.4 +1.0
baz=140
BARN Barnard Glacie 6.08 66 Pn 01 06 09.9 -0.1
MLY Manley 6.09 10 Pn 01 06 11.0 +1.0
MLY Manley 6.09 10 P Pn 01 06 11.1 +1.0
baz=191
HDA Harding Lake 6.11 26 Pn 01 06 09.9 -0.4
CCB Clear Creek Bu 6.14 22 Pn Pn 01 06 10.2 -0.5
RIDG Independent Ri 6.14 37 Pn Pn 01 06 10.9 +0.1
RIDG Independent Ri 6.14 37 P Pn 01 06 11.4 +0.6
baz=224
I21K Tanana 6.16 4 Pn 01 06 11.9 +0.9
I21K Tanana 6.16 4 P Pn 01 06 11.9 +0.9
baz=185
L26K Log Cabin Wild 6.18 46 Pn 01 06 11.7 +0.3
CTG Chitna Glacier 6.21 67 P Pn 01 06 11.9 +0.2
baz=257
TABL Table Mountain 6.21 72 Pn 01 06 12.0 +0.1
CTGM Chitina Glacie 6.21 67 Pn Pn 01 06 12.1 +0.3
J14K Nanvaranak Lak 6.29 310 Pn 01 06 13.7 +1.0
COLA College 6.33 21 Pn 01 06 13.3 0.0
COLA College 6.33 21 P Pn 01 06 13.3 0.0
LOGN Logan Glacier 6.34 69 Pn 01 06 13.1 -0.5
MDM Murphy Dome 6.34 19 Pn Pn 01 06 13.2 -0.3
I23K Minto, Yukon-K 6.35 15 Pn 01 06 13.9 +0.3
I23K Minto, Yukon-K 6.35 15 P Pn 01 06 13.7 +0.1
baz=198
SAMH Samovar Hills 6.36 75 Pn 01 06 14.1 +0.3
M27K Edge Creek, AK 6.43 54 Pn 01 06 14.7 0.0
M27K Edge Creek, AK 6.43 54 P Pn 01 06 14.7 0.0
baz=244
IL31 6.43 25 Pn 01 06 14.2 -0.4
ILAR Eielson Array 6.43 25 Pn 01 06 14.5 -0.3
ILAR Eielson Array 6.43 25 P Pn 01 06 13.7 -1.0
comp=E,4.3nm,0.3s,baz=211,slow=14,SNR=194
ILAR S Sn 01 07 23.2 -3.4
comp=E,38nm,0.7s,baz=208,slow=18,SNR=6.8
comp=E,21nm,0.6s
H20K Anotleneega Mo 6.50 353 Pn 01 06 16.5 +0.8
SCRK Sand Creek 6.58 38 Pn Pn 01 06 16.1 -0.7
SCRK Sand Creek 6.58 38 P Pn 01 06 16.4 -0.4
baz=226
H18K Honhosa River 6.58 340 Pn 01 06 17.5 +0.7
PCA Pinnacle 6.62 76 Pn 01 06 17.0 -0.3
H21K Melozitna Rive 6.62 1 Pn 01 06 17.1 -0.1
PINM Pinnacle 6.62 76 P Pn 01 06 17.2 -0.1
baz=266
POKR Poker Plat Res 6.63 21 Pn 01 06 17.3 -0.1
POKR Poker Plat Res 6.63 21 P Pn 01 06 17.4 0.0
baz=206
YUK2 White River 6.66 61 Pn 01 06 17.9 0.0
J25K Salcha River, 6.66 30 Pn 01 06 17.6 -0.3
J25K Salcha River, 6.66 30 P Pn 01 06 18.0 +0.1
baz=217
H19K Roundabout Mou 6.67 348 Pn 01 06 18.5 +0.6
H19K Roundabout Mou 6.67 348 P Pn 01 06 18.5 +0.6
baz=165
H17K Granite Mounta 6.70 334 Pn 01 06 19.4 +1.1
H17K Granite Mounta 6.70 334 P Pn 01 06 19.1 +0.8
baz=148
L27K Beaver Creek, 6.78 49 Pn 01 06 19.8 +0.2
L27K Beaver Creek, 6.78 49 P Pn 01 06 19.8 +0.2
baz=239
BCAR Beaver Creek A 6.80 49 Pn Pn 01 06 19.9 +0.1
YUK3 Moose Creek 6.83 61 Pn 01 06 20.3 0.0
YUK3 Moose Creek 6.83 61 P Pn 01 06 20.3 0.0

baz=252
BVCY Beaver Creek 6.88 56 Pn 01 06 21.1 +0.2
BVCY Beaver Creek 6.88 56 P Pn 01 06 21.1 +0.2
baz=246
H22K Ishtalitna Cre 6.90 6 Pn 01 06 21.8 +0.7
H22K Ishtalitna Cre 6.90 6 P Pn 01 06 21.8 +0.7
baz=187
BCPM Bancas Point 6.92 77 Pn 01 06 21.0 -0.4
IMAR Indian Mountai 6.95 358 Pn Pn 01 06 22.9 +1.2
YUK8 Steele Glacier 7.02 66 Pn 01 06 23.8 +0.7
YUK8 Steele Glacier 7.02 66 P Pn 01 06 23.8 +0.7
baz=257
PNL Peninsula 7.04 79 Pn 01 06 22.3 -0.8
PNL Peninsula 7.04 79 P Pn 01 06 22.4 -0.6
PNL Peninsula 7.04 79 P Pn 01 06 22.5 -0.6
baz=271
H16K Elim 7.05 326 Pn 01 06 24.2 +1.0
H16K Elim 7.05 326 P Pn 01 06 24.5 +1.3
baz=138
J26L Joseph Creek 7.08 36 Pn 01 06 22.9 -0.7
H24K Noodor Dome 7.21 17 Pn 01 06 25.8 +0.3
H24K Noodor Dome 7.21 17 P Pn 01 06 25.0 -0.4
baz=202
K27K Chicken 7.25 42 Pn 01 06 25.7 -0.1
K27K Chicken 7.25 42 P Pn 01 06 26.0 +0.2
baz=232
G18K Tagagawik 7.31 342 Pn 01 06 27.4 +0.7
G18K Tagagawik 7.31 342 P Pn 01 06 27.4 +0.7
baz=157
G19K Purcell Mounta 7.33 347 Pn 01 06 27.2 +0.2
G19K Purcell Mounta 7.33 347 P Pn 01 06 27.6 +0.6
baz=164
G17K Kiwalik Mounta 7.34 335 Pn 01 06 27.5 +0.4
G17K Kiwalik Mounta 7.34 335 P Pn 01 06 27.5 +0.4
baz=148
PRP Porcupine Dome 7.37 25 Pn Pn 01 06 27.7 0.0
PRP Porcupine Dome 7.37 25 P Pn 01 06 27.4 -0.2
baz=212
O29M Mount Kennedy 7.46 74 Pn 01 06 29.2 +0.3
O29M Mount Kennedy 7.46 74 P Pn 01 06 29.2 +0.3
baz=267
G21K Allakaket 7.48 359 Pn 01 06 30.0 +1.0
G21K Allakaket 7.48 359 P Pn 01 06 30.0 +1.0
baz=178
YUK4 Talbot Arm 7.56 66 P Pn 01 06 31.4 +1.0
baz=258
YUK6 Outpost Mounta 7.63 69 Pn 01 06 31.4 +0.1
YUK6 Outpost Mounta 7.63 69 P Pn 01 06 31.4 +0.1
baz=262
G16K Koyuk River 7.67 330 Pn 01 06 32.2 +0.7
G16K Koyuk River 7.67 330 P Pn 01 06 32.2 +0.7
baz=142
YUK7 Dusty Glacier 7.70 73 Pn 01 06 32.3 +0.2
I26K Coal Creek Min 7.80 32 Pn 01 06 32.7 -0.6
I26K Coal Creek Min 7.80 32 P Pn 01 06 32.5 -0.8
baz=221
G23K Bananza Creek 7.80 9 Pn 01 06 33.9 +0.5
G23K Bananza Creek 7.80 9 P Pn 01 06 33.9 +0.5
baz=192
G15K Niukluk 7.85 324 Pn 01 06 35.0 +1.1
G15K Niukluk 7.85 324 P Pn 01 06 35.0 +1.1
baz=134
P29M Windy Craggy 7.88 79 Pn 01 06 34.0 -0.6
P29M Windy Craggy 7.88 79 P Pn 01 06 34.0 -0.6
baz=272
YUK5 Granite Creek 7.90 68 Pn 01 06 35.1 +0.2
M29M Somme Creek 7.93 59 Pn 01 06 35.0 -0.3
M29M Somme Creek 7.93 59 P Pn 01 06 35.4 +0.2
baz=251
ANM Nome 7.99 319 Pn 01 06 37.5 +1.5
EGAK Eagle 8.03 39 Pn Pn 01 06 36.1 -0.4
HYT Haines Junctio 8.03 71 Pn Pn 01 06 36.8 +0.1
HYT Haines Junctio 8.03 71 P Pn 01 06 36.9 +0.2
baz=264
F19K Shaleruckik Mo 8.08 347 Pn 01 06 38.8 +1.7
G24K Hadweenzic Riv 8.08 16 Pn 01 06 36.9 -0.2
G24K Hadweenzic Riv 8.08 16 P Pn 01 06 37.0 -0.2
baz=201
F20K Avaraart Lake 8.10 353 Pn 01 06 38.8 +1.4
F18K Selawik 8.12 341 Pn 01 06 38.2 +0.5
F18K Selawik 8.12 341 P Pn 01 06 38.2 +0.5
baz=155
F21K Alatna River 8.19 359 Pn 01 06 39.9 +1.2
F21K Alatna River 8.19 359 P Pn 01 06 39.9 +1.2
baz=179
DAWY Dawson 8.24 47 Pn 01 06 39.0 -0.4
DAWY Dawson 8.24 47 P Pn 01 06 38.9 -0.4
baz=239
P30M Million Dollar 8.27 76 Pn 01 06 39.7 -0.1
P30M Million Dollar 8.27 76 P Pn 01 06 39.7 -0.1
baz=270
F17K Baldwin Pennin 8.28 337 Pn 01 06 40.2 +0.3
COLD Coldfoot 8.30 8 Pn 01 06 40.6 +0.4
COLD Coldfoot 8.30 8 P Pn 01 06 40.7 +0.6
baz=190
L29M L29M 8.31 54 Pn 01 06 40.2 -0.1
L29M L29M 8.31 54 P Pn 01 06 40.3 -0.1
baz=247
FYU Fort Yukon 8.34 22 Pn Pn 01 06 39.7 -1.0
I27K Kandik River 8.45 34 Pn 01 06 41.5 -0.8
I27K Kandik River 8.45 34 P Pn 01 06 42.0 -0.3
baz=224
F15K North Star Dit 8.53 326 Pn 01 06 45.0 +1.6
PLBC Pleasant Camp 8.59 80 Pn 01 06 44.0 -0.1
PLBC Pleasant Camp 8.59 80 P Pn 01 06 44.0 -0.1
baz=275
E19K Redstone River 8.62 349 Pn 01 06 45.8 +1.2
M30M Minto, Yukon 8.71 59 Pn Pn 01 06 45.5 -0.3
M30M Minto, Yukon 8.71 59 P Pn 01 06 45.5 -0.3
baz=253
O30N Mendenhall 8.72 71 Pn 01 06 45.6 -0.4
O30N Mendenhall 8.72 71 P Pn 01 06 45.6 -0.4
baz=266
F24K Squaw Lake 8.80 13 Pn 01 06 47.0 0.0
I28M Miner Creek 8.86 38 Pn 01 06 47.1 -0.8
K29M Barlow Dome 8.86 51 Pn Pn 01 06 48.1 +0.2
K29M Barlow Dome 8.86 51 P Pn 01 06 47.8 -0.1
baz=244
J29N Klondike Camp 8.88 46 Pn 01 06 49.1 +1.0
S31K Pelican 8.91 90 Pn 01 06 46.7 -1.8
S31K Pelican 8.91 90 P Pn 01 06 47.7 -0.7
baz=284
H27K Steamboat Moun 8.94 32 Pn 01 06 47.9 -0.9
H27K Steamboat Moun 8.94 32 P Pn 01 06 48.0 -0.9
baz=222
N31M Braeburn, Yuko 8.95 67 Pn 01 06 48.3 -0.7
N31M Braeburn, Yuko 8.95 67 P Pn 01 06 48.3 -0.7
baz=262
E17K Hotham Inlet 8.95 338 Pn 01 06 50.1 +1.1
G26K Porcupine Rive 8.96 24 Pn 01 06 48.5 -0.8
E18K Tukpahlearik C 9.03 341 Pn 01 06 50.8 +0.7
UNV Unalaska Valle 9.06 241 Pn 01 06 50.4 -0.2
UNV Unalaska Valle 9.06 241 P Pn 01 06 49.8 -0.8
baz=49
SKAG Skagway 9.12 80 Pn Pn 01 06 51.3 0.0
MNAT Makushin Natee 9.12 241 Pn 01 06 51.4 -0.1
E22K Anaktuvuk Pass 9.12 3 Pn 01 06 52.9 +1.5
MSW Makushin Switc 9.14 242 Pn 01 06 52.0 +0.2
F25K Christian Rive 9.19 18 Pn 01 06 51.6 -0.6
BMAR Burnt Mountain 9.22 21 Pn Pn 01 06 51.9 -0.9
WHY Whitehorse 9.31 72 Pn 01 06 53.6 -0.5
E21K Killik River 9.42 358 Pn 01 06 58.3 +2.8
TNA Tin City 9.46 320 Pn 01 06 57.0 +1.0
BESE Bessie Mountai 9.48 85 Pn 01 06 56.2 -0.3
F26K Sheenjek River 9.54 21 Pn 01 06 55.9 -1.1
J30M Hart River 9.65 48 Pn 01 06 59.2 +0.4
E25K Arctic Village 9.68 17 Pn 01 06 58.1 -0.9
E25K Arctic Village 9.68 17 P Pn 01 06 58.1 -0.9
baz=204
M31M Drury Creek, Y 9.71 63 Pn 01 06 59.1 -0.3
D19K Kuna River 9.71 349 Pn 01 07 01.4 +1.9
D17K Noatak River 9.73 337 Pn 01 07 00.8 +1.1
TOLK Toolik Lake Re 9.74 8 Pn 01 07 00.6 +0.8
TOLK Toolik Lake Re 9.74 8 P Pn 01 07 00.0 +0.2
baz=191
D20K Etivluk River 9.80 352 Pn 01 07 01.0 +0.3
H29M Whitestone 9.85 37 Pn 01 07 01.3 0.0
D22K Ayikyak River 9.86 1 Pn 01 07 01.5 +0.1
S32K Killisnoo 9.90 91 Pn 01 07 01.1 -0.8
P32M Atlin 9.93 79 Pn 01 07 01.1 -1.4
P32M Atlin 9.93 79 P Pn 01 07 00.5 -2.0
baz=275
I30M Mount Dempster 9.95 45 Pn 01 07 03.3 +0.5
RDOG Red Dog Mine 10.00 338 Pn 01 07 05.0 +1.6

FARO Faro, Yukon 10.20 63 Pn Pn 01 07 05.5 -0.6
N32M Quiet Lake 10.21 70 Pn 01 07 05.8 -0.4
C18K Utukok River 10.24 343 Pn 01 07 08.4 +1.7
D24K Happy Valley 10.30 9 Pn 01 07 08.1 +0.8
P33M Teslin, Yukon 10.34 75 Pn Pn 01 07 06.7 -1.3
F28M Old Crow 10.41 29 Pn Pn 01 07 08.5 -0.5
C19K Lookout Ridge 10.46 347 Pn 01 07 10.8 +1.2
EPYK Eagle Plains 10.47 39 Pn Pn 01 07 10.3 +0.5
B21K Ikpikpuk River 10.62 357 Pn Pn 01 07 11.4 -0.3
C16K Lisburne Hills 10.69 335 Pn 01 07 14.1 +1.4
D25K Kavik River 10.70 13 Pn 01 07 12.8 -0.1
Q32M Nakina River 10.74 82 Pn 01 07 13.1 -0.6
C24K Franklin Bluff 10.86 8 Pn 01 07 15.1 0.0
H31M Peel River 10.97 44 Pn Pn 01 07 17.3 +0.6
G30M tAoh Zraii Nji 11.00 37 Pn Pn 01 07 15.3 -1.7
U33K Whale Pass 11.12 97 Pn Pn 01 07 16.5 -2.1
E28M Babbage River 11.26 26 Pn 01 07 20.5 +0.1
R33M Jennings River 11.34 79 Pn 01 07 20.8 -1.0
WRAK Wrangell Islan 11.40 94 Pn Pn 01 07 22.2 -0.3
D27M Malcolm River 11.47 22 Pn 01 07 23.3 -0.2
E29M Blow River 11.49 29 Pn 01 07 23.2 -0.4
S34M Telegraph Cree 11.55 86 Pn Pn 01 07 24.2 -0.4
G31M Satah River 11.59 39 Pn 01 07 23.9 -1.0
DLBC Dease Lake 11.99 83 Pn Pn 01 07 30.7 +0.1
DLBC Dease Lake 11.99 83 P Pn 01 07 30.2 -0.4
comp=E,2.0nm,0.3s,baz=268,slow=7.9,SNR=27
DLBC S Sn 01 09 38.0 -4.5
comp=E,2.7nm,0.4s,baz=177,slow=22,SNR=3.0
comp=E,7.5nm,0.5s
F31M Tsiigehtchic 12.05 38 Pn Pn 01 07 30.2 -1.0
T35M Bob Quinn 12.29 90 Pn Pn 01 07 35.6 +1.1
INK Inuvik 12.63 35 Pn Pn 01 07 37.5 -1.5
INK Inuvik 12.63 35 P Pn 01 07 37.8 -1.3
comp=E,0.3nm,0.3s,baz=221,slow=14,SNR=56
INK S Sn 01 09 56.0 -1.6
comp=E,2.0nm,0.6s,baz=182,slow=12,SNR=1.2
INK LR LR 01 12 53.3
comp=E,75nm,21.3s,baz=352,slow=39
comp=E,15nm,0.8s
ATKA Atka Island 13.71 249 P P 01 07 57.5 -2.2
FLDN Fort Liard 14.97 73 P Pn 01 08 10.4 +0.5
ADK Adak 15.11 252 Pn Pn 01 08 12.9 +1.1
BBB Bella Bella 15.65 105 P Pn 01 08 19.9 +1.4
comp=E,0.3nm,0.3s,baz=284,slow=8.3,SNR=3.2
BBB LR LR 01 12 57.4
comp=E,107nm,21.9s,baz=326,slow=32
comp=E,32nm,1.1s
C36M Paulatuk 16.10 38 Pn Pn 01 08 21.4 -2.8
A36M Sachs Harbour 17.09 30 Pn 01 08 35.0 -1.5
A36M IAmb IAmb 01 08 40.3
comp=E,28nm,0.8s
HILA High Level 18.56 76 P Pn 01 08 54.0 -0.4
YKA Yellowknife Ar 18.91 63 P P 01 08 57.8 +0.7
YKA Yellowknife Ar 18.91 63 P P 01 08 57.4 +0.3
comp=E,0.8nm,0.3s,baz=276,slow=10,SNR=142
comp=E,9.2nm,0.8s
YKAB2 New Yellowknif 18.92 63 P P 01 08 57.8 +0.7
BILL Bilibino 19.80 314 P P 01 09 06.7 0.0
BILL IAmb IAmb 01 09 12.0
comp=E,12nm,0.7s
NEW Newport 23.61 101 LR LR 01 17 24.2
comp=E,94nm,20.3s,baz=307,slow=32
RES Resolute Bay 26.14 31 P P 01 10 10.1 +0.9
RES Resolute Bay 26.14 31 LR LR 01 22 55.4
comp=E,96nm,18.4s,baz=88,slow=42
PETK Petropavlovsk- 27.54 279 P P 01 10 21.1 -1.0
comp=E,3.7nm,0.8s,baz=67,slow=13,SNR=5.4
comp=E,3.7nm,0.8s
MA2 Magadan 27.91 296 P P 01 10 26.1 +0.8
MA2 IAmb IAmb 01 10 27.1
comp=E,21nm,1.0s
MA2 Magadan 27.91 296 LR LR 01 20 38.2
comp=E,59nm,21.5s,baz=26,slow=34
FCC Fort Churchill 29.62 65 P P 01 10 41.8 +1.4
ELK Elko 29.95 111 LR LR 01 22 01.1
comp=E,46nm,18.5s,baz=339,slow=35
NVAR Mina Array Bea 30.33 117 P P 01 10 49.3 +2.0
comp=E,0.6nm,0.7s,baz=314,slow=10,SNR=5.1
comp=E,0.6nm,0.7s
PDAR Pinedale Array 31.25 102 P P 01 10 57.4 +2.1
PDAR Pinedale Array 31.25 102 P P 01 10 57.6 +2.3
comp=E,0.5nm,0.6s,baz=314,slow=4.7,SNR=7.3
comp=E,0.5nm,0.6s
TIXI Tiksi 32.21 324 LR LR 01 24 15.0
comp=E,61nm,18.5s,baz=32,slow=37
TPNV Topopah Spring 32.48 116 P P 01 11 07.4 +1.2
ULM Lac du Bonnet 33.29 80 LR LR 01 24 16.0
comp=E,79nm,19.9s,baz=16,slow=35
YAK Yakutsk 35.99 309 LR LR 01 25 53.8
comp=E,65nm,21.2s,baz=298,slow=36
EYMN Ely 36.97 80 P P 01 11 45.2 +0.7
EYMN IAmb IAmb 01 11 46.4
comp=E,3.6nm,0.7s
ANMO Albuquerque 38.79 107 LR LR 01 26 09.4
comp=E,80nm,18.5s,baz=108,slow=33
D41A Chassel 39.05 79 P P 01 12 04.1 +2.2
D41A IAmb IAmb 01 12 14.9
comp=E,21nm,1.4s
E43A Lone Tree Farm 40.31 78 P P 01 12 13.1 +0.8
E43A IAmb IAmb 01 12 14.2
comp=E,8.6nm,0.8s
SUMG Summit 41.28 25 P P 01 12 20.9 +0.4
SPITS Spitsbergen Ar 42.85 3 P P 01 12 32.1 -0.6
comp=E,6.3nm,0.8s,baz=0.8,slow=5.8,SNR=9.5
comp=E,6.3nm,0.8s
VLDQ Val d'Or 43.84 70 P P 01 12 40.0 -1.0
VLDQ IAmb IAmb 01 12 52.0
comp=E,6.2nm,1.1s
SCHQ Schefferville 44.13 56 P P 01 12 43.4 +0.1
SCHQ IAmb IAmb 01 13 06.9
comp=E,16nm,1.5s
SCHQ Schefferville 44.13 56 P P 01 12 43.9 +0.5
comp=E,1.0nm,0.4s,baz=273,slow=8.0,SNR=6.3
comp=E,1.0nm,0.4s
HEH HeiHe 44.18 295 eP P 01 12 42.8 -1.0
HEH pmax pmax
comp=E,11nm,0.9s
HEH pmax pmax
comp=E,160nm,6.6s
NRIK Noril'sk 44.71 334 P P 01 12 46.2 -1.5
comp=E,2.3nm,0.4s,baz=47,slow=6.0,SNR=6.4
comp=E,2.3nm,0.4s
TXAR Lajitas Array 44.72 109 P P 01 12 50.1 +1.7
comp=E,0.7nm,1.0s,baz=332,slow=5.0,SNR=3.9
comp=E,0.7nm,1.0s
JCT Junction City 45.69 105 P P 01 12 56.8 +0.8
JCT IAmb IAmb 01 13 20.1
comp=E,7.3nm,0.9s
P48A Milroy 46.07 84 P P 01 12 58.8 -0.1
P48A IAmb IAmb 01 13 13.7
comp=E,17nm,1.5s
USRK Ussuriysk Ar. 46.23 286 P P 01 12 58.4 -1.6
comp=E,1.4nm,0.5s,baz=51,slow=10.0,SNR=5.5
comp=E,1.4nm,0.5s
ACSO Alum Creek Sta 46.75 81 P P 01 13 04.3 +0.2
ACSO IAmb IAmb 01 13 42.6
comp=E,7.7nm,0.8s
WVNY West Valley, N 47.35 76 P P 01 13 09.7 +0.8
BNX BinXian 47.37 291 ||P P 01 13 09.5 +0.6
BNX pmax pmax
comp=E,8.0nm,0.7s
BNX pmax pmax
comp=E,110nm,9.4s
L56A Greenwood 48.08 75 P P 01 13 15.6 +1.1
LBNH Lisbon 49.30 70 P P 01 13 24.8 +1.1
LBNH IAmb IAmb 01 13 35.3
comp=E,15nm,1.2s
H62A Milan 49.42 69 P P 01 13 25.8 +1.1
CN2 Changchun 49.74 290 eP P 01 13 26.7 -0.4
CN2 pmax pmax
comp=E,20nm,0.7s
ODNJ Ogdensburg 50.34 74 P P 01 13 33.1 +1.4
ARCES ARCESS Array B 51.69 1 P P 01 13 41.2 -0.2
comp=E,5.1nm,1.0s,baz=7.1,slow=9.4,SNR=1.9
comp=E,5.1nm,1.0s
KSRS Korea Array 53.33 283 P P 01 13 54.0 +0.1
comp=E,1.6nm,0.8s,baz=39,slow=8.2,SNR=5.0
comp=E,1.6nm,0.8s
XLT XiLinHaoTe 54.10 297 eP P 01 14 01.4 +1.8
XLT pP pP 01 14 20.6 +2.2
XLT sP sP 01 14 33.6 +6.8
XLT pmax pmax
comp=E,5.0nm,0.8s
XLT pmax pmax
comp=E,92nm,4.1s
ULN Ulaanbaatar 54.99 306 P P 01 14 06.8 +0.7
ULN IAmb IAmb 01 14 08.3
comp=E,2.4nm,0.8s
SONM Songino Array 55.29 306 P P 01 14 08.8 +0.5
SONM IAmb IAmb 01 14 10.3
comp=E,4.8nm,1.1s
SONM Songino Array 55.29 306 P P 01 14 08.1 -0.2
comp=E,2.0nm,0.5s,baz=43,slow=7.4,SNR=13
comp=E,2.0nm,0.5s
ZALV Zalesovo Beam 58.09 324 P P 01 14 28.3 +0.5
ZALV Zalesovo Beam 58.09 324 P P 01 14 28.0 +0.2
comp=E,1.6nm,0.5s,baz=37,slow=7.5,SNR=8.7
comp=E,1.6nm,0.5s
HHC Hu-ho-hao-te 58.56 298 eP P 01 14 32.8 +1.4
HHC pP pP 01 14 51.5 +1.0
HHC sP sP 01 15 01.5 +2.7
HHC pmax pmax
comp=E,8.0nm,0.6s
HHC pmax pmax
comp=E,68nm,3.6s
FINES FINESS Array B 59.82 0 P P 01 14 39.9 +0.2
FINES FINESS Array B 59.82 0 P P 01 14 39.4 -0.2
comp=E,2.4nm,0.9s,baz=3.2,slow=8.1,SNR=8.1
comp=E,2.4nm,0.9s
HFS Hagfors 60.69 8 P P 01 14 44.4 -1.2
comp=E,3.0nm,0.9s,baz=38,slow=6.2,SNR=5.0
comp=E,3.0nm,0.9s
BRVK Borovoye 62.86 332 P P 01 15 00.3 +0.1
BRVK Borovoye 62.86 332 P P 01 14 59.5 -0.7
BVAR Borovoye Array 62.87 332 P P 01 14 59.4 -0.9
comp=E,1.9nm,0.5s,baz=25,slow=6.5,SNR=13
BVAR LR LR 01 49 11.7
comp=E,86nm,20.8s,baz=318,slow=43
comp=E,1.9nm,0.5s
KURBB Kurchatov Arra 62.88 326 P P 01 14 59.1 -1.3
comp=E,1.5nm,0.2s,baz=25,slow=6.8,SNR=3.4
comp=E,1.5nm,0.2s
EKA Eskdalemuir Ar 63.44 19 P P 01 15 03.3 -0.8
comp=E,1.7nm,0.5s,baz=332,slow=5.4,SNR=10
comp=E,1.7nm,0.5s
MK31 Makanchi Array 65.12 321 P P 01 15 15.9 +0.7
MKAR Makanchi Array 65.12 321 P P 01 15 15.4 +0.1
MKAR Makanchi Array 65.12 321 P P 01 15 14.9 -0.3
comp=E,0.2nm,0.4s,baz=42,slow=7.0,SNR=7.1
comp=E,0.2nm,0.4s
WMQ Urumqi 65.89 316 eP P 01 15 26.0 +5.7
WMQ pmax pmax
comp=E,13nm,0.7s
ABKAR Akbulak array 68.70 337 P P 01 15 37.4 -0.5
ABKAR Akbulak array 68.70 337 P P 01 15 35.9 -2.0
JTS Las Juntas de 70.06 104 LR LR 01 50 00.3
comp=E,38nm,19.0s,baz=112,slow=39
AKASG Malin Array Be 70.57 358 P P 01 15 48.0 -1.3
comp=E,1.6nm,0.6s,baz=4.2,slow=6.3,SNR=7.4
comp=E,1.6nm,0.6s
KIEV Kiev 70.58 358 P P 01 15 48.7 -0.6
FUNA Funafuti 70.95 209 P P 01 15 53.0 +1.1
ECH Echery 71.86 14 P P 01 15 57.5 +0.3
GERES GERESS Array B 71.91 9 P P 01 15 57.3 -0.2
comp=E,0.6nm,0.7s,baz=10,slow=8.1,SNR=3.5
comp=E,0.6nm,0.7s
CONA Conrad Observa 72.98 8 eP P 01 16 04.8 +0.8
comp=E,0.8nm,0.5s
LESA Schwarzleotal 73.23 10 iP P 01 16 05.5 +0.1
comp=E,0.9nm,0.5s
WTTA Wattenberg 73.29 11 eP P 01 16 05.3 -0.6
comp=E,2.1nm,0.5s
FETA Feichten 73.44 11 eP P 01 16 07.2 +0.4
comp=E,1.6nm,0.7s
KBA Koelnbreinsper 73.63 10 iP P 01 16 08.1 +0.2
comp=E,2.4nm,0.7s
SOKA Soboth 74.17 8 iP P 01 16 10.8 -0.1
comp=E,0.3nm,0.4s
OBKA Obir 74.30 9 iP P 01 16 11.2 -0.5
comp=E,4.0nm,0.4s
ESDC Sonseca Array 78.34 24 P P 01 16 35.0 +0.4
comp=E,2.2nm,0.9s,baz=343,slow=5.9,SNR=11
comp=E,2.2nm,0.9s
BRTR Keskin Array B 81.41 355 P P 01 16 50.5 -0.8
comp=E,0.4nm,0.6s,baz=352,slow=7.8,SNR=2.4
comp=E,0.4nm,0.6s
CMAR Chiang Mai Arr 83.20 295 P P 01 17 00.2 -0.6
comp=E,1.1nm,0.3s,baz=359,slow=6.3,SNR=1.4
comp=E,1.1nm,0.3s
KEST Kesra 84.43 14 P P 01 17 07.9 +1.0
comp=E,7.1nm,0.8s,baz=307,slow=3.5,SNR=16
comp=E,7.1nm,0.8s
RPN Rapa Nui 93.21 142 LR LR 01 53 23.3
comp=E,24nm,18.6s,baz=22,slow=31
BOSA Boshof 149.53 3 PKPbc PKPbc 01 24 22.1 -1.1
comp=E,2.9nm,0.7s,baz=17,slow=5.4,SNR=7.9

IDC 09 01:11:47.8±6.0, 4°76.S×133°06.E, h0km, mb3.5/1, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=355.1km s-min=36.0km az=76.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.14	175	Pn	Pn	01 15 22.9	-0.3
	0.3nm,0.3s,baz=356,slow=13,SNR=20						
WRA				Sn	Sn	01 17 59.2	-12
	0.2nm,0.3s,baz=358,slow=23,SNR=3.1						
	0.4nm,0.4s						
ASAR	Alice Springs	18.81	178	Pn	Pn	01 16 09.8	+0.2
	0.2nm,0.3s,baz=350,slow=8.5,SNR=12						
ASAR				Sn	Sn	01 19 26.6	-14
	0.2nm,0.3s,baz=219,slow=38,SNR=1.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	68.09	325	P	P	01 22 49.6	0.0
	0.2nm,0.3s,baz=114,slow=6.6,SNR=1.8						
	0.2nm,0.3s						

IDC 09 01:38:32.5±2.2, 64°31S×176°56.E, h0km, mb3.9/3, mbtmp3.9/3, MS3.5/9, Error ellipse: s-maj=93.5km s-min=30.1km az=64.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	14.04	193	LR	LR	01 45 43.4	
	comp=E,140nm,20.6s,baz=8.0,slow=31						
RPZ	Rata Peaks	20.87	349	LR	LR	01 49 31.3	
	comp=E,99nm,21.0s,baz=150,slow=32						
QSPA	South Pole Qui	25.78	180	P	P	01 44 05.2	+0.4
	2.7nm,0.8s,baz=31,slow=12,SNR=4.1						
QSPA				LR	LR	01 52 56.0	
	comp=E,110nm,19.1s,baz=60,slow=34						
	2.7nm,0.8s						
URZ	Urewera	26.09	1	LR	LR	01 52 24.3	
	comp=E,81nm,20.4s,baz=301,slow=32						
DZM	Mont Dzumac	42.75	346	LR	LR	02 00 54.5	
	comp=E,50nm,21.8s,baz=213,slow=31						
H01W1	Cape Leeuwin H	47.27	277	T	T	02 37 56.6	
	baz=148,slow=75,SNR=5.8						
H01W2	Cape Leeuwin H	47.28	277	T	T	02 37 56.9	
	baz=148,slow=75,SNR=6.4						
H01W3	Cape Leeuwin H	47.29	277	T	T	02 37 57.8	
	baz=148,slow=75,SNR=5.7						
NWAO	Narrogin (SRO)	47.63	282	LR	LR	02 02 47.4	
	comp=E,60nm,18.7s,baz=158,slow=30						
CTA	Charters Tower	48.62	321	LR	LR	02 05 31.3	
	comp=E,34nm,19.1s,baz=86,slow=33						
ASAR	Alice Springs	49.22	305	P	P	01 47 22.6	+0.3
	1.0nm,0.6s,baz=154,slow=7.4,SNR=11						
	1.0nm,0.6s						
WRA	Warramunga Arr	52.49	307	P	P	01 47 46.8	-0.3
	1.4nm,0.8s,baz=156,slow=6.6,SNR=6.3						
	1.4nm,0.8s						
RPN	Rapa Nui	59.03	89	LR	LR	02 08 09.7	
	comp=E,72nm,19.9s,baz=3.0,slow=30						
H08S2	Diego Garcia H	89.20	254	T	T	03 30 28.3	
	baz=154						
H08S1	Diego Carcia H	89.21	254	T	T	03 30 35.3	
	baz=154						
H08S3	Diego Garcia H	89.22	254	T	T	03 30 34.9	
	baz=154						
ATAH	Atahualpa	90.07	107	LR	LR	02 24 40.4	
	comp=E,43nm,19.1s,baz=243,slow=31						
ILAR	Eielson Array	131.53	20	PKP	PKPdf	01 57 45.6	+0.4
	0.6nm,0.9s,baz=208,slow=3.6,SNR=4.4						
BRTR	Keskin Array B	147.26	239	PKPbc	PKPdf	01 58 15.2	+0.5
	2.4nm,1.1s,baz=143,slow=3.6,SNR=9.1						

ISN 09 01:38:42.0±0.3, 35°36N×45°03E, h18km±20km, ML2.8
TEH 09 01:38:43.9, 35°23N×45°26E, h10km±104km, ML2.7
ISC 09 01:38:44.5±2.7, 35°3N±0°1×45°3E±0°1, h10km, n9, σ1°37/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.83**	**160**	Pg	Pg	01 38 58.8	-1.7
KGS1				Sg	**Sg**	**01 39 10.5**	**-0.8**
IDHR	**Dehrash**	**1.10**	**122**	Pg	**Pg**	**01 39 03.9**	**-1.8**
IGHG	**Ghaleghazi**	**1.45**	**131**	Pg	**Pn**	**01 39 10.6**	**-0.3**
ILIN	**Lien**	**1.45**	**104**	Pg	**Pn**	**01 39 11.8**	**+0.7**
KCHF	**Cheshme Sefid,**	**1.79**	**124**	Pg	**Pn**	**01 39 17.5**	**+1.9**
ILBA	**Ilam Banvizeh**	**1.84**	**154**	Pg	**Pn**	**01 39 18.3**	**+2.1**
BHD	**Baghdad**	**2.14**	**200**	*e*Pg	**Pn**	**01 39 20.0**	**-0.2**
BHD				*e*Sg	**Sn**	**01 39 48.0**	**+1.2**
BHD				AML	AML	01 39 59.7	
	comp=E,114nm,0.5s						
IBDR	**Badra**	**2.25**	**165**	*e*Pn	**Pn**	**01 39 22.0**	**+0.3**
IBDR				*e*Sn	**Sn**	**01 39 51.0**	**+1.6**
IBDR				AML	AML	01 39 56.0	
	comp=E,84nm,0.8s						
IBDR				AML	AML	01 39 56.3	
	comp=N,68nm,0.4s						
RAFI	**Al-Rafai**	**3.63**	**168**	*e*Pn	**Pn**	**01 39 41.0**	**+0.3**
RAFI				*e*Sn	**Sn**	**01 40 24.0**	**+0.4**

*GCG **09** 01:59:20.9±0.7, 15°.47N×88°.99W, h0km±23km, MD3.2*
*CATAC **09** 01:59:21.3±0.3, 15°.34N×88°.84W, h3km, ML3.8*
*SNET **09** 01:59:21.2±1.5, 15°.31N×88°.94W, h0km±6km, ML3.1*

ISC 09 01:59:18.4±1.2, 15°.39N±0°.03×88°.84W±0°.02, h9km±11km, n40, σ0°.98/73, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.88**	**249**	*e*P	**Pn**	**01 59 36.6**	**-0.6**
MRL				*e*S	**Sn**	**01 59 50.2**	**+0.1**
ESQI	**Esquipulas**	**0.96**	**211**	*i* P	**Pn**	**01 59 38.7**	**+0.5**
ESQI				IAML		01 59 39.5	
	comp=Z,3μm,1.0s						
ESQI				*i* S	**Sb**	**01 59 50.0**	**-0.2**
MTO3	**Montecristo**	**1.11**	**207**	*e*P	**Pn**	**01 59 40.2**	**-0.2**
MTO3				IAML		01 59 58.7	
	comp=Z,281nm,0.7s						
MTO3	**Montecristo**	**1.11**	**207**	*i* P	**Pn**	**01 59 41.1**	**+0.7**
MTO3				*i* S	**Sb**	**01 59 54.6**	**0.0**
MTO3				IAML		01 59 58.1	
	comp=Z,1μm,1.0s						
LLGN	**La Laguna**	**1.23**	**185**	*i* P	**Pg**	**01 59 42.5**	**+0.5**
LLGN				*i* S	**Sn**	**01 59 58.2**	**-0.5**
LLGN				IAML		02 00 03.6	
	comp=Z,1μm,1.0s						
COMHN	**El Horno**	**1.56**	**127**	*i* P	**Pb**	**01 59 48.0**	**+0.5**
COMHN				*i* S	**Sg**	**02 00 08.7**	**+0.2**
UNIC	**Universidad Ca**	**1.56**	**206**	*i* P	**Pg**	**01 59 48.6**	**+0.2**
UNIC				*i* S	**Sg**	**02 00 08.6**	**-0.1**
UNIC				IAML		02 00 59.4	
	comp=Z,460nm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.64**	**214**	*e*P	**Pg**	**01 59 49.4**	**-0.5**
SLOZ				*e*S	**Sg**	**02 00 11.7**	**+0.6**
GUNB	**GUNB**	**1.66**	**242**	*i* P	**Pg**	**01 59 49.6**	**-0.7**
GUNB				IAML		01 59 52.2	
	comp=Z,1μm,1.0s						
GUNB				*i* S	**Sg**	**02 00 12.4**	**+0.5**
LOAL	**Lomas de Alarc**	**1.66**	**214**	*i* P	**Pg**	**01 59 50.3**	**0.0**
LOAL				*i* S	**Sg**	**02 00 12.4**	**+0.5**
LOAL				IAML		02 00 14.6	
	comp=Z,2μm,1.0s						
NBG	**Las Nubes**	**1.67**	**242**	*e*P	**Pg**	**01 59 50.7**	**+0.3**
NBG				*e*S	**Sg**	**02 00 13.7**	**+1.6**
PAVA	**Las Pavas**	**1.67**	**183**	*e*P	**Pg**	**01 59 50.3**	**-0.3**
PAVA				*e*S	**Sg**	**02 00 13.5**	**+1.3**
PAVA				IAML		02 00 14.8	
	comp=Z,791nm,0.3s						
PAVA	**Las Pavas**	**1.67**	**183**	*i* P	**Pg**	**01 59 50.0**	**-0.5**
PAVA				*i* S	**Sg**	**02 00 12.5**	**+0.3**
PAVA				IAML		02 00 14.3	
	comp=Z,2μm,1.0s						
RTR	**El Retiro**	**1.68**	**208**	*e*P	**Pg**	**01 59 50.7**	**0.0**
SCLA	**Alcaldia de Sa**	**1.68**	**176**	*e*P	**Pg**	**01 59 50.6**	**-0.1**
SCLA				*e*S	**Sg**	**02 00 13.8**	**+1.2**
SCLA	**Alcaldia de Sa**	**1.68**	**176**	*i* P	**Pg**	**01 59 50.4**	**-0.3**
SCLA				*i* S	**Sg**	**02 00 13.2**	**+0.6**
SCLA				IAML		02 00 17.7	
	comp=Z,990nm,1.0s						
PIC2	**El Picacho**	**1.69**	**194**	*e*P	**Pg**	**01 59 50.8**	**0.0**
SNJE	**San Jose**	**1.69**	**206**	*e*P	**Pg**	**01 59 50.5**	**-0.3**
SNJE				*e*P	**Pg**	**01 59 50.5**	**-0.3**
SBLS	**San Blas**	**1.72**	**206**	*e*P	**Pg**	**01 59 51.1**	**-0.3**
CEVE	**Cerro Verde**	**1.73**	**206**	*e*P	**Pg**	**01 59 51.3**	**-0.4**
CEVE				*e*S	**Sg**	**02 00 14.7**	**+0.5**
CEVE	**Cerro Verde**	**1.73**	**206**	*i* P	**Pb**	**01 59 50.8**	**+0.2**
CEVE				*i* S	**Sg**	**02 00 14.6**	**+0.4**
CEVE				IAML		02 00 21.3	
	comp=Z,870nm,1.0s						
PMON	**Piamonte**	**1.73**	**196**	*i* P	**Pg**	**01 59 51.3**	**-0.4**
PMON				*i* S	**Sg**	**02 00 13.8**	**-0.4**
PMON				IAML		02 00 19.1	
	comp=Z,930nm,1.0s						
NUBE	**Las Nubes**	**1.74**	**212**	*e*P	**Pb**	**01 59 50.2**	**-0.5**
NUBE				IAML		01 59 52.0	
	comp=Z,124nm,0.4s						
NUBE				*e*S	**Sg**	**02 00 13.8**	**-0.6**
NUBE	**Las Nubes**	**1.74**	**212**	*i* P	**Pg**	**01 59 51.6**	**-0.2**
NUBE				*i* S	**Sg**	**02 00 14.0**	**-0.5**
NUBE				IAML		02 00 20.5	
	comp=Z,660nm,1.0s						
COEG	**Centro de Oper**	**1.76**	**181**	*e*P	**Pg**	**01 59 51.7**	**-0.6**
COEG				*e*S	**Sg**	**02 00 15.6**	**+0.4**
LOMA	**Loma Larga**	**1.77**	**191**	*i* P	**Pb**	**01 59 51.0**	**-0.1**
LOMA				*i* S	**Sg**	**02 00 15.5**	**+0.2**
LOMA				IAML		02 00 20.2	
	comp=Z,640nm,1.0s						
LFRS	**El Faro**	**1.77**	**187**	*e*P	**Pg**	**01 59 52.2**	**-0.2**
PETF	**Flores**	**1.81**	**327**	*i* P	**Pg**	**01 59 53.3**	**+0.1**
PETF				*i* S	**Sg**	**02 00 18.9**	**+2.2**
PETF				IAML		02 00 20.3	
	comp=Z,1μm,1.0s						
JAYA	**Jayaque - finc**	**1.83**	**199**	*e*P	**Pb**	**01 59 52.5**	**+0.3**
JAYA				IAML		01 59 58.8	
	comp=Z,253nm,0.3s						
JAYA				*e*S	**Sg**	**02 00 17.7**	**+0.5**
JAYA	**Jayaque - finc**	**1.83**	**199**	*i* P	**Pb**	**01 59 52.3**	**+0.1**
JAYA				*i* S	**Sg**	**02 00 16.8**	**-0.4**
JAYA				IAML		02 00 19.5	
	comp=Z,2μm,1.0s						
LALI	**Alcalda de L**	**1.95**	**194**	*i* P	**Pb**	**01 59 54.6**	**+0.4**
LALI				*i* S	**Sb**	**02 00 19.4**	**+0.8**
LALI				IAML		02 00 23.9	
	comp=Z,270nm,1.0s						
PACA	**Pacayal**	**1.98**	**165**	*e*P	**Pg**	**01 59 55.5**	**-0.8**
PACA				*e*S	**Sg**	**02 00 23.0**	**+1.1**
PACA	**Pacayal**	**1.98**	**165**	*i* P	**Pg**	**01 59 55.5**	**-0.8**
PACA				*i* S	**Sb**	**02 00 20.6**	**+1.1**
PACA				IAML		02 00 33.0	
	comp=Z,2μm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.01**	**131**	*i* P	**Pg**	**01 59 56.4**	**-0.6**
TGUH				*i* S	**Sg**	**02 00 22.3**	**-0.8**
TGUH				IAML		02 00 34.7	
	comp=Z,590nm,1.0s						
FUG	**Fuego 3**	**2.15**	**244**	*e*P	**Pb**	**01 59 57.6**	**-0.2**
QUIS	**Sacapulas**	**2.18**	**268**	*i* P	**Pb**	**01 59 58.5**	**+0.3**
QUIS				*i* S	**Sg**	**02 00 26.7**	**-1.9**
QUIS				IAML		02 00 35.0	
	comp=Z,680nm,1.0s						
YUSH	**Yuscaran**	**2.40**	**126**	*e*P	**Pg**	**02 00 03.5**	**-1.0**
YUSH				*e*S	**Sg**	**02 00 34.9**	**-0.8**
YUSH	**Yuscaran**	**2.40**	**126**	*i* P	**Pb**	**02 00 01.0**	**-0.9**
YUSH				*i* S	**Sb**	**02 00 30.8**	**-0.9**
STG3	**Santiaguito 3,**	**2.73**	**256**	*e*P	**Pb**	**02 00 04.8**	**-2.8**
ILCN	**San Idelfonso**	**3.48**	**143**	*i* P	**Pn**	**02 00 16.5**	**+3.7**
ILCN				IAML		02 00 21.7	
	comp=Z,160nm,1.0s						
ILCN				*i* S	**Sb**	**02 00 58.9**	**-3.8**

JMA 09 02:03:46.0±0.2, 24°.4N±0°.9×123°.4E±0°.4, h58km±2km, MV1.6/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.40**	**282**	P	Pn	02 03 56.8	0.0
YOJ				*e*S	Sn	02 04 04.2	-0.3
HATJ	**Hateruma jima**	**0.46**	**134**	*e*P	Pn	02 03 57.2	-0.1
JYNG	**Yonagunijimaku**	**0.46**	**279**	P	Pn	02 03 57.3	0.0
JYNG				*e*S	Sn	02 04 05.3	-0.2
JKRS	**Kuro-shima**	**0.54**	**105**	P	Pn	02 03 58.3	+0.2
JKRS				*e*S	Sn	02 04 07.4	+0.5
JIJ	**Ishigaki jima**	**0.64**	**91**	P	Pn	02 03 59.2	-0.1
JIJ				S	Sn	02 04 08.8	-0.3
JISG	**Ishigakijimahi**	**0.82**	**75**	*e*P	Pn	02 04 01.7	+0.2
JISG				*e*S	Sn	02 04 13.4	+0.5
JTJ	**Tarama**	**1.18**	**77**	*e*S	Sn	02 04 22.2	+0.9

TAP 09 02:04:15.9, 24°.01N×121°.58E, h5km±1km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**141**	P	Pg	02 04 17.6	+0.6
	baz=134						
HWA				S	Sg	02 04 18.7	+0.9
	baz=134						
TWD	**Chiawan**	**0.07**	**12**	*i* P	Pg	02 04 18.6	+1.0
	baz=18						
TWD				*i* S	Sg	02 04 20.2	+1.5
	baz=18						
ETM	**Tongmen**	**0.09**	**242**	*i* P	Pg	02 04 18.7	+0.8
	baz=242						
ETM				S	Sg	02 04 20.2	+1.1
	baz=242						
LXIB	**Xiulin Townshi**	**0.15**	**275**	*i* P	Pg	02 04 20.1	+1.1
	baz=275						
ETL	**Fush Village**	**0.16**	**15**	P	Pg	02 04 20.0	+0.9
	baz=15						
ETL				S	Sg	02 04 22.6	+1.4
	baz=15						
NACB	**Ninganchiao**	**0.17**	**5**	*i* P	Pg	02 04 20.2	+1.0
	baz=5.0						
NACB				*i* S	Sg	02 04 22.8	+1.3
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.22**	**336**	P	Pg	02 04 21.4	+1.2
	baz=336						
ETLH				S	Sg	02 04 24.8	+1.6
	baz=336						
SHUL	**Shoufeng**	**0.22**	**184**	*e*P	Pg	02 04 21.4	+1.2
	baz=183						
ESL	**Shilin**	**0.23**	**215**	*e*P	Pg	02 04 20.8	+0.3
	baz=212						
WHF	**Hehuan Shan**	**0.32**	**296**	P	Pb	02 04 23.5	-0.9
	baz=295						
WHF				S	Sb	02 04 28.5	-1.6
	baz=295						
WARBT	**Fenglin Townsh**	**0.34**	**212**	*e*P	Pg	02 04 22.7	+0.2
	baz=211						
CHGB	**Renai**	**0.37**	**278**	*e*P	Pb	02 04 24.6	-0.6
	baz=278						
FUSS	**Fushou**	**0.39**	**308**	P	Pb	02 04 25.2	-0.3
	baz=308						
FUSS				*e*S	Sb	02 04 31.1	-0.9
	baz=308						
WUSB	**Renai**	**0.42**	**268**	*e*P	Pb	02 04 25.4	-0.6
	baz=267						
WUSB				*e*S	Sb	02 04 32.7	0.0
	baz=267						
VWDT	**VWDT**	**0.47**	**238**	*e*P	Pb	02 04 26.5	-0.3
	baz=237						
EHY	**Hungye**	**0.55**	**205**	*e*P	Pb	02 04 27.6	-0.5
	baz=204						
SSLB	**Suanglung**	**0.61**	**249**	*e*P	Pb	02 04 28.7	-0.5
	baz=249						

*NEIC **09** 02:14:01.9±1.0, 23°.92N±0°.03×121°.66E±0°.05, h10km±1km, mb4.7/57, Error ellipse: s-maj=7.7km s-min=3.2km az=115.0*
*BJI **09** 02:14:02.0±0.0, 23°.91N×121°.68E, h23km, mb4.1/30, mB4.5/16, ML4.3/9, Ms4.0/18, Ms7 3.9/20*
*NIED **09** 02:14:02.9, 23°.89N×121°.61E, h21km, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.00; $M_{\theta\theta}$-1.19; $M_{\phi\phi}$-0.81; $M_{r\theta}$-0.11; $M_{\theta\phi}$-1.38; $M_{\phi r}$0.76; Fault plane solution: $M_0$2.34000×10^{15} NP1:ϕ_s31.00000°, δ53.00000°, λ66.00000°. NP2:ϕ_s247.00000°, δ43.00000°, λ118.00000°.*
*JMA **09** 02:14:02.9±0.1, 23°.9N±0°.4×12°.2E±°, h21km±1km, MV4.2/16, TAIWAN REGION*
*ASIES **09** 02:14:03.2, 23°.93N×121°.60E, h22km, ML4.7, Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.15; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$0.52; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.58; $M_{\phi r}$1.90; Fault plane solution: $M_0$2.20853×10^{22} NP1:ϕ_s23.14000°, δ88.21000°, λ67.79000°. NP2:ϕ_s288.78000°, δ22.28000°, λ175.28000°. Principal axes: T Plg42.5610°, Azm271.8700°; N Plg22.2000°, Azm23.8790°; P Plg39.2170°, Azm133.3320°;*
*TAP **09** 02:14:03.2, 23°.93N×121°.60E, h22km, ML4.7, B*
*IDC **09** 02:14:05.0±3.0, 23°.95N×121°.73E, h42km±28km, mb3.8/17, mbtmp4.0/19, ML3.9/2, MS3.5/9, Error ellipse: s-maj=17.5km s-min=12.5km az=63.0*

ISC 09 02:14:03.4±0.6, 23°.91N±0°.01×121°.63E±0°.02, h25km±3km, n318, σ1°.24/425, mb4.6/49, MS3.5/7, 65C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**344**	⇑*i*P	**Pb**	**02 14 07.5**	**-0.3**
	baz=16						
HWA				S	**Sb**	**02 14 10.4**	**-0.4**
	baz=16						
SHUL	**Shoufeng**	**0.13**	**206**	⇑*i*P	**Pb**	**02 14 08.5**	**+0.2**
	baz=183						
SHUL				S	**Sb**	**02 14 12.5**	**+0.9**
	baz=183						
ETM	**Tongmen**	**0.14**	**295**	⇓*i*P	**Pb**	**02 14 07.7**	**-0.6**
	baz=282						
ETM				*i* S	**Sb**	**02 14 10.6**	**-1.1**
	baz=282						
TWD	**Chiawan**	**0.17**	**351**	⇑*i*P	**Pb**	**02 14 08.2**	**-0.6**
	baz=353						
TWD				S	**Sb**	**02 14 11.3**	**-1.0**
	baz=353						
ESL	**Shilin**	**0.20**	**242**	⇑*i*P	**Pb**	**02 14 08.5**	**-0.6**
	baz=239						
ESL				S	**Sb**	**02 14 11.9**	**-0.9**
	baz=239						
TEGC	**Jichi Village**	**0.21**	**202**	P	**Pb**	**02 14 09.2**	**-0.1**
	baz=181						
TEGC				S	**Sb**	**02 14 14.0**	**+0.9**
	baz=181						
LXIB	**Xiulin Townshi**	**0.23**	**300**	⇓*i*P	**Pb**	**02 14 08.6**	**-1.0**
	baz=298						
LXIB				S	**Sb**	**02 14 12.3**	**-1.4**
	baz=298						
ETL	**Fush Village**	**0.25**	**359**	⇑*i*P	**Pb**	**02 14 09.2**	**-0.6**
	baz=359						
ETL				*i* S	**Sb**	**02 14 13.4**	**-0.6**
	baz=359						
NACB	**Ninganchiao**	**0.27**	**354**		**Pb**	**02 14 08.2**	**-1.7**
NACB				Sg	**Sb**	**02 14 13.4**	**-0.9**
NACB	**Ninganchiao**	**0.27**	**354**	P	**Pb**	**02 14 09.3**	**-0.6**
NACB	**Ninganchiao**	**0.27**	**354**	⇑*i*P	**Pb**	**02 14 09.3**	**-0.6**
	baz=359						
NACB				*i* S	**Sb**	**02 14 13.5**	**-0.9**
	baz=359						
WARBT	**Fenglin Townsh**	**0.29**	**229**	⇑*i*P	**Pb**	**02 14 09.6**	**-0.7**
	baz=233						
WARBT				S	**Sb**	**02 14 13.9**	**-1.1**
	baz=233						
EGFH	**Guangfu**	**0.30**	**217**	⇑*e*P	**Pb**	**02 14 10.1**	**-0.3**
	baz=221						
EGFH				S	**Sb**	**02 14 15.5**	**+0.3**
	baz=221						
ETLH	**Xiulin Townshi**	**0.33**	**336**	⇓*i*P	**Pb**	**02 14 10.2**	**-0.7**
	baz=338						
ETLH				S	**Sb**	**02 14 14.7**	**-1.3**
	baz=338						
WHF	**Hehuan Shan**	**0.41**	**306**	⇓*i*P	**Pb**	**02 14 11.4**	**-1.0**
	baz=298						
WHF				S	**Sb**	**02 14 17.1**	**-1.4**
	baz=298						
EHP	**Heping Village**	**0.41**	**15**	P	**Pb**	**02 14 12.0**	**-0.2**
	baz=21						
EHP				S	**Sb**	**02 14 18.8**	**+0.6**
	baz=21						
OWD	**Renai**	**0.41**	**276**	⇑*i*P	**Pb**	**02 14 11.6**	**-0.7**
	baz=281						
OWD				S	**Sb**	**02 14 16.7**	**-1.7**
	baz=281						
EAHA	**Aohua**	**0.43**	**14**	⇑*i*P	**Pb**	**02 14 12.1**	**-0.4**
	baz=9.0						
EAHA				S	**Sb**	**02 14 18.7**	**+0.1**
	baz=9.0						
CHGB	**Renai**	**0.44**	**290**	⇓*i*P	**Pb**	**02 14 12.2**	**-0.6**
	baz=288						
CHGB				*i* S	**Sb**	**02 14 18.5**	**-0.6**
	baz=288						
HGSD	**Ruisui**	**0.45**	**204**	⇑*i*P	**Pb**	**02 14 13.2**	**+0.3**
	baz=218						
VWDT	**VWDT**	**0.47**	**251**	⇑*i*P	**Pb**	**02 14 13.0**	**-0.1**
	baz=249						
VWDT				*i* S	**Sb**	**02 14 19.3**	**-0.4**
	baz=249						
WUSB	**Renai**	**0.47**	**280**	⇑*i*P	**Pb**	**02 14 12.8**	**-0.5**
	baz=284						
WUSB				*i* S	**Sb**	**02 14 18.9**	**-1.0**
	baz=284						
FUSS	**Fushou**	**0.49**	**314**	⇓*i*P	**Pb**	**02 14 13.1**	**-0.5**
	baz=321						
FUSS				*i* S	**Sb**	**02 14 19.7**	**-0.7**
	baz=321						
EHY	**Hungye**	**0.49**	**215**	⇑*i*P	**Pb**	**02 14 12.6**	**-0.8**
	baz=224						
ENA	**Nanau**	**0.53**	**11**	⇑*i*P	**Pb**	**02 14 13.9**	**-0.2**
	baz=5.0						
ENA				*i* S	**Sb**	**02 14 21.2**	**-0.2**
	baz=5.0						
TWT	**Tachien**	**0.54**	**310**	⇓*i*P	**Pb**	**02 14 14.1**	**-0.3**
	baz=300						
TWT				*i* S	**Sb**	**02 14 21.1**	**-0.7**
	baz=300						
TDCB	**Techi**	**0.55**	**309**	⇓*i*P	**Pb**	**02 14 14.2**	**-0.4**
	baz=302						
TDCB				*i* S	**Sb**	**02 14 21.3**	**-0.8**
	baz=302						
EWUT	**Wuta**	**0.55**	**15**	⇑*i*P	**Pb**	**02 14 14.3**	**-0.2**
	baz=8.0						
EWUT				S	**Sb**	**02 14 22.0**	**-0.1**
	baz=8.0						
NNSB	**Datong**	**0.56**	**337**	⇓*i*P	**Pb**	**02 14 14.3**	**-0.5**
	baz=337						
NNSB				*i* S	**Sb**	**02 14 21.2**	**-1.3**
	baz=337						
NNSH	**Datong**	**0.56**	**337**	⇓*i*P	**Pb**	**02 14 14.3**	**-0.5**
	baz=336						
NNSH				*i* S	**Sb**	**02 14 21.4**	**-1.1**
	baz=336						
NNS	**Nan Shan**	**0.58**	**336**	⇓*i*P	**Pb**	**02 14 14.4**	**-0.6**
	baz=338						
NNS				*i* S	**Sb**	**02 14 21.9**	**-1.0**
	baz=338						
YULB	**Yu-li**	**0.60**	**210**		**Pb**	**02 14 13.6**	**-1.6**
YULB				Sg	**Sb**	**02 14 23.2**	**-0.1**
YULB	**Yu-li**	**0.60**	**210**	P	**Pb**	**02 14 14.9**	**-0.4**
YULB	**Yu-li**	**0.60**	**210**	⇑*i*P	**Pb**	**02 14 14.1**	**-1.2**
	baz=208						
YULB				*e*S	**Sb**	**02 14 23.4**	**+0.1**
	baz=208						
ECBN	**Changbin**	**0.61**	**195**	⇓*i*P	**Pb**	**02 14 16.0**	**+0.5**
	baz=191						
ECBN				S	**Sn**	**02 14 26.1**	**+0.5**
	baz=191						
WPL	**Puli Township**	**0.62**	**280**	*e*P	**Pb**	**02 14 15.3**	**-0.4**
	baz=279						
WPL				*e*S	**Sb**	**02 14 23.3**	**-0.8**
	baz=279						
EYUL	**Yuli**	**0.63**	**207**	*e*P	**Pb**	**02 14 14.5**	**-1.3**
	baz=219						
SSLB	**Suanglung**	**0.63**	**259**		**Pb**	**02 14 14.5**	**-1.3**
SSLB				Sg	**Sb**	**02 14 22.5**	**-1.8**
SSLB	**Suanglung**	**0.63**	**259**	P	**Pb**	**02 14 15.5**	**-0.3**
SSLB	**Suanglung**	**0.63**	**259**	⇑*i*P	**Pb**	**02 14 15.2**	**-0.6**
	baz=265						
SSLB				*i* S	**Sb**	**02 14 22.8**	**-1.4**
	baz=265						
LATG	**Datong**	**0.63**	**352**	⇓*i*P	**Pb**	**02 14 15.3**	**-0.6**
	baz=352						
LATG				*i* S	**Sb**	**02 14 23.1**	**-1.3**
	baz=352						
TWF1	**Yuli**	**0.63**	**209**	⇑*i*P	**Pb**	**02 14 14.7**	**-1.1**
	baz=219						
DPDB	**Guoxing**	**0.65**	**281**	⇑P	**Pb**	**02 14 15.8**	**-0.4**
	baz=280						
DPDB				S	**Sb**	**02 14 24.6**	**-0.3**
	baz=280						
SMLT	**Sun Moon Lake**	**0.67**	**268**	⇑*i*P	**Pb**	**02 14 16.1**	**-0.4**
	baz=274						
SMLT				S	**Sb**	**02 14 24.7**	**-0.7**
	baz=274						
EOS4	**EOS4**	**0.67**	**71**	⇓P	**Pn**	**02 14 16.7**	**-0.2**
	baz=90						
EOS4				*e*S	**Sn**	**02 14 26.9**	**+0.4**
	baz=90						
WCS	**Beigang Elemen**	**0.67**	**283**	⇑P	**Pb**	**02 14 16.0**	**-0.5**
	baz=282						
WCS				*e*S	**Sb**	**02 14 24.9**	**-0.5**
	baz=282						
ESAO	**Su ao**	**0.69**	**17**	*e*P	**Pb**	**02 14 16.8**	**-0.1**
	baz=12						
ESAO				*e*S	**Sb**	**02 14 26.2**	**+0.1**
	baz=12						
NDT	**Datong Townshi**	**0.70**	**351**	P	**Pb**	**02 14 16.4**	**-0.6**
	baz=352						
NDT				S	**Sb**	**02 14 25.1**	**-1.1**
	baz=352						
TYC	**Yuchr**	**0.70**	**270**	⇑*i*P	**Pb**	**02 14 16.5**	**-0.5**
	baz=273						
TYC				S	**Sb**	**02 14 25.3**	**-1.0**
	baz=273						
WHP	**Taichung City**	**0.72**	**301**	P	**Pb**	**02 14 17.1**	**-0.4**
	baz=293						
WHP				S	**Sb**	**02 14 26.7**	**-0.2**
	baz=293						
NDS	**Dongshan**	**0.73**	**6**	*e*P	**Pb**	**02 14 17.1**	**-0.4**
	baz=359						
NDS				*e*S	**Sb**	**02 14 27.3**	**+0.3**
	baz=359						
TWC	**Suao**	**0.73**	**16**	⇓*i*P	**Pb**	**02 14 17.4**	**0.0**
	baz=12						
TWC				S	**Sn**	**02 14 27.7**	**-0.8**
	baz=12						
ENTT	**Nioudou**	**0.73**	**356**	P	**Pb**	**02 14 17.0**	**-0.5**
	baz=357						
ENTT				S	**Sb**	**02 14 26.7**	**-0.4**
	baz=357						
EOS3	**EOS3**	**0.73**	**59**	*e*P	**Pn**	**02 14 18.4**	**+0.3**
	baz=59						
WHYT	**Xinyi Township**	**0.74**	**254**	P	**Pb**	**02 14 17.4**	**-0.3**
	baz=249						
WHYT				S	**Sb**	**02 14 27.3**	**-0.1**
	baz=249						
CHKH	**Chenggong**	**0.74**	**197**	P	**Pb**	**02 14 17.9**	**+0.2**
	baz=208						
CHKH				*e*S	**Sn**	**02 14 30.3**	**+1.4**
	baz=208						
EOS2	**EOS2**	**0.75**	**47**	*e*P	**Pn**	**02 14 19.2**	**+0.8**
	baz=60						
FULB	**Fuli**	**0.77**	**203**	P	**Pb**	**02 14 17.4**	**-0.8**
	baz=215						
FULB				*e*S	**Sn**	**02 14 31.4**	**+1.8**
	baz=215						
YHNB	**Yeheng**	**0.79**	**343**		**Pb**	**02 14 17.8**	**-0.9**
YHNB				Sg	**Sb**	**02 14 27.5**	**-1.5**
YHNB	**Yeheng**	**0.79**	**343**	P	**Pb**	**02 14 18.5**	**-0.1**
YHNB	**Yeheng**	**0.79**	**343**

ALS Alishan 0.85 242⇑*i*P Pb 02 14 19.6 -0.1
baz=242
ALS S Sb 02 14 31.1 +0.2
baz=242
NFF Wufeng Townshi 0.86 327 ⇓P Pb 02 14 19.2 -0.5
baz=326
WWF Wufeng 0.86 279⇑*i*P Pn 02 14 20.6 +0.6
baz=280
WWF *e*S Sn 02 14 32.8 +1.0
baz=280
ILA Ilan 0.86 7 *e*P Pb 02 14 19.4 -0.3
baz=355
WNT Mingjian 0.86 268⇑*i*P Pn 02 14 20.4 +0.4
baz=270
WNT *i* S Sn 02 14 32.3 +0.5
baz=270
WNT1 Nantou City 0.87 270⇑*i*P Pn 02 14 20.6 +0.5
baz=270
WNT1 *i* S Sn 02 14 32.8 +0.9
baz=270
NWLT Wulai 0.87 353⇓*e*P Pb 02 14 19.4 -0.6
baz=342
NWLT S Sb 02 14 30.8 -0.4
baz=342
ECS Chishang 0.89 205 *e*P Pn 02 14 21.3 +0.9
baz=219
TWQ1 Liyutan 0.89 299⇑*i*P Pn 02 14 20.7 +0.2
baz=307
TWQ1 S Sb 02 14 32.0 +0.2
baz=307
TCU Taichung 0.90 285⇑*e*P Pn 02 14 21.4 +0.9
baz=283
TCU S Sn 02 14 33.9 +1.2
baz=283
ELDTW Lidau 0.91 218⇑*i*P Pb 02 14 19.0 -1.6
baz=209
ELDTW S Sb 02 14 32.5 +0.2
baz=209
NSTT Nanjuang 0.92 322⇓*i*P Pn 02 14 20.7 0.0
baz=321
NSTT *i* S Sb 02 14 32.1 -0.4
baz=321
LIOB Emei 0.92 323⇓*i*P Pn 02 14 21.0 +0.1
baz=321
CHN5 Tsauling 0.92 251⇑*i*P Pn 02 14 21.2 +0.3
baz=240
CHN5 *i* S Sn 02 14 34.0 +0.5
baz=240
NJD Zhudong 0.96 329 *e*P Pn 02 14 22.0 +0.6
baz=327
WYL Yuanlin Townsh 0.96 273 *e*P Pn 02 14 21.5 +0.2
baz=261
WYL S Sn 02 14 35.6 +1.4
baz=261
EDH Donghe 0.98 198 *e*P Pb 02 14 20.7 -1.0
baz=214
NMLH Miaoli 0.99 310 ⇑P Pn 02 14 22.6 +0.9
baz=308
NMLH *e*S Sn 02 14 35.0 +0.1
baz=308
WCHH Zhanghua 0.99 280 P Pn 02 14 22.4 +0.7
baz=279
WCHH *e*S Sn 02 14 37.6 +2.6
baz=279
WGK Gukeng 1.00 257 ⇑P Pn 02 14 22.5 +0.6
baz=257
WGK *e*S Sn 02 14 36.0 +0.8
baz=257
WDJ Dajia District 1.00 296⇑*i*P Pn 02 14 22.8 +0.9
baz=295
WDJ S Sn 02 14 36.3 +1.1
baz=295
WDLH Douliu 1.02 258 P Pb 02 14 22.9 +0.5
baz=259
HSN1 Hsinchu 1.03 327 P Pb 02 14 23.2 +0.6
baz=326
HSN1 *e*S Sn 02 14 35.7 -0.2
baz=326
NJN Zhunan 1.03 318 P Pb 02 14 23.3 +0.6
baz=317
NJN *e*S Sn 02 14 38.1 +2.0
baz=317
WCKO Fanlu 1.05 244 ⇑P Pb 02 14 23.2 +0.3
baz=244
WCKO *e*S Sn 02 14 38.3 +1.9
baz=244
NHDH Xindian Distri 1.05 355 ⇑P Pb 02 14 23.0 0.0
baz=353
NHDH S Sb 02 14 36.0 -0.4
baz=353
SBCB Hsinchu 1.06 327 P Pb 02 14 24.1 +1.0
baz=325
SBCB S Sn 02 14 37.2 +0.6
baz=325
TWA Mucha 1.07 358 *e*P Pn 02 14 22.9 0.0
baz=357
TWA S Sb 02 14 36.6 -0.2
baz=357
TATO Taipei 1.07 353 Pn 02 14 22.5 -0.4
TATO Sg Sb 02 14 36.0 -0.8
TATO Taipei 1.07 353 P Pb 02 14 23.2 -0.1
TATO Taipei 1.07 353 ⇑P Pb 02 14 23.0 -0.3
baz=352
TATO S Sb 02 14 36.0 -0.8
baz=352
HSN Hsinchu 1.07 326 P Pb 02 14 24.0 +0.7
baz=327
HSN *e*S Sn 02 14 38.7 +1.7
baz=327
STYH Taoyuan 1.07 227 P Pn 02 14 23.0 +0.2
baz=219
STYH *e*S Sn 02 14 37.1 +0.2
baz=219
TIPB Shuangxi 1.07 10 P Pn 02 14 22.7 -0.2
baz=355
STYT Tauyuan 1.09 227⇑*i*P Pn 02 14 23.1 -0.1
baz=219
STYT *i* S Sn 02 14 37.8 +0.3
baz=219
BACT New Taipei Cit 1.10 351 *e*P Pn 02 14 23.2 -0.1
baz=355
LONT Longtian 1.10 205 *e*P Pn 02 14 21.5 -1.7
baz=182
TPUB Ta-pu 1.10 237 Pn 02 14 23.5 +0.2
TPUB Sn Sn 02 14 38.7 +1.1
TPUB Ta-pu 1.10 237 P Pb 02 14 24.0 +0.3
TPUB Ta-pu 1.10 237⇑*i*P Pb 02 14 23.8 +0.1
baz=236
TPUB *i* S Sn 02 14 38.7 +1.1
baz=236
CHN4 Tsaushan 1.10 240⇑*i*P Pb 02 14 24.1 +0.4
baz=231
CHN4 *e*S Sn 02 14 40.1 +2.4
baz=231
CHN2 Minshiung 1.12 251 *e*P Pb 02 14 24.8 +0.7
baz=253
NHY Taipei 1.13 357 *e*P Pn 02 14 23.3 -0.3
baz=352
NTY Taoyuan 1.13 345 *e*P Pb 02 14 24.1 -0.1
baz=342
NCUH Zhongli 1.13 339 *e*P Pb 02 14 24.5 +0.2
baz=337
NCUH *e*S Sn 02 14 39.8 +1.4
baz=337
NCU National Centr 1.13 339 ⇑P Pb 02 14 24.5 +0.2
baz=338
NCU S Sn 02 14 40.3 +1.9
baz=338
TAP Taipei 1.13 354 *e*P Pn 02 14 23.4 -0.3
baz=353
TAP *e*S Sb 02 14 37.9 -0.7
baz=353
WTP Ta-pu 1.14 235⇑*i*P Pb 02 14 24.5 0.0
baz=237
TWB1 Santiao Chiao 1.14 17 P Pb 02 14 24.3 -0.3
baz=359
TWB1 S Sn 02 14 40.3 +1.6
baz=359
WRL Guolierlin Hig 1.14 270⇑*e*P Pb 02 14 24.6 +0.1
baz=271
WTK Tuku 1.16 259 *e*P Pb 02 14 24.6 -0.1
baz=261
RLNB Erlin 1.16 269 P Pb 02 14 24.8 +0.1
baz=270
RLNB S Sn 02 14 40.5 +1.3
baz=270
NWF Wu-fen Shan 1.17 7 *e*P Pn 02 14 24.2 0.0
baz=2.0
WFSB Wu-fen Shan 1.17 7 *e*P Pn 02 14 24.4 +0.2
baz=2.0
CHY Chiayi 1.18 250 *e*P Pb 02 14 25.3 +0.2
baz=252
TWG Pinlang 1.20 205 Pn 02 14 22.6 -2.1
TWG Pinlang 1.20 205⇑*e*P Pn 02 14 22.8 -1.8
baz=183
TWGBT Beinan 1.20 205 P Pn 02 14 22.9 -1.7
TWGBT Beinan 1.20 205⇑*i*P Pn 02 14 22.8 -1.8
baz=204
TWGBT *e*S Sb 02 14 41.7 +1.2
baz=204
SXI1 Grass Mountain 1.20 11 P Pn 02 14 24.8 0.0
baz=352
TWS1 Kuangyinshan 1.20 351 *e*P Pn 02 14 25.0 +0.3
baz=346
NHW Xinwu Township 1.21 334 *e*P Pb 02 14 25.5 -0.2
baz=332
NHW *e*S Sb 02 14 42.4 +1.4
baz=332
TWK Hsinying 1.22 239⇑*i*P Pb 02 14 25.7 -0.2
baz=241
TTN Taitung 1.23 201 *e*P Pn 02 14 24.4 -0.6
baz=194
WTCT Ta-ch'eng 1.23 268 *e*P Pb 02 14 25.9 -0.1
baz=269
YM01 YM01 1.23 358 *e*P Pn 02 14 24.9 -0.3
baz=352
LDUT Ludao 1.24 187 *e*P Pn 02 14 23.5 -1.6
baz=170
CHN1 Nanshi 1.24 235⇑*i*P Pb 02 14 26.0 -0.1
baz=238
SNST Tainan City 1.24 237⇑*e*P Pb 02 14 26.1 -0.1
baz=240
TNOU National Taiwa 1.24 6 *e*P Pn 02 14 25.1 -0.1
baz=1.0
NTST Danshui 1.26 353 *e*P Pn 02 14 25.7 +0.3
baz=348
SGST Jiashian 1.26 230⇑*e*P Pn 02 14 25.5 0.0
baz=221
YM08 YM08 1.27 359 *e*P Pn 02 14 25.1 -0.6
baz=353
ANP Anpu 1.28 356 *e*P Pn 02 14 26.0 +0.2
baz=351
SLGT Liugui 1.28 225 *e*P Pb 02 14 26.7 -0.2
baz=217
WMLT Mailiao 1.29 266 *e*P Pb 02 14 27.1 +0.1
baz=267
WSF Szhu 1.31 258 *e*P Pb 02 14 27.7 +0.2
baz=259
WSF *e*S Sb 02 14 45.5 +1.6
baz=259
JYNG Yonagunijimaku 1.32 66 P Pn 02 14 26.7 +0.4
JYNG *e*S Sb 02 14 44.5 +0.5
WSL Shuilin Townsh 1.34 254 *e*P Pb 02 14 27.6 -0.2
baz=256
ICHU Yijhu 1.35 246⇑*e*P Pb 02 14 27.8 -0.2
baz=249
TWY Chenhua 1.36 359 *e*P Pn 02 14 26.9 0.0
baz=353
YOJ Yonaguni jima 1.38 66 Pn 02 14 27.5 +0.4
YOJ Yonaguni jima 1.38 66 P Pn 02 14 27.5 +0.4
YOJ Yonaguni jima 1.38 66 *e*P Pn 02 14 27.5 +0.4
baz=70
YOJ S Sb 02 14 45.4 -0.4
baz=70
YOJ Yonaguni jima 1.38 66 P Pn 02 14 27.6 +0.4
YOJ *e*S Sn 02 14 45.0 +0.4
CHN8 Yiju 1.41 247 ⇑P Pb 02 14 28.6 -0.5
CHN8 S Sb 02 14 48.2 +1.5
baz=247
CHN3 Shinhua 1.42 235⇑*e*P Pb 02 14 29.6 +0.4
baz=238
ECL Taimali 1.45 205 *e*P Pn 02 14 25.8 -2.2
baz=186
SSHA Shanhua 1.45 238 *e*P Pb 02 14 30.2 +0.5
baz=241
SCST Cishan 1.46 226⇑*e*P Pb 02 14 30.1 +0.3
baz=230
SHHT Tainan City 1.47 233 *e*P Pb 02 14 30.8 +0.7
baz=237
SSD Sandimen 1.48 218 *e*P Pn 02 14 27.8 -0.6
baz=216
TSMG Majia 1.50 217 *e*P Pn 02 14 29.5 +0.7
baz=215
SCLT Jiali 1.50 241 *e*P Pb 02 14 30.1 -0.5
baz=244
TWM1 Shoushan 1.55 226 *e*P Pb 02 14 32.3 +0.9
baz=229
SGLT Jiouru 1.57 222 *e*P Pn 02 14 30.6 +0.8
baz=226
MASBT Mashibuluo 1.58 215⇑*e*P Pn 02 14 29.9 0.0
baz=219
TSCK Chigu Township 1.60 242 *e*P Pn 02 14 31.2 +1.0
baz=245
TSPT Pingtung City 1.61 221 *e*P Pb 02 14 32.4 0.0
baz=225
SNJT Kaohsiung City 1.65 226 *e*P Pb 02 14 32.9 -0.3
baz=230
EAST Anshuo 1.68 205⇑*e*P Pn 02 14 29.7 -1.6
baz=188
TAW Tawu 1.68 204 *e*P Pn 02 14 32.2 +0.9
baz=184
TAWH Dawu Township 1.70 204 *e*P Pn 02 14 29.6 -2.0
baz=185
PCYT Pengchaiyu 1.76 13 *e*P Pn 02 14 32.5 +0.1
baz=350
SCZT Fangliau 1.79 211 *e*P Pn 02 14 33.2 +0.5
baz=189
SLIU Shizi 1.85 205 *e*P Pn 02 14 32.8 -0.8
baz=186
LAY Lan-yu 1.86 182 *e*P Pn 02 14 32.1 -1.6
baz=175
LYUB Lan-yu 1.90 181 *e*P Pn 02 14 31.9 -2.3
baz=175
WDGT Dungji 1.92 251⇑*i*P Pn 02 14 35.1 +0.6
baz=253
PHUB P'eng-hu 1.92 259 *e*P Pn 02 14 35.2 +0.6
baz=259
PHUB *e*S Sn 02 14 58.6 +0.6
baz=259
PNG Penghu 1.93 260⇑*e*P Pn 02 14 35.0 +0.4
baz=260
PNG *e*S Sn 02 14 58.0 -0.1
baz=260
TWP Hsiaoliuchiu 1.94 217 *e*P Pb 02 14 36.9 -1.3
baz=221
HATJ Hateruma jima 2.00 85 P Pn 02 14 35.8 +0.1
HATJ *e*S Sn 02 15 00.7 +0.9
HEN Hengchun 2.06 204 *e*P Pb 02 14 39.1 -1.1
baz=187
TWK1 Hengchun 2.10 201 *e*P Pn 02 14 38.2 +1.2
baz=185
TWKBT Hengchun 2.10 201 *e*P Pn 02 14 38.2 +1.2
baz=185
TSEB Hengchuen, Pin 2.11 199 *e*P Pn 02 14 39.1 +2.0
baz=182
VCHM Qimei 2.13 251 ⇑P Pn 02 14 38.0 +0.5
baz=254
JKRS Kuro-shima 2.20 81 P Pn 02 14 39.4 +0.9
JKRS S Sn 02 15 06.2 +1.3
VWUC VWUC 2.26 299⇑*e*P Pn 02 14 38.4 -0.8
baz=298
JIJ Ishigaki jima 2.34 78 P Pn 02 14 40.7 +0.3
JIJ *e*S Sn 02 15 08.9 +0.5
JISG Ishigakijimahi 2.54 74 P Pn 02 14 43.4 +0.4
JISG *e*S Sn 02 15 13.9 +0.7
PTMZ Houxiangcun 2.55 297 *e*P Pn 02 14 43.0 -0.1
baz=296
MATB Ma-tsu 2.70 326 *e*P Pn 02 14 45.0 -0.4
baz=322
MSUT Lienchiang 2.73 326 *e*P Pn 02 14 45.7 0.0
baz=322
JTJ Tarama 2.90 75 P Pn 02 14 48.7 +0.7
JTJ *e*S Sn 02 15 23.6 +1.5
QZH Quanzhou 2.95 291⇑*i*Pn Pn 02 14 48.5 -0.2
QZH Sn Sn 02 15 22.4 -1.0
QZH smax smax
comp=N,1μm,0.6s
QZH smax smax
comp=E,810nm,0.9s
KNM Kinmen 2.96 280⇑*e*P Pn 02 14 50.4 +1.6
baz=281
KNMB Chin-men Tao 3.01 281 Pn Pn 02 14 49.3 -0.1
KNMB Chin-men Tao 3.01 281 *e*P Pn 02 14 49.4 -0.1
baz=282
LYJJ Jianjiangzhen 3.13 328 *e*P Pn 02 14 50.9 -0.2
baz=323
MHZQ Yeshan 3.21 313 *e*P Pn 02 14 51.8 -0.5
baz=311
XPSS Dashiqiu 3.28 337⇑*e*P Pn 02 14 52.5 -0.7
baz=332
JIKM Ikemajima 3.45 72 P Pn 02 14 56.9 +1.3
JIKM S Sn 02 15 38.0 +2.3
JMJ Miyako jima 2 3.46 74 *e*P Pn 02 14 56.8 +1.0
baz=79
AXDP Jialang 3.48 287 *e*P Pn 02 14 55.8 -0.2
baz=288
JMJ2 Miyako jima3 3.48 75 *e*P Pn 02 14 57.3 +1.4
JMJ2 S Sn 02 15 38.3 +2.0
ZPLA Ao Xicun 3.55 271 *e*P Pn 02 14 56.9 0.0
baz=273
DSXP Dongshan 3.85 268 *e*P Pn 02 15 01.3 +0.2
baz=270
SXFK Yanhouchang 4.38 305 *e*P Pn 02 15 08.0 -0.4
baz=304
JOW Kunigami 6.68 63 Pn Pn 02 15 39.1 -0.9
JOW Kunigami 6.68 63 P Pn 02 15 39.4 -0.6
JOW Kunigami 6.68 63 P Pn 02 15 38.5 -1.5
9.2nm,0.3s,baz=259,slow=18,SNR=11
JOW S Sn 02 16 53.0 -2.4
12nm,0.5s,baz=126,slow=26,SNR=1.5
17nm,0.3s
GZH Guangzhou 7.65 266 Pn Pn 02 15 49.2 -4.1
GZH Sn Sn 02 17 13.5 -5.6
GZH smax smax
comp=N,140nm,0.9s
GZH smax smax
comp=E,84nm,0.8s
NJ2 Nanjing 8.47 344 *e*P Pn 02 16 04.0 -0.6
NJ2 S Sn 02 17 35.4 -4.0
NJ2 pmax pmax
comp=Z,21nm,0.5s
NJ2 smax smax
comp=N,130nm,0.8s
NJ2 smax smax
comp=E,140nm,0.9s
NJ2 LR LR
comp=N,370nm,5.7s
NJ2 LR LR
comp=E,170nm,3.8s
NJ2 LR LR
comp=Z,630nm,6.2s
WHN Wuhan 9.25 317 P Pn 02 16 21.0 +5.8
WHN S Sn 02 17 58.1 -0.4
WHN LR LR
comp=Z,2μm,13.5s
QIZ Qiongzhong 11.99 248 P Pn 02 16 54.0 +1.1
QIZ LR LR
comp=N,320nm,9.6s
QIZ LR LR
comp=E,240nm,6.1s
QIZ LR LR
comp=Z,300nm,15.9s
JNU Nakatsue 12.26 39 LR LR 02 22 34.7
comp=Z,218nm,18.2s,baz=227,slow=42
KSRS Korea Array 14.54 20 P Pn 02 17 30.8 +3.2
5.5nm,0.7s,baz=203,slow=12,SNR=15
HNS HongShan 14.70 338 ⇓P P 02 17 37.7 +2.1
HNS *e*S S 02 20 31.9 +1.7
HNS pmax pmax
comp=Z,7.0nm,1.0s
HNS LR LR
comp=N,320nm,12.8s
HNS LR LR
comp=E,340nm,12.8s
HNS LR LR
comp=Z,430nm,13.5s
XAN Xi'an 15.00 315 P Pn 02 17 33.7 -0.2
XAN S Sn 02 20 20.8 +1.4
XAN LR LR
comp=Z,390nm,13.7s
XAN LR LR
comp=Z,500nm,11.6s
XAN LR LR
comp=Z,650nm,14.3s
SNY Shenyang 17.94 5 ⇑P Pn 02 18 04.7 -6.5
SNY S Sn 02 21 17.7 -13
SNY pmax pmax
comp=Z,9.0nm,1.7s
SNY pmax pmax
comp=Z,140nm,4.9s
SNY LR LR
comp=N,110nm,7.7s
SNY LR LR
comp=E,230nm,10.2s
SNY LR LR
comp=Z,100nm,7.8s
PZH PanZhiHua 18.18 282 P P 02 18 17.5 +3.0
PZH S S 02 21 39.3 -2.3
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,6.9s
PZH LR LR
comp=Z,260nm,14.5s
PZH LR LR
comp=Z,390nm,13.0s
PZH LR LR
comp=Z,420nm,13.3s
JHJ Hachijo jima 2 18.39 56 LR LR 02 25 37.9
comp=Z,110nm,19.5s,baz=274,slow=38
HHC Hu-ho-hao-te 18.89 336 *e*P Pn 02 18 24.7 +1.9
HHC sP sP 02 18 33.0 +0.6
HHC PP PnPn 02 18 41.5 +6.2
HHC *e*S S 02 21 59.3 +4.0
HHC sS sS 02 22 05.3 -0.8
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,150nm,4.0s
HHC LR LR
comp=Z,280nm,10.8s
HHC LR LR
comp=Z,200nm,8.3s
HHC LR LR
comp=Z,240nm,10.5s
MJAR Matsushiro Arr 19.04 45 P P 02 18 22.7 -1.1
comp=Z,0.1nm,0.3s,baz=256,slow=6.4,SNR=2.0
MJAR LR LR 02 26 39.1
comp=Z,107nm,19.3s,baz=226,slow=40
comp=Z,0.9nm,0.4s
LZH Lanzhou 19.57 312 *e*P Pn 02 18 33.6 +2.5
LZH sP sP 02 18 40.0 -0.6
LZH pmax pmax
comp=Z,11nm,1.1s
LZH LR LR
comp=Z,380nm,16.1s
LZH LR LR
comp=Z,430nm,13.1s
LZH LR LR
comp=Z,460nm,11.3s
XLT XiLinHaoTe 20.45 348 *e*P Pn 02 18 45.8 +4.4
XLT pP sP 02 18 50.7 +1.6
XLT sP pP 02 18 54.6 +8.7
XLT PP PnPn 02 19 04.3 +7.5
XLT pmax pmax
comp=Z,5.0nm,0.7s
XLT pmax pmax
comp=Z,90nm,5.0s
MDJ Mudanjiang 21.66 16 P P 02 18 53.3 +1.3
MDJ S S 02 22 42.0 -8.6
MDJ pmax pmax
comp=Z,11nm,1.8s
MDJ pmax pmax
comp=Z,110nm,4.8s
MDJ LR LR
comp=Z,190nm,17.5s
MDJ LR LR
comp=Z,320nm,19.2s
MDJ LR LR
comp=Z,250nm,15.8s
CMAR Chiang Mai Arr 21.82 260 P P 02 18 55.2 +1.1
comp=Z,1.0nm,0.3s,baz=61,slow=9.1,SNR=8.1
CMAR LR LR 02 27 53.9
comp=Z,97nm,18.9s,baz=80,slow=38
comp=Z,1.0nm,0.3s
USRK Ussuriysk Ar. 21.95 20 P P 02 18 54.9 -0.3
comp=Z,1.4nm,0.5s,baz=193,slow=12,SNR=5.8
comp=Z,1.4nm,0.5s
GTA Gaotai 24.07 315 *e*P P 02 19 24.9 +8.0
GTA pmax pmax
comp=Z,4.0nm,1.2s

ULN	**Ulaanbaatar**	**26.57**	**338**	P		**P**	**02 19 40.0**	**+0.3**
SONM	**Songino Array**	**26.78**	**337**	P		**P**	**02 19 39.8**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=90,slow=7.4,SNR=3.7							
	comp=Z,1.0nm,0.5s							
MMRI	**Maumere**	**32.35**	**179**	P		**P**	**02 20 27.7**	**-3.3**
WMQ	**Urumqi**	**34.14**	**314**	*e*P		**P**	**02 20 48.9**	**+2.4**
MK31	**Makanchi Array**	**38.82**	**316**			**P**	**02 21 26.8**	**+0.5**
MKAR	**Makanchi Array**	**38.82**	**316**			**P**	**02 21 27.1**	**+0.7**
MKAR	**Makanchi Array**	**38.82**	**316**	P		**P**	**02 21 26.6**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=100,slow=9.0,SNR=18							
MKAR				PcP		**PcP**	**02 23 35.9**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=92,slow=5.1,SNR=4.5							
	comp=Z,2.1nm,0.7s							
MAKZ	**Makanchi**	**39.02**	**316**			**P**	**02 21 28.8**	**+0.8**
PETK	**Petropavlovsk-**	**39.87**	**34**	LR		LR	02 39 33.6	
	comp=Z,61nm,19.3s,baz=225,slow=38							
ZAA0	**Zalesovo Array**	**40.69**	**327**	P		**P**	**02 21 42.0**	**+0.2**
ZALV	**Zalesovo Beam**	**40.69**	**327**	P		**P**	**02 21 41.4**	**-0.3**
ZALV	**Zalesovo Beam**	**40.69**	**327**	P		**P**	**02 21 41.2**	**-0.6**
	comp=Z,3.7nm,0.5s,baz=118,slow=8.2,SNR=22							
ZALV				PcP		**PcP**	**02 23 41.6**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=81,slow=3.3,SNR=2.1							
	comp=Z,3.7nm,0.5s							
PMG	**Port Moresby**	**41.46**	**140**	LR		LR	02 37 00.2	
	comp=Z,38nm,19.2s,baz=282,slow=33							
H11N1	**WAKE ISLAND Hy**	**42.10**	**87**	T		T	03 07 07.6	
	baz=283,slow=74,SNR=32							
H11N2	**WAKE ISLAND Hy**	**42.10**	**87**	T		T	03 07 06.5	
	baz=283,slow=74,SNR=44							
H11N3	**WAKE ISLAND Hy**	**42.12**	**87**	T		T	03 07 09.7	
	baz=283,slow=74,SNR=48							
H11S3	**WAKE ISLAND Hy**	**42.22**	**88**	T		T	03 06 59.6	
	baz=284,slow=74,SNR=78							
H11S1	**WAKE ISLAND Hy**	**42.23**	**88**	T		T	03 07 00.9	
	baz=284,slow=74,SNR=43							
H11S2	**WAKE ISLAND Hy**	**42.24**	**88**	T		T	03 07 00.9	
	baz=284,slow=74,SNR=37							
KURBB	**Kurchatov Arra**	**42.58**	**320**	P		**P**	**02 21 57.0**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=96,slow=6.8,SNR=4.1							
	comp=Z,0.8nm,0.7s							
WB0	**Warramunga Arr**	**45.16**	**163**	P		**P**	**02 22 17.9**	**-0.4**
WB0				IAmb		IAmb	02 22 18.5	
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**45.31**	**163**	P		**P**	**02 22 19.0**	**-0.5**
	comp=Z,2.4nm,0.4s,baz=345,slow=8.7,SNR=19							
WRA				PcP		**PcP**	**02 23 57.3**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=356,slow=3.3,SNR=1.9							
	comp=Z,2.4nm,0.4s							
WR0	**Warramunga Arr**	**45.38**	**163**	P		**P**	**02 22 19.4**	**-0.6**
WR0				IAmb		IAmb	02 22 20.1	
	comp=Z,6.3nm,0.5s							
KKAR	**Karatay Array**	**45.96**	**308**	P		**P**	**02 22 25.0**	**+0.5**
TIXI	**Tiksi**	**47.95**	**3**	P		**P**	**02 22 39.2**	**-0.3**
BVAR	**Borovoye Array**	**48.14**	**321**	P		**P**	**02 22 41.4**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=102,slow=8.5,SNR=10							
BVAR				PcP		**PcP**	**02 24 07.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=61,slow=3.8,SNR=4.1							
	comp=Z,1.3nm,0.5s							
BRVK	**Borovoye**	**48.21**	**321**	P		**P**	**02 22 41.7**	**-0.2**
ASAR	**Alice Springs**	**48.77**	**165**	P		**P**	**02 22 46.1**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=340,slow=6.8,SNR=19							
ASAR				PcP		**PcP**	**02 24 09.5**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=348,slow=3.7,SNR=2.3							
	comp=Z,1.0nm,0.3s							
CTA	**Charters Tower**	**49.88**	**149**	LR		LR	02 43 44.3	
	comp=Z,36nm,19.3s,baz=270,slow=36							
ABKAR	**Akbulak array**	**53.92**	**314**	P		**P**	**02 23 25.5**	**+0.7**
AKTO	**Aktyubinsk**	**55.25**	**316**	LR		LR	02 49 02.6	
	comp=Z,174nm,20.2s,baz=153,slow=38							
GEYT	**Alibeck**	**55.28**	**301**	P		**P**	**02 23 35.3**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=82,slow=12,SNR=1.7							
	comp=Z,0.5nm,0.4s							
STKA	**Stephens Creek**	**58.67**	**160**	P		**P**	**02 23 59.0**	**+0.2**
STKA	**Stephens Creek**	**58.67**	**160**	P		**P**	**02 23 58.0**	**-0.8**
	comp=Z,3.1nm,0.5s,baz=326,slow=7.3,SNR=13							
	comp=Z,3.1nm,0.5s							
E18K	**Tukpahlearik C**	**63.47**	**25**	P		**P**	**02 24 31.8**	**+0.8**
C19K	**Lookout Ridge**	**63.89**	**23**	P		**P**	**02 24 33.9**	**+0.1**
D19K	**Kuna River**	**64.42**	**24**	P		**P**	**02 24 37.7**	**+0.4**
H19K	**Roundabout Mou**	**65.17**	**27**	P		**P**	**02 24 41.9**	**-0.2**
H19K				IAmb		IAmb	02 24 45.0	
	comp=Z,7.1nm,0.9s							
B21K	**Ikpikpuk River**	**65.65**	**22**	P		**P**	**02 24 45.9**	**+0.7**
D22K	**Ayikyak River**	**66.39**	**23**	P		**P**	**02 24 50.6**	**+0.6**
D22K				IAmb		IAmb	02 24 52.1	
	comp=Z,4.2nm,0.8s							
H21K	**Melozitna Rive**	**66.67**	**27**	P		**P**	**02 24 52.3**	**+0.5**
H21K				IAmb		IAmb	02 24 54.6	
	comp=Z,6.3nm,0.9s							
E22K	**Anaktuvuk Pass**	**66.78**	**24**	P		**P**	**02 24 53.1**	**+0.6**
E22K				IAmb		IAmb	02 24 58.0	
	comp=Z,6.2nm,1.4s							
CAST	**Castle Rocks**	**67.26**	**29**	P		**P**	**02 24 56.4**	**+0.8**
CAST				IAmb		IAmb	02 24 58.3	
	comp=Z,6.4nm,0.9s							
MLY	**Manley**	**67.61**	**27**	P		**P**	**02 24 58.4**	**+0.6**
MLY				IAmb		IAmb	02 25 00.0	
	comp=Z,4.2nm,0.8s							
D24K	**Happy Valley**	**67.74**	**23**	P		**P**	**02 24 58.6**	**+0.1**
D24K				IAmb		IAmb	02 24 59.9	
	comp=Z,3.7nm,0.7s							
KTH	**Kantishna Hill**	**67.75**	**29**	P		**P**	**02 24 59.8**	**+0.9**
KTH				IAmb		IAmb	02 25 00.6	
	comp=Z,5.2nm,0.8s							
I23K	**Minto, Yukon-K**	**68.17**	**27**	P		**P**	**02 25 02.1**	**+0.8**
I23K				IAmb		IAmb	02 25 05.4	
	comp=Z,4.4nm,1.0s							
SUA	**Susitna One**	**68.18**	**31**	P		**P**	**02 25 02.1**	**+0.6**
F24K	**Squaw Lake**	**68.34**	**24**	P		**P**	**02 25 03.1**	**+0.7**
F24K				IAmb		IAmb	02 25 04.4	
	comp=Z,4.6nm,0.7s							
NEA2	**Nenana**	**68.39**	**28**	P		**P**	**02 25 03.3**	**+0.6**
G24K	**Hadweenzic Riv**	**68.65**	**25**	P		**P**	**02 25 05.1**	**+0.8**
G24K				IAmb		IAmb	02 25 06.6	
	comp=Z,3.9nm,0.9s							
H24K	**Noodor Dome**	**68.65**	**26**	P		**P**	**02 25 05.0**	**+0.7**
H24K				IAmb		IAmb	02 25 29.6	
	comp=Z,11nm,1.5s							
MDM	**Murphy Dome**	**68.67**	**27**	P		**P**	**02 25 05.1**	**+0.7**
RND	**Reindeer**	**68.69**	**29**	P		**P**	**02 25 04.8**	**+0.1**
SML	**Sawmill**	**69.25**	**31**	P		**P**	**02 25 08.9**	**+0.7**
ILAR	**Eielson Array**	**69.27**	**27**	P		**P**	**02 25 07.5**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=274,slow=8.2,SNR=19							
	comp=Z,1.0nm,0.7s							
SCM	**Sheep Creek Mo**	**69.71**	**30**	P		**P**	**02 25 11.3**	**+0.3**
M24K	**Tolsona, Glenn**	**70.17**	**30**	P		**P**	**02 25 13.8**	**-0.1**
SCRK	**Sand Creek**	**70.68**	**28**	P		**P**	**02 25 16.7**	**-0.3**
SCRK				IAmb		IAmb	02 25 19.0	
	comp=Z,4.1nm,0.8s							
I26K	**Coal Creek Min**	**70.69**	**26**	P		**P**	**02 25 16.8**	**0.0**
I26K				IAmb		IAmb	02 25 18.5	
	comp=Z,4.5nm,0.7s							
J26L	**Joseph Creek**	**70.73**	**27**	P		**P**	**02 25 16.6**	**-0.6**
J26L				IAmb		IAmb	02 25 18.4	
	comp=Z,6.8nm,0.8s							
MENT	**Mentasta**	**71.07**	**29**	P		**P**	**02 25 19.7**	**+0.4**
E28M	**Babbage River**	**71.14**	**23**	P		**P**	**02 25 20.1**	**+0.5**
F28M	**Old Crow**	**71.31**	**24**	P		**P**	**02 25 21.1**	**+0.5**
GLB	**Gilahina Butte**	**71.43**	**30**	P		**P**	**02 25 22.4**	**+0.9**
GLB				IAmb		IAmb	02 25 33.5	
	comp=Z,10nm,1.3s							
K27K	**Chicken**	**71.48**	**27**	P		**P**	**02 25 22.2**	**+0.6**
K27K				IAmb		IAmb	02 25 24.2	
	comp=Z,6.9nm,0.8s							
MCARA	**McCarthy VSAT**	**71.81**	**30**	P		**P**	**02 25 24.4**	**+0.7**
MCARA				IAmb		IAmb	02 25 27.1	
	comp=Z,6.5nm,0.8s							
L27K	**Beaver Creek,**	**71.86**	**28**	P		**P**	**02 25 24.9**	**+0.8**
L27K				IAmb		IAmb	02 25 26.4	
	comp=Z,6.7nm,0.8s							
BCAR	**Beaver Creek A**	**71.88**	**28**	P		**P**	**02 25 25.0**	**+0.8**
FINES	**FINESS Array B**	**71.89**	**330**	P		**P**	**02 25 23.2**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=57,slow=5.3,SNR=11							
	comp=Z,1.6nm,0.8s							
I28M	**Miner Creek**	**71.94**	**26**	P		**P**	**02 25 25.3**	**+0.8**
I28M				IAmb		IAmb	02 25 26.5	
	comp=Z,3.4nm,0.8s							
H29M	**Whitestone**	**72.31**	**25**	P		**P**	**02 25 26.4**	**-0.2**
H29M				IAmb		IAmb	02 25 46.8	
	comp=Z,4.4nm,0.8s							
DAWY	**Dawson**	**72.59**	**27**	P		**P**	**02 25 28.8**	**+0.3**
J29N	**Klondike Camp**	**72.95**	**27**	P		**P**	**02 25 31.6**	**+1.1**
J29N				IAmb		IAmb	02 25 33.0	
	comp=Z,8.0nm,0.8s							
INK	**Inuvik**	**73.33**	**22**	P		**P**	**02 25 31.8**	**-0.7**
I30M	**Mount Dempster**	**73.42**	**25**	P		**P**	**02 25 33.7**	**+0.3**
I30M				IAmb		IAmb	02 25 35.2	
	comp=Z,9.2nm,1.4s							
L29M	**L29M**	**73.45**	**28**	P		**P**	**02 25 34.4**	**+0.9**
L29M				IAmb		IAmb	02 25 35.9	
	comp=Z,7.6nm,0.8s							
K29M	**Barlow Dome**	**73.45**	**27**	P		**P**	**02 25 34.4**	**+0.8**
M29M	**Somme Creek**	**73.53**	**29**	P		**P**	**02 25 35.3**	**+1.3**
F31M	**Tsiigehtchic**	**73.58**	**23**	P		**P**	**02 25 33.5**	**-0.6**
F31M				IAmb		IAmb	02 25 42.4	
	comp=Z,5.2nm,0.8s							
G31M	**Satah River**	**73.59**	**23**	P		**P**	**02 25 33.5**	**-0.6**
G31M				IAmb		IAmb	02 25 34.6	
	comp=Z,5.9nm,0.9s							
BRTR	**Keskin Array B**	**73.66**	**307**	P		**P**	**02 25 34.6**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=111,slow=3.4,SNR=4.8							
	comp=Z,0.4nm,0.7s							
M30M	**Minto, Yukon**	**74.21**	**28**	P		**P**	**02 25 38.7**	**+0.7**
M30M				IAmb		IAmb	02 25 40.6	
	comp=Z,5.9nm,0.9s							
FARO	**Faro, Yukon**	**75.82**	**28**	P		**P**	**02 25 48.1**	**+0.8**
FARO				IAmb		IAmb	02 25 49.3	
	comp=Z,3.9nm,0.8s							
HFS	**Hagfors**	**78.00**	**331**	P		**P**	**02 25 57.9**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=46,slow=8.3,SNR=1.0							
	comp=Z,1.4nm,0.9s							
NOA	**NORSAR Array B**	**78.66**	**332**	P		**P**	**02 26 01.1**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=74,slow=6.0,SNR=1.9							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**83.06**	**23**	P		**P**	**02 26 26.3**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=311,slow=5.1,SNR=41							
	comp=Z,1.8nm,0.6s							
MBAR	**Mbarara**	**91.05**	**270**	LR		LR	03 12 24.5	
	comp=Z,16nm,18.4s,baz=213,slow=38							
NVAR	**Mina Array Bea**	**96.36**	**43**	P		**P**	**02 27 31.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=284,slow=5.7,SNR=3.7							

*IDC **09** 02:15:10.1±4.4,38.69N×73.32E,h83km±29km,mb3.7/2, mbtmp3.7/9,Error ellipse: s-maj=49.3km s-min=21.1km az=141.0*
*NNC **09** 02:15:11.7±5.3,39.04N×73.42E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=41.5km s-min=27.7km az=166.0*
*KRNET **09** 02:15:15.2±0.1,39.22N×73.48E,h35km,mb2.6*
*SOME **09** 02:15:15.5,39.75N×72.58E,h5km*

ISC 09 02:15:10.7±1.8,38.97N±0.10×73.48E±0.04,h10km,n33, σ2s77/48,13C-13D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.04**	**1**	⇓*i*P		**P**	**Pn**	**02 15 35.9**	**+4.3**
	baz=1.0								
SFK				⇓*i*S		S	**Sn**	02 15 50.9	+4.6
	baz=1.0								
DRK	**Karamyk**	**1.40**	**292**	⇑*e*P		**P**	**Pg**	**02 15 41.2**	**+3.7**
	baz=82								
DRK				⇑*e*S		S	**Sg**	**02 16 00.1**	**+4.4**
	baz=82								
OHH	**Osh**	**1.64**	**341**	⇑*i*P		**P**	**Pg**	**02 15 42.3**	**+0.1**
	baz=38								
OHH				⇑*i*S		S	**Sg**	**02 16 01.8**	**-1.7**
	baz=38								
BTK	**Batken**	**2.33**	**299**	⇓*i*P		**P**	**Pb**	**02 15 52.1**	**-0.6**
	baz=93								
BTK				⇓*e*S		S	**Sb**	**02 16 19.0**	**-2.6**
	baz=93								
ARSB	**Arslanbob**	**2.38**	**351**	⇑*i*P		**P**	**Pn**	**02 15 51.7**	**+1.8**
	baz=50								
ARSB				⇑*e*S		S	**Sn**	**02 16 17.4**	**-1.8**
	baz=50								
ARLS	**Aral**	**2.96**	**12**	⇑*i*P		**P**	**Pn**	**02 15 59.2**	**+1.3**
	baz=14								
ARLS				⇑*i*S		S	**Sn**	**02 16 30.2**	**-3.3**
	baz=14								
ARK	**Arkit**	**3.05**	**338**	⇓*e*P		**P**	**Pn**	**02 16 00.7**	**+1.6**
	baz=36								
ARK				⇓*e*S		S	**Sn**	**02 16 32.9**	**-2.8**
	baz=36								
TRKS	**Terek-Say**	**3.12**	**326**	⇓*e*P		**P**	**Pn**	**02 16 00.7**	**+0.6**
	baz=23								
TRKS				⇓*e*S		S	**Sn**	**02 16 33.5**	**-4.0**
	baz=23								
NRN	**Naryn**	**3.13**	**37**	⇑*i*P		**P**	**Pn**	**02 16 01.1**	**+0.8**
	baz=40								
NRN				⇑*e*S		S	**Sn**	**02 16 34.7**	**-3.2**
	baz=40								
UCH	**Uchtor**	**3.35**	**13**	P		**P**	**Pn**	**02 16 06.1**	**+2.6**
	SNR=61								
MNAS	**Manas**	**3.59**	**348**	⇓*e*P		**P**	**Pn**	**02 16 07.2**	**+0.7**
	baz=48								
MNAS				⇓*e*S		S	**Sn**	**02 16 45.0**	**-4.0**
	baz=48								
EKS2	**Erkin-Say**	**3.69**	**3**	P		**P**	**Pn**	**02 16 10.9**	**+3.0**
	SNR=33								
AAK	**Ala-Archa**	**3.74**	**12**	P		**P**	**Pn**	**02 16 11.6**	**+2.9**
	SNR=17								
AAK	**Ala-Archa**	**3.74**	**12**	P		**P**	**Pn**	**02 16 11.1**	**+2.5**
	10nm,0.3s,baz=151,slow=13,SNR=50								
AAK				S		S	**Sn**	**02 16 57.1**	**+4.3**
	9.7nm,0.4s,baz=104,slow=23,SNR=7.5								
MRKS	**Merke**	**3.78**	**357**	*e*P		**P**	**Pn**	**02 16 11.7**	**+2.7**
	17nm,0.3s								
MRKS				*e*S		S	**Sn**	**02 16 56.7**	**+3.2**
	15nm,0.3s								
KBK	**Karagaybulak**	**3.85**	**16**	P		**P**	**Pn**	**02 16 13.0**	**+2.9**
	SNR=12								
ULHL	**Ulahol**	**3.89**	**32**	P		**P**	**Pn**	**02 16 12.2**	**+1.5**
	SNR=40								
IUG	**Iuzhnay**	**4.12**	**322**	*e*P		**P**	**Pn**	**02 16 14.3**	**+0.6**
	22nm,0.1s								
IUG				*e*S		S	**Sn**	**02 17 01.3**	**-0.7**
	48nm,0.5s								
CHMS	**Chumysh**	**4.14**	**13**	P		**P**	**Pn**	**02 16 16.6**	**+2.6**
	SNR=7.5								
CHMS	**Chumysh**	**4.14**	**13**	⇑P		**P**	**Pn**	**02 16 15.3**	**+1.4**
	3.4nm,0.4s								
CHMS				⇓S		S	**Sn**	**02 17 06.6**	**+4.2**
	6.3nm,0.8s								
TKM2	**Tokmak 2**	**4.26**	**21**	⇑P		**P**	**Pn**	**02 16 17.2**	**+1.4**
	4.4nm,0.4s								
TKM2				⇓S		S	**Sn**	**02 17 07.5**	**+1.9**
	4.0nm,0.7s								
USP	**Ospenovka**	**4.36**	**10**	P		**P**	**Pn**	**02 16 20.2**	**+3.1**
	SNR=6.0								
KK31	**Karatay Array**	**4.70**	**332**	⇓P		**P**	**Pn**	**02 16 23.4**	**+1.8**
	6.2nm,0.4s,baz=131,slow=12,SNR=202								
KK31				⇑S		S	**Sn**	**02 17 17.6**	**+1.4**
	6.5nm,0.6s,baz=135,slow=21,SNR=7.6								
BRLS	**Boroldoy**	**4.90**	**327**	*e*P		**P**	**Pn**	**02 16 25.0**	**+0.6**
	3.4nm,0.1s								
BRLS				*e*S		S	**Sn**	**02 17 20.7**	**-0.5**
	11nm,0.2s								
KOTS	**Kotyrbulak**	**5.07**	**32**	*e*P		**P**	**Pg**	**02 16 46.2**	**-1.5**
	2.5nm,0.2s								
KOTS				*e*S		S	**Sg**	**02 17 58.9**	**+5.5**
	13nm,0.4s								
MKAR	**Makanchi Array**	**10.14**	**37**	P		**P**	**Pn**	**02 17 36.2**	**0.0**
	0.5nm,0.8s,baz=218,slow=13,SNR=5.7								
GEYT	**Alibeck**	**12.09**	**270**	P		Pn		02 17 56.9	-6.2
	0.8nm,0.3s,baz=69,slow=18,SNR=4.5								
GEYT				S		Sn		02 20 08.2	-10
	1.2nm,0.5s,baz=55,slow=44,SNR=2.2								
KURBB	**Kurchatov Arra**	**12.19**	**15**	P		**P**	**Pn**	**02 18 02.8**	**-1.4**
	0.3nm,0.5s,baz=203,slow=12,SNR=2.7								
BVAR	**Borovoye Array**	**14.22**	**352**	P		**P**	**Pn**	**02 18 29.4**	**-2.6**
	0.7nm,0.5s,baz=165,slow=12,SNR=5.3								
AKTO	**Aktyubinsk**	**15.84**	**321**	P		**P**	**Pn**	**02 18 51.0**	**-2.7**
	1.4nm,0.3s,baz=109,slow=12,SNR=4.9								
ZALV	**Zalesovo Beam**	**16.86**	**24**	P		**P**	**Pn**	**02 19 02.6**	**-4.0**
	1.7nm,0.3s,baz=213,slow=10,SNR=10								
FINES	**FINESS Array B**	**36.60**	**324**	P		P		02 22 09.5	-7.1
	0.8nm,0.6s,baz=116,slow=10,SNR=7.2								
	0.8nm,0.6s								
ARCES	**ARCESS Array B**	**39.66**	**336**	P		P		02 22 35.0	-7.2
	3.3nm,0.9s,baz=112,slow=9.8,SNR=4.6								
	3.3nm,0.9s								

*IDC **09** 02:22:31.6±0.9,3.14S×127.35E,h0km,mb4.0/6, mbtmp4.1/7,ML4.5/1,MS2.7/1,Error ellipse: s-maj=88.2km s-min=10.4km az=69.0*
*DJA **09** 02:22:33.9±0.2,3.5S±2.2×12.7E±.1,h10km,M4.4/9,mb4.6/3, MLv4.3/9*
*NEIC **09** 02:22:38.0±1.6,3.1S±0.1×127.6E±0.1,h35km±2km, mb4.1/13,Error ellipse: s-maj=18.9km s-min=16.7km az=199.0*

ISC 09 02:22:36.8±0.6,3.06S±0.05×127.46E±0.04,h35km,n36, σ1s33/43,mb4.0/8,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.40**	**244**	P		**P**	**Pn**	**02 22 42.8**	**-3.1**
NLAI				S		S	**Sn**	**02 22 51.1**	**-1.2**
SANI	**Sanana**	**1.78**	**304**	P		**P**	**Pn**	**02 23 03.8**	**-1.2**
SANI				S		S	**Sn**	**02 23 26.8**	**+0.4**
LBMI	**Labuha**	**2.41**	**1**	P		**P**	**Pn**	**02 23 11.3**	**-2.4**
LBMI				S		S	**Sn**	**02 23 42.5**	**+0.5**
BNDI	**Bandanaira**	**2.84**	**121**	P		**P**	**Pn**	**02 23 20.8**	**+1.1**
SWI	**Sorong**	**4.38**	**60**	P		**P**	**Pn**	**02 23 39.4**	**-1.5**
SWI				S		S	**Sn**	**02 24 30.4**	**-0.4**
FAKI	**Fak Fak**	**4.79**	**88**	Pn		**P**	**Pn**	**02 23 45.5**	**-1.0**
FAKI						**Sn**		**02 24 39.2**	**-1.6**
FAKI	**Fak Fak**	**4.79**	**88**	P		**P**	**Pn**	**02 23 45.7**	**-0.8**
FAKI				S		S	**Sn**	**02 24 40.8**	**0.0**
BKSI	**Bulukumba**	**7.65**	**253**	P		**P**	**Pn**	**02 24 26.7**	**+0.9**
	21nm,0.8s,0.1nm								
MTN	**Manton Dam**	**10.38**	**160**	Pn		**Pn**		**02 25 06.8**	**+3.6**
KNRA	**Kununurra**	**12.60**	**174**	Pn		**Pn**		**02 25 36.1**	**+2.5**
FITZ	**Fitzroy Crossi**	**15.05**	**187**	Pn		**Pn**		**02 26 07.5**	**+0.5**
WB0	**Warramunga Arr**	**17.93**	**158**	P		**Pn**		**02 26 43.7**	**+0.2**
WB0				IAmb		IAmb		02 26 45.1	
	comp=Z,12nm,0.8s								
WRA	**Warramunga Arr**	**18.07**	**159**	P		**Pn**		**02 26 43.8**	**-1.5**
WRA	**Warramunga Arr**	**18.07**	**159**	P		**Pn**		**02 26 45.2**	**0.0**
	comp=Z,1.6nm,0.3s,baz=342,slow=12,SNR=36								
WRA				S		**Sn**		**02 30 07.1**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=341,slow=21,SNR=1.6								
	comp=Z,11nm,0.7s								
WB2	**Warramunga Arr**	**18.08**	**159**	P		**Pn**		**02 26 45.5**	**+0.2**
WB2				IAmb		IAmb		02 26 47.4	
	comp=Z,12nm,0.8s								
WR0	**Warramunga Arr**	**18.16**	**158**	P		**Pn**		**02 26 46.1**	**-0.3**
WR0				IAmb		IAmb		02 26 50.6	
	comp=Z,8.2nm,0.8s								
PSA00	**Pilbara Seismi**	**19.83**	**201**	P		**P**		**02 27 02.0**	**-2.7**
PSA00				IAmb		IAmb		02 27 09.0	
	comp=Z,12nm,0.9s								
AS31	**Alice Springs**	**21.41**	**164**	P		**P**		**02 27 22.2**	**+0.4**
AS31				IAmb		IAmb		02 27 26.0	
	comp=Z,5.2nm,1.1s								
ASAR	**Alice Springs**	**21.41**	**164**	P		**P**		**02 27 20.8**	**-0.9**
ASAR	**Alice Springs**	**21.41**	**164**	P		**P**		**02 27 22.1**	**+0.3**
	comp=Z,7.7nm,0.6s,baz=342,slow=12,SNR=42								
ASAR				S		**S**		**02 31 19.7**	**+2.0**
	comp=Z,1.4nm,0.9s,baz=348,slow=22,SNR=6.7								
	comp=Z,7.7nm,0.6s								
FORT	**Forrest**	**27.57**	**179**	P		**P**		**02 28 20.5**	**-0.2**
BBOO	**Buckleboo**	**30.67**	**166**	P		**P**		**02 28 47.0**	**-1.2**
STKA	**Stephens Creek**	**31.60**	**157**	P		**P**		**02 28 55.4**	**-1.0**
STKA	**Stephens Creek**	**31.60**	**157**	P		**P**		**02 28 55.6**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=327,slow=7.9,SNR=7.8								
	comp=Z,1.6nm,0.4s								
CAN	**Canberra**	**37.81**	**151**	P		**P**		**02 29 50.6**	**+0.6**
KSRS	**Korea Array**	**40.31**	**1**	LR		LR		02 50 42.9	
	comp=Z,9.1nm,18.6s,baz=345,slow=42								
USRK	**Ussuriysk Ar.**	**47.23**	**4**	P		**P**		**02 31 07.1**	**+0.9**
USRK	**Ussuriysk Ar.**	**47.23**	**4**	P		**P**		**02 31 06.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=201,slow=16,SNR=2.8								
	comp=Z,1.1nm,0.6s								
PETK	**Petropavlovsk-**	**61.46**	**20**	P		**P**		**02 32 50.7**	**+1.0**
MK31	**Makanchi Array**	**63.56**	**327**	P		**P**		**02 33 05.2**	**+1.3**
MK31				IAmb		IAmb		02 33 07.8	
	comp=Z,2.4nm,1.4s								
MKAR	**Makanchi Array**	**63.56**	**327**	P		**P**		**02

comp=Z,1.0nm,0.5s,baz=209,slow=12,SNR=1.9
comp=Z,1.0nm,0.5s
KURBB **Kurchatov Arra** 50.80 346 P **P** **03 11 24.0 -2.0**
comp=Z,0.2nm,0.4s,baz=163,slow=6.4,SNR=4.9
comp=Z,0.2nm,0.4s
MJAR **Matsushiro Arr** 52.71 44 LR LR 03 36 07.8
comp=Z,36nm,18.3s,baz=324,slow=38
ZALV **Zalesovo Beam** 52.82 352 P **P** **03 11 40.3 -0.7**
comp=Z,0.7nm,0.4s,baz=175,slow=10,SNR=4.7
comp=Z,0.7nm,0.4s
H04N2 **CROZET ISLANDS** 61.05 213 T T 04 20 10.2
baz=52,slow=75
H04N1 **CROZET ISLANDS** 61.07 213 T T 04 20 06.2
baz=52,slow=75
H04N3 **CROZET ISLANDS** 61.07 213 T T 04 20 04.6
baz=52,slow=75
H04S1 **CROZET ISLANDS** 61.42 212 T T 04 20 41.1
baz=51,slow=74
H04S3 **CROZET ISLANDS** 61.43 212 T T 04 20 40.6
baz=51,slow=74
H04S2 **CROZET ISLANDS** 61.44 212 T T 04 20 55.7
baz=51

*CATAC **09** 03:12:39.4±0.7, 15°.54N×92°.93W, h5km, ML3.6*
*MEX **09** 03:12:40.0±0.8, 15°.50N×92°.95W, h2km±17km, MD4.0*
ISC 09 03:12:39.2±1.2, 15°.54N±0°.03×92°.94W±0°.02, h4km±10km, n25, σ1s33/50, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PCIG		**0.32**	**301**	*eP*		**Pg**	**03 12 46.2**	**+0.9**
PCIG				*i* S		**Sg**	**03 12 50.4**	**+0.9**
PATR	**El Naranjo**	**0.80**	**122**	*eP*		**Pg**	**03 12 54.1**	**-0.3**
PATR				*i* S		**Sg**	**03 13 05.2**	**+0.3**
PAVE	**Pavencul**	**0.81**	**115**	*eP*		**Pg**	**03 12 54.5**	**-0.2**
PAVE				*i* S		**Sg**	**03 13 05.8**	**+0.6**
THIG		**0.90**	**134**	*i* P		**Pg**	**03 12 57.3**	**+0.8**
THIG				*i* S		**Sb**	**03 13 10.7**	**+0.9**
CHUJ	**Union Juarez**	**0.91**	**119**	*eP*		**Pg**	**03 12 56.4**	**-0.3**
CHUJ				*i* S		**Sg**	**03 13 08.8**	**+0.2**
CCIG	**Comitan**	**1.07**	**46**	*eP*		**Pg**	**03 12 59.4**	**-0.2**
CCIG				*eS*		**Sg**	**03 13 12.8**	**-0.7**
CCIG	**Comitan**	**1.07**	**46**	*i* P		**Pg**	**03 12 59.3**	**-0.3**
CCIG				IAML			03 13 00.3	
	comp=Z,650nm,1.0s							
CCIG				*i* S		**Sb**	**03 13 14.1**	**-0.6**
SMCA	**Catarina**	**1.07**	**129**	*i* P		**Pg**	**03 12 59.2**	**-0.6**
SMCA				*i* S		**Sg**	**03 13 13.1**	**-0.6**
SMCA				IAML			03 13 15.3	
	comp=Z,490nm,1.0s							
CARR	**Arriaga**	**1.18**	**307**	*eP*		**Pg**	**03 13 00.9**	**-0.8**
CARR				*i* S		**Sg**	**03 13 15.7**	**-1.3**
TGBT	**Tuxtla Gutierr**	**1.24**	**353**	*eP*		**Pn**	**03 13 03.9**	**+0.6**
TGBT				*i* S		**Sg**	**03 13 17.9**	**-1.2**
TGIG		**1.25**	**352**	*eP*		**Pg**	**03 13 02.2**	**-0.9**
TGIG				*i* S		**Sg**	**03 13 17.9**	**-1.4**
SMSP	**San Marcos**	**1.25**	**117**	*i* P		**Pg**	**03 13 02.9**	**-0.2**
SMSP				*i* S		**Sb**	**03 13 19.8**	**-0.3**
SMSP				IAML			03 13 24.2	
	comp=Z,2μm,1.0s							
HUEH	**Huehuetenango**	**1.40**	**99**	*i* P		**Pg**	**03 13 08.5**	**+2.5**
HUEH				*i* S		**Sg**	**03 13 23.0**	**-1.2**
HUEH	**Huehuetenango**	**1.40**	**99**	*i* P		**Pn**	**03 13 05.2**	**-0.6**
HUEH				*i* S		**Sg**	**03 13 23.3**	**-0.9**
HUEH				IAML			03 13 29.6	
	comp=Z,2μm,1.0s							
RTAL	**Retalhuleu**	**1.57**	**130**	*i* P		**Pn**	**03 13 07.7**	**-0.2**
RTAL				*i* S		**Sn**	**03 13 28.7**	**+0.1**
RTAL				IAML			03 13 31.9	
	comp=Z,440nm,1.0s							
QUIS	**Sacapulas**	**1.79**	**98**	*i* P		**Pn**	**03 13 11.6**	**+0.5**
QUIS				*i* S		**Sb**	**03 13 35.1**	**-0.6**
QUIS				IAML			03 13 39.2	
	comp=Z,1μm,1.0s							
NILT	**Santiago Nilte**	**1.91**	**302**	*i* P		**Pn**	**03 13 13.6**	**+1.0**
NILT				*i* S		**Sb**	**03 13 39.0**	**0.0**
CMIG	**Matias Romero**	**2.42**	**310**	*eP*		**Pn**	**03 13 21.0**	**+1.3**
CMIG				*eS*		**Sb**	**03 13 54.1**	**+0.4**
HUIG	**Huatulco**	**3.06**	**275**	*i* P		**Pn**	**03 13 25.5**	**-3.0**
HUIG				*i* S		**Sn**	**03 14 02.2**	**-3.5**
PETF	**Flores**	**3.25**	**65**	*i* P		**Pn**	**03 13 31.2**	**+0.2**
PETF				*i* S		**Sn**	**03 14 11.1**	**+0.9**
PETF				IAML			03 14 30.3	
	comp=Z,76nm,1.0s							
NUBE	**Las Nubes**	**3.46**	**118**	*i* P		**Pn**	**03 13 33.0**	**-1.0**
NUBE				*i* S		**Sn**	**03 14 15.5**	**-0.1**
NUBE				IAML			03 14 39.5	
	comp=Z,62nm,1.0s							
MTO3	**Montecristo**	**3.64**	**108**	*i* P		**Pn**	**03 13 36.8**	**+0.3**
MTO3				*i* S		**Sn**	**03 14 20.3**	**+0.2**
MTO3				IAML			03 14 38.4	
	comp=Z,30nm,1.0s							
JAYA	**Jayaque - finc**	**3.86**	**119**	*i* P		**Pn**	**03 13 38.7**	**-0.9**
JAYA				IAML			03 14 00.8	
	comp=Z,220nm,1.0s							
JAYA				*i* S		**Sn**	**03 14 26.8**	**+1.3**
YOIG	**Yosondua**	**4.62**	**287**	*eP*		**Pn**	**03 13 53.4**	**+3.2**
YOIG				*eS*		**Sn**	**03 14 42.3**	**-2.2**
TOIG	**Toxpalan**	**4.70**	**303**	*eP*		**Pn**	**03 13 54.3**	**+3.2**
TOIG				*eS*		**Sn**	**03 14 48.8**	**+2.6**

*NEIC **09** 03:19:05.0±1.3, 56°.61N±0°.09×147°.9W±0°.1, h17km±7km, ML3.5/22, ML3.4(AEIC), Error ellipse: s-maj=13.2km s-min=7.7km az=162.0*
*IDC **09** 03:19:08.2±1.3, 57°.33N×148°.11W, h0km, mb3.5/10, mbtmp3.5/12, ML3.1/2, MS3.2/7, Error ellipse: s-maj=42.3km s-min=18.5km az=18.0*
*AEIC **09** 03:19:09.2±1.2, 56°.65N±0°.09×147°.9W±0°.1, h11km±7km, Error ellipse: s-maj=13.4km s-min=9.1km az=169.0*
ISC 09 03:19:06.9±0.8, 56°.81N±0°.07×148°.09W±0°.05, h10km, n202, σ1s17/186, mb3.8/9, MS3.1/5, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.63**	**294**			**Pn**	**03 19 48.1**	**-1.2**
KDAK						**Sn**	**03 20 17.5**	**-3.8**
KDAK	**Kodiak Island**	**2.63**	**294**		Pn	**Pn**	**03 19 48.9**	**-0.5**
	6.0nm,0.3s,baz=142,slow=5.3,SNR=45							
KDAK					Sn	**Sn**	**03 20 16.8**	**-4.4**
	5.9nm,0.3s,baz=291,slow=22,SNR=9.3							
	12nm,0.3s							
MID	**Middleton Isla**	**2.78**	**19**			**Pn**	**03 19 50.4**	**-1.1**
MID						**Sn**	**03 20 21.9**	**-3.1**
MID	**Middleton Isla**	**2.78**	**19**	IAML			03 20 26.8	
	comp=N,146nm,1.9s							
MID				IAML			03 20 38.0	
	comp=E,208nm,2.9s							
MID	**Middleton Isla**	**2.78**	**19**	P		**Pn**	**03 19 51.2**	**-0.2**
Q23K	**Middleton Isla**	**2.78**	**19**			**Pn**	**03 19 50.5**	**-1.0**
Q23K	**Middleton Isla**	**2.78**	**19**	IAML			03 20 38.2	
	comp=E,210nm,2.8s							
Q23K				IAML			03 21 16.3	
	comp=N,152nm,2.2s							
Q23K	**Middleton Isla**	**2.78**	**19**	P		**Pn**	**03 19 50.5**	**-1.0**
	baz=198							
OHAK	**Old Harbor**	**2.87**	**280**			**Pn**	**03 19 51.2**	**-1.5**
OHAK						**Sn**	**03 20 24.0**	**-3.3**
OHAK	**Old Harbor**	**2.87**	**280**	P		**Pn**	**03 19 51.2**	**-1.5**
OHAK	**Old Harbor**	**2.87**	**280**	P		**Pn**	**03 19 51.4**	**-1.3**
	baz=99							
OHAK				S		**Sn**	**03 20 24.6**	**-2.7**
	baz=99							
SYI	**Shuyak Island**	**2.93**	**310**			**Pn**	**03 19 53.0**	**-0.5**
SYI						**Sn**	**03 20 28.0**	**-0.7**
SYI	**Shuyak Island**	**2.93**	**310**	IAML			03 20 29.8	
	comp=N,83nm,0.7s							
SYI				IAML			03 20 30.2	
	comp=E,69nm,0.7s							
Q20K	**Shuyak Island**	**2.93**	**310**	P		**Pn**	**03 19 53.0**	**-0.5**
	baz=127							
Q20K				S		**Sn**	**03 20 28.0**	**-0.7**
	baz=127							
CNPM	**China Poot**	**3.19**	**330**			**Pn**	**03 19 56.9**	**-0.3**
CNPM						**Sn**	**03 20 34.5**	**-0.7**
CNPM	**China Poot**	**3.19**	**330**	IAML			03 20 44.6	
	comp=E,48nm,0.8s							
P23K	**Montague Islan**	**3.21**	**6**			**Pn**	**03 19 56.9**	**-0.5**
P23K						**Sn**	**03 20 34.0**	**-1.7**
P23K	**Montague Islan**	**3.21**	**6**	P		**Pn**	**03 19 56.9**	**-0.5**
	baz=185							
P23K				S		**Sn**	**03 20 34.0**	**-1.7**
	baz=185							
BRSE	**Bradley Lake S**	**3.25**	**336**			**Pn**	**03 19 57.6**	**-0.4**
BRSE						**Sn**	**03 20 36.1**	**-0.6**
BRSE	**Bradley Lake S**	**3.25**	**336**	P		**Pn**	**03 19 57.8**	**-0.1**
	baz=153							
BRSE				S		**Sn**	**03 20 36.1**	**-0.6**
	baz=153							
BRLK	**Bradley Lake**	**3.31**	**335**			**Pn**	**03 19 58.2**	**-0.5**
BRLK						**Sn**	**03 20 36.7**	**-1.4**
BRLK	**Bradley Lake**	**3.31**	**335**	IAML			03 20 40.9	
	comp=E,54nm,1.0s							
BRLK				IAML			03 20 41.2	
	comp=N,54nm,1.1s							
SEW	**Seward**	**3.38**	**348**			**Pn**	**03 19 58.9**	**-0.7**
SEW	**Seward**	**3.38**	**348**	P		**Pn**	**03 19 59.4**	**-0.2**
	baz=166							
Q19K	**Cape Douglas,**	**3.65**	**308**			**Pn**	**03 20 04.0**	**+0.6**
KAIM	**Kayak Island**	**3.67**	**30**			**Pn**	**03 20 02.7**	**-0.9**
KAIM	**Kayak Island**	**3.67**	**30**	IAML			03 20 54.9	
	comp=N,177nm,2.7s							
KAIM				IAML			03 21 02.6	
	comp=E,104nm,2.5s							
KAIM	**Kayak Island**	**3.67**	**30**	P		**Pn**	**03 20 02.7**	**-0.9**
	baz=211							
HIN	**Hinchinbrook I**	**3.69**	**12**			**Pn**	**03 20 03.6**	**-0.3**
HIN	**Hinchinbrook I**	**3.69**	**12**	IAML			03 20 52.8	
	comp=N,178nm,0.9s							
O22K	**Cooper Landing**	**3.78**	**348**			**Pn**	**03 20 05.4**	**+0.3**
O22K	**Cooper Landing**	**3.78**	**348**	P		**Pn**	**03 20 05.4**	**+0.3**
	baz=166							
KAHG	**Katmai Hook Gl**	**3.86**	**299**			**Pn**	**03 20 07.0**	**+0.7**
SLKM	**Skilak Lake**	**3.87**	**344**			**Pn**	**03 20 06.1**	**-0.4**
P19K	**Oil Pt**	**3.94**	**318**			**Pn**	**03 20 07.8**	**+0.4**
P19K	**Oil Pt**	**3.94**	**318**	P		**Pn**	**03 20 07.8**	**+0.4**
	baz=135							
EYAK	**Cordova Ski Ar**	**3.94**	**17**			**Pn**	**03 20 06.8**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.94**	**17**	P		**Pn**	**03 20 07.4**	**+0.1**
EYAK	**Cordova Ski Ar**	**3.94**	**17**	P		**Pn**	**03 20 06.8**	**-0.6**
	baz=197							
SUCK	**Suckling Hills**	**3.98**	**33**			**Pn**	**03 20 07.0**	**-0.9**
RAGM	**Ragged Mountai**	**4.00**	**25**			**Pn**	**03 20 07.7**	**-0.5**
O20K	**Slope Mountain**	**4.05**	**326**			**Pn**	**03 20 08.9**	**-0.1**
O20K	**Slope Mountain**	**4.05**	**326**	P		**Pn**	**03 20 07.9**	**-1.1**
	baz=142							
NICHA	**Nichawak Mount**	**4.06**	**30**			**Pn**	**03 20 08.1**	**-0.9**
HMT	**Hamilton**	**4.06**	**28**			**Pn**	**03 20 08.0**	**-1.0**
IVE	**Iliamna Volcan**	**4.13**	**323**			**Pn**	**03 20 09.3**	**-0.8**
KAHC	**Katmai Hardscr**	**4.14**	**299**			**Pn**	**03 20 10.1**	**-0.1**
KAHC	**Katmai Hardscr**	**4.14**	**299**	P		**Pn**	**03 20 10.1**	**-0.1**
	baz=115							
GOAT	**Goat Mountain**	**4.17**	**23**			**Pn**	**03 20 09.7**	**-0.8**
BGLC	**Bering Glacier**	**4.17**	**35**			Pn	**03 20 07.8**	**-2.6**
BGLC	**Bering Glacier**	**4.17**	**35**	P		Pn	**03 20 07.8**	**-2.6**
	baz=217							
BERG	**Berg Lake**	**4.26**	**31**			**Pn**	**03 20 10.7**	**-1.0**
CAPN	**Captain Cook N**	**4.28**	**339**			**Pn**	**03 20 13.3**	**+1.4**
SNH	**Sunshine Point**	**4.36**	**37**			**Pn**	**03 20 12.1**	**-1.1**
RED	**Redoubt Volcan**	**4.37**	**328**			**Pn**	**03 20 12.6**	**-0.7**
RC01	**Rabbit Creek A**	**4.37**	**349**			**Pn**	**03 20 13.2**	**-0.1**
RC01	**Rabbit Creek A**	**4.37**	**349**	P		**Pn**	**03 20 13.2**	**-0.1**
	baz=167							
RDSO	**Redoubt South**	**4.39**	**328**			**Pn**	**03 20 13.0**	**-0.6**
RDT	**Redoubt**	**4.39**	**331**			**Pn**	**03 20 13.4**	**-0.2**
RSO	**Redoubt South**	**4.40**	**328**			**Pn**	**03 20 14.3**	**+0.4**
KHIT	**Khitrov Hills**	**4.43**	**33**			**Pn**	**03 20 13.1**	**-1.1**
CNTC	**Contact Creek**	**4.45**	**292**			**Pn**	**03 20 14.6**	**+0.2**
Q17K	**Contact Creek**	**4.45**	**292**	P		**Pn**	**03 20 14.6**	**+0.1**
	baz=107							
FIS	**Fire Island**	**4.48**	**347**			**Pn**	**03 20 14.6**	**-0.1**
DFR	**Drift River**	**4.49**	**330**			**Pn**	**03 20 14.8**	**-0.1**
NCT	**North Crescent**	**4.53**	**328**			**Pn**	**03 20 15.2**	**-0.3**
BMRM	**Bremner River**	**4.54**	**22**			**Pn**	**03 20 14.8**	**-0.8**
BMRM	**Bremner River**	**4.54**	**22**	P		**Pn**	**03 20 14.8**	**-0.8**
	baz=203							
WAX	**Waxell Ridge**	**4.56**	**35**			**Pn**	**03 20 14.6**	**-1.3**
P18K	**Big Mountain,**	**4.59**	**307**			**Pn**	**03 20 15.7**	**-0.6**
P18K	**Big Mountain,**	**4.59**	**307**	P		**Pn**	**03 20 15.7**	**-0.6**
	baz=122							
KNK	**Knik Glacier**	**4.62**	**358**			**Pn**	**03 20 17.1**	**+0.4**
MESA	**MESA**	**4.66**	**41**			**Pn**	**03 20 16.3**	**-1.2**
O19K	**Port Alsworth**	**4.71**	**319**			**Pn**	**03 20 17.9**	**0.0**
CRQM	**Cirque**	**4.72**	**31**			**Pn**	**03 20 17.3**	**-1.0**
KLU	**Klutina**	**4.82**	**12**			**Pn**	**03 20 19.5**	**-0.1**
KLU	**Klutina**	**4.82**	**12**	P		**Pn**	**03 20 19.5**	**-0.1**
	baz=193							
PMR	**Palmer**	**4.82**	**354**			**Pn**	**03 20 19.6**	**+0.2**
PMR	**Palmer**	**4.82**	**354**	P		**Pn**	**03 20 21.2**	**+1.7**
O18K	**Koktuh Hills**	**4.83**	**312**			**Pn**	**03 20 19.4**	**-0.3**
O18K	**Koktuh Hills**	**4.83**	**312**	P		**Pn**	**03 20 19.4**	**-0.3**
	baz=127							
BAGL	**Bagley Icefiel**	**4.84**	**38**			**Pn**	**03 20 18.2**	**-1.4**
ISLE	**Juniper Island**	**4.84**	**36**			**Pn**	**03 20 18.4**	**-1.5**
SUA	**Susitna One**	**4.86**	**345**			**Pn**	**03 20 20.0**	**-0.1**
SUA	**Susitna One**	**4.86**	**345**	P		**Pn**	**03 20 20.0**	**-0.1**
	baz=162							
N20K	**Mount Spurr**	**4.89**	**336**	P		**Pn**	**03 20 20.4**	**0.0**
	baz=152							
SPCR	**Spurr Chakacha**	**4.89**	**336**			**Pn**	**03 20 19.9**	**-0.5**
SPCP	**Crater Peak Br**	**4.94**	**337**			**Pn**	**03 20 21.0**	**-0.2**
GHO	**Glory Hole Cre**	**4.99**	**355**			**Pn**	**03 20 22.3**	**+0.4**
SML	**Sawmill**	**5.01**	**359**			**Pn**	**03 20 22.5**	**+0.3**
SML	**Sawmill**	**5.01**	**359**	P		**Pn**	**03 20 22.5**	**+0.3**
	baz=178							
VRDI	**Verde Repeater**	**5.03**	**26**			**Pn**	**03 20 21.3**	**-1.3**
P17K	**Kvichak River**	**5.04**	**302**			**Pn**	**03 20 22.8**	**+0.3**
P17K	**Kvichak River**	**5.04**	**302**	P		**Pn**	**03 20 22.8**	**+0.3**
	baz=116							
SCM	**Sheep Creek Mo**	**5.05**	**4**			**Pn**	**03 20 23.1**	**+0.4**
SCM	**Sheep Creek Mo**	**5.05**	**4**	P		**Pn**	**03 20 23.1**	**+0.4**
	baz=184							
STLK	**Strandline Lak**	**5.08**	**339**			**Pn**	**03 20 23.4**	**+0.3**
KIAG	**Kiagna River**	**5.08**	**33**			**Pn**	**03 20 21.7**	**-1.5**
N25K	**Chitina, Valde**	**5.13**	**19**			**Pn**	**03 20 23.3**	**-0.5**
N25K	**Chitina, Valde**	**5.13**	**19**	P		**Pn**	**03 20 23.4**	**-0.5**
	baz=200							
TABL	**Table Mountain**	**5.14**	**42**			**Pn**	**03 20 22.5**	**-1.5**
GLB	**Gilahina Butte**	**5.14**	**24**			**Pn**	**03 20 23.2**	**-0.6**
N19K	**Bonanza Creek**	**5.21**	**323**			**Pn**	**03 20 25.0**	**+0.2**
N19K	**Bonanza Creek**	**5.21**	**323**	P		**Pn**	**03 20 25.0**	**+0.2**
	baz=138							
PTPK	**Patty Peak**	**5.26**	**31**			**Pn**	**03 20 24.5**	**-1.2**
PCA	**Pinnacle**	**5.27**	**48**			**Pn**	**03 20 24.0**	**-1.6**
PINM	**Pinnacle**	**5.27**	**48**	P		**Pn**	**03 20 24.0**	**-1.6**
	baz=233							
MCARA	**McCarthy VSAT**	**5.27**	**28**			**Pn**	**03 20 25.0**	**-0.7**
MCARA	**McCarthy VSAT**	**5.27**	**28**	P		**Pn**	**03 20 25.0**	**-0.7**
	baz=210							
M24K	**Tolsona, Glenn**	**5.40**	**10**			**Pn**	**03 20 27.7**	**+0.3**
M24K	**Tolsona, Glenn**	**5.40**	**10**	P		**Pn**	**03 20 27.7**	**+0.3**
	baz=190							
BARN	**Barnard Glacie**	**5.40**	**35**			**Pn**	**03 20 26.7**	**-1.0**
PNL	**Peninsula**	**5.41**	**54**			**Pn**	**03 20 25.5**	**-2.0**
PNL	**Peninsula**	**5.41**	**54**	P		**Pn**	**03 20 26.3**	**-1.3**
PNL	**Peninsula**	**5.41**	**54**	P		**Pn**	**03 20 25.5**	**-2.0**
	baz=240							
CTG	**Chitna Glacier**	**5.44**	**37**	P		**Pn**	**03 20 27.0**	**-1.0**
	baz=221							
CTGM	**Chitina Glacie**	**5.44**	**37**			**Pn**	**03 20 27.0**	**-1.1**
BCPM	**Bancas Point**	**5.45**	**51**			**Pn**	**03 20 26.6**	**-1.5**
LOGN	**Logan Glacier**	**5.45**	**39**			**Pn**	**03 20 26.9**	**-1.4**
SKT	**Skwentna**	**5.47**	**343**			**Pn**	**03 20 28.7**	**+0.3**
N18K	**Kilae Creek**	**5.62**	**317**			Pn	03 20 29.1	-1.3
N18K	**Kilae Creek**	**5.62**	**317**	P		**Pn**	**03 20 29.8**	**-0.6**
	baz=131							
P16K	**Nushagak River**	**5.73**	**297**			**Pn**	**03 20 31.1**	**-0.7**
P16K	**Nushagak River**	**5.73**	**297**	P		**Pn**	**03 20 31.1**	**-0.7**
	baz=110							
SVW2	**Sparrevohn**	**5.79**	**321**	Pn		Pn	03 20 31.4	-1.3
SVW2	**Sparrevohn**	**5.79**	**321**	P		**Pn**	**03 20 32.3**	**-0.4**
O16K	**Kokwok River B**	**5.98**	**302**			**Pn**	**03 20 35.4**	**0.0**
N17K	**Nushagak Hills**	**6.03**	**312**			**Pn**	**03 20 35.4**	**-0.6**
N17K	**Nushagak Hills**	**6.03**	**312**	P		**Pn**	**03 20 35.7**	**-0.4**
	baz=125							
M19K	**Big River Lodg**	**6.04**	**330**			**Pn**	**03 20 36.3**	**+0.1**
M19K	**Big River Lodg**	**6.04**	**330**	P		**Pn**	**03 20 36.3**	**+0.1**
	baz=145							
O29M	**Mount Kennedy**	**6.08**	**51**			**Pn**	**03 20 35.9**	**-1.0**
M18K	**Stony River**	**6.15**	**323**			**Pn**	**03 20 37.2**	**-0.5**
M18K	**Stony River**	**6.15**	**323**	P		**Pn**	**03 20 37.4**	**-0.2**
	baz=137							
P29M	**Windy Craggy**	**6.15**	**58**			Pn	03 20 34.8	-3.0
P29M	**Windy Craggy**	**6.15**	**58**	P		Pn	03 20 34.8	-3.0
	baz=246							
DHY	**Denali Highway**	**6.29**	**3**			**Pn**	**03 20 40.9**	**+1.1**
L19K	**White Mountain**	**6.39**	**330**			**Pn**	**03 20 40.8**	**-0.3**
L19K	**White Mountain**	**6.39**	**330**	P		**Pn**	**03 20 40.8**	**-0.3**
	baz=144							
M27K	**Edge Creek, AK**	**6.39**	**27**			**Pn**	**03 20 40.8**	**-0.3**
M27K	**Edge Creek, AK**	**6.39**	**27**	P		**Pn**	**03 20 40.8**	**-0.3**
	baz=211							
S31K	**Pelican**	**6.51**	**75**			Pn	03 20 37.8	-4.8
S31K	**Pelican**	**6.51**	**75**	P		Pn	03 20 38.9	-3.7
	baz=263							
MENT	**Mentasta**	**6.52**	**18**			**Pn**	**03 20 43.3**	**+0.4**
RND	**Reindeer**	**6.63**	**357**			**Pn**	**03 20 45.6**	**+1.3**
M17K	**Holitna River**	**6.66**	**318**			**Pn**	**03 20 44.2**	**-0.4**
M17K	**Holitna River**	**6.66**	**318**	P		**Pn**	**03 20 44.2**	**-0.4**
	baz=130							
N16K	**Nishlik Lake**	**6.67**	**308**			**Pn**	**03 20 44.4**	**-0.5**
N16K	**Nishlik Lake**	**6.67**	**308**	P		**Pn**	**03 20 44.4**	**-0.5**
	baz=119							
O15K	**Ungalikthiuk R**	**6.67**	**296**			**Pn**	**03 20 44.5**	**-0.4**
O15K	**Ungalikthiuk R**	**6.67**	**296**	P		**Pn**	**03 20 44.5**	**-0.4**
	baz=107							
P30M	**Million Dollar**	**6.71**	**56**			**Pn**	**03 20 43.9**	**-1.6**
P30M	**Million Dollar**	**6.71**	**56**	P		**Pn**	**03 20 43.9**	**-1.6**
	baz=244							
TRF	**Thorofare Moun**	**6.75**	**352**			**Pn**	**03 20 46.5**	**+0.4**
KTH	**Kantishna Hill**	**6.91**	**349**			**Pn**	**03 20 49.1**	**+0.9**
CAST	**Castle Rocks**	**6.92**	**345**			**Pn**	**03 20 48.4**	**+0.1**
CAST	**Castle Rocks**	**6.92**	**345**	P		**Pn**	**03 20 48.4**	**+0.1**
	baz=161							
SIT	**Sitka**	**6.99**	**83**			Pn	03 20 43.9	-5.2
SIT	**Sitka**	**6.99**	**83**	P		Pn	03 20 43.9	-5.3
SIT	**Sitka**	**6.99**	**83**	P		Pn	03 20 43.9	-5.2
	baz=272							
K20K	**Telida**	**7.21**	**338**			**Pn**	**03 20 54.0**	**+1.7**
SKAG	**Skagway**	**7.25**	**63**	P		Pn	03 20 48.8	-4.0
TTA	**Tatalina**	**7.31**	**330**	P		**Pn**	**03 20 53.7**	**0.0**
S32K	**Killisnoo**	**7.38**	**79**			Pn	03 20 50.4	-4.1
S32K	**Killisnoo**	**7.38**	**79**	P		Pn	03 20 50.4	-4.1
	baz=269							
L17K	**Donlin**	**7.45**	**320**			**Pn**	**03 20 55.0**	**-0.4**
M29M	**Somme Creek**	**7.46**	**37**			**Pn**	**03 20 55.6**	**-0.1**
N14K	**Kuskokwak Cree**	**7.80**	**299**			**Pn**	**03 21 01.1**	**+0.9**
CCB	**Clear Creek Bu**	**7.86**	**1**			**Pn**	**03 21 01.8**	**+0.7**
N31M	**Braeburn, Yuko**	**7.87**	**48**	Pn		**Pn**	**03 21 00.1**	**-1.2**
WHY	**Whitehorse**	**7.87**	**55**			**Pn**	**03 21 00.3**	**-1.2**
IL31		**8.01**	**4**			**Pn**	**03 21 04.6**	**+1.5**
ILAR	**Eielson Array**	**8.01**	**4**	Pn		Pn	03 20 59.6	-3.5
	comp=N,0.1nm,0.3s,baz=191,slow=12,SNR=4.4							
ILAR						Sn	03 22 20.2	-13
	baz=6.5,slow=17							
J26L	**Joseph Creek**	**8.03**	**14**			**Pn**	**03 21 03.9**	**+0.4**
L29M	**L29M**	**8.04**	**34**			**Pn**	**03 21 03.5**	**-0.2**
COLA	**College**	**8.09**	**1**	P		**Pn**	**03 21 04.5**	**+0.3**
M30M	**Minto, Yukon**	**8.12**	**40**			**Pn**	**03 21 03.5**	**-1.2**
MDM	**Murphy Dome**	**8.18**	**360**			**Pn**	**03 21 05.8**	**+0.3**
MLY	**Manley**	**8.35**	**352**			**Pn**	**03 21 08.2**	**+0.4**
CRAG	**Craig**	**8.46**	**93**	P		Pn	03 21 04.1	-5.3
P33M	**Teslin, Yukon**	**8.68**	**61**			**Pn**	**03 21 10.6**	**-1.9**
P33M	**Teslin, Yukon**	**8.68**	**61**	P		**Pn**	**03 21 10.6**	**-1.9**
	baz=252							
FALS	**False Pass**	**8.85**	**264**	P		Pn	03 21 08.8	-5.9
DLBC	**Dease Lake**	**9.82**	**73**	Pn		**Pn**	**03 21 26.2**	**-1.9**
	comp=N,0.7nm,0.3s,baz=268,slow=11,SNR=9.7							
DLBC						**Sn**	**03 23 14.1**	**-4.2**
	comp=N,0.1nm,0.3s,baz=11,slow=16,SNR=1.4							
DLBC					LR	LR	03 24 38.5	
	comp=N,134nm,18.6s,baz=344,slow=34							
BBB	**Bella Bella**	**12.48**	**103**		LR	LR	03 25 42.7	
	com

	baz=317							
NNSH	**Datong**	**0.43**	**318**	P		Pg	03 20 26.3	+0.6
	baz=317							
FUSS	**Fushou**	**0.44**	**289**	*e*P		Pb	03 20 27.4	+0.3
	baz=288							
NNS	**Nan Shan**	**0.45**	**318**	*e*P		Pb	03 20 27.1	-0.1
	baz=318							
LATG	**Datong**	**0.45**	**340**	P		Pb	03 20 27.0	-0.3
	baz=339							
CHGB	**Renai**	**0.48**	**264**	P		Pb	03 20 28.0	+0.1
	baz=264							
WARBT	**Fenglin Townsh**	**0.48**	**217**	*e*P		Pb	03 20 27.7	-0.1
	baz=216							
NDT	**Datong Townshi**	**0.52**	**341**	P		Pb	03 20 28.4	-0.1
	baz=340							
WUSB	**Renai**	**0.55**	**258**	*e*P		Pb	03 20 28.6	-0.3
	baz=257							
VWDT	**VWDT**	**0.62**	**236**	*e*P		Pb	03 20 30.5	+0.4
	baz=235							
YHNB	**Yeheng**	**0.63**	**332**	*e*P		Pb	03 20 30.8	+0.4
	baz=332							
FUSB	**Fushanzhiwuyua**	**0.66**	**351**	*e*P		Pb	03 20 30.7	-0.1
	baz=350							

*SKHL **09** 03:30:56.9±0.2, 43.°50N×145.°30E, h132km±4km, mb4.3/2, msha4.8/2*
*JMA **09** 03:30:56.5±0.2, 43.°6N±0.°6×145.°3E±0.°9, h134km±1km, MV2.5/36, NEMURO REGION*
ISC 09 03:30:56.9±3.0, **43.°58N**±0.°07×**145.°25E**±0.°08, **h132**km±17km, **n16**, σ0^{s}**40**/29, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNSB	**Nemuroshibetsu**	**0.26**	**317**	P			**Pn**	**03 31 15.3**	**+0.2**
JNSB					*e*S		**Sn**	**03 31 29.4**	**+0.5**
JRA	**Rausu**	**0.37**	**346**	P			**Pn**	**03 31 15.3**	**-0.1**
JRA					*e*S		**Sn**	**03 31 29.2**	**-0.3**
JNK	**Nakash**	**0.39**	**271**	*e*P			**Pn**	**03 31 15.6**	**+0.1**
JNK					*e*S		**Sn**	**03 31 29.5**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.41**	**121**	*e*P			**Pn**	**03 31 15.5**	**-0.1**
NMR					AMB		AMB	03 31 15.7	
	50nm,0.2s								
NMR					*e*S		**Sn**	**03 31 29.3**	**-0.5**
NMR					A		A	03 31 29.6	
	290nm,0.3s								
NMR					A		A	03 31 29.6	
	100nm,0.3s								
NEM2	**Nemuro 2**	**0.42**	**121**	P			**Pn**	**03 31 15.5**	**-0.2**
NEM2					*e*S		**Sn**	**03 31 29.2**	**-0.7**
JKHN	**Kushirohamanak**	**0.50**	**187**	*e*P			**Pn**	**03 31 16.4**	**+0.2**
JKHN					*e*S		**Sn**	**03 31 31.0**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**0.63**	**44**	*e*P			**Pn**	**03 31 17.2**	**+0.3**
YUK					AMB		AMB	03 31 17.5	
	220nm,0.3s								
YUK					*e*S		**Sn**	**03 31 32.6**	**+0.5**
YUK					A		A	03 31 39.9	
	120nm,0.2s								
YUK					A		A	03 31 39.9	
	90nm,0.2s								
AKK	**Akkeshi**	**0.64**	**208**	*e*P			**Pn**	**03 31 16.9**	**-0.1**
AKK					*e*S		**Sn**	**03 31 31.9**	**-0.2**
JAK	**Akkeshi**	**0.71**	**215**	*e*P			**Pn**	**03 31 17.6**	**+0.1**
JAK					*e*S		**Sn**	**03 31 33.3**	**+0.2**
JTKR	**Abashiri--Toko**	**1.04**	**292**	*e*P			**Pn**	**03 31 20.1**	**-0.2**
JTKR					*e*S		**Sn**	**03 31 37.3**	**-0.8**
JAR	**Ashorobuto**	**1.11**	**256**	*e*P			**Pn**	**03 31 21.5**	**+0.5**
JAR					*e*S		**Sn**	**03 31 39.7**	**+0.4**
JOB	**Onbets**	**1.24**	**237**	*e*P			**Pn**	**03 31 22.7**	**+0.5**
JOB					*e*S		**Sn**	**03 31 41.5**	**0.0**
JMP	**Maruseppu**	**1.43**	**288**	*e*P			**Pn**	**03 31 24.1**	**-0.2**
JCH	**Churui**	**1.69**	**236**	*e*P			**Pn**	**03 31 27.2**	**0.0**
JCH					*e*S		**Sn**	**03 31 49.4**	**-0.9**
JKK2	**Kamakawa 2**	**1.84**	**280**	*e*P			**Pn**	**03 31 29.0**	**+0.1**
ASAJ	**Asahikawa**	**1.99**	**286**	*e*P			**Pn**	**03 31 31.1**	**+0.3**

*IDC **09** 03:55:56.9±0.8, 23.°94N×121.°63E, h0km, mb3.7/10, mbtmp3.7/11, ML3.7/1, MS3.7/1, Error ellipse: s-maj=28.2km s-min=17.2km az=66.0*
*TAP **09** 03:56:01.1, 23.°92N×121.°60E, h23km, ML4.1, B*
*ASIES **09** 03:56:01.1, 23.°92N×121.°60E, h23km, ML4.1, Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr2.43; Mθθ-1.92; Mφφ-0.52; Mrθ0.93; Mφθ-1.64; Mrφ4.52; Fault plane solution: M0 5.38263×10^{21} NP1 φ=21.10000°, δ77.16000°, λ70.15000°. NP2 φ=259.49000°, δ23.49000°, λ146.14000°. Principal axes: T Plg53.6630°, Azm267.1990°; N Plg19.3290°, Azm25.6790°; P Plg29.4380°, Azm127.0960°;*
*JMA **09** 03:56:02.1±0.1, 24.°0N±0.°3×121.°7E±0.°7, h22km, MV3.8/14, TAIWAN REGION*
ISC 09 03:56:01.0±0.7, **23.°92N**±0.°01×**121.°64E**±0.°02, **h25**km±4km, **n199**, σ0^{s}**87**/278, **mb3.7**/10, **15C-30D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**333**	*i* P			**Pb**	**03 56 05.6**	**0.0**
HWA					S		**Sb**	**03 56 09.1**	**+0.6**
	baz=17								
ETM	**Tongmen**	**0.14**	**291**	⇓*i*P			**Pb**	**03 56 05.8**	**-0.4**
	baz=290								
ETM					S		**Sb**	**03 56 08.7**	**-0.9**
	baz=290								
SHUL	**Shoufeng**	**0.14**	**209**	P			**Pb**	**03 56 06.4**	**+0.3**
	baz=183								
SHUL					*i* S		**Sb**	**03 56 10.7**	**+1.2**
	baz=183								
TWD	**Chiawan**	**0.17**	**346**	⇑*i*P			**Pb**	**03 56 06.3**	**-0.1**
	baz=356								
TWD					*i* S		**Sb**	**03 56 10.0**	**0.0**
	baz=356								
ESL	**Shilin**	**0.21**	**242**	⇓*i*P			**Pb**	**03 56 06.5**	**-0.5**
	baz=242								
ESL					S		**Sb**	**03 56 09.9**	**-1.0**
	baz=242								
TEGC	**Jichi Village**	**0.22**	**204**	P			**Pb**	**03 56 07.3**	**+0.3**
	baz=181								
TEGC					S		**Sb**	**03 56 12.0**	**+0.9**
	baz=181								
LXIB	**Xiulin Townshi**	**0.23**	**297**	⇓*i*P			**Pb**	**03 56 06.6**	**-0.7**
	baz=302								
LXIB					S		**Sb**	**03 56 10.7**	**-0.9**
	baz=302								
ETL	**Fush Village**	**0.24**	**356**	⇑P			**Pb**	**03 56 07.3**	**0.0**
ETL					S		**Sb**	**03 56 11.7**	**+0.1**
NACB	**Ninganchiao**	**0.26**	**351**	P			**Pb**	**03 56 07.7**	**+0.1**
NACB	**Ninganchiao**	**0.26**	**351**	⇓*i*P			**Pb**	**03 56 07.4**	**-0.1**
	baz=354								
NACB					S		**Sb**	**03 56 11.7**	**-0.3**
	baz=354								
WARBT	**Fenglin Townsh**	**0.30**	**230**	⇓*i*P			**Pb**	**03 56 07.6**	**-0.5**
	baz=234								
WARBT					*i* S		**Sb**	**03 56 11.9**	**-1.1**
	baz=234								
EGFH	**Guangfu**	**0.31**	**219**	*e*P			**Pb**	**03 56 08.1**	**-0.2**
	baz=221								
ETLH	**Xiulin Townshi**	**0.33**	**334**	⇓*i*P			**Pb**	**03 56 08.2**	**-0.4**
	baz=339								
ETLH					S		**Sb**	**03 56 13.3**	**-0.3**
	baz=339								
EHP	**Heping Village**	**0.40**	**13**	*e*P			**Pn**	**03 56 10.4**	**-0.9**
	baz=21								
EHP					*e*S		**Sn**	**03 56 17.0**	**-1.0**
	baz=21								
WHF	**Hehuan Shan**	**0.41**	**304**	⇓*i*P			**Pb**	**03 56 09.5**	**-0.6**
	baz=301								
WHF					S		**Sb**	**03 56 15.3**	**-1.0**
	baz=301								
EAHA	**Aohua**	**0.42**	**12**	⇑*e*P			**Pb**	**03 56 10.3**	**+0.3**
	baz=11								
EAHA					*e*S		**Sn**	**03 56 17.6**	**-0.9**
	baz=11								
OWD	**Renai**	**0.43**	**275**	⇓*i*P			**Pb**	**03 56 09.6**	**-0.6**
	baz=280								
CHGB	**Renai**	**0.45**	**289**	⇓*i*P			**Pb**	**03 56 10.2**	**-0.4**
	baz=291								
CHGB					*i* S		**Sb**	**03 56 16.5**	**-0.6**
	baz=291								
HGSD	**Ruisui**	**0.47**	**205**	*e*P			**Pb**	**03 56 11.2**	**+0.6**
	baz=214								
VWDT	**VWDT**	**0.48**	**251**	⇓*i*P			**Pb**	**03 56 10.9**	**-0.1**
	baz=250								
VWDT					*i* S		**Sb**	**03 56 17.3**	**-0.5**
	baz=250								
WUSB	**Renai**	**0.48**	**279**	⇓*i*P			**Pb**	**03 56 10.7**	**-0.4**
	baz=287								
WUSB					*i* S		**Sb**	**03 56 16.9**	**-1.0**
	baz=287								
FUSS	**Fushou**	**0.49**	**313**	⇓*i*P			**Pb**	**03 56 11.0**	**-0.3**
	baz=323								
FUSS					*i* S		**Sb**	**03 56 17.7**	**-0.6**
	baz=323								
EHY	**Hungye**	**0.50**	**216**	⇑*i*P			**Pb**	**03 56 10.4**	**-0.9**
	baz=223								
ENA	**Nanau**	**0.52**	**10**	⇓*i*P			**Pb**	**03 56 11.8**	**+0.2**
	baz=7.0								
ENA					S		**Sn**	**03 56 19.5**	**-1.4**
	baz=7.0								
TWT	**Tachien**	**0.54**	**309**	⇓*i*P			**Pb**	**03 56 12.1**	**0.0**
	baz=305								
TWT					S		**Sb**	**03 56 19.3**	**-0.3**
	baz=305								
EWUT	**Wuta**	**0.54**	**13**	P			**Pb**	**03 56 12.4**	**+0.4**
	baz=10.0								
EWUT					S		**Sn**	**03 56 20.2**	**-1.3**
	baz=10.0								
TDCB	**Techi**	**0.56**	**308**	⇓*i*P			**Pb**	**03 56 12.1**	**-0.2**
	baz=305								
TDCB					*i* S		**Sb**	**03 56 19.2**	**-0.8**
	baz=305								
NNSB	**Datong**	**0.56**	**335**	⇓*i*P			**Pb**	**03 56 12.3**	**-0.2**
	baz=339								
NNSB					*i* S		**Sb**	**03 56 19.6**	**-0.6**
	baz=339								
NNSH	**Datong**	**0.56**	**335**	⇓*i*P			**Pb**	**03 56 12.3**	**-0.2**
	baz=338								
NNSH					S		**Sb**	**03 56 19.6**	**-0.5**
	baz=338								
NNS	**Nan Shan**	**0.58**	**335**	⇓*i*P			**Pb**	**03 56 12.5**	**-0.2**
	baz=339								
NNS					*i* S		**Sb**	**03 56 20.2**	**-0.4**
	baz=339								
YULB	**Yu-li**	**0.61**	**211**	P			**Pb**	**03 56 13.3**	**+0.2**
YULB	**Yu-li**	**0.61**	**211**	⇑*e*P			**Pb**	**03 56 12.0**	**-1.1**
	baz=207								
ECBN	**Changbin**	**0.62**	**196**	⇓P			**Pb**	**03 56 13.7**	**+0.4**
	baz=206								
ECBN					*e*S		**Sn**	**03 56 24.0**	**+0.6**
	baz=206								
LATG	**Datong**	**0.63**	**350**	⇓*i*P			**Pb**	**03 56 13.3**	**-0.2**
	baz=353								
LATG					*e*S		**Sb**	**03 56 21.2**	**-0.8**
	baz=353								
WPL	**Puli Township**	**0.63**	**279**	*e*P			**Pb**	**03 56 13.0**	**-0.5**
	baz=287								
EYUL	**Yuli**	**0.64**	**208**	*e*P			**Pb**	**03 56 13.4**	**-0.1**
	baz=217								
SSLB	**Suanglung**	**0.64**	**259**	P			**Pb**	**03 56 13.3**	**-0.4**
SSLB	**Suanglung**	**0.64**	**259**	⇑P			**Pb**	**03 56 13.2**	**-0.4**
	baz=266								
SSLB					*i* S		**Sb**	**03 56 20.9**	**-1.4**
	baz=266								
TWF1	**Yuli**	**0.64**	**209**	⇑P			**Pb**	**03 56 12.6**	**-1.1**
	baz=217								
EOS4	**EOS4**	**0.65**	**72**	*e*P			**Pn**	**03 56 14.6**	**+0.3**
	baz=73								
DPDB	**Guoxing**	**0.66**	**280**	*e*P			**Pb**	**03 56 13.7**	**-0.3**
	baz=281								
DPDB					*e*S		**Sb**	**03 56 22.6**	**-0.3**
	baz=281								
SMLT	**Sun Moon Lake**	**0.68**	**267**	⇓*i*P			**Pb**	**03 56 14.0**	**-0.3**
	baz=272								
SMLT					*i* S		**Sb**	**03 56 22.6**	**-0.8**
	baz=272								
WCS	**Beigang Elemen**	**0.68**	**282**	⇓P			**Pb**	**03 56 14.1**	**-0.3**
	baz=283								
ESAO	**Su ao**	**0.68**	**16**	*e*P			**Pn**	**03 56 14.9**	**-0.2**
	baz=14								
NDT	**Datong Townshi**	**0.69**	**350**	*e*P			**Pb**	**03 56 14.5**	**-0.1**
	baz=353								
NDT					*e*S		**Sb**	**03 56 23.1**	**-0.7**
	baz=353								
TWC	**Suao**	**0.72**	**15**	*e*P			**Pn**	**03 56 15.3**	**-0.3**
	baz=14								
TWC					*e*S		**Sn**	**03 56 25.5**	**-0.3**
	baz=14								
TYC	**Yuchr**	**0.72**	**269**	⇓P			**Pb**	**03 56 14.5**	**-0.4**
	baz=274								
TYC					S		**Sb**	**03 56 23.2**	**-1.1**
	baz=274								
NDS	**Dongshan**	**0.72**	**5**	*e*P			**Pb**	**03 56 15.1**	**+0.1**
	baz=360								
NDS					*e*S		**Sn**	**03 56 25.0**	**-0.9**
	baz=360								
EOS3	**EOS3**	**0.72**	**59**	*e*P			**Pn**	**03 56 16.2**	**+0.7**
	baz=58								
ENTT	**Nioudou**	**0.72**	**355**	⇓P			**Pb**	**03 56 14.9**	**-0.1**
	baz=358								
ENTT					S		**Sb**	**03 56 24.6**	**0.0**
	baz=358								
WHP	**Taichung City**	**0.73**	**300**	⇓P			**Pb**	**03 56 15.1**	**-0.1**
	baz=297								
WHP					S		**Sb**	**03 56 24.6**	**-0.3**
	baz=297								
EOS2	**EOS2**	**0.74**	**47**	*e*P			**Pn**	**03 56 17.0**	**+1.3**
	baz=59								
WHYT	**Xinyi Township**	**0.75**	**253**	*e*P			**Pb**	**03 56 15.6**	**0.0**
	baz=253								
WHYT					*e*S		**Sb**	**03 56 24.7**	**-0.7**
	baz=253								
CHKH	**Chenggong**	**0.75**	**197**	⇑P			**Pb**	**03 56 15.6**	**+0.1**
	baz=192								
FULB	**Fuli**	**0.78**	**204**	*e*P			**Pb**	**03 56 16.1**	**+0.1**
	baz=214								
YHNB	**Yeheng**	**0.79**	**342**	P			**Pb**	**03 56 16.2**	**0.0**
YHNB	**Yeheng**	**0.79**	**342**	⇓*i*P			**Pb**	**03 56 16.0**	**-0.2**
	baz=343								
YHNB					S		**Sb**	**03 56 25.7**	**-0.9**
	baz=343								
NSK	**Sanguang**	**0.80**	**341**	⇓*i*P			**Pb**	**03 56 16.1**	**-0.3**
	baz=343								
NSK					S		**Sb**	**03 56 25.8**	**-1.0**
	baz=343								
TWE	**Neicheng**	**0.80**	**2**	*e*P			**Pb**	**03 56 16.3**	**-0.1**
	baz=5.0								
TWE					S		**Sb**	**03 56 27.0**	**+0.2**
	baz=5.0								
WJS	**Zhushan**	**0.84**	**264**	*e*P			**Pn**	**03 56 17.5**	**+0.2**
	baz=266								
WJS					*e*S		**Sn**	**03 56 28.9**	**+0.1**
	baz=266								
FUSB	**Fushanzhiwuyua**	**0.84**	**357**	*e*P			**Pn**	**03 56 17.1**	**-0.3**
	baz=347								
FUSB					*e*S		**Sb**	**03 56 27.3**	**-0.7**
	baz=347								
CHKT	**Chengkung**	**0.85**	**197**	P			**Pb**	**03 56 16.9**	**-0.3**
	baz=205								
CHKT					*e*S		**Sn**	**03 56 29.7**	**+0.7**
	baz=205								
NFF	**Wufeng Townshi**	**0.86**	**326**	*e*P			**Pb**	**03 56 17.2**	**-0.2**
	baz=326								
EHD	**Haiduan**	**0.86**	**208**	*e*P			**Pb**	**03 56 16.1**	**-1.3**
	baz=203								
ALS	**Alishan**	**0.86**	**242**	⇑*i*P			**Pb**	**03 56 17.6**	**0.0**
	baz=242								
ALS					S		**Sb**	**03 56 28.4**	**-0.5**
	baz=242								
NWLT	**Wulai**	**0.87**	**352**	P			**Pn**	**03 56 17.5**	**-0.2**
	baz=344								
NWLT					*e*S		**Sb**	**03 56 28.2**	**-0.6**
	baz=344								
WWF	**Wufeng**	**0.87**	**279**	*e*P			**Pn**	**03 56 18.3**	**+0.6**
	baz=281								
WNT	**Mingjian**	**0.88**	**268**	⇑P			**Pb**	**03 56 18.3**	**+0.5**
	baz=268								
WNT					S		**Sn**	**03 56 30.0**	**+0.3**
	baz=268								
WNT1	**Nantou City**	**0.88**	**270**	P			**Pn**	**03 56 18.5**	**+0.7**
	baz=271								
WNT1					S		**Sn**	**03 56 30.5**	**+0.7**
	baz=271								
ECS	**Chishang**	**0.90**	**205**	*e*P			**Pb**	**03 56 17.8**	**-0.2**
	baz=215								
TWQ1	**Liyutan**	**0.90**	**299**	⇓P			**Pn**	**03 56 18.6**	**+0.5**
	baz=308								
TWQ1					*i* S		**Sn**	**03 56 30.8**	**+0.4**
	baz=308								
TCU	**Taichung**	**0.91**	**285**	*e*P			**Pn**	**03 56 18.8**	**+0.6**
	baz=284								
TCU					*e*S		**Sn**	**03 56 32.4**	**+1.8**
	baz=284								
ELDTW	**Lidau**	**0.92**	**219**	P			**Pb**	**03 56 16.8**	**-1.6**
	baz=207								
ELDTW					*e*S		**Sb**	**03 56 30.6**	**+0.3**
	baz=207								
NSTT	**Nanjuang**	**0.92**	**321**	⇓*i*P			**Pn**	**03 56 18.7**	**+0.3**
	baz=322								
NSTT					S		**Sb**	**03 56 29.8**	**-0.4**
	baz=322								
LIOB	**Emei**	**0.92**	**322**	⇓P			**Pn**	**03 56 18.8**	**+0.3**
	baz=323								
LIOB					*e*S		**Sn**	**03 56 31.1**	**+0.2**
	baz=323								
CHN5	**Tsauling**	**0.94**	**250**	⇑*i*P			**Pn**	**03 56 19.2**	**+0.5**
	baz=241								
CHN5					S		**Sn**	**03 56 32.2**	**+0.9**
	baz=241								
NJD	**Zhudong**	**0.96**	**328**	*e*P			**Pn**	**03 56 20.1**	**+1.2**
	baz=328								
WYL	**Yuanlin Townsh**	**0.97**	**273**	*e*P			**Pn**	**03 56 20.0**	**+1.0**
	baz=261								
WYL					*e*S		**Sn**	**03 56 33.4**	**+1.3**
	baz=261								
EDH	**Donghe**	**0.99**	**198**	*e*P			**Pn**	**03 56 18.7**	**-0.6**
	baz=208								
NMLH	**Miaoli**	**0.99**	**309**	*e*P			**Pn**	**03 56 20.5**	**+1.1**
	baz=308								
WCHH	**Zhanghua**	**1.00**	**280**	*e*P			**Pb**	**03 56 20.5**	**+1.0**
	baz=280								
WCHH					*e*S		**Sn**	**03 56 34.5**	**+1.6**
	baz=280								
WDJ	**Dajia District**	**1.01**	**295**	*e*P			**Pn**	**03 56 20.5**	**+0.9**
	baz=296								
WDJ					*e*S		**Sn**	**03 56 34.1**	**+1.0**
	baz=296								
WGK	**Gukeng**	**1.01**	**257**	*e*P			**Pn**	**03 56 19.9**	**+0.3**
	baz=256								
WDLH	**Douliu**	**1.03**	**258**	*e*P			**Pn**	**03 56 20.2**	**+0.3**
	baz=259								
NHDH	**Xindian Distri**	**1.05**	**354**	*e*P			**Pb**	**03 56 20.8**	**+0.3**
	baz=352								
SBCB	**Hsinchu**	**1.06**	**326**	*e*P			**Pb**	**03 56 22.0**	**+1.3**
	baz=326								
SBCB					*e*S		**Sn**	**03 56 35.7**	**+1.5**
	baz=326								
WCKO	**Fanlu**	**1.06**	**244**	⇑*e*P			**Pb**	**03 56 21.2**	**+0.5**
	baz=256								
TWA	**Mucha**	**1.06**	**357**	*e*P			**Pb**	**03 56 20.9**	**+0.1**
	baz=357								
TWA					*e*S		**Sb**	**03 56 33.6**	**-0.6**
	baz=357								
TATO	**Taipei**	**1.06**	**353**	P			**Pb**	**03 56 21.3**	**+0.5**
TATO	**Taipei**	**1.06**	**353**	*e*P			**Pb**	**03 56 21.0**	**+0.2**
	baz=352								
TATO					*e*S		**Sn**	**03 56 34.5**	**+0.2**
	baz=352								
TIPB	**Shuangxi**	**1.07**	**9**	*e*P			**Pb**	**03 56 21.3**	**+0.4**
	baz=356								
HSN	**Hsinchu**	**1.07**	**325**	*e*P			**Pb**	**03 56 21.7**	**+0.8**
	baz=328								
HSN					*e*S		**Sn**	**03 56 35.9**	**+1.3**
	baz=328								
STYH	**Taoyuan**	**1.08**	**227**	*e*P			**Pn**	**03 56 21.0**	**+0.4**
	baz=217								
STYH					*e*S		**Sn**	**03 56 35.6**	**+0.8**
	baz=217								
STYT	**Tauyuan**	**1.10**	**227**	⇑P			**Pn**	**03 56 21.1**	**+0.2**
	baz=218								
STYT					*e*S		**Sb**	**03 56 36.0**	**+0.5**
	baz=218								
LONT	**Longtian**	**1.11**	**205**	*e*P			**Pn**	**03 56 19.4**	**-1.6**
	baz=184								
TPUB	**Ta-pu**	**1.11**	**237**	P			**Pb**	**03 56 22.0**	**+0.4**
TPUB	**Ta-pu**	**1.11**	**237**	P			**Pb**	**03 56 21.7**	**+0.1**
	baz=236								
TPUB					*e*S		**Sn**	**03 56 36.3**	**+0.8**
	baz=236								
CHN4	**Tsaushan**	**1.11**	**240**	⇑P			**Pb**	**03 56 21.8**	**+0.2**
	baz=231								
CHN4					*e*S		**Sn**	**03 56 38.0**	**+2.5**
	baz=231								
NTY	**Taoyuan**	**1.12**	**344**	*e*P			**Pb**	**03 56 22.2**	**+0.4**
	baz=342								
TAP	**Taipei**	**1.13**	**354**	*e*P			**Pb**	**03 56 22.2**	**+0.3**
	baz=351								
NCUH	**Zhongli**	**1.13**	**339**	*e*P			**Pb**	**03 56 22.8**	**+0.9**
	baz=338								
NCUH					*e*S		**Sn**	**03 56 38.5**	**+2.5**
	baz=338								
NCU	**National Centr**	**1.13**	**339**	*e*P			**Pb**	**03 56 22.3**	**+0.4**
	baz=338								
NCU					*e*S		**Sn**	**03 56 37.9**	**+1.9**
	baz=338								
CHN2	**Minshiung**	**1.13**	**251**	*e*P			**Pb**	**03 56 22.1**	**+0.1**
	baz=252								
TWB1	**Santiao Chiao**	**1.13**	**16**	*e*P			**Pb**	**03 56 22.1**	**+0.1**
TWB1					*e*S		**Sn**	**03 56 39.5**	**+3.4**
WTP	**Ta-pu**	**1.15**	**235**	⇑*i*P			**Pb**	**03 56 22.4**	**0.0**
	baz=235								
WTP					S		**Sn**	**03 56 38.0**	**+1.4**
	baz=235								
WRL	**Guolierlin Hig**	**1.16**	**270**	*e*P			**Pb**	**03 56 22.2**	**-0.1**
	baz=271								
NWF	**Wu-fen Shan**	**1.16**	**6**	*e*P			**Pb**	**03 56 22.3**	**-0.2**
	baz=7.0								
WFSB	**Wu-fen Shan**	**1.16**	**6**	*e*P			**Pb**	**03 56 22.1**	**-0.3**
	baz=6.0								
WFSB					*e*S		**Sn**	**03 56 38.6**	**+1.9**
	baz=6.0								
WTK	**Tuku**	**1.17**	**259**	*e*P			**Pb**	**03 56 22.7**	**+0.2**
	baz=260								
RLNB	**Erlin**	**1.17**	**269**	P			**Pb**	**03 56 22.6**	**0.0**
	baz=269								
RLNB					S		**Sb**	**03 56 38.8**	**+1.4**
	baz=269								
CHY	**Chiayi**	**1.19**	**250**	*e*P			**Pn**	**03 56 22.4**	**+0.3**
	baz=251								
SXI1	**Grass Mountain**	**1.19**	**10**	*e*P			**Pb**	**03 56 23.0**	**0.0**
	baz=353								
TWS1	**Kuangyinshan**	**1.20**	**350**	*e*P			**Pb**	**03 56 23.1**	**0.0**
	baz=1.0								
TWS1					S		**Sb**	**03 56 39.6**	**+1.5**
	baz=1.0								
TWGBT	**Beinan**	**1.21**	**205**	P			**Pn**	**03 56 20.8**	**-1.5**
TWGBT	**Beinan**	**1.21**	**205**	*e*P			**Pn**	**03 56 20.6**	**-1.7**
	baz=185								
TWG	**Pinlang**	**1.21**	**206**	*e*P			**Pn**	**03 56 20.6**	**-1.8**
	baz=185								
NHW	**Xinwu Township**	**1.21**	**334**	*e*P			**Pb**	**03 56 23.3**	**-0.1**
	baz=333								
NHW					*e

	baz=248								
YOJ	**Yonaguni jima**	**1.36**	**66**	P		**Pb**	**03 56 25.6**	**-0.3**	
YOJ	**Yonaguni jima**	**1.36**	**66**	P		**Pn**	**03 56 25.3**	**+0.9**	
	baz=69								
YOJ				*e*S		**Sb**	**03 56 43.1**	**+0.2**	
	baz=69								
YOJ	**Yonaguni jima**	**1.36**	**66**	P		**Pb**	**03 56 25.6**	**-0.3**	
YOJ				*e*S		**Sb**	**03 56 43.2**	**+0.2**	
CHN8	**Yiju**	**1.43**	**247**	*e*P		**Pn**	**03 56 26.3**	**+1.0**	
	baz=248								
CHN3	**Shinhua**	**1.44**	**235**	*e*P		**Pb**	**03 56 27.4**	**+0.2**	
	baz=236								
ECL	**Taimali**	**1.46**	**206**	*e*P		**Pn**	**03 56 24.9**	**-0.8**	
	baz=188								
SCST	**Cishan**	**1.47**	**226**	*e*P		**Pb**	**03 56 28.1**	**+0.5**	
	baz=228								
SHHT	**Tainan City**	**1.48**	**233**	*e*P		**Pb**	**03 56 28.5**	**+0.6**	
	baz=235								
SSD	**Sandimen**	**1.49**	**219**	*e*P		**Pn**	**03 56 26.5**	**+0.3**	
	baz=210								
TSMG	**Majia**	**1.51**	**217**	*e*P		**Pb**	**03 56 28.5**	**+0.1**	
	baz=219								
TWM1	**Shoushan**	**1.56**	**226**	*e*P		**Pb**	**03 56 29.4**	**+0.1**	
	baz=228								
MASBT	**Mashibuluo**	**1.59**	**216**	*e*P		**Pn**	**03 56 27.8**	**+0.2**	
	baz=218								
EAST	**Anshuo**	**1.69**	**206**	*e*P		**Pn**	**03 56 28.6**	**-0.4**	
	baz=191								
TAWH	**Dawu Township**	**1.71**	**204**	*e*P		**Pn**	**03 56 30.9**	**+1.6**	
	baz=188								
PCYT	**Pengchaiyu**	**1.75**	**13**	*e*P		**Pn**	**03 56 31.1**	**+1.2**	
	baz=351								
WSSB	**Gushan**	**1.79**	**225**	*e*P		**Pn**	**03 56 32.2**	**+1.8**	
	baz=227								
SCZT	**Fangliau**	**1.80**	**212**	*e*P		**Pn**	**03 56 31.6**	**+1.1**	
	baz=191								
SLIU	**Shizi**	**1.86**	**205**	*e*P		**Pb**	**03 56 33.4**	**-0.9**	
	baz=188								
LAY	**Lan-yu**	**1.87**	**183**	*e*P		**Pn**	**03 56 30.7**	**-0.8**	
	baz=177								
LYUB	**Lan-yu**	**1.91**	**182**	*e*P		**Pn**	**03 56 29.4**	**-2.5**	
	baz=177								
PHUB	**P'eng-hu**	**1.94**	**259**	P		**Pn**	**03 56 33.1**	**+0.7**	
	baz=258								
PHUB				*e*S		**Sn**	**03 56 56.5**	**+0.6**	
	baz=258								
PNG	**Penghu**	**1.94**	**260**	*e*P		**Pn**	**03 56 33.2**	**+0.8**	
	baz=260								
PNG				*e*S		**Sn**	**03 56 57.4**	**+1.4**	
	baz=260								
HATJ	**Hateruma jima**	**1.98**	**85**	P		**Pn**	**03 56 34.0**	**+1.0**	
HATJ				S		**Sn**	**03 56 58.7**	**+1.6**	
HEN	**Hengchun**	**2.07**	**204**	*e*P		**Pn**	**03 56 36.5**	**+2.3**	
	baz=189								
TWK1	**Hengchun**	**2.11**	**202**	*e*P		**Pn**	**03 56 36.0**	**+1.3**	
	baz=187								
TWKBT	**Hengchun**	**2.11**	**201**	*e*P		**Pn**	**03 56 35.7**	**+1.0**	
	baz=187								
VCHM	**Qimei**	**2.15**	**251**	*e*P		**Pn**	**03 56 35.1**	**-0.1**	
	baz=238								
VCHM				*e*S		**Sn**	**03 57 02.7**	**+1.6**	
	baz=238								
JKRS	**Kuro-shima**	**2.19**	**81**	P		**Pn**	**03 56 37.2**	**+1.4**	
JKRS				*e*S		**Sb**	**03 57 04.8**	**-1.9**	
VWUC	**VWUC**	**2.27**	**299**	*e*P		**Pn**	**03 56 36.9**	**0.0**	
	baz=298								
JIJ	**Ishigaki jima**	**2.33**	**78**	P		**Pn**	**03 56 38.5**	**+0.7**	
JIJ				S		**Sn**	**03 57 06.1**	**+0.5**	
JISG	**Ishigakijimahi**	**2.53**	**74**	*e*P		**Pn**	**03 56 41.7**	**+1.2**	
JISG				*e*S		**Sn**	**03 57 11.2**	**+0.8**	
PTMZ	**Houxiangcun**	**2.56**	**297**	*e*P		**Pn**	**03 56 41.0**	**+0.1**	
	baz=296								
MATB	**Ma-tsu**	**2.71**	**326**	*e*P		**Pn**	**03 56 43.7**	**+0.7**	
	baz=323								
JTJ	**Tarama**	**2.89**	**75**	P		**Pn**	**03 56 46.7**	**+1.3**	
JTJ				S		**Sn**	**03 57 22.1**	**+2.8**	
KNM	**Kinmen**	**2.97**	**280**	*e*P		**Pn**	**03 56 48.5**	**+2.0**	
	baz=280								
KNMB	**Chin-men Tao**	**3.02**	**281**	*e*P		**Pn**	**03 56 47.6**	**+0.4**	
	baz=282								
LYJJ	**Jianjiangzhen**	**3.13**	**327**	*e*P		**Pn**	**03 56 49.1**	**+0.4**	
	baz=324								
MHZQ	**Yeshan**	**3.22**	**313**	*e*P		**Pn**	**03 56 50.0**	**+0.1**	
	baz=312								
XPSS	**Dashiqiu**	**3.28**	**337**	*e*P		**Pn**	**03 56 50.8**	**0.0**	
	baz=333								
JMJ	**Miyako jima 2**	**3.45**	**74**	*e*P		**Pn**	**03 56 54.8**	**+1.6**	
	baz=78								
JMJ2	**Miyako jima3**	**3.46**	**76**	*e*P		**Pn**	**03 56 55.0**	**+1.7**	
AXDP	**Jialang**	**3.49**	**287**	*e*P		**Pn**	**03 56 53.9**	**+0.3**	
	baz=287								
ZPLA	**Ao Xicun**	**3.56**	**271**	*e*P		**Pn**	**03 56 55.0**	**+0.3**	
	baz=272								
DSXP	**Dongshan**	**3.87**	**268**	*e*P		**Pn**	**03 56 60.0**	**+1.1**	
	baz=269								
SXFK	**Yanhouchang**	**4.38**	**305**	*e*P		**Pn**	**03 57 06.2**	**+0.2**	
	baz=305								
JOW	**Kunigami**	**6.67**	**63**	P		**Pn**	**03 57 37.3**	**-0.1**	
JOW	**Kunigami**	**6.67**	**63**	Pn		**Pn**	**03 57 37.0**	**-0.4**	
	3.4nm,0.3s,baz=182,slow=12,SNR=14								
JOW					Sn	**Sn**	**03 58 52.8**	**+0.2**	
	0.9nm,0.3s,baz=234,slow=14,SNR=1.8 5.6nm,0.3s								
KSRS	**Korea Array**	**14.53**	**20**	Pn		**P**	**03 59 31.2**	**-0.1**	
	0.3nm,0.3s,baz=197,slow=12,SNR=5.2								
SONM	**Songjno Array**	**26.78**	**337**	P		**P**	**04 01 39.2**	**+0.2**	
	0.6nm,0.6s,baz=148,slow=11,SNR=2.6 0.6nm,0.6s								
MKAR	**Makanchi Array**	**38.82**	**316**	P		**P**	**04 03 22.6**	**-1.2**	
	0.5nm,0.7s,baz=106,slow=11,SNR=4.7 0.5nm,0.7s								
ZALV	**Zalesovo Beam**	**40.70**	**327**	P		**P**	**04 03 39.1**	**-0.2**	
	1.1nm,0.6s,baz=113,slow=7.1,SNR=4.5 1.1nm,0.6s								
H11N1	**WAKE ISLAND Hy**	**42.09**	**87**	T		T	04 49 04.7		
	baz=283,slow=75,SNR=7.5								
H11N2	**WAKE ISLAND Hy**	**42.09**	**87**	T		T	04 49 04.6		
	baz=283,slow=75,SNR=9.9								
H11N3	**WAKE ISLAND Hy**	**42.10**	**87**	T		T	04 49 03.8		
	baz=283,slow=75,SNR=6.6								
H11S3	**WAKE ISLAND Hy**	**42.21**	**88**	T		T	04 49 03.9		
	baz=284,slow=75,SNR=14								
H11S1	**WAKE ISLAND Hy**	**42.22**	**88**	T		T	04 49 07.0		
	baz=284,slow=75,SNR=8.3								
H11S2	**WAKE ISLAND Hy**	**42.23**	**88**	T		T	04 49 27.9		
	baz=284,slow=75,SNR=6.9								
KURBB	**Kurchatov Arra**	**42.58**	**320**	P		**P**	**04 03 54.2**	**-0.7**	
	0.2nm,0.5s,baz=108,slow=9.8,SNR=1.2 0.2nm,0.5s								
AAK	**Ala-Archa**	**43.00**	**308**	LR		LR	04 22 02.4		
	comp=Z,83nm,18.4s,baz=335,slow=36								
WRA	**Warramunga Arr**	**45.31**	**163**	P		**P**	**04 04 16.7**	**-0.4**	
	0.6nm,0.5s,baz=346,slow=8.7,SNR=9.2 0.6nm,0.5s								
ASAR	**Alice Springs**	**48.77**	**165**	P		**P**	**04 04 44.1**	**+0.1**	
	0.4nm,0.3s,baz=331,slow=6.4,SNR=4.9 0.4nm,0.3s								
STKA	**Stephens Creek**	**58.67**	**160**	P		**P**	**04 05 56.3**	**0.0**	
	0.7nm,0.4s,baz=339,slow=14,SNR=2.0 0.7nm,0.4s								
ILAR	**Eielson Array**	**69.26**	**27**	P		**P**	**04 07 05.1**	**-0.6**	
	0.4nm,0.8s,baz=278,slow=6.2,SNR=4.7 0.4nm,0.8s								
FINES	**FINESS Array B**	**71.89**	**330**	P		**P**	**04 07 21.5**	**-0.2**	
	1.6nm,0.8s,baz=60,slow=7.5,SNR=4.0 1.6nm,0.8s								
YKA	**Yellowknife Ar**	**83.05**	**23**	P		**P**	**04 08 23.8**	**-0.3**	
	0.3nm,0.6s,baz=308,slow=5.3,SNR=6.6 0.3nm,0.6s								

TAP 09 04:01:44.1,24.04N×121.60E,h11km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**0**	*i* P	Pg	04 01 46.9	+0.7
	baz=10.0						
TWD				*i* S	Sg	04 01 48.6	+0.8
	baz=10.0						
HWA	**Hwalien**	**0.06**	**172**	*e*P	Pg	04 01 47.1	+0.8
	baz=164						
ETM	**Tongmen**	**0.12**	**234**	P	Pb	04 01 47.8	-0.7
	baz=233						
ETM				S	Sg	04 01 50.0	+0.8
	baz=233						
ETL	**Fush Village**	**0.13**	**11**	*i* P	Pg	04 01 47.9	+0.6
	baz=11						
ETL				S	Sg	04 01 50.2	+0.7
	baz=11						

NACB	**Ninganchiao**	**0.14**	**360**	*i* P		Pg	04 01 48.0	+0.6	
	baz=359								
NACB				*i* S		Sg	04 01 50.5	+0.8	
	baz=359								
LXIB	**Xiulin Townshi**	**0.17**	**265**	P		Pb	04 01 48.9	-0.5	
	baz=265								
LXIB				S		Sg	04 01 51.9	+1.2	
	baz=265								
ETLH	**Xiulin Townshi**	**0.20**	**329**	P		Pb	04 01 49.4	-0.5	
	baz=328								
SHUL	**Shoufeng**	**0.25**	**187**	*e*P		Pb	04 01 50.4	-0.2	
	baz=186								
SHUL				*e*S		Sg	04 01 55.2	+2.5	
	baz=186								
ESL	**Shilin**	**0.27**	**214**	*e*P		Pg	04 01 50.2	+0.6	
	baz=212								
WHF	**Hehuan Shan**	**0.32**	**290**	*e*P		Pb	04 01 51.7	-0.5	
	baz=290								
WARBT	**Fenglin Townsh**	**0.37**	**211**	P		Pg	04 01 52.1	+0.6	
	baz=211								
WARBT				*e*S		Sg	04 01 57.4	+1.0	
	baz=211								
FUSS	**Fushou**	**0.39**	**303**	*e*P		Pb	04 01 53.0	-0.2	
	baz=303								
FUSS				*e*S		Sb	04 01 59.0	-0.2	
	baz=303								
NNSB	**Datong**	**0.44**	**334**	*e*P		Pb	04 01 54.0	0.0	
	baz=333								
LATG	**Datong**	**0.50**	**353**	*e*P		Pb	04 01 54.9	-0.1	
	baz=352								

*ISN **09** 04:07:49.3±0.4,33.55N×45.68E,h10km±2km, ML2.5*
*TEH **09** 04:07:50.5,33.57N×45.72E,h10km±112km, ML2.5*
ISC 09 04:07:51.1±1.0,33.54N±0.04×45.75E±0.05,h13km,n11,
σ0.94/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.39**	**77**	Pg	**Pg**	**04 07 58.8**	**-0.2**
IBDR	**Badra**	**0.45**	**160**	*e*Pg	**Pg**	**04 07 59.0**	**-1.1**
IBDR				*e*Sg	**Sg**	**04 08 06.0**	**-0.1**
IBDR				AML	AML	04 08 15.2	
	comp=N,147nm,0.3s						
IBDR				AML	AML	04 08 26.1	
	comp=E,92nm,0.5s						
IGHG	**Ghaleghazi**	**1.04**	**41**	Pg	**Pg**	**04 08 10.5**	**-0.8**
BHD	**Baghdad**	**1.17**	**257**	*e*Pn	**Pg**	**04 08 13.0**	**-0.7**
BHD				*e*Sn	**Sn**	**04 08 30.0**	**+0.9**
IDHR	**Dehrash**	**1.27**	**24**	Pg	**Pg**	**04 08 14.7**	**-1.0**
ILIN	**Lien**	**1.71**	**36**	Pg	**Pb**	**04 08 22.2**	**-0.3**
IKFM	**Kafar-mosalman**	**1.75**	**90**	Pg	**Pg**	**04 08 24.3**	**-0.5**
RAFI	**Al-Rafai**	**1.83**	**170**	*e*Pn	**Pn**	**04 08 23.0**	**+0.7**
RAFI				*e*Sn	**Sb**	**04 08 48.0**	**+0.6**
IBZA	**Bozab**	**1.99**	**62**	Pn	**Pb**	**04 08 26.1**	**-1.2**
IALM	**Almabolaq**	**2.40**	**56**	Pn	**Pn**	**04 08 31.7**	**+1.3**
HSAM	**Samen**	**2.47**	**73**	Pn	**Pn**	**04 08 32.4**	**+1.1**

*IDC **09** 04:13:49.8±9.4,3.07S×100.74E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=457.8km s-min=25.2km az=52.0*
*DJA **09** 04:13:55.8±0.4,3°S±2°×10°1E±°,h38km±9km,M4.2/7, mb4.4/1,MLv4.0/7*
ISC 09 04:13:55.6±1.1,2.95S±0.09×100.80E±0.06,h35km,n18,
σ1.32/13,mb3.6/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.81**	**283**	P	**Pn**	**04 14 12.5**	**+2.0**
PPSI				S	**Sn**	**04 14 22.1**	**+0.8**
KRJI	**Kerinci**	**1.08**	**38**	P	**Pn**	**04 14 15.0**	**+0.7**
KRJI				S	**Sn**	**04 14 29.9**	**+1.8**
PDSI	**Padang**	**2.05**	**351**	P	**Pn**	**04 14 28.0**	**+0.4**
PDSI				S	**Sn**	**04 14 52.0**	**0.0**
SISI	**Saibi**	**2.34**	**313**	P	**Pn**	**04 14 31.1**	**-0.6**
SISI				S	**Sn**	**04 14 58.0**	**-1.3**
H08S2	**Diego Garcia H**	**28.56**	**259**	T	T	04 49 05.7	
	baz=82,slow=75,SNR=68						
H08S3	**Diego Garcia H**	**28.57**	**259**	T	T	04 49 11.9	
	baz=82,slow=75,SNR=41						
H08S1	**Diego Garcia H**	**28.58**	**259**	T	T	04 49 07.8	
	baz=82,slow=75,SNR=64						
WRA	**Warramunga Arr**	**36.83**	**120**	P	**P**	**04 20 59.7**	**-1.0**
	0.5nm,0.5s,baz=308,slow=8.9,SNR=6.0 0.5nm,0.5s						
ASAR	**Alice Springs**	**38.06**	**126**	P	**P**	**04 21 10.1**	**-1.1**
	0.2nm,0.4s,baz=299,slow=7.8,SNR=2.2 0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.15**	**344**	P	**P**	**04 23 01.6**	**-1.0**
	0.4nm,0.6s,baz=168,slow=8.8,SNR=5.8 0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**58.24**	**349**	P	**P**	**04 23 48.2**	**+1.9**
	0.3nm,0.3s,baz=165,slow=6.0,SNR=2.4 0.3nm,0.3s						
H04N2	**CROZET ISLANDS**	**60.52**	**217**	T	T	05 29 05.8	
	baz=60,slow=75,SNR=186						
H04N1	**CROZET ISLANDS**	**60.53**	**217**	T	T	05 29 06.5	
	baz=60,slow=75,SNR=187						
H04N3	**CROZET ISLANDS**	**60.54**	**217**	T	T	05 29 05.0	
	baz=60,slow=75,SNR=179						
H04S1	**CROZET ISLANDS**	**60.80**	**216**	T	T	05 29 24.0	
	baz=59,slow=75,SNR=5.7						
H04S3	**CROZET ISLANDS**	**60.81**	**216**	T	T	05 29 25.5	
	baz=59,slow=75,SNR=8.9						
H04S2	**CROZET ISLANDS**	**60.81**	**216**	T	T	05 29 24.9	
	baz=59,slow=75,SNR=5.6						
TXAR	**Lajitas Array**	**144.95**	**39**	PKPbc	**PKPab**	**04 33 28.4**	**-0.8**
	0.2nm,0.4s,baz=308,slow=1.1,SNR=12						

*IDC **09** 04:18:58.7±3.8,8.04S×116.89E,h0km,mb3.0/3, mbtmp3.1/3,Error ellipse: s-maj=293.8km s-min=29.5km az=50.0*
*DJA **09** 04:19:01.6±1.0,8°S±3°×11°7E±°,h17km±8km,M4.0/7, MLv4.0/7*
ISC 09 04:19:01.1±1.0,7.77S±0.07×117.25E±0.04,h10km,n10,
σ0.50/15,Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.03**	**200**	P	**Pg**	**04 19 20.6**	**-0.3**
TWSI				S	**Sg**	**04 19 34.6**	**+0.2**
PLAI	**Plampang**	**1.18**	**154**	P	**Pb**	**04 19 23.3**	**-0.3**
PLAI				S	**Sb**	**04 19 38.9**	**0.0**
SRBI	**Singaraja**	**2.04**	**261**	P	**Pn**	**04 19 35.1**	**-0.4**
SRBI				S	**Sn**	**04 20 02.4**	**+1.4**
JAGI	**Jajag, Banyuwa**	**3.14**	**257**	P	**Pn**	**04 19 50.6**	**-0.1**
BLJI	**Banyuglugur**	**3.62**	**270**	P	**Pn**	**04 19 57.6**	**+0.4**
BLJI				S	**Sn**	**04 20 39.8**	**-0.2**
BKSI	**Bulukumba**	**3.75**	**50**	P	**Pn**	**04 19 58.9**	**-0.1**
EDFI	**Ende, Flores**	**4.51**	**103**	P	**Pn**	**04 20 09.8**	**+0.3**
EDFI				S	**Sn**	**04 21 02.7**	**+0.6**
WRA	**Warramunga Arr**	**20.51**	**128**	P	**P**	**04 23 39.5**	**-0.2**
	0.5nm,0.9s,baz=302,slow=12,SNR=5.2 0.5nm,0.9s						
ASAR	**Alice Springs**	**22.48**	**137**	P	**P**	**04 24 00.9**	**+0.1**
	0.2nm,0.4s,baz=308,slow=9.4,SNR=2.5 0.2nm,0.4s						
MKAR	**Makanchi Array**	**62.58**	**334**	P	**P**	**04 29 25.2**	**-0.2**
	0.2nm,0.6s,baz=142,slow=5.4,SNR=2.6 0.2nm,0.6s						

WEL 09 04:23:28.3±1.2,35°S±8°×17°8E±°,h33km,M3.4/9, ML3.7/22,MLv3.4/9,Error ellipse: s-maj=0.0km s-min=0.0km az=57.0,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.37**	**181**	P	Pn	04 24 03.1	-1.7
HAZ	**Te Kaha**	**2.37**	**193**	P	Pn	04 24 01.8	-3.0
HAZ				S	Sn	04 24 32.6	-0.1
KUZ	**Kuaotunu**	**2.57**	**239**	P	Pn	04 24 05.4	-2.2
KUZ				S	Sn	04 24 37.4	-0.3
RUGZ	**Raukumara Rang**	**2.59**	**194**	P	Pn	04 24 06.3	-1.7
RUGZ				S	Sn	04 24 40.6	+2.2
PUZ	**Puketiti**	**2.62**	**184**	P	Pn	04 24 07.7	-0.7
PUZ				S	Sb	04 24 42.8	-3.6
TWGZ	**Tauwhareparae**	**2.75**	**188**	P	Pn	04 24 10.5	+0.4
MWZ	**Matawai**	**2.98**	**194**	P	Pn	04 24 12.0	-1.3
MWZ				S	Sn	04 24 44.7	-3.1
URZ	**Urewera**	**3.01**	**201**	P	Pn	04 24 12.5	-1.1
TKGZ	**Te Karaka**	**3.02**	**189**	P	Pn	04 24 14.9	+1.1
TKGZ				S	Sn	04 24 40.9	-8.0
RAGZ	**Rawiri**	**3.15**	**195**	P	Pn	04 24 15.3	-0.4
RIGZ	**Rimuhau**	**3.30**	**190**	P	Pn	04 24 17.4	-0.3
RTZ	**Ruatahuna**	**3.38**	**200**	P	Pn	04 24 17.7	-1.1
SNGZ	**Shannon Statio**	**3.45**	**195**	P	Pn	04 24 20.5	+0.9
RAHZ	**Arahi**	**3.63**	**197**	P	Pn	04 24 23.2	+1.0
MTHZ	**Maungataniwha**	**3.64**	**200**	P	Pn	04 24 20.9	-1.4
MRHZ	**Matea Rd**	**3.75**	**205**	P	Pn	04 24 22.3	-1.7
NMHZ	**Naumai**	**3.87**	**199**	P	Pn	04 24 26.7	+1.0
BKZ	**Black Stump Fm**	**4.03**	**202**	P	Pn	04 24 28.6	+0.9
NTVZ	**North Tongarir**	**4.27**	**211**	P	Pn	04 24 33.3	+2.2
TMVZ	**Te Maari**	**4.27**	**210**	P	Pn	04 24 33.3	+2.2
ETVZ	**East Tongariro**	**4.29**	**210**	P	Pn	04 24 33.4	+2.1
KWHZ	**Kaweka Forest**	**4.29**	**202**	P	Pn	04 24 31.1	-0.2
OTVZ	**Oturere**	**4.33**	**210**	P	Pn	04 24 32.9	+1.0
NGZ	**Ngauruhoe**	**4.36**	**211**	P	Pn	04 24 34.8	+2.4
FWVZ	**Far West T-bar**	**4.45**	**211**	P	Pn	04 24 36.1	+2.4
WNVZ	**Wahianoa**	**4.49**	**210**	P	Pn	04 24 35.5	+1.3
KRHZ	**Kereru**	**4.50**	**201**	P	Pn	04 24 33.3	-0.9
KAHZ	**Kahuranaki**	**4.52**	**196**	P	Pn	04 24 33.4	-1.0

TAP 09 04:26:58.2,22.76N×121.15E,h28km,ML1.6,1D,A, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.01**	**219**	*e*P	Pb	04 27 03.3	+0.4
	baz=172						
TTN				*e*S	Sb	04 27 07.8	+1.7
	baz=172						
TWGBT	**Beinan**	**0.09**	**309**	*e*P	Pb	04 27 03.7	+0.5
	baz=309						
TWGBT				*i* S	Sb	04 27 07.4	+0.8
	baz=309						
TWG	**Pinlang**	**0.10**	**308**	||P	Pb	04 27 03.6	+0.4
	baz=309						
TWG				*i* S	Sb	04 27 07.3	+0.7
	baz=309						
LONT	**Longtian**	**0.14**	**351**	P	Pb	04 27 04.1	+0.4
	baz=351						
ECL	**Taimali**	**0.25**	**228**	*i* P	Pb	04 27 05.0	+0.3
	baz=226						
ECL				*e*S	Sb	04 27 09.9	+0.7
	baz=226						
EDH	**Donghe**	**0.25**	**33**	*e*P	Pb	04 27 05.4	+0.5
	baz=33						
EDH				*i* S	Sn	04 27 10.4	-0.7
	baz=33						
LDUT	**Ludao**	**0.30**	**107**	*e*P	Pn	04 27 06.5	-0.3
	baz=106						
LDUT				*e*S	Sn	04 27 11.5	-0.8
	baz=106						
ECS	**Chishang**	**0.34**	**10**	*e*P	Pb	04 27 06.2	+0.1
	baz=10.0						
ECS				S	Sn	04 27 12.6	-0.6
	baz=10.0						
CHKT	**Chengkung**	**0.39**	**30**	*e*P	Pb	04 27 04.5	-2.2
	baz=31						
CHKT				*e*S	Sb	04 27 09.8	-2.8
	baz=31						

*NDI **09** 04:41:36.9±4.0,17.62N×94.32E,h41km±999km,ML4.4, MW4.0,mb4.4(NEIC)*
*IDC **09** 04:41:45.9±2.6,18.36N×94.58E,h52km±21km,mb3.9/20, mbtmp4.1/21,ML4.7/2,MS3.7/16,Error ellipse: s-maj=23.6km s-min=9.8km az=40.0*
*NEIC **09** 04:41:45.2±1.4,18.24N±0.07×94.38E±0.07,h43km±7km, mb4.4/24,Error ellipse: s-maj=11.3km s-min=8.7km az=46.0*
ISC 09 04:41:43.7±0.5,18.21N±0.05×94.31E±0.05,h35km,n108,
σ1.56/104,mb4.3/35,MS3.7/15,1D,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MND	**Mandalay**	**4.15**	**24**	Pn	**Pn**	**04 42 43.8**	**-0.8**
CM31	**Chiang Mai Arr**	**4.41**	**86**		**Pn**	**04 42 47.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**4.41**	**86**	Pn	**Pn**	**04 42 47.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**4.41**	**86**	P	**Pn**	**04 42 46.5**	**-1.6**
	12nm,0.3s,baz=264,slow=14,SNR=195						
CMAR				S	**Sn**	**04 43 35.1**	**-3.3**
	63nm,0.6s,baz=261,slow=16,SNR=3.4						
CMAR				LR	LR	04 45 03.6	
	comp=Z,504nm,19.4s,baz=265,slow=48 47nm,0.6s						
SAIH	**SAIHA**	**4.43**	**344**	*e*P	**Pn**	**04 42 50.7**	**+2.1**
SAIH				*e*S	**Sn**	**04 43 42.0**	**+2.9**
SAIH				IAML		04 43 47.3	
	comp=N,143nm,0.5s						
CHTO	**Chiang Mai**	**4.44**	**81**	Pn	**Pn**	**04 42 48.4**	**-0.1**
CHTO	**Chiang Mai**	**4.44**	**81**	P	**Pn**	**04 42 48.9**	**+0.3**
BRDH	**Bariadhala**	**5.10**	**331**	P	**Pn**	**04 43 00.8**	**+3.2**
	comp=N,32nm,0.3s,baz=90,slow=19,SNR=2.2						
BRDH				S	**Sn**	**04 43 57.1**	**+1.8**
	comp=N,99nm,0.3s,baz=270,slow=23,SNR=3.7						
DGPR	**DIGLIPUR**	**5.18**	**195**	*e*P	Pn	04 42 42.0	-17
BELO	**BELONIA**	**5.68**	**332**	*e*S	**Sn**	**04 44 10.6**	**+0.9**
AZL	**Aizawl**	**5.71**	**345**	*e*P	**Pn**	**04 43 07.7**	**+1.6**
AZL				*e*S	**Sn**	**04 44 09.9**	**-0.5**
AZL				IAML		04 44 17.0	
	comp=E,251nm,0.2s						
SRDT	**SRDT**	**6.01**	**129**	P	**Pn**	**04 43 11.3**	**+1.2**
CRAI	**Chiangrai**	**6.07**	**70**	Pn	**Pn**	**04 43 12.3**	**+0.2**
IMP	**Imphal**	**6.60**	**357**	*e*P	**Pn**	**04 43 20.3**	**+2.0**
IMP				*e*S	**Sn**	**04 44 34.7**	**+2.3**
IMP				IAML		04 44 38.8	
	comp=N,66nm,0.6s						
KOHI	**KOHIMA**	**7.48**	**359**	*e*P	**Pn**	**04 43 31.9**	**+1.5**
KOHI				*e*S	**Sn**	**04 44 54.3**	**+0.2**
KOHI				IAML		04 44 57.2	
	comp=N,287nm,0.7s						
SHL	**Shillong**	**7.66**	**343**	Pn	**Pn**	**04 43

QIZ					LR	LR			
	comp=E,300nm,9.0s								
QIZ					LR	LR			
	comp=Z,280nm,14.4s								
HYB	**Hyderabad**	**15.03**	**269**	*eP*	**P**		**04 45 20.3**	**+1.8**	
PALK	**Pallekele**	**17.14**	**232**	Pn	**Pn**		**04 45 39.6**	**-1.0**	
PALK	**Pallekele**	**17.14**	**232**	P	**Pn**		**04 45 39.3**	**-1.4**	
	comp=Z,1.7nm,0.3s,baz=161,slow=12,SNR=2.2								
PALK					LR	LR	04 52 40.8		
	comp=Z,97nm,20.4s,baz=140,slow=38								
GOMU	**GeErMu**	**17.93**	**1**	P	**Pn**		**04 45 47.7**	**-2.9**	
GOMU				pmax	pmax				
	comp=E,5.0nm,0.8s								
LZH	**Lanzhou**	**19.70**	**23**	*eP*	**Pn**		**04 46 11.2**	**-0.7**	
LZH				sP	sP		04 46 22.6	-1.3	
LZH				S	S		04 50 53.5	+63	
LZH				pmax	pmax				
	comp=Z,15nm,1.0s								
LZH				LR	LR				
	comp=N,370nm,18.6s								
LZH				LR	LR				
	comp=E,350nm,20.4s								
LZH				LR	LR				
	comp=Z,400nm,17.9s								
XAN	**Xi'an**	**20.47**	**37**	Pn	**P**		**04 46 14.3**	**-4.2**	
XAN				smax	smax				
	comp=N,50nm,1.2s								
XAN				smax	smax				
	comp=E,33nm,1.2s								
GTA	**Gaotai**	**21.66**	**12**	*eP*	**P**		**04 46 29.9**	**-1.4**	
GTA				S	**S**		**04 50 31.4**	**+2.0**	
GTA				pmax	pmax				
	comp=Z,8.0nm,0.9s								
GTA				LR	LR				
	comp=N,130nm,14.9s								
GTA				LR	LR				
	comp=E,290nm,16.4s								
GTA				LR	LR				
	comp=Z,210nm,16.4s								
WMQ	**Urumqi**	**26.14**	**349**	*eP*	**P**		**04 47 17.5**	**+2.9**	
WMQ				pP	sP		04 47 27.5	-1.3	
WMQ				sP	pP		04 47 33.3	+8.7	
HHC	**Hu-ho-hao-te**	**27.00**	**30**	*eP*	**P**		**04 47 23.5**	**+1.0**	
HHC				pP	pP		04 47 28.9	-3.6	
HHC				PP	**PnPn**		**04 48 08.7**	**+3.0**	
HHC				pmax	pmax				
	comp=Z,7.0nm,0.6s								
HHC				pmax	pmax				
	comp=Z,100nm,4.6s								
ARSB	**Arslanbob**	**29.40**	**326**	P	**P**		**04 47 45.2**	**+1.3**	
SIMJ	**Simiganj**	**30.00**	**318**	P	**P**		**04 47 49.0**	**-0.2**	
SIMJ				IAmb	IAmb		04 47 59.5		
	comp=Z,3.3nm,0.8s								
MK31	**Makanchi Array**	**30.18**	**343**	P	**P**		**04 47 50.3**	**-0.2**	
MKAR	**Makanchi Array**	**30.18**	**343**	P	**P**		**04 47 49.8**	**-0.8**	
MKAR	**Makanchi Array**	**30.18**	**343**	P	**P**		**04 47 50.8**	**+0.2**	
	comp=Z,0.7nm,0.5s,baz=165,slow=8.8,SNR=9.8								
MKAR				LR	LR		05 00 25.8		
	comp=Z,87nm,19.6s,baz=186,slow=37								
	comp=Z,0.7nm,0.5s								
SONM	**Songino Array**	**31.16**	**16**	P	**P**		**04 47 59.6**	**+0.3**	
SONM	**Songino Array**	**31.16**	**16**	P	**P**		**04 47 58.1**	**-1.2**	
	comp=Z,2.3nm,0.8s,baz=199,slow=9.9,SNR=8.1								
SONM				LR	LR		05 02 29.4		
	comp=Z,223nm,19.8s,baz=258,slow=40								
	comp=Z,2.3nm,0.8s								
XLT	**XiLinHaoTe**	**31.49**	**31**	*eP*	P		04 48 08.4	+6.1	
XLT				pP	sP		04 48 21.8	+5.2	
XLT				pmax	pmax				
	comp=Z,87nm,4.1s								
DAV	**Davao City (W)**	**32.40**	**106**	LR	LR		05 01 36.1		
	comp=Z,64nm,20.5s,baz=322,slow=37								
H08S3	**Diego Garcia H**	**33.51**	**222**	T	T		05 22 57.6		
	baz=40,slow=76								
H08S2	**Diego Garcia H**	**33.52**	**222**	T	T		05 22 54.5		
	baz=40,slow=76								
H08S1	**Diego Carcia H**	**33.53**	**222**	T	T		05 22 53.6		
	baz=40,slow=76								
LUWI	**Luwuk**	**33.91**	**121**	P	**P**		**04 48 23.6**	**-0.1**	
KURBB	**Kurchatov Arra**	**34.70**	**342**	P	**P**		**04 48 29.9**	**-0.2**	
	comp=Z,2.1nm,0.6s,baz=154,slow=8.1,SNR=11								
	comp=Z,2.1nm,0.6s								
KURK	**Kurchatov**	**34.76**	**342**	P	**P**		**04 48 30.7**	**+0.1**	
KURK				IAmb	IAmb		04 48 43.6		
	comp=Z,3.2nm,0.8s								
KSRS	**Korea Array**	**35.11**	**50**	LR	LR		05 03 38.8		
	comp=Z,43nm,19.4s,baz=260,slow=38								
JNU	**Nakatsue**	**35.95**	**58**	LR	LR		05 05 59.0		
	comp=Z,72nm,18.8s,baz=207,slow=41								
ZAA0	**Zalesovo Array**	**36.42**	**351**	P	**P**		**04 48 44.8**	**0.0**	
ZAA0				IAmb	IAmb		04 48 49.1		
	comp=Z,3.6nm,0.8s								
ZALV	**Zalesovo Beam**	**36.42**	**351**	P	**P**		**04 48 44.4**	**-0.4**	
ZALV	**Zalesovo Beam**	**36.42**	**351**	P	**P**		**04 48 44.0**	**-0.7**	
	comp=Z,2.6nm,0.6s,baz=163,slow=7.9,SNR=11								
	comp=Z,2.6nm,0.6s								
GEYT	**Alibeck**	**37.18**	**309**	P	**P**		**04 48 53.5**	**+1.9**	
	comp=Z,2.4nm,0.7s,baz=101,slow=6.0,SNR=1.8								
	comp=Z,2.4nm,0.7s								
BNX	**BinXian**	**38.80**	**38**	⇓P	**P**		**04 49 05.3**	**+0.3**	
BNX				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BNX				pmax	pmax				
	comp=Z,64nm,3.3s								
BVAR	**Borovoye Array**	**39.43**	**337**	P	**P**		**04 49 09.4**	**-0.8**	
	comp=Z,0.4nm,0.4s,baz=158,slow=11,SNR=2.3								
	comp=Z,0.4nm,0.4s								
USRK	**Ussuriysk Ar.**	**40.81**	**42**	P	**P**		**04 49 20.9**	**-0.9**	
USRK	**Ussuriysk Ar.**	**40.81**	**42**	P	**P**		**04 49 18.7**	**-3.1**	
	comp=Z,1.0nm,0.3s,baz=253,slow=6.2,SNR=7.4								
	comp=Z,1.0nm,0.3s								
ABKAR	**Akbulak array**	**41.52**	**326**	P	**P**		**04 49 27.9**	**+0.3**	
ABKAR				IAmb	IAmb		04 49 38.0		
	comp=Z,5.9nm,1.2s								
ABKAR	**Akbulak array**	**41.52**	**326**	P	**P**		**04 49 28.1**	**+0.6**	
MJAR	**Matsushiro Arr**	**42.63**	**56**	LR	LR		05 09 42.8		
	comp=Z,78nm,18.4s,baz=258,slow=40								
FITZ	**Fitzroy Crossi**	**47.44**	**138**	P	**P**		**04 50 14.9**	**-0.2**	
KNRA	**Kununurra**	**47.81**	**133**	P	**P**		**04 50 17.2**	**-0.9**	
NRIK	**Noril'sk**	**51.29**	**357**	P	**P**		**04 50 44.3**	**+0.5**	
	comp=Z,1.7nm,0.5s,baz=90,slow=4.0,SNR=2.2								
	comp=Z,1.7nm,0.5s								
KIRV	**Kirov**	**51.88**	**332**	LR	LR		05 16 03.4		
	comp=Z,180nm,20.3s,baz=314,slow=40								
GAZ	**Gaziantep**	**53.18**	**303**	P	**P**		**04 50 58.7**	**+0.2**	
WB0	**Warramunga Arr**	**54.52**	**132**	P	**P**		**04 51 07.7**	**-0.7**	
WRA	**Warramunga Arr**	**54.59**	**132**	P	**P**		**04 51 08.5**	**-0.4**	
WRA	**Warramunga Arr**	**54.59**	**132**	P	**P**		**04 51 08.4**	**-0.6**	
	comp=Z,1.4nm,0.4s,baz=304,slow=6.5,SNR=24								
	comp=Z,1.4nm,0.4s								
WB2	**Warramunga Arr**	**54.60**	**132**	P	**P**		**04 51 08.3**	**-0.7**	
WB2				IAmb	IAmb		04 51 30.2		
	comp=Z,5.0nm,0.9s								
WR0	**Warramunga Arr**	**54.75**	**132**	P	**P**		**04 51 09.3**	**-0.8**	
WR0				IAmb	IAmb		04 51 10.2		
	comp=Z,5.3nm,0.9s								
BRTR	**Keskin Array B**	**56.16**	**306**	P	**P**		**04 51 20.9**	**+0.7**	
	comp=Z,0.4nm,0.8s,baz=52,slow=9.3,SNR=2.0								
	comp=Z,0.4nm,0.8s								
ASAR	**Alice Springs**	**56.80**	**136**	P	**P**		**04 51 24.4**	**-0.3**	
	comp=Z,2.5nm,0.8s,baz=315,slow=6.7,SNR=25								
	comp=Z,2.5nm,0.8s								
OBN	**Obninsk**	**56.92**	**325**	LR	LR		05 20 29.2		
	comp=Z,289nm,20.2s,baz=18,slow=41								
TIXI	**Tiksi**	**57.14**	**12**	P	**P**		**04 51 25.1**	**-1.3**	
	comp=Z,2.2nm,0.4s,baz=234,slow=2.3,SNR=4.6								
	comp=Z,2.2nm,0.4s								
MA2	**Magadan**	**57.68**	**30**	P	**P**		**04 51 29.0**	**-1.4**	
	comp=Z,3.3nm,0.4s,baz=226,slow=6.4,SNR=4.7								
	comp=Z,3.3nm,0.4s								
FORT	**Forrest**	**58.53**	**146**	P	**P**		**04 51 36.7**	**0.0**	
PETK	**Petropavlovsk-**	**59.70**	**39**	LR	LR		05 20 00.6		
	comp=Z,69nm,19.4s,baz=239,slow=39								
RDO	**Rodhopi**	**62.38**	**307**	P	**P**		**04 52 03.9**	**+0.8**	
RDO				IAmb	IAmb		04 52 43.0		
	comp=Z,8.2nm,1.4s								
BURAR	**Bucovina Array**	**62.73**	**315**	P	**P**		**04 52 07.1**	**+1.7**	
CTA	**Charters Tower**	**63.60**	**124**	LR	LR		05 21 49.2		
	comp=Z,26nm,21.8s,baz=268,slow=38								
FINES	**FINESS Array B**	**63.78**	**330**	P	**P**		**04 52 12.5**	**+0.6**	
FINES	**FINESS Array B**	**63.78**	**330**	P	**P**		**04 52 12.0**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=98,slow=5.8,SNR=4.4								
FINES				LR	LR		05 23 46.6		
	comp=Z,298nm,19.9s,baz=294,slow=40								
	comp=Z,1.3nm,0.8s								
ARCES	**ARCESS Array B**	**65.69**	**339**	P	**P**		**04 52 24.4**	**+0.2**	
	comp=Z,2.7nm,0.8s,baz=97,slow=6.2,SNR=5.4								
	comp=Z,2.7nm,0.8s								
STKA	**Stephens Creek**	**67.34**	**137**	P	**P**		**04 52 34.8**	**-0.6**	
	comp=Z,1.0nm,0.3s,baz=319,slow=7.9,SNR=4.8								
STKA				LR	LR		05 26 24.5		
	comp=Z,22nm,20.9s,baz=10,slow=40								
	comp=Z,1.0nm,0.3s								
HFS	**Hagfors**	**69.73**	**328**	P	**P**		**04 52 50.0**	**+0.1**	
	comp=Z,1.2nm,0.6s,baz=100,slow=6.4,SNR=5.3								
	comp=Z,1.2nm,0.6s								
SPITS	**Spitsbergen Ar**	**69.83**	**348**	P	**P**		**04 52 49.5**	**-0.8**	
	comp=Z,7.0nm,0.9s,baz=109,slow=13,SNR=1.5								
SPITS				LR	LR		05 29 47.3		
	comp=Z,112nm,18.5s,baz=144,slow=41								
	comp=Z,7.0nm,0.9s								
GERES	**GERESS Array B**	**70.39**	**316**	P	**P**		**04 52 55.6**	**+1.3**	
	comp=Z,0.8nm,0.8s,baz=69,slow=5.4,SNR=2.8								
	comp=Z,0.8nm,0.8s								
NOA	**NORSAR Array B**	**70.92**	**329**	P	**P**		**04 52 57.5**	**+0.4**	
	comp=Z,0.3nm,0.6s,baz=86,slow=6.1,SNR=1.4								
	comp=Z,0.3nm,0.6s								
H04N2	**CROZET ISLANDS**	**74.71**	**209**	T	T		06 14 45.2		
	baz=43,slow=75								
H04N1	**CROZET ISLANDS**	**74.72**	**209**	T	T		06 14 46.0		
	baz=43,slow=75								
H04N3	**CROZET ISLANDS**	**74.73**	**209**	T	T		06 14 44.7		
	baz=43,slow=75								
D19K	**Kuna River**	**79.46**	**21**	P	**P**		**04 53 48.6**	**+2.4**	
D19K				IAmb	IAmb		04 54 20.6		
	comp=Z,10.0nm,1.5s								
B21K	**Ikpikpuk River**	**80.14**	**19**	P	**P**		**04 53 50.5**	**+0.6**	
B21K				IAmb	IAmb		04 54 30.8		
	comp=Z,6.0nm,1.4s								
H18K	**Honhosa River**	**80.68**	**24**	P	**P**		**04 53 53.0**	**+0.1**	
H18K				IAmb	IAmb		04 54 09.5		
	comp=Z,5.2nm,1.1s								
G19K	**Purcell Mounta**	**80.77**	**23**	P	**P**		**04 53 54.0**	**+0.7**	
G19K				IAmb	IAmb		04 54 09.7		
	comp=Z,5.4nm,1.3s								
D22K	**Ayikyak River**	**81.09**	**20**	P	**P**		**04 53 55.7**	**+0.7**	
D22K				IAmb	IAmb		04 54 24.3		
	comp=Z,4.8nm,1.0s								
BMAR	**Burnt Mountain**	**84.44**	**19**	P	**P**		**04 54 13.1**	**+0.7**	
CASY	**Casey**	**85.11**	**173**	P	**P**		**04 54 15.3**	**-0.2**	
URZ	**Urewera**	**95.61**	**128**	LR	LR		05 43 36.6		
	comp=Z,39nm,18.2s,baz=300,slow=39								
TXAR	**Lajitas Array**	**129.65**	**20**	PKP	**PKiKP**		**05 00 50.3**	**-0.3**	
	comp=Z,0.1nm,0.4s,baz=213,slow=0.5,SNR=4.2								

*JMA **09** 04:50:07.6±0.4,26°N±1°×12°9E±°, h29km±4km, MV3.1/12, NEAR OKINAWAJIMA ISLAND*
*IDC **09** 04:50:08.4±9.3,25°32N×126°.94E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=510.5km s-min=31.4km az=61.0*
ISC 09 04:50:05.5±1.5, **26°09N**±0°.06×**128°.66E**±0°.04, **h16**km±10km, **n13**, σ0§84/20, **mb3.4**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JNTH	**Nagotoyohara**	**0.71**	**307**	P		**Pg**	**04 50 19.4**	**-0.1**
JNTH				S		**Sg**	**04 50 28.1**	**-0.9**
JJT3	**Tamagusuku3**	**0.79**	**274**	P		**Pg**	**04 50 21.0**	**+0.2**
JJT3				S		**Sg**	**04 50 30.9**	**-0.4**
JOW	**Kunigami**	**0.82**	**335**	P		**Pg**	**04 50 21.9**	**+0.4**
JOW				*eS*		**Sg**	**04 50 32.3**	**0.0**
JYRO	**Yoronjima**	**0.95**	**349**	P		**Pb**	**04 50 24.2**	**+0.5**
JYRO				*eS*		**Sb**	**04 50 35.9**	**-0.2**
JIH	**Iheya**	**1.13**	**327**	*eP*		**Pb**	**04 50 27.0**	**+0.3**
JIH				*eS*		**Sb**	**04 50 40.3**	**-0.8**
JOKE	**Okinoerabujima**	**1.27**	**357**	P		**Pn**	**04 50 29.1**	**+0.3**
JAGN	**Aguni-jima**	**1.36**	**292**	P		**Pn**	**04 50 29.6**	**-0.4**
JKE	**Kume jima 2**	**1.70**	**279**	*eS*		**Sn**	**04 50 55.2**	**-0.8**
JMZ	**Minamidaito 2**	**2.33**	**96**	P		**Pn**	**04 50 42.8**	**-0.4**
JMZ				*eS*		**Sn**	**04 51 10.3**	**-1.2**
JKDJ	**Kitadaitoujima**	**2.38**	**93**	P		**Pn**	**04 50 43.9**	**0.0**
JKDJ				*eS*		**Sn**	**04 51 11.4**	**-1.4**
MKAR	**Makanchi Array**	**41.91**	**312**	P		**P**	**04 57 55.4**	**0.0**
	0.2nm,0.6s,baz=92,slow=7.2,SNR=2.3							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**46.09**	**173**	P		**P**	**04 58 29.1**	**0.0**
	0.4nm,0.4s,baz=349,slow=8.0,SNR=6.1							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**49.72**	**174**	P		**P**	**04 58 59.3**	**+2.1**
	0.2nm,0.5s,baz=2.0,slow=15,SNR=4.2							
	0.2nm,0.5s							

*WEL **09** 04:54:23.6±0.2,41°S±2°×17°5E±°, h31km±3km, M3.3/61, ML3.6/63, MLv3.3/61, Error ellipse: s-maj=0.0km s-min=0.0km az=122.8, confirmed*
*NOU **09** 04:54:23.6, 40°.66S×174°.80E, h49km, MLv3.2/7, Cook Strait, New Zealand*
ISC 09 04:54:24.0±1.6, **40°.63S**±0°.03×**174°.76E**±0°.03, **h36**km±1km, **n121**, σ1§15/141, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KIW	**Kapiti Island**	**0.26**	**155**	P		**Pn**	**04 54 32.5**	**+0.3**
KIW				S		**Sn**	**04 54 38.8**	**-0.6**
OTKS	**Otaki School**	**0.32**	**114**	P		**Pn**	**04 54 31.7**	**-0.5**
OTKS				S		**Sn**	**04 54 38.7**	**-0.1**
PAPS	**Paraparaumu Pr**	**0.34**	**148**	P		**Pn**	**04 54 33.4**	**+1.1**
PAPS				S		**Sn**	**04 54 40.8**	**+1.9**
OGWZ	**Otaki Gorge**	**0.36**	**122**	P		**Pn**	**04 54 33.7**	**+1.1**
OGWZ				S		**Sn**	**04 54 41.0**	**+1.9**
FXBS	**Foxton Beach S**	**0.39**	**65**	P		**Pn**	**04 54 32.4**	**-0.4**
FXBS				S		**Sn**	**04 54 40.4**	**+0.9**
HOCS	**Levin Horowhen**	**0.39**	**89**	P		**Pn**	**04 54 32.4**	**-0.5**
HOCS				S		**Sn**	**04 54 39.7**	**+0.2**
POKS	**Katoa Kinderga**	**0.50**	**174**	P		**Pn**	**04 54 34.1**	**-0.5**
POKS				S		**Sn**	**04 54 42.5**	**+0.5**
PWES	**Porirua West**	**0.50**	**175**	P		**Pn**	**04 54 35.5**	**+0.8**
PWES				S		**Sn**	**04 54 43.9**	**+1.8**
POLS	**Porirua Librar**	**0.51**	**174**	P		**Pn**	**04 54 34.2**	**-0.5**
POLS				S		**Sn**	**04 54 42.6**	**+0.4**
PFAS	**Porirua Free A**	**0.52**	**173**	P		**Pn**	**04 54 34.4**	**-0.5**
PFAS				S		**Sn**	**04 54 42.9**	**+0.5**
CAW	**Cannon Point**	**0.53**	**155**	P		**Pn**	**04 54 35.9**	**+0.7**
CAW				S		**Sn**	**04 54 45.1**	**+2.2**
TMDS	**Te Marua Water**	**0.54**	**147**	P		**Pn**	**04 54 34.7**	**-0.6**
TMDS				S		**Sn**	**04 54 43.9**	**+0.8**
OHWZ	**Ohakea**	**0.59**	**45**	P		**Pn**	**04 54 36.2**	**+0.2**
OHWZ				S		**Sn**	**04 54 45.8**	**+1.4**
MRZ	**Mangatainoka R**	**0.62**	**93**	P		**Pn**	**04 54 36.5**	**+0.1**
MRZ				S		**Sn**	**04 54 46.5**	**+1.4**
HOWZ	**Holdsworth Sta**	**0.63**	**116**	P		**Pn**	**04 54 36.6**	**0.0**
HOWZ				S		**Sn**	**04 54 47.3**	**+1.9**
WEL	**Wellington**	**0.66**	**180**	P		**Pn**	**04 54 37.5**	**+0.6**
WEL				S		**Sn**	**04 54 47.9**	**+1.9**
DUWZ	**D'Urville Isla**	**0.66**	**254**	P		**Pn**	**04 54 36.4**	**-0.6**
SNZO	**South Karori**	**0.69**	**184**	P		**Pn**	**04 54 37.8**	**+0.6**
TCW	**Tory Channel**	**0.69**	**212**	P		**Pn**	**04 54 37.5**	**+0.2**
TCW				S		**Sn**	**04 54 47.5**	**+0.7**
MTW	**Mount Morrison**	**0.77**	**134**	P		**Pn**	**04 54 39.0**	**+0.7**
MTW				S		**Sn**	**04 54 52.5**	**+3.7**
BHW	**Baring Head**	**0.79**	**174**	P		**Pn**	**04 54 39.2**	**+0.6**
BHW				S		**Sn**	**04 54 50.4**	**+1.3**
POWZ	**Post Office Ro**	**0.80**	**73**	P		**Pn**	**04 54 38.7**	**-0.1**
TIWZ	**Tintock**	**0.87**	**100**	P		**Pn**	**04 54 39.4**	**-0.3**
WAZ	**Wanganui**	**0.89**	**11**	P		**Pn**	**04 54 40.0**	**0.0**
PAWZ	**Paruwai Farm**	**0.91**	**147**	P		**Pn**	**04 54 40.0**	**-0.3**
PAWZ				S		**Sn**	**04 54 52.5**	**+0.3**
PRWZ	**Pori Road**	**0.92**	**86**	P		**Pn**	**04 54 40.5**	**+0.1**
TMWZ	**Te Maipa**	**0.98**	**120**	P		**Pn**	**04 54 42.0**	**+0.7**
PLWZ	**Palliser**	**1.01**	**159**	P		**Pn**	**04 54 41.5**	**-0.2**
TUWZ	**Tuamarina**	**1.01**	**217**	P		**Pn**	**04 54 42.3**	**+0.6**
TRWZ	**Traveller**	**1.04**	**138**	P		**Pn**	**04 54 43.5**	**+1.4**
TSZ	**Takapari Road**	**1.08**	**59**	P		**Pn**	**04 54 42.3**	**-0.2**
DVHZ	**Dannevirke**	**1.12**	**73**	P		**Pn**	**04 54 42.5**	**-0.6**
CPWZ	**Castlepoint**	**1.13**	**105**	P		**Pn**	**04 54 43.2**	**0.0**
BFZ	**Birch Farm**	**1.13**	**93**	P		**Pn**	**04 54 42.6**	**-0.7**
BFZ	**Birch Farm**	**1.13**	**93**	P		**Pn**	**04 54 42.6**	**-0.7**
CMWZ	**Cape Campbell**	**1.20**	**200**	P		**Pn**	**04 54 45.6**	**+1.4**
LREZ	**Lake Rotokare**	**1.20**	**346**	P		**Pn**	**04 54 44.4**	**+0.2**
NNZ	**Nelson**	**1.20**	**240**	P		**Pn**	**04 54 44.5**	**+0.2**
BSWZ	**Blackbirch Sta**	**1.28**	**211**	P		**Pn**	**04 54 45.7**	**+0.4**
PNHZ	**Pukenui**	**1.31**	**58**	P		**Pn**	**04 54 44.9**	**-0.9**
ANWZ	**Angora Road**	**1.31**	**83**	P		**Pn**	**04 54 45.5**	**-0.3**
MTVZ	**Mangateitei**	**1.35**	**24**	P		**Pn**	**04 54 46.6**	**+0.2**
PREZ	**Palmer Road**	**1.36**	**340**	P		**Pn**	**04 54 47.0**	**+0.4**
NMEZ	**Namu Road**	**1.39**	**330**	P		**Pn**	**04 54 47.2**	**+0.4**
WPHZ	**Waipukurau**	**1.40**	**67**	P		**Pn**	**04 54 46.5**	**-0.5**
PKVZ	**Pokaka**	**1.41**	**19**	P		**Pn**	**04 54 47.1**	**0.0**
TKNZ	**Takaka Hill**	**1.43**	**253**	P		**Pn**	**04 54 47.7**	**+0.3**
MOVZ	**Moawhango**	**1.44**	**32**	P		**Pn**	**04 54 47.0**	**-0.5**
WNVZ	**Wahianoa**	**1.45**	**27**	P		**Pn**	**04 54 47.9**	**+0.1**
NEZ	**North Egmont**	**1.45**	**339**	P		**Pn**	**04 54 48.0**	**+0.3**
KHEZ	**Kahui Hut**	**1.45**	**336**	P		**Pn**	**04 54 48.0**	**+0.2**
KHEZ	**Kahui Hut**	**1.45**	**336**	P		**Pn**	**04 54 48.0**	**+0.2**
TRVZ	**Turoa**	**1.46**	**25**	P		**Pn**	**04 54 48.0**	**0.0**
PRHZ	**Porangahau**	**1.47**	**76**	P		**Pn**	**04 54 47.6**	**-0.4**
WHVZ	**Whangaehu Hut**	**1.48**	**26**	P		**Pn**	**04 54 48.9**	**+0.5**
MAVZ	**Matarangi**	**1.49**	**25**	P		**Pn**	**04 54 48.6**	**+0.1**
FWVZ	**Far West T-bar**	**1.50**	**24**	P		**Pn**	**04 54 48.7**	**+0.2**
DREZ	**Durham Road**	**1.50**	**343**	P		**Pn**	**04 54 48.9**	**+0.6**
VRZ	**Vera Road**	**1.50**	**360**	P		**Pn**	**04 54 48.7**	**+0.3**
BHHZ	**Black Hill Sta**	**1.51**	**42**	P		**Pn**	**04 54 48.1**	**-0.4**
TUVZ	**Tukino**	**1.52**	**27**	P		**Pn**	**04 54 49.1**	**+0.3**
NBEZ	**Newall Road No**	**1.52**	**333**	P		**Pn**	**04 54 48.9**	**+0.3**
COVZ	**Chateau Observ**	**1.54**	**23**	P		**Pn**	**04 54 49.9**	**+0.8**
PKE	**Pukeiti**	**1.55**	**337**	P		**Pn**	**04 54 49.3**	**+0.2**
KRHZ	**Kereru**	**1.57**	**52**	P		**Pn**	**04 54 48.4**	**-1.0**
MHEZ	**Mangahewa**	**1.58**	**347**	P		**Pn**	**04 54 50.8**	**+1.3**
NGZ	**Ngauruhoe**	**1.59**	**24**	P		**Pn**	**04 54 49.9**	**+0.3**
SNVZ	**South Ngauruho**	**1.59**	**25**	P		**Pn**	**04 54 49.4**	**-0.3**
OTVZ	**Oturere**	**1.62**	**26**	P		**Pn**	**04 54 50.4**	**+0.3**
NNVZ	**North Ngauruho**	**1.63**	**24**	P		**Pn**	**04 54 50.7**	**+0.4**
TWVZ	**Taurewa**	**1.64**	**19**	P		**Pn**	**04 54 50.7**	**+0.3**
WTVZ	**West Tongariro**	**1.64**	**23**	P		**Pn**	**04 54 50.8**	**+0.4**
ETVZ	**East Tongariro**	**1.66**	**26**	P		**Pn**	**04 54 50.8**	**+0.2**
KRVZ	**Karewarewa**	**1.67**	**24**	P		**Pn**	**04 54 50.4**	**-0.4**
TMVZ	**Te Maari**	**1.67**	**26**	P		**Pn**	**04 54 51.1**	**+0.2**
NTVZ	**North Tongarir**	**1.68**	**25**	P		**Pn**	**04 54 51.4**	**+0.4**
MRNZ	**Matariki Terra**	**1.70**	**242**	P		**Pn**	**04 54 51.6**	**+0.4**
QRZ	**Quartz Range**	**1.71**	**263**	P		**Pn**	**04 54 50.7**	**-0.5**
QRZ	**Quartz Range**	**1.71**	**263**	P		**Pn**	**04 54 50.7**	**-0.5**
PXZ	**Pawanui**	**1.71**	**70**	P		**Pn**	**04 54 50.4**	**-0.9**
KWHZ	**Kaweka Forest**	**1.75**	**47**	P		**Pn**	**04 54 50.8**	**-1.1**
THZ	**Tophouse**	**1.81**	**230**	P		**Pn**	**04 54 52.6**	**0.0**
KAHZ	**Kahuranaki**	**1.82**	**63**	P		**Pn**	**04 54 51.5**	**-1.3**
RITZ	**Rihia Road**	**1.85**	**27**	P		**Pn**	**04 54 54.9**	**+1.7**
MCHZ	**McNeill Hill**	**1.90**	**52**	P		**Pn**	**04 54 53.4**	**-0.4**
RATZ	**Rangitukua**	**1.92**	**24**	P		**Pn**	**04 54 56.4**	**+2.2**
BKZ	**Black Stump Fm**	**1.97**	**43**	P		**Pn**	**04 54 54.1**	**-0.8**
BKZ	**Black Stump Fm**	**1.97**	**43**	P		**Pn**	**04 54 53.9**	**-1.1**
KHZ	**Kahutara**	**2.01**	**207**	P		**Pn**	**04 54 55.2**	**-0.2**
KHZ	**Kahutara**	**2.01**	**207**	P		**Pn**	**04 54 55.1**	**-0.3**
WATZ	**Wairara**	**2.06**	**22**	P		**Pn**	**04 54 58.5**	**+2.4**
HIZ	**Hauiti**	**2.11**	**2**	P		**Pn**	**04 54 57.6**	**+0.8**
HIZ	**Hauiti**	**2.11**	**2**	P		**Pn**	**04 54

CHKK	**Chushkaly**	**3.55**	**306**	*e*P	**Pb**	**05 04 23.2**	**+1.0**
	1.3nm,0.1s							
CHKK				*e*S	**Sg**	**05 05 11.8**	**-1.4**
	9.3nm,0.3s							
KTBS	**Karatobe**	**3.67**	**302**	Pg	**Pb**	**05 04 24.2**	**0.0**
	1.2nm,0.5s							
KTBS				Lg	Lg	05 05 13.9		
	15nm,0.4s							
KTBS	**Karatobe**	**3.67**	**302**	*e*P	**Pb**	**05 04 24.2**	**0.0**
	1.2nm,0.5s							
KTBS				*e*S	**Sg**	**05 05 13.9**	**-3.1**
	17nm,0.2s							
KST	**Kastek**	**3.89**	**290**	Pg	**Pb**	**05 04 28.9**	**+0.8**
	1.9nm,0.4s							
KST				Lg	Lg	05 05 21.7		
	11nm,0.6s							
KST	**Kastek**	**3.89**	**290**	*e*P	**Pb**	**05 04 28.9**	**+0.8**
	1.9nm,0.4s							
KST				*e*S	**Sg**	**05 05 21.7**	**-2.6**
	11nm,0.6s							
KUU	**Kurty**	**3.97**	**303**	Pg	**Pb**	**05 04 30.8**	**+1.5**
	3.0nm,0.2s							
KUU				Lg	Lg	05 05 25.4		
	5.0nm,0.5s							
KUU	**Kurty**	**3.97**	**303**	*e*P	**Pb**	**05 04 30.8**	**+1.5**
	3.0nm,0.2s							
KUU				*e*S	**Sg**	**05 05 25.4**	**-1.4**
	5.0nm,0.5s							
DGS	**Degeres**	**4.08**	**292**	Pg	**Pb**	**05 04 33.0**	**+1.7**
	1.7nm,0.5s							
DGS				Lg	Lg	05 05 28.7		
	5.5nm,0.8s							
DGS	**Degeres**	**4.08**	**292**	*e*P	**Pb**	**05 04 33.0**	**+1.7**
	1.7nm,0.5s							
DGS				*e*S	**Sg**	**05 05 28.7**	**-1.7**
	5.5nm,0.8s							
TKM2	**Tokmak 2**	**4.12**	**287**	⇓Pg	**Pg**	**05 04 38.4**	**+0.1**
	0.9nm,0.4s							
TKM2				⇑Lg	Lg	05 05 30.6		
	4.4nm,0.8s							
KRBS	**Karabastau**	**4.31**	**297**	Pg	**Pb**	**05 04 35.4**	**+0.2**
	1.0nm,0.4s							
KRBS				Lg	Lg	05 05 32.8		
	3.5nm,0.5s							
KRBS	**Karabastau**	**4.31**	**297**	*e*P	**Pb**	**05 04 35.4**	**+0.2**
	1.0nm,0.4s							
KRBS				*e*S	**Sb**	**05 05 32.9**	**+5.5**
	3.5nm,0.5s							
MAKZ	**Makanchi**	**5.01**	**8**	⇑Pn	**Pn**	**05 04 34.7**	**+0.1**
	0.8nm,0.5s							
MAKZ				⇓Lg	Lg	05 05 57.8		
	2.4nm,0.9s							
MK31	**Makanchi Array**	**5.04**	**10**	Pn	**Pn**	**05 04 35.8**	**+0.8**
	0.2nm,0.3s,baz=200,slow=15,SNR=18							
MK31				⇓Lg	Lg	05 05 59.8		
	1.6nm,0.7s,baz=193,slow=29							

TAP 09 05:06:50.2,24°05N×121°63E,h9km,ML1.8,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**311**	⇓*i*P	Pg	05 06 52.7	+0.6
	baz=320						
TWD				S	Sg	05 06 54.2	+0.7
	baz=320						
ETL	**Fush Village**	**0.11**	**355**	*i* P	Pg	05 06 53.7	+0.7
	baz=354						
ETL				S	Sg	05 06 55.8	+0.9
	baz=354						
NACB	**Ninganchiao**	**0.13**	**344**	*e*P	Pg	05 06 53.8	+0.6
	baz=343						
NACB				*e*S	Sg	05 06 56.3	+1.0
	baz=343						
ETM	**Tongmen**	**0.15**	**237**	*e*P	Pg	05 06 54.1	+0.6
	baz=236						
ETM				*e*S	Sg	05 06 56.9	+1.0
	baz=236						
ETLH	**Xiulin Townshi**	**0.21**	**319**	*i* P	Pg	05 06 55.6	+1.0
	baz=318						
ETLH				S	Sg	05 06 59.4	+1.8
	baz=318						
ENA	**Nanau**	**0.39**	**15**	*e*S	Sb	05 07 04.6	-0.8
	baz=15						
TDCB	**Techi**	**0.48**	**295**	*e*S	Sb	05 07 08.1	0.0
	baz=294						

TEH ***09*** *05:08:38.6, 30°.75N×57°.43E, h7km±45km, ML4.6*
IDC ***09*** *05:08:38.0±0.7, 30°.67N×57°.29E, h0km, mb3.9/19, mbtmp3.9/27, ML3.9/7, MS3.5/15, Error ellipse: s-maj=15.3km s-min=13.1km az=160.0*
THR ***09*** *05:08:39.9±0.7, 30°.77N×57°.36E, h14km±5km, ML4.6*
NEIC ***09*** *05:08:40.7±2.1, 30°.66N±0°.06×57°.22E±0°.08, h10km±1km, mb4.1/18, Error ellipse: s-maj=15.0km s-min=5.9km az=308.0*
OMAN ***09*** *05:08:41.4±0.1, 30°.78N×57°.25E, h19km±3km, mb4.1/31, ml3.3/2, ms2.9/5, Error ellipse: s-maj=6.6km s-min=1.1km az=20.0*
DSN ***09*** *05:08:42.5±2.0, 30°.81N×56°.81E, h15km, ML3.9/11, Error ellipse: s-maj=26.5km s-min=15.1km az=59.0*

ISC 09 05:08:41.0±0.4,30°.73N±0°.03×57°.32E±0°.03,h15km,n198, σ1s73/230,mb4.0/31,MS3.5/10,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.23**	**190**	Pg	**Pg**	**05 08 44.8**	**-1.5**
KRM1				Sg	**Sg**	**05 08 48.7**	**-1.3**
ZRDN	**Zarand Kerman**	**0.71**	**289**	Pg	**Pg**	**05 08 54.1**	**-0.8**
KHGB	**Koh Gabri**	**0.81**	**244**	Pg	**Pb**	**05 08 56.0**	**-0.9**
TVBK	**TV Kerman**	**0.89**	**213**	Pg	**Pb**	**05 08 57.7**	**-0.6**
KRBR	**Kerman**	**0.89**	**213**	*e*Pg	**Pb**	**05 08 57.8**	**-0.6**
CHMN	**Cheshme madani**	**0.89**	**167**	Pg	**Pg**	**05 08 56.0**	**-2.4**
NGRK	**Negar Kerman**	**1.20**	**205**	Pg	**Pn**	**05 09 03.3**	**-0.3**
IBAF	**Bafgh**	**1.73**	**300**	Pg	**Pn**	**05 09 12.3**	**+1.6**
KBAM	**BAM**	**1.87**	**148**	Pn	**Pn**	**05 09 12.5**	**-0.1**
BSRN	**Basiran**	**1.98**	**51**	*e*Pn	**Pn**	**05 09 13.7**	**-0.4**
BSRN				*e*Sg	**Sb**	**05 09 40.9**	**-0.4**
BSRN	**Basiran**	**1.98**	**51**	Pn	**Pn**	**05 09 13.5**	**-0.6**
IKOO	**Kooshah**	**2.22**	**40**	Pn	**Pn**	**05 09 17.2**	**-0.3**
TPRV	**Parvadeh(Tabas**	**2.35**	**347**	Pn	**Pn**	**05 09 19.3**	**+0.1**
IMEH	**Mehriz**	**2.41**	**286**	Pn	**Pn**	**05 09 21.9**	**+1.8**
NHDN	**Nehbandan**	**2.44**	**74**	Pn	**Pn**	**05 09 20.4**	**0.0**
ITEG	**Tejag**	**2.48**	**29**	Pn	**Pn**	**05 09 20.9**	**-0.2**
YZKH	**Yazd**	**2.85**	**306**	*e*Pn	**Pn**	**05 09 27.7**	**+1.6**
YZKH				*e*Sg	**Sb**	**05 10 09.1**	**+2.7**
YZKH				IAML		05 10 18.4	
	comp=E,2μm,0.6s						
YZKH				IAML		05 10 21.1	
	comp=N,2μm,0.4s						
TKDS	**Koohdasht(Taba**	**2.88**	**357**	Pn	**Pn**	**05 09 26.7**	**+0.3**
ICHK	**Chekchek**	**2.91**	**302**	Pn	**Pn**	**05 09 28.4**	**+1.5**
TABS	**Tabas**	**2.91**	**357**	*e*Pn	**Pn**	**05 09 27.4**	**+0.4**
TABS				IAML		05 10 25.1	
	comp=N,2μm,0.5s						
IDAH	**Dahanechah**	**2.95**	**47**	Pn	**Pn**	**05 09 27.5**	**-0.1**
AFRZ	**Afriz**	**3.05**	**28**	Pn	**Pn**	**05 09 28.9**	**+0.1**
ZHSF	**Zahedan**	**3.20**	**110**	*e*Pn	**Pn**	**05 09 31.3**	**+0.4**
ISAD	**Sadrabad**	**3.32**	**292**	Pn	**Pn**	**05 09 34.6**	**+1.9**
BNDS	**Bandar-Abbas**	**3.47**	**197**	*e*Pn	**Pn**	**05 09 36.7**	**+2.0**
BNDS				IAML		05 10 34.5	
	comp=E,571nm,0.7s						
SHRT	**Shahrakht**	**3.84**	**40**	*e*Pn	**Pn**	**05 09 40.6**	**+0.8**
SHRT	**Shahrakht**	**3.84**	**40**	Pn	**Pn**	**05 09 40.2**	**+0.5**
ANAR	**Anarak**	**3.91**	**310**	Pn	**Pn**	**05 09 42.0**	**+1.3**
JHRM	**Jahrom**	**3.94**	**237**	Pn	**Pn**	**05 09 43.7**	**+2.6**
SHI	**Shiraz**	**4.30**	**257**	Pn	**Pn**	**05 09 47.9**	**+1.9**
NASN	**Na'in**	**4.36**	**299**	*e*Pn	**Pn**	**05 09 48.7**	**+1.7**
IRAM	**Ramesheh**	**4.36**	**285**	Pn	**Pn**	**05 09 49.1**	**+2.2**
IZEF	**Zefreh**	**4.76**	**298**	Pn	**Pn**	**05 09 54.3**	**+1.8**
SHME	**Shamm**	**4.78**	**193**	P	**Pn**	**05 09 54.2**	**+1.7**
SHME	**Shamm**	**4.78**	**193**	P	**Pn**	**05 09 55.2**	**+2.7**
SHME				S	**Sn**	**05 10 51.9**	**+4.2**
JASK	**Jask - Hormozg**	**4.87**	**174**	P	**Pn**	**05 09 53.5**	**-0.3**
	SNR=19						
BANOM	**Banah**	**4.88**	**191**	P	**Pn**	**05 09 56.3**	**+2.4**
BANOM	**Banah**	**4.88**	**191**	P	**Pn**	**05 09 55.7**	**+1.8**
BANOM				S	**Sn**	**05 10 53.8**	**+3.7**
KLNJ	**Kolanjah**	**4.93**	**275**	Pn	**Pn**	**05 09 57.6**	**+2.7**
TBHD	**Torbat heydari**	**4.94**	**19**	Pn	**Pn**	**05 09 55.3**	**+0.4**
TBJM	**Torbat-e-JAM**	**5.18**	**28**	Pn	**Pn**	**05 09 58.8**	**+0.6**
IBRJ	**Brojen**	**5.31**	**284**	Pn	**Pn**	**05 10 02.6**	**+2.5**
SHRO	**Shahrood**	**5.36**	**349**	*e*Pn	**Pn**	**05 10 01.6**	**+1.0**
SHRO				IAML		05 11 43.6	
	comp=E,265nm,0.5s						
SHRO				IAML		05 11 44.7	
	comp=N,201nm,0.7s						
MASF	**Masafi**	**5.44**	**191**	P	**Pn**	**05 10 04.2**	**+2.6**
MASF				S	**Sn**	**05 11 06.1**	**+2.1**
KRSH	**Karshahi**	**5.44**	**308**	Pn	**Pn**	**05 10 03.1**	**+1.3**
MSFE	**Esma-Masafi**	**5.45**	**191**	P	**Pn**	**05 10 04.0**	**+2.2**
MDH	**Madha**	**5.49**	**190**	P	**Pn**	**05 10 05.1**	**+2.8**
MDH	**Madha**	**5.49**	**190**	P	**Pn**	**05 10 04.3**	**+2.0**
MDH				S	**Sn**	**05 11 06.6**	**+1.4**
IKLH	**Kolahrood**	**5.51**	**299**	Pn	**Pn**	**05 10 05.3**	**+2.5**
HRA	**Herat**	**5.53**	**48**	Pn	**Pn**	**05 10 03.8**	**+0.9**
SRVN	**Saravan**	**5.55**	**125**	Pn	**Pn**	**05 10 03.6**	**+0.4**
ISFB	**Sefidab**	**5.60**	**311**	Pn	**Pn**	**05 10 04.8**	**+0.9**
IMOG	**Moghan**	**5.62**	**17**	Pn	**Pn**	**05 10 04.6**	**+0.3**
SBZV	**Sabzevar**	**5.64**	**2**	Pn	**Pn**	**05 10 05.2**	**+0.6**
ZNGN	**Zangian**	**5.69**	**286**	Pn	**Pn**	**05 10 08.2**	**+2.8**
JRKH	**Jarkhoshk**	**5.75**	**25**	Pn	**Pn**	**05 10 06.4**	**+0.4**
DSBU	**Dashti - Bushe**	**5.78**	**247**	Pn	**Pn**	**05 10 07.8**	**+1.5**
CHBR	**Chabahar**	**5.83**	**151**	*e*Pn	**Pn**	**05 10 05.8**	**-1.2**
QAMS	**Qamsar**	**5.84**	**302**	Pn	**Pn**	**05 10 09.5**	**+2.2**
UOSS	**Minazif**	**5.85**	**190**	Pn	**Pn**	**05 10 06.9**	**-0.3**
UOSS	**Minazif**	**5.85**	**190**	P	**Pn**	**05 10 08.9**	**+1.7**
UOSS	**Minazif**	**5.85**	**190**	P	**Pn**	**05 10 10.0**	**+2.7**
UOSS				S	**Sn**	**05 11 16.9**	**+2.9**
JHBN	**Jahan bin**	**5.87**	**286**	Pn	**Pn**	**05 10 10.1**	**+2.2**
NAZ	**Nazwa, Dubai**	**5.91**	**195**	P	**Pn**	**05 10 10.2**	**+2.2**
NAZ	**Nazwa, Dubai**	**5.91**	**195**	P	**Pn**	**05 10 11.4**	**+3.4**
NAZ				S	**Sn**	**05 11 19.5**	**+4.0**
IAKL	**Akhelmad**	**5.97**	**11**	Pn	**Pn**	**05 10 09.9**	**+0.7**
HATD	**Hatta, Dubai**	**5.98**	**190**	P	**Pn**	**05 10 11.4**	**+2.4**
HATD				S	**Sn**	**05 11 20.4**	**+3.1**
HATD	**Hatta, Dubai**	**5.98**	**190**	P	**Pn**	**05 10 12.6**	**+3.6**
HATD				S	**Sn**	**05 11 20.8**	**+3.5**
IMYA	**Miami**	**6.06**	**22**	Pn	**Pn**	**05 10 10.9**	**+0.7**
ASHO	**Ashiyiah**	**6.13**	**191**	P	**Pn**	**05 10 12.6**	**+1.5**
ASHO	**Ashiyiah**	**6.13**	**191**	P	**Pn**	**05 10 13.3**	**+2.2**
	SNR=16						
ASHO				S	**Sn**	**05 11 26.0**	**+5.0**
FAQ	**Al Faqa, Dubai**	**6.16**	**195**	P	**Pn**	**05 10 12.9**	**+1.4**
FAQ	**Al Faqa, Dubai**	**6.16**	**195**	P	**Pn**	**05 10 13.7**	**+2.2**
FAQ				S	**Sn**	**05 11 24.1**	**+2.4**
IFIR	**Firoozkooh**	**6.21**	**323**	Pn	**Pn**	**05 10 13.1**	**+0.7**
GHVR	**GHOM**	**6.30**	**308**	*e*Pn	**Pn**	**05 10 15.7**	**+2.1**
ISFR	**Sfrayin**	**6.33**	**5**	Pn	**Pn**	**05 10 14.8**	**+0.8**
NGCH	**Negor - Chabah**	**6.33**	**147**	Pn	**Pn**	**05 10 13.7**	**-0.1**
NGCH	**Negor - Chabah**	**6.33**	**147**	P	**Pn**	**05 10 14.7**	**+0.9**
ASUD	**Al Ashush, Dub**	**6.33**	**197**	P	**Pn**	**05 10 16.9**	**+3.1**
ASUD	**Al Ashush, Dub**	**6.33**	**197**	P	**Pn**	**05 10 17.6**	**+3.7**
	SNR=7.9						
ASUD				S	**Sn**	**05 11 25.8**	**-0.2**
IVRN	**Varamin**	**6.34**	**314**	Pn	**Pn**	**05 10 15.4**	**+1.5**
IGLO	**Ghaloghah**	**6.45**	**334**	Pn	**Pn**	**05 10 17.2**	**+1.7**
AJN	**Ajban**	**6.49**	**199**	P	**Pn**	**05 10 17.6**	**+1.6**
AJN				S	**Sn**	**05 11 30.6**	**+1.0**
IDMV	**Damavand**	**6.55**	**319**	Pn	**Pn**	**05 10 18.7**	**+1.5**
SOHO	**SOHO**	**6.61**	**186**	P	**Pn**	**05 10 17.8**	**+0.1**
SOHO	**SOHO**	**6.61**	**186**	P	**Pn**	**05 10 17.8**	**+0.1**
DAMV	**Damavand**	**6.63**	**319**	*e*Pn	**Pn**	**05 10 19.4**	**+1.3**
IEMG	**Emamgholi**	**6.76**	**9**	Pn	**Pn**	**05 10 20.7**	**+0.8**
ALNE	**Al Ain**	**6.80**	**192**	P	**Pn**	**05 10 22.4**	**+2.2**
ALNE				S	**Sn**	**05 11 37.7**	**+0.3**
IPRN	**Peran**	**6.89**	**324**	Pn	**Pn**	**05 10 23.3**	**+1.7**
IHSB	**Hasanabad**	**6.91**	**314**	Pn	**Pn**	**05 10 23.6**	**+1.8**
BJRD	**Bojnurd**	**6.95**	**1**	*e*Pn	**Pn**	**05 10 23.0**	**+0.6**
MRVT	**Maraveh tapeh**	**6.98**	**352**	*e*Pn	**Pn**	**05 10 23.4**	**+0.5**
MRVT	**Maraveh tapeh**	**6.98**	**352**	Pn	**Pn**	**05 10 24.2**	**+1.4**
JRN	**Qarnain Island**	**6.99**	**216**	P	**Pn**	**05 10 25.1**	**+2.2**
HOQ	**Hoqain**	**7.12**	**180**	P	**Pn**	**05 10 26.2**	**+1.4**
HOQ				P	**Pn**	**05 10 26.2**	**+1.4**
HOQ				S	**Sn**	**05 11 47.9**	**+2.4**
HOQ				S	**Sn**	**05 11 47.9**	**+2.4**
GEYT	**Alibeck**	**7.21**	**5**	Pn	**Pn**	**05 10 27.5**	**+1.6**
GEYT	**Alibeck**	**7.21**	**5**	Pn	**Pn**	**05 10 27.7**	**+1.8**
	comp=N,0.8nm,0.3s,baz=203,slow=14,SNR=7.0						
GEYT				Sn	**Sn**	**05 11 48.2**	**+0.7**
	comp=N,1.3nm,0.3s,baz=218,slow=18,SNR=3.6						
	comp=N,2.0nm,0.2s						
GYA0B	**ALIBECK ARRAY**	**7.21**	**5**	Pn	**Pn**	**05 10 27.7**	**+1.9**
BIDO	**Bidbid**	**7.22**	**174**	P	**Pn**	**05 10 26.3**	**+0.2**
CHTH	**Charan**	**7.31**	**317**	*e*Pn	**Pn**	**05 10 28.9**	**+1.4**
ARQ	**Araqi**	**7.40**	**186**	P	**Pn**	**05 10 31.3**	**+2.7**
	SNR=10						
ARQ				P	**Pn**	**05 10 31.3**	**+2.7**
	SNR=10						
ARQ				S	**Sn**	**05 11 55.4**	**+3.1**
ARQ				S	**Sn**	**05 11 55.4**	**+3.1**
SHMA	**Al-Shehemyia**	**7.41**	**231**	P	**Pn**	**05 10 30.0**	**+1.3**
SHMA				S	**Sn**	**05 11 52.5**	**-0.1**
MZPU	**Pul - Mazandar**	**7.44**	**321**	Pn	**Pn**	**05 10 30.3**	**+1.1**
WSAR	**Wadi Sarin**	**7.56**	**171**	Pn	**Pn**	**05 10 29.4**	**-1.3**
	comp=N,3.2nm,0.3s,baz=0.5,slow=8.3,SNR=34						
WSAR				Sn	**Sn**	**05 11 57.1**	**+1.0**
	comp=N,1.4nm,0.3s,baz=76,slow=19,SNR=2.3						
	comp=N,24nm,0.6s						
WSAR	**Wadi Sarin**	**7.56**	**171**	P	**Pn**	**05 10 30.8**	**+0.1**
	SNR=16						
WSAR				S	**Sn**	**05 12 01.0**	**+4.8**
MZWR	**Madinat Zayed**	**7.59**	**205**	P	**Pn**	**05 10 31.8**	**+0.7**
MZWR				S	**Sn**	**05 11 58.5**	**+1.7**
SMDO	**Samad**	**7.67**	**175**	P	**Pn**	**05 10 32.8**	**+0.4**
SMDO				S	**Sn**	**05 12 03.6**	**+4.5**
KLST	**Kelardasht - M**	**7.78**	**320**	Pn	**Pn**	**05 10 35.6**	**+1.6**
GHWR	**Ruwais**	**7.81**	**211**	P	**Pn**	**05 10 34.4**	**+0.3**
GHWR				S	**Sn**	**05 11 59.4**	**-3.0**
BSY	**Bisya**	**7.96**	**181**	P	**Pn**	**05 10 37.2**	**+1.0**
BSY				S	**Sn**	**05 12 06.7**	**+0.7**
TRNA	**Turayna**	**8.06**	**224**	P	**Pn**	**05 10 37.7**	**+0.2**
	SNR=15						
UMZA	**Um Al Zommool**	**8.22**	**194**	P	**Pn**	**05 10 40.4**	**+0.7**
WBK	**Wadi Bani Khal**	**8.22**	**169**	P	**Pn**	**05 10 39.6**	**-0.3**
	SNR=37						
WBK				P	**Pn**	**05 10 39.6**	**-0.3**
	SNR=37						
SMRA	**Abu-Samra**	**8.29**	**226**	P	**Pn**	**05 10 40.9**	**+0.2**
	SNR=10						
SMRA				S	**Sn**	**05 12 13.8**	**-0.2**
SLWR	**Sila**	**8.31**	**218**	P	**Pn**	**05 10 41.5**	**+0.5**
SLWR				S	**Sn**	**05 12 14.2**	**-0.4**
JMDO	**Jabal Madar**	**8.36**	**175**	P	**Pn**	**05 10 41.2**	**-0.5**
JMDO				P	**Pn**	**05 10 41.2**	**-0.5**
JMDO				S	**Sn**	**05 12 14.4**	**+2.5**
JMDO				S	**Sn**	**05 12 18.4**	**+2.5**
GIDE	**GILAN DEYLAMAN**	**8.72**	**317**	*e*Pn	**Pn**	**05 10 48.3**	**+1.6**
JLN	**Jalan Bani Buh**	**8.75**	**167**	P	**Pn**	**05 10 45.9**	**-1.1**
JLN				S	**Sn**	**05 12 31.4**	**+5.9**
ZNJK	**Zanjan**	**9.31**	**312**	*e*Pn	**Pn**	**05 10 56.5**	**+1.6**
MHTO	**MHTO**	**9.72**	**176**	P	**Pn**	**05 11 01.7**	**+1.3**
MHTO				P	**Pn**	**05 11 01.7**	**+1.3**
MHTO				S	**Sn**	**05 12 51.1**	**+1.7**
MHTO				S	**Sn**	**05 12 51.1**	**+1.7**
GRMI	**Germi**	**11.17**	**319**	*e*Pn	**Pn**	**05 11 22.1**	**+1.8**
DOK	**Doka**	**12.40**	**194**	P	**Pn**	**05 11 36.4**	**-0.8**
	SNR=13						
SIMJ	**Simiganj**	**12.44**	**47**	Pn	**Pn**	**05 11 39.0**	**+1.3**
RAYN	**Ar Rayn**	**12.73**	**238**	Pn	**Pn**	**05 11 38.1**	**-3.5**
RAYN	**Ar Rayn**	**12.73**	**238**	P	**Pn**	**05 11 38.2**	**-3.4**
RAYN	**Ar Rayn**	**12.73**	**238**	P	**Pn**	**05 11 38.4**	**-3.3**
RAYN				S	**Sn**	**05 14 02.9**	**-0.3**
SHAO	**Shalim**	**12.75**	**187**	P	**Pn**	**05 11 41.9**	**+0.1**
DMTO	**DMTO**	**13.14**	**190**	P	**Pn**	**05 11 49.0**	**+1.9**
WHFO	**Wadi Hawf**	**13.16**	**195**	P	**Pn**	**05 11 46.3**	**-1.2**
	SNR=15						
RBK	**Rabkut**	**13.47**	**193**	P	**Pn**	**05 11 50.1**	**-1.7**
NIL	**Nilore**	**13.80**	**74**	Pn	**Pn**	**05 11 59.2**	**+2.9**
ABTO	**Aybut**	**13.81**	**196**	P	**Pn**	**05 11 54.3**	**-2.1**
	SNR=11						
GNI	**Garni**	**13.89**	**316**	LR	LR	05 18 08.9	
	comp=N,119nm,20.0s,baz=118,slow=41						
BTK	**Batken**	**14.40**	**46**	Pn	**Pn**	**05 12 04.9**	**+0.5**
GURO	**Guroymak-BITLI**	**14.79**	**306**	Pn	**Pn**	**05 12 09.8**	**0.0**
KK31	**Karatay Array**	**16.21**	**37**	Pn	**P**	**05 12 30.1**	**-1.2**
KKAR	**Karatay Array**	**16.21**	**37**	Pn	**P**	**05 12 29.7**	**-1.6**
KKAR	**Karatay Array**	**16.21**	**37**	Pn	**Pn**	**05 12 28.8**	**+0.5**
ARSB	**Arslanbob**	**16.47**	**46**	Pn	**P**	**05 12 32.7**	**-1.7**
KBZ	**Khabaz**	**17.29**	**323**	P	**Pn**	**05 12 41.5**	**-0.3**
	comp=N,2.2nm,1.0s,baz=141,slow=16,SNR=2.3						
ASF	**Jabal al Asfar**	**17.48**	**280**	P	**Pn**	**05 12 43.4**	**-1.0**
	comp=N,0.7nm,0.3s,baz=231,slow=20,SNR=7.6						
	comp=N,3.3nm,0.6s						
KIV	**Kislovodsk**	**17.56**	**323**		**Pn**	**05 12 46.1**	**+0.9**
KIV				IAmb	IAmb	05 12 54.4	
	comp=Z,29nm,0.9s						
KSH	**Kashi**	**17.57**	**55**	P	**Pn**	**05 12 44.6**	**-0.9**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AAK	**Ala-Archa**	**18.15**	**44**	Pn	**Pn**	**05 12 51.9**	**-0.8**
AAK	**Ala-Archa**	**18.15**	**44**	P	**P**	**05 12 52.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=240,slow=14,SNR=2.4						
AAK				LR	LR	05 21 27.5	
	comp=Z,117nm,18.2s,baz=294,slow=42						
	comp=Z,0.8nm,0.6s						
ABKAR	**Akbulak array**	**18.61**	**5**		**P**	**05 12 57.0**	**-0.7**
GHAJ	**Ghor Haditha**	**18.65**	**277**	P	**P**	**05 12 56.8**	**-1.5**
GHAJ				IAmb	IAmb	05 13 08.7	
	comp=Z,12nm,0.8s						
MMAI	**Mount Meron Ar**	**18.75**	**283**	P	**P**	**05 12 58.7**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=76,slow=12,SNR=1.9						
MMAI				LR	LR	05 21 41.4	
	comp=Z,100nm,19.8s,baz=65,slow=42						
	comp=Z,0.7nm,0.2s						
EIL	**Elat**	**19.36**	**273**	P	**P**	**05 13 04.9**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=73,slow=2.8,SNR=7.5						
EIL				LR	LR	05 21 39.1	
	comp=Z,131nm,19.0s,baz=80,slow=40						
	comp=Z,4.1nm,0.8s						
AKTO	**Aktyubinsk**	**19.69**	**1**	P	**P**	**05 13 09.6**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=183,slow=10.0,SNR=20						
AKTO				LR	LR	05 22 24.7	
	comp=Z,184nm,21.6s,baz=242,slow=42						
	comp=Z,5.2nm,0.6s						
BR131	**Keskin Array S**	**21.27**	**301**	P	**P**	**05 13 26.9**	**-0.1**
BR131				IAmb	IAmb	05 13 32.3	
	comp=Z,8.5nm,1.1s						
BRTR	**Keskin Array B**	**21.27**	**301**	P	**P**	**05 13 26.7**	**-0.3**
BRTR	**Keskin Array B**	**21.27**	**301**	P	**P**	**05 13 27.1**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=114,slow=11,SNR=18						
	comp=Z,5.6nm,0.9s						
ELL	**Elmali**	**23.52**	**292**	P	**P**	**05 13 51.9**	**+1.2**
BRVK	**Borovoye**	**24.23**	**19**	P	**P**	**05 13 56.8**	**-0.3**
BRVK				IAmb	IAmb	05 14 37.0	
	comp=Z,3.0nm,0.9s						
BVAR	**Borovoye Array**	**24.23**	**19**	P	**P**	**05 13 57.7**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=198,slow=7.5,SNR=12						
	comp=Z,2.6nm,0.5s						
MAKZ	**Makanchi**	**24.90**	**43**	P	**P**	**05 14 03.0**	**-0.3**
MAKZ				IAmb	IAmb	05 14 09.1	
	comp=Z,5.7nm,0.9s						
MK31	**Makanchi Array**	**25.07**	**43**	P	**P**	**05 14 04.8**	**0.0**
MK31				IAmb	IAmb	05 14 10.5	
	comp=Z,5.8nm,1.4s						
MKAR	**Makanchi Array**	**25.07**	**43**	P	**P**	**05 14 05.0**	**+0.1**
MKAR	**Makanchi Array**	**25.07**	**43**	P	**P**	**05 14 05.3**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=226,slow=8.2,SNR=13						
MKAR				LR	LR	05 25 26.4	
	comp=Z,112nm,18.3s,baz=345,slow=40						
	comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**25.40**	**32**	P	**P**	**05 14 08.2**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=232,slow=8.9,SNR=12						
	comp=Z,2.6nm,0.9s						
KURK	**Kurchatov**	**25.51**	**32**	P	**P**	**05 14 09.5**	**+0.8**
KURK				IAmb	IAmb	05 14 12.5	
	comp=Z,3.4nm,0.9s						
ARU	**Arti**	**25.70**	**2**	LR	LR	05 26 04.7	
	comp=Z,84nm,21.9s,baz=291,slow=41						
WMQ	**Urumqi**	**27.31**	**53**	*e*P	**P**	**05 14 27.8**	**+2.6**
AKASG	**Malin Array Be**	**28.90**	**322**	P	**P**	**05 14 39.2**	**+0.1**
	comp=

0.4nm,0.9s,baz=69,slow=336,SNR=35
ZALV Zalesovo Beam 1.29 251 Pg Pg 05 30 02.5 -0.8
0.6nm,0.3s,baz=67,slow=17,SNR=18
ZALV Lg Lg 05 30 19.9
0.9nm,0.3s,baz=68,slow=27,SNR=6.1
KURBB Kurchatov Arra 6.34 237 Pn Pn 05 31 14.7 +1.4
0.1nm,0.3s,baz=53,slow=14,SNR=6.8
KURBB Lg Lg 05 32 59.0
baz=58,slow=32,SNR=1.4
0.6nm,0.3s
MKAR Makanchi Array 8.15 203 Pn Pn 05 31 38.3 +0.2
0.1nm,0.3s,baz=18,slow=28,SNR=4.1
MKAR Lg Lg 05 33 59.5
0.1nm,0.3s,baz=22,slow=34,SNR=3.0
0.2nm,0.4s

IDC 09 05:35:25.4±2.6, 54°28'N×86°15'E, h0km, mbtmp3.5/2, ML2.8/2, Error ellipse: s-maj=20.1km s-min=11.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.85**	**247**	I	I	05 40 20.0	
	0.1nm,0.9s,baz=67,slow=336,SNR=3.0						
ZALV	**Zalesovo Beam**	**0.85**	**247**	Pg	Pg	05 35 40.1	-1.6
	1.0nm,0.3s,baz=62,slow=17,SNR=15						
ZALV				Lg	Lg	05 35 54.7	
	6.2nm,0.3s,baz=68,slow=32,SNR=11						
KURBB	**Kurchatov Arra**	**5.93**	**235**	Pn	Pn	05 36 54.7	+0.4
	0.1nm,0.3s,baz=53,slow=13,SNR=1.1						
	4.0nm,0.2s						
MKAR	**Makanchi Array**	**7.89**	**200**	Pn	Pn	05 37 22.8	+1.5
	0.3nm,0.3s,baz=26,slow=14,SNR=11						
	0.3nm,0.3s						

*MDD **09** 05:37:48.5±0.6, 36.61N×9.79W, h30km±8km, mb_Lg3.4/19, Error ellipse: s-maj=5.5km s-min=2.8km az=73.0*
*SFS **09** 05:37:49.1, 36.62N×9.72W, h41km, mb4.0/4, ML3.4/22, ML3.5/18, MLv3.1/22*
*IGIL **09** 05:37:50.1, 36.64N×9.70W, h32km, ML2.7*
*INMG **09** 05:37:50.1±1.1, 36.64N×9.71W, h31km±7km, ML2.8, Error ellipse: s-maj=4.2km s-min=2.7km az=62.0*

ISC 09 05:37:47.9±1.6, 36°66'N±0°05×9°69'W±0°06, h35km, n76, σ1°63/148, 9C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.84**	**55**	⇑*iP*	**Pn**	**05 38 04.6**	**+1.4**
PFVI				*eS*	**Sn**	**05 38 15.1**	**+0.8**
PFVI				A	A	05 38 16.1	
	219nm,0.1s						
PFVI	**Vila Bisbo**	**0.84**	**55**	P	**Pn**	**05 38 04.6**	**+1.4**
PFVI				S	**Sn**	**05 38 15.2**	**+0.8**
MORF	**Marmelete**	**1.05**	**52**	⇑*iP*	**Pn**	**05 38 07.7**	**+1.5**
MORF				*eS*	**Sn**	**05 38 20.6**	**+0.9**
MORF				A	A	05 38 21.4	
	143nm,0.2s						
MORF	**Marmelete**	**1.05**	**52**	*eP*	**Pn**	**05 38 07.7**	**+1.5**
MORF				*eS*	**Sn**	**05 38 20.5**	**+0.8**
MORF				IAML		05 38 23.1	
	comp=E,207nm,0.1s						
PTEO	**Sao Teotonio**	**1.18**	**41**	⇑*iP*	**Pn**	**05 38 09.3**	**+1.4**
PTEO				*eS*	**Sn**	**05 38 23.9**	**+1.2**
PTEO				A	A	05 38 24.2	
	comp=E,54nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.52**	**67**	⇑*iP*	**Pn**	**05 38 14.3**	**+1.6**
PBDV				*eS*	**Sn**	**05 38 31.9**	**+0.6**
PBDV				A	A	05 38 36.0	
	comp=E,40nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.52**	**67**	P	**Pn**	**05 38 14.2**	**+1.6**
PBDV				S	**Sn**	**05 38 31.6**	**+0.3**
PCVE	**Castro Verde**	**1.64**	**53**	⇑*eP*	**Pn**	**05 38 16.0**	**+1.7**
PCVE				*eS*	**Sn**	**05 38 35.5**	**+1.4**
PCVE				A	A	05 38 36.5	
	comp=E,21nm,0.3s						
PCVE	**Castro Verde**	**1.64**	**53**	P	**Pn**	**05 38 15.9**	**+1.7**
PCVE				S	**Sn**	**05 38 35.0**	**+0.9**
MESJ	**Messejana**	**1.66**	**44**	⇑*eP*	**Pn**	**05 38 16.0**	**+1.4**
MESJ				*eS*	**Sn**	**05 38 35.3**	**+0.6**
MESJ				A	A	05 38 38.4	
	comp=E,52nm,0.3s						
MESJ	**Messejana**	**1.66**	**44**	*eP*	**Pn**	**05 38 15.9**	**+1.4**
MESJ				*eS*	**Sn**	**05 38 35.1**	**+0.3**
MESJ				IAML		05 38 37.5	
	comp=E,41nm,0.1s						
PNCL	**Nicolau / Gran**	**1.72**	**32**	⇑*eP*	**Pn**	**05 38 16.6**	**+1.2**
PNCL				*eS*	**Sn**	**05 38 36.5**	**+0.3**
PNCL				A	A	05 38 37.4	
	comp=E,42nm,0.1s						
PNCL	**Nicolau / Gran**	**1.72**	**32**	P	**Pn**	**05 38 16.6**	**+1.2**
PNCL				S	**Sn**	**05 38 36.4**	**+0.3**
PVAQ	**Vaqueiros**	**1.74**	**64**	*eP*	**Pn**	**05 38 17.2**	**+1.5**
PVAQ				*eS*	**Sn**	**05 38 37.1**	**+0.4**
PVAQ	**Vaqueiros**	**1.74**	**64**	P	**Pn**	**05 38 17.3**	**+1.5**
PVAQ				S	**Sn**	**05 38 36.7**	**0.0**
EGRO	**El Granado**	**1.97**	**63**	P	**Pn**	**05 38 20.1**	**+1.3**
EGRO				S	**Sn**	**05 38 43.1**	**+0.9**
EGRO	**El Granado**	**1.97**	**63**	P	**Pn**	**05 38 20.2**	**+1.4**
EGRO				S	**Sn**	**05 38 43.4**	**+1.2**
EGRO				*i* Vmb_Lg		05 38 44.3	
PBEJ	**Beja**	**1.99**	**46**	⇑*eP*	**Pn**	**05 38 20.2**	**+1.1**
PBEJ				*eS*	**Sn**	**05 38 43.1**	**+0.2**
PBEJ				A	A	05 38 45.5	
	comp=E,21nm,0.2s						
LIS	**Lisbon**	**2.10**	**11**	*eP*	**Pn**	**05 38 21.9**	**+1.3**
LIS				*eS*	**Sn**	**05 38 46.1**	**+0.6**
LIS				A	A	05 38 47.4	
	comp=E,50nm,0.1s						
EVO	**Evora**	**2.30**	**35**	*eP*	**Pn**	**05 38 24.3**	**+1.0**
EVO				*eS*	**Sn**	**05 38 50.2**	**-0.2**
EVO				A	A	05 38 51.1	
	comp=E,48nm,0.1s						
PMAFR	**Mafra**	**2.32**	**8**	*eP*	**Pn**	**05 38 24.6**	**+0.9**
PMAFR				*eS*	**Sn**	**05 38 50.9**	**0.0**
PMAFR				A	A	05 38 53.0	
	comp=E,146nm,0.2s						
PMAFR	**Mafra**	**2.32**	**8**	P	**Pn**	**05 38 24.5**	**+0.9**
PMAFR				S	**Sn**	**05 38 50.9**	**0.0**
PBAR	**Barrancos**	**2.60**	**53**	*eP*	**Pn**	**05 38 28.6**	**+1.2**
PBAR				*eS*	**Sn**	**05 38 57.9**	**+0.2**
PBAR				A	A	05 39 00.0	
	comp=E,19nm,0.2s						
PBAR	**Barrancos**	**2.60**	**53**	P	**Pn**	**05 38 28.5**	**+1.1**
PBAR				S	**Sn**	**05 38 57.4**	**-0.4**
EMIN	**Mina Concepcio**	**2.65**	**64**	P	**Pn**	**05 38 29.2**	**+1.0**
EMIN				S	**Sn**	**05 38 59.0**	**0.0**
EMIN				*i* Vmb_Lg		05 39 01.1	
PMTG	**Montargil**	**2.67**	**25**	*eP*	**Pn**	**05 38 30.0**	**+1.5**
PMTG				*eS*	**Sn**	**05 38 59.2**	**-0.4**
PMTG				A	A	05 39 00.9	
	comp=E,39nm,0.1s						
PESTR	**Estremoz**	**2.76**	**36**	⇑*eP*	**Pn**	**05 38 30.5**	**+0.7**
PESTR				*eS*	**Sn**	**05 39 01.2**	**-0.7**
PESTR				A	A	05 39 03.8	
	comp=E,7.0nm,0.2s						
PESTR	**Estremoz**	**2.76**	**36**	P	**Pn**	**05 38 30.4**	**+0.7**
PESTR				S	**Sn**	**05 39 00.9**	**-1.0**
PSBE	**So Bento**	**2.94**	**14**	*eP*	**Pn**	**05 38 33.4**	**+1.2**
PSBE				*eS*	**Sn**	**05 39 05.9**	**-0.4**
PSBE				A	A	05 39 08.9	
	comp=E,23nm,0.3s						
EBAD	**Badajoz**	**2.98**	**45**	P	**Pn**	**05 38 33.5**	**+0.8**
EBAD				S	**Sn**	**05 39 06.4**	**-0.9**
EBAD	**Badajoz**	**2.98**	**45**	P	**Pn**	**05 38 33.5**	**+0.8**
EBAD				S	**Sn**	**05 39 06.9**	**-0.3**
EBAD				*i* Vmb_Lg		05 39 09.5	
ESPR	**Espera**	**3.08**	**85**	P	**Pn**	**05 38 35.4**	**+1.4**
ESPR				S	**Sn**	**05 39 08.9**	**-0.8**
ESPR	**Espera**	**3.08**	**85**	P	**Pn**	**05 38 35.5**	**+1.4**
ESPR				S	**Sn**	**05 39 09.6**	**-0.2**
ESPR				*i* Vmb_Lg		05 39 11.3	
PMRV	**Marv??o**	**3.31**	**32**	*eP*	**Pn**	**05 38 38.3**	**+1.1**
PMRV				*eS*	**Sn**	**05 39 14.2**	**-1.1**
PMRV				A	A	05 39 16.2	
	comp=E,26nm,0.3s						
EJIF	**Jimena Fronter**	**3.40**	**92**	P	**Pn**	**05 38 40.4**	**+1.9**
EJIF				S	**Sn**	**05 39 18.8**	**+1.1**
PCAS	**Casmilo, Conde**	**3.52**	**15**	*eP*	**Pn**	**05 38 41.3**	**+1.2**
PCAS				*eS*	**Sn**	**05 39 19.5**	**-1.0**
PCAS				A	A	05 39 23.8	
	comp=E,10.0nm,0.1s						
CEU	**Ceuta**	**3.56**	**101**	P	**Pn**	**05 38 42.1**	**+1.3**
CEU				S	**Sn**	**05 39 21.3**	**-0.4**
PCBR	**Castelo Branco**	**3.62**	**28**	*eP*	**Pn**	**05 38 42.9**	**+1.4**
PCBR				*eS*	**Sn**	**05 39 22.1**	**-1.0**
PCBR				A	A	05 39 25.6	
	comp=E,8.7nm,0.3s						
ECAB	**El Cabril**	**3.68**	**66**	P	**Pn**	**05 38 43.6**	**+1.2**
ECAB				S	**Sn**	**05 39 22.4**	**-2.2**
ECAB	**El Cabril**	**3.68**	**66**	P	**Pn**	**05 38 43.6**	**+1.2**
ECAB				S	**Sn**	**05 39 23.6**	**-1.0**
ECAB				*i* Vmb_Lg		05 39 25.4	
COI	**Coimbra**	**3.69**	**15**	*eS*	**Sn**	**05 39 24.7**	**+0.1**
COI				A	A	05 39 26.1	
	comp=E,25nm,0.4s						
AVE	**Averroes**	**3.83**	**150**	P	**Pn**	**05 38 44.7**	**+0.3**
AVE				S	**Sn**	**05 39 26.0**	**-2.3**
EMIJ	**Mijas**	**3.95**	**90**	P	**Pn**	**05 38 47.5**	**+1.4**
EMIJ				S	**Sn**	**05 39 30.5**	**-0.8**
EMIJ	**Mijas**	**3.95**	**90**	P	**Pn**	**05 38 47.3**	**+1.2**
EMIJ				S	**Sn**	**05 39 30.0**	**-1.3**
MTE	**Manteigas**	**4.10**	**24**	*eP*	**Pn**	**05 38 49.2**	**+1.1**
MTE				*eS*	**Sn**	**05 39 33.8**	**-1.1**
MTE				A	A	05 39 38.0	
	comp=E,8.8nm,0.6s						
EADA	**Adamuz**	**4.34**	**68**	P	**Pn**	**05 38 52.5**	**+1.1**
EADA				S	**Sn**	**05 39 37.5**	**-3.3**
EADA	**Adamuz**	**4.34**	**68**	P	**Pn**	**05 38 52.8**	**+1.4**
EADA				S	**Sn**	**05 39 38.7**	**-2.0**
EADA				*i* Vmb_Lg		05 39 43.0	
EPLA	**Plasencia**	**4.43**	**39**	P	**Pn**	**05 38 53.6**	**+1.0**
EPLA				S	**Sn**	**05 39 41.3**	**-1.7**
EPLA				*i* Vmb_Lg		05 39 43.9	
EGOR	**Sierra Gorda,**	**4.49**	**83**	S	**Sn**	**05 39 43.8**	**-0.9**
EGOR				*i* Vmb_Lg		05 39 47.7	
PTO	**Porto**	**4.56**	**10**	*eS*	**Sn**	**05 39 44.5**	**-1.5**
PTO				A	A	05 39 47.3	
	comp=E,27nm,0.3s						
PVRL	**Vila Real**	**4.86**	**18**	*eP*	**Pn**	**05 38 59.6**	**+1.0**
PVRL				*eS*	**Sn**	**05 39 51.0**	**-2.7**
PVRL				A	A	05 39 54.7	
	comp=E,37nm,0.6s						
ELGU	**Los Guajares,**	**4.87**	**86**	P	**Pn**	**05 39 02.0**	**+3.3**
ELGU				S	**Sn**	**05 39 50.9**	**-3.0**
ELGU				*i* Vmb_Lg		05 39 59.2	
IFR	**Ifrane**	**4.88**	**129**	P	**Pn**	**05 38 58.4**	**-0.6**
IFR				S	**Sn**	**05 39 49.8**	**-4.5**
POLO	**Lamas de Olo**	**4.94**	**17**	*eP*	**Pn**	**05 39 00.5**	**+0.8**
POLO				*eS*	**Sn**	**05 39 52.7**	**-2.9**
POLO				A	A	05 39 56.3	
	comp=E,4.4nm,0.4s						
MVO	**Moncorvo**	**4.96**	**24**	*eP*	**Pn**	**05 39 00.8**	**+0.9**
MVO				*eS*	**Sn**	**05 39 54.1**	**-1.9**
MVO				A	A	05 39 56.7	
	comp=E,11nm,0.4s						
EQUE	**Quentar**	**5.03**	**82**	P	**Pn**	**05 39 03.9**	**+2.9**
EQUE				S	**Sn**	**05 39 57.4**	**-0.6**
EQUE				*i* Vmb_Lg		05 40 09.2	
PAB	**San Pablo**	**5.10**	**54**	P	**Pn**	**05 39 02.8**	**+0.9**
PAB				S	**Sn**	**05 39 57.5**	**-2.2**
PAB				*i* Vmb_Lg		05 39 59.2	
PSIM	**Granatula de C**	**5.17**	**64**	P	**Pn**	**05 39 04.1**	**+1.2**
PSIM				S	**Sn**	**05 39 59.8**	**-1.6**
PCAB	**Cabril**	**5.21**	**14**	*eP*	**Pn**	**05 39 04.2**	**+0.8**
PCAB				*eS*	**Sn**	**05 40 01.0**	**-1.2**
PCAB				A	A	05 40 02.6	
	comp=E,15nm,0.2s						
ELOB	**Lobios**	**5.36**	**13**	P	**Pn**	**05 39 05.8**	**+0.4**
ELOB				S	**Sn**	**05 40 03.1**	**-2.8**
ELOB				*i* Vmb_Lg		05 40 05.6	
EQES	**Quesada**	**5.40**	**76**	P	**Pn**	**05 39 07.6**	**+1.5**
EQES				S	**Sn**	**05 40 05.4**	**-1.6**
EQES				*i* Vmb_Lg		05 40 07.9	
PGAV	**Gavieira, Arco**	**5.42**	**11**	*eP*	**Pn**	**05 39 07.1**	**+0.8**
PGAV				*eS*	**Sn**	**05 40 04.5**	**-2.9**
PGAV				A	A	05 40 08.6	
	comp=E,7.8nm,0.2s						
ESDC	**Sonseca Array**	**5.42**	**55**	P	**Pn**	**05 39 07.2**	**+0.8**
ESDC				S	**Sn**	**05 40 06.1**	**-1.4**
ESDC				*i* Vmb_Lg		05 40 13.3	
PBRG	**Braganca**	**5.63**	**23**	*eP*	**Pn**	**05 39 10.1**	**+1.0**
PBRG				*eS*	**Sn**	**05 40 09.7**	**-2.8**
PBRG				A	A	05 40 13.1	
	comp=E,6.2nm,0.2s						
ECAL	**Calabor**	**5.75**	**23**	P	**Pn**	**05 39 12.0**	**+1.2**
ECAL				S	**Sn**	**05 40 14.0**	**-1.7**
ECAL	**Calabor**	**5.75**	**23**	P	**Pn**	**05 39 12.1**	**+1.2**
ECAL				S	**Sn**	**05 40 15.0**	**-0.6**
GUD	**Guadarrama**	**5.88**	**46**	P	**Pn**	**05 39 13.3**	**+0.6**
GUD				S	**Sn**	**05 40 17.2**	**-1.8**
GUD				*i* Vmb_Lg		05 40 18.8	
TIO	**Tiouine**	**6.06**	**160**	P	**Pn**	**05 39 14.9**	**-0.3**
TIO				S	**Sn**	**05 40 18.5**	**-4.9**
UCM	**Universidad Co**	**6.23**	**52**	P	**Pn**	**05 39 19.0**	**+1.6**
UCM				S	**Sn**	**05 40 24.6**	**-2.8**
EAGO	**Agolada(Pontev**	**6.26**	**11**	P	**Pn**	**05 39 18.6**	**+0.8**
EAGO				S	**Sn**	**05 40 24.7**	**-3.4**
EAGO				*i* Vmb_Lg		05 40 26.8	
EMAZ	**Mazaricos**	**6.31**	**5**	S	**Sn**	**05 40 25.6**	**-3.7**
ETOB	**Tobarra**	**6.75**	**70**	P	**Pn**	**05 39 25.4**	**+0.8**
ETOB				S	**Sn**	**05 40 36.7**	**-3.7**
ETOB	**Tobarra**	**6.75**	**70**	P	**Pn**	**05 39 25.4**	**+0.8**
ETOB				S	**Sn**	**05 40 36.7**	**-3.7**
EPON	**Pontenova**	**6.94**	**15**	P	**Pn**	**05 39 28.6**	**+1.5**
EPON				S	**Sn**	**05 40 41.7**	**-3.1**
ETOR	**Torete**	**7.27**	**53**	P	**Pn**	**05 39 32.9**	**+1.2**
ETOR				S	**Sn**	**05 40 48.9**	**-4.1**
EMOS	**Mosqueruela**	**8.12**	**60**	P	**Pn**	**05 39 45.8**	**+2.4**
EMOS				S	**Sn**	**05 41 11.7**	**-2.3**

IDC 09 05:44:20.1±6.6, 20°91'S×169°06'E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=288.4km s-min=35.1km az=150.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.52**	**265**	P	P	05 50 53.6	+0.7
	0.3nm,0.2s,baz=90,slow=5.9,SNR=22						
	0.3nm,0.2s						
ASAR	**Alice Springs**	**32.60**	**259**	P	P	05 50 52.8	-0.9
	1.1nm,0.7s,baz=100,slow=7.6,SNR=10						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**91.87**	**17**	P	P	05 57 29.6	-0.1
	0.4nm,0.6s,baz=238,slow=6.2,SNR=15						
	0.4nm,0.6s						

*IDC **09** 05:47:35.7±2.7, 53.71N×86.90E, h0km, mbtmp3.2/2, ML2.5/2, Error ellipse: s-maj=25.7km s-min=14.6km az=67.0*

ISC 09 05:47:34.4±15.0, 54°2'N±0°7×87°4'E±0°9, h35km, n6, σ0°68/5, 2C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**263**	I	I	05 54 30.0	
	0.1nm,0.8s,baz=100,slow=341,SNR=25						
ZALV	**Zalesovo Beam**	**1.51**	**263**	Pg	**Pn**	**05 47 58.9**	**0.0**
	1.4nm,0.3s,baz=103,slow=17,SNR=27						
ZALV				Lg	Lg	05 48 16.4	
	1.4nm,0.3s,baz=101,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	**Pn**	**05 49 06.7**	**-0.1**
	0.1nm,0.3s,baz=354,slow=17,SNR=2.2						
	1.2nm,0.3s						
MK31	**Makanchi Array**	**8.04**	**206**	Pn	**Pn**	**05 49 28.9**	**+0.3**
	0.1nm,0.3s,baz=25,slow=13,SNR=8.8						
MK31				⇑Lg	Lg	05 50 50.2	
	0.2nm,0.6s,baz=30,slow=28						
MKAR	**Makanchi Array**	**8.04**	**206**	Pn	**Pn**	**05 49 27.8**	**-0.8**
	0.1nm,0.3s,baz=25,slow=14,SNR=8.2						
	0.2nm,0.2s						
MAKZ	**Makanchi**	**8.11**	**207**	⇓Pn	**Pn**	**05 49 30.0**	**+0.5**
	0.1nm,0.3s						
MAKZ				⇑Lg	Lg	05 50 49.2	
	0.4nm,0.7s						

*AZER **09** 05:50:59.3, 41.43N×46.79E, h4km, ml2.9*
*TIF **09** 05:51:00.0, 41.17N×47.10E, h41km±1km*
*MOS **09** 05:51:00.0, 41.42N×46.94E, h12km, MPVA3.8*
*NSSP **09** 05:51:02.2, 41.42N×46.77E, h10km, Ms3.3*
*DRS **09** 05:51:02.8, 41.36N×46.90E, h18km*

ISC 09 05:51:02.0±1.0, 41°45'N±0°01×46°84'E±0°01, h5km±9km, n66, σ1°32/128, 2C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKTA	**Zakatala**	**0.25**	**318**	P	**Pg**	**05 51 07.7**	**+0.7**
ZKTA				S	**Sb**	**05 51 12.5**	**-1.2**
SEKA	**Sheki**	**0.36**	**132**	Pg	**Pg**	**05 51 07.6**	**-1.4**
SEKA				Sg	**Sg**	**05 51 13.2**	**-0.5**
VSHL	**Vashlovani**	**0.40**	**237**	P	**Pb**	**05 51 12.0**	**+0.4**
DDFL	**Dedoflistskaro**	**0.55**	**270**	P	**Pn**	**05 51 16.3**	**-0.2**
LGD	**Lagodekhi**	**0.59**	**311**	P	**Pg**	**05 51 14.0**	**+0.6**
LGD				S	**Sn**	**05 51 27.4**	**+0.2**
LGD	**Lagodekhi**	**0.59**	**311**	*ePg*	**Pg**	**05 51 14.0**	**+0.6**
LGD				*eSg*	**Sn**	**05 51 27.4**	**+0.2**
AKT	**Akhty**	**0.67**	**87**	*ePg*	**Pg**	**05 51 13.6**	**-1.2**
AKT				*eSg*	**Sg**	**05 51 22.4**	**-1.1**
MNGR	**Mingechevir, A**	**0.70**	**165**	P	**Pg**	**05 51 15.9**	**+0.5**
KMKR	**Kumukh**	**0.71**	**16**	*ePg*	**Pg**	**05 51 15.9**	**+0.3**
KMKR				*eSg*	**Sb**	**05 51 26.3**	**-0.8**
GANJ	**Ganja**	**0.90**	**206**	P	**Pg**	**05 51 18.2**	**-1.0**
GANJ				S	**Sg**	**05 51 31.3**	**+0.5**
QBL	**Gabala**	**0.90**	**124**	P	**Pg**	**05 51 18.4**	**-0.9**
QBL				S	**Sn**	**05 51 34.9**	**+0.1**
URKR	**Urkarakh**	**0.93**	**39**	*ePg*	**Pb**	**05 51 20.5**	**-0.2**
URKR				*eSg*	**Sn**	**05 51 34.1**	**-1.5**
GNBR	**Gunib**	**0.94**	**5**	*ePg*	**Pb**	**05 51 20.9**	**0.0**
GNBR				*eSg*	**Sn**	**05 51 35.3**	**-0.6**
KSMR	**Kasumkent**	**0.98**	**81**	*ePg*	**Pg**	**05 51 20.3**	**-0.5**
KSMR				*eSg*	**Sb**	**05 51 33.7**	**-0.9**
XNQ	**Khinaliq**	**1.01**	**105**	P	**Pg**	**05 51 19.9**	**-1.6**
XNQ				S	**Sn**	**05 51 42.9**	**+5.0**
QSAR	**Qusar**	**1.07**	**86**	P	**Pg**	**05 51 21.6**	**-0.9**
QSAR				S	**Sb**	**05 51 37.1**	**-0.2**
XNZR	**Khunzakh**	**1.10**	**355**	*ePg*	**Pn**	**05 51 23.8**	**-0.3**
XNZR				*eSg*	**Sn**	**05 51 40.4**	**+0.6**
GDB	**GEDABAY**	**1.10**	**229**	P	**Pg**	**05 51 21.5**	**-1.6**
GDB				S	**Sg**	**05 51 36.9**	**-0.5**
ARKR	**Arakani**	**1.16**	**6**	*ePg*	**Pn**	**05 51 24.6**	**-0.4**
ARKR				*eSg*	**Sn**	**05 51 41.6**	**+0.5**
QZX	**Qazax, Azerbai**	**1.18**	**251**	P	**Pb**	**05 51 23.5**	**-1.4**
QZX				S	**Sn**	**05 51 41.1**	**-0.5**
SGKR	**Sergokala**	**1.18**	**31**	*ePg*	**Pg**	**05 51 24.5**	**-0.1**
SGKR				*eSg*	**Sn**	**05 51 41.5**	**0.0**
IML	**Ismayilli**	**1.21**	**123**	P	**Pg**	**05 51 25.7**	**+0.6**
IML				S	**Sn**	**05 51 44.1**	**+1.9**
BRDA	**Brd**	**1.21**	**168**	P	**Pn**	**05 51 24.6**	**-0.9**
BRDA				S	**Sn**	**05 51 44.0**	**+1.7**
QUBA	**Quba, Azerbaij**	**1.24**	**94**	P	**Pn**	**05 51 24.9**	**-1.2**
QUBA				S	**Sn**	**05 51 44.4**	**+1.2**
DRN	**Derbent**	**1.25**	**62**	*ePg*	**Pn**	**05 51 25.0**	**-1.2**
DRN				*eSg*	**Sg**	**05 51 42.1**	**-0.2**
UNCR	**Uncukul**	**1.26**	**358**	*ePg*	**Pg**	**05 51 26.7**	**+0.5**
UNCR				*eSg*	**Sn**	**05 51 45.3**	**+1.5**
BTLR	**Botlikh**	**1.30**	**339**	*ePg*	**Pb**	**05 51 26.8**	**-0.2**
BTLR				*eSg*	**Sg**	**05 51 45.5**	**+1.7**
ZRD	**Zardab**	**1.33**	**151**	Pn	**Pn**	**05 51 26.1**	**-1.1**
ZRD				Sn	**Sg**	**05 51 46.9**	**+2.1**
AGDM	**Agdam**	**1.35**	**171**	Pn	**Pn**	**05 51 26.3**	**-1.3**
AGDM				Sn	**Sg**	**05 51 46.9**	**+1.4**
KRNR	**Karanay**	**1.38**	**2**	*ePg*	**Pg**	**05 51 28.4**	**0.0**
KRNR				*eSg*	**Sg**	**05 51 48.8**	**+2.5**
BUJR	**Buynaksk**	**1.39**	**8**	*ePg*	**Pn**	**05 51 27.7**	**-0.4**
BUJR				*eSg*	**Sg**	**05 51 47.2**	**+0.6**
KDMR	**Kurdemir**	**1.48**	**136**	Pn	**Pn**	**05 51 28.6**	**-0.6**
KDMR				Sn	**Sg**	**05 51 50.7**	**+1.2**
PQL	**Pirkuli**	**1.48**	**116**	Pn	**Pn**	**05 51 28.2**	**-1.2**
PQL				Sn	**Sg**	**05 51 54.3**	**+4.8**
SEAG	**Tbilisi Sea**	**1.56**	**282**	P	**Pg**	**05 51 32.3**	**+0.4**
SEAG				S	**Sg**	**05 51 53.8**	**+1.6**
DBC	**Dubki**	**1.57**	**360**	*ePg*	**Pg**	**05 51 32.0**	**-0.1**
DBC				*eSg*	**Sg**	**05 51 54.7**	**+2.2**
MAK	**Makhachkala**	**1.59**	**18**	*ePg*	**Pn**	**05 51 30.4**	**-0.4**
MAK				*eSg*	**Sg**	**05 51 52.3**	**-0.7**
SIZA	**Siyzn**	**1.59**	**103**	Pn	**Pg**	**05 51 32.5**	**0.0**
SIZA				Sn	**Sg**	**05 51 56.9**	**+3.7**
DVE	**Vedeno**	**1.60**	**341**	*ePg*	**Pg**	**05 51 33.5**	**+0.9**
DVE				*eSg*	**Sg**	**05 51 55.0**	**+1.7**
DLMR	**Dylym**	**1.63**	**354**	*ePg*	**Pb**	**05 51 31.9**	**-0.6**
DLMR				*eSg*	**Sg**	**05 51 55.3**	**+1.0**
CHRG	**Chargali**	**1.68**	**302**	P	**Pb**	**05 51 32.7**	**-0.8**
CHRG				S	**Sg**	**05 51 57.0**	**+1.0**
ATGJ	**Altiaghaj**	**1.69**	**110**	Pn	**Pg**	**05 51 34.6**	**+0.2**
ATGJ				Sn	**Sg**	**05 52 00.1**	**+3.9**
SHTL	**Shatili**	**1.74**	**314**	P	**Pn**	**05 51 33.4**	**+0.3**
SHTL				S	**Sg**	**05 51 58.6**	**+0.5**
SHTL	**Shatili**	**1.74**	**314**	*ePg*	**Pn**	**05 51 33.4**	**+0.3**
SHTL				*eSg*	**Sg**	**05 51 58.6**	**+0.5**
BLQ	**Beylaqan**	**1.81**	**162**	Pn	**Pn**	**05 51 33.1**	**-0.7**
BLQ				Sn	**Sb**	**05 51 58.5**	**-0.5**
KAPZ	**Kaputan**	**1.98**	**236**	*eP*	**Pn**	**05 51 37.0**	**+0.7**
KAPZ				*eS*	**Sb**	**05 52 04.0**	**+0.4**
DMNI	**Dmanisi**	**2.00**	**267**	P	**Pn**	**05 51 36.9**	**+0.3**
DMNI	

IDC 09 06:00:21.1±3.8, 55.45N×85.94E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=28.8km s-min=22.4km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.64**	**204**	I	I	06 11 00.0	
	0.2nm,1.1s,baz=20,slow=337,SNR=14						
ZALV	**Zalesovo Beam**	**1.64**	**204**	Pg	Pn	06 00 50.4	-0.7
	1.7nm,0.3s,baz=18,slow=18,SNR=20						
ZALV				Lg	Lg	06 01 15.2	
	1.3nm,0.3s,baz=25,slow=28,SNR=9.2						
KURBB	**Kurchatov Arra**	**6.58**	**226**	Pn	Pn	06 01 59.7	+0.7
	0.1nm,0.3s,baz=39,slow=13,SNR=2.5						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.96**	**196**	Pn	Pn	06 02 31.7	0.0
	baz=20,slow=14,SNR=1.6						
MKAR				Sn	Sn	06 04 08.5	-4.8
	0.1nm,0.3s,baz=18,slow=26,SNR=5.8						
	0.1nm,0.6s						

IDC 09 06:04:58.7±2.5, 54.09N×86.37E, h0km, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=20.2km s-min=12.2km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**262**	I	I	06 10 40.0	
	0.1nm,0.8s,baz=80,slow=338,SNR=10						
ZALV	**Zalesovo Beam**	**0.93**	**262**	Pg	Pg	06 05 15.5	-0.9
	2.4nm,0.3s,baz=78,slow=17,SNR=26						
ZALV				Lg	Lg	06 05 29.3	
	1.4nm,0.3s,baz=78,slow=27,SNR=4.6						
KURBB	**Kurchatov Arra**	**5.93**	**237**	Pn	Pn	06 06 29.4	+1.8
	0.3nm,0.3s,baz=53,slow=13,SNR=6.0						
KURBB				Lg	Lg	06 08 08.5	
	0.1nm,0.3s,baz=59,slow=30,SNR=1.2						
	1.3nm,0.4s						
MKAR	**Makanchi Array**	**7.76**	**201**	Pn	Pn	06 06 53.7	+0.9
	0.4nm,0.3s,baz=25,slow=14,SNR=18						
MKAR				Sn	Sn	06 08 19.8	-1.5
	0.1nm,0.3s,baz=23,slow=28,SNR=2.5						
MKAR				Lg	Lg	06 09 04.7	
	baz=24,slow=28,SNR=1.5						
	0.4nm,0.3s						

*DJA **09** 06:07:17.5±0.7, 4.S×7.3×13.0E±°, h126km±7km, M3.6/6, MLv3.6/6*
*IDC **09** 06:07:23.9±2.8, 3.72S×130.01E, h0km, mb3.6/3, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=226.8km s-min=26.6km az=71.0*
ISC 09 06:07:22.5±1.4, 3.5S±0.1×130.30E±0.08, h35km, n8, σ1§44/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.09**	**201**	P	**Pn**	**06 07 39.9**	**-1.4**
BNDI				S	**Sn**	**06 07 55.3**	**+0.2**
FAKI	**Fak Fak**	**2.04**	**74**	P	**Pn**	**06 07 53.5**	**-0.8**
FAKI				S	**Sn**	**06 08 18.4**	**-0.1**
NLAI	**Namlea**	**3.20**	**275**	P	**Pn**	**06 08 09.8**	**-0.5**
KMPI	**Kaimana, Papua**	**3.41**	**93**	P	Pn	06 08 07.3	-5.9
WRA	**Warramunga Arr**	**16.81**	**167**	Pn	**P**	**06 11 19.1**	**+1.8**
	0.1nm,0.3s,baz=349,slow=12,SNR=2.3						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**20.35**	**170**	P	Pn	06 12 00.3	+2.1
	1.2nm,0.5s,baz=349,slow=11,SNR=20						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**65.49**	**326**	P	P	06 18 09.1	+6.8
	0.3nm,0.6s,baz=125,slow=7.2,SNR=5.0						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**69.71**	**328**	P	P	06 18 36.0	+7.3
	1.0nm,0.9s,baz=123,slow=5.9,SNR=5.1						
	1.0nm,0.9s						

*NNC **09** 06:18:58.9±0.9, 54.64N×83.78E, h0km, mb3.2, mpv2.6, Error ellipse: s-maj=8.6km s-min=3.3km az=23.0, Suspected Mining explosion.*
*IDC **09** 06:18:59.4±2.0, 54.58N×83.71E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=17.1km s-min=9.9km az=169.0*
ISC 09 06:18:58.5±3.3, 54.6N±0.2×83.67E±0.06, h0km, n9, σ1§17/14, 5C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**135**	I	I	06 24 30.0	
	0.4nm,0.9s,baz=315,slow=334,SNR=4.2						
ZAA0	**Zalesovo Array**	**0.97**	**135**	⇓P	**Pg**	**06 19 16.5**	**-0.5**
	0.3nm,0.5s						
ZAA0				⇑S	**Sg**	**06 19 29.5**	**-0.1**
	15nm,0.9s						
ZALV	**Zalesovo Beam**	**0.97**	**135**	Pg	**Pg**	**06 19 15.8**	**-1.2**
	2.8nm,0.3s,baz=324,slow=18,SNR=29						
ZALV				Lg	Lg	06 19 30.6	
	10nm,0.3s,baz=314,slow=29,SNR=12						
KURK	**Kurchatov**	**4.98**	**220**	⇓Pn	**Pn**	**06 20 16.6**	**+2.0**
	0.8nm,0.4s						
KURK				⇑Lg	Lg	06 21 36.3	
	12nm,0.7s						
KURBB	**Kurchatov Arra**	**5.09**	**220**	⇓Pn	**Pn**	**06 20 16.6**	**+0.5**
	0.4nm,0.3s						
KURBB				⇓Lg	Lg	06 21 42.5	
	17nm,0.8s						
KURBB	**Kurchatov Arra**	**5.09**	**220**	Pn	**Pn**	**06 20 16.8**	**+0.8**
	0.2nm,0.3s,baz=39,slow=13,SNR=8.4						
KURBB				Pg	**Pg**	**06 20 34.7**	**-1.3**
	0.2nm,0.3s,baz=34,slow=18,SNR=6.2						
KURBB				Sn	**Sn**	**06 21 14.5**	**-1.0**
	0.1nm,0.3s,baz=18,slow=42,SNR=1.3						
KURBB				Lg	Lg	06 21 41.4	
	0.1nm,0.3s,baz=44,slow=32,SNR=5.8						
	1.0nm,0.5s						
MK31	**Makanchi Array**	**7.90**	**187**	⇑Pn	**Pn**	**06 20 55.2**	**+0.6**
	0.2nm,0.5s,baz=17,slow=13,SNR=11						
MK31				⇓Sn	**Sn**	**06 22 26.0**	**+1.3**
	0.4nm,0.6s						
MK31				⇑Lg	Lg	06 23 14.0	
	2.7nm,0.9s,baz=12,slow=30,SNR=4.0						
MKAR	**Makanchi Array**	**7.90**	**187**	Pn	**Pn**	**06 20 54.8**	**+0.2**
	0.2nm,0.3s,baz=12,slow=12,SNR=10						
MKAR				Sn	**Sn**	**06 22 24.0**	**-0.7**
	baz=120,slow=42,SNR=2.3						
MKAR				Lg	Lg	06 23 04.6	
	0.1nm,0.3s,baz=31,slow=31,SNR=3.2						
	0.5nm,0.4s						
MAKZ	**Makanchi**	**7.91**	**188**	⇓Pn	**Pn**	**06 20 55.2**	**+0.4**
	0.4nm,0.5s						
MAKZ				⇑Sn	**Sn**	**06 22 26.7**	**+1.7**
	0.6nm,0.7s						
MAKZ				⇓Lg	Lg	06 23 06.9	
	2.1nm,0.8s						

IDC 09 06:24:02.1±3.2, 53.49N×87.58E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=27.9km s-min=16.5km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**287**	I	I	06 32 50.0	
	baz=105,slow=342,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.70**	**287**	Pg	Pn	06 24 31.8	-1.2
	0.9nm,0.3s,baz=104,slow=15,SNR=17						
ZALV				Lg	Lg	06 24 56.1	
	1.6nm,0.3s,baz=108,slow=24,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.28**	**246**	Pn	Pn	06 25 37.2	+1.4
	0.1nm,0.3s,baz=62,slow=14,SNR=4.3						
KURBB				Lg	Lg	06 27 23.1	
	baz=354,slow=25,SNR=1.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.51**	**209**	Pn	Pn	06 25 53.5	+0.6
	0.1nm,0.3s,baz=25,slow=14,SNR=2.2						
MKAR				Lg	Lg	06 28 00.1	
	0.1nm,0.3s,baz=24,slow=30,SNR=4.0						
	0.2nm,0.2s						

*TAP **09** 06:35:50.3, 24.11N×121.72E, h8km, ML2.9, D*
*JMA **09** 06:35:50.7±0.2, 24.1N±0.5×121.7E±0.8, h0km, TAIWAN REGION*
ISC 09 06:35:50.8±0.9, 24.10N±0.02×121.72E±0.02, h8km±6km, n65, σ0§73/123, 1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**301**	*i* P	**Pg**	**06 35 53.1**	**-0.2**
	baz=298						
ETL				*i* S	**Sg**	**06 35 54.9**	**-0.2**
	baz=298						
TWD	**Chiawan**	**0.12**	**259**	*i* P	**Pg**	**06 35 53.2**	**-0.2**
	baz=264						
TWD				S	**Sg**	**06 35 55.2**	**-0.1**
	baz=264						
NACB	**Ninganchiao**	**0.14**	**301**	⇓*i* P	**Pg**	**06 35 53.5**	**-0.3**
	baz=290						
NACB				S	**Sg**	**06 35 55.5**	**-0.3**
	baz=290						
EHP	**Heping Village**	**0.21**	**4**	*i* P	**Pg**	**06 35 54.9**	**-0.2**
	baz=4.0						
EHP				S	**Sg**	**06 35 58.5**	**+0.7**
	baz=4.0						
EAHA	**Aohua**	**0.23**	**4**	*i* P	**Pg**	**06 35 55.1**	**-0.2**
	baz=1.0						
EAHA				*e*S	**Sg**	**06 35 59.1**	**+0.7**
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.24**	**295**	*i* P	**Pg**	**06 35 55.4**	**-0.4**
	baz=293						
ETLH				S	**Sg**	**06 35 58.9**	**-0.2**
	baz=293						
ETM	**Tongmen**	**0.25**	**237**	*i* P	**Pg**	**06 35 55.6**	**-0.2**
	baz=239						
ETM				*e*S	**Sg**	**06 36 01.2**	**+2.0**
	baz=239						
LXIB	**Xiulin Townshi**	**0.29**	**254**	*e*P	**Pg**	**06 35 56.2**	**-0.5**
	baz=254						
LXIB				*e*S	**Sg**	**06 36 00.8**	**+0.2**
	baz=254						
ENA	**Nanau**	**0.32**	**3**	*i* P	**Pg**	**06 35 57.1**	**-0.2**
	baz=2.0						
ENA				*e*S	**Sg**	**06 36 02.2**	**+0.6**
	baz=2.0						
EWUT	**Wuta**	**0.34**	**8**	*i* P	**Pg**	**06 35 57.4**	**-0.3**
	baz=6.0						
EWUT				S	**Sg**	**06 36 02.2**	**0.0**
	baz=6.0						
ESL	**Shilin**	**0.39**	**223**	P	**Pg**	**06 35 58.5**	**0.0**
	baz=231						
ESL				*e*S	**Sb**	**06 36 05.0**	**-1.3**
	baz=231						
WHF	**Hehuan Shan**	**0.42**	**276**	*e*S	**Sg**	**06 36 04.6**	**-0.1**
	baz=276						
TEGC	**Jichi Village**	**0.43**	**203**	*e*S	**Sb**	**06 36 06.0**	**-1.2**
	baz=191						
NNSB	**Datong**	**0.45**	**316**	P	**Pg**	**06 35 59.5**	**-0.1**
	baz=314						
NNSB				*e*S	**Sg**	**06 36 05.5**	**0.0**
	baz=314						
FUSS	**Fushou**	**0.46**	**288**	P	**Pg**	**06 35 59.9**	**+0.1**
	baz=288						
FUSS				*e*S	**Sg**	**06 36 06.5**	**+0.5**
	baz=288						
NNS	**Nan Shan**	**0.46**	**316**	P	**Pg**	**06 36 00.1**	**+0.2**
	baz=315						
NNS				*e*S	**Sg**	**06 36 06.1**	**+0.2**
	baz=315						
LATG	**Datong**	**0.47**	**337**	*e*P	**Pg**	**06 35 59.1**	**-0.9**
	baz=335						
LATG				*e*S	**Sg**	**06 36 06.8**	**+0.8**
	baz=335						
ESAO	**Su ao**	**0.48**	**13**	P	**Pg**	**06 35 59.0**	**-1.2**
	baz=11						
ESAO				*e*S	**Sg**	**06 36 06.8**	**+0.3**
	baz=11						
WARBT	**Fenglin Townsh**	**0.49**	**219**	*e*P	**Pg**	**06 36 00.5**	**+0.1**
	baz=231						
WARBT				*e*S	**Sb**	**06 36 08.5**	**-0.6**
	baz=231						
CHGB	**Renai**	**0.50**	**265**	P	**Pg**	**06 36 00.6**	**0.0**
	baz=258						
CHGB				*e*S	**Sg**	**06 36 07.9**	**+0.7**
	baz=258						
EGFH	**Guangfu**	**0.51**	**212**	*e*P	**Pb**	**06 36 01.5**	**-0.6**
	baz=225						
EGFH				*e*S	**Sb**	**06 36 09.1**	**-0.6**
	baz=225						
TWC	**Suao**	**0.52**	**13**	*e*P	**Pg**	**06 36 00.9**	**+0.1**
	baz=6.0						
TWC				*e*S	**Sg**	**06 36 08.4**	**+0.7**
	baz=6.0						
TWT	**Tachien**	**0.52**	**287**	*e*S	**Sg**	**06 36 08.5**	**+0.6**
	baz=285						
NDT	**Datong Townshi**	**0.53**	**339**	*e*P	**Pg**	**06 36 01.3**	**+0.1**
	baz=336						
NDT				*e*S	**Sg**	**06 36 08.6**	**+0.5**
	baz=336						
TDCB	**Techi**	**0.54**	**286**	*e*P	**Pg**	**06 36 00.4**	**-0.8**
	baz=286						
TDCB				*e*S	**Sg**	**06 36 08.8**	**+0.5**
	baz=286						
ENTT	**Nioudou**	**0.55**	**345**	P	**Pg**	**06 36 01.7**	**+0.1**
	baz=343						
ENTT				*e*S	**Sg**	**06 36 08.7**	**-0.1**
	baz=343						
WUSB	**Renai**	**0.56**	**259**	*e*P	**Pg**	**06 36 01.3**	**-0.5**
	baz=260						
WUSB				*e*S	**Sg**	**06 36 09.4**	**+0.2**
	baz=260						
TWE	**Neicheng**	**0.62**	**355**	P	**Pg**	**06 36 02.7**	**0.0**
	baz=354						
TWE				S	**Sb**	**06 36 12.0**	**-0.8**
	baz=354						
VWDT	**VWDT**	**0.64**	**237**	P	**Pg**	**06 36 01.9**	**-1.2**
	baz=239						
VWDT				*e*S	**Sb**	**06 36 12.3**	**-1.0**
	baz=239						
YHNB	**Yeheng**	**0.65**	**331**	P	**Pb**	**06 36 03.6**	**-0.9**
	baz=329						
YHNB				*e*S	**Sg**	**06 36 12.2**	**+0.4**
	baz=329						
NSK	**Sanguang**	**0.66**	**330**	P	**Pg**	**06 36 03.3**	**-0.3**
	baz=328						
NSK				*e*S	**Sg**	**06 36 12.5**	**+0.3**
	baz=328						
FUSB	**Fushanzhiwuyua**	**0.67**	**349**	P	**Pg**	**06 36 03.9**	**+0.2**
	baz=338						
FUSB				*e*S	**Sg**	**06 36 12.7**	**+0.3**
	baz=338						
HGSD	**Ruisui**	**0.67**	**204**	P	**Pb**	**06 36 05.2**	**+0.5**
	baz=194						
HGSD				*e*S	**Sn**	**06 36 16.5**	**-0.8**
	baz=194						
EHY	**Hungye**	**0.70**	**212**	P	**Pb**	**06 36 05.1**	**-0.2**
	baz=227						
EHY				*e*S	**Sb**	**06 36 15.2**	**+0.1**
	baz=227						
NWLT	**Wulai**	**0.70**	**343**	P	**Pg**	**06 36 02.0**	**-2.3**
	baz=341						
NWLT				S	**Sg**	**06 36 13.7**	**+0.2**
	baz=341						
WHP	**Taichung City**	**0.73**	**284**	P	**Pb**	**06 36 06.0**	**+0.1**
	baz=284						
WHP				S	**Sb**	**06 36 16.0**	**-0.1**
	baz=284						
WCS	**Beigang Elemen**	**0.74**	**267**	P	**Pg**	**06 36 04.8**	**-0.3**
	baz=268						
NFF	**Wufeng Townshi**	**0.76**	**314**	P	**Pg**	**06 36 05.4**	**-0.1**
	baz=312						
NFF				*e*S	**Sb**	**06 36 15.9**	**-1.1**
	baz=312						
SSLB	**Suanglung**	**0.77**	**246**	*i* P	**Pg**	**06 36 05.5**	**-0.2**
	baz=259						
SSLB				S	**Sg**	**06 36 15.5**	**-0.2**
	baz=259						
SMLT	**Sun Moon Lake**	**0.78**	**254**	*i* P	**Pg**	**06 36 06.0**	**+0.1**
	baz=255						
SMLT				S	**Sb**	**06 36 16.8**	**-0.8**
	baz=255						
YULB	**Yu-li**	**0.81**	**209**	P	**Pg**	**06 36 06.3**	**0.0**
	baz=226						
YULB				*e*S	**Sn**	**06 36 19.8**	**-1.0**
	baz=226						
TYC	**Yuchr**	**0.82**	**256**	P	**Pg**	**06 36 06.3**	**-0.2**
	baz=258						
TYC				*e*S	**Sg**	**06 36 17.1**	**0.0**
	baz=258						
LIOB	**Emei**	**0.84**	**310**	P	**Pb**	**06 36 07.1**	**-0.7**
	baz=308						
NSTT	**Nanjuang**	**0.84**	**309**	P	**Pn**	**06 36 09.0**	**-0.1**
	baz=307						
NSTT				*e*S	**Sg**	**06 36 18.2**	**+0.1**
	baz=307						
TWF1	**Yuli**	**0.84**	**208**	P	**Pg**	**06 36 06.0**	**-1.0**
	baz=223						
TWF1				*e*S	**Sb**	**06 36 19.8**	**+0.5**
	baz=223						
TIPB	**Shuangxi**	**0.87**	**6**	*i* P	**Pb**	**06 36 07.7**	**-0.5**
	baz=354						
TIPB				*e*S	**Sb**	**06 36 20.1**	**0.0**
	baz=354						
WJS	**Zhushan**	**0.95**	**253**	P	**Pn**	**06 36 10.3**	**-0.2**
	baz=255						
WJS				S	**Sn**	**06 36 24.1**	**-0.2**
	baz=255						
NWF	**Wu-fen Shan**	**0.96**	**3**	*e*P	**Pb**	**06 36 09.6**	**-0.3**
	baz=350						
NWF				S	**Sg**	**06 36 22.0**	**+0.1**
	baz=350						
WFSB	**Wu-fen Shan**	**0.96**	**3**	*e*P	**Pb**	**06 36 10.2**	**+0.4**
	baz=352						
WFSB				S	**Sb**	**06 36 22.3**	**-0.5**
	baz=352						
WNT	**Mingjian**	**0.98**	**257**	*e*P	**Pn**	**06 36 10.8**	**-0.1**
	baz=258						
WNT				*e*S	**Sn**	**06 36 26.0**	**+1.1**
	baz=258						
SXI1	**Grass Mountain**	**1.00**	**8**	P	**Pb**	**06 36 10.2**	**-0.2**
	baz=351						
SXI1				*e*S	**Sn**	**06 36 25.2**	**-0.3**
	baz=351						
ALS	**Alishan**	**1.03**	**235**	*i* P	**Pb**	**06 36 11.2**	**+0.1**
	baz=239						
ALS				S	**Sb**	**06 36 25.4**	**+0.5**
	baz=239						
YM01	**YM01**	**1.05**	**352**	P	**Pg**	**06 36 10.7**	**-0.3**
	baz=349						
YM01				S	**Sn**	**06 36 26.4**	**-0.4**
	baz=349						
CHN5	**Tsauling**	**1.08**	**242**	*i* P	**Pn**	**06 36 12.8**	**+0.4**
	baz=246						
CHN5				S	**Sn**	**06 36 28.9**	**+1.2**
	baz=246						
YM08	**YM08**	**1.09**	**354**	P	**Pb**	**06 36 11.8**	**-0.2**
	baz=335						
YM08				*e*S	**Sg**	**06 36 25.3**	**-0.5**
	baz=335						
ELDTW	**Lidau**	**1.12**	**216**	*i* P	**Pg**	**06 36 11.6**	**-0.7**
	baz=205						
ELDTW				*e*S	**Sg**	**06 36 26.4**	**-0.4**
	baz=205						
JYNG	**Yonagunijimaku**	**1.17**	**72**	S	**Sg**	**06 36 27.9**	**-0.5**
EDH	**Donghe**	**1.19**	**199**	*e*P	**Pg**	**06 36 12.3**	**-1.4**
	baz=192						
EDH				*e*S	**Sg**	**06 36 29.0**	**-0.1**
	baz=192						
WCKO	**Fanlu**	**1.22**	**237**	P	**Pn**	**06 36 14.4**	**+0.2**
	baz=242						
WCKO				*e*S	**Sn**	**06 36 31.4**	**+0.5**
	baz=242						
STYH	**Taoyuan**	**1.27**	**223**	P	Pg	**06 36 13.4**	**-1.8**
	baz=232						
STYH				*e*S	**Sg**	**06 36 30.9**	**-0.9**
	baz=232						
CHN4	**Tsaushan**	**1.28**	**234**	P	**Pn**	**06 36 15.5**	**+0.4**
	baz=239						
CHN4				*e*S	**Sn**	**06 36 34.6**	**+2.2**
	baz=239						
WTP	**Ta-pu**	**1.33**	**230**	*i* P	**Pb**	**06 36 16.8**	**+0.8**
	baz=235						
WTP				S	**Sn**	**06 36 36.2**	**+2.6**
	baz=235						
TWK	**Hsinying**	**1.41**	**234**	P	**Pg**	**06 36 17.9**	**+0.1**
	baz=238						
TWK				*e*S	**Sn**	**06 36 37.1**	**+1.5**
	baz=238						
SLGT	**Liugui**	**1.48**	**222**	P	**Pb**	**06 36 18.6**	**0.0**
	baz=227						
SLGT				*e*S	**Sn**	**06 36 37.5**	**0.0**
	baz=227						
JISG	**Ishigakijimahi**	**2.41**	**78**	*e*P	**Pn**	**06 36 32.5**	**+1.9**

*NEIC **09** 06:37:46.7±1.3, 18.0S±0.1×178.1W±0.2, h521km±8km, mb4.3/51, Error ellipse: s-maj=20.9km s-min=14.7km az=92.0*
*IDC **09** 06:37:52.0±2.6, 18.09S×178.37W, h581km±31km, mb3.3/12, mbtmp4.2/13, Error ellipse: s-maj=29.5km s-min=12.9km az=151.0*
ISC 09 06:37:51.3±0.6, 18.1S±0.1×178.4W±0.1, h579km, n73, σ0§92/76, mb4.2/38, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**14.04**	**249**	P	**P**	**06 40 49.2**	**-1.6**
DZM	**Mont Dzumac**	**14.80**	**252**	P	**P**	**06 40 56.8**	**-1.6**
DZM	**Mont Dzumac**	**14.80**	**252**	P	**P**	**06 40 58.0**	**-0.3**
	6.5nm,0.5s,baz=288,slow=20,SNR=13						
KOUNC	**Koumac, New Ca**	**16.55**	**259**	P	**P**	**06 41 14.7**	**0.0**
URZ	**Urewera**	**20.46**	**190**	P	**P**	**06 41 49.0**	**-1.0**
	5.6nm,0.5s,baz=0.0,slow=3.0,SNR=3.0						
	5.6nm,0.5s						
QRZ	**Quartz Range**	**23.96**	**197**	P	**P**	**06 42 20.9**	**-0.2**
NNZ	**Nelson**	**24.10**	**195**	P	**P**	**06 42 22.1**	**-0.2**
THZ	**Tophouse**	**24.73**	**196**	P	**P**	**06 42 27.5**	**-0.6**
THZ				IAmb	IAmb	06 43 01.2	
	comp=Z,17nm,1.3s						
FOZ	**Fox Glacier**	**27.24**	**199**	P	**P**	**06 42 49.2**	**-0.8**
MLZ	**Mavora Lakes**	**29.43**	**200**	P	**P**	**06 43 08.9**	**-0.1**
ARMA	**Armidale**	**29.88**	**240**	P	**P**	**06 43 14.7**	**+1.5**
ARMA				IAmb	IAmb	06 43 15.8	
	comp=Z,9.0nm,1.1s						
CTAO	**Charters Tower**	**33.46**	**261**	P	**P**	**06 43 43.6**	**-0.1**
CAN	**Canberra**	**33.62**	**233**	P	**P**	**06 43 45.8**	**+1.0**
TOO	**Toolangi**	**37.08**	**231**	P	**P**	**06 44 14.5**	**+1.0**
TOO				IAmb	IAmb	06 44 15.5	
	comp=Z,6.0nm,0.8s						
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**06 44 27.2**	**+1.6**
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**06 44 26.9**	**+1.3**
	comp=Z,3.7nm,0.5s,baz=61,slow=13,SNR=14						
	comp=Z,3.7nm,0.5s						
BBOO	**Buckleboo**	**43.35**	**241**	P	**P**	**06 45 04.3**	**+0.9**
BBOO				IAmb	IAmb	06 45 05.3	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**44.63**	**260**	P	**P**	**06 45 13.5**	**+0.1**
WB2				IAmb	IAmb	06 45 15.1	
	comp=Z,9.0nm,1.2s						
WRA	**Warramunga Arr**	**44.64**	**260**	P	**P**	**06 45 14.0**	**+0.5**
WRA	**Warramunga Arr**	**44.64**	**260**	P	**P**	**06 45 13.6**	**0.0**
	comp=Z,1.1nm,0.5s,baz=98,slow=7.6,SNR=24						
WRA				PcP	**PcP**	**06 46 44.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=88,slow=3.6,SNR=4.6						
	comp=Z,1.1nm,0.5s						
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**06 45 15.4**	**+0.8**
AS31				IAmb	IAmb	06 45 16.5	
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**06 45 15.4**	**+0.8**
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**06 45 15.6**	**+1.0**
	comp=Z,11nm,0.5s,baz=88,slow=9.1,SNR=244						
ASAR				PcP	**PcP**	**06 46 44.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=103,slow=3.8,SNR=4.5						
ASAR				S	**S**	**06 51 10.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=95,slow=18,SNR=5.1						
	comp=Z,11nm,0.5s						
FORT	**Forrest**	**49.96**	**245**	P	**P**	**06 45 53.3**	**+0.1**
FORT				IAmb	IAmb	06 46 02.3	
	comp=Z,13nm,0.9s						
MJAR	**Matsushiro Arr**	**68.09**	**323**	P	**P**	**06 47 54.1**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=142,slow=6.0,SNR=2.5						
	comp=Z,2.0nm,0.6s						
ADK	**Adak**	**69.70**	**1**	P	**P**	**06 48 02.8**	**-0.6**
PEA0B	**Petropavlovsk-**	**73.88**	**345**	P	**P**	**06 48 26.9**	**-0.8**
PETK	**Petropavlovsk-**	**73.88**	**345**	P	**P**	**06 48 27.2**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=121,slow=6.9,SNR=1.7						
	comp=Z,1.9nm,0.6s						
HUMO	**Hull Mountain**	**79.03**	**38**	P	**P**	**06 48 57.0**	**+0.9**
PNTR	**Pine Nut**	**79.06**	**43**	P	**P**	**06 48 57.4**	**+0.8**
L04D	**Klamath Falls**	**79.18**	**39**	P	**P**	**06 48 57.1**	**+0.1**
N15K	**Kwethluk River**	**79.40**	**9**	P	**P**	**06 48 57.3**	**-0.3**

BRLK **Bradley Lake** **80.76** **14** P **P** **06 49 04.2 -0.5**
BRLK IAmb IAmb 06 49 20.7
comp=Z,20nm,1.5s
M17K **Holitna River** **80.99** **10** P **P** **06 49 06.7 +0.9**
M17K IAmb IAmb 06 49 29.5
comp=Z,22nm,1.5s
K15K **Wolf Creek Mou** **81.23** **8** P **P** **06 49 07.7 +0.6**
K15K IAmb IAmb 06 49 07.8
comp=Z,21nm,1.4s
L18K **Granite Mounta** **81.88** **10** P **P** **06 49 10.7 +0.3**
K17K **Iditarod** **82.09** **9** P **P** **06 49 11.2 -0.3**
K17K IAmb IAmb 06 49 32.1
comp=Z,11nm,1.4s
J16K **Anvik River** **82.31** **8** P **P** **06 49 12.5 0.0**
J16K IAmb IAmb 06 49 15.3
comp=Z,12nm,1.4s
SUA **Susitna One** **82.31** **13** P **P** **06 49 11.8 -1.0**
SUA IAmb IAmb 06 49 43.2
comp=Z,12nm,1.4s
U15A **North Rim** **82.62** **48** P **P** **06 49 14.0 -1.1**
PMR **Palmer** **82.78** **14** P **P** **06 49 14.4 -0.5**
PMR IAmb IAmb 06 49 33.8
comp=Z,8.6nm,1.5s
GHO **Glory Hole Cre** **82.99** **14** P **P** **06 49 15.6 -0.5**
K20K **Telida** **83.39** **11** P **P** **06 49 17.7 -0.2**
SCM **Sheep Creek Mo** **83.41** **14** P **P** **06 49 17.7 -0.5**
SCM IAmb IAmb 06 49 25.6
comp=Z,15nm,1.4s
J19K **Poorman** **83.72** **10** P **P** **06 49 19.7 +0.2**
J19K IAmb IAmb 06 50 02.6
comp=Z,6.9nm,1.5s
GLB **Gilahina Butte** **83.94** **16** P **P** **06 49 19.7 -1.1**
GLB IAmb IAmb 06 49 35.2
comp=Z,7.1nm,1.4s
J20K **Nowinta River** **84.13** **10** P **P** **06 49 21.7 +0.2**
J20K IAmb IAmb 06 49 33.8
comp=Z,8.8nm,1.4s
S34M **Telegraph Cree** **85.21** **23** P **P** **06 49 27.6 +0.6**
S34M IAmb IAmb 06 49 34.4
comp=Z,11nm,1.4s
H21K **Melozitna Rive** **85.73** **10** P **P** **06 49 29.5 +0.2**
IMAR **Indian Mountai** **85.87** **10** P **P** **06 49 29.4 -0.5**
TXAR **Lajitas Array** **86.06** **58** P **P** **06 49 33.6 +1.8**
comp=Z,1.1nm,0.7s,baz=218,slow=5.7,SNR=14
comp=Z,1.1nm,0.7s
ILAR **Eielson Array** **86.07** **13** P **P** **06 49 30.2 -0.7**
comp=Z,0.7nm,0.4s,baz=221,slow=5.2,SNR=28
comp=Z,0.7nm,0.4s
G21K **Allakaket** **86.40** **10** P **P** **06 49 31.6 -0.8**
G21K IAmb IAmb 06 49 54.9
comp=Z,6.4nm,1.5s
J26L **Joseph Creek** **86.58** **14** P **P** **06 49 33.5 +0.1**
PDAR **Pinedale Array** **87.47** **43** P **P** **06 49 38.6 +0.3**
comp=Z,0.6nm,0.6s,baz=212,slow=3.2,SNR=7.8
comp=Z,0.6nm,0.6s
D19K **Kuna River** **87.60** **7** P **P** **06 49 37.7 -0.3**
E22K **Anaktuvuk Pass** **88.15** **10** P **P** **06 49 40.1 -0.6**
E22K IAmb IAmb 06 49 42.7
comp=Z,6.9nm,1.5s
CMAR **Chiang Mai Arr** **88.99** **290** P **P** **06 49 48.0 +2.4**
comp=Z,0.6nm,0.3s,baz=131,slow=2.7,SNR=4.6
comp=Z,0.6nm,0.3s
G31M **Satah River** **90.84** **16** P **P** **06 49 52.2 -0.8**
G31M IAmb IAmb 06 49 53.3
comp=Z,3.1nm,0.8s
E28M **Babbage River** **90.89** **13** P **P** **06 49 53.0 -0.2**
E28M IAmb IAmb 06 50 34.0
comp=Z,4.6nm,1.5s
F31M **Tsiigehtchic** **91.36** **16** P **P** **06 49 55.2 -0.2**
F31M IAmb IAmb 06 49 56.1
comp=Z,3.3nm,0.7s
INK **Inuvik** **92.06** **15** P **P** **06 49 57.5 -1.2**
INK IAmb IAmb 06 50 34.6
comp=Z,3.4nm,1.4s
YKA **Yellowknife Ar** **94.49** **25** P **P** **06 50 09.3 -0.5**
comp=Z,0.4nm,0.9s,baz=242,slow=4.8,SNR=3.7
comp=Z,0.4nm,0.9s
MKAR **Makanchi Array** **109.30** **314** PKiKP **PKiKP** **06 55 14.8 -1.4**
comp=Z,0.3nm,0.9s,baz=62,slow=7.2,SNR=2.2
KURBB **Kurchatov Arra** **112.06** **318** PKiKP **PKiKP** **06 55 17.2 -4.0**
comp=Z,0.3nm,0.6s,baz=114,slow=2.3,SNR=4.4
BRTR **Keskin Array B** **144.35** **315** PKP **PKPbc** **06 56 24.1 -0.3**
comp=Z,0.8nm,0.4s,baz=352,slow=3.3,SNR=5.4
CLL **Collm** **145.66** **347** **PKPbc** **06 56 25.8 -0.1**
MMAI **Mount Meron Ar** **146.28** **303** PKPbc **PKPbc** **06 56 27.9 -0.4**
comp=Z,5.0nm,0.3s,baz=28,slow=3.4,SNR=4.0
GERES **GERESS Array B** **147.81** **345** PKPbc **PKPbc** **06 56 31.3 -0.5**
GERES **GERESS Array B** **147.81** **345** PKPbc **PKPbc** **06 56 32.0 +0.2**
comp=Z,2.0nm,0.6s,baz=32,slow=3.9,SNR=7.2

IDC 09 06:45:05.3±2.6, 54.°30N×85.°93E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=19.6km s-min=10.8km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.74**	**242**	I	I	06 49 50.0	
	0.1nm,0.9s,baz=61,slow=330,SNR=5.4						
ZALV	**Zalesovo Beam**	**0.74**	**242**	Pg	Pg	06 45 17.9	-1.7
	0.6nm,0.3s,baz=61,slow=18,SNR=6.4						
ZALV				Lg	Lg	06 45 30.6	
	2.5nm,0.3s,baz=62,slow=30,SNR=7.0						
KURBB	**Kurchatov Arra**	**5.83**	**234**	Pn	Pn	06 46 34.5	+1.5
	0.1nm,0.3s,baz=49,slow=14,SNR=4.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	06 47 01.6	+0.7
	0.2nm,0.3s,baz=23,slow=12,SNR=8.9						
	0.2nm,0.3s						

IDC 09 06:45:45.4±3.1, 53.°81N×88.°12E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=28.3km s-min=19.1km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**275**	I	I	06 57 00.0	
	0.3nm,1.0s,baz=92,slow=340,SNR=15						
ZALV	**Zalesovo Beam**	**1.96**	**275**	Pn	Pn	06 46 19.9	+0.1
	1.3nm,0.3s,baz=88,slow=15,SNR=13						
ZALV				Lg	Lg	06 46 48.1	
	2.4nm,0.3s,baz=96,slow=25,SNR=17						
KURBB	**Kurchatov Arra**	**6.70**	**245**	Pn	Pn	06 47 24.9	0.0
	0.1nm,0.3s,baz=64,slow=15,SNR=8.2						
KURBB				Lg	Lg	06 49 17.8	
	baz=62,slow=33,SNR=6.7						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.95**	**210**	Pn	Pn	06 47 43.7	+1.5
	0.1nm,0.3s,baz=33,slow=15,SNR=5.1						
MKAR				Lg	Lg	06 49 58.8	
	baz=24,slow=28						
	0.2nm,0.4s						

*IDC **09** 06:54:30.6±0.6, 13.°76N×120.°81E, h118km±4km, mb3.9/21, mbtmp4.3/21, MS2.9/4, Error ellipse: s-maj=23.2km s-min=9.7km az=65.0*
*NEIC **09** 06:54:32.1±1.4, 13.°92N±0.°08×120.°9E±0.°1, h122km±4km, mb4.3/44, Error ellipse: s-maj=15.1km s-min=11.2km az=81.0*

ISC 09 06:54:31.4±0.4, 13.°85N±0.°05×120.°81E±0.°08, h122km, n92, σ0s99/98, mb4.4/49, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.28**	**26**	P	**Pn**	**06 54 49.2**	**+0.6**
	2μm,0.3s,baz=225,slow=3.6,SNR=32						
TGY				S	**Sn**	**06 55 02.0**	**+0.4**
	6μm,0.3s,baz=226,slow=13,SNR=12						
DAV	**Davao City (W)**	**8.21**	**145**	LR	LR	07 00 46.3	
	comp=Z,87nm,18.1s,baz=7.0,slow=46						
KKM	**Kota Kinabalu**	**8.98**	**211**		**Pn**	**06 56 40.5**	**+2.2**
YULB	**Yu-li**	**9.50**	**3**		**Pn**	**06 56 45.0**	**-0.2**
SSLB	**Suanglung**	**9.88**	**1**	Pn	**Pn**	**06 56 48.4**	**-1.9**
NACB	**Ninganchiao**	**10.29**	**4**	Pn	**Pn**	**06 56 55.6**	**-0.3**
QIZ	**Qiongzhong**	**11.71**	**298**		**Pn**	**06 57 14.3**	**-0.6**
DLV	**T Lat**	**12.16**	**262**	Pn	**Pn**	**06 57 22.8**	**+1.8**
SBUM	**Sibu**	**14.16**	**218**	Pn	**Pn**	**06 57 46.1**	**-0.5**
TNTI	**Ternate**	**14.53**	**153**	Pn	**Pn**	**06 57 51.5**	**+0.2**
JOW	**Kunigami**	**14.68**	**27**	Pn	**Pn**	**06 57 52.4**	**-0.8**
JOW	**Kunigami**	**14.68**	**27**	P	**P**	**06 57 59.2**	**+3.1**
	20nm,0.8s,baz=252,slow=14,SNR=3.5						
JOW				LR	LR	07 03 23.7	
	comp=Z,35nm,21.3s,baz=118,slow=36						
WHN	**Wuhan**	**17.65**	**341**	⇓P	**Pn**	**06 58 31.1**	**+1.5**
SLVN	**Son La**	**17.74**	**297**	P	**P**	**06 58 29.9**	**-0.1**
KAPI	**Kappang**	**18.77**	**183**	P	**P**	**06 58 42.9**	**+1.6**
ENH	**Enshi**	**19.40**	**329**	P	**P**	**06 58 47.0**	**-1.0**
ENH				IAmb	IAmb	06 58 57.0	
	comp=Z,12nm,0.8s						
CRAI	**Chiangrai**	**20.53**	**291**	P	**P**	**06 59 00.3**	**-0.1**
CM31	**Chiang Mai Arr**	**21.49**	**285**	P	**P**	**06 59 11.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**21.49**	**285**	P	**P**	**06 59 10.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.49**	**285**	P	**P**	**06 59 10.9**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=94,slow=7.1,SNR=18						
CMAR				LR	LR	07 07 40.0	
	comp=Z,26nm,19.3s,baz=135,slow=37						
	comp=Z,1.3nm,0.3s						
CHTO	**Chiang Mai**	**21.55**	**286**	P	**P**	**06 59 11.5**	**+0.3**
PZH	**PanZhiHua**	**21.84**	**308**	P	**P**	**06 59 14.4**	**0.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,130nm,5.5s						
LYN	**LuoYang**	**21.95**	**341**	⇑P	**P**	**06 59 15.6**	**+0.3**
LYN				pmax	pmax		
	comp=Z,46nm,0.7s						
XAN	**Xi'an**	**22.81**	**334**	P	**P**	**06 59 23.4**	**-0.6**
XAN				pP	pP	06 59 52.1	+4.7
XAN				pmax	pmax		
	comp=Z,30nm,0.7s						
JMN	**Monobe**	**23.08**	**29**	P	**P**	**06 59 25.3**	**-1.2**
CD2	**Chengdu**	**23.11**	**320**	P	**P**	**06 59 27.1**	**+0.2**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
KSRS	**Korea Array**	**24.35**	**14**	P	**P**	**06 59 38.2**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=202,slow=12,SNR=4.4						
KSRS				LR	LR	07 08 46.5	
	comp=Z,29nm,20.5s,baz=335,slow=35						
	comp=Z,1.3nm,0.7s						
BJT	**Baijiatuan**	**26.38**	**352**	P	**P**	**06 59 56.7**	**+0.4**
BJT				IAmb	IAmb	06 59 57.9	
	comp=Z,7.6nm,0.8s						
LZH	**Lanzhou**	**26.87**	**328**	eP	**P**	**07 00 01.4**	**+0.4**
LZH				pP	pP	07 00 30.6	+3.3
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC	**Hu-ho-hao-te**	**28.09**	**345**	eP	**P**	**07 00 12.1**	**+0.4**
HHC				pP	pP	07 00 44.3	+6.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,66nm,4.1s						
XLT	**XiLinHaoTe**	**30.22**	**353**	eP	**P**	**07 00 31.8**	**+1.3**
XLT				pP	pP	07 00 59.7	+2.6
XLT				sP	PP	07 01 29.1	-12
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,170nm,4.7s						
GTA	**Gaotai**	**31.47**	**328**	eP	**P**	**07 00 42.3**	**+0.7**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA	**Lhasa**	**31.61**	**305**	P	**P**	**07 00 43.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**31.72**	**15**	P	**P**	**07 00 43.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=218,slow=9.1,SNR=3.5						
	comp=Z,1.4nm,0.7s						
BNX	**BinXian**	**32.27**	**9**	⇓P	**P**	**07 00 48.8**	**+0.4**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,150nm,7.2s						
ULN	**Ulaanbaatar**	**35.79**	**344**	P	**P**	**07 01 18.6**	**-0.4**
ULN				IAmb	IAmb	07 01 21.3	
	comp=Z,6.1nm,0.9s						
SONM	**Songino Array**	**35.94**	**343**	P	**P**	**07 01 20.0**	**-0.3**
SONM				IAmb	IAmb	07 01 21.9	
	comp=Z,6.0nm,0.8s						
SONM	**Songino Array**	**35.94**	**343**	P	**P**	**07 01 20.1**	**-0.1**
	comp=Z,9.1nm,0.5s,baz=163,slow=9.9,SNR=40						
	comp=Z,9.1nm,0.5s						
WB0	**Warramunga Arr**	**35.98**	**158**	P	**P**	**07 01 19.6**	**-1.2**
WB0				IAmb	IAmb	07 02 01.7	
	comp=Z,4.8nm,0.8s						
WRA	**Warramunga Arr**	**36.12**	**158**	P	**P**	**07 01 20.9**	**-1.1**
WRA	**Warramunga Arr**	**36.12**	**158**	P	**P**	**07 01 20.7**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=333,slow=9.6,SNR=22						
WRA				S	**S**	**07 06 48.6**	**-4.1**
	comp=Z,0.7nm,0.9s,baz=318,slow=19,SNR=2.0						
WRA				ScP	**ScP**	**07 07 21.3**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=347,slow=4.3,SNR=1.2						
	comp=Z,0.9nm,0.3s						
AS31	**Alice Springs**	**39.42**	**161**	P	**P**	**07 01 49.2**	**-0.5**
ASAR	**Alice Springs**	**39.43**	**161**	P	**P**	**07 01 49.6**	**-0.1**
ASAR	**Alice Springs**	**39.43**	**161**	P	**P**	**07 01 49.1**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=336,slow=7.0,SNR=24						
ASAR				PcP	**PcP**	**07 03 54.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=341,slow=3.0,SNR=2.0						
	comp=Z,0.9nm,0.3s						
WMQ	**Urumqi**	**41.15**	**323**	eP	**P**	**07 02 05.2**	**+1.4**
WMQ				sP	sP	07 02 56.6	+11
WMQ				PP	**PP**	**07 03 39.9**	**-1.3**
WMQ				PcP	**PcP**	**07 03 59.6**	**-1.3**
WMQ				S	**S**	**07 08 06.8**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**42.00**	**143**	P	**P**	**07 02 11.5**	**+0.6**
FORT	**Forrest**	**44.92**	**171**	P	**P**	**07 02 33.5**	**-0.6**
MK31	**Makanchi Array**	**45.97**	**323**	P	**P**	**07 02 42.2**	**-0.1**
MK31				IAmb	IAmb	07 02 43.7	
	comp=Z,4.4nm,0.8s						
MKAR	**Makanchi Array**	**45.97**	**323**	P	**P**	**07 02 42.5**	**+0.1**
MKAR	**Makanchi Array**	**45.97**	**323**	P	**P**	**07 02 42.8**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=125,slow=9.0,SNR=32						
	comp=Z,1.6nm,0.3s						
MAKZ	**Makanchi**	**46.16**	**323**	P	**P**	**07 02 44.2**	**+0.4**
MAKZ				IAmb	IAmb	07 02 44.6	
	comp=Z,3.5nm,0.7s						
TARG	**Taragay, Kyrgy**	**46.41**	**315**	P	**P**	**07 02 47.0**	**+0.6**
TARG				IAmb	IAmb	07 02 55.4	
	comp=Z,4.5nm,0.9s						
KSH	**Kashi**	**46.88**	**312**	P	**P**	**07 02 52.4**	**+2.7**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NRN	**Naryn**	**47.55**	**314**	P	**P**	**07 02 55.0**	**0.0**
BOOM	**Boomskoye usch**	**47.99**	**315**	P	**P**	**07 02 58.6**	**+0.3**
BOOM				IAmb	IAmb	07 03 00.5	
	comp=Z,13nm,1.3s						
ZAA0	**Zalesovo Array**	**48.97**	**333**	P	**P**	**07 03 04.4**	**-1.0**
ZALV	**Zalesovo Beam**	**48.97**	**333**	P	**P**	**07 03 05.0**	**-0.4**
ZALV	**Zalesovo Beam**	**48.97**	**333**	P	**P**	**07 03 04.7**	**-0.7**
	comp=Z,4.9nm,0.5s,baz=123,slow=7.1,SNR=9.2						
	comp=Z,4.9nm,0.5s						
AAK	**Ala-Archa**	**49.03**	**315**	P	**P**	**07 03 05.8**	**-0.4**
AAK				IAmb	IAmb	07 03 08.7	
	comp=Z,3.1nm,0.8s						
AAK	**Ala-Archa**	**49.03**	**315**	P	**P**	**07 03 06.9**	**+0.6**
	comp=Z,2.4nm,0.5s,baz=127,slow=6.8,SNR=8.4						
	comp=Z,2.4nm,0.5s						
ARSB	**Arslanbob**	**49.64**	**313**	P	**P**	**07 03 11.2**	**+0.4**
STKA	**Stephens Creek**	**49.64**	**157**	P	**P**	**07 03 10.0**	**-0.8**
STKA	**Stephens Creek**	**49.64**	**157**	P	**P**	**07 03 10.2**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=337,slow=11,SNR=3.7						
	comp=Z,0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**50.12**	**326**	P	**P**	**07 03 14.4**	**+0.2**
	comp=Z,13nm,0.9s,baz=123,slow=8.2,SNR=40						
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**50.12**	**326**	P	**P**	**07 03 13.7**	**-0.4**
BTK	**Batken**	**50.82**	**311**	P	**P**	**07 03 19.6**	**-0.1**
BTK				IAmb	IAmb	07 03 20.3	
	comp=Z,3.3nm,0.7s						
KBL	**Kabul**	**50.91**	**303**	P	**P**	**07 03 20.1**	**-0.6**
KBL				IAmb	IAmb	07 03 21.2	
	comp=Z,3.7nm,0.7s						
SIMJ	**Simiganj**	**51.81**	**308**	P	**P**	**07 03 26.4**	**-0.7**
SIMJ				IAmb	IAmb	07 03 29.0	
	comp=Z,2.6nm,0.7s						
KK31	**Karatay Array**	**51.95**	**314**	P	**P**	**07 03 27.4**	**-0.6**
KK31				IAmb	IAmb	07 03 28.8	
	comp=Z,5.1nm,0.8s						
KKAR	**Karatay Array**	**51.95**	**314**	P	**P**	**07 03 27.6**	**-0.4**
KKAR				IAmb	IAmb	07 03 28.8	
	comp=Z,5.1nm,0.8s						
BVAR	**Borovoye Array**	**55.71**	**326**	P	**P**	**07 03 55.2**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=116,slow=10,SNR=20						
	comp=Z,4.1nm,0.6s						
BRVK	**Borovoye**	**55.78**	**326**	P	**P**	**07 03 55.4**	**-0.2**
TIXI	**Tiksi**	**57.98**	**3**	P	**P**	**07 04 09.9**	**-0.9**
TIXI				IAmb	IAmb	07 04 10.4	
	comp=Z,3.3nm,0.8s						
NRIK	**Noril'sk**	**59.29**	**347**	P	**P**	**07 04 19.9**	**0.0**
	comp=Z,2.7nm,0.4s,baz=132,slow=5.8,SNR=6.9						
	comp=Z,2.7nm,0.4s						
GEYT	**Alibeck**	**60.13**	**306**	P	**P**	**07 04 26.5**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**60.13**	**306**	P	**P**	**07 04 26.6**	**+0.2**
ABKAR	**Akbulak array**	**60.69**	**319**	P	**P**	**07 04 28.9**	**-0.9**
AKTO	**Aktyubinsk**	**62.17**	**320**	P	**P**	**07 04 39.4**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=86,slow=6.7,SNR=5.4						
	comp=Z,2.6nm,0.5s						
ARU	**Arti**	**63.32**	**327**	P	**P**	**07 04 46.1**	**-1.2**
	comp=Z,5.5nm,0.2s,baz=112,slow=16,SNR=5.2						
	comp=Z,5.5nm,0.2s						
F15K	**North Star Dit**	**71.11**	**25**	P	**P**	**07 05 37.5**	**+1.2**
F15K				IAmb	IAmb	07 05 50.0	
	comp=Z,6.7nm,1.2s						
C16K	**Lisburne Hills**	**71.25**	**22**	P	**P**	**07 05 37.8**	**+0.7**
C16K				IAmb	IAmb	07 05 54.6	
	comp=Z,6.9nm,1.4s						
C18K	**Utukok River**	**72.82**	**22**	P	**P**	**07 05 47.7**	**+1.2**
E18K	**Tukpahlearik C**	**72.92**	**23**	P	**P**	**07 05 48.6**	**+1.5**
E18K				IAmb	IAmb	07 06 25.8	
	comp=Z,6.4nm,1.4s						
C19K	**Lookout Ridge**	**73.44**	**22**	P	**P**	**07 05 51.2**	**+1.0**
D19K	**Kuna River**	**73.94**	**22**	P	**P**	**07 05 54.0**	**+0.9**
D19K				IAmb	IAmb	07 05 55.2	
	comp=Z,4.4nm,0.8s						
ILAR	**Eielson Array**	**78.57**	**26**	P	**P**	**07 06 21.3**	**+2.1**
	comp=Z,0.6nm,1.1s,baz=311,slow=4.2,SNR=2.6						
	comp=Z,0.6nm,1.1s						
ARCES	**ARCESS Array B**	**78.98**	**339**	P	**P**	**07 06 21.1**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=91,slow=6.3,SNR=6.9						
	comp=Z,3.4nm,0.9s						
BRTR	**Keskin Array B**	**79.14**	**308**	P	**P**	**07 06 23.0**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=44,slow=8.5,SNR=2.6						
	comp=Z,0.6nm,0.7s						
SPITS	**Spitsbergen Ar**	**79.46**	**348**	P	**P**	**07 06 24.3**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=54,slow=13,SNR=8.3						
	comp=Z,1.9nm,0.4s						
FINES	**FINESS Array B**	**80.20**	**331**	P	**P**	**07 06 28.3**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=69,slow=4.6,SNR=6.4						
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**92.59**	**22**	P	**P**	**07 07 29.6**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=305,slow=4.3,SNR=5.7						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**119.29**	**45**	PKP	**PKPdf**	**07 13 07.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=325,slow=1.1,SNR=4.5						

IDC 09 06:58:16.8±1.5, 54.°51N×83.°75E, h0km, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=14.3km s-min=9.5km az=6.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.84**	**131**	I	I	07 03 20.0	
	0.1nm,0.8s,baz=311,slow=342,SNR=7.1						
ZALV	**Zalesovo Beam**	**0.85**	**131**	Pg	Pg	06 58 33.1	+0.1
	1.9nm,0.3s,baz=309,slow=15,SNR=19						
ZALV				Lg	Lg	06 58 44.9	
	3.4nm,0.3s,baz=315,slow=30,SNR=16						
ZALV				Rg	Rg	06 58 50.9	
	4.2nm,0.5s,baz=317,slow=35,SNR=7.4						
KURBB	**Kurchatov Arra**	**5.03**	**221**	Pn	Pn	06 59 33.8	+0.4
	baz=39,slow=13,SNR=4.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.78**	**187**	Pn	Pn	07 00 11.4	+0.1
	baz=13,slow=13,SNR=2.8						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**8.05**	**265**	Pn	Pn	07 00 13.9	-1.1
	baz=79,slow=12,SNR=4.1						
	0.5nm,0.4s						

IDC 09 06:59:26.2±2.8, 54.°15N×87.°11E, h0km, mbtmp3.2/3, ML2.8/3, Error ellipse: s-maj=27.3km s-min=17.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**263**	I	I	07 07 10.0	
	0.3nm,0.8s,baz=79,slow=338,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.36**	**263**	Pg	Pg	06 59 50.1	-2.2
	3.2nm,0.3s,baz=84,slow=16,SNR=12						
ZALV				Lg	Lg	07 00 10.1	
	3.0nm,0.3s,baz=77,slow=21,SNR=4.7						
KURBB	**Kurchatov Arra**	**6.33**	**240**	Pn	Pn	07 01 00.8	+0.1
	0.2nm,0.3s,baz=54,slow=14,SNR=10						
KURBB				Lg	Lg	07 02 46.6	
	baz=53,slow=33,SNR=2.3						
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**7.97**	**205**	Pn	Pn	07 01 24.6	+1.2
	0.2nm,0.3s,baz=25,slow=14,SNR=9.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**10.01**	**270**	Pn	Pn	07 01 51.4	+0.3
	baz=72,slow=14,SNR=3.4						
	0.5nm,0.3s						

*IDC **09** 07:03:56.4±0.9, 8.°9S±0.°1×158.°9E±0.°1, h65km, n10, σ0s78/9, mb3.5/6, Bougainville-Solomon Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.16**	**120**	P	**Pn**	**07 04 16.3**	**-0.4**
	20μm,0.3s,baz=215,slow=6.7,SNR=78						
HNR				S	**Sn**	**07 04 31.7**	**-0.1**
	138μm,0.4s,baz=256,slow=18,SNR=19						
HNR				LR	LR	07 04 48.9	
	comp=Z,6μm,21.8s,baz=154,slow=47						
PMG	**Port Moresby**	**11.63**	**266**	LR	LR	07 10 38.8	
	comp=Z,185nm,18.0s,baz=66,slow=34						
DZM	**Mont Dzumac**	**14.99**	**152**	P	**Pn**	**07 07 25.6**	**+0.8**
	0.3nm,0.3s,baz=49,slow=20,SNR=1.9						
DZM				LR	LR	07 12 02.8	
	comp=Z,73nm,18.1s,baz=304,slow=33						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**26.20**	**242**	P	**P**	**07 09 24.3**	**-1.0**
	0.5nm,0.5s,baz=67,slow=9.1,SNR=4.4						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**28.00**	**213**	P	**P**	**07 09 40.8**	**-0.5**
	0.5nm,0.5s,baz=52,slow=18,SNR=1.0						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**28.11**	**235**	P	**P**	**07 09 42.4**	**0.0**
	0.3nm,0.4s,baz=60,slow=9.8,SNR=7.5						
	0.3nm,0.4s						
URZ	**Urewera**	**33.55**	**154**	LR	LR

ISC 09 07:05:34.3±0.8, 30°68N±0°.04×57°36E±0°.03, h15km, n28, σ2§42/28, mb3.6/4, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRM1	Kerman Provinc	0.19	204	Pg	Pg	07 05 38.8	-0.2
ZRDN	Zarand Kerman	0.77	292	Pg	Pb	07 05 48.6	-1.0
KHGB	Koh Gabri	0.82	249	Pg	Pg	07 05 49.9	-0.4
CHMN	Cheshme madani	0.83	169	Pg	Pg	07 05 50.2	-0.3
TVBK	TV Kerman	0.86	217	Pg	Pn	07 05 51.6	-0.7
NGRK	Negar Kerman	1.17	208	Pg	Pg	07 05 57.1	+0.2
IBAF	Bafgh	1.79	301	Pg	Pg	07 06 07.1	-1.6
KBAM	BAM	1.81	148	Pn	Pg	07 06 07.6	-1.4
BSRN	Basiran	1.98	49	Pn	Pb	07 06 08.5	-1.7
IKOO	Kooshah	2.24	38	Pn	Pb	07 06 12.5	-2.1
TPRV	Parvadeh(Tabas	2.41	346	Pn	Pb	07 06 14.5	-3.0
NHDN	Nehbandan	2.42	72	Pn	Pb	07 06 15.2	-2.3
IMEH	Mehriz	2.46	287	Pn	Pb	07 06 16.6	-1.8
ITEG	Tejag	2.51	28	Pn	Pb	07 06 15.7	-3.5
TKDS	Koohdasht(Taba	2.94	356	Pn	Pb	07 06 21.8	-4.6
AFRZ	Afriz	3.08	27	Pn	Pb	07 06 24.3	-4.6
ZHDN	Zahedan	3.25	112	Pn	Pn	07 06 26.0	+1.1
ISAD	Sadrabad	3.38	292	Pn	Pb	07 06 29.8	-4.3
SHRT	Shahrakht	3.86	39	Pn	Pn	07 06 35.0	+1.7
ANAR	Anarak	3.98	310	Pn	Pn	07 06 37.4	+2.6
IZEF	Zefreh	4.82	299	Pn	Pn	07 06 48.8	+2.2
TBJM	Torbat-e-JAM	5.21	28	Pn	Pn	07 06 53.7	+1.8
GEYT	Alibeck	7.26	5	Pn	Pn	07 07 22.7	+2.8
	0.4nm,0.3s,baz=172,slow=11,SNR=2.2 0.6nm,0.4s						
AKTO	Aktyubinsk	19.74	1	P	Pn	07 10 05.3	+0.4
	1.4nm,0.5s,baz=174,slow=10,SNR=4.2 1.4nm,0.5s						
BVAR	Borovoye Array	24.27	19	P	P	07 10 53.1	+2.3
	0.8nm,0.5s,baz=198,slow=8.8,SNR=5.6 0.8nm,0.5s						
MKAR	Makanchi Array	25.09	43	P	P	07 10 59.6	+1.3
	0.4nm,0.7s,baz=230,slow=9.3,SNR=4.3 0.4nm,0.7s						
KURBB	Kurchatov Arra	25.43	32	P	P	07 11 03.6	+2.3
	0.6nm,0.4s,baz=232,slow=9.1,SNR=7.4 0.6nm,0.4s						
ZALV	Zalesovo Beam	30.53	32	P	P	07 11 48.7	+1.8
	1.3nm,0.6s,baz=242,slow=9.4,SNR=5.5 1.3nm,0.6s						

*IDC **09** 07:10:45.2±4.9, 10°.53S×165°.96E, h177km±44km, mb3.4/10, mbtmp3.9/11, Error ellipse: s-maj=28.8km s-min=21.3km az=143.0*

ISC 09 07:10:42.6±0.8, 10°.53S±0°.09×166°.0E±0°.2, h155km, n14, σ1§40/14, mb3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.48	178	P	Pn	07 13 24.8	+2.6
	7.2nm,0.4s,baz=36,slow=17,SNR=21						
DZM				S	Sn	07 15 26.3	-2.9
	9.5nm,1.0s,baz=292,slow=22,SNR=2.3						
CTA	Charters Tower	21.29	241	P	P	07 15 17.5	+0.4
	3.1nm,0.7s,baz=82,slow=16,SNR=1.8 3.1nm,0.7s						
H11N1	WAKE ISLAND Hy	30.07	2	T	T	07 48 57.1	
	baz=182						
H11N3	WAKE ISLAND Hy	30.07	2	T	T	07 48 52.3	
	baz=182						
H11N2	WAKE ISLAND Hy	30.08	2	T	T	07 49 04.4	
	baz=182						
STKA	Stephens Creek	31.00	223	P	P	07 16 46.4	+0.8
	2.3nm,0.5s,baz=47,slow=10,SNR=8.1 2.3nm,0.5s						
WRA	Warramunga Arr	31.92	249	P	P	07 16 53.3	-0.6
	1.3nm,0.6s,baz=83,slow=9.2,SNR=8.7						
WRA				PcP	PcP	07 19 40.8	+0.1
	1.5nm,0.9s,baz=79,slow=4.2,SNR=6.0 1.3nm,0.6s						
ASAR	Alice Springs	33.27	243	P	P	07 17 05.0	-0.6
	1.3nm,0.9s,baz=66,slow=10,SNR=12						
ASAR				PcP	PcP	07 19 44.6	+0.2
	0.6nm,0.7s,baz=85,slow=3.0,SNR=6.4 1.3nm,0.9s						
SONM	Songino Array	78.42	324	P	P	07 22 25.9	-0.4
	0.2nm,0.3s,baz=155,slow=4.8,SNR=1.9 0.2nm,0.3s						
QSPA	South Pole Qui	79.47	180	P	P	07 22 30.9	-0.8
	1.5nm,0.6s,baz=35,slow=0.8,SNR=6.9 1.5nm,0.6s						
ILAR	Eielson Array	82.94	18	P	P	07 22 50.0	+0.1
	0.4nm,0.6s,baz=222,slow=5.5,SNR=9.4 0.4nm,0.6s						
NVAR	Mina Array Bea	85.48	50	P	P	07 23 04.6	+1.0
	0.3nm,0.7s,baz=230,slow=6.9,SNR=2.5 0.3nm,0.7s						
MKAR	Makanchi Array	93.34	317	P	P	07 23 40.3	+0.2
	0.6nm,0.7s,baz=89,slow=7.0,SNR=4.0 0.6nm,0.7s						
YKA	Yellowknife Ar	94.39	27	P	P	07 23 42.9	-1.6
	0.1nm,0.7s,baz=295,slow=4.4,SNR=2.3 0.1nm,0.7s						

*IDC **09** 07:16:59.7±2.2, 9°.00S×113°.92E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=123.9km s-min=26.1km az=49.0*
*DJA **09** 07:17:01.5±0.6, 9°S±4°×11°4E±°, h14km±3km, M4.2/12, mb4.3/1, MLv4.2/12*

ISC 09 07:17:00.0±2.1, 8°98S±0°.08×113°71E±0°.04, h8km±13km, n21, σ1§05/24, mb3.8/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	0.67	41	P	Pn	07 17 14.9	-0.9
JAGI				S	Sb	07 17 23.4	0.0
GMJI	Gumukmas	0.75	339	P	Pb	07 17 15.2	-0.1
GMJI				S	Sg	07 17 24.2	+0.1
BLJI	Banyuglugur	1.23	355	P	Pg	07 17 23.9	+0.3
BLJI				S	Sg	07 17 39.7	+0.1
SRBI	Singaraja	1.73	59	P	Pb	07 17 31.8	-0.3
SRBI				S	Sg	07 17 54.7	-1.1
GRJI	Gresik	2.38	329	P	Pn	07 17 39.7	+0.3
GRJI				S	Sn	07 18 09.3	+0.4
NGJI	Ngawi	2.74	306	P	Pn	07 17 44.5	+0.2
TWSI	Taliwang, Sumb	3.15	86	P	Pn	07 17 51.4	+1.5
TWSI				S	Sn	07 18 27.4	-0.3
UGM	Wanagama	3.32	288	P	Pn	07 17 52.6	+0.2
UGM				S	Sn	07 18 30.0	-2.2
PLAI	Plampang	4.02	88	P	Pn	07 18 04.2	+2.2
PLAI				S	Sn	07 18 49.5	+0.1
KPJI	Karang Pucung	5.00	289	P	Pn	07 18 16.7	+1.2
KPJI				S	Sn	07 19 13.9	+0.3
CMJI	Cimerak	5.34	282	P	Pn	07 18 19.4	-0.7
WRA	Warramunga Arr	22.73	121	P	P	07 22 01.3	-1.5
	1.2nm,0.6s,baz=296,slow=12,SNR=20 1.2nm,0.6s						
ASAR	Alice Springs	24.22	130	P	P	07 22 16.9	-0.6
	3.5nm,0.5s,baz=305,slow=9.2,SNR=86 3.5nm,0.5s						
STKA	Stephens Creek	34.48	135	P	P	07 23 47.9	-0.8
	0.8nm,0.4s,baz=312,slow=11,SNR=5.4 0.8nm,0.4s						
H08S2	Diego Garcia H	40.79	269	T	T	08 07 50.5	
	baz=94,slow=76,SNR=4.3						
H08S3	Diego Garcia H	40.80	269	T	T	08 07 49.8	
	baz=94,slow=76,SNR=4.4						
H08S1	Diego Garcia H	40.81	269	T	T	08 07 52.6	
	baz=94,slow=76,SNR=4.5						
MKAR	Makanchi Array	62.19	336	P	P	07 27 23.7	+1.6
	0.1nm,0.3s,baz=140,slow=5.3,SNR=1.7 0.1nm,0.3s						
H04N2	CROZET ISLANDS	64.23	223	T	T	08 38 04.0	
	baz=74						
H04N1	CROZET ISLANDS	64.24	223	T	T	08 38 00.7	
	baz=74						
H04N3	CROZET ISLANDS	64.24	223	T	T	08 38 01.8	
	baz=74						

*IDC **09** 07:17:18.0±0.7, 0°.07S×18°.29W, h0km, mb4.2/13, mbtmp4.3/16, ML4.9/3, MS3.7/35, Error ellipse: s-maj=23.3km s-min=15.5km az=135.0*
*NEIC **09** 07:17:19.9±1.6, 0°.09S±0°.08×18°.17W±0°.10, h10km±1km, mb4.9/32, Error ellipse: s-maj=17.0km s-min=12.5km az=74.0*
*GCMT **09** 07:17:21.9±0.4, 0°.05N±0°.02×18°.23W±0°.02, h20km±1km, MW4.8/79, Moment Tensor Solution. s32,c34; s79,c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.50±.12; Mθθ0.63±.10; Mϕϕ-0.13±.09; Mrθ0.63±.18; Mrϕ-1.97±.08; Mθϕ-0.26±.17; Best double couple: Mw2.09700×10¹⁶ NP1:ϕ=85.00000°, δ88.00000°, λ164.00000°. NP2: ϕ=175.00000°, δ74.00000°, λ2.00000°. Principal axes: T 2.4020, Plg13.0000°, Azm39.0000°; N -0.6100, Plg74.0000°, Azm258.0000°; P -1.7930, Plg10.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 07:17:21.0±0.4, 0°.08S±0°.07×18°.18W±0°.07, h23km, n117, σ1§22/85, mb4.6/34, MS3.7/34, 3C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	8.53	155	Pn	Pn	07 19 22.6	-0.4
	baz=330,slow=13						
H10N2				T	T	07 28 26.1	
	baz=333,slow=73,SNR=527						
H10N3	ASCENSION HYDR	8.54	155	Pn	Pn	07 19 22.9	-0.2
	baz=330,slow=13						
H10N3				T	T	07 28 18.8	
	baz=333,slow=73,SNR=865						
H10N1	ASCENSION HYDR	8.55	155	Pn	Pn	07 19 23.0	-0.3
	baz=330,slow=13						
H10N1				T	T	07 28 27.3	
	baz=333,slow=73,SNR=803						
ASCN	Ascension	8.68	154	Pn	Pn	07 19 24.3	-1.0
H10S3	ASCENSION HYDR	9.48	158	Pn	Pn	07 19 36.9	+0.8
	baz=335,slow=74						
H10S3				T	T	07 29 49.4	
	baz=243,slow=74,SNR=228						
H10S2	ASCENSION HYDR	9.50	158	Pn	Pn	07 19 37.3	+1.0
	baz=245,slow=74						
H10S2				T	T	07 29 45.1	
	baz=337,slow=74,SNR=104						
LIC	Lamto	14.54	64	eP	Pn	07 20 45.5	-0.1
	6.5nm,0.3s						
TIC	Toumodi	14.73	63	eP	Pn	07 20 47.0	-1.2
	4.4nm,0.3s						
BBTS	Babate	14.74	6	Pn	Pn	07 20 46.0	-2.2
	4.1nm,0.3s,baz=195,slow=5.6,SNR=7.4						
BBTS				Sn	Sn	07 23 15.3	-16
	2.5nm,0.3s,baz=145,slow=12,SNR=1.6 43nm,0.8s						
KIC	Kosan Boka	14.86	64	eP	Pn	07 20 49.3	-0.6
	13nm,0.4s						
DBIC	Dimbokro	14.89	63	Pn	Pn	07 20 49.0	-1.2
DBIC	Dimbokro	14.89	63	Pn	Pn	07 20 49.5	-0.8
	8.8nm,0.3s,baz=249,slow=16,SNR=77						
DBIC				Sn	Sn	07 23 21.3	-13
	1.0nm,0.3s,baz=227,slow=17,SNR=1.7						
DBIC				LR	LR	07 24 42.4	
	comp=Z,300nm,21.1s,baz=200,slow=30 18nm,0.3s						
SACV	Santiago Islan	15.89	340	Pn	Pn	07 21 02.7	-0.7
SACV				IAmb	IAmb	07 21 09.6	
	comp=Z,96nm,1.2s						
RCBR	Riachuelo	18.59	252	P	P	07 21 35.1	-1.7
	comp=Z,2.7nm,0.3s,baz=87,slow=17,SNR=28						
RCBR				S	Sn	07 24 43.4	-21
	comp=Z,6.5nm,1.0s,baz=20,slow=9.3,SNR=2.1 comp=Z,6.3nm,0.4s						
RCBR	Riachuelo	18.59	252	eP	P	07 21 34.7	-2.1
TOA0	Torodi Ar. Sit	23.68	56	P	P	07 22 31.3	+0.1
TOA0				IAmb	IAmb	07 22 39.5	
	comp=Z,22nm,0.8s						
TORD	Torodi Ar. Bea	23.68	56	P	P	07 22 31.5	+0.3
	comp=Z,12nm,0.3s,baz=251,slow=7.5,SNR=44						
TORD				LR	LR	07 30 48.3	
	comp=Z,235nm,18.3s,baz=248,slow=34 comp=Z,12nm,0.3s						
SDBA	SAO DESIDERIO	29.20	244	eP	P	07 23 20.4	-0.8
JANB	Januaria	29.81	239	eP	P	07 23 25.1	-1.5
BDFB	Brasilia	33.27	241	P	P	07 23 56.8	-0.4
	comp=Z,5.3nm,0.9s,baz=71,slow=10,SNR=6.3 comp=Z,5.3nm,0.9s						
PMNB	Patos De Minas	33.27	235	eP	P	07 23 55.9	-1.2
MCPB	Macapa, AP	33.88	269	eP	P	07 24 08.4	+6.1
IPMB	Ipameri, GO	34.47	237	eP	P	07 24 06.2	-1.3
AVE	Averroes	34.71	16	P	P	07 24 11.0	+1.6
MDP	Montagnes des	34.80	279	LR	LR	07 36 12.0	
	comp=Z,34nm,18.7s,baz=80,slow=33						
MDT	Midelt	35.13	20	LR	LR	07 37 59.2	
	comp=Z,128nm,20.1s,baz=201,slow=35						
MORF	Marmuelete	38.23	12	P	P	07 24 41.0	+1.6
TSUM	Tsumeb	39.89	121	LR	LR	07 37 05.7	
	comp=Z,92nm,21.9s,baz=334,slow=30						
PDRB	Porto dos Gac	39.95	252	eP	P	07 24 56.8	+2.7
RVDE	Rio Verde (Bra	40.68	240	eP	P	07 25 00.1	0.0
PTGB	Pitanga	40.92	231	eP	P	07 25 01.4	-0.7
PAB	San Pablo	41.42	16	P	P	07 25 07.2	+1.3
PAB				IAmb	IAmb	07 26 11.8	
	comp=Z,35nm,1.8s						
MTE	Manteigas	41.44	12	P	P	07 25 06.5	+0.5
ESDC	Sonseca Array	41.65	17	P	P	07 25 08.9	+1.2
	comp=Z,2.1nm,1.0s,baz=202,slow=9.7,SNR=7.1 comp=Z,2.1nm,1.0s						
AQDB	Aquidauana	41.91	239	eP	P	07 25 09.7	-0.5
ITAB	Concordia	42.34	228	P	P	07 25 14.6	+1.1
ITAB				IAmb	IAmb	07 26 15.6	
	comp=Z,59nm,1.8s						
FRBT	Francisco Belt	42.35	230	eP	P	07 25 14.0	+0.3
BOAV	Boa Vista	42.40	274	P	P	07 25 14.4	+0.2
BOAV				IAmb	IAmb	07 25 42.4	
	comp=Z,40nm,2.0s						
BDQN	Bodoquena, MS	42.80	239	eP	P	07 25 17.6	+0.2
ANTJ	Antonio Joao (	42.81	237	eP	P	07 25 17.1	-0.4
KEST	Kesra	43.89	33	LR	LR	07 43 58.3	
	comp=Z,227nm,19.6s,baz=132,slow=36						
BBRB	Robore, Bolivi	44.71	244	eP	P	07 25 33.9	+1.1
SIV	San Ignacio	45.17	247	LR	LR	07 44 18.4	
	comp=Z,82nm,18.2s,baz=108,slow=36						
SAML	Samuel	45.67	258	eP	P	07 25 44.2	+3.7
CPUP	Villa Florida	45.85	232	P	P	07 25 41.0	-0.7
CPUP				IAmb	IAmb	07 25 42.1	
	comp=Z,15nm,1.6s						
CPUP	Villa Florida	45.85	232	P	P	07 25 40.5	-1.2
	comp=Z,1.1nm,0.7s,baz=51,slow=14,SNR=3.5						
CPUP				LR	LR	07 43 19.2	
	comp=Z,77nm,18.8s,baz=70,slow=34 comp=Z,1.1nm,0.7s						
PCRV	Puerto La Cruz	47.31	284	LR	LR	07 43 20.8	
	comp=Z,56nm,19.2s,slow=33						
ETMB	Extrema	48.76	257	P	P	07 26 02.8	-1.8
SUR	Sutherland	48.82	135	P	P	07 26 04.9	-0.1
SUR	Sutherland	48.82	135	LR	LR	07 42 00.6	
	comp=Z,36nm,20.9s,baz=330,slow=30						
LBTB	Lobatse	49.03	124	LR	LR	07 44 39.3	
	comp=Z,27nm,18.7s,baz=282,slow=33						
BOSA	Boshof	50.27	128	P	P	07 26 14.1	-2.0
BOSA	Boshof	50.27	128	LR	LR	07 44 34.1	
	comp=Z,37nm,18.3s,baz=215,slow=32						
SJG	San Juan	50.48	294	LR	LR	07 42 50.3	
	comp=Z,40nm,21.3s,baz=58,slow=30						
FDMO	Fiordimonte	51.26	29	P	P	07 26 23.6	+0.5
CRPR	Cabo Rojo, PR	51.33	293	P	P	07 26 23.9	-0.1
AUA1	Aruba	52.90	286	P	P	07 26 37.3	+1.6
SDV	Santo Domingo	52.99	281	LR	LR	07 46 35.2	
	comp=Z,35nm,19.3s,baz=285,slow=33						
DAVA	Diamantina	53.15	24	eP	P	07 26 38.1	+0.9
	comp=Z,8.2nm,0.6s						
FETA	Feichten	53.28	24	eP	P	07 26 39.1	+0.8
	comp=Z,7.2nm,1.5s						
SQTA	Sankt Quirin	53.64	25	eP	P	07 26 41.2	+0.4
	comp=Z,4.3nm,0.6s						
ABTA	Abfaltersbach	53.82	26	eP	P	07 26 44.3	+2.2
	comp=Z,4.2nm,1.0s						
PB11	IPOC Station P	54.05	246	P	P	07 26 44.0	-0.4
PB11				IAmb	IAmb	07 26 48.4	
	comp=Z,11nm,1.1s						
PRED	Cave del Predi	54.05	27	P	P	07 26 44.8	+1.0
LVC	Limon Verde	54.17	242	LR	LR	07 49 23.7	
	comp=Z,27nm,18.5s,baz=59,slow=36						
FNA	Florina	54.23	37	P	P	07 26 46.9	+1.7
LESA	Schwarzleotal	54.42	25	iP	P	07 26 47.5	+1.0
	comp=Z,8.5nm,0.8s						
PB07	IPOC Station P	54.78	243	P	P	07 26 49.5	-0.1
PB07				IAmb	IAmb	07 26 55.6	
	comp=Z,14nm,0.9s						
SOKA	Soboth	54.90	27	iP	P	07 26 51.4	+1.4
	comp=Z,5.5nm,0.9s						
AC02	Maricunga	55.70	237	P	P	07 26 56.5	-0.1
AC02				IAmb	IAmb	07 27 21.6	
	comp=Z,12nm,1.2s						
GERES	GERESS Array B	55.95	25	P	P	07 26 58.6	+1.1
	comp=Z,1.5nm,0.7s,baz=243,slow=4.3,SNR=8.0						
GERES				PP	PP	07 28 57.7	-4.8
	comp=Z,6.2nm,0.9s,baz=205,slow=5.9,SNR=11						
GERES				LR	LR	07 49 56.4	
	comp=Z,90nm,18.4s,baz=334,slow=35 comp=Z,1.5nm,0.7s						
CONA	Conrad Observa	56.20	27	eP	P	07 27 00.6	+1.3
	comp=Z,4.2nm,1.0s						
RONA	Rosalia, Austr	56.23	27	iP	P	07 27 01.0	+1.5
	comp=Z,4.3nm,0.9s						
ROSC	El Rosal	56.28	276	LR	LR	07 49 43.2	
	comp=Z,80nm,18.3s,baz=254,slow=35						
MODS	Modra-Piesok	57.18	27	eP	P	07 27 08.3	+2.1
EIL	Elat	58.57	55	LR	LR	07 52 03.7	
	comp=Z,67nm,18.6s,baz=256,slow=36						
NNA	Nana	59.39	256	LR	LR	07 51 19.1	
	comp=Z,78nm,21.0s,baz=72,slow=34						
MLR	Muntele Rosu	59.74	35	LR	LR	07 54 57.4	
	comp=Z,168nm,18.2s,baz=293,slow=38						
MMAI	Mount Meron Ar	60.13	51	LR	LR	07 56 35.7	
	comp=Z,68nm,18.0s,baz=258,slow=39						
ATAH	Atahualpa	60.45	262	LR	LR	07 52 52.4	
	comp=Z,92nm,18.6s,baz=91,slow=35						
BR131	Keskin Array S	61.59	44	P	P	07 27 36.8	-0.2
BR131				IAmb	IAmb	07 27 39.4	
	comp=Z,17nm,1.8s						
BRTR	Keskin Array B	61.59	44	P	P	07 27 36.8	-0.2
BRTR	Keskin Array B	61.59	44	P	P	07 27 37.1	+0.2
	comp=Z,0.6nm,0.4s,baz=249,slow=5.3,SNR=4.6						
BRTR				LR	LR	07 55 42.6	
	comp=Z,161nm,18.5s,baz=306,slow=37 comp=Z,0.6nm,0.4s						
PLCA	Paso Flores	62.30	223	LR	LR	07 50 27.2	
	comp=Z,26nm,22.0s,baz=94,slow=32						
BATG	Bathurst New B	62.89	325	P	P	07 27 46.0	+0.6
BATG				IAmb	IAmb	07 28 10.6	
	comp=Z,16nm,1.3s						
KIEV	Kiev	64.56	31	P	P	07 27 56.6	+0.3
KIEV				IAmb	IAmb	07 27 57.6	
	comp=Z,7.4nm,1.1s						
AKASG	Malin Array Be	64.58	31	P	P	07 27 56.8	+0.4
	comp=Z,1.2nm,0.7s,baz=233,slow=7.5,SNR=7.2						
AKASG				LR	LR	08 00 17.6	
	comp=Z,91nm,18.1s,baz=327,slow=40 comp=Z,1.2nm,0.7s						
AKBB	Malin Array Si	64.58	31	P	P	07 27 56.4	0.0
AKBB				IAmb	IAmb	07 27 57.6	
	comp=Z,9.1nm,1.1s						
HFS	Hagfors	64.92	17	LR	LR	07 58 33.5	
	comp=Z,208nm,18.1s,baz=332,slow=38						
NOA	NORSAR Array B	64.99	15	LR	LR	07 56 16.5	
	comp=Z,71nm,18.8s,baz=300,slow=36						
JTS	Las Juntas de	67.18	281	LR	LR	07 59 14.4	
	comp=Z,23nm,18.2s,baz=139,slow=38						
KBZ	Khabaz	69.53	43	P	P	07 28 29.9	+1.8
	comp=Z,2.9nm,0.8s,baz=236,slow=11,SNR=4.2						
KBZ				LR	LR	08 03 11.1	
	comp=Z,62nm,18.2s,baz=316,slow=40 comp=Z,2.9nm,0.8s						
SADO	Sadowa	69.83	318	LR	LR	07 51 15.9	
	comp=Z,29nm,22.0s,baz=71,slow=29						
FINES	FINESS Array B	69.95	21	P	P	07 28 31.7	+1.4
	comp=Z,3.0nm,0.8s,baz=243,slow=5.6,SNR=5.3 comp=Z,3.0nm,0.8s						
SNAA	Sanae	72.16	175	LR	LR	07 53 44.8	
	comp=Z,56nm,19.2s,baz=344,slow=30						
PMSA	Palmer Station	72.56	199	P	P	07 28 48.3	+2.4
L48A	N Adams	72.57	314	P	P	07 28 46.6	0.0
L48A				IAmb	IAmb	07 28 48.2	
	comp=Z,9.7nm,0.7s						
CCM	Cathedral Cave	76.76	309	P	P	07 29 10.7	-0.2
CCM				IAmb	IAmb	07 29 11.5	
	comp=Z,7.5nm,0.8s						
CMIG	Matias Romero	77.32	287	LR	LR	07 59 45.4	
	comp=Z,22nm,21.1s,baz=16,slow=33						
MGMO	Mountain Grove	77.40	308	P	P	07 29 14.5	-0.1
B35A	Bob, Littlefor	80.48	319	P	P	07 29 31.0	-0.2
ECSD	EROS Data Cent	81.70	314	P	P	07 29 37.5	-0.4
ULM	Lac du Bonnet	82.20	321	P	P	07 29 40.6	+0.3
	comp=Z,2.3nm,0.8s,baz=122,slow=5.3,SNR=5.9 comp=Z,2.3nm,0.8s						
TXAR	Lajitas Array	86.10	299	P	P	07 30 01.3	+0.5
	comp=Z,1.6nm,0.8s,baz=115,slow=6.3,SNR=18						
TXAR				LR	LR	08 10 11.2	
	comp=Z,30nm,18.1s,baz=40,slow=37 comp=Z,1.6nm,0.8s						
TX31	Lajitas Ar. Si	86.10	299	P	P	07 29 59.4	-1.4
VHRN	Van Horn	87.29	301	P	P	07 30 06.9	+0.3
VHRN				IAmb	IAmb	07 30 17.8	
	comp=Z,5.8nm,1.1s						
RPN	Rapa Nui	90.99	243	LR	LR	08 06 47.8	
	comp=Z,19nm,18.6s,baz=3.0,slow=33						
PDAR	Pinedale Array	91.07	313	P	P	07 30 24.1	-0.1
	comp=Z,0.5nm,0.8s,baz=98,slow=6.5,SNR=3.6 comp=Z,0.5nm,0.8s						
AAK	Ala-Archa	92.03	48	LR	LR	08 16 31.1	
	comp=Z,86nm,18.1s,baz=322,slow=39						
YKA	Yellowknife Ar	93.05	332	P	P	07 30 33.3	+0.7
	comp=Z,0.7nm,0.7s,baz=87,slow=5.1,SNR=12 comp=Z,0.7nm,0.7s						
WMQ	Urumqi	101.48	45	eP	Pdif	07 31 13.1	+1.8
TAOE	Nuku Hiva Isla	121.53	260	eLR	LR	08 13 44.3	
	comp=Z,294nm,31.3s						
MDJ	Mudanjiang	127.24	29	SS	SS	07 55 31.4	+1.6
MDJ				AMB	AMB		
	comp=Z,160nm,4.8s						
PPT2	Papeete2	129.07	247	eLR	LR	08 17 01.7	
	comp=Z,117nm,26.0s						
ASAR	Alice Springs	144.06	133	PKP	PKPdf	07 36 56.0	+0.2
	comp=Z,0.7nm,0.8s,baz=228,slow=2.4,SNR=4.1						
WRA	Warramunga Arr	146.53	128	PKPbc	PKiKP	07 37 03.6	-0.9
	comp=Z,1.1nm,0.7s,baz=242,slow=2.5,SNR=5.3						
DZM	Mont Dzumac	157.53	191	eLR	LR	08 30 09.2	
	comp=Z,40nm,24.6s						

IDC 09 07:34:03.6±1.6, 54°.63N×83°.72E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=14.4km s-min=9.7km az=7.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU

RES	**Resolute Bay**	**7.33**	**307**	*i* S	**Sn**	**07 40 44.3**	**-2.8**
RES	**Resolute Bay**	**7.33**	**307**	PN	**Pn**	**07 39 25.9**	**+2.0**
RES				SN	**Sn**	**07 40 44.2**	**-2.8**
RES				LG	Lg	07 41 29.0	
RES				Trac		07 41 30.5	
	comp=Z,7.5nm,0.8s						
FRB	**Frobisher Bay**	**7.79**	**167**	*i* P	**Pn**	**07 39 27.6**	**-2.7**
FRB				*i* S	Sn	07 40 51.1	-7.4
FRB	**Frobisher Bay**	**7.79**	**167**	PN	**Pn**	**07 39 32.9**	**+2.5**
FRB				SN	**Sn**	**07 40 54.3**	**-4.1**
FRB				LG	Lg	07 41 43.0	
FRB				Trac		07 41 54.4	
	comp=Z,20nm,0.6s						
NEEM	**North Greenlan**	**8.34**	**33**	*i* P	**Pn**	**07 39 40.7**	**+2.6**
NEEM				*i* S	**Sn**	**07 41 10.2**	**-2.0**
NEEM				IAML		07 41 14.0	
	comp=Z,2.6nm,1.6s						
SUMG	**Summit**	**10.53**	**67**	*i* P	**Pn**	**07 40 10.8**	**+2.7**
SUMG				*i* S	**Sn**	**07 41 59.0**	**-7.1**
SUMG				IAML		07 42 09.3	
	comp=Z,4.0nm,0.8s						
BLKN	**Baker Lake**	**11.26**	**243**	PN	**Pn**	**07 40 18.5**	**+0.7**
BLKN				SN	Sn	07 42 15.2	-8.3
BLKN				LG	Lg	07 43 29.1	
BLKN				Trac		07 43 35.3	
	comp=Z,10.0nm,0.5s						

*IDC **09** 07:44:13.2±2.6,53.53N×90.51E,h0km,mbtmp3.0/4, ML3.0/3,Error ellipse: s-maj=29.9km s-min=18.9km az=10.0*
*NNC **09** 07:44:15.4±3.8,53.92N×90.12E,h0km,mb2.9,mpv2.6, Error ellipse: s-maj=28.1km s-min=20.8km az=53.0, Suspected Mining explosion.*
ISC 09 07:44:20.4±4.1,53.7N±0.1×89.9E±0.2,h0km,n10, σ2s15/12,7C-7D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.99**	**276**		I	I	08 05 10.0	
	baz=91,slow=341,SNR=9.3							
ZAA0	**Zalesovo Array**	**2.99**	**276**	⇑Pg	**Pn**		**07 45 10.6**	**+1.6**
	0.1nm,0.5s							
ZAA0				⇓Lg	Lg		07 45 58.3	
	3.3nm,0.8s							
ZALV	**Zalesovo Beam**	**2.99**	**276**	Pn	**Pn**		**07 45 09.1**	**0.0**
	1.0nm,0.3s,baz=90,slow=16,SNR=4.5							
ZALV				Lg	Lg		07 46 01.8	
	1.7nm,0.3s,baz=95,slow=33,SNR=11							
KURK	**Kurchatov**	**7.53**	**251**	⇑Pn	**Pn**		**07 46 09.8**	**-1.5**
	0.2nm,0.4s							
KURK				⇑Sn	**Sn**		**07 47 40.7**	**+3.4**
	0.2nm,0.4s							
KURK				⇓Lg	Lg		07 48 21.6	
	8.0nm,1.0s							
KURBB	**Kurchatov Arra**	**7.62**	**251**	⇑Pn	**Pn**		**07 46 10.7**	**-2.0**
	0.5nm,0.3s							
KURBB				⇓Sn	**Sn**		**07 47 39.2**	**-0.4**
	0.7nm,0.5s							
KURBB				⇓Lg	Lg		07 48 21.3	
	33nm,0.9s							
KURBB	**Kurchatov Arra**	**7.62**	**251**	Pn	**Pn**		**07 46 09.5**	**-3.1**
	0.1nm,0.3s,baz=64,slow=15,SNR=5.0							
KURBB				Sn	**Sn**		**07 47 38.2**	**-1.4**
	baz=68,slow=26							
KURBB				Lg	Lg		07 48 24.9	
	baz=59,slow=33,SNR=2.3							
	0.6nm,0.4s							
MK31	**Makanchi Array**	**8.46**	**218**	⇑Pn	**Pn**		**07 46 24.1**	**-0.1**
	0.1nm,0.3s,baz=41,slow=11,SNR=5.5							
MK31				⇓Sn	**Sn**		**07 48 03.3**	**+3.0**
	0.4nm,0.5s,baz=45,slow=25,SNR=4.1							
MK31				⇑Lg	Lg		07 48 52.6	
	7.9nm,1.0s,baz=38,slow=31,SNR=4.3							
MKAR	**Makanchi Array**	**8.46**	**218**	Pn	Pn		07 46 19.1	-5.1
	0.1nm,0.3s,baz=37,slow=13,SNR=5.3							
MKAR				Lg	Lg		07 48 44.6	
	0.1nm,0.3s,baz=36,slow=31,SNR=5.4							
	0.2nm,0.4s							
MAKZ	**Makanchi**	**8.56**	**219**	⇑Pn	**Pn**		**07 46 25.2**	**-0.4**
	0.1nm,0.3s							
MAKZ				⇓Sn	**Sn**		**07 48 02.4**	**-0.4**
	0.3nm,0.5s							
MAKZ				⇓Lg	Lg		07 48 56.2	
	5.7nm,1.1s							
SONM	**Songino Array**	**12.01**	**113**	Pn	Pn		07 46 59.6	-13
	0.2nm,0.3s,baz=291,slow=12,SNR=1.6							
SONM				Lg	Lg		07 50 05.5	
	0.1nm,0.3s,baz=297,slow=30,SNR=8.3							
	0.3nm,0.4s							

*SOME **09** 07:45:53.7,42.53N×78.90E,h15km*
*NNC **09** 07:45:53.7±0.6,42.56N×78.87E,h0km,mb3.5,mpv3.4, Error ellipse: s-maj=4.1km s-min=2.2km az=159.0*
*KRNET **09** 07:45:53.6±0.1,42.54N×78.87E,h24km,mb3.0*
ISC 09 07:45:53.3±1.4,42.52N±0.04×78.86E±0.03,h4km±10km, n56,σ0s85/102,6C-12D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.35**	**263**	⇓*e*P	**Pg**		**07 46 01.4**	**+1.4**
	baz=64							
PRZ				⇓*e*S	**Sb**		**07 46 06.7**	**-1.3**
	baz=64							
SATY	**Saty**	**0.63**	**328**	P	**Pg**		**07 46 05.6**	**+0.2**
	72nm,0.1s							
SATY				S	**Sg**		**07 46 14.1**	**+0.4**
	101nm,0.1s							
SATY	**Saty**	**0.63**	**328**	*e*P	**Pg**		**07 46 05.6**	**+0.2**
	72nm,0.1s							
SATY				*e*S	**Sg**		**07 46 14.1**	**+0.4**
	101nm,0.1s							
SATY	**Saty**	**0.63**	**328**	*e*P	**Pg**		**07 46 05.6**	**+0.2**
	baz=27							
SATY				*e*S	**Sg**		**07 46 14.1**	**+0.4**
	baz=27							
UZB	**Uzynbulak**	**0.63**	**10**	P	**Pg**		**07 46 05.3**	**-0.2**
	21nm,0.2s							
UZB				S	**Sg**		**07 46 13.7**	**0.0**
	230nm,0.2s							
UZB	**Uzynbulak**	**0.63**	**10**	*e*P	**Pg**		**07 46 05.3**	**-0.2**
	21nm,0.2s							
UZB				*e*S	**Sg**		**07 46 13.7**	**0.0**
	230nm,0.2s							
UZB	**Uzynbulak**	**0.63**	**10**	*e*P	**Pg**		**07 46 05.3**	**-0.2**
	baz=10.0							
UZB				*e*S	**Sg**		**07 46 13.8**	**0.0**
	baz=10.0							
ZHN	**Zhinishke**	**0.72**	**334**	P	**Pg**		**07 46 07.1**	**0.0**
	24nm,0.2s							
ZHN				S	**Sg**		**07 46 17.1**	**+0.7**
	74nm,0.3s							
ZHN	**Zhinishke**	**0.72**	**334**	*e*P	**Pg**		**07 46 07.1**	**0.0**
	24nm,0.2s							
ZHN				*e*S	**Sg**		**07 46 17.1**	**+0.7**
	74nm,0.3s							
ZHN	**Zhinishke**	**0.72**	**334**	*e*P	**Pg**		**07 46 07.1**	**0.0**
	baz=33							
ZHN				*e*S	**Sg**		**07 46 17.1**	**+0.7**
	baz=33							
SHLS	**Shalkode**	**0.77**	**35**	P	**Pn**		**07 46 11.9**	**+0.8**
	22nm,0.1s							
SHLS				S	**Sn**		**07 46 25.1**	**+1.9**
	69nm,0.5s							
SHLS	**Shalkode**	**0.77**	**35**	*e*P	**Pn**		**07 46 11.9**	**+0.8**
	22nm,0.1s							
SHLS				*e*S	**Sn**		**07 46 25.1**	**+1.9**
	69nm,0.5s							
SHLS	**Shalkode**	**0.77**	**35**	*e*P	**Pn**		**07 46 11.9**	**+0.8**
	baz=50							
SHLS				*e*S	**Sn**		**07 46 25.1**	**+1.9**
	baz=50							
ANVS	**Anan'yevo**	**0.92**	**287**	⇑*e*P	**Pb**		**07 46 11.0**	**-0.9**
	baz=86							
ANVS				⇑*e*S	**Sb**		**07 46 23.4**	**-1.2**
	baz=86							
PDGK	**Podgornoye**	**0.93**	**30**	P	**Pb**		**07 46 10.5**	**-1.5**
	1.9nm,0.1s							
PDGK				S	**Sb**		**07 46 22.4**	**-2.3**
	26nm,0.4s							
KPKS	**Kokpek**	**0.95**	**352**	P	**Pb**		**07 46 11.2**	**-1.2**
	48nm,0.2s							
KPKS				S	**Sb**		**07 46 23.7**	**-1.7**
	77nm,0.3s							
KPKS	**Kokpek**	**0.95**	**352**	*e*P	**Pb**		**07 46 11.2**	**-1.2**
	48nm,0.2s							
KPKS				*e*S	**Sb**		**07 46 23.7**	**-1.7**
	77nm,0.3s							
KPKS	**Kokpek**	**0.95**	**352**	*e*P	**Pb**		**07 46 11.2**	**-1.2**
	baz=52							
KPKS				*e*S	**Sb**		**07 46 23.7**	**-1.7**
	baz=52							
KURS	**Kuram**	**1.09**	**332**	P	**Pb**		**07 46 14.0**	**-0.8**
	12nm,0.3s							
KURS				S	**Sg**		**07 46 28.5**	**+0.2**
	7.1nm,0.2s							
KURS	**Kuram**	**1.09**	**332**	*e*P	**Pb**		**07 46 14.0**	**-0.8**
	12nm,0.3s							
KURS				*e*S	**Sg**		**07 46 28.5**	**+0.2**
	7.1nm,0.2s							
KURS	**Kuram**	**1.09**	**332**	*e*P	**Pb**		**07 46 14.0**	**-0.8**
	baz=32							
KURS				*e*S	**Sg**		**07 46 28.6**	**+0.2**
	baz=32							
TARG	**Taragay, Kyrgy**	**1.12**	**225**	⇑*e*P	**Pb**		**07 46 14.4**	**-1.0**
	baz=25							
TARG				⇑*e*S	**Sb**		**07 46 29.9**	**-0.6**
	baz=25							
KDJ	**Kajisay**	**1.31**	**253**	⇓*e*P	**Pn**		**07 46 17.5**	**-1.0**
	baz=52							
KDJ				⇓*e*S	**Sb**		**07 46 35.0**	**-0.8**
	baz=52							
MDOK	**Medeo**	**1.48**	**296**	Pg	**Pb**		**07 46 21.0**	**-0.5**
	16nm,0.2s							
MDOK				Lg	Lg		07 46 40.4	
	42nm,0.5s							
MDOK	**Medeo**	**1.48**	**296**	*e*P	**Pb**		**07 46 21.0**	**-0.5**
	16nm,0.2s							
MDOK				*e*S	**Sb**		**07 46 40.5**	**-0.2**
	42nm,0.5s							
MDOK	**Medeo**	**1.48**	**296**	*e*P	**Pb**		**07 46 21.0**	**-0.5**
	baz=96							
MDOK				*e*S	**Sb**		**07 46 40.5**	**-0.2**
	baz=96							
TNSS	**Tian-Shan**	**1.50**	**291**	P	**Pb**		**07 46 21.5**	**-0.5**
	13nm,0.3s							
TNSS				S	**Sg**		**07 46 41.5**	**-0.1**
	27nm,0.3s							
TNSS	**Tian-Shan**	**1.50**	**291**	*e*P	**Pb**		**07 46 21.5**	**-0.5**
	13nm,0.3s							
TNSS				*e*S	**Sg**		**07 46 41.5**	**-0.1**
	27nm,0.3s							
TNSS	**Tian-Shan**	**1.50**	**291**	*e*P	**Pb**		**07 46 21.5**	**-0.5**
	baz=90							
TNSS				*e*S	**Sg**		**07 46 41.5**	**-0.1**
	baz=90							
KNOS	**Konyrlen**	**1.85**	**7**	P	**Pb**		**07 46 27.5**	**-0.3**
	13nm,0.1s							
KNOS				S	**Sg**		**07 46 51.7**	**-1.0**
	22nm,0.2s							
ARXS	**Arharly**	**1.85**	**336**	P	**Pb**		**07 46 27.5**	**-0.2**
	9.7nm,0.2s							
ARXS				S	**Sg**		**07 46 51.8**	**-0.9**
	23nm,0.4s							
ARXS	**Arharly**	**1.85**	**336**	*e*P	**Pb**		**07 46 27.5**	**-0.2**
	9.7nm,0.2s							
ARXS				*e*S	**Sg**		**07 46 51.8**	**-0.9**
	23nm,0.4s							
MTBS	**Maitube**	**1.89**	**290**	P	**Pb**		**07 46 28.3**	**-0.1**
	5.8nm,0.2s							
MTBS				S	**Sb**		**07 46 53.0**	**+0.5**
	19nm,0.4s							
MTBS	**Maitube**	**1.89**	**290**	*e*P	**Pb**		**07 46 28.3**	**-0.1**
	5.8nm,0.2s							
MTBS				*e*S	**Sb**		**07 46 53.0**	**+0.5**
	19nm,0.4s							
CHKK	**Chushkaly**	**1.91**	**315**	P	**Pb**		**07 46 28.6**	**-0.1**
	28nm,0.2s							
CHKK				S	**Sg**		**07 46 53.7**	**-1.0**
	40nm,0.2s							
CHKK	**Chushkaly**	**1.91**	**315**	*e*P	**Pb**		**07 46 28.6**	**-0.1**
	28nm,0.2s							
CHKK				*e*S	**Sg**		**07 46 53.7**	**-1.0**
	40nm,0.2s							
DJR	**Jarkent**	**1.93**	**20**	P	**Pb**		**07 46 28.6**	**-0.5**
	3.9nm,0.1s							
DJR				S	**Sb**		**07 46 53.6**	**+0.1**
	36nm,0.4s							
DJR	**Jarkent**	**1.93**	**20**	*e*P	**Pb**		**07 46 28.6**	**-0.5**
	3.9nm,0.1s							
DJR				*e*S	**Sb**		**07 46 53.6**	**+0.1**
	36nm,0.4s							
ULHL	**Ulahol**	**1.96**	**263**	⇑*e*P	**Pn**		**07 46 27.5**	**0.0**
	baz=62							
ULHL				⇑*e*S	**Sb**		**07 46 52.9**	**-1.7**
	baz=62							
KTBS	**Karatobe**	**1.99**	**307**	Pg	**Pb**		**07 46 30.2**	**+0.1**
	25nm,0.3s							
KTBS				Lg	Lg		07 46 57.1	
	41nm,0.2s							
KTBS	**Karatobe**	**1.99**	**307**	*e*P	**Pb**		**07 46 30.2**	**+0.1**
	25nm,0.3s							
KTBS				*e*S	**Sg**		**07 46 57.1**	**-0.1**
	41nm,0.2s							
KST	**Kastek**	**2.20**	**285**	Pg	**Pb**		**07 46 34.0**	**+0.3**
	3.7nm,0.3s							
KST				Lg	Lg		07 47 02.8	
	18nm,0.5s							
KST	**Kastek**	**2.20**	**285**	*e*P	**Pb**		**07 46 34.0**	**+0.3**
	3.7nm,0.3s							
KST				*e*S	**Sg**		**07 47 02.8**	**-1.1**
	18nm,0.5s							
KUU	**Kurty**	**2.30**	**307**	Pg	**Pb**		**07 46 34.7**	**-0.6**
	5.9nm,0.2s							
KUU				Lg	Lg		07 47 04.1	
	26nm,0.3s							
KUU	**Kurty**	**2.30**	**307**	*e*P	**Pb**		**07 46 34.7**	**-0.6**
	5.9nm,0.2s							
KUU				*e*S	**Sb**		**07 47 04.1**	**0.0**
	26nm,0.3s							
DGS	**Degeres**	**2.38**	**289**	Pg	**Pb**		**07 46 37.3**	**+0.4**
	5.3nm,0.4s							
DGS				Lg	Lg		07 47 08.6	
	28nm,0.7s							
DGS	**Degeres**	**2.38**	**289**	*e*P	**Pb**		**07 46 37.2**	**+0.4**
	5.3nm,0.4s							
DGS				*e*S	**Sg**		**07 47 08.6**	**-1.3**
	28nm,0.7s							
TKM2	**Tokmak 2**	**2.44**	**280**	⇓Pg	**Pb**		**07 46 37.4**	**-0.5**
	2.3nm,0.3s							
TKM2				⇓Lg	Lg		07 47 10.6	
	6.5nm,0.5s							
TKM2	**Tokmak 2**	**2.44**	**280**	⇓*e*P	**Pn**		**07 46 34.3**	**+0.2**
	baz=80							
TKM2				⇓*e*S	**Sn**		**07 47 04.3**	**-0.2**
	baz=80							
KRBS	**Karabastau**	**2.61**	**298**	Pg	**Pb**		**07 46 40.1**	**-0.6**
	1.6nm,0.3s							
KRBS				Lg	Lg		07 47 13.4	
	20nm,0.3s							
KRBS	**Karabastau**	**2.61**	**298**	*e*P	**Pb**		**07 46 40.1**	**-0.6**
	1.6nm,0.3s							
KRBS				*e*S	**Sb**		**07 47 13.4**	**+0.2**
	20nm,0.3s							
KAPS	**Kapalarasan**	**2.78**	**7**	Pg	**Pb**		**07 46 43.2**	**-0.4**
	6.6nm,0.4s							
KAPS				Lg	Lg		07 47 19.4	
	11nm,0.3s							
KAPS	**Kapalarasan**	**2.78**	**7**	*e*P	**Pb**		**07 46 43.2**	**-0.4**
	6.6nm,0.4s							
KAPS				*e*S	**Sb**		**07 47 19.4**	**+1.3**
	11nm,0.3s							
CHMS	**Chumysh**	**3.07**	**280**	⇓Pg	**Pb**		**07 46 49.4**	**+1.0**
	0.4nm,0.3s							
CHMS				⇓Lg	Lg		07 47 28.4	
	3.0nm,0.6s							
UCH	**Uchtor**	**3.24**	**266**	⇓*e*P	**Pn**		**07 46 45.4**	**+0.1**
	baz=66							
UCH				⇓*e*S	**Sn**		**07 47 23.8**	**-0.7**
	baz=66							
MRKS	**Merke**	**4.17**	**275**	Pg	**Pb**		**07 47 09.4**	**+2.2**
	0.8nm,0.4s							
MRKS				Lg	Lg		07 48 03.5	
	3.7nm,0.4s							

IDC 09 07:59:34.8±3.1,54.21N×86.93E,h0km,mbtmp2.9/2, ML2.7/2,Error ellipse: s-maj=28.5km s-min=16.7km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**259**		I	I	08 07 10.0	
	0.3nm,1.0s,baz=76,slow=339,SNR=24							
ZALV	**Zalesovo Beam**	**1.27**	**259**	Pg	Pg		07 59 58.5	-0.6
	1.5nm,0.3s,baz=77,slow=17,SNR=11							
ZALV				Lg	Lg		08 00 15.6	
	1.2nm,0.3s,baz=78,slow=27,SNR=5.6							
KURBB	**Kurchatov Arra**	**6.27**	**238**	Pn	Pn		08 01 09.4	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=9.2							
	1.0nm,0.5s							
MKAR	**Makanchi Array**	**7.99**	**204**	Pn	Pn		08 01 33.0	+0.9
	0.1nm,0.3s,baz=25,slow=13,SNR=6.7							
MKAR				Lg	Lg		08 03 47.6	
	baz=22,slow=32,SNR=2.2							
	0.2nm,0.3s							

IDC 09 08:04:58.1±3.4,53.69N×87.99E,h0km,mbtmp2.6/2, ML2.3/2,Error ellipse: s-maj=31.7km s-min=18.6km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.90**	**279**		I	I	08 15 50.0	
	0.1nm,2.1s,baz=96,slow=338,SNR=4.4							
ZALV	**Zalesovo Beam**	**1.90**	**279**	Pg	Pg		08 05 32.8	-0.8
	0.8nm,0.3s,baz=95,slow=12,SNR=16							
ZALV				Lg	Lg		08 05 58.1	
	1.6nm,0.3s,baz=96,slow=33,SNR=11							
KURBB	**Kurchatov Arra**	**6.58**	**246**	Pn	Pn		08 06 37.0	+1.0
	baz=60,slow=14,SNR=4.2							
KURBB				Lg	Lg		08 08 26.6	
	baz=64,slow=26,SNR=3.5							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**7.81**	**210**	Pn	Pn		08 06 53.7	+0.7
	0.1nm,0.3s,baz=29,slow=12,SNR=4.0							
	0.1nm,0.3s							

IDC 09 08:10:07.5±2.7,54.01N×86.48E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=22.7km s-min=13.8km az=57.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**267**		I	I	08 15 20.0	
	baz=86,slow=336,SNR=0.1							
ZALV	**Zalesovo Beam**	**0.98**	**267**	Pg	Pg		08 10 25.5	-0.8
	0.8nm,0.3s,baz=84,slow=16,SNR=5.9							
ZALV				Lg	Lg		08 10 40.4	
	1.5nm,0.3s,baz=86,slow=23,SNR=10							
KURBB	**Kurchatov Arra**	**5.94**	**238**	Pn	Pn		08 11 37.5	+0.9
	0.1nm,0.3s,baz=55,slow=13,SNR=9.6							
	0.8nm,0.4s							
MKAR	**Makanchi Array**	**7.70**	**202**	Pn	Pn		08 12 01.8	+0.9
	0.1nm,0.3s,baz=21,slow=13,SNR=5.1							
MKAR				Lg	Lg		08 14 10.7	
	baz=23,slow=30,SNR=3.1							
	0.1nm,0.4s							

IDC 09 08:21:00.7±2.6,53.96N×86.49E,h0km,mbtmp2.6/2, ML2.5/2,Error ellipse: s-maj=21.9km s-min=13.3km az=62.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**270**		I	I	08 26 50.0	
	baz=90,slow=339,SNR=3.1							
ZALV	**Zalesovo Beam**	**0.99**	**270**	Pg	Pg		08 21 19.2	-0.4
	0.8nm,0.3s,baz=88,slow=18,SNR=5.4							
ZALV				Lg	Lg		08 21 33.1	
	1.7nm,0.3s,baz=88,slow=28,SNR=11							
KURBB	**Kurchatov Arra**	**5.92**	**239**	Pn	Pn		08 22 30.7	+1.3
	0.1nm,0.3s,baz=56,slow=13,SNR=6.8							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.66**	**202**	Pn	Pn		08 22 53.9	+0.5
	0.1nm,0.3s,baz=24,slow=14,SNR=5.2							
	0.1nm,0.3s							

*IDC **09** 08:22:19.7±0.9,56.35N×148.79W,h0km,mb3.7/12, mbtmp3.8/17,ML3.8/5,MS3.9/3,Error ellipse: s-maj=25.9km s-min=13.8km az=37.0*
*NEIC **09** 08:22:21.7±1.5,56.38N±0.07×148.66W±0.10,h19km±6km, mb4.0/19,ML4.1(AEIC),Error ellipse: s-maj=10.7km s-min=7.7km az=172.0*
*AEIC **09** 08:22:24.3±1.6,56.30N±0.07×148.6W±0.1,h12km±5km, Error ellipse: s-maj=10.7km s-min=8.1km az=176.0*
ISC 09 08:22:20.9±0.6,56.44N±0.07×148.67W±0.05,h10km, n335,σ1s06/337,mb4.0/19,MS3.9/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.52**	**304**	Pn	**Pn**		**08 23 01.9**	**+0.1**
KDAK	**Kodiak Island**	**2.52**	**304**	S	**Sn**		**08 23 30.3**	**-2.4**
	baz=124							
KDAK	**Kodiak Island**	**2.52**	**304**	Pn	**Pn**		**08 23 01.5**	**-0.4**
	24nm,0.3s,baz=110,slow=6.0,SNR=426							
KDAK				Sn	**Sn**		**08 23 30.2**	**-2.4**
	60nm,0.3s,baz=149,slow=21,SNR=5.4							
	50nm,0.3s							
OHAK	**Old Harbor**	**2.65**	**289**	Pn	**Pn**		**08 23 02.6**	**-1.0**
OHAK	**Old Harbor**	**2.65**	**289**		**Sn**		**08 23 32.3**	**-3.6**
OHAK	**Old Harbor**	**2.65**	**289**	P	**Pn**		**08 23 03.1**	**-0.6**
OHAK	**Old Harbor**	**2.65**	**289**	P	**Pn**		**08 23 02.7**	**-1.0**
	baz=109							
OHAK				S	**Sn**		**08 23 32.7**	**-3.1**
	baz=109							
SYI	**Shuyak Island**	**2.96**	**319**	Pn	**Pn**		**08 23 08.0**	**+0.2**
SYI	**Shuyak Island**	**2.96**	**319**		**Sn**		**08 23 42.6**	**-0.7**
Q20K	**Shuyak Island**	**2.96**	**319**	P	**Pn**		**08 23 08.1**	**+0.2**
	baz=138							
Q20K				S	**Sn**		**08 23 42.6**	**-0.8**
	baz=138							
SII	**Sitkinak Islan**	**3.06**	**275**	P	**Pn**		**08 23 09.6**	**+0.3**
Q23K	**Middleton Isla**	**3.24**	**21**	Pn	**Pn**		**08 23 11.4**	**-0.3**
Q23K	**Middleton Isla**	**3.24**	**21**	P	**Pn**		**08 23 11.7**	**-0.1**
	baz=202							
MID	**Middleton Isla**	**3.25**	**22**	Pn	**Pn**		**08 23 11.3**	**-0.5**
MID	**Middleton Isla**	**3.25**	**22**	P	**Pn**		**08 23 11.5**	**-0.3**
CNPM	**China Poot**	**3.38**	**337**	Pn	**Pn**		**08 23 13.9**	**+0.2**
CNPM	**China Poot**	**3.38**	**337**		**Sn**		**08 23 53.2**	**-0.7**
BRSE	**Bradley Lake S**	**3.49**	**343**		**Pn**		**08 23 15.3**	**+0.1**
BRSE					**Sn**		**08 23 55.5**	**-1.0**
BRSE	**Bradley Lake S**	**3.49**	**343**	P	**Pn**		**08 23 15.3**	**+0.1**
	baz=161							
BRSE				S	**Sn**		**08 23 56.3**	**-0.2**
	baz=161							
BRLK	**Bradley Lake**	**3.54**	**342**	Pn	**Pn**		**08 23 16.1**	**+0.3**
BRLK	**Bradley Lake**	**3.54**	**342**		**Sn**		**08 23 56.9**	**-0.8**
HOM	**Homer**	**3.59**	**335**		**Pn**		**08 23 16.8**	**+0.2**
HOM	**Homer**	**3.59**	**335**	P	**Pn**		**08 23 17.2**	**+0.6**
	baz=153							
P23K	**Montague Islan**	**3.63**	**10**		**Pn**		**08 23 17.1**	**0.0**
P23K	**Montague Islan**	**3.63**	**10**	P	**Pn**		**08 23 17.1**	**0.0**
	baz=190							
Q19K	**Cape Douglas,**	**3.65**	**315**		**Pn**		**08 23 17.7**	**+0.2**
Q19K	**Cape Douglas,**	**3.65**	**315**	P	**Pn**		**08 23 18.3**	**+0.9**
	baz=133							
SEW	**Seward**	**3.70**	**354**		**Pn**		**08 23 17.8**	**-0.3**
SEW	**Seward**	**3.70**	**354**	P	**Pn**		**08 23 17.7**	**-0.3**

PLK3 Peulik 3 4.33 290 Pn 08 23 25.9 -0.8
EYAK Cordova Ski Ar 4.40 19 Pn 08 23 27.9 +0.3
EYAK Cordova Ski Ar 4.40 19 P Pn 08 23 28.3 +0.7
EYAK Cordova Ski Ar 4.40 19 P Pn 08 23 27.9 +0.3
baz=201
SUCK Suckling Hills 4.47 33 Pn 08 23 28.8 +0.2
RAGM Ragged Mountai 4.48 26 Pn 08 23 29.1 +0.2
CAPN Captain Cook N 4.53 344 Pn 08 23 31.7 +2.3
RED Redoubt Volcan 4.54 333 Pn 08 23 29.2 -0.4
NICHA Nichawak Mount 4.54 31 Pn 08 23 30.1 +0.5
HMT Hamilton 4.54 29 Pn 08 23 30.0 +0.3
RSO Redoubt South 4.57 334 Pn 08 23 30.3 +0.2
P18K Big Mountain, 4.58 313 Pn 08 23 30.2 +0.1
P18K Big Mountain, 4.58 313 P Pn 08 23 30.2 +0.1
baz=129
RDWB Redoubt West 4.61 333 Pn 08 23 30.2 -0.5
GOAT Goat Mountain 4.64 25 Pn 08 23 31.6 +0.5
DFR Drift River 4.67 335 Pn 08 23 31.0 -0.4
RDJH Redoubt Jeurge 4.69 334 Pn 08 23 32.8 +1.0
RC01 Rabbit Creek A 4.70 354 Pn Pn 08 23 32.4 +0.6
RC01 Rabbit Creek A 4.70 354 P Pn 08 23 32.2 +0.5
baz=173
NCT North Crescent 4.70 333 Pn 08 23 31.6 -0.2
BERG Berg Lake 4.75 31 Pn 08 23 32.6 +0.1
GRIN Grindle Hills 4.77 34 Pn 08 23 33.5 +0.7
FIS Fire Island 4.79 351 Pn 08 23 34.0 +1.1
O19K Port Alsworth 4.80 324 Pn 08 23 32.6 -0.6
Q16K King Salmon 4.85 301 Pn 08 23 34.8 +1.0
Q16K King Salmon 4.85 301 P Pn 08 23 34.8 +1.0
baz=116
SNH Sunshine Point 4.85 37 Pn 08 23 34.1 +0.2
O18K Koktuh Hills 4.87 317 Pn 08 23 34.0 -0.2
O18K Koktuh Hills 4.87 317 P Pn 08 23 34.2 +0.1
baz=133
CYK Cape Yakataga 4.90 39 Pn 08 23 34.7 +0.2
KHIT Khitrov Hills 4.92 33 Pn 08 23 35.0 +0.1
DIV Divide 4.94 17 Pn 08 23 35.6 +0.5
P17K Kvichak River 4.99 307 Pn 08 23 36.5 +0.8
KNK Knik Glacier 4.99 1 Pn 08 23 35.7 -0.1
KNK Knik Glacier 4.99 1 P Pn 08 23 36.6 +0.8
baz=181
BMRM Bremner River 5.01 23 Pn 08 23 36.5 +0.4
BMRM Bremner River 5.01 23 P Pn 08 23 36.5 +0.4
baz=206
WAX Waxell Ridge 5.05 35 Pn 08 23 36.5 -0.2
N20K Mount Spurr 5.12 340 P Pn 08 23 37.5 -0.1
baz=158
SPCR Spurr Chakacha 5.12 340 Pn 08 23 37.5 -0.1
BARK Barkley Ridge 5.13 37 Pn 08 23 38.1 +0.2
SPCN Chakachatna No 5.13 341 Pn 08 23 38.2 +0.4
SUA Susitna One 5.15 349 Pn 08 23 38.4 +0.3
MESA MESA 5.16 41 Pn 08 23 38.1 -0.2
MESA MESA 5.16 41 P Pn 08 23 38.5 +0.2
baz=225
SPCP Crater Peak Br 5.17 341 Pn 08 23 38.6 +0.3
SPCG Spurr Capps Gl 5.17 342 Pn 08 23 38.6 +0.2
PMR Palmer 5.17 358 Pn Pn 08 23 38.9 +0.6
PMR Palmer 5.17 358 P Pn 08 23 39.1 +0.8
PMR Palmer 5.17 358 P Pn 08 23 38.7 +0.4
baz=177
SPBG Spurr Blockage 5.20 340 Pn 08 23 38.9 +0.1
CRQM Cirque 5.21 31 Pn 08 23 38.9 0.0
CRQE Cirque 5.22 32 P Pn 08 23 39.2 +0.2
baz=215
KLU Klutina 5.26 15 Pn 08 23 40.3 +0.7
KLU Klutina 5.26 15 P Pn 08 23 40.1 +0.5
baz=196
BAGL Bagley Icefiel 5.33 38 Pn 08 23 40.6 +0.2
STLK Strandline Lak 5.33 343 Pn 08 23 41.0 +0.4
ISLE Juniper Island 5.33 36 Pn 08 23 40.3 -0.3
N19K Bonanza Creek 5.33 328 Pn 08 23 40.2 -0.4
GHO Glory Hole Cre 5.35 359 Pn 08 23 41.5 +0.7
SPNN North Nagishla 5.36 339 Pn 08 23 41.5 +0.4
SML Sawmill 5.39 2 Pn 08 23 42.1 +0.9
SML Sawmill 5.39 2 P Pn 08 23 42.2 +0.9
baz=182
M23K Glacier View 5.39 5 Pn 08 23 42.7 +1.4
M23K Glacier View 5.39 5 P Pn 08 23 42.7 +1.4
baz=185
SCM Sheep Creek Mo 5.46 7 Pn 08 23 43.8 +1.6
SCM Sheep Creek Mo 5.46 7 P Pn 08 23 43.0 +0.8
baz=187
VRDI Verde Repeater 5.51 27 Pn 08 23 43.2 +0.1
SAMH Samovar Hills 5.57 45 Pn 08 23 44.1 +0.3
KIAG Kiagna River 5.57 34 Pn 08 23 44.0 0.0
O17K Koliganek Bris 5.58 310 Pn 08 23 44.0 +0.2
O17K Koliganek Bris 5.58 310 P Pn 08 23 44.0 +0.2
baz=124
N25K Chitina, Valde 5.59 20 Pn 08 23 45.1 +1.0
N25K Chitina, Valde 5.59 20 P Pn 08 23 44.7 +0.6
baz=203
GLB Gilahina Butte 5.61 25 Pn 08 23 45.1 +0.7
P16K Nushagak River 5.63 301 Pn 08 23 45.4 +0.9
P16K Nushagak River 5.63 301 P Pn 08 23 45.4 +0.9
baz=115
TABL Table Mountain 5.63 41 Pn 08 23 44.7 -0.1
N18K Kilae Creek 5.69 321 Pn Pn 08 23 44.7 -0.7
YKU2 Yakutat 5.69 54 Pn Pn 08 23 45.5 +0.1
YKU2 Yakutat 5.69 54 P Pn 08 23 45.8 +0.4
SKT Skwentna 5.75 346 Pn 08 23 47.4 +1.2
SKT Skwentna 5.75 346 P Pn 08 23 47.6 +1.4
baz=164
PTPK Patty Peak 5.75 32 Pn 08 23 46.8 +0.5
MCARA McCarthy VSAT 5.76 28 Pn 08 23 46.4 +0.1
MCARA McCarthy VSAT 5.76 28 P Pn 08 23 46.6 +0.3
baz=212
PCA Pinnacle 5.76 47 Pn 08 23 46.6 +0.2
PINM Pinnacle 5.76 47 P Pn 08 23 46.6 +0.2
baz=233
M24K Tolsona, Glenn 5.83 12 Pn 08 23 48.4 +1.1
M24K Tolsona, Glenn 5.83 12 P Pn 08 23 48.6 +1.3
baz=193
SVW2 Sparrevohn 5.89 325 Pn Pn 08 23 47.5 -0.6
SVW2 Sparrevohn 5.89 325 P Pn 08 23 47.8 -0.4
PNL Peninsula 5.89 53 Pn 08 23 48.2 0.0
PNL Peninsula 5.89 53 P Pn 08 23 48.8 +0.6
PNL Peninsula 5.89 53 P Pn 08 23 48.2 0.0
baz=239
BARN Barnard Glacie 5.90 35 Pn 08 23 48.5 +0.1
M20K Styx River 5.92 339 Pn 08 23 48.6 0.0
O16K Kokwok River B 5.92 306 Pn 08 23 48.8 +0.3
O16K Kokwok River B 5.92 306 P Pn 08 23 49.1 +0.6
baz=120
CTG Chitna Glacier 5.93 37 P Pn 08 23 49.0 +0.2
baz=222
CTGM Chitina Glacie 5.93 37 Pn 08 23 48.9 +0.1
BCPM Bancas Point 5.94 50 Pn 08 23 49.2 +0.5
LOGN Logan Glacier 5.95 39 Pn 08 23 49.1 0.0
N17K Nushagak Hills 6.06 316 Pn Pn 08 23 50.5 +0.1
N17K Nushagak Hills 6.06 316 P Pn 08 23 50.5 +0.1
baz=130
WAT6 Susitna Watana 6.18 4 Pn 08 23 52.8 +0.5
WAT6 Susitna Watana 6.18 4 P Pn 08 23 52.7 +0.5
baz=184
M19K Big River Lodg 6.22 334 Pn 08 23 52.0 -0.7
M19K Big River Lodg 6.22 334 P Pn 08 23 52.6 0.0
baz=150
HARP HAARP 6.24 15 Pn 08 23 53.7 +0.7
HARP HAARP 6.24 15 P Pn 08 23 53.7 +0.7
baz=198
M18K Stony River 6.27 327 Pn 08 23 52.8 -0.5
CNBA Chernabura Isl 6.39 260 Pn 08 23 54.5 -0.4
WAT1 Susitna Watana 6.41 1 Pn 08 23 56.4 +1.1
WAT1 Susitna Watana 6.41 1 P Pn 08 23 56.4 +1.1
baz=180
WAT7 Susitna Watana 6.42 359 Pn 08 23 56.6 +1.2
O15K Ungalikthiuk R 6.56 299 Pn 08 23 58.2 +0.9
L19K White Mountain 6.57 334 Pn 08 23 56.8 -0.7
L19K White Mountain 6.57 334 P Pn 08 23 57.0 -0.5
baz=149
O29M Mount Kennedy 6.57 50 Pn 08 23 58.3 +0.7
L20K Farewell, AK 6.61 339 Pn 08 23 57.2 -0.8
P29M Windy Craggy 6.63 57 Pn 08 23 58.0 -0.3
N16K Nishlik Lake 6.66 312 Pn 08 23 59.1 +0.3
DHY Denali Highway 6.69 5 Pn 08 24 00.5 +1.3
DHY Denali Highway 6.69 5 P Pn 08 24 00.4 +1.1
baz=186
PPLA Purkeypile 6.72 346 Pn 08 24 00.8 +1.3
SDPT Sand Point 6.73 266 Pn 08 23 59.6 -0.1
M17K Holitna River 6.73 321 Pn 08 23 59.6 -0.1
M17K Holitna River 6.73 321 P Pn 08 23 59.8 +0.2
baz=135
PAX Paxson 6.75 13 Pn 08 24 01.2 +1.2
PAX Paxson 6.75 13 P Pn 08 24 01.2 +1.2
baz=195
M27K Edge Creek, AK 6.87 27 Pn 08 24 02.3 +0.6
M27K Edge Creek, AK 6.87 27 P Pn 08 24 02.5 +0.8
baz=212
S31K Pelican 6.93 72 Pn 08 24 00.2 -2.2
S31K Pelican 6.93 72 P Pn 08 23 59.5 -2.8
baz=261
MENT Mentasta 6.98 19 Pn 08 24 02.3 -0.9
RND Reindeer 6.99 359 Pn 08 24 04.6 +1.4
M16K Timber Creek 7.05 315 Pn Pn 08 24 03.9 -0.2
TRF Thorofare Moun 7.08 354 P Pn 08 24 05.8 +1.2
baz=173
N15K Kwethluk River 7.08 307 Pn 08 24 05.4 +0.9
L18K Granite Mounta 7.10 328 Pn 08 24 04.3 -0.4
BVCY Beaver Creek 7.19 30 Pn 08 24 06.9 +0.9
BVCY Beaver Creek 7.19 30 P Pn 08 24 06.9 +0.9
baz=216
P30M Million Dollar 7.19 54 Pn 08 24 06.6 +0.6
CAST Castle Rocks 7.21 348 Pn 08 24 07.2 +1.0
CAST Castle Rocks 7.21 348 P Pn 08 24 06.9 +0.7
baz=165
PLBC Pleasant Camp 7.21 60 Pn 08 24 06.1 -0.1
PLBC Pleasant Camp 7.21 60 P Pn 08 24 06.1 -0.1
baz=249
KTH Kantishna Hill 7.22 352 Pn Pn 08 24 08.3 +1.8
R31K City Hall, Gus 7.26 69 Pn 08 24 05.3 -1.6
R31K City Hall, Gus 7.26 69 P Pn 08 24 05.3 -1.6
baz=258
O14K Tigyukauivet M 7.29 298 Pn Pn 08 24 08.8 +1.5
HYT Haines Junctio 7.30 48 Pn 08 24 07.9 +0.3
HYT Haines Junctio 7.30 48 P Pn 08 24 08.2 +0.6
baz=237
MCK McKinley 7.32 359 Pn 08 24 09.2 +1.5
MCK McKinley 7.32 359 P Pn 08 24 09.2 +1.5
baz=179
SIT Sitka 7.37 80 Pn 08 24 04.2 -4.2
SIT Sitka 7.37 80 P Pn 08 24 05.0 -3.4
SIT Sitka 7.37 80 P Pn 08 24 04.9 -3.5
baz=269
PS1A Pavlof South-1 7.41 268 Pn 08 24 09.4 +0.4
L27K Beaver Creek, 7.48 25 Pn 08 24 10.4 +0.4
TTA Tatalina 7.49 333 Pn 08 24 10.0 -0.1
TTA Tatalina 7.49 333 P Pn 08 24 10.0 -0.1
TTA Tatalina 7.49 333 P Pn 08 24 10.1 0.0
baz=148
BCAR Beaver Creek A 7.50 25 Pn 08 24 10.4 +0.2
K24K Donnelly Dome 7.53 10 Pn 08 24 11.9 +1.3
K24K Donnelly Dome 7.53 10 P Pn 08 24 12.4 +1.8
baz=192
L17K Donlin 7.54 323 Pn 08 24 10.3 -0.4
RIDG Independent Ri 7.57 13 Pn Pn 08 24 12.3 +1.1
M15K Kasigluk River 7.59 309 Pn 08 24 12.1 +0.7
L16K Owhat River 7.67 318 Pn 08 24 12.8 +0.3
N14K Kuskokwak Cree 7.71 302 Pn 08 24 14.2 +1.2
SKAG Skagway 7.72 61 P Pn 08 24 13.8 +0.7
SKAG Skagway 7.72 61 P Pn 08 24 13.1 0.0
baz=251
BESE Bessie Mountai 7.75 68 Pn 08 24 13.0 -0.6
S32K Killinoo 7.78 77 P Pn 08 24 11.8 -2.2
baz=267
O30N Mendenhall 7.87 51 Pn Pn 08 24 15.9 +0.6
O30N Mendenhall 7.87 51 P Pn 08 24 15.9 +0.6
baz=241
R32K Eaglecrest 7.87 71 P Pn 08 24 14.9 -0.4
baz=261
SCRK Sand Creek 7.91 15 Pn 08 24 16.6 +0.7
SCRK Sand Creek 7.91 15 P Pn 08 24 17.5 +1.5
baz=199
JIS Juneau Island 7.94 71 Pn 08 24 15.7 -0.5
JIS Juneau Island 7.94 71 P Pn 08 24 16.0 -0.3
M29M Somme Creek 7.95 37 Pn 08 24 17.2 +0.7
K17K Iditarod 7.96 326 Pn Pn 08 24 16.3 -0.2
HDA Harding Lake 8.04 5 Pn 08 24 19.1 +1.4
WRH Wood River Hil 8.06 2 Pn 08 24 19.3 +1.4
J18K Innoko River 8.11 334 Pn Pn 08 24 18.8 +0.2
J20K Nowinta River 8.22 343 Pn 08 24 20.3 +0.2
K27K Chicken 8.29 21 Pn 08 24 20.9 0.0
J19K Poorman 8.32 338 Pn 08 24 20.7 -0.8
WHY Whitehorse 8.36 54 Pn Pn 08 24 22.2 +0.2
N31M Braeburn, Yuko 8.36 47 Pn 08 24 22.4 +0.4
J25K Salcha River, 8.36 10 Pn 08 24 21.6 -0.4
ILAR Eielson Array 8.41 5 Pn Pn 08 24 22.6 0.0
0.7nm,0.3s,baz=191,slow=13,SNR=31
ILAR Sn Sn 08 25 48.8 -8.7
1.5nm,0.3s,baz=195,slow=27,SNR=4.2
1.5nm,0.4s
L15K Ungalak Mounta 8.43 314 Pn 08 24 23.4 +0.5
J26L Joseph Creek 8.47 15 Pn 08 24 23.7 +0.1
COLA College 8.47 2 Pn Pn 08 24 25.0 +1.5
FALS False Pass 8.49 265 Pn 08 24 23.3 -0.4
FALS False Pass 8.49 265 P Pn 08 24 23.8 +0.1
FALS False Pass 8.49 265 P Pn 08 24 23.3 -0.4
baz=74
L29M L29M 8.54 34 Pn 08 24 25.2 +0.7
P32M Atlin 8.54 62 Pn 08 24 24.6 +0.1
P32M Atlin 8.54 62 P Pn 08 24 24.6 +0.1
baz=254
MDM Murphy Dome 8.55 1 Pn 08 24 25.6 +1.0
M30M Minto, Yukon 8.61 40 P Pn 08 24 25.9 +0.5
baz=229
U33K Whale Pass 8.66 86 Pn 08 24 22.1 -3.9
U33K Whale Pass 8.66 86 P Pn 08 24 23.1 -3.0
baz=277
MLY Manley 8.68 354 Pn 08 24 27.0 +0.6
MLY Manley 8.68 354 P Pn 08 24 27.4 +1.0
baz=172
ISLZ Isanotski Laza 8.69 265 Pn 08 24 25.9 -0.6
I23K Minto, Yukon-K 8.74 358 P Pn 08 24 28.1 +0.8
baz=177
L14K Kuka Creek 8.75 310 Pn 08 24 27.9 +0.6
CRAG Craig 8.78 90 Pn 08 24 23.8 -4.0
CRAG Craig 8.78 90 P Pn 08 24 24.3 -3.4
K15K Wolf Creek Mou 8.79 317 Pn 08 24 28.6 +0.6
I21K Tanana 8.92 351 Pn 08 24 31.3 +1.7
I21K Tanana 8.92 351 P Pn 08 24 31.0 +1.4
baz=168
DAWY Dawson 8.92 27 Pn 08 24 30.2 +0.5
WRAK Wrangell Islan 9.05 83 Pn 08 24 28.5 -2.9
J16K Anvik River 9.10 324 Pn 08 24 31.5 -0.6
Q32M Nakina River 9.14 67 Pn 08 24 32.5 -0.3
P33M Tesiln, Yukon 9.15 59 P Pn 08 24 32.9 -0.1
baz=252
PRP Porcupine Dome 9.23 8 Pn 08 24 34.7 +0.6
K29M Barlow Dome 9.26 32 Pn 08 24 35.2 +0.7
I26K Coal Creek Min 9.29 14 Pn 08 24 35.3 +0.6
N32M Quiet Lake 9.36 53 P Pn 08 24 36.1 +0.4
baz=246
H21K Melozitna Rive 9.46 350 Pn 08 24 36.7 -0.3
H21K Melozitna Rive 9.46 350 P Pn 08 24 38.1 +1.0
baz=166
J29N Klondike Camp 9.54 28 Pn 08 24 38.9 +0.7
H22K Ishtalitna Cre 9.58 353 Pn 08 24 39.2 +0.6
S34M Telegraph Cree 9.64 74 P Pn 08 24 39.1 -0.4
baz=268
V35K Ketchikan 9.65 90 Pn 08 24 36.9 -2.7
FARO Faro, Yukon 9.73 47 Pn 08 24 42.1 +1.3
I27K Kandik River 9.80 17 Pn 08 24 43.3 +1.5
R33M Jennings River 9.87 65 Pn Pn 08 24 42.1 -0.7
H18K Honhosa River 9.93 336 Pn 08 24 42.8 -0.6
AKUT Akutan 10.02 264 P Pn 08 24 44.1 -0.6
J30M Hart River 10.16 32 Pn 08 24 47.7 +1.0
DLBC Dease Lake 10.24 71 Pn Pn 08 24 47.8 -0.1
1.7nm,0.3s,baz=272,slow=7.6,SNR=88
DLBC Sn Sn 08 26 36.5 -6.2
baz=225,slow=18
4.1nm,0.3s
FYU Fort Yukon 10.29 8 Pn 08 24 49.1 +0.8
G23K Bananza Creek 10.33 357 Pn 08 24 49.8 +0.8
UNV Unalaska Valle 10.53 263 P Pn 08 24 50.3 -1.4
I30M Mount Dempster 10.63 29 Pn Pn 08 24 55.1 +1.8
F20K Avaraart Lake 11.15 346 Pn 08 25 00.6 +0.5
E19K Redstone River 11.75 344 Pn 08 25 10.1 +1.8
F28M Old Crow 11.93 16 Pn 08 25 12.2 +1.4
F31M Tsiigehtchic 13.03 26 Pn 08 25 25.0 -0.8
INK Inuvik 13.76 24 Pn Pn 08 25 37.3 +1.6
0.1nm,0.3s,baz=197,slow=14,SNR=11
2.9nm,0.8s
WRGLY Wrigley 14.31 51 Pn Pn 08 25 44.0 +0.7
ATKA Atka Island 15.44 265 P Pn 08 25 58.0 -0.5
C36M Paulatuk 16.93 30 P Pn 08 26 16.4 -1.1
C36M IAmb IAmb 08 26 21.3
comp=Z,16nm,1.4s
ADK Adak 16.96 266 P P 08 26 20.4 +0.5
ADK Adak 16.96 266 P Pn 08 26 18.7 +0.7
YKA Yellowknife Ar 18.17 57 P Pn 08 26 32.4 -0.6
YKA Yellowknife Ar 18.17 57 P Pn 08 26 33.8 +0.8
comp=Z,0.2nm,0.3s,baz=263,slow=13,SNR=14
comp=Z,2.1nm,1.0s
A36M Sachs Harbour 18.40 23 P P 08 26 35.7 0.0
A36M IAmb IAmb 08 26 45.7
comp=Z,9.1nm,0.8s
NEW Newport 20.78 100 P P 08 27 03.4 +1.5
comp=Z,3.4nm,1.0s,baz=303,slow=9.1,SNR=3.3
comp=Z,3.4nm,1.0s
K02D Willamette Mer 21.11 120 P P 08 27 07.0 +1.6
K02D IAmb IAmb 08 27 10.8
comp=Z,7.1nm,0.9s
HUMO Hull Mountain 21.51 119 P P 08 27 11.5 +1.7
G08A Pilot Rock 21.64 108 P P 08 27 13.0 +1.8
J05D Fort Rock, OR 21.86 115 P P 08 27 14.6 +0.9
I07A Izee 22.18 111 P P 08 27 17.6 +0.6
YBH Yreka Blue Hor 22.30 120 P P 08 27 19.3 +1.0
comp=Z,1.6nm,0.7s,baz=19,slow=5.6,SNR=6.4
comp=Z,1.6nm,0.7s
PAHR Pah Rah Range 25.47 119 P P 08 27 49.8 +0.7
PNTR Pine Nut 25.84 120 P P 08 27 53.1 +0.6
PNTR IAmb IAmb 08 27 60.0
comp=Z,4.6nm,1.0s
WAKR Walker 26.38 120 P P 08 27 59.0 +1.6
WAKR IAmb IAmb 08 28 02.6
comp=Z,6.3nm,1.3s
KVN Kaiserville 26.60 118 P P 08 27 59.8 +0.4
KVN IAmb IAmb 08 28 04.0
comp=Z,3.5nm,1.0s
NVAR Mina Array Bea 26.99 119 P P 08 28 03.8 +0.9
comp=Z,1.3nm,0.8s,baz=301,slow=8.8,SNR=11
comp=Z,1.3nm,0.8s
PDAR Pinedale Array 28.36 102 P P 08 28 15.3 +0.1
comp=Z,0.4nm,0.5s,baz=4.1,slow=7.6,SNR=1.6
comp=Z,0.4nm,0.5s
PRN Pahroc Range 29.39 116 P P 08 28 24.7 +0.4
PRN IAmb IAmb 08 28 27.4
comp=Z,3.8nm,1.1s
GWY Greenwater Val 29.56 120 P P 08 28 26.7 +1.0
GWY IAmb IAmb 08 28 27.2
comp=Z,2.2nm,0.9s
RSSD Black Hills 30.51 95 P P 08 28 35.2 +1.0
RSSD IAmb IAmb 08 28 35.9
comp=Z,2.1nm,0.8s
LCMT Little Creek M 30.61 114 P P 08 28 36.5 +1.5
V12A Nelson 30.81 118 P P 08 28 36.3 -0.5
V12A IAmb IAmb 08 28 39.1
comp=Z,2.7nm,0.9s
YAK Yakutsk 39.52 313 LR LR 08 45 46.8
comp=Z,148nm,18.8s,baz=64,slow=36
TXAR Lajitas Array 41.57 111 P P 08 30 09.3 +0.6
comp=Z,0.4nm,0.8s,baz=326,slow=6.0,SNR=4.4
comp=Z,0.4nm,0.8s
SPITS Spitsbergen Ar 45.33 4 LR LR 08 49 30.9
comp=Z,128nm,19.2s,baz=154,slow=36
NRIK Noril'sk 48.10 337 P P 08 31 00.8 +0.7
comp=Z,1.3nm,0.4s,baz=68,slow=1.5,SNR=1.9
comp=Z,1.3nm,0.4s
SONM Songino Array 58.80 310 P P 08 32 18.5 -0.6
comp=Z,0.3nm,0.6s,baz=54,slow=7.3,SNR=1.6
comp=Z,0.3nm,0.6s
FINES FINESS Array B 62.38 3 P P 08 32 43.7 +0.6
comp=Z,2.2nm,1.0s,baz=19,slow=8.8,SNR=2.0
comp=Z,2.2nm,1.0s
BVAR Borovoye Array 66.28 335 P P 08 33 08.5 -0.3
comp=Z,0.4nm,0.5s,baz=45,slow=10,SNR=1.9
comp=Z,0.4nm,0.5s
KURBB Kurchatov Arra 66.38 329 P P 08 33 09.8 +0.4
comp=Z,0.4nm,0.8s,baz=28,slow=6.6,SNR=1.8
comp=Z,0.4nm,0.8s
MKAR Makanchi Array 68.66 325 P P 08 33 24.4 +0.4
comp=Z,0.1nm,0.3s,baz=50,slow=7.2,SNR=5.1
comp=Z,0.1nm,0.3s
AKASG Malin Array Be 73.21 1 P P 08 33 53.3 +1.8
comp=Z,0.4nm,0.4s,baz=358,slow=6.6,SNR=1.6
comp=Z,0.4nm,0.4s
PPT Papeete 73.72 181 LR LR 08 57 36.5
comp=Z,92nm,21.2s,baz=198,slow=29
QSPA South Pole Qui 146.23 180 PKPbc PKPdf 08 41 59.8 +0.9
comp=Z,0.9nm,0.6s,baz=114,slow=10.0,SNR=1.6

*IDC **09** 08:22:32.0±0.7,56°.46N×149°.39W,h0km,mb4.1/27, mbtmp4.2/32,ML4.0/5,MS3.8/4, Error ellipse: s-maj=20.0km s-min=10.1km az=26.0*
*NEIC **09** 08:22:34.3±2.6,56°.36N±0°.07×149°.25W±0°.08,h15km±5km, mb4.5/62,ML4.5/44,ML4.2(AEIC), Error ellipse: s-maj=10.5km s-min=6.5km az=164.0*
*AEIC **09** 08:22:36.8±2.8,56°.30N±0°.07×149°.16W±0°.08,h10km±4km, Error ellipse: s-maj=9.9km s-min=6.7km az=171.0*

ISC 09 08:22:34.5±0.5,56°.47N±0°.06×149°.30W±0°.04,h10km, n210,σ0°90/189,mb4.4/49,MS3.9/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.22	308	Pn	Pn	08 23 11.4	+0.2
KDAK	Kodiak Island	2.22	308		Sn	08 23 37.3	-1.4
KDAK	Kodiak Island	2.22	308	IAML		08 23 39.2	
	800nm,0.6s						
KDAK				IAML		08 23 49.0	
	902nm,0.7s						
KDAK	Kodiak Island	2.22	308	Pn	Pn	08 23 10.0	-1.2
	23nm,0.3s,baz=118,slow=8.3,SNR=12						
KDAK					Sn	08 23 37.0	-1.7
	84nm,0.3s,baz=47,slow=23,SNR=8.6						
	57nm,0.3s						
OHAK	Old Harbor	2.31	291	Pn	Pn	08 23 11.6	-1.0
OHAK	Old Harbor	2.31	291		Sn	08 23 38.3	-2.8
OHAK	Old Harbor	2.31	291	IAML		08 23 39.2	
	comp=E,982nm,0.6s						
OHAK				IAML		08 23 39.2	
	comp=N,1μm,0.7s						
SII	Sitkinak Islan	2.71	274	Pn	Pn	08 23 16.8	-1.2
SII	Sitkinak Islan	2.71	274		Sn	08 23 47.5	-3.3
SYI	Shuyak Island	2.71	323		Pn	08 23 17.9	-0.2
SYI					Sn	08 23 50.7	-0.2
SYI	Shuyak Island	2.71	323	IAML		08 23 52.3	
	comp=N,1μm,0.6s						
SYI				IAML		08 23 52.4	
	comp=E,2μm,0.7s						
CNPM	China Poot	3.23	342	Pn	Pn	08 23 25.6	+0.4
CNPM	China Poot	3.23	342		Sn	08 24 02.6	-1.1
CNPM	China Poot	3.23	342	IAML		08 24 06.2	
	comp=E,635nm,0.8s						
CNPM				IAML		08 24 10.5	
	comp=N,596nm,0.4s						
Q23K	Middleton Isla	3.35	27	Pn	Pn	08 23 26.2	-0.7
Q23K				IAML		08 24 05.0	
	comp=E,740nm,0.6s						
Q23K				IAML		08 24 05.2	
	comp=N,1μm,0.7s						
MID	Middleton Isla	3.36	27	Pn	Pn	08 23 25.9	-1.0
MID	Middleton Isla	3.36	27		Sn	08 24 04.2	-2.5
MID	Middleton Isla	3.36	27	IAML		08 24 05.2	
	comp=N,1μm,0.6s						
MID				IAML		08 24 10.7	
	comp=E,628nm,0.8s						
BRSE	Bradley Lake S	3.37	347		Pn	08 23 27.0	0.0
Q19K	Cape Douglas,	3.39	318		Pn	08 23 27.9	+0.4
Q19K					Sn	08 24 06.5	-1.1
BRLK	Bradley Lake	3.41	346	Pn	Pn	08 23 27.9	+0.3
BRLK				IAML		08 24 12.3	
	comp=E,668nm,0.6s						
HOM	Homer	3.43	340	Pn	Pn	08 23 29.1	+1.2
HOM				IAML		08 24 17.8	
	comp=E,2μm,0.8s						
CHIR	Chirikof Islan	3.60	262	Pn	Pn	08 23 29.5	-0.7
CHIR				IAML		08 24 14.6	
	comp=E,441nm,1.1s						
CHIR				IAML		08 24 48.4	
	comp=N,343nm,3.6s						
SEW	Seward	3.64	359		Pn	08 23 30.4	-0.4
P23K	Montague Islan	3.67	15		Pn	08 23 30.5	-0.8
P23K					Sn	08 24 12.8	-1.8
P19K	Oil Pt	3.81	328		Pn	08 23 33.4	+0.2
P19K	Oil Pt	3.81	328	IAML		08 24 34.2	
	comp=N,944nm,0.6s						
CNTC	Contact Creek	3.99	299		Pn	08 23 35.9	+0.2
O22K	Cooper Landing	4.03	357	Pn	Pn	08 23 36.1	0.0
SLKM	Skilak Lake	4.07	354		Pn	08 23 36.5	-0.3
HIN	Hinchinbrook I	4.20	19		Pn	08 23 38.5	-0.1
HIN	Hinchinbrook I	4.20	19	IAML		08 24 32.8	

comp=E,594nm,0.7s
HIN IAML 08 24 33.2

comp=N,896nm,1.0s
KAIM Kayak Island 4.32 35 Pn 08 23 39.1 -1.1
RDSO Redoubt South 4.38 337 Pn 08 23 40.6 -0.5
EYAK Cordova Ski Ar 4.49 23 Pn 08 23 41.9 -0.5
DFR Drift River 4.49 338 Pn 08 23 43.1 +0.5
NCT North Crescent 4.52 337 Pn 08 23 43.4 +0.4
O19K Port Alsworth 4.57 327 Pn 08 23 43.9 +0.3
RC01 Rabbit Creek A 4.63 357 Pn **Pn 08 23 44.6 +0.2**
RC01 IAML 08 24 40.6

comp=N,278nm,0.5s
RC01 IAML 08 24 43.2

comp=E,354nm,0.8s
SUCK Suckling Hills 4.64 37 Pn 08 23 44.2 -0.3
SUCK Suckling Hills 4.64 37 IAML 08 24 38.9

comp=E,756nm,1.1s
NICHA Nichawak Mount 4.70 34 Pn 08 23 45.2 -0.3
FIS Fire Island 4.71 355 Pn **Pn 08 23 47.1 +1.7**
FIS IAML 08 24 32.2

comp=N,632nm,0.6s
FIS IAML 08 24 44.8

comp=E,641nm,0.7s
ANPK Aniakchak Peak 4.88 278 Pn 08 23 47.5 -0.5
SPCR Spurr Chakacha 4.97 344 Pn 08 23 49.4 +0.2
CKL Chakachamna La 4.99 343 Pn 08 23 49.8 +0.3
SPCG Spurr Capps Gl 5.03 345 Pn 08 23 50.7 +0.6
SPBG Spurr Blockage 5.06 343 Pn 08 23 50.8 +0.5
SUA Susitna One 5.06 352 Pn 08 23 50.5 +0.1
KHIT Khitrov Hills 5.09 36 Pn 08 23 50.6 -0.3
N19K Bonanza Creek 5.12 330 Pn 08 23 51.4 +0.2
N19K Bonanza Creek 5.12 330 IAML 08 24 58.8

comp=E,140nm,0.8s
PMR Palmer 5.13 1 Pn **Pn 08 23 52.0 +0.7**
PMR IAML 08 24 51.3

comp=N,147nm,1.0s
PMR IAML 08 24 57.4

comp=E,140nm,0.9s
STLK Strandline Lak 5.21 346 Pn 08 23 52.6 +0.2
M22K Willow 5.31 356 Pn **Pn 08 23 54.2 +0.5**
P16K Nushagak River 5.31 302 Pn 08 23 54.3 +0.6
GHO Glory Hole Cre 5.32 2 Pn 08 23 54.8 +0.9
KLU Klutina 5.33 18 Pn 08 23 54.3 +0.3
SML Sawmill 5.37 5 Pn **Pn 08 23 55.3 +0.6**
SCM Sheep Creek Mo 5.47 10 Pn **Pn 08 23 56.5 +0.4**
N25K Chitina, Valde 5.69 23 Pn **Pn 08 23 59.1 +0.1**
GLB Gilahina Butte 5.73 27 Pn **Pn 08 24 00.2 +0.6**
SAMH Samovar Hills 5.80 47 Pn 08 23 59.8 -0.8
TABL Table Mountain 5.84 44 Pn **Pn 08 24 01.6 +0.3**
M24K Tolsona, Glenn 5.87 15 Pn 08 24 01.5 0.0
MCARA McCarthy VSAT 5.90 31 Pn **Pn 08 24 02.3 +0.5**
M19K Big River Lodg 6.04 336 Pn 08 24 03.9 +0.1
CNBA Chernabura Isl 6.06 258 Pn 08 24 02.5 -1.4
CTGM Chitina Glacie 6.12 39 Pn **Pn 08 24 04.8 -0.2**
L19K White Mountain 6.39 336 Pn 08 24 08.6 0.0
DHY Denali Highway 6.69 8 Pn 08 24 12.9 0.0
L18K Granite Mounta 6.89 330 Pn 08 24 15.6 +0.2
RND Reindeer 6.96 2 Pn **Pn 08 24 16.9 +0.5**
O14K Tigyukauivet M 6.96 299 Pn 08 24 16.8 +0.4
TRF Thorofare Moun 7.02 356 Pn **Pn 08 24 18.2 +0.9**
CAST Castle Rocks 7.11 350 Pn **Pn 08 24 18.9 +0.5**
PVV Pavlof Volcano 7.11 266 Pn 08 24 17.2 -1.2
S31K Pelican 7.25 73 Pn Pn 08 24 18.2 -2.2
N14K Kuskokwak Cree 7.40 303 Pn 08 24 22.4 +0.1
RIDG Independent Ri 7.62 15 Pn **Pn 08 24 27.5 +2.0**
HDA Harding Lake 8.05 7 Pn 08 24 31.3 +0.1
WRH Wood River Hil 8.05 4 Pn **Pn 08 24 32.0 +0.7**
BESE Bessie Mountai 8.06 69 Pn 08 24 29.9 -1.6
J20K Nowinta River 8.09 345 Pn 08 24 32.1 +0.2
FALS False Pass 8.15 264 Pn 08 24 31.3 -1.3
NEA2 Nenana 8.15 1 Pn **Pn 08 24 33.4 +0.7**
R32K Eaglecrest 8.19 71 Pn 08 24 31.7 -1.6
ILAR Eielson Array 8.41 7 Pn **Pn 08 24 37.1 +0.8**
ILAR Eielson Array 8.41 7 Pn **Pn 08 24 36.9 +0.6**
comp=E,4.9nm,0.3s,baz=188,slow=13,SNR=36
ILAR Sn **Sn 08 26 08.8 -2.3**
comp=E,2.0nm,0.3s,baz=190,slow=24,SNR=6.2
ILAR LR LR 08 28 13.4

comp=E,483nm,18.0s,baz=154,slow=40
MDM Murphy Dome 8.53 3 Pn 08 24 38.6 +0.7
I23K Minto, Yukon-K 8.70 360 Pn **Pn 08 24 40.7 +0.5**
I21K Tanana 8.83 353 Pn **Pn 08 24 43.3 +1.3**
H21K Melozitna Rive 9.37 351 Pn **Pn 08 24 50.6 +1.3**
G18K Tagagawik 10.46 338 Pn 08 25 03.4 -0.9
DLBC Dease Lake 10.56 71 Pn **Pn 08 25 05.1 -0.7**
comp=E,2.8nm,0.3s,baz=263,slow=8.2,SNR=13
DLBC Sn Sn 08 26 57.0 -7.1

comp=E,0.8nm,0.3s,baz=172,slow=19,SNR=1.1
comp=E,7.6nm,0.3s
F21K Alatna River 10.96 351 Pn 08 25 11.5 +0.3
BMAR Burnt Mountain 11.21 9 Pn **Pn 08 25 14.9 +0.3**
E18K Tukpahlearik C 12.17 339 Pn 08 25 28.6 +1.0
D22K Ayikyak River 12.55 354 Pn 08 25 33.7 +0.9
BBB Bella Bella 13.07 100 Pn Pn 08 25 37.4 -2.6
comp=E,0.3nm,0.3s,baz=301,slow=5.8,SNR=5.8
comp=E,6.0nm,0.7s
B21K Ikpikpuk River 13.41 352 Pn 08 25 43.9 -0.5
INK Inuvik 13.88 25 Pn **Pn 08 25 51.4 +0.5**
comp=E,0.6nm,0.3s,baz=207,slow=14,SNR=12
comp=E,12nm,0.9s
HILA High Level 17.37 70 P Pn 08 26 36.1 -0.6
YKA Yellowknife Ar 18.44 57 P P 08 26 49.8 0.0
comp=E,0.2nm,0.3s,baz=264,slow=11,SNR=12
comp=E,4.6nm,1.1s
A36M Sachs Harbour 18.51 24 P P 08 26 51.2 +0.8
E03A Lebam 18.74 111 P P 08 26 53.2 +0.1
D05A Enumclaw 19.15 107 P P 08 26 59.1 +1.4
LON Longmire 19.52 108 P P 08 27 03.7 +1.9
F04A Amboy 19.74 111 P P 08 27 05.0 +0.9
F04A IAmb IAmb 08 27 08.1

comp=Z,33nm,1.5s
LTY Liberty 19.81 106 P P 08 27 04.8 -0.1
LTY IAmb IAmb 08 27 08.1

comp=Z,37nm,1.1s
B08A Colville Reser 19.87 101 P P 08 27 05.8 +0.3
MXC Moxie City 20.44 107 P P 08 27 12.1 +0.4
MXC IAmb IAmb 08 27 15.6

comp=Z,32nm,1.0s
H04D Lebanon 20.55 114 P P 08 27 13.6 +0.6
H04D IAmb IAmb 08 27 21.4

comp=Z,30nm,1.3s
BUCK Buck Mountain 20.66 115 P P 08 27 14.7 +0.5
BUCK IAmb IAmb 08 27 18.3

comp=Z,26nm,1.0s
H04A Detroit Lake 20.72 113 P P 08 27 14.5 -0.3
H04A IAmb IAmb 08 27 18.4

comp=Z,24nm,1.1s
EDM Edmonton 20.80 84 P P 08 27 16.2 +0.5
EDM IAmb IAmb 08 27 20.9

comp=Z,32nm,1.1s
I03D Drain, OR 20.84 117 P P 08 27 17.1 +1.1
J01E Myrtle Point 20.95 119 P P 08 27 17.4 +0.2
KEBM Edson Butte 20.97 120 P P 08 27 18.5 +0.9
NEW Newport 21.13 99 P P 08 27 20.2 +0.9
NEW IAmb IAmb 08 27 20.7

comp=Z,19nm,1.2s
NEW Newport 21.13 99 P P 08 27 16.9 -2.4
comp=Z,7.5nm,1.0s,baz=305,slow=9.8,SNR=7.5
comp=Z,7.5nm,1.0s
E08A Dider Farm, El 21.15 105 P P 08 27 19.5 +0.1
E08A IAmb IAmb 08 27 20.1

comp=Z,23nm,1.0s
I04A Tendick Farm, 21.23 115 P P 08 27 20.8 +0.4
DBO Dodson Butte 21.32 118 P P 08 27 21.7 +0.4
DBO IAmb IAmb 08 27 26.0

comp=Z,18nm,0.8s
K02D Willamette Mer 21.43 119 P P 08 27 22.8 +0.3
HUMO Hull Mountain 21.84 118 P P 08 27 27.3 +0.5
PINE Pine Mountain 21.98 113 P 08 27 29.1 +0.6
PINE IAmb IAmb 08 27 34.1

comp=Z,25nm,1.1s
J05D Fort Rock, OR 22.19 115 P 08 27 31.7 +0.8
L04D Klamath Falls 22.45 118 P P 08 27 33.1 -0.4
F10A Beach Ranch, E 22.46 104 P 08 27 33.4 -0.2
F10A IAmb IAmb 08 27 35.7

comp=Z,13nm,0.8s
I07A Izee 22.52 111 P P 08 27 33.7 -0.6
I07A IAmb IAmb 08 27 35.3

comp=Z,22nm,1.1s
YBH Yreka Blue Hor 22.62 119 P P 08 27 37.0 +1.7
YBH IAmb IAmb 08 27 46.2

comp=Z,20nm,1.3s
YBH Yreka Blue Hor 22.62 119 P P 08 27 34.5 -0.8
comp=Z,5.3nm,0.9s,baz=270,slow=6.3,SNR=8.7
comp=Z,5.3nm,0.9s
K05A Summer Lake 22.77 115 P P 08 27 37.2 +0.2
K05A IAmb IAmb 08 27 38.6

comp=Z,24nm,1.1s
J08A Circle Bar Ran 23.55 111 P P 08 27 45.8 +0.9
BPMT Black Pine Rid 24.23 99 P P 08 27 50.9 -0.5
LYMT Lyon Mountain 24.54 97 P P 08 27 53.4 -0.9
ORV Oroville 24.89 121 P P 08 27 56.4 -0.8
MFID Camas Ranch 24.90 107 P P 08 27 57.3 -0.2
MFID IAmb IAmb 08 27 59.4

comp=Z,9.9nm,1.1s
AFDM Forest Hills D 25.62 121 P P 08 28 03.6 -0.2
PAHR Pah Rah Range 25.79 118 P P 08 28 05.4 -0.1
PAHR IAmb IAmb 08 28 06.7

comp=Z,8.9nm,1.1s
MPK Martis Peak 25.80 119 P P 08 28 05.6 -0.1
MPK IAmb IAmb 08 28 07.0

comp=Z,17nm,1.2s
PNTR Pine Nut 26.16 119 P P 08 28 09.4 +0.4
PNTR IAmb IAmb 08 28 10.4

comp=Z,9.1nm,0.8s
WAKR Walker 26.70 120 P P 08 28 14.1 +0.2
KVN Kaiserville 26.93 117 P P 08 28 15.9 0.0
ELK Elko 27.11 111 P P 08 28 17.5 0.0
comp=Z,3.5nm,1.0s,baz=319,slow=5.9,SNR=7.3
comp=Z,3.5nm,1.0s
NVAR Mina Array Bea 27.31 118 P P 08 28 19.0 -0.4
comp=Z,3.4nm,0.8s,baz=304,slow=9.2,SNR=21
comp=Z,3.4nm,0.8s
RES Resolute Bay 27.40 28 P P 08 28 19.4 -0.1
MDPB Devils Postpil 27.57 120 P P 08 28 22.3 +0.6
PDAR Pinedale Array 28.71 101 P P 08 28 31.4 -0.5
comp=Z,1.1nm,0.8s,baz=316,slow=6.2,SNR=4.8
PDAR LR LR 08 37 55.9

comp=Z,122nm,19.1s,baz=332,slow=32
comp=Z,1.1nm,0.8s
R11B Troy Canyon, C 28.72 115 P P 08 28 31.4 -0.6
PRN Pahroc Range 29.72 115 P P 08 28 41.0 +0.3
PRN IAmb IAmb 08 28 43.3

comp=Z,6.4nm,1.0s
PETK Petropavlovsk- 30.11 286 P P 08 28 43.9 0.0
comp=Z,2.2nm,0.5s,baz=75,slow=13,SNR=6.1
comp=Z,2.2nm,0.5s
SRU San Rafael Swe 30.77 108 P P 08 28 50.3 +0.2
SRU IAmb IAmb 08 28 51.5

comp=Z,8.9nm,1.1s
RSSD Black Hills 30.86 94 P P 08 28 50.5 -0.3
RSSD IAmb IAmb 08 28 51.9

comp=Z,8.2nm,0.8s
LCMT Little Creek M 30.94 114 P P 08 28 51.5 0.0
V12A Nelson 31.14 117 P P 08 28 53.5 +0.3
V12A IAmb IAmb 08 28 55.0

comp=Z,6.9nm,0.9s
ULM Lac du Bonnet 31.78 78 P P 08 28 58.3 -0.2
comp=Z,3.6nm,0.8s,baz=298,slow=10,SNR=9.4
comp=Z,3.6nm,0.8s
WUAZ Wupatki 33.05 113 P P 08 29 10.3 +0.2
WUAZ IAmb IAmb 08 29 11.1

comp=Z,5.3nm,0.9s
X16A Lo Mia Camp, P 33.88 114 P P 08 29 17.8 +0.5
X16A IAmb IAmb 08 29 19.2

comp=Z,4.3nm,0.9s
TIXI Tiksi 35.51 327 P P 08 29 31.6 +0.8
TIXI IAmb IAmb 08 29 34.7

comp=Z,4.6nm,0.9s
TX31 Lajitas Ar. Si 41.90 111 P P 08 30 25.0 0.0
TXAR Lajitas Array 41.90 111 P P 08 30 24.8 -0.2
comp=Z,2.5nm,1.0s,baz=316,slow=7.0,SNR=16
comp=Z,2.5nm,1.0s
SUMG Summit 42.80 24 *i* P **P 08 30 33.0 +0.9**
OLIL Olney 43.33 87 P P 08 30 35.5 -0.8
SCHQ Schefferville 43.89 56 P P 08 30 41.2 +0.5
comp=Z,2.0nm,1.0s,baz=343,slow=19,SNR=1.9
comp=Z,2.0nm,1.0s
NRIK Noril'sk 47.93 336 P P 08 31 12.9 +0.5
NRIK IAmb IAmb 08 31 15.1

comp=Z,4.5nm,0.9s
NRIK Noril'sk 47.93 336 P P
comp=Z,1.6nm,0.4s,baz=32,slow=6.7,SNR=4.2
comp=Z,1.6nm,0.4s 08 31 10.2 -2.1
H11N2 WAKE ISLAND Hy 48.97 240 T T 09 24 39.9
baz=31,slow=76
H11N3 WAKE ISLAND Hy 48.98 240 T T 09 24 40.7
baz=31,slow=76
H11N1 WAKE ISLAND Hy 48.99 240 T T 09 24 43.9
baz=31,slow=76
HODGE Hodges 49.82 87 P P 08 31 26.9 -0.4
H11S1 WAKE ISLAND Hy 50.11 239 T T 09 26 20.2
baz=29,slow=76
H11S2 WAKE ISLAND Hy 50.13 239 T T 09 26 20.4
baz=29,slow=76
H11S3 WAKE ISLAND Hy 50.13 239 T T 09 26 11.2
baz=29,slow=76
MJAR Matsushiro Arr 51.12 279 P P
comp=Z,1.0nm,0.6s,baz=50,slow=8.3,SNR=2.2
comp=Z,1.0nm,0.6s 08 31 35.0 -2.2
ARCES ARCESS Array B 54.24 2 P P 08 31 59.5 -0.2
comp=Z,1.1nm,0.4s,baz=0.0,slow=6.6,SNR=12
comp=Z,1.1nm,0.4s
KSRS Korea Array 55.99 288 P P 08 32 12.8 0.0
comp=Z,0.5nm,0.4s,baz=53,slow=7.3,SNR=2.0
comp=Z,0.5nm,0.4s
SONM Songino Array 58.51 310 P P 08 32 30.0 -0.6
comp=Z,2.0nm,0.8s,baz=44,slow=8.7,SNR=3.5
SONM LR LR 08 57 14.5

comp=Z,92nm,18.9s,baz=334,slow=36
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 61.39 327 P P 08 32 50.3 +0.1
ZALV Zalesovo Beam 61.39 327 P P 08 32 48.7 -1.5
comp=Z,2.7nm,0.7s,baz=29,slow=6.5,SNR=11
ZALV LR LR 09 04 60.0

comp=Z,69nm,18.1s,baz=9.0,slow=42
comp=Z,2.7nm,0.7s
NOA NORSAR Array B 61.83 11 P P 08 32 52.8 -0.3
comp=Z,3.9nm,0.8s,baz=345,slow=6.9,SNR=2.9
comp=Z,0.9nm,0.8s
FINES FINESS Array B 62.37 3 P P 08 32 54.9 -1.7
comp=Z,3.9nm,0.6s,baz=4.4,slow=5.3,SNR=14
comp=Z,3.9nm,0.6s
HFS Hagfors 62.96 9 P P 08 33 00.3 -0.3
comp=Z,1.5nm,0.7s,baz=339,slow=7.7,SNR=1.5
comp=Z,1.5nm,0.7s
NJ2 Nanjing 64.90 290 *e*P **P 08 33 14.2 +0.4**
NJ2 sP **sP 08 33 19.0 +2.9**
NJ2 pmax pmax

comp=Z,6.0nm,0.5s
NJ2 pmax pmax

comp=Z,160nm,3.5s
EKA Eskdalemuir Ar 65.20 21 P P 08 33 13.2 -2.1
comp=Z,1.7nm,0.7s,baz=309,slow=8.0,SNR=4.0
comp=Z,1.7nm,0.7s
BVAR Borovoye Array 66.10 335 P P 08 33 18.7 -2.6
comp=Z,1.5nm,0.6s,baz=30,slow=9.1,SNR=5.5
comp=Z,1.5nm,0.6s
KURBB Kurchatov Arra 66.17 329 P P 08 33 19.7 -2.0
comp=Z,1.2nm,0.8s,baz=29,slow=6.4,SNR=6.4
comp=Z,1.2nm,0.8s
MK31 Makanchi Array 68.43 325 P P 08 33 35.4 -0.8
MKAR Makanchi Array 68.43 325 P P 08 33 34.7 -1.4
MKAR Makanchi Array 68.43 325 P P 08 33 34.0 -2.2
comp=Z,1.0nm,0.5s,baz=38,slow=5.8,SNR=11
comp=Z,1.0nm,0.5s
MAKZ Makanchi 68.52 325 P P 08 33 36.8 +0.1
MAKZ IAmb IAmb 08 33 38.1

comp=Z,2.5nm,0.8s
WMQ Urumqi 69.19 320 *e*P **P 08 33 43.6 +2.6**
ABKAR Akbulak array 71.86 340 P P 08 33 55.9 -1.2
ABKAR IAmb IAmb 08 34 22.2

comp=Z,2.8nm,0.8s
AKASG Malin Array Be 73.18 1 P P 08 34 05.2 +0.3
comp=Z,2.2nm,0.6s,baz=0.5,slow=5.9,SNR=19
comp=Z,2.2nm,0.6s
AKBB Malin Array Si 73.18 1 P P 08 34 04.7 -0.2
KIEV Kiev 73.19 1 P P 08 34 04.7 -0.2
PPT2 Papeete2 73.78 180 *e*LR LR 08 56 24.3
comp=Z,86nm,21.8s
PPT2 *e*LR LR 08 56 44.7

comp=Z,111nm,29.2s
GERES GERESS Array B 74.10 12 P P 08 34 11.1 +0.7
comp=Z,1.6nm,0.7s,baz=354,slow=8.0,SNR=5.4
comp=Z,1.6nm,0.7s
STHS Stebnicka Huta 74.18 6 *e*P **P 08 34 12.0 +1.1**
MODS Modra-Piesok 74.92 9 *e*P **P 08 34 17.0 +1.8**
PSZ Piszkesteto 75.58 7 P P 08 34 20.6 +1.6
BUR08 Bucovina Ar. S 76.15 4 P P 08 34 23.0 +0.7
BUR08 IAmb IAmb 08 34 24.3

comp=Z,2.9nm,0.7s
PZH PanZhiHua 78.01 300 P P 08 34 34.0 +0.9
PZH pmax pmax

comp=Z,10.0nm,0.6s
PZH pmax pmax

comp=Z,110nm,5.7s
TBI Tubuai 79.51 180 *e*LR LR 08 59 16.7
comp=Z,483nm,27.2s
ESDC Sonseca Array 79.82 26 P P 08 34 42.9 +0.1
comp=Z,1.5nm,0.8s,baz=323,slow=4.8,SNR=6.3
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 84.14 358 P P 08 35 05.4 -0.2
comp=Z,1.1nm,0.8s,baz=286,slow=0.9,SNR=4.9
comp=Z,1.1nm,0.8s
CMAR Chiang Mai Arr 86.18 298 P P 08 35 13.7 -2.2
comp=Z,0.8nm,0.4s,baz=15,slow=5.1,SNR=1.8
comp=Z,0.8nm,0.4s
DZM Mont Dzumac 86.68 220 *e*LR LR 09 02 40.3
comp=Z,60nm,23.1s
QSPA South Pole Qui 146.27 180 PKPbc **PKPdf 08 42 12.4 -0.1**
comp=Z,1.2nm,0.5s,baz=338,slow=4.6,SNR=4.2

IDC 09 08:25:18.4±3.4, 53.36N×87.41E, h0km, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=32.5km s-min=16.8km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**292**	I		I	08 34 20.0	
	baz=108,slow=339,SNR=2.3							
ZALV	**Zalesovo Beam**	**1.65**	**292**	Pg		Pn	08 25 48.8	+0.2
	0.5nm,0.3s,baz=110,slow=14,SNR=16							
ZALV				Lg		Lg	08 26 09.6	
	0.7nm,0.3s,baz=112,slow=32,SNR=3.4							
KURBB	**Kurchatov Arra**	**6.13**	**247**	Pn		Pn	08 26 51.8	+1.6
	baz=61,slow=14,SNR=2.6							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**7.35**	**209**	Pn		Pn	08 27 07.2	+0.3
	baz=27,slow=13,SNR=1.6							
	0.1nm,0.3s							
VRAC	**Vranov**	**42.77**	**294**	*e*PG		P	08 33 23.4	+6.1

IDC 09 08:26:10.4±3.1, 53.98N×86.64E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=26.1km s-min=15.1km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.08**	**269**	I		I	08 32 00.0	
	baz=89,slow=338,SNR=11							
ZALV	**Zalesovo Beam**	**1.08**	**269**	Pg		Pg	08 26 29.9	-1.2
	0.4nm,0.3s,baz=85,slow=26,SNR=1.4							
ZALV				Lg		Lg	08 26 46.6	
	0.7nm,0.3s,baz=86,slow=25,SNR=1.8							
KURBB	**Kurchatov Arra**	**6.01**	**239**	Pn		Pn	08 27 41.5	+1.0
	baz=55,slow=14,SNR=2.9							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**7.72**	**203**	Pn		Pn	08 28 05.0	+1.0
	0.1nm,0.3s,baz=23,slow=13,SNR=2.3							
	0.2nm,0.2s							

JMA 09 08:32:35.4±0.1, 26.3N±0.7×129.6E±0.5, h43km, MV2.8/19, NEAR MINAMI-DAITOJIMA IS, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYRO	**Yoronjima**	**1.26**	**305**	P		Pn	08 32 57.1	+0.4
JYRO				*e*S		Sn	08 33 12.8	+0.4
JOW	**Kunigami**	**1.31**	**294**	P		Pn	08 32 58.0	+0.7
JOW				*e*S		Sn	08 33 13.2	-0.4
JOW	**Kunigami**	**1.31**	**294**	P		Pn	08 32 58.2	+0.9
JOKE	**Okinoerabujima**	**1.41**	**319**	P		Pn	08 32 59.4	+0.8
JOKE				S		Sn	08 33 16.9	+1.0
JNTH	**Nagotoyohara**	**1.44**	**279**	P		Pn	08 32 59.3	+0.2
JNTH				*e*S		Sn	08 33 16.4	-0.4
JMZ	**Minamidaito 2**	**1.53**	**108**	P		Pn	08 33 00.8	+0.6
JMZ				S		Sn	08 33 18.6	-0.2
JKDJ	**Kitadaitoujima**	**1.55**	**103**	P		Pn	08 33 01.3	+0.7
JKDJ				S		Sn	08 33 20.1	+0.6
JTK	**Tokunoshima**	**1.59**	**338**	P		Pn	08 33 02.0	+0.9
JTK				S		Sn	08 33 21.4	+0.9
JIH	**Iheya**	**1.64**	**297**	P		Pn	08 33 02.9	+1.1
JIH				S		Sn	08 33 21.7	-0.1
JJT3	**Tamagusuku3**	**1.65**	**265**	*e*P		Pn	08 33 03.8	+1.8
JJT3				S		Sn	08 33 23.5	+1.5
JAMN	**Amaminishikomi**	**1.97**	**349**	P		Pn	08 33 07.2	+0.9
JAMN				S		Sn	08 33 30.8	+1.0
JZK	**Kikaishima**	**2.03**	**9**	P		Pn	08 33 08.9	+1.8
JZK				S		Sn	08 33 32.9	+1.7
JAM	**Amami Oshima**	**2.10**	**360**	P		Pn	08 33 08.6	+0.5
JAGN	**Aguni-jima**	**2.15**	**278**	P		Pn	08 33 10.1	+1.4
JAGN				S		Sn	08 33 34.9	+0.7
JKE	**Kume jima 2**	**2.54**	**271**	P		Pn	08 33 14.7	+0.6
JKE				S		Sn	08 33 43.2	-0.6
JTAJ	**Takarajima**	**2.86**	**353**	*e*P		Pn	08 33 19.5	+0.9

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*ATH **09** 08:40:00.7, 36.71N×26.75E, h146km±6km, ML3.3/9, Error ellipse: s-maj=6.0km s-min=2.0km az=92.0*
*ISK **09** 08:40:01.1, 36.72N×26.71E, h140km, ML2.6/15*
*THE **09** 08:40:05.0, 36.68N×26.73E, h124km±4km, ML3.1/3, Error ellipse: s-maj=4.2km s-min=1.1km az=78.0*
*AFAD **09** 08:40:29.0±0.0, 36.78N×29.19E, h7km±7km, ML1.4*
ISC 09 08:40:01.5±1.7, 36.71N±0.04×26.73E±0.04, h134km±11km, n54, σ0.82/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BODT	**Bodrum**	**0.59**	**52**	Pg		**Pn**	**08 40 22.2**	**+0.7**
BODT				Sg		**Sn**	**08 40 37.6**	**+0.8**
BODT	**Bodrum**	**0.59**	**52**	P		**Pn**	**08 40 22.3**	**+0.7**
BODT				S		**Sn**	**08 40 34.6**	**-2.2**
DAT	**Datca**	**0.68**	**88**	Pg		**Pn**	**08 40 22.9**	**+0.6**
DAT	**Datca**	**0.68**	**88**	P		**Pn**	**08 40 23.0**	**+0.6**
DAT				S		**Sn**	**08 40 35.5**	**-2.6**
RFTAA	**Mazikoy-Bodrum**	**0.86**	**70**	Pg		**Pn**	**08 40 24.3**	**+0.7**
RFTAA				Sg		**Sn**	**08 40 41.3**	**+1.0**
SMG	**Samos**	**1.01**	**5**	P		**Pn**	**08 40 25.3**	**+0.4**
SMG	**Samos**	**1.01**	**5**	P		**Pn**	**08 40 25.3**	**+0.4**
MLSB	**Milas**	**1.02**	**55**	Pg		**Pn**	**08 40 25.7**	**+0.7**
APE	**Apeiranthos**	**1.03**	**291**	Pg		**Pn**	**08 40 25.5**	**+0.4**
APE	**Apeiranthos**	**1.03**	**291**	P		**Pn**	**08 40 25.9**	**+0.8**
APE	**Apeiranthos**	**1.03**	**291**	P		**Pn**	**08 40 25.6**	**+0.5**
THR8	**Santorini-Mono**	**1.05**	**254**	P		**Pn**	**08 40 25.8**	**+0.5**
THR3	**Thira Island,**	**1.11**	**255**	P		**Pn**	**08 40 26.6**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.12**	**255**	P		**Pn**	**08 40 26.3**	**+0.5**
THR6	**Thira Island,**	**1.13**	**252**	P		**Pn**	**08 40 26.9**	**+0.9**
THR6	**Thira Island,**	**1.13**	**252**	P		**Pn**	**08 40 26.8**	**+0.8**
THR9	**Santorini-Faro**	**1.16**	**253**	P		**Pn**	**08 40 27.1**	**+0.8**
KARP	**Karpathos**	**1.21**	**163**	Pn		**Pn**	**08 40 27.5**	**+0.6**
KARP	**Karpathos**	**1.21**	**163**	P		**Pn**	**08 40 26.8**	**-0.1**
KARP				S		**Sn**	**08 40 45.0**	**-1.1**
	1μm,0.2s							
KARP	**Karpathos**	**1.21**	**163**	P		**Pn**	**08 40 27.0**	**+0.2**
KARP				S		**Sn**	**08 40 45.7**	**-0.3**
KARP				AML		AML	08 40 48.9	
	comp=E,1846μm,0.2s							
KARP				AML		AML	08 40 49.9	
	comp=N,2377μm,0.2s							
ARG	**Arkhangelos**	**1.23**	**113**	Pn		**Pn**	**08 40 27.7**	**+0.7**
ARG	**Arkhangelos**	**1.23**	**113**	P		**Pn**	**08 40 27.6**	**+0.6**
ARG				S		**Sn**	**08 40 46.0**	**-0.3**
	comp=N,362nm,0.3s							
ARG	**Arkhangelos**	**1.23**	**113**	P		**Pn**	**08 40 27.6**	**+0.6**
ARG				AML		AML	08 40 50.0	
	comp=N,505μm,0.3s							
ARG				AML		AML	08 40 50.2	
	comp=E,936μm,0.3s							
YER	**Yerkesik**	**1.32**	**70**	Pn		**Pn**	**08 40 28.7**	**+0.7**
YER	**Yerkesik**	**1.32**	**70**	P		**Pn**	**08 40 29.0**	**+1.0**
DALY	**Dalyan (Mula)**	**1.55**	**85**	Pn		**Pn**	**08 40 31.5**	**+1.1**
ZKR	**Zakros**	**1.64**	**195**	Pn		**Pn**	**08 40 32.3**	**+0.8**
ZKR	**Zakros**	**1.64**	**195**	P		**Pn**	**08 40 32.3**	**+0.8**
ZKR				S		**Sn**	**08 40 54.1**	**-0.3**
	comp=E,180nm,0.3s							
ZKR	**Zakros**	**1.64**	**195**	P		**Pn**	**08 40 32.2**	**+0.8**
ZKR				AML		AML	08 40 58.0	
	comp=E,463μm,0.3s							
ZKR				AML		AML	08 40 59.7	
	comp=N,244μm,0.3s							
CHOS	**Chios island**	**1.76**	**342**	Pn		**Pn**	**08 40 33.2**	**+0.2**

CHOS	Chios island	1.76	342	P	Pn	08 40 33.2	+0.2	
SABU	Mula-Dalaman	1.80	86	P	Pn	08 40 33.9	+0.5	
SABU				S	Sn	08 40 35.8	-22	
FRMA	Ierapetra Chan	1.87	206	P	Pn	08 40 34.6	+0.4	
FRMA				S	Sn	08 40 58.5	-0.6	
FRMA	Ierapetra Chan	1.87	206	P	Pn	08 40 34.6	+0.4	
FRMA				AML	AML	08 41 00.9		
	comp=E,686µm,0.2s							
FRMA				AML	AML	08 41 01.7		
	comp=N,488µm,0.2s							
MHLO	Agia Marina, M	1.87	270	P	Pn	08 40 35.5	+1.3	
FETY	Fethiye	1.89	91	Pn	Pn	08 40 35.1	+0.7	
FETY	Fethiye	1.89	91	P	Pn	08 40 36.0	+1.6	
FETY				S	Sn	08 40 38.8	-21	
FETI	Fethiye-Mugla	1.90	90	Pn	Pn	08 40 35.3	+0.8	
EAG2	Marmaro, Chios	1.90	345	P	Pn	08 40 33.8	-0.7	
HRKL	Herakleio	1.92	224	P	Pn	08 40 35.6	+0.8	
IACM	Heraklion	1.94	224	P	Pn	08 40 35.4	+0.5	
KSTL	Kastelli Herak	1.94	224	P	Pn	08 40 34.6	-0.4	
IZZE	Mula-Seydike	2.03	97	P	Pn	08 40 35.3	-0.7	
IZZE				*i* AML	AML	08 40 40.0		
	comp=N,57nm,0.4s							
IZZE				S	Sn	08 40 40.5	-22	
IZZE				*i* AML	AML	08 40 41.0		
	comp=N,77nm,0.3s							
IDI	Anoyia	2.06	227	P	Pn	08 40 36.1	-0.4	
IDI				AML	AML	08 41 03.6		
	comp=N,424µm,0.1s							
IDI				AML	AML	08 41 04.3		
	comp=E,383µm,0.1s							
CAME	Cameli-Denizli	2.08	83	Pn	Pn	08 40 37.1	+0.3	
CAEL	Denizli, Camel	2.12	78	P	Pn	08 40 37.7	+0.5	
CAEL				S	Sn	08 40 40.4	-24	
CAEL				*i* AML	AML	08 40 45.0		
	comp=E,56nm,0.3s							
CAEL				*i* AML	AML	08 40 50.0		
	comp=E,35nm,0.3s							
APMY	Acipayam-Deniz	2.19	69	Pn	Pn	08 40 38.8	+0.7	
KNIK	Mula-Seydike	2.29	86	P	Pn	08 40 39.4	+0.1	
KNIK				S	Pn	08 40 40.5	+1.1	
KSL	Kastellorizon	2.37	103	P	Pn	08 40 40.2	0.0	
KSL				AML	AML	08 41 09.3		
	comp=N,258µm,0.3s							
KSL				AML	AML	08 41 09.7		
	comp=E,397µm,0.4s							
CHAN	Chania	2.48	242	P	Pn	08 40 42.0	+0.4	
CHAN				AML	AML	08 41 12.7		
	comp=E,668µm,0.3s							
CHAN				AML	AML	08 41 14.3		
	comp=N,510µm,0.4s							
IMMV	Iera Moni Meta	2.55	242	P	Pn	08 40 43.1	+0.6	
IMMV				AML	AML	08 41 18.4		
	comp=N,738µm,0.3s							
IMMV				AML	AML	08 41 19.0		
	comp=E,578µm,0.3s							
GVD	Gavdhos	2.84	230	P	Pn	08 40 47.1	+0.8	
GVD				AML	AML	08 41 21.8		
	comp=N,649µm,0.2s							
GVD				AML	AML	08 41 21.9		
	comp=E,546µm,0.3s							
ANKY	Antikythira Is	2.89	254	P	Pn	08 40 46.9	0.0	
VLI	Veliai	3.05	271	P	Pn	08 40 49.5	+0.6	

*NNC **09** 08:47:21.4±2.8,51˚.31N×82˚.07E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=25.9km s-min=12.3km az=25.0, Suspected Mining explosion.*

*IDC **09** 08:47:24.9±1.8,51˚.19N×81˚.70E, h0km, mbtmp2.4/2, ML1.6/2, Error ellipse: s-maj=16.8km s-min=13.8km az=30.0*

ISC 09 08:47:24.5±1.1, 51˚.15N±0˚.06×81˚.72E±0˚.05, h0km, n8, σt$45/11, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	Kurchatov	2.01	259	⇑Pn	Pn	08 47 59.4	-0.2
	0.5nm,0.3s						
KURK				⇑Sn	Sg	08 48 29.9	+1.0
	2.8nm,0.7s						
KURBB	Kurchatov Arra	2.09	256	⇑Pn	Pn	08 48 01.6	+0.9
	0.5nm,0.3s						
KURBB				⇑Sn	Sb	08 48 31.0	+1.3
	8.2nm,0.7s						
KURBB	Kurchatov Arra	2.09	256	Pg	Pb	08 48 02.2	-1.0
	0.1nm,0.3s,baz=71,slow=18,SNR=4.0						
KURBB				Lg	Lg	08 48 31.3	
	0.2nm,0.3s,baz=74,slow=32,SNR=2.5						
ZALV	Zalesovo Beam	3.38	33	Pn	Pn	08 48 18.4	-0.1
	0.2nm,0.3s,baz=219,slow=14,SNR=3.0						
ZALV				Sn	Sn	08 49 00.6	+1.3
	0.2nm,0.3s,baz=217,slow=24,SNR=2.5						
	0.5nm,0.4s						
I46RU	ZALESOVO INFRA	3.38	33	I	I	09 06 00.0	
	0.1nm,0.8s,baz=213,slow=334,SNR=1.4						
MAKZ	Makanchi	4.35	178	⇓Pg	Pb	08 48 41.8	0.0
	0.2nm,0.4s						
MAKZ				⇑Lg	Lg	08 49 44.5	
	1.5nm,0.9s						
MK31	Makanchi Array	4.38	175	⇑Pg	Pg	08 48 45.6	-2.7
	0.1nm,0.3s,baz=14,slow=15,SNR=3.7						
MK31				⇓Lg	Lg	08 49 44.7	
	0.8nm,0.7s,baz=4.6,slow=24,SNR=5.1						
MKAR	Makanchi Array	4.38	175	Pn	Pn	08 48 33.6	+1.4
	0.1nm,0.3s,baz=358,slow=13,SNR=2.7						
MKAR				Pg	Pb	08 48 43.4	+1.1
	0.1nm,0.3s,baz=359,slow=12,SNR=5.0						
MKAR				Lg	Lg	08 49 41.2	
	0.1nm,0.3s,baz=1.7,slow=28,SNR=2.6						
	0.2nm,0.2s						

*IDC **09** 08:50:43.4±1.2,5˚.27S×145˚.61E, h0km, mb3.8/4, mbtmp3.9/6, ML3.8/1, MS3.1/2, Error ellipse: s-maj=40.6km s-min=22.5km az=90.0*

ISC 09 08:50:50.1±1.1, 5˚.45S±0˚.1×145˚.6E±0˚.2, h50km, n8, σ0$92/9, mb3.9/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.30	159	Pn	Pn	08 51 52.0	-1.1
	12nm,0.5s,baz=353,slow=8.1,SNR=1.7						
PMG				Sn	Sn	08 52 42.9	+0.8
	3.7nm,0.3s,baz=343,slow=19,SNR=2.7						
PMG				LR	LR	08 54 12.1	
	comp=Z,242nm,18.0s,baz=356,slow=48						
CTA	Charters Tower	14.65	178	LR	LR	09 00 24.3	
	comp=Z,46nm,18.2s,baz=72,slow=39						
WRA	Warramunga Arr	18.16	216	P	P	08 54 58.3	-0.3
	0.3nm,0.3s,baz=40,slow=12,SNR=18						
WRA				PcP	PcP	08 59 31.5	+1.0
	0.5nm,0.6s,baz=22,slow=0.9,SNR=1.3						
	3.8nm,0.7s						
ASAR	Alice Springs	21.39	211	P	P	08 55 33.2	-0.7
	0.9nm,0.7s,baz=45,slow=8.6,SNR=10.0						
	0.9nm,0.7s						
STKA	Stephens Creek	26.64	188	P	P	08 56 25.0	+0.8
	2.2nm,0.8s,baz=0.0,slow=10,SNR=6.3						
	2.2nm,0.8s						
CMAR	Chiang Mai Arr	51.72	298	P	P	08 59 52.5	-0.3
	0.7nm,0.4s,baz=130,slow=5.9,SNR=1.2						
	0.7nm,0.4s						
ILAR	Eielson Array	85.46	23	P	P	09 03 21.9	-0.3
	0.7nm,0.7s,baz=250,slow=4.5,SNR=8.8						
	0.7nm,0.7s						
DBIC	Dimbokro	150.58	274	PKPbc	PKPbc	09 10 38.6	+0.9
	5.7nm,0.8s,baz=105,slow=3.6,SNR=4.9						

*HEL **09** 08:53:08.8±0.1, 59˚.93N×26˚.68E, h0km, ML2.0, Explosion*
*EST **09** 08:53:08.7±0.1, 59˚.94N×26˚.67E, h0km, ML2.0(HEL), Explosion*

*IDC **09** 08:53:11.9±2.1, 60˚.17N×26˚.50E, h0km, mbtmp3.2/3, ML2.3/3, Error ellipse: s-maj=20.4km s-min=10.7km az=126.0*

ISC 09 08:53:07.0±0.8, 59˚.97N±0˚.02×26˚.66E±0˚.03, h0km, n30, σ0$80/47, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARBE	Arbavere	0.63	213	*e*P	Pg	08 53 19.6	+0.4
ARBE				*e*S	Sg	08 53 27.3	-0.1
PVF	Pernaja	0.70	326	*e*P	Pb	08 53 21.9	-0.3
PVF				*e*S	Sb	08 53 32.0	-0.4
VJF	Virojoki	0.73	37	*e*P	Pb	08 53 22.1	-0.4
VJF				*e*S	Sb	08 53 32.2	-0.8
HEL1	Helsinki	0.92	284	*e*P	Pb	08 53 25.2	-0.5
HEL1				*e*S	Sg	08 53 36.8	+0.3
HEL3	Helsinki	0.94	283	*e*S	Sg	08 53 38.1	+0.8
HEL4	Helsinki	0.97	288	*e*P	Pb	08 53 26.3	-0.4
HEL5	Espoo, Suvisaa	0.98	280	*e*P	Pb	08 53 26.3	-0.5
EE03	Tooma soojaam,	1.12	190	*e*P	Pg	08 53 28.2	-0.2
EE03				*e*PN	Pn	08 53 31.3	+1.5
NUR	Nurmijrvi	1.14	299	*e*P	Pb	08 53 29.6	-0.1
NUR				*e*S	Sb	08 53 44.8	-0.2
MEF	Metsahovi	1.16	283	*e*P	Pn	08 53 31.1	+0.6
MEF	Metsahovi	1.16	283	*e*P	Pb	08 53 29.8	-0.1
MEF				*e*S	Sg	08 53 44.9	+0.5
EE02	Kiisa, Saku	1.27	233	*e*PB	Pg	08 53 31.4	+0.1
EE02				*e*S	Sg	08 53 46.9	-0.8
EE08	Sarghaua, Vand	1.50	210	*e*P	Pn	08 53 35.0	-0.1
EE08				*e*S	Sg	08 53 54.1	-1.1
EE08				*e*SN	Sn	08 53 57.5	+2.1
FIA0	FINESS Array S	1.51	349	*e*P	Pb	08 53 35.6	-0.3
FIA0				*e*S	Sn	08 53 57.0	+1.3
FIA0				MSG		08 54 00.8	
	comp=Z,7.4nm,0.1s						
FINES	FINESS Array B	1.51	349	Pg	Pb	08 53 35.7	-0.2
	comp=Z,1.1nm,0.3s,baz=170,slow=15,SNR=59						
FINES				Lg	Lg	08 53 53.0	
	comp=Z,0.3nm,0.3s,baz=170,slow=27,SNR=7.2						
FIA1	FINESS Array S	1.51	349	*e*P	Pb	08 53 35.8	-0.1
FIA1				*e*S	Sn	08 53 57.1	+1.4
FIA1				MSG		08 54 01.0	
	comp=Z,9.3nm,0.1s						
VSU	Vasula	1.51	179	*e*P	Pb	08 53 35.8	-0.1
VSU	Vasula	1.51	179	*e*P	Pn	08 53 35.5	+0.2
VSU				*e*S	Sg	08 53 55.0	-0.5
EE01	Perakula, Nova	1.72	245	*e*PG	Pb	08 53 39.5	0.0
EE01				*e*S	Sn	08 54 01.1	+0.2
RUF	Ruokolahti	1.85	37	*e*P	Pb	08 53 41.3	-0.3
RUF				*e*SN	Sg	08 54 06.0	-0.3
RUF				MSG		08 54 08.5	
	comp=Z,11nm,0.1s						
MTSE	Matsula	1.93	230	*e*P	Pb	08 53 42.6	-0.4
MTSE	Matsula	1.93	230	*e*PN	Pb	08 53 42.4	-0.5
MTSE				*e*SG	Sb	08 54 07.9	+0.4
KAF	Kangasniemi	2.16	356	*e*P	Pb	08 53 46.4	-0.6
KAF				*e*SG	Sg	08 54 16.5	+0.1
KAF				MSG		08 54 19.6	
	comp=Z,11nm,0.2s						
EE07	Piusa Caves, O	2.17	169	*e*PG	Pb	08 53 47.1	-0.1
EE07				*e*SG	Sb	08 54 14.2	-0.4
KEF	Keuruu	2.37	339	MSG		08 54 24.4	
	comp=Z,10nm,0.2s						
RAF	Rauma	2.64	296	*e*P	Pb	08 53 53.7	-1.5
RAF	Rauma	2.64	296	MSG		08 54 32.3	
	comp=Z,4.1nm,0.2s						
HFS	Hagfors	6.50	277	Pn	Pn	08 54 44.9	+1.1
	comp=Z,0.2nm,0.3s,baz=79,slow=7.5,SNR=2.1						
HFS				Sn	Sn	08 55 55.9	-2.7
	comp=Z,0.2nm,0.3s,baz=87,slow=29,SNR=1.6						
HFS				Lg	Lg	08 56 27.4	
	comp=Z,0.2nm,0.3s,baz=57,slow=29,SNR=1.3						
	comp=Z,3.6nm,0.9s						
NOA	NORSAR Array B	7.70	285	Pn	Pn	08 55 00.8	+0.4
	baz=92,slow=6.2,SNR=4.7						
	comp=Z,2.0nm,0.4s						
ARCES	ARCESS Array B	9.62	358	Pn	Pn	08 55 26.1	-0.4
	comp=Z,0.1nm,0.3s,baz=183,slow=12,SNR=16						
	comp=Z,1.0nm,0.6s						

IDC 09 08:55:24.5±3.6, 54˚.31N×86˚.16E, h0km, mbtmp2.2/1, ML2.3/1, Error ellipse: s-maj=23.8km s-min=13.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.86	246	I	I	09 00 10.0	
	0.1nm,0.7s,baz=64,slow=336,SNR=13						
ZALV	Zalesovo Beam	0.86	246	Pg	Pg	08 55 41.3	+0.2
	0.2nm,0.3s,baz=66,slow=18,SNR=2.9						
ZALV				Lg	Lg	08 55 53.2	
	0.7nm,0.3s,baz=66,slow=29,SNR=6.6						
MKAR	Makanchi Array	7.91	200	Pn	Pn	08 57 21.6	+0.8
	baz=22,slow=13,SNR=1.5						
	0.1nm,0.4s						

*NEIC **09** 08:56:54.3±1.2, 55˚.87N±0˚.09×150˚.12W±0˚.09, h10km±2km, mb3.9/7, ML3.7/38, ML3.4(AEIC), Error ellipse: s-maj=14.7km s-min=8.7km az=176.0*

*AEIC **09** 08:56:58.2±1.3, 55˚.83N±0˚.09×150˚.1W±0˚.1, h10km±6km, Error ellipse: s-maj=14.1km s-min=8.3km az=194.0*

ISC 09 08:56:54.3±1.1, 55˚.93N±0˚.07×150˚.12W±0˚.05, h10km, n160, σt$09/166, mb3.9/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	2.18	308	Pn	Pn	08 57 30.5	0.0
OHAK	Old Harbor	2.18	308		Sn	08 57 55.4	-2.1
OHAK	Old Harbor	2.18	308	P	Pn	08 57 30.6	0.0
	baz=127						
OHAK				S	Sn	08 57 55.4	-2.1
	baz=127						
KDAK	Kodiak Island	2.30	325	Pn	Pn	08 57 32.5	+0.3
KDAK	Kodiak Island	2.30	325		Sn	08 57 58.5	-2.0
SII	Sitkinak Islan	2.35	287		Pn	08 57 32.8	-0.3
SII					Sn	08 58 00.1	-1.8
SII	Sitkinak Islan	2.35	287	IAML		08 58 07.1	
	comp=E,254nm,0.6s						
SII				IAML		08 58 11.0	
	comp=N,281nm,1.1s						
SII	Sitkinak Islan	2.35	287	P	Pn	08 57 32.8	-0.3
	baz=106						
SII				S	Sn	08 58 00.1	-1.8
	baz=106						
SYI	Shuyak Island	2.95	336	Pn	Pn	08 57 41.6	+0.4
SYI	Shuyak Island	2.95	336		Sn	08 58 16.4	-0.3
Q20K	Shuyak Island	2.96	336	P	Pn	08 57 42.0	+0.8
	baz=155						
Q20K				S	Sn	08 58 16.4	-0.3
	baz=155						
Q19K	Cape Douglas,	3.56	329	Pn	Pn	08 57 51.0	+1.5
Q19K				IAML		08 58 51.0	
	comp=N,191nm,1.0s						
Q19K	Cape Douglas,	3.56	329	P	Pn	08 57 50.7	+1.2
	baz=147						
CNPM	China Poot	3.65	351		Pn	08 57 51.2	+0.3
CNPM				IAML		08 58 34.8	
	comp=E,77nm,0.6s						
CNPM	China Poot	3.65	351		Sn	08 58 32.3	-1.7
PLK3	Peulik 3	3.81	300		Pn	08 57 53.8	+0.8
HOM	Homer	3.82	348	Pn	Pn	08 57 54.0	+0.8
HOM				IAML		08 58 49.4	
	comp=E,133nm,0.9s						
HOM				IAML		08 59 36.5	
	comp=N,154nm,1.8s						
HOM	Homer	3.82	348	P	Pn	08 57 53.7	+0.5
	baz=167						
BRSE	Bradley Lake S	3.83	355		Pn	08 57 53.2	-0.2
BRSE					Sn	08 58 36.0	-2.5
BRSE	Bradley Lake S	3.83	355	P	Pn	08 57 53.2	-0.2
	baz=174						
BRSE				S	Sn	08 58 36.0	-2.5
	baz=174						
BRLK	Bradley Lake	3.87	354	Pn	Pn	08 57 53.1	-0.7
BRLK	Bradley Lake	3.87	354		Sn	08 58 36.8	-2.4
CNTC	Contact Creek	3.92	309		Pn	08 57 55.7	+1.1
Q17K	Contact Creek	3.92	309	P	Pn	08 57 55.7	+1.1
	baz=125						
Q23K	Middleton Isla	4.05	28		Pn	08 57 56.3	0.0
Q23K	Middleton Isla	4.05	28	IAML		09 00 07.7	
	comp=N,163nm,2.2s						
Q23K	Middleton Isla	4.05	28	P	Pn	08 57 56.3	0.0
	baz=211						
P19K	Oil Pt	4.08	337	Pn	Pn	08 57 58.0	+1.2
P19K				IAML		08 58 50.0	
	comp=E,134nm,0.5s						
P19K	Oil Pt	4.08	337	P	Pn	08 57 57.8	+0.9
	baz=155						
SEW	Seward	4.20	5		Pn	08 57 58.1	-0.2
SEW	Seward	4.20	5	P	Pn	08 57 58.1	-0.2
	baz=185						
P23K	Montague Islan	4.33	18		Pn	08 58 00.3	+0.2
P23K					Sn	08 58 47.5	-3.0
P23K	Montague Islan	4.33	18	P	Pn	08 58 00.3	+0.2
	baz=200						
P23K				S	Sn	08 58 47.5	-3.0
	baz=200						
O20K	Slope Mountain	4.37	343		Pn	08 58 01.3	+0.6
O20K	Slope Mountain	4.37	343	P	Pn	08 58 01.3	+0.6
	baz=161						
IVE	Iliamna Volcan	4.38	341		Pn	08 58 01.5	+0.6
P18K	Big Mountain,	4.42	324	Pn	Pn	08 58 02.1	+0.6
P18K				IAML		08 59 06.6	
	comp=N,39nm,3.6s						
P18K				IAML		09 00 05.1	
	comp=E,28nm,3.3s						
P18K	Big Mountain,	4.42	324	P	Pn	08 58 02.1	+0.6
	baz=140						
Q16K	King Salmon	4.49	311		Pn	08 58 03.2	+0.9
Q16K	King Salmon	4.49	311	P	Pn	08 58 03.2	+0.9
	baz=126						
O22K	Cooper Landing	4.57	2		Pn	08 58 04.0	+0.6
O22K				IAML		08 59 05.6	
	comp=E,82nm,0.7s						
O22K				IAML		08 59 09.0	
	comp=N,87nm,1.0s						
SLKM	Skilak Lake	4.59	359		Pn	08 58 04.0	+0.3
RSO	Redoubt South	4.75	344		Pn	08 58 06.8	+0.6
O18K	Koktuh Hills	4.78	328	Pn	Pn	08 58 06.7	+0.4
O18K				IAML		08 59 03.4	
	comp=N,36nm,2.0s						
O18K				IAML		08 59 47.8	
	comp=E,39nm,3.6s						
O18K	Koktuh Hills	4.78	328	P	Pn	08 58 06.8	+0.4
	baz=144						
RDWB	Redoubt West	4.79	344		Pn	08 58 06.8	+0.2
O19K	Port Alsworth	4.82	334		Pn	08 58 07.9	+1.0
O19K				IAML		08 59 08.2	
	comp=N,71nm,0.4s						
O19K	Port Alsworth	4.82	334	P	Pn	08 58 07.8	+1.0
	baz=151						
HIN	Hinchinbrook I	4.87	22	Pn	Pn	08 58 08.1	+0.5
HIN				IAML		08 59 10.4	
	comp=N,52nm,1.5s						
HIN				IAML		09 00 21.5	
	comp=E,48nm,2.6s						
NCT	North Crescent	4.87	343		Pn	08 58 08.3	+0.6
CAPN	Captain Cook N	4.88	354		Pn	08 58 10.0	+2.3
KAIM	Kayak Island	5.03	35	Pn	Pn	08 58 09.9	+0.2
KAIM	Kayak Island	5.03	35	P	Pn	08 58 10.2	+0.5
	baz=219						
EYAK	Cordova Ski Ar	5.17	25		Pn	08 58 12.5	+0.8
EYAK	Cordova Ski Ar	5.17	25	P	Pn	08 58 12.5	+0.8
	baz=208						
RC01	Rabbit Creek A	5.18	2	Pn	Pn	08 58 12.5	+0.8
RC01				IAML		08 59 15.4	
	comp=E,34nm,1.0s						
RC01				IAML		08 59 16.1	
	comp=N,20nm,0.4s						
RC01	Rabbit Creek A	5.18	2	P	Pn	08 58 12.3	+0.5
	baz=182						
P16K	Nushagak River	5.26	309		Pn	08 58 14.2	+1.4
P16K	Nushagak River	5.26	309	P	Pn	08 58 14.3	+1.4
	baz=124						
RAGM	Ragged Mountai	5.32	31		Pn	08 58 14.6	+0.8
RAGM				IAML		08 59 22.6	
	comp=E,38nm,0.9s						
SUCK	Suckling Hills	5.35	36		Pn	08 58 15.1	+1.0
N20K	Mount Spurr	5.39	349	P	Pn	08 58 15.4	+0.6
	baz=167						
SPCR	Spurr Chakacha	5.40	349		Pn	08 58 15.4	+0.6
HMT	Hamilton	5.40	33		Pn	08 58 16.1	+1.2
N19K	Bonanza Creek	5.41	337		Pn	08 58 15.5	+0.5
N19K	Bonanza Creek	5.41	337	P	Pn	08 58 15.5	+0.5
	baz=153						
NICHA	Nichawak Mount	5.41	35		Pn	08 58 15.7	+0.7
SPCP	Crater Peak Br	5.45	350		Pn	08 58 16.4	+0.7
GOAT	Goat Mountain	5.46	29		Pn	08 58 16.4	+0.7
CGLM	Capps Glacier	5.48	350		Pn	08 58 16.4	+0.4
SUA	Susitna One	5.56	357		Pn	08 58 17.3	+0.2
SUA	Susitna One	5.56	357	P	Pn	08 58 17.3	+0.2
	baz=176						
O16K	Kokwok River B	5.63	314		Pn	08 58 18.3	+0.3
O16K	Kokwok River B	5.63	314	P	Pn	08 58 18.3	+0.3
	baz=128						
N18K	Kilae Creek	5.65	330		Pn	08 58 18.7	+0.4
N18K	Kilae Creek	5.65	330	P	Pn	08 58 18.7	+0.4
	baz=145						
STLK	Strandline Lak	5.65	352		Pn	08 58 18.7	+0.3
GRIN	Grindle Hills	5.66	37		Pn	08 58 19.3	+0.9
SNH	Sunshine Point	5.75	39	Pn	Pn	08 58 19.9	+0.2
KHIT	Khitrov Hills	5.80	36		Pn	08 58 21.0	+0.6
BMRM	Bremner River	5.82	28		Pn	08 58 21.4	+0.8
BMRM	Bremner River	5.82	28	P	Pn	08 58 21.4	+0.8
	baz=212						
GHO	Glory Hole Cre	5.89	6		Pn	08 58 23.0	+1.4
N17K	Nushagak Hills	5.93	324		Pn	08 58 22.8	+0.8
N17K	Nushagak Hills	5.93	324	P	Pn	08 58 22.8	+0.8
	baz=138						
WAX	Waxell Ridge	5.94	37		Pn	08 58 22.8	+0.5
SML	Sawmill	5.97	8		Pn	08 58 24.0	+1.4
KLU	Klutina	5.99	20		Pn	08 58 23.8	+0.8
KLU	Klutina	5.99	20	P	Pn	08 58 23.8	+0.8
	baz=203						
BARK	Barkley Ridge	6.03	39		Pn	08 58 23.9	+0.3
MESA	MESA	6.08	42		Pn	08 58 24.5	+0.2
MESA	MESA	6.08	42	P	Pn	08 58 24.5	+0.2
	baz=228						
SKT	Skwentna	6.11	354		Pn	08 58 25.2	+0.6
SKT	Skwentna	6.11	354	P	Pn	08 58 25.2	+0.6
	baz=172						
O15K	Ungalikthiuk R	6.15	306		Pn	08 58 26.4	+1.3
O15K	Ungalikthiuk R	6.15	306	P	Pn	08 58 26.4	+1.3
	baz=118						
M20K	Styx River	6.17	347		Pn	08 58 25.8	+0.4
M20K	Styx River	6.17	347	P	Pn	08 58 25.8	+0.4
	baz=164						
ISLE	Juniper Island	6.23	38		Pn	08 58 26.7	+0.4
BAGL	Bagley Icefiel	6.24	40		Pn	08 58 26.8	+0.5
M18K	Stony River	6.32	334		Pn	08 58 28.0	+0.6
M18K	Stony River	6.32	334	P	Pn	08 58 28.0	+0.6
	baz=150						
VRDI	Verde Repeater	6.35	31	Pn	Pn	08 58 28.5	+0.4
N25K	Chitina, Valde	6.37	24	Pn	Pn	08 58 29.1	+0.9
N25K	Chitina, Valde	6.37	24	P	Pn	08 58 29.3	+1.0
	baz=209						
GLB	Gilahina Butte	6.43	28		Pn	08 58 29.9	+0.9
N16K	Nishlik Lake	6.45	318		Pn	08 58 30.3	+1.1
N16K	Nishlik Lake	6.45	318	P	Pn	08 58 30.3	+1.1
	baz=132						
KIAG	Kiagna River	6.45	36		Pn	08 58 30.0	+0.6
M24K	Tolsona, Glenn	6.52	17		Pn	08 58 31.6	+1.3
M24K	Tolsona, Glenn	6.52	17	P	Pn	08 58 31.7	+1.5
	baz=199						
TABL	Table Mountain	6.55	43		Pn	08 58 31.6

S31K	**Pelican**	**7.86**	**69**	P		**Pn**	**08 58 47.5**	**-1.1**	
	baz=260								
L26K	**Log Cabin Wild**	**7.90**	**23**			**Pn**	**08 58 51.8**	**+2.6**	
PLBC	**Pleasant Camp**	**8.17**	**59**			**Pn**	**08 58 53.0**	**+0.2**	
PLBC	**Pleasant Camp**	**8.17**	**59**	P		**Pn**	**08 58 53.0**	**+0.2**	
	baz=250								
IL31		**9.01**	**9**			**Pn**	**08 59 05.4**	**+1.1**	
J16K	**Anvik River**	**9.07**	**329**	Pn		**Pn**	**08 59 06.0**	**+0.8**	
I23K	**Minto, Yukon-K**	**9.26**	**2**	Pn		**Pn**	**08 59 08.6**	**+1.0**	
P32M	**Atlin**	**9.50**	**61**	Pn		**Pn**	**08 59 11.9**	**+0.8**	
PRP	**Porcupine Dome**	**9.87**	**11**	Pn		**Pn**	**08 59 17.9**	**+1.6**	
M31M	**Drury Creek, Y**	**10.23**	**46**	Pn		**Pn**	**08 59 22.9**	**+1.8**	
I28M	**Miner Creek**	**10.75**	**23**	Pn		**Pn**	**08 59 31.3**	**+3.0**	
BMAR	**Burnt Mountain**	**11.83**	**10**	Pn		**Pn**	**08 59 44.6**	**+1.8**	
INK	**Inuvik**	**14.56**	**25**	Pn		**Pn**	**09 00 22.3**	**+2.2**	
YKA	**Yellowknife Ar**	**19.13**	**55**	P		**P**	**09 01 18.2**	**+1.0**	
A36M	**Sachs Harbour**	**19.19**	**23**	P		**P**	**09 01 20.1**	**+2.4**	
A36M				IAmb		IAmb	09 01 30.2		
	comp=Z,5.9nm,0.8s								
PINE	**Pine Mountain**	**22.20**	**111**	P		**P**	**09 01 49.5**	**-1.3**	
G08A	**Pilot Rock**	**22.27**	**105**	P		**P**	**09 01 50.7**	**-0.7**	
G08A				IAmb		IAmb	09 01 59.9		
	comp=Z,3.1nm,0.7s								
KRMB	**Red Mountain**	**22.33**	**119**	P		**P**	**09 01 50.9**	**-1.2**	
PNTR	**Pine Nut**	**26.32**	**117**	P		**P**	**09 02 29.2**	**-1.1**	
PNTR				IAmb		IAmb	09 02 32.0		
	comp=Z,3.1nm,1.1s								
FLWY	**Flagg Ranch**	**27.58**	**99**	P		**P**	**09 02 40.8**	**-0.8**	
FLWY				IAmb		IAmb	09 02 47.7		
	comp=Z,1.7nm,0.9s								
SPUT	**South Promonto**	**28.46**	**105**	P		**P**	**09 02 49.4**	**0.0**	
SPUT				IAmb		IAmb	09 02 50.0		
	comp=Z,2.5nm,1.1s								
MSU	**Marysvale**	**30.60**	**109**	P		**P**	**09 03 08.6**	**+0.1**	

IDC 09 09:01:09.4±1.8, 40°.89N×65°.50E, h0km, mbtmp3.3/4, ML2.9/4, Error ellipse: s-maj=27.3km s-min=18.3km az=154.0, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**6.43**	**245**	Pn	Pn	09 02 45.7	+0.3
GEYT	1.5nm,0.3s,baz=58,slow=11,SNR=8.4			Lg	Lg	09 04 34.1	
	baz=61,slow=43 2.9nm,0.4s						
AAK	**Ala-Archa**	**6.95**	**72**	Pn	Pn	09 02 52.1	-0.5
	0.1nm,0.3s,baz=265,slow=12,SNR=2.6 1.1nm,0.6s						
I31KZ	**AKTYUBINSK INF**	**10.85**	**334**	I	I	10 04 30.0	
	baz=146,slow=339,SNR=2.7						
BVAR	**Borovoye Array**	**12.59**	**14**	Pn	Pn	09 04 04.5	-5.1
	baz=191,slow=13,SNR=1.9 0.6nm,0.4s						
MKAR	**Makanchi Array**	**13.47**	**58**	Pn	Pn	09 04 19.7	-2.0
	baz=248,slow=15,SNR=2.1 0.1nm,0.5s						
I46RU	**ZALESOVO INFRA**	**18.40**	**38**	I	I	10 55 20.0	
	0.1nm,1.2s,baz=228,slow=327,SNR=2.0						

IDC 09 09:03:26.6±2.4, 54°.04N×86°.43E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=18.6km s-min=11.4km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**265**	I	I	09 08 48.0	
	0.1nm,1.9s,baz=83,slow=338,SNR=3.3						
ZALV	**Zalesovo Beam**	**0.96**	**265**	Pg	Pg	09 03 43.8	-1.2
	1.1nm,0.3s,baz=80,slow=17,SNR=12						
ZALV				Lg	Lg	09 03 58.9	
	2.4nm,0.3s,baz=83,slow=33,SNR=11						
KURBB	**Kurchatov Arra**	**5.93**	**238**	Pn	Pn	09 04 57.2	+1.5
	0.1nm,0.3s,baz=56,slow=13,SNR=8.5						
KURBB				Sn	Sn	09 06 03.6	-0.7
	baz=46,slow=27						
KURBB				Lg	Lg	09 06 33.5	
	baz=55,slow=33,SNR=1.1 1.5nm,0.6s						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	09 05 21.3	+1.0
	0.2nm,0.3s,baz=22,slow=15,SNR=9.1						
MKAR				Sn	Sn	09 06 46.5	-1.9
	baz=20,slow=22,SNR=2.6						
MKAR				Lg	Lg	09 07 31.4	
	baz=24,slow=40,SNR=3.2 0.3nm,0.3s						

IDC 09 09:10:00.2±3.6, 54°.08N×87°.31E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=32.8km s-min=20.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**266**	I	I	09 18 20.0	
	baz=83,slow=338,SNR=2.9						
ZALV	**Zalesovo Beam**	**1.48**	**266**	Pg	Pb	09 10 28.5	0.0
	0.7nm,0.3s,baz=86,slow=16,SNR=1.2						
ZALV				Lg	Lg	09 10 47.9	
	0.6nm,0.3s,baz=87,slow=20,SNR=1.4						
KURBB	**Kurchatov Arra**	**6.39**	**241**	Pn	Pn	09 11 34.2	-1.4
	baz=53,slow=14,SNR=1.1 0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.96**	**206**	Pn	Pn	09 11 59.3	+2.1
	0.1nm,0.3s,baz=26,slow=13,SNR=1.8 0.2nm,0.5s						

*NOU **09** 09:13:09.9, 42°.15S×173°.95E, h20km, MLv3.6/7, South Island, New Zealand*
*WEL **09** 09:13:09.7±0.3, 42°.2°×17°.4E°, h11km±3km, M2.9/16, ML3.2/16, MLv2.9/16, Error ellipse: s-maj=0.0km s-min=0.0km az=126.8, confirmed*

ISC 09 09:13:09.1±0.9, 42.08S±0.03×173.95E±0.03, h16km±6km, n73, σ1°41/84, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEKS	**Kekerengu Vall**	**0.12**	**9**	P	**Pg**	**09 13 13.4**	**+0.7**
KEKS				S	**Sg**	**09 13 16.0**	**+0.9**
BSWZ	**Blackbirch Sta**	**0.37**	**351**	P	**Pg**	**09 13 16.3**	**-0.3**
BSWZ				S	**Sg**	**09 13 20.8**	**-0.9**
CMWZ	**Cape Campbell**	**0.38**	**31**	P	**Pn**	**09 13 18.6**	**-1.4**
CMWZ				S	**Sb**	**09 13 25.5**	**+2.3**
KIKS	**Kaikoura**	**0.40**	**210**	P	**Pn**	**09 13 19.5**	**-0.8**
KIKS				S	**Sb**	**09 13 26.5**	**+2.7**
KHZ	**Kahutara**	**0.46**	**222**	P	**Pb**	**09 13 19.5**	**+0.7**
KHZ	**Kahutara**	**0.46**	**222**	P	**Pb**	**09 13 19.4**	**+0.6**
KHZ				S	**Sb**	**09 13 26.6**	**+1.2**
TUWZ	**Tuamarina**	**0.65**	**359**	P	**Pb**	**09 13 21.6**	**-0.4**
TUWZ				S	**Sg**	**09 13 30.6**	**+0.2**
THZ	**Tophouse**	**0.84**	**292**	P	**Pg**	**09 13 24.3**	**-1.2**
THZ				S	**Sg**	**09 13 34.3**	**-2.3**
TCW	**Tory Channel**	**0.90**	**16**	P	**Pb**	**09 13 26.4**	**+0.1**
SNZO	**South Karori**	**0.95**	**36**	P	**Pn**	**09 13 28.4**	**+0.6**
BHW	**Baring Head**	**0.96**	**46**	P	**Pn**	**09 13 28.5**	**+0.6**
BHW				S	**Sn**	**09 13 41.9**	**+0.7**
NNZ	**Nelson**	**0.96**	**333**	P	**Pg**	**09 13 26.2**	**-1.5**
NNZ				S	**Sg**	**09 13 38.1**	**-2.2**
WEL	**Wellington**	**1.00**	**38**	P	**Pn**	**09 13 29.2**	**+0.7**
WEL				S	**Sn**	**09 13 43.6**	**+1.3**
PLWZ	**Palliser**	**1.10**	**63**	P	**Pn**	**09 13 30.4**	**+0.6**
GVZ	**Greta Valley S**	**1.12**	**217**	P	**Pn**	**09 13 30.7**	**+0.5**
GVZ				S	**Sn**	**09 13 46.8**	**+1.6**
MRNZ	**Matariki Terra**	**1.12**	**307**	P	**Pg**	**09 13 29.4**	**-1.4**
MRNZ				S	**Sg**	**09 13 43.6**	**-1.8**
DUWZ	**D'Urville Isla**	**1.28**	**359**	P	**Pn**	**09 13 32.2**	**-0.1**
CAW	**Cannon Point**	**1.28**	**41**	P	**Pg**	**09 13 32.8**	**-0.9**
TKNZ	**Takaka Hill**	**1.28**	**324**	P	**Pn**	**09 13 32.0**	**-0.4**
PAWZ	**Paruwai Farm**	**1.30**	**58**	P	**Pg**	**09 13 33.0**	**-1.1**
KIW	**Kapiti Island**	**1.41**	**31**	P	**Pg**	**09 13 34.9**	**-1.4**
LTZ	**Lake Taylor**	**1.43**	**240**	P	**Pn**	**09 13 34.9**	**+0.4**
AMCZ	**Amberley**	**1.46**	**221**	P	**Pn**	**09 13 35.0**	**+0.2**
TRWZ	**Traveller**	**1.47**	**63**	P	**Pb**	**09 13 35.1**	**-2.1**
MTW	**Mount Morrison**	**1.48**	**52**	P	**Pb**	**09 13 35.2**	**-1.1**
OGWZ	**Otaki Gorge**	**1.56**	**36**	P	**Pb**	**09 13 36.6**	**-0.9**
DSZ	**Denniston Nort**	**1.64**	**281**	P	**Pn**	**09 13 38.3**	**+1.0**
QRZ	**Quartz Range**	**1.65**	**319**	P	**Pn**	**09 13 38.1**	**+0.7**
QRZ	**Quartz Range**	**1.65**	**319**	P	**Pn**	**09 13 38.0**	**+0.7**
HOWZ	**Holdsworth Sta**	**1.66**	**45**	P	**Pn**	**09 13 37.7**	**+0.1**
TMWZ	**Te Maipa**	**1.75**	**57**	P	**Pn**	**09 13 38.6**	**-0.2**
MRZ	**Mangatainoka R**	**1.87**	**41**	P	**Pn**	**09 13 40.4**	**0.0**
OXZ	**Oxford**	**1.88**	**228**	P	**Pn**	**09 13 40.0**	**-0.6**
MQZ	**McQueen's Vall**	**1.89**	**210**	P	**Pn**	**09 13 39.8**	**-0.9**
AKCZ	**Akaroa Harbour**	**1.95**	**203**	P	**Pn**	**09 13 41.6**	**0.0**
TIWZ	**Tintock**	**1.95**	**49**	P	**Pn**	**09 13 41.9**	**+0.3**
INZ	**Inchbonnie**	**1.97**	**250**	P	**Pn**	**09 13 42.4**	**+0.6**
RACZ	**Rakaia**	**2.12**	**218**	P	**Pn**	**09 13 43.3**	**-0.5**
PRWZ	**Pori Road**	**2.15**	**46**	P	**Pn**	**09 13 44.2**	**-0.1**
POWZ	**Post Office Ro**	**2.17**	**40**	P	**Pn**	**09 13 44.7**	**+0.2**
BFZ	**Birch Farm**	**2.22**	**52**	P	**Pg**	**09 13 52.9**	**+1.3**
MHCZ	**Mount Hutt**	**2.28**	**230**	P	**Pn**	**09 13 45.3**	**-0.8**
WACZ	**Wakanui South**	**2.42**	**219**	P	**Pn**	**09 13 47.5**	**-0.6**
DVHZ	**Dannevirke**	**2.44**	**44**	P	**Pg**	**09 13 54.3**	**-1.5**
WAZ	**Wanganui**	**2.45**	**19**	P	**Pb**	**09 13 51.0**	**-1.8**
WVZ	**Waitaha Valley**	**2.58**	**246**	P	**Pn**	**09 13 50.6**	**+0.5**
RPZ	**Rata Peaks**	**2.69**	**232**	P	**Pn**	**09 13 51.8**	**+0.1**
RPZ	**Rata Peaks**	**2.69**	**232**	P	**Pn**	**09 13 51.6**	**-0.1**
PNHZ	**Pukenui**	**2.75**	**39**	P	**Pn**	**09 13 52.0**	**-0.6**
ARCZ	**Arundel**	**2.76**	**227**	P	**Pn**	**09 13 52.4**	**-0.4**
MTVZ	**Mangateitei**	**2.93**	**24**	P	**Pn**	**09 13 56.8**	**+1.8**
VRZ	**Vera Road**	**3.01**	**12**	P	**Pn**	**09 13 59.1**	**+3.0**
WNVZ	**Wahianoa**	**3.02**	**25**	P	**Pb**	**09 13 59.3**	**-3.3**
TRVZ	**Turoa**	**3.03**	**24**	P	**Pb**	**09 14 01.1**	**-1.7**
MAVZ	**Matarangi**	**3.06**	**24**	P	**Pb**	**09 14 01.7**	**-1.7**
TUVZ	**Tukino**	**3.09**	**25**	P	**Pn**	**09 13 59.1**	**+1.7**
COVZ	**Chateau Observ**	**3.12**	**23**	P	**Pb**	**09 14 03.7**	**-0.5**
TMZ	**Timaru**	**3.15**	**222**	P	**Pn**	**09 13 57.7**	**-0.4**
NGZ	**Ngauruhoe**	**3.16**	**24**	P	**Pb**	**09 14 03.2**	**-1.8**
SNVZ	**South Ngauruho**	**3.16**	**24**	P	**Pb**	**09 14 02.7**	**-2.3**
OTVZ	**Oturere**	**3.19**	**25**	P	**Pn**	**09 13 60.0**	**+1.2**
ETVZ	**East Tongariro**	**3.23**	**25**	P	**Pn**	**09 14 01.8**	**+2.6**
TMVZ	**Te Maari**	**3.25**	**25**	P	**Pn**	**09 14 02.6**	**+3.2**
KWHZ	**Kaweka Forest**	**3.25**	**36**	P	**Pn**	**09 13 59.1**	**-0.4**
FOZ	**Fox Glacier**	**3.37**	**243**	P	**Pn**	**09 14 02.0**	**+0.9**
HIZ	**Hauiti**	**3.63**	**11**	P	**Pn**	**09 14 06.6**	**+2.0**
HIZ	**Hauiti**	**3.63**	**11**	P	**Pn**	**09 14 07.6**	**+3.0**
ODZ	**Otahua Downs**	**3.82**	**218**	P	**Pn**	**09 14 06.5**	**-0.7**
ODZ	**Otahua Downs**	**3.82**	**218**	P	**Pn**	**09 14 06.3**	**-0.9**
TLZ	**Tolley Road**	**3.94**	**18**	P	**Pn**	**09 14 13.0**	**+4.1**
JCZ	**Jackson Bay**	**4.28**	**240**	P	**Pn**	**09 14 13.3**	**-0.4**
JCZ	**Jackson Bay**	**4.28**	**240**	P	**Pn**	**09 14 14.4**	**+0.7**
PKGZ	**Pakihiroa**	**5.25**	**38**	P	Pb	09 14 33.6	-6.9

IDC 09 09:14:28.7±3.2, 54°.11N×86°.87E, h0km, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=29.1km s-min=16.2km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.22**	**263**	I	I	09 21 50.0	
	baz=79,slow=338,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.22**	**263**	Pg	Pg	09 14 51.4	-0.7
	1.5nm,0.3s,baz=81,slow=14,SNR=14						
ZALV				Lg	Lg	09 15 07.2	
	0.5nm,0.3s,baz=78,slow=21,SNR=2.6						
KURBB	**Kurchatov Arra**	**6.19**	**239**	Pn	Pn	09 16 02.0	+0.7
	0.1nm,0.3s,baz=54,slow=13,SNR=4.2 0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.89**	**204**	Pn	Pn	09 16 24.4	-0.2
	0.1nm,0.3s,baz=23,slow=14,SNR=2.1						
MKAR				Lg	Lg	09 18 41.1	
	baz=26,slow=24,SNR=1.9 0.1nm,0.3s						
BVAR	**Borovoye Array**	**9.87**	**270**	Pn	Pn	09 16 52.5	+0.8
	baz=75,slow=17,SNR=1.8 0.3nm,0.4s						

*NOU **09** 09:17:27.1, 16°.23S×175°.23W, h439km, mb4.6/21, Tonga Islands*
*IDC **09** 09:18:03.2±2.6, 18°.05S×178°.39W, h574km±30km, mb3.8/17, mbtmp4.7/18, Error ellipse: s-maj=16.8km s-min=14.6km az=125.0*
*NEIC **09** 09:18:05.7±2.0, 18°.0S±0°.1×178°.4W±0°.1, h591km±6km, mb4.5/328, Error ellipse: s-maj=18.4km s-min=13.9km az=136.0*

ISC 09 09:18:04.2±0.3, 17°.99S±0°.07×178°.50W±0°.07, h579km, n755, σ0°83/713, mb4.5/185, 27C-19D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**59**	P	**P**	**09 19 59.1**	**-0.3**
NIUE	**Niue**	**8.21**	**99**	P	**P**	**09 20 06.1**	**+1.3**
PINNC	**Pines Island,**	**13.96**	**248**	P	**P**	**09 21 04.3**	**+1.3**
PINNC	**Pines Island,**	**13.96**	**248**	P	**P**	**09 21 04.3**	**+1.3**
YATNC	**Mamie plateau,**	**14.31**	**251**	P	**P**	**09 21 07.5**	**+1.0**
OUENC	**Ouen Island, N**	**14.45**	**250**	P	**P**	**09 21 09.1**	**+1.3**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**09 21 11.3**	**+0.8**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**09 21 12.6**	**+2.1**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**09 21 09.6**	**-0.9**
	11nm,0.6s,baz=110,slow=17,SNR=10						
ONTNC	**Ouen Toro**	**14.77**	**251**	P	**P**	**09 21 11.8**	**+1.0**
KOUNC	**Koumac, New Ca**	**16.45**	**258**	P	**P**	**09 21 28.4**	**+1.6**
KOUNC	**Koumac, New Ca**	**16.45**	**258**	P	**P**	**09 21 29.2**	**+2.5**
URZ	**Urewera**	**20.56**	**190**	P	**P**	**09 22 00.8**	**-3.0**
	2.6nm,0.3s,baz=346,slow=2.2,SNR=6.4 2.6nm,0.3s						
RTZ	**Ruatahuna**	**20.93**	**190**	P	**P**	**09 22 07.0**	**-0.2**
HNR	**Honiara**	**22.58**	**289**	P	P	09 22 14.6	-7.6
MRZ	**Mangatainoka R**	**23.17**	**192**	P	**P**	**09 22 26.2**	**-0.9**
DSZ	**Denniston Nort**	**25.09**	**197**	P	**P**	**09 22 45.0**	**+0.8**
INZ	**Inchbonnie**	**26.10**	**197**	P	**P**	**09 22 52.4**	**-0.6**
INZ				IAmb	IAmb	09 22 53.5	
	comp=Z,25nm,1.3s						
EIDS	**Eidsvold**	**29.16**	**250**	P	**P**	**09 23 21.0**	**+1.1**
EIDS				IAmb	IAmb	09 23 21.4	
	comp=Z,16nm,0.8s						
MLZ	**Mavora Lakes**	**29.50**	**199**	P	**P**	**09 23 23.2**	**+0.7**
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**09 23 26.4**	**+0.6**
ARMA				IAmb	IAmb	09 23 28.2	
	comp=Z,15nm,0.8s						
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**09 23 26.8**	**+1.1**
WHZ	**Wether Hill Ro**	**30.02**	**199**	P	**P**	**09 23 27.9**	**+0.9**
CNB	**Canberra Magne**	**33.31**	**232**	P	**P**	**09 23 56.5**	**+1.2**
CTA	**Charters Tower**	**33.35**	**261**	P	**P**	**09 23 56.1**	**+0.3**
CTA	**Charters Tower**	**33.35**	**261**	P	**P**	**09 23 55.8**	**+0.1**
	comp=Z,13nm,0.4s,baz=88,slow=9.4,SNR=9.8 comp=Z,13nm,0.4s						
CTAO	**Charters Tower**	**33.35**	**261**	P	**P**	**09 23 56.0**	**+0.3**
CTAO	**Charters Tower**	**33.35**	**261**	P	**P**	**09 23 55.9**	**+0.1**
CAN	**Canberra**	**33.59**	**233**	P	**P**	**09 23 58.6**	**+1.1**
CAN				IAmb	IAmb	09 24 00.1	
	comp=Z,20nm,1.1s						
PMG	**Port Moresby**	**34.39**	**280**	P	**P**	**09 24 06.1**	**+1.6**
CMSA	**Cobar Meteorol**	**35.04**	**240**	P	**P**	**09 24 10.3**	**+0.7**
QLP	**Quilpie**	**35.42**	**249**	P	**P**	**09 24 13.1**	**+0.2**
COEN	**Coen**	**37.02**	**271**	P	**P**	**09 24 27.4**	**+1.2**
TOO	**Toolangi**	**37.05**	**231**	P	**P**	**09 24 27.5**	**+1.3**
TOO	**Toolangi**	**37.05**	**231**	P	**P**	**09 24 27.7**	**+1.5**
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**09 24 39.4**	**+1.3**
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**09 24 39.1**	**+1.0**
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**09 24 38.6**	**+0.5**
	comp=Z,14nm,0.8s,baz=90,slow=10,SNR=29						
STKA				PcP	**PcP**	**09 26 35.8**	**0.0**
	comp=Z,3.1nm,0.9s,baz=106,slow=6.0,SNR=3.4 comp=Z,14nm,0.8s						
INKA	**Innaminka**	**38.64**	**248**	P	**P**	**09 24 40.4**	**+1.3**
QIS	**Mount Isa**	**39.55**	**259**	P	**P**	**09 24 45.8**	**-0.9**
HTT	**Hallett**	**41.03**	**240**	P	**P**	**09 24 59.2**	**+0.9**
LCRK	**Leigh Creek**	**41.14**	**244**	P	**P**	**09 24 59.5**	**+0.4**
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**09 25 16.3**	**+0.4**
BBOO				IAmb	IAmb	09 25 17.3	
	comp=Z,12nm,0.7s						
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**09 25 16.2**	**+0.3**
MLH	**Mauna Loa**	**43.62**	**32**	P	**P**	**09 25 20.1**	**+1.3**
HMH	**Humu'ula Sheep**	**43.66**	**32**	P	**P**	**09 25 20.0**	**+0.8**
HPAH	**Hawaii Prepara**	**43.91**	**32**	P	**P**	**09 25 21.8**	**+0.9**
WR0	**Warramunga Arr**	**44.34**	**260**	P	**P**	**09 25 23.9**	**-0.4**
WB0	**Warramunga Arr**	**44.50**	**260**	P	**P**	**09 25 24.8**	**-0.6**
WB0				IAmb	IAmb	09 25 26.1	
	comp=Z,17nm,0.9s						
WB2	**Warramunga Arr**	**44.52**	**260**	P	**P**	**09 25 24.7**	**-0.9**
WB2				IAmb	IAmb	09 25 26.4	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**44.52**	**260**	P	**P**	**09 25 24.9**	**-0.7**
WRAB				IAmb	IAmb	09 25 26.3	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**44.53**	**260**	P	**P**	**09 25 24.7**	**-1.0**
WRA	**Warramunga Arr**	**44.53**	**260**	P	**P**	**09 25 24.9**	**-0.8**
	comp=Z,7.3nm,0.5s,baz=96,slow=7.5,SNR=107						
WRA				PcP	**PcP**	**09 26 55.4**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=87,slow=3.4,SNR=6.0						
WRA				S	**S**	**09 31 15.5**	**-4.6**
	comp=Z,1.9nm,1.0s,baz=96,slow=13,SNR=5.5 comp=Z,7.3nm,0.5s						
AS31	**Alice Springs**	**44.69**	**254**	P	**P**	**09 25 26.8**	**0.0**
AS31				IAmb	IAmb	09 25 28.4	
	comp=Z,14nm,0.9s						
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**09 25 26.9**	**0.0**
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**09 25 26.7**	**-0.2**
	comp=Z,37nm,0.7s,baz=87,slow=8.9,SNR=343						
ASAR				PcP	**PcP**	**09 26 56.0**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=99,slow=3.9,SNR=9.0						
ASAR				PP	**PP**	**09 27 21.1**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=88,slow=8.6,SNR=2.3						
ASAR				S	**S**	**09 31 18.9**	**-3.3**
	comp=Z,4.3nm,0.9s,baz=91,slow=15,SNR=22 comp=Z,37nm,0.7s						
MULG	**Mulgathing**	**44.70**	**245**	P	**P**	**09 25 26.7**	**-0.1**
MTN	**Manton Dam**	**48.71**	**269**	P	**P**	**09 25 56.6**	**-0.6**
MTN				IAmb	IAmb	09 25 58.1	
	comp=Z,10nm,0.8s						
FORT	**Forrest**	**49.90**	**245**	P	**P**	**09 26 05.0**	**-0.7**
FORT				IAmb	IAmb	09 26 06.4	
	comp=Z,10nm,0.7s						
KNRA	**Kununurra**	**50.39**	**264**	P	**P**	**09 26 09.4**	**-0.2**
KNRA				IAmb	IAmb	09 26 10.7	
	comp=Z,10nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.93**	**261**	P	**P**	**09 26 28.0**	**+0.3**
PSA00	**Pilbara Seismi**	**57.80**	**255**	P	**P**	**09 27 01.0**	**-0.5**
VNDA	**Vanda**	**60.36**	**185**	P	**P**	**09 27 19.1**	**+1.5**
MJAR	**Matsushiro Arr**	**67.92**	**323**	P	**P**	**09 28 05.6**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=154,slow=6.2,SNR=3.1 comp=Z,3.1nm,0.6s						
ADK	**Adak**	**69.59**	**1**	P	**P**	**09 28 15.4**	**-0.3**
QSPA	**South Pole Qui**	**72.07**	**180**	P	**P**	**09 28 30.7**	**+0.4**
QSPA	**South Pole Qui**	**72.07**	**180**	P	**P**	**09 28 30.4**	**0.0**
	comp=Z,4.7nm,0.7s,baz=350,slow=1.1,SNR=12 comp=Z,4.7nm,0.7s						
SSLB	**Suanglung**	**72.20**	**303**	P	**P**	**09 28 31.0**	**-0.7**
SSLB				IAmb	IAmb	09 28 41.8	
	comp=Z,31nm,1.4s						
PEA0B	**Petropavlovsk-**	**73.73**	**345**	P	**P**	**09 28 40.1**	**+0.3**
PETK	**Petropavlovsk-**	**73.73**	**345**	P	**P**	**09 28 40.5**	**+0.7**
PETK	**Petropavlovsk-**	**73.73**	**345**	P	**P**	**09 28 38.8**	**-0.9**
	comp=Z,7.6nm,0.7s,baz=130,slow=7.5,SNR=8.9 comp=Z,7.6nm,0.7s						
CHNA	**Chernabura Isl**	**74.30**	**11**	P	**P**	**09 28 42.2**	**-0.6**
	baz=199						
KSRS	**Korea Array**	**74.70**	**318**	P	**P**	**09 28 46.8**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=122,slow=5.6,SNR=2.7 comp=Z,0.9nm,0.5s						
SBC	**Santa Barbara**	**76.42**	**47**	P	**P**	**09 28 55.7**	**+0.6**
	baz=237						
PKM	**Mcpherson Peak**	**76.59**	**46**	P	**P**	**09 28 56.7**	**+0.3**
	baz=236						
USRK	**Ussuriysk Ar.**	**76.63**	**326**	P	**P**	**09 28 57.1**	**+1.0**
USRK	**Ussuriysk Ar.**	**76.63**	**326**	P	**P**	**09 28 57.4**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=145,slow=5.3,SNR=3.4 comp=Z,2.2nm,0.7s						
PMPB	**Monarch Peak**	**76.66**	**45**	P	**P**	**09 28 57.5**	**+1.0**
PMPB				IAmb	IAmb	09 28 58.3	
	comp=Z,12nm,0.9s						
SMMC	**Simmler**	**76.70**	**46**	P	**P**	**09 28 57.5**	**+0.7**
	baz=236						
BBGB	**Big Mountain B**	**76.70**	**44**	P	**P**	**09 28 57.4**	**+0.6**
BBGB				IAmb	IAmb	09 29 09.3	
	comp=Z,23nm,1.1s						
CIS	**Catalina Islan**	**76.77**	**48**	P	**P**	**09 28 58.4**	**+1.3**
	baz=238						
BCW	**Bitter Crk WRg**	**76.90**	**46**	P	**P**	**09 28 58.4**	**+0.4**
BCW				IAmb	IAmb	09 29 59.8	
	comp=Z,17nm,0.8s						
SII	**Sitkinak Islan**	**77.02**	**14**	P	**P**	**09 28 57.0**	**-0.9**
	baz=204						
KMRM	**Mail Ridge**	**77.13**	**40**	P	**P**	**09 29 00.3**	**+1.3**
PASC	**Pasadena Art C**	**77.34**	**48**	P	**P**	**09 29 00.2**	**0.0**
ARVC	**Arvin**	**77.40**	**46**	P	**P**	**

baz=238,SNR=8.8
N14K **Kuskokwak Cree** 78.83 9 P P 09 29 07.1 -0.4
baz=196
WAKR **Walker** 78.84 43 P P 09 29 09.1 +0.8
WAKR IAmb IAmb 09 29 10.1
comp=Z,17nm,0.9s
MPK **Martis Peak** 78.89 42 P P 09 29 09.3 +0.6
MPK IAmb IAmb 09 29 10.2
comp=Z,20nm,0.8s
GSC **Goldstone, Bar** 78.90 47 P P 09 29 08.8 +0.1
GSC **Goldstone, Bar** 78.90 47 P P 09 29 09.2 +0.6
baz=238
HEC **Hector,Ludlow** 78.98 48 P P 09 29 09.6 +0.5
baz=239
P17K **Kvichak River** 79.00 11 P P 09 29 08.2 -0.2
baz=201
BC3 **Big Chuckawall** 79.02 49 P P 09 29 09.7 +0.4
baz=240,SNR=5.6
HUMO **Hull Mountain** 79.02 38 P P 09 29 10.2 +1.2
PNTR **Pine Nut** 79.06 43 P P 09 29 10.2 +0.7
PNTR IAmb IAmb 09 29 11.1
comp=Z,24nm,0.9s
M13K **Dall Lake** 79.08 8 P P 09 29 08.8 -0.1
baz=195
DBO **Dodson Butte** 79.16 38 P P 09 29 09.9 +0.1
L04D **Klamath Falls** 79.17 39 P P 09 29 10.4 +0.4
L04D IAmb IAmb 09 29 11.3
comp=Z,15nm,0.7s
DSP **Deep Springs** 79.19 45 P P 09 29 10.8 +0.8
QSM **Queen of Sheba** 79.20 47 P P 09 29 10.3 +0.2
YERR **Yerington** 79.23 43 P P 09 29 10.9 +0.4
YERR IAmb IAmb 09 29 11.8
comp=Z,19nm,1.0s
N15K **Kwethluk River** 79.30 9 P P 09 29 09.9 -0.2
baz=198
LHV **Little Huntoon** 79.31 44 P P 09 29 11.8 +1.2
LHV IAmb IAmb 09 29 12.5
comp=Z,18nm,1.0s
Q19K **Cape Douglas,** 79.31 13 P P 09 29 09.8 -0.3
baz=204
GRAC **Grapevine Rang** 79.40 46 P P 09 29 12.5 +1.3
GRAC IAmb IAmb 09 29 12.9
comp=Z,13nm,0.8s
GRAC **Grapevine Rang** 79.40 46 P P 09 29 11.6 +0.4
baz=238
P18K **Big Mountain,** 79.42 12 P P 09 29 10.3 -0.4
baz=202
O17K **Koliganek Bris** 79.42 11 P P 09 29 10.5 -0.1
baz=201
GMRC **Granite Mounta** 79.44 48 P P 09 29 12.0 +0.5
baz=239
GWY **Greenwater Val** 79.45 47 P P 09 29 12.0 +0.4
PIX **Pinacate** 79.46 52 P P 09 29 12.2 +0.6
FURC **Furnace Creek,** 79.47 46 P P 09 29 12.3 +0.8
baz=238,SNR=6.6
IRM **Iron Mountain** 79.49 49 P P 09 29 12.3 +0.6
baz=240,SNR=7.8
RYN **Ryan** 79.50 44 P P 09 29 12.6 +0.7
PAHR **Pah Rah Range** 79.54 42 P P 09 29 12.2 +0.2
PAHR IAmb IAmb 09 29 13.4
comp=Z,18nm,1.2s
NVAR **Mina Array Bea** 79.54 44 P P 09 29 12.5 +0.4
NVAR **Mina Array Bea** 79.54 44 P P 09 29 12.3 +0.2
comp=Z,6.7nm,0.7s,baz=224,slow=8.9,SNR=63
comp=Z,6.7nm,0.7s
SHOC **Shoshone, Teco** 79.58 47 P P 09 29 12.4 +0.3
baz=239,SNR=6.0
TUQ **Turquoise Moun** 79.58 47 P P 09 29 12.6 +0.3
baz=239,SNR=5.5
GMN **Gold Mountain** 79.63 45 P P 09 29 13.1 +0.5
M15K **Kasigluk River** 79.71 9 P P 09 29 12.0 -0.2
baz=197
BLYC **Blythe** 79.74 50 P P 09 29 14.0 +1.0
MZP **Montezuma Peak** 79.76 45 P P 09 29 13.8 +0.4
N16K **Nishlik Lake** 79.80 10 P P 09 29 13.2 +0.5
baz=199
WCT **Wildcat Mounta** 79.80 46 P P 09 29 14.0 +0.7
113A **Mohawk Valley,** 79.81 51 P P 09 29 14.7 +1.3
O18K **Koktuh Hills** 79.85 12 P P 09 29 12.3 -0.7
O18K **Koktuh Hills** 79.85 12 P P 09 29 12.3 -0.7
baz=202,SNR=6.5
KVN **Kaiserville** 80.01 43 P P 09 29 14.7 +0.1
KVN IAmb IAmb 09 29 15.8
comp=Z,13nm,0.9s
I04A **Tendick Farm,** 80.05 38 P P 09 29 14.7 +0.3
I04A IAmb IAmb 09 29 15.4
comp=Z,16nm,1.0s
L14K **Kuka Creek** 80.06 8 P P 09 29 13.4 -0.6
baz=195
TPH **Tonopah** 80.07 45 P P 09 29 14.9 +0.1
BNX **BinXian** 80.11 325 ⇓P P 09 29 15.0 +0.4
BNX pmax pmax
comp=Z,16nm,1.0s
BNX pmax pmax
comp=Z,140nm,6.8s
N17K **Nushagak Hills** 80.11 11 P P 09 29 13.7 -0.6
baz=200
214A **Organ Pipe Nat** 80.13 52 P P 09 29 16.0 +0.9
214A **Organ Pipe Nat** 80.13 52 P P 09 29 15.7 +0.6
baz=242,SNR=6.6
TPNV **Topopah Spring** 80.14 46 P P 09 29 15.6 +0.4
TPNV **Topopah Spring** 80.14 46 P P 09 29 15.7 +0.5
baz=239,SNR=11
HSIG 80.20 55 P P 09 29 15.8 +0.3
PDMCI **Parker Dam,Lak** 80.28 49 P P 09 29 15.9 +0.1
baz=240,SNR=6.4
M16K **Timber Creek** 80.29 10 P P 09 29 15.9 +0.7
M16K **Timber Creek** 80.29 10 P P 09 29 15.1 -0.1
baz=199
K05A **Summer Lake** 80.31 39 P P 09 29 16.8 +0.8
O19K **Port Alsworth** 80.34 12 P P 09 29 14.8 -0.6
O19K **Port Alsworth** 80.34 12 P P 09 29 14.6 -0.8
baz=203
CNPM **China Poot** 80.38 14 P P 09 29 15.5 -0.2
CNPM IAmb IAmb 09 29 34.3
comp=Z,22nm,1.2s
HOM **Homer** 80.41 13 P P 09 29 14.6 -1.2
baz=206
G03D **McMinnville, O** 80.42 36 P P 09 29 16.6 +0.4
J05D **Fort Rock, OR** 80.44 39 P P 09 29 17.2 +0.6
N18K **Kilae Creek** 80.49 11 P P 09 29 15.2 -1.0
baz=202
L15K **Ungalak Mounta** 80.55 8 P P 09 29 15.9 -0.6
baz=196
WTNK **Soaring Height** 80.61 47 P P 09 29 18.2 +0.7
BRSE **Bradley Lake S** 80.69 14 P P 09 29 16.6 -0.7
baz=207
H04A **Detroit Lake** 80.71 37 IAmb IAmb 09 29 18.2
comp=Z,9.7nm,0.7s
S11A **Rachel** 80.84 46 P P 09 29 19.5 +0.7
S11A IAmb IAmb 09 29 20.1
comp=Z,18nm,1.0s
L16K **Owhat River** 80.86 9 P P 09 29 17.9 -0.2
baz=198
N19K **Bonanza Creek** 80.88 12 IAmb IAmb 09 29 18.2
comp=Z,12nm,0.9s
N19K **Bonanza Creek** 80.88 12 P P 09 29 17.8 -0.6
baz=203
M17K **Holitna River** 80.89 10 P P 09 29 18.6 +0.3
baz=200
PINE **Pine Mountain** 80.91 38 P P 09 29 19.9 +0.8
I05D **Terrebonne, OR** 80.99 38 P P 09 29 20.0 +0.7
I05D IAmb IAmb 09 29 20.7
comp=Z,21nm,1.1s
K15K **Wolf Creek Mou** 81.13 8 P P 09 29 19.3 -0.2
baz=196
PRN **Pahroc Range** 81.19 46 P P 09 29 21.6 +1.0
PRN IAmb IAmb 09 29 22.4
comp=Z,17nm,0.9s
M18K **Stony River** 81.25 11 P P 09 29 20.1 0.0
baz=202
SEW **Seward** 81.31 14 P P 09 29 20.4 0.0
baz=208
R11B **Troy Canyon, C** 81.31 45 P P 09 29 21.7 +0.4
baz=239,SNR=12
BMN **Battle Mountai** 81.32 43 P P 09 29 21.9 +0.7
BMN IAmb IAmb 09 29 22.6
comp=Z,19nm,1.0s
J14K **Nanvaranak Lak** 81.33 7 P P 09 29 20.1 -0.3
baz=194
L17K **Donlin** 81.45 9 P P 09 29 21.6 +0.5
baz=199
CAPN **Captain Cook N** 81.52 13 P P 09 29 21.8 +0.4
baz=206
WVOR **Wild Horse Val** 81.52 40 P P 09 29 22.6 +0.5
WVOR IAmb IAmb 09 29 23.6

comp=Z,25nm,1.1s
G05A **Wamic** 81.54 37 P P 09 29 22.0 0.0
G05A IAmb IAmb 09 29 23.2
comp=Z,21nm,1.1s
O22K **Cooper Landing** 81.58 14 P P 09 29 20.7 -1.1
baz=208
N20K **Mount Spurr** 81.68 13 P P 09 29 21.1 -1.4
baz=205,SNR=7.0
P23K **Montague Islan** 81.71 15 P P 09 29 21.7 -0.8
baz=210
L18K **Granite Mounta** 81.79 10 P P 09 29 23.1 +0.2
L18K IAmb IAmb 09 29 24.1
comp=Z,17nm,0.9s
L18K **Granite Mounta** 81.79 10 P P 09 29 23.0 +0.2
baz=201,SNR=5.8
TUC **Tucson** 81.82 52 P P 09 29 25.1 +1.2
TUC IAmb IAmb 09 29 26.0
comp=Z,12nm,1.0s
TUC **Tucson** 81.82 52 P P 09 29 24.6 +0.7
baz=243
M19K **Big River Lodg** 81.90 11 P P 09 29 22.4 -1.0
baz=203
I07A **Izee** 81.92 39 P P 09 29 24.3 +0.1
I07A IAmb IAmb 09 29 25.6
comp=Z,19nm,0.9s
G06A **Carlson Farm,** 81.92 37 P P 09 29 23.9 -0.1
G06A IAmb IAmb 09 29 25.1
comp=Z,14nm,1.0s
K17K **Iditarod** 82.00 9 P P 09 29 23.4 -0.5
baz=199
L19K **White Mountain** 82.07 11 P P 09 29 23.6 -0.7
L19K IAmb IAmb 09 29 25.8
comp=Z,12nm,0.9s
L19K **White Mountain** 82.07 11 P P 09 29 24.0 -0.3
baz=203
GNW **Green Mountain** 82.09 34 P P 09 29 24.9 +0.2
GNW IAmb IAmb 09 29 25.9
comp=Z,10.0nm,0.8s
BELA **Belgrano 2** 82.10 173 P P 09 29 23.7 -0.7
BELA IAmb IAmb 09 29 24.7
comp=Z,8.3nm,0.7s
RC01 **Rabbit Creek A** 82.12 14 P P 09 29 24.6 0.0
RC01 IAmb IAmb 09 29 24.7
comp=Z,21nm,1.2s
RC01 **Rabbit Creek A** 82.12 14 P P 09 29 23.9 -0.6
baz=207
M20K **Styx River** 82.12 12 P P 09 29 24.3 -0.4
baz=204
J08A **Circle Bar Ran** 82.13 40 P P 09 29 25.6 +0.4
J08A IAmb IAmb 09 29 26.6
comp=Z,23nm,1.1s
LON **Longmire** 82.15 35 P P 09 29 25.2 +0.1
Q12A **Willow Creek R** 82.17 45 P P 09 29 26.1 +0.5
Q12A IAmb IAmb 09 29 26.9
comp=Z,17nm,1.0s
J16K **Anvik River** 82.21 8 P P 09 29 25.3 +0.4
J16K IAmb IAmb 09 29 26.2
comp=Z,30nm,1.2s
J16K **Anvik River** 82.21 8 P P 09 29 24.6 -0.4
baz=197
SUA **Susitna One** 82.23 13 P P 09 29 24.2 -1.1
SUA IAmb IAmb 09 29 25.5
comp=Z,18nm,0.8s
SUA **Susitna One** 82.23 13 P P 09 29 24.3 -0.9
baz=206,SNR=9.3
LCMT **Little Creek M** 82.25 47 P P 09 29 26.4 +0.4
LCMT IAmb IAmb 09 29 27.5
comp=Z,12nm,0.9s
X16A **Lo Mia Camp, P** 82.30 50 P P 09 29 27.5 +1.1
X16A IAmb IAmb 09 29 28.9
comp=Z,13nm,1.0s
D05A **Enumclaw** 82.31 35 P P 09 29 26.6 +0.7
KAIM **Kayak Island** 82.42 17 P P 09 29 25.9 -0.3
baz=212
SPR3 **Spring Creek 3** 82.49 45 P P 09 29 27.3 -0.1
L20K **Farewell, AK** 82.52 11 P P 09 29 25.6 -1.0
baz=204
SKT **Skwentna** 82.53 12 P P 09 29 25.9 -0.8
baz=206
319A **Douglas** 82.54 54 P P 09 29 27.1 -0.5
319A IAmb IAmb 09 29 29.8
comp=Z,20nm,0.9s
KNB **Kanab** 82.55 47 P P 09 29 27.7 +0.2
KNB IAmb IAmb 09 29 29.3
comp=Z,12nm,0.9s
TTA **Tatalina** 82.56 10 P P 09 29 27.1 +0.2
TTA IAmb IAmb 09 29 28.3
comp=Z,20nm,1.2s
TTA **Tatalina** 82.56 10 P P 09 29 26.7 -0.2
baz=201,SNR=5.5
EYAK **Cordova Ski Ar** 82.60 16 P P 09 29 26.3 -0.7
baz=211
M22K **Willow** 82.62 13 P P 09 29 26.2 -0.9
M22K **Willow** 82.62 13 P P 09 29 26.0 -1.0
baz=207
U15A **North Rim** 82.64 48 P P 09 29 28.9 +0.8
U15A IAmb IAmb 09 29 30.0
comp=Z,20nm,0.8s
SZCU **Shurtz Canyon** 82.64 47 P P 09 29 28.6 +0.6
KNK **Knik Glacier** 82.69 14 P P 09 29 26.8 -0.7
KNK IAmb IAmb 09 29 27.6
comp=Z,16nm,0.9s
KNK **Knik Glacier** 82.69 14 P P 09 29 26.9 -0.5
baz=209,SNR=5.1
PMR **Palmer** 82.70 14 P P 09 29 26.6 -0.8
PMR IAmb IAmb 09 29 27.4
comp=Z,30nm,1.4s
PMR **Palmer** 82.70 14 P P 09 29 26.5 -1.0
baz=208
F07A **Phinny Hill Vi** 82.71 37 P P 09 29 28.6 +0.7
F07A IAmb IAmb 09 29 29.0
comp=Z,12nm,0.8s
ELK **Elko** 82.77 43 P P 09 29 28.4 -0.3
ELK IAmb IAmb 09 29 29.8
comp=Z,11nm,1.1s
I17K **Unalakleet** 82.77 8 P P 09 29 27.5 -0.2
baz=197
WUAZ **Wupatki** 82.86 49 P P 09 29 30.0 +0.9
WUAZ IAmb IAmb 09 29 31.5
comp=Z,17nm,1.1s
WUAZ **Wupatki** 82.86 49 P P 09 29 29.6 +0.5
baz=242,SNR=9.8
MXC **Moxie City** 82.90 36 P P 09 29 29.1 +0.2
GHO **Glory Hole Cre** 82.90 14 P P 09 29 27.8 -0.8
G08A **Pilot Rock** 82.92 38 P P 09 29 29.5 +0.4
G08A IAmb IAmb 09 29 30.4
comp=Z,11nm,0.9s
J18K **Innoko River** 82.95 10 P P 09 29 28.7 0.0
J18K IAmb IAmb 09 29 29.4
comp=Z,15nm,0.8s
J18K **Innoko River** 82.95 10 P P 09 29 28.4 -0.3
baz=201
SNH **Sunshine Point** 83.07 17 P P 09 29 29.6 +0.1
LTY **Liberty** 83.08 36 P P 09 29 29.6 -0.3
DIV **Divide** 83.09 15 P P 09 29 29.1 -0.4
DIV IAmb IAmb 09 29 29.7
comp=Z,17nm,0.7s
U33K **Whale Pass** 83.10 24 P P 09 29 30.7 +1.2
U33K **Whale Pass** 83.10 24 P P 09 29 29.8 +0.2
baz=223
PKCU **Pink Cliffs** 83.11 47 P P 09 29 32.0 +1.5
PKCU IAmb IAmb 09 29 33.0
comp=Z,17nm,1.0s
V35K **Ketchikan** 83.12 25 P P 09 29 30.0 +0.3
baz=224
E07A **Sunnyside** 83.13 36 P P 09 29 29.6 -0.5
E07A IAmb IAmb 09 29 31.3
comp=Z,17nm,1.0s
CUT **Chulitna** 83.17 13 P P 09 29 28.8 -1.0
CUT **Chulitna** 83.17 13 P P 09 29 28.6 -1.1
baz=207,SNR=7.8
DUN6 **Lazy B Ranch** 83.21 53 P P 09 29 31.6 +0.7
HAWA **Hanford** 83.22 37 P P 09 29 30.6 +0.1
HAWA IAmb IAmb 09 29 31.8
comp=Z,18nm,0.9s
PPLA **Purkeypile** 83.23 12 P P 09 29 29.7 -0.6
baz=205
BMRM **Bremner River** 83.26 16 P P 09 29 29.7 -0.7
BMRM IAmb IAmb 09 29 30.6
comp=Z,30nm,1.3s
BMRM **Bremner River** 83.26 16 P P 09 29 29.6 -0.7
baz=212,SNR=5.4
WAX **Waxell Ridge** 83.29 17 P P 09 29 30.1 -0.5
K20K **Telida** 83.30 11 P P 09 29 30.0 -0.5
K20K IAmb IAmb 09 29 30.9
comp=Z,18nm,0.8s

K20K **Telida** 83.30 11 P P 09 29 29.8 -0.7
baz=203
H16K **Elim** 83.31 7 P P 09 29 29.8 -0.6
baz=196,SNR=7.8
MESA **MESA** 83.32 17 P P 09 29 30.5 -0.3
MESA **MESA** 83.32 17 P P 09 29 30.3 -0.5
baz=215
SCM **Sheep Creek Mo** 83.33 14 P P 09 29 29.8 -0.9
SCM **Sheep Creek Mo** 83.33 14 P P 09 29 29.9 -0.8
baz=210,SNR=12
S31K **Pelican** 83.35 21 P P 09 29 30.7 -0.1
baz=220
KLU **Klutina** 83.37 15 P P 09 29 30.2 -0.7
KLU IAmb IAmb 09 29 31.2
comp=Z,16nm,1.2s
KLU **Klutina** 83.37 15 P P 09 29 30.4 -0.5
baz=211,SNR=6.1
X18A **Snowflake** 83.44 51 P P 09 29 32.0 -0.1
G15K **Niukluk** 83.46 6 P P 09 29 30.4 -0.8
baz=194
CRQM **Cirque** 83.47 17 IAmb IAmb 09 29 32.0
comp=Z,20nm,1.0s
CRQE **Cirque** 83.48 17 P P 09 29 31.1 -0.4
baz=214
MTPU **Mount Pierson** 83.48 47 P P 09 29 32.1 -0.3
MTPU IAmb IAmb 09 29 34.6
comp=Z,10nm,0.9s
HPIG 83.54 59 P P 09 29 32.0 -0.8
E08A **Dider Farm, El** 83.55 37 P P 09 29 32.6 +0.5
E08A IAmb IAmb 09 29 33.2
comp=Z,12nm,0.8s
ISLE **Juniper Island** 83.56 17 P P 09 29 31.7 -0.3
ISLE IAmb IAmb 09 29 32.5
comp=Z,20nm,0.9s
TCRU **Three Creeks R** 83.57 46 P P 09 29 33.1 +0.4
TCRU IAmb IAmb 09 29 34.6
comp=Z,11nm,1.2s
WRAK **Wrangell Islan** 83.62 24 P P 09 29 32.3 +0.2
baz=224
J19K **Poorman** 83.62 10 P P 09 29 31.8 -0.2
baz=202
PNL **Peninsula** 83.66 19 P P 09 29 32.0 -0.4
baz=217
TNA **Tin City** 83.68 4 P P 09 29 31.8 -0.4
baz=190
F14K **Arctic Creek** 83.72 5 P P 09 29 32.0 -0.4
baz=192
CAST **Castle Rocks** 83.72 12 P P 09 29 30.7 -1.8
baz=205,SNR=21
PINM **Pinnacle** 83.75 18 P P 09 29 32.8 -0.1
baz=216
BJI **Beijing** 83.78 315 P P 09 29 33.9 +0.6
BJI pmax pmax
comp=Z,8.0nm,1.4s
VRDI **Verde Repeater** 83.78 16 P P 09 29 32.4 -0.7
VRDI IAmb IAmb 09 29 33.4
comp=Z,11nm,1.0s
MFID **Camas Ranch** 83.79 41 IAmb IAmb 09 29 34.8
comp=Z,10nm,1.0s
N25K **Chitina, Valde** 83.80 16 P P 09 29 32.5 -0.6
N25K **Chitina, Valde** 83.80 16 P P 09 29 32.5 -0.6
baz=212,SNR=12
LYN **LuoYang** 83.81 309 ⇓P P 09 29 34.9 +1.3
LYN pmax pmax
comp=Z,23nm,0.8s
M24K **Tolsona, Glenn** 83.84 15 P P 09 29 33.2 0.0
M24K **Tolsona, Glenn** 83.84 15 P P 09 29 33.1 -0.1
baz=211,SNR=6.7
GLB **Gilahina Butte** 83.86 16 P P 09 29 32.6 -0.7
GLB IAmb IAmb 09 29 33.6
comp=Z,15nm,0.8s
R31K **City Hall, Gus** 83.87 21 P P 09 29 33.4 +0.1
baz=220
H17K **Granite Mounta** 83.88 8 P P 09 29 32.6 -0.7
baz=198
WAT6 **Susitna Watana** 83.88 14 P P 09 29 32.7 -0.9
baz=209,SNR=11
WAT1 **Susitna Watana** 83.92 13 P P 09 29 32.3 -1.2
baz=208
D08A **Wollman Farm,** 83.94 36 IAmb IAmb 09 29 35.3
comp=Z,16nm,0.9s
MCARA **McCarthy VSAT** 84.02 16 P P 09 29 33.8 -0.2
MCARA IAmb IAmb 09 29 34.6
comp=Z,15nm,1.1s
MCARA **McCarthy VSAT** 84.02 16 P P 09 29 33.5 -0.6
baz=214
G16K **Koyuk River** 84.03 7 P P 09 29 33.9 0.0
baz=195
J20K **Nowinta River** 84.04 10 IAmb IAmb 09 29 34.6
comp=Z,11nm,0.8s
J20K **Nowinta River** 84.04 10 P P 09 29 33.7 -0.4
baz=203
KTH **Kantishna Hill** 84.07 12 IAmb IAmb 09 29 34.4
comp=Z,14nm,0.9s
E09A **Wood Farm, Sta** 84.08 37 P P 09 29 34.8 +0.1
E09A IAmb IAmb 09 29 35.6
comp=Z,20nm,1.4s
DUG **Dugway, Tooele** 84.10 45 P P 09 29 34.8 -0.3
baz=240
F15K **North Star Dit** 84.10 6 P P 09 29 33.8 -0.5
baz=193
CHUM **Lake Minchumin** 84.10 11 P P 09 29 33.1 -1.3
baz=205,SNR=6.2
TRF **Thorofare Moun** 84.11 12 P P 09 29 33.3 -1.3
TRF **Thorofare Moun** 84.11 12 P P 09 29 33.4 -1.2
baz=207,SNR=22
LOGN **Logan Glacier** 84.12 17 P P 09 29 34.2 -0.6
LOGN IAmb IAmb 09 29 35.2
comp=Z,14nm,1.0s
BARN **Barnard Glacie** 84.13 17 P P 09 29 34.2 -0.6
BARN IAmb IAmb 09 29 35.5
comp=Z,18nm,0.9s
GCSA **Galena City Sc** 84.13 9 P P 09 29 33.5 -0.9
baz=201
CTG **Chitna Glacier** 84.14 17 P P 09 29 34.3 -0.5
baz=215,SNR=6.7
P29M **Windy Craggy** 84.15 19 IAmb IAmb 09 29 35.9
comp=Z,14nm,0.8s
P29M **Windy Craggy** 84.15 19 P P 09 29 34.6 -0.2
baz=218,SNR=5.2
121A **Cookes Peak, D** 84.19 53 P P 09 29 36.4 +0.6
121A IAmb IAmb 09 29 37.8
comp=Z,7.7nm,0.9s
121A **Cookes Peak, D** 84.19 53 P P 09 29 36.1 +0.3
baz=244
F10A **Beach Ranch, E** 84.31 38 P P 09 29 35.9 -0.1
G17K **Kiwalik Mounta** 84.33 7 P P 09 29 34.8 -0.7
baz=197
HARP **HAARP** 84.33 15 P P 09 29 35.0 -0.6
baz=212,SNR=6.8
RND **Reindeer** 84.36 13 P P 09 29 35.3 -0.5
DHY **Denali Highway** 84.40 14 P P 09 29 35.3 -0.7
DHY **Denali Highway** 84.40 14 P P 09 29 35.2 -0.9
baz=210,SNR=5.3
O29M **Mount Kennedy** 84.42 19 IAmb IAmb 09 29 37.2
comp=Z,14nm,1.2s
O29M **Mount Kennedy** 84.42 19 P P 09 29 36.0 -0.2
baz=218
B08A **Colville Reser** 84.45 35 P P 09 29 35.8 -0.8
PLBC **Pleasant Camp** 84.46 20 P P 09 29 36.2 0.0
baz=220
I20K **Naaghedeneel** 84.56 10 P P 09 29 36.4 -0.2
baz=203
PLID **Pearl Lake** 84.57 39 P P 09 29 37.6 +0.2
MCK **McKinley** 84.64 13 P P 09 29 36.0 -1.0
MCK IAmb IAmb 09 29 36.9
comp=Z,16nm,1.0s
MCK **McKinley** 84.64 13 P P 09 29 36.1 -0.9
baz=208,SNR=8.2
C09A **Chrisman Ranch** 84.72 36 P P 09 29 37.1 -0.8
C09A IAmb IAmb 09 29 38.7
comp=Z,13nm,0.9s
HLID **Hailey** 84.75 41 P P 09 29 37.8 -0.5
HLID IAmb IAmb 09 29 39.8
comp=Z,9.5nm,0.8s
HLID **Hailey** 84.75 41 P P 09 29 38.9 +0.7
baz=239,SNR=14
PAX **Paxson** 84.75 14 P P 09 29 37.0 -0.8
PAX IAmb IAmb 09 29 37.5
comp=Z,7.9nm,0.9s
PAX **Paxson** 84.75 14 P P 09 29 36.9 -0.8
baz=211,SNR=5.5
TMUT **Trail Mountain** 84.75 46 P P 09 29 38.2 -0.4
TMUT IAmb IAmb 09 29 40.2
comp=Z,7.5nm,0.9s
P30M **Million Dollar** 84.78 19 P P 09 29 37.9 0.0
baz=219

MPU Maple Canyon 84.80 45 P P 09 29 37.8 -0.9
SKAG Skagway 84.80 21 P P 09 29 37.9 0.0
baz=221
YUK8 Steele Glacier 84.85 18 P P 09 29 38.3 -0.2
baz=217,SNR=8.7
SPUT South Promonto 84.88 44 P P 09 29 38.6 -0.4
HVU Hansel Valley 84.90 43 P P 09 29 38.6 -0.4
BWN Browne 84.92 12 P P 09 29 38.1 -0.3
H19K Roundabout Mou 84.93 9 P P 09 29 37.9 -0.4
baz=201
G18K Tagagawik 84.96 8 P P 09 29 38.1 -0.4
baz=199
YUK6 Outpost Mounta 84.99 18 P P 09 29 38.4 -0.6
baz=218
YUK3 Moose Creek 85.05 17 P P 09 29 39.1 -0.2
baz=216,SNR=19
SRU San Rafael Swe 85.13 46 P P 09 29 40.4 +0.2
SRU IAmb IAmb 09 29 41.3
comp=Z,7.5nm,0.8s
H20K Anotleneega Mo 85.14 10 P P 09 29 39.0 -0.4
baz=202
M27K Edge Creek, AK 85.14 16 IAmb IAmb 09 29 40.6
comp=Z,20nm,1.1s
M27K Edge Creek, AK 85.14 16 P P 09 29 39.6 0.0
baz=215
MENT Mentasta 85.15 15 P P 09 29 39.3 -0.3
MENT IAmb IAmb 09 29 40.1
comp=Z,8.6nm,1.0s
S34M Telegraph Cree 85.15 23 P P 09 29 40.5 +0.9
S34M Telegraph Cree 85.15 23 P P 09 29 39.9 +0.3
baz=224,SNR=9.9
HYT Haines Junctio 85.16 19 P P 09 29 40.1 +0.3
HYT IAmb IAmb 09 29 40.7
comp=Z,9.4nm,1.0s
HYT Haines Junctio 85.16 19 P P 09 29 39.7 -0.1
baz=219
F17K Baldwin Pennin 85.16 7 P P 09 29 39.2 -0.3
baz=196
YUK4 Talbot Arm 85.22 18 P P 09 29 40.3 +0.1
baz=218
L26K Log Cabin Wild 85.31 15 P P 09 29 40.1 -0.3
L26K IAmb IAmb 09 29 40.9
comp=Z,14nm,1.4s
L26K Log Cabin Wild 85.31 15 P P 09 29 39.8 -0.5
baz=213
I21K Tanana 85.34 11 P P 09 29 39.9 -0.4
baz=205
K24K Donnelly Dome 85.39 14 P P 09 29 40.2 -0.5
baz=211
G19K Purcell Mounta 85.41 9 P P 09 29 39.6 -1.1
G19K Purcell Mounta 85.41 9 P P 09 29 40.1 -0.6
baz=200
MLY Manley 85.44 11 P P 09 29 40.6 -0.4
MLY Manley 85.44 11 P P 09 29 40.2 -0.7
baz=206
P32M Atlin 85.45 21 P P 09 29 41.4 +0.3
P32M IAmb IAmb 09 29 42.3
comp=Z,9.1nm,0.9s
P32M Atlin 85.45 21 P P 09 29 41.0 0.0
baz=222
BVCY Beaver Creek 85.46 17 P P 09 29 40.7 -0.4
baz=216
WRH Wood River Hil 85.47 13 P P 09 29 40.1 -0.9
WRH IAmb IAmb 09 29 41.5
comp=Z,17nm,1.0s
TCUT Toone Canyon 85.48 44 P P 09 29 42.7 +0.7
TCUT IAmb IAmb 09 29 43.1
comp=Z,12nm,0.9s
Q32M Nakina River 85.49 22 IAmb IAmb 09 29 42.7
comp=Z,8.8nm,0.7s
Q32M Nakina River 85.49 22 P P 09 29 41.6 +0.1
baz=223
F18K Selawik 85.51 7 P P 09 29 40.3 -0.8
baz=198
RIDG Independent Ri 85.55 14 P P 09 29 41.2 -0.3
baz=212
O30N Mendenhall 85.56 19 P P 09 29 41.9 +0.3
O30N IAmb IAmb 09 29 42.5
comp=Z,12nm,0.9s
O30N Mendenhall 85.56 19 P P 09 29 41.4 -0.2
baz=220,SNR=5.4
HWUT Hardware Ranch 85.61 44 P P 09 29 42.7 +0.3
NEW Newport 85.62 36 P P 09 29 41.5 -0.7
NEW Newport 85.62 36 P P 09 29 41.7 -0.5
baz=237
H21K Melozitna Rive 85.63 10 P P 09 29 41.5 -0.3
H21K Melozitna Rive 85.63 10 P P 09 29 41.2 -0.6
baz=204
VHRN Van Horn 85.64 56 P P 09 29 43.7 +0.9
VHRN IAmb IAmb 09 29 44.8
comp=Z,16nm,1.4s
BSUT Blindstream Ca 85.64 45 P P 09 29 42.9 0.0
BSUT IAmb IAmb 09 29 44.0
comp=Z,6.3nm,0.9s
HDA Harding Lake 85.65 13 P P 09 29 41.1 -0.8
HDA IAmb IAmb 09 29 41.8
comp=Z,9.2nm,0.9s
HDA Harding Lake 85.65 13 P P 09 29 41.2 -0.8
baz=210,SNR=8.1
PV05 Paradox Valley 85.66 48 P P 09 29 43.6 +0.8
CCB Clear Creek Bu 85.68 13 P P 09 29 40.8 -1.1
CCB IAmb IAmb 09 29 41.6
comp=Z,20nm,1.2s
MNTX Cornudas Mount 85.69 55 P P 09 29 43.1 +0.2
baz=246
MVCO Mesa Verde 85.70 49 P P 09 29 43.1 0.0
baz=244
E17K Hotham Inlet 85.72 6 P P 09 29 41.6 -0.6
baz=196,SNR=9.2
L27K Beaver Creek, 85.73 16 P P 09 29 41.8 -0.6
baz=215
BCAR Beaver Creek A 85.75 16 P P 09 29 41.6 -0.9
I23K Minto, Yukon-K 85.81 12 P P 09 29 41.7 -0.9
baz=208
WHY Whitehorse 85.86 20 IAmb IAmb 09 29 44.1
comp=Z,9.3nm,1.0s
WHY Whitehorse 85.86 20 P P 09 29 43.0 -0.1
baz=221,SNR=5.1
MDM Murphy Dome 85.86 12 IAmb IAmb 09 29 42.5
comp=Z,12nm,1.0s
COLA College 85.87 13 P P 09 29 41.9 -0.9
COLA College 85.87 13 P P 09 29 41.5 -1.4
baz=209
DLBC Dease Lake 85.94 23 IAmb IAmb 09 29 45.7
comp=Z,12nm,1.2s
DLBC Dease Lake 85.94 23 P P 09 29 43.3 -0.2
baz=225
SCRK Sand Creek 85.96 15 P P 09 29 42.8 -0.7
baz=213,SNR=5.7
F19K Shaleruckik Mo 85.97 8 P P 09 29 43.0 -0.3
F19K Shaleruckik Mo 85.97 8 P P 09 29 42.7 -0.6
baz=200
IL31 85.98 13 P P 09 29 42.2 -1.2
IL31 IAmb IAmb 09 29 43.1
comp=Z,9.9nm,0.9s
ILAR Eielson Array 85.98 13 P P 09 29 41.9 -1.5
ILAR Eielson Array 85.98 13 P P 09 29 41.7 -1.8
comp=Z,4.9nm,0.7s,baz=229,slow=5.4,SNR=60
ILAR PP PP 09 33 09.2 -5.5
comp=Z,1.5nm,0.8s,baz=276,slow=5.5,SNR=9.4
comp=Z,4.9nm,0.7s
H22K Ishtalitna Cre 86.10 11 P P 09 29 43.5 -0.5
baz=206
TX31 Lajitas Ar. Si 86.11 58 P P 09 29 45.6 +0.6
TXAR Lajitas Array 86.11 58 P P 09 29 45.8 +0.7
TXAR Lajitas Array 86.11 58 P P 09 29 45.5 +0.5
comp=Z,10nm,0.8s,baz=221,slow=6.0,SNR=117
comp=Z,10nm,0.8s
M29M Somme Creek 86.15 17 P P 09 29 43.8 -0.6
baz=218
POKR Poker Plat Res 86.17 13 IAmb IAmb 09 29 43.8
comp=Z,7.2nm,0.7s
POKR Poker Plat Res 86.17 13 P P 09 29 43.0 -1.4
baz=209,SNR=6.0
J25K Salcha River, 86.18 14 IAmb IAmb 09 29 45.4
comp=Z,13nm,1.2s
J25K Salcha River, 86.18 14 P P 09 29 43.6 -0.8
baz=211
E18K Tukpahlearik C 86.18 7 P P 09 29 44.0 -0.3
E18K IAmb IAmb 09 29 45.1
comp=Z,5.3nm,0.8s
E18K Tukpahlearik C 86.18 7 P P 09 29 43.6 -0.7
baz=197
D17K Noatak River 86.19 6 P P 09 29 43.6 -0.7
baz=195
N31M Braeburn, Yuko 86.20 19 P P 09 29 44.5 -0.1
N31M IAmb IAmb 09 29 45.6
comp=Z,17nm,1.1s
N31M Braeburn, Yuko 86.20 19 P P 09 29 44.3 -0.4
baz=220
P33M Teslin, Yukon 86.21 21 P P 09 29 44.8 +0.1
P33M Teslin, Yukon 86.21 21 P P 09 29 44.3 -0.4
baz=223
ANMO Albuquerque 86.21 52 P P 09 29 45.9 +0.4
ANMO IAmb IAmb 09 29 47.2
comp=Z,6.7nm,1.1s
ANMO Albuquerque 86.21 52 P P 09 29 45.5 0.0
baz=245
XAN Xi'an 86.24 307 P P 09 29 46.6 +1.1
XAN pP pP 09 31 49.3 -1.0
XAN pmax pmax
comp=Z,24nm,1.0s
XAN Xi'an 86.24 307 sP P 09 29 33.8 -12
R33M Jennings River 86.27 22 P P 09 29 45.3 +0.2
R33M IAmb IAmb 09 29 46.5
comp=Z,21nm,1.4s
R33M Jennings River 86.27 22 P P 09 29 44.5 -0.6
baz=225
G21K Allakaket 86.30 10 IAmb IAmb 09 29 45.2
comp=Z,6.9nm,0.8s
G21K Allakaket 86.30 10 P P 09 29 44.1 -0.8
baz=204
F20K Avaraart Lake 86.46 9 P P 09 29 44.7 -0.9
baz=202
K27K Chicken 86.47 15 IAmb IAmb 09 29 46.9
comp=Z,13nm,1.2s
K27K Chicken 86.47 15 P P 09 29 46.0 +0.2
baz=214
J26L Joseph Creek 86.50 14 IAmb IAmb 09 29 46.8
comp=Z,10.0nm,0.7s
J26L Joseph Creek 86.50 14 P P 09 29 45.9 -0.1
baz=213
C16K Lisburne Hills 86.55 5 P P 09 29 45.2 -0.8
baz=192
RDOG Red Dog Mine 86.55 6 P P 09 29 46.0 0.0
baz=195
E19K Redstone River 86.63 8 P P 09 29 46.0 -0.5
E19K IAmb IAmb 09 29 46.8
comp=Z,8.3nm,0.8s
E19K Redstone River 86.63 8 P P 09 29 46.2 -0.3
baz=200
H24K Noodor Dome 86.71 12 P P 09 29 45.6 -1.3
baz=209
M30M Minto, Yukon 86.74 18 P P 09 29 46.8 -0.3
M30M IAmb IAmb 09 29 47.7
comp=Z,12nm,0.8s
M30M Minto, Yukon 86.74 18 P P 09 29 46.6 -0.5
baz=219,SNR=14
PECS Pecos 86.75 56 IAmb IAmb 09 29 49.4
comp=Z,12nm,1.4s
L29M L29M 86.77 17 P P 09 29 47.3 0.0
L29M L29M 86.77 17 P P 09 29 47.2 0.0
baz=218
N32M Quiet Lake 86.81 20 P P 09 29 47.5 -0.1
baz=223
TPAW Teton Pass 86.90 42 P P 09 29 48.1 -0.5
TPAW IAmb IAmb 09 29 49.1
comp=Z,14nm,1.2s
PRP Porcupine Dome 86.92 13 P P 09 29 47.4 -0.6
baz=211,SNR=5.2
C17K DeLong Mountai 86.93 6 P P 09 29 47.3 -0.6
baz=194
F21K Alatna River 86.95 9 P P 09 29 47.2 -0.8
baz=204
G22K Bettes 87.00 10 P P 09 29 47.7 -0.5
baz=206
G23K Bananza Creek 87.08 11 P P 09 29 48.2 -0.4
G23K Bananza Creek 87.08 11 P P 09 29 48.0 -0.7
baz=207
S22A 4UR Ranch, Cre 87.12 49 IAmb IAmb 09 29 51.2
comp=Z,6.5nm,1.1s
S22A 4UR Ranch, Cre 87.12 49 P P 09 29 50.1 +0.2
baz=245,SNR=7.2
O20A White River Ci 87.17 46 P P 09 29 49.4 -0.5
O20A IAmb IAmb 09 29 51.1
comp=Z,7.3nm,1.0s
O20A White River Ci 87.17 46 P P 09 29 49.7 -0.2
baz=244
M31M Drury Creek, Y 87.18 19 IAmb IAmb 09 29 49.3
comp=Z,7.1nm,1.1s
M31M Drury Creek, Y 87.18 19 P P 09 29 48.5 -0.6
baz=221,SNR=5.3
LOHW Long Hollow 87.18 42 IAmb IAmb 09 29 51.1
comp=Z,5.5nm,0.8s
DAWY Dawson 87.19 16 IAmb IAmb 09 29 49.8
comp=Z,12nm,1.2s
DAWY Dawson 87.19 16 P P 09 29 48.9 -0.3
baz=217
HHC Hu-ho-hao-te 87.27 314 eP P 09 29 50.9 +0.7
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,170nm,6.1s
I26K Coal Creek Min 87.27 14 P P 09 29 49.2 -0.3
baz=213
C18K Utukok River 87.30 6 P P 09 29 48.8 -0.8
baz=196
EGAK Eagle 87.31 15 P P 09 29 49.8 +0.1
baz=215
FLWY Flagg Ranch 87.34 42 P P 09 29 51.6 +1.0
FLWY IAmb IAmb 09 29 52.4
comp=Z,12nm,0.9s
YFT Old Faithful 87.43 42 IAmb IAmb 09 29 53.7
comp=Z,8.4nm,0.8s
BW06 Boulder Array 87.47 43 P P 09 29 50.8 -0.5
BW06 IAmb IAmb 09 29 51.9
comp=Z,7.1nm,0.8s
BW06 Boulder Array 87.47 43 P P 09 29 51.1 -0.1
baz=243,SNR=13
PD31 Pinedale Array 87.47 43 IAmb IAmb 09 29 51.9
comp=Z,6.4nm,0.8s
PDAR Pinedale Array 87.47 43 P P 09 29 50.6 -0.6
PDAR Pinedale Array 87.47 43 P P 09 29 50.8 -0.5
comp=Z,5.2nm,0.7s,baz=219,slow=3.0,SNR=64
comp=Z,5.2nm,0.7s
BOZ Bozeman (W) 87.48 40 IAmb IAmb 09 29 52.5
comp=Z,15nm,1.4s
BOZ Bozeman (W) 87.48 40 P P 09 29 51.5 +0.3
baz=241,SNR=9.8
D19K Kuna River 87.50 7 IAmb IAmb 09 29 50.3
comp=Z,4.3nm,0.8s
D19K Kuna River 87.50 7 P P 09 29 50.2 -0.4
baz=199
COLD Coldfoot 87.51 11 P P 09 29 50.2 -0.3
baz=207,SNR=14
K29M Barlow Dome 87.52 17 P P 09 29 50.8 -0.1
baz=219
E20K Nigu River 87.52 8 P P 09 29 50.1 -0.6
baz=201,SNR=11
FARO Faro, Yukon 87.52 19 P P 09 29 50.5 -0.3
FARO IAmb IAmb 09 29 52.0
comp=Z,8.2nm,1.2s
FARO Faro, Yukon 87.52 19 P P 09 29 51.2 +0.4
baz=222,SNR=5.3
G24K Hadweenzic Riv 87.55 12 P P 09 29 49.9 -0.9
baz=209
WTLY Watson Lake, Y 87.56 22 P P 09 29 51.4 +0.4
WTLY IAmb IAmb 09 29 51.6
comp=Z,5.8nm,1.0s
WTLY Watson Lake, Y 87.56 22 P P 09 29 51.0 0.0
baz=226
H17A Grant Village 87.57 42 IAmb IAmb 09 29 54.2
comp=Z,10.0nm,0.9s
H17A Grant Village 87.57 42 P P 09 29 53.2 +1.4
baz=242,SNR=8.6
SAND Sanderson 87.59 58 IAmb IAmb 09 29 53.2
comp=Z,11nm,0.9s
MNHN Monahans 87.61 56 IAmb IAmb 09 29 53.1
comp=Z,7.8nm,0.9s
LKWY Lake 87.76 42 IAmb IAmb 09 29 55.3
comp=Z,8.0nm,0.8s
MAYO Mayo, Yukon 87.78 18 P P 09 29 52.3 +0.4
MAYO Mayo, Yukon 87.78 18 P P 09 29 52.1 +0.2
baz=220,SNR=14
J29N Klondike Camp 87.81 16 P P 09 29 52.5 +0.4
J29N IAmb IAmb 09 29 53.2
comp=Z,8.9nm,0.8s
J29N Klondike Camp 87.81 16 P P 09 29 52.0 -0.2
baz=218,SNR=7.2
I27K Kandik River 87.88 14 P P 09 29 51.7 -0.8
baz=215
D20K Etivluk River 87.89 8 P P 09 29 52.0 -0.4
baz=201,SNR=6.5
C19K Lookout Ridge 87.91 7 IAmb IAmb 09 29 53.8
comp=Z,12nm,1.4s
C19K Lookout Ridge 87.91 7 P P 09 29 52.1 -0.4
baz=198
B18K Kokolik River 87.93 6 P P 09 29 52.4 -0.1
baz=196
E22K Anaktuvuk Pass 88.05 10 P P 09 29 53.0 -0.2
baz=205
SDCO Great Sand Dun 88.08 49 P P 09 29 54.3 0.0
baz=245
I28M Miner Creek 88.16 15 P P 09 29 53.0 -0.8
I28M IAmb IAmb 09 29 53.9
comp=Z,5.1nm,0.8s
I28M Miner Creek 88.16 15 P P 09 29 53.0 -0.8
baz=216
F24K Squaw Lake 88.18 11 P P 09 29 53.4 -0.4
F24K IAmb IAmb 09 29 54.5
comp=Z,8.3nm,0.8s
F24K Squaw Lake 88.18 11 P P 09 29 53.6 -0.2
baz=209
E23K Chandalar 88.35 10 P P 09 29 54.0 -0.6
baz=207
J30M Hart River 88.42 17 P P 09 29 55.0 0.0
baz=220
H27K Steamboat Moun 88.42 14 P P 09 29 54.5 -0.4
baz=215
G26K Porcupine Rive 88.51 13 P P 09 29 55.2 -0.1
baz=213
C21K Knifeblade Rid 88.55 8 P P 09 29 55.4 0.0
baz=202
E24K Your Creek 88.56 11 P P 09 29 55.1 -0.4
baz=208
D22K Ayikyak River 88.60 9 P P 09 29 55.5 -0.2
D22K Ayikyak River 88.60 9 P P 09 29 55.4 -0.3
baz=204,SNR=11
MSTX Muleshoe 88.61 54 P P 09 29 56.4 -0.2
baz=247
F25K Christian Rive 88.68 12 P P 09 29 56.1 -0.1
baz=211
BRLDA Berland Lookou 88.68 31 P P 09 29 57.2 +0.7
RLMT Red Lodge 88.73 41 IAmb IAmb 09 29 58.7
comp=Z,7.4nm,1.0s
RLMT Red Lodge 88.73 41 P P 09 29 57.5 +0.4
baz=243,SNR=7.6
OZNA Ozona 88.75 57 P P 09 29 57.4 +0.1
BMAR Burnt Mountain 88.75 12 P P 09 29 56.6 +0.2
CMAR Chiang Mai Arr 88.83 290 P P 09 29 59.4 +1.5
comp=Z,2.6nm,0.8s,baz=118,slow=2.7,SNR=8.5
comp=Z,2.6nm,0.8s
Q24A Divide 88.83 48 P P 09 29 58.0 +0.2
baz=246
ISCO Idaho Springs 88.85 47 P P 09 29 58.3 +0.4
baz=245
TOLK Toolik Lake Re 88.88 10 P P 09 29 56.7 -0.3
TOLK IAmb IAmb 09 29 57.5
comp=Z,13nm,1.4s
TOLK Toolik Lake Re 88.88 10 P P 09 29 56.4 -0.6
baz=207,SNR=5.2
I30M Mount Dempster 88.90 16 P P 09 29 57.0 -0.3
I30M Mount Dempster 88.90 16 P P 09 29 56.9 -0.3
baz=220
B21K Ikpikpuk River 89.01 8 P P 09 29 57.0 -0.5
B21K IAmb IAmb 09 29 58.1
comp=Z,9.1nm,1.2s
B21K Ikpikpuk River 89.01 8 P P 09 29 57.0 -0.5
baz=203,SNR=6.3
F26K Sheenjek River 89.07 12 P P 09 29 58.1 +0.2
baz=212
ELIB Princess Elisa 89.07 187 dP P 09 29 57.4 -0.7
comp=Z,8.4nm,0.7s
N23A Red Feather La 89.08 46 P P 09 29 59.1 +0.2
baz=245
PZH PanZhiHua 89.12 298 P P 09 30 00.1 +0.9
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,9.0s
E25K Arctic Village 89.15 12 IAmb IAmb 09 29 59.0
comp=Z,7.8nm,1.1s
E25K Arctic Village 89.15 12 P P 09 29 58.1 -0.2
baz=211,SNR=7.0
H29M Whitestone 89.17 15 P P 09 29 58.2 -0.1
H29M Whitestone 89.17 15 P P 09 29 58.0 -0.3
baz=218
833A Chaparral WMA, 89.21 60 P P 09 29 59.8 +0.3
baz=249
K22A Casper 89.42 45 P P 09 30 00.2 -0.1
K22A IAmb IAmb 09 30 01.2
comp=Z,12nm,1.4s
K22A Casper 89.42 45 P P 09 30 00.2 -0.1
baz=245
D24K Happy Valley 89.46 10 IAmb IAmb 09 30 00.3
comp=Z,8.7nm,0.9s
D24K Happy Valley 89.46 10 P P 09 30 00.0 +0.4
baz=208
PHWY Pilot Hill 89.58 46 P P 09 30 00.7 -0.5
PHWY IAmb IAmb 09 30 02.0
comp=Z,5.8nm,0.8s
FLDN Fort Liard 89.65 24 P P 09 30 01.2 +0.6
FLDN Fort Liard 89.65 24 P P 09 30 01.2 +0.6
baz=231
JCT Junction City 89.65 58 P P 09 30 01.5 +0.1
JCT IAmb IAmb 09 30 02.1
comp=Z,6.7nm,0.8s
JCT Junction City 89.65 58 P P 09 30 01.4 -0.1
baz=249
EPYK Eagle Plains 89.70 16 P P 09 30 00.4 -0.5
EPYK Eagle Plains 89.70 16 P P 09 30 00.3 -0.5
baz=219,SNR=6.9
HNDO Hondo 89.73 59 P P 09 30 03.0 +1.2
EGMT Eagleton 89.76 39 P P 09 30 01.5 -0.1
baz=242
AMTX Amarillo 89.79 53 P P 09 30 01.9 -0.2
baz=248
F28M Old Crow 89.93 14 P P 09 30 01.8 -0.1
baz=216
C24K Franklin Bluff 89.98 10 P P 09 30 01.8 -0.2
baz=208
D25K Kavik River 90.03 11 P P 09 30 01.7 -0.7
baz=210
EDM Edmonton 90.27 33 P P 09 30 03.3 -0.5
G30M tAoh Zraii Nji 90.30 15 P P 09 30 02.9 -0.8
G30M tAoh Zraii Nji 90.30 15 P P 09 30 02.9 -0.8
baz=220
APMT Aspermont 90.42 55 P P 09 30 05.1 +0.2
SNAA Sanae 90.52 179 P P 09 30 02.9 -1.8
comp=Z,3.0nm,0.8s,baz=225,slow=8.9,SNR=2.1
comp=Z,3.0nm,0.8s
ABTX Abilene, Hawle 90.54 56 P P 09 30 05.6 0.0
ABTX Abilene, Hawle 90.54 56 P P 09 30 05.4 -0.2
baz=249
BRDY Brady 90.58 57 P P 09 30 05.4 -0.3
BRDY IAmb IAmb 09 30 06.5
comp=Z,8.9nm,1.2s
G31M Satah River 90.76 16 P P 09 30 05.3 -0.3
baz=222
E28M Babbage River 90.80 13 IAmb IAmb 09 30 06.4
comp=Z,7.3nm,0.9s
E28M Babbage River 90.80 13 P P 09 30 05.3 -0.5
baz=217
LZH Lanzhou 90.87 308 eP P 09 30 08.9 +1.8
LZH pmax pmax
comp=Z,15nm,1.0s
LZH Lanzhou 90.87 308 sP P 09 30 09.0 +1.9
F30M Barrier River 90.89 15 P P 09 30 06.5 +0.2
baz=220
E29M Blow River 91.00 14 P P 09 30 06.1 -0.7
baz=218
D27M Malcolm River 91.02 13 P P 09 30 07.0 +0.1
D27M IAmb IAmb 09 30 09.3
comp=Z,4.4nm,1.1s
D27M Malcolm River 91.02 13 P P 09 30 06.5 -0.4
baz=215
F31M Tsiigehtchic 91.28 16 P P 09 30 06.8 -1.3
F31M Tsiigehtchic 91.28 16 P P 09 30 07.3 -0.8
baz=222,SNR=25
LAO LASA Array 91.33 41 P P 09 30 09.4 +0.6
baz=245,SNR=8.4
435B Jarrell 91.55 58 P P 09 30 10.5 +0.3
baz=250
D28M Stokes Point 91.56 13 P P 09 30 09.2 0.0
baz=217
PLPT Palo Pinto 91.66 56 P P 09 30 10.9 +0.2
RSSD Black Hills 91.68 44 P P 09 30 10.1 -0.6
RSSD IAmb IAmb 09 30 11.2
comp=Z,7.0nm,0.9s
RSSD Black Hills 91.68 44 P P 09 30 10.7 -0.1
baz=246

INK	Inuvik	91.98	15	P		P	09 30 10.4	-0.8
INK	Inuvik	91.98	15	P		P	09 30 10.3	-1.0
	baz=222,SNR=8.2							
CBKS	Cedar Bluff	92.68	50	P		P	09 30 15.6	+0.4
	baz=249							
R32A	Long Quarter,	93.29	51	P		P	09 30 18.2	+0.2
DGMT	Dagmar	93.31	40	P		P	09 30 17.8	-0.1
DGMT	Dagmar	93.31	40	P		P	09 30 18.0	+0.1
	baz=246							
YKA	Yellowknife Ar	94.44	25	P		P	09 30 21.5	-1.1
	comp=Z,2.0nm,0.9s,baz=244,slow=4.5,SNR=21							
	comp=Z,2.0nm,0.9s							
KSU1	Kansas State U	95.07	51	P		P	09 30 26.3	+0.3
	baz=251							
C36M	Paulatuk	95.19	17	P		P	09 30 25.7	-0.2
	baz=231							
A36M	Sachs Harbour	96.58	15	P		P	09 30 32.3	+0.2
	baz=230							
MKAR	Makanchi Array	109.13	314	PKiKP		PKiKP	09 35 27.6	-1.3
	comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=4.5							
KURBB	Kurchatov Arra	111.88	318	PKiKP		PKiKP	09 35 31.6	-2.4
	comp=Z,1.5nm,0.7s,baz=89,slow=2.2,SNR=9.3							
AAK	Ala-Archa	114.36	309	PKP		PKPdf	09 35 36.7	-2.4
	comp=Z,1.3nm,0.6s,baz=96,slow=9.7,SNR=3.9							
BVAR	Borovoye Array	116.85	321	PKP		PKPdf	09 35 41.9	-1.5
	comp=Z,4.0nm,0.7s,baz=84,slow=1.2,SNR=12							
BRVK	Borovoye	116.91	321			PKPdf	09 35 42.1	-1.4
ARU	Arti	122.87	326	PKP		PKPdf	09 35 52.9	-2.0
	comp=Z,2.3nm,0.3s,baz=142,slow=4.3,SNR=7.1							
AKTO	Aktyubinsk	124.87	319	PKP		PKPdf	09 35 57.6	-1.3
	comp=Z,3.1nm,0.7s,baz=99,slow=2.8,SNR=6.8							
ARCES	ARCESS Array B	126.38	350	PKP		PKPdf	09 36 00.3	-0.9
	comp=Z,4.7nm,0.8s,baz=11,slow=1.2,SNR=6.3							
GEYT	Alibeck	127.01	304	PKP		PKPdf	09 36 03.1	-0.4
	comp=Z,2.7nm,0.8s,baz=62,slow=10.0,SNR=5.2							
FINES	FINESS Array B	133.24	344	PKP		PKPdf	09 36 13.6	-0.9
	comp=Z,2.3nm,0.8s,baz=62,slow=4.5,SNR=5.2							
HFS	Hagfors	137.09	351	PKP		PKPdf	09 36 20.2	-1.3
	comp=Z,4.0nm,0.8s,baz=243,slow=6.3,SNR=3.9							
AKASG	Malin Array Be	140.59	332	PKhKP		PKPpre	09 36 20.3	
	comp=Z,0.6nm,0.4s,baz=43,slow=4.0,SNR=7.7							
AKASG				PKP		PKPdf	09 36 29.1	+0.9
	comp=Z,1.4nm,0.5s,baz=43,slow=3.0,SNR=6.1							
EKA	Eskdalemuir Ar	142.55	4	PKhKP		PKPpre	09 36 27.2	
	comp=Z,3.6nm,0.9s,baz=258,slow=3.9,SNR=3.8							
DIKM	Dikmen	142.77	317	⇑P		PKPdf	09 36 31.0	-1.5
SORM	Soroca	142.81	330	⇑P		PKPdf	09 36 29.0	-3.3
GAZ	Gaziantep	143.31	309	PKPbc		PKPab	09 36 31.4	-0.7
BNN	Bunyan	143.64	312	PKPbc		PKPab	09 36 33.2	-0.1
LODK	Lodwar	143.81	250	PKPbc		PKPbc	09 36 33.3	-1.2
ILGA	Ilgaz	144.07	317	PKPbc		PKPbc	09 36 33.6	-1.1
KWP	Kalwaria Pacla	144.11	336	PKPbc		PKPbc	09 36 33.8	-0.5
TLCR		144.59	326	⇑P		PKPdf	09 36 35.0	-0.5
BUR08	Bucovina Ar. S	144.63	332			PKPbc	09 36 36.0	0.0
BURAR	Bucovina Array	144.64	332	⇑P		PKPab	09 36 36.5	-0.2
BURAR	Bucovina Array	144.64	332			PKPbc	09 36 36.0	0.0
OJC	Ojcow	144.66	340	*e*PKP		PKPdf	09 36 35.5	0.0
OJC	Ojcow	144.66	340			PKPdf	09 36 35.2	-0.3
GHRR		144.72	328	⇑P		PKPab	09 36 37.4	+0.4
BR131	Keskin Array S	144.78	315	PKPbc		PKPdf	09 36 36.2	0.0
BRTR	Keskin Array B	144.78	315	PKPbc		PKPdf	09 36 36.2	0.0
BRTR	Keskin Array B	144.78	315	PKP		PKPdf	09 36 35.8	-0.4
	comp=Z,8.3nm,0.9s,baz=134,slow=3.6,SNR=23							
TESR	Tescani	144.78	329	⇑P		PKPbc	09 36 36.7	+0.3
STHS	Stebnicka Huta	144.83	337	*e*PKP		PKPdf	09 36 36.0	+0.1
KOLS	Kolonicke sedl	144.84	336	*e*PKP		PKPbc	09 36 36.7	+0.2
NEGRR	Negrea	144.84	327	⇑P		PKPbc	09 36 36.8	+0.2
CFR	Carcaliu	144.95	326	⇑P		PKPbc	09 36 37.3	+0.4
TPGR	Topolog	145.02	326	⇓P		PKPbc	09 36 36.9	-0.3
KSP	Ksiaz	145.16	344	*e*PKP		PKPbc	09 36 37.4	0.0
NIE	Niedzica	145.17	338	*e*PKP		PKPbc	09 36 37.7	+0.2
CRVS	Cervenica-Dubn	145.17	337	*e*PKP		PKPbc	09 36 37.2	-0.3
VRI	Vrincioaia	145.20	329	⇑P		PKPbc	09 36 37.8	+0.2
PLOR	Plostina	145.25	329	⇑P		PKPbc	09 36 37.9	+0.1
ANTO	Ankara	145.27	315	PKPbc		PKPbc	09 36 37.8	-0.4
HARR	Harsova	145.39	326	⇑P		PKPbc	09 36 38.0	-0.2
TURR	Turia	145.41	329	⇑P		PKPbc	09 36 38.4	+0.1
ARCR	ARCALIA	145.43	332	⇓P		PKPbc	09 36 38.7	+0.4
OSTC	Ostas	145.44	343	*e*PKP		PKPbc	09 36 38.5	+0.3
CHVC	Chvalec	145.46	344	*e*PKP		PKPbc	09 36 38.0	-0.3
CLL	Collm	145.52	347			PKPbc	09 36 38.1	-0.3
CLL	Collm	145.52	347	*i* PKPbc		PKPbc	09 36 37.8	-0.6
	comp=Z,40nm,0.9s							
DPC	Dobruska-Polom	145.60	343	*e*PKP		PKPbc	09 36 38.5	-0.2
MANR	Mangalia	145.60	324	⇓P		PKPbc	09 36 39.4	+0.6
LANS	Liptovska Anna	145.68	339	*e*PKP		PKPbc	09 36 39.6	+0.6
BRG	Berggiesshubel	145.72	346	*i* PKP		PKPbc	09 36 38.8	-0.2
BRG				Amp			09 36 41.1	
	comp=Z,19nm,0.9s							
BRG	Berggiesshubel	145.72	346	P		PKiKP	09 36 45.6	+4.0
BRG				Amp			09 36 48.0	
	comp=Z,5.9nm,0.9s							
MORC	Moravsky Berou	145.76	341	⇑P		PKPbc	09 36 38.4	-0.8
MORC	Moravsky Berou	145.76	341			PKPbc	09 36 38.6	-0.6
MORC	Moravsky Berou	145.76	341	*e*PKP		PKPbc	09 36 38.8	-0.4
MLR	Muntele Rosu	145.85	329	⇑P		PKPbc	09 36 39.4	-0.3
MLR	Muntele Rosu	145.85	329			PKPdf	09 36 38.6	+0.8
MDUB	Mudurnu	146.01	317			PKPbc	09 36 40.0	-0.3
MAUC	Maruska	146.03	341	*e*PKP		PKPbc	09 36 39.7	-0.3
MMAI	Mount Meron Ar	146.11	303	PKPbc		PKPbc	09 36 40.6	-0.2
	comp=Z,17nm,0.8s,baz=50,slow=4.6,SNR=15							
BALJ	Balqa	146.19	301			PKPbc	09 36 40.9	0.0
MARR	Marisel-Cluj	146.28	333	⇑P		PKPbc	09 36 40.6	-0.3
VOIR		146.33	330	⇑P		PKPbc	09 36 40.4	-0.5
DRGR		146.37	333	⇑P		PKPbc	09 36 41.3	+0.3
PRU	Pruhonice	146.40	345	*e*PKP		PKPbc	09 36 40.8	-0.1
GOPC	GO Pecny, Ondr	146.40	344	*e*PKP		PKPbc	09 36 40.6	-0.3
GOPC				*ex*		x	09 36 43.9	
VRAC	Vranov	146.46	342	⇑P		PKPbc	09 36 40.5	-0.6
VRAC	Vranov	146.46	342	*e*PKP		PKPbc	09 36 40.7	-0.4
JAVC	Velka Javorina	146.53	341	*e*PKP		PKPbc	09 36 42.2	+0.8
PSZ	Piszkesteto	146.57	337	⇑P		PKPbc	09 36 41.8	+0.3
PSZ	Piszkesteto	146.57	337			PKPbc	09 36 41.0	-0.5
ARR	Arges	146.58	330	⇑P		PKiKP	09 36 42.7	-1.0
NKC	Novy Kostel	146.65	347	*e*PKP		PKPbc	09 36 41.7	+0.1
KRUC	Moravsky	146.74	342	*e*PKP		PKPbc	09 36 41.4	-0.4
MODS	Modra-Piesok	147.08	341	*e*PKP		PKPbc	09 36 43.2	+0.4
SIRR	Siria	147.23	334	⇑P		PKPbc	09 36 43.1	-0.2
MEM	Membach	147.25	355	*d*PKP		PKPbc	09 36 42.9	-0.2
BTNL	Ternell	147.27	355	*d*PKP		PKPbc	09 36 42.5	-0.7
BSTI	Sart Tilman	147.32	355	*d*PKP		PKPbc	09 36 43.0	-0.3
GZR	Gura Zlata	147.43	332	⇓P		PKPbc	09 36 43.0	-0.9
KHC	Kasperske Hory	147.43	345			PKPbc	09 36 43.0	-0.7
KHC	Kasperske Hory	147.43	345	*e*PKP		PKPbc	09 36 43.4	-0.3
SURR	Surduc	147.44	333	⇑P		PKPbc	09 36 43.2	-0.5
BCLA	Clavier	147.50	355	*d*PKP		PKPbc	09 36 43.3	-0.5
BHOU	Houvegnez	147.51	355	*d*PKP		PKPbc	09 36 44.4	+0.5
BMRD	Maredsous	147.65	356	*d*PKP		PKPbc	09 36 43.4	-0.7
GEC2	GERESS Array S	147.66	345			PKPbc	09 36 43.8	-0.6
GERES	GERESS Array B	147.66	345	PKPbc		PKPbc	09 36 43.5	-0.9
	comp=Z,11nm,0.7s,baz=22,slow=4.3,SNR=34							
BZS	Buzias	147.76	333	⇑P		PKPbc	09 36 44.1	-0.5
RCHB	Rochefort	147.77	356	*d*PKP		PKPbc	09 36 44.4	0.0
DOU	Dourbes	147.87	356	*d*PKPdf		PKPdf	09 36 41.0	+0.1
DOU				*d*PKP		PKPbc	09 36 44.5	-0.2
CONA	Conrad Observa	147.91	342	*e*PKP		PKPbc	09 36 44.8	-0.3
	comp=Z,16nm,0.9s,SNR=8.3							
HERR	Herculane	147.98	331	⇑P		PKPbc	09 36 44.6	-0.6
RONA	Rosalia, Austr	147.98	341	*e*PKP		PKPbc	09 36 44.8	-0.4
	comp=Z,14nm,0.8s,SNR=7.4							
WLF	Walferdange	148.18	354	PKPbc		PKPbc	09 36 45.9	+0.4
WLF	Walferdange	148.18	354	*d*PKiKP		PKPbc	09 36 46.1	+0.6
MDVR	Moldovita	148.38	332	⇑P		PKPbc	09 36 45.6	-0.6
MOA	Molln	148.44	343	*e*PKP		PKPbc	09 36 45.6	-0.7
	comp=Z,15nm,1.1s,SNR=5.1							
MORH	Mrgy, Hungar	148.47	337	⇑P		PKPbc	09 36 46.3	0.0
BALB	Balikesir	148.58	319	PKPbc		PKPbc	09 36 46.4	-0.5
BIOA	Bad Ischl, Aus	148.75	344	*e*PKP		PKPbc	09 36 46.1	-0.9
	comp=Z,14nm,1.0s							
BLKB	Belogradchik	148.81	330	⇓P		PKPbc	09 36 47.2	-0.1
FRGS	Fruska Gora	148.89	335	⇓P		PKPbc	09 36 47.4	-0.1
RDO	Rodhopi	149.05	323			PKPbc	09 36 46.7	-1.2
BFO	Black Forest	149.23	351			PKPbc	09 36 47.4	-0.8
LESA	Schwarzleotal	149.24	345	*i* PKP		PKPbc	09 36 47.2	-1.1
	comp=Z,10.0nm,0.9s							
BOVS	Bovan	149.26	331	⇑P		PKPbc	09 36 47.1	-1.2
SOKA	Soboth	149.28	342	*e*PKP		PKPbc	09 36 47.3	-1.2
	comp=Z,8.5nm,0.8s,SNR=5.8							
KBA	Koelnbreinsper	149.39	344	*e*PKP		PKPbc	09 36 47.9	-0.9
	comp=Z,12nm,0.7s,SNR=5.5							
OBKA	Obir	149.58	342	*e*PKP		PKPbc	09 36 47.7	-1.4
	comp=Z,6.5nm,0.9s							
WATA	Walderalm	149.58	346	*i* PKP		PKPbc	09 36 48.4	-0.8
	comp=Z,14nm,0.8s							
RETA	Reutte	149.61	348	*i* PKP		PKPbc	09 36 48.2	-1.0
	comp=Z,7.7nm,0.9s							
WTTA	Wattenberg	149.63	346	*e*PKP		PKPbc	09 36 48.6	-0.7
	comp=Z,28nm,0.8s,SNR=8.1							
MOTA	Moosalm	149.68	347	*e*PKP		PKPbc	09 36 48.6	-0.8
	comp=Z,14nm,0.8s,SNR=6.4							
MYKA	Terra Mystica	149.72	343	*i* PKP		PKPbc	09 36 48.0	-1.5
	comp=Z,13nm,0.7s,SNR=5.0							
SQTA	Sankt Quirin	149.77	347	*e*PKP		PKPbc	09 36 48.9	-0.7
	comp=Z,16nm,0.7s,SNR=5.6							
ABTA	Abfaltersbach	149.91	345	*e*PKP		PKPbc	09 36 48.7	-1.2
	comp=Z,24nm,0.7s,SNR=10							
PRED	Cave del Predi	149.92	343		PKPdf	PKPdf	09 36 39.8	-4.5
PRED						PKPbc	09 36 48.9	-1.1
PRED					PKPab	PKPab	09 36 56.5	-1.6
DAVA	Damuels	149.98	349	*e*PKP		PKPbc	09 36 49.5	-0.7
	comp=Z,21nm,0.9s,SNR=6.4							
LJU	Ljubljana	150.00	342	*i* PKPbc		PKPbc	09 36 49.4	-0.7
CRNS	Crni Vrh	150.05	342	*i* PKPbc		PKPbc	09 36 49.0	-1.2
FETA	Feichten	150.06	347	*e*PKP		PKPbc	09 36 49.8	-0.6
	comp=Z,13nm,0.8s,SNR=7.4							
CLUD	Cludinico	150.09	344			PKPbc	09 36 49.0	-1.3
VISS	Visnje	150.13	341	*i* PKPbc		PKPbc	09 36 49.8	-0.6
STAL	STALIGIAL	150.31	344	PKPbc		PKPbc	09 36 49.9	-1.0
SABO	M.te Sabotino	150.33	343	PKPbc		PKPbc	09 36 49.9	-1.0
FUORN	Ofenpass-Fuorn	150.54	348			PKPbc	09 36 51.5	-0.2
FNA	Florina	151.56	327			PKPbc	09 36 52.7	-1.2
ESDC	Sonseca Array	157.88	11	PKPab		PKPab	09 37 30.3	-1.9
	comp=Z,0.4nm,0.5s,baz=318,slow=2.2,SNR=6.3							

IDC 09 09:20:30.2±3.4, 54°.11N×86°.88E, h0km, mbtmp2.6/2, ML2.3/1, Error ellipse: s-maj=30.4km s-min=17.4km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.22	263	I	I	09 27 50.0	
	baz=81,slow=338,SNR=2.4						
ZALV	Zalesovo Beam	1.22	263	Pg	Pn	09 20 54.7	+0.2
	0.4nm,0.3s,baz=83,slow=17,SNR=2.5						
ZALV				Lg	Lg	09 21 09.2	
	0.8nm,0.3s,baz=81,slow=28,SNR=2.7						
KURBB	Kurchatov Arra	6.19	239	Pn	Pn	09 22 03.1	+0.4
	0.1nm,0.3s,baz=57,slow=13,SNR=4.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.88	204	Pn	Pn	09 22 26.9	+0.9
	0.2nm,0.7s,baz=24,slow=13,SNR=1.4						

ISK 09 09:21:18.8, 37°.18N×27°.84E, h0km, ML1.6/8, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	Milas	0.13	335	Pg	Pg	09 21 22.0	+0.8
MLSB				Sg	Sg	09 21 24.6	+1.7
RFTAA	Mazikoy-Bodrum	0.20	203	Pg	Pg	09 21 23.4	+0.8
YER	Yerkesik	0.35	97	Pg	Pg	09 21 26.6	+1.0
YER				Sg	Sg	09 21 31.4	+1.2
BODT	Bodrum	0.44	255	Pg	Pg	09 21 28.1	+0.8
BODT				Sg	Sg	09 21 34.7	+1.7
DAT	Datca	0.50	205	Pg	Pg	09 21 29.4	+1.1
DALY	Dalyan (Mula)	0.74	119	Pg	Pb	09 21 34.0	-0.6
CAME	Cameli-Denizli	1.19	101	Pn	Pb	09 21 42.4	+0.1
APMY	Acipayam-Deniz	1.20	75	Pn	Pb	09 21 42.4	0.0
APMY				Sn	Sn	09 21 59.5	-0.4

AFAD 09 09:21:55.7±0.0, 38°.40N×26°.57E, h7km±2km, ML1.1, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.05	153	P	Pg	09 21 57.1	-0.1
URLA				S	Sg	09 21 59.3	+1.0
ZEYE	Izmir, Urla-Ze	0.17	197	P	Pg	09 21 59.2	0.0
ZEYE				*i* AML	AML	09 22 03.0	
	comp=N,88nm,0.2s						
ZEYE				S	Sg	09 22 03.1	+1.6
ZEYE				*i* AML	AML	09 22 04.0	
	comp=E,65nm,0.4s						
KARB	zmir-Karabur	0.29	335	P	Pg	09 22 01.2	-0.2
KARB				*i* AML	AML	09 22 06.0	
	comp=N,31nm,0.2s						
KARB				*i* AML	AML	09 22 06.0	
	comp=E,23nm,0.7s						
KARB				S	Sg	09 22 06.4	+1.3

*MOS **09** 09:22:58.9±0.8, 34°.04N×136°.15E, h390km, mb4.1/24, Error ellipse: s-maj=7.8km s-min=5.0km az=108.7*

*IDC **09** 09:23:00.6±0.4, 34°.05N×136°.09E, h390km±4km, mb3.6/29, mbtmp4.4/37, Error ellipse: s-maj=8.7km s-min=6.5km az=60.0*

*JMA **09** 09:23:00.6±0.1, 34°.2N±0°.7×136°.1E±0°.5, h390km±1km, MD4.7/38, MW4.7/38, SOUTHERN MIE PREF*

*NEIC **09** 09:23:00.6±1.8, 34°.06N±0°.07×136°.17E±0°.08, h386km±6km, mb4.1/119, Error ellipse: s-maj=10.8km s-min=8.8km az=151.0*

*NIED **09** 09:23:00.6, 34°.15N×136°.12E, h390km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr=0.52; Mθθ=0.48; Mφφ=0.05; Mrθ=0.07; Mθφ=1.09; Mφr=0.81; Fault plane solution: M0=1.45000×10^16 NP1:φs=13.00000°, δ=74.00000°, λ=-140.00000°. NP2:φs=269.00000°, δ=52.00000°, λ=-21.00000°.*

ISC 09 09:23:00.4±0.4, 34°.10N±0°.04×136°.17E±0°.04, h388km±3km, n383, σ1=15/421, mb4.1/102, 22C-24D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKN2	Miekihoku	0.17	30	⇓P	Pn	09 23 49.1	+0.7
JKN2				⇓*e*S	S	09 24 26.9	-0.3
JNTK	Naratenkawa	0.30	306	⇓P	Pn	09 23 49.2	+0.6
JNTK				⇓*e*S	S	09 24 26.8	-0.8
JWY	Kouya	0.49	285	⇓P	Pn	09 23 49.7	+0.8
JWY				⇓*e*S	S	09 24 27.5	-0.6
JIE	Ise	0.53	56	⇓P	Pn	09 23 49.8	+0.9
JIE				⇓*e*S	S	09 24 28.2	+0.2
JIE	Ise	0.53	56	A	A	09 23 49.8	
	comp=E,5.0nm,2.2s,comp=N,3.0nm,3.2s						
JTNC	Tanabenakahech	0.54	240	⇓P	Pn	09 23 49.6	+0.6
JTNC				⇓*e*S	S	09 24 27.9	-0.3
JHE	Heguri	0.69	324	A	A	09 23 49.8	
	comp=E,5.0nm,3.4s,comp=N,2.0nm,5.0s						
TTO1	TONAKAI O.B.S	0.69	138	⇓P	Pn	09 23 50.3	+1.3
JWKM	Wakayamakushim	0.73	208	A	A	09 23 50.1	
	comp=E,8.0nm,1.7s						
JEG	Eigenji	1.05	10	A	A	09 23 50.9	
	comp=E,7.0nm,2.2s,comp=N,6.0nm,2.9s						
JMIK	Miki	1.17	308	A	A	09 23 51.2	
	comp=E,7.0nm,2.3s,comp=N,7.0nm,1.6s						
TK02	Tokai 2	1.32	96	⇓P	Pn	09 23 52.5	+1.2
TK02				⇓*e*S	S	09 24 35.6	+3.3
JICN	Ichinomiyachia	1.33	24	A	A	09 23 52.0	
	comp=E,13nm,2.3s						
JWT	Wachi	1.34	332	P	Pn	09 23 52.0	+0.4
JWT				*e*S	S	09 24 31.8	-1.1
JWT	Wachi	1.34	332	A	A	09 23 52.0	
	comp=E,5.0nm,2.7s						
INU	Inuyama	1.43	29		Pn	09 23 52.7	+0.7
INU	Inuyama	1.43	29	P	Pn	09 23 52.7	+0.7
JFM	Mihama	1.44	354	A	A	09 23 52.5	
	comp=E,10.0nm,2.1s,comp=N,3.0nm,1.8s						
JAI	Aioi	1.46	259	P	Pn	09 23 52.6	+0.4
JAI				S	S	09 24 33.4	-0.6
JAO	Obara	1.47	37	A	A	09 23 52.8	
	comp=E,8.0nm,2.9s,comp=N,3.0nm,1.8s						
HMMJ	Hamamatsu 2	1.49	59	A	A	09 23 53.0	
	comp=E,3.0nm,3.4s						
JYTA	Yamagatataniai	1.57	17	⇓P	Pn	09 23 53.4	+0.8
JYTA				⇓S	S	09 24 34.7	-0.1
JYTA	Yamagatataniai	1.57	17	A	A	09 23 53.4	
	comp=E,7.0nm,3.6s						
JKY	Yasaka	1.76	330	A	A	09 23 54.1	
	comp=E,9.0nm,2.5s,comp=N,4.0nm,2.0s						
JSG	Sagara	1.76	70		Pn	09 23 55.3	+1.6
JSG	Sagara	1.76	70	P	Pn	09 23 55.3	+1.6
JGF	Kuroka	1.79	33		Pn	09 23 54.5	+0.6
JGF	Kuroka	1.79	33	P	Pn	09 23 54.5	+0.6
JGF	Kuroka	1.79	33	A	A	09 23 54.5	
	comp=E,6.0nm,4.8s,comp=N,2.0nm,2.1s						

JNY	Yasuok	1.88	47	A		A	09 23 55.1	
	comp=E,4.0nm,1.7s							
JKSM	Kasumi	1.94	321	A		A	09 23 55.1	
	comp=E,6.0nm,2.6s,comp=N,3.0nm,2.7s							
JMN	Monobe	1.94	260			Pn	09 23 55.4	+0.5
JMN	Monobe	1.94	260	P		Pn	09 23 55.6	+0.7
JMN	Monobe	1.94	260	P		Pn	09 23 55.4	+0.5
JMN				*e*S		S	09 24 38.9	0.0
JKG	Kaga	2.18	3	⇓P		Pn	09 23 56.7	+0.4
JKG				⇓S		S	09 24 40.8	-0.7
JKG	Kaga	2.18	3	A		A	09 23 56.7	
	comp=E,14nm,1.8s							
JIZS	Izushimoda	2.32	74	A		A	09 23 58.2	
	comp=E,3.0nm,1.6s,comp=N,3.0nm,3.9s							
JFNN	Fujinakano	2.34	61	⇓*e*P		Pn	09 23 58.3	+0.8
JYN	Shimob	2.40	54	⇓P		Pn	09 23 58.4	+0.4
JOD2	Odawara 2	2.67	63	⇓P		Pn	09 24 00.4	+0.4
JHS	Saijyo	2.68	291	P		Pn	09 24 00.5	+0.4
JHS				*e*S		S	09 24 48.0	-0.3
JJH	Hakui	2.87	10	A		A	09 24 01.9	
	comp=E,6.0nm,2.5s,comp=N,5.0nm,2.1s							
JRY	Ryogami san	2.95	49	⇓P		Pn	09 24 02.8	+0.6
MAJO	Matsushiro	2.96	34	Pn		Pn	09 24 02.6	+0.4
MAJO	Matsushiro	2.96	34	*d* iP		Pn	09 24 02.4	+0.2
MAT	Matsushiro	2.96	34	P		Pn	09 24 02.5	+0.3
MAT				S		S	09 24 51.9	-0.4
MJAR	Matsushiro Arr	2.96	34	P		Pn	09 24 02.6	+0.3
	comp=N,421nm,0.6s,baz=198,slow=8.8,SNR=804							
MJAR				S		S	09 24 52.5	+0.1
	comp=N,37nm,0.6s,baz=197,slow=12,SNR=1.8							
MJB9	Matsu-Tunnel	2.96	34	Pn		Pn	09 24 03.5	+1.3
JTO	Tosashimizu	3.07	247	P		Pn	09 24 03.7	+0.3
JTO				*e*S		S	09 24 53.1	-1.1
JNA	Nagahama	3.12	261	P		Pn	09 24 04.2	+0.5
JNA				S		S	09 24 54.2	-0.7
JHT	Toyohira	3.15	281	P		Pn	09 24 04.1	+0.2
JHT				*e*S		S	09 24 54.6	-0.8
JHJ	Hachijo jima 2	3.17	107	P		Pn	09 24 05.1	+1.0
	comp=N,969nm,0.7s,baz=235,slow=15,SNR=34							
JHJ				S		S	09 24 58.4	+2.8
	comp=N,330nm,0.2s,baz=258,slow=24,SNR=7.8							
JHJ2	Mitsune	3.20	107	Pn		Pn	09 24 05.2	+0.8
JHJ2	Mitsune	3.20	107	P		Pn	09 24 05.2	+0.8
JHJ2	Mitsune	3.20	107	P		Pn	09 24 05.0	+0.6
JOI	OKI	3.25	313	*e*P		Pn	09 24 04.7	0.0
JJN	Nakama	3.41	28	A		A	09 24 06.7	
	comp=E,5.0nm,3.5s,comp=N,7.0nm,2.7s							
BSO1	Boso 1	4.01	81	P		Pn	09 24 09.9	-1.3
JNU	Nakatsue	4.52	259	P		Pn	09 24 17.3	+0.3
JNU	Nakatsue	4.52	259	P		Pn	09 24 17.3	+0.3
	comp=N,211nm,0.7s,baz=83,slow=2.2,SNR=140							
JNU				S		S	09 25 18.5	-0.5
	comp=N,49nm,0.9s,baz=168,slow=20,SNR=7.1							
JMM	Marumori	5.31	44	Pn		Pn	09 24 24.0

YULB **Yu-li** 16.83 235 P **P** 09 26 31.8 -1.3
YULB **Yu-li** 16.83 235 P **P** 09 26 32.8 -0.3
BJT **Baijiatuau** 17.01 296 P **P** 09 26 34.3 -0.5
BJT **Baijiatuau** 17.01 296 P **P** 09 26 34.3 -0.5
BJT pmax pmax
comp=Z,37nm,1.1s
TPUB **Ta-pu** 17.34 236 P **P** 09 26 36.5 -2.0
TPUB **Ta-pu** 17.34 236 P **P** 09 26 36.7 -1.9
TWGBT **Beinan** 17.36 234 P **P** 09 26 37.5 -1.3
TWG **Pinlang** 17.37 234 P **P** 09 26 37.6 -1.2
HEH **HeiHe** 17.38 341 ⇑P **P** 09 26 36.9 -1.7
HEH pmax pmax
comp=Z,36nm,1.2s
HEH pmax pmax
comp=Z,140nm,5.8s
TYV **Tymovskoe** 17.41 14 *e*P **Pn** 09 26 46.5 +3.4
TYV pmax pmax
comp=Z,100nm,3.3s
TYV pmax pmax
comp=Z,9.0nm,1.0s
HNS **HongShan** 17.73 287 ⇓P **P** 09 26 42.6 +0.2
HNS pmax pmax
comp=Z,95nm,0.7s
KNMB **Chin-men Tao** 18.22 243 P **P** 09 26 46.1 -1.7
WHN **Wuhan** 18.77 265 ⇑P **P** 09 26 53.2 -0.4
WHN S **S** 09 30 06.8 +1.0
WHN pmax pmax
comp=Z,97nm,0.8s
HIA **Hailar** 19.44 326 P **P** 09 26 58.8 -1.3
HIA **Hailar** 19.44 326 P **P** 09 26 58.7 -1.4
HIA **Hailar** 19.44 326 *i*P **P** 09 26 58.0 -2.1
HIA pmax pmax
comp=Z,30nm,1.0s
HHC **Hu-ho-hao-te** 20.62 296 ⇑*i*P **P** 09 27 11.7 +0.4
HHC sP sP 09 28 58.2 -0.6
HHC S **S** 09 30 39.4 +3.2
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,130nm,5.1s
ZEA **Zeya** 20.63 345 *e*P **P** 09 27 10.8 -0.3
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.6s
SZP **Santa** 21.67 224 P **P** 09 27 21.5 +0.6
GUMO **Guam** 21.89 157 P **P** 09 27 22.8 -0.1
comp=Z,56nm,0.3s,baz=348,slow=20,SNR=2.1
XAN **Xi'an** 22.55 278 P **P** 09 27 28.0 -0.9
XAN pmax pmax
comp=Z,20nm,1.1s
ENH **Enshi** 22.88 268 P **P** 09 27 31.2 -0.6
ENH **Enshi** 22.88 268 P **P** 09 27 31.5 -0.4
ULN **Ulaanbaatar** 25.75 311 P **P** 09 27 59.9 +2.4
ULN lAmb lAmb 09 28 00.6
comp=Z,12nm,0.7s
ULN **Ulaanbaatar** 25.75 311 *ce*P **P** 09 27 57.6 +0.1
ULN pmax pmax
comp=Z,21nm,1.3s
ULN **Ulaanbaatar** 25.75 311 P **P** 09 27 59.9 +2.4
SONM **Songino Array** 26.15 311 P **P** 09 28 03.3 +2.2
SONM lAmb lAmb 09 28 04.2
comp=Z,9.7nm,0.8s
SONM **Songino Array** 26.15 311 P **P** 09 28 02.7 +1.7
comp=Z,7.9nm,0.7s,baz=123,slow=9.7,SNR=42
SONM pP **pwP** 09 29 09.5 -0.2
comp=Z,2.3nm,0.9s,baz=127,slow=9.8,SNR=3.0
SONM PcP **PcP** 09 31 16.6 +0.3
comp=Z,0.5nm,0.3s,baz=33,slow=1.3,SNR=1.9
SONM ScP **ScP** 09 34 18.4 0.0
comp=Z,1.2nm,0.8s,baz=162,slow=4.8,SNR=4.5
comp=Z,7.9nm,0.7s
LZH **Lanzhou** 26.46 284 *e*P **P** 09 28 03.1 -0.9
LZH pP PP 09 29 16.5 +2.9
LZH pmax pmax
comp=Z,16nm,1.0s
CD2 **Chengdu** 27.46 272 P **P** 09 28 11.6 -1.1
CD2 pmax pmax
comp=Z,50nm,0.6s
ZAK **Zakamensk** 28.98 314 *e*P **P** 09 28 27.5 +1.6
ZAK pmax pmax
comp=Z,4.0nm,1.1s
GTA **Gaotai** 29.48 291 *e*P **P** 09 28 30.2 -0.2
GTA pP PP 09 29 47.8 +1.0
GTA sP sP 09 30 26.9 +0.2
GTA PcP **PcP** 09 31 25.4 +0.7
GTA ScP **ScP** 09 34 29.0 +0.1
GTA pmax pmax
comp=Z,6.0nm,0.8s
SEY **Seymchan** 30.60 15 *ce*P **P** 09 28 39.8 0.0
SEY pmax pmax
comp=Z,15nm,2.5s
SLVN **Son La** 31.13 254 P **P** 09 28 45.6 +0.6
SLVN lAmb lAmb 09 28 46.8
comp=Z,13nm,1.0s
UBPT **Khong Chiam** 33.41 243 P **P** 09 29 04.9 +0.3
UBPT lAmb lAmb 09 29 05.5
comp=Z,18nm,0.8s
UBPT **Khong Chiam** 33.41 243 P **P** 09 29 04.6 +0.1
NONG **Nongkai** 33.50 250 P **P** 09 29 05.8 +0.5
GOMU **GeErMu** 33.70 286 P **P** 09 29 06.7 -0.6
GOMU pmax pmax
comp=Z,11nm,0.9s
CRAI **Chiangrai** 34.53 256 P **P** 09 29 14.3 +0.2
CHTO **Chiang Mai** 36.41 255 P **P** 09 29 29.4 -0.5
CHTO lAmb lAmb 09 29 32.2
comp=Z,8.5nm,0.7s
CHTO **Chiang Mai** 36.41 255 P **P** 09 29 30.7 +0.8
CHTO **Chiang Mai** 36.41 255 P **P** 09 29 29.4 -0.5
CHTO pmax pmax
comp=Z,8.0nm,0.7s
CHTO **Chiang Mai** 36.41 255 P **P** 09 29 29.1 -0.8
CMAR **Chiang Mai Arr** 36.60 254 P **P** 09 29 31.7 +0.2
CMAR **Chiang Mai Arr** 36.60 254 *ce*P **P** 09 29 31.3 -0.2
CMAR pmax pmax
comp=Z,4.0nm,0.5s
CMAR **Chiang Mai Arr** 36.60 254 P **P** 09 29 31.1 -0.4
comp=Z,4.2nm,0.6s,baz=48,slow=7.5,SNR=23
CMAR PcP **PcP** 09 31 45.7 +0.6
comp=Z,1.6nm,0.3s,baz=313,slow=0.5,SNR=4.7
CMAR ScP **ScP** 09 34 53.4 -0.6
comp=Z,0.8nm,0.3s,baz=20,slow=3.3,SNR=4.1
comp=Z,4.2nm,0.6s
FAKI **Fak Fak** 37.00 187 P **P** 09 29 35.2 +0.4
MND **Mandalay** 37.12 262 P **P** 09 29 36.3 +0.5
NAYO **Nakonayok** 37.13 247 P **P** 09 29 37.6 +1.7
LUWI **Luwuk** 37.15 203 P **P** 09 29 33.8 -2.3
TIXI **Tiksi** 37.82 356 P **P** 09 29 40.8 0.0
TIXI lAmb lAmb 09 29 41.5
comp=Z,5.4nm,0.8s
TIXI **Tiksi** 37.82 356 *ce*P **P** 09 29 41.0 +0.2
TIXI pmax pmax
comp=Z,4.0nm,0.8s
BILL **Bilibino** 38.09 18 P **P** 09 29 44.7 +1.6
BILL lAmb lAmb 09 29 45.7
comp=Z,15nm,1.2s
BILL **Bilibino** 38.09 18 *e*P **P** 09 29 43.6 +0.4
LSA **Lhasa** 38.24 276 P **P** 09 29 45.9 +0.4
LSA lAmb lAmb 09 29 55.2
comp=Z,3.7nm,0.8s
LSA **Lhasa** 38.24 276 P **P** 09 29 45.9 +0.4
LSA pmax pmax
comp=Z,4.0nm,0.8s
WMQ **Urumqi** 38.45 299 *e*P **P** 09 29 47.9 +1.4
WMQ pmax pmax
comp=Z,16nm,1.3s
DGZ **Jazzator, Alta** 38.77 309 *i*P **P** 09 29 48.5 -0.7
DGZ pmax pmax
comp=Z,7.0nm,1.0s
SRDT **SRDT** 38.80 249 P **P** 09 29 49.9 +0.2
KSM **Kuching** 40.47 222 P **P** 09 30 04.1 +0.8
KSM lAmb lAmb 09 30 04.6
comp=Z,17nm,0.9s
ZALV **Zalesovo Beam** 40.85 315 P **P** 09 30 07.8 +2.0
ZALV **Zalesovo Beam** 40.85 315 P **P** 09 30 05.6 -0.2
comp=Z,0.8nm,0.5s,baz=112,slow=6.8,SNR=2.5
ZALV PcP **PcP** 09 31 57.5 -0.5
comp=Z,5.8nm,0.6s,baz=97,slow=3.7,SNR=7.7
ZALV ScP **ScP** 09 35 08.5 -1.3
comp=Z,4.8nm,0.6s,baz=111,slow=4.0,SNR=15
comp=Z,0.8nm,0.5s
SURA **Surathani** 41.70 242 P **P** 09 30 13.6 +0.4
KAPI **Kappang** 41.88 205 P **P** 09 30 14.1 -0.5
KAPI **Kappang** 41.88 205 P **P** 09 30 14.1 -0.5
KAPI pmax pmax
comp=Z,52nm,1.5s
SRIT **Nakonsritamara** 42.10 241 P **P** 09 30 16.8 +0.4
SRIT **Nakonsritamara** 42.10 241 P **P** 09 30 17.1 +0.7
MK31 **Makanchi Array** 42.14 304 P **P** 09 30 16.6 +0.2
MK31 lAmb lAmb 09 30 17.4
comp=Z,5.0nm,0.9s
MK31 **Makanchi Array** 42.14 304 *ce*P **P** 09 30 15.8 -0.5
MKAR **Makanchi Array** 42.14 304 P **P** 09 30 16.9 +0.5
MKAR **Makanchi Array** 42.14 304 *i*P **P** 09 30 16.7 +0.4
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR **Makanchi Array** 42.14 304 P **P** 09 30 16.3 0.0
comp=Z,3.3nm,0.5s,baz=85,slow=10,SNR=57
MKAR PcP **PcP** 09 32 01.3 -1.1
comp=Z,0.8nm,0.4s,baz=86,slow=5.7,SNR=5.3
MKAR ScP **ScP** 09 35 14.2 -1.0
comp=Z,1.2nm,0.5s,baz=81,slow=5.4,SNR=7.6
comp=Z,3.3nm,0.5s
MAKZ **Makanchi** 42.35 304 P **P** 09 30 18.2 +0.1
MAKZ lAmb lAmb 09 30 18.8
comp=Z,4.7nm,0.6s
MAKZ **Makanchi** 42.35 304 P **P** 09 30 18.2 +0.1
MAKZ pmax pmax
comp=Z,5.0nm,0.6s
KULM **Kulim** 43.64 237 P **P** 09 30 28.4 -0.1
KULM lAmb lAmb 09 30 29.6
comp=Z,27nm,1.4s
IPM **Ipoh** 43.96 236 P **P** 09 30 30.6 -0.5
IPM lAmb lAmb 09 30 31.2
comp=Z,21nm,0.8s
IPM **Ipoh** 43.96 236 P **P** 09 30 30.6 -0.5
NRIK **Noril'sk** 44.24 338 *ce*P **P** 09 30 32.6 0.0
NRIK pmax pmax
comp=Z,3.0nm,1.0s
NRIK **Noril'sk** 44.24 338 P **P** 09 30 32.1 -0.4
comp=Z,1.3nm,0.4s,baz=114,slow=5.3,SNR=1.7
comp=Z,1.3nm,0.4s
KURK **Kurchatov** 44.46 310 P **P** 09 30 34.6 +0.1
KURK lAmb lAmb 09 30 35.2
comp=Z,8.1nm,0.8s
KURK **Kurchatov** 44.46 310 *ce*P **P** 09 30 34.6 +0.1
KURK pmax pmax
comp=Z,6.0nm,0.7s
KURK **Kurchatov** 44.46 310 P **P** 09 30 34.3 -0.2
KURBB **Kurchatov Arra** 44.52 310 P **P** 09 30 34.7 -0.2
comp=Z,4.8nm,0.9s,baz=92,slow=7.4,SNR=28
KURBB PcP **PcP** 09 32 09.3 -1.1
comp=Z,1.7nm,0.4s,baz=94,slow=4.2,SNR=6.1
comp=Z,4.8nm,0.9s
SOEI **Soe** 45.05 197 P **P** 09 30 38.9 -0.7
PSI **Prapat** 46.62 236 P **P** 09 30 51.4 -0.4
PSI **Prapat** 46.62 236 P **P** 09 30 51.3 -0.5
PSI pmax pmax
comp=Z,10.0nm,0.7s
RPSI **Rantau Prapat** 46.69 236 P **P** 09 30 51.2 -1.0
RPSI lAmb lAmb 09 30 53.6
comp=Z,10nm,0.7s
MTN **Manton Dam** 46.92 187 P **P** 09 30 53.1 -0.8
MTN lAmb lAmb 09 30 55.0
comp=Z,20nm,0.8s
MTN **Manton Dam** 46.92 187 P **P** 09 30 53.3 -0.6
JAGI **Jajag, Banyuwa** 47.20 210 P **P** 09 30 54.7 -1.4
JAGI lAmb lAmb 09 30 56.1
comp=Z,26nm,1.1s
NRN **Naryn** 47.30 297 P **P** 09 30 57.2 +0.2
NRN **Naryn** 47.30 297 P **P** 09 30 57.2 +0.2
NRN pmax pmax
comp=Z,4.0nm,1.1s
AAK **Ala-Archa** 48.16 299 P **P** 09 31 03.6 +0.4
AAK **Ala-Archa** 48.16 299 P **P** 09 31 03.1 -0.2
comp=Z,1.0nm,0.6s,baz=39,slow=13,SNR=2.5
AAK PcP **PcP** 09 32 23.0 -0.7
comp=Z,0.9nm,0.5s,baz=95,slow=3.6,SNR=3.8
comp=Z,1.0nm,0.6s
AAK **Ala-Archa** 48.16 299 P **P** 09 31 03.4 +0.1
COEN **Coen** 48.25 171 P **P** 09 31 05.1 +1.2
COEN lAmb lAmb 09 31 28.6
comp=Z,24nm,1.2s
UGM **Wanagama** 48.34 215 P **P** 09 31 03.7 -1.1
GSI **Gunungsitoli** 48.62 236 P **P** 09 31 06.9 0.0
GSI **Gunungsitoli** 48.62 236 P **P** 09 31 06.7 -0.2
GSI **Gunungsitoli** 48.62 236 P **P** 09 31 06.0 -0.9
C18K **Utukok River** 48.78 26 P **P** 09 31 09.0 +1.6
LEM **Lembang** 48.86 219 P **P** 09 31 07.1 -1.7
comp=Z,24nm,0.5s,baz=326,slow=21,SNR=6.0
K17K **Iditarod** 49.19 34 P **P** 09 31 12.7 +2.3
K17K lAmb lAmb 09 31 39.6
comp=Z,32nm,1.5s
H18K **Honhosa River** 49.36 30 P **P** 09 31 11.8 +0.1
H18K lAmb lAmb 09 31 23.3
comp=Z,11nm,1.4s
BVAR **Borovoye Array** 49.44 314 P **P** 09 31 12.3 -0.2
comp=Z,1.8nm,0.4s,baz=95,slow=7.9,SNR=14
BVAR PcP **PcP** 09 32 27.4 -0.6
comp=Z,4.2nm,0.5s,baz=95,slow=3.2,SNR=12
comp=Z,1.8nm,0.4s
C19K **Lookout Ridge** 49.44 25 P **P** 09 31 11.4 -0.9
BRVK **Borovoye** 49.50 314 P **P** 09 31 12.5 -0.5
BRVK **Borovoye** 49.50 314 *ce*P **P** 09 31 12.4 -0.5
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK **Borovoye** 49.50 314 P **P** 09 31 12.5 -0.5
ARSB **Arslanbob** 49.54 298 P **P** 09 31 15.1 +1.5
ARSB **Arslanbob** 49.54 298 P **P** 09 31 15.1 +1.5
ARSB pmax pmax
comp=Z,1.0nm,0.9s
D19K **Kuna River** 49.87 26 P **P** 09 31 17.2 +1.7
KNRA **Kununurra** 49.99 189 P **P** 09 31 17.3 +0.3
KNRA lAmb lAmb 09 31 17.6
comp=Z,8.5nm,0.7s
E19K **Redstone River** 50.06 27 P **P** 09 31 18.8 +1.8
SVW2 **Sparrevohn** 50.42 36 P **P** 09 31 18.9 -0.8
SVW2 lAmb lAmb 09 31 21.8
comp=Z,15nm,1.3s
L19K **White Mountain** 50.77 34 P **P** 09 31 22.8 +0.6
L19K lAmb lAmb 09 31 49.8
comp=Z,8.2nm,1.4s
KK31 **Karatay Array** 50.92 301 P **P** 09 31 23.5 -0.1
KK31 lAmb lAmb 09 31 24.3
comp=Z,4.2nm,0.8s
KK31 **Karatay Array** 50.92 301 P **P** 09 31 23.5 -0.1
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR **Karatay Array** 50.92 301 P **P** 09 31 23.5 -0.2
KKAR **Karatay Array** 50.92 301 P **P** 09 31 23.5 -0.2
K20K **Telida** 51.13 33 P **P** 09 31 24.2 -0.7
K20K lAmb lAmb 09 31 50.0
comp=Z,7.1nm,1.4s
B21K **Ikpikpuk River** 51.26 25 P **P** 09 31 27.2 +1.6
B21K lAmb lAmb 09 31 30.3
comp=Z,6.9nm,1.5s
IMAR **Indian Mountai** 51.33 30 P **P** 09 31 27.7 +1.4
NIL **Nilore** 51.47 288 P **P** 09 31 28.0 +0.1
NIL lAmb lAmb 09 31 29.0
comp=Z,11nm,0.6s
NIL **Nilore** 51.47 288 P **P** 09 31 28.0 +0.1
NIL pmax pmax
comp=Z,11nm,0.6s
D22K **Ayikyak River** 51.89 26 P **P** 09 31 32.0 +1.6
E22K **Anaktuvuk Pass** 52.17 27 P **P** 09 31 34.5 +2.1
FITZ **Fitzroy Crossi** 52.86 193 P **P** 09 31 38.5 +0.5
FITZ **Fitzroy Crossi** 52.86 193 P **P** 09 31 38.2 +0.2
SIMJ **Simiganj** 53.18 296 P **P** 09 31 40.0 -0.4
SIMJ lAmb lAmb 09 31 40.9
comp=Z,10.0nm,0.9s
WB0 **Warramunga Arr** 53.59 182 P **P** 09 31 43.2 0.0
WB0 lAmb lAmb 09 31 43.4
comp=Z,6.3nm,0.6s
MDM **Murphy Dome** 53.65 31 P **P** 09 31 45.1 +2.0
F24K **Squaw Lake** 53.66 28 P **P** 09 31 43.0 -0.1
WRH **Wood River Hil** 53.74 31 P **P** 09 31 43.8 +0.1
H24K **Noodor Dome** 53.74 30 P **P** 09 31 44.3 +0.5
WRAB **Tennant Creek** 53.75 182 P **P** 09 31 44.0 -0.4
WRAB lAmb lAmb 09 31 44.3
comp=Z,14nm,1.4s
WRAB **Tennant Creek** 53.75 182 P **P** 09 31 44.0 -0.4
WRAB pmax pmax
comp=Z,14nm,1.5s
WB2 **Warramunga Arr** 53.76 182 P **P** 09 31 44.0 -0.4
WB2 lAmb lAmb 09 31 44.4
comp=Z,5.8nm,0.6s
WRA **Warramunga Arr** 53.76 182 P **P** 09 31 43.6 -0.8
WRA **Warramunga Arr** 53.76 182 P **P** 09 31 43.7 -0.8
WRA **Warramunga Arr** 53.76 182 P **P** 09 31 43.9 -0.5
comp=Z,5.1nm,0.5s,baz=356,slow=7.7,SNR=62
WRA PcP **PcP** 09 32 44.6 0.0
comp=Z,1.8nm,0.5s,baz=356,slow=4.5,SNR=4.9
WRA S **S** 09 38 46.0 -2.4
comp=Z,1.3nm,1.0s,baz=0.4,slow=12,SNR=4.0
comp=Z,5.1nm,0.5s
WR0 **Warramunga Arr** 53.77 182 P **P** 09 31 43.8 -0.7
WR0 lAmb lAmb 09 31 44.9
comp=Z,8.5nm,0.5s
POKR **Poker Plat Res** 53.97 31 P **P** 09 31 44.6 -0.9
POKR lAmb lAmb 09 31 48.1
comp=Z,3.5nm,0.7s
ILAR **Eielson Array** 54.23 31 P **P** 09 31 46.8 -0.4
ILAR **Eielson Array** 54.23 31 P **P** 09 31 47.9 +0.7
comp=Z,0.4nm,0.7s,baz=257,slow=6.2,SNR=2.0
comp=Z,0.4nm,0.7s
HDA **Harding Lake** 54.24 31 P **P** 09 31 46.9 -0.4
HDA lAmb lAmb 09 32 12.6
comp=Z,6.6nm,1.5s
IL03 **Eielson Array** 54.25 31 P **P** 09 31 47.1 -0.3
KBL **Kabul** 54.47 291 P **P** 09 31 49.1 -0.6
KBL lAmb lAmb 09 31 49.8
comp=Z,6.0nm,0.8s
KBL **Kabul** 54.47 291 P **P** 09 31 49.1 -0.6
KBL pmax pmax
comp=Z,6.0nm,0.8s
E25K **Arctic Village** 54.51 27 P **P** 09 31 51.1 +1.9
BMAR **Burnt Mountain** 54.94 28 P **P** 09 31 53.7 +1.5
SCRK **Sand Creek** 55.58 32 P **P** 09 31 56.9 -0.1
ARU **Arti** 55.74 319 P **P** 09 31 57.6 -0.5
ARU lAmb lAmb 09 31 58.7
comp=Z,5.0nm,0.6s
ARU **Arti** 55.74 319 *d i*P **P** 09 31 58.1 0.0
ARU 09 34 00.6
ARU S **S** 09 39 18.1 +4.4
ARU SS **SS** 09 43 04.7 -0.7
ARU pmax pmax
comp=Z,3.0nm,0.6s
ARU **Arti** 55.74 319 P **P** 09 31 57.8 -0.3
comp=Z,3.5nm,0.2s,baz=122,slow=4.2,SNR=5.9
comp=Z,3.5nm,0.2s
MCARA **McCarthy VSAT** 56.43 35 P **P** 09 32 05.3 +2.5
MCARA lAmb lAmb 09 32 27.2
comp=Z,18nm,1.5s
ABKAR **Akbulak array** 56.57 310 P **P** 09 32 03.8 -0.1
BCAR **Beaver Creek A** 56.70 33 P **P** 09 32 03.9 -0.8
F28M **Old Crow** 56.71 27 P **P** 09 32 04.3 -0.3
M27K **Edge Creek, AK** 56.79 34 P **P** 09 32 07.5 +2.0
M27K lAmb lAmb 09 32 23.5
comp=Z,6.0nm,1.4s
I28M **Miner Creek** 57.06 30 P **P** 09 32 09.7 +2.5
E29M **Blow River** 57.31 26 P **P** 09 32 09.4 +0.6
AKTO **Aktyubinsk** 57.46 312 P **P** 09 32 09.5 -0.6
comp=Z,6.7nm,0.6s,baz=72,slow=9.5,SNR=20
comp=Z,6.7nm,0.6s
AS31 **Alice Springs** 57.48 182 P **P** 09 32 10.5 -0.1
ASAR **Alice Springs** 57.48 182 P **P** 09 32 10.1 -0.5
ASAR **Alice Springs** 57.48 182 P **P** 09 32 10.2 -0.3
comp=Z,3.3nm,0.6s,baz=358,slow=6.0,SNR=35
ASAR S **S** 09 39 34.9 -2.1
comp=Z,0.4nm,0.8s,baz=16,slow=20,SNR=3.2
ASAR PKP2bc 10 02 03.9
comp=Z,0.7nm,1.0s,baz=132,slow=1.4,SNR=4.5
comp=Z,3.3nm,0.6s
PSA00 **Pilbara Seismi** 57.50 198 P **P** 09 32 09.9 -0.7
PSA00 lAmb lAmb 09 32 10.4
comp=Z,7.2nm,0.8s
PSA00 **Pilbara Seismi** 57.50 198 P **P** 09 32 10.1 -0.5
PSA00 lAmb lAmb 09 32 10.5
comp=Z,10nm,0.7s
PALK **Pallekele** 57.53 256 P **P** 09 32 11.3 +0.1
PALK lAmb lAmb 09 32 12.0
comp=Z,11nm,0.8s
PALK **Pallekele** 57.53 256 P **P** 09 32 11.3 +0.1
PALK pmax pmax
comp=Z,11nm,0.9s
PALK **Pallekele** 57.53 256 P **P** 09 32 11.4 +0.3
G30M **tAoh Zraii Nji** 58.22 28 P **P** 09 32 16.7 +1.6
L29M **L29M** 58.31 32 P **P** 09 32 15.0 -0.8
M29M **Somme Creek** 58.32 33 P **P** 09 32 16.6 +0.6
I30M **Mount Dempster** 58.56 30 P **P** 09 32 19.0 +1.4
INK **Inuvik** 58.91 26 P **P** 09 32 20.5 +0.8
INK **Inuvik** 58.91 26 P **P** 09 32 20.5 +0.8
INK pmax pmax
comp=Z,5.0nm,1.5s
G31M **Satah River** 58.98 27 P **P** 09 32 21.6 +1.4
G31M lAmb lAmb 09 32 29.8
comp=Z,5.9nm,1.4s
F31M **Tsiigehtchic** 59.05 27 P **P** 09 32 21.5 +0.9
WRKA **Warakurna** 59.28 188 P **P** 09 32 22.9 +0.1
FARO **Faro, Yukon** 60.68 32 P **P** 09 32 33.7 +2.0
FARO lAmb lAmb 09 32 56.7
comp=Z,7.5nm,1.5s
GEYT **Alibeck** 61.49 298 P **P** 09 32 37.4 -0.1
comp=Z,2.9nm,0.7s,baz=28,slow=13,SNR=5.8
comp=Z,2.9nm,0.7s
C36M **Paulatuk** 61.85 23 P **P** 09 32 40.0 +0.7
C36M lAmb lAmb 09 33 02.0
comp=Z,3.6nm,1.2s
R33M **Jennings River** 62.73 35 P **P** 09 32 47.0 +1.6
R33M lAmb lAmb 09 32 56.7
comp=Z,4.9nm,1.4s
DZM **Mont Dzumac** 62.85 148 P **P** 09 32 48.8 +2.2
DZM **Mont Dzumac** 62.85 148 P **P** 09 32 48.3 +1.7
comp=Z,16nm,0.8s,baz=338,slow=11,SNR=10
comp=Z,16nm,0.8s
FORT **Forrest** 64.98 188 P **P** 09 33 00.3 +0.2
FORT **Forrest** 64.98 188 P **P** 09 33 00.4 +0.4
ARCES **ARCESS Array B** 65.21 339 P **P** 09 33 02.7 +1.6
comp=Z,3.3nm,0.8s,baz=58,slow=7.3,SNR=5.2
comp=Z,3.3nm,0.8s
STKA **Stephens Creek** 65.82 175 P **P** 09 33 05.5 +0.2
comp=Z,1.2nm,0.3s,baz=318,slow=14,SNR=1.8
comp=Z,1.2nm,0.3s
BBOO **Buckleboo** 66.55 180 P **P** 09 33 09.9 0.0
BBOO lAmb lAmb 09 33 33.8
comp=Z,11nm,1.2s
JLN **Jalan Bani Buh** 67.33 282 P **P** 09 33 14.5 -0.7
WSAR **Wadi Sarin** 67.44 283 P **P** 09 33 14.7 -1.2
WBK **Wadi Bani Khal** 67.47 283 P **P** 09 33 14.8 -1.3
BIDO **Bidbid** 67.72 284 P **P** 09 33 18.2 +0.7
OBN **Obninsk** 67.84 322 ⇑*e*P **P** 09 33 16.9 -0.8
OBN pmax pmax
comp=Z,5.0nm,1.0s
SHME **Shamm** 68.10 287 P **P** 09 33 20.2 +0.4
JMDO **Jabal Madar** 68.29 283 P **P** 09 33 20.8 -0.3
MASF **Masafi** 68.41 287 P **P** 09 33 22.2 +0.4
YKA **Yellowknife Ar** 68.45 28 P **P** 09 33 23.6 +2.3
comp=Z,0.1nm,0.5s,baz=297,slow=5.5,SNR=1.3
YKA pP **pP** 09 34 46.3 -0.1
comp=Z,1.2nm,1.0s,baz=293,slow=6.4,SNR=6.3
UOSS **Minazif** 68.58 286 P **P** 09 33 22.5 -0.3
UOSS lAmb lAmb 09 33 36.7
comp=Z,7.9nm,1.1s
UOSS **Minazif** 68.58 286 P **P** 09 33 20.7 -2.1
HATD **Hatta, Dubai** 68.69 286 P **P** 09 33 23.7 +0.2
SOHO **SOHO** 68.70 285 P **P** 09 33 23.4 -0.1
ASHO **Ashiyiah** 68.82 286 P **P** 09 33 24.2 -0.1
BSY **Bisya** 68.84 284 P **P** 09 33 24.5 +0.1
NWAO **Narrogin (SRO)** 69.00 197 P **P** 09 33 25.0 -0.1
NWAO **Narrogin (SRO)** 69.00 197 P **P** 09 33 25.0 -0.1
NWAO pmax pmax
comp=Z,25nm,1.2s
MHTO **MHTO** 69.07 282 P **P** 09 33 25.6 -0.3
ARQ **Araqi** 69.09 285 P **P** 09 33 26.1 +0.1
ALNE **Al Ain** 69.36 286 P **P** 09 33 28.0 +0.3
SNR=5.6
FIA1 **FINESS Array S** 69.37 331 P **P** 09 33 26.8 -0.2
FINES **FINESS Array B** 69.37 331 P **P** 09 33 27.0 0.0
FINES **FINESS Array B** 69.37 331 *ce*P **P** 09 33 26.7 -0.2
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES **FINESS Array B** 69.37 331 P **P** 09 33 26.8 -0.1
comp=Z,2.1nm,0.5s,baz=65,slow=5.4,SNR=27
comp=Z,2.1nm,0.5s
ASUD **Al Ashush, Dub** 69.43 286 P **P** 09 33 27.7 -0.3
KBZ **Khabaz** 69.51 309 P **P** 09 33 28.1 -0.1
comp=Z,6.4nm,0.9s,baz=162,slow=3.6,SNR=7.6
comp=Z,6.4nm,0.9s
KIV **Kislovodsk** 69.54 310 *e*P **P** 09 33 29.5 +1.0
KIV pmax pmax
comp=Z,11nm,1.1s
SHAO **Shalim** 72.47 280 P **P** 09 33 46.0 -0.1
GURO **Guroymak-BITLI** 72.58 305 P **P** 09 33 47.4 +0.7
GURO lAmb lAmb 09 33 48.4
comp=Z,6.4nm,1.0s

SLWR	**Sila**	**72.59 288**	P	**P**	**09 33 45.9**	**-0.9**
DMTO	**DMTO**	**73.17 280**	P	**P**	**09 33 49.9**	**-0.3**
DOK	**Doka** SNR=6.1	**73.38 281**	P	**P**	**09 33 51.0**	**-0.4**
RBK	**Rabkut**	**73.89 280**	P	**P**	**09 33 53.7**	**-0.7**
AKASG	**Malin Array Be**	**73.93 321**	*i* P	**P**	**09 33 53.5**	**-0.5**
AKASG	comp=Z,1.0nm,0.4s		pmax	pmax		
AKASG	**Malin Array Be** comp=Z,1.2nm,0.4s,baz=46,slow=6.4,SNR=9.6	**73.93 321**	P	**P**	**09 33 53.3**	**-0.7**
	comp=Z,1.2nm,0.4s					
AKBB	**Malin Array Si**	**73.93 321**	P	**P**	**09 33 54.2**	**+0.1**
AKBB	comp=Z,13nm,1.3s		IAmb	IAmb	09 33 54.5	
AKBB	**Malin Array Si**	**73.93 321**	*ce*P	**P**	**09 33 53.7**	**-0.3**
AKBB	comp=Z,7.0nm,1.2s		pmax	pmax		
KIEV	**Kiev**	**73.94 321**	P	**P**	**09 33 54.1**	**0.0**
KIEV	comp=Z,13nm,1.4s		IAmb	IAmb	09 33 54.5	
KIEV	**Kiev**	**73.94 321**	P	**P**	**09 33 54.1**	**0.0**
KIEV	comp=Z,13nm,1.4s		pmax	pmax		
WHFO	**Wadi Hawf** SNR=22	**74.03 281**	P	**P**	**09 33 54.0**	**-1.3**
ABTO	**Aybut**	**74.71 281**	P	**P**	**09 33 58.5**	**-0.7**
ARPR	**Arapgir-MALATY**	**74.79 307**	P	**P**	**09 33 59.9**	**+0.5**
ARPR	comp=Z,6.8nm,0.8s		IAmb	IAmb	09 34 01.3	
HFS	**Hagfors**	**74.93 334**	P	**P**	**09 33 59.0**	**-0.5**
HFS	**Hagfors** comp=Z,3.9nm,0.6s,baz=329,slow=1.7,SNR=16	**74.93 334**	P	**P**	**09 33 59.0**	**-0.5**
	comp=Z,3.9nm,0.6s					
NC405	**NORSAR Array S**	**74.94 336**	P	**P**	**09 34 00.1**	**+0.4**
NC204	**NORSAR Array S**	**75.15 336**	P	**P**	**09 34 01.5**	**+0.6**
NB2	**NORSAR Subarra** comp=Z,2.2nm,0.6s,baz=50,slow=5.9	**75.17 336**	P	**P**	**09 34 00.5**	**-0.4**
NOA	**NORSAR Array B** comp=Z,2.3nm,0.8s,baz=102,slow=14,SNR=4.3	**75.17 336**	P	**P**	**09 34 00.6**	**-0.3**
	comp=Z,2.3nm,0.8s					
BR131	**Keskin Array S**	**77.51 310**	P	**P**	**09 34 15.0**	**+0.5**
BR131	**Keskin Array S**	**77.51 310**	*i* P	**P**	**09 34 14.1**	**-0.4**
BR131	**Keskin Array S**	**77.51 310**	P	**P**	**09 34 15.3**	**+0.8**
BRTR	**Keskin Array B**	**77.51 310**	P	**P**	**09 34 14.2**	**-0.3**
BRTR	**Keskin Array B** comp=Z,7.6nm,0.9s,baz=106,slow=4.4,SNR=36	**77.51 310**	P	**P**	**09 34 14.8**	**+0.3**
	comp=Z,7.6nm,0.9s					
RAYN	**Ar Rayn**	**77.73 290**	P	**P**	**09 34 15.9**	**0.0**
RAYN	**Ar Rayn**	**77.73 290**	P	**P**	**09 34 15.9**	**0.0**
RAYN	comp=Z,11nm,0.7s		pmax	pmax		
RAYN	**Ar Rayn**	**77.73 290**	P	**P**	**09 34 15.8**	**0.0**
BURAR	**Bucovina Array**	**77.87 320**	P	**P**	**09 34 16.7**	**+0.4**
BURAR	comp=Z,2.3nm,0.7s		IAmb	IAmb	09 34 17.7	
ANTO	**Ankara**	**77.97 310**	P	**P**	**09 34 17.7**	**+0.8**
ANTO	**Ankara**	**77.97 310**	P	**P**	**09 34 17.7**	**+0.8**
ANTO	comp=Z,14nm,0.8s		pmax	pmax		
MMAI	**Mount Meron Ar** comp=Z,1.6nm,0.3s,baz=57,slow=3.1,SNR=4.6	**80.08 303**	P	**P**	**09 34 28.4**	**+0.1**
	comp=Z,1.6nm,0.3s					
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.6s,baz=280,slow=6.2,SNR=4.6	**80.16 50**	P	**P**	**09 34 30.4**	**+1.5**
NVAR			pP	**pP**	**09 35 57.9**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=291,slow=4.1,SNR=6.3					
	comp=Z,0.4nm,0.6s					
MORC	**Moravsky Berou**	**80.38 325**	P	**P**	**09 34 30.6**	**+1.0**
MORC	comp=Z,4.8nm,1.1s		IAmb	IAmb	09 34 30.9	
MORC	**Moravsky Berou**	**80.38 325**	P	**P**	**09 34 30.6**	**+1.0**
MORC	comp=Z,5.0nm,1.1s		pmax	pmax		
CLL	**Collm**	**81.41 328**	P	**P**	**09 34 35.0**	**+0.2**
CLL	comp=Z,4.0nm,0.6s		IAmb	IAmb	09 34 37.2	
CLL	**Collm**	**81.41 328**	*i* P	**P**	**09 34 35.1**	**+0.2**
CLL	comp=Z,19nm,1.7s		pmax	pmax		
CLL	**Collm** comp=Z,19nm,1.7s	**81.41 328**	*i* P	**P**	**09 34 35.1**	**+0.2**
R11B	**Troy Canyon, C**	**81.92 49**	P	**P**	**09 34 38.8**	**+0.7**
KHC	**Kasperske Hory**	**82.70 326**	P	**P**	**09 34 42.6**	**+1.0**
KHC	comp=Z,3.4nm,0.8s		IAmb	IAmb	09 34 42.7	
KHC	**Kasperske Hory**	**82.70 326**	P	**P**	**09 34 42.6**	**+1.0**
KHC	comp=Z,3.0nm,0.8s		pmax	pmax		
PDAR	**Pinedale Array** comp=Z,0.2nm,0.7s,baz=311,slow=1.8,SNR=2.0	**82.74 43**	P	**P**	**09 34 42.9**	**+0.7**
PDAR			pP	**pP**	**09 36 10.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=268,slow=2.5,SNR=2.4					
	comp=Z,0.2nm,0.7s					
GEC2	**GERESS Array S**	**82.84 326**	P	**P**	**09 34 42.7**	**+0.3**
GEC2	comp=Z,1.7nm,0.8s		IAmb	IAmb	09 34 49.9	
GERES	**GERESS Array B**	**82.84 326**	P	**P**	**09 34 42.5**	**+0.2**
GERES	**GERESS Array B**	**82.84 326**	P	**P**	**09 34 42.6**	**+0.2**
GERES	**GERESS Array B** comp=Z,2.4nm,0.8s,baz=54,slow=6.8,SNR=8.4	**82.84 326**	P	**P**	**09 34 42.1**	**-0.3**
	comp=Z,2.4nm,0.8s					
EKA	**Eskdalemuir Ar** comp=Z,0.5nm,0.4s,baz=32,slow=15,SNR=2.0	**84.36 338**	P	**P**	**09 34 49.8**	**0.0**
	comp=Z,0.5nm,0.4s					
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=279,slow=8.1,SNR=2.0	**95.28 49**	P	**P**	**09 35 42.4**	**+0.9**
TXAR			pP	**pP**	**09 37 12.8**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=320,slow=3.2,SNR=4.6					
	comp=Z,0.1nm,0.3s					
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.5s,baz=65,slow=1.4,SNR=3.4	**116.12 309**	PKP	**PKPdf**	**09 40 57.4**	**-1.2**
QSPA	**South Pole Qui** comp=Z,1.9nm,0.5s,baz=312,slow=0.6,SNR=7.6	**123.84 180**	PKP	**PKPdf**	**09 41 11.6**	**-0.3**

DJA 09 09:24:32.4±0.2, 2°S±2°×121°E±°, h10km, M4.1/9, mb4.3/2, mB6.7/1, MLv4.0/9, Mw(mB)6.6/1, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.70**	**249**	P	Pn	09 25 01.6	-0.5
TTSI				S	Sb	09 25 25.5	+0.3
LUWI	**Luwuk**	**1.94**	**44**	P	Pn	09 25 04.9	-0.6
LUWI				S	Sn	09 25 30.5	+0.5
MRSI	**Marisa**	**2.95**	**10**	P	Pn	09 25 19.5	+0.2
MRSI				S	Sn	09 25 55.8	+1.1
BKSI	**Bulukumba**	**3.14**	**204**	P	Pn	09 25 22.4	+0.5
BKSI				S	Sn	09 26 02.1	+2.6
MPSI	**Mapaga**	**3.15**	**331**	P	Pn	09 25 22.5	+0.5
MPSI				S	Sn	09 25 59.6	-0.1
EDFI	**Ende, Flores** 9.4nm,1.2s,0.1nm	**6.28**	**177**	P	Pn	09 26 03.9	-1.3
LBMI	**Labuha**	**6.35**	**74**	P	Pn	09 26 06.8	+0.7
LBMI				S	Sn	09 27 18.3	-0.4

IDC 09 09:25:22.3±3.0, 54°30N×87°09E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=23.7km s-min=16.6km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.8s,baz=76,slow=339,SNR=10	**1.38**	**256**	I	I	09 32 50.0	
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=74,slow=16,SNR=7.1	**1.38**	**256**	Pg	Pg	09 25 47.7	-1.1
ZALV				Lg	Lg	09 26 04.6	
KURBB	**Kurchatov Arra** baz=54,slow=13,SNR=4.2	**6.39**	**238**	Pn	Pn	09 26 58.9	+1.3
KURBB				Sn	Sn	09 28 12.2	+0.9
	baz=45,slow=20,SNR=1.5						
KURBB				Lg	Lg	09 28 47.5	
	baz=52,slow=30,SNR=1.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=23,slow=13,SNR=4.4	**8.11**	**204**	Pn	Pn	09 27 21.7	+0.4
MKAR				Sn	Sn	09 28 53.0	-0.5
	baz=23,slow=27,SNR=4.0						
MKAR				Lg	Lg	09 29 40.8	
	baz=20,slow=26,SNR=1.9						
	0.1nm,0.3s						

IDC 09 09:39:22.9±4.6, 5°83S×147°09E, h0km, mb3.0/2, mbtmp3.1/3, ML3.4/1, Error ellipse: s-maj=136.4km s-min=36.2km az=103.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=45,slow=11,SNR=9.1	**18.72**	**220**	P	P	09 43 43.2	-0.1
	0.6nm,0.9s						
ASAR	**Alice Springs** 0.3nm,0.6s,baz=38,slow=7.9,SNR=5.7	**21.81**	**214**	P	P	09 44 16.7	-0.2
	0.3nm,0.6s						
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=108,slow=4.7,SNR=2.1	**77.43**	**320**	P	P	09 51 20.4	+0.2
	0.2nm,0.6s						

IDC 09 09:40:50.2±3.2, 53°54N×87°71E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=27.1km s-min=16.5km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=100,slow=339,SNR=3.6	**1.77**	**285**	I	I	09 51 10.0	
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=106,slow=15,SNR=15	**1.77**	**285**	Pg	Pn	09 41 21.5	-0.5
ZALV				Lg	Lg	09 41 46.1	
	1.6nm,0.3s,baz=104,slow=24,SNR=17						
KURBB	**Kurchatov Arra** baz=62,slow=14,SNR=3.0	**6.37**	**246**	Pn	Pn	09 42 26.4	+1.2
KURBB				Lg	Lg	09 44 12.6	
	baz=62,slow=30,SNR=5.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=13,SNR=2.5	**7.60**	**209**	Pn	Pn	09 42 43.2	+1.1
MKAR				Lg	Lg	09 44 50.5	
	baz=32,slow=28,SNR=1.7						
	0.1nm,0.3s						

TAP 09 09:41:15.1, 24°11N×121°68E, h10km, ML2.0, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=312	**0.07**	**313**	⇓*i* P	Pg	09 41 18.2	+0.8
ETL				*i* S	Sg	09 41 19.8	+0.7
	baz=312						
TWD	**Chiawan** baz=244	**0.08**	**246**	*i* P	Pg	09 41 18.2	+0.7
TWD				*i* S	Sg	09 41 19.9	+0.7
	baz=244						
NACB	**Ninganchiao** baz=308	**0.10**	**309**	⇓*i* P	Pg	09 41 18.5	+0.9
NACB				*i* S	Sg	09 41 20.4	+0.9
	baz=308						
HWA	**Hwalien** baz=202	**0.15**	**206**	P	Pg	09 41 17.4	-1.1
ETLH	**Xiulin Townshi** baz=297	**0.20**	**298**	*e*P	Pb	09 41 20.5	-0.4
ETLH				S	Sg	09 41 24.2	+1.9
	baz=297						
EHP	**Heping Village** baz=18	**0.20**	**17**	*e*P	Pg	09 41 18.5	-0.9
EAHA	**Aohua** baz=14	**0.22**	**15**	P	Pb	09 41 20.5	-0.7
EAHA				*i* S	Sg	09 41 24.1	+1.2
	baz=14						
ETM	**Tongmen** baz=228	**0.22**	**229**	P	Pb	09 41 20.6	-0.6
ETM				*i* S	Sg	09 41 23.8	+1.0
	baz=228						
LXIB	**Xiulin Townshi** baz=249	**0.26**	**249**	⇓*i* P	Pb	09 41 21.3	-0.6
LXIB				*i* S	Sb	09 41 25.3	-1.1
	baz=249						
SHUL	**Shoufeng** baz=197	**0.34**	**198**	*e*P	Pb	09 41 23.9	+0.7
EWUT	**Wuta** baz=15	**0.34**	**16**	P	Pb	09 41 22.9	-0.3
EWUT				*i* S	Sg	09 41 27.4	+0.9
	baz=15						
ESL	**Shilin** baz=215	**0.37**	**217**	*e*P	Pb	09 41 23.2	-0.6
ESL				S	Sg	09 41 28.0	+0.6
	baz=215						
WHF	**Hehuan Shan** baz=274	**0.38**	**275**	*i* P	Pb	09 41 23.7	-0.4
NNSB	**Datong** baz=319	**0.41**	**320**	*i* P	Pb	09 41 24.7	+0.1
FUSS	**Fushou** baz=288	**0.42**	**289**	*i* P	Pb	09 41 24.9	+0.2
NNS	**Nan Shan** baz=320	**0.43**	**320**	*e*P	Pb	09 41 24.9	+0.1
LATG	**Datong** baz=341	**0.44**	**342**	*e*P	Pb	09 41 25.1	0.0
LATG				S	Sb	09 41 32.0	+0.2
	baz=341						
CHGB	**Renai** baz=263	**0.46**	**264**	*i* P	Pb	09 41 25.6	+0.2
CHGB				S	Sb	09 41 31.9	-0.6
	baz=263						
WARBT	**Fenglin Townsh** baz=214	**0.47**	**214**	P	Pb	09 41 25.2	-0.3
OWD	**Renai** baz=251	**0.48**	**251**	*e*P	Pb	09 41 26.0	+0.2
EGFH	**Guangfu** baz=207	**0.50**	**207**	*e*P	Pb	09 41 26.0	+0.1
NDT	**Datong Townshi** baz=342	**0.51**	**343**	*e*P	Pb	09 41 26.3	+0.2
NDT				*e*S	Sb	09 41 34.0	+0.4
	baz=342						
TWC	**Suao** baz=18	**0.52**	**18**	*e*P	Pb	09 41 26.2	0.0
WUSB	**Renai** baz=256	**0.53**	**257**	P	Pb	09 41 26.8	+0.4
ENTT	**Nioudou** baz=349	**0.53**	**349**	*e*P	Pb	09 41 26.3	-0.2
TWE	**Neicheng**	**0.60**	**359**	*e*P	Pb	09 41 28.4	+0.6
VWDT	**VWDT** baz=233	**0.61**	**234**	*e*P	Pb	09 41 27.5	-0.3
YHNB	**Yeheng** baz=333	**0.62**	**334**	*e*P	Pb	09 41 27.8	-0.3
YHNB				S	Sg	09 41 36.0	+0.8
	baz=333						
FUSB	**Fushanzhiwuyua** baz=352	**0.65**	**353**	*e*P	Pg	09 41 27.4	-0.3
NWLT	**Wulai** baz=346	**0.68**	**347**	*e*P	Pg	09 41 28.2	-0.1
EHY	**Hungye** baz=207	**0.69**	**208**	*e*P	Pb	09 41 29.2	+0.1
WCS	**Beigang Elemen** baz=265	**0.70**	**266**	*e*P	Pb	09 41 30.2	+0.8
NFF	**Wufeng Townshi** baz=315	**0.73**	**315**	*e*P	Pn	09 41 30.8	-0.6
SSLB	**Suanglung** baz=243	**0.74**	**244**	*e*P	Pb	09 41 30.5	+0.5
SSLB				*e*S	Sb	09 41 40.1	0.0
	baz=243						
SMLT	**Sun Moon Lake** baz=251	**0.75**	**252**	*e*P	Pb	09 41 30.6	+0.4
YULB	**Yu-li** baz=205	**0.80**	**206**	*e*P	Pg	09 41 30.7	+0.3

IDC 09 09:49:37.3±3.5, 54°45N×86°91E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=32.3km s-min=18.3km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.2nm,1.0s,baz=68,slow=337,SNR=18	**1.33**	**249**	I	I	09 56 40.0	
ZALV	**Zalesovo Beam** 1.2nm,0.3s,baz=69,slow=17,SNR=9.6	**1.33**	**249**	Pg	Pg	09 50 01.4	-1.4
ZALV				Lg	Lg	09 50 20.4	
	0.7nm,0.3s,baz=67,slow=30,SNR=3.4						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=14,SNR=4.8	**6.39**	**237**	Pn	Pn	09 51 13.0	+0.4
	0.5nm,0.3s						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=23,slow=14,SNR=2.1	**8.21**	**203**	Pn	Pn	09 51 39.1	+1.5
	0.1nm,0.3s						

IDC 09 09:55:39.6±2.5, 54°22N×86°07E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=18.5km s-min=10.6km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.8s,baz=67,slow=336,SNR=6.5	**0.79**	**250**	I	I	10 00 30.0	
ZALV	**Zalesovo Beam** 1.1nm,0.3s,baz=68,slow=16,SNR=9.5	**0.79**	**250**	Pg	Pg	09 55 53.8	-0.8
ZALV				Lg	Lg	09 56 06.3	
	7.0nm,0.3s,baz=69,slow=28,SNR=28						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=51,slow=13,SNR=1.8	**5.85**	**235**	Pn	Pn	09 57 09.1	+1.6
	0.9nm,0.3s						
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=24,slow=14,SNR=11	**7.81**	**199**	Pn	Pn	09 57 35.6	+1.1
MKAR				Sn	Sn	09 59 01.1	-2.5
	baz=12,slow=36						
MKAR				Lg	Lg	09 59 46.2	
	baz=21,slow=28,SNR=1.5						
	0.2nm,0.3s						

IDC ***09*** *10:06:37.1±2.7, 38°40N×142°78E, h0km, mb3.5/3, mbtmp3.6/6, ML3.0/3, MS4.2/1, Error ellipse: s-maj=60.3km s-min=26.7km az=73.0*
JMA ***09*** *10:06:48.2±0.1, 38°3N±0°3×141°9E±0°6, h63km, MV3.4/40, E OFF MIYAGI PREF*
ISC 09 10:06:46.7±1.4, 38°19N±0°05×142°03E±0°10, h57km±11km, n27, σ0°71/32, mb3.4/3, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.46**	**285**	P	**Pn**	**10 06 58.7**	**+0.8**
JIKH				S	**Sn**	**10 07 06.2**	**+0.1**
JIO	**Ouri**	**0.60**	**296**	P	**Pn**	**10 06 59.9**	**+0.4**
JIO				S	**Sn**	**10 07 08.3**	**-0.5**
JKMT	**Kesennumamotoy**	**0.76**	**325**	P	**Pn**	**10 07 01.9**	**+0.4**
JKMT				S	**Sn**	**10 07 11.8**	**-0.5**
OFUJ	**Ofunato**	**0.93**	**343**	*i* P	**Pn**	**10 07 04.2**	**+0.4**
OFUJ				S	**Sn**	**10 07 16.0**	**-0.3**
JMK	**Ichinoseki**	**0.99**	**320**	⇓*i* P	**Pn**	**10 07 04.8**	**+0.3**
JMK				⇓S	**Sn**	**10 07 16.7**	**-0.9**
JMM	**Marumori**	**1.03**	**252**	*i* P	**Pn**	**10 07 05.1**	**+0.1**
JMM				S	**Sn**	**10 07 17.8**	**-0.7**
JOU	**Okura**	**1.09**	**280**	⇓*i* P	**Pn**	**10 07 05.8**	**0.0**
JOU				⇓S	**Sn**	**10 07 19.1**	**-0.9**
JFK	**Kawauchi**	**1.23**	**228**	*i* P	**Pn**	**10 07 08.5**	**+0.7**
JFK				*e*S	**Sn**	**10 07 23.5**	**+0.1**
JOM	**Ohasama**	**1.40**	**336**	P	**Pn**	**10 07 10.3**	**+0.3**
JOM				S	**Sn**	**10 07 26.9**	**-0.6**
JOTO	**OTAMA OYAMA**	**1.48**	**245**	*i* P	**Pn**	**10 07 11.8**	**+0.7**
JOTO				S	**Sn**	**10 07 29.5**	**+0.1**
JYK	**Kaneyama**	**1.50**	**300**	⇓*i* P	**Pn**	**10 07 11.2**	**-0.1**
JYS	**Shirataka**	**1.55**	**272**	P	**Pn**	**10 07 12.2**	**+0.2**
JYS				S	**Sn**	**10 07 30.6**	**-0.4**
JRG	**Rokugo**	**1.62**	**318**	⇓*i* P	**Pn**	**10 07 13.0**	**0.0**
JYA	**Atsumi**	**1.86**	**283**	⇓P	**Pn**	**10 07 16.3**	**0.0**
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=60,slow=9.9,SNR=13	**3.46**	**243**	Pn	**Pn**	**10 07 40.1**	**+2.0**
MJAR				Sn	Sn	10 08 28.1	+10
	baz=13,slow=18						
	3.1nm,0.6s						
JHJ	**Hachijo jima 2** 2.6nm,0.3s,baz=86,slow=22,SNR=1.6	**5.38**	**201**	Pn	**Pn**	**10 08 05.0**	**+0.6**
JHJ				Sn	**Sn**	**10 09 03.0**	**-2.0**
	7.7nm,0.3s,baz=72,slow=19,SNR=2.6						
	47nm,0.8s						
USRK	**Ussuriysk Ar.** 0.2nm,0.3s,baz=123,slow=13,SNR=5.4	**9.65**	**312**	Pn	**Pn**	**10 09 02.8**	**0.0**
	0.5nm,0.3s						
H11N2	**WAKE ISLAND Hy** baz=316,slow=75,SNR=20	**28.35**	**123**	T	T	10 42 57.3	
H11N1	**WAKE ISLAND Hy** baz=316,slow=75,SNR=18	**28.36**	**123**	T	T	10 43 04.0	
H11N3	**WAKE ISLAND Hy** baz=316,slow=75,SNR=17	**28.37**	**123**	T	T	10 42 58.7	
H11S1	**WAKE ISLAND Hy** baz=318,slow=76,SNR=8.4	**29.10**	**125**	T	T	10 43 55.0	
H11S3	**WAKE ISLAND Hy** baz=318,slow=76,SNR=7.0	**29.11**	**126**	T	T	10 43 55.1	
H11S2	**WAKE ISLAND Hy** baz=318,slow=76,SNR=6.9	**29.12**	**125**	T	T	10 43 55.4	
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=80,slow=8.1,SNR=1.8	**41.51**	**311**	P	**P**	**10 14 28.3**	**+0.2**
	0.3nm,0.4s						
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=82,slow=8.9,SNR=4.9	**43.93**	**301**	P	**P**	**10 14 48.2**	**+0.3**
	0.4nm,0.5s						
BRDH	**Bariadhala** comp=Z,256nm,18.3s,baz=182,slow=40	**45.57**	**265**	LR	LR	10 37 43.9	
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=5.4,slow=6.9,SNR=5.3	**58.27**	**189**	P	**P**	**10 16 35.4**	**-0.1**
	0.3nm,0.5s						

SGS ***09*** *10:15:21.9, 29°63N×32°66E, h6km, Ml2.8*
GII ***09*** *10:15:21.4±0.4, 29°344N±0°004×32°786E±0°001, h1km, Md3.3/5, Mws3.2/3, confirmed*
ISC 09 10:15:24.8±2.6, 29°41N±0°07×32°9E±0°1, h4km, n37, σ1°48/37, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMI	**Paran Flat**	**1.71**	**65**	P	**Pn**	**10 15 53.9**	**-1.6**
KRMI	**Paran Flat**	**1.71**	**65**	S	**Sn**	**10 16 17.9**	**0.0**
KRMI	**Paran Flat**	**1.71**	**65**	P	**Pn**	**10 15 53.7**	**-1.8**
MBRI	**Mt Berech**	**1.77**	**77**	P	**Pn**	**10 15 54.8**	**-1.6**
MBRI	**Mt Berech**	**1.77**	**77**	P	**Pn**	**10 15 54.7**	**-1.6**
MBRI	**Mt Berech**	**1.77**	**77**	S	**Sn**	**10 16 20.1**	**+0.8**
HAQS	**Haql**	**1.78**	**101**	P	**Pn**	**10 15 55.4**	**-0.9**
HAQS	**Haql**	**1.78**	**101**	S	**Sb**	**10 16 20.8**	**+0.2**
EIL	**Elat**	**1.78**	**81**	P	**Pn**	**10 15 54.5**	**-1.9**
EIL	**Elat**	**1.78**	**81**	S	**Sn**	**10 16 19.9**	**+0.4**
EIL	**Elat**	**1.78**	**81**	P	**Pn**	**10 15 54.3**	**-2.1**
HQLS		**1.87**	**93**	P	**Pn**	**10 15 56.6**	**-1.0**
AQBJ	**Aqaba**	**1.88**	**80**	P	**Pn**	**10 15 56.3**	**-1.4**
TAYS	**Tayyib Ism**	**1.91**	**116**	S	**Sb**	**10 15 57.3**	**-0.6**
TAYS	**Tayyib Ism**	**1.91**	**116**	P	**Pn**	**10 15 57.6**	**-0.5**
JMOS	**Jabal al Moall**	**1.92**	**97**	P	**Pn**	**10 15 57.5**	**-0.8**
HRFI	**Mount Harif**	**1.94**	**71**	P	**Pn**	**10 15 56.8**	**-1.7**
HRFI	**Mount Harif**	**1.94**	**71**	S	**Sb**	**10 16 24.6**	**-0.7**
HRFI	**Mount Harif**	**1.94**	**71**	P	**Pn**	**10 15 56.8**	**-1.7**
RSHS		**1.98**	**124**	P	**Pn**	**10 15 58.9**	**-0.2**
PRNI	**Paran**	**2.03**	**62**	P	**Pn**	**10 15 59.9**	**0.0**
PRNI	**Paran**	**2.03**	**62**	S	**Sb**	**10 16 27.3**	**-0.7**
PRNI	**Paran**	**2.03**	**62**	P	**Pn**	**10 15 58.8**	**-1.0**
ZFRI	**Zfri**	**2.26**	**59**	P	**Pn**	**10 16 04.0**	**+1.1**
ZFRI	**Zfri**	**2.26**	**59**	S	**Sn**	**10 16 31.6**	**+0.3**
ZFRI	**Zfri**	**2.26**	**59**	P	**Pn**	**10 16 02.1**	**-0.8**
MSBI	**Mazada**	**2.83**	**47**	P	**Pb**	**10 16 14.6**	**-1.3**
LISJ	**El Lisan**	**2.86**	**50**	P	**Pb**	**10 16 14.6**	**-1.8**
KARJ	**KARJ**	**2.91**	**53**	P	**Pg**	**10 16 24.7**	**+4.1**
GHAJ	**Ghor Haditha**	**2.96**	**50**	P	**Pb**	**10 16 16.2**	**-1.9**
GHAJ	**Ghor Haditha**	**2.96**	**50**	P	**Pn**	**10 16 11.7**	**-0.8**
DSI	**Dead Sea**	**3.02**	**44**	P	**Pb**	**10 16 18.4**	**-0.7**
DSI	**Dead Sea**	**3.02**	**44**	P	**Pn**	**10 16 12.7**	**-0.7**
DSI	**Dead Sea**	**3.02**	**44**	S	**Sn**	**10 16 50.5**	**+0.4**
SALP	**Salfit**	**3.29**	**36**	P	**Pb**	**10 16 23.3**	**-0.5**
BALJ	**Balqa**	**3.55**	**40**	P	**Pb**	**10 16 25.5**	**-2.6**
HMDT	**Nahal Hemdat**	**3.61**	**38**	P	**Pb**	**10 16 26.9**	**-2.3**

IDC ***09*** *10:19:53.4±1.0, 15°56N×88°74W, h0km, mb4.1/11, mbtmp4.1/16, ML3.5/5, MS3.3/10, Error ellipse: s-maj=30.7km s-min=12.8km az=35.0*
SNET ***09*** *10:19:54.4±1.2, 15°30N×88°95W, h0km±5km, ML4.5*
CATAC ***09*** *10:19:54.8±0.3, 15°36N×88°83W, h19km±3km, ML4.8*
NEIC ***09*** *10:19:55.5±2.0, 15°32N±0°05×88°90W±0°

ESQI Sg Sg 10 20 22.7 -0.6
ESQI Esquipulas 0.89 210 *i* P Pg 10 20 11.8 +0.2
ESQI *i* S Sn 10 20 26.1 -0.2
ESQI IAML 10 20 28.1
comp=Z,24µm,1.0s
MTO3 Montecristo 1.04 207 Pg Pg 10 20 13.1 -1.4
LLGN La Laguna 1.17 183 *i* P Pg 10 20 15.7 -1.2
LLGN *i* S Sb 10 20 32.7 +0.6
LLGN IAML 10 20 34.3
comp=Z,9µm,1.0s
AVCB Coban 1.48 275 *i* P Pn 10 20 21.2 -0.2
AVCB *i* S Sg 10 20 41.2 -0.9
AVCB IAML 10 20 49.7
comp=Z,25µm,1.0s
UNIC Universidad Ca 1.50 206 *e*P Pn 10 20 21.3 -0.2
UNIC *e*S Sn 10 20 41.5 +0.4
UNIC Universidad Ca 1.50 206 *i* P Pn 10 20 21.0 -0.5
UNIC *i* S Sn 10 20 41.0 -0.2
UNIC IAML 10 20 43.1
comp=Z,4µm,1.0s
QUEZ Alcaldia de Qu 1.54 194 *e*P Pn 10 20 22.2 +0.1
QUEZ Alcaldia de Qu 1.54 194 *i* P Pn 10 20 21.6 -0.5
QUEZ *i* S Sn 10 20 42.7 +0.4
QUEZ IAML 10 20 53.1
comp=Z,23µm,1.0s
APG El Apazote 1.57 258 LR LR 10 21 17.6
comp=Z,52nm,21.2s,baz=14,slow=48
SLOZ Alcaldia de Sa 1.57 214 *e*P Pn 10 20 22.4 -0.1
LOAL Lomas de Alarc 1.59 213 *i* P Pn 10 20 22.7 -0.1
LOAL *i* S Sn 10 20 43.2 -0.3
LOAL IAML 10 20 50.7
comp=Z,16µm,1.0s
LFU La Fuente 1.59 188 *e*P Pn 10 20 23.1 +0.2
GUNB GUNB 1.60 243 *i* P Pn 10 20 22.8 -0.3
GUNB *i* S Sb 10 20 44.8 +0.1
GUNB IAML 10 20 47.6
comp=Z,11µm,1.0s
NBG Las Nubes 1.60 243 *e*P Pn 10 20 23.5 +0.3
NBG *e*S Sg 10 20 46.5 +0.5
CEDA San Andres 1.60 198 *e*P Pn 10 20 22.8 -0.1
CEDA *e*S Sb 10 20 45.5 +0.8
CEDA IAML 10 20 50.1
comp=Z,8µm,0.3s
CEDA San Andres 1.60 198 *i* P Pn 10 20 23.1 +0.1
CEDA *i* S Sn 10 20 43.8 0.0
CEDA IAML 10 20 49.6
comp=Z,23µm,1.0s
RTR El Retiro 1.61 208 *e*P Pn 10 20 23.6 +0.4
PAVA Las Pavas 1.61 182 *e*P Pn 10 20 23.4 +0.2
PAVA Las Pavas 1.61 182 *i* P Pn 10 20 23.1 -0.1
PAVA *i* S Sn 10 20 44.5 +0.3
PAVA IAML 10 20 47.6
comp=Z,15µm,1.0s
SNJE San Jose 1.62 206 *e*P Pn 10 20 23.5 +0.2
SNJE *e*P Pn 10 20 23.5 +0.2
PIC2 El Picacho 1.62 193 *e*P Pn 10 20 23.9 +0.4
SCLA Alcaldia de Sa 1.63 175 *e*P Pn 10 20 23.6 +0.3
SCLA Alcaldia de Sa 1.63 175 *i* P Pn 10 20 22.1 -1.3
SCLA *i* S Sn 10 20 44.4 -0.1
SCLA IAML 10 21 00.1
comp=Z,4µm,1.0s
UDBS Universidad Do 1.64 190 *i* P Pn 10 20 23.6 +0.2
UDBS *i* S Sn 10 20 44.6 0.0
UDBS IAML 10 20 48.5
comp=Z,5µm,1.0s
IGN Direccin Gen 1.64 190 *i* P Pn 10 20 24.0 +0.5
IGN *i* S Sn 10 20 44.6 -0.1
IGN IAML 10 20 51.1
comp=Z,15µm,1.0s
BOQS Boqueron 1.64 194 *e*P Pn 10 20 23.9 +0.3
UEES Universidad Ev 1.65 192 *e*P Pn 10 20 23.9 +0.2
UEES Universidad Ev 1.65 192 *i* P Pn 10 20 23.7 +0.1
UEES *i* S Sn 10 20 44.9 -0.1
UEES IAML 10 20 55.7
comp=Z,3µm,1.0s
SBLS San Blas 1.66 206 *e*P Pn 10 20 24.0 +0.2
UTEC Universidad Te 1.66 191 *i* P Pn 10 20 23.7 0.0
UTEC *i* S Sn 10 20 45.3 +0.2
UTEC IAML 10 21 04.3
comp=Z,4µm,1.0s
SEMO Seminario San 1.66 192 *i* P Pn 10 20 23.9 +0.2
SEMO *i* S Sn 10 20 45.8 +0.6
SEMO IAML 10 20 48.1
comp=Z,12µm,1.0s
CEVE Cerro Verde 1.67 206 *e*P Pn 10 20 24.5 +0.5
CEVE Cerro Verde 1.67 206 *i* P Pn 10 20 23.7 -0.3
CEVE *i* S Sn 10 20 45.0 -0.6
CEVE IAML 10 20 52.5
comp=Z,8µm,1.0s
PMON Piamonte 1.67 195 *e*P Pn 10 20 24.4 +0.5
PMON Piamonte 1.67 195 *i* P Pn 10 20 23.6 -0.3
PMON *i* S Sn 10 20 45.0 -0.5
PMON IAML 10 20 52.3
comp=Z,7µm,1.0s
NUBE Las Nubes 1.67 212 *e*P Pn 10 20 24.1 0.0
NUBE *e*S Sb 10 20 47.1 +0.4
NUBE Las Nubes 1.67 212 *i* P Pn 10 20 24.2 +0.2
NUBE *i* S Sn 10 20 45.0 -0.7
NUBE IAML 10 20 53.5
comp=Z,5µm,1.0s
SNET Serv Nac Est T 1.68 192 Pn 10 20 23.9 -0.1
SNET Serv Nac Est T 1.68 192 *i* P Pn 10 20 24.0 0.0
SNET *i* S Sn 10 20 45.9 +0.3
SNET IAML 10 20 52.0
comp=Z,7µm,1.0s
UESV Universidad de 1.69 177 *e*P Pn 10 20 24.4 +0.2
UESV Universidad de 1.69 177 *i* P Pn 10 20 23.1 -1.1
UESV *i* S Sn 10 20 45.3 -0.7
UESV IAML 10 21 02.5
comp=Z,3µm,1.0s
COEG Centro de Oper 1.71 180 *e*P Pn 10 20 24.8 +0.4
COEG Centro de Oper 1.71 180 *i* P Pn 10 20 24.2 -0.2
COEG *i* S Sn 10 20 46.4 0.0
COEG IAML 10 20 53.1
comp=Z,3µm,1.0s
LOMA Loma Larga 1.71 190 *e*P Pn 10 20 25.1 +0.6
LOMA Loma Larga 1.71 190 *i* P Pn 10 20 24.8 +0.3
LOMA *i* S Sn 10 20 46.0 -0.5
LOMA IAML 10 20 56.9
comp=Z,3µm,1.0s
LFRS El Faro 1.71 186 *e*P Pn 10 20 25.4 +0.8
SJTE Alcalda de S 1.72 184 *e*P Pn 10 20 25.0 +0.5
SJTE Alcalda de S 1.72 184 *i* P Pn 10 20 24.6 0.0
SJTE *i* S Sn 10 20 46.3 -0.4
SJTE IAML 10 20 51.0
comp=Z,3µm,1.0s
PQSS Presa 15 de Se 1.73 170 *e*P Pn 10 20 24.7 +0.1
PQSS Presa 15 de Se 1.73 170 *i* P Pn 10 20 24.1 -0.6
PQSS *i* S Sn 10 20 46.7 -0.1
PQSS IAML 10 20 50.6
comp=Z,2µm,1.0s
PANCS Alcalda de 1.74 190 *e*P Pn 10 20 25.0 +0.2
PANCS *e*S Sn 10 20 48.2 +1.0
PANCS Alcalda de 1.74 190 *i* P Pn 10 20 24.8 -0.1
PANCS *i* S Sn 10 20 47.0 -0.2
PANCS IAML 10 20 52.0
comp=Z,7µm,1.0s
JAYA Jayaque - finc 1.76 198 *e*P Pn 10 20 25.5 +0.3
JAYA *e*S Sb 10 20 50.4 +1.1
JAYA IAML 10 20 52.2
comp=Z,4µm,0.3s
JAYA Jayaque - finc 1.76 198 *i* P Pn 10 20 24.9 -0.3
JAYA *i* S Sn 10 20 48.0 +0.1
JAYA IAML 10 20 52.1
comp=Z,10µm,1.0s
GCG4 OSOP 1.77 245 *i* P Pn 10 20 24.7 -0.6
GCG4 *i* S Sn 10 20 47.8 -0.2
GCG4 IAML 10 21 02.6
comp=Z,11µm,1.0s
TECO Alcaldia de Te 1.79 177 *e*P Pn 10 20 25.9 +0.4
TECO Alcaldia de Te 1.79 177 *i* P Pn 10 20 26.1 +0.6
TECO *i* S Sn 10 20 48.6 +0.2
TECO IAML 10 20 57.9
comp=Z,2µm,1.0s
GUMI Mixco 1.82 248 *i* P Pn 10 20 25.9 -0.2
GUMI IAML 10 20 28.0
comp=Z,14µm,1.0s
GUMI *i* S Sn 10 20 49.9 +0.6
PETF Flores 1.84 329 Pn 10 20 25.7 -0.4
PETF Flores 1.84 329 *i* P Pn 10 20 26.2 +0.1
PETF *i* S Sn 10 20 48.3 -1.2
PETF IAML 10 20 53.4
comp=Z,10µm,1.0s
TECA Tecapa 1.87 169 *e*P Pn 10 20 27.4 +0.6
LALI Alcalda de L 1.89 193 *e*P Pn 10 20 27.7 +0.9
LALI Alcalda de L 1.89 193 *i* P Pn 10 20 27.1 +0.3
LALI *i* S Sn 10 20 51.2 +0.5
LALI IAML 10 20 59.0
comp=Z,1µm,1.0s
PCG Pacaya 1.92 241 *e*P Pb 10 20 30.0 +0.2
PACA Pacayal 1.93 164 *e*P Pn 10 20 28.5 +0.9
PACA *e*S Sb 10 20 55.1 +0.9
PACA Pacayal 1.93 164 *i* P Pn 10 20 26.7 -0.9
PACA *i* S Sn 10 20 51.4 -0.7
PACA IAML 10 20 58.0
comp=Z,20µm,1.0s
BLLM Bellamira 1.98 162 *e*P Pn 10 20 29.1 +0.9
LCY Lacayo 1.98 163 *e*P Pn 10 20 29.2 +0.9
VSM San Miguel 1.99 163 *e*P Pn 10 20 29.0 +0.6
TGUH Tegucigalpa,Un 2.01 129 Pn 10 20 27.5 -1.1
TGUH Tegucigalpa,Un 2.01 129 *i* P Pn 10 20 27.8 -0.8
TGUH *i* S Sn 10 20 53.2 -0.7
TGUH IAML 10 21 02.4
comp=Z,10µm,1.0s
FUG Fuego 3 2.10 245 *e*P Pb 10 20 32.3 -0.4
CHTG Tecpan 2.12 255 *i* P Pn 10 20 30.4 +0.2
CHTG *i* S Sn 10 20 56.8 0.0
CHTG IAML 10 21 19.5
comp=Z,10µm,1.0s
QUIS Sacapulas 2.14 269 *i* P Pn 10 20 30.4 0.0
QUIS *i* S Sn 10 20 57.2 +0.1
QUIS IAML 10 21 07.9
comp=Z,5µm,1.0s
LCND La Caada 2.23 154 *e*P Pn 10 20 33.3 +1.7
LCND La Caada 2.23 154 *i* P Pn 10 20 31.9 +0.3
LCND *i* S Sn 10 20 59.5 +0.3
LCND IAML 10 21 10.5
comp=Z,2µm,1.0s
CNCH Conchagua 2.29 154 *e*P Pn 10 20 34.3 +1.9
AMPH Amapala 2.36 150 *e*S Sb 10 21 06.4 +0.2
YUSH Yuscaran 2.40 125 *e*P Pn 10 20 36.2 +2.2
YUSH *e*S Sb 10 21 08.0 +0.4
HUEH Huehuetenango 2.53 270 Pn 10 20 36.0 +0.1
HUEH Huehuetenango 2.53 270 *i* P Pn 10 20 36.3 +0.4
HUEH *i* S Sn 10 21 07.6 +0.6
HUEH IAML 10 21 18.3
comp=Z,6µm,1.0s
CSGN Cosiguina Volc 2.67 151 *i* P Pn 10 20 36.8 -0.9
CSGN IAML 10 22 02.0
comp=Z,4µm,1.0s
SULM Suchitepequez, 2.79 249 *e*P Pn 10 20 41.4 +2.0
SMSP San Marcos 2.83 263 *i* P Pn 10 20 40.2 +0.2
SMSP *i* S Sn 10 21 13.9 -0.5
SMSP IAML 10 21 38.9
comp=Z,3µm,1.0s
RTAL Retalhuleu 2.84 254 Pn Pn 10 20 40.9 +1.0
RTAL Retalhuleu 2.84 254 *i* P Pn 10 20 40.0 0.0
RTAL IAML 10 20 50.3
comp=Z,2µm,1.0s
RTAL *i* S Sn 10 21 15.4 +1.1
CRIN San Cristobal 3.17 146 Pn Pn 10 20 46.4 +1.9
CRIN San Cristobal 3.17 146 *i* P Pn 10 20 44.0 -0.5
CRIN *i* S Sn 10 21 22.3 -0.1
CRIN IAML 10 22 12.6
comp=Z,6µm,1.0s
CCIG Comitan 3.28 287 Pn 10 20 46.4 +0.3
LIMN Finca el Limon 3.32 133 *i* P Pn 10 20 45.0 -1.7
LIMN *i* S Sn 10 21 25.1 -1.2
LIMN IAML 10 21 46.4
comp=Z,2µm,1.0s
ILCN San Idelfonso 3.46 142 *i* P Pn 10 20 47.5 -1.0
ILCN *i* S Sn 10 21 29.1 -0.6
ILCN IAML 10 22 13.9
comp=Z,540nm,1.0s
ROCN Rota Cerro Neg 3.48 143 *i* P Pn 10 20 48.4 -0.4
ROCN *i* S Sn 10 21 30.0 -0.2
ROCN IAML 10 22 10.2
comp=Z,1µm,1.0s
CNGN Cerro Negro 3.52 143 Pn Pn 10 20 50.3 +0.9
CNGN Cerro Negro 3.52 143 *i* P Pn 10 20 48.4 -1.0
CNGN *i* S Sn 10 21 30.5 -0.8
CNGN IAML 10 22 08.0
comp=Z,2µm,1.0s
CNGA Al SSO del Vol 3.53 143 *i* P Pn 10 20 49.1 -0.3
CNGA *i* S Sn 10 21 30.0 -1.3
CNGA IAML 10 22 13.5
comp=Z,2µm,1.0s
MACN El Madrono 3.57 143 *i* P Pn 10 20 49.3 -0.7
MACN *i* S Sn 10 21 32.5 +0.2
MACN IAML 10 22 13.2
comp=Z,1µm,1.0s
MOMN Momotombo 3.69 142 *i* P Pn 10 20 50.0 -1.7
MOMN *i* S Sn 10 21 34.9 -0.5
MOMN IAML 10 22 12.9
comp=Z,44nm,1.0s
MOM2 El Cardon 3.70 141 *i* P Pn 10 20 51.6 -0.2
MOM2 *i* S Sn 10 21 35.7 +0.1
MOM2 IAML 10 22 23.2
comp=Z,830nm,1.0s
MATN Matagalpa 3.73 130 Pn 10 20 51.9 -0.4
MATN Matagalpa 3.73 130 *i* P Pn 10 20 51.5 -0.8
MATN *i* S Sn 10 21 34.5 -1.9
MATN IAML 10 21 55.4
comp=Z,670nm,1.0s
COPN Copaltepe 3.84 144 *i* P Pn 10 20 52.7 -1.1
COPN IAML 10 22 10.2
comp=Z,2µm,1.0s
BOAB BOACO BROADBAN 4.24 132 Pn 10 20 58.6 -0.6
BOAB BOACO BROADBAN 4.24 132 *i* P Pn 10 20 57.7 -1.5
BOAB *i* S Sn 10 21 47.5 -1.3
BOAB IAML 10 22 34.0
comp=Z,760nm,1.0s
TEIG Tepich 4.90 7 Pn Pn 10 21 07.9 -0.3
TEIG Tepich 4.90 7 LR LR 10 23 24.6
comp=Z,2µm,21.8s,baz=2.5,slow=45
ACON Acoyapa 4.92 132 Pn 10 21 09.2 +0.7
ESPN Las Esperanzas 5.43 125 Pn Pn 10 21 16.7 +1.1
ORTG Ortega, Santa 5.96 146 Pn Pn 10 21 24.4 +1.4
CMIG Matias Romero 6.03 288 Pn Pn 10 21 24.3 +0.5
comp=Z,1.3nm,0.3s,baz=128,slow=9.6,SNR=11
CMIG Pg Pb 10 21 41.2 +1.5
comp=Z,1.8nm,0.3s,baz=98,slow=16,SNR=7.7
CMIG Sn Sn 10 22 28.8 -4.2
comp=Z,4.3nm,0.3s,baz=69,slow=17,SNR=5.1
CMIG Lg Lg 10 23 02.4
comp=Z,4.2nm,0.3s,baz=76,slow=20,SNR=2.5
CMIG LR LR 10 24 03.8
comp=Z,291nm,21.6s,baz=110,slow=41
comp=Z,2.9nm,0.3s
JTS Las Juntas de 6.31 142 Pn Pn 10 21 26.8 -0.9
JTS Las Juntas de 6.31 142 Pn Pn 10 21 29.1 +1.4
comp=Z,0.4nm,0.3s,baz=329,slow=19,SNR=2.0
JTS LR LR 10 24 32.2
comp=Z,25nm,19.5s,baz=0.5,slow=44
comp=Z,6.1nm,0.9s
ARE1 Arenal 1 6.32 140 Pn Pn 10 21 26.6 -1.2
HDC Heredia 7.05 138 Pn Pn 10 21 37.3 -0.7
LCR2 La Lucha 2 7.32 139 Pn Pn 10 21 41.3 -0.4
RIMA Rio Macho 7.39 138 Pn Pn 10 21 41.6 -1.1
PEZE Perez Zeledon, 7.80 139 Pn Pn 10 21 49.4 +1.2
DRK0 Durika 8.17 137 Pn Pn 10 21 53.8 +0.4
SOR Soroa 9.26 36 Pn Pn 10 22 10.0 +1.8
TLIG Tlapa 9.56 285 Pn Pn 10 22 13.2 +0.9
833A Chaparral WMA, 16.18 325 Pn Pn 10 23 41.6 -0.5
833A IAmb IAmb 10 23 50.1
comp=Z,13nm,0.8s
HNDO Hondo 17.07 328 Pn Pn 10 23 53.5 +0.1
152A Waverly Hall 17.66 12 Pn Pn 10 24 00.7 0.0
ROSC El Rosal 17.71 125 Pn Pn 10 24 01.2 -0.7
ROSC IAmb IAmb 10 24 07.5
comp=Z,18nm,0.8s
ROSC El Rosal 17.71 125 P P 10 24 02.6 -0.1
comp=Z,3.0nm,0.3s,baz=15,slow=11,SNR=6.4
comp=Z,8.0nm,0.4s
DRIO Del Rio 17.71 324 Pn Pn 10 24 00.9 -0.5
237A Washetta, Mont 17.75 340 Pn Pn 10 24 01.2 -0.6
237A IAmb IAmb 10 24 15.9
comp=Z,12nm,0.7s
JCT Junction City 18.10 328 P 10 24 07.3 +0.7
OTAV Otavalo 18.20 145 Pn 10 24 07.6 -0.3
BRDY Brady 18.38 331 P 10 24 09.4 -0.2
GOGA Godfrey 18.65 14 P Pn 10 24 13.3 +0.5
CCAR Cane Creek 18.68 352 P Pn 10 24 13.1 -0.1
CCAR IAmb IAmb 10 24 35.4
comp=Z,21nm,1.0s
Z38A Mt. Pleasant 18.68 344 P Pn 10 24 13.0 -0.3
Z38A IAmb IAmb 10 24 14.3
comp=Z,14nm,1.1s
SDV Santo Domingo 18.95 108 P 10 24 16.1 -0.1
SDV IAmb IAmb 10 24 26.7
comp=Z,26nm,1.4s
SDV Santo Domingo 18.95 108 P Pn 10 24 17.3 +0.6
comp=Z,0.4nm,0.3s,baz=307,slow=6.4,SNR=7.4
SDV LR LR 10 32 25.5
comp=Z,70nm,18.6s,baz=308,slow=40
comp=Z,7.2nm,0.7s
Y52A Lilburn 18.95 12 P Pn 10 24 18.0 +1.4
OZNA Ozona 19.15 326 Pn 10 24 20.3 +1.4
FW06 Azle 19.24 337 P P 10 24 19.2 +0.1
FW06 IAmb IAmb 10 24 25.6
comp=Z,11nm,0.9s
FPAL Fort Paine 19.35 8 P Pn 10 24 21.6 +0.3
FPAL IAmb IAmb 10 24 22.2
comp=Z,9.7nm,0.8s
PLPT Palo Pinto 19.40 335 P P 10 24 20.9 +0.1
PLPT IAmb IAmb 10 24 31.2
comp=Z,9.7nm,0.9s
X40A Basin Creek Fa 19.40 350 P P 10 24 21.1 +0.3
TXAR Lajitas Array 19.49 318 P P 10 24 22.4 +0.4
TXAR Lajitas Array 19.49 318 P Pn 10 24 22.8 -0.4
comp=Z,0.2nm,0.3s,baz=141,slow=9.2,SNR=22
TXAR S Sn 10 28 01.4 -0.7
comp=Z,0.1nm,0.5s,baz=106,slow=25,SNR=1.6
comp=Z,3.9nm,0.8s
TX31 Lajitas Ar. Si 19.50 318 P P 10 24 22.4 +0.4
MIAR Mount Ida 19.59 348 P Pn 10 24 24.8 +0.6
W50A Signal Mountai 20.04 9 P Pn 10 24 28.9 -0.7
W50A IAmb IAmb 10 24 41.5
comp=Z,12nm,1.2s
WHAR Wooly Hollow 20.10 352 P Pn 10 24 29.6 -0.7
ALPN Alpine 20.19 320 P Pn 10 24 31.3 -0.2
WTFS Witchita Falls 20.29 336 P P 10 24 29.7 -0.8
WTFS IAmb IAmb 10 24 35.4
comp=Z,14nm,1.0s
MNHN Monahans 20.37 324 P P 10 24 31.8 +0.3
MNHN IAmb IAmb 10 24 36.0
comp=Z,9.3nm,0.9s
V48A Smith Brothers 20.40 5 P P 10 24 32.2 +0.5
CPCT Cooper Cave 20.41 10 P Pn 10 24 33.0 -0.8
SN01 Snyder 1 20.57 330 P Pn 10 24 35.7 -0.2
APMT Aspermont 20.60 332 P Pn 10 24 35.1 -1.1
APMT IAmb IAmb 10 24 42.1
comp=Z,9.2nm,0.7s
BIRD Birdtown, Kers 20.66 20 P Pn 10 24 36.4 -0.5
BIRD IAmb IAmb 10 24 36.5
comp=Z,9.2nm,0.8s
FCAR Ozark Folk Cen 20.67 353 P Pn 10 24 35.9 -1.0
WVT Waverly 20.73 2 P P 10 24 35.5 +0.3
LCAR Lake Charles 20.75 355 P Pn 10 24 37.0 -0.8
ODSA Odessa 20.84 326 P Pn 10 24 38.1 -0.9
ODSA IAmb IAmb 10 24 42.3
comp=Z,11nm,0.8s
KMSC Kings Mountain 20.85 18 P P 10 24 37.5 +0.9
KMSC IAmb IAmb 10 24 44.9
comp=Z,11nm,1.0s
POST Post 21.04 329 P P 10 24 40.8 +2.1
POST IAmb IAmb 10 24 42.3
comp=Z,16nm,0.9s
DKNS Dickens 21.25 331 P P 10 24 41.9 +0.9
DKNS IAmb IAmb 10 24 44.8
comp=Z,7.6nm,0.9s
FNO Franklin 21.26 340 P P 10 24 42.0 +1.0
U49A Red Boiling Sp 21.27 7 P P 10 24 41.9 +0.9
U49A IAmb IAmb 10 24 42.3
comp=Z,7.0nm,0.8s
WMOK Wichita Mounta 21.27 337 P P 10 24 41.9 +0.7
WMOK IAmb IAmb 10 24 47.3
comp=Z,22nm,1.3s
VHRN Van Horn 21.32 319 P P 10 24 42.3 +0.5
VHRN IAmb IAmb 10 25 04.0
comp=Z,13nm,1.5s
HHAR Hobbs 21.34 349 P P 10 24 43.3 +1.4
AOPR Arecibo Observ 21.38 79 P P 10 24 42.6 +0.2
PBMO Poplar Bluff 21.40 357 P P 10 24 42.6 +0.2
PBMO IAmb IAmb 10 24 45.8
comp=Z,8.4nm,0.9s
TUL3 Leonard 21.40 344 P P 10 24 43.0 +0.5
TUL3 IAmb IAmb 10 24 47.0
comp=Z,13nm,1.0s
T47A Sharon Grove 21.62 4 P P 10 24 45.7 +0.9
T47A IAmb IAmb 10 24 47.8
comp=Z,9.1nm,0.9s
SJG San Juan 21.94 80 LR LR 10 32 30.0
comp=Z,43nm,19.8s,baz=242,slow=35
MGMO Mountain Grove 21.94 353 P P 10 24 49.5 +1.3
MGMO IAmb IAmb 10 24 51.9
comp=Z,14nm,1.2s
LPIG La Paz 21.95 297 P P 10 24 50.5 +1.9
comp=Z,5.1nm,0.6s,baz=178,slow=14,SNR=2.6
LPIG LR LR 10 34 27.2
comp=Z,78nm,19.8s,baz=116,slow=40
comp=Z,5.1nm,0.6s
V58A Windy Hill, Pi 22.17 21 P P 10 24 51.8 +1.1
SMWD Samnorwood 22.17 335 P P 10 24 51.4 +0.5
OK048 Pawnee Station 22.19 343 P P 10 24 52.1 +1.1
OK048 IAmb IAmb 10 24 55.8
comp=Z,15nm,1.0s
S44A Carbondale 22.27 359 P P 10 24 52.8 +1.0
S44A IAmb IAmb 10 25 05.0
comp=Z,7.7nm,0.8s
SIUC Southern Illin 22.29 359 P P 10 24 53.3 +1.3
SIUC IAmb IAmb 10 24 54.1
comp=Z,8.0nm,0.8s
MSTX Muleshoe 22.40 328 P P 10 24 54.5 +1.2
MSTX IAmb IAmb 10 24 56.2
comp=Z,12nm,1.1s
FVM French Village 22.60 357 P P 10 24 54.9 -0.4
FVM IAmb IAmb 10 24 59.8
comp=Z,9.2nm,1.3s
AMTX Amarillo 22.61 332 P P 10 24 55.9 +0.3
S39A Bolivar 22.61 351 P P 10 24 55.9 +0.4
S39A IAmb IAmb 10 25 23.0
comp=Z,10nm,1.3s
ELIS Ellis County 22.69 337 P P 10 24 55.5 -0.9
CCM Cathedral Cave 22.73 355 P P 10 24 56.0 -0.7
CCM IAmb IAmb 10 24 57.5
comp=Z,5.5nm,0.8s
U32A Winter Ranch, 22.82 339 P P 10 24 56.9 -0.9
R40A Maddies Statio 23.06 353 P P 10 25 00.3 +0.2
R40A IAmb IAmb 10 25 01.0
comp=Z,6.3nm,0.9s
T57A Hurt 23.21 20 P P 10 25 03.3 +1.6
T57A IAmb IAmb 10 25 04.5
comp=Z,8.5nm,0.9s
S54A Dingess, Beckl 23.36 15 P P 10 25 04.0 +0.8
Q44A Meyer Farm, Va 23.48 360 P P 10 25 05.0 +0.7
Q44A IAmb IAmb 10 25 05.7
comp=Z,11nm,0.8s
T59A Double "B" Far 23.78 23 P P 10 25 08.4 +1.0
PCRV Puerto La Cruz 24.18 99 LR LR 10 35 35.3
comp=Z,56nm,18.2s,slow=39
P43A Skaggs, Pawnee 24.22 359 P P 10 25 11.4 0.0
121A Cookes Peak, D 24.26 318 P P 10 25 12.3 +0.2
P40A Paris 24.26 354 P P 10 25 11.5 -0.3
P40A IAmb IAmb 10 25 12.6
comp=Z,6.6nm,0.7s
RTBA Rita Blanca 24.38 332 P P 10 25 13.8 +0.7
P38A Dawn 24.54 351 P P 10 25 14.7 +0.4
P38A IAmb IAmb 10 25 16.7
comp=Z,6.1nm,0.8s
R58B Mineral 24.55 21 P P 10 25 15.4 +1.0
P51A Williamsport 24.59 11 P P 10 25 15.9 +1.1
P51A IAmb IAmb 10 25 17.2
comp=Z,9.5nm,0.9s
Q54A Coxs Mills 24.59 15 P P 10 25 15.8 +0.9
Q54A IAmb IAmb 10 25 19.1
comp=Z,9.6nm,1.0s
KSU1 Kansas State U 24.63 345 P P 10 25 15.8 +0.6
KSU1 IAmb IAmb 10 25 19.5
comp=Z,8.7nm,0.8s
CBN Corbin Frederi 24.94 22 P P 10 25 19.4 +1.4
ANMO Albuquerque 25.11 324 P P 10 25 21.3 +1.5
T25A Trinidad 25.73 330 P P 10 25 26.6 +1.2
O54A Avella 25.84 15 P P 10 25 25.6 -0.6
O54A IAmb IAmb 10 25 29.6
comp=Z,15nm,1.4s
P57A Homestead Farm 25.87 20 P P 10 25 26.9 +0.4
P57A IAmb IAmb 10 25 34.6
comp=Z,9.3nm,1.2s
SDCO Great Sand Dun 26.73 330 P P 10 25 35.7 +1.1
SDCO IAmb IAmb 10 25 44.2

	comp=Z,6.6nm,1.4s							
CZSB	**Cruzeiro do Su**	**27.97**	**144**	P	**P**	**10 25 46.4**	**+0.9**	
SADO	**Sadowa**	**30.48**	**14**	LR	LR	10 38 53.5		
	comp=Z,90nm,18.5s,baz=282,slow=38							
P17A	**Butcher Ranch,**	**30.74**	**326**	P	**P**	**10 26 11.4**	**+1.2**	
P17A				IAmb	IAmb	10 26 14.3		
	comp=Z,2.5nm,0.9s							
PDAR	**Pinedale Array**	**32.59**	**331**	P	**P**	**10 26 25.7**	**-0.8**	
	comp=Z,0.3nm,0.7s,baz=129,slow=11,SNR=2.0							
PDAR				PcP	**PcP**	**10 29 12.1**	**-0.8**	
	comp=Z,0.3nm,0.7s,baz=124,slow=4.5,SNR=2.5							
	comp=Z,0.3nm,0.7s							
G62A	**West of Eustis**	**33.57**	**24**	P	**P**	**10 26 35.7**	**+1.0**	
NV11	**Mina Array Sit**	**34.55**	**317**	P	**P**	**10 26 42.9**	**-0.6**	
NVAR	**Mina Array Bea**	**34.64**	**317**	P	**P**	**10 26 45.9**	**+1.5**	
NVAR	**Mina Array Bea**	**34.64**	**317**	P	**P**	**10 26 43.6**	**-0.8**	
	comp=Z,1.2nm,0.7s,baz=128,slow=7.3,SNR=13							
NVAR				PcP	**PcP**	**10 29 18.8**	**+0.1**	
	comp=Z,0.2nm,0.6s,baz=125,slow=4.5,SNR=2.6							
	comp=Z,1.2nm,0.7s							
E62A	**Clayton Lake**	**35.13**	**23**	P	**P**	**10 26 48.3**	**+0.1**	
ULM	**Lac du Bonnet**	**35.28**	**352**	P	**P**	**10 26 47.7**	**-1.8**	
	comp=Z,1.2nm,0.6s,baz=200,slow=8.9,SNR=2.9							
	comp=Z,1.2nm,0.6s							
LMQ	**La Malbaie**	**35.61**	**22**	P	**P**	**10 26 52.5**	**+0.1**	
LDAQ	**Lac Daran**	**35.65**	**20**	P	**P**	**10 26 51.7**	**-1.0**	
LDAQ				IAmb	IAmb	10 27 14.3		
	comp=Z,9.7nm,1.5s							
D62A	**Allapoint, All**	**35.69**	**23**	P	**P**	**10 26 53.3**	**+0.3**	
PAHR	**Pah Rah Range**	**36.05**	**318**	P	**P**	**10 26 57.1**	**+0.7**	
MDP	**Montagnes des**	**37.02**	**102**	LR	LR	10 43 47.7		
	comp=Z,36nm,18.1s,baz=259,slow=39							
PB12	**IPOC Station P**	**38.37**	**151**	P	**P**	**10 27 16.3**	**+0.1**	
PB16	**IPOC Station P**	**38.52**	**150**	P	**P**	**10 27 18.7**	**+0.7**	
PB16				IAmb	IAmb	10 27 20.9		
	comp=Z,11nm,1.2s							
GO01	**Chusmiza**	**39.81**	**150**	P	**P**	**10 27 29.9**	**+1.2**	
GO01				IAmb	IAmb	10 27 33.4		
	comp=Z,3.8nm,0.7s							
SIV	**San Ignacio**	**41.51**	**137**	LR	LR	10 46 03.3		
	comp=Z,47nm,18.0s,baz=292,slow=38							
EDM	**Edmonton**	**42.43**	**338**	P	**P**	**10 27 49.8**	**+0.3**	
EDM				IAmb	IAmb	10 27 53.1		
	comp=Z,6.6nm,1.0s							
SCHQ	**Schefferville**	**42.96**	**19**	P	**P**	**10 27 52.7**	**-0.9**	
SCHQ	**Schefferville**	**42.96**	**19**	P	**P**	**10 27 52.5**	**-1.2**	
	comp=Z,7.6nm,0.6s,baz=218,slow=7.2,SNR=21							
	comp=Z,7.6nm,0.6s							
YKA	**Yellowknife Ar**	**50.48**	**345**	P	**P**	**10 28 52.2**	**-0.2**	
	comp=Z,1.5nm,0.8s,baz=140,slow=7.7,SNR=30							
YKA				PcP	**PcP**	**10 30 10.0**	**-0.4**	
	comp=Z,0.1nm,0.5s,baz=147,slow=2.7,SNR=3.9							
	comp=Z,1.5nm,0.8s							
DLBC	**Dease Lake**	**52.72**	**334**	P	**P**	**10 29 10.4**	**+1.1**	
DLBC				IAmb	IAmb	10 29 11.7		
	comp=Z,4.3nm,0.9s							
S32K	**Killisnoo**	**54.18**	**332**	P	**P**	**10 29 19.9**	**0.0**	
F28M	**Old Crow**	**61.61**	**340**	P	**P**	**10 30 12.8**	**+0.7**	
ILAR	**Eielson Array**	**62.84**	**336**	P	**P**	**10 30 20.6**	**+0.3**	
ILAR	**Eielson Array**	**62.84**	**336**	P	**P**	**10 30 19.9**	**-0.4**	
	comp=Z,1.4nm,1.0s,baz=107,slow=6.2,SNR=8.6							
	comp=Z,1.4nm,1.0s							
BMAR	**Burnt Mountain**	**63.11**	**339**	P	**P**	**10 30 22.6**	**+0.6**	
SUA	**Susitna One**	**63.32**	**332**	P	**P**	**10 30 24.9**	**+1.2**	
F21K	**Alatna River**	**66.22**	**337**	P	**P**	**10 30 43.3**	**+0.9**	
EKA	**Eskdalemuir Ar**	**75.11**	**36**	P	**P**	**10 31 35.2**	**-1.6**	
	comp=Z,1.2nm,0.6s,baz=266,slow=6.3,SNR=5.9							
	comp=Z,1.2nm,0.6s							
ESDC	**Sonseca Array**	**76.52**	**52**	P	**P**	**10 31 44.6**	**-0.6**	
	comp=Z,1.5nm,0.7s,baz=283,slow=5.7,SNR=7.3							
	comp=Z,1.5nm,0.7s							
SPITS	**Spitsbergen Ar**	**78.18**	**12**	P	**P**	**10 31 52.9**	**-0.8**	
	comp=Z,18nm,1.0s,baz=319,slow=5.7,SNR=2.2							
	comp=Z,18nm,1.0s							
NOA	**NORSAR Array B**	**81.53**	**29**	P	**P**	**10 32 11.6**	**-0.7**	
	comp=Z,0.7nm,0.6s,baz=263,slow=8.6,SNR=2.2							
	comp=Z,0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**87.13**	**77**	P	**P**	**10 32 39.5**	**-2.0**	
	comp=Z,0.3nm,0.5s,baz=274,slow=6.7,SNR=1.6							
WRA	**Warramunga Arr**	**138.64**	**257**	PKhKP	PKPpre	10 39 12.4		
	comp=Z,0.4nm,0.8s,baz=74,slow=3.6,SNR=2.4							
WRA				PKP	**PKPdf**	**10 39 21.4**	**-0.2**	
	comp=Z,0.8nm,0.7s,baz=89,slow=2.7,SNR=6.9							
ASAR	**Alice Springs**	**138.96**	**252**	PKhKP	PKPpre	10 39 14.4		
	comp=Z,0.4nm,0.8s,baz=101,slow=3.3,SNR=2.4							
ASAR				PKP	**PKPdf**	**10 39 21.9**	**-0.3**	
	comp=Z,0.5nm,0.7s,baz=74,slow=1.7,SNR=8.2							
CMAR	**Chiang Mai Arr**	**145.55**	**347**	PKPbc	**PKPbc**	**10 39 33.2**	**-0.8**	
	comp=Z,3.8nm,0.8s,baz=331,slow=3.2,SNR=15							

*TRN **09** 10:20:58.4, 10˚.10N×62˚.05W, h42km, MD3.7, Near South-west peninsula of Trinidad.*
*FUNV **09** 10:20:58.4, 10˚.26N×62˚.09W, h7km, MW3.6*
ISC 09 10:20:57.7±1.1,**10˚.18N**±0˚.04×**62˚.16W**±0˚.04,**h20**km±7km,
n20,σ1§**67/37,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.71**	**79**	*e*P	**Pb**	**10 21 11.4**	**-0.1**
TRN	**Trinidad (W)**	**0.88**	**58**	*e*P	**Pb**	**10 21 13.5**	**-0.8**
TRN				*e*S	**Sb**	**10 21 24.9**	**-0.8**
CRUV	**Carupano**	**1.16**	**295**	*e*P	**Pn**	**10 21 18.9**	**+0.1**
CRUV				*e*S	**Sb**	**10 21 34.9**	**+1.1**
GRFF	**Grenada Fort F**	**1.91**	**13**	*e*P	**Pn**	**10 21 29.5**	**+0.5**
GRFF				*e*S	**Sn**	**10 21 52.9**	**+0.4**
GRGR	**Grenville**	**2.00**	**14**	*e*P	**Pn**	**10 21 30.7**	**+0.3**
GRGR				*e*S	**Sn**	**10 21 54.2**	**-0.7**
CUMV	**Cumana_UDO**	**2.01**	**277**	*e*P	**Pb**	**10 21 33.1**	**-0.5**
CUMV				*e*S	**Sb**	**10 21 58.9**	**+0.7**
GRHS	**Sauteurs**	**2.10**	**14**	*e*P	**Pn**	**10 21 33.0**	**+1.3**
GRHS				*e*S	**Sn**	**10 21 56.9**	**-0.2**
GCMP	**Grenada, Carri**	**2.40**	**17**	*e*P	**Pn**	**10 21 36.6**	**+0.7**
GCMP				*e*S	**Sn**	**10 22 04.7**	**-0.1**
PCRV	**Puerto La Cruz**	**2.43**	**270**	*e*P	**Pn**	**10 21 38.2**	**+1.9**
PCRV				*e*S	**Sn**	**10 22 07.8**	**+2.3**
SLBI	**Saint Lucia, B**	**3.99**	**17**	*e*P	**Pn**	**10 21 59.2**	**+1.4**
SLBI				*e*S	**Sn**	**10 22 41.8**	**-2.2**
LUEV	**Luepa**	**4.36**	**171**	*e*P	**Pn**	**10 22 04.6**	**+1.6**
LUEV				*e*S	**Sn**	**10 22 53.9**	**+0.5**
MPOM	**Morne Pois Mar**	**4.43**	**17**	*e*P	**Pn**	**10 22 05.4**	**+1.7**
MPOM				*e*S	**Sn**	**10 22 53.0**	**-1.7**
BIM	**Bigot**	**4.44**	**14**	*e*P	**Pn**	**10 22 04.4**	**+0.5**
TACV	**Tcata**	**4.79**	**270**	*e*P	**Pn**	**10 22 10.4**	**+1.7**
TACV				*e*S	**Sn**	**10 23 03.9**	**+0.2**
CACV	**CAICARA DEL OR**	**5.04**	**239**	*e*P	**Pn**	**10 22 08.6**	**-3.6**
CACV				*e*S	Sn	10 23 00.5	-9.5
BENV	**Beln**	**5.36**	**268**	*e*P	**Pn**	**10 22 18.7**	**+2.1**
BENV				*e*S	**Sn**	**10 23 16.8**	**-1.0**
TURV	**Turiamo**	**5.59**	**273**	*e*P	**Pn**	**10 22 21.1**	**+1.3**
TURV				*e*S	**Sn**	**10 23 22.2**	**-1.2**
BAUV	**El Baul**	**5.93**	**259**	*e*P	**Pn**	**10 22 25.9**	**+1.6**
BAUV				*e*S	**Sn**	**10 23 30.5**	**-1.2**
BAUV	**El Baul**	**5.93**	**259**	*e*P	**Pn**	**10 22 26.0**	**+1.6**
BAUV				*e*S	**Sn**	**10 23 29.6**	**-2.1**
SOCV	**Socops**	**8.79**	**258**	*e*P	**Pn**	**10 23 04.2**	**+0.6**
SOCV				*e*S	**Sn**	**10 24 37.1**	**-5.1**

*AFAD **09** 10:27:01.2±0.0,38˚.73N×38˚.80E, h7km±7km, ML2.5*
*ISK **09** 10:27:09.4, 38˚.27N×39˚.14E, h10km, ML2.3/6*
ISC 09 10:27:06.9±1.4,**38˚.36N**±0˚.05×**39˚.00E**±0˚.03,**h1**km±12km,
n15,σ1§**49/24,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NARI	**Adyaman-Kaht**	**0.52**	**202**	P	**Pb**	**10 27 18.3**	**-0.4**
NARI				S	**Sg**	**10 27 23.9**	**+0.4**
NARI				*i* AML	AML	10 27 25.0	
	comp=N,133nm,0.5s						
PTK	**Pertek**	**0.61**	**30**	Pg	**Pn**	**10 27 22.5**	**-0.4**
HANM	**anlurfa/Hi**	**0.79**	**187**	P	**Pg**	**10 27 22.4**	**+0.4**
HANM				S	**Sg**	**10 27 31.1**	**-1.1**
HANM				*i* AML	AML	10 27 37.0	
	comp=E,97nm,0.6s						
AZEY	**Adyaman-Merk**	**0.81**	**227**	P	**Pn**	**10 27 24.2**	**-1.3**
AZEY				S	**Sb**	**10 27 35.6**	**+0.4**
AZEY				*i* AML	AML	10 27 41.0	
	comp=E,62nm,0.4s						
AZEY				*i* AML	AML	10 27 42.0	
	comp=N,69nm,0.2s						
AKCD	**Akcadag**	**0.85**	**266**	P	Pg	10 27 16.4	-6.9
AKCD				S	**Sn**	**10 27 40.9**	**+1.6**
AKCD				*i* AML	AML	10 27 48.0	
	comp=N,144nm,0.5s						
AKCD				*i* AML	AML	10 27 48.0	
	comp=E,109nm,0.6s						
ARPR	**Arapgir-MALATY**	**0.90**	**325**	Pg	Pn	10 27 29.6	+2.8
DYBB	**Diyarbakir**	**0.99**	**114**	Pg	**Pb**	**10 27 26.3**	**-0.5**
DYBB				Sg	**Sg**	**10 27 38.6**	**0.0**
ATAB	**Bozova**	**1.05**	**212**	P	**Pn**	**10 27 28.4**	**-0.4**
ATAB				S	**Sg**	**10 27 41.3**	**+0.6**
ATAB				*i* AML	AML	10 27 45.0	
	comp=E,136nm,0.4s						
ATAB				*i* AML	AML	10 27 47.0	
	comp=N,117nm,0.4s						
AKCA	**Adyaman/G¶l**	**1.18**	**242**	P	**Pb**	**10 27 26.4**	**-3.7**
AKCA				S	**Sn**	**10 27 51.4**	**+4.0**
AKCA				*i* AML	AML	10 27 54.0	
	comp=E,110nm,0.8s						
AKCA				*i* AML	AML	10 27 55.0	
	comp=N,150nm,0.4s						
SANL	**SANLIURFA_Merk**	**1.19**	**180**	P	**Pn**	**10 27 30.1**	**-0.6**
SANL				S	**Sb**	**10 27 45.1**	**-1.0**
SANL				*i* AML	AML	10 27 47.0	
	comp=N,108nm,0.5s						
SANL				*i* AML	AML	10 27 49.0	
	comp=E,142nm,0.4s						
BNGB	**Bingl**	**1.46**	**64**	Pn	**Pg**	**10 27 35.8**	**+1.0**
MAZI	**Mazidag**	**1.46**	**128**	Pn	**Pb**	**10 27 34.6**	**-0.2**
SURC	**SANLIURFA_SURC**	**1.51**	**192**	P	**Pb**	**10 27 36.0**	**+0.3**
SURC				S	**Sn**	**10 27 55.3**	**-0.2**
SURC				*i* AML	AML	10 27 56.0	
	comp=E,77nm,0.3s						
SURC				*i* AML	AML	10 27 59.0	
	comp=N,65nm,0.2s						
GZT	**Gaziantep**	**1.52**	**229**	P	**Pg**	**10 27 37.0**	**+1.0**
GZT				S	**Sg**	**10 27 56.8**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.74**	**96**	Pn	**Pb**	**10 27 38.9**	**-0.8**
SVAN				Sn	**Sb**	**10 28 00.4**	**-1.6**

*SJA **09** 10:30:30.6±0.7, 22˚.02S×68˚.65W, h136km±4km, ML4.0, MW3.8*
*GUC **09** 10:30:32.9±0.7, 22˚.01S×68˚.61W, h122km±4km, ML4.1*
ISC 09 10:30:30.8±1.4,**22˚.05S**±0˚.03×**68˚.68W**±0˚.05,**h139**km±8km,
n46,σ1§**00/80,8C-3D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.58**	**296**	*e*P	**Pn**	**10 30 51.6**	**0.0**
PB09				*e*S	**Sn**	**10 31 07.1**	**-0.2**
PB09				IAML		10 31 08.5	
	comp=Z,2µm,0.1s						
PB09	**IPOC Station P**	**0.58**	**296**	⇑*i*P	**Pn**	**10 30 51.9**	**+0.3**
PB09				*i* S	**Sn**	**10 31 06.4**	**-1.0**
PB09				IAML		10 31 08.4	
	comp=N,3µm,0.2s						
LVC	**Limon Verde**	**0.60**	**201**	*e*P	**Pn**	**10 30 51.5**	**-0.4**
LVC				*e*S	**Sn**	**10 31 07.2**	**-0.8**
LVC				IAML		10 31 08.1	
	comp=Z,2µm,0.1s						
LVC	**Limon Verde**	**0.60**	**201**	*e*P	**Pn**	**10 30 51.8**	**-0.1**
LVC				*i* S	**Sn**	**10 31 05.8**	**-2.2**
AF01	**San Pedro de A**	**1.01**	**153**	⇓*i*P	**Pn**	**10 30 55.2**	**+0.2**
AF01				*i* S	**Sn**	**10 31 12.7**	**-0.7**
PB06	**IPOC Station P**	**1.05**	**232**	*e*P	**Pn**	**10 30 56.1**	**+0.9**
PB06				*e*S	**Sn**	**10 31 14.7**	**+0.9**
PB06				IAML		10 31 18.3	
	comp=Z,2µm,0.2s						
PB06	**IPOC Station P**	**1.05**	**232**	⇑*i*P	**Pn**	**10 30 56.2**	**+0.9**
PB06				*i* S	**Sn**	**10 31 14.2**	**+0.4**
PB06				IAML		10 31 15.2	
	comp=N,4µm,0.3s						
PB07	**IPOC Station P**	**1.17**	**286**	*e*P	**Pn**	**10 30 57.0**	**+0.7**
PB07				*e*S	**Sn**	**10 31 16.1**	**+0.4**
PB07				IAML		10 31 17.7	
	comp=Z,3µm,0.1s						
PB07	**IPOC Station P**	**1.17**	**286**	⇑*i*P	**Pn**	**10 30 57.1**	**+0.8**
PB07				*i* S	**Sn**	**10 31 15.6**	**-0.1**
PB01	**IPOC Station P**	**1.25**	**323**	*e*P	**Pn**	**10 30 57.3**	**+0.2**
PB01				*e*S	**Sn**	**10 31 17.1**	**0.0**
PB01				IAML		10 31 20.2	
	comp=Z,3µm,0.1s						
PB01	**IPOC Station P**	**1.25**	**323**	*e*P	**Pn**	**10 30 57.2**	**+0.2**
PB01				*i* S	**Sn**	**10 31 15.8**	**-1.3**
PB01				IAML		10 31 17.2	
	comp=N,3µm,0.5s						
PB02	**IPOC Station P**	**1.34**	**302**	*e*P	**Pn**	**10 30 58.8**	**+0.7**
PB02				*e*S	**Sn**	**10 31 18.6**	**-0.2**
PB02	**IPOC Station P**	**1.34**	**302**	⇑*e*P	**Pn**	**10 30 58.7**	**+0.7**
PB02				*i* S	**Sn**	**10 31 18.2**	**-0.6**
PB04	**IPOC Station P**	**1.39**	**258**	*e*P	**Pn**	**10 30 59.6**	**+1.0**
PB04				IAML		10 31 25.2	
	comp=Z,2µm,0.1s						
PB04	**IPOC Station P**	**1.39**	**258**	⇑*i*P	**Pn**	**10 30 59.6**	**+1.0**
PB04				*i* S	**Sn**	**10 31 20.4**	**+0.6**
PB04				IAML		10 31 23.9	
	comp=E,1µm,0.2s						
PB05	**IPOC Station P**	**1.62**	**240**	*e*P	**Pn**	**10 31 02.1**	**+1.1**
PB05	**IPOC Station P**	**1.62**	**240**	⇑*i*P	**Pn**	**10 31 02.1**	**+1.1**
PB05				*i* S	**Sn**	**10 31 24.4**	**+0.3**
PB05				IAML		10 31 28.9	
	comp=N,4µm,0.1s						
PATCX	**Punta Patache**	**1.84**	**311**	*e*P	**Pn**	**10 31 03.8**	**+0.3**
PATCX				*e*S	**Sn**	**10 31 28.3**	**-0.2**
PATCX				IAML		10 31 32.8	
	comp=Z,803nm,0.4s						
PATCX	**Punta Patache**	**1.84**	**311**	⇑*e*P	**Pn**	**10 31 03.8**	**+0.3**
PATCX				*i* S	**Sn**	**10 31 28.1**	**-0.4**
PATCX				IAML		10 31 33.1	
	comp=E,2µm,0.3s						
PX03	**IPOC Station P**	**1.86**	**331**	*e*P	**Pn**	**10 31 03.4**	**-0.4**
PX03				*i* S	**Sn**	**10 31 27.8**	**-1.3**
PX03				IAML		10 31 30.5	
	comp=N,3µm,0.1s						
PB08	**IPOC Station P**	**1.95**	**347**	*e*P	**Pn**	**10 31 06.0**	**+0.9**
PB08				*e*S	**Sn**	**10 31 32.4**	**+1.0**
PB08	**IPOC Station P**	**1.95**	**347**	⇓*i*P	**Pn**	**10 31 06.0**	**+0.9**
PB08				*i* S	**Sn**	**10 31 31.3**	**-0.1**
PB08				IAML		10 31 33.1	
	comp=E,2µm,0.8s						
TA01	**Diego Aracena**	**2.04**	**316**	*e*P	**Pn**	**10 31 06.1**	**+0.4**
TA01				*e*S	**Sn**	**10 31 31.9**	**-0.6**
TA01				IAML		10 31 34.5	
	comp=Z,508nm,0.3s						
TA01	**Diego Aracena**	**2.04**	**316**	*e*P	**Pn**	**10 31 05.9**	**+0.2**
TA01				*i* S	**Sn**	**10 31 31.7**	**-0.8**
TA01				IAML		10 31 34.4	
	comp=E,2µm,0.3s						
HMBC	**Humberstone**	**2.09**	**327**	*e*P	**Pn**	**10 31 06.2**	**-0.3**
HMBC				*e*S	**Sn**	**10 31 33.7**	**-0.3**
TA02	**Huaiquique**	**2.23**	**322**	*e*P	**Pn**	**10 31 08.0**	**-0.1**
TA02				IAML		10 31 41.9	
	comp=Z,1µm,0.1s						
TA02	**Huaiquique**	**2.23**	**322**	*e*P	**Pn**	**10 31 08.0**	**-0.1**
TA02				*i* S	**Sn**	**10 31 36.3**	**-0.4**
TA02				IAML		10 31 39.7	
	comp=N,2µm,0.3s						
PB10	**IPOC Station P**	**2.26**	**230**	*e*P	**Pn**	**10 31 09.4**	**+1.0**
PB10				*e*S	**Sn**	**10 31 36.9**	**-0.5**
PB10	**IPOC Station P**	**2.26**	**230**	⇑*e*P	**Pn**	**10 31 09.4**	**+1.0**
PB10				*i* S	**Sn**	**10 31 36.2**	**-1.2**
PB10				IAML		10 31 49.0	
	comp=E,420nm,0.6s						
GO01	**Chusmiza**	**2.42**	**348**	*e*P	**Pn**	**10 31 11.5**	**+0.6**
GO01				*e*S	**Sn**	**10 31 42.7**	**+1.0**
GO01	**Chusmiza**	**2.42**	**348**	*e*P	**Pn**	**10 31 11.5**	**+0.6**
GO01				*i* S	**Sn**	**10 31 41.6**	**0.0**
GO01				IAML		10 31 47.1	
	comp=E,1µm,0.2s						
PB11	**IPOC Station P**	**2.45**	**338**	*e*P	**Pn**	**10 31 10.9**	**-0.2**
PB11				*e*S	**Sn**	**10 31 41.7**	**-0.3**
PB11				IAML		10 31 43.1	
	comp=Z,623nm,0.3s						
PB11	**IPOC Station P**	**2.45**	**338**	⇓*i*P	**Pn**	**10 31 11.1**	**0.0**
PB11				*i* S	**Sn**	**10 31 40.8**	**-1.2**
PB11				IAML		10 31 42.6	
	comp=E,1µm,0.5s						
YJA	**Yavi**	**2.94**	**93**	*e*P	**Pn**	**10 31 18.6**	**+1.3**
PB14	**IPOC Station P**	**3.01**	**211**	*e*P	**Pn**	**10 31 19.4**	**+1.2**
PB14				*e*S	**Sn**	**10 31 55.6**	**+0.8**
PB14				IAML		10 31 56.2	
	comp=Z,438nm,0.2s						
PB14	**IPOC Station P**	**3.01**	**211**	*e*P	**Pn**	**10 31 19.3**	**+1.1**
PB14				*i* S	**Sn**	**10 31 53.6**	**-1.2**
PB14				IAML		10 31 56.1	
	comp=E,309nm,0.4s						
GO02	**Mina Guanaco**	**3.21**	**195**	*e*P	**Pn**	**10 31 21.6**	**+0.9**
GO02	**Mina Guanaco**	**3.21**	**195**	*e*P	**Pn**	**10 31 21.8**	**+1.1**
PB12	**IPOC Station P**	**3.75**	**335**	IAML		10 32 18.3	
	comp=Z,120nm,0.2s						
PB12	**IPOC Station P**	**3.75**	**335**	*e*P	**Pn**	**10 31 26.4**	**-1.2**
PB12				*i* S	**Sn**	**10 32 08.2**	**-3.5**
PB16	**IPOC Station P**	**3.78**	**348**	*e*P	**Pn**	**10 31 29.2**	**+0.8**
PB16	**IPOC Station P**	**3.78**	**348**	*e*P	**Pn**	**10 31 29.0**	**+0.5**
PB16				*i* S	**Sn**	**10 32 13.1**	**+0.1**
AC01	**Pan de Azucar**	**4.44**	**203**	*e*P	**Pn**	**10 31 35.9**	**-0.7**
AC01				IAML		10 32 42.7	
	comp=Z,109nm,0.2s						
AC01	**Pan de Azucar**	**4.44**	**203**	*e*P	**Pn**	**10 31 36.1**	**-0.4**
AC01				*i* S	**Sn**	**10 32 25.1**	**-2.7**
PB18	**Visviri**	**4.50**	**350**	*e*P	**Pn**	**10 31 41.1**	**+3.2**
AC02	**Maricunga**	**4.78**	**185**	*e*P	**Pn**	**10 31 42.7**	**+1.1**
AC02				IAML		10 33 07.9	
	comp=Z,74nm,0.7s						

*SOME **09** 10:32:26.9, 43˚.37N×69˚.42E*
*NNC **09** 10:32:27.4±2.1, 43˚.57N×69˚.65E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=12.1km s-min=7.5km az=131.0, Suspected Mining explosion.*
ISC 09 10:32:28.3±2.3,**43˚.57N**±0˚.09×**69˚.7E**±0˚.1,**h0**km,**n17,**
σ1§**19/21,3C-2D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.56**	**167**	P	**Pn**	**10 32 42.8**	**-0.8**
BRLS	5.9nm,0.2s			S	**Sn**	**10 32 54.3**	**+0.8**
	30nm,0.3s						
KK31	**Karatay Array**	**0.77**	**127**	P	**Pg**	**10 32 42.2**	**-0.9**
	2.6nm,0.3s,baz=322,slow=17,SNR=257						
KK31				⇑S	**Sg**	**10 32 53.6**	**+0.4**
	37nm,0.7s,baz=296,slow=29,SNR=21						
DZA	**Taraz**	**1.39**	**119**	P	**Pb**	**10 32 55.1**	**-0.2**
DZA	76nm,0.1s			S	**Sn**	**10 33 15.9**	**+1.7**
	86nm,0.3s						
IUG	**luzhnay**	**1.45**	**169**	P	**Pb**	**10 32 56.3**	**0.0**
IUG	44nm,0.3s			S	**Sn**	**10 33 18.2**	**+2.5**
	144nm,0.3s						
MRKS	**Merke**	**2.73**	**106**	Pg	**Pb**	**10 33 16.8**	**-1.3**
MRKS	6.0nm,0.4s			Lg	Lg	10 33 53.6	
	16nm,0.2s						
BTLS	**Baital**	**3.47**	**63**	Pg	**Pb**	**10 33 30.5**	**-0.1**
BTLS	20nm,0.4s			Lg	Lg	10 34 14.4	
	7.2nm,0.5s						
SGDS	**Sogindy**	**3.61**	**90**	Pg	**Pb**	**10 33 33.9**	**+0.8**
SGDS	5.4nm,0.3s			Lg	Lg	10 34 20.3	
	12nm,0.7s						
CHMS	**Chumysh**	**3.75**	**97**	⇑Pg	**Pb**	**10 33 33.9**	**-1.6**
CHMS	2.5nm,0.4s			⇓Lg	Lg	10 34 27.3	
	6.1nm,0.7s						
KRBS	**Karabastau**	**4.36**	**86**	Pg	**Pb**	**10 33 46.1**	**+0.3**
KRBS	6.5nm,0.2s			Lg	Lg	10 34 45.2	
	6.7nm,0.3s						
TKM2	**Tokmak 2**	**4.38**	**97**	⇓Pg	**Pb**	**10 33 44.3**	**-2.0**
TKM2	1.5nm,0.5s			⇑Lg	Lg	10 34 48.0	
	5.2nm,0.8s						
DGS	**Degeres**	**4.46**	**92**	Pg	**Pb**	**10 33 47.9**	**+0.4**
DGS	4.2nm,0.4s			Lg	Lg	10 34 47.3	
	13nm,0.7s						
KUU	**Kurty**	**4.84**	**84**	Pg	**Pb**	**10 33 53.6**	**-0.5**
KUU	3.1nm,0.3s			Lg	Lg	10 34 56.3	
	14nm,0.4s						
MTBS	**Maitube**	**4.95**	**93**	Pg	**Pb**	**10 33 55.7**	**-0.3**
MTBS	2.0nm,0.4s			Lg	Lg	10 35 01.6	
	9.7nm,0.4s						
KTBS	**Karatobe**	**5.09**	**86**	Pg	**Pb**	**10 33 59.5**	**+1.2**
KTBS	5.9nm,0.3s			Lg	Lg	10 35 06.6	
	8.4nm,0.6s						
IZV	**Izvestkoviy**	**5.10**	**94**	Pg	**Pb**	**10 33 59.5**	**+1.0**
IZV	1.9nm,0.3s			Lg	Lg	10 35 06.9	
	14nm,0.5s						
TNSS	**Tian-Shan**	**5.34**	**93**	Pg	**Pb**	**10 34 04.2**	**+1.5**
TNSS	2.2nm,0.3s			Lg	Lg	10 35 13.4	
	4.2nm,0.5s						
MDOK	**Medeo**	**5.39**	**92**	Pg	**Pb**	**10 34 03.3**	**-0.3**
MDOK	3.4nm,0.5s			Lg	Lg	10 35 12.9	
	3.8nm,0.4s						

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VERB				eS	Sb	10 34 09.9	+2.0	
VTR0	**Volcan Turrial**	**0.22**	**35**⇓	eP	Pb	**10 34 05.8**	**-0.2**	
CVTR	**Volcan Turrial**	**0.23**	**35**⇓	eP	Pb	**10 34 05.7**	**-0.3**	
VTUN	**Crater Central**	**0.23**	**34**	*i* P	Pg	**10 34 04.5**	**-0.3**	
VTUN				*i* S	Sb	**10 34 08.6**	**+0.3**	
VTUN				IAML		10 34 19.5		
	comp=Z,14μm,1.0s							
VTUC	**Crater, Volcan**	**0.23**	**34**	*i* P	Pg	**10 34 03.8**	**-1.0**	
VTUC				IAML		10 34 08.4		
	comp=Z,12μm,1.0s							
VTUC				*i* S	Sb	**10 34 09.1**	**+0.8**	
DOMI	**Santo Domingo**	**0.24**	**307**⇑	eP	Pb	**10 34 05.8**	**-0.4**	
DOMI				eS	Sb	**10 34 10.2**	**+1.7**	
VTLO	**VTLO**	**0.26**	**38**⇓	eP	Pb	**10 34 06.3**	**-0.3**	
ACOS	**Acosta**	**0.27**	**262**⇑	eP	Pg	**10 34 05.6**	**+0.1**	
ACOS				eS	Sg	**10 34 09.7**	**+0.4**	
HDC3	**Heredia 3**	**0.27**	**308**⇑	eP	Pb	**10 34 06.3**	**-0.4**	
HDC3	**Heredia 3**	**0.27**	**308**	*i* P	Pg	**10 34 04.4**	**-1.1**	
HDC3				IAML		10 34 08.4		
	comp=Z,14μm,1.0s							
HDC3				*i* S	Sg	**10 34 09.8**	**+0.5**	
RVSTA	**Santa Teresita**	**0.28**	**60**⇓	eP	Pb	**10 34 06.6**	**-0.1**	
RVSTA				eS	Sb	**10 34 11.7**	**+0.3**	
SANTA	**Santa Ana**	**0.30**	**289**⇑	eP	Pg	**10 34 06.3**	**+0.2**	
CDM	**Cerro de Muert**	**0.31**	**156**⇑	eP	Pg	**10 34 05.9**	**-0.4**	
CDM				eS	Sg	**10 34 10.5**	**-0.1**	
CDM	**Cerro de Muert**	**0.31**	**156**	*i* P	Pg	**10 34 05.8**	**-0.4**	
CDM				*i* S	Sg	**10 34 10.1**	**-0.5**	
CDM				IAML		10 34 13.3		
	comp=Z,10μm,1.0s							
BUS1	**Rivas**	**0.31**	**153**⇑	eP	Pg	**10 34 05.9**	**-0.4**	
BELE	**Belen**	**0.32**	**296**⇑	eP	Pb	**10 34 07.8**	**+0.3**	
BELE				eS	Sb	**10 34 12.7**	**0.0**	
RVLA	**Villa Bonita**	**0.41**	**48**	eP	Pb	**10 34 09.1**	**+0.3**	
LCOCO	**El Coco**	**0.41**	**53**⇓	eP	Pb	**10 34 09.1**	**+0.2**	
LLNJ	**Naranjito**	**0.41**	**210**⇓	eP	Pg	**10 34 08.3**	**+0.3**	
IRES	**Siquirres**	**0.46**	**56**	eP	Pb	**10 34 10.1**	**+0.3**	
GREC	**Grecia**	**0.47**	**300**	eP	Pb	**10 34 10.2**	**+0.1**	
RIFO	**Rio Frio, Sara**	**0.48**	**356**⇓	eP	Pb	**10 34 10.3**	**+0.2**	
RIFO	**Rio Frio, Sara**	**0.48**	**356**	*i* P	Pg	**10 34 08.3**	**-0.9**	
RIFO				*i* S	Sb	**10 34 16.6**	**-0.6**	
RIFO				IAML		10 34 21.1		
	comp=Z,4μm,1.0s							
VPS6	**Volcano Poas**	**0.49**	**317**⇑	eP	Pb	**10 34 10.3**	**-0.1**	
PEZE	**Perez Zeledon,**	**0.50**	**155**⇑	eP	Pg	**10 34 08.9**	**-0.7**	
PEZE	**Perez Zeledon,**	**0.50**	**155**	*i* P	Pg	**10 34 08.8**	**-0.7**	
PEZE				*i* S	Sg	**10 34 15.8**	**-0.3**	
PEZE				IAML		10 34 17.3		
	comp=Z,6μm,1.0s							
SARCI	**Sarchi**	**0.52**	**300**⇑	eP	Pb	**10 34 10.8**	**0.0**	
TRB2	**Turrubares**	**0.55**	**278**⇑	eP	Pg	**10 34 10.4**	**-0.2**	
SRA1	**San Ramn**	**0.63**	**293**⇑	eP	Pg	**10 34 12.1**	**0.0**	
CPMI	**Catarata Coope**	**0.66**	**313**	*i* P	Pg	**10 34 12.3**	**-0.3**	
CPMI				*i* S	Sg	**10 34 21.4**	**+0.1**	
CPMI				IAML		10 34 29.3		
	comp=Z,1μm,1.0s							
OCHAL	**Ojochal**	**0.77**	**162**	*i* P	Pg	**10 34 14.0**	**-0.7**	
OCHAL				*i* S	Sg	**10 34 24.5**	**-0.3**	
OCHAL				IAML		10 34 27.8		
	comp=Z,48nm,1.0s							
JACO	**JACO, Garabito**	**0.78**	**257**⇑	eP	Pg	**10 34 14.3**	**-0.5**	
JACO	**JACO, Garabito**	**0.78**	**257**	*i* P	Pg	**10 34 14.3**	**-0.5**	
JACO				*i* S	Sg	**10 34 25.1**	**+0.1**	
JACO				IAML		10 34 25.9		
	comp=Z,2μm,1.0s							
ARZA	**Esparza**	**0.78**	**282**⇑	eP	Pb	**10 34 15.5**	**+0.3**	
DRK0	**Durika**	**0.85**	**132**⇑	eP	Pg	**10 34 15.2**	**-1.1**	
BURE	**Buenos Aires**	**0.85**	**140**	eP	Pg	**10 34 15.2**	**-1.1**	
SOCE	**Pocosol**	**0.90**	**307**	eP	Pb	**10 34 17.6**	**+0.3**	
SOCE	**Pocosol**	**0.90**	**307**	*i* P	Pg	**10 34 15.6**	**-1.5**	
SOCE				IAML		10 34 31.4		
	comp=Z,1μm,1.0s							
LAFE	**Finca La Fe, P**	**1.00**	**269**⇑	eP	Pb	**10 34 19.1**	**+0.1**	
LAFE	**Finca La Fe, P**	**1.00**	**269**	*i* P	Pb	**10 34 18.3**	**-0.7**	
LAFE				IAML		10 34 20.9		
	comp=Z,6.5nm,1.0s							
LAFE				*i* S	Sb	**10 34 31.5**	**-0.7**	
COVE	**Coope Vega, Sa**	**1.01**	**330**	eP	Pg	**10 34 19.2**	**-0.1**	
COVE	**Coope Vega, Sa**	**1.01**	**330**	*i* P	Pg	**10 34 19.2**	**-0.1**	
COVE				*i* S	Sg	**10 34 32.4**	**-0.1**	
COVE				IAML		10 34 39.3		
	comp=Z,2μm,1.0s							
ARE1	**Arenal 1**	**1.02**	**307**⇑	eP	Pg	**10 34 19.5**	**0.0**	
POTG	**Potrero Grande**	**1.09**	**135**	*i* P	Pb	**10 34 19.4**	**-1.1**	
POTG				*i* S	Sb	**10 34 34.3**	**-0.4**	
POTG				IAML		10 34 37.2		
	comp=Z,3μm,1.0s							
JTS	**Las Juntas de**	**1.14**	**294**⇑	*i* P	Pb	**10 34 21.0**	**-0.4**	
JTS			⇑	eP	Pb	**10 34 21.0**	**-0.4**	
JTS				eS	Sn	**10 34 37.7**	**+0.7**	
JTS	**Las Juntas de**	**1.14**	**294**⇑	eP	Pb	**10 34 20.9**	**-0.5**	
JUNT	**Juntas**	**1.14**	**293**⇑	eP	Pb	**10 34 20.9**	**-0.5**	
PLAN	**Los Planes de**	**1.18**	**170**	*i* P	Pn	**10 34 20.9**	**-1.1**	
PLAN				*i* S	Sb	**10 34 37.1**	**0.0**	
PLAN				IAML		10 34 42.7		
	comp=Z,4μm,1.0s							
CBL1	**Cabuya**	**1.21**	**258**⇑	eP	Pn	**10 34 22.0**	**-0.4**	
VITO	**San Vito**	**1.36**	**138**⇑	eP	Pb	**10 34 25.5**	**+0.3**	
CNI2	**El Empalme, Bo**	**1.46**	**106**	*i* P	Pn	**10 34 25.9**	**+0.1**	
CNI2				AMP		10 34 27.0		
	comp=Z,2μm,0.2s							
CNI2				*i* S	Sb	**10 34 45.9**	**+0.6**	
MLIR3	**Monte Lirio, C**	**1.48**	**134**	*i* P	Pb	**10 34 27.6**	**+0.5**	
MLIR3				*i* S	Sg	**10 34 50.9**	**+3.5**	
CMARA	**Lajas Hojancha**	**1.52**	**277**⇑	eP	Pn	**10 34 26.8**	**0.0**	
COLC	**Colonia**	**1.53**	**303**⇑	eP	Pb	**10 34 27.7**	**-0.4**	
BRU2	**Volcan**	**1.57**	**131**⇓	*i* P	Pb	**10 34 28.4**	**-0.4**	
BRU2				AMP		10 34 29.4		
BRU2				eS	Sg	**10 34 51.0**	**+0.5**	
BRU2	**Volcan**	**1.57**	**131**	eP	Pb	**10 34 28.4**	**-0.4**	
BRU2	**Volcan**	**1.57**	**131**	*i* P	Pn	**10 34 27.1**	**-0.5**	
BRU2				*i* S	Sb	**10 34 48.5**	**-0.3**	
BRU2				IAML		10 34 55.4		
	comp=Z,2μm,1.0s							
INDI	**Punta indio, G**	**1.59**	**271**	*i* P	Pn	**10 34 27.0**	**-0.6**	
INDI				*i* S	Sn	**10 34 48.5**	**+0.4**	
INDI				IAML		10 34 54.4		
	comp=Z,870nm,1.0s							
DUNO	**Dulce Nombre,**	**1.60**	**279**	*i* P	Pn	**10 34 27.0**	**-0.8**	
DUNO				IAML		10 34 56.6		
	comp=Z,2μm,1.0s							
CDITO	**Canoas**	**1.61**	**141**	*i* P	Pn	**10 34 28.6**	**+0.7**	
CDITO				*i* S	Sb	**10 34 50.6**	**+1.0**	
BC3P	**Paso Ancho**	**1.62**	**129**	*i* P	Pb	**10 34 29.5**	**-0.2**	
BC3P				eS	Sg	**10 34 52.8**	**+0.8**	
ORTG	**Ortega, Santa**	**1.63**	**289**⇑	eP	Pn	**10 34 28.8**	**+0.5**	
ORTG	**Ortega, Santa**	**1.63**	**289**	*i* P	Pn	**10 34 27.6**	**-0.7**	
ORTG				IAML		10 34 32.5		
	comp=Z,360nm,1.0s							
ORTG				*i* S	Sn	**10 34 49.1**	**-0.2**	
JUD3	**Juan Diaz 3**	**1.66**	**282**⇑	eP	Pn	**10 34 29.2**	**+0.5**	
BCO2	**Palmira**	**1.74**	**129**	*i* P	Pb	**10 34 31.4**	**-0.3**	
BCO2				*i* S	Sg	**10 34 55.1**	**-0.8**	
LNBQ3	**Los Naranjos,**	**1.77**	**126**	*i* P	Pb	**10 34 31.4**	**-0.8**	
LNBQ3				*i* S	Sb	**10 34 54.8**	**+0.4**	
PTAR3	**Potrerillos Ar**	**1.79**	**129**	eP	Pb	**10 34 32.0**	**-0.4**	
PTAR3				eS	Sb	**10 34 56.2**	**+1.4**	
SAJU	**San Juanillo,**	**1.81**	**278**	*i* P	Pn	**10 34 30.3**	**-0.4**	
SAJU				*i* S	Sn	**10 34 53.8**	**+0.3**	
SAJU				IAML		10 35 09.3		
	comp=Z,450nm,1.0s							
HZTE	**Horizontes, Gu**	**1.89**	**298**⇑	eP	Pb	**10 34 33.5**	**-0.7**	
HZTE	**Horizontes, Gu**	**1.89**	**298**	*i* P	Pn	**10 34 30.9**	**-0.9**	
HZTE				IAML		10 34 36.9		
	comp=Z,880nm,1.0s							
HZTE				*i* S	Sn	**10 34 55.6**	**0.0**	
PTPM	**Petroterminale**	**1.90**	**148**	eP	Pb	**10 34 35.0**	**+0.6**	
PTPM				eS	Sb	**10 34 60.0**	**+1.8**	
CHGR2	**Aguacate**	**1.94**	**117**	eP	Pn	**10 34 33.4**	**+0.8**	
CHGR2				eS	Sb	**10 34 59.7**	**+0.4**	
DVD	**David**	**1.99**	**134**	eP	Pn	**10 34 34.5**	**+1.3**	
DVD				eS	Sb	**10 35 01.1**	**+0.5**	
LOCO3	**Loma Colorada,**	**2.03**	**134**	*i* P	Pn	**10 34 35.2**	**+1.4**	
LOCO3				eS	Sb	**10 35 03.4**	**+1.6**	
PEDE3	**Pedregal, Chir**	**2.04**	**135**	eP	Pn	**10 34 35.3**	**+1.4**	
PEDE3				eS	Sb	**10 35 02.3**	**0.0**	
BLUN	**Bluefields**	**2.16**	**3**	*i* P	Pn	**10 34 35.8**	**+0.3**	
BLUN				*i* S	Sn	**10 35 02.9**	**+0.7**	
BLUN				IAML		10 35 07.9		
	comp=Z,930nm,1.0s							
ESPN	**Las Esperanzas**	**2.38**	**350**	*i* P	Pn	**10 34 38.1**	**-0.5**	
ESPN				*i* S	Sb	**10 35 09.1**	**-2.8**	
ESPN				IAML		10 35 14.1		
	comp=Z,510nm,1.0s							
CONN	**Concepcion**	**2.42**	**315**	*i* P	Pn	**10 34 39.0**	**-0.1**	
CONN				IAML		10 34 49.0		
	comp=Z,2μm,1.0s							
CONN				*i* S	Sn	**10 35 09.1**	**+0.4**	
ACON	**Acoyapa**	**2.47**	**329**	*i* P	Pn	**10 34 39.2**	**-0.5**	
ACON				*i* S	Sn	**10 35 10.5**	**+0.7**	
ACON				IAML		10 35 21.5		
	comp=Z,320nm,1.0s							
BOAB	**BOACO BROADBAN**	**3.13**	**326**	*i* P	Pn	**10 34 48.4**	**-0.5**	
BOAB				*i* S	Sn	**10 35 26.9**	**+0.8**	
BOAB				IAML		10 35 36.6		
	comp=Z,170nm,1.0s							
SAPS	**Ciudad Sandino**	**3.39**	**313**	*i* P	Pn	**10 34 51.6**	**-0.8**	
SAPS				IAML		10 34 57.4		
	comp=Z,150nm,1.0s							
COPN	**Copaltepe**	**3.53**	**312**	*i* P	Pn	**10 34 54.1**	**-0.3**	
COPN				IAML		10 36 09.8		
	comp=Z,110nm,1.0s							
MOM2	**El Cardon**	**3.63**	**316**	*i* P	Pn	**10 34 55.9**	**+0.2**	
MOM2				IAML		10 35 19.0		
	comp=Z,73nm,1.0s							
MOM2				*i* S	Sn	**10 35 38.7**	**+0.2**	
MATN	**Matagalpa**	**3.67**	**327**	*i* P	Pn	**10 34 55.7**	**-0.6**	
MATN				*i* S	Sn	**10 35 41.3**	**+1.7**	
MATN				IAML		10 36 09.3		
	comp=Z,48nm,1.0s							
LIMN	**Finca el Limon**	**4.02**	**323**	*i* P	Pn	**10 35 00.6**	**-0.6**	
LIMN				*i* S	Sn	**10 35 48.6**	**+0.2**	
LIMN				IAML		10 36 05.8		
	comp=Z,69nm,1.0s							
BCIP	**Isla Barro Col**	**4.05**	**99**	*i* P	Pn	**10 35 01.4**	**-0.2**	
BCIP				*i* S	Sn	**10 35 50.0**	**+1.0**	
BCIP				IAML		10 36 49.1		
	comp=Z,110nm,1.0s							

CATAC 09 10:37:47.7±0.7, 15°18N×91°73W, h153km±5km, mb3.9, ML3.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMSP	**San Marcos**	**0.21**	**194**	*i* P	Pn	10 38 08.9	+0.1
SMSP				*i* S	Sn	10 38 25.1	+0.3
SMSP				IAML		10 38 42.7	
	comp=Z,510nm,1.0s						
HUEH	**Huehuetenango**	**0.26**	**58**	*i* P	Pn	10 38 10.0	+1.2
HUEH				*i* S	Sn	10 38 26.5	+1.7
HUEH				IAML		10 38 32.4	
	comp=Z,2μm,1.0s						
SMCA	**Catarina**	**0.47**	**226**	*i* P	Pn	10 38 10.5	+1.2
SMCA				*i* S	Sn	10 38 28.4	+2.7
SMCA				IAML		10 38 49.5	
	comp=Z,350nm,1.0s						
QUIS	**Sacapulas**	**0.62**	**80**	*i* P	Pn	10 38 11.5	+1.3
QUIS				IAML		10 38 12.8	
	comp=Z,2μm,1.0s						
QUIS				*i* S	Sn	10 38 29.6	+2.2
RTAL	**Retalhuleu**	**0.65**	**177**	*i* P	Pn	10 38 10.4	+0.1
RTAL				*i* S	Sn	10 38 28.6	+1.1
RTAL				IAML		10 38 39.6	
	comp=Z,940nm,1.0s						
CCIG	**Comitan**	**1.16**	**340**	*i* P	Pn	10 38 14.7	+0.3
CCIG				*i* S	Sn	10 38 34.4	-0.5
CCIG				IAML		10 38 38.7	
	comp=Z,450nm,1.0s						
PETF	**Flores**	**2.48**	**46**	*i* P	Pn	10 38 28.9	+0.1
PETF				IAML		10 38 30.0	
	comp=Z,57nm,1.0s						
PETF				*i* S	Sn	10 39 00.2	-0.3
TLIG	**Tlapa**	**6.98**	**291**	*i* P	Pn	10 39 27.5	-0.1
TLIG				IAmb	IAmb	10 39 28.4	
	comp=Z,17nm,0.9s						
TLIG				IAML		10 39 28.7	
	comp=Z,49nm,1.0s						

UPA ***09*** *10:46:59.7±1.4, 8°28N×83°06W, h27km±4km, MD3.4, ML3.7*
CATAC ***09*** *10:47:01.2±0.8, 8°37N×83°02W, h5km±2km, ML2.7*

ISC 09 10:47:01.0±0.9, 8°39N±0°04×83°00W±0°03, h13km±8km, n24, σ0°90/47, 4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.20**	**84**⇓	eP	Pg	**10 47 05.9**	**+0.3**
LESP3				eS	Sb	**10 47 13.1**	**+2.7**
PTPM	**Petroterminale**	**0.21**	**147**	eP	Pg	**10 47 05.0**	**-0.7**
PTPM				eS	Sg	**10 47 09.4**	**+0.5**
CDITO	**Canoas**	**0.22**	**33**⇓	*i* P	Pb	**10 47 07.0**	**0.0**
CDITO				AMP		10 47 07.2	
	comp=Z,7μm,0.1s						
CDITO				*i* S	Sb	**10 47 13.6**	**+2.6**
CDITO	**Canoas**	**0.22**	**33**	*i* P	Pg	**10 47 05.8**	**-0.1**
CDITO				*i* S	Sb	**10 47 11.1**	**+0.1**
CDITO				IAML		10 47 13.6	
	comp=Z,980nm,1.0s						
LIMO3	**Limones**	**0.31**	**155**	eP	Pg	**10 47 07.1**	**-0.4**
LIMO3				eS	Sg	**10 47 11.7**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.44**	**23**⇓	*i* P	Pb	**10 47 11.4**	**+0.7**
MLIR3				eS	Sn	**10 47 20.4**	**-0.7**
BRU2	**Volcan**	**0.51**	**37**⇓	*i* P	Pb	**10 47 12.2**	**+0.3**
BRU2				eS	Sn	**10 47 21.6**	**-1.2**
BRU2	**Volcan**	**0.51**	**37**	*i* P	Pb	**10 47 12.0**	**+0.1**
BRU2				*i* S	Sb	**10 47 19.5**	**+0.2**
BRU2				IAML		10 47 43.4	
	comp=Z,390nm,1.0s						
DVD	**David**	**0.54**	**85**	eP	Pg	**10 47 11.5**	**-0.2**
DVD				eS	Sb	**10 47 20.3**	**+0.2**
BCO2	**Palmira**	**0.57**	**54**	eP	Pb	**10 47 12.9**	**-0.1**
BCO2				eS	Sn	**10 47 22.8**	**-1.5**
PEDE3	**Pedregal, Chir**	**0.57**	**90**	eP	Pg	**10 47 11.7**	**-0.5**
PEDE3				eS	Sb	**10 47 21.1**	**+0.3**
LOCO3	**Loma Colorada,**	**0.57**	**88**	eP	Pg	**10 47 12.3**	**0.0**
LOCO3				eS	Sb	**10 47 22.3**	**+1.3**
BC3P	**Paso Ancho**	**0.57**	**42**	eP	Pb	**10 47 13.1**	**+0.1**
PTAR3	**Potrerillos Ar**	**0.58**	**58**	eP	Pb	**10 47 13.2**	**0.0**
PTAR3				eS	Sn	**10 47 23.6**	**-1.0**
LNBQ3	**Los Naranjos,**	**0.68**	**54**	eP	Pb	**10 47 14.9**	**0.0**
LNBQ3				eS	Sb	**10 47 24.6**	**+0.3**
PLAN	**Los Planes de**	**0.73**	**293**	*i* P	Pb	**10 47 15.6**	**-0.1**
PLAN				IAML		10 47 17.2	
	comp=Z,650nm,1.0s						
PLAN				*i* S	Sb	**10 47 25.6**	**-0.1**
OCHAL	**Ojochal**	**0.96**	**318**	*i* P	Pb	**10 47 18.7**	**-0.8**
OCHAL				IAML		10 47 20.9	
	comp=Z,3.3nm,1.0s						
OCHAL				*i* S	Sg	**10 47 32.1**	**+0.1**
CHGR2	**Aguacate**	**1.00**	**57**	eP	Pb	**10 47 18.8**	**-1.6**
CHGR2				eS	Sb	**10 47 32.5**	**-1.0**
PEZE	**Perez Zeledon,**	**1.20**	**326**	*i* P	Pb	**10 47 23.5**	**-0.2**
PEZE				*i* S	Sg	**10 47 40.3**	**+0.5**
PEZE				IAML		10 47 49.2	
	comp=Z,81nm,1.0s						
CDM	**Cerro de Muert**	**1.39**	**327**	*i* P	Pn	**10 47 26.4**	**-0.1**
CDM				*i* S	Sg	**10 47 45.8**	**-0.1**
CDM				IAML		10 47 51.3	
	comp=Z,63nm,1.0s						
RIMA	**Rio Macho**	**1.62**	**328**	*i* P	Pb	**10 47 30.1**	**-0.8**
RIMA				*i* S	Sg	**10 47 52.3**	**-0.9**
RIMA				IAML		10 48 27.5	
	comp=Z,160nm,1.0s						
LCR2	**La Lucha 2**	**1.68**	**324**	*i* P	Pb	**10 47 31.4**	**-0.5**
LCR2				*i* S	Sb	**10 47 53.5**	**+0.5**
LCR2				IAML		10 47 57.7	
	comp=Z,54nm,1.0s						
VTCV	**VTCV, Calle Va**	**1.74**	**336**	*i* P	Pb	**10 47 32.5**	**-0.6**
VTCV				*i* S	Sb	**10 47 55.2**	**+0.2**
VTCV				IAML		10 48 11.7	
	comp=Z,120nm,1.0s						
SAJU	**San Juanillo,**	**3.16**	**302**	*i* P	Pn	**10 47 51.6**	**+1.1**
SAJU				*i* S	Sn	**10 48 29.9**	**+1.8**
SAJU				IAML		10 49 34.1	
	comp=Z,56nm,1.0s						

IDC 09 10:50:37.5±4.3, 20°17S×169°58E, h136km±54km, mb3.0/4, mbtmp3.4/5, Error ellipse: s-maj=157.7km s-min=31.3km az=158.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.48**	**237**	P	Pn	10 51 29.6	-1.2
DZM				S	Sn	10 52 12.8	+0.8
	27nm,0.3s,baz=85,slow=18,SNR=12						
WRA	**Warramunga Arr**	**33.07**	**264**	P	P	10 57 01.1	+0.6
	0.2nm,0.4s,baz=98,slow=8.2,SNR=5.8						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**33.23**	**257**	P	P	10 57 00.9	-0.9
	0.3nm,0.5s,baz=81,slow=8.6,SNR=8.5						
	0.3nm,0.5s						
NVAR	**Mina Aray Bea**	**89.18**	**48**	P	P	11 03 18.9	+0.7
	0.1nm,0.3s,baz=213,slow=4.8,SNR=1.9						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**91.02**	**17**	P	P	11 03 25.5	-0.4
	0.3nm,0.8s,baz=236,slow=4.2,SNR=2.4						
	0.3nm,0.8s						

UPA ***09*** *10:55:28.4±1.1, 8°26N×83°05W, h26km±5km, MD3.4, ML3.3*
UCR ***09*** *10:55:29.8±0.9, 8°31N×82°97W, h15km±9km, MW3.6*
CATAC ***09*** *10:55:31.3±0.5, 8°49N×83°04W, h10km±2km, ML2.9*

ISC 09 10:55:28.9±1.1, 8°36N±0°03×82°95W±0°03, h16km±8km, n37, σ1°902/61, 3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.17**	**155**	eP	Pb	**10 55 33.8**	**+0.2**
PTPM				eS	Sb	**10 55 38.0**	**+1.2**
CDITO	**Canoas**	**0.23**	**20**⇓	*i* P	Pb	**10 55 35.8**	**+1.0**
CDITO				*i* S	Sb	**10 55 42.3**	**+3.7**
CDITO	**Canoas**	**0.23**	**20**	eP	Pb	**10 55 35.7**	**+1.0**
CDITO	**Canoas**	**0.23**	**20**	*i* P	Pb	**10 55 35.7**	**+1.0**
CDITO				*i* S	Sb	**10 55 39.9**	**+1.3**
CDITO				IAML		10 55 42.4	
	comp=Z,2μm,1.0s						
LIMO3	**Limones**	**0.27**	**161**	eP	Pb	**10 55 35.5**	**+0.2**
LIMO3				eS	Sn	**10 55 42.5**	**-1.4**
FITO	**Golfito**	**0.34**	**323**	eP	Pg	**10 55 36.2**	**+0.3**
FITO				eS	Sg	**10 55 41.4**	**+0.7**
EDAD	**Golfito**	**0.36**	**324**	eP	Pg	**10 55 36.7**	**+0.3**
PIRO	**Carate, Puerto**	**0.39**	**277**	eP	Pg	**10 55 37.0**	**+0.3**
PTJ1	**Puerto Jimnez**	**0.39**	**297**	eP	Pg	**10 55 37.4**	**+0.5**
PTJ1				eS	Sb	**10 55 44.6**	**+1.4**
JIME	**Puerto Jimenez**	**0.41**	**296**	eP	Pg	**10 55 38.0**	**+0.7**
MLIR3	**Monte Lirio, C**	**0.45**	**16**⇓	eP	Pn	**10 55 40.2**	**-0.6**
MLIR3				AMP		10 55 40.4	
	comp=Z,2μm,0.2s						
VITO	**San Vito**	**0.46**	**358**	eP	Pn	**10 55 40.0**	**-1.0**
BRU2	**Volcan**	**0.51**	**30**⇓	*i* P	Pn	**10 55 40.9**	**-0.7**
BRU2				eS	Sn	**10 55 50.6**	**+0.5**
BRU2	**Volcan**	**0.51**	**30**	eP	Pn	**10 55 40.9**	**-0.7**
BRU2	**Volcan**	**0.51**	**30**	*i* P	Pn	**10 55 40.8**	**-0.8**
BRU2				*i* S	Sn	**10 55 47.5**	**-2.6**
BRU2				IAML		10 56 12.2	
	comp=Z,690nm,1.0s						
BCO2	**Palmira**	**0.55**	**49**	*i* P	Pn	**10 55 41.7**	**-0.6**
BCO2				eS	Sn	**10 55 51.6**	**+0.4**
PTAR3	**Potrerillos Ar**	**0.56**	**53**	eP	Pn	**10 55 41.8**	**-0.5**
PTAR3				eS	Sn	**10 55 52.5**	**+1.1**
BC3P	**Paso Ancho**	**0.57**	**36**	*i* P	Pn	**10 55 41.9**	**-0.7**
BC3P				*i* S	Sn	**10 55 53.2**	**+1.5**
POTG	**Potrero Grande**	**0.71**	**346**	eP	Pn	**10 55 43.9**	**-0.6**
POTG	**Potrero Grande**	**0.71**	**346**	*i* P	Pg	**10 55 42.6**	**-0.3**
POTG				*i* S	Sg	**10 55 51.5**	**-0.8**
POTG				IAML		10 55 57.3	
	comp=Z,720nm,1.0s						
PLAN	**Los Planes de**	**0.79**	**293**	*i* P	Pb	**10 55 44.3**	**+0.1**
PLAN				*i* S	Sb	**10 55 54.0**	**-0.7**
PLAN				IAML		10 56 04.5	
	comp=Z,1μm,1.0s						
DRK0	**Durika**	**0.95**	**342**	eP	Pn	**10 55 47.3**	**-0.4**
CHGR2	**Aguacate**	**0.98**	**54**	eP	Pg	**10 55 46.9**	**-1.1**
CHGR2				eS	Sn	**10 56 01.7**	**-0.1**
OCHAL	**Ojochal**	**1.01**	**317**	*i* P	Pb	**10 55 47.2**	**-0.8**
OCHAL				IAML		10 55 49.5	
	comp=Z,3.5nm,1.0s						
OCHAL				*i* S	Sb	**10 55 59.5**	**-1.5**
PEZE	**Perez Zeledon,**	**1.25**	**325**	eP	Pb	**10 55 52.0**	**-0.2**
PEZE	**Perez Zeledon,**	**1.25**	**325**	*i* P	Pb	**10 55 52.3**	**+0.1**
PEZE				*i* S	Sb	**10 56 07.3**	**-0.8**
PEZE				IAML		10 56 18.0	
	comp=Z,120nm,1.0s						
BUS1	**Rivas**	**1.43**	**327**	eP	Pb	**10 55 55.2**	**-0.2**
CDM	**Cerro de Muert**	**1.44**	**326**	eP	Pb	**10 55 55.3**	**-0.3**
CDM	**Cerro de Muert**	**1.44**	**326**	*i* P	Pb	**10 55 55.3**	**-0.3**
CDM				*i* S	Sn	**10 56 12.6**	**-0.9**
CDM				IAML		10 56 22.0	
	comp=Z,97nm,1.0s						
**RIM

CNSH smax smax
comp=E,220nm,1.5s
TIY Taiyuan 4.97 8 *e*Pn **Pn 11 01 53.0 0.0**
TIY Sg **Sb 11 03 09.0 +3.8**
TIY smax smax
comp=N,430nm,1.0s
TIY smax smax
comp=E,330nm,1.1s
HNS HongShan 5.26 28 ⇑Pn **Pn 11 01 56.6 -0.3**
HNS Pg **Pb 11 02 13.9 +3.6**
HNS Sn **Sn 11 02 57.6 0.0**
HNS Sg **Sb 11 03 18.3 +4.8**
HNS LR LR
comp=N,1μm,7.1s
HNS LR LR
comp=E,1μm,7.0s
HNS LR LR
comp=Z,710nm,10.8s
TIA Tai'an 5.69 52 Pn **Pn 11 02 03.6 +0.7**
TIA Sg Sb 11 03 35.3 +9.3
TIA smax smax
comp=N,120nm,1.2s
TIA smax smax
comp=E,110nm,1.0s
NJ2 Nanjing 6.17 95 *e*Pn **Pn 11 02 09.6 +0.2**
NJ2 Pg Pb 11 02 31.2 +5.4
NJ2 Sg **Sg 11 03 52.3 -4.0**
NJ2 smax smax
comp=N,440nm,1.1s
NJ2 smax smax
comp=E,230nm,1.1s
CD2 Chengdu 6.94 257 Pn **Pn 11 02 22.0 +1.9**
CD2 Sg Sg 11 04 16.0 -5.0
CD2 smax smax
comp=N,590nm,1.2s
CD2 smax smax
comp=E,420nm,1.0s
LZH Lanzhou 7.22 299 *e*Pn **Pn 11 02 23.9 -0.1**
LZH Sg Sb 11 04 20.0 +10
LZH smax smax
comp=N,590nm,1.0s
LZH smax smax
comp=E,850nm,1.0s
LZH LR LR
comp=N,2μm,9.3s
LZH LR LR
comp=E,1μm,10.5s
LZH LR LR
comp=Z,1μm,12.2s
GYA Guiyang 7.63 216 ⇑Pn **Pn 11 02 31.6 +2.0**
GYA Sn **Sn 11 03 58.4 +2.2**
GYA smax smax
comp=N,69nm,1.4s
GYA smax smax
comp=E,120nm,1.0s
GYA LR LR
comp=N,1μm,9.4s
GYA LR LR
comp=E,1μm,7.4s
GYA LR LR
comp=Z,310nm,5.7s
BTO Baotou 7.92 351 *e*P Pn 11 02 39.2 +5.7
BTO S **Sn 11 04 03.1 0.0**
BTO smax smax
comp=N,110nm,0.8s
BTO smax smax
comp=E,150nm,0.8s
HHC Hu-ho-hao-te 8.05 360 *e*P **Pn 11 02 38.5 +3.1**
HHC S **Sn 11 04 13.0 +6.4**
HHC smax smax
comp=N,85nm,1.0s
HHC smax smax
comp=E,72nm,0.7s
BJT Baijiatuau 8.10 26 Pn Pn 11 02 34.1 -1.9
BJT Baijiatuau 8.10 26 P Pn 11 02 34.1 -1.9
SSE Sheshan 8.31 99 P Pn 11 02 35.8 -3.0
SSE S **Sn 11 04 10.1 -2.6**
SSE pmax pmax
comp=Z,7.0nm,0.8s
SSE pmax pmax
comp=Z,98nm,3.9s
SSE LR LR
comp=N,250nm,11.8s
SSE LR LR
comp=E,440nm,11.6s
PZH PanZhiHua 10.62 236 P **Pn 11 03 11.6 +1.0**
PZH S **Sn 11 05 10.8 +1.1**
PZH pmax pmax
comp=E,20nm,0.6s
PZH pmax pmax
comp=E,90nm,5.7s
PZH LR LR
comp=E,540nm,8.7s
PZH LR LR
comp=E,530nm,9.0s
PZH LR LR
comp=E,420nm,12.5s
GTA Gaotai 11.61 308 *e*P Pn 11 03 22.4 -1.7
GTA pmax pmax
comp=E,5.0nm,1.4s
GTA LR LR
comp=E,340nm,13.5s
GTA LR LR
comp=E,240nm,13.4s
GTA LR LR
comp=E,220nm,13.1s
XLT XiLinHaoTe 11.64 16 *e*P Pn 11 03 18.1 -6.4
XLT pP 11 03 22.5
XLT sP 11 03 25.0
XLT PP **PnPn 11 03 26.4 -6.0**
XLT S Sn 11 05 23.3 -11
XLT sS 11 05 30.1
XLT SS **SnSn 11 05 42.8 -3.9**
XLT pmax pmax
comp=Z,3.0nm,0.9s
XLT pmax pmax
comp=Z,74nm,6.4s
XLT LR LR
comp=N,24nm,6.4s
XLT LR LR
comp=E,560nm,8.1s
XLT LR LR
comp=Z,240nm,11.9s
TPUB Ta-pu 12.35 138 Pn **Pn 11 03 32.2 -2.0**
YULB Yu-li 12.66 135 Pn **Pn 11 03 37.1 -1.4**
SNY Shenyang 13.11 43 ⇑P **Pn 11 03 47.9 +3.4**
SNY S **Sn 11 06 17.2 +6.8**
SNY pmax pmax
comp=Z,11nm,1.5s
SNY pmax pmax
comp=Z,50nm,3.5s
SNY LR LR
comp=Z,120nm,8.2s
SNY LR LR
comp=Z,280nm,10.1s
SNY LR LR
comp=Z,270nm,11.5s
TJN Taejon 13.47 70 *i*P Pn 11 03 55.0 +5.6
QIZ Qiongzhong 13.79 187 P **Pn 11 03 53.7 -0.1**
QIZ S **Sn 11 06 29.0 +1.9**
QIZ LR LR
comp=Z,210nm,5.1s
QIZ LR LR
comp=Z,340nm,10.7s
QIZ LR LR
comp=Z,160nm,9.7s
KSAR Wonju Array Be 14.11 66 Pn **Pn 11 03 56.8 -1.3**
KSAR Wonju Array Be 14.11 66 P **Pn 11 03 56.8 -1.3**
KS19 Wonju Array Si 14.11 66 Pn **Pn 11 03 56.5 -1.7**
KSRS Korea Array 14.14 66 *e*P **Pn 11 04 01.6 +3.0**
KSRS Korea Array 14.14 66 Pn **Pn 11 03 57.3 -1.2**
comp=Z,0.1nm,0.3s,baz=238,slow=11,SNR=2.8
KSRS Lg Lg 11 08 03.8
comp=Z,0.1nm,0.3s,baz=170,slow=27,SNR=2.7
comp=Z,2.6nm,1.0s
CN2 Changchun 15.44 41 *e*P **Pn 11 04 21.6 +5.5**
CN2 *e*S **Sn 11 07 12.7 +5.6**
CN2 *es*S S 11 07 18.1 -5.1
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,170nm,12.0s
CN2 LR LR
comp=Z,100nm,12.0s
ULN Ulaanbaatar 15.46 348 Pn **Pn 11 04 14.9 -1.6**
ULN Ulaanbaatar 15.46 348 *ce*P **Pn 11 04 14.3 -2.2**
ULN pmax pmax
comp=Z,9.0nm,2.5s
SONM Songino Array 15.55 347 Pn **Pn 11 04 15.9 -1.7**
SONM Songino Array 15.55 347 P **Pn 11 04 15.9 -1.7**
SONM pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 15.55 347 Pn **Pn 11 04 15.7 -2.0**
baz=165,slow=12,SNR=7.4
SONM Sn **Sn 11 07 14.0 +4.0**
comp=Z,0.2nm,0.3s,baz=145,slow=25,SNR=1.2
SONM Lg Lg 11 08 42.0
comp=Z,0.1nm,0.3s,baz=162,slow=29,SNR=3.0
comp=Z,1.5nm,0.9s
JOW Kunigami 15.62 108 LR LR 11 10 52.3
comp=Z,174nm,19.0s,baz=136,slow=39
JNU Nakatsue 16.18 84 Pn **Pn 11 04 24.0 -1.8**
JNU Nakatsue 16.18 84 LR LR 11 11 03.1
comp=Z,124nm,20.6s,baz=312,slow=39
BNX BinXian 17.76 39 ⇑P **Pn 11 04 45.6 0.0**
BNX pmax pmax
comp=Z,6.0nm,1.3s
BNX pmax pmax
comp=Z,110nm,7.1s
LSA Lhasa 17.77 265 Pn **Pn 11 04 45.5 -0.7**
LSA Lhasa 17.77 265 P **Pn 11 04 45.5 -0.7**
LSA pmax pmax
comp=Z,13nm,0.8s
CHTO Chiang Mai 17.96 222 **Pn 11 04 48.2 0.0**
CHTO Chiang Mai 17.96 222 P **Pn 11 04 48.2 0.0**
CHTO pmax pmax
comp=Z,4.0nm,0.8s
PSTR Posyet 18.07 51 *i*P **Pn 11 04 51.3 +2.0**
CMAR Chiang Mai Arr 18.25 222 Pn **Pn 11 04 49.6 -2.2**
CMAR Chiang Mai Arr 18.25 222 *e*P **Pn 11 04 54.1 +2.4**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 18.25 222 P **Pn 11 04 52.6 +0.9**
comp=Z,1.8nm,0.6s,baz=27,slow=9.3,SNR=15
CMAR LR LR 11 12 44.9
comp=Z,75nm,18.9s,baz=45,slow=40
MSHR Mys Shultsa 18.27 52 *i*P **P 11 04 56.5 +4.6**
MSHR pmax pmax
comp=Z,4.0nm,0.1s
MDJ Mudanjiang 18.30 45 P Pn 11 04 39.6 -13
MDJ pP P 11 04 42.4 -10
MDJ S **Sn 11 08 14.7 -1.8**
MDJ sS S 11 08 19.1 -2.5
MDJ SS **SnSn 11 08 31.2 +1.0**
MDJ ScP ScP 11 12 37.2 -22
MDJ PcS PcS 11 12 40.6 -20
MDJ Mudanjiang 18.30 45 **Pn 11 04 51.1 -1.1**
ZAK Zakamensk 18.64 343 *e*P **P 11 04 55.6 -0.5**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
JMN Monobe 18.65 81 P **P 11 04 55.9 -0.3**
USA0B Ussuriysk Arra 19.55 48 *i*P **P 11 05 07.3 +1.3**
USRK Ussuriysk Ar. 19.55 48 P **P 11 05 06.0 +0.1**
USRK Ussuriysk Ar. 19.55 48 P **P 11 05 06.1 +0.1**
USRK Ussuriysk Ar. 19.55 48 P **P 11 05 04.9 -1.1**
comp=Z,0.1nm,0.3s,baz=260,slow=8.6,SNR=2.5
comp=Z,3.3nm,1.0s
MOY Mondy 20.41 341 *e*P **P 11 05 18.5 +3.1**
MOY pmax pmax
comp=Z,22nm,1.3s
INU Inuyama 21.19 76 P **P 11 05 21.9 -2.0**
JGF Kuroka 21.46 75 P **P 11 05 26.1 -0.8**
WMQ Urumqi 21.69 307 *e*P **P 11 05 34.2 +4.9**
WMQ sP sP 11 05 43.6 +10
WMQ pmax pmax
comp=Z,14nm,1.3s
MJAR Matsushiro Arr 22.17 73 P **P 11 05 34.9 +0.4**
comp=Z,3.1nm,0.8s,baz=265,slow=8.7,SNR=9.0
MJAR LR LR 11 14 35.1
comp=Z,102nm,19.0s,baz=300,slow=38
comp=Z,3.1nm,0.8s
MJA0 Matsu Arr-Jizo 22.20 73 *e*P **P 11 05 38.0 +3.2**
MJA0 pmax pmax
comp=Z,4.0nm,0.8s
KLR Kul'dur 22.27 37 *i*P **P 11 05 33.8 -1.6**
KLR pmax pmax
comp=Z,2.0nm,1.0s
KLR Kul'dur 22.27 37 LR LR 11 14 03.1
comp=Z,54nm,20.3s,baz=240,slow=36
JHJ Hachijo jima 2 23.62 81 LR LR 11 15 29.0
comp=Z,67nm,20.4s,baz=270,slow=38
ZEA Zeya 23.74 23 *e*P **P 11 05 51.8 +1.3**
ZEA pmax pmax
comp=N,10.0nm,1.3s
ZEA pmax pmax
comp=E,10.0nm,1.3s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
DGZ Jazzator, Alta 24.66 320 *i*P **P 11 05 59.3 0.0**
DGZ pmax pmax
comp=Z,13nm,1.3s
MK31 Makanchi Array 26.34 311 P **P 11 06 13.6 -0.8**
MK31 Makanchi Array 26.34 311 *ce*P **P 11 06 13.2 -1.2**
MKAR Makanchi Array 26.34 311 P **P 11 06 13.9 -0.5**
MKAR Makanchi Array 26.34 311 P **P 11 06 14.2 -0.2**
comp=Z,3.5nm,0.7s,baz=110,slow=8.7,SNR=30
MKAR PcP **PcP 11 09 40.1 0.0**
comp=Z,0.4nm,0.6s,baz=94,slow=3.6,SNR=4.1
MKAR LR LR 11 16 44.1
comp=Z,123nm,20.7s,baz=326,slow=37
comp=Z,3.5nm,0.7s
MAKZ Makanchi 26.55 311 P **P 11 06 15.9 -0.3**
MAKZ Makanchi 26.55 311 P **P 11 06 15.9 -0.3**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
ERM Erimo 26.58 61 P **P 11 06 14.8 -1.7**
ERM Erimo 26.58 61 P **P 11 06 14.8 -1.7**
ERM pmax pmax
comp=Z,68nm,1.4s
ASAJ Asahikawa 26.62 56 P **P 11 06 16.0 -0.9**
ASAJ pmax pmax
comp=Z,23nm,1.3s
ASAJ Asahikawa 26.62 56 LR LR 11 16 57.4
comp=Z,70nm,18.2s,baz=348,slow=37
JKA Kamikawa-asahi 26.63 56 P **P 11 06 16.0 -0.9**
JKA IAmb IAmb 11 06 33.8
comp=Z,23nm,1.3s
ZAA0 Zalesovo Array 28.46 326 P **P 11 06 33.0 -0.3**
ZALV Zalesovo Beam 28.46 326 P **P 11 06 33.2 0.0**
ZALV Zalesovo Beam 28.46 326 *e*P **P 11 06 34.0 +0.7**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 28.46 326 P **P 11 06 32.5 -0.7**
comp=Z,2.0nm,0.4s,baz=119,slow=9.0,SNR=18
ZALV LR LR 11 18 44.4
comp=Z,122nm,18.9s,baz=340,slow=38
comp=Z,2.0nm,0.4s
KSH Kashi 29.42 293 P P 11 06 47.7 +5.6
KSH pmax pmax
comp=Z,9.0nm,0.4s
KURK Kurchatov 30.10 316 P **P 11 06 46.7 -1.1**
KURK Kurchatov 30.10 316 P **P 11 06 46.7 -1.1**
KURK pmax pmax
comp=Z,3.0nm,1.2s
KURBB Kurchatov Arra 30.12 316 P **P 11 06 47.4 -0.6**
comp=Z,0.5nm,0.4s,baz=113,slow=9.7,SNR=5.9
KURBB PcP **PcP 11 09 48.9 -0.4**
comp=Z,0.7nm,0.5s,baz=114,slow=2.4,SNR=7.7
comp=Z,0.5nm,0.4s
AAK Ala-Archa 30.76 299 LR LR 11 21 08.9
comp=Z,113nm,18.9s,baz=94,slow=40
YAK Yakutsk 31.49 16 *i*P **P 11 06 59.8 -0.1**
YAK pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 33.72 300 P **P 11 07 20.2 +0.5**
KKAR Karatay Array 33.72 300 P **P 11 07 20.2 +0.5**
SIMJ Simiganj 34.85 292 P **P 11 07 29.6 -0.1**
BVAR Borovoye Array 35.69 317 P **P 11 07 36.1 -0.5**
comp=Z,0.9nm,0.4s,baz=113,slow=9.7,SNR=5.7
BVAR PcP **PcP 11 10 04.2 -0.5**
comp=Z,1.8nm,0.7s,baz=90,slow=4.4,SNR=5.7
comp=Z,0.9nm,0.4s
MA2 Magadan 37.22 32 LR LR 11 23 52.5
comp=Z,47nm,18.9s,baz=306,slow=38
PETK Petropavlovsk- 38.54 44 LR LR 11 26 06.4
comp=Z,54nm,18.5s,baz=251,slow=40
NRIK Noril'sk 39.03 347 P **P 11 08 04.3 -0.5**
NRIK Noril'sk 39.03 347 *e*P **P 11 08 05.7 +1.0**
NRIK pmax pmax
comp=Z,4.0nm,0.8s
NRIK Noril'sk 39.03 347 P **P 11 08 04.2 -0.5**
comp=Z,3.9nm,0.8s,baz=142,slow=6.2,SNR=6.8
comp=Z,3.9nm,0.8s
SEY Seymchan 39.56 28 *ce*P **P 11 08 09.4 +0.2**
SEY pmax pmax
comp=Z,16nm,2.5s
TIXI Tiksi 40.01 8 P **P 11 08 11.9 -1.0**
TIXI Tiksi 40.01 8 P **P 11 08 11.9 -1.0**
TIXI pmax pmax
comp=Z,9.0nm,1.2s
FAKI Fak Fak 40.53 147 P P 11 08 15.6 -2.2
FAKI IAmb IAmb 11 08 40.7
comp=Z,17nm,0.9s
HRA Herat 40.83 286 P P 11 08 19.0 -1.5
JAGI Jajag, Banyuwa 41.09 176 P **P 11 08 21.7 -0.7**
JAGI IAmb IAmb 11 08 42.9
comp=Z,36nm,1.3s
ABKAR Akbulak array 41.46 309 P **P 11 08 25.8 +0.7**
ARU Arti 43.17 320 P **P 11 08 38.9 -0.1**
ARU Arti 43.17 320 *c*P **P 11 08 38.8 -0.1**
ARU S **S 11 15 04.3 -1.0**
ARU SS **SS 11 18 14.5 -3.2**
ARU pmax pmax
comp=Z,28nm,2.2s
GEYT Alibeck 43.44 292 P P 11 08 40.2 -1.2
GEYT Alibeck 43.44 292 P P 11 08 40.2 -1.2
GEYT pmax pmax
comp=Z,6.0nm,0.8s
GEYT Alibeck 43.44 292 P **P 11 08 42.2 +0.7**
comp=Z,3.8nm,0.7s,baz=85,slow=16,SNR=6.0
comp=Z,3.8nm,0.7s
GYA0B ALIBECK ARRAY 43.44 292 P P 11 08 40.1 -1.4
BILL Bilibino 46.96 25 P **P 11 09 08.2 -0.7**
BILL IAmb IAmb 11 09 20.6
comp=Z,7.6nm,1.4s
BILL Bilibino 46.96 25 P **P 11 09 09.9 +1.0**
SHEM Shemya Is, Ala 48.36 46 LR LR 11 29 10.9
comp=Z,31nm,22.0s,baz=174,slow=36
GNI Garni 53.15 298 LR LR 11 36 59.6
comp=Z,67nm,19.1s,baz=347,slow=41
PSA00 Pilbara Seismi 54.62 171 P **P 11 10 06.8 -0.3**
DGAR Diego Garcia 54.64 230 P **P 11 10 07.2 -0.2**
DGAR Diego Garcia 54.64 230 P **P 11 10 07.2 -0.2**
DGAR pmax pmax
comp=Z,38nm,0.9s
WB0 Warramunga Arr 56.61 154 P **P 11 10 20.4 -1.1**
WB0 IAmb IAmb 11 10 43.3
comp=Z,6.8nm,1.4s
WRAB Tennant Creek 56.75 154 P **P 11 10 21.7 -0.7**
WRAB IAmb IAmb 11 10 28.9
comp=Z,6.0nm,1.2s
WRAB Tennant Creek 56.75 154 P **P 11 10 21.7 -0.7**
WRAB pmax pmax
comp=Z,6.0nm,1.2s
WRA Warramunga Arr 56.75 154 P **P 11 10 22.0 -0.5**
WRA Warramunga Arr 56.75 154 P **P 11 10 22.0 -0.5**
WRA Warramunga Arr 56.75 154 P **P 11 10 22.6 +0.1**
comp=Z,2.0nm,1.0s,baz=346,slow=8.0,SNR=8.7
comp=Z,2.0nm,1.0s
WB2 Warramunga Arr 56.76 154 P **P 11 10 22.3 -0.2**
TNA Tin City 56.77 29 P **P 11 10 22.4 +0.4**
baz=277
WR0 Warramunga Arr 56.84 154 P **P 11 10 23.2 +0.1**
WR0 IAmb IAmb 11 10 41.9
comp=Z,9.9nm,1.5s
F14K Arctic Creek 57.44 29 P **P 11 10 26.9 +0.1**
baz=278
C16K Lisburne Hills 57.45 26 P **P 11 10 27.0 +0.1**
C16K Lisburne Hills 57.45 26 P **P 11 10 27.5 +0.6**
baz=277
F15K North Star Dit 58.09 29 P **P 11 10 31.5 +0.1**
F15K IAmb IAmb 11 10 41.7
comp=Z,8.2nm,1.4s
F15K North Star Dit 58.09 29 P **P 11 10 32.0 +0.5**
baz=279
RAYN Ar Rayn 58.20 279 P **P 11 10 32.5 -0.4**
RAYN Ar Rayn 58.20 279 P **P 11 10 32.5 -0.4**
RAYN pmax pmax
comp=Z,6.0nm,1.4s
C17K DeLong Mountai 58.21 26 P **P 11 10 33.4 +1.2**
baz=279
ARCES ARCESS Array B 58.36 336 P **P 11 10 32.4 -0.9**
comp=Z,13nm,1.2s,baz=83,slow=9.2,SNR=1.9
comp=Z,13nm,1.2s
D17K Noatak River 58.37 27 P **P 11 10 33.6 +0.2**
baz=280
G15K Nuiqsut 58.47 30 P **P 11 10 34.2 +0.2**
baz=280
B18K Kokolik River 58.56 25 P **P 11 10 35.3 +0.6**
baz=280,SNR=9.4
C18K Utukok River 58.90 25 P **P 11 10 37.0 -0.2**
C18K IAmb IAmb 11 10 38.2
comp=Z,7.3nm,1.1s
C18K Utukok River 58.90 25 P **P 11 10 36.9 -0.2**
baz=281
E17K Hotham Inlet 58.96 27 P **P 11 10 37.8 +0.3**
baz=281
G16K Koyuk River 59.09 29 P **P 11 10 38.1 -0.2**
G16K IAmb IAmb 11 10 40.6
comp=Z,12nm,1.1s
G16K Koyuk River 59.09 29 P **P 11 10 38.7 +0.3**
baz=282
SPITS Spitsbergen Ar 59.24 346 P **P 11 10 38.9 -0.4**
SPITS pmax pmax
comp=Z,84nm,1.5s
SPITS Spitsbergen Ar 59.24 346 P P 11 10 37.2 -2.1
comp=Z,12nm,1.0s,baz=41,slow=2.7,SNR=1.9
comp=Z,12nm,1.0s
H16K Elim 59.29 30 P **P 11 10 40.3 +0.5**
baz=282
F17K Baldwin Pennin 59.32 28 P **P 11 10 40.7 +0.8**
baz=282
E18K Tukpahlearik C 59.36 27 P **P 11 10 41.2 +1.0**
baz=282
C19K Lookout Ridge 59.38 25 P **P 11 10 40.4 0.0**
C19K IAmb IAmb 11 10 41.8
comp=Z,3.7nm,0.8s
C19K Lookout Ridge 59.38 25 P **P 11 10 40.7 +0.3**
baz=282
G17K Kiwalik Mounta 59.76 29 P **P 11 10 43.9 +0.9**
baz=283
L14K Kuka Creek 59.83 34 P **P 11 10 44.2 +0.7**
baz=284
A21K Barrow 59.89 22 P **P 11 10 44.5 +0.7**
baz=283
F18K Selawik 59.91 27 P **P 11 10 44.3 +0.4**
baz=283
AS31 Alice Springs 60.03 156 P **P 11 10 45.5 +0.2**
ASAR Alice Springs 60.03 156 P **P 11 10 45.7 +0.3**
comp=Z,2.1nm,0.8s,baz=333,slow=6.2,SNR=21
comp=Z,2.1nm,0.8s
D19K Kuna River 60.04 25 P **P 11 10 45.3 +0.3**
D19K Kuna River 60.04 25 P **P 11 10 45.5 +0.5**
baz=284,SNR=9.0
I17K Unalakleet 60.12 31 P **P 11 10 45.8 +0.3**
baz=284
K15K Wolf Creek Mou 60.14 33 P **P 11 10 46.0 +0.3**
K15K Wolf Creek Mou 60.14 33 P **P 11 10 46.5 +0.8**
baz=284
H17K Granite Mounta 60.19 29 P **P 11 10 46.9 +0.9**
baz=284
J16K Anvik River 60.31 31 P **P 11 10 47.9 +1.1**
baz=284
M14K Bethel 60.32 34 P **P 11 10 47.3 +0.4**
baz=285
G18K Tagagawik 60.47 28 P **P 11 10 48.7 +0.8**
G18K IAmb IAmb 11 10 49.0
comp=Z,6.5nm,1.1s
G18K Tagagawik 60.47 28 P **P 11 10 48.0 +0.1**
baz=284
D20K Etivluk River 60.52 25 P **P 11 10 48.6 +0.3**
baz=285
F19K Shaleruckik Mo 60.57 27 P **P 11 10 49.0 +0.4**
F19K IAmb IAmb 11 10 49.5
comp=Z,10nm,1.0s
F19K Shaleruckik Mo 60.57 27 P **P 11 10 48.9 +0.4**
baz=285
E19K Redstone River 60.62 26 P **P 11 10 49.6 +0.7**
E19K IAmb IAmb 11 10 50.5
comp=Z,3.9nm,0.9s
E19K Redstone River 60.62 26 P **P 11 10 49.2 +0.3**
baz=285
H18K Honhosa River 60.78 29 P **P 11 10 51.0 +0.9**
H18K IAmb IAmb 11 10 51.4
comp=Z,9.9nm,1.1s
H18K Honhosa River 60.78 29 P **P 11 10 50.1 +0.1**
baz=285
E20K Nigu River 60.79 25 P **P 11 10 50.4 +0.3**

baz=285
B21K Ikpikpuk River 60.97 24 P P 11 10 51.5 +0.2
B21K IAmb IAmb 11 10 52.3
comp=Z,7.0nm,1.1s
B21K Ikpikpuk River 60.97 24 P P 11 10 51.2 0.0
baz=286
G19K Purcell Mounta 61.02 28 P P 11 10 51.5 -0.1
G19K IAmb IAmb 11 10 53.3
comp=Z,6.3nm,1.2s
G19K Purcell Mounta 61.02 28 P P 11 10 51.6 -0.1
baz=286
C21K Knifeblade Rid 61.04 24 P P 11 10 52.3 +0.6
baz=286
F20K Avaraart Lake 61.29 27 P P 11 10 53.6 +0.2
baz=286
N15K Kwethluk River 61.37 35 P P 11 10 54.5 +0.4
baz=286
BR131 Keskin Array S 61.42 301 P P 11 10 55.7 +0.7
BR131 Keskin Array S 61.42 301 P P 11 10 55.7 +0.7
BR131 pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 61.42 301 P P 11 10 55.2 +0.3
comp=Z,2.2nm,1.1s,baz=95,slow=5.6,SNR=8.3
comp=Z,2.2nm,1.1s
H19K Roundabout Mou 61.45 28 P P 11 10 55.5 +1.0
H19K Roundabout Mou 61.45 28 P P 11 10 55.1 +0.6
baz=287
K17K Iditarod 61.47 32 P P 11 10 55.9 +1.2
K17K Iditarod 61.47 32 P P 11 10 55.3 +0.5
baz=286
GCSA Galena City Sc 61.50 29 P P 11 10 54.9 +0.1
baz=287
E21K Killik River 61.53 25 P P 11 10 55.4 +0.3
E21K IAmb IAmb 11 10 55.9
comp=Z,12nm,1.4s
L17K Donlin 61.64 32 P P 11 10 55.7 -0.1
baz=287
D22K Ayikyak River 61.85 24 P P 11 10 57.5 +0.3
D22K IAmb IAmb 11 10 58.4
comp=Z,4.6nm,0.9s
D22K Ayikyak River 61.85 24 P P 11 10 57.5 +0.3
baz=288
J18K Innoko River 61.94 31 P P 11 10 59.1 +1.2
J18K IAmb IAmb 11 11 04.9
comp=Z,4.8nm,1.2s
J18K Innoko River 61.94 31 P P 11 10 58.3 +0.4
baz=287
F21K Alatna River 62.08 26 P P 11 10 59.3 +0.6
F21K IAmb IAmb 11 10 59.8
comp=Z,6.6nm,1.1s
F21K Alatna River 62.08 26 P P 11 10 59.4 +0.6
baz=288
H20K Anotleneega Mo 62.08 28 P P 11 10 59.5 +0.7
baz=288
J19K Poorman 62.24 30 P P 11 11 00.4 +0.5
J19K Poorman 62.24 30 P P 11 11 01.0 +1.1
baz=288
M17K Holitna River 62.25 33 P P 11 11 01.6 +1.6
M17K Holitna River 62.25 33 P P 11 11 01.1 +1.1
baz=288
G21K Allakaket 62.29 27 P P 11 11 01.1 +0.9
G21K IAmb IAmb 11 11 01.5
comp=Z,6.6nm,0.9s
G21K Allakaket 62.29 27 P P 11 11 01.4 +1.2
baz=288,SNR=6.1
IMAR Indian Mountai 62.37 27 P P 11 11 01.0 +0.3
E22K Anaktuvuk Pass 62.39 25 P P 11 11 00.5 -0.4
E22K IAmb IAmb 11 11 01.8
comp=Z,9.1nm,1.1s
E22K Anaktuvuk Pass 62.39 25 P P 11 11 01.4 +0.5
baz=289
TTA Tatalina 62.41 31 P P 11 11 01.7 +0.5
baz=288
J20K Nowinta River 62.80 29 P P 11 11 04.7 +1.1
J20K IAmb IAmb 11 11 05.8
comp=Z,9.3nm,0.9s
J20K Nowinta River 62.80 29 P P 11 11 04.4 +0.8
baz=289
H21K Melozitna Rive 62.84 28 P P 11 11 04.5 +0.5
H21K Melozitna Rive 62.84 28 P P 11 11 04.6 +0.7
baz=290
C24K Franklin Bluff 62.90 23 P P 11 11 03.9 -0.3
baz=291
G22K Bettles 62.91 26 P P 11 11 04.4 +0.1
baz=290
M18K Stony River 62.95 33 P P 11 11 05.7 +1.0
baz=289
TOLK Toolik Lake Re 62.99 24 P P 11 11 05.4 +0.5
baz=291
D24K Happy Valley 63.06 23 P P 11 11 05.6 +0.4
D24K IAmb IAmb 11 11 06.0
comp=Z,9.0nm,1.1s
D24K Happy Valley 63.06 23 P P 11 11 05.7 +0.4
baz=291
K20K Telida 63.10 30 P P 11 11 07.2 +1.5
K20K IAmb IAmb 11 11 08.0
comp=Z,4.0nm,0.9s
K20K Telida 63.10 30 P P 11 11 06.6 +0.9
baz=290
L19K White Mountain 63.16 32 P P 11 11 06.6 +0.5
baz=290
E23K Chandalar 63.19 25 P P 11 11 06.6 +0.3
baz=291
N18K Kilae Creek 63.19 33 P P 11 11 07.3 +0.9
baz=289
COLD Coldfoot 63.28 26 P P 11 11 07.4 +0.7
baz=291,SNR=7.9
H22K Ishtalitna Cre 63.32 27 P P 11 11 08.0 +0.9
baz=291
I21K Tanana 63.33 28 P P 11 11 08.1 +1.0
baz=290
M19K Big River Lodg 63.46 32 P P 11 11 09.3 +1.2
baz=290
L20K Farewell, AK 63.49 31 P P 11 11 09.4 +1.2
baz=290
G23K Bananza Creek 63.53 26 P P 11 11 08.8 +0.3
G23K IAmb IAmb 11 11 09.3
comp=Z,5.4nm,1.0s
G23K Bananza Creek 63.53 26 P P 11 11 09.0 +0.5
baz=291
E24K Your Creek 63.58 24 P P 11 11 09.2 +0.4
E24K IAmb IAmb 11 11 09.9
comp=Z,6.6nm,0.9s
E24K Your Creek 63.58 24 P P 11 11 09.3 +0.4
baz=292
CHUM Lake Minchumin 63.66 29 P P 11 11 10.1 +0.8
baz=291
O18K Koktuh Hills 63.80 34 P P 11 11 11.5 +1.1
baz=290
N19K Bonanza Creek 63.80 33 P P 11 11 12.2 +1.8
N19K Bonanza Creek 63.80 33 P P 11 11 11.5 +1.1
baz=290
D25K Kavik River 63.80 23 P P 11 11 10.8 +0.5
baz=293
MLY Manley 63.88 28 P P 11 11 11.9 +1.0
MLY IAmb IAmb 11 11 12.7
comp=Z,9.9nm,1.0s
MLY Manley 63.88 28 P P 11 11 11.6 +0.7
baz=292,SNR=8.2
CAST Castle Rocks 63.92 30 P P 11 11 12.3 +1.2
CAST IAmb IAmb 11 11 13.0
comp=Z,4.9nm,0.8s
CAST Castle Rocks 63.92 30 P P 11 11 12.1 +1.0
baz=291
P18K Big Mountain, 63.95 35 P P 11 11 11.7 +0.3
baz=291
F24K Squaw Lake 64.00 25 P P 11 11 11.1 -0.5
F24K Squaw Lake 64.00 25 P P 11 11 12.1 +0.5
baz=293
M20K Styx River 64.03 32 P P 11 11 12.3 +0.4
M20K IAmb IAmb 11 11 14.5
comp=Z,3.7nm,0.9s
M20K Styx River 64.03 32 P P 11 11 13.2 +1.3
baz=291
PPLA Purkeypile 64.07 30 P P 11 11 12.7 +0.5
baz=291
EIL Elat 64.25 290 LR LR 11 42 05.4
comp=Z,36nm,20.2s,baz=20,slow=39
KTH Kantishna Hill 64.36 30 P P 11 11 14.9 +0.8
KTH IAmb IAmb 11 11 16.5
comp=Z,11nm,1.0s
I23K Minto, Yukon-K 64.37 28 P P 11 11 14.9 +0.9
I23K IAmb IAmb 11 11 15.8
comp=Z,7.1nm,1.1s
I23K Minto, Yukon-K 64.37 28 P P 11 11 14.9 +0.9
baz=293
G24K Hadweenzic Riv 64.47 26 P P 11 11 15.1 +0.4
G24K IAmb IAmb 11 11 15.9
comp=Z,2.7nm,0.8s
G24K Hadweenzic Riv 64.47 26 P P 11 11 14.9 +0.3
baz=294
E25K Arctic Village 64.56 24 P P 11 11 14.6 -0.6
E25K Arctic Village 64.56 24 P P 11 11 15.8 +0.5
baz=294
TRF Thorofare Moun 64.66 29 P P 11 11 16.1 -0.1
TRF IAmb IAmb 11 11 43.8
comp=Z,9.1nm,1.4s
TRF Thorofare Moun 64.66 29 P P 11 11 16.7 +0.6
baz=293
H24K Noodor Dome 64.67 27 P P 11 11 16.5 +0.5
H24K IAmb IAmb 11 11 22.2
comp=Z,4.0nm,0.9s
H24K Noodor Dome 64.67 27 P P 11 11 16.7 +0.6
baz=294
N20K Mount Spurr 64.69 32 P P 11 11 17.5 +1.3
baz=292
NEA2 Nenana 64.70 28 P P 11 11 17.3 +1.1
NEA2 Nenana 64.70 28 P P 11 11 17.7 +1.5
baz=293
BWN Browne 64.71 29 P P 11 11 17.8 +1.6
F25K Christian Rive 64.76 24 P P 11 11 17.4 +0.8
baz=295
MDM Murphy Dome 64.89 28 P P 11 11 17.9 +0.5
COLA College 65.07 28 P P 11 11 19.1 +0.6
COLA College 65.07 28 P P 11 11 19.0 +0.5
baz=294
COLA College 65.07 28 P P 11 11 19.1 +0.6
COLA pmax pmax
comp=Z,18nm,1.0s
CUT Chulitna 65.07 31 P P 11 11 19.2 +0.6
CUT Chulitna 65.07 31 P P 11 11 19.1 +0.5
baz=293
MCK McKinley 65.10 29 P P 11 11 19.6 +0.8
MCK IAmb IAmb 11 11 21.7
comp=Z,5.0nm,0.9s
MCK McKinley 65.10 29 P P 11 11 19.2 +0.4
baz=294
MCK McKinley 65.10 29 P P 11 11 19.6 +0.8
MCK pmax pmax
comp=Z,5.0nm,0.9s
POKR Poker Plat Res 65.13 27 P P 11 11 19.1 +0.1
POKR Poker Plat Res 65.13 27 P P 11 11 19.5 +0.6
baz=294,SNR=7.7
WRH Wood River Hil 65.14 28 P P 11 11 18.8 -0.3
WRH IAmb IAmb 11 11 20.9
comp=Z,4.9nm,1.0s
KWP Kalwaria Pacla 65.17 314 P P 11 11 21.6 +2.1
KWP IAmb IAmb 11 11 42.0
comp=Z,9.6nm,1.2s
KWP Kalwaria Pacla 65.17 314 P P 11 11 21.6 +2.1
KWP pmax pmax
comp=Z,10.0nm,1.2s
CCB Clear Creek Bu 65.18 28 P P 11 11 19.5 +0.3
CCB IAmb IAmb 11 11 20.0
comp=Z,3.1nm,0.8s
BMAR Burnt Mountain 65.20 24 P P 11 11 19.8 +0.4
F26K Sheenjek River 65.23 24 P P 11 11 20.3 +0.7
baz=296
SUA Susitna One 65.24 32 P P 11 11 20.4 +0.6
SUA Susitna One 65.24 32 P P 11 11 20.1 +0.3
baz=293
RND Reindeer 65.27 29 P P 11 11 19.8 -0.2
RND Reindeer 65.27 29 P P 11 11 19.8 -0.2
RND pmax pmax
comp=Z,14nm,1.1s
CAPN Captain Cook N 65.33 32 P P 11 11 21.1 +0.9
baz=293
FYU Fort Yukon 65.34 25 P P 11 11 21.4 +1.2
IL31 65.49 27 P P 11 11 20.6 -0.6
IL31 IAmb IAmb 11 11 21.5
comp=Z,7.3nm,1.3s
ILAR Eielson Array 65.49 27 P P 11 11 20.6 -0.7
comp=Z,1.5nm,0.8s,baz=284,slow=5.1,SNR=20
comp=Z,1.5nm,0.8s
HDA Harding Lake 65.62 28 P P 11 11 21.2 -1.0
HDA IAmb IAmb 11 11 21.8
comp=Z,11nm,1.4s
HDA Harding Lake 65.62 28 P P 11 11 22.4 +0.2
baz=295
WAT1 Susitna Watana 65.63 30 P P 11 11 22.6 +0.4
baz=294
G26K Porcupine Rive 65.69 25 P P 11 11 23.3 +0.8
baz=297
PRP Porcupine Dome 65.69 26 P P 11 11 23.3 +0.6
PRP Porcupine Dome 65.69 26 P P 11 11 23.4 +0.6
baz=296,SNR=16
OHAK Old Harbor 65.71 36 P P 11 11 22.7 0.0
KDAK Kodiak Island 65.83 36 P P 11 11 24.3 +0.7
KDAK Kodiak Island 65.83 36 P P 11 11 24.3 +0.7
KDAK pmax pmax
comp=Z,31nm,1.3s
KDAK Kodiak Island 65.83 36 P P 11 11 23.9 +0.4
comp=Z,4.0nm,0.5s,baz=270,slow=5.0,SNR=7.6
comp=Z,4.0nm,0.5s
RC01 Rabbit Creek A 65.83 32 P P 11 11 24.2 +0.6
baz=294
PMR Palmer 65.89 31 P P 11 11 24.0 +0.1
PMR IAmb IAmb 11 11 24.9
comp=Z,6.6nm,0.9s
PMR Palmer 65.89 31 P P 11 11 24.5 +0.6
baz=294
PMR Palmer 65.89 31 P P 11 11 24.0 +0.1
PMR pmax pmax
comp=Z,7.0nm,0.9s
HFS Hagfors 65.89 327 P P 11 11 22.7 -1.2
comp=Z,4.3nm,0.9s,baz=81,slow=9.2,SNR=13
comp=Z,4.3nm,0.9s
DHY Denali Highway 66.01 29 P P 11 11 24.8 -0.1
DHY IAmb IAmb 11 11 25.7
comp=Z,8.7nm,1.2s
DHY Denali Highway 66.01 29 P P 11 11 25.1 +0.2
baz=295
WAT6 Susitna Watana 66.07 30 P P 11 11 25.7 +0.4
baz=295
STHS Stebnicka Huta 66.14 314 eP P 11 11 25.4 -0.4
STHS Stebnicka Huta 66.14 314 eP P 11 11 25.4 -0.4
J25K Salcha River, 66.15 27 P P 11 11 24.3 -1.3
J25K IAmb IAmb 11 11 36.5
comp=Z,4.0nm,1.2s
J25K Salcha River, 66.15 27 P P 11 11 25.2 -0.4
baz=296
SML Sawmill 66.15 31 P P 11 11 26.2 +0.6
SML Sawmill 66.15 31 P P 11 11 25.5 -0.1
baz=295
D28M Stokes Point 66.23 21 P P 11 11 25.9 0.0
baz=300
KNK Knik Glacier 66.26 31 P P 11 11 26.7 +0.4
baz=295
E28M Babbage River 66.34 22 P P 11 11 26.1 -0.6
E28M IAmb IAmb 11 11 27.5
comp=Z,9.8nm,1.2s
E28M Babbage River 66.34 22 P P 11 11 27.2 +0.5
baz=300
K24K Donnelly Dome 66.34 28 P P 11 11 26.8 -0.1
baz=296,SNR=10
SEW Seward 66.37 33 P P 11 11 27.2 +0.2
baz=295
M23K Glacier View 66.42 31 P P 11 11 27.8 +0.5
baz=295
SCM Sheep Creek Mo 66.57 30 P P 11 11 28.9 +0.5
SCM Sheep Creek Mo 66.57 30 P P 11 11 28.7 +0.3
baz=296
SCM Sheep Creek Mo 66.57 30 P P 11 11 28.9 +0.5
SCM pmax pmax
comp=Z,18nm,1.3s
NOA NORSAR Array B 66.63 329 P P 11 11 27.8 -0.9
comp=Z,0.5nm,0.5s,baz=78,slow=5.8,SNR=7.4
comp=Z,0.5nm,0.5s
I26K Coal Creek Min 66.67 26 P P 11 11 28.8 -0.1
I26K IAmb IAmb 11 11 29.8
comp=Z,5.0nm,0.8s
I26K Coal Creek Min 66.67 26 P P 11 11 29.2 +0.4
baz=298
F28M Old Crow 66.72 23 P P 11 11 29.1 -0.1
F28M IAmb IAmb 11 11 30.2
comp=Z,6.9nm,1.1s
F28M Old Crow 66.72 23 P P 11 11 29.3 +0.1
baz=300
RIDG Independent Ri 66.74 28 P P 11 11 28.2 -1.2
RIDG Independent Ri 66.74 28 P P 11 11 29.5 +0.1
baz=297,SNR=6.3
H27K Steamboat Moun 66.82 25 P P 11 11 30.1 +0.2
baz=299,SNR=8.2
PAX Paxson 66.84 29 P P 11 11 30.1 0.0
baz=297
J26L Joseph Creek 66.89 27 P P 11 11 29.9 -0.5
J26L Joseph Creek 66.89 27 P P 11 11 30.1 -0.3
baz=298
M24K Tolsona, Glenn 66.94 30 P P 11 11 32.1 +1.4
M24K Tolsona, Glenn 66.94 30 P P 11 11 30.9 +0.2
baz=296
E29M Blow River 66.97 22 P P 11 11 30.5 -0.2
E29M IAmb IAmb 11 11 31.7
comp=Z,4.8nm,0.9s
E29M Blow River 66.97 22 P P 11 11 30.7 0.0
baz=301
SCRK Sand Creek 66.97 28 P P 11 11 30.4 -0.6
SCRK Sand Creek 66.97 28 P P 11 11 30.7 -0.3
baz=298,SNR=14
I27K Kandik River 67.10 26 P P 11 11 32.0 +0.4
baz=299
HARP HAARP 67.23 29 P P 11 11 33.1 +0.6
baz=297
KLU Klutina 67.32 31 P P 11 11 34.2 +1.1
KLU IAmb IAmb 11 11 34.9
comp=Z,5.3nm,0.9s
KLU Klutina 67.32 31 P P 11 11 33.9 +0.7
baz=297
MENT Mentasta 67.57 29 P P 11 11 35.8 +1.1
MENT IAmb IAmb 11 11 36.0
comp=Z,3.6nm,1.0s
L26K Log Cabin Wild 67.67 28 P P 11 11 36.1 +0.8
baz=298
K27K Chicken 67.69 27 P P 11 11 36.2 +0.8
K27K IAmb IAmb 11 11 36.9
comp=Z,6.9nm,0.9s
K27K Chicken 67.69 27 P P 11 11 35.9 +0.6
baz=299
I28M Miner Creek 67.78 25 P P 11 11 36.2 +0.1
I28M Miner Creek 67.78 25 P P 11 11 37.0 +0.9
baz=300
EYAK Cordova Ski Ar 67.83 31 P P 11 11 37.7 +1.5
EYAK Cordova Ski Ar 67.83 31 P P 11 11 36.9 +0.6
baz=297
N25K Chitina, Valde 67.83 30 P P 11 11 37.3 +0.9
N25K IAmb IAmb 11 11 39.2
comp=Z,12nm,1.2s
N25K Chitina, Valde 67.83 30 P P 11 11 36.9 +0.5
baz=298
H29M Whitestone 67.94 24 P P 11 11 36.9 0.0
H29M Whitestone 67.94 24 P P 11 11 37.2 +0.3
baz=301
F30M Barrier River 68.06 22 P P 11 11 37.8 +0.2
baz=303
MORC Moravsky Berou 68.19 316 P P 11 11 38.6 -0.2
MORC IAmb IAmb 11 11 48.0
comp=Z,4.4nm,1.3s
MORC Moravsky Berou 68.19 316 P P 11 11 38.6 -0.2
MORC pmax pmax
comp=Z,4.0nm,1.3s
GLB Gilahina Butte 68.24 30 P P 11 11 39.7 +0.8
G30M tAoh Zrail Nji 68.26 23 P P 11 11 38.2 -0.8
G30M tAoh Zrail Nji 68.26 23 P P 11 11 38.7 -0.2
baz=303
L27K Beaver Creek, 68.26 28 P P 11 11 40.1 +1.1
L27K IAmb IAmb 11 11 40.9
comp=Z,10.0nm,1.1s
L27K Beaver Creek, 68.26 28 P P 11 11 39.5 +0.5
baz=300
BCAR Beaver Creek A 68.28 28 P P 11 11 39.9 +0.8
A36M Sachs Harbour 68.36 16 P P 11 11 38.3 -1.1
A36M IAmb IAmb 11 11 39.2
comp=Z,5.8nm,0.8s
A36M Sachs Harbour 68.36 16 P P 11 11 39.4 0.0
baz=311
INK Inuvik 68.38 21 P P 11 11 39.1 -0.4
INK Inuvik 68.38 21 P P 11 11 39.7 +0.2
baz=305
INK Inuvik 68.38 21 P P 11 11 39.1 -0.4
INK pmax pmax
comp=Z,19nm,1.1s
EPYK Eagle Plains 68.42 24 P P 11 11 39.7 -0.3
EPYK IAmb IAmb 11 11 40.1
comp=Z,3.7nm,0.9s
EPYK Eagle Plains 68.42 24 P P 11 11 40.0 0.0
baz=303
M27K Edge Creek, AK 68.59 29 P P 11 11 41.4 +0.2
M27K IAmb IAmb 11 11 42.9
comp=Z,5.2nm,0.8s
M27K Edge Creek, AK 68.59 29 P P 11 11 41.6 +0.3
baz=300
MCARA McCarthy VSAT 68.60 30 P P 11 11 42.4 +1.2
MCARA McCarthy VSAT 68.60 30 P P 11 11 41.8 +0.7
baz=299,SNR=5.9
DAWY Dawson 68.69 27 P P 11 11 41.6 -0.1
DAWY IAmb IAmb 11 11 42.4
comp=Z,5.0nm,1.2s
DAWY Dawson 68.69 27 P P 11 11 41.6 -0.1
baz=301
F31M Tsiigehtchic 68.80 22 P P 11 11 41.5 -0.7
F31M Tsiigehtchic 68.80 22 P P 11 11 41.9 -0.4
baz=305
J29N Klondike Camp 68.92 26 P P 11 11 43.9 +0.8
J29N IAmb IAmb 11 11 46.0
comp=Z,5.4nm,0.7s
J29N Klondike Camp 68.92 26 P P 11 11 43.7 +0.6
baz=302
G31M Satah River 68.93 23 P P 11 11 42.6 -0.4
G31M IAmb IAmb 11 11 43.2
comp=Z,7.7nm,1.0s
G31M Satah River 68.93 23 P P 11 11 42.4 -0.6
baz=304
BVCY Beaver Creek 68.97 28 P P 11 11 44.4 +0.9
baz=301,SNR=11
I30M Mount Dempster 69.17 25 P P 11 11 44.5 -0.3
I30M IAmb IAmb 11 11 45.4
comp=Z,4.2nm,0.8s
I30M Mount Dempster 69.17 25 P P 11 11 44.4 -0.4
baz=303
YUK3 Moose Creek 69.47 29 P P 11 11 47.1 +0.3
baz=301,SNR=5.7
K29M Barlow Dome 69.51 26 P P 11 11 47.3 +0.4
K29M IAmb IAmb 11 11 48.3
comp=Z,5.4nm,1.0s
K29M Barlow Dome 69.51 26 P P 11 11 47.3 +0.4
baz=303
CTG Chitna Glacier 69.52 30 P P 11 11 48.1 +1.1
baz=301,SNR=5.1
CTGM Chitina Glacie 69.52 30 P P 11 11 48.5 +1.5
CTGM IAmb IAmb 11 11 49.1
comp=Z,9.6nm,0.9s
NEEM North Greenlan 69.52 356 iP P 11 11 45.8 -1.2
NEEM IAmb IAmb 11 11 48.0
comp=Z,16nm,0.9s
J30M Hart River 69.54 25 P P 11 11 47.6 +0.6
J30M IAmb IAmb 11 11 48.0
comp=Z,6.0nm,1.1s
J30M Hart River 69.54 25 P P 11 11 47.4 +0.3
baz=304
L29M L29M 69.68 27 P P 11 11 48.9 +1.0
L29M L29M 69.68 27 P P 11 11 48.8 +0.9
baz=303,SNR=7.7
LOGN Logan Glacier 69.73 30 P P 11 11 49.7 +1.4
LOGN IAmb IAmb 11 11 50.3
comp=Z,5.1nm,1.0s
M29M Somme Creek 69.91 28 P P 11 11 50.8 +1.5
M29M IAmb IAmb 11 11 51.9
comp=Z,5.7nm,1.1s
M29M Somme Creek 69.91 28 P P 11 11 49.7 +0.4
baz=302
YUK8 Steele Glacier 70.01 29 P P 11 11 50.8 +0.7
baz=302
STKA Stephens Creek 70.27 153 eP P 11 11 51.7 0.0
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 70.27 153 P P 11 11 51.3 -0.4
comp=Z,2.0nm,0.8s,baz=317,slow=7.1,SNR=4.2
comp=Z,2.0nm,0.8s
C36M Paulatuk 70.41 18 P P 11 11 50.8 -1.3
C36M IAmb IAmb 11 11 51.7
comp=Z,7.2nm,0.9s
C36M Paulatuk 70.41 18 P P 11 11 51.2 -0.9
baz=312
YUK4 Talbot Arm 70.43 29 P P 11 11 52.5 -0.2
baz=303
PINM Pinnacle 70.43 30 P P 11 11 53.2 +0.7
baz=302
M30M Minto, Yukon 70.48 27 P P 11 11 53.4 +0.6
M30M IAmb IAmb 11 11 54.9

comp=Z,7.9nm,0.8s
M30M Minto, Yukon 70.48 27 P **P** 11 11 53.5 +0.7
baz=304,SNR=13
YUK6 Outpost Mounta 70.77 29 P **P** 11 11 55.2 +0.5
baz=303
HYT Haines Junctio 71.18 29 P **P** 11 11 58.2 +1.0
HYT Haines Junctio 71.18 29 P **P** 11 11 57.9 +0.8
baz=304,SNR=8.0
RES Resolute Bay 71.39 7 P **P** 11 11 58.1 +0.1
RES IAmb IAmb 11 11 59.3
comp=Z,5.6nm,1.3s
RES Resolute Bay 71.39 7 P **P** 11 11 58.1 +0.1
RES pmax pmax
comp=Z,6.0nm,1.3s
N31M Braeburn, Yuko 71.50 28 P **P** 11 12 00.2 +1.3
N31M Braeburn, Yuko 71.50 28 P **P** 11 11 59.6 +0.7
baz=305,SNR=8.2
M31M Drury Creek, Y 71.62 27 P **P** 11 11 59.6 0.0
M31M Drury Creek, Y 71.62 27 P **P** 11 11 59.8 +0.2
baz=306
P29M Windy Craggy 71.75 30 P **P** 11 12 00.8 +0.3
baz=304
O30N Mendenhall 71.78 29 P **P** 11 12 01.9 +1.2
O30N IAmb IAmb 11 12 02.7
comp=Z,13nm,1.0s
O30N Mendenhall 71.78 29 P **P** 11 12 01.6 +0.9
baz=305,SNR=7.9
P30M Million Dollar 71.80 29 P **P** 11 12 00.9 +0.1
baz=304
FARO Faro, Yukon 72.00 27 P **P** 11 12 02.8 +0.9
FARO IAmb IAmb 11 12 04.9
comp=Z,6.6nm,1.3s
FARO Faro, Yukon 72.00 27 P **P** 11 12 02.2 +0.2
baz=307
WHY Whitehorse 72.33 28 P **P** 11 12 04.6 +0.6
WHY Whitehorse 72.33 28 P **P** 11 12 04.3 +0.2
baz=306
PLBC Pleasant Camp 72.43 30 P **P** 11 12 04.9 +0.4
baz=305
SKAG Skagway 72.86 29 P **P** 11 12 08.0 +1.0
baz=306
SUMG Summit 72.91 351 P **P** 11 12 08.4 +0.8
SUMG IAmb IAmb 11 12 08.7
comp=Z,9.0nm,0.9s
SUMG Summit 72.91 351 P **P** 11 12 08.4 +0.8
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 72.91 351 *i* P **P** 11 12 07.0 -0.6
SUMG IAmb IAmb 11 12 08.2
comp=Z,14nm,1.3s
S31K Pelican 73.35 31 P **P** 11 12 10.3 +0.4
baz=306
P33M Teslin, Yukon 73.42 28 P **P** 11 12 11.2 +0.7
P33M IAmb IAmb 11 12 11.9
comp=Z,5.7nm,1.0s
P33M Teslin, Yukon 73.42 28 P **P** 11 12 10.8 +0.3
baz=308
P32M Atlin 73.44 29 P **P** 11 12 11.5 +0.9
baz=307
SIT Sitka 74.28 31 P **P** 11 12 15.7 +0.3
baz=306
UPNV Upernavik 74.38 356 *i* P P 11 12 14.4 -1.4
UPNV IAmb IAmb 11 12 16.7
comp=Z,5.6nm,0.7s
Q32M Nakina River 74.41 29 P **P** 11 12 17.2 +0.7
baz=308
R33M Jennings River 74.67 28 P **P** 11 12 18.7 +0.9
baz=309
WRGLY Wrigley 74.81 23 P **P** 11 12 18.8 +0.4
WRGLY IAmb IAmb 11 12 19.7
comp=Z,8.0nm,1.0s
WRGLY Wrigley 74.81 23 P **P** 11 12 19.1 +0.7
baz=314
WTLY Watson Lake, Y 75.05 27 P **P** 11 12 20.6 +0.7
baz=311
S34M Telegraph Cree 75.54 29 P **P** 11 12 23.5 +0.8
baz=309
DLBC Dease Lake 75.65 29 P **P** 11 12 24.6 +1.1
DLBC IAmb IAmb 11 12 25.6
comp=Z,7.1nm,0.9s
DLBC Dease Lake 75.65 29 P **P** 11 12 24.1 +0.6
baz=310
DLBC Dease Lake 75.65 29 P **P** 11 12 24.3 +0.8
comp=Z,4.7nm,0.8s,baz=294,slow=3.4,SNR=7.2
comp=Z,4.7nm,0.8s
EKA Eskdalemuir Ar 76.08 328 P **P** 11 12 25.8 -0.1
comp=Z,2.0nm,0.7s,baz=50,slow=6.7,SNR=3.1
comp=Z,2.0nm,0.7s
T35M Bob Quinn 76.50 30 P **P** 11 12 27.5 -0.8
T35M Bob Quinn 76.50 30 P **P** 11 12 29.0 +0.7
baz=310
FLDN Fort Liard 76.91 25 P **P** 11 12 31.9 +1.4
FLDN IAmb IAmb 11 12 32.2
comp=Z,10nm,0.9s
FLDN Fort Liard 76.91 25 P **P** 11 12 31.5 +1.0
baz=315
YKA Yellowknife Ar 78.08 20 P P 11 12 35.3 -1.7
YKA Yellowknife Ar 78.08 20 P **P** 11 12 36.2 -0.7
comp=Z,1.7nm,0.7s,baz=323,slow=5.0,SNR=41
comp=Z,1.7nm,0.7s
YKAB2 New Yellowknif 78.13 20 P P 11 12 35.3 -2.0
DY2G Dye2 79.62 351 *i* P P 11 12 44.1 -1.5
DY2G IAmb IAmb 11 12 47.8
comp=Z,3.9nm,1.2s
KEST Kesra 80.35 306 P **P** 11 12 50.9 +0.9
comp=Z,2.8nm,0.5s,baz=315,slow=1.4,SNR=4.2
comp=Z,2.8nm,0.5s
ESBB Sonseca Array 86.45 316 P **P** 11 13 20.5 -0.8
ESBB IAmb IAmb 11 13 38.4
comp=Z,11nm,1.1s
ESDC Sonseca Array 86.45 316 P **P** 11 13 20.9 -0.4
comp=Z,2.5nm,0.8s,baz=40,slow=5.4,SNR=14
comp=Z,2.5nm,0.8s
FFC Flin Flon 88.17 19 P **P** 11 13 28.9 -0.3
FFC IAmb IAmb 11 13 29.6
comp=Z,4.4nm,1.0s
FFC Flin Flon 88.17 19 P **P** 11 13 28.9 -0.3
FFC pmax pmax
comp=Z,4.0nm,1.0s
NEW Newport 88.30 30 P **P** 11 13 30.6 +0.5
baz=321
EGMT Eagleton 91.43 26 P **P** 11 13 46.0 +1.2
baz=326
HLID Hailey 93.16 32 P **P** 11 13 53.2 +0.2
baz=323
PKM Mcpherson Peak 97.18 40 P P 11 14 09.7 -1.8
baz=318

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*IDC **09** 11:21:51.1±1.0,24.˙02N×121.˙81E,h0km,mb3.3/8, mbtmp3.3/9,ML3.3/1,Error ellipse: s-maj=48.3km s-min=19.5km az=68.0*
*JMA **09** 11:21:53.5±0.2,24.˙0N±0.˙6×121.˙8E±0.˙6,h0km,MV3.4/13, TAIWAN REGION*
*TAP **09** 11:21:53.0,24.˙04N×121.˙83E,h7km,ML3.9,C*
*ASIES **09** 11:21:53,24.˙04N×121.˙83E,h7km,ML3.9,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=1.13; $M_{\theta\theta}$=0.33; $M_{\phi\phi}$=1.44; $M_{r\theta}$=1.67; $M_{\theta\phi}$=0.34; $M_{\phi r}$=1.28; Fault plane solution: M_0=2.50453×10^{21} NP1: ϕ_s=223.48000°,δ=76.49000°,λ=-68.49000°. NP2: ϕ_s=344.14000°,δ=25.23000°,λ=-146.76000°. Principal axes: T Plg=28.3230°, Azm=296.3490°; N Plg=20.8860°, Azm=38.2170°; P Plg=53.5970°, Azm=159.3830°;*
ISC 09 11:21:53.6±0.9,24.˙03N±0.˙01×121.˙85E±0.˙02,h14km±6km, n172,σ1s07/247,mb3.2/8,34C-6D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.23**	**258**	⇑*i*P	**Pg**	**11 21 59.2**	**+0.5**
	baz=250						
HWA				S	**Sg**	**11 22 04.2**	**+2.1**
	baz=250						
TWD	**Chiawan**	**0.24**	**283**	⇑*i*P	**Pg**	**11 21 58.3**	**-0.6**
	baz=281						
TWD				*i* S	**Sg**	**11 22 02.3**	**-0.1**
	baz=281						
ETL	**Fush Village**	**0.25**	**302**	⇑*i*P	**Pg**	**11 21 58.4**	**-0.7**
	baz=303						
ETL				S	**Sg**	**11 22 02.6**	**-0.1**
	baz=303						
NACB	**Ninganchiao**	**0.28**	**302**	P	**Pg**	**11 21 58.9**	**-0.7**
NACB	**Ninganchiao**	**0.28**	**302**	⇑*i*P	**Pg**	**11 21 58.8**	**-0.7**
	baz=302						
NACB				*i* S	**Sb**	**11 22 03.1**	**-1.8**
	baz=302						
EHP	**Heping Village**	**0.30**	**340**	P	**Pb**	**11 21 59.7**	**-1.1**
	baz=349						
EHP				S	**Sb**	**11 22 05.6**	**0.0**
	baz=349						
EAHA	**Aohua**	**0.32**	**341**	⇑P	**Pb**	**11 21 59.9**	**-1.2**
	baz=347						
EAHA				*e*S	**Sb**	**11 22 06.5**	**+0.4**
	baz=347						
ETM	**Tongmen**	**0.34**	**260**	⇑*i*P	**Pb**	**11 22 00.2**	**-1.1**
	baz=254						
ETM				*i* S	**Sb**	**11 22 05.7**	**-0.8**
	baz=254						
SHUL	**Shoufeng**	**0.36**	**228**	⇓P	**Pb**	**11 22 01.8**	**+0.1**
	baz=220						
SHUL				*e*S	**Sb**	**11 22 09.2**	**+2.1**
	baz=220						
ETLH	**Xiulin Townshi**	**0.39**	**298**	⇑*i*P	**Pg**	**11 22 00.8**	**-0.6**
	baz=298						
ETLH				S	**Sb**	**11 22 06.9**	**-1.2**
	baz=298						
LXIB	**Xiulin Townshi**	**0.40**	**269**	⇑*i*P	**Pb**	**11 22 01.4**	**-1.2**
	baz=266						
LXIB				*e*S	**Sb**	**11 22 06.9**	**-1.8**
	baz=266						
ENA	**Nanau**	**0.41**	**346**	⇑*i*P	**Pb**	**11 22 01.9**	**-0.8**
	baz=342						
ENA				S	**Sb**	**11 22 09.0**	**+0.2**
	baz=342						
EWUT	**Wuta**	**0.42**	**351**	⇑P	**Pb**	**11 22 02.2**	**-0.7**
	baz=347						
EWUT				*e*S	**Sb**	**11 22 09.8**	**+0.7**
	baz=347						
TEGC	**Jichi Village**	**0.43**	**222**	*e*P	**Pb**	**11 22 03.2**	**+0.3**
	baz=200						
TEGC				*e*S	**Sb**	**11 22 12.2**	**+3.0**
	baz=200						
EOS4	**EOS4**	**0.43**	**77**	*e*P	**Pn**	**11 22 04.7**	**-0.3**
	baz=80						
ESL	**Shilin**	**0.44**	**241**	⇓P	**Pb**	**11 22 02.3**	**-0.8**
	baz=233						
ESL				S	**Sb**	**11 22 09.5**	**0.0**
	baz=233						
EOS3	**EOS3**	**0.50**	**58**	*e*P	**Pn**	**11 22 05.9**	**-0.2**
	baz=60						
EOS2	**EOS2**	**0.52**	**41**	*e*P	**Pn**	**11 22 06.5**	**+0.1**
	baz=53						
WARBT	**Fenglin Townsh**	**0.53**	**235**	⇓*i*P	**Pb**	**11 22 04.0**	**-0.7**
	baz=227						
WARBT				S	**Sb**	**11 22 12.1**	**+0.1**
	baz=227						
EGFH	**Guangfu**	**0.53**	**228**	*e*P	**Pb**	**11 22 04.2**	**-0.4**
	baz=206						
ESAO	**Su ao**	**0.55**	**359**	*e*P	**Pb**	**11 22 04.4**	**-0.6**
	baz=359						
WHF	**Hehuan Shan**	**0.55**	**283**	⇑P	**Pb**	**11 22 04.1**	**-1.2**
	baz=281						
WHF				S	**Sb**	**11 22 12.1**	**-1.1**
	baz=281						
TWC	**Suao**	**0.58**	**360**	P	**Pb**	**11 22 05.3**	**-0.2**
	baz=358						
TWC				S	**Sn**	**11 22 15.6**	**-1.1**
	baz=358						
NNSB	**Datong**	**0.59**	**313**	⇑*i*P	**Pb**	**11 22 04.9**	**-0.9**
	baz=315						
NNSB				*i* S	**Sb**	**11 22 13.4**	**-0.6**
	baz=315						
NNSH	**Datong**	**0.59**	**313**	⇑P	**Pb**	**11 22 04.8**	**-0.9**
	baz=314						
NNSH				*e*S	**Sb**	**11 22 13.2**	**-0.8**
	baz=314						
LATG	**Datong**	**0.59**	**330**	⇑*i*P	**Pb**	**11 22 05.0**	**-0.8**
	baz=334						
LATG				S	**Sb**	**11 22 13.0**	**-1.0**
	baz=334						
FUSS	**Fushou**	**0.60**	**292**	⇑P	**Pb**	**11 22 05.1**	**-0.9**
	baz=291						
FUSS				*e*S	**Sb**	**11 22 14.3**	**-0.2**
	baz=291						
NNS	**Nan Shan**	**0.60**	**313**	⇑*i*P	**Pb**	**11 22 05.1**	**-0.9**
	baz=315						
NNS				*i* S	**Sb**	**11 22 13.8**	**-0.6**
	baz=315						
NDS	**Dongshan**	**0.62**	**348**	*e*P	**Pb**	**11 22 05.8**	**-0.4**
	baz=353						
NDS				*e*S	**Sb**	**11 22 15.6**	**+0.9**
	baz=353						
CHGB	**Renai**	**0.62**	**273**	⇑*i*P	**Pb**	**11 22 05.7**	**-0.7**
	baz=271						
CHGB				*i* S	**Sb**	**11 22 14.7**	**-0.4**
	baz=271						
OWD	**Renai**	**0.62**	**264**	P	**Pb**	**11 22 05.7**	**-0.7**
	baz=260						
OWD				S	**Sb**	**11 22 14.2**	**-0.8**
	baz=260						
NDT	**Datong Townshi**	**0.65**	**332**	⇑*i*P	**Pb**	**11 22 06.5**	**-0.3**
	baz=335						
NDT				S	**Sb**	**11 22 16.7**	**+0.9**
	baz=335						
TWT	**Tachien**	**0.66**	**290**	P	**Pb**	**11 22 06.6**	**-0.4**
	baz=289						
TWT				S	**Sb**	**11 22 16.1**	**0.0**
	baz=289						
HGSD	**Ruisui**	**0.66**	**217**	⇓P	**Pb**	**11 22 07.2**	**+0.4**
	baz=210						
HGSD				*e*S	**Sn**	**11 22 19.4**	**+0.7**
	baz=210						
ENTT	**Nioudou**	**0.67**	**337**	⇑*i*P	**Pb**	**11 22 06.6**	**-0.4**
	baz=341						
ENTT				*e*S	**Sb**	**11 22 17.4**	**+1.2**
	baz=341						
TDCB	**Techi**	**0.68**	**290**	⇑*i*P	**Pb**	**11 22 06.6**	**-0.6**
	baz=289						
TDCB				*i* S	**Sb**	**11 22 16.0**	**-0.5**
	baz=289						
WUSB	**Renai**	**0.68**	**267**	⇑*i*P	**Pb**	**11 22 06.7**	**-0.5**
	baz=264						
WUSB				*i* S	**Sb**	**11 22 16.0**	**-0.5**
	baz=264						
VWDT	**VWDT**	**0.71**	**248**	⇓*i*P	**Pb**	**11 22 07.5**	**-0.2**
	baz=243						
VWDT				*i* S	**Sb**	**11 22 18.1**	**+0.9**
	baz=243						
EHY	**Hungye**	**0.71**	**223**	*e*P	**Pb**	**11 22 07.6**	**-0.2**
	baz=203						
EHY				*e*S	**Sb**	**11 22 18.8**	**+1.5**
	baz=203						
TWE	**Neicheng**	**0.71**	**346**	⇑*i*P	**Pb**	**11 22 07.7**	**-0.1**
	baz=352						
TWE				*e*S	**Sn**	**11 22 18.9**	**-1.1**
	baz=352						
ILA	**Ilan**	**0.74**	**353**	*e*P	**Pn**	**11 22 08.9**	**-0.7**
	baz=348						
FUSB	**Fushanzhiwuyua**	**0.77**	**342**	⇑*i*P	**Pb**	**11 22 08.7**	**-0.1**
	baz=335						
FUSB				S	**Sb**	**11 22 19.5**	**+0.3**
	baz=335						
YHNB	**Yeheng**	**0.78**	**326**	P	**Pb**	**11 22 08.9**	**0.0**
YHNB	**Yeheng**	**0.78**	**326**	⇑*i*P	**Pb**	**11 22 08.7**	**-0.2**
	baz=329						
YHNB				S	**Sb**	**11 22 19.9**	**+0.6**
	baz=329						
NSK	**Sanguang**	**0.79**	**325**	⇑*i*P	**Pb**	**11 22 08.8**	**-0.3**
	baz=328						
NSK				S	**Sb**	**11 22 20.1**	**+0.3**
	baz=328						
ECBN	**Changbin**	**0.80**	**208**	*e*P	**Pn**	**11 22 10.9**	**+0.6**
	baz=201						
YULB	**Yu-li**	**0.81**	**219**	P	**Pb**	**11 22 09.9**	**+0.4**
YULB	**Yu-li**	**0.81**	**219**	⇓P	**Pg**	**11 22 08.8**	**-0.6**
	baz=213						
YULB				S	**Sb**	**11 22 21.7**	**+1.5**
	baz=213						
NWLT	**Wulai**	**0.81**	**337**	⇑P	**Pb**	**11 22 09.5**	**-0.1**
	baz=341						
NWLT				*e*S	**Sn**	**11 22 21.5**	**-1.0**
	baz=341						
WPL	**Puli Township**	**0.82**	**269**	*e*P	**Pb**	**11 22 09.8**	**+0.2**
	baz=252						
EYUL	**Yuli**	**0.83**	**216**	*e*P	**Pb**	**11 22 10.4**	**+0.6**
	baz=196						
TWF1	**Yuli**	**0.84**	**217**	*e*P	**Pg**	**11 22 09.4**	**-0.6**
	baz=211						
TWF1				*e*S	**Sn**	**11 22 23.0**	**-0.2**
	baz=211						
DPDB	**Guoxing**	**0.85**	**271**	*e*P	**Pb**	**11 22 09.6**	**-0.5**
	baz=268						
SSLB	**Suanglung**	**0.86**	**254**	P	**Pb**	**11 22 10.4**	**+0.1**
SSLB	**Suanglung**	**0.86**	**254**	⇑P	**Pb**	**11 22 09.9**	**-0.4**
	baz=264						
SSLB				*i* S	**Sb**	**11 22 21.1**	**-0.5**
	baz=264						
WCS	**Beigang Elemen**	**0.86**	**272**	⇑P	**Pb**	**11 22 10.1**	**-0.2**
	baz=270						
WCS				*e*S	**Sb**	**11 22 21.6**	**-0.2**
	baz=270						
WHP	**Taichung City**	**0.87**	**287**	⇑P	**Pb**	**11 22 10.4**	**0.0**
	baz=286						
WHP				*i* S	**Sb**	**11 22 22.7**	**+0.7**
	baz=286						
SMLT	**Sun Moon Lake**	**0.89**	**261**	P	**Pb**	**11 22 10.9**	**+0.1**
	baz=258						
SMLT				*i* S	**Sb**	**11 22 23.1**	**+0.6**
	baz=258						
NFF	**Wufeng Townshi**	**0.90**	**312**	⇑P	**Pb**	**11 22 10.8**	**-0.2**
	baz=302						
NFF				S	**Sn**	**11 22 24.1**	**-0.7**
	baz=302						
TYC	**Yuchr**	**0.92**	**263**	P	**Pb**	**11 22 10.8**	**-0.5**
	baz=260						
TYC				*e*S	**Sb**	**11 22 23.1**	**-0.3**
	baz=260						
CHKH	**Chenggong**	**0.93**	**207**	*e*P	**Pb**	**11 22 11.3**	**-0.2**
	baz=200						
TIPB	**Shuangxi**	**0.94**	**358**	⇑*i*P	**Pn**	**11 22 12.1**	**-0.3**
	baz=354						
TIPB				S	**Sn**	**11 22 25.5**	**-0.2**
	baz=354						
FULB	**Fuli**	**0.97**	**212**	*e*P	**Pn**	**11 22 12.6**	**-0.2**
	baz=194						
WHYT	**Xinyi Township**	**0.97**	**251**	*e*P	**Pn**	**11 22 12.5**	**-0.3**
	baz=257						
WHYT				*e*S	**Sn**	**11 22 26.6**	**+0.2**
	baz=257						
NHDH	**Xindian Distri**	**0.98**	**342**	*e*P	**Pn**	**11 22 13.1**	**+0.2**
	baz=348						
TWA	**Mucha**	**0.98**	**346**	P	**Pn**	**11 22 13.1**	**+0.1**
	baz=340						
LIOB	**Emei**	**0.98**	**309**	⇑*i*P	**Pn**	**11 22 12.7**	**-0.3**
	baz=310						
LIOB				*e*S	**Sn**	**11 22 27.1**	**+0.4**
	baz=310						
NSTT	**Nanjuang**	**0.98**	**308**	⇑*i*P	**Pn**	**11 22 12.7**	**-0.3**
	baz=309						
NSTT				S	**Sn**	**11 22 26.6**	**-0.1**
	baz=309						
TWB1	**Santiao Chiao**	**0.99**	**7**	*e*P	**Pn**	**11 22 13.0**	**0.0**
	baz=5.0						
NJD	**Zhudong**	**0.99**	**315**	*e*P	**Pn**	**11 22 13.5**	**+0.4**
	baz=326						
TATO	**Taipei**	**1.00**	**341**	P	**Pn**	**11 22 13.4**	**+0.2**
TATO	**Taipei**	**1.00**	**341**	P	**Pn**	**11 22 13.2**	**0.0**
	baz=345						
TATO				S	**Sn**	**11 22 27.6**	**+0.5**
	baz=345						
CHKT	**Chengkung**	**1.03**	**206**	*e*P	**Pb**	**11 22 13.5**	**+0.4**
	baz=179						
TWQ1	**Liyutan**	**1.04**	**288**	P	**Pn**	**11 22 14.1**	**+0.4**
	baz=299						
TWQ1				*e*S	**Sn**	**11 22 30.8**	**+2.8**
	baz=299						
NWF	**Wu-fen Shan**	**1.04**	**356**	P	**Pn**	**11 22 14.3**	**+0.4**
	baz=354						
NWF				*e*S	**Sn**	**11 22 29.6**	**+1.3**
	baz=354						
WFSB	**Wu-fen Shan**	**1.04**	**356**	⇑*i*P	**Pn**	**11 22 14.2**	**+0.4**
	baz=354						
WFSB				*e*S	**Sn**	**11 22 29.2**	**+1.1**
	baz=354						
WJS	**Zhushan**	**1.05**	**259**	*e*P	**Pn**	**11 22 14.2**	**+0.3**
	baz=255						
EHD	**Haiduan**	**1.06**	**214**	*e*P	**Pn**	**11 22 14.2**	**+0.2**
	baz=195						
WWF	**Wufeng**	**1.06**	**271**	*e*P	**Pn**	**11 22 14.9**	**+0.9**
	baz=269						
SXI1	**Grass Mountain**	**1.06**	**1**	*e*P	**Pn**	**11 22 14.3**	**+0.2**
	baz=14						
HSN1	**Hsinchu**	**1.07**	**315**	*e*P	**Pn**	**11 22 15.0**	**+0.9**
	baz=317						
NSY	**Sanyi**	**1.07**	**291**	P	**Pn**	**11 22 14.7**	**+0.5**
	baz=291						
NSY				*e*S	**Sn**	**11 22 30.0**	**+1.2**
	baz=291						
WNT	**Mingjian**	**1.08**	**262**	P	**Pn**	**11 22 14.7**	**+0.4**
	baz=259						
WNT				S	**Sn**	**11 22 30.2**	**+1.1**
	baz=259						
WNT1	**Nantou City**	**1.08**	**264**	*e*P	**Pn**	**11 22 15.1**	**+0.8**
	baz=248						
JYNG	**Yonagunijimaku**	**1.08**	**67**	P	**Pn**	**11 22 15.0**	**+0.7**
TCU	**Taichung**	**1.08**	**277**	*e*P	**Pn**	**11 22 15.8**	**+1.5**
	baz=275						
TCU				*e*S	**Sn**	**11 22 31.0**	**+1.9**
	baz=275						
ALS	**Alishan**	**1.09**	**242**	*e*P	**Pb**	**11 22 14.4**	**0.0**
	baz=236						
ALS				*e*S	**Sn**	**11 22 29.8**	**+0.1**
	baz=236						
ECS	**Chishang**	**1.09**	**212**	*e*P	**Pn**	**11 22 15.3**	**+0.8**
	baz=192						
NMLH	**Miaoli**	**1.10**	**298**	*e*P	**Pn**	**11 22 15.4**	**+0.9**
	baz=298						
NMLH				*e*S	**Sn**	**11 22 30.9**	**+1.4**
	baz=298						
SBCB	**Hsinchu**	**1.10**	**314**	P	**Pn**	**11 22 15.4**	**+0.8**
	baz=315						
SBCB				*e*S	**Sn**	**11 22 31.8**	**+2.2**
	baz=315						
HSN	**Hsinchu**	**1.12**	**314**	*e*P	**Pn**	**11 22 15.9**	**+1.1**
	baz=318						
HSN				S	**Sn**	**11 22 32.1**	**+2.1**
	baz=318						
NCUH	**Zhongli**	**1.12**	**327**	*e*P	**Pn**	**11 22 16.5**	**+1.7**
	baz=332						
TNOU	**National Taiwa**	**1.12**	**356**	*e*P	**Pn**	**11 22 15.7**	**+0.8**
	baz=3.0						
ELDTW	**Lidau**	**1.13**	**223**	*e*P	**Pg**	**11 22 13.8**	**-1.6**
	baz=214						
ELDTW				*e*S	**Sn**	**11 22 30.9**	**+0.4**
	baz=214						
YOJ	**Yonaguni jima**	**1.14**	**67**	P	**Pn**	**11 22 16.7**	**+1.6**
YOJ	**Yonaguni jima**	**1.14**	**67**	*e*P	**Pn**	**11 22 15.7**	**+0.6**
	baz=72						
YOJ	**Yonaguni jima**	**1.14**	**67**	P	**Pn**	**11 22 15.8**	**+0.7**
TWS1	**Kuangyinshan**	**1.14**	**340**	*e*P	**Pn**	**11 22 16.3**	**+1.2**
	baz=345						
TWS1				*e*S	**Sn**	**11 22 32.2**	**+1.6**
	baz=345						
YM01	**YM01**	**1.15**	**347**	P	**Pn**	**11 22 16.1**	**+0.9**
	baz=352						
YM01				*e*S	**Sn**	**11 22 32.7**	**+2.0**
	baz=352						
WDJ	**Dajia District**	**1.15**	**286**	*e*P	**Pn**	**11 22 17.2**	**+1.9**
	baz=296						
WDJ				*e*S	**Sn**	**11 22 32.4**	**+1.5**
	baz=296						
EDH	**Donghe**	**1.16**	**206**	*e*P	**Pg**	**11 22 13.4**	**-2.6**
	baz=179						
YM08	**YM08**	**1.18**	**348**	*e*P	**Pn**	**11 22 17.2**	**+1.5**
	baz=333						
WCHH	**Zhanghua**	**1.19**	**273**	*e*P	**Pn**	**11 22 17.2**	**+1.5**
	baz=270						
NTST	**Danshui**	**1.19**	**342**	*e*P	**Pn**	**11 22 17.2**	**+1.4**
	baz=348						
ANP	**Anpu**	**1.20**	**345**	*e*P	**Pn**	**11 22 17.2**	**+1.2**
	baz=352						
WGK	**Gukeng**	**1.23**	**254**	*e*P	**Pn**	**11 22 18.2**	**+1.9**
	baz=249						
WDLH	**Douliu**	**1.25**	**255**	*e*P	**Pn**	**11 22 18.8**	**+2.2**
	baz=250						
TWY	**Chenhua**	**1.27**	**349**	*e*P	**Pg**	**11 22 19.4**	**+1.4**
	baz=333						
WCKO	**Fanlu**	**1.29**	**243**	*e*P	**Pg**	**11 22 18.7**	**+0.3**
	baz=237						
WCKO				*e*S	**Sn**	**11 22 36.8**	**+2.7**
	baz=237						
LONT	**Longtian**	**1.30**	**211**	*e*P	**Pn**	**11 22 15.4**	**-1.9**
	baz=184						
STYH	**Taoyuan**	**1.30**	**230**	*e*P	**Pn**	**11 22 17.2**	**-0.2**
	baz=207						
STYT	**Tauyuan**	**1.32**	**230**	P	**Pn**	**11 22 17.8**	**+0.2**
	baz=209						
STYT				*e*S	**Sn**	**11 22 36.0**	**+0.8**
	baz=209						
TPUB	**Ta-pu**	**1.33**	**238**	P	**Pg**	**11 22 19.3**	**0.0**
TPUB	**Ta-pu**	**1.33**	**238**	*e*P	**Pg**	**11 22 18.7**	**-0.6**
	baz=233						

TPUB eS Sn 11 22 36.8 +1.4
baz=233
CHN4 Tsaushan 1.34 240 eP Pg 11 22 18.8 -0.5
baz=234
CHN4 eS Sn 11 22 38.8 +3.4
baz=234
CHN2 Minshiung 1.36 249 eP Pg 11 22 20.0 +0.3
baz=243
WRL Guolierlin Hig 1.36 265 eP Pg 11 22 18.8 -0.9
baz=247
RLNB Erlin 1.37 265 eP Pg 11 22 19.4 -0.7
baz=247
RLNB eS Sn 11 22 39.5 +3.2
baz=247
WTP Ta-pu 1.38 236 eP Pg 11 22 19.1 -1.0
baz=212
WTK Tuku 1.38 256 eP Pg 11 22 20.4 +0.1
baz=252
LDUT Ludao 1.39 195 eP Pn 11 22 16.1 -2.4
baz=186
TWGBT Beinan 1.40 211 P Pn 11 22 18.0 -0.6
TWGBT Beinan 1.40 211 eP Pn 11 22 16.9 -1.8
baz=186
TWG Pinlang 1.40 211 eP Pn 11 22 17.3 -1.4
baz=186
TWK Hsinying 1.46 239 eP Pg 11 22 20.8 -1.0
baz=232
TWK eS Sg 11 22 42.3 +1.5
baz=232
CHN1 Nanshi 1.48 236 eP Pg 11 22 21.4 -0.6
baz=229
CHN1 eS Sg 11 22 42.3 +1.1
baz=229
SNST Tainan City 1.48 237 eP Pg 11 22 21.8 -0.3
baz=231
SGST Jiashian 1.50 231 eP Pn 11 22 19.7 -0.3
baz=208
SLGT Liugui 1.51 227 eP Pg 11 22 21.6 -1.1
baz=220
WSF Szhu 1.54 256 eP Pb 11 22 21.3 -0.6
baz=251
ICHU Yijhu 1.59 246 eP Pg 11 22 23.2 -0.9
baz=241
PCYT Pengchaiyu 1.61 7 eP Pg 11 22 23.6 -0.9
baz=18
ECL Taimali 1.65 210 eP Pn 11 22 21.5 -0.5
baz=187
CHN8 Yiju 1.65 246 eP Pb 11 22 23.8 0.0
baz=241
CHN3 Shinhua 1.66 236 eP Pg 11 22 24.8 -0.8
baz=229
SCST Cishan 1.69 228 eP Pg 11 22 25.0 -1.0
baz=207
SHHT Tainan City 1.71 234 eP Pg 11 22 25.7 -0.7
baz=228
TSMG Majia 1.72 220 eP Pb 11 22 25.1 +0.1
baz=203
IRIF Iriomote-Funau 1.74 79 eP Pn 11 22 24.6 +1.2
TWM1 Shoushan 1.78 228 eP Pg 11 22 27.0 -0.7
baz=220
MASBT Mashibuluo 1.80 219 eP Pb 11 22 25.4 -0.9
baz=203
MASBT eS Sb 11 22 49.7 +1.0
baz=203
EAST Anshuo 1.88 210 eP Pb 11 22 26.7 -1.0
baz=185
JKRS Kuro-shima 1.98 83 eP Pn 11 22 28.1 +1.4
JKRS eS Sn 11 22 53.2 +2.0
SCZT Fangliau 2.00 215 eP Pb 11 22 28.9 -0.8
baz=190
SLIU Shizi 2.05 209 eP Pb 11 22 29.4 -1.2
baz=186
JIJ Ishigaki jima 2.12 80 P Pn 11 22 29.2 +0.7
JIJ S Sn 11 22 56.2 +1.6
PHUB P'eng-hu 2.15 257 eP Pb 11 22 30.8 -1.6
baz=252
PHUB eS Sn 11 22 57.1 +1.6
baz=252
PNG Penghu 2.15 258 eP Pb 11 22 30.8 -1.6
baz=254
JISG Ishigakijimahi 2.31 75 P Pn 11 22 32.0 +0.8
JISG S Sn 11 23 01.0 +1.6
VCHM Qimei 2.37 250 eP Pn 11 22 33.6 +1.6
baz=229
VCHM eS Sb 11 23 03.2 -1.9
baz=229
VWUC VWUC 2.39 294 eP Pn 11 22 33.2 +0.9
baz=290
PTMZ Houxiangcun 2.69 293 eP Pn 11 22 36.7 +0.3
baz=288
MATB Ma-tsu 2.73 321 eP Pn 11 22 37.6 +0.6
baz=319
LYJJ Jianjiangzhen 3.15 323 eP Pn 11 22 43.9 +1.2
baz=323
KNMB Chin-men Tao 3.19 279 eP Pn 11 22 44.3 +1.0
baz=272
XPSS Dashiqiu 3.26 333 eP Pn 11 22 47.4 +3.1
baz=336
MHZQ Yeshan 3.29 309 eP Pn 11 22 47.3 +2.6
baz=305
AXDP Jialang 3.65 285 eP Pn 11 22 50.7 +1.2
baz=278
DSXP Dongshan 4.07 266 eP Pn 11 22 55.4 +0.1
baz=262
SXFK Yanhouchang 4.49 303 eP Pn 11 23 02.4 +1.2
baz=294
KSRS Korea Array 14.36 20 Pn Pn 11 25 15.6 -0.8
0.1nm,0.3s,baz=202,slow=11,SNR=2.1
0.2nm,0.3s
SONM Songino Array 26.75 336 P P 11 27 30.9 -2.0
0.1nm,0.4s,baz=159,slow=6.2,SNR=1.6
0.1nm,0.4s
MKAR Makanchi Array 38.88 316 P P 11 29 18.1 -0.4
0.2nm,0.5s,baz=115,slow=7.9,SNR=2.5
0.2nm,0.5s
ZALV Zalesovo Beam 40.71 327 P P 11 29 33.1 -0.5
0.8nm,0.7s,baz=114,slow=9.7,SNR=1.9
0.8nm,0.7s
H11S3 WAKE ISLAND Hy 42.01 89 T T 12 15 27.9
baz=290
H11S1 WAKE ISLAND Hy 42.02 89 T T 12 15 23.3
baz=290
H11S2 WAKE ISLAND Hy 42.03 89 T T 12 15 27.8
baz=290
KURBB Kurchatov Arra 42.62 320 P P 11 29 49.6 +0.3
0.1nm,0.6s,baz=115,slow=6.5,SNR=1.6
0.1nm,0.6s
WRA Warramunga Arr 45.36 163 P P 11 30 10.8 -0.8
0.4nm,0.5s,baz=344,slow=8.6,SNR=5.8
0.4nm,0.5s
ASAR Alice Springs 48.83 165 P P 11 30 38.5 -0.2
0.1nm,0.3s,baz=340,slow=6.8,SNR=8.4
0.1nm,0.3s
YKA Yellowknife Ar 82.88 23 P P 11 34 17.1 -0.3
0.1nm,0.6s,baz=340,slow=3.9,SNR=2.7
0.1nm,0.6s
NVAR Mina Array Bea 96.13 43 P P 11 35 22.3 +0.8
0.1nm,0.4s,baz=300,slow=4.1,SNR=1.4
0.1nm,0.4s

*IDC **09** 11:30:41.4±1.1,29.˚84N×95.˚20E,h0km,mb3.7/5, mbtmp3.5/8,ML3.6/3,MS3.8/3,Error ellipse: s-maj=63.1km s-min=17.2km az=64.0*

ISC 09 11:30:46.3±1.1,29.˚8N±0.˚1×95.˚2E±0.˚3,h35km,n10, σ0s72/8,mb3.4/5,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.81**	**162**	Pn	**Pn**	**11 33 31.6**	**-0.6**
	0.4nm,0.3s,baz=331,slow=13,SNR=2.2						
CMAR				LR	LR	11 38 52.4	
	comp=Z,43nm,18.3s,baz=245,slow=42						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**19.71**	**333**	P	**P**	**11 35 12.0**	**-0.6**
	0.1nm,0.3s,baz=150,slow=11,SNR=5.0						
	0.2nm,0.4s						
SONM	**Songino Array**	**19.95**	**23**	P	**P**	**11 35 15.1**	**-0.2**
	baz=206,slow=9.8,SNR=5.1						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**24.27**	**334**	P	**P**	**11 35 59.4**	**-0.6**
	0.7nm,0.8s,baz=142,slow=10,SNR=5.3						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**25.27**	**346**	P	**P**	**11 36 08.5**	**-0.6**
	0.4nm,0.3s,baz=161,slow=9.4,SNR=2.8						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**29.46**	**329**	P	**P**	**11 36 47.2**	**+0.5**
	0.4nm,0.5s,baz=120,slow=8.9,SNR=3.9						
	0.4nm,0.5s						
MMAI	**Mount Meron Ar**	**50.55**	**290**	LR	LR	12 05 05.7	
	comp=Z,242nm,18.2s,baz=256,slow=41						
EIL	**Elat**	**51.77**	**286**	LR	LR	12 05 09.0	
	comp=Z,268nm,18.3s,baz=200,slow=40						
WRA	**Warramunga Arr**	**62.19**	**138**	P	**P**	**11 41 05.2**	**+0.8**
	1.2nm,1.0s,baz=329,slow=7.5,SNR=7.3						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**64.88**	**141**	P	**P**	**11 41 22.7**	**+0.6**
	0.5nm,0.4s,baz=324,slow=6.4,SNR=13						
	0.5nm,0.4s						

IDC 09 11:32:21.6±2.1,14.˚52S×178.˚59W,h0km,mb3.3/4, mbtmp3.3/4,Error ellipse: s-maj=134.9km s-min=26.2km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.17**	**256**	P	P	11 40 40.3	-0.3
	0.4nm,0.7s,baz=83,slow=6.2,SNR=5.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**45.63**	**251**	P	P	11 40 44.1	0.0
	2.9nm,0.3s,baz=84,slow=8.7,SNR=116						
ILAR	**Eielson Array**	**82.65**	**13**	P	P	11 44 46.5	+0.1
	0.2nm,0.8s,baz=226,slow=4.8,SNR=4.1						
	0.2nm,0.8s						
TXAR	**Lajitas Array**	**84.34**	**58**	P	P	11 44 56.3	+0.2
	0.2nm,0.8s,baz=239,slow=6.2,SNR=2.2						
	0.2nm,0.8s						
PDAR	**Pinedale Array**	**85.03**	**44**	P	P	11 44 59.3	-0.2
	0.1nm,0.5s,baz=237,slow=4.8,SNR=1.9						
	0.1nm,0.5s						

*EST **09** 11:42:31.8±0.1,59.˚94N×26.˚64E,h0km,ML1.7(HEL), Explosion*
*HEL **09** 11:42:31.9±0.1,59.˚94N×26.˚64E,h0km,ML1.7,Explosion*
*IDC **09** 11:42:33.2±2.2,60.˚01N×26.˚59E,h0km,mbtmp3.4/2, ML1.8/1,Error ellipse: s-maj=22.4km s-min=13.8km az=105.0*

ISC 09 11:42:29.9±0.8,59.˚96N±0.˚03×26.˚67E±0.˚03,h0km,n25, σ0s46/36,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARBE	**Arbavere**	**0.63**	**214**	eP	**Pg**	**11 42 42.5**	**+0.6**
ARBE				eS	**Sg**	**11 42 50.3**	**+0.2**
PVF	**Pernaja**	**0.71**	**326**	eP	**Pb**	**11 42 45.0**	**-0.1**
PVF				eS	**Sb**	**11 42 54.4**	**-1.1**
VJF	**Virojoki**	**0.73**	**37**	eP	**Pb**	**11 42 45.1**	**-0.2**
VJF				eS	**Sb**	**11 42 55.3**	**-0.5**
HEL5	**Espoo, Suvisaa**	**0.98**	**280**	eP	**Pb**	**11 42 49.4**	**-0.4**
EE03	**Tooma soojaam,**	**1.11**	**191**	eP	**Pg**	**11 42 51.3**	**+0.2**
NUR	**Nurmijrvi**	**1.15**	**299**	eP	**Pb**	**11 42 52.6**	**+0.1**
NUR				eS	**Sg**	**11 43 06.6**	**-0.1**
MEF	**Metsahovi**	**1.17**	**284**	eP	**Pb**	**11 42 53.0**	**+0.1**
MEF	**Metsahovi**	**1.17**	**284**	eP	**Pb**	**11 42 52.8**	**-0.1**
MEF				eS	**Sg**	**11 43 07.1**	**-0.3**
EE02	**Kiisa, Saku**	**1.27**	**233**	eP	**Pg**	**11 42 54.3**	**+0.2**
EE02				eS	**Sg**	**11 43 10.1**	**-0.5**
EE08	**Sarghaua, Vand**	**1.50**	**210**	eP	**Pn**	**11 42 58.2**	**+0.2**
EE08				eS	**Sg**	**11 43 17.1**	**-0.9**
VSU	**Vasula**	**1.50**	**179**	eP	**Pb**	**11 42 58.9**	**+0.2**
VSU	**Vasula**	**1.50**	**179**	eP	**Pb**	**11 42 58.9**	**+0.2**
VSU				eS	**Sg**	**11 43 17.4**	**-0.7**
FIA0	**FINESS Array S**	**1.52**	**349**	eP	**Pb**	**11 42 58.8**	**0.0**
FIA0				eS	**Sn**	**11 43 19.8**	**+1.2**
FINES	**FINESS Array B**	**1.52**	**349**	Pg	**Pb**	**11 42 58.8**	**0.0**
	0.2nm,0.3s,baz=170,slow=16,SNR=19						
FINES				Lg	Lg	11 43 19.3	
	0.4nm,0.3s,baz=174,slow=31,SNR=13						
FIA1	**FINESS Array S**	**1.52**	**349**	eP	**Pb**	**11 42 58.8**	**0.0**
FIA1				MSG		11 43 23.3	
	comp=Z,4.4nm,0.1s						
EE01	**Perakula, Nova**	**1.73**	**245**	ePN	**Pg**	**11 43 02.8**	**-0.1**
EE01				eSN	**Sg**	**11 43 25.6**	**+0.3**
RUF	**Ruokolahti**	**1.85**	**36**	eP	**Pb**	**11 43 04.5**	**+0.1**
RUF				eS	**Sg**	**11 43 28.9**	**-0.2**
RUF				MSG		11 43 31.4	
	comp=Z,7.0nm,0.1s						
MTSE	**Matsula**	**1.93**	**231**	eP	**Pb**	**11 43 05.5**	**-0.3**
MTSE	**Matsula**	**1.93**	**231**	eP	**Pb**	**11 43 05.1**	**-0.7**
MTSE				eS	**Sn**	**11 43 29.1**	**+0.4**
KAF	**Kangasniemi**	**2.17**	**355**	eP	**Pb**	**11 43 09.8**	**-0.1**
KAF				eSG	**Sg**	**11 43 39.0**	**-0.4**
KAF				MSG		11 43 42.3	
	comp=Z,5.2nm,0.1s						
KEF	**Keuruu**	**2.38**	**339**	MSG		11 43 47.2	
	comp=Z,3.5nm,0.2s						
RAF	**Rauma**	**2.65**	**296**	eP	**Pn**	**11 43 14.2**	**+0.4**
RAF	**Rauma**	**2.65**	**296**	MSG		11 43 53.6	
	comp=Z,1.9nm,0.1s						
NOA	**NORSAR Array B**	**7.71**	**285**	Pn	**Pn**	**11 44 23.9**	**+0.7**
	baz=94,slow=16,SNR=1.8						
	comp=Z,0.7nm,0.8s						
ARCES	**ARCESS Array B**	**9.63**	**358**	Pn	**Pn**	**11 44 49.1**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=181,slow=13,SNR=6.2						

*MOS **09** 11:43:53.6±1.0,17.˚74S×178.˚69W,h530km,mb5.6/51, Error ellipse: s-maj=7.1km s-min=6.2km az=73.8*
*IDC **09** 11:43:55.6±0.4,17.˚91S×178.˚63W,h550km±4km,mb4.9/28, mbtmp5.8/31,Error ellipse: s-maj=9.4km s-min=7.8km az=83.0*
*BJI **09** 11:43:55.2±0.0,17.˚90S×178.˚65W,h560km,mb5.1/77, mB5.2/64*
*NEIC **09** 11:43:56.8±1.8,17.˚87S±0.˚08×178.˚66W±0.˚09, h557km±3km,mb5.6/620,Mwb6.1/74,Mww6.0/37,Error ellipse: s-maj=12.7km s-min=11.8km az=124.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.57; Mθθ0.28; Mϕϕ-0.86; Mrθ1.10; Mθϕ0.31; Mϕr-0.63; Fault plane solution: M0 1.51000×10¹⁸ NP1: ϕs129.26000°,δ78.21000°,λ64.46000°. NP2:ϕs16.10000°, δ27.97000°,λ154.16000°. Principal axes: T 1.5683, Plg50.0000°, Azm11.0000°; N -0.1272, Plg25.0000°, Azm135.0000°; P -1.4411, Plg29.0000°, Azm240.0000°;*
*IPGP **09** 11:43:56.0,17.˚89S×178.˚66W,h572km,Mw6.1,Fault plane solution: NP1:ϕs126.00000°,δ79.00000°, λ53.00000°. NP2:ϕs22.00000°,δ38.00000°,λ161.00000°.*
*NOU **09** 11:43:56.2,17.˚87S×178.˚56W,h556km,ML5.5/201,Fiji Islands Region*
*NEIC **09** 11:43:57.3,17.˚88S×178.˚66W,h563km*
*NEIC **09** 11:43:57.3,17.˚88S×178.˚66W,h590km*
*NEIC **09** 11:43:57.3,17.˚78S×178.˚55W,h590km,Moment Tensor Solution. Duration: 4s9 Moment tensor: Scale 10¹⁸Nm; Mrr0.43; Mθθ0.34; Mϕϕ-0.78; Mrθ0.75; Mθϕ0.35; Mϕr-0.45; Fault plane solution: M0 1.16000×10¹⁸ NP1: ϕs129.24000°,δ76.63000°,λ56.96000°. NP2:ϕs19.67000°, δ35.35000°,λ156.45000°. Principal axes: T 1.1433, Plg48.0000°, Azm4.0000°; N 0.0266, Plg32.0000°, Azm138.0000°; P -1.1699, Plg24.0000°, Azm244.0000°;*
*GCMT **09** 11:43:59.8±0.1,17.˚80S±0.˚01×178.˚54W±0.˚01, h571km,MW6.0/167,Moment Tensor Solution. s167,c345; s119,c139; Duration: 2s4 Moment tensor: Scale 10¹⁸Nm; Mrr0.36±.01; Mθθ0.42±.01; Mϕϕ-0.77±.01; Mrθ0.84±.01; Mθϕ0.37±.01; Mϕr-0.48±.01; Best double couple: Mo1.23400×10¹⁸ NP1:ϕs127.00000°,δ80.00000°, λ56.00000°. NP2:ϕs22.00000°,δ35.00000°,λ162.00000°. Principal axes: T 1.2310, Plg45.0000°, Azm3.0000°; N 0.0070, Plg33.0000°, Azm133.0000°; P -1.2370, Plg27.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 09 11:43:55.7±0.2,17.˚89S±0.˚03×178.˚61W±0.˚03, h553km±1km,h554km:pP-P,n2003,σ1s18/2074,mb5.5/433, 152C-41D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**1.71**	**313**	P	**P**	**11 45 06.0**	**+1.4**
DGTI	**Dogotuki**	**2.24**	**315**	P	**P**	**11 45 08.2**	**+1.3**
YSA	**Yasawairara**	**3.83**	**287**	P	**P**	**11 45 18.6**	**+2.0**
AFI	**Afiamalu**	**7.67**	**60**	P	**P**	**11 45 49.3**	**-1.1**
AFI	**Afiamalu**	**7.67**	**60**	P	**P**	**11 45 48.7**	**-1.8**
AFI	**Afiamalu**	**7.67**	**60**	P	**P**	**11 45 49.3**	**-1.1**
NIUE	**Niue**	**8.32**	**100**	P	**P**	**11 45 56.0**	**-0.7**
	baz=8.2						
NIUE	**Niue**	**8.32**	**100**	P	**P**	**11 45 57.6**	**+0.8**
NIUE	**Niue**	**8.32**	**100**	P	**P**	**11 45 57.5**	**+0.8**
FUNA	**Funafuti**	**9.55**	**347**	P	**P**	**11 46 09.3**	**+0.1**
FUNA	**Funafuti**	**9.55**	**347**	P	**P**	**11 46 09.8**	**+0.6**
RIZ	**Raoul Island**	**11.32**	**177**	P	**P**	**11 46 25.5**	**-1.7**
RIZ				S	**S**	**11 48 29.4**	**-2.3**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**11 46 26.9**	**-0.3**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**11 46 26.9**	**-0.3**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**11 46 26.2**	**-1.0**
	728nm,0.3s,baz=285,slow=14,SNR=7.6						
RAO				S	**S**	**11 48 28.4**	**-3.4**
	337nm,0.4s,baz=78,slow=20,SNR=1.4						
GLKZ	**Green Lake**	**11.34**	**177**	P	**P**	**11 46 25.5**	**-1.8**
GLKZ				S	**S**	**11 48 31.5**	**-0.5**
PINNC	**Pines Island,**	**13.90**	**248**	P	**P**	**11 46 53.8**	**-0.1**
PINNC	**Pines Island,**	**13.90**	**248**	P	**P**	**11 46 54.1**	**+0.2**
YATNC	**Mamie plateau,**	**14.25**	**251**	P	**P**	**11 46 56.6**	**-0.9**
OUENC	**Ouen Island, N**	**14.39**	**249**	P	**P**	**11 46 58.7**	**-0.2**
OUENC	**Ouen Island, N**	**14.39**	**249**	P	**P**	**11 46 59.7**	**+0.8**
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**11 47 01.4**	**-0.3**
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**11 47 01.3**	**-0.4**
DZM	**Mont Dzumac**	**14.65**	**251**	ePn	**P**	**11 47 01.0**	**-0.8**
	2μm,1.1s						
DZM				eSn	**S**	**11 49 35.4**	**+0.5**
	281nm,1.4s						
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**11 47 00.9**	**-0.8**
	201nm,0.5s,baz=75,slow=15,SNR=84						
DZM				S	**S**	**11 49 34.5**	**-0.4**
	39nm,0.9s,baz=75,slow=22,SNR=1.4						
DZM				ScP	**ScP**	**11 54 17.4**	**+2.3**
	14nm,0.7s,baz=128,slow=3.4,SNR=4.5						
ONTNC	**Ouen Toro**	**14.70**	**250**	P	**P**	**11 47 01.7**	**-0.4**
ONTNC	**Ouen Toro**	**14.70**	**250**	P	**P**	**11 47 02.0**	**-0.1**
KOUNC	**Koumac, New Ca**	**16.37**	**258**	P	**P**	**11 47 19.1**	**+0.4**
KOUNC	**Koumac, New Ca**	**16.37**	**258**	P	**P**	**11 47 19.1**	**+0.4**
NFK	**Norfolk Island**	**16.59**	**226**	P	**P**	**11 47 21.9**	**+1.4**
	baz=17,SNR=19						
NFK	**Norfolk Island**	**16.59**	**226**	P	**P**	**11 47 22.9**	**+2.4**
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**11 47 35.2**	**+1.3**
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**11 47 35.2**	**+1.3**
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**11 47 35.3**	**+1.3**
RAR	**Rarotonga**	**18.05**	**104**	P	**P**	**11 47 34.3**	**+0.3**
	115nm,0.9s,baz=225,slow=7.0,SNR=9.1						
OUZ	**Omahuta**	**18.60**	**200**	P	**P**	**11 47 42.8**	**+4.0**
WCZ	**Waipu Caves**	**19.03**	**198**	P	**P**	**11 47 46.0**	**+3.3**
KUZ	**Kuaotunu**	**19.44**	**194**	P	**P**	**11 47 47.5**	**+1.1**
KUZ	**Kuaotunu**	**19.44**	**194**	P	**P**	**11 47 47.8**	**+1.5**
ABAZ	**Army Bay**	**19.52**	**196**	P	**P**	**11 47 49.8**	**+2.7**
WIAZ	**Waiheke Island**	**19.62**	**195**	P	**P**	**11 47 49.7**	**+1.6**
MBAZ	**Motutapu North**	**19.66**	**196**	P	**P**	**11 47 50.9**	**+2.5**
RVAZ	**Riverhead Bore**	**19.75**	**196**	P	**P**	**11 47 51.5**	**+2.4**
HBAZ	**Herne Bay Bore**	**19.78**	**196**	P	**P**	**11 47 52.2**	**+2.7**
MXZ	**Matakaoa Point**	**19.79**	**187**	P	**P**	**11 47 47.9**	**-1.6**
MXZ	**Matakaoa Point**	**19.79**	**187**	P	**P**	**11 47 47.6**	**-2.0**
MXZ				S	**S**	**11 50 56.7**	**-2.4**
EPAZ	**Eden Park BICE**	**19.80**	**196**	P	**P**	**11 47 52.3**	**+2.7**
ETAZ	**East Tamaki Re**	**19.83**	**195**	P	**P**	**11 47 51.8**	**+1.9**
WTAZ	**Waiatarua**	**19.90**	**196**	P	**P**	**11 47 52.2**	**+1.6**
MKAZ	**Moumakai**	**19.91**	**195**	P	**P**	**11 47 51.7**	**+1.0**
AWAZ	**Awhitu Peninsu**	**20.00**	**196**	P	**P**	**11 47 52.8**	**+1.3**
WMGZ	**Waiomatatini S**	**20.03**	**187**	P	**P**	**11 47 51.4**	**-0.3**
WMGZ				S	**S**	**11 51 00.5**	**-2.5**
HAZ	**Te Kaha**	**20.04**	**188**	P	**P**	**11 47 50.3**	**-1.5**
HAZ				S	**S**	**11 50 58.9**	**-4.3**
PKGZ	**Pakihiroa**	**20.14**	**188**	P	**P**	**11 47 53.8**	**+1.0**
PKGZ				S	**S**	**11 51 01.3**	**-3.5**
RUGZ	**Raukumara Rang**	**20.26**	**189**	P	**P**	**11 47 51.9**	**-2.1**
RUGZ				S	**S**	**11 51 02.6**	**-4.4**
TGRZ	**Tauranga**	**20.27**	**192**	P	**P**	**11 47 54.4**	**+0.5**
PUZ	**Puketiti**	**20.29**	**187**	P	**P**	**11 47 53.1**	**-1.1**
PUZ				S	**S**	**11 51 01.7**	**-5.6**
TWGZ	**Tauwhareparae**	**20.43**	**188**	P	**P**	**11 47 54.9**	**-0.5**
TWGZ				S	**S**	**11 51 11.4**	**+1.9**
TOZ	**Tahuroa Road**	**20.43**	**193**	P	**P**	**11 47 56.4**	**+1.0**
TOZ	**Tahuroa Road**	**20.43**	**193**	P	**P**	**11 47 57.6**	**+2.3**
MARZ	**Manawahe**	**20.44**	**191**	P	**P**	**11 47 52.9**	**-2.7**
KMRZ	**Kaimai**	**20.45**	**192**	P	**P**	**11 47 57.1**	**+1.5**
EDRZ	**Edgecumbe**	**20.55**	**191**	P	**P**	**11 47 55.0**	**-1.6**
KARZ	**Kaharoa**	**20.56**	**192**	P	**P**	**11 47 59.2**	**+2.7**
OMRZ	**Omania**	**20.62**	**191**	P	**P**	**11 47 58.2**	**+1.1**
URZ	**Urewera**	**20.64**	**190**	P	**P**	**11 47 55.2**	**-2.0**
URZ	**Urewera**	**20.64**	**190**	P	**P**	**11 47 55.2**	**-2.0**
	227nm,0.6s,baz=129,slow=0.9,SNR=86						
URZ				S	**S**	**11 51 09.6**	**-3.0**
	56nm,0.8s,baz=212,slow=21,SNR=3.7						
URZ				ScS	**ScS**	**11 58 11.4**	**0.0**
	49nm,1.2s,baz=141,slow=23,SNR=8.3						
	227nm,0.6s						
URZ	**Urewera**	**20.64**	**190**	P	**P**	**11 47 56.0**	**-1.2**
URZ				S	**S**	**11 51 08.8**	**-3.8**
TARA	**Tarawa**	**20.86**	**336**	P	**P**	**11 47 59.5**	**-0.1**
TARA	**Tarawa**	**20.86**	**336**	P	**P**	**11 47 59.2**	**-0.4**
RTZ	**Ruatahuna**	**21.01**	**190**	P	**P**	**11 47 59.5**	**-1.1**
HIZ	**Hauiti**	**21.33**	**194**	P	**P**	**11 48 03.5**	**+0.1**
HIZ	**Hauiti**	**21.33**	**194**	P	**P**	**11 48 05.3**	**+1.8**
BKZ	**Black Stump Fm**	**21.62**	**190**	P	**P**	**11 48 04.3**	**-1.9**
BKZ	**Black Stump Fm**	**21.62**	**190**	P	**P**	**11 48 04.8**	**-1.4**
KHEZ	**Kahui Hut**	**22.27**	**195**	P	**P**	**11 48 15.0**	**+3.0**
HNR	**Honiara**	**22.45**	**289**	P	**P**	**11 48 13.7**	**-0.2**
HNR	**Honiara**	**22.45**	**289**	P	**P**	**11 48 14.7**	**+0.8**
HNR	**Honiara**	**22.45**	**289**	P	**P**	**11 48 13.7**	**-0.2**
BFZ	**Birch Farm**	**23.14**	**190**	P	**P**	**11 48 18.4**	**-1.3**
BFZ	**Birch Farm**	**23.14**	**190**	P	**P**	**11 48 17.5**	**-2.2**
TCW	**Tory Channel**	**24.03**	**193**	P	**P**	**11 48 27.1**	**-0.5**
SNZO	**South Karori**	**24.04**	**192**	P	**P**	**11 48 27.0**	**-0.6**
SNZO	**South Karori**	**24.04**	**192**	P	**P**	**11 48 25.9**	**-1.7**
BHW	**Baring Head**	**24.10**	**192**	P	**P**	**11 48 27.2**	**-0.9**
QRZ	**Quartz Range**	**24.10**	**197**	P	**P**	**11 48 28.1**	**0.0**
NNZ	**Nelson**	**24.25**	**195**	P	**P**	**11 48 29.6**	**+0.2**
LHI	**Lord Howe Isla**	**24.34**	**232**	P	**P**	**11 48 31.0**	**+0.5**
	baz=24,SNR=18						
LHI	**Lord Howe Isla**	**24.34**	**232**	P	**P**	**11 48 30.9**	**+0.5**
LHI	**Lord Howe Isla**	**24.34**	**232**	P	**P**	**11 48 32.1**	**+1.6**
CMWZ	**Cape Campbell**	**24.56**	**193**	P	**P**	**11 48 31.9**	**-0.4**
DSZ	**Dennistoun Nort**	**25.15**	**197**	P	**P**	**11 48 37.5**	**-0.1**
CTZ	**Chatham Island**	**25.82**	**177**	P	**P**	**11 48 46.3**	**+3.0**
CTZ	**Chatham Island**	**25.82**	**177**	P	**P**	**11 48 45.3**	**+2.0**
INZ	**Inchbonnie**	**26.16**	**197**	P	**P**	**11 48 45.1**	**-1.2**
RPZ	**Rata Peaks**	**27.19**	**197**	P	**P**	**11 48 53.9**	**-1.5**
FOZ	**Fox Glacier**	**27.37**	**199**	P	**P**	**11 48 56.4**	**-0.5**
GC1S	**Gold Coast 1 S**	**27.56**	**243**	P	**P**	**11 49 00.0**	**+1.2**
PAE	**Paea**	**27.63**	**94**	eP	**P**	**11 49 01.2**	**+1.6**
	83nm,1.3s						
PAE				epP	**pP**	**11 50 27.6**	**0.0**
	64nm,1.4s						
PPT2	**Papeete2**	**27.64**	**94**	epP	pP	11 50 18.9	-8.9
	2μm,28.8s						
PPT2				epP	pwP	11 50 26.6	-8.8
	1μm,31.2s						
PPT2				eS	S	11 52 49.3	-14
	2μm,27.5s						
PPT2				eS	S	11 52 56.6	-6.7
	1μm,45.0s						
PPT2				esS	sS	11 55 29.0	-22
	767nm,42.0s						
PPT2				esS	SS	11 55 41.1	-26
	168nm,17.2s						
PPT	**Papeete**	**27.64**	**94**	P	**P**	**11 48 59.9**	**+0.2**
	119nm,0.8s,baz=86,slow=12,SNR=7.5						
	119nm,0.8s						
PPTF	**Pamatai, Papee**	**27.65**	**94**	P	**P**	**11 49 01.3**	**+1.4**
**TIA

254nm,1.3s
ARMA Armidale 29.79 240 P **P** **11 49 18.9 +0.6**
baz=30,SNR=500
ARMA Armidale 29.79 240 P **P** **11 49 18.9 +0.6**
ARMA Armidale 29.79 240 P **P** **11 49 19.4 +1.1**
VAH Vaihoa 29.79 90 *e*P **P** **11 49 19.5 +1.1**
132nm,1.1s
VAH *e*pP **pP** **11 50 48.4 +1.1**
104nm,1.2s
DCZ Deep Cove 29.95 200 P **P** **11 49 19.3 0.0**
DCZ IAmb IAmb 11 49 27.8
comp=Z,102nm,0.7s
WHZ Wether Hill Ro 30.08 199 P **P** **11 49 20.0 -0.4**
SYZ Scrubby Hill 30.31 197 P **P** **11 49 22.5 +0.1**
NTLH Newcastle Hard 30.57 235 P **P** **11 49 26.4 +1.5**
comp=Z,749nm,0.7s
AUPHS Peel High Scho 30.60 239 P **P** **11 49 26.6 +1.4**
PYZ Puysegur Point 30.72 200 P **P** **11 49 26.7 +0.7**
MGCD Mangrove Creek 31.15 235 P **P** **11 49 30.8 +0.9**
baz=31,SNR=96
MGCD Mangrove Creek 31.15 235 P **P** **11 49 30.8 +0.9**
RMQ Roma 31.34 248 P **P** **11 49 32.2 +0.6**
RIV Riverview 31.35 234 P **P** **11 49 32.5 +1.0**
baz=32,SNR=11
RIV Riverview 31.35 234 P **P** **11 49 32.7 +1.2**
SYDH Sydney Hard Ro 31.64 234 P **P** **11 49 35.0 +1.0**
RABL Rabaul 31.68 292 P **P** **11 49 33.6 -1.1**
RABL Rabaul 31.68 292 P **P** **11 49 35.1 +0.4**
WOLH Wollongong Har 31.79 233 P **P** **11 49 36.0 +0.7**
AUAYR Ayr State High 32.20 262 P **P** **11 49 39.2 +0.3**
AUUHS Ulladulla High 32.48 231 P **P** **11 49 41.9 +0.8**
AULRC Lightning Ridg 32.58 243 P **P** **11 49 42.2 +0.2**
BULU Kimbe 32.75 288 P **P** **11 49 44.1 +0.4**
AUDCS Dubbo College 32.78 238 P **P** **11 49 45.5 +1.7**
TV1H Townsville Har 32.79 262 P **P** **11 49 43.7 -0.3**
CTA Charters Tower 33.26 261 P **P** **11 49 48.0 0.0**
CTA Charters Tower 33.26 261 S **S** **11 54 27.1 -2.6**
comp=Z,18nm,1.0s,baz=292,slow=16,SNR=2.6
CTA ScP **ScP** **11 55 08.0 +1.8**
comp=Z,53nm,1.1s,baz=122,slow=4.6,SNR=10
CTAO Charters Tower 33.26 261 P **P** **11 49 48.1 +0.1**
CTAO Charters Tower 33.26 261 P **P** **11 49 48.3 +0.3**
CTAO Charters Tower 33.26 261 P **P** **11 49 48.1 +0.1**
CTAO pmax pmax
comp=Z,352nm,0.8s
CTAO Charters Tower 33.26 261 P **P** **11 49 47.6 -0.4**
CTAO pP **pwP** **11 51 21.8 -1.6**
CTAO ScP **ScP** **11 55 07.9 +1.8**
CNB Canberra Magne 33.29 232 P **P** **11 49 48.6 +0.5**
baz=33,SNR=972
CNB Canberra Magne 33.29 232 P **P** **11 49 49.0 +0.9**
PATS Pohnpei 33.51 315 P **P** **11 49 50.4 +0.3**
baz=34,SNR=7.9
PATS Pohnpei 33.51 315 P **P** **11 49 50.2 +0.1**
PATS Pohnpei 33.51 315 P **P** **11 49 50.8 +0.7**
CAN Canberra 33.57 232 P **P** **11 49 50.5 +0.1**
CAN Canberra 33.57 232 P **P** **11 49 51.0 +0.6**
CAN Canberra 33.57 232 P **P** **11 49 50.5 +0.1**
CAN pmax pmax
comp=Z,341nm,0.8s
CAN Canberra 33.57 232 P **P** **11 49 50.8 +0.4**
CAN pP **pwP** **11 51 25.0 -1.3**
CAN ScP **ScP** **11 55 10.0 +2.9**
KAVG Kavieng 33.63 293 P **P** **11 49 52.1 +0.9**
YNG Young 33.65 234 P **P** **11 49 51.8 +0.7**
MILA Mila 34.15 229 P **P** **11 49 55.9 +0.6**
baz=34,SNR=42
MILA Mila 34.15 229 P **P** **11 49 55.8 +0.5**
PMG Port Moresby 34.27 280 P **P** **11 49 57.5 +1.1**
PMG Port Moresby 34.27 280 P **P** **11 49 57.1 +0.6**
PMG Port Moresby 34.27 280 P **P** **11 49 57.3 +0.8**
PMG Port Moresby 34.27 280 *de*P **P** **11 49 56.9 +0.4**
PMG pmax pmax
comp=Z,592nm,1.0s
PMG Port Moresby 34.27 280 S **S** **11 54 43.9 -1.1**
comp=Z,20nm,0.8s,baz=346,slow=23,SNR=2.4
PMG ScP **ScP** **11 55 11.0 +1.1**
comp=Z,21nm,0.8s,baz=269,slow=7.5,SNR=2.3
PMG Port Moresby 34.27 280 P **P** **11 49 57.1 +0.6**
PMG pP **pwP** **11 51 31.1 -1.0**
PMG PcP **PcP** **11 52 17.7 +0.7**
AUSMG Snowy Mountain 34.29 231 P **P** **11 49 57.3 +0.8**
CMSA Cobar Meteorol 35.00 240 P **P** **11 50 02.4 0.0**
baz=35,SNR=1000
CMSA Cobar Meteorol 35.00 240 P **P** **11 50 02.7 +0.4**
MTSU Mount Surprise 35.22 264 P **P** **11 50 04.0 -0.5**
baz=35,SNR=175
MTSU Mount Surprise 35.22 264 P **P** **11 50 04.8 +0.4**
QLP Quilpie 35.37 249 P **P** **11 50 05.4 -0.1**
baz=36,SNR=310
QLP Quilpie 35.37 249 P **P** **11 50 05.4 -0.1**
JOHN Johnston Islan 35.55 15 P **P** **11 50 07.2 +0.2**
JOHN Johnston Islan 35.55 15 P **P** **11 50 07.0 0.0**
GLAD Gladstone 36.73 224 P **P** **11 50 16.9 +0.4**
COEN Coen 36.92 270 P **P** **11 50 18.8 +0.4**
baz=37,SNR=213
COEN Coen 36.92 270 P **P** **11 50 18.6 +0.2**
COEN Coen 36.92 270 P **P** **11 50 18.8 +0.4**
MANU Manus Island 36.92 291 P **P** **11 50 19.7 +1.3**
MANU Manus Island 36.92 291 P **P** **11 50 19.6 +1.2**
TOO Toolangi 37.04 231 P **P** **11 50 19.5 +0.4**
baz=37,SNR=876
TOO Toolangi 37.04 231 P **P** **11 50 19.6 +0.4**
TOO Toolangi 37.04 231 P **P** **11 50 19.9 +0.8**
TOO Toolangi 37.04 231 P **P** **11 50 19.6 +0.5**
TOO pmax pmax
comp=Z,1μm,1.1s
AUMAG Moama Anglican 37.07 233 P **P** **11 50 20.5 +1.1**
AULHS Lilydale High 37.38 224 P **P** **11 50 23.0 +1.2**
CORO Coronation Par 37.53 224 P **P** **11 50 23.9 +0.9**
MLBS Spotswood, Mel 37.57 231 P **P** **11 50 24.2 +0.8**
MOO Moorlands 37.98 223 P **P** **11 50 27.3 +0.6**
baz=38,SNR=43
MOO Moorlands 37.98 223 P **P** **11 50 27.3 +0.6**
AUTAR Taroona High S 38.12 222 P **P** **11 50 29.7 +1.9**
TAU Tasmania Unive 38.13 222 P **P** **11 50 28.2 +0.3**
TAU IAmb IAmb 11 50 30.4
comp=Z,163nm,0.8s
TAU Tasmania Unive 38.13 222 P **P** **11 50 28.3 +0.4**
TAU Tasmania Unive 38.13 222 P **P** **11 50 28.2 +0.3**
TAU pmax pmax
comp=Z,163nm,0.8s
TAU Tasmania Unive 38.13 222 P **P** **11 50 28.4 +0.6**
GEXS Deakin Univers 38.15 230 P **P** **11 50 29.2 +1.1**
BRAT Ballarat 38.18 231 P **P** **11 50 29.6 +1.2**
TAOE Nuku Hiva Isla 38.41 82 P **P** **11 50 31.9 +1.3**
TAOE IAmb IAmb 11 50 32.3
comp=Z,166nm,1.0s
TAOE Nuku Hiva Isla 38.41 82 *e*P **P** **11 50 31.2 +0.5**
comp=Z,431nm,1.3s
STKA Stephens Creek 38.47 241 P **P** **11 50 31.3 +0.3**
baz=39,SNR=1000
STKA Stephens Creek 38.47 241 P **P** **11 50 31.2 +0.3**
STKA IAmb IAmb 11 50 33.8
comp=Z,111nm,0.7s
STKA Stephens Creek 38.47 241 P **P** **11 50 31.6 +0.7**
STKA Stephens Creek 38.47 241 *i*P **P** **11 50 31.0 +0.1**
STKA Stephens Creek 38.47 241 P **P** **11 50 30.7 -0.2**
comp=Z,329nm,0.5s,baz=87,slow=9.0,SNR=903
STKA PP **PP** **11 52 16.2 -0.7**
comp=Z,27nm,0.6s,baz=360,slow=16,SNR=1.2
STKA ScP **ScP** **11 55 27.0 +1.7**
comp=Z,7.7nm,0.5s,baz=52,slow=8.0,SNR=2.1
STKA S **S** **11 55 46.5 -0.6**
comp=Z,8.4nm,0.7s,baz=342,slow=20,SNR=1.3
STKA P3KPbc 12 20 24.5
comp=Z,2.0nm,0.6s,baz=289,slow=6.9,SNR=3.9
comp=Z,329nm,0.5s
INKA Innaminka 38.58 248 P **P** **11 50 32.6 +0.8**
QIS Mount Isa 39.47 259 P **P** **11 50 38.2 -0.9**
baz=40,SNR=100
QIS Mount Isa 39.47 259 P **P** **11 50 38.7 -0.4**
ARPS Mount Arapiles 39.51 233 P **P** **11 50 39.2 +0.1**
baz=40,SNR=265
ARPS Mount Arapiles 39.51 233 P **P** **11 50 39.4 +0.2**
AUHPC Hawkesdale P12 39.57 231 P **P** **11 50 40.8 +1.2**
WAKE Wake Island 39.68 338 P **P** **11 50 40.4 -0.2**
WAKE Wake Island 39.68 338 P **P** **11 50 40.3 -0.3**
WAKE Wake Island 39.68 338 P **P** **11 50 40.4 -0.2**
H11N3 WAKE ISLAND Hy 39.99 338 P **P** **11 50 42.3 -0.5**
baz=182,slow=9.8,SNR=20
H11N1 WAKE ISLAND Hy 39.99 338 P **P** **11 50 42.5 -0.4**
baz=182,slow=9.8,SNR=21
H11N2 WAKE ISLAND Hy 40.01 338 P **P** **11 50 43.0 -0.1**
baz=182,slow=9.8,SNR=15
MCQ Macquarie Isla 40.41 200 P **P** **11 50 46.1 +0.1**
baz=41,SNR=5.9
MCQ Macquarie Isla 40.41 200 P **P** **11 50 46.8 +0.8**
MCQ IAmb IAmb 11 50 48.5
comp=Z,109nm,0.9s
MCQ Macquarie Isla 40.41 200 P **P** **11 50 46.8 +0.8**
MCQ Macquarie Isla 40.41 200 P **P** **11 50 46.8 +0.8**
MCQ pmax pmax
comp=Z,109nm,0.9s
MMPI Merauke 40.93 278 P **P** **11 50 50.3 -0.5**
comp=Z,652nm,0.5s,comp=Z,12μmcomp=Z,3μm
HTT Hallett 40.99 239 P **P** **11 50 51.1 -0.1**
baz=41,SNR=854
HTT Hallett 40.99 239 P **P** **11 50 51.8 +0.7**
LCRK Leigh Creek 41.09 244 P **P** **11 50 52.3 +0.4**
TABU Tabubil 41.20 283 P **P** **11 50 53.6 +0.6**
GHSS Government Hou 41.56 237 P **P** **11 50 56.6 +1.1**
PTPS Port Pirie 41.71 240 P **P** **11 50 57.8 +1.1**
WHYH Whyalla 42.03 240 P **P** **11 50 59.8 +0.6**
OOD Oodnadatta 43.05 248 P **P** **11 51 07.9 +0.6**
GENI Genyem 43.18 286 P **P** **11 51 10.0 +1.5**
GENI Genyem 43.18 286 P **P** **11 51 09.7 +1.2**
comp=Z,804nm,0.7s,comp=Z,7μm
BBOO Buckleboo 43.25 241 P **P** **11 51 08.6 -0.2**
baz=43,SNR=1000
BBOO Buckleboo 43.25 241 P **P** **11 51 08.8 -0.1**
BBOO Buckleboo 43.25 241 P **P** **11 51 08.9 +0.1**
KHU Kahuku 43.27 33 P **P** **11 51 09.3 0.0**
KHU IAmb IAmb 11 51 30.7
comp=Z,180nm,0.9s
KHU Kahuku 43.27 33 P **P** **11 51 09.3 0.0**
KHU pmax pmax
comp=Z,180nm,0.9s
KHLU Kahalu`u 43.41 32 P **P** **11 51 10.6 +0.3**
HLP Hilina Pali 43.47 33 P **P** **11 51 11.8 +1.1**
MWH Moku'aweowe 43.48 32 P **P** **11 51 11.1 -0.1**
MWH IAmb IAmb 11 51 13.7
comp=Z,302nm,1.0s
HUH Hualalai 43.52 32 P **P** **11 51 12.2 +0.9**
MLOA Mauna Loa Obse 43.53 32 P **P** **11 51 11.9 +0.4**
PUH Pauahi 43.58 33 P **P** **11 51 12.8 +1.2**
MLH Mauna Loa 43.59 33 P **P** **11 51 13.0 +1.2**
RSD Rainshed 43.62 33 P **P** **11 51 12.4 +0.5**
HMH Humu'ula Sheep 43.63 32 P **P** **11 51 12.9 +0.7**
STCH Steam Cracks 43.63 33 P **P** **11 51 12.2 +0.3**
JCUZ Jacuzzi 43.65 33 P **P** **11 51 12.8 +0.7**
NPOC North of Pu'u 43.65 33 P **P** **11 51 12.9 +0.8**
KEKH Kekaha 43.73 26 P **P** **11 51 13.1 +0.5**
POHA Pohakuloa 43.74 32 P **P** **11 51 13.1 +0.2**
POHA Pohakuloa 43.74 32 P **P** **11 51 13.4 +0.5**
POHA Pohakuloa 43.74 32 P **P** **11 51 13.2 +0.3**
POHA ScP **ScP** **11 55 50.4 +3.7**
HON Honolulu 43.89 28 P **P** **11 51 14.9 +1.1**
HON Honolulu 43.89 28 P **P** **11 51 14.9 +1.1**
HON pmax pmax
comp=Z,465nm,1.0s
KIP Kipapa 43.97 28 P **P** **11 51 14.8 +0.4**
KIP IAmb IAmb 11 51 18.0
comp=Z,346nm,1.1s
KIP Kipapa 43.97 28 P **P** **11 51 14.7 +0.3**
KIP Kipapa 43.97 28 *i*P **P** **11 51 14.1 -0.3**
KIP pmax pmax
comp=Z,226nm,1.1s
KIP Kipapa 43.97 28 P **P** **11 51 14.5 +0.1**
KIP PcP **PcP** **11 52 48.5 +0.5**
KIP ScP **ScP** **11 55 50.1 +2.9**
OPA Opana 44.20 28 P **P** **11 51 17.6 +1.4**
OPA Opana 44.20 28 P **P** **11 51 17.6 +1.4**
OPA pmax pmax
comp=Z,1μm,1.9s
HLK Haleakala 44.23 31 P **P** **11 51 17.4 +0.7**
KHLH Kahului Airpor 44.26 30 P **P** **11 51 17.2 +0.5**
WR0 Warramunga Arr 44.26 260 P **P** **11 51 15.7 -1.1**
WR0 IAmb IAmb 11 51 18.6
comp=Z,200nm,1.1s
WB0 Warramunga Arr 44.42 260 P **P** **11 51 16.9 -1.1**
WC3 Warramunga Arr 44.42 260 P **P** **11 51 17.0 -1.1**
baz=44
WB2 Warramunga Arr 44.44 260 P **P** **11 51 16.9 -1.3**
WRAB Tennant Creek 44.44 260 P **P** **11 51 16.9 -1.3**
WRAB Tennant Creek 44.44 260 P **P** **11 51 16.9 -1.3**
WRAB pmax pmax
comp=Z,339nm,1.1s
WRA Warramunga Arr 44.45 260 P **P** **11 51 16.9 -1.4**
WRA Warramunga Arr 44.45 260 P **P** **11 51 16.9 -1.4**
WRA pmax pmax
comp=Z,49nm,1.1s
WRA Warramunga Arr 44.45 260 P **P** **11 51 16.9 -1.4**
comp=Z,111nm,0.4s,baz=93,slow=7.0,SNR=980
WRA PcP **PcP** **11 52 48.9 -1.0**
comp=Z,28nm,0.7s,baz=97,slow=3.9,SNR=3.6
WRA PP **PP** **11 53 15.2 +2.8**
comp=Z,37nm,0.9s,baz=92,slow=9.3,SNR=5.4
WRA ScP **ScP** **11 55 50.9 +1.4**
comp=Z,27nm,1.1s,baz=88,slow=4.1,SNR=11
WRA S **S** **11 57 10.0 -3.6**
comp=Z,28nm,0.9s,baz=93,slow=13,SNR=8.0
WRA ScS **ScS** **12 00 15.0 -0.3**
comp=Z,12nm,1.1s,baz=99,slow=5.6,SNR=4.8
comp=Z,111nm,0.4s
AS01 Alice Springs 44.57 254 P **P** **11 51 19.3 +0.1**
AS31 Alice Springs 44.61 254 P **P** **11 51 19.1 -0.4**
ASAR Alice Springs 44.62 254 P **P** **11 51 19.1 -0.4**
ASAR Alice Springs 44.62 254 P **P** **11 51 18.9 -0.6**
comp=Z,2μm,0.6s,baz=89,slow=8.2
ASAR PcP **PcP** **11 52 50.2 -0.2**
comp=Z,36nm,0.7s,baz=101,slow=4.9,SNR=2.6
ASAR ScP **ScP** **11 55 51.5 +1.4**
comp=Z,22nm,0.9s,baz=100,slow=3.9,SNR=6.2
ASAR S **S** **11 57 13.3 -2.5**
comp=Z,95nm,1.0s,baz=87,slow=16,SNR=37
ASAR P3KPbc 12 20 00.0
comp=Z,0.6nm,0.8s,baz=275,slow=4.1,SNR=8.6
ASAR PKP2ab 12 23 55.8
comp=Z,0.5nm,0.7s,baz=275,slow=2.6,SNR=5.9
ASPA Alice Springs 44.62 254 P **P** **11 51 18.9 -0.7**
baz=45
MULG Mulgathing 44.65 245 P **P** **11 51 19.7 0.0**
SMPI Sarmi 44.76 286 P **P** **11 51 21.5 +0.8**
comp=Z,257nm,0.9s,comp=Z,3μm
KDU Kakadu 47.37 269 P **P** **11 51 39.8 -0.7**
baz=48,SNR=407
KDU Kakadu 47.37 269 P **P** **11 51 40.2 -0.3**
GUMO Guam 47.72 309 P **P** **11 51 43.5 +0.4**
GUMO Guam 47.72 309 P **P** **11 51 43.5 +0.4**
GUMO pmax pmax
comp=Z,420nm,0.9s
GUMO Guam 47.72 309 P **P** **11 51 43.3 +0.3**
comp=Z,390nm,0.8s,baz=157,slow=6.5,SNR=7.2
comp=Z,390nm,0.8s
GUMO Guam 47.72 309 P **P** **11 51 43.5 +0.4**
MTN Manton Dam 48.61 268 P **P** **11 51 48.8 -0.9**
baz=49,SNR=63
MTN Manton Dam 48.61 268 P **P** **11 51 48.7 -1.1**
MTN IAmb IAmb 11 51 50.8
comp=Z,174nm,0.8s
MTN Manton Dam 48.61 268 P **P** **11 51 49.3 -0.5**
WRKA Warakurna 49.67 252 P **P** **11 51 57.1 -0.4**
baz=50,SNR=1000
WRKA Warakurna 49.67 252 P **P** **11 51 57.2 -0.3**
SAUI Saumlaki 49.67 275 P **P** **11 51 58.6 +1.0**
SAUI Saumlaki 49.67 275 P **P** **11 51 58.3 +0.7**
SAUI Saumlaki 49.67 275 P **P** **11 51 58.4 +0.8**
comp=Z,475nm,1.2s,comp=Z,15μmcomp=Z,4μm
FORT Forrest 49.84 245 P **P** **11 51 58.0 -0.6**
baz=50,SNR=680
FORT Forrest 49.84 245 P **P** **11 51 57.9 -0.7**
FORT Forrest 49.84 245 P **P** **11 51 58.2 -0.4**
KNRA Kununurra 50.30 264 P **P** **11 52 01.6 -0.6**
baz=50,SNR=152
KNRA Kununurra 50.30 264 P **P** **11 52 01.1 -1.1**
KNRA Kununurra 50.30 264 P **P** **11 52 02.3 +0.1**
FAKI Fak Fak 50.39 281 P **P** **11 52 02.7 -0.2**
FAKI IAmb IAmb 11 52 05.2
comp=Z,159nm,1.2s
FAKI Fak Fak 50.39 281 P **P** **11 52 03.0 +0.1**
FAKI Fak Fak 50.39 281 P **P** **11 52 02.6 -0.2**
comp=Z,131nm,1.7s,comp=Z,2μmcomp=Z,2μm
SWI Sorong 52.06 283 P **P** **11 52 15.1 +0.2**
SWI Sorong 52.06 283 P **P** **11 52 15.1 +0.2**
comp=Z,768nm,1.0s,comp=Z,6μm
FITZ Fitzroy Crossi 52.85 261 P **P** **11 52 20.4 -0.1**
baz=53,SNR=81
FITZ Fitzroy Crossi 52.85 261 P **P** **11 52 20.4 -0.1**
FITZ Fitzroy Crossi 52.85 261 P **P** **11 52 20.7 +0.2**
NLAI Namlea 55.11 279 P **P** **11 52 36.4 -0.1**
comp=Z,123nm,0.9s
KMBL Kambalda 55.15 244 P **P** **11 52 35.7 -0.8**
baz=55,SNR=110
KMBL Kambalda 55.15 244 P **P** **11 52 35.9 -0.7**
DRV Dumont d'Urvil 55.62 199 P **P** **11 52 39.5 +0.3**
DRV pP **pP** **11 54 26.4 +1.6**
LBMI Labuha 55.63 282 P **P** **11 52 40.8 +0.6**
comp=Z,322nm,0.8s,comp=Z,3μm
SOEI Soe 55.88 270 P **P** **11 52 42.9 +0.8**
SOEI Soe 55.88 270 P **P** **11 52 43.7 +1.7**
SOEI Soe 55.88 270 P **P** **11 52 43.3 +1.3**
comp=Z,811nm,1.1s,comp=Z,6μmcomp=Z,3μm
TNTI Ternate 56.27 283 P **P** **11 52 45.0 +0.5**
TNTI IAmb IAmb 11 52 46.6
comp=Z,179nm,1.0s
TNTI Ternate 56.27 283 P **P** **11 52 45.1 +0.5**
TNTI Ternate 56.27 283 P **P** **11 52 44.8 +0.2**
comp=Z,219nm,1.0s
SANI Sanana 56.55 280 P **P** **11 52 46.9 +0.4**
SANI Sanana 56.55 280 P **P** **11 52 46.3 -0.2**
comp=Z,327nm,0.9s,comp=Z,3μm
PSA00 Pilbara Seismi 57.73 255 P **P** **11 52 53.6 -0.9**
PSA00 IAmb IAmb 11 52 55.9
comp=Z,263nm,0.8s
PSA00 Pilbara Seismi 57.73 255 P **P** **11 52 54.2 -0.3**
MMRI Maumere 58.11 271 P **P** **11 52 56.9 -0.2**
MMRI Maumere 58.11 271 P **P** **11 52 56.4 -0.7**
comp=Z,132nm,0.5s,comp=Z,3μmcomp=Z,3μm
MEEK Meekatharra 58.26 249 P **P** **11 52 56.9 -1.2**
baz=58,SNR=71
MEEK Meekatharra 58.26 249 P **P** **11 52 57.4 -0.6**
AUALB St Joseph's Co 58.45 240 P **P** **11 52 59.1 0.0**
EDFI Ende, Flores 58.60 271 P **P** **11 52 59.7 -0.9**
comp=Z,273nm,1.0s,comp=Z,2μmcomp=Z,2μm
KLBR Kellerberrin 58.67 244 P **P** **11 52 60.0 -0.7**
baz=59,SNR=69
KLBR Kellerberrin 58.67 244 P **P** **11 53 00.0 -0.7**
JCJ Chichijima 58.71 319 P **P** **11 53 00.9 +0.1**
JCJ IAmb IAmb 11 53 01.5
comp=Z,272nm,1.2s
JCJ Chichijima 58.71 319 P **P** **11 52 56.5 -4.4**
comp=Z,39nm,0.4s,baz=90,slow=23,SNR=11
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 02.8 -0.4**
baz=59,SNR=84
NWAO P **P** **11 53 02.8 -0.4**
baz=59,SNR=84
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 02.8 -0.4**
NWAO IAmb IAmb 11 53 04.9
comp=Z,206nm,1.1s
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 02.7 -0.4**
NWAO IAmb IAmb 11 53 04.9
comp=Z,616nm,1.1s
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 03.2 0.0**
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 03.0 -0.2**
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 02.8 -0.4**
NWAO pmax pmax
comp=Z,206nm,1.1s
NWAO Narrogin (SRO) 59.05 242 P **P** **11 53 03.0 -0.2**
RKGY Rocky Gully 59.22 240 P **P** **11 53 04.0 -0.3**
baz=59,SNR=30
RKGY Rocky Gully 59.22 240 P **P** **11 53 04.4 +0.1**
BASI Baing, Sumba 59.28 269 P **P** **11 53 05.6 +0.6**
comp=Z,353nm,1.7s,comp=Z,4μmcomp=Z,2μm
KMSI Cibinong 59.35 282 P **P** **11 53 05.5 0.0**
comp=Z,414nm,0.8s,comp=Z,3μm
BLDU Ballidu 59.62 245 P **P** **11 53 06.4 -0.6**
baz=60,SNR=114
BLDU Ballidu 59.62 245 P **P** **11 53 06.4 -0.6**
LUWI Luwuk 59.92 279 P **P** **11 53 09.5 +0.3**
LUWI IAmb IAmb 11 53 11.6
comp=Z,418nm,1.1s
LUWI Luwuk 59.92 279 P **P** **11 53 09.8 +0.6**
LUWI Luwuk 59.92 279 P **P** **11 53 09.5 +0.3**
comp=Z,362nm,1.3s,comp=Z,4μm
MUN Mundaring 59.96 243 P **P** **11 53 09.1 -0.2**
baz=60,SNR=36
MUN Mundaring 59.96 243 P **P** **11 53 09.0 -0.2**
MUN Mundaring 59.96 243 P **P** **11 53 08.6 -0.7**
MORW Morawa 60.32 246 P **P** **11 53 11.0 -0.6**
baz=60,SNR=67
MORW Morawa 60.32 246 P **P** **11 53 11.1 -0.6**
MORW Morawa 60.32 246 P **P** **11 53 11.0 -0.6**
MTKN Mount Kenneth 60.34 243 P **P** **11 53 13.5 +1.8**
SBA Scott Base 60.42 184 P **P** **11 53 13.0 +1.5**
SBA Scott Base 60.42 184 P **P** **11 53 13.0 +1.5**
SBA pmax pmax
comp=Z,194nm,1.4s
SBA Scott Base 60.42 184 P **P** **11 53 13.7 +2.2**
SBA pP **pP** **11 55 05.2 +5.1**
VNDA Vanda 60.45 185 P **P** **11 53 12.9 +1.2**
VNDA Vanda 60.45 185 P **P** **11 53 12.9 +1.2**
VNDA pmax pmax
comp=Z,33nm,0.9s
VNDA Vanda 60.45 185 P **P** **11 53 12.3 +0.7**
comp=Z,26nm,0.8s,baz=352,slow=7.6,SNR=71
VNDA PcP **PcP** **11 53 49.8 +0.1**
comp=Z,6.8nm,0.7s,baz=139,slow=3.9,SNR=1.4
VNDA ScP **ScP** **11 56 58.2 +0.5**
comp=Z,15nm,1.1s,baz=14,slow=7.1,SNR=4.6
comp=Z,26nm,0.8s
VNDA Vanda 60.45 185 P **P** **11 53 12.6 +0.9**
VNDA pP **pwP** **11 55 04.9 +2.6**
VNDA ScP **ScP** **11 57 01.1 +3.4**
BKSI Bulukumba 61.06 274 P **P** **11 53 15.9 -0.9**
comp=Z,51nm,0.7s,comp=Z,946nm
MRSI Marisa 61.22 281 P **P** **11 53 17.5 -0.3**
comp=Z,125nm,1.0s,comp=Z,1μm
KAPI Kappang 61.51 274 P **P** **11 53 19.6 -0.1**
KAPI Kappang 61.51 274 P **P** **11 53 19.6 -0.1**
KAPI pmax pmax
comp=Z,63nm,1.0s
H01W1 Cape Leeuwin H 61.53 240 P **P** **11 53 20.8 +1.5**
baz=117,slow=6.0,SNR=8.5
H01W3 Cape Leeuwin H 61.55 240 P **P** **11 53 20.6 +1.3**
baz=117,slow=6.0,SNR=6.6
H01W2 Cape Leeuwin H 61.55 240 P **P** **11 53 20.8 +1.5**
baz=117,slow=6.0,SNR=8.0
TTSI Tana Toraja 62.05 276 P **P** **11 53 24.2 +1.0**
comp=Z,77nm,1.3s,comp=Z,1μm
PLAI Plampang 62.31 269 P **P** **11 53 24.6 -0.3**
PLAI Plampang 62.31 269 P **P** **11 53 24.4 -0.5**
comp=Z,425nm,0.9s,comp=Z,3μm
TOLI2 Tolitoli 62.53 281 P **P** **11 53 26.5 +0.2**
GIRL Giralia 62.72 253 P **P** **11 53 27.2 -0.2**
baz=63,SNR=46
GIRL Giralia 62.72 253 P **P** **11 53 28.2 +0.7**
GIRL Giralia 62.72 253 P **P** **11 53 28.1 +0.7**
MPSI Mapaga 63.09 280 P **P** **11 53 29.9 0.0**
comp=Z,126nm,0.9s,comp=Z,2μmcomp=Z,1μm
TWSI Taliwang, Sumb 63.18 269 P **P** **11 53 30.0 -0.5**
comp=Z,428nm,0.8s,comp=Z,4μm
JHJ2 Mitsune 64.42 322 P **P** **11 53 38.0 0.0**
JHJ2 Mitsune 64.42 322 P **P** **11 53 38.1 +0.2**
JHJ Hachijo jima 2 64.44 322 P **P** **11 53 38.1 0.0**
comp=Z,399nm,0.6s,baz=144,slow=5.1,SNR=36
comp=Z,399nm,0.6s
DNP Denpasar 64.79 269 P **P** **11 53 41.1 +0.4**
comp=Z,747nm,0.8s,comp=Z,24μm
CCD Concordia, Ant 64.84 194 P **P** **11 53 40.8 +0.3**
CCD pP **pwP** **11 55 33.0 -0.5**
SRBI Singaraja 64.95 269 P **P** **11 53 41.2 -0.5**
comp=Z,180nm,1.1s
JAGI Jajag, Banyuwa 65.85 269 P **P** **11 53 46.2 -1.2**
JAGI Jajag, Banyuwa 65.85 269 P **P** **11 53 46.1 -1.3**
comp=Z,379nm,0.9s,comp=Z,3μm
CASY Casey 66.07 205 P **P** **11 53 48.7 +0.9**
CASY IAmb IAmb 11 53 50.4
comp=Z,162nm,0.7s
CASY Casey 66.07 205 P **P** **11 53 48.3 +0.5**
CASY pP **pP** **11 55 39.7 +1.1**
JSG Sagara 66.48 322 P **P** **11 53 52.3 +1.5**
BLJI Banyuglugur 66.58 269 P **P** **11 53 51.5 -0.4**
comp=Z,301nm,0.8s,comp=Z,3μm
GMJI Gumukmas 66.58 269 P **P** **11 53 51.0 -0.9**
comp=Z,148nm,0.7s,comp=Z,2μm
JMM Marumori 67.32 326 P **P** **11 53 56.0 +0.1**
JMM IAmb IAmb 11 53 57.1
comp=Z,147nm,1.2s
JMM Marumori 67.32 326 P **P** **11 53 56.0 +0.1**
MTKI Muara Teweh, K 67.38 277 P **P** **11 53 57.5 +0.7**
TGY Tagaytay City 67.57 294 P **P** **11 53 58.4 +0.4**
comp=Z,91nm,0.3s,baz=216,slow=12,SNR=1.7

comp=E,91nm,0.3s
JGF Kuroka 67.61 322 P **P** **11 53 57.9 +0.1**
INU Inuyama 67.63 322 P **P** **11 53 58.6 +0.7**
INU Inuyama 67.63 322 P **P** **11 53 57.9 0.0**
MJAR Matsushiro Arr 67.78 323 P **P** **11 53 58.3 -0.5**
comp=Z,55nm,0.5s,baz=155,slow=5.6,SNR=142
MJAR S **S** **12 02 12.4 -1.1**
comp=Z,2.8nm,1.1s,baz=58,slow=18,SNR=5.0
comp=Z,55nm,0.5s
MAJO Matsushiro 67.78 323 P **P** **11 53 58.6 -0.2**
MAJO IAmb IAmb 11 54 00.5
comp=Z,101nm,0.8s
MAJO Matsushiro 67.78 323 P **P** **11 53 58.5 -0.4**
MAJO Matsushiro 67.78 323 P **P** **11 53 58.6 -0.2**
MAJO pmax pmax
comp=Z,101nm,0.9s
MAJO Matsushiro 67.78 323 P **P** **11 53 58.4 -0.4**
MJB9 Matsu-Tunnel 67.79 323 P **P** **11 53 59.6 +0.7**
MJB9 IAmb IAmb 11 54 01.4
comp=Z,97nm,0.8s
JOW Kunigami 68.06 310 P **P** **11 54 01.6 +0.8**
JOW IAmb IAmb 11 54 03.0
comp=Z,159nm,1.3s
JOW Kunigami 68.06 310 P **P** **11 54 01.8 +1.1**
JOW Kunigami 68.06 310 P **P** **11 54 00.8 +0.1**
comp=Z,72nm,1.0s,baz=123,slow=11,SNR=9.8
comp=Z,72nm,1.0s
JMN Monobe 68.45 319 P **P** **11 54 03.8 +0.9**
JMN IAmb IAmb 11 54 05.8
comp=Z,154nm,1.0s
JMN Monobe 68.45 319 P **P** **11 54 03.9 +0.9**
KKM Kota Kinabalu 68.56 284 P **P** **11 54 04.2 +0.1**
KKM Kota Kinabalu 68.56 284 P **P** **11 54 04.4 +0.3**
NGJI Ngawi 68.72 269 P **P** **11 54 07.8 +2.8**
comp=Z,120nm,1.1s
ERM Erimo 69.28 330*c i*P **P** **11 54 08.2 +0.5**
ERM pmax pmax
comp=Z,10.0nm,0.5s
JTM Tenmabayashi 69.36 328 IAmb IAmb 11 54 10.7
comp=Z,228nm,1.2s
JTM Tenmabayashi 69.36 328 P **P** **11 54 08.4 +0.2**
KIWB Kanaga Island 69.46 1 P **P** **11 54 08.0 -0.5**
UGM Wanagama 69.46 268 P **P** **11 54 09.2 -0.3**
UGM Wanagama 69.46 268 P **P** **11 54 09.2 -0.3**
comp=Z,311nm,0.5s
ADK Adak 69.50 1 P **P** **11 54 08.1 -0.6**
ADK Adak 69.50 1 P **P** **11 54 07.8 -1.0**
ADK Adak 69.50 1 P **P** **11 54 08.1 -0.6**
ADK pmax pmax
comp=Z,431nm,1.1s
ADK Adak 69.50 1 P **P** **11 54 07.8 -1.0**
GSTR Great Sitkin T 69.72 2 P **P** **11 54 09.3 -0.8**
SMRI Semarang 69.78 269 P **P** **11 54 12.7 +1.3**
ATKA Atka Island 69.90 3 P **P** **11 54 10.2 -0.9**
ATKA Atka Island 69.90 3 P **P** **11 54 10.2 -0.9**
JNU Nakatsue 70.00 316 P **P** **11 54 12.2 -0.1**
JNU Nakatsue 70.00 316 P **P** **11 54 11.8 -0.5**
comp=Z,59nm,1.1s,baz=110,slow=1.6,SNR=12
comp=Z,59nm,1.1s
YOJ Yonaguni jima 70.78 305 P **P** **11 54 17.0 0.0**
YOJ IAmb IAmb 11 54 18.9
comp=Z,507nm,1.6s
YOJ Yonaguni jima 70.78 305 P **P** **11 54 17.3 +0.3**
YOJ Yonaguni jima 70.78 305 P **P** **11 54 17.0 0.0**
YOJ pmax pmax
comp=Z,507nm,1.6s
STKI Sintang 70.94 276 P **P** **11 54 19.8 +1.6**
comp=Z,179nm,1.0s
NIKH Nikolski High 71.07 6 P **P** **11 54 17.5 -0.5**
NIKH Nikolski High 71.07 6 P **P** **11 54 17.1 -1.0**
baz=190,SNR=15
KPJI Karang Pucung 71.14 268 P **P** **11 54 19.3 0.0**
comp=Z,201nm,0.6s
JKA Kamikawa-asahi 71.17 332 IAmb IAmb 11 54 21.7
comp=Z,228nm,1.2s
ASAJ Asahikawa 71.17 332 P **P** **11 54 20.4 +1.5**
comp=Z,66nm,0.6s,baz=230,slow=5.5,SNR=130
comp=Z,66nm,0.6s
CMJI Cimerak 71.47 268 P **P** **11 54 20.2 -1.1**
comp=Z,214nm,0.9s
YULB Yu-li 71.60 303 P **P** **11 54 21.2 -0.6**
YULB Yu-li 71.60 303 P **P** **11 54 21.3 -0.6**
NACB Ninganchiao 71.75 304 IAmb IAmb 11 56 09.2
comp=Z,88nm,0.6s
NACB Ninganchiao 71.75 304 P **P** **11 54 22.6 -0.1**
SKR Severo-Kuril's 71.81 343 *e*P P 11 54 17.4 -5.0
SKR *e*S **S** **12 02 57.8 -0.9**
SKR pmax pmax
comp=Z,542nm,1.0s
SKR pmax pmax
comp=Z,1μm,6.6s
JCJI Jatiwangi 72.00 269 P **P** **11 54 23.9 -0.5**
comp=Z,394nm,0.8s
SSLB Suanglung 72.07 303 P **P** **11 54 23.7 -0.8**
SSLB Suanglung 72.07 303 P **P** **11 54 23.8 -0.8**
TPUB Ta-pu 72.09 303 IAmb IAmb 11 54 24.7
comp=Z,106nm,0.7s
TPUB Ta-pu 72.09 303 P **P** **11 54 24.4 -0.3**
QSPA South Pole Qui 72.16 180 P **P** **11 54 25.1 +0.5**
QSPA IAmb IAmb 11 54 27.1
comp=Z,188nm,0.9s
QSPA South Pole Qui 72.16 180 P **P** **11 54 25.5 +1.0**
comp=Z,178nm,0.8s,baz=337,slow=0.6,SNR=261
QSPA pP **pP** **11 56 18.4 -0.5**
comp=Z,6.5nm,1.0s,baz=36,slow=14,SNR=0.7
comp=Z,178nm,0.8s
YHNB Yeheng 72.17 304 P **P** **11 54 25.5 +0.3**
YHNB Yeheng 72.17 304 P **P** **11 54 25.6 +0.3**
UNV Unalaska Valle 72.20 7 P **P** **11 54 23.3 -1.3**
UNV Unalaska Valle 72.20 7 P **P** **11 54 23.3 -1.3**
baz=192,SNR=18
BBJI Bungbulang 72.32 268 P **P** **11 54 26.0 -0.3**
KSM Kuching 72.50 277 IAmb IAmb 11 54 29.9
comp=Z,209nm,0.9s
KSM Kuching 72.50 277 P **P** **11 54 28.2 +0.9**
AKUT Akutan 72.57 8 IAmb IAmb 11 54 28.1
comp=Z,214nm,0.8s
AKUT Akutan 72.57 8 P **P** **11 54 25.4 -1.3**
CNJI Cibinong 72.86 268 P **P** **11 54 28.9 -0.4**
comp=Z,131nm,1.1s,comp=Z,1μm
PET Petropavlovsk 73.31 346 P **P** **11 54 30.6 -0.4**
PET Petropavlovsk 73.31 346*ce*P **P** **11 54 30.8 -0.2**
PET pmax pmax
comp=Z,130nm,1.2s
YSS Yuzh-Sakhalins 73.32 333 P **P** **11 54 31.6 +0.5**
YSS IAmb IAmb 11 54 34.0
comp=Z,194nm,1.1s
YSS Yuzh-Sakhalins 73.32 333 P **P** **11 54 32.0 +0.8**
YSS Yuzh-Sakhalins 73.32 333*ce*P **P** **11 54 31.7 +0.5**
YSS *e* 11 57 23.3
YSS *e*S **S** **12 03 18.0 +2.4**
YSS pmax pmax
comp=Z,100nm,1.1s
YSS pmax pmax
comp=Z,1μm,5.8s
YSS pmax pmax
comp=N,300nm,3.4s
YSS pmax pmax
comp=E,200nm,3.4s
YSS pmax pmax
comp=Z,600nm,7.8s
YSS pmax pmax
comp=N,300nm,7.3s
YSS pmax pmax
comp=E,200nm,5.4s
YSS smax smax
comp=N,1μm,10.5s
YSS smax smax
comp=E,1μm,10.5s
XMI Christmas Isla 73.36 264 P **P** **11 54 33.1 +0.8**
XMIS Christmas Isla 73.39 264 P **P** **11 54 33.4 +1.0**
DBJI Dramaga 73.43 268 P **P** **11 54 32.7 0.0**
comp=E,342nm,0.9s,comp=E,7μm
SKJI Sukabumi 73.49 268 P **P** **11 54 32.6 -0.4**
comp=E,795nm,0.7s,comp=E,7μm
FALS False Pass 73.61 9 P **P** **11 54 31.7 -0.9**
FALS False Pass 73.61 9 P **P** **11 54 31.2 -1.4**
baz=195,SNR=6.0
PEA0B Petropavlovsk- 73.61 345 P **P** **11 54 32.8 0.0**
PEA0B Petropavlovsk- 73.61 345*ce*P **P** **11 54 32.7 -0.1**
PETK Petropavlovsk- 73.61 345 P **P** **11 54 32.2 -0.6**
PETK Petropavlovsk- 73.61 345 P **P** **11 54 31.8 -1.0**
comp=E,160nm,0.7s,baz=129,slow=6.5,SNR=167
PETK PKiKP **PKiKP** **12 00 23.0 +0.6**
comp=E,2.9nm,0.7s,baz=101,slow=4.2,SNR=4.1
comp=E,160nm,0.7s
SBJI Serang 74.15 269 P **P** **11 54 38.4 +1.7**
comp=E,355nm,1.1s
CHNA Chernabura Isl 74.23 11 P **P** **11 54 34.9 -1.2**
baz=199
TJN Taejon 74.27 317 IAmb IAmb 11 54 40.5
comp=Z,105nm,0.9s
TJN Taejon 74.27 317 P **P** **11 54 37.7 +0.9**
TJN Taejon 74.27 317*ce*P **P** **11 54 36.8 0.0**
QZH Quanzhou 74.51 303⇩ *i*P **P** **11 54 38.8 +0.4**
QZH S **S** **12 03 30.3 +0.8**
QZH pmax pmax
comp=Z,54nm,0.6s
QZH pmax pmax
comp=Z,380nm,4.8s
SDPT Sand Point 74.56 11 IAmb IAmb 11 54 38.7
comp=Z,353nm,1.0s
SDPT Sand Point 74.56 11 P **P** **11 54 37.1 -0.9**
SDPT Sand Point 74.56 11 P **P** **11 54 36.9 -1.1**
baz=198,SNR=6.4
KSRS Korea Array 74.56 318 P **P** **11 54 39.0 +0.6**
comp=Z,14nm,0.7s,baz=137,slow=6.1,SNR=46
comp=Z,14nm,0.7s
KSAR Wonju Array Be 74.58 318 P **P** **11 54 39.0 +0.4**
KSAR Wonju Array Be 74.58 318 P **P** **11 54 39.0 +0.4**
P08K Saint George I 74.59 5 P **P** **11 54 37.5 -0.7**
baz=189
TEY Ternei 74.70 329⇈ *e*P **P** **11 54 39.7 +0.7**
TEY *e* 11 57 32.2
TEY *e* 12 03 28.4
TEY pmax pmax
comp=Z,30nm,1.2s
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,10.0nm,1.1s
SPIA Saint Paul Isl 75.11 5 P **P** **11 54 40.5 -0.5**
baz=188
UGL Uglegorsk 75.27 334 *e*P **P** **11 54 39.0 -3.1**
UGL *e*S **S** **12 03 37.6 +0.9**
UGL pmax pmax
comp=Z,1μm,3.9s
UGL pmax pmax
comp=Z,200nm,1.0s
UGL smax smax
comp=E,2μm,10.0s
UGL smax smax
comp=N,500nm,13.0s
PPBI Pangkal Pinang 75.31 272 P **P** **11 54 43.9 +0.7**
comp=N,115nm,0.8s,comp=N,47μm
INCN Inchon 75.40 318 P **P** **11 54 44.3 +1.1**
INCN Inchon 75.40 318 P **P** **11 54 44.2 +1.0**
INCN Inchon 75.40 318 P **P** **11 54 44.3 +1.1**
INCN pmax pmax
comp=Z,94nm,1.4s
SSE Sheshan 75.58 310 P **P** **11 54 44.8 +0.5**
SSE S **S** **12 03 46.4 +5.5**
SSE pmax pmax
comp=Z,15nm,1.1s
SSE pmax pmax
comp=Z,110nm,3.7s
S14K Fog Glacier 75.61 11 P **P** **11 54 43.3 -0.7**
baz=199,SNR=5.7
KASI Kota Agung 75.87 269 P **P** **11 54 45.2 -1.1**
comp=Z,389nm,0.9s,comp=Z,3μm
CHIR Chirikof Islan 75.95 13 P **P** **11 54 46.2 +0.4**
CHIR Chirikof Islan 75.95 13 P **P** **11 54 45.6 -0.1**
baz=203
PSTR Posyet 76.12 324 *i* P **P** **11 54 48.1 +1.1**
HJU Haeju 76.31 318 P **P** **11 54 48.2 +0.1**
HJU S **S** **12 03 50.2 +1.9**
HJU AmB
comp=Z,326nm,2.0s
HHU Hamhung 76.31 320 P **P** **11 54 48.6 +0.5**
MCCM Marconi Confer 76.41 42 P **P** **11 54 49.8 +1.1**
SBC Santa Barbara 76.43 47 P **P** **11 54 49.5 +0.6**
baz=237,SNR=5.4
LWLI Liwa 76.44 269 P **P** **11 54 48.9 -0.7**
comp=Z,302nm,0.7s,comp=Z,7μm
TYV Tymovskoe 76.44 336 *e*P **P** **11 54 49.2 +0.7**
TYV *e*S **S** **12 03 48.6 -0.6**
TYV pmax pmax
comp=Z,265nm,1.0s
TYV pmax pmax
comp=Z,1μm,3.5s
TYV smax smax
comp=N,13nm,1.9s
TYV smax smax
comp=E,23nm,1.9s
TYV smax smax
comp=N,500nm,6.1s
TYV smax smax
comp=E,1μm,6.1s
SCI2 San Clemente I 76.46 49 P **P** **11 54 49.9 +0.7**
baz=238,SNR=11
USA0B Ussuriysk Arra 76.50 326 P **P** **11 54 50.0 +0.9**
USA0B Ussuriysk Arra 76.50 326*c i*P **P** **11 54 49.5 +0.5**
USRK Ussuriysk Ar. 76.50 326 P **P** **11 54 49.7 +0.7**
comp=E,23nm,0.6s,baz=113,slow=4.4,SNR=63
USRK S **S** **12 03 51.4 +1.3**
comp=E,0.8nm,0.6s,baz=137,slow=36,SNR=1.8
comp=E,23nm,0.6s
PKM Mcpherson Peak 76.60 46 P **P** **11 54 50.8 +0.8**
baz=237,SNR=29
PMPB Monarch Peak 76.66 45 P **P** **11 54 51.3 +1.0**
PMPB IAmb IAmb 11 54 53.5
comp=Z,165nm,0.7s
BBGB Big Mountain B 76.71 44 P **P** **11 54 52.3 +1.8**
BBGB IAmb IAmb 11 54 59.0
comp=Z,153nm,0.8s
SMMC Simmler 76.71 46 P **P** **11 54 51.5 +1.0**
baz=237,SNR=59
CIS Catalina Islan 76.78 48 P **P** **11 54 51.5 +0.6**
baz=238,SNR=11
HOPS Hopland Field 76.78 41 P **P** **11 54 52.0 +1.2**
KCPM Cahto Peak 76.88 40 P **P** **11 54 52.8 +1.4**
PYAG Pyongyang 76.88 319 P **P** **11 54 52.0 +0.7**
PYAG S **S** **12 03 57.2 +2.8**
PYAG AmB
comp=Z,326nm,2.2s
BCW Bitter Crk WRg 76.90 46 P **P** **11 54 52.9 +1.3**
BCW IAmb IAmb 11 54 55.0
comp=Z,176nm,0.8s
HKPS Hong Kong Po S 76.94 299 P **P** **11 54 52.4 +0.5**
SII Sitkinak Islan 76.95 14 P **P** **11 54 51.4 +0.1**
SII Sitkinak Islan 76.95 14 P **P** **11 54 51.1 -0.2**
SII Sitkinak Islan 76.95 14 P **P** **11 54 51.2 -0.1**
baz=204
KMPM Mount Pierce 76.99 40 P **P** **11 54 53.6 +1.7**
KMPM IAmb IAmb 11 54 55.8
comp=Z,177nm,0.9s
FMP Fort Macarthur 77.03 48 P **P** **11 54 52.9 +0.7**
baz=238,SNR=10
KMRM Mail Ridge 77.12 40 P **P** **11 54 54.4 +1.7**
R16K Pilot Point 77.19 11 P **P** **11 54 52.5 +0.1**
baz=200
OSI Osito Audit: C 77.21 47 P **P** **11 54 53.7 +0.4**
baz=238
CCX Cicese 77.25 50 P **P** **11 54 55.0 +1.6**
JCC Jacoby Creek, 77.29 39 P **P** **11 54 54.9 +1.5**
DECC Green Verdugo 77.29 48 P **P** **11 54 53.7 0.0**
baz=238,SNR=9.2
TJX Tijuana 77.29 50 P **P** **11 54 54.9 +1.2**
TJX IAmb IAmb 11 54 56.9
comp=Z,231nm,0.7s
DSRI Dabo 77.31 274 P **P** **11 54 55.4 +1.2**
comp=Z,74nm,1.3s,comp=Z,2μm
PASC Pasadena Art C 77.35 48 P **P** **11 54 54.8 +0.8**
PASC IAmb IAmb 11 54 56.5
comp=Z,138nm,0.7s
ARVC Arvin 77.41 47 P **P** **11 54 54.7 +0.4**
baz=237,SNR=44
109C Camp Elliot, M 77.45 49 P **P** **11 54 55.5 +1.0**
109C Camp Elliot, M 77.45 49 P **P** **11 54 55.1 +0.6**
baz=239,SNR=15
CBX Cerro Bola 77.48 50 IAmb IAmb 11 54 57.9
comp=Z,120nm,0.7s
KRPM Rodgers 77.50 39 IAmb IAmb 11 54 58.7
comp=Z,148nm,1.0s
VES Vestal, Richgr 77.62 46 P **P** **11 54 55.9 +0.6**
baz=237,SNR=54
VTX Valle De La Tr 77.66 51 P **P** **11 54 57.1 +1.3**
VTX IAmb IAmb 11 54 59.6
comp=Z,232nm,1.6s
VOG Valley Oaks Go 77.67 45 P **P** **11 54 56.5 +0.9**
baz=237
MURC Murrieta 77.75 49 P **P** **11 54 56.8 +0.6**
baz=239,SNR=45
BFSC Mount Baldy Ra 77.75 48 P **P** **11 54 56.5 +0.2**
baz=238,SNR=95
OHAK Old Harbor 77.76 14 IAmb IAmb 11 54 57.4
comp=Z,222nm,0.7s
OHAK Old Harbor 77.76 14 P **P** **11 54 55.6 0.0**
OHAK Old Harbor 77.76 14 P **P** **11 54 55.5 0.0**
baz=205
NJ2 Nanjing 77.78 310⇑ P **P** **11 54 57.4 +1.1**
NJ2 PcP **PcP** **11 55 04.6 +0.9**
NJ2 S **S** **12 04 07.1 +2.9**
NJ2 ScS **ScS** **12 04 26.8 +2.1**
NJ2 sS **sS** **12 07 31.2 -1.2**
NJ2 pmax pmax
comp=Z,44nm,1.1s
NJ2 pmax pmax
comp=Z,180nm,3.5s
DLV T Lat 77.81 287 P **P** **11 54 57.8 +0.7**
EDW2 Edwards Air Fo 77.86 47 P **P** **11 54 57.1 +0.4**
baz=238,SNR=128
ISA Isabella, Lake 77.94 46 P **P** **11 54 58.4 +1.2**
ISA IAmb IAmb 11 55 00.8
comp=Z,175nm,0.9s
ISA Isabella, Lake 77.94 46 P **P** **11 54 57.9 +0.7**
baz=238,SNR=158
ISA Isabella, Lake 77.94 46 P **P** **11 54 58.4 +1.2**
ISA pmax pmax
comp=Z,175nm,0.9s
MONP2 Monument Peak 77.95 50 P **P** **11 54 58.2 +0.7**
baz=239,SNR=198
KBO Bosley Butte 78.02 38 IAmb IAmb 11 55 01.6
comp=Z,260nm,1.6s
RMX La Rumorosa 78.05 50 IAmb IAmb 11 55 01.2
comp=Z,132nm,0.8s
IKP In-Ko-Pah, Jac 78.05 50 P **P** **11 54 58.6 +0.7**
baz=240,SNR=76
MDJ Mudanjiang 78.06 325 P **P** **11 54 58.7 +1.2**
MDJ PcP **PcP** **11 55 05.2 +0.5**
MDJ PP **PP** **11 58 08.6 +4.3**
MDJ S **S** **12 04 11.0 +4.4**
MDJ ScS **ScS** **12 04 28.2 +1.7**
MDJ sS sS 12 07 37.9 +2.9
MDJ SS **SS** **12 09 31.2 +6.6**
MDJ pmax pmax
comp=Z,160nm,1.2s
MDJ pmax pmax
comp=Z,1μm,5.7s
MDJ Mudanjiang 78.06 325 IAmb IAmb 11 55 00.6
comp=Z,148nm,0.9s
MDJ Mudanjiang 78.06 325 P **P** **11 54 58.8 +1.2**
ORV Oroville 78.10 42 P **P** **11 54 58.3 +0.4**
ORV Oroville 78.10 42 P **P** **11 54 58.3 +0.4**
ORV pmax pmax
comp=Z,102nm,1.1s
Q17K Contact Creek 78.17 12 P **P** **11 54 57.3 -0.6**
baz=202,SNR=26
O14K Tigyukauivet M 78.17 9 P **P** **11 54 57.2 -0.6**
baz=197
SFX San Felipe 78.18 52 P **P** **11 54 59.6 +1.1**
YUH Yuha Desert 78.19 50 P **P** **11 54 59.4 +1.0**
PFO Pinyon Flats O 78.28 49 P **P** **11 55 00.2 +1.0**
PFO Pinyon Flats O 78.28 49 P **P** **11 54 59.7 +0.5**
baz=239,SNR=33
PFO Pinyon Flats O 78.28 49*c i*P **P** **11 54 59.2 0.0**
PFO pmax pmax
comp=Z,50nm,0.9s
TPFO Pinon Flats 78.28 49 P **P** **11 54 59.8 +0.6**
baz=239,SNR=30
BBRC Big Bear Solar 78.29 48 P **P** **11 54 60.0 +0.7**
baz=239,SNR=28
SUJ Sinuiju 78.29 319 P **P** **11 54 59.2 +0.3**
SUJ S **S** **12 04 12.7 +3.5**
SUJ AmB
comp=Z,703nm,3.4s
O15K Ungalikthiuk R 78.32 10 P **P** **11 54 57.8 -0.8**
baz=198,SNR=8.8
L02F Cave Junction 78.35 38 P **P** **11 55 00.5 +1.3**
KEBM Edson Butte 78.36 38 P **P** **11 55 00.6 +1.3**
PMD Palm Desert 78.36 49 P **P** **11 55 00.4 +1.0**
LRMC Laurel Mtn Rad 78.39 47 P **P** **11 55 00.2 +0.5**
baz=238,SNR=59
Q16K King Salmon 78.40 11 P **P** **11 54 58.6 -0.3**
baz=201,SNR=21
SWSC Sam W. Stewart 78.42 50 P **P** **11 55 00.5 +0.8**
baz=240,SNR=58
KDAK Kodiak Island 78.43 14 P **P** **11 54 59.1 -0.1**
KDAK IAmb IAmb 11 55 02.4
comp=Z,219nm,0.8s
KDAK Kodiak Island 78.43 14 P **P** **11 54 59.1 -0.1**
baz=205
KDAK Kodiak Island 78.43 14 *i* P **P** **11 54 59.0 -0.1**
KDAK pmax pmax
comp=Z,374nm,1.0s
SRIG Santa Rosalia 78.45 56 P **P** **11 55 01.2 +1.3**
SRIG IAmb IAmb 11 55 03.7
comp=Z,597nm,2.0s
P16K Nushagak River 78.49 11 P **P** **11 54 58.9 -0.6**
baz=200,SNR=28
RRX Edison Barstow 78.55 48 P **P** **11 55 00.8 +0.4**
baz=239,SNR=6.2
MDPB Devils Postpil 78.59 44 P **P** **11 55 01.5 +0.6**
MDPB IAmb IAmb 11 55 04.2
comp=Z,482nm,1.6s
CWC Cottonwood Cre 78.62 46 P **P** **11 55 01.4 +0.4**
baz=238
YBH Yreka Blue Hor 78.63 39 P **P** **11 55 01.5 +0.7**
YBH IAmb IAmb 11 55 04.0
comp=Z,133nm,0.8s
YBH Yreka Blue Hor 78.63 39 P **P** **11 55 01.5 +0.7**
YBH pmax pmax
comp=Z,133nm,0.8s
K02D Willamette Mer 78.64 38 P **P** **11 55 01.8 +1.0**
M11K Mekoryuk 78.64 6 P **P** **11 55 01.0 +0.7**
baz=192
MYKOM Kota Tinggi 78.71 276 P **P** **11 55 02.2 +0.5**
SLBS Sierra La Lagu 78.72 61 P **P** **11 55 03.3 +1.6**
SLBS IAmb IAmb 11 55 05.4
comp=Z,107nm,0.7s
N14K Kuskokwak Cree 78.75 9 P **P** **11 55 00.7 -0.1**
baz=196
MLAC Mammoth, Mammo 78.75 44 P **P** **11 55 02.4 +0.7**
baz=237
BELC Belle Mtn. Jos 78.81 49 P **P** **11 55 02.6 +0.6**
baz=239,SNR=67
MPMC Manual Prospec 78.83 46 P **P** **11 55 02.6 +0.5**
baz=238,SNR=128
WAKR Walker 78.84 43 IAmb IAmb 11 55 05.3
comp=Z,162nm,0.8s
TIN Tinemaha, Big 78.85 45 P **P** **11 55 02.6 +0.5**
baz=238,SNR=20
GSC Goldstone, Bar 78.91 47 IAmb IAmb 11 55 06.0
comp=Z,395nm,2.0s
GSC Goldstone, Bar 78.91 47 P **P** **11 55 02.7 +0.3**
baz=239,SNR=56
P17K Kvichak River 78.93 11 P **P** **11 55 01.3 -0.4**
baz=202,SNR=41
GRNR Gornyy 78.94 333⇑ *i*P **P** **11 55 03.1 +1.0**
GRNR *e*S **S** **12 04 12.3 -3.2**
GRNR pmax pmax
comp=E,30nm,1.3s
GRNR pmax pmax
comp=N,30nm,1.2s
GRNR pmax pmax
comp=Z,110nm,1.1s
GRNR smax smax
comp=N,2.0nm,1.1s
GRNR MLR MLR
comp=N,190nm,14.0s
GRNR MLR MLR
comp=Z,300nm,14.0s
HEC Hector,Ludlow 79.00 48 P **P** **11 55 03.2 +0.3**
baz=239,SNR=79
M13K Dall Lake 79.00 8 IAmb IAmb 11 55 04.6
comp=Z,105nm,0.7s
M13K Dall Lake 79.00 8 P **P** **11 55 02.5 +0.4**
baz=195
O16K Kokwok River B 79.00 10 IAmb IAmb 11 55 03.0
comp=Z,140nm,0.7s
O16K Kokwok River B 79.00 10 P **P** **11 55 01.3 -0.9**
baz=200
HUMO Hull Mountain 79.00 38 IAmb IAmb 11 55 06.5
comp=Z,164nm,1.1s
BC3 Big Chuckawall 79.03 49 P **P** **11 55 03.9 +0.8**
baz=240,SNR=63
L04D Klamath Falls 79.16 39 P **P** **11 55 04.4 +0.8**

L04D IAmb IAmb 11 55 06.5
comp=Z,212nm,0.7s
GLA Glamis 79.19 50 P **P** **11 55 05.6 +1.7**
baz=240
DSP Deep Springs 79.19 45 P **P** **11 55 04.3 +0.6**
DSP IAmb IAmb 11 55 07.0
comp=Z,124nm,0.7s
QSM Queen of Sheba 79.21 47 P **P** **11 55 04.8 +0.9**
N15K Kwethluk River 79.22 9 P **P** **11 55 03.6 +0.2**
baz=198
Q20K Shuyak Island 79.22 14 P **P** **11 55 03.2 -0.2**
baz=205,SNR=10
YERR Yerington 79.23 43 P **P** **11 55 04.8 +0.6**
YERR IAmb IAmb 11 55 07.0
comp=Z,196nm,0.6s
Q19K Cape Douglas, 79.24 13 IAmb IAmb 11 55 05.5
comp=Z,349nm,1.0s
Q19K Cape Douglas, 79.24 13 P **P** **11 55 02.6 -1.0**
baz=204,SNR=8.0
QIZ Qiongzhong 79.27 294 P **P** **11 55 06.3 +1.7**
QIZ pP **pP** **11 57 01.5 -0.7**
QIZ sP **sP** **11 57 56.9 -1.8**
QIZ S **S** **12 04 22.7 +2.5**
QIZ sS **sS** **12 07 46.6 -2.8**
QIZ SS **SS** **12 09 46.8 +3.4**
QIZ pmax pmax
comp=Z,250nm,4.3s
LHV Little Huntoon 79.31 44 IAmb IAmb 11 55 08.2
comp=Z,180nm,0.9s
P18K Big Mountain, 79.34 12 P **P** **11 55 02.9 -1.1**
baz=203,SNR=27
O17K Koliganek Bris 79.35 11 P **P** **11 55 03.3 -0.7**
baz=201,SNR=30
GRAC Grapevine Rang 79.41 46 IAmb IAmb 11 55 08.2
comp=Z,145nm,0.8s
GRAC Grapevine Rang 79.41 46 P **P** **11 55 05.7 +0.8**
baz=238,SNR=28
I03D Drain, OR 79.43 37 IAmb IAmb 11 55 08.3
comp=Z,305nm,1.5s
DL2 Dalian 79.45 317 P **P** **11 55 04.9 -0.1**
DL2 S **S** **12 04 23.0 +1.8**
DL2 pmax pmax
comp=Z,35nm,1.3s
DL2 pmax pmax
comp=Z,410nm,7.5s
GMRC Granite Mounta 79.45 48 P **P** **11 55 05.7 +0.3**
baz=240,SNR=58
FURC Furnace Creek, 79.47 46 P **P** **11 55 05.7 +0.5**
baz=238,SNR=93
IRM Iron Mountain 79.50 49 P **P** **11 55 06.3 +0.8**
baz=240,SNR=96
M14K Bethel 79.51 8 P **P** **11 55 04.9 +0.1**
baz=196,SNR=19
PAHR Pah Rah Range 79.54 42 IAmb IAmb 11 55 08.5
comp=Z,116nm,0.7s
NVAR Mina Array Bea 79.54 44 P **P** **11 55 06.2 +0.4**
NVAR Mina Array Bea 79.54 44 P **P** **11 55 06.4 +0.6**
comp=Z,90nm,0.7s,baz=226,slow=8.3,SNR=475
NVAR pP **pwP** **11 57 04.5 -1.0**
comp=Z,27nm,1.1s,baz=229,slow=9.0,SNR=8.1
NVAR PKKPbc **PKKPbc** **12 13 51.8 +1.2**
comp=Z,0.6nm,0.7s,baz=62,slow=5.0,SNR=5.9
comp=Z,90nm,0.7s
SHOC Shoshone, Teco 79.58 47 P **P** **11 55 06.3 +0.4**
baz=239,SNR=37
TUQ Turquoise Moun 79.59 48 P **P** **11 55 06.7 +0.6**
baz=239,SNR=41
M15K Kasigluk River 79.64 9 P **P** **11 55 05.7 +0.2**
baz=197,SNR=34
GMN Gold Mountain 79.64 45 P **P** **11 55 07.2 +0.7**
N16K Nishlik Lake 79.72 10 P **P** **11 55 06.3 +0.3**
baz=199,SNR=22
K04D Chiloquin, OR 79.73 39 P **P** **11 55 07.0 +0.4**
K04D IAmb IAmb 11 55 26.1
comp=Z,158nm,0.7s
O18K Koktuh Hills 79.78 12 P **P** **11 55 06.1 -0.2**
baz=203,SNR=107
WCT Wildcat Mounta 79.80 46 IAmb IAmb 11 55 10.9
comp=Z,281nm,1.8s
113A Mohawk Valley, 79.83 51 IAmb IAmb 11 55 11.0
comp=Z,558nm,1.9s
SNY Shenyang 79.85 320 ⇑P **P** **11 55 06.5 -0.6**
SNY S **S** **12 04 24.3 -0.9**
SNY pmax pmax
comp=Z,26nm,1.4s
SNY pmax pmax
comp=Z,390nm,4.2s
CN2 Changchun 79.89 322 *e*P **P** **11 55 06.9 -0.4**
CN2 *es*P sP 11 57 57.5 -3.2
CN2 *e*PP **PP** **11 58 19.9 +0.6**
CN2 SKS **SKSac** **12 04 29.3 -2.4**
CN2 *es*S sS 12 07 51.3 -3.9
CN2 pmax pmax
comp=Z,150nm,1.1s
BUCK Buck Mountain 79.94 37 IAmb IAmb 11 55 11.1
comp=Z,184nm,1.1s
BNX BinXian 79.97 325 ⇑P **P** **11 55 07.3 -0.3**
BNX sP **sP** **11 57 59.6 -1.4**
BNX PP **PP** **11 58 19.9 0.0**
BNX S **SKSac** **12 04 30.0 -2.1**
BNX pmax pmax
comp=Z,180nm,1.0s
BNX pmax pmax
comp=Z,880nm,4.2s
L14K Kuka Creek 79.98 8 P **P** **11 55 07.8 +0.5**
baz=195
P19K Oil Pt 79.99 13 P **P** **11 55 07.0 -0.5**
P19K IAmb IAmb 11 55 08.8
comp=Z,210nm,0.7s
P19K Oil Pt 79.99 13 P **P** **11 55 07.0 -0.5**
baz=204,SNR=20
COR Corvallis 80.00 37 P **P** **11 55 09.0 +1.2**
COR IAmb IAmb 11 55 10.8
comp=Z,104nm,0.7s
COR Corvallis 80.00 37 P **P** **11 55 09.0 +1.2**
COR pmax pmax
comp=Z,105nm,0.7s
KLR Kul'dur 80.00 330 *ce*P **P** **11 55 08.1 +0.4**
KLR pmax pmax
comp=Z,59nm,1.2s
KLR Kul'dur 80.00 330 P **P** **11 55 08.4 +0.7**
comp=Z,22nm,0.7s,baz=100,slow=4.5,SNR=57
KLR PKiKP **PKiKP** **12 00 31.6 -0.6**
comp=Z,1.6nm,0.8s,baz=266,slow=7.4,SNR=2.3
KLR S **S** **12 04 26.2 -0.3**
comp=Z,0.5nm,0.6s,baz=15,slow=22,SNR=1.8
KLR PKKPbc **PKKPbc** **12 13 47.5 -2.4**
comp=Z,1.2nm,0.6s,baz=213,slow=1.8,SNR=7.3
comp=Z,22nm,0.7s
KVN Kaiserville 80.01 43 P **P** **11 55 08.5 +0.2**
KVN IAmb IAmb 11 55 11.0
comp=Z,138nm,0.6s
KVN Kaiserville 80.01 43 P **P** **11 55 08.5 +0.2**
KVN pmax pmax
comp=Z,138nm,0.6s
I04A Tendick Farm, 80.03 38 P **P** **11 55 08.6 +0.6**
N17K Nushagak Hills 80.04 11 P **P** **11 55 07.7 0.0**
N17K IAmb IAmb 11 55 09.7
comp=Z,299nm,1.6s
N17K Nushagak Hills 80.04 11 P **P** **11 55 07.2 -0.4**
baz=201
HEBO Mount Hebo 80.12 36 IAmb IAmb 11 55 11.6
comp=Z,163nm,0.8s
TPNV Topopah Spring 80.14 46 P **P** **11 55 09.2 +0.3**
TPNV IAmb IAmb 11 55 12.8
comp=Z,431nm,1.9s
TPNV Topopah Spring 80.14 46 P **P** **11 55 09.7 +0.8**
baz=239,SNR=129
TPNV Topopah Spring 80.14 46 P **P** **11 55 09.2 +0.3**
TPNV pmax pmax
comp=Z,431nm,1.9s
214A Organ Pipe Nat 80.15 52 P **P** **11 55 09.7 +0.8**
214A IAmb IAmb 11 55 13.2
comp=Z,265nm,1.6s
214A Organ Pipe Nat 80.15 52 P **P** **11 55 10.1 +1.1**
baz=242,SNR=56
NEE2 Needles Airpor 80.18 49 P **P** **11 55 09.8 +0.7**
baz=240,SNR=12
M16K Timber Creek 80.21 10 P **P** **11 55 09.4 +0.9**
M16K IAmb IAmb 11 55 11.4
comp=Z,294nm,0.8s
M16K Timber Creek 80.21 10 P **P** **11 55 09.1 +0.6**
baz=199
HSIG 80.23 55 P **P** **11 55 10.2 +0.8**
O19K Port Alsworth 80.26 12 P **P** **11 55 08.6 -0.2**
O19K Port Alsworth 80.26 12 P **P** **11 55 08.1 -0.6**
baz=203,SNR=149
H04D Lebanon 80.28 37 P **P** **11 55 09.7 +0.4**
H04D IAmb IAmb 11 55 12.2
comp=Z,160nm,1.1s
PDMCI Parker Dam,Lak 80.30 49 P **P** **11 55 10.4 +0.8**
baz=241,SNR=61
K05A Summer Lake 80.31 39 P **P** **11 55 10.5 +0.8**
K05A IAmb IAmb 11 55 12.9
comp=Z,229nm,0.7s
CNPM China Poot 80.31 14 P **P** **11 55 09.2 +0.1**
CNPM IAmb IAmb 11 55 10.8
comp=Z,221nm,0.8s
HOM Homer 80.34 14 P **P** **11 55 09.9 +0.7**
HOM Homer 80.34 14 P **P** **11 55 09.4 +0.2**
baz=206,SNR=12
G03D McMinnville, O 80.40 36 P **P** **11 55 11.1 +1.2**
G03D IAmb IAmb 11 55 13.4
comp=Z,393nm,1.4s
N18K Kilae Creek 80.41 11 P **P** **11 55 09.3 -0.3**
N18K IAmb IAmb 11 55 11.0
comp=Z,95nm,0.7s
N18K Kilae Creek 80.41 11 P **P** **11 55 09.2 -0.4**
baz=202
WHN Wuhan 80.44 306 ⇑P **P** **11 55 11.4 +1.0**
WHN S **S** **12 04 33.3 +1.6**
WHN pmax pmax
comp=Z,490nm,1.8s
L15K Ungalak Mounta 80.47 8 P **P** **11 55 09.6 -0.2**
baz=196
CNSH ChangSha 80.50 304 ⇓P **P** **11 55 12.1 +1.3**
CNSH S **S** **12 04 34.1 +1.7**
CNSH pmax pmax
comp=Z,38nm,1.2s
Q09A Carvers 80.50 44 IAmb IAmb 11 55 13.7
comp=Z,235nm,0.7s
O20K Slope Mountain 80.51 13 P **P** **11 55 09.0 -1.2**
baz=205,SNR=25
BRLK Bradley Lake 80.60 14 P **P** **11 55 10.2 -0.4**
BRLK IAmb IAmb 11 55 12.2
comp=Z,237nm,0.7s
BRSE Bradley Lake S 80.62 14 P **P** **11 55 10.1 -0.5**
baz=207,SNR=64
WTNK Soaring Height 80.62 47 P **P** **11 55 12.6 +1.3**
SHPR Sheep Range 80.67 47 P **P** **11 55 13.1 +1.4**
SHPR IAmb IAmb 11 55 15.5
comp=Z,234nm,1.9s
F03A Seaside 80.67 35 P **P** **11 55 12.2 +1.0**
F03A IAmb IAmb 11 55 14.1
comp=Z,132nm,0.8s
H04A Detroit Lake 80.69 37 P **P** **11 55 11.8 +0.3**
H04A IAmb IAmb 11 55 14.6
comp=Z,164nm,0.6s
L16K Owhat River 80.78 9 IAmb IAmb 11 55 14.0
comp=Z,214nm,1.1s
L16K Owhat River 80.78 9 P **P** **11 55 11.2 -0.3**
baz=198
N19K Bonanza Creek 80.80 12 P **P** **11 55 10.8 -0.9**
baz=203,SNR=35
M17K Holitna River 80.82 10 P **P** **11 55 12.5 +0.9**
baz=200
RSO Redoubt South 80.83 13 P **P** **11 55 11.1 -0.8**
RADR Rader Ridge 80.84 35 IAmb IAmb 11 55 15.1
comp=Z,131nm,0.9s
S11A Rachel 80.84 46 P **P** **11 55 13.3 +0.7**
S11A IAmb IAmb 11 55 16.0
comp=Z,115nm,0.8s
SVW2 Sparrevohn 80.86 11 P **P** **11 55 11.4 -0.5**
SVW2 Sparrevohn 80.86 11 P **P** **11 55 11.4 -0.5**
W13A Hualapai Mount 80.87 49 P **P** **11 55 13.8 +1.0**
PINE Pine Mountain 80.89 38 IAmb IAmb 11 55 15.9
comp=Z,232nm,0.9s
I05D Terrebonne, OR 80.98 38 IAmb IAmb 11 55 15.8
comp=Z,123nm,0.8s
E03A Lebam 81.05 35 IAmb IAmb 11 55 16.0
comp=Z,185nm,0.7s
K15K Wolf Creek Mou 81.05 8 P **P** **11 55 13.2 +0.3**
baz=196
F04D Rainier, OR 81.07 36 IAmb IAmb 11 55 16.5
comp=Z,184nm,0.7s
PDSI Padang 81.09 272 P **P** **11 55 12.6 -1.6**
comp=Z,90nm,0.9s
TIA Tai'an 81.10 312 P **P** **11 55 14.1 +0.4**
TIA pP **pP** **11 57 16.1 +4.3**
TIA S **SKSac** **12 04 40.9 +0.7**
TIA pmax pmax
comp=Z,15nm,1.2s
TIA pmax pmax
comp=Z,330nm,6.1s
MA2 Magadan 81.13 345 P **P** **11 55 11.9 -1.3**
MA2 IAmb IAmb 11 55 14.5
comp=Z,121nm,0.9s
MA2 Magadan 81.13 345 P **P** **11 55 12.4 -0.9**
MA2 Magadan 81.13 345 P **P** **11 55 12.0 -1.3**
MA2 pmax pmax
comp=Z,121nm,0.9s
M18K Stony River 81.18 11 P **P** **11 55 13.5 0.0**
baz=202
DIB Dawson Inlet, 81.19 26 P **P** **11 55 14.3 +0.6**
PRN Pahroc Range 81.20 46 P **P** **11 55 15.4 +1.0**
PRN IAmb IAmb 11 55 17.8
comp=Z,160nm,0.8s
SEW Seward 81.24 14 P **P** **11 55 12.8 -1.0**
baz=208,SNR=29
J14K Nanvaranak Lak 81.24 7 P **P** **11 55 13.9 +0.1**
J14K Nanvaranak Lak 81.24 7 P **P** **11 55 13.9 +0.1**
baz=194
WISH Wishkah 81.28 34 IAmb IAmb 11 55 17.6
comp=Z,129nm,0.8s
F04A Amboy 81.31 36 IAmb IAmb 11 55 17.0
comp=Z,103nm,0.7s
R11B Troy Canyon, C 81.31 45 P **P** **11 55 15.0 -0.1**
R11B Troy Canyon, C 81.31 45 P **P** **11 55 14.9 -0.1**
baz=239,SNR=107
BMN Battle Mountai 81.32 43 IAmb IAmb 11 55 17.8
comp=Z,147nm,0.8s
HOLB Holberg 81.35 30 P **P** **11 55 14.9 +0.2**
HOLB IAmb IAmb 11 55 17.1
comp=Z,133nm,0.7s
L17K Donlin 81.37 9 P **P** **11 55 15.3 +0.8**
baz=200
HOOD Mount Hood Mea 81.38 37 IAmb IAmb 11 55 23.1
comp=Z,157nm,0.7s
C03A Quillayute Air 81.38 33 IAmb IAmb 11 55 18.2
comp=Z,175nm,0.7s
NLWA Neilton Lookou 81.40 34 IAmb IAmb 11 55 17.9
comp=Z,101nm,0.7s
Q23K Middleton Isla 81.42 16 P **P** **11 55 13.9 -0.9**
baz=211
CAPN Captain Cook N 81.44 13 P **P** **11 55 15.5 +0.7**
CAPN Captain Cook N 81.44 13 P **P** **11 55 15.1 +0.2**
baz=206,SNR=23
O22K Cooper Landing 81.51 14 P **P** **11 55 14.7 -0.5**
baz=208,SNR=44
WVOR Wild Horse Val 81.52 40 P **P** **11 55 16.4 +0.5**
WVOR IAmb IAmb 11 55 18.9
comp=Z,173nm,0.8s
WVOR Wild Horse Val 81.52 40 P **P** **11 55 16.4 +0.5**
WVOR pmax pmax
comp=Z,173nm,0.8s
G05A Wamic 81.52 37 IAmb IAmb 11 55 24.4
comp=Z,154nm,0.8s
GAMB Gambell 81.58 3 P **P** **11 55 15.1 -0.3**
baz=187,SNR=12
N20K Mount Spurr 81.61 13 P **P** **11 55 14.1 -1.7**
baz=205,SNR=55
P23K Montague Islan 81.64 15 P **P** **11 55 14.8 -1.1**
baz=210,SNR=10
L18K Granite Mounta 81.71 10 P **P** **11 55 16.8 +0.6**
baz=201
UBPT Khong Chiam 81.75 289 P **P** **11 55 18.4 +1.0**
M19K Big River Lodg 81.83 11 IAmb IAmb 11 55 18.2
comp=Z,112nm,0.8s
M19K Big River Lodg 81.83 11 P **P** **11 55 15.8 -1.0**
baz=203
TUC Tucson 81.84 52 P **P** **11 55 18.8 +1.1**
TUC IAmb IAmb 11 55 22.0
comp=Z,142nm,1.1s
TUC Tucson 81.84 52 P **P** **11 55 18.8 +1.1**
baz=243
TUC Tucson 81.84 52 P **P** **11 55 18.8 +1.1**
TUC pmax pmax
comp=Z,143nm,1.1s
G06A Carlson Farm, 81.91 37 P **P** **11 55 18.2 +0.5**
G06A IAmb IAmb 11 55 20.2
comp=Z,134nm,1.1s
I07A Izee 81.91 39 P **P** **11 55 18.5 +0.7**
I07A IAmb IAmb 11 55 20.8
comp=Z,180nm,0.8s
K17K Iditarod 81.92 9 IAmb IAmb 11 55 19.8
comp=Z,104nm,0.7s
K17K Iditarod 81.92 9 P **P** **11 55 17.7 +0.4**
baz=200
L19K White Mountain 82.00 11 IAmb IAmb 11 55 20.5
comp=Z,195nm,0.9s
L19K White Mountain 82.00 11 P **P** **11 55 17.4 -0.4**
baz=203
M20K Styx River 82.05 12 P **P** **11 55 16.8 -1.2**
baz=204,SNR=19
RC01 Rabbit Creek A 82.05 14 IAmb IAmb 11 55 19.4
comp=Z,146nm,0.8s
RC01 Rabbit Creek A 82.05 14 P **P** **11 55 17.0 -0.9**
baz=208,SNR=44
GNW Green Mountain 82.07 34 P **P** **11 55 18.9 +0.6**
GNW IAmb IAmb 11 55 21.0
comp=Z,116nm,0.8s
J16K Anvik River 82.13 8 P **P** **11 55 18.5 +0.2**
J16K IAmb IAmb 11 55 20.9
comp=Z,222nm,0.8s
J16K Anvik River 82.13 8 P **P** **11 55 18.3 0.0**
baz=197
LON Longmire 82.13 36 P **P** **11 55 18.6 -0.2**
LON Longmire 82.13 36 P **P** **11 55 18.6 -0.2**
LON pmax pmax
comp=Z,48nm,0.8s
CLRS Cowichan Lake 82.15 33 IAmb IAmb 11 55 21.3
comp=Z,103nm,0.9s
SUA Susitna One 82.16 13 P **P** **11 55 18.1 -0.5**
SUA Susitna One 82.16 13 P **P** **11 55 17.6 -1.1**
baz=207,SNR=157
BELA Belgrano 2 82.21 173 P **P** **11 55 18.3 -0.4**
BELA IAmb IAmb 11 55 20.2
comp=Z,158nm,0.8s
HIN Hinchinbrook I 82.22 15 P **P** **11 55 18.4 -0.4**
HIN IAmb IAmb 11 55 20.2
comp=Z,125nm,0.9s
IPM Ipoh 82.23 277 IAmb IAmb 11 55 21.9
comp=Z,68nm,0.6s
IPM Ipoh 82.23 277 P **P** **11 55 20.6 +0.6**
LCMT Little Creek M 82.26 47 P **P** **11 55 20.2 +0.5**
LCMT IAmb IAmb 11 55 22.9
comp=Z,103nm,0.8s
SISI Saibi 82.27 271 P **P** **11 55 20.7 +0.5**
comp=Z,66nm,0.8s
CBB Campbell River 82.29 31 P **P** **11 55 20.3 +0.8**
CBB IAmb IAmb 11 55 22.1
comp=Z,116nm,0.8s
X16A Lo Mia Camp, P 82.31 50 IAmb IAmb 11 55 24.3
comp=Z,152nm,0.9s
KAIM Kayak Island 82.36 17 IAmb IAmb 11 55 21.7
comp=Z,261nm,0.8s
KAIM Kayak Island 82.36 17 P **P** **11 55 19.6 0.0**
baz=213,SNR=18
BBB Bella Bella 82.39 29 IAmb IAmb 11 55 22.8
comp=Z,239nm,1.4s
PGC Sidney 82.40 33 P **P** **11 55 20.7 +0.7**
PGC IAmb IAmb 11 55 22.5
comp=Z,101nm,0.8s
L20K Farewell, AK 82.45 11 P **P** **11 55 19.1 -0.9**
baz=204,SNR=64
SKT Skwentna 82.46 13 P **P** **11 55 19.2 -0.8**
SKT Skwentna 82.46 13 P **P** **11 55 18.2 -1.9**
baz=206,SNR=40
TTA Tatalina 82.49 10 P **P** **11 55 20.1 -0.2**
TTA IAmb IAmb 11 55 22.4
comp=Z,125nm,0.8s
TTA Tatalina 82.49 10 P **P** **11 55 20.2 -0.1**
TTA Tatalina 82.49 10 P **P** **11 55 19.7 -0.5**
baz=202,SNR=65
TTA Tatalina 82.49 10 P **P** **11 55 20.1 -0.2**
TTA pmax pmax
comp=Z,125nm,0.8s
EYAK Cordova Ski Ar 82.54 16 P **P** **11 55 20.0 -0.4**
EYAK Cordova Ski Ar 82.54 16 P **P** **11 55 19.5 -0.9**
baz=211,SNR=28
M22K Willow 82.55 13 P **P** **11 55 19.6 -0.9**
baz=207,SNR=18
KNB Kanab 82.55 47 IAmb IAmb 11 55 24.6
comp=Z,144nm,0.8s
319A Douglas 82.57 54 IAmb IAmb 11 55 25.3
comp=Z,139nm,0.7s
CRAG Craig 82.58 24 P **P** **11 55 21.5 +0.8**
CRAG Craig 82.58 24 P **P** **11 55 21.1 +0.4**
baz=223,SNR=8.4
KNK Knik Glacier 82.62 14 P **P** **11 55 20.4 -0.5**
KNK IAmb IAmb 11 55 22.8
comp=Z,196nm,0.7s
KNK Knik Glacier 82.62 14 P **P** **11 55 19.8 -1.1**
baz=209,SNR=64
PMR Palmer 82.63 14 IAmb IAmb 11 55 22.2
comp=Z,169nm,0.6s
PMR Palmer 82.63 14 P **P** **11 55 20.0 -0.8**
PMR Palmer 82.63 14 P **P** **11 55 19.6 -1.2**
baz=208,SNR=125
SZCU Shurtz Canyon 82.65 47 IAmb IAmb 11 55 25.7
comp=Z,284nm,1.6s
SUCK Suckling Hills 82.66 17 P **P** **11 55 21.4 +0.3**
RAGM Ragged Mountai 82.68 16 IAmb IAmb 11 55 23.6
comp=Z,192nm,1.1s
F07A Phinny Hill Vi 82.69 37 IAmb IAmb 11 55 24.2
comp=Z,124nm,0.7s
I17K Unalakleet 82.69 8 IAmb IAmb 11 55 23.6
comp=Z,167nm,1.4s
I17K Unalakleet 82.69 8 P **P** **11 55 21.4 +0.3**
baz=197,SNR=26
GRNB Grenville Isla 82.71 27 P **P** **11 55 22.1 +0.6**
HMT Hamilton 82.75 16 IAmb IAmb 11 55 23.2
comp=Z,125nm,0.8s
HEH HeiHe 82.80 328 ⇑P **P** **11 55 21.8 -0.2**
HEH PP **PP** **11 58 39.3 -3.4**
HEH SKS **SKSac** **12 04 45.6 -5.0**
HEH S **SKSac** **12 04 52.5 +1.9**
HEH sS **sS** **12 08 23.8 -2.4**
HEH pmax pmax
comp=Z,100nm,1.4s
HEH pmax pmax
comp=Z,960nm,4.8s
ANM Nome 82.82 6 P **P** **11 55 22.2 +0.4**
baz=193
GHO Glory Hole Cre 82.83 14 P **P** **11 55 21.6 -0.5**
BGLC Bering Glacier 82.84 17 P **P** **11 55 21.6 -0.3**
baz=214
J18K Innoko River 82.87 10 IAmb IAmb 11 55 24.1
comp=Z,233nm,0.8s
J18K Innoko River 82.87 10 P **P** **11 55 21.9 -0.2**
baz=201
WUAZ Wupatki 82.87 49 IAmb IAmb 11 55 26.9
comp=Z,141nm,0.9s
WUAZ Wupatki 82.87 49 P **P** **11 55 23.6 +0.6**
baz=242,SNR=104
G08A Pilot Rock 82.91 38 P **P** **11 55 23.4 +0.5**
G08A IAmb IAmb 11 55 25.6
comp=Z,121nm,0.7s
SIT Sitka 82.93 22 P **P** **11 55 22.9 +0.4**
SIT Sitka 82.93 22 P **P** **11 55 22.2 -0.3**
baz=221,SNR=6.0
SML Sawmill 83.00 14 IAmb IAmb 11 55 24.9
comp=Z,282nm,1.5s
SML Sawmill 83.00 14 P **P** **11 55 21.8 -1.1**
baz=209,SNR=30
SNH Sunshine Point 83.01 17 P **P** **11 55 23.3 +0.4**
U33K Whale Pass 83.05 24 IAmb IAmb 11 55 25.8
comp=Z,122nm,0.8s
U33K Whale Pass 83.05 24 P **P** **11 55 23.0 -0.1**
baz=223,SNR=19
LTY Liberty 83.06 36 IAmb IAmb 11 55 25.8
comp=Z,90nm,0.8s
V35K Ketchikan 83.07 25 IAmb IAmb 11 55 25.8
comp=Z,110nm,0.9s
V35K Ketchikan 83.07 25 P **P** **11 55 23.4 +0.1**
baz=224,SNR=13
CUT Chulitna 83.10 13 P **P** **11 55 22.1 -1.1**
baz=207,SNR=33
E07A Sunnyside 83.11 36 P **P** **11 55 24.5 +0.8**
E07A IAmb IAmb 11 55 26.5
comp=Z,174nm,0.7s
M23K Glacier View 83.13 14 P **P** **11 55 22.0 -1.4**
baz=210,SNR=38
PPLA Purkeypile 83.15 12 P **P** **11 55 22.4 -1.2**
baz=205,SNR=14
BMRM Bremner River 83.19 16 P **P** **11 55 23.3 -0.5**
baz=212,SNR=106
HAWA Hanford 83.20 37 IAmb IAmb 11 55 26.9
comp=Z,188nm,0.7s

K20K	Telida	83.22	11	P	P	11 55 23.4	-0.5		
	baz=204								
H16K	Elim	83.23	7	P	P	11 55 23.6	-0.2		
	baz=196,SNR=118								
DUN6	Lazy B Ranch	83.23	53	IAmb	IAmb	11 55 29.2			
	comp=Z,242nm,1.1s								
SCM	Sheep Creek Mo	83.26	14	P	P	11 55 23.5	-0.6		
SCM	Sheep Creek Mo	83.26	14	P	P	11 55 23.7	-0.4		
	baz=210,SNR=185								
SCM	Sheep Creek Mo	83.26	14	P	P	11 55 23.5	-0.6		
SCM				pmax	pmax				
	comp=Z,464nm,0.7s								
MESA	MESA	83.26	17	P	P	11 55 24.4	+0.1		
MESA	MESA	83.26	17	P	P	11 55 24.5	+0.1		
	baz=215,SNR=84								
S31K	Pelican	83.30	21	IAmb	IAmb	11 55 26.8			
	comp=Z,136nm,0.9s								
S31K	Pelican	83.30	21	P	P	11 55 24.5	+0.2		
	baz=220,SNR=24								
KLU	Klutina	83.30	15	P	P	11 55 23.8	-0.6		
KLU				IAmb	IAmb	11 55 25.8			
	comp=Z,88nm,0.7s								
KLU	Klutina	83.30	15	P	P	11 55 23.6	-0.8		
	baz=211,SNR=46								
HNS	HongShan	83.37	313	⇓P	P	11 55 26.7	+1.6		
HNS				pP	pP	11 57 28.5	+4.3		
HNS				S	S	12 05 04.3	+3.6		
HNS				SS	SS	12 10 42.9	-0.1		
HNS				pmax	pmax				
	comp=Z,58nm,1.4s								
HNS				pmax	pmax				
	comp=Z,550nm,5.7s								
G15K	Niukluk	83.38	6	P	P	11 55 24.0	-0.5		
	baz=194								
CRQE	Cirque	83.42	17	P	P	11 55 24.2	-0.8		
	baz=214								
X18A	Snowflake	83.46	51	IAmb	IAmb	11 55 29.2			
	comp=Z,82nm,0.8s								
SKLT	Songkhla	83.47	280	P	P	11 55 27.5	+1.3		
MTPU	Mount Pierson	83.49	47	IAmb	IAmb	11 55 30.0			
	comp=Z,112nm,0.8s								
ISLE	Juniper Island	83.50	17	P	P	11 55 25.2	-0.2		
ISLE				IAmb	IAmb	11 55 27.2			
	comp=Z,194nm,0.8s								
S32K	Killisnoo	83.51	22	P	P	11 55 26.0	+0.7		
S32K	Killisnoo	83.51	22	P	P	11 55 25.0	-0.3		
	baz=222,SNR=9.6								
E08A	Dider Farm, El	83.53	37	IAmb	IAmb	11 55 28.4			
	comp=Z,157nm,0.9s								
J19K	Poorman	83.55	10	P	P	11 55 25.1	-0.4		
	baz=202								
WRAK	Wrangell Islan	83.57	24	P	P	11 55 26.4	+0.8		
WRAK				IAmb	IAmb	11 55 28.2			
	comp=Z,124nm,0.8s								
WRAK	Wrangell Islan	83.57	24	P	P	11 55 25.8	+0.2		
	baz=224,SNR=20								
HPIG		83.58	59	IAmb	IAmb	11 55 30.9			
	comp=Z,206nm,1.7s								
TCRU	Three Creeks R	83.58	46	IAmb	IAmb	11 55 30.6			
	comp=Z,141nm,1.4s								
TNA	Tin City	83.59	4	P	P	11 55 25.2	-0.4		
	baz=190,SNR=60								
PNL	Peninsula	83.60	19	P	P	11 55 25.6	-0.2		
PNL	Peninsula	83.60	19	P	P	11 55 25.2	-0.6		
	baz=217,SNR=34								
T33K	Petersburg	83.63	23	P	P	11 55 25.8	-0.1		
	baz=223,SNR=6.8								
F14K	Arctic Creek	83.63	5	P	P	11 55 25.6	-0.2		
	baz=192								
BJI	Beijing	83.64	315	P	P	11 55 26.7	+0.3		
BJI				S	SKSac	12 04 55.1	-1.4		
BJI				pmax	pmax				
	comp=Z,31nm,1.3s								
BJI				pmax	pmax				
	comp=Z,290nm,4.2s								
CAST	Castle Rocks	83.65	12	P	P	11 55 24.2	-1.7		
CAST	Castle Rocks	83.65	12	P	P	11 55 23.9	-2.1		
	baz=205,SNR=299								
LYN	LuoYang	83.67	309	⇑P	P	11 55 28.0	+1.3		
LYN				pP	pP	11 57 31.9	+6.0		
LYN				sP	sP	11 58 22.1	0.0		
LYN				S	S	12 05 08.2	+4.4		
LYN				sS	sS	12 08 40.9	+5.7		
LYN				pmax	pmax				
	comp=Z,140nm,0.9s								
LYN				pmax	pmax				
	comp=Z,670nm,4.8s								
PINM	Pinnacle	83.69	18	P	P	11 55 25.7	-0.6		
	baz=216,SNR=24								
PSI	Prapat	83.70	275	P	P	11 55 26.9	-0.6		
SEY	Seymchan	83.72	347	*e*P	P	11 55 26.0	-0.3		
SEY				pmax	pmax				
	comp=Z,249nm,0.9s								
N25K	Chitina, Valde	83.73	16	P	P	11 55 26.3	-0.2		
N25K	Chitina, Valde	83.73	16	P	P	11 55 25.9	-0.6		
	baz=212,SNR=290								
BCPM	Bancas Point	83.76	19	IAmb	IAmb	11 55 28.5			
	comp=Z,96nm,0.9s								
M24K	Tolsona, Glenn	83.77	15	P	P	11 55 26.5	-0.1		
	baz=211,SNR=124								
MFID	Camas Ranch	83.78	41	P	P	11 55 27.4	+0.2		
MFID				IAmb	IAmb	11 55 30.6			
	comp=Z,219nm,1.4s								
H17K	Granite Mounta	83.80	8	P	P	11 55 26.2	-0.5		
	baz=198								
MAW	Mawson	83.81	200	P	P	11 55 27.0	+0.2		
	comp=Z,78nm,0.7s,baz=146,slow=4.4,SNR=76								
MAW				pP	pP	11 57 26.2	+1.0		
	comp=Z,56nm,1.1s,baz=156,slow=10,SNR=9.1								
	comp=Z,78nm,0.7s								
WAT6	Susitna Watana	83.81	14	P	P	11 55 26.0	-1.0		
	baz=209,SNR=186								
R31K	City Hall, Gus	83.81	21	P	P	11 55 26.6	-0.2		
	baz=221								
WAT1	Susitna Watana	83.85	13	P	P	11 55 26.0	-1.0		
	baz=209								
W18A	Petrified Fore	83.88	50	P	P	11 55 28.1	0.0		
	baz=243,SNR=16								
D08A	Wollman Farm,	83.93	36	P	P	11 55 28.0	+0.3		
D08A				IAmb	IAmb	11 55 30.4			
	comp=Z,170nm,0.8s								
G16K	Koyuk River	83.94	7	P	P	11 55 26.9	-0.4		
	baz=196								
MCARA	McCarthy VSAT	83.96	16	IAmb	IAmb	11 55 29.4			
	comp=Z,141nm,1.0s								
MCARA	McCarthy VSAT	83.96	16	P	P	11 55 26.8	-0.8		
	baz=214,SNR=71								
J20K	Nowinta River	83.97	11	P	P	11 55 26.6	-0.9		
	baz=203								
KTH	Kantishna Hill	84.00	12	P	P	11 55 26.2	-1.5		
KTH				IAmb	IAmb	11 55 29.1			
	comp=Z,146nm,0.6s								
F15K	North Star Dit	84.01	6	P	P	11 55 27.4	-0.3		
	baz=193								
CHUM	Lake Minchumin	84.03	11	P	P	11 55 26.6	-1.1		
	baz=205,SNR=74								
TRF	Thorofare Moun	84.03	12	P	P	11 55 26.9	-1.2		
	baz=207,SNR=344								
GCSA	Galena City Sc	84.05	9	P	P	11 55 27.5	-0.3		
	baz=201,SNR=51								
LOGN	Logan Glacier	84.06	17	IAmb	IAmb	11 55 30.0			
	comp=Z,135nm,0.7s								
E09A	Wood Farm, Sta	84.06	37	IAmb	IAmb	11 55 31.5			
	comp=Z,404nm,1.7s								
BARN	Barnard Glacie	84.07	17	P	P	11 55 27.9	-0.4		
CTG	Chitna Glacier	84.08	17	P	P	11 55 27.7	-0.7		
	baz=215,SNR=120								
CTGM	Chitina Glacie	84.08	17	IAmb	IAmb	11 55 30.2			
	comp=Z,156nm,0.8s								
P29M	Windy Craggy	84.09	20	P	P	11 55 28.8	+0.5		
P29M				IAmb	IAmb	11 55 30.8			
	comp=Z,181nm,0.8s								
P29M	Windy Craggy	84.09	20	P	P	11 55 28.0	-0.3		
	baz=219								
DUG	Dugway, Tooele	84.10	45	P	P	11 55 29.1	+0.2		
DUG	Dugway, Tooele	84.10	45	P	P	11 55 28.7	-0.2		
	baz=241,SNR=39								
DUG	Dugway, Tooele	84.10	45	P	P	11 55 29.1	+0.2		
DUG				pmax	pmax				
	comp=Z,31nm,0.9s								
ENH	Enshi	84.11	304	P	P	11 55 29.5	+0.5		
ENH				IAmb	IAmb	11 55 31.9			
	comp=Z,101nm,0.8s								
ENH	Enshi	84.11	304	P	P	11 55 29.7	+0.7		
U35K	Hyder	84.13	25	P	P	11 55 28.5	+0.1		
	baz=226,SNR=39								
R32K	Eaglecrest	84.14	22	P	P	11 55 28.5	0.0		
	baz=222								
JIS	Juneau Island	84.18	22	P	P	11 55 28.8	+0.2		
JIS				IAmb	IAmb	11 55 31.0			
	comp=Z,70nm,0.8s								
JIS	Juneau Island	84.18	22	P	P	11 55 29.0	+0.4		
121A	Cookes Peak, D	84.21	53	P	P	11 55 30.0	+0.3		
	baz=245,SNR=68								
H18K	Honhosa River	84.22	8	P	P	11 55 28.1	-0.6		
	baz=199								
G17K	Kiwalik Mounta	84.25	7	P	P	11 55 28.2	-0.7		
	baz=197								
HARP	HAARP	84.27	15	P	P	11 55 28.7	-0.4		
	baz=212,SNR=94								
RND	Reindeer	84.29	13	P	P	11 55 29.0	-0.2		
RND	Reindeer	84.29	13	P	P	11 55 29.0	-0.2		
RND				pmax	pmax				
	comp=Z,381nm,0.8s								
F10A	Beach Ranch, E	84.30	38	IAmb	IAmb	11 55 32.4			
	comp=Z,223nm,0.9s								
BGU	Big Grassy Mou	84.31	44	P	P	11 55 30.3	+0.3		
DHY	Denali Highway	84.33	14	P	P	11 55 28.5	-1.0		
	baz=210,SNR=72								
O29M	Mount Kennedy	84.36	19	P	P	11 55 29.7	0.0		
O29M	Mount Kennedy	84.36	19	P	P	11 55 29.4	-0.3		
	baz=218								
PLBC	Pleasant Camp	84.40	20	P	P	11 55 29.7	0.0		
	baz=220,SNR=92								
B08A	Colville Reser	84.43	35	P	P	11 55 30.2	0.0		
HMU	Henry Mountain	84.45	47	P	P	11 55 31.2	+0.4		
NLU	North Lily Min	84.48	45	P	P	11 55 31.9	+1.0		
I20K	Naaghedeneel	84.48	10	IAmb	IAmb	11 55 32.6			
	comp=Z,140nm,0.8s								
I20K	Naaghedeneel	84.48	10	P	P	11 55 29.3	-0.6		
	baz=203,SNR=25								
GSI	Gunungsitoli	84.51	273	IAmb	IAmb	11 55 33.8			
	comp=Z,108nm,0.9s								
GSI	Gunungsitoli	84.51	273	P	P	11 55 32.2	+0.8		
GSI	Gunungsitoli	84.51	273	P	P	11 55 32.5	+1.1		
	comp=Z,141nm,0.7s								
PLID	Pearl Lake	84.56	39	P	P	11 55 31.5	+0.3		
PLID				IAmb	IAmb	11 55 33.4			
	comp=Z,86nm,0.9s								
MCK	McKinley	84.56	13	P	P	11 55 29.4	-1.1		
	baz=208,SNR=132								
PAX	Paxson	84.68	15	P	P	11 55 30.0	-1.2		
	baz=212,SNR=77								
C09A	Chrisman Ranch	84.71	36	IAmb	IAmb	11 55 33.8			
	comp=Z,107nm,0.7s								
P30M	Million Dollar	84.72	20	P	P	11 55 31.7	+0.3		
	baz=220								
HLID	Hailey	84.74	41	IAmb	IAmb	11 55 35.1			
	comp=Z,100nm,0.8s								
HLID	Hailey	84.74	41	P	P	11 55 32.5	+0.5		
	baz=239,SNR=111								
SKAG	Skagway	84.75	21	P	P	11 55 32.7	+1.3		
SKAG	Skagway	84.75	21	P	P	11 55 32.4	+1.0		
SKAG	Skagway	84.75	21	P	P	11 55 32.1	+0.7		
	baz=221,SNR=23								
TMUT	Trail Mountain	84.76	46	IAmb	IAmb	11 55 35.6			
	comp=Z,87nm,0.8s								
T35M	Bob Quinn	84.78	24	P	P	11 55 32.9	+1.2		
T35M	Bob Quinn	84.78	24	P	P	11 55 32.1	+0.4		
	baz=226,SNR=23								
YUK8	Steele Glacier	84.79	18	P	P	11 55 31.5	-0.4		
	baz=217,SNR=119								
NONG	Nongkai	84.81	291	P	P	11 55 33.3	+0.6		
H19K	Roundabout Mou	84.85	9	P	P	11 55 31.6	-0.1		
	baz=201								
GYA	Guiyang	84.86	300	⇑*i*P	P	11 55 33.8	+0.9		
GYA				pP	pP	11 57 33.1	+0.4		
GYA				pmax	pmax				
	comp=Z,22nm,0.8s								
GYA				pmax	pmax				
	comp=Z,190nm,4.3s								
G18K	Tagagawik	84.88	8	P	P	11 55 31.2	-0.8		
G18K	Tagagawik	84.88	8	P	P	11 55 31.1	-0.9		
	baz=199								
SRIT	Nakonsritamara	84.89	281	P	P	11 55 35.0	+1.8		
HVU	Hansel Valley	84.90	43	P	P	11 55 33.3	+0.5		
HVU	Hansel Valley	84.90	43	P	P	11 55 33.3	+0.5		
HVU				pmax	pmax				
	comp=Z,55nm,0.7s								
YUK6	Outpost Mounta	84.93	18	P	P	11 55 32.1	-0.5		
	baz=218,SNR=27								
YUK3	Moose Creek	84.99	17	P	P	11 55 32.5	-0.3		
	baz=216,SNR=184								
KCSI	Kotacane, Aceh	85.01	275	P	P	11 55 33.6	-0.2		
	comp=Z,57nm,0.6s,comp=Z,808nm								
SURA	Surathani	85.05	281	P	P	11 55 35.5	+1.6		
H20K	Anotleneega Mo	85.06	10	P	P	11 55 32.6	-0.2		
	baz=203								
M27K	Edge Creek, AK	85.07	16	IAmb	IAmb	11 55 35.4			
	comp=Z,158nm,0.8s								
M27K	Edge Creek, AK	85.07	16	P	P	11 55 32.8	-0.4		
	baz=215								
MENT	Mentasta	85.08	15	IAmb	IAmb	11 55 34.9			
	comp=Z,101nm,0.8s								
MENT	Mentasta	85.08	15	P	P	11 55 32.7	-0.3		
F17K	Baldwin Pennin	85.08	7	P	P	11 55 32.7	-0.2		
F17K	Baldwin Pennin	85.08	7	P	P	11 55 32.6	-0.2		
	baz=197								
ZEA	Zeya	85.08	331	*e*P	P	11 55 33.5	+0.3		
ZEA				*e*		12 05 07.0			
ZEA				*e*S	S	12 05 19.5	+2.9		
ZEA				pmax	pmax				
	comp=E,20nm,1.2s								
ZEA				pmax	pmax				
	comp=N,70nm,0.9s								
ZEA				pmax	pmax				
	comp=Z,140nm,0.9s								
ZEA				pmax	pmax				
	comp=N,200nm,2.8s								
ZEA				pmax	pmax				
	comp=Z,400nm,2.8s								
ZEA				pmax	pmax				
	comp=Z,200nm,6.4s								
ZEA				smax	smax				
	comp=E,700nm,10.0s								
ZEA				smax	smax				
	comp=N,800nm,6.6s								
HYT	Haines Junctio	85.10	19	P	P	11 55 33.7	+0.4		
HYT	Haines Junctio	85.10	19	P	P	11 55 32.8	-0.5		
	baz=219,SNR=52								
S34M	Telegraph Cree	85.10	23	P	P	11 55 33.8	+0.7		
S34M	Telegraph Cree	85.10	23	P	P	11 55 33.6	+0.4		
	baz=225								
TIY	Taiyuan	85.12	312	⇑P	P	11 55 34.9	+1.1		
TIY				sP	sP	11 58 29.3	-0.3		
TIY				S	S	12 05 19.9	+2.1		
TIY				sS	sS	12 08 52.6	+3.6		
TIY				SS	SS	12 11 05.2	-3.4		
TIY				pmax	pmax				
	comp=N,57nm,0.7s								
TIY				pmax	pmax				
	comp=N,320nm,5.3s								
SRU	San Rafael Swe	85.14	46	IAmb	IAmb	11 55 36.7			
	comp=Z,105nm,0.8s								
YUK4	Talbot Arm	85.16	18	P	P	11 55 33.3	-0.4		
	baz=218,SNR=43								
L26K	Log Cabin Wild	85.25	15	IAmb	IAmb	11 55 35.7			
	comp=Z,81nm,0.9s								
L26K	Log Cabin Wild	85.25	15	P	P	11 55 33.1	-0.7		
	baz=214,SNR=39								
I21K	Tanana	85.27	11	P	P	11 55 33.2	-0.6		
I21K				IAmb	IAmb	11 55 35.9			
	comp=Z,94nm,0.9s								
I21K	Tanana	85.27	11	P	P	11 55 32.6	-1.2		
	baz=205,SNR=52								
NEA2	Nenana	85.30	12	P	P	11 55 32.1	-1.9		
	baz=208,SNR=7.8								
K24K	Donnelly Dome	85.32	14	P	P	11 55 33.5	-0.7		
	baz=211,SNR=139								
G19K	Purcell Mounta	85.33	9	P	P	11 55 33.2	-0.9		
	baz=201,SNR=55								
MLY	Manley	85.36	11	P	P	11 55 33.3	-1.1		
MLY				IAmb	IAmb	11 55 35.6			
	comp=Z,140nm,1.2s								
MLY	Manley	85.36	11	P	P	11 55 33.1	-1.3		
	baz=207,SNR=109								
P32M	Atlin	85.39	21	IAmb	IAmb	11 55 37.1			
	comp=Z,87nm,0.8s								
P32M	Atlin	85.39	21	P	P	11 55 34.7	0.0		
	baz=222,SNR=62								
BVCY	Beaver Creek	85.39	17	P	P	11 55 34.3	-0.3		
	baz=216,SNR=212								
WRH	Wood River Hil	85.39	13	P	P	11 55 33.4	-1.0		
F18K	Selawik	85.42	7	P	P	11 55 33.5	-1.0		
	baz=198,SNR=27								
Q32M	Nakina River	85.44	22	P	P	11 55 35.6	+0.6		
	baz=224,SNR=73								
TCUT	Toone Canyon	85.48	44	IAmb	IAmb	11 55 39.4			
	comp=Z,132nm,0.6s								
RIDG	Independent Ri	85.49	14	IAmb	IAmb	11 55 36.5			
	comp=Z,134nm,0.8s								
RIDG	Independent Ri	85.49	14	P	P	11 55 34.0	-1.0		
	baz=212,SNR=37								
O30N	Mendenhall	85.50	19	P	P	11 55 35.3	+0.2		
O30N				IAmb	IAmb	11 55 37.4			
	comp=Z,130nm,0.9s								
O30N	Mendenhall	85.50	19	P	P	11 55 34.8	-0.3		
	baz=220,SNR=88								
Y22D	IRIS PASSCAL I	85.52	52	IAmb	IAmb	11 57 45.8			
	comp=Z,155nm,1.3s								
Y22D	IRIS PASSCAL I	85.52	52	P	P	11 55 36.4	+0.5		
	baz=245,SNR=7.7								
Y22F	Passcal Instru	85.52	52	P	P	11 55 36.3	+0.4		
	baz=245,SNR=7.8								
H21K	Melozitna Rive	85.56	10	P	P	11 55 34.9	-0.4		
	baz=205								
HDA	Harding Lake	85.58	13	IAmb	IAmb	11 55 36.5			
	comp=Z,117nm,0.8s								
HDA	Harding Lake	85.58	13	P	P	11 55 33.8	-1.6		
	baz=210,SNR=86								
NEW	Newport	85.61	36	P	P	11 55 35.8	-0.1		
NEW				IAmb	IAmb	11 55 37.9			
	comp=Z,70nm,0.8s								
NEW	Newport	85.61	36	P	P	11 55 35.5	-0.4		
	baz=237,SNR=51								
NEW	Newport	85.61	36	P	P	11 55 35.8	-0.1		
NEW				pmax	pmax				
	comp=Z,70nm,0.8s								
CCB	Clear Creek Bu	85.61	13	IAmb	IAmb	11 55 36.3			
	comp=Z,129nm,0.6s								
HWUT	Hardware Ranch	85.61	44	P	P	11 55 36.3	0.0		
XLT	XiLinHaoTe	85.61	319	*e*P	P	11 55 36.5	+0.4		
XLT				pP	pP	11 57 36.5	+0.9		
XLT				sP	sP	11 58 36.0	+4.1		
XLT				SKS	SKSac	12 05 03.9	-5.0		
XLT				S	S	12 05 24.3	+2.0		
XLT				SS	SS	12 11 11.6	-4.0		
XLT				pmax	pmax				
	comp=Z,82nm,1.2s								
XLT				pmax	pmax				
	comp=Z,470nm,4.2s								
E17K	Hotham Inlet	85.64	7	P	P	11 55 34.7	-0.8		
	baz=196,SNR=85								
BSUT	Blindstream Ca	85.64	45	P	P	11 55 37.1	+0.4		
BSUT				IAmb	IAmb	11 55 39.5			
	comp=Z,73nm,0.7s								
JRQG	Juriquilla Cam	85.66	67	P	P	11 55 38.5	+1.5		
VHRN	Van Horn	85.67	56	P	P	11 55 37.8	+1.1		
L27K	Beaver Creek,	85.67	16	P	P	11 55 35.8	0.0		
L27K	Beaver Creek,	85.67	16	P	P	11 55 35.3	-0.6		
	baz=215								
BCAR	Beaver Creek A	85.68	16	P	P	11 55 35.4	-0.6		
IMAR	Indian Mountai	85.70	10	P	P	11 55 35.7	-0.2		
MVCO	Mesa Verde	85.71	49	P	P	11 55 36.9	0.0		
MVCO	Mesa Verde	85.71	49	P	P	11 55 37.3	+0.3		
	baz=244,SNR=33								
MNTX	Cornudas Mount	85.72	55	P	P	11 55 37.2	+0.4		
	baz=246,SNR=114								
I23K	Minto, Yukon-K	85.73	12	P	P	11 55 35.0	-1.1		
I23K				IAmb	IAmb	11 55 37.8			
	comp=Z,298nm,1.8s								
I23K	Minto, Yukon-K	85.73	12	P	P	11 55 34.3	-1.7		
	baz=208,SNR=46								
COLA	College	85.80	13	P	P	11 55 35.6	-0.8		
COLA	College	85.80	13	P	P	11 55 34.9	-1.4		
	baz=209								
COLA	College	85.80	13	⇑P	P	11 55 35.5	-0.8		
WHY	Whitehorse	85.80	20	IAmb	IAmb	11 55 39.0			
	comp=Z,92nm,0.9s								
WHY	Whitehorse	85.80	20	P	P	11 55 36.1	-0.5		
	baz=221,SNR=74								
PV20	West Nyswonger	85.88	48	P	P	11 55 38.6	+0.9		
F19K	Shaleruckik Mo	85.89	8	P	P	11 55 36.1	-0.6		
	baz=200								
DLBC	Dease Lake	85.89	23	P	P	11 55 37.7	+0.6		
DLBC				IAmb	IAmb	11 55 39.6			
	comp=Z,93nm,0.9s								
DLBC	Dease Lake	85.89	23	P	P	11 55 37.2	+0.1		
	baz=226,SNR=60								
SCRK	Sand Creek	85.89	15	IAmb	IAmb	11 55 38.8			
	comp=Z,101nm,1.1s								
SCRK	Sand Creek	85.89	15	P	P	11 55 36.3	-0.7		
	baz=213,SNR=104								
IL31		85.91	13	P	P	11 55 35.6	-1.3		
IL31				IAmb	IAmb	11 55 37.8			
	comp=Z,150nm,1.1s								
ILAR	Eielson Array	85.91	13	P	P	11 55 35.6	-1.3		
ILAR	Eielson Array	85.91	13	P	P	11 55 35.5	-1.4		
	comp=Z,47nm,0.6s,baz=221,slow=5.0,SNR=911								
ILAR				pP	pP	11 57 37.0	+0.7		
	comp=Z,2.0nm,1.0s,baz=226,slow=49,SNR=1.1								
ILAR				PKiKP	PKiKP	12 00 41.0	-0.2		
	comp=Z,1.2nm,0.6s,baz=295,slow=3.4,SNR=4.7								
ILAR				S	SKSac	12 05 07.8	-1.8		
	comp=Z,2.6nm,1.2s,baz=227,slow=4.8,SNR=7.1								
ILAR				PKKP	PKKPdf	12 13 30.4	+0.8		
	comp=Z,0.8nm,0.6s,baz=329,slow=2.2,SNR=12								
	comp=Z,47nm,0.6s								
H22K	Ishtalitna Cre	86.02	11	P	P	11 55 37.0	-0.5		
	baz=206								
PV01	Paradox Valley	86.06	48	P	P	11 55 38.9	+0.3		
PV01				IAmb	IAmb	11 55 41.0			
	comp=Z,57nm,0.8s								
M29M	Somme Creek	86.09	17	IAmb	IAmb	11 55 40.0			
	comp=Z,87nm,0.7s								
M29M	Somme Creek	86.09	17	P	P	11 55 37.4	-0.6		
	baz=218,SNR=135								
E18K	Tukpahlearik C	86.10	7	IAmb	IAmb	11 55 39.7			
	comp=Z,77nm,0.7s								
E18K	Tukpahlearik C	86.10	7	P	P	11 55 37.1	-0.6		
	baz=197								
POKR	Poker Plat Res	86.10	13	P	P	11 55 36.8	-1.0		
POKR	Poker Plat Res	86.10	13	P	P	11 55 36.4	-1.4		
	baz=210,SNR=93								
XAN	Xi'an	86.10	307	⇑P	P	11 55 39.9	+1.3		
XAN				pP	pP	11 57 44.6	+5.8		
XAN				S	S	12 05 31.9	+4.6		
XAN			

HIA	**Hailar**	**86.25**	**325**		P		**P**	**11 55 39.6**	**+0.7**
HIA	**Hailar**	**86.25**	**325**		P		**P**	**11 55 39.5**	**+0.6**
HIA					pmax		pmax			
	comp=Z,54nm,1.1s									
F20K	**Avaraart Lake**	**86.38**	**9**		P		**P**	**11 55 39.0**	**-0.1**
	baz=202									
BILL	**Bilibino**	**86.40**	**354**		P		**P**	**11 55 38.7**	**-0.4**
BILL					IAmb		IAmb	11 55 41.5		
	comp=Z,97nm,0.7s									
BILL	**Bilibino**	**86.40**	**354**	*eP*			**P**	**11 55 38.5**	**-0.6**
K27K	**Chicken**	**86.40**	**15**		P		**P**	**11 55 39.8**	**+0.5**
	baz=215									
J26L	**Joseph Creek**	**86.43**	**14**		IAmb		IAmb	11 55 41.6		
	comp=Z,185nm,1.1s									
J26L	**Joseph Creek**	**86.43**	**14**		P		**P**	**11 55 39.4**	**-0.2**
	baz=213,SNR=154									
RDMU	**Red Mountain**	**86.46**	**45**		IAmb		IAmb	11 55 43.8		
	comp=Z,50nm,0.6s									
C16K	**Lisburne Hills**	**86.46**	**5**		P		**P**	**11 55 38.7**	**-0.7**
	baz=193,SNR=24									
RDOG	**Red Dog Mine**	**86.47**	**6**		P		**P**	**11 55 38.7**	**-0.8**
	baz=195									
MLSI	**Meulaboh, Aceh**	**86.54**	**276**		P		**P**	**11 55 41.7**	**+0.6**
	comp=Z,151nm,0.7s									
E19K	**Redstone River**	**86.55**	**8**		P		**P**	**11 55 39.0**	**-0.9**
	baz=200,SNR=136									
H24K	**Noodor Dome**	**86.64**	**12**		P		**P**	**11 55 38.3**	**-2.1**
	baz=209									
M30M	**Minto, Yukon**	**86.68**	**18**		P		**P**	**11 55 40.2**	**-0.5**
M30M					IAmb		IAmb	11 55 42.6		
	comp=Z,130nm,0.8s									
M30M	**Minto, Yukon**	**86.68**	**18**		P		**P**	**11 55 40.2**	**-0.5**
	baz=220,SNR=163									
L29M	**L29M**	**86.71**	**17**		P		**P**	**11 55 40.9**	**+0.1**
L29M	**L29M**	**86.71**	**17**		P		**P**	**11 55 40.8**	**+0.1**
	baz=218									
N32M	**Quiet Lake**	**86.76**	**20**		P		**P**	**11 55 41.6**	**+0.5**
N32M	**Quiet Lake**	**86.76**	**20**		P		**P**	**11 55 41.2**	**+0.1**
	baz=223									
PECS	**Pecos**	**86.78**	**56**		IAmb		IAmb	11 55 45.4		
	comp=Z,121nm,1.5s									
BPMT	**Black Pine Rid**	**86.78**	**39**		P		**P**	**11 55 41.8**	**0.0**
C17K	**DeLong Mountai**	**86.85**	**6**		P		**P**	**11 55 41.4**	**+0.1**
	baz=195									
PRP	**Porcupine Dome**	**86.85**	**13**		IAmb		IAmb	11 55 48.7		
	comp=Z,52nm,0.7s									
PRP	**Porcupine Dome**	**86.85**	**13**		P		**P**	**11 55 40.2**	**-1.3**
	baz=211,SNR=98									
F21K	**Alatna River**	**86.88**	**10**		P		**P**	**11 55 40.5**	**-1.0**
	baz=204									
TPAW	**Teton Pass**	**86.90**	**42**		IAmb		IAmb	11 55 44.4		
	comp=Z,83nm,0.8s									
REDW	**Red Top Meadow**	**86.90**	**43**		P		**P**	**11 55 42.4**	**0.0**
G22K	**Bettles**	**86.93**	**10**		P		**P**	**11 55 41.8**	**+0.1**
	baz=206									
G23K	**Bananza Creek**	**87.00**	**11**		P		**P**	**11 55 41.4**	**-0.7**
	baz=207									
SNOW	**Snow King Moun**	**87.01**	**42**		IAmb		IAmb	11 55 46.0		
	comp=Z,128nm,0.7s									
M31M	**Drury Creek, Y**	**87.12**	**19**		IAmb		IAmb	11 55 44.3		
	comp=Z,75nm,1.1s									
M31M	**Drury Creek, Y**	**87.12**	**19**		P		**P**	**11 55 41.9**	**-0.8**
	baz=222,SNR=60									
DAWY	**Dawson**	**87.12**	**16**		P		**P**	**11 55 42.5**	**-0.2**
	baz=217									
HHC	**Hu-ho-hao-te**	**87.13**	**315**	⇑*iP*			**P**	**11 55 43.9**	**+0.5**
HHC					SKS		**SKSac**	**12 05 18.5**	**+0.3**
HHC					S		**ScS**	**12 05 41.4**	**-0.2**
HHC					sS		sS	12 09 07.7	-2.0
HHC					SS		**SS**	**12 11 33.0**	**-4.6**
HHC					pmax		pmax			
	comp=Z,40nm,1.0s									
HHC					pmax		pmax			
	comp=Z,430nm,4.9s									
S22A	**4UR Ranch, Cre**	**87.14**	**49**		P		**P**	**11 55 43.7**	**0.0**
	baz=245									
O20A	**White River Ci**	**87.17**	**46**		IAmb		IAmb	11 55 46.5		
	comp=Z,69nm,0.9s									
O20A	**White River Ci**	**87.17**	**46**		P		**P**	**11 55 43.6**	**-0.1**
	baz=244,SNR=44									
LOHW	**Long Hollow**	**87.18**	**42**		P		**P**	**11 55 44.4**	**+0.7**
LOHW					IAmb		IAmb	11 55 46.5		
	comp=Z,76nm,0.9s									
SRDT	**SRDT**	**87.20**	**286**		P		**P**	**11 55 45.8**	**+1.7**
I26K	**Coal Creek Min**	**87.20**	**14**		P		**P**	**11 55 42.5**	**-0.5**
	baz=214									
C18K	**Utukok River**	**87.21**	**6**		P		**P**	**11 55 42.1**	**-0.9**
	baz=197									
EGAK	**Eagle**	**87.25**	**15**		P		**P**	**11 55 42.6**	**-0.6**
	baz=215,SNR=15									
FLWY	**Flagg Ranch**	**87.34**	**42**		IAmb		IAmb	11 55 47.7		
	comp=Z,135nm,0.8s									
D19K	**Kuna River**	**87.42**	**7**		P		**P**	**11 55 43.2**	**-0.8**
	baz=200									
YFT	**Old Faithful**	**87.42**	**42**		IAmb		IAmb	11 55 49.0		
	comp=Z,89nm,0.9s									
COLD	**Coldfoot**	**87.43**	**11**		P		**P**	**11 55 43.7**	**-0.3**
	baz=207,SNR=128									
E20K	**Nigu River**	**87.44**	**8**		P		**P**	**11 55 43.8**	**-0.3**
	baz=201									
K29M	**Barlow Dome**	**87.45**	**17**		P		**P**	**11 55 44.2**	**-0.1**
	baz=219									
FARO	**Faro, Yukon**	**87.47**	**19**		P		**P**	**11 55 43.9**	**-0.5**
	baz=223,SNR=48									
BW06	**Boulder Array**	**87.47**	**44**		IAmb		IAmb	11 55 47.3		
	comp=Z,65nm,0.7s									
BW06	**Boulder Array**	**87.47**	**44**		P		**P**	**11 55 44.9**	**-0.2**
	baz=243,SNR=142									
PD31	**Pinedale Array**	**87.47**	**44**		P		**P**	**11 55 45.2**	**+0.1**
PD31					IAmb		IAmb	11 55 47.4		
	comp=Z,59nm,0.7s									
PDAR	**Pinedale Array**	**87.47**	**44**		P		**P**	**11 55 45.1**	**+0.1**
	comp=Z,49nm,0.5s,baz=217,slow=3.2,SNR=637									
PDAR					pP		**pP**	**11 57 45.2**	**+0.4**
	comp=Z,22nm,1.1s,baz=218,slow=3.6,SNR=7.9									
PDAR					PP		**PP**	**11 59 18.2**	**-2.2**
	comp=Z,5.8nm,1.1s,baz=241,slow=6.1,SNR=4.7									
PDAR					PKKPbc		**PKKPbc**	**12 13 29.6**	**-2.7**
	comp=Z,1.1nm,0.8s,baz=98,slow=7.6,SNR=7.6									
	comp=Z,49nm,0.5s									
G24K	**Hadweenzic Riv**	**87.47**	**12**		IAmb		IAmb	11 55 45.9		
	comp=Z,43nm,0.6s									
G24K	**Hadweenzic Riv**	**87.47**	**12**		P		**P**	**11 55 43.3**	**-0.9**
	baz=210									
BOZ	**Bozeman (W)**	**87.47**	**40**		P		**P**	**11 55 45.6**	**+0.7**
BOZ	**Bozeman (W)**	**87.47**	**40**		P		**P**	**11 55 45.4**	**+0.4**
	baz=241,SNR=103									
BOZ	**Bozeman (W)**	**87.47**	**40**		P		**P**	**11 55 45.6**	**+0.7**
BOZ					pmax		pmax			
	comp=Z,413nm,2.0s									
WTLY	**Watson Lake, Y**	**87.51**	**23**		IAmb		IAmb	11 55 47.1		
	comp=Z,71nm,1.0s									
WTLY	**Watson Lake, Y**	**87.51**	**23**		P		**P**	**11 55 44.8**	**+0.2**
	baz=227,SNR=43									
H17A	**Grant Village**	**87.56**	**42**		IAmb		IAmb	11 55 50.0		
	comp=Z,14nm,0.8s									
H17A	**Grant Village**	**87.56**	**42**		P		**P**	**11 55 46.7**	**+1.2**
	baz=242,SNR=129									
SAND	**Sanderson**	**87.62**	**58**		P		**P**	**11 55 45.9**	**0.0**
SAND					IAmb		IAmb	11 55 48.8		
	comp=Z,63nm,0.8s									
MNHN	**Monahans**	**87.64**	**56**		P		**P**	**11 55 46.9**	**+1.0**
MNHN					IAmb		IAmb	11 55 48.7		
	comp=Z,52nm,0.8s									
YNR	**Norris Junctio**	**87.65**	**41**		IAmb		IAmb	11 55 50.5		
	comp=Z,76nm,1.1s									
KMI	**Kunming**	**87.66**	**297**	⇓	P		**P**	**11 55 47.5**	**+1.1**
KMI					pP		pP	11 57 48.8	+1.8
KMI					SKS		**SKSac**	**12 05 22.3**	**0.0**
KMI					S		**ScS**	**12 05 46.0**	**-0.9**
KMI					pmax		pmax			
	comp=Z,22nm,0.6s									
MAYO	**Mayo, Yukon**	**87.72**	**18**		P		**P**	**11 55 46.0**	**+0.5**
MAYO	**Mayo, Yukon**	**87.72**	**18**		P		**P**	**11 55 45.7**	**+0.2**
	baz=220,SNR=117									
J29N	**Klondike Camp**	**87.74**	**16**		IAmb		IAmb	11 55 48.1		
	comp=Z,186nm,1.2s									
J29N	**Klondike Camp**	**87.74**	**16**		P		**P**	**11 55 45.5**	**-0.2**
	baz=218,SNR=106									
FYU	**Fort Yukon**	**87.81**	**13**		IAmb		IAmb	11 55 47.6		
	comp=Z,56nm,0.6s									
D20K	**Etivluk River**	**87.81**	**8**		P		**P**	**11 55 45.3**	**-0.5**
	baz=201									
I27K	**Kandik River**	**87.81**	**14**		P		**P**	**11 55 45.2**	**-0.7**
	baz=215,SNR=44									
C19K	**Lookout Ridge**	**87.82**	**7**		P		**P**	**11 55 45.5**	**-0.4**
	baz=198,SNR=51									
B18K	**Kokolik River**	**87.84**	**6**		P		**P**	**11 55 45.2**	**-0.7**
	baz=196									
E21K	**Killik River**	**87.92**	**9**		P		**P**	**11 55 45.5**	**-0.9**
	baz=203									
E22K	**Anaktuvuk Pass**	**87.98**	**10**		P		**P**	**11 55 46.2**	**-0.4**
E22K					IAmb		IAmb	11 55 48.3		
	comp=Z,90nm,0.8s									
E22K	**Anaktuvuk Pass**	**87.98**	**10**		P		**P**	**11 55 46.0**	**-0.7**
	baz=206									
YMP	**Mirror Lake Pl**	**87.99**	**42**		IAmb		IAmb	11 56 05.9		
	comp=Z,85nm,1.2s									
BTO	**Baotou**	**88.07**	**314**	*eP*			**P**	**11 55 49.9**	**+2.1**
BTO					pP		**pP**	**11 57 49.3**	**+0.6**
BTO					sP		**sP**	**11 58 42.7**	**-1.7**
BTO					PP		**PP**	**11 59 29.6**	**+4.5**
BTO					S		**S**	**12 05 40.5**	**-5.1**
BTO					sS		**sS**	**12 09 19.4**	**+0.2**
BTO					pmax		pmax			
	comp=Z,38nm,1.2s									
BTO					pmax		pmax			
	comp=Z,1µm,7.2s									
SDCO	**Great Sand Dun**	**88.09**	**49**		P		**P**	**11 55 47.8**	**-0.4**
	baz=246,SNR=35									
I28M	**Miner Creek**	**88.09**	**15**		P		**P**	**11 55 46.8**	**-0.5**
I28M					IAmb		IAmb	11 55 48.7		
	comp=Z,62nm,0.8s									
I28M	**Miner Creek**	**88.09**	**15**		P		**P**	**11 55 46.8**	**-0.5**
	baz=217,SNR=113									
F24K	**Squaw Lake**	**88.11**	**11**		P		**P**	**11 55 47.1**	**-0.1**
F24K					IAmb		IAmb	11 55 49.2		
	comp=Z,92nm,0.7s									
F24K	**Squaw Lake**	**88.11**	**11**		P		**P**	**11 55 47.2**	**-0.1**
	baz=209									
PAYG	**Puerto Ayora**	**88.20**	**90**		P		**P**	**11 55 50.9**	**+2.1**
E23K	**Chandalar**	**88.28**	**10**		P		**P**	**11 55 47.6**	**-0.4**
	baz=208,SNR=94									
H27K	**Steamboat Moun**	**88.35**	**14**		P		**P**	**11 55 48.0**	**-0.4**
	baz=215									
J30M	**Hart River**	**88.35**	**17**		P		**P**	**11 55 48.6**	**0.0**
J30M	**Hart River**	**88.35**	**17**		P		**P**	**11 55 48.3**	**-0.3**
	baz=220									
G26K	**Porcupine Rive**	**88.44**	**13**		P		**P**	**11 55 48.3**	**-0.4**
	baz=213									
COYC	**Coyhaique**	**88.45**	**138**		P		**P**	**11 55 50.3**	**+0.9**
COYC					IAmb		IAmb	11 55 53.6		
	comp=Z,99nm,1.3s									
C21K	**Knifeblade Rid**	**88.47**	**8**		P		**P**	**11 55 48.8**	**0.0**
	baz=203									
E24K	**Your Creek**	**88.49**	**11**		P		**P**	**11 55 48.5**	**-0.5**
E24K	**Your Creek**	**88.49**	**11**		P		**P**	**11 55 49.0**	**0.0**
	baz=209									
D22K	**Ayikyak River**	**88.52**	**9**		P		**P**	**11 55 48.8**	**-0.3**
D22K	**Ayikyak River**	**88.52**	**9**		P		**P**	**11 55 49.1**	**-0.1**
	baz=205									
RWWY	**Rawlins**	**88.55**	**45**		P		**P**	**11 55 50.7**	**+0.4**
F25K	**Christian Rive**	**88.61**	**12**		P		**P**	**11 55 49.8**	**+0.2**
	baz=211,SNR=46									
MSTX	**Muleshoe**	**88.63**	**54**		P		**P**	**11 55 51.0**	**+0.4**
MSTX	**Muleshoe**	**88.63**	**54**		P		**P**	**11 55 50.4**	**-0.2**
	baz=247									
BRLDA	**Berland Lookou**	**88.65**	**31**		P		**P**	**11 55 50.8**	**+0.7**
BMAR	**Burnt Mountain**	**88.68**	**12**		P		**P**	**11 55 49.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**88.70**	**290**		P		**P**	**11 55 51.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**88.70**	**290**	*i*	P		**P**	**11 55 52.5**	**+1.4**
CMAR					pmax		pmax			
	comp=Z,9.0nm,0.8s									
CMAR	**Chiang Mai Arr**	**88.70**	**290**		P		**P**	**11 55 52.3**	**+1.2**
	comp=Z,9.3nm,0.9s,baz=119,slow=2.5,SNR=48									
CMAR					pP		**pP**	**11 57 51.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=208,slow=38,SNR=2.6									
CMAR					PP		**PP**	**11 59 29.6**	**-0.8**
	comp=Z,7.1nm,1.1s,baz=118,slow=5.4,SNR=4.9									
CMAR					PKKPbc		**PKKPbc**	**12 13 28.9**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=289,slow=4.6,SNR=8.7									
	comp=Z,9.3nm,0.9s									
RLMT	**Red Lodge**	**88.73**	**41**		P		**P**	**11 55 51.8**	**+0.9**
RLMT					IAmb		IAmb	11 55 54.0		
	comp=Z,64nm,0.8s									
RLMT	**Red Lodge**	**88.73**	**41**		P		**P**	**11 55 51.5**	**+0.7**
	baz=243,SNR=93									
OZNA	**Ozona**	**88.78**	**57**		P		**P**	**11 55 52.0**	**+0.7**
TOLK	**Toolik Lake Re**	**88.80**	**10**		P		**P**	**11 55 49.8**	**-0.6**
TOLK					IAmb		IAmb	11 55 52.2		
	comp=Z,80nm,1.1s									
TOLK	**Toolik Lake Re**	**88.80**	**10**		P		**P**	**11 55 50.1**	**-0.4**
	baz=208,SNR=66									
CHTO	**Chiang Mai**	**88.82**	**290**		P		**P**	**11 55 52.7**	**+1.1**
CHTO	**Chiang Mai**	**88.82**	**290**		P		**P**	**11 55 52.3**	**+0.7**
CHTO	**Chiang Mai**	**88.82**	**290**		P		**P**	**11 55 52.7**	**+1.1**
CHTO					pmax		pmax			
	comp=Z,11nm,0.7s									
I30M	**Mount Dempster**	**88.84**	**16**		P		**P**	**11 55 49.8**	**-1.0**
I30M					IAmb		IAmb	11 55 52.5		
	comp=Z,75nm,0.8s									
I30M	**Mount Dempster**	**88.84**	**16**		P		**P**	**11 55 50.4**	**-0.4**
	baz=220									
Q24A	**Divide**	**88.84**	**48**		IAmb		IAmb	11 55 55.2		
	comp=Z,103nm,1.4s									
Q24A	**Divide**	**88.84**	**48**		P		**P**	**11 55 51.8**	**+0.1**
	baz=246,SNR=20									
ISCO	**Idaho Springs**	**88.86**	**47**		P		**P**	**11 55 52.6**	**+0.9**
ISCO	**Idaho Springs**	**88.86**	**47**		P		**P**	**11 55 52.4**	**+0.6**
	baz=246,SNR=30									
ISCO	**Idaho Springs**	**88.86**	**47**		P		**P**	**11 55 52.6**	**+0.9**
ISCO					pmax		pmax			
	comp=Z,23nm,0.8s									
CD2	**Chengdu**	**88.90**	**303**		P		**P**	**11 55 53.0**	**+1.2**
CD2					pP		pP	11 57 53.4	+0.4
CD2					sP		sP	11 58 46.7	-1.9
CD2					S		**S**	**12 05 55.7**	**+2.2**
CD2					pmax		pmax			
	comp=Z,10.0nm,0.8s									
CD2					pmax		pmax			
	comp=Z,240nm,6.7s									
B21K	**Ikpikpuk River**	**88.93**	**8**		P		**P**	**11 55 50.7**	**-0.3**
B21K					IAmb		IAmb	11 55 53.4		
	comp=Z,145nm,1.5s									
B21K	**Ikpikpuk River**	**88.93**	**8**		P		**P**	**11 55 50.6**	**-0.3**
	baz=203									
PZH	**PanZhiHua**	**88.98**	**298**		P		**P**	**11 55 53.3**	**+0.9**
PZH					pP		**pP**	**11 57 58.1**	**+4.7**
PZH					sP		**sP**	**11 58 44.5**	**-3.9**
PZH					SKS		**SKSac**	**12 05 27.4**	**-2.4**
PZH					S		**S**	**12 05 55.7**	**+1.2**
PZH					sS		**sS**	**12 09 27.5**	**-1.3**
PZH					pmax		pmax			
	comp=Z,20nm,0.8s									
PZH					pmax		pmax			
	comp=Z,120nm,4.7s									
F26K	**Sheenjek River**	**89.00**	**12**		P		**P**	**11 55 51.6**	**+0.2**
	baz=213									
E25K	**Arctic Village**	**89.08**	**12**		P		**P**	**11 55 51.7**	**-0.1**
E25K					IAmb		IAmb	11 55 53.8		
	comp=Z,73nm,1.1s									
E25K	**Arctic Village**	**89.08**	**12**		P		**P**	**11 55 51.6**	**-0.1**
	baz=211,SNR=63									
N23A	**Red Feather La**	**89.08**	**46**		IAmb		IAmb	11 55 56.2		
	comp=Z,118nm,1.1s									
N23A	**Red Feather La**	**89.08**	**46**		P		**P**	**11 55 53.1**	**+0.4**
	baz=245,SNR=30									
H29M	**Whitestone**	**89.10**	**15**		P		**P**	**11 55 51.5**	**-0.4**
	baz=218									
SGCY	**Sterling City**	**89.14**	**56**		IAmb		IAmb	11 55 55.3		
	comp=Z,51nm,0.6s									
ELIB	**Princess Elisa**	**89.16**	**187**	*d*	P		**P**	**11 55 51.5**	**-0.9**
	comp=Z,125nm,0.8s									
ELIB				*dx*			x	11 55 57.1		
ELIB				*dp*	P		**pwP**	**11 57 55.1**	**0.0**
ELIB				*ds*	P		**sP**	**11 58 45.9**	**-2.7**
833A	**Chaparral WMA,**	**89.25**	**60**		IAmb		IAmb	11 55 56.6		
	comp=Z,55nm,0.8s									
833A	**Chaparral WMA,**	**89.25**	**60**		P		**P**	**11 55 54.2**	**+0.7**
	baz=249									
POST	**Post**	**89.28**	**55**		P		**P**	**11 55 53.3**	**-0.2**
KOTAN	**Kotaneelee Air**	**89.31**	**24**		P		**P**	**11 55 53.3**	**+0.3**
	baz=231,SNR=6.4									
D24K	**Happy Valley**	**89.38**	**10**		P		**P**	**11 55 52.9**	**-0.2**
	baz=208,SNR=69									
HBVL	**Hebbronville**	**89.42**	**61**		P		**P**	**11 55 55.4**	**+1.2**
K22A	**Casper**	**89.43**	**45**		IAmb		IAmb	11 55 56.5		
	comp=Z,53nm,0.8s									
K22A	**Casper**	**89.43**	**45**		P		**P**	**11 55 54.1**	**0.0**
	baz=245,SNR=37									
YAK	**Yakutsk**	**89.49**	**338**		P		**P**	**11 55 52.6**	**-1.1**
YAK					IAmb		IAmb	11 55 54.6		
	comp=Z,75nm,0.8s									
YAK	**Yakutsk**	**89.49**	**338**	*ce*	P		**P**	**11 55 52.1**	**-1.6**
YAK					pmax		pmax			
	comp=Z,58nm,0.8s									
PHWY	**Pilot Hill**	**89.59**	**46**		P		**P**	**11 55 55.4**	**+0.3**
PHWY					IAmb		IAmb	11 55 57.5		
	comp=Z,60nm,0.8s									
FLDN	**Fort Liard**	**89.60**	**24**		P		**P**	**11 55 55.1**	**+0.9**
FLDN	**Fort Liard**	**89.60**	**24**		P		**P**	**11 55 54.5**	**+0.3**
	baz=231,SNR=30									
EPYK	**Eagle Plains**	**89.64**	**16**		P		**P**	**11 55 54.3**	**-0.1**
EPYK					IAmb		IAmb	11 55 56.0		
	comp=Z,94nm,0.8s									
EPYK	**Eagle Plains**	**89.64**	**16**		P		**P**	**11 55 53.5**	**-0.8**
	baz=220,SNR=79									
SN01	**Snyder 1**	**89.68**	**55**		IAmb		IAmb	11 55 58.0		
	comp=Z,94nm,0.8s									
JCT	**Junction City**	**89.68**	**58**		P		**P**	**11 55 56.0**	**+0.6**
JCT					IAmb		IAmb	11 55 57.9		
	comp=Z,80nm,0.8s									
JCT	**Junction City**	**89.68**	**58**		P		**P**	**11 55 55.2**	**-0.2**
	baz=249,SNR=50									
JCT	**Junction City**	**89.68**	**58**		P		**P**	**11 55 56.1**	**+0.6**
JCT					pmax		pmax			
	comp=Z,80nm,0.8s									
EGMT	**Eagleton**	**89.75**	**39**		P		**P**	**11 55 55.8**	**+0.4**
EGMT	**Eagleton**	**89.75**	**39**		P		**P**	**11 55 55.1**	**-0.3**
	baz=243,SNR=28									
AMTX	**Amarillo**	**89.81**	**53**		P		**P**	**11 55 56.2**	**+0.2**
AMTX					IAmb		IAmb	11 55 58.3		
	comp=Z,81nm,0.7s									
AMTX	**Amarillo**	**89.81**	**53**		P		**P**	**11 55 55.5**	**-0.5**
	baz=248									
F28M	**Old Crow**	**89.86**	**14**		P		**P**	**11 55 55.0**	**-0.3**
F28M					IAmb		IAmb	11 55 57.0		
	comp=Z,52nm,1.1s									
F28M	**Old Crow**	**89.86**	**14**		P		**P**	**11 55 54.7**	**-0.6**
	baz=217,SNR=73									
C24K	**Franklin Bluff**	**89.91**	**10**		P		**P**	**11 55 55.6**	**+0.2**
	baz=208									
DKNS	**Dickens**	**89.95**	**55**		P		**P**	**11 55 57.1**	**+0.5**
DKNS					IAmb		IAmb	11 55 58.8		
	comp=Z,45nm,0.9s									
D25K	**Kavik River**	**89.96**	**11**		P		**P**	**11 55 54.5**	**-1.3**
	baz=211									
BRIGG	**Briggsdale**	**90.08**	**47**		IAmb		IAmb	11 55 60.0		
	comp=Z,58nm,0.8s									
G30M	**tAoh Zraii Nji**	**90.24**	**15**		P		**P**	**11 55 56.8**	**-0.4**
G30M	**tAoh Zraii Nji**	**90.24**	**15**		P		**P**	**11 55 56.1**	**-1.1**
	baz=220									
A21K	**Barrow**	**90.26**	**7**		P		**P**	**11 55 56.0**	**-1.1**
	baz=201,SNR=14									
TROLL	**Troll, Antarti**	**90.32**	**180**	⇑	P		**P**	**11 55 57.5**	**-0.2**
	comp=Z,5µm,0.5s									
APMT	**Aspermont**	**90.45**	**55**		P		**P**	**11 55 59.4**	**+0.5**
ABTX	**Abilene, Hawle**	**90.57**	**56**		P		**P**	**11 56 00.0**	**+0.5**
ABTX	**Abilene, Hawle**	**90.57**	**56**		P		**P**	**11 55 59.2**	**-0.3**
	baz=249,SNR=32									
BRDY	**Brady**	**90.61**	**57**		P		**P**	**11 55 59.9**	**+0.2**
BRDY					IAmb		IAmb	11 56 02.6		
	comp=Z,180nm,1.8s									
SNAA	**Sanae**	**90.62**	**179**		IAmb		IAmb	11 56 00.2		
	comp=Z,92nm,1.2s									
SNAA	**Sanae**	**90.62**	**179**	⇑	P		**P**	**11 55 59.0**	**-0.1**
	comp=Z,881nm,0.6s									
SNAA	**Sanae**	**90.62**	**179**	*i*	P		**P**	**11 55 59.4**	**+0.4**
SNAA					pmax		pmax			
	comp=Z,39nm,0.9s									
SNAA	**Sanae**	**90.62**	**179**		P		**P**	**11 55 58.3**	**-0.8**
	comp=Z,30nm,0.5s,baz=207,slow=8.0,SNR=115									
SNAA					S		**SKSac**	**12 05 37.3**	**-0.3**
	comp=Z,7.3nm,1.1s,baz=0.1,slow=22,SNR=6.4									
SNAA					PKKPbc		**PKKPbc**	**12 13 23.5**	**-1.8**
	comp=Z,1.5nm,0.6s,baz=327,slow=5.2,SNR=5.7									
	comp=Z,30nm,0.5s									
KSCO	**Kaye Shedlock'**	**90.67**	**49**		IAmb		IAmb	11 56 04.1		
	comp=Z,80nm,0.9s									
KSCO	**Kaye Shedlock'**	**90.67**	**49**		P		**P**	**11 55 59.8**	**-0.1**
	baz=248,SNR=20									
LR05	**Currie**	**90.68**	**133**		IAmb		IAmb	11 56 02.8		
	comp=Z,77nm,1.5s

INK Inuvik 91.92 15 P P 11 56 04.4 -0.4
comp=Z,38nm,0.8s
INK Inuvik 91.92 15 P P 11 56 03.5 -1.3
baz=222,SNR=117
INK Inuvik 91.92 15 P P 11 56 04.4 -0.4
INK pmax pmax
comp=Z,89nm,0.8s
FW03 Perrin-Whitt E 91.96 56 P P 11 56 06.4 +0.6
FW03 IAmb IAmb 11 56 08.5
comp=Z,71nm,0.7s
WMOK Wichita Mounta 91.99 54 P 11 56 05.9 -0.1
WMOK Wichita Mounta 91.99 54 P P 11 56 05.6 -0.3
baz=250,SNR=17
WMOK Wichita Mounta 91.99 54 P P 11 56 05.9 -0.1
WMOK pmax pmax
comp=Z,13nm,0.8s
FW07 Weatherford 92.07 56 IAmb IAmb 11 56 08.8
comp=Z,39nm,0.7s
WHTX Lake Whitney, 92.09 57 P P 11 56 06.7 +0.3
WHTX IAmb IAmb 11 56 08.8
comp=Z,51nm,0.8s
WHTX Lake Whitney, 92.09 57 P P 11 56 06.5 +0.1
baz=250,SNR=24
FW13 Cleburne 92.23 57 IAmb IAmb 11 56 09.6
comp=Z,62nm,0.8s
FW06 Azle 92.34 56 IAmb IAmb 11 56 10.1
comp=Z,46nm,0.8s
U32A Winter Ranch, 92.39 53 P 11 56 08.8 +1.0
FW14 Alvarado 92.44 57 P 11 56 08.9 +0.9
X34A Smith Ranch, M 92.67 55 P 11 56 10.4 +1.3
X34A IAmb IAmb 11 56 12.7
comp=Z,118nm,1.5s
CBKS Cedar Bluff 92.69 50 IAmb IAmb 11 56 12.1
comp=Z,79nm,0.9s
CBKS Cedar Bluff 92.69 50 P P 11 56 09.9 +0.8
baz=249
Z35A Perchaven, San 92.70 56 IAmb IAmb 11 56 11.5
comp=Z,54nm,0.8s
HKT Hockley 92.73 60 P P 11 56 10.8 +1.5
HKT IAmb IAmb 11 58 22.9
comp=Z,111nm,1.9s
HKT Hockley 92.73 60 P P 11 56 10.8 +1.5
HKT pmax pmax
comp=Z,111nm,1.9s
LOOK Love County 92.98 55 P 11 56 11.1 +0.6
LOOK IAmb IAmb 11 56 13.3
comp=Z,26nm,0.8s
ULN Ulaanbaatar 93.02 320 P P 11 56 10.2 -0.3
ULN IAmb IAmb 11 56 12.4
comp=Z,46nm,1.2s
ULN Ulaanbaatar 93.02 320 *ce*P P 11 56 09.8 -0.7
ULN pmax pmax
comp=Z,29nm,1.1s
OK032 Salt Plains WL 93.13 52 P P 11 56 11.6 +0.5
CROK Carrier 93.20 53 IAmb IAmb 11 56 14.3
comp=Z,107nm,1.3s
R32A Long Quarter, 93.31 51 P P 11 56 12.6 +0.6
KAN10 Anthony SW Sta 93.33 52 P 11 56 13.0 +0.9
OK029 Liberty Lake 93.37 54 IAmb IAmb 11 56 15.0
comp=Z,118nm,1.9s
KAN14 Manchester OK 93.37 52 IAmb IAmb 11 56 14.3
comp=Z,38nm,0.8s
SONM Songino Array 93.42 319 P P 11 56 12.0 -0.3
SONM IAmb IAmb 11 56 14.7
comp=Z,64nm,1.7s
SONM Songino Array 93.42 319 P P 11 56 12.0 -0.3
SONM pmax pmax
comp=Z,64nm,1.7s
SONM Songino Array 93.42 319 P P 11 56 11.7 -0.6
comp=Z,6.6nm,0.8s,baz=132,slow=4.1,SNR=42
SONM pP **pP** 11 58 13.8 0.0
comp=Z,1.4nm,1.1s,baz=129,slow=5.3,SNR=1.5
SONM PP **PP** 12 00 04.8 -1.7
comp=Z,3.0nm,0.9s,baz=140,slow=5.5,SNR=4.2
SONM PKiKP **PKiKP** 12 00 54.4 -0.2
comp=Z,1.6nm,0.8s,baz=110,slow=0.5,SNR=1.4
SONM S **SKSac** 12 05 52.8 -0.8
comp=Z,0.5nm,0.9s,baz=38,slow=33,SNR=3.8
SONM PKKP **PKKPdf** 12 13 16.5 +0.7
comp=Z,0.7nm,0.8s,baz=218,slow=2.2,SNR=4.5
comp=Z,6.6nm,0.8s
237A Washetta, Mont 93.42 58 IAmb IAmb 11 56 16.1
comp=Z,50nm,0.9s
KAN08 Anthony NE Sta 93.45 52 P 11 56 12.4 -0.2
KAN08 IAmb IAmb 11 56 15.0
comp=Z,56nm,0.7s
KAN05 Bluff City Nor 93.49 52 IAmb IAmb 11 56 15.2
comp=Z,64nm,0.8s
BOD Bodaibo 93.56 330 *e*P P 11 56 11.7 -0.8
BOD pmax pmax
comp=Z,26nm,1.4s
KAN01 Argonia South 93.59 52 P 11 56 14.2 +1.0
OK033 Mehan 93.84 53 P 11 56 14.7 +0.3
OK033 IAmb IAmb 11 56 17.1
comp=Z,78nm,1.7s
BLOK Blackwell 93.87 53 P 11 56 15.4 +0.9
BLOK IAmb IAmb 11 56 17.7
comp=Z,58nm,0.8s
OK052 Battle Ridge R 93.93 54 IAmb IAmb 11 56 17.6
comp=Z,60nm,1.4s
OK048 Pawnee Station 93.96 53 P 11 56 15.3 +0.4
OK048 IAmb IAmb 11 56 18.0
comp=Z,28nm,0.7s
OK051 E0350 and S346 94.07 53 IAmb IAmb 11 56 18.4
comp=Z,54nm,1.6s
DEOK Depew 94.11 54 IAmb IAmb 11 56 18.5
comp=Z,64nm,1.6s
NATX Nacogdoches 94.27 58 IAmb IAmb 11 56 20.1
comp=Z,30nm,0.8s
NATX Nacogdoches 94.27 58 P P 11 56 16.4 0.0
baz=252
YKA Yellowknife Ar 94.39 25 P P 11 56 15.2 -1.0
YKA Yellowknife Ar 94.39 25 P P 11 56 15.7 -0.6
comp=Z,26nm,0.8s,baz=247,slow=4.5,SNR=157
YKA pP **pP** 11 58 18.4 +1.2
comp=Z,0.8nm,0.7s,baz=320,slow=5.6,SNR=2.7
YKA PP **PP** 12 00 07.6 -5.9
comp=Z,1.9nm,0.7s,baz=237,slow=7.8,SNR=5.9
YKA S **SKSac** 12 05 56.8 -1.1
comp=Z,0.8nm,1.1s,baz=236,slow=5.9,SNR=4.6
YKA PKKPbc **PKKPdf** 12 13 11.7 -2.7
comp=Z,0.3nm,0.4s,baz=139,slow=7.8,SNR=13
YKA PKPPKP **P'P'df** 12 21 24.7 +1.6
comp=Z,0.6nm,1.0s,baz=49,slow=2.4,SNR=6.1
comp=Z,26nm,0.8s
T35A Sooner Cattle 94.45 53 IAmb IAmb 11 56 20.2
comp=Z,37nm,0.8s
TUL3 Leonard 94.68 54 P 11 56 18.9 +0.7
TUL3 Leonard 94.68 54 P P 11 56 18.5 +0.3
baz=251,SNR=5.5
BGNE Belgrade 94.73 48 P P 11 56 19.6 +1.3
BGNE Belgrade 94.73 48 P P 11 56 18.8 +0.5
baz=250
E28A Huff 94.79 43 P P 11 56 18.4 -0.1
E28A IAmb IAmb 11 56 20.2
comp=Z,28nm,0.7s
GTA Gaotai 94.88 310 *e*P P 11 56 19.4 +0.2
GTA S **S** 12 06 47.5 +1.6
GTA sS sS 12 10 23.1 -0.3
GTA SS **SS** 12 13 27.1 -0.9
GTA pmax pmax
comp=Z,9.0nm,1.2s
KSU1 Kansas State U 95.08 51 P P 11 56 20.6 +0.6
KSU1 Kansas State U 95.08 51 P P 11 56 20.8 +0.9
baz=251
C36M Paulatuk 95.13 17 P P 11 56 18.6 -0.8
C36M Paulatuk 95.13 17 P P 11 56 18.6 -0.8
baz=231,SNR=67
SUSD Miller 95.19 45 P P 11 56 20.8 +0.5
SUSD IAmb IAmb 11 56 23.9
comp=Z,27nm,0.7s
U38A Gravette 95.93 54 P 11 56 24.1 +0.3
MDND Maddock 95.93 42 P P 11 56 23.2 -0.3
MDND Maddock 95.93 42 P P 11 56 23.5 -0.1
baz=250
MIAR Mount Ida 95.98 56 P P 11 56 24.3 +0.2
MIAR Mount Ida 95.98 56 P P 11 56 24.4 +0.3
baz=252,SNR=5.4
MIAR Mount Ida 95.98 56 P P 11 56 24.3 +0.2
MIAR pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 96.09 345 P P 11 56 22.9 -0.8
TIXI IAmb IAmb 11 56 24.4
comp=Z,24nm,0.8s
TIXI Tiksi 96.09 345 P P 11 56 22.9 -0.8
TIXI pmax pmax
comp=Z,24nm,0.8s
L34A Svendsen Farm, 96.17 48 P P 11 56 25.0 +0.2
L34A IAmb IAmb 11 56 27.0
comp=Z,40nm,1.0s
Z41A Richland Creek 96.22 57 IAmb IAmb 11 56 28.9
comp=Z,22nm,0.7s
HHAR Hobbs 96.22 54 P P 11 56 25.3 +0.1
ZAK Zakamensk 96.26 321 *e*P P 11 56 24.3 -0.8
ZAK pmax pmax
comp=Z,11nm,1.2s
ZAK pmax pmax
comp=Z,8.0nm,1.4s
A36M Sachs Harbour 96.51 15 P P 11 56 25.2 -0.4
A36M Sachs Harbour 96.51 15 P P 11 56 25.1 -0.4
baz=230
ECSD EROS Data Cent 96.56 46 IAmb IAmb 11 56 28.1
comp=Z,27nm,0.8s
FFC Flin Flon 96.95 35 P P 11 56 27.5 -0.4
FFC Flin Flon 96.95 35 P P 11 56 27.5 -0.4
FFC pmax pmax
comp=Z,20nm,1.7s
S39A Bolivar 97.11 53 P Pdif 11 56 29.3 +0.2
S39A IAmb IAmb 11 56 32.3
comp=Z,18nm,0.8s
WHAR Wooly Hollow 97.21 55 P P 11 56 30.4 +0.8
F33A 5 Mile Ranch, 97.43 44 P Pdif 11 56 29.9 -0.3
F33A IAmb IAmb 11 56 32.2
comp=Z,89nm,1.8s
FCAR Ozark Folk Cen 97.51 55 P P 11 56 31.2 +0.2
P38A Dawn 97.52 51 P P 11 56 31.3 +0.4
P38A IAmb IAmb 11 56 33.5
comp=Z,33nm,0.8s
GOMU GeErMu 97.68 305 P P 11 56 33.8 +1.7
GOMU PP **PP** 12 00 44.3 +4.7
N38A Joes South For 98.07 50 Pdif Pdif 11 56 33.0 -0.3
N38A IAmb IAmb 11 56 36.4
comp=Z,29nm,0.9s
LCAR Lake Charles 98.32 55 Pdif Pdif 11 56 34.2 -0.3
LCAR IAmb IAmb 11 58 43.1
comp=Z,43nm,1.9s
AGMN Agassiz Nation 98.45 42 Pdif Pdif 11 56 33.8 -1.0
AGMN IAmb IAmb 11 56 36.9
comp=Z,50nm,1.9s
AGMN Agassiz Nation 98.45 42 P Pdif 11 56 34.7 -0.1
baz=253
CCM Cathedral Cave 98.79 53 Pdif P 11 56 36.7 +0.1
CCM IAmb IAmb 11 56 40.4
comp=Z,11nm,0.8s
CCM Cathedral Cave 98.79 53 P P 11 56 37.4 +0.8
baz=254
CCM Cathedral Cave 98.79 53 *i* P P 11 56 36.7 +0.1
CCM pmax pmax
comp=Z,11nm,0.8s
I37A Lemond, Waseca 98.86 47 Pdif Pdif 11 56 36.2 -0.5
I37A IAmb IAmb 11 56 40.1
comp=Z,19nm,0.6s
ULM Lac du Bonnet 99.02 40 *i* P Pdif 11 56 37.2 -0.1
ULM Lac du Bonnet 99.02 40 P Pdif 11 56 35.6 -1.6
comp=Z,6.5nm,0.5s,baz=261,slow=4.5,SNR=17
ULM pP **pP** 11 58 39.3 +0.7
comp=Z,5.1nm,1.1s,baz=188,slow=19,SNR=3.4
ULM PP **PP** 12 00 41.4 -7.4
comp=Z,5.0nm,0.8s,baz=229,slow=4.8,SNR=3.5
ULM PKKPbc **PKKPbc** 12 13 02.1 -0.2
comp=Z,1.6nm,0.6s,baz=289,slow=1.4,SNR=4.1
comp=Z,6.5nm,0.5s
SPMN Marine on St. 99.60 46 Pdif Pdif 11 56 40.3 +0.3
SPMN IAmb IAmb 11 56 42.3
comp=Z,21nm,0.8s
SPMN Marine on St. 99.60 46 P Pdif 11 56 39.8 -0.2
baz=254,SNR=6.4
I40A Norwalk 100.77 47 Pdif Pdif 11 56 45.5 +0.3
JFWS Jewell Farm 100.78 48 P Pdif 11 56 45.6 +0.3
baz=256,SNR=11
HDIL Hopedale 100.90 51 P Pdif 11 56 46.3 +0.4
baz=256
WVT Waverly 100.93 56 P Pdif 11 56 47.1 +1.0
baz=256
EYMN Ely 101.17 43 P Pdif 11 56 47.4 +0.5
baz=256
L44A Lake County Fo 102.29 50 P Pdif 11 56 53.0 +1.0
baz=257
SFIN Lafayette 102.48 51 P Pdif 11 56 53.3 +0.4
baz=257
O53A New Philadelph 106.88 52 P PKiKP 12 01 19.2 +0.3
baz=261
BLA Blacksburg 106.98 56 P PKiKP 12 01 19.6 +0.3
baz=260
HYB Hyderabad 107.03 283 *e*Pdif Pdif 11 57 13.1 -0.5
HYB *e*PKiKP **PKiKP** 12 01 19.5 -0.3
ZSN Zaisan 107.32 315 *e*PKiKP PKiKP 12 01 19.6 +0.1
baz=315
NRIK Noril'sk 107.94 338 Pdiff Pdif 11 57 15.7 -0.8
comp=Z,2.4nm,0.5s,baz=138,slow=4.2,SNR=6.2
NRIK PKiKP **PKiKP** 12 01 19.8 -0.2
comp=Z,4.2nm,0.6s,baz=84,slow=4.6,SNR=8.9
NRIK S **SKSac** 12 07 00.4 -1.5
comp=Z,2.6nm,0.4s,baz=133,slow=5.4,SNR=11
ZALV Zalesovo Beam 108.10 322 Pdiff Pdif 11 57 16.9 -0.7
comp=Z,1.4nm,0.7s,baz=101,slow=4.7,SNR=7.0
ZALV PKiKP **PKiKP** 12 01 19.7 -1.0
comp=Z,6.9nm,0.7s,baz=142,slow=1.5,SNR=19
ZALV PP **PP** 12 01 53.7 -1.5
comp=Z,8.6nm,1.1s,baz=77,slow=6.4,SNR=6.0
MKAR Makanchi Array 108.99 314 Pdiff Pdif 11 57 22.2 +0.5
comp=Z,0.6nm,0.5s,baz=76,slow=4.5,SNR=6.7
MKAR PKiKP **PKiKP** 12 01 21.4 -1.2
comp=Z,6.6nm,0.6s,baz=118,slow=0.7,SNR=42
MKAR PKKPbc **PKKPbc** 12 12 32.3 -0.4
comp=Z,1.0nm,0.7s,baz=267,slow=3.4,SNR=8.5
SSPA Standing Stone 109.44 52 P PKiKP 12 01 23.6 -0.1
baz=263
SHLS Shalkode 110.62 310 *e*PKiKP PKiKP 12 01 24.1 -1.9
baz=310
SHLS Shalkode 110.62 310 *i* PKiKP PKiKP 12 01 24.1 -1.9
SEM Semipalatinsk 110.64 318 *e*PKiKP PKiKP 12 01 25.1 -0.9
baz=318
SEM Semipalatinsk 110.64 318 *i* PKiKP PKiKP 12 01 25.0 -0.9
UZB Uzynbulak 110.94 310 *e*PKiKP PKiKP 12 01 25.9 -0.7
baz=310
UZB Uzynbulak 110.94 310 *i* PKiKP PKiKP 12 01 25.9 -0.7
BINY Binghamton 111.03 51 P PKiKP 12 01 26.9 +0.2
baz=265
KPKS Kokpek 111.21 310 *e*PKiKP PKiKP 12 01 26.6 -0.6
baz=310
KPKS Kokpek 111.21 310 *i* PKiKP PKiKP 12 01 26.5 -0.6
SATY Saty 111.38 310 *e*PKiKP PKiKP 12 01 27.1 -0.4
baz=310
SATY *e*PP **PP** 12 02 17.3 -1.8
baz=310
SATY Saty 111.38 310 *i* PKiKP PKiKP 12 01 27.0 -0.4
SATY *e* 12 02 17.2
TDK Taldyqorghan 111.53 312 *e*PKiKP PKiKP 12 01 27.5 -0.1
baz=312
TDK *e*PP **PP** 12 02 18.2 -1.7
baz=312
TDK Taldyqorghan 111.53 312 *i* PKiKP PKiKP 12 01 27.4 -0.1
TDK *e* 12 02 18.1
KURK Kurchatov 111.69 318 *c i*PKiKP PKiKP 12 01 27.3 -0.3
KURK pmax pmax
comp=Z,13nm,0.7s
KURBB Kurchatov Arra 111.74 318 Pdiff Pdif 11 57 33.2 -0.7
comp=Z,0.2nm,0.3s,baz=101,slow=29,SNR=1.1
KURBB PKiKP **PKiKP** 12 01 26.4 -1.3
comp=Z,11nm,0.7s,baz=89,slow=1.8,SNR=58
KURBB PP **PP** 12 02 20.7 -0.5
comp=Z,7.6nm,1.0s,baz=90,slow=6.1,SNR=6.9
KURBB SKP 12 04 11.2
comp=Z,0.9nm,0.7s,baz=92,slow=1.9,SNR=4.3
KURBB PKKPbc **PKKPbc** 12 12 23.1 -0.8
comp=Z,1.2nm,0.6s,baz=272,slow=4.1,SNR=12
LONY Lake Ozonia 112.24 48 P PKiKP 12 01 29.5 +0.6
baz=266
MDOK Medeo 112.38 310 *e*PKiKP PKiKP 12 01 28.2 -1.3
baz=310
MDOK *e*PP **PP** 12 02 23.7 -2.4
baz=310
MDOK Medeo 112.38 310 *i* PKiKP PKiKP 12 01 28.1 -1.3
MDOK *e* 12 02 23.7
TNSS Tian-Shan 112.45 310 *e*PKiKP PKiKP 12 01 28.9 -0.9
baz=310
TNSS Tian-Shan 112.45 310 *i* PKiKP PKiKP 12 01 28.9 -0.9
PAL Palisades 112.48 52 P PKiKP 12 01 29.3 -0.1
baz=266
KUU Kurty 112.94 311 *e*PKiKP PKiKP 12 01 29.3 -1.0
baz=311
KUU Kurty 112.94 311 *i* PKiKP PKPpre 12 01 29.3
L61B Northampton 113.50 51 P PKiKP 12 01 31.7 +0.3
baz=267
LBNH Lisbon 114.12 49 P PKiKP 12 01 33.2 +0.7
baz=268
SGDS Sogindy 114.16 310 *e*PKP PKPdf 12 01 32.0 -0.7
baz=310
SGDS Sogindy 114.16 310 *e*PKiKP PKPdf 12 01 32.0 -0.7
AAK Ala-Archa 114.23 309 *c i*PKiKP PKPdf 12 01 31.5 -1.5
AAK pmax pmax
comp=Z,9.0nm,1.7s
AAK Ala-Archa 114.23 309 PKP PKPdf 12 01 32.0 -1.0
comp=Z,3.2nm,0.7s,baz=163,slow=5.3,SNR=8.3
AAK PKKPab **PKKPab** 12 12 24.2 +1.6
comp=Z,1.7nm,0.4s,baz=207,slow=4.9,SNR=6.7
BTLS Baital 114.62 312 *e*PKP PKPdf 12 01 32.6 -0.8
baz=312
BTLS Baital 114.62 312 *e*PKiKP PKPdf 12 01 32.5 -0.9
NEEM North Greenlan 115.14 11 *i* P PKPdf 12 01 33.0 -0.9
NEEM IAmb IAmb 12 01 35.7
comp=Z,22nm,0.6s
PKME Peaks-Kenny Pk 116.01 48 P PKiKP 12 01 36.1 0.0
baz=270
UPNV Upernavik 116.34 16 *i* P PKPdf 12 01 34.7 -1.2
BVAR Borovoye Array 116.71 321 PKP PKPdf 12 01 36.4 -0.9
comp=Z,19nm,0.5s,baz=113,slow=1.9,SNR=68
BVAR PP **PP** 12 02 55.0 -0.6
comp=Z,8.6nm,1.0s,baz=87,slow=6.4,SNR=4.6
BVAR SKP 12 04 20.6
comp=Z,3.6nm,0.7s,baz=76,slow=1.3,SNR=3.4
BRVK Borovoye 116.77 321 *c i*PKiKP PKPdf 12 01 36.6 -0.7
BRVK pmax pmax
comp=Z,35nm,1.7s
SCHQ Schefferville 116.96 37 PKP PKPdf 12 01 36.6 -1.0
comp=Z,3.1nm,0.6s,baz=299,slow=3.1,SNR=6.9
SCHQ PP **PP** 12 02 52.6 -4.6
comp=Z,7.9nm,1.0s,baz=48,slow=18,SNR=5.0
SCHQ PKKPbc **PKKPbc** 12 12 05.3 -1.3
comp=Z,1.1nm,0.5s,baz=123,slow=2.2,SNR=3.6
IUG luzhnay 117.52 309 *e*PKP PKPdf 12 01 38.6 -0.6
baz=309
IUG luzhnay 117.52 309 *e*PKiKP PKPdf 12 01 38.6 -0.6
BRLS Borolday 117.66 310 *e*PKP PKPdf 12 01 38.6 -0.8
baz=309
BRLS Borolday 117.66 310 *e*PKiKP PKPdf 12 01 38.5 -0.8
UMMG Uummannaq 118.45 18 *i* P PKPdf 12 01 39.1 -0.9
KBS Kingsbay 118.72 358 *e*PKPdf PKPdf 12 01 40.1 -0.3
KBS Kingsbay 118.72 358 *i* P PKPdf 12 01 39.6 -0.8
SPA1 Spitsbergen Ar 119.24 356 PKPdf PKPdf 12 01 40.8 -0.6
SPA0 Spitsbergen Ar 119.24 356 PKPdf PKiKP 12 01 42.5 +0.9
SPA0 Spitsbergen Ar 119.24 356 *e*PKPdf PKPdf 12 01 40.8 -0.7
SPITS Spitsbergen Ar 119.24 356 PKP PKPdf 12 01 40.8 -0.7
comp=Z,32nm,0.7s,baz=90,slow=4.2,SNR=21
SPITS PP **PP** 12 03 09.6 -2.4
comp=Z,50nm,1.1s,baz=20,slow=17,SNR=6.9
SPITS PKKPbc **PKKPbc** 12 11 56.4 -2.5
comp=Z,7.5nm,0.7s,baz=156,slow=8.2,SNR=7.5
SPB2 Spitsbergen Ar 119.24 356 PKPdf PKPdf 12 01 41.1 -0.3
ILULI Ilulissat 119.48 19 *i* P PKPdf 12 01 40.8 -1.2
FDF Fort de France 120.13 83 PKPdf PKPdf 12 01 44.8 -0.1
FDF Fort de France 120.13 83 PKiKP PKPdf 12 01 44.8 -0.1
SFJD Kangerlussuaq 120.74 21 PKPdf PKPdf 12 01 43.4 -1.1
SFJD Kangerlussuaq 120.74 21 PKiKP PKPdf 12 01 43.4 -1.1
SFJD Kangerlussuaq 120.74 21 P PKPdf 12 01 43.2 -1.3
SUMG Summit 120.76 13 *i* P PKPdf 12 01 44.0 -1.0
BDFB Brasilia 121.01 121 PKP PKPdf 12 01 46.0 -0.7
comp=Z,3.4nm,0.7s,baz=286,slow=2.4,SNR=3.9
BDFB PKKPbc **PKKPbc** 12 11 50.8 -1.0
comp=Z,1.5nm,0.4s,baz=130,slow=17,SNR=1.9
SVE Sverdlovsk 121.52 326 *e*PKiKP PKPdf 12 01 46.2 -0.1
SVE pmax pmax
comp=Z,36nm,0.8s
NUUK Nuuk 121.65 24 *i* P PKPdf 12 01 46.0 -0.3
OPO Ambohidratompo 122.22 233 PKP PKPdf 12 01 49.0 0.0
comp=Z,11nm,0.7s,baz=163,slow=2.1,SNR=11
DY2G Dye2 122.49 21 *i* P PKPdf 12 01 47.2 -1.0
ARU Arti 122.73 326 PKPdf PKPdf 12 01 47.9 -0.8
ARU Arti 122.73 326 *i* PKiKP PKPdf 12 01 48.0 -0.7
ARU 12 03 31.5
ARU 12 08 07.4
ICESG Greenland Ices 122.88 16 *i* P PKPdf 12 01 47.7 -1.4
HRA Herat 123.73 300 PKPdf PKPdf 12 01 50.7 -0.9
ABKAR Akbulak array 123.79 318 PKPdf PKPdf 12 01 50.2 -0.7
ISOG Isortoq, Green 125.42 19 *i* P PKPdf 12 01 52.6 -0.9
SCO Scoresbysund 125.55 9 *i* P PKPdf 12 01 52.9 -0.8
HAMF Hammerfest 125.57 351 *e*PKPdf PKPdf 12 01 53.0 -0.7
SOEG Soedalen 125.61 14 *i* P PKPdf 12 01 52.9 -1.0
NRS Narsarsuaq 125.66 26 *i* P PKPdf 12 01 53.6 -0.5
LVZ Lovozero 125.73 345 PKPdf PKPdf 12 01 54.1 -0.1
LVZ Lovozero 125.73 345 PKiKP PKPdf 12 01 54.1 -0.1
ANGG Ammassalik, Gr 125.79 19 *i* P PKPdf 12 01 52.4 -1.8
ARA0 ARCESS Array S 126.26 350 *e*P PKPdf 12 01 54.8 -0.3
ARA0 IAmb IAmb 12 01 57.1
comp=Z,46nm,0.8s
ARCES ARCESS Array B 126.26 350 PKPdf PKPdf 12 01 54.1 -0.9
ARCES ARCESS Array B 126.26 350 PKP PKPdf 12 01 54.4 -0.7
comp=Z,24nm,0.7s,baz=27,slow=0.8,SNR=32
ARCES PKKPab **PKKPab** 12 11 30.2 +0.9
comp=Z,1.8nm,0.5s,baz=252,slow=0.8,SNR=9.4
APA Apatity 126.29 345 *i*PKiKP PKPdf 12 01 51.0 -4.1
APA pmax pmax
comp=Z,21nm,0.8s
KIRV Kirov 126.42 331 *c i*PKiKP PKiKP 12 01 55.9 -0.2
GEYT Alibeck 126.88 304 PKhKP PKPpre 12 01 43.3
comp=Z,1.3nm,0.3s,baz=101,slow=7.7,SNR=4.2
GEYT PKP **PKPdf** 12 01 57.2 -0.1
comp=Z,13nm,0.8s,baz=117,slow=2.7,SNR=17
GEYT PP **PP** 12 04 03.3 -0.7
comp=Z,4.2nm,0.8s,baz=60,slow=18,SNR=4.0
GYA0B ALIBECK ARRAY 126.88 304 PKPdf PKPdf 12 01 57.0 -0.3
JETT Jettan, Norway 127.03 352 *e*PKPdf PKPdf 12 01 56.3 -0.3
KTK1 Kautokeino 127.11 350 *e*PKPdf PKPdf 12 01 56.3 -0.4
TRO Tromso 127.15 352 *e*PKPdf PKPdf 12 01 56.5 -0.2
BOSA Boshof 128.33 207 PKP PKiKP 12 02 01.1 -0.1
comp=Z,9.5nm,0.8s,baz=210,slow=2.2,SNR=9.4
BOSA pPKP **pPKPdf** 12 04 09.8 +0.4
comp=Z,9.1nm,0.8s,baz=319,slow=2.0,SNR=5.2
SOHO SOHO 128.42 287 *i* PKPdf PKPdf 12 01 59.6 -0.9
SNR=19
MDH Madha 128.71 288 *i* PKPdf PKPdf 12 01 59.6 -1.4
SNR=6.4
UOSS Minazif 128.77 288 PKPdf PKPdf 12 02 00.2 -1.0
UOSS Minazif 128.77 288 *i* PKPdf PKPdf 12 02 00.8 -0.4
SNR=5.7
HATD Hatta, Dubai 128.83 288 *i* PKPdf PKPdf 12 02 00.8 -0.6
SNR=9.7
MSFE Esma-Masafi 128.84 288 *i* PKPdf PKPdf 12 02 01.1 -0.2
SNR=8.3
ASHO Ashiyiah 128.89 288 *i* PKPdf PKPdf 12 02 01.0 -0.4
SNR=8.0
ALNE Al Ain 129.13 287 *i* PKPdf PKPdf 12 02 01.8 -0.1
SNR=14
KLMR Klimovskoe 129.27 337 *e*PKiKP PKPdf 12 01 58.8 -2.2
KLMR pmax pmax
comp=Z,44nm,0.9s
FAQ Al Faqa, Dubai 129.32 288 *i* PKPdf PKPdf 12 02 02.2 0.0
SNR=9.9
ASUD Al Ashush, Dub 129.55 287 *i* PKPdf PKPdf 12 02 02.6 -0.1
SNR=8.3
AJN Ajban 129.86 287 *i* PKPdf PKPdf 12 02 02.3 -0.9
SNR=7.6
BELG Belogornoye 130.16 325 *e*PKiKP PKPdf 12 02 00.4 -2.5
BELG pmax pmax
comp=Z,7.0nm,0.7s
BELG Belogornoye 130.16 325 SKPbc **SKPbc** 12 04 34.3 -0.4
comp=Z,142nm,1.0s,baz=280,slow=0.7,SNR=16
STOK Stokkvaagen 130.99 354 *e*PKPdf PKPdf 12 02 04.4 +0.3
MOR8 Moi Rana 130.99 353 *e*PKPdf PKPdf 12 02 03.8 -0.3
LBTB Lobatse 131.27 210 PKhKP PKPpre 12 01 48.9
comp=Z,1.9nm,0.4s,baz=39,slow=6.9,SNR=4.0
LBTB SKPbc **SKPbc** 12 04 39.7 -0.1
comp=Z,24nm,1.0s,baz=149,slow=3.3,SNR=15
FIA1 FINESS Array S 133.12 344 PKPdf PKPdf 12 02 07.9 -0.3
FINES FINESS Array B 133.12 344 PKhKP PKPpre 12 01 52.5
comp=Z,1.7nm,0.5s,baz=54,slow=4.9,SNR=6.8
FINES PKP **PKPdf** 12 02 08.2 0.0
comp=Z,18nm,0.7s,baz=42,slow=3.8,SNR=14
FINES SKPbc **SKPbc** 12 04 43.9 -0.8
comp=Z,38nm,1.0s,baz=57,slow=7.0,SNR=22
MOS Moscow 133.33 333 *i* PKiKP PKPdf 12 02 08.9 +0.1
MOS *e* 12 04 09.5
MOS *e* 12 04 41.9
VRH Novokhopyorsk 133.95 326 *e*PKiKP PKPdf 12 02 08.1 -2.0
VRH *e**SP PP 12 04 45.8 -2.5
VRH pmax pmax

comp=Z,10.0nm,0.9s
OBN Obninsk 134.19 333 PKPdf **PKPdf 12 02 10.8 +0.3**
OBN Obninsk 134.19 333 ⇑*i*PKIKP **PKPdf 12 02 11.1 +0.7**
OBN *i* 12 04 49.9
OBN *e*SS SS 12 21 55.4 +0.1
OBN pmax pmax
comp=Z,96nm,1.7s
OBN Obninsk 134.19 333 SKPbc **SKPbc 12 04 49.4 +1.0**
comp=Z,26nm,0.3s,baz=80,slow=3.5,SNR=21
MEF Metsahovi 134.60 344 *e*P PKPpre 12 02 06.0
LPSR Galich'ya Gora 134.63 329 *e*PKIKP **PKPdf 12 02 10.3 -1.1**
LPSR *e**SP **PP 12 04 48.1 -4.3**
LPSR pmax pmax
comp=Z,20nm,1.0s
VORR Voronezh 135.02 327 PKIKP **PKPdf 12 02 11.9 -0.2**
VORR 12 04 50.9
VORR pmax pmax
comp=Z,45nm,0.6s
VSR Storozhevoye 135.30 327 *e*PKIKP **PKPdf 12 02 10.1 -2.5**
VSR *e**SP **PP 12 04 51.8 -4.9**
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 135.37 326 *e*PKIKP **PKPdf 12 02 11.6 -1.2**
VORD *e**SP **PP 12 04 52.3 -4.8**
VORD pmax pmax
comp=Z,20nm,0.9s
VSU Vasula 135.41 341 *i* PKIKP **PKPdf 12 02 12.5 -0.1**
VSU pmax pmax
comp=Z,34nm,0.9s
VSU Vasula 135.41 341 *e*P PKPpre 12 02 06.6
DOMB Dombas 135.57 355 *e*PKPdf **PKPdf 12 02 13.7 +0.8**
MTSE Matsula 136.04 343 *e*P **PKPdf 12 02 08.8 -4.9**
NC204 NORSAR Array S 136.16 353 PKPdf **PKiKP 12 02 15.0 -0.9**
NB2 NORSAR Subarra136.34 353 PKP PKPpre 12 02 02.9
comp=Z,16nm,0.8s,baz=15,slow=4.0
NB2 SKPa 12 04 56.2
comp=Z,7.5nm,1.0s,baz=15,slow=2.9
NB2 NORSAR Subarra136.34 353 PKPab PKPpre 12 02 02.9
baz=15,slow=4.0
NOA NORSAR Array B 136.34 353 PKIKP **PKPdf 12 02 14.0 -0.4**
NOA NORSAR Array B 136.34 353 PKhKP PKPpre 12 02 00.9
comp=Z,1.0nm,0.6s,baz=14,slow=1.6,SNR=10.0
NOA PKP **PKPdf 12 02 13.9 -0.4**
comp=Z,3.0nm,0.7s,baz=15,slow=1.6,SNR=12
NOA SKPbc **SKPbc 12 04 55.0 0.0**
comp=Z,37nm,1.2s,baz=15,slow=4.2,SNR=10
ZEI Tsey 136.34 314 *i* PKIKP **PKPdf 12 02 14.7 -0.5**
ZEI pmax pmax
comp=Z,9.0nm,1.3s
NBO00 NORSAR Array S 136.39 353 PKPdf **PKiKP 12 02 15.7 -0.6**
NC602 NORSAR Array S 136.59 353 PKPdf **PKPdf 12 02 14.0 -0.7**
NC602 NORSAR Array S 136.59 353 *e* PKPpre 12 02 04.6
KBZ Khabaz 136.66 316*c* *i*PKIKP **PKiKP 12 02 18.1 +0.8**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 136.66 316 PKhKP PKPpre 12 02 01.2
comp=Z,2.2nm,0.9s,baz=321,slow=8.8,SNR=1.9
KBZ PKP **PKPdf 12 02 15.5 +0.1**
comp=Z,4.8nm,0.8s,baz=69,slow=5.5,SNR=7.3
KBZ SKP 12 04 58.1
comp=Z,7.0nm,1.0s,baz=199,slow=3.1,SNR=4.4
KIV Kislovodsk 136.71 316 *i* PKIKP **PKiKP 12 02 16.8 -0.8**
KIV *e* 12 05 03.1
KIV *e*SS SS 12 22 22.5 -3.8
KIV *e*SSS SSS 12 27 37.9
KIV pmax pmax
comp=Z,13nm,1.0s
SHA1 Shidzhatmaz 136.82 316 *i* PKIKP **PKPdf 12 02 15.6 -0.4**
HFS Hagfors 136.89 351 PKhKP PKPpre 12 02 02.0
comp=Z,4.5nm,0.4s,baz=64,slow=6.8,SNR=19
HFS SKPbc **SKPbc 12 04 56.5 0.0**
comp=Z,37nm,1.2s,baz=35,slow=5.3,SNR=9.6
NEUR Neytrino 136.97 315 *i* PKIKP **PKPdf 12 02 15.9 -0.4**
ERBR Yeremizino-Bor 137.37 319 ⇑*i*PKIKP **PKiKP 12 02 17.9 -0.8**
ERBR pmax pmax
comp=Z,73nm,1.0s
LABN Labinsk 137.70 318 *e*PKIKP **PKPdf 12 02 16.1 -1.2**
LABN pmax pmax
comp=Z,22nm,0.4s
LSZ Lusaka 137.77 220 PKhKP PKPpre 12 02 07.4
comp=Z,3.9nm,0.5s,baz=80,slow=2.3,SNR=8.8
LSZ SKPbc **SKPbc 12 05 00.6 -0.1**
comp=Z,13nm,1.0s,baz=184,slow=1.6,SNR=13
LSZ PP **PP 12 05 12.1 0.0**
comp=Z,36nm,1.2s,baz=183,slow=4.2,SNR=9.7
KONO Kongsberg 137.87 354*c* *i*PKIKP **PKPdf 12 02 17.2 +0.1**
KONO pmax pmax
comp=Z,76nm,1.7s
IDID Didziasalis 137.94 339 *e*P **PKPdf 12 02 12.0 -5.4**
IIGN Ignalina 138.09 339 *e*P PKPpre 12 02 12.6
MNK Minsk 138.17 337 *i* PKIKP **PKPdf 12 02 18.2 +0.4**
MNK *i* 12 05 11.8
MNK *i* PPP PPP 12 08 18.9
MNK *i* 12 08 37.2
MNK *i* SS SS 12 22 40.6 -1.2
MNK *i* SSS SSS 12 27 59.5
MNK pmax pmax
comp=E,4.0nm,0.7s
MNK pmax pmax
comp=N,21nm,0.9s
MNK pmax pmax
comp=Z,36nm,0.8s
RAYN Ar Rayn 138.48 285 ⇑PKHKP PKPpre 12 02 11.2
HOMB Homborsund 139.34 354 *e*PKPdf PKPpre 12 02 12.4
ANN Anapa 139.69 320 *e*PKIKP **PKPdf 12 02 20.0 -0.9**
ANN *e*PPP PPP 12 08 32.1
ANN *e* 12 08 37.9
ANN pmax pmax
comp=Z,41nm,1.0s
KMBO Kilima Mbogo 139.97 246 *i* PKPdf **PKPdf 12 02 17.9 -4.8**
SNR=6.9
MCD Coleburn Disti 140.22 4 *e*P PKPpre 12 02 14.1
AKASG Malin Array Be 140.46 332 PKhKP PKPpre 12 02 14.9
comp=Z,10nm,0.5s,baz=39,slow=4.2,SNR=30
AKASG SKPbc **SKPbc 12 05 07.1 +0.5**
comp=Z,7.1nm,0.7s,baz=36,slow=3.1,SNR=7.0
AKBB Malin Array Si 140.46 332 *i* PKIKP **PKPdf 12 02 20.7 -1.4**
KIEV Kiev 140.47 332 ⇑P PKPpre 12 02 15.1
KIEV Kiev 140.47 332 *i* PKPdf PKPpre 12 02 14.9
SNR=13
KIEV Kiev 140.47 332 ⇑PKHKP PKPpre 12 02 15.1
DRUM Mains of Drumt 140.93 3 *e*P PKPpre 12 02 16.2
LAWE Loch Awe, Argy 141.35 6 *e*P PKPpre 12 02 18.0
SIM Simferopol' 141.62 322 *e*PKIKP **PKPdf 12 02 22.0 -2.4**
SIM pmax pmax
comp=Z,37nm,0.8s
PGBU Glenifferbraes 141.88 5 *e*P PKPpre 12 02 19.4
EKA Eskdalemuir Ar 142.46 4 PKhKP PKPpre 12 02 21.6
comp=Z,19nm,0.5s,baz=328,slow=2.7,SNR=42
EKA PP **PP 12 05 45.0 +5.5**
comp=Z,7.0nm,0.9s,baz=355,slow=5.0,SNR=3.7
ESK Eskdalemuir 142.48 4 *e*P **PKPdf 12 02 21.9 -3.7**
GKP Gorka Klasztor 142.59 344 *e*PKP **PKPdf 12 02 24.5 -1.4**
GKP Gorka Klasztor 142.59 344 *e*P **PKPdf 12 02 24.4 -1.4**
NEWG New Galloway 142.59 5 *e*P **PKPdf 12 02 22.0 -3.8**
DIKM Dikmen 142.63 317 ⇑P **PKPdf 12 02 24.2 -2.1**
SORM Soroca 142.68 330 ⇑P **PKPdf 12 02 22.7 -3.5**
SORM Soroca 142.68 330 ⇑PKHKP PKPpre 12 02 22.7
GAL1 Galloway 142.80 6 *e*P **PKPdf 12 02 22.7 -3.4**
BEL Belsk 142.82 340 *e*PKP **PKPdf 12 02 24.5 -1.8**
EDMD Edmundbyers 143.04 3 *e*P PKPab 12 02 23.8 -0.4
KESW Keswick, Cumbr 143.21 4 *e*P PKPab 12 02 25.0 +0.2
KIS Kishinev 143.24 328 *e*PKP PKPab 12 02 25.0 -0.2
comp=Z,320nm,1.6s
KIS Kishinev 143.24 328 *e*PKHKP PKPpre 12 02 21.0
KIS pmax pmax
comp=Z,320nm,1.6s
MILM Milestii Mici 143.30 328 ⇑*i*PKP PKPab 12 02 24.0 -1.4
comp=Z,100nm,0.5s
MILM Milestii Mici 143.30 328 ⇑P PKPab 12 02 25.0 -0.4
MILM Milestii Mici 143.30 328 ⇑PKIKP PKPab 12 02 25.0 -0.4
LVV L'vov 143.31 335 *e*PKIKP PKPab 12 02 25.3 -0.1
IOMK Kirk Michael 143.41 6 *e*P PKPab 12 02 25.0 -0.6
ILTH Belurgan, Co L 143.44 8 *e*P PKPab 12 02 25.1 -0.6
GDLE Glaisdale, N Y 143.50 2 *e*P PKPab 12 02 25.8 -0.2
BNN Bunyan 143.50 312 PKPbc PKPbc 12 02 27.0 +0.2
WIM Isle of Man 143.51 6 *e*P PKPab 12 02 25.4 -0.6
IGLA Glengowla, Co 143.56 11 *e*P PKPab 12 02 25.2 -1.0
HPK Haverah Park 143.93 3 *e*P PKPbc 12 02 26.8 -0.7
ILGA Ilgaz 143.94 317 PKPbc **PKPdf 12 02 28.8 -0.2**
KWP Kalwaria Pacla 143.98 336 *e*PKP PKPab 12 02 27.9 0.0
KWP Kalwaria Pacla 143.98 336 PKPbc PKPbc 12 02 26.5 -1.3
KWP Kalwaria Pacla 143.98 336 PKIKP PKPbc 12 02 26.5 -1.3
VASR Vaslui 144.00 329 ⇓P PKPab 12 02 28.2 +0.1

RUE Ruedersdorf 144.14 347 *e*P **PKPab 12 02 28.3 -0.1**
RUE Ruedersdorf 144.14 347 *e*PKPbc **PKPab 12 02 28.4 +0.1**
baz=17,slow=2.8
WPS Cemaes, Angles 144.26 6 *e*P PKPbc 12 02 27.8 -0.7
WLF1 Llynfaes 144.38 6 *e*P PKPbc 12 02 28.3 -0.6
VLDR Vladesti 144.40 327 ⇑P **PKPab 12 02 29.9 +0.2**
TLCR 144.45 326 ⇑P PKPbc 12 02 29.6 +0.2
TLCR 144.45 326 ⇑PKIKP PKPbc 12 02 29.6 +0.2
H07N1 FLORES T-PHASE 144.47 46 *e*PKP **PKPdf 12 02 28.6 -1.0**
LBWR Ladybower, Pea 144.48 3 *e*P **PKPdf 12 02 28.7 -0.4**
VARL Varlezi 144.48 328 ⇑P **PKPdf 12 02 28.6 -0.8**
LMK Market Rasen 144.48 2 *e*P **PKPdf 12 02 28.6 -0.6**
BUR08 Bucovina Ar. S 144.50 332 ⇓P PKPbc **PKPab 12 02 29.9 -0.2**
BURAR Bucovina Array 144.51 332 ⇓P **PKPab 12 02 30.0 -0.2**
BURAR Bucovina Array 144.51 332 ⇓PKIKP **PKPab 12 02 30.0 -0.2**
OJC Ojcow 144.53 340 *e*PKP **PKPdf 12 02 29.3 -0.1**
YLL Llanberis 144.56 6 *e*P **PKPdf 12 02 29.0 -0.2**
SCTR Scanteiesti 144.56 327 ⇑P **PKPab 12 02 30.4 +0.2**
H07S1 FLORES T-PHASE 144.56 46 *e*PKP **PKiKP 12 02 32.9 -0.8**
TATR Tatarca 144.58 327 ⇓P **PKPab 12 02 30.2 -0.1**
GHRR 144.59 328 ⇑P **PKPab 12 02 31.0 +0.6**
BR131 Keskin Array S 144.64 315 *i* PKIKP **PKPdf 12 02 30.1 0.0**
BRTR Keskin Array B 144.64 315 PKIKP **PKPdf 12 02 30.0 0.0**
BRTR Keskin Array B 144.64 315 PKP **PKPdf 12 02 30.0 -0.1**
comp=Z,25nm,0.6s,baz=142,slow=5.6,SNR=98
BRTR pPKP **pPKPdf 12 04 38.2 -1.4**
comp=Z,3.7nm,1.0s,baz=127,slow=4.0,SNR=2.1
TESR Tescani 144.65 329 ⇓P PKPbc 12 02 30.0 0.0
RETH Rethem/Aller, 144.67 352 *e*PKPbc **PKPab 12 02 30.2 -0.2**
baz=17,slow=2.8
STHS Stebnicka Huta 144.70 337 *e*PKIKP **PKPdf 12 02 29.6 -0.1**
STHS Stebnicka Huta 144.70 337 *e*PKP **PKPdf 12 02 29.6 -0.1**
NEGRR Negrea 144.71 327 ⇑P **PKPab 12 02 30.9 +0.1**
KOLS Kolonicke sedl 144.71 336 *e*PKIKP **PKPab 12 02 30.9 +0.1**
KOLS Kolonicke sedl 144.71 336 *e*PKP **PKPab 12 02 30.9 +0.1**
SLCR Slobozia Conac 144.73 327 ⇑P **PKPab 12 02 30.8 -0.1**
SCHL Schela 144.76 327 ⇑P **PKPab 12 02 31.4 +0.4**
IZVR Izvoarele 144.76 327 ⇑P **PKPab 12 02 30.9 -0.1**
FLTG Flechtingen 144.77 350 *e*PKPbc PKPbc 12 02 30.2 +0.1
baz=17,slow=2.8
TUDR 144.78 327 ⇑P **PKPab 12 02 31.4 +0.3**
SCHLR Schela 144.78 327 ⇑P **PKPab 12 02 31.0 -0.1**
NRDL Niedersach Rie 144.80 351 *e*PKPbc **PKPab 12 02 30.6 -0.3**
baz=17,slow=2.8
CFR Carcaliu 144.82 326 ⇑P PKPbc 12 02 30.6 +0.2
CFR Carcaliu 144.82 326 ⇑PKIKP PKPbc 12 02 30.6 +0.1
PANC Panciu 144.85 328 ⇑P **PKPab 12 02 31.1 -0.2**
SBD1 Bryn Du 144.87 5 *e*P **PKiKP 12 02 36.2 +2.3**
TPGR Topolog 144.88 326 ⇑P PKPbc 12 02 30.8 +0.1
FOEL Foel Wylfa 144.89 5 *e*P **PKPdf 12 02 30.2 +0.3**
LLW Llanuwychllyn 144.89 5 *e*P **PKPdf 12 02 29.9 0.0**
ODBI Odobesti 144.97 328 ⇑P **PKPab 12 02 31.9 +0.1**
IWEX Carrickbyrne, 144.99 9 *e*P PKPbc 12 02 30.5 -0.3
KSP Ksiaz 145.04 343 *e*PKP **PKPab 12 02 31.6 -0.3**
NIE Niedzica 145.04 338 *e*PKP **PKPbc 12 02 31.6 +0.5**
CRVS Cervenica-Dubn 145.05 337 *e*PKIKP **PKPbc 12 02 31.5 +0.4**
CRVS Cervenica-Dubn 145.05 337 *e*PKP **PKPbc 12 02 31.5 +0.4**
ASSE Asse, Remlinge 145.06 350 *e*PKPbc **PKPbc 12 02 31.4 +0.5**
baz=17,slow=2.8
VRI Vrincioaia 145.07 329 ⇓P **PKPbc 12 02 31.7 +0.4**
VRI Vrincioaia 145.07 329 ⇓PKIKP **PKPbc 12 02 31.7 +0.4**
PLOR Plostina 145.12 329 ⇑P **PKPbc 12 02 31.4 0.0**
PLOR Plostina 145.12 329 ⇑PKIKP **PKPbc 12 02 31.4 0.0**
ANTO Ankara 145.13 315 ⇑P **PKPbc 12 02 31.8 +0.1**
ANTO Ankara 145.13 315 PKPbc **PKPab 12 02 32.6 -0.2**
ANTO Ankara 145.13 315 ⇑PKIKP **PKPbc 12 02 31.8 +0.1**
TIRR Tirgusor 145.15 325 ⇑P **PKPbc 12 02 31.6 +0.1**
TIRR Tirgusor 145.15 325 PKPbc **PKPab 12 02 32.2 -0.3**
TIRR Tirgusor 145.15 325 ⇑PKIKP **PKPbc 12 02 31.6 +0.1**
CWF Charnwood Fore 145.16 3 *e*P **PKPdf 12 02 30.7 +0.4**
BMR Baia Mare 145.22 334 ⇑P **PKPbc 12 02 31.7 +0.1**
BMR Baia Mare 145.22 334 ⇑PKIKP **PKPbc 12 02 31.7 +0.1**
WACR West Acre 145.23 1 *e*P **PKPdf 12 02 30.9 +0.5**
HARR Harsova 145.25 326 ⇑P **PKPbc 12 02 31.9 +0.1**
HARR Harsova 145.25 326 ⇑PKIKP **PKPbc 12 02 31.9 +0.1**
GRER 145.28 328 ⇓P **PKPab 12 02 33.1 +0.1**
TURR Turia 145.28 329 ⇑P **PKPab 12 02 32.7 -0.4**
HLM1 Long Mynd 145.28 5 *e*P **PKPbc 12 02 31.3 -0.3**
IBBN Ibbenburen 145.29 353 *e*PKPbc **PKPbc 12 02 32.1 +0.4**
baz=17,slow=2.8
ARCR ARCALIA 145.29 332 ⇑P **PKPab 12 02 32.5 -0.6**
OSTC Ostas 145.32 343 *e*PKP **PKPbc 12 02 31.6 -0.3**
OSTC *ep*PKP **pPKPdf 12 04 47.2 +6.9**
OSTC Ostas 145.32 343 *e*PKIKP **PKPbc 12 02 31.6 -0.3**
CHVC Chvalec 145.34 344 *e*PKP **PKPbc 12 02 31.9 0.0**
CHVC Chvalec 145.34 344 *e*PKIKP **PKPbc 12 02 31.9 0.0**
CLZ Clausthal 145.39 350 *e*PKPbc **PKPbc 12 02 32.6 +0.6**
baz=17,slow=2.8
OKC Ostrava-Krasne 145.40 341 *e*PKP **PKPbc 12 02 31.9 -0.2**
OKC Ostrava-Krasne 145.40 341 *e*PKIKP **PKPbc 12 02 31.9 -0.2**
CLL Collm 145.41 347 PKPbc **PKPbc 12 02 31.8 -0.3**
CLL Collm 145.41 347 ⇑*i*PKIKP **PKPbc 12 02 32.0 0.0**
CLL *i* 12 02 33.4
CLL pmax pmax
comp=Z,129nm,0.7s
CLL pmax pmax
comp=Z,308nm,0.7s
CLL Collm 145.41 347 *e*PKPbc **PKPbc 12 02 32.4 +0.4**
baz=17,slow=2.8
UPC Upice 145.42 344 *e*PKP **PKPbc 12 02 32.2 +0.1**
UPC *ep*PKP **pPKPdf 12 04 48.1 +7.6**
UPC Upice 145.42 344 *e*PKIKP **PKPbc 12 02 32.2 +0.1**
BOSR Bodos 145.44 330 ⇑P **PKPbc 12 02 32.6 +0.2**
MANR Mangalia 145.47 324 ⇑P **PKPdf 12 02 31.6 +0.5**
TSMN Mangalia Port- 145.47 324 ⇑P **PKPab 12 02 33.4 -0.4**
DPC Dobruska-Polom 145.48 343 *e*PKP **PKPbc 12 02 32.7 +0.3**
DPC *ep*PKP **pPKPdf 12 04 44.2 +3.6**
DPC Dobruska-Polom 145.48 343 *e*PKP2 **PKPbc 12 02 32.7 +0.3**
LANS Liptovska Anna 145.56 339 *e*PKP2 **PKPab 12 02 33.6 -0.5**
LANS Liptovska Anna 145.56 339 *e*PKP **PKPab 12 02 33.6 -0.5**
KRLC Kraliky 145.59 342 *e*PKP **PKPdf 12 02 31.4 +0.2**
KRLC *ep*PKP **pPKPdf 12 04 47.1 +6.2**
KRLC Kraliky 145.59 342 *e*PKIKP **PKPdf 12 02 31.4 +0.2**
BRG Berggiesshubel 145.60 346 ⇓*i*PKPf 12 02 31.6
BRG Amp 12 02 32.4
comp=Z,7.1nm,0.8s
BRG ⇑*i*PKP **PKPbc 12 02 33.2 +0.5**
BRG Amp 12 02 35.9
comp=Z,121nm,0.8s
BRG Berggiesshubel 145.60 346 P **PKiKP 12 02 41.7 +6.3**
BRG Amp 12 02 42.5
comp=Z,43nm,0.7s
BRG Berggiesshubel 145.60 346 *i* PKP2 **PKPbc 12 02 33.1 +0.5**
BRG pmax pmax
comp=Z,121nm,0.8s
BRG Berggiesshubel 145.60 346 *e*PKPbc **PKPbc 12 02 33.2 +0.5**
baz=17,slow=2.8
AMRR Amara 145.62 326 ⇑P **PKPab 12 02 33.6 -0.8**
AMRR Amara 145.62 326 ⇑PKP2 **PKPab 12 02 33.6 -0.8**
MORC Moravsky Berou 145.63 341 ⇑P **PKPdf 12 02 31.9 +0.6**
MORC Moravsky Berou 145.63 341 PKPbc **PKPbc 12 02 32.8 0.0**
MORC Moravsky Berou 145.63 341 *e*PKP **PKPdf 12 02 31.2 -0.1**
MORC *e* 12 04 44.5
MORC Moravsky Berou 145.63 341 PKIKP **PKPbc 12 02 32.8 0.0**
DOPR Dopca 145.65 330 ⇓P **PKPbc 12 02 33.7 +0.8**
RSBS Rosebush, Pemb 145.67 7 *e*P **PKPdf 12 02 31.9 +0.7**
ISR Istrita 145.68 328 ⇑P **PKPbc 12 02 33.5 +0.4**
ISR Istrita 145.68 328 ⇑PKP2 **PKPbc 12 02 33.5 +0.4**
MLR Muntele Rosu 145.72 329 ⇑P **PKPbc 12 02 33.0 -0.3**
MLR Muntele Rosu 145.72 329 PKPbc **PKPab 12 02 34.2 -0.8**
MLR Muntele Rosu 145.72 329 PKP2 **PKPab 12 02 34.2 -0.8**
GTTG Gottingen 145.74 350 *e*PKPbc **PKPbc 12 02 33.6 +0.6**
baz=17,slow=2.8
NEUB Neuenburg 145.75 348 *e*PKPbc **PKPbc 12 02 33.5 +0.5**
baz=17,slow=2.8
KECS Kecovo 145.76 337 *e*PKP2 **PKPbc 12 02 33.8 +0.6**
KECS Kecovo 145.76 337 *e*PKP **PKPbc 12 02 33.8 +0.6**
PVCC Panska Ves 145.77 345 *e*PKP **PKPbc 12 02 32.5 -0.6**
PVCC Panska Ves 145.77 345 *e*PKIKP **PKPbc 12 02 32.5 -0.6**
MBAR Mbarara 145.78 241*c* *i*PKP2 **PKPab 12 02 35.5 -0.7**
MBAR pmax pmax
comp=Z,143nm,1.7s
MBAR Mbarara 145.78 241 PKPbc **PKPbc 12 02 33.9 -0.5**
comp=Z,60nm,0.8s,baz=141,slow=1.7,SNR=60
MCH1 Michaelchurch 145.79 5 *e*P **PKPbc 12 02 32.3 -0.8**
PSN Preselentsi 145.83 324 *i* P **PKPbc 12 02 33.3 -0.2**
MESR Meseseni 145.86 333 ⇑P **PKPbc 12 02 34.0 +0.5**
MDUB Mudurnu 145.87 317 PKPbc **PKPbc 12 02 34.0 +0.1**
MAUC Maruska 145.91 341 *e*PKP **PKPbc 12 02 32.7 -0.9**
CJR Cluj-Napoca 145.91 332 ⇑P **PKPbc 12 02 34.0 +0.3**
CJR Cluj-Napoca 145.91 332 ⇑PKP2 **PKPbc 12 02 34.0 +0.3**

MONM Monmouth 145.96 5 *e*P **PKPdf 12 02 32.3 +0.6**
HSKC Hora Svate Kat 145.97 346 *e*PKP **PKPbc 12 02 33.4 -0.3**
MMAI Mount Meron Ar 145.97 303 PKPbc **PKPbc 12 02 34.2 -0.1**
comp=Z,45nm,0.6s,baz=68,slow=4.6,SNR=51
MMAI pPKPbc pPKPab 12 04 40.1 -0.2
comp=Z,0.7nm,0.3s,baz=100,slow=7.5,SNR=1.7
BALJ Balqa 146.06 301 PKPbc **PKPbc 12 02 34.4 -0.1**
STRD Stroud 146.07 4 *e*P **PKPbc 12 02 33.2 -0.7**
SULR 146.13 327 ⇑P **PKPbc 12 02 34.8 +0.5**
MARR Marisel-Cluj 146.15 333 ⇑P **PKPbc 12 02 33.8 -0.7**
VOIR 146.20 329 ⇑P **PKPbc 12 02 34.7 +0.1**
VOIR 146.20 329 ⇑PKP2 **PKPbc 12 02 34.7 +0.1**
PRA Prague 146.23 345 *e*PKP **PKPbc 12 02 34.4 0.0**
PRA Prague 146.23 345 *e*PKP2 **PKPbc 12 02 34.4 0.0**
DRGR 146.24 333 ⇑P **PKPbc 12 02 34.0 -0.6**
DRGR 146.24 333 ⇑PKIKP **PKPbc 12 02 34.1 -0.6**
PRU Pruhonice 146.28 345 *e*PKP **PKPdf 12 02 33.4 +1.1**
PRU Pruhonice 146.28 345 *e*PKIKP **PKPdf 12 02 33.4 +1.1**
GOPC GO Pecny, Ondr 146.28 344 *e*PKP **PKPdf 12 02 32.6 +0.2**
GOPC GO Pecny, Ondr 146.28 344 *e*PKIKP **PKPdf 12 02 32.6 +0.2**
KASTN Kahler Asten 146.30 352 *e*PKPbc **PKPbc 12 02 35.0 +0.3**
baz=17,slow=2.8
MOX Moxa 146.31 348 *e*PKPbc **PKPbc 12 02 35.1 +0.4**
baz=17,slow=2.8
VRAC Vranov 146.34 342 ⇓P **PKPbc 12 02 34.2 -0.6**
VRAC Vranov 146.34 342 *e*PKP **PKPdf 12 02 32.9 +0.4**
VRAC *e* 12 04 46.7
VRAC Vranov 146.34 342 ⇓PKIKP **PKPbc 12 02 34.2 -0.6**
VRAC Vranov 146.34 342 pPKP pPKPdf 12 04 41.6 -0.5
comp=Z,5.7nm,0.9s,baz=92,slow=5.2,SNR=1.1
SWN1 Swindon 146.36 4 *e*P **PKPdf 12 02 33.1 +0.8**
PLN Plauen 146.36 348 *e*PKPbc **PKPbc 12 02 35.3 +0.5**
baz=17,slow=2.8
TANN Tannenbergstha 146.36 347 *e*PKPbc **PKPbc 12 02 35.4 +0.5**
baz=17,slow=2.8
JAVC Velka Javorina 146.40 340 *e*PKP **PKPdf 12 02 33.7 +1.1**
ARR Arges 146.45 330 ⇑P **PKPdf 12 02 33.8 +1.0**
PSZ Piszkesteto 146.45 337 ⇑P **PKPbc 12 02 34.2 -1.0**
PSZ Piszkesteto 146.45 337 ⇑PKIKP **PKPbc 12 02 34.2 -1.0**
NKC Novy Kostel 146.54 347 *e*PKP **PKPbc 12 02 34.7 -0.6**
NKC Novy Kostel 146.54 347 *e*PKIKP **PKPbc 12 02 34.7 -0.6**
PRD Provadia 146.54 324 *i* P **PKPbc 12 02 35.9 +0.4**
NEF NEVSHA 146.55 325 *i* P **PKPbc 12 02 35.3 -0.2**
WOL Wolverton 146.59 3 *e*P **PKPbc 12 02 34.8 -0.5**
KRUC Moravsky 146.61 342 *e*PKP **PKPdf 12 02 32.7 -0.2**
KRUC *e* 12 04 45.4
PCED Cedros 146.63 46 *e*PKP **PKiKP 12 02 37.1 -0.9**
CALA Caldeira 146.65 46 *e*PKP **PKPbc 12 02 36.8 +0.7**
TREC Trest 146.66 343 *e*PKP **PKPbc 12 02 35.7 0.0**
TREC Trest 146.66 343 *e*PKP2 **PKPbc 12 02 35.7 0.0**
HOR Horta 146.73 46 *e*PKP **PKiKP 12 02 37.2 -0.9**
RAZG Razgrad 146.76 326 ⇑P **PKPbc 12 02 35.0 -1.1**
SMOL Smolenice 146.78 340 *e*PKP2 **PKiKP 12 02 37.2 -0.8**
ELSH Elham, Standar 146.82 0 *e*P **PKPbc 12 02 35.6 -0.3**
MANZ Manzanberg 146.84 347 *e*PKPbc **PKPbc 12 02 36.7 +0.6**
baz=17,slow=2.8
PCAN Candelaria 146.86 46 *e*PKP **PKiKP 12 02 37.6 -0.9**
SRBC Serra Branca 146.87 44 *e*PKP **PKPdf 12 02 34.8 +1.1**
ZVC Zvikov 146.87 345 *e*PKP **PKPdf 12 02 33.4 +0.1**
ZVC *ep*PKP pPKPab 12 04 48.0 +4.6
PICO Pico 146.88 46 *e*PKP **PKPbc 12 02 37.5 +0.8**
HUMR Humele 146.89 328 ⇑P **PKPbc 12 02 36.1 -0.3**
ROSA Rosais 146.90 45 PKPbc **PKPbc 12 02 37.0 +0.4**
ROSA Rosais 146.90 45 *e*PKP **PKPdf 12 02 34.9 +1.2**
CSS Mathiatis 146.92 307 PKPbc **PKPbc 12 02 36.6 -0.2**
MODS Modra-Piesok 146.95 340 *e*PKP2 **PKPbc 12 02 37.3 +0.8**
MODS Modra-Piesok 146.95 340 *e*PKP **PKPbc 12 02 37.3 +0.8**
BEBN Eben Emael 146.99 355 *d*PKP **PKPbc 12 02 36.2 -0.2**
PPNO Prainha do Nor 147.00 45 *e*PKP **PKPbc 12 02 37.8 +0.8**
ROTZ Rotzenmuhle 147.03 347 *e*PKPbc **PKPbc 12 02 37.3 +0.7**
baz=17,slow=2.8
PMAN Manadas 147.04 45 *e*PKP **PKPdf 12 02 34.3 +0.4**
SIRR Siria 147.10 334 ⇑P **PKPbc 12 02 36.9 0.0**
SRO Srobarova 147.10 339 *e*PKP2 **PKiKP 12 02 37.8 -0.8**
SRO Srobarova 147.10 339 *e*PKP **PKiKP 12 02 37.8 -0.8**
PID Ribeirinha 147.12 45 *e*PKP **PKiKP 12 02 39.0 0.0**
MEM Membach 147.15 355 *d*PKPdf **PKPdf 12 02 33.7 -0.1**
MEM *d*PKP **PKPbc 12 02 36.8 -0.1**
BTNL Ternell 147.16 354 *d*PKPdf **PKPdf 12 02 32.2 -1.6**
ZST Bratislava 147.17 340 *e*PKP2 **PKPbc 12 02 37.6 +0.6**
ZST Bratislava 147.17 340 *e*PKP **PKPbc 12 02 37.5 +0.6**
BSTI Sart Tilman 147.21 355 *d*PKP **PKPbc 12 02 37.2 +0.1**
TNS Taunus Mts 147.25 352 *e*PKPbc **PKPbc 12 02 37.8 +0.5**
baz=17,slow=2.8
TNS *e*PKPab **PKPab 12 02 42.0 +1.2**
SZH Strazhitsa 147.25 326 *i* P **PKPbc 12 02 37.1 -0.3**
GZR Gura Zlata 147.29 332 ⇑P **PKPdf 12 02 35.6 +1.3**
GZR Gura Zlata 147.29 332 ⇑PKHKP PKPpre 12 02 35.6
GRA1 Grafenberg Arr 147.30 348 PKPbc **PKPbc 12 02 38.0 +0.6**
GRF Grafenberg Arr 147.30 348 PKP2 **PKPbc 12 02 38.0 +0.6**
GRF Grafenberg Arr 147.30 348 *e*PKPbc **PKPbc 12 02 38.1 +0.8**
baz=17,slow=2.8
GRF *e*PKPab **PKPab 12 02 42.6 +1.6**
SURR Surduc 147.30 333 ⇑P **PKPdf 12 02 35.4 +1.3**
KHC Kasperske Hory 147.31 345 *e*PKP **PKPdf 12 02 34.2 +0.1**
KHC *ex* x 12 02 37.7
KHC Kasperske Hory 147.31 345 *e*PKIKP **PKPdf 12 02 34.2 +0.1**
BCLA Clavier 147.40 355 *d*PKPdf **PKPdf 12 02 33.1 -1.0**
BHOU Houvegnez 147.40 355 *d*PKPdf **PKPdf 12 02 34.7 +0.5**
BHOU *d*PKP **PKPbc 12 02 37.3 +0.1**
CKRC Cesky Krumlov 147.41 344 *e*PKP **PKPdf 12 02 34.9 +0.6**
CKRC *ex* x 12 02 38.0
CKRC *ep*PKP **pPKPab 12 04 50.0 +4.5**
CKRC Cesky Krumlov 147.41 344 *e*PKIKP **PKPdf 12 02 34.9 +0.6**
BGES Gesves 147.45 356 *d*PKP **PKPbc 12 02 37.3 -0.4**
WET Wettzell 147.47 346 *e*PKPdf **PKPdf 12 02 34.6 +0.2**
WET *e*PKPbc **PKPbc 12 02 38.3 +0.5**
baz=17,slow=2.8
WET *e*PKPab **PKPab 12 02 43.4 +1.7**
ELND Elena 147.54 325 ⇑P **PKPbc 12 02 36.5 -1.6**
GEC2 GERESS Array S 147.55 345 PKPbc **PKPbc 12 02 38.2 +0.1**
GEC2 GERESS Array S 147.55 345 *e*PKPdf **PKPdf 12 02 34.5 0.0**
GEC2 *e*PKPbc **PKPbc 12 02 38.6 +0.5**
baz=17,slow=2.8
GEC2 *e*PKPab **PKPab 12 02 43.4 +1.3**
GERES GERESS Array B 147.55 345 PKPbc **PKPbc 12 02 38.0 -0.1**
comp=Z,85nm,0.6s,baz=24,slow=3.8,SNR=147
GERES pPKPbc **pPKPdf 12 04 44.2 -0.1**
comp=Z,4.0nm,0.9s,baz=287,slow=28,SNR=1.7
BMRD Maredsous 147.55 356 *d*PKPdf **PKPdf 12 02 35.4 +1.0**
BMRD *d*PKP **PKPbc 12 02 37.7 -0.2**
PAGU Agualva, Azore 147.58 44 *e*PKP **PKPdf 12 02 36.0 +1.2**
**ADH Angra He

comp=Z,39nm,1.2s
MORH Mrgy, Hungar 148.34 337 ⇑P **PKPdf 12 02 35.9 +0.1**
MPEP Malo Peshtene 148.35 328 *i* P **PKPbc 12 02 40.1 -0.1**
BALB Balikesir 148.44 319 PKPbc **PKPbc 12 02 40.7 +0.2**
ARSA Arzberg 148.50 341 *i* PKP **PKPbc 12 02 39.9 -0.5**
comp=Z,54nm,1.4s,SNR=20
ARSA *ep*PKiKP **pPKiKP 12 04 51.1 +0.5**
comp=Z,14nm,1.1s
STU Stuttgart 148.55 350 *e*PKPbc **PKiKP 12 02 41.1 -0.5**
baz=17,slow=2.8
STU *e*PKPab **PKPab 12 02 47.2 +1.1**
KULA Kula-Manisa 148.58 316 P **PKPbc 12 02 40.3 -0.7**
BIOA Bad Ischl, Aus 148.63 344 *i* PKP **PKPdf 12 02 36.8 +0.5**
comp=Z,6.6nm,0.9s
BIOA *e*PKP **PKPbc 12 02 40.2 -0.6**
comp=Z,76nm,0.9s,SNR=17
ELL Elmali 148.64 313 PKPbc **PKPbc 12 02 41.0 -0.3**
ELL Elmali 148.64 313 PKHKP PKPpre 12 02 41.0
PLD Plovdiv 148.68 325 *i* P **PKPbc 12 02 40.4 -0.6**
BLKB Belogradchik 148.68 330 ⇑P **PKPdf 12 02 38.1 +1.6**
KDZ Kurdzhali 148.70 324 *i* P **PKPbc 12 02 40.6 -0.5**
PGB Panagyurishte 148.73 327 *i* P **PKPbc 12 02 40.9 -0.3**
FUR Furstenfeldbru 148.74 347 *e*PKPbc **PKiKP 12 02 41.6 -0.5**
baz=17,slow=2.8
FUR *e*PKPab **PKPab 12 02 48.4 +1.4**
FRGS Fruska Gora 148.76 334 ⇑P **PKPdf 12 02 38.2 +1.6**
FRGS Fruska Gora 148.76 334 ⇑*i*P **PKPdf 12 02 36.7 +0.1**
ALN Alexandroupoli 148.78 322 PKPbc **PKPbc 12 02 40.3 -1.0**
ALN Alexandroupoli 148.78 322 P **PKPbc 12 02 40.3 -1.0**
ALN Alexandroupoli 148.78 322 PKHKP PKPpre 12 02 40.3
RJOB Jochberg 148.80 345 *e*PKPbc **PKPbc 12 02 41.4 +0.2**
baz=17,slow=2.8
RDO Rodhopi 148.91 323 P **PKPbc 12 02 40.5 -1.1**
RZN Rozhen 148.99 325 *i* P **PKPbc 12 02 41.4 -0.7**
AKAS Kas 149.11 312 PKPbc **PKPbc 12 02 41.4 -1.1**
BFO Black Forest 149.12 351 PKPbc **PKPbc 12 02 41.5 -0.5**
BFO Black Forest 149.12 351 PKHKP PKPpre 12 02 41.5
BFO Black Forest 149.12 351 *e*PKPbc **PKPbc 12 02 42.3 +0.4**
baz=17,slow=2.8
BFO *e*PKPab **PKPab 12 02 49.5 +1.0**
LESA Schwarzleotal 149.12 345 *i* PKP **PKPdf 12 02 37.8 +0.7**
comp=Z,31nm,1.7s
LESA *e*PKP **PKPbc 12 02 41.6 -0.4**
comp=Z,76nm,0.7s
LESA *ep*PKiKP **pPKPab 12 04 52.5 +0.4**
comp=Z,26nm,1.2s
BOVS Bovan 149.13 331 ⇓P **PKPdf 12 02 38.8 +1.6**
VTS Vitosha 149.14 328 *i* P **PKPbc 12 02 42.0 -0.3**
PLNA Plana 149.15 327 *i* P **PKPbc 12 02 42.1 -0.2**
SOKA Soboth 149.16 342 *i* PKP **PKPdf 12 02 38.0 +0.8**
comp=Z,15nm,1.2s,SNR=70
SOKA *i* PKP **PKPbc 12 02 41.6 -0.6**
comp=Z,145nm,1.2s
PERS Pernice 149.17 341 *i* PKPbc **PKPbc 12 02 41.5 -0.6**
PERS *i* PKPab **PKPab 12 02 49.6 +0.8**
PERS *i* 12 04 56.0
KBA Koelnbreinsper 149.27 344 *e*PKP **PKPbc 12 02 42.0 -0.6**
comp=Z,76nm,0.5s,SNR=13
EZN Ezine 149.29 321 P **PKPbc 12 02 42.2 -0.4**
SMTH Samothraki Isl 149.36 322 P **PKPbc 12 02 41.7 -1.0**
TEKS Tekeris 149.37 334 *e*P **PKPdf 12 02 35.2 -2.4**
UBR Ueberruh 149.44 348 *e*PKPbc **PKPbc 12 02 43.1 +0.3**
baz=17,slow=2.8
OBKA Obir 149.46 342 *i* PKP **PKPdf 12 02 38.2 +0.5**
comp=Z,12nm,1.6s
OBKA *e*PKP **PKPbc 12 02 42.6 -0.3**
comp=Z,39nm,0.8s,SNR=14
OBKA *ep*PKP **pPKPab 12 04 53.9 +0.2**
comp=Z,12nm,1.4s
OBKA Obir 149.46 342 ⇑*i*P **PKPdf 12 02 36.4 -1.3**
WATA Walderalm 149.46 346 *e*PKP **PKPdf 12 02 38.2 +0.4**
comp=Z,27nm,1.5s,SNR=36
WATA *i* PKP **PKPbc 12 02 42.4 -0.5**
comp=Z,121nm,0.7s
WATA *ep*PKP **pPKPab 12 04 53.9 +0.5**
comp=Z,12nm,1.1s
RETA Reutte 149.50 347 *i* PKP **PKPdf 12 02 37.5 -0.2**
comp=Z,14nm,1.1s
RETA *i* PKP **PKPbc 12 02 42.6 -0.3**
comp=Z,53nm,0.6s,SNR=16
RETA *ep*PKP **pPKPbc 12 04 52.2 +1.2**
comp=Z,28nm,1.5s
WTTA Wattenberg 149.52 346 *e*PKP **PKPdf 12 02 37.6 -0.4**
comp=Z,32nm,1.3s,SNR=72
WTTA *i* PKP **PKPbc 12 02 42.9 -0.3**
comp=Z,208nm,0.7s
WTTA *ep*PKP **pPKPbc 12 04 52.2 +0.9**
comp=Z,26nm,1.3s
MOTA Moosalm 149.56 347 *i* PKP **PKPdf 12 02 37.2 -0.7**
comp=Z,23nm,1.1s,SNR=40
MOTA *i* PKP **PKPbc 12 02 42.7 -0.5**
comp=Z,160nm,1.0s
MOTA pPKP **pPKPab 12 04 52.9 -0.8**
comp=Z,24nm,1.3s
YER Yerkesik 149.57 314 P **PKPbc 12 02 43.4 0.0**
KAVA Kavala 149.59 324 P **PKPbc 12 02 42.5 -0.7**
MYKA Terra Mystica 149.60 343 *i* PKP **PKPdf 12 02 37.8 -0.1**
comp=Z,9.2nm,1.0s
MYKA *e*PKP **PKPbc 12 02 42.5 -0.7**
comp=Z,104nm,0.6s,SNR=32
MYKA *ep*PKP **pPKPab 12 04 53.9 -0.1**
comp=Z,15nm,1.0s
MMB Musomishta 149.63 326 *i* P **PKPbc 12 02 42.7 -0.7**
SQTA Sankt Quirin 149.65 347 *e*PKP **PKPdf 12 02 37.6 -0.5**
comp=Z,19nm,0.9s,SNR=66
SQTA *i* PKP **PKPbc 12 02 43.1 -0.3**
comp=Z,169nm,0.6s
SQTA *ep*PKP **pPKPab 12 04 54.1 0.0**
comp=Z,14nm,0.9s
PRK Paraskevi 149.68 320 P **PKPbc 12 02 43.4 -0.1**
BLCB Balcova 149.70 318 P **PKPbc 12 02 42.9 -0.7**
NVR Nevrokopi 149.71 325 P **PKiKP 12 02 44.1 -0.2**
KKB Krupnik 149.75 327 *i* P **PKPbc 12 02 43.2 -0.5**
CRES Cresnjev 149.79 340 ⇑*i*P **PKPdf 12 02 36.9 -1.3**
ABTA Abfaltersbach 149.79 345 *i* PKP **PKPdf 12 02 37.6 -0.7**
comp=Z,14nm,0.8s,SNR=34
ABTA *e*PKP **PKPbc 12 02 43.5 -0.2**
comp=Z,184nm,0.7s
ABTA *ep*PKP **pPKPab 12 04 54.7 -0.3**
comp=Z,13nm,0.9s
PRED Cave del Predi 149.80 343 PKPdf **PKPdf 12 02 36.6 -1.6**
PRED PKPbc **PKPbc 12 02 42.9 -0.8**
PRED PKPab **PKPab 12 02 51.6 +0.2**
DAVA Damuels 149.86 348 *i* PKP **PKPdf 12 02 38.4 -0.1**
comp=Z,21nm,1.0s
DAVA *i* PKP **PKiKP 12 02 44.4 -0.2**
comp=Z,148nm,0.9s
DAVA *ep*PKP **pPKPbc 12 04 53.3 +1.2**
comp=Z,45nm,1.8s
LJU Ljubljana 149.88 342 *e*PKPdf **PKPdf 12 02 37.9 -0.5**
LJU *i* PKPbc **PKPbc 12 02 43.6 -0.2**
LJU *i* PKiKP **PKiKP 12 02 45.0 +0.5**
LJU *i* PKPab **PKPab 12 02 52.1 +0.4**
LJU *i* 12 04 58.1
PEHC Pehcevo 149.92 327 *i* P **PKPbc 12 02 44.2 +0.1**
LIA Limnos Island 149.93 322 P **PKPbc 12 02 43.6 -0.5**
PSMN Pico do Norte, 149.93 45 *e*PKP **PKiKP 12 02 45.5 +0.7**
FETA Feichten 149.95 347 *e*PKP **PKPdf 12 02 38.5 -0.1**
comp=Z,28nm,0.9s,SNR=22
FETA *i* PKP **PKPbc 12 02 44.0 -0.1**
comp=Z,123nm,0.7s
FETA *ep*PKiKP **pPKPbc 12 04 52.1 -0.3**
comp=Z,44nm,1.3s
CLUD Cludinico 149.97 344 PKPdf **PKPdf 12 02 37.3 -1.1**
CLUD PKPbc **PKPbc 12 02 43.3 -0.7**
CLUD PKPab **PKPab 12 02 51.2 -0.9**
BBLS Lazići 149.98 333 ⇑*i*P **PKPdf 12 02 38.0 -0.6**
HAPS Han Pijesak,Bl 149.99 334 ⇑*i*P **PKPdf 12 02 38.1 -0.6**
KOKK Kokkinochori, 150.00 324 P **PKPbc 12 02 43.5 -0.7**
A051A Mrakovica 150.00 338 ⇑*i*P **PKPdf 12 02 37.8 -0.8**
SRS Serrai 150.02 325 P **PKPbc 12 02 43.1 -1.2**
BLY Banja Luka 150.13 337 ⇑*i*P **PKPbc 12 02 43.9 -0.5**
BOJS Bojanci 150.14 340 *i* PKPdf **PKPdf 12 02 38.3 -0.4**
BOJS *i* PKPbc **PKPbc 12 02 44.6 +0.2**
BOJS *i* PKiKP **PKiKP 12 02 46.0 +1.0**
BOJS Bojanci 150.14 340 ⇑*i*P **PKPdf 12 02 39.2 +0.5**
CEY Cerknica 150.19 341 ⇑*i*P **PKPdf 12 02 38.5 -0.3**
RUDO Rudo 150.19 333 *e*P **PKPdf 12 02 39.8 +0.9**
SJES Sjenica 150.22 332 ⇑*i*P **PKPdf 12 02 39.6 +0.6**
SMG Samos 150.22 317 P **PKPbc 12 02 44.2 -0.7**
BODT Bodrum 150.27 315 P **PKPbc 12 02 44.3 -0.7**
OUR Ouranopolis 150.34 324 P **PKPbc 12 02 44.0 -1.0**
STIP Stip 150.35 327 *i* P **PKPbc 12 02 43.8 -1.2**
DAVOX Davos/Dischmat 150.35 348 pPKPbc pPKPbc 12 04 53.2 -0.3
comp=Z,3.1nm,0.6s,baz=333,slow=13,SNR=1.1
PLE Pljevlja 150.42 333 ⇑*i*PKP **PKPbc 12 02 45.2 -0.1**
VAY Valandovo 150.42 327 *i* P **PKPbc 12 02 44.1 -1.1**
MGRS Mrkonjic Grad 150.45 337 ⇑*i*P **PKPdf 12 02 39.2 -0.1**
SKO Skopje 150.52 329 *i* P **PKPbc 12 02 45.4 -0.1**
IVA Berane 150.56 332 ⇑*i*PKP **PKPbc 12 02 45.0 -0.6**
A050A Klekovaca 150.60 338 ⇑*i*P **PKPdf 12 02 38.1 -1.4**
HORT Hortiatis 150.65 325 P **PKPbc 12 02 44.5 -1.4**
UPM Unac-Piva 150.73 333 ⇑*i*PKP **PKPbc 12 02 45.2 -0.9**
UPM Unac-Piva 150.73 333 *e*P **PKPdf 12 02 40.1 +0.2**
KOME Kolasin 150.75 332 ⇑*i*PKP **PKPbc 12 02 45.3 -0.7**
PVY Pav 150.75 331 ⇑*i*PKP **PKPbc 12 02 45.5 -0.6**
GRG Griva 150.77 326 P **PKPbc 12 02 44.9 -1.2**
PAIG Paliouri 150.78 323 P **PKPbc 12 02 44.8 -1.3**
UDBI Udbina 150.83 339 *i* P **PKPbc 12 02 45.5 -0.6**
NEVS Nevesinje 150.99 334 *e*P **PKPdf 12 02 42.3 +2.1**
KIJV Kijevo 151.06 337 *i* P **PKPbc 12 02 45.9 -0.7**
NKME Niksic 151.06 333 ⇑*i*PKP **PKPbc 12 02 45.8 -0.9**
BRY Bratogost 151.13 333 ⇑*i*PKP **PKPbc 12 02 45.8 -1.2**
BRY Bratogost 151.13 333 ⇑*i*P **PKPdf 12 02 38.7 -1.8**
SENIN Lac Senin/Sane 151.19 351 PKPdf **PKPdf 12 02 38.9 -1.7**
SENIN PKPbc **PKiKP 12 02 47.4 0.0**
SENIN PKPab **PKPab 12 02 58.0 +0.6**
RICI Ricice 151.21 336 *i* P **PKPbc 12 02 45.9 -1.1**
PHP Peshkopia 151.22 329 P **PKPbc 12 02 46.4 -0.7**
CEME Cevo 151.25 332 ⇑*i*PKP **PKPbc 12 02 46.4 -0.7**
VIRC Vir 151.28 339 *i* P **PKPbc 12 02 46.2 -0.8**
TEOL Teolo 151.30 345 PKPdf **PKPdf 12 02 39.9 -0.6**
TEOL PKPbc **PKiKP 12 02 47.3 -0.1**
TEOL PKPab **PKPab 12 02 58.1 +0.6**
TREB Trebinje 151.36 333 ⇑*i*P **PKPbc 12 02 46.2 -1.1**
KYMI Kymi, Euboea I 151.38 321 P **PKPbc 12 02 46.2 -1.3**
DRME Dracevica, Mon 151.42 332 ⇑*i*PKP **PKPbc 12 02 47.0 -0.5**
DRME Dracevica, Mon 151.42 332 ⇑*i*P **PKPdf 12 02 39.3 -1.5**
MORI Morici 151.43 338 *i* P **PKPbc 12 02 46.5 -0.9**
FNA Florina 151.43 327 P **PKPbc 12 02 46.9 -0.7**
MAKA Makarska 151.43 336 *i* P **PKPbc 12 02 46.5 -0.9**
XOR Xorichti 151.44 323 P **PKPbc 12 02 46.2 -1.4**
APE Apeiranthos 151.44 317 ⇑P **PKPdf 12 02 41.5 +0.5**
APE Apeiranthos 151.44 317 ⇑PKIKP **PKPdf 12 02 41.5 +0.5**
NEO Neokhori 151.46 323 P **PKPbc 12 02 46.3 -1.4**
BUM Brajici-Budva 151.46 332 ⇑*i*PKP **PKPbc 12 02 46.6 -1.0**
OHR Ohrid 151.48 328 *i* P **PKPbc 12 02 47.7 0.0**
DBRK Dubrovnik 151.49 334 *i* P **PKPbc 12 02 46.5 -1.1**
STON Ston 151.51 334 *i* P **PKPbc 12 02 46.3 -1.2**
STON Ston 151.51 334 ⇑*i*P **PKPdf 12 02 39.9 -0.9**
HCY Herceg Novi 151.52 333 ⇑*i*PKP **PKPbc 12 02 46.8 -0.9**
HCY Herceg Novi 151.52 333 ⇑*i*P **PKPdf 12 02 41.4 +0.5**
DUGI Dugi Otok 151.54 339 *i* P **PKPbc 12 02 46.6 -1.0**
ULC Ulcinj 151.57 331 ⇑*i*PKP **PKPbc 12 02 47.2 -0.6**
ZIRJ Zirje 151.63 338 *i* P **PKPbc 12 02 46.2 -1.6**
HVAR Hvar 151.75 336 *i* P **PKPbc 12 02 47.2 -1.0**
DION Dionisos Attik 151.84 320 P **PKPbc 12 02 48.3 -0.2**
NEST Nestorio 151.87 327 P **PKPbc 12 02 48.3 -0.3**
LSTV Lastovo 151.92 335 *i* P **PKPbc 12 02 47.1 -1.4**
THL Klokotos Trika 151.96 325 P **PKPbc 12 02 47.0 -1.7**
PENT Pentalofos 151.98 327 P **PKPbc 12 02 48.1 -0.8**
ATHU Athens Univers 152.00 320 P **PKPbc 12 02 47.3 -1.6**
KPRO Kipourio 152.04 326 P **PKPbc 12 02 47.2 -1.8**
VLY Voula,Athens 152.07 320 P **PKPbc 12 02 47.8 -1.2**
AXAR Agios Charalam 152.15 323 P **PKPbc 12 02 48.3 -0.9**
VILL Villia 152.16 321 P **PKPbc 12 02 47.8 -1.5**
AGG Agios Georgios 152.16 323 PKPdf **PKPdf 12 02 41.4 -0.6**
AGG PKPbc **PKPbc 12 02 48.1 -1.2**
AGG PKPab **PKPab 12 02 48.1 -0.2**
AGG Agios Georgios 152.16 323 P **PKPbc 12 02 48.0 -1.2**
AGG Agios Georgios 152.16 323 PKIKP **PKPdf 12 02 41.4 -0.6**
AGG 12 02 48.1
AGG 12 03 01.5
MAKR Makrakomi, Fth 152.28 324 P **PKPbc 12 02 48.9 -0.6**
EVR Evrytania 152.53 324 P **PKPdf 12 02 43.8 +1.2**
EPID Epidavros 152.63 320 P **PKPbc 12 02 49.0 -1.3**
ANX Ano Chora 152.69 323 P **PKPdf 12 02 42.5 -0.4**
EFP Efpalio 152.81 323 P **PKPbc 12 02 50.3 -0.3**
GUR Goura 152.88 322 P **PKPbc 12 02 50.0 -1.0**
PVO Paravola 152.90 324 P **PKiKP 12 02 51.1 +0.2**
KLV Kalavryta, Ach 152.93 322 P **PKPbc 12 02 49.9 -1.1**
KEK Kerkira 153.03 328 P **PKPbc 12 02 48.5 -2.6**
NRCA Norcia 153.22 341 PKPdf **PKPdf 12 02 42.4 -1.1**
NRCA PKPbc **PKiKP 12 02 51.6 0.0**
NRCA PKPab **PKPab 12 03 05.6 -0.4**
SGRT San Giovanni R 153.23 336 PKPdf **PKPdf 12 02 41.9 -1.7**
SGRT PKPbc **PKPbc 12 02 50.9 -0.7**
SGRT PKPab **PKPab 12 03 05.4 -0.8**
DRO Drossia 153.25 322 P **PKiKP 12 02 52.3 +0.6**
NYDR Nydri-Lefkada 153.29 325 P **PKPbc 12 02 51.1 -0.5**
RLS Riolos of Patr 153.31 323 P **PKiKP 12 02 51.9 +0.1**
EVGI Lefkada island 153.38 325 P **PKPbc 12 02 51.6 -0.2**
CAMP Campotosto 153.39 340 PKPdf **PKPdf 12 02 42.6 -1.1**
CAMP PKPbc **PKPbc 12 02 51.4 -0.5**
CAMP PKPab **PKPab 12 03 06.7 -0.1**
CESX Cesi 153.58 341 PKPdf **PKPdf 12 02 41.3 -2.6**
CESX PKPbc **PKPbc 12 02 51.7 -0.5**
CESX PKPab **PKPab 12 03 07.4 -0.1**
INTR Introdacqua 153.69 339 PKPdf **PKPdf 12 02 43.5 -0.7**
INTR PKPbc **PKiKP 12 02 53.6 +1.1**
INTR PKPab **PKPab 12 03 08.8 +0.7**
VLS Valsamata 153.73 324 P **PKPab 12 03 06.8 -1.5**
PGAV Gavieira, Arco 154.62 17 *e*PKPdf **PKPdf 12 02 46.2 +0.7**
PGAV Gavieira, Arco 154.62 17 *e*PKPab **PKPab 12 03 12.0 +0.4**
TIP Timpagrande 154.93 331 ⇓P **PKPdf 12 02 46.1 0.0**
PBRG Braganca 155.17 15 eLQ LQ 12 02 56.4
PBRG Braganca 155.17 15 *e*PKPab **PKPab 12 03 13.7 -0.6**
PTO Porto 155.29 18 *e*PKPab **PKPab 12 03 14.9 +0.1**
POLO Lamas de Olo 155.30 17 *e*PKPdf **PKPdf 12 02 47.4 +1.0**
POLO eLQ LQ 12 02 57.7
POLO Lamas de Olo 155.30 17 *e*PKPab **PKPab 12 03 15.1 +0.1**
PVRL Vila Real 155.41 17 *e*PKPdf **PKPdf 12 02 47.4 +0.9**
PVRL eLQ LQ 12 02 57.8
PVRL Vila Real 155.41 17 *e*PKPab **PKPab 12 03 15.8 +0.4**
MVO Moncorvo 155.70 16 *e*PKPdf **PKPdf 12 02 47.8 +0.9**
MVO eLQ LQ 12 02 56.8
MVO Moncorvo 155.70 16 *e*PKPab **PKPab 12 03 17.0 +0.3**
MTE Manteigas 156.28 17 *e*PKPdf **PKPdf 12 02 48.1 +0.4**
MTE Manteigas 156.28 17 *e*PKPab **PKPab 12 03 19.2 0.0**
PCAS Casmilo, Conde 156.31 19 *e*PKPdf **PKPdf 12 02 48.2 +0.5**
PCAS Casmilo, Conde 156.31 19 *e*PKPab **PKPab 12 03 18.2 -1.1**
PSBE So Bento 156.71 20 *e*PKPab **PKPab 12 03 20.1 -0.9**
PCBR Castelo Branco 156.81 18 *e*PKPdf **PKPdf 12 02 48.7 +0.4**
PCBR Castelo Branco 156.81 18 *e*PKPab **PKPab 12 03 21.0 -0.4**
PMAFR Mafra 157.04 22 *e*PKPab **PKPab 12 03 22.4 -0.1**
PMRV Marv??o 157.22 18 *e*PKPdf **PKPdf 12 02 49.8 +1.0**
PMRV Marv??o 157.22 18 *e*PKPab **PKPab 12 03 21.8 -1.5**
PMTG Montargil 157.30 20 *e*PKPdf **PKPdf 12 02 49.5 +0.6**
PMTG Montargil 157.30 20 *e*PKPab **PKPab 12 03 23.1 -0.5**
PESTR Estremoz 157.68 19 *e*PKPdf **PKPdf 12 02 50.9 +1.5**
PESTR Estremoz 157.68 19 *e*PKPab **PKPab 12 03 24.5 -0.8**
ESDC Sonseca Array 157.80 11 PKP **PKPdf 12 02 50.0 +0.4**
comp=Z,2.6nm,0.8s,baz=333,slow=2.5,SNR=12
ESDC PKPab **PKPab 12 03 25.5 -0.3**
comp=Z,27nm,0.7s,baz=340,slow=3.8,SNR=31
ESDC pPKPab **pPKPab 12 05 28.7 +1.0**
comp=Z,0.8nm,0.5s,baz=258,slow=2.9,SNR=2.1
ESDC PP **PP 12 07 07.1 +0.5**
comp=Z,4.8nm,1.0s,baz=4.5,slow=4.4,SNR=6.2
EVO Evora 157.85 20 *e*PKPdf **PKPdf 12 02 50.7 +1.1**
EVO Evora 157.85 20 *e*PKPab **PKPab 12 03 25.7 -0.3**
PNCL Nicolau / Gran 158.06 21 *e*PKPdf **PKPdf 12 02 51.4 +1.6**
PNCL Nicolau / Gran 158.06 21 *e*PKPab **PKPab 12 03 26.4 -0.5**
PBEJ Beja 158.36 20 *e*PKPdf **PKPdf 12 02 52.0 +1.8**
PBEJ Beja 158.36 20 *e*PKPab **PKPab 12 03 28.1 -0.1**
MESJ Messejana 158.41 21 *e*PKPdf **PKPdf 12 02 51.4 +1.1**
MESJ Messejana 158.41 21 *e*PKPab **PKPab 12 03 28.4 0.0**
MESJ Messejana 158.41 21 *e*PKPdf **PKPdf 12 02 50.1 -0.2**
PBAR Barrancos 158.48 18 *e*PKPdf **PKPdf 12 02 50.5 +0.1**
PBAR Barrancos 158.48 18 *e*PKPab **PKPab 12 03 28.7 0.0**
PTEO Sao Teotonio 158.50 22 *e*PKPdf **PKPdf 12 02 52.8 +2.4**
PTEO Sao Teotonio 158.50 22 *e*PKPab **PKPab 12 03 28.9 +0.1**
PCVE Castro Verde 158.66 21 *e*PKPab **PKPab 12 03 29.4 -0.1**
MORF Marmelete 158.74 23 *e*PKPdf **PKPdf 12 02 50.3 -0.5**
MORF Marmelete 158.74 23 PKPdf **PKPdf 12 02 49.1 -1.7**
MORF PKPab **PKPab 12 03 29.6 -0.3**
MORF Marmelete 158.74 23 *e*PKPdf **PKPdf 12 02 50.2 -0.5**
MORF Marmelete 158.74 23 PKIKP **PKPdf 12 02 49.1 -1.7**
MORF 12 03 29.7
PFVI Vila Bisbo 158.82 23 *e*PKPdf **PKPdf 12 02 51.1 +0.3**
PFVI Vila Bisbo 158.82 23 *e*PKPab **PKPab 12 03 30.0 -0.3**
PVAQ Vaqueiros 158.97 21 *e*PKPab **PKPab 12 03 31.2 +0.3**
PBDV Barranco-do-Ve 159.05 21 *e*PKPdf **PKPdf 12 02 52.8 +1.7**
PBDV Barranco-do-Ve 159.05 21 *e*PKPab **PKPab 12 03 32.7 +1.4**
KEST Kesra 160.88 340 PKPab **PKPab 12 03 39.7 +0.3**
comp=Z,26nm,0.8s,baz=129,slow=1.9,SNR=14
AVE Averroes 162.74 26 PKPdf **PKPdf 12 02 55.1 0.0**
AVE PKPab **PKPab 12 03 47.8 +0.3**
LIC Lamto 166.82 151 ⇑*e*PKP2 **PKPdf 12 02 58.0 -1.1**
comp=Z,27nm,0.8s
KIC Kosan Boka 167.07 152 ⇑*e*PKP2 **PKPdf 12 02 58.2 -1.1**
comp=Z,21nm,0.8s
TIC Toumodi 167.19 150 ⇑*i*PKP2 **PKPdf 12 02 59.8 +0.4**
comp=Z,33nm,0.8s
DBIC Dimbokro 167.29 151 PKP **PKPdf 12 02 58.5 -0.9**
comp=Z,7.7nm,0.7s,baz=120,slow=1.8,SNR=9.9
DBIC PKPab **PKPab 12 04 07.9 -0.1**
comp=Z,5.7nm,0.8s,baz=192,slow=4.4,SNR=4.0
DBIC pPKPab **pPKPab 12 06 10.0 +0.6**
comp=Z,2.5nm,0.7s,baz=122,slow=19,SNR=1.4
TOA0 Torodi Ar. Sit 175.28 184 PKPdf **PKPdf 12 03 02.5 -0.8**
TOA0 PKPab **PKPab 12 04 43.0 -0.3**
TORD Torodi Ar. Bea 175.28 184 PKP **PKPdf 12 03 02.4 -0.9**
comp=Z,4.6nm,0.8s,baz=19,slow=2.7,SNR=16
TORD PKPab **PKPab 12 04 43.0 -0.3**
comp=Z,5.8nm,0.6s,baz=166,slow=2.9,SNR=19
TORD pPKPab **pPKPab 12 06 43.4 -1.6**
comp=Z,4.4nm,1.0s,baz=40,slow=2.3,SNR=2.8
TORD PP **PP 12 08 35.9 +1.1**
comp=Z,3.7nm,0.8s,baz=167,slow=2.9,SNR=5.6

IDC 09 11:56:16.0±6.6, 30°47N×88°52E, h0km, mb3.5/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=463.1km s-min=27.3km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.00**	**345**	P	P	12 00 16.3	-0.8
	0.1nm,0.3s,baz=162,slow=11,SNR=3.5						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**21.48**	**342**	P	P	12 01 05.5	-0.5
	1.7nm,1.0s,baz=155,slow=11,SNR=5.7						
	1.7nm,1.0s						
WRA	**Warramunga Arr**	**66.73**	**133**	P	P	12 07 09.2	0.0
	0.4nm,0.7s,baz=324,slow=6.8,SNR=1.7						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**69.23**	**136**	P	P	12 07 25.0	+0.1
	0.4nm,0.8s,baz=324,slow=6.4,SNR=4.6						
	0.4nm,0.8s						

*TEH **09** 12:05:31.9,28°.13N×52°.96E, h17km±32km, ML3.4*
*OMAN **09** 12:05:32.5±0.6,28°.06N×53°.04E, h20km, mb3.9/4, ml3.4/10, ms3.3/1, Error ellipse: s-maj=5.6km s-min=2.9km az=177.0*
*DSN **09** 12:05:33.0±0.6,27°.75N×52°.83E, h10km, ML2.8/5, Error ellipse: s-maj=9.4km s-min=2.9km az=13.0*

ISC 09 12:05:31.9±0.9, 28°06N±0'.04×52°99E±0'.04, h14km, n46, σ0s98/64, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.42**	**7**	Pg	**Pg**	**12 05 39.2**	**-1.1**
JHRM	**Jahrom**	**0.69**	**49**	Pg	**Pg**	**12 05 44.8**	**-0.5**
LMD1	**Lamerd**	**0.73**	**167**	Pg	**Pb**	**12 05 47.0**	**+0.5**
LMD1				Sg	**Sn**	**12 05 59.1**	**+0.3**
LAR1	**LAR**	**1.29**	**107**	Pg	**Pg**	**12 05 57.8**	**+1.1**
DSBU	**Dashti - Bushe**	**1.55**	**282**	Pg	**Pb**	**12 05 59.9**	**-0.5**
SHI	**Shiraz**	**1.63**	**345**	Pg	**Pn**	**12 06 00.9**	**+0.5**
AHBU	**AHRAM**	**1.69**	**299**	Pg	**Pb**	**12 06 03.2**	**+0.4**
SHMA	**Al-Shehemyia**	**2.84**	**220**	P	**Pn**	**12 06 17.8**	**+1.0**
SHMA				S	**Sn**	**12 06 53.2**	**+2.4**
JRN	**Qarnain Island**	**3.11**	**182**	P	**Pn**	**12 06 21.1**	**+0.7**
JRN				S	**Sn**	**12 06 58.3**	**+1.0**
NGRK	**Negar Kerman**	**3.65**	**63**	Pn	**Pn**	**12 06 29.4**	**+1.2**
TRNA	**Turayna**	**3.67**	**206**	S	**Sn**	**12 07 12.5**	**+1.2**
IRAM	**Ramesheh**	**3.77**	**352**	Pn	**Pn**	**12 06 30.1**	**+0.2**
TVBK	**TV Kerman**	**3.82**	**59**	Pn	**Pn**	**12 06 31.2**	**+0.5**
SMRA	**Abu-Samra**	**3.83**	**211**	P	**Pn**	**12 06 30.8**	**+0.5**
KHGB	**Koh Gabri**	**3.83**	**52**	Pn	**Pn**	**12 06 32.0**	**+1.4**
NAZ	**Nazwa, Dubai**	**3.88**	**141**	P	**Pn**	**12 06 31.0**	**-0.1**
MASF	**Masafi**	**3.90**	**133**	P	**Pn**	**12 06 32.3**	**+0.9**
MASF				S	**Sn**	**12 07 17.4**	**+0.3**
MSFE	**Esma-Masafi**	**3.91**	**133**	P	**Pn**	**12 06 31.9**	**+0.3**
ASUD	**Al Ashush, Dub**	**4.01**	**148**	P	**Pn**	**12 06 32.7**	**-0.2**
ASUD				S	**Sn**	**12 07 19.0**	**-0.7**
MDH	**Madha**	**4.04**	**132**	P	**Pn**	**12 06 33.5**	**+0.2**
MDH	**Madha**	**4.04**	**132**	P	**Pn**	**12 06 34.1**	**+0.7**
MDH				S	**Sn**	**12 07 19.5**	**-1.0**
FAQ	**Al Faqa, Dubai**	**4.04**	**144**	P	**Pn**	**12 06 34.0**	**+0.7**
FAQ				S	**Sn**	**12 07 21.0**	**+0.4**
SLWR	**Sila**	**4.14**	**197**	P	**Pn**	**12 06 34.5**	**-0.1**
SLWR				S	**Sn**	**12 07 22.6**	**-0.3**
KHNJ	**Kahnooj**	**4.17**	**90**	Pn	**Pn**	**12 06 37.0**	**+1.8**
UOSS	**Minazif**	**4.23**	**136**	P	**Pn**	**12 06 36.0**	**0.0**
UOSS	**Minazif**	**4.23**	**136**	P	**Pn**	**12 06 36.4**	**+0.4**
UOSS				S	**Sn**	**12 07 24.8**	**-0.4**
ASHO	**Ashiyiah**	**4.35**	**140**	P	**Pn**	**12 06 37.6**	**0.0**
ASHO				S	**Sn**	**12 07 27.4**	**-0.7**
ASHO	**Ashiyiah**	**4.35**	**140**	P	**Pn**	**12 06 37.5**	**-0.1**
	SNR=6.2						
ASHO				S	**Sn**	**12 07 27.9**	**-0.2**
ALNE	**Al Ain**	**4.70**	**147**	P	**Pn**	**12 06 43.3**	**+0.9**
ALNE				S	**Sn**	**12 07 35.9**	**-0.8**
IZEF	**Zefreh**	**4.86**	**353**	Pn	**Pn**	**12 06 44.7**	**-0.1**
JASK	**Jask - Hormozg**	**4.87**	**115**	P	**Pn**	**12 06 45.1**	**+0.4**
JASK				S	**Sn**	**12 07 41.1**	**+0.1**
KBAM	**BAM**	**4.93**	**76**	Pn	**Pn**	**12 06 48.1**	**+2.6**
SOHO	**SOHO**	**5.04**	**140**	P	**Pn**	**12 06 46.6**	**-0.5**
SOHO	**SOHO**	**5.04**	**140**	P	**Pn**	**12 06 46.7**	**-0.4**
SOHO				S	**Sn**	**12 07 45.2**	**-0.1**
IKLH	**Kolahrood**	**5.38**	**347**	Pn	**Pn**

ASKU	**Askersund**	**1.63**	**270**	P	Pn	12 07 43.1	0.0
ASKU	**Askersund**	**1.63**	**270**	P	Pn	12 07 43.1	0.0
NRAU	**Nora**	**1.64**	**294**	P	Pn	12 07 43.5	+0.2
NRAU	**Nora**	**1.64**	**294**	P	Pn	12 07 43.5	+0.2
BYXU	**Byxelkrok**	**1.72**	**198**	P	Pn	12 07 44.6	+0.2
BYXU	**Byxelkrok**	**1.72**	**198**	P	Pn	12 07 44.6	+0.2

LVSN 09 12:07:58.0±3.7, 58°63N×21°01E, h0km±57km, ML2.3, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**1.21**	**145**	*eP*	Pg	12 08 18.1	-3.0
SLIT				*eS*	Sg	12 08 35.1	-1.6
SLIT				AML	AML	12 08 45.3	
	comp=E,42nm,0.6s						
SLIT				AML	AML	12 08 45.5	
	comp=Z,39nm,0.6s						
SLIT				AML	AML	12 08 46.1	
	comp=N,51nm,0.7s						
MTSE	**Matsula**	**1.47**	**85**	*eS*	Sg	12 08 40.7	-4.4

*EST **09** 12:08:38.6±0.1, 59°13N×28°25E, h0km, ML1.7(HEL), Explosion*

HEL 09 12:08:39.0±0.5, 59°14N×28°30E, h0km, ML1.7, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSU	**Vasula**	**1.06**	**231**	*eP*	Pg	12 08 57.4	-1.9
EE03	**Tooma soojaam,**	**1.08**	**257**	*eP*	Pg	12 08 57.4	-2.3
EE03				*eS*	Sg	12 09 11.4	-2.3
ARBE	**Arbavere**	**1.23**	**285**	*eS*	Sg	12 09 14.8	-3.6
ARBE				AML	AML	12 09 21.3	
	comp=Z,31nm,0.5s						
ARBE				AML	AML	12 09 21.9	
	comp=E,97nm,0.4s						
ARBE				AML	AML	12 09 22.2	
	comp=N,76nm,0.2s						
ARBE	**Arbavere**	**1.23**	**285**	*eP*	Pg	12 09 00.2	-2.3
ARBE				*eS*	Sg	12 09 14.8	-3.5
EE07	**Piusa Caves, O**	**1.37**	**199**	*eP*	Pg	12 09 02.5	-2.7
EE07				*eSB*	Sg	12 09 20.4	-2.5
VJF	**Virojoki**	**1.46**	**345**	*ePG*	Pn	12 09 05.0	-1.5
VJF				MSG		12 09 22.8	
	comp=Z,5.8nm,0.2s						
VJF				*eS*	Sg	12 09 23.4	-2.4
EE08	**Sarghaua, Vand**	**1.66**	**254**	*eP*	Pn	12 09 07.6	-1.7
EE08				*eS*	Sn	12 09 28.3	-3.0
EE02	**Kiisa, Saku**	**1.86**	**273**	*ePG*	Pn	12 09 11.7	-0.3
EE02				*eSG*	Sn	12 09 34.7	-1.4
PVF	**Pernaja**	**1.88**	**320**	*ePN*	Pn	12 09 11.8	-0.5
PVF				*ePG*	Pb	12 09 12.3	-1.8
PVF				MSG		12 09 34.7	
	comp=Z,2.7nm,0.2s						
PVF				*eS*	Sn	12 09 35.6	-1.0
MEF	**Metsahovi**	**2.26**	**300**	MSG		12 09 45.9	
	comp=Z,2.9nm,0.2s						
MEF				*eSB*	Sn	12 09 46.2	+0.2
NUR	**Nurmijrvi**	**2.30**	**308**	MSG		12 09 47.1	
	comp=Z,2.9nm,0.2s						
NUR				*eSG*	Sn	12 09 48.5	+1.3
RUF	**Ruokolahti**	**2.32**	**8**	MSG		12 09 47.7	
	comp=Z,2.6nm,0.2s						
RUF				*eSG*	Sb	12 09 50.3	-0.5
MTSE	**Matsula**	**2.37**	**262**	*ePB*	Pn	12 09 19.5	+0.5
MTSE				*eSB*	Sn	12 09 49.2	+0.5
EE01	**Perakula, Nova**	**2.41**	**274**	*eSB*	Sn	12 09 50.1	+0.3
FIA0	**FINESS Array S**	**2.57**	**335**	*ePB*	Pn	12 09 22.8	+1.0
FIA0				MSG		12 09 54.7	
	comp=Z,3.1nm,0.2s						
FIA0				*eSG*	Sb	12 09 56.9	-1.0
FIA1	**FINESS Array S**	**2.57**	**335**	*eSB*	Sb	12 09 56.0	-1.9
KAF	**Kangasniemi**	**3.15**	**343**	*ePB*	Pn	12 09 32.6	+2.9
KAF				MSG		12 10 11.2	
	comp=Z,1.7nm,0.2s						

*IDC **09** 12:15:22.5±0.7, 27°96N×127°86E, h0km, mb3.6/10, mbtmp3.6/13, ML3.3/3, MS3.5/1, Error ellipse: s-maj=26.6km s-min=12.4km az=74.0*
*NIED **09** 12:15:22.9, 28°12N×128°07E, h14km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.87; $M_{\theta\theta}$2.33; $M_{\phi\phi}$-1.46; $M_{r\theta}$-1.83; $M_{\theta\phi}$2.91; $M_{\phi r}$0.40; Fault plane solution: $M_0$3.97000×10^{15} NP1: ϕ_s104.00000°, δ83.00000°, λ-30.00000°. NP2: ϕ_s198.00000°, δ60.00000°, λ-172.00000°.*
*JMA **09** 12:15:22.9±0.2, 28°1N±0°4×128°1E±0°6, h14km±2km, MV3.9/23, NW OFF OKINAWAJIMA IS*

ISC 09 12:15:23.5±1.6, 28°03N±0°04×128°08E±0°06, h6km±10km, n32, σ1°820/40, mb3.5/10, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOKE	**Okinoerabujima**	**0.80**	**147**	P	**Pg**	**12 15 39.4**	**+0.5**
JTK	**Tokunoshima**	**0.81**	**108**	P	**Pg**	**12 15 38.7**	**-0.3**
JTK				S	**Sg**	**12 15 50.0**	**+0.5**
JAMN	**Amaminishikomi**	**0.99**	**78**	P	**Pg**	**12 15 41.3**	**-1.1**
JAMN				S	**Sg**	**12 15 54.8**	**-0.5**
JIH	**Iheya**	**1.00**	**186**	P	**Pb**	**12 15 42.8**	**-0.4**
JIH				S	**Sb**	**12 15 57.2**	**+0.6**
JYRO	**Yoronjima**	**1.06**	**162**	P	**Pg**	**12 15 43.7**	**0.0**
JYRO				S	**Sg**	**12 15 58.7**	**+1.2**
JOW	**Kunigami**	**1.21**	**172**	P	**Pg**	**12 15 46.2**	**-0.5**
JOW				S	**Sn**	**12 16 03.8**	**+0.2**
JOW	**Kunigami**	**1.21**	**172**	Pn	**Pb**	**12 15 46.5**	**-0.2**
	248nm,0.3s,baz=62,slow=15,SNR=571						
JOW				Sn	**Sb**	**12 16 03.4**	**+0.7**
	254nm,0.3s,baz=119,slow=29,SNR=24						
JAM	**Amami Oshima**	**1.40**	**74**	P	**Pn**	**12 15 47.9**	**-1.6**
JTAJ	**Takarajima**	**1.49**	**41**	P	**Pn**	**12 15 48.5**	**-2.3**
JNTH	**Nagotoyohara**	**1.51**	**182**	P	**Pb**	**12 15 51.2**	**-0.7**
JNTH				S	**Sn**	**12 16 10.8**	**-0.2**
JAGN	**Aguni-jima**	**1.62**	**208**	P	**Pb**	**12 15 52.3**	**-1.5**
JAGN				*eS*	**Sn**	**12 16 12.6**	**-1.1**
JZK	**Kikaishima**	**1.69**	**80**	*eP*	**Pn**	**12 15 54.5**	**+0.9**
JJT3	**Tamagusuku3**	**1.90**	**188**	P	**Pb**	**12 15 57.7**	**-0.8**
JYAK	**Yakushimahirau**	**3.06**	**43**	*eP*	**Pn**	**12 16 11.5**	**-0.8**
JMTN	**Minamitane**	**3.41**	**46**	*eP*	**Pn**	**12 16 16.7**	**-0.4**
JKDJ	**Kitadaitoujima**	**3.54**	**125**	P	**Pn**	**12 16 18.5**	**-0.5**
JKDJ				*eS*	**Sn**	**12 16 59.8**	**-1.4**
JMZ	**Minamidaito 2**	**3.57**	**127**	P	**Pn**	**12 16 18.4**	**-0.9**
JTN	**Tanegashima 3**	**3.63**	**43**	*eP*	**Pn**	**12 16 21.7**	**+1.4**
JNU	**Nakatsue**	**5.62**	**25**	Pn	**Pn**	**12 16 51.4**	**+3.9**
	3.4nm,0.3s,baz=103,slow=10,SNR=26						
	71nm,0.8s						
KSRS	**Korea Array**	**9.39**	**359**	Pn	**Pn**	**12 17 41.1**	**+1.7**
	0.1nm,0.3s,baz=177,slow=13,SNR=1.9						
	0.8nm,0.8s						
JHJ	**Hachijo jima 2**	**11.28**	**60**	LR	LR	12 22 20.9	
	comp=Z,242nm,19.3s,baz=240,slow=36						
MJAR	**Matsushiro Arr**	**12.05**	**43**	Pn	**Pn**	**12 18 17.6**	**+1.8**
	baz=226,slow=9.9,SNR=2.4						
	0.5nm,0.5s						
KLR	**Kul'dur**	**21.35**	**7**	P	**P**	**12 20 12.3**	**+1.0**
	0.5nm,0.5s,baz=161,slow=17,SNR=2.7						
	0.5nm,0.5s						
SONM	**Songino Array**	**25.98**	**325**	P	**P**	**12 20 56.4**	**-0.7**
	2.4nm,0.9s,baz=136,slow=10,SNR=12						
	2.4nm,0.9s						
MKAR	**Makanchi Array**	**40.25**	**310**	P	**P**	**12 23 00.8**	**-0.3**
	0.7nm,0.6s,baz=93,slow=10,SNR=7.4						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**40.74**	**322**	P	**P**	**12 23 04.2**	**-0.8**
	0.4nm,0.3s,baz=99,slow=8.9,SNR=2.4						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**43.47**	**315**	P	**P**	**12 23 25.7**	**-1.6**
	0.8nm,0.6s,baz=103,slow=8.7,SNR=6.5						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**48.08**	**172**	P	**P**	**12 24 03.6**	**-0.4**
	1.4nm,0.8s,baz=352,slow=7.9,SNR=9.1						
	1.4nm,0.8s						
BVAR	**Borovoye Array**	**48.85**	**317**	P	**P**	**12 24 09.4**	**-0.3**
	1.2nm,0.8s,baz=114,slow=9.9,SNR=5.4						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**51.71**	**173**	P	**P**	**12 24 31.6**	**0.0**
	0.3nm,0.5s,baz=358,slow=8.7,SNR=6.6						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**62.92**	**29**	P	**P**	**12 25 51.6**	**+1.3**
	0.3nm,0.9s,baz=298,slow=5.8,SNR=1.9						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**76.95**	**25**	P	**P**	**12 27 16.5**	**0.0**
	0.4nm,0.9s,baz=302,slow=5.1,SNR=6.8						
	0.4nm,0.9s						

IDC 09 12:22:31.4±8.7, 2°05N×126°09E, h0km, mb3.7/3, mbtmp3.7/3, MS3.4/1, Error ellipse: s-maj=165.6km s-min=135.2km az=71.0, Northern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.30**	**160**	P	P	12 27 41.1	-0.1
	1.4nm,0.5s,baz=337,slow=11,SNR=28						
	1.4nm,0.5s						
PMG	**Port Moresby**	**23.88**	**119**	LR	LR	12 37 23.9	
	comp=Z,97nm,20.6s,baz=306,slow=37						
ASAR	**Alice Springs**	**26.66**	**164**	P	P	12 28 12.7	+0.4
	0.3nm,0.4s,baz=348,slow=7.5,SNR=13						
	0.3nm,0.4s						
STKA	**Stephens Creek**	**36.81**	**158**	P	P	12 29 40.7	-0.6
	1.4nm,0.6s,baz=336,slow=10,SNR=4.0						
	1.4nm,0.6s						

*IDC **09** 12:27:45.5±0.9, 27°86N×127°73E, h0km, mb3.5/8, mbtmp3.5/10, ML3.1/2, MS3.2/1, Error ellipse: s-maj=37.3km s-min=12.9km az=68.0*
*JMA **09** 12:27:45.7±0.2, 28°1N±0°3×128°1E±0°4, h16km±1km, MV3.6/19, NW OFF OKINAWAJIMA IS*
*NIED **09** 12:27:45.7, 28°11N×128°07E, h16km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.21; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.55; $M_{\theta\phi}$0.99; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.37000×10^{15} NP1: ϕ_s289.00000°, δ89.00000°, λ22.00000°. NP2: ϕ_s198.00000°, δ68.00000°, λ179.00000°.*

ISC 09 12:27:46.3±1.7, 28°05N±0°05×128°11E±0°07, h11km±12km, n26, σ1°812/32, mb3.5/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.79**	**109**	P	**Pg**	**12 28 01.5**	**0.0**
JTK				S	**Sg**	**12 28 12.9**	**+1.1**
JOKE	**Okinoerabujima**	**0.80**	**149**	P	**Pg**	**12 28 02.0**	**+0.3**
JAMN	**Amaminishikomi**	**0.96**	**78**	P	**Pg**	**12 28 04.0**	**-0.9**
JAMN				S	**Sg**	**12 28 17.4**	**0.0**
JIH	**Iheya**	**1.01**	**187**	P	**Pb**	**12 28 05.4**	**-0.5**
JIH				S	**Sb**	**12 28 19.7**	**+0.5**
JYRO	**Yoronjima**	**1.06**	**163**	P	**Pg**	**12 28 06.4**	**-0.3**
JYRO				S	**Sg**	**12 28 20.8**	**+0.3**
JOW	**Kunigami**	**1.22**	**173**	P	**Pn**	**12 28 08.9**	**-0.4**
JOW				*eS*	**Sg**	**12 28 25.6**	**+0.1**
JOW	**Kunigami**	**1.22**	**173**	Pn	**Pn**	**12 28 08.9**	**-0.4**
	100nm,0.3s,baz=342,slow=16,SNR=164						
JOW				Sn	**Sg**	**12 28 25.4**	**-0.1**
	100nm,0.3s,baz=100,slow=28,SNR=20						
JAM	**Amami Oshima**	**1.37**	**74**	P	**Pn**	**12 28 10.6**	**-0.8**
JTAJ	**Takarajima**	**1.47**	**41**	P	**Pn**	**12 28 11.2**	**-1.5**
JTAJ				*eS*	**Sn**	**12 28 29.2**	**-2.7**
JNTH	**Nagotoyohara**	**1.52**	**183**	P	**Pb**	**12 28 13.6**	**-1.0**
JNTH				S	**Sn**	**12 28 33.5**	**+0.1**
JAGN	**Aguni-jima**	**1.64**	**208**	*eP*	**Pb**	**12 28 15.2**	**-1.4**
JZK	**Kikaishima**	**1.67**	**80**	*eP*	**Pb**	**12 28 16.7**	**-0.3**
JJT3	**Tamagusuku3**	**1.92**	**189**	*eP*	**Pb**	**12 28 20.1**	**-1.2**
JYAK	**Yakushimahirau**	**3.03**	**43**	*eP*	**Pn**	**12 28 34.5**	**+0.3**
JKDJ	**Kitadaitoujima**	**3.53**	**126**	*eP*	**Pn**	**12 28 42.2**	**+1.1**
JNU	**Nakatsue**	**5.59**	**25**	Pn	Pn	12 29 15.1	+5.6
	0.8nm,0.3s,baz=178,slow=9.4,SNR=18						
	42nm,0.9s						
KSRS	**Korea Array**	**9.38**	**359**	Pn	**Pn**	**12 30 04.0**	**+2.5**
	0.1nm,0.3s,baz=168,slow=14,SNR=2.0						
	0.4nm,0.6s						
JHJ	**Hachijo jima 2**	**11.26**	**60**	LR	LR	12 34 10.1	
	comp=Z,118nm,19.5s,baz=253,slow=33						
KLR	**Kul'dur**	**21.34**	**7**	P	**P**	**12 32 35.9**	**+2.5**
	0.4nm,0.5s,baz=182,slow=10,SNR=1.5						
	0.4nm,0.5s						
SONM	**Songino Array**	**25.99**	**325**	P	**P**	**12 33 19.0**	**-0.3**
	1.1nm,0.9s,baz=135,slow=9.7,SNR=5.2						
	1.1nm,0.9s						
MKAR	**Makanchi Array**	**40.26**	**310**	P	**P**	**12 35 23.4**	**+0.1**
	0.4nm,0.7s,baz=101,slow=10.0,SNR=5.3						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**40.75**	**322**	P	**P**	**12 35 28.9**	**+1.7**
	0.3nm,0.3s,baz=111,slow=6.3,SNR=1.6						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**43.48**	**315**	P	**P**	**12 35 49.0**	**-0.5**
	0.2nm,0.2s,baz=102,slow=8.9,SNR=2.4						
	0.2nm,0.2s						
WRA	**Warramunga Arr**	**48.09**	**172**	P	**P**	**12 36 25.8**	**-0.4**
	0.7nm,0.9s,baz=353,slow=8.2,SNR=4.8						
	0.7nm,0.9s						
BVAR	**Borovoye Array**	**48.86**	**317**	P	**P**	**12 36 31.7**	**-0.2**
	0.4nm,0.4s,baz=74,slow=7.7,SNR=2.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**51.71**	**173**	P	**P**	**12 36 53.2**	**-0.5**
	0.5nm,0.9s,baz=356,slow=7.4,SNR=4.2						
	0.5nm,0.9s						

*SJA **09** 12:39:09.4±0.7, 23°92S×66°81W, h226km±4km, ML4.7, MW4.3*
*IDC **09** 12:39:10.6±0.9, 23°85S×66°65W, h193km±8km, mb4.0/10, mbtmp4.4/16, MS3.3/2, Error ellipse: s-maj=15.0km s-min=11.6km az=42.0*
*NEIC **09** 12:39:11.0±2.1, 23°92S±0°06×66°75W±0°08, h197km±6km, mb4.6/207, Mww4.5/19, Error ellipse: s-maj=10.7km s-min=8.2km az=76.0*
*VAO **09** 12:39:11.7±0.3, 23°85S×66°65W, h197km, mb4.3*
*GUC **09** 12:39:11.3±0.8, 23°88S×67°17W, h229km±7km, ML4.7*

ISC 09 12:39:10.8±0.6, 23°92S±0°03×66°85W±0°04, h202km±5km, n345, σ1°826/378, mb4.5/106, 18C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.47**	**123**	*eP*	**Pn**	**12 39 45.5**	**+1.0**
SLA				*eS*	**Sn**	**12 40 12.3**	**+1.5**
AF01	**San Pedro de A**	**1.55**	**308**		**Pn**	**12 39 47.8**	**+2.2**
AF01				Sn	**Sn**	**12 40 13.0**	**+0.5**
AF01	**San Pedro de A**	**1.55**	**308**	*i P*	**Pn**	**12 39 47.8**	**+2.2**
AF01				*eS*	**Sn**	**12 40 15.6**	**+3.1**
AF01				IAML		12 40 19.8	
	comp=E,4μm,0.4s						
YJA	**Yavi**	**2.13**	**36**	*eP*	**Pn**	**12 39 52.2**	**+0.9**
YJA				*eS*	**Sn**	**12 40 24.1**	**+1.2**
LVC	**Limon Verde**	**2.30**	**304**	*eP*	**Pn**	**12 39 54.5**	**+1.4**
LVC				*eS*	**Sn**	**12 40 27.7**	**+1.8**
LVC	**Limon Verde**	**2.30**	**304**	P	**Pn**	**12 39 54.5**	**+1.4**
	comp=E,895nm,0.4s,baz=131,slow=6.0,SNR=1097						
LVC				LR	LR	12 40 18.6	
	comp=E,152nm,20.0s,baz=12,slow=28						
LVC				*S*	**Sn**	**12 40 26.8**	**+0.9**
	comp=E,928nm,0.4s,baz=268,slow=20,SNR=25						
LVC	**Limon Verde**	**2.30**	**304**	*eP*	**Pn**	**12 39 54.7**	**+1.6**
LVC	**Limon Verde**	**2.30**	**304**	*i P*	**Pn**	**12 39 54.5**	**+1.4**
LVC				*eS*	**Sn**	**12 40 26.9**	**+1.1**
FSA	**Cafayete**	**2.32**	**160**	*eP*	**Pn**	**12 39 53.4**	**+0.3**
FSA				*eS*	**Sn**	**12 40 25.0**	**-1.1**
PB15	**IPOC Station P**	**2.50**	**286**		**Pn**	**12 39 56.5**	**+1.4**
PB15				Sn	**Sn**	**12 40 30.1**	**+0.4**
PB15	**IPOC Station P**	**2.50**	**286**	*eP*	**Pn**	**12 39 56.5**	**+1.4**
PB15				*eS*	**Sn**	**12 40 30.4**	**+0.8**
PB15	**IPOC Station P**	**2.50**	**286**	*i P*	**Pn**	**12 39 56.6**	**+1.4**
PB15				*eS*	**Sn**	**12 40 30.0**	**+0.4**
PB06	**IPOC Station P**	**2.78**	**295**		**Pn**	**12 39 59.5**	**+1.3**
PB06	**IPOC Station P**	**2.78**	**295**	*eP*	**Pn**	**12 39 59.5**	**+1.3**
PB06				*eS*	**Sn**	**12 40 35.2**	**+0.2**
PB06				IAML		12 40 39.5	
	comp=Z,3μm,0.2s						
PB06	**IPOC Station P**	**2.78**	**295**	*i P*	**Pn**	**12 39 59.5**	**+1.3**
PB06				*eS*	**Sn**	**12 40 34.9**	**-0.2**
GO02	**Mina Guanaco**	**2.78**	**243**		**Pn**	**12 39 59.5**	**+1.1**
GO02				Sn	**Sn**	**12 40 36.1**	**+0.6**
GO02	**Mina Guanaco**	**2.78**	**243**	*eP*	**Pn**	**12 39 59.4**	**+1.0**
GO02				*eS*	**Sn**	**12 40 36.4**	**+1.0**
GO02	**Mina Guanaco**	**2.78**	**243**	*i P*	**Pn**	**12 39 59.3**	**+1.0**
PB09	**IPOC Station P**	**3.05**	**313**		**Pn**	**12 40 02.9**	**+1.5**
PB09	**IPOC Station P**	**3.05**	**313**	*eP*	**Pn**	**12 40 02.3**	**+0.9**
PB09				*eS*	**Sn**	**12 40 42.4**	**+1.5**
PB09				IAML		12 40 45.4	
	comp=Z,1μm,0.4s						
PB09	**IPOC Station P**	**3.05**	**313**	*i P*	**Pn**	**12 40 02.9**	**+1.5**
PB09				*eS*	**Sn**	**12 40 41.9**	**+1.0**
PB09				IAML		12 40 45.6	
	comp=N,1μm,0.4s						
AHML	**Horco Molle**	**3.16**	**155**	*eP*	**Pn**	**12 40 02.6**	**+0.1**
AHML				*eS*	**Sn**	**12 40 42.2**	**-1.0**
PB05	**IPOC Station P**	**3.26**	**288**		**Pn**	**12 40 04.3**	**+0.6**
PB05	**IPOC Station P**	**3.26**	**288**	*eP*	**Pn**	**12 40 04.3**	**+0.6**
PB05				*eS*	**Sn**	**12 40 44.6**	**-0.5**
PB05				IAML		12 40 47.6	
	comp=Z,1μm,0.3s						
PB05	**IPOC Station P**	**3.26**	**288**	*i P*	**Pn**	**12 40 04.3**	**+0.6**
PB05				*eS*	**Sn**	**12 40 43.6**	**-1.5**
PB14	**IPOC Station P**	**3.31**	**257**		**Pn**	**12 40 05.1**	**+0.6**
PB14	**IPOC Station P**	**3.31**	**257**	*eP*	**Pn**	**12 40 05.1**	**+0.6**
PB14				*eS*	**Sn**	**12 40 45.5**	**-1.2**
PB14	**IPOC Station P**	**3.31**	**257**	*i P*	**Pn**	**12 40 05.2**	**+0.6**
PB14				*eS*	**Sn**	**12 40 45.4**	**-1.2**
PB10	**IPOC Station P**	**3.42**	**276**		**Pn**	**12 40 06.3**	**+0.9**
PB10	**IPOC Station P**	**3.42**	**276**	*eP*	**Pn**	**12 40 06.4**	**+0.9**
PB10				*eS*	**Sn**	**12 40 47.7**	**-0.7**
PB10	**IPOC Station P**	**3.42**	**276**	*i P*	**Pn**	**12 40 06.5**	**+0.9**
PB10				*eS*	**Sn**	**12 40 47.7**	**-0.7**
PB04	**IPOC Station P**	**3.42**	**297**		**Pn**	**12 40 06.5**	**+0.7**
PB04	**IPOC Station P**	**3.42**	**297**	*eP*	**Pn**	**12 40 06.0**	**+0.2**
PB04	**IPOC Station P**	**3.42**	**297**	*i P*	**Pn**	**12 40 06.5**	**+0.7**
PB04				*eS*	**Sn**	**12 40 47.6**	**-1.2**
PB07	**IPOC Station P**	**3.55**	**307**		**Pn**	**12 40 07.9**	**+0.6**
PB07	**IPOC Station P**	**3.55**	**307**	*eP*	**Pn**	**12 40 07.7**	**+0.4**
PB07				*eS*	**Sn**	**12 40 50.9**	**-0.8**
PB07				IAML		12 40 53.4	
	comp=Z,1μm,0.3s						
PB07	**IPOC Station P**	**3.55**	**307**	*i P*	**Pn**	**12 40 08.0**	**+0.6**
PB07				*eS*	**Sn**	**12 40 50.5**	**-1.1**
AC02	**Maricunga**	**3.56**	**215**		**Pn**	**12 40 08.7**	**+1.0**
AC02	**Maricunga**	**3.56**	**215**	*eP*	**Pn**	**12 40 08.0**	**+0.3**
AC02	**Maricunga**	**3.56**	**215**	*i P*	**Pn**	**12 40 08.7**	**+1.0**
PB01	**IPOC Station P**	**3.76**	**319**	Pn	**Pn**	**12 40 10.1**	**+0.3**
PB01	**IPOC Station P**	**3.76**	**319**	*eP*	**Pn**	**12 40 10.1**	**+0.3**
PB01				*eS*	**Sn**	**12 40 57.4**	**+1.2**
PB01				IAML		12 41 00.1	
	comp=Z,387nm,0.2s						
PB01	**IPOC Station P**	**3.76**	**319**	*i P*	**Pn**	**12 40 10.1**	**+0.3**
PB01				*eS*	**Sn**	**12 40 55.5**	**-0.7**
PB02	**IPOC Station P**	**3.82**	**312**		**Pn**	**12 40 10.2**	**+0.1**
PB02	**IPOC Station P**	**3.82**	**312**	*eP*	**Pn**	**12 40 10.3**	**-0.3**
PB02				*eS*	**Sn**	**12 40 56.9**	**-0.6**
PB02	**IPOC Station P**	**3.82**	**312**	*i P*	**Pn**	**12 40 10.8**	**+0.1**
PB02				*eS*	**Sn**	**12 40 55.4**	**-2.1**
AC01	**Pan de Azucar**	**4.06**	**236**		**Pn**	**12 40 12.8**	**-0.5**
AC01	**Pan de Azucar**	**4.06**	**236**	*eP*	**Pn**	**12 40 12.9**	**-0.5**
AC01				*eS*	**Sn**	**12 40 59.8**	**-2.8**
AC01	**Pan de Azucar**	**4.06**	**236**	*i P*	**Pn**	**12 40 12.7**	**-0.5**
AC01				*eS*	**Sn**	**12 41 00.1**	**-2.5**
PB08	**IPOC Station P**	**4.33**	**330**		**Pn**	**12 40 18.0**	**+0.9**
PB08	**IPOC Station P**	**4.33**	**330**	*eP*	**Pn**	**12 40 18.0**	**+0.9**
PB08				*eS*	**Sn**	**12 41 11.0**	**+1.7**
PB08				IAML		12 41 15.4	
	comp=Z,591nm,0.6s						
PB08	**IPOC Station P**	**4.33**	**330**	*i P*	**Pn**	**12 40 18.1**	**+0.9**
PB08				*eS*	**Sn**	**12 41 09.0**	**-0.3**
GUSE	**Guasayan**	**4.34**	**156**	*eP*	**Pn**	**12 40 17.0**	**+0.1**
PATCX	**Punta Patache**	**4.34**	**315**		**Pn**	**12 40 16.6**	**-0.5**
PATCX	**Punta Patache**	**4.34**	**315**	*eP*	**Pn**	**12 40 16.6**	**-0.5**
PATCX				*eS*	**Sn**	**12 41 09.1**	**-0.1**
PATCX	**Punta Patache**	**4.34**	**315**	*i P*	**Pn**	**12 40 16.5**	**-0.5**
TA01	**Diego Aracena**	**4.54**	**317**		**Pn**	**12 40 19.4**	**-0.1**
TA01	**Diego Aracena**	**4.54**	**317**	*eP*	**Pn**	**12 40 18.9**	**-0.6**
HMBC	**Humberstone**	**4.59**	**322**	*eP*	**Pn**	**12 40 19.2**	**-1.0**
HMBC				*eS*	**Sn**	**12 41 12.5**	**-2.4**
HMBC	**Humberstone**	**4.59**	**322**	*i P*	**Pn**	**12 40 19.2**	**-1.0**
HMBC				*eS*	**Sn**	**12 41 11.2**	**-3.6**
CYA	**Choya**	**4.60**	**168**	*eP*	**Pn**	**12 40 20.8**	**+0.6**
CYA				*eS*	**Sn**	**12 41 13.6**	**-1.4**
CYA	**Choya**	**4.60**	**168**	*eP*	**Pn**	**12 40 20.8**	**+0.6**
TA02	**Huaíquique**	**4.74**	**319**		**Pn**	**12 40 20.7**	**-1.2**
GO01	**Chusmiza**	**4.76**	**332**		**Pn**	**12 40 23.0**	**+0.3**
GO01	**Chusmiza**	**4.76**	**332**	*eP*	**Pn**	**12 40 23.0**	**+0.3**
GO01				*eS*	**Sn**	**12 41 19.8**	**+0.5**
GO01	**Chusmiza**	**4.76**	**332**	*i P*	**Pn**	**12 40 22.9**	**+0.3**
GO03	**Copiap**	**4.76**

SPB IAmb IAmb 12 43 09.7
comp=Z,17nm,0.8s
SPB Sao Paulo 17.78 93 *eP* **P 12 43 03.9 -0.2**
RCLB Rio Claro- Sao 17.83 89 *eP* **P 12 43 04.5 -0.3**
IPMB Ipameri, GO 18.38 75 *eP* **P 12 43 10.1 -0.6**
SNDB Serra Nova Dou 18.96 54 *eP* **P 12 43 15.7 -1.2**
LL06 Loncomilla 19.09 196 P **P 12 43 18.6 +0.5**
PARB Paraibuna 19.46 93 *eP* **P 12 43 21.6 -0.8**
BDFB Brasilia 19.53 69 P **P 12 43 21.8 -1.5**
BDFB Brasilia 19.53 69 P **P 12 43 22.1 -1.1**
comp=Z,29nm,0.9s,baz=245,slow=11,SNR=27
LL02 Futaleuf 19.66 191 P **P 12 43 25.7 +1.5**
PMNB Patos De Minas 19.76 78 *eP* **P 12 43 24.0 -1.7**
NPGB Novo Progresso 20.08 35 *eP* **P 12 43 28.1 -0.9**
TEFE Tefe 20.41 6 *eP* **P 12 43 31.7 -0.7**
MACA Manacapuru-AM 21.48 17 P **P 12 43 42.2 -1.6**
MACA IAmb IAmb 12 44 06.5
comp=Z,23nm,0.8s
ITTB Itaituba 22.20 31 *eP* **P 12 43 49.4 -1.5**
DUB01 Friburgo-RJ 22.60 90 *eP* **P 12 43 54.2 -0.3**
JANB Januaria 22.98 72 *eP* **P 12 43 56.0 -1.9**
MCRA Macar, Loja 23.18 325 P **P 12 44 01.4 +1.6**
BOSC San Juan Bosco 23.52 330 P **P 12 44 04.2 +1.3**
SDBA SAO DESIDERIO 23.75 65 *eP* **P 12 44 03.7 -1.3**
COHC Cochancay 24.47 329 P **P 12 44 12.3 +0.9**
GO08 Villa O'Higgin 24.91 189 P **P 12 44 15.8 +0.8**
BOAV Boa Vista 26.88 14 P **P 12 44 32.9 -0.1**
BOAV Boa Vista 26.88 14 *eP* **P 12 44 32.7 -0.3**
PAYG Puerto Ayora 32.40 312 P **P 12 45 19.1 -2.7**
PAYG IAmb IAmb 12 45 21.5
comp=Z,27nm,1.1s
BAUV El Baul 32.69 358 P **P 12 45 23.5 -0.7**
BAUV IAmb IAmb 12 45 24.2
comp=Z,16nm,0.9s
SDV Santo Domingo 32.82 353 P **P 12 45 24.0 -1.6**
ACON Acoyapa 39.91 331 P **P 12 46 24.6 -0.8**
ACON IAmb IAmb 12 46 58.8
comp=Z,18nm,1.0s
TEIG Tepich 48.59 333 P **P 12 47 35.0 +0.9**
TEIG IAmb IAmb 12 48 00.4
comp=Z,46nm,1.5s
CAMR Camaricoa 48.78 342 P **P 12 47 37.1 +1.7**
CAMR IAmb IAmb 12 48 18.7
comp=Z,176nm,1.3s
SOR Soroa 49.02 340 P **P 12 47 38.3 +1.1**
SOR IAmb IAmb 12 47 38.4
comp=Z,27nm,1.0s
061Z Ochoppi 51.33 344 P **P 12 47 55.9 +1.4**
BELA Belgrano 2 56.10 172 P **P 12 48 29.7 +1.2**
Y58A Scranton 58.79 348 P **P 12 48 49.3 +1.6**
X58A Rowland 59.35 348 P **P 12 48 52.9 +1.3**
SNAA Sanae 59.38 161 P **P 12 48 52.6 +1.2**
SNAA IAmb IAmb 12 48 54.9
comp=Z,6.2nm,0.9s
SNAA Sanae 59.38 161 P **P 12 48 52.2 +0.8**
comp=Z,3.6nm,0.7s,baz=339,slow=15,SNR=3.3
comp=Z,3.6nm,0.7s
LRAL Lakeview Retre 59.81 340 P **P 12 48 54.3 -0.5**
LRAL IAmb IAmb 12 48 56.0
comp=Z,11nm,1.1s
Z47A Carrollton 60.30 340 P **P 12 48 56.7 -1.3**
Z47A IAmb IAmb 12 48 58.4
comp=Z,13nm,0.9s
Y49A Blount Mountai 60.40 341 P **P 12 48 58.6 -0.1**
Y49A IAmb IAmb 12 48 59.4
comp=Z,7.8nm,0.8s
X51A Calhoun 60.63 343 P **P 12 48 59.4 -0.8**
833A Chaparral WMA, 60.67 327 P **P 12 49 01.4 +0.7**
FPAL Fort Paine 60.81 342 P **P 12 48 59.7 -1.9**
FPAL IAmb IAmb 12 49 02.2
comp=Z,7.7nm,0.8s
X48A Hartselle 61.14 341 P **P 12 49 03.6 -0.1**
W50A Signal Mountai 61.35 343 P **P 12 49 05.4 +0.3**
W50A IAmb IAmb 12 49 06.2
comp=Z,12nm,0.9s
Y45A Yeager Farm, C 61.39 339 P **P 12 49 05.9 +0.5**
T60A Surry 61.45 351 P **P 12 49 05.2 -0.5**
SWET Sewanee 61.53 342 P **P 12 49 06.5 +0.1**
HNDO Hondo 61.61 328 P **P 12 49 07.9 +0.8**
HNDO IAmb IAmb 12 49 08.9
comp=Z,10nm,0.7s
V51A Loudon 61.67 344 P **P 12 49 05.9 -1.3**
V51A IAmb IAmb 12 49 45.2
comp=Z,19nm,1.4s
OXF Oxford 61.94 339 P **P 12 49 08.6 -0.5**
PLAL Pickwick Lake 61.95 340 P **P 12 49 09.0 -0.1**
PLAL IAmb IAmb 12 49 09.5
comp=Z,11nm,1.1s
DRIO Del Rio 62.19 327 P **P 12 49 12.0 +1.1**
DRIO IAmb IAmb 12 49 12.5
comp=Z,8.4nm,1.1s
V48A Smith Brothers 62.27 342 P **P 12 49 11.2 -0.1**
V48A IAmb IAmb 12 49 12.1
comp=Z,8.3nm,0.7s
CLTN Cedars of Leba 62.47 342 P **P 12 49 12.6 +0.1**
CLTN IAmb IAmb 12 49 13.3
comp=Z,7.8nm,0.8s
WLAR White Oak Lake 62.51 335 P **P 12 49 14.4 +1.6**
JCT Junction City 62.65 328 P **P 12 49 14.5 +0.6**
U49A Red Boiling Sp 62.71 343 P **P 12 49 13.7 -0.4**
U49A IAmb IAmb 12 49 27.0
comp=Z,9.2nm,1.3s
WHTX Lake Whitney, 62.83 331 P **P 12 49 15.5 +0.5**
WHTX IAmb IAmb 12 49 16.3
comp=Z,6.0nm,0.8s
WVT Waverly 62.93 341 P **P 12 49 15.2 -0.4**
BRDY Brady 62.94 329 P **P 12 49 16.1 +0.3**
BRDY IAmb IAmb 12 49 16.9
comp=Z,6.0nm,0.8s
HPIG 62.94 321 P **P 12 49 17.3 +1.2**
HPIG IAmb IAmb 12 49 18.8
comp=Z,7.0nm,1.1s
T50A Nancy 62.94 344 P **P 12 49 14.9 -0.7**
T50A IAmb IAmb 12 49 19.8
comp=Z,11nm,1.5s
SAND Sanderson 63.38 326 P **P 12 49 20.5 +1.8**
SAND IAmb IAmb 12 49 21.1
comp=Z,12nm,1.1s
MIAR Mount Ida 63.44 335 P **P 12 49 19.8 +0.8**
MIAR IAmb IAmb 12 49 20.4
comp=Z,8.4nm,0.9s
T47A Sharon Grove 63.52 342 P **P 12 49 18.9 -0.6**
T47A IAmb IAmb 12 49 20.0
comp=Z,12nm,0.9s
OZNA Ozona 63.66 327 P **P 12 49 20.9 +0.2**
OZNA IAmb IAmb 12 49 21.7
comp=Z,5.6nm,0.7s
TXAR Lajitas Array 63.69 324 P **P 12 49 22.2 +1.3**
comp=Z,1.8nm,0.7s,baz=150,slow=8.1,SNR=25
comp=Z,1.8nm,0.7s
TX31 Lajitas Ar. Si 63.69 324 P **P 12 49 21.8 +0.9**
PLPT Palo Pinto 63.91 331 P **P 12 49 22.8 +0.7**
PLPT IAmb IAmb 12 49 23.8
comp=Z,11nm,0.8s
LCAR Lake Charles 63.94 338 P **P 12 49 21.8 -0.4**
PARMO Parma 64.02 340 P **P 12 49 23.5 +0.8**
FCAR Ozark Folk Cen 64.11 337 P **P 12 49 22.9 -0.4**
FCAR IAmb IAmb 12 49 23.6
comp=Z,3.8nm,0.6s
PBMO Poplar Bluff 64.34 339 P **P 12 49 25.2 +0.4**
ABTX Abilene, Hawle 64.35 330 P **P 12 49 26.0 +1.0**
ABTX IAmb IAmb 12 49 26.9
comp=Z,17nm,1.3s
LOOK Love County 64.41 332 P **P 12 49 25.4 +0.1**
Q51A Peebles 64.49 346 P **P 12 49 26.4 +0.6**
Q51A IAmb IAmb 12 49 26.7
comp=Z,8.2nm,0.9s
ALPN Alpine 64.50 325 P **P 12 49 27.1 +1.0**
ALPN IAmb IAmb 12 49 28.1
comp=Z,4.4nm,0.7s
WTFS Witchita Falls 64.78 331 P **P 12 49 28.5 +0.8**
WTFS IAmb IAmb 12 49 29.3
comp=Z,12nm,0.9s
T42A Van Buren 64.79 339 P **P 12 49 27.0 -0.7**
S44A Carbondale 64.81 340 P **P 12 49 27.0 -0.8**
S44A IAmb IAmb 12 49 28.4
comp=Z,13nm,1.2s
MNHN Monahans 64.82 326 P **P 12 49 29.3 +1.2**
HHAR Hobbs 65.12 336 P **P 12 49 30.5 +0.6**
HHAR IAmb IAmb 12 49 31.2
comp=Z,9.0nm,0.8s
SN01 Snyder 1 65.14 329 P **P 12 49 31.3 +1.2**
APMT Aspermont 65.16 330 P **P 12 49 31.2 +1.0**
APMT IAmb IAmb 12 49 31.9
comp=Z,9.6nm,0.8s
MGMO Mountain Grove 65.30 338 P **P 12 49 31.6 +0.6**
MGMO IAmb IAmb 12 49 32.2
comp=Z,10nm,0.8s
ODSA Odessa 65.34 327 P **P 12 49 32.1 +0.7**
PECS Pecos 65.41 326 P **P 12 49 33.4 +1.5**
U38A Gravette 65.42 336 P **P 12 49 32.1 +0.3**
FVM French Village 65.44 340 P **P 12 49 32.2 +0.3**
FVM IAmb IAmb 12 49 32.3
comp=Z,11nm,0.8s
TUL3 Leonard 65.50 334 P **P 12 49 32.5 +0.2**
TUL3 IAmb IAmb 12 49 33.9
comp=Z,24nm,1.5s
VHRN Van Horn 65.54 324 P **P 12 49 34.1 +1.2**
VHRN IAmb IAmb 12 49 34.9
comp=Z,10.0nm,0.8s
DEOK Depew 65.72 334 P **P 12 49 34.8 +1.0**
CCM Cathedral Cave 65.77 339 P **P 12 49 34.1 +0.1**
OK052 Battle Ridge R 65.98 334 P **P 12 49 36.3 +0.9**
OK033 Mehan 66.08 334 P **P 12 49 36.6 +0.6**
OK033 IAmb IAmb 12 49 37.5
comp=Z,20nm,1.1s
QUOK Quay 66.09 334 P **P 12 49 36.5 +0.3**
QUOK IAmb IAmb 12 49 38.3
comp=Z,16nm,1.0s
S39A Bolivar 66.15 337 P **P 12 49 37.1 +0.6**
L59A Walton 66.21 353 P **P 12 49 38.3 +1.5**
QSPA South Pole Qui 66.28 180 P **P 12 49 38.4 +1.2**
QSPA IAmb IAmb 12 49 39.3
comp=Z,9.0nm,0.8s
QSPA South Pole Qui 66.28 180 P **P 12 49 38.5 +1.4**
comp=Z,5.9nm,0.5s,baz=185,slow=1.1,SNR=35
comp=Z,5.9nm,0.5s
R40A Maddies Statio 66.32 338 P **P 12 49 37.8 +0.3**
R40A IAmb IAmb 12 49 38.1
comp=Z,6.8nm,0.8s
OK048 Pawnee Station 66.40 334 P **P 12 49 39.0 +0.9**
OK048 IAmb IAmb 12 49 39.8
comp=Z,15nm,0.9s
OK051 E0350 and S346 66.43 334 P **P 12 49 39.0 +0.8**
OK051 IAmb IAmb 12 49 40.0
comp=Z,12nm,0.9s
MNTX Cornudas Mount 66.46 325 P **P 12 49 39.1 +0.6**
N49A Columbus Grove 66.49 346 P **P 12 49 38.8 +0.3**
N49A IAmb IAmb 12 50 19.0
comp=Z,11nm,1.1s
T35A Sooner Cattle 66.66 334 P **P 12 49 39.5 -0.2**
T35A IAmb IAmb 12 49 41.6
comp=Z,11nm,1.0s
P43A Skaggs, Pawnee 66.68 341 P **P 12 49 39.1 -0.7**
P43A IAmb IAmb 12 49 40.7
comp=Z,14nm,1.2s
SMWD Samnorwood 66.69 331 P **P 12 49 40.9 +0.8**
SMWD IAmb IAmb 12 49 41.7
comp=Z,14nm,0.9s
BLOK Blackwell 66.81 334 P **P 12 49 40.9 +0.2**
BLOK IAmb IAmb 12 49 43.5
comp=Z,19nm,1.1s
N47A Urbana 66.81 345 P **P 12 49 39.3 -1.2**
N47A IAmb IAmb 12 49 41.0
comp=Z,25nm,1.5s
O44A Mansfield 66.85 342 P **P 12 49 39.7 -1.1**
O44A IAmb IAmb 12 49 59.3
comp=Z,10nm,1.0s
CROK Carrier 66.90 333 P **P 12 49 42.0 +0.8**
CROK IAmb IAmb 12 49 42.8
comp=Z,13nm,0.8s
MSTX Muleshoe 66.94 328 P **P 12 49 42.2 +0.5**
MSTX IAmb IAmb 12 49 43.9
comp=Z,14nm,0.9s
P40A Paris 67.37 339 P **P 12 49 44.5 +0.4**
P40A IAmb IAmb 12 49 45.5
comp=Z,13nm,0.9s
J59A Piesco 67.42 354 P **P 12 49 45.2 +0.9**
L48A N Adams 67.52 346 P **P 12 49 43.8 -1.3**
L48A IAmb IAmb 12 49 55.3
comp=Z,14nm,1.1s
HSIG 67.60 319 P **P 12 49 47.3 +1.5**
HSIG IAmb IAmb 12 49 48.8
comp=Z,7.7nm,1.0s
P38A Dawn 67.95 338 P **P 12 49 48.0 +0.3**
N41A Harden Midland 68.06 341 P **P 12 49 48.4 0.0**
319A Douglas 68.36 322 P **P 12 49 52.8 +2.2**
319A IAmb IAmb 12 49 53.6
comp=Z,8.5nm,0.7s
121A Cookes Peak, D 68.40 323 P **P 12 49 52.9 +2.0**
121A IAmb IAmb 12 49 54.2
comp=Z,8.5nm,0.9s
KSU1 Kansas State U 68.60 335 P **P 12 49 52.1 +0.4**
KSU1 IAmb IAmb 12 49 53.0
comp=Z,11nm,0.9s
GGN Saint George 68.71 0 P **P 12 49 53.1 +0.9**
R32A Long Quarter, 68.84 334 P **P 12 49 53.9 +0.6**
R32A IAmb IAmb 12 49 55.3
comp=Z,19nm,1.1s
L40A Anamosa 69.42 341 P **P 12 49 56.4 -0.3**
F64A Sherman 69.46 359 P **P 12 49 56.7 -0.2**
F64A IAmb IAmb 12 50 14.5
comp=Z,24nm,1.5s
LMN Caledonia Moun 69.46 2 P **P 12 49 57.4 +0.5**
ANMO Albuquerque 69.56 326 P **P 12 49 59.5 +1.5**
CBKS Cedar Bluff 69.59 333 P **P 12 49 58.5 +0.6**
N35A Tabor 69.79 337 P **P 12 49 59.3 +0.3**
TUC Tucson 69.91 321 P **P 12 50 02.2 +2.1**
JFWS Jewell Farm 69.91 342 P **P 12 50 00.2 +0.4**
TRQ Mont Tremblant 70.16 354 P **P 12 50 00.2 -1.1**
TRQ IAmb IAmb 12 50 02.3
comp=Z,7.1nm,1.0s
E62A Clayton Lake 70.25 358 P **P 12 50 02.9 +1.2**
E62A IAmb IAmb 12 50 03.5
comp=Z,9.4nm,0.9s
PQI Presque Isle 70.27 359 P **P 12 50 03.2 +1.5**
PQI IAmb IAmb 12 50 12.9
comp=Z,12nm,1.3s
T25A Trinidad 70.29 329 P **P 12 50 04.7 +2.3**
N33A J Bar K, Exete 70.34 336 P **P 12 50 01.6 -0.8**
D62A Allapoint, All 70.70 358 P **P 12 50 05.3 +1.0**
D62A IAmb IAmb 12 50 05.9
comp=Z,12nm,1.0s
214A Organ Pipe Nat 70.83 320 P **P 12 50 08.1 +2.5**
214A IAmb IAmb 12 50 09.1
comp=Z,9.9nm,1.4s
BATG Bathurst New B 70.87 1 P **P 12 50 06.3 +0.9**
BATG IAmb IAmb 12 50 06.5
comp=Z,8.1nm,0.9s
L34A Svendsen Farm, 71.02 337 P **P 12 50 06.6 +0.1**
BGNE Belgrade 71.19 336 P **P 12 50 08.6 +1.1**
SDCO Great Sand Dun 71.29 328 P **P 12 50 10.1 +1.5**
X16A Lo Mia Camp, P 71.83 322 P **P 12 50 14.0 +2.3**
I37A Lemond, Waseca 71.86 340 P **P 12 50 11.9 +0.5**
S22A 4UR Ranch, Cre 71.94 328 P **P 12 50 14.3 +1.9**
Q24A Divide 72.10 329 P **P 12 50 15.4 +2.1**
Q24A IAmb IAmb 12 50 16.3
comp=Z,8.3nm,0.9s
MVCO Mesa Verde 72.35 326 P **P 12 50 16.5 +1.7**
MVCO IAmb IAmb 12 50 17.3
comp=Z,6.6nm,0.9s
WUAZ Wupatki 72.60 323 P **P 12 50 18.1 +1.9**
ECSD EROS Data Cent 72.66 338 P **P 12 50 16.9 +0.7**
ECSD IAmb IAmb 12 50 18.0
comp=Z,11nm,0.9s
SPMN Marine on St. 72.77 341 P **P 12 50 16.3 -0.5**
SPMN IAmb IAmb 12 50 18.1
comp=Z,9.3nm,0.8s
K30B Basset 72.83 335 P **P 12 50 18.5 +1.2**
ISCO Idaho Springs 72.98 330 P **P 12 50 20.5 +1.9**
D41A Chassel 73.32 345 P **P 12 50 18.8 -1.2**
D41A IAmb IAmb 12 50 21.6
comp=Z,13nm,0.9s
F36A Milaca 73.56 341 IAmb IAmb 12 50 22.7
comp=Z,9.7nm,0.8s
F33A 5 Mile Ranch, 74.41 339 IAmb IAmb 12 50 27.1
comp=Z,7.5nm,0.9s
O20A White River Ci 74.49 328 P **P 12 50 28.6 +1.4**
O20A IAmb IAmb 12 50 30.2
comp=Z,6.3nm,0.8s
KNB Kanab 74.49 323 IAmb IAmb 12 50 31.0
comp=Z,10nm,0.9s
EYMN Ely 74.89 343 P **P 12 50 28.4 -0.6**
EYMN IAmb IAmb 12 51 08.7
comp=Z,12nm,1.1s
SZCU Shurtz Canyon 75.06 324 P **P 12 50 29.7 -0.8**
P17A Butcher Ranch, 75.22 326 IAmb IAmb 12 50 34.3
comp=Z,7.4nm,1.1s
RDMU Red Mountain 75.47 328 IAmb IAmb 12 50 35.0
comp=Z,5.5nm,0.8s
K22A Casper 75.67 331 P **P 12 50 34.1 +0.2**
K22A IAmb IAmb 12 50 36.8
comp=Z,9.1nm,1.1s
RSSD Black Hills 75.80 333 P **P 12 50 32.3 -2.3**
RSSD IAmb IAmb 12 50 37.0
comp=Z,6.8nm,0.9s
BSUT Blindstream Ca 76.03 327 IAmb IAmb 12 50 38.9
comp=Z,5.5nm,0.8s
TORD Torodi Ar. Bea 76.42 69 P **P 12 50 37.6 -0.8**
comp=Z,6.3nm,0.3s,baz=263,slow=4.4,SNR=9.5
comp=Z,6.3nm,0.3s
E28A Huff 76.56 337 P **P 12 50 39.5 +0.9**
SPR3 Spring Creek 3 76.75 324 P **P 12 50 40.2 0.0**
PD31 Pinedale Array 77.15 329 P **P 12 50 43.1 +0.9**
PDAR Pinedale Array 77.15 329 P **P 12 50 43.1 +0.9**
PDAR Pinedale Array 77.15 329 P **P 12 50 43.6 +1.4**
comp=Z,0.9nm,0.6s,baz=134,slow=7.5,SNR=11
comp=Z,0.9nm,0.6s
HWUT Hardware Ranch 77.23 327 P **P 12 50 44.1 +1.4**
MDND Maddock 77.27 338 P **P 12 50 43.6 +1.1**
SPUT South Promonto 77.45 327 P **P 12 50 45.7 +1.9**
AHID Auburn Hatcher 77.88 328 P **P 12 50 47.2 +1.0**
AHID IAmb IAmb 12 50 48.8
comp=Z,9.4nm,0.8s
ULM Lac du Bonnet 78.20 341 P **P 12 50 47.8 +0.3**
ULM IAmb IAmb 12 50 48.6
comp=Z,7.3nm,0.7s
ULM Lac du Bonnet 78.20 341 P **P 12 50 48.0 +0.5**
comp=Z,5.6nm,0.6s,baz=155,slow=6.4,SNR=16
comp=Z,5.6nm,0.6s
TPAW Teton Pass 78.36 329 P **P 12 50 50.2 +1.2**
SCHQ Schefferville 78.43 0 P **P 12 50 49.1 +0.4**
comp=Z,2.9nm,0.6s,baz=186,slow=3.8,SNR=9.4
comp=Z,2.9nm,0.6s
ELK Elko 78.49 325 P **P 12 50 51.0 +1.4**
NVAR Mina Array Bea 78.56 321 P **P 12 50 52.2 +2.1**
comp=Z,0.9nm,0.7s,baz=156,slow=5.5,SNR=6.1
NVAR LR LR 13 24 30.6
comp=Z,68nm,20.3s,baz=7.0,slow=35
comp=Z,0.9nm,0.7s
FLWY Flagg Ranch 78.69 329 P **P 12 50 53.0 +2.4**
FLWY IAmb IAmb 12 50 53.9
comp=Z,8.8nm,0.9s
LAO LASA Array 78.78 334 IAmb IAmb 12 50 53.2
comp=Z,9.6nm,0.9s
RLMT Red Lodge 78.84 331 IAmb IAmb 12 50 53.6
comp=Z,4.9nm,0.7s
YHH Holmes Hill 79.30 330 P **P 12 50 56.7 +2.7**
DGMT Dagmar 79.44 336 P **P 12 50 56.1 +1.7**
YERR Yerington 79.48 321 P **P 12 50 56.7 +1.7**
PNTR Pine Nut 79.75 321 IAmb IAmb 12 50 59.8
comp=Z,8.7nm,0.8s
PAHR Pah Rah Range 80.05 322 IAmb IAmb 12 51 01.2
comp=Z,9.9nm,0.9s
HLID Hailey 80.10 327 P **P 12 51 00.3 +2.1**
HLID IAmb IAmb 12 51 01.5
comp=Z,9.4nm,0.9s
PLID Pearl Lake 81.98 327 IAmb IAmb 12 51 10.8
comp=Z,9.8nm,0.8s
J08A Circle Bar Ran 82.04 325 P **P 12 51 10.4 +2.1**
J08A IAmb IAmb 12 51 11.2
comp=Z,15nm,1.3s
F10A Beach Ranch, E 83.22 327 P **P 12 51 16.0 +1.6**
F10A IAmb IAmb 12 51 20.9
comp=Z,6.0nm,0.8s
J05D Fort Rock, OR 83.47 323 P **P 12 51 16.2 +0.4**
PINE Pine Mountain 83.65 324 P **P 12 51 16.3 -0.5**
PINE IAmb IAmb 12 51 19.8
comp=Z,6.9nm,0.9s
C09A Chrisman Ranch 85.01 328 P **P 12 51 24.3 +1.1**
C09A IAmb IAmb 12 51 25.5
comp=Z,15nm,1.0s
FCC Fort Churchill 85.42 346 P **P 12 51 25.9 +1.0**
FCC IAmb IAmb 12 51 26.7
comp=Z,8.3nm,0.9s
ESDC Sonseca Array 86.25 44 P **P 12 51 29.3 -0.3**
comp=Z,1.2nm,0.8s,baz=229,slow=4.4,SNR=5.1
comp=Z,1.2nm,0.8s
EDM Edmonton 86.75 334 P **P 12 51 31.7 0.0**
EDM IAmb IAmb 12 51 32.6
comp=Z,10nm,1.1s
YKA Yellowknife Ar 94.10 340 P **P 12 52 06.2 +0.6**
comp=Z,1.7nm,0.6s,baz=132,slow=4.2,SNR=25
comp=Z,1.7nm,0.6s
ASAR Alice Springs 128.58 205 PKP **PKPdf 12 57 54.6 +0.2**
comp=Z,2.5nm,0.7s,baz=138,slow=2.0,SNR=35
WRA Warramunga Arr 131.76 207 PKP **PKPdf 12 58 00.9 +0.4**
comp=Z,3.5nm,0.5s,baz=159,slow=1.6,SNR=16
PETK Petropavlovsk- 135.63 323 PKP **PKiKP 12 58 08.3 +0.1**
comp=Z,2.2nm,0.7s,baz=116,slow=3.4,SNR=1.9
BVAR Borovoye Array 136.65 37 PKP **PKPdf 12 58 10.0 +1.5**
comp=Z,1.4nm,0.8s,baz=253,slow=1.5,SNR=4.4
KURBB Kurchatov Arra 142.24 36 PKhKP PKPpre 12 58 15.4
comp=Z,1.0nm,0.7s,baz=301,slow=2.8,SNR=4.5
KURBB PKP **PKPdf 12 58 20.1 +1.3**
comp=Z,1.5nm,0.9s,baz=299,slow=2.8,SNR=9.9
ZALV Zalesovo Beam 143.26 28 PKP PKPbc 12 58 18.8 +0.7
comp=Z,5.1nm,0.7s,baz=300,slow=4.5,SNR=22
MKAR Makanchi Array 146.38 40 PKPbc **PKPdf 12 58 27.1 +1.0**
comp=Z,6.5nm,0.6s,baz=311,slow=2.6,SNR=49
SONM Songino Array 155.54 11 PKP **PKPdf 12 58 41.7 +1.5**
comp=Z,0.9nm,0.8s,baz=299,slow=3.1,SNR=4.4
SONM PKPab **PKPab 12 59 06.7 -0.3**
comp=Z,1.5nm,0.7s,baz=315,slow=5.0,SNR=6.7

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*IDC **09** 12:43:50.8±0.9, 56°.29N×149°.41W, h0km, mb3.9/14, mbtmp4.0/20, ML3.6/6, MS3.9/45, Error ellipse: s-maj=21.9km s-min=12.5km az=26.0*
*NEIC **09** 12:43:51.8±1.9, 56°.26N±0°.06×149°.47W±0°.08, h17km±5km, mb4.4/70, ML4.3/58, ML4.1(AEIC), Error ellipse: s-maj=9.4km s-min=6.7km az=168.0*
*AEIC **09** 12:43:54.5±2.0, 56°.23N±0°.05×149°.41W±0°.08, h6km±4km, Error ellipse: s-maj=8.8km s-min=4.6km az=146.0*
ISC 09 12:43:50.5±2.7, 56°.30N±0°.06×149°.42W±0°.04, h2km±17km, n472, σ1s18/371, mb4.4/41, MS3.9/40, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.28**	**312**		Pn	12 44 28.2	-0.9
KDAK	**Kodiak Island**	**2.28**	**312**		**Sn**	**12 44 54.2**	**-3.6**
KDAK	**Kodiak Island** baz=130	**2.28**	**312**	S	**Sn**	**12 44 54.4**	**-3.4**
KDAK	**Kodiak Island** 18nm,0.3s,baz=113,slow=5.2,SNR=174	**2.28**	**312**	Pn	**Pn**	**12 44 29.0**	**-0.2**
KDAK	39nm,0.3s,baz=58,slow=20,SNR=18				Sn	**Sn**	**12 44 53.1**	**-4.7**
KDAK	comp=Z,2µm,19.0s,baz=159,slow=47 46nm,0.4s			LR	LR	12 45 39.5	
OHAK	**Old Harbor**	**2.32**	**295**	Pn	Pn	12 44 28.3	-1.4
OHAK					**Sn**	**12 44 54.6**	**-4.2**
OHAK	**Old Harbor**	**2.32**	**295**	P	Pn	12 44 28.8	-1.0
OHAK	**Old Harbor** baz=113	**2.32**	**295**	P	Pn	12 44 28.7	-1.0
OHAK	baz=113			S	**Sn**	**12 44 55.6**	**-3.3**
SII	**Sitkinak Islan**	**2.66**	**278**	Pn	Pn	12 44 33.2	-1.2
SII					**Sn**	**12 45 03.2**	**-4.0**
SII	comp=E,932nm,1.5s			IAML		12 45 05.3	
SII	comp=N,808nm,0.7s			IAML		12 45 17.7	
SII	**Sitkinak Islan**	**2.66**	**278**	P	**Pn**	**12 44 33.8**	**-0.6**
SII	**Sitkinak Islan** baz=95	**2.66**	**278**	S	**Sn**	**12 45 03.7**	**-3.5**
SYI	**Shuyak Island**	**2.82**	**326**	Pn	**Pn**	**12 44 36.3**	**-0.2**
SYI					**Sn**	**12 45 08.9**	**-2.1**
Q20K	**Shuyak Island** baz=144	**2.82**	**326**	P	**Pn**	**12 44 36.3**	**-0.3**
Q20K	baz=144			S	**Sn**	**12 45 08.9**	**-2.1**
CNPM	**China Poot**	**3.38**	**344**		**Pn**	**12 44 43.5**	**-0.7**
CNPM					**Sn**	**12 45 23.8**	**-1.1**
Q19K	**Cape Douglas,**	**3.48**	**321**	Pn	**Pn**	**12 44 46.1**	**+0.4**
Q19K	comp=N,1µm,1.1s			IAML		12 45 37.5	
Q19K	**Cape Douglas,** baz=138	**3.48**	**321**	P	**Pn**	**12 44 45.6**	**0.0**
CHIR	**Chirikof Islan**	**3.51**	**265**	Pn	Pn	12 44 43.3	-2.8
CHIR					**Sn**	**12 45 23.7**	**-4.5**
CHIR	comp=E,358nm,1.1s			IAML		12 45 24.3	

CHIR IAML 12 45 27.5
comp=N,346nm,0.9s
CHIR Chirikof Islan 3.51 265 S **Sn 12 45 23.4 -4.8**
baz=81
BRSE Bradley Lake S 3.52 349 Pn 12 44 45.2 -1.0
BRSE **Sn 12 45 25.8 -2.6**
BRSE Bradley Lake S 3.52 349 P Pn 12 44 45.2 -1.0
baz=168
BRSE S **Sn 12 45 26.1 -2.3**
baz=168
Q23K Middleton Isla 3.54 26 Pn **Pn 12 44 45.5 -0.8**
Q23K IAML 12 45 33.3
comp=N,465nm,0.6s
Q23K IAML 12 45 58.5
comp=E,366nm,1.3s
Q23K Middleton Isla 3.54 26 P **Pn 12 44 45.6 -0.8**
baz=208
Q23K S **Sn 12 45 25.0 -3.8**
baz=208
MID Middleton Isla 3.54 26 Pn **Pn 12 44 45.6 -0.8**
MID **Sn 12 45 24.9 -3.9**
MID IAML 12 45 33.3
comp=N,499nm,0.6s
MID IAML 12 45 58.5
comp=E,319nm,1.3s
MID Middleton Isla 3.54 26 P **Pn 12 44 45.7 -0.7**
BRLK Bradley Lake 3.56 348 Pn 12 44 45.7 -1.0
HOM Homer 3.57 342 **Pn 12 44 46.4 -0.5**
HOM IAML 12 45 42.4
comp=E,716nm,0.9s
HOM IAML 12 45 43.8
comp=N,704nm,0.9s
HOM Homer 3.57 342 P **Pn 12 44 46.7 -0.1**
baz=160
AU22 Augustine Moun 3.73 327 **Pn 12 44 49.0 0.0**
ACHA Angle Creek He 3.74 303 **Pn 12 44 49.9 +0.6**
SEW Seward 3.81 360 Pn 12 44 49.0 -1.2
SEW Seward 3.81 360 P Pn 12 44 49.1 -1.1
baz=179
P23K Montague Islan 3.86 15 **Pn 12 44 50.2 -0.6**
P23K Montague Islan 3.86 15 P **Pn 12 44 50.2 -0.6**
baz=196
P19K Oil Pt 3.93 330 Pn **Pn 12 44 51.4 -0.4**
P19K IAML 12 45 42.1
comp=E,470nm,0.4s
P19K IAML 12 45 43.4
comp=N,557nm,0.5s
P19K Oil Pt 3.93 330 P **Pn 12 44 51.7 -0.1**
baz=148
PLK3 Peulik 3 4.00 293 **Pn 12 44 52.7 -0.1**
CNTC Contact Creek 4.02 302 **Pn 12 44 53.4 +0.2**
Q17K Contact Creek 4.03 302 P **Pn 12 44 53.4 +0.2**
baz=117
KELA Mount Kelaz 4.04 305 **Pn 12 44 53.2 -0.2**
O20K Slope Mountain 4.15 337 **Pn 12 44 54.4 -0.6**
O20K Slope Mountain 4.15 337 P **Pn 12 44 54.4 -0.6**
baz=155
IVE Iliamna Volcan 4.18 334 Pn 12 44 54.3 -1.1
O22K Cooper Landing 4.19 358 Pn 12 44 54.5 -0.9
O22K Cooper Landing 4.19 358 P **Pn 12 44 54.6 -0.8**
baz=177
SLKM Skilak Lake 4.24 355 Pn 12 44 55.1 -1.0
HIN Hinchinbrook I 4.38 19 **Pn 12 44 57.5 -0.5**
HIN IAML 12 45 49.7
comp=E,470nm,0.6s
HIN IAML 12 45 55.7
comp=N,573nm,0.9s
P18K Big Mountain, 4.39 317 Pn **Pn 12 44 58.2 +0.1**
P18K Big Mountain, 4.39 317 P **Pn 12 44 57.9 -0.2**
baz=133
RED Redoubt Volcan 4.49 338 Pn 12 44 58.0 -1.6
KAIM Kayak Island 4.50 34 **Pn 12 44 59.8 +0.2**
KAIM Kayak Island 4.50 34 P **Pn 12 44 59.4 -0.2**
baz=217
RSO Redoubt South 4.53 339 Pn 12 44 59.1 -1.1
RDT Redoubt 4.56 341 Pn 12 44 59.2 -1.4
RDWB Redoubt West 4.57 338 Pn 12 44 59.4 -1.3
CAPN Captain Cook N 4.57 349 Pn **Pn 12 45 00.6 0.0**
DFR Drift River 4.63 340 Pn 12 45 00.3 -1.2
NCT North Crescent 4.65 338 Pn 12 45 00.5 -1.3
RDJH Redoubt Jeurge 4.65 339 **Pn 12 45 01.1 -0.8**
EYAK Cordova Ski Ar 4.67 23 **Pn 12 45 01.5 -0.5**
EYAK Cordova Ski Ar 4.67 23 P **Pn 12 45 01.8 -0.2**
EYAK Cordova Ski Ar 4.67 23 P **Pn 12 45 01.5 -0.5**
baz=205
O19K Port Alsworth 4.68 328 Pn 12 45 01.3 -0.9
O19K IAML 12 46 02.9
comp=N,429nm,0.5s
O19K Port Alsworth 4.68 328 P **Pn 12 45 01.5 -0.6**
baz=145
O18K Koktuh Hills 4.70 322 Pn **Pn 12 45 02.0 -0.4**
O18K IAML 12 46 05.0
comp=E,118nm,1.1s
O18K IAML 12 46 09.4
comp=N,166nm,1.0s
O18K Koktuh Hills 4.70 322 P **Pn 12 45 02.0 -0.4**
baz=137
P17K Kvichak River 4.75 311 **Pn 12 45 03.5 +0.4**
P17K Kvichak River 4.75 311 P **Pn 12 45 03.5 +0.4**
baz=125
RAGM Ragged Mountai 4.80 29 **Pn 12 45 03.6 -0.1**
RC01 Rabbit Creek A 4.80 358 Pn **Pn 12 45 03.0 -0.8**
RC01 IAML 12 46 00.3
comp=N,204nm,0.4s
RC01 IAML 12 46 03.8
comp=E,186nm,0.5s
RC01 Rabbit Creek A 4.80 358 P **Pn 12 45 03.1 -0.7**
baz=178
SUCK Suckling Hills 4.81 36 **Pn 12 45 03.9 -0.1**
SUCK IAML 12 46 07.9
comp=E,410nm,1.3s
HMT Hamilton 4.87 32 **Pn 12 45 05.1 +0.3**
NICHA Nichawak Mount 4.88 34 **Pn 12 45 04.9 0.0**
GOAT Goat Mountain 4.95 28 **Pn 12 45 05.7 -0.1**
BERG Berg Lake 5.09 34 **Pn 12 45 07.3 -0.4**
BERG IAML 12 46 12.9
comp=N,390nm,0.9s
GRIN Grindle Hills 5.12 36 **Pn 12 45 07.9 -0.4**
N20K Mount Spurr 5.12 345 P Pn 12 45 07.3 -1.0
baz=162
SPCR Spurr Chakacha 5.12 345 Pn 12 45 07.3 -1.0
SPCN Chakachatna No 5.14 345 **Pn 12 45 07.8 -0.8**
KNK Knik Glacier 5.15 5 **Pn 12 45 08.1 -0.5**
KNK IAML 12 46 12.1
comp=E,144nm,0.8s
KNK IAML 12 46 18.0
comp=N,122nm,1.0s
KNK Knik Glacier 5.15 5 P **Pn 12 45 08.1 -0.5**
baz=186
SPCP Crater Peak Br 5.18 345 **Pn 12 45 08.5 -0.6**
SPCG Spurr Capps Gl 5.18 346 **Pn 12 45 08.7 -0.4**
DIV Divide 5.20 20 **Pn 12 45 08.9 -0.4**
SPBG Spurr Blockage 5.20 344 **Pn 12 45 08.9 -0.5**
SNH Sunshine Point 5.21 39 **Pn 12 45 09.6 +0.1**
SNH IAML 12 46 22.2
comp=E,312nm,1.3s
SNH IAML 12 46 36.6
comp=N,211nm,1.5s
SUA Susitna One 5.22 353 Pn Pn 12 45 08.7 -0.9
SUA IAML 12 46 20.1
comp=E,96nm,0.9s
SUA IAML 12 46 45.4
comp=N,103nm,1.4s
SUA Susitna One 5.22 353 P Pn 12 45 08.8 -0.9
baz=172
N19K Bonanza Creek 5.24 332 Pn Pn 12 45 09.0 -0.9
N19K Bonanza Creek 5.24 332 P Pn 12 45 09.0 -0.9
baz=148
KHIT Khitrov Hills 5.27 35 **Pn 12 45 09.9 -0.4**
PMR Palmer 5.31 1 Pn **Pn 12 45 10.5 -0.2**
PMR IAML 12 46 18.8
comp=N,81nm,1.0s
PMR IAML 12 46 18.8
comp=E,86nm,0.5s
PMR Palmer 5.31 1 P **Pn 12 45 10.5 -0.2**
PMR Palmer 5.31 1 P **Pn 12 45 10.6 -0.1**
baz=181
BMRM Bremner River 5.31 26 **Pn 12 45 10.5 -0.3**
BMRM Bremner River 5.31 26 P **Pn 12 45 10.5 -0.3**
baz=210
P16K Nushagak River 5.35 304 **Pn 12 45 11.2 -0.2**
P16K Nushagak River 5.35 304 P **Pn 12 45 11.1 -0.2**
baz=118
SPNN North Nagishla 5.36 343 **Pn 12 45 11.0 -0.6**
STLK Strandline Lak 5.36 347 **Pn 12 45 10.8 -0.7**

O17K Koliganek Bris 5.36 314 **Pn 12 45 11.2 -0.3**
O17K Koliganek Bris 5.36 314 P **Pn 12 45 11.2 -0.3**
baz=128
WAX Waxell Ridge 5.40 37 **Pn 12 45 11.9 -0.2**
M22K Willow 5.48 356 Pn **Pn 12 45 13.3 +0.2**
GHO Glory Hole Cre 5.49 2 **Pn 12 45 13.7 +0.4**
BARK Barkley Ridge 5.49 39 **Pn 12 45 13.2 -0.2**
KLU Klutina 5.51 18 **Pn 12 45 13.5 -0.1**
KLU Klutina 5.51 18 P **Pn 12 45 13.5 -0.1**
baz=200
MESA MESA 5.53 42 **Pn 12 45 14.4 +0.3**
MESA MESA 5.53 42 P **Pn 12 45 13.8 -0.2**
baz=228
CRQM Cirque 5.54 34 **Pn 12 45 13.2 -1.0**
N18K Kilae Creek 5.55 325 Pn 12 45 12.6 -1.4
N18K Kilae Creek 5.55 325 P **Pn 12 45 13.6 -0.5**
baz=140
SML Sawmill 5.55 5 Pn **Pn 12 45 14.0 -0.1**
SML Sawmill 5.55 5 P **Pn 12 45 14.2 +0.1**
baz=186
M23K Glacier View 5.58 8 **Pn 12 45 14.5 0.0**
M23K Glacier View 5.58 8 P **Pn 12 45 14.5 0.0**
baz=188
SCM Sheep Creek Mo 5.65 10 **Pn 12 45 15.8 +0.2**
SCM Sheep Creek Mo 5.65 10 P **Pn 12 45 15.9 +0.4**
baz=192
O16K Kokwok River B 5.68 309 **Pn 12 45 15.9 +0.1**
O16K Kokwok River B 5.68 309 P **Pn 12 45 15.9 +0.1**
baz=122
ISLE Juniper Island 5.69 38 **Pn 12 45 15.8 -0.3**
BAGL Bagley Icefiel 5.70 39 **Pn 12 45 16.0 0.0**
SVW2 Sparrevohn 5.78 329 Pn 12 45 16.3 -1.0
SVW2 Sparrevohn 5.78 329 P Pn 12 45 16.3 -1.0
SKT Skwentna 5.80 350 Pn **Pn 12 45 16.9 -0.6**
SKT Skwentna 5.80 350 P **Pn 12 45 16.8 -0.6**
baz=168
VRDI Verde Repeater 5.83 30 Pn **Pn 12 45 17.8 -0.3**
N25K Chitina, Valde 5.87 23 **Pn 12 45 18.4 -0.2**
N25K Chitina, Valde 5.87 23 P **Pn 12 45 18.4 -0.2**
baz=207
N17K Nushagak Hills 5.88 319 **Pn 12 45 18.2 -0.4**
N17K Nushagak Hills 5.88 319 P **Pn 12 45 18.4 -0.2**
baz=133
M20K Styx River 5.91 343 Pn 12 45 18.1 -1.0
M20K Styx River 5.91 343 P Pn 12 45 18.2 -1.0
baz=160
GLB Gilahina Butte 5.92 27 **Pn 12 45 18.9 -0.2**
KIAG Kiagna River 5.92 36 **Pn 12 45 19.4 +0.1**
SAMH Samovar Hills 5.96 46 **Pn 12 45 19.4 -0.4**
CNBA Chernabura Isl 5.96 260 Pn **Pn 12 45 19.7 0.0**
TABL Table Mountain 6.01 43 **Pn 12 45 20.7 +0.1**
M24K Tolsona, Glenn 6.05 15 Pn **Pn 12 45 21.8 +0.8**
M24K Tolsona, Glenn 6.05 15 P **Pn 12 45 21.5 +0.4**
baz=197
MCARA McCarthy VSAT 6.08 30 Pn **Pn 12 45 21.5 +0.2**
MCARA McCarthy VSAT 6.08 30 P **Pn 12 45 21.1 -0.2**
baz=215
PTPK Patty Peak 6.09 34 **Pn 12 45 21.7 +0.1**
YKU2 Yakutat 6.11 54 Pn **Pn 12 45 22.2 +0.6**
CUT Chulina 6.14 356 Pn **Pn 12 45 22.1 0.0**
PCA Pinnacle 6.16 48 **Pn 12 45 22.1 -0.3**
PINM Pinnacle 6.16 48 P **Pn 12 45 22.3 -0.1**
baz=235
M18K Stony River 6.17 330 **Pn 12 45 21.5 -1.1**
M18K Stony River 6.17 330 P Pn 12 45 21.5 -1.1
baz=145
M19K Big River Lodg 6.17 338 **Pn 12 45 22.1 -0.6**
M19K Big River Lodg 6.17 338 P Pn 12 45 21.8 -0.9
baz=153
BARN Barnard Glacie 6.25 37 **Pn 12 45 24.2 +0.3**
WACK Wrangell Chich 6.27 23 **Pn 12 45 24.2 0.0**
O15K Ungalikthiuk R 6.27 302 **Pn 12 45 24.0 0.0**
O15K Ungalikthiuk R 6.27 302 P **Pn 12 45 24.0 0.0**
baz=113
CTG Chitna Glacier 6.29 39 P **Pn 12 45 24.1 -0.3**
baz=225
CTGM Chitina Glacie 6.29 39 Pn **Pn 12 45 24.5 +0.1**
PNL Peninsula 6.30 54 **Pn 12 45 24.1 -0.3**
PNL Peninsula 6.30 54 P **Pn 12 45 24.5 +0.1**
PNL Peninsula 6.30 54 P **Pn 12 45 24.1 -0.3**
baz=241
SDPT Sand Point 6.31 266 Pn **Pn 12 45 24.0 -0.4**
LOGN Logan Glacier 6.32 41 **Pn 12 45 24.9 +0.1**
BCPM Barnes Point 6.34 51 **Pn 12 45 25.0 +0.1**
WAT6 Susitna Watana 6.36 7 **Pn 12 45 25.1 -0.2**
WAT6 Susitna Watana 6.36 7 P **Pn 12 45 25.1 -0.2**
baz=188
N16K Nishlik Lake 6.45 314 **Pn 12 45 26.5 0.0**
N16K Nishlik Lake 6.45 314 P **Pn 12 45 26.5 0.0**
baz=127
L19K White Mountain 6.52 337 Pn 12 45 26.4 -0.9
L19K White Mountain 6.52 337 P Pn 12 45 26.5 -0.9
baz=152
WAT7 Susitna Watana 6.56 2 **Pn 12 45 28.0 0.0**
WAT1 Susitna Watana 6.56 3 **Pn 12 45 28.1 +0.1**
WAT1 Susitna Watana 6.56 3 P **Pn 12 45 28.1 +0.1**
baz=184
M17K Holitna River 6.59 324 **Pn 12 45 28.0 -0.3**
M17K Holitna River 6.59 324 P **Pn 12 45 27.8 -0.5**
baz=138
L20K Farewell, AK 6.60 342 Pn 12 45 27.0 -1.5
PPLA Purkeypile 6.76 349 **Pn 12 45 30.1 -0.7**
PPLA Purkeypile 6.76 349 P **Pn 12 45 30.7 -0.1**
baz=167
N15K Kwethluk River 6.84 309 **Pn 12 45 32.6 +0.9**
M16K Timber Creek 6.87 318 Pn **Pn 12 45 32.0 0.0**
M16K Timber Creek 6.87 318 P **Pn 12 45 32.2 +0.1**
baz=130
DHY Denali Highway 6.87 8 Pn **Pn 12 45 32.1 -0.3**
DHY Denali Highway 6.87 8 P **Pn 12 45 32.4 0.0**
baz=189
O29M Mount Kennedy 6.98 50 **Pn 12 45 34.2 +0.4**
PAX Paxson 6.98 15 **Pn 12 45 33.6 -0.2**
PAX Paxson 6.98 15 P **Pn 12 45 34.0 +0.3**
baz=198
O14K Tigyukauivet M 6.99 300 Pn **Pn 12 45 34.6 +0.8**
L18K Granite Mounta 7.00 331 Pn 12 45 32.7 -1.3
L18K Granite Mounta 7.00 331 P Pn 12 45 33.1 -0.9
baz=145
PVV Pavlof Volcano 7.03 268 Pn 12 45 33.1 -1.3
P29M Windy Craggy 7.05 57 **Pn 12 45 34.3 -0.3**
P29M Windy Craggy 7.05 57 P **Pn 12 45 34.1 -0.5**
baz=246
RND Reindeer 7.13 2 Pn **Pn 12 45 35.4 -0.5**
TRF Thorofare Moun 7.18 357 Pn **Pn 12 45 36.5 -0.1**
TRF Thorofare Moun 7.18 357 P **Pn 12 45 36.4 -0.2**
baz=176
M27K Edge Creek, AK 7.19 29 Pn **Pn 12 45 37.1 +0.5**
MENT Mentasta 7.25 21 Pn **Pn 12 45 38.0 +0.5**
CAST Castle Rocks 7.26 350 Pn **Pn 12 45 37.9 +0.3**
CAST Castle Rocks 7.26 350 P **Pn 12 45 37.9 +0.3**
baz=168
KTH Kantishna Hill 7.31 355 **Pn 12 45 37.9 -0.4**
M15K Kasigluk River 7.36 311 **Pn 12 45 39.2 +0.3**
S31K Pelican 7.37 71 Pn Pn 12 45 35.9 -3.0
S31K Pelican 7.37 71 P Pn 12 45 37.3 -1.7
baz=262
L17K Donlin 7.41 326 **Pn 12 45 38.9 -0.6**
TTA Tatalina 7.44 336 **Pn 12 45 39.4 -0.6**
TTA Tatalina 7.44 336 P **Pn 12 45 39.4 -0.6**
N14K Kuskokwak Cree 7.44 304 **Pn 12 45 40.1 +0.1**
K20K Telida 7.45 344 Pn 12 45 38.9 -1.3
K20K Telida 7.45 344 P **Pn 12 45 39.5 -0.7**
baz=160
MCK McKinley 7.46 2 **Pn 12 45 40.4 +0.1**
MCK McKinley 7.46 2 P **Pn 12 45 40.7 +0.4**
baz=182
L16K Owhat River 7.50 320 Pn **Pn 12 45 40.0 -0.8**
L16K Owhat River 7.50 320 P **Pn 12 45 40.3 -0.5**
baz=132
BVCY Beaver Creek 7.52 32 **Pn 12 45 41.6 +0.4**
BVCY Beaver Creek 7.52 32 P **Pn 12 45 41.6 +0.4**
baz=219
P30M Million Dollar 7.61 55 **Pn 12 45 42.8 +0.4**
P30M Million Dollar 7.61 55 P **Pn 12 45 43.1 +0.8**
baz=245
PLBC Pleasant Camp 7.64 60 **Pn 12 45 42.5 -0.2**
PLBC Pleasant Camp 7.64 60 P **Pn 12 45 42.5 -0.2**
baz=251
R31K City Hall, Gus 7.69 68 Pn 12 45 41.9 -1.5
R31K City Hall, Gus 7.69 68 P Pn 12 45 41.9 -1.5
baz=259
HYT Haines Junctio 7.70 49 Pn **Pn 12 45 43.4 -0.3**
L27K Beaver Creek, 7.79 26 Pn **Pn 12 45 45.7 +0.9**

BCAR Beaver Creek A 7.80 26 **Pn 12 45 45.0 +0.1**
SIT Sitka 7.80 79 P Pn 12 45 41.2 -3.7
SIT Sitka 7.80 79 P Pn 12 45 42.0 -2.9
baz=270
RIDG Independent Ri 7.80 15 Pn **Pn 12 45 45.8 +0.8**
K17K Iditarod 7.86 329 Pn 12 45 44.6 -1.1
K17K Iditarod 7.86 329 P **Pn 12 45 45.2 -0.5**
baz=141
BWN Browne 7.90 360 Pn **Pn 12 45 47.1 +0.9**
M14K Bethel 7.93 309 Pn **Pn 12 45 46.4 -0.2**
J18K Innoko River 8.06 336 **Pn 12 45 48.1 -0.4**
FALS False Pass 8.07 265 Pn 12 45 47.3 -1.3
FALS False Pass 8.07 265 P Pn **12 45 47.7 -0.9**
FALS False Pass 8.07 265 P Pn 12 45 47.0 -1.6
baz=74
SKAG Skagway 8.14 61 **Pn 12 45 49.9 +0.3**
SKAG Skagway 8.14 61 P **Pn 12 45 49.7 +0.1**
SCRK Sand Creek 8.16 17 Pn 12 45 48.7 -1.2
BESE Bessie Mountai 8.18 68 **Pn 12 45 49.1 -1.1**
S32K Killisnoo 8.21 76 Pn Pn 12 45 48.6 -1.9
S32K Killisnoo 8.21 76 P Pn 12 45 48.3 -2.2
baz=268
WRH Wood River Hil 8.22 4 **Pn 12 45 50.5 -0.2**
HDA Harding Lake 8.22 8 **Pn 12 45 51.4 +0.7**
L15K Ungalak Mounta 8.23 316 **Pn 12 45 51.0 +0.2**
L15K Ungalak Mounta 8.23 316 P **Pn 12 45 51.0 +0.2**
baz=126
J20K Nowinta River 8.24 345 **Pn 12 45 50.2 -0.7**
J20K Nowinta River 8.24 345 P **Pn 12 45 50.6 -0.4**
baz=161
ISLZ Isanotski Laza 8.27 265 Pn 12 45 50.2 -1.2
ISNN Isanotski Nort 8.28 266 Pn 12 45 50.2 -1.2
O30N Mendenhall 8.28 52 **Pn 12 45 51.5 -0.1**
R32K Eaglecrest 8.31 70 Pn **Pn 12 45 51.6 -0.3**
J19K Poorman 8.31 341 Pn 12 45 50.3 -1.6
M29M Somme Creek 8.31 38 **Pn 12 45 53.0 +1.1**
M29M Somme Creek 8.31 38 P **Pn 12 45 52.0 0.0**
baz=227
NEA2 Nenana 8.32 1 **Pn 12 45 52.3 +0.3**
JIS Juneau Island 8.38 70 Pn **Pn 12 45 52.0 -0.8**
JIS Juneau Island 8.38 70 P **Pn 12 45 52.2 -0.6**
M13K Dall Lake 8.40 305 **Pn 12 45 53.8 +0.7**
CCB Clear Creek Bu 8.41 5 Pn **Pn 12 45 53.1 -0.1**
L14K Kuka Creek 8.53 312 **Pn 12 45 55.4 +0.6**
K27K Chicken 8.56 22 Pn **Pn 12 45 55.9 +0.5**
J25K Salcha River, 8.57 12 **Pn 12 45 55.5 0.0**
J25K Salcha River, 8.57 12 P **Pn 12 45 55.5 0.0**
baz=195
IL31 8.59 7 **Pn 12 45 56.0 +0.3**
ILAR Eielson Array 8.59 7 Pn **Pn 12 45 55.7 0.0**
ILAR Eielson Array 8.59 7 Pn **Pn 12 45 54.9 -0.8**
comp=E,0.8nm,0.3s,baz=191,slow=13,SNR=43
ILAR Sn **Sn 12 47 28.4 -4.6**
comp=E,1.7nm,0.3s,baz=197,slow=18,SNR=7.1
ILAR LR LR 12 49 34.6
comp=E,841nm,18.3s,baz=152,slow=40
comp=E,3.0nm,0.4s
K15K Wolf Creek Mou 8.62 319 **Pn 12 45 57.1 +0.9**
COLA College 8.63 4 Pn **Pn 12 45 56.7 +0.4**
MDM Murphy Dome 8.71 3 Pn **Pn 12 45 57.1 -0.2**
J26L Joseph Creek 8.71 17 **Pn 12 45 56.6 -0.9**
J26L Joseph Creek 8.71 17 P **Pn 12 45 57.2 -0.3**
baz=202
N31M Braeburn, Yuko 8.76 48 **Pn 12 45 57.6 -0.5**
WHY Whitehorse 8.77 54 **Pn 12 45 59.3 +0.9**
MLY Manley 8.78 356 Pn **Pn 12 45 57.9 -0.5**
MLY Manley 8.78 356 P **Pn 12 45 58.2 -0.2**
baz=175
WESE West Dahl East 8.83 264 Pn 12 45 57.2 -1.9
I20K Naaghedeneel 8.88 346 Pn **Pn 12 46 00.5 +0.9**
I23K Minto, Yukon-K 8.88 0 **Pn 12 46 00.0 +0.4**
I23K Minto, Yukon-K 8.88 0 P **Pn 12 45 59.5 -0.2**
baz=180
L29M L29M 8.88 35 **Pn 12 46 00.3 +0.5**
WEBT Westdahl Beart 8.89 265 **Pn 12 45 59.5 -0.4**
POKR Poker Flat Res 8.90 5 **Pn 12 45 59.9 -0.1**
POKR Poker Flat Res 8.90 5 P **Pn 12 46 00.5 +0.5**
baz=187
P32M Atlin 8.97 62 **Pn 12 46 00.5 -0.5**
P32M Atlin 8.97 62 P **Pn 12 46 00.3 -0.7**
baz=255
J16K Anvik River 8.98 326 Pn 12 46 00.1 -1.0
M30M Minto, Yukon 8.98 40 **Pn 12 46 02.9 +1.7**
M30M Minto, Yukon 8.98 40 P **Pn 12 46 01.7 +0.5**
baz=231
I21K Tanana 8.99 353 **Pn 12 46 01.4 +0.1**
I21K Tanana 8.99 353 P **Pn 12 46 01.1 -0.2**
baz=171
U33K Whale Pass 9.09 84 Pn 12 45 59.1 -3.4
CRAG Craig 9.20 88 Pn Pn 12 46 02.0 -2.0
CRAG Craig 9.20 88 P Pn 12 46 01.0 -3.0
DAWY Dawson 9.24 28 Pn **Pn 12 46 05.2 +0.6**
EGAK Eagle 9.41 22 Pn **Pn 12 46 06.1 -0.9**
PRP Porcupine Dome 9.44 10 Pn **Pn 12 46 07.8 +0.4**
PRP Porcupine Dome 9.44 10 P **Pn 12 46 07.3 -0.1**
baz=193
I17K Unalakleet 9.45 328 Pn **Pn 12 46 07.9 +0.4**
H21K Melozitna Rive 9.53 351 Pn Pn 12 46 06.9 -1.7
I26K Coal Creek Min 9.53 16 **Pn 12 46 09.2 +0.5**
I26K Coal Creek Min 9.53 16 P Pn 12 46 07.5 -1.1
baz=201
Q32M Nakina River 9.57 67 **Pn 12 46 08.4 -1.0**
P33M Teslin, Yukon 9.58 59 **Pn 12 46 08.6 -0.8**
P33M Teslin, Yukon 9.58 59 P **Pn 12 46 09.0 -0.4**
baz=253
H20K Anotleneega Mo 9.59 346 **Pn 12 46 09.3 -0.2**
H20K Anotleneega Mo 9.59 346 P **Pn 12 46 09.3 -0.2**
baz=161
AKUT Akutan 9.60 264 P **Pn 12 46 08.4 -1.1**
H24K Noodor Dome 9.60 4 Pn 12 46 08.1 -1.5
K29M Barlow Dome 9.60 33 **Pn 12 46 10.2 +0.5**
M31M Drury Creek, Y 9.69 46 **Pn 12 46 11.7 +0.9**
AKV Akutan Volcano 9.71 264 Pn 12 46 09.1 -2.1
N32M Quiet Lake 9.77 53 **Pn 12 46 12.7 +0.7**
H19K Roundabout Mou 9.86 343 Pn **Pn 12 46 13.7 +0.6**
H18K Honhosa River 9.89 337 Pn Pn 12 46 12.2 -1.3
IMAR Indian Mountai 9.93 350 Pn 12 46 13.2 -0.9
H17K Granite Mounta 10.06 334 Pn **Pn 12 46 15.1 -0.8**
V35K Ketchikan 10.07 88 Pn **Pn 12 46 15.4 -0.5**
UNV Unalaska Valle 10.10 263 P Pn 12 46 14.7 -1.8
FARO Faro, Yukon 10.13 48 Pn **Pn 12 46 18.0 +1.2**
I28M Miner Creek 10.26 23 Pn **Pn 12 46 20.8 +2.2**
R33M Jennings River 10.30 65 **Pn 12 46 19.1 -0.2**
R33M Jennings River 10.30 65 P **Pn 12 46 18.6 -0.7**
baz=260
G21K Allakaket 10.43 351 Pn **Pn 12 46 21.1 +0.2**
G23K Bananza Creek 10.45 359 Pn **Pn 12 46 20.9 -0.3**
G24K Hadweenzic Riv 10.47 4 Pn **Pn 12 46 22.2 +0.6**
FYU Fort Yukon 10.49 9 Pn **Pn 12 46 22.4 +0.5**
J30M Hart River 10.49 32 Pn **Pn 12 46 22.7 +0.8**
G19K Purcell Mounta 10.53 343 Pn **Pn 12 46 23.1 +0.8**
T35M Bob Quinn 10.57 78 Pn **Pn 12 46 21.7 -1.3**
DLBC Dease Lake 10.68 70 Pn **Pn 12 46 24.3 -0.2**
comp=E,0.9nm,0.3s,baz=271,slow=5.9,SNR=26
DLBC Sn **Sn 12 48 21.9 -2.7**
comp=E,0.3nm,0.3s,baz=278,slow=24,SNR=1.2
DLBC LR LR 12 49 49.1
comp=E,828nm,21.4s,baz=278,slow=34
comp=E,1.9nm,0.3s
I30M Mount Dempster 10.96 30 Pn **Pn 12 46 29.0 +0.7**
F21K Alatna River 11.12 352 Pn 12 46 28.8 -1.6
F20K Avaraart Lake 11.18 347 Pn **Pn 12 46 30.8 -0.3**
F24K Squaw Lake 11.28 3 Pn **Pn 12 46 32.5 -0.1**
BMAR Burnt Mountain 11.39 9 Pn Pn 12 46 32.9 -1.2
EPYK Eagle Plains 11.76 26 Pn **Pn 12 46 40.6 +1.5**
E19K Redstone River 11.77 345 **Pn 12 46 39.6 +0.4**
E24K Your Creek 11.82 2 Pn **Pn 12 46 40.6 +0.6**
E22K Anaktuvuk Pass 11.93 356 Pn Pn 12 46 40.1 -1.3
E25K Arctic Village 11.99 7 **Pn 12 46 41.4 -0.9**
F28M Old Crow 12.18 18 Pn Pn 12 46 43.7 -1.2
E18K Tukpahlearik C 12.31 339 Pn **Pn 12 46 46.1 -0.5**
E21K Killik River 12.36 352 Pn **Pn 12 46 47.4 +0.1**
G30M tAoh Zraii Nji 12.37 25 Pn **Pn 12 46 46.7 -0.8**
TOLK Toolik Lake Re 12.38 360 Pn 12 46 45.4 -2.3
D22K Ayikyak River 12.71 355 Pn **Pn 12 46 51.9 -0.1**
G31M Satah River 12.81 28 Pn **Pn 12 46 53.6 +0.3**
D19K Kuna River 12.86 345 Pn **Pn 12 46 53.9 -0.3**
D24K Happy Valley 12.90 1 Pn **Pn 12 46 55.7 +1.1**
BBB Bella Bella 13.10 99 Pn **Pn 12 46 57.3 -0.1**
comp=E,0.1nm,0.3s,baz=42,slow=16,SNR=1.3
BBB Sn **Sn 12 49 15.8 -7.8**
comp=E,0.4nm,0.3s,baz=157,slow=1.9,SNR=1.8

BBB LR LR 12 50 49.5
comp=E,912nm,19.2s,baz=292,slow=32
comp=E,8.5nm,0.8s
E28M Babbage River 13.14 16 Pn **Pn 12 47 01.2 +3.3**
D25K Kavik River 13.14 5 Pn **Pn 12 47 00.2 +2.3**
F31M Tsiigehtchic 13.34 27 Pn **Pn 12 46 59.7 -0.9**
B21K Ikpikpuk River 13.57 352 Pn **Pn 12 47 03.2 -0.5**
C16K Lisburne Hills 14.04 335 Pn **Pn 12 47 10.3 +0.1**
INK Inuvik 14.06 25 Pn **Pn 12 47 09.4 -0.9**
INK Inuvik 14.06 25 Pn **Pn 12 47 11.7 +1.3**
comp=E,0.2nm,0.3s,baz=221,slow=13,SNR=14
INK LR LR 12 52 58.5
comp=E,436nm,18.4s,baz=184,slow=39
comp=E,9.4nm,1.2s
FLDN Fort Liard 14.16 63 Pn **Pn 12 47 13.8 +2.0**
WRGLY Wrigley 14.72 51 Pn 12 47 20.5 +1.0
C36M Paulatuk 17.26 31 Pn 12 47 51.1 -1.2
HILA High Level 17.49 69 Pn **Pn 12 47 53.9 -1.5**
BRLDA Berland Lookou 18.32 83 P **Pn 12 48 06.5 +0.9**
BRLDA IAmb IAmb 12 48 08.3
comp=Z,31nm,1.0s
GNW Green Mountain 18.48 107 P **P 12 48 06.9 -0.6**
YKAB2 New Yellowknif 18.59 56 P **P 12 48 08.3 -0.2**
YKA Yellowknife Ar 18.59 56 P **P 12 48 09.2 +0.6**
YKA Yellowknife Ar 18.59 56 P **P 12 48 09.5 +0.9**
comp=Z,0.2nm,0.3s,baz=265,slow=11,SNR=57
YKA LR LR 12 55 05.0
comp=Z,288nm,21.1s,baz=286,slow=36
comp=Z,11nm,1.1s
A36M Sachs Harbour 18.69 23 P 12 48 10.4 +0.7
A36M IAmb IAmb 12 48 30.2
comp=Z,27nm,0.9s
LTY Liberty 19.82 105 P **P 12 48 23.4 +1.1**
LTY IAmb IAmb 12 48 26.7
comp=Z,27nm,1.2s
MXC Moxie City 20.45 106 P **P 12 48 29.2 +0.1**
MXC IAmb IAmb 12 48 34.1
comp=Z,25nm,1.3s
H04D Lebanon 20.54 114 P **P 12 48 29.1 -0.9**
H04D IAmb IAmb 12 48 56.4
comp=Z,35nm,1.4s
E07A Sunnyside 20.70 106 P **P 12 48 30.7 -1.1**
E07A IAmb IAmb 12 48 47.0
comp=Z,15nm,1.0s
H04A Detroit Lake 20.71 113 P **P 12 48 31.0 -0.9**
H04A IAmb IAmb 12 48 54.1
comp=Z,35nm,1.4s
EDM Edmonton 20.88 83 P **P 12 48 34.0 +0.2**
D08A Wollman Farm, 20.89 103 P **P 12 48 33.6 -0.3**
D08A IAmb IAmb 12 48 47.3
comp=Z,16nm,1.3s
J01E Myrtle Point 20.92 118 P **P 12 48 35.9 +1.7**
HAWA Hanford 20.97 106 P **P 12 48 34.1 -0.7**
E08A Dider Farm, El 21.17 105 P **P 12 48 37.6 +0.9**
NEW Newport 21.17 99 P **P 12 48 37.5 +0.7**
comp=Z,6.0nm,1.2s,baz=306,slow=13,SNR=4.3
NEW LR LR 12 55 32.8
comp=Z,434nm,20.4s,baz=296,slow=33
comp=Z,6.0nm,1.2s
I04A Tendick Farm, 21.22 115 P **P 12 48 37.6 +0.1**
DBO Dodson Butte 21.29 117 P **P 12 48 39.6 +1.3**
DBO IAmb IAmb 12 48 52.3
comp=Z,24nm,1.2s
SHEM Shemya Is, Ala 21.31 276 LR LR 12 56 27.1
comp=Z,161nm,21.6s,baz=138,slow=36
I05D Terrebonne, OR 21.38 112 P **P 12 48 40.3 +1.1**
I05D IAmb IAmb 12 49 01.1
comp=Z,19nm,1.2s
K02D Willamette Mer 21.40 119 P **P 12 48 39.6 +0.2**
E09A Wood Farm, Sta 21.65 104 P **P 12 48 43.2 +1.3**
HUMO Hull Mountain 21.81 118 P **P 12 48 43.4 -0.4**
HUMO IAmb IAmb 12 48 55.1
comp=Z,18nm,1.2s
PINE Pine Mountain 21.97 113 P **P 12 48 46.5 +0.9**
PINE IAmb IAmb 12 49 19.7
comp=Z,24nm,1.4s
G08A Pilot Rock 21.99 107 P **P 12 48 46.2 +0.5**
J05D Fort Rock, OR 22.18 114 P **P 12 48 48.2 +0.3**
J05D IAmb IAmb 12 48 58.8
comp=Z,22nm,1.1s
F10A Beach Ranch, E 22.48 104 P **P 12 48 50.6 -0.4**
F10A IAmb IAmb 12 49 02.6
comp=Z,16nm,1.1s
I07A Izee 22.52 110 P **P 12 48 51.7 +0.3**
I07A IAmb IAmb 12 49 03.4
comp=Z,23nm,1.4s
YBH Yreka Blue Hor 22.59 119 IAmb IAmb 12 49 04.9
comp=Z,17nm,1.2s
YBH Yreka Blue Hor 22.59 119 LR LR 12 55 27.2
comp=Z,441nm,19.4s,baz=302,slow=31
BILL Bilibino 23.18 318 P **P 12 48 56.3 -1.7**
BILL IAmb IAmb 12 49 39.1
comp=Z,25nm,1.4s
J08A Circle Bar Ran 23.55 110 IAmb IAmb 12 49 36.4
comp=Z,14nm,1.5s
WVOR Wild Horse Val 24.12 112 P **P 12 49 08.8 +1.1**
WVOR IAmb IAmb 12 49 33.0
comp=Z,11nm,1.1s
MPK Martis Peak 25.77 119 P **P 12 49 23.9 +1.2**
PNTR Pine Nut 26.14 119 P **P 12 49 26.1 0.0**
PNTR IAmb IAmb 12 49 45.3
comp=Z,6.9nm,0.9s
YERR Yerington 26.39 118 P **P 12 49 27.2 -1.2**
FFC Flin Flon 26.49 73 P **P 12 49 29.1 +0.2**
FFC IAmb IAmb 12 49 34.5
comp=Z,7.7nm,1.2s
YHH Holmes Hill 26.71 99 P **P 12 49 31.2 -0.2**
KVN Kaiserville 26.91 117 IAmb IAmb 12 50 06.4
comp=Z,10nm,1.4s
ELK Elko 27.11 110 LR LR 12 59 59.7
comp=Z,120nm,18.1s,baz=301,slow=36
NVAR Mina Array Bea 27.29 118 P **P 12 49 38.2 +1.7**
comp=Z,1.2nm,0.7s,baz=311,slow=9.6,SNR=10.0
NVAR LR LR 12 58 28.5
comp=Z,347nm,18.6s,baz=308,slow=32
comp=Z,1.2nm,0.7s
LHV Little Huntoon 27.33 118 P **P 12 49 37.3 +0.8**
RES Resolute Bay 27.58 28 LR LR 13 01 00.3
comp=Z,216nm,18.8s,baz=3.0,slow=37
R11B Troy Canyon, C 28.71 114 P **P 12 49 50.5 +1.4**
PDAR Pinedale Array 28.74 101 P **P 12 49 49.9 +0.5**
comp=Z,0.3nm,0.7s,baz=321,slow=7.0,SNR=2.2
PDAR LR LR 13 01 44.1
comp=Z,118nm,18.9s,baz=328,slow=37
comp=Z,0.3nm,0.7s
FCC Fort Churchill 29.09 62 P **P 12 49 53.5 +1.5**
FCC IAmb IAmb 12 50 02.4
comp=Z,12nm,1.2s
SEY Seymchan 29.23 307 LR LR 13 02 20.6
comp=Z,291nm,19.4s,baz=80,slow=38
TPNV Topopah Spring 29.46 117 IAmb IAmb 12 50 41.4
comp=Z,7.0nm,1.1s
PRN Pahroc Range 29.70 115 IAmb IAmb 12 50 09.3
comp=Z,8.4nm,1.2s
PETK Petropavlovsk- 30.10 287 P **P 12 50 01.9 +0.9**
comp=Z,2.2nm,0.8s,baz=86,slow=8.8,SNR=2.0
PETK LR LR 13 01 48.8
comp=Z,136nm,21.5s,baz=75,slow=36
comp=Z,2.2nm,0.8s
SRU San Rafael Swe 30.78 107 IAmb IAmb 12 50 31.8
comp=Z,5.1nm,0.7s
MA2 Magadan 30.98 301 LR LR 13 04 26.2
comp=Z,177nm,18.0s,baz=91,slow=40
V12A Nelson 31.11 117 P **P 12 50 12.3 +2.0**
V12A IAmb IAmb 12 50 21.5
comp=Z,6.8nm,1.2s
HMU Henry Mountain 31.53 109 IAmb IAmb 12 50 28.2
comp=Z,6.0nm,1.2s
ELS Elsinore Mount 31.54 122 P **P 12 50 15.6 +1.5**
U15A North Rim 31.86 113 IAmb IAmb 12 50 26.8
comp=Z,5.0nm,0.9s
ULM Lac du Bonnet 31.87 78 P **P 12 50 17.8 +1.0**
ULM Lac du Bonnet 31.87 78 P **P 12 50 17.4 +0.7**
comp=Z,1.9nm,0.8s,baz=283,slow=10,SNR=3.5
ULM LR LR 13 02 54.7
comp=Z,534nm,18.6s,baz=284,slow=36
comp=Z,1.9nm,0.8s
PFO Pinyon Flats O 32.03 121 LR LR 13 00 43.9
comp=Z,240nm,21.1s,baz=336,slow=32
SMCO Snowmass 32.64 103 P **P 12 50 21.6 -2.4**
SMCO IAmb IAmb 12 50 22.3
comp=Z,5.5nm,0.9s
WUAZ Wupatki 33.04 113 P **P 12 50 26.7 -0.6**
WUAZ IAmb IAmb 12 50 39.0
comp=Z,9.9nm,1.4s
B35A Bob, Littlefor 34.09 79 P **P 12 50 35.3 -0.8**

EYMN Ely 35.55 78 P **P 12 50 49.9 +1.2**
F36A Milaca 35.68 83 P **P 12 50 50.2 +0.4**
F36A IAmb IAmb 12 50 52.4
comp=Z,7.6nm,1.2s
ANMO Albuquerque 36.05 108 LR LR 13 05 56.1
comp=Z,114nm,19.3s,baz=64,slow=37
E38A The Farm, Brul 36.31 80 P **P 12 50 55.6 +0.4**
YAK Yakutsk 39.31 313 LR LR 13 10 27.2
comp=Z,129nm,18.0s,baz=329,slow=41
N41A Harden Midland 40.50 87 P **P 12 51 30.8 +0.2**
TXAR Lajitas Array 41.90 111 P **P 12 51 42.8 +0.5**
comp=Z,0.8nm,0.9s,baz=316,slow=5.2,SNR=6.5
TXAR LR LR 13 08 04.0
comp=Z,111nm,19.4s,baz=327,slow=35
comp=Z,0.8nm,0.9s
X37A Clayton 42.34 97 P **P 12 51 46.5 +0.8**
JCT Junction City 43.05 106 P **P 12 51 52.6 +1.0**
JCT IAmb IAmb 12 51 53.4
comp=Z,14nm,1.3s
SFJD Kangerlussuaq 43.12 35 LR LR 13 09 52.4
comp=Z,156nm,18.8s,baz=346,slow=36
ASAJ Asahikawa 43.41 284 LR LR 13 11 17.4
comp=Z,139nm,18.2s,baz=356,slow=38
SADO Sadowa 44.21 74 LR LR 13 09 46.6
comp=Z,147nm,19.0s,baz=352,slow=35
KLR Kul'dur 45.76 296 LR LR 13 13 55.8
comp=Z,125nm,18.2s,baz=65,slow=39
NRIK Noril'sk 48.06 336 LR LR 13 16 34.1
comp=Z,163nm,18.5s,baz=26,slow=41
H11N2 WAKE ISLAND Hy 48.83 240 T T 13 45 16.0
baz=30,slow=76,SNR=17
H11N3 WAKE ISLAND Hy 48.83 240 T T 13 45 10.0
baz=30,slow=76,SNR=18
H11N1 WAKE ISLAND Hy 48.85 240 T T 13 45 14.6
baz=30,slow=76,SNR=15
USRK Ussuriysk Ar. 49.00 291 LR LR 13 13 32.9
comp=Z,200nm,21.0s,baz=45,slow=36
MDJ Mudanjiang 49.95 293 P **P 12 52 43.4 -2.1**
MDJ pP pP 12 52 48.3 +3.7
MDJ PcS **PcS 12 58 09.6 +7.2**
MDJ S S 12 59 36.9 -20
MDJ sS sS 12 59 46.2 -8.8
MDJ ScS **ScS 13 02 35.0 -2.6**
H11S1 WAKE ISLAND Hy 49.97 239 T T 13 46 35.5
baz=26
H11S2 WAKE ISLAND Hy 49.98 239 T T 13 46 43.8
baz=26,slow=74
H11S3 WAKE ISLAND Hy 49.99 239 T T 13 46 41.6
baz=26,slow=74
JHJ Hachijo jima 2 52.75 275 LR LR 13 16 53.6
comp=Z,33nm,18.0s,baz=82,slow=38
ARCES ARCESS Array B 54.41 2 P **P 12 53 17.9 -0.5**
comp=Z,3.8nm,1.0s,baz=354,slow=8.2,SNR=4.8
comp=Z,3.8nm,1.0s
KSRS Korea Array 55.98 288 LR LR 13 20 21.3
comp=Z,45nm,18.1s,baz=50,slow=39
JCJ Chichijima 56.01 269 LR LR 13 13 48.4
comp=Z,61nm,21.8s,baz=100,slow=32
TEIG Tepich 57.45 103 LR LR 13 20 34.9
comp=Z,602nm,18.8s,baz=198,slow=38
JNU Nakatsue 57.65 282 LR LR 13 17 14.0
comp=Z,55nm,21.9s,baz=358,slow=35
SONM Songino Array 58.57 310 P **P 12 53 49.8 +1.4**
comp=Z,1.0nm,0.7s,baz=43,slow=6.9,SNR=5.0
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 61.50 327 P **P 12 54 09.1 +0.8**
comp=Z,1.0nm,0.6s,baz=37,slow=8.3,SNR=4.7
comp=Z,1.0nm,0.6s
HHC Hu-ho-hao-te 61.66 302 *e*P **P 12 54 10.9 +1.2**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,6.3s
HHC LR LR
comp=N,120nm,15.8s
HHC LR LR
comp=E,190nm,17.9s
FINES FINESS Array B 62.54 2 P **P 12 54 15.8 +0.7**
comp=E,1.3nm,0.5s,baz=358,slow=9.4,SNR=14
comp=E,1.3nm,0.5s
HFS Hagfors 63.14 9 P **P 12 54 18.9 -0.2**
comp=E,2.1nm,0.8s,baz=25,slow=8.2,SNR=4.7
comp=E,2.1nm,0.8s
KIRV Kirov 64.47 349 LR LR 13 26 49.5
comp=E,177nm,18.4s,baz=324,slow=40
ARU Arti 65.36 343 LR LR 13 24 23.3
comp=E,110nm,19.6s,baz=328,slow=37
BVAR Borovoye Array 66.23 335 P **P 12 54 40.1 +0.7**
comp=E,0.5nm,0.4s,baz=32,slow=8.7,SNR=4.7
BVAR LR LR 13 27 00.5
comp=E,132nm,19.4s,baz=321,slow=39
comp=E,0.5nm,0.4s
KURBB Kurchatov Arra 66.28 329 P **P 12 54 39.7 -0.1**
comp=E,0.6nm,0.6s,baz=31,slow=6.4,SNR=4.8
KURBB LR LR 13 26 36.4
comp=E,116nm,18.3s,baz=167,slow=39
comp=E,0.6nm,0.6s
JTS Las Juntas de 67.43 106 LR LR 13 26 15.3
comp=E,50nm,18.8s,baz=280,slow=38
MK31 Makanchi Array 68.53 325 P 12 54 52.4 -1.8
MKAR Makanchi Array 68.53 325 P **P 12 54 54.2 +0.1**
MKAR Makanchi Array 68.53 325 P **P 12 54 54.5 +0.3**
comp=E,0.4nm,0.4s,baz=28,slow=6.2,SNR=15
MKAR LR LR 13 29 34.0
comp=E,119nm,18.6s,baz=36,slow=40
comp=E,0.4nm,0.4s
MAKZ Makanchi 68.62 325 P 12 54 54.5 -0.2
MAKZ IAmb IAmb 12 55 09.6
comp=Z,3.3nm,1.2s
PPT Papeete 73.58 180 LR LR 13 20 31.6
comp=Z,140nm,18.7s,baz=134,slow=30
AAK Ala-Archa 74.69 328 LR LR 13 30 12.2
comp=Z,95nm,18.8s,baz=352,slow=37
SDV Santo Domingo 76.43 94 LR LR 13 29 44.5
comp=Z,44nm,20.9s,baz=299,slow=36
RAR Rarotonga 77.70 190 LR LR 13 22 08.3
comp=Z,141nm,20.1s,baz=52,slow=30
KBZ Khabaz 79.80 351 LR LR 13 36 34.3
comp=Z,123nm,18.1s,baz=4.0,slow=40
DAV Davao City (W) 81.39 270 LR LR 13 33 02.0
comp=Z,13nm,19.2s,baz=18,slow=36
CMAR Chiang Mai Arr 86.21 298 LR LR 13 39 20.5
comp=Z,44nm,18.9s,baz=345,slow=39

*IDC **09** 12:49:39.9±1.0,21°.35N×103°.26E,h0km,mb3.8/8, mbtmp3.8/9,ML3.6/1,MS3.1/2,Error ellipse: s-maj=22.1km s-min=17.7km az=74.0*
*PLV **09** 12:49:39.1±1.4,21°.39N×103°.30E,h12km±9km,ML3.9*
ISC 09 12:49:43.8±0.7,21°.51N±0°.05×103°.04E±0°.06,h10km,n24, σ1s99/20,mb3.9/9,Vietnam

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBV	**Dienbien**	**0.12**	**188**	*i* Pg		**Pg**		**12 49 45.0**	**-1.7**
DBV				IAML				12 49 48.9	
comp=E,32μm,0.4s									
DBV				*e*Sg		**Sg**		**12 49 49.0**	**+0.2**
DBV				IAML				12 49 49.2	
comp=N,63μm,0.3s									
MLAV	**Muong La stati**	**0.54**	**11**	*i* Pg		Pg		12 49 52.1	-2.2
MLAV				*e*Sg		**Sg**		**12 50 02.2**	**+0.8**
MLVB	**It Ong**	**0.92**	**90**	*i* Pg		Pg		12 49 52.1	-9.4
MLVB				IAML				12 50 03.9	
comp=N,7μm,0.4s									
MLVB				IAML				12 50 04.2	
comp=E,11μm,0.6s									
SPV	**Sa-pa**	**1.11**	**41**	*e*Pg		Pb		12 50 01.6	-3.5
MCVV	**Moc Chau**	**1.66**	**115**	*e*Pg		Pn		12 50 06.0	-6.9
HGVB	**Ha Giang**	**2.24**	**53**	*e*Pg		**Pn**		**12 50 19.9**	**-1.0**
HGVB				*e*Pg		Pb		12 50 20.1	-4.3
HGVB				*e*Sg		**Sn**		**12 50 47.9**	**-0.8**
HGVB				*e*Sg		**Sb**		**12 50 48.9**	**-3.3**
HGVB				IAML				12 50 50.4	
comp=N,608nm,0.6s									
HGVB				IAML				12 50 50.4	
comp=N,608nm,0.6s									
HGVB				IAML				12 50 55.0	
comp=E,715nm,0.7s									
HGVB				IAML				12 50 55.0	
comp=E,715nm,0.7s									
HBVN	**Hoa-Binh**	**2.26**	**107**	*e*Pg		Pn		12 50 17.7	-3.5
HBVN				IAML				12 50 55.1	
comp=E,1μm,0.3s									
BGV	**Bac-Giang**	**2.98**	**93**	*e*Pg		**Pn**		**12 50 31.6**	**+0.6**
THV	**Thanh Hoa**	**3.05**	**122**	*e*Pg		**Pn**		**12 50 32.0**	**0.0**
CBVB	**Cao Bang**	**3.14**	**68**	*e*Pg		**Pn**		**12 50 37.0**	**+3.7**
CBVB				IAML				12 51 25.3	
comp=N,276nm,0.8s									
CBVB				IAML				12 51 26.1	
comp=E,283nm,0.5s									
PLV	**Phu-Lien**	**3.42**	**101**	*e*Pg		**Pn**		**12 50 39.3**	**+2.2**
LSVB	**Lang Son stati**	**3.46**	**84**	*e*Pn		Pn		12 50 32.8	-5.0
LSVB				IAML				12 51 32.0	
comp=N,360nm,0.8s									
CMAR	**Chiang Mai Arr**	**4.91**	**233**	Pn		**Pn**		**12 50 56.8**	**-0.9**
comp=N,0.6nm,0.3s,baz=51,slow=13,SNR=14									
CMAR				Pg		**Pb**		**12 51 12.5**	**+2.7**
comp=N,1.6nm,0.3s,baz=49,slow=17,SNR=24									
CMAR				Lg		Lg		12 52 17.1	
comp=N,0.2nm,0.3s,baz=40,slow=14,SNR=5.3									
CMAR				LR		LR		12 53 22.2	
comp=N,109nm,18.4s,baz=70,slow=45									
comp=N,2.3nm,0.5s									
WMQ	**Urumqi**	**25.65**	**334**	*e*P		**P**		**12 55 15.7**	**+2.0**
DAV	**Davao City (W)**	**26.07**	**120**	LR		LR		13 05 34.2	
comp=N,62nm,21.7s,baz=1.5,slow=37									
KSH	**Kashi**	**29.26**	**314**	P		**P**		**12 55 49.7**	**+3.5**
KSH				pmax		pmax			
comp=Z,3.0nm,1.1s									
MKAR	**Makanchi Array**	**30.33**	**331**	P		**P**		**12 55 56.0**	**+0.5**
comp=Z,1.4nm,0.8s,baz=132,slow=9.7,SNR=9.3									
comp=Z,1.4nm,0.8s									
KURBB	**Kurchatov Arra**	**34.85**	**332**	P		**P**		**12 56 35.3**	**+0.4**
comp=Z,1.0nm,0.8s,baz=125,slow=10,SNR=5.8									
comp=Z,1.0nm,0.8s									
ZALV	**Zalesovo Beam**	**35.23**	**341**	P		**P**		**12 56 38.3**	**+0.1**
comp=Z,1.4nm,0.6s,baz=142,slow=7.8,SNR=7.7									
comp=Z,1.4nm,0.6s									
BVAR	**Borovoye Array**	**40.18**	**330**	P		**P**		**12 57 17.9**	**-2.1**
comp=Z,0.5nm,0.7s,baz=111,slow=7.9,SNR=2.6									
comp=Z,0.5nm,0.7s									
GEYT	**Alibeck**	**41.89**	**303**	P		**P**		**12 57 33.5**	**-0.9**
comp=Z,2.6nm,0.6s,baz=104,slow=12,SNR=5.1									
comp=Z,2.6nm,0.6s									
WRA	**Warramunga Arr**	**51.32**	**141**	P		P		12 58 43.8	-4.7
comp=Z,1.6nm,0.9s,baz=326,slow=8.1,SNR=6.8									
comp=Z,1.6nm,0.9s									
ASAR	**Alice Springs**	**54.02**	**144**	P		P		12 59 04.7	-3.8
comp=Z,2.6nm,0.8s,baz=330,slow=6.4,SNR=6.3									
comp=Z,2.6nm,0.8s									
AKASG	**Malin Array Be**	**63.49**	**317**	P		**P**		**13 00 12.4**	**-1.6**
comp=Z,0.5nm,0.5s,baz=77,slow=6.1,SNR=2.9									
comp=Z,0.5nm,0.5s									

IDC 09 12:52:17.8±4.1,17°.73S×179°.57E,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=178.4km s-min=32.6km az=140.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.04**	**240**	P		P	P	12 59 30.4	+0.8
0.5nm,0.3s,baz=97,slow=8.1,SNR=3.1									
0.5nm,0.3s									
WRA	**Warramunga Arr**	**42.77**	**260**	P		P	P	13 00 17.1	-0.3
0.6nm,0.6s,baz=96,slow=6.9,SNR=11									
0.6nm,0.6s									
ASAR	**Alice Springs**	**42.99**	**254**	P		P	P	13 00 18.6	-0.6
5.8nm,0.6s,baz=90,slow=7.8,SNR=192									
5.8nm,0.6s									
ILAR	**Eielson Array**	**86.16**	**14**	P		P	P	13 05 00.5	+0.1
0.2nm,0.5s,baz=229,slow=4.8,SNR=8.2									
0.2nm,0.5s									

HEL 09 12:54:03.7±0.2,67°.77N×33°.80E,h0km,ML1.6, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.35**	**68**	PG		Pg		12 54 10.1	-0.3
LVZ				SG		Sg		12 54 10.5	-4.3
VRF	**Varrio**	**1.59**	**271**	PG		Pn		12 54 32.4	-0.8
baz=85									
VRF				MSG				12 54 51.4	
comp=Z,4.9nm,0.2s									
VRF				SN		Sn		12 54 53.2	-1.2
RAJF	**Raja-Jooseppi**	**2.17**	**292**	PG		Pn		12 54 42.4	+1.3
RAJF				SG		Sn		12 55 09.8	+1.2
OLKF	**Oulanka, Finla**	**2.26**	**232**	PB		Pn		12 54 42.4	+0.2
baz=50									
OLKF				MSG				12 55 10.6	
comp=Z,2.4nm,0.2s									
OLKF				SB		Sn		12 55 10.7	0.0
KU6	**Riekki**	**2.33**	**223**	PB		Pn		12 54 42.7	-0.6
KU6				SN		Sn		12 55 11.8	-0.8
KU6				MSG				12 55 12.6	
comp=Z,2.0nm,0.2s									
MSF	**Maaselka**	**2.65**	**227**	PB		Pn		12 54 48.4	+0.8
MSF				SB		Sn		12 55 21.5	+1.1
SGF	**Sodankyl**	**2.80**	**267**	PN		Pn		12 54 48.1	-1.6
SGF				SG		Sb		12 55 29.5	+0.1
KMNF	**Kaamanen**	**2.87**	**302**	PN		Pn		12 54 50.7	+0.1
KMNF				SB		Sn		12 55 28.0	+2.3
KEV	**Kevo**	**3.17**	**312**	PB		Pn		12 54 55.8	+1.0
KEV				SB		Sn		12 55 34.9	+1.6
RANF	**Ranua**	**3.28**	**241**	PG		Pb		12 55 02.5	-0.1
RANF				SB		Sb		12 55 41.1	-1.9
ARA0	**ARCESS Array S**	**3.51**	**304**	PN		Pn		12 54 59.6	+0.1
ARA0				SN		Sn		12 55 41.7	+0.1
KLF	**Kolari**	**3.82**	**266**	PG		Pb		12 55 12.2	+0.4
KLF				SG		Sg		12 56 02.7	-3.5
HEF	**Hetta**	**3.85**	**284**	SG		Sg		12 56 03.6	-3.8
TOF	**Tornio**	**4.10**	**250**	SN		Sn		12 55 54.8	-1.2
KTK1	**Kautokeino**	**4.10**	**293**	SG		Sb		12 56 10.7	+4.0
OUL	**Oulu**	**4.16**	**233**	PB		Pb		12 55 13.9	-3.8
OUL				SG		Sb		12 56 12.4	+3.9
OBF4	**Vikkela, Lumij**	**4.59**	**234**	PG		Pb		12 55 28.0	+2.9

*NEIC **09** 12:54:05.4±1.7,2°.23S±0°.03×99°.55E±0°.09,h26km±7km, mb4.2/13,Error ellipse: s-maj=13.6km s-min=3.9km az=98.0*
*IDC **09** 12:54:07.4±1.3,1°.37S×100°.29E,h0km,mb3.6/7, mbtmp3.6/8,ML4.1/1, Error ellipse: s-maj=62.1km s-min=20.7km az=60.0*
ISC 09 12:54:06.2±0.7,2°.20S±0°.08×99°.59E±0°.10,h35km,n46, σ1s35/32,mb4.0/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKNI	**Bangkinang**	**2.90**	**30**	Pn		**Pn**		**12 54 49.3**	**-0.6**
MNAI	**Manna**	**3.99**	**123**	Pn		**Pn**		**12 55 04.9**	**0.0**
GSI	**Gunungsitoli**	**4.02**	**330**			**Pn**		**12 55 06.6**	**+1.2**
RPSI	**Rantau Prapat**	**4.91**	**352**	Pn		**Pn**		**12 55 15.8**	**-1.8**
MYKOM	**Kota Tinggi**	**5.82**	**47**	Pn		**Pn**		**12 55 31.6**	**+1.5**
IPM	**Ipoh**	**6.79**	**12**	Pn		**Pn**		**12 55 43.6**	**+0.1**
KULM	**Kulim**	**7.52**	**8**	Pn		**Pn**		**12 55 53.8**	**+0.4**
COCO	**West Island**	**10.29**	**195**	Pn		**Pn**		**12 56 30.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**20.54**	**358**	P		**P**		**12 58 40.8**	**-1.0**
0.2nm,0.3s,baz=185,slow=8.6,SNR=1.8									
0.6nm,0.4s									
CRAI	**Chiangrai**	**22.31**	**2**	P		**P**		**12 59 02.1**	**+1.3**
SOEI	**Soe**	**25.65**	**108**	P		**P**		**12 59 33.7**	**+0.7**
H08S2	**Diego Garcia H**	**27.52**	**258**	T		T		13 28 41.1	
baz=79,slow=75,SNR=46									
H08S3	**Diego Garcia H**	**27.52**	**258**	T		T		13 28 44.4	
baz=79,slow=75,SNR=46									
H08S1	**Diego Garcia H**	**27.54**	**258**	T		T		13 28 45.6	
baz=79,slow=75,SNR=20									
FITZ	**Fitzroy Crossi**	**30.04**	**123**	P		**P**		**13 00 12.1**	**-0.1**
H01W3	**Cape Leeuwin H**	**35.22**	**159**	T		T		13 38 14.4	
baz=335									
H01W2	**Cape Leeuwin H**	**35.24**	**159**	T		T		13 38 21.5	
baz=335									
H01W1	**Cape Leeuwin H**	**35.24**	**159**	T		T		13 38 21.7	
baz=335									
WB0	**Warramunga Arr**	**38.23**	**120**	P		**P**		**13 01 23.6**	**+0.5**
WB0				IAmb		IAmb		13 01 42.6	
comp=Z,6.7nm,1.2s									
WRA	**Warramunga Arr**	**38.25**	**120**	P		P		13 01 28.1	+4.7
comp=Z,0.4nm,0.8s,baz=303,slow=9.1,SNR=2.4									
comp=Z,0.4nm,0.8s									
WRAB	**Tennant Creek**	**38.25**	**120**	P		**P**		**13 01 22.5**	**-0.8**
WRAB				IAmb		IAmb		13 01 25.2	
comp=Z,7.1nm,1.4s									
WB2	**Warramunga Arr**	**38.26**	**120**	P		**P**		**13 01 22.3**	**-1.1**
WB2				IAmb		IAmb		13 01 22.9	
comp=Z,11nm,1.4s									
WR0	**Warramunga Arr**	**38.43**	**120**	P		**P**		**13 01 24.3**	**-0.6**
WR0				IAmb		IAmb		13 01 32.9	

	comp=Z,6.3nm,1.2s							
AS31	**Alice Springs**	**39.47**	**126**	P	**P**	**13 01 34.7**	**+1.2**	
ASAR	**Alice Springs**	**39.47**	**126**	P	**P**	**13 01 33.5**	**-0.1**	
ASAR	**Alice Springs**	**39.47**	**126**	P	P	13 01 40.0	+6.5	
	comp=Z,0.5nm,0.9s,baz=310,slow=8.0,SNR=4.3							
	comp=Z,0.5nm,0.9s							
JMN	**Monobe**	**48.17**	**39**	P	**P**	**13 02 43.1**	**-0.2**	
SONM	**Songino Array**	**50.19**	**6**	P	**P**	**13 02 56.4**	**-2.1**	
	comp=Z,0.4nm,0.5s,baz=181,slow=7.7,SNR=1.6							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**51.11**	**345**	P	**P**	**13 03 07.3**	**+1.8**	
	comp=Z,0.8nm,0.5s,baz=148,slow=7.7,SNR=11							
	comp=Z,0.8nm,0.5s							
MK31	**Makanchi Array**	**51.12**	**345**	P	**P**	**13 03 07.0**	**+1.6**	
MK31				IAmb	IAmb	13 03 16.5		
	comp=Z,0.9nm,0.8s							
USA0B	**Ussuriysk Arra**	**54.53**	**28**	P	**P**	**13 03 30.7**	**0.0**	
USRK	**Ussuriysk Ar.**	**54.53**	**28**	P	**P**	**13 03 29.0**	**-1.7**	
KURBB	**Kurchatov Arra**	**55.63**	**344**	P	**P**	**13 03 40.6**	**+2.1**	
	comp=Z,0.3nm,0.6s,baz=159,slow=7.3,SNR=2.3							
	comp=Z,0.3nm,0.6s							
KURK	**Kurchatov**	**55.69**	**344**	P	**P**	**13 03 39.8**	**+0.8**	
KURK				IAmb	IAmb	13 03 54.9		
	comp=Z,1.9nm,0.9s							
ZAA0	**Zalesovo Array**	**57.29**	**350**	P	**P**	**13 03 50.3**	**0.0**	
ZAA0				IAmb	IAmb	13 04 06.0		
	comp=Z,2.7nm,0.9s							
ZALV	**Zalesovo Beam**	**57.29**	**350**	P	**P**	**13 03 49.9**	**-0.4**	
ZALV	**Zalesovo Beam**	**57.29**	**350**	P	**P**	**13 03 53.0**	**+2.7**	
	comp=Z,0.8nm,0.5s,baz=173,slow=7.8,SNR=4.6							
	comp=Z,0.8nm,0.5s							
BVAR	**Borovoye Array**	**60.23**	**340**	P	**P**	**13 04 13.8**	**+3.0**	
	comp=Z,0.4nm,0.5s,baz=127,slow=9.2,SNR=2.5							
	comp=Z,0.4nm,0.5s							
H04N2	**CROZET ISLANDS**	**60.39**	**216**	T	T	14 09 55.6		
	baz=58,slow=75							
H04N1	**CROZET ISLANDS**	**60.40**	**216**	T	T	14 09 57.7		
	baz=58,slow=75							
H04N3	**CROZET ISLANDS**	**60.41**	**216**	T	T	14 09 56.9		
	baz=58,slow=75							
H04S1	**CROZET ISLANDS**	**60.68**	**216**	T	T	14 10 14.8		
	baz=57,slow=75,SNR=7.7							
H04S3	**CROZET ISLANDS**	**60.69**	**216**	T	T	14 10 14.4		
	baz=57,slow=75,SNR=4.9							
H04S2	**CROZET ISLANDS**	**60.70**	**216**	T	T	14 10 14.2		
	baz=57,slow=75,SNR=4.9							
CPUP	**Villa Florida**	**143.91**	**217**	PKPbc	**PKiKP**	**13 13 43.8**	**+1.5**	
	comp=Z,1.2nm,0.7s,baz=236,slow=1.2,SNR=3.9							
TXAR	**Lajitas Array**	**145.11**	**37**	PKP	**PKiKP**	**13 13 44.4**	**-0.4**	
	comp=Z,0.3nm,0.7s,baz=270,slow=0.8,SNR=2.5							

HEL 09 12:54:47.9±0.1, 63.65N×26.09E, h0km, ML1.0,
Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.82**	**108**	PG	Pg	12 55 02.6	-0.9
OUF	**Merijarvi**	**0.93**	**321**	PG	Pg	12 55 04.3	-1.5
OUF				MSG		12 55 16.7	
	comp=Z,1.4nm,0.2s						
SUF	**Sumiainen**	**0.94**	**178**	PB	Pg	12 55 05.6	-0.2
SUF				MSG		12 55 16.7	
	comp=Z,0.9nm,0.2s						
OBF0	**Syolatti, Pyha**	**1.17**	**317**	PB	Pg	12 55 09.5	-0.9
OBF0				MSG		12 55 23.4	
	comp=Z,1.2nm,0.2s						
OBF0				SB	Sg	12 55 25.4	-0.1
OBF4	**Vikkela, Lumij**	**1.24**	**340**	PG	Pg	12 55 10.5	-1.2
OBF4				MSG		12 55 25.5	
	comp=Z,1.2nm,0.2s						
OUL	**Oulu**	**1.44**	**357**	SN	Sn	12 55 35.0	+0.2
KAF	**Kangasniemi**	**1.55**	**176**	PN	Pn	12 55 16.9	+0.2
	baz=360						
KAF				MSG		12 55 34.3	
	comp=Z,1.6nm,0.2s						
KEF	**Keuruu**	**1.59**	**201**	PG	Pn	12 55 16.4	-0.9
KEF				MSG		12 55 35.6	
	comp=Z,1.3nm,0.2s						
KEF				SN	Sn	12 55 37.5	-1.0
VAF	**Ylistaro**	**1.66**	**250**	PG	Pn	12 55 17.9	-0.3
VAF				MSG		12 55 37.4	
	comp=Z,1.0nm,0.2s						
VAF				SN	Sn	12 55 39.5	-0.6
FIA0	**FINESS Array S**	**2.22**	**180**	MSG		12 55 53.5	
	comp=Z,1.1nm,0.2s						
FIA0				SG	Sb	12 55 56.0	-0.8
BURU	**Burvik**	**2.27**	**296**	PG	Pn	12 55 28.0	+1.4
BURU				SG	Sb	12 55 58.1	-0.1
UMAU	**Umeaa**	**2.41**	**278**	PG	Pb	12 55 30.6	-1.5
UMAU				SG	Sb	12 56 01.7	-0.7
KPF	**Kankaanpaa**	**2.60**	**227**	SG	Sb	12 56 07.2	-0.4
RNF	**Rovaniemi**	**2.97**	**359**	PN	Pn	12 55 35.6	-0.6

*JMA **09** 12:58:44.4±0.3, 44°N±1°×14°8E±°, h0km, MV3.9/31, E*
OFF HOKKAIDO
*SKHL **09** 12:58:45.9±0.1, 43.80N×148.40E, h63km±5km, mb4.4/3*
ISC 09 12:58:41.8±2.9, 43.68N±0.09×148.7E±0.2, h40km, n18,
σ188/31, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.37**	**279**	*i* P	**Pn**	**12 59 05.2**	**+0.9**
SHO				AMB	AMB	12 59 05.9	
	70nm,0.2s						
SHO				*e*S	**Sn**	**12 59 19.6**	**-1.6**
SHO				A	A	12 59 21.7	
	850nm,0.5s						
SHO				A	A	12 59 21.7	
	420nm,0.5s						
KUR	**Kuril'sk**	**1.67**	**339**	*e*P	**Pn**	**12 59 09.0**	**+0.6**
KUR				AMB	AMB	12 59 09.8	
	210nm,0.5s						
KUR				*i* S	**Sn**	**12 59 26.4**	**-2.1**
KUR				A	A	12 59 28.7	
	160nm,0.2s						
KUR				A	A	12 59 28.7	
	120nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.08**	**281**	*i* P	**Pn**	**12 59 14.8**	**+0.6**
YUK				AMB	AMB	12 59 15.5	
	90nm,0.2s						
YUK				*e*S	**Sn**	**12 59 36.5**	**-2.4**
YUK				A	A	12 59 43.4	
	490nm,0.5s						
YUK				A	A	12 59 43.4	
	590nm,0.5s						
NEM2	**Nemuro 2**	**2.17**	**263**	P	**Pn**	**12 59 16.3**	**+0.9**
NEM2				*e*S	**Sn**	**12 59 39.1**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.19**	**263**	*e*P	**Pn**	**12 59 16.4**	**+0.9**
NMR				*e*S	**Sn**	**12 59 39.2**	**-2.1**
JRA	**Rausu**	**2.60**	**277**	*e*P	**Pn**	**12 59 22.9**	**+1.6**
JRA				*e*S	**Sn**	**12 59 50.5**	**-1.2**
JKHN	**Kushirohamanak**	**2.65**	**258**	*e*P	**Pn**	**12 59 23.6**	**+1.7**
JKHN				*e*S	**Sn**	**12 59 51.8**	**-0.9**
JNSB	**Nemuroshibetsu**	**2.68**	**273**	*e*P	**Pn**	**12 59 24.0**	**+1.7**
JNSB				*e*S	**Sn**	**12 59 53.2**	**-0.4**
AKK	**Akkeshi**	**2.89**	**258**	*e*P	**Pn**	**12 59 27.0**	**+1.7**
JAK	**Akkeshi**	**3.00**	**258**	*e*P	**Pn**	**12 59 28.1**	**+1.4**
JAK				*e*S	**Sn**	**12 59 59.8**	**-1.7**
JTKR	**Abashiri--Toko**	**3.48**	**276**	*e*P	**Pn**	**12 59 35.3**	**+2.0**
JTKR				*e*S	**Sn**	**13 00 14.2**	**+0.9**
JAR	**Ashorobuto**	**3.61**	**266**	*e*P	**Pn**	**12 59 36.9**	**+1.7**
JAR				*e*S	**Sn**	**13 00 16.2**	**-0.2**
JCH	**Churui**	**4.05**	**257**	*e*P	**Pn**	**12 59 42.7**	**+1.5**
JCH				*e*S	**Sn**	**13 00 25.7**	**-1.6**
JKK2	**Kamakawa 2**	**4.32**	**275**	*e*P	**Pn**	**12 59 46.9**	**+2.0**
JNBK	**Urakawa-nobuka**	**4.58**	**254**	*e*P	**Pn**	**12 59 50.0**	**+1.5**
JNBK				*e*S	**Sn**	**13 00 38.6**	**-1.9**
JEW	**Eniwo**	**5.36**	**264**	*e*P	**Pn**	**13 00 02.3**	**+3.1**
JOT	**Ohata**	**6.10**	**251**	*e*P	**Pn**	**13 00 10.8**	**+1.5**
JANG	**Nango**	**6.29**	**241**	*e*S	**Sn**	**13 01 17.8**	**-4.7**

*IDC **09** 13:19:46.5±1.6, 3.36S×151.07E, h0km, mb3.7/9,*
mbtmp3.7/9, MS3.2/1, Error ellipse: s-maj=55.1km
s-min=24.9km az=116.0
ISC 09 13:19:51.8±1.5, 3.34S±0.3×151.1E±0.3, h35km, n16,
σ080/9, mb3.6/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.23**	**195**	LR	LR	13 29 54.7	
	comp=Z,69nm,19.0s,baz=64,slow=35						
WRA	**Warramunga Arr**	**23.15**	**223**	P	**P**	**13 24 54.7**	**-0.6**
	1.6nm,0.8s,baz=46,slow=10.0,SNR=11						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**26.08**	**218**	P	**P**	**13 25 23.1**	**+0.7**
	0.4nm,0.8s,baz=52,slow=9.1,SNR=4.2						
	0.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.66**	**35**	T	T	13 52 40.4	
	baz=217,slow=74,SNR=65						
H11S2	**WAKE ISLAND Hy**	**26.67**	**35**	T	T	13 52 40.9	
	baz=217,slow=74,SNR=36						
H11S1	**WAKE ISLAND Hy**	**26.68**	**35**	T	T	13 52 41.9	
	baz=217,slow=74,SNR=23						
H11N1	**WAKE ISLAND Hy**	**27.75**	**34**	T	T	13 54 00.7	
	baz=218,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**27.77**	**34**	T	T	13 54 02.4	
	baz=218,slow=76,SNR=28						
H11N2	**WAKE ISLAND Hy**	**27.77**	**34**	T	T	13 54 03.6	
	baz=218,slow=76,SNR=85						
CMAR	**Chiang Mai Arr**	**55.71**	**295**	P	**P**	**13 29 25.1**	**-0.2**
	0.7nm,0.4s,baz=121,slow=5.4,SNR=5.5						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**78.13**	**319**	P	**P**	**13 31 48.9**	**+1.4**
	0.3nm,0.7s,baz=104,slow=5.1,SNR=3.7						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**79.03**	**327**	P	**P**	**13 31 52.2**	**0.0**
	0.5nm,0.3s,baz=111,slow=8.0,SNR=2.5						
	0.5nm,0.3s						
ILAR	**Eielson Array**	**81.54**	**23**	P	**P**	**13 32 05.4**	**-0.1**
	0.4nm,0.7s,baz=246,slow=6.7,SNR=2.2						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**81.63**	**322**	P	**P**	**13 32 06.6**	**+0.3**
	0.5nm,0.7s,baz=91,slow=4.6,SNR=4.1						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**87.08**	**323**	P	**P**	**13 32 33.0**	**-0.9**
	1.2nm,0.7s,baz=100,slow=6.4,SNR=10						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**95.01**	**28**	P	**P**	**13 33 10.6**	**-0.1**
	0.2nm,0.7s,baz=266,slow=4.3,SNR=2.7						
	0.2nm,0.7s						

*GCMT **09** 13:28:16.0±0.5, 35.32S±0.03×106.81W±0.03, h25km±1km,*
MW4.9/65, Moment Tensor Solution. s23,c26; s65,c82;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.06±.24;
Mθθ 0.38±.22; Mϕϕ 0.67±.19; Mrθ -0.08±.38; Mϕθ -2.73±.12;
Mrϕ -0.41±.35; Best double couple: M☐2.78900×10¹⁶
NP1:ϕs 92.00000°, δ77.00000°, λ -171.00000°. Principal axes:
T 3.2770, Plg3.0000°, Azm47.0000°; N -0.9770,
Plg74.0000°, Azm148.0000°; P -2.3020, Plg16.0000°,
Azm316.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Surface-wave
location Triangular moment-rate function
IDC 09 13:28:07.5±1.2, 35.68S×106.25W, h0km, mb3.8/4,
mbtmp3.8/4, MS3.9/9 Error ellipse: s-maj=137.3km
s-min=29.6km az=92.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.92**	**342**	LR	LR	13 32 38.7	
	comp=Z,808nm,19.7s,baz=144,slow=30						
PLCA	**Paso Flores**	**28.37**	**111**	LR	LR	13 43 09.2	
	comp=Z,78nm,21.8s,baz=281,slow=32						
LVC	**Limon Verde**	**34.91**	**78**	LR	LR	13 45 09.8	
	comp=Z,154nm,21.2s,baz=248,slow=29						
NNA	**Nana**	**35.53**	**56**	LR	LR	13 45 49.4	
	comp=Z,404nm,21.4s,baz=236,slow=30						
ATAH	**Atahualpa**	**38.19**	**49**	LR		13 47 34.8	
	comp=Z,202nm,19.4s,baz=231,slow=31						
PMSA	**Palmer Station**	**38.46**	**152**	LR	LR	13 47 30.7	
	comp=Z,246nm,18.4s,baz=266,slow=30						
QSPA	**South Pole Qui**	**54.53**	**180**	P	P	13 37 35.8	-1.2
	1.4nm,0.9s,baz=27,slow=8.3,SNR=3.6						
QSPA				LR	LR	13 57 54.5	
	comp=Z,78nm,18.4s,baz=134,slow=33						
	1.4nm,0.9s						
URZ	**Urewera**	**59.59**	**243**	LR	LR	13 57 58.9	
	comp=Z,140nm,20.4s,baz=123,slow=30						
RPZ	**Rata Peaks**	**61.65**	**235**	LR	LR	13 58 16.4	
	comp=Z,149nm,21.5s,baz=114,slow=29						
TXAR	**Lajitas Array**	**64.71**	**2**	P	P	13 38 46.6	-0.8
	0.3nm,0.7s,baz=185,slow=8.2,SNR=4.5						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**74.58**	**350**	P	P	13 39 48.1	-0.2
	0.7nm,0.7s,baz=186,slow=8.2,SNR=3.5						
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**78.13**	**358**	P	P	13 40 08.7	+0.3
	1.7nm,1.0s,baz=172,slow=4.5,SNR=9.8						
	1.7nm,1.0s						
AKASG	**Malin Array Be**	**144.81**	**51**	PKP	PKPdf	13 47 47.6	+1.8
	0.5nm,0.5s,baz=272,slow=2.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	**151.89**	**239**	PKPbc	PKiKP	13 48 06.3	+1.1
	0.3nm,0.3s,baz=160,slow=2.9,SNR=1.9						
SONM	**Songino Array**	**152.99**	**307**	PKPbc	PKPbc	13 48 05.8	-0.8
	1.2nm,0.8s,baz=97,slow=1.4,SNR=6.5						

*UPA **09** 13:45:13.2±2.0, 8.37N×83.11W, h14km±6km, MD3.7,*
MW3.7
*UCR **09** 13:45:13.6±0.9, 8.35N×83.03W, h14km±5km, MW3.6*
*CATAC **09** 13:45:14.8±0.5, 8.54N×83.01W, h5km±4km, ML2.7*
ISC 09 13:45:14.1±1.0, 8.41N±0.03×83.03W±0.03, h18km±3km,
n28, σ095/40, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.06**	**91**	*e*P	**Pg**	**13 45 16.7**	**-0.8**
CCOL				*e*S	**Sg**	**13 45 20.3**	**+0.6**
CCOL	**Caracol de Cor**	**0.06**	**91**	*i* P	**Pg**	**13 45 18.1**	**+0.7**
CCOL				*i* S	**Sg**	**13 45 20.7**	**+1.0**
CCOL				IAML		13 45 25.3	
	comp=Z,15μm,1.0s						
CDITO	**Canoas**	**0.23**	**44**	*e*P	**Pg**	**13 45 19.6**	**+0.1**
CDITO	**Canoas**	**0.23**	**44**	*i* P	**Pg**	**13 45 18.1**	**-1.4**
CDITO				IAML		13 45 33.9	
	comp=Z,1μm,1.0s						
FITO	**Golfito**	**0.25**	**331**	*e*P	**Pg**	**13 45 19.1**	**-0.8**
PTPM	**Petroterminale**	**0.25**	**143**	*i* P	**Pg**	**13 45 18.9**	**-1.0**
PTPM				*e*S	**Sb**	**13 45 24.4**	**+0.3**
EDAD	**Golfito**	**0.28**	**331**	*e*P	**Pg**	**13 45 19.6**	**-0.8**
PIRO	**Carate, Puerto**	**0.30**	**269**	*e*P	**Pb**	**13 45 20.3**	**-0.7**
PIRO	**Carate, Puerto**	**0.30**	**269**	*i* P	**Pb**	**13 45 21.9**	**+0.9**
PIRO				*i* S	**Sb**	**13 45 27.1**	**+1.4**
PIRO				IAML		13 45 35.8	
	comp=Z,2μm,1.0s						
MLIR3	**Monte Lirio, C**	**0.43**	**28**	*e*P	**Pb**	**13 45 23.7**	**+0.3**
MLIR3				*e*S	**Sb**	**13 45 32.1**	**+2.5**
BRU2	**Volcan**	**0.51**	**41**	*i* P	**Pb**	**13 45 24.9**	**+0.2**
BRU2				*e*S	**Sn**	**13 45 35.8**	**+0.7**
BRU2	**Volcan**	**0.51**	**41**	*e*P	**Pb**	**13 45 24.9**	**+0.2**
BRU2	**Volcan**	**0.51**	**41**	*i* P	**Pg**	**13 45 22.7**	**-1.8**
BRU2				IAML		13 45 40.3	
	comp=Z,400nm,1.0s						
DVD	**David**	**0.58**	**87**	*e*P	**Pn**	**13 45 27.4**	**0.0**
DVD				*e*S	**Sn**	**13 45 35.3**	**-1.1**
BC3P	**Paso Ancho**	**0.58**	**46**	*e*P	**Pn**	**13 45 27.8**	**+0.1**
BC3P				*e*S	**Sb**	**13 45 35.5**	**+1.6**
BCO2	**Palmira**	**0.58**	**58**	*e*P	**Pb**	**13 45 26.0**	**0.0**
BCO2				*i* S	**Sn**	**13 45 37.7**	**+0.8**
PEDE3	**Pedregal, Chir**	**0.60**	**92**	*e*P	**Pn**	**13 45 27.1**	**-0.7**
LOCO3	**Loma Colorada,**	**0.61**	**90**	*e*P	**Pn**	**13 45 27.6**	**-0.3**
LOCO3				*e*S	**Sn**	**13 45 36.7**	**-0.6**
POTG	**Potrero Grande**	**0.65**	**352**	*e*P	**Pg**	**13 45 26.9**	**0.0**
POTG	**Potrero Grande**	**0.65**	**352**	*i* P	**Pg**	**13 45 24.9**	**-2.1**
POTG				IAML		13 45 43.9	
	comp=Z,540nm,1.0s						
PLAN	**Los Planes de**	**0.69**	**292**	*i* P	**Pb**	**13 45 28.1**	**+0.4**
PLAN				IAML		13 45 42.8	
	comp=Z,750nm,1.0s						
LNBQ3	**Los Naranjos,**	**0.70**	**57**	*e*P	**Pg**	**13 45 27.5**	**-0.4**
SRBA	**San Rafael, Bu**	**0.88**	**338**	*i* P	**Pb**	**13 45 29.8**	**-1.2**
SRBA				IAML		13 45 46.8	
	comp=Z,140nm,1.0s						
CHGR2	**Aguacate**	**1.02**	**59**	*e*P	**Pb**	**13 45 32.6**	**-0.8**
CHGR2				*e*S	**Sg**	**13 45 47.9**	**+0.4**
BUS1	**Rivas**	**1.34**	**328**	*e*P	**Pn**	**13 45 38.0**	**-0.4**
CDM	**Cerro de Muert**	**1.35**	**328**	*e*P	**Pn**	**13 45 38.2**	**-0.3**
CDM	**Cerro de Muert**	**1.35**	**328**	*i* P	**Pn**	**13 45 38.2**	**-0.3**
CDM				*i* S	**Sb**	**13 45 55.7**	**-0.6**
CDM				IAML		13 46 06.1	
	comp=Z,95nm,1.0s						
RIMA	**Rio Macho**	**1.58**	**329**	*i* P	**Pn**	**13 45 41.7**	**+0.2**
RIMA				IAML		13 46 12.8	
	comp=Z,48nm,1.0s						

*IDC **09** 13:56:24.3±1.4, 18.84N×104.59W, h0km, mb3.5/4,*
mbtmp3.5/6, ML3.5/2, Error ellipse: s-maj=32.1km
s-min=23.5km az=56.0
*MEX **09** 13:56:28.2±1.1, 18.84N×104.88W, h17km±10km, MD4.5*
ISC 09 13:56:26.0±1.5, 18.90N±0.05×104.77W±0.05, h9km±8km,
n60, σ261/93, mb3.4/4, 1D, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIHU	**Emiliano Zapat**	**0.36**	**5**	*e*P	**Pg**	**13 56 33.9**	**+0.8**
CIHU				*i* S	**Sg**	**13 56 39.2**	**+1.2**
CJM	**Chamela**	**0.65**	**337**	*i* P	**Pg**	**13 56 38.8**	**+0.3**
CJM				*e*S	**Sg**	**13 56 48.0**	**+1.0**
CDAR	**Ciudad de Arme**	**0.72**	**87**	*i* P	**Pg**	**13 56 40.2**	**+0.3**
CDAR				*i* S	**Sb**	**13 56 50.6**	**-0.1**
CEGR	**Campo Tres**	**0.99**	**61**	*e*P	**Pg**	**13 56 44.9**	**-0.2**
CEGR				*i* S	**Sn**	**13 56 58.8**	**-1.8**
COIG	**Colima**	**1.06**	**75**	*i* P	**Pg**	**13 56 46.1**	**-0.3**
COIG				*e*S	**Sn**	**13 57 01.1**	**-1.0**
MNGA	**Volcan de Coli**	**1.22**	**63**	*i* P	**Pb**	**13 56 49.4**	**-0.1**
MNGA				*e*S	**Sn**	**13 57 05.4**	**-1.1**
SOMAC	**Volcano de Col**	**1.24**	**60**	*i* P	**Pb**	**13 56 49.6**	**-0.3**
SOMAC				*i* S	**Sb**	**13 57 05.3**	**-0.9**
EZ5V		**1.25**	**62**	*i* P	**Pb**	**13 56 49.9**	**0.0**
EZ5V				*e*S	**Sn**	**13 57 07.6**	**+0.7**
JUBC	**Volcan de Coli**	**1.29**	**62**	*i* P	**Pb**	**13 56 50.8**	**+0.2**
JUBC				*e*S	**Sn**	**13 57 06.8**	**-1.3**
MMIG	**Aquila**	**1.48**	**114**	*e*P	**Pn**	**13 56 51.3**	**-1.6**
MMIG				*e*S	**Sb**	**13 57 11.2**	**-1.6**
ESTA	**Talpa de Allen**	**1.48**	**357**	*e*P	**Pn**	**13 56 52.1**	**-0.9**
ESTA				*e*S	**Sg**	**13 57 10.4**	**-3.4**
ANIG	**Ahuacatlan**	**2.15**	**6**	*e*P	**Pn**	**13 57 03.9**	**+1.7**
ANIG				*e*S	**Sn**	**13 57 29.1**	**-0.1**
UON	**La Union**	**2.96**	**108**	*i* P	**Pn**	**13 57 12.3**	**-0.9**
UON				*i* S	**Sn**	**13 57 45.5**	**-3.3**
MOIG	**Morelia**	**3.47**	**77**	*e*P	**Pb**	**13 57 27.9**	**0.0**
MOIG				*e*S	**Sn**	**13 58 02.8**	**+0.9**
AAIG	**Aguscalientes**	**3.79**	**36**	*e*P	**Pn**	**13 57 24.6**	**-0.3**
AAIG				*e*S	**Sn**	**13 58 10.4**	**+0.8**
ARIG	**Puente Sto Nin**	**4.24**	**98**	*e*P	**Pn**	**13 57 32.5**	**+1.6**
ARIG				*e*S	**Sb**	**13 58 28.4**	**-3.9**
ZAIG	**Zacatecas**	**4.37**	**28**	*e*P	**Pn**	**13 57 35.7**	**+2.9**
ZAIG				*e*S	**Sn**	**13 58 23.1**	**-0.9**
JRQG	**Juriquilla Cam**	**4.45**	**66**	*e*P	**Pn**	**13 57 37.0**	**+3.1**
JRQG				*e*S	**Sn**	**13 58 28.8**	**+2.8**
MAIG	**Mazatlaan**	**4.54**	**340**	*e*P	**Pn**	**13 57 36.0**	**+1.1**
MAIG				*e*S	**Sn**	**13 58 25.4**	**-2.4**
CAIG	**El Cayaco**	**4.67**	**113**	*e*P	Pn	13 57 33.2	-3.5
CAIG				*e*S	**Sn**	**13 58 30.8**	**-0.2**
ACIG	**Acambay**	**4.74**	**76**	*e*S	**Sn**	**13 58 32.7**	**-0.4**
MEIG	**Mezcala**	**4.99**	**100**	*e*P	**Pn**	**13 57 44.3**	**+3.1**
MEIG				*e*S	**Sb**	**13 58 54.3**	**+0.6**
PLIG	**Platanillo**	**5.02**	**95**	*e*P	**Pn**	**13 57 44.7**	**+3.0**
PLIG				*e*S	**Sn**	**13 58 45.2**	**+5.3**
INVM	**La Marquesa**	**5.11**	**85**	*e*P	Pn	13 57 48.4	+5.2
INVM				*e*S	**Sn**	**13 58 42.7**	**+0.2**
AOVM	**Tlapan**	**5.17**	**85**	*e*P	**Pn**	**13 57 45.0**	**+1.0**
AOVM				*e*S	**Sn**	**13 58 44.7**	**+0.6**
DAIG	**Los Arroyos**	**5.22**	**110**	*i* P	**Pn**	**13 57 43.9**	**-0.5**
DAIG				*e*S	**Sn**	**13 58 51.5**	**+6.7**
TLVM	**San Miguel Top**	**5.32**	**86**	*e*S	**Sn**	**13 58 49.3**	**+1.5**
XCVM	**Xochimilco**	**5.36**	**85**	*i* S	**Sn**	**13 58 49.9**	**+1.4**
RPIG	**Rio Verde**	**5.38**	**56**	*e*P	**Pn**	**13 57 51.3**	**+4.5**
RPIG				*e*S	**Sn**	**13 58 50.6**	**+1.7**
PTVM	**Pico Tres Padr**	**5.39**	**82**	*e*S	**Sn**	**13 58 52.8**	**+3.5**
YAIG	**Yautepec**	**5.40**	**90**	*i* P	**Pn**	**13 57 51.0**	**+4.0**
YAIG				*e*S	**Sb**	**13 58 59.1**	**-6.7**
ZUVM	**ZUMPANGO**	**5.45**	**79**	*i* S	**Sn**	**13 58 46.5**	**-4.3**
MPVM	**San Francisco**	**5.46**	**86**	*i* S	**Sn**	**13 58 52.8**	**+1.9**
DEIG	**Demacu**	**5.58**	**75**	*i* P	**Pn**	**13 57 53.5**	**+3.9**
DEIG				*e*S	**Sn**	**13 58 55.6**	**+1.6**
CRIG	**Cruz Grande**	**5.79**	**111**	*e*P	**Pn**	**13 57 53.0**	**+0.9**
CRIG				*i* S	**Sn**	**13 59 02.4**	**+3.7**
PPM	**Popocatepetl**	**5.82**	**87**	*e*P	**Pn**	**13 57 56.9**	**+3.9**
PPM				*e*S	**Sn**	**13 59 02.1**	**+1.9**
TLIG	**Tlapa**	**6.05**	**102**	*i* P	Pn	13 57 50.4	-5.4
TLIG				*i* S	**Sn**	**13 59 05.7**	**+0.4**
PDIG	**Papasquiaro**	**6.13**	**355**	*i* P	**Pn**	**13 57 54.4**	**-2.7**
PDIG				*e*S	**Sn**	**13 59 06.7**	**-0.9**
FTIG	**Fresnillo de T**	**6.38**	**98**	*e*P	**Sn**	**13 58 03.5**	**+3.1**
FTIG				*e*S	**Sn**	**13

*NEIC **09** 14:05:48.4, 18°.93N×104°.76W, h10km*
*NEIC **09** 14:05:48.4, 18°.83N×104°.65W, h18km, Moment Tensor Solution. Duration: 4s1 Moment tensor: Scale 10^17^Nm; Mrr3.97; Mθθ-2.39; Mφφ-1.57; Mrθ3.95; Mrφ2.09; Mθφ-3.09;*
Fault plane solution: M0 6.44000×10^17^ NP1: φs128.35000°, δ70.58000°, λ89.21000°. NP2: φs310.71000°, δ19.44000°, λ92.23000°. Principal axes: T 6.3678, Plg64.0000°, Azm37.0000°; N 0.1481, Plg1.0000°, Azm129.0000°; P -6.5159, Plg26.0000°, Azm219.0000°;
*BGR **09** 14:05:50.5, 20°.26N×105°.97W, h23km, mb5.5, Ms5.7*
*GCMT **09** 14:05:52.3±0.1, 19°.09N±0°.01×104°.74W±0°.01, h17km, MW5.8/163, Moment Tensor Solution. s163,c308; s159,c450; Duration: 19s9 Moment tensor: Scale 10^17^ Nm; Mrr4.20±.05; Mθθ-2.43±.04; Mφφ-1.77±.04; Mrθ3.61±.12; Mrφ2.53±.03; Mθr-2.24±.11; Best double couple: M0 6.13800×10^17^ NP1:φs124.00000°, δ67.00000°, λ84.00000°. NP2:φs319.00000°, δ24.00000°, λ104.00000°. Principal axes: T 5.9460, Plg67.0000°, Azm23.0000°; N 0.3850, Plg5.0000°, Azm127.0000°; P -6.3310, Plg22.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 09 14:05:46.9±0.6, 18°.92N±0°.03×104°.73W±0°.03, h13km±3km, n1591,σ1875/1428, mb5.6/191, MS5.4/372, 118C-35D, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIHU	**Emiliano Zapat**	**0.34**	**360**	⇓*i*P	**Pg**	**14 05 53.5**	**-0.3**
CIHU				*i* S	**Sg**	**14 05 58.4**	**-0.1**
CJM	**Chamela**	**0.65**	**333**	⇓*e*P	**Pg**	**14 05 58.5**	**-1.0**
CJM				*e*S	**Sg**	**14 06 07.6**	**-0.4**
CDAR	**Ciudad de Arme**	**0.69**	**88**	⇓*e*P	**Pg**	**14 05 60.0**	**-0.2**
CDAR				*i* S	**Sb**	**14 06 10.7**	**+0.6**
CEGR	**Campo Tres**	**0.95**	**60**	⇓*e*P	**Pg**	**14 06 04.5**	**-0.8**
CEGR				*i* S	**Sb**	**14 06 17.9**	**-0.1**
COMA	**Comala**	**1.00**	**66**	⇓*i*P	**Pb**	**14 06 05.6**	**-0.6**
COMA				*i* S	**Sn**	**14 06 21.2**	**+0.3**
COIG	**Colima**	**1.02**	**75**	⇑*e*P	**Pb**	**14 06 05.9**	**-0.6**
COIG				*e*S	**Sg**	**14 06 19.8**	**-0.2**
MNGA	**Volcan de Coli**	**1.19**	**63**	⇓*e*P	**Pb**	**14 06 09.2**	**-0.2**
MNGA				*e*S	**Sb**	**14 06 23.9**	**-0.9**
SOMAC	**Volcano de Col**	**1.20**	**60**	⇓*e*P	**Pb**	**14 06 09.4**	**-0.4**
SOMAC				*e*S	**Sb**	**14 06 24.5**	**-0.7**
EZ5V		**1.21**	**62**		**Pb**	**14 06 09.6**	**-0.1**
EZ5V		**1.21**	**62**	⇓*e*P	**Pb**	**14 06 09.6**	**-0.1**
EZ5V				*e*S	**Sb**	**14 06 25.4**	**0.0**
JUBC	**Volcan de Coli**	**1.25**	**62**	⇓*e*P	**Pn**	**14 06 10.4**	**0.0**
MMIG	**Aquila**	**1.46**	**115**		**Pn**	**14 06 10.9**	**-2.0**
MMIG					**Sn**	**14 06 31.6**	**-0.4**
MMIG	**Aquila**	**1.46**	**115**	⇑*e*P	**Pn**	**14 06 10.9**	**-2.0**
MMIG				*e*S	**Sn**	**14 06 31.6**	**-0.4**
ESTA	**Talpa de Allen**	**1.47**	**356**	⇑*e*P	**Pn**	**14 06 11.8**	**-1.5**
ESTA				*e*S	**Sn**	**14 06 31.5**	**-0.9**
PUVA	**Puert Vallarta**	**1.76**	**345**		**Pn**	**14 06 16.2**	**-0.9**
PUVA					**Sb**	**14 06 41.0**	**0.0**
PUVA	**Puert Vallarta**	**1.76**	**345**	⇑*e*P	**Pn**	**14 06 16.2**	**-0.9**
PUVA				*e*S	**Sb**	**14 06 41.0**	**0.0**
ANIG	**Ahuacatlan**	**2.13**	**5**		**Pn**	**14 06 22.7**	**+0.4**
ANIG					**Sb**	**14 06 51.9**	**0.0**
ANIG	**Ahuacatlan**	**2.13**	**5**	⇑*e*P	**Pn**	**14 06 22.7**	**+0.4**
ANIG				*i* S	**Sb**	**14 06 51.9**	**0.0**
GDLP	**Chapalita**	**2.13**	**35**	*e*P	**Pb**	**14 06 24.0**	**-1.5**
GDLP				*i* S	**Sb**	**14 06 51.5**	**-0.5**
TON2	**Tonala**	**2.21**	**40**	*e*P	**Pn**	**14 06 22.9**	**-0.5**
TON2				*e*S	**Sb**	**14 06 53.1**	**-1.0**
TEPI	**Tepic**	**2.60**	**356**	*e*P	**Pn**	**14 06 30.6**	**+1.8**
TEPI				*e*S	**Sn**	**14 06 57.5**	**-2.7**
UON	**La Union**	**2.93**	**108**	*e*P	**Pn**	**14 06 34.3**	**+1.1**
UON				*e*S	**Sn**	**14 07 04.3**	**-3.9**
MOIG	**Morelia**	**3.43**	**77**	Pn	**Pn**	**14 06 40.5**	**+0.1**
MOIG					**Sb**	**14 07 29.5**	**0.0**
MOIG	**Morelia**	**3.43**	**77**	⇑P	**Pn**	**14 06 40.3**	**0.0**
MOIG	**Morelia**	**3.43**	**77**	⇑*e*P	**Pn**	**14 06 41.0**	**+0.7**
MOIG				*e*S	**Sn**	**14 07 23.8**	**+2.8**
PET2	**Petatlan**	**3.58**	**112**	*i* P	**Pn**	**14 06 43.2**	**+1.1**
PET2				*e*S	**Sn**	**14 07 19.0**	**-5.2**
IGIG	**Irapuato, Guan**	**3.69**	**60**		**Sb**	**14 07 39.6**	**+2.8**
IGIG	**Irapuato, Guan**	**3.69**	**60**	*e*S	**Sn**	**14 07 27.9**	**+0.5**
AAIG	**Aguscalientes**	**3.75**	**36**		**Pn**	**14 06 45.7**	**+1.0**
AAIG					**Sn**	**14 07 26.1**	**-2.8**
AAIG	**Aguscalientes**	**3.75**	**36**	⇑*e*P	**Pn**	**14 06 45.7**	**+1.0**
AAIG				*e*S	**Sn**	**14 07 26.1**	**-2.8**
ACAM	**Acambaro**	**3.95**	**73**	*e*P	**Pn**	**14 06 51.6**	**+4.2**
ACAM				*i* S	**Sn**	**14 07 30.9**	**-2.9**
ARIG	**Puente Sto Nin**	**4.21**	**98**		**Pn**	**14 06 51.1**	**+0.2**
ARIG					**Sn**	**14 07 40.4**	**+0.5**
ARIG	**Puente Sto Nin**	**4.21**	**98**	⇑*e*P	**Pn**	**14 06 51.1**	**+0.2**
ARIG				*e*S	**Sn**	**14 07 40.4**	**+0.5**
TEJU	**Tejupilco**	**4.33**	**89**	*e*P	**Pn**	**14 06 55.3**	**+2.6**
TEJU				*i* S	**Sn**	**14 07 47.6**	**+4.4**
ZAIG	**Zacatecas**	**4.33**	**28**	Pn	**Pn**	**14 06 53.7**	**+0.9**
ZAIG					**Sb**	**14 07 60.0**	**+4.5**
ZAIG	**Zacatecas**	**4.33**	**28**	⇑P	**Pn**	**14 06 53.4**	**+0.7**
ZAIG	**Zacatecas**	**4.33**	**28**	⇑*e*P	**Pn**	**14 06 53.3**	**+0.5**
ZAIG				*i* S	**Sn**	**14 07 37.6**	**-5.7**
JRQG	**Juriquilla Cam**	**4.41**	**66**		**Pn**	**14 06 54.5**	**+1.1**
JRQG					**Sb**	**14 07 54.2**	**-3.4**
JRQG	**Juriquilla Cam**	**4.41**	**66**	⇑*e*P	**Pn**	**14 06 55.7**	**+1.9**
JRQG				*i* S	**Sn**	**14 07 42.3**	**-2.9**
ATYC	**Atoyac**	**4.43**	**112**	*i* P	**Pn**	**14 06 56.0**	**+2.2**
ATYC				*e*S	**Sn**	**14 07 41.2**	**-4.1**
MAIG	**Mazatlaan**	**4.53**	**340**		**Pn**	**14 06 53.4**	**-1.8**
MAIG					**Sn**	**14 07 45.7**	**-2.0**
MAIG	**Mazatlaan**	**4.53**	**340**	⇑*e*P	**Pn**	**14 06 53.4**	**-1.8**
MAIG				*e*S	**Sn**	**14 07 45.7**	**-2.0**
CAIG	**El Cayaco**	**4.64**	**113**		**Pn**	**14 06 57.2**	**+0.4**
CAIG					**Sn**	**14 07 56.9**	**+6.3**
CAIG	**El Cayaco**	**4.64**	**113**	*e*P	**Pn**	**14 06 57.2**	**+0.4**
CAIG				*e*S	**Sn**	**14 07 56.9**	**+6.3**
ACIG	**Acambay**	**4.70**	**76**		**Pn**	**14 06 59.9**	**+2.2**
ACIG					**Sb**	**14 08 06.5**	**+0.6**
ACIG	**Acambay**	**4.70**	**76**	⇑*e*P	**Pn**	**14 06 59.8**	**+2.1**
ACIG				*e*S	**Sn**	**14 07 52.1**	**-0.2**
TOVM	**TOLUCA**	**4.79**	**85**		**Pn**	**14 07 01.0**	**+1.8**
TOVM					**Sb**	**14 08 05.1**	**-3.7**
TOVM	**TOLUCA**	**4.79**	**85**	*e*P	**Pn**	**14 07 01.0**	**+1.8**
TOVM				*e*S	**Sb**	**14 08 05.1**	**-3.7**
MEIG	**Mezcala**	**4.96**	**101**		**Pn**	**14 07 02.6**	**+1.5**
MEIG					**Sb**	**14 08 16.3**	**+3.1**
MEIG	**Mezcala**	**4.96**	**101**	*e*P	**Pn**	**14 07 02.6**	**+1.5**
MEIG				*e*S	**Sn**	**14 08 05.2**	**+6.8**
PLIG	**Platanillo**	**4.99**	**95**		**Pn**	**14 07 03.2**	**+1.6**
PLIG					**Sn**	**14 08 01.9**	**+2.7**
PLIG	**Platanillo**	**4.99**	**95**	⇑*e*P	**Pn**	**14 07 03.1**	**+1.6**
PLIG				*e*S	**Sn**	**14 08 01.9**	**+2.7**
ACP2	**Acapulco**	**5.04**	**113**		**Sn**	**14 08 00.4**	**-0.1**
ACP2	**Acapulco**	**5.04**	**113**	*e*S	**Sn**	**14 08 00.4**	**-0.1**
INVM	**La Marquesa**	**5.07**	**85**	*e*P	**Pn**	**14 07 04.6**	**+1.6**
INVM				*e*S	**Sn**	**14 08 04.2**	**+2.4**
AOVM	**Tlapan**	**5.13**	**85**	⇑*e*P	**Pn**	**14 07 05.5**	**+1.6**
CJVM	**Cuajimalpa**	**5.17**	**84**	*e*P	**Pn**	**14 07 06.9**	**+2.6**
CJVM				*e*S	**Sn**	**14 08 05.9**	**+1.9**
AZVM	**Cuida Lopez Ma**	**5.19**	**82**		**Pn**	**14 07 07.8**	**+3.2**
AZVM					**Sb**	**14 08 18.1**	**-2.2**
AZVM	**Cuida Lopez Ma**	**5.19**	**82**	*e*P	**Pn**	**14 07 07.8**	**+3.2**
AZVM				*e*S	**Sn**	**14 08 08.0**	**+3.4**
DAIG	**Los Arroyos**	**5.19**	**111**		**Pn**	**14 07 05.5**	**+1.1**
DAIG					**Sn**	**14 08 09.0**	**+4.8**
DAIG	**Los Arroyos**	**5.19**	**111**	*e*P	**Pn**	**14 07 05.5**	**+1.1**
DAIG				*e*S	**Sn**	**14 08 09.0**	**+4.8**
MHVM	**Bosque de Chap**	**5.25**	**84**	*e*P	**Pn**	**14 07 07.2**	**+1.9**
MHVM				*e*S	**Sn**	**14 08 08.5**	**+2.6**
CUP5	**Mexico City**	**5.27**	**85**	*e*P	**Pn**	**14 07 05.1**	**-0.5**
CUP5				*e*S	**Sn**	**14 08 05.8**	**-0.5**
UNM	**Universidad Na**	**5.27**	**85**		**Pn**	**14 07 07.4**	**+1.7**
UNM					**Sb**	**14 08 15.1**	**-7.3**
UNM	**Universidad Na**	**5.27**	**85**	⇑P	**Pn**	**14 07 08.0**	**+2.4**
UNM	**Universidad Na**	**5.27**	**85**	P	**Pn**	**14 07 07.4**	**+1.7**
UNM						14 08 15.1	
CNCY	**Coyoacan**	**5.27**	**85**	*e*P	**Pn**	**14 07 06.3**	**+0.7**
CNCY				*e*S	**Sn**	**14 08 06.2**	**-0.3**
BJVM	**Benito Juarez**	**5.28**	**84**	*e*P	**Pn**	**14 07 09.0**	**+3.2**
BJVM				*e*S	**Sn**	**14 08 08.2**	**+1.5**
TLVM	**San Miguel Top**	**5.29**	**86**	*e*P	**Pn**	**14 07 08.7**	**+2.8**
TLVM				*e*S	**Sn**	**14 08 08.0**	**+1.0**
COVM	**Coyoacan**	**5.29**	**84**	*i* P	Pn	14 07 11.4	+5.5
COVM				*e*S	**Sn**	**14 08 07.7**	**+0.8**
SCT2	**Benito Juarez**	**5.30**	**84**	*i* S	**Sn**	**14 08 08.4**	**+1.1**
XCVM	**Xochimilco**	**5.32**	**86**	*e*P	**Pn**	**14 07 07.8**	**+1.4**
XCVM				*e*S	**Sn**	**14 08 09.0**	**+1.2**
RPIG	**Rio Verde**	**5.34**	**56**		**Pn**	**14 07 08.4**	**+1.9**
RPIG	**Rio Verde**	**5.34**	**56**	*e*P	**Pn**	**14 07 08.4**	**+1.9**
RPIG				*e*S	**Sn**	**14 08 10.6**	**+2.5**
PTVM	**Pico Tres Padr**	**5.35**	**82**		**Pn**	**14 07 09.0**	**+2.2**
PTVM					**Sb**	**14 08 25.1**	**+0.3**
PTVM	**Pico Tres Padr**	**5.35**	**82**	*e*P	**Pn**	**14 07 09.0**	**+2.2**
PTVM				*e*S	**Sn**	**14 08 11.4**	**+2.9**
PBVM	**Pinon**	**5.37**	**84**		**Pn**	**14 07 09.2**	**+2.6**
PBVM					**Sb**	**14 08 23.7**	**-1.2**
PBVM	**Pinon**	**5.37**	**84**	*e*P	**Pn**	**14 07 09.2**	**+2.6**
PBVM				*e*S	**Sn**	**14 08 10.3**	**+2.0**
ZUVM	**ZUMPANGO**	**5.42**	**79**		**Pn**	**14 07 09.8**	**+2.1**
ZUVM					**Sb**	**14 08 27.9**	**+1.3**
ZUVM	**ZUMPANGO**	**5.42**	**79**	*e*P	**Pn**	**14 07 09.8**	**+2.1**
ZUVM				*e*S	**Sn**	**14 08 12.6**	**+2.5**
MPVM	**San Francisco**	**5.42**	**86**	*e*P	**Pn**	**14 07 10.8**	**+3.1**
MPVM				*e*S	**Sn**	**14 08 10.9**	**+0.8**
THVM	**De Xico**	**5.46**	**85**	*e*P	**Pn**	**14 07 12.0**	**+3.7**
TXVM	**Universitario**	**5.52**	**84**	*i* P	Pn	14 07 15.8	+6.7
TXVM				*e*S	**Sn**	**14 08 14.7**	**+2.0**
DEIG	**Demacu**	**5.54**	**75**	⇑*e*P	**Pn**	**14 07 11.6**	**+2.2**
DEIG				*e*S	**Sn**	**14 08 15.7**	**+2.5**
DHIG	**Demacu**	**5.54**	**75**		**Pn**	**14 07 11.6**	**+2.2**
AMVM	**AMECAMECA**	**5.63**	**87**		**Pn**	**14 07 13.5**	**+2.8**
AMVM					**Sb**	**14 08 31.0**	**-1.9**
AMVM	**AMECAMECA**	**5.63**	**87**	*e*P	**Pn**	**14 07 13.5**	**+2.8**
AMVM				*e*S	**Sn**	**14 08 17.8**	**+2.4**
VTVM	**Tizayuca**	**5.69**	**80**		**Pn**	**14 07 13.9**	**+2.4**
VTVM					**Sb**	**14 08 41.9**	**+7.3**
VTVM	**Tizayuca**	**5.69**	**80**	*e*P	**Pn**	**14 07 13.9**	**+2.4**
VTVM				*e*S	**Sn**	**14 08 19.4**	**+2.6**
CRIG	**Cruz Grande**	**5.76**	**111**		**Pn**	**14 07 12.9**	**+0.7**
CRIG					**Sn**	**14 08 21.9**	**+3.7**
CRIG	**Cruz Grande**	**5.76**	**111**	*e*P	**Pn**	**14 07 12.9**	**+0.7**
CRIG				*e*S	**Sn**	**14 08 21.9**	**+3.7**
HMTT	**Tlapaneco**	**5.97**	**100**		**Pn**	**14 07 17.5**	**+2.4**
HMTT					**Sn**	**14 08 29.8**	**+6.4**
HMTT	**Tlapaneco**	**5.97**	**100**	*e*P	**Pn**	**14 07 17.5**	**+2.4**
HMTT				*e*S	**Sn**	**14 08 29.8**	**+6.4**
TLIG	**Tlapa**	**6.01**	**102**		**Pn**	**14 07 17.1**	**+1.3**
TLIG					**Sn**	**14 08 21.0**	**-3.6**
TLIG	**Tlapa**	**6.01**	**102**	⇑P	**Pn**	**14 07 17.8**	**+2.0**
TLIG	**Tlapa**	**6.01**	**102**	*e*P	**Pn**	**14 07 18.2**	**+2.4**
TLIG				*e*S	**Sn**	**14 08 25.2**	**+0.6**
MGIG	**Malinaltepec**	**6.04**	**105**		**Pn**	**14 07 18.0**	**+1.8**
MGIG					**Sn**	**14 08 27.3**	**+2.0**
MGIG	**Malinaltepec**	**6.04**	**105**	⇑*e*P	**Pn**	**14 07 18.0**	**+1.8**
MGIG				*e*S	**Sn**	**14 08 27.3**	**+2.0**
PDIG	**Papasquiaro**	**6.12**	**354**		**Pn**	**14 07 18.6**	**+1.3**
PDIG					**Sb**	**14 08 43.6**	**-3.2**
PDIG	**Papasquiaro**	**6.12**	**354**	⇑*e*P	**Pn**	**14 07 18.6**	**+1.3**
PDIG				*e*S	**Sn**	**14 08 24.4**	**-2.9**
PHPU	**Puebla**	**6.21**	**88**		**Sn**	**14 08 38.6**	**+8.9**
PHPU	**Puebla**	**6.21**	**88**	*i* S	**Sn**	**14 08 37.9**	**+8.2**
PHPU				*e*S	Sb	14 08 38.6	-11
SSIG	**Sanalona**	**6.28**	**340**		**Pn**	**14 07 19.8**	**+0.5**
SSIG	**Sanalona**	**6.28**	**340**	⇑*e*P	**Pn**	**14 07 19.2**	**-0.1**
FTIG	**Fresnillo de T**	**6.35**	**98**		**Pn**	**14 07 22.5**	**+2.2**
FTIG					**Sn**	**14 08 40.5**	**+7.6**
FTIG	**Fresnillo de T**	**6.35**	**98**	*e*P	**Pn**	**14 07 22.5**	**+2.2**
FTIG				*e*S	**Sn**	**14 08 40.5**	**+7.6**
CTUV	**Llano Grande**	**6.51**	**66**	⇓*e*P	**Pn**	**14 07 24.8**	**+2.4**
CTUV				*e*S	**Sn**	**14 08 38.4**	**+1.8**
GTIG	**Gomez Farias**	**6.64**	**51**		**Pn**	**14 07 25.1**	**+0.9**
GTIG					**Sn**	**14 08 44.3**	**+4.5**
GTIG	**Gomez Farias**	**6.64**	**51**	⇑*e*P	**Pn**	**14 07 25.4**	**+1.2**
GTIG				*e*S	**Sn**	**14 08 44.3**	**+4.5**
HLIG	**Huajuapan de L**	**6.67**	**98**		**Pn**	**14 07 27.0**	**+2.1**
HLIG					Sn	14 08 52.0	+11
HLIG	**Huajuapan de L**	**6.67**	**98**	⇑*e*P	**Pn**	**14 07 27.0**	**+2.1**
HLIG				*e*S	Sn	14 08 52.0	+11
PNIG	**Pinotepa**	**6.78**	**111**		**Pn**	**14 07 27.5**	**+1.3**
PNIG					Sb	14 08 56.9	-8.8
PNIG	**Pinotepa**	**6.78**	**111**	*e*P	**Pn**	**14 07 27.5**	**+1.3**
PNIG				*e*S	**Sn**	**14 08 45.7**	**+2.3**
SLBS	**Sierra La Lagu**	**6.79**	**315**	Pn	**Pn**	**14 07 27.1**	**+0.8**
SLBS	**Sierra La Lagu**	**6.79**	**315**	⇓P	**Pn**	**14 07 28.5**	**+2.2**
SLBS	**Sierra La Lagu**	**6.79**	**315**	*e*P	**Pn**	**14 07 27.4**	**+1.1**
TXIG	**Tlaxiaco**	**6.83**	**103**		**Pn**	**14 07 29.0**	**+1.8**
TXIG					Sb	14 08 58.0	-9.4
TXIG	**Tlaxiaco**	**6.83**	**103**	*e*P	**Pn**	**14 07 29.0**	**+1.8**
TXIG				*e*S	**Sn**	**14 08 47.2**	**+2.3**
TPIG	**Tehuac#an**	**7.01**	**93**		**Pn**	**14 07 32.7**	**+3.3**
TPIG					Sn	14 08 58.7	+10
TPIG	**Tehuac#an**	**7.01**	**93**	*e*P	**Pn**	**14 07 32.7**	**+3.3**
TPIG				*e*S	Sn	14 08 58.7	+10
YOIG	**Yosondua**	**7.15**	**106**		**Pn**	**14 07 33.3**	**+1.9**
YOIG					**Sn**	**14 08 56.9**	**+4.1**
YOIG	**Yosondua**	**7.15**	**106**	⇓*e*P	**Pn**	**14 07 33.3**	**+1.9**
YOIG				*e*S	**Sn**	**14 08 56.9**	**+4.1**
OZST	**Orizaba**	**7.23**	**89**	*e*S	**Sn**	**14 08 58.5**	**+3.9**
LPIG	**La Paz**	**7.31**	**316**		**Pn**	**14 07 35.4**	**+1.9**
LPIG	**La Paz**	**7.31**	**316**	Pn	**Pn**	**14 07 33.7**	**+0.2**
LPIG	15nm,0.3s,baz=97,slow=19,SNR=21 comp=Z,20μm,18.8s,baz=133,slow=33 140nm,0.8s			LR	LR	14 09 43.2	
LPIG	**La Paz**	**7.31**	**316**	*e*P	**Pn**	**14 07 35.4**	**+1.9**
TOIG	**Toxpalan**	**7.32**	**95**		**Pn**	**14 07 36.1**	**+2.4**
TOIG					Sn	14 09 08.1	+11
TOIG	**Toxpalan**	**7.32**	**95**	*e*P	**Pn**	**14 07 36.1**	**+2.4**
TOIG				*e*S	Sn	14 09 08.1	+11
JAUV	**Jalcomulco**	**7.51**	**85**	*e*P	**Pn**	**14 07 38.4**	**+2.1**
JAUV				*e*S	**Sn**	**14 09 02.4**	**+1.0**
LNIG	**Linares**	**7.70**	**38**	⇑*e*P	**Pn**	**14 07 40.9**	**+2.1**
LNIG				*e*S	**Sn**	**14 09 04.3**	**-1.7**
TSIG	**Topolobambo**	**7.75**	**330**		**Pn**	**14 07 40.5**	**+1.0**
TSIG					**Sn**	**14 09 13.8**	**+6.7**
TSIG	**Topolobambo**	**7.75**	**330**	*e*P	**Pn**	**14 07 40.5**	**+1.0**
TSIG				*e*S	**Sn**	**14 09 13.8**	**+6.7**
MNIG	**Monterrey**	**7.83**	**31**		**Pn**	**14 07 43.4**	**+2.8**
MNIG					**Sn**	**14 09 07.8**	**-1.3**
MNIG	**Monterrey**	**7.83**	**31**	⇑*e*P	**Pn**	**14 07 43.4**	**+2.8**
MNIG				*e*S	**Sn**	**14 09 07.8**	**-1.3**
OXIG	**Oaxaca**	**7.83**	**102**		**Pn**	**14 07 43.3**	**+2.5**
OXIG					**Sb**	**14 09 30.0**	**-6.1**
VHO	**Vista Hermosa**	**7.83**	**102**	*e*P	**Pn**	**14 07 43.3**	**+2.5**
VHO				*e*S	**Sn**	**14 09 11.3**	**+1.8**
OXBJ	**Oaxaca**	**7.84**	**102**		**Sn**	**14 09 11.3**	**+1.6**
OXBJ	**Oaxaca**	**7.84**	**102**	*e*S	**Sn**	**14 09 11.3**	**+1.6**
OXBJ				*e*S	Sb	14 09 18.2	-18
LVIG	**Laguna Verde**	**7.89**	**83**	*e*P	**Pn**	**14 07 44.3**	**+2.8**
LVIG				*e*S	Sn	14 09 21.9	+11
HPIG		**8.02**	**354**		**Pn**	**14 07 45.4**	**+2.0**
HPIG					**Sb**	**14 09 44.0**	**+2.5**
HPIG		**8.02**	**354**	⇑P	**Pn**	**14 07 45.9**	**+2.4**
HPIG		**8.02**	**354**	*e*P	**Pn**	**14 07 45.2**	**+1.8**
HPIG				*e*S	**Sn**	**14 09 21.8**	**+7.7**
CSIG	**Choix**	**8.56**	**338**		**Pn**	**14 07 52.0**	**+1.5**
CSIG					**Sn**	**14 09 32.4**	**+5.4**
CSIG	**Choix**	**8.56**	**338**	*e*P	**Pn**	**14 07 52.0**	**+1.5**
CSIG				*e*S	**Sn**	**14 09 32.4**	**+5.4**
NEUV	**Arroyo Zacate**	**8.57**	**97**	*e*P	**Pn**	**14 07 51.5**	**+0.8**
NEUV				*e*S	**Sn**	**14 09 30.6**	**+3.2**
BCIG	**La Boquilla**	**8.61**	**356**		**Pn**	**14 07 53.9**	**+2.5**
BCIG	**La Boquilla**	**8.61**	**356**	*e*P	**Pn**	**14 07 53.9**	**+2.5**
PMUV	**Sontecomapan**	**9.12**	**91**	*e*P	**Pn**	**14 07 58.9**	**+0.5**
PMUV				*i* S	**Sn**	**14 09 46.1**	**+5.2**
CMIG	**Matias Romero**	**9.55**	**99**		**Pn**	**14 08 06.2**	**+2.1**
CMIG					**Sn**	**14 09 55.4**	**+3.9**
CMIG	**Matias Romero**	**9.55**	**99**	*e*P	**Pn**	**14 08 04.6**	**+0.4**
CMIG	2.1nm,0.3s,baz=286,slow=11,SNR=67 comp=Z,24μm,20.7s,baz=321,slow=41 121nm,0.9s			LR	LR	14 12 12.0	
CMIG	**Matias Romero**	**9.55**	**99**	*e*P	**Pn**	**14 08 06.2**	**+2.1**
CMIG				*e*S	**Sn**	**14 09 55.4**	**+3.9**
TUIG	**Tuzandepetl**	**9.82**	**94**	*e*P	**Pn**	**14 08 09.2**	**+1.2**
TUIG				*i* S	**Sn**	**14 10 00.2**	**+2.0**
HBVL	**Hebbronville**	**9.84**	**33**	Pn	**Pn**	**14 08 11.0**	**+2.8**
TX31	**Lajitas Ar. Si**	**10.41**	**5**		**Pn**	**14 08 18.1**	**+2.0**
TXAR	**Lajitas Array**	**10.41**	**5**		**Pn**	**14 08 18.0**	**+1.9**
TXAR	**Lajitas Array**	**10.41**	**5**	P	**Pn**	**14 08 18.0**	**+1.9**
TXAR	**Lajitas Array**	**10.41**	**5**	Pn	**Pn**	**14 08 17.5**	**+1.4**
TXAR	0.8nm,0.3s,baz=190,slow=11,SNR=152			Lg	Lg	14 11 12.8	
	3.0nm,0.3s,baz=99,slow=30,SNR=5.3 30nm,1.0s						
833A	**Chaparral WMA,**	**10.56**	**27**		**Pn**	**14 08 19.7**	**+1.7**
833A	**Chaparral WMA,** baz=208,SNR=19	**10.56**	**27**	P	**Pn**	**14 08 21.4**	**+3.4**
GUYB	**Guaymas**	**10.56**	**329**	*e*P	Pn	14 08 12.7	-5.3
KVTX	**Kingsville**	**10.64**	**35**	Pn	**Pn**	**14 08 21.7**	**+2.6**
KVTX	**Kingsville**	**10.64**	**35**	*e*P	**Pn**	**14 08 17.7**	**-1.4**
SRIG	**Santa Rosalia**	**10.84**	**322**		**Pn**	**14 08 24.4**	**+2.5**
SRIG	**Santa Rosalia**	**10.84**	**322**	⇑P	**Pn**	**14 08 25.0**	**+3.2**
SRIG	**Santa Rosalia**	**10.84**	**322**	*e*P	**Pn**	**14 08 24.6**	**+2.8**
SRIG				*e*S	**Sn**	**14 10 27.3**	**+4.2**
DRIO	**Del Rio**	**11.11**	**19**	Pn	**Pn**	**14 08 27.3**	**+1.8**
SAND	**Sanderson**	**11.24**	**12**	Pn	**Pn**	**14 08 29.5**	**+2.1**
TGIG		**11.26**	**99**		**Pn**	**14 08 30.2**	**+2.5**
TGIG					Sn	14 10 43.8	+10
TGIG		**11.26**	**99**	*e*P	**Pn**	**14 08 30.2**	**+2.5**
TGIG				*e*S	Sn	14 10 43.8	+10
ALPN	**Alpine**	**11.45**	**5**	Pn	**Pn**	**14 08 33.0**	**+2.7**
PCIG		**11.45**	**104**		**Pn**	**14 08 33.1**	**+2.9**
PCIG					**Sn**	**14 10 33.1**	**-5.1**
PCIG		**11.45**	**104**	*e*P	**Pn**	**14 08 33.1**	**+2.9**
PCIG				*e*S	**Sn**	**14 10 33.1**	**-5.1**
HSIG		**11.54**	**332**		**Pn**	**14 08 33.3**	**+1.8**
HSIG		**11.54**	**332**	*e*P	**Pn**	**14 08 33.5**	**+2.1**
HSIG				*e*S	**Sn**	**14 10 38.0**	**-2.4**
HNDO	**Hondo**	**11.67**	**24**		**Pn**	**14 08 35.9**	**+2.6**
EF01	**Eagle Ford 01**	**11.70**	**29**		**Pn**	**14 08 35.7**	**+2.1**
735A	**Kenedy**	**11.74**	**31**		**Pn**	**14 08 37.3**	**+3.1**
CGIG		**11.77**	**346**		**Pn**	**14 08 38.4**	**+3.7**
CGIG		**11.77**	**346**	*e*P	**Pn**	**14 08 38.4**	**+3.7**
VHRN	**Van Horn**	**11.82**	**359**	Pn	**Pn**	**14 08 37.0**	**+1.7**
CCIG	**Comitan**	**12.29**	**100**		**Pn**	**14 08 44.2**	**+2.2**
CCIG	**Comitan**	**12.29**	**100**	⇑P	Pn	14 08 48.1	+6.2
CCIG	**Comitan**	**12.29**	**100**	*e*P	**Pn**	**14 08 44.3**	**+2.4**
JCT	**Junction City**	**12.35**	**20**		**Pn**	**14 08 45.5**	**+3.0**
JCT	**Junction City** baz=202,SNR=32	**12.35**	**20**	P	**Pn

baz=145
W18A Petrified Fore 16.73 346 P P 14 09 43.4 -0.1
baz=163,SNR=6.0
Z38A Mt. Pleasant 16.74 30 P Pn 14 09 40.1 -1.0
YUH Yuha Desert 16.96 326 P 14 09 45.8 -0.1
IKP In-Ko-Pah, Jac 17.07 325 P P 14 09 48.1 +1.0
baz=140,SNR=85
CBX Cerro Bola 17.11 324 P P 14 09 48.3 +0.6
CBX IAmb IAmb 14 09 54.4
comp=Z,506nm,1.4s
SWSC Sam W. Stewart 17.13 327 P P 14 09 48.6 +0.9
baz=142,SNR=99
BLYC Blythe 17.16 331 P P 14 09 48.6 +0.6
BLYC IAmb IAmb 14 09 53.2
comp=Z,368nm,1.2s
TJIG Tijuana 17.21 324 *e*P P 14 09 49.1 +0.5
MONP2 Monument Peak 17.42 325 P P 14 09 52.9 +1.7
baz=140,SNR=57
TGUH Tegucigalpa,Un 17.43 103 P P 14 09 51.4 +0.1
PDMCI Parker Dam,Lak 17.46 333 P P 14 09 53.0 +1.6
baz=149,SNR=43
BC3 Big Chuckawall 17.52 329 P P 14 09 53.5 +1.3
baz=144,SNR=112
WUAZ Wupatki 17.55 342 P P 14 09 54.5 +2.0
baz=158,SNR=44
WUAZ Wupatki 17.55 342 ⇑P P 14 09 53.9 +1.3
IRM Iron Mountain 17.79 331 P P 14 09 57.5 +2.4
baz=146,SNR=160
109C Camp Elliot, M 17.79 324 P P 14 09 55.7 +0.7
109C Camp Elliot, M 17.79 324 P P 14 09 57.1 +2.0
baz=138,SNR=13
Z41A Richland Creek 17.83 34 P Pn 14 09 54.3 -0.5
Z41A IAmb IAmb 14 09 57.1
comp=Z,341nm,1.2s
PMD Palm Desert 17.98 327 P P 14 09 58.8 +1.6
PMD IAmb IAmb 14 10 04.2
comp=Z,395nm,1.2s
TPFO Pinon Flats 17.99 327 P P 14 09 59.8 +2.5
baz=141,SNR=159
PFO Pinyon Flats O 18.00 327 P P 14 09 59.9 +2.5
baz=141,SNR=142
PFO Pinyon Flats O 18.00 327 *c iP* P 14 09 59.5 +2.1
PFO pmax pmax
comp=Z,643nm,1.4s
PFO Pinyon Flats O 18.00 327 P P 14 09 57.5 +0.1
comp=Z,0.7nm,0.3s,baz=140,slow=11,SNR=82
PFO LR LR 14 16 22.4
comp=Z,13μm,18.3s,baz=150,slow=36
comp=Z,251nm,1.3s
WLAR White Oak Lake 18.00 33 P Pn 14 09 56.1 -0.8
W13A Hualapai Mount 18.04 335 P P 14 09 59.2 +1.2
NEE2 Needles Airpor 18.06 333 P P 14 09 60.0 +1.9
baz=148,SNR=5.5
BELC Belle Mtn. Jos 18.07 328 P P 14 10 00.6 +2.3
baz=143,SNR=63
T25A Trinidad 18.15 1 P P 14 10 00.8 +1.5
baz=181,SNR=6.0
MURC Murrieta 18.38 325 P P 14 10 03.8 +2.3
baz=140,SNR=30
VBMS Vicksburg 18.41 41 P P 14 10 01.2 -0.6
baz=227,SNR=7.7
MIAR Mount Ida 18.46 30 P P 14 10 01.0 -1.4
baz=215,SNR=12
MIAR Mount Ida 18.46 30 ⇑P P 14 10 00.7 -1.7
MVCO Mesa Verde 18.52 351 P Pn 14 10 03.9 +0.4
baz=168,SNR=42
MVCO Mesa Verde 18.52 351 ⇑P Pn 14 10 03.8 +0.4
GMRC Granite Mounta 18.54 331 P Pn 14 10 05.6 +2.0
baz=146,SNR=96
U15A North Rim 18.67 341 Pn 14 10 06.5 +1.2
TUL3 Leonard 18.68 23 P P 14 10 03.9 -0.9
baz=207,SNR=7.5
SCI2 San Clemente I 18.69 321 P Pn 14 10 07.8 +2.5
baz=135,SNR=7.4
BBRC Big Bear Solar 18.74 327 P Pn 14 10 08.0 +1.8
baz=141,SNR=36
SDCO Great Sand Dun 18.77 358 P Pn 14 10 06.9 +0.3
baz=178,SNR=52
SDCO Great Sand Dun 18.77 358 ⇑P Pn 14 10 06.8 +0.3
S22A 4UR Ranch, Cre 18.85 355 P Pn 14 10 09.1 +1.6
baz=174,SNR=94
CCAR Cane Creek 18.89 35 P P 14 10 06.8 -0.3
CCAR IAmb IAmb 14 10 16.8
comp=Z,748nm,1.7s
HEC Hector,Ludlow 18.90 329 P Pn 14 10 09.7 +1.7
baz=144,SNR=89
CIS Catalina Islan 18.91 322 P Pn 14 10 09.2 +1.1
baz=136,SNR=12
FMP Fort Macarthur 19.07 323 P Pn 14 10 10.6 +0.7
baz=137
BFSC Mount Baldy Ra 19.11 326 P Pn 14 10 11.8 +1.3
baz=140,SNR=125
TUQ Turquoise Moun 19.20 331 P Pn 14 10 13.1 +1.5
baz=146,SNR=120
RRX Edison Barstow 19.26 328 P Pn 14 10 13.2 +0.9
baz=142,SNR=6.2
BOAB BOACO BROADBAN 19.44 107 P P 14 10 14.2 +0.9
BOAB IAmb IAmb 14 10 26.4
comp=Z,266nm,1.0s
BOAB BOACO BROADBAN 19.44 107 ⇑P Pn 14 10 15.3 +0.8
DECC Green Verdugo 19.49 324 P Pn 14 10 15.9 +0.9
baz=138,SNR=8.6
GSC Goldstone, Bar 19.51 329 P Pn 14 10 16.2 +0.9
baz=144,SNR=271
WHAR Wooly Hollow 19.68 32 P P 14 10 15.1 -0.7
HHAR Hobbs 19.74 27 P P 14 10 14.6 -1.9
HHAR IAmb IAmb 14 10 27.9
comp=Z,472nm,1.9s
SHOC Shoshone, Teco 19.75 331 P Pn 14 10 18.8 +0.8
baz=146,SNR=173
EDW2 Edwards Air Fo 19.78 326 P Pn 14 10 18.6 +0.1
baz=140,SNR=61
OSI Osito Audit: C 19.97 324 P Pn 14 10 21.0 +0.3
baz=138
Q24A Divide 19.98 359 P Pn 14 10 20.1 -1.0
baz=179,SNR=18
LRMC Laurel Mtn Rad 20.08 328 P Pn 14 10 22.4 +0.2
baz=142,SNR=107
BRAL Brewton 20.10 49 P P 14 10 18.7 -1.7
baz=236
KSCO Kaye Shedlock' 20.10 5 IAMs_20 IAMs_20 14 18 03.1
comp=Z,13μm,19.0s
KSCO Kaye Shedlock' 20.10 5 P P 14 10 19.2 -1.4
baz=186,SNR=16
Y45A Yeager Farm, C 20.13 39 P P 14 10 20.0 -0.7
Y45A IAmb IAmb 14 10 21.6
comp=Z,268nm,0.9s
FCAR Ozark Folk Cen 20.24 31 P P 14 10 20.2 -1.7
FCAR IAmb IAmb 14 10 31.1
comp=Z,420nm,2.1s
CBKS Cedar Bluff 20.29 11 P P 14 10 21.0 -1.5
CBKS IAmb IAmb 14 10 39.5
comp=Z,714nm,1.6s
CBKS Cedar Bluff 20.29 11 P P 14 10 21.2 -1.3
baz=194,SNR=16
CBKS Cedar Bluff 20.29 11 ⇑P P 14 10 21.6 -0.9
CBKS Cedar Bluff 20.29 11 P P 14 10 21.0 -1.5
CBKS pmax pmax
CBKS MLR MLR
comp=Z,710μm,19.0s
SBC Santa Barbara 20.41 322 P Pn 14 10 25.0 -0.9
baz=135
ARVC Arvin 20.41 325 P Pn 14 10 26.3 +0.4
baz=138,SNR=71
MPMC Manual Prospec 20.45 329 P Pn 14 10 25.5 -0.9
baz=143,SNR=311
FURC Furnace Creek, 20.48 331 P Pn 14 10 26.4 -0.3
baz=145,SNR=66
PRN Pahroc Range 20.51 336 ⇑P Pn 14 10 26.8 -0.4
MVU Marysvale 20.57 343 P Pn 14 10 27.2 -0.8
TPNV Topopah Spring 20.61 333 P Pn 14 10 28.6 +0.2
baz=147,SNR=584
TPNV Topopah Spring 20.61 333 ⇑P Pn 14 10 28.4 +0.1
ISA Isabella, Lake 20.63 327 P Pn 14 10 27.8 -0.8
ISA IAmb IAmb 14 10 31.9
comp=Z,480nm,1.5s
ISA Isabella, Lake 20.63 327 P Pn 14 10 27.2 -1.3
baz=140,SNR=127
ISA Isabella, Lake 20.63 327 P Pn 14 10 27.8 -0.7
ISA pmax pmax
comp=Z,480nm,1.5s
ISA MLR MLR
comp=Z,4μm,20.0s
OXF Oxford 20.66 38 P P 14 10 24.8 -1.7
baz=225,SNR=27
OXF Oxford 20.66 38 ⇑P P 14 10 24.8 -1.7
OXF Oxford 20.66 38 P P 14 10 24.8 -1.7
SRU San Rafael Swe 20.74 347 IAMs_20 IAMs_20 14 18 39.6
comp=Z,18μm,20.0s
PKM Mcpherson Peak 20.79 323 P Pn 14 10 29.8 -0.7
baz=136,SNR=20
ISCO Idaho Springs 20.82 358 P P 14 10 28.3 -0.2
ISCO IAmb IAmb 14 10 31.7
comp=Z,408nm,2.2s
ISCO Idaho Springs 20.82 358 P P 14 10 29.1 +0.6
baz=207,SNR=44
ISCO Idaho Springs 20.82 358 ⇑P P 14 10 29.0 +0.5
ISCO Idaho Springs 20.82 358 P P 14 10 28.3 -0.2
ISCO pmax pmax
comp=Z,408nm,2.2s
LCAR Lake Charles 20.86 32 P P 14 10 26.1 -2.5
LCAR IAmb IAmb 14 10 44.1
comp=Z,775nm,2.2s
JTS Las Juntas de 20.96 111 ⇑P Pn 14 10 32.4 0.0
JTS Las Juntas de 20.96 111 *i* P Pn 14 10 31.5 -1.0
JTS Las Juntas de 20.96 111 P P 14 10 31.4 +1.5
comp=Z,14nm,0.9s,baz=299,slow=11,SNR=3.2
JTS LR LR 14 18 24.6
comp=Z,6μm,18.8s,baz=296,slow=36
comp=Z,14nm,0.9s
JTS Las Juntas de 20.96 111 *e*P Pn 14 10 31.5 -1.0
CWC Cottonwood Cre 21.04 329 P P 14 10 33.0 +2.2
baz=142
VES Vestal, Richgr 21.09 326 P P 14 10 33.3 +2.3
baz=139,SNR=157
P17A Butcher Ranch, 21.13 347 P P 14 10 32.3 +0.6
P17A IAmb IAmb 14 10 36.4
comp=Z,214nm,1.1s
P17A IAMs_20 IAMs_20 14 18 53.0
comp=Z,15μm,20.0s
GRAC Grapevine Rang 21.15 331 IAMs_20 IAMs_20 14 19 12.1
comp=Z,13μm,18.0s
GRAC Grapevine Rang 21.15 331 P P 14 10 34.3 +2.6
baz=145,SNR=43
SMMC Simmler 21.20 323 P P 14 10 34.4 +2.1
baz=136,SNR=25
LRAL Lakeview Retre 21.21 45 P P 14 10 30.9 -1.5
baz=233,SNR=20
KSU1 Kansas State U 21.31 18 P P 14 10 32.3 -1.1
KSU1 IAmb IAmb 14 10 52.4
comp=Z,170nm,0.9s
KSU1 Kansas State U 21.31 18 P P 14 10 32.4 -1.0
baz=201,SNR=16
KSU1 Kansas State U 21.31 18 ⇑P P 14 10 32.2 -1.1
O20A White River Ci 21.36 353 P P 14 10 34.4 +0.2
baz=171,SNR=45
R11B Troy Canyon, C 21.54 336 P P 14 10 37.6 +1.5
baz=151,SNR=159
BRIGG Briggsdale 21.59 1 IAMs_20 IAMs_20 14 19 14.4
comp=Z,20μm,20.0s
TIN Tinemaha, Big 21.60 330 P P 14 10 39.3 +2.7
baz=143,SNR=35
VOG Valley Oaks Go 21.61 326 P P 14 10 38.3 +1.6
baz=139
SPR3 Spring Creek 3 21.67 339 IAMs_20 IAMs_20 14 18 42.2
comp=Z,13μm,18.0s
DSP Deep Springs 21.73 330 IAMs_20 IAMs_20 14 19 35.5
comp=Z,9μm,18.0s
Q12A Willow Creek R 21.88 339 IAMs_20 IAMs_20 14 18 58.6
comp=Z,10μm,19.0s
N23A Red Feather La 21.93 358 IAMs_20 IAMs_20 14 18 15.2
comp=Z,11μm,20.0s
N23A Red Feather La 21.93 358 P P 14 10 40.0 -0.3
baz=177
RDMU Red Mountain 21.98 350 IAMs_20 IAMs_20 14 19 28.4
comp=Z,21μm,21.0s
OGNE Ogallala 22.07 5 IAMs_20 IAMs_20 14 18 57.9
comp=Z,10μm,18.0s
OGNE Ogallala 22.07 5 P P 14 10 40.7 -1.0
baz=187,SNR=23
OGNE Ogallala 22.07 5 ⇑P P 14 10 40.9 -0.8
DUG Dugway, Tooele 22.32 344 P P 14 10 45.4 +1.0
baz=159,SNR=71
DUG Dugway, Tooele 22.32 344 ⇑P P 14 10 44.8 +0.4
PHWY Pilot Hill 22.32 359 IAMs_20 IAMs_20 14 19 33.6
comp=Z,23μm,21.0s
MLAC Mammoth, Mammo 22.35 329 P P 14 10 47.1 +2.2
baz=143,SNR=72
CCM Cathedral Cave 22.40 29 P P 14 10 42.7 -2.5
baz=215
CCM Cathedral Cave 22.40 29 ⇑P P 14 10 43.0 -2.2
LHV Little Huntoon 22.69 331 IAMs_20 IAMs_20 14 20 07.0
comp=Z,10μm,18.0s
WVT Waverly 22.71 38 P P 14 10 46.1 -2.4
WVT Waverly 22.71 38 P P 14 10 45.8 -2.7
baz=225
WVT Waverly 22.71 38 ⇓P P 14 10 46.0 -2.4
WVT Waverly 22.71 38 P P 14 10 46.1 -2.4
WVT pmax pmax
comp=Z,60nm,1.1s
WVT MLR MLR
comp=Z,4μm,21.0s
NVAR Mina Array Bea 22.75 332 P P 14 10 50.0 +0.9
comp=Z,48nm,0.8s,baz=155,slow=12,SNR=169
NVAR PcP PcP 14 14 41.8 +0.9
comp=Z,2.6nm,0.8s,baz=135,slow=2.6,SNR=3.2
NVAR LR LR 14 19 07.6
comp=Z,7μm,18.5s,baz=146,slow=36
NVAR PKiKP PKiKP 14 22 26.7 +0.8
comp=Z,0.3nm,0.7s,baz=169,slow=0.9,SNR=3.7
comp=Z,48nm,0.8s
TIGA Tifton 22.79 53 P P 14 10 46.4 -2.9
baz=242
TCUT Toone Canyon 22.85 347 IAMs_20 IAMs_20 14 20 00.5
comp=Z,17μm,20.0s
FPAL Fort Paine 23.04 44 P P 14 10 50.0 -2.0
FPAL IAmb IAmb 14 10 52.2
comp=Z,98nm,0.9s
BGNE Belgrade 23.11 13 P P 14 10 51.4 -1.3
baz=196
DWPF Disney Wildern 23.21 62 P P 14 10 50.1 -3.7
baz=252
SWET Sewanee 23.25 42 P P 14 10 52.0 -2.2
HWUT Hardware Ranch 23.35 347 IAMs_20 IAMs_20 14 20 18.3
comp=Z,16μm,20.0s
HWUT Hardware Ranch 23.35 347 ⇑P P 14 10 55.0 -0.3
ELK Elko 23.55 340 IAMs_20 IAMs_20 14 19 44.7
comp=Z,10μm,18.0s
ELK Elko 23.55 340 ⇑P P 14 10 57.9 +0.7
ELK Elko 23.55 340 LR LR 14 19 55.8
comp=Z,10μm,18.4s,baz=164,slow=36
YERR Yerington 23.62 331 IAMs_20 IAMs_20 14 19 58.7
comp=Z,9μm,18.0s
K22A Casper 23.70 357 P P 14 10 57.6 -1.1
baz=176,SNR=32
GOGA Godfrey 23.86 49 P P 14 10 57.5 -2.6
GOGA IAmb IAmb 14 10 59.7
comp=Z,74nm,0.7s
GOGA Godfrey 23.86 49 P P 14 10 56.9 -3.2
baz=238,SNR=28
GOGA Godfrey 23.86 49 ⇑P P 14 10 56.8 -3.3
GOGA Godfrey 23.86 49 P P 14 10 57.5 -2.6
GOGA pmax pmax
comp=Z,74nm,0.7s
BMN Battle Mountai 23.98 336 P P 14 11 02.4 +1.1
BMN IAmb IAmb 14 11 05.1
comp=Z,266nm,1.2s
BMN IAMs_20 IAMs_20 14 21 22.1
comp=Z,9μm,20.0s
BMN Battle Mountai 23.98 336 P P 14 11 02.4 +1.1
BMN pmax pmax
comp=Z,266nm,1.2s
BMN MLR MLR
comp=Z,9μm,20.0s
BW06 Boulder Array 24.12 351 P P 14 11 01.7 -1.0
BW06 IAMs_20 IAMs_20 14 19 36.5
comp=Z,14μm,19.0s
BW06 Boulder Array 24.12 351 P P 14 11 01.7 -1.0
baz=169,SNR=15
BW06 Boulder Array 24.12 351 ⇑P P 14 11 01.5 -1.2
PD31 Pinedale Array 24.12 351 P P 14 11 02.0 -0.7
PDAR Pinedale Array 24.12 351 ⇑P P 14 11 01.3 -1.4
PDAR Pinedale Array 24.12 351 P P 14 11 01.6 -1.1
comp=Z,5.8nm,1.0s,baz=163,slow=9.4,SNR=32
PDAR PcP PcP 14 14 44.0 +0.2
comp=Z,2.6nm,0.8s,baz=160,slow=2.9,SNR=3.3
PDAR LR LR 14 20 45.6
comp=Z,7μm,19.2s,baz=182,slow=38
comp=Z,5.8nm,1.0s
CPCT Cooper Cave 24.30 43 P P 14 11 02.3 -1.9
CPCT IAmb IAmb 14 11 03.8
comp=Z,78nm,0.7s
AHID Auburn Hatcher 24.38 349 IAMs_20 IAMs_20 14 21 46.3
comp=Z,14μm,19.0s
AHID Auburn Hatcher 24.38 349 ⇑P P 14 11 04.0 -1.1
MCCM Marconi Confer 24.84 324 IAMs_20 IAMs_20 14 19 36.7
comp=Z,9μm,20.0s
MCCM Marconi Confer 24.84 324 ⇑P P 14 11 10.5 +1.5
SCIA State Center 24.93 21 IAMs_20 IAMs_20 14 20 54.1
comp=Z,13μm,20.0s
SCIA State Center 24.93 21 P P 14 11 07.8 -2.0
baz=206
SNOW Snow King Moun 24.99 350 P P 14 11 10.6 0.0
SNOW IAmb IAmb 14 11 14.5
comp=Z,134nm,1.0s
SNOW IAMs_20 IAMs_20 14 21 16.1
comp=Z,13μm,20.0s
TPAW Teton Pass 25.05 349 IAMs_20 IAMs_20 14 21 17.8
comp=Z,10μm,18.0s
WCI Wyandotte Cave 25.06 36 IAMs_20 IAMs_20 14 22 08.6
comp=Z,9μm,19.0s
WCI Wyandotte Cave 25.06 36 P P 14 11 10.1 -0.9
baz=225
WCI Wyandotte Cave 25.06 36 ⇑P P 14 11 09.1 -1.9
LOHW Long Hollow 25.11 350 IAMs_20 IAMs_20 14 22 29.4
comp=Z,14μm,18.0s
RSSD Black Hills 25.13 1 P P 14 11 11.0 -0.9
baz=181
RSSD Black Hills 25.13 1 ⇑P P 14 11 10.0 -1.9
HDIL Hopedale 25.31 28 IAMs_20 IAMs_20 14 21 18.2
comp=Z,10μm,18.0s
HDIL Hopedale 25.31 28 P P 14 11 11.0 -2.3
baz=216,SNR=10
HDIL Hopedale 25.31 28 ⇑P P 14 11 10.9 -2.4
HOPS Hopland Field 25.55 325 IAMs_20 IAMs_20 14 20 13.6
comp=Z,9μm,20.0s
FLWY Flagg Ranch 25.58 350 IAMs_20 IAMs_20 14 21 55.6
comp=Z,15μm,18.0s
TZTN Tazewell 25.59 42 P P 14 11 14.3 -1.6
baz=232,SNR=23
TZTN Tazewell 25.59 42 ⇓P P 14 11 14.1 -1.8
ECSD EROS Data Cent 25.66 14 IAMs_20 IAMs_20 14 20 55.8
comp=Z,10μm,19.0s
MTDJ Mount Denham 25.79 87 ⇓P P 14 11 17.9 0.0
H17A Grant Village 25.87 350 P P 14 11 19.8 +1.2
baz=167,SNR=19
HLID Hailey 25.89 344 IAMs_20 IAMs_20 14 21 29.4
comp=Z,11μm,18.0s
HLID Hailey 25.89 344 P P 14 11 19.2 +0.6
baz=158,SNR=54
HLID Hailey 25.89 344 ⇑P P 14 11 18.4 -0.3
SUSD Miller 25.90 10 IAMs_20 IAMs_20 14 21 04.5
comp=Z,9μm,22.0s
SUSD Miller 25.90 10 P P 14 11 17.8 -0.9
baz=192
NHSC New Hope 26.12 52 P P 14 11 19.7 -0.9
baz=243
YMP Mirror Lake Pl 26.14 351 IAMs_20 IAMs_20 14 22 17.4
comp=Z,16μm,20.0s
SFIN Lafayette 26.21 32 P P 14 11 19.7 -1.7
SFIN IAmb IAmb 14 11 21.1
comp=Z,79nm,0.9s
SFIN Lafayette 26.21 32 P P 14 11 19.8 -1.7
baz=220,SNR=18
WVOR Wild Horse Val 26.24 336 ⇑P P 14 11 22.4 +0.5
KMSC Kings Mountain 26.27 47 P P 14 11 20.6 -1.4
baz=238,SNR=14
RLMT Red Lodge 26.40 353 P P 14 11 22.9 -0.4
baz=170
RLMT Red Lodge 26.40 353 ⇓P P 14 11 22.6 -0.7
P49A Miami Univ. Ec 26.85 36 P P 14 11 25.4 -1.8
baz=226,SNR=8.1
JFWS Jewell Farm 26.87 24 IAMs_20 IAMs_20 14 22 03.6
comp=Z,7μm,19.0s
JFWS Jewell Farm 26.87 24 P P 14 11 25.7 -1.8
baz=211,SNR=8.6
JFWS Jewell Farm 26.87 24 ⇑P P 14 11 25.6 -1.8
HQIL Hanson Quary C 26.96 29 IAMs_20 IAMs_20 14 22 12.8
comp=Z,10μm,21.0s
J08A Circle Bar Ran 26.98 338 P P 14 11 28.5 +0.1
J08A IAmb IAmb 14 11 31.9
comp=Z,152nm,1.2s
O48B Farmland 27.12 34 P P 14 11 27.3 -2.4
baz=224,SNR=6.5
BOZ Bozeman (W) 27.21 349 IAMs_20 IAMs_20 14 22 03.3
comp=Z,10μm,19.0s
BOZ Bozeman (W) 27.21 349 P P 14 11 30.7 +0.1
baz=166,SNR=34
BOZ Bozeman (W) 27.21 349 ⇑P P 14 11 30.5 -0.1
L44A Lake County Fo 27.24 28 IAMs_20 IAMs_20 14 22 00.1
comp=Z,7μm,18.0s
L44A Lake County Fo 27.24 28 P P 14 11 28.1 -2.5
baz=216
JCC Jacoby Creek, 27.38 327 IAMs_20 IAMs_20 14 22 30.2
comp=Z,10μm,18.0s
K05A Summer Lake 27.39 334 IAMs_20 IAMs_20 14 22 46.2
comp=Z,7μm,18.0s
YBH Yreka Blue Hor 27.42 330 LR LR 14 21 32.7
comp=Z,3μm,20.4s,baz=161,slow=35
LAO LASA Array 27.72 358 P P 14 11 33.4 -1.6
baz=177,SNR=14
LAO LASA Array 27.72 358 ⇑P P 14 11 33.5 -1.6
PLID Pearl Lake 27.73 343 P P 14 11 34.8 -0.6
PLID IAmb IAmb 14 11 38.2
comp=Z,398nm,2.1s
PLID IAMs_20 IAMs_20 14 22 46.3
comp=Z,10μm,20.0s
BMO Blue Mountains 27.90 341 P P 14 11 36.4 -0.4
BMO IAmb IAmb 14 11 39.2
comp=Z,196nm,1.9s
BMO IAMs_20 IAMs_20 14 22 59.9
comp=Z,9μm,18.0s
BMO Blue Mountains 27.90 341 P P 14 11 36.4 -0.4
BMO pmax pmax
comp=Z,196nm,1.9s
BMO MLR MLR
comp=Z,9μm,18.0s
GTBY Guantanamo Bay 27.94 83 IAMs_20 IAMs_20 14 23 27.0
comp=Z,7μm,21.0s
J05D Fort Rock, OR 27.99 334 IAMs_20 IAMs_20 14 23 49.1
comp=Z,8μm,18.0s
BLA Blacksburg 28.02 44 P P 14 11 36.1 -1.7
baz=236,SNR=8.5
BLA Blacksburg 28.02 44 ⇑P P 14 11 36.4 -1.4
SPMN Marine on St. 28.05 18 P P 14 11 36.2 -1.7
baz=204
KSXB Camp Six Broad 28.05 329 IAMs_20 IAMs_20 14 22 35.7
comp=Z,7μm,19.0s
L02F Cave Junction 28.12 329 IAMs_20 IAMs_20 14 22 26.6
comp=Z,9μm,19.0s
HUMO Hull Mountain 28.21 331 ⇑P P 14 11 39.1 -0.3
PINE Pine Mountain 28.29 335 IAMs_20 IAMs_20 14 23 32.0
comp=Z,8μm,18.0s
ACSO Alum Creek Sta 28.30 37 P P 14 11 38.0 -2.2
baz=228
P52A Corning 28.40 39 P P 14 11 37.7 -3.4
baz=230,SNR=5.6
K02D Willamette Mer 28.61 330 IAMs_20 IAMs_20 14 22 55.3
comp=Z,8μm,19.0s
LYMT Lyon Mountain 28.66 349 P P 14 11 43.2 -0.4
CNNC Cliffs of the 28.77 50 P P 14 11 41.5 -3.0
baz=242
G08A Pilot Rock 28.83 339 P P 14 11 43.8 -1.2
G08A IAmb IAmb 14 11 48.7
comp=Z,201nm,1.5s
F10A Beach Ranch, E 28.89 342 IAMs_20 IAMs_20 14 24 08.0
comp=Z,6μm,19.0s
F10A Beach Ranch, E 28.89 342 ⇑P P 14 11 45.4 -0.2
I05D Terrebonne, OR 28.90 335 IAMs_20 IAMs_20 14 22 59.2
comp=Z,7μm,19.0s
J01E Myrtle Point 29.09 330 IAMs_20 IAMs_20 14 23 29.1
comp=Z,6μm,18.0s
MDND Maddock 29.16 7 IAMs_20 IAMs_20 14 23 07.5
comp=Z,12μm,18.0s
MDND Maddock 29.16 7 P P 14 11 45.4 -2.4
baz=190
EGMT Eagleton 29.32 353 P P 14 11 48.1 -1.2
EGMT IAmb IAmb 14 12 47.5
comp=Z,85nm,1.3s
EGMT IAMs_20 IAMs_20 14 23 06.9
comp=Z,8μm,21.0s
EGMT Eagleton 29.32 353 P P 14 11 48.1 -1.2
baz=170,SNR=29
EGMT Eagleton 29.32 353 ⇑P P 14 11 48.3 -0.9
O53A New Philadelph 29.34 39 P P 14 11 47.2 -2.2
baz=230,SNR=5.8
AAM Ann Arbor 29.38 33 P P 14 11 47.4 -2.4
baz=224
BUCK Buck Mountain 29.48 333 IAMs_20 IAMs_20 14 23 44.3
comp=Z,8μm,19.0s

DGMT Dagmar 29.48 1 P P 14 11 49.6 -1.1
DGMT IAmb IAmb 14 11 52.0
comp=Z,376nm,2.2s
DGMT Dagmar 29.48 1 IAMs_20 IAMs_20 14 23 10.0
comp=Z,9µm,18.0s
DGMT Dagmar 29.48 1 P P 14 11 49.5 -1.1
baz=181
E09A Wood Farm, Sta 29.65 341 IAMs_20 IAMs_20 14 24 05.2
comp=Z,7µm,20.0s
MCWV Mont Chateau 29.80 41 P P 14 11 49.2 -4.3
baz=233,SNR=6.9
HOOD Mount Hood Mea 29.84 336 IAMs_20 IAMs_20 14 23 31.1
comp=Z,7µm,20.0s
COR Corvallis 29.92 333 IAMs_20 IAMs_20 14 24 06.2
comp=Z,8µm,19.0s
COR Corvallis 29.92 333 ⇓P P 14 11 56.2 +1.6
HAWA Hanford 29.99 339 ⇓P P 14 11 55.4 +0.2
COWI Conover 30.01 22 IAMs_20 IAMs_20 14 25 13.7
comp=Z,9µm,18.0s
AGMN Agassiz Nation 30.18 12 IAMs_20 IAMs_20 14 23 58.2
comp=Z,7µm,20.0s
AGMN Agassiz Nation 30.18 12 P P 14 11 54.6 -2.2
baz=197
G03D McMinnville, O 30.41 334 IAMs_20 IAMs_20 14 24 37.0
comp=Z,7µm,19.0s
MXC Moxie City 30.41 339 IAMs_20 IAMs_20 14 25 34.2
comp=Z,11µm,18.0s
M53A WI Miller and 30.41 37 P P 14 11 56.7 -2.2
baz=230
CBN Corbin Frederi 30.59 45 P P 14 11 58.4 -2.1
baz=239
B35A Bob, Littlefor 30.70 14 P P 14 11 58.9 -2.5
B35A IAmb IAmb 14 12 00.5
comp=Z,48nm,0.9s
B35A IAMs_20 IAMs_20 14 24 10.4
comp=Z,10µm,19.0s
GLMI Grayling 30.80 29 P P 14 11 59.6 -2.7
baz=219
CBOC Ciudad Bolivar 30.84 111 eP P 14 12 05.3 +2.1
CBOC eP pP 14 12 06.1 -0.6
EYMN Ely 30.89 17 P P 14 12 01.1 -2.0
EYMN IAmb IAmb 14 12 03.3
comp=Z,61nm,0.9s
EYMN Ely 30.89 17 IAMs_20 IAMs_20 14 24 30.1
comp=Z,9µm,19.0s
EYMN Ely 30.89 17 P P 14 12 00.7 -2.4
baz=205,SNR=60
EYMN Ely 30.89 17 ⇑P P 14 12 00.4 -2.7
NEW Newport 30.95 344 IAMs_20 IAMs_20 14 26 43.4
comp=Z,8µm,19.0s
NEW Newport 30.95 344 P P 14 12 03.3 -0.4
baz=157,SNR=9.9
NEW Newport 30.95 344 ⇑P P 14 12 03.1 -0.5
NEW Newport 30.95 344 LR LR 14 24 57.6
comp=Z,7µm,19.4s,baz=164,slow=37
LON Longmire 31.10 337 IAMs_20 IAMs_20 14 24 35.4
comp=Z,9µm,19.0s
F03A Seaside 31.11 334 IAMs_20 IAMs_20 14 24 39.6
comp=Z,8µm,20.0s
ERPA Erie 31.24 37 P P 14 12 04.0 -2.2
baz=230
D05A Enumclaw 31.54 337 IAMs_20 IAMs_20 14 24 48.9
comp=Z,9µm,19.0s
SDMD Soldier's Deli 31.57 44 P P 14 12 06.8 -2.4
SSPA Standing Stone 31.59 41 P P 14 12 07.4 -1.9
SSPA IAmb IAmb 14 12 08.9
comp=Z,61nm,0.8s
SSPA Standing Stone 31.59 41 P P 14 12 07.2 -2.1
baz=234
SSPA Standing Stone 31.59 41 ⇑P P 14 12 07.0 -2.3
RADR Rader Ridge 31.61 334 IAMs_20 IAMs_20 14 25 37.7
comp=Z,9µm,18.0s
E03A Lebam 31.61 335 IAMs_20 IAMs_20 14 25 08.8
comp=Z,8µm,20.0s
BBAC Balboa, Cauca 31.73 119 eP P 14 12 12.1 +1.0
OTAV Otavalo 31.78 123 ⇓P P 14 12 14.2 +2.4
TULM Tulcn-Chalpat 32.03 121 eP P 14 12 19.9 +5.9
ULM Lac du Bonnet 32.05 11 P P 14 12 10.7 -2.6
ULM IAMs_20 IAMs_20 14 24 41.1
comp=Z,7µm,22.0s
ULM Lac du Bonnet 32.05 11 ⇑P P 14 12 10.6 -2.6
ULM Lac du Bonnet 32.05 11 c iP P 14 12 11.4 -1.8
ULM Lac du Bonnet 32.05 11 P P 14 12 10.5 -2.7
comp=Z,18nm,0.9s,baz=196,slow=9.8,SNR=33
comp=Z,18nm,0.9s
GCUF Volcan Galeras 32.09 120 eP P 14 12 17.2 +2.6
WISH Wishkah 32.16 335 IAMs_20 IAMs_20 14 26 00.3
comp=Z,8µm,19.0s
GNW Green Mountain 32.16 337 P P 14 12 14.6 +0.3
GNW IAmb IAmb 14 12 16.3
comp=Z,118nm,0.9s
NLWA Neilton Lookou 32.42 335 P P 14 12 18.1 +1.4
NLWA IAMs_20 IAMs_20 14 26 16.6
comp=Z,8µm,18.0s
NLWA Neilton Lookou 32.42 335 ⇑P P 14 12 17.0 +0.4
PIAT Ana Tenorio 32.68 124 eP P 14 12 21.9 +2.2
ROSC El Rosal 32.81 111 P P 14 12 19.4 -1.4
comp=Z,8.2nm,0.4s,baz=276,slow=5.7,SNR=6.2
comp=Z,8.2nm,0.4s
BARC Barichara 33.05 108 eP P 14 12 24.8 +2.1
C03A Quillayute Air 33.15 335 IAMs_20 IAMs_20 14 26 28.5
comp=Z,9µm,18.0s
PGC Sidney 33.30 337 P P 14 12 25.1 +0.9
PGC IAMs_20 IAMs_20 14 27 57.6
comp=Z,5µm,18.0s
SADO Sadowa 33.45 34 P P 14 12 23.0 -2.6
SADO IAmb IAmb 14 12 24.5
comp=Z,45nm,0.8s
BINY Binghamton 33.65 40 P P 14 12 25.3 -2.2
BINY IAmb IAmb 14 12 26.8
comp=Z,85nm,0.9s
BINY Binghamton 33.65 40 P P 14 12 25.8 -1.6
baz=235,SNR=19
BINY Binghamton 33.65 40 ⇑P P 14 12 25.2 -2.2
CLRS Cowichan Lake 33.69 337 P P 14 12 28.5 +0.9
CLRS IAMs_20 IAMs_20 14 27 21.0
comp=Z,6µm,18.0s
L59A Walton 34.23 41 P P 14 12 31.0 -1.5
L59A IAmb IAmb 14 12 32.2
comp=Z,102nm,0.9s
PAL Palisades 34.32 43 P P 14 12 31.5 -1.7
baz=239
OZB Mount Ozzard 34.33 336 P P 14 12 34.9 +1.7
TAMC Tame, Arauca 34.37 107 eP P 14 12 36.5 +2.5
SDV Santo Domingo 34.51 102 LR LR 14 26 58.3
comp=Z,5µm,21.4s,baz=322,slow=37
SDV Santo Domingo 34.51 102 eP P 14 12 36.4 +1.1
EDM Edmonton 34.88 351 P P 14 12 36.9 -1.1
EDM IAmb IAmb 14 12 40.6
comp=Z,54nm,1.0s
EDM Edmonton 34.88 351 P P 14 12 36.9 -1.1
EDM pmax pmax
comp=Z,55nm,1.0s
EDM MLR MLR
comp=Z,15µm,21.0s
HATO Hato, Curacao 35.06 96 IAMs_20 IAMs_20 14 28 09.9
comp=Z,5µm,19.0s
CBB Campbell River 35.15 337 P P 14 12 41.4 +1.1
FFC Flin Flon 35.80 3 P P 14 12 43.8 -2.0
FFC IAmb IAmb 14 12 46.3
comp=Z,262nm,1.9s
FFC Flin Flon 35.80 3 ⇑P P 14 12 43.7 -2.0
FFC Flin Flon 35.80 3 P P 14 12 43.8 -2.0
FFC pmax pmax
comp=Z,263nm,2.0s
FFC MLR MLR
comp=Z,46µm,21.0s
L61B Northampton 35.85 42 P P 14 12 43.9 -2.5
baz=239,SNR=6.3
LONY Lake Ozonia 35.89 38 IAMs_20 IAMs_20 14 28 58.0
comp=Z,10µm,21.0s
LONY Lake Ozonia 35.89 38 P P 14 12 44.1 -2.6
baz=234,SNR=5.4
J61A Chester 36.40 41 P P 14 12 50.0 -1.0
J61A IAmb IAmb 14 12 51.2
comp=Z,79nm,0.9s
BRLDA Berland Lookou 36.44 347 IAMs_20 IAMs_20 14 27 23.5
comp=Z,6µm,18.0s
SJG San Juan 36.55 85 IAMs_20 IAMs_20 14 29 06.1
comp=Z,5µm,21.0s
SJG San Juan 36.55 85 ⇑P P 14 12 52.0 -0.7
VLDQ Val d'Or 36.58 31 P P 14 12 49.9 -2.6
HRV Adam Dziewonsk 36.59 43 P P 14 12 51.2 -1.5
baz=240
ATAH Atahualpa 36.67 132 LR LR 14 23 27.9
comp=Z,1µm,20.6s,baz=313,slow=29

HOLB Holberg 36.71 335 P P 14 12 54.5 +0.9
M65A Busby, Falmout 36.74 45 P P 14 12 50.9 -3.1
baz=242
BAUV El Baul 36.90 100 P P 14 12 55.5 -0.1
MNTQ Montreal, Queb 36.95 37 P P 14 12 54.1 -1.7
LBNH Lisbon 37.25 40 IAMs_20 IAMs_20 14 29 12.2
comp=Z,5µm,18.0s
LBNH Lisbon 37.25 40 P P 14 12 56.5 -1.9
baz=238,SNR=9.5
LBNH Lisbon 37.25 40 ⇓P P 14 12 57.2 -1.2
BBB Bella Bella 37.91 337 ⇓P P 14 13 05.2 +1.4
BBB Bella Bella 37.91 337 LR LR 14 29 07.5
comp=Z,3µm,18.8s,baz=154,slow=37
SABA Saba 39.36 85 IAMs_20 IAMs_20 14 31 08.5
comp=Z,6µm,20.0s
PKME Peaks-Kenny Pk 39.39 40 IAMs_20 IAMs_20 14 29 37.7
comp=Z,4µm,18.0s
PKME Peaks-Kenny Pk 39.39 40 P P 14 13 13.2 -3.1
baz=240,SNR=6.5
PKME Peaks-Kenny Pk 39.39 40 ⇑P P 14 13 15.3 -1.0
SEUS St. Eustatius 39.62 85 IAMs_20 IAMs_20 14 31 05.6
comp=Z,4µm,19.0s
PCRV Puerto La Cruz 39.70 97 LR LR 14 31 36.9
comp=Z,6µm,19.4s,slow=39
LDAQ Lac Daran 39.71 35 P P 14 13 17.0 -2.0
LMQ La Malbaie 39.99 37 P P 14 13 19.1 -2.2
RUBB Prince Rupert 40.39 337 P P 14 13 26.2 +1.8
RUBB IAMs_20 IAMs_20 14 31 02.0
comp=Z,4µm,19.0s
CBE Ff, Capester 41.16 87 IAMs_20 IAMs_20 14 32 27.2
comp=Z,7µm,19.0s
CZSB Cruzeiro do Su 41.21 127 eP P 14 13 33.2 +1.5
NNA Nana 41.22 136 i P P 14 13 32.7 +0.8
NNA pmax pmax
comp=Z,19nm,1.0s
NNA Nana 41.22 136 LR LR 14 27 11.3
comp=Z,1µm,20.9s,baz=336,slow=31
MAGL Barre de l'ile 41.49 87 IAMs_20 IAMs_20 14 32 46.0
comp=Z,6µm,19.0s
U35K Hyder 41.56 339 IAMs_20 IAMs_20 14 33 17.0
comp=Z,7µm,19.0s
U35K Hyder 41.56 339 P P 14 13 35.2 +1.1
baz=142
V35K Ketchikan 41.67 337 P P 14 13 36.5 +1.5
baz=140,SNR=13
SVN Savane Anatole 41.81 89 IAMs_20 IAMs_20 14 31 07.7
comp=Z,5µm,20.0s
FDF Fort de France 41.85 89 IAMs_20 IAMs_20 14 30 59.7
comp=Z,5µm,19.0s
BIM Bigot 41.97 89 IAMs_20 IAMs_20 14 31 12.9
comp=Z,5µm,19.0s
GRGR Grenville 41.97 93 IAMs_20 IAMs_20 14 30 47.0
comp=Z,4µm,21.0s
MPOM Morne Pois Mar 42.19 89 IAMs_20 IAMs_20 14 30 58.5
comp=Z,5µm,20.0s
BATG Bathurst New B 42.33 39 P P 14 13 38.9 -1.6
BATG IAmb IAmb 14 13 40.2
comp=Z,75nm,0.9s
CRAG Craig 42.34 336 P P 14 13 42.6 +2.2
CRAG Craig 42.34 336 P P 14 13 42.7 +2.3
baz=138,SNR=13
CRAG Craig 42.34 336 ⇑P P 14 13 41.9 +1.5
T35M Bob Quinn 42.49 340 IAMs_20 IAMs_20 14 32 17.4
comp=Z,4µm,18.0s
T35M Bob Quinn 42.49 340 P P 14 13 43.4 +1.7
baz=143,SNR=18
WRAK Wrangell Islan 42.77 338 P P 14 13 45.0 +1.0
WRAK IAmb IAmb 14 13 47.9
comp=Z,120nm,1.2s
WRAK Wrangell Islan 42.77 338 IAMs_20 IAMs_20 14 31 59.3
comp=Z,6µm,21.0s
WRAK Wrangell Islan 42.77 338 P P 14 13 45.8 +1.8
baz=140,SNR=8.4
U33K Whale Pass 42.82 337 P P 14 13 45.9 +1.6
baz=138,SNR=8.1
T33K Petersburg 43.29 338 P P 14 13 49.7 +1.6
baz=139,SNR=9.7
FLDN Fort Liard 43.40 347 IAMs_20 IAMs_20 14 30 44.6
comp=Z,6µm,20.0s
FLDN Fort Liard 43.40 347 P P 14 13 48.7 -0.3
baz=154,SNR=7.6
KOTAN Kotaneelee Air 43.43 346 P P 14 13 49.5 +0.2
baz=153
S34M Telegraph Cree 43.52 340 IAMs_20 IAMs_20 14 32 53.7
comp=Z,4µm,19.0s
S34M Telegraph Cree 43.52 340 P P 14 13 51.4 +1.4
baz=142,SNR=8.4
DLBC Dease Lake 43.59 341 P P 14 13 52.0 +1.4
DLBC IAmb IAmb 14 13 54.8
comp=Z,177nm,1.2s
DLBC IAMs_20 IAMs_20 14 33 06.6
comp=Z,5µm,18.0s
DLBC Dease Lake 43.59 341 P P 14 13 52.1 +1.5
baz=144,SNR=61
DLBC Dease Lake 43.59 341 LR LR 14 30 56.3
comp=Z,4µm,19.8s,baz=142,slow=35
YKAW1 Yellowknife Wh 44.05 354 IAMs_20 IAMs_20 14 33 20.8
comp=Z,11µm,19.0s
YKA Yellowknife Ar 44.07 353 P P 14 13 52.4 -1.9
comp=Z,11nm,0.8s,baz=165,slow=7.4,SNR=64
YKA PcP PcP 14 15 38.5 -1.0
comp=Z,2.7nm,0.9s,baz=159,slow=3.3,SNR=5.1
YKA LR LR 14 33 30.5
comp=Z,7µm,19.1s,baz=164,slow=38
comp=Z,11nm,0.8s
YKAW3 Yellowknife Wh 44.14 353 IAMs_20 IAMs_20 14 33 23.2
comp=Z,11µm,20.0s
SIT Sitka 44.34 337 P P 14 13 57.9 +1.3
baz=136
S32K Killisnoo 44.37 337 IAMs_20 IAMs_20 14 32 34.2
comp=Z,3µm,20.0s
S32K Killisnoo 44.37 337 P P 14 13 58.5 +1.7
baz=138,SNR=6.8
WTLY Watson Lake, Y 44.61 343 IAMs_20 IAMs_20 14 32 50.7
comp=Z,5µm,19.0s
WTLY Watson Lake, Y 44.61 343 P P 14 13 59.7 +0.9
baz=147,SNR=28
R33M Jennings River 44.65 341 IAMs_20 IAMs_20 14 33 27.8
comp=Z,5µm,19.0s
R33M Jennings River 44.65 341 P P 14 14 00.2 +0.9
baz=143
Q32M Nakina River 44.71 340 IAMs_20 IAMs_20 14 33 31.6
comp=Z,5µm,18.0s
Q32M Nakina River 44.71 340 P P 14 14 01.2 +1.4
baz=142
JIS Juneau Island 44.90 338 P P 14 14 02.9 +1.9
R32K Eaglecrest 44.95 338 IAMs_20 IAMs_20 14 32 56.5
comp=Z,5µm,20.0s
R32K Eaglecrest 44.95 338 P P 14 14 01.9 +0.5
baz=138
TEFE Tefe 45.32 115 eP P 14 14 04.8 -0.2
S31K Pelican 45.34 337 IAMs_20 IAMs_20 14 36 27.8
comp=Z,3µm,18.0s
S31K Pelican 45.34 337 P P 14 14 06.0 +1.5
baz=136,SNR=10
R31K City Hall, Gus 45.48 338 P P 14 14 05.9 +0.3
baz=137
P32M Atlin 45.67 340 IAMs_20 IAMs_20 14 34 27.7
comp=Z,4µm,20.0s
P32M Atlin 45.67 340 P P 14 14 08.2 +0.9
baz=140,SNR=24
P33M Teslin, Yukon 45.87 341 IAMs_20 IAMs_20 14 33 27.9
comp=Z,4µm,21.0s
P33M Teslin, Yukon 45.87 341 P P 14 14 10.1 +1.2
baz=142,SNR=31
SCHQ Schefferville 45.97 30 LR LR 14 34 24.0
comp=Z,7µm,19.5s,baz=230,slow=38
RPN Rapa Nui 45.99 186 LR LR 14 28 56.3
comp=Z,5µm,20.6s,baz=8.5,slow=30
WRGLY Wrigley 46.10 348 IAMs_20 IAMs_20 14 33 27.1
comp=Z,7µm,21.0s
WRGLY Wrigley 46.10 348 P P 14 14 10.5 0.0
baz=155,SNR=50
SKAG Skagway 46.11 339 IAMs_20 IAMs_20 14 34 12.3
comp=Z,4µm,18.0s
SKAG Skagway 46.11 339 P P 14 14 12.0 +1.4
SKAG Skagway 46.11 339 P P 14 14 11.0 +0.4
baz=138,SNR=8.8
SKAG Skagway 46.11 339 ⇑P P 14 14 11.5 +0.9
BOAV Boa Vista 46.27 105 P P 14 14 11.6 -0.9
BOAV Boa Vista 46.27 105 eP P 14 14 12.8 +0.2
PLBC Pleasant Camp 46.47 338 P P 14 14 14.9 +1.4
baz=137,SNR=37
N32M Quiet Lake 46.69 342 P P 14 14 16.1 +0.8
baz=142
WHY Whitehorse 46.87 340 IAMs_20 IAMs_20 14 33 09.3
comp=Z,4µm,19.0s

WHY Whitehorse 46.87 340 P P 14 14 17.4 +0.7
baz=139,SNR=17
P29M Windy Craggy 47.08 338 P P 14 14 19.9 +1.6
baz=135
P30M Million Dollar 47.16 339 P P 14 14 20.4 +1.5
baz=136
O30N Mendenhall 47.35 340 IAMs_20 IAMs_20 14 34 45.9
comp=Z,5µm,18.0s
O30N Mendenhall 47.35 340 P P 14 14 20.9 +0.6
baz=138,SNR=38
ETMB Extrema 47.52 124 eP P 14 14 21.2 -1.1
FARO Faro, Yukon 47.62 342 IAMs_20 IAMs_20 14 34 44.3
comp=Z,3µm,19.0s
FARO Faro, Yukon 47.62 342 P P 14 14 23.2 +0.7
baz=142,SNR=19
PNL Peninsula 47.71 337 P P 14 14 24.9 +1.7
PNL Peninsula 47.71 337 P P 14 14 24.3 +1.1
baz=133,SNR=13
N31M Braeburn, Yuko 47.78 340 IAMs_20 IAMs_20 14 34 35.5
comp=Z,5µm,19.0s
N31M Braeburn, Yuko 47.78 340 P P 14 14 24.5 +0.8
baz=139,SNR=42
O29M Mount Kennedy 47.85 338 IAMs_20 IAMs_20 14 34 51.5
comp=Z,4µm,18.0s
O29M Mount Kennedy 47.85 338 P P 14 14 24.9 +0.5
baz=135
HYT Haines Junctio 47.86 339 P P 14 14 25.9 +1.4
HYT Haines Junctio 47.86 339 P P 14 14 25.9 +1.4
baz=136,SNR=63
M31M Drury Creek, Y 47.91 342 P P 14 14 25.7 +1.0
baz=141,SNR=35
BCPM Bancas Point 47.99 337 IAMs_20 IAMs_20 14 34 14.1
comp=Z,3µm,18.0s
YUK6 Outpost Mounta 48.23 339 P P 14 14 29.1 +1.6
baz=135,SNR=40
PINM Pinnacle 48.32 337 P P 14 14 29.5 +1.5
baz=132,SNR=22
DRLN Deer Lake 48.34 40 ⇓P P 14 14 27.3 -0.9
MACA Manacapuru-AM 48.57 112 eP P 14 14 30.4 0.0
YUK4 Talbot Arm 48.62 339 P P 14 14 32.2 +1.8
baz=135,SNR=54
TABL Table Mountain 48.88 337 IAMs_20 IAMs_20 14 37 37.5
comp=Z,3µm,18.0s
M30M Minto, Yukon 48.92 341 P P 14 14 33.4 +0.9
baz=138,SNR=26
YUK8 Steele Glacier 48.96 338 P P 14 14 34.8 +1.7
baz=134,SNR=90
MESA MESA 49.01 336 IAMs_20 IAMs_20 14 36 18.9
comp=Z,3µm,18.0s
MESA MESA 49.01 336 P P 14 14 35.5 +2.1
baz=131,SNR=13
LOGN Logan Glacier 49.09 337 IAMs_20 IAMs_20 14 36 43.3
comp=Z,4µm,18.0s
CTGM Chitina Glacie 49.30 337 IAMs_20 IAMs_20 14 38 11.7
comp=Z,5µm,19.0s
CTG Chitna Glacier 49.30 337 P P 14 14 37.5 +1.9
baz=132,SNR=35
M29M Somme Creek 49.35 340 P P 14 14 37.0 +1.2
baz=136
MAYO Mayo, Yukon 49.42 342 P P 14 14 37.9 +1.6
baz=140,SNR=17
ISLE Juniper Island 49.43 337 IAMs_20 IAMs_20 14 37 44.1
comp=Z,4µm,18.0s
SAML Samuel 49.45 120 IAMs_20 IAMs_20 14 36 35.0
comp=Z,3µm,18.0s
SAML Samuel 49.45 120 ⇑P P 14 14 35.6 -1.6
SAML Samuel 49.45 120 eP P 14 14 35.7 -1.4
BGLC Bering Glacier 49.48 336 P P 14 14 38.2 +1.4
baz=129
YUK3 Moose Creek 49.54 339 P P 14 14 39.2 +1.7
baz=133,SNR=42
L29M L29M 49.73 341 IAMs_20 IAMs_20 14 35 54.9
comp=Z,5µm,19.0s
L29M L29M 49.73 341 P P 14 14 40.0 +1.3
baz=137,SNR=107
KAIM Kayak Island 49.81 335 IAMs_20 IAMs_20 14 38 56.1
comp=Z,3µm,19.0s
KAIM Kayak Island 49.81 335 P P 14 14 41.4 +2.1
baz=128
CRQE Cirque 49.81 336 P P 14 14 40.8 +1.4
baz=130
K29M Barlow Dome 50.09 342 P P 14 14 42.0 +0.5
baz=138
BVCY Beaver Creek 50.12 339 P P 14 14 43.1 +1.5
baz=133,SNR=44
RAGM Ragged Mountai 50.19 335 IAMs_20 IAMs_20 14 39 20.2
comp=Z,3µm,19.0s
MCARA McCarthy VSAT 50.19 337 P P 14 14 43.8 +1.6
MCARA IAMs_20 IAMs_20 14 38 43.2
comp=Z,4µm,18.0s
MCARA McCarthy VSAT 50.19 337 P P 14 14 43.8 +1.6
baz=130,SNR=49
VRDI Verde Repeater 50.25 337 IAMs_20 IAMs_20 14 38 32.8
comp=Z,5µm,18.0s
MID Middleton Isla 50.30 334 IAMs_20 IAMs_20 14 38 14.9
comp=Z,3µm,19.0s
J30M Hart River 50.30 343 IAMs_20 IAMs_20 14 35 17.0
comp=Z,3µm,21.0s
J30M Hart River 50.30 343 P P 14 14 43.8 +0.7
baz=140,SNR=26
Q23K Middleton Isla 50.30 334 IAMs_20 IAMs_20 14 38 16.1
comp=Z,3µm,19.0s
Q23K Middleton Isla 50.30 334 P P 14 14 43.3 +0.3
baz=125
M27K Edge Creek, AK 50.43 339 IAMs_20 IAMs_20 14 38 43.1
comp=Z,4µm,18.0s
M27K Edge Creek, AK 50.43 339 P P 14 14 45.2 +1.1
baz=132
GLB Gilahina Butte 50.52 337 IAMs_20 IAMs_20 14 38 16.9
comp=Z,4µm,21.0s
BMRM Bremner River 50.52 336 P P 14 14 46.5 +1.7
baz=128,SNR=36
EYAK Cordova Ski Ar 50.72 335 P P 14 14 48.1 +2.0
EYAK Cordova Ski Ar 50.72 335 P P 14 14 48.5 +2.4
baz=127,SNR=15
H31M Peel River 50.74 345 P P 14 14 46.3 0.0
baz=143
J29N Klondike Camp 50.74 342 IAMs_20 IAMs_20 14 35 31.8
comp=Z,3µm,18.0s
J29N Klondike Camp 50.74 342 P P 14 14 47.0 +0.6
baz=138,SNR=11
I30M Mount Dempster 50.81 343 IAMs_20 IAMs_20 14 35 32.5
comp=Z,5µm,20.0s
I30M Mount Dempster 50.81 343 P P 14 14 47.4 +0.5
baz=140
DAWY Dawson 50.81 341 P P 14 14 46.5 -0.4
baz=136
BCAR Beaver Creek A 50.88 339 P P 14 14 47.9 +0.5
L27K Beaver Creek, 50.89 339 IAMs_20 IAMs_20 14 37 48.6
comp=Z,5µm,20.0s
L27K Beaver Creek, 50.89 339 P P 14 14 48.2 +0.7
baz=133,SNR=44
N25K Chitina, Valde 50.92 337 IAMs_20 IAMs_20 14 37 45.5
comp=Z,3µm,18.0s
N25K Chitina, Valde 50.92 337 P P 14 14 49.5 +1.8
baz=128,SNR=47
FRB Frobisher Bay 51.06 20 ⇓P P 14 14 47.9 -0.8
FRB Frobisher Bay 51.06 20 LR LR 14 35 41.9
comp=Z,2µm,21.4s,baz=226,slow=35
P23K Montague Islan 51.06 334 P P 14 14 50.1 +1.3
baz=124
KLU Klutina 51.35 336 IAMs_20 IAMs_20 14 39 12.9
comp=Z,4µm,19.0s
KLU Klutina 51.35 336 P P 14 14 52.5 +1.5
baz=127,SNR=36
L26K Log Cabin Wild 51.38 339 IAMs_20 IAMs_20 14 36 56.7
comp=Z,3µm,21.0s
L26K Log Cabin Wild 51.38 339 P P 14 14 52.1 +1.0
baz=131,SNR=48
MENT Mentasta 51.45 338 P P 14 14 52.7 +1.0
MENT IAmb IAmb 14 14 55.2
comp=Z,115nm,1.3s
MENT IAMs_20 IAMs_20 14 39 15.6
comp=Z,5µm,18.0s
MENT Mentasta 51.45 338 P P 14 14 53.0 +1.3
G31M Satah River 51.62 346 P P 14 14 53.2 +0.4
baz=143
HARP HAARP 51.62 337 P P 14 14 54.3 +1.3
baz=128,SNR=32
K27K Chicken 51.63 340 IAMs_20 IAMs_20 14 37 54.4
comp=Z,3µm,20.0s
K27K Chicken 51.63 340 P P 14 14 53.7 +0.7
baz=133
EPYK Eagle Plains 51.78 344 P P 14 14 54.5 +0.4
baz=140,SNR=52
C36M Paulatuk 51.81 351 P P 14 14 53.7 -0.5
baz=156,SNR=17
M24K Tolsona, Glenn 51.82 337 IAMs_20 IAMs_20 14 39 44.2

comp=Z,3µm,20.0s
M24K **Tolsona, Glenn** 51.82 337 P P 14 14 54.9 +0.4
baz=127,SNR=31
EGAK **Eagle** 51.86 341 P P 14 14 54.1 -0.6
baz=134,SNR=6.7
F31M **Tsiigehtchic** 51.92 346 P P 14 14 55.0 0.0
baz=144,SNR=107
I28M **Miner Creek** 51.97 342 P P 14 14 54.7 -0.9
baz=136
SEW **Seward** 51.98 333 P P 14 14 55.7 +0.2
baz=122,SNR=9.0
PAX **Paxson** 52.09 338 P P 14 14 57.1 +0.5
baz=128,SNR=48
SCM **Sheep Creek Mo** 52.09 336 IAMs_20 IAMs_20 14 39 50.5
comp=Z,4µm,19.0s
SCM **Sheep Creek Mo** 52.09 336 P P 14 14 56.0 -0.5
baz=126,SNR=10
H29M **Whitestone** 52.10 343 IAMs_20 IAMs_20 14 39 59.8
comp=Z,4µm,19.0s
H29M **Whitestone** 52.10 343 P P 14 14 57.1 +0.6
baz=138
G30M **tAoh Zraii Nji** 52.13 345 IAMs_20 IAMs_20 14 36 09.6
comp=Z,5µm,19.0s
G30M **tAoh Zraii Nji** 52.13 345 P P 14 14 56.5 -0.2
baz=141,SNR=23
SCRK **Sand Creek** 52.22 339 IAMs_20 IAMs_20 14 35 47.9
comp=Z,3µm,18.0s
SCRK **Sand Creek** 52.22 339 P P 14 14 58.5 +1.0
baz=131,SNR=65
M23K **Glacier View** 52.22 336 P P 14 14 58.3 +0.9
baz=125,SNR=8.2
KDAK **Kodiak Island** 52.23 330 P P 14 14 57.0 -0.5
baz=117
KDAK **Kodiak Island** 52.23 330 ⇑P P 14 14 59.0 +1.5
KDAK **Kodiak Island** 52.23 330 *i* P P 14 14 59.1 +1.6
KDAK pmax pmax
comp=Z,129nm,1.5s
KDAK **Kodiak Island** 52.23 330 LR LR 14 35 20.8
comp=Z,2µm,21.0s,baz=136,slow=34
KNK **Knik Glacier** 52.29 335 IAMs_20 IAMs_20 14 40 07.8
comp=Z,3µm,18.0s
KNK **Knik Glacier** 52.29 335 P P 14 14 59.5 +1.5
baz=124,SNR=32
O22K **Cooper Landing** 52.30 334 P P 14 14 58.1 +0.1
baz=122,SNR=9.5
OHAK **Old Harbor** 52.32 329 P P 14 15 00.3 +2.2
baz=116
BRSE **Bradley Lake S** 52.35 333 P P 14 14 59.6 +1.3
baz=121,SNR=13
RIDG **Independent Ri** 52.36 339 IAMs_20 IAMs_20 14 40 50.5
comp=Z,3µm,21.0s
RIDG **Independent Ri** 52.36 339 P P 14 14 59.5 +1.0
baz=130,SNR=54
J26L **Joseph Creek** 52.43 340 P P 14 15 00.2 +1.2
J26L IAMs_20 IAMs_20 14 36 07.3
comp=Z,4µm,19.0s
J26L **Joseph Creek** 52.43 340 P P 14 15 00.1 +1.2
baz=131
SML **Sawmill** 52.47 336 P P 14 15 00.1 +0.8
SML IAMs_20 IAMs_20 14 40 12.4
comp=Z,3µm,18.0s
SML **Sawmill** 52.47 336 P P 14 15 00.5 +1.2
baz=124,SNR=26
SII **Sitkinak Islan** 52.47 328 P P 14 15 00.5 +1.1
baz=115
F30M **Barrier River** 52.53 346 P P 14 14 59.6 0.0
baz=142
SYI **Shuyak Island** 52.53 331 IAMs_20 IAMs_20 14 40 42.1
comp=Z,2µm,18.0s
Q20K **Shuyak Island** 52.53 331 P P 14 15 01.4 +1.7
baz=118
MDP **Montagnes des** 52.57 98 LR LR 14 39 35.7
comp=Z,2µm,18.6s,baz=290,slow=39
I27K **Kandik River** 52.58 342 P P 14 15 00.9 +0.9
baz=134
INK **Inuvik** 52.58 347 P P 14 14 59.8 -0.1
INK IAMs_20 IAMs_20 14 37 36.4
comp=Z,5µm,18.0s
INK **Inuvik** 52.58 347 P P 14 15 00.0 +0.1
baz=145,SNR=137
INK **Inuvik** 52.58 347 ⇑P P 14 14 59.5 -0.4
INK **Inuvik** 52.58 347 P P 14 14 59.8 -0.1
INK pmax pmax
comp=Z,432nm,1.7s
INK MLR MLR
comp=Z,5µm,18.0s
INK **Inuvik** 52.58 347 LR LR 14 37 48.1
comp=Z,5µm,19.4s,baz=154,slow=37
RC01 **Rabbit Creek A** 52.63 334 P P 14 15 01.5 +1.0
baz=123,SNR=14
PMR **Palmer** 52.66 335 P P 14 15 01.2 +0.6
PMR IAmb IAmb 14 15 03.8
comp=Z,88nm,1.0s
PMR IAMs_20 IAMs_20 14 40 19.6
comp=Z,3µm,19.0s
PMR **Palmer** 52.66 335 P P 14 15 01.4 +0.8
PMR **Palmer** 52.66 335 P P 14 15 01.2 +0.6
baz=124,SNR=31
PMR **Palmer** 52.66 335 P P 14 15 01.2 +0.6
PMR pmax pmax
comp=Z,88nm,1.0s
PMR MLR MLR
comp=Z,3µm,19.0s
GHO **Glory Hole Cre** 52.68 335 IAMs_20 IAMs_20 14 37 27.1
comp=Z,3µm,18.0s
WAT6 **Susitna Watana** 52.69 337 P P 14 15 01.8 +0.7
baz=126,SNR=46
HOM **Homer** 52.70 332 IAMs_20 IAMs_20 14 39 59.7
comp=Z,2µm,18.0s
HOM **Homer** 52.70 332 P P 14 15 02.2 +1.3
baz=120
K24K **Donnelly Dome** 52.72 339 P P 14 15 02.0 +0.9
baz=129,SNR=56
I26K **Coal Creek Min** 52.84 341 IAMs_20 IAMs_20 14 37 49.1
comp=Z,4µm,18.0s
I26K **Coal Creek Min** 52.84 341 P P 14 15 02.3 +0.4
baz=132
DHY **Denali Highway** 52.84 337 P P 14 15 02.8 +0.6
baz=126,SNR=26
CHIR **Chirikof Islan** 52.91 327 P P 14 15 02.4 -0.2
baz=113
H27K **Steamboat Moun** 52.99 342 P P 14 15 03.4 +0.3
baz=135,SNR=54
CAPN **Captain Cook N** 53.05 334 P P 14 15 04.8 +1.3
baz=121
J25K **Salcha River,** 53.09 339 IAMs_20 IAMs_20 14 39 16.0
comp=Z,4µm,20.0s
J25K **Salcha River,** 53.09 339 P P 14 15 04.4 +0.5
baz=130
WAT1 **Susitna Watana** 53.14 337 P P 14 15 04.4 +0.2
baz=125
M22K **Willow** 53.15 335 IAMs_20 IAMs_20 14 40 17.4
comp=Z,3µm,18.0s
M22K **Willow** 53.15 335 P P 14 15 05.5 +1.3
baz=123,SNR=30
SUA **Susitna One** 53.24 334 IAMs_20 IAMs_20 14 40 50.0
comp=Z,2µm,19.0s
SUA **Susitna One** 53.24 334 P P 14 15 05.9 +0.8
baz=122,SNR=62
Q19K **Cape Douglas,** 53.26 331 IAMs_20 IAMs_20 14 36 04.3
comp=Z,2µm,21.0s
Q19K **Cape Douglas,** 53.26 331 P P 14 15 05.1 0.0
baz=117
O20K **Slope Mountain** 53.34 332 P P 14 15 07.8 +2.0
baz=119,SNR=5.1
P19K **Oil Pt** 53.40 332 P P 14 15 05.9 -0.3
baz=118
ITTB **Itaituba** 53.49 111 *e*P P 14 15 07.0 -0.5
HDA **Harding Lake** 53.50 339 IAMs_20 IAMs_20 14 39 22.7
comp=Z,4µm,20.0s
HDA **Harding Lake** 53.50 339 P P 14 15 07.2 +0.4
baz=128,SNR=40
F28M **Old Crow** 53.54 344 P P 14 15 07.7 +0.6
baz=137,SNR=389
CUT **Chulitna** 53.56 336 IAMs_20 IAMs_20 14 39 58.2
comp=Z,3µm,18.0s
CUT **Chulitna** 53.56 336 P P 14 15 07.9 +0.7
baz=123,SNR=37
RSO **Redoubt South** 53.58 333 P P 14 15 08.0 +0.3
RND **Reindeer** 53.58 337 IAMs_20 IAMs_20 14 37 24.9
comp=Z,3µm,21.0s
E29M **Blow River** 53.63 345 P P 14 15 07.7 0.0
baz=140
IL31 53.70 339 P P 14 15 08.2 0.0
ILAR **Eielson Array** 53.70 339 P P 14 15 08.0 -0.3
ILAR **Eielson Array** 53.70 339 P P 14 15 08.2 -0.1
comp=Z,42nm,0.9s,baz=149,slow=6.0,SNR=316
ILAR LR LR 14 41 24.8
comp=Z,3µm,20.0s,baz=112,slow=40
comp=Z,42nm,0.9s
MALB **Monte Alegre** 53.71 107 *e*P P 14 15 08.7 -0.4
N20K **Mount Spurr** 53.71 334 P P 14 15 09.5 +1.0
baz=120,SNR=23
PRP **Porcupine Dome** 53.73 340 P P 14 15 09.2 +0.6
PRP **Porcupine Dome** 53.73 340 P P 14 15 08.9 +0.3
baz=130,SNR=120
MCK **McKinley** 53.80 337 P P 14 15 09.4 +0.4
baz=125,SNR=61
SKT **Skwentna** 53.83 335 IAMs_20 IAMs_20 14 40 50.5
comp=Z,2µm,20.0s
SKT **Skwentna** 53.83 335 P P 14 15 09.9 +0.6
baz=121,SNR=42
WRH **Wood River Hil** 53.93 338 P P 14 15 09.7 -0.3
WRH IAMs_20 IAMs_20 14 38 38.2
comp=Z,3µm,21.0s
CCB **Clear Creek Bu** 53.94 339 IAMs_20 IAMs_20 14 39 36.3
comp=Z,3µm,18.0s
Q17K **Contact Creek** 54.02 329 P P 14 15 10.6 -0.3
baz=114
COLA **College** 54.09 339 P P 14 15 11.1 0.0
COLA **College** 54.09 339 P P 14 15 11.7 +0.7
baz=127
COLA **College** 54.09 339 ⇑P P 14 15 10.8 -0.3
POKR **Poker Plat Res** 54.10 339 P P 14 15 11.5 +0.3
POKR IAmb IAmb 14 15 13.9
comp=Z,153nm,1.4s
POKR IAMs_20 IAMs_20 14 39 10.5
comp=Z,4µm,19.0s
POKR **Poker Plat Res** 54.10 339 P P 14 15 11.5 +0.3
baz=128,SNR=25
VILB **Vilhena** 54.12 122 *e*P P 14 15 11.2 -0.9
LVC **Limon Verde** 54.12 138 LR LR 14 34 04.5
comp=Z,1µm,19.9s,baz=342,slow=31
LVC **Limon Verde** 54.12 138 *e*P P 14 15 13.9 +1.6
TRF **Thorofare Moun** 54.14 337 P P 14 15 11.9 +0.2
TRF IAMs_20 IAMs_20 14 38 58.6
comp=Z,2µm,21.0s
TRF **Thorofare Moun** 54.14 337 P P 14 15 12.0 +0.3
baz=123,SNR=138
O19K **Port Alsworth** 54.14 332 P P 14 15 11.8 +0.3
baz=117,SNR=7.2
G26K **Porcupine Rive** 54.14 342 P P 14 15 11.9 +0.5
baz=133
E28M **Babbage River** 54.19 345 P P 14 15 11.7 -0.2
E28M IAMs_20 IAMs_20 14 37 44.0
comp=Z,4µm,20.0s
E28M **Babbage River** 54.19 345 P P 14 15 11.0 -0.8
baz=136
P18K **Big Mountain,** 54.19 331 P P 14 15 09.6 -2.4
baz=116
XMAS **Kiritimati** 54.23 259 IAMs_20 IAMs_20 14 32 37.1
comp=Z,4µm,19.0s
BWN **Browne** 54.24 338 IAMs_20 IAMs_20 14 40 38.8
comp=Z,5µm,20.0s
MDM **Murphy Dome** 54.27 339 P P 14 15 12.2 -0.3
MDM IAMs_20 IAMs_20 14 41 51.2
comp=Z,4µm,19.0s
FYU **Fort Yukon** 54.32 341 IAMs_20 IAMs_20 14 38 35.3
comp=Z,4µm,19.0s
NEA2 **Nenana** 54.35 338 IAMs_20 IAMs_20 14 38 52.1
comp=Z,3µm,19.0s
NEA2 **Nenana** 54.35 338 P P 14 15 13.2 +0.2
baz=125,SNR=41
O18K **Koktuh Hills** 54.39 331 P P 14 15 13.9 +0.5
baz=116,SNR=9.0
A36M **Sachs Harbour** 54.40 352 P P 14 15 12.0 -1.2
A36M IAmb IAmb 14 15 13.8
comp=Z,92nm,1.1s
A36M **Sachs Harbour** 54.40 352 P P 14 15 12.1 -1.1
baz=156,SNR=78
M20K **Styx River** 54.44 334 IAMs_20 IAMs_20 14 41 11.9
comp=Z,3µm,19.0s
M20K **Styx River** 54.44 334 P P 14 15 13.4 -0.4
baz=120
N19K **Bonanza Creek** 54.50 333 IAMs_20 IAMs_20 14 40 22.1
comp=Z,3µm,18.0s
N19K **Bonanza Creek** 54.50 333 P P 14 15 13.8 -0.5
baz=117
CHGN **Chignik** 54.54 327 P P 14 15 14.0 -0.5
baz=110
D28M **Stokes Point** 54.55 346 P P 14 15 14.1 -0.2
baz=139
Q16K **King Salmon** 54.56 330 P P 14 15 13.5 -1.1
baz=114
PPLA **Purkeypile** 54.57 336 P P 14 15 14.4 -0.5
baz=121
R16K **Pilot Point** 54.58 328 P P 14 15 12.8 -1.9
baz=112
P17K **Kvichak River** 54.67 330 P P 14 15 13.7 -1.7
baz=114
CHNA **Chernabura Isl** 54.68 325 P P 14 15 12.2 -3.3
baz=108
H24K **Noodor Dome** 54.69 340 P P 14 15 15.9 +0.4
H24K IAMs_20 IAMs_20 14 39 47.0
comp=Z,4µm,19.0s
H24K **Noodor Dome** 54.69 340 P P 14 15 16.0 +0.4
baz=127,SNR=108
BMAR **Burnt Mountain** 54.70 342 P P 14 15 15.9 +0.4
F26K **Sheenjek River** 54.75 343 P P 14 15 16.1 +0.2
baz=132
I23K **Minto, Yukon-K** 54.77 339 IAMs_20 IAMs_20 14 39 21.3
comp=Z,2µm,20.0s
I23K **Minto, Yukon-K** 54.77 339 P P 14 15 16.5 +0.5
baz=125,SNR=77
CAST **Castle Rocks** 54.80 336 IAMs_20 IAMs_20 14 41 35.2
comp=Z,4µm,21.0s
CAST **Castle Rocks** 54.80 336 P P 14 15 16.5 +0.1
baz=122,SNR=63
M19K **Big River Lodg** 54.97 334 IAMs_20 IAMs_20 14 41 38.4
comp=Z,4µm,18.0s
M19K **Big River Lodg** 54.97 334 P P 14 15 17.6 0.0
baz=118
D27M **Malcom River** 55.02 345 P P 14 15 17.4 -0.4
baz=137
L20K **Farewell, AK** 55.04 335 P P 14 15 18.4 +0.3
baz=119
N18K **Kilae Creek** 55.05 332 IAMs_20 IAMs_20 14 40 33.9
comp=Z,2µm,18.0s
N18K **Kilae Creek** 55.05 332 P P 14 15 18.5 +0.3
baz=116
NPGB **Novo Progresso** 55.08 113 *e*P P 14 15 17.5 -1.5
G24K **Hadweenzic Riv** 55.09 341 IAMs_20 IAMs_20 14 41 01.9
comp=Z,4µm,19.0s
G24K **Hadweenzic Riv** 55.09 341 P P 14 15 18.5 +0.1
baz=128
SVW2 **Sparrevohn** 55.10 333 IAMs_20 IAMs_20 14 41 43.8
comp=Z,2µm,20.0s
SVW2 **Sparrevohn** 55.10 333 P P 14 15 18.7 +0.1
F25K **Christian Rive** 55.11 342 P P 14 15 19.1 +0.5
baz=131
MCPB **Macapa, AP** 55.12 104 *e*P P 14 15 18.8 -0.6
S14K **Fog Glacier** 55.13 326 P P 14 15 19.3 +0.4
baz=105
CHUM **Lake Minchumin** 55.13 337 P P 14 15 18.9 +0.2
baz=122,SNR=7.8
MLY **Manley** 55.19 338 IAMs_20 IAMs_20 14 39 15.3
comp=Z,3µm,20.0s
MLY **Manley** 55.19 338 P P 14 15 19.5 +0.4
baz=124,SNR=73
O17K **Koliganek Bris** 55.22 331 P P 14 15 18.5 -0.9
baz=114,SNR=6.3
SIV **San Ignacio** 55.22 126 LR LR 14 36 35.3
comp=Z,3µm,21.6s,baz=329,slow=34
L19K **White Mountain** 55.29 334 IAMs_20 IAMs_20 14 41 49.7
comp=Z,4µm,18.0s
L19K **White Mountain** 55.29 334 P P 14 15 18.5 -1.4
baz=118
SDPT **Sand Point** 55.33 325 P P 14 15 20.4 +0.2
baz=108
P16K **Nushagak River** 55.34 330 P P 14 15 20.6 +0.4
baz=113
M18K **Stony River** 55.38 333 P P 14 15 20.3 -0.2
baz=116,SNR=18
E25K **Arctic Village** 55.44 343 P P 14 15 21.5 +0.6
baz=131,SNR=72
K20K **Telida** 55.54 335 P P 14 15 21.4 -0.3
baz=119
N17K **Nushagak Hills** 55.57 332 IAMs_20 IAMs_20 14 41 25.0
comp=Z,2µm,19.0s
N17K **Nushagak Hills** 55.57 332 P P 14 15 21.7 -0.1
baz=114
O16K **Kokwok River B** 55.61 330 P P 14 15 22.8 +0.6
baz=113
I21K **Tanana** 55.71 338 P P 14 15 22.9 +0.1
I21K IAmb IAmb 14 15 24.7
comp=Z,106nm,1.1s
I21K IAMs_20 IAMs_20 14 41 37.0
comp=Z,4µm,19.0s
I21K **Tanana** 55.71 338 P P 14 15 23.5 +0.7
baz=123,SNR=33
F24K **Squaw Lake** 55.73 341 IAMs_20 IAMs_20 14 38 53.7
comp=Z,4µm,18.0s
F24K **Squaw Lake** 55.73 341 P P 14 15 23.4 +0.4
baz=128
H22K **Ishtalitna Cre** 55.89 339 P P 14 15 24.1 0.0
baz=124,SNR=74
G23K **Bananza Creek** 55.91 340 IAMs_20 IAMs_20 14 39 27.9
comp=Z,3µm,22.0s
G23K **Bananza Creek** 55.91 340 P P 14 15 24.8 +0.5
baz=126
J20K **Nowinta River** 55.98 336 IAMs_20 IAMs_20 14 42 14.2
comp=Z,4µm,20.0s
J20K **Nowinta River** 55.98 336 P P 14 15 23.8 -0.9
baz=120
RES **Resolute Bay** 56.04 3 ⇑P P 14 15 23.5 -1.5
RES **Resolute Bay** 56.04 3 LR LR 14 40 18.3
comp=Z,19µm,19.2s,baz=186,slow=37
M17K **Holitna River** 56.05 333 IAMs_20 IAMs_20 14 43 36.1
comp=Z,3µm,18.0s
M17K **Holitna River** 56.05 333 P P 14 15 25.6 +0.3
baz=115,SNR=12
L18K **Granite Mounta** 56.08 334 IAMs_20 IAMs_20 14 42 24.4
comp=Z,3µm,18.0s
L18K **Granite Mounta** 56.08 334 P P 14 15 24.1 -1.4
baz=116
TTA **Tatalina** 56.12 335 P P 14 15 25.8 -0.1
TTA **Tatalina** 56.12 335 P P 14 15 24.1 -1.8
baz=117,SNR=27
TTA **Tatalina** 56.12 335 ⇑P P 14 15 24.8 -1.0
E24K **Your Creek** 56.25 342 IAMs_20 IAMs_20 14 40 27.6
comp=Z,4µm,21.0s
E24K **Your Creek** 56.25 342 P P 14 15 26.3 -0.5
baz=128
H21K **Melozitna Rive** 56.25 338 IAMs_20 IAMs_20 14 41 04.1
comp=Z,4µm,18.0s
H21K **Melozitna Rive** 56.25 338 P P 14 15 26.1 -0.6
baz=122
N16K **Nishlik Lake** 56.26 331 P P 14 15 25.4 -1.5
baz=113
COLD **Coldfoot** 56.27 341 P P 14 15 27.6 +0.8
baz=126,SNR=82
O15K **Ungalikthiuk R** 56.27 329 P P 14 15 26.8 -0.1
baz=111
BBSD **Serra de San D** 56.30 127 *e*P P 14 15 26.3 -1.4
PTLB **Pontes e Lacer** 56.40 124 *e*P P 14 15 28.4 0.0
I20K **Naaghedeneel** 56.41 337 P P 14 15 28.1 +0.3
I20K **Naaghedeneel** 56.41 337 P P 14 15 27.9 +0.1
baz=120,SNR=23
D25K **Kavik River** 56.46 344 IAMs_20 IAMs_20 14 37 55.7
comp=Z,3µm,20.0s
D25K **Kavik River** 56.46 344 P P 14 15 28.1 -0.1
baz=131
J19K **Poorman** 56.46 336 IAMs_20 IAMs_20 14 42 24.5
comp=Z,3µm,19.0s
J19K **Poorman** 56.46 336 P P 14 15 26.5 -1.7
baz=118
G22K **Bettles** 56.51 340 P P 14 15 28.0 -0.5
baz=124
M16K **Timber Creek** 56.56 332 IAMs_20 IAMs_20 14 43 50.8
comp=Z,2µm,19.0s
M16K **Timber Creek** 56.56 332 P P 14 15 29.0 -0.1
baz=113
E23K **Chandalar** 56.58 341 P P 14 15 30.1 +0.9
baz=127,SNR=160
CLDB **Colider** 56.61 117 *e*P P 14 15 31.8 +1.8
J18K **Innoko River** 56.64 335 IAMs_20 IAMs_20 14 43 31.8
comp=Z,2µm,18.0s
J18K **Innoko River** 56.64 335 P P 14 15 29.2 -0.3
baz=117
L17K **Donlin** 56.72 333 P P 14 15 29.7 -0.4
baz=114
IMAR **Indian Mountai** 56.76 338 P P 14 15 29.4 -0.9
N15K **Kwethluk River** 56.76 331 IAMs_20 IAMs_20 14 43 07.9
comp=Z,3µm,18.0s
N15K **Kwethluk River** 56.76 331 P P 14 15 31.0 +0.6
baz=111
FALS **False Pass** 56.81 324 P P 14 15 31.8 +1.0
FALS **False Pass** 56.81 324 P P 14 15 30.7 -0.1
baz=105
H20K **Anotleneega Mo** 56.91 338 P P 14 15 31.5 +0.1
baz=120
TOLK **Toolik Lake Re** 56.92 342 P P 14 15 31.6 +0.2
TOLK IAmb IAmb 14 15 33.0
comp=Z,93nm,1.0s
TOLK **Toolik Lake Re** 56.92 342 P P 14 15 31.7 +0.2
baz=127,SNR=94
G21K **Allakaket** 56.95 339 IAMs_20 IAMs_20 14 41 45.0
comp=Z,3µm,20.0s
G21K **Allakaket** 56.95 339 P P 14 15 31.5 -0.2
baz=122,SNR=22
K17K **Iditarod** 56.97 334 IAMs_20 IAMs_20 14 43 10.0
comp=Z,2µm,19.0s
K17K **Iditarod** 56.97 334 P P 14 15 31.2 -0.6
baz=115
O14K **Tigyukauivet M** 56.99 329 P P 14 15 31.3 -0.7
baz=110
D24K **Happy Valley** 57.02 343 P P 14 15 31.3 -0.8
baz=128
L16K **Owhat River** 57.06 332 P P 14 15 32.1 -0.4
baz=113
PPT **Papeete** 57.07 233 LR LR 14 33 27.4
comp=Z,2µm,20.3s,baz=26,slow=29
M15K **Kasigluk River** 57.23 331 P P 14 15 33.3 -0.4
baz=111
GCSA **Galena City Sc** 57.29 336 P P 14 15 33.0 -1.0
baz=117,SNR=17
E22K **Anaktuvuk Pass** 57.30 341 P P 14 15 34.0 -0.1
E22K IAMs_20 IAMs_20 14 40 39.0
comp=Z,4µm,21.0s
E22K **Anaktuvuk Pass** 57.30 341 P P 14 15 34.2 0.0
baz=124,SNR=51
F21K **Alatna River** 57.32 340 IAMs_20 IAMs_20 14 40 10.7
comp=Z,3µm,21.0s
F21K **Alatna River** 57.32 340 P P 14 15 33.4 -0.9
baz=122
C24K **Franklin Bluff** 57.34 343 P P 14 15 33.5 -0.8
baz=129
N14K **Kuskokwak Cree** 57.42 330 P P 14 15 33.8 -1.2
baz=110
H19K **Roundabout Mou** 57.50 337 IAMs_20 IAMs_20 14 40 50.7
comp=Z,3µm,20.0s
H19K **Roundabout Mou** 57.50 337 P P 14 15 34.2 -1.3
baz=118
BBRB **Robore, Bolivi** 57.56 127 *e*P P 14 15 35.6 -1.1
H03N2 **Juan Fernandez** 57.60 154 T T 15 17 58.8
baz=333,slow=77,SNR=72
H03N1 **Juan Fernandez** 57.61 154 T T 15 17 58.0
baz=333,slow=77,SNR=74
H03N3 **Juan Fernandez** 57.62 154 T T 15 17 56.5
baz=333,slow=77,SNR=82
M14K **Bethel** 57.83 331 P P 14 15 38.3 +0.4
baz=110
L15K **Ungalak Mounta** 57.94 332 P P 14 15 37.6 -1.1
baz=111
D22K **Ayikyak River** 57.98 341 IAMs_20 IAMs_20 14 40 02.8
comp=Z,4µm,22.0s
D22K **Ayikyak River** 57.98 341 P P 14 15 39.7 +0.8
baz=124
F20K **Avaraart Lake** 57.98 339 P P 14 15 38.4 -0.5
baz=120
G19K **Purcell Mounta** 58.02 338 IAMs_20 IAMs_20 14 42 33.2
comp=Z,3µm,18.0s
G19K **Purcell Mounta** 58.02 338 P P 14 15 39.3 +0.1
baz=118
H18K **Honhosa River** 58.04 336 P P 14 15 39.4 0.0
baz=116
E21K **Killik River** 58.13 341 IAMs_20 IAMs_20 14 38 04.3
comp=Z,3µm,20.0s
E21K **Killik River** 58.13 341 P P 14 15 40.1 0.0
baz=122
J16K **Anvik River** 58.16 334 IAMs_20 IAMs_20 14 44 03.9
comp=Z,3µm,18.0s
J16K **Anvik River** 58.16 334 P P 14 15 40.2 0.0
baz=113
K15K **Wolf Creek Mou** 58.18 333 IAMs_20 IAMs_20 14 43 32.5
comp=Z,3µm,18.0s
K15K **Wolf Creek Mou** 58.18 333 P P 14 15 40.3 -0.1
baz=111
UNV **Unalaska Valle** 58.34 322 P P 14 15 42.9 +1.3
UNV **Unalaska Valle** 58.34 322 P P 14 15 41.4 -0.1
baz=101
L14K **Kuka Creek** 58.36 331 IAMs_20 IAMs_20 14 43 44.9
comp=Z,2µm,20.0s
L14K **Kuka Creek** 58.36 331 P P 14 15 41.7 +0.1

baz=110
M13K Dall Lake 58.37 330 P P 14 15 41.8 +0.1
baz=108
I17K Unalakleet 58.43 335 P P 14 15 43.2 +1.2
baz=113,SNR=15
G18K Tagagawik 58.48 337 IAms_20 IAms_20 14 42 32.9
comp=Z,3µm,18.0s
G18K Tagagawik 58.48 337 P P 14 15 41.4 -1.0
baz=116
H17K Granite Mounta 58.54 336 IAms_20 IAms_20 14 43 58.0
comp=Z,4µm,20.0s
H17K Granite Mounta 58.54 336 P P 14 15 43.6 +0.7
baz=114
F19K Shaleruckik Mo 58.59 338 P P 14 15 43.0 -0.1
F19K IAms_20 IAms_20 14 41 01.8
comp=Z,2µm,21.0s
F19K Shaleruckik Mo 58.59 338 P P 14 15 43.4 +0.3
baz=118
E19K Redstone River 58.70 339 IAms_20 IAms_20 14 39 19.0
comp=Z,2µm,21.0s
E19K Redstone River 58.70 339 P P 14 15 44.0 +0.1
baz=118
E20K Nigu River 58.74 340 P P 14 15 44.0 -0.3
baz=120
C21K Knifeblade Rid 58.77 341 P P 14 15 45.0 +0.7
baz=122,SNR=179
B21K Ikpikpuk River 58.97 342 P P 14 15 45.8 0.0
B21K Ikpikpuk River 58.97 342 P P 14 15 45.6 -0.1
baz=122
SFJD Kangerlussuaq 59.04 22 IAms_20 IAms_20 14 44 35.6
comp=Z,4µm,20.0s
SFJD Kangerlussuaq 59.04 22 LR LR 14 41 41.2
comp=Z,3µm,19.8s,baz=240,slow=37
G17K Kiwalik Mounta 59.06 336 P P 14 15 46.9 +0.5
baz=114,SNR=51
D20K Etivluk River 59.11 340 P P 14 15 47.2 +0.4
baz=120
F18K Selawik 59.15 338 P P 14 15 47.1 +0.1
baz=116,SNR=47
J14K Nanvaranak Lak 59.22 333 IAms_20 IAms_20 14 45 13.6
comp=Z,3µm,18.0s
J14K Nanvaranak Lak 59.22 333 P P 14 15 47.5 0.0
baz=109
CO03 El Pedregal 59.32 146 P P 14 15 49.9 +1.1
CO03 IAmb IAmb 14 16 00.3
comp=Z,40nm,1.1s
H16K Elim 59.34 335 P P 14 15 48.9 +0.4
baz=112,SNR=42
SALV Santo Antonio 59.38 122 eP P 14 15 49.0 -0.4
K13K Kusilvak Mount 59.45 332 IAms_20 IAms_20 14 43 23.4
comp=Z,2µm,18.0s
K13K Kusilvak Mount 59.45 332 P P 14 15 49.0 -0.1
baz=108
D19K Kuna River 59.48 340 P P 14 15 49.1 -0.3
D19K IAms_20 IAms_20 14 41 41.8
comp=Z,4µm,20.0s
D19K Kuna River 59.48 340 P P 14 15 48.7 -0.7
baz=118
TMAB Tom-Au,PA,Br 59.54 105 eP P 14 15 50.0 -0.6
NIKH Nikolski High 59.56 321 P P 14 15 48.4 -1.7
baz=99
F17K Baldwin Pennin 59.67 337 P P 14 15 48.9 -1.6
baz=114
G16K Koyuk River 59.67 336 IAms_20 IAms_20 14 44 26.5
comp=Z,4µm,20.0s
G16K Koyuk River 59.67 336 P P 14 15 50.3 -0.3
baz=112
M11K Mekoryuk 59.71 330 P P 14 15 49.5 -1.5
baz=106
E18K Tukpahlearik C 59.84 338 IAms_20 IAms_20 14 46 36.3
comp=Z,3µm,19.0s
E18K Tukpahlearik C 59.84 338 P P 14 15 50.8 -1.0
baz=115
E17K Hotham Inlet 60.13 338 P P 14 15 53.7 -0.1
baz=114,SNR=81
G15K Niukluk 60.19 335 P P 14 15 54.2 0.0
baz=110
C19K Lookout Ridge 60.24 340 P P 14 15 54.6 0.0
baz=117
UMMG Uummannaq 60.31 18 i P P 14 15 54.5 -0.5
UMMG IAmb IAmb 14 15 57.3
comp=Z,7.6nm,0.9s
DY2G Dye2 60.40 23 i P P 14 15 53.7 -2.3
DY2G IAmb IAmb 14 15 57.5
comp=Z,24nm,0.7s
A21K Barrow 60.44 343 P P 14 15 54.6 -1.3
baz=121,SNR=6.3
C18K Utukok River 60.56 339 P P 14 15 56.4 -0.4
C18K IAmb IAmb 14 15 58.1
comp=Z,90nm,0.9s
C18K IAms_20 IAms_20 14 42 28.4
comp=Z,4µm,19.0s
C18K Utukok River 60.56 339 P P 14 15 56.4 -0.4
baz=115,SNR=68
P08K Saint George I 60.57 325 P P 14 15 54.7 -2.3
baz=100
ANM Nome 60.58 334 IAms_20 IAms_20 14 41 30.4
comp=Z,2µm,18.0s
ANM Nome 60.58 334 P P 14 15 56.6 -0.4
baz=109
F15K North Star Dit 60.68 336 IAms_20 IAms_20 14 44 33.4
comp=Z,2µm,19.0s
F15K North Star Dit 60.68 336 P P 14 15 58.2 +0.6
baz=110,SNR=32
D17K Noatak River 60.82 338 P P 14 15 57.9 -0.6
baz=113
RDOG Red Dog Mine 60.90 339 IAms_20 IAms_20 14 42 35.5
comp=Z,3µm,20.0s
RDOG Red Dog Mine 60.90 339 P P 14 15 59.1 0.0
baz=113
SNDB Serra Nova Dou 60.97 116 eP P 14 16 00.5 +0.2
SPIA Saint Paul Isl 61.05 326 P P 14 16 00.9 +0.6
baz=100
B18K Kokolik River 61.06 340 P P 14 15 59.9 -0.3
baz=115
C17K DeLong Mountai 61.16 339 P P 14 16 01.2 +0.3
baz=113
BDQN Bodoquena, MS 61.17 127 eP P 14 16 00.7 -0.8
F14K Arctic Creek 61.26 335 P P 14 16 01.1 -0.4
baz=108
RVDE Rio Verde (Bra 61.73 125 eP P 14 16 05.1 -0.3
C16K Lisburne Hills 61.83 338 P P 14 16 05.3 0.0
C16K IAms_20 IAms_20 14 43 14.8
comp=Z,3µm,21.0s
C16K Lisburne Hills 61.83 338 P P 14 16 05.0 -0.3
baz=111
TNA Tin City 61.92 335 P P 14 16 06.5 +0.6
baz=107,SNR=16
BO01 Tunca 61.94 149 P P 14 16 07.5 +1.0
BO01 IAmb IAmb 14 16 18.0
comp=Z,25nm,0.8s
LMEL Las Melosas 61.94 148 P P 14 16 07.5 +0.8
LMEL IAmb IAmb 14 16 19.1
comp=Z,30nm,1.0s
AQDB Aquidauana 61.98 127 P P 14 16 06.3 -0.7
AQDB Aquidauana 61.98 127 eP P 14 16 06.8 -0.2
ANTJ Antonio Joao (62.65 128 eP P 14 16 11.7 +0.1
SMTB Santa Maria do 62.73 111 eP P 14 16 13.1 +0.9
BI05 Punta Hualpn 62.87 152 IAms_20 IAms_20 14 37 23.7
comp=Z,3µm,19.0s
GAMB Gambell 63.05 333 P P 14 16 11.4 -2.1
baz=102
ANGG Ammassalik, Gr 63.50 25 i P P 14 16 14.1 -2.4
ANGG IAmb IAmb 14 16 17.1
comp=Z,20nm,0.7s
RPRD Ribas do Rio P 63.51 125 eP P 14 16 18.2 +0.9
ICESG Greenland Ices 63.64 21 i P P 14 16 15.5 -2.3
ICESG IAmb IAmb 14 16 21.0
comp=Z,37nm,0.8s
NEEM North Greenlan 64.08 11 i P P 14 16 18.0 -2.5
NEEM IAmb IAmb 14 16 21.8
comp=Z,22nm,0.6s
ADK Adak 64.23 319 P P 14 16 20.7 -0.8
ADK Adak 64.23 319 P P 14 16 21.5 -0.1
ADK Adak 64.23 319 ⇑P P 14 16 21.5 -0.1
ADK Adak 64.23 319 P P 14 16 20.7 -0.8
ADK pmax pmax
comp=Z,148nm,1.1s
CPUP Villa Florida 64.36 133 P P 14 16 22.6 -0.1
CPUP Villa Florida 64.36 133 ⇓P P 14 16 23.1 +0.3
CPUP Villa Florida 64.36 133 P P 14 16 22.6 -0.1
CPUP pmax pmax
comp=Z,22nm,1.1s
CPUP Villa Florida 64.36 133 P P 14 16 22.9 +0.3
comp=Z,6.9nm,1.0s,baz=327,slow=7.7,SNR=7.7
CPUP LR LR 14 44 02.9
comp=Z,2µm,19.7s,baz=339,slow=36
comp=Z,6.9nm,1.0s
CPUP Villa Florida 64.36 133 eP P 14 16 23.0 +0.3
SUMG Summit 65.04 18 P P 14 16 26.3 -0.7
SUMG IAmb IAmb 14 17 00.4
comp=Z,50nm,1.3s
SUMG Summit 65.04 18 ⇑P P 14 16 26.6 -0.4
SUMG Summit 65.04 18 P P 14 16 26.3 -0.7
SUMG pmax pmax
comp=Z,50nm,1.3s
SUMG MLR MLR
comp=Z,12µm,19.0s
SUMG Summit 65.04 18 i P P 14 16 26.1 -0.9
SUMG IAmb IAmb 14 16 27.9
comp=Z,9.4nm,0.8s
LR04 Corral 65.39 154 IAms_20 IAms_20 14 38 10.2
comp=Z,3µm,20.0s
BDFB Brasilia 65.54 118 P P 14 16 30.5 -0.3
BDFB IAmb IAmb 14 16 40.5
comp=Z,41nm,1.2s
BDFB Brasilia 65.54 118 P P 14 16 30.5 -0.3
BDFB pmax pmax
comp=Z,41nm,1.2s
BDFB Brasilia 65.54 118 P P 14 16 31.1 +0.4
comp=Z,9.8nm,0.8s,baz=299,slow=6.8,SNR=6.4
comp=Z,9.8nm,0.8s
MCR1 Marechal Candi 65.56 129 eP P 14 16 30.7 +0.1
LR03 Panguipulli 65.64 153 IAms_20 IAms_20 14 38 20.8
comp=Z,3µm,20.0s
TRCB Terra Rica 65.64 127 eP P 14 16 31.7 +0.5
ITRB Iturama 65.70 123 eP P 14 16 31.9 +0.2
LR05 Currie 66.28 153 P P 14 16 36.2 +1.3
LR05 IAmb IAmb 14 16 47.5
comp=Z,33nm,1.1s
LR05 IAms_20 IAms_20 14 39 00.8
comp=Z,3µm,18.0s
SOEG Soedalen 66.41 23 i P P 14 16 34.2 -1.2
SOEG IAmb IAmb 14 16 37.2
comp=Z,28nm,0.8s
IPMB Ipameri, GO 66.54 120 eP P 14 16 37.5 +0.4
SDBA SÃO DESIDERIO 66.67 113 eP P 14 16 38.4 +0.3
ITQB Itaqui 66.96 135 P P 14 16 39.3 -0.1
ITQB IAmb IAmb 14 17 05.5
comp=Z,35nm,1.0s
RAR Rarotonga 67.03 236 LR LR 14 38 55.8
comp=Z,2µm,18.0s,baz=58,slow=30
LDASE Londrina, Braz 67.13 127 eP P 14 16 40.7 -0.1
PTGB Pitanga 67.17 128 eP P 14 16 40.5 -0.5
FRBT Francisco Belt 67.17 130 eP P 14 16 41.1 +0.1
PLCA Paso Flores 67.32 152 P P 14 16 43.5 +1.8
PLCA IAmb IAmb 14 16 51.8
comp=Z,28nm,1.1s
PLCA IAms_20 IAms_20 14 39 44.4
comp=Z,3µm,19.0s
PLCA Paso Flores 67.32 152 P P 14 16 43.5 +1.8
PLCA pmax pmax
comp=Z,28nm,1.1s
PLCA Paso Flores 67.32 152 P P 14 16 43.0 +1.3
comp=Z,5.3nm,0.9s,baz=331,slow=8.1,SNR=6.4
PLCA LR LR 14 40 05.2
comp=Z,3µm,18.6s,baz=341,slow=31
comp=Z,5.3nm,0.9s
PLCA Paso Flores 67.32 152 eP P 14 16 43.4 +1.8
CRSM Crissiumal (Br 67.37 132 eP P 14 16 43.4 +1.2
UNIS Unistalda (Bra 67.63 134 eP P 14 16 45.5 +1.8
BB19B Bebedouro 67.88 123 eP P 14 16 46.6 +1.0
PMNB Patos De Minas 68.28 120 eP P 14 16 48.5 +0.3
JANB Januaria 68.39 115 eP P 14 16 49.9 +1.0
ITAB Concordia 68.58 131 P P 14 16 50.1 +0.3
ITAB IAmb IAmb 14 17 20.5
comp=Z,32nm,1.2s
ITAB Concordia 68.58 131 eP P 14 16 50.6 +0.8
TBOT Tacuaremb 68.70 136 eP P 14 16 50.6 +0.2
LL02 Futaleuf 68.80 155 P P 14 16 52.4 +1.6
LL02 IAmb IAmb 14 17 01.2
comp=Z,27nm,1.1s
TRQA Tornquist 69.46 145 IAms_20 IAms_20 14 43 57.8
comp=Z,1µm,18.0s
SHEM Shemya Is, Ala 69.86 320 LR LR 14 44 36.8
comp=Z,303nm,19.1s,baz=118,slow=33
SPB Sao Paulo 70.07 125 P P 14 16 59.0 -0.1
SPB IAmb IAmb 14 17 08.9
comp=Z,112nm,1.6s
SPB IAms_20 IAms_20 14 46 33.5
comp=Z,3µm,19.0s
SPB Sao Paulo 70.07 125 eP P 14 17 00.0 +1.0
BORG Borgarnes 70.26 27 LR LR 14 47 54.9
comp=Z,3µm,18.3s,baz=287,slow=36
PLTB Pedras Altas 70.30 135 P P 14 16 59.7 -0.6
DIAM Diamantina, MG 70.45 118 eP P 14 17 02.1 +0.5
RCBR Riachuelo 72.09 103 P P 14 17 11.4 -0.2
RCBR Riachuelo 72.09 103 IAms_20 IAms_20 14 50 02.4
comp=Z,3µm,19.0s
RCBR Riachuelo 72.09 103 P P 14 17 11.4 -0.2
RCBR pmax pmax
comp=Z,38nm,1.2s
RCBR MLR MLR
comp=Z,3µm,19.0s
RCBR Riachuelo 72.09 103 LR LR 14 50 13.6
comp=Z,2µm,18.8s,baz=304,slow=37
BILL Bilibino 72.25 337 P P 14 17 11.6 0.0
BILL IAmb IAmb 14 17 14.5
comp=Z,172nm,1.6s
BILL IAms_20 IAms_20 14 53 48.4
comp=Z,2µm,19.0s
BILL Bilibino 72.25 337 eP P 14 17 13.6 +2.0
SJMB Sao Joao De Ma 72.73 117 eP P 14 17 16.0 +0.8
GO08 Villa O'Higgin 72.98 158 IAms_20 IAms_20 14 43 45.1
comp=Z,2µm,18.0s
JMIC Jan Mayen 74.29 20 LR LR 14 50 30.5
comp=Z,1µm,18.2s,baz=281,slow=36
KBS Kingsbay 76.46 10 P P 14 17 36.5 +0.5
KBS IAmb IAmb 14 17 39.4
comp=Z,80nm,1.2s
KBS Kingsbay 76.46 10 eP P 14 17 37.0 +1.1
KBS IAmb IAmb 14 17 39.8
comp=Z,46nm,1.3s
KBS Kingsbay 76.46 10 P P 14 17 36.5 +0.5
KBS pmax pmax
comp=Z,80nm,1.3s
KBS MLR MLR
comp=Z,5µm,21.0s
SPITS Spitsbergen Ar 77.61 10 P P 14 17 42.0 -0.4
comp=Z,4.9nm,0.7s,baz=322,slow=9.1,SNR=11
SPITS LR LR 14 52 03.0
comp=Z,4µm,18.8s,baz=284,slow=36
comp=Z,4.9nm,0.7s
PMOZ Porto Moniz, M 77.99 59 eP P 14 17 47.3 +1.8
comp=Z,250nm,1.3s
PMOZ Porto Moniz, M 77.99 59 eS SKSac 14 27 52.4 -7.4
PMOZ Porto Moniz, M 77.99 59 eLR LR 14 44 30.0
comp=Z,1µm,18.0s
PET Petropavlovsk 78.99 322 P P 14 17 51.5 +1.0
PET Petropavlovsk 78.99 322 P P 14 17 51.4 +1.0
PET Petropavlovsk 78.99 322 c i P P 14 17 50.6 +0.2
PET eS S 14 27 47.0 -1.9
PET pmax pmax
comp=Z,2µm,4.4s
PET pmax pmax
comp=Z,1µm,11.6s
PET pmax pmax
comp=Z,168nm,1.2s
PET pmax pmax
comp=Z,500nm,13.8s
SEY Seymchan 79.05 333 ceP P 14 17 51.0 +0.4
SEY pmax pmax
comp=Z,134nm,1.7s
SEY MLR MLR
comp=Z,1µm,19.0s
KPL Plockton 79.06 33 eP P 14 17 50.5 -0.2
PEA0B Petropavlovsk- 79.51 323 P P 14 17 54.3 +0.9
PEA0B Petropavlovsk- 79.51 323 ceP P 14 17 54.7 +1.3
PETK Petropavlovsk- 79.51 323 P P 14 17 53.7 +0.3
PETK Petropavlovsk- 79.51 323 P P 14 17 53.7 +0.3
PETK Petropavlovsk- 79.51 323 P P 14 17 53.4 0.0
comp=Z,38nm,0.8s,baz=79,slow=7.7,SNR=36
comp=Z,38nm,0.8s
LAWE Loch Awe, Argy 79.53 34 eP P 14 17 53.0 -0.3
HOPEN Hopen 80.14 11 eP P 14 17 57.0 +0.7
HOPEN IAmb IAmb 14 17 57.6
comp=Z,65nm,1.0s
PGBU Glenifferbraes 80.16 34 eP P 14 17 56.6 -0.1
PGBU IAmb IAmb 14 17 58.0
comp=Z,134nm,0.9s
MCD Coleburn Disti 80.21 32 eP P 14 17 57.0 0.0
GAL1 Galloway 80.34 35 eP P 14 17 57.5 -0.2
EDI Edinburgh 80.81 34 eP P 14 18 00.4 +0.2
EDI IAmb IAmb 14 18 01.6
comp=Z,140nm,0.9s
DRUM Mains of Drumt 80.83 33 eP P 14 18 00.1 -0.2
DRUM IAmb IAmb 14 18 01.6
comp=Z,101nm,0.9s
MA2 Magadan 80.98 330 P P 14 18 01.5 +0.4
MA2 IAMs_20 IAMs_20 14 57 55.4
comp=Z,1µm,19.0s
MA2 Magadan 80.98 330 P P 14 18 01.8 +0.7
MA2 Magadan 80.98 330 ceP P 14 18 02.0 +0.9
MA2 pmax pmax
MA2 MLR MLR
comp=Z,715nm,17.0s
ESK Eskdalemuir 81.01 35 eP P 14 18 00.9 -0.5
EKA Eskdalemuir Ar 81.03 35 P P 14 18 01.6 +0.1
comp=Z,31nm,0.8s,baz=292,slow=5.3,SNR=34
comp=Z,31nm,0.8s
EDMD Edmundbyers 81.85 35 eP P 14 18 06.1 +0.3
EDMD IAmb IAmb 14 18 07.5
comp=Z,154nm,0.8s
HLM1 Long Mynd 82.17 37 eP P 14 18 07.0 -0.6
HLM1 IAmb IAmb 14 18 09.0
comp=Z,68nm,1.0s
PGAV Gavieira, Arco 82.23 48 eLR LR 14 45 19.8
comp=Z,3µm,20.0s
MCH1 Michaelchurch 82.28 38 eP P 14 18 07.8 -0.4
PMAFR Mafra 82.43 52 eP P 14 18 09.7 +0.5
comp=Z,244nm,1.2s
MONM Monmouth 82.45 38 eP P 14 18 09.1 +0.1
MONM IAmb IAmb 14 18 11.7
comp=Z,130nm,0.9s
LBWR Ladybower, Pea 82.50 36 eP P 14 18 09.1 -0.2
LBWR IAmb IAmb 14 18 11.1
comp=Z,103nm,1.0s
LIS Lisbon 82.61 52 eP P 14 18 11.2 +1.1
LIS IAMs_20 IAMs_20 14 56 46.7
comp=Z,3µm,15.6s
LIS Lisbon 82.61 52 eP P 14 18 11.2 +1.1
PSBE So Bento 82.62 51 eP P 14 18 11.1 +0.9
comp=Z,154nm,2.2s
GDLE Glaisdale, N Y 82.62 35 eP P 14 18 10.8 +1.0
TIXI Tiksi 82.66 345 ceP P 14 18 09.0 -0.7
TIXI pmax pmax
comp=Z,122nm,1.1s
TIXI MLR MLR
comp=Z,2µm,19.0s
TIXI Tiksi 82.66 345 LR LR 15 00 53.8
comp=Z,1µm,18.9s,baz=52,slow=40
PCAS Casmilo, Conde 82.67 50 eP P 14 18 11.6 +1.2
comp=Z,184nm,1.4s
COI Coimbra 82.68 50 IAMs_20 IAMs_20 14 55 27.4
comp=Z,2µm,19.0s
POLO Lamas de Olo 82.75 49 eP P 14 18 11.3 +0.3
comp=Z,36nm,1.2s
PVRL Vila Real 82.84 49 eP P 14 18 11.7 +0.3
comp=Z,109nm,1.5s
STRD Stroud 82.84 38 eP P 14 18 11.5 +0.4
CWF Charnwood Fore 82.98 37 eP P 14 18 11.8 0.0
AKN Aaknes 83.10 26 eP P 14 18 12.6 +0.4
AKN IAmb IAmb 14 18 14.0
comp=Z,68nm,1.2s
STEI Steigen 83.13 19 eP P 14 18 12.9 +0.7
STEI IAmb IAmb 14 18 14.0
comp=Z,82nm,0.9s
PMTG Montargil 83.18 51 eP P 14 18 12.8 -0.3
comp=Z,82nm,1.0s
TRO Tromso 83.21 17 eP P 14 18 12.6 0.0
TRO IAmb IAmb 14 18 13.3
comp=Z,67nm,1.0s
HYA Hoyanger 83.22 27 eP P 14 18 13.7 +0.8
HYA IAmb IAmb 14 18 16.3
comp=Z,80nm,1.1s
KONS Konsvik 83.23 21 eP P 14 18 13.8 +1.1
MTE Manteigas 83.25 50 eP P 14 18 13.2 -0.3
comp=Z,64nm,1.6s
MTE Manteigas 83.25 50 eS S 14 28 41.4 +7.5
MTE Manteigas 83.25 50 eLQ LQ 14 48 25.9
MTE eLR LR 14 52 06.3
comp=Z,3µm,18.0s
MTE Manteigas 83.25 50 P P 14 18 12.0 -1.5
MTE IAmb IAmb 14 18 15.9
comp=Z,59nm,0.9s
PNCL Nicolau / Gran 83.26 52 eP P 14 18 14.4 +0.9
comp=Z,52nm,1.7s
STOK Stokkvaagen 83.28 21 eP P 14 18 14.0 +0.9
STOK IAmb IAmb 14 18 14.9
comp=Z,94nm,1.0s
PTEO Sao Teotonio 83.29 53 eP P 14 18 13.7 0.0
comp=Z,118nm,2.0s
PFVI Vila Bisbo 83.35 53 eP P 14 18 15.3 +1.3
comp=Z,170nm,1.5s
MVO Moncorvo 83.37 49 eP P 14 18 14.5 +0.4
comp=Z,92nm,1.9s
MVO Moncorvo 83.37 49 eS S 14 28 45.0 +10
MVO Moncorvo 83.37 49 eLR LR 14 50 14.7
comp=Z,3µm,18.0s
MORF Marmelete 83.42 53 eP P 14 18 15.1 +0.7
comp=Z,101nm,1.5s
MORF Marmelete 83.42 53 eP P 14 18 15.5 +1.1
MORF eSKSac SKSac 14 28 36.7 -0.3
MORF IAMs_20 IAMs_20 14 56 53.4
comp=Z,4µm,13.2s
MORF Marmelete 83.42 53 eP P 14 18 15.5 +1.1
MORF e 14 28 36.7
FAUS Fauske 83.45 20 eP P 14 18 14.2 +0.3
PCBR Castelo Branco 83.48 50 eP P 14 18 15.9 +1.3
comp=Z,65nm,2.0s
EVO Evora 83.51 52 eP P 14 18 14.6 -0.2
comp=Z,86nm,1.8s
MESJ Messejana 83.58 52 eP P 14 18 15.3 +0.1
comp=Z,63nm,2.1s
MESJ Messejana 83.58 52 eP P 14 18 16.1 +0.9
MESJ eSKSac SKSac 14 28 37.8 -0.1
MESJ IAMs_20 IAMs_20 14 59 46.7
comp=Z,2µm,20.2s
MESJ Messejana 83.58 52 eP P 14 18 16.1 +0.9
MESJ e 14 28 37.8
QUIF Quistinic 83.64 42 P P 14 18 15.0 -0.3
JETT Jettan, Norway 83.67 17 eP P 14 18 15.6 +0.5
JETT IAmb IAmb 14 18 18.1
comp=Z,102nm,1.0s
PMRV Marv??o 83.67 51 eP P 14 18 15.5 -0.2
comp=Z,104nm,2.1s
PMRV Marv??o 83.67 51 eS S 14 28 49.1 +11
PMRV Marv??o 83.67 51 eLR LR 14 48 52.3
comp=Z,2µm,18.0s
BBTS Babate 83.69 77 LR LR 14 51 18.7
comp=Z,2µm,20.8s,baz=247,slow=33
PESTR Estremoz 83.71 51 eP P 14 18 16.9 +1.0
comp=Z,75nm,2.3s
PESTR Estremoz 83.71 51 P P 14 18 16.2 +0.4
PCVE Castro Verde 83.78 52 eP P 14 18 16.3 +0.1
comp=Z,95nm,2.2s
PBEJ Beja 83.78 52 eP P 14 18 16.7 +0.5
comp=Z,82nm,2.0s
HAMF Hammerfest 83.82 15 eP P 14 18 15.5 -0.2
HAMF IAmb IAmb 14 18 16.6
comp=Z,80nm,1.2s
MOR8 Moi Rana 83.86 21 eP P 14 18 16.4 +0.4
MOR8 IAmb IAmb 14 18 16.7
comp=Z,70nm,1.0s
NSS Namsos 83.88 23 eP P 14 18 16.5 +0.4
NSS IAmb IAmb 14 18 17.6
comp=Z,27nm,0.8s
TBLU Trondheim 83.89 24 eP P 14 18 17.8 +1.5
TBLU IAmb IAmb 14 18 18.0
comp=Z,66nm,1.0s
PBDV Barranco-do-Ve 83.99 53 eP P 14 18 18.6 +1.3
comp=Z,137nm,1.8s
DOMB Dombas 84.02 26 eP P 14 18 17.6 +0.6
DOMB IAmb IAmb 14 18 18.9
comp=Z,54nm,0.9s
WACR West Acre 84.07 36 eP P 14 18 17.2 -0.1
WACR IAmb IAmb 14 18 19.0
comp=Z,427nm,0.9s
PVAQ Vaqueiros 84.10 53 eP P 14 18 19.2 +1.4
PVAQ Vaqueiros 84.10 53 eSn S 14 28 50.2 +7.7
BLS5 Blasjo 84.14 29 eP P 14 18 19.0 +1.3
BLS5 IAmb IAmb 14 18 24.5
comp=Z,57nm,1.2s
PBAR Barrancos 84.35 52 eP P 14 18 19.3 +0.2
comp=Z,117nm,1.9s
SKAR Skarslia 84.36 27 eP P 14 18 19.5 +0.7
SKAR IAmb IAmb 14 18 20.7

comp=Z,33nm,1.0s
KTK1 Kautokeino 84.79 17 *e*P **P** **14 18 21.1 +0.4**
KTK1 IAmb IAmb 14 18 22.4
comp=Z,315nm,2.0s
ARA0 ARCESS Array S 85.03 16 *e*P **P** **14 18 21.8 -0.2**
ARA0 IAmb IAmb 14 18 24.4
comp=Z,252nm,2.0s
ARCES ARCESS Array B 85.03 16 P **P** **14 18 21.8 -0.1**
ARCES ARCESS Array B 85.03 16 P **P** **14 18 21.8 -0.1**
ARCES pmax pmax
comp=Z,230nm,1.8s
ARCES ARCESS Array B 85.03 16 P **P** **14 18 21.6 -0.3**
comp=Z,18nm,0.9s,baz=305,slow=2.9,SNR=17
ARCES LR LR 14 56 39.4
comp=Z,3µm,19.6s,baz=316,slow=36
comp=Z,18nm,0.9s
RAO Raoul Island 85.26 237 LR LR 14 47 00.4
comp=Z,1µm,21.9s,baz=96,slow=29
NB2 NORSAR Subarra 85.41 26 P **P** **14 18 23.5 -0.5**
comp=Z,54nm,1.2s,baz=302,slow=4.8
NB2 NORSAR Subarra 85.41 26 P **P** **14 18 23.5 -0.5**
baz=302,slow=4.8
NB2 NORSAR Subarra 85.41 26 P **P** **14 18 23.3 -0.7**
NOA NORSAR Array B 85.41 26 P **P** **14 18 23.9 -0.2**
comp=Z,9.9nm,0.9s,baz=302,slow=4.8,SNR=19
NOA LR LR 14 57 12.9
comp=Z,2µm,19.7s,baz=295,slow=36
comp=Z,9.9nm,0.9s
KONO Kongsberg 85.44 28 *e*P **P** **14 18 24.0 -0.1**
KONO Kongsberg 85.44 28 *i* P **P** **14 18 23.2 -0.9**
KONO pmax pmax
comp=Z,41nm,1.1s
VADS Vadso 85.55 14 *e*P **P** **14 18 24.7 +0.2**
VADS IAmb IAmb 14 18 26.5
comp=Z,122nm,1.4s
AVE Averroes 85.69 56 P **P** **14 18 26.4 +0.4**
AVE IAMs_20 IAMs_20 15 02 16.6
comp=Z,1µm,18.0s
NC602 NORSAR Array S 85.71 26 *e*P **P** **14 18 26.1 +0.7**
NC602 IAmb IAmb 14 18 26.5
comp=Z,28nm,1.0s
ESDC Sonseca Array 86.08 49 P **P** **14 18 27.2 -0.6**
comp=Z,12nm,1.0s,baz=302,slow=5.3,SNR=33
ESDC LR LR 14 57 42.8
comp=Z,2µm,18.6s,baz=302,slow=36
comp=Z,12nm,1.0s
HFS Hagfors 86.94 26 P **P** **14 18 30.2 -1.3**
comp=Z,7.8nm,0.8s,baz=270,slow=4.4,SNR=7.2
HFS LR LR 14 58 09.2
comp=Z,2µm,19.1s,baz=295,slow=36
comp=Z,7.8nm,0.8s
BAIF Baives 87.23 38 P **P** **14 18 32.5 -0.6**
DOU Dourbes 87.43 37 *d*P **P** **14 18 34.5 +0.3**
BMRD Maredsous 87.44 37 *d*P **P** **14 18 34.4 +0.2**
comp=Z,18nm,1.1s
GIVF Givet 87.56 37 P **P** **14 18 34.3 -0.5**
BGES Gesves 87.59 37 *d*P **P** **14 18 35.0 +0.1**
comp=Z,20nm,1.0s
BCLA Clavier 87.69 37 *d*P **P** **14 18 35.1 -0.3**
comp=Z,16nm,1.1s
BSTI Sart Tilman 87.77 37 *d*P **P** **14 18 35.6 -0.1**
RCHB Rochefort 87.77 37 *d*P **P** **14 18 35.6 -0.1**
comp=Z,19nm,1.1s
EPF Esparros 87.79 45 P **P** **14 18 35.1 -1.0**
MEM Membach 88.00 37 *d*P **P** **14 18 36.3 -0.6**
comp=Z,20nm,1.0s
MDT Midelt 88.07 56 LR LR 14 58 20.1
comp=Z,793nm,18.4s,baz=332,slow=36
BTNL Ternell 88.08 37 *d*P **P** **14 18 37.4 +0.1**
SSF Saint Saulge 88.13 41 P **P** **14 18 36.2 -1.3**
IBBN Ibbenburen 88.16 35 *e*P **P** **14 18 38.1 +0.5**
comp=Z,25nm,0.9s,baz=303,slow=4.7
LOR Lormes 88.25 40 P **P** **14 18 37.7 -0.5**
BUG Bochum--Univer 88.32 35 *e*P **P** **14 18 38.6 +0.3**
comp=Z,20nm,0.9s,baz=303,slow=4.7
APA Apatity 88.45 15 *i*P **P** **14 18 34.9 -3.7**
APA pmax pmax
comp=Z,10.0nm,0.8s
WLF Walferdange 88.53 37 *d*P **P** **14 18 39.5 +0.2**
WLF Walferdange 88.53 37 *e*P **P** **14 18 40.0 +0.6**
comp=Z,41nm,1.2s,baz=303,slow=4.7
YAK Yakutsk 88.59 337 P **P** **14 18 39.8 +0.4**
YAK Yakutsk 88.59 337 IAMs_20 IAMs_20 14 59 52.2
comp=Z,2µm,21.0s
YAK Yakutsk 88.59 337 *e*P **P** **14 18 39.8 +0.4**
YAK *e* 14 22 07.5
YAK *e*PPP PPP 14 24 03.8
YAK *e*S **SKSac** **14 29 05.8 -2.4**
YAK *e**SS **pS** **14 29 30.2 +0.1**
YAK *e*SS **SS** **14 35 13.6 -1.4**
YAK pmax pmax
comp=Z,118nm,0.7s
YAK pmax pmax
comp=E,33nm,1.7s
YAK pmax pmax
comp=N,25nm,1.8s
YAK pmax pmax
comp=Z,235nm,5.9s
YAK pmax pmax
comp=E,145nm,5.0s
YAK pmax pmax
comp=N,151nm,5.3s
YAK smax smax
comp=E,341nm,11.6s
YAK smax smax
comp=N,182nm,10.6s
YAK MLR MLR
comp=E,720nm,15.0s
YAK Yakutsk 88.59 337 LR LR 15 01 28.9
comp=E,2µm,19.6s,baz=22,slow=38
AHRW Bad Neuenahr-A 88.64 36 *e*P **P** **14 18 40.4 +0.6**
comp=E,41nm,1.1s,baz=303,slow=4.7
BSEG Bad Segeberg 88.69 32 *e*P **P** **14 18 40.2 +0.3**
comp=E,32nm,1.0s,baz=303,slow=4.7
TYV Tymovskoe 88.93 324 *e*P **P** **14 18 41.3 +0.1**
TYV pmax pmax
comp=Z,900nm,4.9s
TYV pmax pmax
comp=Z,33nm,1.1s
PMSA Palmer Station 89.06 164 LR LR 14 49 36.7
comp=Z,2µm,22.0s,baz=305,slow=30
KASTN Kahler Asten 89.06 35 *e*P **P** **14 18 42.4 +0.5**
comp=Z,47nm,1.1s,baz=303,slow=4.7
TNS Taunus Mts 89.56 36 *e*P **P** **14 18 44.7 +0.4**
comp=Z,43nm,1.0s,baz=303,slow=4.7
GTTG Gottingen 89.73 35 *e*P **P** **14 18 45.5 +0.6**
comp=Z,56nm,1.6s,baz=303,slow=4.7
CLZ Clausthal 89.80 34 *e*P **P** **14 18 45.9 +0.6**
comp=Z,28nm,1.0s,baz=303,slow=4.7
ASSE Asse, Remlinge 89.80 34 *e*P **P** **14 18 45.6 +0.4**
comp=Z,31nm,1.3s,baz=303,slow=4.7
FLTG Flechtingen 90.00 33 *e*P **P** **14 18 46.0 -0.1**
comp=Z,106nm,1.9s,baz=303,slow=4.7
STU Stuttgart 90.71 37 *e*P **P** **14 18 49.9 +0.3**
comp=Z,54nm,0.9s,baz=303,slow=4.7
YSS Yuzh-Sakhalins 90.77 321 P **P** **14 18 50.0 +0.1**
YSS Yuzh-Sakhalins 90.77 321 *e*P **P** **14 18 49.5 -0.4**
YSS *e* 14 22 24.2
YSS *e*PPP PPP 14 24 31.3
YSS *e* 14 29 16.4
YSS *e*S **S** **14 29 41.9 -4.3**
YSS *e*SS **SS** **14 35 46.3 -1.2**
YSS *e*SSS SSS 14 39 29.5
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,500nm,4.7s
YSS pmax pmax
comp=N,100nm,3.7s
YSS pmax pmax
comp=E,200nm,3.9s
FINES FINESS Array B 90.84 21 P **P** **14 18 48.6 -1.3**
comp=E,7.5nm,0.8s,baz=340,slow=2.6,SNR=22
FINES LR LR 14 59 16.8
comp=E,3µm,20.1s,baz=319,slow=35
comp=E,7.5nm,0.8s
NEUB Neuenburg 90.87 34 *e*P **P** **14 18 50.7 +0.5**
comp=E,20nm,1.0s,baz=303,slow=4.7
MOX Moxa 91.09 35 *e*P **P** **14 18 51.7 +0.3**
comp=E,94nm,2.2s,baz=303,slow=4.7
MOX *e*L L 15 00 43.6
comp=E,3µm,18.4s
GRF Grafenberg Arr 91.37 36 *e*P **P** **14 18 53.7 +1.0**
comp=E,35nm,0.9s,baz=303,slow=4.7
GRF *e*L L 14 59 54.4
comp=E,3µm,19.5s
CLL Collm 91.47 34 *e*P **P** **14 18 52.0 -1.1**
CLL *e* 14 29 28.0
CLL MLR MLR
comp=Z,3µm,18.7s
CLL Collm 91.47 34 *e*P **P** **14 18 52.8 -0.2**
comp=Z,17nm,1.2s,baz=303,slow=4.7
NRIK Noril'sk 91.54 356 *c**e*P **P** **14 18 52.7 -0.3**
NRIK pmax pmax
comp=Z,85nm,1.7s
NRIK MLR MLR
comp=Z,6µm,16.0s
NRIK Noril'sk 91.54 356 P **P** **14 18 52.9 -0.2**
comp=Z,19nm,0.9s,baz=40,slow=4.0,SNR=24
NRIK LR LR 15 00 35.3
comp=Z,3µm,21.4s,baz=21,slow=36
comp=Z,19nm,0.9s
MANZ Manzenberg 91.70 35 *e*P **P** **14 18 54.6 +0.3**
comp=Z,26nm,2.2s,baz=303,slow=4.7
NKC Novy Kostel 91.76 35 AMS AMS 15 00 20.0
comp=Z,3µm,18.7s
DAVA Damuels 91.85 38 *i* P **P** **14 18 55.2 0.0**
comp=Z,30nm,1.8s
ROTZ Rotzenmuhle 91.88 35 *e*P **P** **14 18 55.5 +0.5**
comp=Z,24nm,2.1s,baz=303,slow=4.7
TUE Stuetta 91.95 39 IAMs_20 IAMs_20 14 47 36.1
comp=Z,966nm,18.0s
HSKC Hora Svate Kat 92.08 34 *e*P **P** **14 18 55.1 -0.9**
HSKC AMS AMS 15 01 00.0
comp=Z,3µm,20.5s
DAVOX Davos/Dischmat 92.11 39 P **P** **14 18 56.9 +0.5**
comp=Z,4.9nm,0.8s,baz=279,slow=1.4,SNR=6.1
DAVOX LR LR 15 01 13.5
comp=Z,7µm,18.1s,baz=306,slow=36
comp=Z,4.9nm,0.8s
BRG Berggiesshubel 92.20 34 *e*P **P** **14 18 55.9 -0.6**
BRG Amp 14 18 59.0
comp=Z,13nm,1.1s
BRG Berggiesshubel 92.20 34 P P 14 19 06.6 +10
BRG Amp 14 19 07.5
comp=Z,13nm,1.2s
BRG Berggiesshubel 92.20 34 PP PP 14 22 39.0 +2.9
BRG Berggiesshubel 92.20 34 SS SS 14 36 11.0 +3.2
BRG Amp 15 08 16.0
comp=Z,2.5nm,13.6s
BRG Amp 15 08 18.0
comp=N,0.9nm,11.0s
BRG Amp 15 08 21.0
comp=E,1.2nm,12.5s
BRG Berggiesshubel 92.20 34 *e*P **P** **14 18 55.8 -0.6**
BRG 14 22 39.0
BRG PS PnS 14 31 15.0 +3.7
BRG SS SS 14 36 11.0 +3.2
BRG pmax pmax
comp=Z,13nm,1.1s
BRG pmax pmax
comp=Z,3µm,13.6s
BRG Berggiesshubel 92.20 34 *e*P **P** **14 18 56.6 +0.1**
comp=Z,41nm,1.7s,baz=303,slow=4.7
RETA Reutte 92.27 38 *i* P **P** **14 18 56.6 -0.4**
comp=Z,7.0nm,1.3s
GRNR Gornyy 92.35 326 ⇑ *i*P **P** **14 18 57.2 0.0**
GRNR pmax pmax
comp=E,3.0nm,0.9s
GRNR pmax pmax
comp=Z,10.0nm,0.9s
FETA Feichten 92.49 38 *e*PcP **PcP** **14 18 58.8 0.0**
comp=Z,16nm,1.1s,SNR=6.0
MOTA Moosalm 92.54 38 *e*P **P** **14 18 57.9 -0.4**
comp=Z,29nm,2.3s
WET Wettzell 92.58 36 *e*P **P** **14 18 58.8 +0.5**
comp=Z,62nm,1.6s,baz=303,slow=4.7
URZ Urewera 92.62 230 LR LR 14 50 38.6
comp=Z,2µm,22.0s,baz=124,slow=29
SQTA Sankt Quirin 92.66 38 *e*P **P** **14 18 58.6 -0.3**
comp=Z,20nm,1.2s
PVCC Panska Ves 92.73 34 AMS AMS 15 01 40.0
comp=Z,2µm,18.8s
WATA Walderalm 92.81 38 *e*P **P** **14 18 59.2 -0.4**
comp=Z,50nm,1.9s,SNR=6.4
RTZ Ruatahuna 92.85 230 IAMs_20 IAMs_20 14 49 35.9
comp=Z,2µm,21.0s
WTTA Wattenberg 92.89 38 *e*PcP **PcP** **14 19 00.7 +0.1**
comp=Z,48nm,2.0s,SNR=9.8
JEM Erimo 92.90 316 P **P** **14 19 01.3 +1.5**
ERM Erimo 92.90 316 P **P** **14 19 01.6 +1.8**
ERM Erimo 92.90 316 *c**e*P **P** **14 19 00.7 +0.9**
ERM pmax pmax
comp=Z,19nm,1.3s
PRA Prague 92.91 34 AMS AMS 15 01 20.0
comp=Z,3µm,19.2s
KHC Kasperske Hory 92.97 35 *e*P **P** **14 18 59.7 -0.4**
KHC AMS AMS 15 01 20.0
comp=Z,3µm,15.9s
KHC Kasperske Hory 92.97 35 *c**e*P **P** **14 19 00.2 +0.1**
KHC pmax pmax
comp=Z,25nm,1.5s
PRU Pruhonice 93.02 34 *e*P **P** **14 18 59.8 -0.4**
PRU AMS AMS 15 01 20.0
comp=Z,4µm,21.9s
PRU Pruhonice 93.02 34 *e*P **P** **14 18 59.8 -0.4**
PRU MLR MLR
comp=Z,4µm,21.9s
ZVC Zvikov 93.14 35 *e*P **P** **14 19 00.7 -0.1**
ZVC AMS AMS 15 01 10.0
comp=Z,4µm,19.7s
VSU Vasula 93.17 23 *c**e*P **P** **14 18 59.3 -1.4**
VSU pmax pmax
comp=Z,27nm,1.2s
GOPC GO Pecny, Ondr 93.19 34 AMS AMS 15 01 40.0
comp=Z,3µm,20.6s
GEC2 GERESS Array S 93.20 36 *e*P **P** **14 19 01.6 +0.3**
comp=Z,69nm,1.8s,baz=303,slow=4.7
GEC2 *e*pP **sP** **14 19 08.3 +1.8**
GERES GERESS Array B 93.20 36 P **P** **14 19 00.3 -0.9**
comp=Z,4.9nm,0.9s,baz=335,slow=5.9,SNR=19
GERES LR LR 15 01 29.1
comp=Z,3µm,18.4s,baz=313,slow=36
comp=Z,4.9nm,0.9s
RJOB Joberg 93.30 37 *e*P **P** **14 19 02.3 +0.6**
comp=Z,29nm,1.1s,baz=303,slow=4.7
LESA Schwarzleotal 93.40 37 *e*P **P** **14 19 01.2 -1.0**
comp=Z,18nm,1.1s
CHVC Chvalec 93.47 33 *e*P **P** **14 19 01.2 -1.2**
CHVC AMS AMS 15 02 50.0
comp=Z,3µm,18.6s
CHVC Chvalec 93.47 33 *e*P **P** **14 19 01.2 -1.2**
CHVC MLR MLR
comp=Z,3µm,18.6s
UPC Upice 93.50 33 AMS AMS 15 02 50.0
comp=Z,3µm,18.8s
CKRC Cesky Krumlov 93.55 35 *e*P **P** **14 19 02.0 -0.8**
CKRC AMS AMS 15 01 40.0
comp=Z,3µm,17.9s
CKRC Cesky Krumlov 93.55 35 *e*P **P** **14 19 02.0 -0.8**
CKRC MLR MLR
comp=Z,3µm,17.9s
OSTC Ostas 93.57 33 AMS AMS 15 02 50.0
comp=Z,2µm,18.0s
ABTA Abfaltersbach 93.67 38 *e*P **P** **14 19 03.1 -0.4**
comp=Z,29nm,1.3s,SNR=9.8
DPC Dobruska-Polom 93.75 33 *e*P **P** **14 19 02.9 -0.8**
DPC AMS AMS 15 03 00.0
comp=Z,3µm,18.0s
DPC Dobruska-Polom 93.75 33 *e*P **P** **14 19 02.9 -0.8**
DPC MLR MLR
comp=Z,3µm,18.0s
BIOA Bad Ischl, Aus 93.80 37 *e*P **P** **14 19 03.5 -0.4**
comp=Z,52nm,1.2s,SNR=20
TREC Trest 93.92 35 AMS AMS 15 01 50.0
comp=Z,4µm,18.5s
KBA Koelnbreinsper 93.97 37 *e*P **P** **14 19 04.5 -0.5**
comp=Z,29nm,1.2s,SNR=13
MOA Molln 94.06 36 *e*P **P** **14 19 04.9 -0.3**
comp=Z,66nm,1.2s,SNR=11
KRLC Kraliky 94.15 33 *e*P **P** **14 19 07.4 +1.9**
KRLC AMS AMS 15 04 50.0
comp=Z,2µm,14.4s
KRLC Kraliky 94.15 33 *e*P **P** **14 19 07.4 +1.9**
KRLC MLR MLR
comp=Z,2µm,14.4s
MYKA Terra Mystica 94.39 37 *e*P **P** **14 19 06.9 +0.1**
comp=Z,26nm,1.5s,SNR=7.8
VRAC Vranov 94.50 34 *e*P **P** **14 19 07.0 -0.1**
VRAC Vranov 94.50 34 LR LR 15 03 09.0
comp=Z,3µm,18.1s,baz=306,slow=36
KRUC Moravsky 94.54 34 *e*P **P** **14 19 07.1 -0.2**
CADS Cadrg 94.66 38 *i* P **P** **14 19 08.1 +0.1**
MORC Moravsky Berou 94.72 33 *e*P **P** **14 19 08.2 0.0**
JTM Tenmabayashi 94.87 316 P **P** **14 19 09.8 +0.9**
CONA Conrad Observa 94.91 36 *e*P **P** **14 19 08.7 -0.4**
comp=Z,49nm,1.5s,SNR=17
OBKA Obir 94.97 37 *e*P **P** **14 19 08.6 -0.8**
comp=Z,44nm,1.0s,SNR=18
OBKA Obir 94.97 37 *e*P **P** **14 19 08.4 -1.1**
ZEA Zeya 95.00 332 *e*P **P** **14 19 09.2 0.0**
ZEA *e* 14 22 56.1
ZEA *e*PPP PPP 14 25 01.8
ZEA *e* 14 29 47.2
ZEA *e*S **S** **14 30 25.4 +1.9**
ZEA *e*SP **SP** **14 31 45.0 +6.0**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA pmax pmax
comp=Z,300nm,4.5s
ZEA pmax pmax
comp=Z,300nm,7.4s
ZEA smax smax
comp=N,500nm,10.2s
ARSA Arzberg 95.11 36 *e*P **P** **14 19 09.4 -0.6**
comp=N,18nm,0.9s,SNR=11
SOKA Soboth 95.16 37 *e*P **P** **14 19 09.4 -0.9**
comp=N,51nm,1.0s,SNR=26
LJU Ljubljana 95.22 38 *e*P **P** **14 19 11.0 +0.5**
RONA Rosalia, Austr 95.28 36 *e*P **P** **14 19 10.5 -0.3**
comp=N,56nm,1.2s,SNR=19
CEY Cerknica 95.33 38 *e*P **P** **14 19 10.5 -0.5**
JAVC Velka Javorina 95.34 34 *e*P **P** **14 19 10.7 -0.3**
BHW Baring Head 95.37 228 IAMs_20 IAMs_20 14 54 03.6
comp=Z,2µm,19.0s
SMOL Smolenice 95.41 34 *e*P **P** **14 19 12.4 +1.1**
MODS Modra-Piesok 95.42 35 *e*P **P** **14 19 12.1 +0.8**
MODS Modra-Piesok 95.42 35 *e*P **P** **14 19 12.1 +0.8**
ZST Bratislava 95.43 35 *e*P **P** **14 19 12.1 +0.8**
ZST Bratislava 95.43 35 *e*P **P** **14 19 12.1 +0.8**
KLMR Klimovskoe 95.45 17 *e*P **P** **14 19 08.0 -3.2**
KLMR *e* 14 22 59.0
KLR Kul'dur 95.70 327 *c**e*P **P** **14 19 12.4 -0.2**
KLR pmax pmax
comp=Z,20nm,2.5s
KLR MLR MLR
comp=Z,758nm,20.0s
DZM Mont Dzumac 95.88 249 LR LR 14 52 49.6
comp=Z,3µm,21.3s,baz=77,slow=29
CRES Cresnjev 95.88 37 *e*P **P** **14 19 12.6 -0.9**
BOJS Bojanci 95.95 38 *i* P **P** **14 19 14.5 +0.8**
BOJS Bojanci 95.95 38 *e*P **P** **14 19 12.5 -1.3**
LANS Liptovska Anna 96.10 33 *e*P **P** **14 19 17.1 +2.6**
LANS Liptovska Anna 96.10 33 *e*P **P** **14 19 17.1 +2.6**
SRO Srobarova 96.31 35 *e*P **P** **14 19 16.0 +0.7**
SRO Srobarova 96.31 35 *e*P **P** **14 19 16.0 +0.7**
NNZ Nelson 96.36 229 IAMs_20 IAMs_20 14 55 07.8
comp=Z,2µm,19.0s
MNK Minsk 96.43 26 *i* P **P** **14 19 12.7 -3.1**
MNK *i* 14 23 06.3
MNK *i* PPP PPP 14 25 09.5
MNK *i* S **SKSac** **14 29 49.2 -3.1**
MNK *i* PS **PS** **14 31 54.9 -1.8**
MNK *i* SS **SS** **14 37 07.7 0.0**
MNK *i* SSS SSS 14 40 52.1
MNK pmax pmax
comp=N,15nm,0.9s
MNK pmax pmax
comp=E,5.0nm,0.6s
MNK pmax pmax
comp=Z,28nm,0.9s
MNK MLR MLR
comp=E,492nm,17.0s
MNK MLR MLR
comp=Z,1µm,15.0s
MNK MLR MLR
comp=N,1µm,14.0s
KHZ Kahutara 96.65 228 IAMs_20 IAMs_20 14 52 53.4
comp=Z,2µm,20.0s
QRZ Quartz Range 96.84 229 IAMs_20 IAMs_20 14 55 57.6
comp=Z,2µm,19.0s
STHS Stebnicka Huta 96.84 32 *e*P **P** **14 19 16.7 -1.1**
STHS Stebnicka Huta 96.84 32 *e*P **P** **14 19 16.7 -1.1**
TIC Toumodi 96.99 81 *e*P **P** **14 19 18.0 -1.1**
comp=Z,14nm,0.8s
BOD Bodaibo 97.06 340 *e*P **P** **14 19 16.7 -1.8**
BOD pmax pmax
comp=Z,12nm,1.6s
LIC Lamto 97.12 81 *e*P **P** **14 19 18.5 -1.2**
comp=Z,31nm,0.8s
DBIC Dimbokro 97.13 80 P **P** **14 19 19.2 -0.5**
comp=Z,8.1nm,0.8s,baz=294,slow=4.3,SNR=6.9
DBIC LR LR 15 03 44.5
comp=Z,831nm,18.2s,baz=278,slow=36
comp=Z,8.1nm,0.8s
A051A Mrakovica 97.19 37 *e*P **P** **14 19 18.8 -0.7**
HEH HeiHe 97.22 329 *e*P **P** **14 19 19.0 -0.4**
HEH PP **PP** **14 23 15.6 +0.5**
HEH S **S** **14 30 43.5 +0.6**
HEH pmax pmax
comp=Z,12nm,1.1s
HEH pmax pmax
comp=Z,530nm,5.6s
HEH LR LR
comp=Z,3µm,15.2s
HEH LR LR
comp=Z,1µm,14.2s
HEH LR LR
comp=Z,4µm,14.8s
A050A Klekovaca 97.28 38 *e*P **P** **14 19 18.5 -1.4**
KEST Kesra 97.29 48 P **P** **14 19 19.8 -0.4**
comp=Z,12nm,1.0s,baz=338,slow=0.9,SNR=7.5
KEST LR LR 15 03 06.2
comp=Z,534nm,18.8s,baz=285,slow=35
comp=Z,12nm,1.0s
KIC Kosan Boka 97.34 81 *e*P **P** **14 19 20.6 -0.1**
comp=Z,26nm,0.9s
BLY Banja Luka 97.50 38 *e*P Pdif 14 19 21.8 +0.9
LTZ Lake Taylor 97.65 228 IAMs_20 IAMs_20 14 54 01.9
comp=Z,2µm,19.0s
MQZ McQueen's Vall 97.68 227 IAMs_20 IAMs_20 14 57 12.5
comp=Z,1µm,19.0s
HNR Honiara 97.99 263 LR LR 14 54 09.8
comp=Z,12µm,21.9s,baz=60,slow=30
INZ Inchbonnie 98.21 228 IAMs_20 IAMs_20 14 54 27.8
comp=Z,2µm,21.0s
USRK Ussuriysk Ar. 98.61 323 P Pdif 14 19 25.9 +0.1
comp=Z,2.5nm,0.8s,baz=44,slow=5.8,SNR=4.1
comp=Z,2.5nm,0.8s
FRGS Fruska Gora 98.75 36 *e*P **P** **14 19 26.0 -0.4**
RPZ Rata Peaks 98.78 227 IAMs_20 IAMs_20 14 54 35.9
comp=Z,2µm,20.0s
RPZ Rata Peaks 98.78 227 LR LR 14 54 58.8
comp=Z,1µm,21.1s,baz=48,slow=30
STON Ston 98.90 39 *e*P **P** **14 19 26.0 -1.1**
HAPS Han Pijesak,Bl 98.91 37 *e*P **P** **14 19 26.5 -0.8**
MJAR Matsushiro Arr 98.96 313 P **P** **14 19 26.6 -1.0**
comp=Z,2.0nm,0.9s,baz=58,slow=4.0,SNR=4.6
comp=Z,2.0nm,0.9s
MOS Moscow 99.10 20 *e*P **Pdif** **14 19 25.8 -1.9**
OBN Obninsk 99.25 21 ⇑ *i*P **Pdif** **14 19 27.4 -1.0**
OBN *i* 14 19 34.2
OBN *e* 14 23 32.3
OBN *i* S **SKSac** **14 30 03.4 -3.1**
OBN *i* PS **PS** **14 32 24.4 -2.7**
OBN *e*SS SS 14 37 59.1 +12
OBN pmax pmax
comp=Z,12nm,1.1s
OBN MLR MLR
comp=Z,3µm,17.0s
OBN Obninsk 99.25 21 LR LR 15 05 57.0
comp=Z,2µm,18.3s,baz=342,slow=36
BBLS Lazići 99.31 37 *e*P **Pdif** **14 19 28.8 -0.2**
UPM Unac-Piva 99.42 38 *e*P **Pdif** **14 19 29.0 -0.7**
RUDO Rudo 99.44 38 *e*P **Pdif** **14 19 28.4 -1.2**
LBZ Lake Benmore 99.58 226 IAMs_20 IAMs_20 14 54 53.0
comp=Z,2µm,20.0s
JHJ Hachijo jima 2 99.58 310 LR LR 15 03 08.1
comp=Z,296nm,18.1s,baz=57,slow=35
MDJ Mudanjiang 99.71 324 IAMs_20 IAMs_20 15 12 01.5
comp=Z,1µm,22.0s
AKASG Malin Array Be 99.74 28 *i* P **Pdif** **14 19 29.1 -1.6**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 99.74 28 P **Pdif** **14 19 28.6 -2.0**
comp=Z,1.6nm,0.6s,baz=294,slow=3.8,SNR=14
AKASG LR LR 15 05 10.2
comp=Z,1µm,19.8s,baz=324,slow=36
comp=Z,1.6nm,0.6s

AKBB Malin Array Si 99.74 28 *i* P **Pdif** **14 19 30.0 -0.7**
AKBB pmax pmax
comp=Z,26nm,1.4s
VAE Valguarnera 99.88 45 LR LR 15 06 37.9
comp=Z,2µm,18.0s,baz=28,slow=37
KIRV Kirov 99.89 13 *ce*P **Pdif** **14 19 30.5 -0.6**
KIRV Kirov 99.89 13 P **Pdif** **14 19 31.2 0.0**
comp=Z,8.1nm,0.7s,baz=311,slow=2.7,SNR=4.7
KIRV LR LR 15 05 54.3
comp=Z,3µm,20.0s,baz=344,slow=36
comp=Z,8.1nm,0.7s
SJES Sjenica 100.00 38 *e*P **Pdif** **14 19 31.8 -0.4**
TAM Tamanrasset 100.27 62 IAMs_20 IAMs_20 15 09 00.2
comp=Z,1µm,18.0s
MLZ Mavora Lakes 101.27 226 IAMs_20 IAMs_20 14 56 11.5
comp=Z,2µm,21.0s
MLR Muntele Rosu 101.83 33 P **Pdif** **14 19 39.6 -0.7**
comp=Z,7.5nm,0.9s,baz=334,slow=5.8,SNR=6.0
DCZ Deep Cove 101.95 226 IAMs_20 IAMs_20 14 57 19.6
comp=Z,1µm,19.0s
PYZ Puysegur Point 102.44 225 IAMs_20 IAMs_20 14 56 44.7
comp=Z,2µm,20.0s
BELA Belgrano 2 104.30 168 IAMs_20 IAMs_20 15 02 53.7
comp=Z,971nm,18.0s
SNY Shenyang 104.86 325 P **Pdif** **14 19 54.8 +1.1**
SNY PP **PP** **14 24 12.5 -0.4**
SNY SS SS 14 39 02.7 -2.7
SNY AMB AMB
comp=Z,350nm,6.7s
SNY LR LR
comp=Z,2µm,16.7s
SNY LR LR
comp=Z,2µm,14.2s
SNY LR LR
comp=Z,2µm,13.5s
KSRS Korea Array 105.18 319 PKiKP **PKiKP** **14 24 09.0 -0.5**
comp=Z,0.8nm,0.7s,baz=8.1,slow=2.9,SNR=2.9
INCN Inchon 105.95 320 IAMs_20 IAMs_20 15 15 10.4
comp=Z,1µm,18.0s
ZALV Zalesovo Beam 106.97 354 Pdiff **Pdif** **14 20 02.3 -0.5**
comp=Z,0.3nm,0.4s,baz=22,slow=4.7,SNR=1.9
ZALV PKiKP **PKiKP** **14 24 12.0 -0.4**
comp=Z,0.3nm,0.4s,baz=356,slow=4.3,SNR=1.3
XLT XiLinHaoTe 107.17 330 *e*Pdif **Pdif** **14 20 04.4 +0.3**
XLT PP **PP** **14 24 31.9 +1.9**
XLT S **Sdif** **14 32 06.6 -0.1**
XLT AMB AMB
comp=Z,370nm,11.5s
XLT LR LR
comp=Z,92nm,16.6s
XLT LR LR
comp=Z,590nm,13.6s
XLT LR LR
comp=Z,2µm,16.2s
SANT Santorini 107.62 40 IAMs_20 IAMs_20 15 11 13.9
comp=Z,1µm,21.0s
SONM Songino Array 107.93 339 Pdiff **Pdif** **14 20 07.0 -0.4**
comp=Z,0.6nm,0.8s,baz=66,slow=3.5,SNR=3.6
SONM PKiKP **PKiKP** **14 24 14.4 -0.2**
comp=Z,0.8nm,0.9s,baz=0.0,slow=0.7,SNR=4.0
BVAR Borovoye Array 108.23 3 Pdiff **Pdif** **14 20 08.7 +0.2**
comp=Z,1.3nm,0.8s,baz=0.0,slow=4.3,SNR=5.5
QSPA South Pole Qui 108.83 180 IAMs_20 IAMs_20 15 00 24.6
comp=Z,1µm,20.0s
KARP Karpathos 109.20 40 IAMs_20 IAMs_20 15 12 01.7
comp=Z,1µm,22.0s
ANTO Ankara 109.37 33 IAMs_20 IAMs_20 15 13 12.4
comp=Z,1µm,18.0s
BRTR Keskin Array B 109.91 33 PKiKP **PKiKP** **14 24 19.4 +0.8**
comp=Z,2.0nm,0.8s,baz=48,slow=1.8,SNR=3.6
PMG Port Moresby 110.04 267 IAMs_20 IAMs_20 15 03 43.0
comp=Z,1µm,19.0s
KIV Kislovodsk 110.68 25 *i* PKIKP **PKiKP** **14 24 20.8 +1.0**
KIV *e* 14 24 56.3
KIV *e*PPP PPP 14 27 15.4
KIV *e* 14 30 59.9
KIV *e*PS **PS** **14 34 28.1 +1.8**
KIV *e*SS SS 14 40 28.7 +4.8
KIV *e*SSS SSS 14 44 33.5
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,2µm,21.0s
KURBB Kurchatov Arra 110.70 358 Pdiff **Pdif** **14 20 18.4 -1.1**
comp=Z,0.2nm,0.3s,baz=3.6,slow=4.5,SNR=2.1
HHC Hu-ho-hao-te 111.64 331 *e*PKP **PKiKP** **14 24 16.2 -5.5**
HHC PP **PP** **14 25 00.4 -2.0**
HHC SS SS 14 40 34.8 -2.2
HHC AMB AMB
comp=Z,630nm,7.9s
HHC LR LR
comp=Z,2µm,17.2s
HHC LR LR
comp=Z,960nm,18.1s
HHC LR LR
comp=Z,3µm,16.7s
HNS HongShan 112.78 327 *e*PKP **PKiKP** **14 24 23.6 -0.2**
HNS PP **PP** **14 25 10.6 0.0**
HNS AMB AMB
comp=Z,470nm,6.9s
CSS Mathiatis 113.24 37 IAMs_20 IAMs_20 15 15 12.1
comp=Z,739nm,19.0s
MAK Makhachkala 113.33 22 *i* P **Pdif** **14 20 31.4 +0.1**
MAK *i* 14 24 21.1
MAK *e* 14 25 12.4
MAK *e* 14 31 04.8
MAK *e*PS **PS** **14 34 54.9 +4.5**
MAK *e*SSS SSS 14 45 12.7
MAK pmax pmax
comp=Z,385nm,1.2s
CTAO Charters Tower 113.57 256 IAMs_20 IAMs_20 15 03 46.8
comp=Z,633nm,19.0s
CAN Canberra 113.72 239 IAMs_20 IAMs_20 15 04 42.2
comp=Z,860nm,20.0s
MKAR Makanchi Array 114.29 355 PKiKP PKPdf 14 24 26.6 +0.1
comp=Z,1.0nm,0.9s,baz=4.8,slow=1.5,SNR=5.7
MKAR PKKPab **PKKPab** **14 35 15.7 +0.2**
comp=Z,0.9nm,0.8s,baz=173,slow=4.9,SNR=7.0
NJ2 Nanjing 114.33 320 *e*PKP PKPdf 14 24 27.4 +0.5
LYN LuoYang 116.13 326 *e*PKP **PKiKP** **14 24 23.6 -6.7**
LYN PP **PP** **14 25 34.7 +0.4**
LYN AMB AMB
comp=Z,710nm,5.3s
LYN LR LR
comp=Z,2µm,15.4s
LYN LR LR
comp=Z,2µm,16.0s
LYN LR LR
comp=Z,3µm,19.8s
WMQ Urumqi 116.54 350 *e*PKP **PKPdf** **14 24 35.9 +4.9**
WMQ LR LR
comp=Z,2µm,9.7s
WMQ LR LR
comp=Z,3µm,12.1s
WMQ LR LR
comp=Z,2µm,20.7s
GHAJ Ghor Haditha 117.18 38 IAMs_20 IAMs_20 15 25 31.7
comp=Z,721nm,19.0s
GTA Gaotai 117.60 339 *e*PKP **PKiKP** **14 24 33.5 +0.2**
GTA PP **PP** **14 25 46.6 +2.3**
GTA SS SS 14 41 53.6 -1.5
GTA AMB AMB
comp=Z,550nm,11.3s
GTA LR LR
comp=Z,770nm,19.6s
GTA LR LR
comp=Z,800nm,22.9s
GTA LR LR
comp=Z,680nm,22.2s
XAN Xi'an 118.34 328 PKP **PKiKP** **14 24 34.8 +0.1**
XAN LR LR
comp=Z,3µm,15.6s
XAN LR LR
comp=Z,900nm,16.0s
XAN LR LR
comp=Z,4µm,15.4s
SSLB Suanglung 118.46 312 IAMs_20 IAMs_20 15 14 04.4
comp=Z,963nm,19.0s
AAK Ala-Archa 118.75 1 PKPdf **PKPdf** **14 24 35.1 -0.3**
AAK Ala-Archa 118.75 1 PKiKP **PKPdf** **14 24 35.1 -0.3**
LZH Lanzhou 118.97 334 *e*PKP **PKiKP** **14 24 39.8 +3.7**
LZH PP **PP** **14 25 55.0 +1.0**
LZH SS SS 14 42 11.7 -1.5
LZH AMB AMB
comp=Z,680nm,8.1s
LZH LR LR
comp=Z,1µm,23.1s
LZH LR LR
comp=Z,2µm,17.3s
LZH LR LR
comp=Z,2µm,17.7s
STKA Stephens Creek 119.52 244 PKPdf **PKPdf** **14 24 36.5 -0.3**
STKA Stephens Creek 119.52 244 P **PKiKP** **14 24 37.9 +1.0**
STKA Stephens Creek 119.52 244 P **PKPdf** **14 24 36.5 -0.3**
STKA Stephens Creek 119.52 244 PKP **PKPdf** **14 24 36.1 -0.8**
comp=Z,4.6nm,0.8s,baz=45,slow=3.1,SNR=14
STKA PKKPbc **PKKPbc** **14 34 46.9 -1.5**
comp=Z,1.4nm,0.8s,baz=330,slow=12,SNR=3.9
TARG Taragay, Kyrgy 119.61 358 **PKPdf** **14 24 36.6 -0.8**
TARG Taragay, Kyrgy 119.61 358 PKIKP **PKPdf** **14 24 36.6 -0.8**
KNMB Chin-men Tao 119.80 314 IAMs_20 IAMs_20 15 26 04.5
comp=Z,730nm,19.0s
NRN Naryn 119.95 359 PKPdf **PKPdf** **14 24 38.0 +0.1**
NRN Naryn 119.95 359 PKIKP **PKPdf** **14 24 38.0 +0.1**
ARSB Arslanbob 120.03 2 IAMs_20 IAMs_20 15 19 30.8
comp=Z,1µm,21.0s
ENH Enshi 121.03 325 **PKPdf** **14 24 39.0 -1.0**
ENH IAMs_20 IAMs_20 15 26 02.9
comp=Z,1µm,18.0s
ENH Enshi 121.03 325 P **PKPdf** **14 24 39.4 -0.6**
GEYT Alibeck 121.20 16 PKPdf **PKPdf** **14 24 39.7 -0.4**
GEYT Alibeck 121.20 16 PKiKP **PKPdf** **14 24 39.7 -0.4**
GEYT Alibeck 121.20 16 PKP **PKiKP** **14 24 40.8 +0.5**
comp=Z,6.2nm,0.8s,baz=288,slow=5.6,SNR=6.1
GYA0B ALIBECK ARRAY 121.20 16 PKPdf **PKPdf** **14 24 39.8 -0.2**
KSH Kashi 121.87 359 PKP **PKiKP** **14 24 42.4 +0.8**
KSH PP **PP** **14 26 15.7 +2.3**
KSH AMB AMB
comp=Z,400nm,9.0s
KSH LR LR
comp=Z,3µm,16.1s
KSH LR LR
comp=Z,2µm,19.9s
KSH LR LR
comp=Z,3µm,23.4s
FAKI Fak Fak 122.10 279 IAMs_20 IAMs_20 15 07 32.3
comp=Z,1µm,21.0s
GOMU GeErMu 122.14 341 PKP **PKiKP** **14 24 42.7 +0.1**
GOMU PP **PP** **14 26 16.3 +0.5**
GOMU SS SS 14 42 52.9 -1.1
GOMU LR LR
comp=Z,540nm,23.1s
GOMU LR LR
comp=Z,920nm,22.9s
GOMU LR LR
comp=Z,720nm,23.2s
SIMJ Simiganj 122.43 6 **PKPdf** **14 24 42.6 +0.1**
CD2 Chengdu 123.39 331 PKP **PKiKP** **14 24 45.0 +0.3**
CD2 PP **PP** **14 26 26.4 +2.2**
CD2 SKS **SKSac** **14 31 52.7 +6.3**
CD2 SKKS **SKKSac** **14 33 22.0 -2.4**
CD2 LR LR
comp=Z,810nm,14.2s
CD2 LR LR
comp=Z,410nm,11.8s
CD2 LR LR
comp=Z,1µm,14.2s
HKPS Hong Kong Po S 124.13 315 IAMs_20 IAMs_20 15 29 43.3
comp=Z,852nm,20.0s
WR0 Warramunga Arr 124.36 258 **PKPdf** **14 24 46.2 -0.3**
WB0 Warramunga Arr 124.46 259 PKPdf **PKPdf** **14 24 45.9 -0.8**
WB2 Warramunga Arr 124.53 258 PKPdf **PKPdf** **14 24 46.3 -0.5**
WRAB Tennant Creek 124.53 258 **PKPdf** **14 24 46.6 -0.2**
WRAB Tennant Creek 124.53 258 PKIKP **PKPdf** **14 24 46.6 -0.2**
WRA Warramunga Arr 124.54 258 PKPdf **PKPdf** **14 24 46.4 -0.4**
WRA Warramunga Arr 124.54 258 PKP **PKPdf** **14 24 46.1 -0.8**
comp=Z,9.9nm,0.9s,baz=77,slow=2.1,SNR=4.8
WRA PKKPbc **PKKPbc** **14 34 29.2 +0.3**
comp=Z,1.0nm,0.8s,baz=259,slow=2.6,SNR=5.4
SAUI Saumlaki 124.63 273 IAMs_20 IAMs_20 15 20 31.6
comp=Z,1µm,18.0s
AS01 Alice Springs 125.43 254 P **PKPdf** **14 24 48.8 +0.3**
AS01 Alice Springs 125.43 254 P **PKPdf** **14 24 48.3 -0.2**
AS31 Alice Springs 125.47 254 PKPdf **PKPdf** **14 24 47.9 -0.7**
ASAR Alice Springs 125.48 254 PKPdf **PKPdf** **14 24 47.9 -0.7**
ASAR Alice Springs 125.48 254 PKIKP **PKPdf** **14 24 47.9 -0.7**
ASAR Alice Springs 125.48 254 PKhKP PKPpre 14 24 34.7
comp=Z,0.7nm,0.9s,baz=75,slow=4.8,SNR=4.6
ASAR PKP **PKPdf** **14 24 48.3 -0.3**
comp=Z,7.0nm,0.8s,baz=87,slow=2.2,SNR=26
ASAR PKKPbc **PKKPbc** **14 34 25.6 +0.3**
comp=Z,0.9nm,0.9s,baz=259,slow=3.4,SNR=5.1
GYA Guiyang 125.56 325 ||PKP **PKPdf** **14 24 48.2 -0.7**
GYA PP **PP** **14 26 44.1 +5.1**
GYA SS SS 14 43 37.8 +0.2
GYA AMB AMB
comp=Z,320nm,10.7s
GYA LR LR
comp=Z,410nm,16.3s
GYA LR LR
comp=Z,1µm,21.9s
GYA LR LR
comp=Z,730nm,20.5s
HRA Herat 125.56 13 PKPdf **PKPdf** **14 24 48.5 -0.3**
TSUM Tsumeb 125.71 100 PKPdf **PKPdf** **14 24 48.4 -0.9**
MULG Mulgathing 125.87 246 P **PKPdf** **14 24 48.5 -0.6**
KBL Kabul 126.51 6 PKPdf **PKPdf** **14 24 50.8 +0.2**
KBL Kabul 126.51 6 PKIKP **PKPdf** **14 24 50.8 +0.2**
CASY Casey 127.40 197 IAMs_20 IAMs_20 15 08 12.2
comp=Z,968nm,22.0s
PZH PanZhiHua 128.04 330 PKP **PKPdf** **14 24 53.3 -0.3**
PZH sPKP 14 24 58.8
PZH PP **PP** **14 26 56.6 +1.3**
PZH AMB AMB
comp=Z,370nm,9.6s
PZH LR LR
comp=Z,870nm,15.7s
PZH LR LR
comp=Z,760nm,16.7s
PZH LR LR
comp=Z,1µm,16.7s
JMU Jammu 128.66 0 ||*e*P **PKiKP** **14 24 55.6 +0.6**
KMI Kunming 128.70 328 SKKS 14 42 22.2
KMI Kunming 128.70 328 SS SS 14 44 21.8 +4.9
KMI AMB AMB
comp=Z,330nm,8.4s
KMI LR LR
comp=N,1µm,19.9s
KMI LR LR
comp=E,1µm,20.5s
KMI LR LR
comp=Z,1µm,15.6s
RAYN Ar Rayn 128.78 36 PKPdf **PKPdf** **14 24 55.1 +0.1**
RAYN Ar Rayn 128.78 36 PKIKP **PKPdf** **14 24 55.1 +0.1**
THN Thein Dam 128.94 360 *e*P **PKiKP** **14 24 57.3 +1.6**
DHRM DHARAMSHALA 129.11 359 ||*e*P **PKPdf** **14 24 55.4 -0.2**
QIZ Qiongzhong 129.26 316 PKP **PKPdf** **14 24 54.0 -1.9**
QIZ PP **PP** **14 27 02.5 -1.2**
QIZ SS SS 14 44 24.0 -0.2
QIZ AMB AMB
comp=Z,530nm,4.7s
QIZ LR LR
comp=Z,1µm,16.7s
QIZ LR LR
comp=Z,630nm,18.2s
QIZ LR LR
comp=Z,1µm,17.2s
LSA Lhasa 129.29 342 **PKiKP** **14 24 57.2 +0.2**
LSA Lhasa 129.29 342 PKIKP **PKiKP** **14 24 57.3 +0.2**
BHK Bhakra 129.94 359 *e*P **PKiKP** **14 24 58.9 +1.1**
SMLA Simla 130.21 358 *e*P **PKiKP** **14 24 58.2 -0.1**
MAW Mawson 130.69 174 PKP **PKPdf** **14 24 55.2 -1.9**
comp=Z,8.8nm,1.0s,baz=135,slow=5.7,SNR=3.2
WRKA Warakurna 130.70 253 P **PKiKP** **14 24 59.5 +0.1**
WRKA Warakurna 130.70 253 P **PKPdf** **14 24 58.8 +0.3**
TNCH TengChong 130.80 332 PKP **PKPdf** **14 24 58.7 -0.3**
TNCH sPKP 14 25 04.7
TNCH PP **PP** **14 27 14.3 +1.0**
TNCH SKKS 14 34 07.6
TNCH SS **SS** **14 44 42.9 +0.5**
TNCH AMB AMB
comp=Z,590nm,8.5s
SLVN Son La 131.15 324 PKPdf **PKiKP** **14 25 00.2 -0.3**
MOKO MOKOCHONG 131.30 337 ||*e*P **PKiKP** **14 25 01.4 +0.6**
TEZP TEZPUR 131.64 339 *e*P **PKiKP** **14 25 02.2 +0.9**
LGTI Lohaghat 131.67 354 ||*e*P **PKiKP** **14 25 01.3 +0.1**
GTK Tadong 132.25 344 *e*P **PKiKP** **14 25 03.2 +0.6**
FITZ Fitzroy Crossi 132.36 262 P **PKiKP** **14 25 03.6 +0.8**
FITZ Fitzroy Crossi 132.36 262 P **PKiKP** **14 25 02.8 0.0**
ASOR Ausora 132.54 357 ||*e*P **PKiKP** **14 25 02.9 -0.1**
KKM Kota Kinabalu 132.64 298 IAMs_20 IAMs_20 15 15 14.6
comp=Z,586nm,19.0s
BHGR Bahadurgarh 132.64 358 ||*e*P **PKiKP** **14 25 03.7 +0.5**
LDR Lodi Road 132.74 358 ||*e*P **PKPdf** **14 25 02.9 +0.6**
BISR Bishrakh 132.74 357 *e*P **PKPdf** **14 25 00.5 -1.8**
IMP Imphal 132.86 337 *e*P **PKiKP** **14 25 04.6 +0.8**
SLGI Shiliguri 132.89 344 ||*e*P **PKPdf** **14 25 02.9 +0.3**
SHL Shillong 132.92 339 ||*e*P **PKPdf** **14 25 02.8 -0.2**
UGON Onchagaon 132.98 357 *e*P **PKPdf** **14 25 00.5 -2.3**
SONA Sohna 133.07 358 *e*P **PKPdf** **14 25 02.1 -0.8**
BOSA Boshof 133.51 112 PKPdf **PKiKP** **14 25 04.7 -0.3**
BOSA Boshof 133.51 112 PKP **PKPdf** **14 25 03.1 -0.7**
comp=Z,13nm,0.9s,baz=300,slow=2.1,SNR=12
CRAI Chiangrai 133.96 326 PKPdf **PKiKP** **14 25 05.6 -0.5**
NONG Nongkai 134.16 322 P **PKiKP** **14 25 06.8 +0.3**
NONG Nongkai 134.16 322 P **PKiKP** **14 25 06.5 0.0**
MND Mandalay 134.49 332 PKPdf **PKPdf** **14 25 06.0 +0.3**
MND Mandalay 134.49 332 P **PKiKP** **14 25 06.7 -0.4**
MND Mandalay 134.49 332 P **PKPdf** **14 25 06.0 +0.3**
FURI Furi 134.55 56 IAMs_20 IAMs_20 15 26 06.9
comp=Z,825nm,20.0s
AGT Agartala 134.69 339 *e*P **PKPdf** **14 25 06.7 +0.7**
UBPT Khong Chiam 134.84 317 P **PKiKP** **14 25 08.4 +0.5**
AJM Ajmer 134.87 1 ||*e*P **PKPdf** **14 25 06.1 -0.3**
LODK Lodwar 134.89 65 IAMs_20 IAMs_20 15 32 02.9
comp=Z,866nm,18.0s
VAR Varanasi 135.40 350 *e*P **PKPdf** **14 25 05.3 -2.0**
ALBI Allahabad 135.58 352 *e*P **PKPdf** **14 25 06.9 -0.8**
CHTO Chiang Mai 135.88 327 PKPdf **PKPdf** **14 25 08.8 +0.5**
CHTO Chiang Mai 135.88 327 P **PKPdf** **14 25 09.3 +0.9**
CHTO Chiang Mai 135.88 327 P **PKPdf** **14 25 09.1 +0.7**
CHTO Chiang Mai 135.88 327 PKIKP **PKPdf** **14 25 08.9 +0.5**
ATD Arta Tunnel 135.99 49 IAMs_20 IAMs_20 15 27 34.1
comp=Z,863nm,20.0s
CMAR Chiang Mai Arr 136.18 327 PKPdf **PKPdf** **14 25 08.1 -0.9**
CMAR Chiang Mai Arr 136.18 327 PKP **PKPdf** **14 25 07.9 -1.1**
comp=Z,2.5nm,0.8s,baz=337,slow=2.3,SNR=8.7
BOK Bokaro 136.30 346 *e*P **PKPdf** **14 25 09.7 +0.6**
SBUM Sibu 137.91 296 IAMs_20 IAMs_20 15 13 43.6
comp=Z,746nm,20.0s
KIBK Kibwezi 140.02 70 IAMs_20 IAMs_20 15 26 33.4
comp=Z,964nm,19.0s
POO Poona 142.76 2 *e*P **PKPdf** **14 25 20.6 -0.4**
HYB Hyderabad 143.75 355 *e*PKPdf **PKPdf** **14 25 22.8 0.0**
HYB *e*PP **PP** **14 28 36.0 +2.5**
HYB *e*SKSdf **SKSdf** **14 32 33.0 +0.4**
HYB Hyderabad 143.75 355 *e*P PKPbc 14 25 21.2 +1.0
KAD Karad 143.98 2 *e*P **PKPdf** **14 25 22.9 -0.3**
KAD IAmb IAmb 14 25 27.0
comp=Z,31nm,0.9s
MYKOM Kota Tinggi 145.17 303 **PKPdf** **14 25 25.3 0.0**
KULM Kulim 145.30 311 **PKPdf** **14 25 25.6 +0.1**
PPBI Pangkal Pinang 145.49 295 PKP **PKiKP** **14 25 32.7 +2.9**
IPM Ipoh 145.59 310 **PKPdf** **14 25 26.2 +0.1**
IPM Ipoh 145.59 310 P **PKPab** **14 25 26.5 +0.1**
PMBI Palembang 147.05 295 IAMs_20 IAMs_20 15 12 44.7
comp=Z,925nm,22.0s
MDRS Chennai 147.84 351 *e*P **PKPdf** **14 25 30.7 +1.0**
PSI Prapat 148.26 310 P **PKPdf** **14 25 30.9 +0.3**
PSI Prapat 148.26 310 PKIKP **PKPdf** **14 25 29.5 -1.1**
PSI 14 25 34.2
RPSI Rantau Prapat 148.33 310 PKPdf **PKPdf** **14 25 29.5 -1.1**
RPSI PKPbc **PKPbc** **14 25 34.2 +0.2**
SALM Salem 149.49 354 IAmb IAmb 14 25 44.4
comp=Z,77nm,1.0s
GSI Gunungsitoli 150.26 310 PKPdf **PKPdf** **14 25 31.5 -2.2**
GSI **PKiKP** **14 25 39.4 -0.2**
GSI PKPab **PKPab** **14 25 45.9 +1.0**
KOD Kodaikanal 150.95 356 *e*P **PKPdf** **14 25 35.9 +0.8**
KOD IAmb IAmb 14 25 48.4
comp=Z,137nm,1.1s
TRD Trivandrum 152.69 356 *e*P **PKPdf** **14 25 39.0 +1.7**

IPEC ***09*** *14:11:29.6±0.3,51°54′N×16°26′E,h1km,ML2.6/4, Error ellipse: s-maj=3.0km s-min=1.7km az=69.0*
DNK ***09*** *14:11:30.6±1.1,51°42′N×16°29′E,h40km±47km,ML2.1*
PRU ***09*** *14:11:31.7,51°46′N×16°12′E,h0km*
VIE ***09*** *14:11:33.1±0.6,51°32′N×15°92′E,h0km,mb2.4/5,ml2.9/6, Error ellipse: s-maj=4.9km s-min=3.9km az=49.0, Suspected Mining induced.*

ISC 09 14:11:28.9±0.8,51°59′N±0′03×16°14′E±0′02,h0km,n38,
σ1s10/69,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
KSP	**Ksiaz**	**0.75**	**173**	*e*Pg	**Pg**	**14 11 43.4**	**+0.2**
KSP				*e*Sg	**Sg**	**14 11 52.3**	**-0.6**
CHVC	**Chvalec**	**1.00**	**183**	*e*PG	**Pg**	**14 11 48.2**	**+0.2**
CHVC				*e*SG	**Sg**	**14 12 00.4**	**-0.6**
OSTC	**Ostas**	**1.03**	**177**	*e*PG	**Pg**	**14 11 48.7**	**+0.1**
OSTC				*e*SG	**Sg**	**14 12 01.4**	**-0.6**
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**14 11 49.4**	**-0.2**
UPC				*e*SG	**Sg**	**14 12 02.8**	**-0.8**
DPC	**Dobruska-Polom**	**1.24**	**175**	*e*PG	**Pg**	**14 11 52.1**	**-0.6**
DPC				*e*SG	**Sg**	**14 12 07.6**	**-1.1**
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pn**	**14 11 56.4**	**0.0**
PVCC				*e*SG	**Sb**	**14 12 15.6**	**-0.2**
comp=Z,138nm,0.2s							
BRG	**Berggiesshubel**	**1.56**	**244**	Pg	**Pg**	**14 11 59.2**	**+0.5**
BRG				Sg	**Sg**	**14 12 19.5**	**+0.7**
BRG				Amp		14 12 20.7	
comp=Z,66nm,0.5s							
RICC	**Richard**	**1.66**	**232**	*e*SG	**Sg**	**14 12 22.5**	**+0.3**
PRA	**Prague**	**1.86**	**216**	*e*SG	**Sb**	**14 12 26.8**	**-0.8**
GOPC	**GO Pecny, Ondr**	**1.88**	**208**	*e*PG	**Pb**	**14 12 04.0**	**-0.1**
PRU	**Pruhonice**	**1.90**	**213**	*e*SG	**Sb**	**14 12 28.2**	**-0.3**
comp=Z,63nm,0.5s							
HSKC	**Hora Svate Kat**	**1.97**	**241**	*e*PG	**Pb**	**14 12 05.7**	**+0.1**
HSKC				*e*SG	**Sb**	**14 12 31.2**	**+0.5**
comp=Z,43nm,0.4s							
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pn**	**14 12 04.0**	**+0.3**
CLL				*e*Pg	**Pb**	**14 12 06.0**	**+0.1**
CLL				*i* x	x	14 12 09.9	
CLL				*i* Sg	**Sg**	**14 12 33.8**	**+1.2**
comp=Z,42nm,0.7s							
MORC	**Moravsky Berou** baz=336	**2.02**	**153**	*e*Pn	**Pn**	**14 12 03.7**	**-0.5**
MORC				*e*Sg	**Sn**	**14 12 30.6**	**+0.5**
comp=Z,45nm,0.4s,baz=336							
MORC	**Moravsky Berou**	**2.02**	**153**	*e*PN	**Pn**	**14 12 03.8**	**-0.5**
MORC				*e*SG	**Sn**	**14 12 30.7**	**+0.6**
OKC	**Ostrava-Krasne**	**2.16**	**143**	*e*PG	**Pb**	**14 12 08.8**	**-0.1**
VRAC	**Vranov** baz=355	**2.30**	**173**	*e*Pn	**Pn**	**14 12 08.0**	**0.0**
VRAC				*e*Sg	**Sb**	**14 12 39.8**	**-0.3**
comp=Z,27nm,0.3s,baz=355							
KRUC	**Moravsky** baz=358	**2.53**	**176**	*e*Pn	**Pn**	**14 12 11.1**	**-0.1**
KRUC				*e*Sg	**Sb**	**14 12 47.5**	**+0.7**
comp=Z,32nm,0.5s,baz=358							
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**14 12 21.4**	**+1.0**
OJC				*e*Sg	**Sg**	**14 12 55.6**	**+0.5**
NKC	**Novy Kostel**	**2.70**	**241**	*e*PN	**Pn**	**14 12 15.0**	**+1.4**
NKC				*e*PG	**Pg**	**14 12 20.5**	**-0.2**
NKC				*e*SG	**Sg**	**14 12 55.5**	**-0.2**
comp=Z,42nm,0.4s							
JAVC	**Velka Javorina** baz=342	**2.90**	**160**	*e*Pn	**Pn**	**14 12 15.9**	**-0.4**
JAVC	**Velka Javorina**	**2.90**	**160**	*e*PN	**Pn**	**14 12 16.0**	**-0.4**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**14 12 16.8**	**-0.3**
KHC				*e*PG	**Pb**	**14 12 23.2**	**+0.8**
KHC				*e*SN	**Sn**	**14 12 52.4**	**-0.9**
KHC				*e*SG	**Sb**	**14 13 00.8**	**+1.7**
comp=Z,21nm,0.6s							
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN	**Pn**	**14 12 18.5**	**+0.7**
CKRC				*e*PG	**Pb**	**14 12 24.3**	**+1.0**
CKRC				*e*SG	**Sb**	**14 13 02.0**	**+1.4**
comp=Z,23nm,0.6s							
LANS	**Liptovska Anna**	**3.24**	**138**	*e*PN	**Pn**	**14 12 21.7**	**+0.8**
LANS				*e*PG	**Pb**	**14 12 29.3**	**+2.1**
LANS				*e*SG	**Sg**	**14 13 11.2**	**-1.6**
MODS	**Modra-Piesok**	**3.30**	**167**	*e*SG	**Sg**	**14 13 13.5**	**-1.3**
NIE	**Niedzica**	**3.43**	**128**	*e*P	**Pg**	**14 12 34.4**	**-0.1**
NIE				*e*S	**Sg**	**14 13 18.2**	**-0.8**
ZST	**Bratislava**	**3.45**	**169**	*e*SG	**Sb**	**14 13 15.5**	**+2.3**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**14 12 26.9**	**+0.9**
BSD				*i* S	**Sn**	**14 13 07.1**	**-2.2**
BSD				IAML		14 13 25.4	
comp=Z,2.0nm,0.4s							
CONA	**Conrad Observa**	**3.67**	**183**	*i* Pn	**Pn**	**14 12 27.8**	**+0.9**
comp=Z,0.8nm,0.1s							

CONA				*e*Sg	**Sg**	**14 13 23.9**	**-2.7**
	comp=Z,13nm,0.4s						
MOA	**Molln**	**3.93 199**	*e*Pn		**Pn**	**14 12 30.9**	**+0.4**
	comp=Z,1.5nm,0.2s						
MOA				*e*Sg	**Sg**	**14 13 32.3**	**-2.9**
	comp=Z,14nm,0.5s						
ARSA	**Arzberg**	**4.36 186**		Sg	**Sg**	**14 13 48.7**	**-0.1**
	comp=Z,18nm,0.5s						
LUNU	**Lund**	**4.36 339**	*i*	P	**Pn**	**14 12 37.8**	**+1.4**
LUNU			*i*	S	**Sn**	**14 13 26.2**	**-1.6**
BLEU	**Blekinge**	**4.73 358**	*i*	P	**Pn**	**14 12 42.0**	**+0.5**
BLEU			*i*	S	**Sn**	**14 13 34.6**	**-2.3**
DEL	**Delary**	**5.08 346**	*i*	P	**Pn**	**14 12 46.0**	**-0.1**
DEL			*i*	S	**Sn**	**14 13 42.1**	**-3.3**
WTTA	**Wattenberg**	**5.23 216**	*i*	Pn	**Pn**	**14 12 49.4**	**+1.0**
	comp=Z,1.0nm,0.2s						
MOTA	**Moosalm**	**5.37 220**		Sg	**Sg**	**14 14 20.6**	**-0.6**
	comp=Z,2.8nm,0.3s						
SQTA	**Sankt Quirin**	**5.43 218**	*i*	Pn	**Pn**	**14 12 50.8**	**-0.3**
	comp=Z,1.9nm,0.2s						

NOU 09 14:18:47.0, 22°.19S × 169°.73E, h0 km, MLv3.5/5, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**2.15**	**258**	P	Pn	14 19 23.7	-0.5
YATNC	**Mamie plateau,**	**2.64**	**272**	P	Pn	14 19 29.8	-1.0
OUENC	**Ouen Island, N**	**2.68**	**265**	P	Pn	14 19 31.7	+0.2
ONTNC	**Ouen Toro**	**3.04**	**267**	P	Pn	14 19 37.0	+0.7
KOUNC	**Koumac, New Ca**	**5.33**	**287**	P	Pn	14 20 07.9	0.0

DJA 09 14:25:25.3 ± 0.7, 10°.5S × 3°.5 × 12°.5E ±°, h24 km ± 6 km, M3.9/8, mb4.2/4, MLv3.8/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.70**	**331**	P	Pb	14 25 37.5	-1.4
MMRI	**Maumere**	**2.91**	**306**	P	Pn	14 26 11.4	+1.3
MMRI				S	Sn	14 26 45.3	+1.0
EDFI	**Ende, Flores**	**3.30**	**299**	P	Pn	14 26 16.7	+1.1
EDFI				S	Sn	14 26 54.6	+0.4
PLAI	**Plampang**	**6.91**	**282**	P	Pn	14 27 06.3	+1.1
	22nm,0.8s,0.1nm						
PLAI				S	Sn	14 28 22.5	-0.6
	22nm,0.8s,0.1nm						
TWSI	**Taliwang, Sumb**	**7.79**	**281**	P	Pn	14 27 16.7	-0.6

TAP 09 14:25:36.3, 24°.15N × 121°.48E, h11 km ± 1 km, ML1.5, 2C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.06**	**359**	P	Pg	14 25 39.3	+0.6
	baz=359						
ETLH				S	Sg	14 25 40.9	+0.5
	baz=359						
NACB	**Ninganchiao**	**0.10**	**77**	P	Pb	14 25 40.0	-0.4
	baz=77						
NACB				S	Sg	14 25 42.0	+0.8
	baz=77						
TWD	**Chiawan**	**0.12**	**124** ⇑	*i* P	Pb	14 25 40.2	-0.5
	baz=121						
ETL	**Fush Village**	**0.13**	**86**	P	Pg	14 25 40.0	+0.5
	baz=86						
LXIB	**Xiulin Townshi**	**0.14**	**206** ⇑	*i* P	Pg	14 25 39.9	+0.1
	baz=206						
ETM	**Tongmen**	**0.18**	**177**	*e*P	Pb	14 25 41.2	-0.5
	baz=177						
WHF	**Hehuan Shan**	**0.20**	**269**	*i* P	Pb	14 25 41.6	-0.7
	baz=267						
WHF				*i* S	Sg	14 25 44.5	+0.5
	baz=267						
FUSS	**Fushou**	**0.24**	**294**	*e*P	Pb	14 25 42.9	0.0
	baz=293						
NNSB	**Datong**	**0.29**	**342**	*e*P	Pb	14 25 43.2	-0.4
	baz=341						
EAHA	**Aohua**	**0.29**	**53**	*e*P	Pb	14 25 43.1	-0.5
	baz=52						
CHGB	**Renai**	**0.30**	**252**	*e*P	Pb	14 25 43.1	-0.7
	baz=252						
OWD	**Renai**	**0.34**	**235**	*e*P	Pb	14 25 44.0	-0.5
	baz=235						

JMA 09 14:29:08.0 ± 0.4, 27°.N ± 2°.5 × 12°.6E ±°, h209 km, MV3.9/30, EAST CHINA SEA REGION, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.37**	**133**	*i* P	Pn	14 29 42.1	+0.7
JAGN	**Aguni-jima**	**1.57**	**115**	*i* P	Pn	14 29 43.7	+0.6
JAGN				S	S	14 30 09.5	-0.5
JIH	**Iheya**	**2.07**	**96**	*i* P	Pn	14 29 48.4	+0.5
JIH				S	S	14 30 17.1	-1.4
JJT3	**Tamagusuku3**	**2.21**	**120**	P	Pn	14 29 50.2	+0.9
JJT3				S	S	14 30 20.7	-0.4
JNTH	**Nagotoyohara**	**2.24**	**109**	*i* P	Pn	14 29 50.1	+0.5
JNTH				S	S	14 30 19.4	-2.2
JIKM	**Ikemajima**	**2.36**	**189**	P	Pn	14 29 51.2	+0.2
JIKM				S	S	14 30 23.6	-0.5
JOW	**Kunigami**	**2.37**	**100**	*i* P	Pn	14 29 51.2	+0.1
JOW				S	S	14 30 21.7	-2.5
JIRB	**Irabujima**	**2.46**	**190**	P	Pn	14 29 52.3	+0.2
JIRB				S	S	14 30 25.1	-1.0
JYRO	**Yoronjima**	**2.50**	**95**	*i* P	Pn	14 29 52.4	-0.1
JYRO				S	S	14 30 23.8	-2.9
JOGS	**Gusukube**	**2.50**	**185**	P	Pn	14 29 53.1	+0.6
JOGS				S	S	14 30 26.3	-0.5
JMJ2	**Miyako jima3**	**2.53**	**187**	P	Pn	14 29 53.4	+0.6
JMJ2				S	S	14 30 26.8	-0.6
JOKE	**Okinoerabujima**	**2.59**	**87**	*i* P	Pn	14 29 53.3	-0.2
JOKE				S	S	14 30 25.7	-2.8
JTJ	**Tarama**	**2.75**	**198**	P	Pn	14 29 55.8	+0.5
JTJ				S	S	14 30 29.9	-1.9
JISG	**Ishigakijimahi**	**2.93**	**205**	*i* P	Pn	14 29 57.4	+0.1
JISG				S	S	14 30 33.6	-1.8
JTK	**Tokunoshima**	**2.97**	**79**	P	Pn	14 29 57.2	-0.5
JTK				S	S	14 30 32.9	-3.3
JIJ	**Ishigaki jima**	**3.19**	**206**	P	Pn	14 29 59.9	-0.5
JIJ				S	S	14 30 37.9	-3.2
JAMN	**Amaminishikomi**	**3.27**	**72**	P	Pn	14 30 00.5	-0.7
JAMN				S	S	14 30 38.9	-3.5
JKRS	**Kuro-shima**	**3.36**	**207**	P	Pn	14 30 01.9	-0.5
JKRS				S	S	14 30 41.8	-2.8
IRIF	**Iriomote-Funau**	**3.40**	**211**	P	Pn	14 30 02.5	-0.3
IRIF				*e*S	S	14 30 43.6	-1.7
HATJ	**Hateruma jima**	**3.60**	**208**	S	S	14 30 48.1	-1.7
JAM	**Amami Oshima**	**3.68**	**71**	*e*P	Pn	14 30 06.0	-0.2
JZK	**Kikaishima**	**3.96**	**74**	S	S	14 30 55.2	-2.5
JMZ	**Minamidaito 2**	**5.19**	**105**	P	Pn	14 30 24.8	-0.3
JMZ				S	S	14 31 20.5	-5.1
JKDJ	**Kitadaitoujima**	**5.21**	**103**	P	Pn	14 30 25.6	+0.2
JKDJ				S	S	14 31 20.8	-5.4

*IDC **09** 14:31:14.0 ± 12.0, 15°.99S × 176°.03W, h302 km ± 116 km, mb3.5/7, mbtmp4.1/7, MS4.4/1, Error ellipse: s-maj=44.2km s-min=27.1km az=117.0*

ISC 09 14:31:13.8 ± 1.0, 16°.0S ± 0°.2 × 176°.1W ± 0°.2, h300 km, n9, σ 0§60/10, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.53**	**240**	P	**P**	**14 38 33.0**	**+0.3**
	2.0nm,0.8s,baz=84,slow=12,SNR=4.3						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**47.21**	**257**	P	**P**	**14 39 17.8**	**+0.3**
	2.3nm,0.6s,baz=92,slow=7.1,SNR=26						
WRA				PcP	**PcP**	**14 40 43.3**	**-0.5**
	0.6nm,0.7s,baz=92,slow=3.5,SNR=2.7						
	2.3nm,0.6s						
ASAR	**Alice Springs**	**47.49**	**252**	P	**P**	**14 39 19.9**	**+0.3**
	6.8nm,0.4s,baz=88,slow=7.7,SNR=321						
ASAR				PcP	**PcP**	**14 40 44.4**	**-0.3**
	0.4nm,0.5s,baz=97,slow=3.4,SNR=3.1						
	6.8nm,0.4s						
GUMO	**Guam**	**48.53**	**305**	LR	LR	14 56 44.5	
	comp=Z,465nm,21.9s,baz=62,slow=32						
PETK	**Petropavlovsk-**	**72.43**	**344**	P	**P**	**14 42 06.5**	**-1.0**
	4.8nm,1.0s,baz=168,slow=8.8,SNR=2.6						
	4.8nm,1.0s						
QSPA	**South Pole Qui**	**74.06**	**180**	P	**P**	**14 42 16.6**	**-0.5**
	1.7nm,0.8s,baz=65,slow=14,SNR=2.7						
	1.7nm,0.8s						
ILAR	**Eielson Array**	**83.53**	**12**	P	**P**	**14 43 08.4**	**+0.4**
	0.3nm,0.4s,baz=214,slow=5.3,SNR=11						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**84.42**	**43**	P	**P**	**14 43 13.8**	**+0.6**
	0.1nm,0.3s,baz=268,slow=4.5,SNR=1.5						
	0.1nm,0.3s						
BRTR	**Keskin Array B**	**144.94**	**318**	PKP	**PKPab**	**14 50 16.3**	**+0.3**
	0.5nm,0.4s,baz=90,slow=1.4,SNR=4.6						

*IDC **09** 14:38:38.5 ± 0.5, 34°.74N × 139°.16E, h142 km ± 4 km, mb3.8/22, mbtmp4.2/25, MS4.7/1, Error ellipse: s-maj=15.2km s-min=6.2km az=70.0*
*JMA **09** 14:38:38.3 ± 0.1, 34°.8N ± 0°.5 × 139°.3E ± 0°.6, h142 km ± 1 km, MV3.8/38, NEAR IZU-OSHIMA ISLAND*
JMA Felt I J1 at NEAR IZU-OSHIMA ISLAND .
*NEIC **09** 14:38:40.0 ± 2.5, 34°.74N ± 0°.06 × 139°.24E ± 0°.09, h156 km ± 7 km, mb4.2/49, Error ellipse: s-maj=10.7km s-min=9.3km az=76.0*

ISC 09 14:38:38.0 ± 0.6, 34°.80N ± 0°.04 × 139°.24E ± 0°.06, h140 km ± 5 km, n139, σ 1§38/144, mb4.2/54, 5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIM2	**Oshima 3**	**0.18**	**119**	⇓P	**Pn**	**14 38 57.6**	**+0.5**
JIM2				⇓*e*S	**Sn**	**14 39 12.3**	**+0.8**
KTJ3	**Kamata3**	**0.19**	**313**	⇓P	**Pn**	**14 38 57.8**	**+0.8**
KTJ3				⇓S	**Sn**	**14 39 12.6**	**+1.0**
JTHY	**Toshimahigashi**	**0.28**	**172**	P	**Pn**	**14 38 58.2**	**+0.9**
JTHY				S	**Sn**	**14 39 13.4**	**+1.4**
JIZS	**Izushimoda**	**0.31**	**254**	P	**Pn**	**14 38 58.3**	**+0.9**
JIZS				S	**Sn**	**14 39 13.1**	**+1.0**
JOD2	**Odawara 2**	**0.47**	**345**	P	**Pn**	**14 38 58.9**	**+0.7**
JOD2				S	**Sn**	**14 39 14.3**	**+0.8**
JMYK	**Miyake Tsubota**	**0.78**	**161**	P	**Pn**	**14 39 00.7**	**+0.6**
JSG	**Sagara**	**0.88**	**262**	Pn	**Pn**	**14 39 02.2**	**+1.5**
JSG	**Sagara**	**0.88**	**262**	P	**Pn**	**14 39 02.0**	**+1.2**
JYN	**Shimob**	**0.90**	**321**	P	**Pn**	**14 39 02.2**	**+1.2**
JYN				*e*S	**Sn**	**14 39 20.1**	**+1.5**
JRY	**Ryogami san**	**1.24**	**347**	P	**Pn**	**14 39 05.8**	**+1.6**
JRY				S	**Sn**	**14 39 25.9**	**+1.7**
BSO1	**Boso 1**	**1.44**	**96**	P	**Pn**	**14 39 06.0**	**+0.4**
TK02	**Tokai 2**	**1.50**	**236**	P	**Pn**	**14 39 07.9**	**+1.4**
JAG	**Ashikaga**	**1.63**	**6**	P	**Pn**	**14 39 08.9**	**+0.7**
JAG				*e*S	**Sn**	**14 39 31.6**	**+0.2**
JGF	**Kuroka**	**1.73**	**298**	Pn	**Pn**	**14 39 10.9**	**+1.4**
JGF	**Kuroka**	**1.73**	**298**	P	**Pn**	**14 39 10.9**	**+1.4**
JHJ	**Hachijo jima 2**	**1.74**	**165**	P	**Pn**	**14 39 10.3**	**+0.8**
	1µm,0.3s,baz=56,slow=19,SNR=276						
JHJ				S	**Sn**	**14 39 33.8**	**+0.1**
	386nm,0.2s,baz=343,slow=20,SNR=7.5						
JHJ2	**Mitsune**	**1.75**	**164**	Pn	**Pn**	**14 39 10.1**	**+0.4**
JHJ2	**Mitsune**	**1.75**	**164**	P	**Pn**	**14 39 10.5**	**+0.8**
JHJ2	**Mitsune**	**1.75**	**164**	⇓P	**Pn**	**14 39 10.3**	**+0.6**
INU	**Inuyama**	**1.90**	**287**	Pn	**Pn**	**14 39 12.5**	**+1.1**
INU	**Inuyama**	**1.90**	**287**	P	**Pn**	**14 39 12.6**	**+1.2**
MJAR	**Matsushiro Arr**	**1.93**	**334**	P	**Pn**	**14 39 12.5**	**+0.8**
	56nm,0.4s,baz=164,slow=11,SNR=367						
MJAR				S	**Sn**	**14 39 38.5**	**+1.0**
	47nm,0.5s,baz=112,slow=29,SNR=6.0						
MAJO	**Matsushiro**	**1.93**	**334**	Pn	**Pn**	**14 39 12.8**	**+1.1**
MAJO	**Matsushiro**	**1.93**	**334**	P	**Pn**	**14 39 13.0**	**+1.3**
MAT	**Matsushiro**	**1.93**	**334**	P	**Pn**	**14 39 12.8**	**+1.1**
MJB9	**Matsu-Tunnel**	**1.93**	**334**	Pn	**Pn**	**14 39 13.8**	**+2.0**
JIE	**Ise**	**2.13**	**260**	P	**Pn**	**14 39 14.9**	**+0.8**
JMM	**Marumori**	**3.30**	**22**	Pn	**Pn**	**14 39 29.2**	**+0.4**
JMM	**Marumori**	**3.30**	**22**	P	**Pn**	**14 39 29.3**	**+0.4**
JMN	**Monobe**	**4.57**	**258**	Pn	**Pn**	**14 39 46.3**	**+0.8**
JMN	**Monobe**	**4.57**	**258**	P	**Pn**	**14 39 47.0**	**+1.5**
JTM	**Tenmabayashi**	**6.14**	**13**	Pn	**Pn**	**14 40 06.4**	**0.0**
JNU	**Nakatsue**	**7.15**	**259**	Pn	**Pn**	**14 40 20.7**	**+0.6**
JNU	**Nakatsue**	**7.15**	**259**	P	**Pn**	**14 40 20.4**	**+0.4**
	6.7nm,0.6s,baz=19,slow=6.9,SNR=9.3						
ERM	**Erimo**	**7.83**	**22**		**Pn**	**14 40 27.6**	**-1.4**
JCJ	**Chichijima**	**8.09**	**161**	Pn	**Pn**	**14 40 28.1**	**-4.6**
JCJ	**Chichijima**	**8.09**	**161**	P	Pn	14 40 23.6	-9.0
	28nm,0.4s,baz=0.2,slow=21,SNR=15						
JCJ				S	Sn	14 41 47.5	-15
	38nm,0.4s,baz=284,slow=23,SNR=8.7						
KSRS	**Korea Array**	**9.53**	**289**	P	**Pn**	**14 40 52.4**	**+0.6**
	4.2nm,0.6s,baz=103,slow=14,SNR=17						
KSAR	**Wonju Array Be**	**9.56**	**289**	Pn	**Pn**	**14 40 54.3**	**+2.1**
KS19	**Wonju Array Si**	**9.58**	**290**	Pn	**Pn**	**14 40 54.0**	**+1.5**
ASAJ	**Asahikawa**	**9.65**	**15**	P	**Pn**	**14 40 50.6**	**-2.8**
	6.8nm,0.5s,baz=234,slow=11,SNR=28						
ASAJ				S	Sn	14 42 31.4	-8.8
	6.5nm,0.5s,baz=115,slow=27,SNR=4.1						
JKA	**Kamikawa-asahi**	**9.65**	**15**	Pn	**Pn**	**14 40 51.4**	**-2.1**
USRK	**Ussuriysk Ar.**	**10.92**	**331**	P	**Pn**	**14 41 10.0**	**-0.3**
	1.6nm,0.8s,baz=142,slow=9.0,SNR=1.9						
MDJ	**Mudanjiang**	**12.29**	**326**	P	**Pn**	**14 41 28.0**	**-0.2**
MDJ				sP	P	14 42 01.3	+27
MDJ				S	Sn	14 43 27.7	-16
MDJ				PcS	PcS	14 50 47.9	+16
KLR	**Kul'dur**	**15.44**	**341**	P	**Pn**	**14 42 06.2**	**-1.9**
	2.7nm,0.5s,baz=128,slow=9.9,SNR=16						
KLR				S	**Sn**	**14 44 52.9**	**-6.6**
	0.4nm,0.5s,baz=174,slow=22,SNR=1.6						
SSE	**Sheshan**	**15.60**	**261**	P	**Pn**	**14 42 08.7**	**-1.6**
SSE				S	**Sn**	**14 45 01.7**	**-1.9**
SSE				pmax	pmax		
	comp=Z,5.0nm,2.7s						
SSE				pmax	pmax		
	comp=Z,93nm,3.2s						
SSE				LR	LR		
	comp=N,190nm,9.9s						
SSE				LR	LR		
	comp=E,150nm,10.4s						
HEH	**HeiHe**	**17.69**	**334**	*e*P	**P**	**14 42 31.1**	**-3.3**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**22.63**	**294**	*e*P	**P**	**14 43 26.3**	**-0.9**
HHC				pP	pP	14 43 47.4	-6.2
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.6s						
SONM	**Songino Array**	**27.67**	**308**	P	**P**	**14 44 13.4**	**+0.6**
SONM	**Songino Array**	**27.67**	**308**	P	**P**	**14 44 13.2**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=113,slow=8.8,SNR=8.0						
	comp=Z,1.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.68**	**114**	T	T	15 14 09.5	
	baz=308,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hy**	**28.69**	**114**	T	T	15 14 11.9	
	baz=308,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**28.70**	**114**	T	T	15 14 11.6	
	baz=308,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.29**	**117**	T	T	15 14 58.5	
	baz=310,slow=76,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**29.29**	**117**	T	T	15 14 58.6	
	baz=310,slow=76,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**29.30**	**117**	T	T	15 14 59.7	
	baz=310,slow=76,SNR=3.7						
TIXI	**Tiksi**	**37.31**	**355**		**P**	**14 45 35.3**	**-0.8**
TIXI				IAmb	IAmb	14 45 37.1	
	comp=Z,2.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.24**	**256**	P	**P**	**14 45 51.9**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=55,slow=8.4,SNR=5.0						
	comp=Z,0.6nm,0.5s						
WMQ	**Urumqi**	**40.32**	**299**	*e*P	**P**	**14 46 03.1**	**+1.5**
WMQ				LR	LR		
	comp=N,2µm,9.3s						
WMQ				LR	LR		
	comp=E,3µm,13.9s						
WMQ				LR	LR		
	comp=Z,2µm,22.9s						
ZAA0	**Zalesovo Array**	**42.16**	**314**	P	**P**	**14 46 16.7**	**+0.3**
ZAA0				IAmb	IAmb	14 46 17.5	
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**42.16**	**314**	P	**P**	**14 46 16.6**	**+0.2**
ZALV	**Zalesovo Beam**	**42.16**	**314**	P	**P**	**14 46 17.1**	**+0.7**
	comp=Z,3.1nm,0.3s,baz=101,slow=6.6,SNR=18						
	comp=Z,3.1nm,0.3s						
MK31	**Makanchi Array**	**43.85**	**304**	P	**P**	**14 46 30.7**	**+0.6**
MKAR	**Makanchi Array**	**43.85**	**304**	P	**P**	**14 46 30.2**	**+0.1**
MKAR	**Makanchi Array**	**43.85**	**304**	P	**P**	**14 46 30.6**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=90,slow=9.9,SNR=37						
	comp=Z,2.7nm,0.6s						
MAKZ	**Makanchi**	**44.06**	**304**	P	**P**	**14 46 32.1**	**+0.3**
MAKZ				IAmb	IAmb	14 46 33.2	
	comp=Z,3.6nm,0.8s						
NRIK	**Noril'sk**	**44.58**	**337**	P	**P**	**14 46 36.5**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=102,slow=11,SNR=2.1						
	comp=Z,1.6nm,0.4s						
M14K	**Bethel**	**45.23**	**36**	P	**P**	**14 46 41.9**	**+1.1**
KURK	**Kurchatov**	**45.95**	**310**	P	**P**	**14 46 46.6**	**-0.1**
KURBB	**Kurchatov Arra**	**46.02**	**309**	P	**P**	**14 46 47.3**	**+0.1**
	comp=Z,6.6nm,0.6s,baz=85,slow=7.2,SNR=59						
	comp=Z,6.6nm,0.6s						
N15K	**Kwethluk River**	**46.08**	**37**	P	**P**	**14 46 49.3**	**+1.8**
K17K	**Iditarod**	**47.19**	**34**	P	**P**	**14 46 57.9**	**+1.8**
K17K				IAmb	IAmb	14 47 00.2	
	comp=Z,4.8nm,0.9s						
H18K	**Honhosa River**	**47.46**	**31**	P	**P**	**14 47 00.1**	**+1.8**
H18K				IAmb	IAmb	14 47 08.5	
	comp=Z,8.3nm,1.5s						
TARG	**Taragay, Kyrgy**	**47.83**	**298**	P	**P**	**14 47 02.7**	**+0.7**
TARG				IAmb	IAmb	14 47 03.8	
	comp=Z,3.9nm,0.7s						
D19K	**Kuna River**	**48.12**	**26**	P	**P**	**14 47 04.3**	**+1.0**
E19K	**Redstone River**	**48.27**	**28**	P	**P**	**14 47 04.9**	**+0.6**
J19K	**Poorman**	**48.51**	**32**	P	**P**	**14 47 07.5**	**+1.2**
J19K				IAmb	IAmb	14 47 20.1	
	comp=Z,5.2nm,1.3s						
K20K	**Telida**	**49.16**	**33**	P	**P**	**14 47 13.1**	**+1.8**
K20K				IAmb	IAmb	14 47 47.8	
	comp=Z,10.0nm,1.4s						
IMAR	**Indian Mountai**	**49.46**	**30**	P	**P**	**14 47 12.9**	**-0.6**
B21K	**Ikpikpuk River**	**49.55**	**25**	P	**P**	**14 47 15.8**	**+1.7**
B21K				IAmb	IAmb	14 47 16.9	
	comp=Z,7.4nm,1.5s						
KSH	**Kashi**	**49.73**	**295**	P	**P**	**14 47 20.0**	**+3.9**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KDAK	**Kodiak Island**	**49.93**	**41**	P	**P**	**14 47 17.8**	**+0.7**
AAK	**Ala-Archa**	**50.02**	**299**	P	**P**	**14 47 18.0**	**-0.3**
D22K	**Ayikyak River**	**50.14**	**26**	P	**P**	**14 47 20.1**	**+1.4**
E22K	**Anaktuvuk Pass**	**50.39**	**27**	P	**P**	**14 47 22.1**	**+1.6**
SUA	**Susitna One**	**50.69**	**36**	P	**P**	**14 47 23.6**	**+0.6**
SUA				IAmb	IAmb	14 47 49.5	
	comp=Z,7.4nm,1.4s						
BVAR	**Borovoye Array**	**50.79**	**313**	P	**P**	**14 47 23.9**	**+0.2**
	comp=Z,2.7nm,0.3s,baz=102,slow=9.5,SNR=45						
	comp=Z,2.7nm,0.3s						
BRVK	**Borovoye**	**50.85**	**313**	P	**P**	**14 47 24.0**	**-0.1**
BRVK				IAmb	IAmb	14 47 25.4	
	comp=Z,5.1nm,0.9s						
KNRA	**Kununurra**	**51.18**	**193**	P	**P**	**14 47 25.7**	**-1.2**
RND	**Reindeer**	**51.51**	**33**	P	**P**	**14 47 30.2**	**+1.3**
RND				IAmb	IAmb	14 47 59.5	
	comp=Z,7.8nm,1.4s						
GHO	**Glory Hole Cre**	**51.55**	**35**	P	**P**	**14 47 31.0**	**+1.7**
MDM	**Murphy Dome**	**51.73**	**31**	P	**P**	**14 47 32.8**	**+2.2**
MDM				IAmb	IAmb	14 47 33.6	
	comp=Z,3.7nm,0.8s						
H24K	**Noodor Dome**	**51.86**	**30**	P	**P**	**14 47 33.6**	**+2.0**
H24K				IAmb	IAmb	14 47 59.8	
	comp=Z,5.4nm,1.3s						
G24K	**Hadweenzic Riv**	**52.02**	**29**	P	**P**	**14 47 34.5**	**+1.8**
G24K				IAmb	IAmb	14 47 36.0	
	comp=Z,3.7nm,1.1s						
ILAR	**Eielson Array**	**52.31**	**31**	P	**P**	**14 47 35.9**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=279,slow=5.6,SNR=11						
	comp=Z,0.6nm,0.7s						
M24K	**Tolsona, Glenn**	**52.82**	**35**	P	**P**	**14 47 40.2**	**+1.5**
BMAR	**Burnt Mountain**	**53.13**	**28**	P	**P**	**14 47 43.5**	**+2.7**
SCRK	**Sand Creek**	**53.63**	**32**	P	**P**	**14 47 45.4**	**+0.8**
K27K	**Chicken**	**54.46**	**32**	P	**P**	**14 47 51.5**	**+1.0**
K27K				IAmb	IAmb	14 47 58.8	
	comp=Z,4.3nm,1.5s						
WB0	**Warramunga Arr**	**54.47**	**186**	P	**P**	**14 47 50.3**	**-0.7**
WB0				IAmb	IAmb	14 47 50.4	
	comp=Z,5.4nm,1.1s						
WRAB	**Tennant Creek**	**54.63**	**186**	P	**P**	**14 47 51.5**	**-0.7**
WRAB				IAmb	IAmb	14 47 52.6	
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	**54.64**	**186**	P	**P**	**14 47 51.7**	**-0.5**
WB2				IAmb	IAmb	14 47 58.9	
	comp=Z,8.9nm,1.4s						
WRA	**Warramunga Arr**	**54.64**	**186**	P	**P**	**14 47 51.4**	**-0.9**
WRA	**Warramunga Arr**	**54.64**	**186**	P	**P**	**14 47 51.6**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=0.0,slow=7.6,SNR=54						
WRA				LR	LR	15 11 06.0	
	comp=Z,739nm,20.2s,baz=94,slow=36						
	comp=Z,1.5nm,0.4s						
BCAR	**Beaver Creek A**	**54.72**	**33**	P	**P**	**14 47 54.0**	**+1.5**
SIMJ	**Simiganj**	**55.15**	**296**	P	**P**	**14 47 55.1**	**-1.0**
I28M	**Miner Creek**	**55.18**	**30**	P	**P**	**14 47 57.3**	**+1.5**
I28M				IAmb	IAmb	14 47 58.6	
	comp=Z,2.0nm,0.6s						
G30M	**tAoh Zraii Nji**	**56.41**	**28**	P	**P**	**14 48 05.6**	**+1.1**
G30M				IAmb	IAmb	14 48 07.2	
	comp=Z,

*IDC **09** 14:45:44.5±0.8,23˚.97N×121˚.84E,h0km,mb3.7/12, mbtmp3.7/14,ML3.5/1,Error ellipse: s-maj=24.1km s-min=16.5km az=68.0*

*TAP **09** 14:45:45.9,24˚.02N×121˚.80E,h7km,ML4.2,C*

*ASIES **09** 14:45:45.9,24˚.02N×121˚.80E,h7km,ML4.2,Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}0.81; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$0.17; $M_{r\theta}$0.45; $M_{\theta\phi}$-0.45; $M_{\phi r}$1.02; Fault plane solution: M_o1.50651×10^{22} NP1:ϕ_s39.32000°, δ71.64000°,λ61.61000°. NP2:ϕ_s279.09000°,δ33.39000°, λ145.09000°. Principal axes: T Plg54.4000°, Azm274.0370°; N Plg26.8270°, Azm48.9800°; P Plg21.5730°, Azm150.5150°;*

*JMA **09** 14:45:46.2±0.1,24˚.0N±0˚.5×121˚.8E±0˚.6,h0km,MD4.4/17, MV4.0/17,TAIWAN REGION*

*NIED **09** 14:45:46.2,23˚.99N×121˚.80E,h0km,MW4.5,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.09; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$-0.48; $M_{r\theta}$4.92; $M_{\theta\phi}$-0.63; $M_{\phi r}$2.16; Fault plane solution: M_o5.49000×10^{15} NP1:ϕ_s66.00000°, δ84.00000°,λ94.00000°. NP2:ϕ_s211.00000°,δ7.00000°, λ56.00000°.*

ISC 09 14:45:46.2±0.8,**23˚.98N**±0˚.01×**121˚.86E**±0˚.02,**h10**km±5km, **n194**,σ0**f74**/255,**mb3.7**/12,**36C-7D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
HWA	**Hwalien** baz=249	**0.24**	**270**	⇑*iP*		**Pb**	**14 45 51.7**	**-0.9**
HWA				*eS*		**Sb**	**14 45 56.5**	**+2.1**
TWD	**Chiawan** baz=289	**0.27**	**292**	⇓*iP*		**Pg**	**14 45 50.9**	**-0.8**
TWD				*i* S		**Sg**	**14 45 54.5**	**-0.8**
ETL	**Fush Village** baz=310	**0.28**	**309**	⇓*iP*		**Pg**	**14 45 51.2**	**-0.9**
ETL				S		**Sg**	**14 45 55.4**	**-0.5**
NACB	**Ninganchiao**	**0.31**	**308**	P		**Pg**	**14 45 51.8**	**-0.8**
NACB	**Ninganchiao** baz=309	**0.31**	**308**	⇓*iP*		**Pg**	**14 45 51.6**	**-0.9**
NACB				*i* S		**Sg**	**14 45 55.9**	**-0.9**
SHUL	**Shoufeng** baz=221	**0.34**	**236**	⇑*eP*		**Pb**	**14 45 54.2**	**-0.1**
SHUL				*eS*		**Sb**	**14 46 01.0**	**+1.3**
ETM	**Tongmen** baz=259	**0.34**	**268**	⇑*iP*		**Pg**	**14 45 52.9**	**-0.2**
ETM				S		**Sg**	**14 45 57.9**	**+0.3**
EHP	**Heping Village** baz=352	**0.35**	**341**	P		**Pg**	**14 45 52.9**	**-0.3**
EHP				*eS*		**Sg**	**14 45 57.4**	**-0.5**
EAHA	**Aohua** baz=352	**0.37**	**342**	P		**Pg**	**14 45 53.2**	**-0.4**
EAHA				*eS*		**Sg**	**14 45 58.7**	**+0.2**
TEGC	**Jichi Village** baz=203	**0.40**	**228**	*eP*		**Pb**	**14 45 56.2**	**+0.8**
TEGC				*eS*		**Sb**	**14 46 04.2**	**+2.7**
LXIB	**Xiulin Townshi** baz=270	**0.41**	**276**	⇑*iP*		**Pg**	**14 45 53.9**	**-0.6**
LXIB				*i* S		**Sg**	**14 46 00.0**	**0.0**
ETLH	**Xiulin Townshi** baz=303	**0.42**	**303**	P		**Pg**	**14 45 53.8**	**-0.7**
ETLH				S		**Sg**	**14 45 59.5**	**-0.5**
ESL	**Shilin** baz=236	**0.43**	**248**	⇑*iP*		**Pg**	**14 45 54.6**	**-0.1**
ESL				*eS*		**Sb**	**14 46 01.7**	**-0.6**
EOS4	**EOS4** baz=78	**0.44**	**71**	*eP*		**Pn**	**14 45 57.5**	**-0.7**
ENA	**Nanau** baz=355	**0.46**	**346**	P		**Pg**	**14 45 55.0**	**-0.3**
ENA				S		**Sg**	**14 46 01.9**	**+0.5**
EWUT	**Wuta**	**0.47**	**350**	*eP*		**Pg**	**14 45 55.4**	**-0.1**
WARBT	**Fenglin Townsh** baz=229	**0.51**	**239**	⇑P		**Pb**	**14 45 56.4**	**-0.9**
WARBT				*eS*		**Sg**	**14 46 03.4**	**+0.5**
EOS3	**EOS3** baz=59	**0.52**	**53**	*eP*		**Pn**	**14 45 59.4**	**-0.1**
EOS2	**EOS2** baz=52	**0.55**	**37**	*eP*		**Pn**	**14 46 00.1**	**+0.1**
WHF	**Hehuan Shan** baz=285	**0.57**	**287**	P		**Pg**	**14 45 56.8**	**-0.7**
WHF				S		**Sg**	**14 46 04.7**	**-0.4**
ESAO	**Su ao** baz=359	**0.59**	**358**	⇓*eP*		**Pb**	**14 45 58.0**	**-0.7**
ESAO				*eS*		**Sb**	**14 46 07.6**	**+0.4**
FUSS	**Fushou** baz=294	**0.63**	**295**	⇑*iP*		**Pg**	**14 45 57.9**	**-0.6**
FUSS				*eS*		**Sg**	**14 46 06.8**	**0.0**
NNSB	**Datong** baz=317	**0.63**	**316**	⇓*iP*		**Pg**	**14 45 57.8**	**-0.7**
NNSB				*eS*		**Sg**	**14 46 04.8**	**-1.9**
NNSH	**Datong** baz=317	**0.63**	**316**	*eP*		**Pg**	**14 45 57.9**	**-0.6**
TWC	**Suao** baz=359	**0.63**	**359**	P		**Pb**	**14 45 58.7**	**-0.6**
TWC				*eS*		**Sb**	**14 46 08.1**	**-0.1**
HGSD	**Ruisui** baz=210	**0.63**	**220**	⇓P		**Pn**	**14 45 60.0**	**-1.2**
HGSD				*eS*		**Sn**	**14 46 10.3**	**-0.9**
OWD	**Renai** baz=263	**0.63**	**268**	⇑P		**Pg**	**14 45 58.2**	**-0.3**
LATG	**Datong** baz=335	**0.63**	**331**	⇓*iP*		**Pg**	**14 45 58.0**	**-0.6**
LATG				S		**Sg**	**14 46 06.5**	**-0.5**
CHGB	**Renai** baz=274	**0.64**	**277**	⇑*iP*		**Pg**	**14 45 58.4**	**-0.2**
CHGB				*i* S		**Sg**	**14 46 06.8**	**-0.3**
NNS	**Nan Shan** baz=318	**0.64**	**316**	P		**Pg**	**14 45 58.2**	**-0.6**
NNS				*i* S		**Sg**	**14 46 06.9**	**-0.3**
NDS	**Dongshan** baz=355	**0.67**	**348**	P		**Pb**	**14 45 59.4**	**-0.6**
NDS				*i* S		**Sb**	**14 46 09.0**	**-0.3**
WUSB	**Renai** baz=267	**0.68**	**271**	⇑*iP*		**Pg**	**14 45 59.4**	**-0.1**
WUSB				S		**Sg**	**14 46 08.0**	**-0.5**
EHY	**Hungye** baz=217	**0.68**	**227**	⇑*eP*		**Pb**	**14 45 59.6**	**-0.7**
TWT	**Tachien** baz=291	**0.69**	**294**	*eP*		**Pg**	**14 45 59.4**	**-0.2**
TWT				*eS*		**Sg**	**14 46 08.7**	**+0.1**
NDT	**Datong Townshi** baz=337	**0.70**	**333**	P		**Pg**	**14 45 59.7**	**-0.1**
NDT				S		**Sg**	**14 46 09.3**	**+0.4**
VWDT	**VWDT** baz=245	**0.70**	**251**	⇑*iP*		**Pb**	**14 46 00.1**	**-0.3**
VWDT				*i* S		**Sb**	**14 46 10.0**	**-0.1**
TDCB	**Techi** baz=292	**0.70**	**293**	⇑*iP*		**Pg**	**14 45 59.4**	**-0.4**
TDCB				S		**Sg**	**14 46 09.1**	**+0.1**
ENTT	**Nioudou** baz=343	**0.71**	**338**	P		**Pg**	**14 45 59.8**	**-0.2**
ENTT				S		**Sb**	**14 46 10.2**	**-0.4**
ECBN	**Changbin** baz=201	**0.76**	**210**	*eP*		**Pn**	**14 46 02.2**	**-0.8**
TWE	**Neicheng** baz=353	**0.76**	**346**	⇑*iP*		**Pb**	**14 46 01.2**	**-0.4**
TWE				S		**Sg**	**14 46 11.3**	**+0.3**
YULB	**Yu-li** baz=353	**0.78**	**222**	P		**Pn**	**14 46 02.7**	**-0.6**
YULB	**Yu-li** baz=227	**0.78**	**222**	*eP*		**Pb**	**14 46 01.4**	**-0.6**
ILA	**Ilan** baz=349	**0.79**	**352**	⇑*eP*		**Pb**	**14 46 01.7**	**-0.4**
EYUL	**Yuli** baz=230	**0.80**	**219**	*eP*		**Pn**	**14 46 03.3**	**-0.3**
TWF1	**Yuli** baz=231	**0.81**	**220**	*eP*		**Pn**	**14 46 02.8**	**-0.9**
FUSB	**Fushanzhiwuyua** baz=336	**0.82**	**342**	⇑*iP*		**Pb**	**14 46 02.1**	**-0.4**
FUSB				*i* S		**Sb**	**14 46 13.2**	**-0.5**
YHNB	**Yeheng** baz=336	**0.82**	**327**	P		**Pb**	**14 46 02.1**	**-0.5**
YHNB	**Yeheng** baz=330	**0.82**	**327**	⇑*iP*		**Pg**	**14 46 01.6**	**-0.5**
YHNB				*i* S		**Sg**	**14 46 12.0**	**-0.8**
WPL	**Puli Township** baz=269	**0.83**	**272**	*eP*		**Pg**	**14 46 02.1**	**-0.2**
WPL				*eS*		**Sb**	**14 46 13.8**	**-0.2**
NSK	**Sanguang** baz=319	**0.83**	**326**	⇑*iP*		**Pg**	**14 46 02.0**	**-0.4**
NSK				S		**Sg**	**14 46 13.1**	**-0.2**
SSLB	**Suanglung**	**0.85**	**257**	P		**Pb**	**14 46 02.9**	**-0.3**
SSLB	**Suanglung** baz=266	**0.85**	**257**	⇑*iP*		**Pg**	**14 46 02.3**	**-0.4**
SSLB				*i* S		**Sg**	**14 46 13.6**	**-0.3**
DPDB	**Guoxing** baz=271	**0.86**	**274**	⇑P		**Pg**	**14 46 02.6**	**-0.3**
DPDB				*eS*		**Sg**	**14 46 13.7**	**-0.4**
NWLT	**Wulai** baz=341	**0.86**	**338**	⇑*iP*		**Pb**	**14 46 02.8**	**-0.5**
NWLT				*eS*		**Sb**	**14 46 14.7**	**-0.2**
WCS	**Beigang Elemen** baz=272	**0.88**	**275**	⇑P		**Pg**	**14 46 02.8**	**-0.3**
SMLT	**Sun Moon Lake** baz=259	**0.89**	**264**	⇑*iP*		**Pg**	**14 46 03.2**	**-0.2**
SMLT				S		**Sg**	**14 46 15.2**	**+0.2**
WHP	**Taichung City** baz=288	**0.89**	**290**	⇑*iP*		**Pg**	**14 46 03.3**	**-0.2**
WHP				S		**Sg**	**14 46 15.0**	**-0.1**
CHKH	**Chenggong** baz=200	**0.89**	**209**	*eP*		**Pn**	**14 46 04.2**	**-0.6**
TYC	**Yuchr** baz=262	**0.93**	**266**	⇑P		**Pg**	**14 46 03.6**	**-0.4**
TYC				*i* S		**Sg**	**14 46 15.9**	**-0.2**
FULB	**Fuli** baz=194	**0.94**	**214**	*eP*		**Pn**	**14 46 05.5**	**+0.1**
NFF	**Wufeng Townshi** baz=307	**0.94**	**314**	⇑P		**Pg**	**14 46 04.0**	**-0.4**
WHYT	**Xinyi Township** baz=248	**0.97**	**253**	*eP*		**Pb**	**14 46 04.8**	**-0.3**
CHKT	**Chengkung** baz=176	**0.99**	**208**	*eP*		**Pn**	**14 46 05.4**	**-0.7**
CHKT				*eS*		**Sn**	**14 46 21.1**	**+1.0**
TIPB	**Shuangxi** baz=354	**0.99**	**358**	⇑*iP*		**Pb**	**14 46 05.5**	**+0.1**
TIPB				*eS*		**Sb**	**14 46 19.1**	**+0.5**
LIOB	**Emei** baz=312	**1.02**	**311**	⇑*iP*		**Pb**	**14 46 05.8**	**-0.2**
LIOB				*eS*		**Sg**	**14 46 18.9**	**-0.3**
NSTT	**Nanjuang** baz=310	**1.02**	**310**	⇑P		**Pg**	**14 46 05.5**	**-0.4**
EHD	**Haiduan** baz=223	**1.02**	**216**	*eP*		**Pn**	**14 46 06.0**	**-0.7**
NHDH	**Xindian Distri** baz=347	**1.03**	**343**	*eP*		**Pb**	**14 46 06.1**	**0.0**
TWA	**Mucha** baz=340	**1.03**	**346**	P		**Pb**	**14 46 05.8**	**-0.3**
TWB1	**Santiao Chiao** baz=7.0	**1.03**	**6**	*eP*		**Pn**	**14 46 06.6**	**-0.1**
NJD	**Zhudong** baz=318	**1.03**	**317**	*eP*		**Pb**	**14 46 06.0**	**-0.2**
TATO	**Taipei**	**1.05**	**341**	P		**Pn**	**14 46 06.7**	**-0.3**
TATO	**Taipei** baz=346	**1.05**	**341**	⇑*iP*		**Pb**	**14 46 06.3**	**-0.2**
WJS	**Zhushan** baz=258	**1.05**	**262**	*eP*		**Pn**	**14 46 06.8**	**-0.2**
ECS	**Chishang** baz=223	**1.06**	**214**	*eP*		**Pn**	**14 46 07.7**	**+0.6**
TWQ1	**Liyutan** baz=302	**1.06**	**290**	P		**Pb**	**14 46 06.8**	**+0.1**
TWQ1				S		**Sn**	**14 46 21.8**	**-0.2**
WWF	**Wufeng** baz=271	**1.07**	**274**	P		**Pn**	**14 46 07.1**	**-0.1**
WWF				*eS*		**Sn**	**14 46 22.8**	**+0.7**
ALS	**Alishan** baz=238	**1.08**	**245**	*eP*		**Pn**	**14 46 07.2**	**-0.4**
WNT	**Mingjian** baz=261	**1.08**	**265**	P		**Pn**	**14 46 07.2**	**-0.3**
WNT				*eS*		**Sn**	**14 46 22.4**	**-0.1**
WNT1	**Nantou City** baz=263	**1.09**	**266**	*eP*		**Pn**	**14 46 07.9**	**+0.4**
NWF	**Wu-fen Shan** baz=353	**1.09**	**356**	*eP*		**Pn**	**14 46 07.4**	**-0.2**
NWF				*eS*		**Sn**	**14 46 23.1**	**+0.3**
WFSB	**Wu-fen Shan** baz=353	**1.09**	**356**	⇑P		**Pn**	**14 46 07.6**	**+0.1**
WFSB				S		**Sn**	**14 46 22.3**	**-0.4**
JYNG	**Yonagunijimaku**	**1.09**	**64**	P		**Pn**	**14 46 08.6**	**+1.0**
JYNG				S		**Sn**	**14 46 24.4**	**+1.7**
JYNG	**Yonagunijimaku** comp=E,9.0nm,2.2s,comp=N,13nm,3.1s	**1.09**	**64**	A		A	14 46 08.6	
TCU	**Taichung** baz=276	**1.10**	**279**	⇑P		**Pn**	**14 46 07.7**	**0.0**
ELDTW	**Lidau** baz=217	**1.10**	**225**	P		**Pb**	**14 46 07.2**	**-0.3**
TAP	**Taipei** baz=347	**1.10**	**343**	P		**Pn**	**14 46 07.8**	**+0.1**
TAP				*eS*		**Sb**	**14 46 21.9**	**0.0**
HSN1	**Hsinchu** baz=317	**1.11**	**316**	*eP*		**Pb**	**14 46 07.5**	**0.0**
SXI1	**Grass Mountain** baz=359	**1.11**	**1**	⇑P		**Pn**	**14 46 08.1**	**+0.2**
SXI1				*eS*		**Sb**	**14 46 22.4**	**+0.3**
EDH	**Donghe** baz=180	**1.13**	**207**	*eP*		**Pn**	**14 46 08.1**	**+0.1**
NMLH	**Miaoli** baz=299	**1.13**	**300**	*eP*		**Pn**	**14 46 08.3**	**+0.2**
NTY	**Taoyuan** baz=327	**1.14**	**333**	*eP*		**Pn**	**14 46 08.7**	**+0.5**
SBCB	**Hsinchu** baz=316	**1.14**	**315**	P		**Pb**	**14 46 07.9**	**-0.1**
NJN	**Zhunan** baz=308	**1.15**	**308**	*eP*		**Pb**	**14 46 08.0**	**-0.1**
CHN5	**Tsauling** baz=246	**1.15**	**251**	⇑P		**Pn**	**14 46 08.6**	**+0.1**
YOJ	**Yonaguni jima** baz=72	**1.15**	**65**	P		**Pn**	**14 46 11.3**	**+2.9**
YOJ	**Yonaguni jima**	**1.15**	**65**	*eP*		**Pn**	**14 46 09.6**	**+1.2**
YOJ				*eS*		**Sn**	**14 46 25.6**	**+1.4**
YOJ	**Yonaguni jima**	**1.15**	**65**	P		**Pn**	**14 46 09.6**	**+1.2**
YOJ				*eS*		**Sn**	**14 46 26.6**	**+2.4**
YOJ	**Yonaguni jima** comp=E,12nm,1.7s,comp=N,7.0nm,4.1s	**1.15**	**65**	A		A	14 46 09.6	
HSN	**Hsinchu** baz=319	**1.16**	**315**	P		**Pn**	**14 46 08.3**	**-0.1**
HSN				*eS*		**Sn**	**14 46 25.0**	**+0.7**
NCUH	**Zhongli** baz=330	**1.16**	**328**	*eP*		**Pn**	**14 46 08.6**	**0.0**
NCU	**National Centr** baz=329	**1.16**	**328**	P		**Pb**	**14 46 08.0**	**-0.4**
NCU				*eS*		**Sn**	**14 46 25.3**	**+0.8**
TNOU	**National Taiwa** baz=3.0	**1.17**	**356**	*eP*		**Pn**	**14 46 08.8**	**+0.2**
WYL	**Yuanlin Townsh** baz=249	**1.18**	**269**	*eP*		**Pn**	**14 46 09.3**	**+0.6**
WDJ	**Dajia District** baz=286	**1.18**	**288**	*eP*		**Pn**	**14 46 08.9**	**+0.2**
TWS1	**Kuangyinshan** baz=345	**1.19**	**340**	*eP*		**Pn**	**14 46 09.4**	**+0.5**
YM01	**YM01** baz=353	**1.19**	**347**	⇑P		**Pn**	**14 46 09.4**	**+0.4**
WCHH	**Zhanghua** baz=271	**1.20**	**275**	*eP*		**Pg**	**14 46 09.5**	**+0.2**
WGK	**Gukeng** baz=252	**1.23**	**257**	*eP*		**Pg**	**14 46 10.6**	**+0.8**
YM08	**YM08** baz=354	**1.23**	**348**	⇑P		**Pg**	**14 46 09.5**	**-0.4**
NTST	**Danshui** baz=348	**1.24**	**342**	*eP*		**Pn**	**14 46 09.3**	**-0.3**
ANP	**Anpu** baz=351	**1.24**	**345**	*eP*		**Pn**	**14 46 09.3**	**-0.4**
WDLH	**Douliu** baz=252	**1.25**	**257**	*eP*		**Pg**	**14 46 10.5**	**+0.2**
LONT	**Longtian** baz=217	**1.26**	**212**	*eP*		**Pn**	**14 46 09.3**	**-0.6**
NHW	**Xinwu Township** baz=326	**1.27**	**324**	*eP*		**Pn**	**14 46 09.8**	**-0.2**
WCKO	**Fanlu** baz=241	**1.27**	**245**	*eP*		**Pg**	**14 46 11.4**	**+0.7**
STYH	**Taoyuan** baz=210	**1.28**	**231**	*eP*		**Pg**	**14 46 10.7**	**-0.2**
STYH				*eS*		**Sn**	**14 46 28.2**	**+0.8**
STYT	**Tauyuan** baz=210	**1.30**	**232**	P		**Pg**	**14 46 10.6**	**-0.7**
STYT				S		**Sn**	**14 46 29.0**	**+1.1**
TWY	**Chenhua** baz=356	**1.31**	**349**	*eP*		**Pg**	**14 46 11.9**	**+0.4**
TPUB	**Ta-pu**	**1.32**	**239**	P		**Pg**	**14 46 12.0**	**+0.4**
TPUB	**Ta-pu** baz=234	**1.32**	**239**	P		**Pg**	**14 46 11.9**	**+0.3**
TPUB				S		**Sn**	**14 46 29.4**	**+1.1**
CHN4	**Tsaushan** baz=218	**1.32**	**242**	*eP*		**Pg**	**14 46 11.6**	**0.0**
CHN2	**Minshiung** baz=247	**1.35**	**251**	*eP*		**Pg**	**14 46 12.2**	**0.0**
LDUT	**Ludao** baz=173	**1.35**	**196**	*eP*		**Pn**	**14 46 09.9**	**-1.2**
WTP	**Ta-pu** baz=231	**1.36**	**238**	*eP*		**Pb**	**14 46 11.7**	**-0.1**
WTP				*eS*		**Sg**	**14 46 30.5**	**+0.5**
TWGBT	**Beinan**	**1.36**	**212**	P		**Pg**	**14 46 12.5**	**+0.1**
TWGBT	**Beinan** baz=186	**1.36**	**212**	*eP*		**Pn**	**14 46 10.8**	**-0.5**
TWG	**Pinlang** baz=186	**1.36**	**212**	*eP*		**Pn**	**14 46 11.0**	**-0.3**
WRL	**Guolierlin Hig** baz=263	**1.36**	**267**	*eP*		**Pb**	**14 46 11.8**	**0.0**
RLNB	**Erlin** baz=263	**1.38**	**267**	*eP*		**Pg**	**14 46 12.8**	**+0.1**
TWK	**Hsinying** baz=236	**1.45**	**241**	*eP*		**Pg**	**14 46 13.6**	**-0.4**
CHN1	**Nanshi** baz=233	**1.46**	**237**	*eP*		**Pg**	**14 46 14.1**	**-0.2**
CHN1				*eS*		**Sg**	**14 46 33.6**	**+0.4**
SNST	**Tainan City** baz=235	**1.46**	**239**	*eP*		**Pg**	**14 46 14.2**	**-0.2**
SGST	**Jiashian** baz=226	**1.48**	**233**	*eP*		**Pb**	**14 46 13.6**	**-0.2**
SGST				*eS*		**Sg**	**14 46 35.0**	**+1.2**
SLGT	**Liugui** baz=223	**1.49**	**229**	*eP*		**Pg**	**14 46 15.2**	**+0.4**
WSF	**Szhu** baz=253	**1.54**	**258**	*eP*		**Pg**	**14 46 15.2**	**-0.7**
WSL	**Shuilin Townsh** baz=249	**1.57**	**253**	*eP*		**Pb**	**14 46 14.8**	**-0.4**
ICHU	**Yijhu** baz=244	**1.58**	**247**	*eP*		**Pg**	**14 46 15.8**	**-0.8**
ECL	**Taimali** baz=188	**1.61**	**212**	*eP*		**Pb**	**14 46 15.1**	**-0.9**
CHN8	**Yiju** baz=244	**1.64**	**248**	*eP*		**Pb**	**14 46 16.5**	**0.0**
CHN3	**Shinhua** baz=234	**1.64**	**237**	*eP*		**Pg**	**14 46 17.1**	**-0.7**
PCYT	**Pengchaiyu** baz=18	**1.66**	**6**	*eP*		**Pg**	**14 46 17.2**	**-0.8**
SCST	**Cishan** baz=209	**1.66**	**229**	*eP*		**Pg**	**14 46 17.2**	**-1.0**
SSD	**Sandimen** baz=217	**1.67**	**223**	*eP*		**Pb**	**14 46 16.2**	**-0.9**
SHHT	**Tainan City** baz=232	**1.69**	**236**	*eP*		**Pb**	**14 46 17.2**	**-0.1**
TSMG	**Majia** baz=204	**1.69**	**222**	*eP*		**Pg**	**14 46 18.0**	**-0.7**
IRIF	**Iriomote-Funau**	**1.74**	**78**	*eP*		**Pg**	**14 46 18.9**	**-0.8**
IRIF				S		**Sg**	**14 46 42.1**	**-0.1**
IRIF	**Iriomote-Funau** comp=E,5.0nm,2.8s,comp=N,5.0nm,1.0s	**1.74**	**78**	A		A	14 46 18.9	
TWM1	**Shoushan** baz=225	**1.75**	**229**	*eP*		**Pb**	**14 46 18.3**	**-0.2**
MASBT	**Mashibuluo** baz=198	**1.77**	**220**	*eP*		**Pg**	**14 46 19.1**	**-1.2**
SGLT	**Jiouru** baz=219	**1.77**	**226**	*eP*		**Pb**	**14 46 18.9**	**+0.1**
HATJ	**Hateruma jima**	**1.78**	**87**	*eS*		**Sg**	**14 46 44.3**	**+0.9**
HATJ	**Hateruma jima** comp=E,12nm,2.1s,comp=N,9.0nm,3.0s	**1.78**	**87**	A		A	14 46 44.3	
EAST	**Anshuo** baz=191	**1.84**	**211**	*eP*		**Pb**	**14 46 19.3**	**-0.7**
TAWH	**Dawu Township** baz=200	**1.86**	**209**	*eP*		**Pb**	**14 46 20.4**	**+0.1**
SCZT	**Fangliau** baz=193	**1.97**	**216**	*eP*		**Pb**	**14 46 21.8**	**-0.3**
JKRS	**Kuro-shima**	**1.98**	**82**	P		**Pb**	**14 46 21.6**	**-0.7**
JKRS				S		**Sg**	**14 46 48.7**	**-1.1**
JKRS	**Kuro-shima** comp=E,9.0nm,4.1s,comp=N,12nm,2.6s	**1.98**	**82**	A		A	14 46 21.6	
LYUB	**Lan-yu** baz=180	**1.98**	**188**	*eP*		**Pn**	**14 46 18.0**	**-1.9**
SLIU	**Shizi** baz=191	**2.01**	**209**	*eP*		**Pb**	**14 46 22.5**	**-0.4**
JIJ	**Ishigaki jima**	**2.12**	**79**	P		**Pb**	**14 46 22.7**	**-2.0**
JIJ				*eS*		**Sb**	**14 46 49.9**	**-1.1**
PHUB	**P'eng-hu** baz=257	**2.15**	**258**	*eP*		**Pn**	**14 46 23.3**	**+1.2**
PNG	**Penghu** baz=258	**2.15**	**260**	*eP*		**Pn**	**14 46 23.4**	**+1.2**
JISG	**Ishigakijimahi**	**2.31**	**74**	P		**Pn**	**14 46 25.4**	**+1.0**
JISG				S		**Sb**	**14 46 55.1**	**-1.6**
VCHM	**Qimei** baz=251	**2.36**	**252**	*eP*		**Pn**	**14 46 24.9**	**-0.1**
VWUC	**VWUC** baz=290	**2.42**	**295**	*eP*		**Pn**	**14 46 25.8**	**-0.1**
JTJ	**Tarama**	**2.67**	**75**	S		**Sb**	**14 47 07.0**	**0.0**
PTMZ	**Houxiangcun** baz=288	**2.71**	**293**	*eP*		**Pn**	**14 46 29.7**	**-0.2**
MATB	**Ma-tsu** baz=315	**2.78**	**322**	*eP*		**Pn**	**14 46 31.3**	**+0.5**
KNM	**Kinmen** baz=272	**3.16**	**279**	*eP*		**Pn**	**14 46 38.4**	**+2.4**
LYJJ	**Jianjiangzhen** baz=317	**3.19**	**324**	*eP*		**Pn**	**14 46 37.0**	**+0.5**
KNMB	**Chin-men Tao** baz=274	**3.21**	**279**	*eP*		**Pn**	**14 46 36.7**	**0.0**
JMJ2	**Miyako jima3**	**3.25**	**76**	*eS*		**Sn**	**14 47 18.4**	**+2.5**
XPSS	**Dashiqiu** baz=327	**3.31**	**333**	*eP*		**Pn**	**14 46 38.9**	**+0.9**
JOGS	**Gusukube**	**3.32**	**76**	S		**Sn**	**14 47 20.4**	**+2.6**
MHZQ	**Yeshan** baz=303	**3.33**	**310**	*eP*		**Pn**	**14 46 39.8**	**+1.5**
AXDP	**Jialang** baz=278	**3.67**	**285**	*eP*		**Pn**	**14 46 43.3**	**+0.3**
ZPLA	**Ao Xicun** baz=264	**3.76**	**270**	*eP*		**Pn**	**14 46 44.4**	**+0.1**
DSXP	**Dongshan** baz=262	**4.07**	**267**	*eP*		**Pn**	**14 46 48.8**	**+0.2**
SXFK	**Yanhouchang** baz=294	**4.52**	**303**	*eP*		**Pn**	**14 46 54.9**	**+0.2**
JOW	**Kunigami** comp=N,2.5nm,0.3s,baz=192,slow=29,SNR=7.3 comp=N,6.7nm,0.2s	**6.46**	**63**	Pn		**Pn**	**14 47 21.1**	**-0.2**
KSRS	**Korea Array** comp=N,0.2nm,0.3s,baz=200,slow=12,SNR=1.5	**14.40**	**20**	Pn		**Pn**	**14 49 11.3**	**+1.2**
CMAR	**Chiang Mai Arr** comp=N,0.4nm,0.3s,baz=61,slow=9.4,SNR=1.4 comp=N,0.4nm,0.3s	**22.05**	**260**	P		**P**	**14 50 40.7**	**-0.6**

KLR	Kul'dur	26.38	15	P	P	14 51 23.2	+0.7	
	comp=N,0.5nm,0.3s,baz=199,slow=6.6,SNR=3.1							
	comp=N,0.5nm,0.3s							
SONM	Songino Array	26.80	337	P	P	14 51 26.4	-0.2	
	comp=N,3.1nm,1.2s,baz=167,slow=9.4,SNR=11							
	comp=N,3.1nm,1.2s							
MKAR	Makanchi Array	38.92	316	P	P	14 53 12.3	+0.2	
	comp=N,1.0nm,0.8s,baz=111,slow=9.2,SNR=9.5							
	comp=N,1.0nm,0.8s							
ZALV	Zalesovo Beam	40.76	327	P	P	14 53 26.0	-1.2	
	comp=N,2.6nm,0.9s,baz=117,slow=9.0,SNR=9.2							
	comp=N,2.6nm,0.9s							
KURBB	Kurchatov Arra	42.66	320	P	P	14 53 43.2	+0.2	
	comp=N,0.4nm,0.2s,baz=110,slow=7.3,SNR=6.6							
	comp=N,0.4nm,0.2s							
WRA	Warramunga Arr	45.32	163	P	P	14 54 03.3	-1.2	
	comp=N,0.9nm,0.9s,baz=344,slow=9.0,SNR=3.1							
	comp=N,0.9nm,0.9s							
BVAR	Borovoye Array	48.23	321	P	P	14 54 26.6	-0.4	
	comp=N,0.9nm,0.7s,baz=98,slow=9.1,SNR=6.2							
	comp=N,0.9nm,0.7s							
ASAR	Alice Springs	48.78	165	P	P	14 54 31.9	+0.4	
	comp=N,1.0nm,1.0s,baz=340,slow=6.6,SNR=7.3							
	comp=N,1.0nm,1.0s							
STKA	Stephens Creek	58.66	160	P	P	14 55 43.8	+0.1	
	comp=N,0.2nm,0.4s,baz=342,slow=9.6,SNR=2.1							
	comp=N,0.2nm,0.4s							
ILAR	Eielson Array	69.11	27	P	P	14 56 52.1	-0.1	
	comp=N,0.3nm,0.8s,baz=282,slow=6.3,SNR=2.2							
	comp=N,0.3nm,0.8s							
YKA	Yellowknife Ar	82.92	23	P	P	14 58 10.4	-0.5	
	comp=N,0.6nm,0.8s,baz=311,slow=4.8,SNR=12							
	comp=N,0.6nm,0.8s							

*TAP **09** 14:48:01.4, 24.02N×121.81E, h6km, ML3.5, C*
*JMA **09** 14:48:02.3±0.3, 24.0N±0.8×12.2E±°, h0km, TAIWAN REGION*

ISC 09 14:48:02.8±1.0,**24.02N**±0.02×**121.82E**±0.03,**h10**km±7km,
n129,σ0.6**88**/189,**19C-4D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.20**	**259**	*e*P	**Pg**	**14 48 07.1**	**+0.2**
	baz=248						
HWA				*e*S	**Sg**	**14 48 12.2**	**+2.4**
	baz=248						
TWD	**Chiawan**	**0.21**	**288**	*i* P	**Pg**	**14 48 06.6**	**-0.6**
	baz=288						
TWD				*i* S	**Sg**	**14 48 10.5**	**+0.3**
	baz=288						
ETL	**Fush Village**	**0.23**	**309**	*i* P	**Pg**	**14 48 06.8**	**-0.7**
	baz=310						
ETL				*i* S	**Sg**	**14 48 11.0**	**+0.3**
	baz=310						
NACB	**Ninganchiao**	**0.26**	**308**	⇓*i* P	**Pg**	**14 48 07.3**	**-0.7**
	baz=308						
NACB				*i* S	**Sg**	**14 48 11.5**	**-0.1**
	baz=308						
EHP	**Heping Village**	**0.30**	**346**	*e*P	**Pg**	**14 48 08.5**	**-0.4**
	baz=351						
EHP				*e*S	**Sb**	**14 48 14.7**	**-0.6**
	baz=351						
ETM	**Tongmen**	**0.30**	**261**	P	**Pg**	**14 48 08.4**	**-0.5**
	baz=259						
ETM				S	**Sb**	**14 48 13.6**	**-1.7**
	baz=259						
EAHA	**Aohua**	**0.32**	**347**	P	**Pg**	**14 48 08.8**	**-0.4**
	baz=350						
EAHA				S	**Sb**	**14 48 14.7**	**-1.2**
	baz=350						
SHUL	**Shoufeng**	**0.33**	**226**	*e*P	**Pb**	**14 48 10.1**	**-0.6**
	baz=221						
SHUL				*e*S	**Sb**	**14 48 16.8**	**+0.8**
	baz=221						
ETLH	**Xiulin Townshi**	**0.36**	**302**	⇑*e*P	**Pg**	**14 48 09.2**	**-0.8**
	baz=302						
ETLH				*e*S	**Sb**	**14 48 15.5**	**-1.7**
	baz=302						
LXIB	**Xiulin Townshi**	**0.37**	**271**	⇑*i*P	**Pg**	**14 48 09.6**	**-0.6**
	baz=269						
LXIB				S	**Sb**	**14 48 16.0**	**-1.5**
	baz=269						
TEGC	**Jichi Village**	**0.40**	**220**	*e*P	**Pb**	**14 48 11.3**	**-0.6**
	baz=214						
TEGC				*e*S	**Sb**	**14 48 19.3**	**+1.2**
	baz=214						
ESL	**Shilin**	**0.41**	**241**	P	**Pg**	**14 48 10.4**	**-0.3**
	baz=236						
ESL				S	**Sb**	**14 48 17.2**	**-1.1**
	baz=236						
ENA	**Nanau**	**0.42**	**350**	⇓P	**Pg**	**14 48 10.6**	**-0.3**
	baz=355						
ENA				*e*S	**Sb**	**14 48 17.2**	**-1.4**
	baz=355						
EWUT	**Wuta**	**0.43**	**355**	P	**Pb**	**14 48 11.1**	**-1.4**
	baz=359						
EWUT				*e*S	**Sb**	**14 48 18.3**	**-0.7**
	baz=359						
WARBT	**Fenglin Townsh**	**0.49**	**233**	P	**Pb**	**14 48 12.2**	**-1.4**
	baz=229						
WARBT				S	**Sb**	**14 48 20.2**	**-0.7**
	baz=229						
EGFH	**Guangfu**	**0.50**	**226**	*e*P	**Pb**	**14 48 12.6**	**-1.1**
	baz=220						
WHF	**Hehuan Shan**	**0.52**	**284**	⇑P	**Pg**	**14 48 12.4**	**-0.6**
	baz=284						
WHF				S	**Sb**	**14 48 20.9**	**-1.2**
	baz=284						
ESAO	**Su ao**	**0.56**	**2**	⇑*e*P	**Pb**	**14 48 13.7**	**-1.0**
	baz=359						
ESAO				*e*S	**Sb**	**14 48 22.7**	**0.0**
	baz=359						
NNSB	**Datong**	**0.57**	**316**	⇑P	**Pg**	**14 48 13.4**	**-0.5**
	baz=317						
NNSB				*e*S	**Sb**	**14 48 22.1**	**-1.1**
	baz=317						
NNSH	**Datong**	**0.57**	**316**	*e*P	**Pg**	**14 48 13.4**	**-0.5**
	baz=316						
NNSH				*e*S	**Sb**	**14 48 22.3**	**-1.0**
	baz=316						
FUSS	**Fushou**	**0.57**	**294**	*e*P	**Pg**	**14 48 13.5**	**-0.5**
	baz=294						
FUSS				*e*S	**Sb**	**14 48 22.6**	**-0.8**
	baz=294						
LATG	**Datong**	**0.58**	**333**	⇑P	**Pg**	**14 48 13.7**	**-0.4**
	baz=335						
LATG				S	**Sb**	**14 48 23.1**	**-0.5**
	baz=335						
NNS	**Nan Shan**	**0.59**	**316**	P	**Pg**	**14 48 13.7**	**-0.5**
	baz=317						
NNS				S	**Sb**	**14 48 22.9**	**-0.8**
	baz=317						
CHGB	**Renai**	**0.59**	**274**	⇑*i*P	**Pb**	**14 48 14.0**	**-1.4**
	baz=273						
CHGB				S	**Sb**	**14 48 22.9**	**-1.0**
	baz=273						
OWD	**Renai**	**0.59**	**264**	⇑P	**Pg**	**14 48 13.8**	**-0.5**
	baz=276						
OWD				S	**Sb**	**14 48 23.0**	**-0.8**
	baz=276						
TWC	**Suao**	**0.59**	**3**	P	**Pb**	**14 48 14.4**	**-0.9**
	baz=356						
TWC				S	**Sb**	**14 48 23.7**	**+0.1**
	baz=356						
NDS	**Dongshan**	**0.62**	**351**	⇓P	**Pb**	**14 48 14.9**	**-0.8**
	baz=354						
NDS				*e*S	**Sb**	**14 48 24.5**	**-0.1**
	baz=354						
HGSD	**Ruisui**	**0.63**	**215**	*e*P	**Pb**	**14 48 15.8**	**-0.2**
	baz=210						
HGSD				*e*S	**Sn**	**14 48 26.8**	**-1.2**
	baz=210						
TWT	**Tachien**	**0.63**	**292**	P	**Pb**	**14 48 15.0**	**-1.0**
	baz=291						
TWT				S	**Sb**	**14 48 24.8**	**-0.3**
	baz=291						
WUSB	**Renai**	**0.64**	**268**	⇑P	**Pb**	**14 48 15.0**	**-1.2**
	baz=277						
WUSB				S	**Sb**	**14 48 24.3**	**-0.9**
	baz=277						
NDT	**Datong Townshi**	**0.65**	**335**	⇑*i*P	**Pb**	**14 48 15.2**	**-1.0**
	baz=336						
NDT				S	**Sb**	**14 48 25.6**	**+0.2**
	baz=336						
TDCB	**Techi**	**0.65**	**292**	P	**Pb**	**14 48 15.2**	**-1.1**
	baz=291						
TDCB				S	**Sb**	**14 48 24.7**	**-0.8**
	baz=291						
ENTT	**Nioudou**	**0.66**	**340**	*e*P	**Pb**	**14 48 15.4**	**-1.0**
	baz=342						
ENTT				S	**Sb**	**14 48 25.9**	**+0.1**
	baz=342						
VWDT	**VWDT**	**0.67**	**247**	⇑P	**Pb**	**14 48 15.7**	**-0.9**
	baz=245						
VWDT				*e*S	**Sb**	**14 48 25.6**	**-0.4**
	baz=245						
EHY	**Hungye**	**0.68**	**222**	*e*P	**Pg**	**14 48 15.4**	**-0.5**
	baz=216						
TWE	**Neicheng**	**0.72**	**349**	⇑P	**Pb**	**14 48 16.7**	**-0.7**
	baz=353						
TWE				*e*S	**Sb**	**14 48 27.6**	**+0.3**
	baz=353						
YHNB	**Yeheng**	**0.77**	**328**	⇑*i*P	**Pb**	**14 48 17.4**	**-0.8**
	baz=330						
YHNB				S	**Sb**	**14 48 28.6**	**-0.2**
	baz=330						
FUSB	**Fushanzhiwuyua**	**0.77**	**344**	⇑*i*P	**Pb**	**14 48 17.8**	**-0.6**
	baz=336						
FUSB				S	**Sb**	**14 48 29.0**	**+0.1**
	baz=336						
ECBN	**Changbin**	**0.77**	**206**	*e*P	**Pg**	**14 48 17.2**	**-0.5**
	baz=200						
NSK	**Sanguang**	**0.78**	**328**	P	**Pb**	**14 48 17.6**	**-0.9**
	baz=329						
NSK				S	**Sb**	**14 48 29.4**	**+0.2**
	baz=329						
YULB	**Yu-li**	**0.78**	**218**	*e*P	**Pb**	**14 48 17.5**	**-1.0**
	baz=213						
YULB				*e*S	**Sb**	**14 48 28.9**	**-0.3**
	baz=213						
EYUL	**Yuli**	**0.81**	**215**	*e*P	**Pb**	**14 48 18.7**	**-0.2**
	baz=193						
NWLT	**Wulai**	**0.81**	**339**	⇑*e*P	**Pb**	**14 48 18.2**	**-0.8**
	baz=341						
NWLT				*e*S	**Sb**	**14 48 30.0**	**-0.1**
	baz=341						
TWF1	**Yuli**	**0.81**	**216**	⇑*e*P	**Pg**	**14 48 17.8**	**-0.7**
	baz=194						
DPDB	**Guoxing**	**0.82**	**271**	⇑*e*P	**Pb**	**14 48 18.3**	**-0.8**
	baz=270						
DPDB				S	**Sb**	**14 48 30.1**	**-0.1**
	baz=270						
SSLB	**Suanglung**	**0.82**	**254**	P	**Pb**	**14 48 18.3**	**-0.9**
	baz=266						
SSLB				S	**Sb**	**14 48 29.3**	**-1.1**
	baz=266						
WCS	**Beigang Elemen**	**0.83**	**273**	*e*P	**Pb**	**14 48 18.6**	**-0.7**
	baz=271						
WHP	**Taichung City**	**0.84**	**288**	⇑P	**Pb**	**14 48 18.8**	**-0.7**
	baz=288						
WHP				*e*S	**Sb**	**14 48 31.0**	**+0.1**
	baz=288						
SMLT	**Sun Moon Lake**	**0.85**	**261**	P	**Pb**	**14 48 19.0**	**-0.7**
	baz=271						
SMLT				*e*S	**Sb**	**14 48 31.1**	**-0.2**
	baz=271						
NFF	**Wufeng Townshi**	**0.89**	**314**	*e*P	**Pb**	**14 48 19.7**	**-0.6**
	baz=305						
TYC	**Yuchr**	**0.89**	**263**	*e*P	**Pb**	**14 48 19.4**	**-0.9**
	baz=261						
TYC				*e*S	**Sb**	**14 48 30.9**	**-1.3**
	baz=261						
CHKH	**Chenggong**	**0.91**	**205**	*e*P	**Pb**	**14 48 20.1**	**-0.5**
	baz=199						
WHYT	**Xinyi Township**	**0.94**	**250**	*e*P	**Pb**	**14 48 20.6**	**-0.6**
	baz=257						
WHYT				*e*S	**Sb**	**14 48 33.8**	**0.0**
	baz=257						
FULB	**Fuli**	**0.94**	**211**	*e*P	**Pb**	**14 48 21.1**	**-0.2**
	baz=191						
TIPB	**Shuangxi**	**0.95**	**0**	P	**Pb**	**14 48 21.2**	**-0.3**
	baz=7.0						
LIOB	**Emei**	**0.96**	**311**	⇓*e*P	**Pb**	**14 48 21.5**	**-0.1**
	baz=312						
NSTT	**Nanjuang**	**0.97**	**310**	P	**Pb**	**14 48 21.3**	**-0.3**
	baz=310						
NHDH	**Xindian Distri**	**0.98**	**344**	*e*P	**Pb**	**14 48 21.7**	**-0.2**
	baz=348						
TWA	**Mucha**	**0.98**	**347**	*e*P	**Pb**	**14 48 21.7**	**-0.2**
	baz=340						
TWB1	**Santiao Chiao**	**1.00**	**9**	*e*P	**Pb**	**14 48 22.0**	**-0.2**
	baz=6.0						
CHKT	**Chengkung**	**1.00**	**205**	*e*P	**Pb**	**14 48 21.5**	**-0.7**
	baz=198						
TATO	**Taipei**	**1.00**	**343**	⇑*e*P	**Pb**	**14 48 22.2**	**0.0**
	baz=346						
TWQ1	**Liyutan**	**1.01**	**289**	*e*P	**Pn**	**14 48 22.8**	**-0.3**
	baz=280						
WJS	**Zhushan**	**1.02**	**259**	*e*P	**Pn**	**14 48 22.5**	**-0.6**
	baz=265						
WJS				*e*S	**Sn**	**14 48 38.1**	**+0.7**
	baz=265						
WWF	**Wufeng**	**1.02**	**272**	*e*P	**Pn**	**14 48 23.2**	**-0.1**
	baz=270						
EHD	**Haiduan**	**1.03**	**213**	*e*P	**Pg**	**14 48 21.2**	**-1.4**
	baz=222						
WNT	**Mingjian**	**1.05**	**263**	*e*P	**Pb**	**14 48 22.7**	**-0.3**
	baz=260						
WNT				*e*S	**Sn**	**14 48 38.7**	**+0.5**
	baz=260						
NWF	**Wu-fen Shan**	**1.05**	**358**	*e*P	**Pn**	**14 48 23.4**	**-0.3**
	baz=353						
WFSB	**Wu-fen Shan**	**1.05**	**358**	*e*P	**Pn**	**14 48 23.2**	**-0.4**
	baz=4.0						
TCU	**Taichung**	**1.05**	**277**	*e*P	**Pb**	**14 48 22.7**	**-0.4**
	baz=269						
ALS	**Alishan**	**1.06**	**242**	*e*P	**Pb**	**14 48 22.9**	**-0.5**
	baz=238						
ALS				*e*S	**Sb**	**14 48 37.9**	**+0.6**
	baz=238						
ECS	**Chishang**	**1.07**	**211**	*e*P	**Pb**	**14 48 22.9**	**-0.5**
	baz=191						
NMLH	**Miaoli**	**1.07**	**299**	*e*P	**Pn**	**14 48 24.1**	**+0.2**
	baz=299						
SXI1	**Grass Mountain**	**1.07**	**3**	*e*P	**Pn**	**14 48 23.8**	**-0.2**
	baz=354						
SBCB	**Hsinchu**	**1.08**	**316**	*e*P	**Pn**	**14 48 24.3**	**+0.2**
	baz=317						
ELDTW	**Lidau**	**1.10**	**222**	*e*P	**Pg**	**14 48 22.2**	**-1.8**
	baz=215						
NCUH	**Zhongli**	**1.11**	**329**	*e*P	**Pb**	**14 48 23.7**	**-0.4**
	baz=332						
JYNG	**Yonagunijimaku**	**1.12**	**67**	S	**Sn**	**14 48 41.5**	**+1.6**
WDJ	**Dajia District**	**1.13**	**287**	*e*P	**Pn**	**14 48 24.4**	**-0.2**
	baz=286						
TNOU	**National Taiwa**	**1.13**	**358**	*e*P	**Pn**	**14 48 24.4**	**-0.3**
	baz=4.0						
EDH	**Donghe**	**1.14**	**205**	*e*P	**Pg**	**14 48 22.9**	**-1.8**
	baz=178						
TWS1	**Kuangyinshan**	**1.14**	**341**	*e*P	**Pn**	**14 48 25.1**	**+0.2**
	baz=346						
YM01	**YM01**	**1.15**	**349**	P	**Pn**	**14 48 25.1**	**+0.1**
	baz=354						
WCHH	**Zhanghua**	**1.15**	**273**	*e*P	**Pb**	**14 48 24.3**	**-0.5**
	baz=271						
YOJ	**Yonaguni jima**	**1.18**	**68**	*e*P	**Pg**	**14 48 24.7**	**-0.7**
	baz=72						
YM08	**YM08**	**1.19**	**350**	*e*P	**Pn**	**14 48 25.2**	**-0.3**
	baz=355						
ANP	**Anpu**	**1.20**	**347**	*e*P	**Pn**	**14 48 25.4**	**-0.3**
	baz=353						
WGK	**Gukeng**	**1.20**	**254**	*e*P	**Pn**	**14 48 26.1**	**+0.5**
	baz=250						
NHW	**Xinwu Township**	**1.21**	**325**	*e*P	**Pb**	**14 48 25.1**	**-0.7**
	baz=327						
WDLH	**Douliu**	**1.22**	**255**	*e*P	**Pn**	**14 48 25.9**	**+0.1**
	baz=250						
WCKO	**Fanlu**	**1.25**	**243**	*e*P	**Pn**	**14 48 26.6**	**+0.2**
	baz=239						
WCKO				*e*S	**Sn**	**14 48 45.8**	**+2.5**
	baz=239						
TWY	**Chenhua**	**1.27**	**351**	*e*P	**Pn**	**14 48 27.1**	**+0.5**
	baz=359						
LONT	**Longtian**	**1.27**	**210**	*e*P	**Pb**	**14 48 26.4**	**-0.4**
	baz=184						
STYH	**Taoyuan**	**1.27**	**229**	*e*P	**Pg**	**14 48 26.0**	**-1.2**
	baz=206						
STYT	**Tauyuan**	**1.29**	**229**	*e*P	**Pg**	**14 48 26.4**	**-1.2**
	baz=206						
TPUB	**Ta-pu**	**1.30**	**237**	P	**Pb**	**14 48 26.8**	**-0.6**
	baz=233						
TPUB				*e*S	**Sn**	**14 48 45.9**	**+1.3**
	baz=233						
CHN4	**Tsaushan**	**1.30**	**240**	*e*P	**Pn**	**14 48 27.6**	**+0.5**
	baz=235						
CHN4				*e*S	**Sn**	**14 48 47.0**	**+2.4**
	baz=235						
CHN2	**Minshiung**	**1.32**	**249**	*e*P	**Pb**	**14 48 28.5**	**+0.8**
	baz=244						
WRL	**Guolierlin Hig**	**1.32**	**265**	*e*P	**Pb**	**14 48 27.8**	**+0.1**
	baz=263						
RLNB	**Erlin**	**1.34**	**265**	*e*P	**Pn**	**14 48 27.2**	**-0.4**
	baz=262						
WTP	**Ta-pu**	**1.34**	**236**	*e*P	**Pb**	**14 48 27.9**	**-0.2**
	baz=231						
WTP				*e*S	**Sn**	**14 48 47.0**	**+1.4**
	baz=231						
WTK	**Tuku**	**1.35**	**256**	*e*P	**Pb**	**14 48 28.6**	**+0.4**
	baz=254						
WTK				*e*S	**Sn**	**14 48 48.5**	**+2.8**
	baz=254						
TWGBT	**Beinan**	**1.37**	**210**	*e*P	**Pn**	**14 48 26.0**	**-2.0**
	baz=185						
TWG	**Pinlang**	**1.37**	**210**	*e*P	**Pn**	**14 48 26.2**	**-1.8**
	baz=185						
TWK	**Hsinying**	**1.43**	**239**	*e*P	**Pg**	**14 48 29.5**	**-0.7**
	baz=233						
TWK				*e*S	**Sn**	**14 48 49.5**	**+1.8**
	baz=233						
CHN1	**Nanshi**	**1.44**	**235**	*e*P	**Pb**	**14 48 29.2**	**-0.6**
	baz=230						
CHN1				*e*S	**Sn**	**14 48 51.1**	**+3.0**
	baz=230						
SNST	**Tainan City**	**1.45**	**237**	*e*P	**Pg**	**14 48 29.5**	**-1.1**
	baz=218						
SGST	**Jiashian**	**1.47**	**231**	*e*P	**Pn**	**14 48 28.7**	**-0.6**
	baz=208						
SGST				*e*S	**Sn**	**14 48 50.6**	**+2.0**
	baz=208						
SLGT	**Liugui**	**1.48**	**227**	*e*P	**Pb**	**14 48 29.8**	**-0.6**
	baz=206						
SLGT				*e*S	**Sg**	**14 48 50.8**	**+0.4**
	baz=206						
WSF	**Szhu**	**1.51**	**256**	*e*P	**Pn**	**14 48 29.9**	**0.0**
	baz=253						
WSF				*e*S	**Sg**	**14 48 52.4**	**+1.0**
	baz=253						
WSL	**Shuilin Townsh**	**1.54**	**252**	*e*P	**Pb**	**14 48 30.6**	**-0.8**
	baz=249						
ICHU	**Yijhu**	**1.56**	**246**	*e*P	**Pb**	**14 48 30.9**	**-0.7**
	baz=240						
CHN8	**Yiju**	**1.62**	**246**	*e*P	**Pn**	**14 48 30.8**	**-0.5**
	baz=241						
ECL	**Taimali**	**1.62**	**210**	*e*P	**Pn**	**14 48 30.9**	**-0.5**
	baz=187						
SCST	**Cishan**	**1.66**	**228**	*e*P	**Pb**	**14 48 32.9**	**-0.5**
	baz=205						
SSD	**Sandimen**	**1.67**	**221**	*e*P	**Pn**	**14 48 31.5**	**-0.6**
	baz=212						
SSD				*e*S	**Sb**	**14 48 54.8**	**+0.1**
	baz=212						
SHHT	**Tainan City**	**1.67**	**234**	*e*P	**Pb**	**14 48 33.4**	**-0.3**
	baz=228						
TSMG	**Majia**	**1.69**	**220**	*e*P	**Pn**	**14 48 32.7**	**+0.3**
	baz=202						
MASBT	**Mashibuluo**	**1.77**	**218**	*e*P	**Pn**	**14 48 33.4**	**-0.1**
	baz=195						
TSCK	**Chigu Township**	**1.81**	**242**	*e*P	**Pn**	**14 48 34.3**	**+0.3**
	baz=238						
EAST	**Anshuo**	**1.85**	**209**	*e*P	**Pn**	**14 48 34.9**	**+0.2**
	baz=185						
TAWH	**Dawu Township**	**1.88**	**207**	*e*P	**Pn**	**14 48 35.2**	**+0.3**
	baz=198						
SCZT	**Fangliau**	**1.97**	**214**	*e*P	**Pn**	**14 48 36.4**	**+0.1**
	baz=190						
SLIU	**Shizi**	**2.02**	**208**	*e*P	**Pn**	**14 48 37.8**	**+0.8**
	baz=186						
PHUB	**P'eng-hu**	**2.12**	**257**	*e*P	**Pn**	**14 48 38.7**	**+0.5**
	baz=254						
PHUB				*e*S	**Sn**	**14 49 05.7**	**+1.0**
	baz=254						
PNG	**Penghu**	**2.12**	**258**	*e*P	**Pn**	**14 48 38.8**	**+0.5**
	baz=254						
VCHM	**Qimei**	**2.33**	**250**	*e*P	**Pn**	**14 48 41.3**	**+0.1**
	baz=246						
VWUC	**VWUC**	**2.37**	**295**	*e*P	**Pn**	**14 48 41.0**	**-0.7**
	baz=291						
MATB	**Ma-tsu**	**2.72**	**322**	*e*P	**Pn**	**14 48 46.5**	**0.0**
	baz=315						

*IDC **09** 14:55:12.0±0.9, 5.19S×145.37E, h0km, mb4.0/5, mbtmp4.1/8, ML3.7/2, MS4.3/1, Error ellipse: s-maj=43.1km s-min=21.3km az=97.0*

ISC 09 14:55:19.2±0.9,**5.35S**±0.09×**145.4E**±0.1,**h50**km,**n12**,
σ1.**58**/14,**mb4.2/5**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.39**	**157**	Pn	**Pn**	**14 56 22.7**	**-0.6**
	9.9nm,0.3s,baz=328,slow=9.5,SNR=13						
PMG				Sn	**Sn**	**14 57 13.2**	**0.0**
	7.5nm,0.3s,baz=324,slow=22,SNR=8.7						
CTA	**Charters Tower**	**14.68**	**177**	Pn	**Pn**	**14 58 43.8**	**-0.1**
	0.1nm,0.3s,baz=17,slow=14,SNR=0.8						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**18.07**	**216**	P	**P**	**14 59 27.6**	**+0.8**
	0.4nm,0.3s,baz=39,slow=12,SNR=16						
WRA				S	**Sn**	**15 02 44.5**	**-3.3**
	0.6nm,0.7s,baz=35,slow=27,SNR=2.8						
	5.0nm,0.8s						
ASAR	**Alice Springs**	**21.33**	**210**	P	**P**	**15 00 02.6**	**+0.5**
	0.9nm,0.7s,baz=46,slow=8.4,SNR=16						
ASAR				S	**S**	**15 03 59.9**	**+3.5**
	0.5nm,0.7s,baz=25,slow=27,SNR=4.5						
ASAR				LR	LR	15 09 29.9	
	comp=Z,909nm,22.0s,baz=98,slow=40						
	0.9nm,0.7s						
STKA	**Stephens Creek**	**26.64**	**187**	P	**P**	**15 00 53.1**	**-0.1**
	1.4nm,0.5s,baz=358,slow=8.8,SNR=7.0						
	1.4nm,0.5s						
QSPA	**South Pole Qui**	**84.62**	**180**	P	**P**	**15 07 47.5**	**+0.3**
	1.8nm,0.6s,baz=69,slow=4.6,SNR=16						
	1.8nm,0.6s						
BVAR	**Borovoye Array**	**85.32**	**324**	P	**P**	**15 07 50.8**	**0.0**
	2.0nm,0.7s,baz=114,slow=5.7,SNR=4.4						
	2.0nm,0.7s						
ILAR	**Eielson Array**	**85.51**	**23**	P	**P**	**15 07 51.2**	**-0.3**
	1.2nm,0.7s,baz=252,slow=5.1,SNR=22						
	1.2nm,0.7s						
CPUP	**Villa Florida**	**141.56**	**146**	PKP	**PKPdf**	**15 14 46.2**	**+0.6**
	0.7nm,0.5s,baz=235,slow=5.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	**143.40**	**285**	PKP	PKPbc	15 14 47.9	+1.4
	9.9nm,0.5s,baz=63,slow=4.5,SNR=2.0						
SIV	**San Ignacio**	**146.28**	**129**	PKPbc	**PKPbc**	**15 14 56.1**	**+0.7**
	3.6nm,0.8s,baz=232,slow=3.7,SNR=11						
DBIC	**Dimbokro**	**150.41**	**274**	PKPbc	**PKPbc**	**15 15 04.8**	**-1.4**
	7.6nm,0.9s,baz=68,slow=1.8,SNR=5.8						

*IDC **09** 14:58:05.3±0.5, 22.28N×100.93E, h0km, mb4.2/32, mbtmp4.2/33, ML4.3/1, MS4.4/25, Error ellipse: s-maj=14.2km s-min=11.4km az=78.0*
*NEIC **09** 14:58:05.9±2.2, 22.28N±0.06×100.95E±0.05, h10km±1km, mb4.6/53, Error ellipse: s-maj=10.4km s-min=8.2km az=339.0*
*BJI **09** 14:58:06.0±0.0, 22.32N×100.92E, h12km, mb4.3/53, mB4.9/22, ML5.0/7, Ms4.9/51, Ms7 4.8/57*

ISC 09 14:58:06.2±0.7,**22.26N**±0.03×**100.93E**±0.04,**h10**km±3km,
n160,σ2.**902**/179,**mb4.5**/64,**MS4.5**/31,**2C-2D**,
Myanmar-China border region

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

TNCH smax smax
comp=N,13µm,1.2s
TNCH smax smax
comp=E,14µm,1.4s
TNCH LR LR
comp=Z,9µm,5.3s
CHTO Chiang Mai 3.90 209 Pn **Pn 14 59 05.5 -0.7**
CM31 Chiang Mai Arr 4.22 207 **Pn 14 59 09.6 -1.0**
CMAR Chiang Mai Arr 4.22 207 Pn **Pn 14 59 10.0 -0.6**
CMAR Chiang Mai Arr 4.22 207 Pn **Pn 14 59 10.3 -0.3**
4.1nm,0.3s,baz=18,slow=13,SNR=40
CMAR Pg **Pg 14 59 24.3 -2.7**
66nm,0.3s,baz=14,slow=16,SNR=48
CMAR Lg Lg 15 00 19.0
59nm,0.3s,baz=16,slow=28,SNR=13
CMAR LR LR 15 01 12.6
comp=Z,2µm,19.0s,baz=25,slow=44
8.5nm,0.6s
PZH PanZhiHua 4.29 10 Pn **Pn 14 59 10.6 -1.1**
PZH Pg **Pg 14 59 25.5 -2.9**
PZH Sg **Sg 15 00 20.0 -4.0**
PZH smax smax
comp=N,820nm,1.1s
PZH smax smax
comp=E,1µm,1.1s
PZH LR LR
comp=E,10µm,5.5s
PZH LR LR
comp=Z,6µm,8.2s
MND Mandalay 4.47 268 Pn **Pn 14 59 13.0 -1.0**
GYA Guiyang 6.69 50 ⇓Pn **Pn 14 59 45.0 +0.3**
GYA Sn Sn 15 01 11.7 +11
GYA smax smax
comp=N,950nm,1.7s
GYA smax smax
comp=E,710nm,1.4s
GYA LR LR
comp=Z,10µm,7.6s
IMP Imphal 6.90 293 *eP* **Pn 14 59 49.3 +1.8**
IMP *ex* x 15 01 15.1
MOKO MOKOCHONG 7.11 306 *eP* **Pn 14 59 53.0 +2.5**
MOKO IAmb IAmb 15 00 04.4
comp=Z,55nm,0.9s
KOHI KOHIMA 7.12 300 *eP* **Pn 14 59 53.3 +2.6**
KOHI *ex* x 15 01 25.9
SAIH SAIHA 7.35 273 *eP* **Pn 14 59 55.2 +1.4**
SAIH IAmb IAmb 15 00 27.2
comp=Z,64nm,0.9s
ITAN ITANAGAR 8.16 308 *eP* **Pn 15 00 06.6 +1.8**
UBPT Khong Chiam 8.17 147 **Pn 15 00 06.0 +1.2**
TEZP TEZPUR 8.58 302 *eP* **Pn 15 00 11.0 +0.5**
TEZP IAmb IAmb 15 00 15.7
comp=Z,14nm,0.6s
SHL Shillong 8.91 293 *eP* **Pn 15 00 13.6 -1.6**
SHL IAmb IAmb 15 00 23.8
comp=Z,13nm,0.7s
QIZ Qiongzhong 8.94 109 P **Pn 15 00 14.8 -0.7**
QIZ S **Sn 15 01 53.1 -3.3**
QIZ pmax pmax
comp=Z,19nm,1.0s
QIZ pmax pmax
comp=Z,230nm,4.6s
QIZ LR LR
comp=Z,6µm,15.1s
QIZ LR LR
comp=Z,4µm,15.1s
QIZ LR LR
comp=Z,3µm,16.4s
QIZ Qiongzhong 8.94 109 **Pn 15 00 14.9 -0.6**
CD2 Chengdu 8.98 16 P **Pn 15 00 14.7 -1.3**
CD2 S **Sn 15 01 58.5 +1.2**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,8µm,5.8s
CD2 LR LR
comp=Z,5µm,6.3s
ENH Enshi 11.07 42 Pn **Pn 15 00 44.0 -0.7**
LSA Lhasa 11.50 312 Pn **Pn 15 00 52.3 +1.3**
SRIT Nakonsritamara 13.65 186 Pn **Pn 15 01 20.3 +0.4**
XAN Xi'an 13.68 29 P **Pn 15 01 17.1 -3.3**
XAN S **Sn 15 03 48.8 -3.7**
XAN LR LR
comp=Z,5µm,11.2s
LZH Lanzhou 14.01 10 *eP* **Pn 15 01 26.3 +1.3**
LZH pP P 15 01 29.6 -3.4
LZH SS **S 15 04 18.2 -4.2**
LZH pmax pmax
comp=Z,13nm,1.2s
LZH LR LR
comp=Z,3µm,15.3s
LZH LR LR
comp=Z,3µm,11.0s
WHN Wuhan 14.57 53 P **P 15 01 37.9 -1.2**
WHN S **Sn 15 04 20.2 +6.0**
WHN LR LR
comp=Z,8µm,7.3s
WHN LR LR
comp=Z,8µm,7.3s
GOMU GeErMu 14.87 340 P **Pn 15 01 35.2 -1.8**
GOMU S **Sn 15 04 21.2 -0.8**
GOMU pmax pmax
comp=Z,3.0nm,0.7s
GOMU LR LR
comp=Z,5µm,10.6s
GOMU LR LR
comp=Z,2µm,10.6s
LYN LuoYang 15.89 37 ⇑P **Pn 15 01 47.3 -2.7**
LYN PP **PnPn 15 01 59.1 +0.5**
LYN S **Sn 15 04 43.2 -3.0**
LYN pmax pmax
comp=Z,19nm,0.7s
LYN LR LR
comp=Z,11µm,9.3s
KULM Kulim 16.87 181 Pn **Pn 15 01 59.2 -3.4**
GTA Gaotai 17.12 357 *eP* **Pn 15 02 05.7 -0.1**
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA LR LR
comp=Z,1µm,11.3s
GTA LR LR
comp=Z,5µm,12.4s
GTA LR LR
comp=Z,460nm,12.7s
TIY Taiyuan 18.32 30 *eP* **Pn 15 02 20.3 -0.2**
TIY S **Sn 15 05 42.7 -2.5**
TIY pmax pmax
comp=Z,19nm,0.6s
TIY pmax pmax
comp=Z,130nm,4.5s
TIY LR LR
comp=Z,7µm,11.4s
TIY LR LR
comp=Z,3µm,9.5s
MLSI Meulaboh, Aceh 18.42 194 P **Pn 15 02 27.2 +5.4**
comp=Z,28nm,0.9s
NJ2 Nanjing 18.67 55 *eP* **P 15 02 22.3 -2.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 pmax pmax
comp=Z,140nm,3.5s
NJ2 LR LR
comp=Z,6µm,11.4s
NJ2 LR LR
comp=Z,3µm,10.4s
KCSI Kotacane, Aceh 18.88 190 P **Pn 15 02 30.9 +3.5**
comp=Z,57nm,1.5s,comp=Z,1µm
HNS HongShan 19.21 35 ⇑P **Pn 15 02 31.2 -0.1**
HNS S **S 15 06 10.8 +2.7**
HNS pmax pmax
comp=Z,18nm,1.4s
HNS LR LR
comp=Z,8µm,13.5s
HNS LR LR
comp=Z,3µm,10.8s
TIA Tai'an 19.78 42 P **Pn 15 02 37.9 -0.3**
TIA pmax pmax
comp=Z,6.0nm,0.9s
TIA pmax pmax
comp=Z,170nm,11.4s
TIA LR LR
comp=Z,2µm,14.3s
TIA LR LR
comp=Z,2µm,9.3s
BTO Baotou 19.84 21 *eP* **P 15 02 37.2 -0.2**
BTO pP **pP 15 02 41.2 +0.7**
BTO sP **sP 15 02 43.9 +2.0**
BTO PP **PnPn 15 02 55.9 +3.0**
BTO S **Sn 15 06 23.6 +1.6**
BTO sS **sS 15 06 25.8 -0.1**
BTO SS **SnSn 15 06 43.8 +7.2**
BTO pmax pmax
comp=Z,150nm,1.0s
BTO pmax pmax
comp=Z,1µm,8.2s
BTO LR LR
comp=Z,4µm,15.6s
BTO LR LR
comp=Z,6µm,12.0s
LGTI Lohaghat 19.93 295 *eP* **Pn 15 02 40.0 +0.1**
LGTI IAmb IAmb 15 02 45.6
comp=Z,23nm,1.2s
SSE Sheshan 20.10 60 P **P 15 02 38.8 -1.3**
SSE S **S 15 06 26.0 0.0**
SSE pmax pmax
comp=Z,4.0nm,1.0s
SSE pmax pmax
comp=Z,110nm,3.0s
SSE LR LR
comp=Z,2µm,10.8s
MYKOM Kota Tinggi 20.55 172 P **P 15 02 42.6 -2.5**
HHC Hu-ho-hao-te 20.60 23 *eP* **P 15 02 44.6 -1.0**
HHC sP sP 15 02 51.4 +1.3
HHC PP **PnPn 15 03 04.6 +1.3**
HHC *eS* **S 15 06 30.7 -5.3**
HHC SS **SnSn 15 07 02.6 +7.5**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,130nm,4.9s
HHC LR LR
comp=Z,2µm,13.2s
HHC LR LR
comp=Z,1µm,15.2s
HHC LR LR
comp=Z,2µm,10.4s
TGY Tagaytay City 20.65 110 LR LR 15 10 33.3
comp=Z,484nm,21.3s,baz=356,slow=36
GSI Gunungsitoli 21.09 189 P **P 15 02 49.1 -1.7**
GSI IAmb IAmb 15 02 59.5
comp=Z,27nm,1.1s
BJI Beijing 21.95 33 P **P 15 02 59.4 -0.6**
BJI S **S 15 07 05.7 +3.3**
BJI pmax pmax
comp=Z,10.0nm,1.4s
BJI LR LR
comp=Z,2µm,14.2s
BJI LR LR
comp=Z,2µm,15.4s
BJI LR LR
comp=Z,970nm,15.7s
SBUM Sibu 22.54 149 P **P 15 03 04.8 -1.8**
KUDL Kundal 22.86 290 *eP* **P 15 03 08.9 -1.0**
SMLA Simla 22.96 298 *eP* **P 15 03 10.8 0.0**
SMLA IAmb IAmb 15 03 13.9
comp=Z,12nm,0.7s
SISI Saibi 23.51 185 P **P 15 03 19.9 +3.4**
comp=Z,50nm,1.4s
DHRM DHARAMSHALA 24.00 300 *eP* **P 15 03 20.6 -0.9**
DHRM IAmb IAmb 15 03 32.9
comp=Z,64nm,1.1s
WMQ Urumqi 24.14 336 *eP* **P 15 03 23.4 +1.0**
WMQ sP sP 15 03 30.2 +3.1
WMQ PcP **PcP 15 07 06.6 +3.2**
WMQ pmax pmax
comp=Z,5.0nm,1.3s
WMQ LR LR
comp=Z,2µm,11.3s
WMQ LR LR
comp=Z,2µm,19.5s
DL2 Dalian 24.26 42 P **P 15 03 20.1 -3.4**
DL2 S **S 15 07 36.2 -5.9**
DL2 pmax pmax
comp=Z,34nm,2.0s
DL2 pmax pmax
comp=Z,490nm,10.4s
DL2 LR LR
comp=Z,3µm,13.5s
DL2 LR LR
comp=Z,1µm,11.4s
STKI Sintang 24.34 154 P **P 15 03 28.0 +3.6**
PALK Pallekele 24.54 236 P **P 15 03 27.5 +1.2**
comp=Z,5.3nm,0.8s,baz=142,slow=12,SNR=3.0
comp=Z,5.3nm,0.8s
XLT XiLinHaoTe 24.96 27 *eP* **P 15 03 30.5 +0.6**
XLT pP sP 15 03 34.8 +0.2
XLT PcP **PcP 15 07 03.8 -1.4**
XLT pmax pmax
comp=Z,11nm,1.0s
XLT LR LR
comp=Z,3µm,14.0s
XLT LR LR
comp=Z,2µm,11.1s
JOW Kunigami 25.26 74 LR LR 15 13 38.7
comp=Z,720nm,18.8s,baz=41,slow=37
SONM Songino Array 25.89 8 P **P 15 03 35.9 -2.5**
SONM Songino Array 25.89 8 P **P 15 03 38.4 0.0**
comp=Z,5.4nm,0.9s,baz=196,slow=7.6,SNR=21
comp=Z,5.4nm,0.9s
ULN Ulaanbaatar 26.02 9 P **P 15 03 38.1 -1.5**
INCN Inchon 26.84 50 P **P 15 03 43.0 -4.0**
INCN IAmb IAmb 15 04 21.1
comp=Z,20nm,1.1s
NIL Nilore 26.87 301 P **P 15 03 44.2 -3.0**
NIL IAmb IAmb 15 04 02.9
comp=Z,18nm,0.8s
KSH Kashi 27.33 315 P **P 15 03 54.2 +2.7**
KSH pmax pmax
comp=Z,5.0nm,1.8s
KSH LR LR
comp=Z,6µm,16.8s
KSH LR LR
comp=Z,2µm,19.2s
KSH LR LR
comp=Z,8µm,20.3s
TARG Taragay, Kyrgy 27.45 320 P **P 15 03 50.7 -2.2**
KSRS Korea Array 27.75 51 P **P 15 03 55.8 +0.7**
comp=Z,0.6nm,0.8s,baz=242,slow=8.7,SNR=2.4
KSRS LR LR 15 16 03.3
comp=Z,907nm,19.1s,baz=280,slow=39
comp=Z,0.6nm,0.8s
DAV Davao City (W) 28.15 119 LR LR 15 14 52.1
comp=Z,565nm,21.9s,baz=274,slow=36
MK31 Makanchi Array 28.75 333 P **P 15 04 03.6 -0.4**
MK31 IAmb IAmb 15 04 13.4
comp=Z,7.7nm,0.8s
MKAR Makanchi Array 28.75 333 P **P 15 04 04.0 +0.1**
MKAR Makanchi Array 28.75 333 P **P 15 04 04.1 +0.1**
comp=Z,7.3nm,0.6s,baz=143,slow=9.4,SNR=54
MKAR PcP **PcP 15 07 13.6 -0.4**
comp=Z,1.2nm,0.8s,baz=144,slow=1.2,SNR=4.1
comp=Z,7.3nm,0.6s
MAKZ Makanchi 28.89 332 P **P 15 04 04.1 -1.1**
AAK Ala-Archa 29.97 319 P **P 15 04 14.9 -0.1**
comp=Z,1.7nm,0.9s,baz=131,slow=8.8,SNR=2.5
comp=Z,1.7nm,0.9s
KBL Kabul 30.47 301 P **P 15 04 16.7 -2.9**
SIMJ Simiganj 31.80 308 P **P 15 04 30.9 -0.3**
KURBB Kurchatov Arra 33.29 334 P **P 15 04 44.1 +0.3**
comp=Z,3.1nm,0.8s,baz=140,slow=9.6,SNR=14
KURBB PcP **PcP 15 07 27.0 +1.0**
comp=Z,0.5nm,0.7s,baz=137,slow=3.1,SNR=2.4
comp=Z,3.1nm,0.8s
KURK Kurchatov 33.33 334 P **P 15 04 42.6 -1.6**
KURK IAmb IAmb 15 04 49.8
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 33.65 42 P **P 15 04 48.0 +0.9**
comp=Z,0.5nm,0.6s,baz=223,slow=7.5,SNR=1.3
comp=Z,0.5nm,0.6s
ZAA0 Zalesovo Array 33.91 343 P **P 15 04 46.4 -2.9**
ZAA0 IAmb IAmb 15 04 58.8
comp=Z,6.0nm,0.9s
ZALV Zalesovo Beam 33.91 343 P **P 15 04 49.3 0.0**
ZALV Zalesovo Beam 33.91 343 P **P 15 04 50.9 +1.7**
comp=Z,1.0nm,0.7s,baz=134,slow=11,SNR=4.8
comp=Z,1.0nm,0.7s
HEH HeiHe 34.81 30 *eP* **P 15 04 54.7 -2.4**
MJAR Matsushiro Arr 35.23 58 P **P 15 05 02.9 +2.0**
comp=Z,1.4nm,0.9s,baz=271,slow=8.1,SNR=4.0
MJAR LR LR 15 19 10.6
comp=Z,612nm,19.4s,baz=25,slow=36
comp=Z,1.4nm,0.9s
JHJ Hachijo jima 2 35.88 64 LR LR 15 20 07.9
comp=Z,664nm,19.6s,baz=334,slow=37
JCJ Chichijima 37.67 74 LR LR 15 22 28.3
comp=Z,367nm,19.0s,baz=12,slow=39
BVAR Borovoye Array 38.55 330 P **P 15 05 28.6 -0.3**
comp=Z,5.7nm,0.6s,baz=133,slow=9.5,SNR=26
BVAR PcP **PcP 15 07 43.2 +1.7**
comp=Z,1.7nm,0.7s,baz=119,slow=1.8,SNR=4.3
comp=Z,5.7nm,0.6s
BRVK Borovoye 38.62 330 P **P 15 05 28.7 -0.8**
BRVK IAmb IAmb 15 05 39.1
comp=Z,11nm,1.0s
GEYT Alibeck 39.83 303 P **P 15 05 42.2 +2.2**
comp=Z,2.8nm,0.7s,baz=138,slow=6.9,SNR=7.9
comp=Z,2.8nm,0.7s
ASAJ Asahikawa 40.56 47 P **P 15 05 46.9 +1.1**
comp=Z,7.3nm,0.7s,baz=233,slow=5.1,SNR=2.8
comp=Z,7.3nm,0.7s
ABKAR Akbulak array 42.04 320 P **P 15 05 55.3 -2.6**
ABKAR IAmb IAmb 15 06 05.1
comp=Z,5.9nm,0.7s
GUMO Guam 42.56 94 LR LR 15 24 14.1
comp=Z,347nm,19.0s,baz=61,slow=37
AKTO Aktyubinsk 43.66 321 P **P 15 06 11.3 +0.3**
comp=Z,1.6nm,0.5s,baz=111,slow=8.3,SNR=4.6
comp=Z,1.6nm,0.5s
YAK Yakutsk 44.35 19 P **P 15 06 14.0 -2.4**
ARU Arti 46.10 329 P **P 15 06 30.0 -0.4**
comp=Z,3.9nm,0.5s,baz=133,slow=6.3,SNR=6.5
comp=Z,3.9nm,0.5s
NRIK Noril'sk 47.78 354 P **P 15 06 43.3 0.0**
comp=Z,1.3nm,0.4s,baz=157,slow=7.3,SNR=1.4
comp=Z,1.3nm,0.4s
RAYN Ar Rayn 50.80 283 P **P 15 07 07.7 +0.5**
RAYN IAmb IAmb 15 07 13.7
comp=Z,5.7nm,0.8s
KIRV Kirov 51.48 328 P **P 15 07 12.0 +0.4**
comp=Z,6.6nm,0.5s,baz=107,slow=11,SNR=2.9
comp=Z,6.6nm,0.5s
TIXI Tiksi 51.94 11 P **P 15 07 12.9 -2.0**
TIXI IAmb IAmb 15 07 23.1
comp=Z,13nm,1.2s
TIXI Tiksi 51.94 11 LR LR 15 31 57.8
comp=Z,628nm,18.7s,baz=269,slow=39
PETK Petropavlovsk- 52.66 39 LR LR 15 31 31.2
comp=Z,430nm,19.1s,baz=286,slow=38
WB0 Warramunga Arr 53.04 139 P **P 15 07 24.0 +0.2**
WRAB Tennant Creek 53.15 140 P **P 15 07 24.3 -0.2**
WRA Warramunga Arr 53.15 140 P **P 15 07 24.0 -0.6**
WRA Warramunga Arr 53.15 140 P **P 15 07 25.3 +0.8**
comp=Z,8.4nm,0.8s,baz=327,slow=8.0,SNR=19
comp=Z,8.4nm,0.8s
WB2 Warramunga Arr 53.15 140 P **P 15 07 24.2 -0.4**
SEY Seymchan 53.20 27 P **P 15 07 25.4 +1.0**
comp=Z,0.9nm,0.6s,baz=111,slow=17,SNR=6.2
SEY LR LR 15 30 58.9
comp=Z,542nm,18.9s,baz=256,slow=37
comp=Z,0.9nm,0.6s
WR0 Warramunga Arr 53.28 139 P **P 15 07 26.0 +0.5**
AS31 Alice Springs 55.79 143 P **P 15 07 44.2 +0.5**
ASAR Alice Springs 55.79 143 P **P 15 07 44.1 +0.4**
comp=Z,7.0nm,0.8s,baz=324,slow=5.8,SNR=34
comp=Z,7.0nm,0.8s
MMAI Mount Meron Ar 58.22 296 P **P 15 08 03.4 +2.3**
comp=Z,0.4nm,0.4s,baz=97,slow=5.8,SNR=1.8
comp=Z,0.4nm,0.4s
BRTR Keskin Array B 58.97 304 P **P 15 08 02.8 -3.4**
AKASG Malin Array Be 61.60 317 P **P 15 08 24.0 +0.1**
comp=Z,0.8nm,0.5s,baz=81,slow=5.7,SNR=2.0
comp=Z,0.8nm,0.5s
FINES FINESS Array B 63.47 329 P **P 15 08 37.4 +1.2**
comp=Z,1.6nm,0.6s,baz=82,slow=2.9,SNR=8.5
comp=Z,1.6nm,0.6s
MLR Muntele Rosu 64.12 311 P **P 15 08 42.2 +1.3**
comp=Z,1.8nm,0.7s,baz=135,slow=5.7,SNR=1.4
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 64.24 338 P **P 15 08 41.4 +0.2**
comp=Z,8.6nm,1.2s,baz=88,slow=7.4,SNR=5.2
ARCES LR LR 15 39 44.8
comp=Z,247nm,20.5s,baz=52,slow=39
comp=Z,8.6nm,1.2s
KARP Karpathos 64.59 300 P **P 15 08 41.5 -2.5**
HNR Honiara 65.85 112 LR LR 15 34 28.8
comp=Z,µm,21.9s,baz=326,slow=33
STKA Stephens Creek 66.43 143 P **P 15 08 54.9 -0.9**
STKA Stephens Creek 66.43 143 P **P 15 08 55.5 -0.3**
comp=Z,1.9nm,0.8s,baz=297,slow=5.7,SNR=4.8
comp=Z,1.9nm,0.8s
SPITS Spitsbergen Ar 67.25 347 LR LR 15 42 50.5
comp=Z,644nm,18.0s,baz=65,slow=40
HFS Hagfors 69.61 328 P **P 15 09 15.1 -0.4**
comp=Z,2.9nm,0.6s,baz=97,slow=6.1,SNR=9.7
HFS LR LR 15 41 01.1
comp=Z,457nm,19.1s,baz=78,slow=37
comp=Z,2.9nm,0.6s
VRAC Vranov 69.84 316 LR LR 15 43 48.1
comp=Z,241nm,21.9s,baz=82,slow=39
NB2 NORSAR Subarra 70.66 329 P **P 15 09 22.8 +0.9**
comp=Z,4.6nm,0.8s,baz=79,slow=6.2
NOA NORSAR Array B 70.66 329 P **P 15 09 20.9 -1.0**
comp=Z,1.7nm,0.7s,baz=79,slow=6.1,SNR=4.0
NOA LR LR 15 43 03.8
comp=Z,186nm,19.4s,baz=75,slow=38
comp=Z,1.7nm,0.7s
GERES GERESS Array B 71.80 316 P **P 15 09 30.3 +1.2**
comp=Z,0.5nm,0.7s,baz=92,slow=7.1,SNR=1.5
GERES LR LR 15 43 44.4
comp=Z,319nm,18.1s,baz=74,slow=38
comp=Z,0.5nm,0.7s
C19K Lookout Ridge 72.73 22 P **P 15 09 34.1 -0.2**
C19K IAmb IAmb 15 09 43.9
comp=Z,4.1nm,0.8s
E18K Tukpahlearik C 72.86 24 P **P 15 09 34.9 -0.1**
E18K IAmb IAmb 15 09 43.9
comp=Z,4.9nm,0.8s
J14K Nanvaranak Lak 72.94 29 P **P 15 09 34.9 -0.6**
D19K Kuna River 73.43 22 P **P 15 09 38.6 +0.2**
H17K Granite Mounta 73.86 26 P **P 15 09 41.0 0.0**
D22K Ayikyak River 75.15 21 P **P 15 09 48.3 -0.1**
D22K IAmb IAmb 15 09 54.4
comp=Z,9.8nm,1.2s
JMIC Jan Mayen 75.24 341 LR LR 15 46 51.8
comp=Z,207nm,21.8s,baz=96,slow=39
K17K Iditarod 75.26 28 P **P 15 09 49.1 0.0**
F21K Alatna River 75.52 23 P **P 15 09 49.7 -0.9**
F21K IAmb IAmb 15 09 59.6
comp=Z,4.6nm,0.8s
J18K Innoko River 75.67 27 P **P 15 09 51.0 -0.5**
J18K IAmb IAmb 15 09 55.7
comp=Z,11nm,1.5s
E22K Anaktuvuk Pass 75.74 22 P **P 15 09 51.5 -0.4**
E22K IAmb IAmb 15 09 57.4
comp=Z,9.2nm,1.4s
G21K Allakaket 75.79 23 P **P 15 09 51.4 -0.7**
G21K IAmb IAmb 15 10 01.2
comp=Z,6.5nm,1.1s
TOLK Toolik Lake Re 76.28 21 P **P 15 09 54.5 -0.4**
E24K Your Creek 76.89 21 P **P 15 09 58.3 -0.2**
E24K IAmb IAmb 15 10 05.7
comp=Z,5.4nm,0.9s
MDM Murphy Dome 78.43 24 P **P 15 10 06.5 -0.5**
BMAR Burnt Mountain 78.51 21 P **P 15 10 07.3 -0.1**
IL31 79.02 24 P **P 15 10 08.1 -2.1**
ILAR Eielson Array 79.02 24 P **P 15 10 09.2 -1.1**
ILAR Eielson Array 79.02 24 P **P 15 10 09.4 -0.9**
comp=Z,0.4nm,0.6s,baz=291,slow=4.2,SNR=6.1
comp=Z,0.4nm,0.6s
NEEM North Greenlan 79.13 354 *i* P **P 15 10 13.8 +2.8**
EKA Eskdalemuir Ar 79.62 326 P **P 15 10 12.8 -0.8**
comp=Z,1.4nm,0.7s,baz=66,slow=5.5,SNR=1.9
comp=Z,1.4nm,0.7s
KDAK Kodiak Island 79.79 31 LR LR 15 48 13.7
comp=Z,179nm,18.1s,baz=343,slow=38
E29M Blow River 80.08 19 P **P 15 10 15.2 -0.8**
E29M IAmb IAmb 15 10 21.9
comp=Z,7.9nm,1.2s
J26L Joseph Creek 80.39 23 P **P 15 10 16.6 -1.2**
J26L IAmb IAmb 15 10 24.5
comp=Z,6.4nm,0.8s
SCRK Sand Creek 80.52 24 P **P 15 10 17.9 -0.6**
SCRK IAmb IAmb 15 10 26.1
comp=Z,3.9nm,0.8s
I28M Miner Creek 81.16 22 P **P 15 10 21.9 0.0**
I28M IAmb IAmb 15 10 27.4
comp=Z,7.5nm,1.1s
INK Inuvik 81.41 18 P **P 15 10 22.4 -0.5**
INK IAmb IAmb 15 10 37.6
comp=Z,7.8nm,1.1s

INK	**Inuvik**	**81.41**	**18**	P	**P**	**15 10 23.2**	**+0.2**	
	comp=Z,3.7nm,0.9s,baz=345,slow=6.1,SNR=7.2							
INK				LR	LR	15 51 33.5		
	comp=Z,238nm,18.2s,baz=14,slow=39							
	comp=Z,3.7nm,0.9s							
G30M	**tAoh Zraii Nji**	**81.45**	**20**	P	**P**	**15 10 23.3**	**0.0**	
G30M				IAmb	IAmb	15 10 28.2		
	comp=Z,8.2nm,1.1s							
BCAR	**Beaver Creek A**	**81.84**	**24**	P	**P**	**15 10 23.0**	**-2.5**	
DAWY	**Dawson**	**82.15**	**23**	P	**P**	**15 10 25.1**	**-2.0**	
DAWY				IAmb	IAmb	15 10 33.9		
	comp=Z,3.9nm,0.9s							
RES	**Resolute Bay**	**82.75**	**4**	LR	LR	15 52 11.0		
	comp=Z,134nm,18.3s,baz=10,slow=39							
H31M	**Peel River**	**82.78**	**20**	P	**P**	**15 10 29.9**	**-0.5**	
SFJD	**Kangerlussuaq**	**88.50**	**349**	LR	LR	15 56 48.2		
	comp=Z,168nm,18.0s,baz=24,slow=40							
YKA	**Yellowknife Ar**	**90.94**	**16**	P	**P**	**15 11 12.3**	**+2.1**	
	comp=Z,0.9nm,1.0s,baz=324,slow=4.5,SNR=12							
	comp=Z,0.9nm,1.0s							
FRB	**Frobisher Bay**	**93.88**	**355**	LR	LR	15 54 50.2		
	comp=Z,135nm,18.8s,baz=12,slow=36							
TXAR	**Lajitas Array**	**123.50**	**26**	PKP	**PKiKP**	**15 17 06.8**	**+2.0**	
	comp=Z,0.2nm,0.5s,baz=132,slow=1.3,SNR=2.1							

*TAP **09** 14:59:24.1,24˙.02N×121˙.82E,h6km,ML3.0,C*
*JMA **09** 14:59:24.7±0.2,24˙.0N±0˙.6×12˙2E±˚,h0km,TAIWAN REGION*
ISC 09 14:59:25.8±1.0,24˙.01N±0˙.02×121˙.81E±0˙.02,h8km±8km,
n122,σ0°69/187,24C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.19**	**260**		*eP*		**Pg**	**14 59 30.1**	**+0.5**
	baz=253								
TWD	**Chiawan**	**0.21**	**290**	⇑	*iP*		**Pg**	**14 59 29.4**	**-0.6**
	baz=286								
TWD					*i*	S	**Sg**	**14 59 33.5**	**+0.7**
	baz=286								
ETL	**Fush Village**	**0.22**	**311**	⇓	P		**Pg**	**14 59 29.8**	**-0.6**
	baz=308								
ETL					*i*	S	**Sg**	**14 59 34.0**	**+0.6**
	baz=308								
NACB	**Ninganchiao**	**0.25**	**310**		P		**Pg**	**14 59 30.3**	**-0.6**
NACB	**Ninganchiao**	**0.25**	**310**		P		**Pg**	**14 59 30.2**	**-0.6**
NACB	**Ninganchiao**	**0.25**	**310**	⇑	*iP*		**Pg**	**14 59 30.1**	**-0.7**
	baz=307								
NACB					*i*	S	**Sg**	**14 59 34.1**	**-0.2**
	baz=307								
ETM	**Tongmen**	**0.29**	**261**	⇑	*iP*		**Pg**	**14 59 31.3**	**-0.2**
	baz=257								
ETM					*i*	S	**Sb**	**14 59 36.8**	**-1.5**
	baz=257								
EHP	**Heping Village**	**0.30**	**348**		*eP*		**Pg**	**14 59 31.8**	**-0.1**
	baz=350								
EHP					*eS*		**Sb**	**14 59 37.1**	**-1.5**
	baz=350								
SHUL	**Shoufeng**	**0.32**	**225**		*eP*		**Pb**	**14 59 32.9**	**-0.7**
	baz=221								
SHUL					*eS*		**Sb**	**14 59 39.6**	**+0.7**
	baz=221								
EAHA	**Aohua**	**0.32**	**349**	⇓	*eP*		**Pg**	**14 59 31.5**	**-0.7**
	baz=349								
EAHA					*eS*		**Sg**	**14 59 37.6**	**+1.1**
	baz=349								
ETLH	**Xiulin Townshi**	**0.36**	**303**	⇑	P		**Pg**	**14 59 32.1**	**-0.7**
	baz=301								
ETLH					S		**Sg**	**14 59 38.4**	**+0.8**
	baz=301								
LXIB	**Xiulin Townshi**	**0.36**	**272**	⇑	*iP*		**Pg**	**14 59 32.5**	**-0.5**
	baz=268								
LXIB					S		**Sg**	**14 59 38.7**	**+1.0**
	baz=268								
TEGC	**Jichi Village**	**0.39**	**219**		*eP*		**Pb**	**14 59 34.4**	**-0.5**
	baz=200								
TEGC					*eS*		**Sb**	**14 59 42.4**	**+1.3**
	baz=200								
ESL	**Shilin**	**0.40**	**240**	⇑	*iP*		**Pg**	**14 59 33.2**	**-0.4**
	baz=235								
ESL					S		**Sb**	**14 59 40.6**	**-0.7**
	baz=235								
ENA	**Nanau**	**0.42**	**352**		P		**Pg**	**14 59 33.5**	**-0.5**
	baz=355								
ENA					*eS*		**Sg**	**14 59 39.4**	**-0.2**
	baz=355								
EWUT	**Wuta**	**0.43**	**356**		*eP*		**Pg**	**14 59 34.0**	**-0.2**
	baz=348								
EWUT					*eS*		**Sb**	**14 59 41.2**	**-1.1**
	baz=348								
WARBT	**Fenglin Townsh**	**0.48**	**233**	⇑	P		**Pg**	**14 59 34.8**	**-0.3**
	baz=228								
WARBT					S		**Sb**	**14 59 43.0**	**-0.8**
	baz=228								
WHF	**Hehuan Shan**	**0.51**	**285**	⇑	P		**Pg**	**14 59 35.3**	**-0.6**
	baz=283								
WHF					S		**Sg**	**14 59 43.5**	**+0.9**
	baz=283								
ESAO	**Su ao**	**0.56**	**3**		*eP*		**Pg**	**14 59 36.5**	**-0.2**
FUSS	**Fushou**	**0.57**	**295**	⇑	*eP*		**Pg**	**14 59 36.4**	**-0.4**
	baz=293								
FUSS					*eS*		**Sb**	**14 59 45.5**	**-1.0**
	baz=293								
NNSB	**Datong**	**0.57**	**317**	⇑	P		**Pg**	**14 59 36.2**	**-0.6**
	baz=317								
NNSB					*eS*		**Sg**	**14 59 44.8**	**+0.5**
	baz=317								
NNSH	**Datong**	**0.57**	**317**		*eP*		**Pg**	**14 59 36.2**	**-0.7**
	baz=316								
OWD	**Renai**	**0.58**	**265**		P		**Pg**	**14 59 36.8**	**-0.2**
	baz=275								
OWD					S		**Sb**	**14 59 45.9**	**-0.9**
	baz=275								
CHGB	**Renai**	**0.58**	**275**	⇑	P		**Pg**	**14 59 36.8**	**-0.3**
	baz=273								
CHGB					S		**Sb**	**14 59 45.8**	**-1.1**
	baz=273								
LATG	**Datong**	**0.58**	**334**	⇓	P		**Pg**	**14 59 36.5**	**-0.5**
	baz=334								
LATG					S		**Sg**	**14 59 45.4**	**+0.7**
	baz=334								
NNS	**Nan Shan**	**0.58**	**317**	⇑	P		**Pg**	**14 59 36.5**	**-0.6**
	baz=317								
NNS					S		**Sg**	**14 59 44.9**	**+0.1**
	baz=317								
TWC	**Suao**	**0.60**	**4**	⇑	P		**Pg**	**14 59 37.3**	**0.0**
	baz=356								
TWC					*eS*		**Sb**	**14 59 46.0**	**-1.1**
	baz=356								
HGSD	**Ruisui**	**0.62**	**214**		*eP*		**Pb**	**14 59 38.4**	**-0.5**
	baz=210								
HGSD					*eS*		**Sb**	**14 59 49.6**	**+1.7**
	baz=210								
NDS	**Dongshan**	**0.62**	**352**		*eP*		**Pg**	**14 59 37.9**	**0.0**
	baz=354								
NDS					*eS*		**Sg**	**14 59 46.5**	**+0.4**
	baz=354								
TWT	**Tachien**	**0.63**	**293**		*eP*		**Pg**	**14 59 37.9**	**0.0**
	baz=290								
TWT					*eS*		**Sb**	**14 59 47.1**	**-1.0**
	baz=290								
WUSB	**Renai**	**0.63**	**268**	⇑	*iP*		**Pg**	**14 59 37.9**	**-0.2**
	baz=266								
WUSB					S		**Sb**	**14 59 47.2**	**-1.0**
	baz=266								
TDCB	**Techi**	**0.64**	**292**		*eP*		**Pg**	**14 59 38.1**	**0.0**
	baz=291								
TDCB					*eS*		**Sb**	**14 59 47.5**	**-1.0**
	baz=291								
NDT	**Datong Townshi**	**0.65**	**335**	⇑	P		**Pg**	**14 59 38.1**	**-0.2**
	baz=336								
NDT					*eS*		**Sb**	**14 59 48.0**	**-0.5**
	baz=336								
VWDT	**VWDT**	**0.66**	**247**	⇑	*iP*		**Pg**	**14 59 38.6**	**0.0**
	baz=244								
VWDT					*eS*		**Sb**	**14 59 48.4**	**-0.5**
	baz=244								
ENTT	**Nioudou**	**0.66**	**341**	⇑	P		**Pg**	**14 59 38.3**	**-0.3**
	baz=342								
ENTT					*eS*		**Sb**	**14 59 48.7**	**-0.4**
	baz=342								
EHY	**Hungye**	**0.67**	**222**		*eP*		**Pg**	**14 59 38.4**	**-0.3**
	baz=217								
TWE	**Neicheng**	**0.72**	**350**	⇑	*iP*		**Pg**	**14 59 39.5**	**-0.2**
	baz=353								
TWE					*eS*		**Sb**	**14 59 49.9**	**-0.7**
	baz=353								
ECBN	**Changbin**	**0.77**	**205**		*eP*		**Pg**	**14 59 40.2**	**-0.4**
	baz=200								
YHNB	**Yeheng**	**0.77**	**329**		P		**Pg**	**14 59 40.6**	**0.0**
YHNB	**Yeheng**	**0.77**	**329**		P		**Pb**	**14 59 40.8**	**-0.6**
YHNB	**Yeheng**	**0.77**	**329**	⇑	*iP*		**Pg**	**14 59 40.2**	**-0.3**
	baz=329								
YHNB					*eS*		**Sb**	**14 59 51.5**	**-0.5**
	baz=329								
FUSB	**Fushanzhiwuyua**	**0.77**	**345**	⇑	P		**Pg**	**14 59 40.5**	**-0.2**
	baz=336								
FUSB					*eS*		**Sb**	**14 59 51.8**	**-0.5**
	baz=336								
YULB	**Yu-li**	**0.77**	**217**		P		**Pg**	**14 59 40.7**	**0.0**
YULB	**Yu-li**	**0.77**	**217**		P		**Pg**	**14 59 40.9**	**+0.2**
YULB	**Yu-li**	**0.77**	**217**		*eP*		**Pg**	**14 59 40.0**	**-0.7**
	baz=213								
YULB					*eS*		**Sb**	**14 59 51.9**	**-0.3**
	baz=213								
WPL	**Puli Township**	**0.78**	**270**		*eP*		**Pg**	**14 59 41.0**	**+0.2**
	baz=268								
WPL					*eS*		**Sb**	**14 59 52.0**	**-0.3**
	baz=268								
NSK	**Sanguang**	**0.78**	**328**	⇑	*iP*		**Pg**	**14 59 40.4**	**-0.4**
	baz=329								
NSK					*eS*		**Sg**	**14 59 51.5**	**+0.5**
	baz=329								
TWF1	**Yuli**	**0.81**	**216**		*eP*		**Pg**	**14 59 40.5**	**-0.8**
	baz=195								
DPDB	**Guoxing**	**0.81**	**272**	⇑	*eP*		**Pg**	**14 59 41.1**	**-0.2**
	baz=269								
DPDB					*eS*		**Sb**	**14 59 53.3**	**+0.1**
	baz=269								
NWLT	**Wulai**	**0.81**	**340**		P		**Pg**	**14 59 41.3**	**-0.1**
	baz=341								
NWLT					*eS*		**Sb**	**14 59 52.7**	**-0.7**
	baz=341								
SSLB	**Suanglung**	**0.81**	**254**		P		**Pg**	**14 59 41.4**	**0.0**
SSLB	**Suanglung**	**0.81**	**254**		P		**Pg**	**14 59 40.9**	**-0.6**
	baz=265								
SSLB					S		**Sg**	**14 59 51.9**	**-0.1**
	baz=265								
WCS	**Beigang Elemen**	**0.82**	**273**		*eP*		**Pg**	**14 59 41.3**	**-0.3**
	baz=271								
WCS					*eS*		**Sb**	**14 59 53.4**	**-0.1**
	baz=271								
WHP	**Taichung City**	**0.83**	**289**	⇑	*eP*		**Pg**	**14 59 41.7**	**-0.1**
	baz=287								
WHP					*eS*		**Sb**	**14 59 53.4**	**-0.5**
	baz=287								
SMLT	**Sun Moon Lake**	**0.84**	**261**		*eP*		**Pg**	**14 59 42.0**	**0.0**
	baz=270								
SMLT					S		**Sb**	**14 59 53.6**	**-0.6**
	baz=270								
TYC	**Yuchr**	**0.88**	**263**		P		**Pg**	**14 59 42.3**	**-0.4**
	baz=260								
TYC					S		**Sg**	**14 59 54.2**	**+0.2**
	baz=260								
NFF	**Wufeng Townshi**	**0.88**	**315**		*eP*		**Pg**	**14 59 42.5**	**-0.3**
	baz=305								
WHYT	**Xinyi Township**	**0.93**	**250**		*eP*		**Pg**	**14 59 43.4**	**-0.3**
	baz=257								
WHYT					*eS*		**Sb**	**14 59 57.4**	**+0.7**
	baz=257								
FULB	**Fuli**	**0.94**	**210**		*eP*		**Pb**	**14 59 44.1**	**-0.2**
	baz=192								
FULB					*eS*		**Sn**	**14 59 58.7**	**-0.2**
	baz=192								
TIPB	**Shuangxi**	**0.96**	**1**	⇓	*eP*		**Pg**	**14 59 44.0**	**-0.2**
	baz=355								
LIOB	**Emei**	**0.96**	**311**		*eP*		**Pb**	**14 59 44.4**	**-0.3**
	baz=311								
NSTT	**Nanjuang**	**0.96**	**310**		*eP*		**Pg**	**14 59 44.3**	**0.0**
	baz=310								
NSTT					*eS*		**Sb**	**14 59 57.5**	**-0.1**
	baz=310								
TWA	**Mucha**	**0.99**	**348**		*eP*		**Pg**	**14 59 44.5**	**-0.3**
	baz=340								
CHKT	**Chengkung**	**0.99**	**204**		*eP*		**Pg**	**14 59 44.2**	**-0.7**
	baz=198								
TATO	**Taipei**	**1.00**	**343**		P		**Pb**	**14 59 45.4**	**0.0**
TATO	**Taipei**	**1.00**	**343**		*eP*		**Pb**	**14 59 45.1**	**-0.4**
	baz=346								
TWQ1	**Liyutan**	**1.00**	**290**		*eP*		**Pb**	**14 59 45.5**	**+0.1**
	baz=288								
TWB1	**Santiao Chiao**	**1.01**	**9**		*eP*		**Pb**	**14 59 45.4**	**-0.1**
	baz=6.0								
WJS	**Zhushan**	**1.01**	**259**		*eP*		**Pb**	**14 59 45.7**	**+0.2**
	baz=265								
WJS					*eS*		**Sn**	**15 00 00.4**	**-0.1**
	baz=265								
WWF	**Wufeng**	**1.01**	**272**		*eP*		**Pn**	**14 59 46.0**	**-0.4**
	baz=270								
EHD	**Haiduan**	**1.02**	**213**		*eP*		**Pg**	**14 59 44.1**	**-1.3**
	baz=222								
WNT	**Mingjian**	**1.04**	**263**		*eP*		**Pb**	**14 59 46.1**	**+0.1**
	baz=260								
WNT					*eS*		**Sn**	**15 00 01.4**	**+0.1**
	baz=260								
TCU	**Taichung**	**1.04**	**278**		*eP*		**Pg**	**14 59 45.1**	**-0.7**
	baz=275								
ALS	**Alishan**	**1.05**	**242**		*eP*		**Pg**	**14 59 45.5**	**-0.4**
	baz=237								
ALS					*eS*		**Sb**	**15 00 01.0**	**+0.7**
	baz=237								
NWF	**Wu-fen Shan**	**1.05**	**359**		*eP*		**Pb**	**14 59 46.3**	**-0.1**
	baz=354								
WFSB	**Wu-fen Shan**	**1.05**	**359**		*eP*		**Pn**	**14 59 46.1**	**-0.2**
	baz=354								
NMLH	**Miaoli**	**1.07**	**300**		*eP*		**Pn**	**14 59 46.8**	**-0.3**
	baz=298								
SXI1	**Grass Mountain**	**1.08**	**3**	⇓	*eP*		**Pb**	**14 59 46.6**	**-0.1**
	baz=360								
SXI1					*eS*		**Sb**	**15 00 01.4**	**+0.4**
	baz=360								
SBCB	**Hsinchu**	**1.08**	**316**		*eP*		**Pn**	**14 59 47.0**	**-0.2**
	baz=317								
ELDTW	**Lidau**	**1.09**	**222**		*eP*		**Pg**	**14 59 45.0**	**-1.9**
	baz=215								
NCUH	**Zhongli**	**1.11**	**329**		*eP*		**Pg**	**14 59 46.8**	**-0.3**
	baz=330								
EDH	**Donghe**	**1.13**	**204**		*eP*		**Pg**	**14 59 45.9**	**-1.6**
	baz=178								
YM01	**YM01**	**1.15**	**349**		*eP*		**Pb**	**14 59 47.8**	**-0.2**
	baz=354								
YOJ	**Yonaguni jima**	**1.19**	**68**		P		**Pn**	**14 59 51.4**	**+2.7**
YOJ	**Yonaguni jima**	**1.19**	**68**		*eP*		**Pg**	**14 59 48.1**	**-0.5**
	baz=72								
YM08	**YM08**	**1.19**	**350**		*eP*		**Pg**	**14 59 48.0**	**-0.6**
	baz=356								
ANP	**Anpu**	**1.20**	**347**		*eP*		**Pg**	**14 59 48.4**	**-0.4**
	baz=353								
WCKO	**Fanlu**	**1.24**	**243**		*eP*		**Pn**	**14 59 49.7**	**+0.3**
	baz=239								
WCKO					*eS*		**Sn**	**15 00 08.4**	**+2.0**
	baz=239								
STYH	**Taoyuan**	**1.26**	**229**		*eP*		**Pn**	**14 59 49.0**	**-0.8**
	baz=208								
STYH					*eS*		**Sn**	**15 00 07.0**	**+0.1**
	baz=208								
STYT	**Tauyuan**	**1.28**	**229**		P		**Pn**	**14 59 49.4**	**-0.6**
	baz=206								
TPUB	**Ta-pu**	**1.29**	**237**		P		**Pn**	**14 59 49.9**	**-0.3**
TPUB	**Ta-pu**	**1.29**	**237**		P		**Pn**	**14 59 50.1**	**-0.1**
TPUB	**Ta-pu**	**1.29**	**237**		*eP*		**Pn**	**14 59 49.7**	**-0.4**
	baz=232								
TPUB					S		**Sn**	**15 00 08.6**	**+0.9**
	baz=232								
CHN4	**Tsaushan**	**1.29**	**240**	⇑	P		**Pn**	**14 59 50.2**	**0.0**
	baz=236								
CHN4					*eS*		**Sn**	**15 00 09.0**	**+1.3**
	baz=236								
WRL	**Guolierlin Hig**	**1.31**	**266**		*eP*		**Pb**	**14 59 50.6**	**-0.1**
	baz=247								
RLNB	**Erlin**	**1.33**	**265**		*eP*		**Pn**	**14 59 50.2**	**-0.5**
	baz=261								
WTP	**Ta-pu**	**1.33**	**235**		*eP*		**Pn**	**14 59 50.4**	**-0.4**
	baz=229								
WTP					*eS*		**Sn**	**15 00 09.7**	**+1.0**
	baz=229								
WTK	**Tuku**	**1.34**	**256**		*eP*		**Pg**	**14 59 51.6**	**+0.1**
	baz=252								
TWGBT	**Beinan**	**1.36**	**210**		P		**Pn**	**14 59 51.2**	**+0.1**
TWGBT	**Beinan**	**1.36**	**210**		*eP*		**Pn**	**14 59 49.6**	**-1.5**
	baz=216								
TWGBT					*eS*		**Sg**	**15 00 09.3**	**-0.3**
	baz=216								
TWG	**Pinlang**	**1.36**	**210**		*eP*		**Pn**	**14 59 50.1**	**-1.1**
	baz=216								
TWG					*eS*		**Sb**	**15 00 09.0**	**-0.2**
	baz=216								
TWK	**Hsinying**	**1.42**	**239**		*eP*		**Pb**	**14 59 52.3**	**-0.3**
	baz=233								
TWK					*eS*		**Sg**	**15 00 12.3**	**+0.9**
	baz=233								
CHN1	**Nanshi**	**1.43**	**235**		*eP*		**Pn**	**14 59 52.1**	**0.0**
	baz=230								
CHN1					*eS*		**Sg**	**15 00 13.8**	**+1.8**
	baz=230								
SNST	**Tainan City**	**1.44**	**237**		*eP*		**Pb**	**14 59 52.8**	**0.0**
	baz=232								
SNST					*eS*		**Sg**	**15 00 13.5**	**+1.4**
	baz=232								
SGST	**Jiashian**	**1.46**	**231**		*eP*		**Pn**	**14 59 51.6**	**-0.8**
	baz=208								
SGST					*eS*		**Sg**	**15 00 13.3**	**+0.7**
	baz=208								
SLGT	**Liugui**	**1.47**	**227**		*eP*		**Pn**	**14 59 52.2**	**-0.4**
	baz=205								
SLGT					*eS*		**Sg**	**15 00 13.5**	**+0.4**
	baz=205								
ICHU	**Yijhu**	**1.54**	**246**		*eP*		**Pn**	**14 59 53.8**	**+0.2**
	baz=240								
ECL	**Taimali**	**1.61**	**209**		*eP*		**Pn**	**14 59 53.6**	**-0.9**
	baz=187								
SCST	**Cishan**	**1.65**	**227**		*eP*		**Pb**	**14 59 55.7**	**-0.7**
	baz=207								
SSD	**Sandimen**	**1.66**	**221**		*eP*		**Pn**	**14 59 54.2**	**-1.0**
	baz=203								
TSMG	**Majia**	**1.68**	**220**		*eP*		**Pn**	**14 59 56.2**	**+0.7**
	baz=202								
MASBT	**Mashibuluo**	**1.76**	**218**		*eP*		**Pn**	**14 59 56.2**	**-0.5**
	baz=204								
MASBT					*eS*		**Sg**	**15 00 21.9**	**-0.6**
	baz=204								
EAST	**Anshuo**	**1.85**	**209**		*eP*		**Pn**	**14 59 58.3**	**+0.5**
	baz=189								
SCZT	**Fangliau**	**1.96**	**214**		*eP*		**Pn**	**15 00 00.2**	**+0.8**
	baz=190								
SLIU	**Shizi**	**2.01**	**208**		*eP*		**Pn**	**15 00 00.8**	**+0.7**
	baz=189								
PHUB	**P'eng-hu**	**2.11**	**257**		*eP*		**Pn**	**15 00 01.7**	**+0.3**
	baz=253								
PHUB					*eS*		**Sn**	**15 00 28.4**	**+0.6**
	baz=253								
PNG	**Penghu**	**2.11**	**258**		*eP*		**Pn**	**15 00 01.9**	**+0.6**
	baz=254								
JISG	**Ishigakijimahi**	**2.35**	**75**		*eP*		**Pn**	**15 00 03.6**	**-1.1**
JISG					S		**Sn**	**15 00 34.1**	**+0.3**
PTMZ	**Houxiangcun**	**2.65**	**293**		*eP*		**Pn**	**15 00 09.1**	**+0.3**
	baz=287								
MATB	**Ma-tsu**	**2.72**	**322**		*eP*		**Pn**	**15 00 10.3**	**+0.6**
	baz=319								
KNMB	**Chin-men Tao**	**3.15**	**279**		*eP*		**Pn**	**15 00 15.6**	**-0.2**
	baz=274								
XPSS	**Dashiqiu**	**3.25**	**334**		*eP*		**Pn**	**15 00 17.6**	**+0.4**
	baz=334								

*SJA **09** 15:00:30.6±0.6,26˙.72S×71˙.19W,h20km±5km,ML3.2,MW3.5*
*GUC **09** 15:00:33.9±0.3,26˙.71S×70˙.96W,h38km±3km,ML3.1*
ISC 09 15:00:31.5±1.4,26˙.70S±0˙.03×71˙.18W±0˙.08,h34km,n26,
σ1°92/29,1C-3D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.76**	**43**		*eP*		**Pn**	**15 00 46.2**	**+0.4**
AC01					IAML			15 00 59.1	
	comp=Z,634nm,0.2s								
AC01	**Pan de Azucar**	**0.76**	**43**	⇓	*iP*		**Pn**	**15 00 46.2**	**+0.4**
AC01					*i*	S	**Sn**	**15 00 55.5**	**-0.5**
AC01					IAML			15 00 55.8	
	comp=E,1μm,0.2s								
GO03	**Copiap**	**1.22**	**137**		*eP*		**Pb**	**15 00 53.5**	**-0.7**
GO03	**Copiap**	**1.22**	**137**	⇓	*iP*		**Pn**	**15 00 53.2**	**+1.0**
GO03					*i*	S	**Sn**	**15 01 07.8**	**+0.1**
GO03					IAML			15 01 10.8	
	comp=E,872nm,0.3s								
AC04	**Llanos de Chal**	**1.50**	**177**		*eP*		**Pn**	**15 00 58.0**	**+2.0**
AC04					IAML			15 01 24.2	
	comp=Z,95nm,0.3s								
AC04	**Llanos de Chal**	**1.50**	**177**		*eP*		**Pn**	**15 00 58.0**	**+2.0**
AC02	**Maricunga**	**1.84**	**95**		*eP*		**Pb**	**15 01 04.1**	**-0.7**
AC02					IAML			15 01 30.5	
	comp=Z,226nm,0.2s								
AC02	**Maricunga**	**1.84**	**95**	⇓	*iP*		**Pb**	**15 01 03.9**	**-0.9**
AC02					*eS*		**Sb**	**15 01 26.5**	**-1.1**
AC02					IAML			15 01 30.2	
	comp=N,664nm,0.3s								
GO02	**Mina Guanaco**	**2.09**	**43**		*eP*		**Pb**	**15 01 07.6**	**-1.4**
GO02	**Mina Guanaco**	**2.09**	**43**	⇑	*iP*		**Pb**	**15 01 07.4**	**-1.6**
GO02					IAML			15 01 43.0	
	comp=E,476nm,0.5s								
PB14	**IPOC Station P**	**2.18**	**19**		*eP*		**Pn**	**15 01 07.1**	**+1.5**
PB14					IAML			15 01 44.6	
	comp=Z,195nm,0.5s								
PB14	**IPOC Station P**	**2.18**	**19**		*eP*		**Pn**	**15 01 07.1**	**+1.5**
AC05	**El Transito**	**2.27**	**160**		*eP*		**Pb**	**15 01 10.7**	**-1.3**
AC05					IAML			15 01 45.1	
	comp=Z,84nm,0.4s								
AC05	**El Transito**	**2.27**	**160**		*eP*		**Pb**	**15 01 10.0**	**-2.0**
AC05					IAML			15 01 44.4	
	comp=E,141nm,0.6s								
AC05					IAML			15 01 48.1	
	comp=N,107nm,0.3s								
LCO	**Las Campanas**	**2.34**	**170**		*eP*		**Pn**	**15 01 10.8**	**+3.0**
LCO					IAML			15 01 49.4	
	comp=Z,154nm,0.3s								
PB10	**IPOC Station P**	**3.22**	**10**		*eP*		**Pn**	**15 01 20.8**	**+1.1**
PB10					IAML			15 02 25.2	
	comp=Z,18nm,1.0s								
PB10	**IPOC Station P**	**3.22**	**10**		*eP*		**Pn**	**15 01 20.6**	**+0.9**
PB10					IAML			15 02 21.0	
	comp=E,36nm,0.4s								
VCA	**Vinchina**	**3.33**	**128**		*eP*		**Pb**	**15 01 29.2**	**-0.7**
VCA					IAML			15 02 23.0	
	comp=Z,47nm,0.4s								
CO01	**Juntas del Tor**	**3.40**	**

OCAC	**Ocana**	**1.39**	**352**	*eP*		**Pn**	**15 04 27.7**	**+0.1**
OCAC				*eS*		**Sn**	**15 04 49.5**	**0.0**
OCAC				*i*			15 04 55.1	
	comp=Z,385nm,0.4s							
TAMC	**Tame, Arauca**	**1.39**	**107**	*eP*		**Pn**	**15 04 27.8**	**+0.3**
TAMC				⇓*iP*			15 04 27.8	
TAMC				*eS*		**Sn**	**15 04 49.5**	**+0.3**
SPBC	**San Pablo de B**	**1.52**	**218**	*eP*		**Pn**	**15 04 28.3**	**-0.6**
SPBC				*eS*		**Sn**	**15 04 50.8**	**-1.0**
SPBC				*i*			15 04 53.8	
	comp=Z,234nm,0.1s							
NORC	**Norcasia**	**2.16**	**233**	*eP*		**Pn**	**15 04 36.1**	**+0.1**
NORC				⇓*eS*		**Sn**	**15 05 04.8**	**+0.3**
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**15 04 39.2**	**+0.8**
	comp=Z,10nm,0.3s,baz=252,slow=19,SNR=10							
ROSC				S		**Sn**	**15 05 09.7**	**+0.9**
	comp=Z,110nm,0.3s,baz=24,slow=23,SNR=19							
	comp=Z,18nm,0.3s							
ROSC	**El Rosal**	**2.33**	**211**	*eP*		**Pn**	**15 04 40.1**	**+1.7**
ROSC				*eS*		**Sn**	**15 05 10.6**	**+1.8**
ROSC				*i*			15 05 17.2	
	comp=Z,124nm,0.4s							
CVER	**Cruz Verde, Cu**	**2.50**	**202**	*eP*		**Pn**	**15 04 42.3**	**+1.6**
CVER				*i*			15 05 15.5	
	comp=Z,40nm,0.2s							
UREC	**San Jos de Ur**	**2.54**	**291**	*eP*		**Pn**	**15 04 40.2**	**-0.5**
UREC				*eS*		**Sn**	**15 05 11.7**	**-1.1**
UREC				*i*			15 05 14.8	
	comp=Z,81nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*eP*		**Pn**	**15 04 43.7**	**0.0**
GUY2C				*eS*		**Sn**	**15 05 18.9**	**+0.6**
GUY2C				*i*			15 05 26.0	
	comp=Z,109nm,0.5s							
VILC	**Villavicencio,**	**2.79**	**192**	*eP*		**Pn**	**15 04 43.7**	**-0.2**
VILC				*eS*		**Sn**	**15 05 18.0**	**-0.5**
VILC				*i*			15 05 22.0	
	comp=Z,66nm,0.3s							
PTGC	**Puerto Gaitan,**	**2.82**	**159**	*eP*		**Pn**	**15 04 43.1**	**-1.1**
PTGC				*eS*		**Sn**	**15 05 15.3**	**-3.8**
PTGC				*i*			15 05 20.5	
	comp=Z,44nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.03**	**251**	*eP*		**Pn**	**15 04 47.5**	**+0.5**
CBOC				*eS*		**Sn**	**15 05 22.7**	**-1.3**
CBOC				*i*			15 05 35.1	
	comp=Z,37nm,0.5s							
DBBC	**Dabeiba**	**3.06**	**273**	*eP*		**Pn**	**15 04 47.4**	**+0.1**
DBBC				*eS*		**Sn**	**15 05 24.4**	**-0.2**
DBBC				*i*			15 05 26.5	
	comp=Z,53nm,0.3s							
ARGC	**Ariguani, Magd**	**3.18**	**340**	*eP*		**Pn**	**15 04 50.6**	**+1.9**
ARGC				*eS*		**Sn**	**15 05 28.6**	**+1.4**
ARGC				*i*			15 05 36.0	
	comp=Z,14nm,0.3s							
APAC	**Apartado, Choc**	**3.58**	**287**	*eP*		**Pn**	**15 04 54.6**	**+0.9**
APAC				*i*			15 05 40.3	
	comp=Z,33nm,0.4s							
PRAC	**Prado**	**3.58**	**209**	*eP*		**Pn**	**15 04 54.3**	**+0.4**
PRAC				*eS*		**Sn**	**15 05 36.0**	**-0.5**
PRAC				*i*			15 05 40.6	
	comp=Z,46nm,0.3s							
ORTC	**Ortega, Tolima**	**3.61**	**216**	*eP*		**Pn**	**15 04 54.4**	**+0.1**
ORTC				*eS*		**Sn**	**15 05 38.4**	**+1.3**
ORTC				*i*			15 05 40.9	
	comp=Z,30nm,0.2s							
SJCC	**San Jacinto, C**	**3.64**	**326**	*eP*		**Pn**	**15 04 53.7**	**-0.9**
SJCC				*eS*		**Sn**	**15 05 35.6**	**-2.1**
SJCC				*i*			15 05 39.4	
	comp=Z,34nm,0.7s							
PLMC	**San Jos del P**	**3.69**	**238**	*eP*		**Pn**	**15 04 55.5**	**+0.1**
PLMC				*eS*		**Sn**	**15 05 35.8**	**-3.2**
PLMC				*i*			15 05 42.5	
	comp=Z,25nm,0.2s							
YOTC	**Yotoco, Valle**	**4.29**	**228**	*eP*		**Pn**	**15 05 02.0**	**-1.2**
YOTC				*eS*		**Sn**	**15 05 55.2**	**+2.1**
YOTC				*i*			15 05 58.8	
	comp=Z,3.1nm,0.3s							
SMRC	**Santa Marta, M**	**4.41**	**346**	*eP*		**Pn**	**15 05 05.3**	**+0.6**
SMRC				*eS*		**Sn**	**15 05 53.8**	**-2.0**
YKA	**Yellowknife Ar**	**63.23**	**340**	P		**P**	**15 14 09.1**	**-2.0**
	comp=Z,0.1nm,0.6s,baz=151,slow=9.1,SNR=2.5							
	comp=Z,0.1nm,0.6s							
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc		**PKPdf**	**15 23 28.4**	**+2.2**
	comp=Z,0.4nm,0.9s,baz=107,slow=3.7,SNR=1.8							
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc		**PKPdf**	**15 23 31.5**	**+3.3**
	comp=Z,0.3nm,0.8s,baz=110,slow=2.6,SNR=5.0							

*IDC **09** 15:09:12.5±1.9,56˚.22N×148˚.98W,h0km,mb3.1/2, mbtmp3.1/6,ML3.2/4,Error ellipse: s-maj=33.3km s-min=23.1km az=33.0*

*NEIC **09** 15:09:12.8±1.7,56˚.1N±0˚.1×149˚.4W±0˚.1,h23km±10km, ML3.6/36,ML3.3(AEIC),Error ellipse: s-maj=15.3km s-min=8.2km az=172.0*

*AEIC **09** 15:09:14.8±1.7,56˚.06N±0˚.09×149˚.23W±0˚.08,h7km±8km, Error ellipse: s-maj=14.7km s-min=3.6km az=156.0*

ISC 09 15:09:12.7±1.2,56˚24N±0˚08×149˚22W±0˚05,h10km, n159,σ1§24/156,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.40**	**312**		**Sn**	**15 10 19.7**	**-1.8**
KDAK	**Kodiak Island**	**2.40**	**312**		**Pn**	**15 09 51.5**	**-0.5**
KDAK	**Kodiak Island**	**2.40**	**312**	S	**Sn**	**15 10 19.7**	**-1.8**
	baz=132						
KDAK	**Kodiak Island**	**2.40**	**312**	Pn	**Pn**	**15 09 51.3**	**-0.8**
	1.1nm,0.3s,baz=132,slow=5.8,SNR=55						
KDAK				Sn	**Sn**	**15 10 19.2**	**-2.3**
	10.0nm,0.3s,baz=54,slow=22,SNR=29						
	9.7nm,0.6s						
OHAK	**Old Harbor**	**2.45**	**295**		**Pn**	**15 09 51.3**	**-1.3**
OHAK					**Sn**	**15 10 19.0**	**-3.6**
OHAK	**Old Harbor**	**2.45**	**295**	P	**Pn**	**15 09 51.3**	**-1.3**
	baz=116						
OHAK				S	**Sn**	**15 10 19.0**	**-3.6**
	baz=116						
SYI	**Shuyak Island**	**2.93**	**326**		**Pn**	**15 09 58.9**	**-0.4**
SYI					**Sn**	**15 10 33.5**	**-1.0**
SYI	**Shuyak Island**	**2.93**	**326**	IAML		15 10 35.6	
	comp=E,92nm,0.4s						
Q20K	**Shuyak Island**	**2.93**	**326**	P	**Pn**	**15 09 58.9**	**-0.4**
	baz=145						
Q20K				S	**Sn**	**15 10 33.5**	**-1.0**
	baz=145						
CNPM	**China Poot**	**3.47**	**343**		**Pn**	**15 10 06.4**	**-0.4**
CNPM					**Sn**	**15 10 47.7**	**-0.1**
CNPM	**China Poot**	**3.47**	**343**	IAML		15 10 49.5	
	comp=E,49nm,0.4s						
Q19K	**Cape Douglas,**	**3.60**	**320**		**Pn**	**15 10 07.7**	**-0.8**
Q19K					**Sn**	**15 10 49.7**	**-1.3**
Q19K	**Cape Douglas,**	**3.60**	**320**	IAML		15 10 54.3	
	comp=N,163nm,1.3s						
Q19K	**Cape Douglas,**	**3.60**	**320**	P	**Pn**	**15 10 07.7**	**-0.8**
	baz=138						
Q19K				S	**Sn**	**15 10 49.7**	**-1.3**
	baz=138						
BRSE	**Bradley Lake S**	**3.60**	**348**		**Pn**	**15 10 08.2**	**-0.4**
BRSE					**Sn**	**15 10 49.6**	**-1.6**
BRSE	**Bradley Lake S**	**3.60**	**348**	P	**Pn**	**15 10 08.3**	**-0.4**
	baz=167						
BRSE				S	**Sn**	**15 10 49.6**	**-1.6**
	baz=167						
CHIR	**Chirikof Islan**	**3.61**	**266**	Pn	**Pn**	**15 10 04.6**	**-4.1**
CHIR				IAML		15 10 39.1	
	comp=N,166nm,1.1s						
CHIR				IAML		15 12 22.9	
	comp=E,158nm,1.5s						
BRLK	**Bradley Lake**	**3.65**	**347**		**Pn**	**15 10 08.7**	**-0.5**
BRLK					**Sn**	**15 10 51.0**	**-1.2**
HOM	**Homer**	**3.66**	**340**		**Pn**	**15 10 09.2**	**-0.2**
HOM	**Homer**	**3.66**	**340**	P	**Pn**	**15 10 09.2**	**-0.2**
	baz=159						
SEW	**Seward**	**3.88**	**358**		**Pn**	**15 10 11.7**	**-0.6**
SEW	**Seward**	**3.88**	**358**	P	**Pn**	**15 10 11.7**	**-0.6**
	baz=178						
P23K	**Montague Islan**	**3.89**	**14**		**Pn**	**15 10 12.2**	**-0.4**
P23K					**Sn**	**15 10 55.4**	**-2.8**
P23K	**Montague Islan**	**3.89**	**14**	P	**Pn**	**15 10 12.2**	**-0.4**
	baz=195						
P23K				S	**Sn**	**15 10 55.4**	**-2.8**
	baz=195						
P19K	**Oil Pt**	**4.03**	**330**		**Sn**	**15 11 00.6**	**-1.2**
P19K	**Oil Pt**	**4.03**	**330**	S	**Sn**	**15 11 00.6**	**-1.2**
	baz=148						
CNTC	**Contact Creek**	**4.15**	**302**		**Pn**	**15 10 15.1**	**-1.1**
Q17K	**Contact Creek**	**4.15**	**302**	P	**Pn**	**15 10 15.1**	**-1.1**
	baz=118						
O20K	**Slope Mountain**	**4.25**	**336**		**Pn**	**15 10 17.4**	**-0.2**
O20K	**Slope Mountain**	**4.25**	**336**	P	**Pn**	**15 10 17.4**	**-0.2**
	baz=154						
O22K	**Cooper Landing**	**4.26**	**357**		**Pn**	**15 10 17.6**	**0.0**
O22K	**Cooper Landing**	**4.26**	**357**	IAML		15 11 20.6	
	comp=E,81nm,0.6s						
O22K	**Cooper Landing**	**4.26**	**357**	P	**Pn**	**15 10 17.6**	**0.0**
	baz=176						
IVE	**Iliamna Volcan**	**4.29**	**334**		**Pn**	**15 10 17.7**	**-0.4**
HIN	**Hinchinbrook I**	**4.41**	**18**		**Pn**	**15 10 19.6**	**-0.1**
HIN	**Hinchinbrook I**	**4.41**	**18**	IAML		15 11 11.0	
	comp=N,71nm,0.6s						
HIN				IAML		15 11 17.6	
	comp=E,61nm,1.2s						
KAIM	**Kayak Island**	**4.49**	**33**		**Pn**	**15 10 20.4**	**-0.4**
KAIM	**Kayak Island**	**4.49**	**33**	IAML		15 11 12.5	
	comp=E,54nm,1.2s						
KAIM				IAML		15 11 14.6	
	comp=N,83nm,1.2s						
KAIM	**Kayak Island**	**4.49**	**33**	P	**Pn**	**15 10 20.4**	**-0.4**
	baz=216						
RED	**Redoubt Volcan**	**4.59**	**337**		**Pn**	**15 10 21.9**	**-0.3**
RDSO	**Redoubt South**	**4.62**	**338**		**Pn**	**15 10 22.2**	**-0.4**
RSO	**Redoubt South**	**4.62**	**338**	Pn	**Pn**	**15 10 23.3**	**+0.5**
RDT	**Redoubt**	**4.66**	**340**		**Pn**	**15 10 22.9**	**-0.2**
NCT	**North Crescent**	**4.75**	**337**		**Pn**	**15 10 24.2**	**-0.3**
RAGM	**Ragged Mountai**	**4.80**	**28**		**Pn**	**15 10 24.3**	**-0.7**
SUCK	**Suckling Hills**	**4.81**	**35**	Pn	**Pn**	**15 10 26.1**	**+1.0**
SUCK				IAML		15 11 24.6	
	comp=E,32nm,1.3s						
SUCK				IAML		15 11 36.4	
	comp=N,35nm,0.8s						
O18K	**Koktuh Hills**	**4.82**	**321**		**Pn**	**15 10 24.9**	**-0.4**
O18K	**Koktuh Hills**	**4.82**	**321**	IAML		15 11 23.9	
	comp=N,19nm,1.3s						
O18K	**Koktuh Hills**	**4.82**	**321**	P	**Pn**	**15 10 24.9**	**-0.4**
	baz=138						
HMT	**Hamilton**	**4.87**	**30**	Pn	**Pn**	**15 10 26.7**	**+0.7**
RC01	**Rabbit Creek A**	**4.87**	**357**		**Pn**	**15 10 25.8**	**-0.2**
RC01				IAML		15 11 23.0	
	comp=N,17nm,0.6s						
RC01				IAML		15 11 32.0	
	comp=E,21nm,0.7s						
NICHA	**Nichawak Mount**	**4.88**	**33**		**Pn**	**15 10 26.3**	**+0.2**
BERG	**Berg Lake**	**5.08**	**33**		**Pn**	**15 10 28.8**	**-0.1**
BERG	**Berg Lake**	**5.08**	**33**	IAML		15 11 27.1	
	comp=N,48nm,1.0s						
SNH	**Sunshine Point**	**5.20**	**38**		**Pn**	**15 10 30.1**	**-0.4**
SNH	**Sunshine Point**	**5.20**	**38**	IAML		15 11 39.7	
	comp=E,29nm,1.1s						
SNH				IAML		15 12 03.4	
	comp=N,24nm,1.3s						
KHIT	**Khitrov Hills**	**5.26**	**34**		**Pn**	**15 10 31.2**	**-0.2**
SPCP	**Crater Peak Br**	**5.27**	**344**		**Pn**	**15 10 31.4**	**-0.2**
SUA	**Susitna One**	**5.30**	**352**		**Pn**	**15 10 31.9**	**-0.1**
SUA	**Susitna One**	**5.30**	**352**	P	**Pn**	**15 10 31.9**	**-0.1**
	baz=171						
N19K	**Bonanza Creek**	**5.35**	**331**		**Pn**	**15 10 32.1**	**-0.5**
N19K	**Bonanza Creek**	**5.35**	**331**	P	**Pn**	**15 10 32.1**	**-0.5**
	baz=148						
PMR	**Palmer**	**5.37**	**0**	Pn	**Pn**	**15 10 32.4**	**-0.4**
WAX	**Waxell Ridge**	**5.39**	**36**		**Pn**	**15 10 33.5**	**+0.3**
STLK	**Strandline Lak**	**5.45**	**347**		**Pn**	**15 10 33.9**	**0.0**
MESA	**MESA**	**5.51**	**41**		**Pn**	**15 10 34.9**	**-0.1**
MESA	**MESA**	**5.51**	**41**	P	**Pn**	**15 10 34.9**	**-0.1**
	baz=226						
CRQM	**Cirque**	**5.54**	**33**		**Pn**	**15 10 36.1**	**+0.8**
KLU	**Klutina**	**5.54**	**17**	Pn	**Pn**	**15 10 36.1**	**+0.8**
GHO	**Glory Hole Cre**	**5.55**	**1**		**Pn**	**15 10 35.3**	**-0.1**
SML	**Sawmill**	**5.61**	**4**	Pn	**Pn**	**15 10 36.8**	**+0.7**
N18K	**Kilae Creek**	**5.66**	**325**		**Pn**	**15 10 36.3**	**-0.5**
N18K	**Kilae Creek**	**5.66**	**325**	P	**Pn**	**15 10 36.3**	**-0.5**
	baz=140						
ISLE	**Juniper Island**	**5.68**	**37**		**Pn**	**15 10 36.8**	**-0.4**
BAGL	**Bagley Icefiel**	**5.68**	**38**		**Pn**	**15 10 37.0**	**-0.1**
SCM	**Sheep Creek Mo**	**5.70**	**9**	Pn	**Pn**	**15 10 38.0**	**+0.6**
O16K	**Kokwok River B**	**5.80**	**309**		**Pn**	**15 10 38.7**	**0.0**
O16K	**Kokwok River B**	**5.80**	**309**	P	**Pn**	**15 10 38.7**	**0.0**
	baz=123						
SKT	**Skwentna**	**5.88**	**349**	Pn	**Pn**	**15 10 40.2**	**+0.4**
N25K	**Chitina, Valde**	**5.89**	**22**		**Pn**	**15 10 40.1**	**0.0**
N25K	**Chitina, Valde**	**5.89**	**22**	P	**Pn**	**15 10 40.1**	**0.0**
	baz=205						
SVW2	**Sparrevohn**	**5.89**	**328**	Pn	**Pn**	**15 10 40.5**	**+0.5**
GLB	**Gilahina Butte**	**5.93**	**26**	Pn	**Pn**	**15 10 42.4**	**+1.9**
SAMH	**Samovar Hills**	**5.93**	**45**		**Pn**	**15 10 40.5**	**-0.1**
GRNC	**Granite Creek**	**5.97**	**38**	Pn	**Pn**	**15 10 42.5**	**+1.2**
TABL	**Table Mountain**	**5.99**	**42**		**Pn**	**15 10 40.7**	**-0.8**
MCARA	**McCarthy VSAT**	**6.08**	**29**		**Pn**	**15 10 44.5**	**+1.9**
M24K	**Tolsona, Glenn**	**6.09**	**14**	Pn	**Pn**	**15 10 45.3**	**+2.5**
PCA	**Pinnacle**	**6.12**	**47**		**Pn**	**15 10 42.7**	**-0.4**
PINM	**Pinnacle**	**6.12**	**47**	P	**Pn**	**15 10 42.7**	**-0.5**
	baz=234						
BARN	**Barnard Glacie**	**6.24**	**36**	Pn	**Pn**	**15 10 45.4**	**+0.5**
PNL	**Peninsula**	**6.26**	**53**		**Pn**	**15 10 44.7**	**-0.3**
PNL	**Peninsula**	**6.26**	**53**	P	**Pn**	**15 10 44.7**	**-0.3**
	baz=240						
M19K	**Big River Lodg**	**6.27**	**337**	Pn	**Pn**	**15 10 46.3**	**+1.1**
CTG	**Chitna Glacier**	**6.28**	**38**	P	**Pn**	**15 10 45.5**	**+0.1**
	baz=224						
M18K	**Stony River**	**6.28**	**330**		**Pn**	**15 10 44.8**	**-0.5**
M18K	**Stony River**	**6.28**	**330**	P	**Pn**	**15 10 44.8**	**-0.5**
	baz=145						
CTGM	**Chitina Glacie**	**6.28**	**38**		**Pn**	**15 10 45.5**	**0.0**
LOGN	**Logan Glacier**	**6.30**	**40**		**Pn**	**15 10 46.1**	**+0.4**
BCPM	**Bancas Point**	**6.30**	**50**		**Pn**	**15 10 45.5**	**-0.1**
O15K	**Ungalikthiuk R**	**6.40**	**302**		**Pn**	**15 10 47.2**	**+0.3**
O15K	**Ungalikthiuk R**	**6.40**	**302**	P	**Pn**	**15 10 47.2**	**+0.3**
	baz=114						
L19K	**White Mountain**	**6.62**	**336**	Pn	**Pn**	**15 10 49.1**	**-0.9**
M17K	**Holitna River**	**6.70**	**324**		**Pn**	**15 10 50.9**	**-0.2**
M17K	**Holitna River**	**6.70**	**324**	P	**Pn**	**15 10 50.9**	**-0.2**
	baz=138						
DHY	**Denali Highway**	**6.92**	**7**	Pn	**Pn**	**15 10 55.2**	**+0.9**
O29M	**Mount Kennedy**	**6.94**	**50**		**Pn**	**15 10 55.6**	**+1.2**
N15K	**Kwethluk River**	**6.96**	**309**	Pn	**Pn**	**15 10 55.1**	**+0.4**
P29M	**Windy Craggy**	**7.00**	**56**		**Pn**	**15 10 54.5**	**-0.6**
P29M	**Windy Craggy**	**7.00**	**56**	P	**Pn**	**15 10 54.6**	**-0.6**
	baz=245						
M27K	**Edge Creek, AK**	**7.19**	**28**	Pn	**Pn**	**15 10 59.2**	**+1.2**
RND	**Reindeer**	**7.19**	**1**	Pn	**Pn**	**15 10 58.4**	**+0.5**
S31K	**Pelican**	**7.29**	**71**		**Pn**	**15 10 56.5**	**-2.5**
S31K	**Pelican**	**7.29**	**71**	P	**Pn**	**15 10 56.6**	**-2.5**
	baz=260						
CAST	**Castle Rocks**	**7.34**	**350**	Pn	**Pn**	**15 11 00.0**	**+0.1**
KTH	**Kantishna Hill**	**7.39**	**354**	Pn	**Pn**	**15 11 01.8**	**+1.2**
L16K	**Owhat River**	**7.62**	**320**	Pn	Pn	15 10 59.3	-4.3
HYT	**Haines Junctio**	**7.66**	**48**	Pn	**Pn**	**15 11 05.0**	**+0.7**
SIT	**Sitka**	**7.71**	**78**		**Pn**	**15 11 01.8**	**-3.1**
SIT	**Sitka**	**7.71**	**78**	P	**Pn**	**15 11 01.8**	**-3.1**
	baz=268						
BESE	**Bessie Mountai**	**8.11**	**67**		**Pn**	**15 11 09.5**	**-0.9**
S32K	**Killisnoo**	**8.12**	**75**		**Pn**	**15 11 08.6**	**-2.0**
S32K	**Killisnoo**	**8.12**	**75**	P	**Pn**	**15 11 08.6**	**-2.0**
	baz=266						
R32K	**Eaglecrest**	**8.23**	**70**	Pn	**Pn**	**15 11 11.1**	**-0.9**
O30N	**Mendenhall**	**8.24**	**51**	Pn	**Pn**	**15 11 12.7**	**+0.5**
M29M	**Somme Creek**	**8.29**	**37**	Pn	**Pn**	**15 11 13.8**	**+0.8**
JIS	**Juneau Island**	**8.30**	**70**	Pn	**Pn**	**15 11 12.1**	**-0.9**
CCB	**Clear Creek Bu**	**8.47**	**4**	Pn	**Pn**	**15 11 15.5**	**+0.3**
ILAR	**Eielson Array**	**8.64**	**7**	Pn	**Pn**	**15 11 18.3**	**+0.7**
ILAR	**Eielson Array**	**8.64**	**7**	Pn	**Pn**	**15 11 16.0**	**-1.6**
	comp=N,0.2nm,0.3s,baz=188,slow=14,SNR=7.9						
ILAR				Sn	**Sn**	**15 12 50.2**	**-4.7**
	comp=N,0.2nm,0.3s,baz=190,slow=19,SNR=5.7						
	comp=N,0.4nm,0.4s						
N31M	**Braeburn, Yuko**	**8.72**	**47**	Pn	**Pn**	**15 11 19.9**	**+1.1**
WHY	**Whitehorse**	**8.72**	**54**	Pn	**Pn**	**15 11 19.7**	**+0.8**
MLY	**Manley**	**8.85**	**356**	Pn	**Pn**	**15 11 21.2**	**+0.6**
L29M	**L29M**	**8.88**	**35**	Pn	**Pn**	**15 11 22.6**	**+1.6**
P32M	**Atlin**	**8.91**	**61**	Pn	**Pn**	**15 11 21.1**	**-0.2**
P32M	**Atlin**	**8.91**	**61**	P	**Pn**	**15 11 21.2**	**-0.2**
	baz=254						
I23K	**Miro, Yukon-K**	**8.94**	**360**	Pn	**Pn**	**15 11 22.8**	**+1.0**
Q32M	**Nakina River**	**9.50**	**66**	Pn	**Pn**	**15 11 29.8**	**+0.2**
P33M	**Teslin, Yukon**	**9.52**	**59**	Pn	**Pn**	**15 11 30.0**	**+0.2**
K29M	**Barlow Dome**	**9.60**	**33**	Pn	**Pn**	**15 11 33.5**	**+2.7**
H21K	**Melozitna Rive**	**9.61**	**351**	Pn	**Pn**	**15 11 31.8**	**+0.9**
M31M	**Drury Creek, Y**	**9.66**	**46**	Pn	**Pn**	**15 11 32.9**	**+1.3**
N32M	**Quiet Lake**	**9.73**	**53**	Pn	Pn	15 11 29.1	-3.5
R33M	**Jennings River**	**10.23**	**64**	Pn	**Pn**	**15 11 38.5**	**-1.1**
J30M	**Hart River**	**10.49**	**32**	Pn	**Pn**	**15 11 44.8**	**+1.7**
G23K	**Bananza Creek**	**10.52**	**358**	Pn	**Pn**	**15 11 44.5**	**+1.1**
G24K	**Hadweenzic Riv**	**10.53**	**4**	Pn	**Pn**	**15 11 45.2**	**+1.6**
FYU	**Fort Yukon**	**10.54**	**9**	Pn	**Pn**	**15 11 44.6**	**+1.1**
DLBC	**Dease Lake**	**10.60**	**70**	Pn	**Pn**	**15 11 44.3**	**-0.3**
DLBC	**Dease Lake**	**10.60**	**70**	Pn	**Pn**	**15 11 42.2**	**-2.4**
	comp=N,0.4nm,0.3s,baz=262,slow=8.7,SNR=14						
DLBC				Sn	Sn	15 13 36.9	-6.4
	baz=267,slow=14,SNR=1.4						
	comp=N,0.6nm,0.3s						
YKA	**Yellowknife Ar**	**18.54**	**56**	P	**P**	**15 13 29.2**	**+0.1**
	baz=264,slow=10.0,SNR=4.9						
	comp=N,0.3nm,0.8s						
TXAR	**Lajitas Array**	**41.78**	**111**	P	**P**	**15 17 03.0**	**+0.8**
	comp=N,0.2nm,0.6s,baz=323,slow=10,SNR=1.9						
	comp=N,0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**48.89**	**240**	T	T	16 10 38.1	
	baz=31,slow=76,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**48.89**	**240**	T	T	16 10 34.1	
	baz=31,slow=76,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**48.91**	**240**	T	T	16 10 36.9	
	baz=31,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**50.03**	**239**	T	T	16 12 25.5	
	baz=29,slow=74						
H11S2	**WAKE ISLAND Hy**	**50.04**	**239**	T	T	16 12 41.9	
	baz=29						
H11S3	**WAKE ISLAND Hy**	**50.05**	**239**	T	T	16 12 27.7	
	baz=29,slow=74						
MKAR	**Makanchi Array**	**68.65**	**325**	P	**P**	**15 20 18.4**	**+2.6**
	comp=N,0.1nm,0.7s,baz=36,slow=7.6,SNR=1.6						
	comp=N,0.1nm,0.7s						

*NEIC **09** 15:10:39.2±2.3,5˚.23S±0˚.07×145˚.6E±0˚.1,h26km±6km, mb4.4/23,Error ellipse: s-maj=18.3km s-min=9.6km az=97.0*

*IDC **09** 15:10:42.7±2.7,5˚.38S×145˚.66E,h65km±27km,mb3.7/13, mbtmp4.1/16,ML3.8/2,Error ellipse: s-maj=26.6km s-min=11.8km az=98.0*

ISC 09 15:10:39.8±0.5,5˚31S±0˚05×145˚60E±0˚08,h35km,n57, σ1§58/60,mb4.3/19,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.69**	**29**	Pn	**Pn**	**15 11 33.7**	**-0.6**
PMG	**Port Moresby**	**4.36**	**159**		**Pn**	**15 11 45.5**	**+2.0**
PMG	**Port Moresby**	**4.36**	**159**	P	**Pn**	**15 11 44.4**	**+0.9**
	13nm,0.3s,baz=29,slow=1.8,SNR=16						
PMG				S	**Sn**	**15 12 34.7**	**+1.5**
	83nm,0.6s,baz=311,slow=17,SNR=9.8						
COEN	**Coen**	**8.92**	**195**		**Pn**	**15 12 49.1**	**+2.8**
CTA	**Charters Tower**	**14.71**	**178**	P	**Pn**	**15 14 06.4**	**+1.0**
	0.1nm,0.3s,baz=288,slow=7.6,SNR=2.5						
	10nm,1.2s						
CTAO	**Charters Tower**	**14.71**	**178**	P	**P**	**15 14 10.1**	**-1.0**
HNR	**Honiara**	**14.80**	**107**	Pn	**Pn**	**15 14 04.9**	**-1.8**
KDU	**Kakadu**	**14.89**	**240**	P	**Pn**	**15 14 10.5**	**+2.6**
MTN	**Manton Dam**	**16.12**	**241**	P	**P**	**15 14 26.1**	**-0.8**
MTN				IAmb	IAmb	15 14 32.8	
	comp=Z,18nm,0.9s						
MTN	**Manton Dam**	**16.12**	**241**	P	**P**	**15 14 26.2**	**-0.6**
WB0	**Warramunga Arr**	**18.05**	**216**	P	**Pn**	**15 14 47.3**	**-0.6**
WB0				IAmb	IAmb	15 14 49.8	
	comp=Z,24nm,1.4s						
WR0	**Warramunga Arr**	**18.11**	**215**	P	**P**	**15 14 49.6**	**+0.8**
WR0				IAmb	IAmb	15 14 56.4	
	comp=Z,21nm,0.6s						
WRAB	**Tennant Creek**	**18.20**	**216**	P	**Pn**	**15 14 50.4**	**+0.6**
WRAB				IAmb	IAmb	15 14 51.0	
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	**18.21**	**216**	P	**Pn**	**15 14 50.7**	**+0.8**
WB2				IAmb	IAmb	15 14 51.1	
	comp=Z,12nm,0.7s						
WRA	**Warram

DBIC	**Dimbokro**	**150.59**	**274**	PKPbc	**PKiKP**	**15 30 30.4**	**+0.6**
	comp=Z,11nm,0.7s,baz=96,slow=2.6,SNR=14						

*AEIC **09** 15:17:31.6±2.0,56.˚3N±0.˚1×148.˚5W±0.˚1, h2km±8km, Error ellipse: s-maj=17.0km s-min=9.9km az=190.0*
NEIC 09 15:17:30.3±1.3,**56.˚4N**±0.˚1×**148.˚47W**±0.˚03,**h20**km±10km, **ML3.1**/48,**ML3.0**(AEIC),**Error ellipse: s-maj=15.3km s-min=0.8km az=190.0**,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.62**	**303**		Pn	15 18 10.5	-0.8
KDAK	**Kodiak Island**	**2.62**	**303**		Sn	15 18 40.4	-2.1
KDAK	**Kodiak Island**	**2.62**	**303**	IAML		15 18 39.6	
	13nm,1.3s						
SYI	**Shuyak Island**	**3.03**	**317**		Pn	15 18 16.9	-0.2
SYI					Sn	15 18 52.6	-0.1
SYI	**Shuyak Island**	**3.03**	**317**	IAML		15 19 15.9	
	comp=N,29nm,1.5s						
Q23K	**Middleton Isla**	**3.20**	**20**		Pn	15 18 19.4	0.0
CNPM	**China Poot**	**3.43**	**336**		Pn	15 18 22.8	+0.3
CNPM	**China Poot**	**3.43**	**336**		Sn	15 19 02.4	-0.1
BRSE	**Bradley Lake S**	**3.52**	**341**		Pn	15 18 23.7	-0.2
BRLK	**Bradley Lake**	**3.57**	**340**		Pn	15 18 24.5	0.0
P23K	**Montague Islan**	**3.61**	**9**		Pn	15 18 25.0	-0.1
P23K					Sn	15 19 05.8	-1.2
HOM	**Homer**	**3.64**	**334**	Pn	Pn	15 18 26.4	+1.0
SEW	**Seward**	**3.71**	**352**		Pn	15 18 26.0	-0.4
SEW					Sn	15 19 07.3	-2.1
HIN	**Hinchinbrook I**	**4.10**	**14**		Pn	15 18 31.9	+0.1
HIN					Sn	15 19 17.9	-1.2
HIN	**Hinchinbrook I**	**4.10**	**14**	IAML		15 19 18.4	
	comp=N,26nm,1.5s						
HIN				IAML		15 19 25.0	
	comp=E,27nm,1.4s						
KAIM	**Kayak Island**	**4.10**	**30**		Pn	15 18 31.9	+0.2
KAIM	**Kayak Island**	**4.10**	**30**	IAML		15 19 40.2	
	comp=N,35nm,1.3s						
O22K	**Cooper Landing**	**4.11**	**351**		Sn	15 19 19.6	+0.5
O20K	**Slope Mountain**	**4.26**	**331**		Pn	15 18 34.1	+0.1
SUCK	**Suckling Hills**	**4.41**	**32**		Pn	15 18 36.2	+0.3
SUCK	**Suckling Hills**	**4.41**	**32**	IAML		15 21 13.3	
	comp=N,18nm,1.2s						
SUCK				IAML		15 21 20.9	
	comp=E,20nm,1.3s						
RAGM	**Ragged Mountai**	**4.43**	**25**		Pn	15 18 36.6	+0.2
RAGM	**Ragged Mountai**	**4.43**	**25**	IAML		15 21 29.6	
	comp=E,20nm,0.9s						
NICHA	**Nichawak Mount**	**4.49**	**30**		Pn	15 18 37.5	+0.4
HMT	**Hamilton**	**4.49**	**28**		Pn	15 18 37.3	+0.2
HMT	**Hamilton**	**4.49**	**28**	IAML		15 21 21.8	
	comp=N,25nm,0.5s						
RED	**Redoubt Volcan**	**4.58**	**332**		Pn	15 18 38.1	-0.4
RDSO	**Redoubt South**	**4.61**	**333**		Pn	15 18 38.5	-0.4
RSO	**Redoubt South**	**4.62**	**333**	Pn	Pn	15 18 39.1	+0.1
P18K	**Big Mountain,**	**4.66**	**312**	Pn	Pn	15 18 40.0	+0.5
P18K				IAML		15 21 45.8	
	comp=N,12nm,1.5s						
BERG	**Berg Lake**	**4.69**	**30**		Pn	15 18 39.8	-0.1
RC01	**Rabbit Creek A**	**4.71**	**353**		Pn	15 18 40.4	+0.3
RC01	**Rabbit Creek A**	**4.71**	**353**	IAML		15 21 20.5	
	comp=E,11nm,1.5s						
NCT	**North Crescent**	**4.75**	**332**		Pn	15 18 40.6	-0.2
SNH	**Sunshine Point**	**4.78**	**36**	Pn	Pn	15 18 38.7	-2.5
SNH				IAML		15 19 43.4	
	comp=E,15nm,1.5s						
SNH				IAML		15 21 25.1	
	comp=N,14nm,1.3s						
KHIT	**Khitrov Hills**	**4.86**	**32**		Pn	15 18 42.4	+0.1
BMRM	**Bremner River**	**4.97**	**22**		Pn	15 18 43.9	+0.2
KNK	**Knik Glacier**	**4.99**	**0**		Pn	15 18 44.2	+0.3
KNK	**Knik Glacier**	**4.99**	**0**	IAML		15 19 25.1	
	comp=E,6.9nm,1.5s						
KNK				IAML		15 22 06.5	
	comp=N,6.6nm,0.9s						
WAX	**Waxell Ridge**	**4.99**	**34**		Pn	15 18 44.0	0.0
WAX	**Waxell Ridge**	**4.99**	**34**	IAML		15 19 41.3	
	comp=E,17nm,1.4s						
BARK	**Barkley Ridge**	**5.07**	**36**		Pn	15 18 45.1	0.0
MESA	**MESA**	**5.09**	**40**		Pn	15 18 45.4	-0.1
CRQM	**Cirque**	**5.15**	**31**		Pn	15 18 46.4	+0.1
CRQM	**Cirque**	**5.15**	**31**	IAML		15 19 47.2	
	comp=E,8.1nm,1.2s						
CRQM				IAML		15 21 26.2	
	comp=N,10nm,1.4s						
SUA	**Susitna One**	**5.17**	**348**	Pn	Pn	15 18 46.3	-0.3
KLU	**Klutina**	**5.24**	**14**		Pn	15 18 48.0	+0.6
KLU	**Klutina**	**5.24**	**14**	IAML		15 22 16.1	
	comp=E,7.3nm,1.0s						
KLU				IAML		15 22 16.2	
	comp=N,11nm,0.5s						
BAGL	**Bagley Icefiel**	**5.26**	**37**		Pn	15 18 47.9	+0.2
ISLE	**Juniper Island**	**5.27**	**35**	Pn	Pn	15 18 48.0	+0.1
ISLE				IAML		15 21 28.3	
	comp=N,12nm,1.5s						
ISLE				IAML		15 22 17.6	
	comp=E,9.5nm,1.4s						
GHO	**Glory Hole Cre**	**5.35**	**358**		Pn	15 18 50.0	+0.9
GHO	**Glory Hole Cre**	**5.35**	**358**	IAML		15 22 14.1	
	comp=E,13nm,1.2s						
GHO				IAML		15 22 15.5	
	comp=N,14nm,0.9s						
STLK	**Strandline Lak**	**5.36**	**342**		Pn	15 18 49.4	+0.3
N19K	**Bonanza Creek**	**5.39**	**327**		Pn	15 18 49.3	-0.3
SPNN	**North Nagishla**	**5.40**	**338**		Pn	15 18 49.7	-0.1
N25K	**Chitina, Valde**	**5.55**	**20**		Pn	15 18 52.4	+0.7
GLB	**Gilahina Butte**	**5.57**	**24**		Pn	15 18 52.1	+0.2
PTPK	**Patty Peak**	**5.69**	**31**		Pn	15 18 54.2	+0.4
MCARA	**McCarthy VSAT**	**5.70**	**27**		Pn	15 18 54.5	+0.7
N18K	**Kilae Creek**	**5.75**	**321**		Pn	15 18 54.0	-0.5
SKT	**Skwentna**	**5.77**	**345**	Pn	Pn	15 18 51.3	-3.5
M24K	**Tolsona, Glenn**	**5.80**	**11**	Pn	Pn	15 18 56.7	+1.5
BCPM	**Bancas Point**	**5.85**	**49**		Pn	15 18 56.1	+0.3
CTGM	**Chitina Glacie**	**5.87**	**36**	Pn	Pn	15 18 56.0	-0.1
LOGN	**Logan Glacier**	**5.88**	**38**		Pn	15 18 56.3	+0.1
SVW2	**Sparrevohn**	**5.95**	**325**	Pn	Pn	15 18 56.5	-0.7
M20K	**Styx River**	**5.96**	**338**		Pn	15 18 57.2	-0.1
N17K	**Nushagak Hills**	**6.13**	**315**		Pn	15 18 59.6	-0.1
M18K	**Stony River**	**6.33**	**326**		Pn	15 19 01.9	-0.4
O29M	**Mount Kennedy**	**6.49**	**49**		Pn	15 19 05.4	+0.8
P29M	**Windy Craggy**	**6.54**	**56**		Pn	15 19 05.0	-0.2
L19K	**White Mountain**	**6.62**	**333**		Pn	15 19 05.8	-0.6
DHY	**Denali Highway**	**6.68**	**4**	Pn	Pn	15 19 05.0	-2.2
M17K	**Holitna River**	**6.80**	**321**		Pn	15 19 08.4	-0.3
S31K	**Pelican**	**6.83**	**72**		Pn	15 19 07.0	-2.1
N15K	**Kwethluk River**	**7.17**	**306**	Pn	Pn	15 19 15.1	+1.3
HYT	**Haines Junctio**	**7.21**	**48**	Pn	Pn	15 19 15.5	+0.9
KTH	**Kantishna Hill**	**7.24**	**351**	Pn	Pn	15 19 15.8	+0.9
BCAR	**Beaver Creek A**	**7.45**	**24**	Pn	Pn	15 19 18.8	+1.1
M29M	**Somme Creek**	**7.88**	**36**	Pn	Pn	15 19 24.7	+1.0
WHY	**Whitehorse**	**8.27**	**54**	Pn	Pn	15 19 27.5	-1.5
N31M	**Braeburn, Yuko**	**8.28**	**47**	Pn	Pn	15 19 28.6	-0.5
J26L	**Joseph Creek**	**8.44**	**15**	Pn	Pn	15 19 32.7	+1.4
P32M	**Atlin**	**8.44**	**62**	Pn	Pn	15 19 31.3	-0.1
L29M	**L29M**	**8.47**	**34**	Pn	Pn	15 19 31.4	-0.4
I21K	**Tanana**	**8.93**	**350**	Pn	Pn	15 19 37.1	-0.8
WRAK	**Wrangell Islan**	**8.94**	**83**	Pn	Pn	15 19 38.0	-0.1
M31M	**Drury Creek, Y**	**9.22**	**45**	Pn	Pn	15 19 43.4	+1.4
MAYO	**Mayo, Yukon**	**9.53**	**36**	Pn	Pn	15 19 44.4	-1.8
FARO	**Faro, Yukon**	**9.65**	**47**	Pn	Pn	15 19 48.4	+0.6
R33M	**Jennings River**	**9.77**	**65**	Pn	Pn	15 19 49.7	+0.1
IMAR	**Indian Mountai**	**9.90**	**347**	Pn	Pn	15 19 52.2	+0.9

*ISN **09** 15:29:41.1±1.4,34.˚65N×45.˚74E, h2km±999km, ML2.5*
*TEH **09** 15:29:42.8,34.˚64N×45.˚77E, h8km±96km, ML2.6*
ISC 09 15:29:42.4±1.9,**34.˚7N**±0.˚1×**45.˚79E**±0.˚06,**h8**km±13km,**n10,** σ1§**05**/16,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.25**	**220**	Pg	**Pg**	**15 29 47.4**	**-0.1**
IDHR	**Dehrash**	**0.49**	**90**	Pg	**Pg**	**15 29 52.5**	**+0.5**
IDHR				Sg	**Sb**	**15 30 00.8**	**-0.2**
IGHG	**Ghaleghazi**	**0.74**	**120**	Pg	**Pg**	**15 29 57.0**	**+0.2**
IGHG				Sg	**Sn**	**15 30 09.1**	**-2.0**
KCHF	**Cheshme Sefid,**	**1.12**	**112**	Pg	**Pb**	**15 30 04.0**	**-0.2**
KCHF				Sg	**Sn**	**15 30 19.8**	**-0.5**
ILBA	**Ilam Banvizeh**	**1.13**	**162**	Pg	**Pb**	**15 30 02.8**	**-1.5**
IBDR	**Badra**	**1.59**	**176**	*e*Pn	**Pn**	**15 30 11.0**	**+0.1**
IBDR				*e*Sn	**Sb**	**15 30 33.0**	**+0.7**
IBDR				AML	AML	15 30 39.6	
	comp=N,75nm,0.7s						
IBDR				AML	AML	15 30 40.7	
	comp=E,75nm,0.6s						
IBZA	**Bozab**	**1.73**	**97**	Pg	**Pg**	**15 30 15.8**	**+0.2**
BHD	**Baghdad**	**1.84**	**220**	*e*Pn	**Pn**	**15 30 15.0**	**+0.6**
BHD				*e*Sn	**Sb**	**15 30 39.0**	**-0.6**
IKFM	**Kafar-mosalman**	**2.07**	**124**	Pn	**Pb**	**15 30 20.1**	**-0.3**
RAFI	**Al-Rafai**	**2.98**	**175**	*e*Pn	**Pn**	**15 30 31.0**	**+1.0**
RAFI				*e*Sn	**Sn**	**15 31 08.0**	**+2.0**

*MDD **09** 15:32:57.7±0.6,35.˚52N×4.˚61W, h94km±8km, Mb2.6/11, Error ellipse: s-maj=4.6km s-min=3.9km az=137.0*
*IGIL **09** 15:32:58.9,35.˚52N×4.˚61W, h94km*
*INMG **09** 15:32:58.0±1.5,35.˚59N×4.˚55W, h89km±5km, ML2.2, Error ellipse: s-maj=4.6km s-min=4.4km az=176.0*
*SFS **09** 15:32:58.4,35.˚51N×4.˚67W, h76km, ML2.4/14, ML2.9/7, MLv2.2/14*
*CNRM **09** 15:32:60.0,35.˚26N×5.˚01W, h97km*
ISC 09 15:32:55.9±1.3,**35.˚53N**±0.˚03×**4.˚63W**±0.˚04,**h107**km±9km, **n47**,σ1§**38**/71,**10C-1D**,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIR	**Smir Dam**	**0.63**	**284**	P	**Pn**	**15 33 16.0**	**+2.6**
SMIR	**Smir Dam**	**0.63**	**284**	S	**Sn**	**15 33 27.9**	**+1.5**
CEU	**Ceuta**	**0.71**	**302**	P	**Pn**	**15 33 14.2**	**+0.3**
ECEU	**Ceuta**	**0.71**	**302**	P	**Pn**	**15 33 12.2**	**-1.8**
ECEU	**Ceuta**	**0.71**	**302**	P	**Pn**	**15 33 14.6**	**+0.5**
ECEU				⇑*i*Vmb_V		15 33 15.2	
	1µm,SNR=3.2						
EMIJ	**Mijas**	**1.04**	**354**	P	**Pn**	**15 33 17.9**	**+0.6**
EMIJ				S	**Sn**	**15 33 31.9**	**-1.5**
EMIJ	**Mijas**	**1.04**	**354**	P	**Pn**	**15 33 17.9**	**+0.6**
EMIJ				S	**Sn**	**15 33 32.3**	**-1.1**
AKLM	**AKL**	**1.20**	**148**	P	**Pn**	**15 33 20.8**	**+1.8**
AKLM	**AKL**	**1.20**	**148**	S	**Sn**	**15 33 37.2**	**+0.6**
EMAL	**Malaga-Limoner**	**1.24**	**8**	S	**Sn**	**15 33 35.0**	**-2.3**
EALB	**Alboran**	**1.36**	**72**	P	**Pn**	**15 33 22.5**	**+1.6**
ELGU	**Los Guajares,**	**1.57**	**31**	P	**Pn**	**15 33 23.7**	**+0.3**
ELGU				S	**Sn**	**15 33 43.1**	**-1.2**
ELGU	**Los Guajares,**	**1.57**	**31**	P	**Pn**	**15 33 23.7**	**+0.3**
ELGU				⇑*i*Vmb_V		15 33 25.0	
	280nm,SNR=1.3						
ELGU				S	**Sn**	**15 33 42.9**	**-1.4**
IFR	**Ifrane**	**2.05**	**192**	P	**Pn**	**15 33 29.9**	**+0.4**
IFR				S	**Sn**	**15 33 52.7**	**-2.4**
ECAB	**El Cabril**	**2.62**	**346**	P	**Pn**	**15 33 37.9**	**+1.2**
ECAB				S	**Sn**	**15 34 07.1**	**-1.1**
ECAB	**El Cabril**	**2.62**	**346**	P	**Pn**	**15 33 38.0**	**+1.2**
ECAB				⇑*i*Vmb_V		15 33 39.8	
	90nm,SNR=1.0						
ECAB				S	**Sn**	**15 34 07.1**	**-1.1**
EADA	**Adamuz**	**2.64**	**1**	P	**Pn**	**15 33 38.7**	**+1.6**
EADA				S	**Sn**	**15 34 07.1**	**-1.5**
EADA	**Adamuz**	**2.64**	**1**	⇑P	**Pn**	**15 33 38.6**	**+1.6**
EADA				⇑*i*Vmb_V		15 33 39.0	
	398nm,SNR=4.1						
EADA				S	**Sn**	**15 34 08.0**	**-0.6**
MD31	**MD31**	**2.66**	**182**	P	**Pn**	**15 33 37.6**	**+0.3**
MD31	**MD31**	**2.66**	**182**	S	**Sn**	**15 34 08.1**	**-1.1**
ZHG	**ZHG**	**2.66**	**219**	P	**Pn**	**15 33 37.4**	**+0.1**
ZHG	**ZHG**	**2.66**	**219**	S	**Sn**	**15 34 07.3**	**-1.9**
MDT	**Midelt**	**2.71**	**180**	P	**Pn**	**15 33 39.4**	**+1.4**
MDT	**Midelt**	**2.71**	**180**	S	**Sn**	**15 34 08.6**	**-1.8**
EGRO	**El Granado**	**3.05**	**312**	P	**Pn**	**15 33 43.7**	**+1.3**
EGRO				S	**Sn**	**15 34 17.4**	**-0.8**
EGRO	**El Granado**	**3.05**	**312**	⇓P	**Pn**	**15 33 43.7**	**+1.3**
EGRO				⇑*i*Vmb_V		15 33 43.8	
	531nm,SNR=6.4						
EGRO				S	**Sn**	**15 34 17.2**	**-1.0**
PVAQ	**Vaqueiros**	**3.11**	**308**	*e*P	**Pn**	**15 33 44.5**	**+1.2**
PVAQ				*e*S	**Sn**	**15 34 19.4**	**-0.4**
PBDV	**Barranco-do-Ve**	**3.17**	**304**	*e*P	**Pn**	**15 33 45.3**	**+1.3**
PBDV				*e*S	**Sn**	**15 34 20.8**	**-0.3**
PBDV				A	A	15 34 21.4	
	4.6nm,0.4s						
PBAR	**Barrancos**	**3.27**	**325**	*e*P	**Pn**	**15 33 46.9**	**+1.5**
PBAR				*e*S	**Sn**	**15 34 23.0**	**-0.6**
PBAR				A	A	15 34 24.4	
	3.2nm,0.2s						
PBAR	**Barrancos**	**3.27**	**325**	P	**Pn**	**15 33 46.9**	**+1.5**
PBAR				S	**Sn**	**15 34 22.4**	**-1.3**
PSIM	**Granatula de C**	**3.36**	**12**	P	**Pn**	**15 33 48.1**	**+1.5**
PSIM				S	**Sn**	**15 34 24.0**	**-1.8**
PCVE	**Castro Verde**	**3.45**	**308**	*e*P	**Pn**	**15 33 49.1**	**+1.3**
PCVE				*e*S	**Sn**	**15 34 27.3**	**-0.7**
PCVE				A	A	15 34 28.7	
	2.2nm,0.1s						
PCVE	**Castro Verde**	**3.45**	**308**	P	**Pn**	**15 33 49.0**	**+1.2**
PCVE				S	**Sn**	**15 34 26.4**	**-1.6**
MESJ	**Messejana**	**3.69**	**310**	*e*P	**Pn**	**15 33 52.4**	**+1.4**
MESJ				*e*S	**Sn**	**15 34 33.0**	**-0.7**
MESJ				A	A	15 34 33.8	
	1.4nm,0.2s						
MESJ	**Messejana**	**3.69**	**310**	*e*P	**Pn**	**15 33 52.2**	**+1.2**
MORF	**Marmelete**	**3.69**	**300**	*e*P	**Pn**	**15 33 52.4**	**+1.3**
MORF				*e*S	**Sn**	**15 34 33.4**	**-0.4**
MORF				A	A	15 34 34.6	
	3.5nm,0.3s						
MORF	**Marmelete**	**3.69**	**300**	*e*P	**Pn**	**15 33 52.2**	**+1.1**
EBAD	**Badajoz**	**3.74**	**330**	P	**Pn**	**15 33 53.0**	**+1.4**
EBAD				⇑*i*Vmb_V		15 33 54.8	
	94nm,SNR=0.8						
EBAD				S	**Sn**	**15 34 33.8**	**-1.1**
PTEO	**Sao Teotonio**	**3.86**	**303**	*e*P	**Pn**	**15 33 55.0**	**+1.7**
PTEO				*e*S	**Sn**	**15 34 37.1**	**-0.6**
ETOB	**Tobarra**	**3.97**	**37**	P	**Pn**	**15 33 56.6**	**+1.7**
ETOB				⇑*i*Vmb_V		15 33 58.1	
	132nm,SNR=1.0						
PAB	**San Pablo**	**4.02**	**3**	P	**Pn**	**15 33 56.5**	**+1.0**
PAB				⇑*i*Vmb_V		15 33 57.3	
	84nm,SNR=1.2						
PAB				S	**Sn**	**15 34 39.3**	**-2.4**
EVO	**Evora**	**4.04**	**319**	S	**Sn**	**15 34 39.5**	**-2.6**
PNCL	**Nicolau / Gran**	**4.05**	**311**	*e*P	**Pn**	**15 33 57.3**	**+1.5**
PNCL				*e*S	**Sn**	**15 34 41.0**	**-1.3**
PNCL				A	A	15 34 43.2	
	2.0nm,0.2s						
PESTR	**Estremoz**	**4.08**	**326**	*e*S	**Sn**	**15 34 42.2**	**-1.0**
ESDC	**Sonseca Array**	**4.17**	**7**	⇑*i*Vmb_V		15 34 02.4	
	109nm,SNR=1.4						
ESDC				S	**Sn**	**15 34 43.6**	**-1.8**
PMRV	**Marv??o**	**4.47**	**331**	*e*S	**Sn**	**15 34 51.6**	**-0.8**
PMTG	**Montargil**	**4.55**	**322**	*e*S	**Sn**	**15 34 53.3**	**-1.0**

*IDC **09** 15:34:48.4±1.0,36.˚65N×5.˚03E, h0km, mb3.6/7, mbtmp3.6/10, ML3.4/3, MS4.2/3, Error ellipse: s-maj=25.6km s-min=20.0km az=173.0*
*CRAAG **09** 15:34:50.6,36.˚47N×5.˚23E, Ml3.7, Algerie 05km SW Kherrata*
*MDD **09** 15:34:53.6±0.7,36.˚53N×5.˚31E, h23km±9km, Mb4.5/17, M_mb4.0/17, Error ellipse: s-maj=8.9km s-min=4.2km az=153.0*
*LDG **09** 15:34:54.5±0.1,36.˚64N×5.˚21E, h10km, Ml3.6/18, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
ISC 09 15:34:50.5±0.6,**36.˚64N**±0.˚05×**5.˚20E**±0.˚04,**h13**km,**n57,** σ2§**21**/82,**mb3.6**/8,**MS4.2**/3,**11C**,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAZD	**Ain Tagrout**	**0.46**	**185**	P	**Pg**	**15 34 58.0**	**-1.6**
DFRA	**Djebel Bou Aff**	**0.55**	**99**	P	**Pg**	**15 35 02.2**	**+0.9**
CKHR	**Kef el Ahmar**	**0.67**	**158**	P	**Pg**	**15 35 01.7**	**-1.8**
CBHR	**Beni Haroun da**	**0.86**	**94**	P	**Pg**	**15 35 08.2**	**+1.0**
COAT	**Oued Athmania**	**0.96**	**114**	P	**Pg**	**15 35 08.8**	**-0.2**
CTEI	**Djebel Teioual**	**1.13**	**120**	P	**Pb**	**15 35 11.2**	**-0.7**
KEST	**Kesra**	**3.47**	**104**	Pn	**Pn**	**15 35 45.8**	**+1.5**
	5.0nm,0.3s,baz=206,slow=4.0,SNR=36						
KEST				S	**Sn**	**15 36 26.4**	**+1.1**
	1.3nm,0.3s,baz=196,slow=18,SNR=2.1 30nm,0.7s						
ETOS	**Mallorca**	**3.65**	**330**	Pn	**Pn**	**15 35 49.1**	**+2.5**
ETOS				Sn	**Sn**	**15 36 28.9**	**-0.7**
ETOS	**Mallorca**	**3.65**	**330**	Pn	**Pn**	**15 35 48.9**	**+2.3**
ETOS				⇑*i*Vmb_V		15 35 51.2	
	1µm,SNR=3.7						
ETOS				Sn	**Sn**	**15 36 27.2**	**-2.4**
EIBI	**Ibiza**	**3.88**	**309**	Pn	**Pn**	**15 35 52.5**	**+2.7**
EIBI				Sn	**Sn**	**15 36 35.2**	**+0.1**
EIBI	**Ibiza**	**3.88**	**309**	Pn	**Pn**	**15 35 52.7**	**+3.0**
EIBI				⇑*i*Vmb_V		15 35 57.0	
	505nm,SNR=1.8						
EIBI				Sn	**Sn**	**15 36 35.5**	**+0.3**
VSL	**Villasalto**	**4.36**	**48**	Pn	**Pn**	**15 35 57.5**	**+1.1**
VSL				Sn	**Sn**	**15 36 45.1**	**-2.0**
EBEN2	**Beniarda presa**	**4.74**	**297**	Pn	**Pn**	**15 36 03.5**	**+1.8**
EBEN2				⇑*i*Vmb_V		15 36 06.7	
	416nm,SNR=1.4						
CART	**Cartagena**	**5.05**	**283**	Sn	**Sn**	**15 37 02.1**	**-1.9**
CART				Pn	**Pn**	**15 36 07.0**	**+1.2**
EMUR	**La Murta**	**5.28**	**285**	Pn	**Pn**	**15 36 11.3**	**+2.2**
EZAR	**Zarzadilla de**	**5.64**	**285**	Pn	**Pn**	**15 36 16.7**	**+2.6**
EZAR				⇑*i*Vmb_V		15 36 18.5	
	276nm,SNR=1.8						
EVIV	**Cofrentes, Val**	**5.64**	**300**	Pn	**Pn**	**15 36 17.1**	**+3.0**
EVIV				⇑*i*Vmb_V		15 36 19.5	
	315nm,SNR=2.7						
EVIV				Sn	**Sn**	**15 37 18.4**	**-0.4**
ECHE	**Chera**	**5.69**	**303**	Pn	**Pn**	**15 36 17.6**	**+2.8**
ECHE	**Chera**	**5.69**	**303**	Pn	**Pn**	**15 36 17.2**	**+2.5**
ECHE				⇑*i*Vmb_V		15 36 20.5	
	255nm,SNR=1.5						
EPOB	**Poblet**	**5.70**	**327**	Pn	**Pn**	**15 36 17.0**	**+2.1**
EPOB				⇑*i*Vmb_V		15 36 21.1	
	224nm,SNR=1.7						
EPOB				Sn	**Sn**	**15 37 18.3**	**-2.0**
ETOB	**Tobarra**	**5.72**	**293**	Pn	**Pn**	**15 36 17.9**	**+2.7**
ETOB				Sn	**Sn**	**15 37 18.4**	**-2.3**
ETOB	**Tobarra**	**5.72**	**293**	Pn	**Pn**	**15 36 18.5**	**+3.3**
ETOB				⇑*i*Vmb_V		15 36 23.0	
	178nm,SNR=1.6						
ETOB				Sn	**Sn**	**15 37 20.8**	**+0.1**
EMOS	**Mosqueruela**	**5.80**	**312**	Pn	**Pn**	**15 36 19.5**	**+3.1**
EMOS				⇑*i*Vmb_V		15 36 22.7	
	294nm,SNR=2.3						
EMOS				Sn	**Sn**	**15 37 21.1**	**-1.8**
EMIR	**Miracle**	**5.99**	**333**	Pn	**Pn**	**15 36 22.3**	**+3.4**
EMIR				⇑*i*Vmb_V		15 36 22.9	
	646nm,SNR=3.2						
EMIR				Sn	**Sn**	**15 37 26.8**	**-0.6**
EJON	**La Jonquera**	**6.08**	**344**	Pn	**Pn**	**15 36 22.0**	**+2.0**
EJON				Sn	**Sn**	**15 37 27.1**	**-2.2**
EJON	**La Jonquera**	**6.08**	**344**	Pn	**Pn**	**15 36 22.1**	**+2.1**
EJON				⇑*i*Vmb_V		15 36 24.8	
	148nm,SNR=1.2						
EJON				Sn	**Sn**	**15 37 27.2**	**-2.2**
EBER	**Berja**	**6.50**	**275**	Pn	**Pn**	**15 36 27.3**	**+1.3**
PGF	**Pioggiola**	**6.59**	**25**	*e*Pn	**Pn**	**15 36 27.5**	**+0.3**
PGF				*e*Sn	**Sn**	**15 37 39.3**	**-2.9**
	8.3nm,0.3s						
LMR	**La Mourre**	**6.77**	**8**	*e*Pn	**Pn**	**15 36 30.7**	**+1.3**
LMR				*e*Sn	**Sn**	**15 37 43.6**	**-2.7**
	10nm,0.3s						
MTLF	**Montolieu**	**7.08**	**342**	*e*Pn	**Pn**	**15 36 35.4**	**+1.7**
MTLF				*e*Sn	**Sn**	**15 37 51.4**	**-2.6**
	8.9nm,0.4s						
SMRF	**Simiane la Rot**	**7.34**	**2**	*e*Sn	**Sn**	**15 37 57.5**	**-3.0**
	3.7nm,0.5s						
EPF	**Esparros**	**7.40**	**331**	*e*Pn	**Pn**	**15 36 41.5**	**+3.3**
EPF				*e*Sn	**Sn**	**15 37 59.5**	**-2.6**
	31nm,0.5s						
SBF	**Sospel**	**7.42**	**13**	*e*Pn	**Pn**	**15 36 39.7**	**+1.2**
SBF				*e*Sn	**Sn**	**15 37 58.7**	**-3.8**
	14nm,0.3s						
LASF	**Ste Croix**	**7.50**	**353**	*e*Pn	**Pn**	**15 36 41.6**	**+2.0**
LASF				*e*Sn	**Sn**	**15 38 01.6**	**-2.9**
	5.3nm,0.4s						
ETSF	**Etsaut**	**7.67**	**326**	*e*Pn	**Pn**	**15 36 45.4**	**+3.5**
ETSF				*e*Sn	**Sn**	**15 38 06.5**	**-2.1**
	7.6nm,0.4s						
ESDC	**Sonseca Array**	**7.83**	**296**	Pn	**Pn**	**15 36 43.1**	**-1.1**
	0.2nm,0.3s,baz=38,slow=18,SNR=3.9 0.6nm,0.4s						
SJPF	**Ste Jean**	**8.14**	**325**	*e*Pn	**Pn**	**15 36 51.2**	**+2.9**
SJPF				*e*Sn	**Sn

ML2.7/9,**ML2.8**/49(NEIC),**Error ellipse: s-maj=5.6km s-min=2.1km az=135.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HPO	**Honuapo**	**0.53**	**307**		Pg	16 07 29.1	-0.7
HTC	**Hot Caves**	**0.54**	**329**		Pg	16 07 29.5	-0.5
HLP	**Hilina Pali**	**0.55**	**340**		Pg	16 07 29.8	-0.6
HLP					Sg	16 07 37.5	-0.2
HLP	**Hilina Pali**	**0.55**	**340**	IAML		16 07 40.8	
	comp=N,553nm,2.4s						
HLP				IAML		16 07 46.5	
	comp=E,627nm,2.3s						
KNHH	**Kane Nui o Ham**	**0.60**	**354**		Pg	16 07 30.1	-1.3
PUH	**Pauahi**	**0.60**	**350**		Pg	16 07 30.0	-1.4
PUH					Sg	16 07 37.7	-1.7
PUH	**Pauahi**	**0.60**	**350**	IAML		16 07 40.9	
	comp=N,450nm,3.5s						
JCUZ	**Jacuzzi**	**0.61**	**0**		Pg	16 07 30.1	-1.3
JCUZ					Sg	16 07 38.2	-1.2
STCH	**Steam Cracks**	**0.61**	**358**		Pg	16 07 30.1	-1.4
STCH	**Steam Cracks**	**0.61**	**358**	IAML		16 07 38.5	
	comp=E,601nm,0.1s						
STCH				IAML		16 07 39.0	
	comp=N,415nm,0.1s						
NPOC	**North of Pu'u**	**0.61**	**360**		Pg	16 07 30.2	-1.4
NPOC					Sg	16 07 38.1	-1.6
SDHHI	**Sand Hill**	**0.64**	**344**		Pg	16 07 30.4	-1.6
KKO	**Keanakako`i**	**0.64**	**346**		Pg	16 07 30.5	-1.6
KKO	**Keanakako`i**	**0.64**	**346**	IAML		16 07 48.6	
	comp=E,649nm,1.6s						
RIM	**Rim**	**0.64**	**346**		Pg	16 07 30.4	-1.6
RIM	**Rim**	**0.64**	**346**	IAML		16 07 48.5	
	comp=E,634nm,1.2s						
BYL	**Byron's Ledge**	**0.65**	**347**		Pg	16 07 30.5	-1.8
BYL	**Byron's Ledge**	**0.65**	**347**	IAML		16 07 42.7	
	comp=N,600nm,1.4s						
WRMHI	**West Rim**	**0.66**	**344**		Pg	16 07 30.5	-1.8
OBL	**Observatory Le**	**0.66**	**345**	Pg	Pg	16 07 30.6	-1.9
HATHI	**Halema'uma'u T**	**0.66**	**347**		Pg	16 07 30.6	-1.8
HATHI					Sg	16 07 38.9	-2.4
HATHI	**Halema'uma'u T**	**0.66**	**347**	IAML		16 07 44.4	
	comp=N,488nm,1.5s						
HATHI				IAML		16 07 50.5	
	comp=E,686nm,1.4s						
JOKA	**Jonika Flow**	**0.66**	**8**		Pg	16 07 30.7	-1.8
SBLHI	**Steaming Bluff**	**0.67**	**347**		Pg	16 07 30.6	-1.9
SBLHI	**Steaming Bluff**	**0.67**	**347**	IAML		16 07 39.7	
	comp=E,470nm,1.3s						
SBLHI				IAML		16 07 41.1	
	comp=N,454nm,1.0s						
UWB	**Uwekahuna B**	**0.67**	**346**		Pg	16 07 30.6	-1.9
UWB	**Uwekahuna B**	**0.67**	**346**	IAML		16 07 40.7	
	comp=N,419nm,1.7s						
UWE	**Uwekahuna**	**0.67**	**345**		Pg	16 07 30.7	-1.9
UWE	**Uwekahuna**	**0.67**	**345**	IAML		16 07 39.2	
	comp=N,898nm,1.5s						
UWE				IAML		16 07 50.0	
	comp=E,870nm,1.8s						
KHU	**Kahuku**	**0.67**	**314**		Pn	16 07 39.6	+4.4
KHU	**Kahuku**	**0.67**	**314**		Pg	16 07 30.9	-1.8
KHU				IAML		16 07 51.4	
	comp=E,340nm,3.8s						
KHU	**Kahuku**	**0.67**	**314**	IAML		16 07 39.0	
	comp=N,331nm,4.5s						
RSD	**Rainshed**	**0.70**	**347**		Pg	16 07 31.1	-2.2
RSD	**Rainshed**	**0.70**	**347**	IAML		16 07 51.5	
	comp=E,373nm,4.2s						
MLH	**Mauna Loa**	**0.76**	**340**		Pg	16 07 32.2	-2.2
MLH				IAML		16 08 00.5	
	comp=N,449nm,3.6s						
MLH	**Mauna Loa**	**0.76**	**340**		Sg	16 07 41.6	-2.8
MLH	**Mauna Loa**	**0.76**	**340**	IAML		16 07 37.6	
	comp=E,294nm,3.5s						
MWH	**Moku'aweowe**	**0.84**	**327**		Pg	16 07 33.1	-2.9
MWH					Pn	16 07 43.8	+6.0
MWH	**Moku'aweowe**	**0.84**	**327**	IAML		16 07 45.1	
	comp=N,376nm,4.2s						
MWH				IAML		16 07 45.8	
	comp=E,380nm,3.0s						
MLOA	**Mauna Loa Obse**	**0.88**	**330**		Pg	16 07 33.5	-3.1
MLOA					Sg	16 07 43.9	-4.3
MLOA	**Mauna Loa Obse**	**0.88**	**330**	IAML		16 07 55.6	
	comp=N,289nm,3.8s						
MLOA				IAML		16 08 04.7	
	comp=E,378nm,4.1s						
HMH	**Humu'ula Sheep**	**0.90**	**337**		Pg	16 07 33.1	-3.9
HMH					Pn	16 07 44.8	+6.4
HMH	**Humu'ula Sheep**	**0.90**	**337**	IAML		16 07 55.0	
	comp=E,379nm,4.1s						
HMH				IAML		16 07 55.8	
	comp=N,285nm,3.9s						
ALEP	**Alea Permanent**	**0.92**	**326**		Pg	16 07 33.8	-3.6
ALEP					Sg	16 07 44.5	-4.8
POHA	**Pohakuloa**	**1.06**	**338**		Pg	16 07 35.5	-4.4
POHA					Pn	16 07 47.8	+7.4
POHA	**Pohakuloa**	**1.06**	**338**	IAML		16 07 48.3	
	comp=N,202nm,0.4s						
KHLU	**Kahalu`u**	**1.10**	**318**		Pb	16 07 36.0	-4.7
KHLU	**Kahalu`u**	**1.10**	**318**	IAML		16 07 48.0	
	comp=E,184nm,3.1s						
KHLU				IAML		16 08 16.0	
	comp=N,298nm,4.2s						
HUH	**Hualalai**	**1.14**	**323**	Pg	Pb	16 07 37.0	-4.3
HPAH	**Hawaii Prepara**	**1.37**	**336**		Pn	16 07 39.4	-5.2
HPAH					Sb	16 07 54.1	-8.6
HPAH	**Hawaii Prepara**	**1.37**	**336**	IAML		16 08 00.2	
	comp=N,152nm,4.1s						
HPAH				IAML		16 08 29.2	
	comp=E,182nm,3.1s						

IDC 09 16:38:40.6±9.9,17°.89S×175°.95W,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=443.2km s-min=40.0km az=142.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.94**	**259**	P	P	16 47 12.5	-1.0
	0.4nm,0.8s,baz=98,slow=6.9,SNR=1.9 0.4nm,0.8s						
ASAR	**Alice Springs**	**47.05**	**254**	P	P	16 47 14.8	+0.4
	0.5nm,0.4s,baz=89,slow=7.8,SNR=23 0.5nm,0.4s						
ILAR	**Eielson Array**	**85.36**	**12**	P	P	16 51 19.3	0.0
	0.8nm,1.0s,baz=218,slow=6.8,SNR=4.1 0.8nm,1.0s						

DJA 09 16:47:31.6±0.6,9°S±.8°×111°2E±°,h43km±26km,M3.6/10, mb3.6/1,MLv3.6/10,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGJI	**Ngawi**	**1.44**	**346**	P	Pn	16 47 55.8	+0.6
UGM	**Wanagama**	**1.53**	**304**	P	Pn	16 47 55.9	-0.6
UGM				S	Sn	16 48 14.6	-0.7
GMJI	**Gumukmas**	**1.69**	**73**	P	Pn	16 47 59.4	+0.7
GMJI				S	Sn	16 48 18.9	-0.2
BLJI	**Banyuglugur**	**2.04**	**60**	P	Pn	16 48 03.8	+0.3
BLJI				S	Sn	16 48 28.8	+1.1
SMRI	**Semarang**	**2.18**	**321**	P	Pn	16 48 05.8	+0.3
JAGI	**Jajag, Banyuwa**	**2.33**	**83**	P	Pn	16 48 07.2	-0.3
JAGI				S	Sn	16 48 33.7	-1.3
KPJI	**Karang Pucung**	**3.19**	**296**	P	Pn	16 48 20.3	+1.0
SRBI	**Singaraja**	**3.44**	**79**	P	Pn	16 48 22.8	+0.2
TWSI	**Taliwang, Sumb**	**5.01**	**90**	P	Pn	16 48 45.8	+1.4

*TRN **09** 16:50:00.9,19°.33N×64°.81W,h11km,MD0.0,North of the Virgin Islands.*
*IDC **09** 16:50:03.9±2.1,19°.08N×64°.85W,h22km±13km,mb4.2/16, mbtmp4.3/19,ML3.2/3,MS4.0/65,Error ellipse: s-maj=13.8km s-min=12.8km az=95.0*
*NEIC **09** 16:50:05.9±2.4,19°.11N±0°.05×64°.87W±0°.04,h24km±4km, mb4.8/195,ML4.6/35,Mwr4.5/42,Md4.0/21(RSPR),Error ellipse: s-maj=8.3km s-min=4.4km az=159.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; M_{rr}3.36; $M_{\theta\theta}$-3.50; $M_{\phi\phi}$0.14; $M_{r\theta}$-1.94; $M_{\theta\phi}$2.17; $M_{\phi r}$5.31; Fault plane solution: M_o6.96000×10¹⁵ NP1:ϕ_s88.62000°, δ27.96000°, λ33.40000°. NP2:ϕ_s328.41000°, δ75.04000°, λ113.90000°. Principal axes: T 7.3054, Plg54.0000°, Azm267.0000°; N -0.7564, Plg23.0000°, Azm142.0000°;*
P -6.5490, Plg26.0000°, Azm40.0000°;
*RSPR **09** 16:50:07.4,19°.20N×64°.87W,h55km±18km,MD4.0/21*
*NEIC **09** 16:50:08,19°.05N×64°.90W,h39km*

ISC 09 16:50:05.2±0.3,19°.10N±0°.04×64°.88W±0°.03,h25km,n514, σ1§42/415,mb4.8/114,MS4.0/62,5C-14D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.32**	**224**	‖*eP*	Pb	**16 50 29.8**	**+0.4**
HUMP	**Col San Antoni**	**1.32**	**224**	*eS*	Sb	**16 50 46.8**	**+0.9**
HUMP	**Col San Antoni**	**1.32**	**224**		Pb	**16 50 29.8**	**+0.4**
HUMP					Sn	**16 50 47.9**	**+2.0**
HUMP					IAML	16 50 50.7	
	comp=E,7μm,0.2s						
HUMP					IAML	16 50 53.1	
	comp=N,7μm,0.5s						
GCPR	**Guaynabo City**	**1.39**	**236**	‖*eP*	Pn	**16 50 29.9**	**+0.9**
GCPR	**Guaynabo City**	**1.39**	**236**	*eS*	Sb	**16 50 47.9**	**+0.2**
GCPR	**Guaynabo City**	**1.39**	**236**		Pn	**16 50 29.7**	**+0.8**
GCPR	**Guaynabo City**	**1.39**	**236**		Sb	**16 50 47.9**	**+0.2**
GCPR	**Guaynabo City**	**1.39**	**236**	IAML		16 50 54.4	
	comp=E,4μm,0.7s						
GCPR					IAML	16 51 01.4	
	comp=N,4μm,1.0s						
SJG	**San Juan**	**1.55**	**231**	⇑*eP*	Pb	**16 50 33.0**	**-0.2**
SJG	**San Juan**	**1.55**	**231**	*eS*	Sb	**16 50 53.6**	**+1.1**
SJG	**San Juan**	**1.55**	**231**	Pn	Pn	**16 50 32.4**	**+1.1**
SJG	**San Juan**	**1.55**	**231**	Pg	Pn	**16 50 31.3**	**+0.1**
	comp=N,138nm,0.3s,baz=62,slow=11,SNR=112						
SJG				Lg	Lg	16 50 53.3	
	comp=N,202nm,0.3s,baz=38,slow=12,SNR=9.8						
SJG				LR	LR	16 51 25.3	
	comp=N,8μm,18.3s,baz=340,slow=52						
SJG	**San Juan**	**1.55**	**231**	*eP*	Pb	**16 50 33.1**	**-0.2**
IGPR	**InterUniversit**	**1.62**	**226**	‖*eP*	Pb	**16 50 34.1**	**-0.4**
IGPR	**InterUniversit**	**1.62**	**226**	*eS*	Sb	**16 50 55.2**	**+0.7**
IGPR	**InterUniversit**	**1.62**	**226**		Sb	**16 50 55.2**	**+0.7**
IGPR	**InterUniversit**	**1.62**	**226**		Pb	**16 50 34.0**	**-0.4**
IGPR	**InterUniversit**	**1.62**	**226**	IAML		16 51 00.6	
	comp=E,10μm,0.3s						
IGPR					IAML	16 51 05.3	
	comp=N,8μm,0.3s						
CELP	**Cerrillos**	**1.91**	**238**	‖*eP*	Pn	**16 50 37.8**	**+1.7**
CELP	**Cerrillos**	**1.91**	**238**	*eS*	Sb	**16 51 01.5**	**-1.3**
CELP	**Cerrillos**	**1.91**	**238**		Pb	**16 50 38.1**	**-1.2**
CELP					Sn	**16 51 02.0**	**-0.7**
CELP					IAML	16 51 07.5	
	comp=N,5μm,1.0s						
AOPR	**Arecibo Observ**	**1.93**	**247**	‖*eP*	Pn	**16 50 38.1**	**+1.7**
AOPR	**Arecibo Observ**	**1.93**	**247**	*eS*	Sb	**16 51 03.2**	**-0.2**
AOPR	**Arecibo Observ**	**1.93**	**247**		Pn	**16 50 37.9**	**+1.4**
AOPR					IAML	16 51 16.3	
	comp=N,7μm,0.5s						
AOPR	**Arecibo Observ**	**1.93**	**247**		Sb	**16 51 03.2**	**-0.2**
AOPR	**Arecibo Observ**	**1.93**	**247**	*eP*	Pn	**16 50 37.8**	**+1.4**
AOPR					eS	**16 51 04.6**	**+1.2**
UUPR	**Utuado, UPR, P**	**1.94**	**245**	‖*eP*	Pn	**16 50 38.3**	**+1.7**
UUPR	**Utuado, UPR, P**	**1.94**	**245**		Pn	**16 50 38.1**	**+1.5**
OBIP	**Obispado Ponce**	**1.95**	**238**	‖*eP*	Pn	**16 50 37.6**	**+1.0**
OBIP	**Obispado Ponce**	**1.95**	**238**	*eS*	Sn	**16 51 01.1**	**+0.8**
OBIP	**Obispado Ponce**	**1.95**	**238**		Pn	**16 50 37.4**	**+0.8**
OBIP	**Obispado Ponce**	**1.95**	**238**		Sn	**16 51 01.1**	**+0.8**
OBIP	**Obispado Ponce**	**1.95**	**238**	IAML		16 51 07.0	
	comp=E,4μm,1.1s						
OBIP					IAML	16 51 08.4	
	comp=N,4μm,1.0s						
SMRT	**St. Maarten**	**2.00**	**121**	‖*eP*	Pn	**16 50 38.2**	**+0.7**
SMRT	**St. Maarten**	**2.00**	**121**	*eS*	Sn	**16 51 03.0**	**+1.3**
SMRT	**St. Maarten**	**2.00**	**121**		Sn	**16 51 03.0**	**+1.3**
SMRT	**St. Maarten**	**2.00**	**121**	Pn	Pn	**16 50 38.9**	**+1.5**
SMRT					IAML	16 51 13.0	
	comp=N,4μm,0.7s						
SMRT					IAML	16 51 26.3	
	comp=E,5μm,0.7s						
SABA	**Saba**	**2.14**	**133**	‖*eP*	Pb	**16 50 41.6**	**-1.7**
AGPR	**Aguadilla, PR**	**2.21**	**254**	‖*eP*	Pn	**16 50 41.5**	**+1.3**
AGPR	**Aguadilla, PR**	**2.21**	**254**	*eS*	Sn	**16 51 08.6**	**+1.9**
AGPR	**Aguadilla, PR**	**2.21**	**254**		Sn	**16 51 08.6**	**+1.9**
AGPR	**Aguadilla, PR**	**2.21**	**254**		Pn	**16 50 41.6**	**+1.4**
AGPR	**Aguadilla, PR**	**2.21**	**254**	IAML		16 51 16.2	
	comp=N,3μm,1.1s						
AGPR					IAML	16 51 19.6	
	comp=E,4μm,0.8s						
LSP	**Las Mesas**	**2.29**	**247**	‖*eP*	Pn	**16 50 43.2**	**+1.9**
LSP	**Las Mesas**	**2.29**	**247**		Pn	**16 50 43.2**	**+1.9**
PRSN	**Puerto Rico Se**	**2.32**	**248**	⇑*eP*	Pn	**16 50 43.6**	**+1.9**
PRSN	**Puerto Rico Se**	**2.32**	**248**		Pn	**16 50 43.4**	**+1.6**
PRSN					IAML	16 51 16.9	
	comp=E,3μm,0.3s						
PRSN					IAML	16 51 19.6	
	comp=N,3μm,0.2s						
MLPR	**Magueyes Islan**	**2.34**	**242**	‖*eP*	Pn	**16 50 43.1**	**+1.0**
MLPR	**Magueyes Islan**	**2.34**	**242**	*eS*	Sn	**16 51 12.2**	**+2.1**
MLPR	**Magueyes Islan**	**2.34**	**242**		Sn	**16 51 12.2**	**+2.1**
MLPR	**Magueyes Islan**	**2.34**	**242**		Pn	**16 50 43.3**	**+1.2**
MLPR	**Magueyes Islan**	**2.34**	**242**	IAML		16 51 24.9	
	comp=E,2μm,0.8s						
CRPR	**Cabo Rojo, PR**	**2.38**	**243**	‖*eP*	Pn	**16 50 43.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.38**	**243**	*eS*	Sb	**16 51 14.6**	**-1.7**
CRPR	**Cabo Rojo, PR**	**2.38**	**243**		Pn	**16 50 44.7**	**+2.1**
CRPR	**Cabo Rojo, PR**	**2.38**	**243**		Sb	**16 51 14.6**	**-1.7**
IDE	**Isla Desecheo**	**2.56**	**254**	‖*eP*	Pn	**16 50 46.8**	**+1.7**
IDE	**Isla Desecheo**	**2.56**	**254**		Pn	**16 50 46.8**	**+1.7**
PCDR	**Punta Cana, DR**	**3.37**	**261**	‖*eP*	Pn	**16 50 58.3**	**+2.1**
PCDR	**Punta Cana, DR**	**3.37**	**261**	*eS*	Sn	**16 51 37.3**	**+1.9**
PCDR	**Punta Cana, DR**	**3.37**	**261**		Pn	**16 50 58.3**	**+2.1**
PCDR					IAML	16 51 59.0	
	comp=E,2μm,1.1s						
PCDR	**Punta Cana, DR**	**3.37**	**261**		Sn	**16 51 37.3**	**+1.9**
MBFL	**Flemmings, Mon**	**3.45**	**132**	*eP*	Pn	**16 50 59.5**	**+2.1**
ANBD	**Bethesda, Anti**	**3.60**	**124**	*eP*	Pn	**16 50 59.2**	**-0.2**
ANBD					eS	**16 51 44.3**	**+3.2**
GDHS	**Morne Mazeau,**	**4.09**	**133**	Pn	Pn	**16 51 08.2**	**+2.0**
ABD	**La Joyeuse, An**	**4.15**	**128**	*eP*	Pn	**16 51 07.3**	**+0.3**
ABD					eS	**16 51 56.5**	**+1.7**
CBE	**Ff, Capester**	**4.34**	**133**		Sn	**16 52 02.8**	**+3.4**
CBE	**Ff, Capester**	**4.34**	**133**	Pn	Pn	**16 51 11.5**	**+1.9**
CBE	**Ff, Capester**	**4.34**	**133**	*eP*	Pn	**16 51 11.2**	**+1.6**
CBE					eS	**16 52 02.8**	**+3.4**
TBG	**Guadaloupe-3**	**4.46**	**136**	*eP*	Pn	**16 51 12.3**	**+1.0**
GDSD	**La Dsirade Is**	**4.57**	**127**	Pn	Pn	**16 51 12.5**	**-0.3**
MAGL	**Barre de l'ile**	**4.64**	**132**	Pn	Pn	**16 51 15.3**	**+1.6**
MAGL					IAML	16 52 51.8	
	comp=E,836nm,1.4s						
SDD	**Santo Domingo**	**4.81**	**263**	‖*eP*	Pn	**16 51 19.4**	**+3.3**
SDD	**Santo Domingo**	**4.81**	**263**		Pn	**16 51 19.4**	**+3.3**
SDD	**Santo Domingo**	**4.81**	**263**	IAML		16 52 39.0	
	comp=E,547nm,1.5s						
SDD					IAML	16 52 45.4	
	comp=N,371nm,1.1s						
SVN	**Savane Anatole**	**5.52**	**139**	Pn	Pn	**16 51 28.4**	**+2.5**
SVN	**Savane Anatole**	**5.52**	**139**	*eP*	Pn	**16 51 28.2**	**+2.3**
SC01	**Santiago de lo**	**5.54**	**274**		Pn	**16 51 27.8**	**+1.8**
SC01					Sn	**16 52 31.8**	**+2.9**
BIM	**Bigot**	**5.83**	**141**		Pn	**16 51 33.0**	**+2.8**
BIM	**Bigot**	**5.83**	**141**	*eP*	Pn	**16 51 32.2**	**+2.0**
MPOM	**Morne Pois Mar**	**6.02**	**140**	*eP*	Pn	**16 51 35.7**	**+3.0**
SDDR	**Presa de Saban**	**6.06**	**270**	‖*eP*	Pn	**16 51 35.2**	**+1.9**
SDDR	**Presa de Saban**	**6.06**	**270**		Pn	**16 51 35.3**	**+1.9**
SDDR	**Presa de Saban**	**6.06**	**270**	*eP*	Pn	**16 51 35.5**	**+2.1**
SDDR					eS	**16 52 42.6**	**+0.6**
SDDR	**Presa de Saban**	**6.06**	**270**	*eP*	Pn	**16 51 33.8**	**+0.5**
SDDR					eS	**16 52 43.3**	**+1.3**
SLBI	**Saint Lucia, B**	**6.28**	**143**	*eP*	Pn	**16 51 38.6**	**+2.2**
SVB	**Belmont**	**6.76**	**148**	*eP*	Pn	**16 51 44.5**	**+1.6**
PAPH	**Port-au-Prince**	**7.05**	**267**	Pn	Pn	**16 51 47.4**	**+0.5**
PAPH	**Port-au-Prince**	**7.05**	**267**	*eP*	Pn	**16 51 48.0**	**+1.1**
AUA1	**Aruba**	**8.21**	**218**		Pn	**16 52 01.8**	**-0.9**
PCRV	**Puerto La Cruz**	**8.87**	**178**	Pn	Pn	**16 52 10.8**	**-1.2**
	comp=N,0.8nm,0.3s,baz=349,slow=5.2,SNR=2.0						
PCRV					LR	LR	16 55 45.8
	comp=N,1μm,18.4s,slow=38 comp=N,17nm,1.1s						
MOAC	**Moa**	**9.61**	**281**	*eP*	Pn	**16 52 17.9**	**-4.1**
NMDO	**Nuevo Mundo**	**9.62**	**280**	*i P*	Pn	**16 52 17.9**	**-4.2**
NMDO					eP	**16 52 17.9**	**-4.2**
GTBY	**Guantanamo Bay**	**9.69**	**277**	*eP*	Pn	**16 52 19.8**	**-3.2**
GTMO	**Guantanamo**	**9.72**	**277**	*eP*	Pn	16 52 17.9	-5.6
SABCS	**La Quijada**	**9.91**	**279**	*eP*	Pn	**16 52 22.9**	**-3.2**
RCC	**Rio Carpintero**	**10.24**	**277**	*eP*	Pn	**16 52 26.9**	**-3.7**
RCC					eS	16 54 08.7	-16
PINC	**Pinares de May**	**10.37**	**279**	*eP*	Pn	16 52 26.9	-5.5
BAUV	**El Baul**	**10.55**	**197**	Pn	Pn	**16 52 37.8**	**+2.9**
LMGC	**Las Mercedes**	**11.47**	**277**	*eP*	Pn	16 52 42.3	-5.2
SDV	**Santo Domingo**	**11.58**	**210**		Pn	**16 52 53.5**	**+4.2**
SDV	**Santo Domingo**	**11.58**	**210**	Pn	Pn	**16 52 49.3**	**+0.1**
	comp=N,0.3nm,0.3s,baz=19,slow=12,SNR=2.9						
SDV					Sn	**16 54 56.3**	**-1.7**
	comp=N,1.3nm,0.3s,baz=43,slow=12,SNR=1.6						
SDV				LR	LR	16 57 55.6	
	comp=N,1μm,18.1s,baz=50,slow=41 comp=N,4.0nm,0.7s						
ROSC	**El Rosal**	**16.90**	**214**	Pn	P	**16 54 02.6**	**+0.2**
	comp=N,5.8nm,0.3s,baz=48,slow=14,SNR=22						
ROSC				LR	LR	17 01 05.9	
	comp=N,2μm,20.7s,baz=48,slow=39						
BOAV	**Boa Vista**	**17.14**	**165**		P	**16 54 06.5**	**+1.9**
DWPF	**Disney Wildern**	**17.61**	**304**	P	Pn	**16 54 08.7**	**-0.2**
	baz=117						
MDP	**Montagnes des**	**18.33**	**138**	P	P	**16 54 16.6**	**-1.2**
	comp=N,0.2nm,0.3s,baz=319,slow=14,SNR=1.9						
MDP				LR	LR	17 02 18.4	
	comp=N,304nm,20.9s,baz=314,slow=40 comp=N,14nm,1.0s						
456A	**Hilliard**	**19.36**	**310**		Pn	**16 54 34.9**	**+4.8**
NHSC	**New Hope**	**19.55**	**319**	P	Pn	**16 54 32.1**	**-0.3**
	baz=132						
Y58A	**Scranton**	**19.78**	**321**		Pn	**16 54 38.3**	**+3.1**
DRK0	**Durika**	**20.29**	**244**	P	P	**16 54 40.4**	**+0.9**
SRBA	**San Rafael, Bu**	**20.41**	**244**	P	P	**16 54 40.5**	**-0.2**
LCR2	**La Lucha 2**	**20.71**	**246**	P	P	**16 54 44.6**	**+0.6**
LCR2				IAmb	IAmb	16 54 50.4	
	comp=Z,47nm,0.9s						
T60A	**Surry**	**20.76**	**332**	P	P	**16 54 44.2**	**0.0**
ACON	**Acoyapa**	**20.79**	**253**	P	P	**16 54 42.6**	**-2.0**
ACON				IAmb	IAmb	16 54 49.5	
	comp=Z,44nm,1.1s						
TIGA	**Tifton**	**20.87**	**310**	P	Pn	16 54 47.1	-0.9
TIGA	**Tifton**	**20.87**	**310**	P	Pn	16 54 47.1	-1.0
	baz=122						
JTS	**Las Juntas de**	**21.28**	**249**	P	P	**16 54 50.7**	**+0.7**
JTS				IAmb	IAmb	16 54 56.6	
	comp=Z,31nm,0.8s						
JTS	**Las Juntas de**	**21.28**	**249**	P	P	**16 54 49.4**	**-0.6**
	comp=Z,13nm,0.6s,baz=49,slow=11,SNR=10						
JTS				LR	LR	17 04 43.0	
	comp=Z,217nm,18.1s,baz=53,slow=41 comp=Z,13nm,0.6s						
KMSC	**Kings Mountain**	**21.63**	**321**	P	P	**16 54 53.7**	**+0.2**
KMSC				IAmb	IAmb	16 55 24.4	
	comp=Z,29nm,0.7s						
KMSC	**Kings Mountain**	**21.63**	**321**	P	P	**16 54 53.4**	**-0.2**
	baz=133						
ORTG	**Ortega, Santa**	**21.70**	**249**	P	P	**16 54 53.2**	**-1.4**
ORTG				IAmb	IAmb	16 55 06.6	
	comp=Z,29nm,0.9s						
T57A	**Hurt**	**21.84**	**328**	IAmb	IAmb	16 55 12.7	
	comp=Z,71nm,1.1s						
352A	**Blakely**	**21.88**	**308**	P	P	**16 54 55.5**	**-0.8**
GOGA	**Godfrey**	**21.88**	**314**	P	P	**16 54 55.3**	**-1.0**
GOGA				IAmb	IAmb	16 55 00.8	
	comp=Z,44nm,1.1s						
GOGA	**Godfrey**	**21.88**	**314**	P	P	**16 54 57.1**	**+0.8**
	baz=126,SNR=5.6						
CBN	**Corbin Frederi**	**21.93**	**333**	P	P	**16 54 59.1**	**+2.3**
	baz=147,SNR=9.1						
R58B	**Mineral**	**21.95**	**332**	P	P	**16 54 57.4**	**+0.4**
R58B				IAmb	IAmb	16 55 13.5	
	comp=Z,36nm,0.5s						
CNGN	**Cerro Negro**	**21.98**	**256**	P	P	**16 54 56.8**	**-0.8**
TEIG	**Tepich**	**22.06**	**277**	LR	LR	17 05 56.9	
	comp=Z,4μm,18.5s,baz=199,slow=43						
TULM	**Tulcn-Chalpat**	**22.23**	**216**	P	P	**16 55 01.8**	**+1.2**
152A	**Waverly Hall**	**22.34**	**311**	P	P	**16 55 02.0**	**+0.8**
152A				IAmb	IAmb	16 55 24.2	
	comp=Z,37nm,1.1s						
BG3	**Lake Jocassee**	**22.51**	**318**	P	P	**16 55 03.5**	**+0.5**
Y52A	**Lilburn**	**22.55**	**315**	IAmb	IAmb	16 55 22.4	
	comp=Z,32nm,0.6s						
BLA	**Blacksburg**	**22.60**	**326**	P	P	**16 55 04.8**	**+0.7**
	baz=139,SNR=5.4						
OTAV	**Otavalo**	**22.99**	**217**	P	P	**16 55 08.8**	**+0.1**
OTAV				IAmb	IAmb	16 55 38.8	
	comp=Z,47nm,1.2s						
Z51A	**Franklin**	**23.01**	**312**	P	P	**16 55 08.7**	**+0.5**
250A	**Grady**	**23.12**	**308**	P	P	**16 55 08.4**	**-1.0**
250A				IAmb	IAmb	16 55 19.4	
	comp=Z,33nm,0.8s						
PAL	**Palisades**	**23.16**	**342**	P	P	**16 55 10.6**	**+0.8**
	baz=158						
W52A	**Murphy**	**23.20**	**

baz=130
143A **Socs Landing,** 27.35 305 P P 16 55 47.9 -0.4
MCRA **Macar, Loja** 27.64 214 P P 16 55 51.0 -0.2
CZSB **Cruzeiro do Su** 27.75 197 P P 16 55 51.8 -0.3
SAML **Samuel** 27.92 176 P P 16 55 51.9 -1.6
SAML IAmb IAmb 16 56 07.2
comp=Z,18nm,0.9s
SADO **Sadowa** 28.23 338 LR LR 17 09 11.2
comp=Z,184nm,18.0s,baz=187,slow=41
ATAH **Atahualpa** 29.27 208 LR LR 17 09 44.7
comp=Z,840nm,20.5s,baz=349,slow=40
NATX **Nacogdoches** 29.60 301 P P 16 56 09.7 +1.3
baz=108
CCM **Cathedral Cave** 29.72 315 P P 16 56 07.3 -2.1
CCM **Cathedral Cave** 29.72 315 P P 16 56 09.3 -0.1
baz=122
MIAR **Mount Ida** 29.74 307 P P 16 56 09.7 +0.1
baz=114,SNR=6.5
HDIL **Hopedale** 29.92 321 P P 16 56 10.5 -0.7
baz=128
MGMO **Mountain Grove** 29.95 313 P P 16 56 10.8 -0.7
L44A **Lake County Fo** 30.18 325 P P 16 56 14.1 +0.7
baz=133
435B **Jarrell** 31.74 298 P P 16 56 25.6 -1.8
baz=104
WHTX **Lake Whitney,** 31.94 300 P P 16 56 29.7 +0.6
baz=106
TUL3 **Leonard** 31.95 308 P P 16 56 28.6 -0.5
baz=113
VILB **Vilhena** 32.18 171 P P 16 56 29.1 -2.1
DEOK **Depew** 32.45 307 P 16 56 34.3 +0.8
QUOK **Quay** 32.73 308 P 16 56 35.8 -0.2
OK052 **Battle Ridge R** 32.74 308 P 16 56 36.4 +0.4
OK033 **Mehan** 32.86 308 P 16 56 35.9 -1.1
PLPT **Palo Pinto** 32.87 301 P P 16 56 36.9 -0.3
T35A **Sooner Cattle** 32.88 309 P P 16 56 36.5 -0.8
X34A **Smith Ranch, M** 33.03 305 P 16 56 37.8 -0.8
BRDY **Brady** 33.04 298 P P 16 56 38.2 -0.6
NNA **Nana** 33.06 202 P P 16 56 38.4 -0.7
NNA IAmb IAmb 16 56 39.4
comp=Z,15nm,0.6s
NNA **Nana** 33.06 202 LR LR 17 12 28.8
comp=Z,354nm,20.8s,baz=342,slow=41
OK029 **Liberty Lake** 33.15 307 P 16 56 39.1 -0.6
WTFS **Witchita Falls** 33.26 303 P P 16 56 38.2 -2.4
BLOK **Blackwell** 33.34 309 P P 16 56 41.0 -0.3
WMOK **Wichita Mounta** 33.81 304 IAmb IAmb 16 56 53.5
comp=Z,9.5nm,0.8s
WMOK **Wichita Mounta** 33.81 304 P P 16 56 45.9 +0.5
baz=109,SNR=8.6
ABTX **Abilene, Hawle** 33.90 300 P P 16 56 47.6 +1.3
ABTX IAmb IAmb 16 56 55.4
comp=Z,17nm,0.8s
ABTX **Abilene, Hawle** 33.90 300 P P 16 56 46.7 +0.5
baz=105
APMT **Aspermont** 34.47 301 P P 16 56 51.8 +0.7
APMT IAmb IAmb 16 57 01.2
comp=Z,13nm,0.9s
PTLB **Pontes e Lacer** 34.79 170 P P 16 56 53.7 -0.2
SIV **San Ignacio** 35.07 174 LR LR 17 11 46.4
comp=Z,280nm,20.1s,baz=292,slow=37
ZAIG **Zacatecas** 35.33 283 P P 16 56 59.8 +0.7
ZAIG IAmb IAmb 16 57 02.7
comp=Z,12nm,1.1s
SAND **Sanderson** 35.42 295 P P 16 57 00.6 +1.1
POST **Post** 35.52 300 P P 16 56 59.9 -0.5
POST IAmb IAmb 16 57 09.2
comp=Z,8.3nm,0.8s
SCHQ **Schefferville** 35.70 358 P P 16 57 00.9 -0.6
comp=Z,8.2nm,1.1s,baz=176,slow=7.0,SNR=5.4
SCHQ LR LR 17 09 28.1
comp=Z,157nm,20.6s,baz=240,slow=33
comp=Z,8.2nm,1.1s
CBKS **Cedar Bluff** 35.98 311 P P 16 57 03.7 -0.4
baz=113
EYMN **Ely** 35.99 329 P P 16 57 03.4 -0.7
baz=134
AMTX **Amarillo** 36.13 303 P P 16 57 05.9 +0.4
AMTX **Amarillo** 36.13 303 P P 16 57 05.5 -0.1
baz=106
ECSD **EROS Data Cent** 36.19 320 IAmb IAmb 16 57 19.7
comp=Z,15nm,1.4s
TXAR **Lajitas Array** 36.67 294 PcP PcP 16 59 32.9 +0.1
TXAR **Lajitas Array** 36.67 294 P P 16 57 10.0 -0.2
comp=Z,3.8nm,0.8s,baz=109,slow=10.0,SNR=38
TXAR PcP PcP 16 59 31.8 -1.0
comp=Z,2.9nm,1.1s,baz=88,slow=3.9,SNR=4.7
TXAR ScP ScP 17 03 15.0 -3.1
comp=Z,0.1nm,0.3s,baz=116,slow=4.1,SNR=1.9
TXAR LR LR 17 15 59.8
comp=Z,68nm,21.9s,baz=71,slow=42
comp=Z,3.8nm,0.8s
MSTX **Muleshoe** 36.77 301 IAmb IAmb 16 57 27.1
comp=Z,14nm,1.0s
MSTX **Muleshoe** 36.77 301 P P 16 57 11.0 -0.1
baz=104
RTBA **Rita Blanca** 37.40 305 IAmb IAmb 16 57 25.4
comp=Z,27nm,1.1s
PB16 **IPOC Station P** 37.48 187 IAmb IAmb 16 57 31.8
comp=Z,9.5nm,0.7s
VHRN **Van Horn** 37.99 296 IAmb IAmb 16 57 31.3
comp=Z,12nm,0.9s
BDFB **Brasilia** 38.30 153 P P 16 57 22.1 -2.0
comp=Z,1.0nm,0.3s,baz=327,slow=14,SNR=1.7
BDFB LR LR 17 14 15.1
comp=Z,127nm,18.6s,baz=323,slow=38
comp=Z,1.0nm,0.3s
AGMN **Agassiz Nation** 38.42 326 P P 16 57 24.2 -0.5
baz=128
MNTX **Cornudas Mount** 38.47 297 P P 16 57 25.6 +0.3
baz=99
T25A **Trinidad** 38.89 306 IAmb IAmb 16 57 38.2
comp=Z,29nm,0.9s
T25A **Trinidad** 38.89 306 P P 16 57 29.3 +0.2
baz=106,SNR=7.8
ULM **Lac du Bonnet** 39.67 329 P P 16 57 33.3 -1.8
comp=Z,2.4nm,0.6s,baz=132,slow=6.2,SNR=5.2
comp=Z,2.4nm,0.6s
TA01 **Diego Aracena** 39.76 188 P P 16 57 39.2 +3.2
SDCO **Great Sand Dun** 39.89 306 IAmb IAmb 16 57 46.5
comp=Z,27nm,0.8s
SDCO **Great Sand Dun** 39.89 306 P P 16 57 38.6 +1.1
baz=106,SNR=39
ANMO **Albuquerque** 39.95 302 P P 16 57 37.6 -0.3
ANMO PcP PcP 16 59 44.3 +1.3
ANMO **Albuquerque** 39.95 302 P P 16 57 38.0 +0.1
baz=102
ANMO **Albuquerque** 39.95 302 LR LR 17 16 06.4
comp=Z,157nm,21.3s,baz=198,slow=39
Q24A **Divide** 39.99 308 P P 16 57 37.2 -1.1
Q24A **Divide** 39.99 308 P P 16 57 38.9 +0.6
baz=108,SNR=5.9
PB01 **IPOC Station P** 40.15 187 P P 16 57 36.9 -2.5
PB01 IAmb IAmb 16 57 52.3
comp=Z,22nm,0.8s
ISCO **Idaho Springs** 40.59 309 P P 16 57 43.0 -0.3
ISCO **Idaho Springs** 40.59 309 P P 16 57 44.8 +1.5
baz=108,SNR=12
121A **Cookes Peak, D** 40.61 298 P P 16 57 44.7 +1.3
baz=98
S22A **4UR Ranch, Cre** 40.91 306 P P 16 57 46.7 +0.8
S22A **4UR Ranch, Cre** 40.91 306 P P 16 57 47.0 +1.1
baz=105,SNR=11
RSSD **Black Hills** 41.09 316 P P 16 57 47.0 -0.2
baz=115
LVC **Limon Verde** 41.64 186 P P 16 57 49.8 -2.2
LVC **Limon Verde** 41.64 186 LR LR 17 16 50.2
comp=Z,218nm,18.2s,baz=346,slow=39
MVCO **Mesa Verde** 42.06 305 P P 16 57 55.1 -0.2
baz=103
SLBS **Sierra La Lagu** 42.08 284 P P 16 57 56.6 +1.2
SLBS IAmb IAmb 16 57 59.8
comp=Z,21nm,1.0s
K22A **Casper** 42.19 313 P P 16 57 55.8 -0.4
baz=111
LPIG **La Paz** 42.39 285 LR LR 17 19 09.4
comp=Z,77nm,20.1s,baz=78,slow=41
O20A **White River Ci** 42.62 309 P P 16 57 59.7 0.0
O20A **White River Ci** 42.62 309 P P 16 57 59.5 -0.2
baz=106
X18A **Snowflake** 42.70 300 P P 16 58 01.5 +1.0
TUC **Tucson** 43.10 297 P P 16 58 04.7 +1.1
baz=96
RDMU **Red Mountain** 43.71 309 P P 16 58 07.8 -0.8
RDMU IAmb IAmb 16 58 17.2
comp=Z,13nm,0.9s
X16A **Lo Mia Camp, P** 43.91 300 P P 16 58 11.9 +1.7
WUAZ **Wupatki** 44.02 302 P P 16 58 10.1 -1.0
WUAZ IAmb IAmb 16 58 21.5
comp=Z,20nm,1.1s
WUAZ **Wupatki** 44.02 302 P P 16 58 11.6 +0.6
baz=99
P17A **Butcher Ranch,** 44.30 307 P P 16 58 13.3 0.0
P17A IAmb IAmb 16 58 22.1
comp=Z,9.3nm,0.8s
BW06 **Boulder Array** 44.34 312 IAmb IAmb 16 58 15.8
comp=Z,23nm,1.2s
BW06 **Boulder Array** 44.34 312 P P 16 58 14.3 +0.6
baz=108,SNR=17
PD31 **Pinedale Array** 44.34 312 IAmb IAmb 16 58 15.8
comp=Z,21nm,1.2s
PDAR **Pinedale Array** 44.34 312 P P 16 58 13.8 +0.1
comp=Z,8.0nm,0.7s,baz=110,slow=8.1,SNR=53
PDAR PcP PP 16 59 56.7 -0.5
comp=Z,1.9nm,0.9s,baz=106,slow=5.3,SNR=3.7
PDAR ScP ScP 17 03 46.0 -2.1
comp=Z,0.2nm,0.4s,baz=78,slow=5.6,SNR=2.5
PDAR LR LR 17 19 37.4
comp=Z,125nm,18.1s,baz=117,slow=40
comp=Z,8.0nm,0.7s
BSUT **Blindstream Ca** 44.58 309 IAmb IAmb 16 58 24.8
comp=Z,17nm,0.9s
TMUT **Trail Mountain** 44.62 307 IAmb IAmb 16 58 25.2
comp=Z,14nm,1.0s
FRB **Frobisher Bay** 44.69 358 LR LR 17 15 45.0
comp=Z,196nm,20.6s,baz=190,slow=34
214A **Organ Pipe Nat** 44.78 296 P P 16 58 17.1 +0.1
baz=95
RLMT **Red Lodge** 44.92 315 IAmb IAmb 16 58 20.7
comp=Z,10nm,1.0s
RLMT **Red Lodge** 44.92 315 P P 16 58 19.3 +1.1
baz=110,SNR=13
FCC **Fort Churchill** 44.95 339 P P 16 58 17.7 -0.2
PIX **Pinacate** 45.30 296 IAmb IAmb 16 58 41.8
comp=Z,18nm,1.2s
LOHW **Long Hollow** 45.33 313 IAmb IAmb 16 58 38.5
comp=Z,13nm,1.0s
CTU **Camp Tracy** 45.35 309 IAmb IAmb 16 58 33.0
comp=Z,10nm,0.8s
REDW **Red Top Meadow** 45.43 313 P P 16 58 21.9 -0.4
HWUT **Hardware Ranch** 45.44 310 IAmb IAmb 16 58 34.5
comp=Z,17nm,0.9s
MOOW **Moonee Ponds** 45.47 313 IAmb IAmb 16 58 25.3
comp=Z,10nm,0.9s
TPAW **Teton Pass** 45.53 313 P P 16 58 22.6 -0.6
TPAW IAmb IAmb 16 58 38.7
comp=Z,11nm,0.8s
FLWY **Flagg Ranch** 45.54 314 IAmb IAmb 16 58 32.3
comp=Z,19nm,1.3s
H17A **Grant Village** 45.55 314 P P 16 58 24.2 +0.9
baz=109
CPUP **Villa Florida** 45.75 171 P P 16 58 23.5 -1.1
CPUP **Villa Florida** 45.75 171 P P 16 58 23.4 -1.1
comp=Z,6.4nm,0.7s,baz=348,slow=7.9,SNR=14
CPUP LR LR 17 21 27.0
comp=Z,63nm,19.0s,baz=1.0,slow=41
comp=Z,6.4nm,0.7s
AC02 **Maricunga** 45.85 185 P P 16 58 24.2 -1.8
AC02 IAmb IAmb 16 58 37.4
comp=Z,7.9nm,0.8s
YHH **Holmes Hill** 45.87 314 P P 16 58 24.2 -1.6
SPUT **South Promonto** 46.01 309 IAmb IAmb 16 58 28.6
comp=Z,29nm,1.5s
DUG **Dugway, Tooele** 46.02 308 IAmb IAmb 16 58 36.1
comp=Z,9.2nm,0.9s
DUG **Dugway, Tooele** 46.02 308 P P 16 58 28.1 +1.2
baz=103,SNR=8.5
PDMCI **Parker Dam,Lak** 46.11 299 P P 16 58 28.3 +0.8
baz=96
YHL **Hebgen Lake** 46.11 314 IAmb IAmb 16 58 38.9
comp=Z,17nm,1.2s
EGMT **Eagleton** 46.30 319 IAmb IAmb 16 58 39.5
comp=Z,14nm,1.2s
EGMT **Eagleton** 46.30 319 P P 16 58 29.8 +0.9
baz=113,SNR=5.7
BGU **Big Grassy Mou** 46.35 309 IAmb IAmb 16 58 32.1
comp=Z,18nm,1.0s
BBTS **Babate** 46.36 88 LR LR 17 15 11.7
comp=Z,185nm,18.9s,baz=224,slow=32
HVU **Hansel Valley** 46.36 310 IAmb IAmb 16 58 31.2
comp=Z,8.9nm,0.9s
SFX **San Felipe** 46.46 295 IAmb IAmb 16 58 51.6
comp=Z,15nm,1.0s
BOZ **Bozeman (W)** 46.65 315 P P 16 58 30.8 -1.0
BOZ **Bozeman (W)** 46.65 315 P P 16 58 33.1 +1.4
baz=109,SNR=9.0
V12A **Nelson** 46.85 301 IAmb IAmb 16 58 53.0
comp=Z,7.2nm,0.9s
IRM **Iron Mountain** 46.92 299 P P 16 58 36.0 +2.1
baz=95,SNR=5.1
SPR3 **Spring Creek 3** 46.93 306 P P 16 58 33.7 -0.6
BC3 **Big Chuckawall** 47.13 298 P P 16 58 37.5 +1.8
baz=95
MCMT **McKenzie Canyo** 47.23 314 P P 16 58 36.0 -0.4
VTX **Valle De La Tr** 47.27 295 IAmb IAmb 16 58 52.0
comp=Z,18nm,1.3s
Q12A **Willow Creek R** 47.32 306 P P 16 58 37.6 +0.4
Q12A IAmb IAmb 16 58 47.0
comp=Z,11nm,0.8s
GMRC **Granite Mounta** 47.40 300 P P 16 58 38.6 +0.7
baz=96
YUH **Yuha Desert** 47.45 297 IAmb IAmb 16 58 53.1
comp=Z,12nm,1.1s
IKP **In-Ko-Pah, Jac** 47.61 297 P P 16 58 40.7 +1.3
baz=93
BELC **Belle Mtn. Jos** 47.61 299 P P 16 58 41.3 +1.8
baz=95
TUQ **Turquoise Moun** 47.68 301 P P 16 58 41.5 +1.5
baz=96
R11B **Troy Canyon, C** 47.79 305 P P 16 58 42.7 +1.8
baz=99,SNR=7.2
S11A **Rachel** 47.81 304 IAmb IAmb 16 58 53.8
comp=Z,13nm,1.0s
MONP2 **Monument Peak** 47.89 297 P P 16 58 43.4 +1.7
baz=93
ELK **Elko** 47.95 308 IAmb IAmb 16 58 44.3
comp=Z,15nm,1.3s
ELK **Elko** 47.95 308 LR LR 17 22 12.4
comp=Z,164nm,18.3s,baz=88,slow=40
PFO **Pinon Flats O** 47.97 298 LR LR 17 24 18.1
comp=Z,91nm,18.1s,baz=92,slow=43
HLID **Hailey** 47.98 312 IAmb IAmb 16 58 44.5
comp=Z,17nm,1.4s
HLID **Hailey** 47.98 312 P P 16 58 43.6 +1.5
baz=104,SNR=8.9
TPNV **Topopah Spring** 48.12 303 IAmb IAmb 16 59 01.9
comp=Z,7.6nm,0.9s
TPNV **Topopah Spring** 48.12 303 P P 16 58 45.6 +2.2
baz=97
GSC **Goldstone, Bar** 48.39 301 P P 16 58 46.7 +1.3
baz=95
WCT **Wildcat Mounta** 48.40 303 IAmb IAmb 16 59 03.9
comp=Z,8.6nm,1.0s
SFJD **Kangerlussuaq** 48.76 7 *i* P P 16 58 48.6 +1.0
SFJD IAmb IAmb 16 58 55.8
comp=Z,5.4nm,1.1s
SFJD **Kangerlussuaq** 48.76 7 LR LR 17 19 13.5
comp=Z,84nm,19.1s,baz=174,slow=36
DY2G **Dye2** 48.88 10 *i* P P 16 58 48.6 -0.3
DY2G IAmb IAmb 16 58 53.2
comp=Z,5.4nm,1.4s
MFID **Camas Ranch** 48.94 311 IAmb IAmb 16 58 51.5
comp=Z,16nm,1.1s
GRAC **Grapevine Rang** 49.01 303 IAmb IAmb 16 59 08.4
comp=Z,15nm,1.0s
GRAC **Grapevine Rang** 49.01 303 P P 16 58 51.8 +1.7
baz=96
MPMC **Manual Prospec** 49.01 301 P P 16 58 50.7 +0.4
baz=96
CO05 **La Serena** 49.12 187 P P 16 58 50.5 -0.2
LRMC **Laurel Mtn Rad** 49.12 301 P P 16 58 51.0 -0.1
baz=95
EDW2 **Edwards Air Fo** 49.32 300 P P 16 58 52.8 +0.3
baz=94
PLID **Pearl Lake** 49.46 313 P P 16 58 53.0 -0.6
PLID IAmb IAmb 16 59 10.2
comp=Z,8.3nm,0.9s
CWC **Cottonwood Cre** 49.53 302 P P 16 58 54.7 +0.5
baz=96
NV11 **Mina Array Sit** 49.80 304 P P 16 58 51.2 -5.0
NV11 IAmb IAmb 16 59 10.5
comp=Z,12nm,1.0s
NVAR **Mina Array Bea** 49.92 304 P P 16 58 57.5 +0.3
NVAR **Mina Array Bea** 49.92 304 P P 16 58 57.9 +0.7
comp=Z,3.2nm,0.9s,baz=103,slow=6.9,SNR=23
NVAR ScP ScP 17 04 10.3 -1.3
comp=Z,2.0nm,1.3s,baz=119,slow=4.3,SNR=3.9
NVAR LR LR 17 20 56.2
comp=Z,173nm,21.8s,baz=102,slow=37
comp=Z,3.2nm,0.9s
WVOR **Wild Horse Val** 50.76 310 P P 16 59 03.5 +0.1
WVOR IAmb IAmb 16 59 38.2
comp=Z,19nm,1.5s
J08A **Circle Bar Ran** 50.81 311 IAmb IAmb 16 59 05.4
comp=Z,14nm,0.9s
NEW **Newport** 51.03 317 IAmb IAmb 16 59 06.9
comp=Z,28nm,1.2s
NEW **Newport** 51.03 317 P P 16 59 06.0 +0.7
baz=106,SNR=13
NEW **Newport** 51.03 317 LR LR 17 20 45.4
comp=Z,159nm,20.9s,baz=100,slow=36
I07A **Izee** 51.68 312 IAmb IAmb 16 59 12.0
comp=Z,15nm,1.1s
VA03 **San Esteban** 51.85 186 P P 16 59 13.2 +1.7
ORV **Oroville** 52.52 306 P P 16 59 16.6 +0.2
K04D **Chiloquin, OR** 53.07 309 P P 16 59 20.4 -0.2
L04D **Klamath Falls** 53.42 309 P P 16 59 24.2 +1.0
YBH **Yreka Blue Hor** 53.66 308 IAmb IAmb 16 59 32.6
comp=Z,7.7nm,0.8s
YBH **Yreka Blue Hor** 53.66 308 LR LR 17 23 24.6
comp=Z,98nm,21.0s,baz=94,slow=37
H04A **Detroit Lake** 53.68 312 IAmb IAmb 16 59 33.8
comp=Z,6.9nm,0.8s
HUMO **Hull Mountain** 53.95 309 P P 16 59 26.1 -0.8
BORG **Borgarnes** 54.00 21 LR LR 17 17 32.5
comp=Z,83nm,21.4s,baz=164,slow=30
I03D **Drain, OR** 54.37 310 P P 16 59 28.2 -1.7
YKA **Yellowknife Ar** 55.12 334 P P 16 59 34.5 -0.6
YKA **Yellowknife Ar** 55.12 334 P P 16 59 33.2 -1.9
comp=Z,1.7nm,0.9s,baz=110,slow=7.2,SNR=13
YKA LR LR 17 22 07.8
comp=Z,100nm,21.0s,baz=26,slow=35
comp=Z,1.7nm,0.9s
MDT **Midelt** 55.23 63 LR LR 17 18 13.2
comp=Z,230nm,21.1s,baz=342,slow=31
SUMG **Summit** 55.58 9 *i* P P 16 59 42.2 +3.5
SUMG IAmb IAmb 16 59 48.6
comp=Z,9.4nm,0.8s
ESDC **Sonseca Array** 55.84 55 LR LR 17 18 03.2
comp=Z,138nm,21.7s,baz=268,slow=30
RES **Resolute Bay** 57.92 351 LR LR 17 23 14.0
comp=Z,138nm,21.9s,baz=164,slow=34
NEEM **North Greenlan** 58.79 4 *i* P P 17 00 03.7 +2.5
NEEM IAmb IAmb 17 00 11.2
comp=Z,5.0nm,0.9s
DBIC **Dimbokro** 59.55 93 P P 17 00 06.5 -0.6
comp=Z,3.7nm,0.7s,baz=321,slow=14,SNR=2.2
DBIC LR LR 17 24 27.7
comp=Z,138nm,18.5s,baz=269,slow=35
comp=Z,3.7nm,0.7s
PLCA **Paso Flores** 59.76 185 P P 17 00 07.8 -0.2
comp=Z,2.0nm,0.7s,baz=328,slow=3.6,SNR=4.2
PLCA LR LR 17 28 54.1
comp=Z,207nm,18.7s,baz=16,slow=39
comp=Z,2.0nm,0.7s
T35M **Bob Quinn** 60.80 325 P P 17 00 15.8 +0.8
baz=100
DLBC **Dease Lake** 60.95 327 P P 17 00 16.5 +0.5
baz=101
JMIC **Jan Mayen** 61.39 18 LR LR 17 21 20.9
comp=Z,180nm,21.7s,baz=270,slow=31
P33M **Teslin, Yukon** 62.67 329 P P 17 00 26.6 -1.1
baz=99
M31M **Drury Creek, Y** 63.74 331 P P 17 00 35.4 +0.8
M31M IAmb IAmb 17 00 58.7
comp=Z,7.9nm,1.0s
M31M **Drury Creek, Y** 63.74 331 P P 17 00 33.9 -0.7
baz=99
TORD **Torodi Ar. Bea** 63.91 84 P P 17 00 35.3 -1.2
comp=Z,7.4nm,0.3s,baz=320,slow=5.5,SNR=1.2
TORD LR LR 17 24 13.1
comp=Z,220nm,21.3s,baz=312,slow=32
comp=Z,7.4nm,0.3s
F31M **Tsiigehtchic** 64.43 336 P P 17 00 38.9 -0.1
baz=102
G31M **Satah River** 64.53 336 P P 17 00 39.2 -0.5
G31M **Satah River** 64.53 336 P P 17 00 39.1 -0.6
baz=101
INK **Inuvik** 64.54 337 P P 17 00 38.6 -1.1
INK IAmb IAmb 17 00 56.0
comp=Z,6.1nm,0.9s
INK **Inuvik** 64.54 337 P P 17 00 39.4 -0.3
baz=103
INK **Inuvik** 64.54 337 LR LR 17 30 08.1
comp=Z,66nm,18.4s,baz=32,slow=37
M30M **Minto, Yukon** 64.90 331 P P 17 00 42.4 +0.2
baz=97
I30M **Mount Dempster** 65.08 334 P P 17 00 43.8 +0.4
baz=98
F30M **Barrier River** 65.23 337 P P 17 00 45.6 +1.3
baz=100
G30M **tAoh Zraii Nji** 65.29 336 P P 17 00 43.8 -0.9
G30M IAmb IAmb 17 01 17.8
comp=Z,9.1nm,1.1s
G30M **tAoh Zraii Nji** 65.29 336 P P 17 00 44.5 -0.2
baz=100
K29M **Barlow Dome** 65.38 332 P P 17 00 44.8 -0.6
baz=97
EPYK **Eagle Plains** 65.39 335 P P 17 00 44.3 -1.1
baz=99
YUK6 **Outpost Mounta** 65.48 329 P P 17 00 46.8 +0.5
baz=95
L29M **L29M** 65.57 331 P P 17 00 46.1 -0.5
baz=96
YUK4 **Talbot Arm** 65.65 329 P P 17 00 48.0 +0.6
baz=95
M29M **Somme Creek** 65.66 331 P P 17 00 49.0 +1.7
baz=95
J29N **Klondike Camp** 65.75 333 P P 17 00 47.2 -0.6
baz=96
DAVOX **Davos/Dischmat** 65.98 47 LR LR 17 24 48.2
comp=Z,68nm,21.7s,baz=266,slow=32
H29M **Whitestone** 66.03 335 P P 17 00 43.6 -5.9
baz=97
E29M **Blow River** 66.15 337 IAmb IAmb 17 01 06.0
comp=Z,5.8nm,0.9s
E29M **Blow River** 66.15 337 P P 17 00 50.7 +0.6
baz=98
DAWY **Dawson** 66.23 332 P P 17 00 51.2 +0.4
baz=95
KEST **Kesra** 66.53 59 LR LR 17 25 55.3
comp=Z,135nm,20.5s,baz=268,slow=32
YUK3 **Moose Creek** 66.54 330 P P 17 00 52.8 -0.3
baz=93
I28M **Miner Creek** 66.59 334 P P 17 00 52.6 -0.6
baz=95
NOA **NORSAR Array B** 66.75 31 LR LR 17 26 36.9
comp=Z,132nm,19.5s,baz=270,slow=33
E28M **Babbage River** 66.77 337 P P 17 00 51.2 -3.0
baz=97
F28M **Old Crow** 66.78 336 P P 17 00 54.8 +0.5
baz=96
CTG **Chitna Glacier** 66.93 329 P P 17 00 55.2 -0.2
baz=92
M27K **Edge Creek, AK** 67.24 330 P P 17 00 58.7 +1.3
baz=92
L27K **Beaver Creek,** 67.25 331 P P 17 00 57.5 +0.2
baz=93
I27K **Kandik River** 67.30 334 P P 17 00 57.3 -0.3
baz=94
H27K **Steamboat Moun** 67.31 335 P P 17 00 56.8 -0.8
baz=94
K27K **Chicken** 67.40 332 P P 17 00 59.0 +0.8
baz=93
MCARA **McCarthy VSAT** 67.75 329 P P 17 01 00.8 +0.2
MCARA IAmb IAmb 17 01 37.9
comp=Z,10.0nm,0.8s
MCARA **McCarthy VSAT** 67.75 329 P P 17 01 01.3 +0.8
baz=91
CLL **Collm** 67.80 42 *e* P P 17 01 02.0 +1.0
BGLC **Bering Glacier** 67.87 328 P P 17 01 02.0 +0.8
baz=90
I26K **Coal Creek Min** 67.92 334 P P 17 01 00.5 -1.0
baz=92
L26K **Log Cabin Wild** 67.94 331 P P 17 01 01.1 -0.6
baz=91
HFS **Hagfors** 67.95 32 LR LR 17 25 53.6
comp=Z,233nm,21.2s,baz=290,slow=32
J26L **Joseph Creek** 68.07 333 P P 17 01 02.6 0.0
baz=92
SCRK **Sand Creek** 68.24 332 P P 17 01 04.5 +0.8

baz=91
G26K Porcupine Rive 68.25 335 P **P** **17 01 04.0 +0.5**
baz=92
GERES GERESS Array B 68.42 44 LR LR 17 26 56.6
comp=Z,94nm,20.1s,baz=300,slow=32
F26K Sheenjek River 68.42 336 P **P** **17 01 05.7 +1.1**
baz=92
N25K Chitina, Valde 68.51 330 P **P** **17 01 04.0 -1.3**
baz=90
BMRM Bremner River 68.52 329 P **P** **17 01 04.3 -1.1**
baz=89
RIDG Independent Ri 68.62 332 P **P** **17 01 06.9 +0.9**
baz=90
HARP HAARP 68.77 330 P **P** **17 01 06.9 +0.1**
baz=89
J25K Salcha River, 68.85 333 P **P** **17 01 07.5 +0.1**
baz=90
PAX Paxson 68.90 331 P **P** **17 01 07.8 0.0**
baz=89
PRP Porcupine Dome 68.92 334 P **P** **17 01 07.4 -0.5**
PRP IAmb IAmb 17 01 36.8
comp=Z,7.2nm,1.2s
PRP Porcupine Dome 68.92 334 P **P** **17 01 08.5 +0.6**
baz=90
E25K Arctic Village 68.97 337 P **P** **17 01 07.9 -0.2**
baz=91
F25K Christian Rive 68.99 336 P **P** **17 01 08.0 -0.2**
baz=91
K24K Donnelly Dome 69.03 332 P **P** **17 01 07.9 -0.6**
baz=89
KLU Klutina 69.15 330 P **P** **17 01 07.6 -1.7**
baz=88
M24K Tolsona, Glenn 69.25 330 P **P** **17 01 10.9 +1.0**
baz=88
D25K Kavik River 69.29 338 P **P** **17 01 08.3 -1.7**
baz=91
Q23K Middleton Isla 69.44 327 P **P** **17 01 12.4 +1.4**
baz=87
IL31 69.50 333 IAmb IAmb 17 01 37.6
comp=Z,8.9nm,1.4s
ILAR Eielson Array 69.50 333 P **P** **17 01 10.7 -0.6**
comp=Z,0.5nm,0.5s,baz=100,slow=4.0,SNR=15
ILAR LR LR 17 32 13.6
comp=Z,99nm,20.2s,baz=82,slow=36
comp=Z,0.5nm,0.5s
HDA Harding Lake 69.54 333 P **P** **17 01 11.7 +0.1**
baz=88
SPITS Spitsbergen Ar 69.64 13 LR LR 17 30 40.9
comp=Z,133nm,19.6s,baz=197,slow=35
G24K Hadweenzic Riv 69.70 335 P **P** **17 01 13.0 +0.4**
baz=89
POKR Poker Plat Res 69.72 333 P **P** **17 01 11.9 -0.9**
baz=88
SCM Sheep Creek Mo 69.80 330 P **P** **17 01 14.7 +1.3**
baz=87
F24K Squaw Lake 69.85 336 P **P** **17 01 12.5 -1.0**
baz=89
H24K Noodor Dome 69.89 334 IAmb IAmb 17 01 35.6
comp=Z,7.7nm,1.1s
H24K Noodor Dome 69.89 334 P **P** **17 01 12.9 -0.9**
baz=88
WAT6 Susitna Watana 69.96 331 P **P** **17 01 12.6 -1.8**
baz=87
M23K Glacier View 69.99 330 P **P** **17 01 14.1 -0.4**
baz=87
E24K Your Creek 70.06 337 IAmb IAmb 17 01 28.6
comp=Z,8.1nm,1.3s
E24K Your Creek 70.06 337 P **P** **17 01 15.2 +0.4**
baz=88
MDM Murphy Dome 70.07 333 P **P** **17 01 14.2 -0.7**
MDM IAmb IAmb 17 01 28.8
comp=Z,9.7nm,1.0s
C24K Franklin Bluff 70.11 338 P **P** **17 01 15.4 +0.5**
baz=89
D24K Happy Valley 70.16 338 P **P** **17 01 16.5 +1.2**
baz=88
VRAC Vranov 70.27 43 LR LR 17 31 19.8
comp=Z,89nm,18.1s,baz=318,slow=35
VAE Valguarnera 70.31 56 LR LR 17 25 50.6
comp=Z,120nm,21.9s,baz=162,slow=31
WAT1 Susitna Watana 70.32 331 P **P** **17 01 16.2 -0.3**
baz=86
MCK McKinley 70.44 332 P **P** **17 01 16.5 -0.6**
baz=86
NEA2 Nenana 70.45 333 P **P** **17 01 15.9 -1.2**
baz=87
TOLK Toolik Lake Re 70.45 337 P **P** **17 01 16.3 -0.9**
baz=88
I23K Minto, Yukon-K 70.54 334 P **P** **17 01 17.5 -0.2**
baz=87
PMR Palmer 70.68 330 P **P** **17 01 19.5 +0.9**
baz=86
G23K Bananza Creek 70.72 335 P **P** **17 01 18.5 -0.4**
baz=87
COLD Coldfoot 70.76 336 P **P** **17 01 17.7 -1.3**
baz=87
MODS Modra-Piesok 70.83 44 *eP* P 17 01 25.1 +5.3
TRF Thorofare Moun 71.06 332 P **P** **17 01 18.0 -3.1**
baz=85
MLY Manley 71.13 333 P **P** **17 01 19.4 -1.9**
baz=85
CUT Chulitna 71.14 331 P **P** **17 01 19.5 -1.9**
baz=85
E22K Anaktuvuk Pass 71.31 337 P **P** **17 01 21.5 -0.9**
baz=85
SUA Susitna One 71.46 330 P **P** **17 01 22.4 -1.1**
baz=84
D22K Ayikyak River 71.56 338 P **P** **17 01 23.7 -0.2**
baz=85
CAST Castle Rocks 71.87 332 P **P** **17 01 23.6 -2.2**
baz=84
HOM Homer 72.10 328 P **P** **17 01 26.3 -0.9**
baz=83
G21K Allakaket 72.12 335 P **P** **17 01 27.0 -0.3**
baz=83
B21K Ikpikpuk River 72.17 338 P **P** **17 01 30.0 +2.6**
baz=83
N20K Mount Spurr 72.19 329 P **P** **17 01 25.3 -2.5**
baz=83
C21K Knifeblade Rid 72.29 338 P **P** **17 01 28.1 -0.1**
baz=83
ARCES ARCESS Array B 72.41 22 P **P** **17 01 27.0 -1.9**
comp=Z,5.2nm,1.0s,baz=352,slow=5.1,SNR=2.1
ARCES LR LR 17 31 05.8
comp=Z,77nm,19.0s,baz=264,slow=34
comp=Z,5.2nm,1.0s
J20K Nowinta River 72.68 333 P **P** **17 01 30.0 -0.6**
baz=82
E20K Nigu River 72.92 337 P **P** **17 01 33.0 +1.0**
baz=82
F20K Avaraart Lake 72.92 336 P **P** **17 01 33.0 +1.1**
baz=82
D20K Etivluk River 73.00 338 P **P** **17 01 32.1 -0.4**
baz=81
E19K Redstone River 73.44 336 P **P** **17 01 32.5 -2.5**
baz=80
H19K Roundabout Mou 73.45 334 P **P** **17 01 34.0 -1.1**
baz=80
D19K Kuna River 73.58 337 P **P** **17 01 36.6 +0.7**
baz=80
G19K Purcell Mounta 73.60 335 P **P** **17 01 35.6 -0.4**
baz=80
FINES FINESS Array B 73.88 30 P **P** **17 01 36.8 -1.0**
comp=Z,1.4nm,0.8s,baz=271,slow=5.7,SNR=4.8
FINES LR LR 17 28 58.2
comp=Z,131nm,21.8s,baz=280,slow=32
comp=Z,1.4nm,0.8s
B18K Kokolik River 74.71 339 P **P** **17 01 42.5 +0.1**
baz=77
H17K Granite Mounta 75.00 334 P **P** **17 01 45.7 +1.6**
baz=77
G17K Kiwalik Mounta 75.17 335 P **P** **17 01 45.0 -0.2**
baz=77
E17K Hotham Inlet 75.26 336 P **P** **17 01 45.0 -0.6**
baz=76
G16K Koyuk River 75.89 335 P **P** **17 01 51.2 +2.0**
baz=75
H16K Elim 76.03 334 P **P** **17 01 50.1 0.0**
baz=75
MLR Muntele Rosu 77.20 46 LR LR 17 36 38.6
comp=Z,78nm,18.0s,baz=284,slow=36
AKASG Malin Array Be 78.00 40 P **P** **17 01 59.7 -1.7**
comp=Z,0.4nm,0.4s,baz=274,slow=16,SNR=1.3
AKASG LR LR 17 32 05.0
comp=Z,174nm,21.9s,baz=284,slow=32
IDI Anoyia 79.04 56 LR LR 17 37 58.7
comp=Z,25nm,18.3s,baz=304,slow=36
BRTR Keskin Array B 84.32 50 P **P** **17 02 35.1 -0.4**
comp=Z,0.6nm,0.7s,baz=318,slow=1.7,SNR=4.2

BRTR LR LR 17 39 49.0
comp=Z,47nm,18.2s,baz=1.0,slow=35
comp=Z,0.6nm,0.7s
KIRV Kirov 85.80 29 LR LR 17 38 58.7
comp=Z,69nm,18.3s,baz=304,slow=34
BELG Belogornoye 87.98 35 LR LR 17 38 42.0
comp=Z,108nm,20.9s,baz=228,slow=33
EIL Elat 88.87 59 LR LR 17 41 01.8
comp=Z,81nm,20.3s,baz=256,slow=34
TIXI Tiksi 89.00 356 LR LR 17 44 03.7
comp=Z,110nm,19.6s,baz=19,slow=36
KBZ Khabaz 89.16 44 LR LR 17 42 52.9
comp=Z,59nm,18.6s,baz=330,slow=36
TSUM Tsumeb 89.38 110 LR LR 17 37 37.0
comp=Z,131nm,19.1s,baz=284,slow=32
NRIK Noril'sk 89.62 9 LR LR 17 47 03.4
comp=Z,45nm,18.1s,baz=332,slow=38
ARU Arti 91.09 28 LR LR 17 40 20.1
comp=Z,87nm,21.0s,baz=306,slow=33
GNI Garni 91.98 46 LR LR 17 45 02.5
comp=Z,52nm,18.7s,baz=330,slow=36
AKTO Aktyubinsk 94.50 33 LR LR 17 41 45.7
comp=Z,123nm,21.0s,baz=252,slow=33
MBAR Mbarara 95.51 89 LR LR 17 44 54.8
comp=Z,74nm,19.7s,baz=318,slow=34
MA2 Magadan 96.38 343 LR LR 17 48 17.0
comp=Z,40nm,21.1s,baz=32,slow=36
SUR Sutherland 96.50 122 LR LR 17 39 41.5
comp=Z,105nm,19.6s,baz=312,slow=31
LSZ Lusaka 97.70 103 LR LR 17 41 47.0
comp=Z,118nm,20.0s,baz=298,slow=32
LBTB Lobatse 98.27 114 LR LR 17 40 10.4
comp=Z,84nm,21.9s,baz=275,slow=31
STKA Stephens Creek 153.01 237 PKPbc **PKPbc** **17 10 00.8 -0.1**
comp=Z,1.7nm,0.8s,baz=180,slow=0.2,SNR=3.7
WRA Warramunga Arr 161.86 264 PKP **PKPdf** **17 10 03.6 -1.4**
comp=Z,1.8nm,1.0s,baz=46,slow=0.9,SNR=5.5
WRA PKPab **PKPab** **17 10 48.6 -2.3**
comp=Z,1.2nm,0.7s,baz=87,slow=3.9,SNR=5.9
ASAR Alice Springs 161.93 252 PKP **PKPdf** **17 10 04.8 -0.2**
comp=Z,0.2nm,0.3s,baz=55,slow=3.5,SNR=13
ASAR PKPab **PKPab** **17 10 51.2 +0.1**
comp=Z,2.4nm,0.9s,baz=112,slow=4.7,SNR=12

IDC 09 16:51:57.0±1.4, 12°55N×120°30E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=36.2km s-min=23.3km az=78.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.66**	**22**	Pn	Pn	16 52 27.3	-0.2
	218nm,0.3s,baz=200,slow=5.7,SNR=20						
TGY				Sn		16 52 44.1	-5.5
	101nm,0.3s,baz=305,slow=19,SNR=4.0						
CMAR	**Chiang Mai Arr**	**21.40**	**289**	P	P	16 56 46.7	+0.2
	0.6nm,0.7s,baz=96,slow=7.7,SNR=9.8						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**35.12**	**157**	P	P	16 58 51.9	-0.5
	0.6nm,0.7s,baz=330,slow=10,SNR=5.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**38.37**	**160**	P	P	16 59 20.4	+0.2
	0.3nm,0.5s,baz=334,slow=7.5,SNR=10						
	0.3nm,0.5s						

*INMG **09** 16:57:34.5±2.5, 33°.12N×4°.86W, h18km±8km, ML2.8, Error ellipse: s-maj=10.0km s-min=4.8km az=88.0*
*MDD **09** 16:57:34.1±0.5, 33°.01N×5°.23W, h12km, Mb4.2/18, M_mb3.5/18, Error ellipse: s-maj=4.5km s-min=2.7km az=121.0*
*CNRM **09** 16:57:34.2, 32°.97N×5°.06W, h25km, ML3.5*
*SFS **09** 16:57:34.8, 33°.04N×5°.12W, h22km, mb3.5/5, ML3.5/15, ML3.9/12, MLv3.3/15*
*IGL **09** 16:57:35.8, 33°.02N×5°.25W, h22km*
ISC 09 16:57:32.0±0.9, 33°.08N±0°.03×5°.13W±0°.03, h9km, n76, σ1s71/115, 14C, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFR	**Ifrane**	**0.44**	**0**	Pg	**Pb**	**16 57 43.3**	**+1.3**
IFR				Sg	**Sb**	**16 57 49.8**	**+1.0**
MDT	**Midelt**	**0.51**	**121**	P	**Pn**	**16 57 45.7**	**+0.2**
MDT	**Midelt**	**0.51**	**121**	S	**Sg**	**16 57 47.7**	**-0.9**
LCRM	**LCR**	**0.65**	**20**	P	**Pn**	**16 57 47.3**	**-0.2**
LCRM	**LCR**	**0.65**	**20**	S	**Sb**	**16 57 56.0**	**+1.2**
SICH	**Sidi Chahed**	**1.03**	**351**	P	**Pn**	**16 57 54.9**	**+2.2**
SICH	**Sidi Chahed**	**1.03**	**351**	S	**Sn**	**16 58 09.4**	**+2.1**
ZHG	**ZHG**	**1.32**	**287**	P	**Pg**	**16 57 57.7**	**+0.3**
ZHG	**ZHG**	**1.32**	**287**	S	**Sn**	**16 58 17.5**	**+3.0**
AKLM	**AKL**	**1.77**	**36**	P	**Pb**	**16 58 04.7**	**-0.1**
AKLM	**AKL**	**1.77**	**36**	S	**Sb**	**16 58 27.5**	**+0.4**
ARF	**Arif**	**1.81**	**155**	P	**Pn**	**16 58 03.3**	**-0.2**
ARF	**Arif**	**1.81**	**155**	S	**Sn**	**16 58 23.7**	**-2.9**
RSA	**Sarsar**	**1.89**	**342**	P	**Pb**	**16 58 06.9**	**+0.2**
AVE	**Averroes**	**1.93**	**277**	Pn	**Pn**	**16 58 06.1**	**+1.2**
AVE	**Averroes**	**1.93**	**277**	P	**Pb**	**16 58 06.4**	**-1.0**
CHEFC	**Chefchaouen**	**2.03**	**355**	P	**Pb**	**16 58 08.9**	**-0.3**
TZRR	**Tazzarine**	**2.32**	**189**	P	**Pn**	**16 58 10.6**	**+0.2**
PALE	**Palemas**	**2.35**	**24**	P	**Pb**	**16 58 13.3**	**-1.2**
SRHM	**Skhour des Reh**	**2.41**	**256**	P	**Pn**	**16 58 15.5**	**+1.8**
OUZM	**OUZ**	**2.57**	**213**	P	**Pn**	**16 58 15.6**	**+1.7**
SMIR	**Smir Dam**	**2.61**	**355**	P	**Pn**	**16 58 15.9**	**+1.6**
GOG	**Mont Gurugu**	**2.77**	**39**	P	**Pn**	**16 58 16.8**	**+0.1**
TIO	**Tiouine**	**2.81**	**221**	Pn	**Pn**	**16 58 18.0**	**+0.8**
TIO				Sg	**Sb**	**16 58 57.7**	**+0.8**
ECEU	**Ceuta**	**2.82**	**356**	Sn	**Sn**	**16 58 51.6**	**+0.2**
CEU	**Ceuta**	**2.82**	**356**	Pn	**Pn**	**16 58 19.3**	**+2.1**
TAF	**Taforalt**	**2.84**	**52**	P	**Pn**	**16 58 19.1**	**+1.5**
OUK	**Oukaimeden**	**2.98**	**232**	P	**Pn**	**16 58 20.4**	**+0.7**
ZGR	**Zagora**	**2.98**	**188**	P	**Pn**	**16 58 19.5**	**0.0**
EJIF	**Jimena Fronter**	**3.38**	**355**	Pn	**Pn**	**16 58 26.0**	**+1.1**
EJIF				Sn	**Sn**	**16 59 05.2**	**+0.1**
FIGM	**Figuig**	**3.40**	**105**	P	**Pn**	**16 58 25.9**	**+0.6**
EMIJ	**Mijas**	**3.49**	**5**	Pn	**Pn**	**16 58 27.6**	**+1.1**
EMIJ				⇑*i*Vmb_V		16 58 33.3	
	170nm,SNR=1.3						
EMIJ				Sn	**Sn**	**16 59 06.7**	**-1.2**
TTIG	**Tnine Tigouga,**	**3.78**	**229**	P	**Pn**	**16 58 30.4**	**-0.2**
ELGU	**Los Guajares,**	**3.98**	**18**	Pn	**Pn**	**16 58 34.1**	**+0.9**
ELGU				Sn	**Sn**	**16 59 17.9**	**-2.1**
ELGU	**Los Guajares,**	**3.98**	**18**	Pn	**Pn**	**16 58 34.3**	**+1.1**
ELGU				⇑*i*Vmb_V		16 58 35.5	
	222nm,SNR=0.9						
ELGU				Sn	**Sn**	**16 59 20.2**	**+0.2**
EGOR	**Sierra Gorda,**	**4.11**	**11**	Pn	**Pn**	**16 58 36.5**	**+1.4**
EGOR				⇑*i*Vmb_V		16 58 36.9	
	101nm,SNR=1.0						
EGOR				Sn	**Sn**	**16 59 23.5**	**+0.1**
EBER	**Berja**	**4.23**	**25**	Pn	**Pn**	**16 58 39.0**	**+2.2**
EBER				⇑*i*Vmb_V		16 58 43.8	
	137nm,SNR=0.5						
EBER				Sn	**Sn**	**16 59 27.2**	**+0.8**
EQUE	**Quentar**	**4.34**	**18**	Pn	**Pn**	**16 58 40.4**	**+2.1**
EQUE				⇑*i*Vmb_V		16 58 44.2	
	164nm,SNR=1.8						
EQUE				Sn	**Sn**	**16 59 29.6**	**+0.5**
PBDV	**Barranco-do-Ve**	**4.75**	**332**	*eP*	**Pn**	**16 58 44.1**	**+0.3**
PBDV				*eS*	**Sn**	**16 59 36.8**	**-2.1**
PBDV				A	A	16 59 41.3	
	8.2nm,0.5s						
PVAQ	**Vaqueiros**	**4.81**	**335**	*eP*	**Pn**	**16 58 45.2**	**+0.6**
PVAQ				*eS*	**Sn**	**16 59 38.5**	**-1.9**
PVAQ	**Vaqueiros**	**4.81**	**335**	Pn	**Pn**	**16 58 45.1**	**+0.6**
PVAQ				Sn	**Sn**	**16 59 35.0**	**-5.3**
EGRO	**El Granado**	**4.84**	**337**	Pn	**Pn**	**16 58 45.5**	**+0.4**
EGRO				Sn	**Sn**	**16 59 38.6**	**-2.7**
EGRO	**El Granado**	**4.84**	**337**	Pn	**Pn**	**16 58 45.8**	**+0.8**
EGRO				⇑*i*Vmb_V		16 58 46.8	
	646nm,SNR=7.0						
EGRO				Sn	**Sn**	**16 59 39.5**	**-1.8**
EMIN	**Mina Concepcio**	**4.85**	**345**	Pn	**Pn**	**16 58 45.8**	**+0.7**
EMIN				Sn	**Sn**	**16 59 38.6**	**-2.7**
EMIN	**Mina Concepcio**	**4.85**	**345**	Pn	**Pn**	**16 58 46.1**	**+1.0**
EMIN				⇑*i*Vmb_V		16 58 47.4	
	127nm,SNR=1.5						
EMIN				Sn	**Sn**	**16 59 39.4**	**-1.9**
ECAB	**El Cabril**	**4.99**	**357**	Pn	**Pn**	**16 58 47.9**	**+0.8**
ECAB				Sn	**Sn**	**16 59 41.2**	**-3.8**
ECAB	**El Cabril**	**4.99**	**357**	Pn	**Pn**	**16 58 48.3**	**+1.2**
ECAB				⇑*i*Vmb_V		16 58 53.0	
	96nm,SNR=1.2						
ECAB				Sn	**Sn**	**16 59 43.3**	**-1.6**

PFVI Vila Bisbo 5.05 324 *eP* **Pn** **16 58 48.2 +0.2**
PFVI *eS* **Sn** **16 59 45.4 -1.1**
EADA Adamuz 5.10 5 Pn **Pn** **16 58 50.2 +1.6**
EADA ⇑*i*Vmb_V 16 58 55.9
127nm,SNR=1.3
EADA Sn **Sn** **16 59 46.0 -1.6**
MORF Marmelete 5.11 327 *eP* **Pn** **16 58 49.3 +0.5**
MORF *eS* **Sn** **16 59 47.3 -0.6**
MORF A A 16 59 51.1
7.8nm,0.2s
MORF Marmelete 5.11 327 *eP* **Pn** **16 58 49.2 +0.5**
PCVE Castro Verde 5.13 333 *eP* **Pn** **16 58 49.7 +0.7**
PCVE *eS* **Sn** **16 59 46.3 -2.0**
PCVE A A 16 59 51.7
5.0nm,0.3s
PCVE Castro Verde 5.13 333 Pn **Pn** **16 58 49.6 +0.7**
PCVE Sn **Sn** **16 59 45.6 -2.7**
PBAR Barrancos 5.32 344 *eP* **Pn** **16 58 52.4 +0.8**
PBAR *eS* **Sn** **16 59 50.1 -2.9**
PBAR A A 16 59 53.9
7.3nm,0.3s
PBAR Barrancos 5.32 344 Pn **Pn** **16 58 52.3 +0.7**
PBAR Sn **Sn** **16 59 48.6 -4.4**
PTEO Sao Teotonio 5.34 328 *eP* **Pn** **16 58 52.7 +0.9**
PTEO *eS* **Sn** **16 59 52.6 -0.9**
MESJ Messejana 5.38 333 *eP* **Pn** **16 58 52.9 +0.5**
MESJ *eS* **Sn** **16 59 54.7 +0.2**
MESJ A A 16 59 58.8
6.0nm,0.3s
MESJ Messejana 5.38 333 *eP* **Pn** **16 58 52.8 +0.5**
PBEJ Beja 5.42 336 *eS* **Sn** **16 59 53.8 -1.6**
PBEJ A A 16 59 57.5
5.2nm,0.6s
PNCL Nicolau / Gran 5.74 332 *eP* **Pn** **16 58 58.4 +1.1**
PNCL *eS* **Sn** **17 00 00.2 -3.0**
PNCL A A 17 00 10.1
4.0nm,0.4s
PSIM Granatula de C 5.84 11 Pn **Pn** **16 59 00.7 +1.9**
PSIM Sn **Sn** **17 00 04.4 -1.4**
EBAD Badajoz 5.87 345 Pn **Pn** **16 59 00.0 +0.8**
EBAD Sn **Sn** **17 00 03.8 -2.7**
EBAD Badajoz 5.87 345 Pn **Pn** **16 58 59.9 +0.8**
EBAD ⇑*i*Vmb_V 16 59 04.5
497nm,SNR=5.9
EBAD Sn **Sn** **17 00 04.4 -2.1**
EVO Evora 5.92 338 *eP* **Pn** **16 59 01.0 +1.1**
EVO *eS* **Sn** **17 00 06.8 -1.1**
EVO Evora 5.92 338 Pn **Pn** **16 59 00.2 +0.3**
EVO Sn **Sn** **17 00 05.1 -2.8**
PESTR Estremoz 6.11 342 *eP* **Pn** **16 59 03.4 +0.9**
PESTR *eS* **Sn** **17 00 10.8 -1.7**
PESTR A A 17 00 38.0
5.3nm,0.5s
PESTR Estremoz 6.11 342 Pn **Pn** **16 59 03.2 +0.7**
PESTR Sn **Sn** **17 00 09.7 -2.8**
ETOB Tobarra 6.27 27 Pn **Pn** **16 59 07.6 +2.9**
ETOB ⇑*i*Vmb_V 16 59 08.7
107nm,SNR=1.1
PMTG Montargil 6.48 338 *eP* **Pn** **16 59 08.2 +0.6**
PMTG *eS* **Sn** **17 00 19.1 -2.5**
PMTG A A 17 00 43.5
3.3nm,0.9s
PAB San Pablo 6.49 5 Pn **Pn** **16 59 08.7 +1.0**
PAB ⇑*i*Vmb_V 16 59 14.2
101nm,SNR=1.3
PAB Sn **Sn** **17 00 18.5 -3.3**
PMRV Marv??o 6.59 345 *eS* **Sn** **17 00 21.4 -3.1**
PMRV A A 17 00 23.4
6.4nm,0.4s
PCBR Castelo Branco 7.01 345 *eP* **Pn** **16 59 15.8 +1.0**
PCBR *eS* **Sn** **17 00 31.1 -3.5**
PCBR A A 17 00 43.1
3.3nm,0.6s
EPLA Plasencia 7.01 354 Pn **Pn** **16 59 15.6 +0.7**
EPLA ⇑*i*Vmb_V 16 59 21.5
218nm,SNR=1.4
ETOR Torete 8.11 17 Pn **Pn** **16 59 32.2 +2.3**
ETOR ⇑*i*Vmb_V 16 59 37.8
50nm,SNR=0.4
ETOR Sn **Sn** **17 00 58.7 -3.1**
MVO Moncorvo 8.21 350 *eP* **Pn** **16 59 32.3 +0.9**
POLO Lamas de Olo 8.55 346 *eP* **Pn** **16 59 36.8 +0.8**

CNRM 09 16:57:59.9, 32°.95N×5°.09W, h4km, ML3.5, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**0.43**	**109**	P	Pg	16 58 07.8	-0.4
MDT	**Midelt**	**0.43**	**109**	S	Sg	16 58 13.9	+0.1
LCRM	**LCR**	**0.76**	**15**	P	Pg	16 58 12.3	-2.2
LCRM	**LCR**	**0.76**	**15**	S	Sg	16 58 21.1	-3.3
SICH	**Sidi Chahed**	**1.17**	**351**	P	Pg	16 58 22.2	-0.1
SICH	**Sidi Chahed**	**1.17**	**351**	S	Sb	16 58 38.6	+0.5
ZHG	**ZHG**	**1.39**	**291**	P	Pg	16 58 27.0	+0.4
ZHG	**ZHG**	**1.39**	**291**	S	Sn	16 58 47.2	+2.2
ARF	**Arif**	**1.69**	**154**	P	Pn	16 58 29.9	-0.3
ARF	**Arif**	**1.69**	**154**	S	Sb	16 58 52.8	-0.3
AKLM	**AKL**	**1.86**	**33**	P	Pn	16 58 33.4	+0.8
AKLM	**AKL**	**1.86**	**33**	S	Sb	16 58 58.1	-0.1
AVE	**Averroes**	**1.98**	**281**	P	Pn	16 58 34.3	+0.1
AVE	**Averroes**	**1.98**	**281**	S	Sn	16 58 58.6	-0.8
AVE	**Averroes**	**1.98**	**281**	Sg	Pn	16 58 33.9	-0.3
RSA	**Sarsar**	**2.02**	**343**	P	Pn	16 58 35.2	+0.5
RSA	**Sarsar**	**2.02**	**343**	S	Sn	16 59 00.9	+0.4
CHEFC	**Chefchaouen**	**2.16**	**355**	P	Pn	16 58 36.9	+0.1
CHEFC	**Chefchaouen**	**2.16**	**355**	S	Sb	16 59 05.8	-1.0
TZRR	**Tazzarine**	**2.20**	**191**	P	Pn	16 58 37.7	+0.5
TZRR	**Tazzarine**	**2.20**	**191**	S	Sb	16 59 07.4	-0.4
PALE	**Palemas**	**2.45**	**23**	P	Pn	16 58 41.4	+0.7

TAP 09 17:02:54.0, 22°.74N×121°.35E, h36km, ML3.1, 16C-15D, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.13**	**122**	⇑*i*P	Pn	17 03 00.3	-3.7
	baz=114						
LDUT				S	Sn	17 03 04.9	-8.4
	baz=114						
TTN	**Taitung**	**0.18**	**273**	P	Pn	17 03 01.6	-1.2
	baz=272						
TTN				*e*S	Sn	17 03 07.0	-3.8
	baz=272						
EDH	**Donghe**	**0.23**	**350**	⇑P	Pn	17 03 01.4	-0.8
	baz=345						
EDH				*e*S	Sn	17 03 06.7	-2.6
	baz=345						
LONT	**Longtian**	**0.26**	**309**	⇓P	Pn	17 03 01.7	-0.4
	baz=309						
LONT				S	Sn	17 03 07.0	-1.9
	baz=309						
TWGBT	**Beinan**	**0.26**	**287**	⇓*i*P	Pn	17 03 01.4	-0.6
	baz=286						
TWGBT				*i* S	Sn	17 03 06.6	-2.3
	baz=286						
TWG	**Pinlang**	**0.27**	**287**	⇓*i*P	Pn	17 03 01.4	-0.6
	baz=286						
TWG				S	Sn	17 03 06.6	-2.2
	baz=286						
CHKT	**Chengkung**	**0.35**	**3**	P	Pn	17 03 02.6	+0.1
	baz=12						
CHKT				S	Sn	17 03 09.0	0.0
	baz=12						
ECS	**Chishang**	**0.37**	**341**	⇑*i*P	Pn	17 03 03.1	+0.4
	baz=333						
ECS				S	Sn	17 03 10.1	+0.8
	baz=333						
ECL	**Taimali**	**0.39**	**248**	⇓*i*P	Pn	17 03 02.4	-0.5
	baz=253						
ECL				S	Sn	17 03 08.7	-0.9
	baz=253						
EHD	**Haiduan**	**0.42**	**342**	⇑*i*P	Pn	17 03 03.1	-0.4
	baz=335						
EHD				S	Sn	17 03 09.5	-0.7
	baz=335						
CHKH	**Chenggong**	**0.45**	**6**	⇑P	Pn	17 03 03.8	0.0
	baz=13						
CHKH				S	Sn	17 03 11.1	+0.3
	baz=13						
FULB	**Fuli**	**0.46**	**354**	P	Pn	17 03 03.9	0.0
	baz=345						
FULB				S	Sn	17 03 11.6	+0.6
	baz=345						

ELDTW	**Lidau** baz=324	**0.54**	**326**	⇑*i*	P	Pn	17 03 04.6 -0.7
ELDTW	baz=324				S	Sn	17 03 11.7 -1.4
TAW	**Tawu** baz=225	**0.57**	**227**	⇓	P	Pn	17 03 04.9 -0.8
TAW	baz=225				S	Sn	17 03 12.7 -1.0
ECBN	**Changbin** baz=17	**0.58**	**10**		P	Pn	17 03 05.9 0.0
ECBN	baz=17				*e*S	Sn	17 03 14.4 +0.3
EAST	**Anshuo** baz=231	**0.58**	**232**	⇓*i*	P	Pn	17 03 05.2 -0.7
TAWH	**Dawu Township** baz=230	**0.58**	**227**	⇓	P	Pn	17 03 05.2 -0.7
TAWH	baz=230				S	Sn	17 03 13.2 -1.0
EYUL	**Yuli** baz=348	**0.60**	**358**	*e*	P	Pn	17 03 05.7 -0.5
TWF1	**Yuli** baz=347	**0.61**	**356**	⇑*i*	P	Pn	17 03 05.2 -1.1
YULB	**Yu-li** baz=356	**0.65**	**356**	⇑*i*	P	Pn	17 03 05.6 -1.2
TSMG	**Majia** baz=266	**0.65**	**267**		P	Pn	17 03 06.7 -0.1
SSD	**Sandimen** baz=270	**0.66**	**270**	⇓	*e*P	Pn	17 03 05.8 -1.1
MASBT	**Mashibuluo** baz=258	**0.67**	**259**	⇓	P	Pn	17 03 07.1 +0.1
MASBT	baz=258				S	Sn	17 03 15.7 -0.6
STYH	**Taoyuan** baz=309	**0.68**	**309**	*e*	P	Pn	17 03 07.3 +0.2
STYH	baz=309				*e*S	Sn	17 03 17.1 +0.7
STYT	**Tauyuan** baz=308	**0.69**	**308**	⇓	P	Pn	17 03 07.5 +0.2
STYT	baz=308				*e*S	Sn	17 03 17.2 +0.4
SLGT	**Liugui** baz=291	**0.69**	**291**	⇓	P	Pn	17 03 08.0 +0.6
SLGT	baz=291				*e*S	Sn	17 03 17.2 +0.4
LAY	**Lan-yu** baz=164	**0.73**	**165**	*e*	P	Pn	17 03 07.1 -0.7
LAY	baz=164				*e*S	Sn	17 03 18.1 +0.5
SLIU	**Shizi** baz=213	**0.73**	**224**		P	Pn	17 03 07.1 -0.7
SLIU	baz=213				*e*S	Sn	17 03 16.5 -1.2
HGSD	**Ruisui** baz=5.0	**0.75**	**5**	⇑	P	Pn	17 03 07.8 -0.2
EHY	**Hungye** baz=359	**0.76**	**358**	⇑*i*	P	Pn	17 03 07.2 -1.0
SCZT	**Fangliau** baz=239	**0.77**	**241**	*e*	P	Pn	17 03 08.4 +0.1
SCZT	baz=239				*e*S	Sn	17 03 18.7 +0.1
LYUB	**Lan-yu** baz=163	**0.77**	**163**		P	Pn	17 03 06.9 -1.5
LYUB	baz=163				*e*S	Sn	17 03 16.6 -2.1
SGST	**Jiashian** baz=300	**0.78**	**296**	⇓	P	Pn	17 03 08.9 +0.4
SGST	baz=300				*e*S	Sn	17 03 20.4 +1.4
SGLT	**Jiouru** baz=268	**0.79**	**269**	*e*	P	Pn	17 03 10.5 +1.9
SCST	**Cishan** baz=280	**0.80**	**280**	*e*	P	Pn	17 03 10.5 +1.8
WTP	**Ta-pu** baz=314	**0.84**	**307**	⇓	P	Pn	17 03 10.7 +1.3
WTP	baz=314				S	Sn	17 03 22.8 +2.2
TWM1	**Shoushan** baz=275	**0.86**	**275**	*e*	P	Pn	17 03 11.9 +2.3
SMST	**Manzhou Townsh** baz=200	**0.86**	**213**	*e*	P	Pn	17 03 09.1 -0.4
SMST	baz=200				*e*S	Sn	17 03 19.8 -1.2
TPUB	**Ta-pu** baz=311	**0.86**	**310**	⇑	P	Pn	17 03 11.0 +1.3
TPUB	baz=311				*e*S	Sn	17 03 22.9 +1.9
CHN1	**Nanshi** baz=307	**0.87**	**300**	⇓	*e*P	Pn	17 03 11.5 +1.7
CHN1	baz=307				S	Sn	17 03 24.3 +3.0
ALS	**Alishan** baz=335	**0.91**	**327**	⇑	P	Pn	17 03 11.5 +0.9
ALS	baz=335				S	Sn	17 03 23.7 +1.1
SNST	**Tainan City** baz=301	**0.92**	**301**	*e*	P	Pn	17 03 12.0 +1.7
SNST	baz=301				S	Sn	17 03 25.5 +3.2
CHN4	**Tsaushan** baz=312	**0.92**	**311**	*e*	P	Pn	17 03 12.0 +1.6
CHN4	baz=312				*e*S	Sn	17 03 25.3 +2.8
EGFH	**Guangfu** baz=355	**0.92**	**5**	*e*	P	Pn	17 03 09.4 -1.0
HEN	**Hengchun** baz=205	**0.93**	**218**	*e*	P	Pn	17 03 10.7 +0.2
HEN	baz=205				*e*S	Sn	17 03 22.7 +0.2
TSEB	**Hengchuen, Pin** baz=206	**0.94**	**206**	*e*	P	Pn	17 03 11.4 +0.8
TSEB	baz=206				S	Sn	17 03 23.1 +0.4
TWKBT	**Hengchun** baz=210	**0.94**	**212**	⇑	P	Pn	17 03 10.3 -0.4
TWKBT	baz=210				*e*S	Sn	17 03 22.4 -0.5
TWK1	**Hengchun** baz=209	**0.94**	**212**	*e*	P	Pn	17 03 10.3 -0.4
TWK1	baz=209				*e*S	Sn	17 03 22.0 -0.9
TWK	**Hsinying** baz=304	**0.95**	**303**	⇓	P	Pn	17 03 12.4 +1.6
TWK	baz=304				*e*S	Sn	17 03 25.6 +2.4
SHHT	**Tainan City** baz=287	**0.96**	**287**	*e*	P	Pn	17 03 13.8 +2.9
CHN3	**Shinhua** baz=289	**0.96**	**290**	*e*	P	Pn	17 03 13.8 +2.8
WARBT	**Fenglin Townsh** baz=2.0	**0.97**	**2**	⇑	*e*P	Pn	17 03 09.8 -1.3
WCKO	**Fanlu** baz=321	**0.97**	**315**	*e*	P	Pn	17 03 12.7 +1.6
WCKO	baz=321				S	Sn	17 03 26.8 +3.1
VWDT	**VWDT**	**1.02**	**349**	⇑	P	Pn	17 03 11.9 +0.2
VWDT					*e*S	Sn	17 03 24.9 0.0
WHYT	**Xinyi Township** baz=334	**1.05**	**334**	*e*	P	Pn	17 03 13.7 +1.4
SHUL	**Shoufeng** baz=1.0	**1.06**	**11**	*e*	P	Pn	17 03 12.4 +0.2
SHUL	baz=1.0				*e*S	Sn	17 03 26.1 +0.4
ESL	**Shilin** baz=5.0	**1.07**	**4**	*e*	P	Pn	17 03 11.3 -1.1
SSLB	**Suanglung** baz=354	**1.10**	**341**	*e*	P	Pn	17 03 13.6 +0.6
SSLB	baz=354				*e*S	Sn	17 03 27.9 +1.0
ICHU	**Yijhu** baz=302	**1.16**	**302**	*e*	P	Pn	17 03 15.5 +1.8
ICHU	baz=302				*e*S	Sn	17 03 31.4 +3.2
WGK	**Gukeng** baz=324	**1.18**	**323**	*e*	P	Pn	17 03 15.5 +1.5
WGK	baz=324				*e*S	Sn	17 03 31.5 +2.6
CHN8	**Yiju** baz=300	**1.21**	**300**	*e*	P	Pn	17 03 15.9 +1.6
CHN8	baz=300				S	Sn	17 03 32.4 +3.0
SMLT	**Sun Moon Lake** baz=342	**1.21**	**340**	*e*	P	Pn	17 03 15.8 +1.4
SMLT	baz=342				*e*S	Sn	17 03 31.8 +2.2
OWD	**Renai** baz=4.0	**1.22**	**353**		P	Pn	17 03 14.5 -0.1
WJS	**Zhushan** baz=332	**1.22**	**332**	*e*	P	Pn	17 03 16.6 +2.1
TSCK	**Chigu Township** baz=289	**1.23**	**289**	*e*	P	Pn	17 03 15.8 +1.2
TSCK	baz=289				*e*S	Sn	17 03 32.2 +2.2
TYC	**Yuchr** baz=341	**1.24**	**339**	⇑*i*	P	Pn	17 03 16.6 +1.8
TYC	baz=341				*e*S	Sn	17 03 33.0 +2.7
WUSB	**Renai**	**1.26**	**350**		P	Pn	17 03 15.6 +0.4
WUSB					*e*S	Sn	17 03 30.2 -0.7
LXIB	**Xiulin Townshi** baz=13	**1.27**	**3**		*e*S	Sn	17 03 30.0 -1.4
WNT	**Mingjian** baz=333	**1.28**	**332**	*e*	P	Pn	17 03 17.2 +1.8
WNT	baz=333				*e*S	Sn	17 03 34.5 +3.1
WSL	**Shuilin Townsh** baz=307	**1.29**	**307**	*e*	P	Pn	17 03 16.8 +1.4
WSL	baz=307				*e*S	Sn	17 03 34.5 +3.0
WNT1	**Nantou City** baz=332	**1.31**	**332**	*e*	P	Pn	17 03 18.0 +2.2
CHGB	**Renai** baz=3.0	**1.32**	**353**		P	Pn	17 03 16.5 +0.4
CHGB	baz=3.0				*e*S	Sn	17 03 32.1 -0.5
DPDB	**Guoxing** baz=355	**1.34**	**343**	*e*	P	Pn	17 03 17.7 +1.5
WSF	**Szhu** baz=311	**1.36**	**311**	*e*	P	Pn	17 03 18.0 +1.5
WSF	baz=311				*e*S	Sn	17 03 35.6 +2.3
WCS	**Beigang Elemen** baz=343	**1.37**	**343**	*e*	P	Pn	17 03 18.3 +1.8
WHF	**Hehuan Shan** baz=6.0	**1.40**	**357**	*e*	P	Pn	17 03 17.4 +0.1
WYL	**Yuanlin Townsh** baz=316	**1.40**	**330**	*e*	P	Pn	17 03 17.9 +0.9
WWF	**Wufeng** baz=337	**1.42**	**335**	*e*	P	Pn	17 03 19.4 +2.0
WWF	baz=337				*e*S	Sn	17 03 37.6 +2.8
NACB	**Ninganchiao** baz=11	**1.44**	**9**	*e*	P	Pn	17 03 16.6 -0.9
NACB	baz=11				*e*S	Sn	17 03 35.8 +0.6
WRL	**Guolierlin Hig** baz=322	**1.46**	**322**	*e*	P	Pn	17 03 19.2 +1.4
RLNB	**Erlin** baz=321	**1.46**	**322**	*e*	P	Pn	17 03 19.1 +1.3
ETLH	**Xiulin Townshi** baz=5.0	**1.46**	**5**	*e*	P	Pn	17 03 16.8 -1.1
FUSS	**Fushou** baz=7.0	**1.50**	**356**	*e*	P	Pn	17 03 19.2 +0.6
FUSS	baz=7.0				*e*S	Sn	17 03 36.3 -0.8
TDCB	**Techi** baz=1.0	**1.51**	**353**	*e*	P	Pn	17 03 19.6 +0.9
WCHH	**Zhanghua** baz=317	**1.51**	**332**	*e*	P	Pn	17 03 20.1 +1.5
TCU	**Taichung** baz=336	**1.53**	**336**	*e*	P	Pn	17 03 20.5 +1.8
WHP	**Taichung City** baz=357	**1.57**	**347**	*e*	P	Pn	17 03 21.6 +2.2
WHP	baz=357				*e*S	Sn	17 03 42.5 +4.0
EAHA	**Aohua** baz=3.0	**1.62**	**13**	*e*	P	Pn	17 03 19.8 -0.2
EOS4	**EOS4** baz=35	**1.64**	**33**		P	Pn	17 03 20.1 +0.2
EOS4	baz=35				S	Sn	17 03 39.0 -0.5
WDGT	**Dungji** baz=288	**1.64**	**289**	*e*	P	Pn	17 03 20.8 +0.6
WDGT	baz=288				*e*S	Sn	17 03 40.0 0.0
NNSB	**Datong** baz=12	**1.68**	**1**		P	Pn	17 03 21.2 +0.3
TWQ1	**Liyutan** baz=344	**1.68**	**342**		P	Pn	17 03 23.2 +2.3
TWQ1	baz=344				S	Sn	17 03 44.8 +3.6
NNS	**Nan Shan** baz=12	**1.69**	**1**	*e*	P	Pn	17 03 21.5 +0.4
ENA	**Nanau** baz=4.0	**1.71**	**12**	*e*	P	Pn	17 03 21.5 +0.1
ENA	baz=4.0				*e*S	Sn	17 03 41.7 -0.3
WDJ	**Dajia District** baz=338	**1.72**	**338**	*e*	P	Pn	17 03 23.9 +2.4
EWUT	**Wuta** baz=4.0	**1.74**	**13**	*e*	P	Pn	17 03 21.8 +0.2
EOS3	**EOS3** baz=31	**1.77**	**30**	*e*	P	Pn	17 03 22.6 +0.6
EOS3	baz=31				*e*S	Sn	17 03 43.0 -0.3
LATG	**Datong** baz=16	**1.79**	**5**	*e*	P	Pn	17 03 22.6 +0.1
PHUB	**P'eng-hu** baz=295	**1.81**	**295**		P	Pn	17 03 23.0 +0.5
PHUB	baz=295				*e*S	Sn	17 03 43.3 -0.9
VCHM	**Qimei** baz=284	**1.83**	**285**		P	Pn	17 03 23.6 +0.8
PNG	**Penghu** baz=296	**1.84**	**297**	*e*	P	Pn	17 03 23.8 +0.7
PNG	baz=296				*e*S	Sn	17 03 45.6 +0.5
NDT	**Datong Townshi** baz=15	**1.86**	**5**	*e*	P	Pn	17 03 24.0 +0.8
NMLH	**Miaoli** baz=344	**1.86**	**344**	*e*	P	Pn	17 03 25.2 +1.9
NFF	**Wufeng Townshi** baz=359	**1.89**	**354**	*e*	P	Pn	17 03 25.8 +1.9
ENTT	**Nioudou** baz=6.0	**1.90**	**6**	*e*	P	Pn	17 03 24.1 +0.3
NSTT	**Nanjuang** baz=351	**1.91**	**350**	*e*	P	Pn	17 03 26.1 +2.1
TWC	**Suao** baz=4.0	**1.91**	**14**	*e*	P	Pn	17 03 24.5 +0.5
LIOB	**Emei** baz=351	**1.92**	**351**	*e*	P	Pn	17 03 25.9 +1.8
YHNB	**Yeheng** baz=13	**1.92**	**1**		P	Pn	17 03 25.1 +1.0
NSK	**Sanguang** baz=15	**1.92**	**0**	*e*	P	Pn	17 03 25.2 +1.0
NSK	baz=15				*e*S	Sn	17 03 47.3 +0.1
TWE	**Neicheng** baz=9.0	**1.99**	**8**	*e*	P	Pn	17 03 25.3 +0.2
FUSB	**Fushanzhiwuyua** baz=17	**2.02**	**6**	*e*	P	Pn	17 03 25.8 +0.2
NWLT	**Wulai** baz=16	**2.03**	**4**	*e*	P	Pn	17 03 26.3 +0.6
NWLT	baz=16				*e*S	Sn	17 03 50.3 +0.5
TIPB	**Shuangxi** baz=11	**2.26**	**11**	*e*	P	Pn	17 03 30.2 +1.4
YOJ	**Yonaguni jima** baz=52	**2.29**	**41**	*e*	P	Pn	17 03 29.5 +0.2
YOJ	baz=52				*e*S	Sn	17 03 56.1 -0.2
TWB1	**Santiao Chiao** baz=6.0	**2.33**	**14**	*e*	P	Pn	17 03 31.6 +1.9
SXI1	**Grass Mountain** baz=12	**2.39**	**12**	*e*	P	Pn	17 03 31.4 +0.8
VWUC	**VWUC** baz=310	**2.83**	**323**	*e*	P	Pn	17 03 37.0 +0.3
PTMZ	**Houxiangcun** baz=316	**3.06**	**319**	*e*	P	Pn	17 03 40.1 +0.2
KNMB	**Chin-men Tao** baz=301	**3.21**	**303**	*e*	P	Pn	17 03 43.1 +1.3
ZPLA	**Ao Xicun** baz=289	**3.51**	**290**	*e*	P	Pn	17 03 46.4 +0.4
AXDP	**Jialang** baz=304	**3.76**	**305**	*e*	P	Pn	17 03 49.9 +0.4
MHZQ	**Yeshan** baz=325	**3.95**	**328**	*e*	P	Pn	17 03 52.8 +0.7

TAP 09 17:03:58.8, 23.89N × 121.53E, h7km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=334	**0.09**	**335**	*i* P	Pg	17 04 01.6	+0.7
ETM	baz=334			S	Sg	17 04 03.4	+1.0
SHUL	**Shoufeng** baz=164	**0.10**	**165**	P	Pg	17 04 01.9	+0.8
SHUL	baz=164			*e*S	Sg	17 04 04.3	+1.6
HWA	**Hwalien** baz=40	**0.11**	**36**	P	Pg	17 04 02.0	+0.7
ESL	**Shilin** baz=228	**0.12**	**232**	*i* P	Pg	17 04 02.1	+0.7
ESL	baz=228			*i* S	Sg	17 04 04.3	+1.1
LXIB	**Xiulin Townshi** baz=320	**0.17**	**321**	P	Pg	17 04 03.5	+1.1
TWD	**Chiawan** baz=18	**0.20**	**17**	*e*P	Pg	17 04 03.2	+0.3
WARBT	**Fenglin Townsh** baz=218	**0.22**	**219**	P	Pg	17 04 03.9	+0.8
EGFH	**Guangfu** baz=203	**0.24**	**204**	*e*P	Pg	17 04 04.4	+0.9
OWD	**Renai** baz=281	**0.33**	**282**	*e*P	Pb	17 04 06.9	-0.3
OWD	baz=281			*e*S	Sb	17 04 11.9	-0.9
WHF	**Hehuan Shan** baz=316	**0.35**	**316**	*e*P	Pb	17 04 06.9	-0.8
CHGB	**Renai** baz=297	**0.37**	**298**	*e*P	Pb	17 04 07.1	-0.8
CHGB	baz=297			*e*S	Sb	17 04 13.4	-0.5
VWDT	**VWDT** baz=249	**0.38**	**250**	*e*P	Pb	17 04 07.5	-0.4
VWDT	baz=249			*e*S	Sb	17 04 13.5	-0.5
WUSB	**Renai** baz=285	**0.39**	**285**	*e*P	Pg	17 04 07.3	+0.8
WUSB	baz=285			*e*S	Sb	17 04 14.3	-0.2

*TAP **09** 17:09:30.6, 24.02N × 121.79E, h4km, ML2.8, D*
*JMA **09** 17:09:31.4±0.3, 24.0N±0.9×12.2E±°, h0km, TAIWAN REGION*

ISC 09 17:09:32.2±1.0, **24.03N**±0.02×**121.78E**±0.03, **h10**km±6km, **n67**, σ0.**80**/123, **9C-3D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=253	**0.17**	**252**	*e*P	Pg	**17 09 35.8**	**0.0**
HWA	baz=253			S	Sg	**17 09 40.6**	**+2.2**
TWD	**Chiawan** baz=288	**0.17**	**287**	⇓*i*P	Pg	**17 09 35.2**	**-0.8**
TWD	baz=288			S	Sg	**17 09 38.8**	**+0.2**
ETL	**Fush Village** baz=311	**0.19**	**313**	⇑P	Pg	**17 09 35.6**	**-0.7**
ETL	baz=311			S	Sg	**17 09 39.9**	**+0.7**
NACB	**Ninganchiao** baz=310	**0.22**	**311**	⇓*i*P	Pg	**17 09 36.0**	**-0.8**
NACB	baz=310			S	Sg	**17 09 40.2**	**+0.2**
ETM	**Tongmen** baz=257	**0.27**	**257**	⇑*i*P	Pg	**17 09 37.2**	**-0.5**
ETM	baz=257			S	Sb	**17 09 42.3**	**-1.4**
EAHA	**Aohua** baz=351	**0.30**	**353**	P	Pg	**17 09 37.8**	**-0.5**
EAHA	baz=351			S	Sb	**17 09 42.9**	**-1.8**
SHUL	**Shoufeng** baz=221	**0.31**	**219**	P	Pb	**17 09 39.3**	**-0.5**
SHUL	baz=221			S	Sb	**17 09 46.5**	**+1.7**
ETLH	**Xiulin Townshi** baz=303	**0.32**	**303**	⇑P	Pg	**17 09 38.1**	**-0.7**
ETLH	baz=303			S	Sg	**17 09 43.4**	**+0.3**
LXIB	**Xiulin Townshi** baz=269	**0.33**	**269**	⇑*i*P	Pg	**17 09 38.2**	**-0.7**
LXIB	baz=269			S	Sb	**17 09 44.8**	**-0.9**
ESL	**Shilin** baz=247	**0.38**	**236**	*e*P	Pg	**17 09 39.3**	**-0.4**
ESL	baz=247			*e*S	Sb	**17 09 45.5**	**-1.4**
ENA	**Nanau** baz=354	**0.40**	**355**	P	Pg	**17 09 39.5**	**-0.6**
ENA	baz=354			S	Sb	**17 09 47.2**	**-0.3**
EWUT	**Wuta** baz=358	**0.42**	**0**	*e*P	Pg	**17 09 40.0**	**-0.5**
EWUT	baz=358			S	Sb	**17 09 47.4**	**-0.6**
WARBT	**Fenglin Townsh** baz=229	**0.47**	**229**	P	Pg	**17 09 40.9**	**-0.6**
WARBT	baz=229			S	Sb	**17 09 49.8**	**+0.1**
WHF	**Hehuan Shan** baz=284	**0.48**	**284**	⇑P	Pg	**17 09 41.1**	**-0.6**
WHF	baz=284			S	Sb	**17 09 48.9**	**-1.4**
FUSS	**Fushou** baz=293	**0.53**	**294**	P	Pg	**17 09 42.4**	**-0.3**
FUSS	baz=293			S	Sb	**17 09 51.6**	**0.0**
NNSB	**Datong** baz=317	**0.54**	**318**	⇑*i*P	Pg	**17 09 42.3**	**-0.4**
NNSB	baz=317			S	Sb	**17 09 50.6**	**-1.0**
ESAO	**Su ao** baz=354	**0.55**	**6**	*e*P	Pb	**17 09 43.0**	**-0.9**
ESAO	baz=354			S	Sb	**17 09 51.7**	**-0.1**
NNS	**Nan Shan** baz=317	**0.55**	**318**	P	Pg	**17 09 42.6**	**-0.4**
NNS	baz=317			S	Sb	**17 09 51.0**	**-1.1**
CHGB	**Renai** baz=273	**0.55**	**273**	⇑*i*P	Pb	**17 09 42.7**	**-1.4**
CHGB	baz=273			S	Sb	**17 09 51.5**	**-0.7**
LATG	**Datong** baz=334	**0.56**	**336**	P	Pb	**17 09 43.0**	**-1.1**
LATG	baz=334			S	Sb	**17 09 52.1**	**0.0**
OWD	**Renai** baz=273	**0.56**	**263**	P	Pb	**17 09 42.7**	**-1.4**
OWD	baz=273			*e*S	Sb	**17 09 51.3**	**-0.9**
TWC	**Suao** baz=355	**0.58**	**6**	*e*P	Pb	**17 09 43.8**	**-0.7**
TWC	baz=355			*e*S	Sb	**17 09 52.6**	**-0.2**
TWT	**Tachien** baz=291	**0.59**	**292**	*e*P	Pb	**17 09 44.1**	**-0.7**
TWT	baz=291			S	Sb	**17 09 53.2**	**0.0**
WUSB	**Renai** baz=277	**0.60**	**267**	⇑P	Pb	**17 09 43.8**	**-1.2**
WUSB	baz=277			S	Sb	**17 09 52.7**	**-0.8**
NDS	**Dongshan** baz=353	**0.61**	**355**	P	Pb	**17 09 44.1**	**-0.7**
NDS	baz=353			S	Sb	**17 09 53.6**	**+0.2**
TDCB	**Techi** baz=291	**0.61**	**292**	*e*P	Pb	**17 09 44.1**	**-0.8**
TDCB	baz=291			S	Sb	**17 09 52.7**	**-0.9**
NDT	**Datong Townshi** baz=336	**0.62**	**337**	P	Pg	**17 09 43.9**	**-0.4**
NDT	baz=336			S	Sb	**17 09 54.4**	**+0.5**
ENTT	**Nioudou** baz=329	**0.64**	**342**	⇓P	Pb	**17 09 44.8**	**-0.7**
ENTT	baz=329			S	Sb	**17 09 55.1**	**+0.7**
VWDT	**VWDT** baz=255	**0.64**	**245**	P	Pb	**17 09 44.6**	**-0.9**
VWDT	baz=255			S	Sb	**17 09 55.4**	**+0.9**
EHY	**Hungye** baz=220	**0.67**	**219**	*e*P	Pb	**17 09 45.1**	**-0.8**
TWE	**Neicheng** baz=351	**0.70**	**352**	*e*P	Pb	**17 09 45.8**	**-0.6**
TWE	baz=351			*e*S	Sb	**17 09 56.2**	**+0.1**
YHNB	**Yeheng**	**0.74**	**330**	P	Pb	**17 09 46.3**	**-0.9**

	baz=329						
YHNB				S		Sb	17 09 57.8 +0.5
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.75**	**347**	P		Pb	17 09 46.7 -0.7
	baz=345						
FUSB				S		Sb	17 09 58.3 +0.7
	baz=345						
NSK	**Sanguang**	**0.75**	**329**	*e*P		Pb	17 09 46.5 -0.9
	baz=328						
NSK				*e*S		Sb	17 09 58.0 +0.3
	baz=328						
YULB	**Yu-li**	**0.77**	**215**	*e*P		Pb	17 09 46.7 -1.0
	baz=232						
NWLT	**Wulai**	**0.79**	**341**	*e*P		Pb	17 09 47.3 -0.7
	baz=340						
NWLT				*e*S		Sb	17 09 58.8 +0.1
	baz=340						
SSLB	**Suanglung**	**0.79**	**253**	*e*P		Pb	17 09 47.1 -0.9
	baz=264						
SSLB				*e*S		Sb	17 09 58.1 -0.7
	baz=264						
WCS	**Beigang Elemen**	**0.79**	**272**	*e*P		Pb	17 09 47.3 -0.7
	baz=272						
WCS				*e*S		Sb	17 09 58.8 0.0
	baz=272						
WHP	**Taichung City**	**0.80**	**288**	*e*P		Pb	17 09 47.8 -0.4
	baz=288						
WHP				*e*S		Sb	17 10 00.0 +0.9
	baz=288						
TWF1	**Yuli**	**0.80**	**213**	*e*P		Pb	17 09 47.3 -0.9
	baz=233						
SMLT	**Sun Moon Lake**	**0.82**	**260**	⇑ *i*P		Pb	17 09 47.8 -0.7
	baz=271						
SMLT				*e*S		Sb	17 09 59.5 -0.1
	baz=271						
NFF	**Wufeng Townshi**	**0.85**	**315**	*e*P		Pb	17 09 48.5 -0.5
	baz=314						
NFF				*e*S		Sb	17 10 00.6 0.0
	baz=314						
TYC	**Yuchr**	**0.85**	**262**	*e*P		Pb	17 09 48.4 -0.7
	baz=272						
TYC				*e*S		Sb	17 10 00.1 -0.3
	baz=272						
WHYT	**Xinyi Township**	**0.91**	**249**	*e*P		Pn	17 09 50.4 -0.7
	baz=257						
WHYT				*e*S		Sn	17 10 04.3 +0.1
	baz=257						
LIOB	**Emei**	**0.93**	**312**	*e*P		Pb	17 09 50.3 -0.1
	baz=310						
NSTT	**Nanjuang**	**0.93**	**310**	*e*P		Pb	17 09 50.2 -0.2
	baz=309						
NSTT				*e*S		Sb	17 10 03.3 +0.6
	baz=309						
FULB	**Fuli**	**0.94**	**208**	*e*P		Pb	17 09 50.1 -0.5
	baz=197						
TIPB	**Shuangxi**	**0.94**	**3**	*e*P		Pb	17 09 50.5 -0.1
	baz=351						
TIPB				*e*S		Sb	17 10 03.9 +0.7
	baz=351						
TWQ1	**Liyutan**	**0.97**	**289**	*e*P		Pn	17 09 52.3 +0.5
	baz=301						
TWQ1				*e*S		Sn	17 10 06.4 +0.7
	baz=301						
WJS	**Zhushan**	**0.98**	**258**	*e*P		Pn	17 09 51.6 -0.4
	baz=266						
WJS				*e*S		Sn	17 10 07.1 +1.1
	baz=266						
WNT	**Mingjian**	**1.01**	**262**	*e*P		Pb	17 09 51.7 -0.1
	baz=267						
WNT				*e*S		Sn	17 10 07.3 +0.6
	baz=267						
TCU	**Taichung**	**1.01**	**277**	*e*P		Pn	17 09 52.6 +0.2
	baz=268						
EHD	**Haiduan**	**1.02**	**211**	*e*P		Pb	17 09 51.6 -0.3
	baz=226						
EHD				*e*S		Sn	17 10 07.9 +1.0
	baz=226						
ALS	**Alishan**	**1.03**	**240**	*e*P		Pb	17 09 51.6 -0.6
	baz=239						
ALS				*e*S		Sb	17 10 06.2 +0.3
	baz=239						
NMLH	**Miaoli**	**1.03**	**300**	*e*P		Pn	17 09 52.5 -0.2
	baz=298						
NMLH				*e*S		Sn	17 10 09.6 +2.4
	baz=298						
NWF	**Wu-fen Shan**	**1.04**	**0**	*e*P		Pn	17 09 52.4 -0.4
	baz=349						
NWF				*e*S		Sn	17 10 07.6 +0.2
	baz=349						
SXI1	**Grass Mountain**	**1.06**	**5**	*e*P		Pb	17 09 52.7 -0.1
	baz=347						
ELDTW	**Lidau**	**1.09**	**220**	*e*P		Pg	17 09 51.5 -1.7
	baz=205						
ELDTW				*e*S		Sb	17 10 07.9 +0.5
	baz=205						
CHN5	**Tsauling**	**1.09**	**247**	*e*P		Pn	17 09 54.1 +0.5
	baz=247						
CHN5				*e*S		Sn	17 10 10.0 +1.2
	baz=247						
YM01	**YM01**	**1.13**	**350**	*e*P		Pn	17 09 54.2 +0.1
	baz=329						
JYNG	**Yonagunijimaku**	**1.15**	**68**	*e*P		Pn	17 09 54.0 -0.2
WCKO	**Fanlu**	**1.22**	**242**	*e*P		Pn	17 09 56.0 +0.6
	baz=243						
STYH	**Taoyuan**	**1.25**	**227**	*e*P		Pb	17 09 55.3 -0.6
	baz=213						
STYH				*e*S		Sn	17 10 12.9 +0.3
	baz=213						
TPUB	**Ta-pu**	**1.28**	**236**	*e*P		Pn	17 09 56.4 +0.3
	baz=235						
TPUB				*e*S		Sn	17 10 14.2 +0.9
	baz=235						
WRL	**Guolierlin Hig**	**1.29**	**265**	*e*P		Pn	17 09 56.4 +0.2
	baz=264						
WRL				*e*S		Sn	17 10 15.7 +2.2
	baz=264						
WTP	**Ta-pu**	**1.32**	**234**	*e*P		Pb	17 09 57.2 +0.1
	baz=223						
SGST	**Jiashian**	**1.45**	**230**	*e*P		Pn	17 09 57.7 -0.7
	baz=213						
SGST				*e*S		Sn	17 10 18.6 +1.2
	baz=213						

*EST **09** 17:11:29.5±0.1,59°.94N×26°.68E, h0km, ML2.3(HEL), Explosion*
*HEL **09** 17:11:29.5±0.1,59°.93N×26°.67E, h0km, ML2.3, Explosion*
*IDC **09** 17:11:30.7±0.9,60°.00N×26°.63E, h0km, mbtmp3.4/5, ML2.7/4, Error ellipse: s-maj=9.9km s-min=7.3km az=86.0*
*BER **09** 17:11:31.3±2.8,59°.99N×26°.68E, h0km, ML2.3, ML2.3(HEL), Suspected explosion*
*UPP **09** 17:11:34.6±1.9,60°.01N×25°.93E, h0km, ML2.0*

ISC 09 17:11:28.0±0.7,59°.96N±0°.02×26°.59E±0°.03,h0km,n73,
σ1s22/102,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.61**	**211**	*e*P	**Pg**	**17 11 40.3**	**+0.6**
ARBE				*e*S	**Sg**	**17 11 47.8**	**+0.3**
ARBE	**Arbavere**	**0.61**	**211**	*e*P	**Pg**	**17 11 40.3**	**+0.6**
ARBE				*e*S	**Sg**	**17 11 47.8**	**+0.3**
PVF	**Pernaja**	**0.69**	**329**	*e*P	**Pb**	**17 11 42.6**	**-0.3**
PVF				*e*S	**Sb**	**17 11 52.8**	**-0.2**
PVF	**Pernaja**	**0.69**	**329**	*e*P	**Pb**	**17 11 42.6**	**-0.3**
PVF				*e*S	**Sb**	**17 11 52.8**	**-0.2**
VJF	**Virojoki**	**0.76**	**39**	*e*P	**Pg**	**17 11 42.8**	**+0.3**
VJF				*e*S	**Sg**	**17 11 53.0**	**+0.8**
VJF	**Virojoki**	**0.76**	**39**	*e*P	**Pg**	**17 11 42.8**	**+0.3**
VJF				*e*S	**Sg**	**17 11 53.0**	**+0.8**
HEL1	**Helsinki**	**0.88**	**285**	*e*P	**Pb**	**17 11 46.1**	**-0.1**
HEL1				*e*S	**Sg**	**17 11 57.3**	**+0.9**
HEL1	**Helsinki**	**0.88**	**285**	*e*P	**Pb**	**17 11 46.1**	**-0.1**
HEL1				*e*S	**Sg**	**17 11 57.3**	**+0.9**
HEL3	**Helsinki**	**0.91**	**284**	*e*P	**Pb**	**17 11 46.9**	**+0.3**
HEL3	**Helsinki**	**0.91**	**284**	*e*P	**Pb**	**17 11 46.9**	**+0.3**
HEL4	**Helsinki**	**0.94**	**289**	*e*P	**Pb**	**17 11 47.1**	**0.0**
HEL4				*e*S	**Sb**	**17 11 59.9**	**-0.2**
HEL4	**Helsinki**	**0.94**	**289**	*e*P	**Pb**	**17 11 47.1**	**0.0**
HEL4				*e*S	**Sb**	**17 11 59.9**	**-0.2**
HEL5	**Espoo, Suvisaa**	**0.94**	**280**	*e*P	**Pb**	**17 11 47.1**	**-0.1**
HEL5	**Espoo, Suvisaa**	**0.94**	**280**	*e*P	**Pb**	**17 11 47.1**	**-0.1**
EE03	**Tooma soojaam,**	**1.10**	**189**	*e*P	**Pg**	**17 11 49.0**	**-0.2**
EE03				*e*S	**Sg**	**17 12 02.5**	**-0.9**
NUR	**Nurmijrvi**	**1.11**	**300**	*e*P	**Pb**	**17 11 50.3**	**+0.1**
NUR	**Nurmijrvi**	**1.11**	**300**	*e*P	**Pb**	**17 11 50.3**	**+0.1**
MEF	**Metsahovi**	**1.13**	**284**	*e*P	**Pb**	**17 11 50.5**	**+0.1**
MEF	**Metsahovi**	**1.13**	**284**	*e*P	**Pn**	**17 11 51.5**	**+0.4**
MEF	**Metsahovi**	**1.13**	**284**	*e*P	**Pb**	**17 11 50.5**	**+0.1**
EE02	**Kiisa, Saku**	**1.23**	**232**	*e*P	**Pb**	**17 11 52.0**	**-0.1**
EE02				*e*PN	**Pn**	**17 11 54.3**	**+1.8**
EE02				*e*S	**Sg**	**17 12 07.8**	**+0.2**
EE02				*e*SN	**Sn**	**17 12 12.7**	**+2.9**
EE08	**Sarghaua, Vand**	**1.48**	**208**	*e*PG	**Pn**	**17 11 56.1**	**+0.2**
EE08				*e*PN	**Pb**	**17 11 57.5**	**+1.2**
EE08				*e*SN	**Sn**	**17 12 17.3**	**+1.5**
VSU	**Vasula**	**1.50**	**177**	*e*P	**Pn**	**17 11 56.2**	**+0.1**
VSU	**Vasula**	**1.50**	**177**	*e*P	**Pn**	**17 11 56.3**	**+0.1**
VSU	**Vasula**	**1.50**	**177**	*e*P	**Pn**	**17 11 56.2**	**+0.1**
VSU				*e*S	**Sg**	**17 12 14.8**	**-1.5**
VSU				*e*SN	**Sn**	**17 12 17.6**	**+1.1**
FIA0	**FINESS Array S**	**1.51**	**351**	*e*P	**Pn**	**17 11 56.4**	**+0.1**
FIA0				*e*S	**Sn**	**17 12 17.3**	**+0.7**
FIA0	**FINESS Array S**	**1.51**	**351**	*e*P	**Pn**	**17 11 56.4**	**+0.1**
FIA0				*e*S	**Sn**	**17 12 17.3**	**+0.7**
FIA0				MSG		17 12 19.3	
	comp=Z,20nm,0.2s						
FINES	**FINESS Array B**	**1.51**	**351**	Pg	**Pn**	**17 11 56.4**	**+0.1**
	comp=Z,3.9nm,0.3s,baz=165,slow=16,SNR=111						
FINES				Lg	Lg	17 12 17.5	
	comp=Z,5.7nm,0.3s,baz=169,slow=31,SNR=15						
FINES				Rg	Rg	17 12 26.2	
	comp=Z,25nm,0.7s,baz=168,slow=23,SNR=12						
FIA1	**FINESS Array S**	**1.51**	**351**	*e*P	**Pn**	**17 11 56.5**	**+0.1**
FIA1				MSG		17 12 21.5	
	comp=Z,21nm,0.1s						
EE01	**Perakula, Nova**	**1.69**	**245**	*e*P	**Pb**	**17 11 59.7**	**-0.2**
EE01				*e*S	**Sg**	**17 12 22.4**	**+0.2**
RUF	**Ruokolahti**	**1.87**	**37**	*e*P	**Pn**	**17 12 01.7**	**+0.5**
RUF				*e*S	**Sn**	**17 12 26.5**	**+0.9**
RUF				MSG		17 12 29.6	
	comp=Z,40nm,0.1s						
MTSE	**Matsula**	**1.89**	**230**	*e*P	**Pb**	**17 12 02.9**	**-0.5**
MTSE	**Matsula**	**1.89**	**230**	*e*P	**Pb**	**17 12 03.0**	**-0.3**
MTSE				*e*SN	**Sb**	**17 12 27.9**	**+0.4**
KAF	**Kangasniemi**	**2.17**	**356**	*e*P	**Pb**	**17 12 07.2**	**-0.8**
KAF				*e*SG	**Sb**	**17 12 36.5**	**+1.1**
KAF				MSG		17 12 40.5	
	comp=Z,21nm,0.1s						
EE07	**Piusa Caves, O**	**2.17**	**168**	*e*PG	**Pb**	**17 12 07.5**	**-0.6**
EE07				*e*SG	**Sb**	**17 12 35.2**	**-0.4**
KEF	**Keuruu**	**2.37**	**340**	*e*PB	**Pb**	**17 12 11.6**	**+0.1**
KEF				*e*SB	**Sb**	**17 12 41.7**	**+0.5**
KEF				MSG		17 12 45.3	
	comp=Z,24nm,0.2s						
RAF	**Rauma**	**2.62**	**296**	*e*P	**Pb**	**17 12 14.0**	**-1.7**
RAF	**Rauma**	**2.62**	**296**	*e*P	**Pb**	**17 12 14.2**	**-1.5**
RAF				MSG		17 12 51.3	
	comp=Z,13nm,0.2s						
SUF	**Sumiainen**	**2.78**	**356**	*e*P	**Pn**	**17 12 16.1**	**+2.4**
SLIT	**Slitere, Latvi**	**3.24**	**226**	*e*P	**Pn**	**17 12 22.0**	**+2.0**
SLIT	**Slitere, Latvi**	**3.24**	**226**	*e*P	**Pn**	**17 12 21.7**	**+1.7**
NIF	**Nilsia**	**3.49**	**9**	MSG		17 13 24.8	
	comp=Z,5.6nm,0.2s						
JOF	**Joensuu**	**3.73**	**35**	*e*P	**Pn**	**17 12 27.8**	**+0.9**
NRTU	**Norrtaelje**	**4.03**	**269**	P	**Pn**	**17 12 32.0**	**+1.1**
NRTU				S	**Sn**	**17 13 20.0**	**+1.3**
GRAU	**Graesoe**	**4.04**	**279**	P	**Pn**	**17 12 32.0**	**+0.9**
FLYU	**Flymyra**	**4.37**	**276**	P	**Pn**	**17 12 36.7**	**+1.2**
NYNU	**Nynaeshamn**	**4.48**	**261**	P	**Pn**	**17 12 39.1**	**+2.0**
NYNU				S	**Sn**	**17 13 30.9**	**+1.0**
IIGN	**Ignalina**	**4.63**	**183**	*e*P	**Pn**	**17 12 41.3**	**+2.2**
IDIN	**Didziasalis**	**4.66**	**179**	*e*P	**Pn**	**17 12 41.7**	**+2.2**
OSTU	**Oestersvala**	**4.74**	**277**	S	**Sn**	**17 13 37.1**	**+0.8**
GOTU	**Gotland**	**4.75**	**245**	P	**Pn**	**17 12 43.9**	**+3.1**
UMAU	**Umeaa**	**4.83**	**327**	P	Pn	17 12 46.8	+5.0
BURU	**Burvik**	**5.24**	**335**	P	**Pn**	**17 12 49.2**	**+1.7**
FALU	**Falun**	**5.39**	**280**	P	**Pn**	**17 12 50.7**	**+1.1**
HFS	**Hagfors**	**6.46**	**277**	Pn	**Pn**	**17 13 05.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=88,slow=13,SNR=8.0						
HFS				Sn	**Sn**	**17 14 17.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=81,slow=37,SNR=1.5						
HFS				Lg	Lg	17 14 50.5	
	comp=Z,0.5nm,0.3s,baz=87,slow=28,SNR=5.7						
	comp=Z,3.6nm,1.1s						
OBN	**Obninsk**	**7.24**	**128**	Pn	**Pn**	**17 13 15.0**	**+0.1**
	comp=Z,7.4nm,0.4s,baz=300,slow=20,SNR=1.2						
NC602	**NORSAR Array S**	**7.51**	**282**	*e*P	**Pn**	**17 13 18.8**	**+0.2**
NC602				*e*S	**Sn**	**17 14 38.4**	**-5.9**
NC602				IAML		17 14 58.3	
	comp=Z,1.9nm,0.8s						
NC303	**NORSAR Array S**	**7.60**	**286**	*e*P	**Pn**	**17 13 20.1**	**+0.2**
NB201	**NORSAR Array S**	**7.63**	**285**	*e*P	**Pn**	**17 13 22.7**	**+2.3**
NOA	**NORSAR Array B**	**7.67**	**285**	Pn	**Pn**	**17 13 19.6**	**-1.3**
	baz=94,slow=16,SNR=1.6						
NOA				Sn	**Sn**	**17 14 45.9**	**-2.5**
	baz=98,slow=8.9,SNR=1.5						
	comp=Z,0.8nm,0.8s						
NAO01	**NORSAR Array S**	**7.83**	**283**	*e*P	**Pn**	**17 13 24.8**	**+1.8**
NBO00	**NORSAR Array S**	**7.88**	**285**	*e*P	**Pn**	**17 13 25.9**	**+2.1**
NC204	**NORSAR Array S**	**7.89**	**286**	*e*P	**Pn**	**17 13 25.0**	**+1.0**
NSS	**Namsos**	**8.21**	**310**	*e*P	**Pn**	**17 13 28.2**	**0.0**
NSS				*e*S	Sn	17 14 52.0	-10
NSS				IAML		17 15 21.9	
	comp=Z,2.4nm,0.8s						
DOMB	**Dombas**	**8.76**	**291**	*e*P	**Pn**	**17 13 36.4**	**+0.5**
DOMB				IAML		17 15 43.9	
	comp=Z,1.8nm,0.3s						
KONS	**Konsvik**	**8.93**	**323**	*e*P	**Pn**	**17 13 37.2**	**-0.8**
KONS				IAML		17 15 46.5	
	comp=Z,4.7nm,1.0s						
FAUS	**Fauske**	**8.97**	**331**	*e*P	**Pn**	**17 13 38.0**	**-0.5**
SKAR	**Skarslia**	**9.10**	**282**	*e*P	**Pn**	**17 13 40.4**	**-0.1**
KTK1	**Kautokeino**	**9.20**	**352**	*e*P	**Pn**	**17 13 41.6**	**-0.2**
AKASG	**Malin Array Be**	**9.40**	**170**	Pn	**Pn**	**17 13 42.9**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=350,slow=12,SNR=1.6						
	comp=Z,0.4nm,0.3s						
STEI	**Steigen**	**9.41**	**333**	*e*P	**Pn**	**17 13 45.1**	**+0.5**
STEI				IAML		17 15 28.9	
	comp=Z,2.8nm,1.2s						
ARA0	**ARCESS Array S**	**9.63**	**358**	*e*P	**Pn**	**17 13 47.3**	**-0.3**
ARCES	**ARCESS Array B**	**9.63**	**358**	Pn	**Pn**	**17 13 46.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=178,slow=13,SNR=24						
ARCES				Sn	Sn	17 15 27.2	-9.1
	baz=165,slow=21,SNR=2.2						
ARCES				Lg	Lg	17 16 24.9	
	comp=Z,0.1nm,0.3s,baz=168,slow=30,SNR=2.2						
	comp=Z,1.9nm,0.8s						

*JMA **09** 17:14:34.8±0.1,33°.2N×13°.8E±°, h362km, MV2.7/40, FAR S OFF TOKAI DISTRICT*
*IDC **09** 17:14:37.9±0.8,33°.51N×137°.75E, h343km±20km, mb2.6/5, mbtmp3.4/8, Error ellipse: s-maj=55.4km s-min=12.9km az=64.0*

ISC 09 17:14:37.8±0.9,33°.51N±0°.10×137°.7E±0°.1,h352km,n20,
σ1s22/23,mb2.8/5,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO4	**TONANKAI O.B.S**	**0.53**	**341**	*e*P	**Pn**	**17 15 21.0**	**-0.9**
TTO2	**TONANKAI O.B.S**	**0.64**	**291**	P	**Pn**	**17 15 21.4**	**-0.8**
TTO1	**TONANKAI O.B.S**	**0.81**	**278**	*e*P	**Pn**	**17 15 21.5**	**-1.2**
JIE	**Ise**	**1.23**	**316**	P	**Pn**	**17 15 23.5**	**-1.2**
HMMJ	**Hamamatsu 2**	**1.35**	**359**	P	**Pn**	**17 15 24.3**	**-0.9**
JKN2	**Miekihoku**	**1.43**	**301**	P	**Pn**	**17 15 23.9**	**-1.8**
JHJ	**Hachijo jima 2**	**1.75**	**102**	P	**Pn**	**17 15 26.5**	**-1.2**
	36nm,0.3s,baz=252,slow=20,SNR=8.4						
JHJ				S	**S**	**17 16 07.5**	**-0.2**
	54nm,0.8s,baz=266,slow=14,SNR=1.7						
JHJ2	**Mitsune**	**1.78**	**102**	P	**Pn**	**17 15 27.0**	**-0.8**
JAO	**Obara**	**1.80**	**347**	*e*P	**Pn**	**17 15 27.4**	**-0.5**
JTNC	**Tanabenakahech**	**1.81**	**281**	P	**Pn**	**17 15 26.1**	**-2.0**
JNY	**Yasuok**	**1.85**	**3**	*e*P	**Pn**	**17 15 27.7**	**-0.6**
JNY				*e*S	**S**	**17 16 07.9**	**-1.0**
JWY	**Kouya**	**1.93**	**292**	P	**Pn**	**17 15 27.6**	**-1.2**
MJAR	**Matsushiro Arr**	**3.05**	**7**	P	**Pn**	**17 15 37.0**	**-0.7**
	2.0nm,0.6s,baz=187,slow=9.6,SNR=7.5						
MJAR				S	**S**	**17 16 23.7**	**-2.3**
	1.1nm,0.6s,baz=192,slow=20,SNR=2.3						
KSRS	**Korea Array**	**8.93**	**299**	P	**Pn**	**17 16 43.1**	**+0.3**
	1.5nm,0.7s,baz=117,slow=13,SNR=6.3						
USRK	**Ussuriysk Ar.**	**11.58**	**339**	P	**Pn**	**17 17 15.1**	**+0.7**
	1.5nm,0.6s,baz=146,slow=12,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.19**	**315**	P	**P**	**17 21 58.7**	**+1.7**
	0.2nm,0.3s,baz=61,slow=8.6,SNR=1.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**43.55**	**305**	P	**P**	**17 22 09.2**	**+1.2**
	0.2nm,0.5s,baz=78,slow=9.0,SNR=4.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.90**	**310**	P	**P**	**17 22 26.9**	**+0.7**
	0.3nm,0.4s,baz=89,slow=8.4,SNR=4.9						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**53.25**	**184**	P	**P**	**17 23 21.1**	**-0.3**
	0.6nm,0.7s,baz=359,slow=7.5,SNR=2.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**56.97**	**184**	P	**P**	**17 23 48.7**	**+0.9**
	0.2nm,0.8s,baz=21,slow=11,SNR=5.2						
	0.2nm,0.8s						

*TAP **09** 17:16:24.4,24°.11N×121°.78E, h6km, ML3.1, C*
*JMA **09** 17:16:25.0±0.1,24°.1N±0°.4×121°.8E±0°.4, h0km, MV2.7/12, TAIWAN REGION*

ISC 09 17:16:25.1±1.0,24°.11N±0°.02×121°.80E±0°.02,h6km±8km,
n89,σ1s01/143,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.17**	**288**	P	**Pg**	**17 16 28.2**	**-0.3**
	baz=289						
ETL				S	**Sg**	**17 16 31.1**	**+0.4**
	baz=289						
TWD	**Chiawan**	**0.18**	**261**	P	**Pg**	**17 16 28.7**	**-0.1**
	baz=275						
TWD				*e*S	**Sg**	**17 16 32.0**	**+0.7**
	baz=275						
NACB	**Ninganchiao**	**0.19**	**289**	P	**Pg**	**17 16 28.6**	**-0.4**
	baz=293						
NACB				*e*S	**Sg**	**17 16 31.4**	**-0.2**
	baz=293						
EHP	**Heping Village**	**0.21**	**346**	*e*P	**Pg**	**17 16 29.1**	**-0.1**
	baz=351						
EHP				*e*S	**Sg**	**17 16 32.9**	**+0.9**
	baz=351						
EAHA	**Aohua**	**0.23**	**347**	*i* P	**Pg**	**17 16 29.4**	**-0.1**
	baz=350						
EAHA				S	**Sg**	**17 16 33.5**	**+0.9**
	baz=350						
ETLH	**Xiulin Townshi**	**0.30**	**289**	P	**Pg**	**17 16 30.8**	**-0.3**
	baz=286						
ETLH				*e*S	**Sg**	**17 16 35.3**	**+0.3**
	baz=286						
ETM	**Tongmen**	**0.31**	**243**	P	**Pg**	**17 16 31.3**	**+0.1**
	baz=247						
ENA	**Nanau**	**0.32**	**351**	P	**Pg**	**17 16 31.1**	**-0.2**
	baz=354						
ENA				*i* S	**Sg**	**17 16 36.1**	**+0.5**
	baz=354						
EWUT	**Wuta**	**0.34**	**357**	*i* P	**Pg**	**17 16 31.6**	**0.0**
	baz=358						
EWUT				S	**Sg**	**17 16 37.0**	**+0.9**
	baz=358						
LXIB	**Xiulin Townshi**	**0.36**	**256**	*i* P	**Pg**	**17 16 32.0**	**-0.1**
	baz=257						
LXIB				*e*S	**Sg**	**17 16 37.5**	**+0.6**
	baz=257						
SHUL	**Shoufeng**	**0.38**	**214**	*e*P	**Pb**	**17 16 33.7**	**-0.6**
	baz=211						
ESL	**Shilin**	**0.44**	**229**	*e*P	**Pb**	**17 16 33.9**	**-1.5**
	baz=239						
ESAO	**Su ao**	**0.47**	**5**	*e*P	**Pg**	**17 16 34.0**	**-0.1**
	baz=359						
ESAO				*e*S	**Sg**	**17 16 41.2**	**+0.9**
	baz=359						
WHF	**Hehuan Shan**	**0.49**	**274**	P	**Pg**	**17 16 34.4**	**-0.2**
	baz=277						
LATG	**Datong**	**0.49**	**330**	*e*P	**Pg**	**17 16 34.5**	**-0.1**
	baz=332						
LATG				*e*S	**Sg**	**17 16 41.6**	**+0.6**
	baz=332						
NNSB	**Datong**	**0.49**	**310**	P	**Pg**	**17 16 34.5**	**-0.1**
	baz=313						
NNSB				*e*S	**Sb**	**17 16 41.7**	**-2.1**
	baz=313						
TWC	**Suao**	**0.50**	**6**	*e*P	**Pg**	**17 16 34.6**	**-0.1**
	baz=357						
TWC				*e*S	**Sg**	**17 16 42.0**	**+0.7**
	baz=357						
NNS	**Nan Shan**	**0.51**	**311**	*e*P	**Pg**	**17 16 34.7**	**-0.2**
	baz=314						
NNS				*e*S	**Sb**	**17 16 42.2**	**-2.0**
	baz=314						
FUSS	**Fushou**	**0.52**	**285**	*e*P	**Pg**	**17 16 35.3**	**0.0**
	baz=291						
NDS	**Dongshan**	**0.53**	**352**	*e*P	**Pg**	**17 16 35.5**	**+0.2**
	baz=352						
NDS				*e*S	**Sg**	**17 16 42.9**	**+0.7**
	baz=352						
WARBT	**Fenglin Townsh**	**0.54**	**224**	P	**Pb**	**17 16 35.7**	**-1.3**
	baz=234						
EGFH	**Guangfu**	**0.55**	**218**	*e*P	**Pb**	**17 16 36.4**	**-0.9**
	baz=232						
EGFH				*e*S	**Sn**	**17 16 47.2**	**-1.8**
	baz=232						
NDT	**Datong Townshi**	**0.56**	**332**	*e*P	**Pg**	**17 16 35.9**	**+0.1**
	baz=334						
NDT				*e*S	**Sb**	**17 16 44.5**	**-1.0**
	baz=334						
ENTT	**Nioudou**	**0.57**	**338**	P	**Pg**	**17 16 36.2**	**+0.1**
	baz=340						
ENTT				*e*S	**Sb**	**17 16 44.9**	**-1.1**
	baz=340						
CHGB	**Renai**	**0.57**	**265**	P	**Pg**	**17 16 36.0**	**-0.1**
	baz=268						
CHGB				*e*S	**Sb**	**17 16 45.5**	**-0.6**
	baz=268						
TWT	**Tachien**	**0.58**	**284**	*e*P	**Pb**	**17 16 36.9**	**-1.0**
	baz=294						
OWD	**Renai**	**0.59**	**255**	*e*P	**Pg**	**17 16 36.4**	**0.0**
	baz=256						
TDCB	**Techi**	**0.60**	**284**	*e*P	**Pb**	**17 16 36.9**	**-1.3**
	baz=286						
TDCB				*e*S	**Sb**	**17 16 45.2**	**-1.7**
	baz=286						
TWE	**Neicheng**	**0.62**	**349**	P	**Pg**	**17 16 37.2**	**+

baz=256
SMLT eS Sb 17 16 54.4 +0.3
baz=256
TIPB Shuangxi 0.86 2 P Pb 17 16 41.7 -0.8
baz=1.0
TIPB eS Sb 17 16 53.6 -0.7
baz=1.0
EYUL Yuli 0.88 210 eP Pb 17 16 42.6 -0.2
baz=223
TWF1 Yuli 0.88 211 eP Pg 17 16 41.3 -0.7
baz=223
TYC Yuchr 0.88 257 eP Pb 17 16 42.4 -0.4
baz=258
NHDH Xindian Distri 0.89 344 eP Pb 17 16 42.2 -0.7
baz=345
LIOB Emei 0.89 307 eP Pn 17 16 43.2 -1.1
baz=310
LIOB eS Sb 17 16 55.6 +0.5
baz=310
TWA Mucha 0.89 348 eP Pg 17 16 42.0 -0.2
baz=349
NSTT Nanjuang 0.89 306 eP Pb 17 16 42.6 -0.4
baz=308
NSTT eS Sb 17 16 54.3 -0.9
baz=308
WHYT Xinyi Township 0.95 245 eP Pb 17 16 44.1 0.0
baz=254
NWF Wu-fen Shan 0.96 359 eP Pb 17 16 43.8 -0.4
baz=349
NWF eS Sb 17 16 56.5 -0.7
baz=349
WFSB Wu-fen Shan 0.96 359 eP Pb 17 16 44.0 -0.2
baz=350
WFSB eS Sb 17 16 56.8 -0.3
baz=350
TWQ1 Liyutan 0.96 285 eP Pn 17 16 44.8 -0.4
baz=290
SXI1 Grass Mountain 0.98 4 P Pb 17 16 44.3 -0.3
baz=9.0
NMLH Miaoli 1.01 295 eP Pn 17 16 47.1 +1.3
baz=306
FULB Fuli 1.02 207 eP Pb 17 16 44.7 -0.5
baz=194
WJS Zhushan 1.02 254 eP Pn 17 16 45.6 -0.3
baz=256
WJS eS Sn 17 17 01.7 +1.1
baz=256
TNOU National Taiwa 1.04 359 eP Pg 17 16 44.5 -0.5
baz=357
TNOU eS Sn 17 17 00.5 -0.5
baz=357
WNT Mingjian 1.04 257 eP Pn 17 16 46.1 -0.2
baz=259
WNT S Sn 17 17 02.3 +1.2
baz=259
YM01 YM01 1.05 349 eP Pb 17 16 45.8 0.0
baz=349
ALS Alishan 1.08 237 P Pb 17 16 46.2 -0.2
baz=238
ALS eS Sn 17 17 03.0 +0.3
baz=238
EHD Haiduan 1.10 210 eP Pg 17 16 45.3 -0.9
baz=211
EHD eS Sn 17 17 01.6 -1.0
baz=211
ANP Anpu 1.10 347 eP Pb 17 16 46.4 -0.3
baz=348
JYNG Yonaguni jima 1.10 72 P Pb 17 16 46.8 +0.2
ELDTW Lidau 1.16 218 eP Pg 17 16 45.6 -1.8
baz=217
YOJ Yonaguni jima 1.16 72 eP Pg 17 16 47.5 +0.1
baz=69
YOJ Yonaguni jima 1.16 72 P Pb 17 16 47.7 0.0
EDH Donghe 1.22 202 eP Pg 17 16 46.6 -1.8
baz=203
EDH eS Sn 17 17 04.8 -0.7
baz=203
WCKO Fanlu 1.28 239 eP Pn 17 16 50.6 +1.0
baz=242
WCKO eS Sn 17 17 09.8 +2.8
baz=242
WRL Guolierlin Hig 1.31 261 eP Pb 17 16 51.0 +0.8
baz=265
WRL S Sn 17 17 10.2 +2.3
baz=265
STYH Taoyuan 1.32 225 eP Pg 17 16 49.6 -0.8
baz=211
STYH eS Sn 17 17 10.5 +2.4
baz=211
TPUB Ta-pu 1.34 233 *i* P Pb 17 16 51.1 +0.4
baz=236
TPUB eS Sn 17 17 11.4 +2.8
baz=236
LONT Longtian 1.34 207 eP Pn 17 16 49.0 -1.5
baz=206
WTP Ta-pu 1.38 232 eP Pb 17 16 51.2 -0.2
baz=235
WTP eS Sn 17 17 12.7 +3.1
baz=235
TWK Hsinying 1.46 235 eP Pg 17 16 52.8 -0.4
baz=238
TWK eS Sn 17 17 13.8 +2.2
baz=238
CHN1 Nanshi 1.48 232 eP Pg 17 16 53.3 -0.3
baz=235
CHN1 eS Sg 17 17 13.9 +1.2
baz=235
SNST Tainan City 1.48 234 eP Pg 17 16 53.2 -0.3
baz=232
SGST Jiashian 1.51 228 eP Pn 17 16 52.3 -0.5
baz=231
SGST eS Sg 17 17 15.2 +1.5
baz=231
WSF Szhu 1.52 252 eS Sg 17 17 16.2 +2.4
baz=256
SLGT Liugui 1.53 224 eP Pb 17 16 53.4 -0.6
baz=227
SLGT eS Sg 17 17 17.3 +3.0
baz=227
SCST Cishan 1.71 225 eP Pg 17 16 56.8 -1.0
baz=210
TSMG Majia 1.75 217 eP Pb 17 16 56.9 -0.7
baz=221
TSMG eS Sg 17 17 21.4 0.0
baz=221
MASBT Mashibuluo 1.83 216 eP Pn 17 16 57.0 -0.2
baz=203
JKRS Kuro-shima 2.03 86 P Pn 17 17 00.1 +0.3
JIJ Ishigaki jima 2.16 83 P Pn 17 17 01.2 -0.4
JISG Ishigakijimahi 2.34 78 P Pn 17 17 03.9 -0.3
JISG eS Sn 17 17 34.4 +1.1

TEH 09 17:38:44.6, 35.43N×51.86E, h7km±22km, ML3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDMV	**Damavand**	**0.20**	**43**	Pg		Pg	17 38 49.6	+0.7
IVRN	**Varamin**	**0.45**	**195**	Pg		Pb	17 38 54.1	-0.7
IHSB	**Hasanabad**	**0.48**	**271**	Pg		Pg	17 38 54.3	+0.4
IFIR	**Firoozkooh**	**0.76**	**73**	Pg		Pg	17 38 59.7	+0.5
IQOM	**Qom**	**0.87**	**228**	Pg		Pg	17 39 01.5	+0.1
ILAS	**Lasjerd**	**0.90**	**93**	Pg		Pb	17 39 02.2	-0.4
IPRN	**Peran**	**0.90**	**25**	Pg		Pg	17 39 02.1	+0.2
IMHD	**Mahdasht**	**1.01**	**285**	Pg		Pg	17 39 03.6	-0.3
IALA	**Alasht**	**1.01**	**49**	Pg		Pg	17 39 04.2	+0.2
ISFB	**Sefidab**	**1.12**	**164**	Pg		Pg	17 39 06.0	0.0
KRSH	**Karshahi**	**1.47**	**171**	Pg		Pb	17 39 12.1	-0.2
IRAZ	**Razeghan**	**1.58**	**270**	Pg		Pn	17 39 13.6	+0.4
IANJ	**Anjilo**	**1.68**	**88**	Pg		Pb	17 39 15.6	-0.3
QAMS	**Qamsar**	**1.73**	**193**	Pg		Pn	17 39 16.0	+0.7
IGLO	**Ghaloghah**	**1.92**	**56**	Pn		Pb	17 39 20.0	-0.1
JIR1	**Jirandeh**	**2.10**	**308**	Pn		Pb	17 39 22.7	-0.4
IKLH	**Kolahrood**	**2.12**	**186**	Pn		Pb	17 39 22.0	-1.4
HAGD	**Aghdareh**	**2.31**	**256**	Pn		Pb	17 39 25.2	-1.5
IZEF	**Zefreh**	**2.55**	**171**	Pn		Pn	17 39 28.3	+1.6
ANAR	**Anarak**	**2.71**	**145**	Pn		Pn	17 39 30.5	+1.8
IPIR	**Pirpir**	**2.85**	**197**	Pn		Pn	17 39 33.3	+2.5
HSAM	**Samen**	**2.94**	**247**	Pn		Pn	17 39 34.6	+2.5
IGAR	**Gharneh**	**3.02**	**177**	Pn		Pn	17 39 35.5	+2.5
IALM	**Almabolaq**	**3.08**	**260**	Pn		Pn	17 39 36.1	+2.2
JHBN	**Jahan bin**	**3.34**	**198**	Pn		Pn	17 39 38.8	+1.3
ZNGN	**Zangian**	**3.41**	**195**	Pn		Pn	17 39 40.7	+2.2
IBRJ	**Brojen**	**3.55**	**188**	Pn		Pn	17 39 42.5	+2.2
IRAM	**Rameshesh**	**3.63**	**173**	Pn		Pn	17 39 43.6	+2.1
ICHK	**Chekchek**	**3.82**	**146**	Pn		Pn	17 39 45.6	+1.6
ISAD	**Sadrabad**	**3.82**	**156**	Pn		Pn	17 39 46.1	+2.0
IKFM	**Kafar-mosalman**	**3.82**	**241**	Pn		Pn	17 39 46.7	+2.9
MRVT	**Maraveh tapeh**	**4.07**	**56**	Pn		Pn	17 39 48.9	+1.7
ISRB	**Sarab**	**4.14**	**307**	Pn		Pn	17 39 50.6	+2.2
IHSH	**Hashtrud**	**4.16**	**298**	Pn		Pn	17 39 50.0	+1.2
KLNJ	**Kolanjah**	**4.41**	**183**	Pn		Pn	17 39 54.3	+2.0
IGHG	**Ghaleghazi**	**4.49**	**257**	Pn		Pn	17 39 54.9	+1.6
IDHR	**Dehrash**	**4.55**	**262**	Pn		Pn	17 39 55.6	+1.6
IMEH	**Mehriz**	**4.64**	**149**	Pn		Pn	17 39 56.9	+1.7
TPRV	**Parvadeh(Tabas**	**4.66**	**120**	Pn		Pn	17 39 57.3	+1.9
TKDS	**Koohdasht(Taba**	**4.70**	**111**	Pn		Pn	17 39 57.7	+1.6
SBZV	**Sabzevar**	**4.76**	**77**	Pn		Pn	17 39 58.6	+1.6
IBAF	**Bafgh**	**4.92**	**140**	Pn		Pn	17 40 01.1	+2.0
ILBA	**Ilam Banvizeh**	**5.00**	**251**	Pn		Pn	17 40 01.7	+1.5
ISFR	**Sfrayin**	**5.22**	**70**	Pn		Pn	17 40 05.2	+1.9
IAKL	**Akhelmad**	**5.71**	**76**	Pn		Pn	17 40 11.5	+1.5
IEMG	**Emamgholi**	**5.82**	**68**	Pn		Pn	17 40 13.4	+1.8
IPAY	**Payeh**	**5.88**	**78**	Pn		Pn	17 40 13.9	+1.6
AFRZ	**Afriz**	**6.24**	**107**	Pn		Pn	17 40 18.8	+1.6
ITEG	**Tejag**	**6.24**	**112**	Pn		Pn	17 40 19.1	+1.9
IKRD	**Kardeh**	**6.34**	**76**	Pn		Pn	17 40 20.7	+2.0
IKOO	**Kooshah**	**6.65**	**115**	Pn		Pn	17 40 24.6	+1.7
TBJM	**Torbat-e-JAM**	**6.92**	**89**	Pn		Pn	17 40 28.6	+2.0
BSRN	**Basiran**	**6.97**	**118**	Pn		Pn	17 40 28.7	+1.5
SHRT	**Shahrakht**	**7.18**	**102**	Pn		Pn	17 40 32.0	+2.0

*IDC **09** 17:40:31.5±1.6, 2.20S×139.74E, h0km, mb3.5/5, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=55.8km s-min=24.5km az=91.0*
ISC 09 17:40:33.0±1.4, 2.2S±0.1×139.8E±0.3, h10km, n6, σ0.89/6, mb3.6/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.40**	**196**	P		**Pn**	**17 44 47.9**	**-0.5**
	0.2nm,0.3s,baz=17,slow=13,SNR=9.2							
WRA				S		Sn	17 47 59.8	-14
	0.5nm,0.8s,baz=23,slow=22,SNR=1.7							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**22.07**	**194**	P		**P**	**17 45 28.8**	**+0.5**
	0.3nm,0.4s,baz=23,slow=10,SNR=30							
	0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**45.12**	**299**	P		**P**	**17 48 50.7**	**+0.7**
	0.3nm,0.4s,baz=115,slow=6.1,SNR=4.3							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**70.05**	**322**	P		**P**	**17 51 44.1**	**-1.1**
	0.3nm,0.5s,baz=120,slow=4.8,SNR=4.7							
	0.3nm,0.5s							
BVAR	**Borovoye Array**	**79.52**	**325**	P		**P**	**17 52 40.1**	**+0.2**
	0.5nm,0.6s,baz=106,slow=4.8,SNR=4.5							
	0.5nm,0.6s							
ILAR	**Eielson Array**	**84.95**	**24**	P		**P**	**17 53 08.5**	**+0.3**
	0.6nm,1.0s,baz=270,slow=5.0,SNR=3.3							
	0.6nm,1.0s							

*BGR **09** 17:43:28.7, 17.14N×62.18W, h32km, mb5.4, Ms4.6*
*IDC **09** 17:43:29.9±0.3, 18.53N×61.99W, h0km, mb5.1/29, mbtmp5.1/32, ML4.8/3, MS4.4/79, Error ellipse: s-maj=11.8km s-min=9.0km az=131.0*
*BJI **09** 17:43:32.0±0.0, 18.70N×61.90W, h10km, mB5.7/6, Ms5.4/10, Ms7 5.0/12*
*MOS **09** 17:43:34.2±0.8, 18.58N×62.05W, h39km, mb5.6/79, MS4.9/4, Error ellipse: s-maj=6.3km s-min=4.2km az=61.0*
*SDD **09** 17:43:36.2±1.9, 20.33N×63.25W, h20km±22km, MD4.5, ML5.6, MW4.8*
*TRN **09** 17:43:36.2, 18.60N×62.02W, h73km, MD5.4, Far North of Barbuda. Felt in Sint Maarten, MMI III, IV; Antigua IV; St. Kitts III, IV.*
*NEIC **09** 17:43:37.2±1.5, 18.63N±0.06×61.98W±0.05, h43km±3km, mb5.4/890, Mwr5.2/53, Mww5.2/13, Error ellipse: s-maj=9.0km s-min=6.8km az=201.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.27; $M_{\theta\theta}$-6.20; $M_{\phi\phi}$0.93; $M_{r\theta}$-2.75; $M_{\theta\phi}$-2.14; $M_{r\phi}$1.05; Fault plane solution: $M_0$6.84000×10^{16} NP1:ϕ_s272.60000°, δ58.66000°, λ112.33000°. NP2:ϕ_s54.30000°, δ37.81000°, λ58.04000°. Principal axes: T 6.3332, Plg68.0000°, Azm228.0000°; N 0.9259, Plg19.0000°, Azm81.0000°; P -7.2591, Plg11.0000°, Azm347.0000°;*
*NEIC **09** 17:43:37.6, 18.61N×62.02W, h46km*
*NEIC **09** 17:43:37.2, 18.63N×61.99W, h44km*
*NEIC **09** 17:43:37.6, 18.71N×62.13W, h46km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^{16}Nm; M_{rr}5.55; $M_{\theta\theta}$-7.03; $M_{\phi\phi}$ 1.49; $M_{r\theta}$-2.29; $M_{\theta\phi}$-2.08; $M_{r\phi}$1.83; Fault plane solution: $M_0$7.31000×10^{16} NP1: ϕ_s279.45000°, δ57.57000°, λ119.39000°. NP2: ϕ_s53.04000°, δ42.66000°, λ52.31000°. Principal axes: T 6.8544, Plg64.0000°, Azm242.0000°; N 0.9174, Plg24.0000°, Azm83.0000°; P -7.7718, Plg8.0000°, Azm349.0000°;*
*GCMT **09** 17:43:39.2±0.1, 18.77N±0.01×62.10W±0.01, h51km, MW5.2/133, Moment Tensor Solution. s107,c171; s133,c211; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.81±.02; $M_{\theta\theta}$-0.87±.01; $M_{\phi\phi}$0.05±.01; $M_{r\theta}$-0.27±.01; $M_{\theta\phi}$-0.14±.01; $M_{r\phi}$0.31±.01; Best double couple: $M_0$0.94300×10^{17} NP1:ϕ_s282.00000°, δ56.00000°, λ115.00000°. NP2:ϕ_s62.00000°, δ41.00000°, λ58.00000°. Principal axes: T 0.9690, Plg68.0000°, Azm245.0000°; N -0.0530, Plg20.0000°, Azm87.0000°; P -0.9160, Plg8.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*UPA **09** 17:43:41.2±3.8, 17.68N×60.53W, h213km±54km, MW5.7*
ISC 09 17:43:36.0±0.4, 18.59N±0.03×62.09W±0.03, h41km±3km, h41km:pP-P, n1732, σ1946/1557, mb5.4/586, MS4.5/84, 37C-36D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMRT	**St. Maarten**	**1.08**	**240**			**Pn**	**17 43 58.2**	**+3.5**
SMRT				Sn		Sn	17 44 13.4	+4.9
SMRT	**St. Maarten**	**1.08**	**240**	*eP*		**Pn**	**17 43 58.5**	**+3.8**
SEUS	**St. Eustatius**	**1.38**	**218**			**Pn**	**17 44 02.8**	**+3.9**
SEUS				Sn		Sn	17 44 20.7	+4.8
SEUS	**St. Eustatius**	**1.38**	**218**	*eP*		**Pn**	**17 44 02.9**	**+4.1**
SABA	**Saba**	**1.46**	**229**			**Pn**	**17 44 04.0**	**+4.1**
SABA				Sn		Sn	17 44 22.6	+4.7
SABA	**Saba**	**1.46**	**229**	*eP*		**Pn**	**17 44 04.0**	**+4.1**
ANDO	**Antigua, Disas**	**1.49**	**170**	*i*	*P*	**Pn**	**17 44 02.3**	**+2.0**
ANDO				eS		Sn	17 44 20.9	+2.3
ANBD	**Bethesda, Anti**	**1.57**	**169**	*i*	*P*	**Pn**	**17 44 03.3**	**+2.0**
ANBD				eS		Sn	17 44 22.5	+2.0
MBFL	**Flemmings, Mon**	**1.84**	**184**	*i*	*P*	**Pn**	**17 44 08.1**	**+3.0**
MBFL				eS		Sn	17 44 30.6	+3.5
ABD	**La Joyeuse, An**	**2.18**	**165**			**Pn**	**17 44 11.5**	**+1.6**
ABD				Sn		Sn	17 44 37.1	+1.4
ABD	**La Joyeuse, An**	**2.18**	**165**	*i*	*P*	**Pn**	**17 44 11.9**	**+2.1**
ABD				eS		Sn	17 44 38.1	+2.5
GDHS	**Morne Mazeau,**	**2.33**	**172**			**Pn**	**17 44 13.7**	**+1.8**
GDHS				Sn		Sn	17 44 40.4	+1.1
GDSD	**La Dsirade Is**	**2.47**	**156**			**Pn**	**17 44 14.0**	**+0.2**
GDSD				Sn		Sn	17 44 43.2	+0.4
CBE	**Ff, Capester**	**2.55**	**169**			**Pn**	**17 44 17.1**	**+2.2**
CBE				Sn		Sn	17 44 45.9	+1.1
CBE	**Ff, Capester**	**2.55**	**169**	*i*	*P*	**Pn**	**17 44 17.1**	**+2.2**
CBE				eS		Sn	17 44 47.6	+2.8
MAGL	**Barre de l'ile**	**2.74**	**163**			**Pn**	**17 44 19.4**	**+1.9**
MAGL				Sn		Sn	17 44 50.7	+1.3
MAGL	**Barre de l'ile**	**2.74**	**163**	*eP*		**Pn**	**17 44 19.7**	**+2.2**
TBG	**Guadaloupe-3**	**2.76**	**171**	*eP*		**Pn**	**17 44 20.3**	**+2.5**
TDBA	**Terre de Bas,**	**2.76**	**171**	*eP*		**Pn**	**17 44 20.3**	**+2.5**
HUMP	**Col San Antoni**	**3.60**	**263**			**Pn**	**17 44 32.1**	**+2.8**
HUMP				Sn		Sn	17 45 12.3	+1.7
GCPR	**Guaynabo City**	**3.80**	**266**			**Pn**	**17 44 33.9**	**+1.8**
GCPR				Sn		Sn	17 45 16.4	+0.9
SVN	**Savane Anatole**	**3.83**	**167**			**Pn**	**17 44 33.9**	**+1.3**
SVN				Sn		Sn	17 45 16.9	+0.4
SVN	**Savane Anatole**	**3.83**	**167**	*eP*		**Pn**	**17 44 33.7**	**+1.1**
SVN				eS		Sn	17 45 16.4	0.0
PCM	**Pelee Case Pet**	**3.85**	**167**	*eP*		**Pn**	**17 44 34.5**	**+1.7**
BAMF	**Morne Balai**	**3.86**	**166**	*eP*		**Pn**	**17 44 34.5**	**+1.5**
IGPR	**InterUniversit**	**3.87**	**261**			**Pn**	**17 44 35.9**	**+3.0**
GBMF	**Grand Be**	**3.88**	**167**	*eP*		**Pn**	**17 44 34.8**	**+1.6**
SJG	**San Juan**	**3.88**	**264**			**Pn**	**17 44 35.5**	**+2.3**
SJG	**San Juan**	**3.88**	**264**	Sn		**Sn**	**17 45 20.2**	**+2.5**
SJG	**San Juan**	**3.88**	**264**	Pn		**Pn**	**17 44 32.7**	**-0.6**
	59nm,0.3s,baz=67,slow=12,SNR=52							
SJG						Sn	**17 45 19.8**	**+2.1**
	988nm,0.3s,baz=276,slow=19,SNR=22							
	89nm,0.3s							
SJG	**San Juan**	**3.88**	**264**	*eP*		**Pn**	**17 44 36.8**	**+3.6**
SJG				eS		Sn	17 45 19.6	+2.0
PML	**Morne Lenard**	**3.89**	**167**	*eP*		**Pn**	**17 44 34.9**	**+1.5**
FDF	**Fort de France**	**3.94**	**167**			**Pn**	**17 44 35.1**	**+1.0**
FDF	**Fort de France**	**3.94**	**167**	*P*		**Pn**	**17 44 35.1**	**+1.0**
FDF	**Fort de France**	**3.94**	**167**	*i*	*P*	**Pn**	**17 44 35.1**	**+1.0**
FDF				eS		Sn	17 45 19.0	-0.2
ILAM	**Ilet Lapin Mar**	**3.97**	**163**			**Pn**	**17 44 35.6**	**+1.2**
ILAM	**Ilet Lapin Mar**	**3.97**	**163**	*eP*		**Pn**	**17 44 35.6**	**+1.2**
ZAM	**Aeronautique**	**4.12**	**166**	*eP*		**Pn**	**17 44 37.3**	**+0.8**
LPMF	**Morne Lapointe**	**4.14**	**165**	*eP*		**Pn**	**17 44 37.4**	**+0.7**
TRMF	**Trois Ilets**	**4.16**	**166**	*eP*		**Pn**	**17 44 38.2**	**+1.2**
BIM	**Bigot**	**4.17**	**166**			**Pn**	**17 44 38.6**	**+1.4**
BIM	**Bigot**	**4.17**	**166**	*i*	*P*	**Pn**	**17 44 39.1**	**+1.9**
BIM				eS		Sn	17 45 24.5	-0.2
MVM	**Montagne Vaucl**	**4.18**	**164**	*eP*		**Pn**	**17 44 38.3**	**+1.0**
MPOM	**Morne Pois Mar**	**4.29**	**164**			**Pn**	**17 44 39.8**	**+1.0**
MPOM	**Morne Pois Mar**	**4.29**	**164**	*i*	*P*	**Pn**	**17 44 39.8**	**+1.0**
MPOM				eS		Sn	17 45 27.1	-0.5
CELP	**Cerrillos**	**4.29**	**264**			**Pn**	**17 44 41.5**	**+2.6**
CELP	**Cerrillos**	**4.29**	**264**	*i*	*ePg*	**Pn**	**17 44 41.6**	**+2.7**
CELP				*i*	*eSg*	Sn	17 45 30.5	+2.7
CELP					IAML		17 45 32.6	
	comp=N,5μm,1.7s							
OBIP	**Obispado Ponce**	**4.32**	**263**			**Pn**	**17 44 41.2**	**+2.0**
UUPR	**Utuado, UPR, P**	**4.41**	**266**			**Pn**	**17 44 42.6**	**+2.1**
AOPR	**Arecibo Observ**	**4.43**	**268**			**Pn**	**17 44 42.7**	**+1.9**
AOPR	**Arecibo Observ**	**4.43**	**268**	*ePg*		**Pn**	**17 44 43.3**	**+2.5**
AOPR					IAML		17 45 41.5	
	comp=E,25μm,0.3s							
AOPR					IAML		17 45 46.0	
	comp=N,10μm,0.3s							
AOPR	**Arecibo Observ**	**4.43**	**268**	*eP*		**Pn**	**17 44 42.9**	**+2.1**
AOPR				eS		Sn	17 45 32.2	+1.0
SLBI	**Saint Lucia, B**	**4.67**	**167**	*i*	*P*	**Pn**	**17 44 45.9**	**+1.9**
SLBI				eS		Sn	17 45 36.3	-0.7
SLCP	**Castries, St.**	**4.68**	**167**	*eP*		**Pn**	**17 44 46.8**	**+2.7**
SLCP				eS		Sn	17 45 38.2	+1.0
SLW	**Petit Monier**	**4.68**	**166**	*eP*		**Pn**	**17 44 47.3**	**+3.1**
MLPR	**Magueyes Islan**	**4.75**	**263**			**Pn**	**17 44 46.8**	**+1.8**
AGPR	**Aguadilla, PR**	**4.76**	**269**			**Pn**	**17 44 47.1**	**+1.7**
AGPR	**Aguadilla, PR**	**4.76**	**269**	*ePg*		**Pn**	**17 44 47.0**	**+1.7**
AGPR				*eSg*		Sn	17 45 37.0	-2.3
AGPR					IAML		17 45 43.9	
	comp=E,8μm,0.4s							
AGPR					IAML		17 45 46.8	
	comp=N,7μm,0.3s							
CRPR	**Cabo Rojo, PR**	**4.80**	**264**			**Pn**	**17 44 48.6**	**+2.8**
CRPR	**Cabo Rojo, PR**	**4.80**	**264**	*i*	*ePg*	**Pn**	**17 44 48.7**	**+2.9**
CRPR				*i*	*eSg*	Sn	17 45 42.9	+2.6
CRPR					IAML		17 45 47.0	
	comp=N,4μm,0.8s							
CRPR					IAML		17 45 47.2	
	comp=E,5μm,0.8s							
PRSN	**Puerto Rico Se**	**4.81**	**266**			**Pn**	**17 44 48.3**	**+2.3**
SLDE	**Delcer**	**4.86**	**168**	*eP*		**Pn**	**17 44 49.8**	**+3.1**
SSV	**Crater Summit**	**5.31**	**171**	*eP*		**Pn**	**17 44 55.6**	**+2.7**
SVV	**Soufriere Volc**	**5.31**	**171**	*eP*		**Pn**	**17 44 55.6**	**+2.7**
SVB	**Belmont**	**5.35**	**171**	*eP*		**Pn**	**17 44 55.6**	**+2.1**
SVB				eS		Sn	17 45 53.4	-0.4
SVNC	**Richmond Hill,**	**5.47**	**171**	*eP*		**Pn**	**17 44 56.8**	**+1.6**
SVOC				eS		Sn	17 45 55.2	-1.5
BCHC	**Barbados, Cave**	**5.92**	**156**	*eP*		**Pn**	**17 45 03.4**	**+2.2**
BCHC				eS		Sn	**17 46 05.6**	**-2.3**
BBGH	**Gun Hill**	**5.94**	**155**			**Pn**	**17 45 02.5**	**+1.0**
BBGH	**Gun Hill**	**5.94**	**155**	*eP*		**Pn**	**17 45 03.0**	**+1.5**
BBGH				eS		Sn	**17 46 06.9**	**-1.4**
PCDR	**Punta Cana, DR**	**5.97**	**270**	Pn		**Pn**	**17 45 04.4**	**+2.6**
PCDR	**Punta Cana, DR**	**5.97**	**270**	*ePg*		**Pn**	**17 45 04.2**	**+2.4**
PCDR				*eSg*		Sn	**17 46 09.9**	**+0.9**
PCDR					IAML		17 46 15.3	
	comp=E,3μm,0.9s							
PCDR					IAML		17 46 15.4	
	comp=N,6μm,0.7s							
GCMP	**Grenada, Carri**	**6.11**	**174**	*i*	*P*	**Pn**	**17 45 05.7**	**+1.9**
GCMP				eS		Sn	**17 46 11.7**	**-0.7**
GRHS	**Sauteurs**	**6.35**	**176**	*i*	*P*	**Pn**	**17 45 09.3**	**+2.2**
GRHS				eS		Sn	**17 46 17.6**	**-0.7**
SADR	**Isla Saona**	**6.36**	**267**	*ePg*		**Pn**	**17 45 11.9**	**+4.6**
SADR					IAML		17 46 26.4	
	comp=E,5μm,0.6s							
SADR					IAML		17 46 41.6	
	comp=N,5μm,1.4s							
GRGR	**Grenville**	**6.44**	**176**			**Pn**	**17 45 09.8**	**+1.5**
GRGR	**Grenville**	**6.44**	**176**	*eP*		**Pn**	**17 45 10.6**	**+2.3**
GRGR	**Grenville**	**6.44**	**176**	*i*	*P*	**Pn**	**17 45 10.7**	**+2.3**
GRGR				eS		Sn	**17 46 18.3**	**-2.3**
MIDR	**Miches**	**6.60**	**274**	*ePg*		**Pn**	**17 45 12.4**	**+1.8**
MIDR				*eSg*		Sn	**17 46 22.4**	**-2.3**
MIDR					IAML		17 46 23.4	
	comp=N,2μm,0.6s							
MIDR					IAML		17 46 23.8	
	comp=E,2μm,1.1s							
SMDR	**Samana, DR**	**6.75**	**277**	*ePg*		**Pn**	**17 45 12.4**	**-0.2**
SMDR					IAML		17 46 42.2	
	comp=N,2μm,1.1s							
HATOM	**Hato Mayor del**	**6.91**	**273**	*ePg*		**Pn**	**17 45 17.4**	**+2.5**
HATOM					IAML		17 46 49.2	
	comp=N,2μm,0.6s							
DR08	**Loma La Naviza**	**7.52**	**274**	*ePg*		**Pn**	**17 45 26.1**	**+2.8**
DR08					IAML		17 47 04.7	
	comp=N,5μm,0.2s							
BANI	**BANI**	**7.85**	**270**	*ePn*		Pn	17 45 15.7	-12
TRN	**Trinidad (W)**	**7.93**	**175**	*eP*		**Pn**	**17 45 31.1**	**+2.3**
TRN				eS		Sn	**17 46 54.6**	**-2.6**
SDDR	**Presa de Saban**	**8.72**	**274**	Pn		**Pn**	**17 45 41.4**	**+1.7**
SDDR	**Presa de Saban**	**8.72**	**274**	*eP*		**Pn**	**17 45 41.7**	**+2.0**
SDDR				eS		Sn	**17 47 14.6**	**-2.2**
SDDR	**Presa de Saban**	**8.72**	**274**	*eP*		**Pn**	**17 45 41.3**	**+1.6**
SDDR				eS		Sn	**17 47 13.3**	**-3.5**
PCRV	**Puerto La Cruz**	**8.72**	**197**	Pn		**Pn**	**17 45 36.1**	**-3.6**
	comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=2.0							
PCRV					LR	LR	17 49 26.0	
	comp=N,5μm,19.9s,slow=41							
HATO	**Hato, Curacao**	**9.19**	**227**	Pn		**Pn**	**17 45 48.0**	**+1.9**
PAPH	**Port-au-Prince**	**9.68**	**271**	Pn		**Pn**	**17 45 54.4**	**+1.6**
PAPH	**Port-au-Prince**	**9.68**	**271**	*eP*		**Pn**	**17 45 54.9**	**+2.0**
AUA1	**Aruba**	**9.74**	**233**	Pn		**Pn**	**17 45 55.2

MDP LR LR 17 53 20.0
comp=N,836nm,20.5s,baz=325,slow=36
comp=N,50nm,0.8s
CAIB Caibarien 16.73 286 *e*P **Pn 17 47 27.3 -0.2**
UREC San Jos de Ur 16.94 232 *e*P **P 17 47 31.7 0.0**
UREC *e*S **Sn 17 50 31.7 -5.8**
UREC San Jos de Ur 16.94 232 *e*P **P 17 47 33.7 +2.1**
PTBC PUERTO BERRIO, 16.99 227 *e*P **P 17 47 31.8 -0.4**
SPBC San Pablo de B 17.38 224 *i* Pg **Pn 17 47 35.7 0.0**
APAC Apartado, Choc 17.64 235 *e*P **P 17 47 41.6 +2.1**
CAPC Capurgana 17.82 238 *e*P **P 17 47 41.6 +0.2**
DBBC Dabeiba 17.92 232 *e*P **P 17 47 43.5 +0.9**
NORC Norcasia 17.98 226 *e*P **Pn 17 47 39.6 -3.4**
FSCY Frank Sound, G 18.07 275 P **P 17 47 38.4 -5.7**
ROSC El Rosal 18.15 223 P **Pn 17 47 46.1 +0.6**
ROSC IAmb IAmb 17 47 50.1
comp=Z,291nm,0.6s
ROSC El Rosal 18.15 223 P **Pn 17 47 46.1 +0.6**
ROSC pmax pmax
comp=Z,291nm,0.6s
ROSC El Rosal 18.15 223 P **Pn 17 47 45.8 +0.3**
comp=Z,34nm,0.3s,baz=113,slow=7.5,SNR=76
ROSC S **Sn 17 51 08.5 +1.1**
comp=Z,39nm,0.8s,baz=148,slow=22,SNR=2.3
ROSC LR LR 17 55 29.4
comp=Z,4µm,22.0s,baz=40,slow=40
comp=Z,305nm,0.6s
ROSC El Rosal 18.15 223 *e*P **P 17 47 45.5 0.0**
CVER Cruz Verde, Cu 18.24 221 *e*P **Pn 17 47 49.4 +2.8**
VILC Villavicencio, 18.32 220 *e*P **Pn 17 47 47.5 +0.1**
UPD2 Meteti 18.40 239 *e*P **Pn 17 47 50.7 +2.6**
UPD2 *e*S **S 17 51 17.1 +1.0**
UPD2 Meteti 18.40 239 *e*P **P 17 47 47.5 -0.4**
TOTI Torti 18.43 241 *e*P **Pn 17 47 53.5 +5.0**
TOTI *e*S **S 17 51 20.0 +3.3**
CBOC Ciudad Bolivar 18.56 229 *e*P **Pn 17 47 51.4 +1.2**
CAMR Camarioca 18.56 287 P **Pn 17 47 50.0 +0.1**
CAMR IAmb IAmb 17 47 54.1
comp=Z,418nm,1.0s
GUY2C Guyana, Caldas 18.56 226 *e*P **Pn 17 47 51.4 +0.9**
RECRC Villamaria, Ca 18.74 225 *e*P **Pn 17 47 55.3 +2.5**
060A Indiantown 18.81 300 P **P 17 47 51.5 -0.6**
061Z Ochoppi 18.85 296 P **P 17 47 52.5 -0.2**
061Z IAmb IAmb 17 48 00.2
comp=Z,149nm,0.8s
PTAC Punta Ardita, 19.06 235 *e*P **Pn 17 47 57.9 +1.8**
PTAC *e*S **Sn 17 51 28.2 -0.7**
PTAC Punta Ardita, 19.06 235 *e*P **P 17 47 55.3 +0.3**
ANIL Santa Ana 19.12 224 *e*P **Pn 17 47 57.3 +0.1**
SOLC Bahia Solano 19.34 232 *i* Pg **Pn 17 47 59.2 +2.2**
PRAC Prado 19.37 222 *e*P **P 17 47 59.2 +0.7**
PLMC San Jos del P 19.42 227 *e*P **P 17 47 59.2 +0.2**
UPA Univ. de Panam 19.43 243 *e*P **Pn 17 48 00.1 -0.4**
UPA Univ. de Panam 19.43 243 *e*P **P 17 47 59.2 +0.1**
ORTC Ortega, Tolima 19.45 223 *e*P **P 17 47 59.2 -0.2**
BCIP Isla Barro Col 19.59 244 P **P 17 48 01.6 +0.8**
BCIP IAmb IAmb 17 48 03.3
comp=Z,381nm,1.2s
BCIP Isla Barro Col 19.59 244 *i* P **Pn 17 48 02.0 -0.5**
BCIP *e*S **Sn 17 51 46.7 +5.0**
BCIP Isla Barro Col 19.59 244 P **P 17 48 01.6 +0.8**
BCIP pmax pmax
comp=Z,381nm,1.3s
BCIP Isla Barro Col 19.59 244 *e*P **Pn 17 48 03.1 +0.7**
SOR Soroa 20.00 286 P Pn 17 48 06.8 -0.5
SOR Soroa 20.00 286 P Pn 17 48 06.8 -0.5
SOR pmax pmax
comp=Z,113nm,0.9s
DWPF Disney Wildern 20.10 302 P **P 17 48 07.4 +1.0**
DWPF IAmb IAmb 17 48 16.5
comp=Z,217nm,1.1s
DWPF Disney Wildern 20.10 302 P Pn 17 48 09.2 +0.8
baz=114
DWPF Disney Wildern 20.10 302 *e*P Pn 17 48 14.6 +6.2
YOTC Yotoco, Valle 20.13 226 *e*P **P 17 48 05.1 -1.7**
PIZC Pizarro, Choco 20.14 230 *e*P Pn 17 48 09.0 +0.1
BETC Betania 20.52 221 *e*P **P 17 48 09.0 -2.0**
AZU Azuero 20.68 241 *i* P **P 17 48 14.1 +1.4**
AZU *e*S **S 17 52 00.9 -0.7**
AZU Azuero 20.68 241 *e*P **P 17 48 12.9 +0.3**
MALC Bahia Malaga 20.79 228 *e*P **P 17 48 12.9 -0.9**
JAMC Jamundi, Valle 20.91 225 *e*P **P 17 48 12.9 -2.5**
GARC Garzon, Huila 20.94 220 *e*P **P 17 48 14.9 -0.8**
Y60A Bolivia 21.04 320 P **P 17 48 15.2 -1.2**
Y60A IAmb IAmb 17 48 30.0
comp=Z,251nm,0.9s
MCPB Macapa, AP 21.26 151 *e*P **P 17 48 19.9 +1.0**
V61A Roper 21.39 326 P **P 17 48 20.0 -0.1**
CACAO El Cacao, Vera 21.41 241 *e*P **P 17 48 20.8 +0.3**
POPC Popayan, Colom 21.42 224 *e*P **P 17 48 20.8 -0.1**
GMAL Guarumal, Vera 21.50 242 *e*P **P 17 48 23.0 +1.5**
GMAL *e*S **S 17 52 10.9 -6.9**
GMAL Guarumal, Vera 21.50 242 *e*P **P 17 48 20.8 -0.7**
656A Willston 21.51 304 P **P 17 48 22.7 +1.3**
257A Skidaway Islan 21.65 312 P **P 17 48 23.8 +0.9**
MACA Manacapuru-AM 21.66 176 P **P 17 48 22.9 -0.3**
MACA IAmb IAmb 17 48 43.2
comp=Z,104nm,0.9s
MACA Manacapuru-AM 21.66 176 *e*P **P 17 48 24.9 +1.7**
CHGR2 Aguacate 21.69 246 *e*P **P 17 48 25.1 +1.6**
CHGR2 *e*S **S 17 52 12.0 -10**
CNNC Cliffs of the 21.71 323 P **P 17 48 23.0 -0.5**
CNNC Cliffs of the 21.71 323 P **P 17 48 25.1 +1.6**
baz=136
NHSC New Hope 21.72 315 P **P 17 48 23.2 -0.5**
NHSC New Hope 21.72 315 P **P 17 48 25.5 +1.8**
baz=127
MALB Monte Alegre 21.73 158 *e*P **P 17 48 25.5 +1.6**
456A Hilliard 21.73 308 P **P 17 48 24.9 +1.0**
Y58A Scranton 21.88 318 P **P 17 48 25.5 0.0**
W59A Clinton 21.98 322 P **P 17 48 26.6 +0.1**
GR1C Gorgona, Isla 22.09 227 *e*P **P 17 48 28.6 +0.9**
X58A Rowland 22.10 319 P **P 17 48 28.1 +0.3**
X58A IAmb IAmb 17 48 44.7
comp=Z,100nm,0.5s
TEFE Tefe 22.10 187 *e*P **P 17 48 28.4 +0.4**
PTLC Puerto Leguiza 22.16 216 *e*P **P 17 48 28.6 +0.1**
BBLC Balboa, Cauca 22.18 224 *e*P **P 17 48 28.7 -2.4**
BRU2 Volcan 22.23 247 P **P 17 48 29.9 +0.3**
ESPN Las Esperanzas 22.32 257 P **P 17 48 31.0 +0.6**
CRUC La Cruz 22.33 222 *e*P **P 17 48 32.5 +1.7**
CRUC *e*P **pP 17 48 34.5 -5.4**
Y57A Sumter 22.42 317 P **P 17 48 30.8 -0.4**
Y57A IAmb IAmb 17 48 47.7
comp=Z,142nm,0.8s
S61A Accomac 22.43 331 P **P 17 48 30.4 -0.8**
S61A IAmb IAmb 17 48 53.1
comp=Z,180nm,0.8s
U59A Littleton 22.46 325 P **P 17 48 31.8 +0.1**
U59A IAmb IAmb 17 48 39.3
comp=Z,162nm,1.1s
CDITO Canoas 22.50 247 P **P 17 48 32.8 +0.6**
DRK0 Durika 22.51 249 P **P 17 48 32.8 +0.2**
T60A Surry 22.51 328 P **P 17 48 31.6 -0.5**
T60A IAmb IAmb 17 48 53.8
comp=Z,179nm,0.8s
SRBA San Rafael, Bu 22.62 249 P **P 17 48 33.9 +0.2**
SRBA IAmb IAmb 17 48 37.8
comp=Z,151nm,0.9s
255A Hazlehurst 22.67 310 P **P 17 48 34.5 +0.6**
PTPM Petroterminale 22.68 246 *e*P **P 17 48 38.2 +4.1**
PTPM *e*S **S 17 52 35.7 -4.0**
T59A Double "B" Far 22.80 327 P **P 17 48 34.8 -0.4**
T59A IAmb IAmb 17 48 53.5
comp=Z,120nm,0.9s
V58A Windy Hill, Pi 22.81 322 P **P 17 48 34.9 -0.4**
R61A Willards 22.81 332 P **P 17 48 34.4 -0.9**
R61A IAmb IAmb 17 48 54.6
comp=Z,186nm,0.8s
PEZE Perez Zeledon, 22.84 249 P **P 17 48 37.0 +1.1**
PEZE IAmb IAmb 17 48 38.4
comp=Z,169nm,0.9s
GCUF Volcan Galeras 22.84 223 *e*P **P 17 48 36.5 +0.1**
BIRD Birdtown, Kers 22.86 318 P **P 17 48 36.3 +0.5**
BIRD IAmb IAmb 17 48 57.8
comp=Z,140nm,0.9s
W57A Gilead 22.90 320 P **P 17 48 36.7 +0.5**
W57A IAmb IAmb 17 48 57.7
comp=Z,108nm,1.0s
COVE Coope Vega, Sa 22.94 253 P **P 17 48 37.8 +0.9**
HDC Heredia 22.96 251 P **P 17 48 38.2 +0.9**
HDC Heredia 22.96 251 *e*P **P 17 48 39.8 +2.5**

JSC Jenkinsville 23.15 316 IAmb IAmb 17 48 57.3
comp=Z,83nm,0.5s
ACON Acoyapa 23.21 257 P **P 17 48 40.4 +0.9**
ACON IAmb IAmb 17 48 43.0
comp=Z,176nm,1.1s
ACON Acoyapa 23.21 257 *e*P **P 17 48 40.4 +0.9**
TIGA Tifton 23.25 307 P **P 17 48 40.7 +0.9**
TIGA IAmb IAmb 17 49 02.7
comp=Z,111nm,0.8s
TIGA Tifton 23.25 307 P **P 17 48 42.3 +2.5**
baz=118
SOCE Pocosol 23.27 253 P **P 17 48 41.1 +0.9**
SOCE IAmb IAmb 17 49 08.3
comp=Z,34nm,0.6s
ARE1 Arenal 1 23.33 253 P **P 17 48 41.9 +1.1**
CMBC Cumbal 23.37 223 *e*P **P 17 48 42.4 +0.7**
154A Montrose 23.48 311 P **P 17 48 42.3 +0.3**
BOAB BOACO BROADBAN 23.51 258 P **P 17 48 42.5 0.0**
TULM Tulcn-Chalpat 23.52 223 *e*P **P 17 48 46.3 +3.2**
BONI La Bonita 23.55 222 *e*P **P 17 48 40.4 -2.8**
JACO JACO, Garabito 23.59 251 P **P 17 48 44.8 +1.5**
JTS Las Juntas de 23.61 253 P **P 17 48 43.6 +0.1**
JTS Las Juntas de 23.61 253 *e*P **P 17 48 44.1 +0.6**
JTS *e*S **S 17 52 50.8 -4.5**
JTS Las Juntas de 23.61 253 *c i*P **P 17 48 43.7 +0.3**
JTS Las Juntas de 23.61 253 *e*P **P 17 48 40.4 -3.1**
MATN Matagalpa 23.61 260 P **P 17 48 44.6 +1.1**
CBN Corbin Frederi 23.66 329 P **P 17 48 44.2 +0.6**
CBN Corbin Frederi 23.66 329 P **P 17 48 44.5 +0.9**
baz=141
ITTB Itaituba 23.66 164 *e*P **P 17 48 43.9 +0.1**
R58B Mineral 23.72 328 IAmb IAmb 17 49 04.9
comp=Z,128nm,1.0s
KMSC Kings Mountain 23.73 318 P **P 17 48 45.5 +1.1**
KMSC IAmb IAmb 17 49 05.6
comp=Z,197nm,1.3s
KMSC Kings Mountain 23.73 318 P **P 17 48 46.1 +1.7**
baz=129,SNR=10
T57A Hurt 23.74 324 IAmb IAmb 17 49 06.4
comp=Z,95nm,0.8s
HODGE Hodges 23.78 315 IAmb IAmb 17 49 05.4
comp=Z,93nm,0.7s
PAULI Pauline 23.84 317 IAmb IAmb 17 49 07.4
comp=Z,92nm,0.7s
TBTG Tabatinga, AM 23.91 200 P **P 17 48 45.7 -0.5**
TBTG Tabatinga, AM 23.91 200 *e*P **P 17 48 46.3 +0.1**
U56A King 23.93 321 P **P 17 48 47.7 +1.4**
HZTE Horizontes, Gu 24.03 254 P **P 17 48 48.8 +1.4**
HZTE IAmb IAmb 17 48 56.0
comp=Z,102nm,0.8s
M65A Busby, Falmout 24.03 344 P **P 17 48 47.2 +0.1**
baz=160
ORTG Ortega, Santa 24.04 253 P **P 17 48 47.9 +0.3**
ORTG IAmb IAmb 17 49 00.3
comp=Z,126nm,0.9s
V55A Taylorsville 24.11 319 IAmb IAmb 17 49 02.7
comp=Z,114nm,1.1s
S57A Dark Hollow, R 24.13 326 IAmb IAmb 17 49 14.4
comp=Z,86nm,0.9s
GOGA Godfrey 24.16 312 P **P 17 48 49.1 +0.7**
GOGA IAmb IAmb 17 49 03.2
comp=Z,97nm,1.1s
GOGA Godfrey 24.16 312 P **P 17 48 50.3 +1.9**
baz=122,SNR=6.2
GOGA Godfrey 24.16 312 P **P 17 48 49.1 +0.7**
GOGA pmax pmax
comp=Z,97nm,1.1s
DUNO Dulce Nombre, 24.18 253 P **P 17 48 48.7 -0.1**
CUSE Cuicocha Este 24.22 223 *e*P **P 17 48 48.2 -1.4**
M63A Gales Ferry 24.28 342 IAmb IAmb 17 48 53.2
comp=Z,90nm,0.9s
352A Blakely 24.29 306 P **P 17 48 50.2 +0.7**
352A IAmb IAmb 17 49 12.5
comp=Z,80nm,0.8s
OTAV Otavalo 24.31 223 P **P 17 48 50.7 +0.3**
OTAV IAmb IAmb 17 48 54.2
comp=Z,143nm,0.8s
OTAV Otavalo 24.31 223 P **P 17 48 50.7 +0.3**
OTAV pmax pmax
comp=Z,143nm,0.8s
OTAV Otavalo 24.31 223 *e*P **P 17 48 52.2 +1.8**
CPNY Central Park 24.36 338 IAmb IAmb 17 49 14.9
comp=Z,73nm,0.8s
L64A Middleborough 24.43 344 IAmb IAmb 17 49 06.2
comp=Z,137nm,0.9s
CNGN Cerro Negro 24.45 259 P **P 17 48 51.7 +0.4**
WSPT Westport, CT 24.48 339 IAmb IAmb 17 49 17.4
comp=Z,124nm,0.8s
YLE Yale 24.48 340 IAmb IAmb 17 49 07.3
comp=Z,145nm,1.0s
PAL Palisades 24.53 338 P **P 17 48 52.1 +0.5**
PAL IAmb IAmb 17 49 18.1
comp=Z,164nm,1.0s
PAL Palisades 24.53 338 P **P 17 48 52.1 +0.5**
baz=152,SNR=14
PAL Palisades 24.53 338 P **P 17 48 52.2 +0.5**
PAL pmax pmax
comp=Z,164nm,1.0s
BLA Blacksburg 24.55 323 P **P 17 48 53.3 +1.3**
baz=134,SNR=11
TGUH Tegucigalpa,Un 24.57 263 P **P 17 48 53.2 +0.8**
MVL Millersville 24.63 333 P **P 17 48 52.0 -0.6**
MVL IAmb IAmb 17 48 56.5
comp=Z,91nm,1.0s
CRIN San Cristobal 24.72 260 P **P 17 48 56.1 +2.4**
CRIN San Cristobal 24.72 260 *e*P **P 17 48 54.1 +0.3**
LUPA Lehigh Univers 24.73 335 IAmb IAmb 17 48 57.9
comp=Z,166nm,1.0s
TEIG Tepich 24.74 278 P **P 17 48 55.0 +1.1**
TEIG **PcP 17 52 29.9 -0.2**
TEIG Tepich 24.74 278 LR LR 17 58 58.7
comp=Z,4µm,21.6s,baz=199,slow=37
TEIG Tepich 24.74 278 *e*P **P 17 48 52.2 -1.7**
TRNY Table Rock, Ra 24.77 338 IAmb IAmb 17 48 57.5
comp=Z,89nm,0.8s
Y52A Lilburn 24.82 312 P **P 17 48 55.0 +0.6**
Y52A IAmb IAmb 17 49 28.6
comp=Z,83nm,0.6s
U54A Nelsons Funny 24.91 320 P **P 17 48 56.4 +1.1**
U54A IAmb IAmb 17 49 26.9
comp=Z,90nm,0.7s
P57A Homestead Farm 24.97 330 IAmb IAmb 17 49 22.0
comp=Z,93nm,0.7s
V53A Saluda 25.00 317 IAmb IAmb 17 49 23.5
comp=Z,66nm,0.5s
KSCT Kent School, K 25.03 340 IAmb IAmb 17 48 59.9
comp=Z,90nm,0.8s
SLOR San Lorenzo - 25.07 222 P **P 17 48 58.7 +1.3**
SLOR IAmb IAmb 17 49 02.3
comp=Z,64nm,0.8s
PIAT Ana Tenorio 25.13 221 *e*P **P 17 48 58.0 +0.2**
R55A Marlinton 25.14 325 P **P 17 48 58.6 +1.3**
R55A IAmb IAmb 17 49 25.1
comp=Z,91nm,0.8s
HRV Adam Dziewonsk 25.16 343 P **P 17 48 57.7 +0.3**
HRV IAmb IAmb 17 49 25.0
comp=Z,99nm,0.8s
HRV Adam Dziewonsk 25.16 343 P **P 17 48 58.1 +0.7**
baz=158
HRV Adam Dziewonsk 25.16 343 P **P 17 48 57.7 +0.3**
HRV pmax pmax
comp=Z,99nm,0.8s
Z51A Franklin 25.33 310 IAmb IAmb 17 49 31.0
comp=Z,58nm,0.6s
W52A Murphy 25.40 315 P **P 17 49 00.6 +0.8**
L61B Northampton 25.43 342 IAmb IAmb 17 49 30.2
comp=Z,46nm,0.6s
L61B Northampton 25.43 342 P **P 17 49 00.4 +0.6**
baz=156,SNR=5.9
K62A Royalston 25.49 342 IAmb IAmb 17 49 28.9
comp=Z,174nm,1.6s
250A Grady 25.53 306 IAmb IAmb 17 49 28.5
comp=Z,137nm,1.0s
V52A Sevierville 25.61 316 P **P 17 49 01.9 +0.3**
V52A IAmb IAmb 17 49 33.3
comp=Z,83nm,0.7s
X51A Calhoun 25.75 313 IAmb IAmb 17 49 33.9
comp=Z,168nm,0.8s
BRAL Brewton 25.80 304 P **P 17 49 06.5 +3.1**
baz=113
SSPA Standing Stone 25.82 332 P **P 17 49 03.9 +0.4**
SSPA Standing Stone 25.82 332 P **P 17 49 04.8 +1.4**
baz=144
TRY Troy 25.99 340 P **P 17 49 05.3 +0.4**
TRY IAmb IAmb 17 49 38.2

comp=Z,184nm,0.9s
HAL Halifax 26.00 358 IAmb IAmb 17 49 36.1
comp=Z,91nm,0.8s
CPCT Cooper Cave 26.00 315 IAmb IAmb 17 49 38.9
comp=Z,118nm,0.9s
MCWV Mont Chateau 26.00 328 P **P 17 49 05.3 +0.2**
MCWV IAmb IAmb 17 49 36.4
comp=Z,77nm,0.8s
MCWV Mont Chateau 26.00 328 P **P 17 49 06.8 +1.7**
baz=139
TZTN Tazewell 26.01 318 IAmb IAmb 17 49 37.2
comp=Z,121nm,0.9s
TZTN Tazewell 26.01 318 P **P 17 49 07.2 +2.1**
baz=128,SNR=8.4
Q54A Coxs Mills 26.03 325 IAmb IAmb 17 49 30.2
comp=Z,96nm,1.1s
V51A Loudon 26.09 316 P **P 17 49 06.4 +0.5**
V51A IAmb IAmb 17 49 38.4
comp=Z,106nm,0.6s
J61A Chester 26.21 343 P **P 17 49 08.2 +1.3**
NPGB Novo Progresso 26.33 165 *e*P **P 17 49 09.6 +1.4**
BINY Binghamton 26.34 336 P **P 17 49 09.5 +1.4**
baz=149
I63A Otisfield 26.37 346 P **P 17 49 08.1 -0.2**
I62A Tamworth 26.38 345 P **P 17 49 07.9 -0.6**
I62A IAmb IAmb 17 49 46.6
comp=Z,161nm,1.6s
W50A Signal Mountai 26.40 313 IAmb IAmb 17 49 44.0
comp=Z,102nm,1.1s
ESQI Esquipulas 26.41 265 P **P 17 49 09.6 +0.5**
MTO3 Montecristo 26.46 265 P **P 17 49 10.5 +0.8**
HNH Hanover 26.47 343 P **P 17 49 09.9 +0.7**
HNH IAmb IAmb 17 49 49.4
comp=Z,60nm,0.7s
PETF Flores 26.50 271 P **P 17 49 11.3 +1.5**
SNET Serv Nac Est T 26.51 263 P **P 17 49 11.7 +1.8**
LRAL Lakeview Retre 26.55 308 IAmb IAmb 17 49 47.5
comp=Z,146nm,1.6s
LRAL Lakeview Retre 26.55 308 P **P 17 49 12.7 +2.6**
baz=117,SNR=10
ACCN Adirondack Com 26.58 341 P **P 17 49 09.9 -0.3**
ACCN IAmb IAmb 17 49 47.2
comp=Z,73nm,0.8s
O54A Avella 26.67 328 IAmb IAmb 17 49 44.8
comp=Z,84nm,0.8s
S51A Beattyville 26.72 320 P **P 17 49 12.6 +1.0**
S51A IAmb IAmb 17 49 45.5
comp=Z,121nm,1.3s
GBN Guysborough 26.74 1 P **P 17 49 11.7 0.0**
Q52A Bidwell 26.81 323 P **P 17 49 13.5 +1.1**
SWET Sewanee 26.84 313 P **P 17 49 13.2 +0.5**
LBNH Lisbon 26.87 344 P **P 17 49 13.0 +0.2**
LBNH IAmb IAmb 17 49 49.1
comp=Z,61nm,0.7s
LBNH Lisbon 26.87 344 P **P 17 49 13.2 +0.3**
baz=159
LBNH Lisbon 26.87 344 P **P 17 49 13.0 +0.2**
LBNH pmax pmax
comp=Z,61nm,0.7s
M55A Ridgway 26.89 332 P **P 17 49 14.1 +1.0**
M55A IAmb IAmb 17 49 24.0
comp=Z,75nm,1.1s
COHC Cochancay 26.89 221 P **P 17 49 12.7 -0.7**
COHC Cochancay 26.89 221 *e*P **P 17 49 11.5 -1.8**
G65A Princeton 26.92 351 P **P 17 49 12.8 -0.5**
BOSC San Juan Bosco 26.98 218 P **P 17 49 13.0 -1.3**
K57A Scipio Center 26.99 336 P **P 17 49 13.7 -0.3**
H62A Milan 27.00 346 IAmb IAmb 17 49 56.2
comp=Z,43nm,0.6s
J58A Remsen 27.09 339 IAmb IAmb 17 49 52.9
comp=Z,78nm,0.8s
T50A Nancy 27.12 317 P **P 17 49 15.8 +0.6**
O53A New Philadelph 27.15 327 IAmb IAmb 17 49 30.2
comp=Z,162nm,1.6s
O53A New Philadelph 27.15 327 P **P 17 49 16.7 +1.3**
baz=137
PPLP Puerto Lpez 27.17 225 *e*P **P 17 49 15.7 -0.2**
VT1 Waterbury 27.18 343 P **P 17 49 14.9 -0.7**
P52A Corning 27.20 325 P **P 17 49 17.7 +1.9**
baz=135
PKME Peaks-Kenny Pk 27.26 349 P **P 17 49 16.4 0.0**
baz=165
LMN Caledonia Moun 27.28 356 P **P 17 49 16.1 -0.4**
LMN IAmb IAmb 17 49 56.5
comp=Z,60nm,0.8s
NCB Newcomb 27.28 341 IAmb IAmb 17 49 56.4
comp=Z,82nm,0.9s
N53A Lisbon 27.37 328 P **P 17 49 18.1 +0.7**
O52A Adamsville 27.38 326 IAmb IAmb 17 49 57.7
comp=Z,54nm,0.6s
APG El Apazote 27.38 267 LR LR 18 01 41.0
comp=Z,31nm,18.3s,baz=42,slow=40
J57A Williamstown 27.38 338 P **P 17 49 17.0 -0.5**
J57A IAmb IAmb 17 49 56.4
comp=Z,104nm,1.2s
SAML Samuel 27.39 182 P **P 17 49 17.0 -0.7**
SAML Samuel 27.39 182 P **P 17 49 17.0 -0.7**
SAML pmax pmax
comp=Z,27nm,0.9s
SAML Samuel 27.39 182 *e*P **P 17 49 18.3 +0.6**
SAML Samuel 27.39 182 *e*P **P 17 49 15.7 -2.0**
Z47A Carrollton 27.43 307 IAmb IAmb 17 49 54.3
comp=Z,114nm,1.1s
U49A Red Boiling Sp 27.44 315 IAmb IAmb 17 49 56.4
comp=Z,102nm,0.9s
G62A West of Eustis 27.47 347 P **P 17 49 18.5 +0.3**
Q51A Peebles 27.47 322 P **P 17 49 19.9 +1.6**
Q51A IAmb IAmb 17 49 57.2
comp=Z,62nm,0.7s
R50A Paris 27.57 320 P **P 17 49 19.4 +0.2**
R50A IAmb IAmb 17 49 59.9
comp=Z,48nm,0.6s
WVNY West Valley, N 27.57 333 IAmb IAmb 17 49 33.8
comp=Z,73nm,0.9s
J56A Wolcott 27.59 336 P **P 17 49 19.1 -0.2**
P51A Williamsport 27.61 323 P **P 17 49 20.1 +0.5**
F63A Nahmakanta, Br 27.65 349 P **P 17 49 20.5 +0.6**
ALLY Alegheny Colle 27.67 330 IAmb IAmb 17 49 30.7
comp=Z,64nm,0.9s
V48A Smith Brothers 27.73 313 P **P 17 49 21.1 +0.4**
M53A WI Miller and 27.77 329 P **P 17 49 22.6 +1.6**
baz=139
SALI Salinas 27.79 224 P **P 17 49 22.8 +1.4**
SALI IAmb IAmb 17 49 27.3
comp=Z,120nm,1.0s
J55A Hilton 27.95 335 P **P 17 49 21.6 -0.9**
J55A IAmb IAmb 17 50 02.2
comp=Z,53nm,0.8s
ERPA Erie 27.96 331 P **P 17 49 21.8 -0.9**
ERPA IAmb IAmb 17 50 06.5
comp=Z,70nm,0.9s
ERPA Erie 27.96 331 P **P 17 49 23.9 +1.2**
baz=141
LONY Lake Ozonia 27.98 341 P **P 17 49 24.0 +1.2**
baz=154
ACSO Alum Creek Sta 28.08 325 IAmb IAmb 17 50 05.2
comp=Z,87nm,0.8s
ACSO Alum Creek Sta 28.08 325 P **P 17 49 25.8 +2.0**
baz=134,SNR=6.0
CZSB Cruzeiro do Su 28.17 203 P **P 17 49 24.3 -0.4**
CZSB IAmb IAmb 17 49 35.4
comp=Z,146nm,1.0s
CZSB Cruzeiro do Su 28.17 203 *e*P **P 17 49 25.1 +0.3**
CZSB Cruzeiro do Su 28.17 203 *e*P **P 17 49 23.5 -1.2**
M52A Chesterland 28.18 328 P **P 17 49 24.0 -0.6**
M52A IAmb IAmb 17 50 04.6
comp=Z,101nm,0.8s
ARNL Arenillas 28.24 221 P **P 17 49 25.2 -0.2**
ARNL IAmb IAmb 17 49 36.5
comp=Z,100nm,0.7s
N51A Ashland 28.24 326 P **P 17 49 24.2 -1.0**
PLAL Pickwick Lake 28.24 311 P **P 17 49 24.6 -0.7**
PLAL IAmb IAmb 17 50 06.8
comp=Z,48nm,0.6s
HUEH Huehuetenango 28.30 268 P **P 17 49 25.6 -0.6**
PQI Presque Isle 28.43 351 **PcP 17 52 37.8 -0.4**
ETMB Extrema 28.52 189 *e*P **P 17 49 28.0 +0.2**
T47A Sharon Grove 28.59 315 P **P 17 49 28.6 +0.2**
T47A pwP 17 50 08.9 +23
T47A IAmb IAmb 17 50 21.8
comp=Z,50nm,0.6s
P49A Miami Univ. Ec 28.60 322 P **P 17 49 27.4 -1.0**
P49A Miami Univ. Ec 28.60 322 P **P 17 49 29.9 +1.5**
baz=130,SNR=7.3
WVT Waverly 28.64 313 P **P 17 49 27.8 -0.9**

WVT IAmb IAmb 17 50 11.8
comp=Z,30nm,0.5s
WVT Waverly 28.64 313 P **P** **17 49 30.2 +1.5**
baz=121
WVT Waverly 28.64 313 P **P** **17 49 27.8 -0.9**
WVT pmax pmax
comp=Z,30nm,0.5s
CCIG Comitan 28.74 270 P **P** **17 49 30.9 +0.8**
WCI Wyandotte Cave 28.77 318 P **P** **17 49 29.4 -0.4**
WCI Wyandotte Cave 28.77 318 P **P** **17 49 32.1 +2.3**
baz=126
WCI Wyandotte Cave 28.77 318 P **P** **17 49 29.4 -0.4**
WCI pmax pmax
comp=Z,36nm,1.0s
BATG Bathurst New B 28.79 354 P **P** **17 49 28.5 -1.5**
BATG pwP 17 50 10.6 +23
O49A Covington 28.81 323 IAmb IAmb 17 50 32.2
comp=Z,48nm,0.7s
MCRA Macar, Loja 28.82 219 P **P** **17 49 30.2 -0.4**
MCRA Macar, Loja 28.82 219 *eP* **P** **17 49 27.4 -3.1**
Y45A Yeager Farm, C 28.82 307 P **P** **17 49 30.3 -0.1**
Y45A IAmb IAmb 17 50 34.6
comp=Z,76nm,0.9s
VBMS Vicksburg 28.94 303 P **P** **17 49 34.0 +2.5**
baz=111
OXF Oxford 29.00 309 P **P** **17 49 31.9 -0.1**
OXF IAmb IAmb 17 50 18.5
comp=Z,109nm,0.9s
OXF Oxford 29.00 309 P **P** **17 49 33.4 +1.4**
baz=116,SNR=7.4
OXF Oxford 29.00 309 P **P** **17 49 31.9 -0.1**
OXF pmax pmax
comp=Z,109nm,0.9s
O48B Farmland 29.33 322 P **P** **17 49 36.4 +1.6**
baz=131
TRQ Mont Tremblant 29.42 342 P **P** **17 49 35.3 -0.4**
USIN University of 29.50 316 IAmb IAmb 17 50 23.6
comp=Z,95nm,0.8s
SADO Sadowa 29.73 335 P **P** **17 49 38.9 +0.5**
SADO Sadowa 29.73 335 LR LR 17 59 59.8
comp=Z,1µm,21.6s,baz=162,slow=33
143A Socs Landing, 29.81 304 P **P** **17 49 40.5 +1.3**
AAM Ann Arbor 29.90 327 P **P** **17 49 41.5 +1.6**
baz=136
CLDB Colider 29.93 168 *eP* **P** **17 49 42.5 +2.1**
N47A Urbana 30.05 323 P **P** **17 49 41.6 +0.4**
N47A IAmb IAmb 17 49 43.9
comp=Z,84nm,0.7s
P46A Rosedale 30.16 319 IAmb IAmb 17 50 37.2
comp=Z,58nm,0.8s
ATAH Atahualpa 30.20 214 LR LR 18 04 43.5
comp=Z,963nm,18.8s,baz=20,slow=42
OLIL Olney 30.21 317 IAmb IAmb 17 50 42.5
comp=Z,50nm,0.8s
LDAQ Lac Daran 30.23 348 P **P** **17 49 43.2 +0.4**
PARMO Parma 30.25 312 P **P** **17 49 43.8 +0.8**
SIUC Southern Illin 30.40 314 P **P** **17 49 45.6 +1.2**
SIUC IAmb IAmb 17 50 37.5
comp=Z,64nm,0.5s
S44A Carbondale 30.42 314 IAmb IAmb 17 49 47.8
comp=Z,82nm,1.1s
SFIN Lafayette 30.56 321 P **P** **17 49 45.8 +0.1**
SFIN IAmb IAmb 17 50 38.0
comp=Z,44nm,0.7s
SFIN Lafayette 30.56 321 P **P** **17 49 46.9 +1.2**
baz=128
I49A Point Hope 30.69 330 P **P** **17 49 47.4 +0.5**
DRLN Deer Lake 30.81 6 P **P** **17 49 48.0 +0.1**
DRLN IAmb IAmb 17 50 09.6
comp=Z,65nm,1.1s
Q44A Meyer Farm, Va 30.90 317 P **P** **17 49 49.8 +1.1**
Q44A **PnPn** **17 50 41.2 -9.2**
Q44A IAmb IAmb 17 50 43.6
comp=Z,75nm,0.8s
LCAR Lake Charles 30.97 310 P **P** **17 49 50.0 +0.6**
Z41A Richland Creek 31.11 304 IAmb IAmb 17 49 54.2
comp=Z,62nm,1.0s
J47A Sunmer 31.17 327 IAmb IAmb 17 50 48.4
comp=Z,68nm,0.8s
CMIG Matias Romero 31.23 272 LR LR 18 01 57.5
comp=Z,253nm,21.5s,baz=96,slow=35
O44A Mansfield 31.26 319 P **P** **17 49 52.5 +0.6**
O44A IAmb IAmb 17 50 58.8
comp=Z,46nm,0.8s
UALR University of 31.31 307 P **P** **17 49 51.5 -0.9**
UALR IAmb IAmb 17 50 57.7
comp=Z,87nm,1.6s
VILB Vilhena 31.40 176 P **P** **17 49 54.2 +0.9**
VILB IAmb IAmb 17 49 56.7
comp=Z,78nm,1.0s
VILB Vilhena 31.40 176 *eP* **P** **17 49 55.9 +2.6**
WHAR Wooly Hollow 31.48 308 IAmb IAmb 17 49 56.8
comp=Z,44nm,1.0s
WLAR White Oak Lake 31.50 305 P **P** **17 49 54.6 +0.6**
FCAR Ozark Folk Cen 31.60 309 P **P** **17 49 56.0 +1.1**
FCAR IAmb IAmb 17 49 57.8
comp=Z,83nm,1.4s
CCM Cathedral Cave 31.96 313 P **P** **17 49 59.0 +0.9**
CCM IAmb IAmb 17 50 00.2
comp=Z,35nm,0.6s
CCM Cathedral Cave 31.96 313 P **P** **17 49 59.5 +1.5**
baz=119
CCM Cathedral Cave 31.96 313 P **P** **17 49 59.0 +0.9**
CCM pmax pmax
comp=Z,35nm,0.6s
CCM Cathedral Cave 31.96 313 ⇑P **P** **17 49 59.6 +1.5**
CCM PcP **PcP** **17 52 48.5 +0.9**
HDIL Hopedale 32.01 319 IAmb IAmb 17 50 59.9
comp=Z,79nm,0.8s
HDIL Hopedale 32.01 319 P **P** **17 50 00.3 +1.8**
baz=125,SNR=7.4
NATX Nacogdoches 32.13 300 P **P** **17 50 02.6 +2.9**
baz=106,SNR=16
L44A Lake County Fo 32.16 323 IAmb IAmb 17 50 02.8
comp=Z,80nm,0.9s
L44A Lake County Fo 32.16 323 P **P** **17 50 01.5 +1.8**
baz=129
MIAR Mount Ida 32.16 306 P **P** **17 50 01.9 +2.0**
baz=111
SNDB Serra Nova Dou 32.19 160 *eP* **P** **17 50 01.7 +1.5**
GLMI Grayling 32.21 329 P **P** **17 50 01.3 +1.1**
baz=137
MGMO Mountain Grove 32.26 311 P **P** **17 50 02.0 +1.2**
HNVL Huntsville, TX 32.53 298 IAmb IAmb 17 50 07.0
comp=Z,102nm,1.0s
HKT Hockley 32.66 297 P **P** **17 50 05.2 +1.0**
HKT Hockley 32.66 297 *i P* **P** **17 50 05.8 +1.6**
HKT pmax pmax
comp=Z,8.0nm,1.0s
Z38A Mt. Pleasant 32.83 303 P **P** **17 50 07.4 +1.6**
Z38A **PcP** **17 52 51.5 +1.4**
G45A Suttons Bay 32.88 329 IAmb IAmb 17 51 08.6
comp=Z,47nm,0.7s
L42A Oliver, Polo 33.08 321 IAmb IAmb 17 50 10.8
comp=Z,88nm,0.9s
E46A Sault Ste Mari 33.21 331 P **P** **17 50 10.3 +1.4**
E46A IAmb IAmb 17 50 19.8
comp=Z,80nm,0.8s
E46A PcP **PcP** **17 52 51.0 +0.1**
S39A Bolivar 33.25 311 IAmb IAmb 17 50 11.6
comp=Z,73nm,1.3s
U38A Gravette 33.49 309 P **P** **17 50 12.2 +0.6**
U38A PcP **PcP** **17 52 51.5 -0.4**
PAYG Puerto Ayora 33.68 238 P **P** **17 50 13.7 +0.4**
PAYG IAmb IAmb 17 50 40.3
comp=Z,101nm,1.2s
NNA Nana 33.69 207 P **P** **17 50 13.3 -0.2**
NNA IAmb IAmb 17 50 24.2
comp=Z,40nm,0.9s
NNA Nana 33.69 207 *ceP* **P** **17 50 13.2 -0.2**
NNA pmax pmax
comp=Z,66nm,1.0s
NNA Nana 33.69 207 LR LR 18 07 05.4
comp=Z,760nm,19.4s,baz=7.5,slow=42
NNA Nana 33.69 207 *eP* P 17 50 08.6 -4.8
NNA Nana 33.69 207 P **P** **17 50 14.1 +0.7**
I42A Draeger Farm, 33.81 324 IAmb IAmb 17 51 21.4
comp=Z,41nm,0.9s
RLO Rose Lookout 33.86 308 IAmb IAmb 17 50 16.7
comp=Z,17nm,0.8s
PTLB Pontes e Lacer 33.95 175 IAmb IAmb 17 50 18.2
comp=Z,42nm,0.9s
PTLB Pontes e Lacer 33.95 175 *eP* **P** **17 50 16.8 +1.2**
JFWS Jewell Farm 33.97 322 IAmb IAmb 17 51 33.0
comp=Z,25nm,0.6s
JFWS Jewell Farm 33.97 322 P **P** **17 50 16.9 +1.3**
baz=127,SNR=5.6
KVTX Kingsville 34.02 292 P **P** **17 50 17.1 +0.9**
L40A Anamosa 34.06 320 IAmb IAmb 17 50 18.6
comp=Z,62nm,0.8s
P38A Dawn 34.28 314 IAmb IAmb 17 50 20.6
comp=Z,41nm,0.7s
435B Jarrell 34.31 298 P **P** **17 50 20.3 +1.5**
435B PcP **PcP** **17 52 54.6 +0.2**
435B Jarrell 34.31 298 P **P** **17 50 20.6 +1.9**
baz=102
TUL3 Leonard 34.35 307 IAmb IAmb 17 50 21.8
comp=Z,87nm,1.0s
TUL3 Leonard 34.35 307 P **P** **17 50 20.6 +1.6**
baz=111,SNR=9.1
SIV San Ignacio 34.38 178 LR LR 18 05 22.8
comp=Z,892nm,19.4s,baz=332,slow=38
WHTX Lake Whitney, 34.48 300 IAmb IAmb 17 50 23.4
comp=Z,68nm,0.8s
WHTX Lake Whitney, 34.48 300 P **P** **17 50 22.2 +2.0**
baz=104,SNR=13
FW13 Cleburne 34.55 300 P **P** **17 50 22.5 +1.7**
FW13 **PcP** **17 52 55.8 +0.8**
I40A Norwalk 34.77 323 IAmb IAmb 17 50 25.2
comp=Z,58nm,0.7s
LOOK Love County 34.80 303 **P** **17 50 23.6 +0.7**
LOOK IAmb IAmb 17 50 25.8
comp=Z,40nm,0.7s
LOOK **PcP** **17 52 56.2 +0.6**
SALV Santo Antonio 34.85 169 *eP* **P** **17 50 24.9 +1.5**
DEOK Depew 34.86 307 **P** **17 50 24.6 +1.1**
DEOK IAmb IAmb 17 50 26.3
comp=Z,89nm,1.0s
DEOK **PcP** **17 52 56.3 +0.5**
FW07 Weatherford 34.93 301 P **P** **17 50 25.8 +1.7**
QUOK Quay 35.13 307 IAmb IAmb 17 50 28.5
comp=Z,71nm,1.2s
QUOK **PcP** **17 52 58.0 +1.3**
OK052 Battle Ridge R 35.15 307 IAmb IAmb 17 50 28.7
comp=Z,60nm,0.9s
SDBA SAN DESIDERIO 35.16 150 *eP* **P** **17 50 26.9 +0.8**
LPAZ La Paz 35.17 190 P **P** **17 50 25.8 -1.0**
LPAZ La Paz 35.17 190 P **P** **17 50 25.8 -1.0**
SCIA State Center 35.22 318 IAmb IAmb 17 50 28.9
comp=Z,49nm,0.7s
SCIA State Center 35.22 318 P **P** **17 50 28.1 +1.7**
baz=122
OK033 Mehan 35.27 307 IAmb IAmb 17 50 29.8
comp=Z,78nm,0.9s
OK033 **PcP** **17 52 58.3 +1.4**
K38A Parkersburg 35.34 319 P **P** **17 50 28.1 +0.7**
OK051 E0350 and S346 35.35 307 P **P** **17 50 28.7 +1.1**
OK051 IAmb IAmb 17 50 30.4
comp=Z,40nm,0.9s
OK051 **PcP** **17 52 57.5 +0.3**
FNO Franklin 35.36 305 **PcP** **17 52 58.9 +1.6**
G40A Rib Lake 35.40 325 IAmb IAmb 17 50 31.0
comp=Z,36nm,0.8s
OK048 Pawnee Station 35.40 307 IAmb IAmb 17 50 30.9
comp=Z,62nm,1.2s
OK048 **PcP** **17 52 58.7 +1.3**
RCBR Riachuelo 35.43 131 LR LR 18 03 10.3
comp=Z,277nm,21.8s,baz=292,slow=33
RCBR Riachuelo 35.43 131 *eP* **P** **17 50 29.6 +1.1**
RCBR Riachuelo 35.43 131 P **P** **17 50 30.1 +1.5**
833A Chaparral WMA, 35.44 293 P **P** **17 50 29.4 +0.9**
833A IAmb IAmb 17 50 31.2
comp=Z,79nm,1.1s
833A Chaparral WMA, 35.44 293 P **P** **17 50 29.7 +1.2**
baz=98,SNR=12
ARAG Araguaiana, MT 35.55 163 *eP* **P** **17 50 31.1 +1.6**
BBSD Serra de San D 35.59 178 *eP* **P** **17 50 30.5 +0.7**
BLOK Blackwell 35.73 308 P **P** **17 50 31.6 +0.8**
BLOK IAmb IAmb 17 50 33.8
comp=Z,73nm,1.0s
D41A Chassel 35.74 329 P **P** **17 50 32.0 +1.2**
D41A IAmb IAmb 17 50 41.9
comp=Z,80nm,1.1s
JCT Junction City 36.13 296 P **P** **17 50 35.6 +1.2**
baz=100,SNR=18
JRQG Juriquilla Cam 36.13 280 IAmb IAmb 17 50 38.6
comp=Z,92nm,1.5s
KSU1 Kansas State U 36.18 312 P **P** **17 50 35.3 +0.5**
KSU1 IAmb IAmb 17 50 36.4
comp=Z,56nm,0.8s
KSU1 Kansas State U 36.18 312 P **P** **17 50 35.2 +0.5**
baz=114,SNR=7.7
CROK Carrier 36.22 307 **P** **17 50 35.9 +0.9**
CROK **PcP** **17 53 00.0 +0.2**
WMOK Wichita Mounta 36.28 304 IAmb IAmb 17 50 37.8
comp=Z,78nm,1.4s
WMOK Wichita Mounta 36.28 304 P **P** **17 50 36.7 +1.0**
baz=107,SNR=38
KAN14 Manchester OK 36.36 308 P **P** **17 50 36.7 +0.5**
SCHQ Schefferville 36.36 355 P **P** **17 50 36.6 +0.6**
SCHQ IAmb IAmb 17 50 38.2
comp=Z,22nm,0.6s
SCHQ **PcP** **17 52 59.5 -0.4**
SCHQ Schefferville 36.36 355 P **P** **17 50 36.5 +0.6**
comp=Z,19nm,0.6s,baz=177,slow=7.0,SNR=62
SCHQ PcP **PcP** **17 52 59.4 -0.4**
comp=Z,16nm,0.8s,baz=148,slow=3.6,SNR=5.3
SCHQ LR LR 18 03 33.2
comp=Z,1µm,21.9s,baz=231,slow=33
comp=Z,19nm,0.6s
ABTX Abilene, Hawle 36.43 300 P **P** **17 50 38.5 +1.5**
baz=103,SNR=24
I37A Lemond, Waseca 36.48 321 IAmb IAmb 17 50 39.5
comp=Z,56nm,0.9s
CSTR Hydro, Custer 36.48 305 P **P** **17 50 38.1 +0.7**
OK032 Salt Plains WL 36.49 307 IAmb IAmb 17 50 40.3
comp=Z,84nm,0.9s
DRIO Del Rio 36.66 294 IAmb IAmb 17 50 41.2
comp=Z,53nm,0.9s
BBRB Robore, Bolivi 36.71 176 *eP* **P** **17 50 40.6 +1.3**
BDFB Brasilia 36.73 157 P **P** **17 50 39.8 +0.1**
BDFB IAmb IAmb 17 50 42.5
comp=Z,66nm,1.5s
BDFB Brasilia 36.73 157 P **P** **17 50 39.8 +0.1**
BDFB pmax pmax
comp=Z,66nm,1.5s
BDFB Brasilia 36.73 157 P **P** **17 50 39.6 -0.1**
comp=Z,20nm,0.8s,baz=345,slow=7.0,SNR=18
BDFB LR LR 18 07 55.4
comp=Z,310nm,18.5s,baz=322,slow=40
comp=Z,20nm,0.8s
OK038 West end E0370 36.78 307 IAmb IAmb 17 50 42.7
comp=Z,65nm,1.0s
SPMN Marine on St. 36.82 323 IAmb IAmb 17 50 42.5
comp=Z,48nm,1.0s
SPMN Marine on St. 36.82 323 P **P** **17 50 41.1 +1.0**
baz=126,SNR=9.5
OK035 E0210 Rd and N 36.84 307 P **P** **17 50 40.6 +0.2**
OK035 IAmb IAmb 17 50 43.3
comp=Z,61nm,0.9s
U32A Winter Ranch, 36.95 306 IAmb IAmb 17 50 44.4
comp=Z,90nm,1.0s
E38A The Farm, Brul 36.98 326 IAmb IAmb 17 50 43.9
comp=Z,35nm,0.8s
APMT Aspermont 36.98 301 P **P** **17 50 42.9 +1.2**
L34A Svendsen Farm, 37.29 316 IAmb IAmb 17 50 46.3
comp=Z,60nm,0.7s
OZNA Ozona 37.33 297 P **P** **17 50 45.3 +0.6**
OZNA IAmb IAmb 17 50 46.9
comp=Z,50nm,0.7s
SN01 Snyder 1 37.51 300 IAmb IAmb 17 50 48.7
comp=Z,74nm,0.8s
SGCY Sterling City 37.51 298 P **P** **17 50 46.6 +0.4**
SGCY IAmb IAmb 17 50 48.4
comp=Z,86nm,1.0s
F36A Milaca 37.61 323 IAmb IAmb 17 50 49.0
comp=Z,40nm,0.8s
DKNS Dickens 37.72 301 P **P** **17 50 48.4 +0.5**
JANB Januaria 37.75 151 *eP* **P** **17 50 49.3 +1.1**
EYMN Ely 37.80 327 P **P** **17 50 49.7 +1.3**
baz=130,SNR=22
SAND Sanderson 38.03 295 IAmb IAmb 17 50 52.7
comp=Z,121nm,1.8s
POST Post 38.05 300 P **P** **17 50 51.9 +1.2**
POST PcP **PcP** **17 53 05.5 -0.1**
BGNE Belgrade 38.23 314 P **P** **17 50 53.3 +1.2**
baz=116,SNR=8.7
ECSD EROS Data Cent 38.30 318 P **P** **17 50 53.3 +0.7**
ECSD IAmb IAmb 17 50 54.9
comp=Z,43nm,0.7s
ECSD PcP **PcP** **17 53 05.7 -0.3**
CBKS Cedar Bluff 38.32 310 IAmb IAmb 17 50 55.5
comp=Z,82nm,0.8s
CBKS Cedar Bluff 38.32 310 P **P** **17 50 54.3 +1.3**
baz=111,SNR=9.5
AMTX Amarillo 38.62 303 P **P** **17 50 57.0 +1.5**
baz=104
GO01 Chusmiza 38.66 191 IAmb IAmb 17 50 57.0
comp=Z,46nm,0.8s
ODSA Odessa 38.73 298 P **P** **17 50 57.2 +0.7**
MNHN Monahans 38.78 297 P **P** **17 50 56.7 -0.2**
MNHN **PcP** **17 53 08.3 +0.4**
IPMB Ipameri, GO 38.82 159 *eP* **P** **17 50 58.6 +1.3**
PB11 IPOC Station P 38.83 191 IAmb IAmb 17 50 57.6
comp=Z,111nm,1.0s
PB08 IPOC Station P 39.11 191 IAmb IAmb 17 51 01.0
comp=Z,59nm,0.9s
BDQN Bodoquena, MS 39.15 172 *eP* **P** **17 51 01.5 +1.6**
B35A Bob, Littlefor 39.22 326 P **P** **17 51 01.0 +0.7**
B35A IAmb IAmb 17 51 02.6
comp=Z,57nm,0.8s
B35A PcP **PcP** **17 53 08.7 -0.1**
MSTX Muleshoe 39.28 301 IAmb IAmb 17 51 03.6
comp=Z,90nm,0.8s
MSTX Muleshoe 39.28 301 P **P** **17 51 02.7 +1.5**
baz=102,SNR=57
TXAR Lajitas Array 39.29 294 P **P** **17 51 02.1 +0.9**
TXAR **PcP** **17 53 10.6 +1.1**
TXAR Lajitas Array 39.29 294 P **P** **17 51 02.1 +0.9**
comp=Z,14nm,0.7s,baz=112,slow=9.5,SNR=62
TXAR PcP **PcP** **17 53 10.1 +0.6**
comp=Z,20nm,0.8s,baz=120,slow=5.8,SNR=15
TXAR LR LR 18 10 51.7
comp=Z,70nm,20.7s,baz=67,slow=42
comp=Z,14nm,0.7s
AQDB Aquidauana 39.33 171 IAmb IAmb 17 51 04.2
comp=Z,58nm,1.1s
AQDB Aquidauana 39.33 171 *eP* **P** **17 51 03.2 +1.8**
ALPN Alpine 39.39 295 IAmb IAmb 17 51 04.6
comp=Z,56nm,0.9s
RPRD Ribas do Rio P 39.69 168 *eP* **P** **17 51 06.9 +2.4**
K30B Basset 39.75 315 P **P** **17 51 05.4 +0.6**
K30B IAmb IAmb 17 51 32.6
comp=Z,122nm,1.1s
K30B PP **PP** **17 52 37.6 +1.0**
K30B PcP **PcP** **17 53 11.9 +1.2**
ITRB Iturama 39.76 163 *eP* **P** **17 51 06.7 +1.6**
RTBA Rita Blanca 39.85 305 IAmb IAmb 17 51 09.2
comp=Z,46nm,0.8s
PATCX Punta Patache 39.96 192 IAmb IAmb 17 51 07.0
comp=Z,67nm,1.0s
PMNB Patos De Minas 39.97 157 *eP* **P** **17 51 08.1 +1.2**
PB01 IPOC Station P 40.05 191 IAmb IAmb 17 51 08.4
comp=Z,55nm,1.1s
SUSD Miller 40.12 318 P **P** **17 51 08.3 +0.5**
SUSD PP **PP** **17 52 40.1 -0.5**
SUSD Miller 40.12 318 P **P** **17 51 08.5 +0.7**
baz=118,SNR=7.6
MURT Porto Murtinho 40.24 174 *eP* **P** **17 51 10.2 +1.2**
AGMN Agassiz Nation 40.33 325 P **P** **17 51 10.3 +0.9**
AGMN IAmb IAmb 17 51 11.5
comp=Z,43nm,0.8s
AGMN PcP **PcP** **17 53 11.6 -0.7**
AGMN Agassiz Nation 40.33 325 P **P** **17 51 10.0 +0.5**
baz=125,SNR=27
KSCO Kaye Shedlock' 40.51 309 IAmb IAmb 17 51 13.9
comp=Z,99nm,0.9s
KSCO Kaye Shedlock' 40.51 309 P **P** **17 51 12.4 +1.1**
baz=108,SNR=7.7
VHRN Van Horn 40.59 296 IAmb IAmb 17 51 15.5
comp=Z,106nm,1.1s
OGNE Ogallala 40.73 312 P **P** **17 51 13.5 +0.5**
OGNE IAmb IAmb 17 51 15.6
comp=Z,91nm,1.3s
OGNE Ogallala 40.73 312 P **P** **17 51 14.3 +1.3**
baz=111,SNR=8.9
ANTJ Antonio Joao (40.78 171 *eP* **P** **17 51 14.5 +1.1**
HPIG 40.87 290 P **P** **17 51 15.4 +1.0**
HPIG IAmb IAmb 17 51 17.6
comp=Z,115nm,1.1s
HPIG PcP **PcP** **17 53 15.6 +0.9**
DIAM Diamantina, MG 40.88 153 *eP* **P** **17 51 15.4 +0.9**
MNTX Cornudas Mount 41.05 297 P **P** **17 51 17.1 +1.5**
baz=98,SNR=65
GUA01 Guaratinga, BA 41.27 147 *eP* **P** **17 51 18.5 +1.0**
T25A Trinidad 41.33 305 P **P** **17 51 20.2 +2.0**
baz=105,SNR=18
PCMB Pacaembu 41.34 165 *eP* **P** **17 51 19.5 +1.5**
LVC Limon Verde 41.49 190 P **P** **17 51 17.9 -1.8**
LVC Limon Verde 41.49 190 P **P** **17 51 17.9 -1.8**
LVC pmax pmax
comp=Z,23nm,0.9s
LVC Limon Verde 41.49 190 LR LR 18 10 18.3
comp=Z,2µm,20.9s,baz=348,slow=39
LVC Limon Verde 41.49 190 *eP* **P** **17 51 18.7 -1.0**
LVC Limon Verde 41.49 190 P **P** **17 51 18.4 -1.3**
LVC PcP **PcP** **17 53 18.5 +1.6**
ULM Lac du Bonnet 41.49 327 IAmb IAmb 17 51 20.6
comp=Z,42nm,0.8s
ULM Lac du Bonnet 41.49 327 *i P* **P** **17 51 20.0 +1.0**
ULM Lac du Bonnet 41.49 327 P **P** **17 51 19.7 +0.7**
comp=Z,37nm,0.7s,baz=132,slow=8.2,SNR=103
ULM PcP **PcP** **17 53 15.4 -0.6**
comp=Z,6.1nm,0.8s,baz=193,slow=6.2,SNR=3.6
ULM LR LR 18 06 56.1
comp=Z,483nm,21.9s,baz=115,slow=34
comp=Z,37nm,0.7s
TRCB Terra Rica 42.16 167 IAmb IAmb 17 51 26.8
comp=Z,64nm,0.9s
MDND Maddock 42.18 322 P **P** **17 51 25.7 +1.0**
baz=121,SNR=9.3
E28A Huff 42.20 320 IAmb IAmb 17 51 52.0
comp=Z,186nm,1.8s
BRIGG Briggsdale 42.25 310 P **P** **17 51 26.8 +1.3**
BRIGG IAmb IAmb 17 51 28.4
comp=Z,58nm,0.9s
SDCO Great Sand Dun 42.32 306 P **P** **17 51 27.3 +0.9**
SDCO PcP **PcP** **17 53 20.2 +0.8**
SDCO Great Sand Dun 42.32 306 P **P** **17 51 28.3 +1.9**
baz=104,SNR=69
SJMB Sao Joao De Ma 42.37 150 *eP* **P** **17 51 28.2 +1.7**
Q24A Divide 42.38 308 P **P** **17 51 27.7 +0.9**
Q24A Divide 42.38 308 P **P** **17 51 28.4 +1.6**
baz=106,SNR=18
ANMO Albuquerque 42.46 302 P **P** **17 51 28.8 +1.3**
ANMO IAmb IAmb 17 51 30.7
comp=Z,73nm,1.2s
ANMO Albuquerque 42.46 302 P **P** **17 51 29.7 +2.3**
baz=101
ANMO Albuquerque 42.46 302 *ceP* **P** **17 51 29.5 +2.1**
ANMO pmax pmax
comp=Z,7.0nm,0.5s
ANMO Albuquerque 42.46 302 LR LR 18 11 11.5
comp=Z,564nm,20.4s,baz=198,slow=39
ANMO Albuquerque 42.46 302 P **P** **17 51 29.5 +2.1**
ANMO PcP **PcP** **17 53 21.1 +1.3**
PMOZ Porto Moniz, M 42.55 62 *eP* **P** **17 51 29.0 +1.0**
comp=Z,193nm,1.9s
PMOZ *eLQ* LQ 17 51 37.1
Y22D IRIS PASSCAL I 42.69 300 P **P** **17 51 31.6 +2.4**
baz=99
Y22F Passcal Instru 42.69 300 P **P** **17 51 31.5 +2.3**
baz=99
BSCB Bom Sucesso 42.85 156 *eP* **P** **17 51 31.3 +0.9**
ISCO Idaho Springs 42.96 309 P **P** **17 51 33.4 +1.9**
baz=106,SNR=12
ABR01 Abrolhos, BA 42.99 146 *eP* **P** **17 51 33.4 +1.8**
LDASE Londrina, Braz 43.08 165 *eP* **P** **17 51 33.2 +0.9**
RCLB Rio Claro- Sao 43.17 160 *eP* **P** **17 51 35.0 +2.0**
121A Cookes Peak, D 43.18 298 IAmb IAmb 17 51 37.2
comp=Z,97nm,0.8s
121A Cookes Peak, D 43.18 298 P **P** **17 51 36.1 +2.9**
baz=97,SNR=64
RIB01 Linhares ES 43.27 149 *eP* **P** **17 51 34.6 +0.8**
RSSD Black Hills 43.29 315 P **P** **17 51 34.5 +0.5**
RSSD PcP **PcP** **17 53 22.4 0.0**
RSSD Black Hills 43.29 315 P **P** **17 51 35.5 +1.6**
baz=112
S22A 4UR Ranch, Cre 43.34 306 P **P** **17 51 34.9 +0.3**
S22A 4UR Ranch, Cre 43.34 306 P **P** **17 51 36.6 +2.0**
baz=103,SNR=35
ESFA Espinillo Form 43.43 175 *eP* **P** **17 51 35.9 +0.9**
FRTB Fartura 43.44 163 *eP* **P** **17 51 36.5 +1.4**
MCR1 Marechal Candi 43.51 169 *eP* **P** **17 51 36.3 +0.7**
N23A Red Feather La 43.52 310 P **P** **17 51 37.7 +1.7**
baz=107,SNR=5.7

BBTS Babate 43.74 88 LR LR 18 08 18.0
comp=Z,310nm,18.1s,baz=236,slow=34
GO02 Mina Guanaco 44.10 190 P **P** **17 51 39.5 -1.2**
GO02 IAmb IAmb 17 51 42.7
comp=Z,50nm,0.8s
PTGB Pitanga 44.14 167 *e*P **P** **17 51 42.7 +1.9**
ALF01 Guarapari-ES 44.24 151 *e*P **P** **17 51 42.7 +1.2**
319A Douglas 44.32 296 IAmb IAmb 17 51 46.6
comp=Z,135nm,1.2s
K22A Casper 44.47 313 P **P** **17 51 43.8 +0.4**
K22A IAmb IAmb 17 51 46.3
comp=Z,60nm,1.1s
K22A PcP **PcP** **17 53 26.5 +0.1**
K22A Casper 44.47 313 P **P** **17 51 45.3 +1.8**
baz=108,SNR=6.1
MVCO Mesa Verde 44.52 304 IAmb IAmb 17 53 29.3
comp=Z,40nm,0.8s
MVCO Mesa Verde 44.52 304 P **P** **17 51 45.7 +1.6**
baz=102
VAS01 Vassouras-RJ 44.53 155 *e*P **P** **17 51 45.2 +1.3**
RWWY Rawlins 44.66 311 IAmb IAmb 17 51 48.5
comp=Z,82nm,1.1s
PARB Paraibuna 44.67 158 *e*P **P** **17 51 46.8 +1.8**
TICA Tres Isletas 44.74 178 *e*P **P** **17 51 47.4 +2.0**
SLBS Sierra La Lagu 44.76 285 P **P** **17 51 47.5 +1.5**
SLBS IAmb IAmb 17 51 50.1
comp=Z,104nm,1.5s
SLBS Sierra La Lagu 44.76 285 P **P** **17 51 49.1 +3.2**
DUB01 Friburgo-RJ 44.79 154 *e*P **P** **17 51 47.2 +1.2**
CPUP Villa Florida 44.89 174 P **P** **17 51 46.0 -0.6**
CPUP Villa Florida 44.89 174 P **P** **17 51 46.0 -0.6**
comp=Z,27nm,1.0s,baz=1.9,slow=5.9,SNR=29
CPUP LR LR 18 11 27.1
comp=Z,329nm,21.9s,baz=2.0,slow=37
comp=Z,27nm,1.0s
CPUP Villa Florida 44.89 174 *e*P **P** **17 51 46.2 -0.5**
CPUP Villa Florida 44.89 174 P **P** **17 51 46.0 -0.6**
CPUP PcP **PcP** **17 53 28.0 +0.2**
O20A White River Ci 44.99 309 P **P** **17 51 49.6 +1.9**
baz=105,SNR=5.5
PET01 Itanhaem-SP 45.00 161 *e*P **P** **17 51 48.9 +1.3**
LPIG La Paz 45.07 286 LR LR 18 12 36.9
comp=Z,216nm,21.8s,baz=66,slow=39
W18A Petrified Fore 45.14 301 P **P** **17 51 51.2 +2.2**
baz=98,SNR=40
FRBT Francisco Belt 45.16 169 *e*P **P** **17 51 48.7 -0.2**
DGMT Dagmar 45.18 321 IAmb IAmb 17 51 51.4
comp=Z,42nm,0.8s
DGMT Dagmar 45.18 321 P **P** **17 51 50.3 +1.4**
baz=116,SNR=9.5
X18A Snowflake 45.23 300 IAmb IAmb 17 51 53.1
comp=Z,45nm,0.9s
FRB Frobisher Bay 45.33 356 LR LR 18 08 57.5
comp=Z,410nm,20.9s,baz=183,slow=34
HSIG 45.62 293 P **P** **17 51 53.8 +1.3**
HSIG IAmb IAmb 17 51 55.8
comp=Z,64nm,1.0s
HSIG PcP **PcP** **17 53 30.4 -0.1**
AC02 Maricunga 45.67 189 IAmb IAmb 17 51 54.9
comp=Z,39nm,0.8s
TUC Tucson 45.68 297 P **P** **17 51 55.0 +2.0**
TUC IAmb IAmb 17 51 56.9
comp=Z,44nm,1.0s
TUC Tucson 45.68 297 P **P** **17 51 55.7 +2.6**
baz=95
TUC Tucson 45.68 297 P **P** **17 51 55.1 +2.0**
TUC pmax pmax
comp=Z,44nm,1.0s
TUC Tucson 45.68 297 P **P** **17 51 55.6 +2.6**
TUC PcP **PcP** **17 53 32.1 +1.4**
LAO LASA Array 45.69 318 IAmb IAmb 17 51 55.9
comp=Z,56nm,1.1s
LAO LASA Array 45.69 318 P **P** **17 51 54.7 +1.7**
baz=113,SNR=12
RDMU Red Mountain 46.08 309 IAmb IAmb 17 51 59.1
comp=Z,65nm,1.0s
FCC Fort Churchill 46.40 338 P **P** **17 51 58.4 +0.2**
FCC PcP **PcP** **17 53 31.9 -0.6**
FCC Fort Churchill 46.40 338 P **P** **17 51 58.4 +0.2**
FCC 17 53 31.9
FCC pmax pmax
comp=Z,24nm,0.9s
X16A Lo Mia Camp, P 46.44 300 IAmb IAmb 17 52 03.1
comp=Z,40nm,1.1s
CRSM Crissiumal (Br 46.47 170 *e*P **P** **17 51 59.0 -0.1**
SRU San Rafael Swe 46.47 307 IAmb IAmb 17 53 35.5
comp=Z,36nm,0.8s
WUAZ Wupatki 46.53 302 IAmb IAmb 17 52 03.4
comp=Z,64nm,1.0s
WUAZ Wupatki 46.53 302 P **P** **17 52 02.3 +2.4**
baz=98,SNR=40
ITAB Concordia 46.57 168 P **P** **17 51 59.7 -0.1**
ITAB IAmb IAmb 17 52 01.6
comp=Z,55nm,1.0s
ITAB Concordia 46.57 168 *e*P **P** **17 52 00.7 +0.8**
PD31 Pinedale Array 46.64 312 IAmb IAmb 17 52 03.5
comp=Z,95nm,1.4s
PDAR Pinedale Array 46.64 312 P **P** **17 52 01.9 +1.1**
comp=Z,20nm,0.7s,baz=113,slow=7.5,SNR=77
PDAR PcP **PcP** **17 53 34.1 +0.1**
comp=Z,23nm,1.0s,baz=107,slow=5.1,SNR=7.6
PDAR LR LR 18 12 49.6
comp=Z,456nm,19.2s,baz=124,slow=38
comp=Z,20nm,0.7s
BW06 Boulder Array 46.64 312 IAmb IAmb 17 52 03.5
comp=Z,106nm,1.4s
BW06 Boulder Array 46.64 312 P **P** **17 52 02.4 +1.7**
baz=106,SNR=17
SRIG Santa Rosalia 46.73 290 P **P** **17 52 02.6 +1.2**
SRIG **PcP** **17 53 34.9 +0.6**
Q16A Castle Valley 46.93 306 IAmb IAmb 17 52 07.2
comp=Z,68nm,1.3s
TMUT Trail Mountain 47.03 307 IAmb IAmb 17 52 07.2
comp=Z,48nm,0.9s
FFC Flin Flon 47.13 329 P **P** **17 52 04.0 0.0**
FFC PcP **PcP** **17 53 35.8 +0.5**
FFC Flin Flon 47.13 329 P **P** **17 52 04.0 0.0**
FFC 17 53 35.8
FFC pmax pmax
comp=Z,19nm,1.0s
FFC Flin Flon 47.13 329 ⇑P **P** **17 52 04.5 +0.5**
FFC PcP **PcP** **17 53 36.0 +0.8**
RLMT Red Lodge 47.14 315 IAmb IAmb 17 52 07.6
comp=Z,82nm,1.2s
RLMT Red Lodge 47.14 315 P **P** **17 52 06.5 +2.0**
baz=108,SNR=44
214A Organ Pipe Nat 47.36 297 P **P** **17 52 08.9 +2.7**
baz=94,SNR=16
U15A North Rim 47.39 303 IAmb IAmb 17 52 10.5
comp=Z,50nm,1.1s
MPU Maple Canyon 47.50 308 IAmb IAmb 17 52 10.5
comp=Z,66nm,1.1s
MTPU Mount Pierson 47.55 305 IAmb IAmb 17 52 11.7
comp=Z,42nm,0.9s
PKCU Pink Cliffs 47.56 304 P **P** **17 52 09.4 +1.4**
PKCU IAmb IAmb 17 52 10.8
comp=Z,32nm,0.9s
PKCU PcP **PcP** **17 53 36.2 -1.4**
TCUT Toone Canyon 47.57 309 IAmb IAmb 17 52 10.7
comp=Z,67nm,1.0s
MVU Marysvale 47.65 305 P **P** **17 52 10.6 +1.9**
MVU PcP **PcP** **17 53 39.1 +1.4**
Y14A Wickenburg 47.68 299 IAmb IAmb 17 52 12.3
comp=Z,48nm,0.9s
LKWY Lake 47.74 314 P **P** **17 52 09.7 +0.4**
LKWY PcP **PcP** **17 53 39.5 +1.5**
LKWY Lake 47.74 314 P **P** **17 52 09.7 +0.4**
LKWY 17 53 39.5
LKWY pmax pmax
comp=Z,18nm,1.0s
FLWY Flagg Ranch 47.80 313 IAmb IAmb 17 52 12.7
comp=Z,80nm,1.6s
H17A Grant Village 47.81 314 P **P** **17 52 12.6 +2.8**
baz=106,SNR=6.6
AC05 El Transito 47.81 190 P **P** **17 52 08.8 -0.9**
AC05 IAmb IAmb 17 52 20.0
comp=Z,51nm,1.1s
AC05 PcP **PcP** **17 53 38.0 -0.2**
TPAW Teton Pass 47.82 312 IAmb IAmb 17 52 11.8
comp=Z,64nm,1.3s
UNIS Unistalda (Bra 47.86 172 *e*P **P** **17 52 09.8 -0.2**
PIX Pinacate 47.89 296 P **P** **17 52 12.0 +1.7**
PIX PcP **PcP** **17 53 38.5 +0.1**
KNB Kanab 47.90 303 IAmb IAmb 17 52 14.3
comp=Z,37nm,1.0s
ALGR Alto Alegre (B 47.92 169 *e*P **P** **17 52 10.0 -0.5**

LCO Las Campanas 48.05 190 P **P** **17 52 10.7 -1.0**
LCO Las Campanas 48.05 190 P **P** **17 52 10.7 -1.0**
LCO pmax pmax
comp=Z,168nm,2.0s
LCO Las Campanas 48.05 190 P **P** **17 52 11.0 -0.7**
SZCU Shurtz Canyon 48.19 304 IAmb IAmb 17 52 15.7
comp=Z,41nm,1.0s
113A Mohawk Valley, 48.22 298 P **P** **17 52 14.1 +1.3**
113A PcP **PcP** **17 53 40.0 +0.4**
ITQB Itaqui 48.27 174 P **P** **17 52 12.3 -0.8**
ITQB Itaqui 48.27 174 *e*P **P** **17 52 13.1 0.0**
SPUT South Promonto 48.37 309 IAmb IAmb 17 52 17.0
comp=Z,56nm,0.9s
EGMT Eagleton 48.42 318 P **P** **17 52 16.1 +1.8**
baz=110,SNR=17
DUG Dugway, Tooele 48.42 308 P **P** **17 52 16.7 +2.2**
baz=101,SNR=88
W13A Hualapai Mount 48.52 301 IAmb IAmb 17 52 19.2
comp=Z,38nm,1.0s
PDMCI Parker Dam,Lak 48.65 300 P **P** **17 52 18.7 +2.5**
baz=95,SNR=8.6
HVU Hansel Valley 48.71 310 IAmb IAmb 17 52 19.5
comp=Z,45nm,0.9s
CNLB Canela 48.85 167 *e*P **P** **17 52 18.3 +0.7**
BOZ Bozeman (W) 48.87 315 IAmb IAmb 17 52 20.9
comp=Z,24nm,0.8s
BOZ Bozeman (W) 48.87 315 P **P** **17 52 19.7 +1.9**
baz=107,SNR=24
CO01 Juntas del Tor 48.90 189 IAmb IAmb 17 52 20.6
comp=Z,49nm,1.1s
BLYC Blythe 48.92 299 P **P** **17 52 19.5 +1.3**
BLYC PcP **PcP** **17 53 41.5 -0.6**
SFJD Kangerlussuaq 48.95 6 P **P** **17 52 18.5 +0.7**
SFJD IAmb IAmb 17 52 43.6
comp=Z,67nm,1.4s
SFJD Kangerlussuaq 48.95 6 P **P** **17 52 18.5 +0.7**
SFJD pmax pmax
comp=Z,67nm,1.5s
SFJD Kangerlussuaq 48.95 6 *i* P **P** **17 52 19.8 +1.9**
SFJD IAmb IAmb 17 52 29.0
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 48.95 6 LR LR 18 10 52.9
comp=Z,590nm,21.0s,baz=184,slow=34
DY2G Dye2 48.96 8 *i* P **P** **17 52 19.2 +1.0**
DY2G IAmb IAmb 17 52 48.8
comp=Z,30nm,0.8s
NEE2 Needles Airpor 49.09 300 P **P** **17 52 21.8 +2.3**
baz=95
RODS Rosario do Sul 49.11 172 *e*P **P** **17 52 19.5 0.0**
GLA Glamis 49.13 298 P **P** **17 52 22.5 +2.6**
baz=93
GO04 Tololo Observa 49.20 190 P **P** **17 52 19.5 -1.1**
GO04 IAmb IAmb 17 52 43.1
comp=Z,35nm,0.6s
V12A Nelson 49.36 301 IAmb IAmb 17 52 25.4
comp=Z,31nm,1.1s
CPSB Cacapava Do Su 49.42 170 *e*P **P** **17 52 21.8 -0.1**
IRM Iron Mountain 49.47 299 P **P** **17 52 25.2 +2.8**
baz=94,SNR=48
BC3 Big Chuckawall 49.69 299 P **P** **17 52 26.6 +2.4**
baz=94,SNR=21
LYMT Lyon Mountain 49.70 316 P **P** **17 52 25.3 +1.0**
LYMT PcP **PcP** **17 53 45.0 0.0**
PRN Pahroc Range 49.71 304 IAmb IAmb 17 53 48.7
comp=Z,55nm,1.0s
CO03 El Pedregal 49.84 190 IAmb IAmb 17 52 42.8
comp=Z,45nm,0.8s
GMRC Granite Mounta 49.94 300 P **P** **17 52 28.4 +2.2**
baz=94,SNR=20
SWSC Sam W. Stewart 49.94 298 P **P** **17 52 28.5 +2.5**
baz=93,SNR=9.1
ESJX Sierra Juarez 50.03 296 IAmb IAmb 17 52 30.9
comp=Z,39nm,1.1s
YUH Yuha Desert 50.03 297 IAmb IAmb 17 52 30.6
comp=Z,52nm,1.0s
MORF Marmelete 50.08 57 *e*P **P** **17 52 27.6 +0.6**
comp=Z,93nm,1.5s
MORF *e*LQ LQ 17 52 36.4
MORF Marmelete 50.08 57 P **P** **17 52 26.9 -0.1**
MORF IAmb IAmb 17 52 37.7
comp=Z,67nm,1.1s
MORF Marmelete 50.08 57 *e*P **P** **17 52 27.1 +0.1**
MORF IAmb IAmb 17 52 28.3
comp=Z,30nm,1.0s
MORF Marmelete 50.08 57 P **P** **17 52 26.9 -0.1**
MORF pmax pmax
comp=Z,67nm,1.1s
RMX La Rumorosa 50.16 297 IAmb IAmb 17 52 31.6
comp=Z,60nm,1.7s
BELC Belle Mtn. Jos 50.16 299 P **P** **17 52 30.4 +2.5**
baz=94,SNR=6.6
IKP In-Ko-Pah, Jac 50.19 297 P **P** **17 52 30.7 +2.7**
baz=92,SNR=12
TUQ Turquoise Moun 50.21 301 P **P** **17 52 30.5 +2.3**
baz=95,SNR=27
R11B Troy Canyon, C 50.25 305 IAmb IAmb 17 53 50.0
comp=Z,29nm,0.9s
R11B Troy Canyon, C 50.25 305 P **P** **17 52 30.9 +2.4**
baz=97,SNR=45
PNCL Nicolau / Gran 50.27 56 *e*P **P** **17 52 26.8 -1.6**
comp=Z,51nm,1.6s
PNCL *e*LQ LQ 17 52 37.3
HLID Hailey 50.28 312 P **P** **17 52 30.6 +2.0**
baz=102,SNR=26
TBOT Tacuaremb 50.34 173 *e*P **P** **17 52 29.0 +0.2**
ELK Elko 50.34 308 P **P** **17 52 29.9 +0.7**
ELK PcP **PcP** **17 53 47.7 +0.2**
ELK Elko 50.34 308 P **P** **17 52 29.9 +0.7**
ELK 17 53 47.7
ELK pmax pmax
comp=Z,121nm,1.7s
ELK Elko 50.34 308 LR LR 18 15 24.9
comp=Z,635nm,19.3s,baz=99,slow=38
PMD Palm Desert 50.46 299 IAmb IAmb 17 52 33.6
comp=Z,29nm,1.0s
MONP2 Monument Peak 50.46 298 P **P** **17 52 32.9 +2.7**
baz=92,SNR=39
MESJ Messejana 50.48 56 *e*P **P** **17 52 31.1 +1.1**
comp=Z,88nm,1.3s
MESJ *e*LQ LQ 17 52 39.3
MESJ Messejana 50.48 56 IAmb IAmb 17 52 40.7
comp=Z,56nm,1.1s
MESJ Messejana 50.48 56 *e*P **P** **17 52 30.0 0.0**
MESJ IAmb IAmb 17 52 32.0
comp=Z,35nm,1.2s
MESJ Messejana 50.48 56 *e*P **P** **17 52 30.0 0.0**
HEC Hector,Ludlow 50.50 300 P **P** **17 52 32.8 +2.5**
baz=94,SNR=22
TPFO Pinon Flats 50.52 299 P **P** **17 52 33.0 +2.5**
baz=93,SNR=7.8
PFO Pinyon Flats O 50.53 299 P **P** **17 52 31.4 +0.8**
PFO PcP **PcP** **17 53 48.8 +0.6**
PFO Pinyon Flats O 50.53 299 P **P** **17 52 33.1 +2.5**
baz=93,SNR=8.2
PFO Pinyon Flats O 50.53 299 *i* P **P** **17 52 29.6 -1.0**
PFO pmax pmax
comp=Z,47nm,1.4s
PFO Pinyon Flats O 50.53 299 LR LR 18 16 27.8
comp=Z,169nm,19.8s,baz=100,slow=39
SHOC Shoshone, Teco 50.53 301 P **P** **17 52 33.0 +2.5**
baz=95
PCAS Casmilo, Conde 50.56 53 *e*P **P** **17 52 31.4 +0.8**
comp=Z,120nm,1.6s
PCAS *e*LQ LQ 17 52 40.0
PCVE Castro Verde 50.60 56 *e*P **P** **17 52 31.7 +0.8**
comp=Z,43nm,1.7s
PCVE *e*LQ LQ 17 52 40.4
TKX Tecate 50.60 297 IAmb IAmb 17 52 34.5
comp=Z,32nm,1.1s
TPNV Topopah Spring 50.61 303 IAmb IAmb 17 52 35.1
comp=Z,50nm,0.9s
TPNV Topopah Spring 50.61 303 P **P** **17 52 33.9 +2.7**
baz=96,SNR=34
PMTG Montargil 50.63 54 *e*P **P** **17 52 31.6 +0.5**
comp=Z,73nm,1.5s
PMTG *e*LQ LQ 17 52 40.2
CCX Cicese 50.63 296 IAmb IAmb 17 52 59.0
comp=Z,34nm,1.1s
PBDV Barranco-do-Ve 50.64 57 *e*P **P** **17 52 32.5 +1.2**
comp=Z,110nm,1.8s
PBDV *e*LQ LQ 17 52 41.3
COI Coimbra 50.65 53 *e*P **P** **17 52 32.3 +1.0**
comp=Z,137nm,1.1s
COI *e*LQ LQ 17 52 41.1
BAR Barrett 50.66 297 IAmb IAmb 17 52 35.0
comp=Z,55nm,1.2s

PLTB Pedras Altas 50.73 171 P **P** **17 52 31.5 -0.3**
PLTB IAmb IAmb 17 52 33.0
comp=Z,45nm,1.0s
PLTB Pedras Altas 50.73 171 *e*P **P** **17 52 32.1 +0.3**
EVO Evora 50.73 55 *e*P **P** **17 52 32.5 +0.6**
comp=Z,37nm,1.6s
EVO *e*LQ LQ 17 52 41.0
PBEJ Beja 50.78 56 *e*P **P** **17 52 32.9 +0.6**
comp=Z,52nm,1.5s
PBEJ *e*LQ LQ 17 52 41.5
PVAQ Vaqueiros 50.83 57 *e*P **P** **17 52 33.8 +1.2**
PVAQ *e*LQ LQ 17 52 42.5
GWY Greenwater Val 50.88 302 IAmb IAmb 17 53 52.4
comp=Z,35nm,0.8s
WCT Wildcat Mounta 50.90 303 IAmb IAmb 17 52 37.0
comp=Z,53nm,1.0s
GSC Goldstone, Bar 50.92 301 P **P** **17 52 35.8 +2.3**
baz=94,SNR=17
BBRC Big Bear Solar 50.95 299 P **P** **17 52 36.6 +2.7**
baz=93
QSM Queen of Sheba 51.02 302 IAmb IAmb 17 52 37.7
comp=Z,58nm,1.3s
109C Camp Elliot, M 51.04 298 IAmb IAmb 17 52 49.4
comp=Z,57nm,1.1s
109C Camp Elliot, M 51.04 298 P **P** **17 52 36.6 +2.4**
baz=92
PGAV Gavieira, Arco 51.05 51 *e*P **P** **17 52 35.5 +1.1**
comp=Z,76nm,2.1s
PGAV *e*LQ LQ 17 52 43.1
FURC Furnace Creek, 51.06 302 P **P** **17 52 36.8 +2.5**
baz=95,SNR=5.4
ILULI Ilulissat 51.07 5 IAmb IAmb 17 52 36.9
comp=Z,61nm,1.2s
ILULI Ilulissat 51.07 5 *i* P **P** **17 52 35.2 +1.3**
ILULI IAmb IAmb 17 53 05.2
comp=Z,17nm,0.7s
PESTR Estremoz 51.10 55 *e*P **P** **17 52 35.4 +0.7**
comp=Z,58nm,1.4s
PESTR *e*LQ LQ 17 52 44.1
PESTR Estremoz 51.10 55 P **P** **17 52 34.8 +0.1**
PESTR IAmb IAmb 17 52 45.4
comp=Z,68nm,1.4s
PESTR PcP **PcP** **17 53 52.5 +2.5**
MURC Murrieta 51.14 298 P **P** **17 52 37.5 +2.4**
baz=92
MFID Camas Ranch 51.26 311 IAmb IAmb 17 52 38.9
comp=Z,36nm,1.0s
POLO Lamas de Olo 51.30 52 *e*P **P** **17 52 37.0 +0.8**
comp=Z,61nm,1.7s
POLO *e*LQ LQ 17 52 45.6
PCBR Castelo Branco 51.31 54 *e*P **P** **17 52 36.8 +0.6**
comp=Z,50nm,1.7s
PCBR *e*LQ LQ 17 52 45.4
PMRV Marv??o 51.32 54 *e*P **P** **17 52 36.8 +0.5**
comp=Z,44nm,1.3s
PMRV *e*LQ LQ 17 52 45.3
MTE Manteigas 51.34 53 *e*P **P** **17 52 36.6 +0.1**
comp=Z,79nm,1.1s
MTE *e*LQ LQ 17 52 45.3
MTE Manteigas 51.34 53 P **P** **17 52 35.9 -0.6**
MTE IAmb IAmb 17 52 46.4
comp=Z,68nm,1.1s
PVRL Vila Real 51.34 52 *e*P **P** **17 52 37.3 +0.8**
comp=Z,90nm,1.6s
PVRL *e*LQ LQ 17 52 45.5
PBAR Barrancos 51.45 56 *e*P **P** **17 52 38.0 +0.7**
comp=Z,44nm,1.9s
PBAR *e*LQ LQ 17 52 46.5
GRAC Grapevine Rang 51.51 303 IAmb IAmb 17 52 41.5
comp=Z,66nm,1.0s
GRAC Grapevine Rang 51.51 303 P **P** **17 52 40.3 +2.5**
baz=95,SNR=15
MPMC Manual Prospec 51.53 302 P **P** **17 52 40.3 +2.2**
baz=94,SNR=15
BFSC Mount Baldy Ra 51.55 299 P **P** **17 52 40.2 +1.9**
baz=93,SNR=7.8
LRMC Laurel Mtn Rad 51.64 301 P **P** **17 52 41.0 +2.0**
baz=94,SNR=15
VA03 San Esteban 51.70 189 P **P** **17 52 39.7 +0.5**
VA03 IAmb IAmb 17 52 41.0
comp=Z,92nm,1.2s
MVO Moncorvo 51.84 52 *e*P **P** **17 52 39.9 -0.3**
comp=Z,91nm,1.5s
MVO *e*LQ LQ 17 52 49.3
EDW2 Edwards Air Fo 51.86 300 P **P** **17 52 42.7 +2.2**
baz=93,SNR=17
CCAC Calif City Air 51.90 300 IAmb IAmb 17 52 44.3
comp=Z,79nm,1.2s
PASC Pasadena Art C 51.99 299 IAmb IAmb 17 52 43.9
comp=Z,66nm,1.4s
DSP Deep Springs 52.02 303 IAmb IAmb 17 52 45.4
comp=Z,36nm,1.0s
CWC Cottonwood Cre 52.03 302 P **P** **17 52 44.1 +2.2**
baz=94
FMP Fort Macarthur 52.06 299 P **P** **17 52 44.0 +2.1**
baz=92
PEL Peldehue 52.10 189 P **P** **17 52 42.1 0.0**
PEL Peldehue 52.10 189 P **P** **17 52 42.1 0.0**
PEL pmax pmax
comp=Z,273nm,1.9s
DECC Green Verdugo 52.11 299 P **P** **17 52 44.0 +1.7**
baz=92
PBRG Braganca 52.15 51 *e*P **P** **17 52 43.2 +0.7**
comp=Z,65nm,1.9s
PBRG *e*LQ LQ 17 52 51.4
CIS Catalina Islan 52.15 298 P **P** **17 52 44.9 +2.3**
baz=92
TIN Tinemaha, Big 52.20 303 P **P** **17 52 45.4 +2.3**
baz=94
SCI2 San Clemente I 52.25 298 P **P** **17 52 46.1 +2.7**
baz=91
ISA Isabella, Lake 52.30 301 IAmb IAmb 17 53 57.7
comp=Z,30nm,0.9s
ISA Isabella, Lake 52.30 301 P **P** **17 52 46.3 +2.5**
baz=93,SNR=5.7
ICESG Greenland Ices 52.38 10 *i* P **P** **17 52 44.1 +0.1**
ICESG IAmb IAmb 17 52 54.5
comp=Z,17nm,0.9s
NVAR Mina Array Bea 52.38 305 P **P** **17 52 45.6 +1.1**
comp=Z,28nm,0.8s,baz=98,slow=6.4,SNR=173
NVAR PcP **PcP** **17 53 56.6 +1.5**
comp=Z,15nm,0.8s,baz=120,slow=4.3,SNR=6.7
NVAR LR LR 18 15 24.7
comp=Z,603nm,21.5s,baz=100,slow=37
comp=Z,28nm,0.8s
EDM Edmonton 52.40 324 IAmb IAmb 17 52 45.4
comp=Z,41nm,0.8s
MT03 Universidad Ad 52.41 189 P **P** **17 52 45.0 +0.5**
UMMG Uummannaq 52.43 4 *i* P **P** **17 52 44.5 +0.5**
UMMG IAmb IAmb 17 53 20.7
comp=Z,13nm,0.7s
OSI Osito Audit: C 52.45 300 P **P** **17 52 46.5 +1.7**
baz=92
ARVC Arvin 52.56 300 P **P** **17 52 48.1 +2.5**
baz=93
LMEL Las Melosas 52.72 188 IAmb IAmb 17 52 53.3
comp=Z,50nm,0.9s
MLAC Mammoth, Mammo 52.73 303 P **P** **17 52 49.4 +2.3**
baz=95
MT09 Talagante 52.76 189 P **P** **17 52 47.2 +0.1**
VES Vestal, Richgr 52.80 301 P **P** **17 52 49.5 +2.1**
baz=93
MDPB Devils Postpil 52.92 303 IAmb IAmb 17 52 52.0
comp=Z,35nm,1.0s
BCW Bitter Crk WRg 53.03 300 IAmb IAmb 17 52 52.9
comp=Z,56nm,1.0s
VOG Valley Oaks Go 53.07 302 P **P** **17 52 50.7 +1.3**
baz=93
MDT Midelt 53.11 63 LR LR 18 10 13.7
comp=Z,374nm,21.4s,baz=332,slow=30
J08A Circle Bar Ran 53.15 311 IAmb IAmb 17 52 52.4
comp=Z,64nm,1.1s
YERR Yerington 53.16 305 P **P** **17 52 50.9 +0.7**
YERR PcP **PcP** **17 53 59.1 +1.1**
YERR IAmb IAmb 17 54 01.4
comp=Z,44nm,1.2s
NEW Newport 53.20 317 P **P** **17 52 51.3 +1.1**
baz=104,SNR=34
NEW Newport 53.20 317 LR LR 18 14 41.1
comp=Z,471nm,21.6s,baz=98,slow=35
SBC Santa Barbara 53.26 299 P **P** **17 52 53.0 +2.2**
baz=92
WAKR Walker 53.27 304 IAmb IAmb 17 52 54.1
comp=Z,38nm,0.8s
PAHR Pah Rah Range 53.34 306 IAmb IAmb 17 54 01.6
comp=Z,33nm,1.0s
PKM Mcpherson Peak 53.36 300 P **P** **17 52 54.0 +2.3**

baz=92,SNR=16
SMMC Simmler 53.52 300 P **P** 17 52 55.2 +2.5
baz=92,SNR=14
BORG Borgarnes 53.53 20 LR LR 18 10 22.8
comp=Z,398nm,21.8s,baz=231,slow=30
H10N3 ASCENSION HYDR 53.78 115 T T 18 50 29.0
baz=299,slow=75,SNR=311
H10N2 ASCENSION HYDR 53.79 115 T T 18 50 29.4
baz=299,slow=75,SNR=384
MPK Martis Peak 53.80 305 P **P** 17 52 55.3 +0.2
MPK IAmb IAmb 17 52 58.5
comp=Z,67nm,1.2s
H10N1 ASCENSION HYDR 53.80 115 T T 18 50 30.6
baz=299,slow=75,SNR=556
ESDC Sonseca Array 53.98 54 P **P** 17 52 55.8 -0.3
comp=Z,6.3nm,1.0s,baz=257,slow=7.7,SNR=19
ESDC LR LR 18 10 29.3
comp=Z,300nm,21.5s,baz=257,slow=30
comp=Z,6.3nm,1.0s
I07A Izee 54.00 311 IAmb IAmb 17 52 58.8
comp=Z,52nm,0.9s
GO05 Huala 54.12 190 P **P** 17 52 56.5 -0.4
GO05 IAmb IAmb 17 53 08.8
comp=Z,58nm,1.2s
D08A Wollman Farm, 54.12 315 IAmb IAmb 17 52 59.5
comp=Z,39nm,1.2s
H10S3 ASCENSION HYDR 54.20 116 T T 18 51 57.8
baz=285,slow=74,SNR=6.9
H10S2 ASCENSION HYDR 54.22 116 T T 18 51 53.9
baz=295,slow=74,SNR=7.3
BBGB Big Mountain B 54.42 302 IAmb IAmb 17 53 07.0
comp=Z,33nm,0.8s
E07A Sunnyside 54.66 314 IAmb IAmb 17 53 03.6
comp=Z,31nm,1.1s
ML02 Panimavida 54.77 189 P **P** 17 53 01.4 -0.2
MXC Moxie City 54.96 314 IAmb IAmb 17 53 06.0
comp=Z,71nm,1.3s
BRLDA Berland Lookou 54.97 324 IAmb IAmb 17 53 04.9
comp=Z,90nm,1.4s
G06A Carlson Farm, 54.97 313 IAmb IAmb 17 53 06.5
comp=Z,39nm,1.1s
PINE Pine Mountain 54.98 311 P **P** 17 53 04.5 +1.1
PINE PcP **PcP** 17 54 05.9 +1.1
ILTH Belurgan, Co L 55.20 36 *eP* **P** 17 53 05.0 +0.6
LTY Liberty 55.33 315 IAmb IAmb 17 53 08.1
comp=Z,59nm,1.2s
I05D Terrebonne, OR 55.34 311 IAmb IAmb 17 53 09.4
comp=Z,42nm,1.0s
RSBS Rosebush, Pemb 55.55 39 *eP* **P** 17 53 07.5 +0.4
RSBS IAmb IAmb 17 53 08.4
comp=Z,56nm,0.8s
SUMG Summit 55.67 8 P **P** 17 53 09.4 +1.3
SUMG Summit 55.67 8 P **P** 17 53 09.4 +1.3
SUMG pmax pmax
comp=Z,82nm,1.1s
SUMG Summit 55.67 8 *i* P **P** 17 53 09.0 +0.9
SUMG IAmb IAmb 17 53 19.1
comp=Z,26nm,0.9s
HOOD Mount Hood Mea 55.70 313 IAmb IAmb 17 53 11.6
comp=Z,58nm,1.1s
H04A Detroit Lake 55.98 312 IAmb IAmb 17 53 13.0
comp=Z,50nm,1.0s
YBH Yreka Blue Hor 56.05 308 P **P** 17 53 10.9 -0.2
YBH IAmb IAmb 17 53 12.3
comp=Z,39nm,1.0s
YBH Yreka Blue Hor 56.05 308 P **P** 17 53 10.9 -0.2
YBH pmax pmax
comp=Z,39nm,1.0s
YBH Yreka Blue Hor 56.05 308 LR LR 18 19 00.7
comp=Z,460nm,19.7s,baz=83,slow=38
HOPS Hopland Field 56.14 305 IAmb IAmb 17 53 15.4
comp=Z,64nm,1.0s
TRQA Tornquist 56.35 180 P **P** 17 53 13.0 +0.1
TRQA IAmb IAmb 17 53 13.8
comp=Z,38nm,1.1s
TRQA Tornquist 56.35 180 P **P** 17 53 13.0 +0.1
TRQA pmax pmax
comp=Z,38nm,1.1s
H04D Lebanon 56.36 312 IAmb IAmb 17 53 15.0
comp=Z,38nm,0.9s
BUCK Buck Mountain 56.50 311 IAmb IAmb 17 53 16.2
comp=Z,73nm,1.1s
DBO Dodson Butte 56.57 310 IAmb IAmb 17 54 13.4
comp=Z,32nm,1.1s
KCPM Cahto Peak 56.57 306 IAmb IAmb 17 53 17.8
comp=Z,65nm,1.0s
KPL Plockton 56.59 33 *eP* **P** 17 53 14.7 +0.3
KPL IAmb IAmb 17 53 15.9
comp=Z,36nm,1.0s
NEWG New Galloway 56.68 36 *eP* **P** 17 53 15.2 0.0
FOEL Foel Wylfa 56.70 38 *eP* **P** 17 53 15.7 +0.4
I03D Drain, OR 56.70 310 IAmb IAmb 17 53 17.6
comp=Z,102nm,1.6s
YKA Yellowknife Ar 56.72 334 P **P** 17 53 15.5 +0.2
comp=Z,32nm,0.8s,baz=68,slow=1.2,SNR=210
YKA LR LR 18 16 09.9
comp=Z,762nm,21.7s,baz=106,slow=34
comp=Z,32nm,0.8s
PGBU Glenifferbraes 56.74 35 *eP* **P** 17 53 16.4 +0.8
PGBU IAmb IAmb 17 53 18.0
comp=Z,96nm,1.1s
COR Corvallis 56.77 312 P **P** 17 53 16.8 +0.9
COR Corvallis 56.77 312 P **P** 17 53 16.8 +0.9
COR pmax pmax
comp=Z,214nm,1.9s
G03D McMinnville, O 56.81 312 IAmb IAmb 17 53 19.1
comp=Z,51nm,0.9s
K02D Willamette Mer 56.84 309 IAmb IAmb 17 53 18.6
comp=Z,58nm,1.3s
DBIC Dimbokro 56.88 94 P **P** 17 53 16.6 -0.6
DBIC Dimbokro 56.88 94 P **P** 17 53 16.6 -0.6
DBIC pmax pmax
comp=Z,22nm,0.9s
DBIC Dimbokro 56.88 94 P **P** 17 53 16.7 -0.4
comp=Z,10nm,0.6s,baz=279,slow=7.2,SNR=17
DBIC LR LR 18 12 55.4
comp=Z,369nm,21.3s,baz=274,slow=31
comp=Z,10nm,0.6s
DBIC Dimbokro 56.88 94 P **P** 17 53 16.7 -0.4
KSXB Camp Six Broad 56.93 308 IAmb IAmb 17 53 19.9
comp=Z,39nm,0.8s
KRMB Red Mountain 56.93 308 P **P** 17 53 18.1 +0.8
KRMB IAmb IAmb 17 53 19.6
comp=Z,30nm,0.9s
KRMB **PcP** 17 54 12.9 +0.5
INVG Invergeldie, C 57.15 34 *eP* **P** 17 53 18.2 -0.2
ESK Eskdalemuir 57.30 36 *eP* **P** 17 53 19.2 -0.3
ESK IAmb IAmb 17 53 22.0
comp=Z,156nm,1.9s
EKA Eskdalemuir Ar 57.33 36 P **P** 17 53 19.7 0.0
comp=Z,8.0nm,0.7s,baz=276,slow=3.6,SNR=19
comp=Z,8.0nm,0.7s
NLWA Neilton Lookou 57.50 315 P **P** 17 53 22.1 +0.9
NLWA IAmb IAmb 17 53 24.8
comp=Z,77nm,1.4s
NLWA PcP **PcP** 17 54 14.9 +0.6
MFF Saint Martin d 57.51 46 P **P** 17 53 21.7 +0.5
LBWR Ladybower, Pea 57.68 38 *eP* **P** 17 53 22.9 +0.6
LBWR IAmb IAmb 17 53 23.9
comp=Z,79nm,1.0s
LDF La Druitiere 57.80 44 P **P** 17 53 23.4 +0.2
CLRS Cowichan Lake 57.88 316 IAmb IAmb 17 53 25.9
comp=Z,54nm,1.0s
MCD Coleburn Disti 57.90 33 *eP* **P** 17 53 23.5 -0.2
MCD IAmb IAmb 17 53 25.1
comp=Z,43nm,0.7s
LFF La Frestale 57.95 48 P **P** 17 53 24.5 +0.2
GO06 Curarrehue 58.53 188 IAmb IAmb 17 53 30.1
comp=Z,41nm,1.0s
RES Resolute Bay 58.84 350 LR LR 18 18 39.8
comp=Z,580nm,19.6s,baz=153,slow=36
CBB Campbell River 58.85 318 IAmb IAmb 17 53 32.7
comp=Z,46nm,0.9s
NEEM North Greenlan 59.14 3 *i* P **P** 17 53 32.9 +0.5
NEEM IAmb IAmb 17 54 03.5
comp=Z,17nm,0.7s
CLF Chambon-Foret 59.30 45 P **P** 17 53 34.6 +1.0
PLCA Paso Flores 59.54 187 P **P** 17 53 35.5 +0.2
comp=Z,59nm,0.9s,baz=6.4,slow=7.3,SNR=60
PLCA LR LR 18 22 34.6
comp=Z,249nm,19.8s,baz=0.0,slow=39
comp=Z,59nm,0.9s
PLCA Paso Flores 59.54 187 *eP* **P** 17 53 36.0 +0.7
PLCA Paso Flores 59.54 187 P **P** 17 53 36.0 +0.7
FLDN Fort Liard 59.91 330 P **P** 17 53 39.0 +1.4
baz=106
AVF Avril sur Loir 59.93 46 P **P** 17 53 37.8 -0.2

KOTAN Kotaneelee Air 60.16 329 P **P** 17 53 40.9 +1.6
baz=105
SSB Saint Sauveur 60.66 48 P **P** 17 53 43.8 +0.7
SSB IAmb IAmb 17 54 05.9
comp=Z,35nm,1.2s
SSB Saint Sauveur 60.66 48 P **P** 17 53 43.8 +0.7
SSB pmax pmax
comp=Z,35nm,1.2s
SSB Saint Sauveur 60.66 48 P **P** 17 53 44.0 +0.9
VIVF Saint-Julien-l 60.73 49 P **P** 17 53 44.4 +0.8
WRGLY Wrigley 60.77 333 P **P** 17 53 44.3 +0.9
baz=107,SNR=12
BAIF Baives 60.79 43 P **P** 17 53 43.8 0.0
BBB Bella Bella 60.85 320 LR LR 18 19 50.5
comp=Z,723nm,21.1s,baz=107,slow=36
DOU Dourbes 61.04 43 *dP* **P** 17 53 46.0 +0.5
comp=Z,10nm,1.1s
JMIC Jan Mayen 61.06 18 LR LR 18 14 15.1
comp=Z,325nm,21.9s,baz=258,slow=30
BMRD Maredsous 61.17 42 *dP* **P** 17 53 46.6 +0.2
comp=Z,18nm,1.1s
BMRD *dp*P **pP** 17 53 56.0 -0.4
GIVF Givet 61.19 43 P **P** 17 53 46.4 -0.1
TOA0 Torodi Ar. Sit 61.33 85 P **P** 17 53 46.5 -1.6
TORD Torodi Ar. Bea 61.33 85 P **P** 17 53 46.7 -1.3
comp=Z,13nm,0.4s,baz=299,slow=6.8,SNR=38
TORD LR LR 18 16 51.6
comp=Z,476nm,20.6s,baz=316,slow=33
comp=Z,13nm,0.4s
BGES Gesves 61.38 42 *dP* **P** 17 53 48.0 +0.2
comp=Z,19nm,1.1s
RCHB Rochefort 61.45 43 *dP* **P** 17 53 48.9 +0.6
comp=Z,25nm,1.0s
BCLA Clavier 61.52 42 *dP* **P** 17 53 49.0 +0.2
BCLA *dp*P **pP** 17 53 58.4 -0.4
BSTI Sart Tilman 61.70 42 *dP* **P** 17 53 50.0 0.0
BEBN Eben Emael 61.79 42 *dP* **P** 17 53 50.6 +0.1
BHOU Houvegnez 61.97 42 *dP* **P** 17 53 52.6 +0.8
comp=Z,30nm,1.1s
BHOU *dp*P **pP** 17 54 01.6 -0.3
MEM Membach 61.99 42 *dP* **P** 17 53 52.4 +0.6
comp=Z,36nm,1.0s
MEM *dp*P **pP** 17 54 01.3 -0.7
WLF Walferdange 62.01 43 P **P** 17 53 51.4 -0.6
WLF IAmb IAmb 17 54 02.5
comp=Z,49nm,1.0s
WLF Walferdange 62.01 43 *dP* **P** 17 53 52.4 +0.4
comp=Z,30nm,1.1s
WLF *dp*P **pP** 17 54 01.3 -0.8
WLF Walferdange 62.01 43 P **P** 17 53 51.4 -0.6
WLF pmax pmax
comp=Z,49nm,1.0s
WLF Walferdange 62.01 43 *eP* **P** 17 53 53.2 +1.1
comp=Z,48nm,1.0s,baz=269,slow=6.4
WLF *ep*P **pP** 17 54 02.3 +0.1
baz=269,slow=6.4
BTNL Ternell 62.06 42 *dP* **P** 17 53 53.0 +0.5
comp=Z,17nm,1.0s
BNI Bardonecchia 62.16 48 IAmb IAmb 17 54 05.2
comp=Z,36nm,1.1s
LPL La Plagne 62.21 48 P **P** 17 53 54.3 +0.5
U35K Hyder 62.45 324 P **P** 17 53 56.3 +1.4
baz=97
WTLY Watson Lake, Y 62.47 329 IAmb IAmb 17 53 57.9
comp=Z,50nm,1.1s
WTLY Watson Lake, Y 62.47 329 P **P** 17 53 56.8 +1.8
baz=101,SNR=16
TGTN Hyland Airport 62.50 330 P **P** 17 53 57.6 +2.3
baz=102,SNR=65
ECH Echery 62.59 45 P **P** 17 53 56.3 +0.3
ECH IAmb IAmb 17 53 57.4
comp=Z,46nm,1.1s
ECH Echery 62.59 45 P **P** 17 53 56.3 +0.3
ECH pmax pmax
comp=Z,46nm,1.1s
ECH Echery 62.59 45 P **P** 17 53 56.4 +0.3
SENIN Lac Senin/Sane 62.62 47 P **P** 17 53 56.4 -0.1
AHRW Bad Neuenahr-A 62.66 42 *eP* **P** 17 53 57.8 +1.4
comp=Z,100nm,0.9s,baz=269,slow=6.4
AHRW *ep*P **pP** 17 54 07.0 +0.5
baz=269,slow=6.4
T35M Bob Quinn 62.72 325 IAmb IAmb 17 53 59.7
comp=Z,29nm,0.9s
T35M Bob Quinn 62.72 325 P **P** 17 53 58.4 +1.7
baz=98,SNR=12
DLBC Dease Lake 62.81 327 IAmb IAmb 17 54 00.2
comp=Z,45nm,0.8s
DLBC Dease Lake 62.81 327 P **P** 17 53 59.0 +1.7
baz=99,SNR=30
DLBC Dease Lake 62.81 327 LR LR 18 20 07.7
comp=Z,909nm,21.4s,baz=91,slow=35
BUG Bourg-Univer 62.84 41 *eP* **P** 17 53 58.5 +1.0
comp=Z,43nm,1.2s,baz=269,slow=6.4
BUG *ep*P **pP** 17 54 07.5 -0.1
baz=269,slow=6.4
BER Bergen 62.88 31 *eP* **P** 17 53 58.4 +0.8
TAM Tamanrasset 62.91 73 P **P** 17 53 58.6 0.0
TAM Tamanrasset 62.91 73 P **P** 17 53 58.7 0.0
TAM pmax pmax
comp=Z,19nm,1.0s
C36M Paulatuk 62.98 339 P **P** 17 53 57.3 -0.8
baz=110,SNR=9.3
IBBN Ibbenburen 63.21 40 *eP* **P** 17 54 01.1 +1.1
comp=Z,63nm,1.0s,baz=269,slow=6.4
IBBN *ep*P **pP** 17 54 10.3 +0.2
baz=269,slow=6.4
BLS5 Blasjo 63.27 32 *eP* **P** 17 54 01.3 +1.0
BLS5 IAmb IAmb 17 54 02.5
comp=Z,38nm,0.9s
V35K Ketchikan 63.28 323 P **P** 17 54 01.5 +1.2
baz=96
S34M Telegraph Cree 63.31 326 IAmb IAmb 17 54 03.5
comp=Z,32nm,1.0s
S34M Telegraph Cree 63.31 326 P **P** 17 54 02.0 +1.4
baz=98,SNR=14
BFO Black Forest 63.38 45 P **P** 17 54 00.2 -1.1
BFO Black Forest 63.38 45 P **P** 17 54 00.2 -1.1
BFO Black Forest 63.38 45 *eP* **P** 17 54 01.7 +0.4
comp=Z,14nm,1.1s,baz=269,slow=6.4
BFO Black Forest 63.38 45 P **P** 17 54 01.1 -0.1
HYA Hoyanger 63.43 30 *eP* **P** 17 54 02.4 +1.2
ODD1 Odda 63.44 32 *eP* **P** 17 54 02.7 +1.2
ODD1 IAmb IAmb 17 54 03.7
comp=Z,34nm,0.9s
R33M Jennings River 63.44 328 P **P** 17 54 02.7 +1.1
R33M IAmb IAmb 17 54 04.8
comp=Z,45nm,1.0s
R33M Jennings River 63.44 328 P **P** 17 54 03.4 +1.9
baz=98,SNR=35
TNS Taunus Mts 63.52 43 *eP* **P** 17 54 03.4 +1.2
comp=Z,49nm,1.1s,baz=269,slow=6.4
TNS *ep*P **pP** 17 54 12.3 0.0
baz=269,slow=6.4
KASTN Kahler Asten 63.55 41 *eP* **P** 17 54 03.2 +0.9
comp=Z,40nm,1.1s,baz=269,slow=6.4
KASTN *ep*P **pP** 17 54 12.2 -0.2
baz=269,slow=6.4
WRAK Wrangell Islan 63.80 324 P **P** 17 54 05.8 +2.0
baz=96
ALE Alert 63.98 360 P **P** 17 54 04.8 +0.2
AKN Aaknes 63.98 29 *eP* **P** 17 54 06.5 +1.5
AKN IAmb IAmb 17 54 18.1
comp=Z,49nm,1.0s
TUE Stuetta 64.04 47 IAmb IAmb 17 54 35.9
comp=Z,50nm,1.4s
Q32M Nakina River 64.04 327 IAmb IAmb 17 54 08.7
comp=Z,25nm,0.8s
Q32M Nakina River 64.04 327 P **P** 17 54 07.4 +1.8
baz=97
CRAG Craig 64.15 323 P **P** 17 54 06.8 +0.8
baz=94
U33K Whale Pass 64.20 324 P **P** 17 54 07.5 +1.1
baz=95
RETH Rethem/Aller, 64.21 40 *eP* **P** 17 54 07.8 +1.3
comp=Z,51nm,1.3s,baz=269,slow=6.4
RETH *ep*P **pP** 17 54 16.9 +0.2
baz=269,slow=6.4
A36M Sachs Harbour 64.25 342 P **P** 17 54 06.1 -0.4
A36M IAmb IAmb 17 54 08.2
comp=Z,40nm,0.8s
A36M PcP **PcP** 17 54 41.2 +0.3
A36M Sachs Harbour 64.25 342 P **P** 17 54 06.5 0.0
baz=110,SNR=43
VSL Villasalto 64.28 55 P **P** 17 54 06.9 -0.4
VSL IAmb IAmb 17 54 29.7
comp=Z,36nm,1.0s

SKAR Skarslia 64.37 31 *eP* **P** 17 54 08.7 +1.1
SKAR IAmb IAmb 17 54 09.5
comp=Z,43nm,0.9s
DAVA Damuels 64.41 46 *i* P **P** 17 54 08.9 +0.7
comp=Z,49nm,0.9s,SNR=11
DAVOX Davos/Dischmat 64.41 46 LR LR 18 16 37.2
comp=Z,311nm,21.6s,baz=274,slow=31
P33M Teslin, Yukon 64.47 329 IAmb IAmb 17 54 11.2
comp=Z,53nm,1.2s
P33M Teslin, Yukon 64.47 329 P **P** 17 54 10.0 +1.7
baz=97,SNR=34
COYC Coyhaique 64.50 188 P **P** 17 54 08.5 +0.1
COYC Coyhaique 64.50 188 P **P** 17 54 09.2 +0.8
RPN Rapa Nui 64.52 226 LR LR 18 20 09.0
comp=Z,75nm,21.9s,baz=33,slow=34
GTTG Gottingen 64.53 41 *eP* **P** 17 54 09.7 +1.0
comp=Z,33nm,1.1s,baz=269,slow=6.4
GTTG *ep*P **pP** 17 54 18.8 0.0
baz=269,slow=6.4
UBBA Unterbreizbach 64.53 42 *ep*P pP 17 54 18.7 0.0
baz=269,slow=6.4
KEST Kesra 64.54 59 P **P** 17 54 08.5 -0.7
KEST IAmb IAmb 17 54 43.7
comp=Z,46nm,1.1s
KEST Kesra 64.54 59 P **P** 17 54 09.1 -0.1
comp=Z,15nm,0.8s,baz=183,slow=3.1,SNR=11
KEST PcP **PcP** 17 54 40.4 -2.6
comp=Z,35nm,1.1s,baz=251,slow=1.5,SNR=4.7
KEST LR LR 18 19 26.5
comp=Z,214nm,19.7s,baz=304,slow=33
comp=Z,15nm,0.8s
UBR Ueberruh 64.56 45 *eP* **P** 17 54 09.7 +0.6
comp=Z,9.0nm,0.9s,baz=269,slow=6.4
NRDL Niedersach Rie 64.66 40 *eP* **P** 17 54 10.7 +1.3
comp=Z,35nm,1.0s,baz=269,slow=6.4
NRDL *ep*P **pP** 17 54 19.9 +0.3
baz=269,slow=6.4
FUORN Ofenpass-Fuorn 64.67 47 P **P** 17 54 10.2 +0.1
FUORN IAmb IAmb 17 54 21.3
comp=Z,48nm,1.2s
N32M Quiet Lake 64.72 330 IAmb IAmb 17 54 12.5
comp=Z,34nm,0.9s
N32M Quiet Lake 64.72 330 P **P** 17 54 11.1 +1.2
baz=97
CLZ Clausthal 64.80 41 *eP* **P** 17 54 11.5 +1.0
comp=Z,32nm,1.0s,baz=269,slow=6.4
CLZ *ep*P **pP** 17 54 20.6 0.0
baz=269,slow=6.4
BSEG Bad Segeberg 64.84 39 *eP* **P** 17 54 11.5 +0.9
comp=Z,32nm,1.1s,baz=269,slow=6.4
BSEG *ep*P **pP** 17 54 20.7 0.0
baz=269,slow=6.4
P32M Atlin 64.85 328 IAmb IAmb 17 54 13.5
comp=Z,30nm,0.9s
P32M Atlin 64.85 328 P **P** 17 54 12.3 +1.6
baz=96,SNR=12
KONO Kongsberg 64.89 32 *eP* **P** 17 54 12.1 +1.1
KONO Kongsberg 64.89 32 *ce*P **P** 17 54 11.6 +0.7
KONO pmax pmax
comp=Z,41nm,1.0s
KONO Kongsberg 64.89 32 P **P** 17 54 11.9 +1.1
DOMB Dombas 64.92 30 *eP* **P** 17 54 12.4 +1.3
FETA Feichten 64.99 46 *i* P **P** 17 54 12.7 +0.7
comp=Z,48nm,1.1s,SNR=18
ASSE Asse, Remlinge 64.99 41 *eP* **P** 17 54 13.0 +1.4
comp=Z,39nm,1.1s,baz=269,slow=6.4
ASSE *ep*P **pP** 17 54 22.2 +0.4
baz=269,slow=6.4
FARO Faro, Yukon 64.99 331 P **P** 17 54 12.8 +1.2
FARO IAmb IAmb 17 54 14.2
comp=Z,56nm,0.9s
FARO Faro, Yukon 64.99 331 P **P** 17 54 13.1 +1.6
baz=98,SNR=66
RETA Reutte 65.01 46 *i* P **P** 17 54 12.5 +0.5
comp=Z,46nm,1.1s,SNR=10
S32K Killisnoo 65.11 325 P **P** 17 54 13.4 +1.1
S32K Killisnoo 65.11 325 P **P** 17 54 13.9 +1.5
baz=94
R32K Eaglecrest 65.14 326 P **P** 17 54 14.9 +2.3
baz=95
ZCCA Zocca 65.23 49 IAmb IAmb 17 54 37.0
comp=Z,93nm,1.9s
MOTA Moosalm 65.24 46 *i* P **P** 17 54 13.8 +0.2
comp=Z,39nm,1.1s,SNR=13
GRFO Grafenberg 65.30 43 P **P** 17 54 13.9 +0.1
GRFO IAmb IAmb 17 54 35.9
comp=Z,56nm,1.3s
GRFO Grafenberg 65.30 43 P **P** 17 54 13.9 +0.1
GRFO pmax pmax
comp=Z,56nm,1.3s
GRA1 Grafenberg Arr 65.30 43 P **P** 17 54 13.6 -0.2
GRA1 IAmb IAmb 17 54 36.0
comp=Z,62nm,1.4s
GRF Grafenberg Arr 65.30 43 P **P** 17 54 13.6 -0.2
GRF pmax pmax
comp=Z,62nm,1.4s
GRF Grafenberg Arr 65.30 43 *eP* **P** 17 54 14.5 +0.7
comp=Z,37nm,1.2s,baz=269,slow=6.4
GRF *ep*P **pP** 17 54 23.7 -0.2
baz=269,slow=6.4
GRF *eL* L 18 15 21.9
comp=Z,450nm,22.0s
SQTA Sankt Quirin 65.31 46 *i* P **P** 17 54 14.5 +0.4
comp=Z,45nm,1.4s,SNR=15
FLTG Flechtingen 65.34 40 *eP* **P** 17 54 14.6 +0.6
comp=Z,36nm,1.0s,baz=269,slow=6.4
FLTG *ep*P **pP** 17 54 23.8 -0.3
baz=269,slow=6.4
OSSC Osservatorio P 65.46 50 P **P** 17 54 14.2 -0.8
M31M Drury Creek, Y 65.47 331 P **P** 17 54 16.8 +2.1
baz=97,SNR=110
SIT Sitka 65.49 325 P **P** 17 54 16.1 +1.3
baz=93
WHY Whitehorse 65.54 329 P **P** 17 54 16.0 +0.8
baz=95,SNR=16
AY02 Valle Explorad 65.54 188 P **P** 17 54 16.0 +0.8
MOX Moxa 65.56 42 *eP* **P** 17 54 15.9 +0.5
comp=Z,7.5nm,1.0s,baz=269,slow=6.4
MOX *eL* L 18 16 47.1
comp=Z,432nm,20.5s
WATA Walderalm 65.56 46 *i* P **P** 17 54 15.7 0.0
comp=Z,12nm,0.9s,SNR=5.6
WTTA Wattenberg 65.60 46 *i* P **P** 17 54 16.3 +0.3
comp=Z,24nm,1.2s,SNR=7.6
NBO00 NORSAR Array S 65.62 31 IAmb IAmb 17 54 17.9
comp=Z,50nm,0.9s
NC204 NORSAR Array S 65.64 30 P **P** 17 54 16.1 +0.3
NC204 IAmb IAmb 17 54 17.9
comp=Z,44nm,1.1s
CTI Castel Tesino 65.65 47 P **P** 17 54 15.5 -0.7
CTI Castel Tesino 65.65 47 P **P** 17 54 15.5 -0.7
CTI pmax pmax
comp=Z,21nm,0.8s
NAO01 NORSAR Array S 65.65 31 P **P** 17 54 16.6 +0.7
NAO01 IAmb IAmb 17 54 18.0
comp=Z,68nm,1.1s
SKAG Skagway 65.66 328 P **P** 17 54 17.1 +1.3
baz=94
NEUB Neuenburg 65.66 42 *eP* **P** 17 54 17.0 +1.0
comp=Z,39nm,1.1s,baz=269,slow=6.4
NEUB *ep*P **pP** 17 54 25.9 -0.3
baz=269,slow=6.4
NB2 NORSAR Subarra 65.83 31 P **P** 17 54 17.8 +0.8
comp=Z,15nm,0.8s,baz=266,slow=6.5
NB2 NORSAR Subarra 65.83 31 P **P** 17 54 17.8 +0.8
baz=266,slow=6.5
NOA NORSAR Array B 65.83 31 P **P** 17 54 17.5 +0.5
comp=Z,30nm,0.8s,baz=265,slow=6.4,SNR=49
NOA LR LR 18 17 20.9
comp=Z,414nm,21.9s,baz=270,slow=31
comp=Z,30nm,0.8s
NB201 NORSAR Array S 65.87 31 P **P** 17 54 17.8 +0.6
NB201 IAmb IAmb 17 54 19.6
comp=Z,56nm,0.9s
MANZ Manzenberg 65.87 43 *eP* **P** 17 54 18.6 +1.1
comp=Z,17nm,1.1s,baz=269,slow=6.4
MANZ *ep*P **pP** 17 54 27.7 0.0
baz=269,slow=6.4
PLN Plauen 65.90 42 *eP* **P** 17 54 18.2 +0.5
comp=Z,105nm,2.1s,baz=269,slow=6.4
PLN *ep*P **pP** 17 54 27.5 -0.3
baz=269,slow=6.4
NC303 NORSAR Array S 65.92 31 P **P** 17 54 17.8 +0.2
NC303 IAmb IAmb 17 54 19.8
comp=Z,46nm,0.8s
H31M Peel River 65.93 335 P **P** 17 54 18.5 +0.9
baz=98

ROTZ Rotzenmuhle 65.94 43 *e*P **P 17 54 18.7 +0.8**
comp=Z,6.0nm,1.1s,baz=269,slow=6.4
ROTZ *e*pP **pP 17 54 27.9 -0.1**
baz=269,slow=6.4
F31M Tsiigehtchic 65.95 336 IAmb IAmb 17 54 18.9
comp=Z,42nm,0.9s
F31M Tsiigehtchic 65.95 336 P **P 17 54 17.9 +0.3**
baz=100,SNR=25
NC602 NORSAR Array S 65.96 31 IAmb IAmb 17 54 20.3
comp=Z,39nm,0.8s
NC602 NORSAR Array S 65.96 31 *e*P **P 17 54 19.3 +1.5**
NC602 IAmb IAmb 17 54 19.9
comp=Z,30nm,0.8s
INK Inuvik 66.02 337 P **P 17 54 18.5 +0.5**
baz=100,SNR=110
INK Inuvik 66.02 337 LR LR 18 24 43.5
comp=Z,195nm,19.4s,baz=124,slow=37
S31K Pelican 66.03 326 IAmb IAmb 17 54 21.3
comp=Z,44nm,0.9s
S31K Pelican 66.03 326 P **P 17 54 20.2 +2.0**
baz=93,SNR=15
N31M Braeburn, Yuko 66.06 330 P **P 17 54 20.1 +1.6**
baz=95,SNR=57
G31M Satah River 66.07 336 P **P 17 54 19.1 +0.8**
baz=99
NC405 NORSAR Array S 66.08 31 P **P 17 54 18.7 +0.1**
NC405 IAmb IAmb 17 54 20.8
comp=Z,41nm,0.9s
NKC Novy Kostel 66.09 43 *e*P **P 17 54 19.5 +0.6**
NKC Novy Kostel 66.09 43 *e*P **P 17 54 19.5 +0.6**
TANN Tannenbergstha 66.10 42 *e*P **P 17 54 19.6 +0.7**
comp=Z,21nm,1.1s,baz=269,slow=6.4
TANN *e*pP **pP 17 54 28.9 -0.3**
baz=269,slow=6.4
O30N Mendenhall 66.14 329 IAmb IAmb 17 54 21.9
comp=Z,48nm,1.2s
O30N Mendenhall 66.14 329 P **P 17 54 20.8 +1.8**
baz=94,SNR=18
PLBC Pleasant Camp 66.19 327 P **P 17 54 21.0 +1.7**
baz=94
AY03 Cochrane 66.22 188 IAmb IAmb 17 54 22.7
comp=Z,216nm,0.8s
ABTA Abfaltersbach 66.22 46 *i* P **P 17 54 19.8 -0.1**
comp=Z,26nm,1.3s,SNR=11
LESA Schwarzleotal 66.31 46 *i* P **P 17 54 20.2 -0.2**
comp=Z,18nm,1.0s
MAYO Mayo, Yukon 66.31 332 P **P 17 54 21.7 +1.7**
baz=96
RJOB Jochberg 66.38 45 *e*P **P 17 54 20.9 +0.1**
comp=Z,9.6nm,1.1s,baz=269,slow=6.4
WET Wettzell 66.39 44 *e*P **P 17 54 21.4 +0.6**
comp=Z,27nm,1.2s,baz=269,slow=6.4
WET *e*pP **pP 17 54 30.7 -0.3**
baz=269,slow=6.4
MURB Monte Urbino 66.41 50 P **P 17 54 19.5 -1.6**
MURB IAmb IAmb 17 54 20.9
comp=Z,48nm,1.5s
CLL Collm 66.43 41 P **P 17 54 20.8 -0.2**
CLL IAmb IAmb 17 54 22.4
comp=Z,29nm,0.9s
CLL Collm 66.43 41⇑*i*P **P 17 54 21.3 +0.3**
CLL *i* 17 54 29.5
CLL pmax pmax
comp=Z,39nm,1.1s
CLL Collm 66.43 41 *e*SSSS 18 11 18.0
CLL Collm 66.43 41 *e*P **P 17 54 21.6 +0.6**
comp=Z,32nm,1.0s,baz=269,slow=6.4
CLL *e*pP **pP 17 54 30.8 -0.4**
baz=269,slow=6.4
CLL Collm 66.43 41⇑*i*P **P 17 54 21.3 +0.3**
comp=Z,39nm,1.1s
CLL Collm 66.43 41 *i* x x 17 54 29.5
comp=Z,36nm,1.1s
CLL Collm 66.43 41 *i* x x 17 54 42.2
CLL Collm 66.43 41 *e*PcP **PcP 17 54 51.0 +0.6**
CLL Collm 66.43 41 *e*PP PP 17 56 50.0 +2.6
CLL Collm 66.43 41 *e*SSS SSS 18 10 33.0
CLUD Cludinico 66.48 47 P **P 17 54 20.6 -0.8**
CLUD IAmb IAmb 17 54 52.1
comp=Z,24nm,0.9s
CESX Cesi 66.49 51 P **P 17 54 20.7 -0.9**
CESX IAmb IAmb 17 54 43.4
comp=Z,36nm,1.1s
NSS Namsos 66.52 27 *e*P **P 17 54 22.2 +0.9**
P30M Million Dollar 66.53 328 P **P 17 54 23.4 +1.9**
baz=93,SNR=11
J30M Hart River 66.61 333 P **P 17 54 23.4 +1.3**
baz=96
M30M Minto, Yukon 66.62 331 P **P 17 54 23.6 +1.4**
baz=95,SNR=73
I30M Mount Dempster 66.69 334 IAmb IAmb 17 54 24.5
comp=Z,40nm,0.8s
I30M Mount Dempster 66.69 334 P **P 17 54 23.7 +1.1**
baz=96
HSKC Hora Svate Kat 66.71 42 *e*P **P 17 54 23.2 +0.3**
HSKC *ex* x 17 54 32.2
F30M Barrier River 66.75 336 P **P 17 54 23.4 +0.7**
baz=98
KBA Koelnbreinsper 66.78 46 *i* P **P 17 54 23.5 0.0**
comp=Z,14nm,0.9s,SNR=5.6
FDMO Fiordimonte 66.83 50 P **P 17 54 23.0 -0.8**
G30M tAoh Zraii Nji 66.84 336 P **P 17 54 23.0 -0.4**
G30M IAmb IAmb 17 54 25.4
comp=Z,27nm,0.9s
G30M tAoh Zraii Nji 66.84 336 P **P 17 54 23.5 +0.2**
baz=97
HYT Haines Junctio 66.84 329 IAmb IAmb 17 54 26.8
comp=Z,42nm,1.1s
HYT Haines Junctio 66.84 329 P **P 17 54 25.5 +1.9**
baz=93,SNR=26
KHC Kasperske Hory 66.85 44 P **P 17 54 23.2 -0.5**
KHC IAmb IAmb 17 54 46.0
comp=Z,95nm,2.0s
KHC Kasperske Hory 66.85 44 *e*P **P 17 54 24.1 +0.3**
KHC Kasperske Hory 66.85 44 *ce*P **P 17 54 24.0 +0.3**
KHC pmax pmax
comp=Z,22nm,1.0s
NRCA Norcia 66.87 51 P **P 17 54 22.5 -1.6**
P29M Windy Craggy 66.89 328 P **P 17 54 25.3 +1.4**
baz=92
RUE Ruedersdorf 66.90 40 *e*P **P 17 54 24.6 +0.7**
RUE Ruedersdorf 66.90 40 *e*P **P 17 54 24.7 +0.7**
comp=Z,28nm,0.9s,baz=269,slow=6.4
RUE *e*pP **pP 17 54 33.9 -0.2**
baz=269,slow=6.4
GEC2 GERESS Array S 66.94 44 IAmb IAmb 17 54 46.4
comp=Z,88nm,1.8s
GEC2 GERESS Array S 66.94 44 *e*P **P 17 54 24.9 +0.4**
comp=Z,76nm,1.8s,baz=269,slow=6.4
GEC2 *e*pP **pP 17 54 33.9 -0.7**
baz=269,slow=6.4
GERES GERESS Array B 66.94 44 P **P 17 54 23.8 -0.6**
GERES GERESS Array B 66.94 44 P **P 17 54 23.8 -0.6**
GERES GERESS Array B 66.94 44 P **P 17 54 24.4 -0.1**
comp=Z,7.1nm,0.7s,baz=286,slow=5.3,SNR=34
GERES LR LR 18 18 42.8
comp=Z,181nm,20.5s,baz=262,slow=32
comp=Z,7.1nm,0.7s
BIOA Bad Ischl, Aus 66.95 45 *i* P **P 17 54 24.2 -0.2**
comp=Z,22nm,1.2s,SNR=6.2
PRED Cave del Predi 66.96 47 P **P 17 54 23.9 -0.6**
PRED IAmb IAmb 17 54 35.0
comp=Z,42nm,1.2s
EPYK Eagle Plains 66.96 335 IAmb IAmb 17 54 25.7
comp=Z,47nm,0.9s
EPYK Eagle Plains 66.96 335 P **P 17 54 24.7 +0.6**
baz=96,SNR=22
HFS Hagfors 66.99 32 P **P 17 54 24.9 +0.5**
comp=Z,20nm,0.8s,baz=277,slow=3.7,SNR=24
HFS LR LR 18 18 07.6
comp=Z,431nm,21.5s,baz=278,slow=31
comp=Z,20nm,0.8s
MYKA Terra Mystica 67.00 47 *i* P **P 17 54 24.6 -0.2**
comp=Z,18nm,1.1s,SNR=8.8
SABO M.te Sabotino 67.01 47 P **P 17 54 23.8 -1.1**
SABO IAmb IAmb 17 54 47.0
comp=Z,198nm,2.0s
GUMA Gualdo di Mace 67.01 50 P **P 17 54 23.3 -1.6**
GUMA IAmb IAmb 17 54 46.0
comp=Z,22nm,1.0s
BRG Berggiesshubel 67.03 42⇑*i*P **P 17 54 25.2 +0.4**
BRG Amp 17 54 27.9
comp=Z,25nm,0.9s
BRG Berggiesshubel 67.03 42 P P 17 54 34.8 +10
BRG Amp 17 54 36.6
comp=Z,21nm,1.0s
BRG Berggiesshubel 67.03 42⇑*i*P **P 17 54 25.2 +0.4**
BRG 17 54 34.7
BRG 17 54 46.3
BRG pmax pmax
comp=Z,25nm,0.9s
BRG Berggiesshubel 67.03 42 *e*P **P 17 54 25.7 +0.9**
comp=Z,25nm,0.9s,baz=269,slow=6.4
BRG *e*pP **pP 17 54 34.8 -0.2**
baz=269,slow=6.4
K29M Barlow Dome 67.06 332 IAmb IAmb 17 54 28.9
comp=Z,47nm,1.2s
K29M Barlow Dome 67.06 332 P **P 17 54 26.4 +1.4**
baz=94
CADS Cadrg 67.09 47 *i* P **P 17 54 25.2 -0.2**
RICC Richard 67.14 42 *e*P **P 17 54 26.4 +0.9**
ZVC Zvikov 67.24 43 *e*P **P 17 54 26.7 +0.5**
YUK6 Outpost Mounta 67.27 329 P **P 17 54 28.7 +2.3**
baz=92,SNR=27
L29M L29M 67.28 331 IAmb IAmb 17 54 30.0
comp=Z,26nm,0.9s
L29M L29M 67.28 331 P **P 17 54 27.6 +1.4**
baz=94
CKRC Cesky Krumlov 67.34 44 *e*P **P 17 54 26.9 0.0**
CKRC *ex* x 17 54 35.7
CKRC Cesky Krumlov 67.34 44 *e*P **P 17 54 26.9 0.0**
CKRC *e* 17 54 35.7
MOA Molln 67.36 45 *e*P **P 17 54 26.8 -0.2**
comp=Z,25nm,1.4s
M29M Somme Creek 67.39 331 IAmb IAmb 17 54 29.7
comp=Z,46nm,0.9s
M29M Somme Creek 67.39 331 P **P 17 54 28.7 +1.6**
baz=93,SNR=42
GO08 Villa O'Higgin 67.40 188 P **P 17 54 28.9 +1.9**
J29N Klondike Camp 67.41 333 IAmb IAmb 17 54 29.3
comp=Z,18nm,0.9s
J29N Klondike Camp 67.41 333 P **P 17 54 28.6 +1.6**
baz=94,SNR=8.9
YUK4 Talbot Arm 67.42 329 P **P 17 54 29.0 +1.6**
baz=92,SNR=31
PRU Pruhonice 67.44 43 *e*P **P 17 54 28.1 +0.6**
PRU *e*pP **pP 17 54 36.5 -1.1**
PRU Pruhonice 67.44 43 *e*P **P 17 54 28.1 +0.6**
PRU *e* 17 54 36.5
CEY Cerknica 67.60 47⇑*i*P **P 17 54 28.5 -0.1**
GOPC GO Pecny, Ondr 67.61 43 *e*P **P 17 54 29.2 +0.7**
GOPC GO Pecny, Ondr 67.61 43 *e*P **P 17 54 29.2 +0.7**
H29M Whitestone 67.61 335 IAmb IAmb 17 54 30.0
comp=Z,59nm,0.9s
H29M Whitestone 67.61 335 P **P 17 54 29.0 +0.7**
baz=95
OBKA Obir 67.63 47 *i* P **P 17 54 28.7 -0.1**
comp=Z,42nm,1.6s,SNR=15
OBKA Obir 67.63 47⇑*i*P **P 17 54 27.0 -1.9**
E29M Blow River 67.63 337 IAmb IAmb 17 54 29.7
comp=Z,46nm,0.8s
E29M Blow River 67.63 337 P **P 17 54 28.6 +0.2**
baz=96
LJU Ljubljana 67.65 47 *i* P **P 17 54 29.2 +0.3**
LJU *i* 17 54 38.4
LJU *i* 17 54 50.1
PNL Peninsula 67.74 328 P **P 17 54 30.7 +1.5**
baz=91
DAWY Dawson 67.89 332 IAmb IAmb 17 54 32.0
comp=Z,26nm,0.7s
DAWY Dawson 67.89 332 P **P 17 54 31.5 +1.3**
baz=93
SOKA Soboth 67.95 46 *i* P **P 17 54 30.2 -0.7**
comp=Z,16nm,1.2s,SNR=10
YUK8 Steele Glacier 67.96 329 P **P 17 54 32.2 +1.4**
baz=91,SNR=15
D28M Stokes Point 68.03 338 P **P 17 54 31.7 +0.9**
baz=96
PAOL Paolisi 68.11 52 P **P 17 54 31.2 -0.7**
PAOL IAmb IAmb 17 54 54.0
comp=Z,28nm,1.0s
FAUS Fauske 68.14 24 *e*P **P 17 54 32.2 +0.8**
FAUS IAmb IAmb 17 54 33.0
comp=Z,33nm,0.9s
PINM Pinnacle 68.18 328 P **P 17 54 33.6 +1.6**
baz=90,SNR=11
BOJS Bojanci 68.19 48 *i* P **P 17 54 32.4 +0.1**
BOJS Bojanci 68.19 48⇑*i*P **P 17 54 31.5 -0.8**
I28M Miner Creek 68.20 334 P **P 17 54 32.7 +0.6**
baz=93,SNR=27
ARSA Arzberg 68.25 46 *e*P **P 17 54 32.4 -0.3**
comp=Z,12nm,0.9s,SNR=9.5
E28M Babbage River 68.26 337 IAmb IAmb 17 54 33.1
comp=Z,35nm,0.8s
E28M Babbage River 68.26 337 P **P 17 54 32.2 0.0**
baz=94
YUK3 Moose Creek 68.30 330 P **P 17 54 34.1 +1.2**
baz=91,SNR=38
F28M Old Crow 68.31 336 IAmb IAmb 17 54 34.0
comp=Z,42nm,0.9s
F28M Old Crow 68.31 336 P **P 17 54 32.9 +0.3**
baz=94,SNR=54
CRES Cresnjev 68.31 47⇑*i*P **P 17 54 32.8 -0.2**
UPC Upice 68.36 42 *e*P **P 17 54 34.0 +0.8**
UPC Upice 68.36 42 *e*P **P 17 54 34.0 +0.8**
CHVC Chvalec 68.39 42 *e*P **P 17 54 34.0 +0.6**
CHVC Chvalec 68.39 42 *e*P **P 17 54 34.0 +0.6**
VAE Valguarnera 68.40 56 LR LR 18 19 07.3
comp=Z,779nm,21.3s,baz=325,slow=31
CONA Conrad Observa 68.43 45 *e*P **P 17 54 33.7 -0.1**
comp=Z,23nm,1.4s,SNR=12
OSTC Ostas 68.49 42 *e*P **P 17 54 34.8 +0.7**
OSTC Ostas 68.49 42 *e*P **P 17 54 34.8 +0.7**
BVCY Beaver Creek 68.50 331 P **P 17 54 35.6 +1.7**
baz=91,SNR=54
KSP Ksiaz 68.52 42 *e*P **P 17 54 34.7 +0.5**
LOGN Logan Glacier 68.55 329 IAmb IAmb 17 54 37.4
comp=Z,48nm,0.9s
DPC Dobruska-Polom 68.57 42 *e*P **P 17 54 34.3 -0.3**
DPC *ep*P **pP 17 54 44.1 -0.7**
DPC Dobruska-Polom 68.57 42 *e*P **P 17 54 34.3 -0.3**
DPC *e* 17 54 44.1
EGAK Eagle 68.69 333 IAmb IAmb 17 54 37.0
comp=Z,52nm,0.8s
EGAK Eagle 68.69 333 P **P 17 54 36.1 +1.1**
baz=92
KRUC Moravsky 68.70 44 *e*P **P 17 54 35.3 -0.1**
CTGM Chitina Glacie 68.72 329 IAmb IAmb 17 54 38.6
comp=Z,61nm,1.0s
CTG Chitna Glacier 68.72 329 P **P 17 54 37.5 +2.0**
baz=90,SNR=37
RONA Rosalia, Austr 68.74 45 *i* P **P 17 54 35.7 0.0**
comp=Z,26nm,1.3s,SNR=10.0
VRAC Vranov 68.81 43 *e*P **P 17 54 36.0 -0.1**
VRAC Vranov 68.81 43 LR LR 18 20 10.3
comp=Z,182nm,20.1s,baz=288,slow=32
KBS Kingsbay 68.81 11 *e*P **P 17 54 37.5 +1.9**
KBS IAmb IAmb 17 54 38.7
comp=Z,37nm,1.0s
KBS Kingsbay 68.81 11 *ce*P **P 17 54 36.5 +0.9**
KBS pmax pmax
comp=Z,50nm,1.3s
KBS Kingsbay 68.81 11 P **P 17 54 37.3 +1.8**
D27M Malcolm River 68.82 338 IAmb IAmb 17 54 37.6
comp=Z,36nm,0.9s
D27M Malcolm River 68.82 338 P **P 17 54 36.3 +0.4**
baz=94
BARN Barnard Glacie 68.87 329 IAmb IAmb 17 54 39.9
comp=Z,80nm,1.3s
KRLC Kraliky 68.88 43 *e*P **P 17 54 37.2 +0.6**
KRLC Kraliky 68.88 43 *e*P **P 17 54 37.2 +0.6**
H27K Steamboat Moun 68.89 335 P **P 17 54 36.6 +0.3**
baz=92
I27K Kandik River 68.91 334 P **P 17 54 37.0 +0.6**
baz=91,SNR=68
L27K Beaver Creek, 68.95 331 P **P 17 54 38.4 +1.6**
baz=90
GKP Gorka Klasztor 68.97 39 *e*P **P 17 54 38.1 +1.2**
M27K Edge Creek, AK 68.97 331 P **P 17 54 38.1 +1.1**
M27K Edge Creek, AK 68.97 331 P **P 17 54 38.8 +1.7**
baz=90
MESA MESA 69.03 328 IAmb IAmb 17 54 40.5
comp=Z,50nm,1.1s
MESA MESA 69.03 328 P **P 17 54 39.2 +1.8**
baz=89,SNR=6.4
K27K Chicken 69.07 332 P **P 17 54 39.2 +1.7**
baz=90
CUC Castrocucco 69.17 53 P **P 17 54 38.1 -0.5**
A050A Klekovaca 69.19 49⇑*i*P **P 17 54 38.7 +0.1**
ZST Bratislava 69.24 45 *e*P **P 17 54 39.2 +0.5**
ZST pmax pmax
comp=Z,67nm,1.1s
ZST Bratislava 69.24 45 *e*P **P 17 54 39.2 +0.5**
MODS Modra-Piesok 69.34 44 *e*P **P 17 54 39.8 +0.4**
MODS pmax pmax
comp=Z,82nm,1.1s
MODS Modra-Piesok 69.34 44 *e*P **P 17 54 39.8 +0.4**
MORC Moravsky Berou 69.39 43 P **P 17 54 39.2 -0.5**
MORC Moravsky Berou 69.39 43 *e*P **P 17 54 40.1 +0.4**
MORC Moravsky Berou 69.39 43 P **P 17 54 39.2 -0.5**
MORC pmax pmax
comp=Z,24nm,1.0s
A051A Mrakovica 69.40 48⇑*i*P **P 17 54 39.5 -0.4**
SMOL Smolenice 69.43 44 *e*P **P 17 54 40.5 +0.6**
WAX Waxell Ridge 69.47 329 IAmb IAmb 17 54 46.2
comp=Z,28nm,0.9s
MCARA McCarthy VSAT 69.53 330 P **P 17 54 42.6 +2.3**
baz=89,SNR=94
I26K Coal Creek Min 69.54 334 IAmb IAmb 17 54 42.0
comp=Z,140nm,1.9s
I26K Coal Creek Min 69.54 334 P **P 17 54 41.1 +0.8**
baz=90
JAVC Velka Javorina 69.56 44 *e*P **P 17 54 42.0 +1.2**
SPITS Spitsbergen Ar 69.56 12 P **P 17 54 40.6 +0.4**
comp=Z,24nm,0.9s,baz=189,slow=4.7,SNR=6.7
SPITS LR LR 18 22 25.7
comp=Z,228nm,21.6s,baz=222,slow=34
comp=Z,24nm,0.9s
CRQE Cirque 69.58 329 P **P 17 54 42.2 +1.5**
baz=88
MGRS Mrkonjic Grad 69.59 49 *e*P **P 17 54 41.5 +0.5**
TRO Tromso 69.59 22 *e*P **P 17 54 41.5 +1.0**
TRO IAmb IAmb 17 54 42.7
comp=Z,40nm,0.8s
CRQM Cirque 69.60 329 IAmb IAmb 17 54 56.4
comp=Z,32nm,1.0s
MAUC Maruska 69.61 43 *e*P **P 17 54 42.1 +1.0**
BLY Banja Luka 69.63 48⇑*i*P **P 17 54 41.2 0.0**
L26K Log Cabin Wild 69.65 331 P **P 17 54 42.9 +1.9**
baz=89,SNR=33
BGLC Bering Glacier 69.69 328 P **P 17 54 42.6 +1.4**
baz=88
J26L Joseph Creek 69.72 333 P **P 17 54 42.1 +0.5**
J26L IAmb IAmb 17 54 43.5
comp=Z,33nm,0.9s
J26L Joseph Creek 69.72 333 P **P 17 54 42.4 +0.8**
baz=89
VRDI Verde Repeater 69.74 329 IAmb IAmb 17 54 44.5
comp=Z,39nm,0.9s
G26K Porcupine Rive 69.80 335 P **P 17 54 42.5 +0.6**
baz=90
BERG Berg Lake 69.89 328 IAmb IAmb 17 54 45.5
comp=Z,61nm,1.0s
GLB Gilahina Butte 69.91 330 IAmb IAmb 17 54 45.4
comp=Z,26nm,0.8s
SCRK Sand Creek 69.92 332 IAmb IAmb 17 54 45.1
comp=Z,28nm,0.9s
SCRK Sand Creek 69.92 332 P **P 17 54 43.9 +1.2**
baz=89,SNR=36
F26K Sheenjek River 69.94 336 P **P 17 54 43.4 +0.6**
baz=90
SUCK Suckling Hills 69.94 328 IAmb IAmb 17 54 47.9
comp=Z,33nm,1.3s
EFI East Falkland 70.05 177 P **P 17 54 44.6 +1.2**
EFI East Falkland 70.05 177 *ce*P **P 17 54 42.9 -0.5**
EFI pmax pmax
comp=Z,70nm,1.2s
SRO Srobarova 70.08 45 *e*P **P 17 54 44.5 +0.6**
SRO pmax pmax
comp=Z,47nm,1.6s
SRO Srobarova 70.08 45 *e*P **P 17 54 44.5 +0.6**
JETT Jettan, Norway 70.11 22 *e*P **P 17 54 45.0 +1.2**
JETT IAmb IAmb 17 54 46.1
comp=Z,61nm,0.7s
GO09 Cerro Castillo 70.14 187 P **P 17 54 45.3 +1.3**
HMT Hamilton 70.17 328 IAmb IAmb 17 54 47.1
comp=Z,53nm,0.9s
STON Ston 70.22 50 *e*P **P 17 54 44.1 -0.7**
KAIM Kayak Island 70.27 328 P **P 17 54 46.8 +1.9**
baz=87
N25K Chitina, Valde 70.28 330 P **P 17 54 46.6 +1.6**
baz=87,SNR=11
RIDG Independent Ri 70.30 332 IAmb IAmb 17 54 47.4
comp=Z,46nm,1.0s
RIDG Independent Ri 70.30 332 P **P 17 54 46.2 +1.1**
baz=88,SNR=13
BMRM Bremner River 70.31 329 P **P 17 54 46.7 +1.5**
baz=87,SNR=20
RAGM Ragged Mountai 70.38 328 IAmb IAmb 17 54 48.5
comp=Z,46nm,1.0s
FYU Fort Yukon 70.38 335 IAmb IAmb 17 54 47.1
comp=Z,38nm,1.2s
E25K Arctic Village 70.48 337 P **P 17 54 46.4 +0.4**
E25K IAmb IAmb 17 54 47.9
comp=Z,31nm,0.8s
E25K Arctic Village 70.48 337 P **P 17 54 46.8 +0.8**
baz=89,SNR=37
J25K Salcha River, 70.50 333 P **P 17 54 46.9 +0.6**
baz=88,SNR=26
HARP HAARP 70.50 331 P **P 17 54 47.6 +1.4**
baz=87,SNR=28
F25K Christian Rive 70.52 336 P **P 17 54 47.4 +1.1**
baz=88
PRP Porcupine Dome 70.53 334 IAmb IAmb 17 54 48.4
comp=Z,70nm,1.0s
PRP Porcupine Dome 70.53 334 P **P 17 54 47.4 +0.8**
baz=88,SNR=65
PAX Paxson 70.62 331 P **P 17 54 47.9 +0.9**
baz=87,SNR=30
LANS Liptovska Anna 70.70 43 *e*P **P 17 54 49.3 +1.5**
LANS pmax pmax
comp=Z,6.0nm,0.8s
LANS Liptovska Anna 70.70 43 *e*P **P 17 54 49.3 +1.5**
K24K Donnelly Dome 70.72 332 P **P 17 54 48.5 +0.9**
baz=87,SNR=21
D25K Kavik River 70.74 338 P **P 17 54 48.5 +0.8**
baz=88
OJC Ojcow 70.80 42 *e*P **P 17 54 48.8 +0.5**
BRY Bratogost 70.83 50 *e*P **P 17 54 47.9 -0.9**
EYAK Cordova Ski Ar 70.90 329 P **P 17 54 50.0 +1.4**
baz=86
KLU Klutina 70.92 330 IAmb IAmb 17 54 51.1
comp=Z,47nm,1.0s
KLU Klutina 70.92 330 P **P 17 54 50.0 +1.1**
baz=86,SNR=23
RAF Rauma 70.96 31 *e*P **P 17 54 49.7 +0.7**
HAPS Han Pijesak,Bl 70.97 49 *e*P **P 17 54 49.5 0.0**
M24K Tolsona, Glenn 71.00 330 P **P 17 54 50.4 +1.1**
baz=86,SNR=5.1
UPM Unac-Piva 71.05 50 *e*P **P 17 54 50.5 +0.3**
KTK1 Kautokeino 71.13 22 *e*P **P 17 54 50.9 +0.9**
KTK1 IAmb IAmb 17 54 51.6
comp=Z,77nm,0.9s
PSZ Piszkesteto 71.13 45 P **P 17 54 50.2 -0.2**
PSZ IAmb IAmb 17 55 13.1
comp=Z,58nm,1.6s
PSZ Piszkesteto 71.13 45 P **P 17 54 50.2 -0.2**
PSZ pmax pmax
comp=Z,58nm,1.6s
IL31 71.14 333 IAmb IAmb 17 54 51.6
comp=Z,71nm,1.0s
ILAR Eielson Array 71.14 333 P **P 17 54 50.5 +0.4**
comp=Z,41nm,0.8s,baz=96,slow=5.0,SNR=375
ILAR LR LR 18 25 19.6
comp=Z,374nm,21.3s,baz=70,slow=35
comp=Z,41nm,0.8s
HDA Harding Lake 71.19 333 IAmb IAmb 17 54 51.7
comp=Z,87nm,1.7s
HDA Harding Lake 71.19 333 P **P 17 54 50.6 +0.2**
baz=86,SNR=14
HAMF Hammerfest 71.21 21 *e*P **P 17 54 51.6 +1.2**
NIE Niedzica 71.22 43 *e*P **P 17 54 52.4 +1.5**
G24K Hadweenzic Riv 71.27 335 P **P 17 54 51.7 +0.8**
baz=86
HIN Hinchinbrook I 71.28 329 IAmb IAmb 17 54 53.6
comp=Z,58nm,1.0s
Q23K Middleton Isla 71.28 328 P **P 17 54 53.0 +2.0**
baz=85
TEKS Tekeris 71.31 48 *e*P P 17 54 45.9 -5.6
BBLS Lazići 71.32 49⇑*i*P **P 17 54 52.0 +0.3**
RUDO Rudo 71.33 49 *e*P **P 17 54 50.7 -0.9**
POKR Poker Plat Res 71.35 334 P **P 17 54 52.2 +0.9**
baz=86,SNR=42
F24K Squaw Lake 71.38 336 P **P 17 54 52.3 +0.7**
F24K IAmb IAmb 17 54 53.8
comp=Z,31nm,0.9s
F24K Squaw Lake 71.38 336 P **P 17 54 52.6 +1.1**
baz=86
DRME Dracevica, Mon 71.40 51 *e*P **P 17 54 52.5 +0.4**

FRGS	Fruska Gora	71.43	48	⇑	*i*	P		P	17 54 52.6 +0.4
KECS	Kecovo	71.45	44		*e*	P		P	17 54 53.1 +0.8
KECS	Kecovo	71.45	44		*e*	P		P	17 54 53.1 +0.8
PBUR	Paburge	71.47	36		*e*	P		P	17 54 53.2 +1.0
DHY	Denali Highway	71.48	331			P		P	17 54 53.1 +0.8
	baz=85,SNR=11								
H24K	Noodor Dome	71.49	334			IAmb		IAmb	17 54 54.3
	comp=Z,65nm,0.9s								
H24K	Noodor Dome	71.49	334			P		P	17 54 53.1 +0.9
	baz=86								
SLIT	Slitere, Latvi	71.51	34		*e*	P		P	17 54 52.6 +0.3
C24K	Franklin Bluff	71.54	338			P		P	17 54 53.5 +1.1
	baz=86								
CCB	Clear Creek Bu	71.55	333			IAmb		IAmb	17 54 53.7
	comp=Z,42nm,0.9s								
COLA	College	71.55	333			P		P	17 54 52.7 +0.2
COLA						IAmb		IAmb	17 54 54.9
	comp=Z,57nm,0.9s								
COLA	College	71.55	333			P		P	17 54 53.0 +0.5
	baz=86								
COLA	College	71.55	333			P		P	17 54 52.7 +0.2
COLA						pmax		pmax	
	comp=Z,57nm,1.0s								
COLA	College	71.55	333			P		P	17 54 53.0 +0.5
SCM	Sheep Creek Mo	71.56	330			P		P	17 54 53.7 +1.0
	baz=85,SNR=23								
E24K	Your Creek	71.57	337			IAmb		IAmb	17 54 55.0
	comp=Z,62nm,1.0s								
E24K	Your Creek	71.57	337			P		P	17 54 53.9 +1.2
	baz=86								
D24K	Happy Valley	71.62	338			P		P	17 54 53.6 +0.7
	baz=86								
WRH	Wood River Hil	71.68	333			IAmb		IAmb	17 54 55.4
	comp=Z,39nm,0.9s								
WAT6	Susitna Watana	71.69	331			P		P	17 54 54.2 +0.6
	baz=85,SNR=30								
M23K	Glacier View	71.75	330			P		P	17 54 54.5 +0.7
	baz=85,SNR=16								
P23K	Montague Islan	71.76	328			P		P	17 54 54.7 +0.8
	baz=84								
SJES	Sjenica	71.82	50	⇑	*i*	P		P	17 54 55.0 +0.3
STHS	Stebnicka Huta	71.83	43		*e*	P		P	17 54 55.6 +1.0
STHS	Stebnicka Huta	71.83	43		*e*	P		P	17 54 55.5 +1.0
ARCES	ARCESS Array B	71.90	22			IAmb		IAmb	17 54 56.3
	comp=Z,55nm,0.9s								
ARCES	ARCESS Array B	71.90	22			P		P	17 54 54.9 +0.3
	comp=Z,41nm,0.8s,baz=263,slow=5.2,SNR=45								
ARCES						LR		LR	18 19 53.0
	comp=Z,198nm,21.7s,baz=283,slow=30								
	comp=Z,41nm,0.8s								
ARA0	ARCESS Array S	71.90	22		*e*	P		P	17 54 55.4 +0.8
ARA0						IAmb		IAmb	17 54 56.0
	comp=Z,68nm,1.0s								
TOLK	Toolik Lake Re	71.93	337			P		P	17 54 55.4 +0.5
	baz=85,SNR=20								
E23K	Chandalar	72.00	337			P		P	17 54 56.1 +0.8
	baz=85								
WAT1	Susitna Watana	72.03	331			P		P	17 54 56.3 +0.7
	baz=84								
SML	Sawmill	72.04	330			IAmb		IAmb	17 54 57.5
	comp=Z,63nm,1.3s								
SML	Sawmill	72.04	330			P		P	17 54 56.5 +0.9
	baz=84,SNR=11								
CRVS	Cervenica-Dubn	72.04	44		*e*	P		P	17 54 57.1 +1.3
CRVS						pmax		pmax	
	comp=Z,52nm,1.1s								
CRVS	Cervenica-Dubn	72.04	44		*e*	P		P	17 54 57.1 +1.3
NEA2	Nenana	72.09	333			P		P	17 54 56.3 +0.5
	baz=84,SNR=37								
RND	Reindeer	72.11	332			IAmb		IAmb	17 54 58.3
	comp=Z,52nm,0.9s								
MCK	McKinley	72.12	332			P		P	17 54 56.4 +0.4
	baz=84,SNR=15								
KNK	Knik Glacier	72.14	330			P		P	17 54 57.1 +0.9
	baz=84,SNR=6.9								
I23K	Minto, Yukon-K	72.16	334			P		P	17 54 56.6 +0.5
I23K						IAmb		IAmb	17 54 58.0
	comp=Z,66nm,0.9s								
I23K	Minto, Yukon-K	72.16	334			P		P	17 54 57.0 +0.9
	baz=84,SNR=46								
MTSE	Matsula	72.20	33		*e*	P		P	17 54 57.2 +0.7
G23K	Bananza Creek	72.28	335			IAmb		IAmb	17 54 59.1
	comp=Z,40nm,1.0s								
G23K	Bananza Creek	72.28	335			P		P	17 54 57.9 +1.0
	baz=84								
COLD	Coldfoot	72.30	336			P		P	17 54 57.9 +0.9
	baz=84,SNR=29								
GHO	Glory Hole Cre	72.32	330			IAmb		IAmb	17 54 59.3
	comp=Z,55nm,1.0s								
MEF	Metsahovi	72.33	32		*e*	P		P	17 54 57.9 +0.6
KEV	Kevo	72.41	21			P		P	17 54 57.8 +0.3
KEV						IAmb		IAmb	17 54 59.2
	comp=Z,45nm,0.9s								
KEV	Kevo	72.41	21			P		P	17 54 57.8 +0.3
KEV						pmax		pmax	
	comp=Z,45nm,0.9s								
SUW	Suwalki	72.42	38		*e*	P		P	17 54 58.4 +0.4
SUW	Suwalki	72.42	38			P		P	17 54 58.0 0.0
SUW	Suwalki	72.42	38			P		P	17 54 58.0 0.0
SUW						pmax		pmax	
	comp=Z,88nm,1.0s								
SUW	Suwalki	72.42	38		*e*	P		P	17 54 58.6 +0.7
PMR	Palmer	72.44	330			IAmb		IAmb	17 54 59.8
	comp=Z,40nm,1.1s								
PMR	Palmer	72.44	330			P		P	17 54 58.5 +0.7
	baz=83,SNR=12								
TRIS	Tristan da Cun	72.56	140			P		P	17 54 59.4 +0.5
KOLS	Kolonicke sedl	72.56	43		*e*	P		P	17 55 00.1 +1.2
KOLS						pmax		pmax	
	comp=Z,13nm,0.9s								
KOLS	Kolonicke sedl	72.56	43		*e*	P		P	17 55 00.1 +1.2
VSVD	Vaisvydziai	72.60	36		*e*	P		P	17 54 59.8 +0.9
PABE	Paberze	72.68	36			P		P	17 54 59.5 +0.1
PABE						IAmb		IAmb	17 55 01.0
	comp=Z,56nm,0.8s								
PABE	Paberze	72.68	36		*e*	P		P	17 55 00.4 +1.0
KWP	Kalwaria Pacla	72.74	43		*e*	P		P	17 55 01.4 +1.4
KWP	Kalwaria Pacla	72.74	43			IAmb		IAmb	17 55 02.5
	comp=Z,47nm,0.9s								
TRF	Thorofare Moun	72.75	332			P		P	17 55 00.9 +0.9
	baz=83,SNR=65								
MLY	Manley	72.76	334			IAmb		IAmb	17 55 01.3
	comp=Z,60nm,0.8s								
MLY	Manley	72.76	334			P		P	17 55 00.3 +0.5
	baz=83,SNR=58								
OHR	Ohrid	72.77	52		*i*	P		P	17 55 01.6 +1.3
SEW	Seward	72.77	328			P		P	17 55 00.5 +0.6
	baz=83,SNR=7.6								
RC01	Rabbit Creek A	72.79	329			P		P	17 55 00.8 +0.7
	baz=83,SNR=6.8								
E22K	Anaktuvuk Pass	72.81	337			P		P	17 55 00.1 0.0
E22K	Anaktuvuk Pass	72.81	337			P		P	17 55 00.7 +0.6
	baz=83,SNR=104								
G22K	Bettles	72.84	336			P		P	17 55 00.9 +0.7
	baz=83								
O22K	Cooper Landing	72.86	329			IAmb		IAmb	17 55 34.1
	comp=Z,50nm,0.9s								
O22K	Cooper Landing	72.86	329			P		P	17 55 01.1 +0.7
	baz=82								
CUT	Chulitna	72.87	331			P		P	17 55 01.2 +0.8
	baz=83,SNR=15								
M22K	Willow	72.89	330			P		P	17 55 01.2 +0.7
	baz=82,SNR=8.6								
H22K	Ishtalitna Cre	72.91	335			P		P	17 55 01.5 +0.8
	baz=83								
FINES	FINESS Array B	72.99	30			P		P	17 55 01.4 +0.3
	comp=Z,34nm,0.8s,baz=259,slow=3.6,SNR=129								
FINES						LR		LR	18 21 43.8
	comp=Z,443nm,21.2s,baz=275,slow=31								
	comp=Z,34nm,0.8s								
FIA1	FINESS Array S	72.99	30			P		P	17 55 01.2 0.0
D22K	Ayikyak River	73.03	338			IAmb		IAmb	17 55 03.4
	comp=Z,58nm,0.9s								
D22K	Ayikyak River	73.03	338			P		P	17 55 02.4 +1.1
	baz=82								
SKO	Skopje	73.09	51		*i*	P		P	17 55 02.7 +0.5
VADS	Vadso	73.17	21		*e*	P		P	17 55 03.1 +1.0
VADS						IAmb		IAmb	17 55 03.7
	comp=Z,82nm,1.0s								
SUA	Susitna One	73.22	330			IAmb		IAmb	17 55 04.7
	comp=Z,85nm,1.8s								
SUA	Susitna One	73.22	330			P		P	17 55 03.6 +0.9
	baz=82,SNR=5.2								
FNA	Florina	73.25	52			P		P	17 55 03.8 +0.5
FNA	Florina	73.25	52			P		P	17 55 03.8 +0.5
FNA						pmax		pmax	
	comp=Z,11nm,1.0s								
I21K	Tanana	73.26	334			P		P	17 55 03.2 +0.5
	baz=82,SNR=16								
BRSE	Bradley Lake S	73.47	328			P		P	17 55 04.8 +0.8
	baz=81,SNR=5.3								
CAPN	Captain Cook N	73.52	329			P		P	17 55 05.6 +1.3
	baz=81								
SKT	Skwentna	73.52	330			P		P	17 55 04.8 +0.4
	baz=81,SNR=10								
H21K	Melozitna Rive	73.53	334			IAmb		IAmb	17 55 06.1
	comp=Z,57nm,0.9s								
H21K	Melozitna Rive	73.53	334			P		P	17 55 04.8 +0.5
	baz=81								
BRLK	Bradley Lake	73.53	328			IAmb		IAmb	17 55 06.2
	comp=Z,36nm,1.0s								
CAST	Castle Rocks	73.56	332			IAmb		IAmb	17 55 05.7
	comp=Z,41nm,0.9s								
CAST	Castle Rocks	73.56	332			P		P	17 55 04.7 +0.2
	baz=81,SNR=26								
LVV	L'vov	73.56	42		*e*	P		P	17 55 04.7 -0.1
E21K	Killik River	73.56	337			P		P	17 55 04.5 0.0
	baz=81								
F21K	Alatna River	73.56	336			P		P	17 55 04.8 +0.3
	baz=81								
CHUM	Lake Minchumin	73.59	333			P		P	17 55 05.1 +0.4
	baz=81,SNR=20								
B21K	Ikpikpuk River	73.61	339			P		P	17 55 05.7 +1.1
	baz=81								
G21K	Allakaket	73.68	335			P		P	17 55 06.3 +1.1
	baz=81								
PPLA	Purkeypile	73.68	331			P		P	17 55 05.8 +0.4
	baz=81								
STIP	Stip	73.69	51		*i*	P		P	17 55 06.7 +0.9
C21K	Knifeblade Rid	73.74	338			P		P	17 55 06.5 +1.0
	baz=81								
VSU	Vasula	73.75	33		*ce*	P		P	17 55 05.7 0.0
VSU						pmax		pmax	
	comp=Z,91nm,0.9s								
VSU	Vasula	73.75	33		*e*	P		P	17 55 06.3 +0.6
ISAL	Salakas	73.88	36		*e*	P		P	17 55 09.0 +2.5
HOM	Homer	73.93	328			P		P	17 55 08.7 +1.9
	baz=81								
N20K	Mount Spurr	73.96	330			P		P	17 55 07.4 +0.4
	baz=81,SNR=15								
IIGN	Ignalina	73.97	36		*e*	P		P	17 55 07.2 +0.2
A21K	Barrow	73.98	340			P		P	17 55 08.1 +1.2
	baz=80								
PEHC	Pehcevo	74.20	51		*i*	P		P	17 55 10.0 +1.2
IDID	Didziasalis	74.27	36		*e*	P		P	17 55 07.5 -1.2
M20K	Styx River	74.28	331			P		P	17 55 09.2 +0.3
	baz=80								
AGG	Agios Georgios	74.30	54			P		P	17 55 09.7 +0.3
AGG	Agios Georgios	74.30	54			P		P	17 55 09.7 +0.3
AGG						pmax		pmax	
	comp=Z,13nm,1.2s								
J20K	Nowinta River	74.34	333			IAmb		IAmb	17 55 10.2
	comp=Z,34nm,0.8s								
J20K	Nowinta River	74.34	333			P		P	17 55 09.3 +0.3
	baz=80								
O20K	Slope Mountain	74.35	329			P		P	17 55 10.0 +0.8
	baz=80								
I20K	Naaghedeneel	74.37	334			IAmb		IAmb	17 56 17.2
	comp=Z,96nm,1.7s								
I20K	Naaghedeneel	74.37	334			P		P	17 55 09.9 +0.8
	baz=80								
E20K	Nigu River	74.41	337			P		P	17 55 10.3 +0.8
	baz=79,SNR=64								
H20K	Anneega Mo	74.41	334			P		P	17 55 09.9 +0.4
	baz=80								
K20K	Telida	74.45	332			IAmb		IAmb	17 55 11.0
	comp=Z,73nm,0.9s								
K20K	Telida	74.45	332			P		P	17 55 10.0 +0.2
	baz=80								
F20K	Avaraart Lake	74.46	336			P		P	17 55 10.4 +0.8
	baz=79								
D20K	Etivluk River	74.47	338			P		P	17 55 10.4 +0.6
	baz=79								
Q20K	Shuyak Island	74.49	327			P		P	17 55 11.1 +1.0
	baz=80								
L20K	Farewell, AK	74.52	331			P		P	17 55 10.3 +0.1
	baz=80,SNR=18								
BUR08	Bucovina Ar. S	74.70	44			P		P	17 55 12.2 +0.6
BUR08						IAmb		IAmb	17 55 13.9
	comp=Z,34nm,1.1s								
BURAR	Bucovina Array	74.72	44			P		P	17 55 12.3 +0.6
P19K	Oil Pt	74.73	328			P		P	17 55 12.1 +0.7
	baz=79								
KDAK	Kodiak Island	74.74	326			P		P	17 55 12.2 +0.8
	baz=79								
KDAK	Kodiak Island	74.74	326			LR		LR	18 28 00.3
	comp=Z,577nm,20.5s,baz=84,slow=36								
M19K	Big River Lodg	74.86	331			IAmb		IAmb	17 55 13.8
	comp=Z,57nm,1.2s								
M19K	Big River Lodg	74.86	331			P		P	17 55 12.7 +0.5
	baz=79								
E19K	Redstone River	74.95	337			IAmb		IAmb	17 55 14.2
	comp=Z,41nm,0.9s								
E19K	Redstone River	74.95	337			P		P	17 55 13.0 +0.5
	baz=78								
J19K	Poorman	75.01	333			P		P	17 55 12.7 -0.3
	baz=78								
L19K	White Mountain	75.02	331			IAmb		IAmb	17 55 14.3
	comp=Z,50nm,0.9s								
L19K	White Mountain	75.02	331			P		P	17 55 13.4 +0.3
	baz=79								
H19K	Roundabout Mou	75.04	335			P		P	17 55 13.5 +0.4
	baz=78								
D19K	Kuna River	75.06	338			IAmb		IAmb	17 55 14.9
	comp=Z,41nm,0.8s								
D19K	Kuna River	75.06	338			P		P	17 55 13.9 +0.7
	baz=77								
APA	Apatity	75.06	23	⇓	*i*	P		P	17 55 11.5 -1.7
APA						pmax		pmax	
	comp=Z,28nm,0.9s								
MNK	Minsk	75.07	37		*i*	P		P	17 55 13.6 +0.2
MNK					*i*	*PP		pP	17 55 25.6 +1.6
MNK					*i*				17 58 01.4
MNK					*i*	PPP		PPP	17 59 47.4
MNK					*i*	S		S	18 04 48.9 +0.4
MNK					*i*	*SS		sS	18 05 09.5 +3.8
MNK					*i*				18 05 22.3
MNK					*i*	SS		SS	18 09 41.7 +4.2
MNK						pmax		pmax	
	comp=Z,88nm,1.0s								
MNK						pmax		pmax	
	comp=E,18nm,0.9s								
MNK						pmax		pmax	
	comp=N,17nm,0.9s								
MNK						MLR		MLR	
	comp=Z,297nm,19.0s								
MNK						MLR		MLR	
	comp=E,75nm,16.0s								
MNK						MLR		MLR	
	comp=N,134nm,17.0s								
N19K	Bonanza Creek	75.12	330			P		P	17 55 14.0 +0.3
	baz=78,SNR=6.2								
O19K	Port Alsworth	75.16	329			IAmb		IAmb	17 55 15.0
	comp=Z,47nm,0.9s								
O19K	Port Alsworth	75.16	329			P		P	17 55 14.0 +0.2
	baz=78								
G19K	Purcell Mounta	75.17	335			P		P	17 55 13.9 0.0
G19K	Purcell Mounta	75.17	335			P		P	17 55 14.4 +0.5
	baz=78,SNR=21								
OHAK	Old Harbor	75.22	326			P		P	17 55 15.2 +1.0
	baz=79								
F19K	Shaleruckik Mo	75.29	336			IAmb		IAmb	17 55 16.0
	comp=Z,30nm,0.9s								
F19K	Shaleruckik Mo	75.29	336			P		P	17 55 14.9 +0.4
	baz=77								
PUL	Pulkovo	75.34	32		*ce*	P		P	17 55 14.8 -0.1
PUL						pmax		pmax	
	comp=Z,37nm,0.5s								
GCSA	Galena City Sc	75.39	334			P		P	17 55 15.6 +0.6
	baz=78								
TTA	Tatalina	75.40	332			P		P	17 55 15.1 -0.2
	baz=78,SNR=7.5								
C19K	Lookout Ridge	75.44	338			P		P	17 55 16.5 +1.1
	baz=76								
LVZ	Lovozero	75.45	23		*ce*	P		P	17 55 15.3 -0.2
LVZ						pmax		pmax	
	comp=Z,29nm,0.9s								
SVW2	Sparrevohn	75.58	330			IAmb		IAmb	17 55 17.4
	comp=Z,32nm,0.9s								
J18K	Innoko River	75.59	332			IAmb		IAmb	17 55 55.4
	comp=Z,68nm,2.0s								
J18K	Innoko River	75.59	332			P		P	17 55 16.6 +0.2
	baz=77								
M18K	Stony River	75.61	330			P		P	17 55 16.9 +0.4
	baz=78								
MLR	Muntele Rosu	75.63	47			P		P	17 55 17.2 +0.1
MLR	Muntele Rosu	75.63	47			P		P	17 55 17.2 +0.1
MLR						pmax		pmax	
	comp=Z,129nm,1.4s								
MLR	Muntele Rosu	75.63	47			LR		LR	18 24 18.3
	comp=Z,279nm,20.6s,baz=274,slow=32								
O18K	Koktuh Hills	75.67	329			P		P	17 55 17.2 +0.4
	baz=78,SNR=5.2								
P18K	Big Mountain,	75.78	328			P		P	17 55 17.6 +0.1
	baz=78								
N18K	Kilae Creek	75.82	330			P		P	17 55 17.9 +0.2
	baz=77								
SII	Sitkinak Islan	75.83	325			P		P	17 55 18.4 +0.5
	baz=78								
G18K	Tagagawik	75.85	335			P		P	17 55 18.2 +0.4
	baz=78								
L18K	Granite Mounta	75.86	331			P		P	17 55 18.0 +0.2
	baz=77								
H18K	Honhosa River	75.91	334			P		P	17 55 19.1 +1.0
	baz=76								
F18K	Selawik	76.07	336			P		P	17 55 19.5 +0.6
	baz=76,SNR=23								
C18K	Utukok River	76.12	338			P		P	17 55 20.1 +0.8
	baz=75								
B18K	Kokolik River	76.14	339			P		P	17 55 20.6 +1.3
	baz=74								
E18K	Tukpahlearik C	76.22	337			P		P	17 55 20.4 +0.6
	baz=75								
RDO	Rodhopi	76.27	51			P		P	17 55 20.4 -0.1
Q17K	Contact Creek	76.36	327			P		P	17 55 22.4 +1.4
	baz=77								
M17K	Holitna River	76.39	330			P		P	17 55 22.2 +1.3
	baz=76								
P17K	Kvichak River	76.42	328			P		P	17 55 21.5 +0.4
	baz=76								
K17K	Iditarod	76.47	332			IAmb		IAmb	17 55 23.1
	comp=Z,54nm,0.8s								
K17K	Iditarod	76.47	332			P		P	17 55 21.9 +0.6
	baz=76								
H17K	Granite Mounta	76.60	334			IAmb		IAmb	17 55 24.1
	comp=Z,29nm,0.9s								
H17K	Granite Mounta	76.60	334			P		P	17 55 22.8 +0.8
	baz=75,SNR=14								
L17K	Donlin	76.61	331			P		P	17 55 22.8 +0.7
	baz=76								
O17K	Koliganek Bris	76.61	329			P		P	17 55 22.6 +0.4
	baz=76								
KIEV	Kiev	76.65	41			P		P	17 55 21.8 -0.7
KIEV	Kiev	76.65	41			P		P	17 55 21.8 -0.7
KIEV						pmax		pmax	
	comp=Z,35nm,1.4s								
AKASG	Malin Array Be	76.66	41			P		P	17 55 22.1 -0.5
AKASG	Malin Array Be	76.66	41			P		P	17 55 22.1 -0.5
AKASG						pmax		pmax	
	comp=Z,13nm,1.1s								
AKASG	Malin Array Be	76.66	41			P		P	17 55 22.6 0.0
	comp=Z,9.7nm,0.8s,baz=271,slow=5.2,SNR=25								
AKASG						LR		LR	18 26 30.4
	comp=Z,352nm,19.4s,baz=279,slow=34								
	comp=Z,9.7nm,0.8s								
AKBB	Malin Array Si	76.66	41			P		P	17 55 22.0 -0.6
AKBB						IAmb		IAmb	17 55 23.8
	comp=Z,42nm,1.4s								
AKBB	Malin Array Si	76.66	41		*ce*	P		P	17 55 22.7 +0.1
AKBB						pmax		pmax	
	comp=Z,31nm,1.3s								
ALN	Alexandroupoli	76.70	51			P		P	17 55 22.5 -0.5
ALN	Alexandroupoli	76.70	51			P		P	17 55 22.5 -0.5
ALN						pmax		pmax	
	comp=Z,20nm,1.1s								
F17K	Baldwin Pennin	76.73	336			IAmb		IAmb	17 55 25.3
	comp=Z,65nm,1.9s								
F17K	Baldwin Pennin	76.73	336			P		P	17 55 23.2 +0.5
	baz=74,SNR=5.6								
G17K	Kiwalik Mounta	76.75	335			P		P	17 55 23.8 +1.0
	baz=74								
E17K	Hotham Inlet	76.77	337			P		P	17 55 23.7 +0.8
	baz=74,SNR=52								
C17K	DeLong Mountai	76.86	338			P		P	17 55 24.4 +0.9
	baz=73								
RDOG	Red Dog Mine	76.89	338			P		P	17 55 24.4 +0.8
	baz=73								
IDI	Anoyia	77.11	57			LR		LR	18 29 10.6
	comp=Z,25nm,18.3s,baz=287,slow=36								
O16K	Kokuk River B	77.15	329			P		P	17 55 25.5 +0.3
	baz=75								
APE	Apeiranthos	77.19	55		*i*	P		P	17 55 24.9 -1.1
APE						pmax		pmax	
	comp=Z,9.0nm,1.1s								
M16K	Timber Creek	77.20	330			IAmb		IAmb	17 55 27.8
	comp=Z,25nm,0.8s								
M16K	Timber Creek	77.20	330			P		P	17 55 26.9 +1.4
	baz=75								
I17K	Unalakleet	77.21	333			IAmb		IAmb	17 55 27.8
	comp=Z,31nm,0.8s								
I17K	Unalakleet	77.21	333			P		P	17 55 26.6 +1.2
	baz=74,SNR=11								
P16K	Nushagak River	77.24	328			P		P	17 55 26.2 +0.6
	baz=75								
N16K	Nishlik Lake	77.25	330			P		P	17 55 27.1 +1.3
	baz=75								
L16K	Owhat River	77.26	331			IAmb		IAmb	17 55 28.5
	comp=Z,29nm,1.0s								
L16K	Owhat River	77.26	331			P		P	17 55 27.0 +1.2
	baz=74								
MILM	Milestii Mici	77.26	45		*i*	P		P	17 55 25.0 -1.1
	comp=Z,110nm,1.3s								
J16K	Anvik River	77.33	333			P		P	17 55 27.7 +1.5
	baz=74								
G16K	Koyuk River	77.47	335			IAmb		IAmb	17 55 29.1
	comp=Z,39nm,0.8s								
G16K	Koyuk River	77.47	335			P		P	17 55 28.0 +1.2
	baz=73								
TIRR	Tirgusor	77.57	47			P		P	17 55 27.5 -0.4
TIRR						IAmb		IAmb	17 55 49.9
	comp=Z,36nm,0.9s								
TIRR	Tirgusor	77.57	47			P		P	17 55 27.5 -0.4
TIRR						pmax		pmax	
	comp=Z,36nm,0.9s								
H16K	Elim	77.64	334			P		P	17 55 28.9 +1.1
	baz=73,SNR=14								
C16K	Lisburne Hills	77.69	338			IAmb		IAmb	17 55 30.3
	comp=Z,52nm,1.2s								
C16K	Lisburne Hills	77.69	338			P		P	17 55 29.1 +1.0
	baz=71,SNR=24								
N15K	Kwethluk River	77.97	330			P		P	17 55 31.1 +1.3
	baz=74								
K15K	Wolf

TNA	**Tin City**	**79.60**	**336**	P	**P**	**17 55 40.5**	**+1.9**			
	baz=68,SNR=28									
OBN	**Obninsk**	**79.78**	**35**	P	**P**	**17 55 39.6**	**-0.2**			
OBN	**Obninsk**	**79.78**	**35**	*ce*P	**P**	**17 55 40.0**	**+0.2**			
OBN				*e*		17 55 48.4				
OBN				pmax	pmax					
	comp=Z,68nm,1.0s									
OBN	**Obninsk**	**79.78**	**35**	LR	LR	18 26 46.9				
	comp=Z,293nm,21.3s,baz=336,slow=33									
MOS	**Moscow**	**80.16**	**34**	*e*P	**P**	**17 55 41.8**	**0.0**			
MOS				*e*		17 55 50.5				
MOS				*e*		17 58 38.9				
MOS				pmax	pmax					
	comp=Z,39nm,0.8s									
ELL	**Elmali**	**80.67**	**54**	P	**P**	**17 55 45.0**	**-0.1**			
ELL	**Elmali**	**80.67**	**54**	P	**P**	**17 55 45.0**	**-0.1**			
ELL				pmax	pmax					
	comp=Z,126nm,1.0s									
M11K	**Mekoryuk**	**80.78**	**331**	P	**P**	**17 55 47.1**	**+2.1**			
	baz=69									
SIM	**Simferopol'**	**81.36**	**46**	*e*P	**P**	**17 55 49.6**	**+1.1**			
SIM				pmax	pmax					
	comp=Z,40nm,1.2s									
GAMB	**Gambell**	**81.81**	**335**	P	**P**	**17 55 52.1**	**+1.7**			
	baz=64									
LPSR	**Galich'ya Gora**	**81.92**	**37**	*e*P	**P**	**17 55 49.3**	**-1.9**			
LPSR				pmax	pmax					
	comp=Z,60nm,0.9s									
ANTO	**Ankara**	**81.94**	**51**	P	**P**	**17 55 50.9**	**-0.9**			
ANTO				IAmb	IAmb	17 56 14.6				
	comp=Z,27nm,0.9s									
ANTO	**Ankara**	**81.94**	**51**	P	**P**	**17 55 50.9**	**-0.9**			
ANTO				pmax	pmax					
	comp=Z,27nm,1.0s									
VORR	**Voronezh**	**82.40**	**38**	*e*P	**P**	**17 55 54.2**	**+0.4**			
VORR				pmax	pmax					
	comp=Z,65nm,1.2s									
VSR	**Storozhevoye**	**82.53**	**38**	*e*P	**P**	**17 55 53.0**	**-1.5**			
VSR				*e**SP	**pwP**	**17 56 13.9**	**+1.3**			
VSR				pmax	pmax					
	comp=Z,20nm,1.0s									
BR131	**Keskin Array S**	**82.61**	**51**	P	**P**	**17 55 54.4**	**-0.9**			
BR131	**Keskin Array S**	**82.61**	**51**	*i* P	**P**	**17 55 55.3**	**0.0**			
BRTR	**Keskin Array B**	**82.61**	**51**	P	**P**	**17 55 55.3**	**0.0**			
	comp=Z,7.6nm,0.9s,baz=273,slow=4.7,SNR=33									
BRTR				PKKPbc	**PKKPbc**	**18 14 20.9**	**+0.2**			
	comp=Z,0.7nm,0.7s,baz=150,slow=10.0,SNR=4.4									
BRTR				LR	LR	18 29 52.4				
	comp=Z,165nm,20.7s,baz=294,slow=34									
	comp=Z,7.6nm,0.9s									
VORD	**Divnogorie**	**82.70**	**39**	*e*P	**P**	**17 55 53.9**	**-1.4**			
VORD				*e**SP	**pwP**	**17 56 14.7**	**+1.2**			
VORD				pmax	pmax					
	comp=Z,30nm,1.0s									
PMSA	**Palmer Station**	**83.11**	**181**	LR	LR	18 36 51.7				
	comp=Z,190nm,18.2s,baz=303,slow=39									
PMSA	**Palmer Station**	**83.11**	**181**	*e*P	**P**	**17 55 58.8**	**+1.9**			
UNV	**Unalaska Valle**	**83.37**	**325**	P	**P**	**17 56 00.3**	**+1.5**			
	baz=68									
ANN	**Anapa**	**83.64**	**45**	*e*P	**P**	**17 55 58.5**	**-1.8**			
ANN				*e**PP	**pP**	**17 56 11.0**	**+0.1**			
ANN				*e*S	**S**	**18 06 16.8**	**-2.9**			
ANN				pmax	pmax					
	comp=Z,58nm,1.3s									
VRH	**Novokhopyorsk**	**84.04**	**38**	*e*P	**P**	**17 56 00.6**	**-1.6**			
VRH				pmax	pmax					
	comp=Z,30nm,1.0s									
KIRV	**Kirov**	**84.96**	**29**	*ce*P	**P**	**17 56 06.9**	**+0.2**			
KIRV	**Kirov**	**84.96**	**29**	LR	LR	18 30 46.9				
	comp=Z,194nm,19.6s,baz=302,slow=33									
NIKH	**Nikolski High**	**85.01**	**324**	P	**P**	**17 56 08.2**	**+1.1**			
	baz=66									
ERBR	**Yeremizino-Bor**	**85.33**	**43**	*e*P	**P**	**17 56 09.6**	**+0.7**			
ERBR				*e**PP	**pP**	**17 56 19.1**	**-0.4**			
ERBR				*e*S	**SKSac**	**18 06 29.6**	**-1.2**			
ERBR				pmax	pmax					
	comp=Z,60nm,1.2s									
ERBR				MLR	MLR					
	comp=Z,261nm,7.0s									
LABN	**Labinsk**	**85.89**	**44**	*e*P	**P**	**17 56 10.5**	**-1.2**			
LABN				pmax	pmax					
	comp=Z,32nm,0.6s									
MMAI	**Mount Meron Ar**	**86.11**	**57**	P	**P**	**17 56 12.8**	**-0.3**			
	comp=Z,8.9nm,0.9s,baz=338,slow=3.6,SNR=13									
MMAI				PKKPbc	**PKKPbc**	**18 14 13.6**	**+1.3**			
	comp=Z,1.0nm,0.9s,baz=52,slow=1.4,SNR=3.5									
MMAI				LR	LR	18 31 42.3				
	comp=Z,64nm,21.5s,baz=259,slow=34									
	comp=Z,8.9nm,0.9s									
ARPR	**Arapgir-MALATY**	**86.25**	**50**	IAmb	IAmb	17 56 37.8				
	comp=Z,46nm,1.1s									
SMAI	**San Martin Ant**	**86.55**	**182**	P	**P**	**17 56 15.8**	**+1.6**			
TSUM	**Tsumeb**	**86.73**	**111**	P	**P**	**17 56 16.3**	**-0.1**			
TSUM				IAmb	IAmb	17 56 18.2				
	comp=Z,30nm,1.2s									
TSUM	**Tsumeb**	**86.73**	**111**	LR	LR	18 26 58.9				
	comp=Z,351nm,21.5s,baz=325,slow=30									
BILL	**Bilibino**	**86.75**	**344**	P	**P**	**17 56 16.0**	**+0.5**			
BILL	**Bilibino**	**86.75**	**344**	*e*P	**P**	**17 56 15.7**	**+0.2**			
EIL	**Elat**	**86.85**	**60**	LR	LR	18 33 19.7				
	comp=Z,184nm,21.1s,baz=256,slow=34									
BELG	**Belogornoye**	**86.88**	**35**	*i* P	**P**	**17 56 14.7**	**-1.7**			
BELG				pmax	pmax					
	comp=Z,12nm,1.1s									
BELG	**Belogornoye**	**86.88**	**35**	LR	LR	18 30 37.7				
	comp=Z,414nm,21.8s,baz=312,slow=32									
POHA	**Pohakuloa**	**86.97**	**290**	P	**P**	**17 56 17.8**	**0.0**			
KIV	**Kislovodsk**	**87.45**	**44**	P	**P**	**17 56 19.9**	**+0.5**			
KIV				IAmb	IAmb	17 56 43.4				
	comp=Z,39nm,1.1s									
KIV	**Kislovodsk**	**87.45**	**44**	*e*P	**P**	**17 56 19.7**	**+0.2**			
KIV				pmax	pmax					
	comp=Z,23nm,1.1s									
WIN	**Windhoek**	**87.51**	**115**	P	**P**	**17 56 20.6**	**+0.4**			
WIN				IAmb	IAmb	17 56 22.0				
	comp=Z,62nm,1.5s									
WIN	**Windhoek**	**87.51**	**115**	P	**P**	**17 56 20.6**	**+0.4**			
WIN				pmax	pmax					
	comp=Z,62nm,1.5s									
SHA1	**Shidzhatmaz**	**87.52**	**45**	*i* P	**P**	**17 56 19.9**	**-0.1**			
KBZ	**Khabaz**	**87.68**	**44**	*ce*P	**P**	**17 56 19.8**	**-0.6**			
KBZ				pmax	pmax					
	comp=Z,12nm,0.9s									
KBZ	**Khabaz**	**87.68**	**44**	P	**P**	**17 56 20.7**	**+0.3**			
	comp=Z,11nm,0.9s,baz=280,slow=1.3,SNR=14									
KBZ				LR	LR	18 33 37.0				
	comp=Z,78nm,20.5s,baz=324,slow=34									
	comp=Z,11nm,0.9s									
NEUR	**Neytrino**	**87.73**	**45**	*i* P	**P**	**17 56 20.9**	**-0.1**			
ONI	**Oni**	**88.51**	**45**	IAmb	IAmb	17 56 26.8				
	comp=Z,31nm,1.1s									
ZEI	**Tsey**	**88.73**	**45**	*e*P	**P**	**17 56 25.9**	**+0.2**			
ZEI				pmax	pmax					
	comp=Z,17nm,1.0s									
AKH	**Akhalkalaki**	**89.02**	**46**	P	**P**	**17 56 27.5**	**+0.4**			
AKH	**Akhalkalaki**	**89.02**	**46**	P	**P**	**17 56 27.5**	**+0.4**			
AKH				pmax	pmax					
	comp=Z,78nm,0.9s									
GURO	**Guroymak-BITLI**	**89.13**	**50**	P	**P**	**17 56 28.5**	**+0.9**			
NRIK	**Noril'sk**	**89.67**	**10**	*ce*P	**P**	**17 56 29.5**	**+0.2**			
NRIK				pmax	pmax					
	comp=Z,7.0nm,1.1s									
NRIK	**Noril'sk**	**89.67**	**10**	P	**P**	**17 56 29.1**	**-0.2**			
	comp=Z,2.4nm,0.5s,baz=337,slow=3.9,SNR=9.2									
NRIK				LR	LR	18 35 40.3				
	comp=Z,261nm,22.0s,baz=340,slow=35									
	comp=Z,2.4nm,0.5s									
TIXI	**Tiksi**	**89.68**	**357**	P	**P**	**17 56 29.3**	**+0.1**			
TIXI	**Tiksi**	**89.68**	**357**	*ce*P	**P**	**17 56 28.6**	**-0.7**			
TIXI				pmax	pmax					
	comp=Z,33nm,1.0s									
ARU	**Arti**	**90.29**	**29**	P	**P**	**17 56 32.4**	**0.0**			
ARU				IAmb	IAmb	17 56 34.3				
	comp=Z,40nm,1.5s									
ARU	**Arti**	**90.29**	**29**	*c i*P	**P**	**17 56 33.1**	**+0.6**			
ARU						18 00 08.3				
ARU				S	**SKSac**	**18 07 00.8**	**+0.4**			
ARU				SP	**SPn**	**18 08 25.4**	**-3.8**			
ARU				pmax	pmax					
	comp=Z,27nm,1.4s									
ARU	**Arti**	**90.29**	**29**	LR	LR	18 32 00.3				
	comp=Z,210nm,21.9s,baz=302,slow=32									
GNI	**Garni**	**90.40**	**47**	P	**P**	**17 56 33.5**	**-0.1**			
GNI	**Garni**	**90.40**	**47**	*ce*P	**P**	**17 56 33.7**	**+0.2**			
GNI				pmax	pmax					
	comp=Z,21nm,1.0s									
GNI	**Garni**	**90.40**	**47**	LR	LR	18 36 40.7				
	comp=Z,81nm,19.9s,baz=315,slow=35									
SVE	**Sverdlovsk**	**90.98**	**28**	*e*P	**P**	**17 56 36.4**	**+0.7**			
SVE				pmax	pmax					
	comp=Z,19nm,1.1s									
MBAR	**Mbarara**	**92.87**	**90**	LR	LR	18 35 25.7				
	comp=Z,253nm,20.5s,baz=286,slow=34									
PPT	**Papeete**	**93.17**	**253**	LR	LR	18 31 04.3				
	comp=Z,61nm,20.9s,baz=186,slow=31									
PPT2	**Papeete2**	**93.18**	**253**	*e*P	**P**	**17 56 48.8**	**+2.2**			
	comp=Z,101nm,42.5s									
PPT2	**Papeete2**	**93.18**	**253**	*e*S	**S**	**18 07 48.3**	**-2.8**			
	comp=Z,112nm,32.0s									
PPT2	**Papeete2**	**93.18**	**253**	*e*LR	LR	18 26 55.4				
	comp=Z,278nm,26.0s									
PPT2				*e*LR	LR	18 27 01.4				
	comp=Z,176nm,25.5s									
SHEM	**Shemya Is, Ala**	**93.98**	**330**	LR	LR	18 38 58.6				
	comp=Z,358nm,21.4s,baz=109,slow=35									
SUR	**Sutherland**	**94.00**	**123**	LR	LR	18 31 20.0				
	comp=Z,185nm,20.9s,baz=328,slow=31									
SEY	**Seymchan**	**94.35**	**345**	*ce*P	**P**	**17 56 50.7**	**-0.4**			
SEY				pmax	pmax					
	comp=Z,23nm,1.1s									
SEY	**Seymchan**	**94.35**	**345**	LR	LR	18 41 44.9				
	comp=Z,361nm,19.8s,baz=12,slow=37									
LSZ	**Lusaka**	**95.02**	**104**	P	**P**	**17 56 55.2**	**+0.1**			
LSZ	**Lusaka**	**95.02**	**104**	P	**P**	**17 56 55.3**	**+0.1**			
LSZ				pmax	pmax					
	comp=Z,9.0nm,1.0s									
LSZ	**Lusaka**	**95.02**	**104**	LR	LR	18 33 38.1				
	comp=Z,163nm,18.7s,baz=310,slow=32									
ABKAR	**Akbulak array**	**95.18**	**34**	P	**P**	**17 56 54.7**	**-0.5**			
LBTB	**Lobatse**	**95.66**	**114**	LR	LR	18 34 10.0				
	comp=Z,155nm,19.0s,baz=294,slow=32									
BOSA	**Boshof**	**96.45**	**118**	P	**P**	**17 57 01.1**	**-0.4**			
	comp=Z,3.1nm,0.7s,baz=281,slow=1.9,SNR=6.7									
BOSA				LR	LR	18 35 19.5				
	comp=Z,72nm,18.5s,baz=326,slow=32									
	comp=Z,3.1nm,0.7s									
MA2	**Magadan**	**97.62**	**344**	LR	LR	18 44 22.0				
	comp=Z,183nm,19.7s,baz=46,slow=37									
BRVK	**Borovoye**	**97.65**	**27**	P	**P**	**17 57 06.2**	**-0.1**			
BRVK	**Borovoye**	**97.65**	**27**	*ce*P	Pdif	17 57 06.4	0.0			
BRVK				pmax	pmax					
	comp=Z,4.0nm,1.0s									
BVAR	**Borovoye Array**	**97.72**	**27**	P	**P**	**17 57 06.2**	**-0.4**			
	comp=Z,2.4nm,0.8s,baz=300,slow=4.1,SNR=15									
BVAR				PKKPbc	**PKKPbc**	**18 13 41.2**	**-2.1**			
	comp=Z,2.0nm,0.7s,baz=151,slow=3.4,SNR=11									
BVAR				LR	LR	18 36 59.3				
	comp=Z,280nm,21.6s,baz=309,slow=33									
	comp=Z,2.4nm,0.8s									
SNAA	**Sanae**	**98.47**	**164**	P	**P**	**17 57 08.7**	**-0.7**			
	comp=Z,3.0nm,0.8s,baz=297,slow=10,SNR=3.9									
	comp=Z,3.0nm,0.8s									
YAK	**Yakutsk**	**99.11**	**354**	P	**Pdif**	**17 57 12.3**	**-0.3**			
YAK				IAmb	IAmb	17 57 14.3				
	comp=Z,16nm,1.1s									
YAK	**Yakutsk**	**99.11**	**354**	*e*P	**Pdif**	**17 57 12.6**	**0.0**			
YAK				*e*		18 01 14.1				
YAK				*e*S	**SKSac**	**18 07 50.8**	**+3.3**			
YAK				*e*SS	**SS**	**18 15 23.2**	**-4.1**			
YAK				*e*SSS	SSS	18 19 17.3				
YAK				pmax	pmax					
	comp=Z,17nm,1.5s									
YAK				pmax	pmax					
	comp=N,5.0nm,1.5s									
YAK				pmax	pmax					
	comp=E,2.0nm,1.5s									
YAK				pmax	pmax					
	comp=Z,106nm,5.8s									
YAK				pmax	pmax					
	comp=N,122nm,5.7s									
YAK				pmax	pmax					
	comp=E,133nm,6.4s									
YAK				smax	smax					
	comp=E,69nm,4.8s									
YAK				smax	smax					
	comp=N,49nm,4.6s									
YAK				MLR	MLR					
	comp=Z,252nm,17.0s									
YAK				MLR	MLR					
	comp=N,148nm,16.0s									
YAK				MLR	MLR					
	comp=E,55nm,24.0s									
YAK	**Yakutsk**	**99.11**	**354**	LR	LR	18 42 49.4				
	comp=E,281nm,20.2s,baz=338,slow=36									
GEYT	**Alibeck**	**100.57**	**44**	PKKPbc	PKKPbc	18 13 34.6	-0.3			
	comp=E,1.6nm,0.8s,baz=155,slow=4.9,SNR=3.8									
KURK	**Kurchatov**	**102.83**	**24**	*i* P	**Pdif**	**17 57 28.6**	**-0.8**			
KURK				pmax	pmax					
	comp=Z,1.0nm,1.0s									
KURBB	**Kurchatov Arra**	**102.87**	**24**	P	**Pdif**	**17 57 28.2**	**-1.4**			
	comp=Z,0.6nm,0.7s,baz=318,slow=5.0,SNR=5.7									
KURBB				PKKPbc	**PKKPbc**	**18 13 25.5**	**-3.2**			
	comp=Z,1.0nm,0.6s,baz=131,slow=2.5,SNR=9.3									
ELIB	**Princess Elisa**	**106.12**	**161**	*d*PKP	**PKiKP**	**18 02 01.4**	**+6.2**			
MKAR	**Makanchi Array**	**107.43**	**25**	PKKPbc	PKKPbc	18 13 12.9	-2.0			
	comp=Z,2.5nm,0.8s,baz=116,slow=5.5,SNR=18									
MKAR				PKKP	**PKKPdf**	**18 13 27.1**	**+0.2**			
	comp=Z,1.1nm,0.8s,baz=129,slow=5.4,SNR=4.9									
QSPA	**South Pole Qui**	**108.54**	**180**	PKKPbc	PKKPbc	18 13 09.3	-3.4			
	comp=Z,2.0nm,1.1s,baz=160,slow=2.7,SNR=3.5									
WMQ	**Urumqi**	**112.00**	**23**	*e*PKP	**PKiKP**	**18 02 05.4**	**-1.7**			
WMQ				LR	LR					
	comp=Z,220nm,24.0s									
SONM	**Songino Array**	**113.08**	**8**	PKiKP	**PKiKP**	**18 02 09.0**	**-0.1**			
	comp=Z,1.1nm,0.7s,baz=306,slow=1.5,SNR=7.7									
SONM				PKKPbc	**PKKPbc**	**18 12 53.6**	**-3.2**			
	comp=Z,1.1nm,0.8s,baz=180,slow=2.6,SNR=5.6									
MDJ	**Mudanjiang**	**116.20**	**351**	PKP	**PKPdf**	**18 02 15.4**	**+0.4**			
MDJ				AMB	AMB					
	comp=Z,79nm,5.5s									
XLT	**XiLinHaoTe**	**117.79**	**1**	*e*PKP	**PKPdf**	**18 02 14.7**	**-3.6**			
XLT				AMB	AMB					
	comp=Z,100nm,14.0s									
XLT				LR	LR					
	comp=Z,47nm,13.6s									
XLT				LR	LR					
	comp=Z,370nm,12.8s									
XLT				LR	LR					
	comp=Z,580nm,12.3s									
GTA	**Gaotai**	**119.87**	**16**	PKP	**PKiKP**	**18 02 22.6**	**+0.1**			
MAW	**Mawson**	**120.06**	**159**	PKP	**PKPdf**	**18 02 21.1**	**-0.5**			
	comp=Z,10nm,0.8s,baz=299,slow=8.6,SNR=4.7									
HHC	**Hu-ho-hao-te**	**120.57**	**6**	*e*PKP	**PKiKP**	**18 02 24.1**	**+0.3**			
HHC				PP	**PP**	**18 03 49.5**	**-0.2**			
HHC				SS	SS	18 20 16.8	+1.2			
HHC				LR	LR					
	comp=Z,210nm,17.7s									
HHC				LR	LR					
	comp=Z,260nm,16.2s									
HHC				LR	LR					
	comp=Z,380nm,18.6s									
BTO	**Baotou**	**120.65**	**7**	*e*PKP	**PKPdf**	**18 02 16.5**	**-7.4**			
BTO				PP	**PP**	**18 03 46.4**	**-3.9**			
BTO	**Baotou**	**120.65**	**7**	SS	SS	18 20 05.7	-11			
BTO				pmax	pmax					
	comp=Z,8.0nm,0.9s									
BTO				pmax	pmax					
	comp=Z,200nm,8.8s									
BTO				LR	LR					
	comp=N,3μm,11.9s									
BTO				LR	LR					
	comp=E,2μm,10.6s									
BTO				LR	LR					
	comp=Z,4μm,10.5s									
BJI	**Beijing**	**121.65**	**2**	PKP	**PKPdf**	**18 02 25.2**	**-0.4**			
BJI				LR	LR					
	comp=Z,290nm,11.8s									
BJI				LR	LR					
	comp=Z,170nm,12.7s									
BJI				LR	LR					
	comp=Z,440nm,12.6s									
MJB9	**Matsu-Tunnel**	**121.90**	**341**		**PKPdf**	**18 02 25.5**	**-0.8**			
MAJO	**Matsushiro**	**121.90**	**341**		**PKPdf**	**18 02 24.9**	**-1.4**			
MAJO	**Matsushiro**	**121.90**	**341**	PKIKP	**PKPdf**	**18 02 24.9**	**-1.4**			
MJAR	**Matsushiro Arr**	**121.90**	**341**	PKP	**PKPdf**	**18 02 25.7**	**-0.6**			
	comp=Z,4.6nm,0.6s,baz=83,slow=1.4,SNR=17									
KSRS	**Korea Array**	**123.46**	**350**	PKP	**PKPdf**	**18 02 28.6**	**-0.5**			
	comp=Z,2.6nm,0.6s,baz=58,slow=2.7,SNR=9.0									
LZH	**Lanzhou**	**124.01**	**14**	*e*PKP	**PKiKP**	**18 02 31.3**	**+0.5**			
LSA	**Lhasa**	**125.49**	**29**		**PKPdf**	**18 02 33.7**	**-0.2**			
LSA	**Lhasa**	**125.49**	**29**	PKIKP	**PKPdf**	**18 02 33.7**	**-0.2**			
XAN	**Xi'an**	**126.97**	**9**	PKP	**PKPdf**	**18 02 36.3**	**+0.2**			
TUWZ	**Tuamarina**	**127.40**	**232**		**PKPdf**	**18 02 36.6**	**+0.1**			
CD2	**Chengdu**	**128.94**	**16**	PKP	**PKPdf**	**18 02 40.0**	**0.0**			
INZ	**Inchbonnie**	**129.02**	**230**		**PKPdf**	**18 02 39.4**	**-0.2**			
RPZ	**Rata Peaks**	**129.10**	**228**	PKPdf	**PKPdf**	**18 02 39.1**	**-0.6**			
NJ2	**Nanjing**	**129.64**	**359**	*e*PKP	**PKPdf**	**18 02 41.2**	**0.0**			
FOZ	**Fox Glacier**	**130.02**	**228**		**PKPdf**	**18 02 40.9**	**-0.5**			
WHZ	**Wether Hill Ro**	**130.71**	**225**		**PKPdf**	**18 02 42.6**	**-0.1**			
ENH	**Enshi**	**130.75**	**10**		**PKPdf**	**18 02 42.1**	**-1.3**			
WHN	**Wuhan**	**131.03**	**4**	⇓PKP	**PKPdf**	**18 02 43.8**	**0.0**			
PZH	**PanZhiHua**	**132.50**	**20**	PKP	**PKPdf**	**18 02 46.7**	**-0.2**			
GYA	**Guiyang**	**133.91**	**14**	⇓PKP	**PKPdf**	**18 02 49.9**	**+0.3**			
GYA				AMB	AMB					
	comp=Z,160nm,3.9s									
GYA				LR	LR					
	comp=Z,160nm,8.6s									
GYA				LR	LR					
	comp=Z,160nm,4.2s									
GYA				LR	LR					
	comp=Z,320nm,11.4s									
KMI	**Kunming**	**134.11**	**19**	⇓PKP	**PKPdf**	**18 02 49.3**	**-0.8**			
KMI				LR	LR					
	comp=Z,240nm,24.1s									
KMI				LR	LR					
	comp=Z,190nm,19.7s									
KMI				LR	LR					
	comp=Z,240nm,19.3s									
PALK	**Pallekele**	**135.20**	**58**	PKPdf	**PKPdf**	**18 02 51.7**	**-0.5**			
PALK	**Pallekele**	**135.20**	**58**	PKIKP	**PKPdf**	**18 02 51.7**	**-0.5**			
CHTO	**Chiang Mai**	**138.42**	**28**	PKPdf	**PKPdf**	**18 02 56.1**	**-1.9**			
CHTO	**Chiang Mai**	**138.42**	**28**	PKIKP	**PKPdf**	**18 02 56.1**	**-1.9**			
CMAR	**Chiang Mai Arr**	**138.74**	**28**	PKPdf	**PKPdf**	**18 02 56.2**	**-2.3**			
CMAR	**Chiang Mai Arr**	**138.74**	**28**	PKIKP	**PKPdf**	**18 02 56.2**	**-2.3**			
CMAR	**Chiang Mai Arr**	**138.74**	**28**	PKhKP	PKPpre	18 02 48.5				
	comp=Z,0.8nm,0.7s,baz=315,slow=4.1,SNR=7.3									
CMAR				PKP	**PKPdf**	**18 02 57.8**	**-0.8**			
	comp=Z,6.7nm,0.8s,baz=305,slow=2.3,SNR=26									
RABL	**Rabaul**	**143.60**	**289**		PKPab	18 03 04.2	+0.2			
ARMA	**Armidale**	**147.26**	**242**	PKPdf	**PKPdf**	**18 03 13.0**	**-0.3**			
TGY	**Tagaytay City**	**147.38**	**355**	PKPbc	**PKPdf**	**18 03 14.4**	**+0.5**			
	comp=Z,303nm,0.7s,baz=282,slow=2.2,SNR=5.6									
CAN	**Canberra**	**147.84**	**233**	PKPdf	**PKPdf**	**18 03 14.2**	**+0.2**			
CAN	**Canberra**	**147.84**	**233**	PKIKP	**PKPdf**	**18 03 14.3**	**+0.2**			
DLV	**T Lat**	**148.27**	**18**		**PKPdf**	**18 03 16.8**	**+1.3**			
TOO	**Toolangi**	**149.36**	**226**	PKPdf	**PKPdf**	**18 03 16.9**	**+0.5**			
TOO	**Toolangi**	**149.36**	**226**	PKHKP	PKPpre	18 03 16.9				
PMG	**Port Moresby**	**150.23**	**284**	*c i* PKIKP	**PKiKP**	**18 03 25.3**	**+0.9**			
PMG				pmax	pmax					
	comp=Z,214nm,2.5s									
PMG	**Port Moresby**	**150.23**	**284**	PKPbc	**PKiKP**	**18 03 24.0**	**-0.4**			
	comp=Z,98nm,1.1s,baz=34,slow=5.4,SNR=12									
PSI	**Prapat**	**151.69**	**43**	PKIKP	**PKPdf**	**18 03 19.4**	**-1.5**			
PSI						18 03 26.1				
RPSI	**Rantau Prapat**	**151.77**	**43**		**PKPdf**	**18 03 19.4**	**-1.5**			
RPSI					**PKPbc**	**18 03 26.1**	**-1.1**			
STKA	**Stephens Creek**	**154.89**	**234**	PKP	**PKPdf**	**18 03 24.1**	**-0.7**			
	comp=Z,6.9nm,0.7s,baz=47,slow=1.1,SNR=15									
STKA				PKPbc	**PKiKP**	**18 03 33.5**	**0.0**			
	comp=Z,16nm,0.8s,baz=81,slow=2.9,SNR=21									
KKM	**Kota Kinabalu**	**155.46**	**4**		**PKPab**	**18 03 51.1**	**-0.5**			
KRJI	**Kerinci**	**157.00**	**46**	PKP	**PKPdf**	**18 03 28.3**	**0.0**			
KRJI				PKP	pPKPdf	18 03 28.5	-11			
MPSI	**Mapaga**	**161.09**	**354**	PKP	**PKPdf**	**18 03 33.2**	**+0.3**			
MPSI				PKP	pPKPdf	18 03 34.1	-10			
LUWI	**Luwuk**	**161.92**	**344**	PKPdf	**PKPdf**	**18 03 32.1**	**-1.7**			
LUWI					**PKPab**	**18 04 18.1**	**-1.4**			
WR0	**Warramunga Arr**	**164.24**	**262**		**PKPdf**	**18 03 34.2**	**-1.6**	

ISC 09 18:04:24.3±0.9, 18.3N±0.1×96.19E±0.09, h10km, n27, σ1s09/25, mb3.7/10, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**2.62**	**85**		**Pn**	**18 05 06.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**2.62**	**85**		**Pn**	**18 05 06.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**2.62**	**85**	Pn	**Pn**	**18 05 06.8**	**+0.1**
	1.8nm,0.3s,baz=264,slow=15,SNR=37						
CMAR				Pg	**Pb**	**18 05 13.3**	**+1.9**
	38nm,0.3s,baz=263,slow=18,SNR=47						
CMAR				Lg	Lg	18 05 47.6	
	144nm,0.3s,baz=262,slow=31,SNR=7.6						
CMAR				LR	LR	18 06 20.6	
	comp=Z,209nm,19.9s,baz=245,slow=44 5.7nm,0.3s						
CHTO	**Chiang Mai**	**2.67**	**78**		**Pn**	**18 05 07.4**	**-0.1**
MND	**Mandalay**	**3.73**	**359**		**Pn**	**18 05 21.2**	**-0.8**
CRAI	**Chiangrai**	**4.41**	**63**		**Pn**	**18 05 31.8**	**+0.4**
SLVN	**Son La**	**7.88**	**66**	Pn	**Pn**	**18 06 18.4**	**-0.6**
UBPT	**Khong Chiam**	**9.37**	**107**	Pn	**Pn**	**18 06 38.0**	**-1.5**
HYB	**Hyderabad**	**16.81**	**270**	*eP*	**Pn**	**18 08 22.3**	**+2.3**
PALK	**Pallekele**	**18.62**	**236**	LR	LR	18 15 03.7	
	comp=Z,81nm,20.7s,baz=131,slow=35						
MK31	**Makanchi Array**	**30.67**	**341**	P	**P**	**18 10 38.7**	**-0.3**
MKAR	**Makanchi Array**	**30.67**	**341**	P	**P**	**18 10 38.2**	**-0.8**
MKAR	**Makanchi Array**	**30.67**	**341**	P	**P**	**18 10 39.2**	**+0.2**
	0.6nm,0.5s,baz=152,slow=9.0,SNR=9.7 0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**35.22**	**340**	P	**P**	**18 11 17.2**	**-1.5**
	0.3nm,0.3s,baz=152,slow=8.4,SNR=9.8 0.3nm,0.3s						
KURK	**Kurchatov**	**35.27**	**341**	P	P	18 11 17.0	-2.1
KURK				IAmb	IAmb	18 11 24.8	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**36.68**	**349**	P	**P**	**18 11 30.7**	**-0.4**
ZALV	**Zalesovo Beam**	**36.68**	**349**	P	**P**	**18 11 31.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=177,slow=8.9,SNR=4.8 comp=Z,0.4nm,0.4s						
GEYT	**Alibeck**	**38.53**	**308**	P	**P**	**18 11 46.5**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=190,slow=6.0,SNR=2.9 comp=Z,0.4nm,0.4s						
ABKAR	**Akbulak array**	**42.48**	**325**	P	**P**	**18 12 18.8**	**-0.8**
WRA	**Warramunga Arr**	**53.32**	**134**	P	**P**	**18 13 42.4**	**-1.6**
	comp=Z,0.7nm,0.9s,baz=321,slow=7.4,SNR=3.0 comp=Z,0.7nm,0.9s						
WRAB	**Tennant Creek**	**53.32**	**134**	P	**P**	**18 13 42.5**	**-1.4**
WRAB				IAmb	IAmb	18 14 10.9	
	comp=Z,7.7nm,1.4s						
WR0	**Warramunga Arr**	**53.47**	**133**	P	**P**	**18 13 43.6**	**-1.5**
ASAR	**Alice Springs**	**55.61**	**137**	P	**P**	**18 14 01.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=319,slow=6.2,SNR=5.8 comp=Z,0.4nm,0.7s						
PETK	**Petropavlovsk-**	**58.54**	**38**	LR	LR	18 42 03.4	
	comp=Z,194nm,21.7s,baz=26,slow=39						
FIA1	**FINESS Array S**	**64.62**	**330**	P	**P**	**18 15 03.2**	**+1.3**
FINES	**FINESS Array B**	**64.62**	**330**	P	**P**	**18 15 01.8**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=109,slow=10,SNR=2.1 comp=Z,2.3nm,0.9s						
HFS	**Hagfors**	**70.62**	**328**	P	**P**	**18 15 40.3**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=81,slow=7.6,SNR=1.4 comp=Z,1.4nm,0.8s						

*IDC **09** 18:23:28.0±1.3, 56.55N×162.81E, h0km, mb3.3/5, mbtmp3.3/6, ML2.0/1, Error ellipse: s-maj=44.6km s-min=20.8km az=154.0*
*KRSC **09** 18:23:27.5±1.4, 56.24N×163.24E, h18km±37km, Ml3.7*
ISC 09 18:23:28.4±1.9, 56.41N±0.06×162.96E±0.06, h5km±11km, n30, σ1s17/41, mb3.4/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMKR	**Semkarok**	**0.85**	**282**	*eP*	**Pn**	**18 23 46.3**	**-0.7**
SMKR				*eS*	**Sn**	**18 23 60.0**	**+0.2**
BDR	**Baidarnaya**	**0.99**	**280**	*eP*	**Pn**	**18 23 48.9**	**0.0**
BDR				*eS*	**Sn**	**18 24 04.5**	**+1.3**
SRKR	**Sorokina**	**1.02**	**284**	*eP*	**Pn**	**18 23 49.8**	**+0.4**
ZLN	**Zelenaya**	**1.27**	**253**	*eP*	**Pg**	**18 23 52.9**	**+0.2**
ZLN				*eS*	**Sn**	**18 24 10.9**	**+0.7**
CIRR	**Tsirk**	**1.27**	**257**	*eP*	**Pg**	**18 23 53.0**	**+0.2**
CIRR				*eS*	**Sn**	**18 24 11.1**	**+0.8**
KLY	**Klyuchi**	**1.29**	**267**	*eP*	**Pn**	**18 23 51.4**	**-1.5**
KLY				*eS*	**Sb**	**18 24 08.6**	**-1.3**
KRSR	**Krestovskiy**	**1.35**	**263**	*eP*	**Pn**	**18 23 53.5**	**-0.4**
KRSR				*eS*	**Sg**	**18 24 12.7**	**+1.0**
BZWR	**Bezymyannyi-We**	**1.45**	**253**	*eP*	**Pb**	**18 23 55.5**	**-0.4**
BZMR	**Bezymyannaya**	**1.46**	**252**	*eP*	**Pb**	**18 23 55.4**	**-0.7**
BZMR				*eS*	**Sg**	**18 24 16.0**	**+0.6**
KIRR	**Kirishev**	**1.54**	**254**	*eP*	**Pb**	**18 23 56.4**	**-0.9**
KIRR				*eS*	**Sg**	**18 24 17.6**	**-0.1**
KPT	**Kopyto**	**1.60**	**255**	*eP*	**Pb**	**18 23 57.7**	**-0.6**
KPT				*eS*	**Sg**	**18 24 19.3**	**-0.3**
KMNR	**Kamenistaya**	**1.66**	**248**	*eP*	**Pb**	**18 23 59.0**	**-0.5**
KMNR				*eS*	**Sg**	**18 24 22.1**	**+0.4**
SRDR	**Sredinnyy**	**1.81**	**268**	*eP*	**Pb**	**18 24 01.5**	**-0.5**
SRDR				*eS*	**Sb**	**18 24 25.8**	**+0.9**
TUMR	**Tumrok**	**1.95**	**236**	*eP*	**Pb**	**18 24 02.8**	**-1.6**
TUMR				*eS*	**Sb**	**18 24 28.2**	**-0.8**
SPN	**Mys Shipunski**	**3.73**	**208**	*eP*	**Pn**	**18 24 26.3**	**-0.2**
SPN				*eS*	**Sn**	**18 25 06.8**	**-4.0**
KRX	**Arik**	**3.94**	**221**	*eP*	**Pn**	**18 24 31.1**	**+1.5**
SMAR	**Somma**	**3.97**	**219**	*eP*	**Pn**	**18 24 30.6**	**+0.7**
AVH	**Avacha**	**3.99**	**220**	*eP*	**Pn**	**18 24 31.4**	**+1.2**
UGLR	**Uglovaya**	**4.00**	**218**	*eP*	**Pn**	**18 24 31.6**	**+1.3**
PETK	**Petropavlovsk-**	**4.50**	**225**	Pn	**Pn**	**18 24 38.1**	**+1.0**
	0.4nm,0.3s,baz=58,slow=18,SNR=11						
PETK				Sn	**Sn**	**18 25 32.1**	**+2.4**
	baz=134,slow=13 2.3nm,0.7s						
RUS	**Russkaya**	**4.76**	**215**	*eS*	**Sn**	**18 25 37.3**	**+1.2**
MTVR	**Mutnovka**	**4.82**	**217**	*eP*	**Pn**	**18 24 42.9**	**+1.2**
ILAR	**Eielson Array**	**25.35**	**50**	P	**P**	**18 28 55.3**	**-0.4**
	0.7nm,0.8s,baz=259,slow=7.3,SNR=7.5 0.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**36.74**	**174**	T	T	19 09 19.8	
	baz=357,slow=76,SNR=86						
H11N3	**WAKE ISLAND Hy**	**36.76**	**174**	T	T	19 09 19.5	
	baz=357,slow=76,SNR=66						
H11N1	**WAKE ISLAND Hy**	**36.76**	**174**	T	T	19 09 21.0	
	baz=357,slow=76,SNR=96						
YKA	**Yellowknife Ar**	**39.62**	**46**	P	**P**	**18 31 00.7**	**+0.4**
	0.4nm,0.6s,baz=298,slow=8.1,SNR=6.1 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**47.53**	**301**	P	**P**	**18 32 02.8**	**-1.3**
	0.2nm,0.5s,baz=53,slow=8.3,SNR=2.7 0.2nm,0.5s						
MKAR	**Makanchi Array**	**48.25**	**295**	P	**P**	**18 32 09.3**	**-0.4**
	0.1nm,0.5s,baz=36,slow=7.4,SNR=1.5 0.1nm,0.5s						
TXAR	**Lajitas Array**	**67.87**	**70**	P	**P**	**18 34 28.6**	**+0.9**
	0.5nm,0.6s,baz=297,slow=5.9,SNR=6.2 0.5nm,0.6s						

IDC 09 18:37:35.3±2.3, 4.70S×153.73E, h0km, mb3.6/3, mbtmp3.7/4, ML2.0/1, Error ellipse: s-maj=145.1km s-min=28.1km az=129.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.02**	**234**	Pn	Pn	18 39 35.4	+2.2
	1.2nm,0.3s,baz=62,slow=10,SNR=5.9 7.9nm,0.6s						
WRA	**Warramunga Arr**	**24.20**	**230**	P	P	18 42 52.5	-1.4
	2.8nm,0.6s,baz=55,slow=9.3,SNR=22 2.8nm,0.6s						
ASAR	**Alice Springs**	**26.85**	**224**	P	P	18 43 18.2	+0.4
	0.3nm,0.5s,baz=53,slow=9.2,SNR=12 0.3nm,0.5s						
ILAR	**Eielson Array**	**81.72**	**22**	P	P	18 49 55.4	-0.1
	0.5nm,1.1s,baz=251,slow=4.7,SNR=1.5 0.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**151.15**	**289**	PKPbc	PKiKP	18 57 32.0	-0.3
	0.3nm,0.5s,baz=56,slow=4.2,SNR=2.3						

*VIE **09** 18:39:31.7±0.6, 51.35N×15.88E, h0km, mb2.2/2, ml2.5/2, Error ellipse: s-maj=5.0km s-min=3.7km az=69.0, Suspected Mining induced.*
*PRU **09** 18:39:31.5, 51.46N×16.07E, h0km*
ISC 09 18:39:29.4±1.2, 51.50N±0.06×16.09E±0.03, h0km, n24, σ0s49/48, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**169**	*e*Pg	**Pg**	**18 39 42.7**	**+0.5**
KSP				*e*Sg	**Sg**	**18 39 51.8**	**+0.9**
CHVC	**Chvalec**	**0.92**	**181**	*e*PG	**Pb**	**18 39 47.7**	**-0.4**
CHVC				*e*SG	**Sb**	**18 40 00.1**	**-0.7**
OSTC	**Ostas**	**0.95**	**175**	*e*PG	**Pb**	**18 39 48.3**	**-0.4**
OSTC				*e*SG	**Sb**	**18 40 01.0**	**-0.8**
	comp=Z,12nm,0.3s						
UPC	**Upice**	**1.00**	**183**	*e*PG	**Pb**	**18 39 48.9**	**-0.6**
UPC				*e*SG	**Sb**	**18 40 02.5**	**-0.7**
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**18 39 51.5**	**-0.1**
DPC				*e*SG	**Sg**	**18 40 06.6**	**-0.1**
	comp=Z,9.8nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**225**	*e*PG	**Pn**	**18 39 55.6**	**-0.1**
PVCC				*e*SG	**Sn**	**18 40 14.7**	**+0.2**
	comp=Z,34nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**246**	Pg	**Pb**	**18 39 57.8**	**0.0**
BRG				Sg	**Sn**	**18 40 18.1**	**+0.6**
BRG				Amp		18 40 19.3	
	comp=Z,22nm,0.3s						
KRLC	**Kraliky**	**1.50**	**163**	*e*PG	**Pn**	**18 39 57.1**	**-0.4**
KRLC				*e*SG	**Sn**	**18 40 17.9**	**+0.2**
	comp=Z,11nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.79**	**208**	*e*PG	**Pb**	**18 40 02.7**	**-0.4**
PRU	**Pruhonice**	**1.81**	**214**	*e*PG	**Pb**	**18 40 03.0**	**-0.3**
PRU				*e*SG	**Sg**	**18 40 27.5**	**+0.2**
	comp=Z,9.5nm,0.3s						
HSKC	**Hora Svate Kat**	**1.90**	**243**	*e*PG	**Pb**	**18 40 04.5**	**-0.4**
HSKC				*e*SG	**Sb**	**18 40 29.6**	**+0.4**
CLL	**Collm**	**1.94**	**265**	*e*Pg	**Pb**	**18 40 05.0**	**-0.6**
CLL				*e*Sg	**Sg**	**18 40 32.0**	**+0.3**
	comp=Z,13nm,0.5s						
MORC	**Moravsky Berou**	**1.96**	**151**	*e*PN	**Pn**	**18 40 03.4**	**-0.5**
MORC				*e*SG	**Sb**	**18 40 31.4**	**+0.5**
VRAC	**Vranov**	**2.22**	**171**	*e*PN	**Pn**	**18 40 07.2**	**-0.2**
VRAC				*e*SG	**Sg**	**18 40 40.3**	**-0.3**
KRUC	**Moravsky**	**2.45**	**175**	*e*PN	**Pn**	**18 40 10.6**	**0.0**
KRUC				*e*SG	**Sg**	**18 40 48.0**	**-0.1**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**18 40 13.4**	**+0.3**
NKC				*e*PG	**Pg**	**18 40 19.5**	**-0.3**
NKC				*e*SG	**Sg**	**18 40 54.0**	**+0.1**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**18 40 20.6**	**-0.1**
OJC				*e*Sg	**Sg**	**18 40 55.7**	**+0.3**
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	**Pn**	**18 40 16.5**	**+0.1**
KHC				*e*PG	**Pb**	**18 40 22.0**	**+0.6**
KHC				*e*SG	**Sg**	**18 41 00.2**	**-1.2**
CKRC	**Cesky Krumlov**	**2.92**	**204**	*e*PN	**Pn**	**18 40 17.1**	**+0.1**
CKRC				*e*PG	**Pb**	**18 40 23.5**	**+1.2**
CKRC				*e*SG	**Sg**	**18 41 02.4**	**-0.7**
LANS	**Liptovska Anna**	**3.20**	**136**	*e*PG	**Pg**	**18 40 30.6**	**-0.1**
LANS				*e*SG	**Sg**	**18 41 12.1**	**0.0**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*	**Pg**	**18 40 31.5**	**+0.4**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*SG	**Sg**	**18 41 13.1**	**+0.2**
CONA	**Conrad Observa**	**3.58**	**182**	*i* Pn	**Pn**	**18 40 27.0**	**+0.8**
	comp=Z,0.4nm,0.2s						
CONA				*e*Sg	**Sg**	**18 41 24.7**	**+0.3**
	comp=Z,3.0nm,0.3s						
MOA	**Molln**	**3.84**	**199**	*i* Pn	**Pn**	**18 40 29.7**	**0.0**
	comp=Z,1.3nm,0.2s						
MOA				*e*Sg	**Sg**	**18 41 32.4**	**-0.3**
	comp=Z,0.4nm,0.1s						

*IDC **09** 18:43:07.3±0.7, 24.03N×122.12E, h0km, mb3.9/16, mbtmp3.9/19, ML3.1/3, MS3.9/18, Error ellipse: s-maj=20.2km s-min=14.3km az=70.0*
*ASIES **09** 18:43:09.0, 24.03N×121.81E, h6km, ML4.7, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}1.78; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$0.43; $M_{r\theta}$1.55; $M_{\theta\phi}$-0.82; $M_{r\phi}$2.39; Fault plane solution: $M_0$3.28611×10^{22} NP1:ϑ_s327.09000°, δ77.71000°, λ74.66000°. NP2:ϑ_s269.26000°, δ19.56000°, λ140.51000°. Principal axes: T Plg54.7710°, Azm288.1750°; N Plg14.9740°, Azm40.4300°; P Plg31.0480°, Azm139.6950°;*
*TAP **09** 18:43:09.0, 24.03N×121.81E, h6km, ML4.7, C*
*NEIC **09** 18:43:09.4±1.8, 24.02N±0.02×121.82E±0.03, h10km±1km, mb4.6/76, Mwr4.5/21, Error ellipse: s-maj=4.6km s-min=3.9km az=310.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.57; $M_{\theta\theta}$-1.94; $M_{\phi\phi}$-0.63; $M_{r\theta}$5.58; $M_{\theta\phi}$-0.66; $M_{r\phi}$5.39; Fault plane solution: $M_0$8.12000×10^{15} NP1:ϑ_s255.44000°, δ9.29000°, λ117.96000°. NP2:ϑ_s47.17000°, δ81.80000°, λ85.61000°. Principal axes: T 8.3978, Plg53.0000°, Azm312.0000°; N -0.5795, Plg4.0000°, Azm48.0000°; P -7.8183, Plg37.0000°, Azm141.0000°;*
*NIED **09** 18:43:09.4, 24.02N×121.82E, h0km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.43; $M_{\theta\theta}$-0.69; $M_{\phi\phi}$-0.73; $M_{r\theta}$7.97; $M_{\theta\phi}$-1.14; $M_{r\phi}$3.28; Fault plane solution: $M_0$8.78000×10^{15} NP1:ϑ_s67.00000°, δ85.00000°, λ95.00000°. NP2:ϑ_s199.00000°, δ7.00000°, λ42.00000°.*
*JMA **09** 18:43:09.4±0.1, 24.0N±0.3×121.8E±0.3, h0km, MD4.6/18, MV4.3/18, TAIWAN REGION*
*NEIC **09** 18:43:09.4, 24.02N×121.82E, h10km*
*BJI **09** 18:43:09.3±0.0, 23.98N×121.90E, h12km, mb4.2/46, mB4.6/26, ML4.3/11, Ms4.6/55, Ms7 4.6/50*
ISC 09 18:43:10.8±0.3, 24.01N±0.02×121.85E±0.02, h18km±1km, n358, σ1s61/447, mb4.4/56, MS4.1/21, 43C-14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.23**	**262**	P	**Pb**	**18 43 15.1**	**-1.0**
	baz=252						
HWA				*e*S	**Sg**	**18 43 19.8**	**-0.1**
	baz=252						
TWD	**Chiawan**	**0.24**	**287**	⇓*i*P	**Pg**	**18 43 14.3**	**-2.2**
	baz=285						
TWD				*i* S	**Sg**	**18 43 18.1**	**-2.2**
	baz=285						
ETL	**Fush Village**	**0.26**	**306**	⇓*i*P	**Pg**	**18 43 14.5**	**-2.2**
	baz=307						
ETL				*i* S	**Sg**	**18 43 18.7**	**-2.0**
	baz=307						
NACB	**Ninganchiao**	**0.28**	**305**		**Pg**	**18 43 14.5**	**-2.7**
NACB				Sg	**Sg**	**18 43 19.2**	**-2.2**
NACB	**Ninganchiao**	**0.28**	**305**	P	**Pg**	**18 43 15.0**	**-2.2**
NACB	**Ninganchiao**	**0.28**	**305**	⇓*i*P	**Pg**	**18 43 15.0**	**-2.2**
	baz=306						
NACB				*i* S	**Sg**	**18 43 19.2**	**-2.2**
	baz=306						
EHP	**Heping Village**	**0.32**	**341**	P	**Pg**	**18 43 15.9**	**-1.8**
	baz=349						
ETM	**Tongmen**	**0.33**	**262**	⇑*i*P	**Pg**	**18 43 16.2**	**-1.7**
	baz=266						
ETM				S	**Sg**	**18 43 21.3**	**-1.5**
	baz=266						
EAHA	**Aohua**	**0.33**	**342**	⇓P	**Pg**	**18 43 16.3**	**-1.7**
	baz=349						
EAHA				S	**Sg**	**18 43 22.0**	**-0.9**
	baz=349						
SHUL	**Shoufeng**	**0.34**	**230**	*e*P	**Pg**	**18 43 18.0**	**-0.1**
	baz=220						
SHUL				*e*S	**Sb**	**18 43 25.1**	**+1.6**
	baz=220						
ETLH	**Xiulin Townshi**	**0.39**	**300**	⇓*i*P	**Pg**	**18 43 17.0**	**-2.0**
	baz=300						
ETLH				S	**Sg**	**18 43 23.0**	**-1.5**
	baz=300						
LXIB	**Xiulin Townshi**	**0.40**	**272**	⇑*i*P	**Pg**	**18 43 17.3**	**-1.9**
	baz=268						
LXIB				*e*S	**Sg**	**18 43 23.3**	**-1.5**
	baz=268						
TEGC	**Jichi Village**	**0.41**	**224**	P	**Pg**	**18 43 18.9**	**-0.4**
	baz=199						
ENA	**Nanau**	**0.43**	**346**	⇓*i*P	**Pg**	**18 43 18.2**	**-1.5**
	baz=354						
ENA				*e*S	**Sg**	**18 43 25.6**	**0.0**
	baz=354						
ESL	**Shilin**	**0.43**	**243**	⇓*i*P	**Pg**	**18 43 18.2**	**-1.4**
	baz=235						
ESL				S	**Sg**	**18 43 25.6**	**+0.1**
	baz=235						
EWUT	**Wuta**	**0.44**	**351**	P	**Pg**	**18 43 18.5**	**-1.3**
EOS4	**EOS4**	**0.44**	**75**	*e*P	**Pn**	**18 43 21.1**	**-0.8**
	baz=80						
EOS3	**EOS3**	**0.51**	**57**	*e*P	**Pn**	**18 43 22.4**	**-0.6**
	baz=61						
WARBT	**Fenglin Townsh**	**0.52**	**236**	⇓*i*P	**Pg**	**18 43 19.9**	**-1.3**
	baz=228						
WARBT				S	**Sg**	**18 43 27.4**	**-0.8**
	baz=228						
EOS2	**EOS2**	**0.54**	**40**	*e*P	**Pn**	**18 43 23.2**	**-0.2**
	baz=54						
WHF	**Hehuan Shan**	**0.55**	**284**	⇑P	**Pg**	**18 43 20.2**	**-1.9**
	baz=283						
WHF				S	**Sg**	**18 43 28.2**	**-1.4**
	baz=283						
ESAO	**Su ao**	**0.56**	**359**	*e*P	**Pg**	**18 43 21.1**	**-1.0**
NNSB	**Datong**	**0.60**	**314**	⇑*i*P	**Pb**	**18 43 21.0**	**-1.7**
	baz=316						
NNSB				*e*S	**Sg**	**18 43 29.0**	**-1.8**
	baz=316						
NNSH	**Datong**	**0.60**	**314**	P	**Pb**	**18 43 21.1**	**-1.7**
	baz=315						
NNSH				*e*S	**Sg**	**18 43 29.2**	**-1.6**
	baz=315						
TWC	**Suao**	**0.60**	**360**	P	**Pb**	**18 43 21.7**	**-1.0**
	baz=357						
LATG	**Datong**	**0.60**	**331**	⇓*i*P	**Pb**	**18 43 21.2**	**-1.6**
	baz=334						
LATG				*i* S	**Sg**	**18 43 30.7**	**-0.3**
	baz=334						
FUSS	**Fushou**	**0.60**	**293**	⇑*i*P	**Pg**	**18 43 21.3**	**-1.6**
	baz=292						
FUSS				*e*S	**Sg**	**18 43 30.4**	**-0.7**
	baz=292						
NNS	**Nan Shan**	**0.61**	**315**	P	**Pb**	**18 43 21.3**	**-1.7**
	baz=316						
NNS				*e*S	**Sg**	**18 43 28.9**	**-2.4**
	baz=316						
OWD	**Renai**	**0.62**	**265**	P	**Pb**	**18 43 21.6**	**-1.6**
	baz=275						
OWD				S	**Sg**	**18 43 30.5**	**-1.0**
	baz=275						
CHGB	**Renai**	**0.62**	**275**	⇑*i*P	**Pb**	**18 43 21.7**	**-1.5**
	baz=272						
CHGB				*i* S	**Sg**	**18 43 30.4**	**-1.2**
	baz=272						
NDS	**Dongshan**	**0.63**	**349**	⇑P	**Pb**	**18 43 22.4**	**-0.9**
	baz=354						
NDS				S	**Sg**	**18 43 32.4**	**+0.5**
	baz=354						
HGSD	**Ruisui**	**0.65**	**217**	⇓*i*P	**Pb**	**18 43 23.2**	**-0.3**
	baz=210						
HGSD				*e*S	**Sn**	**18 43 34.7**	**-0.2**
	baz=210						
TWT	**Tachien**	**0.66**	**292**	⇑*i*P	**Pb**	**18 43 22.8**	**-1.1**
	baz=290						
TWT				*e*S	**Sb**	**18 43 31.9**	**-0.9**
	baz=290						
NDT	**Datong Townshi**	**0.67**	**332**	*i* P	**Pb**	**18 43 22.8**	**-1.1**
	baz=336						
NDT				*e*S	**Sg**	**18 43 33.2**	**+0.3**
	baz=336						
WUSB	**Renai**	**0.67**	**269**	⇑*i*P	**Pb**	**18 43 22.8**	**-1.3**
	baz=276						
WUSB				*i* S	**Sb**	**18 43 32.4**	**-0.6**
	baz=276						
TDCB	**Techi**	**0.68**	**291**	⇑*i*P	**Pb**	**18 43 22.8**	**-1.4**
	baz=290						
TDCB				*e*S	**Sb**	**18 43 30.9**	**-2.4**
	baz=290						
ENTT	**Nioudou**	**0.68**	**338**	⇑P	**Pb**	**18 43 23.1**	**-1.0**
	baz=342						
ENTT				S	**Sg**	**18 43 33.5**	**+0.2**
	baz=342						
EHY	**Hungye**	**0.70**	**224**	*e*P	**Pb**	**18 43 23.1**	**-1.4**
	baz=232						
VWDT	**VWDT**	**0.70**	**249**	⇑*i*P	**Pb**	**18 43 23.5**	**-0.9**
	baz=244						
VWDT				S	**Sb**	**18 43 33.6**	**-0.1**
	baz=244						
TWE	**Neicheng**	**0.73**	**347**	⇑*i*P	**Pb**	**18 43 24.2**	**-0.7**
	baz=353						
TWE				*e*S	**Sb**	**18 43 34.2**	**-0.4**
	baz=353						
ILA	**Ilan**	**0.76**	**353**	*e*P	**Pb**	**18 43 24.1**	**-1.3**
	baz=349						
ECBN	**Changbin**	**0.78**	**208**	*e*P	**Pb**	**18 43 24.9**	**-1.0**
	baz=200						
FUSB	**Fushanzhiwuyua**	**0.78**	**342**	⇑*i*P	**Pb**	**18 43 25.1**	**-0.8**
	baz=335						
FUSB				*i* S	**Sb**	**18 43 36.2**	**-0.1**
	baz=335						
YHNB	**Yeheng**	**0.79**	**327**		**Pb**	**18 43 24.6**	**-1.5**
YHNB				Sg	**Sb**	**18 43 35.8**	**-0.6**
YHNB	**Yeheng**	**0.79**	**327**	P	**Pb**	**18 43 25.2**	**-0.8**
YHNB	**Yeheng**	**0.79**	**327**	⇑*i*P	**Pb**	**18 43 25.2**	**-0.8**
	baz=329						
YHNB				*i* S	**Sb**	**18 43 35.9**	**-0.6**
	baz=329						
YULB	**Yu-li**	**0.80**	**220**		**Pb**	**18 43 24.6**	**-1.5**
YULB					**Sn**	**18 43 37.9**	**-0.7**
YULB	**Yu-li**	**0.80**	**220**	P	**Pb**	**18 43 25.6**	**-0.6**
YULB	**Yu-li**	**0.80**	**220**	⇓*e*P	**Pb**	**18 43 24.6**	**-1.5**
	baz=227						
NSK	**Sanguang**	**0.80**	**326**	⇑*i*P	**Pb**	**18 43 25.3**	**-0.9**
	baz=329						
NSK				S	**Sb**	**18 43 36.7**	**-0.1**
	baz=329						
WPL	**Puli Township**	**0.82**	**270**	P	**Pb**	**18 43 25.7**	**-0.8**
	baz=268						
WPL				*e*S	**Sb**	**18 43 36.5**	**-0.7**
	baz=268						
EYUL	**Yuli**	**0.82**	**217**	*e*P	**Pb**	**18 43 26.1**	**-0.5**
	baz=193						
NWLT	**Wulai**	**0.83**	**337**	⇑*i*P	**Pb**	**18 43 25.8**	**-0.9**
	baz=341						
NWLT				S	**Sb**	**18 43 37.6**	**+0.1**
	baz=341						
TWF1	**Yuli**	**0.83**	**218**	*e*P	**Pb**	**18 43 25.2**	**-1.5**
	baz=230						
DPDB	**Guoxing**	**0.85**	**272**	⇑*i*P	**Pb**	**18 43 25.9**	**-1.1**
	baz=269						
DPDB				S	**Sb**	**18 43 37.7**	**-0.4**
	baz=269	

CHKT Chengkung 1.01 206 eP Pb 18 43 29.1 -0.7
baz=197
TATO Taipei 1.02 341 Pb 18 43 29.4 -0.5
TATO Sg Sb 18 43 43.0 +0.1
TATO Taipei 1.02 341 P Pb 18 43 30.0 +0.1
TATO Taipei 1.02 341 ⇑P Pb 18 43 29.4 -0.5
baz=345
TATO eS Sb 18 43 42.4 -0.6
baz=345
TWQ1 Liyutan 1.04 289 ⇑iP Pb 18 43 29.9 -0.4
baz=288
EHD Haiduan 1.04 215 eP Pb 18 43 28.6 -1.7
baz=222
WJS Zhushan 1.04 260 ⇑P Pb 18 43 30.2 -0.1
baz=256
BACT New Taipei Cit 1.05 339 eP Pn 18 43 30.6 -0.1
baz=344
WWF Wufeng 1.05 272 eP Pn 18 43 30.7 0.0
baz=270
WWF eS Sg 18 43 46.7 +1.5
baz=270
NHY Taipei 1.06 346 eP Pn 18 43 30.9 +0.1
baz=351
NWF Wu-fen Shan 1.06 357 P Pb 18 43 30.5 -0.2
baz=352
NWF eS Sn 18 43 45.2 +0.1
baz=352
WFSB Wu-fen Shan 1.06 357 ⇑iP Pb 18 43 30.7 +0.1
baz=352
WFSB eS Sg 18 43 45.8 +0.5
baz=352
TAP Taipei 1.07 343 P Pn 18 43 31.1 +0.1
baz=349
NSY Sanyi 1.07 292 ⇑eP Pn 18 43 31.1 +0.1
baz=292
NSY eS Sn 18 43 45.4 0.0
baz=292
WNT Mingjian 1.08 263 eP Pn 18 43 31.2 +0.2
baz=260
WNT eS Sg 18 43 46.2 +0.3
baz=260
WNT1 Nantou City 1.08 265 eP Pb 18 43 30.9 0.0
baz=269
WNT1 eS Sg 18 43 47.0 +1.2
baz=269
HSN1 Hsinchu 1.08 315 P Pb 18 43 30.8 -0.1
baz=317
HSN1 eS Sg 18 43 45.8 -0.1
baz=317
ECS Chishang 1.08 213 eP Pb 18 43 29.3 -1.7
baz=222
ALS Alishan 1.08 243 eP Pb 18 43 30.6 -0.5
baz=237
SXI1 Grass Mountain 1.08 1 ⇑iP Pn 18 43 31.2 +0.1
baz=359
SXI1 S Sg 18 43 47.0 +1.0
baz=359
TCU Taichung 1.08 278 ⇑eP Pn 18 43 31.2 +0.2
baz=269
TCU eS Sg 18 43 47.1 +1.1
baz=269
JYNG Yonagunijimaku 1.09 66 P Pn 18 43 31.3 +0.1
JYNG Yonagunijimaku 1.09 66 A A 18 43 31.3
comp=E,14nm,3.4s,comp=N,18nm,2.6s
NMLH Miaoli 1.10 299 ⇑eP Pn 18 43 31.5 +0.2
baz=298
NTY Taoyuan 1.11 333 P Pb 18 43 31.5 +0.1
baz=336
NTY eS Sg 18 43 48.4 +1.6
baz=336
SBCB Hsinchu 1.11 315 ⇑eP Pg 18 43 31.9 -0.4
baz=315
SBCB eS Sg 18 43 48.2 +1.3
baz=315
NJN Zhunan 1.12 307 eP Pb 18 43 31.7 +0.1
baz=307
ELDTW Lidau 1.12 223 eP Pn 18 43 30.3 -1.4
baz=215
ELDTW eS Sn 18 43 46.8 +0.1
baz=215
HSN Hsinchu 1.13 315 ⇑P Pn 18 43 31.6 -0.1
baz=318
HSN eS Sg 18 43 48.2 +0.8
baz=318
NCUH Zhongli 1.13 328 eP Pn 18 43 31.3 -0.4
baz=330
NCUH eS Sg 18 43 49.0 +1.4
baz=330
NCU National Centr 1.13 328 eP Pn 18 43 31.2 -0.6
baz=330
NCU S Sg 18 43 49.3 +1.7
baz=330
TNOU National Taiwa 1.14 356 ⇑P Pn 18 43 31.4 -0.5
baz=354
TNOU eS Sg 18 43 48.4 +0.6
baz=354
EDH Donghe 1.15 206 eP Pn 18 43 31.0 -1.0
baz=178
YOJ Yonaguni jima 1.15 67 Pn 18 43 32.1 +0.1
YOJ Sg Sg 18 43 49.5 +1.3
YOJ Yonaguni jima 1.15 67 P Pb 18 43 32.5 +0.3
YOJ Yonaguni jima 1.15 67 iP Pn 18 43 31.9 -0.1
baz=73
YOJ eS Sg 18 43 49.1 +0.9
baz=73
YOJ Yonaguni jima 1.15 67 P Pb 18 43 32.2 0.0
YOJ S Sg 18 43 48.7 +0.5
YOJ Yonaguni jima 1.15 67 A A 18 43 32.2
comp=E,13nm,2.3s,comp=N,17nm,3.4s
TWS1 Kuangyinshan 1.16 340 eP Pb 18 43 32.3 0.0
baz=343
TWS1 eS Sg 18 43 49.2 +0.8
baz=343
WDJ Dajia District 1.16 287 eP Pg 18 43 32.9 -0.3
baz=286
WDJ eS Sg 18 43 48.7 +0.4
baz=286
YM01 YM01 1.16 347 ⇑iP Pb 18 43 32.4 0.0
baz=352
YM01 S Sg 18 43 48.2 -0.3
baz=352
WYL Yuanlin Townsh 1.16 268 eP Pb 18 43 32.6 +0.2
baz=245
WCHH Zhanghua 1.18 274 eP Pn 18 43 32.5 0.0
baz=271
YM08 YM08 1.20 349 P Pn 18 43 32.5 -0.2
baz=358
NTST Danshui 1.21 342 eP Pn 18 43 32.7 -0.1
baz=347
ANP Anpu 1.21 346 eP Pn 18 43 32.8 -0.2
baz=353
WGK Gukeng 1.22 255 eP Pb 18 43 33.5 +0.1
baz=249
NHW Xinwu Township 1.23 324 eP Pn 18 43 32.1 -1.1
baz=325
NHW eS Sg 18 43 51.6 +0.7
baz=325
WDLH Douliu 1.24 255 eP Pb 18 43 34.1 +0.3
baz=250
WCKO Fanlu 1.28 244 eP Pb 18 43 34.4 +0.1
baz=239
WCKO eS Sg 18 43 53.2 +1.1
baz=239
TWY Chenhua 1.28 350 eP Pb 18 43 35.0 +0.6
baz=333
STYH Taoyuan 1.29 230 eP Pn 18 43 33.3 -0.7
baz=208
STYH eS Sb 18 43 51.5 +0.7
baz=208
STYT Tauyuan 1.31 230 P Pn 18 43 34.0 -0.2
baz=208
STYT S Sg 18 43 52.6 -0.7
baz=208
TPUB Ta-pu 1.32 238 Pn 18 43 34.6 +0.2
TPUB Sg Sb 18 43 52.7 +0.9
TPUB Ta-pu 1.32 238 P Pb 18 43 35.2 +0.1
TPUB Ta-pu 1.32 238 ⇑iP Pn 18 43 34.6 +0.2
baz=232
TPUB eS Sb 18 43 52.6 +0.8
baz=232
CHN4 Tsaushan 1.33 241 eP Pb 18 43 34.9 -0.3
baz=214
CHN2 Minshiung 1.35 250 eP Pb 18 43 35.9 +0.4
baz=244
WRL Guolierlin Hig 1.35 266 eP Pn 18 43 35.2 +0.4
baz=248
WTP Ta-pu 1.37 236 eP Pb 18 43 35.6 -0.3
baz=230
WTP eS Sg 18 43 54.5 -0.6
baz=230
RLNB Erlin 1.37 265 eP Pn 18 43 35.0 0.0
baz=263
RLNB eS Sg 18 43 54.5 -0.6
baz=263
LDUT Ludao 1.38 195 eP Pn 18 43 32.6 -2.5
baz=170
WTK Tuku 1.38 257 eP Pg 18 43 36.9 -0.5
baz=254
WTK eS Sg 18 43 56.8 +1.4
baz=254
TWGBT Beinan 1.38 211 P Pn 18 43 33.8 -1.4
TWGBT Beinan 1.38 211 eP Pn 18 43 32.7 -2.5
baz=184
TWG Pinlang 1.38 211 Pn 18 43 33.1 -2.1
TWG Pinlang 1.38 211 eP Pn 18 43 32.3 -2.9
baz=184
WTCT Ta-ch'eng 1.44 265 eP Pb 18 43 36.7 -0.5
baz=261
TWK Hsinying 1.45 240 eP Pb 18 43 37.1 -0.2
baz=233
TWK eS Sg 18 43 57.8 0.0
baz=233
CHN1 Nanshi 1.47 236 eP Pb 18 43 37.2 -0.4
baz=230
CHN1 eS Sg 18 43 58.1 -0.1
baz=230
SNST Tainan City 1.47 238 eP Pb 18 43 37.3 -0.3
baz=231
SGST Jiashian 1.49 232 eP Pn 18 43 36.5 -0.1
baz=225
SGST eS Sg 18 43 58.1 -0.7
baz=225
SLGT Liugui 1.50 228 eP Pb 18 43 37.8 -0.3
baz=205
SLGT eS Sg 18 43 59.7 +0.4
baz=205
WSF Szhu 1.54 256 eP Pb 18 43 38.4 -0.4
baz=253
WSF eS Sg 18 44 00.5 0.0
baz=253
WSL Shuilin Townsh 1.56 252 eP Pn 18 43 38.4 +0.7
baz=249
WSL eS Sg 18 44 00.9 -0.4
baz=249
ICHU Yijhu 1.58 246 eP Pn 18 43 38.4 +0.5
baz=242
PCYT Pengchaiyu 1.62 7 eP Pb 18 43 39.8 -0.4
baz=21
ECL Taimali 1.63 211 eP Pn 18 43 36.1 -2.5
baz=186
CHN8 Yiju 1.64 247 ⇑P Pn 18 43 39.4 +0.6
baz=243
CHN8 eS Sb 18 44 02.1 +1.2
baz=243
CHN3 Shinhua 1.65 236 ⇑eP Pb 18 43 40.7 0.0
baz=229
SCST Cishan 1.68 228 eP Pb 18 43 41.4 +0.2
baz=205
SSHA Shanhua 1.68 239 eP Pb 18 43 41.1 0.0
baz=232
SSD Sandimen 1.68 222 eP Pn 18 43 39.2 -0.1
baz=212
SSD eS Sb 18 44 02.7 +0.6
baz=212
SHHT Tainan City 1.69 235 eP Pb 18 43 41.2 -0.3
baz=228
TSMG Majia 1.71 221 eP Pn 18 43 40.4 +0.7
baz=212
SCLT Jiali 1.73 242 eP Pn 18 43 40.7 +0.7
baz=238
SCLT eS Sb 18 44 04.4 +0.9
baz=238
IRIF Iriomote-Funau 1.75 79 P Pn 18 43 41.0 +0.8
IRIF S Sb 18 44 04.7 +0.8
IRIF Iriomote-Funau 1.75 79 A A 18 43 41.0
comp=E,8.0nm,4.4s,comp=N,11nm,3.3s
TWM1 Shoushan 1.77 228 eP Pb 18 43 42.8 +0.2
baz=221
MASBT Mashibuluo 1.79 219 eP Pn 18 43 41.2 +0.4
baz=209
MASBT eS Sb 18 44 06.2 +1.2
baz=209
HATJ Hateruma jima 1.79 88 eP Pn 18 43 41.2 +0.4
HATJ Hateruma jima 1.79 88 A A 18 43 41.2
comp=E,17nm,2.2s,comp=N,20nm,4.2s
SGLT Jiouru 1.79 225 eP Pb 18 43 43.4 +0.3
baz=216
TSPT Pingtung City 1.82 223 eP Pb 18 44 44.1 +0.5
baz=215
EAST Anshuo 1.86 210 eP Pn 18 43 40.3 -1.6
baz=184
TAW Tawu 1.86 208 eP Pb 18 43 43.5 -0.8
baz=198
SNJT Kaohsiung City 1.87 228 eP Pb 18 43 44.2 -0.3
baz=222
TAWH Dawu Township 1.88 208 eP Pb 18 43 44.2 -0.5
baz=198
JKRS Kuro-shima 1.98 83 P Pn 18 43 44.3 +0.9
JKRS S Sb 18 44 10.9 +0.1
JKRS Kuro-shima 1.98 83 A A 18 43 44.3
comp=E,15nm,2.6s,comp=N,18nm,4.7s
SCZT Fangliau 1.98 215 eP Pb 18 43 45.2 -1.2
baz=189
LYUB Lan-yu 2.01 187 eP Pn 18 43 39.8 -4.0
baz=178
SLIU Shizi 2.03 209 eP Pn 18 43 43.6 -0.5
baz=185
JIJ Ishigaki jima 2.12 80 P Pn 18 43 45.4 +0.1
JIJ S Sb 18 44 13.1 -1.7
WDGT Dungji 2.14 250 eP Pn 18 43 45.7 0.0
baz=228
WDGT eS Sn 18 44 12.5 +0.7
baz=228
PHUB P'eng-hu 2.15 257 eP Pn 18 43 46.2 +0.5
baz=252
PHUB eS Sn 18 44 12.6 +0.8
baz=252
PNG Penghu 2.15 259 eP Pn 18 43 46.1 +0.4
baz=253
TWP Hsiaoliuchiu 2.15 220 eP Pb 18 43 49.5 +0.3
baz=213
HEN Hengchun 2.24 207 eP Pb 18 43 50.0 -0.8
baz=182
TWK1 Hengchun 2.27 205 eP Pn 18 43 46.9 -0.6
baz=184
TWKBT Hengchun 2.27 205 eP Pn 18 43 47.1 -0.3
baz=184
TSEB Hengchuen, Pin 2.28 203 eP Pn 18 43 49.1 +1.6
baz=182
JISG Ishigakijimahi 2.32 75 P Pn 18 43 48.0 0.0
JISG S Sn 18 44 17.5 +1.4
VCHM Qimei 2.36 251 eP Pn 18 43 48.3 -0.4
baz=246
VWUC VWUC 2.40 295 eP Pn 18 43 48.5 -0.6
baz=291
JTJ Tarama 2.68 76 eP Pn 18 43 53.9 +0.9
JTJ Tarama 2.68 76 A A 18 43 53.9
comp=E,7.0nm,3.1s,comp=N,9.0nm,4.0s
PTMZ Houxiangcun 2.69 293 eP Pn 18 43 52.5 -0.7
baz=286
MATB Ma-tsu 2.74 321 eP Pn 18 43 55.0 +1.1
baz=315
QZH Quanzhou 3.11 288 Pn Pn 18 43 58.8 -0.2
QZH Sn Sn 18 44 35.0 -0.7
QZH smax smax
comp=N,630nm,0.6s
QZH smax smax
comp=N,440nm,0.6s
QZH LR LR
comp=N,3μm,8.6s
QZH LR LR
comp=N,8μm,8.1s
QZH LR LR
comp=N,10μm,9.0s
JIRB Irabujima 3.14 74 P Pn 18 44 00.0 +0.7
KNM Kinmen 3.15 278 eP Pn 18 44 01.6 +2.2
baz=272
LYJJ Jianjiangzhen 3.16 324 eP Pn 18 43 59.3 -0.3
baz=317
KNMB Chin-men Tao 3.19 279 Pn 18 43 59.8 -0.3
KNMB Chin-men Tao 3.19 279 eP Pn 18 44 00.2 +0.1
baz=273
JIKM Ikemajima 3.23 73 P Pn 18 44 01.8 +1.3
JMJ2 Miyako jima3 3.25 76 eP Pn 18 44 02.2 +1.3
XPSS Dashiqiu 3.27 333 eP Pn 18 44 02.6 +1.4
baz=330
MHZQ Yeshan 3.30 310 eP Pn 18 44 02.3 +0.7
baz=303
AXDP Jialang 3.65 285 eP Pn 18 44 06.2 -0.2
baz=278
ZPLA Ao Xicun 3.75 270 eP Pn 18 44 07.5 -0.3
baz=264
DSXP Dongshan 4.06 267 eP Pn 18 44 12.0 -0.1
baz=260
SXFK Yanhouchang 4.49 303 eP Pn 18 44 18.6 +0.6
baz=295
JOW Kunigami 6.45 63 Pn Pn 18 44 44.1 -0.8
JOW Kunigami 6.45 63 Pn Pn 18 44 43.6 -1.3
comp=N,9.0nm,0.3s,baz=240,slow=16,SNR=23
JOW Sn Sn 18 45 50.2 -7.9
baz=280,slow=25
SSE Sheshan 7.08 355 Pn Pn 18 44 54.7 +1.1
SSE Sn Sn 18 46 16.5 +2.9
SSE LR LR
comp=N,460nm,7.5s
SSE LR LR
comp=N,260nm,8.2s
HKPS Hong Kong Po S 7.30 258 Pn Pn 18 44 58.5 +1.9
GZH Guangzhou 7.86 265 Pn Pn 18 44 59.5 -4.8
GZH Sn Sn 18 46 24.2 -8.6
GZH smax smax
comp=N,150nm,0.9s
GZH smax smax
comp=N,160nm,1.0s
NJ2 Nanjing 8.44 342 eP Pn 18 45 12.5 +0.4
NJ2 S Sn 18 46 49.0 +2.1
NJ2 pmax pmax
comp=N,33nm,0.7s
NJ2 smax smax
comp=N,130nm,0.9s
NJ2 smax smax
comp=N,120nm,1.2s
NJ2 LR LR
comp=N,2μm,8.1s
NJ2 LR LR
comp=N,1μm,7.3s
NJ2 LR LR
comp=N,3μm,10.2s
CNSH ChangSha 9.03 299 ⇓P Pn 18 45 25.2 +4.9
CNSH S Sn 18 47 13.1 +12
CNSH smax smax
comp=N,310nm,0.9s
CNSH smax smax
comp=N,250nm,1.4s
WHN Wuhan 9.32 316 P Pn 18 45 24.1 -0.1
WHN S Sn 18 47 05.9 -2.7
WHN LR LR
comp=N,10μm,9.3s
WHN LR LR
comp=N,7μm,10.1s
WHN LR LR
comp=N,12μm,9.0s
TGY Tagaytay City 9.89 185 LR LR 18 49 53.7
comp=N,142nm,18.4s,baz=344,slow=41
JNU Nakatsue 12.05 39 Pn Pn 18 46 03.2 +1.6
JNU Nakatsue 12.05 39 Pn Pn 18 45 59.9 -1.8
comp=N,0.1nm,0.3s,baz=146,slow=11,SNR=2.1
comp=N,10nm,1.1s
QIZ Qiongzhong 12.22 248 P Pn 18 46 02.6 -1.5
QIZ LR LR
comp=N,830nm,11.4s
QIZ LR LR
comp=N,310nm,8.0s
QIZ LR LR
comp=N,440nm,11.3s
QIZ Qiongzhong 12.22 248 Pn Pn 18 46 03.9 -0.2
LYN LuoYang 13.31 324 eP Pn 18 46 18.7 -0.1
LYN PP P 18 46 28.9 +0.4
LYN S Sn 18 48 52.5 +6.1
LYN SS S 18 49 09.6 -0.9
LYN pmax pmax
comp=N,12nm,0.5s
LYN pmax pmax
comp=N,240nm,4.7s
LYN LR LR
comp=N,6μm,9.2s
LYN LR LR
comp=N,2μm,9.8s
LYN LR LR
comp=N,7μm,9.5s
GYA Guiyang 13.96 283 ⇓P Pn 18 46 31.4 +3.5
GYA S Sn 18 49 03.1 +0.6
GYA pmax pmax
comp=N,5.0nm,1.4s
GYA pmax pmax
comp=N,120nm,4.6s
GYA LR LR
comp=N,800nm,7.5s
GYA LR LR
comp=N,3μm,9.9s
GYA LR LR
comp=N,3μm,9.4s
KSAR Wonju Array Be 14.35 20 P 18 46 37.3 -2.8
KSRS Korea Array 14.38 20 Pn Pn 18 46 31.7 -1.7
comp=N,0.1nm,0.3s,baz=141,slow=18,SNR=2.0
KSRS Sn Sn 18 49 04.8 -7.6
comp=N,0.2nm,0.3s,baz=123,slow=32,SNR=4.8
KSRS LR LR 18 52 43.9
comp=N,296nm,19.7s,baz=30,slow=40
comp=N,0.5nm,0.7s
KS19 Wonju Array Si 14.40 20 P P 18 46 41.4 +0.7
HNS HongShan 14.68 337 eP P 18 46 41.4 -2.3
HNS eS S 18 49 32.6 -6.0
HNS LR LR
comp=N,1μm,11.1s
HNS LR LR
comp=N,850nm,11.8s
HNS LR LR
comp=N,1μm,11.9s
XAN Xi'an 15.08 314 P Pn 18 46 44.6 +1.6
XAN S Sn 18 49 31.8 +2.2
XAN pmax pmax
comp=N,17nm,1.2s
XAN LR LR
comp=N,1μm,7.7s
XAN LR LR
comp=N,3μm,9.3s
XAN LR LR
comp=N,4μm,9.8s
SLVN Son La 16.78 264 P P 18 47 06.5 -0.6
CD2 Chengdu 17.46 297 P P 18 47 17.5 +2.9
CD2 pmax pmax
comp=N,10.0nm,0.5s
CD2 LR LR
comp=N,780nm,9.7s
CD2 LR LR
comp=N,2μm,6.1s
CD2 LR LR
comp=N,1μm,8.7s
SNY Shenyang 17.83 4 ⇑P Pn 18 47 17.2 -0.7
SNY S S 18 50 40.3 -2.4
SNY pmax pmax
comp=N,9.0nm,2.0s
SNY pmax pmax
comp=N,130nm,4.5s
SNY LR LR
comp=N,950nm,11.0s
SNY LR LR
comp=N,240nm,8.8s
SNY LR LR
comp=N,1μm,12.0s
PZH PanZhiHua 18.36 282 P Pn 18 47 25.0 +0.3
PZH PP PnPn 18 47 44.8 +8.6
PZH S Sn 18 50 48.5 -0.9
PZH pmax pmax
comp=N,10.0nm,1.1s
PZH pmax pmax
comp=N,110nm,8.0s
PZH LR LR
comp=N,560nm,10.6s
PZH LR LR
comp=N,1μm,11.6s
PZH LR LR
comp=N,1μm,12.0s
KKM Kota Kinabalu 18.67 198 P P 18 47 26.9 -1.2
MJAR Matsushiro Arr 18.82 45 P P 18 47 25.3 -4.3
baz=228,slow=7.3,SNR=1.4
comp=N,0.5nm,0.6s
HHC Hu-ho-hao-te 18.88 335 eP Pn 18 47 34.1 +3.2
HHC pP sP 18 47 38.6 +2.0
HHC S Sn 18 50 59.7 -2.1

HHC pmax pmax
comp=N,10.0nm,0.6s
HHC pmax pmax
comp=N,79nm,5.3s
HHC LR LR
comp=N,820nm,10.0s
HHC LR LR
comp=N,310nm,10.2s
HHC LR LR
comp=N,700nm,10.7s
BTO Baotou 19.30 332 *e*P **Pn 18 47 39.6 +3.6**
BTO pP **sP 18 47 43.4 +2.2**
BTO sP **pP 18 47 46.6 +6.9**
BTO PP **PnPn 18 47 58.0 +8.9**
BTO pmax pmax
comp=N,7.0nm,1.3s
BTO pmax pmax
comp=N,240nm,5.8s
BTO LR LR
comp=N,3μm,12.7s
BTO LR LR
comp=N,2μm,10.1s
BTO LR LR
comp=N,4μm,11.1s
LZH Lanzhou 19.66 312 *e*P **Pn 18 47 44.0 +3.7**
LZH pP sP 18 47 48.1 +2.9
LZH SS Sn 18 51 44.0 +23
LZH pmax pmax
comp=N,21nm,1.1s
LZH LR LR
comp=N,880nm,10.8s
LZH LR LR
comp=N,2μm,11.3s
LZH LR LR
comp=N,2μm,11.0s
CN2 Changchun 19.96 8 *e*P **P 18 47 41.7 -0.2**
CN2 *e*S **S 18 51 20.3 -5.5**
CN2 pmax pmax
comp=N,10.0nm,1.6s
CN2 LR LR
comp=N,580nm,12.0s
CN2 LR LR
comp=N,200nm,12.0s
CN2 LR LR
comp=N,480nm,12.0s
CRAI Chiangrai 20.25 263 P 18 47 44.9 -0.4
XLT XiLinHaoTe 20.40 348 *e*P Pn 18 47 49.9 +1.0
XLT sP sP 18 47 57.9 +4.7
XLT PP **PnPn 18 48 10.2 +6.1**
XLT S Sn 18 51 41.3 +3.0
XLT pmax pmax
comp=N,7.0nm,0.8s
XLT pmax pmax
comp=N,140nm,5.1s
XLT LR LR
comp=N,47nm,13.2s
XLT LR LR
comp=N,360nm,11.9s
XLT LR LR
comp=N,580nm,12.3s
TNCH TengChong 21.25 278 P P 18 47 58.8 +2.5
TNCH pP pP 18 48 01.5 +0.2
TNCH sP sP 18 48 04.1 +1.5
TNCH S **S 18 51 48.2 -3.8**
TNCH pmax pmax
comp=N,17nm,1.4s
TNCH pmax pmax
comp=N,150nm,4.9s
TNCH LR LR
comp=N,530nm,7.2s
TNCH LR LR
comp=N,1μm,9.4s
TNCH LR LR
comp=N,2μm,9.8s
MDJ Mudanjiang 21.51 15 P P 18 48 05.6 +7.0
MDJ pP pwP 18 48 11.1 +5.2
MDJ pmax pmax
comp=N,6.0nm,1.0s
MDJ pmax pmax
comp=N,210nm,4.5s
MDJ LR LR
comp=N,940nm,12.7s
MDJ LR LR
comp=N,980nm,16.1s
MDJ LR LR
comp=N,1μm,14.4s
USRK Ussuriysk Ar. 21.79 20 P **P 18 48 02.2 +0.6**
USRK Ussuriysk Ar. 21.79 20 P **P 18 47 58.6 -3.0**
comp=N,1.0nm,0.8s,baz=209,slow=12,SNR=1.6
comp=N,1.0nm,0.8s
CHTO Chiang Mai 21.93 261 P P 18 48 02.5 -1.0
CM31 Chiang Mai Arr 22.04 260 P P 18 48 04.3 -0.4
CMAR Chiang Mai Arr 22.04 260 P P 18 48 03.8 -0.8
CMAR Chiang Mai Arr 22.04 260 P P 18 48 06.2 +1.5
comp=N,0.7nm,0.7s,baz=60,slow=8.6,SNR=9.3
comp=N,0.7nm,0.7s
SBUM Sibu 23.37 205 P **P 18 48 17.7 -0.9**
GTA Gaotai 24.14 315 *e*P **P 18 48 28.5 +2.6**
GTA sP pwP 18 48 35.7 +1.7
GTA pmax pmax
comp=N,4.0nm,1.7s
GTA LR LR
comp=N,470nm,13.1s
GTA LR LR
comp=N,1μm,12.4s
GTA LR LR
comp=N,960nm,12.0s
KLR Kul'dur 26.35 15 LR LR 19 01 15.5
comp=N,175nm,18.7s,baz=66,slow=41
HEH HeiHe 26.55 8 *e*P **P 18 48 50.9 +3.4**
HEH pmax pmax
comp=N,6.0nm,0.7s
HEH pmax pmax
comp=N,300nm,7.2s
HEH LR LR
comp=N,560nm,15.8s
HEH LR LR
comp=N,320nm,14.8s
HEH LR LR
comp=N,820nm,14.0s
ULN Ulaanbaatar 26.56 337 P **P 18 48 46.9 -0.9**
ULN lAmb lAmb 18 49 15.3
comp=Z,7.2nm,1.1s
SONM Songino Array 26.77 337 P **P 18 48 49.0 -0.7**
SONM Songino Array 26.77 337 P **P 18 48 50.1 +0.4**
comp=Z,2.7nm,0.8s,baz=156,slow=9.5,SNR=12
SONM LR LR 19 00 36.7
comp=Z,460nm,20.0s,baz=108,slow=39
comp=Z,2.7nm,0.8s
LSA Lhasa 27.92 288 P **P 18 49 00.3 -0.3**
WMQ Urumqi 34.22 314 *e*P P 18 49 59.8 +4.3
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ LR LR
comp=Z,580nm,9.5s
WMQ LR LR
comp=Z,370nm,10.5s
WMQ LR LR
comp=Z,120nm,12.3s
YAK Yakutsk 38.38 6 LR LR 19 07 18.7
comp=Z,151nm,19.0s,baz=117,slow=38
MK31 Makanchi Array 38.89 316 P **P 18 50 33.7 -1.5**
MKAR Makanchi Array 38.89 316 P **P 18 50 34.8 -0.4**
MKAR Makanchi Array 38.89 316 P **P 18 50 35.9 +0.6**
comp=Z,1.9nm,0.7s,baz=101,slow=10,SNR=15
comp=Z,1.9nm,0.7s
MAKZ Makanchi 39.09 316 P **P 18 50 36.8 -0.2**
PETK Petropavlovsk- 39.67 34 LR LR 19 05 24.9
comp=Z,54nm,21.8s,baz=239,slow=34
KNRA Kununurra 40.02 170 P **P 18 50 44.2 -0.6**
KNRA lAmb lAmb 18 50 53.2
comp=Z,9.3nm,1.1s
ZAA0 Zalesovo Array 40.72 327 P **P 18 50 49.2 -1.1**
ZAA0 lAmb lAmb 18 50 59.4
comp=Z,7.9nm,1.1s
ZALV Zalesovo Beam 40.72 327 P **P 18 50 49.6 -0.7**
ZALV Zalesovo Beam 40.72 327 P **P 18 50 50.4 0.0**
comp=Z,4.2nm,0.9s,baz=110,slow=6.6,SNR=12
ZALV LR LR 19 09 29.5
comp=Z,80nm,18.4s,baz=88,slow=39
comp=Z,4.2nm,0.9s
MA2 Magadan 40.91 22 LR LR 19 07 37.9
comp=Z,68nm,19.1s,baz=322,slow=36
KSH Kashi 41.51 303 P P 18 51 02.1 +5.0
KSH pmax pmax
comp=Z,2.0nm,0.9s

NRN Naryn 41.78 306 P **P 18 50 59.1 -0.5**
H11N1 WAKE ISLAND Hy 41.89 87 T T 19 36 19.5
SNR=7.8
H11S3 WAKE ISLAND Hy 42.01 89 T T 19 36 18.2
baz=284,slow=75,SNR=21
H11S1 WAKE ISLAND Hy 42.02 89 T T 19 36 10.5
baz=284,slow=75,SNR=12
H11S2 WAKE ISLAND Hy 42.03 89 T T 19 36 18.9
baz=284,slow=75,SNR=16
KURK Kurchatov 42.62 320 P **P 18 51 05.8 0.0**
KURBB Kurchatov Arra 42.63 320 P **P 18 51 05.9 -0.1**
comp=Z,1.1nm,0.9s,baz=105,slow=7.2,SNR=10
comp=Z,1.1nm,0.9s
PALK Pallekele 42.77 254 P **P 18 51 06.2 -1.4**
PALK lAmb lAmb 18 51 15.9
comp=Z,14nm,1.1s
AAK Ala-Archa 43.10 307 LR LR 19 11 19.6
comp=Z,97nm,19.4s,baz=44,slow=39
COEN Coen 43.11 149 P **P 18 51 09.5 -0.7**
NIL Nilore 43.31 294 P **P 18 51 11.3 -0.5**
NIL lAmb lAmb 18 51 39.2
comp=Z,3.9nm,0.5s
COCO West Island 43.50 217 P **P 18 51 13.4 0.0**
ARSB Arslanbob 44.01 305 P **P 18 51 15.6 -1.9**
WB0 Warramunga Arr 45.20 163 P **P 18 51 25.4 -1.5**
WB0 lAmb lAmb 18 52 04.9
comp=Z,8.1nm,1.2s
WRAB Tennant Creek 45.34 163 P **P 18 51 26.6 -1.4**
WRAB lAmb lAmb 18 51 56.6
comp=Z,4.1nm,1.0s
PSA00 Pilbara Seismi 45.35 183 P **P 18 51 26.9 -1.2**
PSA00 lAmb lAmb 18 51 38.5
comp=Z,6.3nm,1.2s
PSA00 Pilbara Seismi 45.35 183 P **P 18 51 27.4 -0.7**
PSA00 lAmb lAmb 18 51 57.8
comp=Z,14nm,1.1s
WRA Warramunga Arr 45.35 163 P **P 18 51 26.8 -1.4**
WRA Warramunga Arr 45.35 163 P **P 18 51 26.9 -1.2**
comp=Z,1.3nm,0.5s,baz=346,slow=8.7,SNR=18
comp=Z,1.3nm,0.5s
WB2 Warramunga Arr 45.35 163 P **P 18 51 26.4 -1.7**
WB2 lAmb lAmb 18 51 35.3
comp=Z,9.8nm,1.3s
WR0 Warramunga Arr 45.42 163 P **P 18 51 27.3 -1.3**
WR0 lAmb lAmb 18 51 28.4
comp=Z,11nm,1.2s
KK31 Karatay Array 46.06 307 P **P 18 51 31.4 -2.2**
KK31 lAmb lAmb 18 51 40.5
comp=Z,6.3nm,1.5s
KKAR Karatay Array 46.06 307 P **P 18 51 31.3 -2.3**
KKAR Karatay Array 46.06 307 P **P 18 51 31.9 -1.7**
KKAR lAmb lAmb 18 51 40.4
comp=Z,6.3nm,1.5s
KBL Kabul 46.79 296 P **P 18 51 37.2 -2.4**
KBL lAmb lAmb 18 52 04.9
comp=Z,8.9nm,1.1s
TIXI Tiksi 47.83 3 P **P 18 51 45.1 -1.9**
TIXI lAmb lAmb 18 51 52.1
comp=Z,6.2nm,0.8s
TIXI Tiksi 47.83 3 LR LR 19 13 47.9
comp=Z,183nm,19.2s,baz=202,slow=38
BVAR Borovoye Array 48.19 321 P **P 18 51 50.9 +0.8**
comp=Z,1.5nm,0.6s,baz=102,slow=7.8,SNR=11
comp=Z,1.5nm,0.6s
BRVK Borovoye 48.26 321 P **P 18 51 49.6 -1.0**
BRVK lAmb lAmb 18 51 55.4
comp=Z,2.7nm,0.8s
AS31 Alice Springs 48.81 165 P **P 18 51 53.9 -1.2**
ASAR Alice Springs 48.81 165 P **P 18 51 54.1 -1.1**
ASAR Alice Springs 48.81 165 P **P 18 51 54.4 -0.8**
comp=Z,1.7nm,0.7s,baz=341,slow=7.1,SNR=46
comp=Z,1.7nm,0.7s
AMKA Amchitka 51.42 43 P **P 18 52 13.4 -1.1**
KIWB Kanaga Island 53.67 42 P **P 18 52 30.9 -0.4**
ABKAR Akbulak array 54.00 314 P **P 18 52 32.2 -1.5**
ABKAR Akbulak array 54.00 314 P **P 18 52 31.5 -2.2**
ABKAR lAmb lAmb 18 52 53.4
comp=Z,3.8nm,1.1s
AKTO Aktyubinsk 55.32 316 LR LR 19 15 52.5
comp=Z,149nm,18.6s,baz=273,slow=35
GEYT Alibeck 55.41 301 P **P 18 52 43.8 -0.4**
GEYT lAmb lAmb 18 52 52.5
comp=Z,3.3nm,0.9s
GEYT Alibeck 55.41 301 P **P 18 52 45.3 +1.1**
comp=Z,1.5nm,0.7s,baz=38,slow=16,SNR=3.3
comp=Z,1.5nm,0.7s
ATKA Atka Island 55.52 42 P **P 18 52 43.5 -1.3**
ARU Arti 55.61 323 P **P 18 52 44.8 -0.5**
ARU lAmb lAmb 18 52 50.3
comp=Z,13nm,1.5s
EIDS Eidsvold 56.66 148 P **P 18 52 51.9 -1.3**
NWAO Narrogin (SRO) 56.79 185 P **P 18 52 52.3 -1.6**
NWAO Narrogin (SRO) 56.79 185 P **P 18 52 52.2 -1.7**
NWAO lAmb lAmb 18 53 31.9
comp=Z,60nm,1.4s
STKA Stephens Creek 58.69 160 P **P 18 53 06.0 -1.4**
comp=Z,1.3nm,0.6s,baz=326,slow=3.9,SNR=6.3
comp=Z,1.3nm,0.6s
F17K Baldwin Pennin 63.01 26 P **P 18 53 35.9 -0.3**
F17K lAmb lAmb 18 54 09.2
comp=Z,7.6nm,1.3s
ONTNC Ouen Toro 63.24 133 P **P 18 53 38.4 0.0**
N15K Kwethluk River 63.58 33 P **P 18 53 39.3 -0.8**
SDPT Sand Point 63.66 39 P **P 18 53 40.8 0.0**
L16K Owhat River 63.81 31 P **P 18 53 41.5 -0.1**
D19K Kuna River 64.25 24 P **P 18 53 44.1 -0.4**
D19K lAmb lAmb 18 53 51.7
comp=Z,3.5nm,0.8s
TOO Toolangi 65.17 159 P **P 18 53 50.3 -0.5**
TTA Tatalina 65.35 30 P **P 18 53 52.0 +0.2**
B21K Ikpikpuk River 65.48 22 P **P 18 53 52.8 +0.4**
B21K lAmb lAmb 18 53 59.8
comp=Z,6.3nm,0.9s
IMAR Indian Mountai 66.06 26 P **P 18 53 56.0 -0.3**
J20K Nowinta River 66.07 28 P **P 18 53 56.2 -0.1**
E22K Anaktuvuk Pass 66.61 24 P **P 18 53 59.6 -0.2**
E22K lAmb lAmb 18 54 07.8
comp=Z,7.9nm,1.1s
CAST Castle Rocks 67.07 29 P **P 18 54 02.3 -0.5**
CAST lAmb lAmb 18 54 07.6
comp=Z,5.2nm,1.1s
TOLK Toolik Lake Re 67.37 23 P **P 18 54 03.4 -1.3**
TOLK lAmb lAmb 18 54 28.2
comp=Z,6.6nm,1.2s
SKT Skwentna 67.53 31 P **P 18 54 05.1 -0.6**
SKT lAmb lAmb 18 54 45.7
comp=Z,8.9nm,1.3s
KTH Kantishna Hill 67.57 29 P **P 18 54 04.6 -1.4**
KTH lAmb lAmb 18 54 43.8
comp=Z,9.0nm,1.3s
SUA Susitna One 67.99 31 P **P 18 54 08.4 -0.3**
MDM Murphy Dome 68.49 27 P **P 18 54 10.8 -0.9**
RND Reindeer 68.51 29 P **P 18 54 10.9 -1.0**
E25K Arctic Village 68.92 24 P **P 18 54 14.3 0.0**
E25K lAmb lAmb 18 54 51.0
comp=Z,4.6nm,1.3s
ILAR Eielson Array 69.09 27 P **P 18 54 15.1 -0.3**
ILAR Eielson Array 69.09 27 P **P 18 54 14.0 -1.4**
comp=Z,0.3nm,0.5s,baz=290,slow=7.0,SNR=5.6
comp=Z,0.3nm,0.5s
DHY Denali Highway 69.23 29 P **P 18 54 15.9 -0.6**
DHY lAmb lAmb 18 54 37.0
comp=Z,3.4nm,1.0s
BMAR Burnt Mountain 69.43 24 P **P 18 54 17.0 -0.5**
SCM Sheep Creek Mo 69.52 30 P **P 18 54 17.3 -0.9**
SPITS Spitsbergen Ar 69.78 348 LR LR 19 29 28.5
comp=Z,126nm,18.8s,baz=51,slow=40
M24K Tolsona, Glenn 69.98 30 P **P 18 54 21.2 +0.1**
KLU Klutina 70.25 31 P **P 18 54 21.7 -1.0**
SCRK Sand Creek 70.50 28 P **P 18 54 23.6 -0.7**
SCRK lAmb lAmb 18 54 51.7
comp=Z,5.2nm,1.5s
I26K Coal Creek Min 70.50 26 P **P 18 54 23.0 -1.1**
I26K lAmb lAmb 18 54 32.6
comp=Z,8.2nm,1.4s
J26L Joseph Creek 70.54 27 P **P 18 54 23.4 -1.1**
J26L lAmb lAmb 18 54 30.5
comp=Z,2.7nm,0.9s
GLB Gilahina Butte 71.24 30 P **P 18 54 28.5 -0.3**
GLB lAmb lAmb 18 54 35.8
comp=Z,5.3nm,1.0s
L27K Beaver Creek, 71.68 28 P **P 18 54 31.3 0.0**
L27K lAmb lAmb 18 54 56.6
comp=Z,3.3nm,1.1s
BCAR Beaver Creek A 71.70 28 P **P 18 54 31.9 +0.5**

FINES FINESS Array B 71.90 330 P **P 18 54 32.3 -0.3**
comp=Z,1.7nm,0.8s,baz=354,slow=5.7,SNR=2.1
comp=Z,1.7nm,0.8s
CTGM Chitina Glacie 72.53 31 P **P 18 54 36.0 -0.5**
CTGM lAmb lAmb 18 54 48.9
comp=Z,4.7nm,0.8s
INK Inuvik 73.16 22 P **P 18 54 39.0 -1.0**
INK Inuvik 73.16 22 LR LR 19 30 41.0
comp=Z,57nm,18.2s,baz=110,slow=39
F31M Tsiigehtchic 73.41 23 P **P 18 54 40.3 -1.2**
F31M lAmb lAmb 18 54 46.9
comp=Z,4.1nm,0.8s
BRTR Keskin Array B 73.77 307 P **P 18 54 44.5 +0.2**
comp=Z,0.7nm,0.8s,baz=52,slow=2.0,SNR=5.2
comp=Z,0.7nm,0.8s
HFS Hagfors 78.01 331 LR LR 19 35 41.5
comp=Z,311nm,19.0s,baz=37,slow=40
NOA NORSAR Array B 78.66 332 LR LR 19 33 53.5
comp=Z,104nm,18.1s,baz=55,slow=39
YKA Yellowknife Ar 82.89 23 P **P 18 55 33.1 -1.0**
comp=Z,1.1nm,0.8s,baz=311,slow=5.1,SNR=13
YKA LR LR 19 35 29.6
comp=Z,29nm,18.2s,baz=314,slow=38
comp=Z,1.1nm,0.8s
BORG Borgarnes 87.05 345 LR LR 19 38 48.4
comp=Z,104nm,18.0s,baz=102,slow=38
NEW Newport 90.80 35 P **P 18 56 11.8 -1.3**
comp=Z,1.4nm,0.3s,baz=346,slow=7.1,SNR=2.9
comp=Z,1.4nm,0.3s
FRB Frobisher Bay 92.16 5 LR LR 19 41 24.0
comp=Z,58nm,18.2s,baz=3.0,slow=38

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*NEIC **09** 18:54:59.0±1.7, 6.76S±0.10×125.23E±0.08, h541km±14km, mb4.3/19, Error ellipse: s-maj=15.5km s-min=10.4km az=211.0*
*DJA **09** 18:54:59.4±0.3, 7.3S×12.5E±*, h530km±4km, M4.1/19, mB4.8/7, mb4.1/19, MLv4.2/14, Mw(mB)4.0/7*
*IDC **09** 18:55:01.8±3.3, 6.66S×125.48E, h576km±45km, mb2.7/5, mbtmp3.8/7, Error ellipse: s-maj=120.4km s-min=11.9km az=61.0*

ISC 09 18:54:58.7±0.5, 6.77S±0.06×125.22E±0.06, h543km, n83, σ1909/93, mb3.2/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.11**	**197**	P	**P**	**18 56 14.3**	**+0.2**
SOEI				S	**S**	**18 57 12.3**	**-3.1**
SOEI	**Soe**	**3.11**	**197**	P	**P**	**18 56 14.5**	**+0.4**
SOEI	**Soe**	**3.11**	**197**	P	**P**	**18 56 14.8**	**+0.7**
SOEI				S	**S**	**18 57 13.8**	**-1.6**
MMRI	**Maumere**	**3.49**	**238**	P	**P**	**18 56 15.6**	**-0.9**
MMRI				S	**S**	**18 57 18.0**	**-1.6**
MMRI	**Maumere**	**3.49**	**238**	P	**P**	**18 56 16.1**	**-0.3**
NLAI	**Namlea**	**3.98**	**28**	P	**P**	**18 56 20.9**	**+0.9**
NLAI				S	**S**	**18 57 25.4**	**-0.7**
EDFI	**Ende, Flores**	**4.01**	**240**	P	**P**	**18 56 19.2**	**-1.1**
EDFI				S	**S**	**18 57 26.3**	**-0.5**
SANI	**Sanana**	**4.75**	**9**	P	**P**	**18 56 26.6**	**+0.4**
SANI	**Sanana**	**4.75**	**9**	P	**P**	**18 56 26.7**	**+0.5**
BNDI	**Bandanaira** 276nm,1.4s,1.0nm	**5.17**	**65**	P	**P**	**18 56 30.4**	**+0.7**
BKSI	**Bulukumba** 28nm,0.8s,0.1nm	**5.26**	**286**	P	**P**	**18 56 30.3**	**-0.2**
KAPI	**Kappang**	**5.71**	**287**	P	**P**	**18 56 34.2**	**-0.2**
BASI	**Baing, Sumba** 109nm,1.0s,0.7nm	**5.73**	**233**	P	**P**	**18 56 33.7**	**-0.9**
BASI	109nm,1.0s,0.7nm			S	**S**	**18 57 48.5**	**-4.3**
SAUI	**Saumlaki**	**6.15**	**102**	P	**P**	**18 56 38.5**	**0.0**
SAUI	**Saumlaki** 85nm,0.6s,0.5nm	**6.15**	**102**	P	**P**	**18 56 39.6**	**+1.1**
LUWI	**Luwuk**	**6.19**	**337**	P	**P**	**18 56 40.4**	**+1.5**
LUWI	**Luwuk**	**6.19**	**337**	P	**P**	**18 56 40.4**	**+1.5**
LUWI	**Luwuk** 46nm,0.9s,0.1nm	**6.19**	**337**	P	**P**	**18 56 39.3**	**+0.5**
LBMI	**Labuha** 44nm,1.5s,2μm0.3nm	**6.50**	**21**	P	**P**	**18 56 42.8**	**+1.0**
KMSI	**Cibinong** 379nm,0.6s,4μm1.5nm	**7.40**	**350**	P	**P**	**18 56 51.6**	**+1.2**
PLAI	**Plampang**	**7.65**	**254**	P	**P**	**18 56 51.6**	**-1.2**
PLAI	**Plampang** 19nm,0.8s,0.2nm	**7.65**	**254**	P	**P**	**18 56 51.6**	**-1.2**
MRSI	**Marisa** 46nm,0.8s,528nm0.2nm	**7.91**	**335**	P	**P**	**18 56 56.2**	**+0.8**
FAKI	**Fak Fak**	**7.98**	**62**	P	**P**	**18 56 56.4**	**+0.2**
FAKI				S	**S**	**18 58 29.2**	**-3.2**
FAKI	**Fak Fak**	**7.98**	**62**	P	**P**	**18 56 57.1**	**+0.9**
FAKI	**Fak Fak** 45nm,0.7s	**7.98**	**62**	P	**P**	**18 56 56.6**	**+0.4**
MTN	**Manton Dam**	**8.39**	**136**	P	**P**	**18 57 00.8**	**+0.6**
MTN	**Manton Dam**	**8.39**	**136**	P	**P**	**18 57 00.8**	**+0.6**
SWI	**Sorong** 40nm,0.9s	**8.41**	**46**	P	**P**	**18 57 02.1**	**+1.6**
TWSI	**Taliwang, Sumb** 14nm,1.2s	**8.49**	**256**	P	**P**	**18 56 59.9**	**-1.3**
MPSI	**Mapaga** 4.1nm,0.7s,483nm	**8.83**	**323**	P	**P**	**18 57 05.2**	**+0.5**
TOLI2	**Tolitoli**	**8.99**	**330**	P	**P**	**18 57 06.8**	**+0.4**
TOLI2				S	**S**	**18 58 50.2**	**-0.9**
TOLI2	**Tolitoli**	**8.99**	**330**	P	**P**	**18 57 06.7**	**+0.4**
KDU	**Kakadu**	**9.26**	**130**	P	**P**	**18 57 09.5**	**+0.5**
KNRA	**Kununurra**	**9.51**	**159**	P	**P**	**18 57 12.3**	**+0.8**
KNRA	**Kununurra**	**9.51**	**159**	P	**P**	**18 57 12.1**	**+0.5**
DNP	**Denpasar**	**10.17**	**259**	P	**P**	**18 57 17.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**11.27**	**178**	P	**P**	**18 57 30.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.27**	**178**	P	**P**	**18 57 29.9**	**+0.2**
GMJI	**Gumukmas**	**11.77**	**262**	P	**P**	**18 57 34.7**	**-0.2**
BWJI	**Bawean**	**12.52**	**273**	P	**P**	**18 57 42.7**	**0.0**
PSA00	**Pilbara Seismi**	**15.61**	**199**	P	**P**	**18 58 13.3**	**-1.2**
PSA00	**Pilbara Seismi**	**15.61**	**199**	P	**P**	**18 58 13.8**	**-0.8**
PSA00	comp=Z,17nm,1.3s			lAmb	lAmb	18 58 30.8	
PSA00	**Pilbara Seismi**	**15.61**	**199**	P	**P**	**18 58 14.1**	**-0.5**
WB0	**Warramunga Arr**	**15.70**	**146**	P	**P**	**18 58 15.1**	**-0.5**
WB0	comp=Z,4.5nm,0.5s			lAmb	lAmb	18 58 15.6	
WRAB	**Tennant Creek**	**15.81**	**147**	P	**P**	**18 58 16.4**	**-0.2**
WRAB	comp=Z,4.6nm,1.0s			lAmb	lAmb	18 58 18.5	
WRA	**Warramunga Arr**	**15.81**	**147**	P	**P**	**18 58 15.6**	**-1.1**
WRA	**Warramunga Arr** comp=Z,1.2nm,0.3s,baz=325,slow=11,SNR=53	**15.81**	**147**	P	**P**	**18 58 16.4**	**-0.3**
WRA				S	**S**	**19 00 59.2**	**+0.4**
WR0	**Warramunga Arr** comp=Z,2.7nm,0.9s,baz=331,slow=16,SNR=5.4	**15.93**	**146**	P	**P**	**18 58 17.8**	**-0.1**
WR0	comp=Z,15nm,1.2s			lAmb	lAmb	18 58 19.2	
WRKA	**Warakurna**	**18.40**	**171**	P	**P**	**18 58 41.7**	**+1.0**
AS31	**Alice Springs**	**18.76**	**154**	P	**P**	**18 58 44.5**	**+0.5**
AS31	comp=Z,1.9nm,0.5s			lAmb	lAmb	18 58 47.4	
ASAR	**Alice Springs**	**18.76**	**154**	P	**P**	**18 58 44.5**	**+0.5**
ASAR	**Alice Springs** comp=Z,2.9nm,0.6s,baz=335,slow=8.6,SNR=106	**18.76**	**154**	P	**P**	**18 58 45.3**	**+1.3**
ASAR				S	**S**	**19 01 47.3**	**+0.1**
AS01	**Alice Springs** comp=Z,1.7nm,0.9s,baz=340,slow=20,SNR=12	**18.78**	**154**	P	**P**	**18 58 45.3**	**+1.1**
GIRL	**Giralia**	**19.00**	**213**	P	**P**	**18 58 46.5**	**+0.4**
GIRL	**Giralia**	**19.00**	**213**	P	**P**	**18 58 46.8**	**+0.7**
COEN	**Coen**	**19.05**	**113**	P	**P**	**18 58 46.5**	**-0.1**
COEN	comp=Z,19nm,1.2s			lAmb	lAmb	18 58 53.3	
QIS	**Mount Isa**	**19.55**	**136**	P	**P**	**18 58 52.7**	**+1.5**
MEEK	**Meekatharra**	**20.74**	**197**	P	**P**	**18 59 02.7**	**+0.8**
OOD	**Oodnadatta**	**23.15**	**156**	P	**P**	**18 59 24.7**	**+1.2**
MORW	**Morawa**	**23.81**	**200**	P	**P**	**18 59 29.4**	**0.0**
MORW	**Morawa**	**23.81**	**200**	P	**P**	**18 59 29.8**	**+0.5**
FORT	**Forrest**	**24.04**	**174**	P	**P**	**18 59 32.0**	**+0.8**
FORT	**Forrest**	**24.04**	**174**	P	**P**	**18 59 32.3**	**+1.0**
MULG	**Mulgathing**	**24.82**	**162**	P	**P**	**18 59 39.8**	**+1.5**
BLDU	**Ballidu**	**25.03**	**198**	P	**P**	**18 59 40.8**	**+0.7**
LCRK	**Leigh Creek**	**26.53**	**154**	P	**P**	**18 59 54.9**	**+1.6**
NWAO	**Narrogin (SRO)**	**27.07**	**195**	P	**P**	**18 59 58.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**27.07**	**195**	P	**P**	**18 59 58.5**	**+0.5**
NWAO	comp=Z,160nm,1.3s			lAmb	lAmb	19 00 00.5	
NWAO	**Narrogin (SRO)**	**27.07**	**195**	P	**P**	**18 59 58.8**	**+0.8**
BBOO	**Buckleboo**	**27.80**	**160**	P	**P**	**19 00 04.3**	**-0.2**
BBOO	comp=Z,17nm,1.4s			lAmb	lAmb	19 00 07.5	
BBOO	**Buckleboo**	**27.80**	**160**	P	**P**	**19 00 05.6**	**+1.1**
STKA	**Stephens Creek**	**29.29**	**151**	P	**P**	**19 00 17.1**	**-0.3**

STKA	**Stephens Creek**	**29.29 151**	P	**P**	**19 00 19.1**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=327,slow=10,SNR=4.6					
	comp=Z,1.7nm,0.7s					
HTT	**Hallett**	**29.42 156**	P	**P**	**19 00 20.6**	**+2.0**
TPUB	**Ta-pu**	**30.22 352**	P	**P**	**19 00 24.6**	**-1.0**
YULB	**Yu-li**	**30.22 353**	P	**P**	**19 00 24.9**	**-0.6**
YULB			IAmb	IAmb	19 00 28.2	
	comp=Z,22nm,1.4s					
PATS	**Pohnpei**	**35.68 68**	P	**P**	**19 01 11.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**36.06 314**	P	**P**	**19 01 16.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=148,slow=7.1,SNR=2.3					
	comp=Z,0.1nm,0.3s					
MKAR	**Makanchi Array**	**65.51 329**	P	**P**	**19 04 49.7**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=126,slow=8.1,SNR=6.4					
	comp=Z,0.4nm,0.5s					
ZALV	**Zalesovo Beam**	**69.35 336**	P	**P**	**19 05 11.6**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=134,slow=6.2,SNR=2.2					
	comp=Z,0.5nm,0.6s					
BVAR	**Borovoye Array**	**75.39 329**	P	**P**	**19 05 47.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=114,slow=6.5,SNR=3.1					
	comp=Z,0.4nm,0.5s					
BRVK	**Borovoye**	**75.46 329**	P	**P**	**19 05 47.0**	**-0.2**

*NEIC **09** 19:06:22.6±3.4, 43.76N±0.04×105.35W±0.09, h0km±1km, ML3.2/68, Error ellipse: s-maj=10.5km s-min=7.0km az=84.0*
*IDC **09** 19:06:25.3±1.7, 43.92N×105.72W, h0km, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=56.2km s-min=7.0km az=147.0*
ISC 09 19:06:23.9±0.9, 43.68N±0.05×105.31W±0.05, h0km, n44, σ1§29/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.02**	**64**		**Pg**	**19 06 44.6**	**+1.2**
K22A	**Casper**	**1.36**	**221**		**Pb**	**19 06 50.2**	**-0.2**
K22A				IAML		19 07 12.5	
	comp=N,520nm,0.3s						
PHWY	**Pilot Hill**	**2.38**	**183**		**Pb**	**19 07 06.7**	**-1.2**
RWWY	**Rawlins**	**2.44**	**216**	Pn	**Pb**	**19 07 08.4**	**-0.3**
N23A	**Red Feather La**	**2.83**	**190**		**Pn**	**19 07 13.1**	**+2.5**
N23A				IAML		19 07 54.7	
	comp=E,74nm,0.8s						
N23A				IAML		19 08 00.8	
	comp=N,65nm,0.7s						
LAO	**LASA Array**	**3.07**	**348**		**Pn**	**19 07 16.7**	**+3.0**
LAO				IAML		19 08 07.0	
	comp=N,110nm,0.7s						
RLMT	**Red Lodge**	**3.18**	**298**		**Pn**	**19 07 17.1**	**+1.7**
RLMT				IAML		19 08 18.6	
	comp=N,48nm,0.8s						
RLMT				IAML		19 08 19.6	
	comp=N,47nm,1.0s						
BRIGG	**Briggsdale**	**3.19**	**166**		**Pn**	**19 07 16.1**	**+0.8**
BW06	**Boulder Array**	**3.24**	**255**		**Pn**	**19 07 16.8**	**+0.6**
BW06				IAML		19 08 07.3	
	comp=N,50nm,0.8s						
BW06				IAML		19 08 10.8	
	comp=N,46nm,0.8s						
PD31	**Pinedale Array**	**3.24**	**255**		**Pn**	**19 07 17.9**	**+1.7**
PDAR	**Pinedale Array**	**3.24**	**255**		**Pn**	**19 07 17.5**	**+1.3**
PDAR	**Pinedale Array**	**3.24**	**255**	Pn	**Pn**	**19 07 18.0**	**+1.8**
	comp=N,2.7nm,0.3s,baz=77,slow=20,SNR=33						
PDAR				Pg	**Pb**	**19 07 23.1**	**+0.7**
	comp=N,3.6nm,0.3s,baz=64,slow=17,SNR=25						
PDAR				Lg	Lg	19 07 59.4	
	comp=N,5.5nm,0.3s,baz=72,slow=24,SNR=7.8						
	comp=N,1.1nm,0.3s						
YMP	**Mirror Lake Pl**	**3.64**	**289**		**Pn**	**19 07 21.3**	**-0.5**
YMP				IAML		19 08 27.0	
	comp=N,58nm,1.0s						
LKWY	**Lake**	**3.77**	**285**		**Pn**	**19 07 24.4**	**+0.9**
LKWY				IAML		19 07 45.5	
	comp=N,42nm,1.1s						
LKWY				IAML		19 08 39.4	
	comp=N,29nm,2.2s						
LOHW	**Long Hollow**	**3.84**	**271**		**Pn**	**19 07 24.8**	**+0.2**
H17A	**Grant Village**	**3.87**	**282**		**Pn**	**19 07 24.2**	**-0.6**
ISCO	**Idaho Springs**	**3.89**	**183**		**Pn**	**19 07 25.8**	**+0.6**
FLWY	**Flagg Ranch**	**3.92**	**278**		**Pn**	**19 07 24.6**	**-0.9**
FLWY				IAML		19 08 42.1	
	comp=N,40nm,1.2s						
FLWY				IAML		19 08 43.1	
	comp=N,38nm,1.9s						
MOOW	**Moose Ponds**	**3.94**	**273**		**Pn**	**19 07 25.8**	**-0.1**
SNOW	**Snow King Moun**	**3.96**	**269**		**Pn**	**19 07 25.3**	**-0.9**
SNOW				IAML		19 08 43.6	
	comp=N,54nm,1.2s						
SNOW				IAML		19 09 03.0	
	comp=N,45nm,1.1s						
REDW	**Red Top Meadow**	**4.04**	**267**		**Pn**	**19 07 27.1**	**-0.1**
IMW	**Indian Meadow**	**4.08**	**275**		**Pn**	**19 07 28.0**	**+0.1**
IMW				IAML		19 08 42.5	
	comp=N,32nm,0.8s						
TPAW	**Teton Pass**	**4.10**	**269**		**Pn**	**19 07 28.6**	**+0.5**
TPAW				IAML		19 08 44.5	
	comp=N,39nm,1.0s						
TPAW				IAML		19 08 56.5	
	comp=N,25nm,1.1s						
YHH	**Holmes Hill**	**4.13**	**287**		**Pn**	**19 07 27.9**	**-0.6**
O20A	**White River Ci**	**4.17**	**213**	Pn	**Pn**	**19 07 30.0**	**+1.1**
O20A				IAML		19 09 01.2	
	comp=E,44nm,1.2s						
K30B	**Basset**	**4.29**	**102**		**Pn**	**19 07 33.0**	**+2.6**
AHID	**Auburn Hatcher**	**4.33**	**260**		**Pn**	**19 07 30.4**	**-0.8**
AHID				IAML		19 08 50.8	
	comp=E,40nm,1.2s						
E28A	**Huff**	**4.36**	**47**		**Pn**	**19 07 33.1**	**+1.7**
RDMU	**Red Mountain**	**4.44**	**227**		**Pn**	**19 07 32.0**	**-0.7**
RDMU				IAML		19 08 48.7	
	comp=N,32nm,1.2s						
RDMU				IAML		19 08 48.8	
	comp=E,29nm,0.9s						
SMCO	**Snowmass**	**4.67**	**196**		**Pn**	**19 07 36.2**	**+0.2**
SMCO				IAML		19 09 04.9	
	comp=E,29nm,0.8s						
SMCO				IAML		19 09 09.3	
	comp=E,18nm,1.1s						
BOZ	**Bozeman (W)**	**4.90**	**295**		**Pn**	**19 07 38.7**	**-0.3**
BOZ				IAML		19 08 59.2	
	comp=E,13nm,1.8s						
BOZ				IAML		19 09 01.6	
	comp=E,13nm,1.0s						
HWUT	**Hardware Ranch**	**5.06**	**248**		**Pn**	**19 07 40.5**	**-0.7**
BSUT	**Blindstream Ca**	**5.13**	**234**		**Pn**	**19 07 41.6**	**-0.7**
BSUT				IAML		19 09 13.1	
	comp=N,11nm,2.3s						
BSUT				IAML		19 09 32.2	
	comp=E,12nm,2.4s						
TCUT	**Toone Canyon**	**5.19**	**242**		**Pn**	**19 07 42.8**	**-0.3**
EGMT	**Eagleton**	**5.34**	**326**		**Pn**	**19 07 46.0**	**+1.1**
MDND	**Maddock**	**5.77**	**42**		**Pn**	**19 07 52.0**	**+1.3**
HVU	**Hansel Valley**	**5.82**	**253**		**Pn**	**19 07 50.8**	**-0.8**
P17A	**Butcher Ranch,**	**5.86**	**226**		**Pn**	**19 07 51.5**	**-0.6**
LYMT	**Lyon Mountain**	**5.92**	**306**		**Pn**	**19 07 51.8**	**-1.1**
SRU	**San Rafael Swe**	**6.02**	**222**		**Pn**	**19 07 53.2**	**-1.2**
TMUT	**Trail Mountain**	**6.23**	**227**		**Pn**	**19 07 55.9**	**-1.5**
HMU	**Henry Mountain**	**7.07**	**218**	Pn	**Pn**	**19 08 08.4**	**-0.4**
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**19 08 36.9**	**-0.9**
	comp=E,1.4nm,0.3s,baz=235,slow=11,SNR=12						
ULM				Pg		19 09 04.3	
	comp=E,0.4nm,0.3s,baz=226,slow=18,SNR=2.2						
ULM				Sn	**Sn**	**19 10 19.7**	**-2.2**
	comp=E,0.3nm,0.3s,baz=329,slow=4.2,SNR=4.9						
ULM				Lg	Lg	19 11 07.4	
	comp=E,0.2nm,0.3s,baz=140,slow=21,SNR=1.4						
	comp=E,2.3nm,0.3s						
NVAR	**Mina Array Bea**	**11.12**	**246**	Pn	**Pn**	**19 09 07.5**	**+3.1**
	baz=68,slow=15,SNR=1.7						
	comp=E,0.2nm,0.5s						

*NIC **09** 19:07:24.9, 35.14N×33.18E, h44km±1km, Ml1.2/7*
*ISK **09** 19:07:26.2, 35.41N×33.02E, h2km, ML1.5/7*
*GII **09** 19:07:26.4±0.4, 34.930N±0.005×33.679E±0.001, h1km, Mws2.8, confirmed*
ISC 09 19:07:24.5±1.3, 35.08N±0.04×33.20E±0.04, h56km±6km, n30, σ1§12/39, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Mathiatis**	**0.16**	**138**	Pg	**Pn**	**19 07 37.2**	**+3.8**
CSS	**Mathiatis**	**0.16**	**138**	P	**Pn**	**19 07 33.3**	**-0.1**
CSS				S	**Sn**	**19 07 39.9**	**+0.1**
CSS				AML	AML	19 07 40.6	
CSS				AML	AML	19 07 41.6	
CSS	**Mathiatis**	**0.16**	**138**	P	**Pn**	**19 07 32.9**	**-0.5**
ATHAL	**Athalassa**	**0.17**	**70**	S	**Sn**	**19 07 38.6**	**-1.2**
ATHAL				AML	AML	19 07 40.6	
	0.2nm,0.5s						
ATHAL				AML	AML	19 07 45.2	
	0.1nm,0.6s						
LEF	**Lefka**	**0.26**	**278**	Pg	**Pn**	**19 07 33.5**	**-0.4**
LEF				Sg	**Sn**	**19 07 39.2**	**-1.5**
ASGA	**Asgata**	**0.30**	**172**	P	**Pn**	**19 07 33.8**	**-0.5**
ASGA				S	**Sn**	**19 07 41.4**	**+0.1**
ASGA				AML	AML	19 07 41.9	
	0.1nm,0.6s						
ASGA				AML	AML	19 07 44.2	
LFK	**Lefkose**	**0.34**	**54**	Pg	**Pn**	**19 07 35.5**	**+0.8**
LFK				Sg	**Sn**	**19 07 42.8**	**+0.8**
MVOU	**Mavrovouni**	**0.36**	**101**	P	**Pn**	**19 07 34.7**	**-0.1**
MVOU				S	**Sn**	**19 07 41.9**	**-0.3**
MVOU				AML	AML	19 07 42.9	
	0.1nm,0.3s						
MVOU				AML	AML	19 07 45.6	
	0.1nm,0.3s						
ALFC	**Alefka**	**0.50**	**279**	P	**Pn**	**19 07 35.5**	**-0.7**
ALFC				S	**Sn**	**19 07 43.7**	**-1.0**
ALFC				AML	AML	19 07 46.9	
	0.1nm,0.4s						
ALFC				AML	AML	19 07 47.4	
	0.1nm,0.2s						
NATA	**Nata**	**0.60**	**240**	P	**Pn**	**19 07 37.4**	**0.0**
NATA				S	**Sn**	**19 07 47.2**	**+0.5**
NATA				AML	AML	19 07 49.4	
	0.1nm,0.2s						
NATA				AML	AML	19 07 49.5	
	0.1nm,0.5s						
AKMS	**Akamas**	**0.71**	**265**	P	**Pn**	**19 07 38.6**	**-0.1**
AKMS				S	**Sn**	**19 07 50.2**	**+1.1**
AKMS				AML	AML	19 07 50.8	
AKMS				AML	AML	19 07 53.3	
	0.1nm,0.3s						
AKKU	**Akkuyu-Mersin**	**1.11**	**15**	Pg	**Pn**	**19 07 43.9**	**0.0**
AKKU				Sg	**Sn**	**19 07 56.5**	**-1.8**
IKL	**Isikli**	**1.22**	**19**	Pg	**Pn**	**19 07 46.2**	**+0.8**
TEVE	**Tevekalti-Mers**	**1.36**	**8**	Pn	**Pn**	**19 07 47.9**	**+0.5**
HDMB	**Hadim**	**1.96**	**343**	Pn	**Pn**	**19 07 57.1**	**+1.4**
MMA0B	**Mount Meron ar**	**2.76**	**138**	P	**Pn**	**19 08 06.1**	**-0.3**
MMA0B	**Mount Meron ar**	**2.76**	**138**	S	**Sn**	**19 08 37.6**	**-0.9**
NATI	**Neve Ativ**	**2.78**	**130**	P	**Pn**	**19 08 05.8**	**-0.7**
NATI	**Neve Ativ**	**2.78**	**130**	S	**Sn**	**19 08 36.8**	**-2.1**
KSHT	**Keshet**	**3.02**	**133**	S	**Sn**	**19 08 43.7**	**-1.2**
KSHT	**Keshet**	**3.02**	**133**	P	**Pn**	**19 08 10.3**	**+0.4**
MMLI	**Mount Malkishu**	**3.22**	**144**	S	**Sn**	**19 08 49.3**	**-0.6**
MMLI	**Mount Malkishu**	**3.22**	**144**	P	**Pn**	**19 08 13.5**	**+0.8**
HMDT	**Nahal Hemdat**	**3.42**	**145**	S	**Sn**	**19 08 54.4**	**-0.4**
HMDT	**Nahal Hemdat**	**3.42**	**145**	P	**Pn**	**19 08 16.5**	**+1.1**
SALP	**Salfit**	**3.44**	**150**	P	**Pn**	**19 08 16.6**	**+1.0**
SALP	**Salfit**	**3.44**	**150**	S	**Sn**	**19 08 54.4**	**-0.8**
DSI	**Dead Sea**	**3.95**	**152**	P	**Pn**	**19 08 23.4**	**+0.8**
DSI	**Dead Sea**	**3.95**	**152**	S	**Sn**	**19 09 07.9**	**+0.2**
MSBI	**Mazada**	**4.17**	**154**	P	**Pn**	**19 08 27.1**	**+1.5**

IDC 09 19:41:08.3±13.0, 5.66S×129.42E, h499km±195km, mb2.5/1, mbtmp3.3/3, Error ellipse: s-maj=125.9km s-min=78.1km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.98**	**162**	P	P	19 44 19.9	+1.6
	0.7nm,0.6s,baz=341,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**18.41**	**167**	P	P	19 44 52.0	-0.6
	0.3nm,0.6s,baz=346,slow=11,SNR=9.5						
MKAR	**Makanchi Array**	**66.80**	**327**	P	P	19 51 09.9	+0.1
	0.3nm,0.8s,baz=131,slow=5.9,SNR=2.8						
	0.3nm,0.8s						

IDC 09 19:41:29.0±2.9, 21.32S×173.41E, h495km±29km, mb3.1/8, mbtmp4.1/10, Error ellipse: s-maj=28.6km s-min=18.2km az=46.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.52**	**262**	P	P	19 43 10.3	-0.1
	7.1nm,0.8s,baz=123,slow=22,SNR=6.4						
URZ	**Urewera**	**17.18**	**170**	P	P	19 45 02.2	+0.5
	6.7nm,0.3s,baz=334,slow=2.7,SNR=18						
STKA	**Stephens Creek**	**30.23**	**243**	P	P	19 46 59.2	+0.5
	0.6nm,0.4s,baz=86,slow=13,SNR=3.9						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**36.50**	**259**	P	P	19 47 51.9	-0.1
	0.5nm,0.3s,baz=81,slow=8.6,SNR=32						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**36.53**	**265**	P	P	19 47 51.3	-0.9
	0.7nm,0.3s,baz=96,slow=8.2,SNR=34						
	0.7nm,0.3s						
VNDA	**Vanda**	**56.53**	**183**	P	P	19 50 23.2	+0.1
	1.3nm,1.1s,baz=27,slow=7.5,SNR=1.1						
	1.3nm,1.1s						
QSPA	**South Pole Qui**	**68.75**	**180**	P	P	19 51 42.6	+0.1
	1.7nm,0.4s,baz=63,slow=6.8,SNR=5.6						
	1.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**82.92**	**293**	P	P	19 53 03.4	+1.5
	0.7nm,0.8s,baz=138,slow=4.2,SNR=4.9						
	0.7nm,0.8s						
SNAA	**Sanae**	**87.22**	**181**	P	P	19 53 20.3	-1.5
	0.8nm,0.5s,baz=282,slow=17,SNR=1.4						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**91.09**	**16**	P	P	19 53 39.5	-0.2
	0.7nm,0.6s,baz=232,slow=5.4,SNR=5.0						
	0.7nm,0.6s						
ARCES	**ARCESS Array B**	**128.04**	**346**	PKP	PKiKP	19 59 39.1	+0.9
	3.7nm,0.9s,baz=35,slow=3.3,SNR=3.7						
EKA	**Eskdalemuir Ar**	**145.94**	**357**	PKPbc	PKPdf	20 00 09.8	-0.9
	1.9nm,0.7s,baz=359,slow=2.8,SNR=3.6						
GERES	**GERESS Array B**	**148.11**	**334**	PKPbc	PKPbc	20 00 18.1	-0.5
	0.9nm,0.7s,baz=35,slow=3.6,SNR=5.0						

*IDC **09** 19:47:02.0±2.8, 32.18N×141.46E, h0km, mb3.6/3, mbtmp3.6/5, ML2.8/2, Error ellipse: s-maj=86.7km s-min=20.2km az=60.0*
*JMA **09** 19:47:03.5±0.9, 33°N±2.2'×14°2E±', h22km, MV3.3/12, E OFF HACHIJOJIMA ISLAND*
ISC 09 19:47:05.2±1.5, 32.31N±0.09×141.6E±0.1, h31km, n11, σ1§45/13, mb3.5/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.57**	**276**	P	**Pb**	**19 47 33.5**	**-0.1**
JHCJ	**Hachijojimakas**	**1.71**	**297**	P	**Pn**	**19 47 33.9**	**+1.0**
JHJ2	**Mitsune**	**1.71**	**298**	P	**Pb**	**19 47 34.3**	**-1.7**
JHJ	**Hachijo jima 2**	**1.74**	**298**	Pn	**Pn**	**19 47 34.0**	**+0.7**
	9.0nm,0.3s,baz=352,slow=23,SNR=18						
JHJ				Sn	**Sn**	**19 47 54.4**	**-0.1**
	9.1nm,0.3s,baz=39,slow=20,SNR=2.1						
JHO	**Hitachi**	**4.38**	**349**	P	**Pn**	**19 48 07.7**	**-1.8**
JAG	**Ashikaga**	**4.47**	**337**	P	**Pn**	**19 48 10.1**	**-0.8**
MJAR	**Matsushiro Arr**	**5.07**	**327**	Pn	**Pn**	**19 48 19.4**	**+0.3**
	baz=162,slow=13,SNR=2.5						
MJAR				Sn	**Sn**	**19 49 17.5**	**+0.8**
	baz=197,slow=18,SNR=1.4						
	1.1nm,0.7s						
JCJ	**Chichijima**	**5.22**	**174**	Pn	**Pn**	**19 48 18.0**	**-3.2**
	2.5nm,0.3s,baz=309,slow=18,SNR=1.9						
	41nm,0.6s						
MKAR	**Makanchi Array**	**46.89**	**306**	P	**P**	**19 55 33.3**	**+0.7**
	0.4nm,0.7s,baz=105,slow=9.7,SNR=4.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**49.14**	**311**	P	**P**	**19 55 50.6**	**+0.7**
	0.3nm,0.2s,baz=81,slow=5.7,SNR=1.7						
	0.3nm,0.2s						
WRA	**Warramunga Arr**	**52.42**	**189**	P	**P**	**19 56 15.8**	**+0.9**
	0.5nm,0.8s,baz=4.3,slow=7.4,SNR=5.4						
	0.5nm,0.8s						

*NEIC **09** 19:50:23±1.9, 55.68N±0.07×149.1W±0.1, h11km±6km, ML3.5/38, ML3.3(AEIC), Error ellipse: s-maj=11.5km s-min=7.7km az=150.0*
*AEIC **09** 19:50:27.6±1.6, 55.69N±0.09×149.1W±0.1, h8km±7km, Error ellipse: s-maj=13.8km s-min=8.5km az=164.0*
ISC 09 19:50:23.3±1.6, 55.80N±0.10×149.16W±0.05, h10km, n196, σ1§31/198, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.70**	**304**		**Pn**	**19 51 06.7**	**+0.1**
OHAK	**Old Harbor**	**2.70**	**304**		**Sn**	**19 51 37.6**	**-1.6**
OHAK	**Old Harbor**	**2.70**	**304**	P	**Pn**	**19 51 07.2**	**+0.6**
	baz=122						
OHAK				S	**Sn**	**19 51 37.6**	**-1.6**
	baz=122						
KDAK	**Kodiak Island**	**2.74**	**318**		**Pn**	**19 51 08.2**	**+1.1**
KDAK	**Kodiak Island**	**2.74**	**318**		**Sn**	**19 51 38.8**	**-1.5**
KDAK	**Kodiak Island**	**2.74**	**318**	S	**Sn**	**19 51 38.8**	**-1.5**
	baz=136						
SII	**Sitkinak Islan**	**2.91**	**287**		**Sn**	**19 51 43.4**	**-1.2**
SII	**Sitkinak Islan**	**2.91**	**287**	Pn	**Pn**	**19 51 08.5**	**-1.1**
SII				IAML		19 51 44.0	
	comp=N,144nm,0.2s						
SII				IAML		19 51 48.3	
	comp=E,145nm,1.1s						
SII	**Sitkinak Islan**	**2.91**	**287**	S	**Sn**	**19 51 43.4**	**-1.2**
	baz=105						
SYI	**Shuyak Island**	**3.32**	**329**		**Pn**	**19 51 16.2**	**+1.1**
SYI	**Shuyak Island**	**3.32**	**329**		**Sn**	**19 51 54.9**	**+0.3**
Q20K	**Shuyak Island**	**3.32**	**329**	P	**Pn**	**19 51 16.4**	**+1.2**
	baz=148						
Q20K				S	**Sn**	**19 51 54.9**	**+0.2**
	baz=148						
CNPM	**China Poot**	**3.90**	**344**		**Pn**	**19 51 24.1**	**+0.9**
CNPM					**Sn**	**19 52 08.1**	**-0.8**
CNPM	**China Poot**	**3.90**	**344**	IAML		19 52 22.6	
	comp=N,28nm,0.8s						
MID	**Middleton Isla**	**3.94**	**21**	Pn	**Pn**	**19 51 24.5**	**+0.8**
MID				IAML		19 52 07.6	
	comp=E,85nm,1.0s						
MID				IAML		19 53 34.9	
	comp=N,88nm,1.1s						
Q23K	**Middleton Isla**	**3.94**	**21**		**Pn**	**19 51 24.7**	**+1.1**
Q23K	**Middleton Isla**	**3.94**	**21**	IAML		19 52 07.7	
	comp=E,87nm,1.1s						
Q23K				IAML		19 53 34.9	
	comp=N,84nm,1.1s						
Q23K	**Middleton Isla**	**3.94**	**21**	P	**Pn**	**19 51 24.7**	**+1.1**
	baz=203						
Q19K	**Cape Douglas,**	**3.97**	**324**		**Pn**	**19 51 25.8**	**+1.7**
Q19K	**Cape Douglas,**	**3.97**	**324**	P	**Pn**	**19 51 25.8**	**+1.7**
	baz=141						
BRSE	**Bradley Lake S**	**4.04**	**349**		**Pn**	**19 51 25.6**	**+0.5**
BRSE					**Sn**	**19 52 11.0**	**-1.5**
BRSE	**Bradley Lake S**	**4.04**	**349**	P	**Pn**	**19 51 25.6**	**+0.5**
	baz=167						
BRSE				S	**Sn**	**19 52 11.0**	**-1.5**
	baz=167						
BRLK	**Bradley Lake**	**4.08**	**348**		**Pn**	**19 51 26.2**	**+0.5**
BRLK	**Bradley Lake**	**4.08**	**348**	IAML		19 52 15.3	
	comp=E,33nm,0.8s						
BRLK				IAML		19 52 18.2	
	comp=N,33nm,0.8s						
P23K	**Montague Islan**	**4.31**	**12**		**Pn**	**19 51 29.8**	**+1.0**
P23K					**Sn**	**19 52 16.9**	**-2.1**
P23K	**Montague Islan**	**4.31**	**12**	P	**Pn**	**19 51 29.8**	**+1.0**
	baz=193						
P23K				S	**Sn**	**19 52 17.0**	**-2.1**
	baz=193						
SEW	**Seward**	**4.32**	**358**		**Pn**	**19 51 29.3**	**+0.4**
SEW	**Seward**	**4.32**	**358**	P	**Pn**	**19 51 29.6**	**+0.8**
	baz=178						
CNTC	**Contact Creek**	**4.43**	**307**		**Pn**	**19 51 31.2**	**+0.7**
Q17K	**Contact Creek**	**4.43**	**307**	P	**Pn**	**19 51 31.2**	**+0.7**
	baz=122						
P19K	**Oil Pt**	**4.44**	**332**		**Pn**	**19 51 31.8**	**+1.2**
P19K	**Oil Pt**	**4.44**	**332**	IAML		19 52 28.4	
	comp=E,50nm,0.7s						
P19K				IAML		19 52 32.5	
	comp=N,51nm,1.2s						
P19K	**Oil Pt**	**4.44**	**332**	P	**Pn**	**19 51 31.8**	**+1.2**
	baz=149						
O20K	**Slope Mountain**	**4.67**	**338**		**Pn**	**19 51 35.0**	**+1.2**
O20K	**Slope Mountain**	**4.67**	**338**	P	**Pn**	**19 51 35.0**	**+1.2**
	baz=156						
O22K	**Cooper Landing**	**4.70**	**357**	Pn	**Pn**	**19 51 35.3**	**+1.1**
SLKM	**Skilak Lake**	**4.75**	**354**		**Pn**	**19 51 36.0**	**+1.0**
HIN	**Hinchinbrook I**	**4.82**	**16**		**Pn**	**19 51 36.7**	**+0.9**
HIN				IAML		19 52 30.4	
	comp=E,48nm,0.7s						
KAIM	**Kayak Island**	**4.85**	**29**		**Pn**	**19 51 36.5**	**+0.3**
KAIM				IAML		19 52 35.2	
	comp=E,46nm,1.2s						
KAIM				IAML		19 52 35.3	
	comp=N,58nm,0.6s						
KAIM	**Kayak Island**	**4.85**	**29**	P	**Pn**	**19 51 37.1**	**+0.9**
	baz=213						
P18K	**Big Mountain,**	**4.86**	**320**	Pn	**Pn**	**19 51 36.8**	**+0.4**
RSO	**Redoubt South**	**5.05**	**339**	Pn	**Pn**	**19 51 39.0**	**-0.1**
RDT	**Redoubt**	**5.08**	**342**		**Pn**	**19 51 40.2**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.09**	**19**		**Pn**	**19 51 40.4**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.09**	**19**	P	**Pn**	**19 51 40.7**	**+1.3**
	baz=202						
SUCK	**Suckling Hills**	**5.15**	**32**		**Pn**	**19 51 41.5**	**+1.1**
SUCK	**Suckling Hills**	**5.15**	**32**	IAML		19 52 40.2	
	comp=N,24nm,0.9s						
SUCK				IAML		19 52 43.5	
	comp=E,22nm,0.8s						
DFR	**Drift River**	**5.15**	**340**		**Pn**	**19 51 41.5**	**+1.1**
RAGM	**Ragged Mountai**	**5.18**	**25**		**Pn**	**19 51 42.0**	**+1.2**
RAGM	**Ragged Mountai**	**5.18**	**25**	IAML		19 52 46.3	
	comp=E,44nm,0.6s						
O19K	**Port Alsworth**	**5.19**	**330**	Pn	**Pn**	**19 51 41.0**	**+0.2**
O19K				IAML		19 52 47.6	
	comp=E,48nm,0.5s						
O18K	**Koktuh Hills**	**5.19**	**324**		**Pn**	**19 51 41.1**	**+0.2**
O18K				IAML		19 54 12.1	
	comp=N,26nm,0.7s						
O18K				IAML		19 54 18.8	
	comp=E,14nm,1.0s						
O18K	**Koktuh Hills**	**5.19**	**324**	P	**Pn**	**19 51 41.9**	**+1.0**
	baz=140						
NICHA	**Nichawak Mount**	**5.

N25K					Sn		19 53 05.4	-2.5
N25K	**Chitina, Valde**	**6.29**	**20**	P	**Pn**		19 51 58.0	+2.0
	baz=204							
SVW2	**Sparrevohn**	**6.29**	**330**	Pn	**Pn**		19 51 55.5	-0.4
TABL	**Table Mountain**	**6.30**	**39**		**Pn**		19 51 57.3	+1.1
YKU2	**Yakutat**	**6.30**	**50**	Pn	**Pn**		19 51 56.9	+0.8
GLB	**Gilahina Butte**	**6.31**	**24**		**Pn**		19 51 57.1	+0.9
GLB					**Sn**		19 53 05.9	-2.5
SKT	**Skwentna**	**6.32**	**350**	Pn	**Pn**		19 51 57.4	+1.0
PCA	**Pinnacle**	**6.40**	**44**		**Pn**		19 51 58.7	+1.2
PINM	**Pinnacle**	**6.40**	**44**	P	**Pn**		19 51 58.7	+1.1
	baz=231							
M20K	**Styx River**	**6.44**	**343**		**Pn**		19 51 58.6	+0.5
M20K	**Styx River**	**6.44**	**343**	P	**Pn**		19 51 59.0	+0.9
	baz=160							
PTPK	**Patty Peak**	**6.44**	**30**		**Pn**		19 51 59.9	+1.7
MCARA	**McCarthy VSAT**	**6.45**	**27**		**Pn**		19 51 59.7	+1.5
PNL	**Peninsula**	**6.51**	**49**		**Pn**		19 52 00.2	+1.3
PNL	**Peninsula**	**6.51**	**49**	P	**Pn**		19 52 00.3	+1.3
	baz=237							
M24K	**Tolsona, Glenn**	**6.51**	**12**	Pn	**Pn**		19 52 00.3	+1.2
M24K					**Sn**		19 53 14.5	+1.2
BCPM	**Bancas Point**	**6.56**	**47**		**Pn**		19 52 01.2	+1.4
BARN	**Barnard Glacie**	**6.58**	**34**		**Pn**		19 52 01.5	+1.4
CTG	**Chitna Glacier**	**6.61**	**35**	P	**Pn**		19 52 01.5	+1.0
	baz=221							
CTGM	**Chitina Glacie**	**6.61**	**35**		**Pn**		19 52 01.7	+1.2
LOGN	**Logan Glacier**	**6.62**	**37**		**Pn**		19 52 01.9	+1.2
M18K	**Stony River**	**6.68**	**331**		**Pn**		19 52 01.9	+0.6
M18K	**Stony River**	**6.68**	**331**	P	**Pn**		19 52 01.9	+0.6
	baz=146							
M19K	**Big River Lodg**	**6.69**	**338**	Pn	**Pn**		19 52 02.6	+1.1
N16K	**Nishlik Lake**	**6.91**	**317**		**Pn**		19 52 05.9	+1.4
N16K	**Nishlik Lake**	**6.91**	**317**	P	**Pn**		19 52 05.9	+1.4
	baz=129							
L19K	**White Mountain**	**7.04**	**338**		**Pn**		19 52 06.8	+0.5
L19K	**White Mountain**	**7.04**	**338**	P	**Pn**		19 52 07.0	+0.7
	baz=153							
M17K	**Holitna River**	**7.08**	**326**		**Pn**		19 52 08.0	+1.2
M17K	**Holitna River**	**7.08**	**326**	P	**Pn**		19 52 08.0	+1.2
	baz=139							
O29M	**Mount Kennedy**	**7.20**	**47**		**Pn**		19 52 10.1	+1.6
O29M	**Mount Kennedy**	**7.20**	**47**	P	**Pn**		19 52 10.1	+1.6
	baz=235							
P29M	**Windy Craggy**	**7.22**	**53**		**Pn**		19 52 09.4	+0.6
P29M	**Windy Craggy**	**7.22**	**53**	P	**Pn**		19 52 09.9	+1.2
	baz=242							
M16K	**Timber Creek**	**7.34**	**320**	Pn	**Pn**		19 52 11.7	+1.3
DHY	**Denali Highway**	**7.35**	**6**		**Pn**		19 52 11.3	+0.6
DHY	**Denali Highway**	**7.35**	**6**	P	**Pn**		19 52 11.6	+0.9
	baz=188							
O14K	**Tigyukauivet M**	**7.38**	**303**	Pn	**Pn**		19 52 12.2	+1.4
S31K	**Pelican**	**7.41**	**68**		**Pn**		19 52 09.7	-1.6
S31K	**Pelican**	**7.41**	**68**	P	**Pn**		19 52 10.7	-0.5
	baz=258							
L18K	**Granite Mounta**	**7.51**	**332**		**Pn**		19 52 12.5	-0.3
L18K	**Granite Mounta**	**7.51**	**332**	P	**Pn**		19 52 13.3	+0.6
	baz=146							
M27K	**Edge Creek, AK**	**7.57**	**27**	Pn	**Pn**		19 52 13.1	-0.5
RND	**Reindeer**	**7.63**	**1**	Pn	Pn		19 52 12.3	-2.2
TRF	**Thorofare Moun**	**7.70**	**356**	Pn	**Pn**		19 52 16.5	+1.1
SIT	**Sitka**	**7.77**	**75**	Pn	**Pn**		19 52 14.3	-2.0
CAST	**Castle Rocks**	**7.78**	**350**	Pn	**Pn**		19 52 17.9	+1.4
KTH	**Kantishna Hill**	**7.83**	**354**	Pn	**Pn**		19 52 18.3	+1.2
HYT	**Haines Junctio**	**7.93**	**46**	Pn	**Pn**		19 52 20.8	+2.2
TTA	**Tatalina**	**7.96**	**337**	Pn	**Pn**		19 52 18.0	-0.9
K20K	**Telida**	**7.98**	**344**	Pn	**Pn**		19 52 19.4	+0.4
L16K	**Owhat River**	**7.99**	**322**	Pn	**Pn**		19 52 20.1	+1.0
L27K	**Beaver Creek,**	**8.18**	**24**	Pn	**Pn**		19 52 22.8	+0.9
FALS	**False Pass**	**8.19**	**269**		**Pn**		19 52 20.6	-1.3
FALS	**False Pass**	**8.19**	**269**	P	**Pn**		19 52 20.6	-1.3
	baz=78							
BCAR	**Beaver Creek A**	**8.19**	**24**	Pn	**Pn**		19 52 23.2	+1.1
S32K	**Killisnoo**	**8.21**	**72**		**Pn**		19 52 21.4	-0.9
S32K	**Killisnoo**	**8.21**	**72**	P	**Pn**		19 52 21.4	-0.9
	baz=264							
SKAG	**Skagway**	**8.27**	**58**	Pn	**Pn**		19 52 24.2	+1.0
R32K	**Eaglecrest**	**8.36**	**67**	Pn	**Pn**		19 52 24.7	+0.4
BWN	**Browne**	**8.40**	**359**	Pn	Pn		19 52 21.7	-3.2
JIS	**Juneau Island**	**8.43**	**67**	Pn	**Pn**		19 52 25.3	+0.1
N30M	**Aishikik Lake**	**8.47**	**43**		**Pn**		19 52 28.1	+2.2
O30N	**Mendenhall**	**8.49**	**49**		**Pn**		19 52 27.4	+1.3
O30N	**Mendenhall**	**8.49**	**49**	P	**Pn**		19 52 27.5	+1.3
	baz=239							
J18K	**Innoko River**	**8.58**	**337**	Pn	**Pn**		19 52 27.3	-0.1
SCRK	**Sand Creek**	**8.60**	**15**	Pn	**Pn**		19 52 28.1	+0.4
M29M	**Somme Creek**	**8.63**	**35**		**Pn**		19 52 29.8	+1.7
M29M	**Somme Creek**	**8.63**	**35**	P	**Pn**		19 52 29.8	+1.7
	baz=224							
J20K	**Nowinta River**	**8.76**	**346**	Pn	**Pn**		19 52 31.9	+2.0
J19K	**Poorman**	**8.83**	**341**	Pn	**Pn**		19 52 30.1	-0.7
WHY	**Whitehorse**	**8.96**	**51**		**Pn**		19 52 34.8	+2.1
L14K	**Kuka Creek**	**8.98**	**314**	Pn	**Pn**		19 52 35.2	+2.5
N31M	**Braeburn, Yuko**	**9.00**	**45**		**Pn**		19 52 35.1	+2.0
ILAR	**Eielson Array**	**9.07**	**6**	Pn	**Pn**		19 52 35.6	+1.5
P32M	**Atlin**	**9.10**	**59**		**Pn**		19 52 35.1	+0.7
P32M	**Atlin**	**9.10**	**59**	P	**Pn**		19 52 35.1	+0.7
	baz=251							
K15K	**Wolf Creek Mou**	**9.10**	**321**	Pn	**Pn**		19 52 36.9	+2.4
J26L	**Joseph Creek**	**9.16**	**15**	Pn	Pn		19 52 32.9	-2.5
L29M	**L29M**	**9.22**	**33**		**Pn**		19 52 38.4	+2.2
M30M	**Minto, Yukon**	**9.28**	**38**		**Pn**		19 52 38.8	+1.8
MLY	**Manley**	**9.29**	**356**		**Pn**		19 52 39.5	+2.4
J16K	**Anvik River**	**9.48**	**327**		**Pn**		19 52 40.4	+0.8
I21K	**Tanana**	**9.51**	**353**		**Pn**		19 52 42.6	+2.5
DAWY	**Dawson**	**9.62**	**27**		**Pn**		19 52 40.2	-1.4
Q32M	**Nakina River**	**9.65**	**64**		**Pn**		19 52 43.4	+1.2
P33M	**Teslin, Yukon**	**9.72**	**56**		**Pn**		19 52 44.4	+1.3
M31M	**Drury Creek, Y**	**9.94**	**44**		**Pn**		19 52 48.7	+2.7
K29M	**Barlow Dome**	**9.95**	**31**	Pn	**Pn**		19 52 48.1	+1.9
N32M	**Quiet Lake**	**9.97**	**51**	Pn	**Pn**		19 52 48.0	+1.6
H21K	**Melozitna Rive**	**10.05**	**351**	Pn	**Pn**		19 52 48.6	+1.2
K13K	**Kusilvak Mount**	**10.09**	**314**	Pn	**Pn**		19 52 49.4	+1.3
FARO	**Faro, Yukon**	**10.37**	**45**	Pn	**Pn**		19 52 54.0	+2.1
R33M	**Jennings River**	**10.40**	**62**	Pn	**Pn**		19 52 53.4	+1.0
H18K	**Honhosa River**	**10.41**	**338**	Pn	**Pn**		19 52 52.8	+0.4
IMAR	**Indian Mountai**	**10.46**	**350**	Pn	**Pn**		19 52 53.6	+0.6
DLBC	**Dease Lake**	**10.72**	**68**	Pn	**Pn**		19 52 57.1	+0.3
J30M	**Hart River**	**10.85**	**31**	Pn	**Pn**		19 52 59.8	+1.3
G21K	**Allakaket**	**10.95**	**351**	Pn	**Pn**		19 53 00.5	+0.7
G23K	**Bananza Creek**	**10.96**	**358**	Pn	**Pn**		19 53 00.6	+0.7
MMPY	**Sheldon Lake,**	**11.41**	**46**	Pn	**Pn**		19 53 08.5	+2.4
F21K	**Alatna River**	**11.64**	**352**	Pn	**Pn**		19 53 11.5	+2.3
E19K	**Redstone River**	**12.29**	**345**	Pn	**Pn**		19 53 21.1	+3.0

*IDC **09** 19:54:44.5±1.5, 13˚.69N×95˚.59E, h0km, mb3.7/5, mbtmp3.6/6, ML4.0/1, Error ellipse: s-maj=48.1km s-min=20.8km az=68.0*

*DJA **09** 19:54:49.8±1.1, 14˚N±3˚×9˚.5E±˚, h120km±28km, M4.3/6, mB6.1/2, mb3.9/6, MLv4.5/6, Mw(mB)5.8/2*

ISC 09 19:54:49.5±1.5, 13.7N±0.1×95.6E±0.2, h35km, n6, σθ35/7, mb3.6/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.71**	**34**	Pn	**Pn**	19 56 11.8	**-0.1**
	1.1nm,0.3s,baz=238,slow=16,SNR=52						
CMAR				Sn	**Sn**	19 57 16.4	**0.0**
	baz=240,slow=18						
	3.7nm,0.9s						
MKAR	**Makanchi Array**	**34.82**	**344**	P	**P**	20 01 37.5	**+0.4**
	0.2nm,0.5s,baz=140,slow=6.9,SNR=2.7						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**39.34**	**343**	P	**P**	20 02 14.9	**-0.5**
	1.4nm,0.2s,baz=156,slow=7.3,SNR=1.6						
	1.4nm,0.2s						
ZALV	**Zalesovo Beam**	**41.03**	**350**	P	**P**	20 02 29.6	**+0.3**
	0.6nm,0.4s,baz=168,slow=7.9,SNR=4.2						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**50.71**	**130**	P	**P**	20 03 46.3	**+0.1**
	0.3nm,0.4s,baz=311,slow=8.1,SNR=6.1						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**52.76**	**134**	P	**P**	20 04 01.3	**-0.1**
	0.3nm,0.5s,baz=309,slow=6.9,SNR=9.5						
	0.3nm,0.5s						

*AEIC **09** 19:55:11.9±2.2, 51˚.39N±0˚.09×177˚.17E±0˚.07, h16km±3km, Error ellipse: s-maj=12.9km s-min=6.0km az=181.0*

*MOS **09** 19:55:12.1±0.9, 51˚.59N×177˚.33E, h34km, mb5.5/102, MS4.3/6, Error ellipse: s-maj=7.0km s-min=4.0km az=105.1*

*IDC **09** 19:55:13.5±1.3, 51˚.63N×177˚.34E, h30km±8km, mb4.8/38, mbtmp4.9/43, ML4.9/3, MS4.3/73, Error ellipse: s-maj=12.7km s-min=8.6km az=177.0*

*NEIC **09** 19:55:13.0±1.9, 51˚.57N±0˚.09×177˚.34E±0˚.05, h29km±3km, mb5.2/638, Mwws5.1/13, ML5.1(AEIC), Error ellipse: s-maj=12.8km s-min=4.5km az=177.0*

*BJI **09** 19:55:14.5±0.0, 51˚.92N×176˚.85E, h42km, mb5.1/74, mB5.1/40, Ms4.6/45, Ms7 4.4/44*

*NEIC **09** 19:55:14.8, 51˚.32N×177˚.82E, h26km, Moment Tensor Solution. Duration: 1s Moment tensor: Scale 10^16^Nm; Mrr0.81; Mθθ-1.38; Mφφ0.57; Mrθ4.44; Mθφ1.24; Mφr-0.22; Fault plane solution: M0 4.73000×10^16^ NP1:φ91.43000°, δ83.09000°, λ75.71000°. NP2:φ336.16000°, δ15.84000°, λ153.87000°. Principal axes: T 4.3810, Plg50.0000°, Azm346.0000°; N 0.6995, Plg14.0000°, Azm93.0000°; P -5.0804, Plg37.0000°, Azm194.0000°;*

*NEIC **09** 19:55:14.8, 51˚.62N×177˚.33E, h26km*

*BGR **09** 19:55:15.8, 51˚.80N×175˚.50E, h33km, mb5.1, Ms4.5*

*GCMT **09** 19:55:16.0±0.2, 51˚.65N±0˚.02×177˚.27E±0˚.02, h29km±1km, MW5.1/116, Moment Tensor Solution. s80, c106; s116, c169; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.08±.14; Mθθ-3.09±.10; Mφφ0.01±.09; Mrθ5.12±.27; Mθφ0.22±.06; Mφr-0.14±.13; Best double couple: M0 5.98300×10^16^ NP1:φ92.00000°, δ74.00000°, λ89.00000°. NP2:φ276.00000°, δ16.00000°, λ94.00000°. Principal axes: T 5.9730, Plg61.0000°, Azm0.0000°; N 0.0230, Plg1.0000°, Azm92.0000°; P -5.9940, Plg29.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 19:55:14.7±0.3, 51.50N±0.05×177.26E±0.03, h45km±2km, h45km:pP-P, n1509, σ1912/1404, mb5.2/462, MS4.3/92, 86C-29D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.91**	**59**		**Pn**	19 55 30.2	**-0.9**
LSSE	**Little Sitkin**	**0.92**	**62**		**Pn**	19 55 30.5	**-0.7**
LSPA	**Little Sitkin**	**0.93**	**60**		**Pn**	19 55 30.8	**-0.6**
AMKA	**Amchitka**	**1.28**	**95**		**Pn**	19 55 34.2	**-1.9**
AMKA				Sn	**Sn**	19 55 48.0	**-4.1**
CESW	**Semis' Southwe**	**1.49**	**74**	Pn	**Pn**	19 55 39.0	**0.0**
CEAP	**Semis' Anvil P**	**1.52**	**70**	Pn	**Pn**	19 55 39.7	**+0.3**
SHEM	**Shemya Is, Ala**	**2.30**	**303**	Pn	**Pn**	19 55 50.0	**0.0**
	904nm,0.3s,baz=106,slow=2.8,SNR=328						
SHEM				Sn	**Sn**	19 56 17.0	**-0.1**
	380nm,0.3s,baz=113,slow=23,SNR=17						
	4μm,0.5s						
GANO	**Gareloi North**	**2.47**	**81**		**Pn**	19 55 52.9	**+0.5**
GAEA	**Gareloi East**	**2.50**	**82**		**Pn**	19 55 53.6	**+0.7**
TANO	**Tanaga North**	**2.90**	**80**		**Pn**	19 55 59.0	**+0.7**
TASE	**Tanaga Southea**	**2.95**	**82**		**Pn**	19 55 59.8	**+0.8**
TAFP	**Tanaga Falls P**	**2.99**	**81**		**Sn**	19 56 37.6	**+3.5**
KICM	**Kanaga Island**	**3.47**	**81**		**Sn**	19 56 07.2	**+1.0**
KICM					**Sn**	19 56 49.5	**+3.5**
KIWB	**Kanaga Island**	**3.50**	**82**	Pn	**Pn**	19 56 06.4	**-0.1**
KIRH	**Kanaga Island**	**3.54**	**81**		**Pn**	19 56 07.7	**+0.7**
ADK	**Adak**	**3.79**	**82**	Pn	**Pn**	19 56 10.8	**+0.3**
ADK				Sn	**Sn**	19 56 54.7	**+1.0**
ADK	**Adak**	**3.79**	**82**	P	**Pn**	19 56 11.9	**+1.4**
GSMY	**Great Sitkin M**	**4.19**	**80**		**Pn**	19 56 17.0	**+1.0**
GSTR	**Great Sitkin T**	**4.19**	**79**	Pn	**Pn**	19 56 16.6	**+0.6**
ATKA	**Atka Island**	**5.34**	**79**	Pn	**Pn**	19 56 32.5	**+0.8**
ATKA				Sn	**Sn**	19 57 30.1	**-1.9**
ATKA	**Atka Island**	**5.34**	**79**	P	**Pn**	19 56 33.2	**+1.4**
KOKL	**Mount Kliuchef**	**5.35**	**78**		**Pn**	19 56 32.8	**+0.9**
KOFP	**Korovin Flat P**	**5.41**	**78**		**Pn**	19 56 34.0	**+1.2**
CLES	**Cleveland East**	**8.01**	**75**	Pn	**Pn**	19 57 09.3	**+0.9**
CLCO	**Concord Point,**	**8.11**	**76**		**Pn**	19 57 11.9	**+2.2**
NIKH	**Nikolski High**	**8.65**	**75**		**Pn**	19 57 18.5	**+1.4**
NIKH	**Nikolski High**	**8.65**	**75**	P	**Pn**	19 57 19.9	**+2.8**
NIKH	**Nikolski High**	**8.65**	**75**	P	**Pn**	19 57 19.9	**+2.8**
	baz=265						
OKWE	**Okmok W'ng Wal**	**9.07**	**72**		**Pn**	19 57 24.7	**+1.9**
OKER	**Okmok East Rim**	**9.18**	**72**		**Pn**	19 57 26.8	**+2.3**
SPIA	**Saint Paul Isl**	**9.24**	**47**		**Pn**	19 57 26.0	**+0.8**
SPIA	**Saint Paul Isl**	**9.24**	**47**	P	**Pn**	19 57 27.3	**+2.2**
	baz=237						
OKFG	**Magazine Ridge**	**9.26**	**72**		**Pn**	19 57 28.1	**+2.7**
P08K	**Saint George I**	**9.28**	**51**		**Pn**	19 57 27.1	**+1.4**
P08K	**Saint George I**	**9.28**	**51**	P	**Pn**	19 57 27.7	**+2.0**
	baz=242						
MAPS	**Pakushin South**	**9.88**	**70**		**Pn**	19 57 36.0	**+2.1**
MGOD	**Makushin Gods**	**9.91**	**70**		**Pn**	19 57 36.5	**+2.0**
UNV	**Unalaska Valle**	**10.14**	**70**	P	**Pn**	19 57 39.7	**+2.3**
UNV	**Unalaska Valle**	**10.14**	**70**	P	**Pn**	19 57 40.1	**+2.7**
	baz=263,SNR=6.4						
AKUT	**Akutan**	**10.60**	**69**	Pn	**Pn**	19 57 42.4	**-1.3**
AKUT	**Akutan**	**10.60**	**69**	P	**Pn**	19 57 46.6	**+2.8**
PET	**Petropavlovsk**	**11.50**	**285**	Pn	**Pn**	19 57 55.4	**-0.7**
FALS	**False Pass**	**12.06**	**66**	P	**Pn**	19 58 07.6	**+3.9**
FALS	**False Pass**	**12.06**	**66**	P	**Pn**	19 58 06.0	**+2.3**
	baz=261						
PEA0B	**Petropavlovsk-**	**12.08**	**285**		**Pn**	19 58 04.4	**+0.4**
PEA0B	**Petropavlovsk-**	**12.08**	**285**	*i* P	**Pn**	19 58 05.5	**+1.5**
PETK	**Petropavlovsk-**	**12.08**	**285**		**Pn**	19 58 05.5	**+1.5**
PETK	**Petropavlovsk-**	**12.08**	**285**	Pn	**Pn**	19 58 04.1	**+0.1**
	12nm,0.9s,baz=89,slow=19,SNR=18						
PETK				Sn	**Sn**	20 00 10.9	**-6.3**
	1.0nm,0.3s,baz=342,slow=41,SNR=3.7						
PETK				LR	LR	20 03 41.9	
	comp=Z,336nm,18.1s,baz=94,slow=42						
M11K	**Mekoryuk**	**12.81**	**40**	P	**Pn**	19 58 16.2	**+2.3**
	baz=233,SNR=31						
GAMB	**Gambell**	**13.62**	**21**	P	**Pn**	19 58 26.3	**+1.4**
	baz=211						
SDPT	**Sand Point**	**13.80**	**65**	Pn	**Pn**	19 58 25.9	**-1.5**
SDPT	**Sand Point**	**13.80**	**65**	P	**Pn**	19 58 27.3	**-0.1**
SDPT	**Sand Point**	**13.80**	**65**	P	**Pn**	19 58 27.8	**+0.3**
	baz=263						
M13K	**Dall Lake**	**14.00**	**43**		**Pn**	19 58 32.7	**+2.5**
M13K	**Dall Lake**	**14.00**	**43**	P	**Pn**	19 58 31.7	**+1.5**
	baz=239						
CNBA	**Chernabura Isl**	**14.26**	**67**	Pn	**Pn**	19 58 30.4	**-3.2**
K13K	**Kusilvak Mount**	**14.35**	**36**	P	**Pn**	19 58 36.6	**+1.7**
K13K	**Kusilvak Mount**	**14.35**	**36**	P	**Pn**	19 58 37.1	**+2.3**
	baz=231						
O14K	**Tigyukauivet M**	**14.41**	**49**		**Pn**	19 58 36.4	**+0.8**
O14K	**Tigyukauivet M**	**14.41**	**49**	P	**Pn**	19 58 38.3	**+2.7**
	baz=247,SNR=9.7						
S14K	**Fog Glacier**	**14.45**	**62**	P	**Pn**	19 58 39.2	**+2.9**
	baz=260						
N14K	**Kuskokwak Cree**	**14.50**	**46**	P	**Pn**	19 58 39.4	**+2.6**
	baz=244,SNR=14						
M14K	**Bethel**	**14.77**	**43**		**Pn**	19 58 40.9	**+0.6**
M14K	**Bethel**	**14.77**	**43**	P	**P**	19 58 43.1	**-2.4**
	baz=240,SNR=32						
L14K	**Kuka Creek**	**14.77**	**40**	P	**Pn**	19 58 41.0	**+0.6**
L14K	**Kuka Creek**	**14.77**	**40**	P	**Pn**	19 58 42.7	**+2.3**
	baz=237						
O15K	**Ungalikthiuk R**	**15.07**	**50**	P	**Pn**	19 58 46.5	**+2.2**
	baz=249,SNR=11						
J14K	**Nanvaranak Lak**	**15.27**	**35**	P	**Pn**	19 58 48.8	**+1.9**
J14K	**Nanvaranak Lak**	**15.27**	**35**	P	**P**	19 58 49.2	**-1.8**
	baz=231,SNR=8.8						
M15K	**Kasigluk River**	**15.29**	**44**	P	**Pn**	19 58 49.2	**+2.0**
	baz=243,SNR=20						
N15K	**Kwethluk River**	**15.33**	**47**	P	**P**	19 58 50.1	**-1.7**
N15K				IAmb	IAmb	19 58 52.8	
	comp=Z,204nm,1.1s						
N15K	**Kwethluk River**	**15.33**	**47**	P	**P**	19 58 49.7	**-2.0**
	baz=245,SNR=19						
L15K	**Ungalak Mounta**	**15.44**	**40**	P	**Pn**	19 58 50.7	**+1.6**
	baz=238,SNR=8.4						
K15K	**Wolf Creek Mou**	**15.75**	**39**	P	**P**	19 58 55.9	**-0.5**
K15K				IAmb	IAmb	19 58 59.2	
	comp=Z,95nm,0.8s						
K15K	**Wolf Creek Mou**	**15.75**	**39**	P	**P**	19 58 54.8	**-1.7**
	baz=236,SNR=26						
R16K	**Pilot Point**	**15.76**	**58**	P	**Pn**	19 58 54.5	**+1.3**
	baz=258						
ANM	**Nome**	**15.91**	**28**	P	**Pn**	19 58 56.4	**+1.2**
ANM	**Nome**	**15.91**	**28**	P	**Pn**	19 58 56.5	**+1.3**
	baz=223						
ANM	**Nome**	**15.91**	**28**	P	**Pn**	19 58 56.4	**+1.2**
ANM				pmax	pmax		
	comp=Z,114nm,1.9s						
P16K	**Nushagak River**	**15.92**	**52**	P	**Pn**	19 58 56.5	**+1.2**
	baz=252,SNR=9.9						
TNA	**Tin City**	**16.01**	**23**	P	**P**	19 58 58.1	**-1.1**
	baz=215,SNR=31						
O16K	**Kokwok River B**	**16.05**	**50**	P	**Pn**	19 58 58.0	**+1.1**
O16K				IAmb	IAmb	19 59 02.7	
	comp=Z,136nm,1.1s						
O16K	**Kokwok River B**	**16.05**	**50**	P	**P**	19 58 58.9	**-0.8**
	baz=250,SNR=23						
N16K	**Nishlik Lake**	**16.05**	**47**	P	**P**	19 58 59.7	**-0.1**
	baz=246						
M16K	**Timber Creek**	**16.19**	**45**	P	**Pn**	19 58 59.6	**+0.8**
M16K	**Timber Creek**	**16.19**	**45**	P	**P**	19 59 00.6	**-0.7**
	baz=244,SNR=16						
L16K	**Owhat River**	**16.28**	**42**		**P**	19 59 02.5	**+0.2**
L16K	**Owhat River**	**16.28**	**42**	P	**Pn**	19 59 00.6	**+0.7**
	baz=242,SNR=18						
F14K	**Arctic Creek**	**16.34**	**25**	P	**P**	19 59 02.6	**-0.3**
	baz=219,SNR=14						
Q16K	**King Salmon**	**16.49**	**54**	P	**P**	19 59 04.2	**-0.4**
	baz=255						
O17K	**Koliganek Bris**	**16.58**	**50**	P	**P**	19 59 05.2	**-0.4**
	baz=251						
CHIR	**Chirikof Islan**	**16.59**	**64**	P	**Pn**	19 59 04.8	**+1.0**
	baz=266						
G15K	**Niukluk**	**16.62**	**28**	P	**P**	19 59 05.9	**-0.1**
	baz=224,SNR=18						
J16K	**Anvik River**	**16.66**	**36**	P	**Pn**	19 59 04.3	**-0.4**
J16K	**Anvik River**	**16.66**	**36**	P	**P**	19 59 05.9	**-0.6**
	baz=235,SNR=16						
P17K	**Kvichak River**	**16.73**	**52**	P	**P**	19 59 07.7	**+0.5**
	baz=254,SNR=9.6						
Q17K	**Contact Creek**	**16.79**	**56**	P	**P**	19 59 07.7	**-0.3**
	baz=258						
N17K	**Nushagak Hills**	**16.80**	**48**	P	**Pn**	19 59 06.6	**+0.3**
N17K				IAmb	IAmb	19 59 11.8	
	comp=Z,139nm,1.1s						
N17K	**Nushagak Hills**	**16.80**	**48**	P	**P**	19 59 07.9	**-0.1**
	baz=249,SNR=20						
MA2	**Magadan**	**16.93**	**309**	P	**P**	19 59 10.9	**+1.4**
MA2	**Magadan**	**16.93**	**309**	*i* P	**Pn**	19 59 07.6	**-0.5**
MA2				pmax	pmax		
	comp=Z,38nm,1.7s						
MA2	**Magadan**	**16.93**	**309**	Pn	**Pn**	19 59 08.8	**+0.7**
	comp=Z,0.2nm,0.3s,baz=121,slow=18,SNR=2.2						
MA2				LR	LR	20 05 38.2	
	comp=Z,1μm,18.3s,baz=110,slow=37						
	comp=Z,1.4nm,0.3s						
H16K	**Elim**	**16.93**	**31**	P	**P**	19 59 09.6	**+0.1**
	baz=229,SNR=32						
F15K	**North Star Dit**	**16.97**	**26**	P	**Pn**	19 59 07.8	**-0.7**
F15K	**North Star Dit**	**16.97**	**26**	P	**P**	19 59 10.1	**+0.2**
	baz=222						
L17K	**Donlin**	**16.98**	**42**	P	**P**	19 59 11.2	**+1.3**
	baz=242,SNR=19						
I17K	**Unalakleet**	**16.98**	**35**	P	**Pn**	19 59 08.7	**+0.1**
I17K	**Unalakleet**	**16.98**	**35**	P	**P**	19 59 12.1	**+2.1**
	baz=233,SNR=9.6						
M17K	**Holitna River**	**17.02**	**45**	P	**P**	19 59 09.9	**-0.5**
M17K				IAmb	IAmb	19 59 14.4	
	comp=Z,167nm,0.9s						
M17K	**Holitna River**	**17.02**	**45**	P	**P**	19 59 12.3	**+1.8**
	baz=246,SNR=29						
K17K	**Iditarod**	**17.25**	**40**	P	**P**	19 59 12.5	**-0.5**
K17K	**Iditarod**	**17.25**	**40**	P	**P**	19 59 14.4	**+1.4**
	baz=241,SNR=19						
P18K	**Big Mountain,**	**17

comp=Z,352nm,1.9s
E17K **Hotham Inlet** 18.75 26 P Pn 19 59 30.7 +0.5
baz=224,SNR=70
C16K **Lisburne Hills** 18.82 20 IAmb IAmb 19 59 33.5
comp=Z,227nm,1.0s
C16K **Lisburne Hills** 18.82 20 P Pn 19 59 31.3 +0.3
baz=215,SNR=221
O20K **Slope Mountain** 18.83 51 P Pn 19 59 32.0 +0.6
baz=256,SNR=14
GCSA **Galena City Sc** 18.84 35 P Pn 19 59 31.9 +0.6
baz=238,SNR=49
RSO **Redoubt South** 18.86 50 P Pn 19 59 31.5 -0.3
G18K **Tagagawik** 18.90 31 IAmb IAmb 19 59 39.6
comp=Z,101nm,0.9s
G18K **Tagagawik** 18.90 31 P Pn 19 59 32.1 +0.1
baz=232,SNR=71
J19K **Poorman** 18.93 38 P Pn 19 59 32.4 -0.1
baz=241,SNR=27
L20K **Farewell, AK** 18.99 44 P Pn 19 59 33.4 +0.2
baz=248
F18K **Selawik** 19.04 29 P Pn 19 59 34.0 +0.3
baz=229,SNR=85
M20K **Styx River** 19.11 46 IAmb IAmb 19 59 42.4
comp=Z,156nm,0.9s
M20K **Styx River** 19.11 46 P Pn 19 59 35.2 +0.5
baz=250
RDOG **Red Dog Mine** 19.20 23 P Pn 19 59 36.4 +0.7
baz=220
HOM **Homer** 19.22 53 P P 19 59 34.1 -0.5
HOM **Homer** 19.22 53 P Pn 19 59 35.8 -0.1
baz=258
K20K **Telida** 19.26 41 P P 19 59 34.8 -0.3
K20K **Telida** 19.26 41 P Pn 19 59 36.7 +0.2
baz=245,SNR=37
N20K **Mount Spurr** 19.32 48 P Pn 19 59 37.6 +0.3
baz=254,SNR=94
E18K **Tukpahlearik C** 19.33 26 IAmb IAmb 19 59 39.8
comp=Z,194nm,0.9s
E18K **Tukpahlearik C** 19.33 26 P Pn 19 59 37.6 +0.4
baz=225,SNR=164
CNPM **China Poot** 19.40 53 P 19 59 36.6 -0.1
CNPM IAmb IAmb 19 59 50.0
comp=Z,218nm,1.1s
H19K **Roundabout Mou** 19.42 34 P Pn 19 59 39.9 +1.6
baz=236,SNR=141
C17K **DeLong Mountai** 19.46 22 P Pn 19 59 39.1 +0.3
baz=219,SNR=171
G19K **Purcell Mounta** 19.56 32 IAmb IAmb 19 59 44.9
comp=Z,99nm,0.8s
G19K **Purcell Mounta** 19.56 32 P Pn 19 59 39.5 -0.5
baz=234
J20K **Nowinta River** 19.59 39 IAmb IAmb 19 59 46.7
comp=Z,189nm,1.0s
J20K **Nowinta River** 19.59 39 P Pn 19 59 40.0 -0.3
baz=243,SNR=119
BRLK **Bradley Lake** 19.62 53 P P 19 59 37.9 -1.2
BRLK IAmb IAmb 19 59 43.0
comp=Z,147nm,0.9s
BRSE **Bradley Lake S** 19.69 53 P P 19 59 39.6 -0.1
baz=259,SNR=18
CAPN **Captain Cook N** 19.70 50 P P 19 59 38.9 -1.0
CAPN **Captain Cook N** 19.70 50 P Pn 19 59 41.8 +0.2
baz=256
I20K **Naaghedeneel** 19.75 37 IAmb IAmb 19 59 43.7
comp=Z,153nm,0.9s
I20K **Naaghedeneel** 19.75 37 P Pn 19 59 41.6 -0.6
baz=241
F19K **Shaleruckik Mo** 19.76 30 IAmb IAmb 19 59 46.1
comp=Z,100nm,0.8s
F19K **Shaleruckik Mo** 19.76 30 P P 19 59 41.1 +0.6
baz=231,SNR=41
SKT **Skwentna** 19.86 46 P Pn 19 59 42.5 -1.0
SKT IAmb IAmb 19 59 45.4
comp=Z,156nm,1.0s
SKT **Skwentna** 19.86 46 P Pn 19 59 43.2 -0.4
baz=252,SNR=51
PPLA **Purkeypile** 19.87 43 P Pn 19 59 43.5 -0.3
baz=249
H20K **Anotleneega Mo** 19.96 35 P Pn 19 59 43.8 -0.8
baz=239,SNR=75
C18K **Utukok River** 20.07 23 P Pn 19 59 45.2 -0.7
baz=222,SNR=242
SUA **Susitna One** 20.07 48 P P 19 59 44.4 +0.4
SUA IAmb IAmb 19 59 50.6
comp=Z,165nm,1.0s
SUA **Susitna One** 20.07 48 P Pn 19 59 45.2 -0.9
baz=255,SNR=59
CAST **Castle Rocks** 20.11 42 P P 19 59 45.1 +0.8
CAST IAmb IAmb 19 59 50.8
comp=Z,141nm,1.0s
CAST **Castle Rocks** 20.11 42 P Pn 19 59 45.6 -0.8
baz=248,SNR=103
CHUM **Lake Minchumin** 20.19 40 P Pn 19 59 46.8 -0.7
baz=246,SNR=216
FIS **Fire Island** 20.24 49 P P 19 59 45.7 0.0
E19K **Redstone River** 20.32 29 P P 19 59 47.6 +1.0
baz=231
O22K **Cooper Landing** 20.33 51 P P 19 59 46.0 -0.6
O22K **Cooper Landing** 20.33 51 P P 19 59 46.3 -0.4
baz=258,SNR=35
SEW **Seward** 20.39 52 P P 19 59 47.2 -0.2
baz=260,SNR=26
M22K **Willow** 20.44 47 P P 19 59 47.3 -0.5
M22K **Willow** 20.44 47 P P 19 59 48.4 +0.6
baz=255,SNR=6.1
RC01 **Rabbit Creek A** 20.45 49 P 19 59 47.1 -0.9
RC01 IAmb IAmb 20 00 00.2
comp=Z,114nm,1.0s
RC01 **Rabbit Creek A** 20.45 49 P P 19 59 47.9 -0.1
baz=257,SNR=17
B18K **Kokolik River** 20.47 21 P Pn 19 59 49.3 -1.4
baz=220
F20K **Avaraart Lake** 20.54 31 IAmb IAmb 19 59 53.7
comp=Z,59nm,0.8s
F20K **Avaraart Lake** 20.54 31 P P 19 59 49.5 +0.6
baz=234
CUT **Chulitna** 20.55 45 P P 19 59 48.3 -0.8
CUT IAmb IAmb 20 00 01.4
comp=Z,177nm,1.0s
CUT **Chulitna** 20.55 45 P P 19 59 49.8 +0.8
baz=253,SNR=8.5
IMAR **Indian Mountai** 20.61 34 P P 19 59 49.7 0.0
KTH **Kantishna Hill** 20.64 42 P P 19 59 50.9 +0.7
D19K **Kuna River** 20.75 26 IAmb IAmb 19 59 56.3
comp=Z,183nm,1.0s
D19K **Kuna River** 20.75 26 P P 19 59 52.4 +1.1
baz=227
H21K **Melozitna Rive** 20.79 36 P Pn 19 59 53.0 -1.5
baz=241,SNR=315
C19K **Lookout Ridge** 20.80 23 IAmb IAmb 19 59 59.6
comp=Z,227nm,1.3s
C19K **Lookout Ridge** 20.80 23 P P 19 59 52.7 +0.9
baz=224
PMR **Palmer** 20.85 48 P P 19 59 51.9 -0.5
PMR **Palmer** 20.85 48 P Pn 19 59 53.9 -1.3
PMR **Palmer** 20.85 48 P P 19 59 53.0 +0.7
baz=256,SNR=11
PMR **Palmer** 20.85 48 P P 19 59 51.9 -0.5
PMR pmax pmax
comp=Z,35nm,0.9s
I21K **Tanana** 20.87 37 P P 19 59 53.5 +1.0
baz=244,SNR=114
TRF **Thorofare Moun** 20.87 43 P 19 59 52.2 -0.6
TRF **Thorofare Moun** 20.87 43 P P 19 59 53.6 +0.8
baz=250,SNR=94
G21K **Allakaket** 20.97 33 IAmb IAmb 20 00 00.3
comp=Z,86nm,0.9s
G21K **Allakaket** 20.97 33 P P 19 59 54.1 +0.5
baz=238
GHO **Glory Hole Cre** 20.99 48 P P 19 59 53.2 -0.8
GHO IAmb IAmb 20 00 06.1
comp=Z,75nm,1.0s
KNK **Knik Glacier** 21.13 49 P P 19 59 53.6 -1.8
KNK IAmb IAmb 19 59 58.6
comp=Z,143nm,0.9s
KNK **Knik Glacier** 21.13 49 P P 19 59 55.0 -0.4
baz=258,SNR=53
E20K **Nigu River** 21.14 28 P P 19 59 56.3 +0.8
baz=231,SNR=152
SML **Sawmill** 21.27 48 P 19 59 56.8 -0.1
SML **Sawmill** 21.27 48 P P 19 59 57.7 +0.7
baz=257,SNR=56
MLY **Manley** 21.29 38 P 19 59 56.2 -0.9
MLY IAmb IAmb 20 00 01.5
comp=Z,156nm,1.0s
MLY **Manley** 21.29 38 P P 19 59 57.5 +0.5
baz=246,SNR=155

D20K **Etivluk River** 21.31 26 P P 19 59 58.1 +0.8
baz=229
F21K **Alatna River** 21.36 32 P P 19 59 56.6 -1.1
F21K **Alatna River** 21.36 32 P P 19 59 58.4 +0.7
baz=237
P23K **Montague Islan** 21.39 53 P P 19 59 57.3 -0.9
baz=262,SNR=12
H22K **Ishtalitna Cre** 21.42 36 P P 19 59 59.0 +0.6
baz=243,SNR=87
WAT1 **Susitna Watana** 21.43 45 P P 19 59 58.8 +0.2
baz=254
BWN **Browne** 21.47 41 P 19 59 58.8 -0.1
RND **Reindeer** 21.47 43 P 19 59 57.6 -1.4
RND IAmb IAmb 20 00 01.0
comp=Z,60nm,0.8s
RND **Reindeer** 21.47 43 P P 19 59 57.6 -1.4
RND pmax pmax
comp=Z,60nm,0.8s
MCK **McKinley** 21.54 42 P P 19 59 59.3 -0.4
baz=251,SNR=83
M23K **Glacier View** 21.55 48 P P 19 59 59.3 -0.6
baz=257,SNR=22
TYV **Tymovskoe** 21.59 282 eP P 20 00 03.1 +2.8
TYV eS Sn 20 04 05.2 -1.9
TYV pmax pmax
comp=Z,44nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.3s
WAT6 **Susitna Watana** 21.73 46 P P 20 00 01.0 -0.9
baz=255,SNR=122
SCM **Sheep Creek Mo** 21.74 48 P P 20 00 00.9 -1.1
SCM **Sheep Creek Mo** 21.74 48 P P 20 00 01.4 -0.6
baz=258,SNR=31
SCM **Sheep Creek Mo** 21.74 48 P P 20 00 00.9 -1.1
SCM pmax pmax
comp=Z,208nm,1.0s
NEA2 **Nenana** 21.78 40 P P 20 00 01.7 -0.5
NEA2 **Nenana** 21.78 40 P P 20 00 02.9 +0.7
baz=249,SNR=125
Q23K **Middleton Isla** 21.86 55 P P 20 00 02.8 -0.3
baz=265
G22K **Bettles** 21.86 33 P P 20 00 03.4 +0.3
baz=240,SNR=55
MID **Middleton Isla** 21.86 55 P P 20 00 02.8 -0.4
MID **Middleton Isla** 21.86 55 P P 20 00 02.8 -0.4
MID pmax pmax
comp=Z,308nm,1.2s
I23K **Minto, Yukon-K** 21.87 39 P P 20 00 03.4 +0.2
I23K IAmb IAmb 20 00 06.2
comp=Z,69nm,0.9s
I23K **Minto, Yukon-K** 21.87 39 P P 20 00 03.4 +0.2
baz=247,SNR=46
HIN **Hinchinbrook I** 21.89 52 P P 20 00 02.5 -1.0
HIN IAmb IAmb 20 00 20.3
comp=Z,197nm,1.1s
E21K **Killik River** 21.90 28 P P 20 00 03.5 -0.1
baz=234
DHY **Denali Highway** 22.02 45 P 20 00 03.9 -1.1
DHY **Denali Highway** 22.02 45 P P 20 00 04.9 -0.1
baz=255,SNR=171
C21K **Knifeblade Rid** 22.11 26 P P 20 00 05.8 +0.1
baz=231,SNR=151
WRH **Wood River Hil** 22.13 41 P P 20 00 04.7 -1.4
WRH IAmb IAmb 20 00 10.8
comp=Z,122nm,1.0s
MDM **Murphy Dome** 22.24 40 P 20 00 06.5 -0.8
EYAK **Cordova Ski Ar** 22.28 52 P P 20 00 07.5 -0.2
baz=263,SNR=20
G23K **Bananza Creek** 22.28 35 P P 20 00 08.0 +0.3
baz=243,SNR=251
CCB **Clear Creek Bu** 22.31 41 P P 20 00 06.3 -1.6
CCB IAmb IAmb 20 00 11.1
comp=Z,126nm,1.0s
M24K **Tolsona, Glenn** 22.33 47 P 20 00 07.8 -0.5
M24K **Tolsona, Glenn** 22.33 47 P P 20 00 08.2 -0.1
baz=258,SNR=54
KLU **Klutina** 22.34 49 P P 20 00 07.1 -1.2
KLU IAmb IAmb 20 00 24.3
comp=Z,90nm,1.0s
KLU **Klutina** 22.34 49 P P 20 00 08.6 +0.3
baz=260,SNR=37
COLA **College** 22.36 40 P P 20 00 07.7 -0.8
COLA **College** 22.36 40 P P 20 00 09.3 +0.8
COLA **College** 22.36 40 P P 20 00 08.3 -0.2
baz=250
COLA **College** 22.36 40 P P 20 00 07.7 -0.8
COLA pmax pmax
comp=Z,208nm,0.8s
E22K **Anaktuvuk Pass** 22.39 30 P P 20 00 09.7 +0.9
baz=238
B21K **Ikpikpuk River** 22.45 26 P P 20 00 09.3 -0.1
baz=230,SNR=326
COLD **Coldfoot** 22.46 33 P P 20 00 09.1 -0.4
baz=242,SNR=34
D22K **Ayikyak River** 22.54 28 P P 20 00 10.8 +0.4
baz=235
HDA **Harding Lake** 22.58 41 P P 20 00 08.2 -2.6
HDA **Harding Lake** 22.58 41 P P 20 00 09.9 -1.0
baz=252,SNR=23
POKR **Poker Plat Res** 22.62 39 P P 20 00 10.1 -1.2
POKR **Poker Plat Res** 22.62 39 P P 20 00 11.2 -0.1
baz=250,SNR=64
H24K **Nodor Dome** 22.70 38 P P 20 00 13.0 +0.8
baz=248
IL31 **22.72 41** P P 20 00 09.9 -2.4
IL31 IAmb IAmb 20 00 13.8
comp=Z,124nm,1.1s
ILAR **Eielson Array** 22.72 41 P P 20 00 09.6 -2.8
ILAR **Eielson Array** 22.72 41 P P 20 00 10.5 -1.8
comp=Z,58nm,0.9s,baz=243,slow=10.0,SNR=99
ILAR PcP PcP 20 04 02.5 -0.1
comp=Z,1.5nm,0.8s,baz=242,slow=3.5,SNR=3.6
ILAR ScP ScP 20 07 37.0 +0.6
comp=Z,0.7nm,0.7s,baz=266,slow=3.1,SNR=3.5
ILAR LR LR 20 09 10.0
comp=Z,927nm,20.3s,baz=239,slow=37
comp=Z,58nm,0.9s
RAGM **Ragged Mountai** 22.79 52 P P 20 00 12.3 -0.8
PAX **Paxson** 22.84 45 P P 20 00 13.2 -0.4
baz=257,SNR=102
YSS **Yuzh-Sakhalins** 22.85 272 P P 20 00 14.1 +0.3
YSS **Yuzh-Sakhalins** 22.85 272 eP P 20 00 14.5 +0.7
YSS eS S 20 04 22.6 +2.8
YSS pmax pmax
comp=Z,200nm,3.8s
YSS pmax pmax
comp=Z,30nm,0.8s
YSS smax smax
comp=E,300nm,5.7s
HARP **HAARP** 22.86 47 P P 20 00 13.8 -0.1
baz=259,SNR=36
KAIM **Kayak Island** 22.88 53 P 20 00 12.8 -1.2
KAIM **Kayak Island** 22.88 53 P P 20 00 13.4 -0.6
baz=265,SNR=9.8
BMRM **Bremner River** 22.89 51 P P 20 00 13.5 -0.7
baz=263,SNR=77
K24K **Donnelly Dome** 22.90 43 P P 20 00 13.3 -1.0
baz=255,SNR=44
N25K **Chitina, Valde** 22.98 49 P P 20 00 14.1 -1.1
N25K IAmb IAmb 20 00 28.1
comp=Z,82nm,0.8s
N25K **Chitina, Valde** 22.98 49 P P 20 00 14.8 -0.4
baz=261,SNR=50
HMT **Hamilton** 22.99 52 P P 20 00 13.9 -1.3
E23K **Chandalar** 23.06 32 P P 20 00 16.0 +0.1
baz=241,SNR=219
A21K **Barrow** 23.11 21 P P 20 00 15.1 -1.0
baz=225,SNR=16
G24K **Hadweenzic Riv** 23.19 36 P P 20 00 17.5 +0.4
baz=246
SUCK **Suckling Hills** 23.21 53 P P 20 00 15.9 -1.4
BERG **Berg Lake** 23.27 52 P P 20 00 16.4 -1.6
RIDG **Independent Ri** 23.29 44 P P 20 00 16.7 -1.4
RIDG IAmb IAmb 20 00 18.6
comp=Z,53nm,0.8s
RIDG **Independent Ri** 23.29 44 P P 20 00 17.0 -1.1
baz=256,SNR=27
J25K **Salcha River,** 23.30 41 P P 20 00 16.6 -1.6
J25K IAmb IAmb 20 00 19.1
comp=Z,44nm,0.8s
J25K **Salcha River,** 23.30 41 P P 20 00 17.2 -1.0
baz=254,SNR=49
GLB **Gilahina Butte** 23.33 50 P P 20 00 16.9 -1.7
GLB IAmb IAmb 20 00 19.4
comp=Z,82nm,1.0s
TOLK **Toolik Lake Re** 23.36 30 P P 20 00 18.2 -0.6

TOLK **Toolik Lake Re** 23.36 30 P P 20 00 18.7 -0.1
baz=240,SNR=234
F24K **Squaw Lake** 23.39 34 P P 20 00 19.8 +0.8
baz=244
E24K **Your Creek** 23.44 32 IAmb IAmb 20 00 28.9
comp=Z,58nm,0.8s
E24K **Your Creek** 23.44 32 P P 20 00 19.9 +0.4
baz=242
BGLC **Bering Glacier** 23.46 53 P P 20 00 19.7 +0.1
baz=266
VRDI **Verde Repeater** 23.48 50 P P 20 00 18.8 -1.3
VRDI IAmb IAmb 20 00 23.6
comp=Z,66nm,0.8s
PRP **Porcupine Dome** 23.50 39 P P 20 00 18.8 -1.5
PRP IAmb IAmb 20 00 20.9
comp=Z,102nm,1.0s
PRP **Porcupine Dome** 23.50 39 P P 20 00 18.9 -1.4
baz=251,SNR=102
CRQE **Cirque** 23.60 51 P P 20 00 20.7 -0.6
baz=265
MENT **Mentasta** 23.61 46 P P 20 00 20.8 -0.5
MENT **Mentasta** 23.61 46 P P 20 00 22.4 +1.2
SNH **Sunshine Point** 23.69 53 P P 20 00 20.7 -1.2
SNH IAmb IAmb 20 00 26.6
comp=Z,117nm,1.0s
C23K **Itkillik River** 23.69 27 IAmb IAmb 20 00 25.0
comp=Z,134nm,1.1s
C23K **Itkillik River** 23.69 27 P P 20 00 21.7 -0.2
baz=236
MCARA **McCarthy VSAT** 23.70 50 P P 20 00 21.8 -0.2
baz=263,SNR=83
SCRK **Sand Creek** 23.71 43 P P 20 00 20.8 -1.5
SCRK IAmb IAmb 20 00 22.3
comp=Z,124nm,1.0s
SCRK **Sand Creek** 23.71 43 P P 20 00 21.0 -1.2
baz=256,SNR=130
L26K **Log Cabin Wild** 23.80 46 P P 20 00 22.5 -0.4
L26K **Log Cabin Wild** 23.80 46 P P 20 00 23.1 +0.2
baz=259,SNR=157
M26K **Nabesna, AK** 23.85 47 IAmb IAmb 20 00 41.1
comp=Z,97nm,1.1s
M26K **Nabesna, AK** 23.85 47 P P 20 00 23.1 -0.4
baz=261
D24K **Happy Valley** 23.86 30 P P 20 00 23.4 +0.1
baz=240
ISLE **Juniper Island** 23.96 52 P P 20 00 23.5 -1.1
ISLE IAmb IAmb 20 00 47.4
comp=Z,116nm,0.9s
FYU **Fort Yukon** 23.97 37 P P 20 00 24.1 -0.3
J26L **Joseph Creek** 24.02 42 P P 20 00 23.9 -1.1
baz=256,SNR=223
MESA **MESA** 24.13 53 P P 20 00 25.1 -1.1
MESA IAmb IAmb 20 00 42.5
comp=Z,107nm,0.9s
MESA **MESA** 24.13 53 P P 20 00 25.5 -0.7
baz=267,SNR=21
C24K **Franklin Bluff** 24.19 28 P P 20 00 26.8 +0.4
baz=239,SNR=90
F25K **Christian River** 24.20 34 P P 20 00 27.2 +0.6
baz=247,SNR=244
JKA **Kamikawa-asahi** 24.25 266 P P 20 00 28.0 +0.8
JKA IAmb IAmb 20 00 49.0
comp=Z,63nm,1.0s
ASAJ **Asahikawa** 24.25 266 P P 20 00 28.0 +0.8
ASAJ pmax pmax
comp=Z,63nm,1.0s
ASAJ **Asahikawa** 24.25 266 LR LR 20 12 49.9
comp=Z,175nm,18.1s,baz=134,slow=44
BARN **Barnard Glacie** 24.33 51 P P 20 00 27.5 -0.5
M27K **Edge Creek, AK** 24.36 48 IAmb IAmb 20 00 30.7
comp=Z,122nm,0.9s
M27K **Edge Creek, AK** 24.36 48 P P 20 00 28.3 +0.1
baz=262
I26K **Coal Creek Min** 24.39 40 P P 20 00 27.6 -0.7
baz=255
E25K **Arctic Village** 24.44 33 P P 20 00 27.9 -0.9
E25K **Arctic Village** 24.44 33 P P 20 00 29.3 +0.5
baz=246,SNR=135
CTG **Chitna Glacier** 24.48 51 P P 20 00 29.6 +0.3
baz=266,SNR=78
CTGM **Chitina Glacie** 24.48 51 P P 20 00 28.5 -0.9
L27K **Beaver Creek,** 24.48 46 P P 20 00 29.6 +0.4
baz=261,SNR=510
BCAR **Beaver Creek A** 24.50 46 P P 20 00 29.3 -0.2
BMAR **Burnt Mountain** 24.52 35 P P 20 00 29.4 -0.1
TABL **Table Mountain** 24.54 52 P P 20 00 29.0 -1.0
K27K **Chicken** 24.55 44 P P 20 00 29.4 -0.3
baz=258
LOGN **Logan Glacier** 24.63 52 P P 20 00 29.8 -1.0
G26K **Porcupine Rive** 24.64 36 P P 20 00 30.9 +0.4
baz=250,SNR=358
D25K **Kavik River** 24.70 30 P P 20 00 31.3 +0.1
baz=242,SNR=295
F26K **Sheenjek River** 24.77 35 P P 20 00 32.2 +0.4
baz=248,SNR=384
BVCY **Beaver Creek** 24.84 48 P P 20 00 32.4 -0.1
baz=263,SNR=79
YUK3 **Moose Creek** 24.96 49 P P 20 00 33.3 -0.5
baz=265,SNR=155
PINM **Pinnacle** 24.98 53 P P 20 00 32.9 -0.8
baz=269,SNR=38
ERM **Erimo** 25.01 261 P P 20 00 34.9 +0.8
ERM IAmb IAmb 20 01 02.7
comp=Z,71nm,1.2s
ERM **Erimo** 25.01 261 P P 20 00 34.9 +0.8
ERM pmax pmax
comp=Z,71nm,1.3s
EGAK **Eagle** 25.09 42 P P 20 00 34.0 -0.6
EGAK **Eagle** 25.09 42 P P 20 00 34.2 -0.4
baz=258,SNR=44
I27K **Kandik River** 25.09 40 P P 20 00 33.0 -1.7
baz=256,SNR=56
YUK8 **Steele Glacier** 25.26 50 P P 20 00 35.9 -0.6
baz=267,SNR=239
BCPM **Bancas Point** 25.28 54 P P 20 00 35.2 -1.2
H27K **Steamboat Moun** 25.29 39 P P 20 00 34.8 -1.7
baz=254
GRNR **Gornyy** 25.41 285 ⇑iP P 20 00 38.5 +0.8
GRNR eS S 20 05 06.2 +5.2
GRNR pmax pmax
comp=N,3.0nm,1.0s
GRNR pmax pmax
comp=E,10.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=E,2.0nm,1.0s
GRNR MLR MLR
comp=N,180nm,13.0s
PNL **Peninsula** 25.41 54 P P 20 00 36.9 -0.7
PNL **Peninsula** 25.41 54 P P 20 00 36.2 -1.4
baz=270,SNR=12
DAWY **Dawson** 25.72 44 P P 20 00 40.0 -0.4
baz=261
I28M **Miner Creek** 25.74 41 P P 20 00 38.6 -2.0
I28M **Miner Creek** 25.74 41 P P 20 00 40.2 -0.4
baz=258,SNR=192
YUK4 **Talbot Arm** 25.80 50 P P 20 00 43.9 +2.5
baz=268,SNR=225
O29M **Mount Kennedy** 25.82 53 IAmb IAmb 20 00 45.0
comp=Z,86nm,1.0s
O29M **Mount Kennedy** 25.82 53 P P 20 00 40.5 -0.9
baz=270
YUK6 **Outpost Mounta** 25.93 51 P P 20 00 41.6 -0.9
baz=269,SNR=25
M29M **Somme Creek** 25.95 48 IAmb IAmb 20 00 56.5
comp=Z,55nm,1.0s
M29M **Somme Creek** 25.95 48 P P 20 00 41.6 -1.0
baz=266
L29M **L29M** 26.16 46 P P 20 00 44.0 -0.4
L29M IAmb IAmb 20 01 14.5
comp=Z,52nm,0.9s
L29M **L29M** 26.16 46 P P 20 00 44.3 -0.1
baz=264
P29M **Windy Craggy** 26.25 54 IAmb IAmb 20 01 00.1
comp=Z,90nm,0.8s
P29M **Windy Craggy** 26.25 54 P P 20 00 44.5 -0.8
baz=272,SNR=32
J29N **Klondike Camp** 26.28 43 P P 20 00 44.7 -0.8
J29N IAmb IAmb 20 00 47.5
comp=Z,97nm,1.1s
J29N **Klondike Camp** 26.28 43 P P 20 00 45.1 -0.4
baz=262,SNR=39
F28M **Old Crow** 26.29 36 P P 20 00 45.4 -0.2
F28M IAmb IAmb 20 00 48.4
comp=Z,63nm,0.8s
F28M **Old Crow** 26.29 36 P P 20 00 45.6 +0.1

baz=254,SNR=95
HYT Haines Junctio 26.34 52 P **P 20 00 46.2 -0.1**
baz=270,SNR=124
D27M Malcolm River 26.43 32 P **P 20 00 47.5 +0.7**
baz=249,SNR=96
K29M Barlow Dome 26.51 45 P **P**
K29M IAmb IAmb 20 00 52.0
comp=Z,87nm,0.9s
K29M Barlow Dome 26.51 45 P **P 20 00 47.8 +0.2**
baz=264,SNR=100
H29M Whitestone 26.53 39 IAmb IAmb 20 00 51.3
comp=Z,45nm,0.8s
H29M Whitestone 26.53 39 P **P 20 00 47.1 -0.6**
baz=258,SNR=35
N30M Aishikik Lake 26.55 50 IAmb IAmb 20 00 52.7
comp=Z,96nm,0.8s
N30M Aishikik Lake 26.55 50 P **P 20 00 48.7 +0.7**
baz=269
P30M Million Dollar 26.62 53 P **P 20 00 48.8 +0.2**
baz=272
E28M Babbage River 26.70 34 IAmb IAmb 20 00 51.1
comp=Z,52nm,1.0s
E28M Babbage River 26.70 34 P **P 20 00 50.0 +0.8**
baz=252
M30M Minto, Yukon 26.73 48 P **P 20 00 48.9 -0.6**
M30M IAmb IAmb 20 00 55.7
comp=Z,37nm,0.9s
M30M Minto, Yukon 26.73 48 P **P 20 00 50.9 +1.3**
baz=267,SNR=21
PLBC Pleasant Camp 26.95 55 P **P 20 00 52.6 +1.1**
baz=273,SNR=5.8
O30N Mendenhall 27.04 52 P **P 20 00 51.5 -0.8**
O30N IAmb IAmb 20 01 08.6
comp=Z,77nm,1.4s
O30N Mendenhall 27.04 52 P **P 20 00 53.0 +0.6**
baz=271,SNR=26
J30M Hart River 27.11 43 IAmb IAmb 20 00 54.8
comp=Z,78nm,1.1s
J30M Hart River 27.11 43 P **P 20 00 53.1 +0.1**
baz=263,SNR=95
S31K Pelican 27.16 58 P **P 20 00 52.1 -1.2**
S31K Pelican 27.16 58 P **P 20 00 52.7 -0.6**
baz=276
I30M Mount Dempster 27.17 42 IAmb IAmb 20 00 54.6
comp=Z,40nm,0.9s
I30M Mount Dempster 27.17 42 P **P 20 00 52.9 -0.7**
baz=262,SNR=53
N31M Braeburn, Yuko 27.18 50 P **P 20 00 53.2 -0.4**
N31M IAmb IAmb 20 01 00.7
comp=Z,67nm,1.0s
N31M Braeburn, Yuko 27.18 50 P **P 20 00 53.3 -0.3**
baz=270,SNR=24
D28M Stokes Point 27.20 33 P **P 20 00 53.8 +0.2**
baz=252
EPYK Eagle Plains 27.21 39 P **P 20 00 52.5 -1.3**
EPYK Eagle Plains 27.21 39 P **P 20 00 53.4 -0.4**
baz=260,SNR=112
E29M Blow River 27.22 35 IAmb IAmb 20 01 02.2
comp=Z,62nm,0.9s
E29M Blow River 27.22 35 P **P 20 00 53.7 -0.2**
baz=254
YAK Yakutsk 27.48 311 P **P 20 00 55.0 -1.2**
YAK Yakutsk 27.48 311 *e*P **P 20 00 55.2 -1.0**
YAK *e**PP **pP 20 01 07.3 -0.5**
YAK *e* 20 01 40.8
YAK *e* 20 04 13.8
YAK *e*S **S 20 05 33.1 -0.3**
YAK *e* 20 11 40.3
YAK pmax pmax
comp=Z,123nm,1.0s
YAK pmax pmax
comp=N,14nm,1.3s
YAK pmax pmax
comp=E,80nm,1.4s
YAK pmax pmax
comp=Z,265nm,6.8s
YAK pmax pmax
comp=N,308nm,6.3s
YAK pmax pmax
comp=E,294nm,6.4s
YAK smax smax
comp=N,198nm,4.5s
YAK smax smax
comp=E,60nm,2.9s
YAK Yakutsk 27.48 311 LR LR 20 11 59.4
comp=E,605nm,18.0s,baz=102,slow=37
SKAG Skagway 27.48 55 P **P 20 00 55.9 -0.3**
baz=274
G30M tAoh Zraii Nji 27.52 38 IAmb IAmb 20 01 01.2
comp=Z,58nm,0.8s
G30M tAoh Zraii Nji 27.52 38 P **P 20 00 56.3 -0.3**
baz=259,SNR=51
WHY Whitehorse 27.64 52 P **P 20 00 57.3 -0.5**
baz=272,SNR=8.2
SIT Sitka 27.76 60 P **P 20 00 58.0 -0.7**
baz=279
F30M Barrier River 27.81 37 P **P 20 00 59.8 +0.6**
baz=258,SNR=149
M31M Drury Creek, Y 27.84 49 P **P 20 00 59.4 -0.1**
baz=270,SNR=27
H31M Peel River 28.08 41 P **P 20 01 00.5 -1.1**
H31M IAmb IAmb 20 01 08.7
comp=Z,49nm,0.8s
H31M Peel River 28.08 41 P **P 20 01 01.0 -0.7**
baz=263
S32K Killisnoo 28.10 59 P **P 20 01 01.6 -0.3**
S32K Killisnoo 28.10 59 P **P 20 01 01.5 -0.3**
baz=279,SNR=6.5
G31M Satah River 28.27 39 P **P 20 01 03.2 0.0**
baz=261
P32M Atlin 28.29 54 P **P 20 01 03.6 0.0**
baz=275,SNR=9.3
FARO Faro, Yukon 28.33 49 P **P 20 01 03.9 +0.1**
baz=271,SNR=14
N32M Quiet Lake 28.49 51 IAmb IAmb 20 01 22.9
comp=Z,39nm,1.0s
N32M Quiet Lake 28.49 51 P **P 20 01 04.7 -0.6**
baz=273
F31M Tsiigehtchic 28.55 38 P **P 20 01 04.8 -0.9**
F31M IAmb IAmb 20 01 07.5
comp=Z,65nm,1.0s
F31M Tsiigehtchic 28.55 38 P **P 20 01 05.3 -0.4**
baz=261,SNR=57
P33M Teslin, Yukon 28.69 53 P **P 20 01 07.1 0.0**
baz=275,SNR=17
KLR Kul'dur 28.76 284*ce*P **P 20 01 08.5 +0.7**
KLR pmax pmax
comp=Z,28nm,0.8s
KLR Kul'dur 28.76 284 P **P 20 01 08.2 +0.4**
comp=Z,22nm,0.9s,baz=60,slow=8.6,SNR=71
KLR LR LR 20 12 43.4
comp=Z,315nm,20.3s,baz=64,slow=36
comp=Z,22nm,0.9s
INK Inuvik 28.78 36 IAmb IAmb 20 01 15.8
comp=Z,88nm,1.1s
INK Inuvik 28.78 36 P **P 20 01 07.9 +0.2**
baz=259,SNR=62
INK Inuvik 28.78 36 LR LR 20 13 01.7
comp=Z,616nm,20.4s,baz=187,slow=37
Q32M Nakina River 29.10 55 P **P 20 01 11.3 +0.3**
baz=278,SNR=6.7
CRAG Craig 29.27 63 P **P 20 01 13.0 +0.7**
baz=283
MMPY Sheldon Lake, 29.29 48 IAmb IAmb 20 01 25.9
comp=Z,35nm,0.9s
MMPY Sheldon Lake, 29.29 48 P **P 20 01 13.0 +0.6**
baz=272,SNR=31
TIXI Tiksi 29.32 331 P **P 20 01 11.0 -1.5**
TIXI PcP **PcP 20 04 16.6 -1.1**
TIXI Tiksi 29.32 331*ce*P **P 20 01 10.6 -1.9**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
WRAK Wrangell Islan 29.49 60 P **P 20 01 14.4 +0.3**
baz=282
R33M Jennings River 29.71 54 P **P 20 01 16.4 +0.2**
baz=278,SNR=15
S34M Telegraph Cree 29.85 57 P **P 20 01 17.5 +0.2**
baz=280,SNR=7.3
ZEA Zeya 29.94 294 *e*P **P 20 01 17.5 -0.6**
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA MLR MLR
comp=Z,200nm,13.0s
V35K Ketchikan 30.14 62 P **P 20 01 19.1 -0.8**
baz=284

DLBC Dease Lake 30.34 56 P **P 20 01 21.6 -0.1**
DLBC Dease Lake 30.34 56 P **P 20 01 22.3 +0.5**
baz=280,SNR=8.8
DLBC Dease Lake 30.34 56 LR LR 20 13 21.8
comp=Z,1μm,21.2s,baz=282,slow=36
T35M Bob Quinn 30.50 59 P **P 20 01 23.7 +0.6**
baz=282,SNR=10
WTLY Watson Lake, Y 30.70 52 IAmb IAmb 20 01 33.2
comp=Z,49nm,1.7s
WTLY Watson Lake, Y 30.70 52 P **P 20 01 25.0 +0.1**
baz=278
TGTN Hyland Airport 30.77 50 P **P 20 01 25.9 +0.4**
baz=276,SNR=15
USA0B Ussuriysk Arra 30.83 274 P **P 20 01 26.1 0.0**
USA0B Ussuriysk Arra 30.83 274 P **P 20 01 26.1 0.0**
USA0B pmax pmax
comp=Z,9.0nm,0.8s
USRK Ussuriysk Ar. 30.83 274 P **P 20 01 25.9 -0.1**
USRK Ussuriysk Ar. 30.83 274 P **P 20 01 26.4 +0.3**
comp=Z,11nm,0.8s,baz=56,slow=8.7,SNR=22
USRK PcP **PcP 20 04 23.1 +1.0**
comp=Z,6.7nm,0.8s,baz=68,slow=2.8,SNR=7.2
USRK ScP **ScP 20 08 03.6 +2.7**
comp=Z,1.5nm,0.9s,baz=65,slow=10,SNR=4.2
comp=Z,11nm,0.8s
HEH HeiHe 30.99 288 *e*P **P 20 01 25.2 -2.2**
HEH pP **pP 20 01 36.6 -1.8**
HEH S **S 20 06 26.8 -2.0**
HEH pmax pmax
comp=Z,23nm,0.8s
HEH pmax pmax
comp=Z,140nm,4.4s
HEH LR LR
comp=Z,470nm,14.2s
HEH LR LR
comp=Z,230nm,15.6s
HEH LR LR
comp=Z,320nm,15.2s
MJAR Matsushiro Arr 31.39 257 P **P 20 01 32.5 +1.4**
comp=Z,2.0nm,0.8s,baz=53,slow=7.2,SNR=6.8
MJAR ScP **ScP 20 08 04.3 +1.5**
comp=Z,9.9nm,1.3s,baz=22,slow=1.3,SNR=9.9
MJAR LR LR 20 12 08.6
comp=Z,252nm,21.4s,baz=62,slow=32
comp=Z,2.0nm,0.8s
MDJ Mudanjiang 32.11 277 P **P 20 01 37.2 -0.2**
MDJ ScS ScS 20 11 58.3 -5.6
MDJ pmax pmax
comp=Z,13nm,1.0s
MDJ pmax pmax
comp=Z,160nm,4.1s
MDJ LR LR
comp=Z,260nm,19.2s
MDJ LR LR
comp=Z,290nm,18.9s
MDJ LR LR
comp=Z,380nm,18.9s
MDJ Mudanjiang 32.11 277 P **P 20 01 37.2 -0.2**
A36M Sachs Harbour 32.18 30 P **P 20 01 38.2 +0.6**
A36M PcP **PcP 20 04 25.0 -0.2**
A36M Sachs Harbour 32.18 30 P **P 20 01 38.1 +0.4**
baz=262,SNR=88
C36M Paulatuk 32.31 35 P **P 20 01 38.7 -0.1**
baz=267,SNR=71
PSTR Posyet 32.37 273 *i*P **P 20 01 40.9 +1.3**
H11N2 WAKE ISLAND Hy 32.74 198 T T 20 36 38.2
baz=11,slow=76,SNR=537
H11N3 WAKE ISLAND Hy 32.75 198 T T 20 36 39.8
baz=11,slow=76,SNR=634
H11N1 WAKE ISLAND Hy 32.76 198 T T 20 36 39.7
baz=11,slow=76,SNR=591
JHJ Hachijo jima 2 32.78 251 LR LR 20 13 07.7
comp=Z,150nm,20.9s,baz=95,slow=33
WRGLY Wrigley 32.80 46 P **P 20 01 43.1 -0.2**
WRGLY Wrigley 32.80 46 P **P 20 01 43.0 -0.2**
baz=277,SNR=13
BNX BinXian 32.92 280 ⇑P **P 20 01 43.9 -0.5**
BNX pmax pmax
comp=Z,20nm,0.9s
BNX pmax pmax
comp=Z,110nm,4.5s
KOTAN Kotaneelee Air 33.03 52 P **P 20 01 45.1 -0.2**
baz=282
BBB Bella Bella 33.08 67 LR LR 20 13 23.9
comp=Z,318nm,22.0s,baz=292,slow=33
H11S1 WAKE ISLAND Hy 33.97 198 T T 20 38 40.5
baz=11,slow=76,SNR=293
H11S2 WAKE ISLAND Hy 33.98 198 T T 20 38 22.2
baz=11,slow=76,SNR=124
H11S3 WAKE ISLAND Hy 33.98 198 T T 20 38 44.3
baz=11,slow=76,SNR=180
CN2 Changchun 35.09 278 *e*P **P 20 02 03.1 -0.2**
CN2 *e*S **S 20 07 31.1 -1.5**
CN2 *es*S sS 20 07 51.4 -0.4
CN2 *e*SS **SnSn 20 09 47.8 -3.8**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=Z,180nm,15.0s
CN2 LR LR
comp=Z,150nm,15.0s
KIP Kipapa 35.67 138 *i*P **P 20 02 09.5 +1.1**
KIP pmax pmax
comp=Z,56nm,1.0s
BOD Bodaibo 35.91 305 *e*P **P 20 02 09.5 -0.6**
BOD pmax pmax
comp=Z,113nm,1.3s
HIA Hailar 35.94 290 IAmb IAmb 20 02 11.1
comp=Z,22nm,1.0s
HIA Hailar 35.94 290 P **P 20 02 10.0 -0.5**
HIA PcP **PcP 20 04 37.2 +0.8**
JCJ Chichijima 35.94 241 LR LR 20 14 30.7
comp=Z,153nm,21.3s,baz=20,slow=32
HILA High Level 36.92 53 P **P 20 02 18.5 -0.3**
HILA **PcP 20 04 39.4 +0.2**
YKA Yellowknife Ar 36.92 46 P **P 20 02 18.4 -0.3**
comp=Z,20nm,0.9s,baz=285,slow=8.5,SNR=151
YKA PcP **PcP 20 04 39.1 0.0**
comp=Z,6.1nm,0.8s,baz=299,slow=3.3,SNR=7.5
YKA ScP **ScP 20 08 22.6 +0.6**
comp=Z,2.5nm,0.9s,baz=286,slow=3.4,SNR=9.2
YKA LR LR 20 18 12.5
comp=Z,1μm,20.0s,baz=297,slow=37
comp=Z,20nm,0.9s
KSRS Korea Array 37.17 268 P **P 20 02 22.8 +1.7**
comp=Z,5.1nm,0.8s,baz=53,slow=8.2,SNR=19
KSRS PcP **PcP 20 04 41.5 +1.2**
comp=Z,1.8nm,0.7s,baz=75,slow=2.6,SNR=5.1
comp=Z,5.1nm,0.8s
KSAR Wonju Array Be 37.21 268 P **P 20 02 21.2 -0.2**
KSAR Wonju Array Be 37.21 268 P **P 20 02 21.2 -0.2**
NLWA Neilton Lookou 37.60 72 P **P 20 02 24.5 -0.2**
GNW Green Mountain 38.14 72 P **P 20 02 28.9 -0.2**
E03A Lebam 38.20 73 P **P 20 02 28.7 -0.9**
E03A IAmb IAmb 20 02 31.6
comp=Z,30nm,1.0s
TJN Taejon 38.20 267*ce*P **P 20 02 29.8 0.0**
CIT Chita 38.30 297 *e*P **P 20 02 30.7 +0.2**
CIT *e* 20 02 46.3
CIT pmax pmax
comp=Z,114nm,1.1s
BRLDA Berland Lookou 38.33 60 P **P 20 02 30.2 -0.7**
BRLDA IAmb IAmb 20 02 31.3
comp=Z,36nm,1.1s
BRLDA **PcP 20 04 44.3 +0.5**
D05A Enumclaw 38.82 72 P **P 20 02 34.5 -0.4**
D05A IAmb IAmb 20 02 38.8
comp=Z,36nm,1.1s
F04A Amboy 39.19 74 P **P 20 02 37.4 -0.6**
HOOD Mount Hood Mea 39.97 74 P **P 20 02 43.3 -1.4**
I04A Tendick Farm, 40.32 76 P **P 20 02 47.0 -0.6**
L02F Cave Junction 40.54 79 IAmb IAmb 20 02 55.7
comp=Z,53nm,1.7s
RES Resolute Bay 40.64 24 P **P 20 02 49.1 -0.6**
RES Resolute Bay 40.64 24 P **P 20 02 49.1 -0.6**
RES pmax pmax
comp=Z,30nm,1.1s
RES Resolute Bay 40.64 24 LR LR 20 21 28.6
comp=Z,316nm,20.6s,baz=336,slow=39
KRMB Red Mountain 40.67 80 IAmb IAmb 20 02 53.9
comp=Z,68nm,1.6s
I05D Terrebonne, OR 40.68 75 P **P 20 02 50.6 +0.2**
I05D IAmb IAmb 20 02 57.3
comp=Z,60nm,1.8s
D08A Wollman Farm, 40.70 70 P **P 20 02 49.1 -1.4**
XLT XiLinHaoTe 40.78 284 *e*P **P 20 02 52.3 +0.9**

XLT pP pwP 20 03 05.4 -1.5
XLT sP sP 20 03 12.5 +5.0
XLT PP **PnPn 20 04 31.6 +1.5**
XLT PcP **PcP 20 04 52.9 +1.2**
XLT S **S 20 08 55.6 -3.3**
XLT pmax pmax
comp=Z,36nm,0.9s
XLT pmax pmax
comp=Z,130nm,5.1s
XLT LR LR
comp=Z,32nm,15.3s
XLT LR LR
comp=Z,250nm,11.9s
XLT LR LR
comp=Z,220nm,16.2s
EDM Edmonton 40.88 59 P **P 20 02 51.0 -1.1**
EDM IAmb IAmb 20 03 10.1
comp=Z,29nm,0.7s
EDM Edmonton 40.88 59 P **P 20 02 51.0 -1.1**
EDM pmax pmax
comp=Z,29nm,0.7s
NEW Newport 41.13 68 P **P 20 02 52.8 -1.3**
NEW Newport 41.13 68 P **P 20 02 52.4 -1.8**
baz=300,SNR=13
NEW Newport 41.13 68 P **P 20 02 52.8 -1.3**
NEW pmax pmax
comp=Z,13nm,0.8s
NEW Newport 41.13 68 LR LR 20 17 39.3
comp=Z,180nm,21.5s,baz=294,slow=33
KHMM Horse Mountain 41.16 81 P **P 20 02 55.1 +0.6**
KHMM IAmb IAmb 20 03 07.8
comp=Z,29nm,0.8s
KMPM Mount Pierce 41.18 82 IAmb IAmb 20 03 09.8
comp=Z,42nm,0.8s
PINE Pine Mountain 41.22 76 P **P 20 02 54.9 -0.1**
YBH Yreka Blue Hor 41.29 79 P **P 20 02 55.8 +0.2**
YBH Yreka Blue Hor 41.29 79 P **P 20 02 55.8 +0.2**
YBH pmax pmax
comp=Z,22nm,1.0s
YBH Yreka Blue Hor 41.29 79 LR LR 20 19 36.8
comp=Z,185nm,18.6s,baz=306,slow=36
K04D Chiloquin, OR 41.37 78 IAmb IAmb 20 03 26.2
comp=Z,38nm,0.7s
KMRM Mail Ridge 41.55 82 P **P 20 02 58.6 +0.9**
KMRM IAmb IAmb 20 03 12.8
comp=Z,35nm,0.9s
KCPM Cahto Peak 41.95 82 IAmb IAmb 20 03 03.8
comp=Z,112nm,1.5s
F10A Beach Ranch, E 42.26 71 P **P 20 03 01.8 -1.6**
HOPS Hopland Field 42.68 83 P **P 20 03 07.4 +0.6**
HOPS IAmb IAmb 20 03 09.9
comp=Z,70nm,1.1s
ALE Alert 42.92 10 P **P 20 03 08.6 +0.4**
ALE PcP **PcP 20 04 58.6 +0.6**
BJI Beijing 42.93 279 P **P 20 03 09.9 +1.1**
BJI pP **pP 20 03 21.0 +0.8**
BJI sP **sP 20 03 25.2 +0.1**
BJI PP **PP 20 04 51.7 +2.9**
BJI S **S 20 09 33.2 +2.8**
BJI ScS **ScS 20 13 05.8 +0.6**
BJI pmax pmax
comp=Z,6.0nm,0.9s
BJI LR LR
comp=Z,120nm,17.8s
BJI LR LR
comp=Z,68nm,16.7s
BJI LR LR
comp=Z,140nm,23.0s
BJT Baijiatuau 42.95 279 P **P 20 03 10.1 +1.2**
BJT PcP **PcP 20 04 59.5 +0.8**
GDXM Geysers 42.96 83 P **P 20 03 10.2 +1.0**
GDXM IAmb IAmb 20 03 12.8
comp=Z,59nm,1.2s
NRIK Noril'sk 43.03 329 P **P 20 03 08.3 -1.0**
NRIK Noril'sk 43.03 329 P **P 20 03 08.3 -1.0**
NRIK pmax pmax
comp=Z,19nm,1.0s
NRIK Noril'sk 43.03 329 P **P 20 03 09.1 -0.2**
comp=Z,18nm,1.0s,baz=77,slow=10.0,SNR=20
NRIK PcP **PcP 20 04 59.2 +0.7**
comp=Z,9.5nm,0.9s,baz=83,slow=2.8,SNR=5.0
NRIK LR LR 20 22 18.8
comp=Z,293nm,18.0s,baz=73,slow=38
comp=Z,18nm,1.0s
IRK Irkutsk 43.28 301 *e*P **P 20 03 10.8 -0.7**
IRK pmax pmax
comp=Z,40nm,1.4s
ORV Oroville 43.31 81 P **P 20 03 11.6 -0.3**
ORV Oroville 43.31 81 P **P 20 03 11.6 -0.3**
ORV pmax pmax
comp=Z,16nm,0.9s
PLID Pearl Lake 43.46 71 P **P 20 03 12.2 -1.2**
ULN Ulaanbaatar 43.98 294 P **P 20 03 17.4 +0.1**
ULN IAmb IAmb 20 03 19.1
comp=Z,26nm,0.8s
ULN Ulaanbaatar 43.98 294*ce*P **P 20 03 17.4 +0.1**
ULN pmax pmax
comp=Z,36nm,1.0s
ULN Ulaanbaatar 43.98 294 P **P 20 03 18.1 +0.8**
ULN PcP **PcP 20 05 02.8 +0.4**
AFDM Forest Hills D 44.01 81 P **P 20 03 17.7 +0.2**
JOW Kunigami 44.20 255 LR LR 20 18 55.6
comp=Z,115nm,20.1s,baz=81,slow=32
SONM Songino Array 44.37 294 P **P 20 03 20.7 +0.3**
SONM IAmb IAmb 20 03 22.4
comp=Z,25nm,0.9s
SONM PcP **PcP 20 05 03.0 -0.7**
SONM Songino Array 44.37 294 P **P 20 03 20.9 +0.4**
comp=Z,19nm,0.8s,baz=58,slow=8.8,SNR=120
SONM PcP **PP 20 05 04.2 0.0**
comp=Z,3.7nm,0.7s,baz=56,slow=2.9,SNR=4.6
SONM ScP **ScP 20 08 52.7 +0.9**
comp=Z,3.7nm,1.1s,baz=77,slow=2.0,SNR=8.1
SONM S **S 20 09 52.6 +1.1**
comp=Z,0.7nm,1.0s,baz=134,slow=10,SNR=2.2
SONM LR LR 20 22 26.0
comp=Z,145nm,18.8s,baz=30,slow=37
comp=Z,19nm,0.8s
MPK Martis Peak 44.38 80 P **P 20 03 20.3 -0.5**
MPK IAmb IAmb 20 03 37.8
comp=Z,59nm,1.2s
PAHR Pah Rah Range 44.53 80 IAmb IAmb 20 03 39.1
comp=Z,22nm,0.9s
LYMT Lyon Mountain 44.60 67 P **P 20 03 20.5 -1.9**
TIA Tai'an 44.70 274 P **P 20 03 24.4 +1.3**
TIA pmax pmax
comp=Z,21nm,0.9s
ZAK Zakamensk 44.76 299 *e*P **P 20 03 22.8 -0.7**
ZAK *e* 20 05 05.4
ZAK pmax pmax
comp=Z,30nm,1.3s
ZAK pmax pmax
comp=Z,9.0nm,1.1s
PNTR Pine Nut 44.77 80 IAmb IAmb 20 03 42.4
comp=Z,53nm,0.9s
CMB Columbia Colle 44.93 82 P **P 20 03 25.1 +0.2**
CMB IAmb IAmb 20 03 40.5
comp=Z,21nm,0.9s
CMB Columbia Colle 44.93 82 P **P 20 03 25.1 +0.2**
CMB pmax pmax
comp=Z,21nm,0.9s
YERR Yerington 45.05 80 IAmb IAmb 20 03 41.5
comp=Z,21nm,1.0s
HLID Hailey 45.26 72 P **P 20 03 26.3 -1.4**
HLID Hailey 45.26 72 P **P 20 03 26.6 -1.0**
baz=305,SNR=19
HHC Hu-ho-hao-te 45.27 283 ⇑P **P 20 03 29.1 +1.4**
HHC sP sP 20 03 46.3 +2.0
HHC S **S 20 10 07.1 +2.4**
HHC SS **ScS 20 13 17.5 -2.8**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC LR LR
comp=Z,220nm,14.9s
HHC LR LR
comp=Z,300nm,15.3s
HHC LR LR
comp=Z,200nm,16.3s
MOY Mondy 45.32 302 *e*P **P 20 03 27.5 -0.4**
MOY pmax pmax
comp=Z,36nm,1.4s
BBGB Big Mountain B 45.44 84 P **P 20 03 29.6 +0.6**
HNS HongShan 45.45 277 ⇑P **P 20 03 30.7 +1.7**
HNS S **S 20 10 12.5 +5.4**
HNS pmax pmax

comp=Z,28nm,1.0s
HNS LR LR
comp=Z,220nm,16.2s
HNS LR LR
comp=Z,170nm,15.2s
HNS LR LR
comp=Z,240nm,18.6s
EGMT Eagleton 45.46 64 IAmb IAmb 20 05 09.5
comp=Z,36nm,1.4s
EGMT Eagleton 45.46 64 P **P** **20 03 27.7 -1.4**
baz=303
TULEG Thule 45.61 17 P **P** **20 03 28.5 -1.3**
TULEG IAmb IAmb 20 03 46.0
comp=Z,28nm,1.1s
RYN Ryan 45.71 80 P **P** **20 03 31.1 -0.2**
BOZ Bozeman (W) 45.74 68 P **P** **20 03 29.9 -1.5**
baz=304,SNR=23
PMPB Monarch Peak 45.82 84 P **P** **20 03 31.8 -0.2**
PMPB IAmb IAmb 20 03 39.8
comp=Z,35nm,1.0s
LHV Little Huntoon 45.96 81 P **P** **20 03 33.9 +1.0**
LHV IAmb IAmb 20 03 36.4
comp=Z,48nm,1.3s
NVAR Mina Array Bea 45.97 80 P **P** **20 03 33.8 +0.4**
comp=Z,3.2nm,0.6s,baz=295,slow=7.4,SNR=30
NVAR ScP **ScP** **20 09 00.8 +2.2**
comp=Z,0.2nm,0.3s,baz=292,slow=4.8,SNR=2.4
NVAR LR LR 20 20 30.1
comp=Z,115nm,21.3s,baz=289,slow=33
comp=Z,3.2nm,0.6s
MDPB Devils Postpil 45.99 82 IAmb IAmb 20 03 45.3
comp=Z,30nm,0.9s
FFC Flin Flon 46.05 53 P **P** **20 03 31.9 -1.6**
FFC **PcP** **20 05 08.7 -0.5**
FFC IAmb IAmb 20 05 10.9
comp=Z,24nm,1.0s
FFC Flin Flon 46.05 53 P **P** **20 03 31.9 -1.6**
FFC pmax pmax
comp=Z,24nm,1.0s
MLAC Mammoth, Mammo 46.14 81 P **P** **20 03 32.4 -2.4**
baz=309
NJ2 Nanjing 46.34 269 *e*P **P** **20 03 37.3 +1.2**
NJ2 sP **sP** **20 03 53.5 +1.6**
NJ2 pmax pmax
comp=Z,18nm,0.7s
NJ2 pmax pmax
comp=Z,220nm,4.7s
BTO Baotou 46.35 284 *e*P **P** **20 03 36.4 +0.2**
BTO pP **pP** **20 03 48.9 +1.0**
BTO sP **sP** **20 03 54.1 +1.3**
BTO PP **PP** **20 05 25.3 -0.1**
BTO S **S** **20 10 21.5 +1.2**
BTO sS **sS** **20 10 40.0 0.0**
BTO SS **SS** **20 13 36.9 -8.9**
BTO pmax pmax
comp=Z,110nm,0.9s
BTO pmax pmax
comp=Z,470nm,5.4s
BTO LR LR
comp=Z,570nm,20.5s
BTO LR LR
comp=Z,590nm,15.9s
BTO LR LR
comp=Z,610nm,15.0s
YHL Hebgen Lake 46.42 69 IAmb IAmb 20 03 52.2
comp=Z,21nm,0.9s
ELK Elko 46.43 76 LR LR 20 22 41.8
comp=Z,162nm,18.2s,baz=296,slow=36
TIY Taiyuan 46.66 279 *e*P **P** **20 03 40.8 +2.2**
TIY pP **pwP** **20 03 53.5 +0.1**
TIY S **S** **20 10 26.3 +1.7**
TIY sS **sS** **20 10 41.6 -2.8**
TIY SS **SS** **20 13 45.2 -5.6**
TIY pmax pmax
comp=Z,11nm,0.7s
TIY pmax pmax
comp=Z,120nm,5.4s
TIY LR LR
comp=Z,170nm,14.4s
TIY LR LR
comp=Z,150nm,13.1s
TIY LR LR
comp=Z,210nm,15.8s
YNR Norris Junctio 46.80 69 P **P** **20 03 38.5 -1.3**
YNR IAmb IAmb 20 03 55.6
comp=Z,21nm,1.1s
DSP Deep Springs 46.84 81 IAmb IAmb 20 03 43.1
comp=Z,26nm,1.1s
YFT Old Faithful 46.86 69 P **P** **20 03 39.7 -0.6**
YFT IAmb IAmb 20 03 57.4
comp=Z,13nm,0.8s
YFT PcP **PcP** **20 05 14.7 +2.1**
TPH Tonopah 46.86 80 P **P** **20 03 39.9 -0.4**
TPH Tonopah 46.86 80 P **P** **20 03 39.9 -0.4**
TPH pmax pmax
comp=Z,92nm,1.0s
TIN Tinemaha, Big 46.88 82 P **P** **20 03 40.9 +0.5**
baz=309,SNR=8.8
SMMC Simmler 46.90 85 P **P** **20 03 41.0 +0.5**
baz=310
H17A Grant Village 47.04 69 IAmb IAmb 20 03 43.8
comp=Z,19nm,1.1s
H17A Grant Village 47.04 69 P **P** **20 03 41.7 0.0**
baz=306,SNR=10
LKWY Lake 47.04 69 IAmb IAmb 20 05 18.8
comp=Z,16nm,0.9s
YMP Mirror Lake Pl 47.08 68 P **P** **20 03 40.0 -2.1**
YMP **PcP** **20 05 13.8 +0.4**
YMP IAmb IAmb 20 05 16.7
comp=Z,19nm,0.9s
VES Vestal, Richgr 47.12 84 P **P** **20 03 42.2 0.0**
baz=310,SNR=8.4
PKM Mcpherson Peak 47.29 85 P **P** **20 03 44.6 +0.9**
baz=311,SNR=7.8
HVU Hansel Valley 47.29 73 IAmb IAmb 20 04 00.2
comp=Z,14nm,0.8s
CWC Cottonwood Cre 47.36 82 P **P** **20 03 44.7 +0.5**
baz=310
RLMT Red Lodge 47.38 67 P **P** **20 03 43.0 -1.3**
RLMT IAmb IAmb 20 03 59.2
comp=Z,27nm,1.2s
RLMT Red Lodge 47.38 67 P **P** **20 03 43.5 -0.8**
baz=306,SNR=14
GRAC Grapevine Rang 47.45 81 IAmb IAmb 20 03 53.5
comp=Z,74nm,1.6s
GRAC Grapevine Rang 47.45 81 P **P** **20 03 44.6 -0.1**
baz=310
BCW Bitter Crk WRg 47.50 85 P **P** **20 03 46.3 +1.0**
ISA Isabella, Lake 47.62 83 IAmb IAmb 20 03 56.2
comp=Z,15nm,1.0s
ISA Isabella, Lake 47.62 83 P **P** **20 03 45.7 -0.4**
baz=310,SNR=9.2
FCC Fort Churchill 47.63 45 IAmb IAmb 20 03 46.4
comp=Z,20nm,1.0s
R11B Troy Canyon, C 47.69 78 P **P** **20 03 46.8 0.0**
baz=309,SNR=27
Q12A Willow Creek R 47.72 77 P **P** **20 03 46.3 -0.7**
Q12A IAmb IAmb 20 04 28.2
comp=Z,28nm,1.1s
ARVC Arvin 47.74 84 P **P** **20 03 46.7 -0.2**
baz=311
NEEM North Greenlan 47.87 13 *i* P **P** **20 03 47.1 -0.7**
NEEM IAmb IAmb 20 03 49.3
comp=Z,105nm,0.9s
MPMC Manual Prospec 47.97 82 P **P** **20 03 49.3 +0.3**
baz=310,SNR=24
S11A Rachel 48.03 79 IAmb IAmb 20 04 06.7
comp=Z,34nm,1.0s
FURC Furnace Creek, 48.10 81 P **P** **20 03 50.0 +0.3**
baz=310,SNR=12
OSI Osito Audit: C 48.14 85 P **P** **20 03 50.3 +0.1**
baz=311
TPNV Topopah Spring 48.17 80 P **P** **20 03 50.4 -0.1**
TPNV Topopah Spring 48.17 80 P **P** **20 03 50.9 +0.4**
baz=310
TPNV Topopah Spring 48.17 80 P **P** **20 03 50.4 -0.1**
TPNV pmax pmax
comp=Z,52nm,0.9s
LRMC Laurel Mtn Rad 48.23 83 P **P** **20 03 50.7 -0.2**
baz=310,SNR=6.2
DUG Dugway, Tooele 48.23 75 IAmb IAmb 20 03 53.5
comp=Z,22nm,0.9s
DUG Dugway, Tooele 48.23 75 P **P** **20 03 50.7 -0.1**
baz=308,SNR=28
DGMT Dagmar 48.30 61 P **P** **20 03 50.4 -0.8**
baz=305
GWY Greenwater Val 48.40 81 IAmb IAmb 20 03 54.5
comp=Z,23nm,0.9s
QSM Queen of Sheba 48.42 82 IAmb IAmb 20 03 55.5
comp=Z,21nm,1.0s
EDW2 Edwards Air Fo 48.42 84 P **P** **20 03 52.5 +0.2**
baz=311,SNR=9.5
BW06 Boulder Array 48.60 70 P **P** **20 03 52.8 -1.0**
baz=307,SNR=6.4
PD31 Pinedale Array 48.60 70 P **P** **20 03 52.5 -1.4**
PDAR Pinedale Array 48.60 70 P **P** **20 03 53.0 -0.8**
comp=Z,5.7nm,0.8s,baz=307,slow=5.2,SNR=36
PDAR ScP **ScP** **20 09 10.5 +0.8**
comp=Z,2.1nm,0.9s,baz=318,slow=3.6,SNR=6.4
PDAR LR LR 20 22 44.7
comp=Z,126nm,20.1s,baz=316,slow=34
comp=Z,5.7nm,0.8s
PRN Pahroc Range 48.61 79 IAmb IAmb 20 04 35.2
comp=Z,24nm,1.0s
DECC Green Verdugo 48.62 85 P **P** **20 03 54.2 +0.4**
baz=311
LYN LuoYang 48.67 276 ⇑P **P** **20 03 55.1 +1.0**
LYN S **S** **20 10 55.8 +2.8**
LYN pmax pmax
comp=Z,50nm,0.8s
LYN pmax pmax
comp=Z,230nm,3.6s
LYN LR LR
comp=Z,300nm,16.1s
LYN LR LR
comp=Z,190nm,15.2s
LYN LR LR
comp=Z,280nm,14.6s
PASC Pasadena Art C 48.77 85 P **P** **20 03 54.6 -0.3**
PASC IAmb IAmb 20 03 56.6
comp=Z,21nm,0.8s
SHOC Shoshone, Teco 48.83 81 P **P** **20 03 55.8 +0.4**
baz=310,SNR=11
GSC Goose, Bar 48.89 82 P **P** **20 03 56.5 +0.6**
baz=311,SNR=25
RRX Edison Barstow 49.05 83 P **P** **20 03 56.9 -0.2**
baz=311
BFSC Mount Baldy Ra 49.05 84 P **P** **20 03 57.7 +0.5**
baz=311,SNR=13
SCI2 San Clemente I 49.34 86 P **P** **20 03 59.1 -0.2**
baz=312
TUQ Turquoise Moun 49.34 82 P **P** **20 03 59.8 +0.3**
baz=311,SNR=5.3
HEC Hector,Ludlow 49.49 83 P **P** **20 04 01.1 +0.6**
baz=311
BBRC Big Bear Solar 49.50 84 P **P** **20 04 00.8 0.0**
baz=311
KBS Kingsbay 49.53 356 P **P** **20 04 00.9 +0.8**
KBS IAmb IAmb 20 05 23.7
comp=Z,43nm,1.1s
KBS Kingsbay 49.53 356 *e*P **P** **20 03 59.1 -1.1**
KBS IAmb IAmb 20 04 03.4
comp=Z,33nm,1.0s
KBS Kingsbay 49.53 356 P **P** **20 04 00.9 +0.8**
KBS pmax pmax
comp=Z,43nm,1.1s
KBS Kingsbay 49.53 356 *i* P **P** **20 04 00.1 0.0**
ELS Elsinore Mount 49.59 85 IAmb IAmb 20 04 02.9
comp=Z,30nm,1.0s
TMUT Trail Mountain 49.76 75 IAmb IAmb 20 04 05.3
comp=Z,20nm,0.9s
MURC Murrieta 49.77 84 P **P** **20 04 02.9 +0.3**
baz=312,SNR=8.2
V12A Nelson 49.82 81 P **P** **20 04 03.0 0.0**
GMRC Granite Mounta 49.93 82 P **P** **20 04 04.6 +0.7**
baz=311,SNR=28
RDMU Red Mountain 49.94 72 IAmb IAmb 20 04 21.4
comp=Z,30nm,0.9s
LCMT Little Creek M 49.97 78 IAmb IAmb 20 04 21.1
comp=Z,18nm,1.0s
Q16A Castle Valley 50.02 75 P **P** **20 04 04.1 -0.5**
SPA0 Spitsbergen Ar 50.05 355 *e*P **P** **20 04 03.4 -0.7**
SPA0 IAmb IAmb 20 04 04.6
comp=Z,24nm,0.7s
SPITS Spitsbergen Ar 50.05 355 P **P** **20 04 03.1 -1.1**
SPITS pmax pmax
comp=Z,33nm,0.8s
SPITS Spitsbergen Ar 50.05 355 P **P** **20 04 03.5 -0.7**
comp=Z,15nm,0.5s,baz=46,slow=8.3,SNR=87
comp=Z,15nm,0.5s
WHN Wuhan 50.19 271 ⇓P **P** **20 04 06.7 +1.0**
WHN pmax pmax
comp=Z,66nm,0.6s
PFO Pinyon Flats O 50.21 84 P **P** **20 04 05.8 -0.3**
PFO IAmb IAmb 20 04 07.7
comp=Z,19nm,1.1s
PFO Pinyon Flats O 50.21 84 P **P** **20 04 06.1 0.0**
baz=312,SNR=9.5
PFO Pinyon Flats O 50.21 84 *i* P **P** **20 04 06.5 +0.4**
PFO pmax pmax
comp=Z,33nm,1.1s
PFO Pinyon Flats O 50.21 84 LR LR 20 22 42.4
comp=Z,130nm,20.4s,baz=318,slow=33
PFO Pinyon Flats O 50.21 84 P **P** **20 04 06.3 +0.2**
PFO pP **pP** **20 04 15.9 -2.2**
TPFO Pinon Flats 50.22 84 P **P** **20 04 06.5 +0.4**
baz=312,SNR=9.8
KNB Kanab 50.23 78 IAmb IAmb 20 05 44.0
comp=Z,29nm,1.1s
PMD Palm Desert 50.24 84 IAmb IAmb 20 04 07.4
comp=Z,19nm,1.1s
BELC Belle Mtn. Jos 50.24 83 P **P** **20 04 06.4 +0.1**
baz=312,SNR=18
PKCU Pink Cliffs 50.27 77 IAmb IAmb 20 04 19.8
comp=Z,79nm,2.0s
SRU San Rafael Swe 50.29 74 IAmb IAmb 20 04 09.8
comp=Z,17nm,1.0s
109C Camp Elliot, M 50.30 85 P **P** **20 04 07.0 +0.5**
baz=312
K22A Casper 50.44 68 P **P** **20 04 07.3 -0.5**
baz=308
NEE2 Needles Airpor 50.59 81 P **P** **20 04 09.2 +0.4**
baz=311
UPNV Upernavik 50.64 18 *i* P **P** **20 04 07.4 -1.1**
UPNV IAmb IAmb 20 04 27.4
comp=Z,26nm,0.9s
IRM Iron Mountain 50.67 82 P **P** **20 04 10.0 +0.6**
baz=312,SNR=36
BAR Barrett 50.70 85 IAmb IAmb 20 04 11.4
comp=Z,48nm,1.0s
MONP2 Monument Peak 50.72 85 P **P** **20 04 10.6 +0.6**
baz=312,SNR=22
BC3 Big Chuckawall 50.81 83 P **P** **20 04 10.8 +0.2**
baz=312,SNR=14
TKX Tecate 50.82 85 P **P** **20 04 10.8 +0.3**
HMU Henry Mountain 50.90 76 IAmb IAmb 20 04 21.8
comp=Z,23nm,0.8s
U15A North Rim 50.93 78 IAmb IAmb 20 04 29.5
comp=Z,18nm,0.9s
RSSD Black Hills 50.97 65 P **P** **20 04 09.7 -2.1**
RSSD PcP **PcP** **20 05 26.9 -0.5**
RSSD Black Hills 50.97 65 P **P** **20 04 10.9 -0.9**
baz=308
RSSD Black Hills 50.97 65 P **P** **20 04 09.7 -2.1**
RSSD pmax pmax
comp=Z,14nm,1.0s
O20A White River Ci 51.00 72 IAmb IAmb 20 04 59.5
comp=Z,22nm,1.1s
O20A White River Ci 51.00 72 P **P** **20 04 11.8 -0.2**
baz=309
SWSC Sam W. Stewart 51.07 84 P **P** **20 04 12.2 -0.2**
baz=312
IKP In-Ko-Pah, Jac 51.08 85 P **P** **20 04 12.3 -0.2**
baz=312,SNR=17
RMX La Rumorosa 51.13 85 IAmb IAmb 20 04 15.2
comp=Z,19nm,1.0s
MDND Maddock 51.15 59 P **P** **20 04 11.9 -0.9**
MDND **PcP** **20 05 26.8 -0.9**
MDND IAmb IAmb 20 05 29.9
comp=Z,48nm,0.9s
MDND Maddock 51.15 59 P **P** **20 04 12.5 -0.3**
baz=307
PDMCI Parker Dam,Lak 51.19 82 P **P** **20 04 13.9 +0.6**
baz=312,SNR=21
YUH Yuha Desert 51.19 84 IAmb IAmb 20 04 14.8
comp=Z,18nm,0.9s
XAN Xi'an 51.21 278 ⇑P **P** **20 04 14.0 +0.6**
XAN pP pP 20 04 26.3 +1.0
XAN S **S** **20 11 28.1 -0.5**
XAN pmax pmax
comp=Z,21nm,0.8s
XAN LR LR
comp=Z,210nm,16.5s
XAN LR LR
comp=Z,370nm,15.6s
XAN LR LR
comp=Z,350nm,24.0s
XAN Xi'an 51.21 278 P **P** **20 04 13.9 +0.4**
BLYC Blythe 51.32 82 P **P** **20 04 14.5 +0.3**
BLYC IAmb IAmb 20 04 16.4
comp=Z,40nm,1.0s
TPUB Ta-pu 51.46 259 P **P** **20 04 14.2 -1.2**
ESJX Sierra Juarez 51.61 85 IAmb IAmb 20 04 18.5
comp=Z,22nm,1.0s
ULM Lac du Bonnet 51.65 55 P **P** **20 04 15.0 -1.5**
comp=Z,4.1nm,0.8s,baz=328,slow=6.8,SNR=8.4
ULM PcP **PcP** **20 05 29.6 +0.1**
comp=Z,8.7nm,0.9s,baz=314,slow=4.6,SNR=4.9
ULM LR LR 20 27 32.8
comp=Z,822nm,18.5s,baz=299,slow=38
comp=Z,4.1nm,0.8s
N23A Red Feather La 51.88 70 P **P** **20 04 18.0 -0.7**
baz=309
WUAZ Wupatki 52.09 78 IAmb IAmb 20 04 40.0
comp=Z,15nm,0.8s
WUAZ Wupatki 52.09 78 P **P** **20 04 20.2 0.0**
baz=311,SNR=9.3
ZAA0 Zalesovo Array 52.13 312 P **P** **20 04 18.9 -1.0**
ZALV Zalesovo Beam 52.13 312 P **P** **20 04 18.8 -1.2**
ZALV PcP **PcP** **20 05 31.5 +0.2**
ZALV Zalesovo Beam 52.13 312 P **P** **20 04 19.4 -0.6**
comp=Z,7.3nm,0.8s,baz=50,slow=7.6,SNR=28
ZALV PcP **PcP** **20 05 32.2 +1.0**
comp=Z,7.4nm,0.8s,baz=41,slow=3.4,SNR=6.1
ZALV ScP **ScP** **20 09 24.7 +0.4**
comp=Z,1.5nm,0.8s,baz=67,slow=3.7,SNR=4.1
ZALV LR LR 20 28 32.9
comp=Z,320nm,18.1s,baz=48,slow=38
comp=Z,7.3nm,0.8s
MVCO Mesa Verde 52.73 75 P **P** **20 04 25.0 0.0**
baz=311,SNR=7.6
ISCO Idaho Springs 52.77 71 P **P** **20 04 24.7 -0.6**
baz=310
X16A Lo Mia Camp, P 52.78 80 IAmb IAmb 20 04 28.1
comp=Z,17nm,0.9s
AGMN Agassiz Nation 52.86 57 P **P** **20 04 23.6 -1.8**
AGMN Agassiz Nation 52.86 57 P **P** **20 04 24.9 -0.5**
baz=308
SFX San Felipe 52.96 85 P **P** **20 04 26.5 +0.1**
LZH Lanzhou 52.97 283 ⇑*i*P **P** **20 04 28.0 +1.3**
LZH pP pP 20 04 40.8 +2.3
LZH sP sP 20 04 46.0 +2.6
LZH PcP **PcP** **20 05 36.9 +1.9**
LZH sS sS 20 12 13.8 +0.2
LZH pmax pmax
comp=Z,47nm,1.1s
LZH LR LR
comp=Z,350nm,16.5s
LZH LR LR
comp=Z,340nm,17.7s
LZH LR LR
comp=Z,420nm,18.9s
GTA Gaotai 53.21 289 ⇑P **P** **20 04 29.1 +0.7**
GTA pP pP 20 04 42.4 +2.3
GTA ScP **ScP** **20 09 30.8 +1.4**
GTA S **S** **20 11 56.2 +0.1**
GTA ScS **ScS** **20 14 13.4 -0.6**
GTA pmax pmax
comp=Z,26nm,1.0s
GTA LR LR
comp=Z,240nm,14.9s
GTA LR LR
comp=Z,290nm,15.3s
GTA LR LR
comp=Z,340nm,15.3s
W18A Petrified Fore 53.36 78 P **P** **20 04 29.2 -0.4**
baz=312
S22A 4UR Ranch, Cre 53.38 73 P **P** **20 04 29.6 -0.3**
S22A 4UR Ranch, Cre 53.38 73 P **P** **20 04 29.9 0.0**
baz=311,SNR=6.7
ENH Enshi 53.41 274 P **P** **20 04 29.7 -0.1**
ENH Enshi 53.41 274 P **P** **20 04 30.2 +0.4**
BJO1 Bjornoya 53.43 353 *e*P **P** **20 04 30.2 +0.9**
BJO1 IAmb IAmb 20 04 36.5
comp=Z,420nm,1.9s
PIX Pinacate 53.46 84 P **P** **20 04 29.4 -0.7**
DGZ Jazzator, Alta 53.49 306 *c i*P **P** **20 04 30.2 -0.1**
DGZ pmax pmax
comp=Z,41nm,0.9s
214A Organ Pipe Nat 53.59 83 IAmb IAmb 20 04 32.8
comp=Z,27nm,1.0s
214A Organ Pipe Nat 53.59 83 P **P** **20 04 31.2 +0.1**
baz=313,SNR=17
X18A Snowflake 53.62 78 IAmb IAmb 20 04 33.6
comp=Z,16nm,0.9s
SUMG Summit 53.74 13 P **P** **20 04 31.3 -0.8**
SUMG IAmb IAmb 20 04 33.1
comp=Z,41nm,0.9s
SUMG Summit 53.74 13 P **P** **20 04 31.3 -0.8**
SUMG pmax pmax
comp=Z,41nm,0.9s
SUMG Summit 53.74 13 *i* P **P** **20 04 31.0 -1.1**
SUMG IAmb IAmb 20 04 33.4
comp=Z,21nm,0.8s
SDCO Great Sand Dun 54.18 72 P **P** **20 04 35.2 -0.4**
SDCO Great Sand Dun 54.18 72 P **P** **20 04 35.2 -0.4**
baz=311,SNR=13
FRB Frobisher Bay 54.18 30 LR LR 20 29 11.7
comp=Z,958nm,21.1s,baz=330,slow=38
ILULI Ilulissat 54.48 19 P **P** **20 04 35.6 -1.4**
ILULI IAmb IAmb 20 04 54.5
comp=Z,58nm,1.3s
ILULI Ilulissat 54.48 19 P **P** **20 04 35.6 -1.4**
ILULI pmax pmax
comp=Z,58nm,1.3s
ILULI Ilulissat 54.48 19 *i* P **P** **20 04 35.0 -2.0**
ILULI IAmb IAmb 20 04 53.7
comp=Z,13nm,0.7s
TUC Tucson 54.61 81 P **P** **20 04 39.0 +0.4**
TUC IAmb IAmb 20 04 40.4
comp=Z,26nm,1.0s
TUC Tucson 54.61 81 P **P** **20 04 38.7 +0.2**
baz=313
TUC Tucson 54.61 81 P **P** **20 04 39.0 +0.4**
TUC pmax pmax
comp=Z,26nm,1.0s
TUC Tucson 54.61 81 P **P** **20 04 39.2 +0.6**
TUC pP **pP** **20 04 48.9 -1.7**
T25A Trinidad 55.23 72 IAmb IAmb 20 04 58.5
comp=Z,28nm,1.1s
T25A Trinidad 55.23 72 P **P** **20 04 42.6 -0.6**
baz=312
EYMN Ely 55.34 55 IAmb IAmb 20 04 58.9
comp=Z,18nm,1.0s
EYMN Ely 55.34 55 P **P** **20 04 42.5 -1.1**
baz=311,SNR=9.2
ANMO Albuquerque 55.47 76 P **P** **20 04 44.4 -0.5**
ANMO PcP **PcP** **20 05 43.8 -0.8**
ANMO Albuquerque 55.47 76 P **P** **20 04 44.1 -0.8**
baz=312
ANMO Albuquerque 55.47 76 P **P** **20 04 44.4 -0.5**
ANMO 20 05 43.8
ANMO pmax pmax
comp=Z,6.0nm,0.8s
ANMO Albuquerque 55.47 76 LR LR 20 25 54.0
comp=Z,164nm,21.5s,baz=49,slow=33
DUN6 Lazy B Ranch 55.48 80 IAmb IAmb 20 04 57.9
comp=Z,26nm,0.9s
319A Douglas 56.18 81 P **P** **20 04 50.2 +0.2**
319A IAmb IAmb 20 04 52.4
comp=Z,39nm,1.0s
E38A The Farm, Brul 56.19 56 IAmb IAmb 20 05 00.6
comp=Z,16nm,0.8s
ZSN Zaisan 56.25 305 *e*P **P** **20 04 50.2 +0.1**
comp=Z,6.2nm,0.5s,baz=305
ZSN Zaisan 56.25 305 *e*P **P** **20 04 50.2 +0.1**
ZSN pmax pmax
comp=Z,6.0nm,0.5s
121A Cookes Peak, D 56.30 79 P **P** **20 04 50.7 -0.2**
baz=314,SNR=7.7
SFJD Kangerlussuaq 56.42 20 P **P** **20 04 49.7 -1.3**
SFJD IAmb IAmb 20 05 35.8
comp=Z,60nm,1.7s
SFJD Kangerlussuaq 56.42 20 P **P** **20 04 49.7 -1.3**
SFJD pmax pmax
comp=Z,60nm,1.7s
SFJD Kangerlussuaq 56.42 20 *i* P **P** **20 04 49.3 -1.6**
SFJD IAmb IAmb 20 05 15.1
comp=Z,5.9nm,0.8s
SPMN Marine on St. 56.44 58 P **P** **20 04 51.1 -0.4**

baz=311
CD2 Chengdu 56.53 279 P P 20 04 52.9 +0.6
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 LR LR
comp=Z,120nm,13.6s
SEM Semipalatinsk 56.56 310 *e*P **P 20 04 51.7 -0.9**
comp=Z,13nm,0.7s,baz=310
SEM Semipalatinsk 56.56 310 *e*P **P 20 04 51.6 -0.9**
SEM pmax pmax
comp=Z,13nm,0.7s
ICESG Greenland Ices 56.69 15 *i* P **P 20 04 52.0 -1.3**
ICESG IAmb IAmb 20 05 10.9
comp=Z,20nm,0.9s
HSIG 56.78 84 IAmb IAmb 20 04 55.7
comp=Z,30nm,1.0s
CBKS Cedar Bluff 56.85 68 P **P 20 04 53.5 -1.1**
CBKS PcP **PcP 20 05 49.6 -0.1**
CBKS IAmb IAmb 20 05 51.0
comp=Z,30nm,0.9s
CBKS Cedar Bluff 56.85 68 P **P 20 04 54.9 +0.3**
baz=312
CBKS Cedar Bluff 56.85 68 P **P 20 04 53.5 -1.1**
CBKS 20 05 49.6
CBKS pmax pmax
comp=Z,30nm,0.9s
I37A Lemond, Waseca 56.93 59 P **P 20 04 53.5 -1.4**
I37A IAmb IAmb 20 04 59.5
comp=Z,27nm,1.1s
KEV Kevo 57.12 348 P **P 20 04 55.4 -0.5**
KEV Kevo 57.12 348 P **P 20 04 55.4 -0.5**
KEV pmax pmax
comp=Z,156nm,2.0s
KURK Kurchatov 57.12 312 P **P 20 04 55.9 -0.3**
KURK Kurchatov 57.12 312 *ce*P **P 20 04 56.2 0.0**
KURK pmax pmax
comp=Z,187nm,1.3s
KURK Kurchatov 57.12 312 P **P 20 04 56.2 0.0**
KURK sP **pP 20 05 10.8 +2.4**
WMQ Urumqi 57.18 301 *e*P **P 20 04 57.2 +0.4**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,170nm,3.6s
WMQ LR LR
comp=Z,580nm,15.5s
WMQ LR LR
comp=Z,590nm,14.1s
WMQ LR LR
comp=Z,390nm,18.1s
KURBB Kurchatov Arra 57.23 312 P **P 20 04 56.8 -0.1**
comp=Z,77nm,1.0s,baz=43,slow=6.8,SNR=230
KURBB ScP **ScP 20 09 47.5 +0.9**
comp=Z,0.6nm,0.2s,baz=47,slow=4.3,SNR=2.0
KURBB S **S 20 12 47.9 -1.2**
comp=Z,0.8nm,0.3s,baz=51,slow=12,SNR=4.9
KURBB LR LR 20 31 17.4
comp=Z,387nm,18.1s,baz=204,slow=38
comp=Z,77nm,1.0s
D41A Chassel 57.41 54 IAmb IAmb 20 05 14.9
comp=Z,19nm,0.9s
ARA0 ARCESS Array S 57.51 349 *e*P **P 20 04 58.5 -0.2**
ARA0 IAmb IAmb 20 05 00.2
comp=Z,84nm,1.4s
ARCES ARCESS Array B 57.51 349 P **P 20 04 58.0 -0.7**
ARCES ARCESS Array B 57.51 349 P **P 20 04 58.0 -0.7**
ARCES pmax pmax
comp=Z,165nm,2.0s
ARCES ARCESS Array B 57.51 349 P **P 20 04 58.2 -0.5**
comp=Z,14nm,1.0s,baz=27,slow=8.0,SNR=10
ARCES LR LR 20 29 50.6
comp=Z,438nm,21.8s,baz=20,slow=36
comp=Z,14nm,1.0s
SCO Scoresbysund 57.53 8 *i* P **P 20 04 57.7 -1.0**
SCO IAmb IAmb 20 05 00.8
comp=Z,13nm,0.8s
LVZ Lovozero 57.68 344 P **P 20 04 58.8 -1.1**
LVZ Lovozero 57.68 344 *ce*P **P 20 04 59.2 -0.7**
LVZ pmax pmax
comp=Z,72nm,1.0s
LVZ Lovozero 57.68 344 P **P 20 04 59.2 -0.7**
JMIC Jan Mayen 57.74 2 LR LR 20 30 54.3
comp=Z,149nm,18.1s,baz=321,slow=37
DY2G Dye2 57.79 19 *i* P **P 20 04 59.1 -1.9**
DY2G IAmb IAmb 20 05 19.6
comp=Z,7.5nm,0.6s
GYA Guiyang 57.85 273 ⇓P **P 20 05 02.9 +1.1**
GYA pmax pmax
comp=Z,14nm,1.2s
MK31 Makanchi Array 57.99 306 IAmb IAmb 20 05 03.0
comp=Z,22nm,1.0s
MKAR Makanchi Array 58.00 306 P **P 20 05 01.7 -0.7**
comp=Z,18nm,0.8s,baz=52,slow=7.4,SNR=172
MKAR PcP **PcP 20 05 55.4 +1.3**
comp=Z,6.6nm,0.9s,baz=56,slow=7.8,SNR=4.2
MKAR S **S 20 12 57.8 -1.6**
comp=Z,0.2nm,0.7s,baz=43,slow=2.2,SNR=3.0
MKAR LR LR 20 30 48.5
comp=Z,420nm,20.8s,baz=34,slow=37
comp=Z,18nm,0.8s
JETT Jettan, Norway 58.07 351 *e*P **P 20 05 02.3 -0.3**
JETT IAmb IAmb 20 05 03.2
comp=Z,35nm,1.0s
MAKZ Makanchi 58.14 306 P **P 20 05 03.0 -0.5**
MAKZ IAmb IAmb 20 05 04.0
comp=Z,28nm,0.8s
MAKZ Makanchi 58.14 306 P **P 20 05 03.0 -0.5**
MAKZ pmax pmax
comp=Z,28nm,0.9s
MAKZ Makanchi 58.14 306 P **P 20 05 02.7 -0.8**
MAKZ pP **pP 20 05 13.3 -2.5**
MAKZ sP **sP 20 05 17.1 -3.7**
GOMU GeErMu 58.30 290 P **P 20 05 05.4 +0.2**
GOMU PP **PP 20 07 13.7 -0.5**
GOMU S **S 20 13 00.8 -3.6**
GOMU pmax pmax
comp=Z,25nm,0.8s
GOMU LR LR
comp=Z,230nm,15.8s
GOMU LR LR
comp=Z,170nm,16.2s
GOMU LR LR
comp=Z,450nm,16.3s
TGY Tagaytay City 58.31 252 LR LR 20 29 26.0
comp=Z,70nm,20.0s,baz=18,slow=35
MNTX Cornudas Mount 58.35 78 P **P 20 05 05.1 0.0**
baz=314,SNR=34
MSTX Muleshoe 58.36 74 IAmb IAmb 20 05 35.0
comp=Z,62nm,1.9s
MSTX Muleshoe 58.36 74 P **P 20 05 05.3 0.0**
baz=314
AMTX Amarillo 58.38 72 IAmb IAmb 20 05 58.0
comp=Z,13nm,0.8s
AMTX Amarillo 58.38 72 P **P 20 05 05.6 +0.2**
baz=314
SCIA State Center 58.45 61 P **P 20 05 05.6 -0.1**
baz=313
E43A Lone Tree Farm 58.67 54 P **P 20 05 06.0 -1.2**
E43A IAmb IAmb 20 05 10.3
comp=Z,21nm,0.8s
SMWD Samnorwood 59.08 71 IAmb IAmb 20 05 25.2
comp=Z,14nm,1.0s
BVAR Borovoye Array 59.17 318 P **P 20 05 10.6 +0.1**
comp=Z,63nm,0.7s,baz=50,slow=7.5,SNR=256
BVAR S **S 20 13 15.1 +0.7**
comp=Z,0.6nm,0.5s,baz=227,slow=42,SNR=1.7
BVAR LR LR 20 32 10.0
comp=Z,396nm,19.9s,baz=45,slow=38
comp=Z,63nm,0.7s
BRVK Borovoye 59.19 318 P **P 20 05 10.5 -0.1**
BRVK Borovoye 59.19 318 *ce*P **P 20 05 10.7 +0.1**
BRVK pmax pmax
comp=Z,82nm,1.0s
BRVK Borovoye 59.19 318 P **P 20 05 10.7 +0.1**
VHRN Van Horn 59.23 78 P **P 20 05 11.4 +0.1**
VHRN IAmb IAmb 20 05 33.9
comp=Z,15nm,0.8s
JFWS Jewell Farm 59.36 59 P **P 20 05 10.6 -1.4**
baz=314
I42A Draeger Farm, 59.39 57 IAmb IAmb 20 05 15.2
comp=Z,25nm,0.9s
L40A Anamosa 59.42 60 IAmb IAmb 20 06 27.3
comp=Z,17nm,1.1s
DKNS Dickens 59.67 73 P **P 20 05 13.1 -1.2**
DKNS IAmb IAmb 20 05 25.9
comp=Z,14nm,0.9s

ISOG Isortoq, Green 60.00 17 *i* P **P 20 05 13.4 -2.6**
ISOG IAmb IAmb 20 05 31.8
comp=Z,15nm,0.8s
SVE Sverdlovsk 60.13 325 *e*P **P 20 05 17.4 +0.4**
SVE pmax pmax
comp=Z,51nm,1.1s
MNHN Monahans 60.19 76 P **P 20 05 17.7 -0.2**
WMOK Wichita Mounta 60.20 71 P **P 20 05 17.2 -0.7**
WMOK Wichita Mounta 60.20 71 P **P 20 05 18.0 +0.1**
baz=314,SNR=10
WMOK Wichita Mounta 60.20 71 P **P 20 05 17.2 -0.7**
WMOK pmax pmax
comp=Z,9.0nm,0.8s
SN01 Snyder 1 60.26 74 IAmb IAmb 20 05 29.6
comp=Z,14nm,0.8s
ALPN Alpine 60.34 78 P **P 20 05 18.5 -0.6**
BRZS Berezniki 60.36 314 ⇑ *i*P **P 20 05 18.6 -0.2**
comp=Z,19nm,0.9s,baz=314
BRZS Berezniki 60.36 314 *c i*P **P 20 05 18.5 -0.2**
BRZS pmax pmax
comp=Z,19nm,0.9s
APMT Aspermont 60.39 73 IAmb IAmb 20 05 21.5
comp=Z,18nm,1.1s
N41A Harden Midland 60.56 61 IAmb IAmb 20 05 34.7
comp=Z,20nm,0.9s
FAUS Fauske 60.66 352 *e*P **P 20 05 20.2 -0.2**
LPIG La Paz 60.70 87 LR LR 20 29 56.3
comp=Z,38nm,18.1s,baz=302,slow=34
P40A Paris 60.72 62 IAmb IAmb 20 05 32.1
comp=Z,32nm,1.2s
PZH PanZhiHua 60.89 277 P **P 20 05 23.3 +0.5**
PZH sP **sP 20 05 42.8 +3.0**
PZH S **S 20 13 37.8 +0.4**
PZH ScS SKKSac 20 15 09.3 -0.8
PZH pmax pmax
comp=Z,30nm,1.0s
PZH pmax pmax
comp=Z,150nm,4.9s
TX31 Lajitas Ar. Si 61.06 78 IAmb IAmb 20 05 25.6
comp=Z,20nm,1.1s
TXAR Lajitas Array 61.06 78 P **P 20 05 24.1 +0.2**
comp=Z,7.5nm,0.7s,baz=300,slow=5.1,SNR=64
TXAR ScP **ScP 20 10 05.8 +1.7**
comp=Z,1.4nm,1.0s,baz=324,slow=4.5,SNR=3.5
comp=Z,7.5nm,0.7s
WTFS Witchita Falls 61.07 71 P **P 20 05 23.0 -0.8**
WTFS IAmb IAmb 20 05 35.8
comp=Z,58nm,1.6s
L44A Lake County Fo 61.11 58 P **P 20 05 23.4 -0.6**
baz=315
TUL3 Leonard 61.13 68 P **P 20 05 23.5 -0.6**
baz=315
ARU Arti 61.16 326 P **P 20 05 23.8 -0.2**
ARU Arti 61.16 326 *c i*P **P 20 05 24.4 +0.4**
ARU 20 06 08.3
ARU S **S 20 13 45.1 +5.3**
ARU SS **SS 20 17 39.6 +0.3**
ARU pmax pmax
comp=Z,78nm,1.1s
ARU Arti 61.16 326 LR LR 20 34 20.8
comp=Z,392nm,19.3s,baz=41,slow=38
ARU Arti 61.16 326 P **P 20 05 24.5 +0.4**
ARU pP **pP 20 05 35.1 -1.1**
ABTX Abilene, Hawle 61.17 73 IAmb IAmb 20 05 36.9
comp=Z,28nm,1.1s
ABTX Abilene, Hawle 61.17 73 P **P 20 05 24.2 -0.3**
baz=315,SNR=5.8
TDK Taldyqorghan 61.19 307 *e*P **P 20 05 24.7 +0.2**
baz=307
TDK Taldyqorghan 61.19 307 *e*P **P 20 05 24.6 +0.2**
SLBS Sierra La Lagu 61.23 88 P **P 20 05 25.5 +0.5**
SLBS IAmb IAmb 20 05 41.2
comp=Z,27nm,0.9s
KMI Kunming 61.26 275 ⇓P **P 20 05 26.4 +0.9**
KMI pP pP 20 05 39.3 +1.7
KMI pmax pmax
comp=Z,12nm,0.7s
DAV Davao City (W) 61.31 243 LR LR 20 27 52.8
comp=Z,109nm,20.4s,baz=56,slow=32
SCHQ Schefferville 61.40 36 P **P 20 05 25.3 -0.4**
comp=Z,39nm,1.0s,baz=338,slow=7.0,SNR=32
SCHQ LR LR 20 32 27.9
comp=Z,298nm,19.9s,baz=322,slow=36
comp=Z,39nm,1.0s
OZNA Ozona 61.48 75 IAmb IAmb 20 05 37.9
comp=Z,16nm,0.8s
HDIL Hopedale 61.51 60 P **P 20 05 25.6 -1.1**
baz=315
HPIG 61.54 82 P **P 20 05 26.3 -1.0**
HPIG IAmb IAmb 20 05 28.9
comp=Z,32nm,1.1s
U38A Gravette 61.57 66 P **P 20 05 25.4 -1.7**
U38A IAmb IAmb 20 06 09.4
comp=Z,17nm,1.1s
PLPT Palo Pinto 61.83 72 IAmb IAmb 20 05 31.6
comp=Z,16nm,0.8s
MOR8 Moi Rana 61.92 352 *e*P **P 20 05 27.7 -1.4**
MOR8 IAmb IAmb 20 05 30.0
comp=Z,25nm,1.0s
IVI Ivigtut 61.92 23 *i* P **P 20 05 28.3 -0.8**
IVI IAmb IAmb 20 05 29.9
comp=Z,24nm,0.8s
HHAR Hobs 61.93 66 IAmb IAmb 20 06 11.0
comp=Z,16nm,1.4s
SHLS Shalkode 61.97 305 *e*P **P 20 05 28.6 -1.3**
baz=304
SHLS Shalkode 61.97 305 *e*P **P 20 05 28.6 -1.3**
VLDQ Val d'Or 62.03 47 IAmb IAmb 20 05 30.6
comp=Z,22nm,0.8s
KPKS Kokpek 62.15 305 ⇑ *i*P **P 20 05 31.2 +0.2**
comp=Z,19nm,0.9s,baz=306
KPKS Kokpek 62.15 305 *c i*P **P 20 05 31.2 +0.2**
KPKS pmax pmax
comp=Z,19nm,0.9s
UZB Uzunbulak 62.20 305 *e*P **P 20 05 31.6 +0.1**
comp=Z,6.4nm,0.6s,baz=305
UZB Uzunbulak 62.20 305 *e*P **P 20 05 31.6 +0.1**
UZB pmax pmax
comp=Z,6.0nm,0.6s
ZHN Zhinishke 62.48 305 *e*P **P 20 05 33.8 +0.5**
baz=305
ZHN Zhinishke 62.48 305 *e*P **P 20 05 33.8 +0.5**
BRDY Brady 62.50 74 P **P 20 05 32.7 -0.8**
BRDY IAmb IAmb 20 05 45.0
comp=Z,14nm,1.0s
HNR Honiara 62.51 199 LR LR 20 27 47.5
comp=Z,4μm,20.8s,baz=0.5,slow=31
SATY Saty 62.58 305 *e*P **P 20 05 34.2 +0.3**
comp=Z,15nm,1.0s,baz=305
SATY Saty 62.58 305 *e*P **P 20 05 34.2 +0.3**
SATY pmax pmax
comp=Z,15nm,1.0s
JCT Junction City 62.59 75 IAmb IAmb 20 06 14.7
comp=Z,23nm,0.9s
JCT Junction City 62.59 75 P **P 20 05 34.2 +0.1**
baz=316
NRS Narsarsuaq 62.62 22 *i* P **P 20 05 32.9 -0.8**
NRS IAmb IAmb 20 05 34.5
comp=Z,16nm,0.8s
CHKK Chushkaly 62.72 307 *e*P **P 20 05 34.0 -0.7**
baz=307
CHKK Chushkaly 62.72 307 *e*P **P 20 05 34.0 -0.7**
DRIO Del Rio 62.85 76 IAmb IAmb 20 05 46.6
comp=Z,16nm,0.8s
WHTX Lake Whitney, 62.92 72 P **P 20 05 34.6 -1.6**
baz=316
KLMR Klimovskoe 62.98 338 *e*P **P 20 05 31.6 -4.6**
KLMR pmax pmax
comp=Z,46nm,1.1s
BORG Borgarnes 63.19 9 LR LR 20 32 42.9
comp=Z,219nm,20.7s,baz=344,slow=36
MDOK Medeo 63.19 306 *i* P **P 20 05 38.4 +0.3**
baz=306
MDOK Medeo 63.19 306 *i* P **P 20 05 38.4 +0.3**
AAA Alma-Ata 63.23 306 *e*P **P 20 05 38.7 +0.5**
baz=306
AAA Alma-Ata 63.23 306 *e*P **P 20 05 38.7 +0.5**
FCAR Ozark Folk Cen 63.25 65 P **P 20 05 35.8 -2.5**
FCAR IAmb IAmb 20 05 49.3
comp=Z,16nm,0.7s
SLVN Son La 63.30 271 P **P 20 05 40.1 +1.2**
SLVN IAmb IAmb 20 05 41.9
comp=Z,22nm,1.1s
BTLS Baital 63.31 309 ⇑ *i*P **P 20 05 38.8 +0.2**
comp=Z,16nm,1.0s,baz=309
BTLS Baital 63.31 309 *c i*P **P 20 05 38.8 +0.2**

BTLS pmax pmax
comp=Z,16nm,1.0s
TNSS Tian-Shan 63.33 306 *e*P **P 20 05 39.5 +0.1**
baz=306
TNSS Tian-Shan 63.33 306 *e*P **P 20 05 39.4 +0.1**
MIAR Mount Ida 63.37 67 IAmb IAmb 20 06 17.7
comp=Z,30nm,0.9s
MIAR Mount Ida 63.37 67 P **P 20 05 38.9 -0.3**
baz=316,SNR=12
WUS Wushi 63.50 303 P **P 20 05 40.5 +0.4**
PBMO Poplar Bluff 63.57 64 IAmb IAmb 20 06 17.5
comp=Z,11nm,0.8s
WHAR Wooly Hollow 63.58 66 IAmb IAmb 20 06 30.9
comp=Z,14nm,1.0s
SADO Sadowa 63.69 51 IAmb IAmb 20 05 43.3
comp=Z,14nm,0.8s
SADO Sadowa 63.69 51 LR LR 20 34 32.3
comp=Z,602nm,19.9s,baz=350,slow=37
NSS Namsos 63.74 353 *e*P **P 20 05 41.2 +0.1**
TARG Taragay, Kyrgy 63.85 305 IAmb IAmb 20 05 47.6
comp=Z,9.7nm,0.8s
O48B Farmland 63.94 58 P **P 20 05 41.0 -1.8**
baz=316
TNCH TengChong 63.95 278 P **P 20 05 44.5 +1.2**
TNCH pP pP 20 05 56.3 +0.8
TNCH pmax pmax
comp=Z,14nm,0.9s
TNCH pmax pmax
comp=Z,160nm,5.2s
N49A Columbus Grove 63.97 57 IAmb IAmb 20 05 46.0
comp=Z,33nm,1.4s
TKM2 Tokmak 2 64.10 307 P **P 20 05 44.6 +0.5**
SNR=13
SGDS Sogindy 64.19 308 *e*P **P 20 05 43.6 -0.9**
baz=308
SGDS Sogindy 64.19 308 *e*P **P 20 05 43.6 -0.9**
ULHL Ulahol 64.27 306 P **P 20 05 46.4 +1.2**
SNR=5.8
P48A Milroy 64.37 58 P **P 20 05 43.9 -1.8**
P48A IAmb IAmb 20 06 03.3
comp=Z,44nm,1.4s
USP Ospenovka 64.39 308 P **P 20 05 46.6 +0.9**
SNR=55
CHMS Chumysh 64.46 307 P **P 20 05 47.0 +0.7**
SNR=19
DELO Deloro Mine 64.61 50 IAmb IAmb 20 05 48.0
comp=Z,14nm,0.9s
KBK Karagaybulak 64.61 307 P **P 20 05 48.3 +0.8**
SNR=25
TRQ Mont Tremblant 64.76 47 IAmb IAmb 20 05 49.7
comp=Z,16nm,0.8s
WCI Wyandotte Cave 64.80 60 P **P 20 05 47.9 -0.5**
baz=317
AAK Ala-Archa 64.86 307 P **P 20 05 49.6 +0.6**
SNR=34
AAK Ala-Archa 64.86 307 P **P 20 05 49.0 0.0**
AAK Ala-Archa 64.86 307 *i* P **P 20 05 49.6 +0.6**
SNR=5.8
AAK Ala-Archa 64.86 307 P **P 20 05 49.0 0.0**
AAK pmax pmax
comp=Z,41nm,0.9s
AAK Ala-Archa 64.86 307 LR LR 20 34 58.0
comp=Z,235nm,19.6s,baz=36,slow=37
AAK Ala-Archa 64.86 307 P **P 20 05 49.5 +0.6**
AAK pP **pP 20 06 00.3 -1.2**
LDAQ Lac Daran 64.91 44 IAmb IAmb 20 05 50.8
comp=Z,23nm,1.2s
NRN Naryn 64.99 306 IAmb IAmb 20 05 52.0
comp=Z,19nm,1.0s
LSA Lhasa 65.06 287 P **P 20 05 51.7 +0.8**
LSA IAmb IAmb 20 05 53.7
comp=Z,19nm,0.9s
LSA Lhasa 65.06 287 P **P 20 05 52.7 +1.8**
LSA Lhasa 65.06 287 P **P 20 05 51.7 +0.8**
LSA pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 65.06 287 P **P 20 05 52.4 +1.5**
FIA1 FINESS Array S 65.07 345 P **P 20 05 49.0 -0.8**
FINES FINESS Array B 65.07 345 P **P 20 05 48.5 -1.3**
FINES FINESS Array B 65.07 345 P **P 20 05 49.0 -0.8**
comp=Z,16nm,0.9s,baz=28,slow=6.3,SNR=25
comp=Z,16nm,0.9s
ACSO Alum Creek Sta 65.09 56 P **P 20 05 49.5 -0.9**
baz=317
UCH Uchtor 65.15 307 P **P 20 05 52.3 +1.0**
SNR=16
EKS2 Erkin-Say 65.19 308 P **P 20 05 52.0 +0.8**
SNR=58
MEDO Medina 65.21 51 IAmb IAmb 20 05 54.3
comp=Z,25nm,0.8s
ERPA Erie 65.23 53 P **P 20 05 50.3 -0.9**
baz=318
T47A Sharon Grove 65.26 61 IAmb IAmb 20 05 54.4
comp=Z,23nm,0.8s
M53A WI Miller and 65.39 54 P **P 20 05 51.1 -1.2**
baz=318
WVT Waverly 65.48 62 P **P 20 05 51.3 -1.7**
WVT IAmb IAmb 20 05 55.6
comp=Z,13nm,1.0s
WVT Waverly 65.48 62 P **P 20 05 52.2 -0.8**
baz=317
WVT Waverly 65.48 62 P **P 20 05 51.3 -1.7**
WVT pmax pmax
comp=Z,13nm,1.0s
LMQ La Malbaie 65.62 43 IAmb IAmb 20 05 54.0
comp=Z,34nm,1.4s
O52A Adamsville 65.77 56 P **P 20 05 53.0 -1.8**
O52A IAmb IAmb 20 05 57.7
comp=Z,18nm,0.9s
OXF Oxford 65.78 65 P **P 20 05 54.3 -0.6**
baz=317,SNR=7.5
J56A Wolcott 65.90 50 IAmb IAmb 20 05 58.3
comp=Z,24nm,0.8s
LONY Lake Ozonia 65.96 48 P **P 20 05 55.6 -0.3**
baz=320
P52A Corning 65.98 56 P **P 20 05 54.5 -1.6**
baz=318
O53A New Philadelph 66.00 55 P **P 20 05 55.6 -0.6**
baz=318
AKTO Aktyubinsk 66.12 322 LR LR 20 37 30.9
comp=Z,656nm,19.1s,baz=11,slow=38
RAF Rauma 66.12 347 *e*P **P 20 05 56.1 -0.5**
Y45A Yeager Farm, C 66.17 65 P **P 20 05 56.0 -1.4**
DZA Taraz 66.21 309 *e*P **P 20 05 57.8 +0.2**
comp=Z,8.3nm,0.7s,baz=310
DZA Taraz 66.21 309 *e*P **P 20 05 57.8 +0.2**
DZA pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 66.31 321 IAmb IAmb 20 05 59.7
comp=Z,31nm,0.9s
M55A Ridgway 66.33 53 IAmb IAmb 20 06 16.8
comp=Z,18nm,0.8s
CRAI Chiangrai 66.33 273 P **P 20 05 58.4 -0.2**
CRAI IAmb IAmb 20 06 00.7
comp=Z,17nm,0.9s
U49A Red Boiling Sp 66.33 61 P **P 20 05 56.7 -1.7**
U49A IAmb IAmb 20 06 09.2
comp=Z,39nm,1.6s
CLTN Cedars of Leba 66.34 61 IAmb IAmb 20 06 01.4
comp=Z,23nm,0.9s
AKN Aaknes 66.40 355 *e*P **P 20 05 59.0 +0.6**
AKN IAmb IAmb 20 05 60.0
comp=Z,52nm,1.1s
DOMB Dombas 66.41 354 *e*P **P 20 05 58.3 -0.2**
DOMB IAmb IAmb 20 06 00.6
comp=Z,20nm,0.9s
KSH Kashi 66.42 304 P **P 20 06 02.6 +3.5**
KSH pP pwP 20 06 13.8 +2.2
KSH pmax pmax
comp=Z,64nm,0.9s
KSH LR LR
comp=Z,280nm,15.8s
KSH LR LR
comp=Z,210nm,11.3s
KSH LR LR
comp=Z,410nm,19.2s
KK31 Karatay Array 66.45 310 P **P 20 05 58.7 -0.4**
KK31 IAmb IAmb 20 06 00.4
comp=Z,33nm,0.9s
KK31 Karatay Array 66.45 310 P **P 20 05 58.7 -0.4**
KK31 pmax pmax
comp=Z,33nm,0.9s
KKAR Karatay Array 66.45 310 IAmb IAmb 20 06 00.5
comp=Z,33nm,0.9s
K57A Scipio Center 66.48 50 IAmb IAmb 20 06 00.3
comp=Z,27nm,0.8s
ZAIG Zacatecas 66.49 83 P **P 20 06 00.0 0.0**

ZAIG IAmb IAmb 20 06 02.1
comp=Z,41nm,1.1s
MEF Metsahovi 66.50 346 *e*P **P 20 05 59.1 0.0**
D62A Allapoint, All 66.53 43 IAmb IAmb 20 05 59.4
comp=Z,27nm,1.1s
ARSB Arslanbob 66.58 307 P **P 20 06 00.1 0.0**
ARSB IAmb IAmb 20 06 02.1
comp=Z,12nm,1.0s
ARSB Arslanbob 66.58 307 P **P 20 06 00.1 0.0**
ARSB pmax pmax
comp=Z,12nm,1.0s
J58A Remsen 66.59 49 IAmb IAmb 20 06 02.1
comp=Z,16nm,0.9s
NCB Newcomb 66.62 48 IAmb IAmb 20 06 03.5
comp=Z,14nm,0.8s
E62A Clayton Lake 66.69 44 IAmb IAmb 20 06 02.3
comp=Z,18nm,0.9s
BRLS Boroldav 66.83 310⇑ *i*P **P 20 06 03.2 +1.7**
baz=310
BRLS Boroldav 66.83 310*c i*P **P 20 06 03.2 +1.7**
UBPT Khong Chiam 66.86 266 P **P 20 06 02.8 +0.8**
UBPT IAmb IAmb 20 06 04.0
comp=Z,18nm,1.2s
J59A Piesco 66.88 49 IAmb IAmb 20 06 03.6
comp=Z,13nm,0.7s
VT1 Waterbury 67.03 47 IAmb IAmb 20 06 03.3
comp=Z,20nm,1.0s
NC204 NORSAR Array S 67.05 353 P **P 20 06 02.3 -0.4**
NC303 NORSAR Array S 67.06 353 P **P 20 06 02.1 -0.5**
NC303 IAmb IAmb 20 06 04.4
comp=Z,43nm,1.1s
BINY Binghamton 67.14 51 P **P 20 06 02.4 -1.0**
baz=320
MCWV Mont Chateau 67.14 55 P **P 20 06 02.0 -1.5**
baz=319
NC405 NORSAR Array S 67.14 352 P **P 20 06 02.5 -0.7**
NC405 IAmb IAmb 20 06 04.7
comp=Z,27nm,0.9s
SWET Sewanee 67.20 62 IAmb IAmb 20 06 21.7
comp=Z,46nm,1.7s
M57A Sunshine Farm, 67.23 52 IAmb IAmb 20 06 07.0
comp=Z,26nm,0.8s
NB201 NORSAR Array S 67.23 353 P **P 20 06 02.6 -1.2**
NB2 NORSAR Subarra 67.25 353 P **P 20 06 03.4 -0.5**
comp=Z,22nm,1.1s,baz=7.8,slow=6.2
NB2 NORSAR Subarra 67.25 353 P **P 20 06 03.4 -0.5**
baz=7.8,slow=6.2
NOA NORSAR Array B 67.25 353 P **P 20 06 03.5 -0.5**
comp=Z,8.0nm,0.7s,baz=9.7,slow=6.6,SNR=21
NOA LR LR 20 33 43.8
comp=Z,144nm,21.7s,baz=355,slow=34
comp=Z,8.0nm,0.7s
G62A West of Eustis 67.34 45 IAmb IAmb 20 06 05.7
comp=Z,32nm,1.2s
SSPA Standing Stone 67.39 53 P **P 20 06 04.2 -0.9**
SSPA IAmb IAmb 20 06 07.7
comp=Z,20nm,0.8s
SSPA Standing Stone 67.39 53 P **P 20 06 04.0 -1.1**
baz=319
SSPA Standing Stone 67.39 53 P **P 20 06 04.2 -0.9**
IUG luzhnay 67.41 310⇑ *i*P **P 20 06 06.1 +0.7**
baz=310
IUG luzhnay 67.41 310*c i*P **P 20 06 06.0 +0.7**
LBNH Lisbon 67.47 47 IAmb IAmb 20 06 05.2
comp=Z,25nm,1.1s
LBNH Lisbon 67.47 47 P **P 20 06 04.0 -1.5**
baz=321,SNR=5.2
CHM Chimkent 67.48 310 *e*P **P 20 06 06.5 +0.8**
comp=Z,22nm,1.0s,baz=310
CHM Chimkent 67.48 310 *e*P **P 20 06 06.4 +0.8**
CHM pmax pmax
comp=Z,22nm,1.0s
Z47A Carrollton 67.50 65 IAmb IAmb 20 06 07.8
comp=Z,27nm,1.1s
TZTN Tazewell 67.52 59 P **P 20 06 05.3 -0.6**
baz=318
W50A Signal Mountai 67.56 61 IAmb IAmb 20 06 31.9
comp=Z,12nm,0.8s
H62A Milan 67.56 46 P **P 20 06 04.7 -1.5**
F63A Nahmakanta, Br 67.59 44 IAmb IAmb 20 06 06.0
comp=Z,17nm,1.0s
L59A Walton 67.60 50 P **P 20 06 05.0 -1.4**
L59A IAmb IAmb 20 06 07.5
comp=Z,26nm,1.1s
SHL Shillong 67.63 283 P **P 20 06 06.9 -0.1**
SHL Shillong 67.63 283 P **P 20 06 06.9 -0.1**
SHL pmax pmax
comp=Z,45nm,0.9s
V51A Loudon 67.63 60 P **P 20 06 06.1 -0.6**
V51A IAmb IAmb 20 06 08.8
comp=Z,20nm,1.1s
KSPA Keystone Colle 67.73 51 IAmb IAmb 20 06 10.1
comp=Z,14nm,0.7s
VSU Vasula 67.78 344 *e*P **P 20 06 07.7 +0.4**
F64A Sherman 67.79 43 IAmb IAmb 20 06 07.6
comp=Z,32nm,1.1s
CPCT Cooper Cave 67.80 61 P **P 20 06 06.7 -1.1**
CPCT IAmb IAmb 20 06 07.7
comp=Z,15nm,1.2s
N58A Sunbury 67.81 52 IAmb IAmb 20 06 10.6
comp=Z,26nm,0.8s
SKAR Skarslia 67.81 354 *e*P **P 20 06 07.9 +0.4**
SKAR IAmb IAmb 20 06 08.9
comp=Z,100nm,1.6s
PKME Peaks-Kenny Pk 67.85 44 P **P 20 06 06.8 -1.0**
baz=322
J61A Chester 67.88 48 IAmb IAmb 20 06 10.4
comp=Z,16nm,0.8s
FPAL Fort Paine 67.88 62 IAmb IAmb 20 06 10.7
comp=Z,33nm,1.3s
HFS Hagfors 67.93 351 P **P 20 06 07.4 -0.7**
comp=Z,7.8nm,0.8s,baz=35,slow=5.3,SNR=18
comp=Z,7.8nm,0.8s
MOS Moscow 68.01 337 *e*P **P 20 06 08.3 -0.4**
MOS *e* 20 06 34.0
MOS pmax pmax
comp=Z,42nm,0.8s
MTSE Matsula 68.03 345 *e*P **P 20 06 08.8 +0.1**
BELG Belogornoye 68.13 329 LR LR 20 39 08.2
comp=Z,508nm,19.1s,baz=351,slow=39
LRAL Lakeview Retre 68.22 64 P **P 20 06 09.5 -0.9**
baz=318
CHTO Chiang Mai 68.28 273 P **P 20 06 10.8 -0.1**
CHTO IAmb IAmb 20 06 13.1
comp=Z,14nm,0.9s
CHTO Chiang Mai 68.28 273 P **P 20 06 10.8 -0.1**
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 68.28 273 P **P 20 06 11.5 +0.5**
W52A Murphy 68.39 61 IAmb IAmb 20 06 14.3
comp=Z,24nm,1.2s
U54A Nelsons Funny 68.46 58 IAmb IAmb 20 06 14.5
comp=Z,18nm,0.9s
L61B Northampton 68.51 48 P **P 20 06 10.3 -1.8**
L61B IAmb IAmb 20 06 14.2
comp=Z,12nm,0.8s
L61B Northampton 68.51 48 P **P 20 06 11.1 -1.0**
baz=321
CM31 Chiang Mai Arr 68.54 273 P **P 20 06 12.8 +0.2**
CM31 IAmb IAmb 20 06 14.5
comp=Z,15nm,0.8s
CMAR Chiang Mai Arr 68.54 273 P **P 20 06 12.6 0.0**
CMAR Chiang Mai Arr 68.54 273 P **P 20 06 12.6 0.0**
CMAR Chiang Mai Arr 68.54 273 P **P 20 06 13.4 +0.8**
comp=Z,11nm,0.8s,baz=26,slow=7.0,SNR=86
CMAR LR LR 20 39 26.0
comp=Z,59nm,19.2s,baz=50,slow=39
comp=Z,11nm,0.8s
BTK Batken 68.62 308 P **P 20 06 13.3 +0.4**
BTK Batken 68.62 308 P **P 20 06 13.3 +0.4**
BTK pmax pmax
comp=Z,53nm,0.9s
MVL Millersville 68.64 52 IAmb IAmb 20 06 15.5
comp=Z,11nm,0.7s
ODNJ Ogdensburg 68.66 50 P **P 20 06 12.1 -0.9**
ODNJ IAmb IAmb 20 06 13.8
comp=Z,22nm,1.2s
LUPA Lehigh Univers 68.66 51 IAmb IAmb 20 06 16.2
comp=Z,29nm,0.8s
BLA Blacksburg 68.68 57 P **P 20 06 12.2 -1.1**
baz=319
ODD1 Odda 68.68 355 *e*P **P 20 06 13.1 +0.2**
KONO Kongsberg 68.75 353 *e*P **P 20 06 13.3 0.0**
OBN Obninsk 68.83 337⇓ *i*P **P 20 06 14.0 +0.2**
OBN *e* 20 06 21.2
OBN *e* 20 08 47.4
comp=Z,59nm,1.1s
OBN pmax pmax
comp=Z,597nm,21.0s
OBN Obninsk 68.83 337 P **P 20 06 14.1 +0.2**
comp=Z,13nm,0.4s,baz=356,slow=13,SNR=10
OBN LR LR 20 39 16.2
comp=Z,588nm,20.3s,baz=360,slow=38
comp=Z,13nm,0.4s
HRV Adam Dziewonsk 68.99 48 P **P 20 06 13.9 -1.2**
baz=321
BG3 Lake Jocassee 69.01 60 P **P 20 06 14.8 -0.5**
BG3 IAmb IAmb 20 06 16.8
comp=Z,27nm,1.2s
GGN Saint George 69.02 43 IAmb IAmb 20 06 14.9
comp=Z,35nm,0.9s
PAL Palisades 69.05 50 IAmb IAmb 20 06 16.4
comp=Z,24nm,1.0s
PAL Palisades 69.05 50 P **P 20 06 14.6 -0.8**
baz=321
EMMW East Machias 69.09 44 P **P 20 06 14.2 -1.4**
EMMW IAmb IAmb 20 06 15.4
comp=Z,22nm,0.9s
CPNY Central Park 69.19 50 IAmb IAmb 20 06 18.5
comp=Z,24nm,0.7s
WES Weston 69.19 48 IAmb IAmb 20 06 16.0
comp=Z,22nm,0.9s
WSPT Westport, CT 69.20 50 IAmb IAmb 20 06 17.5
comp=Z,17nm,1.0s
Y52A Lilburn 69.24 62 P **P 20 06 15.5 -1.2**
Y52A IAmb IAmb 20 06 18.3
comp=Z,28nm,1.2s
LMN Caledonia Moun 69.29 41 P **P 20 06 15.5 -1.3**
LMN IAmb IAmb 20 06 17.1
comp=Z,28nm,1.0s
SLIT Slitere, Latvi 69.31 346 *e*P **P 20 06 17.0 +0.3**
CBN Corbin Frederi 69.49 54 P **P 20 06 16.9 -1.3**
baz=320
PAULI Pauline 69.74 59 P **P 20 06 18.4 -1.4**
KMSC Kings Mountain 69.76 59 P **P 20 06 19.2 -0.7**
KMSC IAmb IAmb 20 06 22.1
comp=Z,18nm,1.1s
KMSC Kings Mountain 69.76 59 P **P 20 06 18.9 -1.0**
baz=319
GOGA Godfrey 69.91 62 P **P 20 06 19.6 -1.2**
baz=319
BRDH Bariadhala 69.92 281 P **P 20 06 22.6 +1.5**
comp=Z,69nm,0.3s,baz=90,slow=19,SNR=4.0
HODGE Hodges 69.95 60 IAmb IAmb 20 06 41.5
comp=Z,12nm,0.8s
LPSR Galich'ya Gora 70.50 335 *e*P **P 20 06 22.2 -1.9**
LPSR pmax pmax
comp=Z,40nm,1.2s
SIMJ Simiganj 70.59 308 P **P 20 06 25.4 +0.3**
SIMJ PP **PP 20 08 59.9 -1.4**
IDID Didziasalis 70.76 343 *e*P **P 20 06 24.2 -1.5**
VRH Novokhopyorsk 70.97 332 *e*P **P 20 06 24.1 -2.9**
VRH pmax pmax
comp=Z,30nm,0.8s
PABE Paberze 71.08 344 *e*P **P 20 06 28.0 +0.4**
VORR Voronezh 71.26 334 *e*P **P 20 06 29.1 +0.3**
VORR pmax pmax
comp=Z,31nm,1.3s
MNK Minsk 71.31 342 *i*P **P 20 06 29.6 +0.5**
MNK *i* 20 06 49.2
MNK *i* 20 09 13.8
MNK *i*S **S 20 15 45.1 +2.1**
MNK *i* *SS **sS 20 16 11.0 +6.7**
MNK *i* 20 16 31.3
MNK *i*SS **SS 20 20 20.3 +3.8**
MNK pmax pmax
comp=Z,42nm,1.0s
MNK pmax pmax
comp=N,34nm,1.0s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK MLR MLR
comp=Z,294nm,19.0s
MNK MLR MLR
comp=N,167nm,14.0s
MNK MLR MLR
comp=E,52nm,18.0s
VSR Storozhevoye 71.68 334 *e*P **P 20 06 29.6 -1.7**
VSR pmax pmax
comp=Z,30nm,1.1s
VORD Divnogorie 71.87 334 *e*P **P 20 06 29.8 -2.6**
VORD pmax pmax
comp=Z,20nm,1.1s
NHSC New Hope 71.92 60 P **P 20 06 32.8 -0.3**
baz=320
NIL Nilore 72.28 302 P **P 20 06 35.9 +0.6**
NIL Nilore 72.28 302 P **P 20 06 35.9 +0.6**
NIL pmax pmax
comp=Z,75nm,1.0s
SUW Suwalki 72.64 344 P **P 20 06 35.9 -1.1**
SUW IAmb IAmb 20 06 37.7
comp=Z,38nm,1.0s
SUW Suwalki 72.64 344 P **P 20 06 35.9 -1.1**
SUW pmax pmax
comp=Z,38nm,1.0s
SUW Suwalki 72.64 344 *e*P **P 20 06 37.2 +0.2**
SBUM Sibu 72.74 252 P **P 20 06 38.7 +0.6**
TLIG Tlapa 72.86 83 IAmb IAmb 20 06 41.9
comp=Z,54nm,1.3s
EKA Eskdalemuir Ar 73.53 0 P **P 20 06 42.3 0.0**
comp=Z,35nm,1.0s,baz=0.0,slow=4.6,SNR=29
comp=Z,35nm,1.0s
ESK Eskdalemuir 73.55 0 P **P 20 06 42.0 -0.3**
ESK Eskdalemuir 73.55 0 P **P 20 06 42.0 -0.3**
ESK pmax pmax
comp=Z,191nm,1.8s
KBL Kabul 73.78 305 P **P 20 06 43.5 -0.9**
KBL Kabul 73.78 305 P **P 20 06 43.5 -0.9**
KBL pmax pmax
comp=Z,55nm,1.0s
DZM Mont Dzumac 73.87 190 LR LR 20 33 11.6
comp=Z,492nm,21.0s,baz=62,slow=31
BSEG Bad Segeberg 74.36 352 *e*P **P 20 06 47.7 +0.6**
comp=Z,29nm,1.1s,baz=9.9,slow=5.7
AKASG Malin Array Be 74.62 340 P **P 20 06 47.8 -0.9**
AKASG Malin Array Be 74.62 340 P **P 20 06 47.8 -0.9**
AKASG pmax pmax
comp=Z,14nm,1.1s
AKASG Malin Array Be 74.62 340 P **P 20 06 48.3 -0.4**
comp=Z,29nm,0.9s,baz=23,slow=5.8,SNR=63
AKASG LR LR 20 44 12.1
comp=Z,290nm,18.2s,baz=13,slow=39
comp=Z,29nm,0.9s
AKBB Malin Array Si 74.62 340 P **P 20 06 48.0 -0.6**
AKBB IAmb IAmb 20 06 49.6
comp=Z,45nm,0.9s
AKBB Malin Array Si 74.62 340 P **P 20 06 48.1 -0.6**
AKBB pmax pmax
comp=Z,45nm,1.0s
KIEV Kiev 74.63 340⇑P **P 20 06 48.5 -0.2**
KIEV Kiev 74.63 340 P **P 20 06 48.0 -0.6**
KIEV IAmb IAmb 20 06 49.6
comp=Z,40nm,0.9s
KIEV Kiev 74.63 340 *i*P **P 20 06 48.5 -0.2**
SNR=26
KIEV Kiev 74.63 340 P **P 20 06 48.1 -0.6**
KIEV pmax pmax
comp=Z,40nm,1.0s
PPT Papeete 74.64 147 LR LR 20 34 17.1
comp=Z,400nm,19.5s,baz=356,slow=31
RAR Rarotonga 75.16 158 LR LR 20 33 43.3
comp=Z,480nm,19.0s,baz=304,slow=31
CMIG Matias Romero 75.50 81 LR LR 20 39 07.4
comp=Z,60nm,19.5s,baz=298,slow=35
MTN Manton Dam 75.52 227 P **P 20 06 54.4 +0.2**
MTN IAmb IAmb 20 07 12.1
comp=Z,25nm,0.9s
DSB Dublin 75.58 2 P **P 20 06 53.6 -0.5**
RETH Rethem/Aller, 75.63 352 *e*P **P 20 06 54.9 +0.5**
comp=Z,32nm,1.3s,baz=9.9,slow=5.7
GOF Gofitskoye 76.01 328*ce*P **P 20 06 57.6 +0.8**
IBBN Ibbenburen 76.18 353 *e*P **P 20 06 58.4 +0.8**
comp=Z,84nm,1.1s,baz=9.9,slow=5.7
GEYT Alibeck 76.28 315 P **P 20 06 59.0 +0.5**
GEYT IAmb IAmb 20 07 00.6
comp=Z,34nm,1.0s
GEYT Alibeck 76.28 315 P **P 20 06 59.0 +0.5**
GEYT pmax pmax
comp=Z,34nm,1.0s
GEYT Alibeck 76.28 315 P **P 20 06 59.1 +0.6**
comp=Z,22nm,1.0s,baz=352,slow=3.2,SNR=36
GEYT LR LR 20 43 11.5
comp=Z,538nm,20.1s,baz=48,slow=38
comp=Z,22nm,1.0s
GYA0B ALIBECK ARRAY 76.28 315 P **P 20 06 59.2 +0.7**
GYA0B IAmb IAmb 20 07 00.5
comp=Z,26nm,0.9s
CTA Charters Tower 76.29 210 LR LR 20 38 17.4
comp=Z,195nm,19.3s,baz=20,slow=34
CLZ Clausthal 76.43 352 *e*P **P 20 06 59.9 +0.8**
comp=Z,40nm,1.2s,baz=9.9,slow=5.7
LVV L'vov 76.51 343 *e*P **P 20 06 59.6 +0.1**
CLL Collm 76.70 350 P **P 20 06 59.8 -0.8**
CLL Collm 76.70 350 P **P 20 06 59.8 -0.8**
CLL pmax pmax
comp=Z,15nm,1.3s
CLL Collm 76.70 350 *i*P **P 20 07 00.0 -0.6**
comp=Z,15nm,1.3s
CLL *e*pP **PcP 20 07 11.0 -0.8**
CLL *e*sP **pP 20 07 16.0 +2.8**
CLL *e*PS **PnS 20 17 30.0 +4.1**
CLL AMS AMS 20 37 00.0
comp=N,300nm,18.5s
CLL AMS AMS 20 37 00.0
comp=E,200nm,21.7s
CLL AMS AMS 20 37 00.0
comp=Z,400nm,20.1s
CLL Collm 76.70 350 *e*P **P 20 07 00.3 -0.2**
comp=Z,15nm,1.3s,baz=9.9,slow=5.7
OJC Ojcow 76.86 345 *e*P **P 20 07 02.1 +0.7**
OJC Ojcow 76.86 345 P **P 20 07 01.1 -0.4**
OJC IAmb IAmb 20 07 05.1
comp=Z,20nm,1.0s
OJC Ojcow 76.86 345 P **P 20 07 01.1 -0.4**
OJC pmax pmax
comp=Z,20nm,1.0s
NEUB Neuenburg 76.93 351 *e*P **P 20 07 02.0 +0.2**
comp=Z,44nm,1.5s,baz=9.9,slow=5.7
KWP Kalwaria Pacla 76.93 343 *e*P **P 20 07 03.0 +1.1**
BRG Berggiesshubel 77.02 349 *e*P **P 20 07 02.4 0.0**
BRG Amp 20 07 04.7
comp=Z,12nm,1.3s
BRG Berggiesshubel 77.02 349 P P 20 07 08.8 +6.4
BRG Amp 20 07 09.8
comp=Z,7.2nm,1.1s
BRG Berggiesshubel 77.02 349 *e*P **P 20 07 02.4 0.0**
BRG 20 07 08.7
BRG 20 07 17.1
BRG pmax pmax
comp=Z,12nm,1.3s
BRG Berggiesshubel 77.02 349 *e*P **P 20 07 02.3 0.0**
comp=Z,16nm,1.4s,baz=9.9,slow=5.7
CHVC Chvalec 77.04 348 *e*P **P 20 07 03.7 +1.2**
CHVC Chvalec 77.04 348 *e*P **P 20 07 03.7 +1.2**
BUG Bochum--Univer 77.08 354 *e*P **P 20 07 03.1 +0.4**
comp=Z,21nm,1.0s,baz=9.9,slow=5.7
KIV Kislovodsk 77.11 328⇑P **P 20 07 03.7 +0.6**
KIV Kislovodsk 77.11 328 P **P 20 07 03.1 0.0**
KIV IAmb IAmb 20 07 05.2
comp=Z,24nm,0.9s
KIV Kislovodsk 77.11 328 *i*P **P 20 07 04.2 +1.0**
SNR=7.7
KIV Kislovodsk 77.11 328 *e*P **P 20 07 03.2 +0.1**
KIV pmax pmax
comp=Z,25nm,1.1s
UPC Upice 77.12 348 *e*P **P 20 07 04.8 +1.8**
UPC Upice 77.12 348 *e*P **P 20 07 04.8 +1.8**
SORM Soroca 77.23 339⇑P **P 20 07 03.5 -0.1**
SORM Soroca 77.23 339 P **P 20 07 03.9 +0.3**
KASTN Kahler Asten 77.23 353 *e*P **P 20 07 03.9 +0.3**
comp=Z,30nm,1.3s,baz=9.9,slow=5.7
DPC Dobruska-Polom 77.24 348 *e*P **P 20 07 04.2 +0.5**
DPC Dobruska-Polom 77.24 348 *e*P **P 20 07 04.2 +0.5**
KBZ Khabaz 77.24 328 *i*P **P 20 07 05.0 +1.3**
KBZ pmax pmax
comp=Z,31nm,1.0s
KBZ Khabaz 77.24 328 P **P 20 07 04.7 +1.0**
comp=Z,17nm,0.9s,baz=37,slow=4.0,SNR=25
KBZ LR LR 20 44 37.0
comp=Z,142nm,20.9s,baz=21,slow=38
comp=Z,17nm,0.9s
HRA Herat 77.28 310 P **P 20 07 05.0 +0.6**
HRA IAmb IAmb 20 07 06.7
comp=Z,39nm,0.9s
SHA1 Shidzhatmaz 77.31 328 *i*P **P 20 07 04.6 +0.2**
HSKC Hora Svate Kat 77.34 350 *e*P **P 20 07 04.3 +0.1**
STHS Stebnicka Huta 77.40 344 *e*P **P 20 07 04.7 +0.1**
STHS pmax pmax
comp=Z,19nm,1.2s
STHS Stebnicka Huta 77.40 344 *e*P **P 20 07 04.7 +0.1**
KRLC Kraliky 77.44 347 *e*P **P 20 07 05.2 +0.4**
KRLC Kraliky 77.44 347 *e*P **P 20 07 05.2 +0.4**
UBBA Unterbreizbach 77.48 352 *e*P **P 20 07 05.3 +0.4**
comp=Z,26nm,1.6s,baz=9.9,slow=5.7
MOX Moxa 77.50 351 *e*P **P 20 07 05.3 +0.2**
comp=Z,18nm,1.3s,baz=9.9,slow=5.7
MOX *e*L L 20 38 12.7
comp=Z,211nm,20.0s
PLN Plauen 77.60 350 *e*P **P 20 07 05.9 +0.3**
comp=Z,8.8nm,1.2s,baz=9.9,slow=5.7
MORC Moravsky Berou 77.63 347⇑P **P 20 07 06.1 +0.3**
MORC Moravsky Berou 77.63 347 *e*P **P 20 07 05.8 -0.1**
MORC Moravsky Berou 77.63 347 P **P 20 07 06.1 +0.3**
TANN Tannenbergstha 77.64 350 *e*P **P 20 07 06.3 +0.4**
comp=Z,19nm,1.5s,baz=9.9,slow=5.7
KOLS Kolonicke sedl 77.68 343 *e*P **P 20 07 07.1 +1.0**
KOLS pmax pmax
comp=Z,28nm,0.9s
KOLS Kolonicke sedl 77.68 343 *e*P **P 20 07 07.1 +1.0**
NEUR Neytrino 77.72 328 *i*P **P 20 07 07.7 +1.0**
ZEI Tsey 77.73 327 *e*P **P 20 07 06.8 0.0**
ZEI pmax pmax
comp=Z,54nm,1.1s
ZKTA Zakatala 77.78 324 P **P 20 07 05.2 -1.7**
NKC Novy Kostel 77.82 350 *e*P **P 20 07 07.1 +0.2**
NKC Novy Kostel 77.82 350 *e*P **P 20 07 07.1 +0.2**
PRU Pruhonice 77.82 349 *e*P **P 20 07 07.3 +0.4**
PRU Pruhonice 77.82 349 *e*P **P 20 07 07.3 +0.4**
CRVS Cervenica-Dubn 77.86 344 *e*P **P 20 07 07.8 +0.7**
CRVS pmax pmax
comp=Z,30nm,1.0s
CRVS Cervenica-Dubn 77.86 344 *e*P **P 20 07 07.8 +0.7**
LANS Liptovska Anna 77.95 345 *e*P **P 20 07 09.7 +2.1**
LANS pmax pmax
comp=Z,19nm,1.2s
LANS Liptovska Anna 77.95 345 *e*P **P 20 07 09.7 +2.1**
SEKA Sheki 77.95 324 P **P 20 07 05.8 -2.0**
MAUC Maruska 77.99 346 *e*P **P 20 07 08.4 +0.5**
AHRW Bad Neuenahr-A 77.99 354 *e*P **P 20 07 08.4 +0.7**
comp=Z,30nm,1.0s,baz=9.9,slow=5.7
MEM Membach 77.99 354 *d*P **P 20 07 08.1 +0.3**
comp=Z,29nm,1.0s
BTNL Ternell 78.01 354 *d*P **P 20 07 08.3 +0.4**
comp=Z,22nm,1.0s
BSTI Sart Tilman 78.04 355 *d*P **P 20 07 07.6 -0.5**
comp=Z,5.4nm,0.9s
ONI Oni 78.06 327 P **P 20 07 08.6 +0.1**
ONI IAmb IAmb 20 07 14.1
comp=Z,17nm,0.9s
ONI Oni 78.06 327 P **P 20 07 08.6 +0.1**
ONI pmax pmax
comp=Z,17nm,0.9s
MANZ Manzenberg 78.10 350 *e*P **P 20 07 08.9 +0.4**
comp=Z,5.6nm,1.6s,baz=9.9,slow=5.7
TNS Taunus Mts 78.20 353 *e*P **P 20 07 09.4 +0.4**
comp=Z,26nm,1.1s,baz=9.9,slow=5.7
VRAC Vranov 78.22 347 ⇓P **P 20 07 09.8 +0.6**
VRAC Vranov 78.22 347 *e*P **P 20 07 09.2 +0.1**
VRAC Vranov 78.22 347 P **P 20 07 09.7 +0.6**
BCLA Clavier 78.22 355 *d*P **P 20 07 09.3 +0.2**
comp=Z,16nm,0.9s
BHOU Houvegnez 78.25 354 *d*P **P 20 07 09.2 -0.1**
MILM Milestii Mici 78.27 339⇑P **P 20 07 09.4 0.0**
MILM Milestii Mici 78.27 339 P **P 20 07 09.6 +0.2**
ROTZ Rotzenmuhle 78.31 350 *e*P **P 20 07 10.1 +0.5**
comp=Z,3.5nm,1.2s,baz=9.9,slow=5.7
BUR08 Bucovina Ar. S 78.36 341 P **P 20 07 10.0 -0.1**
BMRD Maredsous 78.37 355 *d*P **P 20 07 10.0 +0.1**
comp=Z,22nm,1.0s
BURAR Bucovina Array 78.39 341⇑P **P 20 07 10.7 +0.5**
BURAR Bucovina Array 78.39 341 P **P 20 07 10.7 +0.5**
SOC Sochi 78.39 330 *e*P **P 20 07 09.8 -0.4**
SOC *e*PPP PPP 20 11 54.2
SOC *e*S **S 20 17 04.7 +2.5**
SOC *e*SS **SS 20 22 03.7 -0.6**
SOC *e*SSS SSS 20 25 32.1

SOC pmax pmax
comp=Z,36nm,1.0s
SOC MLR MLR
comp=Z,225nm,21.0s
ZVC Zvikov 78.40 349 *e*P **P 20 07 10.3 +0.2**
KECS Kecovo 78.43 344 *e*P **P 20 07 11.2 +0.9**
KECS Kecovo 78.43 344 *e*P **P 20 07 11.2 +0.9**
GRA1 Grafenberg Arr 78.48 351 P **P 20 07 10.5 -0.1**
GRA1 IAmb IAmb 20 07 12.9
comp=Z,39nm,1.3s
GRF Grafenberg Arr 78.48 351 P **P 20 07 10.5 -0.1**
GRF pmax pmax
comp=Z,39nm,1.3s
GRF Grafenberg Arr 78.48 351 *e*P **P 20 07 11.3 +0.7**
comp=Z,31nm,1.2s,baz=9.9,slow=5.7
GRF *e*L L 20 37 00.3
comp=Z,239nm,19.1s
GRFO Grafenberg 78.48 351 P **P 20 07 10.6 +0.1**
GRFO IAmb IAmb 20 07 12.8
comp=Z,32nm,1.2s
GRFO Grafenberg 78.48 351 P **P 20 07 10.6 +0.1**
GRFO pmax pmax
comp=Z,32nm,1.2s
KRUC Moravsky 78.49 347 *e*P **P 20 07 10.3 -0.3**
RCHB Rochefort 78.49 355 *d*P **P 20 07 09.8 -0.8**
comp=Z,16nm,1.0s
JAVC Velka Javorina 78.50 346 *e*P **P 20 07 11.9 +1.1**
GIVF Givet 78.57 355 P **P 20 07 10.4 -0.6**
DOU Dourbes 78.58 355 *d*P **P 20 07 11.1 0.0**
comp=Z,14nm,1.1s
BAIF Baives 78.64 355 P **P 20 07 11.1 -0.3**
GIRR Girov 78.75 340 ⇑P **P 20 07 13.0 +0.9**
KHC Kasperske Hory 78.78 349 P **P 20 07 12.0 -0.2**
KHC Kasperske Hory 78.78 349 *e*P **P 20 07 12.7 +0.5**
KHC Kasperske Hory 78.78 349 P **P 20 07 12.0 -0.2**
KHC pmax pmax
comp=Z,16nm,1.2s
SIM Simferopol' 78.78 334 *e*P **P 20 07 12.6 +0.3**
SIM pmax pmax
comp=Z,35nm,1.0s
LEOM Leova 78.82 339 ⇓P **P 20 07 12.7 +0.2**
LEOM Leova 78.82 339 P **P 20 07 12.6 +0.2**
SMOL Smolenice 78.88 346 *e*P **P 20 07 14.8 +2.1**
WLF Walferdange 78.92 354 *d*P **P 20 07 12.9 -0.1**
comp=Z,12nm,1.0s
WLF Walferdange 78.92 354 *e*P **P 20 07 13.9 +0.9**
comp=Z,20nm,1.0s,baz=9.9,slow=5.7
CKRC Cesky Krumlov 79.00 349 *e*P **P 20 07 13.7 +0.3**
CKRC Cesky Krumlov 79.00 349 *e*P **P 20 07 13.7 +0.3**
MODS Modra-Piesok 79.03 347 *e*P **P 20 07 14.6 +1.0**
MODS pmax pmax
comp=Z,52nm,1.3s
MODS Modra-Piesok 79.03 347 *e*P **P 20 07 14.6 +1.0**
GEC2 GERESS Array S 79.05 349 *e*P **P 20 07 14.1 +0.3**
comp=Z,22nm,1.4s,baz=9.9,slow=5.7
GERES GERESS Array B 79.05 349 P **P 20 07 13.1 -0.7**
GERES GERESS Array B 79.05 349 P **P 20 07 13.6 -0.2**
comp=Z,2.1nm,0.7s,baz=19,slow=6.3,SNR=17
comp=Z,2.1nm,0.7s
ARCR ARCALIA 79.07 342 ⇑P **P 20 07 15.5 +1.7**
PSZ Piszkesteto 79.07 345 ⇑P **P 20 07 15.1 +1.2**
PSZ Piszkesteto 79.07 345 P **P 20 07 13.8 -0.1**
PSZ IAmb IAmb 20 07 16.2
comp=Z,30nm,1.2s
PSZ Piszkesteto 79.07 345 P **P 20 07 13.8 -0.1**
PSZ pmax pmax
comp=Z,30nm,1.2s
AKH Akhalkalaki 79.10 326 P **P 20 07 15.0 +0.7**
AKH Akhalkalaki 79.10 326 P **P 20 07 15.0 +0.7**
AKH pmax pmax
comp=Z,70nm,0.9s
TESR Tescani 79.14 340 ⇓P **P 20 07 14.7 +0.5**
ZST Bratislava 79.23 347 *e*P **P 20 07 16.0 +1.3**
ZST pmax pmax
comp=Z,97nm,1.4s
ZST Bratislava 79.23 347 *e*P **P 20 07 16.0 +1.3**
MESR Meseneni 79.28 342 ⇑P **P 20 07 16.6 +1.7**
GHRR 79.40 339 ⇑P **P 20 07 16.7 +1.1**
VARL Varlezi 79.45 339 ⇓P **P 20 07 17.1 +1.2**
VLDR Vladesti 79.45 339 ⇓P **P 20 07 17.1 +1.2**
LKRN Lenkeran, Azer 79.52 321 P **P 20 07 14.6 -1.8**
CJR Cluj-Napoca 79.57 342 ⇑P **P 20 07 17.4 +0.8**
CJR Cluj-Napoca 79.57 342 P **P 20 07 17.4 +0.8**
PANC Panciu 79.64 339 ⇓P **P 20 07 18.6 +1.7**
DRGR 79.67 343 ⇑P **P 20 07 17.5 +0.3**
DRGR 79.67 343 P **P 20 07 18.3 +1.1**
CONA Conrad Observa 79.67 347 *i* P **P 20 07 18.1 +0.9**
comp=Z,19nm,1.2s,SNR=7.9
MARR Marisel-Cluj 79.70 342 ⇑P **P 20 07 17.9 +0.5**
BCA Borcka 79.70 328 ⇑P **P 20 07 17.5 +0.1**
TURR Turia 79.71 340 ⇑P **P 20 07 19.1 +1.8**
OZUR 79.72 340 ⇑P **P 20 07 18.6 +1.2**
VRI Vrincioaia 79.74 340 ⇑P **P 20 07 18.0 +0.5**
VRI Vrincioaia 79.74 340 P **P 20 07 17.9 +0.5**
ODBI Odobesti 79.76 339 ⇑P **P 20 07 18.6 +1.0**
BOSR Bodos 79.77 340 ⇑P **P 20 07 18.8 +1.1**
SLCR Slobozia Conac 79.77 339 ⇑P **P 20 07 19.0 +1.4**
PLOR Plostina 79.77 340 ⇑P **P 20 07 18.0 +0.3**
PLOR Plostina 79.77 340 P **P 20 07 18.0 +0.3**
GNI Garni 79.77 325 P **P 20 07 19.1 +1.1**
GNI IAmb IAmb 20 07 35.9
comp=Z,43nm,1.1s
GNI Garni 79.77 325 P **P 20 07 19.9 +1.9**
GNI Garni 79.77 325 P **P 20 07 19.1 +1.1**
GNI pmax pmax
comp=Z,43nm,1.2s
GNI Garni 79.77 325 LR LR 20 47 44.3
comp=Z,451nm,19.3s,baz=32,slow=40
IZVR Izvoarele 79.81 339 ⇑P **P 20 07 19.3 +1.5**
RONA Rosalia, Austr 79.83 347 *i* P **P 20 07 18.8 +0.8**
comp=Z,24nm,1.6s,SNR=8.0
SCHLR Schela 79.86 339 ⇑P **P 20 07 19.1 +0.9**
COVR Voineasa-Covas 79.87 340 ⇑P **P 20 07 19.4 +1.1**
TLCR 79.91 338 ⇑P **P 20 07 19.2 +0.8**
TLCR 79.91 338 P **P 20 07 19.1 +0.8**
DOPR Dopca 79.92 340 ⇑P **P 20 07 19.1 +0.6**
KARS Kars 79.93 326 P **P 20 07 18.6 -0.2**
KARS Kars 79.93 326 P **P 20 07 18.6 -0.2**
KARS pmax pmax
comp=Z,67nm,1.0s
CFR Carcaliu 80.07 338 ⇑P **P 20 07 19.4 +0.1**
CFR Carcaliu 80.07 338 P **P 20 07 19.9 +0.7**
BFO Black Forest 80.09 353 P **P 20 07 19.0 -0.4**
BFO Black Forest 80.09 353 P **P 20 07 19.0 -0.4**
BFO pmax pmax
comp=Z,10.0nm,0.9s
BFO Black Forest 80.09 353 *e*P **P 20 07 19.8 +0.4**
comp=Z,14nm,1.1s,baz=9.9,slow=5.7
GRER 80.14 339 ⇑P **P 20 07 21.1 +1.4**
BIOA Bad Ischl, Aus 80.19 349 *i* P **P 20 07 20.3 +0.3**
comp=Z,21nm,1.2s,SNR=8.0
SENK Senkaya-Erzuru 80.24 327 *e*P **P 20 07 22.3 +1.7**
NEHR Nehoiu 80.25 340 ⇑P **P 20 07 21.2 +0.9**
MLR Muntele Rosu 80.26 340 ⇑P **P 20 07 22.0 +1.6**
MLR Muntele Rosu 80.26 340 *e*P **P 20 07 22.8 +2.3**
MLR Muntele Rosu 80.26 340 P **P 20 07 20.6 +0.1**
MLR IAmb IAmb 20 07 23.7
comp=Z,38nm,1.0s
MLR Muntele Rosu 80.26 340 P **P 20 07 20.6 +0.1**
MLR pmax pmax
comp=Z,38nm,1.0s
MLR Muntele Rosu 80.26 340 P **P 20 07 21.3 +0.8**
comp=Z,32nm,0.9s,baz=52,slow=11,SNR=30
MLR LR LR 20 46 02.0
comp=Z,131nm,18.0s,baz=10,slow=38
comp=Z,32nm,0.9s
WB0 Warramunga Arr 80.27 221 P **P 20 07 20.2 -0.3**
WB0 IAmb IAmb 20 07 38.8
comp=Z,22nm,1.2s
ECH Echery 80.30 353 P **P 20 07 19.6 -0.8**
ECH IAmb IAmb 20 07 21.5
comp=Z,16nm,1.0s
ECH Echery 80.30 353 P **P 20 07 19.7 -0.8**
ECH pmax pmax
comp=Z,16nm,1.0s
TPGR Topolog 80.31 338 ⇓P **P 20 07 21.3 +0.7**
NAX Nakhchivan 80.36 324 P **P 20 07 19.4 -1.6**
SIRR Siria 80.36 343 ⇓P **P 20 07 21.9 +1.1**
ARSA Arzberg 80.38 347 *e*P **P 20 07 21.5 +0.6**
comp=Z,20nm,1.6s,SNR=7.6
WR0 Warramunga Arr 80.38 220 P **P 20 07 21.2 +0.1**
WRAB Tennant Creek 80.44 221 P **P 20 07 21.6 +0.2**
WRAB Tennant Creek 80.44 221 P **P 20 07 21.6 +0.2**
WRAB pmax pmax
comp=Z,12nm,1.0s
WB2 Warramunga Arr 80.44 221 P **P 20 07 21.4 -0.1**
WB2 IAmb IAmb 20 07 39.8
comp=Z,18nm,1.1s
WRA Warramunga Arr 80.45 221 P **P 20 07 21.7 +0.2**
comp=Z,3.2nm,0.6s,baz=32,slow=5.9,SNR=26
WRA LR LR 20 39 05.2
comp=Z,373nm,21.8s,baz=340,slow=33
comp=Z,3.2nm,0.6s
ISR Istrita 80.49 339 ⇑P **P 20 07 23.3 +1.6**
ISR Istrita 80.49 339 P **P 20 07 23.2 +1.6**
VOIR 80.50 341 ⇑P **P 20 07 22.8 +1.0**
VOIR 80.50 341 P **P 20 07 22.7 +1.0**
RAO Raoul Island 80.52 176 LR LR 20 36 07.2
comp=Z,290nm,20.0s,baz=111,slow=30
LESA Schwarzleotal 80.56 349 *i* P **P 20 07 22.4 +0.4**
comp=Z,9.6nm,1.0s
HARR Harsova 80.58 338 ⇑P **P 20 07 22.3 +0.3**
HARR Harsova 80.58 338 P **P 20 07 22.7 +0.7**
ARR Arges 80.65 341 ⇑P **P 20 07 23.7 +1.2**
TIRR Tirgusor 80.69 338 ⇓P **P 20 07 23.3 +0.7**
TIRR Tirgusor 80.69 338 P **P 20 07 22.1 -0.5**
TIRR Tirgusor 80.69 338 P **P 20 07 22.1 -0.5**
TIRR pmax pmax
comp=Z,71nm,1.0s
TLBR Topalu 80.69 338 ⇓P **P 20 07 22.9 +0.3**
RETA Reutte 80.71 351 *i* P **P 20 07 23.0 +0.2**
comp=Z,14nm,1.3s
KTUT Trabzon 80.72 329 ⇑P **P 20 07 23.8 +1.0**
CLF Chambon-Foret 80.76 357 P **P 20 07 22.7 -0.2**
WATA Walderalm 80.77 350 *i* P **P 20 07 23.6 +0.4**
comp=Z,37nm,1.1s,SNR=14
MOTA Moosalm 80.81 351 *i* P **P 20 07 23.6 +0.2**
comp=Z,41nm,1.3s,SNR=11
KBA Koelnbreinsper 80.83 349 *i* P **P 20 07 24.5 +0.9**
comp=Z,64nm,1.3s,SNR=25
WTTA Wattenberg 80.84 350 *i* P **P 20 07 24.0 +0.4**
comp=Z,37nm,1.1s,SNR=14
SQTA Sankt Quirin 80.93 350 *i* P **P 20 07 24.4 +0.4**
comp=Z,32nm,1.1s,SNR=12
MORH Mrgy, Hungar 80.93 345 ⇑P **P 20 07 23.8 0.0**
MTO3 Montecristo 80.96 78 P **P 20 07 24.6 -0.2**
MTO3 IAmb IAmb 20 07 26.3
comp=Z,19nm,1.0s
QUIF Quistinic 80.96 0 P **P 20 07 23.3 -0.7**
SULR 80.97 340 ⇑P **P 20 07 25.1 +1.1**
DAVA Damuels 80.99 351 *i* P **P 20 07 24.0 -0.4**
comp=Z,15nm,1.3s
GZR Gura Zlata 81.00 342 ⇑P **P 20 07 25.1 +0.7**
GZR Gura Zlata 81.00 342 P **P 20 07 25.0 +0.7**
BZS Buzias 81.00 343 ⇑P **P 20 07 24.7 +0.4**
BZS Buzias 81.00 343 *e*P **P 20 07 24.3 0.0**
BZS Buzias 81.00 343 P **P 20 07 24.7 +0.4**
SOKA Soboth 81.01 348 *i* P **P 20 07 25.1 +0.7**
comp=Z,59nm,1.4s,SNR=30
ICOR Ion Corvin 81.15 338 ⇑P **P 20 07 26.6 +1.5**
GROS Grobnik 81.16 347 *i* P **P 20 07 25.6 +0.4**
FETA Feichten 81.17 351 *i* P **P 20 07 25.8 +0.4**
comp=Z,26nm,1.1s,SNR=9.9
MYKA Terra Mystica 81.23 349 *i* P **P 20 07 25.5 0.0**
comp=Z,18nm,1.4s,SNR=7.3
OBKA Obir 81.24 348 *i* P **P 20 07 26.2 +0.5**
comp=Z,30nm,1.3s,SNR=14
OBKA Obir 81.24 348 *e*P **P 20 07 25.8 +0.2**
ABTA Abteltersbach 81.25 349 *e*P **P 20 07 26.0 +0.3**
comp=Z,31nm,1.2s,SNR=16
MANR Mangalia 81.25 338 ⇓P **P 20 07 25.8 +0.2**
PRED Cave del Predi 81.43 349 P **P 20 07 26.3 -0.3**
PRED IAmb IAmb 20 07 28.1
comp=Z,43nm,1.4s
MLAZ Malazgirt-MUS 81.44 326 *e*P **P 20 07 28.5 +1.6**
SGRR Singureni 81.46 340 ⇓P **P 20 07 27.6 +0.9**
DAVOX Davos/Dischmat 81.49 351 P **P 20 07 27.7 +0.5**
comp=Z,13nm,0.9s,baz=344,slow=6.6,SNR=17
DAVOX LR LR 20 47 18.1
comp=Z,113nm,18.2s,baz=338,slow=38
comp=Z,13nm,0.9s
CLUD Cludinico 81.50 349 P **P 20 07 26.4 -0.5**
DIKM Dikmen 81.51 332 ⇑P **P 20 07 28.5 +1.5**
DIKM Dikmen 81.51 332 *e*P **P 20 07 27.4 +0.4**
HERR Herculane 81.56 342 ⇑P **P 20 07 27.6 +0.3**
FUORN Ofenpass-Fuorn 81.62 351 P **P 20 07 27.4 -0.4**
STAL STALIGIAL 81.71 349 P **P 20 07 27.3 -0.7**
FRGS Fruska Gora 81.77 344 ⇑P **P 20 07 28.9 +0.5**
FRGS Fruska Gora 81.77 344 ⇑*i*P **P 20 07 28.6 +0.3**
CRES Cresnjev 81.79 347 *e*P **P 20 07 27.9 -0.5**
MDVR Moldovita 81.79 343 ⇑P **P 20 07 28.8 +0.2**
TUE Stuetta 81.85 352 P **P 20 07 28.9 -0.1**
TUE IAmb IAmb 20 07 30.6
comp=Z,17nm,0.9s
SABO M.te Sabotino 81.88 349 P **P 20 07 28.2 -0.8**
SABO IAmb IAmb 20 07 50.8
comp=Z,8.9nm,0.9s
JAVS Javornik 81.91 348 *i* P **P 20 07 28.4 -0.8**
AVF Avril sur Loir 81.94 356 P **P 20 07 28.7 -0.5**
CEY Cerknica 82.01 348 *i* P **P 20 07 29.4 -0.2**
CEY Cerknica 82.01 348 *e*P **P 20 07 29.2 -0.4**
AKDM Akdamar-Van 82.02 325 *e*P **P 20 07 31.5 +1.5**
CTI Castel Tesino 82.04 350 P **P 20 07 29.2 -0.7**
CTI IAmb IAmb 20 07 30.7
comp=Z,19nm,1.1s
CTI Castel Tesino 82.04 350 P **P 20 07 29.2 -0.7**
CTI pmax pmax
comp=Z,19nm,1.1s
PUNG Punghina 82.04 342 ⇓P **P 20 07 30.2 +0.4**
SMF Signal de Mont 82.07 355 P **P 20 07 29.3 -0.6**
SENIN Lac Senin/Sane 82.13 353 P **P 20 07 30.5 0.0**
SENIN IAmb IAmb 20 07 32.6
comp=Z,54nm,1.2s
BOJS Bojanci 82.13 347 ⇑*i*P **P 20 07 30.1 -0.1**
GURO Guroymak-BITLI 82.15 326 P **P 20 07 30.8 +0.1**
GURO IAmb IAmb 20 07 33.2
comp=Z,45nm,2.0s
TOKT Tokat 82.34 331 *e*P **P 20 07 30.8 -0.7**
A051A Mrakovica 82.37 346 *e*P **P 20 07 31.6 0.0**
TEKS Tekeris 82.40 344 ⇑*i*P **P 20 07 31.6 -0.1**
PLVB Pleven 82.55 340 ⇑P **P 20 07 33.1 +0.7**
SVSK Karacayir 82.57 330 *e*P **P 20 07 34.0 +1.4**
BLY Banja Luka 82.59 346 ⇑*i*P **P 20 07 32.8 +0.2**
FITZ Fitzroy Crossi 82.64 229 P **P 20 07 33.9 +0.8**
TEOL Teolo 82.72 350 P **P 20 07 32.5 -0.8**
ELND Elena 82.72 339 ⇓P **P 20 07 33.4 0.0**
BLKB Belogradchik 82.72 342 ⇓P **P 20 07 33.4 0.0**
PTK Pertek 82.74 328 *e*P **P 20 07 35.6 +1.8**
CUKT Cukurca 82.75 324 *e*P **P 20 07 34.5 +0.7**
LEM Lembang 82.89 250 LR LR 20 43 20.4
comp=Z,26nm,21.0s,baz=224,slow=35
BOVS Bovan 82.90 342 ⇑P **P 20 07 34.2 -0.1**
ARPR Arapgir-MALATY 82.90 329 *e*P **P 20 07 36.0 +1.4**
ARPR Arapgir-MALATY 82.90 329 P **P 20 07 34.1 -0.4**
ARPR IAmb IAmb 20 07 37.1
comp=Z,29nm,0.9s
A050A Klekovaca 82.95 346 ⇑*i*P **P 20 07 34.2 -0.4**
HAPS Han Pijesak,BI 82.95 344 ⇑*i*P **P 20 07 35.3 +0.6**
LPL La Plagne 83.01 353 P **P 20 07 35.5 +0.4**
CORM Corum 83.05 332 *e*P **P 20 07 36.8 +1.5**
BBLS Lazići 83.09 344 ⇑*i*P **P 20 07 36.0 +0.7**
RUDO Rudo 83.33 344 ⇑*i*P **P 20 07 36.6 +0.1**
SSB Saint Sauveur 83.39 355 P **P 20 07 37.0 +0.2**
SSB IAmb IAmb 20 07 38.4
comp=Z,22nm,1.0s
SSB Saint Sauveur 83.39 355 P **P 20 07 37.0 +0.2**
SSB pmax pmax
comp=Z,22nm,1.0s
BNI Bardonecchia 83.48 353 P **P 20 07 38.0 +0.6**
BNI Bardonecchia 83.48 353 P **P 20 07 38.0 +0.6**
BNI pmax pmax
comp=Z,37nm,0.9s
SJES Sjenica 83.58 344 ⇑*i*P **P 20 07 38.3 +0.4**
DARE Darende-Malaty 83.65 329 *e*P **P 20 07 40.1 +1.7**
ORIF Oris-en-Rattie 83.67 354 P **P 20 07 39.4 +1.1**
MAZI Mazidag 83.68 327 *e*P **P 20 07 39.2 +0.7**
YUVA Yuva-Kibriscik 83.68 334 *e*P **P 20 07 39.4 +0.9**
MDUB Mudurnu 83.74 335 P **P 20 07 38.2 -0.6**
BR131 Keskin Array S 83.75 333 *e*P **P 20 07 39.4 +0.5**
BR131 Keskin Array S 83.75 333 P **P 20 07 39.0 +0.1**
BR131 IAmb IAmb 20 07 41.0
comp=Z,26nm,0.9s
BR131 Keskin Array S 83.75 333 P **P 20 07 39.0 +0.1**
BR131 pmax pmax
comp=Z,26nm,0.9s
BRTR Keskin Array B 83.75 333 P **P 20 07 38.8 -0.2**
BRTR Keskin Array B 83.75 333 P **P 20 07 39.0 +0.1**
comp=Z,19nm,0.9s,baz=48,slow=2.7,SNR=92
BRTR LR LR 20 47 52.1
comp=Z,121nm,21.7s,baz=350,slow=38
comp=Z,19nm,0.9s
ZCCA Zocca 83.79 350 P **P 20 07 39.0 +0.1**
VIVF Saint-Julien-l 83.81 355 P **P 20 07 38.8 -0.2**
HRT Hereke 83.81 336 *e*P **P 20 07 39.8 +0.7**
UPM Unac-Piva 83.82 344 *e*P **P 20 07 38.0 -1.2**
NEVS Nevesinje 83.86 345 *e*P **P 20 07 39.6 +0.3**
ANTO Ankara 83.86 333 ⇑P **P 20 07 40.5 +1.1**
ANTO Ankara 83.86 333 P **P 20 07 39.4 0.0**
ANTO Ankara 83.86 333 P **P 20 07 39.4 0.0**
ANTO pmax pmax
comp=Z,52nm,1.3s
LFF La Frestale 83.89 358 P **P 20 07 39.2 -0.1**
BNN Bunyan 83.90 331 *e*P **P 20 07 40.8 +1.1**
BNN Bunyan 83.90 331 P **P 20 07 39.6 0.0**
GULT Gulveren 83.95 335 *e*P **P 20 07 40.8 +0.9**
AS31 Alice Springs 83.97 219 P **P 20 07 39.7 -0.2**
ASAR Alice Springs 83.97 219 P **P 20 07 39.5 -0.3**
ASAR Alice Springs 83.97 219 P **P 20 07 39.6 -0.3**
ASAR Alice Springs 83.97 219 P **P 20 07 40.4 +0.5**
comp=Z,3.2nm,0.6s,baz=24,slow=5.6,SNR=78
comp=Z,3.2nm,0.6s
YLV Yalova 84.12 336 *e*P **P 20 07 42.2 +1.5**
SARI SarD1z-Kayseri 84.13 330 *e*P **P 20 07 42.5 +1.6**
AFSR Afar-Bala (An 84.17 333 *e*P **P 20 07 42.4 +1.4**
BRY Bratogost 84.17 344 *e*P **P 20 07 40.3 -0.7**
SRCK Saricakaya, Es 84.29 335 *e*P **P 20 07 42.1 +0.6**
STON Ston 84.34 345 *e*P **P 20 07 40.8 -0.8**
RDO Rodhopi 84.49 339 *e*P **P 20 07 43.2 +0.8**
RDO Rodhopi 84.49 339 P **P 20 07 42.5 +0.1**
SERE Sereflikochisa 84.50 332 *e*P **P 20 07 43.6 +0.9**
MRMT Marmara Adasi 84.53 337 *e*P **P 20 07 42.9 +0.2**
OSSC Osservatorio P 84.58 350 P **P 20 07 42.7 -0.1**
ALN Alexandroupoli 84.61 338 *e*P **P 20 07 43.5 +0.4**
ALN Alexandroupoli 84.61 338 P **P 20 07 42.7 -0.3**
ALN IAmb IAmb 20 07 44.4
comp=Z,24nm,1.0s
ALN Alexandroupoli 84.61 338 P **P 20 07 42.7 -0.3**
ALN pmax pmax
comp=Z,24nm,1.0s
HCY Herceg Novi 84.62 344 *e*P **P 20 07 42.1 -1.0**
EDC Edincik 84.71 337 *e*P **P 20 07 44.2 +0.6**
ERIK Erikli-Kesan 84.72 338 *e*P **P 20 07 44.6 +1.0**
DRME Dracevica, Mon 84.76 344 ⇑*i*P **P 20 07 43.6 -0.2**
GUMA Gualdo di Mace 84.78 348 P **P 20 07 43.8 -0.2**
GUMA IAmb IAmb 20 08 09.6
comp=Z,59nm,0.9s
KMRS Kahramanmaras 84.81 329 *e*P **P 20 07 45.4 +1.2**
CIFT Cifteler, Eski 84.81 334 *e*P **P 20 07 44.7 +0.5**
LPK Lapseki 84.95 338 *e*P **P 20 07 45.5 +0.7**
GAZ Gaziantep 85.01 329 *e*P **P 20 07 46.8 +1.5**
CHBY Cihanbeyli 85.03 333 *e*P **P 20 07 45.8 +0.5**
TVSB Tavsanli 85.15 336 *e*P **P 20 07 46.9 +1.0**
KOZT Kozan 85.17 330 *e*P **P 20 07 46.5 +0.5**
CMRD Camardi-Nigde 85.26 331 *e*P **P 20 07 47.5 +1.0**
CAMP Campotosto 85.29 348 P **P 20 07 46.4 -0.3**
CESX Cesi 85.32 349 IAmb IAmb 20 07 48.4
comp=Z,25nm,1.0s
YESY Yesilyurt 85.52 332 *e*P **P 20 07 48.1 +0.3**
LADK Ladik-KONYA 85.53 333 *e*P **P 20 07 48.3 +0.4**
KARA Karaisali 85.61 331 *e*P **P 20 07 49.1 +1.0**
SHUT Suhut-Afyon 85.71 334 *e*P **P 20 07 49.2 +0.5**
SGRT San Giovanni R 85.73 346 P **P 20 07 48.0 -0.8**
SGRT IAmb IAmb 20 11 06.4
comp=Z,13nm,0.6s
INTR Introdacqua 85.74 348 IAmb IAmb 20 08 06.2
comp=Z,12nm,1.0s
KONT Konya--Tatoy 85.77 333 *e*P **P 20 07 50.1 +1.1**
SEYD Seydisehir-KON 86.42 333 *e*P **P 20 07 53.2 +0.9**
PBRG Braganca 87.00 3 *e*P **P 20 07 54.5 -0.5**
SHME Shamm 87.11 310 P **P 20 07 55.0 -0.7**
POLO Lamas de Olo 87.40 4 *e*P **P 20 07 57.1 +0.2**
comp=Z,23nm,1.5s
PVRL Vila Real 87.50 4 *e*P **P 20 07 57.5 +0.1**
comp=Z,72nm,1.3s
MVO Moncorvo 87.63 3 *e*P **P 20 07 58.0 0.0**
comp=Z,46nm,1.4s
MSFE Esma-Masafi 87.68 309 P **P 20 07 58.4 -0.1**
UOSS Minazif 88.01 309 P **P 20 07 58.6 -1.5**
UOSS IAmb IAmb 20 07 59.9
comp=Z,12nm,0.8s
UOSS Minazif 88.01 309 P **P 20 07 59.2 -0.8**
HATD Hatta, Dubai 88.15 309 P **P 20 08 00.3 -0.4**
WSAR Wadi Sarin 88.23 306 LR LR 20 52 15.1
comp=Z,109nm,19.3s,baz=58,slow=39
CSS Mathiatis 88.26 331 P **P 20 07 59.7 -1.4**
MTE Manteigas 88.38 4 *e*P **P 20 08 01.4 -0.2**
comp=Z,48nm,1.2s
MTE Manteigas 88.38 4 P **P 20 08 01.1 -0.5**
PALK Pallekele 88.43 280 P **P 20 08 02.3 +0.1**
PALK IAmb IAmb 20 08 03.8
comp=Z,16nm,1.0s
PALK Pallekele 88.43 280 P **P 20 08 02.3 +0.1**
PALK pmax pmax
comp=Z,16nm,1.0s
PALK Pallekele 88.43 280 P **P 20 08 02.5 +0.3**
comp=Z,13nm,1.0s,baz=18,slow=3.1,SNR=5.0
comp=Z,13nm,1.0s
COI Coimbra 88.53 4 *e*P **P 20 08 02.8 +0.6**
SOHO SOHO 88.53 308 *i* P **P 20 08 02.0 -0.5**
SNR=7.7
PCAS Casmilo, Conde 88.68 4 *e*P **P 20 08 01.9 -1.0**
comp=Z,64nm,1.5s
STKA Stephens Creek 88.75 210 P **P 20 08 04.0 +0.9**
comp=Z,2.3nm,0.7s,baz=340,slow=12,SNR=8.3
STKA LR LR 20 45 16.3
comp=Z,229nm,20.2s,baz=22,slow=34
comp=Z,2.3nm,0.7s
PCBR Castelo Branco 88.94 4 *e*P **P 20 08 03.9 -0.2**
comp=Z,26nm,1.5s
ESDC Sonseca Array 89.19 1 P **P 20 08 03.9 -1.6**
ESDC IAmb IAmb 20 08 06.3
comp=Z,23nm,1.6s
ESDC Sonseca Array 89.19 1 P **P 20 08 04.7 -0.7**
comp=Z,5.3nm,0.8s,baz=353,slow=3.9,SNR=23
comp=Z,5.3nm,0.8s
URZ Urewera 89.39 180 LR LR 20 41 57.0
comp=Z,415nm,21.8s,baz=121,slow=31
MMAI Mount Meron Ar 89.41 329 P **P 20 08 06.7 +0.2**
comp=Z,9.2nm,0.9s,baz=3.8,slow=4.3,SNR=11
MMAI LR LR 20 53 15.0
comp=Z,141nm,20.6s,baz=3.0,slow=39
comp=Z,9.2nm,0.9s
ASF Jabal al Asfar 89.69 327 LR LR 20 54 18.5
comp=Z,196nm,19.3s,baz=333,slow=40
PMAFR Mafra 89.73 5 *e*P **P 20 08 07.4 -0.5**
comp=Z,169nm,1.8s
PESTR Estremoz 89.90 4 *e*P **P 20 08 08.2 -0.5**
VAE Valguarnera 90.12 346 LR LR 20 53 34.9
comp=Z,68nm,18.6s,baz=336,slow=39
EVO Evora 90.22 4 *e*P **P 20 08 09.3 -0.9**
comp=Z,28nm,1.6s
IDI Anoyia 90.23 338 LR LR 20 53 51.1
comp=Z,73nm,18.2s,baz=15,slow=39
PBAR Barrancos 90.62 3 *e*P **P 20 08 11.0 -1.0**
comp=Z,26nm,1.7s
PBEJ Beja 90.73 4 *e*P **P 20 08 12.5 -0.1**
comp=Z,29nm,1.7s
PVAQ Vaqueiros 91.36 4 *e*P **P 20 08 15.8 +0.3**
SJG San Juan 91.42 58 LR LR 20 50 58.2
comp=Z,92nm,20.3s,baz=13,slow=37
EIL Elat 92.64 328 LR LR 20 56 50.7
comp=Z,179nm,18.5s,baz=52,slow=40
RAYN Ar Rayn 94.14 317 P **P 20 08 28.4 -0.2**
RAYN IAmb IAmb 20 08 29.5
comp=Z,12nm,1.1s
RAYN Ar Rayn 94.14 317 *i* P **P 20 08 28.8 +0.2**
SNR=10
RAYN Ar Rayn 94.14 317 P **P 20 08 28.7 +0.1**
SDV Santo Domingo 96.47 67 LR LR 20 56 04.1
comp=Z,68nm,18.8s,baz=334,slow=38
PCRV Puerto La Cruz 98.79 61 LR LR 20 55 10.2
comp=Z,118nm,20.7s,slow=36
TORD Torodi Ar. Bea 115.50 355 PKP **PKiKP 20 13 51.0 -0.8**
comp=Z,0.6nm,0.4s,baz=342,slow=2.6,SNR=5.0
DBIC Dimbokro 122.03 2 PKP **PKPdf 20 14 03.9 -0.4**
comp=Z,4.4nm,0.7s,baz=205,slow=4.1,SNR=3.5
H03N2 Juan Fernandez 123.56 103 T T 22 29 09.2
baz=318,slow=78,SNR=4.5
H03N1 Juan Fernandez 123.58 103 T T 22 29 12.7
baz=318,slow=78,SNR=6.0
H03N3 Juan Fernandez 123.58 103 T T 22 29 03.5
baz=318,slow=78,SNR=6.7

BDFB	**Brasilia**	**129.26**	**62**	PKP	**PKPdf**	**20 14 18.6**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=0.0,slow=0.0,SNR=3.6						
CPUP	**Villa Florida**	**132.02**	**80**		**PKPdf**	**20 14 22.7**	**-0.3**
CPUP	**Villa Florida**	**132.02**	**80**	PKP	**PKPdf**	**20 14 23.3**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=3.1,slow=7.1,SNR=4.9						
CPUP				SKPbc	**SKPab**	**20 17 48.9**	**+2.7**
	comp=Z,1.6nm,0.4s,baz=324,slow=4.3,SNR=3.9						
PLCA	**Paso Flores**	**133.38**	**105**	PKP	**PKPdf**	**20 14 25.2**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=315,slow=2.9,SNR=8.1						
PLCA				SKPbc	**SKPab**	**20 17 51.9**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=285,slow=6.5,SNR=3.3						
QSPA	**South Pole Qui**	**141.25**	**180**		**PKPdf**	**20 14 38.8**	**0.0**
QSPA	**South Pole Qui**	**141.25**	**180**	PKP	**PKPdf**	**20 14 39.0**	**+0.2**
	comp=Z,5.0nm,0.9s,baz=311,slow=1.1,SNR=9.4						
TSUM	**Tsumeb**	**144.01**	**326**		PKPbc	20 14 43.1	-0.2
MAW	**Mawson**	**145.08**	**218**	PKPbc	**PKPab**	**20 14 45.6**	**+0.5**
	comp=Z,12nm,0.8s,baz=70,slow=7.9,SNR=9.3						
LBTB	**Lobatse**	**145.83**	**310**	PKPdf	**PKPdf**	**20 14 47.3**	**-1.0**
LBTB	**Lobatse**	**145.83**	**310**	PKIKP	**PKPdf**	**20 14 47.3**	**-1.0**
WIN	**Windhoek**	**147.28**	**325**		**PKPbc**	**20 14 53.6**	**+0.3**
WIN	**Windhoek**	**147.28**	**325**	PKP2	**PKPbc**	**20 14 53.6**	**+0.3**
BOSA	**Boshof**	**149.00**	**307**		**PKPbc**	**20 14 57.1**	**-0.5**
BOSA	**Boshof**	**149.00**	**307**	PKP2	**PKPbc**	**20 14 57.1**	**-0.5**
BOSA	**Boshof**	**149.00**	**307**	PKPbc	**PKPbc**	**20 14 58.1**	**+0.6**
	comp=Z,10nm,0.8s,baz=82,slow=1.3,SNR=17						
BELA	**Belgrano 2**	**151.06**	**167**		**PKPbc**	**20 15 00.5**	**-0.5**
ELIB	**Princess Elisa**	**156.45**	**200**	*d*PKP	PKPab	20 15 21.0	-11

DJA 09 19:56:43.8±0.4,5°S±4°×10°4E±°, *h*39km±10km, M3.7/11, MLv3.7/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.57**	**44**	P	Pn	19 56 56.6	+1.0
LWLI				S	Sn	19 57 05.8	+1.9
KASI	**Kota Agung**	**0.84**	**96**	P	Pn	19 57 00.0	+0.9
KASI				S	Sn	19 57 11.3	+1.0
MNAI	**Manna**	**1.27**	**327**	P	Pn	19 57 05.2	+0.1
MNAI				S	Sn	19 57 21.2	+0.2
SBJI	**Serang**	**2.55**	**106**	P	Pn	19 57 23.3	+0.6
SKJI	**Sukabumi**	**3.28**	**119**	P	Pn	19 57 32.2	-0.5
CNJI	**Cibinong**	**3.92**	**119**	P	Pn	19 57 42.0	+0.5
PPBI	**Pangkal Pinang**	**4.08**	**37**	P	Pn	19 57 43.5	-0.2
LEM	**Lembang**	**4.17**	**110**	P	Pn	19 57 45.2	+0.1
PPSI	**Pulau Pagai**	**4.50**	**306**	P	Pn	19 57 49.2	-0.3

*PDG **09** 20:10:04.4±0.4,40°.36N×19°.43E, h15km±1km, ML3.2/12, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
*THE **09** 20:10:05.2,40°.23N×19°.42E, h0km±1km, ML3.2/14, Error ellipse: s-maj=1.6km s-min=0.6km az=258.0*
*TIR **09** 20:10:05.1,40°.28N×19°.56E, h25km±1km, Md3.6, Ml3.4*
*PRU **09** 20:10:06.7,40°.47N×19°.66E, h0km*
*ATH **09** 20:10:07.3,40°.23N×19°.50E, h14km±3km, ML3.3/17, Error ellipse: s-maj=3.3km s-min=1.0km az=183.0*
*IDC **09** 20:10:08.7±3.9,40°.97N×20°.12E, h0km, mb3.3/5, mbtmp3.4/7, ML3.4/2, Error ellipse: s-maj=72.6km s-min=19.5km az=37.0*

ISC 09 20:10:05.7±1.0, 40°.30N±0°.02×19°.46E±0°.03, *h*16km±8km, n154, σ1°36/203, mb3.4/5, 5C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.17**	**9**	P	**Pb**	**20 10 10.6**	**+0.2**
	baz=346						
VLO				S	**Sb**	**20 10 14.4**	**+0.8**
	baz=346						
VLO				AMP			
	comp=E,57nm,0.1s,baz=346						
VLO	**Vlora**	**0.17**	**9**	P	**Pb**	**20 10 10.6**	**+0.2**
VLO				S	**Sb**	**20 10 14.7**	**+1.1**
	comp=E,16μm,0.3s						
SRN	**Sarande**	**0.59**	**136**	P	**Pg**	**20 10 15.8**	**-1.5**
	baz=139						
SRN				S	**Sg**	**20 10 23.9**	**-1.3**
	baz=139						
SRN				AMP			
	comp=N,4.6nm,0.2s,baz=139						
SRN	**Sarande**	**0.59**	**136**	P	**Pg**	**20 10 15.7**	**-1.6**
SRN				S	**Sg**	**20 10 24.5**	**-0.7**
	comp=N,845nm,0.5s						
KEK	**Kerkira**	**0.64**	**156**	P	Pg	20 10 14.8	-3.5
KEK				S	**Sg**	**20 10 25.6**	**-1.2**
KASA	**Kassiopi**	**0.66**	**147**	P	**Pg**	**20 10 18.3**	**-0.4**
KASA				S	**Sg**	**20 10 27.0**	**-0.4**
KASA				AML	AML	20 10 31.6	
	comp=E,4120μm,0.3s						
KASA				AML	AML	20 10 31.9	
	comp=N,2898μm,0.3s						
SCTE	**Santa Cesarea**	**0.80**	**254**	P	**Pb**	**20 10 22.2**	**+1.0**
	baz=257						
SCTE				S	**Sb**	**20 10 34.2**	**+2.5**
	baz=257						
SCTE				AMP			
	comp=E,6.6nm,0.2s,baz=257						
SCTE	**Santa Cesarea**	**0.80**	**254**	P	**Pb**	**20 10 22.2**	**+1.0**
SCTE				S	**Sb**	**20 10 34.0**	**+2.3**
SCTE				AML	AML	20 10 34.9	
	comp=N,4605μm,0.3s						
SCTE				AML	AML	20 10 36.2	
	comp=E,3690μm,0.3s						
LSK	**Leskovik**	**0.88**	**100**	P	**Pg**	**20 10 21.4**	**-1.5**
	baz=98						
LSK				S	**Sg**	**20 10 32.7**	**-1.7**
	baz=98						
LSK				AMP			
	comp=N,5.9nm,0.5s,baz=98						
LSK	**Leskovik**	**0.88**	**100**	P	**Pg**	**20 10 21.3**	**-1.5**
LSK				S	**Sn**	**20 10 35.8**	**-0.3**
	comp=N,2μm,0.6s						
IGT	**Igoumenitsa**	**1.02**	**139**	P	**Pb**	**20 10 24.6**	**-0.4**
	baz=141						
IGT	**Igoumenitsa**	**1.02**	**139**	P	**Pb**	**20 10 23.9**	**-1.1**
IGT				S	**Sb**	**20 10 38.5**	**+0.3**
	comp=N,1μm,0.4s						
IGT	**Igoumenitsa**	**1.02**	**139**	P	**Pb**	**20 10 23.8**	**-1.2**
IGT				S	**Sb**	**20 10 37.7**	**-0.4**
IGT				AML	AML	20 10 40.5	
	comp=N,2492μm,0.4s						
IGT				AML	AML	20 10 40.9	
	comp=E,1852μm,0.4s						
KBN	**Korca**	**1.06**	**72**	P	**Pn**	**20 10 26.0**	**-0.1**
	baz=69						
KBN				S	**Sg**	**20 10 38.2**	**-1.9**
	baz=69						
KBN				AMP			
	comp=E,4.7nm,0.9s,baz=69						
KBN	**Korca**	**1.06**	**72**	P	**Pn**	**20 10 25.9**	**-0.1**
KBN				S	**Sn**	**20 10 42.2**	**+1.7**
	comp=E,1μm,0.7s						
TIR	**Tirane**	**1.09**	**16**	P	**Pn**	**20 10 28.1**	**+1.8**
	baz=12						
TIR				S	**Sn**	**20 10 42.0**	**+1.0**
	baz=12						
TIR				AMP			
	comp=N,1.2nm,0.7s,baz=12						
TIR	**Tirane**	**1.09**	**16**	P	**Pn**	**20 10 27.7**	**+1.4**
TIR				S	**Sn**	**20 10 43.8**	**+2.7**
	comp=N,348nm,0.6s						
NEST	**Nestorio**	**1.22**	**84**	P	**Pn**	**20 10 28.3**	**+0.2**
NEST				S	**Sn**	**20 10 47.3**	**+2.9**
	comp=N,938nm,0.6s						
NEST	**Nestorio**	**1.22**	**84**	P	**Pn**	**20 10 28.4**	**+0.2**
NEST				AML	AML	20 10 50.4	
	comp=E,2400μm,0.7s						
NEST				AML	AML	20 10 50.8	
	comp=N,2170μm,0.7s						
JAN	**Janina**	**1.25**	**121**	P	**Pb**	**20 10 29.6**	**+0.7**
JAN				S	**Sg**	**20 10 47.4**	**+1.4**
	comp=N,2μm,0.4s						
JAN	**Janina**	**1.25**	**121**	P	**Pn**	**20 10 29.1**	**+0.6**
JAN				AML	AML	20 10 49.2	
	comp=N,3755μm,0.3s						
JAN				AML	AML	20 10 49.8	
	comp=E,4656μm,0.4s						
PENT	**Pentalofos**	**1.29**	**94**	P	**Pn**	**20 10 29.0**	**-0.1**
PENT				S	**Sg**	**20 10 49.4**	**+2.1**
PENT	**Pentalofos**	**1.29**	**94**	P	**Pn**	**20 10 29.3**	**+0.1**
OHR	**Ohrid**	**1.30**	**51**	P	**Pg**	**20 10 31.0**	**+0.3**
OHR				*e*Sg	**Sg**	**20 10 51.4**	**+3.8**
KPRO	**Kipourio**	**1.50**	**103**	P	**Pb**	**20 10 33.2**	**0.0**
KPRO				S	**Sg**	**20 10 54.5**	**+0.5**
	comp=E,1μm,0.7s						
KPRO	**Kipourio**	**1.50**	**103**	P	**Pn**	**20 10 32.6**	**+0.6**
KPRO				AML	AML	20 10 58.4	
	comp=E,2061μm,0.6s						
KPRO				AML	AML	20 10 58.7	
	comp=N,2155μm,0.8s						
FNA	**Florina**	**1.54**	**71**	P	**Pg**	**20 10 34.4**	**-0.8**
	baz=69						
FNA	**Florina**	**1.54**	**71**	P	**Pb**	**20 10 33.9**	**+0.1**
FNA				S	**Sg**	**20 10 55.9**	**+0.7**
	comp=N,1μm,0.5s						
FNA	**Florina**	**1.54**	**71**	P	**Pb**	**20 10 33.7**	**-0.2**
FNA				AML	AML	20 11 00.8	
	comp=E,2110μm,0.5s						
PHP	**Peshkopia**	**1.57**	**28**	P	**Pg**	**20 10 34.8**	**-1.0**
	baz=25						
PHP				S	**Sg**	**20 10 54.6**	**-1.5**
	baz=25						
PHP				AMP			
	comp=N,1.5nm,0.8s,baz=25						
PHP	**Peshkopia**	**1.57**	**28**	P	**Pg**	**20 10 34.9**	**-0.9**
PHP				S	**Sg**	**20 10 58.1**	**+1.9**
	comp=N,265nm,0.8s						
ULC	**Ulcinj**	**1.67**	**354**	*i*Pn	**Pn**	**20 10 34.6**	**+0.3**
ULC				*i* Sn	**Sb**	**20 10 57.2**	**+0.4**
TSLK	**Tsoukalades, L**	**1.74**	**148**	P	**Pn**	**20 10 35.4**	**+0.1**
TSLK	**Tsoukalades, L**	**1.74**	**148**	P	**Pn**	**20 10 35.4**	**+0.1**
PUK	**Puka**	**1.77**	**10**	P	**Pb**	**20 10 37.2**	**-0.6**
	baz=8.0						
PUK				S	**Sg**	**20 11 01.8**	**-0.8**
	baz=8.0						
PUK				AMP			
	comp=N,1.1nm,0.4s,baz=8.0						
LKD2	**Lefkada island**	**1.77**	**148**	P	**Pn**	**20 10 36.1**	**+0.3**
	baz=149						
LKD2	**Lefkada island**	**1.77**	**148**	P	**Pn**	**20 10 35.6**	**-0.1**
LKD2				S	**Sn**	**20 10 58.9**	**+0.9**
	comp=N,345nm,0.5s						
LKD2	**Lefkada island**	**1.77**	**148**	P	**Pn**	**20 10 36.1**	**+0.3**
LKD2				AML	AML	20 11 06.4	
	comp=N,1182μm,0.6s						
LKD2				AML	AML	20 11 10.4	
	comp=E,791μm,0.7s						
DRAG	**Dragano-Lefkad**	**1.83**	**152**	P	**Pn**	**20 10 36.1**	**-0.4**
DRAG	**Dragano-Lefkad**	**1.83**	**152**	P	**Pn**	**20 10 36.6**	**0.0**
NYDR	**Nydri-Lefkada**	**1.85**	**149**	P	**Pn**	**20 10 36.5**	**-0.2**
NYDR	**Nydri-Lefkada**	**1.85**	**149**	P	**Pn**	**20 10 36.6**	**-0.2**
DRME	**Dracevica, Mon**	**1.89**	**354**	*i*Pn	**Pn**	**20 10 38.0**	**+0.6**
DRME				*i* Sn	**Sb**	**20 11 02.7**	**-0.6**
DRME	**Dracevica, Mon**	**1.89**	**354**	*e*Pn	**Pn**	**20 10 37.6**	**+0.2**
EVGI	**Lefkada island**	**1.92**	**151**	P	**Pn**	**20 10 37.4**	**-0.3**
EVGI	**Lefkada island**	**1.92**	**151**	P	**Pn**	**20 10 37.6**	**-0.1**
FSK	**Fiskardo**	**2.03**	**155**	P	**Pn**	**20 10 38.5**	**-0.7**
FSK				AML	AML	20 11 17.1	
	comp=N,623μm,0.6s						
FSK				AML	AML	20 11 21.1	
	comp=E,413μm,0.5s						
BUM	**Brajici-Budva**	**2.04**	**348**	*i*Pn	**Pn**	**20 10 39.8**	**+0.3**
BUM				*i* Sn	**Sb**	**20 11 07.1**	**-0.5**
THL	**Klokotos Trika**	**2.10**	**110**	P	**Pn**	**20 10 41.3**	**+1.2**
THL	**Klokotos Trika**	**2.10**	**110**	P	**Pn**	**20 10 41.4**	**+1.2**
BCI	**Bajram Curri**	**2.11**	**12**	P	**Pb**	**20 10 42.6**	**-1.0**
	baz=10.0						
KEF4	**Livadi, Kephal**	**2.17**	**160**	P	**Pn**	**20 10 40.6**	**-0.6**
KEF4	**Livadi, Kephal**	**2.17**	**160**	P	**Pn**	**20 10 40.6**	**-0.6**
DMLN	**Damoulianata-K**	**2.18**	**161**	P	**Pn**	**20 10 40.8**	**-0.5**
KEF3	**Kipouria, Keph**	**2.21**	**162**	P	**Pn**	**20 10 40.8**	**-0.9**
KEF3	**Kipouria, Keph**	**2.21**	**162**	P	**Pn**	**20 10 40.8**	**-0.9**
TYRN	**Tyrnavos**	**2.21**	**105**	P	**Pn**	**20 10 42.9**	**+1.2**
TYRN	**Tyrnavos**	**2.21**	**105**	P	**Pn**	**20 10 42.6**	**+0.9**
TYRN				AML	AML	20 11 20.0	
	comp=E,552μm,0.8s						
TYRN				AML	AML	20 11 21.4	
	comp=N,903μm,0.9s						
SKO	**Skopje**	**2.24**	**41**	*i* Pn	**Pb**	**20 10 45.2**	**-0.5**
HCY	**Herceg Novi**	**2.26**	**342**	*i*Pn	**Pn**	**20 10 42.5**	**0.0**
HCY				*i* Sn	**Sn**	**20 11 12.3**	**+2.2**
HCY	**Herceg Novi**	**2.26**	**342**	*e*Pn	**Pn**	**20 10 42.2**	**-0.3**
CEME	**Cevo**	**2.28**	**350**	*i*Pn	**Pn**	**20 10 43.0**	**+0.3**
CEME				*i* Sn	**Sn**	**20 11 11.9**	**+1.3**
EVR	**Evrytania**	**2.28**	**127**	P	**Pn**	**20 10 45.1**	**+2.3**
EVR				S	**Sn**	**20 11 12.9**	**+2.3**
	comp=N,252nm,0.6s						
VLS	**Valsamata**	**2.30**	**157**	P	**Pn**	**20 10 42.1**	**-0.8**
VLS	**Valsamata**	**2.30**	**157**	P	**Pn**	**20 10 42.2**	**-0.8**
PVY	**Plav**	**2.32**	**9**	*i*Pn	**Pn**	**20 10 44.4**	**+1.0**
PVY				*i* Sn	**Sb**	**20 11 13.5**	**-2.2**
PVO	**Paravola**	**2.32**	**136**	P	**Pn**	**20 10 44.2**	**+1.0**
PVO	**Paravola**	**2.32**	**136**	P	**Pn**	**20 10 44.2**	**+1.0**
GRG	**Griva**	**2.33**	**73**	P	**Pn**	**20 10 44.1**	**+0.7**
GRG	**Griva**	**2.33**	**73**	P	**Pn**	**20 10 44.5**	**+1.0**
GRG				AML	AML	20 11 32.8	
	comp=N,458μm,1.3s						
GRG				AML	AML	20 11 36.8	
	comp=E,278μm,1.3s						
PSDA	**Pessada-Kefalo**	**2.35**	**158**	P	**Pn**	**20 10 43.2**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.43**	**121**	P	**Pn**	**20 10 46.6**	**+1.8**
MAKR	**Makrakomi, Fth**	**2.43**	**121**	P	**Pn**	**20 10 46.0**	**+1.2**
MAKR				AML	AML	20 11 28.2	
	comp=N,958μm,0.5s						
MAKR				AML	AML	20 11 30.6	
	comp=E,1577μm,0.5s						
NKME	**Niksic**	**2.49**	**351**	*i*Pn	**Pn**	**20 10 45.5**	**-0.2**
NKME				*i* Sn	**Sn**	**20 11 17.0**	**+1.2**
KOME	**Kolasin**	**2.55**	**1**	*e*Pn	**Pn**	**20 10 47.6**	**+1.2**
KOME				*i* Sn	**Sb**	**20 11 19.7**	**-2.5**
TREB	**Trebinje**	**2.55**	**341**	*e*Pn	**Pn**	**20 10 46.3**	**-0.1**
AGG	**Agios Georgios**	**2.56**	**119**	P	**Pn**	**20 10 48.0**	**+1.4**
AGG	**Agios Georgios**	**2.56**	**119**	P	**Pn**	**20 10 47.9**	**+1.4**
AGG				AML	AML	20 11 34.6	
	comp=E,726μm,0.7s						
AGG				AML	AML	20 11 35.5	
	comp=N,760μm,0.6s						
ANX	**Ano Chora**	**2.56**	**131**	P	**Pn**	**20 10 48.0**	**+1.4**
ANX	**Ano Chora**	**2.56**	**131**	P	**Pn**	**20 10 48.3**	**+1.7**
ANX				AML	AML	20 11 29.3	
	comp=E,839μm,0.5s						
ANX				AML	AML	20 11 34.3	
	comp=N,730μm,0.5s						
DBRK	**Dubrovnik**	**2.56**	**338**	*e*Pn	**Pn**	**20 10 46.2**	**-0.4**
VAY	**Valandovo**	**2.57**	**66**	*i* Pn	**Pb**	**20 10 48.9**	**-2.5**
VAY				*e*Sg	**Sg**	**20 11 29.7**	**+1.5**
IVA	**Berane**	**2.59**	**7**	*i*Pn	**Pn**	**20 10 48.7**	**+1.7**
IVA				*i* Sn	**Sb**	**20 11 21.1**	**-2.3**
EFP	**Efpalio**	**2.66**	**134**	P	**Pn**	**20 10 49.3**	**+1.3**
EFP	**Efpalio**	**2.66**	**134**	P	**Pn**	**20 10 48.8**	**+0.8**
EFP				AML	AML	20 11 34.8	
	comp=E,525μm,0.7s						
EFP				AML	AML	20 11 35.7	
	comp=N,615μm,0.5s						
BRY	**Bratogost**	**2.69**	**345**	*e*Pn	**Pn**	**20 10 48.7**	**+0.3**
BRY	**Bratogost**	**2.69**	**345**	*e*Pn	**Pn**	**20 10 49.1**	**+0.7**
KNT	**Kendrikon**	**2.75**	**71**	P	**Pn**	**20 10 50.1**	**+1.0**
KNT	**Kendrikon**	**2.75**	**71**	P	**Pn**	**20 10 50.2**	**+1.0**
HORT	**Hortiatis**	**2.79**	**83**	P	**Pn**	**20 10 50.2**	**+0.4**
HORT	**Hortiatis**	**2.79**	**83**	P	**Pn**	**20 10 50.4**	**+0.6**
HORT				AML	AML	20 11 43.8	
	comp=E,148μm,1.1s						
HORT				AML	AML	20 11 46.3	
	comp=N,125μm,0.9s						
STON	**Ston**	**2.89**	**333**	*e*Pn	**Pn**	**20 10 51.0**	**0.0**
STON				Sn	**Sn**	**20 11 24.9**	**-0.5**
STON	**Ston**	**2.89**	**333**	*e*Pn	**Pn**	**20 10 50.8**	**-0.2**
ALIK	**Aliki, Aigiali**	**2.90**	**134**	P	**Pn**	**20 10 52.6**	**+1.5**
AXAR	**Agios Charalam**	**2.91**	**121**	P	**Pn**	**20 10 52.8**	**+1.4**
DRO	**Drossia**	**2.93**	**143**	P	**Pn**	**20 10 52.0**	**+0.4**
DRO	**Drossia**	**2.93**	**143**	P	**Pn**	**20 10 52.0**	**+0.4**
DRO				AML	AML	20 11 49.0	
	comp=E,334μm,0.5s						
DRO				AML	AML	20 11 51.0	
	comp=N,416μm,0.5s						
UPM	**Unac-Piva**	**2.93**	**352**	*e*Pn	**Pn**	**20 10 52.3**	**+0.5**
UPM				*i* Sn	**Sn**	**20 11 28.9**	**+2.2**
UPM	**Unac-Piva**	**2.93**	**352**	*e*Pn	**Pn**	**20 10 52.9**	**+1.1**
SJES	**Sjenica**	**2.98**	**7**	*e*Pn	**Pn**	**20 10 54.6**	**+2.2**
PEHC	**Pehcevo**	**2.99**	**59**	*i* Pn	**Pn**	**20 10 52.7**	**+0.2**
XOR	**Xorichti**	**3.02**	**107**	P	**Pn**	**20 10 54.1**	**+1.2**
PLE	**Pljevlja**	**3.02**	**359**	*i*Pn	**Pn**	**20 10 53.6**	**+0.5**
PLE				*i* Sn	**Sn**	**20 11 31.2**	**+2.2**
KLV	**Kalavryta, Ach**	**3.08**	**136**	P	**Pn**	**20 10 54.7**	**+1.1**
KLV	**Kalavryta, Ach**	**3.08**	**136**	P	**Pn**	**20 10 54.8**	**+1.1**
LSTV	**Lastovo**	**3.13**	**323**	*e*Pn	**Pn**	**20 10 54.5**	**+0.1**
NEVS	**Nevesinje**	**3.16**	**342**	*e*Pn	**Pn**	**20 10 56.1**	**+1.2**
PAIG	**Paliouri**	**3.25**	**95**	P	**Pn**	**20 10 56.1**	**0.0**
GUR	**Goura**	**3.26**	**136**	P	**Pn**	**20 10 57.3**	**+1.1**
RUDO	**Rudo**	**3.31**	**359**	*e*Pn	**Pn**	**20 11 00.4**	**+3.5**
MAKA	**Makarska**	**3.50**	**329**	*e*Pn	**Pn**	**20 11 00.1**	**+0.7**
BBLS	**Lazići**	**3.56**	**359**	*e*Pn	**Pn**	**20 11 01.9**	**+1.5**
RICI	**Ricice**	**3.63**	**332**	*e*Pn	**Pn**	**20 11 01.7**	**+0.4**
HVAR	**Hvar**	**3.65**	**323**	*e*Pn	**Pn**	**20 11 01.8**	**+0.3**
HAPS	**Han Pijesak,BI**	**3.80**	**354**	*e*Pn	**Pn**	**20 11 04.2**	**+0.5**
VLY	**Voula,Athens**	**4.17**	**125**	P	**Pn**	**20 11 09.1**	**+0.5**
KIJV	**Kijevo**	**4.34**	**329**	*e*Pn	**Pn**	**20 11 12.1**	**+1.0**
ZIRJ	**Zirje**	**4.39**	**321**	*e*Pn	**Pn**	**20 11 12.1**	**+0.3**
MGRS	**Mrkonjic Grad**	**4.47**	**338**	*e*Pn	Pn	20 11 17.5	+4.6
MORI	**Morici**	**4.53**	**323**	*e*Pn	**Pn**	**20 11 14.2**	**+0.6**
A050A	**Klekovaca**	**4.71**	**333**	*e*Pn	**Pn**	**20 11 17.3**	**+1.2**
BLY	**Banja Luka**	**4.75**	**340**	*e*Pn	**Pn**	**20 11 16.9**	**+0.3**
FRGS	**Fruska Gora**	**4.86**	**3**	*e*Pn	**Pn**	**20 11 18.3**	**+0.1**
DUGI	**Dugi Otok**	**4.93**	**320**	*e*Pn	**Pn**	**20 11 19.7**	**+0.6**
DUGI					Sn	**Sn**	**20 12 14.6**	**-1.3**
UDBI	**Udbina**	**5.03**	**328**	*e*Pn	**Pn**	**20 11 22.4**	**+1.8**
A051A	**Mrakovica**	**5.07**	**339**	*e*Pn	**Pn**	**20 11 21.5**	**+0.4**
VIRC	**Vir**	**5.16**	**322**	*e*Pn	**Pn**	**20 11 22.8**	**+0.7**
VIRC					Sn	**Sn**	**20 12 20.1**	**-1.3**
PLIT	**Plitvice**	**5.38**	**329**	*e*Pn	**Pn**	**20 11 26.6**	**+1.3**
NVLJ	**Novalja**	**5.45**	**323**	*e*Pn	**Pn**	**20 11 26.8**	**+0.6**
RABC	**Rab**	**5.63**	**324**	*e*Pn	**Pn**	**20 11 29.4**	**+0.7**
BOJS	**Bojanci**	**6.05**	**331**	*e*Pn	**Pn**	**20 11 35.0**	**+0.6**
OZLJ	**Ozalj**	**6.06**	**332**	*e*Pn	**Pn**	**20 11 34.7**	**+0.1**
SMRN	**Sveta Marina**	**6.14**	**322**	*e*Pn	**Pn**	**20 11 36.3**	**+0.7**
BRJN	**Brijuni**	**6.24**	**319**	*e*Pn	**Pn**	**20 11 37.1**	**+0.1**
CRES	**Cresnjev**	**6.25**	**333**	*e*Pn	**Pn**	**20 11 37.1**	**-0.2**
CEY	**Cerknica**	**6.57**	**327**	*e*Pn	**Pn**	**20 11 41.3**	**-0.3**
SOKA	**Soboth**	**7.14**	**335**	*i* Pn	**Pn**	**20 11 49.9**	**+0.3**
	comp=N,1.0nm,0.2s						
SOKA				*i* Sn	**Sn**	**20 13 06.0**	**-4.3**
	comp=N,1.4nm,0.3s						
OBKA	**Obir**	**7.16**	**332**	*i* Pn	**Pn**	**20 11 50.7**	**+0.9**
	comp=N,2.3nm,0.2s						
OBKA				*i* Sn	**Sn**	**20 13 09.8**	**-1.1**
	comp=N,2.7nm,0.3s						
OBKA	**Obir**	**7.16**	**332**	*e*Pn	**Pn**	**20 11 50.4**	**+0.6**
MOA	**Molln**	**8.42**	**335**	*i* Pn	**Pn**	**20 12 08.6**	**+1.6**
	comp=N,1.4nm,0.3s						
LESA	**Schwarzleotal**	**8.64**	**328**	*i* Pn	**Pn**	**20 12 12.1**	**+2.0**
	comp=N,1.7nm,0.3s						
LESA				*i* Sn	**Sn**	**20 13 46.0**	**-1.2**
	comp=N,4.3nm,0.5s						
WTTA	**Wattenberg**	**8.97**	**323**	*i* Pn	**Pn**	**20 12 16.5**	**+1.8**
	comp=N,1.0nm,0.3s						
WTTA				*i* Sn	**Sn**	**20 13 54.5**	**-0.8**
	comp=N,2.0nm,0.4s						
WATA	**Walderalm**	**9.05**	**324**	*i* Pn	**Pn**	**20 12 17.4**	**+1.7**
	comp=N,1.0nm,0.2s						
WATA				*i* Sn	**Sn**	**20 13 56.4**	**-1.0**
	comp=N,2.5nm,0.3s						
SQTA	**Sankt Quirin**	**9.13**	**322**	*i* Pn	**Pn**	**20 12 18.3**	**+1.4**
	comp=N,1.3nm,0.3s						
SQTA				*i* Sn	**Sn**	**20 13 57.9**	**-1.5**
	comp=N,1.8nm,0.4s						
FETA	**Feichten**	**9.22**	**320**	*i* Pn	**Pn**	**20 12 20.1**	**+1.9**
	comp=N,0.6nm,0.5s						
FETA				*i* Sn	**Sn**	**20 13 60.0**	**-1.7**
	comp=N,1.0nm,0.5s						
MOTA	**Moosalm**	**9.27**	**322**	*e*Pn	**Pn**	**20 12 20.3**	**+1.5**
	comp=N,2.1nm,0.5s						
MOTA				*e*Sn	**Sn**	**20 14 00.7**	**-2.1**
	comp=N,2.6nm,0.6s						
GERES	**GERESS Array B**	**9.47**	**336**	Pn	**Pn**	**20 12 22.1**	**+0.5**
	comp=N,0.3nm,0.3s,baz=146,slow=17,SNR=4.8						
GERES				Sn	**Sn**	**20 14 02.0**	**-5.7**
	comp=N,0.2nm,0.3s,baz=154,slow=25,SNR=2.8						
	comp=N,0.5nm,0.4s						
KHC	**Kasperske Hory**	**9.77**	**337**	*e*SN	**Sn**	**20 14 10.4**	**-4.4**
HFS	**Hagfors**	**20.18**	**352**	P	**P**	**20 14 39.5**	**+0.2**
	comp=N,0.1nm,0.3s,baz=167,slow=13,SNR=1.8						
	comp=N,2.9nm,0.9s						
EKA	**Eskdalemuir Ar**	**21.23**	**323**	P	**P**	**20 14 54.5**	**+3.8**
	comp=N,0.3nm,0.5s,baz=131,slow=7.6,SNR=1.6						
	comp=N,0.3nm,

KNRA	Kununurra	7.91	177	P	Pn	20 19 37.1	-0.3		
PLAI	Plampang	10.52	263	P	Pn	20 20 09.9	-1.3		
PLAI	Plampang	10.52	263	P	Pn	20 20 10.1	-1.1		
FITZ	Fitzroy Crossi	10.64	194		Pn	20 20 10.5	-2.2		
WB0	Warramunga Arr	13.33	155		Pn	20 20 46.0	-0.8		
WRAB	Tennant Creek	13.46	155	P	Pn	20 20 47.5	-1.0		
WRA	Warramunga Arr	13.46	155		Pn	20 20 46.9	-1.6		
WRA	Warramunga Arr	13.46	155	P	Pn	20 20 47.9	-0.6		
	5.4nm,0.3s,baz=320,slow=13,SNR=111								
WRA				S	S	20 23 10.3	-8.4		
	40nm,0.8s,baz=331,slow=22,SNR=12								
WB2	Warramunga Arr	13.47	155		Pn	20 20 48.0	-0.5		
WR0	Warramunga Arr	13.56	154	P	Pn	20 20 49.0	-0.8		
JAGI	Jajag, Banyuwa	14.07	266	P	P	20 20 57.7	-0.2		
COEN	Coen	15.82	114	P	Pn	20 21 18.3	+0.9		
COEN				IAmb	IAmb	20 21 45.5			
	comp=Z,18nm,1.1s								
COEN	Coen	15.82	114	P	Pn	20 21 20.9	+3.4		
PSA00	Pilbara Seismi	16.03	210	P	Pn	20 21 19.7	-0.2		
PSA00	Pilbara Seismi	16.03	210		Pn	20 21 19.7	-0.2		
PSA00				IAmb	IAmb	20 21 37.3			
	comp=Z,4.2nm,0.8s								
PSA00	Pilbara Seismi	16.03	210	P	Pn	20 21 21.4	+1.5		
AS31	Alice Springs	16.72	162	P	Pn	20 21 30.2	+1.9		
AS31				IAmb	IAmb	20 21 33.4			
	comp=Z,7.3nm,0.6s								
ASAR	Alice Springs	16.72	162	P	Pn	20 21 30.7	+2.4		
ASAR	Alice Springs	16.72	162	P	Pn	20 21 31.0	+2.7		
	comp=Z,18nm,0.7s,baz=340,slow=11,SNR=204								
ASAR				S	S	20 24 27.3	-4.4		
	comp=Z,2.2nm,0.7s,baz=324,slow=23,SNR=2.7								
AS01	Alice Springs	16.74	162	P	Pn	20 21 32.3	+3.9		
QIS	Mount Isa	16.77	141	P	Pn	20 21 32.7	+3.8		
WRKA	Warakurna	17.22	180	P	Pn	20 21 37.2	+3.1		
KKM	Kota Kinabalu	18.26	318	P	Pn	20 21 44.7	-1.8		
KKM				IAmb	IAmb	20 21 57.8			
	comp=Z,13nm,0.9s								
KKM	Kota Kinabalu	18.26	318	P	Pn	20 21 47.2	+0.7		
SBUM	Sibu	19.00	302	P	Pn	20 21 53.8	-1.3		
SBUM				IAmb	IAmb	20 21 55.8			
	comp=Z,17nm,1.2s								
KSM	Kuching	20.18	296	P	Pn	20 22 05.5	-3.9		
MEEK	Meekatharra	20.96	205	P	P	20 22 17.5	+4.6		
OOD	Oodnadatta	21.14	162	P	P	20 22 19.8	+5.2		
FORT	Forrest	22.94	181	P	P	20 22 29.9	-2.1		
FORT	Forrest	22.94	181	P	P	20 22 38.0	+6.0		
MORW	Morawa	24.19	207	P	P	20 22 44.2	+0.8		
MORW	Morawa	24.19	207	P	P	20 22 49.3	+5.9		
LCRK	Leigh Creek	24.42	159	P	P	20 22 52.1	+6.6		
BLDU	Ballidu	25.25	204	P	P	20 22 59.4	+6.5		
BBOO	Buckleboo	25.97	165	P	P	20 23 02.2	+2.8		
BBOO				IAmb	IAmb	20 23 44.7			
	comp=Z,6.0nm,0.8s								
BBOO	Buckleboo	25.97	165	P	P	20 23 06.7	+7.3		
STKA	Stephens Creek	27.01	155	P	P	20 23 09.7	+0.9		
STKA	Stephens Creek	27.01	155	P	P	20 23 14.3	+5.6		
	comp=Z,0.6nm,0.3s,baz=335,slow=11,SNR=4.0								
	comp=Z,0.6nm,0.3s								
NWAO	Narrogin (SRO)	27.11	201	P	P	20 23 12.3	+2.7		
KULM	Kulim	30.51	294	P	P	20 23 40.4	+0.5		
CMAR	Chiang Mai Arr	38.97	312	P	P	20 24 54.2	+2.0		
	comp=Z,1.3nm,0.8s,baz=136,slow=6.8,SNR=12								
CMAR				PcP	PcP	20 27 02.7	+4.0		
	comp=Z,0.3nm,0.5s,baz=138,slow=2.3,SNR=4.1								
	comp=Z,1.3nm,0.8s								
CRAI	Chiangrai	39.10	316	P	P	20 24 54.8	+1.4		
CRAI				IAmb	IAmb	20 24 57.4			
	comp=Z,3.4nm,1.1s								
CHTO	Chiang Mai	39.19	313	P	P	20 24 56.2	+2.0		
PZH	PanZhiHua	42.71	324	P	P	20 25 25.5	+2.6		
PZH				pmax	pmax				
	comp=Z,10.0nm,1.0s								
PZH				pmax	pmax				
	comp=Z,110nm,4.9s								
KSRS	Korea Array	44.94	360	P	P	20 25 41.4	+1.2		
	comp=Z,0.4nm,0.3s,baz=167,slow=9.2,SNR=3.1								
	comp=Z,0.4nm,0.3s								
XAN	Xi'an	45.44	337	*eP*	P	20 25 44.8	+0.5		
XAN				pmax	pmax				
	comp=Z,6.0nm,0.6s								
SHL	Shillong	48.51	314	P	P	20 26 08.0	-0.3		
SHL				IAmb	IAmb	20 26 12.2			
	comp=Z,3.4nm,0.7s								
HHC	Hu-ho-hao-te	50.74	344	*eP*	P	20 26 27.6	+2.7		
HHC				pP	pP	20 27 05.9	-1.8		
HHC				pmax	pmax				
	comp=Z,11nm,0.8s								
HHC				pmax	pmax				
	comp=Z,100nm,5.1s								
LSA	Lhasa	51.61	318	P	P	20 26 33.3	+1.4		
LSA				IAmb	IAmb	20 26 35.0			
	comp=Z,2.7nm,0.7s								
USA0B	Ussuriysk Arra	51.79	3	P	P	20 26 31.5	-0.9		
USA0B				IAmb	IAmb	20 26 39.4			
	comp=Z,7.1nm,0.8s								
USRK	Ussuriysk Ar.	51.79	3	P	P	20 26 31.6	-0.8		
GTA	Gaotai	53.84	333	*eP*	P	20 26 49.6	+1.9		
GTA				pmax	pmax				
	comp=Z,2.0nm,0.7s								
SONM	Songino Array	58.63	343	P	P	20 27 22.1	+0.7		
SONM	Songino Array	58.63	343	P	P	20 27 23.8	+2.4		
	comp=Z,0.9nm,0.6s,baz=158,slow=7.2,SNR=7.9								
	comp=Z,0.9nm,0.6s								
WMQ	Urumqi	63.12	328	*eP*	P	20 27 54.6	+2.9		
WMQ				pmax	pmax				
	comp=Z,10.0nm,1.1s								
MK31	Makanchi Array	67.95	328	P	P	20 28 24.1	+1.6		
MKAR	Makanchi Array	67.95	328	P	P	20 28 23.9	+1.4		
MKAR	Makanchi Array	67.95	328	P	P	20 28 24.2	+1.8		
	comp=Z,0.6nm,0.5s,baz=118,slow=8.7,SNR=13								
	comp=Z,0.6nm,0.5s								
YAK	Yakutsk	69.55	1		P	20 28 33.3	+1.3		
KBL	Kabul	69.99	311	P	P	20 28 35.7	+0.1		
KBL				IAmb	IAmb	20 28 42.9			
	comp=Z,2.8nm,1.1s								
AAK	Ala-Archa	70.05	321	P	P	20 28 37.0	+1.3		
ARSB	Arslanbob	70.34	319	P	P	20 28 39.0	+1.6		
ZAA0	Zalesovo Array	71.52	335		P	20 28 44.9	+0.9		
ZAA0				IAmb	IAmb	20 28 46.2			
	comp=Z,5.6nm,0.9s								
ZALV	Zalesovo Beam	71.52	335		P	20 28 44.8	+0.7		
ZALV	Zalesovo Beam	71.52	335	P	P	20 28 45.3	+1.2		
	comp=Z,5.2nm,0.8s,baz=124,slow=4.6,SNR=22								
	comp=Z,5.2nm,0.8s								
KURBB	Kurchatov Arra	72.28	329	P	P	20 28 50.9	+2.2		
	comp=Z,4.1nm,0.6s,baz=133,slow=5.0,SNR=30								
	comp=Z,4.1nm,0.6s								
KURK	Kurchatov	72.29	329		P	20 28 50.3	+1.6		
KURK				IAmb	IAmb	20 28 51.8			
	comp=Z,8.1nm,0.8s								
KKAR	Karatay Array	72.81	320	P	P	20 28 53.8	+1.7		
BVAR	Borovoye Array	77.81	328	P	P	20 29 22.0	+1.7		
	comp=Z,2.5nm,0.6s,baz=132,slow=6.0,SNR=11								
	comp=Z,2.5nm,0.6s								
TIXI	Tiksi	79.21	0	P	P	20 29 28.8	+1.4		
ABKAR	Akbulak array	82.06	322	P	P	20 29 44.7	+1.6		
ABKAR	Akbulak array	82.06	322	P	P	20 29 44.6	+1.5		
ARU	Arti	85.46	328	P	P	20 30 01.6	+1.4		
ARU				IAmb	IAmb	20 30 03.5			
	comp=Z,6.3nm,1.0s								
TORD	Torodi Ar. Bea	127.34	281	PKP	PKiKP	20 36 30.5	+2.9		
	comp=Z,0.6nm,0.7s,baz=66,slow=3.3,SNR=3.1								

TIR **09** *20:24:04.5,38˚.11N×20˚.44E,h28km±2km,Md4.3,Ml3.6*
IDC **09** *20:24:05.6±0.9,38˚.32N×20˚.32E,h0km,mb4.0/12, mbtmp3.9/20,ML3.4/7, Error ellipse: s-maj=18.1km s-min=13.8km az=171.0*
NAO **09** *20:24:06.9,38˚.21N×20˚.29E,h5km,mb3.2*
PDG **09** *20:24:07.4±0.7,38˚.28N×20˚.32E,h11km±1km,ML4.3/12, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*
THE **09** *20:24:08.5,38˚.25N×20˚.47E,h0km±1km,ML3.9/16, Error ellipse: s-maj=1.6km s-min=0.5km az=258.0*
ATH **09** *20:24:08.5,38˚.26N×20˚.45E,h6km±1km,ML3.8/18, Manual Solution by A.Papageorgiou This location: 2020/05/29 14:26:54 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
ISC 09 20:24:07.4±0.6,38˚.25N±0.02×20˚.41E±0.02,h16km±3km, n212,σ1≀45/279,mb3.9/13,11C-6D,Greece

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

KEF4	Livadi, Kephal	0.02	47	P	Pg	20 24 09.9	-0.4		
KEF4				S	Sg	20 24 11.3	-0.9		
KEF4	Livadi, Kephal	0.02	47	P	Pg	20 24 09.9	-0.4		
KEF4				S	Sg	20 24 11.4	-0.8		
DMLN	Damoulianata-K	0.03	255	P	Pg	20 24 10.3	-0.1		
DMLN				S	Sg	20 24 11.7	-0.6		
	370μm,0.4s								
DMLN	Damoulianata-K	0.03	255	P	Pg	20 24 10.3	-0.1		
DMLN				S	Sg	20 24 12.0	-0.3		
LXR1	Lixouri, Cepha	0.05	152	P	Pg	20 24 10.3	-0.1		
LXRA	Lixouri, Kepha	0.05	153	P	Pg	20 24 10.3	-0.2		
LXRA				S	Sg	20 24 12.0	-0.4		
KEF3	Kipouria, Keph	0.06	228	P	Pg	20 24 10.3	-0.3		
KEF3				S	Sg	20 24 11.7	-0.9		
KEF3	Kipouria, Keph	0.06	228	P	Pg	20 24 10.2	-0.3		
KEF3				S	Sg	20 24 12.3	-0.3		
VLS	Valsamata	0.16	115	P	Pg	20 24 11.2	-0.4		
VLS				S	Sg	20 24 13.4	-1.0		
	315μm,0.2s								
VLS	Valsamata	0.16	115	P	Pg	20 24 11.4	-0.2		
VLS				S	Sg	20 24 13.7	-0.8		
PSDA	Pessada-Kefalo	0.19	133	P	Pg	20 24 12.0	-0.1		
PSDA				S	Sg	20 24 14.8	-0.4		
	139μm,0.2s								
PSDA	Pessada-Kefalo	0.19	133	P	Pg	20 24 12.2	+0.1		
VSK1	VASILIKIADES	0.20	37	P	Pg	20 24 12.1	-0.2		
VSK1				S	Sg	20 24 15.1	-0.5		
	103μm,0.4s								
FSK	Fiskardo	0.24	30	P	Pg	20 24 12.7	-0.2		
FSK				S	Sg	20 24 16.0	-0.7		
	41μm,0.2s								
FSK	Fiskardo	0.24	30	P	Pg	20 24 12.9	0.0		
FSK				S	Sg	20 24 16.4	-0.2		
EVGI	Lefkada island	0.42	27	P	Pb	20 24 16.0	-0.5		
EVGI				S	Sb	20 24 22.3	-0.4		
	52μm,0.3s								
DRAG	Dragano-Lefkad	0.46	17	P	Pb	20 24 16.5	-0.6		
DRAG				S	Sb	20 24 23.3	-0.4		
DRAG	Dragano-Lefkad	0.46	17	P	Pb	20 24 16.7	-0.4		
DRAG				S	Sb	20 24 23.8	+0.2		
NYDR	Nydri-Lefkada	0.52	26	P	Pb	20 24 17.5	-0.7		
NYDR				S	Sb	20 24 25.1	-0.3		
	10μm,0.4s								
NYDR	Nydri-Lefkada	0.52	26	P	Pb	20 24 17.7	-0.5		
NYDR				S	Sb	20 24 25.5	0.0		
LKD2	Lefkada island	0.58	20	P	Pb	20 24 18.6	-0.6		
	baz=13								
LKD2				S	Sb	20 24 27.5	+0.3		
	baz=13								
LKD2				AMP					
	comp=E,12nm,0.3s,baz=13								
LKD2	Lefkada island	0.58	20	P	Pb	20 24 18.5	-0.6		
LKD2	Lefkada island	0.58	20	P	Pb	20 24 18.7	-0.5		
LKD2				S	Sb	20 24 26.9	-0.2		
TSLK	Tsoukalades, L	0.61	18	P	Pb	20 24 19.2	-0.5		
TSLK				S	Sb	20 24 27.8	-0.2		
	comp=E,8μm,0.5s								
TSLK	Tsoukalades, L	0.61	18	P	Pb	20 24 19.5	-0.2		
TSLK				S	Sb	20 24 27.8	-0.2		
AST1	Astakos	0.61	61	P	Pb	20 24 19.0	-0.7		
AST1				S	Sb	20 24 28.1	0.0		
	comp=E,19μm,0.5s								
LTHK	Lithakia	0.63	148	P	Pb	20 24 19.5	-0.6		
LTHK				S	Sb	20 24 29.2	+0.5		
	comp=E,11μm,0.2s								
LTHK	Lithakia	0.63	148	P	Pb	20 24 19.9	-0.2		
LTHK				S	Sb	20 24 29.6	+0.9		
KRI1	kERI	0.67	151	P	Pb	20 24 20.2	-0.5		
KRI1				S	Sb	20 24 31.0	+1.4		
	comp=E,20μm,0.3s								
RLS	Riolos of Patr	0.86	102	P	Pb	20 24 23.2	-0.7		
RLS				S	Sn	20 24 36.3	-0.6		
	comp=E,4μm,0.4s								
RLS	Riolos of Patr	0.86	102	P	Pb	20 24 23.5	-0.4		
RLS				S	Sn	20 24 36.1	-0.8		
PVO	Paravola	0.95	67	P	Pb	20 24 25.5	0.0		
PVO				S	Sn	20 24 38.8	-0.6		
PVO	Paravola	0.95	67	P	Pb	20 24 25.6	0.0		
DRO	Drossia	1.07	106	P	Pb	20 24 27.4	-0.1		
DRO				S	Sn	20 24 42.9	+0.7		
	comp=E,7μm,0.3s								
DRO	Drossia	1.07	106	P	Pb	20 24 27.5	-0.1		
DRO				S	Sb	20 24 41.8	+0.5		
UPR	University Cam	1.09	88	P	Pn	20 24 28.3	+0.4		
EFP	Efpalio	1.19	81	P	Pg	20 24 28.8	-1.6		
EFP	Efpalio	1.19	81	P	Pb	20 24 29.2	-0.4		
ANX	Ano Chora	1.24	73	P	Pg	20 24 29.8	-1.6		
ANX				S	Sn	20 24 48.7	+2.1		
	comp=E,9μm,0.7s								
EVR	Evrytania	1.29	58	P	Pn	20 24 31.7	+0.9		
EVR	Evrytania	1.29	58	P	Pn	20 24 31.5	+0.7		
IGT	Igoumenitsa	1.29	357	P	Pb	20 24 32.1	+0.8		
	baz=357								
IGT				S	Sn	20 24 51.9	+4.2		
	baz=357								
IGT				AMP					
	comp=E,4.3nm,0.4s,baz=357								
IGT	Igoumenitsa	1.29	357	P	Pn	20 24 31.2	+0.5		
IGT				S	Sn	20 24 51.6	+4.0		
	comp=E,1μm,0.3s								
IGT	Igoumenitsa	1.29	357	P	Pb	20 24 31.5	+0.3		
ALIK	Aliki, Aigiali	1.34	89	P	Pg	20 24 31.7	-1.6		
KLV	Kalavryta, Ach	1.39	98	P	Pn	20 24 32.3	+0.2		
KLV				S	Sn	20 24 53.8	+3.6		
	comp=E,2μm,0.4s								
KLV	Kalavryta, Ach	1.39	98	P	Pn	20 24 32.4	+0.2		
JAN	Janina	1.45	14	P	Pg	20 24 36.1	+0.7		
JAN	Janina	1.45	14	P	Pg	20 24 35.2	-0.2		
KEK	Kerkira	1.54	342	P	Pn	20 24 33.5	-0.7		
KASA	Kassiopi	1.54	346	P	Pg	20 24 36.3	-0.8		
MAKR	Makrakomi, Fth	1.55	60	P	Pb	20 24 35.5	-0.3		
MAKR	Makrakomi, Fth	1.55	60	P	Pg	20 24 35.7	-1.6		
GUR	Goura	1.56	101	P	Pb	20 24 35.3	-0.6		
GUR	Goura	1.56	101	P	Pb	20 24 35.2	-0.6		
DLFA	Delphi	1.66	81	P	Pg	20 24 38.1	-1.2		
SRN	Sarande	1.66	349	P	Pb	20 24 37.6	0.0		
	baz=350								
SRN				S	Sg	20 25 01.2	+0.2		
	baz=350								
SRN				AMP					
	comp=N,1.0nm,0.4s,baz=350								
SRN	Sarande	1.66	349	P	Pb	20 24 37.4	-0.2		
AGG	Agios Georgios	1.69	62	P	Pg	20 24 38.3	-1.7		
AGG	Agios Georgios	1.69	62	P	Pb	20 24 38.0	-0.2		
PYL	PYLOS	1.71	141	P	Pb	20 24 38.0	-0.5		
PYL	PYLOS	1.71	141	P	Pn	20 24 37.6	+1.0		
THAL	Thalero	1.79	96	P	Pb	20 24 39.5	-0.3		
THAL	Thalero	1.79	96	P	Pn	20 24 39.5	-0.3		
THL	Klokotos Trika	1.82	43	P	Pb	20 24 40.2	-0.1		
THL	Klokotos Trika	1.82	43	P	Pb	20 24 40.2	-0.1		
AXAR	Agios Charalam	1.84	73	P	Pg	20 24 40.8	-2.0		
AXAR	Agios Charalam	1.84	73	P	Pg	20 24 40.8	-2.0		
KPRO	Kipourio	1.86	23	P	Pg	20 24 41.6	-1.6		
KPRO	Kipourio	1.86	23	P	Pg	20 24 41.6	-1.6		
LSK	Leskovik	1.91	4	P	Pb	20 24 41.5	-0.4		
	baz=3.0								
LSK				S	Sg	20 25 09.1	+0.3		
	baz=3.0								
LSK				AMP					
	comp=N,8.6nm,0.6s,baz=3.0								
LSK	Leskovik	1.91	4	P	Pb	20 24 41.5	-0.4		
PENT	Pentalofos	2.03	16	P	Pb	20 24 44.3	+0.3		
PENT	Pentalofos	2.03	16	P	Pn	20 24 43.6	-0.4		
LTK	Loutraki	2.03	95	P	Pb	20 24 42.8	-1.1		
TYRN	Tyrnavos	2.04	44	P	Pb	20 24 43.5	-0.6		
TYRN	Tyrnavos	2.04	44	P	Pn	20 24 43.4	-0.7		
LOUT	Loutraki	2.04	96	P	Pb	20 24 43.4	-0.7		
LOUT	Loutraki	2.04	96	P	Pb	20 24 43.5	-0.7		
NEST	Nestorio	2.22	13	P	Pb	20 24 47.3	0.0		
NEST	Nestorio	2.22	13	P	Pn	20 24 46.1	-1.1		
EPID	Epidavros	2.23	106	P	Pb	20 24 46.3	-1.1		
EPID	Epidavros	2.23	106	P	Pb	20 24 45.5	-1.9		
VIL2	Platees	2.25	90	P	Pb	20 24 46.5	-1.2		
VILL	Villia	2.29	91	P	Pb	20 24 46.8	-1.6		
KRND	KRANIDI	2.34	111	P	Pb	20 24 47.9	-1.2		
KRND	KRANIDI	2.34	111	P	Pn	20 24 47.3	-1.8		
SCTE	Santa Cesarea	2.37	321	P	Pn	20 24 47.1	+1.5		
	baz=323								
SCTE				S	Sn	20 25 15.5	+1.2		
	baz=323								
SCTE				AMP					
	comp=N,0.7nm,0.2s,baz=323								
KBN	Korca	2.39	7	P	Pb	20 24 49.9	-0.3		
	baz=5.0								
NEO	Neokhori	2.44	63	P	Pb	20 24 48.9	-2.1		
NEO	Neokhori	2.44	63	P	Pb	20 24 49.2	-1.8		
XOR	Xorichti	2.45	62	P	Pn	20 24 48.6	+1.9		
XOR	Xorichti	2.45	62	P	Pb	20 24 48.7	-2.3		
VLI	Veliai	2.52	126	P	Pn	20 24 50.6	-1.7		
VLI	Veliai	2.52	126	P	Pb	20 24 50.9	-1.5		
ATH	Athens Observa	2.62	95	P	Pn	20 24 51.2	+2.1		
FNA	Florina	2.64	16	P	Pb	20 24 52.2	-2.2		
	baz=14								
FNA				S	Sb	20 25 25.3	-1.4		
	baz=14								
FNA				AMP					
	comp=N,0.5nm,0.3s,baz=14								
FNA	Florina	2.64	16	P	Pn	20 24 51.8	+2.4		
FNA	Florina	2.64	16	P	Pn	20 24 51.7	+2.3		
ATHU	Athens Univers	2.68	95	P	Pn	20 24 52.1	+2.3		
VLY	Voula,Athens	2.70	97	P	Pn	20 24 52.3	+2.1		
VLY	Voula,Athens	2.70	97	P	Pn	20 24 52.4	+2.1		
DION	Dionisos Attik	2.78	92	P	Pb	20 24 54.6	-2.2		
DION	Dionisos Attik	2.78	92	P	Pn	20 24 53.6	+2.3		
OHR	Ohrid	2.88	6	*i* Pn	Pb	20 24 56.0	-2.4		
OHR				*e*Sg	Sb	20 25 32.2	-1.2		
KYMI	Kymi, Euboea I	2.92	81	P	Pn	20 24 55.4	+2.2		
PAIG	Paliouri	3.05	56	P	Pn	20 24 56.4	+1.4		
GRG	Griva	3.12	29	P	Pn	20 24 57.4	+1.5		
GRG	Griva	3.12	29	P	Pn	20 24 57.5	+1.5		
TIR	Tirane	3.13	352	P	Pn	20 24 58.2	+2.2		
	baz=353								
TIR				AMP					
	comp=E,0.2nm,0.3s,baz=353								
HORT	Hortiatis	3.14	41	P	Pn	20 24 58.0	+1.7		
ANKY	Antikythira Is	3.31	135	P	Pn	20 25 00.8	+2.2		
PHP	Peshkopia	3.44	0	P	Pn	20 25 02.7	+2.4		
	baz=0.0								
PHP	Peshkopia	3.44	0	P	Pn	20 25 02.5	+2.2		
OUR	Ouranopolis	3.47	52	P	Pn	20 25 02.9	+2.2		
OUR	Ouranopolis	3.47	52	P	Pn	20 25 02.6	+1.9		
KNT	Kendrikon	3.49	33	P	Pn	20 25 02.8	+1.8		
VAY	Valandovo	3.49	28	*e*Pn	Pn	20 25 04.3	+3.3		
VAY				*e*Sg	Sn	20 25 44.9	+2.8		
KOKK	Kokkinochori,	3.78	46	P	Pn	20 25 07.3	+2.3		
RODP	Rodopos	3.79	134	P	Pn	20 25 08.2	+3.0		
SKO	Skopje	3.81	12	*e*Pn	Pn	20 25 08.2	+2.9		
SKO				*e*Sg	Sn	20 25 50.1	+0.3		
PUK	Puka	3.81	354	P	Pn	20 25 07.0	+1.5		
	baz=355								
ULC	Ulcinj	3.82	347	⇑ *i* Pn	Pn	20 25 05.9	+0.3		
ULC				*e*Sn	Sn	20 25 50.9	+0.8		
PEHC	Pehcevo	4.01	28	*e*Pn	Pn	20 25 07.9	-0.4		
PEHC				*e*Sg	Sn	20 25 55.7	+0.7		
DRME	Dracevica, Mon	4.05	347	⇑ *i* Pn	Pn	20 25 09.5	+0.8		
DRME				*i* Sn	Sn	20 25 56.6	+0.9		
DRME	Dracevica, Mon	4.05	347	*e*Pn	Pn	20 25 09.3	+0.6		
BCI	Bajram Curri	4.12	356	P	Pn	20 25 12.1	+2.4		
	baz=357								
BUM	Brajici-Budva	4.21	345	⇓ *i* Pn	Pn	20 25 11.4	+0.4		
BUM				*i* Sn	Sn	20 26 00.7	+0.8		
PVY	Plav	4.36	356	⇑ *i* Pn	Pn	20 25 15.0	+1.9		
PVY				*i* Sn	Sn	20 26 04.9	+1.4		
CEME	Cevo	4.44	346	⇑ *i* Pn	Pn	20 25 14.3	+0.1		
CEME				*i* Sn	Sn	20 26 05.9	+0.3		
CHOS	Chios island	4.44	86	P	Pn	20 25 16.3	+2.1		
HCY	Herceg Novi	4.44	341	⇑ *i* Pn	Pn	20 25 14.0	-0.1		
HCY				*i* Sn	Sn	20 26 04.8	-0.7		
HCY	Herceg Novi	4.44	341	*e*Pn	Pn	20 25 13.8	-0.3		
IVA	Berane	4.64	355	⇓ *i* Pn	Pn	20 25 18.7	+1.8		
IVA				*e*Sn	Sn	20 26 11.3	+0.9		
KOME	Kolasin	4.65	352	⇓ *i* Pn	Pn	20 25 18.6	+1.6		
KOME				*i* Sn	Sn	20 26 11.3	+0.6		
NKME	Niksic	4.65	347	⇑ *i* Pn	Pn	20 25 17.4	+0.4		
NKME				*i* Sn	Sn	20 26 11.0	+0.3		
TREB	Trebinje	4.73	341	*e*Pn	Pn	20 25 17.8	-0.3		
DBRK	Dubrovnik	4.74	339	*e*Pn	Pn	20 25 17.9	-0.4		
VAE	Valguarnera	4.81	263	Pn	Pn	20 25 19.3	+0.1		

GERES				Sn	Sn	20 28 53.8	-8.9	
	comp=E,0.1nm,0.3s,baz=167,slow=26,SNR=2.3							
	comp=E,0.4nm,0.3s							
KHC	**Kasperske Hory**	**11.94**	**338**	*e*PN	**Pn**	**20 26 55.8**	**-1.2**	
MMAI	**Mount Meron Ar**	**13.26**	**109**	Pn	**Pn**	**20 27 13.3**	**-1.8**	
	comp=E,0.4nm,0.3s,baz=291,slow=12,SNR=4.5							
MMAI				Sn	**Sn**	**20 29 36.4**	**-5.8**	
	comp=E,0.8nm,0.3s,baz=303,slow=17,SNR=2.1							
EIL	**Elat**	**14.78**	**121**	Pn	**Pn**	**20 27 36.2**	**+0.5**	
	comp=E,0.2nm,0.3s,baz=229,slow=11,SNR=2.0							
EIL				Sn	Sn	20 30 08.6	-11	
	comp=E,0.2nm,0.3s,baz=340,slow=11,SNR=1.5							
	comp=E,0.7nm,0.4s							
MNK	**Minsk**	**17.04**	**15**	*i* P	**Pn**	**20 28 04.0**	**-0.8**	
	comp=E,11nm,1.2s							
MNK				*i* P	**Pn**	**20 28 04.0**	**-0.8**	
	comp=N,7.0nm,0.8s							
MNK				*i* P	**Pn**	**20 28 04.0**	**-0.8**	
	comp=Z,10.0nm,0.8s,baz=201							
MNK				*i* PP	**PnPn**	**20 28 13.8**	**-0.8**	
MNK				*i* PPP	PPP	20 28 21.6		
MNK				*i* S	**Sn**	**20 31 15.1**	**+1.3**	
MNK				*i* SS	**SnSn**	**20 31 29.8**	**+2.7**	
MNK				*i* SSS	SSS	20 31 42.6		
MNK				*i* LQ	LQ	20 33 08.1		
MNK				*i* LR	LR	20 34 26.2		
MNK				*i* LRM	MLR	20 36 21.0		
	comp=N,141nm,13.5s							
MNK				*i* LRM	MLR	20 36 37.8		
	comp=E,72nm,17.4s							
MNK				*i* LRM	MLR	20 36 54.5		
	comp=Z,282nm,20.6s							
KBZ	**Khabaz**	**17.82**	**65**	P	**P**	**20 28 18.9**	**+3.6**	
	comp=Z,2.5nm,0.9s,baz=232,slow=19,SNR=3.8							
GNI	**Garni**	**18.94**	**77**	P	**Pn**	**20 28 30.1**	**+1.6**	
	comp=Z,0.4nm,0.3s,baz=339,slow=3.6,SNR=8.4							
	comp=Z,7.0nm,0.8s							
ESDC	**Sonseca Array**	**19.00**	**282**	P	**P**	**20 28 28.6**	**+0.3**	
	baz=96,slow=12,SNR=1.7							
	comp=Z,0.5nm,0.9s							
HFS	**Hagfors**	**22.32**	**351**	P	**P**	**20 29 03.7**	**-0.3**	
	comp=Z,2.0nm,0.4s,baz=155,slow=11,SNR=20							
	comp=Z,2.0nm,0.4s							
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P	**P**	**20 29 15.8**	**+1.3**	
	comp=Z,6.7nm,1.2s,baz=134,slow=8.0,SNR=3.4							
	comp=Z,6.7nm,1.2s							
FINES	**FINESS Array B**	**23.49**	**7**	P	**P**	**20 29 15.5**	**-0.7**	
	comp=Z,2.4nm,0.7s,baz=170,slow=11,SNR=19							
	comp=Z,2.4nm,0.7s							
NB2	**NORSAR Subarra**	**23.53**	**349**	P	**P**	**20 29 17.4**	**+0.8**	
	comp=Z,0.9nm,0.7s,baz=162,slow=11							
NOA	**NORSAR Array B**	**23.53**	**349**	P	**P**	**20 29 15.7**	**-0.9**	
	comp=Z,1.6nm,0.7s,baz=162,slow=10,SNR=6.3							
	comp=Z,1.6nm,0.7s							
BELG	**Belogorsk Array**	**23.62**	**44**	P	**P**	**20 29 18.4**	**+1.0**	
	comp=Z,14nm,0.7s,baz=312,slow=1.4,SNR=8.9							
	comp=Z,14nm,0.7s							
GEYT	**Alibeck**	**29.55**	**79**	P	**P**	**20 30 12.1**	**+0.8**	
	comp=Z,2.3nm,0.6s,baz=255,slow=11,SNR=6.1							
	comp=Z,2.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.03**	**219**	P	**P**	**20 30 16.8**	**+1.2**	
	comp=Z,1.3nm,1.0s,baz=32,slow=12,SNR=4.5							
ARCES	**ARCESS Array B**	**31.47**	**3**	P	**P**	**20 30 28.2**	**+0.4**	
	comp=Z,0.9nm,0.5s,baz=189,slow=9.9,SNR=7.5							
	comp=Z,0.9nm,0.5s							
BVAR	**Borovoye Array**	**37.14**	**50**	P	**P**	**20 31 17.9**	**+0.8**	
	comp=Z,0.3nm,0.3s,baz=247,slow=7.4,SNR=2.3							
	comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**42.26**	**54**	P	**P**	**20 31 59.7**	**0.0**	
	comp=Z,0.5nm,0.4s,baz=282,slow=8.9,SNR=2.0							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**20 32 24.8**	**+0.1**	
	comp=Z,1.6nm,0.5s,baz=273,slow=7.2,SNR=33							
MKAR				PcP	**PcP**	**20 34 05.4**	**+1.4**	
	comp=Z,0.4nm,0.6s,baz=278,slow=4.4,SNR=2.8							
	comp=Z,1.6nm,0.5s							
ZALV	**Zalesovo Beam**	**45.71**	**48**	P	**P**	**20 32 27.7**	**+0.3**	
	comp=Z,3.6nm,0.6s,baz=276,slow=8.4,SNR=18							
	comp=Z,3.6nm,0.6s							
SONM	**Songino Array**	**60.48**	**51**	P	**P**	**20 34 17.4**	**+0.9**	
	comp=Z,0.3nm,0.5s,baz=316,slow=4.0,SNR=3.1							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**122.27**	**96**	PKP	**PKPdf**	**20 43 02.5**	**+0.7**	
	comp=Z,0.2nm,0.6s,baz=304,slow=2.0,SNR=1.7							

TAP 09 20:25:16.5, 24.°12N×121.°68E, h9km±1km, ML1.6, 3D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.06**	**306**	⇓*i* P			Pg	20 25 19.3	+0.8
	baz=305								
ETL				*i* S			Sg	20 25 20.9	+0.9
	baz=305								
TWD	**Chiawan**	**0.09**	**241**	*i* P			Pg	20 25 19.4	+0.6
	baz=238								
TWD				*i* S			Sg	20 25 20.9	+0.6
	baz=238								
NACB	**Ninganchiao**	**0.09**	**304**	⇓*i* P			Pg	20 25 19.7	+0.8
	baz=304								
NACB				*i* S			Sg	20 25 21.6	+1.0
	baz=304								
ETLH	**Xiulin Townshi**	**0.20**	**295**	*e*P			Pg	20 25 21.7	+1.0
	baz=295								
ETLH				*e*S			Sg	20 25 24.9	+1.4
	baz=295								
EAHA	**Aohua**	**0.21**	**15**	⇓*i* P			Pg	20 25 21.7	+0.8
	baz=15								
EAHA				*e*S			Sg	20 25 25.2	+1.3
	baz=15								
ETM	**Tongmen**	**0.23**	**227**	*e*P			Pg	20 25 21.7	+0.6
	baz=227								
LXIB	**Xiulin Townshi**	**0.26**	**248**	*e*P			Pg	20 25 22.4	+0.6
	baz=247								
ENA	**Nanau**	**0.31**	**11**	*i* P			Pb	20 25 23.6	-0.6
	baz=12								
ENA				*e*S			Sg	20 25 27.9	+1.1
	baz=12								
EWUT	**Wuta**	**0.34**	**16**	*e*P			Pb	20 25 23.9	-0.7
	baz=15								
WHF	**Hehuan Shan**	**0.38**	**274**	*e*P			Pb	20 25 25.0	-0.6
	baz=273								
LATG	**Datong**	**0.43**	**341**	*e*P			Pb	20 25 26.1	-0.3
	baz=341								
TWC	**Suao**	**0.51**	**18**	P			Pb	20 25 28.2	+0.5
	baz=18								
YHNB	**Yeheng**	**0.61**	**333**	*e*P			Pb	20 25 29.9	+0.5
	baz=333								
YULB	**Yu-li**	**0.81**	**206**	P			Pg	20 25 31.6	-0.4

*JMA **09** 20:25:19.6±0.1, 24.°0N±0.°3×12.°2E±.°, h3km, MV2.9/12, TAIWAN REGION*

*ASIES **09** 20:25:19.8, 23.°98N×121.°60E, h9km, ML3.7, Mw3.1, Moment Tensor Solution. Moment tensor: Scale 10^20^Nm; Mrr5.43; Mθθ-0.92; Mφφ-4.51; Mrθ1.06; Mθφ-1.45; Mφr1.32; Fault plane solution: M0 5.50170×10^20^ NP1:φs24.84000°, δ53.73000°, λ96.15000°. NP2:φs194.53000°, δ36.72000°, λ81.70000°. Principal axes: T Plg80.1130°, Azm321.0050°; N Plg4.9510°, Azm201.2000°; P Plg8.5360°, Azm110.4550°;*

*TAP **09** 20:25:19.8, 23.°98N×121.°60E, h9km, ML3.7, B*

ISC 09 20:25:20.4±0.8, 23.°96N±0.°01×121.°64E±0.°01, h8km±5km, n141, σθ°75/258, 1C-37D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**294**	⇓*i* P			**Pg**	**20 25 21.7**	**-0.3**
	baz=97								
HWA				*i* S			**Sg**	**20 25 23.8**	**+0.6**
	baz=97								
TWD	**Chiawan**	**0.12**	**342**	⇓*i* P			**Pg**	**20 25 22.8**	**-0.4**
	baz=3.0								
TWD				*i* S			**Sg**	**20 25 24.7**	**-0.4**
	baz=3.0								
ETM	**Tongmen**	**0.13**	**271**	*i* P			**Pg**	**20 25 22.7**	**-0.7**
	baz=264								
ETM				*i* S			**Sg**	**20 25 24.5**	**-0.9**
	baz=264								
SHUL	**Shoufeng**	**0.19**	**201**	⇓*i* P			**Pg**	**20 25 24.7**	**+0.4**
	baz=198								
SHUL				S			**Sg**	**20 25 28.7**	**+1.8**
	baz=198								
ETL	**Fush Village**	**0.19**	**357**	*i* P			**Pg**	**20 25 24.1**	**-0.3**
	baz=7.0								
ETL				*i* S			**Sg**	**20 25 27.0**	**-0.2**
	baz=7.0								
LXIB	**Xiulin Townshi**	**0.21**	**286**	⇓*i* P			**Pg**	**20 25 24.1**	**-0.7**
	baz=278								
LXIB				*i* S			**Sg**	**20 25 27.4**	**-0.3**
	baz=278								
NACB	**Ninganchiao**	**0.21**	**350**	⇓*i* P			**Pg**	**20 25 24.3**	**-0.5**
	baz=5.0								
NACB				*i* S			**Sg**	**20 25 27.1**	**-0.6**
	baz=5.0								
ESL	**Shilin**	**0.24**	**231**	⇓*i* P			**Pg**	**20 25 24.5**	**-0.7**
	baz=228								
ESL				*i* S			**Sg**	**20 25 27.7**	**-0.7**
	baz=228								
TEGC	**Jichi Village**	**0.27**	**199**	P			**Pb**	**20 25 26.6**	**-1.0**
	baz=201								
TEGC				*e*S			**Sb**	**20 25 32.6**	**+0.4**
	baz=201								
ETLH	**Xiulin Townshi**	**0.28**	**330**	⇓*i* P			**Pg**	**20 25 25.5**	**-0.6**
	baz=335								
ETLH				*i* S			**Sg**	**20 25 29.0**	**-0.8**
	baz=335								
WARBT	**Fenglin Townsh**	**0.34**	**223**	⇓*i* P			**Pg**	**20 25 26.3**	**-0.8**
	baz=227								
WARBT				*e*S			**Sg**	**20 25 30.5**	**-1.0**
	baz=227								
EGFH	**Guangfu**	**0.35**	**213**	⇓*i* P			**Pg**	**20 25 26.9**	**-0.4**
	baz=217								
EGFH				*e*S			**Sb**	**20 25 33.8**	**-0.8**
	baz=217								
EHP	**Heping Village**	**0.36**	**16**	*e*P			**Pg**	**20 25 27.5**	**+0.1**
	baz=22								
EHP				*e*S			**Sg**	**20 25 32.7**	**+0.4**
	baz=22								
EAHA	**Aohua**	**0.38**	**15**	P			**Pg**	**20 25 27.5**	**-0.3**
	baz=27								
EAHA				S			**Sg**	**20 25 32.6**	**-0.2**
	baz=27								
WHF	**Hehuan Shan**	**0.38**	**298**	⇓*i* P			**Pg**	**20 25 27.4**	**-0.8**
	baz=299								
WHF				*i* S			**Sg**	**20 25 32.5**	**-0.7**
	baz=299								
OWD	**Renai**	**0.42**	**269**	⇓*i* P			**Pg**	**20 25 28.1**	**-0.6**
	baz=278								
OWD				S			**Sg**	**20 25 33.7**	**-0.6**
	baz=278								
CHGB	**Renai**	**0.43**	**283**	⇓*i* P			**Pg**	**20 25 28.5**	**-0.4**
	baz=283								
CHGB				*e*S			**Sg**	**20 25 34.7**	**+0.1**
	baz=283								
FUSS	**Fushou**	**0.46**	**308**	⇓*i* P			**Pg**	**20 25 29.0**	**-0.4**
	baz=310								
FUSS				S			**Sg**	**20 25 35.0**	**-0.4**
	baz=310								
ENA	**Nanau**	**0.47**	**12**	*i* P			**Pg**	**20 25 29.4**	**-0.2**
	baz=16								
ENA				S			**Sg**	**20 25 35.8**	**0.0**
	baz=16								
WUSB	**Renai**	**0.47**	**273**	⇓*i* P			**Pg**	**20 25 29.3**	**-0.4**
	baz=282								
WUSB				S			**Sg**	**20 25 35.7**	**-0.2**
	baz=282								
EWUT	**Wuta**	**0.50**	**15**	P			**Pg**	**20 25 29.8**	**-0.3**
	baz=18								
EWUT				*e*S			**Sg**	**20 25 36.5**	**-0.1**
	baz=18								
VWDT	**VWDT**	**0.50**	**245**	⇓*i* P			**Pg**	**20 25 29.8**	**-0.3**
	baz=244								
VWDT				*e*S			**Sg**	**20 25 37.0**	**+0.3**
	baz=244								
HGSD	**Ruisui**	**0.51**	**202**	P			**Pg**	**20 25 30.7**	**+0.4**
	baz=215								
HGSD				*e*S			**Sb**	**20 25 39.2**	**+0.1**
	baz=215								
TWT	**Tachien**	**0.51**	**304**	⇓P			**Pg**	**20 25 30.3**	**-0.1**
	baz=304								
TWT				*e*S			**Sg**	**20 25 37.3**	**+0.2**
	baz=304								
NNSB	**Datong**	**0.52**	**333**	⇓P			**Pg**	**20 25 30.2**	**-0.3**
	baz=336								
NNSB				S			**Sg**	**20 25 36.7**	**-0.6**
	baz=336								
NNSH	**Datong**	**0.52**	**333**	P			**Pg**	**20 25 30.2**	**-0.3**
	baz=329								
NNSH				S			**Sg**	**20 25 36.7**	**-0.6**
	baz=329								
TDCB	**Techi**	**0.52**	**303**	⇓P			**Pg**	**20 25 30.3**	**-0.3**
	baz=304								
TDCB				*e*S			**Sg**	**20 25 37.3**	**-0.2**
	baz=304								
NNS	**Nan Shan**	**0.53**	**333**	⇓P			**Pg**	**20 25 30.4**	**-0.4**
	baz=336								
NNS				*e*S			**Sg**	**20 25 37.1**	**-0.6**
	baz=336								
EHY	**Hungye**	**0.54**	**212**	⇓P			**Pg**	**20 25 30.2**	**-0.7**
	baz=219								
EHY				*e*S			**Sb**	**20 25 39.0**	**-1.0**
	baz=219								
LATG	**Datong**	**0.58**	**350**	⇓*i* P			**Pg**	**20 25 31.2**	**-0.5**
	baz=353								
LATG				*e*S			**Sg**	**20 25 38.7**	**-0.5**
	baz=353								
WPL	**Puli Township**	**0.62**	**275**	*e*P			**Pg**	**20 25 32.2**	**-0.2**
	baz=274								
WPL				*e*S			**Sg**	**20 25 40.4**	**-0.2**
	baz=274								
ESAO	**Su ao**	**0.64**	**17**	*e*P			**Pg**	**20 25 32.6**	**-0.2**
	baz=10.0								
ESAO				*e*S			**Sg**	**20 25 40.7**	**-0.4**
	baz=10.0								
EOS4	**EOS4**	**0.64**	**76**	P			**Pb**	**20 25 34.0**	**+0.3**
	baz=95								
EOS4				*e*S			**Sb**	**20 25 44.4**	**+1.7**
	baz=95								
NDT	**Datong Townshi**	**0.65**	**350**	⇓P			**Pg**	**20 25 32.7**	**-0.2**
	baz=352								
NDT				S			**Sg**	**20 25 41.4**	**0.0**
	baz=352								
YULB	**Yu-li**	**0.65**	**209**	P			**Pg**	**20 25 32.3**	**-0.7**
	baz=216								
YULB				*e*S			**Sg**	**20 25 42.1**	**+0.7**
	baz=216								
SSLB	**Suanglung**	**0.65**	**254**	P			**Pg**	**20 25 32.5**	**-0.5**
SSLB	**Suanglung**	**0.65**	**254**	⇓*i* P			**Pg**	**20 25 32.4**	**-0.5**
	baz=263								
SSLB				S			**Sg**	**20 25 40.3**	**-1.2**
	baz=263								
DPDB	**Guoxing**	**0.65**	**276**	⇓P			**Pg**	**20 25 33.0**	**-0.1**
	baz=276								
DPDB				*e*S			**Sg**	**20 25 41.6**	**0.0**
	baz=276								
WCS	**Beigang Elemen**	**0.67**	**278**	⇓P			**Pg**	**20 25 33.2**	**-0.2**
	baz=278								
WCS				*e*S			**Sg**	**20 25 42.0**	**0.0**
	baz=278								
NDS	**Dongshan**	**0.67**	**6**	*e*P			**Pg**	**20 25 33.2**	**-0.2**
	baz=9.0								
NDS				*e*S			**Sg**	**20 25 41.9**	**-0.2**
	baz=9.0								
TWC	**Suao**	**0.67**	**17**	P			**Pg**	**20 25 33.4**	**0.0**
	baz=11								
TWC				*e*S			**Sg**	**20 25 42.9**	**+0.7**
	baz=11								
ENTT	**Nioudou**	**0.68**	**355**	⇓P			**Pg**	**20 25 33.3**	**-0.2**
	baz=357								
ENTT				*e*S			**Sg**	**20 25 42.1**	**-0.3**
	baz=357								
SMLT	**Sun Moon Lake**	**0.68**	**263**	⇓P			**Pg**	**20 25 33.2**	**-0.3**
	baz=263								
SMLT				*e*S			**Sg**	**20 25 42.7**	**+0.3**
	baz=263								
EYUL	**Yuli**	**0.68**	**205**	*e*P			**Pg**	**20 25 33.3**	**-0.2**
	baz=218								
TWF1	**Yuli**	**0.68**	**207**	⇑P			**Pg**	**20 25 33.2**	**-0.4**
	baz=216								
TWF1				*e*S			**Sg**	**20 25 42.8**	**+0.3**
	baz=216								
EOS3	**EOS3**	**0.70**	**63**	*e*P			**Pb**	**20 25 35.7**	**+0.9**
	baz=61								
WHP	**Taichung City**	**0.70**	**296**	⇓*e*P			**Pb**	**20 25 34.5**	**-0.5**
	baz=290								
WHP				*e*S			**Sb**	**20 25 43.9**	**-1.0**
	baz=290								
EOS2	**EOS2**	**0.71**	**50**	*e*P			**Pn**	**20 25 36.7**	**+0.1**
	baz=63								
TYC	**Yuchr**	**0.71**	**265**	⇓*e*P			**Pg**	**20 25 33.7**	**-0.5**
	baz=265								
TYC				*e*S			**Sg**	**20 25 42.8**	**-0.8**
	baz=265								
YHNB	**Yeheng**	**0.74**	**341**	P			**Pb**	**20 25 34.9**	**-0.7**
YHNB	**Yeheng**	**0.74**	**341**	⇓*e*P			**Pg**	**20 25 34.7**	**-0.1**
	baz=343								
YHNB				*e*S			**Sg**	**20 25 43.9**	**-0.6**
	baz=343								
NSK	**Sanguang**	**0.75**	**340**	⇓*e*P			**Pg**	**20 25 34.8**	**-0.1**
	baz=343								
NSK				*e*S			**Sg**	**20 25 44.1**	**-0.6**
	baz=343								
TWE	**Neicheng**	**0.75**	**2**	*e*P			**Pg**	**20 25 34.9**	**-0.1**
	baz=5.0								
TWE				*e*S			**Sg**	**20 25 45.2**	**+0.4**
	baz=5.0								
WHYT	**Xinyi Township**	**0.77**	**250**	⇓*e*P			**Pg**	**20 25 34.6**	**-0.5**
	baz=255								
WHYT				*e*S			**Sb**	**20 25 46.4**	**-0.2**
	baz=255								
FUSB	**Fushanzhiwuyua**	**0.79**	**357**	*e*P			**Pg**	**20 25 35.5**	**-0.2**
	baz=359								
FUSB				*e*S			**Sg**	**20 25 45.9**	**-0.2**
	baz=359								
CHKH	**Chenggong**	**0.80**	**196**	*e*P			**Pg**	**20 25 36.0**	**+0.2**
	baz=185								
CHKH				*e*S			**Sb**	**20 25 48.7**	**+1.2**
	baz=185								
ILA	**Ilan**	**0.80**	**7**	*e*P			**Pb**	**20 25 36.5**	**-0.1**
	baz=10.0								
ILA				*e*S			**Sb**	**20 25 48.1**	**+0.4**
	baz=10.0								
NFF	**Wufeng Townshi**	**0.82**	**325**	*e*P			**Pb**	**20 25 36.2**	**-0.7**
	baz=326								
NFF				*e*S			**Sg**	**20 25 46.6**	**-0.2**
	baz=326								
NWLT	**Wulai**	**0.82**	**351**	*e*P			**Pg**	**20 25 36.0**	**-0.2**
	baz=353								
NWLT				*e*S			**Sg**	**20 25 46.3**	**-0.6**
	baz=353								
FULB	**Fuli**	**0.82**	**202**	*e*P			**Pb**	**20 25 37.1**	**+0.1**
	baz=217								
FULB				*e*S			**Sn**	**20 25 50.7**	**0.0**
	baz=217								
WJS	**Zhushan**	**0.84**	**261**	*e*P			**Pb**	**20 25 37.0**	**-0.3**
	baz=266								
WJS				*e*S			**Sb**	**20 25 49.6**	**+0.8**
	baz=266								
WWF	**Wufeng**	**0.86**	**275**	*e*P			**Pb**	**20 25 38.1**	**+0.5**
	baz=281								
WNT	**Mingjian**	**0.88**	**265**	*e*P			**Pb**	**20 25 38.1**	**+0.2**
	baz=264								
WNT				*e*S			**Sb**	**20 25 50.2**	**+0.5**
	baz=264								
TWQ1	**Liyutan**	**0.88**	**296**	*e*P			**Pb**	**20 25 37.6**	**-0.2**
	baz=297								
TWQ1				*e*S			**Sn**	**20 25 51.3**	**-0.7**
	baz=297								
NSTT	**Nanjuang**	**0.88**	**319**	*e*P			**Pb**	**20 25 37.6**	**-0.4**
	baz=320								
NSTT				*e*S			**Sb**	**20 25 49.0**	**-0.9**
	baz=320								
LIOB	**Emei**	**0.88**	**320**	*e*P			**Pb**	**20 25 37.8**	**-0.2**
	baz=321								
LIOB				*e*S			**Sb**	**20 25 49.4**	**-0.6**
	baz=321								
ALS	**Alishan**	**0.89**	**239**	⇓P			**Pg**	**20 25 37.2**	**-0.3**
	baz=239								
ALS				*e*S			**Sb**	**20 25 49.5**	**-0.8**
	baz=239								
CHKT	**Chengkung**	**0.90**	**196**	*e*P			**Pg**	**20 25 36.4**	**-1.2**
	baz=196								
CHKT				*e*S			**Sb**	**20 25 51.9**	**+1.6**
	baz=196								
TCU	**Taichung**	**0.90**	**282**	*e*P			**Pb**	**20 25 38.5**	**+0.3**
	baz=277								
TCU				*e*S			**Sn**	**20 25 52.1**	**-0.4**
	baz=277								
EHD	**Haiduan**	**0.90**	**206**	*e*P			**Pg**	**20 25 37.1**	**-0.7**
	baz=216								
EHD				*e*S			**Sb**	**20 25 50.6**	**+0.1**
	baz=216								
NJD	**Zhudong**	**0.92**	**327**	*e*P			**Pn**	**20 25 39.2**	**-0.4**
	baz=328								
NJD				*e*S			**Sb**	**20 25 51.3**	**+0.4**
	baz=328								
NSY	**Sanyi**	**0.92**	**300**	*e*P			**Pb**	**20 25 39.0**	**+0.5**
	baz=312								
NSY				*e*S			**Sn**	**20 25 52.5**	**-0.5**
	baz=312								
ECS	**Chishang**	**0.95**	**204**	*e*P			**Pn**	**20 25 40.0**	**0.0**
	baz=204								
CHN5	**Tsauling**	**0.95**	**248**	⇓*e*P			**Pb**	**20 25 39.0**	**-0.2**
	baz=237								
CHN5				*e*S			**Sn**	**20 25 53.7**	**-0.2**
	baz=237								
ELDTW	**Lidau**	**0.96**	**216**	*e*P			**Pg**	**20 25 37.4**	**-1.5**
	baz=208								
ELDTW				*e*S			**Sg**	**20 25 51.2**	**-0.1**
	baz=208								
NMLH	**Miaoli**	**0.96**	**307**	*e*P			**Pn**	**20 25 40.0**	**-0.2**
	baz=307								
NMLH				*e*S			**Sb**	**20 25 52.1**	**-0.1**
	baz=307								
WYL	**Yuanlin Townsh**	**0.97**	**270**	*e*P			**Pn**	**20 25 39.9**	**-0.3**
	baz=256								
WYL				*e*S			**Sn**	**20 25 54.6**	**+0.4**
	baz=256								
WDJ	**Dajia District**	**0.99**	**293**	*e*P			**Pn**	**20 25 40.7**	**+0.1**
	baz=293								
WDJ				*e*S			**Sn**	**20 25 55.1**	**+0.4**
	baz=293								
HSN1	**Hsinchu**	**0.99**	**325**	*e*P			**Pn**	**20 25 40.8**	**+0.3**
	baz=325								
WCHH	**Zhanghua**	**0.99**	**277**	*e*P			**Pn**	**20 25 40.4**	**-0.2**
	baz=277								
NHDH	**Xindian Distri**	**1.00**	**354**	*e*P			**Pb**	**20 25 39.7**	**-0.3**
	baz=355								
NHDH				*e*S			**Sg**	**20 25 52.3**	**-0.4**
	baz=355								
NJN	**Zhunan**	**1.00**	**316**	*e*P			**Pn**	**20 25 41.0**	**+0.2**
	baz=324								
TWA	**Mucha**	**1.01**	**357**	*e*P			**Pb**	**20 25 40.1**	**-0.1**
	baz=350								
TWA				*e*S			**Sg**	**20 25 53.0**	**-0.1**
	baz=350								
SBCB	**Hsinchu**	**1.02**	**324**	*e*P			**Pn**	**20 25 41.7**	**+0.7**
	baz=324								
TATO	**Taipei**	**1.02**	**352**	P			**Pb**	**20 25 40.1**	**-0.2**
TATO	**Taipei**	**1.02**	**352**	*e*P			**Pb**	**20 25 40.2**	**-0.1**
	baz=353								
TATO				*e*S			**Sg**	**20 25 52.9**	**-0.3**
	baz=353								
TIPB	**Shuangxi**	**1.02**	**10**	*e*P		

NCU					*e*S		**Sn**	20 25 57.6	+0.5
	baz=349								
TWB1	**Santiao Chiao**	**1.09**	**17**	*e*P			**Pb**	**20 25 41.6**	**+0.1**
	baz=11								
TWB1					*e*S		**Sb**	**20 25 55.8**	**0.0**
	baz=11								
NWF	**Wu-fen Shan**	**1.11**	**7**	*e*P			**Pb**	**20 25 41.8**	**-0.2**
	baz=8.0								
NWF					*e*S		**Sg**	**20 25 56.2**	**0.0**
	baz=8.0								
WFSB	**Wu-fen Shan**	**1.11**	**7**	*e*P			**Pb**	**20 25 41.9**	**0.0**
	baz=8.0								
WFSB					*e*S		**Sg**	**20 25 56.1**	**-0.1**
	baz=8.0								
STYH	**Taoyuan**	**1.12**	**225**	*e*P			**Pg**	**20 25 41.4**	**-0.5**
	baz=226								
STYH					*e*S		**Sb**	**20 25 56.7**	**0.0**
	baz=226								
STYT	**Tauyuan**	**1.13**	**225**	*e*P			**Pg**	**20 25 42.0**	**-0.3**
	baz=226								
STYT					*e*S		**Sb**	**20 25 57.8**	**+0.6**
	baz=226								
CHN4	**Tsaushan**	**1.14**	**238**⇓	*e*P			**Pb**	**20 25 42.4**	**+0.1**
	baz=227								
CHN4					*e*S		**Sn**	**20 25 59.5**	**+1.2**
	baz=227								
TPUB	**Ta-pu**	**1.14**	**235**	P			**Pg**	**20 25 41.8**	**-0.4**
TPUB	**Ta-pu**	**1.14**	**235**⇓	*e*P			**Pb**	**20 25 42.2**	**-0.1**
	baz=224								
TPUB					*e*S		**Sn**	**20 25 58.7**	**+0.3**
	baz=224								
SXI1	**Grass Mountain**	**1.15**	**11**	*e*P			**Pb**	**20 25 42.6**	**+0.1**
	baz=5.0								
SXI1					*e*S		**Sn**	**20 25 59.7**	**+1.0**
	baz=5.0								
CHN2	**Minshiung**	**1.15**	**248**	*e*P			**Pn**	**20 25 43.5**	**+0.7**
	baz=264								
CHN2					*e*S		**Sn**	**20 25 59.5**	**+0.8**
	baz=264								
TWS1	**Kuangyinshan**	**1.15**	**350**	*e*P			**Pn**	**20 25 43.1**	**+0.3**
	baz=359								
LONT	**Longtian**	**1.15**	**204**	*e*P			**Pg**	**20 25 42.3**	**-0.3**
	baz=205								
WRL	**Guolierlin Hig**	**1.15**	**267**	*e*P			**Pb**	**20 25 42.5**	**-0.1**
	baz=268								
WRL					*e*S		**Sn**	**20 25 58.7**	**-0.1**
	baz=268								
NHW	**Xinwu Township**	**1.17**	**333**	*e*P			**Pn**	**20 25 43.9**	**+0.8**
	baz=322								
NHW					*e*S		**Sn**	**20 26 00.5**	**+1.3**
	baz=322								
RLNB	**Erlin**	**1.17**	**267**	*e*P			**Pb**	**20 25 43.0**	**+0.1**
	baz=268								
RLNB					*e*S		**Sn**	**20 25 59.8**	**+0.6**
	baz=268								
WTK	**Tuku**	**1.18**	**257**	*e*P			**Pn**	**20 25 43.4**	**+0.2**
	baz=258								
WTK					*e*S		**Sn**	**20 25 59.6**	**+0.2**
	baz=258								
YM01	**YM01**	**1.18**	**357**	*e*P			**Pn**	**20 25 43.6**	**+0.3**
	baz=349								
YM01					*e*S		**Sb**	**20 25 59.1**	**+0.6**
	baz=349								
WTP	**Ta-pu**	**1.18**	**233**⇓	*e*P			**Pb**	**20 25 42.9**	**-0.2**
	baz=234								
WTP					*e*S		**Sb**	**20 25 59.5**	**+0.9**
	baz=234								
TNOU	**National Taiwa**	**1.19**	**6**	*e*P			**Pn**	**20 25 43.7**	**+0.4**
	baz=5.0								
NTST	**Danshui**	**1.21**	**352**	*e*P			**Pn**	**20 25 44.2**	**+0.6**
NTST					*e*S		**Sn**	**20 26 00.3**	**+0.2**
YM08	**YM08**	**1.22**	**358**	*e*P			**Pn**	**20 25 44.1**	**+0.3**
	baz=357								
TWGBT	**Beinan**	**1.25**	**204**	P			Pn	20 25 42.4	+0.1
TWG	**Pinlang**	**1.25**	**205**	*e*P			**Pg**	**20 25 41.9**	**-2.5**
	baz=193								
TWGBT	**Beinan**	**1.25**	**204**	*e*P			**Pg**	**20 25 42.2**	**-2.3**
	baz=214								
TWGBT					*e*S		**Sn**	**20 26 02.3**	**+1.1**
	baz=214								
TWK	**Hsinying**	**1.26**	**237**	*e*P			**Pb**	**20 25 44.5**	**0.0**
	baz=227								
TWK					*e*S		**Sn**	**20 26 02.2**	**+0.7**
	baz=227								
CHN1	**Nanshi**	**1.28**	**233**	*e*P			**Pn**	**20 25 45.0**	**+0.4**
	baz=238								
CHN1					*e*S		**Sn**	**20 26 03.4**	**+1.4**
	baz=238								
SNST	**Tainan City**	**1.28**	**235**	*e*P			**Pn**	**20 25 44.9**	**+0.3**
	baz=226								
SNST					*e*S		**Sn**	**20 26 02.9**	**+0.9**
	baz=226								
JYNG	**Yonagunijimaku**	**1.29**	**68**	*e*P			**Pg**	**20 25 44.1**	**-1.1**
JYNG					S		**Sg**	**20 26 01.9**	**-0.1**
LDUT	**Ludao**	**1.29**	**187**	*e*P			**Pg**	**20 25 41.8**	**-3.5**
	baz=171								
LDUT					*e*S		**Sb**	**20 26 02.0**	**+0.3**
	baz=171								
SGST	**Jiashian**	**1.31**	**228**	*e*P			**Pg**	**20 25 44.5**	**-1.1**
	baz=230								
SGST					*e*S		**Sn**	**20 26 03.4**	**+0.8**
	baz=230								
SLGT	**Liugui**	**1.33**	**223**	*e*P			**Pn**	**20 25 46.0**	**+0.7**
	baz=225								
SLGT					*e*S		**Sn**	**20 26 04.4**	**+1.3**
	baz=225								
WSF	**Szhu**	**1.33**	**256**	*e*P			**Pg**	**20 25 45.5**	**-0.6**
	baz=258								
WSF					*e*S		**Sn**	**20 26 03.8**	**+0.6**
	baz=258								
YOJ	**Yonaguni jima**	**1.35**	**68**	P			**Pg**	**20 25 44.9**	**-1.4**
YOJ	**Yonaguni jima**	**1.35**	**68**	*e*P			**Pg**	**20 25 44.7**	**-1.6**
	baz=67								
YOJ					*e*S		**Sg**	**20 26 03.8**	**-0.1**
	baz=67								
YOJ	**Yonaguni jima**	**1.35**	**68**	P			**Pg**	**20 25 44.7**	**-1.6**
ICHU	**Yijhu**	**1.38**	**244**	*e*P			**Pb**	**20 25 46.7**	**+0.2**
	baz=247								
ICHU					*e*S		**Sn**	**20 26 05.6**	**+1.2**
	baz=247								
CHN8	**Yiju**	**1.44**	**245**	*e*P			**Pb**	**20 25 47.5**	**0.0**
	baz=247								
CHN8					*e*S		**Sn**	**20 26 08.4**	**+2.4**
	baz=247								
ECL	**Taimali**	**1.50**	**205**	*e*P			**Pn**	**20 25 46.7**	**-0.9**
	baz=190								
SCST	**Cishan**	**1.50**	**225**	*e*P			**Pg**	**20 25 49.7**	**+0.5**
	baz=228								
SCST					*e*S		**Sn**	**20 26 12.1**	**+4.7**
	baz=228								
SSD	**Sandimen**	**1.52**	**217**	*e*P			**Pn**	**20 25 47.3**	**-0.6**
	baz=220								
SSD					*e*S		**Sg**	**20 26 09.9**	**+0.5**
	baz=220								
TSMG	**Majia**	**1.55**	**216**	*e*P			**Pb**	**20 25 49.1**	**-0.2**
	baz=233								
TSMG					*e*S		**Sg**	**20 26 11.4**	**+1.1**
	baz=233								
MASBT	**Mashibuluo**	**1.63**	**215**	*e*P			**Pn**	**20 25 49.5**	**+0.1**
	baz=218								
MASBT					*e*S		**Sg**	**20 26 12.9**	**-0.1**
	baz=218								
JKRS	**Kuro-shima**	**2.19**	**82**	*e*P			**Pn**	**20 25 56.8**	**-0.3**
JIJ	**Ishigaki jima**	**2.32**	**80**	P			**Pn**	**20 25 57.9**	**-1.1**
JIJ					*e*S		**Sn**	**20 26 28.3**	**+0.6**
JISG	**Ishigakijimahi**	**2.52**	**75**	P			**Pn**	**20 26 00.6**	**-1.0**
JISG					*e*S		**Sn**	**20 26 32.4**	**-0.1**

*CATAC **09** 20:26:55.3±2.9, 8.°07N×82.°95W, h1km±6km, ML3.4*
*UCR **09** 20:26:58.8±1.0, 8.°32N×83.°06W, h6km±6km, MW3.8*
ISC 09 20:26:59.8±1.2, **8.°39N**±0.°07×**83.°06W**±0.°03, **h12**km±8km, **n25**, σ**0.°79**/28, **2D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCOL	**Caracol de Cor**	**0.09**	**79**	*e*S	**Sg**	**20 27 05.6**	**+1.2**
CCOL				*e*P	**Pg**	**20 27 02.1**	**-0.4**
CCOL	**Caracol de Cor**	**0.09**	**79**	*i* P	**Pg**	**20 27 01.3**	**-1.2**
CCOL				IAML		20 27 10.8	
	comp=Z,37μm,1.0s						
FITO	**Golfito**	**0.25**	**339**⇓	*i* P	**Pg**	**20 27 04.8**	**-0.3**
FITO				*e*S	**Sg**	**20 27 09.8**	**+1.2**
CDITO	**Canoas**	**0.26**	**46**	*i* P	**Pg**	**20 27 05.1**	**-0.1**
CDITO				IAML		20 27 14.3	
	comp=Z,2μm,1.0s						
PIRO	**Carate, Puerto**	**0.27**	**273**	*e*P	**Pg**	**20 27 05.1**	**-0.3**
PIRO	**Carate, Puerto**	**0.27**	**273**	*i* P	**Pg**	**20 27 05.1**	**-0.3**
PIRO				IAML		20 27 13.7	
	comp=Z,2μm,1.0s						
EDAD	**Golfito**	**0.28**	**338**	*e*P	**Pg**	**20 27 05.3**	**-0.3**
JIME	**Puerto Jimenez**	**0.30**	**299**	*e*P	**Pg**	**20 27 05.7**	**-0.3**
VITO	**San Vito**	**0.43**	**12**⇓	*i* P	**Pb**	**20 27 09.0**	**-0.6**
BRU2	**Volcan**	**0.54**	**42**	*e*P	**Pg**	**20 27 10.4**	**-0.1**
BRU2				*e*S	**Sb**	**20 27 20.0**	**+0.7**
BRU2	**Volcan**	**0.54**	**42**	*i* P	**Pg**	**20 27 10.4**	**-0.1**
BRU2				IAML		20 27 27.3	
	comp=Z,690nm,1.0s						
PLAN	**Los Planes de**	**0.67**	**295**	*i* P	**Pg**	**20 27 13.4**	**+0.5**
PLAN				IAML		20 27 30.8	
	comp=Z,2μm,1.0s						
SRBA	**San Rafael, Bu**	**0.89**	**341**	*e*P	**Pg**	**20 27 16.1**	**-0.8**
SRBA	**San Rafael, Bu**	**0.89**	**341**	*i* P	**Pn**	**20 27 18.2**	**-0.1**
SRBA				IAML		20 27 32.8	
	comp=Z,160nm,1.0s						
OCHAL	**Ojochal**	**0.91**	**321**	*i* P	**Pn**	**20 27 18.6**	**+0.1**
OCHAL				IAML		20 27 37.3	
	comp=Z,6.5nm,1.0s						
PEZE	**Perez Zeledon,**	**1.16**	**328**	*e*P	**Pg**	**20 27 20.8**	**-1.3**
BUS1	**Rivas**	**1.34**	**330**	*e*P	**Pb**	**20 27 23.8**	**-1.4**
CDM	**Cerro de Muert**	**1.35**	**329**	*e*P	**Pb**	**20 27 23.9**	**-1.4**
CDM	**Cerro de Muert**	**1.35**	**329**	*i* P	**Pg**	**20 27 25.5**	**-0.3**
CDM				IAML		20 27 53.0	
	comp=Z,210nm,1.0s						
LCR2	**La Lucha 2**	**1.64**	**325**	*i* P	**Pb**	**20 27 29.8**	**-0.3**
LCR2				IAML		20 27 54.8	
	comp=Z,170nm,1.0s						
VTCV	**VTCV, Calle Va**	**1.71**	**338**	*i* P	**Pb**	**20 27 31.0**	**-0.4**
VTCV				IAML		20 28 02.1	
	comp=Z,250nm,1.0s						
JACO	**JACO, Garabito**	**2.02**	**309**	*i* P	**Pn**	**20 27 33.5**	**-0.3**
JACO				IAML		20 27 40.8	
	comp=Z,82nm,1.0s						
ORTG	**Ortega, Santa**	**3.07**	**310**	*i* P	**Pn**	**20 27 49.8**	**+1.5**
ORTG				IAML		20 29 19.5	
	comp=Z,36nm,1.0s						
SAJU	**San Juanillo,**	**3.10**	**303**	*i* P	**Pn**	**20 27 48.9**	**+0.3**
SAJU				IAML		20 28 50.9	
	comp=Z,46nm,1.0s						
ESPN	**Las Esperanzas**	**3.97**	**342**	*i* P	**Pn**	**20 28 00.9**	**+0.3**
ESPN				IAML		20 28 11.0	
	comp=Z,150nm,1.0s						

TAP 09 20:32:10.3, 23.°38N×120.°48E, h9km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWK	**Hsinying**	**0.11**	**177**	P	Pg	20 32 13.5	+0.5
	baz=161						
TWK				S	Sg	20 32 16.0	+1.1
	baz=161						
WCKO	**Fanlu**	**0.13**	**61**	P	Pg	20 32 14.0	+0.7
	baz=61						
WCKO				S	Sg	20 32 16.9	+1.4
	baz=61						
SNST	**Tainan City**	**0.15**	**174**	P	Pg	20 32 14.3	+0.6
	baz=166						
SNST				*e*S	Sg	20 32 17.3	+1.2
	baz=166						
TPUB	**Ta-pu**	**0.15**	**118**	*i* P	Pg	20 32 14.3	+0.6
	baz=119						
TPUB				*i* S	Sg	20 32 17.4	+1.3
	baz=119						
WTP	**Ta-pu**	**0.18**	**136**	P	Pg	20 32 14.9	+0.8
	baz=135						
WTP				S	Sg	20 32 18.8	+2.1
	baz=135						
ICHU	**Yijhu**	**0.19**	**266**	*e*P	Pg	20 32 15.1	+0.8
	baz=265						
ICHU				*e*S	Sg	20 32 19.6	+2.7
	baz=265						
CHN1	**Nanshi**	**0.19**	**167**	P	Pg	20 32 15.5	+1.1
	baz=160						
CHN1				*e*S	Sg	20 32 19.4	+2.2
	baz=160						
CHN8	**Yiju**	**0.25**	**263**	P	Pg	20 32 16.3	+0.9
	baz=263						
CHN8				S	Sg	20 32 21.8	+3.0
	baz=263						
WSL	**Shuilin Townsh**	**0.28**	**302**	*e*P	Pb	20 32 16.9	-0.6
	baz=302						
WSL				*e*S	Sb	20 32 22.4	+0.2
	baz=302						
CHN5	**Tsauling**	**0.29**	**39**	P	Pb	20 32 17.1	-0.6
	baz=39						
CHN5				*e*S	Sb	20 32 22.1	-0.6
	baz=39						
SGST	**Jiashian**	**0.31**	**162**	*e*P	Pg	20 32 16.6	+0.1
	baz=161						
SGST				*e*S	Sb	20 32 22.3	-0.8
	baz=161						
WTK	**Tuku**	**0.32**	**345**	*e*P	Pb	20 32 17.8	-0.5
	baz=345						
WTK				*e*S	Sb	20 32 23.4	-0.1
	baz=345						
ALS	**Alishan**	**0.33**	**66**	P	Pb	20 32 18.1	-0.4
	baz=67						
ALS				*e*S	Sb	20 32 23.9	-0.1
	baz=67						
STYH	**Taoyuan**	**0.34**	**127**	P	Pb	20 32 17.8	-0.7
	baz=115						
STYH				*e*S	Sb	20 32 23.6	-0.5
	baz=115						
WSF	**Szhu**	**0.35**	**318**	*e*S	Sb	20 32 24.5	0.0
	baz=319						
TSCK	**Chigu Township**	**0.43**	**238**	*e*S	Sb	20 32 27.0	+0.4
	baz=238						
WHYT	**Xinyi Township**	**0.47**	**47**	P	Pb	20 32 20.7	-0.1
	baz=47						
WHYT				S	Sb	20 32 28.0	+0.2
	baz=47						
ELDTW	**Lidau**	**0.53**	**110**	P	Pb	20 32 21.4	-0.4
	baz=111						
ELDTW				S	Sb	20 32 29.6	+0.1
	baz=111						
TYC	**Yuchr**	**0.63**	**33**	*e*P	Pb	20 32 23.8	+0.3
	baz=34						
TYC				*e*S	Sn	20 32 34.1	-1.5
	baz=34						
SMLT	**Sun Moon Lake**	**0.64**	**37**	*e*P	Pb	20 32 23.9	+0.2
	baz=38						
EHD	**Haiduan**	**0.70**	**109**	*e*P	Pb	20 32 24.5	-0.3
	baz=100						
EHD				*e*S	Sb	20 32 35.3	+0.8
	baz=100						
YULB	**Yu-li**	**0.75**	**89**	*e*P	Pb	20 32 25.3	-0.3
	baz=89						

*NEIC **09** 20:33:09.5±0.7, 35.°856N±0.°010×96.°67W±0.°01, h6km±3km, Error ellipse: s-maj=1.7km s-min=1.5km az=86.0*
TUL 09 20:33:09.8±0.8, **35.°862N**±0.°010×**96.°68W**±0.°01, **h8**km±3km, **ML2.6, mb_Lg2.4**/9(NEIC), **ML2.5**/32(NEIC), **Error ellipse: s-maj=1.7km s-min=1.4km az=104.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEOK	**Depew**	**0.15**	**97**	Pg	Pg	20 33 13.2	+0.2
DEOK				Sg	Sg	20 33 15.7	+0.5
DEOK				IAML		20 33 16.0	
	comp=N,2μm,0.3s						
DEOK				IAML		20 33 16.6	
	comp=E,888nm,0.1s						
OK052	**Battle Ridge R**	**0.16**	**324**	Pg	Pg	20 33 13.4	+0.2
OK052				Sg	Sg	20 33 15.9	+0.4
OK033	**Mehan**	**0.28**	**311**	Pg	Pg	20 33 15.4	+0.1
OK033				Sg	Sg	20 33 19.2	+0.2
OK033				IAML		20 33 22.8	
	comp=E,342nm,0.1s						
QUOK	**Quay**	**0.31**	**356**	Pg	Pg	20 33 16.1	+0.2
QUOK				Sg	Sg	20 33 20.7	+0.7
QUOK				IAML		20 33 20.8	
	comp=E,683nm,0.3s						
OK048	**Pawnee Station**	**0.59**	**339**		Pg	20 33 21.1	-0.1
OK048				Sg	Sg	20 33 29.3	+0.3
OK048				IAML		20 33 29.5	
	comp=E,249nm,0.2s						
ADOK	**Arcadia Dam**	**0.60**	**250**	Pg	Pb	20 33 22.6	+0.1
ADOK				Sg	Sg	20 33 29.8	+0.6
OK029	**Liberty Lake**	**0.63**	**264**	Pg	Pg	20 33 21.9	-0.1
OK029				Sg	Sg	20 33 30.5	+0.3
OK029				IAML		20 33 34.9	
	comp=E,179nm,0.5s						
OK051	**E0350 and S346**	**0.65**	**349**		Pg	20 33 22.4	0.0
OK051				Sg	Sg	20 33 31.2	+0.2
OK051				IAML		20 33 31.5	
	comp=E,301nm,0.2s						
OK051				IAML		20 33 32.2	
	comp=E,334nm,0.2s						
W35A	**Tecumseh**	**0.72**	**192**		Pg	20 33 23.4	-0.4
W35A				Sg	Sg	20 33 33.5	+0.3
W35A				IAML		20 33 33.8	
	comp=E,154nm,0.4s						
TUL3	**Leonard**	**0.73**	**86**	Pg	Pg	20 33 23.6	-0.2
TUL3				Sg	Sg	20 33 33.3	+0.1
FNO	**Franklin**	**0.84**	**224**	Pg	Pg	20 33 25.4	-0.5
FNO				Sg	Sg	20 33 37.3	+0.4
FNO				IAML		20 33 37.4	
	comp=E,151nm,1.1s						
BLOK	**Blackwell**	**0.99**	**335**	Pg	Pg	20 33 28.5	-0.4
BLOK				Sg	Sg	20 33 42.2	+0.4
T35A	**Sooner Cattle**	**1.06**	**7**		Pg	20 33 29.6	-0.5
T35A				Sg	Sg	20 33 44.0	0.0
T35A				IAML		20 33 44.5	
	comp=N,125nm,0.2s						
CROK	**Carrier**	**1.23**	**302**	Pg	Pb	20 33 32.4	-1.0
CROK				IAML		20 33 55.5	
	comp=E,117nm,0.3s						
CROK				IAML		20 33 56.1	
	comp=N,114nm,0.2s						
KAN13	**South Haven SW**	**1.31**	**331**		Pb	20 33 34.7	-0.1
GC02	**Grant County #**	**1.37**	**316**		Pn	20 33 35.0	-0.3
RLO	**Rose Lookout**	**1.38**	**77**		Pn	20 33 34.7	-0.7
KAN09	**Caldwell North**	**1.48**	**330**		Pn	20 33 36.2	-0.6
KAN14	**Manchester OK**	**1.50**	**317**		Pn	20 33 37.0	-0.1
OK032	**Salt Plains WL**	**1.55**	**308**		Pb	20 33 38.5	-0.3
X34A	**Smith Ranch, M**	**1.57**	**217**		Pn	20 33 38.3	+0.2
CSTR	**Hydro, Custer**	**1.65**	**263**		Pn	20 33 38.7	-0.4
KAN06	**Argonia West S**	**1.68**	**326**		Pn	20 33 39.8	+0.3
KAN10	**Anthony SW Sta**	**1.70**	**318**		Pn	20 33 40.2	+0.4
OK038	**West end E0370**	**1.78**	**291**		Pn	20 33 41.6	+0.7
KAN12	**Harper NE Stat**	**1.78**	**324**	Pn	Pb	20 33 42.1	-0.7
LOOK	**Love County**	**1.91**	**192**	Pn	Pn	20 33 43.2	+0.5
U32A	**Winter Ranch,**	**1.95**	**286**	Pn	Pb	20 33 44.5	-1.1
U32A				IAmb_Lg		20 34 10.5	
	comp=Z,13nm,1.0s						
U38A	**Gravette**	**1.95**	**72**		Pn	20 33 44.2	+1.0
U38A				IAmb_Lg		20 34 11.4	
	comp=Z,21nm,0.9s						
WMOK	**Wichita Mounta**	**2.05**	**237**		Pn	20 33 45.5	+0.8
HHAR	**Hobbs**	**2.26**	**79**	Pn	Pn	20 33 48.3	+0.8
MIAR	**Mount Ida**	**2.86**	**116**	Pn	Pn	20 33 56.7	+0.9
S39A	**Bolivar**	**3.26**	**55**		Pn	20 34 01.2	0.0
X40A	**Basin Creek Fa**	**3.44**	**112**	Pn	Pn	20 34 01.9	-1.8
WHAR	**Wooly Hollow**	**3.63**	**98**	Pn	Pn	20 34 07.0	+0.7
MGMO	**Mountain Grove**	**3.78**	**69**	Pn	Pn	20 34 08.5	0.0
MGMO				IAmb_Lg		20 35 18.4	
	comp=Z,10nm,0.9s						
CBKS	**Cedar Bluff**	**3.82**	**321**	Pn	Pn	20 34 09.6	+0.6
DKNS	**Dickens**	**4.12**	**239**	Pn	Pn	20 34 11.8	-1.4
AMTX	**Amarillo**	**4.20**	**258**	Pn	Pn	20 34 13.4	-0.9
R40A	**Maddies Statio**	**4.28**	**54**	Pn	Pn	20 34 14.1	-1.3
LCAR	**Lake Charles**	**4.49**	**86**	Pn	Pn	20 34 18.7	+0.5
P38A	**Dawn**	**4.51**	**33**	Pn	Pn	20 34 18.8	+0.4
CCM	**Cathedral Cave**	**4.88**	**62**	Pn	Pn	20 34 22.3	-1.2
CCM				IAmb_Lg		20 35 51.8	
	comp=Z,7.8nm,1.0s						
RTBA	**Rita Blanca**	**4.93**	**278**	IAmb_Lg		20 35 44.1	
	comp=Z,5.8nm,1.0s						

*TAP **09** 20:36:17.7, 23.°97N×121.°77E, h4km, ML3.3, C*
*JMA **09** 20:36:18.4±0.3, 24.°0N±0.°5×12.°2E±°, h0km, TAIWAN REGION*
ISC 09 20:36:19.1±1.0, **23.°97N**±0.°02×**121.°77E**±0.°03, **h8**km±7km, **n95**, σ**0.°92**/154, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.15**	**274**	P	**Pg**	**20 36 22.2**	**-0.1**
	baz=271						
HWA				*e*S	**Sg**	**20 36 25.6**	**+1.2**
	baz=271						
TWD	**Chiawan**	**0.19**	**305**	*i* P	**Pg**	**20 36 22.6**	**-0.4**
	baz=305						
TWD				*e*S	**Sg**	**20 36 25.8**	**+0.1**
	baz=305						
ETL	**Fush Village**	**0.23**	**325**	*i* P	**Pg**	**20 36 23.6**	**-0.2**
	baz=324						
ETL				*e*S	**Sg**	**20 36 28.4**	**+1.4**
	baz=324						
ETM	**Tongmen**	**0.25**	**270**	*i* P	**Pg**	**20 36 23.6**	**-0.6**
	baz=267						
ETM				*e*S	**Sg**	**20 36 28.3**	**+0.7**
	baz=267						
NACB	**Ninganchiao**	**0.26**	**322**	P	**Pg**	**20 36 23.8**	**-0.5**
NACB	**Ninganchiao**	**0.26**	**322**	P	**Pg**	**20 36 23.8**	**-0.5**
	baz=321						
NACB				S	**Sg**	**20 36 28.2**	**+0.4**
	baz=321						
SHUL	**Shoufeng**	**0.26**	**226**	*e*P	**Pb**	**20 36 25.3**	**-0.7**
	baz=225						
SHUL				*e*S	**Sb**	**20 36 30.9**	**+0.2**
	baz=225						
LXIB	**Xiulin Townshi**	**0.33**	**279**	*i* P	**Pg**	**20 36 25.0**	**-0.6**
	baz=278						
LXIB				*e*S	**Sg**	**20 36 30.4**	**+0.4**
	baz=278						
TEGC	**Jichi Village**	**0.33**	**219**	*e*P	**Pb**	**20 36 26.9**	**-0.3**
	baz=218						
TEGC				*e*S	**Sb**	**20 36 33.6**	**+0.9**
	baz=218						
EHP	**Heping Village**	**0.34**	**356**	*e*P	**Pb**	**20 36 26.1**	**-1.3**
	baz=357						
EHP				*e*S	**Sb**	**20 36 32.2**	**-0.8**
	baz=357						
ESL	**Shilin**	**0.34**	**244**	P	**Pg**	**20 36 25.4**	**-0.4**
	baz=243						
ETLH	**Xiulin Townshi**	**0.35**	**312**	P	**Pg**	**20 36 25.7**	**-0.4**
	baz=311						
ETLH				*e*S	**Sg**	**20 36 31.0**	**+0.2**
	baz=311						
EAHA	**Aohua**	**0.36**	**356**	*e*P	**Pb**	**20 36 26.4**	**-1.3**
	baz=356						
EAHA				*e*S	**Sb**	**20 36 32.5**	**-1.1**
	baz=356						
WARBT	**Fenglin Townsh**	**0.43**	**235**	P	**Pg**	**20 36 27.1**	**-0.3**
	baz=234						
WARBT				*e*S	**Sb**	**20 36 34.3**	**-1.3**
	baz=234						
EGFH	**Guangfu**	**0.43**	**226**	P	**Pb**	**20 36 27.8**	**-1.1**
	baz=226						
EGFH				*e*S	**Sb**	**20 36 35.1**	**-0.5**
	baz=226						
ENA	**Nanau**	**0.46**	**357**	P	**Pb**	**20 36 28.2**	**-1.2**
	baz=358						
ENA				*e*S	**Sb**	**20 36 35.9**	**-0.6**
	baz=358

WUSB	**Renai**	**0.60**	**272**	*i* P	**Pb**	**20 36 30.5**	**-1.3**
	baz=281							
WUSB				eS	**Sb**	**20 36 39.2**	**-1.2**
	baz=281							
LATG	**Datong**	**0.61**	**339**	P	**Pb**	**20 36 30.8**	**-1.2**
	baz=338							
LATG				eS	**Sb**	**20 36 40.6**	**-0.2**
	baz=338							
ESAO	**Su ao**	**0.61**	**6**	eP	**Pb**	**20 36 31.6**	**-0.4**
	baz=356							
ESAO				eS	**Sb**	**20 36 41.0**	**+0.3**
	baz=356							
TWT	**Tachien**	**0.61**	**298**	P	**Pb**	**20 36 31.0**	**-1.1**
	baz=296							
TWT				eS	**Sb**	**20 36 41.1**	**+0.2**
	baz=296							
VWDT	**VWDT**	**0.61**	**250**	P	**Pb**	**20 36 30.8**	**-1.2**
	baz=259							
VWDT				S	**Sb**	**20 36 39.5**	**-1.2**
	baz=259							
EHY	**Hungye**	**0.61**	**222**	eP	**Pb**	**20 36 30.9**	**-1.2**
	baz=221							
EHY				eS	**Sb**	**20 36 41.0**	**+0.1**
	baz=221							
TDCB	**Techi**	**0.63**	**297**	P	**Pb**	**20 36 31.1**	**-1.3**
	baz=296							
TDCB				eS	**Sb**	**20 36 40.6**	**-0.7**
	baz=296							
TWC	**Suao**	**0.64**	**7**	eP	**Pb**	**20 36 32.2**	**-0.3**
	baz=356							
NDS	**Dongshan**	**0.67**	**356**	eP	**Pb**	**20 36 32.4**	**-0.5**
	baz=356							
NDS				eS	**Sb**	**20 36 43.0**	**+0.7**
	baz=356							
NDT	**Datong Townshi**	**0.67**	**340**	eP	**Pb**	**20 36 32.2**	**-0.9**
	baz=339							
NDT				eS	**Sb**	**20 36 42.6**	**0.0**
	baz=339							
ENTT	**Nioudou**	**0.69**	**345**	P	**Pb**	**20 36 32.7**	**-0.8**
	baz=331							
ENTT				eS	**Sb**	**20 36 43.4**	**+0.2**
	baz=331							
YULB	**Yu-li**	**0.72**	**217**	P	**Pb**	**20 36 33.4**	**-0.4**
YULB	**Yu-li**	**0.72**	**217**	eP	**Pb**	**20 36 32.8**	**-1.1**
	baz=234							
EYUL	**Yuli**	**0.74**	**214**	eP	**Pb**	**20 36 34.2**	**0.0**
	baz=194							
TWF1	**Yuli**	**0.75**	**215**	eP	**Pb**	**20 36 33.6**	**-0.8**
	baz=235							
TWE	**Neicheng**	**0.76**	**353**	P	**Pb**	**20 36 34.0**	**-0.5**
	baz=354							
TWE				eS	**Sb**	**20 36 45.2**	**+0.2**
	baz=354							
SSLB	**Suanglung**	**0.77**	**257**	P	**Pg**	**20 36 33.4**	**-0.5**
SSLB	**Suanglung**	**0.77**	**257**	*i* P	**Pb**	**20 36 33.6**	**-1.1**
	baz=265							
SSLB				eS	**Sb**	**20 36 43.9**	**-1.4**
	baz=265							
YHNB	**Yeheng**	**0.79**	**333**	P	**Pb**	**20 36 34.3**	**-0.7**
YHNB	**Yeheng**	**0.79**	**333**	P	**Pb**	**20 36 34.3**	**-0.7**
	baz=322							
YHNB				eS	**Sb**	**20 36 45.4**	**-0.5**
	baz=322							
WCS	**Beigang Elemen**	**0.79**	**277**	eP	**Pb**	**20 36 34.0**	**-1.1**
	baz=276							
NSK	**Sanguang**	**0.80**	**332**	P	**Pb**	**20 36 34.4**	**-0.8**
	baz=322							
NSK				eS	**Sb**	**20 36 45.8**	**-0.4**
	baz=322							
SMLT	**Sun Moon Lake**	**0.80**	**264**	*i* P	**Pb**	**20 36 34.4**	**-0.9**
	baz=274							
SMLT				eS	**Sb**	**20 36 46.0**	**-0.3**
	baz=274							
FUSB	**Fushanzhiwuyua**	**0.81**	**348**	P	**Pb**	**20 36 34.9**	**-0.5**
	baz=336							
FUSB				eS	**Sb**	**20 36 46.8**	**+0.3**
	baz=336							
WHP	**Taichung City**	**0.81**	**293**	P	**Pb**	**20 36 34.8**	**-0.8**
	baz=281							
WHP				eS	**Sb**	**20 36 47.5**	**+0.9**
	baz=281							
TYC	**Yuchr**	**0.84**	**266**	P	**Pb**	**20 36 34.9**	**-1.0**
	baz=265							
NWLT	**Wulai**	**0.84**	**343**	eP	**Pb**	**20 36 35.3**	**-0.7**
	baz=343							
NWLT				eS	**Sb**	**20 36 47.5**	**+0.1**
	baz=343							
FULB	**Fuli**	**0.88**	**210**	eP	**Pn**	**20 36 37.2**	**-0.6**
	baz=192							
WHYT	**Xinyi Township**	**0.88**	**252**	eP	**Pb**	**20 36 35.8**	**-0.9**
	baz=252							
NFF	**Wufeng Townshi**	**0.89**	**318**	P	**Pb**	**20 36 36.2**	**-0.6**
	baz=317							
NFF				eS	**Sb**	**20 36 48.2**	**-0.6**
	baz=317							
CHKT	**Chengkung**	**0.94**	**203**	eP	**Pg**	**20 36 36.4**	**-0.8**
	baz=203							
LIOB	**Emei**	**0.96**	**315**	eP	**Pb**	**20 36 37.9**	**-0.2**
	baz=312							
NSTT	**Nanjuang**	**0.96**	**313**	eP	**Pb**	**20 36 37.9**	**-0.1**
	baz=313							
NSTT				eS	**Sn**	**20 36 51.9**	**-0.9**
	baz=313							
WJS	**Zhushan**	**0.96**	**262**	eP	**Pn**	**20 36 38.3**	**-0.6**
	baz=260							
WJS				eS	**Sn**	**20 36 53.1**	**+0.3**
	baz=260							
EHD	**Haiduan**	**0.96**	**212**	eP	**Pb**	**20 36 37.9**	**-0.1**
	baz=229							
TWQ1	**Liyutan**	**0.98**	**293**	eP	**Pn**	**20 36 38.7**	**-0.5**
	baz=283							
ALS	**Alishan**	**0.99**	**243**	eP	**Pb**	**20 36 38.3**	**-0.4**
	baz=242							
WNT	**Mingjian**	**1.00**	**265**	eP	**Pn**	**20 36 39.1**	**-0.3**
	baz=263							
WNT				eS	**Sn**	**20 36 53.5**	**-0.1**
	baz=263							
TIPB	**Shuangxi**	**1.00**	**3**	eP	**Pn**	**20 36 38.8**	**-0.7**
	baz=1.0							
TCU	**Taichung**	**1.01**	**280**	eP	**Pn**	**20 36 39.8**	**+0.2**
	baz=279							
NHDH	**Xindian Distri**	**1.02**	**347**	eP	**Pn**	**20 36 39.8**	**+0.2**
	baz=336							
NHDH				eS	**Sn**	**20 36 55.2**	**+1.1**
	baz=336							
TATO	**Taipei**	**1.04**	**346**	P	**Pn**	**20 36 39.7**	**-0.2**
ELDTW	**Lidau**	**1.04**	**222**	eP	**Pg**	**20 36 37.9**	**-1.2**
	baz=220							
ELDTW				eS	**Sn**	**20 36 54.9**	**+0.1**
	baz=220							
NMLH	**Miaoli**	**1.06**	**303**	eP	**Pn**	**20 36 40.6**	**+0.4**
	baz=302							
NMLH				eS	**Sn**	**20 36 56.5**	**+1.4**
	baz=302							
CHN5	**Tsauling**	**1.06**	**250**	P	**Pn**	**20 36 40.0**	**-0.4**
	baz=235							
CHN5				eS	**Sn**	**20 36 56.1**	**+0.7**
	baz=235							
EDH	**Donghe**	**1.08**	**203**	eP	**Pg**	**20 36 38.0**	**-1.7**
	baz=180							
WDJ	**Dajia District**	**1.10**	**290**	eP	**Pn**	**20 36 41.6**	**+0.9**
	baz=289							
WFSB	**Wu-fen Shan**	**1.10**	**1**	eP	**Pn**	**20 36 41.0**	**+0.3**
	baz=352							
WFSB				eS	**Sn**	**20 36 56.3**	**+0.2**
	baz=352							
SXI1	**Grass Mountain**	**1.13**	**5**	eP	**Pn**	**20 36 41.3**	**+0.1**
	baz=357							
SXI1				eS	**Sn**	**20 36 59.0**	**+2.1**
	baz=357							
YM01	**YM01**	**1.19**	**351**	eP	**Pn**	**20 36 42.5**	**+0.4**
	baz=347							
WCKO	**Fanlu**	**1.19**	**244**	eP	**Pn**	**20 36 42.1**	**+0.1**
	baz=242							
WCKO				eS	**Sn**	**20 37 00.1**	**+1.8**
	baz=242							
STYH	**Taoyuan**	**1.21**	**229**	eP	**Pb**	**20 36 41.6**	**-0.6**
	baz=215							
YM08	**YM08**	**1.23**	**352**	eP	**Pn**	**20 36 42.8**	**+0.2**
	baz=348							
ANP	**Anpu**	**1.23**	**349**	eP	**Pn**	**20 36 43.0**	**+0.3**
	baz=345							
YOJ	**Yonaguni jima**	**1.24**	**66**	P	**Pn**	**20 36 43.5**	**+0.9**
TPUB	**Ta-pu**	**1.24**	**238**	P	**Pn**	**20 36 43.1**	**+0.4**
TPUB	**Ta-pu**	**1.24**	**238**	P	**Pn**	**20 36 42.6**	**-0.1**
	baz=236							
TPUB				eS	**Sn**	**20 37 01.0**	**+1.4**
	baz=236							
CHN4	**Tsaushan**	**1.24**	**241**	eP	**Pn**	**20 36 43.3**	**+0.6**
	baz=224							
CHN4				eS	**Sn**	**20 37 02.3**	**+2.7**
	baz=224							
WRL	**Guolierlin Hig**	**1.27**	**267**	eP	**Pn**	**20 36 42.9**	**-0.2**
	baz=263							
WRL				eS	**Sn**	**20 37 01.2**	**+0.7**
	baz=263							
WTP	**Ta-pu**	**1.28**	**236**	eP	**Pn**	**20 36 43.5**	**+0.2**
	baz=223							
TWGBT	**Beinan**	**1.31**	**209**	P	**Pb**	**20 36 43.8**	**-0.1**
TWK	**Hsinying**	**1.37**	**240**	eP	**Pb**	**20 36 44.9**	**0.0**
	baz=222							
CHN1	**Nanshi**	**1.38**	**236**	eP	**Pb**	**20 36 45.6**	**+0.5**
	baz=235							
SNST	**Tainan City**	**1.38**	**238**	eP	**Pb**	**20 36 45.3**	**+0.1**
	baz=236							
SNST				eS	**Sn**	**20 37 06.1**	**+2.9**
	baz=236							
SGST	**Jiashian**	**1.40**	**231**	eP	**Pn**	**20 36 44.3**	**-0.6**
	baz=216							
SGST				eS	**Sn**	**20 37 04.9**	**+1.3**
	baz=216							
SLGT	**Liugui**	**1.42**	**227**	eP	**Pg**	**20 36 45.7**	**-0.5**
	baz=213							
SLGT				eS	**Sn**	**20 37 05.7**	**+1.8**
	baz=213							
WSF	**Szhu**	**1.45**	**257**	eP	**Pg**	**20 36 46.2**	**-0.8**
	baz=253							
WSF				eS	**Sn**	**20 37 08.6**	**+3.7**
	baz=253							
ICHU	**Yijhu**	**1.49**	**246**	eP	**Pg**	**20 36 46.7**	**-1.0**
	baz=242							
ICHU				eS	**Sg**	**20 37 09.0**	**+1.9**
	baz=242							
TSMG	**Majia**	**1.63**	**220**	eP	**Pg**	**20 36 49.0**	**-1.3**
	baz=217							
TSMG				eS	**Sg**	**20 37 11.7**	**+0.3**
	baz=217							
MASBT	**Mashibuluo**	**1.71**	**218**	eP	**Pn**	**20 36 49.5**	**+0.3**
	baz=216							
MASBT				eS	**Sg**	**20 37 13.3**	**-0.7**
	baz=216							

*IDC **09** 20:41:37.7±0.8,29°.22N×142°.43E,h0km,mb3.8/13, mbtmp3.8/16,ML3.3/3,MS3.0/1,Error ellipse: s-maj=25.7km s-min=16.7km az=76.0*
*NIED **09** 20:41:39.7,29°.34N×142°.59E,h54km,MW4.0,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.71; Mθθ-0.01; Mφφ-0.70; Mrθ-0.45; Mθφ0.26; Mφr0.95; Fault plane solution: M₀1.28000×10¹⁵ NP1: φs336.00000°,δ72.00000°,λ86.00000°. NP2: φs168.00000°,δ18.00000°,λ102.00000°.*
*JMA **09** 20:41:39.7±0.3,29°.3N±0°.6×14°.3E±°,h54km,MV3.9/23, NEAR TORISHIMA IS*
*NEIC **09** 20:41:39.7±2.1,29°.21N±0°.04×142°.4E±0°.2,h14km±4km, mb4.4/26,Error ellipse: s-maj=19.9km s-min=5.8km az=89.0*

ISC 09 20:41:38.9±0.6,29°26N±0°05×142°4E±0°1,h10km,n63, σ1s59/69,mb4.2/24,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.16**	**185**	eP		**Pn**	**20 42 15.7**	**+0.8**
CBIJ				eS		**Sn**	**20 42 42.3**	**+0.5**
JCJ	**Chichijima**	**2.16**	**185**	Pn		**Pn**	**20 42 13.2**	**-1.7**
JCJ	**Chichijima**	**2.16**	**185**	Pn		**Pn**	**20 42 11.4**	**-3.5**
	3.3nm,0.3s,baz=288,slow=19,SNR=1.5							
JCJ				Sn		**Sn**	**20 42 36.9**	**-4.9**
	8.6nm,0.3s,baz=295,slow=22,SNR=7.3							
JHJ2	**Mitsune**	**4.44**	**331**	Pn		**Pn**	**20 42 46.2**	**0.0**
JHJ2	**Mitsune**	**4.44**	**331**	P		**Pn**	**20 42 46.4**	**+0.2**
JHJ	**Hachijo jima 2**	**4.46**	**330**	Pn		**Pn**	**20 42 45.2**	**-1.3**
	7.0nm,0.3s,baz=50,slow=14,SNR=1.3							
JHJ				Sn		**Sn**	**20 43 37.9**	**-0.7**
	6.9nm,0.3s,baz=36,slow=22,SNR=1.3 16nm,0.3s							
BSO1	**Boso 1**	**5.52**	**348**	eP		**Pn**	**20 42 59.8**	**-0.7**
BSO1				eS		**Sn**	**20 43 60.0**	**-3.8**
JOD2	**Odawara 2**	**6.62**	**336**	P		**Pn**	**20 43 17.7**	**+1.5**
JHU	**Hanno**	**7.09**	**339**	eP		**Pn**	**20 43 22.6**	**0.0**
JHU				eS		**Sn**	**20 44 38.9**	**-4.4**
JRY	**Ryogami san**	**7.36**	**337**	P		**Pn**	**20 43 27.0**	**+0.5**
JHO	**Hitachi**	**7.50**	**349**	eP		**Pn**	**20 43 26.5**	**-1.8**
JAG	**Ashikaga**	**7.57**	**342**	eP		**Pn**	**20 43 28.4**	**-0.8**
INU	**Inuyama**	**7.60**	**324**	Pn		**Pn**	**20 43 28.8**	**-0.9**
JGF	**Kuroka**	**7.63**	**327**	Pn		**Pn**	**20 43 29.4**	**-0.8**
MJAR	**Matsushiro Arr**	**8.08**	**335**	Pn		**Pn**	**20 43 36.3**	**+0.1**
	0.3nm,0.3s,baz=158,slow=11,SNR=22							
MJAR				Sn		**Sn**	**20 45 01.8**	**-5.9**
	0.2nm,0.3s,baz=95,slow=18,SNR=5.8 2.2nm,0.4s							
MAJO	**Matsushiro**	**8.08**	**335**			**Pn**	**20 43 36.9**	**+0.7**
MJB9	**Matsu-Tunnel**	**8.08**	**335**			**Pn**	**20 43 37.9**	**+1.6**
JOW	**Kunigami**	**12.72**	**262**	LR		LR	20 47 52.7	
	comp=Z,74nm,20.4s,baz=307,slow=30							
KSRS	**Korea Array**	**14.60**	**308**	Pn		**Pn**	**20 45 09.9**	**+4.4**
	0.2nm,0.3s,baz=115,slow=13,SNR=3.4							
USRK	**Ussuriysk Ar.**	**17.07**	**334**	P		**Pn**	**20 45 39.2**	**+1.6**
	0.1nm,0.3s,baz=112,slow=16,SNR=1.4 0.8nm,0.6s							
YHNB	**Yeheng**	**19.29**	**261**	P		**P**	**20 46 05.0**	**+0.9**
YULB	**Yu-li**	**19.80**	**258**	P		**P**	**20 46 09.7**	**+0.3**
YULB					IAmb	IAmb	20 46 50.1	
	comp=Z,37nm,1.3s							
SSLB	**Suanglung**	**19.95**	**259**	P		**P**	**20 46 10.5**	**-0.7**
SSLB					IAmb	IAmb	20 46 18.8	
	comp=Z,22nm,0.9s							
KLR	**Kul'dur**	**21.55**	**341**	P		**P**	**20 46 27.9**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=180,slow=10,SNR=6.4 comp=Z,2.0nm,0.8s							
ULN	**Ulaanbaatar**	**32.93**	**314**	P		**P**	**20 48 14.5**	**+0.9**
ULN					IAmb	IAmb	20 48 16.9	
	comp=Z,7.5nm,1.4s							
SONM	**Songino Array**	**33.33**	**314**	P		**P**	**20 48 18.1**	**+1.1**
SONM					IAmb	IAmb	20 48 19.8	
	comp=Z,2.4nm,0.9s							
SONM	**Songino Array**	**33.33**	**314**	P		**P**	**20 48 18.3**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=109,slow=8.0,SNR=13 comp=Z,2.1nm,0.8s							
CRAI	**Chiangrai**	**39.05**	**266**	P		**P**	**20 49 06.2**	**+0.1**
CHTO	**Chiang Mai**	**40.84**	**265**	P		**P**	**20 49 20.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**40.98**	**265**	P		**P**	**20 49 22.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=54,slow=6.3,SNR=5.1 comp=Z,0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**48.01**	**318**	P		**P**	**20 50 16.4**	**-1.5**
ZALV	**Zalesovo Beam**	**48.01**	**318**	P		**P**	**20 50 18.2**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=87,slow=8.4,SNR=6.0 comp=Z,0.9nm,0.5s							
MK31	**Makanchi Array**	**49.28**	**308**	P		**P**	**20 50 27.8**	**-0.1**
MKAR	**Makanchi Array**	**49.28**	**308**	P		**P**	**20 50 27.9**	**+0.1**
MKAR	**Makanchi Array**	**49.28**	**308**	P		**P**	**20 50 28.6**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=90,slow=9.6,SNR=20 comp=Z,1.1nm,0.6s							
WB0	**Warramunga Arr**	**49.35**	**190**	P		**P**	**20 50 28.7**	**+0.2**
MAKZ	**Makanchi**	**49.49**	**308**	P		**P**	**20 50 29.7**	**+0.2**
WR0	**Warramunga Arr**	**49.52**	**190**	P		**P**	**20 50 28.0**	**-1.8**
WR0					IAmb	IAmb	20 51 09.9	
	comp=Z,5.5nm,1.2s							
WRAB	**Tennant Creek**	**49.52**	**190**	P		**P**	**20 50 29.4**	**-0.4**
WRAB					IAmb	IAmb	20 50 51.6	
	comp=Z,3.4nm,0.9s							
WB2	**Warramunga Arr**	**49.53**	**190**	P		**P**	**20 50 28.8**	**-1.0**
WRA	**Warramunga Arr**	**49.53**	**190**	P		**P**	**20 50 28.6**	**-1.3**
WRA	**Warramunga Arr**	**49.53**	**190**	P		**P**	**20 50 29.6**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=8.5,slow=7.9,SNR=10.0							
WRA				PcP		**PcP**	**20 51 52.4**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=359,slow=3.6,SNR=2.2 comp=Z,2.5nm,0.8s							
KURK	**Kurchatov**	**51.64**	**313**	P		**P**	**20 50 46.2**	**+0.7**
KURK					IAmb	IAmb	20 50 48.1	
	comp=Z,6.7nm,1.1s							
KURBB	**Kurchatov Arra**	**51.69**	**313**	P		**P**	**20 50 46.7**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=92,slow=6.6,SNR=30 comp=Z,2.3nm,0.6s							
B20K	**Meade River**	**52.78**	**22**	P		**P**	**20 50 53.7**	**0.0**
B20K					IAmb	IAmb	20 51 06.0	
	comp=Z,4.4nm,1.3s							
ASAR	**Alice Springs**	**53.25**	**190**	P		**P**	**20 50 57.2**	**-0.5**
ASAR	**Alice Springs**	**53.25**	**190**	P		**P**	**20 50 57.7**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=3.2,slow=5.4,SNR=5.8 comp=Z,0.2nm,0.5s							
D22K	**Ayikyak River**	**54.02**	**24**	P		**P**	**20 51 03.4**	**+0.5**
D22K					IAmb	IAmb	20 51 14.1	
	comp=Z,4.3nm,1.3s							
C23K	**Itkillik River**	**54.93**	**23**	P		**P**	**20 51 09.7**	**+0.2**
C23K					IAmb	IAmb	20 51 25.6	
	comp=Z,2.3nm,0.9s							
F24K	**Squaw Lake**	**55.57**	**26**	P		**P**	**20 51 15.1**	**+0.9**
F24K					IAmb	IAmb	20 51 34.7	
	comp=Z,4.1nm,1.4s							
ILAR	**Eielson Array**	**55.73**	**29**	P		**P**	**20 51 15.8**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=269,slow=6.3,SNR=1.7 comp=Z,0.2nm,0.7s							
BVAR	**Borovoye Array**	**56.61**	**317**	P		**P**	**20 51 22.7**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=95,slow=7.8,SNR=13 comp=Z,3.9nm,0.7s							
BRVK	**Borovoye**	**56.67**	**317**	P		**P**	**20 51 23.1**	**+0.9**
BRVK					IAmb	IAmb	20 51 25.4	
	comp=Z,3.5nm,0.8s							
BMAR	**Burnt Mountain**	**56.83**	**26**	P		**P**	**20 51 23.1**	**-0.1**
KK31	**Karatay Array**	**58.00**	**305**	P		**P**	**20 51 32.8**	**+0.9**
KKAR	**Karatay Array**	**58.00**	**305**	P		**P**	**20 51 32.8**	**+0.9**
SIMJ	**Simiganj**	**60.14**	**300**	P		**P**	**20 51 47.6**	**+0.7**
SIMJ					IAmb	IAmb	20 51 53.3	
	comp=Z,4.6nm,1.2s							
BBOO	**Buckleboo**	**62.02**	**186**	P		**P**	**20 51 59.0**	**-0.4**
ABKAR	**Akbulak array**	**63.75**	**314**	P		**P**	**20 52 10.4**	**-0.3**
ABKAR	**Akbulak array**	**63.75**	**314**	P		**P**	**20 52 09.8**	**-1.0**
ABKAR					IAmb	IAmb	20 52 14.0	
	comp=Z,3.7nm,1.2s							
YKA	**Yellowknife Ar**	**70.15**	**29**	P		**P**	**20 52 51.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=297,slow=6.9,SNR=2.0 comp=Z,0.1nm,0.3s							
NVAR	**Mina Array Bea**	**79.03**	**52**	P		**P**	**20 53 44.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=308,slow=4.4,SNR=2.1 comp=Z,0.5nm,0.7s							
BRTR	**Keskin Array B**	**84.69**	**313**	P		**P**	**20 54 14.1**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=78,slow=4.1,SNR=3.8 comp=Z,0.6nm,0.8s							

*KRSC **09** 20:44:45.7±0.8,53°.47N×160°.42E,h59km±6km,Ml4.0*
*IDC **09** 20:44:50.0±1.4,53°.59N×159°.77E,h112km±23km,mb3.2/7, mbtmp3.5/8,Error ellipse: s-maj=39.0km s-min=24.8km az=6.0*

ISC 09 20:44:46.3±0.9,53°52N±0°06×160°39E±0°08,h68km±9km, n28,σ1s32/31,mb3.6/7,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.47**	**208**	*i* P		**Pn**	**20 44 58.1**	**-0.6**
SPN				eS		**Sn**	**20 45 06.6**	**-1.1**
KII	**Karymskiy**	**0.76**	**313**	eP		**Pn**	**20 45 02.4**	**+0.5**
KII				eS		**Sn**	**20 45 14.0**	**+0.7**
SMAR	**Somma**	**0.99**	**256**	eP		**Pn**	**20 45 05.0**	**+0.3**
UGLR	**Uglovaya**	**0.99**	**252**	eP		**Pn**	**20 45 05.2**	**+0.6**
AVH	**Avacha**	**1.02**	**256**	eP		**Pn**	**20 45 05.8**	**+0.8**
AVH				eS		**Sn**	**20 45 20.4**	**+1.5**
KRX	**Arik**	**1.05**	**262**	eP		**Pn**	**20 45 05.9**	**+0.4**
KRX				eS		**Sn**	**20 45 20.2**	**+0.5**
KOK	**Koryaka**	**1.07**	**259**	eP		**Pn**	**20 45 06.3**	**+0.6**
PET	**Petropavlovsk**	**1.16**	**245**	eP		**Pn**	**20 45 06.9**	**+0.3**
PET				eS		**Sn**	**20 45 22.3**	**+0.5**
GNL	**Ganaly**	**1.47**	**278**	eP		**Pn**	**20 45 12.0**	**+1.1**
RUS	**Russkaya**	**1.57**	**227**	eP		**Pn**	**20 45 12.2**	**+0.1**
RUS				eS		**Sn**	**20 45 31.6**	**0.0**
PETK	**Petropavlovsk-**	**1.67**	**257**	P		**Pn**	**20 45 14.2**	**+0.8**
	17nm,0.3s,baz=68,slow=19,SNR=117							
PETK				S		**Sn**	**20 45 34.1**	**+0.2**
	40nm,0.4s,baz=87,slow=28,SNR=5.4							
MTVR	**Mutnovka**	**1.69**	**233**	eP		**Pn**	**20 45 14.6**	**+0.7**
MTVR				eS		**Sn**	**20 45 35.7**	**+1.0**
GRL	**Gorelyy**	**1.70**	**236**	eP		**Pn**	**20 45 15.2**	**+1.2**
ASAK	**Asacha**	**1.89**	**234**	eP		**Pn**	**20 45 17.6**	**+1.2**
ASAK				eS		**Sn**	**20 45 41.2**	**+1.9**
MA2	**Magadan**	**8.06**	**323**	P		**Pn**	**20 46 40.7**	**+0.2**
	2.5nm,0.7s,baz=170,slow=17,SNR=3.6							
ILAR	**Eielson Array**	**28.39**	**46**	P		**P**	**20 50 34.6**	**+0.8**
	0.4nm,0.8s,baz=269,slow=8.1,SNR=4.2 0.4nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**34.10**	**169**	T		T	21 27 49.4	
	baz=354,slow=76,SNR=32							
H11N3	**WAKE ISLAND Hy**	**34.11**	**169**	T		T	21 27 55.1	
	baz=354,slow=76,SNR=32							
H11N1	**WAKE ISLAND Hy**	**34.11**	**169**	T		T	21 27 55.6	
	baz=354,slow=76,SNR=24							
H11S1	**WAKE ISLAND Hy**	**35.28**	**170**	T		T	21 29 15.3	
	baz=354							
H11S3	**WAKE ISLAND Hy**	**35.30**	**170**	T		T	21 29 16.6	
	baz=354							
H11S2	**WAKE ISLAND Hy**	**35.30**	**170**	T		T	21 29 20.4	
	baz=354							
YKA	**Yellowknife Ar**	**42.73**	**43**	P		**P**	**20 52 37.0**	**+0.8**
	0.2nm,0.6s,baz=297,slow=7.6,SNR=3.9 0.2nm,0.6s							
MKAR	**Makanchi Array**	**48.13**	**295**	P		**P**	**20 53 14.5**	**-4.7**
	0.1nm,0.5s,baz=53,slow=6.1,SNR=1.7 0.1nm,0.5s							
NVAR	**Mina Array Bea**	**55.43**	**71**	P		**P**	**20 54 14.2**	**+0.4**
	0.4nm,0.3s,baz=300,slow=9.2,SNR=9.8 0.4nm,0.3s							
PDAR	**Pinedale Array**	**57.16**	**61**	P		**P**	**20 54 27.3**	**+1.2**
	0.4nm,0.6s,baz=316,slow=4.1,SNR=4.0 0.4nm,0.6s							
TXAR	**Lajitas Array**	**70.31**	**67**	P		**P**	**20 55 54.4**	**+1.8**
	0.9nm,0.5s,baz=302,slow=5.0,SNR=9.1 0.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**70.67**	**350**	P		**P**	**20 55 52.8**	**-1.4**
	0.3nm,0.4s,baz=23,slow=5.7,SNR=4.0 0.3nm,0.4s							

*IDC **09** 21:10:58.3±2.3,2°.18N×125°.80E,h0km,mb3.6/4, mbtmp3.7/4,Error ellipse: s-maj=281.1km s-min=21.5km az=65.0*
*DJA **09** 21:11:30.0±0.8,1°N±5°×12°4E±°,h255km±7km,M3.0/6, MLv3.0/6*

**ISC 09 21:11:30.7±1.8,0°8N±0°2×124°18E±0°07,h250km,n9, σ1s88/10,mb3.3/4,Minahassa Peninsula,

0.1nm,0.5s

IDC 09 21:23:49.3±2.1,2.50N×124.73E,h0km,mb3.3/3, mbtmp3.3/3,Error ellipse: s-maj=206.3km s-min=29.0km az=64.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.21**	**157**	P	P	21 29 07.4	-0.5
	1.2nm,0.9s,baz=336,slow=11,SNR=8.0 1.2nm,0.9s						
ASAR	**Alice Springs**	**27.50**	**162**	P	P	21 29 38.8	+1.2
	0.2nm,0.6s,baz=347,slow=7.1,SNR=1.5 0.2nm,0.6s						
MKAR	**Makanchi Array**	**57.45**	**327**	P	P	21 33 39.5	-0.6
	0.2nm,0.6s,baz=107,slow=7.8,SNR=2.2 0.2nm,0.6s						

*JMA **09** 21:26:13.9±0.1,24.0N±0.3×12.2E±,h4km,MV3.0/14, TAIWAN REGION*

*ASIES **09** 21:26:14.1,23.98N×121.58E,h8km,ML3.7,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.04; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-0.65; $M_{r\theta}$1.32; $M_{r\phi}$-0.51; $M_{\theta\phi}$1.20; Fault plane solution: $M_0$2.07505×10^{21} NP1:φs46.40000°, δ74.98000°, λ94.42000°. NP2:φs209.80000°, δ15.64000°, λ73.99000°. Principal axes: T Plg59.7870°, Azm322.6030°; N Plg4.2640°, Azm225.2460°; P Plg29.8470°, Azm132.7940°;*

*TAP **09** 21:26:14.1,23.98N×121.58E,h8km,ML3.7,B*

ISC 09 21:26:14.4±0.8,23.97N±0.01×121.60E±0.01,h10km±4km, n124,σ0.78/233,3C-36D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.01**	**60**	⇓*i*P	**Pg**	**21 26 16.1**	**0.0**
	baz=100						
HWA				*i* S	**Sg**	**21 26 17.7**	**+0.4**
ETM	**Tongmen**	**0.10**	**265**	*i* P	**Pg**	**21 26 16.6**	**-0.3**
	baz=260						
ETM				*i* S	**Sg**	**21 26 18.4**	**-0.4**
TWD	**Chiawan**	**0.11**	**359**	⇓*i*P	**Pg**	**21 26 17.1**	**0.0**
	baz=11						
TWD				*i* S	**Sg**	**21 26 18.9**	**-0.1**
LXIB	**Xiulin Townshi**	**0.18**	**286**	⇓*i*P	**Pg**	**21 26 18.2**	**-0.1**
	baz=278						
LXIB				*i* S	**Sg**	**21 26 21.2**	**+0.3**
ETL	**Fush Village**	**0.19**	**7**	⇓*i*P	**Pg**	**21 26 18.3**	**0.0**
	baz=11						
ETL				*i* S	**Sg**	**21 26 21.1**	**-0.1**
SHUL	**Shoufeng**	**0.19**	**190**	⇓*i*P	**Pg**	**21 26 18.9**	**+0.5**
	baz=193						
SHUL				S	**Sg**	**21 26 22.7**	**+1.6**
NACB	**Ninganchiao**	**0.20**	**359**	⇓*i*P	**Pg**	**21 26 18.5**	**-0.1**
	baz=10.0						
NACB				*i* S	**Sg**	**21 26 21.3**	**-0.2**
ESL	**Shilin**	**0.22**	**224**	⇓*i*P	**Pg**	**21 26 18.6**	**-0.3**
	baz=225						
ESL				*i* S	**Sg**	**21 26 21.6**	**-0.4**
ETLH	**Xiulin Townshi**	**0.26**	**335**	⇓*i*P	**Pg**	**21 26 19.6**	**0.0**
	baz=337						
ETLH				*i* S	**Sg**	**21 26 23.0**	**-0.1**
TEGC	**Jichi Village**	**0.27**	**192**	P	**Pb**	**21 26 20.8**	**-0.6**
	baz=199						
TEGC				S	**Sb**	**21 26 26.6**	**+0.6**
WARBT	**Fenglin Townsh**	**0.32**	**217**	⇓*i*P	**Pg**	**21 26 20.5**	**-0.3**
	baz=224						
WARBT				S	**Sg**	**21 26 24.6**	**-0.5**
EGFH	**Guangfu**	**0.34**	**207**	⇓*i*P	**Pg**	**21 26 21.0**	**-0.2**
	baz=214						
EGFH				*e*S	**Sg**	**21 26 25.6**	**-0.2**
WHF	**Hehuan Shan**	**0.35**	**299**	⇓*i*P	**Pg**	**21 26 21.4**	**-0.1**
	baz=299						
WHF				S	**Sg**	**21 26 26.4**	**+0.2**
EHP	**Heping Village**	**0.36**	**21**	*e*P	**Pg**	**21 26 21.8**	**+0.3**
	baz=32						
EHP				*e*S	**Sg**	**21 26 26.9**	**+0.6**
EAHA	**Aohua**	**0.38**	**20**	⇓*i*P	**Pg**	**21 26 21.6**	**-0.2**
	baz=29						
EAHA				S	**Sg**	**21 26 26.9**	**0.0**
OWD	**Renai**	**0.39**	**267**	⇓*i*P	**Pg**	**21 26 22.2**	**+0.1**
	baz=277						
OWD				S	**Sb**	**21 26 28.0**	**-1.6**
CHGB	**Renai**	**0.40**	**283**	⇓*i*P	**Pb**	**21 26 22.6**	**-1.1**
	baz=282						
CHGB				*i* S	**Sb**	**21 26 28.2**	**-1.8**
FUSS	**Fushou**	**0.42**	**310**	⇓*i*P	**Pb**	**21 26 23.1**	**-1.0**
	baz=320						
FUSS				S	**Sg**	**21 26 28.9**	**+0.5**
WUSB	**Renai**	**0.44**	**272**	⇓*i*P	**Pb**	**21 26 23.4**	**-0.9**
	baz=281						
WUSB				S	**Sb**	**21 26 29.8**	**-1.3**
ENA	**Nanau**	**0.47**	**16**	⇓*i*P	**Pg**	**21 26 23.6**	**0.0**
	baz=18						
ENA				*e*S	**Sg**	**21 26 30.1**	**+0.2**
VWDT	**VWDT**	**0.47**	**242**	⇓*i*P	**Pb**	**21 26 23.9**	**-0.9**
	baz=242						
VWDT				*e*S	**Sb**	**21 26 30.5**	**-1.4**
TWT	**Tachien**	**0.48**	**306**	*e*P	**Pb**	**21 26 24.4**	**-0.7**
	baz=304						
TWT				*e*S	**Sb**	**21 26 31.2**	**-1.0**
TDCB	**Techi**	**0.49**	**305**	⇓P	**Pb**	**21 26 24.4**	**-0.8**
	baz=304						
TDCB				*e*S	**Sb**	**21 26 31.2**	**-1.4**
NNSB	**Datong**	**0.49**	**337**	⇓P	**Pb**	**21 26 24.4**	**-0.9**
	baz=337						
NNSB				S	**Sg**	**21 26 30.7**	**+0.1**
NNSH	**Datong**	**0.49**	**337**	P	**Pb**	**21 26 24.4**	**-0.9**
	baz=330						
NNSH				*e*S	**Sg**	**21 26 30.7**	**+0.1**
EWUT	**Wuta**	**0.50**	**19**	⇓P	**Pg**	**21 26 24.0**	**-0.1**
	baz=20						
EWUT				S	**Sg**	**21 26 30.4**	**-0.3**
HGSD	**Ruisui**	**0.51**	**199**	*e*P	**Pb**	**21 26 24.8**	**-0.6**
	baz=211						
HGSD				*e*S	**Sb**	**21 26 33.4**	**+0.6**
NNS	**Nan Shan**	**0.51**	**336**	⇓P	**Pb**	**21 26 24.6**	**-0.9**
	baz=337						
NNS				*e*S	**Sg**	**21 26 31.2**	**+0.1**
EHY	**Hungye**	**0.53**	**209**	⇓*e*P	**Pg**	**21 26 24.4**	**-0.3**
	baz=217						
EHY				*e*S	**Sb**	**21 26 33.0**	**-0.5**
LATG	**Datong**	**0.56**	**353**	⇓*i*P	**Pg**	**21 26 25.4**	**0.0**
	baz=344						
LATG				*e*S	**Sb**	**21 26 33.3**	**-1.3**
WPL	**Puli Township**	**0.59**	**274**	P	**Pb**	**21 26 26.4**	**-0.4**
	baz=274						
WPL				*e*S	**Sb**	**21 26 34.2**	**-1.0**
DPDB	**Guoxing**	**0.62**	**276**	⇓P	**Pb**	**21 26 27.1**	**-0.3**
	baz=275						
DPDB				*e*S	**Sb**	**21 26 35.5**	**-0.6**
SSLB	**Suanglung**	**0.62**	**253**	⇓P	**Pb**	**21 26 26.5**	**-0.8**
	baz=265						
SSLB				S	**Sg**	**21 26 34.0**	**-0.6**
NDT	**Datong Townshi**	**0.63**	**353**	⇓P	**Pb**	**21 26 26.9**	**-0.7**
	baz=346						
NDT				S	**Sg**	**21 26 34.9**	**-0.1**
WCS	**Beigang Elemen**	**0.63**	**278**	⇓P	**Pb**	**21 26 27.2**	**-0.3**
	baz=277						
WCS				*e*S	**Sb**	**21 26 36.2**	**-0.4**
ESAO	**Su ao**	**0.64**	**20**	P	**Pg**	**21 26 26.6**	**-0.2**
	baz=11						
ESAO				*e*S	**Sg**	**21 26 34.8**	**-0.4**
YULB	**Yu-li**	**0.64**	**206**	P	**Pg**	**21 26 26.4**	**-0.4**
	baz=215						
YULB				*e*S	**Sb**	**21 26 36.0**	**-0.7**
SMLT	**Sun Moon Lake**	**0.65**	**262**	⇓P	**Pb**	**21 26 27.3**	**-0.6**
	baz=262						
SMLT				*e*S	**Sb**	**21 26 36.4**	**-0.5**
ENTT	**Nioudou**	**0.66**	**357**	⇓P	**Pb**	**21 26 27.6**	**-0.6**
	baz=358						
ENTT				*e*S	**Sb**	**21 26 36.9**	**-0.5**
NDS	**Dongshan**	**0.67**	**9**	*e*P	**Pg**	**21 26 27.4**	**+0.1**
	baz=10.0						
NDS				*e*S	**Sb**	**21 26 36.7**	**-0.7**
ECBN	**Changbin**	**0.67**	**192**	*e*P	**Pn**	**21 26 29.4**	**-0.6**
	baz=181						
ECBN				*e*S	**Sn**	**21 26 39.7**	**-0.8**
WHP	**Taichung City**	**0.67**	**297**	⇓*e*P	**Pb**	**21 26 28.6**	**+0.3**
	baz=288						
WHP				*e*S	**Sb**	**21 26 37.9**	**+0.3**
TWC	**Suao**	**0.67**	**20**	*e*P	**Pg**	**21 26 27.4**	**0.0**
	baz=12						
TWC				*e*S	**Sg**	**21 26 36.3**	**0.0**
EOS4	**EOS4**	**0.67**	**77**	P	**Pb**	**21 26 28.4**	**+0.4**
	baz=86						
EOS4				*e*S	**Sb**	**21 26 38.3**	**+1.0**
EYUL	**Yuli**	**0.67**	**202**	*e*P	**Pg**	**21 26 27.6**	**+0.2**
	baz=214						
EYUL				*e*S	**Sb**	**21 26 37.2**	**-0.4**
TWF1	**Yuli**	**0.68**	**204**	*e*P	**Pg**	**21 26 27.0**	**-0.5**
	baz=213						
TWF1				*e*S	**Sb**	**21 26 37.2**	**-0.6**
TYC	**Yuchr**	**0.68**	**264**	⇓*e*P	**Pb**	**21 26 27.8**	**-0.6**
	baz=264						
TYC				*e*S	**Sg**	**21 26 36.5**	**0.0**
YHNB	**Yeheng**	**0.72**	**344**	*e*P	**Pb**	**21 26 28.8**	**-0.3**
	baz=344						
YHNB				*e*S	**Sg**	**21 26 37.8**	**-0.1**
EOS3	**EOS3**	**0.73**	**64**	*e*P	**Pn**	**21 26 30.5**	**-0.1**
	baz=62						
EOS2	**EOS2**	**0.73**	**52**	*e*P	**Pn**	**21 26 30.7**	**0.0**
	baz=35						
NSK	**Sanguang**	**0.73**	**343**	⇓*e*P	**Pb**	**21 26 29.0**	**-0.3**
	baz=343						
NSK				*e*S	**Sg**	**21 26 38.3**	**+0.1**
WHYT	**Xinyi Township**	**0.74**	**248**	*e*P	**Pb**	**21 26 28.9**	**-0.4**
	baz=248						
WHYT				*e*S	**Sb**	**21 26 39.4**	**-0.2**
TWE	**Neicheng**	**0.75**	**5**	⇓*e*P	**Pb**	**21 26 29.1**	**-0.4**
	baz=6.0						
TWE				*e*S	**Sb**	**21 26 39.1**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.78**	**359**	*e*P	**Pb**	**21 26 29.8**	**-0.4**
	baz=359						
FUSB				*e*S	**Sg**	**21 26 39.7**	**-0.1**
NFF	**Wufeng Townshi**	**0.79**	**326**	⇑*e*P	**Pb**	**21 26 30.5**	**+0.2**
	baz=326						
NFF				*e*S	**Sb**	**21 26 40.6**	**-0.4**
CHKH	**Chenggong**	**0.80**	**193**	*e*P	**Pb**	**21 26 30.4**	**0.0**
	baz=183						
CHKH				*e*S	**Sn**	**21 26 42.8**	**-0.9**
ILA	**Ilan**	**0.80**	**10**	*e*P	**Pb**	**21 26 30.5**	**0.0**
	baz=9.0						
NWLT	**Wulai**	**0.81**	**354**	*e*P	**Pb**	**21 26 30.2**	**-0.3**
	baz=354						
NWLT				*e*S	**Sg**	**21 26 40.4**	**-0.1**
WJS	**Zhushan**	**0.81**	**259**	*e*P	**Pn**	**21 26 31.4**	**-0.6**
	baz=259						
WJS				*e*S	**Sn**	**21 26 43.3**	**-0.7**
FULB	**Fuli**	**0.82**	**200**	*e*P	**Pb**	**21 26 31.0**	**+0.2**
	baz=216						
FULB				*e*S	**Sn**	**21 26 43.5**	**-0.8**
WWF	**Wufeng**	**0.83**	**275**	*e*P	**Pn**	**21 26 32.7**	**+0.6**
	baz=275						
TWQ1	**Liyutan**	**0.84**	**296**	*e*P	**Pn**	**21 26 31.9**	**-0.5**
	baz=296						
TWQ1				*e*S	**Sn**	**21 26 43.5**	**-1.3**
WNT	**Mingjian**	**0.84**	**264**	*e*P	**Pn**	**21 26 32.4**	**0.0**
	baz=263						
WNT				*e*S	**Sn**	**21 26 44.0**	**-0.8**
NSTT	**Nanjuang**	**0.85**	**320**	*e*P	**Pn**	**21 26 31.7**	**-0.8**
	baz=320						
NSTT				*e*S	**Sb**	**21 26 43.2**	**+0.4**
LIOB	**Emei**	**0.85**	**322**	*e*P	**Pn**	**21 26 32.0**	**-0.6**
	baz=321						
LIOB				*e*S	**Sb**	**21 26 43.6**	**+0.7**
ALS	**Alishan**	**0.86**	**238**	⇓*e*P	**Pb**	**21 26 31.3**	**-0.3**
	baz=238						
ALS				*e*S	**Sb**	**21 26 44.0**	**+0.6**
TCU	**Taichung**	**0.86**	**282**	*e*P	**Pn**	**21 26 32.9**	**+0.3**
	baz=276						
TCU				*e*S	**Sn**	**21 26 46.2**	**+1.0**
NJD	**Zhudong**	**0.89**	**329**	*e*P	**Pn**	**21 26 33.4**	**+0.4**
	baz=328						
NJD				*e*S	**Sn**	**21 26 45.4**	**-0.6**
CHKT	**Chengkung**	**0.90**	**194**	*e*P	**Pb**	**21 26 32.1**	**+0.1**
	baz=195						
CHKT				*e*S	**Sn**	**21 26 46.2**	**+0.1**
EHD	**Haiduan**	**0.90**	**204**	*e*P	**Pg**	**21 26 31.3**	**-0.4**
	baz=216						
EHD				*e*S	**Sb**	**21 26 44.8**	**+0.7**
CHN5	**Tsauling**	**0.92**	**246**	⇓*e*P	**Pn**	**21 26 33.1**	**-0.5**
	baz=236						
CHN5				*e*S	**Sn**	**21 26 47.1**	**+0.2**
NMLH	**Miaoli**	**0.93**	**307**	*e*P	**Pn**	**21 26 34.2**	**+0.7**
	baz=307						
NMLH				*e*S	**Sn**	**21 26 46.8**	**-0.1**
WYL	**Yuanlin Townsh**	**0.93**	**269**	*e*P	**Pn**	**21 26 33.8**	**+0.3**
	baz=256						
WYL				*e*S	**Sn**	**21 26 47.9**	**+0.9**
ECS	**Chishang**	**0.94**	**202**	*e*P	**Pn**	**21 26 33.9**	**+0.1**
	baz=205						
ELDTW	**Lidau**	**0.95**	**214**	*e*P	**Pg**	**21 26 31.5**	**-1.1**
	baz=207						
ELDTW				*e*S	**Sb**	**21 26 46.0**	**+0.4**
WCHH	**Zhanghua**	**0.96**	**277**	*e*P	**Pn**	**21 26 34.7**	**+0.8**
	baz=276						
WCHH				*e*S	**Sn**	**21 26 49.3**	**+1.7**
HSN1	**Hsinchu**	**0.96**	**327**	*e*P	**Pn**	**21 26 34.2**	**+0.2**
	baz=326						
HSN1				*e*S	**Sn**	**21 26 47.9**	**+0.1**
NHDH	**Xindian Distri**	**0.99**	**356**	*e*P	**Pn**	**21 26 34.0**	**-0.4**
	baz=356						
NHDH				*e*S	**Sb**	**21 26 46.1**	**-0.6**
SBCB	**Hsinchu**	**0.99**	**326**	*e*P	**Pn**	**21 26 35.9**	**+1.5**
	baz=324						
WGK	**Gukeng**	**0.99**	**253**	*e*P	**Pn**	**21 26 34.7**	**+0.3**
	baz=254						
WGK				*e*S	**Sn**	**21 26 49.3**	**+0.8**
TATO	**Taipei**	**1.00**	**354**	*e*P	**Pn**	**21 26 34.3**	**-0.2**
	baz=354						
TATO				*e*S	**Sb**	**21 26 46.7**	**-0.4**
TWA	**Mucha**	**1.00**	**359**	⇑*e*P	**Pn**	**21 26 34.3**	**-0.3**
	baz=349						
TWA				*e*S	**Sb**	**21 26 46.7**	**-0.4**
HSN	**Hsinchu**	**1.00**	**325**	*e*P	**Pn**	**21 26 36.1**	**+1.5**
	baz=327						
TIPB	**Shuangxi**	**1.01**	**12**	⇑*e*P	**Pb**	**21 26 34.0**	**-0.1**
	baz=2.0						
TIPB				*e*S	**Sg**	**21 26 46.6**	**-0.5**
EDH	**Donghe**	**1.03**	**195**	*e*P	**Pg**	**21 26 32.7**	**-1.6**
	baz=198						
EDH				*e*S	**Sn**	**21 26 49.8**	**+0.3**
WCKO	**Fanlu**	**1.05**	**240**	*e*P	**Pn**	**21 26 35.6**	**+0.3**
	baz=236						
WCKO				*e*S	**Sn**	**21 26 50.7**	**+0.6**
NCU	**National Centr**	**1.06**	**339**	*e*P	**Pn**	**21 26 36.6**	**+1.2**
	baz=350						
NCU				*e*S	**Sn**	**21 26 52.0**	**+1.8**
TAP	**Taipei**	**1.06**	**355**	*e*P	**Pn**	**21 26 36.0**	**+0.6**
	baz=356						
TAP				*e*S	**Sn**	**21 26 49.7**	**-0.5**
TWB1	**Santiao Chiao**	**1.09**	**19**	*e*P	**Pn**	**21 26 35.6**	**-0.1**
	baz=11						
TWB1				*e*S	**Sb**	**21 26 49.4**	**-0.2**
STYH	**Taoyuan**	**1.10**	**224**	*e*P	**Pn**	**21 26 35.6**	**-0.2**
	baz=226						
STYH				*e*S	**Sn**	**21 26 51.4**	**+0.3**
NWF	**Wu-fen Shan**	**1.10**	**9**	*e*P	**Pn**	**21 26 36.1**	**+0.1**
	baz=8.0						
NWF				*e*S	**Sb**	**21 26 49.9**	**-0.3**
WFSB	**Wu-fen Shan**	**1.10**	**9**	*e*P	**Pn**	**21 26 36.1**	**+0.2**
	baz=8.0						
WFSB				*e*S	**Sb**	**21 26 50.0**	**-0.1**
CHN4	**Tsaushan**	**1.11**	**236**	*e*P	**Pn**	**21 26 36.7**	**+0.6**
	baz=230						
CHN4				*e*S	**Sn**	**21 26 54.4**	**+2.9**
TPUB	**Ta-pu**	**1.11**	**233**	*e*P	**Pn**	**21 26 36.4**	**+0.3**
	baz=235						
TPUB				*e*S	**Sn**	**21 26 52.2**	**+0.6**
STYT	**Tauyuan**	**1.12**	**224**	*e*P	**Pn**	**21 26 35.9**	**-0.3**
	baz=226						
STYT				*e*S	**Sn**	**21 26 51.9**	**+0.2**
CHN2	**Minshiung**	**1.12**	**247**	*e*P	**Pn**	**21 26 37.6**	**+1.4**
	baz=249						
WRL	**Guolierlin Hig**	**1.12**	**267**	*e*P	**Pn**	**21 26 36.7**	**+0.5**
	baz=267						
WRL				*e*S	**Sn**	**21 26 52.6**	**+0.9**
TWS1	**Kuangyinshan**	**1.13**	**352**	*e*P	**Pn**	**21 26 37.2**	**+0.8**
	baz=360						
TWS1				*e*S	**Sn**	**21 26 52.7**	**+0.7**
RLNB	**Erlin**	**1.14**	**266**	*e*P	**Pn**	**21 26 37.5**	**+1.1**
	baz=266						
RLNB				*e*S	**Sn**	**21 26 53.7**	**+1.6**
NHW	**Xinwu Township**	**1.14**	**334**	*e*P	**Pn**	**21 26 38.3**	**+1.7**
	baz=333						
NHW				*e*S	**Sn**	**21 26 53.9**	**+1.7**
SXI1	**Grass Mountain**	**1.14**	**13**	*e*P	**Pn**	**21 26 36.7**	**+0.1**
	baz=3.0						
SXI1				*e*S	**Sb**	**21 26 51.1**	**-0.2**
WTK	**Tuku**	**1.14**	**256**	*e*P	**Pn**	**21 26 37.4**	**+0.9**
	baz=257						
WTK				*e*S	**Sn**	**21 26 53.4**	**+1.1**
WTP	**Ta-pu**	**1.16**	**231**	*e*P	**Pn**	**21 26 37.3**	**+0.5**
	baz=233						
WTP				*e*S	**Sn**	**21 26 54.4**	**+1.7**
YM01	**YM01**	**1.17**	**359**	*e*P	**Pn**	**21 26 37.7**	**+0.8**
	baz=349						
YM01				*e*S	**Sn**	**21 26 53.8**	**+0.9**
TNOU	**National Taiwa**	**1.18**	**8**	*e*P	**Pn**	**21 26 37.2**	**+0.2**
	baz=7.0						
TNOU				*e*S	**Sg**	**21 26 51.4**	**-1.1**
NTST	**Danshui**	**1.19**	**353**	*e*P	**Pn**	**21 26 38.5**	**+1.3**
	baz=1.0						
NTST				*e*S	**Sn**	**21 26 55.6**	**+2.1**
YM08	**YM08**	**1.21**	**360**	*e*P	**Pn**	**21 26 38.2**	**+0.8**
	baz=7.0						
ANP	**Anpu**	**1.21**	**357**	*e*P	**Pn**	**21 26 38.3**	**+0.8**
	baz=354						
TWK	**Hsinying**	**1.24**	**236**	*e*P	**Pg**	**21 26 38.9**	**+0.7**
	baz=230						
TWK				*e*S	**Sn**	**21 26 55.3**	**+0.7**
TWG	**Pinlang**	**1.25**	**203**	*e*P	**Pn**	**21 26 37.0**	**-0.9**
	baz=214						
TWGBT	**Beinan**	**1.25**	**203**	*e*P	**Pn**	**21 26 36.7**	**-1.2**
	baz=213						
TWGBT				*e*S	**Sn**	**21 26 56.4**	**+1.6**
CHN1	**Nanshi**	**1.26**	**232**	*e*P	**Pg**	**21 26 39.2**	**+0.6**
	baz=237						
CHN1				*e*S	**Sn**	**21 26 57.2**	**+2.1**
SNST	**Tainan City**	**1.26**	**234**	*e*P	**Pg**	**21 26 39.0**	**+0.4**
	baz=232						
SNST				*e*S	**Sn**	**21 26 56.6**	**+1.5**
SGST	**Jiashian**	**1.29**	**227**	*e*P	**Pb**	**21 26 38.5**	**-0.3**
	baz=230						
SLGT	**Liugui**	**1.31**	**222**	*e*P	**Pg**	**21 26 39.3**	**-0.3**
	baz=210						
JYNG	**Yonaguni jima**	**1.32**	**69**	*e*P	**Pn**	**21 26 38.6**	**-0.2**
JYNG				*e*S	**Sb**	**21 26 55.2**	**-1.0**
YOJ	**Yonaguni jima**	**1.38**	**69**	*e*P	**Pn**	**21 26 39.3**	**-0.4**
	baz=67						
YOJ				*e*S	**Sg**	**21 26 59.0**	**+0.2**
YOJ	**Yonaguni jima**	**1.38**	**69**	*e*P	**Pn**	**21 26 39.5**	**-0.3**
YOJ				*e*S	**Sn**	**21 26 58.4**	**+0.4**
SSD	**Sandimen**	**1.51**	**216**	*e*P	**Pn**	**21 26 41.8**	**+0.2**
	baz=220						
SSD				*e*S	**Sg**	**21 27 04.8**	**+1.8**
HATJ	**Hateruma jima**	**2.02**	**87**	*e*S	**Sn**	**21 27 14.2**	**+0.4**
JKRS	**Kuro-shima**	**2.22**	**83**	P	**Pn**	**21 26 51.6**	**+0.3**
JKRS				S	**Sn**	**21 27 20.2**	**+1.4**
JIJ	**Ishigaki jima**	**2.36**	**80**	P	**Pn**	**21 26 52.4**	**-0.7**
JIJ				*e*S	**Sn**	**21 27 21.4**	**-0.8**
JISG	**Ishigakijimahi**	**2.55**	**76**	P	**Pn**	**21 26 55.3**	**-0.5**
JISG				*e*S	**Sn**	**21 27 25.8**	**-1.1**
JTJ	**Tarama**	**2.91**	**76**	*e*S	**Sn**	**21 27 38.2**	**+2.4**

*IGIL **09** 21:28:51.5,35.83N×10.32W,h23km,ML1.8*

*INMG **09** 21:28:51.9±1.4,35.77N×10.34W,h32km±14km,ML2.0, Error ellipse: s-maj=13.0km s-min=5.4km az=71.0*

*CNRM **09** 21:28:56.8,34.86N×10.12W,h119km,ML3.0*

ISC 09 21:28:48.3±2.2,35.71N±0.05×10.4W±0.1,h42km,n30, σ1.68/39,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.89**	**41**	*e*P	**Pn**	**21 29 19.5**	**+1.4**
PFVI				*e*S	**Sn**	**21 29 39.8**	**-0.9**

PFVI					A		A	21 29 46.6
	8.9nm,0.7s							
MORF	**Marmelete**	**2.11**	**41**	*eP*		**Pn**		**21 29 22.6 +1.4**
MORF				*eS*		**Sn**		**21 29 45.4 -0.8**
MORF					A	A		21 29 45.9
	8.8nm,0.2s							
MORF	**Marmelete**	**2.11**	**41**	*eP*		**Pn**		**21 29 22.6 +1.4**
MORF				*eS*		**Sn**		**21 29 45.2 -1.0**
MORF				IAML				21 29 47.8
	comp=N,9.3nm,0.2s							
PTEO	**Sao Teotonio**	**2.26**	**36**	*eP*		**Pn**		**21 29 24.7 +1.5**
PTEO				*eS*		**Sn**		**21 29 49.1 -0.7**
PTEO					A	A		21 29 57.1
	comp=N,6.7nm,0.6s							
PBDV	**Barranco-do-Ve**	**2.50**	**52**	*eP*		**Pn**		**21 29 28.2 +1.8**
PBDV				*eS*		**Sn**		**21 29 54.9 -0.7**
PBDV					A	A		21 29 58.0
	comp=N,3.0nm,0.6s							
PCVE	**Castro Verde**	**2.69**	**44**	*eP*		**Pn**		**21 29 31.0 +2.0**
PCVE				*eS*		**Sn**		**21 29 59.9 -0.4**
PCVE					A	A		21 30 02.5
	comp=N,2.6nm,0.2s							
PVAQ	**Vaqueiros**	**2.73**	**51**	*eP*		**Pn**		**21 29 31.3 +1.7**
PVAQ				*eS*		**Sn**		**21 30 00.2 -1.1**
MESJ	**Messejana**	**2.74**	**39**	*eP*		**Pn**		**21 29 31.1 +1.4**
MESJ				*eS*		**Sn**		**21 30 00.7 -0.9**
MESJ					A	A		21 30 02.5
	comp=N,3.2nm,0.7s							
MESJ	**Messejana**	**2.74**	**39**	*eP*		**Pn**		**21 29 31.2 +1.4**
MESJ				*eS*		**Sn**		**21 30 00.5 -1.2**
MESJ				IAML				21 30 02.5
	comp=N,3.6nm,0.1s							
PNCL	**Nicolau / Gran**	**2.82**	**31**	*eP*		**Pn**		**21 29 32.2 +1.4**
PNCL				*eS*		**Sn**		**21 30 02.2 -1.3**
PNCL					A	A		21 30 06.4
	comp=N,3.3nm,0.4s							
PBEJ	**Beja**	**3.07**	**40**	*eS*		**Sn**		**21 30 08.1 -1.5**
PBEJ					A	A		21 30 09.9
	comp=N,2.6nm,0.2s							
PMAFR	**Mafra**	**3.35**	**15**	*eP*		**Pn**		**21 29 39.6 +1.4**
PMAFR				*eS*		**Sn**		**21 30 14.7 -2.0**
EVO	**Evora**	**3.39**	**33**	*eP*		**Pn**		**21 29 39.6 +0.9**
EVO				*eS*		**Sn**		**21 30 15.9 -1.7**
EVO					A	A		21 30 16.9
	comp=N,5.1nm,0.2s							
PBAR	**Barrancos**	**3.63**	**46**	*eP*		**Pn**		**21 29 43.8 +1.8**
PBAR				*eS*		**Sn**		**21 30 22.2 -1.4**
PBAR					A	A		21 30 24.0
	comp=N,1.5nm,0.3s							
PMTG	**Montargil**	**3.77**	**26**	*eP*		**Pn**		**21 29 45.4 +1.6**
PMTG				*eS*		**Sn**		**21 30 24.5 -2.3**
PMTG					A	A		21 30 27.0
	comp=N,2.0nm,0.1s							
ZHG	**ZHG**	**3.82**	**125**	P		**Pn**		**21 29 46.5 +1.8**
ZHG	**ZHG**	**3.82**	**125**	S		Sn		21 30 23.6 -4.8
SRHM	**Skhour des Reh**	**3.83**	**147**	P		**Pn**		**21 29 46.0 +1.2**
SRHM	**Skhour des Reh**	**3.83**	**147**	S		Sn		21 30 22.8 -5.8
PESTR	**Estremoz**	**3.86**	**34**	*eS*		**Sn**		**21 30 27.2 -1.9**
PMRV	**Marv??o**	**4.40**	**32**	*eP*		**Pn**		**21 29 53.6 +1.0**
PMRV				*eS*		**Sn**		**21 30 39.7 -2.9**
PMRV					A	A		21 30 42.4
	comp=N,2.3nm,0.2s							
PCAS	**Casmilo, Conde**	**4.58**	**18**	*eS*		**Sn**		**21 30 44.9 -2.1**
TTIG	**Tnine Tigouga,**	**5.40**	**162**	P		Pn		21 30 03.0 -3.4
TTIG	**Tnine Tigouga,**	**5.40**	**162**	S		Sn		21 30 55.9 -11
MD31	**MD31**	**5.45**	**120**	P		**Pn**		**21 30 07.9 +0.9**
MD31	**MD31**	**5.45**	**120**	S		Sn		21 31 04.0 -4.5
AKLM	**AKL**	**5.47**	**101**	P		**Pn**		**21 30 09.3 +2.0**
MDT	**Midelt**	**5.58**	**120**	P		**Pn**		**21 30 10.2 +1.3**
MDT	**Midelt**	**5.58**	**120**	S		**Sn**		**21 31 08.3 -3.6**
OUZM	**OUZ**	**5.67**	**147**	P		Pn		21 30 09.0 -1.1

TAP 09 21:38:56.4, 24.00N×121.56E, h3km, ML0.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**120**	P	Pg	21 38 57.8	+0.4
	baz=117						
ETM	**Tongmen**	**0.07**	**241**	P	Pg	21 38 58.3	+0.4
	baz=241						
TWD	**Chiawan**	**0.09**	**22**	P	Pg	21 38 58.6	+0.5
	baz=24						
LXIB	**Xiulin Townshi**	**0.14**	**279**	*eP*	Pg	21 38 59.9	+0.7
	baz=271						
NACB	**Ninganchiao**	**0.18**	**10**	*eP*	Pg	21 39 00.0	+0.1
	baz=9.0						
ESL	**Shilin**	**0.22**	**212**	*i* P	Pg	21 39 02.1	+1.4
	baz=210						
ESL				*i* S	Sg	21 39 04.8	+1.2
	baz=210						

*NEIC **09** 21:44:28.2±1.5, 8.68N±0.06×126.74E±0.09, h10km±1km, mb4.4/48, Error ellipse: s-maj=14.8km s-min=9.2km az=69.0*

*IDC **09** 21:44:34.4±3.5, 8.64N×126.90E, h68km±32km, mb3.6/17, mbtmp4.0/18, ML4.2/1, MS3.1/3, Error ellipse: s-maj=29.3km s-min=15.1km az=65.0*

ISC 09 21:44:31.4±0.4, 8.71N±0.06×126.82E±0.08, h39km, n72, σ1§18/73, mb4.3/35, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.04**	**217**		**Pn**	**21 45 05.4**	**+2.1**
DAV	**Davao City (W)**	**2.04**	**217**	P	**Pn**	**21 45 05.3**	**+2.0**
	81nm,0.3s,baz=77,slow=2.9,SNR=12						
DAV				S	**Sn**	**21 45 32.0**	**+4.4**
	505nm,0.7s,baz=24,slow=20,SNR=7.5						
DAV				LR	LR	21 45 40.4	
	comp=Z,207nm,19.8s,baz=46,slow=32						
	215nm,0.4s						
TGY	**Tagaytay City**	**7.88**	**313**	LR	LR	21 49 48.9	
	comp=Z,163nm,21.7s,baz=160,slow=39						
TNTI	**Ternate**	**7.90**	**176**	Pn	**Pn**	**21 46 21.6**	**-2.3**
KNMB	**Chin-men Tao**	**17.62**	**334**	Pn	**Pn**	**21 48 32.1**	**-1.9**
KNMB				IAmb	IAmb	21 48 36.9	
	comp=Z,59nm,1.3s						
MMRI	**Maumere**	**17.82**	**195**	P	**Pn**	**21 48 35.5**	**-1.1**
MMRI				IAmb	IAmb	21 48 38.3	
	comp=Z,31nm,1.1s						
KSM	**Kuching**	**17.94**	**247**	Pn	**Pn**	**21 48 34.9**	**-3.1**
DLV	**T Lat**	**18.32**	**282**	Pn	**P**	**21 48 39.4**	**-3.3**
DLV				IAmb	IAmb	21 48 46.1	
	comp=Z,28nm,1.3s						
UBPT	**Khong Chiam**	**21.87**	**289**	P	**P**	**21 49 18.4**	**-2.6**
KNRA	**Kununurra**	**24.30**	**175**		**P**	**21 49 44.5**	**-0.9**
KNRA				IAmb	IAmb	21 49 57.7	
	comp=Z,9.1nm,0.7s						
SLVN	**Son La**	**25.40**	**302**	P	**P**	**21 49 55.0**	**-0.5**
IPM	**Ipoh**	**25.96**	**262**	P	**P**	**21 49 59.8**	**-0.8**
IPM				IAmb	IAmb	21 50 18.7	
	comp=Z,13nm,1.4s						
KULM	**Kulim**	**26.19**	**264**	P	**P**	**21 50 01.2**	**-1.4**
KULM				IAmb	IAmb	21 50 15.2	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**26.66**	**183**	P	**P**	**21 50 06.5**	**-0.2**
COEN	**Coen**	**27.76**	**144**		**P**	**21 50 15.6**	**-1.1**
COEN				IAmb	IAmb	21 50 43.9	
	comp=Z,14nm,1.2s						
KSRS	**Korea Array**	**28.64**	**2**	P	**P**	**21 50 24.7**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=255,slow=6.1,SNR=4.2						
	comp=Z,2.1nm,0.9s						
CM31	**Chiang Mai Arr**	**28.74**	**293**	P	**P**	**21 50 25.3**	**-0.2**
CM31				IAmb	IAmb	21 50 39.2	
	comp=Z,5.5nm,1.1s						
CMAR	**Chiang Mai Ar**	**28.74**	**293**	P	**P**	**21 50 25.3**	**-0.2**
CMAR	**Chiang Mai Ar**	**28.74**	**293**	P	**P**	**21 50 26.2**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=112,slow=6.9,SNR=16						
	comp=Z,0.9nm,0.3s						
WB0	**Warramunga Arr**	**29.26**	**165**	P	**P**	**21 50 30.0**	**0.0**
WB0				IAmb	IAmb	21 50 48.4	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**29.41**	**165**	P	**P**	**21 50 30.0**	**-1.4**
WRAB				IAmb	IAmb	21 50 58.0	
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**29.42**	**165**	P	**P**	**21 50 31.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=346,slow=8.0,SNR=8.7						
	comp=Z,0.5nm,0.6s						
WB2	**Warramunga Arr**	**29.42**	**165**	P	**P**	**21 50 31.3**	**-0.2**
ASAR	**Alice Springs**	**32.91**	**168**	P	**P**	**21 51 01.0**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=347,slow=7.8,SNR=4.3						
	comp=Z,0.3nm,0.4s						
USA0B	**Ussuriysk Arra**	**35.64**	**6**	P	**P**	**21 51 25.9**	**+0.3**
USA0B				IAmb	IAmb	21 51 38.6	
	comp=Z,6.2nm,0.8s						
FORT	**Forrest**	**39.28**	**178**	P	**P**	**21 51 57.0**	**+0.5**
SONM	**Songino Array**	**42.66**	**340**	P	**P**	**21 52 24.5**	**+0.2**
SONM	**Songino Array**	**42.66**	**340**	P	**P**	**21 52 25.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=155,slow=7.9,SNR=4.6						
SONM				PcP	**PcP**	**21 54 15.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=172,slow=2.9,SNR=2.8						
	comp=Z,0.6nm,0.7s						
STKA	**Stephens Creek**	**42.76**	**161**	P	**P**	**21 52 23.8**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=326,slow=17,SNR=2.2						
	comp=Z,0.7nm,0.6s						
ARMA	**Armidale**	**45.62**	**150**	P	**P**	**21 52 49.5**	**+1.3**
DZM	**Mont Dzumac**	**49.45**	**129**	P	**P**	**21 53 17.1**	**-0.9**
ONTNC	**Ouen Toro**	**49.58**	**129**	P	**P**	**21 53 19.2**	**+0.2**
PEA0B	**Petropavlovsk-**	**50.84**	**24**	P	**P**	**21 53 29.4**	**+1.4**
PETK	**Petropavlovsk-**	**50.84**	**24**	P	**P**	**21 53 28.8**	**+0.8**
MK31	**Makanchi Array**	**53.59**	**323**	P	**P**	**21 53 48.9**	**+0.2**
MKAR	**Makanchi Array**	**53.59**	**323**	P	**P**	**21 53 48.6**	**-0.1**
MKAR	**Makanchi Array**	**53.59**	**323**	P	**P**	**21 53 49.7**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=122,slow=7.9,SNR=21						
MKAR				PcP	**PcP**	**21 54 55.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=108,slow=4.7,SNR=1.8						
	comp=Z,1.5nm,0.6s						
MAKZ	**Makanchi**	**53.79**	**323**	P	**P**	**21 53 50.9**	**+0.8**
MAKZ				IAmb	IAmb	21 54 03.4	
	comp=Z,4.1nm,1.4s						
NIL	**Nilore**	**55.06**	**305**	P	**P**	**21 53 59.6**	**-0.1**
ZALV	**Zalesovo Beam**	**56.25**	**332**	P	**P**	**21 54 06.9**	**-0.8**
ZALV	**Zalesovo Beam**	**56.25**	**332**	P	**P**	**21 54 07.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=120,slow=5.3,SNR=4.0						
	comp=Z,0.7nm,0.4s						
ARSB	**Arslanbob**	**57.43**	**314**	P	**P**	**21 54 16.5**	**-0.1**
KURK	**Kurchatov**	**57.66**	**326**	P	**P**	**21 54 17.9**	**+0.2**
KURK				IAmb	IAmb	21 54 19.7	
	comp=Z,7.9nm,1.4s						
KURBB	**Kurchatov Arra**	**57.66**	**326**	P	**P**	**21 54 18.6**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=123,slow=7.0,SNR=12						
	comp=Z,1.0nm,0.6s						
BTK	**Batken**	**58.62**	**312**	P	**P**	**21 54 23.5**	**-1.4**
KBL	**Kabul**	**58.67**	**305**	P	**P**	**21 54 25.2**	**-0.2**
KBL				IAmb	IAmb	21 54 26.7	
	comp=Z,3.2nm,0.6s						
SIMJ	**Simiganj**	**59.61**	**310**	P	**P**	**21 54 32.2**	**+0.4**
SIMJ				IAmb	IAmb	21 54 34.7	
	comp=Z,4.9nm,1.2s						
KKAR	**Karatay Array**	**59.73**	**315**	P	**P**	**21 54 32.4**	**0.0**
KKAR	**Karatay Array**	**59.73**	**315**	P	**P**	**21 54 32.5**	**+0.1**
KKAR				IAmb	IAmb	21 54 34.0	
	comp=Z,2.0nm,0.7s						
TIXI	**Tiksi**	**62.90**	**1**	P	**P**	**21 54 53.8**	**+0.6**
TIXI				IAmb	IAmb	21 54 56.2	
	comp=Z,5.1nm,1.0s						
BVAR	**Borovoye Array**	**63.25**	**326**	P	**P**	**21 54 56.9**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=120,slow=8.8,SNR=16						
	comp=Z,3.1nm,0.8s						
BRVK	**Borovoye**	**63.33**	**326**	P	**P**	**21 54 56.2**	**-0.2**
BRVK				IAmb	IAmb	21 54 58.6	
	comp=Z,3.6nm,0.8s						
TOZ	**Tahuroa Road**	**64.79**	**139**	P	**P**	**21 55 07.1**	**+0.8**
HIZ	**Hauiti**	**64.83**	**140**	P	**P**	**21 55 07.7**	**+1.2**
MLZ	**Mavora Lakes**	**65.36**	**149**	P	**P**	**21 55 10.7**	**+0.9**
RPZ	**Rata Peaks**	**65.79**	**146**	LR	LR	22 23 50.5	
	comp=Z,30nm,18.1s,baz=234,slow=36						
GEYT	**Alibeck**	**67.92**	**307**	P	**P**	**21 55 26.8**	**+0.4**
GEYT				IAmb	IAmb	21 55 30.3	
	comp=Z,3.3nm,0.9s						
GEYT	**Alibeck**	**67.92**	**307**	P	**P**	**21 55 25.8**	**-0.6**
	comp=Z,2.9nm,1.0s,baz=117,slow=5.8,SNR=5.3						
	comp=Z,2.9nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**67.92**	**307**	P	**P**	**21 55 27.0**	**+0.6**
GYA0B				IAmb	IAmb	21 55 30.2	
	comp=Z,2.8nm,0.8s						
SPIA	**Saint Paul Isl**	**68.21**	**31**	P	**P**	**21 55 28.3**	**+0.6**
ABKAR	**Akbulak array**	**68.41**	**320**	P	**P**	**21 55 28.9**	**-0.3**
ABKAR	**Akbulak array**	**68.41**	**320**	P	**P**	**21 55 28.6**	**-0.6**
ARU	**Arti**	**70.82**	**327**	P	**P**	**21 55 44.5**	**+0.6**
ARU				IAmb	IAmb	21 55 47.5	
	comp=Z,2.7nm,0.8s						
O14K	**Tigyukauivet M**	**73.34**	**31**	P	**P**	**21 55 59.9**	**+1.0**
CNPM	**China Poot**	**78.46**	**31**	P	**P**	**21 56 28.3**	**+0.1**
RAYN	**Ar Rayn**	**78.66**	**292**	P	**P**	**21 56 29.6**	**-0.4**
RAYN				IAmb	IAmb	21 56 31.0	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**80.60**	**26**	P	**P**	**21 56 40.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.2,SNR=2.2						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**85.84**	**340**	P	**P**	**21 57 06.6**	**0.0**
	comp=Z,4.6nm,1.0s,baz=64,slow=6.1,SNR=2.1						
	comp=Z,4.6nm,1.0s						
MMAI	**Mount Meron Ar**	**86.50**	**303**	P	**P**	**21 57 11.1**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=101,slow=7.5,SNR=1.8						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**86.94**	**310**	P	**P**	**21 57 12.3**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=81,slow=4.5,SNR=2.7						
	comp=Z,0.4nm,0.6s						
FINES	**FINESS Array B**	**87.52**	**332**	P	**P**	**21 57 14.9**	**0.0**
	comp=Z,0.8nm,0.5s,baz=77,slow=5.9,SNR=13						
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**94.95**	**24**	P	**P**	**21 57 50.8**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=298,slow=4.9,SNR=3.7						
	comp=Z,0.2nm,0.5s						

*IDC **09** 21:47:34.5±1.8, 3.58S×142.27E, h0km, mb3.5/5, mbtmp3.6/6, ML4.2/1, MS2.9/1, Error ellipse: s-maj=72.1km s-min=25.0km az=99.0*

ISC 09 21:47:38.5±1.7, 3.85±0.2×142.6E±0.5, h35km, n7, σ1§05/6, mb3.5/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.58**	**168**	LR	LR	21 57 30.0	
	comp=Z,40nm,19.4s,baz=323,slow=35						
WRA	**Warramunga Arr**	**17.95**	**206**	P	**P**	**21 51 44.7**	**-1.0**
	0.8nm,0.3s,baz=14,slow=11,SNR=14						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**21.46**	**202**	P	**P**	**21 52 25.2**	**+1.2**
	2.3nm,0.6s,baz=29,slow=12,SNR=21						
	2.3nm,0.6s						
SONM	**Songino Array**	**60.40**	**333**	P	**P**	**21 57 45.2**	**+0.7**
	0.2nm,0.6s,baz=142,slow=7.3,SNR=2.6						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**73.03**	**321**	P	**P**	**21 59 04.8**	**-0.1**
	0.4nm,0.8s,baz=107,slow=5.0,SNR=3.3						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**82.42**	**325**	P	**P**	**21 59 56.5**	**-0.6**
	0.2nm,0.4s,baz=131,slow=4.0,SNR=1.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**85.23**	**24**	P	**P**	**22 00 11.1**	**-0.2**
	0.3nm,0.7s,baz=264,slow=4.6,SNR=1.8						
	0.3nm,0.7s						

*IDC **09** 21:55:30.7±1.1, 24.17N×121.93E, h0km, mb3.4/7, mbtmp3.4/8, ML3.0/1, Error ellipse: s-maj=53.6km s-min=21.5km az=68.0*

*JMA **09** 21:55:31.4±0.1, 24.1N±0.3×121.8E±0.3, h0km, MV3.3/14, TAIWAN REGION*

*TAP **09** 21:55:31.4, 24.16N×121.77E, h4km, ML3.6, C*

*ASIES **09** 21:55:31.4, 24.16N×121.77E, h4km, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.81; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$ 1.56; $M_{r\theta}$-1.02; $M_{\theta\phi}$0.80; $M_{\phi r}$-0.79; Fault plane solution: M_o2.09048×10^{21} NP1: ϕ_s244.14000°, δ81.66000°, λ40.66000°. NP2: ϕ_s147.04000°, δ49.85000°, λ169.06000°. Principal axes: T Plg33.9530°, Azm113.8600°; N Plg48.6310°, Azm253.7280°; P Plg20.6930°, Azm9.1260°;*

ISC 09 21:55:31.9±0.9, 24.16N±0.02×121.78E±0.02, h7km±6km, n136, σ0§80/182, mb3.3/7, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.15**	**268**	P	**Pg**	**21 55 34.6**	**-0.4**
	baz=269						
ETL				*e*S	**Sg**	**21 55 37.4**	**+0.2**
	baz=269						
EHP	**Heping Village**	**0.15**	**345**	P	**Pg**	**21 55 35.0**	**-0.1**
	baz=354						
EHP				S	**Sg**	**21 55 37.8**	**+0.6**
	baz=354						
EAHA	**Aohua**	**0.17**	**346**	*i* P	**Pg**	**21 55 35.3**	**-0.1**
	baz=351						
EAHA				*e*S	**Sg**	**21 55 38.7**	**+0.9**
	baz=351						
NACB	**Ninganchiao**	**0.17**	**273**	P	**Pg**	**21 55 35.0**	**-0.4**
	baz=275						
NACB				*e*S	**Sg**	**21 55 38.1**	**+0.2**
	baz=275						
TWD	**Chiawan**	**0.19**	**244**	*i* P	**Pg**	**21 55 35.4**	**-0.4**
	baz=250						
TWD				*e*S	**Sg**	**21 55 40.2**	**+1.9**
	baz=250						
HWA	**Hwalien**	**0.25**	**221**	*eP*	**Pg**	**21 55 38.0**	**+1.2**
	baz=226						
ENA	**Nanau**	**0.27**	**352**	*i* P	**Pg**	**21 55 37.1**	**-0.1**
	baz=356						
ENA				*e*S	**Sg**	**21 55 41.1**	**+0.3**
	baz=356						
ETLH	**Xiulin Townshi**	**0.28**	**279**	*i* P	**Pg**	**21 55 37.2**	**-0.3**
	baz=273						
ETLH				*e*S	**Sg**	**21 55 41.7**	**+0.5**
	baz=273						
EWUT	**Wuta**	**0.28**	**359**	*eP*	**Pg**	**21 55 37.5**	**0.0**
	baz=1.0						
EWUT				S	**Sg**	**21 55 42.1**	**+0.8**
	baz=1.0						
ETM	**Tongmen**	**0.33**	**233**	*i* P	**Pg**	**21 55 38.1**	**-0.3**
	baz=243						
LXIB	**Xiulin Townshi**	**0.37**	**247**	P	**Pg**	**21 55 38.7**	**-0.4**
	baz=250						
LXIB				*e*S	**Sb**	**21 55 45.2**	**-1.7**
	baz=250						
ESAO	**Su ao**	**0.41**	**8**	*i* P	**Pg**	**21 55 39.9**	**-0.1**
	baz=9.0						
ESAO				*e*S	**Sg**	**21 55 46.0**	**+0.6**
	baz=9.0						
SHUL	**Shoufeng**	**0.42**	**208**	P	**Pb**	**21 55 41.7**	**-0.1**
	baz=221						
LATG	**Datong**	**0.44**	**328**	*eP*	**Pg**	**21 55 40.5**	**0.0**
	baz=329						
LATG				*e*S	**Sb**	**21 55 47.1**	**-1.8**
	baz=329						
TWC	**Suao**	**0.45**	**8**	*i* P	**Pg**	**21 55 40.7**	**0.0**
	baz=10.0						
TWC				S	**Sg**	**21 55 47.3**	**+0.8**
	baz=10.0						
NNSB	**Datong**	**0.45**	**306**	*i* P	**Pg**	**21 55 40.8**	**+0.1**
	baz=308						
NNSB				*i* S	**Sg**	**21 55 47.0**	**+0.4**
	baz=308						
NNS	**Nan Shan**	**0.46**	**306**	*i* P	**Pg**	**21 55 41.0**	**0.0**
	baz=308						
NNS				*i* S	**Sg**	**21 55 47.4**	**+0.3**
	baz=308						
NDS	**Dongshan**	**0.47**	**353**	*eP*	**Pb**	**21 55 41.5**	**-1.1**
	baz=353						
NDS				*e*S	**Sg**	**21 55 47.6**	**+0.3**
	baz=353						
ESL	**Shilin**	**0.47**	**223**	*i* P	**Pg**	**21 55 40.8**	**-0.3**
	baz=238						
WHF	**Hehuan Shan**	**0.47**	**268**	*i* P	**Pg**	**21 55 40.9**	**-0.3**
	baz=270						
WHF				*e*S	**Sg**	**21 55 47.8**	**+0.3**
	baz=270						
EOS2	**EOS2**	**0.48**	**58**	*eP*	**Pb**	**21 55 42.7**	**0.0**
	baz=42						
EOS4	**EOS4**	**0.49**	**95**	*eP*	**Pn**	**21 55 44.3**	**-0.7**
	baz=90						
FUSS	**Fushou**	**0.50**	**280**	*i* P	**Pb**	**21 55 41.7**	**-1.5**
	baz=282						
FUSS				*e*S	**Sb**	**21 55 49.8**	**-0.9**
	baz=282						
NDT	**Datong Townshi**	**0.50**	**331**	*i* P	**Pb**	**21 55 42.0**	**-1.1**
	baz=332						
NDT				*e*S	**Sb**	**21 55 49.6**	**-1.0**
	baz=332						
TEGC	**Jichi Village**	**0.50**	**206**	*eP*	**Pb**	**21 55 43.0**	**-0.1**
	baz=212						
ENTT	**Nioudou**	**0.51**	**337**	*i* P	**Pg**	**21 55 42.1**	**+0.2**
	baz=339						
ENTT				*e*S	**Sb**	**21 55 49.7**	**-1.3**
	baz=339						
TWT	**Tachien**	**0.56**	**279**	*eP*	**Pb**	**21 55 43.2**	**-1.0**
	baz=281						
TWT				*e*S	**Sb**	**21 55 52.0**	**-0.5**
	baz=281						
TWE	**Neicheng**	**0.56**	**349**	*i* P	**Pb**	**21 55 43.1**	**-1.1**
	baz=351						
TWE				S	**Sb**	**21 55 51.3**	**-1.2**
	baz=351						
CHGB	**Renai**	**0.57**	**260**	*eP*	**Pb**	**21 55 42.9**	**-1.4**
	baz=263						
CHGB				*e*S	**Sb**	**21 55 52.1**	**-0.6**
	baz=263						
WARBT	**Fenglin Townsh**	**0.57**	**219**	*eP*	**Pg**	**21 55 42.7**	**-0.3**
	baz=234						
TDCB	**Techi**	**0.58**	**279**	P	**Pb**	**21 55 43.2**	**-1.3**
	baz=281						
TDCB				*e*S	**Sg**	**21 55 50.8**	**+0.1**
	baz=281						
EGFH	**Guangfu**	**0.59**	**214**	*eP*	**Pb**	**21 55 43.5**	**-1.1**
	baz=223						
OWD	**Renai**	**0.59**	**250**	P	**Pg**	**21 55 43.1**	**-0.3**
	baz=251						
FUSB	**Fushanzhiwuyua**	**0.62**	**343**	P	**Pb**	**21 55 44.2**	**-1.0**
	baz=344						
FUSB				*e*S	**Sb**	**21 55 52.9**	**-1.3**
	baz=344						
YHNB	**Yeheng**	**0.63**	**324**	P	**Pb**	**21 55 44.4**	**-0.8**
YHNB	**Yeheng**	**0.63**	**324**	P	**Pb**	**21 55 44.5**	**-0.8**
YHNB	**Yeheng**	**0.63**	**324**	P	**Pb**	**21 55 44.4**	**-0.8**
	baz=325						
YHNB				*e*S	**Sb**	**21 55 53.4**	**-0.9**
	baz=325						
WUSB	**Renai**	**0.63**	**254**	P	**Pg**	**21 55 44.0**	**-0.1**
	baz=256						
WUSB				*e*S	**Sb**	**21 55 54.1**	**-0.4**
	baz=256						
NSK	**Sanguang**	**0.64**	**323**	P	**Pb**	**21 55 44.6**	**-1.0**
	ba

NWF eS Sb 21 56 01.5 -0.8
baz=350
WFSB Wu-fen Shan 0.90 360 P Pb 21 55 50.0 0.0
baz=350
WFSB eS Sb 21 56 02.0 -0.2
baz=350
EYUL Yuli 0.92 208 eP Pb 21 55 50.1 -0.1
baz=225
TWF1 Yuli 0.92 209 eP Pb 21 55 49.7 -0.5
baz=227
SXI1 Grass Mountain 0.93 5 eP Pb 21 55 50.0 -0.5
baz=13
SXI1 eS Sn 21 56 04.1 -1.0
baz=13
TWQ1 Liyutan 0.94 281 eP Pn 21 55 50.9 -0.7
baz=283
NSY Sanyi 0.97 285 eP Pn 21 55 51.9 -0.1
baz=287
NCUH Zhongli 0.97 326 eP Pn 21 55 52.1 +0.2
baz=326
WHYT Xinyi Township 0.97 242 eP Pb 21 55 50.9 -0.2
baz=245
NMLH Miaoli 0.98 293 eP Pn 21 55 52.3 +0.2
baz=303
TNOU National Taiwa 0.98 359 eP Pb 21 55 51.1 -0.2
baz=358
TWS1 Kuangyinshan 0.99 340 eP Pn 21 55 52.5 +0.2
baz=340
YM01 YM01 1.00 349 eP Pn 21 55 51.9 -0.5
baz=348
TCU Taichung 1.01 269 eP Pn 21 55 52.9 +0.4
baz=264
WJS Zhushan 1.02 251 eP Pn 21 55 52.5 -0.2
baz=254
CHKH Chenggong 1.03 200 eP Pb 21 55 51.8 -0.3
baz=191
YM08 YM08 1.03 350 eP Pb 21 55 51.7 -0.6
baz=349
NTST Danshui 1.04 343 eP Pb 21 55 52.3 0.0
baz=342
WNT Mingjian 1.04 254 eP Pn 21 55 53.3 +0.3
baz=250
FULB Fuli 1.06 205 eP Pg 21 55 51.9 -0.4
baz=229
JYNG Yonaguni jima 1.10 75 P Pn 21 55 53.5 -0.3
ALS Alishan 1.11 234 eP Pb 21 55 53.1 -0.5
baz=248
TWY Chenhua 1.12 351 eP Pn 21 55 53.8 -0.3
baz=350
CHKT Chengkung 1.13 200 eP Pg 21 55 53.0 -0.5
baz=204
CHKT eS Sn 21 56 09.9 +0.1
baz=204
EHD Haiduan 1.14 208 eP Pg 21 55 52.7 -1.2
baz=229
CHN5 Tsauling 1.16 241 eP Pn 21 55 54.7 0.0
baz=246
CHN5 eS Sn 21 56 13.4 +2.7
baz=246
YOJ Yonaguni jima 1.16 75 P Pn 21 55 54.8 +0.3
YOJ Yonaguni jima 1.16 75 eP Pn 21 55 54.5 0.0
baz=53
YOJ Yonaguni jima 1.16 75 P Pn 21 55 54.9 +0.3
ELDTW Lidau 1.20 216 eP Pg 21 55 53.4 -1.5
baz=223
WDLH Douliu 1.23 248 eP Pn 21 55 55.3 -0.3
baz=254
WDLH eS Sn 21 56 12.8 +0.3
baz=254
WCKO Fanlu 1.30 236 eP Pb 21 55 57.3 +0.7
baz=242
WRL Guolierlin Hig 1.31 259 eP Pb 21 55 57.6 +0.7
baz=254
STYH Taoyuan 1.35 223 eP Pb 21 55 57.1 -0.5
baz=230
STYH eS Sn 21 56 16.9 +1.5
baz=230
CHN4 Tsaushan 1.36 234 eP Pg 21 55 58.3 +0.3
baz=244
WTK Tuku 1.36 250 eP Pg 21 55 58.0 -0.1
baz=255
TPUB Ta-pu 1.36 231 P Pg 21 55 58.3 +0.2
TPUB Ta-pu 1.36 231 P Pg 21 55 57.9 -0.1
TPUB Ta-pu 1.36 231 eP Pg 21 55 58.0 -0.1
baz=237
LONT Longtian 1.39 206 eP Pn 21 55 56.0 -1.7
baz=217
WTP Ta-pu 1.41 230 eP Pg 21 55 58.8 -0.2
baz=235
WTP eS Sn 21 56 20.6 +3.7
baz=235
PCYT Pengchaiyu 1.48 10 eP Pb 21 55 59.6 -0.3
baz=13
TWK Hsinying 1.48 233 eP Pg 21 56 00.4 0.0
baz=242
TWGBT Beinan 1.49 206 P Pg 21 56 01.3 +0.8
TWGBT Beinan 1.49 206 P Pn 21 55 58.9 -0.2
CHN1 Nanshi 1.51 230 eP Pg 21 56 01.1 +0.2
baz=239
SNST Tainan City 1.51 232 eP Pg 21 56 01.1 +0.3
baz=241
WSF Szhu 1.52 250 eP Pg 21 56 01.8 +0.7
baz=257
SLGT Liugui 1.56 222 eP Pg 21 56 02.0 +0.1
baz=235
ICHU Yijhu 1.59 240 eP Pg 21 56 01.8 -0.7
baz=251
IRIF Iriomote-Funau 1.79 84 P Pg 21 56 05.7 -0.5
TSMG Majia 1.79 216 eP Pb 21 56 04.4 -0.7
baz=241
TSMG eS Sg 21 56 29.9 +0.4
baz=241
TSCK Chigu Township 1.86 237 eP Pn 21 56 04.4 +0.2
baz=248
TSCK eS Sg 21 56 31.8 +0.1
baz=248
MASBT Mashibuluo 1.87 215 eP Pb 21 56 05.2 -1.3
baz=217
JKRS Kuro-shima 2.03 87 eP Pn 21 56 07.6 +1.0
PHUB P'eng-hu 2.12 253 eP Pn 21 56 08.5 +0.6
baz=251
PHUB eS Sg 21 56 38.0 -2.3
baz=251
JIJ Ishigaki jima 2.16 84 eP Pn 21 56 08.6 +0.2
VWUC VWUC 2.28 292 eP Pn 21 56 10.0 0.0
baz=294
VWUC eS Sn 21 56 39.1 +0.8
baz=294
JISG Ishigakijimahi 2.34 79 P Pn 21 56 11.3 +0.5
PTMZ Houxiangcun 2.58 290 eP Pn 21 56 13.9 -0.2
baz=293
PTMZ eS Sn 21 56 46.0 +0.4
baz=293
JTJ Tarama 2.70 79 eP Pb 21 56 18.9 -1.7
KNMB Chin-men Tao 3.11 276 eP Pn 21 56 21.7 +0.3
baz=281
MHZQ Yeshan 3.15 308 eP Pn 21 56 22.2 +0.2
baz=310
AXDP Jialang 3.55 283 eP Pn 21 56 27.7 +0.3
baz=286
DSXP Dongshan 4.01 264 eP Pn 21 56 34.2 +0.4
baz=272
KSRS Korea Array 14.25 20 Pn Pn 21 58 54.8 +0.6
0.1nm,0.3s,baz=195,slow=12,SNR=1.3
0.3nm,0.3s
SONM Songino Array 26.60 336 P P 22 01 11.0 0.0
0.3nm,0.6s,baz=146,slow=10,SNR=2.4
0.3nm,0.6s
MKAR Makanchi Array 38.73 316 P P 22 02 57.4 +0.6
0.3nm,0.6s,baz=102,slow=11,SNR=4.2
MKAR PcP PcP 22 05 10.7 +2.3
0.2nm,0.6s,baz=131,slow=4.0,SNR=1.8
0.3nm,0.6s
ZALV Zalesovo Beam 40.56 327 P P 22 03 11.3 -0.5
0.4nm,0.6s,baz=103,slow=6.2,SNR=2.4
ZALV ScP ScP 22 09 04.6 +0.7
0.7nm,0.8s,baz=123,slow=5.3,SNR=2.2
0.4nm,0.6s
WRA Warramunga Arr 45.51 163 P P 22 03 50.2 -2.1
0.7nm,0.9s,baz=344,slow=8.8,SNR=1.6
0.7nm,0.9s
BVAR Borovoye Array 48.04 321 P P 22 04 11.7 0.0
0.4nm,0.6s,baz=90,slow=5.8,SNR=3.4
0.4nm,0.6s
ASAR Alice Springs 48.98 165 P P 22 04 20.1 +0.8
0.1nm,0.3s,baz=353,slow=14,SNR=2.1
0.1nm,0.3s
YKA Yellowknife Ar 82.78 23 P P 22 07 55.4 -1.1
0.2nm,0.4s,baz=311,slow=4.6,SNR=4.1
0.2nm,0.4s

NDI ***09*** *22:17:35.2±2.4,33.63N×90.10E,h35km,ML3.6,MW4.0, mb4.2(NEIC)*
IDC ***09*** *22:17:42.4±0.8,32.27N×89.72E,h0km,mb3.9/15, mbtmp3.9/17,ML3.1/1,MS3.2/7,Error ellipse: s-maj=29.7km s-min=15.6km az=56.0*
NEIC ***09*** *22:17:47.6±2.1,32.48N±0.07°×89.66E±0.08,h35km±1km, mb4.2/35,Error ellipse: s-maj=15.9km s-min=4.1km az=227.0*

ISC 09 22:17:44.3±0.4,32.39N±0.04°×89.60E±0.04,h10km,n81, σ1.39s/78,mb4.1/28,MS3.4/6,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LSA	**Lhasa**	**2.99**	**153**	Pn		**Pn**	**22 18 35.5**	**+3.2**
GTK	**Tadong**	**5.12**	**190**	*eP*		Pn	22 19 07.6	+6.3
GTK				IAML			22 20 16.4	
	comp=E,190nm,0.2s							
GTK				IAML			22 20 24.3	
	comp=E,207nm,0.3s							
GOMU	**GeErMu**	**5.75**	**47**	Pn		**Pn**	**22 19 12.0**	**+1.9**
GOMU				Pg		**Pg**	**22 19 35.0**	**+0.5**
GOMU				Sn		**Sg**	**22 20 50.7**	**+1.6**
GOMU				smax		smax		
	comp=N,3.0nm,0.9s							
GOMU				smax		smax		
	comp=E,4.0nm,0.9s							
TEZP	**TEZPUR**	**6.39**	**153**	*eP*		**Pn**	**22 19 18.9**	**+0.3**
MOKO	**MOKOCHONG**	**7.41**	**143**	*eP*		**Pn**	**22 19 33.2**	**+0.5**
KOHI	**KOHIMA**	**7.73**	**148**	*eP*		**Pn**	**22 19 37.2**	**+0.1**
KOHI				*eS*		**Sn**	**22 21 05.5**	**+0.8**
KOHI				IAML			22 21 22.5	
	comp=E,19nm,0.8s							
KOHI				IAML			22 21 26.8	
	comp=E,13nm,0.5s							
IMP	**Imphal**	**8.44**	**152**	IAmb		IAmb	22 19 49.8	
	comp=Z,6.7nm,0.9s							
IMP				*eS*		**Sn**	**22 21 23.2**	**+1.0**
IMP				IAML			22 21 25.2	
	comp=N,28nm,0.4s							
IMP				IAML			22 21 27.3	
	comp=E,61nm,0.5s							
SAIH	**SAIHA**	**10.31**	**162**	*eP*		**Pn**	**22 20 12.2**	**-0.2**
SAIH				IAmb		IAmb	22 20 15.6	
	comp=Z,15nm,0.6s							
SAIH				*eS*		**Sn**	**22 22 11.3**	**+3.1**
SAIH				IAML			22 22 35.0	
	comp=E,8.6nm,0.8s							
SAIH				IAML			22 22 39.6	
	comp=E,5.4nm,1.0s							
WMQ	**Urumqi**	**11.51**	**353**	*eP*		**Pn**	**22 20 31.2**	**+2.4**
WMQ				pmax		pmax		
	comp=Z,8.0nm,1.1s							
WMQ				smax		smax		
	comp=N,57nm,0.9s							
WMQ				smax		smax		
	comp=E,50nm,0.7s							
THN	**Thein Dam**	**11.73**	**274**	*ex*		x	22 19 41.4	
THN				*ex*		x	22 20 43.5	
MND	**Mandalay**	**11.84**	**149**	Pn		**Pn**	**22 20 32.1**	**-1.2**
PZH	**PanZhiHua**	**12.10**	**116**	P		**Pn**	**22 20 37.0**	**+0.1**
PZH				S		**Sn**	**22 22 51.3**	**-0.7**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
PZH				pmax		pmax		
	comp=Z,90nm,5.0s							
PZH				LR		LR		
	comp=N,180nm,8.5s							
PZH				LR		LR		
	comp=E,150nm,7.7s							
PZH				LR		LR		
	comp=Z,160nm,6.2s							
KSH	**Kashi**	**13.12**	**307**	P		**P**	**22 20 59.9**	**-1.2**
KSH				pmax		pmax		
	comp=Z,2.0nm,1.0s							
MK31	**Makanchi Array**	**15.44**	**341**	Pn		**Pn**	**22 21 21.8**	**-0.4**
MKAR	**Makanchi Array**	**15.44**	**341**			**Pn**	**22 21 21.7**	**-0.5**
MKAR	**Makanchi Array**	**15.44**	**341**	Pn		**Pn**	**22 21 21.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=18							
MKAR				LR		LR	22 27 29.1	
	comp=Z,78nm,20.6s,baz=351,slow=38							
	comp=Z,1.3nm,0.7s							
CRAI	**Chiangrai**	**15.48**	**139**	Pn		**Pn**	**22 21 23.3**	**+0.5**
MAKZ	**Makanchi**	**15.54**	**340**	Pn		**Pn**	**22 21 22.2**	**-1.2**
MAKZ				IAmb		IAmb	22 21 26.8	
	comp=Z,2.2nm,0.6s							
AAK	**Ala-Archa**	**15.73**	**315**			**Pn**	**22 21 26.1**	**0.0**
ARSB	**Arslanbob**	**15.99**	**309**	Pn		**Pn**	**22 21 30.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**16.22**	**147**	Pn		**Pn**	**22 21 31.3**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=325,slow=12,SNR=5.4							
CMAR				LR		LR	22 27 19.0	
	comp=Z,19nm,18.6s,baz=320,slow=36							
XAN	**Xi'an**	**16.26**	**79**	*eP*		**Pn**	**22 21 33.7**	**+0.8**
SLVN	**Son La**	**16.84**	**127**	Pn		**Pn**	**22 21 39.1**	**-1.2**
BTK	**Batken**	**16.96**	**302**			**Pn**	**22 21 42.6**	**+0.9**
BTK				IAmb		IAmb	22 21 58.5	
	comp=Z,5.3nm,0.8s							
KBL	**Kabul**	**17.28**	**283**	Pn		**Pn**	**22 21 45.1**	**-0.9**
HYB	**Hyderabad**	**17.94**	**216**	*eP*		**Pn**	**22 21 55.6**	**+1.7**
KKAR	**Karatay Array**	**18.46**	**311**	P		**P**	**22 22 00.7**	**+0.5**
HHC	**Hu-ho-hao-te**	**19.52**	**58**	*eP*		**P**	**22 22 12.4**	**+0.5**
HHC				sP		sP	22 22 26.8	+8.8
HHC				S		**Sn**	**22 25 48.0**	**-4.2**
HHC				SS		**SnSn**	**22 26 08.2**	**+1.9**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,51nm,6.0s							
HHC				LR		LR		
	comp=N,120nm,9.2s							
HHC				LR		LR		
	comp=Z,140nm,9.7s							
KURBB	**Kurchatov Array**	**19.98**	**339**	P		**P**	**22 22 17.7**	**+1.0**
	comp=Z,7.4nm,0.8s,baz=146,slow=12,SNR=14							
	comp=Z,7.4nm,0.8s							
SONM	**Songino Array**	**20.01**	**35**	P		**P**	**22 22 17.1**	**-0.1**
SONM	**Songino Array**	**20.01**	**35**	P		**P**	**22 22 18.4**	**+1.1**
	comp=Z,1.1nm,1.4s,baz=222,slow=11,SNR=7.7							
	comp=Z,1.1nm,1.4s							
KURK	**Kurchatov**	**20.03**	**339**	P		**P**	**22 22 17.1**	**-0.2**
KURK				IAmb		IAmb	22 22 20.8	
	comp=Z,6.5nm,0.8s							
ULN	**Ulaanbaatar**	**20.35**	**36**	P		**P**	**22 22 19.0**	**-2.0**
ULN				IAmb		IAmb	22 22 22.6	
	comp=Z,2.6nm,0.8s							
ZAA0	**Zalesovo Array**	**21.82**	**352**	P		**P**	**22 22 36.3**	**-0.2**
ZAA0				IAmb		IAmb	22 22 41.9	
	comp=Z,6.8nm,1.1s							
ZALV	**Zalesovo Beam**	**21.82**	**352**	P		**P**	**22 22 36.5**	**-0.1**
ZALV	**Zalesovo Beam**	**21.82**	**352**	P		**P**	**22 22 37.4**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=168,slow=11,SNR=11							
	comp=Z,3.7nm,0.8s							
UBPT	**Khong Chiam**	**22.33**	**136**	P		**P**	**22 22 42.7**	**+0.4**
UBPT				IAmb		IAmb	22 22 51.0	
	comp=Z,7.5nm,1.1s							
HRA	**Herat**	**22.90**	**282**	P		**P**	**22 22 49.7**	**+1.2**
XLT	**XiLinHaoTe**	**23.69**	**53**	*eP*		**P**	**22 22 56.3**	**+0.1**
XLT				pP		sP	22 23 05.5	+2.9
XLT				sP		pP	22 23 12.9	+12
XLT				PP		**PnPn**	**22 23 28.3**	**+4.9**
XLT				PcP		**PcP**	**22 26 42.6**	**+2.2**
XLT				S		**S**	**22 27 07.6**	**-3.6**
XLT				sS		pS	22 27 18.3	+2.6
XLT				SS		**SnSn**	**22 27 48.0**	**-0.5**
XLT				pmax		pmax		
	comp=Z,2.0nm,1.0s							
XLT				pmax		pmax		
	comp=Z,140nm,5.5s							
XLT				LR		LR		
	comp=N,10.0nm,9.4s							
XLT				LR		LR		
	comp=E,130nm,9.4s							
XLT				LR		LR		
	comp=Z,78nm,11.1s							
BVAR	**Borovoye Array**	**24.84**	**332**	P		**P**	**22 23 08.0**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=115,slow=10.0,SNR=9.8							
	comp=Z,1.4nm,0.6s							
BRVK	**Borovoye**	**24.91**	**332**	P		**P**	**22 23 06.6**	**-0.7**
BRVK				IAmb		IAmb	22 23 11.1	
	comp=Z,3.8nm,0.9s							
ABKAR	**Akbulak array**	**27.82**	**316**	P		**P**	**22 23 33.5**	**-0.1**
LHMI	**Lhok Sumawe**	**27.88**	**164**	P		**P**	**22 23 33.3**	**-1.1**
INCN	**Inchon**	**30.65**	**70**	P		P	22 23 56.9	-2.0
KSAR	**Wonju Array Be**	**31.65**	**70**	P		**P**	**22 24 06.0**	**-1.7**
KSRS	**Korea Array**	**31.68**	**70**	LR		LR	22 38 03.6	
	comp=Z,30nm,19.2s,baz=320,slow=39							
ARU	**Arti**	**32.22**	**328**	P		**P**	**22 24 12.1**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=95,slow=11,SNR=4.1							
	comp=Z,1.2nm,0.5s							
JNU	**Nakatsue**	**34.57**	**77**	LR		LR	22 39 45.4	
	comp=Z,55nm,21.1s,baz=309,slow=38							
USRK	**Ussuriysk Ar.**	**34.94**	**58**	P		**P**	**22 24 35.7**	**-0.6**
SBUM	**Sibu**	**36.59**	**140**	P		**P**	**22 24 49.8**	**-0.9**
SBUM				IAmb		IAmb	22 25 30.9	
	comp=Z,8.6nm,1.5s							
NRIK	**Noril'sk**	**37.02**	**359**	P		**P**	**22 24 54.7**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=172,slow=5.9,SNR=3.3							
	comp=Z,1.6nm,0.5s							
KIV	**Kislovodsk**	**38.17**	**301**	P		P	22 25 01.9	-2.2
KIV				IAmb		IAmb	22 25 07.0	
	comp=Z,12nm,1.4s							
MNAI	**Manna**	**38.69**	**158**	P		**P**	**22 25 07.6**	**-0.9**
INU	**Inuyama**	**39.20**	**72**	P		P	22 25 10.1	-2.5
INU				IAmb		IAmb	22 25 27.0	
	comp=Z,16nm,1.3s							
MJAR	**Matsushiro Arr**	**39.96**	**70**	LR		LR	22 42 47.5	
	comp=Z,55nm,18.9s,baz=270,slow=38							
JHJ	**Hachijo jima 2**	**41.88**	**75**	LR		LR	22 43 21.4	
	comp=Z,46nm,19.1s,baz=106,slow=37							
TIXI	**Tiksi**	**44.51**	**17**	P		**P**	**22 25 54.4**	**-1.2**
TIXI				IAmb		IAmb	22 25 56.0	
	comp=Z,3.1nm,0.7s							
GHAJ	**Ghor Haditha**	**45.49**	**284**	P		**P**	**22 26 02.6**	**-1.3**
GHAJ				IAmb		IAmb	22 26 42.5	
	comp=Z,10nm,1.2s							
JCJ	**Chichijima**	**45.59**	**82**	P		P	22 26 02.9	-1.9
EIL	**Elat**	**46.48**	**282**	LR		LR	22 48 28.9	
	comp=Z,39nm,18.5s,baz=65,slow=40							
ELL	**Elmali**	**48.66**	**293**	P		**P**	**22 26 27.7**	**-1.0**
FINES	**FINESS Array B**	**49.55**	**326**	P		**P**	**22 26 35.9**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=91,slow=7.6,SNR=7.1							
	comp=Z,1.4nm,0.6s							
MLR	**Muntele Rosu**	**49.98**	**305**	P		**P**	**22 26 37.6**	**-1.2**
MLR				IAmb		IAmb	22 26 43.3	
	comp=Z,3.2nm,0.9s							
ARG	**Arkhangelos**	**50.18**	**292**	P		**P**	**22 26 39.8**	**-0.5**
BURAR	**Bucovina Array**	**50.20**	**307**	P		P	22 26 38.3	-2.1
BURAR				IAmb		IAmb	22 26 42.2	
	comp=Z,1.8nm,1.4s							
SUW	**Suwalki**	**50.94**	**316**	P		**P**	**22 26 45.4**	**-0.3**
SUW				IAmb		IAmb	22 26 51.2	
	comp=Z,10.0nm,0.9s							
PSZ	**Piszkesteto**	**53.71**	**308**	P		P	22 27 04.5	-2.0
PSZ				IAmb		IAmb	22 27 07.6	
	comp=Z,3.8nm,1.0s							
HFS	**Hagfors**	**55.62**	**324**	P		**P**	**22 27 21.0**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=83,slow=8.6,SNR=1.1							
	comp=Z,0.9nm,0.5s							
NOA	**NORSAR Array B**	**56.73**	**325**	P		**P**	**22 27 28.3**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=91,slow=8.2,SNR=2.9							
	comp=Z,1.3nm,0.9s							
NBO00	**NORSAR Array S**	**56.94**	**325**	P		**P**	**22 27 29.2**	**-0.3**
GEC2	**GERESS Array S**	**57.56**	**311**	P		P	22 27 32.4	-1.8
GEC2				IAmb		IAmb	22 28 06.2	
	comp=Z,3.4nm,1.4s							
GERES	**GERESS Array B**	**57.56**	**311**	P		**P**	**22 27 33.5**	**-0.7**
GERES	**GERESS Array B**	**57.56**	**311**	P		**P**	**22 27 35.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=76,slow=7.3,SNR=5.0							
	comp=Z,0.9nm,0.7s							
ROCAM	**Rodrigues Isla**	**57.61**	**210**	P		**P**	**22 27 34.4**	**-0.1**
NRCA	**Norcia**	**59.56**	**304**	P		**P**	**22 27 47.1**	**-1.1**
NRCA				IAmb		IAmb	22 27 58.1	
	comp=Z,7.4nm,1.4s							
WRA	**Warramunga Arr**	**67.38**	**134**	P		**P**	**22 28 38.7**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=327,slow=6.6,SNR=6.6							
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**69.98**	**137**	P		**P**	**22 28 54.9**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=324,slow=6.3,SNR=11							
	comp=Z,0.9nm,0.7s							
ESDC	**Sonseca Array**	**72.64**	**306**	P		**P**	**22 29 13.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=69,slow=6.0,SNR=2.7							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**73.66**	**22**	P		**P**	**22 29 17.2**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=290,slow=5.3,SNR=12							
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**81.33**	**280**	P		**P**	**22 30 01.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=50,slow=6.8,SNR=4.2							
YKA	**Yellowknife Ar**	**83.46**	**11**	P		**P**	**22 30 11.3**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=341,slow=4.6,SNR=12							
	comp=Z,0.6nm,0.8s							

UCR ***09*** *22:18:04.9±0.9,8.31N×82.86W,h23km±6km,MW3.5*
UPA ***09*** *22:18:05.0±1.4,8.35N×82.79W,h16km±2km,MD3.7, ML3.9,MW3.7*
CATAC ***09*** *22:18:07.4±0.5,8.47N×82.94W,h4km±4km,ML3.1*

ISC 09 22:18:04.0±0.9,8.32N±0.04°×82.74W±0.03,h26km±8km, n38,σ0.98/56,3C-9D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTPM	**Petroterminale**	**0.18**	**230**	*iP*		**Pb**	**22 18 09.2**	**-0.4**
PTPM				AMP			22 18 10.0	
	comp=Z,30μm,0.1s							
PTPM				*i* S		**Sb**	**22 18 13.5**	**+0.1**
CCOL	**Caracol de Cor**	**0.25**	**290**	*i* P		**Pb**	**22 18 09.8**	**-0.6**
CCOL				IAML			22 18 16.5	
	comp=Z,14μm,1.0s							
LIMO3	**Limones**	**0.25**	**210**	*iP*		**Pb**	**22 18 10.4**	**-0.1**
LIMO3				*i* S		**Sb**	**22 18 14.3**	**-0.6**
CDITO	**Canoas**	**0.28**	**332**	*i* P		**Pb**	**22 18 10.9**	**0.0**
CDITO				IAML			22 18 15.8	
	comp=Z,2μm,1.0s							
DVD	**David**	**0.31**	**69**	*iP*		**Pn**	**22 18 12.8**	**0.0**
DVD				*i* S		**Sn**	**22 18 17.6**	**-0.9**
PEDE3	**Pedregal, Chir**	**0.32**	**79**	*iP*		**Pn**	**22 18 13.1**	**+0.1**
PEDE3				*i* S		**Sn**	**22 18 17.9**	**-0.8**
LOCO3	**Loma Colorada,**	**0.33**	**75**	*iP*		**Pn**	**22 18 13.4**	**+0.3**
LOCO3				*i* S		**Sn**	**22 18 19.4**	**+0.3**
PTAR3	**Potrerillos Ar**	**0.44**	**33**	*eP*		**Pn**	**22 18 14.8**	**0.0**
PTAR3				*i* S		**Sn**	**22 18 22.1**	**+0.2**
BCO2	**Palmira**	**0.44**	**28**	*iP*		**Pn**	**22 18 14.8**	**-0.1**
BCO2				AMP			22 18 16.3	
	comp=Z,27μm,0.1s							
BCO2				*i* S		**Sn**	**22 18 22.4**	**+0.2**
BRU2	**Volcan**	**0.47**	**6**	*iP*		**Pn**	**22 18 14.8**	**-0.5**
BRU2				AMP			22 18 15.0	
	comp=Z,2μm,0.2s							
BRU2				*i* S		**Sn**	**22 18 22.9**	**+0.2**
BRU2	**Volcan**	**0.47**	**6**	*eP*		**Pn**	**22 18 14.8**	**-0.5**
BRU2				*eS*		**Sn**	**22 18 23.0**	**+0.2**
BRU2	**Volcan**	**0.47**	**6**	*i* P		**Pn**	**22 18 14.8**	**-0.5**
BRU2				IAML			22 18 30.7	
	comp=Z,860nm,1.0s							
MLIR3	**Monte Lirio, C**	**0.47**	**350**	*eP*		**Pn**	**22 18 14.8**	**-0.4**
BC3P	**Paso Ancho**	**0.51**	**14**	*iP*		**Pn**	**22 18 15.3**	**-0.4**
BC3P				*i* S		**Sn**	**22 18 23.3**	**-0.4**
EDAD	**Golfito**	**0.53**	**308**	*eP*		**Pb**	**22 18 13.3**	**-1.6**
LNBQ3	**Los Naranjos,**	**0.55**	**32**	*eP*		**Pn**	**22 18 16.0**	**-0.3**
LNBQ3				*i* S		**Sn**	**22 18 24.4**	**-0.3**
PIRO	**Carate, Puerto**	**0.60**	**278**	*eP*		**Pb**	**22 18 14.6**	**-1.4**
POTG	**Potrero Grande**	**0.82**	**333**	*eP*		**Pn**	**22 18 19.5**	**-0.4**
CHGR2	**Aguacate**	**0.85**	**44**	*iP*		**Pb**	**22 18 20.7**	**+0.6**
CHGR2				*i* S		**Sn**	**22 18 32.5**	**+0.6**
PLAN	**Los Planes de**	**0.99**	**290**	*i* P		**Pn**	**22 18 21.4**	**-0.9**
PLAN				IAML			22 18 37.1	
	comp=Z,1μm,1.0s							
NANC3	**Nancito, Chiri**	**1.00**	**95**	*eP*		**Pb**	**22 18 23.5**	**+0.8**
DRK0	**Durika**	**1.06**	**332**	*eP*		**Pn**	**22 18 23.1**	**-0.3**
SRBA	**San Rafael, Bu**	**1.09**	**326**	*i* P		**Pn**	**22 18 23.3**	**-0.4**
SRBA				IAML			22 18 39.3	
	comp=Z,310nm,1.0s							
CNI2	**El Empalme, Bo**	**1.12**	**14**	*eP*		**Pb**	**22 18 24.9**	**+0.1**
CNI2				*i* S		**Sn**	**22 18 38.2**	**-0.5**
BUS1	**Rivas**	**1.58**	**321**	*eP*		**Pn**	**22 18 31.0**	**+0.3**
CDM	**Cerro de Muert**	**1.59**	**320**	*i* P		**Pb**	**22 18 32.6**	**-0.4**
CDM				*i* S		**Sn**	**22 18 50.8**	**0.0**
CDM				IAML			22 18 59.7	
	comp=Z,190nm,1.0s							
GMAL	**Guarumal, Vera**	**1.59**	**110**	*eP*		**Pn**	**22 18 31.3**	**+0.8**
GMAL				*i* S		**Sb**	**22 18 52.1**	**-0.4**
SAFE3	**Santa Fe, Vera**	**1.65**	**83**	*eP*		**P

OCM	**Ochomogo**	**1.97**	**322**	*i* P		**Pb**	**22 18 38.2**	**-1.2**
OCM				*i* S		**Sn**	**22 19 01.5**	**+1.5**
OCM				IAML			22 19 07.0	
	comp=Z,180nm,1.0s							
HAYA	**Volcan Irazu**	**1.98**	**327**	*i* P		**Pb**	**22 18 38.7**	**-0.9**
HAYA				IAML			22 19 07.9	
	comp=Z,330nm,1.0s							
CACAO	**El Cacao, Vera**	**2.10**	**117**	*e*P		**Pb**	**22 18 40.4**	**-1.0**
JACO	**JACO, Garabito**	**2.32**	**305**	*i* P		**Pn**	**22 18 42.5**	**+2.0**
JACO				*i* S		**Sn**	**22 19 09.4**	**+1.2**
JACO				IAML			22 19 21.7	
	comp=Z,74nm,1.0s							
CHIT3	**Chitre**	**2.33**	**99**	*e*P		**Pb**	**22 18 44.1**	**-1.2**
AZU	**Azuero**	**2.50**	**102**‖	*e*P		**Pn**	**22 18 45.4**	**+2.4**
JTS	**Las Juntas de**	**2.93**	**312**	*e*P		**Pn**	**22 18 50.6**	**+1.6**
ORTG	**Ortega, Santa**	**3.36**	**307**	*i* P		**Pn**	**22 18 57.6**	**+2.6**
ORTG				IAML			22 21 05.3	
	comp=Z,45nm,1.0s							

*IDC **09** 22:43:33.8±1.1, 16°.71S×178°.29W, h0km, mb4.0/6, mbtmp4.0/6, ML6.4/1, Error ellipse: s-maj=50.6km s-min=23.1km az=146.0*

ISC 09 22:43:39.0±0.9, 16°.8S±0°.2×178°.3W±0°.2, h35km, n7, σ0.37/7, mb3.8/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**12.38**	**179**	Pn		**Pn**	**22 46 32.6**	**-0.1**
	228nm,0.3s,baz=221,slow=24,SNR=5.2							
STKA	**Stephens Creek**	**39.28**	**240**	P		**P**	**22 51 05.0**	**+0.4**
	1.6nm,0.4s,baz=109,slow=13,SNR=5.6							
	1.6nm,0.4s							
WRA	**Warramunga Arr**	**44.98**	**258**	P		**P**	**22 51 51.1**	**-0.1**
	0.9nm,0.5s,baz=91,slow=6.9,SNR=19							
	0.9nm,0.5s							
ASAR	**Alice Springs**	**45.23**	**253**	P		**P**	**22 51 53.0**	**-0.3**
	9.8nm,0.5s,baz=89,slow=8.3,SNR=166							
	9.8nm,0.5s							
ILAR	**Eielson Array**	**84.80**	**13**	P		**P**	**22 56 09.2**	**-0.2**
	0.1nm,0.3s,baz=232,slow=3.9,SNR=1.3							
	0.1nm,0.3s							
TXAR	**Lajitas Array**	**85.30**	**58**	P		**P**	**22 56 13.2**	**+0.4**
	0.3nm,0.7s,baz=216,slow=4.5,SNR=4.1							
	0.3nm,0.7s							
PDAR	**Pinedale Array**	**86.47**	**43**	P		**P**	**22 56 18.2**	**-0.3**
	0.3nm,0.6s,baz=210,slow=5.0,SNR=3.6							
	0.3nm,0.6s							

*MOS **09** 22:53:10.6±1.1, 15°.36S×173°.12W, h10km, mb5.2/45, Error ellipse: s-maj=16.4km s-min=7.8km az=56.0*

*IDC **09** 22:53:10.6±0.5, 15°.39S×173°.22W, h0km, mb4.7/18, mbtmp4.6/18, MS3.9/48, Error ellipse: s-maj=21.6km s-min=13.8km az=122.0*

*NEIC **09** 22:53:12.3±1.8, 15°.37S±0°.06×173°.0W±0°.1, h10km±1km, mb5.1/430, Error ellipse: s-maj=17.1km s-min=9.0km az=108.0*

*GCMT **09** 22:53:21.3±0.3, 15°.41S±0°.02×172°.77W±0°.02, h38km±1km, MW5.0/86, Moment Tensor Solution. s37,c44; s86,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.19; $M_{\theta\theta}$2.64±.12; $M_{\phi\phi}$-0.45±.12; $M_{r\theta}$-1.93±.15; $M_{r\phi}$-0.46±.10; $M_{\theta\phi}$2.00±.13; Best double couple: M_o3.72700×10^{16} NP1:ϕs125.00000°, δ71.00000°, λ-68.00000°. NP2: ϕs254.00000°, δ29.00000°, λ-137.00000°. Principal axes: T 3.6500, Plg23.0000°, Azm198.0000°; N 0.1570, Plg21.0000°, Azm297.0000°; P -3.8030, Plg58.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 22:53:11.4±0.3, 15°.42S±0°.06×173°.10W±0°.07, h10km, n1031, σ1.37/934, mb5.1/244, MS4.1/49, 52C-21D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**1.97**	**41**	Pn		**Pn**	**22 53 44.4**	**-0.5**
AFI				Sn		**Sn**	**22 54 04.6**	**-5.3**
AFI	**Afiamalu**	**1.97**	**41**	P		**Pn**	**22 53 44.4**	**-0.5**
AFI							22 54 04.6	
NIUE	**Niue**	**4.74**	**141**	Pn		**Pn**	**22 54 22.2**	**-0.7**
NIUE				Sn		Sn	22 55 09.8	-8.0
RAR	**Rarotonga**	**13.90**	**116**	Pn		**Pn**	**22 56 27.2**	**-1.4**
RAR	**Rarotonga**	**13.90**	**116**	P		**Pn**	**22 56 27.2**	**-1.4**
RAR	**Rarotonga**	**13.90**	**116**	Pn		**Pn**	**22 56 26.0**	**-2.5**
	3.7nm,0.3s,baz=253,slow=9.1,SNR=4.7							
RAR				Sn		Sn	22 58 47.8	-15
	2.2nm,0.3s,baz=133,slow=16,SNR=1.9							
RAR				LR		LR	23 00 49.0	
	comp=Z,167nm,19.5s,baz=326,slow=33							
GLKZ	**Green Lake**	**14.48**	**197**	P		Pn	22 56 32.7	-3.7
GLKZ				S		Sn	22 59 06.1	-11
PINNC	**Pines Island,**	**19.72**	**246**	P		**P**	**22 57 41.7**	**+0.4**
PINNC				IAmb		IAmb	22 57 53.2	
	comp=Z,79nm,0.8s							
OUENC	**Ouen Island, N**	**20.20**	**247**	P		**P**	**22 57 48.9**	**+2.5**
OUENC				IAmb		IAmb	22 57 53.8	
	comp=Z,120nm,0.8s							
DZM	**Mont Dzumac**	**20.46**	**248**	P		**P**	**22 57 52.1**	**+2.8**
DZM	**Mont Dzumac**	**20.46**	**248**	*e*P		Pn	22 57 54.1	+2.6
	comp=Z,193nm,1.2s							
DZM				*e*LR		LR	23 02 56.5	
	comp=Z,2μm,27.5s							
DZM	**Mont Dzumac**	**20.46**	**248**	P		**P**	**22 57 50.6**	**+1.2**
	comp=Z,9.3nm,0.8s,baz=118,slow=16,SNR=3.7							
DZM				LR		LR	23 03 37.7	
	comp=Z,85nm,20.9s,baz=82,slow=31							
	comp=Z,9.3nm,0.8s							
ONTNC	**Ouen Toro**	**20.51**	**247**	P		**P**	**22 57 46.9**	**-3.0**
PPT	**Papeete**	**22.66**	**99**	LR		LR	23 04 30.6	
	comp=Z,116nm,19.9s,baz=186,slow=30							
PPT2	**Papeete2**	**22.66**	**99**	*e*P		P	22 58 00.4	-13
	comp=Z,109nm,29.5s							
PPT2				*e*LR		LR	23 03 19.4	
	comp=Z,476nm,28.0s							
PPT2				*e*LR		LR	23 03 26.2	
	comp=Z,537nm,26.0s							
OUZ	**Omahuta**	**23.05**	**209**	P		**P**	**22 58 19.9**	**+3.0**
GRZ	**Great Barrier**	**23.12**	**204**	P		**P**	**22 58 20.4**	**+2.8**
WCZ	**Waipu Caves**	**23.31**	**206**	P		**P**	**22 58 21.0**	**+1.4**
MXZ	**Matakaoa Point**	**23.33**	**197**	P		**P**	**22 58 22.0**	**+2.3**
KUZ	**Kuaotunu**	**23.45**	**203**	P		**P**	**22 58 23.4**	**+2.4**
WMGZ	**Waiomatatini S**	**23.54**	**197**	P		**P**	**22 58 23.2**	**+1.4**
TBI	**Tubuai**	**23.63**	**113**	*e*LR		LR	23 03 57.4	
	comp=Z,2μm,27.0s							
TBI				*e*LR		LR	23 03 59.9	
	comp=Z,1μm,26.8s							
HAZ	**Te Kaha**	**23.67**	**198**	P		**P**	**22 58 23.7**	**+0.6**
PKGZ	**Pakihiroa**	**23.70**	**198**	P		**P**	**22 58 25.1**	**+1.6**
WIAZ	**Waiheke Island**	**23.72**	**204**	P		**P**	**22 58 24.5**	**+0.9**
PUZ	**Puketiti**	**23.82**	**197**	P		**P**	**22 58 24.0**	**-0.6**
RUGZ	**Raukumara Rang**	**23.89**	**198**	P		**P**	**22 58 26.3**	**+0.9**
ETAZ	**East Tamaki Re**	**23.94**	**204**	P		**P**	**22 58 29.5**	**+3.8**
MKAZ	**Moumakai**	**23.98**	**204**	P		**P**	**22 58 27.0**	**+0.8**
TWGZ	**Tauwhareparae**	**24.00**	**197**	P		**P**	**22 58 27.9**	**+1.6**
MWZ	**Matawai**	**24.28**	**198**	P		**P**	**22 58 30.8**	**+1.9**
TKGZ	**Te Karaka**	**24.28**	**197**	P		**P**	**22 58 31.5**	**+2.6**
URZ	**Urewera**	**24.34**	**199**	P		**P**	**22 58 29.7**	**+0.3**
	comp=Z,42nm,0.7s,baz=96,slow=1.7,SNR=33							
	comp=Z,42nm,0.7s							
URZ	**Urewera**	**24.34**	**199**	P		**P**	**22 58 29.8**	**+0.5**
TOZ	**Tahuroa Road**	**24.41**	**202**			**P**	**22 58 30.8**	**+0.8**
TOZ				IAmb		IAmb	22 58 32.8	
	comp=Z,110nm,1.4s							
TOZ	**Tahuroa Road**	**24.41**	**202**	P		**P**	**22 58 31.1**	**+1.1**
RAGZ	**Rawiri**	**24.46**	**198**	P		**P**	**22 58 30.0**	**-0.6**
MUGZ	**Murupara**	**24.64**	**199**	P		**P**	**22 58 34.0**	**+1.8**
RTZ	**Ruatahuna**	**24.70**	**199**	P		**P**	**22 58 33.3**	**+0.5**
RTZ				IAmb		IAmb	22 58 37.1	
	comp=Z,39nm,0.6s							
HIZ	**Hauiti**	**25.33**	**202**	P		**P**	**22 58 38.4**	**0.0**
BKZ	**Black Stump Fm**	**25.36**	**199**			**P**	**22 58 38.8**	**0.0**
BFZ	**Birch Farm**	**26.82**	**198**	P		**P**	**22 58 50.9**	**-1.0**
BFZ				IAmb		IAmb	22 58 55.2	
	comp=Z,46nm,0.9s							
HNR	**Honiara**	**26.97**	**280**	LR		LR	23 08 09.1	
	comp=Z,4μm,21.5s,baz=142,slow=34							
MRZ	**Mangatainoka R**	**27.01**	**199**			**P**	**22 58 52.7**	**-0.8**
BHW	**Baring Head**	**27.91**	**200**	P		**P**	**22 59 00.7**	**-1.0**
BHW				IAmb		IAmb	22 59 06.9	
	comp=Z,67nm,1.3s							
TCW	**Tory Channel**	**27.93**	**201**			**P**	**22 59 01.9**	**+0.1**
PLWZ	**Palliser**	**27.94**	**199**	P		**P**	**22 59 01.9**	**0.0**
QRZ	**Quartz Range**	**28.23**	**203**	P		**P**	**22 59 04.0**	**-0.4**
TUWZ	**Tuamarina**	**28.24**	**201**	P		**P**	**22 59 03.9**	**-0.7**
TKNZ	**Takaka Hill**	**28.24**	**203**	P		**P**	**22 59 04.6**	**-0.1**
BSWZ	**Blackbirch Sta**	**28.52**	**201**	P		**P**	**22 59 08.4**	**+1.3**
MRNZ	**Matariki Terra**	**28.64**	**203**	P		**P**	**22 59 09.1**	**+0.9**
THZ	**Tophouse**	**28.90**	**202**	P		**P**	**22 59 10.8**	**+0.3**
THZ				IAmb		IAmb	22 59 16.5	
	comp=Z,22nm,0.7s							
KHZ	**Kahutara**	**29.26**	**200**			**P**	**22 59 13.2**	**-0.3**
KHZ				IAmb		IAmb	22 59 18.8	
	comp=Z,23nm,0.7s							
DSZ	**Denniston Nort**	**29.30**	**203**			**P**	**22 59 13.9**	**-0.1**
DSZ				IAmb		IAmb	22 59 17.4	
	comp=Z,39nm,0.8s							
GVZ	**Greta Valley S**	**29.92**	**201**			**P**	**22 59 18.8**	**-0.7**
GVZ				IAmb		IAmb	22 59 26.7	
	comp=Z,36nm,0.7s							
LTZ	**Lake Taylor**	**30.02**	**202**			**P**	**22 59 19.6**	**-0.8**
LTZ				IAmb		IAmb	22 59 27.4	
	comp=Z,29nm,0.9s							
INZ	**Inchbonnie**	**30.27**	**203**			**P**	**22 59 22.5**	**-0.1**
OXZ	**Oxford**	**30.58**	**202**	P		**P**	**22 59 24.4**	**-1.0**
OXZ				IAmb		IAmb	22 59 33.9	
	comp=Z,33nm,0.7s							
RPZ	**Rata Peaks**	**31.27**	**202**	P		**P**	**22 59 31.9**	**+0.4**
RPZ	**Rata Peaks**	**31.27**	**202**	LR		LR	23 12 30.9	
	comp=Z,246nm,18.1s,baz=36,slow=37							
FOZ	**Fox Glacier**	**31.59**	**204**	P		**P**	**22 59 32.9**	**-1.2**
LBZ	**Lake Benmore**	**32.17**	**203**	P		**P**	**22 59 38.2**	**-1.1**
LBZ				IAmb		IAmb	22 59 44.3	
	comp=Z,26nm,1.3s							
ODZ	**Otahua Downs**	**32.57**	**202**	P		**P**	**22 59 43.9**	**+1.1**
TAOE	**Nuku Hiva Isla**	**32.84**	**82**	*e*LR		LR	23 08 03.7	
	comp=Z,826nm,30.0s							
WKZ	**Wanaka**	**32.99**	**204**	P		**P**	**22 59 44.8**	**-1.7**
WKZ				IAmb		IAmb	22 59 51.5	
	comp=Z,16nm,0.8s							
MLZ	**Mavora Lakes**	**33.79**	**204**			**P**	**22 59 52.6**	**-0.9**
MLZ				IAmb		IAmb	22 59 53.8	
	comp=Z,17nm,0.8s							
DCZ	**Deep Cove**	**34.25**	**205**	P		**P**	**22 59 57.1**	**-0.3**
DCZ				IAmb		IAmb	23 00 00.3	
	comp=Z,26nm,0.8s							
WHZ	**Wether Hill Ro**	**34.29**	**204**			**P**	**22 59 57.1**	**-0.7**
CTA	**Charters Tower**	**38.92**	**257**	LR		LR	23 14 02.3	
	comp=Z,221nm,21.1s,baz=82,slow=32							
H11S2	**WAKE ISLAND Hy**	**39.13**	**329**	T		T	23 41 09.1	
	baz=146,slow=76,SNR=77							
H11S3	**WAKE ISLAND Hy**	**39.14**	**329**	T		T	23 41 10.1	
	baz=146,slow=76,SNR=129							
H11S1	**WAKE ISLAND Hy**	**39.15**	**329**	T		T	23 41 04.9	
	baz=146,slow=76,SNR=72							
PMG	**Port Moresby**	**39.22**	**274**	*i* P		P	23 00 36.8	-3.4
PMG					pmax	pmax		
	comp=Z,25nm,1.1s							
PMG	**Port Moresby**	**39.22**	**274**	LR		LR	23 15 05.7	
	comp=Z,64nm,21.0s,baz=50,slow=34							
H11N3	**WAKE ISLAND Hy**	**40.07**	**330**	T		T	23 43 31.4	
	baz=150,slow=76,SNR=31							
H11N1	**WAKE ISLAND Hy**	**40.08**	**330**	T		T	23 43 31.7	
	baz=150,slow=76,SNR=21							
H11N2	**WAKE ISLAND Hy**	**40.09**	**330**	T		T	23 43 32.8	
	baz=150,slow=76,SNR=34							
COEN	**Coen**	**42.27**	**266**	P		**P**	**23 01 02.9**	**-2.5**
TOO	**Toolangi**	**42.68**	**231**	P		**P**	**23 01 07.4**	**-1.1**
TOO	**Toolangi**	**42.68**	**231**	P		**P**	**23 01 07.4**	**-1.1**
TOO					pmax	pmax		
	comp=Z,7.0nm,0.9s							
STKA	**Stephens Creek**	**44.28**	**240**	P		**P**	**23 01 20.2**	**-1.2**
STKA	**Stephens Creek**	**44.28**	**240**	*i* P		**P**	**23 01 20.6**	**-0.9**
STKA	**Stephens Creek**	**44.28**	**240**	P		**P**	**23 01 21.1**	**-0.4**
	comp=Z,11nm,0.9s,baz=85,slow=10,SNR=23							
STKA					LR	LR	23 17 38.0	
	comp=Z,152nm,21.5s,baz=44,slow=33							
	comp=Z,11nm,0.9s							
BBOO	**Buckleboo**	**49.05**	**240**	P		**P**	**23 01 57.8**	**-1.1**
BBOO					IAmb	IAmb	23 01 59.1	
	comp=Z,16nm,0.8s							
WB0	**Warramunga Arr**	**50.08**	**257**	P		**P**	**23 02 05.1**	**-1.8**
WB2	**Warramunga Arr**	**50.11**	**257**	P		**P**	**23 02 04.9**	**-2.2**
WRA	**Warramunga Arr**	**50.12**	**257**	P		**P**	**23 02 05.0**	**-2.2**
WRA	**Warramunga Arr**	**50.12**	**257**	P		**P**	**23 02 05.0**	**-2.2**
WRA	**Warramunga Arr**	**50.12**	**257**	P		**P**	**23 02 06.1**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=96,slow=6.6,SNR=31							
	comp=Z,2.3nm,0.7s							
AS31	**Alice Springs**	**50.38**	**252**	P		**P**	**23 02 07.8**	**-1.4**
ASAR	**Alice Springs**	**50.38**	**252**	P		**P**	**23 02 08.5**	**-0.7**
ASAR	**Alice Springs**	**50.38**	**252**	P		**P**	**23 02 08.5**	**-0.7**
ASAR	**Alice Springs**	**50.38**	**252**	P		**P**	**23 02 08.2**	**-1.0**
	comp=Z,11nm,0.7s,baz=86,slow=8.1,SNR=84							
ASAR					LR	LR	23 21 45.7	
	comp=Z,516nm,21.7s,baz=98,slow=34							
	comp=Z,11nm,0.7s							
FORT	**Forrest**	**55.66**	**243**	P		**P**	**23 02 46.0**	**-2.0**
FORT					IAmb	IAmb	23 02 47.6	
	comp=Z,41nm,1.2s							
VNDA	**Vanda**	**63.39**	**186**	P		**P**	**23 03 42.5**	**+2.0**
	comp=Z,4.5nm,0.9s,baz=0.3,slow=7.7,SNR=9.6							
VNDA					LR	LR	23 26 46.5	
	comp=Z,35nm,21.7s,baz=319,slow=32							
	comp=Z,4.5nm,0.9s							
PSA00	**Pilbara Seismi**	**63.48**	**253**	P		**P**	**23 03 40.3**	**-1.8**
PSA00					IAmb	IAmb	23 04 00.1	
	comp=Z,9.4nm,0.7s							
PSA00	**Pilbara Seismi**	**63.48**	**253**	P		**P**	**23 03 39.8**	**-2.3**
PSA00					IAmb	IAmb	23 03 58.7	
	comp=Z,3.6nm,0.8s							
NWAO	**Narrogin (SRO)**	**64.86**	**241**	LR		LR	23 31 16.9	
	comp=Z,86nm,18.4s,baz=90,slow=35							
JHJ	**Hachijo jima 2**	**65.98**	**318**	LR		LR	23 29 21.7	
	comp=Z,18nm,20.1s,baz=246,slow=33							
SHEM	**Shemya Is, Ala**	**68.76**	**352**	LR		LR	23 28 17.7	
	comp=Z,192nm,21.2s,baz=134,slow=31							
MJAR	**Matsushiro Arr**	**69.14**	**320**	LR		LR	23 28 59.3	
	comp=Z,36nm,21.1s,baz=132,slow=31							
AKUT	**Akutan**	**69.56**	**5**	P		P	23 04 12.9	-7.3
ERM	**Erimo**	**69.94**	**327**	P		P	23 04 17.6	-5.2
ERM					IAmb	IAmb	23 04 19.6	
	comp=Z,28nm,1.1s							
ERM	**Erimo**	**69.94**	**327**	P		P	23 04 17.6	-5.2
ERM					pmax	pmax		
	comp=Z,28nm,1.1s							
CHNA	**Chernabura Isl**	**70.91**	**8**	P		**P**	**23 04 30.1**	**+1.6**
	baz=194							
SCI2	**San Clemente I**	**70.92**	**46**	P		**P**	**23 04 29.9**	**+0.9**
	baz=236							
PKM	**Mcpherson Peak**	**71.12**	**44**	P		**P**	**23 04 31.7**	**+1.2**
	baz=235							
CIS	**Catalina Islan**	**71.24**	**46**	P		**P**	**23 04 31.5**	**+0.5**
	baz=236							
PMPB	**Monarch Peak**	**71.25**	**43**	P		**P**	**23 04 31.9**	**+0.8**
PMPB					IAmb	IAmb	23 04 34.2	
	comp=Z,24nm,1.1s							
BBGB	**Big Mountain B**	**71.31**	**42**	P		**P**	**23 04 31.4**	**-0.1**
ASAJ	**Asahikawa**	**71.71**	**328**	P		**P**	**23 04 34.5**	**+0.9**
	comp=Z,6.8nm,0.8s,baz=143,slow=25,SNR=2.0							
ASAJ					LR	LR	23 33 53.8	
	comp=Z,22nm,18.1s,baz=140,slow=34							
	comp=Z,6.8nm,0.8s							
KMRM	**Mail Ridge**	**71.90**	**38**	P		P	23 04 26.9	-8.1
JNU	**Nakatsue**	**72.02**	**313**	LR		LR	23 29 20.0	
	comp=Z,41nm,21.0s,baz=170,slow=30							
ELS	**Elsinore Mount**	**72.06**	**46**	P		P	23 04 27.1	-9.0
ELS					IAmb	IAmb	23 04 38.5	
	comp=Z,16nm,1.1s							
BAR	**Barrett**	**72.08**	**48**	P		P	23 04 27.4	-8.6
VES	**Vestal, Richgr**	**72.16**	**44**	P		**P**	**23 04 37.9**	**+1.4**
	baz=235,SNR=6.1							
MURC	**Murrieta**	**72.20**	**47**	P		**P**	**23 04 38.0**	**+1.2**
	baz=237							
BFSC	**Mount Baldy Ra**	**72.23**	**46**	P		**P**	**23 04 38.2**	**+1.0**
	baz=236							
ESJX	**Sierra Juarez**	**72.24**	**49**	P		P	23 04 27.4	-10
EDW2	**Edwards Air Fo**	**72.35**	**45**	P		**P**	**23 04 39.1**	**+1.4**
	baz=236,SNR=12							
MONP2	**Monument Peak**	**72.37**	**48**	P		**P**	**23 04 39.3**	**+1.2**
	baz=238,SNR=11							
RMX	**La Rumorosa**	**72.46**	**48**	P		P	23 04 29.4	-9.2
IKP	**In-Ko-Pah, Jac**	**72.46**	**48**	P		**P**	**23 04 40.1**	**+1.6**
	baz=238,SNR=5.6							
ISA	**Isabella, Lake**	**72.47**	**44**	P		P	23 04 29.8	-8.6
ISA					IAmb	IAmb	23 04 41.2	
	comp=Z,24nm,1.1s							
ISA	**Isabella, Lake**	**72.47**	**44**	P		**P**	**23 04 40.1**	**+1.7**
	baz=235,SNR=6.0							
ISA	**Isabella, Lake**	**72.47**	**44**	P		P	23 04 29.8	-8.6
ISA					pmax	pmax		
	comp=Z,24nm,1.2s							
CCAC	**Calif City Air**	**72.49**	**45**	P		P	23 04 30.4	-8.2
CCAC					IAmb	IAmb	23 04 41.2	
	comp=Z,36nm,1.5s							
CHGN	**Chignik**	**72.50**	**9**	P		P	23 04 29.5	-8.5
SFX	**San Felipe**	**72.54**	**50**	P		P	23 04 30.3	-8.6
CMB	**Columbia Colle**	**72.59**	**41**	P		P	23 04 30.0	-9.1
CMB	**Columbia Colle**	**72.59**	**41**	P		P	23 04 30.0	-9.1
CMB					pmax	pmax		
	comp=Z,8.0nm,1.0s							
YUH	**Yuha Desert**	**72.59**	**48**	P		P	23 04 30.1	-9.0
KRMB	**Red Mountain**	**72.62**	**37**	P		P	23 04 30.2	-9.1
KRMB					IAmb	IAmb	23 04 42.5	
	comp=Z,30nm,1.1s							
PFO	**Pinyon Flats O**	**72.72**	**47**	P		P	23 04 30.8	-9.3
PFO	**Pinyon Flats O**	**72.72**	**47**	P		**P**	**23 04 41.2**	**+1.1**
	baz=237,SNR=6.0							
PFO	**Pinyon Flats O**	**72.72**	**47**	*d* P		**P**	**23 04 40.6**	**+0.5**
PFO					pmax	pmax		
	comp=Z,21nm,1.1s							
PFO	**Pinyon Flats O**	**72.72**	**47**	LR		LR	23 28 27.7	
	comp=Z,205nm,21.2s,baz=238,slow=29							
TPFO	**Pinon Flats**	**72.72**	**47**	P		**P**	**23 04 41.4**	**+1.3**
	baz=237,SNR=5.8							
PETK	**Petropavlovsk-**	**72.74**	**342**	P		P	23 04 33.5	-6.0
PETK	**Petropavlovsk-**	**72.74**	**342**	P		**P**	**23 04 40.6**	**+1.1**
	comp=Z,8.8nm,0.8s,baz=130,slow=8.0,SNR=10							
PETK					LR	LR	23 28 41.0	
	comp=Z,40nm,21.9s,baz=120,slow=29							
	comp=Z,8.8nm,0.8s							
AFDM	**Forest Hills D**	**72.77**	**40**	P		P	23 04 30.9	-9.2
PMD	**Palm Desert**	**72.80**	**47**	P		P	23 04 31.2	-9.1
PMD					IAmb	IAmb	23 04 42.7	
	comp=Z,16nm,1.2s							
LPIG	**La Paz**	**72.80**	**58**	LR		LR	23 28 16.6	
	comp=Z,147nm,20.2s,baz=216,slow=29							
ORV	**Oroville**	**72.81**	**39**	P		P	23 04 31.9	-8.4
ORV	**Oroville**	**72.81**	**39**	P		P	23 04 31.9	-8.4
ORV					pmax	pmax		
	comp=Z,8.0nm,1.2s							
SWSC	**Sam W. Stewart**	**72.84**	**48**	P		**P**	**23 04 41.5**	**+0.9**
	baz=238							
LRMC	**Laurel Mtn Rad**	**72.90**	**45**	P		**P**	**23 04 42.1**	**+1.1**
	baz=236,SNR=12							
RRX	**Edison Barstow**	**73.03**	**46**	P		**P**	**23 04 43.1**	**+1.4**
	baz=237							
CWC	**Cottonwood Cre**	**73.17**	**44**	P		**P**	**23 04 44.2**	**+1.5**
	baz=236							
MDPB	**Devils Postpil**	**73.19**	**42**	P		P	23 04 32.3	-11
KEBM	**Edson Butte**	**73.25**	**35**	P		P	23 04 34.5	-8.4
BELC	**Belle Mtn. Jos**	**73.26**	**47**	P		**P**	**23 04 44.6**	**+1.4**
	baz=238,SNR=12							
MLAC	**Mammoth, Mammo**	**73.35**	**42**	P		**P**	**23 04 45.3**	**+1.4**
	baz=235							
MPMC	**Manual Prospec**	**73.35**	**44**	P		**P**	**23 04 45.2**	**+1.4**
	baz=236,SNR=30							
GSC	**Goldstone, Bar**	**73.40**	**45**	P		P	23 04 34.7	-9.3
GSC					IAmb	IAmb	23 04 46.3	
	comp=Z,20nm,1.1s							
GSC	**Goldstone, Bar**	**73.40**	**45**	P		**P**	**23 04 45.5**	**+1.6**
	baz=237,SNR=12							
GSC	**Goldstone, Bar**	**73.40**	**45**	P		P	23 04 34.7	-9.3
GSC					pmax	pmax		
	comp=Z,20nm,1.1s							
TIN	**Tinemaha, Big**	**73.42**	**43**	P		**P**	**23 04 45.8**	**+1.7**
	baz=235							
YBH	**Yreka Blue Hor**	**73.44**	**37**	P		P	23 04 34.5	-10
YBH					IAmb	IAmb	23 04 47.2	
	comp=Z,22nm,1.1s							
YBH	**Yreka Blue Hor**	**73.44**	**37**	P		P	23 04 34.5	-10
YBH					pmax	pmax		
	comp=Z,22nm,1.1s							
YBH	**Yreka Blue Hor**	**73.44**	**37**	LR		LR	23 29 38.8	
	comp=Z,180nm,21.1s,baz=198,slow=30							
BC3	**Big Chuckawall**	**73.46**	**47**	P		**P**	**23 04 46.0**	**+1.6**
	baz=238,SNR=13							
HEC	**Hector,Ludlow**	**73.47**	**46**	P		**P**	**23 04 45.5**	**+1.2**
	baz=237,SNR=10.0							
WAKR	**Walker**	**73.47**	**41**	P		P	23 04 34.2	-10
MPK	**Martis Peak**	**73.56**	**40**	P		P	23 04

QSPA South Pole Qui 74.62 180 P **P** **23 04 51.2 +0.5**
QSPA IAmb IAmb 23 05 09.3
comp=Z,26nm,1.1s
QSPA South Pole Qui 74.62 180 P **P** **23 04 52.4 +1.6**
comp=Z,14nm,0.9s,baz=34,slow=2.5,SNR=22
QSPA LR LR 23 32 57.3
comp=Z,34nm,21.4s,baz=30,slow=32
comp=Z,14nm,0.9s
NEE2 Needles Airpor 74.63 47 P **P** **23 04 52.5 +1.4**
baz=238
KVN Kaiserville 74.64 41 P **P** **23 04 52.5 +1.2**
KVN Kaiserville 74.64 41 P **P** **23 04 52.5 +1.2**
KVN pmax pmax
comp=Z,15nm,1.1s
TPH Tonopah 74.65 43 P **P** **23 04 51.3 -0.1**
TPH Tonopah 74.65 43 P **P** **23 04 51.3 -0.1**
TPH pmax pmax
comp=Z,143nm,1.0s
TPNV Topopah Spring 74.67 44 P **P** **23 04 52.6 +1.1**
TPNV IAmb IAmb 23 04 54.1
comp=Z,13nm,0.9s
TPNV Topopah Spring 74.67 44 P **P** **23 04 53.1 +1.6**
baz=237
TPNV Topopah Spring 74.67 44 P **P** **23 04 52.6 +1.1**
TPNV pmax pmax
comp=Z,13nm,0.9s
PDMCI Parker Dam,Lak 74.72 47 P **P** **23 04 53.2 +1.6**
baz=239,SNR=16
BUCK Buck Mountain 74.85 35 P **P** **23 04 52.5 +0.3**
KDAK Kodiak Island 74.89 11 LR LR 23 29 56.1
comp=Z,284nm,21.2s,baz=220,slow=30
I04A Tendick Farm, 74.92 35 P **P** **23 04 53.0 +0.4**
I04A IAmb IAmb 23 04 55.1
comp=Z,26nm,1.0s
V12A Nelson 74.97 46 **P** **23 04 54.6 +1.4**
WTNK Soaring Height 75.11 45 P **P** **23 04 55.1 +1.2**
K05A Summer Lake 75.11 37 **P** **23 04 55.1 +1.1**
SHPR Sheep Range 75.17 45 **P** **23 04 54.9 +0.5**
H04D Lebanon 75.20 35 P **P** **23 04 55.5 +1.4**
J05D Fort Rock, OR 75.26 36 P **P** **23 04 55.1 +0.3**
W13A Hualapai Mount 75.31 47 P **P** **23 04 55.8 +0.4**
Y14A Wickenburg 75.35 48 P **P** **23 04 55.5 +0.1**
Y14A IAmb IAmb 23 04 57.7
comp=Z,16nm,0.8s
G03D McMinnville, O 75.36 34 P **P** **23 04 55.3 +0.3**
S11A Rachel 75.39 44 P **P** **23 04 55.1 -0.5**
S11A IAmb IAmb 23 04 58.0
comp=Z,20nm,0.9s
H04A Detroit Lake 75.61 35 P **P** **23 04 56.9 +0.3**
PRN Pahroc Range 75.72 44 **P** **23 04 58.9 +1.4**
O16K Kokwok River B 75.74 8 P **P** **23 05 00.2 +3.3**
baz=195
PINE Pine Mountain 75.75 36 **P** **23 04 59.1 +1.5**
Q19K Cape Douglas, 75.78 10 P **P** **23 05 00.9 +3.7**
baz=199
I05D Terrebonne, OR 75.86 36 P **P** **23 04 58.6 +0.6**
R11B Troy Canyon, C 75.88 43 P **P** **23 04 58.5 +0.1**
R11B Troy Canyon, C 75.88 43 P **P** **23 04 59.7 +1.2**
baz=237,SNR=19
M13K Dall Lake 75.98 5 P **P** **23 05 00.4 +2.2**
baz=190
BMN Battle Mountai 75.98 41 P **P** **23 04 57.8 -1.1**
BMN IAmb IAmb 23 05 01.5
comp=Z,19nm,1.0s
BMN Battle Mountai 75.98 41 P **P** **23 04 57.8 -1.1**
BMN pmax pmax
comp=Z,19nm,1.0s
O17K Koliganek Bris 76.05 8 P **P** **23 05 01.1 +2.5**
baz=196
N15K Kwethluk River 76.06 7 P **P** **23 05 01.2 +2.5**
baz=193
E03A Lebam 76.07 33 P **P** **23 05 00.1 +1.0**
TUC Tucson 76.18 51 P **P** **23 05 00.7 +0.5**
TUC IAmb IAmb 23 05 03.0
comp=Z,20nm,1.1s
TUC Tucson 76.18 51 P **P** **23 05 01.8 +1.6**
baz=242
TUC Tucson 76.18 51 P **P** **23 05 00.7 +0.5**
TUC pmax pmax
comp=Z,20nm,1.1s
WVOR Wild Horse Val 76.27 38 P **P** **23 05 01.0 +0.5**
WVOR IAmb IAmb 23 05 03.2
comp=Z,28nm,1.1s
WVOR Wild Horse Val 76.27 38 P **P** **23 05 01.0 +0.5**
WVOR pmax pmax
comp=Z,28nm,1.1s
F04A Amboy 76.28 34 **P** **23 05 01.1 +0.8**
HOOD Mount Hood Mea 76.30 35 P **P** **23 05 00.9 +0.2**
WISH Wishkah 76.34 32 P **P** **23 04 59.9 -0.7**
KSRS Korea Array 76.37 315 LR LR 23 33 27.6
comp=Z,13nm,21.8s,baz=130,slow=32
M14K Bethel 76.44 6 P **P** **23 05 01.2 +0.5**
M14K Bethel 76.44 6 P **P** **23 05 02.1 +1.3**
baz=191
G05A Wamic 76.44 35 P **P** **23 05 01.2 -0.1**
NLWA Neilton Lookou 76.47 32 P **P** **23 05 02.0 +0.6**
NLWA IAmb IAmb 23 05 04.5
comp=Z,15nm,1.1s
M15K Kasigluk River 76.51 6 P **P** **23 05 02.4 +1.1**
baz=192
N16K Nishlik Lake 76.51 7 P **P** **23 05 02.7 +1.4**
baz=194
X16A Lo Mia Camp, P 76.71 48 P **P** **23 05 03.6 +0.3**
X16A IAmb IAmb 23 05 06.2
comp=Z,24nm,0.9s
I07A Izee 76.74 37 **P** **23 05 04.1 +0.9**
LCMT Little Creek M 76.75 45 P **P** **23 05 03.5 +0.1**
LCMT IAmb IAmb 23 05 06.0
comp=Z,12nm,0.8s
Q12A Willow Creek R 76.75 43 P **P** **23 05 04.2 +0.8**
Q12A IAmb IAmb 23 05 05.8
comp=Z,18nm,0.9s
G06A Carlson Farm, 76.81 35 P **P** **23 05 03.7 +0.3**
G06A IAmb IAmb 23 05 05.8
comp=Z,23nm,1.2s
O19K Port Alsworth 76.86 10 P **P** **23 05 04.1 +0.8**
baz=198
319A Douglas 76.88 52 P **P** **23 05 04.8 +0.7**
319A IAmb IAmb 23 05 06.4
comp=Z,13nm,0.8s
J08A Circle Bar Ran 76.91 38 P **P** **23 05 04.5 +0.4**
L14K Kuka Creek 76.95 5 P **P** **23 05 06.1 +2.4**
baz=190
M16K Timber Creek 77.02 7 P **P** **23 05 06.8 +2.6**
baz=194
KNB Kanab 77.04 46 P **P** **23 05 06.1 +1.1**
KNB IAmb IAmb 23 05 07.4
comp=Z,15nm,0.9s
KNB Kanab 77.04 46 P **P** **23 05 06.1 +1.1**
KNB pmax pmax
comp=Z,15nm,0.9s
SPR3 Spring Creek 3 77.05 43 P **P** **23 05 05.5 +0.2**
SPR3 IAmb IAmb 23 05 07.3
comp=Z,18nm,1.1s
BRSE Bradley Lake S 77.06 11 P **P** **23 05 06.7 +2.3**
baz=202
U15A North Rim 77.11 46 **P** **23 05 06.2 +0.6**
GNW Green Mountain 77.11 32 P **P** **23 05 05.5 +0.6**
GNW IAmb IAmb 23 05 07.8
comp=Z,26nm,1.2s
LON Longmire 77.12 33 P **P** **23 05 05.9 +0.8**
LON Longmire 77.12 33 P **P** **23 05 05.9 +0.8**
LON pmax pmax
comp=Z,6.0nm,0.8s
SZCU Shurtz Canyon 77.15 45 P **P** **23 05 06.2 +0.4**
SZCU IAmb IAmb 23 05 08.6
comp=Z,18nm,1.1s
WUAZ Wupatki 77.30 47 P **P** **23 05 08.2 +1.6**
WUAZ IAmb IAmb 23 05 09.4
comp=Z,20nm,1.1s
WUAZ Wupatki 77.30 47 P **P** **23 05 08.0 +1.5**
baz=240,SNR=11
D05A Enumclaw 77.31 33 P **P** **23 05 07.0 +0.9**
L15K Ungalak Mounta 77.39 6 P **P** **23 05 08.5 +2.3**
baz=191
ELK Elko 77.41 41 P **P** **23 05 07.7 +0.6**
ELK IAmb IAmb 23 05 09.6
comp=Z,31nm,1.4s
ELK Elko 77.41 41 P **P** **23 05 07.7 +0.6**
ELK pmax pmax
comp=Z,31nm,1.5s
ELK Elko 77.41 41 LR LR 23 32 26.4
comp=Z,173nm,20.5s,baz=258,slow=30
N19K Bonanza Creek 77.43 9 P **P** **23 05 08.4 +1.8**
baz=198

CBB Campbell River 77.51 29 P **P** **23 05 08.7 +1.6**
CBB IAmb IAmb 23 05 09.8
comp=Z,35nm,1.4s
PGC Sidney 77.51 31 P **P** **23 05 08.2 +1.0**
PGC IAmb IAmb 23 05 09.6
comp=Z,13nm,0.8s
DUN6 Lazy B Ranch 77.56 51 P **P** **23 05 08.5 +0.5**
USRK Ussuriysk Ar. 77.57 323 LR LR 23 31 25.6
comp=Z,52nm,21.4s,baz=145,slow=30
M17K Holitna River 77.57 8 P **P** **23 05 09.2 +2.0**
baz=195
PKCU Pink Cliffs 77.61 45 P **P** **23 05 07.6 -0.8**
F07A Phinny Hill Vi 77.61 35 P **P** **23 05 08.2 +0.4**
F07A IAmb IAmb 23 05 10.3
comp=Z,26nm,1.2s
BBB Bella Bella 77.78 26 LR LR 23 33 07.8
comp=Z,104nm,19.4s,baz=220,slow=31
G08A Pilot Rock 77.78 36 P **P** **23 05 09.4 +0.5**
HPIG 77.80 58 P **P** **23 05 09.6 +0.1**
HPIG IAmb IAmb 23 05 11.8
comp=Z,39nm,1.5s
MXC Moxie City 77.83 34 P **P** **23 05 09.4 +0.3**
MXC IAmb IAmb 23 05 11.5
comp=Z,19nm,1.1s
X18A Snowflake 77.85 49 P **P** **23 05 09.8 +0.2**
X18A IAmb IAmb 23 05 12.4
comp=Z,22nm,1.1s
M18K Stony River 77.88 8 P **P** **23 05 10.6 +1.7**
baz=197
LEM Lembang 77.92 266 P P 23 05 21.2 +11
LEM Lembang 77.92 266 LR LR 23 40 46.0
comp=Z,56nm,19.0s,baz=298,slow=37
K15K Wolf Creek Mou 77.99 6 P **P** **23 05 10.2 +0.6**
K15K Wolf Creek Mou 77.99 6 P **P** **23 05 12.0 +2.4**
baz=191
MTPU Mount Pierson 78.00 45 P **P** **23 05 11.5 +0.9**
MTPU IAmb IAmb 23 05 13.6
comp=Z,19nm,0.8s
LTY Liberty 78.05 33 P **P** **23 05 10.8 +0.5**
LTY IAmb IAmb 23 05 12.5
comp=Z,19nm,1.2s
E07A Sunnyside 78.05 34 P **P** **23 05 11.0 +0.7**
TCRU Three Creeks R 78.11 44 P **P** **23 05 12.9 +1.8**
HAWA Hanford 78.13 35 P **P** **23 05 12.1 +1.4**
N20K Mount Spurr 78.16 10 P **P** **23 05 13.2 +2.6**
baz=200
L17K Donlin 78.18 7 P **P** **23 05 13.1 +2.6**
baz=194
MVU Marysvale 78.21 44 P **P** **23 05 12.6 +1.0**
MSU Marysvale 78.24 44 P **P** **23 05 13.1 +1.3**
MSU Marysvale 78.24 44 P **P** **23 05 13.1 +1.3**
CRAG Craig 78.25 22 P **P** **23 05 13.2 +2.1**
baz=219
W18A Petrified Fore 78.28 48 P **P** **23 05 13.2 +1.2**
W18A IAmb IAmb 23 05 14.7
comp=Z,14nm,0.8s
W18A Petrified Fore 78.28 48 P **P** **23 05 13.2 +1.2**
baz=242
E08A Dider Farm, El 78.45 35 P **P** **23 05 13.8 +1.4**
L18K Granite Mounta 78.46 8 P **P** **23 05 13.0 +0.9**
L18K IAmb IAmb 23 05 36.7
comp=Z,22nm,1.2s
L18K Granite Mounta 78.46 8 P **P** **23 05 14.1 +2.0**
baz=196
BMO Blue Mountains 78.47 37 P **P** **23 05 13.3 +0.5**
BMO IAmb IAmb 23 05 15.0
comp=Z,23nm,1.1s
BMO Blue Mountains 78.47 37 P **P** **23 05 13.3 +0.5**
BMO pmax pmax
comp=Z,23nm,1.1s
MFID Camas Ranch 78.52 39 P **P** **23 05 13.0 -0.1**
MFID IAmb IAmb 23 05 15.4
comp=Z,24nm,1.1s
121A Cookes Peak, D 78.53 52 P **P** **23 05 13.6 +0.1**
121A IAmb IAmb 23 05 16.5
comp=Z,37nm,1.4s
121A Cookes Peak, D 78.53 52 P **P** **23 05 14.7 +1.2**
baz=243,SNR=6.4
SUA Susitna One 78.67 11 P **P** **23 05 15.4 +1.9**
baz=202
DUG Dugway, Tooele 78.68 43 P **P** **23 05 14.4 +0.3**
DUG IAmb IAmb 23 05 16.5
comp=Z,20nm,1.1s
DUG Dugway, Tooele 78.68 43 P **P** **23 05 15.0 +0.9**
baz=239,SNR=17
DUG Dugway, Tooele 78.68 43 P **P** **23 05 14.4 +0.3**
DUG pmax pmax
comp=Z,20nm,1.1s
V35K Ketchikan 78.69 23 P **P** **23 05 15.6 +2.0**
baz=221
K17K Iditarod 78.74 7 P **P** **23 05 15.5 +1.8**
baz=194
SIT Sitka 78.74 20 P **P** **23 05 17.0 +3.2**
baz=217
U33K Whale Pass 78.75 22 P **P** **23 05 15.5 +1.6**
baz=219
ZAIG Zacatecas 78.76 63 P **P** **23 05 15.5 +0.5**
ZAIG IAmb IAmb 23 05 17.9
comp=Z,25nm,1.5s
D08A Wollman Farm, 78.87 34 P **P** **23 05 15.3 +0.5**
BGU Big Grassy Mou 78.92 42 P **P** **23 05 15.5 +0.1**
HMU Henry Mountain 78.93 46 P **P** **23 05 15.8 +0.1**
HMU IAmb IAmb 23 05 18.8
comp=Z,25nm,1.0s
E09A Wood Farm, Sta 78.97 35 P **P** **23 05 15.7 +0.4**
E09A IAmb IAmb 23 05 17.4
comp=Z,20nm,1.0s
SKT Skwentna 79.01 10 P **P** **23 05 17.1 +1.8**
baz=201
BGLC Bering Glacier 79.03 15 P **P** **23 05 15.4 +0.1**
baz=209
NLU North Lily Min 79.04 43 P **P** **23 05 15.4 -0.8**
M22K Willow 79.05 11 P **P** **23 05 15.6 +0.3**
M22K IAmb IAmb 23 05 39.0
comp=Z,34nm,1.0s
M22K Willow 79.05 11 P **P** **23 05 16.6 +1.2**
baz=202
KNK Knik Glacier 79.05 12 P **P** **23 05 16.6 +1.1**
baz=204
J16K Anvik River 79.05 6 P **P** **23 05 16.6 +1.2**
J16K IAmb IAmb 23 05 40.4
comp=Z,30nm,0.9s
J16K Anvik River 79.05 6 P **P** **23 05 17.5 +2.1**
baz=192,SNR=9.3
PMR Palmer 79.08 11 P **P** **23 05 17.1 +1.6**
baz=203
Q16A Castle Valley 79.12 45 P **P** **23 05 16.8 +0.2**
Q16A IAmb IAmb 23 05 19.7
comp=Z,17nm,0.8s
F10A Beach Ranch, E 79.17 36 P **P** **23 05 16.2 -0.3**
F10A IAmb IAmb 23 05 18.4
comp=Z,27nm,0.8s
BERG Berg Lake 79.17 14 P **P** **23 05 16.7 +0.6**
BERG IAmb IAmb 23 05 18.5
comp=Z,26nm,1.4s
MDJ Mudanjiang 79.22 322 P **P** **23 05 15.5 -1.2**
MDJ pmax pmax
comp=Z,8.0nm,1.6s
MDJ pmax pmax
comp=Z,180nm,3.6s
TTA Tatalina 79.23 8 P **P** **23 05 18.0 +1.5**
baz=197
WRAK Wrangell Islan 79.26 22 P **P** **23 05 18.1 +1.5**
baz=220
TMUT Trail Mountain 79.29 44 P **P** **23 05 17.8 +0.2**
S32K Killisnoo 79.32 20 P **P** **23 05 18.1 +1.2**
baz=218
DIV Divide 79.35 13 P **P** **23 05 16.6 -0.6**
DIV IAmb IAmb 23 05 40.8
comp=Z,14nm,0.8s
PLID Pearl Lake 79.36 37 P **P** **23 05 17.9 +0.1**
PLID IAmb IAmb 23 05 19.7
comp=Z,13nm,0.8s
MPU Maple Canyon 79.36 43 P **P** **23 05 19.0 +1.1**
WAX Waxell Ridge 79.43 15 P **P** **23 05 18.1 +0.5**
HLID Hailey 79.46 39 P **P** **23 05 19.6 +1.3**
baz=237,SNR=47
BMRM Bremner River 79.47 14 P **P** **23 05 18.6 +0.8**
BMRM IAmb IAmb 23 05 19.8
comp=Z,27nm,1.2s
BMRM Bremner River 79.47 14 P **P** **23 05 18.4 +0.7**
baz=208
SPUT South Promonto 79.49 42 P **P** **23 05 18.9 +0.4**
SPUT IAmb IAmb 23 05 21.1
comp=Z,38nm,1.5s
HVU Hansel Valley 79.53 41 P **P** **23 05 19.7 +1.0**
HVU IAmb IAmb 23 05 21.1
comp=Z,18nm,0.9s
HVU Hansel Valley 79.53 41 P **P** **23 05 19.7 +1.0**
HVU pmax pmax
comp=Z,18nm,0.9s
CRQM Cirque 79.62 14 P **P** **23 05 19.3 +0.4**
CRQM IAmb IAmb 23 05 20.9
comp=Z,19nm,1.1s
CUT Chulitna 79.62 11 P **P** **23 05 19.8 +1.3**
baz=202
CTU Camp Tracy 79.63 43 P **P** **23 05 19.8 +0.5**
CRQE Cirque 79.63 14 P **P** **23 05 19.3 +0.5**
baz=209
KLU Klutina 79.64 13 P **P** **23 05 17.3 -1.4**
KLU Klutina 79.64 13 P **P** **23 05 19.8 +1.0**
baz=206
SRU San Rafael Swe 79.66 45 P **P** **23 05 20.6 +1.1**
SRU IAmb IAmb 23 05 22.1
comp=Z,24nm,1.0s
SRU San Rafael Swe 79.66 45 P **P** **23 05 20.6 +1.1**
SRU pmax pmax
comp=Z,24nm,1.0s
PNL Peninsula 79.66 17 P **P** **23 05 19.3 +0.5**
baz=213
SCM Sheep Creek Mo 79.66 12 P **P** **23 05 18.5 -0.3**
SCM IAmb IAmb 23 05 22.2
comp=Z,13nm,0.8s
SCM Sheep Creek Mo 79.66 12 P **P** **23 05 20.2 +1.4**
baz=205
SCM Sheep Creek Mo 79.66 12 P **P** **23 05 18.5 -0.3**
SCM pmax pmax
comp=Z,13nm,0.8s
J18K Innoko River 79.66 7 P **P** **23 05 19.1 +0.4**
J18K IAmb IAmb 23 05 43.1
comp=Z,13nm,0.8s
J18K Innoko River 79.66 7 P **P** **23 05 20.6 +1.9**
baz=196
C09A Chrisman Ranch 79.67 34 P **P** **23 05 19.8 +0.7**
C09A IAmb IAmb 23 05 21.3
comp=Z,21nm,0.9s
ISLE Juniper Island 79.69 15 P **P** **23 05 18.7 -0.4**
ISLE IAmb IAmb 23 05 21.2
comp=Z,32nm,1.4s
P17A Butcher Ranch, 79.69 44 P **P** **23 05 20.0 +0.4**
P17A IAmb IAmb 23 05 22.6
comp=Z,32nm,1.1s
TGL Tana Glacier 79.70 15 P **P** **23 05 19.5 +0.4**
PINM Pinnacle 79.79 16 P **P** **23 05 21.2 +1.6**
baz=212
BCPM Bancas Point 79.83 16 P P 23 05 11.2 -8.5
TABL Table Mountain 79.85 15 P **P** **23 05 18.6 -1.5**
LENM Lemitar 79.87 50 P **P** **23 05 21.2 +0.4**
K20K Telida 79.91 9 P **P** **23 05 19.1 -0.9**
K20K Telida 79.91 9 P **P** **23 05 22.1 +2.0**
baz=199
VHRN Van Horn 79.93 54 P **P** **23 05 21.6 +0.5**
GRNC Granite Creek 79.94 15 P **P** **23 05 20.2 -0.4**
CRNM Carthage 79.95 51 P **P** **23 05 21.5 +0.3**
VRDI Verde Repeater 79.96 14 P **P** **23 05 21.3 +0.7**
VRDI IAmb IAmb 23 05 22.6
comp=Z,30nm,1.4s
R32K Eaglecrest 79.98 20 P **P** **23 05 22.5 +1.9**
MNTX Cornudas Mount 80.01 53 P **P** **23 05 21.3 -0.1**
MNTX IAmb IAmb 23 05 24.0
comp=Z,39nm,1.5s
MNTX Cornudas Mount 80.01 53 P **P** **23 05 22.3 +1.0**
baz=245,SNR=15
N25K Chitina, Valde 80.03 13 P **P** **23 05 20.0 -0.9**
N25K Chitina, Valde 80.03 13 P **P** **23 05 22.0 +1.1**
baz=208
GLB Gilahina Butte 80.07 14 P **P** **23 05 20.2 -0.8**
TCUT Toone Canyon 80.07 42 P **P** **23 05 21.8 0.0**
P29M Windy Craggy 80.09 17 P **P** **23 05 21.3 +0.1**
P29M Windy Craggy 80.09 17 P **P** **23 05 22.7 +1.5**
baz=214
BNM Barren Site 80.12 51 P **P** **23 05 23.0 +0.8**
PV05 Paradox Valley 80.13 46 P **P** **23 05 22.7 +0.5**
M24K Tolsona, Glenn 80.14 12 P **P** **23 05 21.0 -0.4**
M24K IAmb IAmb 23 05 45.5
comp=Z,28nm,1.0s
M24K Tolsona, Glenn 80.14 12 P **P** **23 05 23.3 +1.9**
baz=206
MVCO Mesa Verde 80.15 47 P **P** **23 05 20.3 -2.0**
MVCO Mesa Verde 80.15 47 P **P** **23 05 23.0 +0.7**
baz=242,SNR=5.9
MCARA McCarthy VSAT 80.20 14 P **P** **23 05 20.6 -1.1**
MCARA McCarthy VSAT 80.20 14 P **P** **23 05 22.6 +0.9**
baz=209
BSUT Blindstream Ca 80.20 43 P **P** **23 05 22.0 -0.7**
LOGN Logan Glacier 80.21 15 P **P** **23 05 21.1 -0.8**
HWUT Hardware Ranch 80.22 42 P **P** **23 05 20.6 -1.9**
H16K Elim 80.24 5 P **P** **23 05 23.5 +1.6**
baz=191,SNR=7.3
CTG Chitna Glacier 80.25 15 P **P** **23 05 23.1 +0.9**
baz=211,SNR=5.1
BARN Barnard Glacie 80.25 15 P **P** **23 05 20.1 -2.1**
BARN IAmb IAmb 23 05 24.4
comp=Z,29nm,1.4s
CTGM Chitina Glacie 80.25 15 P **P** **23 05 21.5 -0.7**
WAT6 Susitna Watana 80.26 12 P **P** **23 05 22.7 +0.5**
baz=205
CAST Castle Rocks 80.27 9 P **P** **23 05 22.5 +0.5**
baz=200
MA2 Magadan 80.27 342 *ce* P P 23 05 18.6 -3.5
MA2 pmax pmax
comp=Z,31nm,2.5s
MA2 Magadan 80.27 342 P **P** **23 05 22.4 +0.3**
comp=Z,4.3nm,0.6s,baz=209,slow=2.8,SNR=5.6
MA2 LR LR 23 35 52.2
comp=Z,25nm,20.3s,baz=124,slow=32
comp=Z,4.3nm,0.6s
J19K Poorman 80.31 8 P **P** **23 05 22.7 +0.5**
baz=197
PV10 Paradox Valley 80.32 46 P **P** **23 05 23.2 0.0**
PV19 Morning Glory 80.32 46 P **P** **23 05 23.1 -0.1**
PV19 IAmb IAmb 23 05 25.7
comp=Z,35nm,1.0s
PV17 East Wray Mesa 80.33 46 P **P** **23 05 23.1 -0.1**
PV17 IAmb IAmb 23 05 25.6
comp=Z,33nm,1.0s
PV14 Lion Creek, Pa 80.33 46 P **P** **23 05 23.8 +0.6**
WAT1 Susitna Watana 80.33 11 P **P** **23 05 23.1 +0.7**
baz=204
PV18 Skein Mesa, Pa 80.35 46 P **P** **23 05 24.0 +0.7**
PV18 IAmb IAmb 23 05 25.8
comp=Z,32nm,1.0s
PV20 West Nyswonger 80.35 46 P **P** **23 05 24.1 +0.8**
PLBC Pleasant Camp 80.35 18 P **P** **23 05 24.0 +1.5**
baz=216
PV16 Nyswonger Mesa 80.37 46 P **P** **23 05 23.4 0.0**
PV16 IAmb IAmb 23 05 26.0
comp=Z,35nm,1.3s
PV23 Carpenter Ridg 80.37 46 P **P** **23 05 24.7 +1.2**
TX31 Lajitas Ar. Si 80.38 56 P **P** **23 05 23.8 +0.3**
TX31 IAmb IAmb 23 05 26.4
comp=Z,38nm,1.4s
TXAR Lajitas Array 80.38 56 P **P** **23 05 24.2 +0.6**
TXAR Lajitas Array 80.38 56 P **P** **23 05 24.2 +0.6**
TXAR Lajitas Array 80.38 56 P **P** **23 05 25.1 +1.5**
comp=Z,7.9nm,1.0s,baz=227,slow=5.0,SNR=54
TXAR LR LR 23 33 48.3
comp=Z,89nm,19.3s,baz=230,slow=30
comp=Z,7.9nm,1.0s
PV03 Paradox Valley 80.39 46 P **P** **23 05 23.6 0.0**
PV03 IAmb IAmb 23 05 26.0
comp=Z,28nm,1.1s
PV11 David Mesa, Pa 80.40 46 P **P** **23 05 24.4 +0.9**
PV11 IAmb IAmb 23 05 26.8
comp=Z,41nm,1.2s
NJ2 Nanjing 80.41 307 *e* P P 23 05 19.2 -4.2
NJ2 sP pP 23 05 26.0 -0.1
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 pmax pmax
comp=Z,90nm,3.9s
O29M Mount Kennedy 80.42 17 P **P** **23 05 22.9 -0.1**
O29M Mount Kennedy 80.42 17 P **P** **23 05 24.2 +1.2**
baz=214
PV04 Paradox Valley 80.42 46 P **P** **23 05 24.1 +0.5**
T35M Bob Quinn 80.44 22 P **P** **23 05 23.3 +0.2**
T35M Bob Quinn 80.44 22 P **P** **23 05 23.2 +0.1**
baz=222
PV02 Paradox Valley 80.45 46 P **P** **23 05 24.0 +0.1**
PV02 IAmb IAmb 23 05 26.4
comp=Z,28nm,1.0s

PV21 **Cone Mtn., Par** 80.45 46 P P 23 05 24.3 +0.4
PV12 **Saucer Basin,** 80.45 46 P P 23 05 24.5 +0.6
G15K **Niukluk** 80.47 4 P P 23 05 24.9 +1.9
baz=189,SNR=5.4
PV01 **Paradox Valley** 80.53 46 P P 23 05 24.4 +0.1
PV01 IAmb IAmb 23 05 26.8
comp=Z,29nm,1.0s
NEW **Newport** 80.56 34 P P 23 05 24.1 +0.1
baz=234,SNR=6.7
NEW **Newport** 80.56 34 LR LR 23 34 38.3
comp=Z,119nm,19.5s,baz=220,slow=31
PV22 **Blue Mesa, Par** 80.57 46 P P 23 05 25.1 +0.6
PV22 IAmb IAmb 23 05 27.1
comp=Z,20nm,1.0s
KTH **Kantishna Hill** 80.58 10 P P 23 05 23.5 -0.3
TRF **Thorofare Moun** 80.59 10 P P 23 05 24.3 +0.3
TRF IAmb IAmb 23 05 50.8
comp=Z,22nm,1.1s
TRF **Thorofare Moun** 80.59 10 P P 23 05 25.3 +1.4
baz=202
ANMO **Albuquerque** 80.59 50 P P 23 05 24.5 -0.1
ANMO **Albuquerque** 80.59 50 P P 23 05 25.8 +1.1
baz=244
ANMO **Albuquerque** 80.59 50 *i* P P 23 05 25.9 +1.2
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO **Albuquerque** 80.59 50 LR LR 23 33 07.1
comp=Z,114nm,21.2s,baz=337,slow=30
PV07 **Paradox Valley** 80.62 46 P P 23 05 25.2 +0.5
PV07 IAmb IAmb 23 05 27.2
comp=Z,18nm,1.0s
HARP **HAARP** 80.62 13 P P 23 05 26.1 +2.2
baz=207
CHUM **Lake Minchumin** 80.67 9 P P 23 05 25.2 +1.1
baz=200
SKAG **Skagway** 80.67 18 P P 23 05 24.8 +0.6
SKAG IAmb IAmb 23 05 27.2
comp=Z,29nm,1.3s
SKAG **Skagway** 80.67 18 P P 23 05 25.2 +1.0
baz=217
J20K **Nowinta River** 80.68 8 P P 23 05 24.7 +0.5
J20K IAmb IAmb 23 05 48.2
comp=Z,23nm,0.9s
J20K **Nowinta River** 80.68 8 P P 23 05 25.4 +1.2
baz=198,SNR=6.8
PV15 **Paradox Valley** 80.69 46 P P 23 05 25.0 -0.2
PV15 IAmb IAmb 23 05 27.6
comp=Z,22nm,0.9s
KLR **Kul'dur** 80.69 327 *ce* P P 23 05 23.7 -0.9
KLR pmax pmax
comp=Z,6.0nm,2.5s
KLR **Kul'dur** 80.69 327 LR LR 23 33 56.9
comp=Z,26nm,21.5s,baz=172,slow=30
P30M **Million Dollar** 80.72 17 P P 23 05 25.8 +1.2
baz=215
H17K **Granite Mounta** 80.74 6 P P 23 05 26.0 +1.5
baz=193
DHY **Denali Highway** 80.78 12 P P 23 05 26.3 +1.3
baz=205
RND **Reindeer** 80.80 11 P P 23 05 25.5 +0.5
RND IAmb IAmb 23 05 48.5
comp=Z,18nm,1.0s
RND **Reindeer** 80.80 11 P P 23 05 25.5 +0.5
RND pmax pmax
comp=Z,18nm,1.0s
F14K **Arctic Creek** 80.81 3 P P 23 05 26.8 +2.0
baz=187
ALPN **Alpine** 80.82 55 P P 23 05 26.2 +0.3
ALPN IAmb IAmb 23 05 28.3
comp=Z,19nm,0.9s
TNA **Tin City** 80.83 2 P P 23 05 25.9 +0.9
TNA IAmb IAmb 23 05 49.8
comp=Z,17nm,1.1s
TNA **Tin City** 80.83 2 P P 23 05 27.0 +2.0
baz=185
S34M **Telegraph Cree** 80.83 21 P P 23 05 25.9 +0.8
S34M IAmb IAmb 23 05 27.8
comp=Z,28nm,1.4s
S34M **Telegraph Cree** 80.83 21 P P 23 05 26.2 +1.0
baz=221,SNR=6.4
YUK8 **Steele Glacier** 80.92 16 P P 23 05 27.7 +1.8
baz=212,SNR=5.5
G16K **Koyuk River** 80.98 5 P P 23 05 26.6 +0.8
G16K **Koyuk River** 80.98 5 P P 23 05 27.7 +1.9
baz=190
GDL2 **Guadalupe Moun** 81.00 53 P P 23 05 27.8 +0.9
YUK6 **Outpost Mounta** 81.01 16 P P 23 05 27.3 +1.0
baz=214
RDMU **Red Mountain** 81.01 44 P P 23 05 27.3 +0.5
RDMU IAmb IAmb 23 05 29.1
comp=Z,22nm,1.3s
PECS **Pecos** 81.05 54 P P 23 05 27.0 0.0
PAX **Paxson** 81.06 12 P P 23 05 26.1 -0.3
PAX **Paxson** 81.06 12 P P 23 05 27.2 +0.8
baz=207
PAX **Paxson** 81.06 12 P P 23 05 26.1 -0.3
PAX pmax pmax
comp=Z,7.0nm,1.1s
MCK **McKinley** 81.09 11 P P 23 05 26.2 -0.2
MCK IAmb IAmb 23 05 49.8
comp=Z,22nm,0.8s
MCK **McKinley** 81.09 11 P P 23 05 27.1 +0.6
baz=204,SNR=7.0
MCK **McKinley** 81.09 11 P P 23 05 26.2 -0.2
MCK pmax pmax
comp=Z,22nm,0.8s
MCMT **McKenzie Canyo** 81.09 39 P P 23 05 27.4 +0.2
AHID **Auburn Hatcher** 81.10 41 P P 23 05 27.6 +0.4
AHID IAmb IAmb 23 05 29.6
comp=Z,28nm,1.3s
H18K **Honhosa River** 81.11 6 P P 23 05 27.5 +1.0
H18K IAmb IAmb 23 05 50.5
comp=Z,27nm,1.4s
H18K **Honhosa River** 81.11 6 P P 23 05 27.5 +1.0
baz=194
BNX **BinXian** 81.13 322 ⇑P P 23 05 27.4 +0.4
BNX pmax pmax
comp=Z,6.0nm,1.1s
BNX pmax pmax
comp=Z,96nm,3.9s
F15K **North Star Dit** 81.14 4 P P 23 05 28.8 +2.2
baz=188
HYT **Haines Junctio** 81.15 17 P P 23 05 27.3 +0.4
HYT **Haines Junctio** 81.15 17 P P 23 05 28.6 +1.7
baz=214,SNR=9.6
YUK3 **Moose Creek** 81.16 15 P P 23 05 28.0 +0.8
baz=212,SNR=7.7
I20K **Naaghedeneel** 81.22 8 P P 23 05 28.3 +1.3
baz=198
G17K **Kiwalik Mounta** 81.23 5 P P 23 05 28.9 +1.8
baz=192
Q32M **Nakina River** 81.25 20 P P 23 05 27.9 +0.3
Q32M **Nakina River** 81.25 20 P P 23 05 28.5 +0.9
baz=220
YUK4 **Talbot Arm** 81.27 16 P P 23 05 29.2 +1.6
baz=214
P32M **Atlin** 81.27 19 P P 23 05 29.2 +1.7
baz=218
CN2 **Changchun** 81.29 320 *e* P P 23 05 20.2 -7.7
CN2 **Changchun** 81.29 320 SKS S 23 15 34.1 -4.5
M27K **Edge Creek, AK** 81.32 14 P P 23 05 27.5 -0.4
M27K IAmb IAmb 23 05 30.4
comp=Z,24nm,1.4s
M27K **Edge Creek, AK** 81.32 14 P P 23 05 29.5 +1.6
baz=210
CLNB **Carlsbad** 81.40 53 P P 23 05 30.0 +1.1
MENT **Mentasta** 81.41 13 P P 23 05 28.8 +0.6
O30N **Mendenhall** 81.50 17 P P 23 05 29.6 +0.9
O30N IAmb IAmb 23 05 31.2
comp=Z,21nm,1.3s
O30N **Mendenhall** 81.50 17 P P 23 05 30.0 +1.3
baz=216,SNR=9.2
CLN7 **Carlsbad 7** 81.52 53 P P 23 05 29.9 +0.4
REDW **Red Top Meadow** 81.56 41 P P 23 05 30.2 +0.5
TPAW **Teton Pass** 81.56 41 P P 23 05 29.9 +0.1
TPAW IAmb IAmb 23 05 31.3
comp=Z,21nm,0.9s
L26K **Log Cabin Wild** 81.57 13 P P 23 05 29.5 +0.5
L26K **Log Cabin Wild** 81.57 13 P P 23 05 29.8 +0.8
baz=209
S22A **4UR Ranch, Cre** 81.57 47 P P 23 05 30.6 +0.6
S22A **4UR Ranch, Cre** 81.57 47 P P 23 05 31.5 +1.5
baz=243,SNR=36
BPMT **Black Pine Rid** 81.60 37 P P 23 05 30.6 +0.8
BVCY **Beaver Creek** 81.61 15 P P 23 05 30.3 +1.1
baz=211,SNR=5.1

DLBC **Dease Lake** 81.61 21 P P 23 05 30.0 +0.6
DLBC **Dease Lake** 81.61 21 P P 23 05 30.4 +1.0
baz=222
DLBC **Dease Lake** 81.61 21 LR LR 23 33 54.6
comp=Z,113nm,19.9s,baz=253,slow=30
SNOW **Snow King Moun** 81.67 41 P P 23 05 30.1 -0.3
SNOW IAmb IAmb 23 05 32.9
comp=Z,24nm,0.9s
H19K **Roundabout Mou** 81.68 7 P P 23 05 30.0 +0.6
H19K IAmb IAmb 23 05 54.1
comp=Z,17nm,1.2s
H19K **Roundabout Mou** 81.68 7 P P 23 05 31.2 +1.8
baz=196
O20A **White River Ci** 81.69 45 P P 23 05 31.2 +0.8
O20A **White River Ci** 81.69 45 P P 23 05 31.7 +1.3
baz=242,SNR=5.4
K24K **Donnelly Dome** 81.75 12 P P 23 05 31.2 +1.2
baz=206
WHY **Whitehorse** 81.77 18 P P 23 05 30.3 +0.1
WHY **Whitehorse** 81.77 18 P P 23 05 31.1 +0.9
baz=217
IMW **Indian Meadow** 81.78 40 P P 23 05 31.9 +1.0
N30M **Aishikik Lake** 81.78 17 P P 23 05 30.9 +0.7
N30M **Aishikik Lake** 81.78 17 P P 23 05 31.1 +0.9
baz=215
G18K **Tagagawik** 81.80 6 P P 23 05 30.9 +0.8
G18K IAmb IAmb 23 05 54.3
comp=Z,15nm,1.2s
G18K **Tagagawik** 81.80 6 P P 23 05 31.1 +1.0
baz=194
MOOW **Moose Ponds** 81.82 40 P P 23 05 31.4 +0.4
MOOW IAmb IAmb 23 05 33.6
comp=Z,23nm,1.4s
H20K **Anotleneega Mo** 81.84 8 P P 23 05 32.1 +1.7
baz=198
LOHW **Long Hollow** 81.84 41 P P 23 05 31.8 +0.6
LOHW IAmb IAmb 23 05 33.7
comp=Z,30nm,1.4s
LRM **Limekiln Ridge** 81.86 38 P P 23 05 31.6 +0.4
NEA2 **Nenana** 81.86 10 P P 23 05 31.1 +0.7
NEA2 **Nenana** 81.86 10 P P 23 05 32.3 +1.9
baz=203
SAND **Sanderson** 81.86 56 P P 23 05 30.8 -0.6
SAND IAmb IAmb 23 05 33.3
comp=Z,13nm,0.9s
RIDG **Independent Ri** 81.88 12 P P 23 05 31.0 +0.3
RIDG IAmb IAmb 23 05 54.3
comp=Z,14nm,1.1s
RIDG **Independent Ri** 81.88 12 P P 23 05 32.3 +1.6
baz=207
MNHN **Monahans** 81.90 54 P P 23 05 31.7 +0.1
MNHN IAmb IAmb 23 05 33.5
comp=Z,12nm,0.8s
WRH **Wood River Hil** 81.92 11 P P 23 05 31.2 +0.4
I21K **Tanana** 81.94 9 P P 23 05 31.4 +0.6
baz=200
L27K **Beaver Creek,** 81.94 14 P P 23 05 31.5 +0.5
L27K **Beaver Creek,** 81.94 14 P P 23 05 32.1 +1.1
baz=210
QLMT **Earthquake Lak** 81.95 39 P P 23 05 33.4 +1.7
BCAR **Beaver Creek A** 81.95 14 P P 23 05 31.2 +0.2
MLY **Manley** 81.99 9 P P 23 05 31.1 -0.1
MLY **Manley** 81.99 9 P P 23 05 31.3 +0.1
baz=202,SNR=9.5
R33M **Jennings River** 82.02 20 P P 23 05 31.6 +0.1
R33M **Jennings River** 82.02 20 P P 23 05 32.5 +0.9
baz=221
FLWY **Flagg Ranch** 82.02 40 P P 23 05 32.7 +0.7
P33M **Teslin, Yukon** 82.04 19 P P 23 05 32.2 +0.5
baz=219
HDA **Harding Lake** 82.07 11 P P 23 05 32.1 +0.5
HDA **Harding Lake** 82.07 11 P P 23 05 32.3 +0.8
baz=205,SNR=6.5
BW06 **Boulder Array** 82.09 42 P P 23 05 32.2 -0.2
BW06 IAmb IAmb 23 05 34.5
comp=Z,30nm,1.3s
BW06 **Boulder Array** 82.09 42 P P 23 05 33.1 +0.6
baz=241,SNR=8.8
PD31 **Pinedale Array** 82.09 42 P P 23 05 32.4 -0.1
PD31 IAmb IAmb 23 05 34.4
comp=Z,27nm,1.3s
PDAR **Pinedale Array** 82.09 42 P P 23 05 31.8 -0.7
PDAR **Pinedale Array** 82.09 42 P P 23 05 33.5 +1.0
comp=Z,10nm,1.0s,baz=208,slow=2.9,SNR=52
PDAR LR LR 23 37 24.7
comp=Z,135nm,18.5s,baz=258,slow=32
comp=Z,10nm,1.0s
F17K **Baldwin Pennin** 82.10 5 P P 23 05 32.2 +0.6
F17K IAmb IAmb 23 05 56.3
comp=Z,20nm,1.1s
F17K **Baldwin Pennin** 82.10 5 P P 23 05 33.4 +1.8
baz=192
YHL **Hebgen Lake** 82.11 39 P P 23 05 33.4 +0.7
SMCO **Snowmass** 82.12 46 P P 23 05 33.9 +0.9
SMCO IAmb IAmb 23 05 35.6
comp=Z,27nm,1.1s
YFT **Old Faithful** 82.12 40 P P 23 05 33.3 +0.6
YFT IAmb IAmb 23 05 36.5
comp=Z,18nm,1.1s
CCB **Clear Creek Bu** 82.13 11 P P 23 05 31.3 -0.6
CCB IAmb IAmb 23 05 55.1
comp=Z,16nm,0.9s
N31M **Braeburn, Yuko** 82.17 17 P P 23 05 32.9 +0.6
N31M IAmb IAmb 23 05 34.7
comp=Z,28nm,1.4s
N31M **Braeburn, Yuko** 82.17 17 P P 23 05 33.0 +0.8
baz=216,SNR=5.3
G19K **Purcell Mounta** 82.20 7 P P 23 05 32.9 +0.7
G19K **Purcell Mounta** 82.20 7 P P 23 05 33.4 +1.2
baz=196
BOZ **Bozeman (W)** 82.23 39 P P 23 05 33.4 +0.3
BOZ IAmb IAmb 23 05 35.6
comp=Z,30nm,1.1s
BOZ **Bozeman (W)** 82.23 39 P P 23 05 34.1 +1.1
baz=239,SNR=21
BOZ **Bozeman (W)** 82.23 39 P P 23 05 33.4 +0.3
BOZ pmax pmax
comp=Z,30nm,1.2s
M29M **Somme Creek** 82.23 15 P P 23 05 32.7 +0.1
M29M **Somme Creek** 82.23 15 P P 23 05 33.7 +1.1
baz=214
H17A **Grant Village** 82.25 40 P P 23 05 33.8 +0.5
H17A IAmb IAmb 23 05 37.0
comp=Z,14nm,0.9s
H17A **Grant Village** 82.25 40 P P 23 05 35.5 +2.1
baz=240,SNR=12
SCRK **Sand Creek** 82.27 13 P P 23 05 33.3 +0.5
SCRK **Sand Creek** 82.27 13 P P 23 05 33.5 +0.8
baz=208,SNR=5.8
H21K **Melozitna Rive** 82.27 8 P P 23 05 33.1 +0.5
H21K **Melozitna Rive** 82.27 8 P P 23 05 35.3 +2.6
baz=200
YHH **Holmes Hill** 82.28 39 P P 23 05 33.8 +0.2
I23K **Minto, Yukon-K** 82.32 10 P P 23 05 33.3 +0.4
I23K IAmb IAmb 23 05 56.2
comp=Z,15nm,1.1s
I23K **Minto, Yukon-K** 82.32 10 P P 23 05 33.8 +1.0
baz=203
COLA **College** 82.33 11 P P 23 05 32.7 -0.1
COLA **College** 82.33 11 P P 23 05 33.2 +0.3
baz=204
COLA **College** 82.33 11 P P 23 05 32.7 -0.1
COLA pmax pmax
comp=Z,35nm,1.1s
MDM **Murphy Dome** 82.34 10 IAmb IAmb 23 05 56.4
comp=Z,24nm,1.2s
YNR **Norris Junctio** 82.35 40 P P 23 05 35.3 +1.5
ODSA **Odessa** 82.38 54 P P 23 05 34.2 +0.1
ODSA IAmb IAmb 23 05 36.0
comp=Z,22nm,1.0s
F18K **Selawik** 82.39 5 P P 23 05 34.3 +1.1
baz=193
IL31 82.41 11 P P 23 05 34.0 +0.7
IL31 IAmb IAmb 23 05 47.9
comp=Z,18nm,1.5s
ILAR **Eielson Array** 82.41 11 P P 23 05 33.7 +0.4
comp=Z,2.2nm,0.6s,baz=227,slow=6.1,SNR=51
ILAR LR LR 23 34 37.2
comp=Z,116nm,21.0s,baz=184,slow=30
comp=Z,2.2nm,0.6s
IL03 **Eielson Array** 82.42 11 P P 23 05 33.5 +0.1
LKWY **Lake** 82.45 40 P P 23 05 35.7 +1.3
LKWY **Lake** 82.45 40 P P 23 05 35.7 +1.3
LKWY pmax pmax
comp=Z,31nm,1.1s
SDCO **Great Sand Dun** 82.52 48 P P 23 05 35.5 +0.6
SDCO IAmb IAmb 23 05 37.3
comp=Z,25nm,1.3s
SDCO **Great Sand Dun** 82.52 48 P P 23 05 35.7 +0.8
baz=244,SNR=19
J25K **Salcha River,** 82.55 12 P P 23 05 34.1 -0.1
J25K IAmb IAmb 23 05 57.8
comp=Z,23nm,1.2s
J25K **Salcha River,** 82.55 12 P P 23 05 35.4 +1.2
baz=207
LYMT **Lyon Mountain** 82.56 37 P P 23 05 35.1 +0.2
SEY **Seymchan** 82.61 345 *i* P P 23 05 31.5 -2.9
SEY pmax pmax
comp=Z,10.0nm,1.1s
SEY **Seymchan** 82.61 345 P P 23 05 35.2 +0.8
comp=Z,7.5nm,1.0s,baz=126,slow=4.8,SNR=14
comp=Z,7.5nm,1.0s
POKR **Poker Plat Res** 82.62 11 P P 23 05 34.7 +0.2
POKR **Poker Plat Res** 82.62 11 P P 23 05 35.0 +0.6
baz=205,SNR=6.2
E17K **Hotham Inlet** 82.69 4 P P 23 05 36.6 +1.9
baz=191,SNR=6.0
N32M **Quiet Lake** 82.70 18 P P 23 05 35.5 +0.5
N32M IAmb IAmb 23 05 37.5
comp=Z,14nm,1.2s
N32M **Quiet Lake** 82.70 18 P P 23 05 36.1 +1.1
baz=219
H22K **Ishtalitna Cre** 82.70 9 P P 23 05 36.0 +1.1
baz=201
K27K **Chicken** 82.72 13 P P 23 05 34.6 -0.4
K27K **Chicken** 82.72 13 P P 23 05 36.1 +1.1
baz=210
M30M **Minto, Yukon** 82.78 16 P P 23 05 35.9 +0.5
M30M **Minto, Yukon** 82.78 16 P P 23 05 36.0 +0.6
baz=215,SNR=6.7
F19K **Shaleruckik Mo** 82.80 6 P P 23 05 34.3 -1.0
F19K IAmb IAmb 23 06 00.5
comp=Z,9.6nm,0.8s
F19K **Shaleruckik Mo** 82.80 6 P P 23 05 36.9 +1.6
baz=195
J26L **Joseph Creek** 82.82 12 P P 23 05 36.6 +1.0
J26L IAmb IAmb 23 05 60.0
comp=Z,12nm,1.0s
J26L **Joseph Creek** 82.82 12 P P 23 05 37.0 +1.4
baz=209,SNR=7.1
DRIO **Del Rio** 82.87 57 P P 23 05 37.0 +0.4
DRIO IAmb IAmb 23 05 38.5
comp=Z,15nm,0.9s
L29M **L29M** 82.88 15 P P 23 05 36.5 +0.6
L29M IAmb IAmb 23 06 00.1
comp=Z,17nm,0.9s
L29M **L29M** 82.88 15 P P 23 05 37.5 +1.6
baz=214
MSTX **Muleshoe** 82.94 52 P P 23 05 36.9 -0.1
MSTX **Muleshoe** 82.94 52 P P 23 05 37.6 +0.7
baz=246,SNR=11
G21K **Allakaket** 82.99 8 P P 23 05 36.7 +0.4
G21K **Allakaket** 82.99 8 P P 23 05 37.4 +1.0
baz=199
OZNA **Ozona** 83.03 55 P P 23 05 37.3 -0.2
T25A **Trinidad** 83.04 49 P P 23 05 37.7 +0.1
T25A IAmb IAmb 23 05 39.7
comp=Z,18nm,1.0s
T25A **Trinidad** 83.04 49 P P 23 05 38.0 +0.4
baz=245
RWWY **Rawlins** 83.11 44 P P 23 05 38.8 +0.9
E18K **Tukpahlearik C** 83.12 5 P P 23 05 37.6 +0.7
E18K IAmb IAmb 23 06 01.6
comp=Z,12nm,0.8s
E18K **Tukpahlearik C** 83.12 5 P P 23 05 38.1 +1.2
baz=192
M31M **Drury Creek, Y** 83.14 17 P P 23 05 37.2 0.0
M31M **Drury Creek, Y** 83.14 17 P P 23 05 37.6 +0.3
baz=217
F20K **Avaraart Lake** 83.23 7 P P 23 05 38.8 +1.3
F20K **Avaraart Lake** 83.23 7 P P 23 05 39.1 +1.6
baz=197
WTLY **Watson Lake, Y** 83.28 21 P P 23 05 38.4 +0.4
Q24A **Divide** 83.30 47 P P 23 05 38.9 -0.1
Q24A **Divide** 83.30 47 P P 23 05 39.4 +0.5
baz=244,SNR=12
PRP **Porcupine Dome** 83.34 11 P P 23 05 39.0 +0.7
PRP IAmb IAmb 23 06 02.3
comp=Z,18nm,1.0s
PRP **Porcupine Dome** 83.34 11 P P 23 05 39.0 +0.7
baz=207,SNR=13
ISCO **Idaho Springs** 83.34 46 P P 23 05 39.1 -0.1
ISCO **Idaho Springs** 83.34 46 P P 23 05 40.0 +0.9
baz=244,SNR=9.5
ISCO **Idaho Springs** 83.34 46 P P 23 05 39.1 -0.1
ISCO pmax pmax
comp=Z,11nm,1.1s
DAWY **Dawson** 83.37 14 P P 23 05 38.5 +0.1
DAWY IAmb IAmb 23 06 02.5
comp=Z,17nm,1.2s
DAWY **Dawson** 83.37 14 P P 23 05 39.5 +1.1
baz=212
SGCY **Sterling City** 83.41 54 P P 23 05 39.9 +0.5
SGCY IAmb IAmb 23 05 42.0
comp=Z,12nm,0.9s
RLMT **Red Lodge** 83.43 40 P P 23 05 40.6 +1.3
RLMT **Red Lodge** 83.43 40 P P 23 05 40.7 +1.3
baz=240,SNR=22
E19K **Redstone River** 83.46 6 P P 23 05 38.9 +0.1
E19K IAmb IAmb 23 06 03.3
comp=Z,15nm,0.8s
E19K **Redstone River** 83.46 6 P P 23 05 40.2 +1.4
baz=195
FARO **Faro, Yukon** 83.46 18 P P 23 05 39.6 +0.7
baz=218
833A **Chaparral WMA,** 83.46 58 P P 23 05 39.7 0.0
833A IAmb IAmb 23 05 41.5
comp=Z,12nm,1.1s
833A **Chaparral WMA,** 83.46 58 P P 23 05 39.9 +0.2
baz=249
POST **Post** 83.56 53 P P 23 05 40.3 +0.1
RDOG **Red Dog Mine** 83.57 4 P P 23 05 40.5 +1.2
RDOG IAmb IAmb 23 05 42.0
comp=Z,15nm,1.3s
EGAK **Eagle** 83.57 13 P P 23 05 40.3 +0.9
baz=211
N23A **Red Feather La** 83.60 45 P P 23 05 40.7 +0.3
N23A IAmb IAmb 23 05 42.9
comp=Z,22nm,1.0s
N23A **Red Feather La** 83.60 45 P P 23 05 42.0 +1.6
baz=243,SNR=11
I26K **Coal Creek Min** 83.61 12 P P 23 05 40.1 +0.6
I26K IAmb IAmb 23 06 03.2
comp=Z,15nm,1.2s
I26K **Coal Creek Min** 83.61 12 P P 23 05 40.4 +0.9
baz=209
HBVL **Hebbronville** 83.61 60 P P 23 05 40.6 +0.2
CMIG **Matias Romero** 83.62 70 LR LR 23 34 12.8
comp=Z,95nm,20.1s,baz=249,slow=29
K29M **Barlow Dome** 83.64 15 P P 23 05 40.9 +1.0
K29M IAmb IAmb 23 05 43.4
comp=Z,9.9nm,1.0s
K29M **Barlow Dome** 83.64 15 P P 23 05 40.9 +1.0
baz=214
G22K **Bettles** 83.64 8 P P 23 05 41.3 +1.6
baz=201
C16K **Lisburne Hills** 83.65 3 P P 23 05 40.4 +0.7
C16K **Lisburne Hills** 83.65 3 P P 23 05 40.9 +1.2
baz=188,SNR=5.2
F21K **Alatna River** 83.66 8 P P 23 05 40.8 +0.9
F21K IAmb IAmb 23 06 04.2
comp=Z,20nm,1.4s
F21K **Alatna River** 83.66 8 P P 23 05 41.0 +1.2
baz=199
G23K **Bananza Creek** 83.67 9 P P 23 05 40.4 +0.5
G23K IAmb IAmb 23 06 04.1
comp=Z,11nm,1.1s
G23K **Bananza Creek** 83.67 9 P P 23 05 41.2 +1.4
baz=202
BRLDA **Berland Lookou** 83.88 29 P P 23 05 40.8 -0.5
JCT **Junction City** 83.92 56 P P 23 05 42.1 +0.1
JCT **Junction City** 83.92 56 P P 23 05 41.9 -0.1
baz=248
JCT **Junction City** 83.92 56 P P 23 05 42.1 +0.1
JCT pmax pmax
comp=Z,5.0nm,0.7s
SN01 **Snyder 1** 83.96 54 P P 23 05 41.9 -0.3
RTBA **Rita Blanca** 83.97 50 P P 23 05 42.0 -0.2
SN05 **Snyder 5** 83.97 54 P P 23 05 41.5 -0.7
C17K **DeLong Mountai** 83.97 4 P P 23 05 43.3 +1.9
baz=190
J29N **Klondike Camp** 83.97 14 P P 23 05 42.4 +0.9

J29N IAmb IAmb 23 05 46.3
comp=Z,42nm,0.3s
J29N Klondike Camp 83.97 14 P P 23 05 43.2 +1.7
baz=214,SNR=30
HNDO Hondo 83.99 57 P P 23 05 42.7 +0.3
HNDO IAmb IAmb 23 05 44.6
comp=Z,21nm,1.1s
PMSA Palmer Station 84.04 156 LR LR 23 37 06.2
comp=Z,70nm,18.1s,baz=234,slow=31
G24K Hadweenzic Riv 84.06 10 P P 23 05 43.5 +1.6
baz=205
PHWY Pilot Hill 84.11 44 P P 23 05 42.9 -0.2
PHWY IAmb IAmb 23 05 44.9
comp=Z,11nm,1.0s
COLD Coldfoot 84.12 9 P P 23 05 43.9 +1.8
baz=202
AMTX Amarillo 84.13 52 P P 23 05 43.5 +0.4
AMTX Amarillo 84.13 52 P P 23 05 42.8 -0.3
baz=247
I27K Kandik River 84.19 13 P P 23 05 43.3 +0.7
baz=210
DKNS Dickens 84.24 53 P P 23 05 44.2 +0.6
DKNS IAmb IAmb 23 05 46.1
comp=Z,18nm,1.0s
C18K Utukok River 84.28 4 P P 23 05 43.7 +0.8
baz=192
E20K Nigu River 84.34 6 P P 23 05 44.8 +1.5
baz=196
D19K Kuna River 84.38 5 P P 23 05 43.7 +0.2
D19K IAmb IAmb 23 06 07.9
comp=Z,15nm,0.9s
D19K Kuna River 84.38 5 P P 23 05 44.9 +1.4
baz=194
MMPY Sheldon Lake, 84.38 18 P P 23 05 43.5 -0.1
MMPY Sheldon Lake, 84.38 18 P P 23 05 44.8 +1.1
baz=220,SNR=7.4
I28M Miner Creek 84.42 13 P P 23 05 44.1 +0.3
I28M IAmb IAmb 23 06 06.9
comp=Z,11nm,1.1s
I28M Miner Creek 84.42 13 P P 23 05 44.6 +0.8
baz=212
TGTN Hyland Airport 84.50 20 P P 23 05 45.6 +1.4
baz=223,SNR=7.2
J30M Hart River 84.54 15 P P 23 05 44.0 -0.4
J30M Hart River 84.54 15 P P 23 05 45.8 +1.3
baz=215
BILL Bilibino 84.57 352 P P 23 05 43.8 -0.6
BILL Bilibino 84.57 352 *i* P P 23 05 43.4 -1.0
BRIGG Briggsdale 84.57 45 P P 23 05 46.1 +0.8
BRIGG IAmb IAmb 23 05 47.5
comp=Z,12nm,0.9s
EGMT Eagleton 84.57 37 P P 23 05 45.9 +0.9
EGMT IAmb IAmb 23 05 47.1
comp=Z,22nm,1.1s
EGMT Eagleton 84.57 37 P P 23 05 45.8 +0.9
baz=240,SNR=9.5
EF01 Eagle Ford 01 84.58 58 P P 23 05 45.9 +0.6
APMT Aspermont 84.73 54 P P 23 05 46.2 +0.2
D20K Etivluk River 84.74 6 P P 23 05 46.5 +1.2
baz=196
F24K Squaw Lake 84.74 9 P P 23 05 45.9 +0.5
F24K Squaw Lake 84.74 9 P P 23 05 46.8 +1.5
baz=204
E22K Anaktuvuk Pass 84.74 8 P P 23 05 45.8 +0.5
E22K Anaktuvuk Pass 84.74 8 P P 23 05 46.7 +1.4
baz=200
H27K Steamboat Moun 84.75 12 P P 23 05 46.8 +1.4
baz=210
ABTX Abilene, Hawle 84.84 54 P P 23 05 47.4 +0.8
ABTX Abilene, Hawle 84.84 54 P P 23 05 47.4 +0.8
baz=248
C19K Lookout Ridge 84.85 5 P P 23 05 46.4 +0.5
C19K Lookout Ridge 84.85 5 P P 23 05 46.9 +1.0
baz=193
BRDY Brady 84.86 56 P P 23 05 46.3 -0.4
G26K Porcupine Rive 84.94 11 P P 23 05 47.9 +1.6
baz=208
B18K Kokolik River 84.94 4 P P 23 05 48.1 +1.9
baz=191
E23K Chandalar 84.98 9 P P 23 05 48.1 +1.6
baz=203
I30M Mount Dempster 85.06 15 P P 23 05 47.2 +0.1
I30M IAmb IAmb 23 05 48.5
comp=Z,9.8nm,0.9s
I30M Mount Dempster 85.06 15 P P 23 05 48.0 +0.9
baz=215
KSCO Kaye Shedlock' 85.10 47 P P 23 05 49.1 +1.3
KSCO IAmb IAmb 23 05 51.7
comp=Z,23nm,1.1s
KSCO Kaye Shedlock' 85.10 47 P P 23 05 48.2 +0.3
baz=246
E24K Your Creek 85.16 9 P P 23 05 48.1 +0.7
E24K Your Creek 85.16 9 P P 23 05 48.8 +1.4
baz=204
F25K Christian Rive 85.18 10 P P 23 05 49.3 +1.7
baz=206,SNR=9.5
BMAR Burnt Mountain 85.22 11 P P 23 05 49.0 +1.2
SMWD Samnorwood 85.31 52 P P 23 05 48.8 -0.1
SMWD IAmb IAmb 23 05 50.8
comp=Z,22nm,1.4s
D22K Ayikyak River 85.34 7 P P 23 05 49.1 +0.8
D22K Ayikyak River 85.34 7 P P 23 05 50.0 +1.7
baz=200
EDM Edmonton 85.35 31 P P 23 05 48.5 -0.2
EDM Edmonton 85.35 31 P P 23 05 48.5 -0.2
EDM pmax pmax
comp=Z,47nm,1.5s
C21K Kniveblade Rid 85.36 6 P P 23 05 50.1 +1.8
baz=198
H29M Whitestone 85.42 13 P P 23 05 49.0 +0.3
H29M IAmb IAmb 23 06 13.4
comp=Z,18nm,1.1s
H29M Whitestone 85.42 13 P P 23 05 49.6 +0.9
baz=213,SNR=9.0
TOLK Toolik Lake Re 85.52 8 P P 23 05 49.2 0.0
TOLK IAmb IAmb 23 06 13.7
comp=Z,14nm,1.0s
TOLK Toolik Lake Re 85.52 8 P P 23 05 51.6 +2.4
baz=203
F26K Sheenjek River 85.53 11 P P 23 05 51.2 +2.0
baz=208
ZEA Zeya 85.59 329 *e*P P 23 05 48.6 -1.2
E25K Arctic Village 85.67 10 P P 23 05 50.6 +0.7
E25K IAmb IAmb 23 06 14.8
comp=Z,13nm,1.0s
E25K Arctic Village 85.67 10 P P 23 05 51.6 +1.7
baz=206,SNR=10
435B Jarrell 85.81 57 P P 23 05 51.7 +0.2
435B IAmb IAmb 23 05 53.6
comp=Z,16nm,0.8s
435B Jarrell 85.81 57 P P 23 05 52.1 +0.6
baz=249
B21K Ikpikpuk River 85.82 6 P P 23 05 52.2 +1.6
baz=198
EPYK Eagle Plains 85.92 14 P P 23 05 51.6 +0.4
EPYK IAmb IAmb 23 06 15.2
comp=Z,28nm,1.4s
EPYK Eagle Plains 85.92 14 P P 23 05 51.8 +0.6
baz=215
PLPT Palo Pinto 85.95 55 P P 23 05 52.5 +0.3
H31M Peel River 86.03 15 P P 23 05 52.8 +1.0
baz=217
LAO LASA Array 86.04 39 P P 23 05 53.5 +1.2
LAO LASA Array 86.04 39 P P 23 05 53.4 +1.1
baz=243,SNR=9.9
D24K Happy Valley 86.10 8 P P 23 05 54.5 +2.5
baz=203
WTFS Witchita Falls 86.18 54 P P 23 05 53.9 +0.6
FW03 Perrin-Whitt E 86.23 54 P P 23 05 54.0 +0.5
F28M Old Crow 86.28 12 P P 23 05 53.4 +0.4
F28M Old Crow 86.28 12 P P 23 05 54.5 +1.5
baz=212,SNR=6.4
RSSD Black Hills 86.28 42 P P 23 05 53.0 -0.8
RSSD Black Hills 86.28 42 P P 23 05 53.4 -0.4
baz=244
RSSD Black Hills 86.28 42 P P 23 05 53.0 -0.8
RSSD pmax pmax
comp=Z,10.0nm,1.1s
WMOK Wichita Mounta 86.29 53 P P 23 05 53.3 -0.5
WMOK Wichita Mounta 86.29 53 P P 23 05 53.3 -0.5
baz=248
WMOK Wichita Mounta 86.29 53 P P 23 05 53.3 -0.5
WMOK pmax pmax
comp=Z,10.0nm,1.4s
OGNE Ogallala 86.30 46 P P 23 05 54.5 +0.8
baz=246

FW07 Weatherford 86.33 55 P P 23 05 54.6 +0.6
WHTX Lake Whitney, 86.34 56 P P 23 05 54.2 +0.2
WHTX IAmb IAmb 23 05 56.7
comp=Z,15nm,0.9s
WHTX Lake Whitney, 86.34 56 P P 23 05 54.5 +0.5
baz=249
FW13 Cleburne 86.48 55 P P 23 05 55.1 +0.3
C23K Itkillik River 86.49 8 P P 23 05 55.4 +1.5
C23K IAmb IAmb 23 06 19.3
comp=Z,15nm,0.9s
C23K Itkillik River 86.49 8 P P 23 05 55.7 +1.7
baz=202
G30M tAoh Zraii Nji 86.53 14 P P 23 05 53.7 -0.6
G30M tAoh Zraii Nji 86.53 14 P P 23 05 55.7 +1.4
baz=215
FW06 Azle 86.60 55 P P 23 05 55.7 +0.4
D25K Kavik River 86.62 9 P P 23 05 54.6 0.0
D25K Kavik River 86.62 9 P P 23 05 56.3 +1.6
baz=206
C24K Franklin Bluff 86.64 8 P P 23 05 56.5 +1.8
baz=203
HILA High Level 86.73 26 P P 23 05 54.9 -0.4
G31M Satah River 86.94 14 P P 23 05 57.1 +0.9
baz=217
HKT Hockley 86.95 58 P P 23 05 57.7 +0.7
HKT Hockley 86.95 58 P P 23 05 57.7 +0.7
HKT pmax pmax
comp=Z,8.0nm,0.4s
X34A Smith Ranch, M 86.97 53 P P 23 05 57.6 +0.5
X34A IAmb IAmb 23 05 59.6
comp=Z,20nm,1.1s
Z35A Perchaven, San 86.97 54 P P 23 05 57.3 +0.2
F30M Barrier River 87.15 13 P P 23 05 59.2 +2.0
baz=216
E28M Babbage River 87.19 12 P P 23 05 59.5 +2.1
baz=212
LOOK Love County 87.26 54 P P 23 05 56.6 -1.9
WRGLY Wrigley 87.29 20 P P 23 05 58.1 +0.2
WRGLY Wrigley 87.29 20 P P 23 05 59.5 +1.5
baz=227
E29M Blow River 87.33 12 P P 23 05 57.7 -0.4
E29M Blow River 87.33 12 P P 23 05 58.8 +0.8
baz=214
F31M Tsiigehtchic 87.48 14 P P 23 05 58.6 -0.2
F31M Tsiigehtchic 87.48 14 P P 23 05 59.3 +0.5
baz=218,SNR=13
HNVL Huntsville, TX 87.52 57 P P 23 06 00.3 +0.5
237A Washetta, Mont 87.66 56 P P 23 06 01.1 +0.6
TREL Terrell 87.68 55 P P 23 06 00.9 +0.4
R32A Long Quarter, 87.69 49 P P 23 06 01.1 +0.5
R32A IAmb IAmb 23 06 02.3
comp=Z,15nm,0.9s
MAW Mawson 87.86 199 LR LR 23 41 15.8
comp=Z,141nm,21.9s,baz=92,slow=33
W35A Tecumseh 87.90 53 P P 23 06 02.9 +1.4
W35A IAmb IAmb 23 06 05.5
comp=Z,24nm,1.5s
KAN01 Argonia South 87.93 51 P P 23 06 02.2 +0.5
DGMT Dagmar 88.06 38 P P 23 06 02.2 +0.1
DGMT Dagmar 88.06 38 P P 23 06 02.7 +0.6
baz=244
OK033 Mehan 88.16 52 P P 23 06 01.6 -1.1
INK Inuvik 88.22 14 P P 23 06 02.7 +0.5
INK IAmb IAmb 23 06 26.0
comp=Z,8.9nm,1.1s
INK Inuvik 88.22 14 P P 23 06 02.8 +0.5
baz=218,SNR=6.4
INK Inuvik 88.22 14 P P 23 06 02.7 +0.5
INK pmax pmax
comp=Z,9.0nm,1.2s
INK Inuvik 88.22 14 LR LR 23 39 33.8
comp=Z,107nm,19.0s,baz=188,slow=32
NATX Nacogdoches 88.50 57 P P 23 06 04.4 -0.1
K30B Basset 88.64 45 P P 23 06 05.0 0.0
YAK Yakutsk 89.25 337 *i* P P 23 06 05.2 -2.0
YAK pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 89.25 337 LR LR 23 39 23.2
comp=Z,31nm,22.0s,baz=104,slow=31
HHC Hu-ho-hao-te 89.25 313 *e*P P 23 06 05.4 -2.5
HHC sP pP 23 06 13.2 +2.5
HHC SKS **SKSac** **23 16 33.3 -5.0**
HHC *e*S **S** **23 16 59.1 +1.4**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,100nm,4.8s
HHC LR LR
comp=Z,100nm,14.9s
HHC LR LR
comp=Z,99nm,14.3s
CNGN Cerro Negro 89.87 77 P P 23 06 09.7 -1.7
YKAB2 New Yellowknif 89.96 23 P P 23 06 10.2 -0.3
YKA Yellowknife Ar 90.00 23 P P 23 06 11.0 +0.2
YKA Yellowknife Ar 90.00 23 P P 23 06 11.0 +0.2
YKA Yellowknife Ar 90.00 23 P P 23 06 11.6 +0.8
comp=Z,2.1nm,0.9s,baz=237,slow=4.5,SNR=30
YKA LR LR 23 40 11.3
comp=Z,163nm,19.7s,baz=274,slow=31
comp=Z,2.1nm,0.9s
WLAR White Oak Lake 90.35 55 P P 23 06 12.8 -0.3
WLAR IAmb IAmb 23 06 15.4
comp=Z,13nm,0.9s
TEIG Tepich 90.52 69 LR LR 23 38 39.1
comp=Z,424nm,21.0s,baz=16,slow=30
X40A Basin Creek Fa 90.82 55 P P 23 06 14.9 -0.3
JTS Las Juntas de 90.93 80 P P 23 06 16.0 -0.3
JTS IAmb IAmb 23 06 19.7
comp=Z,11nm,1.0s
JTS Las Juntas de 90.93 80 P P 23 06 16.0 -0.3
JTS pmax pmax
comp=Z,11nm,1.0s
JTS Las Juntas de 90.93 80 LR LR 23 36 18.8
comp=Z,89nm,21.7s,baz=254,slow=28
S39A Bolivar 91.44 51 P P 23 06 18.4 +0.3
S39A IAmb IAmb 23 06 20.3
comp=Z,12nm,1.4s
WHAR Wooly Hollow 91.49 54 P P 23 06 18.1 -0.2
WHAR IAmb IAmb 23 06 20.2
comp=Z,8.8nm,1.0s
FCAR Ozark Folk Cen 91.80 53 P P 23 06 19.5 -0.3
FCAR IAmb IAmb 23 06 22.8
comp=Z,9.3nm,1.4s
RIMA Rio Macho 91.83 80 P P 23 06 20.2 -0.5
RIMA IAmb IAmb 23 06 30.1
comp=Z,20nm,1.3s
ESPN Las Esperanzas 92.05 78 P P 23 06 19.2 -2.2
MGMO Mountain Grove 92.07 52 P P 23 06 21.3 +0.2
MGMO IAmb IAmb 23 06 22.6
comp=Z,12nm,1.0s
ELIB Princess Elisa 92.14 185 *d*P P 23 06 21.8 +0.9
comp=Z,8.3nm,0.8s
ELIB *dx* x 23 06 35.5
R40A Maddies Statio 92.42 51 P P 23 06 22.2 -0.4
R40A IAmb IAmb 23 06 23.7
comp=Z,14nm,1.1s
PZH PanZhiHua 92.54 297 P P 23 06 20.0 -3.6
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,110nm,6.1s
LCAR Lake Charles 92.60 53 P P 23 06 22.8 -0.7
ATAH Atahualpa 92.63 98 LR LR 23 37 59.0
comp=Z,82nm,21.8s,baz=275,slow=29
NNA Nana 92.77 103 LR LR 23 38 37.4
comp=Z,40nm,21.7s,baz=263,slow=29
A36M Sachs Harbour 92.85 13 P P 23 06 24.5 +0.7
baz=226,SNR=15
SNAA Sanae 92.87 177 *i* P P 23 06 22.7 -1.5
SNAA pmax pmax
comp=Z,7.0nm,1.4s
P40A Paris 92.95 50 P P 23 06 24.7 -0.3
CCM Cathedral Cave 93.12 52 P P 23 06 25.4 -0.4
baz=253
AGMN Agassiz Nation 93.12 41 P P 23 06 24.8 -0.8
baz=250
PBMO Poplar Bluff 93.37 53 P P 23 06 26.7 -0.3
PBMO IAmb IAmb 23 06 39.1
comp=Z,10nm,1.4s
FVM French Village 93.71 52 P P 23 06 28.3 -0.3
FVM IAmb IAmb 23 06 29.7
comp=Z,18nm,1.3s
FVM French Village 93.71 52 P P 23 06 28.3 -0.3
FVM pmax pmax
comp=Z,19nm,1.3s

ULM Lac du Bonnet 93.77 39 P P 23 06 27.9 -0.6
ULM IAmb IAmb 23 06 29.1
comp=Z,9.5nm,1.4s
ULM Lac du Bonnet 93.77 39 P P 23 06 27.9 -0.6
ULM pmax pmax
comp=Z,9.0nm,1.4s
ULM Lac du Bonnet 93.77 39 LR LR 23 41 32.4
comp=Z,189nm,21.5s,baz=268,slow=31
SPMN Marine on St. 94.13 44 P P 23 06 30.2 -0.2
SPMN IAmb IAmb 23 06 31.5
comp=Z,7.5nm,0.9s
SPMN Marine on St. 94.13 44 P P 23 06 30.6 +0.2
baz=252
Z47A Carrollton 94.24 57 P P 23 06 31.5 +0.4
L40A Anamosa 94.30 48 P P 23 06 29.9 -1.2
L40A IAmb IAmb 23 06 32.2
comp=Z,11nm,0.9s
B35A Bob, Littlefor 94.49 41 P P 23 06 30.8 -1.1
B35A IAmb IAmb 23 06 32.2
comp=Z,14nm,1.4s
SONM Songino Array 95.05 318 P P 23 06 36.3 +1.7
comp=Z,0.3nm,0.6s,baz=115,slow=6.8,SNR=2.5
comp=Z,0.3nm,0.6s
LRAL Lakeview Retre 95.07 57 P P 23 06 35.0 +0.1
baz=255
TIXI Tiksi 95.10 344 *i* P P 23 06 29.9 -4.2
TIXI pmax pmax
comp=Z,1.0nm,0.9s
TIXI Tiksi 95.10 344 P P 23 06 33.9 -0.3
comp=Z,0.6nm,0.2s,baz=103,slow=3.4,SNR=5.6
TIXI LR LR 23 45 32.3
comp=Z,45nm,19.9s,baz=169,slow=33
comp=Z,0.6nm,0.2s
WVT Waverly 95.21 54 P P 23 06 34.9 -0.6
WVT IAmb IAmb 23 06 39.2
comp=Z,10.0nm,1.4s
WVT Waverly 95.21 54 P P 23 06 35.9 +0.4
baz=255
WVT Waverly 95.21 54 P P 23 06 34.9 -0.6
WVT pmax pmax
comp=Z,10.0nm,1.4s
JFWS Jewell Farm 95.23 47 P P 23 06 35.5 0.0
baz=254
E38A The Farm, Brul 95.37 43 P P 23 06 36.4 +0.4
EYMN Ely 95.79 42 P P 23 06 36.1 -1.8
baz=254
ROSC El Rosal 99.72 88 LR LR 23 41 48.6
comp=Z,74nm,21.8s,baz=257,slow=29
MKAR Makanchi Array 111.05 315 *c i* PKIKP **PKiKP** **23 11 45.2 0.0**
KURK Kurchatov 113.34 319 *i* PKIKP **PKiKP** **23 11 47.0 -2.4**
KURBB Kurchatov Arra 113.41 319 PKiKP **PKiKP** **23 11 48.4 -1.1**
comp=Z,0.6nm,0.2s,baz=82,slow=1.7,SNR=6.3
KSH Kashi 115.72 307 PKP **PKPdf** **23 11 56.6 +2.1**
KSH PP PP 23 13 13.2 +16
BVAR Borovoye Array 118.08 322 PKP **PKPdf** **23 11 58.4 -0.1**
comp=Z,1.3nm,0.7s,baz=80,slow=1.8,SNR=7.5
ARU Arti 123.51 328 *i* PKIKP **PKPdf** **23 12 06.6 -2.2**
ARU 23 13 48.7
ARU 23 19 18.3
ARU SS SS 23 30 38.8 +1.8
ARCES ARCESS Array B 124.67 352 PKP **PKPdf** **23 12 10.8 +0.1**
comp=Z,0.8nm,0.5s,baz=49,slow=3.7,SNR=4.9
KIRV Kirov 126.69 334 *c i* PKIKP **PKPdf** **23 12 14.2 -0.6**
HRA Herat 127.02 302 PKPdf **PKPdf** **23 12 11.9 -4.6**
FINES FINESS Array B 132.02 348 PKP **PKPdf** **23 12 24.3 -0.6**
comp=Z,0.7nm,0.5s,baz=25,slow=3.7,SNR=6.5
OBN Obninsk 134.25 337 *e* PKIKP **PKPdf** **23 12 25.1 -4.1**
OBN pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 138.39 320 *i* PKIKP **PKPdf** **23 12 32.3 -5.0**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 138.40 320 *i* PKIKP **PKPdf** **23 12 38.0 +0.5**
KIV pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 143.87 354 PKPdf PKPab 23 12 44.4 +0.5
CLL Collm 143.87 354 PKIKP PKPab 23 12 44.4 +0.5
CLL Collm 143.87 354 *e* PKPdf PKPab 23 12 44.0 +0.1
STHS Stebnicka Huta 144.13 344 *e* PKIKP **PKPab** **23 12 46.2 +1.2**
STHS Stebnicka Huta 144.13 344 *e* PKP **PKPab** **23 12 46.2 +1.2**
OSTC Ostas 144.15 350 *e* PKP **PKPab** **23 12 47.1 +2.0**
OSTC Ostas 144.15 350 *e* PKIKP **PKPab** **23 12 47.1 +2.0**
KOLS Kolonicke sedl 144.28 343 *e* PKIKP **PKPab** **23 12 46.8 +1.2**
KOLS Kolonicke sedl 144.28 343 *e* PKP **PKPab** **23 12 46.8 +1.2**
DPC Dobruska-Polom 144.33 350 *e* PKP **PKPab** **23 12 47.3 +1.5**
DPC Dobruska-Polom 144.33 350 *e* PKIKP **PKPab** **23 12 47.3 +1.5**
BURAR Bucovina Array 144.49 339 ⇑P **PKPab** **23 12 47.5 +0.9**
BURAR Bucovina Array 144.49 339 ⇑PKIKP **PKPab** **23 12 47.5 +0.9**
KRLC Kraliky 144.51 349 *e* PKP **PKPab** **23 12 47.2 +0.7**
KRLC Kraliky 144.51 349 *e* PKIKP **PKPab** **23 12 47.2 +0.7**
CRVS Cervenica-Dubn 144.54 343 *e* PKIKP **PKPab** **23 12 48.3 +1.7**
CRVS Cervenica-Dubn 144.54 343 *e* PKP **PKPab** **23 12 48.3 +1.7**
MORC Moravsky Berou 144.66 348 ⇓P **PKPab** **23 12 47.5 +0.5**
MORC Moravsky Berou 144.66 348 *e* PKP **PKPab** **23 12 47.9 +0.9**
MORC Moravsky Berou 144.66 348 ⇓PKIKP **PKPab** **23 12 47.5 +0.5**
LANS Liptovska Anna 144.82 346 *e* PKIKP **PKPab** **23 12 49.5 +1.9**
LANS Liptovska Anna 144.82 346 *e* PKP **PKPab** **23 12 49.5 +1.9**
VLDR Vladesti 144.84 334 ⇑P **PKPab** **23 12 48.4 +0.7**
TESR Tescani 144.88 336 ⇓P **PKPab** **23 12 48.6 +0.7**
BSTI Sart Tilman 144.91 1 *d* PKP **PKPab** **23 12 48.7 +0.9**
GHRR 144.95 335 ⇓P **PKPab** **23 12 50.0 +1.8**
PRU Pruhonice 144.97 351 *e* PKP **PKPab** **23 12 48.7 +0.6**
PRU Pruhonice 144.97 351 *e* PKIKP **PKPab** **23 12 48.7 +0.6**
NKC Novy Kostel 144.99 354 *e* PKP **PKPbc** **23 12 48.9 +0.7**
NKC Novy Kostel 144.99 354 *e* PKIKP **PKPbc** **23 12 48.9 +0.7**
MAUC Maruska 144.99 348 *e* PKP **PKPbc** **23 12 49.7 +1.5**
BMR Baia Mare 145.03 340 ⇑P **PKPbc** **23 12 49.1 +0.8**
BMR Baia Mare 145.03 340 ⇑PKIKP **PKPbc** **23 12 49.1 +0.8**
TLCR 145.04 333 ⇓P **PKPbc** **23 12 49.6 +1.1**
TLCR 145.04 333 ⇓PKIKP **PKPbc** **23 12 49.6 +1.1**
BCLA Clavier 145.07 2 *d* PKP **PKPbc** **23 12 43.4 -5.0**
BHOU Houvegnez 145.15 1 *d* PKP **PKPbc** **23 12 49.4 +0.7**
BMRD Maredsous 145.16 2 *d* PKP **PKPbc** **23 12 49.2 +0.5**
NEGRR Negrea 145.17 334 ⇑P **PKPbc** **23 12 50.4 +1.5**
SLCR Slobozia Conac 145.18 334 ⇑P **PKPbc** **23 12 50.4 +1.6**
PANC Panciu 145.21 335 ⇑P **PKPbc** **23 12 50.6 +1.6**
IZVR Izvoarele 145.22 334 ⇑P **PKPbc** **23 12 50.1 +1.1**
ARCR ARCALIA 145.25 339 ⇑P **PKPbc** **23 12 50.0 +0.9**
VRAC Vranov 145.29 349 ⇑P **PKPbc** **23 12 50.1 +0.9**
VRAC Vranov 145.29 349 *e* PKP **PKPbc** **23 12 49.8 +0.6**
VRAC Vranov 145.29 349 ⇑PKIKP **PKPbc** **23 12 50.1 +0.9**
ODBI Odobesti 145.34 335 ⇑P **PKPbc** **23 12 50.5 +1.1**
CFR Carcaliu 145.35 333 ⇓P **PKPbc** **23 12 50.4 +1.0**
CFR Carcaliu 145.35 333 ⇓PKIKP **PKPbc** **23 12 50.4 +1.0**
DOU Dourbes 145.36 3 *d* PKP **PKPbc** **23 12 50.1 +0.7**
VRI Vrincioaia 145.38 335 ⇑P **PKPbc** **23 12 50.7 +1.1**
VRI Vrincioaia 145.38 335 ⇑PKIKP **PKPbc** **23 12 50.7 +1.1**
PLOR Plostina 145.43 335 ⇑P **PKPbc** **23 12 49.8 0.0**
PLOR Plostina 145.43 335 ⇑PKIKP **PKPbc** **23 12 49.8 0.0**
TPGR Topolog 145.47 333 ⇑P **PKPdf** **23 12 51.4 +1.4**
JAVC Velka Javorina 145.50 347 *e* PKP **PKPdf** **23 12 51.7 +1.8**
TURR Turia 145.51 336 ⇑P **PKPdf** **23 12 51.2 +1.2**
ZVC Zvikov 145.55 352 *e* PKP **PKPdf** **23 12 51.0 +1.1**
ZVC *ex* x 23 13 03.7
KRUC Moravsky 145.56 349 *e* PKP **PKPdf** **23 12 50.5 +0.6**
OZUR 145.56 337 ⇑P **PKPdf** **23 12 50.5 +0.4**
COVR Voineasa-Covas 145.61 336 ⇑P **PKPdf** **23 12 51.0 +0.8**
BOSR Bodos 145.63 337 ⇓P **PKPdf** **23 12 52.1 +1.9**
GRF Grafenberg Arr 145.64 355 *e* PKPbc **PKPdf** **23 12 51.5 +1.4**
baz=6.6,slow=3.2
TIRR Tirgusor 145.79 332 ⇑P **PKPdf** **23 12 49.5 -0.9**
TIRR Tirgusor 145.79 332 ⇑PKIKP **PKPdf** **23 12 49.5 -0.9**
HARR Harsova 145.82 333 ⇑P **PKPdf** **23 12 51.9 +1.4**
HARR Harsova 145.82 333 ⇑PKP2 **PKPdf** **23 12 51.9 +1.4**
DOPR Dopca 145.82 337 ⇑P **PKPdf** **23 12 52.6 +2.1**
WLF Walferdange 145.84 1 *d* PKP **PKPdf** **23 12 52.0 +1.6**
TLBR Topalu 145.88 333 ⇑P **PKPdf** **23 12 52.8 +2.2**
KHC Kasperske Hory 145.94 352 *e* PKP **PKPdf** **23 12 52.3 +1.7**
KHC *ex* x 23 13 06.8
KHC Kasperske Hory 145.94 352 *c i* PKP2 **PKPdf** **23 12 50.9 +0.3**
KHC pmax pmax
comp=Z,49nm,1.0s
MLR Muntele Rosu 146.00 336 ⇓P **PKPdf** **23 12 52.5 +1.5**
MLR Muntele Rosu 146.00 336 ⇓PKP2 **PKPdf** **23 12 52.5 +1.5**
MODS Modra-Piesok 146.04 348 *e* PKP2 **PKPdf** **23 12 53.2 +2.4**
MODS Modra-Piesok 146.04 348 *e* PKP **PKPdf** **23 12 53.2 +2.4**
ISR Istrita 146.07 335 ⇑P **PKPdf** **23 12 52.8 +1.8**
ISR Istrita 146.07 335 ⇑PKP2 **PKPdf** **23 12 52.8 +1.8**
CKRC Cesky Krumlov 146.14 351 *e* PKP **PKPdf** **23 12 51.7 +0.7**
CKRC *ex* x 23 13 07.0
CKRC Cesky Krumlov 146.14 351 *e* PKP2 **PKPdf** **23 12 51.7 +0.7**
GERES GERESS Array B 146.20 352 PKPbc **PKPdf** **23 12 52.6 +1.4**

	comp=Z,6.3nm,1.0s,baz=35,slow=4.9,SNR=23						
SRO	Srobarova	146.35	346	*e*PKP2	PKPbc	23 12 55.2	+2.7
SRO	Srobarova	146.35	346	*e*PKP	PKPbc	23 12 55.2	+2.7
BRTR	Keskin Array B	146.35	321	PKPbc	PKPdf	23 12 53.9	+2.1
	comp=Z,9.4nm,1.0s,baz=122,slow=2.3,SNR=42						
VOIR		146.40	337	⇑P	PKPdf	23 12 54.1	+2.5
VOIR		146.40	337	⇑PKP2	PKPdf	23 12 54.1	+2.5
ARR	Arges	146.62	337	⇑P	PKPdf	23 12 54.1	+2.2
CONA	Conrad Observa	146.75	349	*e*pPKiKP	PKPdf	23 12 55.2	+3.1
	comp=Z,8.3nm,0.9s						
DEV	Deva	146.79	339	⇑P	PKPdf	23 12 55.0	+2.9
DEV	Deva	146.79	339	⇑PKP2	PKPdf	23 12 55.0	+2.9
SIRR	Siria	146.85	341	⇑P	PKPdf	23 12 55.2	+2.9
RONA	Rosalia, Austr	146.88	348	*i* pPKiKP	PKPdf	23 12 55.5	+3.2
	comp=Z,14nm,1.1s						
MOA	Molln	147.09	351	*i* pPKiKP	PKPdf	23 12 55.8	+3.2
	comp=Z,9.4nm,1.1s						
BFO	Black Forest	147.16	358	PKPab	PKPdf	23 12 55.7	+3.0
BFO	Black Forest	147.16	358	PKP2	PKPdf	23 12 55.7	+3.0
GZR	Gura Zlata	147.26	339	⇑P	PKPdf	23 12 56.0	+3.0
GZR	Gura Zlata	147.26	339	⇑PKP2	PKPdf	23 12 56.0	+3.0
BIOA	Bad Ischl, Aus	147.34	352	*e*pPKiKP	PKPdf	23 12 56.1	+3.0
	comp=Z,12nm,0.9s						
BZS	Buzias	147.45	341	⇑P	PKPdf	23 12 53.6	+0.3
BZS	Buzias	147.45	341	⇑PKIKP	PKPdf	23 12 53.6	+0.3
LOZB	Loznitsa	147.46	333	⇑P	PKPdf	23 12 56.8	+3.5
ARSA	Arzberg	147.46	349	*i* pPKiKP	PKPdf	23 12 56.6	+3.3
	comp=Z,5.4nm,0.9s						
LESA	Schwarzleotal	147.73	353	*i* pPKiKP	PKPdf	23 12 57.2	+3.4
	comp=Z,9.9nm,1.3s						
MORH	Mrgy, Hungar	147.76	345	⇑P	PKPdf	23 12 57.0	+3.3
HERR	Herculane	147.83	339	⇑P	PKPdf	23 12 57.5	+3.6
RETA	Reutte	147.87	355	*e*pPKiKP	PKPbc	23 12 57.9	+1.0
	comp=Z,13nm,1.1s,SNR=6.9						
WATA	Walderalm	147.94	354	*e*pPKiKP	PKPdf	23 12 57.6	+3.4
	comp=Z,10nm,1.3s						
MOTA	Moosalm	147.98	355	*e*pPKiKP	PKPdf	23 12 58.0	+3.7
	comp=Z,13nm,0.9s,SNR=7.6						
KBA	Koelnbreinsper	147.98	352	*e*pPKiKP	PKPdf	23 12 57.6	+3.3
	comp=Z,6.3nm,0.9s,SNR=4.4						
WTTA	Wattenberg	148.01	354	*i* pPKiKP	PKPbc	23 12 58.3	+0.8
	comp=Z,7.2nm,0.7s,SNR=5.4						
SQTA	Sankt Quirin	148.09	354	*e*pPKiKP	PKPbc	23 12 58.4	+0.9
	comp=Z,7.6nm,1.1s,SNR=5.1						
SOKA	Soboth	148.10	349	*i* pPKiKP	PKPdf	23 12 58.0	+3.6
	comp=Z,8.6nm,1.1s,SNR=7.3						
ELND	Elena	148.12	333	⇑P	PKPbc	23 12 58.7	+1.1
DAVA	Damuels	148.13	356	*e*pPKiKP	PKPbc	23 12 58.6	+0.9
	comp=Z,17nm,1.1s						
MDVR	Moldovita	148.16	340	⇑P	PKPbc	23 12 58.5	+0.8
PLVB	Pleven	148.28	335	⇑P	PKPbc	23 12 59.3	+1.3
FETA	Feichten	148.33	355	*e*pPKiKP	PKPbc	23 12 59.1	+0.8
	comp=Z,10nm,1.1s,SNR=5.3						
OBKA	Obir	148.35	350	*i* pPKP	PKPdf	23 12 58.4	+3.6
	comp=Z,6.1nm,1.4s						
OBKA	Obir	148.35	350	*e*P	PKPdf	23 12 57.2	+2.4
MYKA	Terra Mystica	148.38	351	*e*pPKP	PKPdf	23 12 58.4	+3.5
	comp=Z,5.7nm,0.9s,SNR=4.5						
FRGS	Fruska Gora	148.41	342	⇓P	PKPbc	23 12 59.2	+0.8
FRGS	Fruska Gora	148.41	342	*e*P	PKPbc	23 12 59.2	+0.8
ABTA	Abfaltersbach	148.42	353	*e*pPKP	pPKPdf	23 12 58.7	+1.0
	comp=Z,12nm,0.9s,SNR=10						
DOBS	Dobrina	148.53	349	*i* PKPbc	PKPdf	23 12 58.6	+3.6
MMAI	Mount Meron Ar	148.80	309	PKPbc	PKPbc	23 13 00.7	+0.8
	comp=Z,5.3nm,0.9s,baz=57,slow=3.1,SNR=8.8						
LJU	Ljubljana	148.81	350	*i* PKPbc	PKPdf	23 12 59.7	+4.2
BLKB	Belogradchik	148.83	338	⇑P	PKPdf	23 12 59.3	+3.6
CRES	Cresnjev	148.85	348	*e*P	PKPdf	23 12 59.2	+3.7
TUE	Stuetta	148.97	357		PKPdf	23 12 59.6	+3.6
SABO	M.te Sabotino	149.02	351	PKPdf	PKPdf	23 12 56.1	+0.3
CEY	Cerknica	149.12	350	*e*P	PKPdf	23 12 58.6	+2.6
BOJS	Bojanci	149.19	348	*e*P	PKPbc	23 13 01.0	+0.7
A051A	Mrakovica	149.31	346	*e*P	PKPdf	23 13 00.8	+4.4
CSS	Mathiatis	149.32	314	PKPbc	PKPdf	23 12 59.8	+3.2
BLY	Banja Luka	149.50	345	*e*P	PKPbc	23 13 02.2	+1.1
LODK	Lodwar	149.55	250	PKPbc	PKPdf	23 13 01.3	+3.6
LODK				PKPab	PKPab	23 13 08.9	+1.8
HAPS	Han Pijesak,BI	149.64	343	*e*P	PKPbc	23 13 01.9	+0.3
ALN	Alexandroupoli	149.66	331	PKPbc	PKPdf	23 13 00.8	+3.8
ALN	Alexandroupoli	149.66	331	PKP2	PKPdf	23 13 00.8	+3.8
BALB	Balikesir	149.68	327	PKPbc	PKPbc	23 13 02.1	+0.4
RDO	Rodhopi	149.70	331	PKPbc	PKPbc	23 13 01.7	+0.1
BBLS	Lazići	149.71	342	*e*P	PKPbc	23 13 02.1	+0.4
MGRS	Mrkonjic Grad	149.83	345	*e*P	PKPbc	23 13 03.6	+1.6
TEOL	Teolo	149.88	353	PKPbc	PKPdf	23 13 01.6	+4.4
A050A	Klekovaca	149.90	346	*e*P	PKPdf	23 13 00.6	+3.2
RUDO	Rudo	149.95	342	*e*P	PKPdf	23 13 01.4	+4.0
SJES	Sjenica	150.08	341	*e*P	PKPbc	23 13 02.9	+0.2
SSB	Saint Sauveur	150.17	3	PKPdf	PKPdf	23 12 58.8	+1.1
SSB	Saint Sauveur	150.17	3	PKIKP	PKPdf	23 12 58.8	+1.1
NEVS	Nevesinje	150.61	343	*e*P	PKPbc	23 13 04.6	+0.7
ZCCA	Zocca	150.96	354	PKPbc	PKPbc	23 13 05.3	+0.6
STON	Ston	151.12	343	*e*P	PKPdf	23 13 03.4	+4.2
DRME	Dracevica, Mon	151.30	341	*e*P	PKPbc	23 13 05.9	+0.4
FNA	Florina	151.77	336		PKPbc	23 13 06.6	-0.1
FNA	Florina	151.77	336	PKIKP	PKPbc	23 13 06.6	-0.1
ESDC	Sonseca Array	154.03	19	PKPbc	PKPbc	23 13 12.0	+0.3
	comp=Z,1.3nm,0.8s,baz=310,slow=2.6,SNR=6.3						
ESDC				PKPab	PKPab	23 13 26.1	+1.0
	comp=Z,2.2nm,1.0s,baz=339,slow=3.8,SNR=6.1						
TORD	Torodi Ar. Bea	174.47	113	PKPdf	PKPdf	23 13 21.9	-0.5
	comp=Z,1.4nm,1.1s,baz=263,slow=3.7,SNR=3.8						
TORD				PKPab	PKPab	23 14 54.7	-0.6
	comp=Z,2.2nm,1.1s,baz=264,slow=5.4,SNR=5.6						

IDC 09 23:03:32.1±3.0, **4°39N**×**93°47E, h0**km**, mb3.6**/4, **mbtmp3.6**/5, **ML3.9**/1, **Error ellipse: s-maj=116.1km s-min=25.2km az=61.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.97	21	Pn	Pn	23 07 05.0	-0.2
	0.2nm,0.3s,baz=194,slow=12,SNR=1.4 0.5nm,0.3s						
H08S2	Diego Garcia H	24.10	240	T	T	23 33 25.5	
	baz=62,slow=75,SNR=103						
H08S3	Diego Garcia H	24.10	240	T	T	23 33 27.9	
	baz=62,slow=75,SNR=150						
H08S1	Diego Carcia H	24.12	240	T	T	23 33 29.8	
	baz=62,slow=75,SNR=90						
MKAR	Makanchi Array	43.34	349	P	P	23 11 35.8	-0.2
	0.2nm,0.4s,baz=169,slow=7.8,SNR=4.8 0.2nm,0.4s						
H01W3	Cape Leeuwin H	43.64	155	T	T	23 57 16.3	
	baz=330,slow=76,SNR=8.3						
H01W2	Cape Leeuwin H	43.65	155	T	T	23 57 17.6	
	baz=330,slow=76,SNR=9.3						
H01W1	Cape Leeuwin H	43.65	155	T	T	23 57 19.1	
	baz=330,slow=76,SNR=8.8						
WRA	Warramunga Arr	46.88	122	P	P	23 12 05.1	+0.5
	0.8nm,0.9s,baz=298,slow=9.1,SNR=4.6 0.8nm,0.9s						
ASAR	Alice Springs	48.28	127	P	P	23 12 14.6	-0.9
	0.3nm,0.8s,baz=312,slow=9.8,SNR=2.7 0.3nm,0.8s						
ZALV	Zalesovo Beam	49.91	353	P	P	23 12 27.4	0.0
	1.1nm,0.5s,baz=170,slow=7.3,SNR=6.7 1.1nm,0.5s						
H04N2	CROZET ISLANDS	62.42	211	T	T	00 21 13.9	
	baz=50,slow=75,SNR=70						
H04N1	CROZET ISLANDS	62.43	211	T	T	00 21 03.9	
	baz=50,slow=75,SNR=75						
H04N3	CROZET ISLANDS	62.44	211	T	T	00 21 14.9	
	baz=50,slow=75,SNR=64						
H04S1	CROZET ISLANDS	62.81	211	T	T	00 21 40.1	
	baz=51						
H04S3	CROZET ISLANDS	62.82	211	T	T	00 21 48.5	
	baz=51						
H04S2	CROZET ISLANDS	62.83	211	T	T	00 21 37.1	
	baz=51						

*IDC **09** 23:47:33.6*±*2.5, 13°.10N*×*57°.44E, h0*km*, mb3.8/8, mbtmp3.8/9, ML3.2/1, MS2.8/2, Error ellipse: s-maj=53.3km s-min=26.4km az=6.0*

*NEIC **09** 23:47:36*±*1.7, 13°.3N*±*0°.1*×*57°.4E*±*0°.1, h10*km*±*2km, mb4.2/16, Error ellipse: s-maj=18.5km s-min=17.5km az=232.0*

ISC 09 23:47:36.5±0.9, **13°.2N**±**0°.1**×**57°.4E**±**0°.1, h17**km**, n29, σ0**93**/25, mb4.0/16, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	10.01	6	Pn	Pn	23 49 59.9	+0.2
	0.2nm,0.3s,baz=213,slow=20,SNR=4.3						
WSAR				LR	LR	23 52 36.0	
	comp=Z,36nm,20.5s,baz=214,slow=30 1.4nm,0.7s						
RAYN	Ar Rayn	15.23	314		Pn	23 51 10.6	-0.4
HRA	Herat	21.50	11	P	P	23 52 24.5	-0.3
KBL	Kabul	23.68	24	P	P	23 52 47.3	-0.3
KBL				IAmb	IAmb	23 52 58.2	
	comp=Z,6.2nm,1.5s						
EIL	Elat	26.45	312	LR	LR	00 03 35.2	
	comp=Z,33nm,19.6s,baz=80,slow=36						
SIMJ	Simiganj	27.33	20	P	P	23 53 21.4	+0.7
SIMJ				IAmb	IAmb	23 53 29.4	
	comp=Z,3.7nm,1.4s						
ARSB	Arslanbob	31.11	23	P	P	23 53 54.0	-0.3
BNN	Bunyan	31.86	327	P	P	23 53 58.5	-2.4
BNN				IAmb	IAmb	23 53 58.8	
	comp=Z,8.4nm,1.2s						
AAK	Ala-Archa	32.81	24	P	P	23 54 10.0	+0.7
AAK				IAmb	IAmb	23 54 16.4	
	comp=Z,2.1nm,1.0s						
ABPO	Ambohimpanom	33.59	198	P	P	23 54 15.2	-1.0
BRTR	Keskin Array B	33.68	326	P	P	23 54 18.8	+1.9
	comp=Z,0.5nm,0.6s,baz=127,slow=11,SNR=5.5 comp=Z,0.5nm,0.6s						
ABKAR	Akbulak array	35.97	3	P	P	23 54 36.0	-0.2
ABKAR				IAmb	IAmb	23 54 40.2	
	comp=Z,1.2nm,0.8s						
VOI	Vohitsoka	36.45	197	P	P	23 54 41.6	+0.8
SANT	Santorini	36.75	314	P	P	23 54 44.0	+0.8
BALB	Balikesir	36.98	321	P	P	23 54 44.9	-0.1
BALB				IAmb	IAmb	23 54 47.7	
	comp=Z,5.0nm,0.7s						
ALN	Alexandroupoli	38.85	321	P	P	23 55 01.0	+0.2
ALN				IAmb	IAmb	23 55 04.6	
	comp=Z,6.0nm,1.3s						
MK31	Makanchi Array	39.44	27	P	P	23 55 05.3	-0.4
MKAR	Makanchi Array	39.44	27	P	P	23 55 05.0	-0.7
MKAR	Makanchi Array	39.44	27	P	P	23 55 06.7	+1.0
	comp=Z,0.6nm,0.5s,baz=210,slow=8.6,SNR=9.0 comp=Z,0.6nm,0.5s						
TIRR	Tirgusor	39.76	327	P	P	23 55 06.9	-1.4
TIRR				IAmb	IAmb	23 55 09.2	
	comp=Z,17nm,1.0s						
CMAR	Chiang Mai Arr	40.23	77	P	P	23 55 12.2	-0.4
	comp=Z,1.0nm,0.3s,baz=280,slow=9.0,SNR=6.9 comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	41.06	20	P	P	23 55 20.1	+1.1
	comp=Z,0.7nm,0.8s,baz=220,slow=8.2,SNR=7.2 comp=Z,0.7nm,0.8s						
ZALV	Zalesovo Beam	46.01	22	P	P	23 55 58.9	0.0
	comp=Z,1.0nm,0.6s,baz=216,slow=7.3,SNR=5.7 comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	53.18	342	P	P	23 56 53.3	-0.1
	comp=Z,3.2nm,1.0s,baz=147,slow=6.3,SNR=4.4 comp=Z,3.2nm,1.0s						
SONM	Songino Array	53.22	39	P	P	23 56 54.7	+0.5
	comp=Z,0.3nm,0.6s,baz=263,slow=7.2,SNR=4.4 comp=Z,0.3nm,0.6s						
ESDC	Sonseca Array	59.68	308	P	P	23 57 40.7	+0.4
	comp=Z,0.8nm,0.7s,baz=90,slow=6.3,SNR=8.2 comp=Z,0.8nm,0.7s						
H01W3	Cape Leeuwin H	71.96	134	T	T	01 16 56.8	
	baz=302,slow=75,SNR=6.8						
H01W2	Cape Leeuwin H	71.97	134	T	T	01 17 00.6	
	baz=302,slow=75,SNR=7.2						
H01W1	Cape Leeuwin H	71.98	134	T	T	01 16 58.5	
	baz=302,slow=75,SNR=6.8						

*NEIC **09** 23:52:15.2*±*1.9, 5°.00S*±*0°.09*×*67°.97E*±*0°.09, h10*km*±*1km, mb4.6/36, Error ellipse: s-maj=15.9km s-min=15.0km az=242.0*

*IDC **09** 23:52:16.8*±*2.8, 4°.99S*×*68°.01E, h0*km*, mb3.8/7, mbtmp3.8/8, ML4.0/1, MS3.5/6, Error ellipse: s-maj=71.2km s-min=30.4km az=66.0*

ISC 09 23:52:14.9±0.5, **5°.03S**±0°.09×**67°.95E**±0°.08, **h10**km**, n60, σ1**§**63/45, mb4.4/20, MS3.7/5, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	5.07	118	Pn	Pn	23 53 30.3	-0.7
H08S3	Diego Garcia H	5.20	120	T	T	23 58 23.8	
	baz=311,slow=74,SNR=145						
H08S1	Diego Carcia H	5.20	120	T	T	23 58 24.0	
	baz=311,slow=74,SNR=102						
H08S2	Diego Garcia H	5.21	120	T	T	23 58 24.5	
	baz=311,slow=74,SNR=140						
KAAM	Kaadhehdhoo	7.46	43	Pn	Pn	23 54 02.5	-1.4
PALK	Pallekele	17.65	46	P	P	23 56 24.5	+2.4
	0.5nm,0.3s,baz=349,slow=17,SNR=2.5						
PALK				LR	LR	00 01 27.4	
	comp=Z,91nm,21.8s,baz=321,slow=31 3.7nm,0.7s						
ATD	Arta Tunnel	29.90	304	P	P	23 58 25.2	+1.9
ATD				IAmb	IAmb	23 58 36.5	
	comp=Z,13nm,1.1s						
KIBK	Kibwezi	29.95	274	P	P	23 58 24.4	+0.6
GSI	Gunungsitoli	30.26	79	P	P	23 58 27.2	+0.7
RAYN	Ar Rayn	35.85	323	P	P	23 59 14.4	-0.8
MBAR	Mbarara	37.41	276	LR	LR	00 12 39.6	
	comp=Z,121nm,21.1s,baz=124,slow=33						
XMIS	Christmas Isla	37.73	101	P	P	23 59 31.8	+0.5
CMAR	Chiang Mai Arr	38.45	52	P	P	23 59 39.4	+2.0
	comp=Z,2.7nm,0.3s,baz=241,slow=10,SNR=6.0						
CMAR				LR	LR	00 14 46.8	
	comp=Z,45nm,18.9s,baz=250,slow=35 comp=Z,2.7nm,0.3s						
CHTO	Chiang Mai	38.66	51	P	P	23 59 38.1	-0.9
KBL	Kabul	39.38	1	P	P	23 59 45.7	+0.7
LSA	Lhasa	41.09	31	P	P	00 00 00.4	+0.8
H04N2	CROZET ISLANDS	43.30	196	T	T	00 47 07.7	
	baz=25						
H04N1	CROZET ISLANDS	43.31	196	T	T	00 47 03.6	
	baz=25						
H04N3	CROZET ISLANDS	43.32	196	T	T	00 47 06.4	
	baz=25						
BTK	Batken	44.95	3	P	P	00 00 29.5	-0.8
LBTB	Lobatse	45.20	239	P	P	00 00 32.4	-0.3
LBTB				IAmb	IAmb	00 00 44.1	
	comp=Z,18nm,1.5s						
LBTB	Lobatse	45.20	239	LR	LR	00 17 05.7	
	comp=Z,78nm,19.6s,baz=86,slow=33						
JAGI	Jajeg, Banyuwa	45.99	97	P	P	00 00 39.0	+0.1
ARSB	Arslanbob	46.36	5	P	P	00 00 42.3	+0.7
BOSA	Boshof	46.74	235	LR	LR	00 16 47.8	
	comp=Z,79nm,20.2s,baz=72,slow=31						
KK31	Karatay Array	47.97	3	P	P	00 00 50.2	-3.7
KK31				IAmb	IAmb	00 00 50.7	
	comp=Z,4.1nm,1.4s						
KKAR	Karatay Array	47.97	3	P	P	00 00 50.1	-3.8
KKM	Kota Kinabalu	49.43	78	P	P	00 01 04.4	-1.4
KARS	Kars	50.85	336	P	P	00 01 14.8	-1.3
KARS				IAmb	IAmb	00 01 19.4	
	comp=Z,21nm,1.4s						
H01W3	Cape Leeuwin H	51.93	131	T	T	00 56 51.0	
	baz=296						
H01W2	Cape Leeuwin H	51.94	131	T	T	00 56 52.6	
	baz=296						
H01W1	Cape Leeuwin H	51.95	131	T	T	00 56 52.4	
	baz=296						
PSA00	Pilbara Seismi	52.84	113	P	P	00 01 29.7	-1.6
MAKZ	Makanchi	53.09	12	P	P	00 01 31.9	-0.7
MKAR	Makanchi Array	53.15	12	P	P	00 01 36.2	+3.2
	comp=Z,0.2nm,0.4s,baz=199,slow=7.9,SNR=4.3 comp=Z,0.2nm,0.4s						
KURBB	Kurchatov Arra	56.18	8	P	P	00 01 57.7	+2.8
	comp=Z,0.7nm,0.9s,baz=205,slow=8.5,SNR=5.2 comp=Z,0.7nm,0.9s						
KURK	Kurchatov	56.28	8	P	P	00 01 54.8	-0.9
KURK				IAmb	IAmb	00 01 56.1	
	comp=Z,5.0nm,1.4s						
ZALV	Zalesovo Beam	60.45	11	P	P	00 02 24.9	+0.2
ZALV	Zalesovo Beam	60.45	11	P	P	00 02 27.8	+3.1
	comp=Z,0.6nm,0.6s,baz=210,slow=8.3,SNR=2.4 comp=Z,0.6nm,0.6s						
SONM	Songino Array	62.53	28	P	P	00 02 38.7	-0.4
SONM				IAmb	IAmb	00 02 45.3	
	comp=Z,2.4nm,1.4s						
SONM	Songino Array	62.53	28	P	P	00 02 42.2	+3.1
	comp=Z,0.7nm,0.7s,baz=226,slow=7.5,SNR=5.8 comp=Z,0.7nm,0.7s						
MAW	Mawson	62.56	182	P	P	00 02 39.3	+0.5
MAW				IAmb	IAmb	00 03 07.7	
	comp=Z,3.5nm,1.2s						
FAKI	Fak Fak	64.16	91	P	P	00 02 49.1	-1.3
AKBB	Malin Array Si	64.72	334	P	P	00 02 52.8	-0.5
AKBB				IAmb	IAmb	00 03 03.3	
	comp=Z,12nm,1.5s						
KIEV	Kiev	64.72	334	P	P	00 02 53.0	-0.3
KIEV				IAmb	IAmb	00 03 03.3	
	comp=Z,11nm,1.5s						
OBN	Obninsk	65.33	341	P	P	00 02 56.1	-1.1
OBN				IAmb	IAmb	00 03 21.9	
	comp=Z,6.3nm,0.6s						
ASAR	Alice Springs	65.99	114	P	P	00 03 05.5	+3.3
	comp=Z,0.5nm,0.9s,baz=277,slow=5.8,SNR=1.3 comp=Z,0.5nm,0.9s						
WRA	Warramunga Arr	66.12	109	P	P	00 03 06.2	+3.2
	comp=Z,0.9nm,0.9s,baz=283,slow=6.2,SNR=3.7 comp=Z,0.9nm,0.9s						
WB2	Warramunga Arr	66.13	109	P	P	00 03 00.4	-2.7
WB2				IAmb	IAmb	00 03 28.2	
	comp=Z,11nm,1.5s						
KS19	Wonju Array Si	69.86	47	P	P	00 03 25.4	-0.8
KSRS	Korea Array	69.89	47	LR	LR	00 35 43.2	
	comp=Z,44nm,18.1s,baz=135,slow=37						
CTI	Castel Tesino	71.19	322	P	P	00 03 32.5	-1.7
CTI				IAmb	IAmb	00 03 39.5	
	comp=Z,3.3nm,1.3s						
GEC2	GERESS Array S	71.39	326	P	P	00 03 35.1	-0.3
GEC2				IAmb	IAmb	00 03 50.3	
	comp=Z,3.3nm,1.4s						
GERES	GERESS Array B	71.39	326	P	P	00 03 35.3	-0.1
SENIN	Lac Senin/Sane	74.02	321	P	P	00 03 50.8	-0.4
MJB9	Matsu-Tunnel	77.33	51	P	P	00 04 08.7	-1.6
NC602	NORSAR Array S	78.76	335	P	P	00 04 17.2	-0.4
NC602				IAmb	IAmb	00 04 43.0	
	comp=Z,13nm,1.3s						
NB201	NORSAR Array S	79.03	336	P	P	00 04 17.8	-1.3
F15K	North Star Dit	109.25	20	Pdif	Pdif	00 06 40.2	-1.0
E22K	Anaktuvuk Pass	111.57	15	Pdif	Pdif	00 06 49.4	-2.2

*MOS **09** 23:59:22.3*±*0.7, 21°.34S*×*179°.34W, h593km, mb5.4/44, Error ellipse: s-maj=9.0km s-min=7.7km az=52.1*

*BJI **09** 23:59:23.4*±*0.0, 21°.07S*×*178°.95W, h614km, mb5.5/72, mB5.2/41*

*NOU **09** 23:59:24.6, 21°.37S*×*179°.26W, h610km, ML5.3/171, Fiji Islands Region*

*IDC **09** 23:59:24.4*±*0.6, 21°.34S*×*179°.37W, h608km*±*6km, mb4.9/27, mbtmp5.8/30, Error ellipse: s-maj=7.6km s-min=7.4km az=136.0*

*NEIC **09** 23:59:24.2*±*1.6, 21°.40S*±*0°.07×179°.28W*±*0°.08, h604km*±*3km, mb5.3/654, Mwb5.7/36, Mww5.6/20, Error ellipse: s-maj=11.6km s-min=9.5km az=59.0, Moment Tensor Solution. Moment tensor: Scale 10*17*Nm; Mrr1.14; Mθθ-2.00; Mφφ0.86; Mrθ-3.53; Mθφ-0.55; Mφr-2.74; Fault plane solution: Mo4.83000×10*17* NP1: φs232.58000°, δ81.94000°, λ75.24000°. NP2: φs114.57000°, δ16.77000°, λ150.94000°. Principal axes: T 4.6290, Plg51.0000°, Azm126.0000°; N 0.3738, Plg15.0000°, Azm235.0000°; P -5.0028, Plg35.0000°, Azm335.0000°;*

*NEIC **09** 23:59:24.4, 21°.32S*×*179°.21W, h630km, Moment Tensor Solution. Duration: 3*ŝ*3 Moment tensor: Scale 10*17*Nm; Mrr1.14; Mθθ-1.85; Mφφ0.71; Mrθ-2.13; Mθφ-0.48; Mφr-2.22; Fault plane solution: Mo3.51000×10*17* NP1: φs227.75000°, δ79.72000°, λ69.19000°. NP2: φs112.59000°, δ23.11000°, λ152.94000°. Principal axes: T 3.4956, Plg51.0000°, Azm114.0000°; N 0.0299, Plg20.0000°, Azm232.0000°; P -3.5255, Plg32.0000°, Azm335.0000°;*

*NEIC **09** 23:59:24.6, 21°.43S*×*179°.35W, h611km*

*NEIC **09** 23:59:24.4, 21°.42S*×*179°.32W, h630km*

*BGR **09** 23:59:25.7, 21°.34S*×*179°.25W, h617km*±*17km*

*GCMT **09** 23:59:28.2*±*0.2, 21°.47S*±*0°.01×179°.18W*±*0°.02, h621km*±*1km, MW5.7/132, Moment Tensor Solution. s132, c219; Duration: 1ŝ7 Moment tensor: Scale 10*17* Nm; Mrr1.42*±*.04; Mθθ-2.26*±*.07; Mφφ0.84*±*.07; Mrθ-2.39*±*.06; Mθφ-0.69*±*.07; Mφr-2.46*±*.06; Best double couple: Mo4.01600×10*17* NP1: φs228.00000°, δ78.00000°, λ68.00000°. NP2: φs111.00000°, δ25.00000°, λ151.00000°. Principal axes: T 3.9370, Plg52.0000°, Azm113.0000°; N 0.1580, Plg21.0000°, Azm232.0000°; P -4.0950, Plg30.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 09 23:59:24.3±0.2, **21°.44S**±0°.03×**179°.23W**±0°.03, **h612**km±2km, **h613**km**:pP-P, n1885,** σ**1**§**13**/2070, **mb5.3**/419, **114C-95D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	3.22	7	P	P	00 00 45.9	+0.1
TAVE	Taveuni	4.75	352	P	P	00 00 56.3	+0.1
DGTI	Dogotuki	5.21	349	P	P	00 00 59.6	-0.2
YSA	Yasawairara	5.61	327	P	P	00 01 02.6	-0.3
RAO	Raoul Island	7.87	172	P	P	00 01 21.8	-0.9
RAO	Raoul Island	7.87	172	P	P	00 01 22.6	-0.1
RAO	Raoul Island	7.87	172	P	P	00 01 22.2	-0.5
	2μm,0.3s,baz=88,slow=20,SNR=17						
RAO				S	S

URZ S S 00 05 33.5 -4.8
URZ Urewera 17.05 190 P ScP 00 09 37.1 -0.1
MWZ Matawai 17.07 189 P P 00 02 49.3 -1.4
MWZ S S 00 05 31.4 -7.2
MWZ Matawai 17.07 189 P ScP 00 09 38.1 +0.8
TKGZ Te Karaka 17.13 188 P P 00 02 51.6 +0.4
CNGZ Carnagh Statio 17.13 187 P P 00 02 52.1 +0.9
RAGZ Rawiri 17.24 189 P P 00 02 52.1 -0.3
RAGZ Rawiri 17.24 189 P ScP 00 09 38.9 +1.3
MUGZ Murupara 17.32 191 P P 00 02 52.5 -0.5
HRRZ Handcock Road 17.33 192 P P 00 02 53.9 +0.8
RIGZ Rimuhau 17.40 188 P P 00 02 52.6 -1.2
RIGZ Rimuhau 17.40 188 P ScP 00 09 39.7 +1.8
RTZ Ruatahuna 17.42 190 P P 00 02 52.8 -1.2
RTZ Ruatahuna 17.42 190 P P 00 02 52.5 -1.5
RTZ S S 00 05 36.4 -8.0
SNGZ Shannon Statio 17.53 189 P P 00 02 54.2 -0.8
MTHZ Maungataniwha 17.68 190 P P 00 02 55.9 -0.4
RAHZ Arahi 17.70 190 P P 00 02 56.4 -0.1
KNZ Kokohu 17.72 188 P P 00 02 56.0 -0.6
MRHZ Matea Rd 17.73 191 P P 00 02 55.9 -0.9
WATZ Wairara 17.75 193 P P 00 02 58.6 +1.6
HIZ Hauiti 17.76 195 P P 00 02 57.3 +0.3
HIZ Hauiti 17.76 195 P P 00 02 59.3 +2.3
HIZ Hauiti 17.76 195 P P 00 02 59.7 +2.7
MHGZ Mahia Peninsul 17.82 187 P P 00 02 57.7 +0.1
RATZ Rangitukua 17.89 193 P P 00 02 58.9 +0.7
NMHZ Naumai 17.92 190 P P 00 02 58.1 -0.5
RITZ Rihia Road 17.98 192 P P 00 02 59.0 0.0
KATZ Kakaramea 18.01 193 P P 00 03 00.9 +1.5
BKZ Black Stump Fm 18.04 191 P P 00 02 58.1 -1.5
BKZ Black Stump Fm 18.04 191 P P 00 03 00.5 +0.9
BKZ Black Stump Fm 18.04 191 P P 00 02 58.4 -1.3
ARHZ Aropaoanui 18.05 190 P P 00 02 59.9 +0.3
RAR Rarotonga 18.13 93 P P 00 02 59.9 -0.7
RAR Rarotonga 18.13 93 P P 00 03 01.4 +0.8
RAR Rarotonga 18.13 93 P P 00 03 01.3 +0.8
313nm,1.0s,baz=242,slow=6.4,SNR=23
NTVZ North Tongariro 18.13 193 P P 00 03 01.1 +0.6
KRVZ Karewarewa 18.14 193 P P 00 03 02.3 +1.7
ETVZ East Tongariro 18.16 193 P P 00 03 01.3 +0.5
WTVZ West Tongariro 18.17 193 P P 00 03 02.0 +1.1
NNVZ North Ngauruho 18.18 193 P P 00 03 03.3 +2.3
OTVZ Oturere 18.20 193 P P 00 03 00.1 -1.1
SNVZ South Ngauruho 18.23 193 P P 00 03 01.2 -0.2
MCHZ McNeill Hill 18.28 190 P P 00 03 01.3 -0.4
TUVZ Tukino 18.30 193 P P 00 03 01.7 -0.4
KWHZ Kaweka Forest 18.31 191 P P 00 03 00.7 -1.3
FWVZ Far West T-bar 18.31 193 P P 00 03 02.9 +0.6
MAVZ Matarangi 18.32 193 P P 00 03 03.1 +0.6
WNVZ Wahianoa 18.37 193 P P 00 03 01.7 -1.0
MOVZ Moawhango 18.41 192 P P 00 03 03.2 +0.1
BHHZ Black Hill Sta 18.43 192 P P 00 03 01.7 -1.5
KRHZ Kereru 18.53 191 P P 00 03 03.7 -0.3
KAHZ Kahuranaki 18.59 189 P P 00 03 04.4 -0.3
KAHZ Kahuranaki 18.59 189 P ScP 00 09 42.6 +2.1
PXZ Pawanui 18.83 189 P ScP 00 09 43.3 +2.4
WPHZ Waipukurau 18.93 190 P ScP 00 09 42.7 +1.5
DVHZ Dannevirke 19.20 191 P ScP 00 09 42.7 +0.9
PRWZ Pori Road 19.48 191 P ScP 00 09 44.2 +1.7
BFZ Birch Farm 19.56 190 P P 00 03 12.8 -0.5
BFZ S S 00 06 16.4 -2.0
BFZ Birch Farm 19.56 190 P ScP 00 09 43.9 +1.2
MRZ Mangatainoka R 19.66 192 P P 00 03 13.0 -1.2
MRZ Mangatainoka R 19.66 192 P ScP 00 09 43.8 +1.0
TCW Tory Channel 20.46 194 P P 00 03 21.0 -0.4
SNZO South Karori 20.46 193 P P 00 03 20.9 -0.5
SNZO S S 00 06 28.4 -4.1
BHW Baring Head 20.52 193 P P 00 03 21.2 -0.7
QRZ Quartz Range 20.55 198 P P 00 03 22.1 -0.2
QRZ Quartz Range 20.55 198 P P 00 03 23.1 +0.9
PLWZ Palliser 20.60 192 P P 00 03 21.4 -1.4
TKNZ Takaka Hill 20.62 197 P P 00 03 22.9 -0.1
NNZ Nelson 20.68 196 P P 00 03 23.1 -0.3
TUWZ Tuamarina 20.75 195 P P 00 03 22.9 -1.0
CMWZ Cape Campbell 20.99 194 P P 00 03 24.6 -1.5
MRNZ Matariki Terra 21.02 197 P P 00 03 25.6 -0.9
BSWZ Blackbirch Sta 21.03 195 P P 00 03 26.2 -0.3
DSZ Denniston Nort 21.61 198 P P 00 03 31.1 -0.6
KHZ Kahutara 21.78 195 P P 00 03 32.2 -0.9
KHZ Kahutara 21.78 195 P P 00 03 32.2 -0.9
CTZ Chatham Island 22.34 175 P P 00 03 37.0 -1.1
CTZ Chatham Island 22.34 175 P P 00 03 39.8 +1.7
GVZ Greta Valley S 22.42 195 P P 00 03 37.9 -1.0
LTZ Lake Taylor 22.44 197 P P 00 03 38.0 -1.1
INZ Inchbonnie 22.61 198 P P 00 03 40.0 -0.6
AMCZ Amberley 22.71 196 P P 00 03 40.9 -0.6
AMCZ P PcP 00 07 12.0 +2.3
MQZ McQueen's Vall 23.21 195 P P 00 03 44.7 -1.1
MQZ P PcP 00 07 12.4 +1.6
HNR Honiara 23.32 298 P P 00 03 45.9 -1.4
HNR Honiara 23.32 298 P P 00 03 46.8 -0.5
HNR Honiara 23.32 298 P P 00 03 46.1 -1.2
5µm,0.7s,baz=213,slow=4.7,SNR=13
RPZ Rata Peaks 23.64 198 P P 00 03 47.6 -2.1
RPZ Rata Peaks 23.64 198 P P 00 03 50.3 +0.7
11nm,0.5s,baz=358,slow=3.4,SNR=6.3
RPZ ScP ScP 00 09 53.2 +0.1
18nm,0.5s,baz=201,slow=7.2,SNR=6.3
FOZ Fox Glacier 23.84 200 P P 00 03 51.3 -0.2
TARA Tarawa 23.92 340 P P 00 03 51.7 -0.9
TARA Tarawa 23.92 340 P P 00 03 52.1 -0.5
LBZ Lake Benmore 24.50 199 P P 00 03 56.0 -1.3
JCZ Jackson Bay 24.66 201 P P 00 03 59.3 +0.5
ODZ Otahua Downs 24.98 197 P 00 04 01.4 0.0
ODZ Otahua Downs 24.98 197 P P 00 04 01.3 -0.2
WKZ Wanaka 25.26 200 P P 00 04 04.3 +0.3
MLZ Mavora Lakes 26.03 201 P P 00 04 11.0 +0.2
DCZ Deep Cove 26.44 202 P P 00 04 15.0 +0.7
WHZ Wether Hill Ro 26.55 200 P P 00 04 15.2 0.0
PYZ Puysegur Point 27.21 202 P P 00 04 21.0 -0.1
GD1S Gladstone Soft 27.41 259 P P 00 04 23.3 +0.2
EIDS Eidsvold 27.50 256 P P 00 04 24.5 +0.6
EIDS Eidsvold 27.50 256 P P 00 04 24.2 +0.3
TBI Tubuai 27.56 100 *e*P P 00 04 24.9 +0.4
586nm,1.0s
TBI Tubuai 27.56 100 *e*P P 00 04 25.3 +0.8
718nm,28.0s
TBI *e*S S 00 08 21.9 -2.6
1µm,33.5s
TBI *es*S sS 00 11 19.1 -3.5
3µm,31.8s
ARMA Armidale 27.63 245 P P 00 04 26.3 +1.2
ARMA Armidale 27.63 245 P P 00 04 26.5 +1.4
RK1H Rockhampton Ha 28.04 260 P P 00 04 28.5 -0.1
PAE Paea 28.17 88 *e*P P 00 04 29.5 -0.2
124nm,1.3s
PPT2 Papeete2 28.19 87 *e*P P 00 04 23.9 -6.1
178nm,25.8s
PPT2 Papeete2 28.19 87 *e*P P 00 04 30.0 0.0
289nm,1.2s
PPT2 *e*S S 00 08 33.1 -1.3
227nm,25.5s
PPT2 *es*S sS 00 11 28.2 -5.0
1µm,26.8s
PPT2 *es*S SS 00 11 36.1 -4.5
768nm,29.0s
PPT Papeete 28.19 87 P P 00 04 30.3 +0.3
236nm,0.9s,baz=53,slow=5.8,SNR=10
236nm,0.9s
PPTF Pamatai, Papee 28.20 87 P P 00 04 31.2 +1.1
PPTF Pamatai, Papee 28.20 87 P P 00 04 31.1 +1.0
AUPHS Peel High Scho 28.39 244 P P 00 04 32.5 +0.9
TIAR Tiarei 28.41 87 *e*P P 00 04 32.4 +0.5
1.2nm,0.8s
TVO Taravao 28.45 88 *e*P P 00 04 32.1 -0.2
92nm,0.8s
MGCD Mangrove Creek 28.74 240 P P 00 04 36.1 +1.5
SYDH Sydney Hard Ro 29.20 239 P P 00 04 39.9 +1.5
MEH Mehetia 29.53 89 *e*P P 00 04 41.0 -0.6
137nm,1.1s
PMOR Pomariorio Ree 30.41 83 *e*P P 00 04 48.5 -0.5
776nm,1.2s
VAH Vaihoa 30.59 84 *e*P P 00 04 49.9 -0.7
476nm,1.0s
AULRC Lightning Ridg 30.59 248 P P 00 04 51.2 +0.8
CNB Canberra Magne 30.75 236 P P 00 04 53.2 +1.3
CAN Canberra 31.04 237 P P 00 04 53.8 -0.5
CAN Canberra 31.04 237 P P 00 04 53.8 -0.5
CAN pmax pmax
comp=Z,16nm,0.8s
CAN Canberra 31.04 237 P P 00 04 55.5 +1.2
CAN PcP PcP 00 07 31.6 +1.2
CAN ScP ScP 00 10 19.1 +2.9
AUAYR Ayr State High 31.27 267 P P 00 04 56.8 +0.4
XMAS Kiritimati 31.61 45 P P 00 04 59.4 +0.1
XMAS Kiritimati 31.61 45 P P 00 04 59.6 +0.3
XMAS Kiritimati 31.61 45 P P 00 04 59.6 +0.3
AUSMG Snowy Mountain 31.68 235 P P 00 05 01.3 +1.5
TV1H Townsville Har 31.90 268 P P 00 05 01.7 0.0
CTA Charters Tower 32.27 266 P P 00 05 04.9 +0.1
comp=Z,134nm,0.5s,baz=94,slow=11
CTA S S 00 09 35.0 -1.8
comp=Z,7.6nm,0.9s,baz=317,slow=21,SNR=6.0
CTA ScP ScP 00 10 22.4 +1.8
comp=Z,36nm,0.8s,baz=108,slow=2.7,SNR=12
CTA ScS ScS 00 14 25.4 +3.6
comp=Z,5.0nm,1.2s,baz=341,slow=23,SNR=15
comp=Z,134nm,0.5s
CTAO Charters Tower 32.27 266 P P 00 05 05.2 +0.3
CTAO Charters Tower 32.27 266 P P 00 05 04.9 +0.1
CTAO Charters Tower 32.27 266 P P 00 05 05.2 +0.3
CTAO pmax pmax
comp=Z,244nm,1.1s
CTAO Charters Tower 32.27 266 ⇓P P 00 05 05.0 +0.1
CTAO ScP ScP 00 10 23.5 +2.9
RABL Rabaul 32.64 298 P P 00 05 07.5 -0.5
RABL Rabaul 32.64 298 P P 00 05 08.9 +0.8
CMSA Cobar Meteorol 32.85 245 P P 00 05 10.0 +0.4
QLP Quilpie 33.69 254 P P 00 05 16.7 0.0
MTSU Mount Surprise 34.41 269 P P 00 05 22.8 -0.1
TOO Toolangi 34.42 234 P P 00 05 23.5 +0.9
TOO IAmb IAmb 00 05 24.9
comp=Z,37nm,0.8s
TOO Toolangi 34.42 234 P P 00 05 23.9 +1.3
TOO Toolangi 34.42 234 P P 00 05 23.5 +0.9
TOO pmax pmax
comp=Z,37nm,0.8s
PMG Port Moresby 34.46 285 P P 00 05 22.8 -0.4
PMG Port Moresby 34.46 285 P P 00 05 23.0 -0.2
PMG Port Moresby 34.46 285 *de*P P 00 05 22.8 -0.4
PMG pmax pmax
comp=Z,528nm,1.0s
PMG Port Moresby 34.46 285 ⇓P P 00 05 23.0 -0.2
PMG pP pP 00 07 02.6 +0.5
PMG ScP ScP 00 10 30.4 +2.0
AULHS Lilydale High 34.50 227 P P 00 05 24.9 +1.7
CORO Coronation Par 34.63 227 P P 00 05 25.9 +1.6
KAVG Kavieng 34.66 299 P P 00 05 23.9 -1.0
TAU Tasmania Unive 35.15 225 P P 00 05 27.4 -1.2
TAU IAmb IAmb 00 06 13.9
comp=Z,177nm,2.0s
TAU Tasmania Unive 35.15 225 P P 00 05 27.4 -1.2
TAU pmax pmax
comp=Z,177nm,2.0s
BRAT Ballarat 35.60 235 P P 00 05 33.7 +1.4
PATS Pohnpei 35.72 319 P P 00 05 33.2 -0.4
PATS Pohnpei 35.72 319 P P 00 05 33.8 +0.2
STKA Stephens Creek 36.35 245 P P 00 05 39.3 +0.7
STKA Stephens Creek 36.35 245 P P 00 05 39.4 +0.8
STKA Stephens Creek 36.35 245 *i*P P 00 05 38.6 0.0
STKA Stephens Creek 36.35 245 P P 00 05 38.8 +0.2
comp=Z,19nm,0.4s,baz=92,slow=9.9,SNR=88
STKA ScP S 00 10 36.8 -1.0
comp=Z,30nm,0.9s,baz=293,slow=3.0,SNR=8.3
STKA ScS ScS 00 14 45.7 +2.0
comp=Z,1.3nm,0.6s,baz=233,slow=22,SNR=5.1
comp=Z,19nm,0.4s
COEN Coen 36.51 275 P P 00 05 40.4 +0.2
INKA Innaminka 36.82 252 P P 00 05 43.5 +1.0
MCQ Macquarie Isla 36.90 201 P P 00 05 43.8 +1.1
MCQ IAmb IAmb 00 05 45.5
comp=Z,94nm,0.8s
MCQ Macquarie Isla 36.90 201 P P 00 05 43.8 +1.1
MCQ pmax pmax
comp=Z,94nm,0.9s
ARPS Mount Arapiles 37.01 237 P P 00 05 44.4 +0.5
MANU Manus Island 37.81 296 P P 00 05 50.6 -0.1
QIS Mount Isa 38.37 264 P P 00 05 54.7 -0.5
HTT Hallett 38.78 243 P P 00 05 58.7 +0.4
JOHN Johnston Islan 39.11 15 P P 00 06 01.0 0.0
JOHN Johnston Islan 39.11 15 P P 00 06 01.5 +0.5
JOHN Johnston Islan 39.11 15 P P 00 06 01.2 +0.1
LCRK Leigh Creek 39.12 248 P P 00 06 01.2 +0.2
PTPS Port Pirie 39.52 244 P P 00 06 05.0 +0.8
TAOE Nuku Hiva Isla 39.62 78 P P 00 06 06.3 +1.0
TAOE Nuku Hiva Isla 39.62 78 P P 00 06 06.1 +0.7
TAOE Nuku Hiva Isla 39.62 78 *e*P P 00 06 05.3 -0.1
comp=Z,971nm,1.0s
TAOE Nuku Hiva Isla 39.62 78 P P 00 06 06.1 +0.7
WHYH Whyalla 39.85 244 P P 00 06 07.4 +0.5
BBOO Buckleboo 41.10 244 P P 00 06 16.8 +0.1
BBOO IAmb IAmb 00 06 17.6
comp=Z,47nm,0.5s
BBOO Buckleboo 41.10 244 P P 00 06 16.9 +0.1
OOD Oodnadatta 41.30 252 P P 00 06 19.2 +0.8
TABU Tabubil 41.54 287 P P 00 06 20.9 +0.4
H11S2 WAKE ISLAND Hy 42.01 340 P P 00 06 22.7 -1.0
baz=196,slow=5.2,SNR=9.9
H11S3 WAKE ISLAND Hy 42.02 340 P P 00 06 22.8 -1.0
baz=196,slow=5.2,SNR=3.2
H11S1 WAKE ISLAND Hy 42.03 340 P P 00 06 23.2 -0.7
baz=196,slow=5.2,SNR=7.1
MULG Mulgathing 42.70 248 P P 00 06 29.3 0.0
WAKE Wake Island 42.77 340 P P 00 06 29.5 -0.3
WAKE Wake Island 42.77 340 P P 00 06 29.4 -0.4
WAKE Wake Island 42.77 340 P P 00 06 29.2 -0.7
H11N3 WAKE ISLAND Hy 43.10 341 P P 00 06 31.6 -0.6
baz=176,slow=9.3,SNR=12
H11N1 WAKE ISLAND Hy 43.10 341 P P 00 06 31.6 -0.6
baz=176,slow=9.3,SNR=18
H11N2 WAKE ISLAND Hy 43.12 341 P P 00 06 31.6 -0.7
baz=176,slow=9.3,SNR=20
AS01 Alice Springs 43.15 258 P P 00 06 32.9 -0.1
WR0 Warramunga Arr 43.16 263 P P 00 06 32.2 -0.7
WR0 IAmb IAmb 00 06 33.3
comp=Z,270nm,1.4s
AS31 Alice Springs 43.19 258 P P 00 06 33.5 +0.2
AS31 IAmb IAmb 00 06 34.6
comp=Z,84nm,1.2s
ASAR Alice Springs 43.19 258 P P 00 06 33.2 -0.1
comp=Z,145nm,0.7s,baz=95,slow=7.9,SNR=1684
ASAR ScP ScP 00 11 04.8 +2.4
comp=Z,39nm,0.7s,baz=106,slow=4.4,SNR=19
ASAR S S 00 12 15.1 -2.2
comp=Z,53nm,0.8s,baz=95,slow=16,SNR=38
ASAR ScS ScS 00 15 27.4 +1.8
comp=Z,25nm,0.8s,baz=92,slow=7.0,SNR=22
comp=Z,145nm,0.7s
WB0 Warramunga Arr 43.33 264 P P 00 06 33.9 -0.4
WRAB Tennant Creek 43.34 263 P P 00 06 33.5 -0.9
WRAB Tennant Creek 43.34 263 P P 00 06 33.5 -0.9
WRAB pmax pmax
comp=Z,238nm,1.0s
WRA Warramunga Arr 43.34 263 P P 00 06 34.1 -0.4
WRA Warramunga Arr 43.34 263 P P 00 06 34.1 -0.4
WRA pmax pmax
comp=Z,25nm,0.9s
WRA Warramunga Arr 43.34 263 P P 00 06 33.4 -1.1
comp=Z,145nm,0.8s,baz=96,slow=7.5,SNR=820
WRA ScP ScP 00 11 05.6 +2.6
comp=Z,24nm,0.8s,baz=96,slow=4.2,SNR=14
WRA S S 00 12 14.8 -4.6
comp=Z,13nm,0.8s,baz=102,slow=12,SNR=10
comp=Z,145nm,0.8s
GENI Genyem 43.71 290 P P 00 06 37.8 +0.5
PTCN Pitcairn Islan 45.09 104 P P 00 06 49.6 +1.8
PTCN Pitcairn Islan 45.09 104 P P 00 06 49.8 +2.1
KHU Kahuku 46.57 31 P P 00 06 58.7 -0.5
KHU IAmb IAmb 00 07 29.0
comp=Z,307nm,1.5s
KHU Kahuku 46.57 31 P P 00 06 58.7 -0.5
KHU pmax pmax
comp=Z,307nm,1.5s
KHLU Kahalu`u 46.74 31 P P 00 07 00.8 +0.5
KDU Kakadu 46.84 273 P P 00 07 00.6 -0.4
MLOA Mauna Loa Obse 46.84 31 P P 00 07 01.6 +0.2
MLOA IAmb IAmb 00 07 10.8
comp=Z,248nm,1.2s
HUH Hualalai 46.84 31 P P 00 07 01.0 -0.2
HUH IAmb IAmb 00 07 02.4
comp=Z,148nm,0.8s
PUH Pauahi 46.88 32 P P 00 07 01.6 +0.3
MLH Mauna Loa 46.90 31 P P 00 07 02.5 +0.9
POHA Pohakuloa 47.05 31 P P 00 07 01.1 -1.7
POHA Pohakuloa 47.05 31 P P 00 07 03.0 +0.2
POHA Pohakuloa 47.05 31 P P 00 07 03.1 +0.2
KEKH Kekaha 47.18 25 P P 00 07 02.9 -0.4
HPAH Hawaii Prepara 47.21 31 P P 00 07 04.1 +0.3
MHA Mahukona 47.24 30 P P 00 07 03.9 0.0
MHA Mahukona 47.24 30 P P 00 07 03.9 0.0
HON Honolulu 47.29 27 P P 00 07 05.0 +0.8
HON Honolulu 47.29 27 P P 00 07 05.0 +0.8
HON pmax pmax
comp=Z,488nm,0.8s
KIP Kipapa 47.37 27 P P 00 07 05.0 +0.1
KIP Kipapa 47.37 27 P P 00 07 05.0 +0.1
KIP Kipapa 47.37 27 *i*P P 00 07 05.4 +0.5
KIP pmax pmax
comp=Z,168nm,1.0s
HLK Haleakala 47.58 30 P P 00 07 06.9 +0.2
FORT Forrest 47.87 247 P P 00 07 08.6 0.0
FORT IAmb IAmb 00 07 09.0
comp=Z,75nm,0.6s
FORT Forrest 47.87 247 P P 00 07 08.3 -0.3
MTN Manton Dam 48.04 272 P P 00 07 09.2 -0.8
MTN Manton Dam 48.04 272 P P 00 07 08.9 -1.1
WRKA Warakurna 48.11 255 P P 00 07 10.2 -0.3
MIDW Midway 49.40 2 P P 00 07 19.4 -0.3
MIDW Midway 49.40 2 P P 00 07 19.3 -0.4
MIDW Midway 49.40 2 P P 00 07 19.2 -0.5
KNRA Kununurra 49.46 267 P P 00 07 20.6 +0.1
KNRA Kununurra 49.46 267 P P 00 07 20.0 -0.5
SAUI Saumlaki 49.48 278 P P 00 07 20.4 -0.2
SAUI Saumlaki 49.48 278 P P 00 07 20.9 +0.2
GUMO Guam 49.54 311 P P 00 07 20.7 -0.3
GUMO Guam 49.54 311 P P 00 07 21.0 0.0
GUMO Guam 49.54 311 P P 00 07 20.7 -0.3
GUMO pmax pmax
comp=Z,557nm,0.7s
GUMO Guam 49.54 311 P P 00 07 20.7 -0.3
FAKI Fak Fak 50.61 284 P P 00 07 28.3 -0.6
FAKI Fak Fak 50.61 284 P P 00 07 28.2 -0.7
FITZ Fitzroy Crossi 51.77 263 P P 00 07 37.4 +0.1
FITZ Fitzroy Crossi 51.77 263 P P 00 07 37.3 +0.1
BNDI Bandanaira 52.08 281 P P 00 07 39.4 0.0
DRV Dumont d'Urvil 52.09 199 P P 00 07 39.6 +1.0
SOEI Soe 55.39 273 P P 00 08 04.6 +1.7
SOEI Soe 55.39 273 P P 00 08 04.1 +1.2
PSA00 Pilbara Seismi 56.34 258 P P 00 08 08.7 -0.5
PSA00 IAmb IAmb 00 08 09.7
comp=Z,160nm,1.1s
PSA00 Pilbara Seismi 56.34 258 P P 00 08 07.8 -1.3
PSA00 IAmb IAmb 00 08 09.8
comp=Z,60nm,1.1s
PSA00 Pilbara Seismi 56.34 258 P P 00 08 08.7 -0.5
MEEK Meekatharra 56.53 252 P P 00 08 09.9 -0.5
TNTI Ternate 56.60 286 P P 00 08 10.7 -0.4
TNTI Ternate 56.60 286 P P 00 08 11.0 0.0
KLBR Kellerberrin 56.62 246 P P 00 08 10.8 -0.1
SANI Sanana 56.65 282 P P 00 08 10.6 -0.7
SBA Scott Base 56.86 184 P P 00 08 15.1 +3.4
SBA IAmb IAmb 00 08 16.3
comp=Z,264nm,1.0s
SBA Scott Base 56.86 184 P P 00 08 15.1 +3.4
SBA pmax pmax
comp=Z,263nm,1.0s
SBA Scott Base 56.86 184 P P 00 08 14.9 +3.2
VNDA Vanda 56.88 185 P P 00 08 14.1 +2.3
VNDA IAmb IAmb 00 08 15.3
comp=Z,350nm,1.8s
VNDA Vanda 56.88 185 P P 00 08 14.1 +2.3
VNDA pmax pmax
comp=Z,350nm,1.8s
VNDA Vanda 56.88 185 P P 00 08 14.2 +2.3
comp=Z,59nm,0.9s,baz=356,slow=7.6,SNR=184
comp=Z,59nm,0.9s
VNDA Vanda 56.88 185 ⇑P P 00 08 14.2 +2.3
VNDA PcP PcP 00 08 59.8 +1.4
VNDA ScP ScP 00 12 01.8 +1.8
NWAO Narrogin (SRO) 56.92 244 P P 00 08 12.9 0.0
NWAO Narrogin (SRO) 56.92 244 P P 00 08 13.2 +0.2
NWAO IAmb IAmb 00 10 11.1
comp=Z,244nm,1.6s
NWAO Narrogin (SRO) 56.92 244 P P 00 08 13.2 +0.2
NWAO pmax pmax
comp=Z,244nm,1.6s
BLDU Ballidu 57.63 247 P P 00 08 17.5 -0.3
MMRI Maumere 57.65 273 P P 00 08 17.9 -0.2
MMRI IAmb IAmb 00 08 18.6
comp=Z,436nm,1.2s
MMRI Maumere 57.65 273 P P 00 08 17.7 -0.5
MORW Morawa 58.41 248 P P 00 08 22.8 -0.3
MORW Morawa 58.41 248 P P 00 08 23.0 -0.1
LUWI Luwuk 59.99 282 P P 00 08 33.9 +0.1
LUWI Luwuk 59.99 282 P P 00 08 33.9 +0.1
JCJ Chichijima 61.02 321 P P 00 08 39.9 -0.4
JCJ Chichijima 61.02 321 P P 00 08 39.7 -0.5
GIRL Giralia 61.20 255 P P 00 08 42.7 +1.1
GIRL Giralia 61.20 255 P P 00 08 42.6 +1.0
KAPI Kappang 61.24 276 P P 00 08 41.2 -0.7
KAPI IAmb IAmb 00 08 42.9
comp=Z,286nm,1.9s
KAPI Kappang 61.24 276 P P 00 08 41.2 -0.7
KAPI pmax pmax
comp=Z,286nm,1.9s
CCD Concordia, Ant 61.27 194 ⇑P P 00 08 43.1 +1.5
CCD PcP PcP 00 09 16.9 +0.3
PLAI Plampang 61.74 271 P P 00 08 44.7 -0.5
CASY Casey 62.62 205 P P 00 08 50.7 +0.7
CASY IAmb IAmb 00 08 52.0
comp=Z,290nm,1.1s
CASY Casey 62.62 205 P P 00 08 50.8 +0.8
CASY PcP PcP 00 09 21.5 -0.3
TOLI2 Tolitoli 62.69 283 P P 00 08 50.6 -0.7
RPN Rapa Nui 63.24 110 P P 00 08 57.1 +2.4
RPN PcP PcP 00 09 27.4 +2.2
JAGI Jajag, Banyuwa 65.24 270 P P 00 09 05.7 -1.7
JAGI IAmb IAmb 00 09 07.0
comp=Z,232nm,1.0s
JAGI Jajag, Banyuwa 65.24 270 P P 00 09 06.1 -1.4
JHJ2 Mitsune 66.87 323 P P 00 09 17.2 +0.1
JHJ2 Mitsune 66.87 323 P P 00 09 17.2 +0.1
QSPA South Pole Qui 68.63 180 P P 00 09 29.2 +1.8
QSPA South Pole Qui 68.63 180 P P 00 09 29.1 +1.7
comp=Z,407nm,0.9s,baz=24,slow=1.3,SNR=622
QSPA S S 00 17 46.2 +3.5
comp=Z,7.4nm,1.0s,baz=164,slow=22,SNR=14
comp=Z,407nm,0.9s
QSPA South Pole Qui 68.63 180 ⇑P P 00 09 29.1 +1.7
QSPA PcP PcP 00 09 48.1 +0.9
UGM Wanagama 68.81 270 P P 00 09 29.3 0.0
UGM Wanagama 68.81 270 P P 00 09 29.1 -0.2
KKM Kota Kinabalu 68.90 286 P P 00 09 30.3 +0.4
KKM IAmb IAmb 00 09 30.6
comp=Z,99nm,0.6s
KKM Kota Kinabalu 68.90 286 P P 00 09 30.1 +0.1
JSG Sagara 68.93 323 P P 00 09 30.5 +1.0
JSG Sagara 68.93 323 P P 00 09 30.1 +0.6
SMRI Semarang 69.18 270 P P 00 09 31.5 0.0
SMRI Semarang 69.18 270 P P 00 09 31.8 +0.3
JOW Kunigami 69.91 311 P P 00 09 35.9 +0.4
JOW Kunigami 69.91 311 P P 00 09 35.6 +0.1
JMM Marumori 69.95 327 P P 00 09 35.8 +0.3
JMM Marumori 69.95 327 P P 00 09 35.5 0.0
JGF Kuroka 70.07 323 P P 00 09 36.2 -0.2
JGF IAmb IAmb 00 09 36.9
comp=Z,98nm,0.6s
JGF Kuroka 70.07 323 P P 00 09 35.9 -0.5
INU Inuyama 70.08 323 P P 00 09 36.5 +0.2
INU Inuyama 70.08 323 P P 00 09 36.1 -0.3
MJAR Matsushiro Arr 70.30 325 P P 00 09 37.1 -0.5
comp=Z,111nm,0.6s,baz=159,slow=5.3,SNR=259
MJAR PKP2bc 00 37 30.1
comp=Z,6.8nm,1.1s,baz=309,slow=4.4,SNR=8.8
comp=Z,111nm,0.6s
MAJO Matsushiro 70.30 325 P P 00 09 37.1 -0.6
MAJO Matsushiro 70.30 325 P P 00 09 37.4 -0.3
MAJO Matsushiro 70.30 325 *d*/P P 00 09 37.2 -0.4
MAJO pmax pmax
comp=Z,151nm,0.7s
MAJO Matsushiro 70.30 325 P P 00 09 37.3 -0.4
MJB9 Matsu-Tunnel 70.31 325 P P 00 09 38.5 +0.8
JMN Monobe 70.75 320 P P 00 09 40.8 +0.4
JMN Monobe 70.75 320 P P 00 09 41.0 +0.6
SBUM Sibu 71.04 280 P P 00 09 43.0 +0.5
BBJI Bungbulang 71.64 269 P P 00 09 45.1 -0.9
JTM Tenmabayashi 72.08 329 P P 00 09 48.3 +0.5

JTM Tenmabayashi 72.08 329 P P 00 09 48.4 +0.5
ERM Erimo 72.09 331 P P 00 09 49.0 +1.1
ERM IAmb IAmb 00 09 51.1
comp=Z,102nm,0.8s
ERM Erimo 72.09 331 P P 00 09 49.0 +1.1
ERM Erimo 72.09 331 *ce*P P 00 09 49.4 +1.5
ERM pmax pmax
comp=Z,121nm,0.8s
JEM Erimo 72.09 331 P P 00 09 48.9 +1.0
JNU Nakatsue 72.19 318 P P 00 09 48.5 -0.2
JNU Nakatsue 72.19 318 P P 00 09 48.3 -0.4
YOJ Yonaguni jima 72.35 306 P P 00 09 49.8 0.0
YOJ Yonaguni jima 72.35 306 P P 00 09 50.0 +0.2
YOJ Yonaguni jima 72.35 306 P P 00 09 49.8 0.0
YOJ pmax pmax
comp=Z,604nm,1.3s
KSM Kuching 72.42 279 P P 00 09 50.6 +0.2
KSM IAmb IAmb 00 09 51.8
comp=Z,139nm,0.7s
KSM Kuching 72.42 279 P P 00 09 50.9 +0.4
XMIS Christmas Isla 72.49 265 P P 00 09 49.8 -1.1
XMIS IAmb IAmb 00 09 51.7
comp=Z,64nm,1.1s
TWGBT Beinan 72.93 304 P P 00 09 51.8 -1.4
TWG Pinlang 72.93 304 P P 00 09 51.5 -1.7
KIWB Kanaga Island 73.00 1 P P 00 09 52.4 -0.5
ADK Adak 73.04 2 P P 00 09 52.2 -0.9
ADK Adak 73.04 2 P P 00 09 52.7 -0.4
ADK Adak 73.04 2 P P 00 09 52.2 -0.9
ADK pmax pmax
comp=Z,306nm,0.7s
YULB Yu-li 73.07 304 P P 00 09 53.1 -0.8
YULB IAmb IAmb 00 09 56.2
comp=Z,119nm,0.6s
YULB Yu-li 73.07 304 P P 00 09 52.7 -1.3
NACB Ninganchiao 73.27 305 P P 00 09 54.6 -0.5
NACB Ninganchiao 73.27 305 P P 00 09 54.3 -0.7
GSTR Great Sitkin T 73.27 2 P P 00 09 54.2 -0.3
ATKA Atka Island 73.46 3 P P 00 09 54.6 -0.9
ATKA Atka Island 73.46 3 P P 00 09 55.0 -0.5
TPUB Ta-pu 73.53 304 P P 00 09 55.3 -1.3
SSLB Suanglung 73.55 304 P P 00 09 56.0 -0.7
SSLB Suanglung 73.55 304 P P 00 09 55.6 -1.1
YHNB Yeheng 73.70 305 P P 00 09 57.5 -0.2
YHNB Yeheng 73.70 305 P P 00 09 57.2 -0.4
TATO Taipei 73.79 306 P P 00 09 57.8 -0.2
TATO Taipei 73.79 306 P P 00 09 57.8 -0.2
ASAJ Asahikawa 74.02 332 P P 00 10 00.3 +1.5
comp=Z,176nm,0.8s,baz=219,slow=7.1,SNR=76
comp=Z,176nm,0.8s
SHEM Shemya Is, Ala 74.08 356 P P 00 09 58.4 -0.6
comp=Z,304nm,0.8s,baz=270,slow=22,SNR=14
comp=Z,304nm,0.8s
CLES Cleveland East 74.40 6 P P 00 10 01.0 +0.3
NIKH Nikolski High 74.65 6 P P 00 10 01.7 -0.5
NIKH Nikolski High 74.65 6 P P 00 10 01.6 -0.5
baz=190,SNR=16
SKR Severo-Kuril's 75.04 344 *e*P P 00 10 02.8 -1.5
SKR *e*S S 00 19 01.8 +8.0
SKR pmax pmax
comp=Z,1µm,4.9s
UNV Unalaska Valle 75.78 8 P P 00 10 07.4 -1.0
UNV Unalaska Valle 75.78 8 P P 00 10 07.4 -1.0
baz=192,SNR=10
KNMB Chin-men Tao 75.89 304 IAmb IAmb 00 10 11.0
comp=Z,149nm,0.8s
QZH Quanzhou 75.98 304 ⇓*i*P P 00 10 10.7 +0.5
QZH S S 00 19 05.6 +0.6
QZH pmax pmax
comp=Z,260nm,0.8s
QZH pmax pmax
comp=Z,440nm,4.2s
AKUT Akutan 76.15 8 P P 00 10 09.2 -1.2
AKUT IAmb IAmb 00 10 11.3
comp=Z,88nm,0.8s
AKUT Akutan 76.15 8 P P 00 10 09.5 -0.9
YSS Yuzh-Sakhalins 76.23 334 P P 00 10 11.4 +0.3
YSS IAmb IAmb 00 10 14.9
comp=Z,139nm,0.7s
YSS Yuzh-Sakhalins 76.23 334 P P 00 10 12.3 +1.3
YSS Yuzh-Sakhalins 76.23 334 *k*P P 00 10 11.9 +0.9
YSS *e* 00 10 20.4
YSS *e**PP pP 00 12 17.9 +1.4
YSS *e* 00 13 12.5
YSS *e*PPP PPP 00 15 06.0
YSS *e*S S 00 19 06.1 -0.7
YSS *e* 00 19 21.4
YSS *e*SSS SSS 00 27 49.0
YSS pmax pmax
comp=Z,150nm,0.7s
YSS pmax pmax
comp=N,300nm,2.5s
YSS pmax pmax
comp=E,100nm,2.5s
YSS pmax pmax
comp=Z,600nm,2.5s
YSS smax smax
comp=N,400nm,7.2s
YSS smax smax
comp=E,300nm,4.9s
YSS MLR MLR
comp=Z,200nm,15.0s
TJN Taejon 76.50 318 P P 00 10 14.2 +1.5
TJN Taejon 76.50 318 *ce*P P 00 10 13.2 +0.5
PET Petropavlovsk 76.61 346 P P 00 10 12.5 -0.5
PET IAmb IAmb 00 10 13.0
comp=Z,72nm,0.8s
PET Petropavlovsk 76.61 346 *e*P P 00 10 12.2 -0.7
PET *e*S S 00 19 07.3 -3.1
PET pmax pmax
comp=Z,142nm,0.7s
PET pmax pmax
comp=Z,200nm,11.1s
KSRS Korea Array 76.84 319 P P 00 10 15.2 +0.7
comp=Z,36nm,0.9s,baz=142,slow=6.3,SNR=65
comp=Z,36nm,0.9s
KSAR Wonju Array Be 76.86 319 P P 00 10 15.6 +0.9
KSAR Wonju Array Be 76.86 319 P P 00 10 15.6 +0.9
PEA0B Petropavlovsk- 76.89 346 P P 00 10 14.7 +0.2
PEA0B Petropavlovsk- 76.89 346 *ce*P P 00 10 14.5 0.0
PETK Petropavlovsk- 76.89 346 P P 00 10 14.2 -0.3
PETK pwP 00 12 22.6 -1.1
PETK Petropavlovsk- 76.89 346 P P 00 10 14.2 -0.3
PETK Petropavlovsk- 76.89 346 P P 00 10 13.5 -1.1
comp=Z,205nm,0.9s,baz=125,slow=6.3,SNR=143
comp=Z,205nm,0.9s
KS19 Wonju Array Si 76.91 319 P P 00 10 14.9 -0.1
KS19 IAmb IAmb 00 10 16.0
comp=Z,69nm,1.1s
MNAI Manna 77.09 270 P P 00 10 16.6 +0.1
MNAI IAmb IAmb 00 10 36.1
comp=Z,130nm,0.8s
FALS False Pass 77.19 9 P P 00 10 15.4 -0.6
baz=195
TEY Ternei 77.44 330 ⇓*e*P P 00 10 15.3 -2.3
TEY pmax pmax
comp=Z,20nm,1.8s
TEY pmax pmax
comp=Z,200nm,1.9s
INCN Inchon 77.65 319 P P 00 10 18.7 -0.3
INCN IAmb IAmb 00 10 20.8
comp=Z,138nm,1.1s
INCN Inchon 77.65 319 P P 00 10 19.7 +0.7
INCN Inchon 77.65 319 P P 00 10 18.7 -0.3
INCN pmax pmax
comp=Z,138nm,1.1s
CNBA Chernabura Isl 77.80 11 P P 00 10 18.8 -0.5
CNBA IAmb IAmb 00 10 20.0
comp=Z,316nm,1.4s
CHNA Chernabura Isl 77.81 11 P P 00 10 19.0 -0.4
baz=199
H06E1 SOCORRO T-PHAS 77.88 64 P P 00 10 22.4 +1.8
SNR=18
SMAI San Martin Ant 78.14 159 P P 00 10 23.4 +2.3
SDPT Sand Point 78.14 11 P P 00 10 20.6 -0.5
SDPT Sand Point 78.14 11 P P 00 10 20.5 -0.6
baz=198
HKPS Hong Kong Po S 78.16 300 P P 00 10 23.0 +1.0
HKPS Hong Kong Po S 78.16 300 P P 00 10 23.3 +1.3
UGL Uglegorsk 78.22 335 *e*P P 00 10 22.2 +0.5
UGL *e*S S 00 19 30.8 +3.3
UGL pmax pmax
comp=Z,300nm,0.9s
DLV T Lat 78.31 288 P P 00 10 24.4 +1.2
DLV IAmb IAmb 00 10 25.3
comp=Z,104nm,0.7s
DLV T Lat 78.31 288 P P 00 10 24.3 +1.1
HJU Haeju 78.56 319 P P 00 10 23.8 0.0
HJU S S 00 19 34.1 +2.6
HJU AmB
comp=Z,524nm,1.6s
PSTR Posyet 78.66 325 *d*P P 00 10 25.0 +0.8
SPIA Saint Paul Isl 78.68 5 P P 00 10 23.6 -0.4
baz=189
HHU Hamhung 78.68 321 P P 00 10 25.1 +0.7
HHU AmB
comp=Z,507nm,1.6s
BELA Belgrano 2 78.77 173 P P 00 10 25.0 +0.6
USA0B Ussuriysk Arra 79.11 327 P P 00 10 27.4 +0.8
USA0B IAmb IAmb 00 10 28.7
comp=Z,203nm,1.0s
USA0B Ussuriysk Arra 79.11 327 *d*P P 00 10 27.3 +0.8
USRK Ussuriysk Ar. 79.11 327 P P 00 10 27.9 +1.3
USRK Ussuriysk Ar. 79.11 327 P P 00 10 27.9 +1.3
USRK Ussuriysk Ar. 79.11 327 P P 00 10 27.3 +0.7
comp=Z,165nm,1.0s,baz=123,slow=3.0,SNR=155
comp=Z,165nm,1.0s
PYAG Pyongyang 79.17 319 P P 00 10 27.4 +0.4
PYAG S S 00 19 41.0 +3.2
PYAG AmB
comp=Z,193nm,0.9s
S14K Fog Glacier 79.19 11 P P 00 10 27.0 +0.1
baz=199
SCI2 San Clemente I 79.25 48 P P 00 10 28.7 +1.1
baz=236
CHGN Chignik 79.42 12 P P 00 10 28.0 +0.1
CHGN Chignik 79.42 12 P P 00 10 27.7 -0.2
baz=200
TYV Tymovskoe 79.44 337 *e*P P 00 10 28.9 +0.8
TYV *e*S S 00 19 41.4 +1.4
TYV pmax pmax
comp=Z,700nm,1.9s
TYV pmax pmax
comp=Z,191nm,1.2s
TYV smax smax
comp=N,13nm,1.9s
TYV smax smax
comp=E,10.0nm,1.9s
TYV smax smax
comp=N,800nm,5.2s
TYV smax smax
comp=E,300nm,5.2s
PKM Mcpherson Peak 79.47 46 P P 00 10 30.4 +1.5
baz=235,SNR=5.9
SAO San Andreas Ge 79.50 44 P P 00 10 29.6 +0.8
SAO San Andreas Ge 79.50 44 P P 00 10 29.6 +0.8
SAO pmax pmax
comp=Z,19nm,1.0s
CIS Catalina Islan 79.58 48 P P 00 10 30.0 +0.7
baz=236
PMPB Monarch Peak 79.59 44 P P 00 10 30.3 +0.9
NJ2 Nanjing 79.61 310 ⇓P P 00 10 30.2 +0.7
NJ2 pmax pmax
comp=Z,120nm,0.8s
BBGB Big Mountain B 79.65 44 P P 00 10 30.2 +0.4
BCW Bitter Crk WRg 79.77 46 P P 00 10 30.7 +0.3
CCX Cicese 79.96 50 P P 00 10 31.7 +0.4
OSI Osito Audit: C 80.05 47 P P 00 10 33.0 +1.2
baz=235
COCO West Island 80.07 261 P P 00 10 31.9 -0.4
COCO IAmb IAmb 00 10 34.5
comp=Z,119nm,0.9s
COCO West Island 80.07 261 P P 00 10 31.9 -0.4
COCO pmax pmax
comp=Z,119nm,1.0s
KMPM Mount Pierce 80.09 39 P P 00 10 32.4 +0.5
KMPM IAmb IAmb 00 12 59.5
comp=Z,96nm,1.9s
PASC Pasadena Art C 80.17 47 P P 00 10 33.1 +0.7
CBX Cerro Bola 80.20 50 P P 00 10 33.0 +0.3
CBX IAmb IAmb 00 10 35.2
comp=Z,78nm,1.4s
QIZ Qiongzhong 80.20 295 P P 00 10 33.3 +0.4
QIZ sP sP 00 13 40.1 -0.8
QIZ S S 00 19 50.8 +1.6
QIZ sS sS 00 23 41.6 +5.4
QIZ pmax pmax
comp=Z,26nm,0.9s
QIZ pmax pmax
comp=Z,300nm,4.4s
QIZ Qiongzhong 80.20 295 P P 00 10 32.6 -0.3
QIZ IAmb IAmb 00 10 34.8
comp=Z,99nm,1.7s
109C Camp Elliot, M 80.21 49 P P 00 10 34.2 +1.6
baz=237
KMRM Mail Ridge 80.21 40 P P 00 10 33.1 +0.6
ARVC Arvin 80.27 46 P P 00 10 34.0 +1.1
baz=235
MAW Mawson 80.29 200 P P 00 10 32.5 +0.1
MAW Mawson 80.29 200 P P 00 10 32.5 +0.1
MAW pmax pmax
comp=Z,16nm,0.9s
MAW Mawson 80.29 200 P P 00 10 33.4 +1.0
comp=Z,52nm,0.7s,baz=129,slow=6.5,SNR=29
comp=Z,52nm,0.7s
VTX Valle De La Tr 80.34 51 P P 00 10 33.4 0.0
TKX Tecate 80.38 50 P P 00 10 33.3 -0.2
BAR Barrett 80.40 49 P P 00 10 34.0 +0.3
ELS Elsinore Mount 80.40 48 P P 00 10 34.4 +0.7
VES Vestal, Richgr 80.50 46 P P 00 10 35.0 +0.9
baz=235,SNR=5.2
MURC Murrieta 80.53 48 P P 00 10 35.7 +1.3
baz=236,SNR=7.8
ESJX Sierra Juarez 80.55 50 P P 00 10 35.8 +1.1
BKNI Bangkinang 80.56 274 P P 00 10 34.4 -0.5
BKNI IAmb IAmb 00 10 36.8
comp=Z,89nm,1.0s
BKNI Bangkinang 80.56 274 P P 00 10 34.9 0.0
BFSC Mount Baldy Ra 80.57 48 P P 00 10 35.5 +0.9
baz=236,SNR=6.1
SUJ Sinuiju 80.59 320 P P 00 10 34.3 -0.1
SUJ sP PP 00 13 56.5 +6.4
SUJ S SKSac 00 19 54.7 -0.2
SUJ AmB
comp=Z,760nm,1.8s
KHMM Horse Mountain 80.60 39 P P 00 10 35.0 +0.4
MDJ Mudanjiang 80.64 326 P P 00 10 35.2 +0.7
MDJ pP pwP 00 12 47.0 +1.4
MDJ sP sP 00 13 42.5 -1.0
MDJ S S 00 19 54.4 +1.9
MDJ pmax pmax
comp=Z,130nm,1.0s
MDJ pmax pmax
comp=Z,780nm,3.6s
MDJ Mudanjiang 80.64 326 P P 00 10 35.1 +0.5
MDJ IAmb IAmb 00 10 36.0
comp=Z,93nm,0.9s
MDJ Mudanjiang 80.64 326 P P 00 10 35.3 +0.7
MONP2 Monument Peak 80.69 49 P P 00 10 37.0 +1.6
baz=237,SNR=35
EDW2 Edwards Air Fo 80.69 47 P P 00 10 36.6 +1.4
baz=236,SNR=15
RMX La Rumorosa 80.78 50 P P 00 10 37.1 +1.3
IKP In-Ko-Pah, Jac 80.78 50 P P 00 10 37.3 +1.6
baz=237,SNR=20
ISA Isabella, Lake 80.81 46 P P 00 10 36.8 +1.0
ISA Isabella, Lake 80.81 46 P P 00 10 37.3 +1.5
baz=235,SNR=7.7
ISA Isabella, Lake 80.81 46 P P 00 10 36.8 +1.0
ISA pmax pmax
comp=Z,34nm,0.9s
CCAC Calif City Air 80.83 47 P P 00 10 36.6 +0.8
SFX San Felipe 80.83 52 P P 00 10 37.2 +1.4
PMSA Palmer Station 80.88 157 P P 00 10 36.5 +1.1
SRIG Santa Rosalia 80.90 56 P P 00 10 36.9 +0.6
SRIG IAmb IAmb 00 10 38.9
comp=Z,106nm,1.1s
YUH Yuha Desert 80.91 50 P P 00 10 37.0 +0.7
CMB Columbia Colle 80.93 43 P P 00 10 37.1 +0.9
CMB Columbia Colle 80.93 43 P P 00 10 37.2 +0.9
CMB pmax pmax
comp=Z,28nm,1.1s
SLBS Sierra La Lagu 80.97 60 P P 00 10 37.6 +0.7
SLBS IAmb IAmb 00 10 39.2
comp=Z,42nm,0.8s
PFO Pinyon Flats O 81.05 49 P P 00 10 37.8 +0.7
PFO Pinyon Flats O 81.05 49 P P 00 10 38.6 +1.5
baz=237,SNR=8.6
PFO Pinyon Flats O 81.05 49 *i*P P 00 10 38.0 +0.9
PFO pmax pmax
comp=Z,25nm,1.0s
TPFO Pinon Flats 81.05 49 P P 00 10 38.5 +1.4
baz=237,SNR=8.4
AFDM Forest Hills D 81.10 42 P P 00 10 38.2 +1.0
PMD Palm Desert 81.13 49 P P 00 10 37.8 +0.4
ORV Oroville 81.14 41 P P 00 10 38.1 +0.8
ORV Oroville 81.14 41 P P 00 10 38.1 +0.8
ORV pmax pmax
comp=Z,15nm,1.0s
SWSC Sam W. Stewart 81.16 50 P P 00 10 39.0 +1.5
baz=237,SNR=14
CPBX Cerro Prieto 81.23 50 P P 00 10 38.6 +0.7
CPBX IAmb IAmb 00 10 43.7
comp=Z,40nm,0.8s
LRMC Laurel Mtn Rad 81.24 47 P P 00 10 39.2 +1.2
baz=236,SNR=8.7
OHAK Old Harbor 81.33 14 P P 00 10 37.2 -0.6
OHAK IAmb IAmb 00 10 39.1
comp=Z,141nm,1.4s
OHAK Old Harbor 81.33 14 P P 00 10 38.0 +0.3
baz=204
RRX Edison Barstow 81.37 47 P P 00 10 39.6 +1.0
baz=236
R18K Karluk 81.39 13 P P 00 10 38.7 +0.6
baz=203
CWC Cottonwood Cre 81.51 46 P P 00 10 40.4 +0.9
baz=236
MDPB Devils Postpil 81.54 44 P P 00 10 40.8 +1.1
BELC Belle Mtn. Jos 81.59 49 P P 00 10 41.2 +1.3
baz=237,SNR=27
DL2 Dalian 81.64 317 P P 00 10 40.0 +0.2
DL2 *ep*P pP 00 12 47.6 +0.3
DL2 S SKSac 00 20 02.3 +0.4
DL2 pmax pmax
comp=Z,78nm,0.9s
DL2 pmax pmax
comp=Z,320nm,4.6s
MLAC Mammoth, Mammo 81.69 44 P P 00 10 42.0 +1.5
baz=235
MPMC Manual Prospec 81.69 46 P P 00 10 41.6 +1.1
baz=236,SNR=30
GSC Goldstone, Bar 81.74 47 P P 00 10 40.6 +0.1
GSC Goldstone, Bar 81.74 47 P P 00 10 41.7 +1.1
baz=236,SNR=22
GSC Goldstone, Bar 81.74 47 P P 00 10 40.6 +0.1
GSC pmax pmax
comp=Z,25nm,1.0s
YBH Yreka Blue Hor 81.74 39 P P 00 10 41.2 +0.8
YBH Yreka Blue Hor 81.74 39 P P 00 10 41.2 +0.8
YBH pmax pmax
comp=Z,56nm,2.0s
Q17K Contact Creek 81.74 12 P P 00 10 39.8 -0.2
baz=202,SNR=6.3
O14K Tigyukauivet M 81.75 9 P P 00 10 39.8 0.0
baz=197
TIN Tinemaha, Big 81.76 45 P P 00 10 42.1 +1.4
baz=235,SNR=11
BC3 Big Chuckawall 81.78 49 P P 00 10 42.5 +1.7
baz=238,SNR=18
K02D Willamette Mer 81.79 38 P P 00 10 42.2 +1.6
HEC Hector,Ludlow 81.80 48 P P 00 10 41.8 +1.0
baz=237,SNR=14
WAKR Walker 81.81 43 P P 00 10 41.8 +0.8
GRNR Gornyy 81.82 333 ⇓*i*P P 00 10 41.6 +1.1
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=N,30nm,1.0s
GRNR pmax pmax
comp=Z,120nm,1.0s
MPK Martis Peak 81.90 42 P P 00 10 42.6 +1.1
MPK IAmb IAmb 00 10 44.0
comp=Z,43nm,0.9s
O15K Ungalikthiuk R 81.90 10 P P 00 10 40.6 0.0
baz=198
GLA Glamis 81.91 50 P P 00 10 43.0 +1.6
GLA Glamis 81.91 50 P P 00 10 43.0 +1.6
Q16K King Salmon 81.98 12 P P 00 10 41.0 0.0
baz=201,SNR=7.1
KDAK Kodiak Island 82.00 14 P P 00 10 41.3 +0.2
baz=205
PNTR Pine Nut 82.05 43 P P 00 10 42.4 +0.3
PNTR IAmb IAmb 00 10 44.6
comp=Z,67nm,0.8s
QSM Queen of Sheba 82.06 47 P P 00 10 42.6 +0.5
QSM pP 00 12 50.2 +0.2
P16K Nushagak River 82.07 11 P P 00 10 41.4 -0.1
baz=200,SNR=9.9
WHN Wuhan 82.09 307 ⇓P P 00 10 42.8 +0.5
WHN SKS SKSac 00 20 04.9 -0.3
WHN S SKKSac 00 20 09.9 -0.4
WHN pmax pmax
comp=Z,180nm,0.9s
DSP Deep Springs 82.11 45 P P 00 10 43.3 +1.1
PIX Pinacate 82.12 52 P P 00 10 43.2 +0.8
IPM Ipoh 82.12 278 P P 00 10 42.3 -0.6
IPM Ipoh 82.12 278 P P 00 10 43.2 +0.3
HUMO Hull Mountain 82.14 38 P P 00 10 43.7 +1.4
SNY Shenyang 82.20 321 ⇓P P 00 10 42.6 +0.1
SNY pP pP 00 12 50.5 +0.3
SNY sP sP 00 13 49.3 -2.4
SNY S SKSac 00 20 03.1 -2.3
SNY pmax pmax
comp=Z,95nm,0.7s
SNY pmax pmax
comp=Z,360nm,5.4s
YERR Yerington 82.21 43 P P 00 10 43.7 +0.7
M11K Mekoryuk 82.22 6 P P 00 10 43.6 +1.4
baz=192,SNR=25
GMRC Granite Mounta 82.28 48 P P 00 10 43.2 0.0
baz=237,SNR=17
LHV Little Huntoon 82.26 44 P P 00 10 43.9 +1.0
IRM Iron Mountain 82.27 49 P P 00 10 44.8 +1.7
baz=238,SNR=32
L04D Klamath Falls 82.28 39 P P 00 10 44.0 +0.8
GRAC Grapevine Rang 82.30 45 P P 00 10 44.0 +0.7
GRAC IAmb IAmb 00 10 45.9
comp=Z,93nm,1.4s
GRAC Grapevine Rang 82.30 45 P P 00 10 44.9 +1.6
baz=236,SNR=14
GWY Greenwater Val 82.32 46 P P 00 10 43.9 +0.4
N14K Kuskokwak Cree 82.33 9 P P 00 10 43.5 +0.8
baz=196
FURC Furnace Creek, 82.34 46 P P 00 10 44.4 +1.0
baz=236,SNR=11
CN2 Changchun 82.35 323 P P 00 10 43.5 +0.2
CN2 pP pP 00 12 51.5 +0.4
CN2 S S 00 20 11.4 +1.7
CN2 pmax pmax
comp=Z,160nm,1.2s
UBPT Khong Chiam 82.36 290 P P 00 10 43.8 -0.2
UBPT IAmb IAmb 00 10 46.0
comp=Z,127nm,1.4s
UBPT Khong Chiam 82.36 290 P P 00 10 44.7 +0.7
TUQ Turquoise Moun 82.41 47 P P 00 10 45.0 +1.0
baz=237,SNR=13
SHOC Shoshone, Teco 82.43 47 P P 00 10 44.8 +0.9
baz=237,SNR=6.6
RYN Ryan 82.47 44 P P 00 10 44.8 +0.6
BLYC Blythe 82.49 49 P P 00 10 45.1 +0.8
NVAR Mina Array Bea 82.49 44 P P 00 10 44.8 +0.3
NVAR Mina Array Bea 82.49 44 P P 00 10 45.5 +1.1
comp=Z,17nm,0.8s,baz=224,slow=8.6,SNR=97
NVAR PKKPbc PKKPbc 00 29 07.1 +0.6
comp=Z,1.4nm,0.7s,baz=86,slow=2.4,SNR=9.3
NVAR PKPPKP P'P'df 00 37 11.2 +1.9
comp=Z,2.9nm,1.0s,baz=101,slow=1.6,SNR=10
comp=Z,17nm,0.8s
P17K Kvichak River 82.51 12 P P 00 10 43.6 -0.1
baz=201
113A Mohawk Valley, 82.52 51 P P 00 10 45.2 +0.8
GMN Gold Mountain 82.54 45 P P 00 10 45.0 +0.3
BNX BinXian 82.54 325 ⇓P P 00 10 44.0 -0.2
BNX pP pwP 00 12 54.8 -0.6
BNX sP sP 00 13 56.6 +3.1
BNX PP PP 00 14 06.0 +0.3
BNX S SKSac 00 20 09.3 +1.8
BNX pmax pmax
comp=Z,170nm,0.9s
BNX pmax pmax
comp=Z,170nm,5.4s
PAHR Pah Rah Range 82.54 42 P P 00 10 45.2 +0.6
M13K Dall Lake 82.58 8 P P 00 10 44.5 +0.5
M13K IAmb IAmb 00 10 46.1

M13K Dall Lake 82.58 8 P P 00 10 45.0 +1.0
baz=195
O16K Kokwok River B 82.58 11 P P 00 10 43.2 -0.8
O16K IAmb IAmb 00 10 44.3
comp=Z,94nm,0.9s
O16K Kokwok River B 82.58 11 P P 00 10 43.4 -0.7
baz=200
NV11 Mina Array Sit 82.59 44 P P 00 10 40.0 -4.8
I03D Drain, OR 82.60 37 P P 00 10 44.1 -0.4
WCT Wildcat Mounta 82.68 46 P P 00 10 46.0 +0.8
MZP Montezuma Peak 82.68 45 P P 00 10 45.7 +0.3
HSIG 82.73 55 P P 00 10 46.6 +1.0
HSIG IAmb IAmb 00 10 48.0
comp=Z,53nm,0.9s
KLR Kul'dur 82.76 330 ceP P 00 10 45.8 +0.6
KLR pmax pmax
comp=Z,61nm,0.9s
KLR Kul'dur 82.76 330 P P 00 10 45.9 +0.7
comp=Z,47nm,0.8s,baz=106,slow=4.0,SNR=148
KLR S SKSac 00 20 07.8 -0.9
comp=Z,0.4nm,0.4s,baz=20,slow=22,SNR=10
comp=Z,47nm,0.8s
KULM Kulim 82.77 279 P P 00 10 45.7 -0.4
KULM IAmb IAmb 00 10 47.4
comp=Z,65nm,0.7s
214A Organ Pipe Nat 82.80 52 P P 00 10 47.0 +1.2
214A Organ Pipe Nat 82.80 52 P P 00 10 47.6 +1.8
baz=239,SNR=22
N15K Kwethluk River 82.80 10 P P 00 10 45.9 +0.7
N15K Kwethluk River 82.80 10 P P 00 10 46.2 +1.1
baz=198
P18K Big Mountain, 82.92 12 P P 00 10 45.5 -0.3
P18K IAmb IAmb 00 10 45.9
comp=Z,88nm,0.7s
P18K Big Mountain, 82.92 12 P P 00 10 45.3 -0.5
baz=202
O17K Koliganek Bris 82.93 11 P P 00 10 45.4 -0.3
baz=201
NEE2 Needles Airpor 82.96 49 P P 00 10 47.9 +1.3
baz=238
KVN Kaiserville 82.98 43 P P 00 10 47.3 +0.5
KVN Kaiserville 82.98 43 P P 00 10 47.3 +0.5
KVN pmax pmax
comp=Z,25nm,1.0s
TPH Tonopah 83.00 45 P P 00 10 47.7 +0.8
TPH IAmb IAmb 00 10 49.1
comp=Z,137nm,0.9s
TPH Tonopah 83.00 45 P P 00 10 47.7 +0.8
TPH pmax pmax
comp=Z,137nm,0.9s
TPNV Topopah Spring 83.02 46 P P 00 10 47.8 +0.8
TPNV Topopah Spring 83.02 46 P P 00 10 48.2 +1.2
baz=237
TPNV Topopah Spring 83.02 46 P P 00 10 47.8 +0.8
TPNV pmax pmax
comp=Z,28nm,1.0s
PDMCI Parker Dam,Lak 83.05 49 P P 00 10 48.5 +1.5
baz=238,SNR=24
M14K Bethel 83.09 8 P P 00 10 47.0 +0.5
M14K Bethel 83.09 8 P P 00 10 47.1 +0.5
baz=196,SNR=15
I04A Tendick Farm, 83.19 38 P P 00 10 47.8 +0.3
M15K Kasigluk River 83.22 9 P P 00 10 47.8 +0.6
baz=197,SNR=27
MG04 Isla Riesco 83.24 144 P P 00 10 48.8 +1.1
MG04 IAmb IAmb 00 10 50.7
comp=Z,141nm,0.8s
N16K Nishlik Lake 83.30 10 P P 00 10 48.5 +0.8
baz=199,SNR=17
V12A Nelson 83.31 48 P P 00 10 49.1 +0.7
O18K Koktuh Hills 83.35 12 P P 00 10 47.4 -0.6
O18K Koktuh Hills 83.35 12 P P 00 10 47.9 -0.1
baz=202,SNR=17
GO10 Punta Arenas 83.39 145 P P 00 10 50.2 +1.7
RPSI Rantau Prapat 83.40 275 P P 00 10 48.2 -1.0
RPSI IAmb IAmb 00 10 49.8
comp=Z,61nm,0.9s
K05A Summer Lake 83.41 39 P P 00 10 49.6 +0.7
PSI Prapat 83.44 276 P P 00 10 48.7 -0.9
PSI Prapat 83.44 276 P P 00 10 48.2 -1.4
PSI pmax pmax
comp=Z,61nm,0.9s
WTNK Soaring Height 83.45 47 P P 00 10 49.5 +0.5
Q09A Carvers 83.45 44 P P 00 10 49.4 +0.3
Q09A IAmb IAmb 00 10 58.9
comp=Z,34nm,0.8s
SKLT Songkhla 83.51 280 P P 00 10 51.3 +1.5
SHPR Sheep Range 83.51 47 P P 00 10 50.1 +0.7
GO09 Cerro Castillo 83.52 143 P P 00 10 50.4 +1.2
GO09 IAmb IAmb 00 10 53.5
comp=Z,111nm,1.1s
J05D Fort Rock, OR 83.55 39 P P 00 10 50.3 +0.8
J05D IAmb IAmb 00 10 58.6
comp=Z,95nm,1.8s
L14K Kuka Creek 83.56 8 P P 00 10 49.2 +0.4
L14K IAmb IAmb 00 10 50.6
comp=Z,92nm,1.1s
L14K Kuka Creek 83.56 8 P P 00 10 49.5 +0.6
baz=196,SNR=18
P19K Oil Pt 83.56 13 P P 00 10 48.4 -0.6
P19K IAmb IAmb 00 10 49.4
comp=Z,90nm,0.7s
P19K Oil Pt 83.56 13 P P 00 10 48.9 -0.1
baz=204
N17K Nushagak Hills 83.62 11 P P 00 10 49.5 +0.3
N17K IAmb IAmb 00 10 50.3
comp=Z,52nm,1.4s
N17K Nushagak Hills 83.62 11 P P 00 10 49.2 0.0
baz=201
W13A Hualapai Mount 83.65 49 P P 00 10 50.8 +0.6
Y14A Wickenburg 83.67 50 P P 00 10 51.1 +0.9
S11A Rachel 83.73 46 P P 00 10 50.7 +0.1
M16K Timber Creek 83.79 10 P P 00 10 50.8 +0.7
M16K Timber Creek 83.79 10 P P 00 10 51.1 +1.1
baz=199
O19K Port Alsworth 83.84 12 P P 00 10 49.8 -0.5
O19K Port Alsworth 83.84 12 P P 00 10 49.8 -0.5
baz=203,SNR=32
H04A Detroit Lake 83.87 37 P P 00 10 50.9 0.0
CNPM China Poot 83.88 14 P P 00 10 49.8 -0.7
CNPM IAmb IAmb 00 10 51.7
comp=Z,83nm,0.8s
HOM Homer 83.91 14 P P 00 10 50.7 +0.1
baz=206
N18K Kilae Creek 83.99 11 P P 00 10 50.5 -0.6
N18K IAmb IAmb 00 10 51.9
comp=Z,107nm,1.6s
N18K Kilae Creek 83.99 11 P P 00 10 50.6 -0.4
baz=202
PINE Pine Mountain 84.03 38 P P 00 10 53.1 +1.2
L15K Ungalak Mounta 84.05 8 P P 00 10 51.3 0.0
baz=197
PRN Pahroc Range 84.07 46 P P 00 10 53.2 +1.0
PRN IAmb IAmb 00 10 54.8
comp=Z,50nm,1.5s
O20K Slope Mountain 84.08 13 P P 00 10 51.3 -0.3
baz=205,SNR=6.6
GSI Gunungsitoli 84.14 274 P P 00 10 54.2 +1.3
BRLK Bradley Lake 84.17 14 P P 00 10 51.6 -0.4
BRLK IAmb IAmb 00 10 52.9
comp=Z,116nm,0.9s
BRSE Bradley Lake S 84.19 14 P P 00 10 52.0 0.0
baz=207,SNR=12
R11B Troy Canyon, C 84.22 45 P P 00 10 53.3 +0.4
R11B Troy Canyon, C 84.22 45 P P 00 10 53.1 +0.1
baz=237,SNR=7.6
E03A Lebam 84.28 35 P P 00 10 54.0 +1.3
E03A IAmb IAmb 00 10 56.0
comp=Z,40nm,1.1s
BMN Battle Mountai 84.32 43 P P 00 10 53.9 +0.6
BMN pwP 00 13 06.0 +0.8
MG01 Puerto William 84.32 147 P P 00 10 53.8 +0.9
L16K Owhat River 84.37 9 P P 00 10 53.0 +0.2
L16K Owhat River 84.37 9 P P 00 10 53.5 +0.7
baz=198
N19K Bonanza Creek 84.38 12 P P 00 10 52.1 -0.9
N19K IAmb IAmb 00 10 53.3
comp=Z,58nm,0.9s
N19K Bonanza Creek 84.38 12 P P 00 10 52.4 -0.6
baz=203
MA2 Magadan 84.39 345 P P 00 10 52.2 -0.8
MA2 IAmb IAmb 00 10 53.1
comp=Z,100nm,0.9s
MA2 Magadan 84.39 345 P P 00 10 52.4 -0.6
MA2 Magadan 84.39 345 ceP P 00 10 52.4 -0.6
MA2 pmax pmax
comp=Z,219nm,1.7s
MA2 Magadan 84.39 345 P P 00 10 52.5 -0.6
comp=Z,68nm,0.8s,baz=138,slow=5.1,SNR=62
comp=Z,68nm,0.8s
M17K Holitna River 84.40 10 P P 00 10 53.5 +0.5
M17K IAmb IAmb 00 10 55.2
comp=Z,81nm,0.9s
M17K Holitna River 84.40 10 P P 00 10 54.0 +1.0
baz=200
RSO Redoubt South 84.40 13 P P 00 10 52.5 -0.8
SVW2 Sparrevohn 84.44 11 P P 00 10 53.3 0.0
SVW2 IAmb IAmb 00 11 29.5
comp=Z,61nm,1.5s
SVW2 Sparrevohn 84.44 11 P P 00 10 53.0 -0.2
TUC Tucson 84.46 52 P P 00 10 55.0 +0.8
TUC IAmb IAmb 00 10 57.2
comp=Z,38nm,0.9s
TUC Tucson 84.46 52 PcP 00 10 55.4 -1.0
TUC Tucson 84.46 52 P P 00 10 56.0 +1.8
baz=240
TUC Tucson 84.46 52 P P 00 10 55.0 +0.8
TUC pmax pmax
comp=Z,38nm,0.9s
F04A Amboy 84.51 36 P P 00 10 54.7 +0.8
WISH Wishkah 84.53 34 P P 00 10 54.8 +0.8
WISH IAmb IAmb 00 10 57.0
comp=Z,45nm,1.1s
MG02 Cerro Sombrero 84.54 145 P P 00 10 55.6 +1.5
WVOR Wild Horse Val 84.59 40 P P 00 10 54.5 0.0
WVOR Wild Horse Val 84.59 40 P P 00 10 54.5 0.0
WVOR pmax pmax
comp=Z,17nm,1.1s
DIB Dawson Inlet, 84.62 26 P P 00 10 53.9 -0.3
H02S1 DAWSON INLET T 84.63 26 P P 00 10 55.2 +1.0
K15K Wolf Creek Mou 84.64 8 P P 00 10 54.5 +0.3
K15K IAmb IAmb 00 10 57.1
comp=Z,111nm,1.1s
K15K pP 00 13 07.5 +3.6
K15K Wolf Creek Mou 84.64 8 P P 00 10 54.2 +0.1
baz=197
GO08 Villa O'Higgin 84.64 140 P P 00 10 55.3 +0.6
GO08 IAmb IAmb 00 10 57.9
comp=Z,112nm,0.9s
NLWA Neilton Lookou 84.66 34 P P 00 10 55.5 +0.9
M18K Stony River 84.76 11 P P 00 10 54.1 -0.6
baz=202
SEW Seward 84.81 14 P P 00 10 54.3 -0.6
SEW IAmb IAmb 00 10 55.7
comp=Z,56nm,0.9s
SEW Seward 84.81 14 P P 00 10 54.7 -0.2
baz=208,SNR=5.2
J14K Nanvaranak Lak 84.82 7 P P 00 10 54.0 -1.0
J14K Nanvaranak Lak 84.82 7 P P 00 10 55.0 0.0
baz=195
L17K Donlin 84.95 10 P P 00 10 56.4 +0.7
baz=200
SRIT Nakonsritamara 84.98 281 P P 00 10 57.5 +0.6
SRIT Nakonsritamara 84.98 281 P P 00 10 58.9 +1.9
CAPN Captain Cook N 85.02 13 P P 00 10 56.4 +0.4
CAPN Captain Cook N 85.02 13 P P 00 10 57.0 +1.0
baz=206
X16A Lo Mia Camp, P 85.03 50 P P 00 10 58.0 +1.0
I07A Izee 85.03 39 P P 00 10 57.7 +1.0
O22K Cooper Landing 85.08 14 P P 00 10 55.9 -0.3
O22K IAmb IAmb 00 11 02.4
comp=Z,137nm,1.1s
O22K Cooper Landing 85.08 14 P P 00 10 56.1 -0.2
baz=207,SNR=8.5
LCMT Little Creek M 85.09 47 P P 00 10 57.8 +0.7
Q12A Willow Creek R 85.09 45 P P 00 10 57.0 -0.1
AY02 Valle Explorad 85.13 138 P P 00 10 58.9 +1.8
319A Douglas 85.13 54 P P 00 10 58.8 +1.3
319A IAmb IAmb 00 11 00.6
comp=Z,92nm,0.9s
GAMB Gambell 85.14 3 P P 00 10 56.2 -0.3
GAMB IAmb IAmb 00 10 58.2
comp=Z,71nm,1.1s
GAMB Gambell 85.14 3 P P 00 10 56.9 +0.4
baz=187
AY03 Cochrane 85.16 139 P P 00 10 58.3 +1.1
AY03 IAmb IAmb 00 11 00.5
comp=Z,82nm,0.9s
SURA Surathani 85.18 282 P P 00 10 59.9 +2.0
N20K Mount Spurr 85.19 13 P P 00 10 55.8 -1.2
baz=205,SNR=17
P23K Montague Islan 85.20 15 P P 00 10 57.0 0.0
baz=210
J08A Circle Bar Ran 85.22 40 P P 00 10 58.1 +0.6
L18K Granite Mounta 85.29 10 P P 00 10 57.4 +0.1
L18K IAmb IAmb 00 10 58.5
comp=Z,49nm,1.0s
L18K Granite Mounta 85.29 10 P P 00 10 57.9 +0.6
baz=201
GNW Green Mountain 85.31 34 P P 00 10 58.6 +0.9
HNS HongShan 85.34 313 ↓P P 00 10 58.9 +0.8
HNS sP sP 00 14 10.0 +2.0
HNS SKS SKSac 00 20 24.5 -1.0
HNS S ScS 00 20 42.6 -2.8
HNS pmax pmax
comp=Z,110nm,1.0s
LON Longmire 85.35 36 P P 00 10 58.5 +0.4
LON Longmire 85.35 36 P P 00 10 58.5 +0.4
LON pmax pmax
comp=Z,4.0nm,0.8s
KNB Kanab 85.38 47 P P 00 10 59.5 +0.9
KNB Kanab 85.38 47 P P 00 10 59.5 +0.9
KNB pmax pmax
comp=Z,19nm,0.8s
SPR3 Spring Creek 3 85.40 45 P P 00 10 59.0 +0.2
M19K Big River Lodg 85.41 12 P P 00 10 57.4 -0.5
M19K IAmb IAmb 00 10 58.5
comp=Z,36nm,0.7s
M19K Big River Lodg 85.41 12 P P 00 10 57.6 -0.3
baz=203
U15A North Rim 85.44 48 P P 00 10 59.5 +0.5
U15A IAmb IAmb 00 11 01.6
comp=Z,47nm,0.8s
LYN LuoYang 85.47 310 ↓iP P 00 10 59.8 +1.0
LYN pP pP 00 13 06.0 -2.0
LYN PP PP 00 14 24.9 -4.4
LYN SKS SKSac 00 20 24.6 -1.8
LYN S ScS 00 20 44.6 -2.0
LYN pmax pmax
comp=Z,170nm,0.8s
LYN pmax pmax
comp=Z,400nm,3.5s
SZCU Shurtz Canyon 85.50 47 P P 00 11 00.6 +1.5
SZCU pwP 00 13 12.1 -0.1
K17K Iditarod 85.50 10 P P 00 10 59.1 +0.8
K17K IAmb IAmb 00 10 59.8
comp=Z,106nm,1.6s
K17K Iditarod 85.50 10 P P 00 10 58.5 +0.2
baz=200
HEH HeiHe 85.52 329 eP P 00 10 58.7 +0.1
HEH sP sP 00 14 09.7 +0.9
HEH PP PP 00 14 25.1 -4.3
HEH S S 00 20 43.0 +2.9
HEH SS SS 00 26 38.3 +2.8
HEH pmax pmax
comp=Z,150nm,0.6s
HEH pmax pmax
comp=Z,630nm,4.3s
D05A Enumclaw 85.52 35 P P 00 10 59.4 +0.7
D05A IAmb IAmb 00 11 08.8
comp=Z,104nm,1.7s
NONG Nongkai 85.53 291 P P 00 11 00.4 +0.9
FIS Fire Island 85.56 14 P P 00 10 58.8 +0.3
ELIB Princess Elisa 85.58 187 dP P 00 10 59.2 +0.3
comp=Z,251nm,0.8s
ELIB dpP pwP 00 13 12.2 +1.2
L19K White Mountain 85.58 11 P P 00 10 58.5 -0.2
L19K IAmb IAmb 00 11 00.1
comp=Z,106nm,0.9s
L19K White Mountain 85.58 11 P P 00 10 58.8 +0.1
baz=203
CBB Campbell River 85.61 31 P P 00 10 59.8 +0.7
CBB IAmb IAmb 00 11 01.6
comp=Z,51nm,1.5s
RC01 Rabbit Creek A 85.62 14 P P 00 10 58.2 -0.6
RC01 IAmb IAmb 00 10 59.8
comp=Z,172nm,1.4s
RC01 Rabbit Creek A 85.62 14 P P 00 10 58.1 -0.8
baz=207,SNR=19
WUAZ Wupatki 85.62 49 P P 00 11 00.4 +0.7
WUAZ Wupatki 85.62 49 P P 00 11 00.7 +1.0
baz=240,SNR=14
M20K Styx River 85.62 12 P P 00 10 57.7 -1.3
M20K Styx River 85.62 12 P P 00 10 58.0 -1.0
baz=204
ENH Enshi 85.63 305 P P 00 10 59.8 +0.1
ENH Enshi 85.63 305 P P 00 11 00.2 +0.5
PGC Sidney 85.67 33 P P 00 11 00.0 +0.6
J16K Anvik River 85.71 8 P P 00 10 59.2 0.0
J16K IAmb IAmb 00 11 00.8
comp=Z,40nm,0.9s
J16K Anvik River 85.71 8 P P 00 10 59.8 +0.5
baz=197,SNR=16
SUA Susitna One 85.73 13 P P 00 10 58.6 -0.9
SUA Susitna One 85.73 13 P P 00 10 59.2 -0.4
baz=206,SNR=33
ELK Elko 85.75 43 P P 00 11 00.3 0.0
ELK pwP 00 13 12.8 -0.2
ELK Elko 85.75 43 P P 00 11 00.3 0.0
ELK pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuau 85.76 316 P P 00 11 00.3 +0.3
BJT IAmb IAmb 00 11 01.1
comp=Z,60nm,0.8s
BJT Baijiatuau 85.76 316 P P 00 11 00.5 +0.5
BJT Baijiatuau 85.76 316 P P 00 11 00.3 +0.3
BJT pmax pmax
comp=Z,60nm,0.8s
BJI Beijing 85.76 316 P P 00 11 00.6 +0.6
BJI pP pwP 00 13 14.2 +0.3
BJI PP PP 00 14 27.7 -3.9
BJI SKS SKSac 00 20 24.4 -3.5
BJI S S 00 20 43.4 +0.6
BJI pmax pmax
comp=Z,42nm,0.7s
BJI pmax pmax
comp=Z,220nm,3.9s
BBB Bella Bella 85.77 29 P P 00 11 01.2 +1.4
BBB IAmb IAmb 00 11 02.0
comp=Z,25nm,0.8s
HIN Hinchinbrook I 85.78 16 IAmb IAmb 00 11 00.6
comp=Z,60nm,1.0s
DUN6 Lazy B Ranch 85.83 53 P P 00 11 02.2 +1.5
DUN6 IAmb IAmb 00 11 03.9
comp=Z,102nm,1.0s
HPIG 85.89 59 P P 00 11 02.0 +0.7
HPIG IAmb IAmb 00 11 03.0
comp=Z,30nm,0.8s
KAIM Kayak Island 85.92 17 P P 00 11 00.7 +0.3
KAIM IAmb IAmb 00 11 02.1
comp=Z,77nm,1.0s
KAIM Kayak Island 85.92 17 P P 00 11 01.0 +0.7
baz=212,SNR=5.3
PKCU Pink Cliffs 85.95 47 P P 00 11 02.6 +1.2
PKCU IAmb IAmb 00 11 04.7
comp=Z,52nm,1.0s
L20K Farewell, AK 86.03 11 P P 00 11 00.5 -0.3
baz=204
SKT Skwentna 86.03 13 P P 00 10 59.2 -1.6
SKT IAmb IAmb 00 11 00.5
comp=Z,31nm,1.0s
SKT Skwentna 86.03 13 P P 00 10 59.8 -1.1
baz=206,SNR=9.2
CRAG Craig 86.04 24 P P 00 11 00.9 0.0
CRAG IAmb IAmb 00 11 03.0
comp=Z,25nm,0.9s
CRAG Craig 86.04 24 P P 00 11 01.1 +0.1
baz=222
G08A Pilot Rock 86.06 38 P P 00 11 01.3 -0.3
G08A pwP 00 13 14.3 -0.1
TTA Tatalina 86.07 10 P P 00 11 00.7 -0.4
TTA IAmb IAmb 00 11 02.4
comp=Z,58nm,1.2s
TTA Tatalina 86.07 10 P P 00 11 01.3 +0.2
TTA Tatalina 86.07 10 P P 00 11 01.1 0.0
baz=202,SNR=15
TTA Tatalina 86.07 10 P P 00 11 00.7 -0.4
TTA pmax pmax
comp=Z,58nm,1.2s
MXC Moxie City 86.07 36 P P 00 11 00.7 -0.7
EYAK Cordova Ski Ar 86.10 16 P P 00 10 59.8 -1.3
EYAK IAmb IAmb 00 11 02.2
comp=Z,77nm,1.0s
EYAK Cordova Ski Ar 86.10 16 P P 00 11 01.5 +0.4
EYAK Cordova Ski Ar 86.10 16 P P 00 11 01.2 +0.1
baz=211,SNR=13
GYA Guiyang 86.12 300 ↓iP P 00 11 02.7 +0.4
GYA pP pwP 00 13 14.8 -2.0
GYA SKS SKSac 00 20 31.2 +0.1
GYA S S 00 20 48.5 +1.3
GYA pmax pmax
comp=Z,61nm,1.1s
M22K Willow 86.13 13 P P 00 11 00.5 -0.7
M22K Willow 86.13 13 P P 00 11 01.0 -0.2
baz=207,SNR=19
GRNB Grenville Isla 86.14 27 P P 00 11 01.9 +0.4
GRNB IAmb IAmb 00 11 03.9
comp=Z,32nm,0.9s
X18A Snowflake 86.15 51 P P 00 11 02.9 +0.6
LHMI Lhok Sumawe 86.17 277 P P 00 11 01.9 -0.7
KNK Knik Glacier 86.19 14 P P 00 11 01.1 -0.5
KNK IAmb IAmb 00 11 02.6
comp=Z,74nm,0.8s
KNK Knik Glacier 86.19 14 P P 00 11 01.4 -0.3
baz=209,SNR=25
PMR Palmer 86.20 14 P P 00 11 01.6 0.0
PMR Palmer 86.20 14 P P 00 11 01.4 -0.2
PMR Palmer 86.20 14 P P 00 11 01.2 -0.4
baz=208,SNR=20
PMR Palmer 86.20 14 P P 00 11 01.6 0.0
PMR pmax pmax
comp=Z,233nm,1.6s
SUCK Suckling Hills 86.21 17 P P 00 11 02.8 +1.0
SUCK IAmb IAmb 00 11 06.0
comp=Z,74nm,1.4s
SLVN Son La 86.22 295 P P 00 11 02.8 0.0
COYC Coyhaique 86.23 138 P P 00 11 03.6 +1.2
RAGM Ragged Mountai 86.24 16 P P 00 11 01.6 -0.3
RAGM IAmb IAmb 00 11 03.3
comp=Z,64nm,1.1s
I17K Unalakleet 86.28 8 P P 00 11 02.2 +0.3
I17K Unalakleet 86.28 8 P P 00 11 02.2 +0.3
baz=197
LTY Liberty 86.28 36 P P 00 11 02.0 -0.4
GO07 Milladeo Hill, 86.30 135 P P 00 11 03.6 +0.9
HMT Hamilton 86.30 17 P P 00 11 01.8 -0.4
HMT IAmb IAmb 00 11 03.5
comp=Z,66nm,1.0s
MTPU Mount Pierson 86.34 47 P P 00 11 04.0 +0.7
AY01 Puyuhuapi 86.39 137 P P 00 11 03.2 +0.1
AY01 IAmb IAmb 00 11 06.0
comp=Z,140nm,1.1s
HAWA Hanford 86.39 37 P P 00 11 03.0 +0.1
BGLC Bering Glacier 86.39 17 P P 00 11 03.6 +1.1
baz=213
ANM Nome 86.40 6 P P 00 11 02.0 -0.5
ANM Nome 86.40 6 P P 00 11 02.7 +0.2
baz=193
ANM Nome 86.40 6 P P 00 11 02.0 -0.5
ANM pmax pmax
comp=Z,11nm,0.8s
GHO Glory Hole Cre 86.41 14 P P 00 11 02.4 -0.3
SIT Sitka 86.42 22 P P 00 11 03.1 +0.4
SIT Sitka 86.42 22 P P 00 11 03.6 +0.9
baz=220
SIT Sitka 86.42 22 P P 00 11 03.1 +0.4
SIT pmax pmax
comp=Z,32nm,1.2s
TCRU Three Creeks R 86.45 46 P P 00 11 05.0 +1.3
J18K Innoko River 86.46 10 P P 00 11 02.5 -0.4
J18K IAmb IAmb 00 11 03.9
comp=Z,77nm,0.8s
J18K Innoko River 86.46 10 P P 00 11 03.0 +0.1
baz=201
BERG Berg Lake 86.50 17 P P 00 11 03.3 +0.2
BERG IAmb IAmb 00 11 04.7
comp=Z,96nm,1.2s
PAF Port-aux-Franc 86.50 218 P P 00 11 03.4 -0.1
PAF Port-aux-Franc 86.50 218 P P 00 11 03.4 -0.1
PAF pmax pmax
comp=Z,154nm,1.1s
U33K Whale Pass 86.52 24 P P 00 11 05.1 +1.9
U33K IAmb IAmb 00 11 05.7
comp=Z,67nm,1.0s

U33K	Whale Pass		86.52	24	P		P		00 11 04.5	+1.3
	baz=222									
V35K	Ketchikan		86.52	25	P		P		00 11 03.8	+0.6
V35K					IAmb		IAmb		00 11 05.6	
	comp=Z,44nm,1.1s									
V35K	Ketchikan		86.52	25	P		P		00 11 04.4	+1.1
	baz=224									
MOIG	Morelia		86.54	67	P		P		00 11 05.0	+0.5
LL07	Hotel Espejo d		86.55	135	P		P		00 11 04.4	+0.5
MVU	Marysvale		86.55	46	P		P		00 11 05.5	+1.3
MVU					IAmb		IAmb		00 11 07.0	
	comp=Z,56nm,1.1s									
SNH	Sunshine Point		86.56	17	P		P		00 11 04.1	+0.7
SML	Sawmill		86.57	14	P		P		00 11 02.7	-0.7
SML					IAmb		IAmb		00 11 13.7	
	comp=Z,34nm,0.9s									
SML	Sawmill		86.57	14	P		P		00 11 03.0	-0.4
	baz=209,SNR=8.3									
MSU	Marysvale		86.58	46	P		P		00 11 04.8	+0.5
MSU	Marysvale		86.58	46	P		P		00 11 04.8	+0.5
DIV	Divide		86.59	16	P		P		00 11 03.4	-0.2
DIV					IAmb		IAmb		00 11 04.5	
	comp=Z,77nm,0.9s									
W18A	Petrified Fore		86.59	50	P		P		00 11 04.5	+0.2
W18A	Petrified Fore		86.59	50	P		P		00 11 05.4	+1.0
	baz=241,SNR=7.0									
ZAIG	Zacatecas		86.64	64	P		P		00 11 06.3	+1.3
ZAIG					IAmb		IAmb		00 11 08.1	
	comp=Z,50nm,1.0s									
CUT	Chulitna		86.68	13	P		P		00 11 03.0	-0.9
CUT	Chulitna		86.68	13	P		P		00 11 03.4	-0.4
	baz=207,SNR=31									
M23K	Glacier View		86.70	14	P		P		00 11 03.6	-0.4
	baz=209,SNR=13									
E08A	Dider Farm, El		86.71	37	P		P		00 11 05.9	+1.5
LL06	Loncomilla		86.72	134	P		P		00 11 05.3	+0.6
PPLA	Purkeypile		86.73	12	P		P		00 11 02.4	-1.9
PPLA					IAmb		IAmb		00 11 04.4	
	comp=Z,75nm,1.7s									
PPLA	Purkeypile		86.73	12	P		P		00 11 03.9	-0.4
	baz=205									
BMRM	Bremner River		86.75	16	P		P		00 11 04.4	+0.1
BMRM					IAmb		IAmb		00 11 05.4	
	comp=Z,83nm,0.9s									
BMRM	Bremner River		86.75	16	P		P		00 11 04.6	+0.3
	baz=212,SNR=25									
BMO	Blue Mountains		86.77	39	P		P		00 11 04.9	+0.1
BMO	Blue Mountains		86.77	39	P		P		00 11 04.9	+0.1
BMO					pmax		pmax			
	comp=Z,7.0nm,1.0s									
WAX	Waxell Ridge		86.78	17	P		P		00 11 05.4	+0.9
TROLL	Troll, Antarti		86.78	181	⇑P		P		00 11 04.8	+0.1
	comp=Z,5μm,0.6s									
TROLL					⇓S		SKSac		00 20 32.8	-0.9
	comp=Z,186nm,0.9s									
121A	Cookes Peak, D		86.79	53	P		P		00 11 06.1	+0.7
121A					IAmb		IAmb		00 11 08.5	
	comp=Z,71nm,1.6s									
121A	Cookes Peak, D		86.79	53	P		P		00 11 07.1	+1.8
	baz=242									
K20K	Telida		86.80	11	P		P		00 11 03.8	-0.6
K20K					IAmb		IAmb		00 11 05.4	
	comp=Z,83nm,1.1s									
K20K	Telida		86.80	11	P		P		00 11 04.5	+0.1
	baz=203									
H16K	Elim		86.81	7	P		P		00 11 04.5	+0.1
	baz=196									
MESA	MESA		86.81	18	P		P		00 11 05.4	+0.6
MESA	MESA		86.81	18	P		P		00 11 05.4	+0.6
	baz=214,SNR=38									
S31K	Pelican		86.81	21	P		P		00 11 05.4	+0.9
S31K					IAmb		IAmb		00 11 06.7	
	comp=Z,40nm,0.9s									
S31K	Pelican		86.81	21	P		P		00 11 05.4	+0.9
	baz=220,SNR=13									
SCM	Sheep Creek Mo		86.83	15	P		P		00 11 04.2	-0.5
SCM	Sheep Creek Mo		86.83	15	P		P		00 11 04.9	+0.2
	baz=210,SNR=45									
SCM	Sheep Creek Mo		86.83	15	P		P		00 11 04.2	-0.5
SCM					pmax		pmax			
	comp=Z,190nm,0.7s									
MFID	Camas Ranch		86.84	41	P		P		00 11 05.4	+0.1
KLU	Klutina		86.87	15	P		P		00 11 04.1	-0.7
KLU					IAmb		IAmb		00 11 05.9	
	comp=Z,37nm,0.7s									
KLU	Klutina		86.87	15	P		P		00 11 04.8	-0.1
	baz=211,SNR=20									
G15K	Niukluk		86.95	6	P		P		00 11 05.2	+0.1
	baz=194									
CRQM	Cirque		86.96	17	P		P		00 11 05.3	-0.1
CRQM					IAmb		IAmb		00 11 06.8	
	comp=Z,115nm,1.2s									
CRQE	Cirque		86.97	17	P		P		00 11 05.8	+0.4
	baz=213									
S32K	Killisnoo		87.00	22	P		P		00 11 05.2	-0.2
S32K	Killisnoo		87.00	22	P		P		00 11 06.1	+0.6
	baz=221,SNR=6.7									
DUG	Dugway, Tooele		87.03	45	P		P		00 11 06.1	-0.1
DUG	Dugway, Tooele		87.03	45	P		P		00 11 06.8	+0.6
	baz=239,SNR=6.0									
DUG	Dugway, Tooele		87.03	45	P		P		00 11 06.1	-0.1
DUG					pmax		pmax			
	comp=Z,19nm,1.7s									
SEY	Seymchan		87.04	347	*ce*P		P		00 11 05.4	-0.1
SEY					pmax		pmax			
	comp=Z,225nm,1.3s									
SEY	Seymchan		87.04	347	P		P		00 11 05.7	+0.2
	comp=Z,105nm,0.9s,baz=145,slow=5.4,SNR=257									
	comp=Z,105nm,0.9s									
WRAK	Wrangell Islan		87.04	24	P		P		00 11 06.7	+1.0
WRAK					IAmb		IAmb		00 11 08.0	
	comp=Z,53nm,1.1s									
WRAK	Wrangell Islan		87.04	24	P		P		00 11 06.7	+1.0
	baz=223,SNR=8.1									
TGL	Tana Glacier		87.04	17	P		P		00 11 05.5	-0.2
TGL					IAmb		IAmb		00 11 07.1	
	comp=Z,80nm,1.1s									
ISLE	Juniper Island		87.05	17	P		P		00 11 05.3	-0.6
ISLE					IAmb		IAmb		00 11 07.1	
	comp=Z,76nm,0.9s									
TIY	Taiyuan		87.06	312	*e*P		P		00 11 07.3	+1.0
TIY					PP		PP		00 14 38.8	-3.2
TIY					SKS		SKSac		00 20 33.4	-2.7
TIY					S		S		00 20 57.0	+1.6
TIY					pmax		pmax			
	comp=Z,73nm,0.7s									
TIY					pmax		pmax			
	comp=Z,150nm,3.8s									
SNAA	Sanae		87.10	179	P		P		00 11 05.4	-0.6
SNAA					IAmb		IAmb		00 11 07.0	
	comp=Z,90nm,1.3s									
SNAA	Sanae		87.10	179	⇑P		P		00 11 05.7	-0.3
	comp=Z,661nm,0.5s									
SNAA					⇓S		SKSac		00 20 32.9	-2.5
	comp=Z,82nm,0.8s									
SNAA	Sanae		87.10	179	*i*P		P		00 11 07.3	+1.3
SNAA					pmax		pmax			
	comp=Z,31nm,0.9s									
SNAA	Sanae		87.10	179	P		P		00 11 05.7	-0.3
	comp=Z,27nm,0.5s,baz=208,slow=8.1,SNR=180									
SNAA					S		SKSac		00 20 33.9	-1.5
	comp=Z,4.1nm,0.9s,baz=209,slow=21,SNR=4.3									
	comp=Z,27nm,0.5s									
D08A	Wollman Farm,		87.12	36	P		P		00 11 07.0	+0.7
D08A					IAmb		IAmb		00 11 14.6	
	comp=Z,48nm,1.8s									
J19K	Poorman		87.13	10	P		P		00 11 05.8	-0.2
J19K					IAmb		IAmb		00 11 07.3	
	comp=Z,42nm,0.9s									
J19K	Poorman		87.13	10	P		P		00 11 06.0	+0.1
	baz=202									
PNL	Peninsula		87.14	19	P		P		00 11 06.8	+0.7
	baz=217,SNR=28									
TNA	Tin City		87.16	5	P		P		00 11 06.2	+0.2
TNA					IAmb		IAmb		00 11 07.2	
	comp=Z,150nm,1.8s									
TNA	Tin City		87.16	5	P		P		00 11 06.3	+0.3
	baz=191									
F14K	Arctic Creek		87.20	5	P		P		00 11 06.5	+0.2
	baz=192									
PCA	Pinnacle		87.23	18	P		P		00 11 06.1	-0.5
PCA					IAmb		IAmb		00 11 07.9	
	comp=Z,53nm,0.8s									
PINM	Pinnacle		87.23	18	P		P		00 11 07.0	+0.4
	baz=216,SNR=12									
CAST	Castle Rocks		87.23	12	P		P		00 11 05.1	-1.3
	baz=205,SNR=79									
CAST	Castle Rocks		87.23	12	P		P		00 11 05.1	-1.3
E09A	Wood Farm, Sta		87.23	37	P		P		00 11 07.6	+0.8
TABL	Table Mountain		87.25	18	P		P		00 11 06.9	+0.1
BGU	Big Grassy Mou		87.26	44	P		P		00 11 07.1	-0.3
HMU	Henry Mountain		87.27	47	P		P		00 11 07.2	-0.4
HMU					IAmb		IAmb		00 11 09.6	
	comp=Z,53nm,1.7s									
VRDI	Verde Repeater		87.27	16	P		P		00 11 06.9	0.0
VRDI					IAmb		IAmb		00 11 08.2	
	comp=Z,107nm,1.4s									
VNA3	Neumayer Olymp		87.28	177	⇑P		P		00 11 06.7	0.0
	comp=Z,245nm,0.6s									
N25K	Chitina, Valde		87.30	16	IAmb		IAmb		00 11 08.1	
	comp=Z,72nm,0.7s									
N25K	Chitina, Valde		87.30	16	P		P		00 11 07.2	+0.3
	baz=212,SNR=37									
GRNC	Granite Creek		87.32	17	P		P		00 11 07.2	+0.1
GRNC					IAmb		IAmb		00 11 08.6	
	comp=Z,91nm,1.1s									
M24K	Tolsona, Glenn		87.34	15	IAmb		IAmb		00 11 08.7	
	comp=Z,90nm,0.8s									
M24K	Tolsona, Glenn		87.34	15	P		P		00 11 07.7	+0.7
	baz=211,SNR=11									
GLB	Gilahina Butte		87.36	16	IAmb		IAmb		00 11 08.2	
	comp=Z,54nm,0.7s									
GLB							pP		00 13 22.1	+3.9
H17K	Granite Mounta		87.38	8	IAmb		IAmb		00 11 07.9	
	comp=Z,51nm,1.2s									
H17K	Granite Mounta		87.38	8	P		P		00 11 07.0	-0.1
	baz=198									
WAT6	Susitna Watana		87.39	14	P		P		00 11 07.2	-0.2
	baz=209,SNR=31									
NLU	North Lily Min		87.39	45	P		P		00 11 08.2	+0.2
EPT	El Paso		87.41	54	P		P		00 11 08.7	+0.5
EPT					IAmb		IAmb		00 11 10.9	
	comp=Z,93nm,1.2s									
WAT1	Susitna Watana		87.42	14	P		P		00 11 07.0	-0.4
	baz=208									
F10A	Beach Ranch, E		87.45	38	P		P		00 11 08.6	+0.6
LL01	San Ignacio de		87.45	135	P		P		00 11 08.7	+0.6
LL01					IAmb		IAmb		00 11 10.8	
	comp=Z,84nm,1.2s									
LL02	Futaleuf		87.46	136	P		P		00 11 08.9	+0.7
Q16A	Castle Valley		87.47	46	P		P		00 11 09.2	+0.8
Q16A					IAmb		IAmb		00 11 12.1	
	comp=Z,114nm,1.7s									
MCARA	McCarthy VSAT		87.52	17	IAmb		IAmb		00 11 09.4	
	comp=Z,83nm,1.1s									
MCARA	McCarthy VSAT		87.52	17	P		P		00 11 08.3	+0.5
	baz=213,SNR=24									
G16K	Koyuk River		87.52	7	IAmb		IAmb		00 11 08.9	
	comp=Z,26nm,0.9s									
G16K	Koyuk River		87.52	7	P		P		00 11 07.8	+0.1
	baz=196									
J20K	Nowinta River		87.55	11	IAmb		IAmb		00 11 08.9	
	comp=Z,131nm,1.4s									
J20K	Nowinta River		87.55	11	P		P		00 11 07.9	0.0
	baz=203,SNR=29									
KTH	Kantishna Hill		87.58	12	IAmb		IAmb		00 11 07.9	
	comp=Z,73nm,0.8s									
F15K	North Star Dit		87.59	6	IAmb		IAmb		00 11 09.1	
	comp=Z,46nm,1.5s									
F15K	North Star Dit		87.59	6	P		P		00 11 07.9	-0.1
	baz=194									
JRQG	Juriquilla Cam		87.59	67	P		P		00 11 10.4	+1.0
JRQG					IAmb		IAmb		00 11 12.0	
	comp=Z,38nm,1.1s									
LOGN	Logan Glacier		87.61	18	IAmb		IAmb		00 11 09.8	
	comp=Z,76nm,0.9s									
CHUM	Lake Minchumin		87.61	12	P		P		00 11 07.1	-1.1
	baz=205,SNR=21									
TRF	Thorofare Moun		87.61	13	P		P		00 11 07.7	-0.7
	baz=207,SNR=74									
BARN	Barnard Glacie		87.62	17	P		P		00 11 07.9	-0.6
BARN					IAmb		IAmb		00 11 10.0	
	comp=Z,92nm,0.8s									
SRDT	SRDT		87.62	286	P		P		00 11 11.1	+1.8
P29M	Windy Craggy		87.62	20	IAmb		IAmb		00 11 10.4	
	comp=Z,96nm,1.4s									
P29M	Windy Craggy		87.62	20	P		P		00 11 09.5	+1.1
	baz=218									
CTG	Chitna Glacier		87.63	17	P		P		00 11 09.0	+0.5
	baz=215,SNR=45									
CTGM	Chitina Glacie		87.63	17	IAmb		IAmb		00 11 09.9	
	comp=Z,77nm,0.8s									
CTGM						pP		pP	00 13 23.3	+3.6
TMUT	Trail Mountain		87.63	46	P		P		00 11 09.7	+0.4
TMUT					IAmb		IAmb		00 11 12.1	
	comp=Z,32nm,0.9s									
GCSA	Galena City Sc		87.63	9	P		P		00 11 08.7	+0.4
	baz=201,SNR=11									
R32K	Eaglecrest		87.63	22	P		P		00 11 08.0	-0.4
R32K	Eaglecrest		87.63	22	P		P		00 11 09.3	+0.8
	baz=221									
JIS	Juneau Island		87.68	22	P		P		00 11 08.9	+0.4
JIS					IAmb		IAmb		00 11 10.7	
	comp=Z,38nm,1.2s									
JIS	Juneau Island		87.68	22	P		P		00 11 09.4	+0.8
VNA2	Neumayer--Watz		87.70	177	⇑P		P		00 11 08.9	+0.1
	comp=Z,131nm,0.6s,baz=181,slow=3.0									
VNA2					⇑S		SKSac		00 20 35.3	-3.6
	baz=9.7,slow=3.8									
MPU	Maple Canyon		87.71	45	P		P		00 11 10.6	+1.1
MPU					IAmb		IAmb		00 11 11.9	
	comp=Z,38nm,1.6s									
BESE	Bessie Mountai		87.75	22	P		P		00 11 10.1	+1.1
BESE					IAmb		IAmb		00 11 11.2	
	comp=Z,45nm,1.0s									
HLID	Hailey		87.79	41	P		P		00 11 10.1	+0.3
HLID							pwP		00 13 22.8	-0.3
HLID	Hailey		87.79	41	P		P		00 11 11.0	+1.3
	baz=238,SNR=32									
XAN	Xi'an		87.80	308	⇓P		P		00 11 10.8	+0.9
XAN					pP		pP		00 13 18.4	-1.5
XAN					sP		sP		00 14 26.4	+6.0
XAN					SKS		SKSac		00 20 39.4	-1.2
XAN					S		ScS		00 21 07.2	+1.1
XAN					pmax		pmax			
	comp=Z,160nm,0.9s									
XAN					pmax		pmax			
	comp=Z,470nm,3.5s									
H18K	Honhosa River		87.80	9	IAmb		IAmb		00 11 09.8	
	comp=Z,55nm,1.5s									
H18K	Honhosa River		87.80	9	P		P		00 11 08.5	-0.5
	baz=199									
G17K	Kiwalik Mounta		87.83	8	P		P		00 11 09.2	0.0
	baz=197									
HARP	HAARP		87.83	15	P		P		00 11 09.7	+0.4
	baz=212,SNR=10									
SPUT	South Promonto		87.84	44	P		P		00 11 09.9	-0.1
SPUT					IAmb		IAmb		00 11 12.3	
	comp=Z,31nm,1.1s									
HVU	Hansel Valley		87.87	43	P		P		00 11 10.2	0.0
HVU					IAmb		IAmb		00 11 12.4	
	comp=Z,47nm,1.3s									
HVU	Hansel Valley		87.87	43	P		P		00 11 10.2	0.0
HVU					pmax		pmax			
	comp=Z,47nm,1.3s									
LR04	Corral		87.88	132	P		P		00 11 11.2	+1.0
O29M	Mount Kennedy		87.89	19	IAmb		IAmb		00 11 11.6	
	comp=Z,33nm,1.0s									
O29M	Mount Kennedy		87.89	19	P		P		00 11 10.6	+0.9
	baz=217									
XLT	XiLinHaoTe		87.89	319	*i*P		P		00 11 10.1	0.0
XLT					pP		pP		00 13 19.3	-0.8
XLT					sP		sP		00 14 26.4	+5.6
XLT					PP		PP		00 14 45.1	-3.4
XLT					SKS		SKSac		00 20 38.1	-2.7
XLT					S		SKKSac		00 20 53.8	+0.2
XLT					pmax		pmax			
	comp=Z,43nm,0.8s									
XLT					pmax		pmax			
	comp=Z,100nm,4.5s									
DHY	Denali Highway		87.90	14	IAmb		IAmb		00 11 10.6	
	comp=Z,86nm,1.6s									
DHY	Denali Highway		87.90	14	P		P		00 11 09.6	-0.2
	baz=210,SNR=17									
ZEA	Zeya		87.90	331	*e*P		P		00 11 10.3	+0.5
ZEA					*e*				00 14 35.7	
ZEA					*e*				00 20 40.3	
ZEA					*e*S		S		00 21 03.2	+1.0
ZEA					pmax		pmax			
	comp=E,10.0nm,0.7s									
ZEA					pmax		pmax			
	comp=N,30nm,1.1s									
ZEA					pmax		pmax			
	comp=Z,60nm,1.0s									
ZEA					pmax		pmax			
	comp=Z,200nm,7.0s									
ZEA					smax		smax			
	comp=N,400nm,5.8s									
ZEA					smax		smax			
	comp=E,400nm,8.2s									
C09A	Chrisman Ranch		87.91	36	P		P		00 11 10.8	+0.8
PLBC	Pleasant Camp		87.92	20	P		P		00 11 10.6	+0.9
	baz=219,SNR=21									
VNA1	Neumayer--Stat		87.94	177	⇑P		P		00 11 10.1	+0.4
	comp=Z,210nm,0.8s									
CTU	Camp Tracy		87.98	45	P		P		00 11 11.0	+0.3
TLIG	Tlapa		87.98	70	P		P		00 11 11.7	+0.5
TLIG					IAmb		IAmb		00 11 14.2	
	comp=Z,65nm,1.0s									
SRU	San Rafael Swe		88.00	46	P		P		00 11 11.1	+0.2
SRU					IAmb		IAmb		00 11 13.0	
	comp=Z,38nm,0.9s									
SRU	San Rafael Swe		88.00	46	P		P		00 11 11.1	+0.2
SRU					pmax		pmax			
	comp=Z,38nm,0.9s									
P17A	Butcher Ranch,		88.03	46	P		P		00 11 11.7	+0.7
P17A					IAmb		IAmb		00 11 13.5	
	comp=Z,36nm,1.2s									
I20K	Naaghedeneel		88.06	10	P		P		00 11 10.6	+0.4
	baz=203									
VHRN	Van Horn		88.13	56	P		P		00 11 12.5	+0.9
VHRN					IAmb		IAmb		00 11 14.3	
	comp=Z,48nm,0.9s									
MCK	McKinley		88.14	13	P		P		00 11 09.9	-0.8
MCK					IAmb		IAmb		00 11 12.2	
	comp=Z,66nm,0.8s									
MCK	McKinley		88.14	13	P		P		00 11 10.3	-0.5
	baz=208,SNR=34									
MCK	McKinley		88.14	13	P		P		00 11 09.9	-0.8
MCK					pmax		pmax			
	comp=Z,66nm,0.8s									
LENM	Lemitar		88.15	52	P		P		00 11 11.7	0.0
CRNM	Carthage		88.23	52	P		P		00 11 12.5	+0.4
MNTX	Cornudas Mount		88.23	55	P		P		00 11 13.8	+1.9
MNTX					IAmb		IAmb		00 11 14.5	
	comp=Z,46nm,0.8s									
MNTX	Cornudas Mount		88.23	55	P		P		00 11 13.2	+1.3
	baz=244									
T35M	Bob Quinn		88.24	24	P		P		00 11 11.9	+0.5
T35M	Bob Quinn		88.24	24	P		P		00 11 12.5	+1.2
	baz=225,SNR=6.5									
PAX	Paxson		88.25	15	P		P		00 11 10.6	-0.7
PAX					IAmb		IAmb		00 11 11.9	
	comp=Z,28nm,1.0s									
PAX	Paxson		88.25	15	P		P		00 11 10.8	-0.5
	baz=211,SNR=17									
PAX	Paxson		88.25	15	P		P		00 11 10.6	-0.7
PAX					pmax		pmax			
	comp=Z,28nm,1.0s									
P30M	Million Dollar		88.25	20	P		P		00 11 12.4	+1.0
	baz=219									
SKAG	Skagway		88.26	21	P		P		00 11 12.2	+0.9
SKAG					IAmb		IAmb		00 11 13.9	
	comp=Z,52nm,1.4s									
SKAG	Skagway		88.26	21	P		P		00 11 11.8	+0.5
SKAG	Skagway		88.26	21	P		P		00 11 12.4	+1.1
	baz=220,SNR=9.0									
YUK8	Steele Glacier		88.33	18	P		P		00 11 12.4	+0.5
	baz=216,SNR=73									
BNM	Barren Site		88.40	52	P		P		00 11 13.3	+0.4
TCUT	Toone Canyon		88.42	44	P		P		00 11 13.5	+0.7
TCUT					IAmb		IAmb		00 11 15.1	
	comp=Z,51nm,0.9s									
H19K	Roundabout Mou		88.43	9	P		P		00 11 12.0	0.0
H19K					IAmb		IAmb		00 11 13.2	
	comp=Z,64nm,0.9s									
H19K	Roundabout Mou		88.43	9	P		P		00 11 12.2	+0.3
	baz=201									
G18K	Tagagawik		88.46	8	IAmb		IAmb		00 11 12.8	
	comp=Z,34nm,1.1s									
G18K	Tagagawik		88.46	8	P		P		00 11 11.6	-0.5
	baz=199									
YUK6	Outpost Mounta		88.47	19	P		P		00 11 13.1	+0.5
	baz=218,SNR=15									
PV05	Paradox Valley		88.47	48	P		P		00 11 14.1	+0.9
PV05					IAmb		IAmb		00 11 15.6	
	comp=Z,33nm,1.2s									
MVCO	Mesa Verde		88.47	49	P		P		00 11 13.3	+0.1
MVCO	Mesa Verde		88.47	49	P		P		00 11 13.2	0.0
	baz=242									
TX31	Lajitas Ar. Si		88.53	58	P		P		00 11 13.6	+0.2
TX31					IAmb		IAmb		00 11 16.3	
	comp=Z,65nm,0.9s									
TXAR	Lajitas Array		88.53	58	P		P		00 11 14.2	+0.7
TXAR	Lajitas Array		88.53	58	P		P		00 11 15.0	+1.6
TXAR	Lajitas Array		88.53	58	P		P		00 11 15.0	+1.6
	comp=Z,40nm,0.8s,baz=219,slow=5.6,SNR=263									
TXAR					PKKPbc		PKKPbc		00 28 52.2	+0.6
	comp=Z,2.3nm,0.6s,baz=150,slow=2.7,SNR=27									
	comp=Z,40nm,0.8s									
YUK3	Moose Creek		88.53	17	P		P		00 11 13.3	+0.4
	baz=216,SNR=93									
BSUT	Blindstream Ca		88.55	45	P		P		00 11 14.1	+0.5
BSUT					IAmb		IAmb		00 11 15.9	
	comp=Z,44nm,0.9s									
HWUT	Hardware Ranch		88.56	44	P		P		00 11 14.0	+0.6
HWUT					IAmb		IAmb		00 11 15.1	
	comp=Z,18nm,0.8s									
S34M	Telegraph Cree		88.58	23	P		P		00 11 13.3	+0.4
S34M					IAmb		IAmb		00 11 15.2	
	comp=Z,35nm,0.9s									
S34M	Telegraph Cree		88.58	23	P		P		00 11 14.2	+1.3
	baz=224,SNR=20									
M27K	Edge Creek, AK		88.63

PV12 **Saucer Basin,** 88.79 48 P P 00 11 14.7 +0.1
PV12 IAmb IAmb 00 11 17.2
comp=Z,21nm,0.9s
CRAI Chiangrai 88.80 292 P P 00 11 14.6 -0.2
CRAI IAmb IAmb 00 11 17.1
comp=Z,40nm,0.9s
HIA Hailar 88.80 325 IAmb IAmb 00 11 15.1
comp=Z,29nm,0.9s
HIA Hailar 88.80 325 P P 00 11 14.0 -0.2
HIA Hailar 88.80 325 *d* P P 00 11 13.9 -0.2
HIA pmax pmax
comp=Z,27nm,1.0s
L26K Log Cabin Wild 88.81 16 IAmb IAmb 00 11 15.1
comp=Z,70nm,1.4s
L26K Log Cabin Wild 88.81 16 P P 00 11 14.2 +0.4
baz=213,SNR=18
I21K Tanana 88.85 11 P P 00 11 13.5 -0.4
baz=205
PV01 Paradox Valley 88.86 48 P P 00 11 14.5 -0.5
NEA2 Nenana 88.88 13 IAmb IAmb 00 11 13.9
comp=Z,24nm,0.8s
NEA2 Nenana 88.88 13 P P 00 11 12.7 -1.4
baz=208,SNR=11
ANMO Albuquerque 88.89 52 P P 00 11 15.7 +0.6
ANMO IAmb IAmb 00 11 17.2
comp=Z,26nm,0.9s
ANMO Albuquerque 88.89 52 P P 00 11 15.9 +0.8
baz=243
ANMO Albuquerque 88.89 52 *ce* P P 00 11 16.1 +1.0
ANMO pmax pmax
comp=Z,39nm,1.3s
K24K Donnelly Dome 88.89 14 P P 00 11 14.4 +0.2
baz=211,SNR=35
P32M Atlin 88.90 21 P P 00 11 14.8 +0.5
P32M Atlin 88.90 21 P P 00 11 15.1 +0.7
baz=222,SNR=11
PV22 Blue Mesa, Par 88.90 48 P P 00 11 14.1 -1.0
PV22 IAmb IAmb 00 11 17.1
comp=Z,22nm,1.1s
G19K Purcell Mounta 88.92 9 IAmb IAmb 00 11 15.3
comp=Z,59nm,0.9s
G19K Purcell Mounta 88.92 9 P P 00 11 14.2 0.0
baz=201
Q32M Nakina River 88.93 22 P P 00 11 14.6 -0.2
Q32M IAmb IAmb 00 11 16.8
comp=Z,19nm,0.9s
Q32M Nakina River 88.93 22 P P 00 11 15.5 +0.8
baz=223
MLY Manley 88.94 12 IAmb IAmb 00 11 14.4
comp=Z,77nm,1.3s
MLY Manley 88.94 12 P P 00 11 13.4 -1.0
baz=206,SNR=35
BVCY Beaver Creek 88.95 17 P P 00 11 15.3 +0.8
baz=215,SNR=14
PV07 Paradox Valley 88.95 48 P P 00 11 15.5 +0.1
ALPN Alpine 89.00 57 P P 00 11 16.3 +0.7
ALPN IAmb IAmb 00 11 18.0
comp=Z,47nm,0.7s
F18K Selawik 89.00 8 P P 00 11 14.2 -0.4
baz=198
PV15 Paradox Valley 89.02 48 P P 00 11 15.5 -0.2
PV15 IAmb IAmb 00 11 17.5
comp=Z,24nm,1.1s
O30N Mendenhall 89.03 20 IAmb IAmb 00 11 16.7
comp=Z,25nm,0.8s
O30N Mendenhall 89.03 20 P P 00 11 15.7 +0.8
baz=220,SNR=18
RIDG Independent Ri 89.05 15 IAmb IAmb 00 11 16.0
comp=Z,52nm,0.9s
RIDG Independent Ri 89.05 15 P P 00 11 14.7 -0.3
baz=212,SNR=13
H21K Melozitna Rive 89.14 11 IAmb IAmb 00 11 16.4
comp=Z,43nm,0.9s
H21K Melozitna Rive 89.14 11 P P 00 11 15.2 -0.1
baz=204
HDA Harding Lake 89.16 13 IAmb IAmb 00 11 15.8
comp=Z,48nm,0.6s
HDA Harding Lake 89.16 13 P P 00 11 14.9 -0.5
baz=210,SNR=29
HHC Hu-ho-hao-te 89.20 315 ⇓ *i* P P 00 11 17.1 +0.8
HHC pP pP 00 13 27.8 +1.1
HHC SKS **SKSac** 00 20 48.6 0.0
HHC S **S** 00 21 15.0 +0.1
HHC pmax pmax
comp=Z,76nm,0.8s
HHC pmax pmax
comp=Z,160nm,4.3s
E17K Hotham Inlet 89.21 7 P P 00 11 15.8 +0.2
baz=196
GDL2 Guadalupe Moun 89.23 55 P P 00 11 17.3 +0.7
L27K Beaver Creek, 89.23 16 IAmb IAmb 00 11 17.1
comp=Z,22nm,0.8s
L27K Beaver Creek, 89.23 16 P P 00 11 16.1 +0.3
baz=214
BCAR Beaver Creek A 89.24 16 P P 00 11 15.5 -0.3
PECS Pecos 89.25 56 P P 00 11 17.0 +0.3
PECS IAmb IAmb 00 11 18.8
comp=Z,38nm,1.3s
IMAR Indian Mountai 89.28 10 P P 00 11 15.6 -0.3
IMAR pP **pP** 00 13 29.2 +1.6
I23K Minto, Yukon-K 89.31 12 IAmb IAmb 00 11 16.3
comp=Z,24nm,0.6s
I23K Minto, Yukon-K 89.31 12 P P 00 11 15.0 -1.1
baz=208,SNR=10.0
WHY Whitehorse 89.32 20 IAmb IAmb 00 11 18.2
comp=Z,19nm,0.8s
WHY pP pP 00 13 30.3 +2.4
WHY Whitehorse 89.32 20 P P 00 11 17.0 +0.6
baz=221,SNR=17
CM31 Chiang Mai Arr 89.36 290 P P 00 11 18.3 +0.9
CMAR Chiang Mai Arr 89.36 290 P P 00 11 18.9 +1.5
CMAR Chiang Mai Arr 89.36 290 *i* P P 00 11 19.1 +1.7
CMAR pmax pmax
comp=Z,70nm,0.9s
CMAR Chiang Mai Arr 89.36 290 P P 00 11 19.1 +1.7
comp=Z,65nm,0.8s,baz=132,slow=3.1,SNR=266
CMAR PP **PP** 00 14 57.3 -2.9
comp=Z,2.7nm,0.7s,baz=117,slow=7.1,SNR=4.2
CMAR PKKPbc **PKKPbc** 00 28 48.5 -0.5
comp=Z,2.7nm,0.4s,baz=280,slow=3.0,SNR=5.2
CMAR SKKPbc SKKPbc 00 31 31.0 +0.2
comp=Z,0.6nm,0.4s,baz=284,slow=4.0,SNR=6.2
CMAR PKPPKP **P'P'df** 00 36 54.5 -3.8
comp=Z,1.1nm,0.3s,baz=279,slow=3.3,SNR=4.6
comp=Z,65nm,0.8s
RDMU Red Mountain 89.36 46 IAmb IAmb 00 11 19.0
comp=Z,26nm,0.8s
DLBC Dease Lake 89.36 23 IAmb IAmb 00 14 59.3
comp=Z,24nm,1.2s
DLBC Dease Lake 89.36 23 P P 00 11 17.4 +0.9
baz=225,SNR=6.6
MDM Murphy Dome 89.37 13 IAmb IAmb 00 11 16.6
comp=Z,71nm,0.9s
COLA College 89.37 13 P P 00 11 15.7 -0.6
COLA College 89.37 13 P P 00 11 15.5 -0.8
COLA IAmb IAmb 00 11 16.5
comp=Z,67nm,0.7s
COLA College 89.37 13 P P 00 11 15.7 -0.6
COLA College 89.37 13 P P 00 11 15.5 -0.8
baz=209
COLA College 89.37 13 P P 00 11 15.5 -0.8
COLA pmax pmax
comp=Z,67nm,0.7s
MCMT McKenzie Canyo 89.41 41 P P 00 11 17.7 +0.3
AHID Auburn Hatcher 89.44 43 IAmb IAmb 00 11 20.3
comp=Z,24nm,0.8s
PLCA Paso Flores 89.45 134 P P 00 11 19.0 +1.4
PLCA Paso Flores 89.45 134 P P 00 11 19.0 +1.4
PLCA pmax pmax
comp=Z,94nm,1.0s
PLCA Paso Flores 89.45 134 P P 00 11 19.3 +1.7
comp=Z,83nm,0.9s,baz=234,slow=4.8,SNR=153
comp=Z,83nm,0.9s
SCRK Sand Creek 89.46 15 IAmb IAmb 00 11 18.1
comp=Z,31nm,0.9s
SCRK Sand Creek 89.46 15 P P 00 11 16.8 -0.2
baz=212,SNR=28
F19K Shaleruckik Mo 89.47 8 IAmb IAmb 00 11 17.6
comp=Z,39nm,0.8s
F19K Shaleruckik Mo 89.47 8 P P 00 11 16.7 0.0
baz=200
ILAR Eielson Array 89.49 13 P P 00 11 16.0 -0.9
ILAR pP **pP** 00 13 29.6 +1.1
ILAR Eielson Array 89.49 13 P P 00 11 16.0 -0.9
comp=Z,18nm,0.6s,baz=220,slow=5.0,SNR=247
ILAR PKiKP **PKiKP** 00 16 09.0 -0.9
comp=Z,0.4nm,0.4s,baz=270,slow=2.9,SNR=5.1
ILAR PKKPbc **PKKPdf** 00 28 46.8 +0.7
comp=Z,0.8nm,0.5s,baz=4.1,slow=2.6,SNR=7.7
ILAR PKPPKP **P'P'df** 00 36 56.2 +1.8
comp=Z,0.7nm,0.9s,baz=326,slow=3.5,SNR=6.3
comp=Z,18nm,0.6s
CHTO Chiang Mai 89.49 290 P P 00 11 18.9 +0.9
CHTO Chiang Mai 89.49 290 P P 00 11 19.2 +1.2
CHTO Chiang Mai 89.49 290 P P 00 11 18.9 +0.9
CHTO pmax pmax
comp=Z,75nm,0.8s
IL03 Eielson Array 89.49 13 P P 00 11 16.3 -0.7
H22K Ishtalitna Cre 89.60 11 P P 00 11 17.4 -0.1
baz=206
CLNB Carlsbad 89.62 55 P P 00 11 18.6 +0.1
M29M Somme Creek 89.63 18 IAmb IAmb 00 11 19.3
comp=Z,38nm,0.8s
M29M Somme Creek 89.63 18 P P 00 11 18.3 +0.5
baz=218
P33M Teslin, Yukon 89.67 21 P P 00 11 18.1 +0.2
P33M IAmb IAmb 00 15 01.5
comp=Z,23nm,1.4s
P33M Teslin, Yukon 89.67 21 P P 00 11 18.2 +0.2
baz=222
POKR Poker Plat Res 89.67 13 IAmb IAmb 00 11 17.8
comp=Z,29nm,0.6s
POKR Poker Plat Res 89.67 13 P P 00 11 16.9 -0.9
baz=209,SNR=23
N31M Braeburn, Yuko 89.67 19 IAmb IAmb 00 11 19.6
comp=Z,56nm,1.4s
N31M Braeburn, Yuko 89.67 19 P P 00 11 18.5 +0.6
baz=220,SNR=13
E18K Tukpahlearik C 89.68 7 IAmb IAmb 00 11 18.9
comp=Z,63nm,0.9s
E18K Tukpahlearik C 89.68 7 P P 00 11 18.0 +0.3
baz=197
J25K Salcha River, 89.68 14 IAmb IAmb 00 11 18.6
comp=Z,28nm,0.6s
J25K Salcha River, 89.68 14 P P 00 11 17.6 -0.3
baz=211
R33M Jennings River 89.71 22 IAmb IAmb 00 11 20.5
comp=Z,28nm,1.4s
R33M pP 00 13 32.0 +2.3
R33M Jennings River 89.71 22 P P 00 11 19.0 +0.8
baz=224
CLN7 Carlsbad 7 89.74 55 P P 00 11 19.0 0.0
G21K Allakaket 89.81 10 IAmb IAmb 00 11 19.4
comp=Z,61nm,0.8s
G21K Allakaket 89.81 10 P P 00 11 18.5 +0.1
baz=204
BILL Bilibino 89.86 355 P P 00 11 18.4 -0.2
BILL IAmb IAmb 00 11 19.7
comp=Z,68nm,0.9s
BILL Bilibino 89.86 355 *e* P P 00 11 19.1 +0.6
S22A 4UR Ranch, Cre 89.90 49 P P 00 11 20.0 +0.2
S22A IAmb IAmb 00 11 22.2
comp=Z,39nm,1.4s
S22A 4UR Ranch, Cre 89.90 49 P P 00 11 21.1 +1.2
baz=243,SNR=23
REDW Red Top Meadow 89.90 43 P P 00 11 19.9 +0.2
F20K Avaraart Lake 89.96 9 IAmb IAmb 00 11 20.1
comp=Z,46nm,0.9s
F20K Avaraart Lake 89.96 9 P P 00 11 19.1 +0.1
baz=202
CPRX Cap Rock 89.96 54 P P 00 11 20.6 +0.5
K27K Chicken 89.97 15 IAmb IAmb 00 11 20.8
comp=Z,38nm,1.0s
K27K Chicken 89.97 15 P P 00 11 19.8 +0.7
baz=214
J26L Joseph Creek 90.00 15 P P 00 11 19.6 +0.2
J26L IAmb IAmb 00 11 21.0
comp=Z,83nm,1.0s
J26L Joseph Creek 90.00 15 P P 00 11 19.9 +0.5
baz=213,SNR=71
SAND Sanderson 90.01 58 P P 00 11 20.6 +0.3
SAND IAmb IAmb 00 11 22.1
comp=Z,29nm,0.9s
SNOW Snow King Moun 90.01 43 P P 00 11 20.6 +0.5
SNOW IAmb IAmb 00 11 22.5
comp=Z,27nm,0.9s
C16K Lisburne Hills 90.03 5 IAmb IAmb 00 11 20.4
comp=Z,46nm,1.1s
C16K Lisburne Hills 90.03 5 P P 00 11 19.2 -0.1
baz=193
O20A White River Ci 90.04 46 P P 00 11 20.5 +0.1
O20A IAmb IAmb 00 11 22.2
comp=Z,25nm,0.8s
O20A White River Ci 90.04 46 P P 00 11 21.2 +0.9
baz=242,SNR=19
RDOG Red Dog Mine 90.04 6 P P 00 11 19.6 +0.2
RDOG IAmb IAmb 00 11 20.7
comp=Z,44nm,1.0s
RDOG Red Dog Mine 90.04 6 P P 00 11 19.6 +0.2
baz=195
MNHN Monahans 90.09 56 P P 00 11 21.0 +0.5
MNHN IAmb IAmb 00 11 22.4
comp=Z,24nm,1.1s
BTO Baotou 90.11 314 *e* P P 00 11 21.7 +1.2
BTO pP **pP** 00 13 32.4 +1.3
BTO sP **sP** 00 14 31.2 -0.2
BTO PP **PP** 00 15 10.5 +4.7
BTO SKS **SKSac** 00 20 53.3 -0.4
BTO S **SKKSac** 00 21 13.8 +3.5
BTO sS **sS** 00 25 16.5 -0.5
BTO pmax pmax
comp=Z,130nm,1.1s
BTO pmax pmax
comp=Z,630nm,7.7s
IMW Indian Meadow 90.11 42 P P 00 11 21.2 +0.5
IMW IAmb IAmb 00 11 23.0
comp=Z,19nm,1.0s
E19K Redstone River 90.13 8 P P 00 11 19.9 0.0
baz=200
PZH PanZhiHua 90.14 298 P P 00 11 21.6 +0.6
PZH pP **pwP** 00 13 38.9 +2.7
PZH PP **PP** 00 15 06.7 +0.3
PZH SKS **SKSac** 00 20 51.8 -2.8
PZH S **S** 00 21 24.0 0.0
PZH pmax pmax
comp=Z,70nm,0.8s
PZH pmax pmax
comp=Z,180nm,4.6s
MOOW Moose Ponds 90.16 42 P P 00 11 21.6 +0.7
LRM Limekiln Ridge 90.17 40 P P 00 11 20.9 0.0
LOHW Long Hollow 90.18 43 P P 00 11 20.7 -0.2
H24K Noodor Dome 90.21 12 P P 00 11 19.4 -0.9
baz=209
M30M Minto, Yukon 90.22 18 IAmb IAmb 00 11 22.4
comp=Z,36nm,0.7s
M30M pP pP 00 13 33.6 +1.4
M30M Minto, Yukon 90.22 18 P P 00 11 20.6 +0.2
baz=219,SNR=44
L29M L29M 90.26 17 IAmb IAmb 00 11 22.4
comp=Z,49nm,0.9s
L29M pP 00 13 34.7 +2.3
L29M L29M 90.26 17 P P 00 11 21.3 +0.7
baz=218,SNR=28
N32M Quiet Lake 90.28 20 IAmb IAmb 00 11 23.3
comp=Z,16nm,0.9s
N32M Quiet Lake 90.28 20 P P 00 11 21.4 +0.7
baz=222
QLMT Earthquake Lak 90.28 41 P P 00 11 22.2 +0.9
CD2 Chengdu 90.34 303 P P 00 11 22.5 +0.8
CD2 SKS **SKSac** 00 20 54.1 -1.3
CD2 S **S** 00 21 24.6 -0.8
CD2 pmax pmax
comp=Z,20nm,0.8s
FLWY Flagg Ranch 90.36 42 P P 00 11 22.1 +0.4
FLWY IAmb IAmb 00 11 24.2
comp=Z,32nm,1.4s
C17K DeLong Mountai 90.42 6 P P 00 11 21.3 +0.1
baz=195
PRP Porcupine Dome 90.42 13 IAmb IAmb 00 11 22.7
comp=Z,49nm,1.4s
PRP Porcupine Dome 90.42 13 P P 00 11 20.7 -0.7
baz=211,SNR=22
BW06 Boulder Array 90.43 44 IAmb IAmb 00 11 23.6
comp=Z,15nm,0.9s
BW06 Boulder Array 90.43 44 P P 00 11 22.6 +0.5
baz=241
PDAR Pinedale Array 90.43 44 P P 00 11 22.4 +0.2
comp=Z,15nm,1.0s,baz=205,slow=3.0,SNR=71
PDAR PKKPbc **PKKPbc** 00 28 46.0 -1.6
comp=Z,2.1nm,0.8s,baz=84,slow=4.1,SNR=12
PDAR PKPPKP **P'P'df** 00 36 53.3 -1.4
comp=Z,1.1nm,1.0s,baz=104,slow=2.8,SNR=4.9
comp=Z,15nm,1.0s
YHL Hebgen Lake 90.44 41 P P 00 11 23.3 +1.1
YHL IAmb IAmb 00 13 46.2
comp=Z,28nm,1.4s
YFT Old Faithful 90.45 42 P P 00 11 23.3 +1.1
SMCO Snowmass 90.45 48 P P 00 11 22.4 -0.1
SMCO IAmb IAmb 00 11 24.4
comp=Z,15nm,0.9s
F21K Alatna River 90.46 10 IAmb IAmb 00 11 22.3
comp=Z,61nm,1.6s
F21K Alatna River 90.46 10 P P 00 11 21.0 -0.3
baz=204
G22K Bettles 90.51 11 P P 00 11 21.7 +0.1
baz=206
BOZ Bozeman (W) 90.55 40 P P 00 11 23.0 +0.6
BOZ Bozeman (W) 90.55 40 P P 00 11 23.2 +0.7
baz=239,SNR=15
BOZ Bozeman (W) 90.55 40 P P 00 11 23.0 +0.6
BOZ pmax pmax
comp=Z,9.0nm,1.0s
G23K Bananza Creek 90.58 11 IAmb IAmb 00 11 23.3
comp=Z,26nm,1.2s
G23K Bananza Creek 90.58 11 P P 00 11 21.8 -0.2
baz=207
ODSA Odessa 90.58 56 P P 00 11 23.5 +0.6
ODSA IAmb IAmb 00 11 24.7
comp=Z,48nm,1.0s
H17A Grant Village 90.59 42 P P 00 11 24.2 +1.4
H17A Grant Village 90.59 42 P P 00 11 24.8 +1.9
baz=240
YHH Holmes Hill 90.61 41 P P 00 11 24.6 +1.6
M31M Drury Creek, Y 90.65 19 IAmb IAmb 00 15 09.0
comp=Z,39nm,1.4s
M31M Drury Creek, Y 90.65 19 P P 00 11 22.2 -0.2
baz=221,SNR=10
DAWY Dawson 90.68 16 IAmb IAmb 00 11 23.8
comp=Z,48nm,1.2s
DAWY Dawson 90.68 16 P P 00 11 22.7 +0.2
baz=217
YNR Norris Junctio 90.68 42 P P 00 11 24.9 +1.6
I26K Coal Creek Min 90.77 14 IAmb IAmb 00 11 24.2
comp=Z,89nm,1.6s
I26K Coal Creek Min 90.77 14 P P 00 11 22.9 +0.1
baz=213
LKWY Lake 90.78 42 P P 00 11 23.9 +0.2
LKWY Lake 90.78 42 P P 00 11 23.9 +0.2
LKWY pmax pmax
comp=Z,6.0nm,0.7s
C18K Utukok River 90.79 7 IAmb IAmb 00 11 23.8
comp=Z,54nm,1.2s
C18K Utukok River 90.79 7 P P 00 11 22.7 -0.3
baz=197
EGAK Eagle 90.81 15 IAmb IAmb 00 11 24.1
comp=Z,29nm,0.8s
EGAK Eagle 90.81 15 P P 00 11 23.3 +0.3
baz=215
SDCO Great Sand Dun 90.84 50 IAmb IAmb 00 11 25.9
comp=Z,14nm,0.9s
SDCO Great Sand Dun 90.84 50 P P 00 11 24.8 +0.6
baz=243,SNR=25
LYMT Lyon Mountain 90.86 39 P P 00 11 24.7 +0.7
EFI East Falkland 90.90 148 P P 00 11 23.9 0.0
EFI East Falkland 90.90 148 *ce* P P 00 11 25.4 +1.5
EFI pmax pmax
comp=Z,108nm,0.9s
DRIO Del Rio 90.98 59 P P 00 11 24.9 +0.2
FARO Faro, Yukon 90.99 20 P P 00 11 22.9 -1.0
FARO Faro, Yukon 90.99 20 P P 00 11 23.7 -0.3
baz=222
WTLY Watson Lake, Y 91.00 23 P P 00 11 23.7 -0.4
WTLY Watson Lake, Y 91.00 23 P P 00 11 24.6 +0.6
baz=226,SNR=5.6
D19K Kuna River 91.00 8 IAmb IAmb 00 11 24.9
comp=Z,63nm,0.9s
D19K Kuna River 91.00 8 P P 00 11 23.8 0.0
baz=200
K29M Barlow Dome 91.00 17 IAmb IAmb 00 11 25.7
comp=Z,34nm,1.1s
K29M Barlow Dome 91.00 17 P P 00 11 24.6 +0.5
baz=218,SNR=24
COLD Coldfoot 91.01 11 P P 00 11 23.7 -0.2
COLD IAmb IAmb 00 11 25.4
comp=Z,39nm,1.1s
COLD Coldfoot 91.01 11 P P 00 11 24.4 +0.5
baz=207,SNR=9.8
E20K Nigu River 91.02 8 P P 00 11 23.9 -0.1
baz=201
G24K Hadweenzic Riv 91.05 12 IAmb IAmb 00 12 05.5
comp=Z,26nm,1.8s
G24K Hadweenzic Riv 91.05 12 P P 00 11 23.6 -0.5
baz=209
OZNA Ozona 91.19 57 IAmb IAmb 00 11 27.2
comp=Z,21nm,0.7s
MSTX Muleshoe 91.19 54 IAmb IAmb 00 11 27.2
comp=Z,25nm,0.8s
MSTX Muleshoe 91.19 54 P P 00 11 26.0 +0.3
baz=245
MAYO Mayo, Yukon 91.27 18 P P 00 11 26.0 +0.9
MAYO Mayo, Yukon 91.27 18 P P 00 11 26.3 +1.1
baz=220
J29N Klondike Camp 91.30 17 IAmb IAmb 00 11 27.0
comp=Z,24nm,0.7s
J29N Klondike Camp 91.30 17 P P 00 11 26.1 +0.7
baz=218
T25A Trinidad 91.35 50 IAmb IAmb 00 11 28.0
comp=Z,20nm,0.9s
T25A Trinidad 91.35 50 P P 00 11 26.6 +0.2
baz=244
I27K Kandik River 91.38 15 P P 00 11 25.7 0.0
baz=215
D20K Etivluk River 91.39 8 P P 00 11 25.7 0.0
baz=201
C19K Lookout Ridge 91.40 7 P P 00 11 26.0 +0.3
baz=198
B18K Kokolik River 91.42 6 P P 00 11 25.7 0.0
baz=196
RWWY Rawlins 91.45 45 P P 00 11 27.0 +0.1
RWWY IAmb IAmb 00 11 28.4
comp=Z,22nm,1.1s
E21K Killik River 91.51 9 IAmb IAmb 00 11 27.1
comp=Z,24nm,1.1s
E21K Killik River 91.51 9 P P 00 11 25.9 -0.3
baz=204
833A Chaparral WMA, 91.52 60 IAmb IAmb 00 11 29.2
comp=Z,45nm,0.9s
833A Chaparral WMA, 91.52 60 P P 00 11 27.5 +0.4
baz=246
E22K Anaktuvuk Pass 91.56 10 IAmb IAmb 00 11 27.6
comp=Z,63nm,1.4s
E22K Anaktuvuk Pass 91.56 10 P P 00 11 26.5 0.0
baz=205
SGCY Sterling City 91.59 56 IAmb IAmb 00 11 30.3
comp=Z,23nm,1.0s
HBVL Hebbronville 91.61 62 P P 00 11 28.4 +0.8
Q24A Divide 91.62 49 P P 00 11 27.8 0.0
Q24A Divide 91.62 49 P P 00 11 28.5 +0.7
baz=244,SNR=7.9
I28M Miner Creek 91.66 15 IAmb IAmb 00 11 27.8
comp=Z,16nm,0.8s
I28M Miner Creek 91.66 15 P P 00 11 26.8 -0.3
baz=216
ISCO Idaho Springs 91.67 48 P P 00 11 28.1 +0.1
ISCO Idaho Springs 91.67 48 P P 00 11 28.6 +0.6
baz=243,SNR=8.5
ISCO Idaho Springs 91.67 48 P P 00 11 28.1 +0.1
ISCO pmax pmax
comp=Z,5.0nm,0.8s
F24K Squaw Lake 91.69 12 IAmb IAmb 00 11 28.4
comp=Z,68nm,1.6s
F24K Squaw Lake 91.69 12 P P 00 11 27.3 +0.2
baz=209
RLMT Red Lodge 91.76 42 P P 00 11 28.1 0.0
RLMT Red Lodge 91.76 42 P P 00 11 28.7 +0.5
baz=241
POST Post 91.78 55 P P 00 11 28.6 +0.2
POST IAmb IAmb 00 11 29.6
comp=Z,28nm,1.0s
E23K Chandalar 91.86 11 P P 00 11 28.0 +0.1
baz=208
J30M Hart River 91.90 17 P P 00 11 28.4 +0.2
baz=219
H27K Steamboat Moun 91.92 14 P P 00 11 28.5 +0.4
baz=215,SNR=11
MMPY Sheldon Lake, 91.94 20 IAmb IAmb 00 11 31.6
comp=Z,14nm,0.9s
MMPY pP pP 00 13 42.0 +1.6
MMPY Sheldon Lake, 91.94 20 P P 00 11 28.7 +0.4
baz=224,SNR=16

N23A Red Feather La 91.94 47 P P 00 11 29.5 +0.3
N23A IAmb IAmb 00 11 31.8
comp=Z,18nm,1.1s
N23A Red Feather La 91.94 47 P P 00 11 29.8 +0.6
baz=243,SNR=13
VA05 Santo Domingo 91.98 127 P P 00 11 29.8 +0.5
G26K Porcupine Rive 92.02 13 P P 00 11 28.8 +0.3
baz=213,SNR=26
BO01 Tunca 92.03 128 P P 00 11 30.1 +0.6
C21K Knifeblade Rid 92.05 9 P P 00 11 29.0 +0.3
baz=203
JCT Junction City 92.05 58 P P 00 11 29.8 +0.2
JCT IAmb IAmb 00 11 30.9
comp=Z,18nm,0.7s
JCT Junction City 92.05 58 P P 00 11 29.8 +0.2
baz=246
JCT Junction City 92.05 58 P P 00 11 29.8 +0.2
JCT pmax pmax
comp=Z,18nm,0.7s
E24K Your Creek 92.07 11 P P 00 11 28.7 -0.1
baz=208
D22K Ayikyak River 92.10 9 IAmb IAmb 00 11 30.3
comp=Z,22nm,0.8s
D22K Ayikyak River 92.10 9 P P 00 11 29.3 +0.3
baz=205
MT01 Popeta 92.16 128 P P 00 11 30.1 0.0
SN01 Snyder 1 92.16 56 P P 00 11 30.3 +0.2
SN01 IAmb IAmb 00 11 31.3
comp=Z,21nm,1.0s
TGTN Hyland Airport 92.16 22 P P 00 11 29.8 +0.4
baz=226
SN05 Snyder 5 92.17 56 P P 00 11 30.0 -0.2
SN05 IAmb IAmb 00 11 31.3
comp=Z,20nm,0.9s
F25K Christian Rive 92.19 12 P P 00 11 29.8 +0.4
baz=211
TNCH TengChong 92.24 296 P P 00 11 31.5 +0.7
TNCH pP pP 00 13 40.6 -1.1
TNCH PP **PP** **00 15 22.3 -0.4**
TNCH SKS **SKSac** **00 21 07.9 +1.4**
TNCH S **S** **00 21 42.3 -0.3**
TNCH pmax pmax
comp=Z,40nm,0.9s
TNCH pmax pmax
comp=Z,100nm,3.4s
VA01 Torpederas 92.25 127 P P 00 11 30.9 +0.4
BMAR Burnt Mountain 92.26 13 P P 00 11 30.0 +0.3
BMAR pP **pP** **00 13 43.1 +1.4**
RTBA Rita Blanca 92.26 52 P P 00 11 30.3 -0.2
RTBA IAmb IAmb 00 11 31.5
comp=Z,13nm,0.9s
K22A Casper 92.35 45 P P 00 11 31.4 +0.5
K22A IAmb IAmb 00 11 32.5
comp=Z,24nm,1.4s
K22A Casper 92.35 45 P P 00 11 31.0 +0.1
baz=243
TOLK Toolik Lake Re 92.38 10 IAmb IAmb 00 11 31.6
comp=Z,70nm,1.8s
TOLK Toolik Lake Re 92.38 10 P P 00 11 30.1 -0.1
baz=208
MT09 Talagante 92.39 128 P P 00 11 31.4 0.0
AMTX Amarillo 92.39 53 P P 00 11 31.1 0.0
AMTX Amarillo 92.39 53 P P 00 11 31.0 -0.2
baz=246
I30M Mount Dempster 92.39 17 IAmb IAmb 00 11 31.4
comp=Z,20nm,0.9s
I30M Mount Dempster 92.39 17 P P 00 11 30.3 -0.1
baz=219
LZH Lanzhou 92.44 308 ⇓P P 00 11 32.2 +0.8
LZH pP pwP 00 13 45.1 -1.5
LZH SKS **SKSac** **00 21 05.7 -1.3**
LZH S **S** **00 21 43.5 -0.3**
LZH pmax pmax
comp=Z,98nm,0.9s
KVTX Kingsville 92.44 61 P P 00 11 32.0 +0.7
PHWY Pilot Hill 92.45 46 P P 00 11 31.6 +0.1
DKNS Dickens 92.47 55 P P 00 11 31.7 +0.2
D23K Nanushuk River 92.49 10 P P 00 11 31.1 +0.4
baz=206
B21K Ikpikpuk River 92.51 8 IAmb IAmb 00 11 31.9
comp=Z,31nm,1.2s
B21K Ikpikpuk River 92.51 8 P P 00 11 30.9 +0.2
baz=203
MT02 Curacav 92.52 127 P P 00 11 32.5 +0.7
MT02 IAmb IAmb 00 11 35.8
comp=Z,51nm,0.9s
YAK Yakutsk 92.56 338 P P 00 11 29.6 -1.5
YAK Yakutsk 92.56 338 *d* P P 00 11 30.2 -0.9
YAK *e**PP **pP** **00 13 42.3 -0.7**
YAK *e* 00 15 18.7
YAK *e*PPP PPP 00 17 32.4
YAK *e*S **SKSac** **00 21 02.7 -3.4**
YAK *e* 00 21 39.0
YAK *e**SS sS 00 25 15.6 -24
YAK *e*SS **SS** **00 28 14.6 -1.0**
YAK *e*SSS SSS 00 32 02.4
YAK pmax pmax
comp=Z,117nm,0.9s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,123nm,3.1s
YAK pmax pmax
comp=N,46nm,2.2s
YAK pmax pmax
comp=E,50nm,1.9s
YAK smax smax
comp=N,312nm,2.0s
YAK smax smax
comp=E,143nm,2.2s
YAK Yakutsk 92.56 338 P P 00 11 30.3 -0.8
comp=E,113nm,0.8s,baz=111,slow=1.8,SNR=27
YAK S **SKSac** **00 21 02.7 -3.4**
comp=E,5.8nm,0.4s,baz=342,slow=23,SNR=18
comp=E,113nm,0.8s
BO04 La Punta 92.57 128 P P 00 11 32.6 +0.5
BO04 IAmb IAmb 00 11 35.1
comp=Z,36nm,0.8s
F26K Sheenjek River 92.57 13 P P 00 11 31.8 +0.7
baz=212
E25K Arctic Village 92.66 12 P P 00 11 31.5 0.0
baz=211,SNR=12
EF01 Eagle Ford 01 92.66 60 P P 00 11 32.9 +0.5
H29M Whitestone 92.67 15 IAmb IAmb 00 11 32.5
comp=Z,29nm,0.8s
H29M Whitestone 92.67 15 P P 00 11 31.3 -0.2
baz=218
VA06 Catapilco 92.72 126 P P 00 11 32.2 -0.5
MT05 Renca 92.75 127 P P 00 11 33.6 +0.6
EGMT Eagleton 92.87 39 P P 00 11 34.0 +1.0
EGMT IAmb IAmb 00 15 25.7
comp=Z,21nm,1.4s
MT03 Universidad Ad 92.88 128 P P 00 11 33.7 +0.2
MT16 CCHEN 92.90 128 P P 00 11 33.9 +0.4
PEL Peldehue 92.91 127 P P 00 11 34.0 +0.4
PEL Peldehue 92.91 127 P P 00 11 34.0 +0.4
PEL pmax pmax
comp=Z,146nm,0.9s
MT13 San Alfonso 92.92 128 P P 00 11 34.8 +1.0
LMEL Las Melosas 92.94 128 P P 00 11 34.1 +0.2
LMEL IAmb IAmb 00 11 37.0
comp=Z,62nm,1.0s
APMT Aspermont 92.94 55 P P 00 11 33.9 +0.3
APMT IAmb IAmb 00 11 35.0
comp=Z,67nm,1.6s
D24K Happy Valley 92.97 10 P P 00 11 33.5 +0.7
baz=208
BRDY Brady 93.00 58 P P 00 11 33.9 -0.1
BRDY IAmb IAmb 00 11 35.3
comp=Z,24nm,1.3s
735A Kenedy 93.01 60 P P 00 11 34.8 +0.8
735A IAmb IAmb 00 11 36.7
comp=Z,49nm,1.0s
ABTX Abilene, Hawle 93.03 56 P P 00 11 33.5 -0.6
ABTX IAmb IAmb 00 11 35.6
comp=Z,81nm,1.6s
ABTX Abilene, Hawle 93.03 56 P P 00 11 33.7 -0.3
baz=246
MND Mandalay 93.15 292 P P 00 11 35.2 +0.4
VA03 San Esteban 93.19 127 P P 00 11 35.3 +0.3
EPYK Eagle Plains 93.20 16 P P 00 11 33.7 -0.3
EPYK IAmb IAmb 00 11 34.8
comp=Z,22nm,0.8s
EPYK Eagle Plains 93.20 16 P P 00 11 33.6 -0.3
baz=219,SNR=12
CCIG Comitan 93.20 74 P P 00 11 36.0 +0.7
CCIG IAmb IAmb 00 11 37.3
comp=Z,16nm,0.7s
CO06 Fray Jorge 93.33 125 P P 00 11 35.5 0.0
CO06 IAmb IAmb 00 14 28.4
comp=Z,64nm,1.2s
H31M Peel River 93.39 17 P P 00 11 34.8 -0.1
H31M Peel River 93.39 17 P P 00 11 34.0 -0.9
baz=221
KSCO Kaye Shedlock' 93.42 49 P P 00 11 36.0 +0.2
KSCO IAmb IAmb 00 11 37.6
comp=Z,49nm,1.1s
KSCO Kaye Shedlock' 93.42 49 P P 00 11 36.3 +0.5
baz=245
F28M Old Crow 93.43 14 IAmb IAmb 00 15 30.0
comp=Z,77nm,2.0s
F28M Old Crow 93.43 14 P P 00 11 35.0 0.0
baz=216,SNR=9.1
C24K Franklin Bluff 93.49 10 P P 00 11 35.3 +0.1
baz=208
EDM Edmonton 93.52 33 P P 00 11 36.7 +0.9
EDM Edmonton 93.52 33 P P 00 11 36.7 +0.9
EDM pmax pmax
comp=Z,8.0nm,1.0s
D25K Kavik River 93.54 11 P P 00 11 35.7 +0.2
baz=210
SMWD Samonwood 93.56 54 P P 00 11 37.0 +0.5
CO02 Bombarbal 93.57 125 P P 00 11 37.2 +0.4
G30M tAoh Zraii Nji 93.80 16 IAmb IAmb 00 11 37.5
comp=Z,35nm,0.9s
G30M tAoh Zraii Nji 93.80 16 P P 00 11 36.1 -0.6
baz=220
A21K Barrow 93.84 7 P P 00 11 36.5 -0.2
baz=201
435B Jarrell 93.93 59 P P 00 11 38.7 +0.5
435B IAmb IAmb 00 11 39.9
comp=Z,42nm,1.5s
435B Jarrell 93.93 59 P P 00 11 38.4 +0.3
baz=248
CO03 El Pedregal 93.98 125 P P 00 11 38.9 +0.3
PLPT Palo Pinto 94.13 56 P P 00 11 39.2 +0.1
PLPT IAmb IAmb 00 11 40.6
comp=Z,24nm,0.9s
GO04 Tololo Observa 94.20 125 P P 00 11 38.9 -0.9
G31M Satah River 94.25 16 P P 00 11 38.4 -0.3
baz=221
E28M Babbage River 94.31 14 IAmb IAmb 00 11 40.0
comp=Z,17nm,0.9s
E28M Babbage River 94.31 14 P P 00 11 38.9 0.0
baz=217
LAO LASA Array 94.37 41 P P 00 11 40.1 +0.3
LAO IAmb IAmb 00 11 42.2
comp=Z,9.2nm,0.8s
LAO LASA Array 94.37 41 P P 00 11 41.0 +1.2
baz=243,SNR=5.1
WTFS Witchita Falls 94.39 56 P P 00 11 39.9 -0.2
WTFS IAmb IAmb 00 13 57.1
comp=Z,39nm,1.8s
F30M Barrier River 94.39 15 P P 00 11 40.2 +0.9
baz=220
FW03 Perrin-Whitt E 94.42 56 P P 00 11 40.9 +0.6
FW03 IAmb IAmb 00 11 41.9
comp=Z,19nm,0.9s
WHTX Lake Whitney, 94.49 58 P P 00 11 40.1 -0.6
WHTX IAmb IAmb 00 14 17.2
comp=Z,12nm,0.8s
E29M Blow River 94.50 14 IAmb IAmb 00 11 40.3
comp=Z,23nm,1.7s
E29M Blow River 94.50 14 P P 00 11 39.3 -0.5
baz=218,SNR=7.2
D27M Malcolm River 94.52 13 P P 00 11 39.6 -0.4
D27M IAmb IAmb 00 11 41.5
comp=Z,31nm,1.4s
D27M Malcolm River 94.52 13 P P 00 11 40.4 +0.4
baz=215
WMOK Wichita Mounta 94.52 55 P P 00 11 40.8 0.0
baz=247
ELIS Ellis County 94.56 53 P P 00 11 40.9 0.0
ELIS IAmb IAmb 00 11 42.6
comp=Z,12nm,0.9s
RSSD Black Hills 94.63 44 P P 00 11 41.6 +0.3
RSSD IAmb IAmb 00 11 42.8
comp=Z,8.5nm,0.8s
RSSD Black Hills 94.63 44 P P 00 11 41.5 +0.3
baz=245
RSSD Black Hills 94.63 44 P P 00 11 41.6 +0.3
RSSD pmax pmax
comp=Z,9.0nm,0.9s
F31M Tsiigehtchic 94.78 16 P P 00 11 41.0 -0.1
baz=222,SNR=23
LCO Las Campanas 94.81 124 P P 00 11 42.7 0.0
LCO Las Campanas 94.81 124 P P 00 11 42.7 0.0
LCO pmax pmax
comp=Z,123nm,1.7s
CO01 Juntas del Tor 94.83 125 P P 00 11 42.2 -0.5
CO01 IAmb IAmb 00 11 55.9
comp=Z,17nm,1.1s
U32A Winter Ranch, 94.99 53 P P 00 11 43.0 +0.2
U32A IAmb IAmb 00 11 53.3
comp=Z,12nm,0.8s
HKT Hockley 95.02 60 P P 00 11 43.6 +0.7
HKT IAmb IAmb 00 11 45.5
comp=Z,28nm,1.3s
HKT Hockley 95.02 60 **PcP** **00 11 44.3 +1.3**
HKT Hockley 95.02 60 P P 00 11 43.7 +0.7
HKT pmax pmax
comp=Z,28nm,1.3s
MTO3 Montecristo 95.03 77 P P 00 11 43.9 +0.2
MTO3 IAmb IAmb 00 14 43.1
comp=Z,65nm,2.0s
D28M Stokes Point 95.06 13 P P 00 11 42.4 +0.1
baz=217
Z35A Perchaven, San 95.16 56 P P 00 11 43.4 -0.3
Z35A IAmb IAmb 00 11 45.0
comp=Z,28nm,1.4s
X34A Smith Ranch, M 95.19 55 P P 00 11 44.8 +1.0
AC05 El Transito 95.22 124 P P 00 11 44.5 +0.1
AC05 IAmb IAmb 00 11 47.6
comp=Z,32nm,0.8s
ULN Ulaanbaatar 95.33 320 P P 00 11 43.7 -0.6
ULN IAmb IAmb 00 11 46.1
comp=Z,11nm,0.8s
ULN Ulaanbaatar 95.33 320 *ce* P P 00 11 43.9 -0.4
ULN pmax pmax
comp=Z,13nm,0.9s
CBKS Cedar Bluff 95.40 50 P P 00 11 44.7 0.0
CBKS IAmb IAmb 00 11 46.2
comp=Z,12nm,0.8s
CBKS Cedar Bluff 95.40 50 P P 00 11 44.7 0.0
CBKS pmax pmax
comp=Z,12nm,0.8s
PETF Flores 95.46 74 P P 00 11 44.7 -0.6
INK Inuvik 95.48 16 pP pP 00 13 58.8 +2.2
SONM Songino Array 95.71 319 P P 00 11 45.2 -0.8
SONM IAmb IAmb 00 15 47.3
comp=Z,11nm,1.1s
SONM Songino Array 95.71 319 P P 00 11 45.2 -0.8
SONM pmax pmax
comp=Z,11nm,1.1s
SONM Songino Array 95.71 319 P P 00 11 44.9 -1.1
comp=Z,6.0nm,0.9s,baz=120,slow=3.6,SNR=24
SONM PP PP 00 15 40.6 -8.2
comp=Z,4.3nm,0.9s,baz=111,slow=8.1,SNR=5.1
SONM S **SKSac** **00 21 22.2 -1.6**
comp=Z,3.0nm,1.1s,baz=136,slow=2.9,SNR=4.9
SONM PKKPbc **PKKPbc** **00 28 33.5 -0.5**
comp=Z,6.6nm,0.9s,baz=270,slow=2.3,SNR=20
comp=Z,6.0nm,0.9s
FNO Franklin 95.77 55 P P 00 11 46.4 +0.1
FNO IAmb IAmb 00 11 48.1
comp=Z,33nm,1.5s
237A Washetta, Mont 95.79 58 P P 00 11 46.5 0.0
237A IAmb IAmb 00 11 48.7
comp=Z,33nm,1.4s
GO03 Copiap 95.83 122 P P 00 11 47.7 +0.7
R32A Long Quarter, 95.99 51 P P 00 11 47.2 -0.1
R32A IAmb IAmb 00 11 49.3
comp=Z,16nm,0.8s
W35A Tecumseh 96.13 55 P P 00 11 47.6 -0.4
W35A IAmb IAmb 00 11 49.8
comp=Z,38nm,1.7s
GTA Gaotai 96.69 310 *eP* P 00 11 50.7 +0.2
GTA pP pwP 00 14 05.4 -1.0
GTA SKS **SKSac** **00 21 27.3 -1.9**
GTA S **ScS** **00 22 21.7 +1.6**
GTA pmax pmax
comp=Z,15nm,1.5s
KSU1 Kansas State U 97.77 51 Pdiff P 00 11 55.6 +0.4
baz=249
YKA Yellowknife Ar 97.85 25 P P 00 11 55.0 +0.1
comp=Z,1.7nm,0.8s,baz=245,slow=4.5,SNR=28
YKA PP PP 00 15 55.9 -8.4
comp=Z,4.7nm,1.1s,baz=240,slow=6.8,SNR=4.1
YKA PKKPbc **PKKPbc** **00 28 25.9 -2.6**
comp=Z,0.8nm,0.5s,baz=34,slow=2.3,SNR=15
YKA PKPPKP 00 36 40.3
comp=Z,0.3nm,0.7s,baz=41,slow=1.6,SNR=6.9
comp=Z,1.7nm,0.8s
MIAR Mount Ida 98.44 56 Pdiff Pdif 00 11 58.2 -0.1
baz=250
ZAK Zakamensk 98.63 321 *eP* Pdif 00 11 57.5 -1.4
ZAK pmax pmax
comp=Z,4.0nm,1.6s
C36M Paulatuk 98.68 17 Pdiff P 00 11 58.9 +0.4
baz=231
TIXI Tiksi 99.36 345 *ce* P **Pdif** 00 11 59.6 -1.9
TIXI pmax pmax
comp=Z,4.0nm,1.0s
ECSD EROS Data Cent 99.41 47 IAmb IAmb 00 12 05.2
comp=Z,8.6nm,1.3s
A36M Sachs Harbour 100.08 15 Pdiff **Pdif** 00 12 05.0 +0.3
baz=230
ULM Lac du Bonnet 102.09 41 P **Pdif** 00 12 14.7 +0.6
comp=Z,0.5nm,0.4s,baz=139,slow=3.1,SNR=1.6
ULM PKiKP **PKiKP** **00 16 31.7 -0.7**
comp=Z,3.1nm,0.9s,baz=252,slow=2.6,SNR=4.8
ULM PKKPbc **PKKPbc** **00 28 15.2 -1.0**
comp=Z,1.2nm,0.5s,baz=93,slow=2.8,SNR=4.2
EYMN Ely 104.14 44 Pdiff **Pdif** 00 12 24.0 +0.7
baz=254
CPUP Villa Florida 106.34 127 PKiKP **PKiKP** 00 16 40.1 -1.0
comp=Z,1.9nm,0.8s,baz=294,slow=2.5,SNR=4.9
CPUP PP PP 00 17 07.4 +0.5
comp=Z,2.9nm,0.7s,baz=262,slow=5.4,SNR=4.3
O48B Farmland 106.53 53 PKiKP **PKiKP** 00 16 40.5 -0.4
baz=256
NHSC New Hope 108.70 61 PKiKP **PKiKP** 00 16 44.3 -0.9
baz=256
ZSN Zaisan 109.39 314 *e* PKiKP **PKiKP** 00 16 46.3 +0.2
baz=314
ZSN *e*PP **PP** **00 17 27.9 -1.1**
baz=314
BLA Blacksburg 109.43 57 PKiKP **PKiKP** 00 16 45.7 -0.9
baz=258
M53A WI Miller and 110.11 52 PKiKP **PKiKP** 00 16 47.1 -0.5
baz=259
ZALV Zalesovo Beam 110.51 321 Pdiff **Pdif** 00 12 49.6 -1.9
comp=Z,0.3nm,0.3s,baz=112,slow=6.6,SNR=3.8
ZALV PKiKP **PKiKP** **00 16 46.7 -1.2**
comp=Z,1.3nm,0.5s,baz=147,slow=1.1,SNR=7.5
ZALV PP **PP** **00 17 36.0 -0.7**
comp=Z,6.9nm,0.9s,baz=96,slow=4.4,SNR=6.3
ZALV PKKPbc **PKKPbc** **00 27 48.5 -2.1**
comp=Z,3.2nm,0.7s,baz=266,slow=3.6,SNR=9.4
NRIK Noril'sk 111.00 338 PP **PP** 00 17 36.0 -3.7
comp=Z,12nm,1.0s,baz=103,slow=7.2,SNR=13
NRIK SKP 00 19 27.4
comp=Z,3.5nm,0.7s,baz=69,slow=3.2,SNR=3.8
MKAR Makanchi Array 111.01 313 Pdiff **Pdif** 00 12 53.3 -0.6
comp=Z,2.4nm,0.7s,baz=83,slow=6.6,SNR=19
MKAR PKiKP **PKiKP** **00 16 48.2 -1.0**
comp=Z,0.8nm,0.4s,baz=145,slow=0.6,SNR=7.9
MKAR PP PP 00 17 30.3 -10
comp=Z,3.2nm,0.9s,baz=103,slow=10,SNR=6.5
MKAR SKP 00 19 25.5
comp=Z,2.7nm,0.9s,baz=48,slow=1.8,SNR=3.9
MKAR PKKPbc **PKKPbc** **00 27 48.1 -0.8**
comp=Z,14nm,0.7s,baz=276,slow=3.7,SNR=49
MKAR PKKPab **PKKPab** **00 28 00.5 +1.0**
comp=Z,8.6nm,0.9s,baz=290,slow=3.6,SNR=9.8
SSPA Standing Stone 112.03 54 PKiKP **PKiKP** 00 16 50.7 -0.6
baz=260
SHLS Shalkode 112.42 309 *e* PP **PP** 00 17 46.7 -3.9
baz=309
UZB Uzynbulak 112.74 309 *e* PP **PP** 00 17 51.0 -2.0
baz=309
KPKS Kokpek 113.03 309 *e* PKiKP **PKiKP** 00 16 53.0 -0.3
baz=309
KPKS *e*PP **PP** **00 17 53.0 -1.9**
baz=309
KPKS Kokpek 113.03 309 *i* PKIKP **PKiKP** **00 16 52.9 -0.3**
KPKS *e* 00 17 53.0
ZHN Zhinishke 113.17 309 *e* PP **PP** **00 17 54.3 -1.6**
baz=309
SATY Saty 113.17 309 *e* PP **PP** **00 17 54.2 -1.7**
baz=309
BINY Binghamton 113.69 52 PKiKP **PKiKP** 00 16 53.8 -0.6
baz=262
KURK Kurchatov 113.91 317 *i* PKiKP **PKiKP** 00 16 53.6 -0.9
KURBB Kurchatov Arra 113.96 317 Pdiff **Pdif** 00 13 07.3 +0.4
comp=Z,0.3nm,0.8s,baz=93,slow=5.2,SNR=2.2
KURBB PKiKP **PKiKP** **00 16 53.6 -1.0**
comp=Z,0.6nm,0.5s,baz=93,slow=1.7,SNR=20
KURBB PP PP 00 17 51.0 -10
comp=Z,12nm,1.2s,baz=99,slow=5.9,SNR=11
KURBB SKP 00 19 33.0
comp=Z,3.9nm,0.8s,baz=96,slow=1.8,SNR=6.3
KURBB PKKPbc **PKKPbc** **00 27 39.1 -0.2**
comp=Z,6.8nm,0.7s,baz=275,slow=3.9,SNR=32
KURBB PKKPab **PKKPab** **00 27 48.2 +2.0**
comp=Z,11nm,0.8s,baz=270,slow=4.9,SNR=14
KURBB SKKPbc SKKPbc 00 30 24.9 -3.0
comp=Z,0.9nm,1.0s,baz=254,slow=3.6,SNR=4.3
MDOK Medeo 114.17 309 *e* PP **PP** 00 18 01.6 -1.3
baz=309
LONY Lake Ozonia 115.00 50 PKiKP PKPdf 00 16 56.0 -0.9
baz=264
PAL Palisades 115.08 54 PKiKP **PKPdf** 00 16 56.2 -0.9
baz=263
KBK Karagaybulak 115.65 308 P **PKKPbc** 00 27 34.0 +0.3
SNR=6.8
CHMS Chumysh 115.83 308 P **PKKPbc** 00 27 32.9 0.0
SNR=9.1
UCH Uchtor 115.92 308 P **PKKPbc** 00 27 33.2 +0.1
SNR=9.2
SGDS Sogindy 115.96 309 *e* PP **PP** 00 18 13.1 -2.0
baz=309
AAK Ala-Archa 115.98 308 P **PKKPbc** 00 27 32.7 +0.2
SNR=12
USP Ospenovka 116.04 309 P **PKKPbc** 00 27 32.0 -0.2
SNR=10
L61B Northampton 116.15 52 PKiKP **PKPdf** 00 16 58.6 -0.5
baz=264
EKS2 Erkin-Say 116.51 308 P **PKKPbc** 00 27 30.3 -0.4
SNR=7.2
BTLS Baital 116.52 311 *e* PKP **PKPdf** 00 16 59.4 -0.4
baz=311
BTLS *e*PP **PP** **00 18 16.8 -2.0**
baz=311
BTLS Baital 116.52 311 *e* PKIKP **PKPdf** 00 16 59.4 -0.4
BTLS *e* 00 18 16.7
LBNH Lisbon 116.86 50 PKiKP **PKPdf** 00 17 00.0 -0.5
baz=266
SJG San Juan 117.36 80 **PKPdf** 00 17 01.4 -0.7
SJG San Juan 117.36 80 PKIKP **PKPdf** 00 17 01.4 -0.7
BRZS Berezniki 117.67 316 *e* PKP **PKPdf** 00 17 01.3 -0.6
baz=316
BRZS Berezniki 117.67 316 *e* PKiKP **PKPdf** 00 17 01.2 -0.6
DZA Taraz 118.32 308 *e* PP **PP** 00 18 28.6 -2.6
baz=308
NEEM North Greenlan 118.72 11 *i* P **PKPdf** 00 17 02.2 -1.3
KKAR Karatay Array 118.93 308 **PKPdf** 00 17 03.6 -0.9
KKAR Karatay Array 118.93 308 PKIKP **PKPdf** 00 17 03.6 -0.9
BVAR Borovoye Array 119.06 320 PKP **PKPdf** 00 17 03.7 -0.7
comp=Z,5.5nm,0.3s,baz=96,slow=2.4,SNR=51
BVAR PP **PP** **00 18 31.7 -4.1**
comp=Z,4.1nm,0.6s,baz=94,slow=9.5,SNR=6.7
BVAR SKP 00 19 43.2
comp=Z,8.7nm,0.8s,baz=50,slow=2.1,SNR=5.6
BVAR PKKPbc **PKKPbc** **00 27 21.3 -0.5**
comp=Z,4.7nm,0.6s,baz=281,slow=3.2,SNR=21
BRVK Borovoye 119.12 320 *c i* PKIKP **PKiKP** 00 17 06.1 +1.5
BRVK pmax pmax
comp=Z,11nm,2.5s
BRLS Borolday 119.42 308 *e* PKP **PKPdf** 00 17 05.3 -0.2
baz=308
BRLS Borolday 119.42 308 *e* PKIKP **PKPdf** 00 17 05.3 -0.2
BDFB Brasilia 119.60 124 PKPdf **PKPdf** 00 17 06.5 -0.2
BDFB Brasilia 119.60 124 PKIKP **PKPdf** 00 17 06.5 -0.2
BDFB Brasilia 119.60 124 PKP **PKPdf** 00 17 06.2 -0.6
comp=Z,7.7nm,0.5s,baz=209,slow=2.8,SNR=20

BDFB PP **PP** **00 18 39.5 -0.2**
comp=Z,1.8nm,0.5s,baz=235,slow=6.2,SNR=3.7
BDFB PKKPab **PKKPab** **00 27 26.5 +2.2**
comp=Z,2.5nm,0.7s,baz=116,slow=5.0,SNR=3.0
UPNV Upernavik 119.90 17 *i* P **PKPdf** **00 17 03.8 -1.6**
SCHQ Schefferville 120.12 38 PKP **PKPdf** **00 17 05.7 -0.7**
comp=Z,3.6nm,0.6s,baz=280,slow=4.5,SNR=8.9
BATG Bathurst New B 121.05 47 PKPdf **PKPdf** **00 17 08.0 -0.4**
UMMG Uummannaq 121.99 18 *i* P **PKPdf** **00 17 08.5 -1.0**
SPITS Spitsbergen Ar 122.73 356 PKP **PKPdf** **00 17 10.7 -0.2**
comp=Z,6.6nm,0.5s,baz=108,slow=4.5,SNR=22
SPITS SKP 00 19 50.6
comp=Z,16nm,0.8s,baz=26,slow=4.6,SNR=5.9
SPITS PKKPbc **PKKPab** **00 27 07.1 -0.1**
comp=Z,12nm,0.8s,baz=170,slow=6.8,SNR=18
ILULI Ilulissat 123.01 20 *i* P **PKPdf** **00 17 09.8 -1.7**
SUR Sutherland 123.15 200 PKPdf **PKiKP** **00 17 13.9 +0.3**
SFJD Kangerlussuaq 124.24 22 *i* P **PKPdf** **00 17 12.3 -1.6**
SUMG Summit 124.33 13 PKPdf **PKiKP** **00 17 14.7 -0.2**
SUMG Summit 124.33 13 PKiKP **PKiKP** **00 17 14.7 -0.2**
SUMG Summit 124.33 13 *i* P **PKPdf** **00 17 14.4 -0.1**
SUMG Summit 124.33 13 *i* P **PKKPbc** **00 27 01.0 -2.1**
BOSA Boshof 124.91 206 PKP **PKiKP** **00 17 17.1 0.0**
comp=Z,21nm,0.8s,baz=187,slow=1.9,SNR=27
BOSA PKKPab **PKKPbc** **00 27 00.1 -0.5**
comp=Z,2.2nm,0.8s,baz=185,slow=2.1,SNR=3.7
ARU Arti 125.32 325 PKPdf **PKPdf** **00 17 16.2 -0.1**
ARU Arti 125.32 325 *i* PKiKP **PKiKP** **00 17 17.2 +0.5**
ARU 00 19 16.0
ARU 00 23 31.1
DY2G Dye2 126.00 21 *i* P **PKPdf** **00 17 16.9 -0.8**
ICESG Greenland Ices 126.43 17 *i* P **PKPdf** **00 17 17.1 -1.4**
GEYT Alibeck 128.32 302 PKPdf **PKiKP** **00 17 23.1 -0.3**
GEYT Alibeck 128.32 302 PKiKP **PKiKP** **00 17 23.1 -0.3**
GEYT Alibeck 128.32 302 PKhKP PKPpre 00 17 09.2
comp=Z,2.2nm,0.8s,baz=272,slow=12,SNR=5.1
GEYT PKP **PKPdf** **00 17 22.7 0.0**
comp=Z,1.0nm,0.3s,baz=97,slow=1.0,SNR=7.1
GEYT PP **PP** **00 19 35.1 -2.3**
comp=Z,16nm,1.0s,baz=72,slow=4.8,SNR=15
SOHO SOHO 128.81 284 *i* PKPdf **PKPdf** **00 17 23.0 -1.0**
SNR=6.6
ISOG Isortoq, Green 128.95 20 *i* P **PKPdf** **00 17 21.5 -1.4**
NRS Narsarsuaq 129.09 27 *i* P **PKPdf** **00 17 22.9 -0.5**
SCO Scoresbysund 129.13 10 *i* P **PKPdf** **00 17 23.0 -0.1**
SOEG Soedalen 129.18 15 *i* P **PKPdf** **00 17 23.1 -0.2**
KIRV Kirov 129.20 330*c* *i*PKiKP **PKPdf** **00 17 23.8 +0.2**
HATD Hatta, Dubai 129.27 285 *i* PKPdf **PKPdf** **00 17 24.4 -0.4**
SNR=6.7
ASHO Ashiyiah 129.31 285 *i* PKPdf **PKPdf** **00 17 24.4 -0.6**
SNR=7.2
ALNE Al Ain 129.50 284 *i* PKPdf **PKPdf** **00 17 24.6 -0.7**
SNR=8.1
ARA0 ARCESS Array S 129.63 349 *e*P **PKPdf** **00 17 24.2 0.0**
ARA0 IAmb IAmb 00 17 26.4
comp=Z,135nm,1.9s
ARA0 *e* 00 19 51.5
ARCES ARCESS Array B 129.63 349 PKhKP PKPpre 00 17 11.6
comp=Z,5.0nm,0.7s,baz=41,slow=0.8,SNR=10
ARCES PKP **PKPdf** **00 17 23.9 -0.3**
comp=Z,3.8nm,0.5s,baz=21,slow=1.4,SNR=18
ARCES PKKP **PKKPdf** **00 27 27.6 -2.8**
comp=Z,1.2nm,0.4s,baz=220,slow=2.5,SNR=13
FAQ Al Faqa, Dubai 129.74 285 *i* PKPdf **PKPdf** **00 17 25.6 -0.1**
SNR=14
ASUD Al Ashush, Dub 129.96 285 *i* PKPdf **PKPdf** **00 17 26.0 -0.1**
SNR=6.8
JETT Jettan, Norway 130.44 351 *e* 00 19 54.0
KTK1 Kautokeino 130.48 350 *e* 00 19 53.7
TRO Tromso 130.57 352 *e* 00 19 53.9
FAUS Fauske 133.16 352 *e* 00 20 03.7
FAUS *e*P PKPpre 00 17 20.7
LSZ Lusaka 134.67 219 PKPpre 00 17 27.4
LSZ Lusaka 134.67 219 PKHKP PKPpre 00 17 27.4
RCBR Riachuelo 134.97 123 **PKPdf** **00 17 36.2 +0.2**
RCBR Riachuelo 134.97 123 PKiKP **PKPdf** **00 17 36.2 +0.2**
NSS Namsos 136.29 353 *e*P PKPpre 00 17 23.9
FINES FINESS Array B 136.34 343 PKhKP PKPpre 00 17 23.4
comp=Z,1.7nm,0.4s,baz=42,slow=0.2,SNR=16
FINES PKP **PKPdf** **00 17 35.8 -1.1**
comp=Z,8.7nm,0.6s,baz=96,slow=3.1,SNR=9.8
FINES SKPbc **SKPbc** **00 20 13.0 +0.4**
comp=Z,47nm,0.9s,baz=64,slow=4.9,SNR=24
PUL Pulkovo 136.35 339 *i* PKiKP **PKPdf** **00 17 37.8 +0.8**
TSUM Tsumeb 136.38 203 PKPpre 00 17 30.0
OBN Obninsk 137.02 330⇑ *i*PKiKP **PKiKP** **00 17 39.5 -0.9**
OBN 00 20 03.0
OBN *e* 00 20 06.1
OBN *i* 00 20 48.9
OBN *e* 00 23 52.8
OBN *e* 00 30 05.3
OBN *e*SS SS 00 37 47.4 -1.5
OBN *e*SSS SSS 00 42 49.0
OBN pmax pmax
comp=Z,28nm,1.8s
KMBO Kilima Mbogo 137.89 242 PKPpre 00 17 33.7
KMBO Kilima Mbogo 137.89 242 PKPdf PKPpre 00 17 31.9
KMBO Kilima Mbogo 137.89 242 PKHKP PKPpre 00 17 33.7
ZEI Tsey 138.29 311 *i* PKHKP PKPpre 00 17 33.8
ZEI pmax pmax
comp=Z,6.0nm,1.3s
GNI Garni 138.36 307 PKPdf PKPpre 00 17 32.4
GNI Garni 138.36 307*c* *i*PKiKP **PKPdf** **00 17 40.8 -0.8**
GNI pmax pmax
comp=Z,16nm,1.7s
VSU Vasula 138.54 340 *e*P PKPdf 00 17 31.6 -9.4
KBZ Khabaz 138.70 313 PKhKP PKPpre 00 17 34.2
comp=Z,1.7nm,0.7s,baz=205,slow=4.1,SNR=5.1
KBZ SKPbc **SKPbc** **00 20 20.6 +0.7**
comp=Z,8.8nm,0.9s,baz=77,slow=1.2,SNR=10
RAYN Ar Rayn 138.74 282 PKPpre 00 17 36.5
RAYN Ar Rayn 138.74 282 PKHKP PKPpre 00 17 36.5
KIV Kislovodsk 138.77 313 *i* PKiKP **PKPdf** **00 17 41.0 -1.1**
KIV *e* 00 20 15.8
KIV *e* 00 20 34.5
KIV *e*SSS SSS 00 43 28.0
KIV pmax pmax
comp=Z,6.0nm,1.1s
DOMB Dombas 139.03 354 *e*P PKPpre 00 17 33.6
AKN Aaknes 139.07 356 *e* 00 20 21.9
FOO Floro 139.77 357 *e*P PKPpre 00 17 38.7
NB2 NORSAR Subarra139.77 352 pPKP pPKPdf 00 20 23.4 +19
comp=Z,5.8nm,0.8s,baz=11,slow=2.9
NB2 PKP PKPpre 00 17 35.6
comp=Z,12nm,0.7s,baz=20,slow=4.4
NB2 NORSAR Subarra139.77 352 PKPab PKPpre 00 17 35.6
baz=20,slow=4.4
NOA NORSAR Array B 139.77 352 PKhKP PKPpre 00 17 35.5
comp=Z,2.5nm,0.7s,baz=16,slow=1.6,SNR=21
NOA PKP **PKPdf** **00 17 44.3 +1.0**
comp=Z,1.1nm,0.5s,baz=14,slow=4.1,SNR=4.6
NOA SKPbc **SKPbc** **00 22.8 +0.4**
comp=Z,24nm,1.1s,baz=15,slow=4.3,SNR=12
NOA SKPab **SKPab** **00 20 35.2 +0.4**
comp=Z,10.0nm,1.1s,baz=14,slow=3.2,SNR=3.9
NC602 NORSAR Array S 140.02 352 *e* 00 20 22.1
NC602 *e*P PKPpre 00 17 36.3
HFS Hagfors 140.28 350 PKhKP PKPpre 00 17 37.3
comp=Z,21nm,0.6s,baz=84,slow=6.1,SNR=50
HFS SKPbc **SKPbc** **00 20 24.1 +0.5**
comp=Z,29nm,0.8s,baz=112,slow=1.6,SNR=14
SKAR Skarslia 140.44 354 *e*P PKPpre 00 17 38.5
OSL Oslo 140.90 352 *e*P PKPpre 00 17 39.7
IDID Didziasalis 140.99 337 *e*P PKPpre 00 17 37.9
ISAL Salakas 141.01 337 *e*P PKPpre 00 17 42.4
IIGN Ignalina 141.15 337 *e*P PKPpre 00 17 40.1
MNK Minsk 141.16 335 *i* PKHKP PKPpre 00 17 42.7
MNK *i* 00 20 03.3
MNK *i* 00 20 52.6
MNK *i* 00 23 55.4
MNK *i* PPP PPP 00 24 05.7
MNK *i* SS SS 00 38 33.9 -2.7
MNK *i* SSS SSS 00 44 02.0
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=N,11nm,0.8s
MNK MLR MLR
comp=N,2μm,18.0s
MNK MLR MLR
comp=Z,276nm,18.0s
MNK MLR MLR
comp=E,225nm,19.0s
KONO Kongsberg 141.31 353 IAmb IAmb 00 17 41.4
comp=Z,35nm,0.9s
KONO *e*P PKPpre 00 17 41.0
KONO Kongsberg 141.31 353*c* *i*PKHKP PKPpre 00 17 40.0
KONO pmax pmax
comp=Z,74nm,2.5s
ODD1 Odda 141.34 355 *e* 00 20 27.9
ODD1 *e*P PKPpre 00 17 41.1
VSVD Vaisvydziai 141.45 339 *e*P PKPpre 00 17 41.8
KTUT Trabzon 141.78 310 ⇓P PKPpre 00 17 43.9
PABE Paberze 141.82 339 *e*P PKPpre 00 17 43.7
BLS5 Blasjo 141.84 355 *e*P **PKPdf** **00 17 43.0 -4.0**
BLS5 IAmb IAmb 00 17 47.9
comp=Z,791nm,2.6s
LODK Lodwar 141.92 247 PKPdf **PKPdf** **00 17 46.0 -2.7**
PBUR Paburge 142.05 341 *e*P **PKPdf** **00 17 44.3 -3.1**
SHEL Horse Pasture 142.28 170 PKPdf **PKPdf** **00 17 47.6 -1.6**
SHEL Horse Pasture 142.28 170 PKiKP **PKPdf** **00 17 47.6 -1.6**
HOMB Homborsund 142.79 353 *e*P **PKPdf** **00 17 46.4 -2.2**
HOMB IAmb IAmb 00 17 46.9
comp=Z,181nm,0.8s
SNART Snartemo 142.85 354 *e*P **PKPdf** **00 17 46.4 -2.4**
SNART IAmb IAmb 00 17 47.0
comp=Z,115nm,0.8s
SNART *e* 00 20 31.9
AKASG Malin Array Be 143.26 330 PKP PKPab 00 17 47.3 -0.9
comp=Z,176nm,0.6s,baz=42,slow=4.3,SNR=696
AKASG SKPbc **SKPbc** **00 20 31.6 +0.3**
comp=Z,29nm,0.9s,baz=42,slow=2.3,SNR=24
KIEV Kiev 143.27 330 ⇓P PKPab 00 17 47.4 -0.8
KIEV Kiev 143.27 330 PKPdf PKPab 00 17 47.4 -0.8
KIEV Kiev 143.27 330 PKiKP PKPab 00 17 47.4 -0.8
SUW Suwalki 143.29 338 *e*PKPab PKPab 00 17 48.0 -0.2
SUW *e*PKPdf **PKPdf** **00 17 50.2 +0.5**
SUW Suwalki 143.29 338 *e*P PKPbc 00 17 48.6 +0.2
MBAR Mbarara 143.44 237 **PKPdf** **00 17 51.2 -0.3**
MBAR Mbarara 143.44 237 PKiKP **PKPdf** **00 17 51.2 -0.3**
SIM Simferopol' 143.96 318 *e*PKiKP **PKPdf** **00 17 51.1 -0.1**
SIM 00 17 53.0
SIM *e* 00 20 33.0
SIM pmax pmax
comp=Z,314nm,0.9s
SIM pmax pmax
comp=Z,100nm,0.9s
MUD Monsted U'grnd 144.48 352 *i* P **PKPdf** **00 17 51.4 -0.3**
DIKM Dikmen 144.70 313 ⇓P **PKPab** **00 17 53.6 -0.4**
BSD Bornholm Skovb 144.74 346 *i* P **PKPdf** **00 17 51.9 -0.3**
SSRD Sdr. Stenderup 145.37 351 *i* P **PKPbc** **00 17 54.1 -0.5**
SORM Soroca 145.39 327 ⇓P **PKPbc** **00 17 54.3 -0.6**
SORM Soroca 145.39 327 ⇓PKiKP **PKPbc** **00 17 54.3 -0.6**
PURM Purcari 145.58 324 ⇓P **PKPbc** **00 17 55.4 -0.2**
GKP Gorka Klasztor 145.81 342 *e*PKPbc **PKPbc** **00 17 55.8 -0.1**
GKP *e*PKPab **PKPab** **00 17 57.9 -0.1**
GKP Gorka Klasztor 145.81 342 *e*P **PKPbc** **00 17 56.5 +0.5**
KIS Kishinev 145.87 325⇓ *i*PKP **PKPbc** **00 17 55.9 -0.4**
comp=Z,160nm,1.8s
KIS Kishinev 145.87 325*d* *i*PKiKP **PKPbc** **00 17 55.9 -0.4**
KIS pmax pmax
comp=Z,160nm,1.8s
BEL Belsk 145.91 338 *e*PKPbc **PKPbc** **00 17 56.7 +0.4**
BEL *e*PKPab **PKiKP** **00 17 59.1 +0.3**
MILM Milestii Mici 145.92 325⇓ *i*PKP **PKPbc** **00 17 55.9 -0.5**
comp=Z,243nm,1.0s
MILM Milestii Mici 145.92 325 ⇓P **PKPbc** **00 17 56.0 -0.5**
MILM Milestii Mici 145.92 325*d* *i*PKiKP **PKPbc** **00 17 55.9 -0.5**
MILM pmax pmax
comp=Z,230nm,1.0s
EKA Eskdalemuir Ar 146.03 4 PKPbc **PKPbc** **00 17 56.0 -0.5**
comp=Z,31nm,0.7s,baz=344,slow=2.7,SNR=50
EKA SKPbc **SKiKP** **00 20 37.6 -0.1**
comp=Z,3.5nm,0.9s,baz=323,slow=2.0,SNR=4.2
ESK Eskdalemuir 146.04 4 **PKPbc** **00 17 56.4 -0.1**
ESK Eskdalemuir 146.04 4 PKiKP **PKPbc** **00 17 56.4 -0.1**
H10S3 ASCENSION HYDR146.20 152 PKPbc **PKPab** **00 18 02.3 +2.0**
baz=200,slow=74,SNR=4.9
H10S2 ASCENSION HYDR146.21 152 PKPbc **PKPbc** **00 17 56.9 -1.1**
baz=20,slow=74,SNR=12
LVV L'vov 146.23 333 *e*PKiKP **PKPbc** **00 17 56.8 -0.5**
LVV *e* 00 20 19.0
BEIL Beino 146.30 300 *e*P **PKPbc** **00 17 58.5 +0.5**
LEOM Leova 146.50 325 ⇑P **PKPbc** **00 17 58.2 +0.2**
LEOM Leova 146.50 325 ⇑PKP2 **PKPbc** **00 17 58.3 +0.2**
HWQ Hawqa 146.55 300 *e*P **PKPbc** **00 17 58.7 -0.1**
BRTR Keskin Array B 146.60 311 **PKPbc** **00 17 58.3 -0.5**
BRTR Keskin Array B 146.60 311 PKPbc **PKPbc** **00 17 58.0 -0.7**
comp=Z,21nm,0.7s,baz=66,slow=1.5,SNR=169
BRTR SKPbc **SKiKP** **00 20 39.8 +0.1**
comp=Z,10.0nm,0.9s,baz=132,slow=1.8,SNR=6.4
VASR Vaslui 146.64 325 ⇑P **PKPbc** **00 17 59.1 +0.6**
BSEG Bad Segeberg 146.75 350 *e*PKPbc **PKPbc** **00 17 59.1 +0.6**
baz=19,slow=2.3
BSEG *e*PKPab **PKPab** **00 18 01.7 0.0**
baz=17,slow=4.3
BHL Bhannes 146.87 300 *e*P **PKPbc** **00 17 59.8 +0.2**
QRWL Qaraoun 146.92 299 *e*P **PKPbc** **00 18 00.1 +0.4**
KWP Kalwaria Pacla 146.93 334 *e*PKPbc **PKPbc** **00 17 58.3 +0.1**
KWP *e*PKPab **PKPab** **00 18 02.8 +0.1**
BIR Birlad 146.97 325 ⇑P **PKiKP** **00 18 00.3 -0.8**
BIR Birlad 146.97 325 ⇑PKP2 **PKiKP** **00 18 00.3 -0.8**
PRAR RASCA 146.97 328 ⇑P **PKPbc** **00 17 59.3 0.0**
TLCR 146.98 322 ⇑P **PKiKP** **00 18 01.0 -0.1**
TLCR 146.98 322 ⇑PKP2 **PKiKP** **00 18 01.0 -0.1**
DQRL Deir Qamar 146.98 299 *e*P **PKPbc** **00 18 00.5 +0.5**
VLDR Vladesti 146.99 324 ⇑P **PKPbc** **00 17 59.6 +0.2**
VARL Varlezi 147.08 324 ⇑P **PKPbc** **00 17 59.6 0.0**
ANTO Ankara 147.14 311 ⇓P **PKPbc** **00 18 00.3 +0.2**
ANTO Ankara 147.14 311 **PKPbc** **00 18 00.4 +0.2**
ANTO Ankara 147.14 311 ⇓PKP2 **PKPbc** **00 18 00.3 +0.2**
SCTR Scanteiesti 147.14 324 ⇑P **PKPbc** **00 17 59.0 -0.8**
TATR Tatarca 147.16 324 ⇑P **PKPbc** **00 17 59.9 +0.1**
GHRR 147.22 325 ⇓P **PKiKP** **00 18 00.9 -0.7**
ASCN Ascension 147.24 151 PKPab **PKiKP** **00 18 02.2 -0.5**
H10N3 ASCENSION HYDR147.26 151 PKPbc **PKiKP** **00 18 02.0 -0.4**
baz=213,slow=3.2,SNR=14
MMAI Mount Meron Ar 147.26 298 PKPbc **PKPbc** **00 18 01.2 +0.6**
comp=Z,70nm,0.7s,baz=69,slow=4.7,SNR=103
MMAI SKPbc **SKiKP** **00 20 42.0 +0.8**
comp=Z,14nm,0.9s,baz=70,slow=3.1,SNR=4.2
H10N1 ASCENSION HYDR147.27 151 PKPbc **PKiKP** **00 18 01.9 -0.5**
baz=213,slow=3.2,SNR=16
H10N2 ASCENSION HYDR147.28 151 PKPbc **PKiKP** **00 18 01.8 -0.6**
baz=213,slow=3.2,SNR=15
NEGRR Negrra 147.29 324 ⇑P **PKPbc** **00 18 00.9 +0.7**
BUR01 Bucovina Ar. S 147.29 329 ⇑P **PKPbc** **00 18 01.0 +0.7**
BURAR Bucovina Array 147.29 329 ⇑P **PKPbc** **00 18 01.0 +0.7**
BURAR Bucovina Array 147.29 329 **PKPbc** **00 18 00.7 +0.4**
BURAR Bucovina Array 147.29 329 ⇑PKP2 **PKPbc** **00 18 01.0 +0.7**
SLCR Slobozia Conac 147.32 324 ⇓P **PKPbc** **00 18 00.6 +0.3**
TESR Tescani 147.33 326 ⇑P **PKPbc** **00 18 00.1 -0.2**
SCHL Schela 147.34 324 ⇑P **PKPbc** **00 18 00.5 +0.2**
IZVR Izvoarele 147.35 324 ⇓P **PKPbc** **00 18 00.7 +0.4**
CFR Carcaliu 147.37 323 ⇓P **PKPbc** **00 18 00.4 0.0**
CFR Carcaliu 147.37 323 ⇓PKP2 **PKPbc** **00 18 00.4 0.0**
H07S1 FLORES T-PHASE147.37 50 *e*PKP **PKPab** **00 18 04.3 -0.5**
TUDR 147.37 324 ⇑P **PKPbc** **00 18 00.9 +0.5**
TPGR Topolog 147.40 322 ⇓P **PKPbc** **00 18 00.9 +0.4**
RUE Ruedersdorf 147.43 345 *e*PKPbc **PKPbc** **00 18 00.9 +0.6**
baz=19,slow=2.3
RUE *e*PKPab **PKPab** **00 18 04.5 0.0**
baz=17,slow=4.3
PANC Panciu 147.48 325 ⇓P **PKPbc** **00 18 01.4 +0.7**
ODBI Odobesti 147.60 325 ⇑P **PKiKP** **00 18 02.2 -0.2**
OJC Ojcow 147.60 337 *e*PKPbc **PKPbc** **00 18 00.9 0.0**
OJC *e*PKPab **PKPab** **00 18 05.2 -0.1**
TIRR Tirgusor 147.64 322 ⇑P **PKPbc** **00 18 01.3 +0.2**
TIRR Tirgusor 147.64 322 ⇑PKP2 **PKPbc** **00 18 01.3 +0.2**
VRI Vrincioaia 147.71 325 ⇑P **PKPbc** **00 18 01.4 +0.1**
VRI Vrincioaia 147.71 325 ⇑PKP2 **PKPbc** **00 18 01.4 +0.1**
PLOR Plostina 147.76 325 ⇑P **PKPbc** **00 18 01.5 +0.1**
PLOR Plostina 147.76 325 ⇑PKP2 **PKPbc** **00 18 01.5 +0.1**
HARR Harsova 147.78 322 ⇑P **PKPbc** **00 18 01.9 +0.5**
HARR Harsova 147.78 322 ⇑PKP2 **PKPbc** **00 18 01.9 +0.5**
MFTR Murfatlar 147.80 321 ⇓P **PKPbc** **00 18 01.9 +0.4**
TLBR Topalu 147.80 322 ⇑P **PKPbc** **00 18 02.0 +0.5**
GRER 147.88 324 ⇓P **PKiKP** **00 18 04.3 +1.2**
MANR Mangalia 147.91 321 ⇓P **PKPbc** **00 18 02.3 +0.5**
TURR Turia 147.96 326 ⇑P **PKiKP** **00 18 02.8 -0.4**
COVR Voineasa-Covas 148.00 326 ⇑P **PKPbc** **00 18 01.9 -0.1**
OZUR 148.05 326 ⇑P **PKiKP** **00 18 02.9 -0.6**
BMR Baia Mare 148.06 330 ⇑P **PKPbc** **00 18 02.5 +0.4**
BMR Baia Mare 148.06 330 ⇑PKP2 **PKPbc** **00 18 02.5 +0.4**
NIE Niedzica 148.07 336 *e*PKPbc **PKiKP** **00 18 02.9 -0.4**
NIE *e*PKPab **PKPab** **00 18 07.6 +0.3**
RETH Rethem/Aller, 148.07 350 *e*PKPbc **PKiKP** **00 18 02.4 -0.6**
baz=19,slow=2.3
RETH *e*PKPab **PKPab** **00 18 07.0 0.0**
baz=17,slow=4.3
ARCR ARCALIA 148.08 329 ⇑P **PKiKP** **00 18 03.0 -0.4**
FLTG Flechtingen 148.12 348 *e*PKPbc **PKPbc** **00 18 02.3 +0.3**
baz=19,slow=2.3
FLTG *e*PKPab **PKPab** **00 18 06.9 -0.4**
baz=17,slow=4.3
BOSR Bodos 148.13 326 ⇓P **PKiKP** **00 18 03.0 -0.6**
AMRR Amara 148.16 323 ⇑P **PKPab** **00 18 08.7 +0.9**
AMRR Amara 148.16 323 ⇑PKP2 **PKPab** **00 18 08.7 +0.9**
NRDL Niedersach Rie 148.18 349 *e*PKPbc **PKPbc** **00 18 02.7 +0.6**
baz=19,slow=2.3
NRDL *e*PKPab **PKPab** **00 18 07.5 0.0**
baz=17,slow=4.3
ICOR Ion Corvin 148.20 322 ⇑P **PKiKP** **00 18 03.2 -0.5**
NEHR Nehoiu 148.22 325 ⇑P **PKPdf** **00 17 58.9 +0.5**
KSP Ksiaz 148.23 341 *e*PKPbc **PKPbc** **00 18 03.0 -0.6**
KSP *e*PKPab **PKPab** **00 18 08.3 +0.4**
PSN Preselentsi 148.28 321 P **PKPbc** **00 18 03.2 +0.4**
ISR Istrita 148.28 324 ⇑P **PKiKP** **00 18 04.0 +0.1**
ISR Istrita 148.28 324 ⇑PKP2 **PKiKP** **00 18 04.0 +0.1**
DOPR Dopca 148.34 326 ⇓P **PKiKP** **00 18 03.4 -0.6**
MLR Muntele Rosu 148.37 325 ⇑P **PKPbc** **00 18 03.2 +0.1**
MLR Muntele Rosu 148.37 325 ⇑PKP2 **PKPbc** **00 18 03.2 +0.1**
TGMR Targu Mures 148.39 328 ⇑P **PKPab** **00 18 09.6 +0.9**
ASSE Asse, Remlinge 148.42 348 *e*PKPbc **PKiKP** **00 18 03.3 -0.5**
baz=19,slow=2.3
ASSE *e*PKPab **PKPab** **00 18 08.4 -0.1**
baz=17,slow=4.3
OKC Ostrava-Krasne 148.50 338⇑ *e*PKP **PKPbc** **00 18 03.4 +0.3**
OKC *e*PKPAB **PKPab** **00 18 09.5 +0.5**
OKC Ostrava-Krasne 148.50 338 *e*PKP2 **PKPbc** **00 18 03.4 +0.3**
OSTC Ostas 148.51 341⇑ *e*PKP **PKiKP** **00 18 03.8 -0.4**
OSTC *e*PKPAB **PKPab** **00 18 09.7 +0.7**
OSTC Ostas 148.51 341 *e*PKP2 **PKiKP** **00 18 03.8 -0.4**
CHVC Chvalec 148.53 341⇑ *e*PKP **PKPbc** **00 18 03.6 +0.4**
CHVC *e*PKPAB **PKPab** **00 18 09.7 +0.6**
CHVC Chvalec 148.53 341 *e*PKP2 **PKPbc** **00 18 03.6 +0.4**
UPC Upice 148.61 341⇑ *e*PKP **PKPbc** **00 18 03.8 +0.4**
UPC *e*pPKP **pPKPab** **00 20 25.6 +2.1**
UPC Upice 148.61 341 *e*PKP2 **PKPbc** **00 18 03.8 +0.4**
DPC Dobruska-Polom 148.66 341⇑ *e*PKP **PKPbc** **00 18 04.0 +0.5**
DPC *e*PKPAB **PKPab** **00 18 10.4 +0.7**
DPC Dobruska-Polom 148.66 341 *e*PKP2 **PKPbc** **00 18 04.0 +0.5**
CBBR Cluj-Babes-Bol 148.70 329 ⇑P **PKPdf** **00 18 00.7 +1.6**
CLL Collm 148.70 345⇓ *e*PKHKP PKPpre 00 17 59.0
CLL *i* 00 18 03.6
CLL *i* 00 18 09.4
CLL pmax pmax
comp=Z,65nm,1.1s
CLL pmax pmax
comp=Z,82nm,0.8s
CLL Collm 148.70 345 *e*PKPdf **PKPdf** **00 17 59.0 +0.1**
CLL ⇓*i*PKPbc **PKPbc** **00 18 03.6 +0.1**
comp=Z,65nm,1.1s
CLL ⇓*i*PKPab **PKPab** **00 18 09.4 -0.3**
comp=Z,82nm,0.8s
CLL *i* pPKPab **pPKPab** **00 20 26.5 +2.8**
comp=Z,57nm,1.1s
CLL *e*SKPbc **SKiKP** **00 20 44.0 +0.6**
CLL *e*PKSdf **PKSdf** **00 21 33.0 -0.6**
CLL *ex* x 00 21 37.0
CLL *e*PP **PP** **00 21 40.0 +0.3**
CLL Collm 148.70 345 *e*PKPbc **PKiKP** **00 18 04.0 -0.5**
baz=19,slow=2.3
CLL *e*PKPab **PKPab** **00 18 09.8 +0.1**
baz=17,slow=4.3
CLL *e*pPKPab **pPKPab** **00 20 27.9 +4.2**
MESR Meseseni 148.70 330 ⇓P **PKPbc** **00 18 04.0 +0.3**
CJR Cluj-Napoca 148.71 329 ⇓P **PKPbc** **00 18 04.1 +0.3**
CJP Cluj-Napoca 148.71 329 ⇓PKHKP PKPpre 00 18 04.1
IBBN Ibbenburen 148.72 352 *e*PKPbc **PKiKP** **00 18 04.1 -0.5**
baz=19,slow=2.3
IBBN *e*PKPab **PKPab** **00 18 09.9 +0.1**
baz=17,slow=4.3
SULR 148.72 324 ⇑P **PKPbc** **00 18 03.4 -0.3**
KRLC Kraliky 148.75 340⇑ *e*PKP **PKPbc** **00 18 04.2 +0.4**
KRLC *e*PKPAB **PKPab** **00 18 10.7 +0.6**
KRLC *e*pPKP **pPKPab** **00 20 28.8 +4.8**
KRLC Kraliky 148.75 340 *e*PKHKP PKPpre 00 18 04.2
KRLC *e* 00 18 10.7
CLZ Clausthal 148.75 348 *e*PKPbc **PKiKP** **00 18 04.5 -0.2**
baz=19,slow=2.3
CLZ *e*pPKPab **pPKPab** **00 20 28.3 +4.4**
MORC Moravsky Berou 148.76 339 ⇑P **PKiKP** **00 18 04.5 -0.3**
MORC Moravsky Berou 148.76 339 *e*PKP **PKPbc** **00 18 04.0 +0.2**
MORC *e* 00 18 10.6
MORC *e*pPKP **pPKPab** **00 20 25.0 +0.9**
MORC Moravsky Berou 148.76 339 ⇑PKP2 **PKiKP** **00 18 04.5 -0.3**
BRG Berggiesshubel 148.86 344⇓ *i*PKP **PKPbc** **00 18 04.3 +0.4**
BRG Amp 00 18 05.5
comp=Z,25nm,0.9s
BRG Berggiesshubel 148.86 344 P **PKPab** **00 18 10.7 +0.2**
BRG Amp 00 18 11.4
comp=Z,48nm,0.8s
BRG pPKP **pPKPab** **00 20 27.2 +2.9**
BRG Amp 00 20 29.1
comp=Z,30nm,1.3s
BRG Berggiesshubel 148.86 344⇓ *i*PKHKP PKPpre 00 18 04.3
BRG 00 18 10.6
BRG pmax pmax
comp=Z,25nm,0.9s
BRG Berggiesshubel 148.86 344 *e*PKPbc **PKiKP** **00 18 04.6 -0.3**
baz=19,slow=2.3
BRG *e*PKPab **PKPab** **00 18 10.8 +0.3**
baz=17,slow=4.3
VOIR 148.87 326 ⇑P **PKPbc** **00 18 04.4 +0.2**
MARR Marisel-Cluj 148.97 329 ⇓P **PKPbc** **00 18 04.5 0.0**
PRD Provadia 148.99 320 P **PKiKP** **00 18 04.9 -0.5**
LTVH Ltavrtes, Hu 149.00 332 ⇑P **PKiKP** **00 18 05.3 +0.1**
NEF NEVSHA 149.01 321 P **PKPbc** **00 18 04.2 -0.4**
PVCC Panska Ves 149.01 343 *e*PKPAB **PKPab** **00 18 11.4 +0.3**
PVCC Panska Ves 149.01 343 *e*PKP2 **PKPab** **00 18 11.4 +0.3**
MAUC Maruska 149.01 338⇑ *e*PKP **PKiKP** **00 18 05.2 -0.1**
NEUB Neuenburg 149.07 346 *e*PKPbc **PKiKP** **00 18 05.1 -0.2**
baz=19,slow=2.3
NEUB *e*PKPab **PKPab** **00 18 11.4 +0.1**
baz=17,slow=4.3
DRGR 149.07 330 ⇓P **PKPbc** **00 18 04.6 -0.1**
GTTG Gottingen 149.11 349 *e*PKPbc **PKiKP** **00 18 05.1 -0.2**
baz=19,slow=2.3
GTTG *e*PKPab **PKPab** **00 18 11.6 +0.1**
baz=17,slow=4.3
RICC Richard 149.12 343⇑ *e*PKP **PKiKP** **00 18 05.2 -0.2**
RICC *e*PKPAB **PKPab** **00 18 12.3 +0.8**
ARR Arges 149.14 326 ⇑P **PKiKP** **00 18 05.6 -0.1**
SGRR Singureni 149.17 323 ⇑P **PKPbc** **00 18 04.5 -0.4**
HSKC Hora Svate Kat 149.24 344⇑ *e*PKP **PKPbc** **00 18 05.2 +0.3**
HSKC *e*PKPAB **PKPab** **00 18 10.8 -1.3**
RAZG Razgrad 149.27 322 ⇑P **PKPbc** **00 18 04.8 -0.4**
LOZB Loznitsa 149.34 321 ⇓P **PKPbc** **00 18 05.3 -0.1**
PSZ Piszkesteto 149.43 334 ⇑P **PKPbc** **00 18 05.2 -0.3**
PCED Cedros 149.45 49 *e*PKP **PKiKP** **00 18 06.8 +0.3**
PRA Prague 149.46 343⇑ *e*PKP **PKiKP** **00 18 05.8 -0.3**
CALA Caldeira 149.47 49 *e*PKP **PKiKP** **00 18 06.7 +0.1**
VRAC Vranov 149.48 339 ⇑P **PKiKP** **00 18 06.4 +0.1**
VRAC Vranov 149.48 339 *e*PKP **PKPbc** **00 18 05.7 +0.2**
VRAC *e* 00 18 13.8
VRAC *e*pPKP **pPKPab** **00 20 27.3 +0.5**
JAVC Velka Javorina 149.50 338 *e*PKP **PKiKP** **00 18 06.9 +0.6**
JAVC *e* 00 18 14.8
JAVC *e*pPKP **pPKPab** **00 20 29.6 +2.8**
GOPC GO Pecny, Ondr 149.50 342⇑ *e*PKP **PKPbc** **00 18 05.8 +0.3**
GOPC *e*pPKP **pPKPab** **00 20 28.9 +2.0**
PRU Pruhonice 149.50 342⇑ *e*PKP **PKPbc** **00 18 05.7 +0.2**
PRU *e*PKPAB **PKPab** **00 18 13.6 +0.5**
PRU *e*pPKP **pPKPab** **00 20 28.6 +1.7**
HUMR Humele 149.51 325 ⇓P **PKPbc

TANN				*e*PKPab	**PKPab**	**00 18 14.1**	**+0.2**	
	baz=17,slow=4.3							
PLN	**Plauen**	**149.66**	**346**	*e*PKPbc	**PKiKP**	**00 18 06.5**	**-0.1**	
	baz=19,slow=2.3							
PLN				*e*PKPab	**PKPab**	**00 18 13.9**	**+0.1**	
	baz=17,slow=4.3							
PCAN	**Candelaria**	**149.68**	**49**	*e*PKP	**PKiKP**	**00 18 06.9**	**-0.1**	
KASTN	**Kahler Asten**	**149.70**	**350**	*e*PKPbc	**PKiKP**	**00 18 06.5**	**-0.2**	
	baz=19,slow=2.3							
PICO	**Pico**	**149.70**	**49**	*e*PKP	**PKPbc**	**00 18 05.2**	**-1.3**	
SRBC	**Serra Branca**	**149.73**	**48**	*e*PKP	**PKPbc**	**00 18 06.2**	**-0.2**	
ROSA	**Rosais**	**149.74**	**49**		**PKPbc**	**00 18 06.7**	**+0.2**	
ROSA	**Rosais**	**149.74**	**49**	*e*PKP	**PKiKP**	**00 18 07.0**	**-0.1**	
KRUC	**Moravsky**	**149.76**	**339**	*e*PKP	**PKPbc**	**00 18 06.3**	**+0.1**	
KRUC				*e*		00 18 14.7		
KRUC				*ep*PKP	**pPKPab**	**00 20 28.8**	**+0.9**	
SZH	**Strazhitsa**	**149.76**	**322**	P	**PKPab**	**00 18 15.1**	**+0.6**	
UBBA	**Unterbreizbach**	**149.80**	**348**	*e*PKPab	**PKPab**	**00 18 13.9**	**-0.3**	
	baz=17,slow=4.3							
NKC	**Novy Kostel**	**149.83**	**345**⇑	*e*PKP	**PKiKP**	**00 18 06.7**	**-0.2**	
NKC				*e*PKPAB	**PKPab**	**00 18 14.6**	**+0.1**	
PPNO	**Prainha do Nor**	**149.83**	**49**	*e*PKP	**PKiKP**	**00 18 07.9**	**+0.5**	
TREC	**Trest**	**149.84**	**341**⇑	*e*PKP	**PKPbc**	**00 18 06.4**	**0.0**	
TREC				*ep*PKP	**pPKPab**	**00 20 29.4**	**+1.2**	
PMAN	**Manadas**	**149.88**	**49**	*e*PKP	**PKiKP**	**00 18 07.6**	**+0.2**	
JMB	**Yambol**	**149.91**	**320**	P	**PKiKP**	**00 18 07.0**	**-0.3**	
SIRR	**Siria**	**149.95**	**330**	⇑P	**PKPbc**	**00 18 06.7**	**0.0**	
ELND	**Elena**	**150.03**	**321**	⇓P	**PKPbc**	**00 18 07.2**	**+0.2**	
GZR	**Gura Zlata**	**150.06**	**328**	⇓P	**PKPbc**	**00 18 06.8**	**-0.3**	
GZR	**Gura Zlata**	**150.06**	**328**	⇓PKIKP	**PKPbc**	**00 18 06.8**	**-0.3**	
ZVC	**Zvikov**	**150.10**	**342**	*e*PKPDF	**PKPdf**	**00 18 02.0**	**+0.8**	
ZVC				⇑*e*PKP	**PKiKP**	**00 18 07.2**	**-0.3**	
MANZ	**Manzenberg**	**150.14**	**345**	*e*PKPbc	**PKiKP**	**00 18 07.6**	**+0.1**	
	baz=19,slow=2.3							
MANZ				*e*PKPab	**PKPab**	**00 18 16.1**	**+0.2**	
	baz=17,slow=4.3							
MANZ				*ep*PKPab	**pPKPab**	**00 20 31.0**	**+1.5**	
VLAD	**Vladila**	**150.18**	**324**	⇑P	**PKiKP**	**00 18 07.8**	**+0.1**	
AMBH	**Ambrzfalva**	**150.31**	**331**	⇓P	**PKiKP**	**00 18 08.5**	**+0.5**	
ROTZ	**Rotzenmuhle**	**150.32**	**345**	*e*PKPbc	**PKiKP**	**00 18 08.0**	**+0.1**	
	baz=19,slow=2.3							
ROTZ				*e*PKPab	**PKPab**	**00 18 17.0**	**+0.4**	
	baz=17,slow=4.3							
ROTZ				*ep*PKPab	**pPKPab**	**00 20 31.2**	**+1.1**	
SRE	**Strehaia**	**150.36**	**327**	⇑P	**PKPbc**	**00 18 07.1**	**-0.6**	
SRE	**Strehaia**	**150.36**	**327**	⇑PKIKP	**PKPbc**	**00 18 07.1**	**-0.6**	
PAGU	**Agualva, Azore**	**150.45**	**48**	*e*PKP	**PKiKP**	**00 18 09.1**	**+0.5**	
BEBN	**Eben Emael**	**150.45**	**354**	*d*PKP	**PKPab**	**00 18 16.7**	**-0.3**	
BZS	**Buzias**	**150.46**	**330**	⇑P	**PKPbc**	**00 18 07.8**	**-0.1**	
BZS	**Buzias**	**150.46**	**330**	⇑PKIKP	**PKPbc**	**00 18 07.8**	**-0.1**	
PLVB	**Pleven**	**150.46**	**323**	⇑P	**PKPbc**	**00 18 07.5**	**-0.5**	
ADH	**Angra Heroismo**	**150.47**	**48**	*e*PKP	**PKPbc**	**00 18 07.6**	**-0.5**	
KHC	**Kasperske Hory**	**150.55**	**343**	*e*PKPDF	**PKPdf**	**00 18 02.4**	**+0.5**	
KHC				⇑*e*PKP	**PKiKP**	**00 18 08.3**	**-0.2**	
KHC				*e*PKPAB	**PKPab**	**00 18 18.1**	**+0.5**	
KHC				*ep*PKP	**pPKPab**	**00 20 32.3**	**+1.1**	
KHC	**Kasperske Hory**	**150.55**	**343**	*e*PKIKP	**PKPdf**	**00 18 02.4**	**+0.5**	
KHC				*e*		00 18 08.3		
KHC				*e*		00 18 18.1		
HERR	**Herculane**	**150.60**	**328**	⇓P	**PKPbc**	**00 18 08.0**	**-0.2**	
MEM	**Membach**	**150.60**	**353**	*d*PKiKP	**PKPbc**	**00 18 08.0**	**0.0**	
MEM				*d*PKP	**PKPab**	**00 18 16.9**	**-0.8**	
BTNL	**Ternell**	**150.61**	**353**	*d*PKiKP	**PKPbc**	**00 18 08.0**	**-0.1**	
BTNL				*d*PKP	**PKPab**	**00 18 16.1**	**-1.7**	
GRF	**Grafenberg Arr**	**150.62**	**346**	*e*PKPbc	**PKiKP**	**00 18 08.8**	**+0.2**	
	baz=19,slow=2.3							
GRF				*e*PKPab	**PKPab**	**00 18 18.3**	**+0.4**	
	baz=17,slow=4.3							
GRFO	**Grafenberg**	**150.62**	**346**		**PKiKP**	**00 18 08.9**	**+0.4**	
GRFO	**Grafenberg**	**150.62**	**346**	PKIKP	**PKiKP**	**00 18 08.9**	**+0.4**	
CKRC	**Cesky Krumlov**	**150.62**	**342**⇑	*e*PKP	**PKiKP**	**00 18 08.4**	**-0.2**	
CKRC				*e*PKPAB	**PKPab**	**00 18 17.8**	**-0.1**	
CKRC				*ep*PKP	**pPKPab**	**00 20 32.2**	**+0.8**	
CKRC	**Cesky Krumlov**	**150.62**	**342**	*e*PKIKP	**PKiKP**	**00 18 08.4**	**-0.2**	
CKRC				*e*		00 18 17.8		
CKRC				*e*		00 20 32.2		
TNS	**Taunus Mts**	**150.65**	**350**	*e*PKPbc	**PKiKP**	**00 18 08.7**	**+0.1**	
	baz=19,slow=2.3							
TNS				*e*PKPab	**PKPab**	**00 18 17.9**	**-0.1**	
	baz=17,slow=4.3							
BSTI	**Sart Tilman**	**150.67**	**354**	*d*PKiKP	**PKPbc**	**00 18 08.3**	**+0.1**	
BSTI				*d*PKP	**PKPab**	**00 18 17.5**	**-0.5**	
WET	**Wettzell**	**150.72**	**344**	*e*PKPbc	**PKiKP**	**00 18 08.9**	**0.0**	
	baz=19,slow=2.3							
WET				*e*PKPab	**PKPab**	**00 18 18.9**	**+0.5**	
	baz=17,slow=4.3							
WET				*ep*PKPab	**pPKPab**	**00 20 32.5**	**+0.6**	
GEC2	**GERESS Array S**	**150.77**	**342**	*e*PKPbc	**PKiKP**	**00 18 09.0**	**0.0**	
	baz=19,slow=2.3							
GEC2				*e*PKPab	**PKPab**	**00 18 18.9**	**+0.3**	
	baz=17,slow=4.3							
GEC2				*ep*PKPab	**pPKPab**	**00 20 32.3**	**+0.2**	
GERES	**GERESS Array B**	**150.77**	**342**	PKP	**PKPdf**	**00 18 02.2**	**-0.2**	
	comp=Z,1.3nm,0.8s,baz=64,slow=3.1,SNR=6.3							
GERES				PKPbc	**PKPbc**	**00 18 08.7**	**0.0**	
	comp=Z,9.4nm,0.7s,baz=31,slow=3.4,SNR=41							
GERES				PKPab	**PKPab**	**00 18 18.7**	**0.0**	
	comp=Z,16nm,0.8s,baz=28,slow=6.0,SNR=21							
BHOU	**Houvegnez**	**150.85**	**353**	*d*PKP	**PKPab**	**00 18 18.8**	**0.0**	
BANR	**Banloc**	**150.85**	**330**	⇑P	**PKiKP**	**00 18 09.6**	**+0.5**	
BCLA	**Clavier**	**150.86**	**354**	*d*PKiKP	**PKPbc**	**00 18 08.6**	**-0.1**	
BCLA				*d*PKP	**PKPab**	**00 18 18.1**	**-0.7**	
VALD	**Valchedram**	**150.90**	**325**	P	**PKPbc**	**00 18 08.7**	**-0.2**	
BGES	**Gesves**	**150.92**	**354**	*d*PcP	**PKPab**	**00 18 18.4**	**-0.7**	
CONA	**Conrad Observa**	**150.92**	**339**	*i* PKP	**PKiKP**	**00 18 09.3**	**-0.1**	
	comp=Z,27nm,0.9s							
CONA				*i* PKP	**PKPab**	**00 18 19.8**	**+0.5**	
	comp=Z,58nm,0.7s							
CONA				*i* pPKP	**pPKPab**	**00 20 33.9**	**+1.3**	
	comp=Z,79nm,1.7s,SNR=12							
MPEP	**Malo Peshtene**	**150.96**	**324**	P	**PKPbc**	**00 18 08.8**	**-0.3**	
RONA	**Rosalia, Austr**	**150.97**	**338**	*i* PKP	**PKiKP**	**00 18 09.3**	**-0.1**	
	comp=Z,36nm,1.0s							
RONA				*i* PKP	**PKPab**	**00 18 19.9**	**+0.5**	
	comp=Z,58nm,0.7s							
RONA				*ep*PKP	**pPKPab**	**00 20 34.0**	**+1.3**	
	comp=Z,56nm,1.7s,SNR=9.3							
MDVR	**Moldovita**	**151.02**	**328**	⇓P	**PKPbc**	**00 18 09.1**	**-0.2**	
BMRD	**Maredsous**	**151.03**	**355**	*d*PKiKP	**PKiKP**	**00 18 09.3**	**-0.1**	
BMRD				*d*PKP	**PKPab**	**00 18 19.0**	**-0.5**	
KDZ	**Kurdzhali**	**151.13**	**320**	P	**PKPbc**	**00 18 09.4**	**-0.2**	
RCHB	**Rochefort**	**151.13**	**354**	*d*PKiKP	**PKPbc**	**00 18 09.3**	**+0.1**	
RCHB				*d*PKP	**PKPab**	**00 18 19.0**	**-0.9**	
PLD	**Plovdiv**	**151.17**	**321**	P	**PKPab**	**00 18 21.3**	**+0.9**	
DOU	**Dourbes**	**151.25**	**355**	*d*PKiKP	**PKiKP**	**00 18 08.7**	**-0.2**	
DOU				*d*PKP	**PKPab**	**00 18 19.4**	**-1.0**	
PGB	**Panagyurishte**	**151.27**	**322**	P	**PKPab**	**00 18 21.5**	**+0.6**	
MORH	**Mrgy, Hungar**	**151.31**	**334**	⇑P	**PKPdf**	**00 18 03.2**	**+0.2**	
BLKB	**Belogradchik**	**151.35**	**326**	⇓P	**PKPbc**	**00 18 09.9**	**-0.1**	
RZN	**Rozhen**	**151.45**	**320**	P	**PKPab**	**00 18 22.5**	**+0.6**	
MOA	**Molln**	**151.50**	**341**	*e*PKP	**PKPbc**	**00 18 09.9**	**-0.3**	
	comp=Z,10nm,1.0s,SNR=6.7							
MOA				*i* PKP	**PKPab**	**00 18 22.0**	**+0.3**	
	comp=Z,40nm,1.1s,SNR=8.4							
MOA				*ep*PKP	**pPKPab**	**00 20 35.0**	**-0.1**	
	comp=Z,20nm,1.5s							
WLF	**Walferdange**	**151.52**	**353**	*d*PKiKP	**PKPbc**	**00 18 10.0**	**-0.1**	
WLF				*d*PKP	**PKPab**	**00 18 21.4**	**-0.2**	
WLF	**Walferdange**	**151.52**	**353**	*e*PKPbc	**PKiKP**	**00 18 11.2**	**+0.8**	
	baz=19,slow=2.3							
WLF				*e*PKPab	**PKPab**	**00 18 21.9**	**+0.3**	
	baz=17,slow=4.3							
ARSA	**Arzberg**	**151.62**	**339**	*i* PKP	**PKPbc**	**00 18 10.1**	**-0.4**	
	comp=Z,3.2nm,0.8s							
ARSA				*i* PKP	**PKPab**	**00 18 22.3**	**+0.1**	
	comp=Z,20nm,0.6s,SNR=6.8							
ARSA				*ep*PKP	**pPKPab**	**00 20 35.3**	**-0.1**	
	comp=Z,15nm,1.4s							
FRGS	**Fruska Gora**	**151.64**	**331**	⇓P	**PKPbc**	**00 18 10.5**	**-0.1**	
FRGS	**Fruska Gora**	**151.64**	**331**	*e*P	**PKPbc**	**00 18 09.9**	**-0.7**	
VTS	**Vitosha**	**151.73**	**323**	P	**PKPab**	**00 18 23.8**	**+0.8**	
BIOA	**Bad Ischl, Aus**	**151.83**	**341**	*i* PKP	**PKPbc**	**00 18 10.5**	**-0.4**	
	comp=Z,7.4nm,0.8s							
BIOA				*i* PKP	**PKPab**	**00 18 23.3**	**+0.3**	
	comp=Z,109nm,1.2s,SNR=16							
BIOA				*ep*PKP	**pPKPab**	**00 20 35.8**	**-0.6**	
	comp=Z,36nm,1.6s,SNR=5.4							
STU	**Stuttgart**	**151.91**	**348**	*e*PKPbc	**PKiKP**	**00 18 11.5**	**+0.3**	
	baz=19,slow=2.3							
STU				*e*PKPab	**PKPab**	**00 18 23.3**	**0.0**	
	baz=17,slow=4.3							
PDA	**Ponta Delgada**	**151.99**	**49**	*e*PKP	**PKiKP**	**00 18 12.3**	**+0.6**	
RJOB	**Jochberg**	**152.03**	**343**	*e*PKPbc	**PKPbc**	**00 18 11.4**	**0.0**	
	baz=19,slow=2.3							
RJOB				*e*PKPab	**PKPab**	**00 18 24.7**	**+0.8**	
	baz=17,slow=4.3							
FUR	**Furstenfeldbru**	**152.03**	**345**	*e*PKPbc	**PKiKP**	**00 18 11.7**	**+0.2**	
	baz=19,slow=2.3							
FUR				*e*PKPab	**PKPab**	**00 18 24.5**	**+0.6**	
	baz=17,slow=4.3							
KOGS	**Kog**	**152.05**	**337**	*i* PKPbc	**PKPbc**	**00 18 10.8**	**-0.6**	
KOGS				*i* PKPab	**PKPab**	**00 18 23.6**	**-0.4**	
KOGS				*ep*PKPbc	**pPKPab**	**00 20 35.6**	**-1.4**	
CMLA	**Cha da Macela**	**152.07**	**49**	*e*PKP	**PKPbc**	**00 18 10.7**	**-1.1**	
MMB	**Musomishta**	**152.12**	**321**	P	**PKPab**	**00 18 25.1**	**+0.5**	
TEKS	**Tekeris**	**152.23**	**330**	*e*P	**PKPbc**	**00 18 11.2**	**-0.7**	
SOKA	**Soboth**	**152.28**	**339**	*i* PKP	**PKPbc**	**00 18 11.7**	**-0.4**	
	comp=Z,10nm,0.9s							
SOKA				*i* PKP	**PKPab**	**00 18 24.8**	**-0.2**	
	comp=Z,48nm,1.0s							
SOKA				*ep*PKP	**pPKPab**	**00 20 36.2**	**-2.0**	
	comp=Z,34nm,1.4s,SNR=9.4							
KKB	**Krupnik**	**152.29**	**322**	P	**PKPab**	**00 18 25.9**	**+0.7**	
LESA	**Schwarzleotal**	**152.35**	**342**	*i* PKP	**PKPdf**	**00 18 04.2**	**-0.6**	
	comp=Z,4.0nm,0.8s							
LESA				*i* PKP	**PKPbc**	**00 18 11.9**	**-0.3**	
	comp=Z,10nm,1.0s							
LESA				*i* PKP	**PKPab**	**00 18 25.4**	**+0.1**	
	comp=Z,58nm,1.1s							
LESA				*ep*PKP	**pPKPab**	**00 20 37.1**	**-1.4**	
	comp=Z,21nm,1.2s							
LOBO	**Lobor**	**152.37**	**337**	*i* PKP	**PKPbc**	**00 18 11.4**	**-0.8**	
PEHC	**Pehcevo**	**152.47**	**322**	*i* P	**PKPab**	**00 18 26.9**	**+0.9**	
KBA	**Koelnbreinsper**	**152.47**	**341**	*i* PKP	**PKPbc**	**00 18 12.2**	**-0.4**	
	comp=Z,8.3nm,0.7s							
KBA				*i* PKP	**PKPab**	**00 18 25.9**	**-0.1**	
	comp=Z,28nm,0.5s,SNR=5.8							
KBA				*i* pPKP	**pPKPab**	**00 20 37.2**	**-2.0**	
	comp=Z,16nm,0.9s							
BFO	**Black Forest**	**152.50**	**349**		**PKPbc**	**00 18 11.5**	**-0.9**	
BFO	**Black Forest**	**152.50**	**349**	PKIKP	**PKPbc**	**00 18 11.5**	**-0.9**	
BFO	**Black Forest**	**152.50**	**349**	*e*PKPbc	**PKiKP**	**00 18 12.6**	**+0.1**	
	baz=19,slow=2.3							
BFO				*e*PKPab	**PKPab**	**00 18 25.7**	**-0.1**	
	baz=17,slow=4.3							
MOSL	**Moslavina**	**152.56**	**335**	*i* PKP	**PKPbc**	**00 18 11.7**	**-0.9**	
OBKA	**Obir**	**152.59**	**339**	*i* PKP	**PKPbc**	**00 18 12.4**	**-0.4**	
	comp=Z,4.8nm,0.9s							
OBKA				*i* PKP	**PKPab**	**00 18 26.2**	**-0.2**	
	comp=Z,30nm,0.7s,SNR=10.0							
OBKA				*ep*PKP	**pPKPab**	**00 20 37.6**	**-1.9**	
	comp=Z,19nm,1.8s							
OBKA	**Obir**	**152.59**	**339**	*e*P	**PKPbc**	**00 18 11.4**	**-1.4**	
WATA	**Walderalm**	**152.73**	**344**	*i* PKP	**PKPdf**	**00 18 05.2**	**-0.2**	
	comp=Z,7.0nm,1.2s							
WATA				*i* PKP	**PKPbc**	**00 18 12.9**	**-0.2**	
	comp=Z,6.2nm,0.6s							
WATA				*i* PKP	**PKPab**	**00 18 26.9**	**-0.1**	
	comp=Z,76nm,1.1s,SNR=12							
WATA				*ep*PKP	**pPKPab**	**00 20 38.1**	**-2.0**	
	comp=Z,28nm,1.5s,SNR=5.8							
UBR	**Ueberruh**	**152.76**	**346**	*e*PKPbc	**PKiKP**	**00 18 13.2**	**+0.1**	
	baz=19,slow=2.3							
WTTA	**Wattenberg**	**152.78**	**344**	*i* PKP	**PKPdf**	**00 18 05.7**	**+0.2**	
	comp=Z,7.2nm,1.2s							
WTTA				*i* PKP	**PKPbc**	**00 18 13.0**	**-0.2**	
	comp=Z,10nm,0.6s							
WTTA				*i* PKP	**PKPab**	**00 18 27.4**	**+0.1**	
	comp=Z,54nm,0.6s,SNR=8.1							
WTTA				*ep*PKP	**pPKPab**	**00 20 38.1**	**-2.4**	
	comp=Z,38nm,1.5s,SNR=5.2							
MYKA	**Terra Mystica**	**152.78**	**340**	*i* PKP	**PKPbc**	**00 18 12.7**	**-0.5**	
	comp=Z,5.5nm,0.7s							
MYKA				*i* PKP	**PKPab**	**00 18 26.8**	**-0.3**	
	comp=Z,40nm,0.7s,SNR=8.8							
MYKA				*ep*PKP	**pPKPab**	**00 20 37.8**	**-2.6**	
	comp=Z,22nm,1.3s							
RETA	**Reutte**	**152.79**	**345**	*i* PKP	**PKiKP**	**00 18 13.2**	**0.0**	
	comp=Z,4.2nm,0.8s							
RETA				*i* PKP	**PKPab**	**00 18 27.1**	**-0.1**	
	comp=Z,29nm,0.6s,SNR=12							
RETA				*ep*PKP	**pPKPab**	**00 20 38.3**	**-2.0**	
	comp=Z,16nm,1.6s							
BBLS	**Lazići**	**152.81**	**330**	*e*P	**PKPbc**	**00 18 13.1**	**-0.2**	
LEGS	**Legarje**	**152.82**	**337**	*i* PKPab	**PKPab**	**00 18 26.8**	**-0.4**	
MOTA	**Moosalm**	**152.84**	**345**	*i* PKP	**PKPdf**	**00 18 05.2**	**-0.4**	
	comp=Z,4.8nm,0.8s							
MOTA				*i* PKP	**PKPbc**	**00 18 13.3**	**0.0**	
	comp=Z,13nm,1.1s							
MOTA				*e*PKP	**PKPab**	**00 18 27.3**	**-0.2**	
	comp=Z,65nm,1.2s,SNR=9.1							
MOTA				*ep*PKP	**pPKPab**	**00 20 38.4**	**-2.3**	
	comp=Z,39nm,1.3s							
HAPS	**Han Pijesak,BI**	**152.85**	**330**	*e*P	**PKPbc**	**00 18 13.4**	**0.0**	
CRES	**Cresnjev**	**152.87**	**337**	*e*P	**PKPbc**	**00 18 12.8**	**-0.5**	
STIP	**Stip**	**152.92**	**323**⇑	*i*P	**PKPab**	**00 18 27.5**	**-0.4**	
SQTA	**Sankt Quirin**	**152.93**	**344**	*i* PKP	**PKPdf**	**00 18 05.2**	**-0.4**	
	comp=Z,9.8nm,1.3s							
SQTA				*i* PKP	**PKiKP**	**00 18 13.6**	**+0.1**	
	comp=Z,13nm,1.2s							
SQTA				*i* PKP	**PKPab**	**00 18 28.0**	**+0.1**	
	comp=Z,61nm,1.3s,SNR=7.0							
SQTA				*ep*PKP	**pPKPab**	**00 20 38.9**	**-2.1**	
	comp=Z,33nm,1.5s							
VAY	**Valandovo**	**152.95**	**322**⇑	*i*P	**PKPab**	**00 18 28.4**	**+0.4**	
SJES	**Sjenica**	**152.99**	**328**	*e*P	**PKPbc**	**00 18 12.5**	**-1.2**	
KARP	**Karpathos**	**152.99**	**307**		**PKPbc**	**00 18 13.3**	**-0.5**	
A051A	**Mrakovica**	**153.00**	**334**	*e*P	**PKPbc**	**00 18 13.1**	**-0.5**	
ABTA	**Abfaltersbach**	**153.01**	**342**	*i* PKP	**PKPdf**	**00 18 04.9**	**-0.8**	
	comp=Z,6.8nm,0.8s,SNR=9.6							
ABTA				*i* PKP	**PKPbc**	**00 18 13.3**	**-0.4**	
	comp=Z,20nm,1.0s							
ABTA				*i* PKP	**PKPab**	**00 18 27.8**	**-0.4**	
	comp=Z,46nm,0.6s							
ABTA				*ep*PKP	**pPKPab**	**00 20 38.3**	**-3.0**	
	comp=Z,22nm,1.1s,SNR=7.3							
RUDO	**Rudo**	**153.01**	**329**	*e*P	**PKPbc**	**00 18 12.3**	**-1.3**	
CRNS	**Crni Vrh**	**153.07**	**339**	*i* PKPbc	**PKPbc**	**00 18 13.1**	**-0.6**	
BLY	**Banja Luka**	**153.10**	**334**	*e*P	**PKiKP**	**00 18 14.3**	**+0.5**	
VISS	**Visnje**	**153.11**	**338**	*i* PKPbc	**PKPbc**	**00 18 13.6**	**-0.2**	
VISS				*i* PKPab	**PKPab**	**00 18 27.7**	**-0.8**	
SKO	**Skopje**	**153.15**	**324**⇑	*i*P	**PKPab**	**00 18 29.6**	**+0.8**	
A251A	**Rujevac**	**153.16**	**335**	*i* PKP	**PKPbc**	**00 18 13.7**	**-0.2**	
DAVA	**Damuels**	**153.18**	**346**	*i* PKP	**PKPdf**	**00 18 06.0**	**0.0**	
	comp=Z,4.7nm,0.9s							
DAVA				*i* PKP	**PKPbc**	**00 18 14.1**	**0.0**	
	comp=Z,14nm,1.2s							
DAVA				*i* PKP	**PKPab**	**00 18 28.9**	**-0.1**	
	comp=Z,37nm,0.7s,SNR=9.0							
DAVA				*ep*PKP	**pPKPab**	**00 20 39.3**	**-2.8**	
	comp=Z,28nm,1.3s							
BOJS	**Bojanci**	**153.22**	**337**	*e*P	**PKiKP**	**00 18 14.1**	**+0.1**	
FETA	**Feichten**	**153.24**	**345**	*i* PKP	**PKPdf**	**00 18 05.5**	**-0.6**	
	comp=Z,9.5nm,0.9s,SNR=11							
FETA				*i* PKP	**PKPbc**	**00 18 14.1**	**-0.1**	
	comp=Z,15nm,1.1s							
FETA				*i* PKP	**PKPab**	**00 18 28.8**	**-0.5**	
	comp=Z,37nm,1.4s							
FETA				*i* pPKP	**pPKPab**	**00 20 39.7**	**-2.6**	
	comp=Z,22nm,1.1s							
CEY	**Cerknica**	**153.31**	**338**	*e*P	**PKPbc**	**00 18 13.8**	**-0.4**	
MGRS	**Mrkonjic Grad**	**153.41**	**333**	*e*P	**PKiKP**	**00 18 14.8**	**+0.3**	
APE	**Apeiranthos**	**153.49**	**311**	⇑P	**PKPbc**	**00 18 14.4**	**-0.5**	
APE	**Apeiranthos**	**153.49**	**311**	⇑PKIKP	**PKPbc**	**00 18 14.4**	**-0.5**	
A050A	**Klekovaca**	**153.59**	**334**	*e*P	**PKiKP**	**00 18 16.2**	**+1.2**	
NEVS	**Nevesinje**	**153.85**	**330**	*e*P	**PKiKP**	**00 18 16.1**	**+0.6**	
SANT	**Santorini**	**153.87**	**310**	⇑P	**PKPab**	**00 18 31.0**	**-1.2**	
OHR	**Ohrid**	**154.09**	**324**⇑	*i*P	**PKPab**	**00 18 33.3**	**+0.4**	
OHR				*eS*		00 20 40.7		
RICI	**Ricice**	**154.13**	**332**	*i* PKP	**PKPbc**	**00 18 15.2**	**-0.9**	
DRME	**Dracevica, Mon**	**154.17**	**327**	*e*P	**PKiKP**	**00 18 14.8**	**-1.3**	
TREB	**Trebinje**	**154.18**	**329**	*e*P	**PKPbc**	**00 18 16.8**	**+0.7**	
VIRC	**Vir**	**154.33**	**336**	*i* PKP	**PKiKP**	**00 18 14.7**	**-1.6**	
STON	**Ston**	**154.37**	**330**	*e*P	**PKiKP**	**00 18 15.5**	**-1.0**	
MATE	**Matera**	**156.56**	**328**	⇓P	**PKPab**	**00 18 42.8**	**-0.7**	
TIP	**Timpagrande**	**157.64**	**326**	⇑P	**PKPab**	**00 18 48.9**	**+0.5**	
PGAV	**Gavieira, Arco**	**158.17**	**18**	*e*PKPab	**PKPab**	**00 18 50.9**	**+0.3**	
PBRG	**Braganca**	**158.73**	**16**	*e*PKPab	**PKPab**	**00 18 53.5**	**+0.5**	
POLO	**Lamas de Olo**	**158.85**	**18**	*e*PKPdf	**PKPdf**	**00 18 13.4**	**-0.1**	
POLO	**Lamas de Olo**	**158.85**	**18**	*e*PKPab	**PKPab**	**00 18 54.4**	**+0.8**	
PVRL	**Vila Real**	**158.96**	**18**	*e*PKPab	**PKPab**	**00 18 54.7**	**+0.7**	
MVO	**Moncorvo**	**159.26**	**17**	*e*PKPdf	**PKPdf**	**00 18 14.5**	**+0.6**	
MVO	**Moncorvo**	**159.26**	**17**	*e*PKPab	**PKPab**	**00 18 55.9**	**+0.6**	
MTE	**Manteigas**	**159.82**	**19**	*e*PKPdf	**PKPdf**	**00 18 15.2**	**+0.7**	
MTE	**Manteigas**	**159.82**	**19**	*e*PKPab	**PKPab**	**00 18 58.5**	**+0.7**	
PCAS	**Casmilo, Conde**	**159.83**	**21**	*e*PKPdf	**PKPdf**	**00 18 16.3**	**+1.8**	
PCAS	**Casmilo, Conde**	**159.83**	**21**	*e*PKPab	**PKPab**	**00 18 58.0**	**+0.2**	
PCBR	**Castelo Branco**	**160.35**	**19**	*e*PKPdf	**PKPdf**	**00 18 15.5**	**+0.5**	
PCBR	**Castelo Branco**	**160.35**	**19**	*e*PKPab	**PKPab**	**00 19 00.0**	**0.0**	
PMAFR	**Mafra**	**160.53**	**24**	*e*PKPab	**PKPab**	**00 19 01.4**	**+0.5**	
PMRV	**Marv??o**	**160.76**	**20**	*e*PKPdf	**PKPdf**	**00 18 16.1**	**+0.6**	
PMTG	**Montargil**	**160.81**	**22**	*e*PKPab	**PKPab**	**00 19 01.9**	**-0.2**	
EVO	**Evora**	**161.36**	**22**	*e*PKPdf	**PKPdf**	**00 18 16.9**	**+0.7**	
ESDC	**Sonseca Array**	**161.38**	**12**	PKPab	**PKPab**	**00 19 04.5**	**-0.2**	
ESDC	**Sonseca Array**	**161.38**	**12**	PKP	**PKPdf**	**00 18 16.7**	**+0.5**	
	comp=Z,1.0nm,0.8s,baz=337,slow=1.7,SNR=6.6							
ESDC				PKPab	**PKPab**	**00 19 03.0**	**-1.6**	
	comp=Z,17nm,1.0s,baz=346,slow=4.2,SNR=28							
ESDC				PP	**PP**	**00 22 46.3**	**-3.0**	
	comp=Z,3.2nm,1.0s,baz=351,slow=4.7,SNR=5.6							
PNCL	**Nicolau / Gran**	**161.55**	**24**	*e*PKPab	**PKPab**	**00 19 05.5**	**+0.2**	
PBEJ	**Beja**	**161.87**	**22**	*e*PKPdf	**PKPdf**	**00 18 17.9**	**+1.2**	
MESJ	**Messejana**	**161.90**	**23**	*e*PKPdf	**PKPdf**	**00 18 17.7**	**+1.0**	
MESJ	**Messejana**	**161.90**	**23**	*e*PKPab	**PKPab**	**00 19 06.7**	**-0.2**	
MESJ	**Messejana**	**161.90**	**23**	*e*PKPdf	**PKPdf**	**00 18 17.4**	**+0.7**	

SOEI Soe 7.03 98 P **Pn** 00 33 00.0 +1.2
283nm,0.8s,3µm1.2nm
SOEI S **Sn** 00 34 15.4 -1.9
283nm,0.8s,3µm1.2nm
KPJI Karang Pucung 8.33 280 P **Pn** 00 33 16.1 -0.3
111nm,0.6s,1µm
LUWI Luwuk 9.50 36 Pn **Pn** 00 33 35.0 +2.8
BBJI Bungbulang 9.56 277 P **Pn** 00 33 31.5 -1.7
LEM Lembang 9.71 281 P **Pn** 00 33 32.7 -2.6
17nm,0.5s,baz=6.0,slow=19,SNR=1.9
LEM S **Sn** 00 35 25.2 +2.6
23nm,0.5s,baz=350,slow=22,SNR=1.5
TOLI2 Tolitoli 10.48 20 Pn **Pn** 00 33 48.1 +2.5
DBJI Dramaga 10.61 281 P **Pn** 00 33 47.4 +0.1
84nm,0.6s,19µm
SANI Sanana 11.02 53 P Pn 00 33 57.7 +4.9
43nm,1.1s
NLAI Namlea 11.28 61 P **P** 00 34 01.5 -4.4
139nm,0.8s,15µm
XMI Christmas Isla 11.48 261 P **Pn** 00 33 58.3 -0.7
FITZ Fitzroy Crossi 12.34 139 Pn **Pn** 00 34 07.9 -2.5
FITZ Fitzroy Crossi 12.34 139 P **Pn** 00 34 08.4 -2.0
PSA00 Pilbara Seismi 12.94 169 Pn **Pn** 00 34 16.4 -1.8
PSA00 Pilbara Seismi 12.94 169 **Pn** 00 34 17.0 -1.2
PSA00 Pilbara Seismi 12.94 169 P **Pn** 00 34 18.2 0.0
KASI Kota Agung 13.03 284 P **Pn** 00 34 18.5 -0.9
47nm,0.6s
KNRA Kununurra 13.19 122 Pn **Pn** 00 34 20.4 -1.0
KNRA Kununurra 13.19 122 P **Pn** 00 34 20.8 -0.6
SAUI Saumlaki 13.96 88 Pn **Pn** 00 34 32.1 +0.6
GIRL Giralia 14.05 191 P **Pn** 00 34 30.9 -1.7
MTN Manton Dam 14.25 108 Pn **Pn** 00 34 34.1 -1.1
MTN Manton Dam 14.25 108 P **Pn** 00 34 33.7 -1.5
KKM Kota Kinabalu 14.79 356 **Pn** 00 34 43.3 +1.1
MNAI Manna 14.83 286 Pn **Pn** 00 34 43.2 +0.6
MNAI Manna 14.83 286 P **Pn** 00 34 41.9 -0.8
KDU Kakadu 15.48 106 P **Pn** 00 34 49.9 -0.8
FAKI Fak Fak 16.06 70 Pn **P** 00 34 59.1 -0.1
FAKI Fak Fak 16.06 70 P **Pn** 00 34 57.0 -1.0
MEEK Meekatharra 17.78 176 P **Pn** 00 35 19.2 +0.3
WRKA Warakurna 19.29 148 P **Pn** 00 35 36.3 -0.5
WB0 Warramunga Arr 19.87 125 P **P** 00 35 41.5 +0.4
WRA Warramunga Arr 19.92 126 P **P** 00 35 41.1 -0.5
WRA Warramunga Arr 19.92 126 P **P** 00 35 42.3 +0.7
33nm,0.6s,baz=300,slow=12,SNR=368
WRA S **S** 00 39 10.6 -9.2
1.8nm,0.7s,baz=294,slow=19,SNR=3.3
33nm,0.6s
WRAB Tennant Creek 19.92 126 P **P** 00 35 42.1 +0.5
WB2 Warramunga Arr 19.93 126 P **P** 00 35 42.0 +0.3
WR0 Warramunga Arr 20.09 125 P **P** 00 35 44.0 +0.6
MORW Morawa 20.18 183 P **P** 00 35 43.1 -1.1
MORW Morawa 20.18 183 P **P** 00 35 45.5 +1.2
RPSI Rantau Prapat 21.52 301 P **P** 00 35 58.8 +0.1
BLDU Ballidu 21.70 181 P **P** 00 36 00.1 -0.4
AS31 Alice Springs 21.76 135 P **P** 00 36 01.8 +0.5
ASAR Alice Springs 21.76 135 P **P** 00 36 01.5 +0.3
ASAR Alice Springs 21.76 135 P **P** 00 36 01.9 +0.7
26nm,0.8s,baz=313,slow=8.7,SNR=141
ASAR S **S** 00 39 50.1 -5.3
2.6nm,0.8s,baz=305,slow=14,SNR=2.7
ASAR LR LR 00 43 58.8
comp=Z,67nm,21.4s,baz=90,slow=35
26nm,0.8s
AS01 Alice Springs 21.79 135 P **P** 00 36 02.1 +0.5
GSI Gunungsitoli 22.00 296 P **P** 00 36 04.5 +0.7
KLBR Kellerberrin 22.67 179 P **P** 00 36 10.5 0.0
KMBL Kambalda 22.86 170 P **P** 00 36 12.2 -0.2
NWAO Narrogin (SRO) 24.00 180 P **P** 00 36 23.9 +1.1
NWAO Narrogin (SRO) 24.00 180 P **P** 00 36 22.9 +0.1
8.2nm,0.5s,baz=0.2,slow=7.8,SNR=10
NWAO pP **pP** 00 36 45.9 +0.7
11nm,0.6s,baz=355,slow=9.8,SNR=3.6
NWAO S **S** 00 40 34.3 +2.5
2.1nm,0.4s,baz=337,slow=15,SNR=0.8
8.2nm,0.5s
FORT Forrest 24.09 157 P **P** 00 36 24.6 +1.0
FORT Forrest 24.09 157 P **P** 00 36 25.9 +2.3
QIS Mount Isa 24.57 121 P **P** 00 36 29.2 +1.0
OOD Oodnadatta 25.70 140 P **P** 00 36 39.1 +0.7
COEN Coen 25.95 104 P **P** 00 36 41.0 +0.3
COEN IAmb IAmb 00 37 09.8
comp=Z,20nm,0.9s
COEN Coen 25.95 104 P **P** 00 36 41.7 +1.0
MULG Mulgathing 26.54 146 P **P** 00 36 46.6 +0.7
INKA Innaminka 29.12 133 P **P** 00 37 10.4 +1.5
LCRK Leigh Creek 29.13 141 P **P** 00 37 09.7 +0.8
BBOO Buckleboo 29.57 147 P **P** 00 37 13.1 +0.3
BBOO IAmb IAmb 00 37 14.2
comp=Z,18nm,0.9s
BBOO Buckleboo 29.57 147 P **P** 00 37 13.2 +0.3
PMG Port Moresby 29.57 94 P **P** 00 37 14.2 +1.2
comp=Z,7.8nm,0.5s,baz=251,slow=18,SNR=2.3
PMG LR LR 00 51 09.0
comp=Z,30nm,18.1s,baz=310,slow=40
comp=Z,7.8nm,0.5s
CTA Charters Tower 30.22 115 P **P** 00 37 19.9 +1.1
comp=Z,8.5nm,0.5s,baz=285,slow=9.2,SNR=20
comp=Z,8.5nm,0.5s
CTAO Charters Tower 30.22 115 P **P** 00 37 19.4 +0.7
CTAO IAmb IAmb 00 37 21.3
comp=Z,10.0nm,0.6s
CTAO Charters Tower 30.22 115 P **P** 00 37 20.5 +1.7
CTAO Charters Tower 30.22 115 P **P** 00 37 20.4 +1.7
CTAO sP **sP** 00 37 55.0 -0.5
CTAO PcP **PcP** 00 40 15.4 -1.8
QLP Quilpie 31.11 128 P **P** 00 37 28.3 +1.8
HTT Hallett 31.64 144 P **P** 00 37 32.2 +1.0
STKA Stephens Creek 32.24 139 P **P** 00 37 36.8 +0.4
STKA Stephens Creek 32.24 139 P **P** 00 37 37.4 +1.1
STKA Stephens Creek 32.24 139 P **P** 00 37 37.5 +1.2
comp=Z,15nm,0.5s,baz=313,slow=9.5,SNR=48
STKA PcP **PcP** 00 40 23.1 +0.7
comp=Z,4.4nm,0.5s,baz=6.3,slow=4.4,SNR=4.7
STKA LR LR 00 53 17.6
comp=Z,40nm,19.8s,baz=3.2,slow=41
comp=Z,15nm,0.5s
CMAR Chiang Mai Arr 32.55 326 P **P** 00 37 39.0 -0.1
comp=Z,1.5nm,0.3s,baz=150,slow=6.2,SNR=4.4
CMAR PcP **PcP** 00 40 23.6 +0.1
comp=Z,1.2nm,0.4s,baz=178,slow=2.7,SNR=6.5
CMAR ScP **ScP** 00 43 55.6 -1.6
comp=Z,2.3nm,0.3s,baz=180,slow=3.4,SNR=15
comp=Z,1.5nm,0.3s
CMSA Cobar Meteorol 34.81 135 P **P** 00 38 00.1 +1.4
ARPS Mount Arapiles 35.70 145 P **P** 00 38 07.3 +1.1
PZH PanZhiHua 38.18 337 P **P** 00 38 28.3 +0.8
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,7.5s
YNG Young 38.25 136 P **P** 00 38 29.8 +2.0
TOO Toolangi 38.37 143 P **P** 00 38 29.8 +0.9
TOO IAmb IAmb 00 38 31.7
comp=Z,7.4nm,0.7s
CAN Canberra 39.23 137 P **P** 00 38 38.0 +1.9
CAN pP **pwP** 00 39 02.0 -1.4
CAN sP **sP** 00 39 14.0 +0.8
CAN PcP **PcP** 00 40 44.3 +1.2
ENH Enshi 39.56 349 P **P** 00 38 39.2 +0.4
ENH IAmb IAmb 00 39 07.6
comp=Z,12nm,0.7s
MGCD Mangrove Creek 39.58 133 P **P** 00 38 40.6 +1.6
PALK Pallekele 39.74 293 LR LR 00 57 14.9
comp=Z,51nm,19.1s,baz=216,slow=39
NJ2 Nanjing 40.66 2 ⇓P **P** 00 38 50.1 +2.3
NJ2 sP **sP** 00 39 30.6 +5.1
NJ2 pmax pmax
comp=Z,22nm,0.7s
CD2 Chengdu 41.55 342 P **P** 00 38 55.2 0.0
CD2 pP pP 00 39 23.1 +2.8
CD2 pmax pmax
comp=Z,40nm,0.6s
GLAD Gladstone 42.08 145 P **P** 00 39 01.5 +2.1
XAN Xi'an 43.34 350 *e*P **P** 00 39 10.5 +0.9
XAN pP pP 00 39 37.3 +2.4
XAN sP sP 00 39 49.7 +2.3
XAN pmax pmax
comp=Z,12nm,1.4s
LZH Lanzhou 46.40 345 *e*P P 00 39 38.8 +4.8
LZH pP pP 00 40 02.5 +2.8
LZH sP sP 00 40 14.2 +2.1
LZH pmax pmax
comp=Z,11nm,0.9s

KSRS Korea Array 47.10 12 P **P** 00 39 39.5 +0.3
comp=Z,1.6nm,0.7s,baz=188,slow=10.0,SNR=7.1
KSRS PcP **PcP** 00 41 09.4 +0.1
comp=Z,2.6nm,1.0s,baz=210,slow=2.9,SNR=4.9
comp=Z,1.6nm,0.7s
BJT Baijiatuau 48.59 359 P **P** 00 39 50.6 -0.1
BJT IAmb IAmb 00 40 19.5
comp=Z,12nm,1.3s
BJT Baijiatuau 48.59 359 P **P** 00 39 51.3 +0.6
BJT pP **pP** 00 40 17.1 +0.5
BJI Beijing 48.61 359 P **P** 00 39 51.3 +0.5
BJI pP **pP** 00 40 18.3 +1.5
BJI pmax pmax
comp=Z,3.0nm,0.7s
NOUC Port Laguerre 48.91 112 P **P** 00 39 55.6 +2.0
DZM Mont Dzumac 49.04 112 P **P** 00 39 56.9 +2.3
DZM Mont Dzumac 49.04 112 P **P** 00 39 58.7 +4.1
DZM pP **pP** 00 40 23.8 +3.3
MJAR Matsushiro Arr 49.24 22 P **P** 00 39 54.8 -1.0
comp=Z,7.6nm,1.0s,baz=192,slow=7.3,SNR=10
MJAR PcP **PcP** 00 41 17.0 -0.2
comp=Z,1.3nm,0.5s,baz=197,slow=4.4,SNR=4.6
comp=Z,7.6nm,1.0s
BTO Baotou 49.62 353 *e*P **P** 00 40 01.3 +2.7
BTO pP **sP** 00 40 30.6 -6.4
BTO sP pP 00 40 45.1 +20
BTO PP **PP** 00 41 59.2 +5.0
BTO pmax pmax
comp=Z,16nm,0.5s
BTO pmax pmax
comp=Z,250nm,4.9s
HHC Hu-ho-hao-te 49.69 354 *e*P **P** 00 40 03.7 +4.6
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,65nm,4.9s
GTA Gaotai 50.62 343 *e*P **P** 00 40 06.9 +0.6
GTA pP pP 00 40 34.5 +2.2
GTA sP sP 00 40 47.3 +2.7
GTA PcP **PcP** 00 41 22.4 +0.1
GTA pmax pmax
comp=Z,3.0nm,0.8s
CN2 Changchun 52.89 7 P **P** 00 40 25.9 +3.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MDJ Mudanjiang 54.34 11 P **P** 00 40 34.8 +1.4
MDJ pmax pmax
comp=Z,14nm,1.0s
MDJ pmax pmax
comp=Z,150nm,3.7s
USA0B Ussuriysk Arra 54.43 13 P **P** 00 40 34.9 +0.8
USA0B IAmb IAmb 00 40 35.8
comp=Z,8.5nm,0.8s
USRK Ussuriysk Ar. 54.43 13 P **P** 00 40 33.7 -0.4
USRK Ussuriysk Ar. 54.43 13 P **P** 00 40 33.4 -0.7
comp=Z,6.8nm,0.6s,baz=191,slow=6.3,SNR=14
USRK pP **pP** 00 41 00.4 -0.3
comp=Z,5.0nm,0.7s,baz=184,slow=6.8,SNR=4.3
comp=Z,6.8nm,0.6s
ERM Erimo 55.89 23 P **P** 00 40 44.8 +0.2
ERM IAmb IAmb 00 42 04.6
comp=Z,35nm,1.0s
PYZ Puysegur Point 56.23 141 P **P** 00 40 48.8 +1.6
MCQ Macquarie Isla 56.38 152 P **P** 00 40 50.0 +2.1
TARA Taranaki 56.42 82 P **P** 00 40 49.7 +0.7
JCZ Jackson Bay 56.75 138 P **P** 00 40 53.2 +2.2
MLZ Mavora Lakes 56.82 139 P **P** 00 40 52.5 +1.2
MLZ IAmb IAmb 00 40 53.8
comp=Z,13nm,0.7s
WHZ Wether Hill Ro 56.92 140 P **P** 00 40 53.0 +1.1
WKZ Wanaka 57.19 138 P **P** 00 40 55.1 +1.2
SONM Songino Array 57.21 351 P **P** 00 40 54.0 -0.1
SONM Songino Array 57.21 351 P **P** 00 40 53.1 -1.0
comp=Z,3.0nm,0.5s,baz=168,slow=7.6,SNR=27
SONM pP **pP** 00 41 20.6 -0.2
comp=Z,3.7nm,0.8s,baz=169,slow=8.6,SNR=6.5
SONM PcP **PcP** 00 41 46.2 -1.1
comp=Z,1.5nm,0.5s,baz=171,slow=4.2,SNR=4.4
comp=Z,3.0nm,0.5s
FOZ Fox Glacier 57.25 137 P **P** 00 40 54.6 +0.3
JKA Kamikawa-asahi 57.48 21 P **P** 00 40 56.8 +0.9
LBZ Lake Benmore 57.80 137 P **P** 00 40 59.0 +0.7
LBZ IAmb IAmb 00 40 59.9
comp=Z,24nm,1.2s
DSZ Denniston Nort 58.03 134 P **P** 00 41 01.3 +1.3
INZ Inchbonnie 58.09 135 P **P** 00 41 00.6 +0.3
INZ IAmb IAmb 00 41 02.0
comp=Z,14nm,0.8s
RPZ Rata Peaks 58.15 136 P **P** 00 41 01.3 +0.6
RPZ Rata Peaks 58.15 136 P **P** 00 41 02.5 +1.8
QRZ Quartz Range 58.27 133 P **P** 00 41 02.6 +1.1
QRZ Quartz Range 58.27 133 P **P** 00 41 03.0 +1.5
ODZ Otahua Downs 58.35 138 P **P** 00 41 02.6 +0.6
ODZ IAmb IAmb 00 42 57.2
comp=Z,48nm,1.7s
MRNZ Matariki Terra 58.61 133 P **P** 00 41 05.1 +1.2
OXZ Oxford 58.70 136 P **P** 00 41 04.3 -0.2
OXZ IAmb IAmb 00 41 07.1
comp=Z,14nm,0.5s
WMQ Urumqi 58.83 335 *e*P **P** 00 41 08.3 +2.9
NNZ Nelson 59.00 133 P **P** 00 41 06.2 -0.4
HEH HeiHe 59.49 8 *e*P **P** 00 41 09.4 -0.2
HEH pmax pmax
comp=Z,9.0nm,0.8s
TOZ Tahuroa Road 59.69 129 P **P** 00 41 12.0 +0.6
TOZ IAmb IAmb 00 41 15.8
comp=Z,18nm,1.1s
URZ Urewera 61.05 129 P **P** 00 41 22.4 +1.8
KSH Kashi 61.42 324 P **P** 00 41 21.2 -2.0
KSH pP pP 00 41 49.2 -1.1
KSH pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 63.50 334 P **P** 00 41 35.4 -1.4
MKAR Makanchi Array 63.50 334 P **P** 00 41 35.3 -1.5
MKAR Makanchi Array 63.50 334 P **P** 00 41 35.1 -1.7
comp=Z,2.7nm,0.4s,baz=155,slow=6.5,SNR=91
MKAR pP **pP** 00 42 00.9 -3.1
comp=Z,0.9nm,0.4s,baz=146,slow=7.3,SNR=3.1
comp=Z,2.7nm,0.4s
RAO Raoul Island 63.85 118 P **P** 00 41 39.2 -0.3
ARSB Arslanbob 64.32 324 P **P** 00 41 40.8 -1.7
AAK Ala-Archa 64.33 326 **P** 00 41 41.5 -0.9
AAK Ala-Archa 64.33 326 P **P** 00 41 41.8 -0.7
AAK PcP **PcP** 00 42 15.6 -0.6
SIMJ Simiganj 65.10 320 P **P** 00 41 45.8 -1.7
SIMJ Simiganj 65.10 320 P **P** 00 41 45.5 -2.0
SIMJ PcP **PcP** 00 42 18.9 -0.5
CCD Concordia, Ant 66.35 178 P **P** 00 41 56.9 +1.7
H04N2 CROZET ISLANDS 66.72 223 T T 01 54 58.8
baz=81,slow=75
H04N1 CROZET ISLANDS 66.73 223 T T 01 54 39.8
baz=81,slow=75
H04N3 CROZET ISLANDS 66.73 223 T T 01 54 54.0
baz=81,slow=75
KKAR Karatay Array 66.87 325 P **P** 00 41 56.9 -1.7
KURBB Kurchatov Arra 68.03 335 P **P** 00 42 04.0 -1.7
comp=Z,1.2nm,0.5s,baz=144,slow=5.8,SNR=24
KURBB pP **PcP** 00 42 29.2 -1.9
comp=Z,1.2nm,0.8s,baz=146,slow=4.4,SNR=4.2
comp=Z,1.2nm,0.5s
KURK Kurchatov 68.06 335 P **P** 00 42 04.7 -1.2
KURK Kurchatov 68.06 335 P **P** 00 42 04.0 -1.9
KURK PcP **PcP** 00 42 29.6 -1.6
ZAA0 Zalesovo Array 68.25 340 IAmb IAmb 00 42 06.3
comp=Z,3.9nm,0.6s
ZALV Zalesovo Beam 68.25 340 P **P** 00 42 04.8 -2.3
comp=Z,4.1nm,0.5s,baz=145,slow=5.1,SNR=31
ZALV pP **PcP** 00 42 29.8 -2.2
comp=Z,1.3nm,0.4s,baz=145,slow=4.4,SNR=3.3
comp=Z,4.1nm,0.5s
PETK Petropavlovsk- 70.62 25 P **P** 00 42 21.2 -0.5
comp=Z,3.2nm,0.8s,baz=227,slow=2.8,SNR=2.7
comp=Z,3.2nm,0.8s
GEYT Alibeck 72.05 315 P **P** 00 42 28.9 -1.7
comp=Z,1.8nm,0.6s,baz=218,slow=9.1,SNR=4.5
comp=Z,1.8nm,0.6s
VNDA Vanda 72.45 171 P **P** 00 42 32.2 -0.1
comp=Z,1.7nm,0.7s,baz=303,slow=6.7,SNR=6.0
comp=Z,1.7nm,0.7s
BVAR Borovoye Array 73.31 333 P **P** 00 42 35.9 -1.8
comp=Z,2.6nm,0.7s,baz=138,slow=7.8,SNR=20
BVAR pP **pP** 00 43 02.9 -2.8
comp=Z,1.9nm,0.8s,baz=125,slow=7.4,SNR=4.8
comp=Z,2.6nm,0.7s
ABKAR Akbulak array 76.40 325 pP 00 43 21.6 -2.2

RAYN Ar Rayn 77.04 297 P **P** 00 42 58.5 -1.3
KMBO Kilima Mbogo 79.91 270 P **P** 00 43 14.5 -1.5
NRIK Noril'sk 80.64 350 P **P** 00 43 17.4 -1.0
comp=Z,2.2nm,0.6s,baz=144,slow=6.0,SNR=7.7
comp=Z,2.2nm,0.6s
TIXI Tiksi 80.66 4 P **P** 00 43 17.3 -1.2
TIXI IAmb IAmb 00 43 17.6
comp=Z,5.8nm,0.8s
QSPA South Pole Qui 81.18 180 P **P** 00 43 22.0 +0.3
QSPA IAmb IAmb 00 43 25.4
comp=Z,11nm,1.1s
QSPA South Pole Qui 81.18 180 P **P** 00 43 21.9 +0.3
comp=Z,2.7nm,0.5s,baz=340,slow=2.1,SNR=7.4
comp=Z,2.7nm,0.5s
GURO Guroymak-BITLI 84.04 310 P **P** 00 43 37.2 +0.2
GURO IAmb IAmb 00 43 37.7
comp=Z,3.5nm,0.6s
KBZ Khabaz 84.90 316 P **P** 00 43 40.2 -0.8
comp=Z,2.2nm,0.7s,baz=109,slow=8.9,SNR=7.4
comp=Z,2.2nm,0.7s
MBAR Mbarara 86.42 270 P **P** 00 43 49.3 -0.2
MBAR IAmb IAmb 00 43 50.9
comp=Z,6.7nm,0.7s
LSZ Lusaka 86.78 255 P **P** 00 43 50.4 -0.8
LSZ IAmb IAmb 00 43 52.5
comp=Z,8.6nm,0.6s
ARPR Arapgir-MALATY 86.97 310 P **P** 00 43 51.8 +0.2
ARPR IAmb IAmb 00 45 36.6
comp=Z,9.6nm,0.5s
BOSA Boshof 87.55 242 P **P** 00 43 55.4 +0.8
comp=Z,4.4nm,0.7s,baz=108,slow=3.9,SNR=10
BOSA pP **pP** 00 44 22.1 -1.5
comp=Z,1.8nm,0.5s,baz=127,slow=3.7,SNR=2.0
comp=Z,4.4nm,0.7s
MMAI Mount Meron Ar 87.95 304 P **P** 00 43 56.3 0.0
comp=Z,1.8nm,0.5s,baz=88,slow=8.4,SNR=11
MMAI pP **pP** 00 44 23.3 -2.0
comp=Z,1.1nm,0.5s,baz=90,slow=7.5,SNR=2.9
comp=Z,1.8nm,0.5s
SPIA Saint Paul Isl 88.06 31 P **P** 00 43 56.9 +0.8
baz=251
TROLL Troll, Antarti 89.06 196 ⇑P **P** 00 44 02.3 +1.4
comp=Z,258nm,0.5s
GAMB Gambell 89.66 25 P **P** 00 44 04.0 +0.6
baz=249
BR131 Keskin Array S 90.66 310 IAmb IAmb 00 44 08.8
comp=Z,4.0nm,1.1s
BRTR Keskin Array B 90.66 310 P **P** 00 44 07.5 -1.4
comp=Z,1.4nm,0.8s,baz=143,slow=6.9,SNR=12
BRTR LR LR 01 30 04.8
comp=Z,39nm,18.1s,baz=38,slow=39
comp=Z,1.4nm,0.8s
SNAA Sanae 90.70 196 P **P** 00 44 09.1 +0.7
SNAA IAmb IAmb 00 46 09.8
comp=Z,40nm,1.8s
SNAA Sanae 90.70 196 ⇑P **P** 00 44 09.3 +0.9
comp=Z,103nm,0.5s
SNAA Sanae 90.70 196 P **P** 00 44 09.7 +1.2
comp=Z,5.7nm,0.7s,baz=191,slow=6.4,SNR=15
comp=Z,5.7nm,0.7s
BELA Belgrano 2 92.03 186 P **P** 00 44 14.7 +0.3
BELA IAmb IAmb 00 44 16.1
comp=Z,10nm,0.7s
VNA2 Neumayer--Watz 92.34 196 ⇑P **P** 00 44 17.2 +1.3
comp=Z,6.9nm,0.6s,baz=113,slow=4.7
M14K Bethel 93.16 29 P **P** 00 44 20.3 +0.5
baz=258
C16K Lisburne Hills 93.51 21 P **P** 00 44 21.4 +0.2
baz=255
S14K Fog Glacier 93.52 34 P **P** 00 44 22.1 +0.4
baz=260
H16K Elim 93.87 25 P **P** 00 44 22.2 -0.7
baz=258
O15K Ungalikthiuk R 93.91 31 P **P** 00 44 23.3 0.0
baz=259
G16K Koyuk River 93.98 24 P **P** 00 44 23.3 -0.1
baz=258
D17K Noatak River 94.20 22 P **P** 00 44 24.3 -0.1
baz=257
C17K DeLong Mountai 94.34 21 P **P** 00 44 25.5 +0.4
baz=257
E17K Hotham Inlet 94.54 23 P **P** 00 44 26.2 +0.2
baz=258
M16K Timber Creek 94.66 29 P **P** 00 44 25.8 -0.9
baz=260
G17K Kiwalik Mounta 94.70 24 P **P** 00 44 26.4 -0.3
baz=259
O16K Kokwok River B 94.85 31 P **P** 00 44 26.7 -0.9
baz=261
C18K Utukok River 95.09 21 P **P** 00 44 28.6 +0.1
baz=259
N17K Nushagak Hills 95.44 30 P **P** 00 44 30.1 -0.1
baz=262
C19K Lookout Ridge 95.74 21 P **P** 00 44 32.0 +0.5
baz=260
Q17K Contact Creek 95.79 32 P **P** 00 44 31.9 -0.1
baz=263
D19K Kuna River 96.18 22 P **P** 00 44 33.3 -0.2
baz=262
M18K Stony River 96.22 29 P **P** 00 44 33.7 0.0
baz=263
G19K Purcell Mounta 96.25 24 P **P** 00 44 33.5 -0.3
baz=262
TTA Tatalina 96.31 27 P **P** 00 44 34.8 +0.6
baz=263
E19K Redstone River 96.37 23 P **P** 00 44 34.9 +0.6
baz=262
H19K Roundabout Mou 96.43 25 P **P** 00 44 34.8 +0.2
baz=263
J19K Poorman 96.61 26 P **P** 00 44 35.2 -0.3
baz=264
D20K Etivluk River 96.75 22 P **P** 00 44 36.1 0.0
baz=263
E20K Nigu River 96.86 22 P **P** 00 44 36.3 -0.3
baz=264
L20K Farewell, AK 97.24 28 P Pdif 00 44 38.8 +0.4
baz=265
C21K Knifeblade Rid 97.46 21 P Pdif 00 44 39.6 +0.3
baz=265
KDAK Kodiak Island 97.49 33 P **P** 00 44 39.6 +0.1
baz=265
B21K Ikpikpuk River 97.56 21 P Pdif 00 44 40.2 +0.6
baz=265
FINES FINESS Array B 98.21 331 P **P** 00 44 40.5 -2.2
comp=Z,1.0nm,0.7s,baz=93,slow=9.7,SNR=3.8
FINES PKiKP **PKiKP** 00 49 13.8 -1.1
comp=Z,1.2nm,0.8s,baz=75,slow=1.6,SNR=4.5
comp=Z,1.0nm,0.7s
F25K Christian Rive 100.82 23 P **Pdif** 00 44 54.4 +0.1
baz=273
I26K Coal Creek Min 101.98 25 P **Pdif** 00 44 59.9 +0.4
baz=275
E29M Blow River 103.62 22 P **Pdif** 00 45 08.0 +1.3
baz=281
T35M Bob Quinn 109.56 32 P **PKiKP** 00 49 36.6 +0.8
baz=284
EKA Eskdalemuir Ar 114.23 327 PKiKP PKPdf 00 49 44.5 -0.2
comp=Z,1.5nm,0.8s,baz=25,slow=2.0,SNR=3.5
YKA Yellowknife Ar 114.74 24 PKP **PKiKP** 00 49 45.0 -0.5
comp=Z,1.5nm,0.5s,baz=311,slow=2.2,SNR=26
TORD Torodi Ar. Bea 116.69 280 PKP **PKPdf** 00 49 50.0 -0.6
comp=Z,2.1nm,0.6s,baz=65,slow=2.8,SNR=14
ESDC Sonseca Array 119.45 311 PKP **PKPdf** 00 49 54.6 -0.7
comp=Z,0.5nm,0.5s,baz=42,slow=2.3,SNR=5.8
NEW Newport 119.89 39 P **PKiKP** 00 49 56.5 +0.5
baz=292
EDM Edmonton 119.94 32 **PKiKP** 00 49 56.1 +0.2
NVAR Mina Array Bea 122.25 50 PKPdf **PKiKP** 00 50 01.8 +0.6
NVAR Mina Array Bea 122.25 50 PKP **PKPdf** 00 50 00.5 -0.5
comp=Z,1.5nm,0.6s,baz=249,slow=1.3,SNR=12
PESTR Estremoz 122.38 311 PKPdf **PKPdf** 00 50 01.1 +0.2
DBIC Dimbokro 122.60 272 PKP **PKPdf** 00 50 01.8 -0.3
comp=Z,1.2nm,0.4s,baz=135,slow=3.0,SNR=8.0
GRAC Grapevine Rang 123.35 51 P **PKiKP** 00 50 04.1 +0.9
baz=285
EDW2 Edwards Air Fo 123.39 54 P **PKiKP** 00 50 04.1 +0.8
baz=284
HLID Hailey 123.40 43 P **PKiKP** 00 50 03.9 +0.6
baz=292
LRMC Laurel Mtn Rad 123.49 53 P **PKiKP** 00 50 04.2 +0.6
baz=284
MPMC Manual Prospec 123.50 52 P **PKiKP** 00 50 03.8 +0.1
baz=285
BFSC Mount Baldy Ra 123.81 55 P **PKiKP** 00 50 04.5 +0.2
baz=283
ELK Elko 123.82 46 **PKiKP** 00 50 04.5 +0.2
TPNV Topopah Spring 124.23 51 P **PKiKP** 00 50 05.3 +0.2
baz=286

GSC	Goldstone, Bar baz=285	124.23	53	P		PKiKP	00 50 05.7 +0.7
R11B	Troy Canyon, C baz=288	124.33	49	P		PKiKP	00 50 05.9 +0.7
BOZ	Bozeman (W) baz=296	124.41	40	P		PKiKP	00 50 05.7 +0.5
EGMT	Eagleton baz=299	124.44	37	P		PKiKP	00 50 05.4 +0.3
109C	Camp Elliot, M baz=283	124.56	56	P		PKiKP	00 50 05.8 +0.2
FFC	Flin Flon	124.63	26			PKPdf	00 50 04.8 0.0
TUQ	Turquoise Moun baz=285	124.89	53	P		PKiKP	00 50 07.1 +0.7
PFO	Pinyon Flats O baz=284	124.92	55	P		PKiKP	00 50 06.5 0.0
TPFO	Pinon Flats baz=284	124.93	55	P		PKiKP	00 50 07.1 +0.6
MONP2	Monument Peak baz=283	125.12	56	P		PKiKP	00 50 07.4 +0.4
BELC	Belle Mtn. Jos baz=284	125.20	55	P		PKiKP	00 50 08.0 +1.0
GMRC	Granite Mounta baz=285	125.27	53	P		PKiKP	00 50 08.2 +1.0
BC3	Big Chuckawall baz=284	125.72	55	P		PKiKP	00 50 08.6 +0.5
DUG	Dugway, Tooele baz=291	125.75	46	P		PKiKP	00 50 08.0 +0.1
IRM	Iron Mountain baz=285	125.84	54	P		PKiKP	00 50 08.9 +0.7
RLMT	Red Lodge baz=298	126.11	39	P		PKiKP	00 50 09.5 +0.8
BW06	Boulder Array baz=296	126.97	42	P		PKiKP	00 50 10.5 +0.1
PDAR	Pinedale Array comp=Z,0.3nm,0.6s,baz=142,slow=3.1,SNR=4.3	126.97	42	PKP		PKPdf	00 50 09.3 -0.6
LAO	LASA Array baz=302	127.19	36	P		PKiKP	00 50 11.6 +1.1
O20A	White River Ci baz=295	128.99	45	P		PKiKP	00 50 14.9 +0.4
RSSD	Black Hills baz=302	129.85	38	P		PKPdf	00 50 15.7 +0.4
TUC	Tucson baz=287	129.87	55	P		PKiKP	00 50 16.3 -0.1
MVCO	Mesa Verde baz=293	129.99	48	P		PKiKP	00 50 16.5 -0.2
PLCA	Paso Flores comp=Z,1.0nm,0.7s,baz=316,slow=5.2,SNR=3.9	130.19	172	PKP		PKiKP	00 50 16.6 -0.2
ULM	Lac du Bonnet comp=Z,2.5nm,0.6s,baz=28,slow=0.1,SNR=7.0	130.41	27	PKP		PKPdf	00 50 15.8 -0.1
ISCO	Idaho Springs baz=297	130.96	44	P		PKiKP	00 50 19.1 +0.4
SDCO	Great Sand Dun baz=296	131.95	46	P		PKiKP	00 50 20.5 -0.2
ANMO	Albuquerque baz=292	132.38	50	P		PKiKP	00 50 21.2 -0.3
T25A	Trinidad baz=296	132.99	47	P		PKPdf	00 50 22.1 +0.6
SCHQ	Schefferville comp=Z,3.8nm,0.6s,baz=214,slow=13,SNR=5.2	133.99	3	PKP		PKPdf	00 50 22.4 -0.2
EYMN	Ely baz=319	134.06	27	P		PKiKP	00 50 23.9 -0.4
MNTX	Cornudas Mount baz=290	134.41	54	P		PKiKP	00 50 25.4 0.0
TXAR	Lajitas Array comp=Z,0.4nm,0.7s,baz=263,slow=2.1,SNR=5.1	136.61	56	PKhKP		PKPpre	00 50 18.1
TXAR	comp=Z,1.0nm,0.8s,baz=237,slow=2.1,SNR=8.5			PKP		PKPdf	00 50 28.1 -0.2
GLMI	Grayling baz=326	139.45	24	P		PKPdf	00 50 34.2 +1.2
833A	Chaparral WMA, baz=292	140.47	56	P		PKPdf	00 50 36.3 +1.0
MIAR	Mount Ida baz=305	141.88	43	P		PKiKP	00 50 39.5 -1.1
WVT	Waverly baz=314	144.51	36	P		PKPab	00 50 40.3 -0.5
OXF	Oxford baz=310,SNR=24	144.63	40	P		PKPab	00 50 41.1 -0.2
O53A	New Philadelph baz=327,SNR=6.5	144.65	25	P		PKPab	00 50 40.5 -0.7
CPUP	Villa Florida comp=Z,29nm,0.7s,baz=177,slow=2.3,SNR=56	144.67	188	PKP		PKPdf	00 50 43.1 +0.3
P52A	Corning baz=326,SNR=14	144.77	26	P		PKPab	00 50 41.0 -0.7
BINY	Binghamton baz=337,SNR=8.9	144.77	17	P		PKPab	00 50 41.6 0.0
VBMS	Vicksburg baz=306,SNR=5.9	145.31	44	P		PKPab	00 50 44.1 +0.2
L61B	Northampton baz=343	145.38	13	P		PKPdf	00 50 43.6 +0.1
HRV	Adam Dziewonsk baz=345	145.56	12	P		PKPdf	00 50 43.8 -0.1
SSPA	Standing Stone baz=333	145.58	21	P		PKPdf	00 50 43.7 -0.2
MCWV	Mont Chateau baz=329,SNR=10	145.70	24	P		PKPdf	00 50 44.4 +0.2
PAL	Palisades baz=340	146.45	15	P		PKPbc	00 50 46.5 -0.3
TZTN	Tazewell baz=321	146.56	31	P		PKPbc	00 50 46.9 -0.5
LRAL	Lakeview Retre baz=312,SNR=11	147.12	39	P		PKPbc	00 50 48.2 -0.8
BLA	Blacksburg baz=326	147.53	27	P		PKPbc	00 50 49.1 -1.1
CBN	Corbin Frederi baz=332	147.92	22	P		PKPbc	00 50 50.6 -0.5
KMSC	Kings Mountain baz=323	148.77	30	P		PKPbc	00 50 52.7 -0.7
GOGA	Godfrey baz=318	148.96	35	P		PKPbc	00 50 53.6 -0.3
CNNC	Cliffs of the baz=329	150.28	25	P		PKPbc	00 50 56.8 -0.3
TIGA	Tifton baz=315	150.31	38	P		PKPbc	00 50 57.2 -0.1
NHSC	New Hope baz=323	150.97	31	P		PKPbc	00 50 58.7 0.0
BDFB	Brasilia comp=Z,5.4nm,0.5s,baz=130,slow=2.0,SNR=13	151.64	211	PKPbc		PKPbc	00 51 01.1 +0.2

*NEIC **10** 00:39:21.2±0.8, 56°.2N±0°.1×149°.30W±0°.09, h21km±10km, ML3.4/26, ML3.3(AEIC), Error ellipse: s-maj=17.0km s-min=7.4km az=175.0*

AEIC 10 00:39:23.6±1.5, 56°.1N±0°.1×149°.3W±0°.1, h11km±9km, Error ellipse: s-maj=18.9km s-min=8.8km az=175.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.50	315		Pn	00 39 59.5	-4.7
KDAK	Kodiak Island	2.50	315		Sn	00 40 26.9	-7.8
KDAK	Kodiak Island	2.50	315		Pn	00 39 58.9	-5.4
KDAK	22nm,1.4s			IAML		00 40 18.0	
KDAK	22nm,1.4s			IAML		00 40 42.0	
OHAK	Old Harbor	2.51	299		Pn	00 39 59.6	-4.7
OHAK	Old Harbor	2.51	299		Sn	00 40 27.1	-7.7
SYI	Shuyak Island	3.06	328		Pn	00 40 07.1	-4.7
SYI	Shuyak Island	3.06	328		Sn	00 40 41.6	-6.8
SYI	Shuyak Island comp=E,51nm,1.4s	3.06	328	IAML		00 40 39.1	
CNPM	China Poot	3.62	344		Pn	00 40 14.0	-5.6
CNPM					Sn	00 40 55.5	-6.9
CNPM	China Poot comp=E,38nm,1.3s	3.62	344	IAML		00 42 17.8	
Q19K	Cape Douglas,	3.71	322	Pn	Pn	00 40 16.5	-4.4
BRSE	Bradley Lake S	3.76	348		Pn	00 40 16.2	-5.4
BRSE					Sn	00 40 58.7	-7.2
BRLK	Bradley Lake	3.80	347		Pn	00 40 16.7	-5.4
BRLK	Bradley Lake comp=E,31nm,1.2s	3.80	347	IAML		00 42 22.7	
BRLK	comp=N,27nm,1.4s			IAML		00 42 44.3	
P23K	Montague Islan	4.06	13		Pn	00 40 20.3	-5.3
IVE	Iliamna Volcan	4.43	335		Pn	00 40 26.0	-4.8
SLKM	Skilak Lake	4.48	354		Pn	00 40 26.1	-5.3
HIN	Hinchinbrook I	4.58	17		Pn	00 40 27.4	-5.3
HIN					Sn	00 41 16.8	-9.0
HIN	Hinchinbrook I comp=N,78nm,1.1s	4.58	17	IAML		00 42 36.5	
HIN	comp=E,58nm,1.4s			IAML		00 42 37.1	
KAIM	Kayak Island	4.64	32		Pn	00 40 28.7	-4.9
KAIM	Kayak Island comp=N,64nm,1.3s	4.64	32	IAML		00 42 54.3	
KAIM	comp=E,57nm,0.9s			IAML		00 42 54.5	
SUCK	Suckling Hills	4.95	34		Pn	00 40 33.2	-4.7
SUCK	Suckling Hills comp=E,31nm,1.4s	4.95	34	IAML		00 42 59.2	
SUCK	comp=N,35nm,0.6s			IAML		00 43 50.2	
HMT	Hamilton	5.03	30		Pn	00 40 34.0	-4.9
NICHA	Nichawak Mount	5.03	32		Pn	00 40 34.2	-4.7
GOAT	Goat Mountain	5.11	26		Pn	00 40 35.4	-4.7
BERG	Berg Lake	5.23	32		Pn	00 40 36.7	-5.1
GRIN	Grindle Hills	5.26	34		Pn	00 40 37.5	-4.7
SNH	Sunshine Point	5.34	37		Pn	00 40 38.5	-4.8
SNH	Sunshine Point comp=N,23nm,1.0s	5.34	37	IAML		00 44 04.8	
KHIT	Khitrov Hills	5.41	33		Pn	00 40 39.1	-5.1
BMRM	Bremner River	5.48	24		Pn	00 40 40.4	-4.8
N19K	Bonanza Creek	5.49	332		Pn	00 40 40.0	-5.3
N19K	Bonanza Creek comp=N,8.7nm,1.2s	5.49	332	IAML		00 43 03.1	
N19K	comp=E,13nm,1.1s			IAML		00 44 16.8	
WAX	Waxell Ridge	5.54	35		Pn	00 40 41.0	-5.0
BARK	Barkley Ridge	5.62	37		Pn	00 40 42.4	-4.8
CRQM	Cirque	5.69	32		Pn	00 40 43.5	-4.7
KLU	Klutina	5.71	16		Pn	00 40 43.5	-4.8
GHO	Glory Hole Cre	5.72	2	Pn	Pn	00 40 43.0	-5.5
TGL	Tana Glacier	5.78	33		Pn	00 40 44.3	-5.1
N18K	Kilae Creek	5.79	326	Pn	Pn	00 40 44.2	-5.2
ISLE	Juniper Island	5.82	36		Pn	00 40 45.1	-4.8
BAGL	Bagley Icefiel	5.82	38		Pn	00 40 45.1	-4.7
SCM	Sheep Creek Mo	5.86	9	Pn	Pn	00 40 44.9	-5.6
GRNC	Granite Creek	6.11	37	Pn	Pn	00 40 48.6	-5.4
TABL	Table Mountain	6.12	41	Pn	Pn	00 40 49.6	-4.5
MCARA	McCarthy VSAT	6.24	29	Pn	Pn	00 40 52.2	-3.3
PNL	Peninsula	6.38	52		Pn	00 40 53.3	-4.2
BCPM	Bancas Point	6.42	49	Pn	Pn	00 40 53.3	-4.8
CTGM	Chitina Glacie	6.42	37	Pn	Pn	00 40 53.4	-4.8
LOGN	Logan Glacier	6.44	39		Pn	00 40 53.8	-4.6
M17K	Holitna River	6.83	325	Pn	Pn	00 40 58.2	-5.4
O29M	Mount Kennedy	7.06	49	Pn	Pn	00 41 02.6	-4.3
O29M					Sn	00 42 19.1	-8.0
P29M	Windy Craggy	7.10	55	Pn	Pn	00 41 02.9	-4.5
P29M					Sn	00 42 19.4	-8.7
M27K	Edge Creek, AK	7.35	28	Pn	Pn	00 41 06.5	-4.4

*NEIC **10** 00:40:42.2±1.3, 56°.4N±0°.1×148°.59W±0°.10, h20km±10km, ML3.5/42, ML3.3(AEIC), Error ellipse: s-maj=15.3km s-min=8.0km az=182.0*

AEIC 10 00:40:45.3±1.5, 56°.3N±0°.1×148°.6W±0°.1, h10km±8km, Error ellipse: s-maj=16.7km s-min=10.0km az=184.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.64	305		Pn	00 41 23.6	-4.3
KDAK					Sn	00 41 53.0	-6.9
KDAK	Kodiak Island	2.64	305	Pn	Pn	00 41 23.3	-4.6
KDAK	56nm,1.4s			IAML		00 43 01.6	
KDAK	36nm,1.4s			IAML		00 43 01.7	
OHAK	Old Harbor	2.75	291		Pn	00 41 25.2	-4.3
OHAK					Sn	00 41 55.3	-7.5
SYI	Shuyak Island	3.09	319		Pn	00 41 29.7	-4.3
SYI					Sn	00 42 03.7	-7.2
Q23K	Middleton Isla	3.32	20		Pn	00 41 32.7	-4.5
Q23K	Middleton Isla comp=E,162nm,1.4s	3.32	20	IAML		00 42 18.6	
CNPM	China Poot	3.51	337		Pn	00 41 34.9	-5.0
CNPM					Sn	00 42 14.1	-7.3
BRSE	Bradley Lake S	3.61	342		Pn	00 41 36.0	-5.3
BRSE					Sn	00 42 16.4	-7.5
BRLK	Bradley Lake	3.66	341		Pn	00 41 36.6	-5.3
P23K	Montague Islan	3.73	9		Pn	00 41 37.6	-5.2
Q19K	Cape Douglas,	3.78	316		Pn	00 41 39.8	-3.7
HIN	Hinchinbrook I	4.22	14		Pn	00 41 44.5	-5.1
HIN					Sn	00 42 29.8	-9.1
KAIM	Kayak Island	4.22	30		Pn	00 41 44.7	-4.9
SLKM	Skilak Lake	4.28	349		Pn	00 41 45.3	-5.2
O20K	Slope Mountain	4.33	332		Pn	00 41 46.3	-5.0
IVE	Iliamna Volcan	4.39	329		Pn	00 41 46.5	-5.4
EYAK	Cordova Ski Ar	4.48	18		Pn	00 41 48.5	-4.7
SUCK	Suckling Hills	4.52	32		Pn	00 41 49.1	-4.7
RAGM	Ragged Mountai	4.55	25	Pn	Pn	00 41 49.2	-5.0
NICHA	Nichawak Mount	4.60	30		Pn	00 41 50.6	-4.3
HMT	Hamilton	4.61	28		Pn	00 41 50.7	-4.3
HMT	Hamilton comp=N,138nm,0.5s	4.61	28	IAML		00 43 53.2	
HMT	comp=E,170nm,1.1s			IAML		00 44 02.8	
RED	Redoubt Volcan	4.66	333		Pn	00 41 50.1	-5.6
RSO	Redoubt South	4.70	334	Pn	Pn	00 41 52.2	-4.1
BGLC	Bering Glacier	4.71	34		Pn	00 41 51.9	-4.3
GOAT	Goat Mountain	4.71	24		Pn	00 41 51.7	-4.7
BERG	Berg Lake	4.81	30		Pn	00 41 52.9	-4.7
RC01	Rabbit Creek A	4.81	353	Pn	Pn	00 41 53.1	-4.6
RC01	comp=E,38nm,1.3s			IAML		00 44 00.4	
RC01	comp=N,36nm,0.7s			IAML		00 44 00.5	
GRIN	Grindle Hills	4.83	33		Pn	00 41 53.9	-4.1
SNH	Sunshine Point	4.90	36	Pn	Pn	00 41 54.6	-4.3
SNH	comp=N,33nm,1.4s			IAML		00 44 20.1	
DIV	Divide	5.03	16		Pn	00 41 55.9	-4.8
BMRM	Bremner River	5.09	22		Pn	00 41 57.1	-4.5
WAX	Waxell Ridge	5.10	34		Pn	00 41 56.0	-5.8
WAX	comp=E,41nm,0.7s			IAML		00 44 02.8	
WAX	comp=N,47nm,0.7s			IAML		00 44 21.8	
BARK	Barkley Ridge	5.18	35		Pn	00 41 58.6	-4.2
CRQM	Cirque	5.26	30		Pn	00 41 59.6	-4.5
SUA	Susitna One	5.27	348	Pn	Pn	00 41 59.4	-4.8
SUA	comp=N,18nm,1.5s			IAML		00 44 13.8	
PMR	Palmer	5.29	357	Pn	Pn	00 41 59.4	-4.8
KLU	Klutina	5.35	14	Pn	Pn	00 41 60.0	-5.2
TGL	Tana Glacier	5.35	32		Pn	00 42 01.1	-4.2
ISLE	Juniper Island	5.38	35	Pn	Pn	00 42 01.5	-4.2
N19K	Bonanza Creek	5.46	328	Pn	Pn	00 42 03.0	-3.7
GHO	Glory Hole Cre	5.46	358	Pn	Pn	00 42 01.9	-4.8
SML	Sawmill	5.49	1	Pn	Pn	00 42 02.2	-5.0
VRDI	Verde Repeater	5.58	26	Pn	Pn	00 42 03.1	-5.3
GRNC	Granite Creek	5.67	36	Pn	Pn	00 42 04.8	-4.9
TABL	Table Mountain	5.67	40		Pn	00 42 05.0	-4.7
GLB	Gilahina Butte	5.68	24	Pn	Pn	00 42 03.1	-6.6
N18K	Kilae Creek	5.81	322	Pn	Pn	00 42 05.3	-6.2
MCARA	McCarthy VSAT	5.82	27	Pn	Pn	00 42 06.9	-4.7
SKT	Skwentna	5.87	346	Pn	Pn	00 42 07.3	-5.0
M24K	Tolsona, Glenn	5.92	11	Pn	Pn	00 42 08.1	-4.9
BARN	Barnard Glacie	5.95	34		Pn	00 42 09.2	-4.3
BCPM	Bancas Point	5.96	49	Pn	Pn	00 42 09.8	-3.6
CTGM	Chitina Glacie	5.98	36	Pn	Pn	00 42 08.9	-5.0
LOGN	Logan Glacier	5.99	38		Pn	00 42 08.2	-5.8
SVW2	Sparrevohn	6.02	325	Pn	Pn	00 42 08.9	-5.4
O16K	Kokwok River B	6.04	307	Pn	Pn	00 42 08.8	-5.7
M19K	Big River Lodg	6.34	334	Pn	Pn	00 42 11.6	-7.1
P29M	Windy Craggy	6.63	56		Pn	00 42 18.8	-3.9
L19K	White Mountain	6.70	334	Pn	Pn	00 42 18.8	-4.8
M17K	Holitna River	6.86	322	Pn	Pn	00 42 21.4	-4.4
S31K	Pelican	6.90	71		Pn	00 42 22.2	-4.2
M27K	Edge Creek, AK	6.94	27	Pn	Pn	00 42 22.8	-4.2
M16K	Timber Creek	7.18	315	Pn	Pn	00 42 25.3	-4.9
TRF	Thorofare Moun	7.20	354	Pn	Pn	00 42 26.8	-3.8
L18K	Granite Mounta	7.22	328	Pn	Pn	00 42 26.2	-4.6
HYT	Haines Junctio	7.32	47	Pn	Pn	00 42 28.4	-3.9
SIT	Sitka	7.32	79	Pn	Pn	00 42 26.3	-5.8
CAST	Castle Rocks	7.33	347	Pn	Pn	00 42 28.1	-4.2
KTH	Kantishna Hill	7.34	352		Pn	00 42 29.5	-3.0
L27K	Beaver Creek,	7.56	24	Pn	Pn	00 42 31.0	-4.4
K20K	Telida	7.57	341	Pn	Pn	00 42 32.2	-3.4
M29M	Somme Creek	8.00	36		Pn	00 42 37.9	-3.6
K17K	Iditarod	8.09	326	Pn	Pn	00 42 37.3	-5.3
J18K	Innoko River	8.24	334	Pn	Pn	00 42 39.8	-4.9

*NEIC **10** 00:41:49.2±1.6, 56°.43N±0°.09×148°.62W±0°.10, h20km±8km, ML3.5/34, ML3.3(AEIC), Error ellipse: s-maj=14.8km s-min=3.4km az=150.0*

*AEIC **10** 00:41:51.7±1.4, 56°.37N±0°.09×148°.6W±0°.1, h6km±8km, Error ellipse: s-maj=14.0km s-min=5.8km az=150.0*

ISC 10 00:41:47.8±2.1, 56°.5N±0°.1×148°.65W±0°.06, h10km, n89, σ0s99/87, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.52	303		Pn	00 42 29.9	+1.2
KDAK					Sn	00 42 59.3	-0.2
OHAK	Old Harbor	2.66	289		Pn	00 42 31.0	+0.3
OHAK					Sn	00 43 01.3	-1.6
OHAK	Old Harbor comp=N,72nm,0.6s	2.66	289	IAML		00 43 02.8	
OHAK	comp=E,58nm,1.4s			IAML		00 43 03.9	
OHAK	Old Harbor baz=106	2.66	289	P	Pn	00 42 31.0	+0.3
OHAK	baz=106			S	Sn	00 43 01.3	-1.6
SYI	Shuyak Island	2.96	319		Pn	00 42 35.4	+0.7
SYI					Sn	00 43 10.4	+0.2
SYI	Shuyak Island comp=N,59nm,1.2s	2.96	319	IAML		00 43 15.3	
SYI	comp=E,52nm,1.4s			IAML		00 43 22.5	
Q20K	Shuyak Island baz=136	2.96	318	P	Pn	00 42 35.4	+0.7
Q20K	baz=136			S	Sn	00 43 10.4	+0.2
Q23K	Middleton Isla	3.22	21		Pn	00 42 39.0	+0.6
Q23K	Middleton Isla comp=N,193nm,1.4s	3.22	21	IAML		00 43 04.8	
Q23K	comp=E,149nm,1.2s			IAML		00 43 45.2	
Q23K	Middleton Isla baz=202	3.22	21	P	Pn	00 42 39.0	+0.6
CNPM	China Poot	3.37	337		Pn	00 42 41.4	+0.9
CNPM					Sn	00 43 19.6	-0.9
CNPM	China Poot comp=N,40nm,1.0s	3.37	337	IAML		00 43 25.3	
CNPM	comp=E,51nm,1.3s			IAML		00 43 26.7	
BRSE	Bradley Lake S	3.48	342		Pn	00 42 42.5	+0.6
BRSE					Sn	00 43 21.9	-1.2
BRSE	Bradley Lake S baz=160	3.48	342	P	Pn	00 42 42.5	+0.6
BRSE	baz=160			S	Sn	00 43 21.9	-1.2
BRLK	Bradley Lake	3.52	341		Pn	00 42 42.9	+0.4
BRLK					Sn	00 43 23.3	-1.0
BRLK	Bradley Lake comp=E,45nm,1.3s	3.52	341	IAML		00 43 29.5	
HOM	Homer	3.58	335	Pn	Pn	00 42 44.0	+0.7
P23K	Montague Islan	3.61	10		Pn	00 42 44.1	+0.4
P23K	Montague Islan baz=190	3.61	10	P	Pn	00 42 44.1	+0.4
Q19K	Cape Douglas, baz=131	3.65	315	P	Pn	00 42 46.4	+2.0
Q22K	Cooper Landing	4.08	352	Pn	Pn	00 42 49.5	-0.6
HIN	Hinchinbrook I	4.11	15		Pn	00 42 50.9	+0.3
HIN	Hinchinbrook I comp=N,138nm,0.9s	4.11	15	IAML		00 43 43.4	
HIN	comp=E,89nm,1.1s			IAML		00 43 46.9	
KAIM	Kayak Island	4.14	31		Pn	00 42 51.1	+0.1
KAIM	Kayak Island comp=E,81nm,0.9s	4.14	31	IAML		00 43 42.0	
KAIM	Kayak Island baz=214	4.14	31	P	Pn	00 42 51.1	+0.1
SLKM	Skilak Lake	4.15	349		Pn	00 42 51.7	+0.5
O20K	Slope Mountain	4.20	332		Pn	00 42 52.6	+0.7
O20K	Slope Mountain baz=149	4.20	332	P	Pn	00 42 52.6	+0.7
IVE	Iliamna Volcan	4.25	329		Pn	00 42 52.6	0.0
EYAK	Cordova Ski Ar	4.38	19		Pn	00 42 54.0	-0.2
EYAK	Cordova Ski Ar baz=201	4.38	19	P	Pn	00 42 54.9	+0.7
SUCK	Suckling Hills	4.45	33		Pn	00 42 55.8	+0.6
SUCK	Suckling Hills comp=N,48nm,1.1s	4.45	33	IAML		00 44 15.9	
SUCK	comp=E,44nm,1.1s			IAML		00 44 20.4	
NICHA	Nichawak Mount	4.52	31		Pn	00 42 57.0	+0.8
HMT	Hamilton	4.52	29		Pn	00 42 56.3	0.0
GOAT	Goat Mountain	4.62	25		Pn	00 42 58.7	+1.1
RC01	Rabbit Creek A baz=172	4.68	354	P	Pn	00 42 59.1	+0.7
BERG	Berg Lake	4.73	31		Pn	00 42 59.2	+0.1
BERG	Berg Lake comp=E,76nm,0.7s	4.73	31	IAML		00 44 02.3	
BERG	comp=N,62nm,1.0s			IAML		00 44 03.6	
GRIN	Grindle Hills	4.75	34		Pn	00 43 00.2	+0.8
KHIT	Khitrov Hills	4.90	33		Pn	00 43 02.1	+0.6
DIV	Divide	4.92	16		Pn	00 43 00.4	-1.4
BMRM	Bremner River	4.99	23		Pn	00 43 03.4	+0.7
BMRM	Bremner River baz=206	4.99	23	P	Pn	00 43 03.4	+0.7
BARK	Barkley Ridge	5.11	37		Pn	00 43 05.0	+0.5
CRQM	Cirque	5.18	31		Pn	00 43 04.6	-0.9
CRQM	comp=E,26nm,1.0s			IAML		00 44 04.9	
CRQM	comp=N,25nm,1.2s			IAML		00 44 16.4	
CRQE	Cirque baz=216	5.20	32	P	Pn	00 43 06.0	+0.4
KLU	Klutina	5.25	14		Pn	00 43 04.0	-2.2
KLU	comp=E,28nm,1.3s			IAML		00 44 10.6	
KLU	comp=N,24nm,0.8s			IAML		00 44 14.0	
KLU	Klutina baz=196	5.25	14	P	Pn	00 43 07.3	+1.0
TGL	Tana Glacier	5.28	33	Pn	Pn	00 43 04.8	-1.9
TGL	comp=E,22nm,0.5s			IAML		00 44 12.2	
TGL	comp=N,17nm,0.9s			IAML		00 44 24.3	
BAGL	Bagley Icefiel	5.31	38		Pn	00 43 07.6	+0.6
ISLE	Juniper Island	5.31	36		Pn	00 43 06.0	-1.1
ISLE	comp=E,25nm,1.3s			IAML		00 44 18.6	
ISLE	comp=N,26nm,1.1s			IAML		00 44 30.9	
SCM	Sheep Creek Mo	5.44	7		Pn	00 43 05.9	-3.0
N25K	Chitina, Valde	5.57	20		Pn	00 43 06.8	-3.9
GLB	Gilahina Butte	5.59	25	Pn	Pn	00 43 06.8	-4.1
GRNC	Granite Creek	5.60	37	Pn	Pn	00 43 11.0	-0.2
TABL	Table Mountain	5.61	41		Pn	00 43 11.9	+0.5
N18K	Kilae Creek	5.68	321	Pn	Pn	00 43 12.4	+0.3
MCARA	McCarthy VSAT	5.74	28	Pn	Pn	00 43 13.7	+0.8
SKT	Skwentna	5.74	346	Pn	Pn	00 43 13.2	+0.3
M24K	Tolsona, Glenn	5.81	12	Pn	Pn	00 43 14.2	+0.2
BARN	Barnard Glacie	5.88	35	Pn	Pn	00 43 13.8	-1.2
SVW2	Sparrevohn	5.89	325	Pn	Pn	00 43 16.3	+1.4
M20K	Styx River	5.91	339	Pn	Pn	00 43 15.8	+0.4
CTGM	Chitina Glacie	5.91	37	Pn	Pn	00 43 15.4	0.0
BCPM	Bancas Point	5.92	50	Pn	Pn	00 43 15.3	0.0
LOGN	Logan Glacier	5.92	39	Pn	Pn	00 43 16.0	+0.3
M19K	Big River Lodg	6.21	334	Pn	Pn	00 43 19.4	0.0
O29M	Mount Kennedy	6.55	50	Pn	Pn	00 43 24.9	+0.7
L19K	White Mountain	6.56	334	Pn	Pn	00 43 25.1	+0.8
P29M	Windy Craggy	6.61	57	Pn	Pn	00 43 25.5	+0.6
DHY	Denali Highway	6.67	5	Pn	Pn	00 43 27.0	+1.1
M17K	Holitna River	6.73	321	Pn	Pn	00 43 27.1	+0.6
M27K	Edge Creek, AK	6.85	27	Pn	Pn	00 43 30.1	+1.8
S31K	Pelican	6.91	72	Pn	Pn	00 43 28.2	-0.8
M16K	Timber Creek	7.05	315	Pn	Pn	00 43 32.1	+1.2
M29M	Somme Creek	7.93	37		Pn	00 43 43.8	+0.8
K17K	Iditarod	7.96	326

s-min=0.3km az=32.0,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VPL	**Vulcano Piano**	**0.18**	**343**	P	Pb	00 46 41.7	-0.8
VPL				S	Sg	00 46 45.2	+1.6
VPL				AML	AML		
	comp=E,544μm,1.0s						
VPL				AML	AML		
	comp=N,404μm,1.5s						
NOV	**Novara**	**0.19**	**159**	P	Pb	00 46 41.8	-0.8
NOV				S	Sg	00 46 45.0	+1.3
NOV				AML	AML		
	comp=N,212μm,1.1s						
NOV				AML	AML		
	comp=E,215μm,1.2s						
NOV				AML	AML		
	comp=N,212μm,0.9s						
NOV				AML	AML		
	comp=E,215μm,0.8s						
IVGP	**Vulcano Grotta**	**0.21**	**340**	⇓P	Pg	00 46 41.8	+0.5
IVGP				S	Sg	00 46 45.2	+0.9
IVGP				AML	AML		
	comp=N,313μm,1.4s						
IVGP				AML	AML		
	comp=E,386μm,1.2s						
IVGP				AML	AML		
	comp=N,313μm,0.6s						
MUCR	**Ucria**	**0.21**	**221**	⇓P	Pg	00 46 42.1	+0.7
MUCR				S	Sg	00 46 45.4	+0.9
MUCR				AML	AML		
	comp=N,226μm,1.0s						
MUCR				AML	AML		
	comp=N,226μm,1.0s						
MUCR				AML	AML		
	comp=E,210μm,0.2s						
MPNC	**Port Mandanici**	**0.24**	**103**	⇑P	Pg	00 46 42.7	+0.7
MPNC				S	Sg	00 46 46.9	+1.5
MPNC				AML	AML		
	comp=N,224μm,1.1s						
MPNC				AML	AML		
	comp=E,250μm,0.4s						
AIO	**Antillo**	**0.27**	**148**	P	Pb	00 46 43.4	-0.6
AIO				S	Sb	00 46 47.6	-1.1
AIO				AML	AML		
	comp=E,151μm,0.3s						
AIO				AML	AML		
	comp=N,258μm,0.2s						
MSRU	**Castanea**	**0.37**	**80**	⇑P	Pg	00 46 44.7	+0.5
MSRU				S	Sg	00 46 50.2	+1.1
MSFR	**San Fratello**	**0.40**	**245**	⇑P	Pg	00 46 45.4	+0.6
MSFR				S	Sb	00 46 51.5	-0.9
MTTG	**Motta San Giov**	**0.55**	**111**	P	Pg	00 46 48.0	+0.4
CEL	**Celeste**	**0.67**	**85**	P	Pg	00 46 49.8	-0.1
CSLB	**Castelbuono**	**0.83**	**252**	P	Pg	00 46 52.7	-0.2

ROM 10 00:47:04.8±0.1,38°.204N±0°.004×15°.059E±0°.006, h9km,ML2.2/18,3C-3D,Error ellipse: s-maj=0.5km
s-min=0.3km az=22.0,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VPL	**Vulcano Piano**	**0.18**	**341**	⇓P	Pg	00 47 09.4	+0.8
VPL				S	Sg	00 47 12.8	+1.4
VPL				AML	AML		
	comp=E,2290μm,0.7s						
VPL				AML	AML		
	comp=N,2045μm,0.2s						
NOV	**Novara**	**0.19**	**161**	⇓P	Pg	00 47 09.4	+0.8
NOV				S	Sg	00 47 12.5	+1.1
NOV				AML	AML		
	comp=N,969μm,1.2s						
NOV				AML	AML		
	comp=N,969μm,0.8s						
NOV				AML	AML		
	comp=E,800μm,0.2s						
IVGP	**Vulcano Grotta**	**0.21**	**338**	⇓P	Pg	00 47 09.6	+0.5
IVGP				S	Sg	00 47 12.9	+0.9
IVGP				AML	AML		
	comp=E,1675μm,0.6s						
IVGP				AML	AML		
	comp=N,1245μm,0.2s						
MUCR	**Ucria**	**0.22**	**222**	P	Pg	00 47 09.9	+0.6
MUCR				S	Sg	00 47 13.2	+0.9
MUCR				AML	AML		
	comp=N,1024μm,1.0s						
MUCR				AML	AML		
	comp=E,909μm,0.4s						
MUCR				AML	AML		
	comp=N,1024μm,1.0s						
MPNC	**Port Mandanici**	**0.24**	**104**	⇑P	Pg	00 47 10.4	+0.8
MPNC				S	Sg	00 47 14.6	+1.7
MPNC				AML	AML		
	comp=N,1108μm,0.2s						
MPNC				AML	AML		
	comp=E,1210μm,0.4s						
LLI	**Lipari**	**0.26**	**340**	P	Pb	00 47 11.6	0.0
AIO	**Antillo**	**0.27**	**149**	P	Pb	00 47 11.1	-0.8
AIO				S	Sg	00 47 15.2	+1.4
AIO				AML	AML		
	comp=E,708μm,0.3s						
AIO				AML	AML		
	comp=N,1188μm,0.2s						
AIO				AML	AML		
	comp=E,708μm,1.7s						
MSRU	**Castanea**	**0.36**	**80**	⇑P	Pg	00 47 12.4	+0.6
MSRU				S	Sb	00 47 17.9	-1.2
MSRU				AML	AML		
	comp=N,582μm,1.0s						
MSRU				AML	AML		
	comp=E,487μm,0.2s						
MSRU				AML	AML		
	comp=N,582μm,1.0s						
EMSG	**Monte Spagnolo**	**0.39**	**193**	P	Pb	00 47 14.2	+0.2
MSFR	**San Fratello**	**0.41**	**245**	⇑P	Pg	00 47 13.1	+0.4
MSFR				S	Sb	00 47 19.3	-1.2
EPZF	**Pizzo Felice**	**0.41**	**203**	P	Pb	00 47 14.0	-0.3
MTTG	**Motta San Giov**	**0.54**	**112**	P	Pg	00 47 15.6	+0.3
MTTG				S	Sb	00 47 25.1	+0.8
CEL	**Celeste**	**0.66**	**85**	P	Pg	00 47 17.2	-0.3
CEL				S	Sb	00 47 27.4	-0.4
CEL				AML	AML		
	comp=N,108μm,0.6s						
CEL				AML	AML		
	comp=E,99μm,1.5s						
PLLN	**Pollina**	**0.75**	**254**	P	Pg	00 47 19.5	+0.2
JOPP	**Joppolo**	**0.76**	**58**	P	Pg	00 47 19.4	-0.1
JOPP				S	Sg	00 47 29.9	+0.5
JOPP				AML	AML		
	comp=N,76μm,0.2s						
JOPP				AML	AML		
	comp=E,77μm,1.0s						
SOI	**Samo**	**0.80**	**99**	P	Pg	00 47 19.8	-0.3
CSLB	**Castelbuono**	**0.83**	**252**	P	Pg	00 47 20.5	-0.3

*JMA **10** 00:55:12.5±0.2,24°.0N±0°.2×121°.7E±0°.7,h0km±2km, MV3.1/10,TAIWAN REGION*
*TAP **10** 00:55:12.9,24°.03N×121°.63E,h8km,ML3.4,C*
ISC 10 00:55:13.5±0.9,24°.03N±0°.02×121°.67E±0°.02,h6km±6km, n83,σ0s58/132,9D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.08**	**225**	P	**Pg**	**00 55 15.5**	**+0.1**
HWA	baz=192			*e*S	**Sg**	**00 55 17.4**	**+0.7**
TWD	**Chiawan**	**0.08**	**305**	⇓*i*P	**Pg**	**00 55 15.0**	**-0.4**
TWD	baz=338			*i* S	**Sg**	**00 55 16.5**	**-0.2**
ETL	**Fush Village**	**0.13**	**342**	*i* P	**Pg**	**00 55 15.9**	**-0.4**
ETL	baz=358			*e*S	**Sg**	**00 55 18.9**	**+0.7**
NACB	**Ninganchiao**	**0.15**	**335**	P	**Pg**	**00 55 16.1**	**-0.6**
NACB	**Ninganchiao**	**0.15**	**335**	⇓*i*P	**Pg**	**00 55 16.2**	**-0.5**
NACB	baz=356			S	**Sg**	**00 55 18.4**	**-0.4**
ETM	**Tongmen**	**0.17**	**247**	⇓*i*P	**Pg**	**00 55 16.5**	**-0.5**
ETM	baz=243			*e*S	**Sg**	**00 55 18.9**	**-0.4**
	baz=243						
LXIB	**Xiulin Townshi**	**0.23**	**267**	⇓*i*P	**Pg**	**00 55 17.6**	**-0.6**
LXIB	baz=262			*e*S	**Sg**	**00 55 21.1**	**-0.2**
ETLH	**Xiulin Townshi**	**0.24**	**316**	⇓*i*P	**Pg**	**00 55 17.9**	**-0.4**
ETLH	baz=323			*e*S	**Sg**	**00 55 21.5**	**-0.1**
SHUL	**Shoufeng**	**0.26**	**201**	*e*P	**Pg**	**00 55 19.4**	**+0.8**
EHP	baz=194 **Heping Village**	**0.28**	**14**	*e*P	**Pg**	**00 55 17.9**	**-1.2**
EHP	baz=22			*e*S	**Sg**	**00 55 23.8**	**+0.9**
EAHA	**Aohua**	**0.30**	**13**	*e*P	**Pg**	**00 55 18.9**	**-0.5**
EAHA	baz=28			*e*S	**Sg**	**00 55 23.0**	**-0.4**
ESL	**Shilin**	**0.31**	**224**	*e*P	**Pg**	**00 55 18.8**	**-0.7**
ESL	baz=227			*e*S	**Sg**	**00 55 22.3**	**-1.2**
TEGC	**Jichi Village**	**0.34**	**200**	*e*P	**Pg**	**00 55 20.6**	**+0.4**
TEGC	baz=184			*e*S	**Sb**	**00 55 27.9**	**+0.2**
WHF	**Hehuan Shan**	**0.38**	**287**	*i* P	**Pg**	**00 55 20.6**	**-0.5**
WHF	baz=290			*e*S	**Sg**	**00 55 25.9**	**-0.4**
ENA	**Nanau**	**0.40**	**10**	*e*P	**Pg**	**00 55 20.8**	**-0.4**
ENA	baz=16			*e*S	**Sg**	**00 55 26.9**	**+0.3**
EWUT	**Wuta**	**0.42**	**14**	*e*P	**Pg**	**00 55 21.3**	**-0.5**
EWUT	baz=19			*e*S	**Sg**	**00 55 27.9**	**+0.6**
EGFH	**Guangfu**	**0.42**	**211**	*e*P	**Pg**	**00 55 21.9**	**+0.1**
FUSS	baz=215 **Fushou**	**0.44**	**299**	P	**Pg**	**00 55 22.0**	**-0.2**
FUSS	baz=301			*e*S	**Sg**	**00 55 28.2**	**+0.2**
CHGB	**Renai**	**0.45**	**273**	⇓*i*P	**Pg**	**00 55 22.1**	**-0.2**
CHGB	baz=265			*e*S	**Sg**	**00 55 28.3**	**0.0**
OWD	**Renai**	**0.46**	**260**	*e*P	**Pg**	**00 55 21.9**	**-0.5**
OWD	baz=270			*e*S	**Sg**	**00 55 28.0**	**-0.4**
NNSB	**Datong**	**0.47**	**327**	*i* P	**Pg**	**00 55 22.4**	**-0.3**
NNSB	baz=331			*e*S	**Sg**	**00 55 28.9**	**0.0**
NNS	**Nan Shan**	**0.48**	**326**	*i* P	**Pg**	**00 55 22.6**	**-0.3**
NNS	baz=331			*e*S	**Sg**	**00 55 29.2**	**-0.1**
TWT	**Tachien**	**0.50**	**296**	*e*P	**Pg**	**00 55 23.5**	**+0.3**
TWT	baz=297			*e*S	**Sg**	**00 55 30.3**	**+0.5**
TDCB	**Techi**	**0.51**	**295**	*e*P	**Pg**	**00 55 23.3**	**-0.1**
TDCB	baz=297			*e*S	**Sg**	**00 55 29.9**	**-0.2**
LATG	**Datong**	**0.52**	**346**	⇓*i*P	**Pg**	**00 55 23.2**	**-0.3**
LATG	baz=350			*e*S	**Sg**	**00 55 30.0**	**-0.3**
ESAO	**Su ao**	**0.56**	**17**	*e*P	**Pg**	**00 55 25.4**	**+1.0**
ESAO	baz=26			*e*S	**Sg**	**00 55 32.3**	**+0.6**
HGSD	**Ruisui**	**0.58**	**202**	*e*P	**Pg**	**00 55 25.8**	**+1.0**
HGSD	baz=215			*e*S	**Sg**	**00 55 33.5**	**+1.2**
NDT	**Datong Townshi**	**0.58**	**346**	*i* P	**Pg**	**00 55 24.8**	**0.0**
NDT	baz=350			S	**Sg**	**00 55 32.7**	**+0.3**
TWC	**Suao**	**0.60**	**16**	*e*P	**Pg**	**00 55 25.4**	**+0.4**
TWC	baz=10.0			*e*S	**Sg**	**00 55 33.5**	**+0.7**
NDS	**Dongshan**	**0.60**	**4**	*e*P	**Pg**	**00 55 24.9**	**-0.2**
NDS	baz=8.0			*e*S	**Sb**	**00 55 34.7**	**-0.4**
ENTT	**Nioudou**	**0.61**	**351**	*i* P	**Pg**	**00 55 25.2**	**-0.2**
ENTT	baz=356			*e*S	**Sg**	**00 55 33.4**	**+0.1**
EHY	**Hungye**	**0.61**	**211**	*e*P	**Pg**	**00 55 24.7**	**-0.6**
EOS3	baz=216 **EOS3**	**0.65**	**67**	*e*P	**Pb**	**00 55 27.5**	**+0.4**
TWE	baz=65 **Nelcheng**	**0.68**	**0**	*e*P	**Pg**	**00 55 26.6**	**-0.1**
TWE	baz=5.0			*e*S	**Sg**	**00 55 36.3**	**+0.6**
YHNB	**Yeheng**	**0.69**	**337**	P	**Pg**	**00 55 26.8**	**0.0**
SSLB	**Suanglung**	**0.70**	**250**	P	**Pg**	**00 55 26.6**	**-0.3**
SSLB	**Suanglung**	**0.70**	**250**	⇓*i*P	**Pg**	**00 55 26.5**	**-0.5**
SSLB	baz=261			*e*S	**Sg**	**00 55 35.6**	**-0.4**
NSK	**Sanguang**	**0.70**	**336**	⇓*i*P	**Pg**	**00 55 26.9**	**-0.1**
NSK	baz=340			*e*S	**Sg**	**00 55 36.1**	**0.0**
SMLT	baz=340 **Sun Moon Lake**	**0.72**	**258**	*e*P	**Pg**	**00 55 27.2**	**-0.1**
SMLT	baz=258			S	**Sg**	**00 55 36.8**	**+0.1**
YULB	**Yu-li**	**0.72**	**208**	P	**Pg**	**00 55 26.7**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.73**	**354**	*e*P	**Pg**	**00 55 27.4**	**-0.1**
FUSB	baz=357			*e*S	**Sg**	**00 55 38.1**	**+1.1**
ECBN	**Changbin**	**0.74**	**196**	*e*P	**Pg**	**00 55 28.1**	**+0.3**
ECBN	baz=182			*e*S	**Sg**	**00 55 38.6**	**+1.2**
TYC	**Yuchr**	**0.75**	**260**	*e*P	**Pg**	**00 55 27.5**	**-0.5**
TYC	baz=260			*e*S	**Sg**	**00 55 36.9**	**-0.9**
EYUL	**Yuli**	**0.75**	**205**	*e*P	**Pg**	**00 55 27.6**	**-0.4**
NWLT	baz=218 **Wulai**	**0.76**	**349**	*i* P	**Pg**	**00 55 28.2**	**+0.1**
NWLT	baz=351			*i* S	**Sg**	**00 55 37.6**	**-0.3**
TWF1	**Yuli**	**0.76**	**207**	*e*P	**Pg**	**00 55 27.2**	**-0.9**
NFF	baz=218 **Wufeng Townshi**	**0.78**	**320**	*e*P	**Pg**	**00 55 28.4**	**-0.1**
NFF	baz=322			*e*S	**Sg**	**00 55 38.8**	**+0.2**
NSTT	**Nanjuang**	**0.85**	**315**	*e*P	**Pg**	**00 55 30.2**	**+0.3**
NSTT	baz=316			*e*S	**Sg**	**00 55 40.1**	**-0.9**
LIOB	**Emei**	**0.85**	**316**	*e*P	**Pg**	**00 55 30.5**	**+0.6**
LIOB	baz=318			*e*S	**Sg**	**00 55 41.0**	**0.0**
CHKH	**Chenggong**	**0.87**	**197**	*e*P	**Pg**	**00 55 30.5**	**+0.2**
CHKH	baz=183			*e*S	**Sb**	**00 55 44.2**	**+1.2**
FULB	**Fuli**	**0.90**	**202**	*e*P	**Pg**	**00 55 31.0**	**+0.2**
NSY	baz=216 **Sanyi**	**0.91**	**295**	*e*P	**Pb**	**00 55 32.0**	**+0.2**
WNT	baz=296 **Mingjian**	**0.91**	**260**	*e*P	**Pb**	**00 55 32.1**	**+0.4**
NHDH	baz=254 **Xindian Distri**	**0.93**	**352**	*e*P	**Pg**	**00 55 31.4**	**-0.1**
NHDH	baz=344			*e*S	**Sg**	**00 55 44.1**	**+0.5**
NMLH	baz=344 **Miaoli**	**0.94**	**302**	*e*P	**Pn**	**00 55 33.6**	**+0.2**
TIPB	baz=303 **Shuangxi**	**0.94**	**9**	*e*P	**Pg**	**00 55 31.6**	**-0.2**
	baz=355						
ALS	**Alishan**	**0.95**	**237**	*e*P	**Pg**	**00 55 31.6**	**-0.2**
ALS	baz=236			*e*S	**Sb**	**00 55 45.2**	**-0.2**
TATO	baz=236 **Taipei**	**0.95**	**350**	P	**Pg**	**00 55 32.2**	**+0.4**
EHD	**Haiduan**	**0.98**	**206**	*e*P	**Pg**	**00 55 32.2**	**0.0**
TWB1	baz=206 **Santiao Chiao**	**1.01**	**17**	*e*P	**Pg**	**00 55 33.4**	**+0.4**
NCUH	baz=10.0 **Zhongli**	**1.03**	**335**	*e*P	**Pn**	**00 55 34.9**	**+0.3**
ELDTW	baz=335 **Lidau**	**1.03**	**215**	*e*P	**Pg**	**00 55 31.5**	**-1.9**
ELDTW	baz=214			*e*S	**Sg**	**00 55 46.0**	**-0.7**
NWF	**Wu-fen Shan**	**1.04**	**6**	*e*P	**Pg**	**00 55 33.8**	**+0.3**
NWF	baz=8.0			*e*S	**Sg**	**00 55 46.9**	**-0.1**
SXI1	**Grass Mountain**	**1.07**	**10**	*e*P	**Pg**	**00 55 34.5**	**+0.3**
EDH	baz=358 **Donghe**	**1.11**	**198**	*e*P	**Pg**	**00 55 32.9**	**-1.9**
ANP	baz=215 **Anpu**	**1.16**	**353**	*e*P	**Pg**	**00 55 35.7**	**-0.1**
STYH	baz=354 **Taoyuan**	**1.19**	**224**	*e*P	**Pg**	**00 55 35.5**	**-0.8**
STYH	baz=223			*e*S	**Sg**	**00 55 51.5**	**-0.2**
CHN4	**Tsaushan**	**1.20**	**236**	*e*P	**Pg**	**00 55 36.8**	**+0.3**
TPUB	baz=237 **Ta-pu**	**1.20**	**233**	P	**Pg**	**00 55 36.7**	**+0.1**
TPUB	**Ta-pu**	**1.20**	**233**	*e*P	**Pg**	**00 55 36.6**	**+0.1**
TPUB	baz=232			*e*S	**Sg**	**00 55 52.0**	**-0.1**
JYNG	baz=232 **Yonagunijimaku**	**1.24**	**70**	*e*P	**Pg**	**00 55 36.1**	**-1.2**
WTP	**Ta-pu**	**1.24**	**231**	*e*P	**Pg**	**00 55 37.1**	**-0.3**
WTP	baz=231			*e*S	**Sn**	**00 55 54.9**	**+0.2**
YOJ	baz=231 **Yonaguni jima**	**1.30**	**71**	P	**Pn**	**00 55 37.3**	**-1.0**
YOJ	**Yonaguni jima**	**1.30**	**71**	*e*P	**Pn**	**00 55 37.2**	**-1.0**
YOJ				S	**Sb**	**00 55 55.4**	**+0.1**
TWK	**Hsinying**	**1.32**	**235**	*e*P	**Pn**	**00 55 38.7**	**+0.1**
TWGBT	baz=236 **Beinan**	**1.32**	**204**	P	**Pn**	**00 55 38.5**	**-0.1**
CHN1	**Nanshi**	**1.34**	**231**	*e*P	**Pn**	**00 55 39.3**	**+0.5**
SNST	baz=233 **Tainan City**	**1.34**	**233**	*e*P	**Pn**	**00 55 39.3**	**+0.4**
SGST	baz=235 **Jiashian**	**1.37**	**227**	*e*P	**Pn**	**00 55 38.9**	**-0.4**
SLGT	baz=228 **Liugui**	**1.40**	**222**	*e*P	**Pn**	**00 55 40.0**	**+0.4**
SCST	baz=224 **Cishan**	**1.57**	**224**	*e*P	**Pg**	**00 55 43.9**	**+0.2**
SCST	baz=225			*i* S	**Sg**	**00 56 04.7**	**+0.7**
MASBT	baz=225 **Mashibuluo**	**1.71**	**214**	*e*P	**Pn**	**00 55 42.5**	**-1.3**
JISG	baz=205 **Ishigakijimahi**	**2.47**	**77**	P	**Pn**	**00 55 53.3**	**-1.1**

TAP 10 00:55:34.3,24°.04N×121°.63E,h8km,ML3.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.05**	**323**	*e*P	Pg	00 55 35.9	0.0
TWD	baz=334			*e*S	Sg	00 55 37.3	+0.2
HWA	**Hwalien**	**0.07**	**196**	P	Pg	00 55 36.6	+0.4
HWA	baz=188			*i* S	Sg	00 55 38.7	+1.2
ETL	**Fush Village**	**0.12**	**359**	P	Pg	00 55 36.9	0.0
ETL	baz=360			S	Sg	00 55 39.5	+0.7
NACB	**Ninganchiao**	**0.13**	**348**	P	Pg	00 55 37.1	-0.1
NACB	baz=357			S	Sg	00 55 39.8	+0.6
ETM	**Tongmen**	**0.14**	**238**	P	Pg	00 55 37.4	+0.1
ETM	baz=237			*e*S	Sg	00 55 40.0	+0.5
LXIB	**Xiulin Townshi**	**0.20**	**264**	P	Pg	00 55 38.6	+0.3
LXIB	baz=257			*e*S	Sg	00 55 42.0	+0.9
ETLH	**Xiulin Townshi**	**0.21**	**321**	P	Pg	00 55 39.1	+0.6
ETLH	baz=321			*e*S	Sg	00 55 42.8	+1.3
SHUL	**Shoufeng**	**0.26**	**193**	*e*P	Pb	00 55 40.7	-0.6
SHUL	baz=192			*e*S	Sb	00 55 45.7	-0.1
EHP	**Heping Village**	**0.29**	**22**	*e*P	Pg	00 55 40.3	+0.4
EHP	baz=24			*e*S	Sg	00 55 44.5	+0.7
ESL	**Shilin**	**0.29**	**218**	P	Pg	00 55 39.9	-0.1
ESL	baz=226			*e*S	Sg	00 55 43.9	0.0
EAHA	**Aohua**	**0.30**	**20**	*e*P	Pg	00 55 40.3	0.0
EAHA	baz=30			*e*S	Sg	00 55 44.8	+0.4
TEGC	**Jichi Village**	**0.34**	**193**	*e*P	Pb	00 55 42.1	-0.5
TEGC	baz=196			*e*S	Sb	00 55 49.1	+0.9
WHF	**Hehuan Shan**	**0.34**	**287**	P	Pg	00 55 41.9	+0.7
WHF	baz=287			*e*S	Sg	00 55 46.8	+1.0
ENA	**Nanau**	**0.40**	**15**	*e*P	Pg	00 55 41.9	-0.2
ENA	baz=17			*e*S	Sg	00 55 48.0	+0.7
FUSS	**Fushou**	**0.40**	**300**	*e*P	Pb	00 55 43.2	-0.7
FUSS	baz=300			*e*S	Sb	00 55 49.0	-1.2
CHGB	**Renai**	**0.41**	**272**	P	Pg	00 55 43.0	+0.6
CHGB	baz=262			*e*S	Sb	00 55 49.3	-1.2
EGFH	**Guangfu**	**0.41**	**206**	*e*P	Pg	00 55 42.6	+0.2
EGFH	baz=216			*e*S	Sg	00 55 48.5	+0.7
OWD	**Renai**	**0.42**	**258**	*e*P	Pg	00 55 43.1	+0.5
OWD	baz=267			*e*S	Sg	00 55 49.0	+0.9
NNSB	**Datong**	**0.44**	**330**	*e*P	Pg	00 55 43.3	+0.4
NNSB	baz=330			*e*S	Sg	00 55 49.4	+0.6
NNS	**Nan Shan**	**0.46**	**330**	*e*P	Pg	00 55 43.8	+0.5
NNS	baz=330			*e*S	Sg	00 55 50.1	+0.9
TWT	**Tachien**	**0.46**	**297**	*e*P	Pb	00 55 44.5	-0.3
TWT	baz=295			*e*S	Sb	00 55 51.1	-0.7
TDCB	**Techi**	**0.48**	**296**	P	Pg	00 55 44.3	+0.7
TDCB	baz=295			*e*S	Sg	00 55 50.4	+0.6
LATG	**Datong**	**0.50**	**350**	*e*P	Pb	00 55 44.9	-0.5
LATG	baz=350			*e*S	Sg	00 55 51.1	+0.5
ESAO	**Su ao**	**0.57**	**21**	*e*P	Pb	00 55 45.9	-0.6
ESAO	baz=27			S	Sg	00 55 53.4	+0.7
NDT	**Datong Townshi**	**0.57**	**350**	*e*P	Pg	00 55 45.8	+0.5
NDT	baz=350			*e*S	Sg	00 55 53.5	+0.9

	baz=350							
HGSD	**Ruisui**	**0.58**	**199**	*e*P	Pb	00 55 47.1	+0.5	
	baz=213							
HGSD				*e*S	Sn	00 55 57.2	-1.2	
	baz=213							
ENTT	**Nioudou**	**0.60**	**355**	*e*P	Pg	00 55 46.3	+0.5	
	baz=356							
ENTT				*e*S	Sg	00 55 54.2	+0.6	
	baz=356							
TWC	**Suao**	**0.60**	**20**	*e*P	Pg	00 55 46.4	+0.5	
	baz=21							
EHY	**Hungye**	**0.60**	**208**	*e*P	Pg	00 55 46.4	+0.5	
	baz=214							
EHY				*e*S	Sg	00 55 53.3	-0.5	
	baz=214							
SSLB	**Suanglung**	**0.67**	**248**	P	Pg	00 55 47.6	+0.5	
	baz=258							
SSLB				*i* S	Sg	00 55 56.3	+0.5	
	baz=258							
NSK	**Sanguang**	**0.68**	**339**	*e*P	Pg	00 55 47.8	+0.5	
	baz=333							
NSK				*e*S	Sb	00 55 57.3	-0.6	
	baz=333							
TWE	**Neicheng**	**0.68**	**3**	*e*P	Pb	00 55 48.8	+0.5	
	baz=5.0							
TWE				*e*S	Sg	00 55 56.9	+0.7	
	baz=5.0							
SMLT	**Sun Moon Lake**	**0.68**	**257**	*e*P	Pb	00 55 48.6	+0.1	
	baz=256							
SMLT				*e*S	Sb	00 55 57.6	-0.6	
	baz=256							
FUSB	**Fushanzhiwuyua**	**0.71**	**357**	*e*P	Pb	00 55 49.2	+0.2	
	baz=358							
FUSB				*e*S	Sb	00 55 59.7	+0.6	
	baz=358							
TYC	**Yuchr**	**0.72**	**259**	*e*P	Pb	00 55 48.8	-0.3	
	baz=258							
TYC				*e*S	Sg	00 55 57.9	+0.5	
	baz=258							
NWLT	**Wulai**	**0.74**	**351**	*e*P	Pb	00 55 49.2	-0.3	
	baz=352							
NWLT				*e*S	Sg	00 55 58.6	+0.4	
	baz=352							
NFF	**Wufeng Townshi**	**0.75**	**322**	*e*P	Pb	00 55 49.9	+0.3	
	baz=322							
NFF				*e*S	Sg	00 55 59.0	+0.5	
	baz=322							
EYUL	**Yuli**	**0.75**	**202**	*e*P	Pb	00 55 49.4	-0.2	
	baz=217							
LIOB	**Emei**	**0.82**	**317**	*e*P	Pn	00 55 51.5	-0.6	
	baz=317							
LIOB				*e*S	Sb	00 56 02.1	+0.1	
	baz=317							
WNT	**Mingjian**	**0.88**	**259**	*e*P	Pn	00 55 53.4	+0.5	
	baz=252							
FULB	**Fuli**	**0.89**	**200**	*e*P	Pg	00 55 50.4	-1.0	
	baz=215							
NMLH	**Miaoli**	**0.91**	**303**	*e*P	Pn	00 55 54.4	+1.0	
	baz=302							
NMLH				*e*S	Sn	00 56 06.9	+0.3	
	baz=302							
ALS	**Alishan**	**0.92**	**235**	*e*P	Pb	00 55 53.1	+0.4	
	baz=234							
ALS				*e*S	Sb	00 56 06.3	+1.1	
	baz=234							
EHD	**Haiduan**	**0.97**	**203**	*e*P	Pg	00 55 52.5	-0.4	
	baz=205							
STYH	**Taoyuan**	**1.17**	**222**	*e*P	Pg	00 55 56.3	-0.4	
	baz=229							
TPUB	**Ta-pu**	**1.18**	**231**	*e*P	Pn	00 55 57.7	+0.6	
	baz=233							
SNST	**Tainan City**	**1.32**	**232**	P	Pg	00 56 00.2	+0.6	
	baz=220							
SNST				*e*S	Sn	00 56 18.6	+1.8	
	baz=220							
CHN1	**Nanshi**	**1.32**	**230**	*e*P	Pg	00 55 59.8	+0.2	
	baz=219							
CHN1				*e*S	Sn	00 56 18.8	+2.0	
	baz=219							
SGST	**Jiashian**	**1.35**	**225**	*i* P	Pg	00 56 00.4	+0.1	
	baz=217							
SGST				S	Sg	00 56 20.3	+2.5	
	baz=217							
SLGT	**Liugui**	**1.38**	**221**	*e*P	Pb	00 56 00.4	+0.1	
	baz=223							
ICHU	**Yijhu**	**1.41**	**241**	*e*P	Pg	00 56 01.9	+0.6	
	baz=243							
PHUB	**P'eng-hu**	**1.95**	**255**	*e*P	Pn	00 56 08.5	+0.8	
	baz=254							
PHUB				*e*S	Sb	00 56 34.1	-0.6	
	baz=254							
PNG	**Penghu**	**1.96**	**256**	*e*P	Pn	00 56 08.8	+1.0	
	baz=255							
PNG				*e*S	Sb	00 56 34.6	-0.1	
	baz=255							
WDGT	**Dungji**	**1.96**	**247**	*e*P	Pb	00 56 09.2	-1.1	
	baz=231							
WDGT				*e*S	Sb	00 56 34.2	-0.7	
	baz=231							

*JMA **10** 01:01:46.7±0.2,24.0N±0.2×121.6E±0.9,h1km±1km, TAIWAN REGION*
*TAP **10** 01:01:46.9,24.04N×121.66E,h7km,ML3.0,C*
ISC 10 01:01:46.4±0.9,**24.04N**±0.02×**121.70E**±0.03,**h9**km±5km, **n65**,σ0=**69**/116,**7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.10**	**294**	⇓*i*P		**Pg**		**01 01 49.0**	**+0.1**
	baz=308								
TWD				*e*S		**Sg**		**01 01 50.5**	**-0.2**
	baz=308								
HWA	**Hwalien**	**0.10**	**235**	*e*P		**Pg**		**01 01 49.4**	**+0.4**
	baz=225								
HWA				*e*S		**Sg**		**01 01 51.5**	**+0.8**
	baz=225								
ETL	**Fush Village**	**0.14**	**330**	P		**Pg**		**01 01 50.0**	**+0.5**
	baz=342								
ETL				*e*S		**Sg**		**01 01 52.0**	**+0.3**
	baz=342								
NACB	**Ninganchiao**	**0.17**	**325**	*i* P		**Pg**		**01 01 50.2**	**+0.3**
	baz=335								
NACB				*e*S		**Sg**		**01 01 52.2**	**-0.1**
	baz=335								
ETM	**Tongmen**	**0.20**	**249**	P		**Pg**		**01 01 50.5**	**-0.1**
	baz=244								
ETM				*e*S		**Sg**		**01 01 52.9**	**-0.5**
	baz=244								
ETLH	**Xiulin Townshi**	**0.26**	**310**	⇓P		**Pg**		**01 01 51.9**	**+0.3**
	baz=320								
ETLH				*e*S		**Sg**		**01 01 55.6**	**+0.4**
	baz=320								
LXIB	**Xiulin Townshi**	**0.26**	**267**	*e*P		**Pg**		**01 01 51.4**	**-0.3**
	baz=255								
LXIB				*e*S		**Sg**		**01 01 54.9**	**-0.4**
	baz=255								
EHP	**Heping Village**	**0.27**	**8**	*e*P		**Pb**		**01 01 52.4**	**-1.1**
	baz=10.0								
EHP				*e*S		**Sb**		**01 01 57.4**	**-0.9**
	baz=10.0								
SHUL	**Shoufeng**	**0.28**	**207**	*e*P		**Pb**		**01 01 53.5**	**-0.1**
	baz=210								
SHUL				*e*S		**Sb**		**01 01 58.6**	**+0.3**
	baz=210								
EAHA	**Aohua**	**0.29**	**7**	*e*P		**Pb**		**01 01 53.0**	**-0.9**
	baz=11								
EAHA				*e*S		**Sb**		**01 01 57.5**	**-1.3**
	baz=11								
ESL	**Shilin**	**0.33**	**228**	*e*P		**Pg**		**01 01 52.5**	**-0.5**
	baz=232								
ESL				*e*S		**Sg**		**01 01 56.7**	**-0.7**
	baz=232								
TEGC	**Jichi Village**	**0.36**	**204**	*e*P		**Pb**		**01 01 55.1**	**+0.2**
	baz=202								
TEGC				*e*S		**Sb**		**01 02 01.4**	**+0.8**
	baz=202								
ENA	**Nanau**	**0.39**	**6**	*e*P		**Pb**		**01 01 54.9**	**-0.6**
	baz=7.0								
ENA				*e*S		**Sb**		**01 02 00.5**	**-1.1**
	baz=7.0								
WHF	**Hehuan Shan**	**0.41**	**285**	*e*P		**Pg**		**01 01 54.5**	**-0.1**
	baz=286								
WHF				*e*S		**Sg**		**01 01 60.0**	**-0.1**
	baz=286								
EWUT	**Wuta**	**0.41**	**10**	*e*P		**Pb**		**01 01 55.4**	**-0.5**
	baz=10.0								
EWUT				*e*S		**Sb**		**01 02 01.1**	**-1.1**
	baz=10.0								
EGFH	**Guangfu**	**0.44**	**214**	*e*P		**Pg**		**01 01 55.4**	**+0.4**
	baz=220								
FUSS	**Fushou**	**0.47**	**297**	⇓*e*P		**Pg**		**01 01 56.0**	**+0.5**
	baz=298								
FUSS				*e*S		**Sg**		**01 02 02.2**	**+0.5**
	baz=298								
CHGB	**Renai**	**0.48**	**273**	⇓*i*P		**Pg**		**01 01 56.0**	**+0.2**
	baz=272								
CHGB				S		**Sg**		**01 02 02.2**	**+0.1**
	baz=272								
NNSB	**Datong**	**0.48**	**323**	⇓*i*P		**Pg**		**01 01 56.5**	**+0.6**
	baz=326								
NNSB				*e*S		**Sg**		**01 02 02.6**	**+0.3**
	baz=326								
OWD	**Renai**	**0.49**	**260**	*e*P		**Pg**		**01 01 55.9**	**0.0**
	baz=268								
OWD				S		**Sg**		**01 02 02.4**	**+0.1**
	baz=268								
NNS	**Nan Shan**	**0.50**	**323**	P		**Pg**		**01 01 56.7**	**+0.6**
	baz=326								
NNS				*e*S		**Sg**		**01 02 02.8**	**+0.1**
	baz=326								
LATG	**Datong**	**0.52**	**342**	⇓*i*P		**Pb**		**01 01 57.2**	**-0.6**
	baz=343								
LATG				*e*S		**Sg**		**01 02 03.9**	**+0.5**
	baz=343								
TWT	**Tachien**	**0.52**	**294**	*e*P		**Pg**		**01 01 57.2**	**+0.6**
	baz=294								
TWT				*e*S		**Sg**		**01 02 04.6**	**+1.1**
	baz=294								
TDCB	**Techi**	**0.54**	**294**	*e*P		**Pg**		**01 01 57.0**	**+0.1**
	baz=294								
TDCB				*e*S		**Sg**		**01 02 03.2**	**-0.8**
	baz=294								
ESAO	**Su ao**	**0.55**	**14**	*e*P		**Pb**		**01 01 57.2**	**-1.0**
	baz=11								
ESAO				*e*S		**Sb**		**01 02 05.5**	**-0.8**
	baz=11								
TWC	**Suao**	**0.58**	**13**	*e*P		**Pb**		**01 01 58.7**	**-0.1**
	baz=7.0								
TWC				*e*S		**Sb**		**01 02 07.0**	**-0.2**
	baz=7.0								
NDT	**Datong Townshi**	**0.59**	**343**	*i* P		**Pb**		**01 01 58.8**	**-0.1**
	baz=344								
NDT				*i* S		**Sb**		**01 02 06.5**	**-0.8**
	baz=344								
NDS	**Dongshan**	**0.59**	**1**	*e*P		**Pb**		**01 01 58.9**	**-0.1**
	baz=1.0								
NDS				*e*S		**Sb**		**01 02 07.0**	**-0.5**
	baz=1.0								
HGSD	**Ruisui**	**0.60**	**205**	*e*P		**Pn**		**01 01 59.7**	**-1.4**
	baz=222								
ENTT	**Nioudou**	**0.61**	**349**	⇓*i*P		**Pb**		**01 01 59.2**	**0.0**
	baz=349								
ENTT				*i* S		**Sb**		**01 02 07.5**	**-0.6**
	baz=349								
EOS2	**EOS2**	**0.62**	**52**	*e*P		**Pn**		**01 02 01.3**	**+0.1**
	baz=61								
EHY	**Hungye**	**0.63**	**213**	*e*P		**Pg**		**01 01 58.6**	**0.0**
	baz=211								
TWE	**Neicheng**	**0.68**	**358**	*e*P		**Pb**		**01 02 00.5**	**0.0**
	baz=358								
TWE				*e*S		**Sb**		**01 02 09.6**	**-0.4**
	baz=358								
NSK	**Sanguang**	**0.71**	**334**	P		**Pb**		**01 02 00.9**	**0.0**
	baz=326								
NSK				*e*S		**Sg**		**01 02 09.5**	**+0.2**
	baz=326								
FUSB	**Fushanzhiwuyua**	**0.73**	**352**	*e*P		**Pb**		**01 02 01.5**	**+0.2**
	baz=351								
FUSB				*e*S		**Sb**		**01 02 10.6**	**-0.8**
	baz=351								
SSLB	**Suanglung**	**0.73**	**250**	*e*P		**Pg**		**01 02 00.4**	**0.0**
	baz=260								
SSLB				*e*S		**Sg**		**01 02 09.6**	**-0.3**
	baz=260								
SMLT	**Sun Moon Lake**	**0.75**	**258**	*e*P		**Pg**		**01 02 01.2**	**+0.4**
	baz=258								
SMLT				*e*S		**Sg**		**01 02 10.7**	**+0.1**
	baz=258								
NWLT	**Wulai**	**0.76**	**346**	*e*P		**Pb**		**01 02 01.9**	**+0.2**
	baz=345								
NWLT				*e*S		**Sg**		**01 02 11.4**	**+0.5**
	baz=345								
TWF1	**Yuli**	**0.78**	**208**	*e*P		**Pg**		**01 02 00.8**	**-0.5**
	baz=222								
TYC	**Yuchr**	**0.78**	**260**	*e*P		**Pg**		**01 02 01.6**	**+0.2**
	baz=260								
TYC				*e*S		**Sg**		**01 02 11.3**	**-0.4**
	baz=260								
NFF	**Wufeng Townshi**	**0.80**	**318**	*e*P		**Pb**		**01 02 02.5**	**+0.1**
	baz=318								
NFF				*e*S		**Sb**		**01 02 13.4**	**0.0**
	baz=318								
LIOB	**Emei**	**0.87**	**314**	*e*P		**Pb**		**01 02 03.5**	**-0.1**
	baz=315								
LIOB				*e*S		**Sg**		**01 02 15.0**	**+0.5**
	baz=315								
NSTT	**Nanjuang**	**0.87**	**313**	*e*P		**Pb**		**01 02 03.8**	**+0.1**
	baz=314								
NSTT				*e*S		**Sb**		**01 02 15.6**	**+0.2**
	baz=314								
TWQ1	**Liyutan**	**0.90**	**290**	*e*P		**Pn**		**01 02 06.4**	**+1.2**
	baz=302								
TWQ1				*e*S		**Sn**		**01 02 18.2**	**-0.2**
	baz=302								
FULB	**Fuli**	**0.91**	**204**	*e*P		**Pn**		**01 02 04.7**	**-0.7**
	baz=223								
FULB				*e*S		**Sn**		**01 02 18.6**	**-0.1**
	baz=223								
NHDH	**Xindian Distri**	**0.94**	**350**	*e*P		**Pn**		**01 02 04.9**	**-0.8**
	baz=342								
NSY	**Sanyi**	**0.94**	**294**	*e*P		**Pn**		**01 02 06.1**	**+0.3**
	baz=306								
NSY				*e*S		**Sn**		**01 02 19.0**	**-0.3**
	baz=306								
TIPB	**Shuangxi**	**0.94**	**7**	*e*P		**Pn**		**01 02 04.7**	**-1.0**
	baz=357								
NMLH	**Miaoli**	**0.97**	**301**	*e*P		**Pn**		**01 02 06.3**	**+0.1**
	baz=301								
ALS	**Alishan**	**0.97**	**238**	*e*P		**Pb**		**01 02 05.6**	**0.0**
	baz=238								
ALS				*e*S		**Sb**		**01 02 18.9**	**+0.3**
	baz=238								
EHD	**Haiduan**	**0.99**	**207**	*e*P		**Pn**		**01 02 05.8**	**-0.7**
	baz=224								
EHD				*e*S		**Sn**		**01 02 20.8**	**+0.1**
	baz=224								
NWF	**Wu-fen Shan**	**1.03**	**4**	*e*P		**Pn**		**01 02 07.9**	**+0.7**
	baz=351								
NWF				*e*S		**Sn**		**01 02 20.8**	**-1.0**
	baz=351								
ELDTW	**Lidau**	**1.05**	**217**	*e*P		**Pb**		**01 02 05.7**	**-1.1**
	baz=206								
SXI1	**Grass Mountain**	**1.06**	**9**	*e*P		**Pn**		**01 02 08.0**	**+0.5**
	baz=358								
SXI1				*e*S		**Sn**		**01 02 23.1**	**+0.5**
	baz=358								
STYH	**Taoyuan**	**1.21**	**225**	*e*P		**Pb**		**01 02 09.2**	**-0.3**
	baz=230								
STYH				*e*S		**Sn**		**01 02 26.3**	**+0.4**
	baz=230								
JYNG	**Yonagunijimaku**	**1.21**	**70**	S		**Sn**		**01 02 28.3**	**+2.3**
CHN4	**Tsaushan**	**1.22**	**236**	*e*P		**Pg**		**01 02 10.7**	**+0.8**
	baz=227								
CHN4				*e*S		**Sg**		**01 02 27.7**	**+2.0**
	baz=227								
TPUB	**Ta-pu**	**1.23**	**233**	*e*P		**Pg**		**01 02 09.9**	**0.0**
	baz=225								
TPUB				*e*S		**Sn**		**01 02 26.1**	**-0.3**
	baz=225								
WTP	**Ta-pu**	**1.27**	**232**	*e*P		**Pg**		**01 02 11.1**	**+0.3**
	baz=235								
WTP				*e*S		**Sg**		**01 02 29.4**	**+2.2**
	baz=235								
YOJ	**Yonaguni jima**	**1.27**	**70**	*e*S		**Sn**		**01 02 29.8**	**+2.3**
TWK	**Hsinying**	**1.35**	**236**	*e*P		**Pg**		**01 02 12.2**	**-0.1**
	baz=237								
TWK				*e*S		**Sg**		**01 02 30.9**	**+1.1**
	baz=237								
CHN1	**Nanshi**	**1.37**	**232**	*e*P		**Pg**		**01 02 13.0**	**+0.4**
	baz=233								
CHN1				*e*S		**Sg**		**01 02 30.7**	**+0.3**
	baz=233								
SNST	**Tainan City**	**1.37**	**234**	*e*P		**Pg**		**01 02 12.8**	**+0.1**
	baz=236								
SLGT	**Liugui**	**1.42**	**223**	*e*P		**Pg**		**01 02 13.9**	**+0.3**
	baz=228								
MASBT	**Mashibuluo**	**1.73**	**215**	*e*P		**Pg**		**01 02 18.7**	**-0.8**
	baz=208								

*IDC **10** 01:02:10.7±2.9,21.36S×170.29E,h0km,mb4.0/3, mbtmp4.0/4,ML4.2/1,MS3.5/16,Error ellipse: s-maj=120.4km s-min=33.9km az=149.0*
ISC 10 01:02:13.1±1.9,**21.36S**±0.8×**170.1E**±0.3,**h10**km,**n21**, σ0=**58/7**,**mb4.0/3**,**MS3.4/12**,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.53**	**256**	Pn		**Pn**		**01 03 08.7**	**+0.6**
	18nm,0.3s,baz=121,slow=8.9,SNR=401								
DZM				Sn		**Sn**		**01 03 49.3**	**-0.6**
	10nm,0.3s,baz=151,slow=19,SNR=6.4								
DZM				LR		LR		01 04 22.2	
	comp=Z,290nm,21.8s,baz=154,slow=36 36nm,0.3s								
RAO	**Raoul Island**	**13.43**	**129**	LR		LR		01 09 08.1	
	comp=Z,303nm,21.1s,baz=81,slow=32								
HNR	**Honiara**	**15.30**	**319**	LR		LR		01 11 03.3	
	comp=Z,1μm,22.0s,baz=168,slow=34								
URZ	**Urewera**	**17.99**	**162**	LR		LR		01 11 31.4	
	comp=Z,245nm,18.5s,baz=118,slow=31								
CTA	**Charters Tower**	**22.37**	**269**	LR		LR		01 15 01.8	
	comp=Z,25nm,19.6s,baz=87,slow=34								
RPZ	**Rata Peaks**	**22.42**	**178**	LR		LR		01 13 55.5	
	comp=Z,150nm,21.6s,baz=22,slow=32								
PMG	**Port Moresby**	**25.05**	**295**	LR		LR		01 16 11.6	
	comp=Z,106nm,19.9s,baz=205,slow=33								
STKA	**Stephens Creek**	**27.55**	**241**	P		**P**		**01 08 00.1**	**-0.2**
	1.0nm,0.3s,baz=63,slow=6.8,SNR=3.1 1.0nm,0.3s								
WRA	**Warramunga Arr**	**33.49**	**266**	P		**P**		**01 08 53.0**	**+0.1**
	1.2nm,0.4s,baz=98,slow=8.4,SNR=24 1.2nm,0.4s								
ASAR	**Alice Springs**	**33.51**	**259**	P		**P**		**01 08 53.3**	**+0.2**
	0.9nm,0.8s,baz=84,slow=10.0,SNR=9.4 0.9nm,0.8s								
GUMO	**Guam**	**42.59**	**322**	LR		LR		01 25 23.8	
	comp=Z,54nm,20.7s,baz=92,slow=33								
VNDA	**Vanda**	**56.46**	**182**	LR		LR		01 31 33.1	
	comp=Z,79nm,20.9s,baz=272,slow=31								
MJAR	**Matsushiro Arr**	**64.91**	**332**	LR		LR		01 42 15.3	
	comp=Z,21nm,18.6s,baz=106,slow=37								
JNU	**Nakatsue**	**65.78**	**324**	LR		LR		01 38 26.3	
	comp=Z,47nm,21.4s,baz=132,slow=33								
ASAJ	**Asahikawa**	**69.77**	**339**	LR		LR		01 41 13.8	
	comp=Z,20nm,18.9s,baz=128,slow=34								
KSRS	**Korea Array**	**70.63**	**325**	LR		LR		01 44 18.4	
	comp=Z,14nm,18.1s,baz=155,slow=36								
RPN	**Rapa Nui**	**72.53**	**113**	LR		LR		01 39 14.7	
	comp=Z,24nm,19.0s,baz=40,slow=31								
PETK	**Petropavlovsk-**	**74.83**	**352**	LR		LR		01 43 05.1	
	comp=Z,26nm,19.1s,baz=127,slow=33								
KLR	**Kul'dur**	**78.04**	**335**	LR		LR		01 47 18.6	
	comp=Z,26nm,19.2s,baz=126,slow=35								
EKA	**Eskdalemuir Ar**	**145.59**	**353**	PKPbc		**PKPdf**		**01 21 50.8**	**-0.7**
	3.7nm,1.1s,baz=7.6,slow=2.5,SNR=3.7								
GERES	**GERESS Array B**	**146.65**	**331**	PKPbc		**PKPdf**		**01 21 53.8**	**+0.3**
	1.1nm,0.7s,baz=40,slow=1.7,SNR=6.8								

ROM 10 01:10:11.2±0.1,**38.216N**±0.007×**15.090E**±0.009, **h7**km±1km,**ML2.0/8,1C,Error ellipse: s-maj=0.8km s-min=0.3km az=66.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VPL	**Vulcano Piano**	**0.18**	**333**	P		Pg		01 10 15.9	+1.0
VPL				S		Sg		01 10 19.3	+1.9
VPL				AML		AML			
	comp=E,1608μm,0.2s								
VPL				AML		AML			
	comp=N,1695μm,0.2s								
VPL				AML		AML			
	comp=E,1320μm,0.7s								
VPL				AML		AML			
	comp=N,1196μm,0.2s								
NOV	**Novara**	**0.19**	**169**	P		Pg		01 10 15.9	+0.9
NOV				S		Sg		01 10 18.9	+1.3
NOV				AML		AML			
	comp=N,2805μm,1.2s								
NOV				AML		AML			
	comp=E,2295μm,1.6s								
NOV				AML		AML			
	comp=E,399μm,1.7s								
NOV				AML		AML			
	comp=N,446μm,1.2s								
IVGP	**Vulcano Grotta**	**0.21**	**331**	P		Pg		01 10 15.9	+0.6
IVGP				S		Sg		01 10 19.2	+1.1
IVGP				AML		AML			
	comp=E,2965μm,0.8s								
IVGP				AML		AML			
	comp=N,2295μm,0.5s								
IVGP				AML		AML			
	comp=N,845μm,0.2s								
IVGP				AML		AML			
	comp=E,1090μm,1.2s								
MUCR	**Ucria**	**0.24**	**225**	P		Pg		01 10 16.2	+0.3
MUCR				S		Sg		01 10 19.8	+0.5
MUCR				AML		AML			
	comp=N,3450μm,1.0s								
MUCR				AML		AML			
	comp=E,3085μm,0.2s								
MUCR				AML		AML			
	comp=N,554μm,0.4s								
AIO	**Antillo**	**0.27**	**155**	P		Pg		01 10 17.4	+0.9
AIO				S		Sb		01 10 21.6	-1.5
AIO				AML		AML			
	comp=E,1865μm,0.3s								
AIO				AML		AML			
	comp=N,2970μm,0.2s								
AIO				AML		AML			
	comp=E,315μm,0.3s								
MSRU	**Castanea**	**0.33**	**82**	⇑P		Pb		01 10 18.8	-0.6
MSRU				S		Sb		01 10 24.4	-0.6
MSRU				AML		AML			
	comp=E,922μm,1.1s								
MSRU				AML		AML			
	comp=N,996μm,0.3s								
EMSG	**Monte Spagnolo**	**0.41**	**196**	P		Pb		01 10 20.7	-0.1
EMSG				P		Pn		01 10 28.2	+4.6
EMSG				AML		AML			
	comp=E,996μm,0.9s								
EMSG				AML		AML			
	comp=N,1085μm,0.6s								
EMSG				AML		AML			
	comp=N,1041μm,1.5s								
EPZF	**Pizzo Felice**	**0.43**	**205**	P		Pb		01 10 20.6	-0.6
EPZF				AML		AML			
	comp=E,618μm,0.4s								
EPZF				AML		AML			
	comp=N,1012μm,0.3s								
MSFR	**San Fratello**	**0.43**	**245**	P		Pg		01 10 19.6	0.0
MSFR				AML		AML			
	comp=E,422μm,0.8s								
MSFR				AML		AML			
	comp=N,464μm,0.6s								
MTTG	**Motta San Giov**	**0.52**	**114**	P		Pg		01 10 21.9	+0.7
MTTG				AML		AML			
	comp=E,379μm,0.5s								
MTTG				AML		AML			
	comp=N,378μm,0.4s								
CEL	**Celeste**	**0.64**	**86**	P		Pg		01 10 23.7	+0.3
CEL				S		Sg		01 10 32.2	+0.6
CEL				AML		AML			
	comp=E,164μm,0.3s								
CEL				AML		AML			
	comp=N,148μm,0.3s								
PLLN	**Pollina**	**0.78**	**254**	P		Pg		01 10 25.8	-0.3
PLLN				AML		AML			
	comp=E,378μm,0.7s								
PLLN				AML		AML			
	comp=N,505μm,1.6s								

*ROM **10** 01:10:19.0±0.1,38.209N±0.006×15.067E±0.009, h8km±1km,ML2.5/10,Error ellipse: s-maj=0.8km s-min=0.2km az=242.0*
ISC 10 01:10:19.1±1.0,**38.21N**±0.03×**15.07E**±0.

VPL	**Vulcano Piano**	**0.18**	**339**	P	**Pg**	**01 10 23.6**	**-0.1**
VPL				S	**Sg**	**01 10 26.8**	**+0.1**
VPL				AML	AML		
	comp=E,4905μm,0.4s						
VPL				AML	AML		
	comp=N,4955μm,0.3s						
VPL				AML	AML		
	comp=E,4396μm,0.2s						
VPL				AML	AML		
	comp=N,4955μm,0.3s						
NOV	**Novara**	**0.19**	**163**	P	**Pg**	**01 10 23.7**	**0.0**
NOV				S	**Sg**	**01 10 26.6**	**-0.2**
NOV				AML	AML		
	comp=E,2295μm,1.6s						
NOV				AML	AML		
	comp=N,2805μm,1.2s						
NOV				AML	AML		
	comp=E,2295μm,0.4s						
NOV				AML	AML		
	comp=N,2461μm,0.3s						
IVGP	**Vulcano Grotta**	**0.21**	**336**	P	**Pg**	**01 10 23.8**	**-0.2**
IVGP				S	**Sg**	**01 10 27.0**	**-0.3**
MUCR	**Ucria**	**0.22**	**223**	P	**Pg**	**01 10 24.0**	**-0.3**
MUCR				S	**Sg**	**01 10 27.2**	**-0.6**
MPNC	**Port Mandanici**	**0.23**	**105**	P	**Pg**	**01 10 24.6**	**+0.2**
MPNC				S	**Sg**	**01 10 28.5**	**+0.5**
AIO	**Antillo**	**0.27**	**151**	P	**Pb**	**01 10 25.4**	**-0.2**
AIO				S	**Sg**	**01 10 29.2**	**+0.2**
AIO				AML	AML		
	comp=E,1865μm,0.3s						
AIO				AML	AML		
	comp=N,2970μm,0.2s						
AIO				AML	AML		
	comp=E,1867μm,0.3s						
AIO				AML	AML		
	comp=N,2969μm,0.2s						
MSRU	**Castanea**	**0.35**	**81**	P	**Pg**	**01 10 26.5**	**+0.1**
MSRU				S	**Sb**	**01 10 32.2**	**-0.2**
MSFR	**San Fratello**	**0.41**	**245**	P	**Pg**	**01 10 27.3**	**-0.2**
MSFR				S	**Sg**	**01 10 33.5**	**+0.3**
EPZF	**Pizzo Felice**	**0.42**	**204**	P	**Pb**	**01 10 28.2**	**0.0**
MTTG	**Motta San Giov**	**0.54**	**112**	P	**Pg**	**01 10 29.8**	**0.0**
ESML	**S. M. di Licod**	**0.61**	**194**	P	**Pn**	**01 10 33.1**	**0.0**
GALF	**Gagliano Caste**	**0.63**	**219**	P	**Pb**	**01 10 32.8**	**+1.0**
SOI	**Samo**	**0.79**	**99**	P	**Pg**	**01 10 33.8**	**-0.7**
SOI				AML	AML		
	comp=N,89μm,0.6s						
SOI				AML	AML		
	comp=E,95μm,0.6s						
HLNI	**Lentini**	**0.87**	**190**	P	**Pg**	**01 10 36.0**	**0.0**
HLNI				AML	AML		
	comp=N,108μm,0.2s						
HAGA	**Augusta**	**0.92**	**176**	P	**Pg**	**01 10 36.9**	**-0.1**
SSY	**Sortino**	**1.05**	**180**	P	**Pg**	**01 10 39.2**	**-0.2**
SSY				AML	AML		
	comp=N,329μm,0.6s						

*IDC **10** 01:22:51.2±1.3,56°.05N×163°.56E, h0km, mb3.1/6, mbtmp3.2/7, ML3.0/1, MS2.8/1, Error ellipse: s-maj=56.7km s-min=21.4km az=154.0*
*KRSC **10** 01:22:53.2±1.1, 54°.92N×164°.63E, h41km±28km, Ml4.1*
ISC 10 01:22:56.1±0.8, 55°.02N±0°.05×164°.72E±0°.04, h35km, n48, σ1s34/51, mb3.1/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.74**	**75**	*eP*	**Pn**	**01 23 09.1**	**-1.0**
BKI				*eS*	**Sn**	**01 23 19.3**	**-0.9**
KBG	**Krutoberegovo**	**1.69**	**318**	*eP*	**Pn**	**01 23 21.3**	**-1.7**
KBG				*eS*	**Sn**	**01 23 40.9**	**-2.4**
SMKR	**Semkarok**	**2.41**	**312**	*eP*	**Pn**	**01 23 32.6**	**-0.5**
ZLN	**Zelenaya**	**2.44**	**296**	*eP*	**Pn**	**01 23 34.1**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**2.47**	**294**	*eP*	**Pn**	**01 23 34.3**	**+0.4**
TUMD	**Tumrok D**	**2.49**	**276**	*eP*	**Pn**	**01 23 34.2**	**+0.1**
CIRR	**Tsirk**	**2.51**	**298**	*eP*	**Pn**	**01 23 34.3**	**-0.3**
BZMR	**Bezymyannaya**	**2.58**	**293**	*eP*	**Pn**	**01 23 35.8**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.58**	**293**	*eP*	**Pn**	**01 23 36.0**	**+0.4**
TUMR	**Tumrok**	**2.64**	**278**	*eP*	**Pn**	**01 23 36.8**	**+0.6**
KLY	**Klyuchi**	**2.64**	**301**	*eP*	**Pn**	**01 23 35.0**	**-1.2**
KLY				*eS*	**Sn**	**01 24 05.2**	**-1.8**
KIRR	**Kirishev**	**2.66**	**292**	*eP*	**Pn**	**01 23 37.5**	**+0.9**
KMNR	**Kamenistaya**	**2.66**	**288**	*eP*	**Pn**	**01 23 37.4**	**+0.8**
KMNR				*eS*	**Sn**	**01 24 08.8**	**+1.2**
KPT	**Kopyto**	**2.73**	**292**	*eP*	**Pn**	**01 23 38.4**	**+0.9**
KOZ	**Kozyrevsk**	**2.94**	**293**	*eP*	**Pn**	**01 23 41.5**	**+1.1**
SRDR	**Sredinnyy**	**3.12**	**297**	*eP*	**Pn**	**01 23 43.6**	**+0.8**
SPN	**Mys Shipunski**	**3.37**	**237**	*eP*	**Pn**	**01 23 45.3**	**-1.0**
SPN				*eS*	**Sn**	**01 24 21.9**	**-3.0**
ESO	**Esso**	**3.54**	**287**	*eP*	**Pn**	**01 23 49.3**	**+0.7**
SMAR	**Somma**	**3.90**	**246**	*eP*	**Pn**	**01 23 54.1**	**+0.4**
UGLR	**Uglovaya**	**3.91**	**245**	*eP*	**Pn**	**01 23 54.1**	**+0.3**
AVH	**Avacha**	**3.93**	**246**	*eP*	**Pn**	**01 23 55.4**	**+1.4**
KRX	**Arik**	**3.93**	**247**	*eP*	**Pn**	**01 23 54.6**	**+0.5**
KRX				*eS*	**Sn**	**01 24 37.2**	**-1.9**
KOK	**Koryaka**	**3.97**	**247**	*eP*	**Pn**	**01 23 55.4**	**+0.8**
DALK	**Dalny**	**4.04**	**243**	*eP*	**Pn**	**01 23 55.7**	**+0.3**
PET	**Petropavlovsk**	**4.10**	**243**	*eP*	**Pn**	**01 23 56.9**	**+0.7**
PET				*eS*	**Sn**	**01 24 40.8**	**-2.1**
GNL	**Ganaly**	**4.18**	**254**	*eP*	**Pn**	**01 23 58.8**	**+1.3**
KRMR	**Karymshinskiy**	**4.47**	**243**	*eP*	**Pn**	**01 24 02.1**	**+0.8**
KRMR				*eS*	**Sn**	**01 24 50.0**	**-2.0**
RUS	**Russkaya**	**4.50**	**237**	*eP*	**Pn**	**01 24 01.7**	**-0.1**
PETK	**Petropavlovsk-** 4.0nm,0.3s,baz=67,slow=18,SNR=10	**4.56**	**248**	Pn	**Pn**	**01 24 02.8**	**+0.2**
PETK				Sn	**Sn**	**01 24 53.4**	**-0.8**
	1.7nm,0.3s,baz=46,slow=19,SNR=3.3 5.6nm,0.4s						
MTVR	**Mutnovka**	**4.64**	**239**	*eP*	**Pn**	**01 24 04.0**	**+0.2**
MTVR				*eS*	**Sn**	**01 24 53.8**	**-2.6**
GRL	**Gorelyy**	**4.65**	**241**	*eP*	**Pn**	**01 24 04.6**	**+0.7**
ASAK	**Asacha**	**4.84**	**240**	*eP*	**Pn**	**01 24 07.4**	**+1.0**
APC	**Apacha**	**4.93**	**248**	*eP*	**Pn**	**01 24 09.0**	**+1.4**
KDTR	**Khodutka, Kamc**	**5.11**	**234**	*eP*	**Pn**	**01 24 09.6**	**-0.5**
KDTR				*eS*	**Sn**	**01 25 04.3**	**-3.5**
SHEM	**Shemya Is, Ala** comp=Z,66nm,18.5s,baz=246,slow=33	**6.00**	**109**	LR	LR	01 26 39.0	
SKR	**Severo-Kuril's**	**6.78**	**234**	*eP*	**Pn**	**01 24 34.5**	**+1.5**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=261,slow=8.6,SNR=4.8 0.4nm,0.8s	**25.51**	**48**	P	**P**	**01 28 19.9**	**-0.9**
H11N2	**WAKE ISLAND Hy** baz=359,slow=76,SNR=66	**35.27**	**176**	T	T	02 07 45.8	
H11N3	**WAKE ISLAND Hy** baz=359,slow=76,SNR=14	**35.28**	**176**	T	T	02 07 44.5	
H11N1	**WAKE ISLAND Hy** baz=359,slow=76,SNR=31	**35.28**	**176**	T	T	02 07 46.8	
H11S1	**WAKE ISLAND Hy** baz=358	**36.48**	**177**	T	T	02 09 20.3	
H11S3	**WAKE ISLAND Hy** baz=358	**36.49**	**177**	T	T	02 09 16.5	
H11S2	**WAKE ISLAND Hy** baz=358	**36.49**	**177**	T	T	02 09 19.3	
YKA	**Yellowknife Ar** 0.1nm,0.8s,baz=298,slow=8.5,SNR=2.5 0.1nm,0.8s	**39.88**	**46**	P	**P**	**01 30 25.2**	**-0.7**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=64,slow=6.6,SNR=2.1 0.1nm,0.5s	**49.75**	**297**	P	P	01 31 36.0	-8.7
NVAR	**Mina Array Bea** 0.2nm,0.5s,baz=284,slow=3.6,SNR=1.9 0.2nm,0.5s	**52.56**	**75**	P	**P**	**01 32 07.9**	**+1.8**
PDAR	**Pinedale Array** 0.4nm,0.9s,baz=318,slow=1.2,SNR=1.5 0.4nm,0.9s	**54.22**	**65**	P	**P**	**01 32 20.0**	**+1.7**
TXAR	**Lajitas Array** 0.1nm,0.5s,baz=324,slow=6.0,SNR=2.2 0.1nm,0.5s	**67.40**	**71**	P	**P**	**01 33 49.3**	**+1.4**

*GCG **10** 01:31:12.1±0.4, 15°.74N×94°.39W, h27km, MD4.5*
*IDC **10** 01:31:35.4±1.8, 15°.95N×91°.76W, h0km, mb3.7/7, mbtmp3.7/10, ML3.7/3, MS3.2/8, Error ellipse: s-maj=64.5km s-min=21.0km az=36.0*
*MEX **10** 01:31:38.0±0.6, 14°.64N×92°.61W, h73km±12km, MD4.4*
*CATAC **10** 01:31:39.2±0.5, 14°.61N×92°.61W, h22km±3km, ML5.0*
*NEIC **10** 01:31:40.0±2.0, 14°.83N±0°.07×92°.59W±0°.06, h46km±13km, mb4.1/16, Md4.4/21(MEX), Error ellipse: s-maj=12.0km s-min=5.3km az=213.0*
ISC 10 01:31:37.3±1.0, 14°.63N±0°.05×92°.76W±0°.05, h49km±10km, n127, σ1s72/167, mb4.0/9, MS3.2/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.55**	**60**		**Pn**	**01 31 49.4**	**+0.2**
THIG					**Sn**	**01 31 57.0**	**-0.6**
THIG		**0.55**	**60**	*eP*	**Pn**	**01 31 49.4**	**+0.2**
THIG				*eS*	**Sn**	**01 31 57.0**	**-0.6**
SMCA	**Catarina**	**0.70**	**71**	*i P*	**Pn**	**01 31 51.1**	**+0.1**
SMCA				*i S*	**Sn**	**01 32 00.9**	**-0.1**
SMCA				IAML		01 32 01.4	
	comp=Z,43μm,1.0s						
PATR	**El Naranjo**	**0.70**	**47**	*eP*	**Pn**	**01 31 50.7**	**-0.5**
PATR				*i S*	**Sn**	**01 32 00.7**	**-0.6**
CHUJ	**Union Juarez**	**0.78**	**54**	*eP*	**Pn**	**01 31 51.5**	**-0.8**
CHUJ				*eS*	**Sn**	**01 32 02.5**	**-0.7**
PAVE	**Pavencul**	**0.80**	**45**	*eP*	**Pn**	**01 31 52.0**	**-0.5**
PAVE				*i S*	**Sn**	**01 32 03.2**	**-0.3**
SMSP	**San Marcos**	**1.01**	**70**	*i P*	**Pn**	**01 31 55.1**	**-0.3**
SMSP				*i S*	**Sn**	**01 32 08.1**	**-0.6**
SMSP				IAML		01 32 09.3	
	comp=Z,110μm,1.0s						
RTAL	**Retalhuleu**	**1.04**	**96**		**Pn**	**01 31 55.3**	**-0.2**
RTAL					**Sn**	**01 32 07.0**	**-2.0**
RTAL	**Retalhuleu**	**1.04**	**96**	*i P*	**Pn**	**01 31 55.3**	**-0.2**
RTAL				*i S*	**Sn**	**01 32 07.9**	**-1.1**
RTAL				IAML		01 32 08.1	
	comp=Z,22μm,1.0s						
PCIG		**1.15**	**338**		**Pn**	**01 31 58.3**	**+1.2**
PCIG					**Sn**	**01 32 13.2**	**+1.4**
PCIG		**1.15**	**338**	*eP*	**Pn**	**01 31 58.3**	**+1.2**
PCIG				*eS*	**Sn**	**01 32 13.2**	**+1.4**
STG3	**Santiaguito 3,**	**1.16**	**86**	*eP*	**Pn**	**01 31 57.2**	**-0.1**
SULM	**Suchitepequez,**	**1.20**	**106**	*eP*	**Pn**	**01 31 59.1**	**+1.3**
HUEH	**Huehuetenango**	**1.40**	**61**		**Pn**	**01 32 00.9**	**+0.4**
HUEH	**Huehuetenango**	**1.40**	**61**	*i P*	**Pn**	**01 32 01.5**	**+0.9**
HUEH				*i S*	**Sn**	**01 32 19.1**	**+1.1**
HUEH				IAML		01 32 21.1	
	comp=Z,50μm,1.0s						
QUIS	**Sacapulas**	**1.74**	**68**	*i P*	**Pn**	**01 32 05.9**	**+0.6**
QUIS				*i S*	**Sn**	**01 32 27.6**	**+1.2**
QUIS				IAML		01 32 32.4	
	comp=Z,10μm,1.0s						
CCIG	**Comitan**	**1.75**	**20**	Pn	**Pn**	**01 32 06.8**	**+1.4**
CCIG	**Comitan**	**1.75**	**20**	*i P*	**Pn**	**01 32 07.1**	**+1.7**
CCIG				*i S*	**Sn**	**01 32 29.4**	**+2.8**
CCIG				IAML		01 32 34.3	
	comp=Z,8μm,1.0s						
FUG	**Fuego 3**	**1.87**	**95**	*eP*	**Pn**	**01 32 07.7**	**+0.7**
GUMI	**Mixco**	**2.08**	**90**	*i P*	**Pn**	**01 32 10.8**	**+0.8**
GUMI				*i S*	**Sn**	**01 32 35.3**	**+0.5**
GUMI				IAML		01 32 40.2	
	comp=Z,7μm,1.0s						
PCG	**Pacaya**	**2.10**	**96**	*eP*	**Pn**	**01 32 11.5**	**+1.3**
GCG4	**OSOP**	**2.16**	**91**	*i P*	**Pn**	**01 32 12.7**	**+1.7**
GCG4				*i S*	**Sn**	**01 32 37.5**	**+0.8**
GCG4				IAML		01 32 51.6	
	comp=Z,4μm,1.0s						
NBG	**Las Nubes**	**2.34**	**91**	*eP*	**Pn**	**01 32 15.7**	**+2.1**
GUNB	**GUNB**	**2.34**	**91**	*i P*	**Pn**	**01 32 14.4**	**+0.8**
GUNB				*i S*	**Sn**	**01 32 43.3**	**+2.0**
GUNB				IAML		01 32 45.7	
	comp=Z,2μm,1.0s						
AVCB	**Coban**	**2.42**	**70**	*i P*	**Pn**	**01 32 17.7**	**+3.1**
AVCB				*i S*	**Sn**	**01 32 47.5**	**+4.3**
AVCB				IAML		01 33 29.5	
	comp=Z,6μm,1.0s						
LOAL	**Lomas de Alarc**	**2.96**	**102**	*i P*	**Pn**	**01 32 22.6**	**+0.7**
LOAL				*i S*	**Sn**	**01 32 56.9**	**+0.7**
LOAL				IAML		01 33 12.4	
	comp=Z,5μm,1.0s						
NUBE	**Las Nubes**	**2.98**	**104**	*i P*	**Pn**	**01 32 22.9**	**+0.6**
NUBE				*i S*	**Sn**	**01 32 54.9**	**-2.0**
NUBE				IAML		01 33 05.6	
	comp=Z,2μm,1.0s						
CEVE	**Cerro Verde**	**3.15**	**104**	*i P*	**Pn**	**01 32 25.6**	**+1.0**
CEVE				*i S*	**Sn**	**01 33 01.2**	**+0.1**
CEVE				IAML		01 33 12.9	
	comp=Z,5μm,1.0s						
UNIC	**Universidad Ca**	**3.18**	**101**	*i P*	**Pn**	**01 32 26.2**	**+1.3**
UNIC				IAML		01 33 10.9	
	comp=Z,430nm,1.0s						
CMIG	**Matias Romero**	**3.19**	**320**		**Pn**	**01 32 26.8**	**+1.9**
CMIG					**Sn**	**01 33 02.6**	**+0.9**
CMIG	**Matias Romero**	**3.19**	**320**	Pn	**Pn**	**01 32 27.0**	**+2.1**
	comp=Z,7.7nm,0.3s,baz=134,slow=11,SNR=40						
CMIG				Sn	**Sn**	**01 33 03.9**	**+2.2**
	comp=Z,50nm,0.3s,baz=105,slow=14,SNR=7.0						
CMIG				LR	LR	01 33 50.3	
	comp=Z,100nm,21.0s,baz=204,slow=42 comp=Z,27nm,0.3s						
CMIG	**Matias Romero**	**3.19**	**320**	*eP*	**Pn**	**01 32 26.8**	**+1.9**
CMIG				*i S*	**Sn**	**01 33 02.6**	**+0.9**
MTO3	**Montecristo**	**3.30**	**94**		**Pn**	**01 32 26.4**	**-0.3**
MTO3	**Montecristo**	**3.30**	**94**	*i P*	**Pn**	**01 32 26.6**	**-0.1**
MTO3				IAML		01 33 19.7	
	comp=Z,380nm,1.0s						
ESQI	**Esquipulas**	**3.31**	**91**		**Pn**	**01 32 26.9**	**+0.2**
ESQI	**Esquipulas**	**3.31**	**91**	*i P*	**Pn**	**01 32 29.7**	**+2.9**
ESQI				IAML		01 33 36.1	
	comp=Z,2μm,1.0s						
JAYA	**Jayaque - finc**	**3.36**	**106**	*i P*	**Pn**	**01 32 27.9**	**+0.5**
JAYA				*i S*	**Sn**	**01 33 04.7**	**-1.5**
JAYA				IAML		01 33 15.5	
	comp=Z,6μm,1.0s						
CEDA	**San Andres**	**3.37**	**104**	*i P*	**Pn**	**01 32 27.6**	**+0.1**
CEDA				*i S*	**Sn**	**01 33 08.4**	**+2.2**
CEDA				IAML		01 33 21.9	
	comp=Z,6μm,1.0s						
HUIG	**Huatulco**	**3.42**	**290**	*eP*	**Pn**	**01 32 29.4**	**+1.2**
HUIG				*eS*	**Sn**	**01 33 04.6**	**-2.9**
PMON	**Piamonte**	**3.47**	**105**	*i P*	**Pn**	**01 32 29.8**	**+0.9**
PMON				*i S*	**Sn**	**01 33 09.1**	**+0.3**
PMON				IAML		01 33 17.0	
	comp=Z,3μm,1.0s						
QUEZ	**Alcaldia de Qu**	**3.48**	**103**	*i P*	**Pn**	**01 32 31.0**	**+2.1**
QUEZ				*i S*	**Sn**	**01 33 09.8**	**+0.9**
QUEZ				IAML		01 33 25.4	
	comp=Z,5μm,1.0s						
ITCA	**Escuela Especi**	**3.51**	**105**	*i P*	**Pn**	**01 32 31.0**	**+1.5**
ITCA				*i S*	**Sn**	**01 33 09.3**	**-0.6**
ITCA				IAML		01 33 26.1	
	comp=Z,6μm,1.0s						
LALI	**Alcalda de L**	**3.53**	**108**	*i P*	**Pn**	**01 32 30.0**	**+0.4**
LALI				*i S*	**Sn**	**01 33 08.0**	**-2.1**
LALI				IAML		01 33 22.6	
	comp=Z,820nm,1.0s						
UEES	**Universidad Ev**	**3.54**	**104**	*i P*	**Pn**	**01 32 30.6**	**+0.8**
UEES				*i S*	**Sn**	**01 33 10.8**	**+0.3**
UEES				IAML		01 33 25.3	
	comp=Z,1μm,1.0s						
SNET	**Serv Nac Est T**	**3.55**	**105**	Pn	**Pn**	**01 32 31.3**	**+1.3**
SNET	**Serv Nac Est T**	**3.55**	**105**	*i P*	**Pn**	**01 32 30.4**	**+0.4**
SNET				*i S*	**Sn**	**01 33 09.3**	**-1.5**
SNET				IAML		01 33 20.6	
	comp=Z,3μm,1.0s						
SEMO	**Seminario San**	**3.55**	**105**	*i S*	**Sn**	**01 33 09.2**	**-1.7**
UTEC	**Universidad Te**	**3.58**	**105**	*i S*	**Sn**	**01 33 11.7**	**+0.3**
PETF	**Flores**	**3.59**	**50**		**Pn**	**01 32 31.0**	**+0.4**
PETF	**Flores**	**3.59**	**50**	*i P*	**Pn**	**01 32 31.5**	**+0.9**
PETF				IAML		01 33 32.0	
	comp=Z,1μm,1.0s						
IGN	**Direccin Gen**	**3.60**	**104**	*i P*	**Pn**	**01 32 31.9**	**+1.2**
IGN				*i S*	**Sn**	**01 33 13.7**	**+1.7**
IGN				IAML		01 33 16.3	
	comp=Z,7μm,1.0s						
UDBS	**Universidad Do**	**3.62**	**104**	*i P*	**Pn**	**01 32 33.2**	**+2.3**
UDBS				*i S*	**Sn**	**01 33 12.9**	**+0.5**
UDBS				IAML		01 33 21.0	
	comp=Z,2μm,1.0s						
LOMA	**Loma Larga**	**3.62**	**105**	*i P*	**Pn**	**01 32 32.5**	**+1.5**
LOMA				*i S*	**Sn**	**01 33 10.9**	**-1.7**
LOMA				IAML		01 33 27.1	
	comp=Z,3μm,1.0s						
PANCS	**Alcalda de**	**3.62**	**106**	*i P*	**Pn**	**01 32 32.0**	**+1.0**
PANCS				*i S*	**Sn**	**01 33 10.2**	**-2.3**
PANCS				IAML		01 33 24.8	
	comp=Z,4μm,1.0s						
LLGN	**La Laguna**	**3.73**	**97**	*i S*	**Sn**	**01 33 21.7**	**+6.5**
SJTE	**Alcalda de S**	**3.78**	**105**	*i P*	**Pn**	**01 32 34.6**	**+1.4**
SJTE				*i S*	**Sn**	**01 33 17.4**	**+0.9**
SJTE				IAML		01 33 29.5	
	comp=Z,1μm,1.0s						
PAVA	**Las Pavas**	**3.82**	**103**	*i P*	**Pn**	**01 32 35.5**	**+1.7**
PAVA				*i S*	**Sn**	**01 33 21.9**	**+4.4**
PAVA				IAML		01 33 33.3	
	comp=Z,1μm,1.0s						
COEG	**Centro de Oper**	**3.90**	**104**	*i P*	**Pn**	**01 32 37.0**	**+2.2**
COEG				*i S*	**Sn**	**01 33 20.7**	**+1.3**
COEG				IAML		01 33 46.7	
	comp=Z,1μm,1.0s						
UESV	**Universidad de**	**3.98**	**104**	*i P*	**Pn**	**01 32 38.2**	**+2.3**
UESV				*i S*	**Sn**	**01 33 22.5**	**+1.2**
UESV				IAML		01 33 40.5	
	comp=Z,1μm,1.0s						
TECO	**Alcaldia de Te**	**4.01**	**105**	*i P*	**Pn**	**01 32 37.7**	**+1.4**
TECO				*i S*	**Sn**	**01 33 23.5**	**+1.4**
TECO				IAML		01 33 40.5	
	comp=Z,710nm,1.0s						
SCLA	**Alcaldia de Sa**	**4.02**	**103**	*i P*	**Pn**	**01 32 37.4**	**+1.0**
SCLA				*i S*	**Sn**	**01 33 24.6**	**+2.3**
SCLA				IAML		01 33 42.9	
	comp=Z,440nm,1.0s						
NEUV	**Arroyo Zacate**	**4.23**	**317**	*eP*	**Pn**	**01 32 40.2**	**+0.9**
NEUV				*i S*	**Sn**	**01 33 26.8**	**-0.7**
ALJI	**Alcalda de J**	**4.27**	**107**	*i P*	**Pn**	**01 32 40.3**	**+0.5**
ALJI				*i S*	Sn	01 33 18.8	-10
ALJI				IAML		01 33 24.7	
	comp=Z,640nm,1.0s						
PEIG	**Puerto Escondi**	**4.44**	**288**		**Pn**	**01 32 43.8**	**+1.6**
PEIG	**Puerto Escondi**	**4.44**	**288**	*eP*	**Pn**	**01 32 43.8**	**+1.6**
PEIG				*eS*	Sn	01 33 27.8	-5.0
PACA	**Pacayal**	**4.46**	**104**	*i P*	**Pn**	**01 32 44.0**	**+1.4**
PACA				*i S*	**Sn**	**01 33 35.4**	**+2.1**
PACA				IAML		01 33 51.7	
	comp=Z,5μm,1.0s						
OXIG	**Oaxaca**	**4.53**	**303**		**Pn**	**01 32 44.9**	**+1.4**
VHO	**Vista Hermosa**	**4.53**	**303**	*eP*	**Pn**	**01 32 44.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**5.35**	**95**		**Pn**	**01 32 55.1**	**+0.3**
TGUH	**Tegucigalpa,Un**	**5.35**	**95**	*eP*	**Pn**	**01 32 57.1**	**+2.3**
CRIN	**San Cristobal**	**5.87**	**108**		**Pn**	**01 33 03.9**	**+2.0**
CRIN	**San Cristobal**	**5.87**	**108**	*eP*	**Pn**	**01 33 04.3**	**+2.4**
CNGN	**Cerro Negro**	**6.26**	**109**	Pn	**Pn**	**01 33 08.5**	**+1.2**
CNGN	**Cerro Negro**	**6.26**	**109**	*eP*	**Pn**	**01 33 08.5**	**+1.2**
TLIG	**Tlapa**	**6.29**	**298**		**Pn**	**01 33 12.0**	**+4.2**
MATN	**Matagalpa**	**6.85**	**103**		**Pn**	**01 33 15.5**	**+0.1**
TEIG	**Tepich**	**7.02**	**37**		**Pn**	**01 33 15.9**	**-1.6**
TEIG	**Tepich**	**7.02**	**37**	*eP*	**Pn**	**01 33 16.4**	**-1.1**
BOAB	**BOACO BROADBAN**	**7.23**	**107**	Pn	**Pn**	**01 33 21.0**	**+0.5**
ACON	**Acoyapa**	**7.85**	**109**	Pn	**Pn**	**01 33 30.7**	**+1.8**
ACON	**Acoyapa**	**7.85**	**109**	*eP*	**Pn**	**01 33 31.2**	**+2.3**
HZTE	**Horizontes, Gu**	**8.00**	**118**		**Pn**	**01 33 34.2**	**+3.1**
ORTG	**Ortega, Santa**	**8.30**	**120**	Pn	**Pn**	**01 33 37.8**	**+2.6**
ESPN	**Las Esperanzas**	**8.58**	**105**	Pn	**Pn**	**01 33 40.9**	**+1.9**
JTS	**Las Juntas de**	**8.76**	**119**	Pn	**Pn**	**01 33 43.7**	**+2.2**
JTS	**Las Juntas de** comp=Z,4.2nm,0.3s,baz=308,slow=18,SNR=14	**8.76**	**119**	Pn	**Pn**	**01 33 43.0**	**+1.5**
JTS				Sn	**Sn**	**01 35 16.9**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=242,slow=17,SNR=1.2						
JTS				LR	LR	01 37 14.2	
	comp=Z,68nm,19.3s,baz=321,slow=39 comp=Z,8.9nm,0.3s						
JTS	**Las Juntas de**	**8.76**	**119**	*eP*	**Pn**	**01 33 44.2**	**+2.7**
ARE1	**Arenal 1**	**8.88**	**117**	Pn	**Pn**	**01 33 45.6**	**+2.5**
JACO	**JACO, Garabito**	**9.33**	**121**		**Pn**	**01 33 52.6**	**+3.3**
LCR2	**La Lucha 2**	**9.84**	**119**		**Pn**	**01 33 58.3**	**+1.9**
RIMA	**Rio Macho**	**9.95**	**118**		**Pn**	**01 33 59.9**	**+1.9**
PEZE	**Perez Zeledon,**	**10.30**	**119**		**Pn**	**01 34 05.2**	**+2.5**
DRK0	**Durika**	**10.73**	**119**		**Pn**	**01 34 11.4**	**+2.8**
SOR	**Soroa**	**12.29**	**47**	Pn	**Pn**	**01 34 27.2**	**-2.5**
833A	**Chaparral WMA,**	**14.95**	**337**	Pn	**Pn**	**01 35 05.7**	**+0.1**
HNDO	**Hondo**	**16.00**	**339**	Pn	**Pn**	**01 35 19.4**	**+0.2**
HNVL	**Huntsville, TX**	**16.24**	**352**	Pn	**P**	**01 35 23.1**	**-1.4**
HNVL				IAmb	IAmb	01 35 42.0	
	comp=Z,14nm,0.9s						
553A	**Crawfordville**	**17.28**	**25**		**P**	**01 35 34.8**	**-1.3**
656A	**Willston**	**17.45**	**31**		**P**	**01 35 37.6**	**-0.2**
TX31	**Lajitas Ar. Si**	**17.77**	**327**		**P**	**01 35 43.7**	**+2.1**
TXAR	**Lajitas Array**	**17.77**	**327**		**P**	**01 35 42.9**	**+1.3**
TXAR	**Lajitas Array** baz=147,slow=14,SNR=1.3 comp=Z,0.2nm,0.8s	**17.77**	**327**	P	**Pn**	**01 35 38.9**	**-2.4**
352A	**Blakely**	**18.24**	**22**		**Pn**	**01 35 46.0**	**-0.9**
352A				IAmb	IAmb	01 35 58.0	
	comp=Z,23nm,1.1s						
250A	**Grady**	**18.26**	**18**		**Pn**	**01 35 45.7**	**-1.4**
ALPN	**Alpine**	**18.59**	**329**	P	**Pn**	**01 35 51.9**	**+0.5**
APMT	**Aspermont**	**19.77**	**342**	P	**Pn**	**01 36 04.6**	**-0.7**
MIAR	**Mount Ida**	**19.84**	**358**	P	**Pn**	**01 36 04.8**	**-1.2**
MIAR				IAmb	IAmb	01 36 09.1	
	comp=Z,10.0nm,0.8s

JNAR	**Kushima--Naru**	**2.46**	**11**	eP		**Pn**	**01 36 17.3**	**0.0**	
JNKG	**Nichinankitago**	**2.61**	**12**	P		**Pn**	**01 36 19.5**	**+0.2**	
JTZ	**Takazaki**	**2.80**	**6**	P		**Pn**	**01 36 22.1**	**+0.1**	
JOW	**Kunigami**	**3.14**	**224**	Pn		**Pn**	**01 36 25.8**	**-0.8**	
	3.3nm,0.3s,baz=140,slow=17,SNR=8.1								
JOW				Sn		**Sn**	**01 37 00.8**	**-2.0**	
	4.3nm,0.3s,baz=136,slow=12,SNR=2.1								
	6.3nm,0.2s								
JNU	**Nakatsue**	**4.00**	**2**	Pn		**Pn**	**01 36 37.1**	**-1.4**	
	2.0nm,0.3s,baz=222,slow=10,SNR=8.5								
JNU				Sn		**Sn**	**01 37 21.6**	**-2.6**	
	baz=187,slow=9.8								
	10.0nm,0.6s								
KLR	**Kul'dur**	**20.11**	**2**	P		Pn	01 40 08.6	-2.7	
	1.2nm,0.7s,baz=182,slow=4.5,SNR=4.7								
	1.2nm,0.7s								
SONM	**Songino Array**	**26.52**	**322**	P		**P**	**01 41 11.9**	**-0.6**	
	0.1nm,0.3s,baz=128,slow=11,SNR=2.0								
	0.1nm,0.3s								
MKAR	**Makanchi Array**	**41.37**	**309**	P		**P**	**01 43 21.0**	**+0.2**	
	0.2nm,0.5s,baz=98,slow=9.0,SNR=3.2								
	0.2nm,0.5s								
KURBB	**Kurchatov Arra**	**44.38**	**314**	P		**P**	**01 43 45.4**	**+0.4**	
	0.3nm,0.3s,baz=96,slow=7.6,SNR=6.0								
	0.3nm,0.3s								
BVAR	**Borovoye Array**	**49.67**	**316**	P		**P**	**01 44 27.2**	**+1.0**	
	1.2nm,0.5s,baz=98,slow=7.8,SNR=12								
	1.2nm,0.5s								
KBZ	**Khabaz**	**69.06**	**309**	P		**P**	**01 46 40.6**	**+0.4**	
	1.7nm,0.8s,baz=60,slow=8.1,SNR=2.5								
	1.7nm,0.8s								
FINES	**FINESS Array B**	**71.46**	**331**	P		**P**	**01 46 54.0**	**-0.5**	
	1.6nm,0.9s,baz=58,slow=4.7,SNR=5.4								
	1.6nm,0.9s								
AKASG	**Malin Array Be**	**74.78**	**320**	P		**P**	**01 47 14.0**	**-0.3**	
	0.4nm,0.3s,baz=60,slow=6.3,SNR=3.3								
	0.4nm,0.3s								
BRTR	**Keskin Array B**	**77.01**	**308**	P		**P**	**01 47 29.6**	**+2.1**	
	0.4nm,0.6s,baz=74,slow=6.2,SNR=3.2								
	0.4nm,0.6s								

NEIC ***10*** *01:37:34.3±1.3, 46.58N±0.01×121.77W±0.02, h11km±5km, Error ellipse: s-maj=2.4km s-min=1.1km az=122.0*
PNSN ***10*** *01:37:34.7, 46.59N×121.75W, h8km, MD2.7, Fault plane solution: NP1:φs150.00000°, δ5.00000°, λ70.00000°.*

SEA 10 01:37:34.7±1.3, 46.59N±0.01×121.75W±0.02, h8km±4km, ML2.7/18, ML2.6/64(NEIC), Error ellipse: s-maj=2.3km s-min=1.8km az=103.0, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LON	**Longmire**	**0.17**	**347**		Pg	01 37 38.2	-0.1
LON				Sg	Sg	01 37 40.9	+0.1
LON	**Longmire**	**0.17**	**347**		Pg	01 37 38.3	0.0
REMR	**Mount Rainier-**	**0.24**	**346**		Pg	01 37 39.5	-0.2
RCM	**Mount Rainier-**	**0.25**	**3**		Pg	01 37 39.8	-0.1
RCM					Sg	01 37 43.4	0.0
RCS	**Mount Rainier-**	**0.29**	**3**		Pg	01 37 40.3	-0.3
OBSR	**Observation Ro**	**0.32**	**352**		Pg	01 37 40.9	-0.2
KOSW	**Kosmos**	**0.33**	**248**		Pg	01 37 41.1	-0.1
SR41	**SR410 Landslid**	**0.34**	**26**		Pg	01 37 40.8	-0.6
SR41					Sg	01 37 45.5	-0.4
FMW	**Mount Fremont**	**0.35**	**9**		Pg	01 37 41.5	-0.3
RVC	**Mount Rainier-**	**0.39**	**337**		Pg	01 37 42.0	-0.4
TDL	**Tradedollar La**	**0.40**	**234**		Pg	01 37 42.2	-0.3
SOSW	**Source of Smit**	**0.43**	**218**		Pg	01 37 42.7	-0.5
JRO	**Jston Ridge Ob**	**0.45**	**226**		Pg	01 37 43.0	-0.4
ASR	**Mount Adams--S**	**0.45**	**166**		Pg	01 37 43.2	-0.2
B201	**Coldwater, Mou**	**0.45**	**232**		Pg	01 37 43.0	-0.5
B201					Sg	01 37 49.4	-0.1
BOLM	**Sugar Bowl**	**0.47**	**218**		Pg	01 37 43.7	-0.3
ESD	**East Dome**	**0.48**	**215**		Pg	01 37 43.7	-0.3
STD	**Studebaker Rid**	**0.48**	**223**		Pg	01 37 43.5	-0.5
STD					Sg	01 37 50.3	+0.1
VALT	**Mount Saint He**	**0.48**	**219**		Pg	01 37 43.7	-0.3
ERK	**Elk Rock**	**0.49**	**236**		Pg	01 37 43.8	-0.5
HSR	**South Ridge**	**0.51**	**216**		Pg	01 37 44.2	-0.4
CDFW	**Cedar Flats**	**0.51**	**204**		Pg	01 37 44.1	-0.5
B941	**Kapowsin**	**0.51**	**322**		Pg	01 37 43.8	-0.9
SHW	**Mount Saint He**	**0.52**	**221**		Pg	01 37 44.3	-0.5
JLK	**June Lake**	**0.52**	**212**		Pg	01 37 44.2	-0.6
SWF2	**Southwest Flan**	**0.52**	**218**		Pg	01 37 44.3	-0.5
FL2	**Flat Top 2**	**0.57**	**227**		Pg	01 37 45.2	-0.5
B203	**Quarry, Mount**	**0.58**	**224**		Pg	01 37 45.2	-0.7
B203					Sg	01 37 53.5	0.0
GSM	**Grass Mountain**	**0.62**	**357**		Pg	01 37 46.2	-0.5
PCFR	**Pierce County**	**0.62**	**311**		Pg	01 37 45.9	-0.8
D05A	**Enumclaw**	**0.62**	**345**		Pg	01 37 46.1	-0.7
D05A				Sg	Sg	01 37 54.3	-0.7
MTMW	**Mount Mitchell**	**0.64**	**210**		Pg	01 37 46.4	-0.8
NAC	**Naches**	**0.66**	**77**		Pg	01 37 46.7	-0.7
LCW	**Lucas Creek**	**0.66**	**278**		Pg	01 37 47.0	-0.5
F04A	**Amboy**	**0.80**	**216**		Pg	01 37 49.0	-1.2
F04A				Sg	Sg	01 37 59.9	-0.6
F04A				IAML		01 38 00.7	
	comp=E,292nm,0.5s						
F04A				IAML		01 38 00.7	
	comp=N,143nm,0.2s						
YA2	**Yakima**	**0.84**	**94**		Pg	01 37 50.8	-0.2
TRW	**Toppenish Ridg**	**0.89**	**109**		Pg	01 37 51.4	-0.4
TBM	**Table Mountain**	**0.98**	**53**		Pg	01 37 52.9	-0.8
LTY	**Liberty**	**1.00**	**47**		Pg	01 37 52.6	-1.4
LTY				IAML		01 38 06.2	
	comp=E,113nm,0.6s						
LTY				IAML		01 38 06.4	
	comp=N,209nm,0.6s						
F04D	**Rainier, OR**	**1.01**	**240**		Pg	01 37 52.6	-1.4
F04D				Sg	Sg	01 38 06.5	-0.5
MXC	**Moxie City**	**1.01**	**90**		Pg	01 37 53.3	-0.7
MXC				IAML		01 38 07.7	
	comp=E,211nm,0.4s						
BMW	**Boistfort Moun**	**1.02**	**264**		Pg	01 37 52.8	-1.6
CPW	**Capitol Peak**	**1.03**	**293**		Pg	01 37 52.9	-1.6
SHRK	**Shell Rock**	**1.13**	**172**		Pg	01 37 55.2	-1.2
GNW	**Green Mountain**	**1.22**	**324**		Pb	01 37 55.6	-2.5
E03A	**Lebam**	**1.25**	**269**		Pn	01 37 56.3	-2.2
E03A				IAML		01 38 15.4	
	comp=E,132nm,0.3s						
HOOD	**Mount Hood Mea**	**1.27**	**177**		Pn	01 37 57.2	-1.6
HOOD				IAML		01 38 18.7	
	comp=E,75nm,0.9s						
BLTW	**Bickleton**	**1.28**	**121**		Pn	01 37 57.9	-1.0
E07A	**Sunnyside**	**1.31**	**90**		Pn	01 37 58.2	-1.1
E07A				IAML		01 38 21.1	
	comp=N,117nm,0.5s						
E07A				IAML		01 38 21.5	
	comp=E,121nm,0.8s						
G05A	**Wamic**	**1.38**	**167**	Pn	Pn	01 37 59.9	-0.4
G05A				IAML		01 38 20.3	
	comp=E,56nm,1.1s						
WRW	**Wenatchee Ridg**	**1.40**	**25**		Pn	01 37 59.5	-1.2
F03A	**Seaside**	**1.41**	**243**		Pn	01 37 59.3	-1.4
RADR	**Rader Ridge**	**1.42**	**264**		Pn	01 37 59.4	-1.5
RADR				IAML		01 38 24.2	
	comp=E,99nm,0.8s						
RADR				IAML		01 38 25.0	
	comp=N,96nm,0.6s						
SLFW	**Sugar Loaf**	**1.44**	**35**		Pn	01 38 00.5	-0.8
F07A	**Phinny Hill Vi**	**1.44**	**118**		Pn	01 38 00.0	-1.0
F07A				IAML		01 38 21.9	
	comp=E,98nm,0.5s						
WISH	**Wishkah**	**1.48**	**292**	Pn	Pn	01 38 00.6	-1.0
WISH				IAML		01 38 30.2	
	comp=N,54nm,2.5s						
HAWA	**Hanford**	**1.55**	**96**		Pn	01 38 01.5	-1.1
HAWA				IAML		01 38 23.7	
	comp=N,49nm,0.2s						
G06A	**Carlson Farm,**	**1.56**	**150**		Pn	01 38 02.1	-0.7
NLWA	**Neilton Lookou**	**1.66**	**300**		Pn	01 38 03.1	-1.0
G03D	**McMinnville, O**	**1.73**	**218**		Pn	01 38 04.4	-0.7
G03D				IAML		01 38 33.3	
	comp=N,67nm,0.6s						
G03D				IAML		01 38 34.9	
	comp=E,58nm,0.6s						
NLW	**Nelson Butte**	**1.78**	**32**		Pn	01 38 06.3	+0.5
H04A	**Detroit Lake**	**1.93**	**189**		Pn	01 38 07.7	-0.1
H04A				IAML		01 38 35.8	
	comp=N,66nm,0.4s						
H04A				IAML		01 38 42.2	
	comp=E,64nm,0.3s						
HEBO	**Mount Hebo**	**1.96**	**226**	Pn	Pn	01 38 08.1	-0.1
HEBO				IAML		01 38 38.5	
	comp=N,70nm,1.8s						
D08A	**Wollman Farm,**	**2.00**	**75**		Pn	01 38 08.4	-0.4
H04D	**Lebanon**	**2.17**	**199**		Pn	01 38 11.2	0.0
MBW	**Mount Baker**	**2.20**	**357**		Pn	01 38 12.6	+0.9
MCW	**Mount Constitu**	**2.22**	**341**		Pn	01 38 11.8	0.0
I05D	**Terrebonne, OR**	**2.27**	**172**		Pn	01 38 12.8	+0.3
COR	**Corvallis**	**2.28**	**209**		Pn	01 38 11.7	-0.8
COR	**Corvallis**	**2.28**	**209**	IAML		01 38 51.3	
	comp=N,25nm,1.1s						
COR				IAML		01 38 53.0	
	comp=N,30nm,1.5s						
G08A	**Pilot Rock**	**2.34**	**123**	Pn	Pn	01 38 11.8	-1.8
PGC	**Sidney**	**2.36**	**332**	Pn	Pn	01 38 13.1	-0.6
B08A	**Colville Reser**	**2.42**	**42**		Pn	01 38 13.9	-0.6
B08A				IAML		01 39 41.3	
	comp=N,43nm,0.9s						
E09A	**Wood Farm, Sta**	**2.49**	**90**		Pn	01 38 14.7	-0.8
BUCK	**Buck Mountain**	**2.54**	**200**	Pn	Pn	01 38 17.1	+0.8
BUCK				IAML		01 38 52.9	
	comp=N,22nm,1.7s						
BUCK				IAML		01 39 04.8	
	comp=E,28nm,3.1s						
C09A	**Chrisman Ranch**	**2.67**	**62**		Pn	01 38 16.8	-1.1
I04A	**Tendick Farm,**	**2.83**	**190**	Pn	Pn	01 38 20.5	+0.3
PINE	**Pine Mountain**	**2.85**	**168**		Pn	01 38 21.1	+0.4
PINE				IAML		01 38 40.6	
	comp=N,14nm,4.3s						
I07A	**Izee**	**2.96**	**147**		Pn	01 38 22.0	-0.1
I03D	**Drain, OR**	**3.10**	**202**	Pn	Pn	01 38 24.0	+0.2
F10A	**Beach Ranch, E**	**3.20**	**99**	Pn	Pn	01 38 24.5	-0.8
F10A				IAML		01 39 23.1	
	comp=E,16nm,1.2s						
F10A				IAML		01 39 28.5	
	comp=N,13nm,1.1s						
BMO	**Blue Mountains**	**3.56**	**117**	Pn	Pn	01 38 29.8	-0.6
NEW	**Newport**	**3.56**	**60**	Pn	Pn	01 38 28.4	-1.9
NEW				IAML		01 39 27.9	
	comp=N,17nm,0.5s						

NEIC ***10*** *01:39:00.9±1.6, 38.83N±0.02×122.80W±0.06, h3km±7km, Error ellipse: s-maj=7.3km s-min=2.5km az=73.0*
IDC ***10*** *01:39:01.3±3.2, 38.72N×122.75W, h0km, mb3.4/1, mbtmp3.0/6, ML2.8/4, MS2.9/5, Error ellipse: s-maj=41.9km s-min=16.4km az=37.0*
NCEDC ***10*** *01:39:01.3±1.9, 38.81N±0.02×122.82W±0.07, h3km±6km, ML3.2/51, ML3.1/66(NEIC), Error ellipse: s-maj=7.5km s-min=2.3km az=76.0*

ISC 10 01:39:01.6±0.9, 38.79N±0.02×122.80W±0.02, h5km±6km, n142, σ1§00/135, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.01**	**9**	Pg	**Pg**	**01 39 02.2**	**-0.5**
GGPM	**Geyser Peak**	**0.05**	**232**		**Pg**	**01 39 02.7**	**-0.2**
GCRM	**Castle Rock Sp**	**0.07**	**107**		**Pg**	**01 39 03.3**	**0.0**
GBGM	**Boggs Mountain**	**0.10**	**77**		**Pg**	**01 39 04.0**	**+0.2**
GSGM	**Seigler Mounta**	**0.10**	**43**		**Pg**	**01 39 04.0**	**+0.3**
GPMM	**Pine Mountain**	**0.13**	**295**		**Pg**	**01 39 03.8**	**-0.5**
GCVM	**Cloverdale**	**0.17**	**262**		**Pg**	**01 39 05.0**	**-0.1**
GRTM	**Round Top Moun**	**0.18**	**34**		**Pg**	**01 39 05.0**	**-0.2**
GSSM	**Skaggs Springs**	**0.19**	**242**		**Pg**	**01 39 05.6**	**+0.2**
NHSM	**Mount Saint He**	**0.20**	**133**		**Pg**	**01 39 05.8**	**+0.2**
NMTM	**Middletown**	**0.28**	**87**		**Pg**	**01 39 07.4**	**+0.4**
MNRC	**McLaughlin Min**	**0.29**	**73**		**Pb**	**01 39 08.0**	**-1.3**
HOPS	**Hopland Field**	**0.29**	**313**	Pg	**Pg**	**01 39 07.1**	**-0.2**
HOPS				Sg	**Sg**	**01 39 11.8**	**+0.5**
GHLM	**Highland Sprin**	**0.30**	**325**		**Pg**	**01 39 07.1**	**-0.4**
GHCM	**House Creek**	**0.36**	**239**		**Pg**	**01 39 08.9**	**+0.3**
NTYM	**Taylor**	**0.42**	**165**		**Pg**	**01 39 10.3**	**+0.6**
GBMM	**Baldy Mountain**	**0.42**	**34**		**Pg**	**01 39 10.2**	**+0.4**
NBPM	**Berryessa Peak**	**0.49**	**105**		**Pb**	**01 39 12.3**	**-0.4**
CVS	**Carmenet Viney**	**0.52**	**149**		**Pg**	**01 39 12.1**	**+0.5**
GTSM	**Trough Springs**	**0.54**	**16**		**Pb**	**01 39 12.6**	**-1.1**
NBRB	**Beebe Ranch Br**	**0.56**	**160**		**Pg**	**01 39 12.9**	**+0.4**
GWRM	**Wonder Ranch**	**0.57**	**317**		**Pg**	**01 39 12.2**	**-0.4**
MCCM	**Marconi Confer**	**0.65**	**186**	Pg	**Pb**	**01 39 15.1**	**-0.3**
MCCM				IAML		01 39 30.0	
	comp=E,1μm,0.9s						
MCCM				IAML		01 39 34.4	
	comp=N,2μm,0.9s						
NDHM	**Dunnigan Hills**	**0.69**	**92**		**Pb**	**01 39 16.9**	**+0.7**
GHMM	**Hull Mountain**	**0.71**	**352**		**Pb**	**01 39 15.9**	**-0.7**
NADM	**Allendale**	**0.73**	**117**		**Pb**	**01 39 17.5**	**+0.7**
NOLM	**Olema**	**0.75**	**180**		**Pb**	**01 39 16.7**	**-0.4**
DCMP	**DeCamp, Califo**	**0.80**	**328**		**Pg**	**01 39 16.6**	**-0.3**
GCK	**Clark Valley**	**0.80**	**20**		**Pb**	**01 39 18.4**	**+0.3**
NPRM	**Point Reyes**	**0.81**	**192**		**Pb**	**01 39 17.9**	**-0.3**
GTC	**Three Chop Rid**	**0.84**	**316**		**Pg**	**01 39 17.6**	**-0.2**
OSUM	**Sutter Buttes**	**0.88**	**57**		**Pg**	**01 39 18.5**	**0.0**
CPMM	**Point Molate**	**0.90**	**160**		**Pg**	**01 39 19.2**	**+0.3**
SUTB	**Sutter Butte**	**0.90**	**61**		**Pg**	**01 39 18.3**	**-0.6**
CPIM	**Pinole Ridge**	**0.92**	**150**		**Pb**	**01 39 19.9**	**-0.2**
CTAM	**Taylor**	**0.98**	**141**		**Pb**	**01 39 21.4**	**+0.3**
GVV	**Valley View**	**0.99**	**5**		**Pb**	**01 39 21.4**	**+0.1**
BRK	**Berkeley--Havi**	**1.01**	**155**		**Pg**	**01 39 20.9**	**-0.1**
VAK	**Adit at Lawren**	**1.01**	**155**		**Pg**	**01 39 21.0**	**0.0**
BL67	**Building 67, L**	**1.01**	**155**		**Pb**	**01 39 21.4**	**-0.3**
CVPM	**Vollmer Peak**	**1.01**	**153**		**Pg**	**01 39 20.7**	**-0.3**
BKS	**Berkeley--Byer**	**1.02**	**154**		**Pg**	**01 39 20.8**	**-0.3**
JPRM	**Presidio of Sa**	**1.03**	**166**		**Pg**	**01 39 21.6**	**+0.2**
CYBM	**Yerba Buena Is**	**1.04**	**161**		**Pg**	**01 39 20.8**	**-0.7**
OSTM	**Stimpson Lane**	**1.10**	**58**		**Pg**	**01 39 21.4**	**-1.3**
FARB	**Farallon Islan**	**1.10**	**188**		**Pg**	**01 39 21.9**	**-0.9**
CRPB	**Russellman Par**	**1.12**	**141**		**Pg**	**01 39 22.9**	**-0.2**
BGC	**Bolinger Road**	**1.13**	**149**		**Pg**	**01 39 23.4**	**0.0**
OHCM	**Honcut**	**1.16**	**62**		**Pg**	**01 39 22.1**	**-1.7**
JMGM	**Milagra Ridge**	**1.18**	**167**		**Pg**	**01 39 23.3**	**-1.0**
CSLM	**San Leandro Hi**	**1.19**	**153**		**Pg**	**01 39 23.7**	**-0.8**
OWYM	**Wyandotte**	**1.21**	**57**		**Pg**	**01 39 23.0**	**-2.0**
SAC	**San Andreas**	**1.25**	**166**		**Pg**	**01 39 24.2**	**-1.3**
CMOB	**Morgan Territo**	**1.25**	**141**		**Pg**	**01 39 24.6**	**-1.0**
OGOM	**Van Goodin Ran**	**1.26**	**47**		**Pg**	**01 39 23.4**	**-2.4**
ORV	**Oroville**	**1.26**	**53**	Pg	**Pg**	**01 39 23.4**	**-2.4**
CDOM	**Doolan Road**	**1.30**	**144**		**Pg**	**01 39 25.3**	**-1.3**
JCHM	**Cahill Ridge**	**1.32**	**165**		**Pn**	**01 39 25.2**	**-1.4**
CBSNC	**Byron Hot Spri**	**1.33**	**137**		**Pn**	**01 39 25.9**	**-0.9**
O02D	**Mt. Diablo Mer**	**1.38**	**0**		**Pn**	**01 39 27.3**	**-0.3**
CVLM	**Vallecito**	**1.39**	**147**		**Pn**	**01 39 27.2**	**-0.5**
CBZL	**Buffer Zone**	**1.39**	**142**		**Pn**	**01 39 27.2**	**-0.5**
KPK	**Kanaka Peak**	**1.40**	**55**		**Pn**	**01 39 26.3**	**-1.6**
WENL	**Wente Vineyard**	**1.43**	**145**		**Pn**	**01 39 27.4**	**-0.8**
AFDM	**Forest Hills D**	**1.43**	**83**		**Pn**	**01 39 26.5**	**-1.8**
JSFB	**Stanford Teles**	**1.47**	**160**		**Pn**	**01 39 27.9**	**-0.9**
JFP	**Foothills Park**	**1.51**	**161**		**Pn**	**01 39 27.9**	**-1.4**
CSTL	**Corral Hollow**	**1.54**	**138**		**Pn**	**01 39 28.9**	**-0.9**
CALM	**Calaveras Res.**	**1.55**	**149**		**Pn**	**01 39 28.7**	**-1.2**
JBMM	**Black Mountain**	**1.56**	**161**		**Pn**	**01 39 29.5**	**-0.5**
CMLM	**Mount Lewis**	**1.59**	**145**		**Pn**	**01 39 29.9**	**-0.7**
JPSM		**1.63**	**167**		**Pn**	**01 39 30.3**	**-0.6**
CMMM	**Mount Mocho**	**1.69**	**142**		**Pn**	**01 39 31.2**	**-0.7**
O03E	**Paynes Creek**	**1.69**	**27**		**Pn**	**01 39 30.6**	**-1.2**
MHC	**Mount Hamilton**	**1.71**	**147**		**Pn**	**01 39 31.7**	**-0.5**
MTOS	**Mt Oso, Westle**	**1.73**	**138**		**Pn**	**01 39 31.3**	**-1.1**
ARN	**Arnold Ranch**	**1.75**	**145**		**Pn**	**01 39 31.8**	**-0.9**
CCOB	**Coe Ranch Numb**	**1.77**	**150**		**Pn**	**01 39 32.1**	**-0.8**
JLAB	**Laurel Hill**	**1.84**	**152**		**Pn**	**01 39 32.6**	**-1.3**
CMPM	**Mikes Peak**	**1.85**	**140**		**Pn**	**01 39 34.0**	**0.0**
KMPM	**Mount Pierce**	**1.92**	**328**	Pn	**Pn**	**01 39 35.5**	**+0.5**
KMPM				IAML		01 40 19.9	
	comp=N,139nm,1.9s						
KMPM				IAML		01 40 30.7	
	comp=E,236nm,1.6s						
HLPM	**Lions Peak**	**1.98**	**152**		**Pn**	**01 39 34.5**	**-1.2**
DONR	**Donner Summit**	**2.01**	**73**		**Pn**	**01 39 36.5**	**+0.1**
CMB	**Columbia Colle**	**2.04**	**111**		**Pn**	**01 39 36.4**	**-0.3**
CDC	**Canada Road**	**2.05**	**149**		**Pn**	**01 39 35.9**	**-0.8**
TNK	**Tinkers Knob**	**2.05**	**76**		**Pg**	**01 39 42.4**	**+1.4**
RUBR	**Rubicon Trail**	**2.08**	**82**		**Pn**	**01 39 37.8**	**+0.4**
HPCM	**Pacheco Lake**	**2.11**	**145**		**Pn**	**01 39 36.5**	**-1.1**
SLD	**San Luis Dam**	**2.12**	**143**		**Pn**	**01 39 37.5**	**-0.2**
PACP	**Pacheco Peak**	**2.15**	**146**		**Pn**	**01 39 37.8**	**-0.4**
LOY	**Loyalton**	**2.17**	**66**		**Pn**	**01 39 39.1**	**+0.6**
BEKR	**Beckworth**	**2.17**	**60**		**Pn**	**01 39 39.2**	**+0.5**
MPK	**Martis Peak**	**2.21**	**76**		**Pn**	**01 39 39.9**	**+0.6**
MPK				IAML		01 39 57.4	
	comp=E,184nm,1.1s						
JCC	**Jacoby Creek,**	**2.23**	**335**		**Pn**	**01 39 39.3**	**0.0**
JCC				IAML		01 40 39.5	
	comp=E,128nm,2.1s						
JCC				IAML		01 40 42.6	
	comp=N,81nm,2.1s						
FRP	**Fremont Peak**	**2.28**	**153**		**Pn**	**01 39 38.1**	**-2.0**
SAO	**San Andreas Ge**	**2.29**	**152**		**Pn**	**01 39 38.7**	**-1.4**
BMRR	**Black Mountain**	**2.34**	**55**		**Pn**	**01 39 42.0**	**+1.0**
PEAR	**Peavine Mounta**	**2.35**	**69**		**Pn**	**01 39 42.1**	**+1.0**
BPCNC	**Pine Canyon**	**2.40**	**157**		**Pn**	**01 39 40.0**	**-1.6**
BJCM	**Johnson Can.**	**2.50**	**153**		**Pn**	**01 39 41.2**	**-1.8**
PNTR	**Pine Nut**	**2.51**	**82**		**Pn**	**01 39 44.1**	**+0.8**
BPRM	**Ponciano Ridge**	**2.53**	**160**		**Pn**	**01 39 41.5**	**-1.9**
HAST	**Hastings Reser**	**2.60**	**157**		**Pn**	**01 39 42.6**	**-1.7**
BBGB	**Big Mountain B**	**2.61**	**147**		**Pn**	**01 39 44.4**	**-0.2**
BPIM	**Pinnacles**	**2.64**	**150**		**Pn**	**01 39 43.2**	**-1.7**
BSMM	**Soledad Missio**	**2.64**	**155**		**Pn**	**01 39 43.6**	**-1.3**
WAKR	**Walker**	**2.65**	**95**		**Pn**	**01 39 46.1**	**+0.9**
WAKR				IAML		01 40 25.1	
	comp=N,81nm,1.1s						
WAKR				IAML		01 40 26.7	
	comp=E,74nm,0.9s						
BBNM	**San Benito**	**2.66**	**149**		**Pn**	**01 39 44.4**	**-0.7**
YERR	**Yerington**	**2.78**	**85**		**Pn**	**01 39 47.3**	**+0.2**
YERR				IAML		01 40 45.3	
	comp=N,94nm,1.2s						
PAHR	**Pah Rah Range**	**2.80**	**70**		**Pn**	**01 39 46.8**	**-0.4**
PAHR				IAML		01 40 33.0	
	comp=E,46nm,1.2s						
PAHR				IAML		01 40 44.1	
	comp=N,39nm,1.3s						
KRMB	**Red Mountain**	**2.86**	**343**	Pn	**Pn**	**01 39 48.2**	**+0.3**
YBH	**Yreka Blue Hor**	**2.94**	**1**	Pn	**Pn**	**01 39 48.5**	**-0.6**
YBH	**Yreka Blue Hor**	**2.94**	**1**	Pn	**Pn**	**01 39 50.9**	**+1.8**
	comp=N,0.5nm,0.3s,baz=182,slow=14,SNR=3.5						
YBH				LR	LR	01 41 16.6	
	comp=N,121nm,19.6s,baz=263,slow=45						
	comp=N,1.4nm,0.4s						
PMPB	**Monarch Peak**	**3.02**	**148**		**Pn**	**01 39 49.2**	**-1.0**
PMPB				IAML		01 41 06.1	
	comp=E,70nm,1.3s						
PMPB				IAML		01 41 16.7	
	comp=N,75nm,1.5s						
KSXB	**Camp Six Broad**	**3.15**	**345**		**Pn**	**01 39 52.7**	**+0.8**
KSXB				IAML		01 40 40.2	
	comp=E,31nm,3.2s						
KSXB				IAML		01 41 03.3	
	comp=N,32nm,1.9s						
MDPB	**Devils Postpil**	**3.15**	**110**		**Pn**	**01 39 53.2**	**+1.0**
MDPB				IAML		01 40 39.3	
	comp=E,55nm,0.7s						
MDPB				IAML		01 40 45.7	
	comp=N,65nm,1.0s						
RYN	**Ryan**	**3.35**	**91**		**Pn**	**01 39 55.0**	**+0.2**
RYN				IAML		01 41 00.9	
	comp=E,41nm,0.9s						
RYN				IAML		01 41 01.3	
	comp=N,35nm,1.0s						
LHV	**Little Huntoon**	**3.41**	**98**		**Pn**	**01 39 56.4**	**+1.0**
NVAR	**Mina Array Bea**	**3.54**	**94**		**Pn**	**01 39 58.0**	**+0.5**
NVAR	**Mina Array Bea**	**3.54**	**94**	Pn	**Pn**	**01 39 57.3**	**-0.2**
	comp=N,0.8nm,0.3s,baz=269,slow=15,SNR=20						
NVAR				Lg	Lg	01 40 50.0	
	comp=N,0.9nm,0.3s,baz=272,slow=33,SNR=1.1						
NVAR				LR	LR	01 41 36.2	
	comp=N,173nm,18.2s,baz=278,slow=43						
	comp=N,3.2nm,0.8s						
KBO	**Bosley Butte**	**3.58**	**343**	Pn	**Pn**	**01 39 57.4**	**-0.6**
KVN	**Kaiserville**	**3.67**	**85**	Pn	**Pn**	**01 39 58.8**	**-0.5**
KVN				IAML		01 41 00.9	
	comp=N,23nm,1.2s						
**HU

Q19K	Cape Douglas, baz=132	3.70	315	P		Pn	01 40 30.6	+1.4
P19K	Oil Pt	4.07	325	Pn		Pn	01 40 36.2	+1.9
P19K	comp=N,78nm,1.4s			IAML			01 41 31.5	
P19K	Oil Pt baz=142	4.07	325	P		Pn	01 40 36.4	+2.0
HIN	Hinchinbrook I	4.15	15	Pn		Pn	01 40 36.2	+0.8
HIN						Sn	01 41 21.5	-2.5
HIN	comp=N,76nm,1.5s			IAML			01 41 22.4	
HIN	comp=E,57nm,1.3s			IAML			01 41 23.2	
KAIM	Kayak Island	4.17	30			Pn	01 40 36.4	+0.8
KAIM	comp=E,59nm,0.5s			IAML			01 41 29.7	
KAIM	comp=N,75nm,1.4s			IAML			01 41 32.6	
KAIM	Kayak Island baz=214	4.17	30	P		Pn	01 40 36.6	+0.9
SLKM	Skilak Lake	4.20	349			Pn	01 40 36.7	+0.6
O20K	Slope Mountain	4.25	332			Pn	01 40 37.5	+0.7
O20K	Slope Mountain baz=149	4.25	332	P		Pn	01 40 37.5	+0.7
IVE	Iliamna Volcan	4.30	329			Pn	01 40 38.0	+0.5
CNTC	Contact Creek	4.36	298			Pn	01 40 38.6	+0.3
Q17K	Contact Creek baz=113	4.36	298	P		Pn	01 40 38.6	+0.3
EYAK	Cordova Ski Ar	4.41	19			Pn	01 40 39.9	+0.9
EYAK	Cordova Ski Ar	4.41	19	P		Pn	01 40 40.1	+1.1
EYAK	Cordova Ski Ar baz=201	4.41	19	P		Pn	01 40 39.9	+0.9
SUCK	Suckling Hills	4.47	33			Pn	01 40 40.8	+1.0
SUCK	comp=N,39nm,2.4s			IAML			01 41 46.4	
RAGM	Ragged Mountai	4.49	26			Pn	01 40 41.1	+1.0
NICHA	Nichawak Mount	4.55	31			Pn	01 40 41.9	+1.0
HMT	Hamilton	4.55	28			Pn	01 40 42.0	+1.0
RSO	Redoubt South	4.61	334	Pn		Pn	01 40 42.5	+0.6
RDT	Redoubt	4.62	336			Pn	01 40 42.4	+0.4
RDWB	Redoubt West	4.65	333			Pn	01 40 42.8	+0.4
RC01	Rabbit Creek A	4.73	353	Pn		Pn	01 40 43.7	+0.3
RC01	comp=E,38nm,0.5s			IAML			01 41 38.5	
RC01	comp=N,32nm,0.4s			IAML			01 41 39.0	
BERG	Berg Lake	4.76	31			Pn	01 40 44.6	+0.9
BERG	comp=N,39nm,0.5s			IAML			01 41 43.6	
BERG	comp=E,37nm,0.9s			IAML			01 41 47.5	
GRIN	Grindle Hills	4.78	33			Pn	01 40 45.2	+1.1
SNH	Sunshine Point	4.85	36			Pn	01 40 46.1	+1.0
SNH	comp=E,22nm,1.1s			IAML			01 42 04.0	
KNK	Knik Glacier	5.02	1	Pn		Pn	01 40 47.8	+0.5
KNK	comp=E,22nm,1.4s			IAML			01 41 47.5	
KNK	comp=N,20nm,3.6s			IAML			01 42 05.2	
BMRM	Bremner River	5.03	23			Pn	01 40 48.5	+1.0
BMRM	Bremner River baz=206	5.03	23	P		Pn	01 40 48.3	+0.8
WAX	Waxell Ridge	5.06	34			Pn	01 40 48.8	+0.9
WAX	comp=E,35nm,0.3s			IAML			01 41 47.9	
WAX	comp=N,37nm,0.5s			IAML			01 41 49.5	
SUA	Susitna One	5.19	349	Pn		Pn	01 40 51.1	+1.3
CRQM	Cirque	5.21	31			Pn	01 40 51.0	+0.9
CRQM	comp=N,24nm,4.0s			IAML			01 41 31.6	
CRQM	comp=E,17nm,1.1s			IAML			01 41 50.6	
CRQE	Cirque baz=216	5.22	31	P		Pn	01 40 51.1	+0.9
KLU	Klutina	5.28	14	Pn		Pn	01 40 52.4	+1.3
KLU	comp=N,19nm,0.4s			IAML			01 41 50.8	
KLU	comp=E,20nm,4.1s			IAML			01 42 06.8	
KLU	Klutina baz=196	5.28	14	P		Pn	01 40 52.3	+1.3
BAGL	Bagley Icefiel	5.33	37			Pn	01 40 52.6	+1.0
ISLE	Juniper Island	5.34	35			Pn	01 40 52.6	+0.8
ISLE	comp=E,16nm,3.2s			IAML			01 42 00.5	
ISLE	comp=N,24nm,3.1s			IAML			01 44 19.6	
STLK	Strandline Lak	5.37	343			Pn	01 40 53.4	+1.2
N19K	Bonanza Creek	5.38	328	Pn		Pn	01 40 53.2	+0.9
GHO	Glory Hole Cre	5.38	358			Pn	01 40 53.9	+1.6
SPNN	North Nagishla	5.40	339			Pn	01 40 54.3	+1.6
SML	Sawmill	5.42	1	Pn		Pn	01 40 53.8	+1.0
SML	Sawmill baz=182	5.42	1	P		Pn	01 40 54.3	+1.5
SCM	Sheep Creek Mo	5.48	6	Pn		Pn	01 40 55.2	+1.5
VRDI	Verde Repeater	5.53	27	Pn		Pn	01 40 55.0	+0.6
SAMH	Samovar Hills	5.57	45			Pn	01 40 56.8	+1.9
KIAG	Kiagna River	5.58	33			Pn	01 40 56.1	+0.9
N25K	Chitina, Valde	5.61	20			Pn	01 40 56.9	+1.5
N25K	Chitina, Valde baz=203	5.61	20	P		Pn	01 40 57.0	+1.5
GLB	Gilahina Butte	5.62	24			Pn	01 40 56.6	+1.0
GRNC	Granite Creek	5.62	37			Pn	01 40 56.7	+0.8
TABL	Table Mountain	5.63	41			Pn	01 40 57.1	+1.1
N18K	Kilae Creek	5.73	321	Pn		Pn	01 40 57.8	+0.7
N18K	Kilae Creek baz=136	5.73	321	P		Pn	01 40 58.1	+1.0
PCA	Pinnacle	5.75	47			Pn	01 40 58.7	+1.2
PINM	Pinnacle baz=234	5.75	47	P		Pn	01 40 58.8	+1.4
PTPK	Patty Peak	5.76	31			Pn	01 40 58.8	+1.2
MCARA	McCarthy VSAT	5.77	28			Pn	01 40 58.7	+1.2
MCARA	McCarthy VSAT baz=212	5.77	28	P		Pn	01 40 58.8	+1.2
SKT	Skwentna	5.78	346	Pn		Pn	01 40 59.4	+1.6
M24K	Tolsona, Glenn	5.85	11	Pn		Pn	01 41 00.3	+1.5
M24K	Tolsona, Glenn baz=194	5.85	11	P		Pn	01 41 00.7	+2.0
PNL	Peninsula	5.88	52			Pn	01 41 00.7	+1.5
PNL	Peninsula	5.88	52	P		Pn	01 41 00.8	+1.6
PNL	Peninsula baz=240	5.88	52	P		Pn	01 41 00.7	+1.5
BARN	Barnard Glacie	5.90	35			Pn	01 41 00.8	+1.2
BCPM	Bancas Point	5.93	49			Pn	01 41 01.3	+1.5
CTG	Chitna Glacier baz=223	5.94	37	P		Pn	01 41 01.0	+1.0
CTGM	Chitina Glacie	5.94	37	Pn		Pn	01 41 00.8	+0.8
LOGN	Logan Glacier	5.95	39			Pn	01 41 00.9	+0.7
WACK	Wrangell Chich	6.01	20			Pn	01 41 02.7	+1.6
HARP	HAARP	6.26	15			Pn	01 41 06.2	+1.9
HARP	HAARP baz=198	6.26	15	P		Pn	01 41 06.2	+1.9
M18K	Stony River	6.31	327			Pn	01 41 05.6	+0.6
M18K	Stony River baz=141	6.31	327	P		Pn	01 41 05.6	+0.6
O29M	Mount Kennedy baz=238	6.56	49	P		Pn	01 41 10.4	+1.8
O15K	Ungalikthiuk R	6.60	299			Pn	01 41 10.4	+1.4
O15K	Ungalikthiuk R baz=110	6.60	299	P		Pn	01 41 10.4	+1.4
L19K	White Mountain	6.61	334	Pn		Pn	01 41 09.0	-0.2
P29M	Windy Craggy	6.62	56			Pn	01 41 10.1	+0.8
P29M	Windy Craggy baz=245	6.62	56	P		Pn	01 41 10.3	+1.0
DHY	Denali Highway	6.72	5	Pn		Pn	01 41 12.4	+1.7
M17K	Holitna River	6.77	321	Pn		Pn	01 41 12.4	+1.0
M27K	Edge Creek, AK	6.88	27	Pn		Pn	01 41 14.6	+1.5
S31K	Pelican	6.91	72			Pn	01 41 12.2	-1.0
YUK6	Outpost Mounta baz=234	7.01	45	P		Pn	01 41 17.2	+2.3
M16K	Timber Creek	7.10	315	Pn		Pn	01 41 16.6	+0.8
TRF	Thorofare Moun	7.11	354	Pn		Pn	01 41 18.0	+1.9
N15K	Kwethluk River	7.12	307	Pn		Pn	01 41 18.1	+1.9
L18K	Granite Mounta	7.14	328	Pn		Pn	01 41 16.7	+0.3
HYT	Haines Junctio	7.29	48			Pn	01 41 19.9	+1.2
SIT	Sitka	7.34	79	Pn		Pn	01 41 17.4	-1.7
SIT	Sitka	7.34	79	P		Pn	01 41 17.9	-1.2
BCAR	Beaver Creek A	7.51	24	Pn		Pn	01 41 22.7	+1.2
SKAG	Skagway	7.70	61			Pn	01 41 24.9	+0.9
SKAG	Skagway	7.70	61	P		Pn	01 41 26.0	+1.9
S32K	Killisnoo	7.75	76	Pn		Pn	01 41 24.1	-0.7
R32K	Eaglecrest	7.85	70	Pn		Pn	01 41 26.0	-0.1
JIS	Juneau Island	7.92	70	Pn		Pn	01 41 26.9	-0.2
JIS	Juneau Island	7.92	70	P		Pn	01 41 28.2	+1.1
M29M	Somme Creek	7.95	36			Pn	01 41 29.2	+1.6
K17K	Iditarod	8.00	326	Pn		Pn	01 41 29.0	+0.7
J18K	Innoko River	8.15	333	Pn		Pn	01 41 31.7	+1.4
J20K	Nowinta River	8.26	343	Pn		Pn	01 41 32.9	+1.2
WHY	Whitehorse	8.35	54	Pn		Pn	01 41 34.6	+1.6
N31M	Braeburn, Yuko	8.35	47			Pn	01 41 34.5	+1.4
ILAR	Eielson Array	8.43	5	Pn		Pn	01 41 35.0	+0.9
J26L	Joseph Creek	8.49	15	Pn		Pn	01 41 36.5	+1.5
P32M	Atlin	8.53	62	Pn		Pn	01 41 36.4	+0.9
L29M	L29M	8.54	34			Pn	01 41 37.1	+1.4
U33K	Whale Pass	8.63	86	Pn		Pn	01 41 34.8	-2.0
MLY	Manley	8.71	354	Pn		Pn	01 41 38.5	+0.6
I23K	Minto, Yukon-K	8.78	358	Pn		Pn	01 41 39.2	+0.4
K15K	Wolf Creek Mou	8.84	317	Pn		Pn	01 41 40.5	+0.9
P33M	Teslin, Yukon	9.14	59			Pn	01 41 44.4	+0.6
PRP	Porcupine Dome	9.26	8	Pn		Pn	01 41 46.6	+1.0
K29M	Barlow Dome	9.27	32			Pn	01 41 47.1	+1.4
M31M	Drury Creek, Y	9.29	46			Pn	01 41 47.8	+1.9
H21K	Melozitna Rive	9.50	349	Pn		Pn	01 41 50.0	+1.3
R33M	Jennings River	9.85	65	Pn		Pn	01 41 54.8	+1.1
IMAR	Indian Mountai	9.92	348	Pn		Pn	01 41 55.0	+0.6
I28M	Miner Creek	9.99	21	Pn		Pn	01 41 56.0	+0.5
DLBC	Dease Lake	10.22	71	Pn		Pn	01 41 59.2	+0.5
F21K	Alatna River	11.09	350	Pn		Pn	01 42 11.8	+1.4
C36M	Paulatuk	16.94	30	Pn		Pn	01 43 29.6	+0.9
C36M	comp=Z,3.0nm,1.2s			IAmb		IAmb	01 43 50.3	
A36M	Sachs Harbour	18.42	23	P		P	01 43 47.1	+0.1
A36M	comp=Z,4.7nm,0.8s			IAmb		IAmb	01 43 59.4	

*NEIC **10** 02:04:26.5±0.9,55.94N±0.09×149.9W±0.1,h8km±7km, ML3.6/28,ML3.4(AEIC), Error ellipse: s-maj=12.9km s-min=8.2km az=163.0*
*IDC **10** 02:04:27.7±2.5,56.10N×149.70W,h0km,mb3.1/1, mbtmp3.2/5,ML2.7/4,MS3.0/2, Error ellipse: s-maj=40.4km s-min=23.1km az=47.0*
*AEIC **10** 02:04:29.8±1.5,55.8N±0.1×149.9W±0.1,h10km±8km, Error ellipse: s-maj=16.3km s-min=9.5km az=184.0*

ISC 10 02:04:27.4±1.3,56.05N±0.09×149.91W±0.06,h10km, n122,σ1§12/131,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	2.20	304		Pn	02 05 03.7	-0.3
OHAK	baz=125				Sn	02 05 29.3	-1.9
OHAK	Old Harbor	2.20	304	P	Pn	02 05 04.0	0.0
OHAK	baz=125			S	Sn	02 05 29.3	-1.9
KDAK	Kodiak Island	2.27	321	Pn	Pn	02 05 05.6	+0.7
KDAK	6.3nm,0.3s,baz=144,slow=5.2,SNR=102			Sn	Sn	02 05 32.7	-0.2
KDAK	5.7nm,0.3s,baz=97,slow=18,SNR=17			LR	LR	02 06 17.5	
KDAK	comp=Z,229nm,18.1s,baz=180,slow=48 16m3s						
SII	Sitkinak Islan baz=105	2.44	284	S	Sn	02 05 34.4	-2.6
SYI	Shuyak Island	2.90	333		Pn	02 05 14.2	+0.8
SYI					Sn	02 05 49.1	+0.9
Q20K	Shuyak Island baz=152	2.90	333	P	Pn	02 05 14.4	+1.0
Q20K	baz=152			S	Sn	02 05 49.2	+0.9
CNPM	China Poot	3.55	349		Pn	02 05 23.0	+0.4
CNPM					Sn	02 06 04.6	0.0
CNPM	comp=N,79nm,3.2s			IAML		02 06 07.9	
CNPM	comp=E,85nm,2.2s			IAML		02 06 21.6	
BRSE	Bradley Lake S	3.73	353		Pn	02 05 25.2	+0.3
BRSE					Sn	02 06 08.2	-0.7
BRSE	Bradley Lake S baz=173	3.73	353	P	Pn	02 05 25.5	+0.6
BRSE	baz=173			S	Sn	02 06 08.2	-0.7
BRLK	Bradley Lake	3.76	352		Pn	02 05 25.5	+0.1
BRLK					Sn	02 06 09.5	-0.1
BRLK	comp=E,54nm,3.6s			IAML		02 06 24.0	
Q23K	Middleton Isla	3.88	28		Pn	02 05 27.3	+0.2
MID	Middleton Isla	3.89	28	Pn	Pn	02 05 27.3	+0.3
P19K	Oil Pt	4.02	335		Pn	02 05 30.2	+1.2
P19K	comp=E,111nm,0.9s			IAML		02 06 22.5	
P19K	comp=N,136nm,3.0s			IAML		02 06 35.7	
SEW	Seward	4.07	3		Pn	02 05 29.6	0.0
P23K	Montague Islan	4.17	18		Pn	02 05 31.2	+0.2
O20K	Slope Mountain	4.29	341		Pn	02 05 33.5	+0.8
IVE	Iliamna Volcan	4.30	339		Pn	02 05 33.9	+1.0
SLKM	Skilak Lake	4.47	358		Pn	02 05 35.2	+0.1
RSO	Redoubt South	4.67	342	Pn	Pn	02 05 37.9	-0.1
HIN	Hinchinbrook I	4.71	21		Pn	02 05 39.2	+0.7
HIN	comp=N,48nm,1.3s			IAML		02 06 36.8	
HIN	comp=E,47nm,0.9s			IAML		02 06 38.1	
KAIM	Kayak Island	4.86	35		Pn	02 05 41.1	+0.7
KAIM	comp=N,61nm,2.4s			IAML		02 07 33.4	
KAIM	comp=E,54nm,2.6s			IAML		02 08 16.7	
EYAK	Cordova Ski Ar	5.01	24		Pn	02 05 43.2	+0.7
EYAK	Cordova Ski Ar baz=206	5.01	24	P	Pn	02 05 43.5	+1.0
RC01	Rabbit Creek A	5.05	1	Pn	Pn	02 05 43.5	+0.5
RC01	comp=E,34nm,0.5s			IAML		02 06 43.3	
RC01	comp=N,24nm,0.4s			IAML		02 06 48.1	
RAGM	Ragged Mountai	5.15	30		Pn	02 05 45.3	+0.8
RAGM	comp=E,42nm,0.5s			IAML		02 06 55.2	
SUCK	Suckling Hills	5.18	36		Pn	02 05 45.6	+0.7
SUCK	comp=E,33nm,1.6s			IAML		02 06 49.0	
SUCK	comp=N,41nm,3.5s			IAML		02 06 54.6	
HMT	Hamilton	5.23	32		Pn	02 05 46.5	+0.9
NICHA	Nichawak Mount	5.24	34		Pn	02 05 46.6	+0.8
GOAT	Goat Mountain	5.30	29		Pn	02 05 47.2	+0.7
N19K	Bonanza Creek	5.34	335		Pn	02 05 47.5	+0.3
KNK	Knik Glacier	5.43	7		Pn	02 05 48.4	+0.1
SUA	Susitna One	5.44	356	Pn	Pn	02 05 48.8	+0.2
BERG	Berg Lake	5.45	34		Pn	02 05 49.0	+0.5
GRIN	Grindle Hills	5.49	37		Pn	02 05 49.5	+0.4
DIV	Divide	5.53	21		Pn	02 05 50.8	+1.1
SNH	Sunshine Point	5.58	39		Pn	02 05 51.0	+0.6
N18K	Kilae Creek	5.61	328		Pn	02 05 51.5	+0.8
BMRM	Bremner River	5.66	27		Pn	02 05 52.2	+0.8
BMRM	Bremner River baz=210	5.66	27	P	Pn	02 05 52.5	+1.1
GHO	Glory Hole Cre	5.76	5		Pn	02 05 54.0	+1.1
WAX	Waxell Ridge	5.77	37		Pn	02 05 53.5	+0.5
SML	Sawmill	5.83	7		Pn	02 05 54.7	+0.9
KLU	Klutina	5.83	19		Pn	02 05 55.0	+1.1
KLU	Klutina baz=202	5.83	19	P	Pn	02 05 55.5	+1.6
BARK	Barkley Ridge	5.86	39		Pn	02 05 54.8	+0.5
MESA	MESA	5.91	42		Pn	02 05 55.3	+0.3
MESA	MESA baz=227	5.91	42	P	Pn	02 05 56.5	+1.5
CRQM	Cirque	5.91	34		Pn	02 05 55.7	+0.7
SCM	Sheep Creek Mo	5.95	12		Pn	02 05 57.0	+1.6
SKT	Skwentna	6.00	353	Pn	Pn	02 05 56.6	+0.4
ISLE	Juniper Island	6.06	38		Pn	02 05 57.6	+0.5
BAGL	Bagley Icefiel	6.07	40		Pn	02 05 57.7	+0.7
VRDI	Verde Repeater	6.18	30		Pn	02 05 59.5	+0.7
N25K	Chitina, Valde	6.21	24		Pn	02 06 00.3	+1.2
N25K	Chitina, Valde baz=208	6.21	24	P	Pn	02 06 00.6	+1.4
M18K	Stony River	6.26	333		Pn	02 06 00.1	+0.4
GLB	Gilahina Butte	6.26	28		Pn	02 06 00.4	+0.6
KIAG	Kiagna River	6.28	36		Pn	02 06 00.8	+0.6
M24K	Tolsona, Glenn	6.37	16		Pn	02 06 02.5	+1.3
TABL	Table Mountain	6.38	43		Pn	02 06 02.1	+0.5
MCARA	McCarthy VSAT	6.43	31		Pn	02 06 02.9	+0.8
MCARA	McCarthy VSAT baz=216	6.43	31	P	Pn	02 06 03.6	+1.5
PTPK	Patty Peak	6.45	34		Pn	02 06 03.4	+0.9
PCA	Pinnacle	6.53	48		Pn	02 06 04.1	+0.7
PINM	Pinnacle baz=234	6.53	48	P	Pn	02 06 04.5	+1.1
WACK	Wrangell Chich	6.61	24		Pn	02 06 05.7	+1.0
BARN	Barnard Glacie	6.62	37		Pn	02 06 05.5	+0.8
M17K	Holitna River	6.64	327		Pn	02 06 05.7	+0.8
L19K	White Mountain	6.65	340	Pn	Pn	02 06 05.7	+0.6
CTG	Chitna Glacier baz=225	6.66	39	P	Pn	02 06 06.0	+0.7
CTGM	Chitina Glacie	6.66	39		Pn	02 06 06.0	+0.7
PNL	Peninsula	6.68	53		Pn	02 06 05.7	+0.3
PNL	Peninsula baz=240	6.68	53	P	Pn	02 06 05.9	+0.5
LOGN	Logan Glacier	6.69	41		Pn	02 06 06.0	+0.3
BCPM	Bancas Point	6.71	50		Pn	02 06 06.4	+0.5
HARP	HAARP	6.81	19		Pn	02 06 08.8	+1.6
HARP	HAARP baz=202	6.81	19	P	Pn	02 06 08.8	+1.6
M16K	Timber Creek	6.87	320		Pn	02 06 09.1	+1.0
L18K	Granite Mounta	7.10	333	Pn	Pn	02 06 11.2	+0.1
DHY	Denali Highway	7.16	9		Pn	02 06 13.1	+1.0
O29M	Mount Kennedy	7.35	50		Pn	02 06 15.5	+0.8
RND	Reindeer	7.40	4		Pn	02 06 16.6	+1.3
P29M	Windy Craggy	7.42	56		Pn	02 06 15.7	+0.1
TRF	Thorofare Moun	7.42	359	Pn	Pn	02 06 16.6	+0.8
YUK8	Steele Glacier	7.44	41		Pn	02 06 17.3	+1.2
YUK8	Steele Glacier baz=228	7.44	41	P	Pn	02 06 17.3	+1.2
CAST	Castle Rocks	7.47	352	Pn	Pn	02 06 17.5	+1.2
YUK3	Moose Creek baz=223	7.53	37	P	Pn	02 06 19.3	+1.9
K20K	Telida	7.62	346	Pn	Pn	02 06 18.6	+0.3
S31K	Pelican	7.71	70		Pn	02 06 17.8	-1.7
M14K	Bethel	7.88	312	Pn	Pn	02 06 21.2	-0.7
YUK4	Talbot Arm baz=231	7.90	43	P	Pn	02 06 25.7	+3.3
HYT	Haines Junctio	8.07	49	Pn	Pn	02 06 25.2	+0.6
BCAR	Beaver Creek A	8.15	27	Pn	Pn	02 06 26.8	+1.2
M13K	Dall Lake	8.32	307	Pn	Pn	02 06 28.0	+0.1
SCRK	Sand Creek	8.48	18	Pn	Pn	02 06 30.4	+0.2
SKAG	Skagway	8.51	60	Pn	Pn	02 06 30.8	+0.4
S32K	Killisnoo	8.54	74	Pn	Pn	02 06 29.9	-1.0
M29M	Somme Creek	8.68	38	Pn	Pn	02 06 34.1	+1.2
JIS	Juneau Island	8.72	69	Pn	Pn	02 06 32.7	-0.8
ILAR	Eielson Array	8.87	8	Pn	Pn	02 06 36.2	+0.7
ILAR	Eielson Array baz=195,slow=14,SNR=1.3	8.87	8	Pn	Pn	02 06 33.2	-2.3
ILAR	comp=N,0.1nm,0.3s,baz=192,slow=21,SNR=2.0 comp=N,0.2nm,0.3s			Sn	Sn	02 08 08.7	-6.7
K27K	Chicken	8.90	23	Pn	Pn	02 06 36.1	+0.3
MDM	Murphy Dome	8.97	5	Pn	Pn	02 06 37.1	+0.2
J26L	Joseph Creek	9.04	18	Pn	Pn	02 06 38.1	+0.3
J26L	Joseph Creek baz=203	9.04	18	P	Pn	02 06 39.9	+2.0
WHY	Whitehorse	9.14	54	Pn	Pn	02 06 39.6	+0.4
P32M	Atlin	9.33	61	Pn	Pn	02 06 41.9	+0.1
M30M	Minto, Yukon	9.35	40	Pn	Pn	02 06 42.9	+0.8
DAWY	Dawson	9.59	29	Pn	Pn	02 06 46.1	+0.8
P33M	Teslin, Yukon	9.94	58	Pn	Pn	02 06 48.9	-1.3
IMAR	Indian Mountai	10.13	351	Pn	Pn	02 06 53.2	+0.5
R33M	Jennings River	10.66	64	Pn	Pn	02 07 00.1	0.0
G23K	Bananza Creek	10.70	360	Pn	Pn	02 07 00.9	+0.5
G24K	Hadweenzic Riv	10.75	5	Pn	Pn	02 07 01.8	+0.6
DLBC	Dease Lake	11.03	69	Pn	Pn	02 07 04.9	-0.1
BMAR	Burnt Mountain	11.69	10	Pn	Pn	02 07 14.8	+0.8
INK	Inuvik baz=223,slow=13,SNR=4.2 comp=N,2.2nm,1.1s	14.40	25	Pn	Pn	02 07 50.2	-0.7
YKA	Yellowknife Ar baz=264,slow=10,SNR=8.6 comp=N,0.8nm,0.9s	18.96	56	P	Pn	02 08 49.4	+0.4
A36M	Sachs Harbour	19.03	23	P	Pn	02 08 50.7	+0.9
YBH	Yreka Blue Hor comp=N,46nm,18.7s,baz=18,slow=30	22.71	118	LR	LR	02 15 51.7	
TXAR	Lajitas Array comp=N,0.2nm,0.8s,baz=330,slow=5.3,SNR=3.2 comp=N,0.2nm,0.8s	42.08	110	P	P	02 12 20.2	+0.9

*NEIC **10** 02:13:23.1±1.2,56.1N±0.1×148.6W±0.1,h20km±9km, mb3.5/1,ML3.5/36,ML3.2(AEIC),Error ellipse: s-maj=15.7km s-min=9.3km az=176.0*
*AEIC **10** 02:13:26.6±1.4,56.1N±0.1×148.6W±0.1,h10km±7km, Error ellipse: s-maj=14.9km s-min=9.2km az=179.0*

ISC 10 02:13:22.4±1.8,56.2N±0.1×148.69W±0.06,h10km,n121, σ0§70/128,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.65	308		Pn	02 14 05.7	+0.6
KDAK	Kodiak Island	2.65	308		Sn	02 14 36.6	-0.7
KDAK	Kodiak Island baz=126	2.65	308	S	Sn	02 14 36.4	-0.8
OHAK	Old Harbor	2.73	294		Pn	02 14 06.6	+0.4
OHAK					Sn	02 14 37.4	-1.8
OHAK	Old Harbor baz=111	2.73	294	P	Pn	02 14 06.6	+0.4
OHAK	baz=111			S	Sn	02 14 38.0	-1.2
SYI	Shuyak Island	3.13	322		Pn	02 14 12.6	+0.9
SYI	comp=N,67nm,1.5s			IAML		02 14 48.8	
SYI					Sn	02 14 49.1	+0.1
Q20K	Shuyak Island baz=139	3.13	322	P	Pn	02 14 12.6	+0.9
Q20K	baz=139			S	Sn	02 14 49.2	+0.2
MID	Middleton Isla	3.46	20		Pn	02 14 15.9	-0.3
MID	comp=N,150nm,1.3s			IAML		02 16 07.2	
Q23K	Middleton Isla	3.46	20		Pn	02 14 15.8	-0.4
Q23K	Middleton Isla baz=201	3.46	20	P	Pn	02 14 15.9	-0.2
CNPM	China Poot	3.59	339		Pn	02 14 18.5	+0.5
CNPM					Sn	02 14 59.4	-1.1
BRSE	Bradley Lake S	3.70	344		Pn	02 14 19.9	+0.3
BRSE					Sn	02 15 01.9	-1.3
BRSE	Bradley Lake S baz=162	3.70	344	P	Pn	02 14 19.9	+0.3
BRSE	baz=162			S	Sn	02 15 01.9	-1.3
BRLK	Bradley Lake	3.75	343		Pn	02 14 20.3	+0.1
P23K	Montague Islan	3.86	10		Pn	02 14 21.4	-0.3
SEW	Seward	3.92	354		Pn	02 14 22.4	-0.2
P19K	Oil Pt	4.21	327		Pn	02 14 27.6	+1.0
P19K	comp=N,65nm,1.2s			IAML		02 15 18.5	
P19K	comp=E,69nm,1.5s			IAML		02 15 23.1	
HIN	Hinchinbrook I	4.35	14		Pn	02 14 28.4	-0.1
HIN	comp=N,60nm,1.0s			IAML		02 15

	comp=N,45nm,0.8s							
GRIN	**Grindle Hills**	**4.97**	**33**		**Pn**	**02 14 36.9**	**0.0**	
SNH	**Sunshine Point**	**5.04**	**35**		**Pn**	**02 14 38.0**	**0.0**	
SNH				IAML		02 15 48.5		
	comp=N,22nm,1.4s							
SNH				IAML		02 15 54.6		
	comp=E,25nm,0.9s							
KHIT	**Khitrov Hills**	**5.12**	**32**		**Pn**	**02 14 38.6**	**-0.5**	
DIV	**Divide**	**5.16**	**16**		**Pn**	**02 14 39.1**	**-0.6**	
KNK	**Knik Glacier**	**5.22**	**1**		**Pn**	**02 14 40.6**	**+0.2**	
KNK				IAML		02 15 53.4		
	comp=E,18nm,1.1s							
KNK				IAML		02 16 01.7		
	comp=N,12nm,0.9s							
BMRM	**Bremner River**	**5.22**	**22**		**Pn**	**02 14 40.7**	**+0.2**	
BMRM	**Bremner River**	**5.22**	**22**	P	**Pn**	**02 14 41.5**	**+1.0**	
	baz=205							
WAX	**Waxell Ridge**	**5.24**	**33**		**Pn**	**02 14 40.4**	**-0.3**	
WAX				IAML		02 15 48.1		
	comp=E,35nm,0.9s							
BARK	**Barkley Ridge**	**5.32**	**35**		**Pn**	**02 14 41.8**	**0.0**	
SPCR	**Spurr Chakacha**	**5.33**	**341**		**Pn**	**02 14 42.1**	**+0.1**	
MESA	**MESA**	**5.34**	**39**		**Pn**	**02 14 42.6**	**+0.4**	
MESA				IAML		02 15 52.1		
	comp=E,31nm,1.5s							
SUA	**Susitna One**	**5.37**	**349**		**Pn**	**02 14 42.9**	**+0.3**	
CRQM	**Cirque**	**5.41**	**30**		**Pn**	**02 14 43.0**	**-0.1**	
KLU	**Klutina**	**5.49**	**14**		**Pn**	**02 14 44.5**	**+0.4**	
KLU	**Klutina**	**5.49**	**14**	P	**Pn**	**02 14 44.6**	**+0.5**	
	baz=196							
TGL	**Tana Glacier**	**5.49**	**32**		**Pn**	**02 14 44.0**	**-0.2**	
BAGL	**Bagley Icefiel**	**5.52**	**36**		**Pn**	**02 14 44.2**	**-0.2**	
ISLE	**Juniper Island**	**5.52**	**35**		**Pn**	**02 14 45.0**	**+0.3**	
N19K	**Bonanza Creek**	**5.52**	**329**		**Pn**	**02 14 44.8**	**+0.1**	
SPNN	**North Nagishla**	**5.57**	**340**		**Pn**	**02 14 46.3**	**+0.9**	
GHO	**Glory Hole Cre**	**5.58**	**359**		**Pn**	**02 14 46.1**	**+0.8**	
SML	**Sawmill**	**5.61**	**2**		**Pn**	**02 14 46.6**	**+0.8**	
SCM	**Sheep Creek Mo**	**5.68**	**7**		**Pn**	**02 14 47.8**	**+1.0**	
VRDI	**Verde Repeater**	**5.72**	**26**		**Pn**	**02 14 47.4**	**-0.1**	
SAMH	**Samovar Hills**	**5.74**	**44**		**Pn**	**02 14 48.1**	**+0.5**	
KIAG	**Kiagna River**	**5.77**	**32**		**Pn**	**02 14 47.8**	**-0.2**	
GRNC	**Granite Creek**	**5.81**	**36**		**Pn**	**02 14 48.4**	**-0.3**	
N25K	**Chitina, Valde**	**5.81**	**20**		**Pn**	**02 14 49.3**	**+0.8**	
N25K	**Chitina, Valde**	**5.81**	**20**	P	**Pn**	**02 14 49.5**	**+1.0**	
	baz=202							
TABL	**Table Mountain**	**5.81**	**40**		**Pn**	**02 14 48.9**	**+0.3**	
GLB	**Gilahina Butte**	**5.82**	**24**		**Pn**	**02 14 49.0**	**+0.3**	
N18K	**Kilae Creek**	**5.86**	**323**		**Pn**	**02 14 49.4**	**+0.2**	
PCA	**Pinnacle**	**5.92**	**45**		**Pn**	**02 14 50.1**	**+0.1**	
PINM	**Pinnacle**	**5.92**	**45**	P	**Pn**	**02 14 50.3**	**+0.2**	
	baz=232							
PTPK	**Patty Peak**	**5.95**	**30**		**Pn**	**02 14 50.4**	**-0.2**	
MCARA	**McCarthy VSAT**	**5.96**	**27**		**Pn**	**02 14 51.3**	**+0.7**	
MCARA	**McCarthy VSAT**	**5.96**	**27**	P	**Pn**	**02 14 51.7**	**+1.2**	
	baz=211							
SKT	**Skwentna**	**5.97**	**347**	Pn	**Pn**	**02 14 51.7**	**+1.1**	
PNL	**Peninsula**	**6.04**	**51**	P	**Pn**	**02 14 52.1**	**+0.5**	
	baz=238							
M24K	**Tolsona, Glenn**	**6.05**	**11**		**Pn**	**02 14 52.9**	**+1.0**	
BARN	**Barnard Glacie**	**6.09**	**34**		**Pn**	**02 14 52.7**	**+0.2**	
BCPM	**Bancas Point**	**6.09**	**48**		**Pn**	**02 14 52.6**	**+0.3**	
CTGM	**Chitina Glacie**	**6.12**	**36**		**Pn**	**02 14 52.7**	**-0.1**	
LOGN	**Logan Glacier**	**6.13**	**38**		**Pn**	**02 14 52.7**	**-0.3**	
M20K	**Styx River**	**6.13**	**340**		**Pn**	**02 14 53.2**	**+0.3**	
M19K	**Big River Lodg**	**6.42**	**335**		**Pn**	**02 14 56.7**	**-0.2**	
M18K	**Stony River**	**6.46**	**328**		**Pn**	**02 14 57.5**	**+0.2**	
O29M	**Mount Kennedy**	**6.72**	**48**		**Pn**	**02 15 01.9**	**+0.7**	
P29M	**Windy Craggy**	**6.76**	**55**		**Pn**	**02 15 01.2**	**-0.3**	
L19K	**White Mountain**	**6.77**	**335**	Pn	**Pn**	**02 15 01.5**	**-0.2**	
M17K	**Holitna River**	**6.90**	**322**		**Pn**	**02 15 04.2**	**+0.7**	
DHY	**Denali Highway**	**6.92**	**5**	Pn	**Pn**	**02 15 05.1**	**+1.3**	
S31K	**Pelican**	**7.01**	**70**	Pn	**Pn**	**02 15 02.7**	**-2.2**	
YUK7	**Dusty Glacier**	**7.03**	**48**		**Pn**	**02 15 06.0**	**+0.6**	
M27K	**Edge Creek, AK**	**7.08**	**27**	Pn	**Pn**	**02 15 07.2**	**+1.2**	
TRF	**Thorofare Moun**	**7.30**	**354**	Pn	**Pn**	**02 15 10.4**	**+1.2**	
CAST	**Castle Rocks**	**7.43**	**348**	Pn	**Pn**	**02 15 11.3**	**+0.6**	
HYT	**Haines Junctio**	**7.46**	**47**	Pn	**Pn**	**02 15 11.8**	**+0.7**	
L27K	**Beaver Creek,**	**7.69**	**24**		**Pn**	**02 15 15.5**	**+1.1**	
BCAR	**Beaver Creek A**	**7.71**	**24**	Pn	**Pn**	**02 15 14.9**	**+0.3**	
SKAG	**Skagway**	**7.83**	**60**	Pn	**Pn**	**02 15 17.1**	**+0.9**	
S32K	**Killisnoo**	**7.84**	**75**	Pn	**Pn**	**02 15 15.2**	**-1.1**	
O30N	**Mendenhall**	**8.02**	**50**		**Pn**	**02 15 18.9**	**0.0**	
SCRK	**Sand Creek**	**8.13**	**15**	Pn	**Pn**	**02 15 20.8**	**+0.4**	
M29M	**Somme Creek**	**8.14**	**36**		**Pn**	**02 15 20.8**	**+0.3**	
WHY	**Whitehorse**	**8.50**	**53**	Pn	**Pn**	**02 15 26.1**	**+0.7**	
N31M	**Braeburn, Yuko**	**8.52**	**46**	Pn	**Pn**	**02 15 26.5**	**+0.9**	
J19K	**Poorman**	**8.53**	**339**	Pn	**Pn**	**02 15 25.7**	**-0.1**	
IL31		**8.63**	**5**	Pn	**Pn**	**02 15 27.5**	**+0.4**	
ILAR	**Eielson Array**	**8.63**	**5**	Pn	**Pn**	**02 15 27.8**	**+0.7**	
P32M	**Atlin**	**8.66**	**61**	Pn	**Pn**	**02 15 27.4**	**-0.2**	
L29M	**L29M**	**8.73**	**33**	Pn	**Pn**	**02 15 29.1**	**+0.6**	
MDM	**Murphy Dome**	**8.78**	**1**	Pn	**Pn**	**02 15 30.4**	**+1.2**	
M30M	**Minto, Yukon**	**8.79**	**39**	Pn	**Pn**	**02 15 30.3**	**+0.9**	
I23K	**Minto, Yukon-K**	**8.97**	**358**	Pn	**Pn**	**02 15 33.4**	**+1.6**	
DAWY	**Dawson**	**9.13**	**27**	Pn	**Pn**	**02 15 35.0**	**+1.0**	
P33M	**Teslin, Yukon**	**9.28**	**58**	Pn	**Pn**	**02 15 34.0**	**-2.1**	
K29M	**Barlow Dome**	**9.46**	**31**	Pn	**Pn**	**02 15 39.2**	**+0.6**	
I26K	**Coal Creek Min**	**9.51**	**14**	Pn	**Pn**	**02 15 40.6**	**+1.4**	
H21K	**Melozitna Rive**	**9.68**	**350**	Pn	**Pn**	**02 15 41.7**	**+0.1**	
R33M	**Jennings River**	**9.97**	**64**	Pn	**Pn**	**02 15 45.4**	**-0.3**	
IMAR	**Indian Mountai**	**10.10**	**348**	Pn	**Pn**	**02 15 46.7**	**-0.5**	
H18K	**Honhosa River**	**10.13**	**336**	Pn	**Pn**	**02 15 47.3**	**-0.4**	
J30M	**Hart River**	**10.36**	**31**	Pn	**Pn**	**02 15 50.3**	**-0.6**	
G21K	**Allakaket**	**10.59**	**349**	Pn	**Pn**	**02 15 53.9**	**0.0**	
BMAR	**Burnt Mountain**	**11.42**	**8**	Pn	**Pn**	**02 16 05.8**	**+0.5**	
B21K	**Ikpikpuk River**	**13.71**	**351**	Pn	**Pn**	**02 16 37.8**	**+1.3**	
YKA	**Yellowknife Ar**	**18.30**	**56**	P	**Pn**	**02 17 36.5**	**+0.4**	
A36M	**Sachs Harbour**	**18.61**	**23**	P	**P**	**02 17 39.8**	**+0.4**	
A36M				IAmb	IAmb	02 17 43.2		
	comp=Z,2.7nm,0.8s							

IDC 10 02:15:13.8±1.2, 15°.79S×174°.19W, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=50.8km s-min=27.5km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.01**	**257**	P	P	02 24 02.5	-0.3
	1.4nm,0.7s,baz=97,slow=6.5,SNR=22						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**49.27**	**252**	P	P	02 24 05.0	+0.3
	9.9nm,0.6s,baz=87,slow=8.0,SNR=121						
	9.9nm,0.6s						
QSPA	**South Pole Qui**	**74.25**	**180**	P	P	02 26 53.0	+0.4
	0.3nm,0.3s,baz=22,slow=5.6,SNR=1.5						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**82.98**	**11**	P	P	02 27 40.9	+0.5
	0.3nm,0.5s,baz=215,slow=5.2,SNR=12						
	0.3nm,0.5s						
PDAR	**Pinedale Array**	**83.06**	**42**	P	P	02 27 41.8	+0.1
	0.2nm,0.6s,baz=227,slow=3.3,SNR=2.3						
	0.2nm,0.6s						
BRTR	**Keskin Array B**	**145.97**	**320**	PKPbc	PKPdf	02 34 54.0	-1.3
	0.8nm,0.6s,baz=79,slow=2.6,SNR=8.0						

*IDC **10** 02:16:15.8±0.8, 38°.30N×15°.85E, h0km, mb3.6/7, mbtmp3.6/14, ML3.5/7, MS3.1/2, Error ellipse: s-maj=20.2km s-min=13.0km az=140.0*

*PDG **10** 02:16:16.9±0.8, 38°.20N×15°.77E, h18km±1km, ML3.6/12, Error ellipse: s-maj=1.0km s-min=2.0km az=0.0*

*ROM **10** 02:16:17.5±0.1, 38°.217N±0°.007×15°.756E±0°.008, h17km±1km, ML3.7/144, Mw3.7, Error ellipse: s-maj=0.8km s-min=0.3km az=316.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr-2.69; Mθθ-2.32; Mφφ5.01; Mrθ-1.87; Mθφ0.60; Mφr-0.52; Fault plane solution: M0 4.75480×10^14^ NP1:φs 150.00000°, δ 54.00000°, λ -145.00000°. NP2:φs 38.00000°, δ 63.00000°, λ -42.00000°.*

*LDG **10** 02:16:18.0±0.2, 38°.19N×15°.76E, h19km, Ml3.3/4 Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*

*NEIC **10** 02:16:18.5±2.4, 38°.20N±0°.05×15°.81E±0°.07, h17km±3km, mb3.9/7, Error ellipse: s-maj=9.6km s-min=5.6km az=132.0*

*THE **10** 02:16:19.3, 38°.04N×15°.73E, h31km±40km, ML3.4/5, Error ellipse: s-maj=40.4km s-min=1.4km az=0.0*

ISC 10 02:16:17.6±0.8, 38°.22N±0°.02×15.74E±0°.02, h14km±5km, n261, σ1§48/304, mb3.9/11, 25C-10D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEL	**Celeste**	**0.13**	**71**	Pg	**Pb**	**02 16 20.9**	**-1.0**
CEL				Sg	**Sb**	**02 16 24.1**	**-0.5**
CEL	**Celeste**	**0.13**	**71**	⇑P	**Pb**	**02 16 21.6**	**-0.3**
CEL				S	**Sb**	**02 16 24.2**	**-0.5**
CEL				AML	AML		
CEL				AML	AML		
CEL				AML	AML		
CEL				AML	AML		
MSRU	**Castanea**	**0.19**	**284**	⇑P	**Pg**	**02 16 22.2**	**+0.2**
MSRU				S	**Sg**	**02 16 25.4**	**+0.4**
MSRU				AML	AML		
MSRU				AML	AML		
MTTG	**Motta San Giov**	**0.22**	**190**	⇓P	**Pg**	**02 16 22.0**	**-0.5**
MTTG				S	**Sg**	**02 16 25.0**	**-0.8**
MTTG				AML	AML		
	comp=N,82850μm,0.5s						
MTTG				AML	AML		
	comp=E,36550μm,0.5s						
MTTG				AML	AML		
	comp=N,82850μm,1.5s						
SOI	**Samo**	**0.29**	**120**	⇑P	**Pg**	**02 16 23.6**	**0.0**
SOI				S	**Sg**	**02 16 27.2**	**-0.5**
SOI				AML	AML		
	comp=N,40600μm,0.3s						
SOI				AML	AML		
	comp=E,37950μm,0.5s						
JOPP	**Joppolo**	**0.41**	**16**	⇑P	**Pg**	**02 16 26.5**	**+0.7**
JOPP				S	**Sb**	**02 16 32.9**	**+0.2**
JOPP				AML	AML		
	comp=N,31800μm,0.4s						
JOPP				AML	AML		
	comp=E,15850μm,0.3s						
AIO	**Antillo**	**0.47**	**239**	⇑P	**Pg**	**02 16 26.5**	**-0.5**
AIO				S	**Sg**	**02 16 33.7**	**+0.4**
AIO				AML	AML		
	comp=E,12650μm,0.3s						
AIO				AML	AML		
	comp=N,14850μm,0.4s						
NOV	**Novara**	**0.51**	**249**	⇑P	**Pg**	**02 16 27.2**	**-0.5**
NOV				S	**Sg**	**02 16 34.9**	**+0.3**
NOV				AML	AML		
	comp=E,19650μm,0.7s						
NOV				AML	AML		
	comp=E,19650μm,1.3s						
NOV				AML	AML		
	comp=N,19950μm,1.2s						
PLAC	**Placanica**	**0.60**	**67**	⇑P	**Pb**	**02 16 29.8**	**0.0**
PLAC				AML	AML		
	comp=N,18350μm,0.8s						
PLAC				AML	AML		
	comp=N,21100μm,0.6s						
PLAC				AML	AML		
	comp=E,18850μm,1.0s						
PLAC				AML	AML		
	comp=E,20150μm,0.6s						
PLAC				AML	AML		
	comp=N,18350μm,1.2s						
VPL	**Vulcano Piano**	**0.62**	**285**	⇑P	**Pg**	**02 16 29.6**	**-0.1**
VPL				S	**Sg**	**02 16 39.3**	**+1.4**
VPL				AML	AML		
	comp=E,87400μm,0.5s						
VPL				AML	AML		
	comp=N,96400μm,0.5s						
IVGP	**Vulcano Grotta**	**0.64**	**287**	⇑P	**Pg**	**02 16 29.7**	**-0.5**
IVGP				S	**Sg**	**02 16 39.4**	**+0.8**
IVGP				AML	AML		
	comp=N,24750μm,0.6s						
IVGP				AML	AML		
	comp=E,44450μm,0.3s						
LLI	**Lipari**	**0.66**	**290**	⇑P	**Pb**	**02 16 30.8**	**-0.2**
LLI				AML	AML		
	comp=E,91950μm,0.4s						
LLI				AML	AML		
MUCR	**Ucria**	**0.70**	**256**	⇑P	**Pb**	**02 16 30.8**	**-1.0**
MUCR				S	**Sg**	**02 16 42.2**	**+1.5**
MUCR				AML	AML		
	comp=E,9465μm,0.3s						
MUCR				AML	AML		
	comp=N,17050μm,0.4s						
IST3	**Stromboli F**	**0.71**	**326**	P	**Pb**	**02 16 31.6**	**-0.1**
IST3				AML	AML		
	comp=E,19300μm,0.3s						
IST3				AML	AML		
	comp=N,29100μm,1.3s						
IST3				AML	AML		
	comp=E,19300μm,1.7s						
ISTR	**Stromboli Gino**	**0.71**	**323**	P	**Pb**	**02 16 31.4**	**-0.4**
ISTR				AML	AML		
	comp=E,20100μm,0.5s						
ISTR				AML	AML		
	comp=N,19050μm,0.3s						
EMSG	**Monte Spagnolo**	**0.74**	**238**	⇑P	**Pb**	**02 16 32.4**	**+0.1**
EMSG				AML	AML		
	comp=E,12800μm,0.6s						
EMSG				AML	AML		
	comp=E,12800μm,1.4s						
EMSG				AML	AML		
	comp=N,11250μm,0.4s						
ESLN	**Serra La Nave**	**0.80**	**229**	P	**Pb**	**02 16 33.7**	**+0.3**
EPZF	**Pizzo Felice**	**0.80**	**241**	⇑P	**Pb**	**02 16 33.1**	**-0.2**
EPZF				AML	AML		
	comp=N,10260μm,0.5s						
EPZF				AML	AML		
	comp=E,8500μm,0.4s						
GRI	**Girifalco**	**0.81**	**41**	P	**Pb**	**02 16 33.0**	**-0.4**
GRI				AML	AML		
	comp=E,11310μm,0.5s						
GRI				AML	AML		
	comp=E,11310μm,1.5s						
GRI				AML	AML		
	comp=N,13400μm,0.4s						
EPOZ	**Pozzillo**	**0.87**	**217**	⇑P	**Pb**	**02 16 32.2**	**-2.4**
EPOZ				AML	AML		
	comp=E,6945μm,0.7s						
EPOZ				AML	AML		
	comp=N,7165μm,1.0s						
EPOZ				AML	AML		
	comp=E,6945μm,1.3s						
ESML	**S. M. di Licod**	**0.91**	**229**	⇑P	**Pb**	**02 16 35.5**	**+0.4**
ESML				AML	AML		
	comp=E,4805μm,0.7s						
ESML				AML	AML		
	comp=N,3430μm,1.5s						
ESML				AML	AML		
	comp=N,3430μm,0.5s						
ESML				AML	AML		
	comp=E,4805μm,1.3s						
MSFR	**San Fratello**	**0.93**	**259**	⇑P	**Pb**	**02 16 34.8**	**-0.6**
MSFR				S	**Sb**	**02 16 48.4**	**+0.7**
MSFR				AML	AML		
	comp=E,2915μm,0.7s						
MSFR				AML	AML		
	comp=N,2575μm,1.3s						
HAGA	**Augusta**	**1.04**	**207**	P	**Pb**	**02 16 37.0**	**-0.4**
GALF	**Gagliano Caste**	**1.06**	**242**	P	**Pb**	**02 16 38.0**	**+0.3**
GALF				AML	AML		
	comp=E,11650μm,0.7s						
GALF				AML	AML		
	comp=N,9960μm,0.6s						
GALF				AML	AML		
	comp=E,11650μm,1.3s						
CAR1	**CAROLEI**	**1.10**	**19**	P	**Pb**	**02 16 37.5**	**-0.9**
CAR1				AML	AML		
	comp=E,10500μm,0.5s						
CAR1				AML	AML		
	comp=N,9255μm,0.7s						
CAR1				AML	AML		
	comp=N,9255μm,0.7s						
CAR1				AML	AML		
	comp=N,8850μm,1.1s						
CAR1				AML	AML		
	comp=N,8850μm,0.9s						
CAR1				AML	AML		
	comp=N,9255μm,1.3s						
CAR1				AML	AML		
	comp=E,9580μm,0.5s						
SERS	**Sersale**	**1.10**	**42**	P	**Pn**	**02 16 38.8**	**0.0**
SPS2	**Spezzano della**	**1.17**	**23**	P	**Pn**	**02 16 38.7**	**-1.0**
SPS2				AML	AML		
	comp=N,2650μm,0.4s						
SPS2				AML	AML		
	comp=N,2650μm,1.6s						
SPS2				AML	AML		
	comp=E,2050μm,1.5s						
SSY	**Sortino**	**1.19**	**207**	P	**Pn**	**02 16 39.4**	**-0.5**
SSY				S	**Sg**	**02 16 56.3**	**+0.4**
SSY				AML	AML		
	comp=N,7300μm,0.8s						
SSY				AML	AML		
	comp=E,5300μm,0.7s						
TIP	**Timpagrande**	**1.25**	**39**		**Pb**	**02 16 41.1**	**+0.1**
TIP	**Timpagrande**	**1.25**	**39**	P	**Pn**	**02 16 40.8**	**+0.1**
TIP				AML	AML		
	comp=N,2245μm,0.7s						
TIP				AML	AML		
	comp=E,2330μm,0.8s						
TIP				AML	AML		
	comp=E,1940μm,0.7s						
TIP				AML	AML		
	comp=N,2740μm,0.7s						
TIP				AML	AML		
	comp=E,1940μm,1.3s						
PLLN	**Pollina**	**1.28**	**260**	P	**Pn**	**02 16 40.4**	**-0.8**
PLLN				AML	AML		
	comp=E,7670μm,0.6s						
PLLN				AML	AML		
	comp=N,7165μm,0.5s						
PLLN				AML	AML		
	comp=E,7670μm,1.4s						
VAE	**Valguarnera**	**1.28**	**235**	Pn	**Pg**	**02 16 43.5**	**+1.1**
	comp=E,30nm,0.3s,baz=60,slow=0.8,SNR=52						
VAE				Sn	**Sg**	**02 17 04.3**	**+5.3**
	comp=E,64nm,0.3s,baz=133,slow=7.1,SNR=8.1						
HVZN	**Vizzini**	**1.32**	**218**	P	**Pn**	**02 16 41.7**	**0.0**
HVZN				S	**Sg**	**02 16 59.9**	**-0.3**
CET2	**Cetraro**	**1.32**	**7**	⇓P	**Pn**	**02 16 40.9**	**-0.8**
CET2				AML	AML		
	comp=N,7915μm,0.5s						
CET2				AML	AML		
	comp=E,5640μm,0.4s						
CET2				AML	AML		
	comp=E,5640μm,1.6s						
PETRA	**Petralia Sopra**	**1.34**	**254**	P	**Pn**	**02 16 42.1**	**0.0**
PETRA				AML	AML		
	comp=N,3165μm,0.8s						
PETRA				AML	AML		
	comp=E,3045μm,0.3s						
PETRA				AML	AML		
	comp=N,3165μm,1.2s						
CSLB	**Castelbuono**	**1.36**	**259**	P	**Pn**	**02 16 41.2**	**-1.0**
CSLB				AML	AML		
	comp=N,950μm,1.0s						
CSLB				AML	AML		
	comp=N,950μm,1.0s						
CSLB				AML	AML		
	comp=E,873μm,1.0s						
GIB	**Gibilmanna**	**1.37**	**261**	P	**Pn**	**02 16 41.8**	**-0.6**
GIB				AML	AML		
	comp=E,4405μm,0.6s						
GIB				AML	AML		
	comp=N,5145μm,0.6s						
GIB				AML	AML		
	comp=E,4405μm,1.4s						
LADO	**San Nicola del**	**1.44**	**42**	P	**Pg**	**02 16 45.4**	**0.0**
RESU	**Resuttano**	**1.45**	**247**	P	**Pg**	**02 16 45.7**	**+0.2**
HMDC	**Modica**	**1.47**	**212**	P	**Pn**	**02 16 43.8**	**0.0**
HMDC				AML	AML		
	comp=E,2120μm,0.7s						
HMDC				AML	AML		
	comp=N,2630μm,0.7s						
HMDC				AML	AML		
	comp=N,2630μm,1.3s						
RAFF	**Raffo Rosso**	**1.48**	**228**		**Pb**	**02 16 44.7**	**-0.2**
RAFF				Sn	**Sg**	**02 17 05.7**	**+0.5**
RAFF	**Raffo Rosso**	**1.48**	**228**	⇑P	**Pb**	**02 16 44.7**	**-0.2**
RAFF				AML	AML		
	comp=E,3395μm,0.9s						
RAFF				AML	AML		
	comp=N,4170μm,0.6s						
TDS	**Terranova Siba**	**1.51**	**18**	P	**Pn**	**02 16 43.6**	**-0.7**
TDS				AML	AML		
	comp=N,808μm,1.2s						
TDS				AML	AML		
	comp=N,808μm,0.8s						
TDS				AML	AML		
	comp=E,679μm,1.0s						
PIPA	**Pietrapaola**	**1.52**	**33**	P	**Pb**	**02 16 46.3**	**+0.7**
GRIS	**Grisolia**	**1.52**	**3**	⇓P	**Pn**	**02 16 43.9**	**-0.6**
HPAC	**Pachino**	**1.60**	**198**	P	**Pn**	**02 16 45.8**	**+0.3**
HPAC				AML	AML		
	comp=E,2720μm,0.9s						
HPAC				AML	AML		
	comp=N,3000μm,1.4s						
ALJA	**Alia**	**1.64**	**254**	P	**Pn**	**02 16 46.9**	**+0.8**
MMN	**Mormanno**	**1.68**	**7**	P	**Pn**	**02 16 46.0**	**-0.6**
MMN				AML	AML		
	comp=E,1385μm,0.8s						
MMN				AML	AML		
	comp=N,3760μm,0.4s						
SALB	**San Lorenzo Be**	**1.72**	**16**	P	**Pn**	**02 16 47.3**	**0.0**
SALB				AML	AML		
	comp=N,554μm,0.7s						
SALB				AML	AML		
	comp=E,826μm,0.3s						
SOLUN	**Solunto**	**1.75**	**267**	P	**Pn**	**02 16 46.2**	**-1.2**
SOLUN				AML	AML		
	comp=N,376μm,0.5s						
SOLUN				AML	AML		
	comp=E,560μm,0.6s						
CUC	**Castrocucco**	**1.77**	**2**		**Pn**	**02 16 47.0**	**-1.0**
CUC	**Castrocucco**	**1.77**	**2**	P	**Pn**	**02 16 47.1**	**-0.8**
CUC				AML	AML		
	comp=N,1160μm,0.6s						
CUC				AML	AML		
	comp=N,1425μm,0.6s						
CUC				AML	AML		
	comp=E,1905μm,0.5s						
CUC				AML	AML		
	comp=E,1570μm,0.5s						
CUC				AML	AML		
	comp=N,1425μm,1.4s						
CUC				AML	AML		
	comp=N,1160μm,1.4s						
MPG	**Monte Pellegri**	**1.88**	**269**	P	**Pn**	**02 16 48.2**	**-1.2**
MPG				AML	AML		
	comp=N,380μm,1.2s						
MPG				AML	AML		
	comp=E,345μm,1.2s						
MGR	**Morigerati**	**1.92**	**356**	⇓P	**Pn**	**02 16 49.2**	**-0.7**
MGR				AML	AML		
	comp=E,704μm,0.3s						
MGR				AML	AML		
	comp=N,804μm,0.8s						
MGR				AML	AML		
	comp=E,704μm,1.7s						
MGR				AML	AML		
	comp=N,804μm,1.2s						
ORI	**Oriolo Calabro**	**1.93**	**16**	P	**Pn**	**02 16 50.9**	**+0.9**
CORL	**Corleone**	**1.95**	**261**	P	**Pn**	**02 16 50.2**	**-0.2**
SIRI	**Monte Sirino -**	**1.96**	**3**	⇓P	**Pn**	**02 16 50.0**	**-0.7**
SIRI				AML	AML		
	comp=E,1550μm,1.6s						
SIRI				AML	AML		
	comp=E,1565μm,1.6s						
SIRI				AML	AML		
	comp=N,1003μm,0.5s						
SIRI				AML	AML		
	comp=E,1550μm,0.4s						
SIRI				AML	AML		
	comp=E,1565μm,0.4s						
SIRI				AML	AML		
	comp=N,974μm,0.5s						
MTSN	**Montesano sull**	**2.05**	**0**	P	**Pn**	**02 16 51.0**	**-0.8**
MTSN				AML	AML		
	comp=E,860μm,1.6s						
MTSN				AML	AML		
	comp=N,974μm,1.4s						
MTSN				AML	AML		
	comp=N,974μm,0.6s						
MTSN				AML	AML		
	comp=E,860μm,0.4s						
USI	**Ustica**	**2.07**	**284**	P	**Pn**	**02 16 49.8**	**-2.2**
CLTB	**Caltabellotta**	**2.10**	**253**		**Pn**	**02 16 54.0**	**+1.6**
CLTB	**Caltabellotta**	**2.10**	**253**	P	**Pb**	**02 16 54.6**	**-0.8**
MCEL	**Monticello**	**2.

comp=E,659µm,0.4s
MCEL AML AML
comp=N,694µm,0.5s
MCEL AML AML
comp=E,659µm,1.6s
MCEL AML AML
comp=E,658µm,1.6s
CMPR Campora 2.13 351 ⇓P **Pn** 02 16 52.1 -0.7
CMPR AML AML
comp=E,642µm,0.4s
CMPR AML AML
comp=N,500µm,0.7s
CMPR AML AML
comp=E,642µm,1.6s
CMPR AML AML
comp=N,500µm,1.3s
SLCN Sala Consilina 2.17 358 P **Pn** 02 16 53.0 -0.4
SLCN AML AML
comp=E,1505µm,0.5s
SLCN AML AML
comp=N,1035µm,1.2s
SLCN AML AML
comp=N,922µm,1.3s
SLCN AML AML
comp=N,922µm,0.7s
SLCN AML AML
comp=N,1035µm,0.8s
SLCN AML AML
comp=E,1650µm,0.6s
CRAC Craco 2.21 14 P **Pn** 02 16 55.2 +1.3
MMGO Monte Magaggia 2.25 257 ⇓P **Pn** 02 16 55.9 +1.4
MMGO AML AML
comp=E,278µm,0.6s
MMGO AML AML
comp=E,278µm,1.4s
MMGO AML AML
comp=N,226µm,1.2s
SRN3 Sant'Arsenio 2.28 355 P **Pn** 02 16 54.6 -0.3
PTRP Pietrapertosa 2.31 6 P **Pn** 02 16 56.0 +0.5
MATE Matera 2.54 17 P **Pn** 02 16 58.8 +0.3
MATE AML AML
comp=E,286µm,1.1s
MATE AML AML
comp=E,286µm,0.9s
MATE AML AML
comp=N,306µm,1.6s
MRLC Muro Lucano 2.54 356 P **Pn** 02 16 59.4 +0.8
MRLC AML AML
comp=E,146µm,0.9s
MRLC AML AML
comp=N,341µm,1.2s
MRLC AML AML
comp=N,168µm,1.2s
MRLC AML AML
comp=E,284µm,0.9s
WDD Wied Dalam 2.57 203 Pn **Pn** 02 16 57.9 -0.9
ACER Acerenza 2.57 3 P **Pn** 02 17 00.0 +1.1
ACER AML AML
comp=E,514µm,1.5s
ACER AML AML
comp=E,501µm,1.5s
ACER AML AML
comp=E,501µm,0.5s
ACER AML AML
comp=N,428µm,0.5s
ACER AML AML
comp=N,434µm,0.5s
ACER AML AML
comp=E,514µm,0.5s
TAR1 Taranto 2.60 27 P **Pn** 02 16 59.5 +0.3
TAR1 AML AML
comp=E,294µm,0.6s
TAR1 AML AML
comp=N,286µm,0.4s
TAR1 AML AML
comp=E,294µm,1.4s
PALZ Palazzo San Ge 2.73 3 P **Pn** 02 17 01.7 +0.6
PALZ AML AML
comp=E,423µm,0.8s
PALZ AML AML
comp=N,444µm,1.5s
PALZ AML AML
comp=E,423µm,1.2s
PALZ AML AML
comp=N,444µm,0.5s
SNAL S. Angelo Dei 2.74 352 P **Pn** 02 17 02.1 +0.9
SNAL AML AML
comp=E,393µm,0.9s
SNAL AML AML
comp=N,409µm,1.0s
SNAL AML AML
comp=E,402µm,0.7s
SNAL AML AML
comp=N,396µm,1.0s
SNAL AML AML
comp=N,409µm,1.0s
SNAL AML AML
comp=N,396µm,1.0s
SNAL AML AML
comp=E,393µm,1.1s
SNAL AML AML
comp=E,402µm,1.3s
AMUR Altamura 2.77 14 P **Pn** 02 17 01.6 0.0
AMUR AML AML
comp=N,218µm,0.8s
AMUR AML AML
comp=E,232µm,1.0s
AMUR AML AML
comp=N,218µm,1.2s
SCTE Santa Cesarea 2.82 48 **Pn** 02 17 02.9 +0.7
SCTE Santa Cesarea 2.82 48 P **Pn** 02 17 02.4 +0.2
SCTE AML AML
comp=E,466µm,1.5s
SCTE AML AML
comp=N,402µm,0.4s
SCTE AML AML
comp=E,466µm,0.5s
MRVN Minervino Murg 2.86 7 P **Pn** 02 17 02.6 -0.2
MRVN AML AML
comp=E,175µm,0.4s
MRVN AML AML
comp=N,132µm,0.6s
MESG Mesagne 2.88 34 P **Pn** 02 17 03.4 +0.3
PAOL Paolisi 2.95 343 **Pn** 02 17 05.2 +1.0
MSAG Monte S. Angel 3.49 2 P **Pn** 02 17 11.7 +0.1
MSAG AML AML
comp=N,285µm,0.4s
MSAG AML AML
comp=N,110µm,1.1s
MSAG AML AML
comp=N,110µm,0.9s
MSAG AML AML
comp=N,285µm,1.6s
MSAG AML AML
comp=E,47µm,0.7s
MSAG AML AML
comp=E,141µm,0.7s
KEK Kerkira 3.50 63 Pn **Pn** 02 17 10.3 -1.3
KEK Kerkira 3.50 63 P **Pn** 02 17 12.4 +0.8
KEK S **Sn** 02 17 54.2 +1.4
comp=E,235nm,0.5s
KEK Kerkira 3.50 63 P **Pn** 02 17 09.9 -1.7
KEK AML AML
comp=E,72µm,0.5s
KEK AML AML
comp=N,51µm,0.5s
MELA Melanico ??? S 3.52 352 P **Pn** 02 17 12.6 +0.8
MELA AML AML
comp=N,200µm,0.8s
MELA AML AML
comp=E,192µm,1.0s
SGRT San Giovanni R 3.53 0 Pn **Pn** 02 17 12.2 0.0
SGRT San Giovanni R 3.53 0 P **Pn** 02 17 12.2 0.0
SGRT AML AML
comp=E,118µm,0.6s
SGRT AML AML
comp=N,188µm,0.9s
SGRT AML AML
comp=E,118µm,1.4s
APRC Apricena 3.54 358 P **Pn** 02 17 12.4 +0.2
APRC AML AML
comp=N,181µm,0.7s
APRC AML AML
comp=E,156µm,0.5s
KEF3 Kipouria, Keph 3.63 89 P **Pn** 02 17 14.1 +0.7
VLO Vlora 3.68 51 **Pn** 02 17 15.1 +1.0
VLO Vlora 3.68 51 P **Pn** 02 17 16.1 +2.1
VLO S **Sn** 02 18 00.0 +2.8
KEF4 Livadi, Kephal 3.69 88 P **Pn** 02 17 14.7 +0.5
SRN Sarande 3.71 62 P **Pn** 02 17 15.7 +1.2
SRN S **Sn** 02 18 00.0 +2.1
SRN Sarande 3.71 62 P **Pn** 02 17 14.7 +0.3
SRN AML AML
comp=E,81µm,0.8s
SRN AML AML
comp=N,95µm,1.5s
SRN AML AML
comp=N,95µm,0.5s
FSK Fiskardo 3.80 85 P **Pn** 02 17 16.0 +0.3
IGT Igoumenitsa 3.82 68 P **Pn** 02 17 16.6 +0.6
IGT S **Sn** 02 18 01.9 +1.2
comp=N,82nm,0.4s
VLS Valsamata 3.82 89 P **Pn** 02 17 15.9 -0.1
VLS S **Sn** 02 18 00.4 -0.4
VLS Valsamata 3.82 89 AML AML
comp=N,41µm,1.1s
VLS AML AML
comp=E,50µm,1.1s
VLS AML AML
comp=E,50µm,0.9s
EVGI Lefkada island 3.88 83 P **Pn** 02 17 17.5 +0.6
LKD2 Lefkada island 3.90 80 P **Pn** 02 17 17.6 +0.5
LKD2 S **Sn** 02 18 03.4 +0.7
TSLK Tsoukalades, L 3.90 80 P **Pn** 02 17 17.6 +0.5
NYDR Nydri-Lefkada 3.92 81 P **Pn** 02 17 17.9 +0.5
NYDR S **Sn** 02 18 03.9 +0.7
comp=E,62nm,0.5s
INTR Introdacqua 4.04 340 Pn **Pn** 02 17 20.9 +1.7
LTHK Lithakia 4.06 96 P **Pn** 02 17 19.2 -0.1
JAN Janina 4.24 69 P **Pn** 02 17 24.1 +2.3
JAN S **Sn** 02 18 13.8 +2.8
comp=E,172nm,0.3s
TIR Tirane 4.46 44 **Pn** 02 17 24.8 0.0
TIR Tirane 4.46 44 AML AML
comp=E,226µm,1.3s
TIR AML AML
comp=E,226µm,0.7s
TIR AML AML
comp=N,309µm,0.5s
RLS Riolos of Patr 4.52 90 P **Pn** 02 17 26.6 +1.0
PVO Paravola 4.56 83 P **Pn** 02 17 28.2 +2.0
PVO S **Sn** 02 18 20.3 +1.3
KBN Korca 4.59 57 **Pn** 02 17 27.2 +0.6
KBN Korca 4.59 57 P **Pn** 02 17 28.0 +1.4
ULC Ulcinj 4.61 35⇑ *i* Pn **Pn** 02 17 26.9 0.0
ULC *i* Sn **Sn** 02 18 19.7 -0.5
LSTV Lastovo 4.63 11 *e*Pn **Pn** 02 17 26.2 -0.9
NEST Nestorio 4.67 60 P **Pn** 02 17 30.2 +2.5
NEST S **Sn** 02 18 24.6 +2.9
comp=N,60nm,0.5s
CAMP Campotosto 4.67 338 **Pn** 02 17 29.3 +1.5
KPRO Kipourio 4.71 67 P **Pn** 02 17 29.8 +1.5
KPRO S **Sn** 02 18 25.5 +2.8
DRO Drossia 4.72 91 P **Pn** 02 17 29.5 +1.1
HCY Herceg Novi 4.72 26⇑ *i* Pn **Pn** 02 17 26.8 -1.6
HCY *i* Sn **Sn** 02 18 22.4 -0.5
HCY Herceg Novi 4.72 26 *e*Pn **Pn** 02 17 27.0 -1.4
BUM Brajici-Budva 4.74 30⇑ *i* Pn **Pn** 02 17 26.9 -1.8
BUM *i* Sn **Sn** 02 18 22.8 -0.7
DRME Dracevica, Mon 4.76 33⇑ *i* Pn **Pn** 02 17 28.6 -0.3
DRME *i* Sn **Sn** 02 18 23.4 -0.5
DRME Dracevica, Mon 4.76 33 *e*Pn **Pn** 02 17 28.0 -0.9
EVR Evrytania 4.81 80 P **Pn** 02 17 30.8 +1.1
DBRK Dubrovnik 4.81 22 *i* Pn **Pn** 02 17 28.8 -0.9
DBRK Sn **Sn** 02 18 24.6 -0.5
EFP Efpalio 4.85 86 P **Pn** 02 17 31.4 +1.2
OHR Ohrid 4.86 52 *i* Pn **Pn** 02 17 33.0 +2.7
OHR *e*Sg **Sn** 02 18 27.9 +1.5
ANX Ano Chora 4.87 84 P **Pn** 02 17 31.7 +1.2
STON Ston 4.88 17 *e*Pn **Pn** 02 17 30.2 -0.4
STON Ston 4.88 17 *e*Pn **Pn** 02 17 30.2 -0.4
TREB Trebinje 4.92 23 *e*Pn **Pn** 02 17 30.2 -0.9
PYL PYLOS 4.95 104 P **Pn** 02 17 31.4 -0.1
CEME Cevo 4.96 28⇓ *i* Pn **Pn** 02 17 30.3 -1.4
CEME *i* Sn **Sn** 02 18 25.7 -3.2
PUK Puka 4.97 38 **Pn** 02 17 33.0 +1.0
PHP Peshkopia 5.00 45 P **Pn** 02 17 34.2 +1.9
NRCA Norcia 5.03 337 Pn **Pn** 02 17 34.5 +1.9
FNA Florina 5.06 58 Pn **Pn** 02 17 34.0 +0.9
FNA Florina 5.06 58 P **Pn** 02 17 35.1 +2.0
FNA S **Sn** 02 18 34.3 +3.0
KLV Kalavryta, Ach 5.06 90 P **Pn** 02 17 33.9 +0.8
MAKR Makrakomi, Fth 5.07 79 P **Pn** 02 17 35.0 +1.8
THL Klokotos Trika 5.08 73 P **Pn** 02 17 35.3 +2.0
VSL Villasalto 5.13 286 Pn **Pn** 02 17 32.1 -1.9
VSL Villasalto 5.13 286 P **Pn** 02 17 31.9 -2.1
BRY Bratogost 5.14 24⇓ *i* Pn **Pn** 02 17 33.1 -1.2
BRY *i* Sn **Sn** 02 18 31.9 -1.6
BRY Bratogost 5.14 24 *e*Pn **Pn** 02 17 33.4 -0.9
MAKA Makarska 5.16 10 *e*Pn **Pn** 02 17 35.3 +1.0
NKME Niksic 5.16 27⇓ *i* Pn **Pn** 02 17 32.9 -1.6
NKME *i* Sn **Sn** 02 18 32.0 -1.9
GUMA Gualdo di Mace 5.17 340 **Pn** 02 17 36.0 +1.4
DGI Dorgali Grotta 5.20 296 P **Pn** 02 17 32.9 -2.2
GUR Goura 5.22 91 P **Pn** 02 17 36.4 +1.1
FDMO Fiordimonte 5.22 338 Pn **Pn** 02 17 37.0 +1.7
AGG Agios Georgios 5.22 79 Pn **Pn** 02 17 36.0 +0.7
AGG Agios Georgios 5.22 79 P **Pn** 02 17 37.4 +2.1
TYRN Tyrnavos 5.28 72 P **Pn** 02 17 38.0 +2.0
RICI Ricice 5.38 11 *e*Pn **Pn** 02 17 36.3 -1.1
NEVS Nevesinje 5.38 19 *e*Pn **Pn** 02 17 38.9 +1.3
PVY Plav 5.43 35⇑ *i* Pn **Pn** 02 17 37.9 -0.3
PVY *i* Sn **Sn** 02 18 39.8 -0.8
ZIRJ Zirje 5.43 359 *e*Pn **Pn** 02 17 38.0 -0.2
KOME Kolasin 5.45 31⇑ *i* Pn **Pn** 02 17 37.9 -0.6
KOME *i* Sn **Sn** 02 18 39.7 -1.3
AXAR Agios Charalam 5.46 82 P **Pn** 02 17 40.5 +2.0
AXAR S **Sn** 02 18 43.0 +1.9
THAL Thalero 5.46 90 P **Pn** 02 17 39.7 +1.1
UPM Unac-Piva 5.53 25⇑ *i* Pn **Pn** 02 17 38.6 -1.1
UPM *i* Sn **Sn** 02 18 42.4 -0.7
UPM Unac-Piva 5.53 25 *e*Pn **Pn** 02 17 40.9 +1.2
MURB Monte Urbino 5.60 335 Pn **Pn** 02 17 42.3 +1.8
IVA Berane 5.62 33 *e*Pn **Pn** 02 17 40.2 -0.7
IVA *i* Sn **Sn** 02 18 44.8 -0.5
MORI Morici 5.64 360 *e*Pn **Pn** 02 17 41.0 -0.1
KEST Kesra 5.69 246 Pn **Pn** 02 17 43.3 +1.5
KEST Kesra 5.69 246 Pn **Pn** 02 17 44.0 +2.2
comp=N,0.5nm,0.3s,baz=344,slow=12,SNR=7.2
KEST Sn **Sn** 02 18 49.0 +2.1
comp=N,0.4nm,0.3s,baz=29,slow=19,SNR=1.5
KEST LR LR 02 19 33.5
comp=N,37nm,21.6s,baz=332,slow=34
comp=N,5.6nm,0.6s
SKO Skopje 5.76 48 *i* Pn **Pn** 02 17 43.9 +1.2
DUGI Dugi Otok 5.79 355 *e*Pn **Pn** 02 17 43.2 +0.1
KIJV Kijevo 5.80 5 *e*Pn **Pn** 02 17 43.8 +0.5
PLE Pljevlja 5.81 27⇑ *i* Pn **Pn** 02 17 42.7 -0.8
PLE *i* Sn **Sn** 02 18 49.0 -0.9
GRG Griva 5.83 60 P **Pn** 02 17 45.6 +2.0
VLI Veliai 5.92 102 P **Pn** 02 17 46.3 +1.5
KRND KRANIDI 5.93 96 P **Pn** 02 17 45.7 +0.7
XOR Xorichti 5.93 77 P **Pn** 02 17 47.8 +2.7
VILL Villia 5.96 88 P **Pn** 02 17 46.8 +1.3
SJES Sjenica 5.98 31 *e*Pn **Pn** 02 17 47.2 +1.5
STIP Stip 6.05 53 *i* Pn **Pn** 02 17 50.0 +3.3
STIP *e*Sg **Sn** 02 19 00.9 +5.2
RUDO Rudo 6.05 26 *e*Pn **Pn** 02 17 46.4 -0.3
VIRC Vir 6.09 355 *e*Pn **Pn** 02 17 47.5 +0.3
VAY Valandovo 6.11 57 *e*Pn **Pn** 02 17 48.8 +1.4
MGRS Mrkonjic Grad 6.28 9 *e*Pn **Pn** 02 17 53.0 +3.2
BBLS Lazići 6.29 25 *e*Pn **Pn** 02 17 50.9 +0.9
A050A Klekovaca 6.29 5 *e*Pn **Pn** 02 17 51.0 +1.0
HAPS Han Pijesak,Bl 6.34 21 *e*Pn **Pn** 02 17 51.4 +0.6
VLY Voula,Athens 6.37 91 P **Pn** 02 17 51.8 +0.8
NVLJ Novalja 6.38 354 *e*Pn **Pn** 02 17 51.5 +0.5
PAIG Paliouri 6.41 72 P **Pn** 02 17 53.4 +1.8
DION Dionisos Attik 6.46 89 P **Pn** 02 17 54.1 +1.8
PEHC Pehcevo 6.55 55 *i* Pn **Pn** 02 17 54.7 +1.1
RABC Rab 6.57 354 *e*Pn **Pn** 02 17 54.9 +1.1
KYMI Kymi, Euboea I 6.58 84 P **Pn** 02 17 55.0 +1.1
BLY Banja Luka 6.62 9 *e*Pn **Pn** 02 17 56.8 +2.4
PGF Pioggiola 6.72 312 *e*Pn **Pn** 02 17 55.6 -0.4
PGF *e*Sn **Sn** 02 19 06.7 -5.7
comp=N,20nm,0.8s
A051A Mrakovica 6.85 7 *e*Pn **Pn** 02 17 58.3 +0.7
BRJN Brijuni 6.85 348 *e*Pn **Pn** 02 17 58.0 +0.4
KOKK Kokkinochori, 6.89 65 P **Pn** 02 18 00.4 +2.2
TEKS Tekeris 6.94 23 *e*Pn **Pn** 02 17 57.1 -1.7
RODP Rodopos 6.95 110 P **Pn** 02 17 59.1 +0.1
IMMV Iera Moni Meta 7.16 110 P **Pn** 02 18 02.5 +0.6
BOJS Bojanci 7.29 357 *e*Pn **Pn** 02 18 04.6 +0.9
FRGS Fruska Gora 7.57 22 *e*Pn **Pn** 02 18 10.5 +2.9
CRES Cresnjev 7.61 359 *e*Pn **Pn** 02 18 08.4 +0.4
SABO M.te Sabotino 7.92 349 Pn **Pn** 02 18 12.0 -0.4
SANT Santorini 7.96 100 Pn **Pn** 02 18 12.0 -0.9
OBKA Obir 8.33 354 *e*Pn **Pn** 02 18 18.6 +0.5
comp=N,1.0nm,0.3s
OBKA Obir 8.33 354 *e*Pn **Pn** 02 18 17.9 -0.2
STAL STALIGIAL 8.35 345 Pn **Pn** 02 18 18.7 +0.5
PRED Cave del Predi 8.38 350 Pn **Pn** 02 18 18.4 -0.2
CTI Castel Tesino 8.39 340 Pn **Pn** 02 18 19.4 +0.5
ALN Alexandroupoli 8.40 68 Pn **Pn** 02 18 18.3 -0.5
SOKA Soboth 8.47 357 *i* Pn **Pn** 02 18 21.5 +1.5
comp=N,0.5nm,0.3s
LMR La Mourre 8.67 309 *e*Pn **Pn** 02 18 20.8 -1.8
LMR *e*Sn **Sn** 02 19 52.9 -7.2
comp=N,0.6nm,0.3s
ABTA Abfaltersbach 8.85 345 *i* Pn **Pn** 02 18 25.6 +0.4
comp=N,1.2nm,0.4s
ARSA Arzberg 9.03 359 *i* Pn **Pn** 02 18 27.4 -0.2
comp=N,0.7nm,0.3s
KBA Koelnbreinsper 9.03 350 *i* Pn **Pn** 02 18 29.9 +2.2
comp=N,1.0nm,0.4s
MBDF Montbardon 9.36 317 *e*P **Pn** 02 18 36.5 +4.4
LESA Schwarzleotal 9.47 347 *i* Pn **Pn** 02 18 35.8 +2.2
comp=N,1.6nm,0.3s
RONA Rosalia, Austr 9.49 2 *i* Pn **Pn** 02 18 34.4 +0.6
comp=N,0.9nm,0.3s
KARP Karpathos 9.53 103 Pn **Pn** 02 18 33.5 -0.9
WTTA Wattenberg 9.53 343 *i* Pn **Pn** 02 18 36.1 +1.6
comp=N,2.1nm,0.5s
FETA Feichten 9.54 339 *i* Pn **Pn** 02 18 39.0 +4.4
comp=N,1.8nm,0.8s
SQTA Sankt Quirin 9.59 341 *i* Pn **Pn** 02 18 38.5 +3.1
comp=N,1.9nm,0.4s
MOA Molln 9.69 354 *i* Pn **Pn** 02 18 38.0 +1.4
comp=N,3.4nm,0.7s
CONA Conrad Observa 9.71 0 *e*Pn **Pn** 02 18 38.9 +2.1
comp=N,1.0nm,0.4s
MOTA Moosalm 9.74 341 *i* Pn **Pn** 02 18 40.1 +2.8
comp=N,1.3nm,0.5s
LPL La Plagne 9.91 320 *e*Pn **Pn** 02 18 38.3 -1.5
RETA Reutte 9.96 340 *i* Pn **Pn** 02 18 44.0 +3.7
comp=N,1.4nm,0.5s
ORIF Oris-en-Rattie 9.97 315 *e*Pn **Pn** 02 18 38.6 -1.8
ARG Arkhangelos 10.08 98 Pn **Pn** 02 18 41.5 -0.4
MODS Modra-Piesok 10.21 6 *e*PN Pn 02 18 50.2 +6.5
MLR Muntele Rosu 10.52 43 Pn **Pn** 02 18 47.6 -0.5
comp=N,0.1nm,0.3s,baz=225,slow=16,SNR=3.1
comp=N,0.9nm,0.7s
GERES GERESS Array B 10.73 353 Pn **Pn** 02 18 50.4 -0.4
GERES GERESS Array B 10.73 353 Pn **Pn** 02 18 50.1 -0.7
comp=N,0.3nm,0.3s,baz=167,slow=12,SNR=5.3
comp=N,0.5nm,0.3s
ELL Elmali 11.35 93 Pn **Pn** 02 18 58.9 -0.6
BURAR Bucovina Array 11.67 33 Pn **Pn** 02 19 05.3 +1.5
BRTR Keskin Array B 14.01 78 Pn **Pn** 02 19 36.1 +0.3
baz=267,slow=8.6,SNR=1.5
comp=N,0.2nm,0.5s
ESDC Sonseca Array 15.40 282 Pn **Pn** 02 19 56.9 +2.4
baz=65,slow=11,SNR=2.2
comp=N,0.7nm,0.9s
MMAI Mount Meron Ar 16.80 102 Pn **Pn** 02 20 08.4 -4.1
comp=N,0.9nm,0.3s,baz=306,slow=11,SNR=15
BALJ Balqa 17.37 105 Pn **Pn** 02 20 18.0 -1.6
BALJ IAmb IAmb 02 20 44.8
comp=Z,8.1nm,1.2s
GHAJ Ghor Haditha 17.67 107 Pn **Pn** 02 20 21.6 -1.7
GHAJ IAmb IAmb 02 20 30.4
comp=Z,16nm,1.3s
EIL Elat 18.05 112 P **Pn** 02 20 27.1 -0.9
comp=Z,0.4nm,0.3s,baz=307,slow=4.7,SNR=7.3
comp=Z,2.2nm,0.5s
ASF Jabal al Asfar 18.30 103 P **Pn** 02 20 28.8 -2.3
comp=Z,0.1nm,0.3s,baz=239,slow=20,SNR=1.9
comp=Z,0.5nm,0.3s
GURO Guroymak-BITLI 20.59 81 P **P** 02 20 55.3 -1.1
EKA Eskdalemuir Ar 21.34 329 P **P** 02 21 03.8 -0.4
comp=Z,2.0nm,0.8s,baz=148,slow=11,SNR=2.6
comp=Z,2.0nm,0.8s
HFS Hagfors 21.98 357 P **P** 02 21 10.7 -0.2
comp=Z,0.9nm,0.5s,baz=159,slow=13,SNR=1.3
comp=Z,0.9nm,0.5s
FINES FINESS Array B 24.13 12 P **P** 02 21 30.9 -1.8
FINES FINESS Array B 24.13 12 P **P** 02 21 30.7 -2.0
comp=Z,1.2nm,0.8s,baz=193,slow=9.3,SNR=9.1
comp=Z,1.2nm,0.8s
FIA1 FINESS Array S 24.13 12 P **P** 02 21 31.8 -1.0
TORD Torodi Ar. Bea 27.92 210 P **P** 02 22 08.0 +0.6
comp=Z,1.5nm,1.1s,baz=19,slow=9.2,SNR=4.1
ABKAR Akbulak array 33.34 56 P **P** 02 22 55.0 0.0
ABKAR IAmb IAmb 02 23 00.4
comp=Z,1.2nm,0.8s
KURBB Kurchatov Arra 45.22 53 P **P** 02 24 34.5 +0.4
comp=Z,0.6nm,0.8s,baz=285,slow=9.2,SNR=4.2
comp=Z,0.6nm,0.8s
KURK Kurchatov 45.27 53 P **P** 02 24 35.7 +1.2
KURK IAmb IAmb 02 24 40.2
comp=Z,4.0nm,1.4s
ZALV Zalesovo Beam 48.46 48 P **P** 02 24 59.0 -0.4
ZALV Zalesovo Beam 48.46 48 P **P** 02 24 58.2 -1.1
comp=Z,0.7nm,0.4s,baz=296,slow=6.6,SNR=4.2
comp=Z,0.7nm,0.4s
MK31 Makanchi Array 48.47 57 P **P** 02 24 59.6 -0.1
MK31 IAmb IAmb 02 25 02.8
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 48.47 57 P **P** 02 25 00.2 +0.6
MKAR Makanchi Array 48.47 57 P **P** 02 25 00.1 +0.4
comp=Z,0.8nm,0.4s,baz=280,slow=7.2,SNR=12
comp=Z,0.8nm,0.4s
SONM Songino Array 63.31 49 P **P** 02 26 45.9 -0.2
comp=Z,0.7nm,0.8s,baz=302,slow=7.9,SNR=4.5
comp=Z,0.7nm,0.8s
CMIG Matias Romero 94.90 296 LR LR 03 05 53.8
comp=Z,41nm,21.6s,baz=89,slow=31

IDC 10 02:38:33.3±3.2,11°.20S×113°.51E,h0km,mb3.2/3, mbtmp3.3/3,MS3.8/2,Error ellipse: s-maj=163.2km s-min=28.4km az=45.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.84**	**116**	P	P	02 43 27.9	+0.3
	0.4nm,0.6s,baz=290,slow=11,SNR=2.1						
WRA				LR	LR	02 51 24.8	
	comp=Z,446nm,21.0s,baz=66,slow=35						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**23.03**	**125**	P	P	02 43 40.1	-0.2
	0.5nm,0.8s,baz=286,slow=9.0,SNR=5.5						
	0.5nm,0.8s						
JCJ	**Chichijima**	**47.16**	**36**	LR	LR	03 10 10.6	
	comp=Z,48nm,18.6s,baz=110,slow=40						
MKAR	**Makanchi Array**	**64.14**	**337**	P	P	02 49 09.4	0.0
	0.3nm,0.5s,baz=146,slow=8.4,SNR=4.6						
	0.3nm,0.5s						

*IDC **10** 02:55:50.4±0.8,50°.42N×123°.45W,h0km,mb3.2/1, mbtmp3.2/9,ML3.0/9,MS2.8/1,Error ellipse: s-maj=21.6km s-min=8.5km az=42.0*

ISC 10 02:55:51.6±0.9,50°.6N±0°.1×123°.30W±0°.10,h10km,n10, σ0665/10,British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**3.43**	**300**	Pn	Pn	**02 56 45.0**	**-0.1**
	6.1nm,0.3s,baz=164,slow=6.1,SNR=32						
BBB				Lg	Lg	02 57 28.8	
	4.2nm,0.3s,baz=166,slow=12,SNR=2.8						
	38nm,0.5s						
NEW	**Newport**	**4.64**	**117**	Pn	Pn	**02 57 01.7**	**-0.1**
	0.1nm,0.3s,baz=323,slow=13,SNR=4.4						
NEW				Pg	Pb	**02 57 13.1**	**0.0**
	1.9nm,0.3s,baz=307,slow=13,SNR=25						
NEW				Lg	Lg	02 58 08.9	
	0.5nm,0.3s,baz=332,slow=17,SNR=3.6						
NEW				LR	LR	02 59 03.1	
	comp=Z,110nm,18.6s,baz=337,slow=41						
	2.1nm,0.7s						
DLBC	**Dease Lake**	**8.81**	**336**	Pn	Pn	**02 57 58.1**	**-0.8**
	0.2nm,0.3s,baz=185,slow=15,SNR=9.4						
DLBC				Lg	Lg	03 00 20.1	
	0.1nm,0.3s,baz=118,slow=12,SNR=3.4						

	2.2nm,0.7s								
PDAR	**Pinedale Array**	**12.23**	**124**	Pn		**Pn**	**02 58 46.0**	**0.0**	
	baz=315,slow=13,SNR=1.8								
	0.1nm,0.7s								
NVAR	**Mina Array Bea**	**12.64**	**162**	Pn		**Pn**	**02 58 51.7**	**+0.1**	
	baz=332,slow=11,SNR=1.4								
	0.1nm,0.5s								
YKA	**Yellowknife Ar**	**12.87**	**18**	Pn		Pn	02 58 50.6	-3.8	
	0.1nm,0.3s,baz=199,slow=13,SNR=4.8								
	0.4nm,0.9s								
ULM	**Lac du Bonnet**	**17.45**	**80**	P		**Pn**	**02 59 56.0**	**+1.1**	
	0.1nm,0.3s,baz=301,slow=5.8,SNR=2.9								
	1.2nm,0.7s								
KDAK	**Kodiak Island**	**18.49**	**304**	P		**P**	**03 00 07.6**	**0.0**	
	0.2nm,0.3s,baz=212,slow=2.5,SNR=3.6								
ILAR	**Eielson Array**	**18.85**	**328**	P		**P**	**03 00 12.3**	**+0.8**	
	baz=136,slow=10,SNR=6.8								
	0.4nm,0.8s								
TXAR	**Lajitas Array**	**25.85**	**138**	P		**P**	**03 01 22.6**	**-0.7**	
	0.3nm,0.7s,baz=331,slow=9.2,SNR=2.3								
	0.3nm,0.7s								

IDC 10 03:00:17.5±4.4, 11°.34S×166°.47E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=217.8km s-min=33.1km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.05**	**251**	P	P	03 06 46.8	+0.4
	0.4nm,0.7s,baz=82,slow=8.7,SNR=7.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**33.30**	**244**	P	P	03 06 56.7	-0.6
	0.4nm,0.5s,baz=67,slow=8.8,SNR=5.7						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**83.56**	**18**	P	P	03 12 47.3	0.0
	0.3nm,0.6s,baz=236,slow=4.7,SNR=6.1						
	0.3nm,0.6s						

*IDC **10** 03:01:01.5±1.5, 13°.70N×89°.79W, h0km, mb3.6/7, mbtmp3.7/9, ML3.4/2, MS3.2/11, Error ellipse: s-maj=45.5km s-min=25.4km az=41.0*
*CATAC **10** 03:01:05.6±0.5, 13°.30N×90°.26W, h12km±3km, ML4.2*
*SNET **10** 03:01:05.5±0.8, 13°.28N×90°.28W, h10km, ML4.1*
*GCG **10** 03:01:07.5±0.3, 13°.35N×90°.49W, h15km±7km, MD4.0*
ISC 10 03:01:05.3±1.5, 13°.28N±0°.06×90°.32W±0°.03, h29km±10km, n76, σ1°.9 10/75, mb3.7/6, MS3.1/8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.81**	**40**	*i* P	**Pn**	**03 01 20.9**	**0.0**
NUBE				IAML		03 01 33.5	
	comp=Z,4μm,1.0s						
CEVE	**Cerro Verde**	**0.86**	**51**	*e*P	**Pn**	**03 01 22.1**	**+0.3**
CEVE				*e*S	**Sn**	**03 01 34.0**	**+0.4**
CEVE	**Cerro Verde**	**0.86**	**51**	*i* P	**Pn**	**03 01 22.1**	**+0.3**
CEVE				IAML		03 01 39.7	
	comp=Z,10μm,1.0s						
LOAL	**Lomas de Alarc**	**0.88**	**36**	*i* P	Pn	03 01 34.3	+12
JAYA	**Jayaque - finc**	**0.92**	**66**	*e*P	**Pn**	**03 01 22.4**	**-0.1**
JAYA				*e*S	**Sb**	**03 01 34.2**	**-0.5**
JAYA	**Jayaque - finc**	**0.92**	**66**	*i* P	**Pn**	**03 01 22.5**	**0.0**
JAYA				*i* S	**Sb**	**03 01 34.0**	**-0.7**
JAYA				IAML		03 01 36.9	
	comp=Z,9μm,1.0s						
LALI	**Alcalda de L**	**0.99**	**78**	*i* S	**Sb**	**03 01 35.1**	**-1.4**
UNIC	**Universidad Ca**	**1.02**	**47**	*i* S	**Sn**	**03 01 37.2**	**+0.1**
CEDA	**San Andres**	**1.03**	**60**	*e*P	**Pn**	**03 01 24.2**	**+0.3**
CEDA				*e*S	**Sn**	**03 01 38.0**	**+0.6**
CEDA	**San Andres**	**1.03**	**60**	*i* P	**Pn**	**03 01 24.3**	**+0.4**
CEDA				*i* SA		03 01 38.2	
CEDA				IAML		03 01 46.6	
	comp=Z,14μm,1.0s						
PMON	**Piamonte**	**1.06**	**66**	*i* S	**Sn**	**03 01 38.6**	**+0.3**
ITCA	**Escuela Especi**	**1.08**	**69**	*i* P	**Pn**	**03 01 25.0**	**+0.4**
ITCA				IAML		03 01 49.5	
	comp=Z,8μm,1.0s						
BOQS	**Boqueron**	**1.10**	**66**	*e*P	**Pn**	**03 01 25.5**	**+0.5**
SNET	**Serv Nac Est T**	**1.13**	**69**	*i* S	**Sn**	**03 01 40.7**	**+0.9**
UEES	**Universidad Ev**	**1.13**	**68**	*i* S	**Sn**	**03 01 41.8**	**+1.8**
PCG	**Pacaya**	**1.14**	**346**	*e*P	**Pb**	**03 01 26.9**	**+0.3**
SEMO	**Seminario San**	**1.14**	**68**	*i* S	**Sn**	**03 01 41.0**	**+0.8**
PANCS	**Alcalda de**	**1.15**	**73**	*i* P	**Pn**	**03 01 25.4**	**-0.2**
PANCS				*i* SA		03 01 40.5	
PANCS				IAML		03 01 43.6	
	comp=Z,5μm,1.0s						
QUEZ	**Alcaldia de Qu**	**1.15**	**62**	*i* P	**Pb**	**03 01 26.0**	**-0.6**
QUEZ				*i* SA		03 01 41.6	
QUEZ				IAML		03 01 46.9	
	comp=Z,9μm,1.0s						
UTEC	**Universidad Te**	**1.16**	**69**	*i* S	**Sn**	**03 01 41.8**	**+1.2**
LOMA	**Loma Larga**	**1.17**	**72**	*i* S	**Sn**	**03 01 43.7**	**+2.8**
IGN	**Direccin Gen**	**1.19**	**69**	*i* P	**Pb**	**03 01 27.0**	**-0.3**
IGN				IAML		03 01 53.7	
	comp=Z,8μm,1.0s						
UDBS	**Universidad Do**	**1.21**	**69**	*i* P	**Pb**	**03 01 30.0**	**+2.4**
FUG	**Fuego 3**	**1.27**	**336**	*e*P	**Pb**	**03 01 28.3**	**-0.3**
NBG	**Las Nubes**	**1.30**	**359**	*e*P	**Pb**	**03 01 30.2**	**+1.0**
NBG				*e*S	**Sb**	**03 01 47.9**	**+2.3**
GUNB	**GUNB**	**1.30**	**359**	*i* P	**Pn**	**03 01 28.3**	**+0.4**
GUNB				*i* SA		03 01 45.2	
GUNB				IAML		03 01 45.4	
	comp=Z,5μm,1.0s						
GCG4	**OSOP**	**1.31**	**351**	*i* P	**Pb**	**03 01 28.5**	**-1.0**
GCG4				IAML		03 01 53.3	
	comp=Z,3μm,1.0s						
SJTE	**Alcalda de S**	**1.31**	**75**	*i* P	**Pn**	**03 01 27.6**	**-0.2**
SJTE				*i* SA		03 01 45.4	
SJTE				IAML		03 01 50.5	
	comp=Z,2μm,1.0s						
GUMI	**Mixco**	**1.37**	**348**	*i* P	**Pb**	**03 01 30.2**	**-0.3**
GUMI				IAML		03 01 52.6	
	comp=Z,3μm,1.0s						
PAVA	**Las Pavas**	**1.41**	**72**	*i* P	**Pb**	**03 01 30.1**	**-0.9**
PAVA				IAML		03 01 53.0	
	comp=Z,3μm,1.0s						
COEG	**Centro de Oper**	**1.44**	**76**	*e*P	**Pn**	**03 01 30.0**	**+0.5**
COEG				*e*S	**Sb**	**03 01 50.0**	**+0.6**
COEG	**Centro de Oper**	**1.44**	**76**	*i* S	**Sb**	**03 01 48.9**	**-0.5**
MTO3	**Montecristo**	**1.44**	**40**	*i* P	**Pb**	**03 01 30.7**	**-1.0**
MTO3				IAML		03 01 31.7	
	comp=Z,2μm,1.0s						
TECO	**Alcaldia de Te**	**1.51**	**80**	*i* P	**Pn**	**03 01 31.0**	**+0.5**
TECO				*i* SA		03 01 49.6	
TECO				IAML		03 01 54.6	
	comp=Z,1μm,1.0s						
UESV	**Universidad de**	**1.53**	**77**	*i* P	**Pn**	**03 01 31.4**	**+0.7**
UESV				*i* SA		03 01 51.0	
UESV				IAML		03 01 56.3	
	comp=Z,2μm,1.0s						
ESQI	**Esquipulas**	**1.58**	**37**	*i* P	**Pb**	**03 01 32.7**	**-1.3**
ESQI				IAML		03 02 15.9	
	comp=Z,4μm,1.0s						
SULM	**Suchitepequez,**	**1.58**	**310**	*e*P	**Pb**	**03 01 34.3**	**+0.4**
LLGN	**La Laguna**	**1.59**	**57**	*i* S	**Sb**	**03 01 53.8**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.60**	**75**	*i* S	**Sb**	**03 01 54.1**	**+0.1**
RTAL	**Retalhuleu**	**1.82**	**313**	*i* P	**Pb**	**03 01 38.0**	**0.0**
RTAL				*i* S	**Sn**	**03 01 57.0**	**+0.1**
RTAL				IAML		03 02 04.5	
	comp=Z,2μm,1.0s						
STG3	**Santiaguito 3,**	**1.87**	**319**	*e*P	**Pb**	**03 01 37.1**	**-1.9**
PACA	**Pacayal**	**1.95**	**84**	*i* P	**Pb**	**03 01 38.3**	**-1.9**
PACA				IAML		03 02 17.1	
	comp=Z,7μm,1.0s						
BLLM	**Bellamira**	**2.03**	**85**	*e*P	**Pn**	**03 01 38.6**	**+1.0**
QUIS	**Sacapulas**	**2.13**	**339**	*i* S	**Sb**	**03 02 09.0**	**-0.5**
SMCA	**Catarina**	**2.31**	**313**	*i* S	**Sn**	**03 02 08.3**	**-0.8**
LCND	**La Caada**	**2.36**	**89**	*i* P	**Pn**	**03 01 43.0**	**+0.8**
LCND				IAML		03 02 18.2	
	comp=Z,530nm,1.0s						
AMPH	**Amapala**	**2.59**	**90**	*i* P	**Pn**	**03 01 45.8**	**+0.6**
CSGN	**Cosiguina Volc**	**2.70**	**96**	*i* P	**Pn**	**03 01 48.5**	**+1.6**
CSGN				IAML		03 02 26.9	
	comp=Z,2μm,1.0s						
COMHN	**El Horno**	**2.92**	**66**	*i* P	**Pn**	**03 01 50.1**	**+0.1**
CRIN	**San Cristobal**	**3.23**	**100**	*i* P	**Pn**	**03 01 56.7**	**+2.4**
CRIN				IAML		03 02 47.3	
	comp=Z,850nm,1.0s						
YUSH	**Yuscaran**	**3.44**	**78**	*i* P	**Pn**	**03 01 57.7**	**+0.6**
PACN	**Al O del Volca**	**3.52**	**102**	*i* P	**Pn**	**03 01 59.6**	**+1.5**
PACN				IAML		03 02 50.6	
	comp=Z,220nm,1.0s						
MACN	**El Madrono**	**3.64**	**102**	*i* P	**Pn**	**03 02 01.4**	**+1.6**
MACN				IAML		03 02 58.1	
	comp=Z,90nm,1.0s						
MOMN	**Momotombo**	**3.78**	**103**	*i* P	**Pn**	**03 02 03.4**	**+1.6**
MOMN				IAML		03 03 08.7	
	comp=Z,7.1nm,1.0s						
COPN	**Copaltepe**	**3.79**	**106**	*i* P	**Pn**	**03 02 02.9**	**+1.0**
COPN				IAML		03 02 54.9	
	comp=Z,350nm,1.0s						
LIMN	**Finca el Limon**	**3.85**	**93**	*i* S	**Sn**	**03 02 47.9**	**+0.7**
MATN	**Matagalpa**	**4.29**	**94**	*i* P	**Pn**	**03 02 09.9**	**+1.1**
MATN				IAML		03 03 01.2	
	comp=Z,33nm,1.0s						
CMIG	**Matias Romero**	**5.81**	**311**	Pn	**Pn**	**03 02 31.9**	**+2.2**
	comp=Z,2.4nm,0.3s,baz=119,slow=9.6,SNR=25						
CMIG				Sn	**Sn**	**03 03 36.3**	**+0.9**
	comp=Z,4.0nm,0.3s,baz=90,slow=17,SNR=4.6						
	comp=Z,12nm,0.5s						
JTS	**Las Juntas de**	**6.03**	**119**	Pn	**Pn**	**03 02 31.3**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=288,slow=19,SNR=1.2						
JTS				Lg	Lg	03 03 59.3	
	comp=Z,0.8nm,0.3s,baz=143,slow=21,SNR=2.1						
	comp=Z,3.0nm,0.6s						
TEIG	**Tepich**	**7.17**	**16**	LR	LR	03 05 34.5	
	comp=Z,549nm,21.4s,baz=25,slow=41						
ROSC	**El Rosal**	**17.87**	**117**	LR	LR	03 11 34.0	
	comp=Z,62nm,21.3s,baz=14,slow=36						
SDV	**Santo Domingo**	**19.80**	**101**	LR	LR	03 12 44.6	
	comp=Z,59nm,20.3s,baz=268,slow=36						
TXAR	**Lajitas Array**	**20.21**	**324**	P	**P**	**03 05 38.9**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=145,slow=11,SNR=12						
TXAR				PcP	**PcP**	**03 09 52.1**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=137,slow=4.4,SNR=3.7						
TXAR				LR	LR	03 14 32.5	
	comp=Z,20nm,19.6s,baz=74,slow=40						
	comp=Z,0.5nm,0.5s						
ATAH	**Atahualpa**	**23.49**	**149**	LR	LR	03 14 24.1	
	comp=Z,35nm,19.0s,baz=48,slow=34						
ANMO	**Albuquerque**	**26.04**	**329**	P	**P**	**03 06 36.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=56,slow=17,SNR=2.1						
	comp=Z,0.6nm,0.8s						
NNA	**Nana**	**28.44**	**151**	LR	LR	03 17 39.0	
	comp=Z,26nm,19.9s,baz=322,slow=35						
PFO	**Pinyon Flats O**	**31.22**	**315**	LR	LR	03 21 33.3	
	comp=Z,31nm,19.1s,baz=66,slow=39						
SADO	**Sadowa**	**32.80**	**15**	LR	LR	03 21 33.4	
	comp=Z,57nm,19.6s,baz=220,slow=38						
PDAR	**Pinedale Array**	**33.76**	**334**	P	**P**	**03 07 43.3**	**-1.5**
	comp=Z,0.1nm,0.5s,baz=127,slow=8.4,SNR=2.1						
PDAR				PcP	**PcP**	**03 10 23.1**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=125,slow=7.6,SNR=3.7						
	comp=Z,0.1nm,0.5s						
NVAR	**Mina Array Bea**	**35.26**	**320**	P	**P**	**03 07 59.5**	**+1.7**
	comp=Z,3.4nm,0.7s,baz=132,slow=8.1,SNR=36						
NVAR				PcP	**PcP**	**03 10 27.4**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=133,slow=3.8,SNR=4.3						
	comp=Z,3.4nm,0.7s						
ULM	**Lac du Bonnet**	**37.14**	**354**	P	P	03 08 10.5	-3.0
	comp=Z,1.4nm,0.5s,baz=160,slow=9.2,SNR=5.0						
ULM				LR	LR	03 24 53.7	
	comp=Z,49nm,19.6s,baz=79,slow=39						
	comp=Z,1.4nm,0.5s						
SCHQ	**Schefferville**	**45.34**	**19**	P	P	03 09 17.4	-3.4
	comp=Z,1.9nm,0.5s,baz=214,slow=7.4,SNR=9.5						
	comp=Z,1.9nm,0.5s						
YKA	**Yellowknife Ar**	**52.10**	**346**	P	**P**	**03 10 10.3**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=124,slow=10,SNR=4.3						
	comp=Z,0.3nm,0.7s						
SFJD	**Kangerlussuaq**	**59.71**	**17**	LR	LR	03 36 17.9	
	comp=Z,49nm,20.4s,baz=164,slow=36						
MDT	**Midel**	**79.37**	**59**	LR	LR	03 43 35.5	
	comp=Z,36nm,19.5s,baz=9.0,slow=32						
WRA	**Warramunga Arr**	**136.80**	**255**	PKP	**PKiKP**	**03 20 28.6**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=88,slow=2.6,SNR=1.4						

*ISN **10** 03:02:42.3±1.5, 34°.76N×45°.83E, h28km±797km, ML3.5*
*TEH **10** 03:02:44.9, 34°.83N×45°.86E, h20km±29km, ML3.6*
ISC 10 03:02:44.9±1.0, 34°.78N±0°.04×45°.86E±0°.04, h10km, n22, σ0°.9 61/27, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.35**	**219**	Pg	**Pb**	**03 02 52.8**	**-0.5**
KGS1				Sg	**Sb**	**03 02 59.8**	**+0.8**
IDHR	**Dehrash**	**0.44**	**100**	Pg	**Pb**	**03 02 54.6**	**-0.4**
IGHG	**Ghaleghazi**	**0.74**	**127**	Pg	**Pg**	**03 02 59.3**	**+0.1**
ILIN	**Lien**	**0.92**	**81**	Pg	**Pg**	**03 03 02.4**	**-0.2**
ILIN				Sg	**Sb**	**03 03 15.9**	**+0.4**
KCHF	**Cheshme Sefid,**	**1.10**	**117**	Pg	**Pg**	**03 03 05.4**	**-0.6**
SDS1	**Sardasht. Az.**	**1.40**	**348**	Pg	**Pn**	**03 03 10.2**	**-0.4**
IBDR	**Badra**	**1.67**	**178**	*e*Pn	**Pb**	**03 03 15.0**	**-0.7**
IBDR				*e*Sn	**Sb**	**03 03 37.0**	**+0.2**
IBZA	**Bozab**	**1.68**	**100**	Pg	**Pn**	**03 03 14.2**	**-0.4**
IALM	**Almabolaq**	**1.90**	**87**	Pn	**Pn**	**03 03 17.5**	**-0.2**
BHD	**Baghdad**	**1.94**	**220**	*e*Pn	**Pn**	**03 03 18.0**	**0.0**
BHD				*e*Sn	**Sb**	**03 03 44.0**	**-0.7**
BHD				AML	AML	03 03 50.1	
	comp=E,601nm,0.4s						
MAHB	**Mahabad**	**1.98**	**356**	Pn	**Pn**	**03 03 18.8**	**+0.1**
IKFM	**Kafar-mosalman**	**2.07**	**127**	Pn	**Pn**	**03 03 19.5**	**-0.2**
IDOB	**Doab**	**2.16**	**117**	Pn	**Pn**	**03 03 20.5**	**-0.7**
HSAM	**Samen**	**2.34**	**103**	Pn	**Pn**	**03 03 23.0**	**-0.6**
HAGD	**Aghdareh**	**2.70**	**88**	Pn	**Pn**	**03 03 28.5**	**-0.1**
IAZR	**Azarshahr**	**2.89**	**2**	Pn	**Pn**	**03 03 31.1**	**-0.2**
RAFI	**Al-Rafai**	**3.06**	**176**	*e*Pn	**Pn**	**03 03 33.0**	**-0.3**
RAFI				*e*Sn	**Sn**	**03 04 12.0**	**+2.1**
ISRB	**Sarab**	**3.37**	**25**	Pn	**Pn**	**03 03 38.2**	**+0.4**
IRAZ	**Razeghan**	**3.40**	**78**	Pn	**Pn**	**03 03 38.6**	**+0.4**
GRMI	**Germi**	**4.34**	**22**	Pn	**Pn**	**03 03 50.8**	**-0.2**
QAMS	**Qamsar**	**4.70**	**101**	Pn	**Pn**	**03 03 56.0**	**-0.2**
IKLH	**Kolahrood**	**4.97**	**105**	Pn	**Pn**	**03 04 00.1**	**+0.3**

IDC 10 03:05:37.1±56.0, 19°.30S×178°.99W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=1019.0km s-min=154.8km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.49**	**243**	P	P	03 12 52.8	+0.1
	0.9nm,0.5s,baz=62,slow=9.6,SNR=3.6						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**43.85**	**261**	P	P	03 13 45.5	0.0
	1.1nm,0.5s,baz=97,slow=7.6,SNR=19						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**43.90**	**256**	P	P	03 13 45.4	-0.4
	2.4nm,0.6s,baz=95,slow=7.6,SNR=34						
	2.4nm,0.6s						

*IDC **10** 03:09:30.8±1.0, 51°.87N×179°.96E, h83km±6km, mb3.7/24, mbtmp4.1/28, MS3.0/4, Error ellipse: s-maj=20.3km s-min=9.6km az=179.0*
*AEIC **10** 03:09:30.2±2.4, 51°.6N±0°.1×179°.98E±0°.07, h75km±5km, Error ellipse: s-maj=15.7km s-min=6.1km az=171.0*
*NEIC **10** 03:09:30.2±2.0, 51°.67N±0°.06×179°.95E±0°.08, h76km±6km, mb4.2/81, ML4.6(AEIC), Error ellipse: s-maj=11.3km s-min=1.9km az=143.0*
ISC 10 03:09:31.5±0.5, 51°.67N±0°.09×179°.95E±0°.04, h100km, n161, σ1°.9 55/163, mb4.1/67, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.49**	**235**		**Pn**	**03 09 43.7**	**-3.5**
AMKA				Sn	**Sn**	**03 09 53.2**	**-5.8**
KIWB	**Kanaga Island**	**1.81**	**83**		**Pn**	**03 09 59.8**	**-1.9**
KIWB				Sn	**Sn**	**03 10 22.0**	**-2.6**
ADK	**Adak**	**2.10**	**83**		**Pn**	**03 10 03.6**	**-1.7**
ADK				Sn	**Sn**	**03 10 28.7**	**-2.6**
GSTR	**Great Sitkin T**	**2.51**	**79**		**Pn**	**03 10 09.1**	**-1.7**
ATKA	**Atka Island**	**3.67**	**79**		**Pn**	**03 10 24.5**	**-1.6**
ATKA				Sn	**Sn**	**03 11 05.8**	**-2.5**
SHEM	**Shemya Is, Ala**	**3.75**	**289**	P	**Pn**	**03 10 26.6**	**-0.6**
	94nm,0.3s,baz=86,slow=5.0,SNR=15						
SHEM				S	**Sn**	**03 11 09.2**	**-1.2**
	177nm,0.3s,baz=120,slow=20,SNR=2.0						
AKUT	**Akutan**	**8.98**	**68**	Pn	**Pn**	**03 11 38.3**	**+0.2**
SDPT	**Sand Point**	**12.21**	**65**	Pn	**Pn**	**03 12 20.0**	**-1.8**
CNBA	**Chernabura Isl**	**12.65**	**68**	Pn	**Pn**	**03 12 24.4**	**-3.1**
CHGN	**Chignik**	**13.53**	**61**	Pn	**Pn**	**03 12 38.5**	**-0.5**
PEA0B	**Petropavlovsk-**	**13.66**	**285**	Pn	**Pn**	**03 12 41.3**	**+0.5**
PETK	**Petropavlovsk-**	**13.66**	**285**	Pn	**Pn**	**03 12 41.4**	**+0.7**
PETK	**Petropavlovsk-**	**13.66**	**285**	P	**Pn**	**03 12 41.3**	**+0.6**
	1.8nm,0.7s,baz=75,slow=2.6,SNR=10						
PETK				S	**Sn**	**03 15 04.5**	**-6.3**
	0.9nm,0.5s,baz=77,slow=21,SNR=1.6						
PETK				LR	LR	03 18 13.4	
	comp=Z,22nm,18.9s,baz=91,slow=38						
J14K	**Nanvaranak Lak**	**14.20**	**32**	Pn	**Pn**	**03 12 47.9**	**+0.2**
ANM	**Nome**	**15.02**	**25**	Pn	**Pn**	**03 12 57.7**	**-0.4**
F15K	**North Star Dit**	**16.12**	**23**		**P**	**03 13 12.3**	**-1.0**
OHAK	**Old Harbor**	**16.47**	**60**	Pn	**Pn**	**03 13 14.6**	**-1.6**
G16K	**Koyuk River**	**16.48**	**27**	P	**P**	**03 13 17.7**	**+0.5**
KDAK	**Kodiak Island**	**16.93**	**58**	Pn	**Pn**	**03 13 20.0**	**-1.9**
KDAK	**Kodiak Island**	**16.93**	**58**	P	**Pn**	**03 13 20.3**	**-1.6**
	6.1nm,0.3s,baz=313,slow=3.9,SNR=24						
KDAK				S	**Sn**	**03 16 23.2**	**-6.5**
	13nm,0.9s,baz=245,slow=9.4,SNR=1.3						
TTA	**Tatalina**	**17.08**	**39**		**P**	**03 13 22.9**	**-1.0**
BILL	**Bilibino**	**17.72**	**343**	P	**Pn**	**03 13 31.9**	**+0.4**
BILL				IAmb	IAmb	03 13 37.0	
	comp=Z,20nm,1.0s						
CNPM	**China Poot**	**17.96**	**53**	P	**Pn**	**03 13 33.8**	**-0.7**
MA2	**Magadan**	**18.15**	**307**	LR	LR	03 20 45.8	
	comp=Z,16nm,18.5s,baz=106,slow=37						
BRLK	**Bradley Lake**	**18.19**	**52**	P	**P**	**03 13 36.5**	**-0.7**
E18K	**Tukpahlearik C**	**18.47**	**24**	P	**Pn**	**03 13 40.8**	**+0.3**
E18K				IAmb	IAmb	03 13 46.5	
	comp=Z,23nm,1.5s						
SEY	**Seymchan**	**18.51**	**318**	P	**Pn**	**03 13 39.6**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=107,slow=19,SNR=2.3						
SEY				ScP	**ScP**	**03 21 31.6**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=120,slow=5.7,SNR=4.8						
SKT	**Skwentna**	**18.55**	**45**	Pn	**Pn**	**03 13 41.8**	**+0.4**
SKT				IAmb	IAmb	03 13 44.8	
	comp=Z,16nm,1.0s						
SUA	**Susitna One**	**18.73**	**47**	P	**Pn**	**03 13 42.2**	**-1.5**
SUA				IAmb	IAmb	03 13 45.8	
	comp=Z,12nm,1.2s						
CAST	**Castle Rocks**	**18.88**	**41**		**Pn**	**03 13 45.0**	**-0.3**
RC01	**Rabbit Creek A**	**19.08**	**49**	P	**Pn**	**03 13 45.9**	**-1.8**
C18K	**Utukok River**	**19.29**	**21**	P	**Pn**	**03 13 49.5**	**-0.6**
C18K				IAmb	IAmb	03 13 52.6	
	comp=Z,12nm,1.3s						
KTH	**Kantishna Hill**	**19.41**	**41**	P	**Pn**	**03 13 51.1**	**-0.5**
KTH				IAmb	IAmb	03 13 52.8	
	comp=Z,12nm,0.7s						
PMR	**Palmer**	**19.50**	**47**	P	**P**	**03 13 49.7**	**-0.7**
IMAR	**Indian Mountai**	**19.55**	**33**	P	**Pn**	**03 13 52.1**	**-1.0**
F20K	**Avaraart Lake**	**19.57**	**29**	P	**Pn**	**03 13 52.2**	**-1.1**
TRF	**Thorofare Moun**	**19.63**	**42**		**Pn**	**03 13 51.9**	**-2.3**
TRF				IAmb	IAmb	03 14 16.7	
	comp=Z,26nm,1.4s						
KNK	**Knik Glacier**	**19.77**	**48**	P	**P**	**03 13 53.2**	**-0.1**
KNK				IAmb	IAmb	03 14 05.9	
	comp=Z,21nm,1.5s						
D19K	**Kuna River**	**19.90**	**24**	P	**Pn**	**03 13 56.3**	**-1.0**
MLY	**Manley**	**20.13**	**37**	P	Pn	03 13 58.2	-1.8
MLY				IAmb	IAmb	03 14 12.3	
	comp=Z,12nm,1.4s						
F21K	**Alatna River**	**20.36**	**30**	P	Pn	03 14 00.5	-2.1
DHY	**Denali Highway**	**20.73**	**44**	P	Pn	03 14 04.3	-2.8
DHY				IAmb	IAmb	03 14 26.8	
	comp=Z,7.4nm,0.7s						
MDM	**Murphy Dome**	**21.06**	**39**	P	**P**	**03 14 07.6**	**+0.4**
CCB	**Clear Creek Bu**	**21.10**	**40**	P	**P**	**03 14 07.2**	**-0.4**
HDA	**Harding Lake**	**21.36**	**41**	P	**P**	**03 14 11.1**	**+0.8**
RAGM	**Ragged Mountai**	**21.37**	**52**	P	**P**	**03 14 10.9**	**+0.4**
RAGM				IAmb	IAmb	03 14 38.0	
	comp=Z,16nm,1.2s						
IL31		**21.52**	**40**	P	**P**	**03 14 12.2**	**+0.2**
ILAR	**Eielson Array**	**21.52**	**40**	P	**P**	**03 14 12.8**	**+0.8**
ILAR	**Eielson Array**	**21.52**	**40**	P	**P**	**03 14 10.6**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=236,slow=8.4,SNR=24						
ILAR				PcP	**PcP**	**03 18 10.8**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=266,slow=3.0,SNR=4.2						
ILAR				ScP	**ScP**	**03 21 38.3**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=279,slow=3.3,SNR=13						
	comp=Z,0.6nm,0.4s						
B21K	**Ikpikpuk River**	**21.59**	**24**	P	**P**	**03 14 13.1**

SONM	**Songino Array**	**45.82**	**296**	P		**P**		**03 17 44.8**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=54,slow=8.8,SNR=11								
SONM				pP		**pP**		**03 18 03.5**	**-2.9**
	comp=Z,1.3nm,0.6s,baz=58,slow=8.9,SNR=3.9								
SONM				PcP		**PcP**		**03 19 20.1**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=50,slow=2.6,SNR=4.1								
SONM				ScP		**ScP**		**03 23 04.6**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=35,slow=3.5,SNR=1.4								
	comp=Z,1.6nm,0.7s								
FCC	**Fort Churchill**	**46.33**	**46**	P		**P**		**03 17 47.0**	**+0.2**
FCC				lAmb		lAmb		03 17 53.7	
	comp=Z,2.8nm,1.2s								
TPNV	**Topopah Spring**	**46.49**	**82**	P		**P**		**03 17 50.0**	**+1.4**
HHC	**Hu-ho-hao-te**	**46.86**	**285**	*e*P		**P**		**03 17 52.6**	**+1.2**
HHC				pmax		pmax			
	comp=Z,15nm,0.6s								
HHC				pmax		pmax			
	comp=Z,100nm,4.8s								
PD31	**Pinedale Array**	**46.97**	**72**	P		**P**		**03 17 53.0**	**+0.7**
PD31				lAmb		lAmb		03 17 54.0	
	comp=Z,4.2nm,1.2s								
PDAR	**Pinedale Array**	**46.97**	**72**	P		**P**		**03 17 52.8**	**+0.5**
PDAR	**Pinedale Array**	**46.97**	**72**	P		**P**		**03 17 53.0**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=321,slow=3.3,SNR=22								
PDAR				ScP		**ScP**		**03 23 08.4**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=297,slow=1.3,SNR=4.0								
	comp=Z,1.3nm,0.6s								
GSC	**Goldstone, Bar**	**47.20**	**85**	P		**P**		**03 17 55.5**	**+1.4**
GSC				lAmb		lAmb		03 17 56.7	
	comp=Z,4.1nm,0.8s								
TMUT	**Trail Mountain**	**48.09**	**76**	P		**P**		**03 18 02.7**	**+1.5**
PFO	**Pinyon Flats O**	**48.53**	**86**	LR		LR		03 37 32.7	
	comp=Z,27nm,18.0s,baz=184,slow=35								
O20A	**White River Ci**	**49.35**	**74**	P		**P**		**03 18 12.2**	**+1.5**
ESJX	**Sierra Juarez**	**49.93**	**87**	P		**P**		**03 18 16.5**	**+1.4**
ESJX				lAmb		lAmb		03 18 19.8	
	comp=Z,6.2nm,1.5s								
SPA0	**Spitsbergen Ar**	**50.03**	**356**	P		**P**		**03 18 15.2**	**+0.2**
SPITS	**Spitsbergen Ar**	**50.03**	**356**	P		**P**		**03 18 15.5**	**+0.4**
	comp=Z,4.0nm,0.5s,baz=27,slow=6.5,SNR=18								
	comp=Z,4.0nm,0.5s								
SDCO	**Great Sand Dun**	**52.52**	**74**	P		**P**		**03 18 35.5**	**+0.9**
SDCO				lAmb		lAmb		03 18 37.2	
	comp=Z,2.7nm,1.0s								
SUMG	**Summit**	**53.20**	**14**	P		**P**		**03 18 40.1**	**+0.9**
LZH	**Lanzhou**	**54.55**	**285**	*e*P		P		03 18 53.3	+4.0
LZH				pmax		pmax			
	comp=Z,15nm,1.0s								
GTA	**Gaotai**	**54.73**	**291**	*e*P		**P**		**03 18 52.2**	**+1.7**
GTA				pmax		pmax			
	comp=Z,6.0nm,0.6s								
ARCES	**ARCESS Array B**	**57.67**	**350**	P		**P**		**03 19 10.8**	**+0.1**
ARCES	**ARCESS Array B**	**57.67**	**350**	P		**P**		**03 19 10.8**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=27,slow=8.2,SNR=15								
ARCES				PcP		**PcP**		**03 20 03.4**	**+0.8**
	comp=Z,3.8nm,0.8s,baz=3.6,slow=5.8,SNR=1.2								
	comp=Z,2.9nm,0.5s								
LVZ	**Lovozero**	**57.97**	**345**	P		**P**		**03 19 12.7**	**-0.2**
KURK	**Kurchatov**	**58.25**	**313**	P		**P**		**03 19 16.0**	**+1.0**
KURK				lAmb		lAmb		03 19 38.2	
	comp=Z,2.3nm,1.1s								
KURBB	**Kurchatov Arra**	**58.36**	**313**	P		**P**		**03 19 16.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=41,slow=6.6,SNR=4.4								
	comp=Z,0.6nm,0.5s								
MNHN	**Monahans**	**58.52**	**78**	P		**P**		**03 19 18.2**	**+0.9**
WMQ	**Urumqi**	**58.52**	**302**	*e*P		**P**		**03 19 19.9**	**+2.7**
WMQ				pmax		pmax			
	comp=Z,12nm,0.7s								
MK31	**Makanchi Array**	**59.24**	**308**	P		**P**		**03 19 22.4**	**+0.4**
MKAR	**Makanchi Array**	**59.24**	**308**	P		**P**		**03 19 22.1**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=46,slow=6.7,SNR=24								
MKAR				pP		**pP**		**03 19 42.6**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=52,slow=4.3,SNR=3.8								
	comp=Z,0.8nm,0.3s								
TX31	**Lajitas Ar. Si**	**59.38**	**80**	P		**P**		**03 19 24.0**	**+0.7**
TX31				lAmb		lAmb		03 19 25.7	
	comp=Z,5.2nm,1.3s								
TXAR	**Lajitas Array**	**59.38**	**80**	P		**P**		**03 19 24.3**	**+0.9**
TXAR	**Lajitas Array**	**59.38**	**80**	P		**P**		**03 19 24.8**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=307,slow=4.7,SNR=15								
	comp=Z,0.8nm,0.5s								
BVAR	**Borovoye Array**	**60.16**	**319**	P		**P**		**03 19 27.6**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=53,slow=7.3,SNR=8.8								
BVAR				pP		**pP**		**03 19 48.1**	**-4.7**
	comp=Z,1.6nm,0.6s,baz=50,slow=7.6,SNR=5.3								
	comp=Z,1.2nm,0.4s								
BRVK	**Borovoye**	**60.18**	**319**	P		**P**		**03 19 29.3**	**+1.0**
BRVK				lAmb		lAmb		03 19 50.5	
	comp=Z,1.4nm,0.7s								
SCHQ	**Schefferville**	**60.26**	**38**	P		**P**		**03 19 28.4**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=289,slow=6.6,SNR=6.8								
	comp=Z,3.0nm,0.7s								
FCAR	**Ozark Folk Cen**	**61.65**	**67**	P		**P**		**03 19 38.0**	**-0.5**
PZH	**PanZhiHua**	**62.52**	**279**	P		**P**		**03 19 45.8**	**+1.1**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.6s								
PZH				pmax		pmax			
	comp=Z,110nm,5.5s								
FIA1	**FINESS Array S**	**65.32**	**347**	P		**P**		**03 20 01.9**	**-0.4**
FINES	**FINESS Array B**	**65.32**	**347**	P		**P**		**03 20 01.9**	**-0.4**
FINES	**FINESS Array B**	**65.32**	**347**	P		**P**		**03 20 02.0**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=12,slow=7.2,SNR=26								
	comp=Z,1.6nm,0.4s								
NC204	**NORSAR Array S**	**67.08**	**354**	P		**P**		**03 20 14.0**	**+0.4**
ABKAR	**Akbulak array**	**67.23**	**322**	P		**P**		**03 20 14.9**	**+0.3**
ABKAR	**Akbulak array**	**67.23**	**322**	P		**P**		**03 20 14.8**	**+0.1**
ABKAR				lAmb		lAmb		03 20 39.4	
	comp=Z,3.1nm,1.3s								
NB2	**NORSAR Subarra**	**67.28**	**354**	P		**P**		**03 20 15.9**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=7.7,slow=6.5								
NOA	**NORSAR Array B**	**67.28**	**354**	P		**P**		**03 20 15.2**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=3.2,slow=5.0,SNR=11								
	comp=Z,1.1nm,0.5s								
KKAR	**Karatay Array**	**67.61**	**312**	P		**P**		**03 20 18.1**	**+0.9**
HFS	**Hagfors**	**68.00**	**353**	P		**P**		**03 20 19.3**	**0.0**
	comp=Z,0.8nm,0.4s,baz=44,slow=5.1,SNR=6.4								
	comp=Z,0.8nm,0.4s								
CMAR	**Chiang Mai Arr**	**70.20**	**275**	P		**P**		**03 20 34.9**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=24,slow=7.5,SNR=6.3								
	comp=Z,0.9nm,0.3s								
PABE	**Paberze**	**71.35**	**346**	P		**P**		**03 20 40.4**	**+0.5**
EKA	**Eskdalemuir Ar**	**73.34**	**2**	P		**P**		**03 20 51.9**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=352,slow=5.1,SNR=4.9								
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**	**75.03**	**341**	P		**P**		**03 21 01.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=18,slow=6.0,SNR=3.7								
	comp=Z,0.6nm,0.3s								
BUR08	**Bucovina Ar. S**	**78.73**	**343**	P		**P**		**03 21 23.4**	**+0.8**
BUR08				lAmb		lAmb		03 21 25.1	
	comp=Z,3.0nm,0.9s								
BURAR	**Bucovina Array**	**78.75**	**343**	P		**P**		**03 21 23.1**	**+0.4**
BURAR				lAmb		lAmb		03 21 25.5	
	comp=Z,2.5nm,0.8s								
GERES	**GERESS Array B**	**79.18**	**351**	P		**P**		**03 21 24.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=342,slow=6.2,SNR=2.6								
	comp=Z,0.6nm,0.7s								
WATA	**Walderalm**	**80.87**	**352**	*i* P		**P**		**03 21 35.1**	**+0.8**
	comp=Z,1.3nm,0.5s								
MOTA	**Moosalm**	**80.90**	**352**	*i* P		**P**		**03 21 36.2**	**+1.8**
	comp=Z,0.8nm,0.5s								
WTTA	**Wattenberg**	**80.94**	**352**	*i* P		**P**		**03 21 35.8**	**+1.1**
	comp=Z,1.2nm,0.4s								
KBA	**Koelnbreinsper**	**80.96**	**351**	*i* P		**P**		**03 21 36.4**	**+1.6**
	comp=Z,3.5nm,0.4s								
SOKA	**Soboth**	**81.18**	**350**	*i* P		**P**		**03 21 37.2**	**+1.4**
	comp=Z,0.3nm,0.3s								
FETA	**Feichten**	**81.25**	**353**	*i* P		**P**		**03 21 37.4**	**+1.0**
	comp=Z,1.8nm,0.8s								
ABTA	**Abfaltersbach**	**81.37**	**351**	*i* P		**P**		**03 21 38.3**	**+1.5**
	comp=Z,0.5nm,0.4s								
OBKA	**Obir**	**81.40**	**350**	*i* P		**P**		**03 21 38.3**	**+1.4**
	comp=Z,0.8nm,0.4s								
WB0	**Warramunga Arr**	**81.51**	**223**	P		**P**		**03 21 38.1**	**+0.4**
WB0				lAmb		lAmb		03 21 42.8	
	comp=Z,6.1nm,1.3s								
TUE	**Stuetta**	**81.91**	**353**	P		**P**		**03 21 40.2**	**+0.4**
TUE				lAmb		lAmb		03 21 50.9	
	comp=Z,4.1nm,1.1s								
TEOL	**Teolo**	**82.82**	**352**	P		**P**		**03 21 44.6**	**+0.2**
BRTR	**Keskin Array B**	**84.35**	**335**	P		**P**		**03 21 52.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=4.8,slow=8.7,SNR=1.9								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**85.18**	**221**	P		**P**		**03 21 58.1**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=23,slow=4.5,SNR=5.0								
	comp=Z,0.5nm,0.6s								
ESDC	**Sonseca Array**	**88.97**	**3**	P		**P**		**03 22 14.3**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=349,slow=3.3,SNR=6.2								
	comp=Z,0.8nm,0.8s								
SDV	**Santo Domingo**	**94.85**	**69**	LR		LR		04 06 30.1	
	comp=Z,20nm,21.3s,baz=266,slow=36								
TORD	**Torodi Ar. Bea**	**115.44**	**358**	PKP		**PKPdf**		**03 28 01.2**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=29,slow=3.9,SNR=1.5								
DBIC	**Dimbokro**	**121.75**	**6**	PKP		**PKiKP**		**03 28 14.0**	**0.0**
	comp=Z,2.5nm,1.0s,baz=64,slow=18,SNR=1.2								
H03N2	**Juan Fernandez**	**121.98**	**105**	T		T		05 41 42.5	
	baz=317,slow=76,SNR=8.1								
H03N1	**Juan Fernandez**	**121.99**	**105**	T		T		05 41 43.0	
	baz=317,slow=76,SNR=7.2								
H03N3	**Juan Fernandez**	**121.99**	**105**	T		T		05 41 40.2	
	baz=317								
BOSA	**Boshof**	**150.20**	**311**	PKPbc		**PKiKP**		**03 29 12.0**	**+0.6**
	comp=Z,4.7nm,0.6s,baz=22,slow=2.4,SNR=13								

*JMA **10** 03:56:20.9±0.3,23.9N±0.3×121.6E±0.9,h0km±2km, MV3.0/14,TAIWAN REGION*

*ASIES **10** 03:56:21.4,23.89N×121.57E,h8km,ML3.9,Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.94; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.78; $M_{r\theta}$1.40; $M_{\theta\phi}$-0.71; $M_{\phi r}$0.79; Fault plane solution: M_o2.31300×10^{21} NP1:ϕ_s52.78000°, δ67.49000°,λ100.55000°. NP2:ϕ_s206.84000°,δ24.74000°, λ66.16000°. Principal axes: T Plg65.9070°, Azm341.2760°; N Plg9.7380°, Azm228.7070°; P Plg21.8100°, Azm134.7690°;*

*TAP **10** 03:56:21.4,23.89N×121.57E,h8km,ML3.9,C*

*IDC **10** 03:56:23.4±3.2,24.47N×121.40E,h0km,mb3.5/5, mbtmp3.5/6,ML3.3/1,MS3.5/4,Error ellipse: s-maj=70.1km s-min=35.7km az=152.0*

ISC 10 03:56:21.6±0.7,23.89N±0.01×121.58E±0.02,h10km±4km, n149,$_{\sigma}$0^{6}83/230,mb3.4/5,MS3.3/4,2C-23D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.09**	**14**	*i* P		**Pg**		**03 56 24.4**	**+0.4**
HWA	baz=22			S		**Sg**		**03 56 26.5**	**+0.7**
SHUL	**Shoufeng**	**0.10**	**190**	⇑ *i* P		**Pg**		**03 56 24.5**	**+0.3**
SHUL	baz=186			S		**Sg**		**03 56 27.0**	**+0.9**
ETM	**Tongmen**	**0.11**	**313**	⇓ *i* P		**Pg**		**03 56 24.2**	**-0.1**
ETM	baz=317			S		**Sg**		**03 56 26.1**	**-0.2**
ESL	**Shilin**	**0.16**	**241**	⇓ *i* P		**Pg**		**03 56 24.7**	**-0.3**
ESL	baz=246			*i* S		**Sg**		**03 56 26.9**	**-0.5**
TEGC	**Jichi Village**	**0.18**	**192**	*e*P		**Pg**		**03 56 26.2**	**+0.7**
TEGC	baz=187			S		**Sg**		**03 56 29.9**	**+1.7**
TWD	**Chiawan**	**0.19**	**4**	⇓ *i* P		**Pg**		**03 56 25.7**	**+0.1**
TWD	baz=356			*e*S		**Sg**		**03 56 28.6**	**+0.2**
LXIB	**Xiulin Townshi**	**0.20**	**310**	⇓ *i* P		**Pg**		**03 56 25.8**	**-0.1**
LXIB	baz=313			S		**Sg**		**03 56 28.9**	**0.0**
WARBT	**Fenglin Townsh**	**0.25**	**226**	⇓ *i* P		**Pg**		**03 56 26.3**	**-0.3**
WARBT	baz=233			S		**Sg**		**03 56 29.3**	**-0.8**
EGFH	**Guangfu**	**0.26**	**213**	⇑ *e*P		**Pg**		**03 56 26.9**	**0.0**
EGFH	baz=223			*e*S		**Sg**		**03 56 30.1**	**-0.3**
ETL	**Fush Village**	**0.27**	**8**	*e*P		**Pg**		**03 56 27.1**	**0.0**
ETL	baz=6.0			*e*S		**Sg**		**03 56 31.1**	**+0.3**
NACB	**Ninganchiao**	**0.28**	**2**	P		**Pg**		**03 56 27.3**	**0.0**
NACB	**Ninganchiao**	**0.28**	**2**	⇓ *i* P		**Pg**		**03 56 27.2**	**-0.2**
NACB	baz=4.0			S		**Sg**		**03 56 31.2**	**0.0**
ETLH	**Xiulin Townshi**	**0.33**	**344**	⇓ *e*P		**Pg**		**03 56 28.1**	**-0.1**
ETLH	baz=344			*e*S		**Sg**		**03 56 33.5**	**+0.8**
OWD	**Renai**	**0.38**	**280**	⇓ P		**Pg**		**03 56 29.3**	**+0.2**
OWD	baz=281			S		**Sg**		**03 56 34.8**	**+0.6**
WHF	**Hehuan Shan**	**0.39**	**311**	⇓ *e*P		**Pg**		**03 56 29.3**	**-0.1**
WHF	baz=313			*i* S		**Sg**		**03 56 35.0**	**+0.5**
CHGB	**Renai**	**0.41**	**294**	⇓ *i* P		**Pb**		**03 56 30.1**	**-1.0**
CHGB	baz=296			S		**Sb**		**03 56 36.1**	**-1.4**
HGSD	**Ruisui**	**0.42**	**200**	*e*P		**Pb**		**03 56 30.6**	**-0.6**
VWDT	**VWDT**	**0.43**	**251**	⇓ *i* P		**Pb**		**03 56 30.3**	**-0.9**
VWDT	baz=253			S		**Sg**		**03 56 35.6**	**0.0**
WUSB	**Renai**	**0.44**	**283**	⇓ *i* P		**Pb**		**03 56 30.7**	**-0.8**
WUSB	baz=294			S		**Sb**		**03 56 36.8**	**-1.3**
EHP	**Heping Village**	**0.44**	**19**	*e*P		**Pg**		**03 56 30.6**	**+0.3**
EHP	baz=18			*e*S		**Sg**		**03 56 36.8**	**+0.6**
EHY	**Hungye**	**0.45**	**212**	*e*P		**Pg**		**03 56 30.1**	**-0.3**
EHY	baz=222			*e*S		**Sg**		**03 56 34.9**	**-1.5**
EAHA	**Aohua**	**0.46**	**18**	*e*P		**Pg**		**03 56 30.6**	**0.0**
EAHA	baz=15			*e*S		**Sg**		**03 56 36.9**	**+0.2**
FUSS	**Fushou**	**0.47**	**319**	⇓ *e*P		**Pg**		**03 56 31.2**	**+0.3**
FUSS	baz=327			*e*S		**Sg**		**03 56 37.9**	**+0.7**
TWT	**Tachien**	**0.52**	**314**	*e*P		**Pb**		**03 56 32.4**	**-0.6**
TWT	baz=303			*e*S		**Sb**		**03 56 39.5**	**-1.0**
TDCB	**Techi**	**0.53**	**313**	⇓ P		**Pb**		**03 56 32.4**	**-0.7**
TDCB	baz=304			*e*S		**Sg**		**03 56 39.4**	**+0.4**
ENA	**Nanau**	**0.56**	**15**	*e*P		**Pg**		**03 56 32.4**	**0.0**
ENA	baz=360			*e*S		**Sg**		**03 56 39.2**	**-0.5**
YULB	**Yu-li**	**0.56**	**208**	P		**Pg**		**03 56 32.4**	**-0.1**
YULB	**Yu-li**	**0.56**	**208**	P		**Pn**		**03 56 35.6**	**-0.1**
YULB	**Yu-li**	**0.56**	**208**	*e*P		**Pg**		**03 56 32.1**	**-0.4**
YULB	baz=221			S		**Sg**		**03 56 39.1**	**-0.8**
NNSB	**Datong**	**0.57**	**341**	⇓ P		**Pg**		**03 56 32.8**	**+0.2**
NNSB	baz=332			*e*S		**Sg**		**03 56 40.5**	**+0.4**
NNS	**Nan Shan**	**0.58**	**341**	⇓ P		**Pg**		**03 56 33.1**	**+0.2**
NNS	baz=333			*e*S		**Sg**		**03 56 40.7**	**+0.1**
EWUT	**Wuta**	**0.58**	**18**	*e*P		**Pg**		**03 56 32.8**	**-0.2**
EWUT	baz=6.0			*e*S		**Sg**		**03 56 41.0**	**+0.4**
ECBN	**Changbin**	**0.58**	**192**	*e*P		**Pb**		**03 56 34.0**	**+0.1**
ECBN	baz=180			*e*S		**Sb**		**03 56 43.5**	**+1.2**
SSLB	**Suanglung**	**0.58**	**260**	P		**Pb**		**03 56 33.3**	**-0.7**
SSLB	**Suanglung**	**0.58**	**260**	P		**Pb**		**03 56 33.2**	**-0.7**
SSLB	**Suanglung**	**0.58**	**260**	⇓ *i* P		**Pb**		**03 56 33.1**	**-0.9**
SSLB	baz=269			S		**Sg**		**03 56 40.3**	**-0.4**
EYUL	**Yuli**	**0.59**	**204**	*e*P		**Pb**		**03 56 33.5**	**-0.6**
EYUL	baz=218			*e*S		**Sb**		**03 56 43.2**	**+0.7**
TWF1	**Yuli**	**0.60**	**206**	*e*P		**Pg**		**03 56 33.0**	**-0.2**
TWF1	baz=217			*e*S		**Sg**		**03 56 40.5**	**-0.5**
WCS	**Beigang Elemen**	**0.64**	**285**	*e*P		**Pb**		**03 56 34.7**	**-0.1**
WCS	baz=286			*e*S		**Sb**		**03 56 42.8**	**-1.0**
LATG	**Datong**	**0.64**	**356**	*i* P		**Pg**		**03 56 34.0**	**-0.1**
LATG	baz=345			*e*S		**Sg**		**03 56 42.8**	**+0.1**
TYC	**Yuchr**	**0.66**	**271**	⇓ P		**Pb**		**03 56 34.6**	**-0.7**
TYC	baz=282			*e*S		**Sg**		**03 56 43.3**	**+0.2**
WHYT	**Xinyi Township**	**0.69**	**254**	*e*P		**Pb**		**03 56 35.6**	**-0.2**
WHYT	baz=262			*e*S		**Sg**		**03 56 44.2**	**0.0**
WHP	**Taichung City**	**0.70**	**304**	⇓ *i* P		**Pb**		**03 56 35.9**	**0.0**
WHP	baz=296			*i* S		**Sb**		**03 56 46.1**	**+0.5**
EOS4	**EOS4**	**0.71**	**71**	*e*P		**Pb**		**03 56 36.1**	**+0.2**
EOS4	baz=89			*i* S		**Sn**		**03 56 47.7**	**-0.5**
NDT	**Datong Townshi**	**0.71**	**355**	*e*P		**Pg**		**03 56 35.5**	**+0.1**
NDT	baz=345			*e*S		**Sg**		**03 56 45.1**	**+0.4**
CHKH	**Chenggong**	**0.72**	**194**	*e*P		**Pb**		**03 56 36.4**	**+0.2**
CHKH	baz=185			*e*S		**Sn**		**03 56 47.7**	**-1.1**
ESAO	**Su ao**	**0.72**	**19**	*e*P		**Pg**		**03 56 35.7**	**+0.1**
FULB	**Fuli**	**0.74**	**201**	*e*P		**Pb**		**03 56 37.2**	**+0.6**
ENTT	**Nioudou**	**0.75**	**359**	⇓ *i* P		**Pg**		**03 56 36.2**	**+0.2**
NDS	**Dongshan**	**0.75**	**9**	*e*P		**Pg**		**03 56 36.2**	**+0.1**
NDS	baz=7.0			*e*S		**Sg**		**03 56 46.2**	**+0.3**
TWC	**Suao**	**0.76**	**19**	*e*P		**Pb**		**03 56 36.6**	**-0.3**
TWC	baz=7.0			*e*S		**Sb**		**03 56 47.1**	**-0.1**
EOS3	**EOS3**	**0.78**	**59**	*e*P		**Pb**		**03 56 37.9**	**+0.7**
WJS	baz=54 **Zhushan**	**0.79**	**265**	*e*P		**Pn**		**03 56 38.7**	**-0.1**
WJS	baz=273			*i* S		**Sn**		**03 56 49.8**	**-0.8**
EOS2	**EOS2**	**0.79**	**48**	*e*P		**Pn**		**03 56 39.1**	**+0.4**
YHNB	baz=59 **Yeheng**	**0.80**	**346**	P		**Pb**		**03 56 37.7**	**0.0**
YHNB	**Yeheng**	**0.80**	**346**	⇓ *i* P		**Pb**		**03 56 37.5**	**-0.2**
YHNB	baz=345			*e*S		**Sb**		**03 56 48.2**	**-0.4**
ALS	**Alishan**	**0.81**	**242**	⇓ P		**Pb**		**03 56 37.4**	**-0.5**
ALS	baz=244			*e*S		**Sb**		**03 56 49.2**	**+0.3**
NSK	**Sanguang**	**0.81**	**345**	⇓ *e*P		**Pb**		**03 56 37.5**	**-0.3**
NSK	baz=344			S		**Sg**		**03 56 47.8**	**0.0**
CHKT	**Chengkung**	**0.81**	**194**	*e*P		**Pb**		**03 56 38.0**	**+0.2**
CHKT	baz=184			S		**Sn**		**03 56 50.8**	**-0.4**
EHD	**Haiduan**	**0.81**	**205**	*e*P		**Pg**		**03 56 37.3**	**0.0**
EHD	baz=219			*e*S		**Sb**		**03 56 48.8**	**-0.1**
WNT	**Mingjian**	**0.82**	**269**	*e*P		**Pn**		**03 56 39.0**	**-0.2**
WNT	baz=276			*e*S		**Sn**		**03 56 50.4**	**-1.0**
TWE	**Neicheng**	**0.83**	**5**	*e*P		**Pb**		**03 56 38.0**	**-0.2**
NFF	baz=352 **Wufeng Townshi**	**0.85**	**330**	*i* P		**Pb**		**03 56 38.7**	**+0.1**
NFF	baz=329			*e*S		**Sg**		**03 56 48.9**	**-0.2**
ECS	**Chishang**	**0.86**	**203**	*e*P		**Pn**		**03 56 40.6**	**+0.9**
FUSB	baz=218 **Fushanzhiwuyua**	**0.86**	**0**	*e*P		**Pb**		**03 56 38.7**	**-0.1**
FUSB	baz=358			*e*S		**Sb**		**03 56 51.2**	**+0.7**
TCU	**Taichung**	**0.87**	**287**	*e*P		**Pn**		**03 56 39.9**	**0.0**
TWQ1	baz=288 **Liyutan**	**0.87**	**302**	*e*P		**Pn**		**03 56 39.6**	**-0.3**
ELDTW	baz=302 **Lidau**	**0.87**	**217**	*e*P		**Pg**		**03 56 38.1**	**-0.3**
CHN5	baz=218 **Tsauling**	**0.88**	**251**	P		**Pn**		**03 56 39.5**	**-0.6**
CHN5	baz=241			*i* S		**Sn**		**03 56 53.2**	**+0.2**
NWLT	**Wulai**	**0.89**	**355**	*i* P		**Pb**		**03 56 39.2**	**+0.1**
NWLT	baz=348			*e*S		**Sb**		**03 56 50.6**	**-0.4**
NSTT	**Nanjuang**	**0.91**	**324**	*e*P		**Pn**		**03 56 39.9**	**-0.5**
NSTT	baz=324			*e*S		**Sg**		**03 56 50.2**	**-0.7**
LIOB	**Emei**	**0.91**	**326**	*i* P		**Pn**		**03 56 40.3**	**-0.2**
LIOB	baz=325			*e*S		**Sb**		**03 56 52.4**	**+0.7**
WCHH	**Zhanghua**	**0.95**	**282**	*e*P		**Pn**		**03 56 41.4**	**+0.3**
WCHH	baz=283			*e*S		**Sn**		**03 56 56.2**	**+1.5**
WGK	**Gukeng**	**0.96**	**258**	*e*P		**Pn**		**03 56 41.4**	**+0.3**
WGK	baz=261			*e*S		**Sn**		**03 56 55.7**	**+1.0**
NMLH	**Miaoli**	**0.97**	**312**	*i* P		**Pn**		**03 56 41.9**	**+0.6**
NMLH	baz=311			*e*S		**Sn**		**03 56 55.9**	**+0.8**
WDJ	**Dajia District**	**0.97**	**298**	*e*P		**Pn**		**03 56 42.3**	**+1.0**
WDLH	baz=298 **Douliu**	**0.98**	**258**	*e*P		**Pn**		**03 56 42.0**	**+0.6**
WDLH	baz=261			*i* S		**Sn**		**03 56 56.1**	**+0.8**
WCKO	baz=261 **Fanlu**	**1.00**	**244**	*e*P		**Pn**		**03 56 41.9**	**+0.1**
STYH	baz=246 **Taoyuan**	**1.03**	**226**	*i* P		**Pn**		**03 56 42.0**	**-0.1**
STYH	baz=234			*e*S		**Sn**		**03 56 56.4**	**-0.2**
SBCB	baz=234 **Hsinchu**	**1.05**	**329**	*e*P		**Pn**		**03 56 43.2**	**+0.8**
TPUB	baz=327 **Ta-pu**	**1.05**	**236**	P		**Pn**		**03 56 42.9**	**+0.4**
TPUB	**Ta-pu**	**1.05**	**236**	*e*P		**Pn**		**03 56 42.7**	**+0.2**
TPUB	baz=238			*e*S		**Sn**		**03 56 57.2**	**0.0**
CHN4	baz=238 **Tsaushan**	**1.05**	**240**	*e*P		**Pn**		**03 56 43.1**	**+0.7**
CHN4	baz=235			*e*

WTK	**Tuku**	**1.11**	**260**	*e*P		**Pn**	**03 56 44.0**	**+0.8**
	baz=263							
WTK				S		**Sn**	**03 57 00.2**	**+1.6**
	baz=263							
NCUH	**Zhongli**	**1.13**	**341**	*e*P		**Pn**	**03 56 44.9**	**+1.4**
	baz=338							
TWG	**Pinlang**	**1.16**	**204**	*e*P		**Pb**	**03 56 43.7**	**-0.1**
	baz=207							
TWGBT	**Beinan**	**1.16**	**203**	P		**Pg**	**03 56 43.6**	**-0.4**
TWGBT	**Beinan**	**1.16**	**203**	P		**Pn**	**03 56 44.3**	**+0.3**
TWGBT	**Beinan**	**1.16**	**203**	*e*P		**Pg**	**03 56 42.4**	**-1.6**
	baz=207							
TWB1	**Santiao Chiao**	**1.17**	**18**	*e*P		**Pg**	**03 56 44.1**	**0.0**
	baz=6.0							
TWK	**Hsinying**	**1.18**	**238**	*e*P		**Pn**	**03 56 45.5**	**+1.3**
	baz=242							
TWK				*i* S		**Sn**	**03 57 02.2**	**+1.8**
	baz=242							
NWF	**Wu-fen Shan**	**1.19**	**9**	*e*P		**Pn**	**03 56 45.4**	**+1.0**
	baz=4.0							
NWF				*e*S		**Sb**	**03 57 00.4**	**+0.6**
	baz=4.0							
WFSB	**Wu-fen Shan**	**1.19**	**9**	*e*P		**Pb**	**03 56 44.2**	**-0.1**
	baz=4.0							
WFSB				*e*S		**Sn**	**03 57 00.4**	**-0.2**
	baz=4.0							
CHN1	**Nanshi**	**1.20**	**234**	P		**Pn**	**03 56 45.8**	**+1.3**
	baz=237							
CHN1				*e*S		**Sn**	**03 57 02.3**	**+1.6**
	baz=237							
SNST	**Tainan City**	**1.20**	**236**	*e*P		**Pn**	**03 56 45.8**	**+1.3**
	baz=242							
SNST				S		**Sn**	**03 57 02.4**	**+1.6**
	baz=242							
TWS1	**Kuangyinshan**	**1.21**	**353**	*e*P		**Pg**	**03 56 46.2**	**+1.3**
	baz=349							
LDUT	**Ludao**	**1.22**	**185**	*e*P		**Pb**	**03 56 41.8**	**-2.9**
	baz=173							
SGST	**Jiashian**	**1.22**	**229**	*e*P		**Pn**	**03 56 45.0**	**+0.3**
	baz=232							
SGST				*i* S		**Sn**	**03 57 02.4**	**+1.1**
	baz=232							
SXI1	**Grass Mountain**	**1.23**	**13**	*e*P		**Pg**	**03 56 46.2**	**+0.9**
	baz=355							
SLGT	**Liugui**	**1.24**	**224**	*e*P		**Pg**	**03 56 45.9**	**+0.4**
	baz=240							
SLGT				*e*S		**Sn**	**03 57 04.1**	**+2.3**
	baz=240							
YM01	**YM01**	**1.25**	**360**	*e*P		**Pg**	**03 56 46.1**	**+0.5**
	baz=355							
YM01				*e*S		**Sn**	**03 57 02.6**	**+0.4**
	baz=355							
TNOU	**National Taiwa**	**1.27**	**8**	*e*P		**Pg**	**03 56 46.3**	**+0.4**
	baz=2.0							
NTST	**Danshui**	**1.27**	**355**	*e*P		**Pg**	**03 56 47.5**	**+1.4**
	baz=350							
ANP	**Anpu**	**1.29**	**358**	*e*P		**Pg**	**03 56 47.0**	**+0.5**
	baz=353							
YM08	**YM08**	**1.29**	**0**	*e*P		**Pg**	**03 56 46.7**	**+0.2**
	baz=355							
WSL	**Shuilin Townsh**	**1.29**	**254**	*e*P		**Pg**	**03 56 46.9**	**+0.4**
	baz=271							
WSL				*e*S		**Sn**	**03 57 05.6**	**+2.5**
	baz=271							
ICHU	**Yijhu**	**1.31**	**246**	*e*P		**Pg**	**03 56 47.4**	**+0.7**
	baz=252							
ICHU				S		**Sn**	**03 57 05.8**	**+2.4**
	baz=252							
JYNG	**Yonagunijimaku**	**1.36**	**66**	P		**Pn**	**03 56 46.7**	**0.0**
JYNG				S		**Sg**	**03 57 06.1**	**+0.6**
ECL	**Taimali**	**1.41**	**204**	*e*P		**Pb**	**03 56 48.1**	**0.0**
	baz=194							
SCST	**Cishan**	**1.41**	**225**	*e*P		**Pg**	**03 56 49.8**	**+1.0**
	baz=232							
SCST				*i* S		**Sg**	**03 57 10.9**	**+3.8**
	baz=232							
YOJ	**Yonaguni jima**	**1.42**	**66**	P		**Pn**	**03 56 47.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.42**	**66**	*e*P		**Pn**	**03 56 46.8**	**-0.8**
	baz=66							
YOJ				*e*S		**Sb**	**03 57 06.9**	**+0.4**
	baz=66							
YOJ	**Yonaguni jima**	**1.42**	**66**	P		**Pn**	**03 56 47.6**	**0.0**
YOJ				*e*S		**Sn**	**03 57 06.3**	**-0.1**
SHHT	**Tainan City**	**1.43**	**233**	*e*P		**Pg**	**03 56 50.5**	**+1.5**
	baz=237							
TSMG	**Majia**	**1.46**	**216**	*e*P		**Pb**	**03 56 48.9**	**0.0**
	baz=212							
MASBT	**Mashibuluo**	**1.54**	**215**	*e*P		**Pb**	**03 56 50.3**	**0.0**
	baz=211							
TSCK	**Chigu Township**	**1.56**	**242**	*e*P		**Pb**	**03 56 50.2**	**-0.4**
	baz=246							
EAST	**Anshuo**	**1.65**	**204**	*e*P		**Pg**	**03 56 52.6**	**-0.6**
	baz=194							
SCZT	**Fangliau**	**1.75**	**211**	*e*P		**Pb**	**03 56 53.0**	**-0.8**
	baz=202							
WDGT	**Dungji**	**1.87**	**251**	*e*P		**Pn**	**03 56 54.1**	**+0.4**
	baz=255							
PHUB	**P'eng-hu**	**1.88**	**259**	*e*P		**Pb**	**03 56 55.3**	**-0.8**
	baz=263							
PHUB				S		**Sb**	**03 57 19.8**	**+0.2**
	baz=263							
PNG	**Penghu**	**1.89**	**261**	*e*P		**Pn**	**03 56 54.6**	**+0.8**
	baz=264							
PNG				*e*S		**Sb**	**03 57 20.0**	**+0.3**
	baz=264							
HATJ	**Hateruma jima**	**2.04**	**85**	*e*S		**Sn**	**03 57 22.0**	**+0.5**
VWUC	**VWUC**	**2.23**	**300**	*e*P		**Pn**	**03 56 58.1**	**-0.6**
	baz=300							
JKRS	**Kuro-shima**	**2.25**	**81**	P		**Pn**	**03 56 59.5**	**+0.6**
JKRS				S		**Sn**	**03 57 27.7**	**+1.0**
JIJ	**Ishigaki jima**	**2.39**	**78**	P		**Pn**	**03 57 00.1**	**-0.7**
JIJ				S		**Sn**	**03 57 29.1**	**-1.0**
PTMZ	**Houxiangcun**	**2.52**	**298**	*e*P		**Pn**	**03 57 01.9**	**-0.7**
	baz=299							
JISG	**Ishigakijimahi**	**2.59**	**74**	P		**Pn**	**03 57 02.7**	**-0.8**
JISG				*e*S		**Sn**	**03 57 35.5**	**+0.5**
MATB	**Ma-tsu**	**2.70**	**327**	*e*P		**Pn**	**03 57 04.4**	**-0.7**
	baz=312							
KNM	**Kinmen**	**2.92**	**281**	*e*P		**Pn**	**03 57 10.2**	**+2.1**
	baz=284							
JTJ	**Tarama**	**2.94**	**75**	*e*S		**Sn**	**03 57 45.2**	**+1.4**
KNMB	**Chin-men Tao**	**2.97**	**282**	*e*P		**Pn**	**03 57 08.7**	**-0.1**
	baz=297							
AXDP	**Jialang**	**3.44**	**288**	*e*P		**Pn**	**03 57 15.4**	**+0.1**
	baz=290							
ZPLA	**Ao Xicun**	**3.51**	**271**	*e*P		**Pn**	**03 57 16.5**	**+0.3**
	baz=275							
KSRS	**Korea Array**	**14.57**	**20**	Pn		**Pn**	**03 59 45.7**	**-2.2**
	0.1nm,0.3s,baz=203,slow=12,SNR=1.5 0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**21.78**	**260**	P		**P**	**04 01 16.6**	**+2.8**
	1.2nm,0.3s,baz=62,slow=11,SNR=1.5 1.2nm,0.3s							
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**	**04 03 45.9**	**-0.6**
	0.4nm,0.8s,baz=110,slow=9.7,SNR=3.9 0.4nm,0.8s							
ZALV	**Zalesovo Beam**	**40.69**	**327**	P		**P**	**04 03 59.4**	**-2.6**
	0.6nm,0.7s,baz=117,slow=8.2,SNR=2.3							
ZALV				LR		LR	04 23 25.2	
	comp=Z,73nm,18.8s,baz=279,slow=40 0.6nm,0.7s							
MA2	**Magadan**	**41.12**	**22**	LR		LR	04 22 02.0	
	comp=Z,16nm,18.8s,baz=339,slow=38							
KURBB	**Kurchatov Arra**	**42.57**	**320**	P		**P**	**04 04 16.4**	**-1.1**
	0.2nm,0.5s,baz=109,slow=9.4,SNR=2.4 0.2nm,0.5s							
WRA	**Warramunga Arr**	**45.31**	**163**	LR		LR	04 24 44.1	
	comp=Z,357nm,21.8s,baz=180,slow=37							
CTA	**Charters Tower**	**49.89**	**149**	LR		LR	04 26 46.0	
	comp=Z,16nm,19.0s,baz=83,slow=36							
YKA	**Yellowknife Ar**	**83.10**	**23**	P		**P**	**04 08 48.2**	**+0.9**
	0.3nm,0.7s,baz=309,slow=5.3,SNR=6.1 0.3nm,0.7s							

IDC 10 03:59:24.2±5.1, 4°.91S×153°.20E, h0km, mb3.3/3, mbtmp3.3/3, MS4.0/1, Error ellipse: s-maj=152.5km s-min=41.3km az=109.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.06**	**124**	LR	LR	04 04 09.9	
	comp=Z,932nm,19.2s,baz=315,slow=36						
WRA	**Warramunga Arr**	**23.67**	**229**	P	P	04 04 37.9	+0.2
	0.4nm,0.5s,baz=56,slow=10.0,SNR=4.3 0.4nm,0.5s						
ASAR	**Alice Springs**	**26.34**	**223**	P	P	04 05 02.2	+0.1
	0.2nm,0.6s,baz=57,slow=9.4,SNR=2.0 0.2nm,0.6s						
MKAR	**Makanchi Array**	**80.67**	**319**	P	P	04 11 39.0	-0.2
	0.2nm,0.5s,baz=96,slow=5.8,SNR=2.9 0.2nm,0.5s						

IDC 10 04:03:02.0±7.7, 3°.48S×138°.60E, h0km, mb3.3/2, mbtmp3.4/3, ML3.7/1, Error ellipse: s-maj=323.5km s-min=33.3km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.88**	**194**	Pn	Pn	04 06 58.3	-1.6
	0.3nm,0.3s,baz=12,slow=13,SNR=8.0						
WRA				Sn	Sn	04 09 59.6	-8.7
	0.4nm,0.3s,baz=24,slow=22,SNR=4.9 0.3nm,0.5s						
ASAR	**Alice Springs**	**20.57**	**192**	P	P	04 07 43.4	+0.7
	1.6nm,0.6s,baz=25,slow=9.9,SNR=28						
ASAR				S	S	04 11 28.9	-4.9
	0.5nm,0.8s,baz=20,slow=25,SNR=2.4 1.6nm,0.6s						
MKAR	**Makanchi Array**	**70.33**	**323**	P	P	04 14 17.6	0.0
	0.1nm,0.4s,baz=108,slow=4.7,SNR=1.6 0.1nm,0.4s						

*VAO **10** 04:28:16.6±0.4, 15°.39S×71°.98W, h75km, mb4.0*
ISC 10 04:28:17.8±1.3, 15°.43S±0°.09×71°.9W±0°.2, h132km, n18, σ1s99/21, 3D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.30**	**153**	↓*e*P	**Pn**	**04 29 08.9**	**+0.5**
AP01				*e*S	**Sn**	**04 29 45.2**	**-2.4**
PB12	**IPOC Station P**	**3.52**	**154**	↓*i*P	**Pn**	**04 29 11.2**	**-0.3**
PB12				*i* S	**Sn**	**04 29 49.9**	**-3.1**
PB12				IAML		04 29 53.9	
	comp=N,198nm,0.5s						
PB16	**IPOC Station P**	**3.71**	**142**	↓*e*P	**Pn**	**04 29 15.6**	**+1.2**
PB16				*e*S	**Sn**	**04 29 57.6**	**-0.5**
CZSB	**Cruzeiro do Su**	**7.69**	**354**	*e*P	**Pn**	**04 30 04.7**	**-2.5**
LVC	**Limon Verde**	**7.70**	**159**	*e*P	**Pn**	**04 30 07.0**	**-0.5**
ETMB	**Extrema**	**7.89**	**46**	*e*P	**Pn**	**04 30 09.3**	**-0.6**
BBSD	**Serra de San D**	**11.01**	**101**	*e*P	**Pn**	**04 30 49.7**	**-2.0**
TBTG	**Tabatinga, AM**	**11.34**	**10**	*e*P	**Pn**	**04 30 53.5**	**-2.7**
BBRB	**Robore, Bolivi**	**11.95**	**105**	*e*P	**Pn**	**04 31 04.3**	**+0.2**
PTLB	**Pontes e Lacer**	**12.34**	**92**	*e*P	**Pn**	**04 31 08.7**	**-0.4**
SALV	**Santo Antonio**	**15.65**	**94**	*e*P	**Pn**	**04 31 52.0**	**+0.8**
PP1B	**Ponte de Pedra**	**16.49**	**100**	*e*P	**P**	**04 32 03.6**	**+1.7**
RVDE	**Rio Verde (Bra**	**16.62**	**105**	*e*P	**P**	**04 32 04.8**	**+1.4**
CRSM	**Crissiumal (Br**	**20.50**	**129**	*e*P	**P**	**04 32 47.7**	**+2.2**
FRBT	**Francisco Belt**	**20.51**	**124**	*e*P	**P**	**04 32 48.5**	**+2.8**
PCMB	**Pacaembu**	**20.53**	**111**	*e*P	**P**	**04 32 49.0**	**+3.1**
LDASE	**Londrina, Braz**	**21.15**	**115**	*e*P	**P**	**04 32 54.1**	**+1.5**
HDC	**Heredia**	**28.00**	**334**	*e*P	**P**	**04 33 59.2**	**+2.6**

*IDC **10** 04:56:15.2±14.0, 51°.93N×179°.61W, h0km, mb3.3/5, mbtmp3.4/5, Error ellipse: s-maj=288.0km s-min=60.4km az=82.0*
*NEIC **10** 04:56:41.8±0.9, 52°.0N±0°.2×179°.2W±0°.1, h236km±2km, ML3.0(AEIC), Error ellipse: s-maj=30.2km s-min=9.0km az=175.0*
*AEIC **10** 04:56:42.5±1.1, 52°.2N±0°.2×179°.26W±0°.09, h218km±4km, Error ellipse: s-maj=31.1km s-min=7.5km az=178.0*
ISC 10 04:56:42.3±0.8, 52°.6N±0°.1×179°.19W±0°.06, h200km, n23, σ2s13/26, mb3.2/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GANO	**Gareloi North**	**0.80**	**163**		**Pn**	**04 57 12.6**	**+1.7**
GANE	**Gareloi Northe**	**0.81**	**162**		**Pn**	**04 57 12.8**	**+1.9**
GAEA	**Gareloi East**	**0.85**	**161**		**Pn**	**04 57 13.0**	**+1.8**
CEAP	**Semis' Anvil P**	**0.96**	**233**		**Pn**	**04 57 14.0**	**+2.2**
TAFP	**Tanaga Falls P**	**1.01**	**132**		**Pn**	**04 57 14.2**	**+2.0**
CESW	**Semis' Southwe**	**1.03**	**229**		**Pn**	**04 57 14.0**	**+1.7**
CESW					**Sn**	**04 57 38.3**	**+2.9**
TASE	**Tanaga Southea**	**1.03**	**136**		**Pn**	**04 57 14.4**	**+2.0**
KIWB	**Kanaga Island**	**1.45**	**120**	Pn	**Pn**	**04 57 17.1**	**+1.5**
LSPA	**Little Sitkin**	**1.51**	**246**		**Pn**	**04 57 17.8**	**+1.6**
LSSE	**Little Sitkin**	**1.52**	**246**		**Pn**	**04 57 18.0**	**+1.7**
AMKA	**Amchitka**	**1.53**	**218**		**Pn**	**04 57 16.1**	**-0.1**
AMKA					**Sn**	**04 57 41.6**	**-0.9**
LSNW	**Little Sitkin**	**1.54**	**247**		**Pn**	**04 57 17.8**	**+1.4**
LSSA	**Little Sitkin**	**1.55**	**247**		**Pn**	**04 57 17.9**	**+1.4**
ADK	**Adak**	**1.69**	**114**	Pn	**Pn**	**04 57 17.9**	**+0.2**
ADK				Sn	**Sn**	**04 57 46.9**	**+1.6**
GSCK	**Great Sitkin C**	**1.94**	**106**		**Pn**	**04 57 22.1**	**+1.8**
GSCK					**Sn**	**04 57 53.4**	**+3.6**
ATKA	**Atka Island**	**3.08**	**95**	Pn	**Pn**	**04 57 33.5**	**+0.6**
L14K	**Kuka Creek**	**12.54**	**39**		Pn	04 59 39.6	+6.0
K15K	**Wolf Creek Mou**	**13.55**	**37**		**Pn**	**04 59 50.5**	**+4.1**
ILAR	**Eielson Array**	**20.47**	**41**	P	**P**	**05 01 01.9**	**-2.4**
	0.3nm,0.5s,baz=247,slow=10,SNR=9.2 0.3nm,0.5s						
YKA	**Yellowknife Ar**	**34.58**	**48**	P	**P**	**05 03 09.9**	**-1.7**
	0.4nm,0.7s,baz=281,slow=8.3,SNR=7.1 0.4nm,0.7s						
NVAR	**Mina Array Bea**	**43.65**	**84**	P	**P**	**05 04 25.4**	**-1.8**
	0.5nm,0.6s,baz=305,slow=7.2,SNR=4.6 0.5nm,0.6s						
PDAR	**Pinedale Array**	**46.18**	**73**	P	**P**	**05 04 45.0**	**-2.2**
	0.3nm,0.5s,baz=314,slow=4.2,SNR=4.8 0.3nm,0.5s						
TXAR	**Lajitas Array**	**58.71**	**82**	P	**P**	**05 06 16.7**	**-2.4**
	0.2nm,0.5s,baz=298,slow=4.8,SNR=6.3 0.2nm,0.5s						

*IDC **10** 05:12:28.7±0.7, 5°.14N×125°.27E, h0km, mb4.0/13, mbtmp4.0/13, MS3.1/7, Error ellipse: s-maj=29.5km s-min=14.5km az=79.0*
*NEIC **10** 05:12:35.5±1.1, 5°.11N±0°.07×125°.32E±0°.06, h44km±9km, mb4.3/18, Error ellipse: s-maj=12.9km s-min=5.2km az=140.0*
ISC 10 05:12:35.6±0.5, 5°.04N±0°.06×125°.2E±0°.1, h50km, n45, σ1s37/43, mb4.2/23, MS3.0/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.05**	**10**	Pn	**Pn**	**05 13 06.2**	**-1.5**
DAV	**Davao City (W)**	**2.05**	**10**	Pn	**Pn**	**05 13 08.4**	**+0.7**
	38nm,0.3s,baz=192,slow=2.2,SNR=7.6						
DAV				Sn	**Sn**	**05 13 37.3**	**+5.2**
	90nm,0.3s,baz=257,slow=22,SNR=6.0						
DAV				LR	LR	05 14 05.8	
	comp=Z,501nm,21.1s,baz=152,slow=50						
TOLI2	**Tolitoli**	**5.91**	**229**	Pn	**Pn**	**05 14 00.4**	**-0.2**
LUWI	**Luwuk**	**6.52**	**202**		**Pn**	**05 14 10.1**	**+1.1**
MTN	**Manton Dam**	**18.70**	**162**	P	**P**	**05 16 47.8**	**-2.3**
KNRA	**Kununurra**	**20.87**	**170**	P	**P**	**05 17 13.7**	**+0.1**
KNRA				IAmb	IAmb	05 17 34.3	
	comp=Z,12nm,0.8s						
GUMO	**Guam**	**21.14**	**65**	LR	LR	05 23 52.9	
	comp=Z,42nm,21.9s,baz=76,slow=32						
LEM	**Lembang**	**21.16**	**236**	P	**P**	**05 17 17.3**	**+0.3**
	comp=Z,28nm,0.4s,baz=261,slow=12,SNR=4.5						
FITZ	**Fitzroy Crossi**	**22.99**	**179**	P	**P**	**05 17 37.1**	**+0.9**
WB0	**Warramunga Arr**	**26.24**	**160**	P	**P**	**05 18 08.3**	**+2.1**
WB0				IAmb	IAmb	05 18 25.1	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**26.39**	**160**	P	**P**	**05 18 07.3**	**-0.2**
WRA	**Warramunga Arr**	**26.39**	**160**	P	**P**	**05 18 07.5**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=340,slow=9.9,SNR=15 comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**29.76**	**164**	P	**P**	**05 18 37.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=348,slow=8.2,SNR=5.0						
ASAR				PcP	**PcP**	**05 21 41.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=351,slow=3.0,SNR=2.8 comp=Z,0.6nm,0.5s						
KSRS	**Korea Array**	**32.36**	**4**	P	**P**	**05 18 57.1**	**-3.2**
	comp=Z,2.0nm,0.7s,baz=185,slow=9.4,SNR=7.2						
KSRS				LR	LR	05 31 55.7	
	comp=Z,17nm,21.0s,baz=190,slow=36 comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**33.54**	**19**	P	**P**	**05 19 09.7**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=208,slow=7.4,SNR=2.1						
MJAR				LR	LR	05 34 05.6	
	comp=Z,26nm,18.2s,baz=221,slow=39 comp=Z,0.8nm,0.4s						
HHC	**Hu-ho-hao-te**	**37.71**	**343**	*e*P	**P**	**05 19 48.8**	**+2.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,82nm,5.0s						
NWAO	**Narrogin (SRO)**	**38.51**	**191**	LR	LR	05 37 19.5	
	comp=Z,23nm,18.3s,baz=232,slow=39						
BBOO	**Buckleboo**	**39.02**	**165**	P	**P**	**05 19 58.5**	**+1.1**
USA0B	**Ussuriysk Arra**	**39.46**	**8**	P	**P**	**05 19 59.8**	**-1.1**
USA0B				IAmb	IAmb	05 20 35.8	
	comp=Z,7.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**39.46**	**8**	P	**P**	**05 20 00.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**39.46**	**8**	P	**P**	**05 20 00.6**	**-0.4**
	comp=Z,6.6nm,0.7s,baz=190,slow=8.2,SNR=11 comp=Z,6.6nm,0.7s						
STKA	**Stephens Creek**	**39.88**	**158**	P	**P**	**05 20 05.0**	**+0.3**
STKA	**Stephens Creek**	**39.88**	**158**	P	**P**	**05 20 05.5**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=339,slow=6.5,SNR=3.6 comp=Z,1.7nm,0.6s						
ASAJ	**Asahikawa**	**41.82**	**19**	LR	LR	05 39 39.5	
	comp=Z,26nm,18.0s,baz=184,slow=39						
SONM	**Songjino Array**	**45.60**	**342**	P	**P**	**05 20 49.4**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=153,slow=9.7,SNR=1.9 comp=Z,0.2nm,0.4s						
PETK	**Petropavlovsk-**	**54.81**	**23**	P	**P**	**05 22 00.3**	**-0.2**
PETK	**Petropavlovsk-**	**54.81**	**23**	P	**P**	**05 22 01.0**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=177,slow=3.0,SNR=1.4						
PETK				LR	LR	05 47 16.5	
	comp=Z,15nm,18.4s,baz=52,slow=38 comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**55.64**	**325**	P	**P**	**05 22 07.2**	**+0.6**
MK31				IAmb	IAmb	05 22 07.9	
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**55.64**	**325**	P	**P**	**05 22 06.2**	**-0.4**
MKAR	**Makanchi Array**	**55.64**	**325**	P	**P**	**05 22 07.0**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=124,slow=8.2,SNR=29 comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**58.76**	**333**	P	**P**	**05 22 27.3**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=103,slow=6.5,SNR=2.8 comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**59.84**	**328**	P	**P**	**05 22 35.4**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=128,slow=6.0,SNR=29 comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**59.84**	**328**	P	**P**	**05 22 36.0**	**0.0**
KKAR	**Karatay Array**	**61.26**	**317**	P	**P**	**05 22 46.3**	**+0.4**
BVAR	**Borovoye Array**	**65.42**	**327**	P	**P**	**05 23 12.4**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=116,slow=6.6,SNR=7.3 comp=Z,1.6nm,0.8s						
BRVK	**Borovoye**	**65.49**	**327**	P	**P**	**05 23 13.2**	**-0.3**
BRVK				IAmb	IAmb	05 23 14.8	
	comp=Z,3.2nm,1.1s						
TIXI	**Tiksi**	**66.57**	**1**	P	**P**	**05 23 18.9**	**-1.3**
TIXI				IAmb	IAmb	05 23 20.0	
	comp=Z,5.8nm,0.8s						
TIXI	**Tiksi**	**66.57**	**1**	LR	LR	05 55 35.0	
	comp=Z,42nm,18.2s,baz=194,slow=39						
K15K	**Wolf Creek Mou**	**77.80**	**27**	P	**P**	**05 24 27.3**	**-0.1**
J16K	**Anvik River**	**78.43**	**26**	P	**P**	**05 24 29.5**	**-1.4**
C18K	**Utukok River**	**79.38**	**21**	P	**P**	**05 24 34.6**	**-1.4**
C18K				IAmb	IAmb	05 24 55.2	
	comp=Z,4.4nm,1.4s						
C19K	**Lookout Ridge**	**80.05**	**21**	P	**P**	**05 24 39.5**	**-0.2**
C19K				IAmb	IAmb	05 24 53.6	
	comp=Z,6.5nm,1.4s						
D19K	**Kuna River**	**80.45**	**21**	P	**P**	**05 24 41.6**	**-0.3**
D19K				IAmb	IAmb	05 24 53.6	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**84.58**	**25**	P	**P**	**05 25 02.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=253,slow=5.6,SNR=4.4 comp=Z,0.6nm,0.7s						
TXAR	**Lajitas Array**	**121.96**	**51**	PKP	**PKiKP**	**05 31 25.5**	**0.0**
	comp=Z,0.3nm,0.7s,baz=267,slow=0.6,SNR=5.5						

*NEIC **10** 05:21:50.3±1.1, 56°.2N±0°.1×148°.6W±0°.1, h20km±11km, ML3.4/16, ML3.1(AEIC), Error ellipse: s-maj=16.7km s-min=10.2km az=181.0*
*AEIC **10** 05:21:53.0±1.0, 56°.2N±0°.1×148°.62W±0°.08, h5km±8km, Error ellipse: s-maj=19.1km s-min=6.4km az=172.0*
ISC 10 05:21:48.5±2.3, 56°.2N±0°.1×148°.64W±0°.06, h10km, n109, σ1s16/112, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.67**	**308**	Pn	**Pn**	**05 22 31.8**	**+0.4**
OHAK	**Old Harbor**	**2.75**	**293**		**Pn**	**05 22 33.0**	**+0.4**
OHAK	**Old Harbor**	**2.75**	**293**	P	**Pn**	**05 22 32.9**	**+0.3**
	baz=110						
OHAK				S	**Sn**	**05 23 04.2**	**-1.7**
	baz=110						
SYI	**Shuyak Island**	**3.14**	**321**	Pn	**Pn**	**05 22 39.4**	**+1.4**
SYI	**Shuyak Island**	**3.14**	**321**		**Sn**	**05 23 14.3**	**-1.1**
Q20K	**Shuyak Island**	**3.14**	**321**	P	**Pn**	**05 22 39.2**	**+1.2**
	baz=139						
Q20K				S	**Sn**	**05 23 14.3**	**-1.1**
	baz=139						
Q23K	**Middleton Isla**	**3.44**	**20**		**Pn**	**05 22 42.5**	**+0.5**
Q23K	**Middleton Isla**	**3.44**	**20**	P	**Pn**	**05 22 42.9**	**+0.8**
	baz=202						
CNPM	**China Poot**	**3.59**	**338**	Pn	**Pn**	**05 22 45.1**	**+0.9**
CNPM	**China Poot**	**3.59**	**338**		**Sn**	**05 23 24.6**	**-2.0**
CNPM	**China Poot**	**3.59**	**338**	IAML		05 23 56.9	
	comp=E,42nm,0.6s						
CNPM				IAML		05 23 58.6	
	comp=N,55nm,1.0s						
BRSE	**Bradley Lake S**	**3.70**	**343**		**Pn**	**05 22 46.6**	**+0.9**
BRSE					**Sn**	**05 23 27.9**	**-1.6**
BRSE	**Bradley Lake S**	**3.70**

CRQE	Cirque	5.39	30	P		Pn	05 23 09.7 +0.7
	baz=215						
PMR	Palmer	5.39	357	Pn		Pn	05 23 10.2 +1.3
KLU	Klutina	5.47	14	Pn		Pn	05 23 11.3 +1.2
KLU	Klutina	5.47	14	P		Pn	05 23 11.5 +1.5
	baz=196						
TGL	Tana Glacier	5.47	31			Pn	05 23 10.8 +0.8
BAGL	Bagley Icefiel	5.50	36			Pn	05 23 11.1 +0.8
ISLE	Juniper Island	5.50	34	Pn		Pn	05 23 10.9 +0.4
STLK	Strandline Lak	5.55	344			Pn	05 23 12.4 +1.3
GHO	Glory Hole Cre	5.57	359	Pn		Pn	05 23 12.7 +1.3
SML	Sawmill	5.61	1	Pn		Pn	05 23 13.4 +1.5
VRDI	Verde Repeater	5.70	26			Pn	05 23 14.0 +0.7
SAMH	Samovar Hills	5.71	43			Pn	05 23 14.7 +1.3
KIAG	Kiagna River	5.75	32			Pn	05 23 14.6 +0.7
N25K	Chitina, Valde	5.79	19	Pn		Pn	05 23 16.0 +1.6
N25K	Chitina, Valde	5.79	19	P		Pn	05 23 15.9 +1.4
	baz=203						
GLB	Gilahina Butte	5.80	24	Pn		Pn	05 23 15.7 +1.1
N18K	Kilae Creek	5.87	323	Pn		Pn	05 23 15.6 +0.1
N18K	Kilae Creek	5.87	323	P		Pn	05 23 16.5 +1.0
	baz=137						
PCA	Pinnacle	5.90	45			Pn	05 23 16.7 +0.8
PINM	Pinnacle	5.90	45	P		Pn	05 23 16.7 +0.8
	baz=232						
PTPK	Patty Peak	5.93	30			Pn	05 23 17.3 +0.9
MCARA	McCarthy VSAT	5.94	27	Pn		Pn	05 23 17.6 +1.2
PNL	Peninsula	6.01	51			Pn	05 23 17.9 +0.4
PNL	Peninsula	6.01	51	P		Pn	05 23 17.9 +0.4
	baz=238						
BCPM	Bancas Point	6.07	48	Pn		Pn	05 23 19.1 +1.0
BARN	Barnard Glacie	6.07	34	Pn		Pn	05 23 19.4 +1.1
CTG	Chitna Glacier	6.10	36	P		Pn	05 23 19.5 +0.8
	baz=222						
CTGM	Chitina Glacie	6.10	36	Pn		Pn	05 23 19.4 +0.7
LOGN	Logan Glacier	6.11	38	Pn		Pn	05 23 19.6 +0.8
M20K	Styx River	6.13	340	Pn		Pn	05 23 19.6 +0.5
O29M	Mount Kennedy	6.70	48			Pn	05 23 28.0 +1.0
O29M	Mount Kennedy	6.70	48	P		Pn	05 23 28.0 +1.0
	baz=236						
P29M	Windy Craggy	6.74	55			Pn	05 23 27.7 +0.3
P29M	Windy Craggy	6.74	55	P		Pn	05 23 27.6 +0.3
	baz=244						
L19K	White Mountain	6.77	334	Pn		Pn	05 23 28.1 +0.3
M17K	Holitna River	6.91	322	Pn		Pn	05 23 31.2 +1.4
S31K	Pelican	6.98	70	Pn		Pn	05 23 28.6 -2.0
YUK7	Dusty Glacier	7.01	48			Pn	05 23 32.6 +1.4
YUK6	Outpost Mounta	7.16	44			Pn	05 23 35.4 +2.0
YUK6	Outpost Mounta	7.16	44	P		Pn	05 23 35.4 +2.0
	baz=233						
RND	Reindeer	7.21	359	Pn		Pn	05 23 35.9 +2.0
M16K	Timber Creek	7.22	316	Pn		Pn	05 23 35.6 +1.6
L18K	Granite Mounta	7.29	329	Pn		Pn	05 23 35.3 +0.3
TRF	Thorofare Moun	7.30	354	Pn		Pn	05 23 36.7 +1.5
YUK4	Talbot Arm	7.30	41	P		Pn	05 23 38.8 +3.5
	baz=229						
CAST	Castle Rocks	7.43	348	Pn		Pn	05 23 38.4 +1.6
HYT	Haines Junctio	7.43	47	Pn		Pn	05 23 38.5 +1.5
YUK5	Granite Creek	7.46	44			Pn	05 23 39.7 +2.3
TTA	Tatalina	7.70	334	Pn		Pn	05 23 40.2 -0.3
JIS	Juneau Island	8.00	69	Pn		Pn	05 23 44.3 -0.3
M29M	Somme Creek	8.12	36	Pn		Pn	05 23 47.5 +1.2
WHY	Whitehorse	8.47	53	Pn		Pn	05 23 52.0 +0.8
N31M	Braeburn, Yuko	8.49	46	Pn		Pn	05 23 53.1 +1.6
J26L	Joseph Creek	8.68	15	Pn		Pn	05 23 55.1 +1.1

*NEIC **10** 05:22:15.6±1.9,56°.1N±0°.1×148°.56W±0°.08,h20^{km}±9^{km}, mb3.7/2,ML3.8/40,ML3.5(AEIC),Error ellipse: s-maj=14.7km s-min=6.9km az=179.0*

*AEIC **10** 05:22:19.2±1.6,56°.1N±0°.1×148°.6W±0°.1,h7^{km}±7^{km}, Error ellipse: s-maj=14.9km s-min=8.9km az=181.0*

ISC 10 05:22:14.5±1.4,56°.15N±0°.09×148°.55W±0°.05,h10^{km}, n181,σ1°20/188,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.75	308	Pn		Pn	05 22 58.7	+0.1
KDAK	Kodiak Island	2.75	308			Sn	05 23 29.9	-1.9
OHAK	Old Harbor	2.83	294	Pn		Pn	05 22 59.7	+0.1
OHAK	Old Harbor	2.83	294			Sn	05 23 31.1	-2.6
OHAK	Old Harbor	2.83	294	P		Pn	05 22 59.7	+0.1
	baz=111							
OHAK				S		Sn	05 23 31.1	-2.6
	baz=111							
SYI	Shuyak Island	3.23	322	Pn		Pn	05 23 06.2	+1.1
SYI				IAML			05 23 44.8	
	comp=E,58nm,0.8s							
SYI				IAML			05 23 46.9	
	comp=N,51nm,1.4s							
SYI	Shuyak Island	3.23	322			Sn	05 23 43.0	-0.6
Q20K	Shuyak Island	3.23	321	P		Pn	05 23 05.7	+0.6
	baz=139							
Q20K				S		Sn	05 23 43.0	-0.6
	baz=139							
Q23K	Middleton Isla	3.50	19			Pn	05 23 09.0	+0.2
Q23K						Sn	05 23 47.9	-2.3
Q23K	Middleton Isla	3.50	19	IAML			05 24 11.6	
	comp=E,205nm,1.4s							
Q23K				IAML			05 24 29.4	
	comp=N,194nm,1.2s							
Q23K	Middleton Isla	3.50	19	P		Pn	05 23 09.0	+0.2
	baz=201							
Q23K				S		Sn	05 23 47.9	-2.3
	baz=201							
MID	Middleton Isla	3.50	19	Pn		Pn	05 23 09.0	+0.2
MID				IAML			05 24 28.7	
	comp=N,162nm,1.4s							
MID				IAML			05 25 13.6	
	comp=E,215nm,1.4s							
CNPM	China Poot	3.68	338	Pn		Pn	05 23 11.8	+0.4
CNPM	China Poot	3.68	338			Sn	05 23 53.3	-1.5
BRSE	Bradley Lake S	3.79	343			Pn	05 23 13.4	+0.5
BRSE						Sn	05 23 56.6	-0.9
BRSE	Bradley Lake S	3.79	343	P		Pn	05 23 13.4	+0.5
	baz=162							
BRSE				S		Sn	05 23 56.6	-0.9
	baz=162							
BRLK	Bradley Lake	3.83	342			Pn	05 23 14.2	+0.7
HOM	Homer	3.89	336	Pn		Pn	05 23 15.4	+1.2
HOM	Homer	3.89	336	P		Pn	05 23 15.4	+1.2
	baz=154							
P23K	Montague Islan	3.91	8			Pn	05 23 14.8	+0.3
P23K						Sn	05 23 57.3	-3.1
P23K	Montague Islan	3.91	8	P		Pn	05 23 14.8	+0.3
	baz=190							
P23K				S		Sn	05 23 57.9	-2.5
	baz=190							
Q19K	Cape Douglas,	3.91	318	Pn		Pn	05 23 15.6	+1.0
Q19K				IAML			05 24 57.6	
	comp=N,212nm,1.4s							
Q19K	Cape Douglas,	3.91	318	P		Pn	05 23 15.8	+1.2
	baz=134							
SEW	Seward	4.00	354			Pn	05 23 15.9	+0.2
SEW	Seward	4.00	354	P		Pn	05 23 15.9	+0.2
	baz=173							
KAHC	Katmai Hardscr	4.30	308			Pn	05 23 21.3	+1.3
KAHC	Katmai Hardscr	4.30	308	P		Pn	05 23 21.3	+1.3
	baz=124							
P19K	Oil Pt	4.31	327	Pn		Pn	05 23 21.1	+1.1
P19K				IAML			05 24 16.3	
	comp=E,99nm,0.4s							
P19K				IAML			05 24 19.9	
	comp=N,102nm,0.6s							
P19K	Oil Pt	4.31	327	P		Pn	05 23 21.2	+1.1
	baz=143							
KAIM	Kayak Island	4.38	28			Pn	05 23 21.4	+0.5
KAIM						Sn	05 24 10.5	-1.5
KAIM	Kayak Island	4.38	28	IAML			05 24 14.1	
	comp=E,115nm,1.5s							
KAIM				IAML			05 24 14.1	
	comp=N,109nm,1.2s							
KAIM	Kayak Island	4.38	28	P		Pn	05 23 21.4	+0.5
	baz=212							
KAIM				S		Sn	05 24 10.5	-1.5
	baz=212							
HIN	Hinchinbrook I	4.40	13	Pn		Pn	05 23 21.8	+0.6
HIN				IAML			05 24 10.9	
	comp=N,110nm,0.8s							
HIN				IAML			05 24 11.3	
	comp=E,158nm,1.0s							
SLKM	Skilak Lake	4.46	349			Pn	05 23 23.0	+0.9
O20K	Slope Mountain	4.50	333			Pn	05 23 22.9	+0.2
O20K	Slope Mountain	4.50	333	P		Pn	05 23 22.9	+0.2
	baz=150							
CNTC	Contact Creek	4.52	301			Pn	05 23 24.3	+1.3
Q17K	Contact Creek	4.52	301	P		Pn	05 23 24.3	+1.3
	baz=116							
IVE	Iliamna Volcan	4.55	330			Pn	05 23 23.8	+0.4
EYAK	Cordova Ski Ar	4.65	17			Pn	05 23 25.5	+0.8
EYAK	Cordova Ski Ar	4.65	17	P		Pn	05 23 25.5	+0.8
	baz=200							
SUCK	Suckling Hills	4.68	31			Pn	05 23 26.0	+0.9
SUCK				IAML			05 24 19.6	
	comp=E,55nm,0.9s							
SUCK				IAML			05 24 21.4	
	comp=N,92nm,0.6s							
SUCK	Suckling Hills	4.68	31			Sn	05 24 16.6	-2.8
RAGM	Ragged Mountai	4.72	24			Pn	05 23 26.9	+1.2
RAGM				IAML			05 24 34.5	
	comp=E,111nm,0.8s							
NICHA	Nichawak Mount	4.76	29			Pn	05 23 27.4	+1.2
HMT	Hamilton	4.77	27			Pn	05 23 27.5	+1.1
RED	Redoubt Volcan	4.83	334			Pn	05 23 27.2	0.0
RDSO	Redoubt South	4.85	335			Pn	05 23 27.8	+0.2
RSO	Redoubt South	4.86	335			Pn	05 23 28.1	+0.3
GOAT	Goat Mountain	4.88	23			Pn	05 23 28.1	+0.2
RDT	Redoubt	4.88	337			Pn	05 23 28.0	+0.1
RDWB	Redoubt West	4.91	334			Pn	05 23 28.8	+0.5
BERG	Berg Lake	4.97	29			Pn	05 23 29.4	+0.4
GRIN	Grindle Hills	4.98	32			Pn	05 23 30.5	+1.2
RC01	Rabbit Creek A	5.00	353	Pn		Pn	05 23 30.7	+1.3
RC01				IAML			05 24 26.6	
	comp=E,38nm,0.4s							
RC01				IAML			05 24 27.2	
	comp=N,41nm,0.4s							
RC01	Rabbit Creek A	5.00	353	P		Pn	05 23 29.9	+0.4
	baz=172							
SNH	Sunshine Point	5.05	34			Pn	05 23 31.2	+1.0
SNH				IAML			05 24 28.6	
	comp=E,39nm,0.8s							
SNH				IAML			05 24 34.0	
	comp=N,29nm,0.9s							
KHIT	Khitrov Hills	5.13	31			Pn	05 23 31.7	+0.3
DIV	Divide	5.20	15			Pn	05 23 33.2	+0.8
BMRM	Bremner River	5.26	21			Pn	05 23 33.5	+0.5
BMRM	Bremner River	5.26	21	P		Pn	05 23 33.5	+0.5
	baz=205							
WAX	Waxell Ridge	5.26	32			Pn	05 23 33.8	+0.7
KNK	Knik Glacier	5.28	0			Pn	05 23 33.7	+0.3
KNK	Knik Glacier	5.28	0	IAML			05 24 38.0	
	comp=E,30nm,0.7s							
KNK				IAML			05 24 46.7	
	comp=N,24nm,1.1s							
KNK	Knik Glacier	5.28	0	P		Pn	05 23 33.7	+0.3
	baz=181							
BARK	Barkley Ridge	5.33	34			Pn	05 23 34.9	+0.8
MESA	MESA	5.34	38			Pn	05 23 35.4	+1.0
MESA	MESA	5.34	38	P		Pn	05 23 35.2	+0.8
	baz=223							
N20K	Mount Spurr	5.42	341	P		Pn	05 23 35.6	+0.4
	baz=158							
SPCR	Spurr Chakacha	5.42	341			Pn	05 23 35.6	+0.3
CRQM	Cirque	5.42	29			Pn	05 23 35.3	-0.2
CRQE	Cirque	5.43	30	P		Pn	05 23 35.3	-0.2
	baz=214							
CKL	Chakachamna La	5.44	340			Pn	05 23 35.5	0.0
SUA	Susitna One	5.45	349	Pn		Pn	05 23 36.6	+0.8
SUA	Susitna One	5.45	349	P		Pn	05 23 36.4	+0.6
	baz=167							
SPCP	Crater Peak Br	5.47	341			Pn	05 23 37.1	+1.0
SPCG	Spurr Capps Gl	5.47	342			Pn	05 23 36.3	+0.3
PMR	Palmer	5.47	357	Pn		Pn	05 23 36.8	+0.9
TGL	Tana Glacier	5.51	31			Pn	05 23 37.4	+0.8
BAGL	Bagley Icefiel	5.53	35			Pn	05 23 37.8	+1.1
KLU	Klutina	5.53	13			Pn	05 23 38.3	+1.4
KLU	Klutina	5.53	13	P		Pn	05 23 38.0	+1.2
	baz=195							
ISLE	Juniper Island	5.53	34			Pn	05 23 37.9	+1.0
N19K	Bonanza Creek	5.62	329			Pn	05 23 38.2	+0.1
N19K	Bonanza Creek	5.62	329	P		Pn	05 23 38.2	+0.1
	baz=144							
STLK	Strandline Lak	5.63	344			Pn	05 23 39.2	+0.9
GHO	Glory Hole Cre	5.65	358	Pn		Pn	05 23 40.1	+1.7
SPNN	North Nagishla	5.66	339			Pn	05 23 39.7	+1.0
SML	Sawmill	5.68	1	Pn		Pn	05 23 40.3	+1.5
SML	Sawmill	5.68	1	P		Pn	05 23 39.2	+0.4
	baz=181							
SAMH	Samovar Hills	5.73	43			Pn	05 23 41.3	+1.7
VRDI	Verde Repeater	5.75	25			Pn	05 23 40.2	+0.3
KIAG	Kiagna River	5.78	32			Pn	05 23 41.1	+0.7
TABL	Table Mountain	5.81	39			Pn	05 23 42.1	+1.3
N25K	Chitina, Valde	5.85	19			Pn	05 23 42.8	+1.6
N25K	Chitina, Valde	5.85	19	P		Pn	05 23 42.2	+1.1
	baz=202							
GLB	Gilahina Butte	5.85	23			Pn	05 23 42.0	+0.8
PCA	Pinnacle	5.91	45			Pn	05 23 43.4	+1.3
PINM	Pinnacle	5.92	45	P		Pn	05 23 43.4	+1.3
	baz=231							
N18K	Kilae Creek	5.96	323			Pn	05 23 42.6	-0.1
N18K	Kilae Creek	5.96	323	P		Pn	05 23 42.6	-0.1
	baz=137							
PTPK	Patty Peak	5.97	30			Pn	05 23 43.8	+0.9
MCARA	McCarthy VSAT	5.99	26	Pn		Pn	05 23 44.4	+1.4
MCARA	McCarthy VSAT	5.99	26	P		Pn	05 23 44.5	+1.4
	baz=211							
PNL	Peninsula	6.02	50			Pn	05 23 44.9	+1.3
PNL	Peninsula	6.02	50	P		Pn	05 23 44.8	+1.3
	baz=238							
BCPM	Bancas Point	6.08	47			Pn	05 23 45.3	+1.0
BARN	Barnard Glacie	6.10	33			Pn	05 23 45.5	+0.8
M24K	Tolsona, Glenn	6.10	11			Pn	05 23 46.1	+1.4
CTG	Chitna Glacier	6.13	35	P		Pn	05 23 46.2	+1.1
	baz=221							
CTGM	Chitina Glacie	6.13	35			Pn	05 23 45.8	+0.6
LOGN	Logan Glacier	6.13	37			Pn	05 23 46.0	+0.8
O16K	Kokwok River B	6.15	308			Pn	05 23 46.5	+1.3
O16K	Kokwok River B	6.15	308	P		Pn	05 23 46.5	+1.3
	baz=120							
M20K	Styx River	6.22	340	Pn		Pn	05 23 46.6	+0.3
M20K	Styx River	6.22	340	P		Pn	05 23 46.4	+0.1
	baz=156							
WASW	Wrangell South	6.22	19			Pn	05 23 47.5	+1.0
WAT6	Susitna Watana	6.47	3			Pn	05 23 51.5	+1.8
WAT6	Susitna Watana	6.47	3	P		Pn	05 23 51.5	+1.8
	baz=184							
HARP	HAARP	6.51	14			Pn	05 23 51.6	+1.4
HARP	HAARP	6.51	14	P		Pn	05 23 51.6	+1.4
	baz=197							
M19K	Big River Lodg	6.51	335			Pn	05 23 50.0	-0.2
M19K	Big River Lodg	6.51	335	P		Pn	05 23 50.0	-0.2
	baz=150							
M18K	Stony River	6.55	328			Pn	05 23 51.1	+0.3
M18K	Stony River	6.55	328	P		Pn	05 23 51.1	+0.3
	baz=142							
WAT7	Susitna Watana	6.71	359			Pn	05 23 54.0	+1.0
O29M	Mount Kennedy	6.71	48			Pn	05 23 54.7	+1.6
O29M	Mount Kennedy	6.71	48	P		Pn	05 23 54.7	+1.6
	baz=236							
P29M	Windy Craggy	6.74	54	Pn		Pn	05 23 54.3	+0.9
P29M	Windy Craggy	6.74	54	P		Pn	05 23 54.3	+0.9
	baz=243							
O15K	Ungalikthiuk R	6.77	301			Pn	05 23 54.9	+1.2
O15K	Ungalikthiuk R	6.77	301	P		Pn	05 23 54.9	+1.2
	baz=112							
L19K	White Mountain	6.86	334	Pn		Pn	05 23 55.3	+0.2
L19K	White Mountain	6.86	334	P		Pn	05 23 55.2	+0.2
	baz=149							
S31K	Pelican	6.96	70	Pn		Pn	05 23 56.0	-0.4
DHY	Denali Highway	6.98	4	Pn		Pn	05 23 59.0	+2.2
M17K	Holitna River	7.00	322	Pn		Pn	05 23 57.8	+0.8
M17K	Holitna River	7.00	322	P		Pn	05 23 57.7	+0.8
	baz=135							
RND	Reindeer	7.29	359			Pn	05 24 02.7	+1.9
PLBC	Pleasant Camp	7.31	58			Pn	05 24 02.3	+1.2
PLBC	Pleasant Camp	7.31	58	P		Pn	05 24 02.3	+1.2
	baz=248							
M16K	Timber Creek	7.31	316	Pn		Pn	05 24 02.7	+1.5
N15K	Kwethluk River	7.31	308			Pn	05 24 03.3	+2.1
P30M	Million Dollar	7.31	52			Pn	05 24 03.2	+1.9
P30M	Million Dollar	7.31	52	P		Pn	05 24 03.2	+1.9
	baz=242							
BVCY	Beaver Creek	7.41	29			Pn	05 24 04.1	+1.5
BVCY	Beaver Creek	7.41	29	P		Pn	05 24 04.1	+1.5
	baz=215							
HYT	Haines Junctio	7.45	46	Pn		Pn	05 24 04.5	+1.3
HYT	Haines Junctio	7.45	46	P		Pn	05 24 04.3	+1.2
	baz=236							
KTH	Kantishna Hill	7.53	352	Pn		Pn	05 24 06.0	+1.8
MCK	McKinley	7.61	359			Pn	05 24 06.9	+1.5
MCK	McKinley	7.61	359	P		Pn	05 24 06.9	+1.5
	baz=178							
K20K	Telida	7.75	341	Pn		Pn	05 24 08.1	+0.9
S32K	Killisnoo	7.79	74			Pn	05 24 07.4	-0.3
S32K	Killisnoo	7.79	74	P		Pn	05 24 07.4	-0.3
	baz=266							
BESE	Bessie Mountai	7.80	66			Pn	05 24 08.7	+0.8
SKAG	Skagway	7.80	59			Pn	05 24 09.2	+1.3
R32K	Eaglecrest	7.91	69	Pn		Pn	05 24 10.2	+0.8
JIS	Juneau Island	7.98	69			Pn	05 24 11.2	+0.8
M29M	Somme Creek	8.15	35			Pn	05 24 14.6	+1.8
WHY	Whitehorse	8.48	52	Pn		Pn	05 24 19.0	+1.7
N31M	Braeburn, Yuko	8.51	46	Pn		Pn	05 24 19.4	+1.7
J20K	Nowinta River	8.52	343			Pn	05 24 18.1	+0.4
P32M	Atlin	8.62	60	Pn		Pn	05 24 19.8	+0.5
P32M	Atlin	8.62	60	P		Pn	05 24 20.2	+1.0
	baz=253							
J26L	Joseph Creek	8.74	14	Pn		Pn	05 24 22.9	+2.1
L29M	L29M	8.74	33	Pn		Pn	05 24 22.6	+1.8
L29M	L29M	8.74	33	P		Pn	05 24 22.4	+1.6
	baz=222							
M30M	Minto, Yukon	8.80	38	Pn		Pn	05 24 23.1	+1.5
M30M	Minto, Yukon	8.80	38	P		Pn	05 24 22.7	+1.1
	baz=228							
L14K	Kuka Creek	8.99	311	Pn		Pn	05 24 25.7	+1.5
P33M	Teslin, Yukon	9.25	57	Pn		Pn	05 24 28.9	+1.1
M31M	Drury Creek, Y	9.46	44			Pn	05 24 32.8	+2.2
K29M	Barlow Dome	9.48	31			Pn	05 24 32.9	+1.9
I26K	Coal Creek Min	9.56	14	Pn		Pn	05 24 34.3	+2.4
H21K	Melozitna Rive	9.76	350			Pn	05 24 35.5	+0.8
FARO	Faro, Yukon	9.88	46			Pn	05 24 38.5	+2.0
R33M	Jennings River	9.93	64			Pn	05 24 38.4	+1.1
YKA	Yellowknife Ar	18.28	56	P		Pn	05 26 29.6	+1.8
A36M	Sachs Harbour	18.65	23	P		P	05 26 33.2	+1.3
A36M					IAmb	IAmb	05 26 45.2	
	comp=Z,2.7nm,0.8s							
F04A	Amboy	19.23	111	P		P	05 26 36.9	-1.7
F04A					IAmb	IAmb	05 27 10.6	
	comp=Z,7.4nm,1.1s							

*JMA **10** 05:27:43.4±0.2,24°.2N±0°.8×125°.2E±0°.5,h17^{km}, MV3.1/10, NEAR MIYAKOJIMA ISLAND*

*IDC **10** 05:27:56.4±3.1,24°.62N×125°.82E,h172km±37km,mb3.2/6, mbtmp3.6/7, MS2.4/1, Error ellipse: s-maj=44.1km s-min=18.3km az=64.0*

ISC 10 05:27:41.8±0.9,24°.27N±0°.06×125°.29E±0°.05,h21^{km},n16, σ1°65/25,mb3.6/6,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.47	4	P		Pn	Pn	05 27 53.9	+0.6
JMJ2				eS		Sn	Sn	05 28 01.8	+0.8
JOGS	Gusukube	0.50	12	P		Pn	Pn	05 27 54.8	+1.1
JOGS				S		Sn	Sn	05 28 03.2	+1.5
JIRB	Irabujima	0.57	349	eP		Pn	Pn	05 27 55.1	+0.4
JIRB				eS		Sn	Sn	05 28 02.8	-0.5
JTJ	Tarama	0.65	305	P		Pb	Pb	05 27 54.7	+0.2
JTJ				S		Sb	Sb	05 28 02.8	-0.4
JIKM	Ikemajima	0.65	357	eP		Pn	Pn	05 27 56.6	+0.8
JIKM				S		Sn	Sn	05 28 06.1	+0.6
JISG	Ishigakijimahi	0.95	290	P		Pn	Pn	05 27 58.9	-1.0
JISG				eS		Sb	Sb	05 28 10.7	-0.9
JIJ	Ishigaki jima	1.05	275	P		Pn	Pn	05 28 00.8	-0.4
JIJ				eS		Sn	Sn	05 28 14.0	-1.2
JKRS	Kuro-shima	1.17	269	P		Pn	Pn	05 28 03.3	+0.4
JKRS				S		Sn	Sn	05 28 18.4	+0.2
HATJ	Hateruma jima	1.37	262	eS		Sn	Sn	05 28 23.2	0.0
JOW	Kunigami	3.71	46	P		Pb	Pb	05 28 46.3	-0.3
	4.8nm,0.3s,baz=313,slow=23,SNR=1.3								
JOW				S		Sn	Sn	05 29 17.6	-3.4
	6.3nm,0.3s,baz=128,slow=27,SNR=1.6								
CMAR	Chiang Mai Arr	25.19	262	P		P	P	05 33 11.5	+5.5
	0.6nm,0.3s,baz=79,slow=6.9,SNR=1.8								
CMAR				LR		LR	LR	05 44 21.7	
	comp=Z,8.0nm,18.0s,baz=190,slow=38								
	0.6nm,0.3s								
MKAR	Makanchi Array	40.92	314	P		P	P	05 35 22.2	-0.5
	0.2nm,0.5s,baz=103,slow=10.0,SNR=4.5								
	0.2nm,0.5s								
ZALV	Zalesovo Beam	42.26	325	P		P	P	05 35 31.4	-2.1
	0.4nm,0.4s,baz=118,slow=5.4,SNR=1.4								
	0.4nm,0.4s								
WRA	Warramunga Arr	44.82	168	P		P	P	05 35 54.5	+0.1
	0.5nm,0.6s,baz=348,slow=8.6,SNR=4.8								
	0.5nm,0.6s								
ASAR	Alice Springs	48.38	169	P		P	P	05 36 23.2	+0.9
	0.2nm,0.4s,baz=358,slow=7.3,SNR=6.0								
	0.2nm,0.4s								
FINES	FINESS Array B	73.25	330	P		P	P	05 39 09.1	-2.0
	2.7nm,1.0s,baz=43,slow=6.3,SNR=2.1								
	2.7nm,1.0s								

*IDC **10** 05:51:55.9±1.2,23°.96S×69°.40E,h0^{km},mb3.9/9, mbt

CATAC ***10*** *06:10:50.3±0.8,8˚.21N×82˚.73W,h17km±3km,ML2.7*
UPA ***10*** *06:10:51.1±0.7,8˚.30N×82˚.70W,h40km±2km,ML3.6, MW3.6*

ISC 10 06:10:51.3±1.1,8˚26N±0˚.04×82˚67W±0˚.03,h31km±9km, n24,σ0°85/45,4C-3D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTPM	**Petroterminale**	**0.21**	**256**	*i*P	**Pn**	**06 10 58.2**	**-0.3**
PTPM				AMP		06 10 58.6	
	comp=Z,4μm,0.2s						
PTPM				*i* S	**Sn**	**06 11 04.1**	**+1.2**
LIMO3	**Limones**	**0.25**	**232**	⇓*i*P	**Pn**	**06 10 58.4**	**-0.5**
LIMO3				*i* S	**Sn**	**06 11 04.0**	**+0.3**
PEDE3	**Pedregal, Chir**	**0.28**	**62**	⇑*e*P	**Pn**	**06 10 58.8**	**-0.5**
PEDE3				*i* S	**Sn**	**06 11 04.5**	**0.0**
DVD	**David**	**0.28**	**50**	⇑*i*P	**Pn**	**06 10 59.0**	**-0.4**
DVD				*i* S	**Sn**	**06 11 05.0**	**+0.4**
LOCO3	**Loma Colorada,**	**0.29**	**58**	*i* P	**Pn**	**06 10 59.7**	**+0.1**
LOCO3				*i* S	**Sn**	**06 11 05.4**	**+0.5**
CDITO	**Canoas**	**0.38**	**328**	*i* P	**Pb**	**06 10 59.3**	**-0.6**
CDITO				*i* S	**Sn**	**06 11 06.6**	**-0.3**
CDITO				IAML		06 11 08.0	
	comp=Z,410nm,1.0s						
PTAR3	**Potrerillos Ar**	**0.47**	**21**	⇑*e*P	**Pb**	**06 11 01.4**	**0.0**
PTAR3				*i* S	**Sb**	**06 11 08.9**	**+0.7**
BCO2	**Palmira**	**0.48**	**17**	⇓*i*P	**Pb**	**06 11 01.5**	**-0.2**
BCO2				AMP		06 11 02.8	
	comp=Z,4μm,0.1s						
BCO2				*i* S	**Sb**	**06 11 09.3**	**+0.6**
BRU2	**Volcan**	**0.54**	**358**	⇑*i*P	**Pn**	**06 11 02.0**	**-1.0**
BRU2				AMP		06 11 02.2	
	comp=Z,4μm,0.2s						
BRU2				*i* S	**Sb**	**06 11 10.1**	**-0.1**
BRU2	**Volcan**	**0.54**	**358**	*i* P	**Pn**	**06 11 02.1**	**-1.0**
BRU2				*i* S	**Sb**	**06 11 11.0**	**+0.8**
BRU2				IAML		06 11 15.3	
	comp=Z,220nm,1.0s						
MLIR3	**Monte Lirio, C**	**0.56**	**344**	*e*P	**Pn**	**06 11 02.2**	**-1.0**
BC3P	**Paso Ancho**	**0.56**	**6**	*i* P	**Pn**	**06 11 02.4**	**-1.0**
BC3P				*e*S	**Sb**	**06 11 11.0**	**+0.1**
LNBQ3	**Los Naranjos,**	**0.58**	**23**	*i* P	**Pn**	**06 11 02.4**	**-1.2**
LNBQ3				*i* S	**Sn**	**06 11 11.6**	**-0.6**
PIRO	**Carate, Puerto**	**0.68**	**283**	*i* P	**Pn**	**06 11 04.1**	**-0.7**
PIRO				*i* S	**Sn**	**06 11 13.3**	**-1.1**
PIRO				IAML		06 11 15.4	
	comp=Z,440nm,1.0s						
CHGR2	**Aguacate**	**0.85**	**37**	*e*P	**Pn**	**06 11 06.2**	**-1.1**
CHGR2				*e*S	**Sn**	**06 11 17.6**	**-1.2**
POTG	**Potrero Grande**	**0.91**	**331**	*i* P	**Pn**	**06 11 08.1**	**0.0**
POTG				*i* S	**Sn**	**06 11 20.6**	**+0.4**
POTG				IAML		06 11 23.1	
	comp=Z,240nm,1.0s						
PLAN	**Los Planes de**	**1.08**	**293**	*i* P	**Pn**	**06 11 09.5**	**-0.9**
PLAN				*i* S	**Sn**	**06 11 23.3**	**-1.1**
PLAN				IAML		06 11 27.0	
	comp=Z,140nm,1.0s						
OCHAL	**Ojochal**	**1.28**	**311**	*i* P	**Pn**	**06 11 12.4**	**-0.7**
OCHAL				IAML		06 11 14.1	
	comp=Z,1.8nm,1.0s						
OCHAL				*i* S	**Sn**	**06 11 29.7**	**+0.5**
RGM0	**Gandoca**	**1.33**	**3**	IAML		06 11 12.8	
	comp=Z,660nm,1.0s						
RGM0				*i* P	**Pn**	**06 11 14.9**	**+1.1**
GMAL	**Guarumal, Vera**	**1.50**	**109**	*e*P	**Pn**	**06 11 15.7**	**-0.5**
GMAL				*i* S	**Sn**	**06 11 35.0**	**+0.3**
CDM	**Cerro de Muert**	**1.68**	**320**	*i* P	**Pn**	**06 11 18.7**	**-0.4**
CDM				*i* S	**Sn**	**06 11 40.6**	**+0.7**
CDM				IAML		06 11 47.4	
	comp=Z,37nm,1.0s						
LCR2	**La Lucha 2**	**1.98**	**318**	*i* P	**Pn**	**06 11 22.7**	**-0.3**
LCR2				IAML		06 11 48.7	
	comp=Z,39nm,1.0s						
LCR2				*i* S	**Sn**	**06 11 48.8**	**+1.9**
CACAO	**El Cacao, Vera**	**2.01**	**117**	*e*P	**Pn**	**06 11 23.3**	**+0.2**
VTCV	**VTCV, Calle Va**	**2.01**	**329**	*i* P	**Pn**	**06 11 24.4**	**+1.0**
VTCV				*i* S	**Sn**	**06 11 49.8**	**+2.2**
VTCV				IAML		06 11 56.0	
	comp=Z,91nm,1.0s						

NEIC ***10*** *06:17:59.7±0.3,36˚.04N±0˚.01×97˚.90W±0˚.02,h1km,Error ellipse: s-maj=1.9km s-min=1.7km az=47.0*

TUL 10 06:18:00.4±0.3,36˚04N±0˚.01×97˚897W±0˚.008,h8km±6km, ML2.7,mb_Lg2.3/23(NEIC),ML2.4/34(NEIC),Error ellipse: s-maj=1.8km s-min=0.5km az=154.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.43**	**124**	Pg	Pg	06 18 08.7	-0.2
OK029				IAML		06 18 15.5	
	348nm,0.2s						
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	06 18 09.4	-0.2
CROK				IAML		06 18 21.4	
	comp=N,309nm,0.4s						
CROK				IAML		06 18 21.5	
	comp=E,219nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	Pg	06 18 14.1	-0.4
OKCSW				IAML		06 18 28.6	
	comp=E,170nm,0.1s						
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	Pg	06 18 14.8	-0.1
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	06 18 15.2	-0.2
OK033				IAML		06 18 33.5	
	comp=E,192nm,0.1s						
OK032	**Salt Plains WL**	**0.81**	**342**	Pg	Pg	06 18 15.5	-0.4
OK038	**West end E0370**	**0.81**	**303**		Pg	06 18 15.8	-0.3
GC02	**Grant County #**	**0.81**	**2**	Pg	Pg	06 18 15.7	-0.3
OK048	**Pawnee Station**	**0.86**	**64**		Pg	06 18 16.6	-0.3
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	06 18 16.8	-0.5
FNO				IAML		06 18 31.1	
	comp=N,81nm,0.2s						
FNO				IAML		06 18 41.2	
	comp=E,126nm,0.1s						
KAN14	**Manchester OK**	**0.92**	**357**	Pg	Pg	06 18 17.5	-0.6
KAN14				IAML		06 18 34.2	
	comp=E,188nm,0.1s						
KAN14				IAML		06 18 45.4	
	comp=N,143nm,0.1s						
U32A	**Winter Ranch,**	**0.96**	**291**		Pg	06 18 18.2	-0.6
U32A				IAML		06 18 32.9	
	comp=E,134nm,0.1s						
U32A				IAML		06 18 34.2	
	comp=N,182nm,0.3s						
QUOK	**Quay**	**0.97**	**82**		Pg	06 18 18.6	-0.4
QUOK				IAML		06 18 34.8	
	comp=E,119nm,0.2s						
QUOK				IAML		06 18 49.3	
	comp=N,115nm,0.2s						
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	06 18 19.6	-0.6
KAN09	**Caldwell North**	**1.12**	**11**	Pg	Pg	06 18 21.1	-0.9
DEOK	**Depew**	**1.15**	**99**	Pg	Pg	06 18 21.5	-1.0
DEOK				IAML		06 18 42.1	
	comp=E,110nm,0.2s						
DEOK				IAML		06 18 45.8	
	comp=N,96nm,0.1s						
KAN06	**Argonia West S**	**1.21**	**1**		Pb	06 18 22.9	-0.7
T35A	**Sooner Cattle**	**1.42**	**51**		Pn	06 18 26.8	+0.2
X34A	**Smith Ranch, M**	**1.43**	**178**	Pg	Pb	06 18 27.2	-0.2
TUL3	**Leonard**	**1.71**	**94**		Pn	06 18 30.9	+0.3
TUL3				IAmb_Lg		06 18 56.3	
	comp=Z,23nm,0.9s						
LOOK	**Love County**	**2.12**	**164**		Pn	06 18 37.3	+1.1
SMWD	**Samnorwood**	**2.13**	**245**	IAmb_Lg		06 19 10.8	
	comp=Z,9.0nm,0.7s						
R32A	**Long Quarter,**	**2.47**	**345**	IAmb_Lg		06 19 22.7	
	comp=Z,6.8nm,0.9s						
AMTX	**Amarillo**	**3.30**	**251**	IAmb_Lg		06 19 46.4	
	comp=Z,9.2nm,0.8s						
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		06 19 56.2	
	comp=Z,7.4nm,0.9s						
MIAR	**Mount Ida**	**3.83**	**112**	IAmb_Lg		06 20 10.3	
	comp=Z,5.6nm,0.8s						
POST	**Post**	**4.20**	**226**	IAmb_Lg		06 20 25.8	
	comp=Z,5.3nm,0.7s						
X40A	**Basin Creek Fa**	**4.42**	**109**	IAmb_Lg		06 20 31.3	
	comp=Z,5.7nm,0.9s						
MGMO	**Mountain Grove**	**4.66**	**75**	IAmb_Lg		06 20 29.0	
	comp=Z,5.3nm,0.8s						
R40A	**Maddies Statio**	**5.03**	**62**	IAmb_Lg		06 20 49.5	
	comp=Z,4.5nm,0.9s						
N35A	**Tabor**	**5.13**	**19**	IAmb_Lg		06 20 54.5	
	comp=Z,10nm,0.8s						
CCM	**Cathedral Cave**	**5.69**	**67**	IAmb_Lg		06 21 07.2	
	comp=Z,5.0nm,0.8s						
P40A	**Paris**	**5.80**	**51**	IAmb_Lg		06 21 07.1	
	comp=Z,9.3nm,1.0s						

TEH ***10*** *06:42:14.0,33˚.75N×45˚.53E,h14km±52km,ML2.8*
ISN ***10*** *06:42:14.3±0.8,33˚.79N×45˚.60E,h14km±5km,ML2.7*

ISC 10 06:42:15.0±1.3,33˚76N±0˚.05×45˚59E±0˚.05,h13km±13km, n10,σ1°02/15,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.71**	**156**	*e*Pg	**Pg**	**06 42 28.0**	**-0.8**
IBDR				*e*Sg	**Sb**	**06 42 39.0**	**+0.2**
IBDR				AML	AML	06 42 50.7	
	comp=N,81nm,0.5s						
IGHG	**Ghaleghazi**	**0.99**	**55**	Pg	**Pg**	**06 42 33.7**	**-0.6**
BHD	**Baghdad**	**1.12**	**245**	*e*Pn	**Pg**	**06 42 36.0**	**-0.6**
BHD				*e*Sn	**Sn**	**06 42 52.0**	**+0.4**
BHD				AML	AML	06 42 59.8	
	comp=E,623nm,0.5s						
IDHR	**Dehrash**	**1.15**	**35**	Pg	**Pg**	**06 42 36.6**	**-0.6**
KCHF	**Cheshme Sefid,**	**1.31**	**67**	Pg	**Pb**	**06 42 39.1**	**-0.5**
KCHF				Sg	**Sg**	**06 42 59.4**	**+2.0**
ILIN	**Lien**	**1.62**	**44**	Pg	**Pg**	**06 42 45.5**	**-0.7**
ILIN				Sg	**Sg**	**06 43 08.4**	**+1.1**
IKFM	**Kafar-mosalman**	**1.90**	**96**	Pn	**Pb**	**06 42 50.0**	**+0.5**
IBZA	**Bozab**	**2.02**	**69**	Pn	**Pb**	**06 42 50.2**	**-1.4**
RAFI	**Al-Rafai**	**2.08**	**168**	*e*Pn	**Pn**	**06 42 50.0**	**+0.5**
RAFI				*e*Sn	**Sn**	**06 43 15.0**	**-0.3**
IDOB	**Doab**	**2.16**	**89**	Pn	**Pg**	**06 42 55.3**	**-1.1**

IDC 10 06:42:49.8±6.5,49˚32S×125˚58E,h0km,mb3.7/3, mbtmp3.7/3,MS3.3/5,Error ellipse: s-maj=392.1km s-min=28.3km az=92.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.69**	**325**	T	T	07 04 10.5	
	baz=151,slow=75,SNR=14						
H01W2	**Cape Leeuwin H**	**16.70**	**325**	T	T	07 04 13.5	
	baz=151,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**16.71**	**325**	T	T	07 04 15.3	
	baz=151,slow=75,SNR=16						
NWAO	**Narrogin (SRO)**	**17.52**	**336**	LR	LR	06 52 23.1	
	comp=Z,118nm,19.9s,baz=170,slow=33						
STKA	**Stephens Creek**	**21.17**	**41**	LR	LR	06 54 22.1	
	comp=Z,32nm,21.1s,baz=204,slow=33						
ASAR	**Alice Springs**	**26.43**	**17**	P	P	06 48 28.2	0.0
	0.9nm,0.5s,baz=190,slow=9.6,SNR=20						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**30.14**	**17**	P	P	06 49 00.6	-0.7
	0.2nm,0.4s,baz=193,slow=8.4,SNR=6.3						
	0.2nm,0.4s						
VNDA	**Vanda**	**31.48**	**166**	P	P	06 49 12.0	-0.6
	1.3nm,0.9s,baz=294,slow=9.3,SNR=2.6						
VNDA				LR	LR	07 00 09.4	
	comp=Z,116nm,20.1s,baz=296,slow=33						
	1.3nm,0.9s						
DZM	**Mont Dzumac**	**42.14**	**65**	LR	LR	07 04 32.5	
	comp=Z,35nm,18.7s,baz=58,slow=31						
HNR	**Honiara**	**49.00**	**48**	LR	LR	07 11 13.7	
	comp=Z,473nm,18.1s,baz=342,slow=35						
H08S2	**Diego Garcia H**	**60.69**	**295**	T	T	07 59 07.2	
	baz=144						
H08S1	**Diego Carcia H**	**60.70**	**295**	T	T	07 59 04.5	
	baz=144						
H08S3	**Diego Garcia H**	**60.71**	**295**	T	T	07 59 04.3	
	baz=144						
CMAR	**Chiang Mai Arr**	**71.50**	**333**	LR	LR	07 24 57.4	
	comp=Z,15nm,19.4s,baz=135,slow=35						
YKA	**Yellowknife Ar**	**145.16**	**45**	PKPbc	PKPab	07 02 27.7	+0.1
	0.2nm,0.6s,baz=270,slow=3.7,SNR=7.7						

IDC ***10*** *06:48:09.3±1.1,58˚.67S×25˚.26W,h0km,mb4.2/4, mbtmp4.2/5,ML3.9/1,MS3.7/1,Error ellipse: s-maj=43.8km s-min=26.5km az=81.0*
NEIC ***10*** *06:48:10.6±0.7,58˚.70S±0˚.08×25˚.2W±0˚.4,h10km±1km, mb4.6/13,Error ellipse: s-maj=34.5km s-min=9.9km az=74.0*

ISC 10 06:48:13.1±0.7,58˚7S±0˚.1×25˚2W±0˚.2,h28km,n41, σ0°92/32,mb4.7/9,5C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.90**	**156**	⇑P	**Pn**	**06 51 28.6**	**+0.7**
	comp=Z,0.5nm,0.1s						
VNA3	**Neumayer Olymp**	**14.10**	**159**	⇑P	**Pn**	**06 51 29.5**	**-1.2**
	comp=Z,2.6nm,0.2s						
VNA2	**Neumayer--Watz**	**14.30**	**156**	⇑P	**Pn**	**06 51 32.3**	**-1.0**
	comp=Z,2.1nm,0.3s,baz=321,slow=15						
SNAA	**Sanae**	**15.85**	**154**	Pn	**Pn**	**06 51 52.1**	**-1.9**
SNAA	**Sanae**	**15.85**	**154**	⇑P	**Pn**	**06 51 53.7**	**-0.3**
	comp=Z,40nm,0.3s						
SNAA	**Sanae**	**15.85**	**154**	Pn	**Pn**	**06 51 52.7**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=321,slow=16,SNR=9.6						
	comp=Z,2.0nm,0.4s						
TROLL	**Troll, Antarti**	**17.36**	**151**	⇑P	**P**	**06 52 13.9**	**-0.4**
	comp=Z,29nm,0.2s						
QSPA	**South Pole Qui**	**31.52**	**180**	P	**P**	**06 54 32.6**	**+0.2**
QSPA	**South Pole Qui**	**31.52**	**180**	P	**P**	**06 54 33.0**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=234,slow=2.1,SNR=8.9						
	comp=Z,1.9nm,0.8s						
PLCA	**Paso Flores**	**33.59**	**282**	P	**P**	**06 54 50.3**	**-0.4**
PLCA				IAmb	IAmb	06 55 28.7	
	comp=Z,8.4nm,1.3s						
PLCA	**Paso Flores**	**33.59**	**282**	P	**P**	**06 54 50.4**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=135,slow=7.1,SNR=3.3						
	comp=Z,1.1nm,0.8s						
LL06	**Lonomila**	**34.09**	**277**	P	**P**	**06 54 54.2**	**-0.7**
MAW	**Mawson**	**37.36**	**141**	P	**P**	**06 55 21.3**	**-1.3**
MAW	**Mawson**	**37.36**	**141**	LR	LR	07 09 55.7	
	comp=Z,93nm,18.2s,baz=100,slow=35						
BO02	**Sierra Bellavi**	**38.28**	**288**	P	**P**	**06 55 30.6**	**-0.3**
BO02				IAmb	IAmb	06 55 56.8	
	comp=Z,24nm,1.4s						
SPB	**Sao Paulo**	**38.51**	**326**	P	**P**	**06 55 32.3**	**-0.5**
SPB				IAmb	IAmb	06 55 47.8	
	comp=Z,21nm,1.4s						
GO05	**Huala**	**38.68**	**287**	P	**P**	**06 55 33.3**	**-0.8**
MT09	**Talagante**	**39.20**	**289**	P	**P**	**06 55 37.5**	**-1.1**
MT01	**Popeta**	**39.26**	**289**	P	**P**	**06 55 38.4**	**-0.6**
MT01				IAmb	IAmb	06 55 47.4	
	comp=Z,31nm,1.2s						
MT02	**Curacav**	**39.69**	**289**	P	**P**	**06 55 42.1**	**-0.5**
MT02				IAmb	IAmb	06 56 12.0	
	comp=Z,31nm,1.3s						
CO01	**Juntas del Tor**	**41.87**	**293**	P	**P**	**06 56 01.6**	**+0.7**
CO01				IAmb	IAmb	06 56 22.9	
	comp=Z,10nm,1.3s						
VNDA	**Vanda**	**43.94**	**182**	P	**P**	**06 56 18.8**	**+2.0**
VNDA	**Vanda**	**43.94**	**182**	P	**P**	**06 56 18.9**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=167,slow=8.5,SNR=2.7						
	comp=Z,1.0nm,0.7s						
H04S2	**CROZET ISLANDS**	**45.52**	**110**	T	T	07 45 57.1	
	baz=226,slow=75,SNR=10						
H04S3	**CROZET ISLANDS**	**45.53**	**110**	T	T	07 45 58.0	
	baz=226,slow=75,SNR=12						
H04S1	**CROZET ISLANDS**	**45.54**	**110**	T	T	07 45 58.1	
	baz=226,slow=75,SNR=8.0						
H10S2	**ASCENSION HYDR**	**50.30**	**14**	T	T	07 51 25.7	
	baz=33,slow=74,SNR=8.7						
H10S3	**ASCENSION HYDR**	**50.31**	**14**	T	T	07 51 25.5	
	baz=187,slow=74,SNR=17						
H10N1	**ASCENSION HYDR**	**51.42**	**14**	T	T	07 52 56.0	
	baz=187						
H10N3	**ASCENSION HYDR**	**51.42**	**14**	T	T	07 52 49.1	
	baz=187,slow=74						
H10N2	**ASCENSION HYDR**	**51.44**	**14**	T	T	07 52 55.6	
	baz=187,slow=74						
LPAZ	**La Paz**	**52.81**	**305**	P	**P**	**06 57 26.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**74.90**	**27**	P	**P**	**06 59 52.3**	**+1.2**
	comp=Z,6.0nm,0.3s,baz=199,slow=7.2,SNR=2.1						
	comp=Z,6.0nm,0.3s						
FINES	**FINESS Array B**	**126.25**	**28**	PKP	**PKPdf**	**07 07 11.0**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=151,slow=4.4,SNR=4.8						
YKA	**Yellowknife Ar**	**138.87**	**315**	PKP	**PKPdf**	**07 07 35.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=126,slow=2.4,SNR=8.6						
P33M	**Teslin, Yukon**	**144.90**	**304**	PKPdf	**PKPdf**	**07 07 45.9**	**-0.2**
P32M	**Atlin**	**144.97**	**303**		**PKPdf**	**07 07 45.9**	**-0.3**
N32M	**Quiet Lake**	**145.48**	**305**		**PKPab**	**07 07 47.8**	**+0.4**
P29M	**Windy Craggy**	**146.77**	**301**	PKPdf	**PKPbc**	**07 07 51.3**	**+0.2**
A36M	**Sachs Harbour**	**147.06**	**326**		**PKPbc**	**07 07 51.4**	**0.0**
ILAR	**Eielson Array**	**152.67**	**307**	PKPbc	**PKiKP**	**07 08 05.7**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=134,slow=2.6,SNR=6.1						

LDG ***10*** *06:54:15.5±0.1,42˚.97N×0˚.23E,h11km,Md1.8/2,Ml1.8/6, Error ellipse: s-maj=1.6km s-min=0.9km az=167.0*
STR ***10*** *06:54:16.0±0.4,43˚.N±4.4˚×±˚,h2km,MLv1.6/7,Error ellipse: s-maj=0.0km s-min=0.0km az=180.0,preliminary*

MRB 10 06:54:16.1±0.5,42˚96N×0˚22E,h7km±10km,ML1.3/4, Error ellipse: s-maj=2.7km s-min=2.0km az=49.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EPF	**Esparros**	**0.11**	**49**	*e*Pg	Pg	06 54 18.6	0.0
EPF				*e*Sg	Sg	06 54 20.6	+0.2
	64nm,0.3s						
EPF	**Esparros**	**0.11**	**49**	Pg	Pg	06 54 18.6	0.0
EPF				Sg	Sg	06 54 20.6	+0.2
VIEF	**Viey**	**0.16**	**243**	Pg	Pg	06 54 19.4	-0.1
VIEF				Sg	Sg	06 54 21.8	0.0
PYLO	**Lourdes**	**0.24**	**305**	P	Pg	06 54 21.2	+0.2
PYLO				S	Sg	06 54 24.5	+0.3
	228nm,0.1s						
PYLO	**Lourdes**	**0.24**	**305**	Pg	Pg	06 54 20.8	-0.2
ECHI	**Chisagues Biel**	**0.29**	**184**	P	Pg	06 54 22.0	+0.1
ECHI				S	Sg	06 54 26.2	+0.4
	49nm,0.1s						
ECHI	**Chisagues Biel**	**0.29**	**184**	Pg	Pg	06 54 22.0	+0.1
ECHI				Sg	Sg	06 54 25.9	+0.1
CARA	**Val d'Aran**	**0.50**	**119**	P	Pg	06 54 25.8	-0.1
CARA				S	Sg	06 54 32.8	+0.3
	8.4nm,0.2s						
ETSF	**Etsaut**	**0.58**	**264**	*e*Pg	Pg	06 54 26.6	-0.6
ETSF				*e*Sg	Sg	06 54 34.2	-0.6
	14nm,0.3s						
ETSF	**Etsaut**	**0.58**	**264**	Pg	Pg	06 54 26.6	-0.6
MLS	**Moulis**	**0.64**	**90**	Pg	Pg	06 54 27.8	-0.6
MLS				Sg	Sg	06 54 36.3	-0.4
ATE	**Arette**	**0.69**	**281**	P	Pg	06 54 29.3	0.0
ATE				S	Sg	06 54 39.0	+0.6
ATE	**Arette**	**0.69**	**281**	Pg	Pg	06 54 28.9	-0.5
ATE				Sg	Sb	06 54 39.4	-0.8
SALF	**Salau**	**0.74**	**105**	Pg	Pg	06 54 29.8	-0.5
SALF				Sg	Sg	06 54 38.8	-1.0
PAND	**Andorre**	**1.07**	**114**	Pg	Pg	06 54 28.4	-8.2
SJPF	**Ste Jean**	**1.07**	**279**	*e*Pg	Pg	06 54 35.5	-1.2
SJPF				*e*Sg	Sg	06 54 49.6	-1.0
	2.7nm,0.4s						
SJPF	**Ste Jean**	**1.07**	**279**	Pg	Pg	06 54 35.5	-1.2
OSSF	**Osses**	**1.13**	**286**	Pg	Pb	06 54 37.9	0.0
OSSF				Sg	Sb	06 54 53.0	+0.2
DUNF	**Dun**	**1.17**	**86**	Pg	Pg	06 54 37.9	-0.6
DUNF				Sg	Sg	06 54 52.8	-0.8
EALK	**Alkurruntz**	**1.29**	**282**	Pg	Pn	06 54 40.6	0.0
EALK	**Alkurruntz**	**1.29**	**282**	Sg	Sb	06 54 57.2	-0.5
MTLF	**Montolieu**	**1.51**	**75**	*e*Pg	Pn	06 54 43.8	+0.2
MTLF				*e*Sg	Sn	06 55 02.5	-1.0
	4.2nm,0.3s						
MTLF	**Montolieu**	**1.51**	**75**	Pg	Pn	06 54 43.8	+0.2
MTLF	**Montolieu**	**1.51**	**75**	Pn	Pn	06 54 43.8	+0.3
MTLF	**Montolieu**	**1.51**	**75**	Sn	Sn	06 55 03.6	+0.1
MONQ	**Montcuq**	**1.58**	**26**	Pn	Pn	06 54 44.6	+0.2
MONQ				Sn	Sb	06 55 05.9	+0.2
CORI	**Orista**	**1.67**	**125**	S	Sn	06 55 07.7	+0.2
	1.3nm,0.2s						
CAF	**Calviac**	**2.38**	**33**	*e*Pg	Pb	06 54 59.4	+0.2
CAF				*e*Sg	Sb	06 55 29.9	+1.2
	0.5nm,0.2s						
RJF	**Les Rejaudoux**	**2.52**	**21**	*e*Pg	Pb	06 55 02.2	+0.4
RJF				*e*Sg	Sb	06 55 35.0	+2.0
	0.4nm,0.2s						
LASF	**Ste Croix**	**2.87**	**66**	*e*Pg	Pb	06 55 08.1	+0.5
LASF				*e*Sg	Sb	06 55 45.1	+2.1
	0.7nm,0.2s						

MRB 10 06:54:23.7±0.4,42˚32N×1˚33E,h0km±3km,ML0.9/13, 2C-2D,Error ellipse: s-maj=1.3km s-min=0.9km az=97.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CORG	**Organya**	**0.09**	**184**	⇑P	Pg	06 54 25.3	-0.1
CORG				S	Sg	06 54 26.8	+0.3
	85nm,0.1s						
CSOR	**Sort**	**0.15**	**292**	⇓P	Pg	06 54 26.8	+0.1
CSOR				S	Sg	06 54 29.4	+0.8
	52nm,0.2s						
ARBS	**La Rabassa**	**0.21**	**52**	⇑P	Pg	06 54 27.4	-0.3
ARBS				S	Sg	06 54 30.4	0.0
PAND	**Andorre**	**0.26**	**39**	P	Pg	06 54 29.1	+0.4
PAND				S	Sg	06 54 33.0	+0.9
	15nm,0.2s						
PAND	**Andorre**	**0.26**	**39**	Sg	Sg	06 54 32.6	+0.4
CEST	**Esterri de Car**	**0.28**	**349**	P	Pg	06 54 29.3	+0.1
CEST				S	Sg	06 54 33.6	+0.7
	12nm,0.3s						
CTRE	**Tremp**	**0.41**	**271**	*e*P	Pg	06 54 32.0	+0.4
CTRE				S	Sg	06 54 38.0	+1.1
	9.3nm,0.3s						
CLLI	**Ll

KUR16				⇑S		Sb	07 06 59.6	-0.9
KUR05	**Kurchatov Arra**	**0.56**	**342**	⇑P		**Pb**	**07 06 51.5**	**-0.7**
KUR05				⇓S		**Sb**	**07 07 00.3**	**-0.4**
KUR17	**Kurchatov Arra**	**0.56**	**338**	⇑P		**Pb**	**07 06 51.4**	**-0.9**
KUR17				⇑S		**Sb**	**07 06 59.8**	**-1.0**
KUR04	**Kurchatov Arra**	**0.57**	**343**	⇑P		**Pb**	**07 06 51.8**	**-0.7**
KUR04				⇑S		**Sb**	**07 07 00.8**	**-0.3**
KURK	**Kurchatov**	**0.61**	**349**	⇑P		**Pb**	**07 06 52.4**	**-0.8**
	7.9nm,0.4s							
KURK				⇑S		**Sb**	**07 07 01.4**	**-0.9**
	9.8nm,0.5s							
MAKZ	**Makanchi**	**3.93**	**146**	⇓Pg		**Pb**	**07 07 45.6**	**-4.0**
	3.0nm,0.5s							
MAKZ				⇓Lg		Lg	07 08 38.9	
	8.3nm,0.7s							
BRZS	**Berezniki**	**3.95**	**270**	Pg		**Pb**	**07 07 51.3**	**+1.2**
	3.9nm,0.3s							
BRZS				Lg		Lg	07 08 43.7	
	4.6nm,0.3s							
MK31	**Makanchi Array**	**4.05**	**144**	⇓Pn		**Pn**	**07 07 43.2**	**+0.3**
	0.1nm,0.2s,baz=323,slow=10.0,SNR=13							
MK31				⇑Pg		**Pb**	**07 07 51.5**	**-0.3**
	0.2nm,0.2s,baz=335,slow=16,SNR=16							
MK31				⇑Sn		**Sn**	**07 08 32.3**	**+1.3**
MK31				⇓Lg		Lg	07 08 45.3	
	2.1nm,0.4s,baz=330,slow=26,SNR=19							
MKAR	**Makanchi Array**	**4.05**	**144**	Pn		**Pn**	**07 07 43.1**	**+0.2**
	0.3nm,0.3s,baz=320,slow=10,SNR=17							
MKAR				Pg		**Pb**	**07 07 50.6**	**-1.2**
	1.0nm,0.3s,baz=328,slow=15,SNR=18							
MKAR				Lg		Lg	07 08 43.3	
	1.1nm,0.3s,baz=332,slow=25,SNR=13							
	0.3nm,0.3s							
OTUK	**Ortayu**	**4.63**	**249**	Pg		**Pb**	**07 08 02.3**	**+0.6**
	0.5nm,0.6s							
OTUK				Lg		Lg	07 09 02.8	
	1.7nm,0.2s							
OTUK	**Ortayu**	**4.63**	**249**	⇓Pn		**Pn**	**07 07 50.1**	**-0.8**
	0.9nm,0.3s							
OTUK				⇓Pg		**Pb**	**07 08 01.1**	**-0.5**
	3.8nm,1.1s							
OTUK				⇓Lg		Lg	07 09 07.9	
	3.0nm,0.6s							
I46RU	**ZALESOVO INFRA**	**5.34**	**42**	I		I	07 40 40.0	
	baz=224,slow=324,SNR=1.9							
ZALV	**Zalesovo Beam**	**5.34**	**42**	Pn		**Pn**	**07 08 03.3**	**+2.8**
	0.8nm,0.3s,baz=232,slow=14,SNR=12							
ZALV				Sn		**Sn**	**07 09 05.4**	**+2.7**
	0.1nm,0.3s,baz=228,slow=24,SNR=2.0							
ZALV				Lg		Lg	07 09 33.6	
	0.2nm,0.3s,baz=222,slow=23,SNR=2.2							
	1.5nm,0.3s							
ARXS	**Arharly**	**5.94**	**187**	Pg		**Pb**	**07 08 25.1**	**+1.1**
	0.2nm,0.1s							
ARXS				Lg		Lg	07 09 42.3	
	2.9nm,0.5s							
BVAR	**Borovoye Array**	**6.00**	**302**	Pn		**Pn**	**07 08 09.2**	**-0.4**
	baz=119,slow=15,SNR=1.8							
BVAR				Sn		**Sn**	**07 09 17.2**	**-1.7**
	baz=116,slow=23,SNR=3.2							
BVAR				Lg		Lg	07 09 51.3	
	baz=111,slow=24,SNR=3.9							
	0.2nm,0.3s							

IDC ***10*** *07:10:31.9±1.2,24.˚17N×121.˚71E,h0km,mb3.4/5, mbtmp3.4/5,MS3.1/3,Error ellipse: s-maj=70.9km s-min=24.9km az=67.0*

NIED ***10*** *07:10:33.4,24.˚13N×121.˚74E,h2km,MW4.0,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr=0.01; Mθθ-0.47; Mϕϕ0.48; Mrθ-0.75; Mθϕ0.34; Mϕr-0.59; Fault plane solution: M₀1.11000×10¹⁵ NP1:φs58.00000°, δ89.00000°,λ-59.00000°. NP2:φs149.00000°,δ31.00000°, λ-178.00000°.*

ASIES ***10*** *07:10:33.5,24.˚18N×121.˚77E,h9km,ML3.9,Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr-0.60; Mθθ-1.60; Mϕϕ2.20; Mrθ2.86; Mθϕ1.17; Mϕr-7.20; Fault plane solution: M₀8.07831×10²¹ NP1: φs338.23000°,δ87.36000°,λ-105.50000°. NP2: φs238.79000°,δ15.72000°,λ-9.80000°. Principal axes: T Plg40.3950°, Azm82.5980°; N Plg15.4850°, Azm338.9630°; P Plg45.5010°, Azm232.5870°;*

JMA ***10*** *07:10:33.4±0.1,24.˚1N±0.˚2×121.˚7E±0.˚2,h2km±1km, MV3.5/13,TAIWAN REGION*

TAP ***10*** *07:10:33.5,24.˚18N×121.˚77E,h9km,ML3.9,C*

ISC 10 07:10:34.1±0.8,24.˚18N±0.˚01×121.˚77E±0.˚01,h11km±5km, n186,σ1§04/336,mb3.5/5,36C-27D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**348**	⇓	*eP*	**Pg**	**07 10 36.5**	**-0.7**
	baz=351							
EHP				S		**Sg**	**07 10 39.2**	**-0.2**
	baz=351							
ETL	**Fush Village**	**0.14**	**260**	⇑	*eP*	**Pg**	**07 10 35.9**	**-1.4**
	baz=260							
ETL				*e*S		**Sg**	**07 10 38.7**	**-0.9**
	baz=260							
EAHA	**Aohua**	**0.15**	**349**	⇓	P	**Pg**	**07 10 36.7**	**-0.7**
	baz=349							
EAHA				*i*	S	**Sg**	**07 10 39.9**	**0.0**
	baz=349							
NACB	**Ninganchiao**	**0.16**	**267**		P	**Pg**	**07 10 36.4**	**-1.3**
NACB	**Ninganchiao**	**0.16**	**267**	⇑	P	**Pg**	**07 10 36.3**	**-1.3**
	baz=268							
NACB				*i*	S	**Sg**	**07 10 39.6**	**-0.6**
	baz=268							
TWD	**Chiawan**	**0.19**	**237**	⇑	*eP*	**Pg**	**07 10 36.6**	**-1.5**
	baz=244							
TWD					S	**Sg**	**07 10 41.4**	**+0.5**
	baz=244							
ENA	**Nanau**	**0.24**	**354**	⇓	P	**Pg**	**07 10 38.7**	**-0.5**
	baz=356							
ENA					S	**Sg**	**07 10 42.8**	**+0.2**
	baz=356							
HWA	**Hwalien**	**0.26**	**216**	*e*	P	**Pg**	**07 10 38.8**	**-0.5**
	baz=226							
HWA				*e*	S	**Sb**	**07 10 45.8**	**+0.6**
	baz=226							
EWUT	**Wuta**	**0.26**	**1**	⇓	*i* P	**Pg**	**07 10 39.0**	**-0.4**
	baz=2.0							
EWUT				*i*	S	**Sg**	**07 10 43.2**	**+0.2**
	baz=2.0							
ETLH	**Xiulin Townshi**	**0.27**	**275**	⇑	*eP*	**Pg**	**07 10 38.5**	**-1.1**
	baz=277							
ETLH				*e*	S	**Sg**	**07 10 42.5**	**-0.7**
	baz=277							
ETM	**Tongmen**	**0.33**	**230**	⇑	*eP*	**Pg**	**07 10 39.3**	**-1.5**
	baz=231							
ETM				*e*	S	**Sg**	**07 10 45.8**	**+0.6**
	baz=231							
LXIB	**Xiulin Townshi**	**0.36**	**244**	⇑	*eP*	**Pg**	**07 10 39.9**	**-1.4**
	baz=246							
LXIB				*e*	S	**Sg**	**07 10 46.5**	**+0.3**
	baz=246							
ESAO	**Su ao**	**0.40**	**10**	⇓	P	**Pg**	**07 10 41.5**	**-0.5**
	baz=6.0							
ESAO				*e*	S	**Sg**	**07 10 47.2**	**0.0**
	baz=6.0							
LATG	**Datong**	**0.42**	**328**	*e*	P	**Pg**	**07 10 41.9**	**-0.4**
	baz=328							
LATG				*e*	S	**Sg**	**07 10 47.7**	**-0.2**
	baz=328							
NNSB	**Datong**	**0.43**	**305**	⇑	*eP*	**Pg**	**07 10 42.1**	**-0.5**
	baz=306							
NNSB					S	**Sg**	**07 10 48.2**	**-0.1**
	baz=306							
NNSH	**Datong**	**0.43**	**305**	⇑	P	**Pg**	**07 10 42.2**	**-0.4**
	baz=305							
NNSH					S	**Sg**	**07 10 48.3**	**0.0**
	baz=305							
TWC	**Suao**	**0.43**	**10**	⇓	P	**Pg**	**07 10 42.2**	**-0.4**
	baz=7.0							
TWC				*e*	S	**Sb**	**07 10 49.2**	**-1.0**
	baz=7.0							
SHUL	**Shoufeng**	**0.44**	**206**	⇑	*i* P	**Pb**	**07 10 43.5**	**-0.3**
	baz=208							
NNS	**Nan Shan**	**0.44**	**305**	*e*	P	**Pg**	**07 10 42.4**	**-0.5**
	baz=306							
NNS					S	**Sg**	**07 10 48.8**	**+0.1**
	baz=306							
NDS	**Dongshan**	**0.45**	**354**	⇑	*i* P	**Pg**	**07 10 42.9**	**-0.1**
	baz=354							
NDS					S	**Sb**	**07 10 49.6**	**-1.3**
	baz=354							
WHF	**Hehuan Shan**	**0.46**	**265**	*e*	P	**Pg**	**07 10 42.4**	**-0.9**
	baz=267							
WHF				*i*	S	**Sg**	**07 10 49.9**	**+0.5**
	baz=267							
NDT	**Datong Townshi**	**0.48**	**331**	*e*	P	**Pg**	**07 10 43.4**	**-0.1**
	baz=331							
NDT				*e*	S	**Sb**	**07 10 50.6**	**-1.1**
	baz=331							
ESL	**Shilin**	**0.48**	**220**	⇑	*eP*	**Pg**	**07 10 42.0**	**-1.5**
	baz=230							
ESL				*e*	S	**Sb**	**07 10 50.8**	**-0.8**
	baz=230							
EOS2	**EOS2**	**0.48**	**61**	⇑	*eP*	**Pb**	**07 10 44.4**	**-0.1**
	baz=42							
FUSS	**Fushou**	**0.49**	**278**	⇑	*eP*	**Pg**	**07 10 43.0**	**-0.6**
	baz=279							
FUSS				*e*	S	**Sg**	**07 10 50.0**	**-0.1**
	baz=279							
ENTT	**Nioudou**	**0.49**	**338**	*e*	P	**Pg**	**07 10 43.6**	**-0.1**
	baz=339							
ENTT					S	**Sb**	**07 10 51.0**	**-1.0**
	baz=339							
EOS4	**EOS4**	**0.50**	**97**	*e*	P	**Pn**	**07 10 46.1**	**-0.9**
	baz=94							
EOS4				*e*	S	**Sn**	**07 10 55.5**	**+0.1**
	baz=94							
TEGC	**Jichi Village**	**0.52**	**204**	*e*	P	**Pg**	**07 10 43.6**	**-0.6**
	baz=207							
TWE	**Neicheng**	**0.54**	**350**	⇓	*i* P	**Pg**	**07 10 44.5**	**-0.2**
	baz=352							
TWE					S	**Sb**	**07 10 52.8**	**-0.8**
	baz=352							
TWT	**Tachien**	**0.55**	**277**	*i*	P	**Pg**	**07 10 44.6**	**-0.2**
	baz=278							
TWT				*e*	S	**Sg**	**07 10 52.4**	**+0.3**
	baz=278							
CHGB	**Renai**	**0.56**	**257**	*e*	P	**Pg**	**07 10 44.1**	**-0.9**
	baz=252							
CHGB				*e*	S	**Sb**	**07 10 54.4**	**+0.2**
	baz=252							
TDCB	**Techi**	**0.56**	**277**	⇑	P	**Pg**	**07 10 44.6**	**-0.5**
	baz=279							
TDCB				*e*	S	**Sg**	**07 10 52.4**	**-0.2**
	baz=279							
ILA	**Ilan**	**0.58**	**358**		P	**Pg**	**07 10 45.0**	**-0.4**
	baz=351							
ILA				*i*	S	**Sb**	**07 10 54.4**	**-0.2**
	baz=351							
WARBT	**Fenglin Townsh**	**0.58**	**217**	⇑	*eP*	**Pg**	**07 10 43.8**	**-1.6**
	baz=227							
OWD	**Renai**	**0.59**	**247**	*e*	P	**Pg**	**07 10 44.6**	**-1.0**
	baz=249							
OWD				*e*	S	**Sg**	**07 10 53.6**	**+0.3**
	baz=249							
FUSB	**Fushanzhiwuyua**	**0.60**	**344**	⇓	P	**Pg**	**07 10 45.7**	**-0.1**
	baz=344							
FUSB				*e*	S	**Sb**	**07 10 54.0**	**-1.2**
	baz=344							
EGFH	**Guangfu**	**0.60**	**212**	⇑	*eP*	**Pg**	**07 10 44.5**	**-1.2**
	baz=220							
EGFH				*e*	S	**Sb**	**07 10 56.2**	**+1.0**
	baz=220							
YHNB	**Yeheng**	**0.60**	**323**		P	**Pb**	**07 10 46.2**	**-0.6**
YHNB	**Yeheng**	**0.60**	**323**	*e*	P	**Pb**	**07 10 45.9**	**-0.9**
	baz=324							
YHNB					S	**Sb**	**07 10 54.2**	**-1.1**
	baz=324							
NSK	**Sanguang**	**0.62**	**323**	*e*	P	**Pg**	**07 10 46.0**	**-0.1**
	baz=323							
NSK				*i*	S	**Sb**	**07 10 54.9**	**-0.9**
	baz=323							
WUSB	**Renai**	**0.63**	**252**	*e*	P	**Pg**	**07 10 45.4**	**-0.9**
	baz=254							
WUSB				*e*	S	**Sg**	**07 10 54.4**	**-0.2**
	baz=254							
NWLT	**Wulai**	**0.64**	**338**		P	**Pb**	**07 10 46.5**	**-0.9**
	baz=338							
NWLT					S	**Sg**	**07 10 55.2**	**+0.2**
	baz=338							
NTC	**Toucheng**	**0.67**	**5**	*e*	P	**Pg**	**07 10 46.3**	**-0.8**
	baz=4.0							
NTC				*e*	S	**Sg**	**07 10 55.8**	**-0.1**
	baz=4.0							
VWDT	**VWDT**	**0.72**	**234**	*e*	P	**Pg**	**07 10 46.7**	**-1.2**
	baz=235							
VWDT				*e*	S	**Sn**	**07 10 60.0**	**-1.3**
	baz=235							
NFF	**Wufeng Townshi**	**0.74**	**307**	*e*	P	**Pb**	**07 10 48.5**	**-0.7**
	baz=308							
NFF					S	**Sb**	**07 10 58.5**	**-0.9**
	baz=308							
HGSD	**Ruisui**	**0.76**	**205**	⇑	*eP*	**Pb**	**07 10 48.6**	**-0.7**
	baz=194							
HGSD				*e*	S	**Sn**	**07 11 02.6**	**+0.3**
	baz=194							
WHP	**Taichung City**	**0.76**	**277**	⇑	P	**Pb**	**07 10 48.6**	**-0.8**
	baz=278							
WHP					S	**Sb**	**07 10 59.2**	**-0.6**
	baz=278							
WPL	**Puli Township**	**0.76**	**257**	⇓	*eP*	**Pg**	**07 10 48.2**	**-0.6**
	baz=249							
WPL				*e*	S	**Sb**	**07 10 59.0**	**-0.9**
	baz=249							
DPDB	**Guoxing**	**0.79**	**259**	⇑	*eP*	**Pg**	**07 10 48.6**	**-0.7**
	baz=251							
DPDB				*e*	S	**Sb**	**07 11 00.6**	**+0.1**
	baz=251							
TIPB	**Shuangxi**	**0.79**	**4**	⇓	P	**Pb**	**07 10 49.1**	**-0.7**
	baz=3.0							
TIPB				*e*	S	**Sb**	**07 10 59.9**	**-0.7**
	baz=3.0							
EHY	**Hungye**	**0.79**	**211**	⇑	*eP*	**Pg**	**07 10 47.7**	**-1.6**
	baz=224							
EHY				*e*	S	**Sb**	**07 11 01.3**	**+0.7**
	baz=224							
WCS	**Beigang Elemen**	**0.80**	**261**	*e*	P	**Pg**	**07 10 48.8**	**-0.6**
	baz=264							
NHDH	**Xindian Distri**	**0.81**	**344**	⇓	*eP*	**Pb**	**07 10 49.8**	**-0.4**
	baz=344							
NHDH				*e*	S	**Sb**	**07 11 00.7**	**-0.4**
	baz=344							
TWA	**Mucha**	**0.81**	**348**	⇑	*eP*	**Pb**	**07 10 50.0**	**-0.3**
	baz=348							
TWA				*e*	S	**Sb**	**07 11 00.9**	**-0.4**
	baz=348							
LIOB	**Emei**	**0.83**	**304**	*e*	P	**Pb**	**07 10 50.5**	**0.0**
	baz=305							
LIOB					S	**Sb**	**07 11 01.8**	**0.0**
	baz=305							
TATO	**Taipei**	**0.83**	**342**		P	**Pb**	**07 10 50.4**	**-0.2**
TATO	**Taipei**	**0.83**	**342**	⇑	*eP*	**Pb**	**07 10 50.4**	**-0.2**
	baz=342							
TATO					S	**Sb**	**07 11 01.6**	**-0.1**
	baz=342							
NJD	**Zhudong**	**0.83**	**312**	*e*	P	**Pn**	**07 10 51.3**	**-0.5**
	baz=312							
NJD				*e*	S	**Sn**	**07 11 03.1**	**-0.9**
	baz=312							
NSTT	**Nanjuang**	**0.83**	**303**	⇑	*eP*	**Pb**	**07 10 50.2**	**-0.4**
	baz=304							
NSTT					S	**Sb**	**07 11 01.8**	**0.0**
	baz=304							
SSLB	**Suanglung**	**0.84**	**242**		P	**Pg**	**07 10 49.3**	**-1.1**
SSLB	**Suanglung**	**0.84**	**242**	*e*	P	**Pg**	**07 10 49.1**	**-1.3**
	baz=258							
TWB1	**Santiao Chiao**	**0.84**	**13**	⇑	*eP*	**Pg**	**07 10 50.0**	**-0.4**
	baz=14							
TWB1				*e*	S	**Sb**	**07 11 02.3**	**+0.1**
	baz=14							
SMLT	**Sun Moon Lake**	**0.85**	**250**	⇓	*eP*	**Pg**	**07 10 49.6**	**-0.9**
	baz=251							
SMLT					S	**Sb**	**07 11 02.5**	**0.0**
	baz=251							
BACT	**New Taipei Cit**	**0.86**	**340**	*e*	P	**Pg**	**07 10 50.4**	**-0.4**
	baz=340							
BACT				*e*	S	**Sb**	**07 11 03.2**	**+0.4**
	baz=340							
NHY	**Taipei**	**0.87**	**348**	*e*	P	**Pb**	**07 10 50.9**	**-0.4**
	baz=348							
NHY				*e*	S	**Sb**	**07 11 03.0**	**0.0**
	baz=348							
TYC	**Yuchr**	**0.88**	**252**	*e*	P	**Pg**	**07 10 50.0**	**-1.1**
	baz=245							
TYC				*e*	S	**Sb**	**07 11 03.1**	**-0.1**
	baz=245							
NWF	**Wu-fen Shan**	**0.88**	**1**	⇑	P	**Pb**	**07 10 51.5**	**0.0**
	baz=352							
NWF				*e*	S	**Sb**	**07 11 03.2**	**-0.2**
	baz=352							
WFSB	**Wu-fen Shan**	**0.88**	**1**	⇑	P	**Pn**	**07 10 51.6**	**-0.9**
	baz=354							
WFSB				*e*	S	**Sb**	**07 11 03.1**	**-0.3**
	baz=354							
TAP	**Taipei**	**0.89**	**344**		P	**Pg**	**07 10 50.4**	**-0.7**
	baz=345							
TAP				*i*	S	**Sb**	**07 11 03.7**	**+0.4**
	baz=345							
YULB	**Yu-li**	**0.90**	**209**		P	**Pb**	**07 10 51.2**	**-0.5**
YULB	**Yu-li**	**0.90**	**209**	⇑	*eP*	**Pg**	**07 10 50.0**	**-1.5**
	baz=212							
YULB				*e*	S	**Sn**	**07 11 05.5**	**-0.2**
	baz=212							
HSN1	**Hsinchu**	**0.91**	**311**	*e*	P	**Pn**	**07 10 53.1**	**+0.3**
	baz=312							
HSN1				*e*	S	**Sn**	**07 11 06.4**	**+0.5**
	baz=312							
ECBN	**Changbin**	**0.91**	**199**	*e*	P	**Pb**	**07 10 51.4**	**-0.5**
	baz=200							
ECBN				*e*	S	**Sn**	**07 11 06.0**	**0.0**
	baz=200							
SXI1	**Grass Mountain**	**0.91**	**6**	⇓	P	**Pb**	**07 10 51.7**	**-0.3**
	baz=12							
SXI1				*e*	S	**Sb**	**07 11 04.5**	**+0.2**
	baz=12							
NTY	**Taoyuan**	**0.92**	**332**	*e*	P	**Pg**	**07 10 50.8**	**-1.1**
	baz=333							
NTY				*e*	S	**Sn**	**07 11 06.3**	**+0.1**
	baz=333							
TWQ1	**Liyutan**	**0.93**	**280**	⇑	*eP*	**Pb**	**07 10 52.2**	**0.0**
	baz=282							
TWQ1				*e*	S	**Sn**	**07 11 07.1**	**+0.7**
	baz=282							
EYUL	**Yuli**	**0.93**	**207**		P	**Pg**	**07 10 51.1**	**-0.8**
	baz=227							
TWF1	**Yuli**	**0.93**	**208**	*e*	P	**Pb**	**07 10 52.1**	**-0.3**
	baz=221							
SBCB	**Hsinchu**	**0.94**	**310**	*e*	P	**Pn**	**07 10 53.6**	**+0.4**
	baz=311							
SBCB				*e*	S	**Sn**	**07 11 06.7**	**0.0**
	baz=311							
NCUH	**Zhongli**	**0.95**	**326**	⇓	*eP*	**Pn**	**07 10 53.5**	**+0.1**
	baz=326							
NCUH				*e*	S	**Sn**	**07 11 07.6**	**+0.7**
	baz=326							
NCU	**National Centr**	**0.95**	**326**	⇓	*eP*	**Pn**	**07 10 53.4**	**0.0**
	baz=327							
NCU				*e*	S	**Sn**	**07 11 07.2**	**+0.3**
	baz=327							
NSY	**Sanyi**	**0.95**	**284**	*e*	P	**Pn**	**07 10 53.2**	**-0.3**
	baz=286							
NSY				*e*	S	**Sn**	**07 11 06.2**	**-0.8**
	baz=286							
HSN	**Hsinchu**	**0.95**	**310**	*e*	P	**Pn**	**07 10 53.7**	**+0.2**
	baz=314							
HSN				*e*	S	**Sn**	**07 11 07.0**	**-0.1**
	baz=314							
NJN	**Zhunan**	**0.96**	**301**	*e*	P	**Pg**	**07 10 52.0**	**-0.5**
	baz=302							
NJN				*e*	S	**Sn**	**07 11 08.3**	**+1.1**
	baz=302							
NMLH	**Miaoli**	**0.96**	**292**	*e*	P	**Pn**	**07 10 53.2**	**-0.3**
	baz=293							
NMLH				*e*	S	**Sn**	**07 11 07.1**	**-0.2**
	baz=293							
TNOU	**National Taiwa**	**0.96**	**0**	⇑	P	**Pb**	**07 10 52.7**	**-0.1**
TNOU				*e*	S	**Sb**	**07 11 05.2**	**-0.4**
TWS1	**Kuangyinshan**	**0.97**	**341**	*e*	P	**Pn**	**07 10 53.8**	**+0.1**
	baz=341							
TWS1				*e*	S	**Sn**	**07 11 08.9**	**+1.5**
	baz=341							
WHYT	**Xinyi Township**	**0.97**	**240**	*i*	P	**Pb**	**07 10 52.6**	**-0.4**
	baz=250							
WHYT				*e*	S	**Sn**	**07 11 06.9**	**-0.6**
	baz=250							
YM01	**YM01**	**0.98**	**349**	⇑	*eP*	**Pn**	**07 10 53.4**	**-0.4**
	baz=349							
YM01				*e*	S	**Sb**	**07 11 06.3**	**+0.3**
	baz=349							
WWF	**Wufeng**	**0.99**	**262**	⇓	*eP*	**Pn**	**07 10 54.2**	**+0.3**
	baz=258							
WWF				*e*	S	**Sn**	**07 11 10.3**	**+2.3**
	baz=258							
TCU	**Taichung**	**1.00**	**268**	*e*	P	**Pn**	**07 10 54.4**	**+0.3**
	baz=270							
TCU				*e*	S	**Sn**	**07 11 08.6**	**+0.4**
	baz=270							
YM08	**YM08**	**1.01**	**351**	⇑	*eP*	**Pb**	**07 10 53.6**	**-0.1**
	baz=351							
YM08				*e*	S	**Sb**	**07 11 08.2**	**-0.5**
	baz=351							
WJS	**Zhushan**	**1.02**	**250**	*e*	P	**Pn**	**07 10 54.6**	**+0.3**
	baz=245							
NTST	**Danshui**	**1.02**	**343**	*e*	P	**Pn**	**07 10 55.0**	**+0.6**
	baz=344							
NTST				*e*	S	**Sn**	**07 11 10.1**	**+1.3**
	baz=344							
NWRT	**Kuosheng**	**1.02**	**354**	*e*	P	**Pb**	**07 10 53.6**	**-0.2**
	baz=345							
NWRT				*e*	S	**Sn**	**07 11 09.4**	**+0.7**
	baz=345							
ANP	**Anpu**	**1.02**	**347**	⇓	*eP*	**Pn**	**07 10 54.3**	**-0.2**
	baz=348							
ANP				*e*	S	**Sn**	**07 11 08.1**	**-0.9**
	baz=348							
WNT1	**Nantou City**	**1.03**	**255**	*e*	P	**Pn**	**07 10 55.2**	**+0.6**
	baz=252							
WNT1				*e*	S	**Sn**	**07 11 11.7**	**+2.6**
	baz=252							
WNT	**Mingjian**	**1.04**	**253**	⇓	*eP*	**Pn**	**07 10 54.7**	**+0.1**
	baz=250							
WNT				*e*	S	**Sn**	**07 11 11.1**	**+1.9**
	baz=250							
CHKH	**Chenggong**	**1.04**	**199**	⇑	P	**Pb**	**07 10 53.7**	**-0.5**
	baz=220							
CHKH				*e*	S	**Sn**	**07 11 10.3**	**+1.0**
	baz=220							
WDJ	**Dajia District**	**1.04**	**279**	⇓	*eP*	**Pn**	**07 10 55.5**	**+0.8**
	baz=281							
WDJ				*e*	S	**Sn**	**07 11 10.1**	**+0.7**
	baz=281							
NHW	**Xinwu Township**	**1.05**	**321**	*i*	P	**Pg**	**07 10 53.5**	**-0.8**
	baz=322							
NHW				*e*	S	**Sn**	**07 11 11.0**	**+1.5**
	baz=322							
FULB	**Fuli**	**1.07**	**204**	⇑	P	**Pn**	**07 10 54.8**	**-0.4**
	baz=223							
FULB				*e*	S	**Sn**	**07 11 12.5**	**+2.4**
	baz=223							
TWY	**Chenhua**	**1.10**	**352**	⇓	*eP*	**Pn**	**07 10 56.6**	**+1.1**
	baz=352							
TWY				*e*	S	**Sn**	**07 11 11.6**	**+0.9**
	baz=352							
JYNG	**Yonagunijimaku**	**1.10**	**76**		P	**Pn**	**07 10 55.1**	**-0.4**
JYNG				*e*	S	**Sn**	**07 11 10.1**	**-0.7**
ALS	**Alishan**	**1.11**	**233**	⇓	*eP*	**Pg**	**07 10 54.4**	**-1.1**
	baz=235							
ALS				*e*	S	**Sn**	**07 11 11.8**	**+0.5**
	baz=235							
WCHH	**Zhanghua**	**1.11**	**265**	*e*	P	**Pn**	**07 10 56.4**	**+0.8**
	baz=267							
WCHH				*e*	S	**Sn**	**07 11 14.1**	**+3.1**
	baz=267							
CHKT	**Chengkung**	**1.14**	**199**	⇓	P	**Pn**	**07 10 55.7**	**-0.3**

baz=205
WGK Gukeng 1.21 246 *e*P **Pb 07 10 56.3 -0.7**
baz=249
WGK *e*S **Sn 07 11 13.5 0.0**
baz=249
WDLH Douliu 1.23 247 *e*P **Pg 07 10 58.4 +0.7**
baz=250
WDLH *e*S **Sn 07 11 16.8 +2.8**
baz=250
WCKO Fanlu 1.30 235 ⇓P **Pg 07 10 58.8 -0.3**
baz=239
WCKO *e*S **Sn 07 11 18.4 +2.7**
baz=239
WRL Guolierlin Hig 1.30 258 *e*P **Pg 07 10 58.8 -0.4**
baz=261
WRL *e*S **Sg 07 11 18.2 +2.1**
baz=261
RLNB Erlin 1.32 258 *e*P **Pg 07 11 00.8 +1.3**
baz=261
RLNB *e*S **Sg 07 11 18.9 +2.2**
baz=261
CHN2 Minshiung 1.35 242 *e*P **Pg 07 10 60.0 -0.1**
baz=245
CHN2 *e*S **Sg 07 11 21.7 +4.1**
baz=245
WTK Tuku 1.36 249 *e*P **Pn 07 10 58.7 -0.3**
baz=252
WTK *e*S **Sg 07 11 20.2 +2.4**
baz=252
CHN4 Tsaushan 1.36 233 ⇑P **Pg 07 10 59.5 -0.8**
baz=237
CHN4 *e*S **Sg 07 11 20.2 +2.3**
baz=237
STYH Taoyuan 1.36 222 P **Pb 07 10 58.9 -0.6**
baz=226
STYH *i*S **Sg 07 11 18.4 +0.6**
baz=226
TPUB Ta-pu 1.37 230 P **Pb 07 10 59.5 -0.2**
TPUB Ta-pu 1.37 230 ⇓P **Pg 07 10 59.7 -0.7**
baz=222
TPUB *e*S **Sg 07 11 20.9 +2.9**
baz=222
STYT Tauyuan 1.38 223 ⇓P **Pn 07 10 59.1 -0.3**
baz=226
STYT *i*S **Sg 07 11 19.1 +0.7**
baz=226
WTCT Ta-ch'eng 1.40 257 *e*P **Pn 07 10 59.2 -0.4**
baz=260
WTCT *e*S **Sg 07 11 18.6 -0.5**
baz=260
LONT Longtian 1.40 205 *e*P **Pb 07 10 59.6 -0.7**
baz=209
LONT *e*S **Sg 07 11 19.7 +0.6**
baz=209
CHY Chiayi 1.41 241 *e*P **Pn 07 10 59.4 -0.3**
baz=245
CHY *e*S **Sg 07 11 18.9 -0.5**
baz=245
WTP Ta-pu 1.41 229 ⇓P **Pg 07 11 00.4 -0.8**
baz=233
WTP *e*S **Sg 07 11 21.6 +2.1**
baz=233
PCYT Pengchaiyu 1.47 11⇑*e*P **Pg 07 11 02.0 -0.2**
baz=10.0
PCYT *e*S **Sg 07 11 20.6 -0.6**
baz=10.0
TWK Hsinying 1.49 232 *e*P **Pg 07 11 02.1 -0.6**
baz=237
TWK *e*S **Sg 07 11 23.7 +1.7**
baz=237
TWG Pinlang 1.50 205 *e*P **Pb 07 11 01.1 -0.9**
baz=210
TWG *e*S **Sg 07 11 22.4 +0.1**
baz=210
TWGBT Beinan 1.50 205 P **Pg 07 11 02.4 -0.5**
TWGBT Beinan 1.50 205 *e*P **Pn 07 10 59.3 -1.7**
baz=210
TWGBT *e*S **Sg 07 11 22.4 +0.1**
baz=210
SNST Tainan City 1.51 231⇓*e*P **Pg 07 11 02.5 -0.6**
baz=235
SNST *e*S **Sg 07 11 25.5 +2.8**
baz=235
CHN1 Nanshi 1.51 229 *e*P **Pb 07 11 02.7 -0.4**
baz=234
CHN1 *e*S **Sg 07 11 25.1 +2.4**
baz=234
WSF Szhu 1.52 249 *e*P **Pb 07 11 01.9 -0.4**
baz=253
WSF *e*S **Sg 07 11 25.2 +2.3**
baz=253
LDUT Ludao 1.53 191 *e*P **Pn 07 10 58.5 -2.9**
baz=181
LDUT *e*S **Sg 07 11 22.1 -1.1**
baz=181
SGST Jiashian 1.54 225 *e*P **Pb 07 11 02.4 -0.4**
baz=229
SGST *e*S **Sg 07 11 24.2 +0.4**
baz=229
SLGT Liugui 1.57 221 *e*P **Pb 07 11 03.1 -0.1**
baz=226
SLGT *e*S **Sg 07 11 26.7 +2.1**
baz=226
ICHU Yijhu 1.59 239 *e*P **Pg 07 11 04.0 -0.6**
baz=245
CHN8 Yiju 1.65 240 *e*P **Pg 07 11 06.4 +0.6**
baz=245
CHN8 *e*S **Sg 07 11 30.6 +3.3**
baz=245
SCST Cishan 1.74 222 *e*P **Pb 07 11 05.7 -0.4**
baz=228
SCST *e*S **Sg 07 11 32.5 +2.3**
baz=228
SHHT Tainan City 1.74 229 *e*P **Pb 07 11 04.8 -1.3**
baz=235
SSD Sandimen 1.77 216 *e*P **Pb 07 11 05.8 -0.8**
baz=221
SSD *e*S **Sb 07 11 29.0 +0.1**
baz=221
TSMG Majia 1.80 215 *e*P **Pb 07 11 06.5 -0.5**
baz=220
TSMG *e*S **Sg 07 11 32.1 +0.2**
baz=220
TSCK Chigu Township 1.86 237 *e*P **Pb 07 11 07.0 -1.0**
baz=242
TSCK *e*S **Sg 07 11 33.7 -0.1**
baz=242
MASBT Mashibuluo 1.88 214 P **Pb 07 11 07.4 -1.1**
baz=219
MASBT *e*S **Sb 07 11 31.8 -0.3**
baz=219
TAW Tawu 1.99 204 *e*S **Sb 07 11 34.3 -0.7**
baz=209
TAWH Dawu Township 2.01 204 *e*P **Pn 07 11 08.8 +0.9**
baz=196
TAWH *e*S **Sb 07 11 34.4 -1.2**
baz=196
JKRS Kuro-shima 2.04 88 P **Pb 07 11 09.9 -1.4**
JKRS *e*S **Sb 07 11 36.9 +0.2**
SCZT Fangliau 2.09 211 *e*P **Pb 07 11 10.8 -1.2**
baz=215
SCZT *e*S **Sb 07 11 36.7 -1.3**
baz=215
PNG Penghu 2.12 254 *i*P **Pn 07 11 09.6 +0.1**
baz=259
PNG *e*S **Sb 07 11 40.0 +1.1**
baz=259
PHUB P'eng-hu 2.12 252 *e*P **Pb 07 11 11.1 -1.5**
baz=258
PHUB *e*S **Sb 07 11 39.7 +0.8**
baz=258
WDGT Dungji 2.14 245 *e*P **Pn 07 11 10.8 +1.0**
baz=251
WDGT *e*S **Sb 07 11 40.6 +1.1**
baz=251
LAY Lan-yu 2.14 185 *e*P **Pn 07 11 07.8 -2.0**
baz=178
LAY *e*S **Sn 07 11 37.3 +0.8**
baz=178
SLIU Shizi 2.15 205 *e*S **Sb 07 11 40.2 +0.3**
baz=199
JIJ Ishigaki jima 2.17 85 P **Pn 07 11 10.9 +0.7**
JIJ *e*S **Sb 07 11 38.9 -1.5**
LYUB Lan-yu 2.18 185 *e*P **Pn 07 11 11.0 +0.7**
baz=188
VWUC VWUC 2.26 291 *e*P **Pn 07 11 11.5 0.0**
baz=292
VWUC *i*S **Sn 07 11 40.0 +0.6**
baz=292
JISG Ishigakijimahi 2.35 80 P **Pn 07 11 12.9 +0.3**
JISG *e*S **Sb 07 11 43.9 -1.6**
VCHM Qimei 2.35 246 *e*P **Pn 07 11 13.7 +0.9**
baz=235
VCHM *e*S **Sb 07 11 44.5 -1.2**
baz=235
TWKBT Hengchun 2.40 202 *e*P **Pn 07 11 14.9 +1.5**
TWKBT S **Sb 07 11 44.6 -2.4**
baz=208
PTMZ Houxiangcun 2.56 290 *e*P **Pn 07 11 15.8 +0.2**
baz=291
PTMZ *e*S **Sn 07 11 46.4 -0.4**
baz=291
MATB Ma-tsu 2.56 320 *e*P **Pn 07 11 16.3 +0.6**
baz=320
MATB *i*S **Sn 07 11 47.5 +0.7**
baz=320
MSUT Lienchiang 2.59 320 *e*P **Pn 07 11 16.1 +0.1**
baz=320
MSUT *e*S **Sn 07 11 47.2 -0.3**
baz=320
JTJ Tarama 2.71 80 P **Pn 07 11 19.6 +2.0**
JTJ *e*S **Sn 07 11 52.4 +1.9**
LYJJ Jianjiangzhen 2.98 323 P **Pn 07 11 22.0 +0.7**
baz=324
KNM Kinmen 3.05 275 *e*P **Pn 07 11 24.6 +2.2**
baz=276
KNM *e*S **Sn 07 12 01.6 +2.7**
baz=276
XPSS Dashiqiu 3.09 333 P **Pn 07 11 23.4 +0.6**
baz=333
KNMB Chin-men Tao 3.10 276 *e*P **Pn 07 11 23.0 +0.1**
baz=277
KNMB *e*S **Sn 07 12 00.3 +0.3**
baz=277
MHZQ Yeshan 3.13 308 *e*P **Pn 07 11 23.8 +0.4**
baz=309
JMJ Miyako jima 2 3.27 78 P **Pn 07 11 27.1 +1.8**
baz=68
JMJ *e*S **Sn 07 12 06.5 +2.2**
baz=68
AXDP Jialang 3.53 282 *e*P **Pn 07 11 28.9 -0.1**
baz=283
AXDP *e*S **Sn 07 12 11.6 +0.8**
baz=283
ZPLA Ao Xicun 3.68 267 P **Pn 07 11 31.9 +0.9**
baz=269
ZPLA *e*S **Sn 07 12 14.4 0.0**
baz=269
DSXP Dongshan 4.00 264 *e*P **Pn 07 11 34.7 -0.7**
baz=267
DSXP *e*S **Sn 07 12 22.6 +0.2**
baz=267
SXFK Yanhouchang 4.34 301 *e*P **Pn 07 11 41.0 +0.9**
baz=299
SXFK *e*S **Sn 07 12 30.0 -0.6**
baz=299
KSRS Korea Array 14.24 20 Pn **P 07 14 04.7 +1.6**
0.1nm,0.3s,baz=197,slow=11,SNR=2.1
KSRS LR LR 07 20 21.1
comp=Z,30nm,18.3s,baz=190,slow=41
ASAJ Asahikawa 26.18 35 LR LR 07 26 40.2
comp=Z,39nm,18.8s,baz=220,slow=37
MKAR Makanchi Array 38.71 316 P **P 07 17 57.7 -0.5**
0.4nm,0.9s,baz=104,slow=10,SNR=2.4
0.4nm,0.9s
ZALV Zalesovo Beam 40.54 327 P **P 07 18 11.9 -1.3**
0.3nm,0.2s,baz=110,slow=7.8,SNR=2.0
0.3nm,0.2s
WRA Warramunga Arr 45.54 163 P **P 07 18 52.2 -1.8**
0.5nm,0.8s,baz=344,slow=8.7,SNR=2.1
0.5nm,0.8s
ASAR Alice Springs 49.00 165 P **P 07 19 21.6 +0.6**
0.3nm,0.7s,baz=338,slow=6.5,SNR=2.1
0.3nm,0.7s
INK Inuvik 73.02 22 LR LR 07 56 23.2
comp=Z,31nm,18.6s,baz=86,slow=38
YKA Yellowknife Ar 82.76 23 P **P 07 22 57.8 -0.2**
0.3nm,0.7s,baz=311,slow=4.9,SNR=4.3
0.3nm,0.7s

*NNC **10** 07:16:49.1±0.6,51.°57N×75.°25E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=22.0km s-min=4.1km az=26.0, Suspected Mining explosion.*
*IDC **10** 07:16:51.9±1.0,51.°77N×75.°63E,h0km,mbtmp2.5/4, ML1.8/4, Error ellipse: s-maj=20.5km s-min=8.3km az=26.0*
ISC 10 07:16:48.4±0.9,**51.°79N**±0.°09×**75.°30E**±0.°06,**h0**km,**n10,** σ0s**88**/**11**,**7C-3D**,**Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.34**	**119**	⇑Pg		**Pb**		**07 17 30.5**	**-1.0**
	3.4nm,0.5s								
KURBB				⇑Lg		Lg		07 18 01.2	
	23nm,0.5s								
KURBB	**Kurchatov Arra**	**2.34**	**119**	Pn		**Pn**		**07 17 28.2**	**+0.1**
	0.3nm,0.3s,baz=304,slow=19,SNR=14								
KURBB				Lg		Lg		07 18 01.4	
	0.5nm,0.3s,baz=306,slow=32,SNR=14								
	1.5nm,0.6s								
KURK	**Kurchatov**	**2.35**	**116**	⇑Pg		**Pb**		**07 17 31.1**	**-0.4**
	3.7nm,0.8s								
KURK				⇓Lg		Lg		07 18 00.3	
	9.3nm,0.8s								
BVA0	**Borovoye Array**	**3.25**	**294**	⇑Pg		**Pg**		**07 17 50.0**	**-0.7**
	2.1nm,1.2s,baz=116,slow=17,SNR=3.8								
BVA0				⇑Lg		Lg		07 18 34.3	
	4.9nm,1.1s,baz=122,slow=26,SNR=5.8								
BVAR	**Borovoye Array**	**3.25**	**294**	Pn		**Pb**		**07 17 46.7**	**-0.3**
	baz=105,slow=10.0,SNR=5.0								
BVAR				Sn		**Sb**		**07 18 28.1**	**+1.0**
	0.1nm,0.3s,baz=107,slow=24,SNR=4.7								
BVAR				Lg		Lg		07 18 40.7	
	0.1nm,0.3s,baz=113,slow=25,SNR=4.9								
	1.0nm,0.5s								
BRVK	**Borovoye**	**3.32**	**294**	⇓Pg		**Pg**		**07 17 51.2**	**-0.8**
	1.7nm,0.9s								
BRVK				⇓Lg		Lg		07 18 35.2	
	4.3nm,0.7s								
I46RU	**ZALESOVO INFRA**	**6.15**	**66**	I		I		07 52 00.0	
	baz=253,slow=341,SNR=5.0								
ZALV	**Zalesovo Beam**	**6.15**	**66**	Pn		**Pn**		**07 18 21.1**	**+0.7**
	0.1nm,0.3s,baz=247,slow=11,SNR=4.7								
ZALV				Sn		**Sn**		**07 19 31.7**	**+0.3**
	0.1nm,0.3s,baz=254,slow=24,SNR=2.0								
ZALV				Lg		Lg		07 20 04.9	
	0.1nm,0.3s,baz=258,slow=28,SNR=2.0								
	0.6nm,0.4s								
MK31	**Makanchi Array**	**6.77**	**135**	⇑Sn		**Sn**		**07 19 46.7**	**-0.1**
	0.5nm,0.5s								
MK31				⇑Lg		Lg		07 20 19.1	
	2.4nm,0.7s,baz=323,slow=28,SNR=5.6								
MKAR	**Makanchi Array**	**6.78**	**135**	Pn		**Pn**		**07 18 30.6**	**+1.5**
	baz=318,slow=14,SNR=2.8								
MKAR				Lg		Lg		07 20 19.4	
	0.2nm,0.3s,baz=319,slow=28,SNR=6.9								
	0.2nm,0.5s								

*CRAAG **10** 07:17:31.2,36.°35N×7.°22E,Ml3.7,Algerie 03km SW Ras-El-Akba*
*IDC **10** 07:17:31.5±1.3,36.°39N×7.°31E,h0km,mb3.7/5, mbtmp3.8/8,ML3.7/3,MS2.9/2,Error ellipse: s-maj=23.6km s-min=14.4km az=18.0*
*TUN **10** 07:17:33.5,36.°40N×7.°51E,h25km±3km,MD3.8*
*LDG **10** 07:17:33.5±0.4,36.°34N×7.°22E,h10km,Ml3.3/10,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
ISC 10 07:17:32.6±1.1,**36.°43N**±0.°04×**7.°23E**±0.°04,**h16**km±7km, **n42**,σ1s**86**/**44**,**mb3.8**/5,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBST	**Bordj Sabath**	**0.11**	**257**	P		**Pg**		**07 17 34.9**	**-1.4**
CMAH	**Djebel Manchou**	**0.25**	**38**	P		**Pg**		**07 17 38.9**	**+0.7**
ABSA	**Djebel Ababsia**	**0.25**	**128**	P		**Pg**		**07 17 37.0**	**-1.3**
CAEH	**Ain El Ouahch**	**0.46**	**319**	P		**Pg**		**07 17 42.4**	**+0.4**
CSGS	**Sigus**	**0.52**	**235**	P		**Pg**		**07 17 41.2**	**-1.7**
CASM	**Ain Smara**	**0.62**	**254**	P		**Pg**		**07 17 43.4**	**-1.5**
CBHR	**Beni Haroun da**	**0.79**	**280**	P		**Pg**		**07 17 47.7**	**-0.3**
CBOS	**Bilal Ibnou Ra**	**0.82**	**296**	P		**Pg**		**07 17 49.0**	**+0.4**
GHAT	**Ghardimaou**	**0.87**	**85**	*i*P		**Pn**		**07 17 50.4**	**+0.2**
CJSR	**Ain Djasser**	**1.18**	**242**	P		**Pn**		**07 17 54.0**	**-0.6**
BLIT	**Baltah**	**1.41**	**78**	*i*P		**Pn**		**07 17 58.1**	**+0.4**
THTN	**Thala**	**1.47**	**126**	*i*P		**Pn**		**07 17 59.1**	**+0.6**
KRIT	**Krib**	**1.49**	**93**	*i*P		**Pn**		**07 17 59.1**	**+0.3**
KEST	**Kesra**	**1.85**	**112**	Pg		**Pn**		**07 18 04.4**	**+0.6**
	36nm,0.3s,baz=115,slow=4.5,SNR=124								
KEST				Lg		Lg		07 18 28.7	
	14nm,0.3s,baz=256,slow=17,SNR=5.9								
BERT	**Berda**	**2.63**	**146**	*i*P		**Pn**		**07 18 15.0**	**+0.7**
SGNT	**Sidi Gnaou**	**3.51**	**141**	*i*P		**Pn**		**07 18 26.7**	**+0.1**
PGF	**Pioggiola**	**6.26**	**12**	*e*Pn		**Pn**		**07 19 05.2**	**+0.8**
PGF				*e*Sn		**Sn**		**07 20 11.0**	**-4.6**
	5.3nm,0.3s								
LMR	**La Mourre**	**6.92**	**356**	*e*Pn		**Pn**		**07 19 12.5**	**-0.8**
LMR				*e*Sn		**Sn**		**07 20 26.2**	**-5.4**
	7.0nm,0.3s								
SBF	**Sospel**	**7.42**	**1**	*e*Pn		**Pn**		**07 19 19.4**	**-1.0**
SBF				*e*Sn		**Sn**		**07 20 38.4**	**-5.9**
	12nm,0.5s								
SMRF	**Simiane la Rot**	**7.64**	**351**	*e*Pn		**Pn**		**07 19 23.2**	**-0.1**
SMRF				*e*Sn		Sn		07 20 43.6	-6.0
	5.9nm,0.5s								
MTLF	**Montolieu**	**7.90**	**332**	*e*Pn		**Pn**		**07 19 26.0**	**-0.9**
MTLF				*e*Sn		Sn		07 20 50.2	-5.7
	1.2nm,0.2s								
LASF	**Ste Croix**	**8.06**	**342**	*e*Pn		**Pn**		**07 19 29.0**	**0.0**
LASF				*e*Sn		Sn		07 20 53.8	-6.0
	2.5nm,0.4s								
MBDF	**Montbardon**	**8.29**	**358**	*e*Pn		**Pn**		**07 19 33.1**	**+0.7**
MBDF				*e*Sn		Sn		07 20 59.3	-6.5
	0.6nm,0.4s								
EPF	**Esparros**	**8.46**	**323**	*e*Pn		**Pn**		**07 19 36.1**	**+1.5**
EPF				*e*Sn		Sn		07 21 04.1	-5.6
	4.6nm,0.6s								
ORIF	**Oris-en-Rattie**	**8.54**	**354**	*e*Pn		**Pn**		**07 19 35.5**	**-0.2**
VIVF	**Saint-Julien-l**	**8.64**	**348**	*e*Pn		**Pn**		**07 19 36.1**	**-0.9**
VIVF				*e*Sn		Sn		07 21 07.6	-6.4
	3.6nm,0.4s								
ETSF	**Etsaut**	**8.82**	**319**	*e*Pn		**Pn**		**07 19 41.2**	**+1.7**
LPG	**La Plagne**	**9.06**	**358**	*e*Pn		**Pn**		**07 19 43.8**	**+0.7**
LPL	**La Plagne**	**9.08**	**358**	*e*Pn		**Pn**		**07 19 43.7**	**+0.4**
SJPF	**Ste Jean**	**9.32**	**318**	*e*Pn		**Pn**		**07 19 48.3**	**+2.0**
CAF	**Calviac**	**9.35**	**337**	*e*Pn		**Pn**		**07 19 46.8**	**+0.1**
ESDC	**Sonseca Array**	**9.40**	**294**	Pn		**Pn**		**07 19 50.8**	**+3.3**
	0.7nm,0.3s,baz=98,slow=14,SNR=41								
	3.5nm,0.4s								
LFF	**La Frestale**	**9.82**	**332**	*e*Pn		**Pn**		**07 19 53.1**	**0.0**
CABF	**La Chapelle**	**10.21**	**356**	*e*Pn		**Pn**		**07 19 58.4**	**-0.1**
MDT	**Midelt**	**10.40**	**253**	Pn		**Pn**		**07 20 03.5**	**+2.3**
	0.1nm,0.3s,baz=107,slow=24,SNR=6.8								
MDT				LR		LR		07 23 46.3	
	comp=Z,70nm,18.7s,baz=0.0,slow=36								
	2.4nm,1.1s								
DAVOX	**Davos/Dischmat**	**10.53**	**10**	Pn		**Pn**		**07 20 05.5**	**+2.5**
	0.2nm,0.3s,baz=186,slow=18,SNR=2.4								
	1.5nm,0.6s								
BRTR	**Keskin Array B**	**21.02**	**73**	P		**P**		**07 22 17.5**	**+1.7**
	1.3nm,0.7s,baz=264,slow=8.8,SNR=6.3								
	1.3nm,0.7s								
AKASG	**Malin Array Be**	**21.27**	**41**	P		**P**		**07 22 18.6**	**+0.5**
	0.5nm,0.5s,baz=239,slow=9.0,SNR=2.2								
	0.5nm,0.5s								
MMAI	**Mount Meron Ar**	**23.37**	**90**	P		**P**		**07 22 39.9**	**-0.7**
	0.7nm,0.2s,baz=246,slow=9.3,SNR=2.3								
	0.7nm,0.2s								
TORD	**Torodi Ar. Bea**	**23.71**	**194**	P		**P**		**07 22 44.4**	**+0.5**
	9.7nm,0.4s,baz=6.0,slow=11,SNR=4.4								
	9.7nm,0.4s								
NOA	**NORSAR Array B**	**24.76**	**5**	LR		LR		07 32 40.8	
	comp=Z,29nm,20.0s,baz=335,slow=37								
MKAR	**Makanchi Array**	**55.08**	**54**	P		**P**		**07 27 04.2**	**+0.5**
	0.9nm,0.8s,baz=288,slow=5.8,SNR=8.0								
	0.9nm,0.8s								

*CATAC **10** 07:26:42.1±0.5,8.°67N×82.°81W,h16km±3km,ML2.3*
*UPA **10** 07:26:42.3±1.1,8.°65N×82.°74W,h18km±2km,MD3.5, ML3.4*
ISC 10 07:26:41.5±0.9,**8.°65N**±0.°03×**82.°75W**±0.°03,**h31**km±5km, **n27**,σ0s**89**/**49**,**4C-8D**,**Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.14**	**239**	⇓*i*P		**Pn**		**07 26 46.8**	**-0.8**
CDITO				*i*S		**Sn**		**07 26 49.6**	**-1.6**
CDITO	**Canoas**	**0.14**	**239**	*i*P		**Pn**		**07 26 46.6**	**-1.0**
CDITO				*i*S		**Sn**		**07 26 50.0**	**-1.2**
CDITO				IAML				07 26 52.6	
	comp=Z,450nm,1.0s								
BRU2	**Volcan**	**0.16**	**21**	⇓*i*P		**Pb**		**07 26 47.6**	**0.0**
BRU2				*i*S		**Sb**		**07 26 51.2**	**-0.7**
BRU2	**Volcan**	**0.16**	**21**	*i*P		**Pb**		**07 26 47.6**	**0.0**
BRU2				*i*S		**Sb**		**07 26 51.8**	**-0.1**
BRU2				IAML				07 26 57.1	
	comp=Z,510nm,1.0s								
MLIR3	**Monte Lirio, C**	**0.16**	**333**	⇓*i*P		**Pn**		**07 26 47.7**	**-0.3**
MLIR3				*i*S		**Sb**		**07 26 50.7**	**-1.1**
BC3P	**Paso Ancho**	**0.22**	**39**	⇓*i*P		**Pb**		**07 26 48.4**	**+0.1**
BC3P				*i*S		**Sb**		**07 26 52.9**	**0.0**
BCO2	**Palmira**	**0.23**	**72**	⇓*i*P		**Pb**		**07 26 48.9**	**+0.5**
BCO2				AMP				07 26 50.6	
	comp=Z,7μm,0.1s								
BCO2				*i*S		**Sb**		**07 26 53.8**	**+0.7**
LNBQ3	**Los Naranjos,**	**0.34**	**65**	⇓*i*P		**Pn**		**07 26 49.9**	**-0.4**
LNBQ3				*i*S		**Sb**		**07 26 55.3**	**0.0**
DVD	**David**	**0.36**	**125**	⇑*i*P		**Pb**		**07 26 50.5**	**+0.6**
DVD				*i*S		**Sb**		**07 26 56.1**	**+0.5**
LOCO3	**Loma Colorada,**	**0.40**	**126**	⇑*i*P		**Pb**		**07 26 51.2**	**+0.7**
LOCO3				*i*S		**Sn**		**07 26 58.0**	**+0.3**
PEDE3	**Pedregal, Chir**	**0.42**	**129**	⇑*i*P		**Pb**		**07 26 51.3**	**+0.6**
PEDE3				*i*S		**Sb**		**07 26 57.5**	**+0.5**
POTG	**Potrero Grande**	**0.54**	**318**	*i*P		**Pb**		**07 26 52.5**	**-0.3**
POTG				IAML				07 26 52.8	
	comp=Z,440nm,1.0s								
POTG				*i*S		**Sb**		**07 27 00.4**	**-0.1**
PIRO	**Carate, Puerto**	**0.63**	**248**	*i*P		**Pn**		**07 26 53.9**	**-0.4**
PIRO				IAML				07 27 17.4	
	comp=Z,300nm,1.0s								
CHGR2	**Aguacate**	**0.66**	**64**	⇓*i*P		**Pb**		**07 26 54.8**	**+0.1**
CHGR2				*i*S		**Sn**		**07 27 03.8**	**-0.4**
CNI2	**El Empalme, Bo**	**0.82**	**20**	*e*P		**Pb**		**07 26 57.3**	**0.0**
CNI2				*i*S		**Sb**		**07 27 07.9**	**-0.2**
PLAN	**Los Planes de**	**0.92**	**272**	*i*P		**Pn**		**07 26 58.8**	**+0.5**
PLAN				*i*S		**Sn**		**07 27 12.2**	**+1.7**
PLAN				IAML				07 27 15.3	
	comp=Z,110nm,1.0s								
OCHAL	**Ojochal**	**0.99**	**297**	*i*P		**Pn**		**07 26 58.7**	**-0.6**
OCHAL				*i*S		**Sn**		**07 27 11.2**	**-1.1**
OCHAL				IAML				07 27 38.1	
	comp=Z,2.1nm,1.0s								
NANC3	**Nancito, Chiri**	**1.08**	**112**	⇓*i*P		**Pb**		**07 27 02.1**	**+0.4**
NANC3				*e*S		**Sn**		**07 27 14.1**	**-0.4**
PEZE	**Perez Zeledon,**	**1.17**	**309**	*i*P		**Pn**		**07 27 02.3**	**+0.5**
PEZE				*i*S		**Sn**		**07 27 17.8**	**+1.0**
PEZE				IAML				07 27 19.7	
	comp=Z,54nm,1.0s								
CDM	**Cerro de Muert**	**1.35**	**312**	*i*P		**Pn**		**07 27 04.8**	**+0.2**
CDM				IAML				07 27 06.3	
	comp=Z,45nm,1.0s								
CDM				*i*S		**Sn**		**07 27 22.3**	**+0.7**
RIMA	**Rio Macho**	**1.56**	**315**	*i*P		**Pn**		**07 27 07.9**	**+0.5**
RIMA				IAML				07 27 11.2	
	comp=Z,38nm,1.0s								
RIMA				*i*S		**Sn**		**07 27 28.3**	**+1.6**
VTCV	**VTCV, Calle Va**	**1.64**	**324**	*i*P		**Pb**		**07 27 10.4**	**-0.9**
VTCV				IAML				07 27 10.5	
	comp=Z,120nm,1.0s								
VTCV				*i*S		**Sb**		**07 27 32.3**	**+0.6**
LCR2	**La Lucha 2**	**1.65**	**311**	*i*P		**Pn**		**07 27 09.9**	**+1.4**
LCR2				IAML				07 27 14.9	
	comp=Z,28nm,1.0s								
LCR2				*i*S		**Sn**		**07 27 29.6**	**+0.8**
OCM	**Ochomogo**	**1.72**	**316**	*i*P		**Pn**		**07 27 10.8**	**+1.3**
OCM				IAML				07 27 12.2	
	comp=Z,47nm,1.0s								
GMAL	**Guarumal, Vera**	**1.74**	**120**	⇑*e*P		**Pn**		**07 27 10.6**	**+1.1**
GMAL				*i*S		**Sn**		**07 27 30.8**	**+0.1**
CACAO	**El Cacao, Vera**	**2.27**	**125**	*e*P		Pn		07 27 11.3	-5.6
BCIP	**Isla Barro Col**	**2.92**	**80**	*e*P		**Pn**		**07 27 22.9**	**-2.9**

*NEIC **10** 07:29:11.6±1.2,56.°52N±0.°08×148.°62W±0.°09,h20km±9km, mb3.5/3,ML3.5/50,ML3.2(AEIC),Error ellipse: s-maj=12.9km s-min=6.2km az=157.0*

*AEIC **10** 07:29:13.5±1.2,56.40N±0.09×148.6W±0.1,h8km±7km,*
Error ellipse: s-maj=13.4km s-min=9.0km az=173.0
ISC 10 07:29:09.9±1.3,**56.52N**±0.09×**148.62W**±0.05,**h10**km,
n136,σ0**99**/142,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.50**	**302**	Pn	**Pn**	**07 29 49.9**	**-0.7**
KDAK	**Kodiak Island**	**2.50**	**302**		**Sn**	**07 30 19.3**	**-1.8**
OHAK	**Old Harbor**	**2.66**	**287**	Pn	**Pn**	**07 29 52.1**	**-0.5**
OHAK	**Old Harbor**	**2.66**	**287**		**Sn**	**07 30 22.2**	**-2.6**
OHAK	**Old Harbor**	**2.66**	**287**	P	**Pn**	**07 29 52.4**	**-0.3**
OHAK	**Old Harbor** baz=106	**2.66**	**287**	P	**Pn**	**07 29 51.9**	**-0.8**
OHAK				S	**Sn**	**07 30 22.2**	**-2.6**
	baz=106						
SYI	**Shuyak Island**	**2.92**	**317**		**Pn**	**07 29 57.0**	**+0.7**
SYI					**Sn**	**07 30 31.1**	**-0.2**
Q20K	**Shuyak Island** baz=136	**2.92**	**317**	P	**Pn**	**07 29 57.0**	**+0.7**
Q20K				S	**Sn**	**07 30 31.1**	**-0.3**
	baz=136						
SII	**Sitkinak Islan**	**3.08**	**273**	Pn	**Pn**	**07 30 01.0**	**+2.4**
SII				IAML		07 30 38.0	
	comp=N,144nm,1.5s						
SII				IAML		07 31 59.0	
	comp=E,129nm,1.4s						
Q23K	**Middleton Isla**	**3.15**	**22**	Pn	**Pn**	**07 29 59.0**	**-0.5**
Q23K				IAML		07 30 36.0	
	comp=E,201nm,1.5s						
Q23K				IAML		07 31 10.3	
	comp=N,195nm,1.5s						
Q23K	**Middleton Isla** baz=203	**3.15**	**22**	P	**Pn**	**07 29 59.6**	**0.0**
MID	**Middleton Isla**	**3.16**	**22**	Pn	**Pn**	**07 29 59.3**	**-0.2**
MID				IAML		07 31 11.0	
	comp=N,146nm,1.4s						
MID				IAML		07 31 20.6	
	comp=E,140nm,1.3s						
MID	**Middleton Isla**	**3.16**	**22**	P	**Pn**	**07 29 59.8**	**+0.3**
CNPM	**China Poot**	**3.32**	**336**	Pn	**Pn**	**07 30 02.1**	**+0.3**
CNPM	**China Poot**	**3.32**	**336**		**Sn**	**07 30 40.4**	**-0.8**
BRSE	**Bradley Lake S**	**3.42**	**342**		**Pn**	**07 30 03.4**	**+0.2**
BRSE					**Sn**	**07 30 42.3**	**-1.4**
BRSE	**Bradley Lake S** baz=160	**3.42**	**342**	P	**Pn**	**07 30 03.4**	**+0.2**
BRSE				S	**Sn**	**07 30 42.3**	**-1.4**
	baz=160						
BRLK	**Bradley Lake**	**3.46**	**341**		**Pn**	**07 30 04.1**	**+0.2**
P23K	**Montague Islan**	**3.54**	**10**		**Pn**	**07 30 05.0**	**+0.2**
P23K					**Sn**	**07 30 44.6**	**-2.2**
P23K	**Montague Islan** baz=191	**3.54**	**10**	P	**Pn**	**07 30 05.0**	**+0.2**
P23K				S	**Sn**	**07 30 44.6**	**-2.2**
	baz=191						
Q19K	**Cape Douglas,**	**3.62**	**314**	Pn	**Pn**	**07 30 08.1**	**+2.1**
SEW	**Seward**	**3.62**	**353**		**Pn**	**07 30 06.0**	**+0.2**
SEW	**Seward** baz=173	**3.62**	**353**	P	**Pn**	**07 30 06.0**	**+0.2**
O22K	**Cooper Landing**	**4.01**	**352**		**Pn**	**07 30 12.8**	**+1.5**
O22K	**Cooper Landing** baz=171	**4.01**	**352**	P	**Pn**	**07 30 12.8**	**+1.5**
HIN	**Hinchinbrook I**	**4.04**	**15**		**Pn**	**07 30 12.2**	**+0.4**
HIN				IAML		07 31 05.8	
	comp=N,74nm,0.7s						
HIN				IAML		07 31 10.3	
	comp=E,70nm,1.3s						
KAIM	**Kayak Island**	**4.07**	**31**		**Pn**	**07 30 12.0**	**-0.2**
KAIM				IAML		07 31 01.3	
	comp=E,73nm,1.3s						
KAIM				IAML		07 31 02.3	
	comp=N,73nm,0.6s						
KAIM	**Kayak Island** baz=214	**4.07**	**31**	P	**Pn**	**07 30 12.5**	**+0.4**
SLKM	**Skilak Lake**	**4.08**	**349**		**Pn**	**07 30 13.2**	**+0.8**
O20K	**Slope Mountain**	**4.15**	**331**		**Pn**	**07 30 14.0**	**+0.8**
O20K	**Slope Mountain** baz=148	**4.15**	**331**	P	**Pn**	**07 30 14.0**	**+0.8**
IVE	**Iliamna Volcan**	**4.20**	**328**		**Pn**	**07 30 13.8**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.31**	**19**		**Pn**	**07 30 15.8**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.31**	**19**	P	**Pn**	**07 30 16.2**	**+0.8**
EYAK	**Cordova Ski Ar** baz=201	**4.31**	**19**	P	**Pn**	**07 30 15.8**	**+0.5**
SUCK	**Suckling Hills**	**4.38**	**34**		**Pn**	**07 30 16.9**	**+0.4**
SUCK				IAML		07 31 15.1	
	comp=E,42nm,1.5s						
SUCK				IAML		07 31 16.4	
	comp=N,48nm,1.1s						
RAGM	**Ragged Mountai**	**4.39**	**26**		**Pn**	**07 30 17.7**	**+1.1**
NICHA	**Nichawak Mount**	**4.46**	**31**		**Pn**	**07 30 17.8**	**+0.4**
HMT	**Hamilton**	**4.46**	**29**		**Pn**	**07 30 17.7**	**+0.3**
RSO	**Redoubt South**	**4.50**	**333**	Pn	**Pn**	**07 30 18.2**	**-0.1**
RDT	**Redoubt**	**4.52**	**336**		**Pn**	**07 30 18.1**	**-0.3**
GOAT	**Goat Mountain**	**4.55**	**25**		**Pn**	**07 30 19.6**	**+0.8**
BGLC	**Bering Glacier**	**4.57**	**36**		**Pn**	**07 30 19.8**	**+0.8**
BGLC	**Bering Glacier** baz=219	**4.57**	**36**	P	**Pn**	**07 30 19.8**	**+0.8**
BERG	**Berg Lake**	**4.66**	**32**		**Pn**	**07 30 20.5**	**+0.2**
BERG				IAML		07 31 24.3	
	comp=N,54nm,0.7s						
GRIN	**Grindle Hills**	**4.69**	**34**		**Pn**	**07 30 21.0**	**+0.4**
SNH	**Sunshine Point**	**4.77**	**37**	Pn	**Pn**	**07 30 22.2**	**+0.5**
SNH				IAML		07 31 32.3	
	comp=N,20nm,1.5s						
SNH				IAML		07 31 32.8	
	comp=E,24nm,1.3s						
KHIT	**Khitrov Hills**	**4.84**	**33**		**Pn**	**07 30 22.7**	**-0.1**
DIV	**Divide**	**4.85**	**17**		**Pn**	**07 30 23.4**	**+0.5**
BMRM	**Bremner River**	**4.92**	**23**		**Pn**	**07 30 24.5**	**+0.6**
BMRM	**Bremner River** baz=206	**4.92**	**23**	P	**Pn**	**07 30 24.5**	**+0.6**
WAX	**Waxell Ridge**	**4.96**	**35**		**Pn**	**07 30 24.9**	**+0.4**
WAX				IAML		07 31 25.3	
	comp=E,37nm,1.5s						
BARK	**Barkley Ridge**	**5.05**	**37**		**Pn**	**07 30 25.9**	**+0.3**
MESA	**MESA**	**5.08**	**41**	Pn	**Pn**	**07 30 27.2**	**+1.1**
MESA	**MESA** baz=226	**5.08**	**41**	P	**Pn**	**07 30 26.4**	**+0.2**
SUA	**Susitna One**	**5.08**	**348**	Pn	**Pn**	**07 30 26.7**	**+0.7**
SUA				IAML		07 31 27.7	
	comp=N,15nm,1.4s						
PMR	**Palmer**	**5.09**	**357**	P	**Pn**	**07 30 27.6**	**+1.5**
CRQM	**Cirque**	**5.12**	**32**		**Pn**	**07 30 27.0**	**+0.3**
CRQM	**Cirque** comp=N,38nm,0.5s	**5.12**	**32**	IAML		07 31 24.5	
CRQM				IAML		07 31 26.7	
	comp=E,23nm,0.9s						
CRQE	**Cirque** baz=216	**5.13**	**32**	P	**Pn**	**07 30 27.0**	**+0.3**
KLU	**Klutina**	**5.17**	**15**		**Pn**	**07 30 28.6**	**+1.2**
KLU				IAML		07 31 32.3	
	comp=E,17nm,1.1s						
KLU				IAML		07 31 37.6	
	comp=N,22nm,1.3s						
KLU	**Klutina** baz=196	**5.17**	**15**	P	**Pn**	**07 30 27.8**	**+0.4**
BAGL	**Bagley Icefiel**	**5.25**	**38**		**Pn**	**07 30 28.7**	**+0.5**
ISLE	**Juniper Island**	**5.25**	**36**		**Pn**	**07 30 28.8**	**+0.4**
ISLE				IAML		07 31 39.6	
	comp=E,21nm,0.9s						
ISLE				IAML		07 31 43.7	
	comp=N,21nm,1.3s						
GHO	**Glory Hole Cre**	**5.27**	**358**	Pn	**Pn**	**07 30 29.3**	**+0.7**
GHO				IAML		07 31 30.0	
	comp=E,27nm,1.4s						
GHO				IAML		07 31 32.9	
	comp=N,38nm,0.7s						
N19K	**Bonanza Creek**	**5.28**	**327**	Pn	**Pn**	**07 30 30.1**	**+1.3**
N19K				IAML		07 31 36.8	
	comp=N,13nm,1.4s						
VRDI	**Verde Repeater**	**5.42**	**27**		**Pn**	**07 30 31.4**	**+0.5**
KIAG	**Kiagna River**	**5.49**	**34**		**Pn**	**07 30 32.1**	**+0.4**
SAMH	**Samovar Hills**	**5.49**	**46**		**Pn**	**07 30 32.4**	**+0.7**
N25K	**Chitina, Valde**	**5.50**	**20**		**Pn**	**07 30 32.8**	**+0.9**
N25K	**Chitina, Valde** baz=203	**5.50**	**20**	P	**Pn**	**07 30 32.8**	**+0.9**
GLB	**Gilahina Butte**	**5.52**	**25**		**Pn**	**07 30 32.7**	**+0.6**
GRNC	**Granite Creek**	**5.54**	**38**		**Pn**	**07 30 32.9**	**+0.5**
TABL	**Table Mountain**	**5.55**	**42**		**Pn**	**07 30 33.0**	**+0.3**
PTPK	**Patty Peak**	**5.66**	**32**		**Pn**	**07 30 34.7**	**+0.5**
MCARA	**McCarthy VSAT**	**5.67**	**28**	Pn	**Pn**	**07 30 34.1**	**+0.1**
MCARA	**McCarthy VSAT** baz=212	**5.67**	**28**	P	**Pn**	**07 30 34.6**	**+0.5**
PCA	**Pinnacle**	**5.68**	**47**		**Pn**	**07 30 34.8**	**+0.5**
PINM	**Pinnacle**	**5.68**	**47**	P	**Pn**	**07 30 34.8**	**+0.5**
	baz=234						
M24K	**Tolsona, Glenn**	**5.74**	**12**	Pn	**Pn**	**07 30 36.3**	**+1.2**
BARN	**Barnard Glacie**	**5.81**	**36**		**Pn**	**07 30 36.9**	**+0.7**
PNL	**Peninsula**	**5.82**	**53**		**Pn**	**07 30 36.2**	**+0.1**
PNL	**Peninsula**	**5.82**	**53**	P	**Pn**	**07 30 36.9**	**+0.8**
PNL	**Peninsula** baz=240	**5.82**	**53**	P	**Pn**	**07 30 36.2**	**+0.1**
CTG	**Chitna Glacier** baz=223	**5.85**	**37**	P	**Pn**	**07 30 37.0**	**+0.4**
CTGM	**Chitina Glacie**	**5.85**	**37**		**Pn**	**07 30 36.9**	**+0.2**
BCPM	**Bancas Point**	**5.86**	**50**		**Pn**	**07 30 37.4**	**+0.7**
LOGN	**Logan Glacier**	**5.86**	**39**		**Pn**	**07 30 37.0**	**+0.1**
O16K	**Kokwok River B**	**5.89**	**305**	Pn	**Pn**	**07 30 38.7**	**+1.6**
HARP	**HAARP**	**6.15**	**15**		**Pn**	**07 30 42.4**	**+1.7**
HARP	**HAARP** baz=198	**6.15**	**15**	P	**Pn**	**07 30 42.4**	**+1.7**
O29M	**Mount Kennedy**	**6.50**	**50**		**Pn**	**07 30 46.3**	**+0.8**
O29M	**Mount Kennedy** baz=238	**6.50**	**50**	P	**Pn**	**07 30 46.3**	**+0.8**
L19K	**White Mountain**	**6.51**	**333**	Pn	**Pn**	**07 30 46.2**	**+0.6**
P29M	**Windy Craggy**	**6.56**	**57**		**Pn**	**07 30 47.0**	**+0.7**
P29M	**Windy Craggy** baz=245	**6.56**	**57**	P	**Pn**	**07 30 46.6**	**+0.3**
DHY	**Denali Highway**	**6.60**	**5**	Pn	**Pn**	**07 30 49.5**	**+2.5**
YUK8	**Steele Glacier**	**6.62**	**40**		**Pn**	**07 30 48.9**	**+1.6**
YUK8	**Steele Glacier** baz=227	**6.62**	**40**	P	**Pn**	**07 30 48.9**	**+1.6**
M17K	**Holitna River**	**6.68**	**321**	Pn	**Pn**	**07 30 48.9**	**+0.9**
M27K	**Edge Creek, AK**	**6.78**	**28**		**Pn**	**07 30 50.5**	**+1.0**
M27K	**Edge Creek, AK** baz=213	**6.78**	**28**	P	**Pn**	**07 30 50.5**	**+1.0**
YUK7	**Dusty Glacier**	**6.80**	**49**		**Pn**	**07 30 50.9**	**+1.1**
S31K	**Pelican**	**6.88**	**73**		**Pn**	**07 30 50.2**	**-0.4**
YUK6	**Outpost Mounta**	**6.94**	**46**		**Pn**	**07 30 53.3**	**+1.6**
YUK6	**Outpost Mounta** baz=234	**6.94**	**46**	P	**Pn**	**07 30 53.3**	**+1.6**
PLBC	**Pleasant Camp**	**7.15**	**61**		**Pn**	**07 30 55.5**	**+1.2**
PLBC	**Pleasant Camp** baz=250	**7.15**	**61**	P	**Pn**	**07 30 55.5**	**+1.2**
HYT	**Haines Junctio**	**7.22**	**49**	Pn	**Pn**	**07 30 55.8**	**+0.3**
YUK5	**Granite Creek**	**7.24**	**46**		**Pn**	**07 30 57.6**	**+1.8**
BCAR	**Beaver Creek A**	**7.41**	**25**	Pn	**Pn**	**07 30 59.4**	**+1.4**
RIDG	**Independent Ri**	**7.48**	**13**	Pn	**Pn**	**07 31 00.9**	**+2.0**
SKAG	**Skagway**	**7.65**	**62**		**Pn**	**07 31 01.7**	**+0.5**
O30N	**Mendenhall**	**7.79**	**52**	Pn	**Pn**	**07 31 03.5**	**+0.2**
O30N	**Mendenhall** baz=242	**7.79**	**52**	P	**Pn**	**07 31 04.3**	**+1.0**
R32K	**Eaglecrest**	**7.82**	**71**	Pn	**Pn**	**07 31 03.5**	**-0.1**
M29M	**Somme Creek**	**7.87**	**37**		**Pn**	**07 31 04.7**	**+0.4**
JIS	**Juneau Island**	**7.89**	**71**	Pn	**Pn**	**07 31 03.9**	**-0.6**
K17K	**Iditarod**	**7.91**	**326**	Pn	**Pn**	**07 31 05.0**	**+0.2**
N31M	**Braeburn, Yuko**	**8.28**	**48**		**Pn**	**07 31 09.5**	**-0.4**
WHY	**Whitehorse**	**8.28**	**54**		**Pn**	**07 31 10.5**	**+0.5**
L29M	**L29M**	**8.45**	**34**		**Pn**	**07 31 13.3**	**+1.0**
P32M	**Atlin**	**8.48**	**63**	Pn	**Pn**	**07 31 12.6**	**-0.1**
P32M	**Atlin** baz=254	**8.48**	**63**	P	**Pn**	**07 31 13.1**	**+0.4**
M30M	**Minto, Yukon**	**8.53**	**40**	Pn	**Pn**	**07 31 14.2**	**+0.9**
P33M	**Teslin, Yukon**	**9.08**	**59**		**Pn**	**07 31 21.8**	**+0.8**
M31M	**Drury Creek, Y**	**9.22**	**46**		**Pn**	**07 31 24.0**	**+1.3**
H21K	**Melozitna Rive**	**9.38**	**349**	Pn	**Pn**	**07 31 25.9**	**+1.0**
FARO	**Faro, Yukon**	**9.65**	**47**	Pn	**Pn**	**07 31 30.5**	**+1.8**
IMAR	**Indian Mountai**	**9.80**	**348**	Pn	**Pn**	**07 31 31.1**	**+0.3**
J30M	**Hart River**	**10.07**	**32**	Pn	**Pn**	**07 31 36.5**	**+2.0**
FYU	**Fort Yukon**	**10.21**	**8**	Pn	**Pn**	**07 31 37.4**	**+1.2**
C36M	**Paulatuk**	**16.85**	**31**	Pn	**Pn**	**07 33 06.2**	**+0.8**
C36M				IAmb	IAmb	07 33 18.1	
	comp=Z,2.5nm,1.1s						
YKA	**Yellowknife Ar**	**18.10**	**57**	P	**Pn**	**07 33 21.0**	**-0.1**
A36M	**Sachs Harbour**	**18.31**	**23**	P	**Pn**	**07 33 24.7**	**+1.1**
A36M				IAmb	IAmb	07 33 28.5	
	comp=Z,5.3nm,0.9s						
LON	**Longmire**	**19.18**	**109**	P	**P**	**07 33 34.2**	**+0.7**
LON				IAmb	IAmb	07 34 15.7	
	comp=Z,3.1nm,1.0s						

*TAP **10** 07:37:49.5,23.96N×121.59E,h9km,ML3.7,B*
*ASIES **10** 07:37:49.5,23.96N×121.59E,h9km,ML3.7,Mw3.4,*
Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm;
M_{rr}1.69; $M_{\theta\theta}$-0.95; $M_{\phi\phi}$-0.74; $M_{r\theta}$-0.02; $M_{\theta\phi}$-0.93;
$M_{\theta r}$~0.43; Fault plane solution: $M_0$1.79206×10^{21} NP1:
ϕ_s218.11000°,δ50.76000°,λ76.69000°. NP2:ϕ_s58.62000°,
δ41.09000°,λ105.74000°. Principal axes: T Plg78.5930°,
Azm72.7270°; N Plg10.2700°, Azm226.6280°; P
Plg4.9110°, Azm317.5200°;
*JMA **10** 07:37:49.4±0.1,23.9N±0.2×12.2E±, h2km,MV2.9/14,*
TAIWAN REGION
ISC 10 07:37:49.9±0.8,**23.96N**±0.01×**121.60E**±0.01,**h9**km±4km,
n137,σ0**88**/243,**4C-29D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=48	**0.02**	**19**	⇑*i*P	**Pg**	**07 37 51.4**	**-0.2**
HWA				*i* S	**Sg**	**07 37 53.3**	**+0.5**
	baz=48						
ETM	**Tongmen** baz=278	**0.10**	**275**	⇓*i*P	**Pg**	**07 37 52.2**	**-0.2**
ETM				*i* S	**Sg**	**07 37 53.9**	**-0.2**
	baz=278						
TWD	**Chiawan** baz=6.0	**0.12**	**359**	⇓*i*P	**Pg**	**07 37 52.8**	**0.0**
TWD				*i* S	**Sg**	**07 37 55.3**	**+0.6**
	baz=6.0						
SHUL	**Shoufeng** baz=197	**0.17**	**191**	*i* P	**Pg**	**07 37 53.9**	**+0.3**
SHUL				S	**Sg**	**07 37 57.8**	**+1.7**
	baz=197						
LXIB	**Xiulin Townshi** baz=286	**0.18**	**291**	⇓*i*P	**Pg**	**07 37 53.7**	**-0.1**
LXIB				*i* S	**Sg**	**07 37 56.8**	**+0.3**
	baz=286						
ETL	**Fush Village** baz=7.0	**0.20**	**7**	⇓*i*P	**Pg**	**07 37 54.1**	**0.0**
ETL				*i* S	**Sg**	**07 37 57.4**	**+0.4**
	baz=7.0						
ESL	**Shilin** baz=231	**0.21**	**227**	*i* P	**Pg**	**07 37 53.9**	**-0.3**
ESL				S	**Sg**	**07 37 56.7**	**-0.4**
	baz=231						
NACB	**Ninganchiao**	**0.21**	**359**	P	**Pg**	**07 37 54.3**	**0.0**
NACB	**Ninganchiao**	**0.21**	**359**	P	**Pg**	**07 37 54.4**	**0.0**
NACB	**Ninganchiao** baz=5.0	**0.21**	**359**	⇓*i*P	**Pg**	**07 37 54.3**	**0.0**
NACB				S	**Sg**	**07 37 57.8**	**+0.5**
	baz=5.0						
TEGC	**Jichi Village** baz=202	**0.25**	**192**	P	**Pg**	**07 37 56.0**	**+1.0**
TEGC				*e*S	**Sg**	**07 38 01.0**	**+2.6**
	baz=202						
ETLH	**Xiulin Townshi** baz=337	**0.27**	**337**	⇓*i*P	**Pg**	**07 37 55.4**	**0.0**
ETLH				*e*S	**Sg**	**07 37 59.1**	**+0.1**
	baz=337						
WARBT	**Fenglin Townsh** baz=229	**0.31**	**219**	*i* P	**Pg**	**07 37 55.6**	**-0.4**
WARBT				*e*S	**Sg**	**07 37 59.7**	**-0.4**
	baz=229						
EGFH	**Guangfu** baz=218	**0.33**	**209**	*i* P	**Pg**	**07 37 56.2**	**-0.2**
EGFH				*e*S	**Sb**	**07 38 02.3**	**-1.0**
	baz=218						
WHF	**Hehuan Shan** baz=303	**0.36**	**302**	⇓*i*P	**Pg**	**07 37 57.1**	**-0.1**
WHF				S	**Sg**	**07 38 02.5**	**+0.6**
	baz=303						
EHP	**Heping Village** baz=21	**0.37**	**20**	*e*P	**Pg**	**07 37 57.6**	**+0.3**
EHP				*e*S	**Sg**	**07 38 02.9**	**+0.6**
	baz=21						
OWD	**Renai** baz=271	**0.39**	**270**	*i* P	**Pg**	**07 37 57.6**	**+0.1**
OWD				S	**Sg**	**07 38 03.2**	**+0.5**
	baz=271						
EAHA	**Aohua** baz=25	**0.39**	**19**	⇓*i*P	**Pg**	**07 37 57.5**	**-0.2**
EAHA				*e*S	**Sb**	**07 38 05.3**	**+0.1**
	baz=25						
CHGB	**Renai** baz=286	**0.40**	**285**	⇓*i*P	**Pb**	**07 37 58.2**	**-1.1**
CHGB				*e*S	**Sb**	**07 38 04.1**	**-1.6**
	baz=286						
FUSS	**Fushou** baz=312	**0.43**	**312**	⇓P	**Pb**	**07 37 58.9**	**-1.0**
FUSS				*e*S	**Sb**	**07 38 05.6**	**-1.0**
	baz=312						
WUSB	**Renai** baz=285	**0.44**	**275**	⇓*i*P	**Pb**	**07 37 58.9**	**-1.0**
WUSB				*e*S	**Sb**	**07 38 05.6**	**-1.1**
	baz=285						
VWDT	**VWDT** baz=247	**0.47**	**244**	⇓*i*P	**Pb**	**07 37 59.2**	**-1.0**
VWDT				*e*S	**Sg**	**07 38 05.4**	**+0.3**
	baz=247						
TWT	**Tachien** baz=306	**0.48**	**307**	*e*P	**Pb**	**07 38 00.1**	**-0.7**
TWT				*e*S	**Sb**	**07 38 07.2**	**-0.9**
	baz=306						
ENA	**Nanau** baz=15	**0.49**	**16**	⇓P	**Pg**	**07 37 59.4**	**0.0**
ENA				*e*S	**Sb**	**07 38 08.5**	**+0.6**
	baz=15						
TDCB	**Techi** baz=298	**0.50**	**306**	*e*P	**Pb**	**07 38 00.1**	**-0.8**
TDCB				*e*S	**Sb**	**07 38 07.5**	**-0.8**
	baz=298						
NNSB	**Datong** baz=337	**0.51**	**337**	⇓*e*P	**Pb**	**07 38 00.2**	**-0.9**
NNSB				*e*S	**Sb**	**07 38 07.7**	**-1.0**
	baz=337						
NNSH	**Datong** baz=331	**0.51**	**337**	*e*P	**Pb**	**07 38 00.1**	**-0.9**
NNSH				*e*S	**Sb**	**07 38 07.8**	**-0.9**
	baz=331						
EWUT	**Wuta** baz=17	**0.51**	**19**	⇓P	**Pg**	**07 37 59.9**	**0.0**
EWUT				*e*S	**Sb**	**07 38 09.8**	**+1.2**
	baz=17						
EHY	**Hungye** baz=220	**0.52**	**209**	P	**Pg**	**07 37 59.6**	**-0.3**
EHY				*e*S	**Sg**	**07 38 06.7**	**0.0**
	baz=220						
NNS	**Nan Shan** baz=337	**0.52**	**337**	⇓*e*P	**Pb**	**07 38 00.4**	**-0.9**
NNS				*e*S	**Sb**	**07 38 08.1**	**-0.9**
	baz=337						
LATG	**Datong** baz=353	**0.58**	**354**	⇓P	**Pg**	**07 38 01.2**	**0.0**
LATG				*e*S	**Sb**	**07 38 10.3**	**-0.4**
	baz=353						
WPL	**Puli Township** baz=277	**0.59**	**275**	*e*P	**Pb**	**07 38 02.0**	**-0.4**
WPL				*e*S	**Sb**	**07 38 10.1**	**-0.8**
	baz=277						
SSLB	**Suanglung**	**0.61**	**254**	P	**Pb**	**07 38 01.9**	**-0.9**
SSLB	**Suanglung**	**0.61**	**254**	P	**Pb**	**07 38 02.3**	**-0.5**
SSLB	**Suanglung** baz=265	**0.61**	**254**	⇓*i*P	**Pb**	**07 38 01.9**	**-0.9**
SSLB				*e*S	**Sg**	**07 38 09.7**	**-0.1**
	baz=265						
DPDB	**Guoxing** baz=278	**0.62**	**277**	⇓P	**Pb**	**07 38 02.6**	**-0.3**
DPDB				*e*S	**Sb**	**07 38 11.1**	**-0.6**
	baz=278						
YULB	**Yu-li**	**0.63**	**206**	P	**Pg**	**07 38 01.8**	**-0.2**
YULB	**Yu-li**	**0.63**	**206**	P	**Pb**	**07 38 03.0**	**0.0**
YULB	**Yu-li** baz=218	**0.63**	**206**	⇑P	**Pg**	**07 38 01.6**	**-0.4**
YULB				*e*S	**Sg**	**07 38 10.4**	**+0.1**
	baz=218						
WCS	**Beigang Elemen** baz=280	**0.64**	**279**	⇓*e*P	**Pb**	**07 38 02.8**	**-0.4**
WCS				*e*S	**Sb**	**07 38 11.9**	**-0.3**
	baz=280						
SMLT	**Sun Moon Lake** baz=265	**0.64**	**264**	⇓P	**Pb**	**07 38 02.8**	**-0.6**
SMLT				*e*S	**Sb**	**07 38 11.7**	**-0.8**
	baz=265						
NDT	**Datong Townshi** baz=353	**0.65**	**353**	⇓*e*P	**Pb**	**07 38 02.7**	**-0.7**
NDT				*e*S	**Sn**	**07 38 13.8**	**-1.8**
	baz=353						
ECBN	**Changbin** baz=182	**0.65**	**192**	*e*P	**Pn**	**07 38 04.1**	**-1.3**
ECBN				*e*S	**Sn**	**07 38 13.8**	**-2.0**
	baz=182						
ESAO	**Su ao** baz=10.0	**0.66**	**20**	*e*P	**Pg**	**07 38 02.7**	**+0.1**
ESAO				*e*S	**Sb**	**07 38 13.6**	**+0.8**
	baz=10.0						
EYUL	**Yuli** baz=216	**0.66**	**203**	*e*P	**Pg**	**07 38 02.5**	**-0.1**
EYUL				*e*S	**Sb**	**07 38 13.0**	**+0.2**
	baz=216						
TWF1	**Yuli** baz=215	**0.66**	**205**	*e*P	**Pg**	**07 38 02.0**	**-0.7**
TWF1				*e*S	**Sb**	**07 38 11.9**	**-1.1**
	baz=215						
WHP	**Taichung City** baz=290	**0.68**	**298**	⇓*e*P	**Pb**	**07 38 04.3**	**+0.4**
WHP				*e*S	**Sn**	**07 38 14.9**	**-1.6**
	baz=290						
EOS4	**EOS4** baz=83	**0.68**	**76**	P	**Pb**	**07 38 04.0**	**+0.3**
EOS4				*e*S	**Sn**	**07 38 14.8**	**-1.0**
	baz=83						
ENTT	**Nioudou** baz=356	**0.68**	**358**	⇓*e*P	**Pb**	**07 38 03.4**	**-0.6**
TYC	**Yuchr** baz=267	**0.68**	**266**	⇓*e*P	**Pb**	**07 38 03.2**	**-0.7**
TYC				*e*S	**Sb**	**07 38 12.4**	**-1.1**
	baz=267						
NDS	**Dongshan** baz=8.0	**0.68**	**9**	*e*P	**Pb**	**07 38 03.3**	**-0.7**
NDS				*e*S	**Sn**	**07 38 14.8**	**-1.6**
	baz=8.0						
TWC	**Suao** baz=11	**0.69**	**19**	P	**Pg**	**07 38 03.2**	**0.0**
TWC				*e*S	**Sn**	**07 38 15.1**	**-1.5**
	baz=11						
WHYT	**Xinyi Township** baz=257	**0.73**	**249**	*e*P	**Pb**	**07 38 04.3**	**-0.5**
WHYT				*e*S	**Sb**	**07 38 15.0**	**+0.1**
	baz=257						
EOS3	**EOS3** baz=58	**0.73**	**63**	*e*P	**Pn**	**07 38 06.3**	**0.0**
EOS3				*e*S	**Sn**	**07 38 17.8**	**+0.3**
	baz=58						
YHNB	**Yeheng**	**0.74**	**344**	P	**Pb**	**07 38 04.8**	**-0.2**
YHNB	**Yeheng** baz=349	**0.74**	**344**	⇓*e*P	**Pb**	**07 38 04.7**	**-0.3**
EOS2	**EOS2** baz=60	**0.74**	**51**	*e*P	**Pn**	**07 38 06.8**	**+0.4**
NSK	**Sanguang** baz=343	**0.75**	**343**	⇓*e*P	**Pb**	**07 38 04.8**	**-0.3**
NSK				*e*S	**Sb**	**07 38 16.4**	**+1.0**
	baz=343						
TWE	**Neicheng** baz=5.0	**0.76**	**5**	*e*P	**Pb**	**07 38 04.9**	**-0.4**
TWE				*e*S	**Sb**	**07 38 16.5**	**+

WNT1	**Nantou City**	**0.84**	**267**	*eP*	**Pn**	**07 38 08.2**	**+0.3**
	baz=274							
WNT1				*eS*	**Sn**	**07 38 21.7**	**+1.3**
	baz=274							
TWQ1	**Liyutan**	**0.85**	**297**	*eP*	**Pn**	**07 38 07.6**	**-0.4**
	baz=298							
ALS	**Alishan**	**0.85**	**239**	*eP*	**Pb**	**07 38 06.9**	**-0.2**
	baz=241							
ALS				*eS*	**Sb**	**07 38 18.9**	**+0.3**
	baz=241							
NSTT	**Nanjuang**	**0.86**	**321**	*eP*	**Pn**	**07 38 07.5**	**-0.7**
	baz=321							
NSTT				*eS*	**Sn**	**07 38 19.6**	**-1.4**
	baz=321							
TCU	**Taichung**	**0.86**	**283**	*eP*	**Pn**	**07 38 08.8**	**+0.5**
	baz=284							
LIOB	**Emei**	**0.87**	**322**	*eP*	**Pn**	**07 38 07.6**	**-0.7**
	baz=322							
LIOB				*eS*	**Sn**	**07 38 20.4**	**-0.7**
	baz=322							
CHKT	**Chengkung**	**0.88**	**194**	*eP*	**Pg**	**07 38 05.9**	**-0.9**
	baz=186							
CHKT				*eS*	**Sn**	**07 38 20.9**	**-0.4**
	baz=186							
EHD	**Haiduan**	**0.88**	**204**	*eP*	**Pg**	**07 38 06.5**	**-0.3**
	baz=218							
EHD				*eS*	**Sb**	**07 38 19.8**	**+0.5**
	baz=218							
NSY	**Sanyi**	**0.89**	**301**	*eP*	**Pn**	**07 38 08.6**	**0.0**
	baz=301							
NSY				*eS*	**Sn**	**07 38 22.6**	**+1.0**
	baz=301							
CHN5	**Tsauling**	**0.92**	**247⇑**	*eP*	**Pn**	**07 38 08.7**	**-0.4**
	baz=239							
CHN5				*eS*	**Sn**	**07 38 22.2**	**-0.1**
	baz=239							
ECS	**Chishang**	**0.93**	**202**	*eP*	**Pn**	**07 38 09.4**	**+0.3**
	baz=205							
ELDTW	**Lidau**	**0.93**	**215**	*eP*	**Pg**	**07 38 06.6**	**-1.2**
	baz=209							
ELDTW				*eS*	**Sb**	**07 38 20.9**	**+0.1**
	baz=209							
NMLH	**Miaoli**	**0.94**	**308**	*eP*	**Pn**	**07 38 09.6**	**+0.3**
	baz=319							
NMLH				*eS*	**Sn**	**07 38 23.9**	**+1.1**
	baz=319							
WCHH	**Zhanghua**	**0.96**	**277**	*eP*	**Pn**	**07 38 09.9**	**+0.3**
	baz=279							
HSN1	**Hsinchu**	**0.97**	**327**	*eP*	**Pn**	**07 38 10.8**	**+1.1**
	baz=326							
WGK	**Gukeng**	**0.99**	**254**	*eP*	**Pn**	**07 38 10.4**	**+0.5**
	baz=257							
WGK				*eS*	**Sn**	**07 38 24.9**	**+0.9**
	baz=257							
NHDH	**Xindian Distri**	**1.00**	**356**	*eP*	**Pn**	**07 38 09.9**	**-0.2**
	baz=354							
WDLH	**Douliu**	**1.01**	**255**	*eP*	**Pn**	**07 38 10.8**	**+0.6**
	baz=257							
WDLH				*eS*	**Sn**	**07 38 25.4**	**+0.9**
	baz=257							
TATO	**Taipei**	**1.02**	**354**	P	**Pn**	**07 38 10.1**	**-0.3**
TATO	**Taipei**	**1.02**	**354**	*eP*	**Pn**	**07 38 10.1**	**-0.3**
	baz=353							
TATO				*eS*	**Sn**	**07 38 24.7**	**-0.1**
	baz=353							
TWA	**Mucha**	**1.02**	**359**	*eP*	**Pn**	**07 38 10.2**	**-0.2**
	baz=349							
TWA				*eS*	**Sn**	**07 38 25.3**	**+0.5**
	baz=349							
TIPB	**Shuangxi**	**1.03**	**12**	*eP*	**Pb**	**07 38 09.9**	**0.0**
	baz=356							
WCKO	**Fanlu**	**1.05**	**241**	*eP*	**Pn**	**07 38 11.1**	**+0.3**
	baz=239							
WCKO				*eS*	**Sn**	**07 38 26.0**	**+0.5**
	baz=239							
STYH	**Taoyuan**	**1.09**	**224**	*eP*	**Pb**	**07 38 10.4**	**-0.5**
	baz=228							
STYH				*eS*	**Sn**	**07 38 27.4**	**+1.0**
	baz=228							
CHN4	**Tsaushan**	**1.10**	**237⇑**	*eP*	**Pn**	**07 38 11.9**	**+0.4**
	baz=232							
CHN4				*eS*	**Sn**	**07 38 28.9**	**+2.1**
	baz=232							
TPUB	**Ta-pu**	**1.10**	**234**	P	**Pn**	**07 38 11.5**	**0.0**
TPUB	**Ta-pu**	**1.10**	**234**	P	**Pn**	**07 38 11.7**	**+0.2**
TPUB	**Ta-pu**	**1.10**	**234**	*eP*	**Pn**	**07 38 11.8**	**+0.2**
	baz=237							
TPUB				*eS*	**Sn**	**07 38 26.4**	**-0.6**
	baz=237							
STYT	**Tauyuan**	**1.10**	**224**	*eP*	**Pn**	**07 38 11.3**	**-0.3**
	baz=228							
STYT				*eS*	**Sn**	**07 38 27.5**	**+0.5**
	baz=228							
TWB1	**Santiao Chiao**	**1.10**	**19**	*eP*	**Pn**	**07 38 11.3**	**-0.2**
	baz=9.0							
TWB1				*eS*	**Sn**	**07 38 26.4**	**-0.5**
	baz=9.0							
CHN2	**Minshiung**	**1.11**	**248**	*eP*	**Pn**	**07 38 13.4**	**+1.7**
	baz=265							
CHN2				*eS*	**Sn**	**07 38 29.1**	**+2.0**
	baz=265							
WRL	**Guolierlin Hig**	**1.12**	**267**	*eP*	**Pn**	**07 38 12.2**	**+0.5**
	baz=269							
WRL				*eS*	**Sn**	**07 38 28.2**	**+0.9**
	baz=269							
NWF	**Wu-fen Shan**	**1.12**	**9**	*eP*	**Pn**	**07 38 12.3**	**+0.4**
	baz=7.0							
NWF				*eS*	**Sn**	**07 38 27.7**	**+0.2**
	baz=7.0							
WFSB	**Wu-fen Shan**	**1.12**	**9**	*eP*	**Pn**	**07 38 12.3**	**+0.5**
	baz=7.0							
WFSB				*eS*	**Sn**	**07 38 26.7**	**-0.7**
	baz=7.0							
LONT	**Longtian**	**1.13**	**202**	*eP*	**Pn**	**07 38 11.5**	**-0.4**
	baz=215							
LONT				*eS*	**Sn**	**07 38 28.2**	**+0.6**
	baz=215							
RLNB	**Erlin**	**1.14**	**267**	*eP*	**Pn**	**07 38 12.0**	**0.0**
	baz=269							
RLNB				*eS*	**Sn**	**07 38 29.5**	**+1.9**
	baz=269							
WTK	**Tuku**	**1.14**	**257**	*eP*	**Pn**	**07 38 12.0**	**0.0**
	baz=259							
WTK				*eS*	**Sn**	**07 38 28.9**	**+1.2**
	baz=259							
WTP	**Ta-pu**	**1.15**	**232**	*eP*	**Pn**	**07 38 12.2**	**0.0**
	baz=235							
WTP				*eS*	**Sn**	**07 38 28.6**	**+0.6**
	baz=235							
TWS1	**Kuangyinshan**	**1.15**	**352**	*eP*	**Pn**	**07 38 13.4**	**+1.2**
	baz=356							
SXI1	**Grass Mountain**	**1.16**	**13**	*eP*	**Pn**	**07 38 12.7**	**+0.4**
	baz=2.0							
SXI1				*eS*	**Sn**	**07 38 30.8**	**+2.4**
	baz=2.0							
YM01	**YM01**	**1.18**	**359**	*eP*	**Pn**	**07 38 13.6**	**+0.9**
	baz=6.0							
ANP	**Anpu**	**1.23**	**357**	*eP*	**Pg**	**07 38 14.3**	**+0.8**
	baz=354							
TWK	**Hsinying**	**1.23**	**236**	*eP*	**Pg**	**07 38 14.0**	**+0.5**
	baz=239							
TWK				*eS*	**Sn**	**07 38 31.7**	**+1.7**
	baz=239							
TWG	**Pinlang**	**1.23**	**203**	*eP*	**Pg**	**07 38 13.8**	**+0.2**
	baz=207							
TWGBT	**Beinan**	**1.23**	**203**	P	**Pg**	**07 38 14.0**	**+0.4**
TWGBT	**Beinan**	**1.23**	**203**	P	**Pg**	**07 38 14.2**	**+0.6**
TWGBT	**Beinan**	**1.23**	**203**	*eP*	**Pg**	**07 38 13.8**	**+0.3**
	baz=215							
TWGBT				*eS*	**Sn**	**07 38 29.8**	**-0.2**
	baz=215							
CHN1	**Nanshi**	**1.25**	**232**	*eP*	**Pg**	**07 38 14.3**	**+0.4**
	baz=240							
CHN1				*eS*	**Sn**	**07 38 32.2**	**+1.8**
	baz=240							
SNST	**Tainan City**	**1.25**	**234**	*eP*	**Pg**	**07 38 14.4**	**+0.5**
	baz=238							
SNST				*eS*	**Sn**	**07 38 32.3**	**+1.8**
	baz=238							
SGST	**Jiashian**	**1.28**	**227**	*eP*	**Pg**	**07 38 14.3**	**-0.1**
	baz=231							
SGST				*eS*	**Sn**	**07 38 32.5**	**+1.4**
	baz=231							
LDUT	**Ludao**	**1.28**	**185**	*eP*	**Pn**	**07 38 11.3**	**-2.7**
	baz=171							
LDUT				*eS*	**Sb**	**07 38 29.8**	**-1.1**
	baz=171							
SLGT	**Liugui**	**1.30**	**223**	*eP*	**Pg**	**07 38 14.3**	**-0.6**
	baz=227							
SLGT				*eS*	**Sn**	**07 38 34.0**	**+2.3**
	baz=227							
JYNG	**Yonagunijimaku**	**1.32**	**68**	S	**Sg**	**07 38 32.4**	**-0.2**
ICHU	**Yijhu**	**1.35**	**244**	*eP*	**Pg**	**07 38 16.3**	**+0.5**
	baz=248							
ICHU				*eS*	**Sg**	**07 38 35.6**	**+2.3**
	baz=248							
YOJ	**Yonaguni jima**	**1.38**	**68**	P	**Pg**	**07 38 18.0**	**+1.5**
YOJ	**Yonaguni jima**	**1.38**	**68**	*eP*	**Pb**	**07 38 15.5**	**-0.5**
	baz=66							
YOJ				*eS*	**Sg**	**07 38 34.3**	**-0.1**
	baz=66							
YOJ	**Yonaguni jima**	**1.38**	**68**	P	**Pb**	**07 38 15.4**	**-0.5**
YOJ				S	**Sg**	**07 38 34.4**	**-0.1**
SCST	**Cishan**	**1.47**	**224**	*eP*	**Pg**	**07 38 18.5**	**+0.3**
	baz=229							
SCST				*eS*	**Sg**	**07 38 41.0**	**+3.8**
	baz=229							
SSD	**Sandimen**	**1.50**	**217**	*eP*	**Pn**	**07 38 16.6**	**-0.4**
	baz=222							
SSD				*eS*	**Sg**	**07 38 38.7**	**+0.6**
	baz=222							
TSMG	**Majia**	**1.52**	**215**	*eP*	**Pb**	**07 38 18.1**	**-0.2**
	baz=221							
TSMG				*eS*	**Sg**	**07 38 40.0**	**+1.0**
	baz=221							
MASBT	**Mashibuluo**	**1.61**	**214**	*eP*	**Pn**	**07 38 18.2**	**-0.3**
	baz=220							
MASBT				*eS*	**Sg**	**07 38 42.6**	**+1.0**
	baz=220							
EAST	**Anshuo**	**1.71**	**204**	*eP*	**Pb**	**07 38 20.5**	**-1.1**
	baz=195							
SCZT	**Fangliau**	**1.82**	**210**	*eP*	**Pb**	**07 38 23.4**	**0.0**
	baz=212							
SCZT				*eS*	**Sg**	**07 38 47.4**	**-0.9**
	baz=212							
PHUB	**P'eng-hu**	**1.91**	**257**	*eP*	**Pb**	**07 38 23.7**	**-1.2**
	baz=260							
PHUB				*eS*	**Sb**	**07 38 49.3**	**+0.5**
	baz=260							
PNG	**Penghu**	**1.91**	**259**	*eP*	**Pb**	**07 38 23.9**	**-1.0**
	baz=261							
PNG				*eS*	**Sg**	**07 38 49.7**	**-1.7**
	baz=261							
HATJ	**Hateruma jima**	**2.02**	**87**	*eP*	**Pn**	**07 38 23.8**	**-0.4**
HATJ				*eS*	**Sn**	**07 38 49.1**	**-0.4**
JKRS	**Kuro-shima**	**2.22**	**82**	*i S*	**Sb**	**07 38 56.2**	**-1.6**
JIJ	**Ishigaki jima**	**2.36**	**80**	*eP*	**Pn**	**07 38 29.3**	**+0.5**
JIJ				S	**Sn**	**07 38 56.6**	**-1.3**
JISG	**Ishigakijimahi**	**2.55**	**75**	P	**Pn**	**07 38 30.9**	**-0.6**
JISG				S	**Sn**	**07 39 01.7**	**-1.0**
JTJ	**Tarama**	**2.91**	**76**	*eP*	**Pn**	**07 38 37.8**	**+1.4**
JTJ				*eS*	**Sn**	**07 39 12.4**	**+0.8**

*IDC **10** 07:39:31.9±5.0,36.°49N×76.°78E,h92km±42km,mb3.3/4, mbtmp3.5/9,MS3.7/1,Error ellipse: s-maj=47.6km s-min=24.2km az=45.0*

ISC 10 07:39:32.8±1.3,36.°5N±0.°1×76.°8E±0.°1,h100km,n10, σ0.58/11,mb3.4/4,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.35**	**345**	P			**Pn**	**07 41 03.4**	**-0.5**
	0.8nm,0.6s,baz=188,slow=15,SNR=1.6								
AAK				S			**Sn**	**07 42 15.1**	**0.0**
	2.0nm,0.5s,baz=323,slow=11,SNR=2.2								
MKAR	**Makanchi Array**	**11.06**	**20**	P			**Pn**	**07 42 07.9**	**0.0**
	0.2nm,0.3s,baz=199,slow=13,SNR=6.9								
MKAR				S			**Sn**	**07 44 08.7**	**-0.8**
	0.8nm,0.6s,baz=197,slow=23,SNR=6.6								
KURBB	**Kurchatov Arra**	**14.15**	**5**	P			**Pn**	**07 42 49.7**	**+1.1**
	0.4nm,0.2s,baz=198,slow=9.6,SNR=1.7								
BVAR	**Borovoye Array**	**17.09**	**347**	P			**P**	**07 43 25.8**	**+0.3**
	0.2nm,0.3s,baz=162,slow=10.0,SNR=2.0								
AKTO	**Aktyubinsk**	**19.37**	**322**	P			**P**	**07 43 50.0**	**-0.4**
	0.8nm,0.3s,baz=126,slow=8.7,SNR=2.5								
FINES	**FINESS Array B**	**40.09**	**325**	P			**P**	**07 46 58.3**	**+0.1**
	0.6nm,0.4s,baz=110,slow=8.7,SNR=6.9								
	0.6nm,0.4s								
TGY	**Tagaytay City**	**45.26**	**108**	LR			LR	08 08 38.6	
	comp=Z,90nm,20.3s,baz=196,slow=39								
WRA	**Warramunga Arr**	**78.16**	**126**	P			**P**	**07 51 20.9**	**-0.4**
	0.4nm,0.6s,baz=327,slow=5.9,SNR=4.6								
	0.4nm,0.6s								
ASAR	**Alice Springs**	**80.56**	**129**	P			**P**	**07 51 34.1**	**-0.1**
	0.4nm,0.7s,baz=318,slow=5.3,SNR=5.7								
	0.4nm,0.7s								
YKA	**Yellowknife Ar**	**80.90**	**5**	P			**P**	**07 51 35.9**	**+0.3**
	0.3nm,0.6s,baz=346,slow=5.4,SNR=5.3								
	0.3nm,0.6s								

TAP 10 07:48:46.3,23.°90N×121.°55E,h7km,ML1.8,4D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.08**	**322**	⇓*iP*			Pg	07 48 49.1	+0.8
	baz=321								
ETM				*i* S			Sg	07 48 50.6	+1.1
	baz=321								
HWA	**Hwalien**	**0.09**	**37**	P			Pg	07 48 49.1	+0.6
	baz=41								
HWA				*eS*			Sg	07 48 51.0	+1.2
	baz=41								
SHUL	**Shoufeng**	**0.12**	**172**	*eP*			Pg	07 48 50.1	+1.3
	baz=172								
SHUL				*eS*			Sg	07 48 53.0	+2.5
	baz=172								
ESL	**Shilin**	**0.14**	**229**	⇓*iP*			Pg	07 48 50.0	+0.8
	baz=226								
ESL				*i* S			Sg	07 48 52.3	+1.2
	baz=226								
LXIB	**Xiulin Townshi**	**0.17**	**314**	*i* P			Pg	07 48 50.6	+0.8
	baz=313								
LXIB				S			Sg	07 48 53.8	+1.6
	baz=313								
TWD	**Chiawan**	**0.18**	**15**	P			Pg	07 48 50.4	+0.4
	baz=16								
TWD				*eS*			Sg	07 48 52.7	+0.3
	baz=16								
WARBT	**Fenglin Townsh**	**0.24**	**218**	P			Pg	07 48 51.7	+0.7
	baz=218								
WARBT				*eS*			Sg	07 48 54.9	+0.7
	baz=218								
EGFH	**Guangfu**	**0.26**	**205**	*eP*			Pg	07 48 52.3	+0.9
	baz=204								
NACB	**Ninganchiao**	**0.27**	**9**	*eP*			Pg	07 48 51.8	+0.1
	baz=9.0								
ETLH	**Xiulin Townshi**	**0.31**	**349**	*eP*			Pg	07 48 52.7	+0.3
	baz=348								
OWD	**Renai**	**0.34**	**279**	P			Pb	07 48 54.3	-0.6
	baz=278								
WHF	**Hehuan Shan**	**0.35**	**313**	P			Pg	07 48 54.1	+0.8
	baz=313								
CHGB	**Renai**	**0.37**	**295**	⇓*iP*			Pb	07 48 55.0	-0.5
	baz=294								
VWDT	**VWDT**	**0.40**	**248**	⇓P			Pb	07 48 55.5	-0.3
	baz=248								
VWDT				*eS*			Sb	07 49 01.0	-1.1
	baz=248								
WUSB	**Renai**	**0.40**	**283**	P			Pb	07 48 55.6	-0.3
	baz=282								
WUSB				*eS*			Sb	07 49 01.6	-0.7
	baz=282								

*IDC **10** 07:48:46.5±0.7,24.°35N×122.°21E,h0km,mb4.0/18, mbtmp4.0/18,MS3.7/21,Error ellipse: s-maj=25.4km s-min=15.3km az=61.0*

*TAP **10** 07:48:49.6,24.°2N×121.°84E,h11km,ML4.7,B*

*NIED **10** 07:48:50.0,24.°17N×121.°79E,h18km,MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-0.87; Mθθ0.46; Mφφ0.41; Mrθ4.28; Mθφ0.45; Mφr0.54; Fault plane solution: M₀4.40000×10¹⁵ NP1: φs262.00000°,δ85.00000°,λ-84.00000°. NP2:φs32.00000°, δ7.00000°,λ-139.00000°.*

*ASIES **10** 07:48:49.6,24.°23N×121.°84E,h11km,ML4.7,Mw4.1, Moment Tensor Solution. Moment tensor: Scale 10²²Nm; Mrr0.66; Mθθ-0.44; Mφφ0.44; Mrθ1.52; Mθφ0.24; Mφr0.74; Fault plane solution: M₀1.82640×10²² NP1:φs67.09000°, δ83.27000°,λ74.36000°. NP2:φs314.37000°,δ17.00000°, λ156.35000°. Principal axes: T Plg49.3890°, Azm320.0590°; N Plg15.5340°, Azm68.9750°; P Plg36.3900°, Azm170.7960°;*

*NEIC **10** 07:48:49.4±1.1,24.°18N±0.°02×121.°86E±0.°04,h12km±2km, mb4.6/32,Mwr4.2/21 Error ellipse: s-maj=5.3km s-min=3.3km az=99.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.16; Mθθ-0.09; Mφφ0.25; Mrθ1.92; Mθφ1.89; Mφr0.22; Fault plane solution: M₀2.71000×10¹⁵ NP1:φs265.49000°,δ88.18000°, λ-45.71000°. NP2:φs357.36000°,δ44.32000°, λ-177.39000°. Principal axes: T 2.7964, Plg29.0000°, Azm321.0000°; N -0.1752, Plg44.0000°, Azm84.0000°; P -2.6212, Plg32.0000°, Azm211.0000°;*

*BJI **10** 07:48:49.9±0.0,24.°25N×121.°86E,h10km,mb4.2/29, mB4.5/15,ML4.2/11,Ms4.3/25,Ms7 4.1/27*

*JMA **10** 07:48:50.0±0.1,24.°2N±0.°6×121.°8E±0.°9,h18km±1km, MD4.4/13,MV4.1/13,TAIWAN REGION*

*NEIC **10** 07:48:49.5,24.°17N×121.°85E,h12km*

ISC 10 07:48:50.0±0.6,24.°21N±0.°01×121.°87E±0.°02,h15km±3km, n296,σ1$29/365,mb4.3/37,MS3.7/20,13C-58D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**311**	*i* P			**Pg**	**07 48 52.8**	**-1.2**
	baz=314								
EHP				*i* S			**Sg**	**07 48 55.0**	**-1.7**
	baz=314								
EAHA	**Aohua**	**0.17**	**316**	*i* P			**Pg**	**07 48 53.1**	**-1.1**
	baz=317								
EAHA				*i* S			**Sg**	**07 48 55.9**	**-1.1**
	baz=317								
ETL	**Fush Village**	**0.23**	**257⇑**	*i* P			**Pg**	**07 48 54.3**	**-0.9**
	baz=254								
ETL				S			**Sg**	**07 48 57.9**	**-0.8**
	baz=254								
ENA	**Nanau**	**0.25**	**332**	⇓*iP*			**Pg**	**07 48 54.5**	**-1.0**
	baz=335								
ENA				*i* S			**Sg**	**07 48 57.9**	**-1.2**
	baz=335								
EWUT	**Wuta**	**0.25**	**341**	⇓*iP*			**Pg**	**07 48 54.7**	**-0.8**
	baz=342								
EWUT				*i* S			**Sg**	**07 48 58.1**	**-1.0**
	baz=342								
NACB	**Ninganchiao**	**0.25**	**262**				**Pg**	**07 48 54.6**	**-0.9**
NACB	**Ninganchiao**	**0.25**	**262**	P			**Pg**	**07 48 54.7**	**-0.8**
NACB	**Ninganchiao**	**0.25**	**262**	⇑*iP*			**Pg**	**07 48 54.5**	**-0.9**
	baz=260								
NACB				S			**Sg**	**07 48 58.0**	**-1.2**
	baz=260								
TWD	**Chiawan**	**0.28**	**242**	⇓*iP*			**Pg**	**07 48 55.3**	**-0.7**
	baz=246								
TWD				*eS*			**Sg**	**07 48 59.7**	**-0.4**
	baz=246								
HWA	**Hwalien**	**0.33**	**226**	*eP*			**Pb**	**07 48 57.6**	**0.0**
	baz=234								
ETLH	**Xiulin Townshi**	**0.35**	**270**	*eP*			**Pg**	**07 48 56.5**	**-0.8**
	baz=268								
ETLH				S			**Sg**	**07 49 01.6**	**-0.6**
	baz=268								
ESAO	**Su ao**	**0.36**	**357**	⇓*iP*			**Pg**	**07 48 56.8**	**-0.7**
	baz=351								
ESAO				*i* S			**Sg**	**07 49 02.0**	**-0.6**
	baz=351								
EOS2	**EOS2**	**0.39**	**58⇓**	*eP*			**Pb**	**07 48 59.1**	**+0.5**
	baz=52								
TWC	**Suao**	**0.40**	**358**	⇓*iP*			**Pg**	**07 48 57.4**	**-0.6**
TWC				*eS*			**Sg**	**07 49 02.7**	**-0.8**
EOS3	**EOS3**	**0.42**	**79⇓**	*eP*			**Pb**	**07 48 59.7**	**+0.7**
	baz=80								
ETM	**Tongmen**	**0.42**	**235**	P			**Pg**	**07 48 58.1**	**-0.3**
	baz=238								
EOS4	**EOS4**	**0.42**	**102**	*eP*			**Pb**	**07 48 59.1**	**+0.2**
	baz=93								
NDS	**Dongshan**	**0.44**	**342**	⇓*iP*			**Pg**	**07 48 58.4**	**-0.5**
	baz=342								
NDS				S			**Sg**	**07 49 04.3**	**-0.7**
	baz=342								
LATG	**Datong**	**0.45**	**316**	⇓*iP*			**Pg**	**07 48 58.3**	**-0.7**
	baz=316								
LATG				*eS*			**Sg**	**07 49 03.5**	**-1.7**
	baz=316								
LXIB	**Xiulin Townshi**	**0.46**	**246**	P			**Pg**	**07 48 58.5**	**-0.6**
	baz=257								
LXIB				*i* S			**Sb**	**07 49 05.9**	**-0.5**
	baz=257								
NNSB	**Datong**	**0.49**	**296**	⇓P			**Pg**	**07 48 59.0**	**-0.8**
	baz=296								
NNSB				*eS*			**Sg**	**07 49 04.5**	**-2.0**
	baz=296								
NNSH	**Datong**	**0.49**	**296**	*eP*			**Pg**	**07 48 59.2**	**-0.7**
	baz=296								
NNSH				*eS*			**Sg**	**07 49 04.8**	**-1.7**
	baz=296								
SHUL	**Shoufeng**	**0.50**	**214**	⇓P			**Pb**	**07 49 00.8**	**+0.2**
	baz=215								
SHUL				*eS*			**Sb**	**07 49 09.1**	**+1.4**
	baz=215								
NNS	**Nan Shan**	**0.51**	**297**	*eP*			**Pg**	**07 48 59.4**	**-0.7**
	baz=297								
NNS				S			**Sg**	**07 49 05.2**	**-1.7**
	baz=297								
NDT	**Datong Townshi**	**0.51**	**321**	⇓*iP*			**Pg**	**07 48 59.5**	**-0.5**
	baz=320								
NDT				S			**Sg**	**07 49 06.2**	**-0.7**
	baz=320								
ENTT	**Nioudou**	**0.51**	**327**	⇓*iP*			**Pg**	**07 48 59.5**	**-0.6**
	baz=327								
ENTT				S			**Sg**	**07 49 05.8**	**-1.2**
	baz=327								
TWE	**Neicheng**	**0.54**	**340**	⇓*iP*			**Pg**	**07 49 00.2**	**-0.5**
	baz=341								
TWE				*i* S			**Sg**	**07 49 07.2**	**-0.7**
	baz=341								
WHF	**Hehuan Shan**	**0.55**	**263**	P			**Pg**	**07 49 00.5**	**-0.6**
	baz=264								
WHF				*eS*			**Sg**	**07 49 08.3**	**-0.3**
	baz=264								
ESL	**Shilin**	**0.56**	**225**	P			**Pg**	**07 49 00.9**	**-0.1**
	baz=234								
ESL				*i* S			**Sb**	**07 49 09.1**	**-0.1**
	baz=234								
ILA	**Ilan**	**0.56**	**349**	P			**Pg**	**07 49 00.7**	**-0.5**
	baz=343								
ILA				S			**Sb**	**07 49 08.9**	**-0.5**
	baz=343								
FUSS	**Fushou**	**0.57**	**274**	*eP*			**Pg**	**07 49 00.8**	**-0.6**
	baz=274								
TEGC	**Jichi Village**	**0.58**	**211**	*eP*			**Pb**	**07 49 01.7**	**-0.2**
	baz=210								
TEGC				*eS*			**Sb**	**07 49 11.8**	**+1.9**
	baz=210								
FUSB	**Fushanzhiwuyua**	**0.60**	**335**	⇓*iP*			**Pb**	**07 49 01.5**	**-0.8**
	baz=325								
FUSB				*i* S			**Sg**	**07 49 09.0**	**-1.0**
	baz=325								
TWT	**Tachien**	**0.63**	**274**	*eP*			**Pb**	**07 49 02.3**	**-0.6**
	baz=273								
TWT				*eS*			**Sg**	**07 49 10.7**	**-0.2**
	baz=273								
YHNB	**Yeheng**	**0.64**	**316**	Pg			**Pg**	**07 49 01.9**	**-0.7**
YHNB	**Yeheng**	**0.64**	**316**	P			Pb	07 49 02.3	0.0
YHNB	**Yeheng**	**0.64**	**316**	⇓*iP*			**Pg**	**07 49 02.1**	**-0.5**
	baz=315								
YHNB				S			**Sg**	**07 49

EGFH	**Guangfu**	**0.67**	**217**	⇓	*e*P	**Pg**	**07 49 02.9**	**-0.3**
	baz=226							
OWD	**Renai**	**0.68**	**248**		*e*P	**Pg**	**07 49 03.0**	**-0.4**
	baz=249							
OWD					*e*S	**Sg**	**07 49 12.2**	**-0.2**
	baz=249							
WUSB	**Renai**	**0.72**	**253**	⇓	P	**Pg**	**07 49 03.7**	**-0.4**
	baz=253							
WUSB					*i* S	**Sg**	**07 49 13.4**	**-0.2**
	baz=253							
TIPB	**Shuangxi**	**0.76**	**357**	⇓	*i*P	**Pb**	**07 49 04.3**	**-0.6**
	baz=4.0							
NFF	**Wufeng Townshi**	**0.80**	**302**	⇑	*i*P	**Pb**	**07 49 05.2**	**-0.4**
	baz=301							
NFF					S	**Sg**	**07 49 15.6**	**-0.6**
	baz=301							
TWB1	**Santiao Chiao**	**0.80**	**8**	⇓	*i*P	**Pg**	**07 49 05.0**	**-0.6**
	baz=360							
VWDT	**VWDT**	**0.80**	**236**	⇓	*i*P	**Pb**	**07 49 05.6**	**0.0**
	baz=245							
VWDT					S	**Sb**	**07 49 16.3**	**0.0**
	baz=245							
TWA	**Mucha**	**0.81**	**341**	⇓	*e*P	**Pb**	**07 49 05.5**	**-0.3**
	baz=340							
NHDH	**Xindian Distri**	**0.81**	**338**		*e*P	**Pb**	**07 49 05.5**	**-0.2**
	baz=329							
HGSD	**Ruisui**	**0.82**	**210**	⇓	*i*P	**Pb**	**07 49 06.0**	**0.0**
	baz=200							
TATO	**Taipei**	**0.84**	**336**			**Pb**	**07 49 06.1**	**-0.1**
TATO	**Taipei**	**0.84**	**336**		P	**Pb**	**07 49 06.2**	**-0.1**
TATO	**Taipei**	**0.84**	**336**	⇑	P	**Pb**	**07 49 05.9**	**-0.3**
	baz=335							
TATO					*e*S	**Sg**	**07 49 15.1**	**-2.2**
	baz=335							
WHP	**Taichung City**	**0.84**	**275**	⇑	*i*P	**Pb**	**07 49 06.1**	**-0.3**
	baz=275							
WHP					S	**Sb**	**07 49 17.2**	**-0.3**
	baz=275							
WPL	**Puli Township**	**0.85**	**257**		P	**Pb**	**07 49 06.3**	**-0.2**
	baz=258							
WPL					S	**Sg**	**07 49 17.2**	**-0.7**
	baz=258							
EHY	**Hungye**	**0.86**	**216**	⇓	*e*P	**Pg**	**07 49 05.3**	**-1.4**
	baz=229							
NWF	**Wu-fen Shan**	**0.86**	**355**	⇓	P	**Pb**	**07 49 06.5**	**-0.2**
	baz=346							
WFSB	**Wu-fen Shan**	**0.86**	**355**	⇓	*i*P	**Pb**	**07 49 06.5**	**-0.1**
	baz=346							
WFSB					*e*S	**Sb**	**07 49 17.5**	**-0.4**
	baz=346							
NHY	**Taipei**	**0.87**	**342**		*e*P	**Pb**	**07 49 06.8**	**0.0**
	baz=340							
DPDB	**Guoxing**	**0.88**	**259**		P	**Pb**	**07 49 06.8**	**-0.1**
	baz=260							
DPDB					S	**Sb**	**07 49 18.4**	**-0.1**
	baz=260							
SXI1	**Grass Mountain**	**0.88**	**1**	⇓	P	**Pb**	**07 49 06.9**	**-0.2**
	baz=6.0							
SXI1					*e*S	**Sb**	**07 49 18.7**	**+0.1**
	baz=6.0							
NJD	**Zhudong**	**0.88**	**307**		*e*P	**Pb**	**07 49 07.1**	**+0.1**
	baz=313							
WCS	**Beigang Elemen**	**0.89**	**260**		*e*P	**Pb**	**07 49 06.9**	**-0.2**
	baz=261							
WCS					*e*S	**Sg**	**07 49 18.4**	**-0.5**
	baz=261							
LIOB	**Emei**	**0.89**	**299**	⇑	*i*P	**Pb**	**07 49 07.1**	**0.0**
	baz=299							
LIOB					*e*S	**Sb**	**07 49 19.0**	**+0.2**
	baz=299							
TAP	**Taipei**	**0.89**	**338**		*e*P	**Pn**	**07 49 07.4**	**-0.5**
	baz=338							
TAP					*e*S	**Sg**	**07 49 17.9**	**-1.0**
	baz=338							
NSTT	**Nanjuang**	**0.89**	**298**	⇑	*i*P	**Pb**	**07 49 07.1**	**-0.1**
	baz=298							
NSTT					S	**Sb**	**07 49 18.4**	**-0.5**
	baz=298							
SSLB	**Suanglung**	**0.94**	**243**		Pg	**Pg**	**07 49 07.4**	**-0.7**
SSLB	**Suanglung**	**0.94**	**243**		P	**Pg**	**07 49 07.7**	**-0.4**
SSLB	**Suanglung**	**0.94**	**243**	⇓	*i*P	**Pg**	**07 49 07.5**	**-0.6**
	baz=253							
SSLB					*e*S	**Sg**	**07 49 19.2**	**-1.2**
	baz=253							
TNOU	**National Taiwa**	**0.94**	**355**	⇓	P	**Pb**	**07 49 07.9**	**0.0**
	baz=353							
NTY	**Taoyuan**	**0.94**	**327**		*e*P	**Pn**	**07 49 08.8**	**+0.1**
	baz=326							
SMLT	**Sun Moon Lake**	**0.94**	**250**	⇓	*i*P	**Pb**	**07 49 08.0**	**-0.1**
	baz=251							
SMLT					S	**Sb**	**07 49 20.5**	**+0.1**
	baz=251							
HSN1	**Hsinchu**	**0.96**	**306**		*e*P	**Pn**	**07 49 09.2**	**+0.3**
	baz=295							
YULB	**Yu-li**	**0.97**	**213**			**Pg**	**07 49 07.0**	**-1.8**
YULB	**Yu-li**	**0.97**	**213**		P	**Pg**	**07 49 08.0**	**-0.7**
YULB	**Yu-li**	**0.97**	**213**	⇓	*e*P	**Pg**	**07 49 06.9**	**-1.8**
	baz=227							
YULB					S	**Sn**	**07 49 22.4**	**0.0**
	baz=227							
ECBN	**Changbin**	**0.97**	**203**		*e*P	**Pg**	**07 49 08.0**	**-0.8**
	baz=195							
YM01	**YM01**	**0.97**	**344**	⇓	*e*P	**Pb**	**07 49 08.5**	**-0.1**
	baz=342							
YM01					*e*S	**Sb**	**07 49 21.0**	**-0.2**
	baz=342							
TYC	**Yuchr**	**0.97**	**252**	⇓	P	**Pg**	**07 49 08.1**	**-0.7**
	baz=253							
TYC					*e*S	**Sg**	**07 49 21.0**	**-0.6**
	baz=253							
NCUH	**Zhongli**	**0.98**	**321**		*e*P	**Pn**	**07 49 09.5**	**+0.3**
	baz=313							
NCUH					*e*S	**Sn**	**07 49 23.9**	**+1.2**
	baz=313							
TWS1	**Kuangyinshan**	**0.98**	**335**		*e*P	**Pn**	**07 49 09.1**	**-0.1**
	baz=334							
TWS1					*e*S	**Sb**	**07 49 21.3**	**0.0**
	baz=334							
NCU	**National Centr**	**0.98**	**321**		*e*P	**Pn**	**07 49 09.1**	**-0.1**
	baz=314							
NCU					*e*S	**Sn**	**07 49 23.5**	**+0.8**
	baz=314							
SBCB	**Hsinchu**	**0.99**	**306**	⇑	*e*P	**Pn**	**07 49 09.6**	**+0.3**
	baz=306							
SBCB					S	**Sb**	**07 49 22.2**	**+0.5**
	baz=306							
EYUL	**Yuli**	**0.99**	**210**		*e*P	**Pg**	**07 49 08.3**	**-1.0**
	baz=222							
TWF1	**Yuli**	**1.00**	**212**		*e*P	**Pg**	**07 49 07.7**	**-1.7**
	baz=223							
NWRT	**Kuosheng**	**1.01**	**349**		*e*P	**Pb**	**07 49 08.8**	**-0.3**
	baz=335							
YM08	**YM08**	**1.01**	**346**	⇑	*e*P	**Pb**	**07 49 09.1**	**-0.1**
	baz=327							
HSN	**Hsinchu**	**1.01**	**306**	⇑	*e*P	**Pn**	**07 49 09.4**	**-0.2**
	baz=308							
TWQ1	**Liyutan**	**1.01**	**278**	⇑	*e*P	**Pn**	**07 49 09.6**	**0.0**
	baz=278							
JYNG	**Yonagunijimaku**	**1.01**	**76**		P	**Pn**	**07 49 10.0**	**+0.4**
JYNG					S	**Sn**	**07 49 24.9**	**+1.3**
JYNG	**Yonagunijimaku**	**1.01**	**76**		A	A	07 49 10.0	
	comp=E,12nm,2.9s,comp=N,18nm,2.0s							
ANP	**Anpu**	**1.02**	**342**		*e*P	**Pn**	**07 49 09.5**	**-0.4**
	baz=340							
NTST	**Danshui**	**1.02**	**338**		*e*P	**Pn**	**07 49 09.7**	**0.0**
	baz=336							
NSY	**Sanyi**	**1.03**	**282**	⇑	*e*P	**Pn**	**07 49 10.3**	**+0.4**
	baz=282							
NMLH	**Miaoli**	**1.03**	**289**		*e*P	**Pn**	**07 49 10.7**	**+0.7**
	baz=288							
WHYT	**Xinyi Township**	**1.06**	**241**	⇓	P	**Pb**	**07 49 10.0**	**0.0**
	baz=251							
WHYT					*e*S	**Sn**	**07 49 25.2**	**+0.4**
	baz=251							
YOJ	**Yonaguni jima**	**1.07**	**76**			**Pn**	**07 49 10.9**	**+0.5**
YOJ	**Yonaguni jima**	**1.07**	**76**		P	**Pn**	**07 49 11.2**	**+0.7**
YOJ	**Yonaguni jima**	**1.07**	**76**	⇓	P	**Pn**	**07 49 10.6**	**+0.2**
	baz=61							
YOJ					S	**Sn**	**07 49 26.9**	**+1.9**
	baz=61							
YOJ	**Yonaguni jima**	**1.07**	**76**		P	**Pn**	**07 49 11.0**	**+0.6**
YOJ					S	**Sn**	**07 49 25.8**	**+0.8**
YOJ	**Yonaguni jima**	**1.07**	**76**		A	A	07 49 11.0	
	comp=E,13nm,3.0s,comp=N,13nm,2.1s							
WWF	**Wufeng**	**1.08**	**261**		*e*P	**Pn**	**07 49 11.6**	**+1.0**
	baz=257							
NHW	**Xinwu Township**	**1.09**	**317**	⇓	P	**Pn**	**07 49 11.2**	**+0.6**
	baz=316							
NHW					S	**Sn**	**07 49 25.2**	**-0.3**
	baz=316							
TCU	**Taichung**	**1.09**	**267**	⇓	*e*P	**Pn**	**07 49 12.2**	**+1.5**
	baz=268							
TCU					*e*S	**Sn**	**07 49 28.0**	**+2.6**
	baz=268							
TWY	**Chenhua**	**1.09**	**347**	⇓	*e*P	**Pn**	**07 49 11.1**	**+0.4**
	baz=329							
CHKH	**Chenggong**	**1.10**	**203**		*e*P	**Pb**	**07 49 09.9**	**-0.8**
	baz=192							
WJS	**Zhushan**	**1.11**	**250**	⇓	*e*P	**Pn**	**07 49 11.6**	**+0.6**
	baz=247							
WJS					*e*S	**Sn**	**07 49 27.1**	**+1.1**
	baz=247							
WNT1	**Nantou City**	**1.13**	**255**		*e*P	**Pn**	**07 49 12.1**	**+0.9**
	baz=253							
WNT1					*e*S	**Sn**	**07 49 27.9**	**+1.6**
	baz=253							
WDJ	**Dajia District**	**1.13**	**277**		*e*P	**Pn**	**07 49 12.3**	**+1.1**
	baz=278							
WNT	**Mingjian**	**1.13**	**253**	⇓	*e*P	**Pn**	**07 49 12.2**	**+0.9**
	baz=251							
WNT					*e*S	**Sn**	**07 49 28.2**	**+1.7**
	baz=251							
FULB	**Fuli**	**1.14**	**208**		*e*P	**Pb**	**07 49 10.2**	**-1.2**
	baz=227							
ALS	**Alishan**	**1.20**	**235**	⇓	*i*P	**Pb**	**07 49 12.3**	**-0.2**
	baz=228							
ALS					*e*S	**Sg**	**07 49 28.6**	**-0.1**
	baz=228							
CHKT	**Chengkung**	**1.20**	**203**		*e*P	**Pn**	**07 49 11.1**	**-1.1**
	baz=189							
WCHH	**Zhanghua**	**1.20**	**264**		*e*P	**Pg**	**07 49 13.4**	**+0.2**
	baz=265							
WYL	**Yuanlin Townsh**	**1.20**	**258**		*e*P	**Pg**	**07 49 13.2**	**+0.1**
	baz=260							
EHD	**Haiduan**	**1.22**	**210**		*e*P	**Pn**	**07 49 11.0**	**-1.4**
	baz=214							
ECS	**Chishang**	**1.26**	**208**		*e*P	**Pn**	**07 49 11.5**	**-1.5**
	baz=213							
ELDTW	**Lidau**	**1.28**	**218**		*e*P	**Pn**	**07 49 12.1**	**-1.3**
	baz=207							
WGK	**Gukeng**	**1.30**	**247**		*e*P	**Pb**	**07 49 14.0**	**-0.2**
	baz=250							
WDLH	**Douliu**	**1.32**	**247**		*e*P	**Pn**	**07 49 13.8**	**0.0**
	baz=250							
WCKO	**Fanlu**	**1.39**	**237**	⇓	*e*P	**Pb**	**07 49 15.3**	**-0.3**
	baz=241							
WRL	**Guolierlin Hig**	**1.40**	**258**		*e*P	**Pb**	**07 49 15.7**	**-0.1**
	baz=260							
RLNB	**Erlin**	**1.41**	**257**		*e*P	**Pg**	**07 49 16.4**	**-0.8**
	baz=260							
PCYT	**Pengchaiyu**	**1.43**	**7**		*e*P	**Pb**	**07 49 15.9**	**-0.4**
	baz=3.0							
STYH	**Taoyuan**	**1.44**	**224**	⇓	*e*P	**Pn**	**07 49 15.4**	**0.0**
	baz=213							
CHN2	**Minshiung**	**1.44**	**242**		*e*P	**Pn**	**07 49 16.9**	**+0.4**
	baz=246							
CHN4	**Tsaushan**	**1.45**	**234**	⇓	P	**Pb**	**07 49 16.6**	**0.0**
	baz=239							
CHN4					*e*S	**Sg**	**07 49 37.6**	**+0.9**
	baz=239							
WTK	**Tuku**	**1.45**	**249**		*e*P	**Pb**	**07 49 16.8**	**+0.2**
	baz=239							
TPUB	**Ta-pu**	**1.45**	**232**			**Pb**	**07 49 16.8**	**0.0**
TPUB	**Ta-pu**	**1.45**	**232**		P	**Pb**	**07 49 17.0**	**+0.3**
TPUB	**Ta-pu**	**1.45**	**232**	⇓	*i*P	**Pb**	**07 49 16.4**	**-0.3**
	baz=236							
TPUB					*e*S	**Sb**	**07 49 35.6**	**+0.7**
	baz=236							
STYT	**Tauyuan**	**1.46**	**225**	⇓	*i*P	**Pn**	**07 49 16.0**	**+0.2**
	baz=229							
STYT					*e*S	**Sg**	**07 49 36.3**	**-0.7**
	baz=229							
LONT	**Longtian**	**1.46**	**208**		*e*P	**Pn**	**07 49 14.4**	**-1.5**
	baz=212							
WTCT	**Ta-ch'eng**	**1.49**	**257**		*e*P	**Pn**	**07 49 16.6**	**+0.4**
	baz=260							
WTCT					*e*S	**Sg**	**07 49 37.8**	**-0.3**
	baz=260							
WTP	**Ta-pu**	**1.50**	**230**	⇓	*i*P	**Pb**	**07 49 17.2**	**-0.3**
	baz=235							
WTP					*e*S	**Sg**	**07 49 38.0**	**-0.3**
	baz=235							
CHY	**Chiayi**	**1.50**	**242**		*e*P	**Pg**	**07 49 18.0**	**-0.9**
	baz=246							
TWG	**Pinlang**	**1.56**	**208**			**Pn**	**07 49 15.4**	**-1.8**
TWG	**Pinlang**	**1.56**	**208**	⇓	*e*P	**Pn**	**07 49 15.4**	**-1.8**
	baz=213							
TWGBT	**Beinan**	**1.56**	**208**		P	**Pn**	**07 49 15.8**	**-1.4**
TWGBT	**Beinan**	**1.56**	**208**	⇓	*e*P	**Pn**	**07 49 15.3**	**-1.9**
	baz=213							
LDUT	**Ludao**	**1.57**	**194**		*e*P	**Pn**	**07 49 15.7**	**-1.6**
	baz=186							
TWK	**Hsinying**	**1.57**	**234**		*e*P	**Pb**	**07 49 18.3**	**-0.5**
	baz=238							
TTN	**Taitung**	**1.59**	**205**		*e*P	**Pn**	**07 49 18.3**	**+0.7**
	baz=209							
CHN1	**Nanshi**	**1.60**	**231**		*e*P	**Pn**	**07 49 18.4**	**+0.7**
	baz=235							
SNST	**Tainan City**	**1.60**	**232**		*e*P	**Pb**	**07 49 18.8**	**-0.4**
	baz=237							
WSF	**Szhu**	**1.61**	**250**		*e*P	**Pb**	**07 49 19.3**	**-0.1**
	baz=253							
SGST	**Jiashian**	**1.63**	**227**	⇓	P	**Pn**	**07 49 18.5**	**+0.4**
	baz=216							
SLGT	**Liugui**	**1.65**	**223**		*e*P	**Pb**	**07 49 19.5**	**-0.6**
	baz=228							
SLGT					*e*S	**Sb**	**07 49 41.8**	**+1.1**
	baz=228							
WSL	**Shuilin Townsh**	**1.65**	**246**		*e*P	**Pb**	**07 49 20.1**	**0.0**
	baz=250							
ICHU	**Yijhu**	**1.68**	**240**		*e*P	**Pb**	**07 49 20.5**	**-0.1**
	baz=244							
CHN8	**Yiju**	**1.74**	**241**		P	**Pb**	**07 49 20.9**	**-0.8**
	baz=245							
CHN8					*e*S	**Sb**	**07 49 44.5**	**+1.1**
	baz=245							
HATJ	**Hateruma jima**	**1.78**	**95**		P	**Pb**	**07 49 22.0**	**-0.3**
HATJ					*e*S	**Sb**	**07 49 45.6**	**+1.3**
HATJ	**Hateruma jima**	**1.78**	**95**		A	A	07 49 22.0	
	comp=E,12nm,3.4s,comp=N,13nm,2.7s							
CHN3	**Shinhua**	**1.78**	**231**		*e*P	**Pb**	**07 49 21.9**	**-0.4**
	baz=235							
ECL	**Taimali**	**1.81**	**208**		*e*P	**Pn**	**07 49 21.7**	**+1.1**
	baz=213							
SCST	**Cishan**	**1.82**	**224**		*e*P	**Pb**	**07 49 22.6**	**-0.4**
	baz=229							
SHHT	**Tainan City**	**1.83**	**230**		*e*P	**Pb**	**07 49 22.9**	**-0.2**
	baz=235							
SSD	**Sandimen**	**1.85**	**218**		*e*P	**Pn**	**07 49 21.8**	**+0.7**
	baz=222							
SSD					*e*S	**Sb**	**07 49 46.1**	**-0.2**
	baz=222							
SCLT	**Jiali**	**1.85**	**236**		*e*P	**Pn**	**07 49 21.5**	**+0.4**
	baz=241							
TSMG	**Majia**	**1.87**	**217**		*e*P	**Pb**	**07 49 23.1**	**-0.8**
	baz=222							
TWM1	**Shoushan**	**1.91**	**224**		*e*P	**Pb**	**07 49 24.3**	**-0.3**
	baz=229							
SGLT	**Jiouru**	**1.94**	**221**		*e*P	**Pb**	**07 49 24.7**	**-0.4**
	baz=211							
TSCK	**Chigu Township**	**1.94**	**237**		*e*P	**Pn**	**07 49 23.8**	**+1.3**
	baz=242							
MASBT	**Mashibuluo**	**1.95**	**216**		*e*P	**Pn**	**07 49 23.6**	**+1.0**
	baz=220							
MASBT					*e*S	**Sb**	**07 49 49.8**	**+0.4**
	baz=220							
JKRS	**Kuro-shima**	**1.96**	**89**		P	**Pn**	**07 49 24.1**	**+1.5**
JKRS					*e*S	**Sn**	**07 49 48.0**	**+1.1**
SNJT	**Kaohsiung City**	**2.02**	**224**		*e*P	**Pb**	**07 49 25.4**	**-1.0**
	baz=229							
EAST	**Anshuo**	**2.04**	**207**		*e*P	**Pn**	**07 49 23.9**	**0.0**
	baz=200							
TAW	**Tawu**	**2.05**	**206**		*e*P	**Pb**	**07 49 26.9**	**0.0**
	baz=212							
TAWH	**Dawu Township**	**2.07**	**206**		*e*P	**Pn**	**07 49 24.8**	**+0.6**
	baz=212							
JIJ	**Ishigaki jima**	**2.08**	**85**		P	**Pn**	**07 49 25.4**	**+1.0**
JIJ					*e*S	**Sb**	**07 49 52.2**	**-1.0**
SCZT	**Fangliau**	**2.16**	**212**		*e*P	**Pn**	**07 49 27.1**	**+1.7**
	baz=218							
LAY	**Lan-yu**	**2.18**	**188**		*e*P	**Pn**	**07 49 23.7**	**-2.0**
	baz=194							
PNG	**Penghu**	**2.21**	**254**		*e*P	**Pn**	**07 49 26.6**	**+0.5**
	baz=258							
PNG					*e*S	**Sn**	**07 49 53.9**	**+0.8**
	baz=258							
PHUB	**P'eng-hu**	**2.21**	**252**		*e*P	**Pn**	**07 49 26.3**	**+0.2**
	baz=257							
PHUB					*e*S	**Sn**	**07 49 53.4**	**+0.2**
	baz=257							
LYUB	**Lan-yu**	**2.21**	**187**		*e*P	**Pn**	**07 49 23.7**	**-2.4**
	baz=193							
SLIU	**Shizi**	**2.21**	**207**		*e*P	**Pn**	**07 49 27.4**	**+1.2**
	baz=201							
WDGT	**Dungji**	**2.23**	**245**	⇓	*i*P	**Pn**	**07 49 27.3**	**+0.9**
	baz=250							
WDGT					*e*S	**Sn**	**07 49 55.6**	**+1.9**
	baz=250							
JISG	**Ishigakijimahi**	**2.26**	**80**		P	**Pn**	**07 49 28.2**	**+1.4**
JISG					S	**Sn**	**07 49 56.8**	**+2.4**
VWUC	**VWUC**	**2.33**	**290**		*e*P	**Pn**	**07 49 27.5**	**-0.3**
	baz=290							
VCHM	**Qimei**	**2.45**	**246**		P	**Pn**	**07 49 30.3**	**+0.9**
	baz=236							
VCHM					*e*S	**Sn**	**07 50 00.2**	**+1.3**
	baz=236							
TWKBT	**Hengchun**	**2.46**	**203**		*e*P	**Pn**	**07 49 31.3**	**+1.8**
	baz=198							
TWK1	**Hengchun**	**2.46**	**204**		*e*P	**Pn**	**07 49 31.1**	**+1.5**
	baz=198							
TSEB	**Hengchuen, Pin**	**2.46**	**201**		*e*P	**Pn**	**07 49 29.2**	**-0.4**
	baz=209							
MATB	**Ma-tsu**	**2.60**	**318**		*e*P	**Pn**	**07 49 31.8**	**+0.3**
	baz=316							
JTJ	**Tarama**	**2.62**	**80**		P	**Pn**	**07 49 33.9**	**+2.2**
JTJ					*e*S	**Sb**	**07 50 06.8**	**-1.8**
PTMZ	**Houxiangcun**	**2.63**	**289**		*e*P	**Pn**	**07 49 31.8**	**-0.1**
	baz=289							
LYJJ	**Jianjiangzhen**	**3.01**	**321**		*e*P	**Pn**	**07 49 37.1**	**0.0**
	baz=319							
QZH	**Quanzhou**	**3.07**	**284**		Pn	**Pn**	**07 49 37.6**	**-0.3**
QZH					Sn	**Sn**	**07 50 13.0**	**-1.4**
QZH					smax	smax		
	comp=N,670nm,0.6s							
QZH					smax	smax		
	comp=N,480nm,0.8s							
QZH					LR	LR		
	comp=N,1μm,7.4s							
QZH					LR	LR		
	comp=N,2μm,7.6s							
QZH					LR	LR		
	comp=N,2μm,9.7s							
XPSS	**Dashiqiu**	**3.10**	**331**		*e*P	**Pn**	**07 49 37.8**	**-0.6**
	baz=326							
KNM	**Kinmen**	**3.14**	**274**	⇓	*e*P	**Pn**	**07 49 40.5**	**+1.6**
	baz=277							
JMJ	**Miyako jima 2**	**3.18**	**78**		P	Pn	07 49 41.7	0.0
KNMB	**Chin-men Tao**	**3.18**	**275**		Pn	**Pn**	**07 49 39.0**	**-0.4**
KNMB	**Chin-men Tao**	**3.18**	**275**	⇓	*e*P	**Pn**	**07 49 39.5**	**0.0**
	baz=278							
MHZQ	**Yeshan**	**3.19**	**307**		*e*P	**Pn**	**07 49 39.3**	**-0.2**
	baz=305							
AXDP	**Jialang**	**3.61**	**282**	⇑	*e*P	**Pn**	**07 49 45.5**	**+0.1**
	baz=283							
ZPLA	**Ao Xicun**	**3.77**	**267**		*e*P	**Pn**	**07 49 47.7**	**+0.1**
	baz=270							
DSXP	**Dongshan**	**4.09**	**264**		*e*P	**Pn**	**07 49 52.2**	**+0.2**
	baz=268							
SXFK	**Yanhouchang**	**4.40**	**301**		*e*P	**Pn**	**07 49 56.1**	**-0.1**
	baz=300							
VDOS	**Pratas Island**	**5.89**	**235**		*e*P	**Pn**	**07 50 18.7**	**+1.9**
	baz=241							
JOW	**Kunigami**	**6.35**	**64**		Pn	**Pn**	**07 50 23.1**	**0.0**
JOW	**Kunigami**	**6.35**	**64**		Pn	**Pn**	**07 50 20.3**	**-2.7**
	comp=N,2.6nm,0.3s,baz=263,slow=30,SNR=2.3							
SSE	**Sheshan**	**6.89**	**355**		Pn	**Pn**	**07 50 30.3**	**-0.1**
SSE					Sn	**Sn**	**07 51 49.1**	**+0.7**
SSE					smax	smax		
	comp=N,31nm,1.1s							
SSE					smax	smax		
	comp=N,54nm,0.7s							
HKPS	**Hong Kong Po S**	**7.36**	**256**		Pn	**Pn**	**07 50 36.0**	**-1.0**
GZH	**Guangzhou**	**7.89**	**264**		Pn	Pn	07 50 39.2	-5.0
GZH					Sn	**Sn**	**07 52 06.1**	**-7.2**
GZH					smax	smax		
	comp=N,170nm,0.9s							
GZH					smax	smax		
	comp=N,100nm,1.3s							
WHN	**Wuhan**	**9.19**	**315**		*e*P	**Pn**	**07 51 00.9**	**-1.0**
WHN					S	**Sn**	**07 52 42.2**	**-2.9**
WHN					LR	LR		
	comp=N,3μm,10.7s							
WHN					LR	LR		
	comp=N,3μm,7.9s							
WHN					LR	LR		
	comp=N,4μm,9.3s							
JNU	**Nakatsue**	**11.89**	**40**		Pn	**Pn**	**07 51 37.6**	**-1.3**
	comp=N,0.1nm,0.3s,baz=88,slow=21,SNR=5.3							
JNU					LR	LR	07 56 45.4	
	comp=N,273nm,18.3s,baz=202,slow=41							
QIZ	**Qiongzhong**	**12.31**	**248**		P	**Pn**	**07 51 44.4**	**-0.4**
QIZ					S	**Sn**	**07 54 04.0**	**+2.2**
QIZ					LR	LR		
	comp=N,370nm,13.4s							
QIZ					LR	LR		
	comp=N,180nm,11.5s							
QIZ					LR	LR		
	comp=N,250nm,11.7s							
LYN	**LuoYang**	**13.16**	**324**	⇓	P	Pn	07 51 50.9	-5.4
LYN					PP	**P**	**07 52 08.2**	**+1.9**
LYN					S	**Sn**	**07 54 20.2**	**-2.1**
LYN					SS	**S**	**07 54 50.7**	**+3.5**
LYN					pmax	pmax		
	comp=Z,13nm,0.4s							
LYN					pmax	pmax		
	comp=Z,170nm,3.9s							
LYN					LR	LR		
	comp=N,1μm,10.2s							
LYN					LR	LR		
	comp=E,570nm,11.3s							
LYN					LR	LR		
	comp=Z,2μm,10.5s							
KSRS	**Korea Array**	**14.18**	**20**		Pn	**Pn**	**07 52 09.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=198,slow=12,SNR=2.4							
KSRS					LR	LR	07 58 29.5	
	comp=Z,137nm,18.6s,baz=210,slow=42							
XAN	**Xi'an**	**14.95**	**314**		P	**Pn**	**07 52 21.8**	**+1.0**
XAN					S	**

BTO LR LR
comp=Z,540nm,11.9s
BTO LR LR
comp=Z,1μm,13.1s
LZH Lanzhou 19.53 311 *e*P **Pn** **07 53 24.2 +5.8**
LZH sP sP 07 53 32.2 +9.1
LZH pmax pmax
comp=Z,22nm,1.2s
LZH LR LR
comp=Z,420nm,10.3s
LZH LR LR
comp=Z,450nm,12.4s
LZH LR LR
comp=Z,640nm,11.3s
JSD Sado 19.63 42 P **P** **07 53 17.2 -0.8**
CN2 Changchun 19.76 8 P **Pn** **07 53 22.9 +2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,500nm,15.0s
CN2 LR LR
comp=Z,600nm,14.0s
XLT XiLinHaoTe 20.21 348 *e*P Pn 07 53 25.5 -0.7
XLT pP pwP 07 53 30.6 -1.0
XLT pmax pmax
comp=Z,6.0nm,1.3s
XLT pmax pmax
comp=Z,83nm,3.7s
XLT LR LR
comp=Z,31nm,12.2s
XLT LR LR
comp=Z,300nm,16.7s
XLT LR LR
comp=Z,420nm,15.5s
JMM Marumori 21.12 45 P **P** **07 53 33.8 -0.4**
JMM IAmb IAmb 07 53 53.1
comp=Z,35nm,1.3s
TNCH TengChong 21.24 277 P **P** **07 53 37.1 +1.4**
TNCH S **S** **07 57 26.9 -4.7**
TNCH pmax pmax
comp=Z,120nm,5.5s
TNCH LR LR
comp=Z,680nm,12.3s
TNCH LR LR
comp=Z,200nm,6.8s
TNCH LR LR
comp=Z,300nm,9.9s
USRK Ussuriysk Ar. 21.59 20 P **P** **07 53 39.5 +0.3**
comp=Z,1.1nm,0.7s,baz=147,slow=25,SNR=2.2
CMAR Chiang Mai Arr 22.09 259 P **P** **07 53 47.0 +2.2**
comp=Z,1.2nm,0.3s,baz=55,slow=12,SNR=7.4
CMAR LR LR 08 01 42.9
comp=Z,52nm,20.1s,baz=105,slow=35
comp=Z,1.2nm,0.3s
GTA Gaotai 24.01 314 P **P** **07 54 08.8 +4.5**
GTA pP sP 07 54 15.7 +4.9
GTA pmax pmax
comp=Z,4.0nm,1.5s
GTA LR LR
comp=Z,130nm,10.5s
GTA LR LR
comp=Z,400nm,11.6s
GTA LR LR
comp=Z,350nm,13.8s
ASAJ Asahikawa 26.11 35 LR LR 08 05 27.4
comp=Z,216nm,18.5s,baz=216,slow=39
KLR Kul'dur 26.15 15 LR LR 08 05 27.9
comp=Z,179nm,18.6s,baz=204,slow=39
ULN Ulaanbaatar 26.38 337 P **P** **07 54 25.4 -0.3**
SONM Songino Array 26.59 336 P **P** **07 54 27.7 0.0**
SONM Songino Array 26.59 336 P **P** **07 54 27.1 -0.6**
comp=Z,2.9nm,0.7s,baz=152,slow=9.6,SNR=5.8
SONM LR LR 08 06 01.1
comp=Z,226nm,18.6s,baz=328,slow=39
comp=Z,2.9nm,0.7s
WMQ Urumqi 34.09 313 *e*P **P** **07 55 34.3 +0.3**
WMQ pmax pmax
comp=Z,13nm,0.7s
MTN Manton Dam 37.92 165 P **P** **07 56 04.9 -2.0**
YAK Yakutsk 38.18 6 LR LR 08 13 42.4
comp=Z,148nm,18.3s,baz=126,slow=39
MK31 Makanchi Array 38.75 316 P **P** **07 56 13.4 -0.3**
MKAR Makanchi Array 38.75 316 P **P** **07 56 13.5 -0.2**
MKAR Makanchi Array 38.75 316 P **P** **07 56 13.9 +0.2**
comp=Z,1.5nm,0.5s,baz=102,slow=10,SNR=16
MKAR ScP **ScP** **08 02 16.4 +3.5**
comp=Z,0.4nm,0.7s,baz=108,slow=4.7,SNR=2.9
MKAR LR LR 08 13 45.2
comp=Z,106nm,18.2s,baz=37,slow=39
comp=Z,1.5nm,0.5s
MAKZ Makanchi 38.96 316 P **P** **07 56 14.8 -0.6**
MAKZ IAmb IAmb 07 56 25.6
comp=Z,7.1nm,0.8s
PETK Petropavlovsk- 39.50 34 LR LR 08 14 05.0
comp=Z,108nm,18.7s,baz=211,slow=39
ZAA0 Zalesovo Array 40.56 327 P **P** **07 56 28.9 +0.3**
ZALV Zalesovo Beam 40.56 327 P **P** **07 56 27.6 -1.1**
ZALV Zalesovo Beam 40.56 327 P **P** **07 56 27.1 -1.5**
comp=Z,2.5nm,0.6s,baz=110,slow=8.8,SNR=12
ZALV LR LR 08 13 36.2
comp=Z,51nm,20.6s,baz=79,slow=37
comp=Z,2.5nm,0.6s
NRN Naryn 41.68 306 P **P** **07 56 38.8 +0.4**
H11N1 WAKE ISLAND Hy 41.86 87 T T 08 42 02.7
baz=283,slow=74,SNR=4.7
H11N2 WAKE ISLAND Hy 41.86 87 T T 08 42 03.5
baz=283,slow=74,SNR=4.0
H11N3 WAKE ISLAND Hy 41.88 87 T T 08 42 06.7
baz=283,slow=74,SNR=5.4
H11S3 WAKE ISLAND Hy 41.99 89 T T 08 41 52.1
baz=284,slow=74,SNR=15
H11S1 WAKE ISLAND Hy 42.00 89 T T 08 41 52.7
baz=284,slow=74,SNR=6.9
H11S2 WAKE ISLAND Hy 42.01 89 T T 08 41 53.4
baz=284,slow=74,SNR=5.3
KURK Kurchatov 42.47 320 P **P** **07 56 44.1 -0.2**
KURBB Kurchatov Arra 42.49 320 P **P** **07 56 44.4 -0.1**
comp=Z,1.6nm,0.9s,baz=111,slow=7.3,SNR=13
comp=Z,1.6nm,0.9s
SEY Seymchan 43.74 20 LR LR 08 15 53.1
comp=Z,78nm,19.8s,baz=286,slow=37
WRA Warramunga Arr 45.54 163 P **P** **07 57 07.7 -1.6**
comp=Z,0.9nm,0.6s,baz=345,slow=8.7,SNR=8.6
comp=Z,0.9nm,0.6s
WB2 Warramunga Ar 45.54 163 P **P** **07 57 07.3 -2.0**
WB2 IAmb IAmb 07 57 48.5
comp=Z,14nm,1.5s
PSA00 Pilbara Seismi 45.55 183 P **P** **07 57 08.0 -1.3**
TIXI Tiksi 47.63 3 P **P** **07 57 23.0 -2.0**
TIXI IAmb IAmb 07 57 36.8
comp=Z,7.1nm,1.2s
TIXI Tiksi 47.63 3 LR LR 08 19 58.9
comp=Z,168nm,18.1s,baz=196,slow=39
BVAR Borovoye Array 48.05 321 P **P** **07 57 28.5 -0.1**
comp=Z,2.2nm,0.5s,baz=109,slow=8.6,SNR=16
comp=Z,2.2nm,0.5s
BRVK Borovoye 48.12 321 P **P** **07 57 28.7 -0.4**
BRVK IAmb IAmb 07 57 36.0
comp=Z,2.4nm,0.7s
SHEM Shemya Is, Ala 48.41 40 LR LR 08 19 27.5
comp=Z,26nm,19.1s,baz=147,slow=38
ASAR Alice Springs 49.00 165 P **P** **07 57 36.0 -0.2**
comp=Z,0.5nm,0.5s,baz=341,slow=7.6,SNR=8.0
comp=Z,0.5nm,0.5s
HMDM Hanimaadhoo 49.73 258 P **P** **07 57 40.7 -1.2**
CTA Charters Tower 50.03 150 LR LR 08 16 46.0
comp=Z,53nm,21.5s,baz=273,slow=34
ABKAR Akbulak array 53.87 314 P **P** **07 58 12.5 +0.1**
ABKAR IAmb IAmb 07 58 13.7
comp=Z,4.8nm,0.9s
GEYT Alibeck 55.32 300 P **P** **07 58 24.8 +1.5**
comp=Z,2.7nm,0.7s,baz=60,slow=3.5,SNR=6.1
comp=Z,2.7nm,0.7s
ARU Arti 55.46 323 P **P** **07 58 23.1 -0.8**
ARU IAmb IAmb 07 58 41.8
comp=Z,5.3nm,1.0s
STKA Stephens Creek 58.88 160 P **P** **07 58 47.3 -0.9**
comp=Z,1.5nm,0.8s,baz=294,slow=10.0,SNR=2.2
comp=Z,1.5nm,0.8s
KIRV Kirov 60.55 325 LR LR 08 28 50.6
comp=Z,94nm,20.6s,baz=23,slow=40
D19K Kuna River 64.06 24 P **P** **07 59 22.9 0.0**
TTA Tatalina 65.17 30 P **P** **07 59 30.7 +0.4**
TTA IAmb IAmb 07 59 30.8
comp=Z,7.7nm,1.3s

IMAR Indian Mountai 65.88 27 P **P** **07 59 34.7 0.0**
KBZ Khabaz 65.95 309 P **P** **07 59 34.7 -0.8**
comp=Z,1.9nm,0.8s,baz=117,slow=6.8,SNR=4.3
comp=Z,1.9nm,0.8s
D22K Ayikyak River 66.03 23 P **P** **07 59 35.4 -0.3**
D22K IAmb IAmb 07 59 47.4
comp=Z,4.8nm,0.8s
CAST Castle Rocks 66.89 29 P **P** **07 59 41.3 0.0**
CAST IAmb IAmb 08 00 17.7
comp=Z,4.7nm,1.3s
TOLK Toolik Lake Re 67.18 23 P **P** **07 59 43.4 +0.3**
TOLK IAmb IAmb 07 59 50.1
comp=Z,2.1nm,0.7s
TRF Thorofare Moun 67.68 29 P **P** **07 59 47.4 +0.9**
I23K Minto, Yukon-K 67.80 27 P **P** **07 59 46.8 -0.2**
I23K IAmb IAmb 07 59 57.0
comp=Z,4.0nm,1.3s
SUA Susitna One 67.81 31 P **P** **07 59 46.3 -1.0**
OBN Obninsk 67.87 322 LR LR 08 29 07.7
comp=Z,171nm,18.7s,baz=194,slow=36
MDM Murphy Dome 68.31 27 P **P** **07 59 49.7 -0.5**
MDM IAmb IAmb 07 59 53.0
comp=Z,6.3nm,1.2s
RND Reindeer 68.33 29 P **P** **07 59 49.2 -1.2**
E25K Arctic Village 68.73 24 P **P** **07 59 53.2 +0.4**
E25K IAmb IAmb 08 00 19.2
comp=Z,2.8nm,1.1s
ILAR Eielson Array 68.90 27 P **P** **07 59 50.5 -3.3**
comp=Z,0.3nm,0.5s,baz=272,slow=5.7,SNR=8.6
comp=Z,0.3nm,0.5s
DHY Denali Highway 69.05 29 P **P** **07 59 54.0 -1.0**
FINES FINESS Array B 71.74 330 P **P** **08 00 10.4 -0.9**
comp=Z,0.8nm,0.5s,baz=75,slow=4.4,SNR=8.8
comp=Z,0.8nm,0.5s
L29M L29M 73.08 28 P **P** **08 00 19.3 -0.1**
L29M IAmb IAmb 08 00 58.0
comp=Z,9.0nm,1.4s
F31M Tsiigehtchic 73.22 23 P **P** **08 00 19.1 -0.8**
F31M IAmb IAmb 08 00 23.2
comp=Z,4.1nm,0.7s
AKASG Malin Array Be 73.27 318 P **P** **08 00 18.4 -2.1**
comp=Z,0.4nm,0.5s,baz=58,slow=6.0,SNR=2.0
comp=Z,0.4nm,0.5s
BRTR Keskin Array B 73.66 307 P **P** **08 00 23.0 -0.3**
comp=Z,1.1nm,0.9s,baz=73,slow=5.0,SNR=3.0
comp=Z,1.1nm,0.9s
HFS Hagfors 77.85 331 LR LR 08 40 20.3
comp=Z,211nm,20.7s,baz=15,slow=40
NB2 NORSAR Subarra 78.49 332 P **P** **08 00 49.2 -1.1**
comp=Z,2.7nm,0.8s,baz=59,slow=5.9
NOA NORSAR Array B 78.49 332 P **P** **08 00 48.3 -2.0**
comp=Z,0.6nm,0.6s,baz=60,slow=5.6,SNR=2.0
NOA LR LR 08 37 07.8
comp=Z,56nm,19.4s,baz=290,slow=37
comp=Z,0.6nm,0.6s
JMIC Jan Mayen 78.96 345 LR LR 08 38 57.1
comp=Z,33nm,18.1s,baz=214,slow=38
YKA Yellowknife Ar 82.70 23 P **P** **08 01 11.3 -1.4**
comp=Z,0.9nm,0.6s,baz=310,slow=5.2,SNR=18
comp=Z,0.9nm,0.6s
NVAR Mina Array Bea 95.99 43 P **P** **08 02 15.4 -1.6**
comp=Z,0.3nm,0.7s,baz=294,slow=4.5,SNR=2.4
comp=Z,0.3nm,0.7s

CATAC ***10*** *07:57:03.8±0.5, 8.°28N×82.°98W, h5km±2km, ML3.9*
UCR ***10*** *07:57:04.0±0.4, 8.°33N×83.°00W, h2km±3km, MW4.4*
UPA ***10*** *07:57:05.4±1.8, 8.°37N×82.°92W, h4km±3km, MD4.1, MW4.5*
IDC ***10*** *07:57:12.2±6.9, 8.°85N×86.°74W, h0km, mb3.7/3, mbtmp3.7/4, ML3.2/1, MS2.1/1, Error ellipse: s-maj=141.9km s-min=32.7km az=164.0*
ISC 10 07:57:04.3±0.9, 8.°31N±0.°03×82.°98W±0.°02, h16km±6km, n87, σ1°09/124, mb3.8/3, 3C-13D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.14**	**135**	⇑*i*P		**Pg**	**07 57 08.6**	**+0.3**
PTPM				*i* S		**Sb**	**07 57 12.6**	**+1.0**
CDITO	**Canoas**	**0.29**	**22**	⇓*i*P		**Pg**	**07 57 10.5**	**0.0**
CDITO				*i* S		**Sg**	**07 57 14.8**	**+0.1**
CDITO	**Canoas**	**0.29**	**22**	*e*P		**Pg**	**07 57 10.4**	**0.0**
CDITO	**Canoas**	**0.29**	**22**	*i* P		**Pg**	**07 57 10.2**	**-0.3**
CDITO				IAML			07 57 17.1	
	comp=Z,15μm,1.0s							
FITO	**Golfito**	**0.36**	**332**	*e*P		**Pg**	**07 57 10.9**	**-0.8**
PIRO	**Carate, Puerto**	**0.36**	**285**	*e*P		**Pg**	**07 57 11.6**	**-0.2**
PIRO	**Carate, Puerto**	**0.36**	**285**	*i* P		**Pg**	**07 57 12.2**	**+0.4**
PIRO				*i* S		**Sn**	**07 57 20.4**	**-1.4**
PIRO				IAML			07 57 24.8	
	comp=Z,19μm,1.0s							
EDAD	**Golfito**	**0.39**	**332**	*e*P		**Pg**	**07 57 11.3**	**-1.0**
PTJ1	**Puerto Jimnez**	**0.39**	**306**	*e*P		**Pg**	**07 57 12.1**	**-0.1**
JIME	**Puerto Jimenez**	**0.41**	**304**	*e*P		**Pg**	**07 57 12.4**	**-0.2**
MLIR3	**Monte Lirio, C**	**0.51**	**18**	⇓*i*P		**Pb**	**07 57 14.9**	**0.0**
MLIR3				*i* S		**Sg**	**07 57 20.9**	**-0.5**
VITO	**San Vito**	**0.51**	**1**	*e*P		**Pg**	**07 57 14.6**	**+0.1**
DVD	**David**	**0.54**	**76**	⇓*e*P		**Pg**	**07 57 14.9**	**-0.1**
DVD				*i* S		**Sb**	**07 57 23.1**	**+0.1**
PEDE3	**Pedregal, Chir**	**0.56**	**82**	⇓*i*P		**Pg**	**07 57 15.1**	**-0.3**
PEDE3				*i* S		**Sb**	**07 57 23.5**	**0.0**
BRU2	**Volcan**	**0.56**	**31**	⇓*i*P		**Pg**	**07 57 15.6**	**+0.1**
BRU2				*i* S		**Sb**	**07 57 24.6**	**+0.8**
BRU2	**Volcan**	**0.56**	**31**	*e*P		**Pg**	**07 57 15.6**	**+0.1**
BRU2	**Volcan**	**0.56**	**31**	*i* P		**Pg**	**07 57 15.4**	**-0.1**
BRU2				*i* S		**Sb**	**07 57 24.2**	**+0.4**
BRU2				IAML			07 57 28.4	
	comp=Z,4μm,1.0s							
LOCO3	**Loma Colorada,**	**0.57**	**80**	⇓*i*P		**Pg**	**07 57 15.4**	**-0.1**
LOCO3				*i* S		**Sb**	**07 57 24.1**	**+0.4**
BCO2	**Palmira**	**0.61**	**48**	⇓*i*P		**Pg**	**07 57 16.3**	**0.0**
BCO2				*i* S		**Sb**	**07 57 24.8**	**-0.3**
BC3P	**Paso Ancho**	**0.62**	**36**	⇓*i*P		**Pg**	**07 57 16.5**	**-0.2**
BC3P				*i* S		**Sb**	**07 57 25.7**	**+0.1**
LNBQ3	**Los Naranjos,**	**0.72**	**48**	⇓*i*P		**Pg**	**07 57 17.7**	**-0.7**
LNBQ3				*i* S		**Sb**	**07 57 28.6**	**+0.3**
POTG	**Potrero Grande**	**0.75**	**350**	*e*P		**Pg**	**07 57 18.5**	**-0.6**
POTG	**Potrero Grande**	**0.75**	**350**	*i* P		**Pg**	**07 57 18.6**	**-0.4**
POTG				*i* S		**Sn**	**07 57 30.4**	**-1.1**
POTG				IAML			07 57 38.5	
	comp=Z,8μm,1.0s							
PLAN	**Los Planes de**	**0.78**	**298**	*i* P		**Pg**	**07 57 19.2**	**-0.3**
PLAN				*i* S		**Sn**	**07 57 31.7**	**-0.4**
PLAN				IAML			07 57 36.2	
	comp=Z,6μm,1.0s							
EDPN	**Palmar Norte**	**0.80**	**324**	*e*P		**Pb**	**07 57 18.7**	**-1.2**
EDBA	**Buenos Aires**	**0.90**	**341**	*e*P		**Pb**	**07 57 21.0**	**-0.6**
DRK0	**Durika**	**0.98**	**345**	*e*P		**Pb**	**07 57 22.0**	**-1.1**
OCHAL	**Ojochal**	**1.02**	**320**	*i* P		**Pb**	**07 57 22.7**	**-1.0**
OCHAL				IAML			07 57 47.3	
	comp=Z,18nm,1.0s							
CHGR2	**Aguacate**	**1.04**	**53**	⇑*i*P		**Pb**	**07 57 23.0**	**-1.0**
CHGR2				*i* S		**Sg**	**07 57 37.7**	**-0.4**
CNI2	**El Empalme, Bo**	**1.22**	**24**	⇓*i*P		**Pn**	**07 57 26.1**	**-0.7**
CNI2				*i* S		**Sb**	**07 57 42.6**	**0.0**
NANC3	**Nancito, Chiri**	**1.24**	**93**	⇓*e*P		**Pn**	**07 57 26.5**	**-0.5**
NANC3				*e*S		**Sn**	**07 57 43.6**	**+0.2**
PEZE	**Perez Zeledon,**	**1.27**	**327**	*e*P		**Pn**	**07 57 26.6**	**-0.9**
PEZE	**Perez Zeledon,**	**1.27**	**327**	*i* P		**Pn**	**07 57 26.7**	**-0.8**
PEZE				*i* S		**Sn**	**07 57 44.8**	**+0.5**
PEZE				IAML			07 57 52.6	
	comp=Z,1μm,1.0s							
CDM	**Cerro de Muert**	**1.46**	**328**	*e*P		**Pn**	**07 57 29.8**	**-0.7**
CDM	**Cerro de Muert**	**1.46**	**328**	*i* P		**Pn**	**07 57 30.0**	**-0.5**
CDM				*i* S		**Sb**	**07 57 50.3**	**+0.4**
CDM				IAML			07 57 54.1	
	comp=Z,900nm,1.0s							
LLNJ	**Naranjito**	**1.60**	**316**	*e*P		**Pn**	**07 57 32.3**	**+0.3**
RIMA	**Rio Macho**	**1.69**	**329**	*e*P		**Pn**	**07 57 33.4**	**-0.1**
RIMA	**Rio Macho**	**1.69**	**329**	*i* P		**Pn**	**07 57 33.2**	**-0.2**
RIMA				*i* S		**Sb**	**07 57 57.3**	**+0.9**
RIMA				IAML			07 58 02.4	
	comp=Z,460nm,1.0s							
REPA	**Paraso**	**1.75**	**330**	*e*P		**Pb**	**07 57 35.5**	**-0.7**
LCR2	**La Lucha 2**	**1.75**	**325**	*e*P		**Pn**	**07 57 34.4**	**+0.2**
LCR2	**La Lucha 2**	**1.75**	**325**	*i* P		**Pn**	**07 57 34.4**	**+0.2**
LCR2				*i* S		**Sb**	**07 57 59.0**	**+1.0**
LCR2				IAML			07 58 08.2	
	comp=Z,770nm,1.0s							
VERB	**Verbena**	**1.77**	**337**	*e*P		**Pn**	**07 57 35.3**	**+0.8**
MESA3	**La Mesa, Verag**	**1.79**	**95**	*i* P		**Pb**	**07 57 36.0**	**-0.7**
MESA3				*i* S		**Sn**	**07 57 57.7**	**+0.8**

GMAL Guarumal, Vera 1.81 107 *e*P **Pn** **07 57 34.8 -0.1**
GMAL *i* S **Sb** **07 57 58.9 -0.8**
VTCV VTCV, Calle Va 1.82 336 *i* P **Pn** **07 57 36.1 +0.9**
VTCV *i* S **Sb** **07 58 00.7 +0.6**
VTCV IAML 07 58 15.2
comp=Z,1μm,1.0s
RSUS3 Rio de Jesus, 1.83 100 *e*P **Pb** **07 57 37.1 -0.4**
RSUS3 *e*S **Sb** **07 57 59.4 -0.8**
RAFA San Farael, Vo 1.83 334 *e*P **Pn** **07 57 36.4 +0.9**
OCM Ochomogo 1.85 329 *i* P **Pn** **07 57 36.0 +0.4**
OCM *i* S **Sb** **07 58 01.4 +0.5**
OCM IAML 07 58 07.3
comp=Z,560nm,1.0s
LCOCO El Coco 1.85 342 *e*P **Pn** **07 57 36.7 +1.2**
VTRT Volcan Turrial 1.86 335 *i* P **Pn** **07 57 36.6 +0.7**
VTRT IAML 07 58 09.7
comp=Z,2μm,1.0s
HAYA Volcan Irazu 1.87 333 *i* P **Pn** **07 57 37.3 +1.3**
HAYA IAML 07 58 11.3
comp=Z,1μm,1.0s
VIRE VIRE 1.88 331 *i* P **Pb** **07 57 37.7 -0.8**
VIRE IAML 07 58 16.0
comp=Z,1μm,1.0s
SAFE3 Santa Fe, Vera 1.90 84 *e*P **Pb** **07 57 37.5 -1.0**
SAFE3 *i* S **Sn** **07 58 00.8 +1.2**
STIA3 Santiago, Vera 2.00 96 *e*P **Pn** **07 57 38.4 +0.9**
STIA3 *e*S **Sn** **07 58 03.0 +0.8**
HDC3 Heredia 3 2.02 327 *i* P **Pb** **07 57 40.2 -0.6**
HDC3 *i* S **Sb** **07 58 07.2 +1.4**
HDC3 IAML 07 58 15.1
comp=Z,1μm,1.0s
MARI3 Mariato, Verag 2.08 108 ⇓*e*P **Pb** **07 57 40.7 -1.0**
MARI3 *i* S **Sn** **07 58 05.7 +1.6**
CALO3 Calobre, Verag 2.12 89 *e*P **Pn** **07 57 40.2 +1.0**
CALO3 *i* S **Sn** **07 58 06.5 +1.3**
JACO JACO, Garabito 2.13 309 *e*P **Pn** **07 57 39.5 +0.1**
JACO JACO, Garabito 2.13 309 *i* P **Pn** **07 57 39.6 +0.3**
JACO IAML 07 58 22.3
comp=Z,470nm,1.0s
RIFO Rio Frio, Sara 2.20 335 *i* P **Pn** **07 57 42.1 +1.8**
RIFO IAML 07 58 21.0
comp=Z,550nm,1.0s
SRA1 San Ramn 2.30 320 *e*P **Pn** **07 57 43.1 +1.4**
CACAO El Cacao, Vera 2.31 114 ⇑*e*P **Pn** **07 57 43.1 +1.4**
CACAO *i* S **Sb** **07 58 13.6 -0.4**
CRIS3 El Cristo, Coc 2.34 91 *e*P **Pn** **07 57 43.7 +1.6**
CPMI Catarata Coope 2.40 325 *i* P **Pn** **07 57 45.4 +2.2**
CPMI *i* S **Sb** **07 58 18.6 +1.8**
CPMI IAML 07 58 32.5
comp=Z,320nm,1.0s
LAFE Finca La Fe, P 2.42 308 *i* P **Pn** **07 57 43.4 +0.2**
LAFE IAML 07 58 28.5
comp=Z,1.7nm,1.0s
CHIT3 Chitre 2.56 98 *e*P **Pn** **07 57 47.3 +2.1**
SOCE Pocosol 2.62 322 *i* P **Pn** **07 57 48.3 +2.2**
SOCE IAML 07 57 51.0
comp=Z,280nm,1.0s
PNME Penonome 2.63 86 *e*P **Pn** **07 57 48.3 +2.1**
AZU Azuero 2.73 101 *e*P **Pn** **07 57 49.6 +2.1**
AZU *e*S **Sb** **07 58 24.4 -1.6**
JTS Las Juntas de 2.77 316 ⇓*i*P **Pn** **07 57 51.0 +2.9**
JTS *e*S **Sn** **07 58 23.9 +2.6**
JTS Las Juntas de 2.77 316 Pn **Pn** **07 57 50.4 +2.3**
comp=Z,7.1nm,0.3s,baz=234,slow=19,SNR=60
JTS LR LR 07 58 18.5
comp=Z,41nm,20.0s,baz=252,slow=29
JTS Sn **Sn** **07 58 22.7 +1.4**
comp=Z,10.0nm,0.3s,baz=28,slow=21,SNR=7.6
comp=Z,48nm,0.4s
COVE Coope Vega, Sa 2.78 330 *i* P **Pn** **07 57 50.9 +2.7**
COVE IAML 07 58 45.5
comp=Z,410nm,1.0s
ACHO3 Achotines, Los 2.92 107 *e*P **Pn** **07 57 50.0 -0.1**
ACHO3 *e*S **Sg** **07 58 38.9 +0.6**
INDI Punta indio, G 2.93 302 *i* P **Pn** **07 57 50.7 +0.4**
INDI IAML 07 58 56.3
comp=Z,200nm,1.0s
DUNO Dulce Nombre, 3.04 306 *i* P **Pn** **07 57 53.0 +1.2**
DUNO IAML 07 58 43.1
comp=Z,220nm,1.0s
ZANG Zanguenga, Cho 3.15 78 *e*P **Pn** **07 57 54.1 +0.8**
ORTG Ortega, Santa 3.19 310 *i* P **Pn** **07 57 55.6 +1.7**
ORTG IAML 07 58 54.5
comp=Z,82nm,1.0s
SAJU San Juanillo, 3.21 303 *i* P **Pn** **07 57 54.8 +0.6**
SAJU IAML 07 58 58.5
comp=Z,110nm,1.0s
BCIP Isla Barro Col 3.22 74 *e*P **Pn** **07 57 56.4 +2.1**
BCIP Isla Barro Col 3.22 74 *i* P **Pn** **07 57 55.7 +1.4**
BCIP IAML 07 59 05.6
comp=Z,150nm,1.0s
UPA Univ. de Panam 3.48 79 *e*P **Pn** **07 57 59.6 +1.8**
BLUN Bluefields 3.76 348 *i* P **Pn** **07 58 02.5 +0.8**
BLUN IAML 07 58 06.9
comp=Z,170nm,1.0s
ACON Acoyapa 4.23 330 *i* P **Pn** **07 58 11.4 +3.2**
TOTI Torti 4.66 82 *e*P **Pn** **07 58 15.1 +0.9**
ULM Lac du Bonnet 43.17 348 P **P** **08 05 03.8 -0.5**
comp=Z,2.6nm,0.8s,baz=172,slow=8.7,SNR=7.4
comp=Z,2.6nm,0.8s
YKA Yellowknife Ar 58.78 343 P **P** **08 07 01.9 +0.5**
comp=Z,0.7nm,0.9s,baz=136,slow=6.8,SNR=9.0
comp=Z,0.7nm,0.9s
ILAR Eielson Array 71.56 336 P **P** **08 08 22.6 -1.8**
comp=Z,0.2nm,0.7s,baz=120,slow=4.9,SNR=5.2
comp=Z,0.2nm,0.7s

IDC 10 08:05:01.3±3.4, 16.°74S×176.°17W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=95.4km s-min=43.6km az=24.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.06**	**241**	P		P	08 12 46.4	-0.4
	1.5nm,0.6s,baz=82,slow=7.1,SNR=3.8							
	1.5nm,0.6s							
WRA	**Warramunga Arr**	**46.95**	**258**	P		P	08 13 34.4	+0.1
	0.3nm,0.3s,baz=97,slow=7.7,SNR=13							
WRA				PcP		PcP	08 15 06.5	-0.5
	0.3nm,0.8s,baz=95,slow=2.6,SNR=1.1							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**47.17**	**253**	P		P	08 13 36.1	+0.1
	4.4nm,0.7s,baz=90,slow=8.4,SNR=69							
ASAR				PcP		PcP	08 15 06.2	-1.5
	0.1nm,0.4s,baz=109,slow=5.7,SNR=1.5							
	4.4nm,0.7s							
QSPA	**South Pole Qui**	**73.31**	**180**	P		P	08 16 35.1	+0.5
	0.9nm,0.7s,baz=28,slow=1.6,SNR=6.1							
	0.9nm,0.7s							

PRU ***10*** *08:12:06.3, 51.°47N×16.°05E, h0km*
VIE ***10*** *08:12:06.1±1.0, 51.°39N×15.°86E, h0km, mb2.4/4, ml2.5/4, Error ellipse: s-maj=7.8km s-min=6.8km az=87.0, Suspected Mining induced.*
ISC 10 08:12:02.7±1.3, 51.°60N±0.°06×16.°10E±0.°03, h0km, n25, σ0.°66/52, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.76**	**171**	*e*Pg		**Pg**	**08 12 17.7**	**+0.4**
KSP				*e*Sg		**Sg**	**08 12 27.4**	**+0.3**
CHVC	**Chvalec**	**1.01**	**182**	*e*PG		**Pb**	**08 12 22.5**	**-0.5**
CHVC				*e*SG		**Sg**	**08 12 35.2**	**+0.2**
	comp=Z,38nm,0.4s							
OSTC	**Ostas**	**1.04**	**176**	*e*PG		**Pb**	**08 12 23.3**	**-0.3**
OSTC				*e*SG		**Sg**	**08 12 35.5**	**-0.6**
	comp=Z,31nm,0.5s							
UPC	**Upice**	**1.09**	**183**	*e*PG		**Pg**	**08 12 23.8**	**+0.3**
UPC				*e*SG		**Sg**	**08 12 37.7**	**0.0**
	comp=Z,64nm,0.4s							
DPC	**Dobruska-Polom**	**1.25**	**173**	*e*PG		**Pg**	**08 12 26.6**	**-0.1**
DPC				*e*SG		**Sg**	**08 12 42.1**	**-0.8**
	comp=Z,22nm,0.2s							
PVCC	**Panska Ves**	**1.44**	**223**	*e*PG		**Pb**	**08 12 30.5**	**+0.1**
PVCC				*e*SG		**Sg**	**08 12 48.8**	**-0.1**
	comp=Z,32nm,0.2s							
BRG	**Berggiesshubel**	**1.54**	**243**	Pg		**Pg**	**08 12 32.4**	**+0.3**
BRG				Sg		**Sb**	**08 12 52.4**	**+0.4**
BRG				Amp			08 12 55.3	
	comp=Z,51nm,0.4s							
KRLC	**Kraliky**	**1.58**	**164**	*e*PG		**Pn**	**08 12 31.6**	**-0.4**
KRLC				*e*SG		**Sn**	**08 12 52.4**	**-0.8**
	comp=Z,26nm,0.5s							

GOPC	**GO Pecny, Ondr**	**1.88**	**207**	*e*PN	**Pn**	**08 12 35.7**	**-0.4**
GOPC				*e*PG	**Pb**	**08 12 37.4**	**-0.4**
PRU	**Pruhonice**	**1.89**	**212**	*e*PG	**Pb**	**08 12 37.9**	**-0.1**
PRU				*e*SG	**Sb**	**08 13 01.8**	**-0.3**
	comp=Z,20nm,0.5s						
HSKC	**Hora Svate Kat**	**1.95**	**241**	*e*PG	**Pb**	**08 12 38.9**	**-0.2**
HSKC				*e*SG	**Sb**	**08 13 04.2**	**+0.2**
	comp=Z,31nm,0.3s						
CLL	**Collm**	**1.96**	**263**	*i* Pn	**Pn**	**08 12 36.4**	**-0.7**
CLL				*e*Pg	**Pb**	**08 12 39.0**	**-0.2**
CLL				*i* x	x	08 12 42.0	
CLL				*i* x	x	08 12 43.4	
CLL				*e*Sg	**Sb**	**08 13 05.0**	**+0.8**
	comp=Z,14nm,0.5s						
CLL				*i* x	x	08 13 11.8	
VRAC	**Vranov**	**2.31**	**172**	*e*PN	**Pn**	**08 12 41.8**	**-0.2**
VRAC				*e*SG	**Sb**	**08 13 14.8**	**+0.5**
KRUC	**Moravsky**	**2.54**	**176**	*e*PN	**Pn**	**08 12 44.9**	**-0.3**
KRUC				*e*SG	**Sb**	**08 13 21.8**	**+0.8**
NKC	**Novy Kostel**	**2.68**	**241**	*e*PN	**Pn**	**08 12 47.7**	**+0.6**
NKC				*e*PG	**Pg**	**08 12 53.8**	**-0.3**
NKC				*e*SG	**Sg**	**08 13 29.0**	**+0.2**
	comp=Z,29nm,0.4s						
OJC	**Ojcow**	**2.72**	**119**	*e*Pg	**Pg**	**08 12 55.1**	**+0.4**
OJC				*e*SG	**Sg**	**08 13 29.8**	**-0.1**
JAVC	**Velka Javorina**	**2.92**	**159**	*e*PN	**Pn**	**08 12 50.4**	**0.0**
KHC	**Kasperske Hory**	**2.95**	**214**	*e*PN	**Pn**	**08 12 50.5**	**-0.3**
KHC				*e*PG	**Pb**	**08 12 57.5**	**+1.4**
KHC				*e*SG	**Sg**	**08 13 35.6**	**-1.7**
CKRC	**Cesky Krumlov**	**3.01**	**203**	*e*PN	**Pn**	**08 12 51.8**	**+0.2**
CKRC				*e*PG	**Pb**	**08 12 57.7**	**+0.6**
LANS	**Liptovska Anna**	**3.26**	**137**	*e*PG	**Pg**	**08 13 04.7**	**-0.4**
LANS				*e*SG	**Sg**	**08 13 46.8**	**-0.6**
MODS	**Modra-Piesok**	**3.31**	**166**	*e*PG	**Pg**	**08 13 05.9**	**-0.2**
MODS				*e*SG	**Sg**	**08 13 48.0**	**-1.0**
CONA	**Conrad Observa**	**3.67**	**183**	*i* Pn	**Pn**	**08 13 01.3**	**+0.5**
	comp=Z,1.1nm,0.3s						
CONA				Sg	**Sg**	**08 14 00.9**	**+0.2**
	comp=Z,10nm,0.4s						
MOA	**Molln**	**3.93**	**198**	*i* Pn	**Pn**	**08 13 04.6**	**+0.3**
	comp=Z,2.4nm,0.2s						
MOA				*e*Sg	**Sg**	**08 14 07.4**	**-1.5**
	comp=Z,4.9nm,0.5s						
ARSA	**Arzberg**	**4.37**	**185**	*i* Pn	**Pn**	**08 13 12.5**	**+2.2**
	comp=Z,0.7nm,0.2s						
ARSA				*e*Sg	**Sg**	**08 14 22.9**	**+0.1**
	comp=Z,2.1nm,0.4s						
KBA	**Koelnbreinsper**	**4.87**	**203**	*i* Pn	**Pn**	**08 13 17.8**	**+0.5**
	comp=Z,1.5nm,0.4s						
KBA				Sg	**Sg**	**08 14 38.8**	**-0.2**
	comp=Z,4.8nm,0.5s						

IDC ***10*** *08:30:54.6±0.8,43˚.19S×170˚.64E, h0km, mb4.0/3, mbtmp4.0/4, ML3.2/1, MS3.5/11, Error ellipse: s-maj=28.8km s-min=7.9km az=57.0*

WEL ***10*** *08:30:55.0, 43˚.31S×170˚.49E, h7km, ML4.5, Mw4.4, Moment Tensor Solution. s13 Moment tensor: Mrr=56.67; Mθθ=380.10; Mϕϕ=-323.43; Mrθ=31.09; Mθϕ=198.96; Mrϕ=213.59; Fault plane solution: NP1:ϕs=327.00000°, δ64.00000°, λ=-168.00000°. NP2:ϕs=327.00000°, δ80.00000°, λ=-26.00000°. Principal axes: T 448.0700, Plg11.0000°, Azm17.0000°; N -472.5200, Plg62.0000°, Azm128.0000°; P 24.4500, Plg26.0000°, Azm283.0000°; SOUTH ISLAND*

NEIC ***10*** *08:30:54.7, 43˚.26S×170˚.49E, h2km*

WEL ***10*** *08:30:55.0±0.4, 43˚.3S×17˚.0E±˚, h4km±2km, M4.3/17, ML4.5/17, MLv4.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=150.3, confirmed*

NOU ***10*** *08:30:55.1, 43˚.31S×170˚.49E, h2km, MLv4.6/13, South Island, New Zealand*

NEIC ***10*** *08:30:55.1±1.0, 43˚.29S±0˚.06×170˚.50E±0˚.07, h7km±5km, mb4.4/6, Mwr4.3/54, Error ellipse: s-maj=9.9km s-min=4.0km az=140.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.13; Mθθ1.91; Mϕϕ-2.04; Mrθ0.94; Mθϕ-1.91; Mϕr-1.22; Fault plane solution: Mo3.16000×10¹⁵ NP1:ϕs158.12000°, δ84.47000°, λ28.16000°. NP2:ϕs65.16000°, δ61.98000°, λ173.73000°. Principal axes: T 3.2675, Plg24.0000°, Azm25.0000°; N -0.2375, Plg61.0000°, Azm168.0000°; P -3.0300, Plg15.0000°, Azm288.0000°;*

ISC 10 08:30:55.4±0.8, 43˚.29S±0˚.02×170˚.50E±0˚.02, h10km±5km, n177, σ1ϟ40/175, mb4.3/7, MS3.5/11, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHFS	**Whataroa Fire**	**0.10**	**284**	P	**Pg**	**08 30 58.1**	**+0.2**
WHFS				S	**Sg**	**08 31 00.1**	**+0.3**
HAFS	**Harihari Fire**	**0.14**	**18**	P	**Pg**	**08 30 57.7**	**-0.9**
FJDS	**Franz Josef DO**	**0.25**	**245**	P	**Pg**	**08 30 59.4**	**-1.0**
FJDS				S	**Sg**	**08 31 03.1**	**-0.7**
WVZ	**Waitaha Valley**	**0.28**	**40**	P	**Pg**	**08 31 00.7**	**-0.2**
WVZ				S	**Sg**	**08 31 04.6**	**0.0**
WVAS	**Waitaha Valley**	**0.28**	**40**	P	**Pg**	**08 31 00.8**	**-0.1**
WVAS				S	**Sg**	**08 31 05.3**	**+0.6**
FGPS	**Fox Glacier Pa**	**0.39**	**243**	P	**Pg**	**08 31 02.2**	**-0.9**
FGPS				S	**Sg**	**08 31 07.7**	**-0.5**
MCNS	**Mount Cook Ann**	**0.54**	**213**	P	**Pg**	**08 31 05.3**	**-0.5**
MCNS				S	**Sg**	**08 31 12.0**	**-0.9**
FOZ	**Fox Glacier**	**0.55**	**243**		**Pg**	**08 31 05.9**	**-0.2**
FOZ	**Fox Glacier**	**0.55**	**243**	P	**Pg**	**08 31 06.0**	**-0.1**
FOZ				S	**Sg**	**08 31 12.9**	**-0.4**
RPZ	**Rata Peaks**	**0.59**	**137**	Pg	**Pg**	**08 31 06.1**	**-0.7**
RPZ	**Rata Peaks**	**0.59**	**137**	P	**Pg**	**08 31 06.4**	**-0.4**
RPZ	**Rata Peaks**	**0.59**	**137**	Pg	**Pg**	**08 31 06.5**	**-0.4**
	278nm,0.3s,baz=304,slow=6.8,SNR=881						
RPZ				Lg	Lg	08 31 13.4	
	1μm,0.3s,baz=250,slow=7.3,SNR=27						
RPZ				LR	LR	08 31 30.9	
	comp=Z,728nm,21.2s,baz=160,slow=60						
RPZ	**Rata Peaks**	**0.59**	**137**	P	**Pg**	**08 31 06.6**	**-0.3**
RPZ				S	**Sg**	**08 31 14.2**	**-0.4**
KOKS	**Kokatahi**	**0.61**	**50**	P	**Pg**	**08 31 05.8**	**-1.4**
KOKS				S	**Sg**	**08 31 14.3**	**-1.0**
HMCS	**Hokitika Medic**	**0.67**	**31**	P	**Pg**	**08 31 07.4**	**-0.8**
HMCS				S	**Sg**	**08 31 16.4**	**-0.5**
MSMC	**Mount Somers S**	**0.78**	**123**	P	**Pg**	**08 31 09.4**	**-1.1**
MHCZ	**Mount Hutt**	**0.82**	**108**	P	**Pg**	**08 31 10.8**	**-0.4**
ARCZ	**Arundel**	**0.83**	**143**	P	**Pg**	**08 31 10.8**	**-0.5**
INZ	**Inchbonnie**	**0.89**	**51**	Pg	**Pg**	**08 31 11.3**	**-1.2**
INZ	**Inchbonnie**	**0.89**	**51**	P	**Pg**	**08 31 11.5**	**-1.0**
LBZ	**Lake Benmore**	**1.12**	**191**		**Pg**	**08 31 15.5**	**-1.5**
LBZ	**Lake Benmore**	**1.12**	**191**	P	**Pg**	**08 31 15.9**	**-1.0**
OXZ	**Oxford**	**1.13**	**93**		**Pg**	**08 31 16.7**	**-0.4**
OXZ	**Oxford**	**1.13**	**93**	P	**Pg**	**08 31 16.8**	**-0.2**
TMZ	**Timaru**	**1.16**	**162**	P	**Pg**	**08 31 16.7**	**-0.9**
WACZ	**Wakanui South**	**1.18**	**124**	P	**Pb**	**08 31 17.8**	**0.0**
RACZ	**Rakaia**	**1.28**	**111**	P	**Pg**	**08 31 19.3**	**-0.6**
LTZ	**Lake Taylor**	**1.40**	**69**		**Pn**	**08 31 21.1**	**+0.2**
LTZ	**Lake Taylor**	**1.40**	**69**	P	**Pn**	**08 31 21.4**	**+0.4**
JCZ	**Jackson Bay**	**1.47**	**237**	P	**Pn**	**08 31 21.3**	**-0.7**
JCZ	**Jackson Bay**	**1.47**	**237**	P	**Pn**	**08 31 21.4**	**-0.7**
AMCZ	**Amberley**	**1.58**	**87**		**Pn**	**08 31 23.9**	**+0.5**
AMCZ	**Amberley**	**1.58**	**87**	P	**Pn**	**08 31 23.9**	**+0.5**
MQZ	**McQueen's Vall**	**1.63**	**106**	Pn	**Pn**	**08 31 24.0**	**-0.1**
MQZ	**McQueen's Vall**	**1.63**	**106**	P	**Pn**	**08 31 23.3**	**-0.8**
ODZ	**Otahua Downs**	**1.76**	**177**		**Pn**	**08 31 25.9**	**0.0**
ODZ	**Otahua Downs**	**1.76**	**177**	P	**Pn**	**08 31 26.2**	**+0.2**
ODZ	**Otahua Downs**	**1.76**	**177**	P	**Pn**	**08 31 25.7**	**-0.2**
DSZ	**Denniston Nort**	**1.82**	**33**	Pn	**Pn**	**08 31 26.0**	**-0.8**
DSZ	**Denniston Nort**	**1.82**	**33**	P	**Pn**	**08 31 26.1**	**-0.7**
AKCZ	**Akaroa Harbour**	**1.85**	**109**	P	**Pn**	**08 31 27.0**	**-0.2**
WKZ	**Wanaka**	**1.87**	**214**		**Pn**	**08 31 27.6**	**+0.1**
WKZ	**Wanaka**	**1.87**	**214**	P	**Pn**	**08 31 27.6**	**+0.1**
GVZ	**Greta Valley S**	**1.89**	**81**	Pn	**Pn**	**08 31 27.4**	**-0.3**
GVZ	**Greta Valley S**	**1.89**	**81**	P	**Pn**	**08 31 27.4**	**-0.3**
EAZ	**Earnscleugh**	**2.12**	**203**	P	**Pn**	**08 31 30.1**	**-0.9**
MSZ	**Milford Sound**	**2.31**	**232**	P	**Pn**	**08 31 33.0**	**-0.5**
THZ	**Tophouse**	**2.34**	**50**		**Pn**	**08 31 33.9**	**-0.1**
THZ	**Tophouse**	**2.34**	**50**	P	**Pn**	**08 31 34.2**	**+0.2**
KHZ	**Kahutara**	**2.40**	**70**	Pn	**Pn**	**08 31 35.5**	**+0.8**
KHZ	**Kahutara**	**2.40**	**70**	P	**Pn**	**08 31 35.7**	**+1.0**
KHZ	**Kahutara**	**2.40**	**70**	P	**Pn**	**08 31 35.4**	**+0.6**
MRNZ	**Matariki Terra**	**2.52**	**42**		**Pn**	**08 31 36.3**	**-0.2**
MRNZ	**Matariki Terra**	**2.52**	**42**	P	**Pn**	**08 31 36.5**	**+0.1**
HHSZ	**Highcliff Hill**	**2.60**	**178**	P	**Pn**	**08 31 38.7**	**+1.2**
MLZ	**Mavora Lakes**	**2.69**	**219**	Pn	**Pn**	**08 31 38.7**	**-0.1**
MLZ	**Mavora Lakes**	**2.69**	**219**	P	**Pn**	**08 31 38.7**	**-0.1**
TUZ	**Tuapeka**	**2.74**	**193**	P	**Pn**	**08 31 38.9**	**-0.5**
QRZ	**Quartz Range**	**2.89**	**32**		**Pn**	**08 31 41.0**	**-0.4**
QRZ	**Quartz Range**	**2.89**	**32**	P	**Pn**	**08 31 41.4**	**0.0**
QRZ	**Quartz Range**	**2.89**	**32**	P	**Pn**	**08 31 41.1**	**-0.3**
TKNZ	**Takaka Hill**	**2.90**	**40**		**Pn**	**08 31 41.4**	**-0.3**
TKNZ	**Takaka Hill**	**2.90**	**40**	P	**Pn**	**08 31 43.1**	**+1.4**
BSWZ	**Blackbirch Sta**	**2.95**	**59**		**Pn**	**08 31 43.1**	**+0.8**
BSWZ	**Blackbirch Sta**	**2.95**	**59**	P	**Pn**	**08 31 44.0**	**+1.6**
NNZ	**Nelson**	**2.98**	**47**		**Pn**	**08 31 43.3**	**+0.7**
NNZ	**Nelson**	**2.98**	**47**	P	**Pn**	**08 31 43.6**	**+1.0**
CMWZ	**Cape Campbell**	**3.15**	**62**		**Pn**	**08 31 46.9**	**+1.9**
CMWZ	**Cape Campbell**	**3.15**	**62**	P	**Pb**	**08 31 50.2**	**-1.2**
TUWZ	**Tuamarina**	**3.16**	**55**		**Pn**	**08 31 45.4**	**+0.2**
TUWZ	**Tuamarina**	**3.16**	**55**	P	**Pn**	**08 31 46.4**	**+1.3**
WHZ	**Wether Hill Ro**	**3.18**	**214**		**Pn**	**08 31 45.7**	**+0.3**
WHZ	**Wether Hill Ro**	**3.18**	**214**	P	**Pn**	**08 31 46.2**	**+0.7**
DCZ	**Deep Cove**	**3.24**	**227**	Pn	**Pn**	**08 31 46.5**	**+0.3**
DCZ	**Deep Cove**	**3.24**	**227**	P	**Pn**	**08 31 47.0**	**+0.8**
SYZ	**Scrubby Hill**	**3.39**	**196**	P	**Pn**	**08 31 48.0**	**-0.3**
SYZ	**Scrubby Hill**	**3.39**	**196**	P	**Pn**	**08 31 47.3**	**-1.0**
TCW	**Tory Channel**	**3.49**	**55**		**Pn**	**08 31 50.7**	**+0.9**
TCW	**Tory Channel**	**3.49**	**55**	P	**Pn**	**08 31 51.2**	**+1.5**
DUWZ	**D'Urville Isla**	**3.56**	**47**	P	**Pn**	**08 31 52.0**	**+1.3**
SNZO	**South Karori**	**3.69**	**59**		**Pn**	**08 31 53.8**	**+1.2**
SNZO	**South Karori**	**3.69**	**59**	P	**Pn**	**08 31 54.2**	**+1.7**
BHW	**Baring Head**	**3.75**	**61**		**Pn**	**08 31 54.6**	**+1.4**
BHW	**Baring Head**	**3.75**	**61**	P	**Pn**	**08 31 52.3**	**-0.9**
PLWZ	**Palliser**	**3.92**	**66**	Pn	**Pn**	**08 31 54.7**	**-0.9**
PLWZ	**Palliser**	**3.92**	**66**	P	**Pn**	**08 31 55.7**	**0.0**
PYZ	**Puysegur Point**	**3.96**	**222**	Pn	**Pn**	**08 31 56.9**	**+0.7**
PYZ	**Puysegur Point**	**3.96**	**222**	P	**Pn**	**08 31 56.9**	**+0.7**
PYZ	**Puysegur Point**	**3.96**	**222**	P	**Pn**	**08 31 56.9**	**+0.7**
APZ	**The Paps**	**3.96**	**206**	P	**Pn**	**08 31 54.6**	**-1.6**
APZ					P	**Pn**	**08 31 54.6**	**-1.6**
CAW	**Cannon Point**	**4.03**	**59**	P	**Pn**	**08 31 56.7**	**-0.5**
KIW	**Kapiti Island**	**4.08**	**55**	P	**Pn**	**08 31 58.1**	**+0.2**
PAWZ	**Paruwai Farm**	**4.12**	**64**	P	**Pn**	**08 31 58.4**	**0.0**
OGWZ	**Otaki Gorge**	**4.27**	**56**	P	**Pn**	**08 32 00.3**	**-0.1**
MTW	**Mount Morrison**	**4.28**	**62**	P	**Pn**	**08 31 59.7**	**-0.9**
TRWZ	**Traveller**	**4.29**	**66**	P	**Pn**	**08 32 00.9**	**+0.2**
HOWZ	**Holdsworth Sta**	**4.43**	**59**	P	**Pn**	**08 32 03.9**	**+1.2**
TMWZ	**Te Maipa**	**4.56**	**63**	P	**Pn**	**08 32 04.0**	**-0.4**
MRZ	**Mangatainoka R**	**4.61**	**57**		**Pn**	**08 32 04.9**	**-0.2**
MRZ	**Mangatainoka R**	**4.61**	**57**	P	**Pn**	**08 32 03.8**	**-1.3**
NMEZ	**Namu Road**	**4.63**	**34**	P	**Pn**	**08 32 06.6**	**+1.2**
NBEZ	**Newall Road No**	**4.75**	**33**	P	**Pn**	**08 32 07.9**	**+0.8**
KHEZ	**Kahui Hut**	**4.79**	**35**	P	**Pn**	**08 32 08.9**	**+1.2**
KHEZ	**Kahui Hut**	**4.79**	**35**	P	**Pn**	**08 32 09.0**	**+1.4**
PREZ	**Palmer Road**	**4.81**	**36**	P	**Pn**	**08 32 09.2**	**+1.2**
LREZ	**Lake Rotokare**	**4.82**	**39**	P	**Pn**	**08 32 09.7**	**+1.7**
NEZ	**North Egmont**	**4.84**	**35**	P	**Pn**	**08 32 09.3**	**+0.9**
PKE	**Pukeiti**	**4.86**	**34**	P	**Pn**	**08 32 10.0**	**+1.4**
WAZ	**Wanganui**	**4.88**	**45**	P	**Pn**	**08 32 10.9**	**+2.0**
POWZ	**Post Office Ro**	**4.89**	**56**	P	Pb	08 32 15.7	-5.4
PRWZ	**Pori Road**	**4.91**	**58**	P	**Pn**	**08 32 08.8**	**-0.5**
DREZ	**Durham Road**	**4.96**	**36**	P	**Pn**	**08 32 10.8**	**+1.0**
BFZ	**Birch Farm**	**5.01**	**61**	P	**Pn**	**08 32 10.7**	**0.0**
MHEZ	**Mangahewa**	**5.10**	**36**	P	**Pn**	**08 32 15.1**	**+3.3**
TSZ	**Takapari Road**	**5.21**	**54**	P	**Pn**	**08 32 16.0**	**+2.6**
VRZ	**Vera Road**	**5.26**	**39**	P	**Pn**	**08 32 14.6**	**+0.6**
MTVZ	**Mangateitei**	**5.41**	**46**	P	Pn	08 32 21.1	+5.0
PKVZ	**Pokaka**	**5.41**	**44**	P	**Pn**	**08 32 17.9**	**+1.7**
PNHZ	**Pukenui**	**5.44**	**54**	P	**Pn**	**08 32 17.7**	**+1.1**
TRVZ	**Turoa**	**5.51**	**45**	P	**Pn**	**08 32 20.7**	**+3.0**
WNVZ	**Wahianoa**	**5.51**	**46**	P	**Pn**	**08 32 21.0**	**+3.3**
MOVZ	**Moawhango**	**5.54**	**47**	P	**Pn**	**08 32 21.9**	**+3.9**
MAVZ	**Matarangi**	**5.54**	**45**	P	**Pn**	**08 32 20.0**	**+3.9**
COVZ	**Chateau Observ**	**5.58**	**45**	P	**Pn**	**08 32 23.3**	**+4.7**
NGZ	**Ngauruhoe**	**5.63**	**45**	P	**Pn**	**08 32 23.3**	**+4.0**
BHHZ	**Black Hill Sta**	**5.65**	**50**	P	**Pn**	**08 32 20.5**	**+1.0**
WTVZ	**West Tongariro**	**5.67**	**44**	P	**Pn**	**08 32 24.5**	**+4.7**
OTVZ	**Oturere**	**5.67**	**45**	P	**Pn**	**08 32 22.3**	**+2.4**
ETVZ	**East Tongariro**	**5.71**	**45**	P	**Pn**	**08 32 24.4**	**+3.9**
NTVZ	**North Tongarir**	**5.72**	**45**	P	**Pn**	**08 32 23.8**	**+3.3**
TMVZ	**Te Maari**	**5.73**	**45**	P	**Pn**	**08 32 23.9**	**+3.3**
HIZ	**Hauiti**	**5.80**	**36**		**Pn**	**08 32 21.3**	**-0.1**
HIZ	**Hauiti**	**5.80**	**36**	P	**Pn**	**08 32 21.4**	**-0.1**
HIZ	**Hauiti**	**5.80**	**36**	P	**Pn**	**08 32 21.5**	**0.0**
KWHZ	**Kaweka Forest**	**5.90**	**51**	P	**Pn**	**08 32 25.9**	**+3.1**
KAHZ	**Kahuranaki**	**5.92**	**56**	P	**Pn**	**08 32 24.7**	**+1.5**
BKZ	**Black Stump Fm**	**6.11**	**50**	P	**Pn**	**08 32 26.8**	**+1.0**
BKZ	**Black Stump Fm**	**6.11**	**50**	P	Pn	08 32 32.2	+6.4
TLZ	**Tolley Road**	**6.26**	**39**	P	**Pn**	**08 32 28.1**	**+0.3**
MTHZ	**Maungataniwha**	**6.53**	**49**	P	Pn	08 32 37.0	+5.5
TOZ	**Tahuroa Road**	**6.73**	**36**		**Pn**	**08 32 34.0**	**-0.3**
TOZ	**Tahuroa Road**	**6.73**	**36**	P	**Pn**	**08 32 34.2**	**-0.1**
RTZ	**Ruatahuna**	**6.77**	**49**	Pn	**Pn**	**08 32 34.8**	**-0.1**
AWAZ	**Awhitu Peninsu**	**6.98**	**28**	P	**Pn**	**08 32 38.2**	**+0.6**
WTAZ	**Waiatarua**	**7.07**	**28**	P	**Pn**	**08 32 39.6**	**+0.6**
URZ	**Urewera**	**7.10**	**47**	P	**Pn**	**08 32 39.1**	**-0.2**
URZ	**Urewera**	**7.10**	**47**	Pn	**Pn**	**08 32 38.3**	**-0.9**
	0.4nm,0.3s,baz=39,slow=17,SNR=2.0						
URZ				Sn	**Sn**	**08 33 57.6**	**-2.4**
	2.4nm,0.3s,baz=118,slow=10,SNR=1.9						
	7.6nm,0.8s						
OUZ	**Omahuta**	**8.41**	**18**	P	**Pn**	**08 32 59.3**	**+2.1**
RAO	**Raoul Island**	**16.81**	**37**	Pn	**Pn**	**08 34 49.5**	**-1.4**
DZM	**Mont Dzumac**	**21.42**	**350**	*e*S	**S**	**08 39 36.8**	**-4.6**
	42nm,24.3s						
DZM				*e*LR	LR	08 40 48.4	
	285nm,25.6s						
DZM	**Mont Dzumac**	**21.42**	**350**	LR	LR	08 42 33.2	
	comp=Z,182nm,20.6s,baz=216,slow=33						
STKA	**Stephens Creek**	**25.45**	**287**	LR	LR	08 45 15.8	
	comp=Z,69nm,20.3s,baz=193,slow=34						
CTA	**Charters Tower**	**30.78**	**311**	LR	LR	08 48 19.2	
	comp=Z,83nm,19.2s,baz=124,slow=34						
VNDA	**Vanda**	**34.52**	**183**	LR	LR	08 49 53.6	
	comp=Z,155nm,18.6s,baz=30,slow=33						
AS31	**Alice Springs**	**35.88**	**291**	P	**P**	**08 37 55.0**	**-0.6**
ASAR	**Alice Springs**	**35.88**	**291**	P	**P**	**08 37 55.0**	**-0.6**
ASAR	**Alice Springs**	**35.88**	**291**	P	**P**	**08 37 55.5**	**-0.1**
	1.3nm,0.5s,baz=128,slow=7.7,SNR=22						
ASAR				PcP	**PcP**	**08 40 23.4**	**+0.6**
	0.3nm,0.6s,baz=128,slow=4.1,SNR=4.6						
ASAR				LR	LR	08 51 21.9	
	comp=Z,95nm,21.1s,baz=111,slow=34						
	1.3nm,0.5s						
COEN	**Coen**	**37.48**	**313**	P	**P**	**08 38 09.9**	**+0.7**
COEN				IAmb	IAmb	08 38 34.6	
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	**38.15**	**296**	P	**P**	**08 38 14.9**	**0.0**
WB2				IAmb	IAmb	08 38 27.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**38.16**	**296**	P	**P**	**08 38 15.2**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=138,slow=7.5,SNR=8.8						
WRA				PcP	**PcP**	**08 40 30.8**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=134,slow=2.7,SNR=4.6						
	comp=Z,1.2nm,0.8s						
WB0	**Warramunga Arr**	**38.25**	**296**	P	**P**	**08 38 14.8**	**-1.0**
WB0				IAmb	IAmb	08 38 21.0	
	comp=Z,2.9nm,0.9s						
TBI	**Tubuai**	**38.46**	**72**	*e*LR	LR	08 48 39.4	
	comp=Z,403nm,26.8s						
PPT2	**Papeete2**	**42.33**	**65**	*e*LR	LR	08 50 24.5	
	comp=Z,72nm,23.2s						
PPT2				*e*LR	LR	08 50 28.7	
	comp=Z,94nm,23.5s						
NWAO	**Narrogin (SRO)**	**42.53**	**266**	LR	LR	08 52 03.0	
	comp=Z,61nm,21.4s,baz=52,slow=30						
QSPA	**South Pole Qui**	**46.84**	**180**	P	**P**	**08 39 28.4**	**+3.1**
QSPA	**South Pole Qui**	**46.84**	**180**	P	**P**	**08 39 28.6**	**+3.4**
	comp=Z,1.8nm,0.6s,baz=316,slow=1.3,SNR=18						
QSPA				LR	LR	08 56 11.5	
	comp=Z,81nm,21.1s,baz=38,slow=32						
	comp=Z,1.8nm,0.6s						
TAOE	**Nuku Hiva Isla**	**54.93**	**66**	*e*LR	LR	08 56 16.9	
	comp=Z,229nm,29.3s						
CMAR	**Chiang Mai Arr**	**89.75**	**296**	LR	LR	09 26 35.4	
	comp=Z,7.5nm,20.7s,baz=350,slow=37						
ASAJ	**Asahikawa**	**90.52**	**340**	LR	LR	09 20 57.2	
	comp=Z,13nm,19.4s,baz=132,slow=33						
PETK	**Petropavlovsk-**	**96.65**	**352**	LR	LR	09 22 10.5	
	comp=Z,29nm,19.1s,baz=121,slow=32						
LPIG	**La Paz**	**98.76**	**65**	LR	LR	09 20 54.9	
	comp=Z,36nm,19.4s,baz=216,slow=30						
HHC	**Hu-ho-hao-te**	**99.16**	**319**	*e*P	**Pdif**	**08 44 37.4**	**+0.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,71nm,3.9s						
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,89nm,3.7s						
BRTR	**Keskin Array B**	**147.76**	**279**	PKPbc	**PKPbc**	**08 50 40.5**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=141,slow=4.7,SNR=8.4						
ARCES	**ARCESS Array B**	**148.20**	**337**	PKPbc	**PKPbc**	**08 50 39.6**	**-0.7**
	comp=Z,4.7nm,0.8s,baz=60,slow=4.8,SNR=6.8						
TORD	**Torodi Ar. Bea**	**148.45**	**201**	PKPbc	**PKiKP**	**08 50 44.6**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=156,slow=3.0,SNR=12						
FINES	**FINESS Array B**	**152.19**	**323**	PKPbc	**PKPbc**	**08 50 50.6**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=18,slow=2.1,SNR=6.5						
AKASG	**Malin Array Be**	**152.81**	**299**	PKPbc	**PKiKP**	**08 50 52.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=69,slow=1.6,SNR=1.5						

IDC ***10*** *08:33:16.3±1.7, 55˚.61N×149˚.22W, h0km, mb3.9/2, mbtmp3.8/7, ML3.4/5, MS2.8/2, Error ellipse: s-maj=31.3km s-min=28.5km az=175.0*

NEIC ***10*** *08:33:18.8±1.4, 55˚.83N±0˚.05×149˚.39W±0˚.09, h8km±6km, mb4.1/3, ML4.1/40, ML3.8(AEIC), Error ellipse: s-maj=8.8km s-min=5.2km az=223.0*

AEIC ***10*** *08:33:23.5±1.8, 55˚.80N±0˚.08×149˚.4W±0˚.1, h22km±7km, Error ellipse: s-maj=11.5km s-min=8.3km az=165.0*

ISC 10 08:33:18.6±0.8, 55˚.89N±0˚.07×149˚.34W±0˚.05, h10km, n250, σ1ϟ48/259, mb4.2/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.56**	**303**	Pn	**Pn**	**08 34 00.2**	**0.0**
OHAK	**Old Harbor**	**2.56**	**303**		**Sn**	**08 34 29.8**	**-1.6**
OHAK	**Old Harbor**	**2.56**	**303**	P	**Pn**	**08 34 00.6**	**+0.5**
OHAK	**Old Harbor**	**2.56**	**303**	P	**Pn**	**08 34 00.7**	**+0.5**
	baz=122						
OHAK				S	**Sn**	**08 34 29.8**	**-1.6**
	baz=122						
KDAK	**Kodiak Island**	**2.60**	**318**	Pn	**Pn**	**08 34 01.6**	**+0.9**
KDAK	**Kodiak Island**	**2.60**	**318**		**Sn**	**08 34 30.9**	**-1.4**
KDAK	**Kodiak Island**	**2.60**	**318**	S	**Sn**	**08 34 30.9**	**-1.4**
	baz=137						
KDAK	**Kodiak Island**	**2.60**	**318**	Pn	**Pn**	**08 34 01.6**	**+0.9**
	3.6nm,0.3s,baz=141,slow=6.5,SNR=42					

BGLC	Bering Glacier	5.32	35		Pn	08 34 39.0	+1.1
BGLC	Bering Glacier baz=219	5.32	35	P	Pn	08 34 39.1	+1.1
BERG	Berg Lake	5.41	31		Pn	08 34 39.8	+0.5
GRIN	Grindle Hills	5.43	33		Pn	08 34 40.9	+1.2
SNH	Sunshine Point	5.51	36		Pn	08 34 41.7	+1.0
N20K	Mount Spurr baz=163	5.53	345	P	Pn	08 34 41.6	+0.6
SPCR	Spurr Chakacha	5.53	345		Pn	08 34 41.6	+0.6
SPCN	Chakachatna No	5.55	346		Pn	08 34 43.0	+1.7
KNK	Knik Glacier	5.56	4		Pn	08 34 42.2	+0.9
KNK	Knik Glacier baz=185	5.56	4	P	Pn	08 34 42.2	+0.9
CYK	Cape Yakataga	5.56	38		Pn	08 34 42.8	+1.5
DIV	Divide	5.58	18		Pn	08 34 42.5	+0.9
KHIT	Khitrov Hills	5.58	33		Pn	08 34 42.7	+1.0
SPCP	Crater Peak Br	5.59	346		Pn	08 34 42.9	+1.1
N19K	Bonanza Creek	5.63	333		Pn	08 34 42.6	+0.2
N19K	Bonanza Creek baz=150	5.63	333	P	Pn	08 34 42.6	+0.2
SUA	Susitna One	5.64	353		Pn	08 34 43.0	+0.5
SUA	Susitna One baz=172	5.64	353	P	Pn	08 34 43.0	+0.5
BMRM	Bremner River	5.66	24		Pn	08 34 43.9	+1.1
BMRM	Bremner River baz=207	5.66	24	P	Pn	08 34 44.1	+1.3
WAX	Waxell Ridge	5.71	34		Pn	08 34 44.6	+1.1
PMR	Palmer	5.72	1		Pn	08 34 44.6	+1.1
PMR	Palmer	5.72	1	P	Pn	08 34 45.2	+1.8
PMR	Palmer baz=181	5.72	1	P	Pn	08 34 44.6	+1.1
S14K	Fog Glacier baz=91	5.74	278	P	Pn	08 34 42.7	-1.1
VNFG	Fog Glacier, M	5.74	278		Pn	08 34 42.7	-1.1
SPNN	North Nagishla	5.76	344		Pn	08 34 45.6	+1.3
STLK	Strandline Lak	5.77	348		Pn	08 34 44.7	+0.4
BARK	Barkley Ridge	5.79	36		Pn	08 34 45.9	+1.3
MESA	MESA	5.82	39		Pn	08 34 46.5	+1.5
MESA	MESA baz=224	5.82	39	P	Pn	08 34 46.2	+1.2
CRQM	Cirque	5.87	31		Pn	08 34 46.3	+0.6
CRQE	Cirque baz=216	5.88	31	P	Pn	08 34 46.3	+0.6
KLU	Klutina	5.89	16		Pn	08 34 47.2	+1.2
KLU	Klutina baz=198	5.89	16	P	Pn	08 34 47.1	+1.1
GHO	Glory Hole Cre	5.90	2	Pn	Pn	08 34 47.7	+1.7
N18K	Kilae Creek	5.92	327		Pn	08 34 46.4	+0.2
N18K	Kilae Creek baz=142	5.92	327	P	Pn	08 34 46.4	+0.2
CHNA	Chernabura Isl baz=77	5.95	264	P	Pn	08 34 45.4	-1.2
CNBA	Chernabura Isl	5.95	264		Pn	08 34 45.4	-1.2
SML	Sawmill	5.96	5		Pn	08 34 48.1	+1.3
SML	Sawmill baz=185	5.96	5	P	Pn	08 34 48.1	+1.3
M23K	Glacier View	5.98	7		Pn	08 34 48.7	+1.6
M23K	Glacier View baz=188	5.98	7	P	Pn	08 34 48.7	+1.6
BAGL	Bagley Icefiel	5.99	37		Pn	08 34 48.6	+1.4
ISLE	Juniper Island	5.99	35		Pn	08 34 49.0	+1.6
SCM	Sheep Creek Mo	6.05	9		Pn	08 34 49.7	+1.6
SCM	Sheep Creek Mo baz=190	6.05	9	P	Pn	08 34 49.5	+1.4
VRDI	Verde Repeater	6.17	27		Pn	08 34 50.7	+0.8
SKT	Skwentna	6.21	350		Pn	08 34 51.6	+1.3
SKT	Skwentna baz=168	6.21	350	P	Pn	08 34 51.6	+1.3
SAMH	Samovar Hills	6.22	43		Pn	08 34 52.1	+1.7
KIAG	Kiagna River	6.24	33		Pn	08 34 51.9	+1.2
N25K	Chitina, Valde	6.24	21		Pn	08 34 51.9	+1.2
N25K	Chitina, Valde baz=205	6.24	21	P	Pn	08 34 51.9	+1.2
GLB	Gilahina Butte	6.27	25		Pn	08 34 52.2	+1.2
TABL	Table Mountain	6.29	40		Pn	08 34 52.9	+1.4
M20K	Styx River	6.32	343		Pn	08 34 52.3	+0.5
M20K	Styx River baz=160	6.32	343	P	Pn	08 34 52.3	+0.5
YKU2	Yakutat	6.32	51	P	Pn	08 34 53.5	+1.8
SDPT	Sand Point	6.34	270		Pn	08 34 52.2	+0.2
SDPT	Sand Point	6.34	270	P	Pn	08 34 52.6	+0.7
SDPT	Sand Point baz=82	6.34	270	P	Pn	08 34 52.2	+0.2
PCA	Pinnacle	6.41	45		Pn	08 34 54.2	+1.2
PINM	Pinnacle baz=232	6.41	45	P	Pn	08 34 54.4	+1.4
PTPK	Patty Peak	6.41	31		Pn	08 34 54.6	+1.4
MCARA	McCarthy VSAT	6.42	28		Pn	08 34 54.9	+1.9
MCARA	McCarthy VSAT baz=213	6.42	28	P	Pn	08 34 55.0	+1.9
M24K	Tolsona, Glenn	6.44	13		Pn	08 34 55.7	+2.2
M24K	Tolsona, Glenn baz=196	6.44	13	P	Pn	08 34 55.4	+1.9
PNL	Peninsula	6.52	50		Pn	08 34 55.8	+1.2
PNL	Peninsula	6.52	50	P	Pn	08 34 56.3	+1.8
PNL	Peninsula baz=238	6.52	50	P	Pn	08 34 55.8	+1.2
O15K	Ungalikthiuk R	6.54	305		Pn	08 34 56.3	+1.6
O15K	Ungalikthiuk R baz=117	6.54	305	P	Pn	08 34 56.3	+1.6
M18K	Stony River	6.55	332		Pn	08 34 55.3	+0.4
M18K	Stony River baz=147	6.55	332	P	Pn	08 34 55.3	+0.4
BARN	Barnard Glacie	6.56	35		Pn	08 34 56.2	+1.0
M19K	Big River Lodg	6.57	339		Pn	08 34 56.5	+1.3
M19K	Big River Lodg baz=155	6.57	339	P	Pn	08 34 56.5	+1.3
BCPM	Bancas Point	6.58	48		Pn	08 34 56.4	+1.2
CTG	Chitna Glacier baz=222	6.59	36	P	Pn	08 34 56.9	+1.3
CTGM	Chitina Glacie	6.59	36		Pn	08 34 56.5	+0.9
LOGN	Logan Glacier	6.61	38		Pn	08 34 57.1	+1.3
WASW	Wrangell South	6.62	22		Pn	08 34 57.5	+1.5
WACK	Wrangell Chich	6.64	21		Pn	08 34 58.2	+1.9
WAT6	Susitna Watana	6.76	6		Pn	08 34 59.2	+1.3
WAT6	Susitna Watana baz=187	6.76	6	P	Pn	08 34 59.2	+1.3
L19K	White Mountain	6.92	338		Pn	08 35 00.7	+0.7
L19K	White Mountain baz=154	6.92	338	P	Pn	08 35 01.2	+1.2
M17K	Holitna River	6.95	326		Pn	08 35 01.3	+0.9
M17K	Holitna River baz=140	6.95	326	P	Pn	08 35 01.3	+0.9
WAT1	Susitna Watana	6.97	3		Pn	08 35 02.4	+1.7
WAT1	Susitna Watana baz=183	6.97	3	P	Pn	08 35 02.3	+1.7
PPLA	Purkeypile	7.18	349		Pn	08 35 05.6	+2.0
PPLA	Purkeypile baz=167	7.18	349	P	Pn	08 35 05.6	+2.0
O29M	Mount Kennedy	7.21	48		Pn	08 35 05.8	+1.7
O29M	Mount Kennedy baz=236	7.21	48	P	Pn	08 35 05.8	+1.7
P29M	Windy Craggy	7.25	54		Pn	08 35 05.8	+1.4
P29M	Windy Craggy baz=243	7.25	54	P	Pn	08 35 05.3	+0.9
DHY	Denali Highway	7.28	7	Pn	Pn	08 35 07.5	+2.5
DHY	Denali Highway baz=188	7.28	7	P	Pn	08 35 06.6	+1.7
YUK8	Steele Glacier	7.36	39		Pn	08 35 08.7	+2.5
YUK8	Steele Glacier baz=226	7.36	39	P	Pn	08 35 08.7	+2.5
PAX	Paxson	7.37	14		Pn	08 35 08.1	+1.9
PAX	Paxson baz=197	7.37	14	P	Pn	08 35 08.5	+2.3
YUK2	White River	7.37	33		Pn	08 35 08.3	+2.1
L18K	Granite Mounta	7.39	332		Pn	08 35 07.0	+0.6
S31K	Pelican	7.46	68		Pn	08 35 06.4	-1.0
S31K	Pelican baz=258	7.46	68	P	Pn	08 35 06.0	-1.3
YUK3	Moose Creek	7.48	34		Pn	08 35 09.8	+2.0
YUK3	Moose Creek baz=221	7.48	34	P	Pn	08 35 09.8	+2.0
YUK7	Dusty Glacier	7.52	47		Pn	08 35 10.5	+2.1
M27K	Edge Creek, AK	7.53	28		Pn	08 35 10.7	+2.2
M27K	Edge Creek, AK baz=213	7.53	28	P	Pn	08 35 10.6	+2.2
RND	Reindeer	7.54	2		Pn	08 35 10.0	+1.4
TRF	Thorofare Moun	7.60	357		Pn	08 35 11.2	+1.8
TRF	Thorofare Moun baz=176	7.60	357	P	Pn	08 35 11.6	+2.2
MENT	Mentasta	7.62	20		Pn	08 35 11.7	+2.0
YUK6	Outpost Mounta	7.67	44		Pn	08 35 12.5	+2.1
YUK6	Outpost Mounta baz=233	7.67	44	P	Pn	08 35 12.5	+2.1
CAST	Castle Rocks	7.68	351		Pn	08 35 13.0	+2.6
CAST	Castle Rocks baz=168	7.68	351	P	Pn	08 35 12.8	+2.4
KTH	Kantishna Hill	7.73	355		Pn	08 35 13.5	+2.4
PLBC	Pleasant Camp	7.81	57		Pn	08 35 13.8	+1.6
P30M	Million Dollar	7.82	52		Pn	08 35 13.8	+1.4
P30M	Million Dollar baz=242	7.82	52	P	Pn	08 35 13.8	+1.4
TTA	Tatalina	7.83	337	P	Pn	08 35 13.8	+1.2
SIT	Sitka	7.85	76	P	Pn	08 35 10.9	-1.7
BVCY	Beaver Creek	7.85	30		Pn	08 35 15.7	+2.9
MCK	McKinley	7.87	1		Pn	08 35 15.1	+2.1
MCK	McKinley baz=182	7.87	1	P	Pn	08 35 15.3	+2.3
HYT	Haines Junctio	7.94	47	Pn	Pn	08 35 15.7	+1.6
BCAR	Beaver Creek A	8.15	25		Pn	08 35 18.2	+1.3
K17K	Iditarod	8.23	330		Pn	08 35 18.9	+1.0
K17K	Iditarod baz=143	8.23	330	P	Pn	08 35 18.9	+1.0
S32K	Killisnoo	8.28	73		Pn	08 35 17.3	-1.3
ISLZ	Isanotski Laza	8.29	268		Pn	08 35 18.6	-0.1
BESE	Bessie Mountai	8.30	65		Pn	08 35 18.9	-0.1
SKAG	Skagway	8.31	59		Pn	08 35 20.7	+1.7
SKAG	Skagway	8.31	59	P	Pn	08 35 21.2	+2.2
R32K	Eaglecrest	8.42	67		Pn	08 35 21.1	+0.6
SSLS	Shishaldin Sou	8.45	268		Pn	08 35 20.5	-0.5
JIS	Juneau Island	8.49	67		Pn	08 35 21.4	0.0
JIS	Juneau Island	8.49	67	P	Pn	08 35 21.7	+0.3
O30N	Mendenhall	8.51	49		Pn	08 35 23.2	+1.5
O30N	Mendenhall baz=240	8.51	49	P	Pn	08 35 22.4	+0.6
HDA	Harding Lake	8.63	7		Pn	08 35 24.8	+1.4
CCB	Clear Creek Bu	8.82	4		Pn	08 35 28.3	+2.4
WHY	Whitehorse	8.98	52	Pn	Pn	08 35 30.0	+1.7
IL31		8.99	7		Pn	08 35 30.6	+2.3
ILAR	Eielson Array comp=E,0.7nm,0.3s,baz=190,slow=14,SNR=27	8.99	7	Pn	Pn	08 35 29.8	+1.5
ILAR				Sn	Sn	08 37 05.3	-4.2
	comp=E,0.9nm,0.3s,baz=182,slow=20,SNR=14						
ILAR				LR	LR	08 39 11.6	
	comp=E,53nm,20.0s,baz=245,slow=38 comp=E,1.9nm,0.4s						
COLA	College	9.04	4	P	Pn	08 35 32.0	+3.0
MDM	Murphy Dome	9.12	3		Pn	08 35 32.8	+2.7
P32M	Atlin	9.13	60		Pn	08 35 31.4	+1.1
P32M	Atlin baz=252	9.13	60	P	Pn	08 35 31.7	+1.3
CRAG	Craig	9.17	86	P	Pn	08 35 29.3	-1.5
MLY	Manley baz=175	9.20	356	P	Pn	08 35 32.1	+0.9
M30M	Minto, Yukon	9.27	39		Pn	08 35 34.0	+1.7
M30M	Minto, Yukon baz=229	9.27	39	P	Pn	08 35 34.0	+1.7
I23K	Minto, Yukon-K	9.29	360		Pn	08 35 34.3	+1.9
P33M	Teslin, Yukon	9.76	57		Pn	08 35 40.2	+1.3
P33M	Teslin, Yukon baz=250	9.76	57	P	Pn	08 35 40.0	+1.1
M31M	Drury Creek, Y	9.95	44		Pn	08 35 43.6	+2.2
UNV	Unalaska Valle	10.11	265	P	Pn	08 35 43.3	-0.3
J29N	Klondike Camp	10.20	28		Pn	08 35 47.3	+2.4
FARO	Faro, Yukon	10.38	46		Pn	08 35 48.8	+2.4
R33M	Jennings River	10.44	63		Pn	08 35 49.0	+0.6
DLBC	Dease Lake	10.78	68		Pn	08 35 54.1	+1.1
DLBC	Dease Lake comp=E,0.4nm,0.3s,baz=270,slow=7.7,SNR=20	10.78	68	Pn	Pn	08 35 53.0	+0.1
DLBC				Sn	Sn	08 37 47.6	-6.0
	comp=E,0.1nm,0.3s,baz=251,slow=26,SNR=1.9						
DLBC				LR	LR	08 39 29.8	
	comp=E,52nm,21.5s,baz=277,slow=34 comp=E,2.2nm,0.5s						
J30M	Hart River	10.82	31		Pn	08 35 56.1	+2.6
G23K	Banana Creek	10.86	359		Pn	08 35 57.0	+3.0
I30M	Mount Dempster	11.29	29	Pn	Pn	08 36 03.2	+3.2
BMAR	Burnt Mountain	11.79	9	Pn	Pn	08 36 07.6	+0.9
F31M	Tsiigehtchic	13.69	26		Pn	08 36 33.7	+1.3
B21K	Ikpikpuk River	13.98	352	Pn	Pn	08 36 36.6	+0.2
INK	Inuvik comp=E,0.1nm,0.3s,baz=212,slow=10,SNR=14 comp=E,3.5nm,0.9s	14.41	24	Pn	Pn	08 36 44.0	+1.7
C36M	Paulatuk	17.59	30		Pn	08 37 23.6	+0.1
C36M				IAmb	IAmb	08 37 24.0	
	comp=Z,5.3nm,0.8s						
YKA	Yellowknife Ar	18.79	55	P	P	08 37 37.7	0.0
YKA	Yellowknife Ar comp=Z,0.1nm,0.3s,baz=261,slow=11,SNR=9.7 comp=Z,0.9nm,0.7s	18.79	55	P	P	08 37 38.4	+0.7
A36M	Sachs Harbour	19.05	23	P	Pn	08 37 42.0	+0.7
A36M				IAmb	IAmb	08 37 43.7	
	comp=Z,10nm,0.8s						
TCRU	Three Creeks R	29.95	110	P	P	08 39 30.2	+3.2
TCRU				IAmb	IAmb	08 39 45.1	
	comp=Z,4.7nm,0.5s						
ZALV	Zalesovo Beam comp=Z,0.4nm,0.5s,baz=46,slow=6.2,SNR=1.7 comp=Z,0.4nm,0.5s	61.87	327	P	P	08 43 38.9	+1.3
HHC	Hu-ho-hao-te	61.92	302	*e*P	P	08 43 38.4	+0.2
FINES	FINESS Array B comp=Z,1.7nm,0.9s,baz=12,slow=9.8,SNR=4.8 comp=Z,1.7nm,0.9s	62.95	2	P	P	08 43 44.2	-0.4
QSPA	South Pole Qui comp=Z,1.2nm,0.8s,baz=154,slow=0.9,SNR=5.3	145.68	180	PKPbc	PKPdf	08 52 54.2	-1.4

*NNC **10** 08:35:16.9±1.5, 50.97N×73.74E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=16.2km s-min=11.6km az=41.0, Suspected Mining explosion.*

*IDC **10** 08:35:18.4±0.9, 51.08N×73.68E, h0km, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=21.6km s-min=7.4km az=26.0*

ISC 10 08:35:15.8±0.8, **50.93N**±0.05×**73.61E**±0.05, **h0km, n25, σ2s53/20, 7C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
					Op		h m s	
OTUK	**Ortayu** 8.3nm,0.9s	**2.81**	**198**	⇑Pg		**Pg**	**08 36 05.9**	**-3.7**
OTUK				⇑Lg		Lg	08 36 48.0	
	22nm,0.7s							
BVA0	**Borovoye Array** 4.3nm,0.9s,baz=122,slow=16,SNR=17	**2.90**	**318**	⇑Pg		**Pg**	**08 36 08.8**	**-2.4**
BVA0				⇓Lg		Lg	08 36 53.5	
	17nm,0.7s,baz=119,slow=28,SNR=5.8							
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=136,slow=16,SNR=9.8	**2.90**	**318**	Pg		**Pb**	**08 36 08.1**	**-0.2**
BVAR				Lg		Lg	08 36 49.0	
	0.3nm,0.3s,baz=136,slow=28,SNR=12							
BRVK	**Borovoye** 5.1nm,0.9s	**2.97**	**317**	⇓Pg		**Pg**	**08 36 11.6**	**-0.9**
BRVK				⇑Lg		Lg	08 36 52.7	
	34nm,0.9s							
KURBB	**Kurchatov Arra** 6.5nm,0.5s	**3.14**	**94**	⇓Pg		**Pg**	**08 36 15.0**	**-0.8**
KURBB				⇓Lg		Lg	08 36 55.3	
	126nm,0.8s							
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=280,slow=14,SNR=21	**3.14**	**94**	Pn		**Pn**	**08 36 08.2**	**+1.8**
KURBB				Pg		**Pb**	**08 36 12.9**	**+0.6**
	0.4nm,0.3s,baz=281,slow=18,SNR=8.5							
KURBB				Lg		Lg	08 36 53.0	
	0.3nm,0.3s,baz=281,slow=15,SNR=7.5 2.3nm,0.6s							
KURK	**Kurchatov** 3.2nm,0.7s	**3.18**	**92**	⇓Pg		**Pb**	**08 36 13.1**	**-0.1**
KURK				⇑Lg		Lg	08 36 56.1	
	45nm,0.7s							
BTLS	**Baital** 1.2nm,0.3s	**5.89**	**177**	Pg		**Pb**	**08 37 01.7**	**+2.3**
BTLS				Lg		Lg	08 38 15.7	
	2.8nm,0.6s							
TDK	**Taldyqorghan** 25nm,0.1s	**6.74**	**150**	Pg		**Pg**	**08 37 22.5**	**-2.4**
TDK				Lg		Lg	08 38 50.7	
	36nm,0.4s							
MK31	**Makanchi Array** 9.5nm,0.8s,baz=321,slow=27,SNR=8.0	**7.06**	**122**	⇑Lg		Lg	08 39 02.5	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=307,slow=12,SNR=1.9	**7.06**	**122**	Pn		**Pn**	**08 37 03.1**	**+2.8**
MKAR				Pg		**Pb**	**08 37 20.6**	**+1.4**
	0.1nm,0.3s,baz=316,slow=17,SNR=2.5							
MKAR				Sn		**Sn**	**08 38 22.8**	**+1.5**
	0.1nm,0.3s,baz=271,slow=16,SNR=2.3							
MKAR				Lg		Lg	08 38 54.1	
	0.3nm,0.3s,baz=320,slow=26,SNR=8.3 0.4nm,0.8s							
KRBS	**Karabastau**	**7.37**	**168**	Pg		**Pg**	**08 37 32.1**	**-4.8**
	1.0nm,0.7s							
KRBS				Lg		Lg	08 39 07.2	
	9.0nm,1.0s							
I46RU	**ZALESOVO INFRA** baz=252,slow=341,SNR=1.2	**7.49**	**62**	I		I	09 18 00.0	
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=259,slow=15,SNR=2.3	**7.49**	**62**	Pn		**Pn**	**08 37 07.4**	**+1.3**
ZALV				Sn		**Sn**	**08 38 31.3**	**-0.4**
	0.1nm,0.3s,baz=62,slow=32,SNR=1.4 0.5nm,0.4s							
KTBS	**Karatobe** 1.0nm,0.6s	**7.51**	**163**	Pg		Pg	08 37 34.5	-5.1
KTBS				Lg		Lg	08 39 11.2	
	11nm,0.6s							
KNOS	**Konyrlen** 2.6nm,1.5s	**7.57**	**148**	Pg		**Pg**	**08 37 37.1**	**-3.6**
KNOS				Lg		Lg	08 39 16.7	
	6.9nm,0.7s							
DJR	**Jarkent** 0.4nm,0.2s	**7.80**	**145**	Pg		Pg	08 37 39.8	-5.3
DJR				Lg		Lg	08 39 20.9	
	5.8nm,0.8s							
DGS	**Degeres** 0.9nm,0.4s	**7.83**	**168**	Pg		Pg	08 37 38.8	-6.8
DGS				Lg		Lg	08 39 19.3	
	11nm,0.8s							
KOTS	**Kotyrbulak** 1.2nm,1.5s	**8.06**	**161**	Pg		Pg	08 37 44.7	-5.3
KOTS				Lg		Lg	08 39 29.0	
	18nm,0.9s							
KK31	**Karatay Array** 3.6nm,0.7s,baz=25,slow=22,SNR=6.0	**8.11**	**196**	⇑Lg		Lg	08 39 31.1	
ZSN	**Zaisan** 1.7nm,0.3s	**8.15**	**111**	Pg		Pb	08 37 44.5	+6.7
ZSN				Lg		Lg	08 39 29.3	
	8.1nm,0.5s							
IZV	**Izvestkoviy** 1.2nm,0.6s	**8.15**	**164**	Pg		Pg	08 37 46.5	-5.4
IZV				Lg		Lg	08 39 32.3	
	6.1nm,0.7s							
KPKS	**Kokpek** 1.0nm,0.5s	**8.22**	**153**	Pg		**Pg**	**08 37 48.8**	**-4.3**
KPKS				Lg		Lg	08 39 36.0	
	5.8nm,0.6s							
AAK	**Ala-Archa** 0.1nm,0.3s,baz=174,slow=22,SNR=1.9	**8.31**	**175**	Sn		**Sn**	**08 38 50.9**	**-1.3**
AAK				Lg		Lg	08 39 37.8	
	0.1nm,0.3s,baz=231,slow=20,SNR=5.0							
AKTO	**Aktyubinsk** 0.1nm,0.3s,baz=70,slow=15,SNR=2.1	**9.91**	**273**	Pn		**Pn**	**08 37 41.1**	**+1.7**
AKTO				Lg		Lg	08 40 31.0	
	0.1nm,0.3s,baz=233,slow=10.0,SNR=2.7 0.6nm,0.5s							

*JMA **10** 08:42:57.1±0.1, 24.0N±0.3×12.2E±, h3km, TAIWAN REGION*

*ASIES **10** 08:42:57.4, 23.97N×121.60E, h8km, ML3.6, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.41; Mθθ-0.09; Mφφ-0.32; Mrθ0.59; Mrφ-0.17; Mθφ1.12; Fault plane solution: M₀1.33064×10²¹ NP1:φ₁2.67800°, δ81.04000°, λ89.99000°. NP2:φ₂207.72000°, δ8.96000°, λ90.04000°. Principal axes: T Plg53.9600°, Azm297.6720°; N Plg0.0060°, Azm27.6800°; P Plg36.0400°, Azm117.6850°;*

*TAP **10** 08:42:57.4, 23.97N×121.60E, h8km, ML3.6, B*

ISC 10 08:42:57.6±0.8, **23.97N**±0.01×**121.61E**±0.02, **h9km**±4km, **n111, σ0s79/215, 3C-40D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
					Op		h m s	
HWA	**Hwalien** baz=82	**0.01**	**328**	⇓*i*P		**Pg**	**08 42 59.3**	**+0.1**
HWA				*i* S		**Sg**	**08 43 00.7**	**+0.4**
	baz=82							
ETM	**Tongmen** baz=266	**0.11**	**268**	⇓*i*P		**Pg**	**08 43 00.1**	**-0.1**
ETM				*i* S		**Sg**	**08 43 01.8**	**-0.2**
	baz=266							
TWD	**Chiawan** baz=4.0	**0.11**	**353**	⇓*i*P		**Pg**	**08 43 00.3**	**+0.1**
TWD				*i* S		**Sg**	**08 43 02.2**	**+0.2**
	baz=4.0							
LXIB	**Xiulin Townshi** baz=280	**0.19**	**286**	⇓*i*P		**Pg**	**08 43 01.5**	**-0.1**
LXIB				*i* S		**Sg**	**08 43 04.7**	**+0.4**
	baz=280							
SHUL	**Shoufeng** baz=197	**0.19**	**193**	⇓*i*P		**Pg**	**08 43 02.1**	**+0.6**
SHUL				*e*S		**Sg**	**08 43 05.8**	**+1.6**
	baz=197							
ETL	**Fush Village** baz=7.0	**0.19**	**4**	⇓*i*P		**Pg**	**08 43 01.6**	**0.0**
ETL				*i* S		**Sg**	**08 43 04.4**	**+0.1**
	baz=7.0							
NACB	**Ninganchiao** baz=5.0	**0.20**	**356**	⇓*i*P		**Pg**	**08 43 01.8**	**0.0**
NACB				*i* S		**Sg**	**08 43 04.7**	**0.0**
	baz=5.0							
ESL	**Shilin** baz=229	**0.22**	**226**	⇓*i*P		**Pg**	**08 43 01.9**	**-0.3**
ESL				*i* S		**Sg**	**08 43 05.1**	**-0.2**
	baz=229							
ETLH	**Xiulin Townshi** baz=335	**0.26**	**334**	⇓*i*P		**Pg**	**08 43 03.0**	**0.0**
ETLH				*i* S		**Sg**	**08 43 06.6**	**0.0**
	baz=335							
TEGC	**Jichi Village** baz=197	**0.27**	**194**	*i* P		**Pb**	**08 43 04.0**	**-0.6**
TEGC				*e*S		**Sb**	**08 43 09.7**	**+0.3**
	baz=197							
WARBT	**Fenglin Townsh** baz=227	**0.32**	**219**	⇓*i*P		**Pg**	**08 43 03.8**	**-0.3**
WARBT				*i* S		**Sg**	**08 43 07.9**	**-0.5**
	baz=227							
EGFH	**Guangfu** baz=217	**0.34**	**209**	⇓*i*P		**Pg**	**08 43 04.3**	**-0.1**
EGFH				*e*S		**Sb**	**08 43 10.0**	**-1.5**
	baz=217							
EHP	**Heping Village** baz=22	**0.36**	**19**	*e*P		**Pg**	**08 43 05.1**	**+0.3**
EHP				*e*S		**Sg**	**08 43 10.1**	**+0.6**
	baz=22							
WHF	**Hehuan Shan** baz=300	**0.36**	**299**	⇓*i*P		**Pg**	**08 43 04.8**	**-0.1**
WHF				*i* S		**Sg**	**08 43 10.2**	**+0.5**
	baz=300							
EAHA	**Aohua** baz=27	**0.38**	**18**	⇓*i*P		**Pg**	**08 43 04.9**	**-0.1**
EAHA				S		**Sg**	**08 43 10.2**	**+0.1**
	baz=27							
OWD	**Renai** baz=278	**0.40**	**268**	⇓*i*P		**Pg**	**08 43 05.6**	**+0.1**
OWD				*i* S		**Sg**	**08 43 11.3**	**+0.

NNSB	**Datong** baz=336	**0.50**	**336**	⇓*i*P	**Pb**	**08 43 07.7**	**-1.0**
NNSB				S	**Sg**	**08 43 14.2**	**+0.2**
NNSH	**Datong** baz=336	**0.50**	**336**	P	**Pb**	**08 43 07.7**	**-1.0**
NNSH				S	**Sg**	**08 43 14.1**	**+0.1**
HGSD	**Ruisui** baz=213	**0.51**	**200**	*e*P	**Pb**	**08 43 08.2**	**-0.5**
HGSD				*e*S	**Sb**	**08 43 15.5**	**-0.7**
NNS	**Nan Shan** baz=336	**0.52**	**335**	⇓*e*P	**Pg**	**08 43 07.9**	**+0.2**
NNS				*e*S	**Sg**	**08 43 14.7**	**+0.2**
EHY	**Hungye** baz=219	**0.53**	**210**	⇓*i*P	**Pg**	**08 43 07.7**	**-0.3**
EHY				*e*S	**Sg**	**08 43 15.3**	**+0.4**
LATG	**Datong** baz=353	**0.57**	**352**	⇓*i*P	**Pg**	**08 43 08.7**	**0.0**
LATG				S	**Sb**	**08 43 16.8**	**-1.3**
WPL	**Puli Township** baz=275	**0.60**	**274**	⇓P	**Pb**	**08 43 09.8**	**-0.5**
WPL				*e*S	**Sb**	**08 43 18.6**	**-0.3**
SSLB	**Suanglung** baz=266	**0.63**	**253**	⇓*i*P	**Pb**	**08 43 09.9**	**-1.0**
SSLB				S	**Sg**	**08 43 17.5**	**-0.5**
DPDB	**Guoxing** baz=276	**0.63**	**276**	⇓P	**Pb**	**08 43 10.4**	**-0.5**
DPDB				*e*S	**Sb**	**08 43 19.8**	**0.0**
NDT	**Datong Townshi** baz=352	**0.64**	**352**	⇓*i*P	**Pb**	**08 43 10.2**	**-0.7**
NDT				*e*S	**Sb**	**08 43 19.0**	**-1.0**
ESAO	**Su ao** baz=20	**0.64**	**19**	P	**Pg**	**08 43 09.9**	**-0.1**
ESAO				S	**Sg**	**08 43 19.0**	**+0.6**
YULB	**Yu-li** baz=217	**0.64**	**207**	P	**Pg**	**08 43 09.7**	**-0.3**
YULB				*e*S	**Sb**	**08 43 19.3**	**-0.9**
WCS	**Beigang Elemen** baz=278	**0.64**	**278**	⇓*i*P	**Pb**	**08 43 10.6**	**-0.5**
WCS				*e*S	**Sb**	**08 43 20.2**	**0.0**
SMLT	**Sun Moon Lake** baz=263	**0.66**	**263**	⇓P	**Pb**	**08 43 10.7**	**-0.7**
SMLT				*e*S	**Sb**	**08 43 20.1**	**-0.5**
EOS4	**EOS4** baz=85	**0.67**	**77**	P	**Pb**	**08 43 11.4**	**+0.2**
EOS4				*e*S	**Sb**	**08 43 21.2**	**+0.8**
ECBN	**Changbin** baz=182	**0.67**	**193**	*e*P	**Pn**	**08 43 12.6**	**-0.7**
ECBN				*e*S	**Sn**	**08 43 23.8**	**-0.1**
ENTT	**Nioudou** baz=357	**0.67**	**357**	⇓*i*P	**Pb**	**08 43 10.8**	**-0.7**
ENTT				S	**Sb**	**08 43 20.3**	**-0.7**
NDS	**Dongshan** baz=9.0	**0.67**	**8**	P	**Pg**	**08 43 10.7**	**+0.2**
NDS				*e*S	**Sb**	**08 43 20.1**	**-0.8**
TWC	**Suao** baz=11	**0.67**	**19**	P	**Pg**	**08 43 10.7**	**+0.1**
TWC				*e*S	**Sb**	**08 43 20.4**	**-0.7**
EYUL	**Yuli** baz=216	**0.68**	**203**	*e*P	**Pg**	**08 43 10.7**	**0.0**
EYUL				*e*S	**Sb**	**08 43 21.4**	**+0.3**
TWF1	**Yuli** baz=217	**0.68**	**205**	*e*P	**Pg**	**08 43 10.3**	**-0.5**
TWF1				*e*S	**Sb**	**08 43 21.3**	**+0.1**
WHP	**Taichung City** baz=288	**0.68**	**297**	⇓*e*P	**Pb**	**08 43 12.0**	**+0.2**
WHP				*e*S	**Sb**	**08 43 21.9**	**+0.6**
TYC	**Yuchr** baz=265	**0.69**	**265**	⇓P	**Pb**	**08 43 11.2**	**-0.7**
TYC				*e*S	**Sb**	**08 43 20.9**	**-0.6**
EOS3	**EOS3** baz=59	**0.72**	**64**	*e*P	**Pn**	**08 43 13.5**	**-0.4**
EOS3				*e*S	**Sn**	**08 43 25.4**	**+0.4**
EOS2	**EOS2** baz=34	**0.72**	**52**	*e*P	**Pn**	**08 43 14.3**	**+0.3**
YHNB	**Yeheng** baz=343	**0.73**	**343**	⇓*e*P	**Pb**	**08 43 12.1**	**-0.5**
YHNB				*e*S	**Sg**	**08 43 21.2**	**-0.1**
NSK	**Sanguang** baz=343	**0.74**	**342**	*e*P	**Pb**	**08 43 12.3**	**-0.5**
NSK				*e*S	**Sb**	**08 43 22.0**	**-1.0**
WHYT	**Xinyi Township** baz=249	**0.74**	**249**	*e*P	**Pb**	**08 43 12.2**	**-0.7**
WHYT				*e*S	**Sb**	**08 43 22.4**	**-0.8**
TWE	**Neicheng** baz=5.0	**0.75**	**4**	⇓*e*P	**Pb**	**08 43 12.4**	**-0.5**
TWE				*e*S	**Sb**	**08 43 22.5**	**-0.7**
FUSB	**Fushanzhiwuyua** baz=359	**0.79**	**359**	*e*P	**Pb**	**08 43 13.1**	**-0.5**
FUSB				*e*S	**Sb**	**08 43 24.0**	**-0.4**
NFF	**Wufeng Townshi** baz=326	**0.80**	**326**	⇓*e*P	**Pb**	**08 43 13.6**	**-0.1**
NFF				*e*S	**Sb**	**08 43 24.1**	**-0.6**
CHKH	**Chenggong** baz=186	**0.80**	**194**	*e*P	**Pb**	**08 43 13.8**	**+0.1**
CHKH				*e*S	**Sn**	**08 43 26.2**	**-1.0**
NWLT	**Wulai** baz=353	**0.81**	**353**	*e*P	**Pb**	**08 43 13.6**	**-0.4**
NWLT				*e*S	**Sg**	**08 43 23.8**	**0.0**
FULB	**Fuli** baz=217	**0.82**	**201**	*e*P	**Pb**	**08 43 14.1**	**0.0**
FULB				*e*S	**Sn**	**08 43 27.5**	**-0.2**
WJS	**Zhushan** baz=261	**0.82**	**260**	*e*P	**Pn**	**08 43 14.4**	**-1.0**
WJS				*e*S	**Sn**	**08 43 27.4**	**-0.3**
WWF	**Wufeng** baz=281	**0.84**	**275**	*e*P	**Pn**	**08 43 15.9**	**+0.3**
TWQ1	**Liyutan** baz=297	**0.85**	**296**	*e*P	**Pn**	**08 43 15.5**	**-0.4**
TWQ1				*e*S	**Sn**	**08 43 28.2**	**-0.3**
WNT	**Mingjian** baz=265	**0.85**	**264**	*e*P	**Pn**	**08 43 15.2**	**-0.6**
WNT				*e*S	**Sn**	**08 43 28.2**	**-0.3**
WNT1	**Nantou City** baz=267	**0.85**	**266**	*e*P	**Pn**	**08 43 15.9**	**0.0**
WNT1				*e*S	**Sn**	**08 43 29.8**	**+1.3**
NSTT	**Nanjuang** baz=320	**0.86**	**320**	*e*P	**Pn**	**08 43 15.2**	**-0.8**
NSTT				*e*S	**Sb**	**08 43 26.9**	**+0.5**
LIOB	**Emei** baz=321	**0.86**	**321**	*e*P	**Pn**	**08 43 15.3**	**-0.7**
LIOB				*e*S	**Sb**	**08 43 27.0**	**+0.5**
ALS	**Alishan** baz=240	**0.87**	**238**	⇓*e*P	**Pb**	**08 43 14.7**	**-0.4**
ALS				*e*S	**Sb**	**08 43 26.9**	**0.0**
TCU	**Taichung** baz=277	**0.87**	**282**	*e*P	**Pn**	**08 43 15.6**	**-0.5**
NSY	**Sanyi** baz=300	**0.89**	**300**	*e*P	**Pn**	**08 43 16.5**	**+0.1**
NSY				*e*S	**Sn**	**08 43 29.0**	**-0.5**
CHKT	**Chengkung** baz=185	**0.90**	**195**	*e*P	**Pb**	**08 43 15.2**	**-0.2**
CHKT				*e*S	**Sn**	**08 43 28.9**	**-0.7**
EHD	**Haiduan** baz=217	**0.90**	**204**	⇑*e*P	**Pg**	**08 43 14.7**	**-0.2**
EHD				*e*S	**Sn**	**08 43 28.6**	**-1.0**
CHN5	**Tsauling** baz=237	**0.93**	**247**	⇓*e*P	**Pn**	**08 43 16.4**	**-0.6**
CHN5				*e*S	**Sn**	**08 43 30.6**	**+0.1**
NMLH	**Miaoli** baz=307	**0.94**	**307**	*e*P	**Pn**	**08 43 17.5**	**+0.5**
NMLH				*e*S	**Sn**	**08 43 30.3**	**-0.3**
ELDTW	**Lidau** baz=208	**0.95**	**215**	*e*P	**Pg**	**08 43 15.2**	**-0.7**
ELDTW				*e*S	**Sb**	**08 43 29.3**	**+0.2**
WCHH	**Zhanghua** baz=277	**0.97**	**277**	*e*P	**Pn**	**08 43 17.0**	**-0.4**
WCHH				*e*S	**Sn**	**08 43 33.7**	**+2.4**
NHDH	**Xindian Distri** baz=356	**0.99**	**356**	*e*P	**Pn**	**08 43 17.4**	**-0.4**
NHDH				*e*S	**Sb**	**08 43 30.0**	**-0.2**
SBCB	**Hsinchu** baz=324	**1.00**	**325**	*e*P	**Pn**	**08 43 18.6**	**+0.7**
WGK	**Gukeng** baz=256	**1.00**	**254**	*e*P	**Pn**	**08 43 19.0**	**+1.1**
WGK				*e*S	**Sn**	**08 43 33.4**	**+1.3**
TWA	**Mucha** baz=348	**1.01**	**359**	⇑*e*P	**Pn**	**08 43 17.6**	**-0.4**
TWA				*e*S	**Sg**	**08 43 29.8**	**-0.3**
TATO	**Taipei** baz=354	**1.01**	**354**	*e*P	**Pn**	**08 43 17.7**	**-0.3**
TATO				*e*S	**Sb**	**08 43 30.4**	**-0.3**
HSN	**Hsinchu** baz=328	**1.01**	**325**	*e*P	**Pn**	**08 43 19.4**	**+1.4**
HSN				*e*S	**Sn**	**08 43 33.1**	**+0.7**
TIPB	**Shuangxi** baz=2.0	**1.02**	**11**	*e*P	**Pb**	**08 43 17.2**	**-0.2**
TIPB				*e*S	**Sb**	**08 43 30.5**	**-0.5**
WDLH	**Douliu** baz=256	**1.02**	**254**	*e*P	**Pn**	**08 43 18.7**	**+0.5**
WDLH				*e*S	**Sn**	**08 43 33.5**	**+0.9**
WCKO	**Fanlu** baz=238	**1.06**	**240**	*e*P	**Pn**	**08 43 18.8**	**0.0**
WCKO				*e*S	**Sn**	**08 43 35.0**	**+1.3**
TWB1	**Santiao Chiao** baz=10.0	**1.09**	**18**	*e*P	**Pn**	**08 43 19.2**	**0.0**
TWB1				*e*S	**Sb**	**08 43 33.1**	**0.0**
STYH	**Taoyuan** baz=231	**1.10**	**224**	*e*P	**Pn**	**08 43 18.8**	**-0.5**
STYH				*e*S	**Sn**	**08 43 33.8**	**-0.9**
NWF	**Wu-fen Shan** baz=8.0	**1.11**	**8**	*e*P	**Pn**	**08 43 19.4**	**0.0**
NWF				*e*S	**Sb**	**08 43 33.9**	**+0.2**
WFSB	**Wu-fen Shan** baz=8.0	**1.11**	**8**	*e*P	**Pn**	**08 43 19.5**	**+0.1**
WFSB				*e*S	**Sb**	**08 43 33.7**	**+0.1**
TPUB	**Ta-pu** baz=236	**1.12**	**234**	*e*P	**Pn**	**08 43 19.6**	**+0.1**
TPUB				*e*S	**Sn**	**08 43 35.8**	**+0.7**
STYT	**Tauyuan** baz=231	**1.12**	**224**	*e*P	**Pn**	**08 43 19.5**	**-0.2**
STYT				*e*S	**Sn**	**08 43 36.0**	**+0.7**
WRL	**Guolierlin Hig** baz=268	**1.13**	**267**	*e*P	**Pn**	**08 43 20.0**	**+0.3**
WRL				*e*S	**Sn**	**08 43 36.4**	**+1.1**
TWS1	**Kuangyinshan** baz=360	**1.14**	**351**	*e*P	**Pn**	**08 43 21.0**	**+1.2**
TWS1				*e*S	**Sn**	**08 43 37.0**	**+1.4**
SXI1	**Grass Mountain** baz=2.0	**1.15**	**12**	*e*P	**Pn**	**08 43 20.3**	**+0.3**
SXI1				*e*S	**Sn**	**08 43 35.6**	**-0.2**
LONT	**Longtian** baz=207	**1.15**	**203**	*e*P	**Pg**	**08 43 19.0**	**-0.7**
RLNB	**Erlin** baz=268	**1.15**	**266**	*e*P	**Pn**	**08 43 20.7**	**+0.8**
RLNB				*e*S	**Sn**	**08 43 37.3**	**+1.6**
WTK	**Tuku** baz=258	**1.15**	**256**	*e*P	**Pn**	**08 43 20.9**	**+1.0**
WTK				*e*S	**Sn**	**08 43 35.9**	**0.0**
WTP	**Ta-pu** baz=238	**1.16**	**232**	*e*P	**Pn**	**08 43 20.5**	**+0.3**
WTP				*e*S	**Sn**	**08 43 36.8**	**+0.5**
YM01	**YM01** baz=7.0	**1.17**	**358**	*e*P	**Pn**	**08 43 21.1**	**+0.8**
YM01				*e*S	**Sn**	**08 43 36.8**	**+0.3**
TWK	**Hsinying** baz=238	**1.25**	**236**	*e*P	**Pg**	**08 43 22.0**	**+0.4**
TWK				*e*S	**Sn**	**08 43 39.7**	**+1.4**
TWG	**Pinlang** baz=214	**1.25**	**203**	*e*P	**Pb**	**08 43 21.2**	**-0.2**
TWG				*e*S	**Sn**	**08 43 39.1**	**+0.9**
TWGBT	**Beinan** baz=214	**1.25**	**203**	*e*P	**Pn**	**08 43 21.0**	**-0.3**
TWGBT				*e*S	**Sn**	**08 43 39.0**	**+0.8**
CHN1	**Nanshi** baz=238	**1.26**	**232**	*e*P	**Pg**	**08 43 22.6**	**+0.7**
CHN1				*e*S	**Sn**	**08 43 41.6**	**+2.9**
SNST	**Tainan City** baz=237	**1.27**	**234**	*e*P	**Pg**	**08 43 22.5**	**+0.6**
SNST				*e*S	**Sn**	**08 43 40.1**	**+1.5**
SGST	**Jiashian** baz=230	**1.29**	**227**	*e*P	**Pg**	**08 43 22.3**	**-0.2**
SGST				*e*S	**Sn**	**08 43 40.9**	**+1.5**
LDUT	**Ludao** baz=171	**1.30**	**186**	*e*P	**Pn**	**08 43 19.2**	**-2.7**
LDUT				*e*S	**Sn**	**08 43 40.0**	**+0.5**
JYNG	**Yonagunijimaku**	**1.31**	**68**	*e*S	**Sb**	**08 43 38.8**	**-0.6**
SLGT	**Liugui** baz=228	**1.31**	**222**	⇑*e*P	**Pg**	**08 43 23.6**	**+0.7**
SLGT				*e*S	**Sn**	**08 43 42.2**	**+2.3**
ICHU	**Yijhu** baz=247	**1.36**	**244**	*e*P	**Pg**	**08 43 24.4**	**+0.6**
SCST	**Cishan** baz=228	**1.49**	**224**	*e*P	**Pg**	**08 43 27.2**	**+1.0**
SCST				*e*S	**Sg**	**08 43 49.9**	**+4.3**
SSD	**Sandimen** baz=228	**1.51**	**217**	*e*P	**Pg**	**08 43 26.4**	**-0.3**
SSD				*e*S	**Sg**	**08 43 47.3**	**+0.9**
TSMG	**Majia** baz=221	**1.54**	**215**	*e*P	**Pg**	**08 43 27.2**	**+0.1**
TSMG				*e*S	**Sg**	**08 43 47.0**	**-0.2**
MASBT	**Mashibuluo** baz=219	**1.62**	**214**	*e*P	**Pg**	**08 43 28.1**	**-0.7**
MASBT				*e*S	**Sg**	**08 43 49.6**	**-0.2**

*ISK **10** 08:45:15.8, 36°.63N×31°.22E, h10km, ML2.7/19*

*AFAD **10** 08:45:17.3±0.0, 36°.68N×31°.23E, h48km±2km, ML2.4*
*NIC **10** 08:45:18.1, 36°.45N×31°.39E, h33km±3.9km, Ml2.5/3*
ISC 10 08:45:13.8±1.1, **36°.60N**±0°.02×**31°.32E**±0°.02, **h6**km±10km, **n45**, **σ1°64**/65, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEPZ	**Antalya-Kepez**	**0.38**	**37**	P	**Pn**	**08 45 27.1**	**+1.2**
KEPZ				S	**Sb**	**08 45 33.7**	**+4.5**
KEPZ				*i* AML	AML	08 45 36.0	
	comp=N,168nm,0.4s						
KEPZ				*i* AML	AML	08 45 37.0	
	comp=E,211nm,0.6s						
KEMT	**Kemer-ANTALYA**	**0.61**	**271**	Pg	**Pb**	**08 45 26.7**	**-0.3**
KEMT				Sg	**Sg**	**08 45 34.3**	**+0.7**
ANTB	**Antalya**	**0.62**	**300**	Pg	**Pb**	**08 45 27.0**	**0.0**
ANTB				Sg	**Sg**	**08 45 34.4**	**+0.8**
AKUM	**Antalya-Kumluc**	**0.83**	**251**	P	**Pn**	**08 45 32.3**	**+0.2**
AKUM				S	**Sn**	**08 45 44.1**	**-0.6**
AKUM				*i* AML	AML	08 45 49.0	
	comp=N,122nm,0.3s						
AKUM				*i* AML	AML	08 45 53.0	
	comp=E,119nm,0.5s						
KORT	**Korkueli**	**0.88**	**298**	P	**Pg**	**08 45 30.2**	**-0.5**
KORT				*i* AML	AML	08 45 49.0	
	comp=E,90nm,0.5s						
GAZI	**Gazipasa**	**0.88**	**114**	P	**Pn**	**08 45 34.0**	**+1.3**
GAZI				S	**Sb**	**08 45 44.3**	**+0.8**
GAZI				*i* AML	AML	08 45 55.0	
	comp=N,72nm,0.6s						
SEYD	**Seydisehir-KON**	**0.91**	**27**	Pg	**Pn**	**08 45 33.9**	**+0.6**
SEYD				Sg	**Sn**	**08 45 46.9**	**+0.1**
SEDI	**Konya, Seydise**	**0.92**	**22**	P	**Pn**	**08 45 34.0**	**+0.5**
SEDI				S	**Sn**	**08 45 45.5**	**-1.6**
SEDI				*i* AML	AML	08 45 49.0	
	comp=E,94nm,0.5s						
BUCA	**Burdur, Bucak-**	**0.95**	**320**	P	**Pg**	**08 45 31.6**	**-0.4**
BUCA				S	**Sg**	**08 45 39.1**	**-5.3**
HDMB	**Hadim**	**1.01**	**68**	Pg	**Pn**	**08 45 36.8**	**+2.1**
HDMB				Sg	**Sn**	**08 45 52.1**	**+2.8**
BCK	**Bucak**	**1.04**	**326**	Pg	**Pn**	**08 45 34.9**	**-0.2**
ELL	**Elmali**	**1.15**	**278**	Pg	**Pn**	**08 45 36.5**	**0.0**
ELL	**Elmali**	**1.15**	**278**	P	**Pg**	**08 45 35.8**	**0.0**
ELL				S	**Sn**	**08 45 54.8**	**+2.2**
KNIK	**Mula-Seydike**	**1.43**	**281**	P	**Pg**	**08 45 42.5**	**+1.4**
KNIK				S	**Sn**	**08 46 01.3**	**+1.6**
KNIK				*i* AML	AML	08 46 05.0	
	comp=N,62nm,0.5s						
KNIK				*i* AML	AML	08 46 05.0	
	comp=E,60nm,0.4s						
AKAS	**Kas**	**1.43**	**256**	P	**Pb**	**08 45 41.3**	**+0.4**
AKAS				*i* AML	AML	08 46 07.0	
	comp=E,77nm,1.0s						
AKAS				*i* AML	AML	08 46 10.0	
	comp=N,104nm,0.7s						
KMER	**Konya-Meram**	**1.44**	**35**	P	**Pg**	**08 45 41.6**	**+0.2**
KMER				*i* AML	AML	08 46 02.0	
	comp=N,75nm,0.4s						
KKBE	**Karaman, Kazim**	**1.44**	**64**	P	**Pg**	**08 45 43.5**	**+2.1**
KKBE				S	**Sn**	**08 46 01.8**	**+1.9**
KKBE				*i* AML	AML	08 46 05.0	
	comp=E,50nm,0.4s						
BRDR	**BURDUR-Merkez**	**1.49**	**318**	P	**Pn**	**08 45 40.7**	**-0.5**
DOGA	**KONYA_Doganhis**	**1.53**	**10**	P	**Pg**	**08 45 43.5**	**+0.3**
DOGA				S	**Sn**	**08 45 58.9**	**-3.4**
GOLH	**Golhisar**	**1.55**	**295**	P	**Pb**	**08 45 42.8**	**-0.2**
GOLH				S	**Sg**	**08 46 03.9**	**+0.3**
GOLH				*i* AML	AML	08 46 10.0	
	comp=E,54nm,0.5s						
GOLH				*i* AML	AML	08 46 11.0	
	comp=N,43nm,0.5s						
KONT	**Konya--Tatoy**	**1.58**	**31**	Pn	**Pg**	**08 45 44.8**	**+0.7**
KONT	**Konya--Tatoy**	**1.58**	**31**	P	**Pg**	**08 45 44.6**	**+0.5**
CAME	**Cameli-Denizli**	**1.66**	**283**	Pn	**Pb**	**08 45 44.5**	**-0.3**
YVAC	**Isparta, Yalva**	**1.67**	**358**	P	**Pn**	**08 45 44.1**	**+0.3**
TEVE	**Tevekalti-Mers**	**1.72**	**95**	Pn	**Pg**	**08 45 47.7**	**+1.0**
ALFC	**Alefka**	**1.77**	**144**	P	**Pn**	**08 45 44.9**	**-0.1**
ALFC				S	**Sn**	**08 46 04.7**	**-3.3**
ALFC				AML	AML	08 46 06.4	
	0.2nm,0.2s						
ALFC				AML	AML	08 46 08.3	
	0.2nm,0.1s						
AKMS	**Akamas**	**1.78**	**152**	P	**Pn**	**08 45 44.1**	**-1.0**
AKMS				S	**Sn**	**08 46 05.5**	**-2.5**
AKMS				AML	AML	08 46 12.9	
	0.1nm,0.4s						
AFYN	**Afyon-Dinar-K**	**1.80**	**339**	P	**Pn**	**08 45 44.4**	**-1.1**
FETY	**Fethiye**	**1.80**	**272**	Pn	**Pn**	**08 45 46.5**	**+1.1**
LADK	**Ladik-KONYA**	**1.81**	**27**	Pn	**Pg**	**08 45 47.9**	**-0.5**
APMY	**Acipayam-Deniz**	**1.84**	**299**	Pn	**Pn**	**08 45 46.8**	**+0.8**
GULN	**MERSIN_Gulnar**	**1.84**	**102**	P	**Pg**	**08 45 49.4**	**+0.3**
GULN				S	**Sg**	**08 46 12.6**	**-0.3**
GULN				*i* AML	AML	08 46 17.0	
	comp=N,24nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.85**	**103**	Pn	**Pg**	**08 45 49.5**	**+0.2**
KZIL	**AFYON_Kizioren**	**1.91**	**331**	P	**Pn**	**08 45 45.6**	**-1.4**
IKL	**Isikli**	**1.94**	**100**	Pn	**Pg**	**08 45 50.8**	**-0.2**
LEF	**Lefka**	**1.95**	**139**	Pn	**Pb**	**08 45 50.6**	**+0.9**
KDHN	**Kadinhani**	**2.02**	**18**	P	**Pg**	**08 45 51.4**	**-1.2**
UCKU	**Afyonkarahisar**	**2.04**	**2**	P	**Pn**	**08 45 49.3**	**+0.5**
TROD	**Troodos**	**2.07**	**142**	P	**Pn**	**08 45 49.2**	**-0.1**
TROD				S	**Sn**	**08 46 12.1**	**-3.5**
TROD				AML	AML	08 46 15.0	
TROD				AML	AML	08 46 19.5	
ALIN	**Konya, Altinte**	**2.10**	**36**	P	**Pb**	**08 45 51.4**	**-1.0**
DALY	**Dalyan (Mula)**	**2.15**	**277**	Pn	**Pn**	**08 45 51.5**	**+1.2**
CSS	**Mathiatis**	**2.31**	**134**	P	**Pn**	**08 45 51.8**	**-0.6**
CSS				S	**Sn**	**08 46 17.8**	**-3.3**
KIZT	**Kizilcal**	**2.32**	**11**	Pn	**Pb**	**08 45 54.6**	**-1.6**
CHBY	**Cihanbeyli**	**2.34**	**32**	Pn	**Pb**	**08 45 54.8**	**-1.7**
MVOU	**Mavrovouni**	**2.45**	**129**	P	**Pn**	**08 45 54.7**	**+0.4**
MVOU				S	**Sn**	**08 46 22.1**	**-2.5**

*IDC **10** 08:48:28.7±0.9, 27°.91S×176°.36W, h0km, mb3.9/4, mbtmp3.9/4, MS3.6/6, Error ellipse: s-maj=32.8km s-min=23.0km az=135.0*
ISC 10 08:48:34.2±0.9, **27°.9S**±0°.2×**176°.4W**±0°.2, **h37**km, **n20**, **σ0°88**/14, **mb4.0**/4, **MS3.5**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.91**	**225**	Pn	**Pn**	**08 49 03.3**	**-0.9**
	89nm,0.3s,baz=251,slow=23,SNR=2.2						
RAO				Sn	**Sn**	**08 49 28.4**	**+1.3**
	194nm,0.3s,baz=87,slow=23,SNR=4.2						
DZM	**Mont Dzumac**	**16.62**	**287**	LR	LR	08 58 00.2	
	comp=Z,76nm,18.7s,baz=145,slow=34						
PPT	**Papeete**	**26.71**	**73**	LR	LR	09 02 17.8	
	comp=Z,53nm,18.8s,baz=190,slow=31						
HNR	**Honiara**	**28.89**	**305**	LR	LR	09 03 43.3	
	comp=Z,581nm,21.0s,baz=180,slow=32						
CTA	**Charters Tower**	**34.91**	**275**	LR	LR	09 09 31.2	
	comp=Z,71nm,18.9s,baz=96,slow=36						
ASAR	**Alice Springs**	**44.73**	**264**	P	**P**	**08 56 43.9**	**-0.3**
	0.9nm,0.5s,baz=95,slow=6.9,SNR=21						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**45.50**	**269**	P	**P**	**08 56 49.9**	**-0.4**
	0.9nm,0.4s,baz=106,slow=6.2,SNR=15						
	0.9nm,0.4s						
RPN	**Rapa Nui**	**58.75**	**106**	LR	LR	09 17 45.4	
QSPA	**South Pole Qui**	**62.20**	**180**	P	**P**	**08 58 52.2**	**+0.4**
	2.3nm,0.8s,baz=45,slow=2.6,SNR=7.1						
	2.3nm,0.8s						
NVAR	**Mina Array Bea**	**85.44**	**42**	P	**P**	**09 01 08.8**	**+0.6**
	0.4nm,0.7s,baz=220,slow=8.2,SNR=2.9						
	0.4nm,0.7s						
ELK	**Elko**	**88.74**	**42**	LR	LR	09 33 25.9	
	comp=Z,46nm,21.1s,baz=251,slow=30						
MKAR	**Makanchi Array**	**117.24**	**311**	PKP	**PKPdf**	**09 07 14.4**	**-0.9**
	0.2nm,0.7s,baz=233,slow=1.4,SNR=1.9						
KURBB	**Kurchatov Arra**	**120.37**	**315**	PKP	**PKPdf**	**09 07 20.5**	**-0.7**
	0.2nm,0.3s,baz=103,slow=2.1,SNR=1.4						
BVAR	**Borovoye Array**	**125.58**	**317**	PKP	**PKiKP**	**09 07 31.2**	**-0.3**
	0.3nm,0.3s,baz=46,slow=4.2,SNR=2.2						
FINES	**FINESS Array B**	**143.25**	**342**	PKhKP	PKPpre	09 08 00.5	
	3.0nm,0.9s,baz=66,slow=3.5,SNR=2.7						
HFS	**Hagfors**	**147.05**	**351**	PKPbc	**PKPbc**	**09 08 12.6**	**+0.2**
	1.7nm,0.7s,baz=352,slow=5.8,SNR=2.1						
AKASG	**Malin Array Be**	**150.09**	**327**	PKPbc	**PKPbc**	**09 08 20.4**	**-0.2**
	1.2nm,0.7s,baz=68,slow=3.2,SNR=1.6						
MMAI	**Mount Meron Ar**	**152.20**	**288**	PKPbc	**PKiKP**	**09 08 27.7**	**+1.2**
	0.5nm,0.3s,baz=106,slow=4.8,SNR=1.6						
BRTR	**Keskin Array B**	**152.54**	**303**	PKPab	**PKPab**	**09 08 38.4**	**+0.9**

0.7nm,0.5s,baz=146,slow=5.3,SNR=3.7
TORD Torodi Ar. Bea 165.21 173 PKPab **PKPab 09 09 31.3 -1.1**
0.7nm,0.6s,baz=194,slow=4.6,SNR=3.7

*WEL **10** 08:58:44.3±0.3,43°S±2°×17°0E±°, h5km,M3.8/16, ML4.0/16,MLv3.8/16,Error ellipse: s-maj=0.0km s-min=0.0km az=141.1,confirmed*
*NOU **10** 08:58:44.6,43°31S×170°47E, h5km, MLv4.1/10,South Island, New Zealand*
*WEL **10** 08:58:44.4,43°30S×170°49E, h6km, ML3.9, Mw3.7, Moment Tensor Solution. s6 Moment tensor: Mrr-3.06; Mθθ34.16; Mϕϕ-31.10; Mrθ0.11; Mrϕ20.35; Mθϕ9.29; Fault plane solution: NP1:ϕs62.00000°,δ78.00000°, λ-173.00000°. NP2:ϕs330.00000°,δ83.00000°, λ-12.00000°. Principal axes: T 40.1600, Plg3.0000°, Azm16.0000°; N -39.1300, Plg76.0000°, Azm120.0000°; P -1.0300, Plg14.0000°, Azm286.0000°; SOUTH ISLAND*

ISC 10 08:58:44.6±0.9,43°31S±0.02×170°49E±0.02,h6km±9km, n72,σ0s82/86,South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WHFS	**Whataroa Fire**	**0.11**	**294**	P			**Pg**	**08 58 47.4**	**+0.5**
WHFS				S			**Sg**	**08 58 49.5**	**+1.1**
HAFS	**Harihari Fire**	**0.16**	**17**	P			**Pg**	**08 58 47.0**	**-0.9**
HAFS				S			**Sg**	**08 58 49.5**	**-0.6**
FJDS	**Franz Josef DO**	**0.24**	**249**	P			**Pg**	**08 58 48.7**	**-0.7**
FJDS				S			**Sg**	**08 58 51.7**	**-0.9**
WVZ	**Waitaha Valley**	**0.29**	**38**	P			**Pg**	**08 58 50.0**	**-0.3**
WVZ				S			**Sg**	**08 58 54.3**	**+0.1**
WVAS	**Waitaha Valley**	**0.29**	**38**	P			**Pg**	**08 58 50.1**	**-0.2**
WVAS				S			**Sg**	**08 58 54.9**	**+0.6**
FGPS	**Fox Glacier Pa**	**0.38**	**245**	P			**Pg**	**08 58 51.3**	**-0.7**
FGPS				S			**Sg**	**08 58 57.2**	**+0.2**
MCNS	**Mount Cook Ann**	**0.52**	**214**	P			**Pg**	**08 58 54.6**	**-0.1**
MCNS				S			**Sg**	**08 59 01.7**	**+0.3**
FOZ	**Fox Glacier**	**0.54**	**245**	P			**Pg**	**08 58 55.3**	**+0.2**
FOZ				S			**Sg**	**08 59 02.2**	**+0.1**
RPZ	**Rata Peaks**	**0.58**	**135**	P			**Pg**	**08 58 56.0**	**+0.2**
RPZ	**Rata Peaks**	**0.58**	**135**	P			**Pg**	**08 58 55.9**	**+0.1**
RPZ				S			**Sg**	**08 59 03.5**	**+0.2**
KOKS	**Kokatahi**	**0.63**	**49**	P			**Pg**	**08 58 55.1**	**-1.6**
KOKS				S			**Sg**	**08 59 05.0**	**+0.2**
HMCS	**Hokitika Medic**	**0.68**	**31**	P			**Pg**	**08 58 56.7**	**-1.0**
HMCS				S			**Sg**	**08 59 05.7**	**-0.9**
MSMC	**Mount Somers S**	**0.77**	**121**	P			**Pg**	**08 58 58.7**	**-0.8**
ARCZ	**Arundel**	**0.81**	**142**	P			**Pg**	**08 59 00.1**	**-0.2**
ARCZ				S			**Sg**	**08 59 10.3**	**-0.5**
MHCZ	**Mount Hutt**	**0.82**	**106**	P			**Pg**	**08 59 00.1**	**-0.2**
INZ	**Inchbonnie**	**0.91**	**51**	P			**Pg**	**08 59 00.9**	**-1.1**
LBZ	**Lake Benmore**	**1.10**	**192**	P			**Pg**	**08 59 05.2**	**-0.6**
OXZ	**Oxford**	**1.13**	**92**	P			**Pg**	**08 59 06.2**	**-0.1**
TMZ	**Timaru**	**1.14**	**161**	P			**Pg**	**08 59 06.0**	**-0.5**
TMZ				S			**Sb**	**08 59 22.0**	**+0.1**
WACZ	**Wakanui South**	**1.17**	**124**	P			**Pb**	**08 59 07.1**	**-0.1**
RACZ	**Rakaia**	**1.27**	**110**	P			**Pg**	**08 59 08.6**	**-0.4**
LTZ	**Lake Taylor**	**1.41**	**69**	P			**Pn**	**08 59 10.7**	**-0.1**
LTZ				S			**Sn**	**08 59 31.3**	**+1.6**
JCZ	**Jackson Bay**	**1.46**	**238**	P			**Pn**	**08 59 10.9**	**-0.7**
JCZ	**Jackson Bay**	**1.46**	**238**	P			**Pn**	**08 59 10.6**	**-1.0**
AMCZ	**Amberley**	**1.58**	**86**	P			**Pn**	**08 59 13.2**	**0.0**
MQZ	**McQueen's Vall**	**1.62**	**105**	P			**Pn**	**08 59 12.9**	**-0.9**
ODZ	**Otahua Downs**	**1.74**	**176**	P			**Pn**	**08 59 15.4**	**-0.1**
ODZ	**Otahua Downs**	**1.74**	**176**	P			**Pn**	**08 59 15.1**	**-0.3**
DSZ	**Dennistn Nort**	**1.84**	**32**	P			**Pn**	**08 59 15.7**	**-1.1**
AKCZ	**Akaroa Harbour**	**1.85**	**109**	P			**Pn**	**08 59 17.2**	**+0.3**
WKZ	**Wanaka**	**1.86**	**214**	P			**Pn**	**08 59 17.3**	**+0.3**
GVZ	**Greta Valley S**	**1.89**	**81**	P			**Pn**	**08 59 17.1**	**-0.4**
EAZ	**Earnscleugh**	**2.10**	**203**	P			**Pn**	**08 59 19.3**	**-1.1**
MSZ	**Milford Sound**	**2.30**	**233**	P			**Pn**	**08 59 22.3**	**-0.8**
THZ	**Tophouse**	**2.36**	**50**	P			**Pn**	**08 59 23.8**	**-0.1**
KHZ	**Kahutara**	**2.41**	**69**	P			**Pn**	**08 59 24.7**	**+0.1**
KHZ	**Kahutara**	**2.41**	**69**	P			**Pn**	**08 59 24.8**	**+0.2**
MRNZ	**Matariki Terra**	**2.54**	**42**	P			**Pn**	**08 59 26.1**	**-0.3**
HHSZ	**Highcliff Hill**	**2.58**	**178**	P			**Pn**	**08 59 28.1**	**+1.1**
MLZ	**Mavora Lakes**	**2.67**	**219**	P			**Pn**	**08 59 27.9**	**-0.4**
TUZ	**Tuapeka**	**2.72**	**193**	P			**Pn**	**08 59 28.2**	**-0.7**
QRZ	**Quartz Range**	**2.91**	**32**	P			**Pn**	**08 59 30.6**	**-0.8**
QRZ	**Quartz Range**	**2.91**	**32**	P			**Pn**	**08 59 30.9**	**-0.6**
TKNZ	**Takaka Hill**	**2.92**	**40**	P			**Pn**	**08 59 32.6**	**+1.0**
DCZ	**Deep Cove**	**3.22**	**227**	P			**Pn**	**08 59 36.3**	**+0.5**
SYZ	**Scrubby Hill**	**3.37**	**196**	P			**Pn**	**08 59 36.7**	**-1.1**
SYZ	**Scrubby Hill**	**3.37**	**196**	P			**Pn**	**08 59 36.4**	**-1.4**
TCW	**Tory Channel**	**3.50**	**55**	P			**Pn**	**08 59 41.3**	**+1.7**
DUWZ	**D'Urville Isla**	**3.57**	**47**	P			**Pn**	**08 59 42.1**	**+1.5**
SNZO	**South Karori**	**3.71**	**59**	P			**Pn**	**08 59 44.0**	**+1.6**
PYZ	**Puysegur Point**	**3.94**	**222**	P			**Pn**	**08 59 46.1**	**+0.4**
PYZ	**Puysegur Point**	**3.94**	**222**	P			**Pn**	**08 59 46.1**	**+0.4**
APZ	**The Paps**	**3.95**	**206**	P			**Pn**	**08 59 43.9**	**-1.9**
CAW	**Cannon Point**	**4.04**	**59**	P			**Pn**	**08 59 46.9**	**-0.3**
KIW	**Kapiti Island**	**4.09**	**55**	P			**Pn**	**08 59 47.6**	**-0.2**
OGWZ	**Otaki Gorge**	**4.28**	**56**	P			**Pn**	**08 59 50.4**	**+0.1**
MRZ	**Mangatainoka R**	**4.62**	**57**	P			**Pn**	**08 59 54.0**	**-1.0**
NMEZ	**Namu Road**	**4.65**	**34**	P			**Pn**	**08 59 56.4**	**+1.0**
NBEZ	**Newall Road No**	**4.77**	**33**	P			**Pn**	**08 59 57.4**	**+0.3**
KHEZ	**Kahui Hut**	**4.80**	**35**	P			**Pn**	**08 59 58.3**	**+0.7**
KHEZ	**Kahui Hut**	**4.80**	**35**	P			**Pn**	**08 59 58.5**	**+0.8**
PREZ	**Palmer Road**	**4.83**	**36**	P			**Pn**	**08 59 58.5**	**+0.6**
LREZ	**Lake Rotokare**	**4.84**	**39**	P			**Pn**	**08 59 59.9**	**+1.9**
NEZ	**North Egmont**	**4.86**	**35**	P			**Pn**	**08 59 59.3**	**+0.9**
PKE	**Pukeiti**	**4.88**	**34**	P			**Pn**	**08 59 59.4**	**+0.8**
WAZ	**Wanganui**	**4.89**	**45**	P			**Pn**	**09 00 00.8**	**+2.1**
VRZ	**Vera Road**	**5.27**	**39**	P			**Pn**	**09 00 04.2**	**+0.3**
HIZ	**Hauiti**	**5.82**	**36**	P			**Pn**	**09 00 11.0**	**-0.4**
HIZ	**Hauiti**	**5.82**	**36**	P			**Pn**	**09 00 11.0**	**-0.4**
TLZ	**Tolley Road**	**6.27**	**39**	P			**Pn**	**09 00 18.5**	**+0.8**
TOZ	**Tahuroa Road**	**6.75**	**36**	P			**Pn**	**09 00 23.6**	**-0.6**
MKAZ	**Moumakai**	**7.15**	**32**	P			**Pn**	**09 00 30.6**	**+0.9**

*BER **10** 09:15:41.9±3.5,80°.33N×1°.04W, h10km, mb(Pn)4.2, ML3.6(NAO),Confirmed Earthquake*
*IDC **10** 09:15:42.2±1.5,80°.19N×1°.55W, h0km, mb3.7/5, mbtmp3.8/7, ML4.8/2, MS3.4/12, Error ellipse: s-maj=31.7km s-min=22.2km az=179.0*
*DNK **10** 09:15:42.0±4.1,80°.01N×0°.86W, h10km, ML1.9*
*FCIAR **10** 09:15:49.0,80°.08N×1°.36E, h10km, station ZFI2 has station magnitude of 4.00*
*KOLA **10** 09:15:49.8,80°.06N×2°.17E, h0km, ML2.6, Error ellipse: s-maj=68.8km s-min=26.6km az=30.0, Greenland sea,Knipovich ridge, north*

ISC 10 09:15:40.1±0.7,80°.30N±0°.07×1°.14W±0°.05,h10km,n49, σ3s49/60,mb3.7/4,MS3.6/9,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.74**	**114**	P			**Pn**	**09 16 24.1**	**+0.1**
KBS				S			**Sn**	**09 16 50.5**	**-6.6**
KBS	**Kingsbay**	**2.74**	**114**	*e*P			**Pn**	**09 16 24.2**	**+0.2**
KBS				*e*S			**Sn**	**09 16 52.5**	**-4.6**
KBS				IAML				09 16 54.2	
	comp=Z,125nm,0.3s								
KBS	**Kingsbay**	**2.74**	**114**	*i* P			**Pn**	**09 16 24.1**	**+0.1**
KBS				*i* S			**Sn**	**09 16 52.6**	**-4.5**
KBS	**Kingsbay**	**2.74**	**114**	Pn			**Pn**	**09 16 24.1**	**+0.1**
KBS				Sn			**Sn**	**09 16 52.5**	**-4.5**
KBS	**Kingsbay**	**2.74**	**114**	*e*P			**Pn**	**09 16 24.2**	**+0.2**
KBS				*e*S			**Sn**	**09 16 50.6**	**-6.4**
BRBB	**Barentsburg B**	**3.63**	**120**	P			**Pn**	**09 16 37.8**	**+1.6**
BRBB				S			**Sn**	**09 17 13.5**	**-5.5**
BRBB	**Barentsburg B**	**3.63**	**120**	*e*P			**Pn**	**09 16 38.0**	**+1.7**
BRBB				*e*S			**Sn**	**09 17 15.9**	**-3.1**
BRBB	**Barentsburg B**	**3.63**	**120**	Pn			**Pn**	**09 16 37.9**	**+1.7**
BRBB				Sn			**Sn**	**09 17 16.3**	**-2.8**
BRBA	**Barentsburg A**	**3.66**	**120**	*e*P			**Pn**	**09 16 38.5**	**+1.9**
BRBA				*e*S			**Sn**	**09 17 17.2**	**-2.4**
BRBA				IAML				09 17 19.8	
	comp=Z,58nm,0.4s								
BRBA	**Barentsburg A**	**3.66**	**120**	Pn			**Pn**	**09 16 38.5**	**+1.9**
BRBA				Sn			**Sn**	**09 17 17.0**	**-2.6**
SPA0	**Spitsbergen Ar**	**3.90**	**114**	Pn			**Pn**	**09 16 40.7**	**+0.8**
	baz=322,slow=10								
SPA0				Sn			**Sn**	**09 17 21.5**	**-4.2**
	baz=334,slow=14								
SPA0	**Spitsbergen Ar**	**3.90**	**114**	Pn			**Pn**	**09 16 40.7**	**+0.8**
	baz=322,slow=10								
SPA0				Sn			**Sn**	**09 17 21.5**	**-4.2**
	baz=334,slow=14								
SPA0	**Spitsbergen Ar**	**3.90**	**114**	*e*P			**Pn**	**09 16 40.8**	**+0.8**
SPA0				*e*S			**Sn**	**09 17 19.7**	**-6.0**
SPITS	**Spitsbergen Ar**	**3.90**	**114**	P			**Pn**	**09 16 40.8**	**+0.8**
SPITS				S			**Sn**	**09 17 19.5**	**-6.2**
SPITS	**Spitsbergen Ar**	**3.90**	**114**	Pn			**Pn**	**09 16 41.0**	**+1.0**
	baz=326,slow=7.2								
SPITS				Sn			**Sn**	**09 17 22.4**	**-3.3**
	baz=324,slow=20								
	comp=Z,28nm,0.3s								
HSPB	**Hornsund (broa**	**4.65**	**127**	P			**Pn**	**09 16 51.2**	**+1.0**
HSPB				S			Sn	09 17 34.9	-9.2
HSPB	**Hornsund (broa**	**4.65**	**127**	*e*P			**Pn**	**09 16 51.2**	**+1.0**
HSPB				*e*S			**Sn**	**09 17 40.2**	**-3.9**
HSPB				IAML				09 17 46.6	
	comp=Z,91nm,0.6s								
HSPB	**Hornsund (broa**	**4.65**	**127**	Pn			**Pn**	**09 16 51.4**	**+1.2**
HSPB				Sn			**Sn**	**09 17 40.5**	**-3.6**
HOPEN	**Hopen**	**6.43**	**112**	*e*P			**Pn**	**09 17 15.3**	**+0.7**
HOPEN				*e*S			**Sn**	**09 18 22.2**	**-5.7**
HOPEN				IAML				09 18 25.2	
	comp=Z,55nm,0.4s								
HOPEN	**Hopen**	**6.43**	**112**	Pn			**Pn**	**09 17 15.1**	**+0.5**
HOPEN				Sn			**Sn**	**09 18 22.2**	**-5.7**
HOPEN	**Hopen**	**6.43**	**112**	*e*P			**Pn**	**09 17 14.7**	**+0.1**
HOPEN				S			Sn	09 18 18.1	-10
ZFI2	**Zemlya Franca-**	**7.84**	**62**	*e*P			**Pn**	**09 17 36.0**	**+2.1**
ZFI2				*e*S			**Sn**	**09 18 54.9**	**-7.6**
	comp=Z,44nm,0.8s								
OMEGA	**Omega**	**7.86**	**63**	*e*P			**Pn**	**09 17 36.0**	**+1.8**
OMEGA				*e*S			**Sn**	**09 18 55.9**	**-7.1**
JMIC	**Jan Mayen**	**9.53**	**195**	Pn			**Pn**	**09 17 58.4**	**+1.3**
	comp=Z,15nm,0.3s,baz=42,slow=12,SNR=2.4								
NEEM	**North Greenlan**	**9.76**	**279**	*i* P			**Pn**	**09 18 00.7**	**+0.2**
NEEM				*i* S			**Sn**	**09 19 44.0**	**-6.1**
NEEM	**North Greenlan**	**9.76**	**279**	*i* P			**Pn**	**09 18 00.7**	**+0.2**
NEEM				*i* S			Sn	09 19 42.2	-7.8
SCO	**Scoresbysund**	**11.05**	**219**	*e*P			**Pn**	**09 18 16.3**	**-1.5**
SCO				*i* S			Sn	09 20 04.4	-17
SCO	**Scoresbysund**	**11.05**	**219**	*e*P			**Pn**	**09 18 16.3**	**-1.5**
SCO				*i* S			Sn	09 20 04.4	-17
SUMG	**Summit**	**11.37**	**248**	*e*			**Pn**	**09 18 21.5**	**-1.2**
	baz=40,slow=9.3								
SUMG				*i* P				09 18 22.4	
SUMG				*e*S			Sn	09 20 13.9	-16
SUMG				IAML				09 20 33.1	
	comp=Z,2.2nm,0.4s								
ARA0	**ARCESS Array S**	**12.61**	**134**	Pn			**Pn**	**09 18 41.6**	**+2.4**
	baz=336,slow=11								
ARA0				Sn			Sn	09 20 51.2	-8.3
	baz=355,slow=22								
ARA0	**ARCESS Array S**	**12.61**	**134**	Pn			**Pn**	**09 18 41.6**	**+2.4**
	baz=336,slow=11								
ARA0				Sn			Sn	09 20 51.2	-8.3
	baz=355,slow=22								
ARCES	**ARCESS Array B**	**12.61**	**134**	Pn			**Pn**	**09 18 41.6**	**+2.3**
	comp=Z,2.3nm,0.6s,baz=340,slow=10,SNR=5.7								
ARCES				Sn			Sn	09 20 50.6	-8.9
	comp=Z,0.1nm,0.3s,baz=0.3,slow=19,SNR=2.3								
BORG	**Borgarnes**	**16.56**	**211**	LR			LR	09 24 45.0	
	comp=Z,60nm,18.0s,baz=72,slow=33								
SFJD	**Kangerlussuaq**	**18.28**	**252**	P			**Pn**	**09 19 51.7**	**-1.7**
	comp=Z,6.2nm,0.8s,baz=3.0,slow=12,SNR=5.1								
SFJD				LR			LR	09 27 23.8	
	comp=Z,126nm,20.3s,baz=34,slow=39								
NOA	**NORSAR Array B**	**19.69**	**162**	LR			LR	09 25 57.5	
	comp=Z,66nm,16.5s,baz=345,slow=31								
FINES	**FINESS Array B**	**20.49**	**141**	P			Pn	09 20 21.1	+1.4
	comp=Z,0.9nm,0.8s,baz=354,slow=13,SNR=1.2								
	comp=Z,0.9nm,0.8s								
NRIK	**Noril'sk**	**22.67**	**67**	P			**P**	**09 20 45.5**	**+4.5**
	comp=Z,2.1nm,0.8s,baz=339,slow=8.9,SNR=2.1								
	comp=Z,2.1nm,0.8s								
KLMR	**Klimovskoe**	**22.73**	**124**	P			**P**	**09 20 41.9**	**+0.3**
FRB	**Frobisher Bay**	**24.26**	**268**	P			**P**	**09 20 59.6**	**+2.8**
	comp=Z,2.3nm,1.0s,baz=30,slow=13,SNR=4.7								
FRB				LR			LR	09 30 28.6	
	comp=Z,40nm,21.0s,baz=346,slow=37								
	comp=Z,2.3nm,1.0s								
ZALV	**Zalesovo Beam**	**36.68**	**81**	LR			LR	09 39 34.5	
	comp=Z,28nm,18.3s,baz=340,slow=39								
KURBB	**Kurchatov Arra**	**38.82**	**88**	P			**P**	**09 23 08.7**	**+4.2**
	comp=Z,1.3nm,0.7s,baz=342,slow=7.9,SNR=15								
	comp=Z,1.3nm,0.7s								
MKAR	**Makanchi Array**	**43.16**	**86**	P			**P**	**09 23 45.0**	**+4.6**
	comp=Z,1.1nm,0.7s,baz=344,slow=7.8,SNR=12								
	comp=Z,1.1nm,0.7s								
SADO	**Sadowa**	**44.21**	**268**	LR			LR	09 42 56.5	
	comp=Z,65nm,18.0s,baz=42,slow=37								
AAK	**Ala-Archa**	**45.88**	**95**	LR			LR	09 44 52.0	
	comp=Z,62nm,18.6s,baz=327,slow=38								
MMAI	**Mount Meron Ar**	**49.54**	**139**	LR			LR	09 48 14.6	
	comp=Z,36nm,18.3s,baz=26,slow=39								
ANMO	**Albuquerque**	**58.32**	**291**	LR			LR	09 51 18.5	
	comp=Z,40nm,18.5s,baz=110,slow=37								
PFO	**Pinyon Flats O**	**61.15**	**301**	LR			LR	09 53 25.1	
	comp=Z,39nm,18.6s,baz=202,slow=37								
TXAR	**Lajitas Array**	**63.37**	**288**	LR			LR	09 53 02.9	
	comp=Z,32nm,19.2s,baz=22,slow=35								
PCRV	**Puerto La Cruz**	**75.67**	**245**	LR			LR	09 58 17.2	
	comp=Z,31nm,21.6s,slow=34								

*KRNET **10** 09:18:28.0±0.1,40°.01N×69°.65E, h8km, mb2.6*
*SOME **10** 09:18:28.9,40°.03N×70°.07E, h10km*
*ISU **10** 09:18:29.6,39°.85N×69°.71E, h25km*

ISC 10 09:18:30.2±1.1,40°.16N±0°.04×69°.75E±0°.03,h16km±14km, n16,σ1s73/31,15C-5D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.83**	**97**	⇓*i*P			**Pg**	**09 18 45.1**	**-1.2**
	baz=87								
BTK				⇓*i*S			**Sb**	**09 18 57.7**	**+0.5**
	baz=87								
BXML	**Bakhmal**	**1.40**	**251**	P			**Pg**	**09 18 57.6**	**+0.4**
BXML				S			**Sg**	**09 19 18.9**	**+3.4**
DZI	**Dzhizak**	**1.48**	**269**	P			**Pg**	**09 18 57.0**	**-1.6**
DZI				S			**Sg**	**09 19 17.7**	**-0.1**
FRG	**Fergana**	**1.57**	**81**	P			**Pg**	**09 19 00.4**	**0.0**
FRG				S			**Sg**	**09 19 23.2**	**+2.3**
DRK	**Karamyk**	**1.72**	**113**	⇑*e*P			**Pb**	**09 19 00.8**	**-0.8**
	baz=7.0								
DRK				⇑*e*S			**Sg**	**09 19 25.4**	**-0.3**
	baz=7.0								
TRKS	**Terek-Say**	**1.73**	**37**	⇑*i*P			**Pg**	**09 19 02.8**	**-0.7**
	baz=38								
TRKS				⇑*i*S			**Sg**	**09 19 28.6**	**+2.6**
	baz=38								
TSTA	**Tashata**	**2.13**	**78**	P			**Pb**	**09 19 08.8**	**+0.4**
TSTA				S			**Sg**	**09 19 39.4**	**+0.8**
ARK	**Arkit**	**2.34**	**45**	⇑*i*P			**Pb**	**09 19 12.5**	**+0.3**
	baz=44								
ARK				⇑*i*S			**Sg**	**09 19 44.9**	**-0.7**
	baz=44								
OHH	**Osh**	**2.35**	**80**	⇓*e*P			**Pb**	**09 19 11.8**	**-0.4**
	baz=77								
OHH				⇓*e*S			**Sb**	**09 19 43.5**	**+2.5**
	baz=77								
ARSB	**Arslanbob**	**2.72**	**64**	⇑*i*P			**Pb**	**09 19 16.9**	**-1.7**
	baz=62								
ARSB				⇑*i*S			**Sb**	**09 19 52.8**	**+1.1**
	baz=62								
BRLS	**Borolday**	**2.87**	**1**	*e*P			**Pb**	**09 19 19.6**	**-1.4**
	1.2nm,0.2s								
BRLS				*e*S			**Sb**	**09 19 56.6**	**+0.7**
	23nm,0.2s								
SFK	**Sufi-Kurgan**	**2.88**	**92**	⇑*e*P			**Pb**	**09 19 18.6**	**-2.8**
	baz=89								
SFK				⇑*e*S			**Sb**	**09 19 55.6**	**-1.0**
	baz=89								
KK31	**Karatay Array**	**3.00**	**11**	⇓Pn			**Pg**	**09 19 26.5**	**-1.2**
	1.0nm,0.3s,baz=197,slow=15,SNR=12								
KK31				⇑Lg			Lg	09 20 06.1	
	4.0nm,0.3s,baz=193,slow=32,SNR=13								
KKAR	**Karatay Array**	**3.00**	**11**	⇑*i*P			**Pb**	**09 19 21.4**	**-1.8**
	baz=12								
KKAR				⇑*i*S			**Sb**	**09 20 00.4**	**+0.8**
	baz=12								
MNAS	**Manas**	**3.12**	**41**	⇑*e*P			**Pb**	**09 19 23.1**	**-2.3**
	baz=40								
MNAS				⇑*e*S			**Sb**	**09 20 03.2**	**0.0**
	baz=40								
MRKS	**Merke**	**3.68**	**44**	*e*P			**Pb**	**09 19 34.8**	**-0.1**
	3.7nm,0.7s								
MRKS				*e*S			**Sb**	**09 20 23.5**	**+4.3**
	9.3nm,0.8s								

*IDC **10** 09:45:18.8±0.8,42°.01S×88°.27E, h0km, mb4.3/10, mbtmp4.3/10, MS4.4/50, Error ellipse: s-maj=28.6km s-min=19.1km az=104.0*
*BJI **10** 09:45:19.5±0.0,42°.00S×88°.20E, h10km, mb4.8/39, mB5.1/16, Ms5.1/24, Ms7 4.7/26*
*NEIC **10** 09:45:20.8±0.9,42°.03S±0°.10×88°.2E±0°.1, h10km±1km, mb4.9/36, Error ellipse: s-maj=18.0km s-min=15.7km az=246.0*
*GCMT **10** 09:45:21.8±0.2,42°.05S±0°.01×88°.40E±0°.01, h13km±1km, MW5.1/132, Moment Tensor Solution. s58,c73; s132,c209; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.54±.12; Mθθ5.99±.14; Mϕϕ-4.45±.10; Mrθ-1.78±.29; Mθϕ-0.08±.09; Mrϕ1.67±.28; Best double couple: M≤5.83000×10^16 NP1:ϕs132.00000°,δ82.00000°, λ-28.00000°. NP2:ϕs227.00000°,δ62.00000°, λ-170.00000°. Principal axes: T 6.4080, Plg13.0000°, Azm182.0000°; N -1.1560, Plg61.0000°, Azm297.0000°; P -5.2520, Plg26.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:45:20.5±0.4,42°.16S±0°.08×88°.21E±0°.08,h10km,n128, σ1s53/75,mb4.8/38,MS4.5/61,5C-3D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**21.49**	**79**	T			T	10 12 05.3	
	baz=243,slow=74,SNR=64								
H01W3	**Cape Leeuwin H**	**21.50**	**79**	T			T	10 12 04.9	
	baz=243,slow=74,SNR=84								
H01W1	**Cape Leeuwin H**	**21.50**	**79**	T			T	10 12 06.8	
	baz=243,slow=74,SNR=52								
NWAO	**Narrogin (SRO)**	**24.69**	**78**	P			**P**	**09 50 42.0**	**+0.3**
NWAO				IAmb			IAmb	09 51 02.3	
	comp=Z,41nm,1.2s								
NWAO	**Narrogin (SRO)**	**24.69**	**78**	LR			LR	09 58 02.9	
	comp=Z,1μm,21.8s,baz=214,slow=31								
H04S1	**CROZET ISLANDS**	**26.15**	**247**	T			T	10 18 31.9	
	baz=92,slow=75,SNR=84								
H04S2	**CROZET ISLANDS**	**26.16**	**247**	T			T	10 18 31.0	
	baz=92,slow=75,SNR=141								
H04S3	**CROZET ISLANDS**	**26.17**	**247**	T			T	10 18 29.6	
	baz=92,slow=75,SNR=165								
H04N2	**CROZET ISLANDS**	**26.27**	**249**	T			T	10 18 41.1	
	baz=93,slow=75								
H04N3	**CROZET ISLANDS**	**26.28**	**249**	T			T	10 18 44.2	
	baz=93,slow=75								
H04N1	**CROZET ISLANDS**	**26.29**	**249**	T			T	10 18 40.2	
	baz=93,slow=75,SNR=5369								
MAW	**Mawson**	**28.93**	**200**	LR			LR	10 00 24.6	
	comp=Z,2μm,21.0s,baz=36,slow=31								
PSA00	**Pilbara Seismi**	**33.52**	**62**	P			**P**	**09 51 59.3**	**-1.1**
PSA00				IAmb			IAmb	09 52 16.4	
	comp=Z,18nm,1.4s								
FORT	**Forrest**	**33.72**	**83**	P			**P**	**09 52 02.4**	**+0.4**
H08S2	**Diego Garcia H**	**37.08**	**334**	T			T	10 31 32.2	
	baz=160,slow=76,SNR=772								
H08S1	**Diego Garcia H**	**37.08**	**334**	T			T	10 31 34.3	
	baz=160,slow=76,SNR=518								
H08S3	**Diego Garcia H**	**37.10**	**334**	T			T	10 31 35.3	
	baz=160,slow=76,SNR=866								
BBOO	**Buckleboo**	**38.66**	**92**	P			**P**	**09 52 44.0**	**-0.3**
BBOO				IAmb			IAmb	09 52 50.6	
	comp=Z,19nm,1.1s								
LEM	**Lembang**	**39.16**	**31**	LR			LR	10 05 22.9	
	comp=Z,454nm,21.3s,baz=176,slow=31								
VOI	**Voh

FAKI Fak Fak 55.41 57 P **P** 09 54 54.7 -0.5
LSZ Lusaka 57.75 279 P **P** 09 55 11.7 -0.3
LSZ IAmb IAmb 09 55 15.3
comp=Z,22nm,1.5s
LSZ Lusaka 57.75 279 LR LR 10 15 54.1
comp=Z,225nm,20.6s,baz=142,slow=32
RPZ Rata Peaks 58.15 122 LR LR 10 15 18.8
comp=Z,370nm,18.9s,baz=231,slow=31
DAV Davao City (W) 59.69 44 LR LR 10 21 25.8
comp=Z,91nm,16.6s,baz=179,slow=36
PMG Port Moresby 60.86 75 LR LR 10 20 48.5
comp=Z,889nm,18.1s,baz=206,slow=35
CMAR Chiang Mai Arr 61.12 12 P **P** 09 55 34.2 -0.7
CMAR Chiang Mai Arr 61.12 12 P **P** 09 55 33.9 -1.0
comp=Z,1.6nm,0.5s,baz=209,slow=7.2,SNR=14
CMAR LR LR 10 17 24.6
comp=Z,211nm,21.9s,baz=190,slow=32
comp=Z,1.6nm,0.5s
CHTO Chiang Mai 61.47 12 P **P** 09 55 36.0 -1.3
CRAI Chiangrai 63.08 13 P **P** 09 55 47.2 -0.8
TSUM Tsumeb 63.15 268 P **P** 09 55 48.1 -0.8
TSUM Tsumeb 63.15 268 LR LR 10 18 50.2
comp=Z,526nm,21.2s,baz=151,slow=32
QIZ Qiongzhong 64.08 23 P **P** 09 55 55.6 +0.9
QIZ S **S** 10 04 33.4 +2.1
QIZ LR LR
comp=Z,300nm,20.6s
QIZ LR LR
comp=Z,270nm,17.7s
QIZ LR LR
comp=Z,290nm,30.3s
URZ Urewera 64.94 120 LR LR 10 19 51.8
comp=Z,163nm,18.4s,baz=302,slow=32
MBAR Mbarara 66.00 293 LR LR 10 20 17.2
comp=Z,169nm,20.8s,baz=74,slow=32
DZM Mont Dzumac 67.02 99 *e*LR LR 10 16 30.1
comp=Z,376nm,23.4s
DZM Mont Dzumac 67.02 99 LR LR 10 20 36.2
comp=Z,224nm,21.6s,baz=214,slow=32
TNCH TengChong 67.53 10 *e*P P 09 56 22.3 +5.3
TNCH pP pwP 09 56 25.5 +2.5
TNCH S **S** **10 05 18.7 +5.1**
TNCH pmax pmax
comp=Z,21nm,0.4s
TNCH pmax pmax
comp=Z,100nm,4.5s
TNCH LR LR
comp=Z,570nm,14.6s
TNCH LR LR
comp=Z,320nm,12.0s
TNCH LR LR
comp=Z,210nm,18.5s
ATD Arta Tunnel 67.72 311 LR LR 10 20 41.4
comp=Z,5.9nm,18.8s,baz=126,slow=31
PZH PanZhiHua 69.45 13 P **P** **09 56 31.3 +2.3**
PZH S **S** **10 05 41.5 +5.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.7s
PZH LR LR
comp=Z,290nm,19.1s
PZH LR LR
comp=Z,250nm,17.7s
PZH LR LR
comp=Z,390nm,19.1s
HNR Honiara 70.20 85 LR LR 10 25 38.3
comp=Z,2μm,18.2s,baz=222,slow=34
GYA Guiyang 70.37 18 ⇓P **P** **09 56 36.6 +2.0**
GYA pmax pmax
comp=Z,14nm,1.3s
WSAR Wadi Sarin 70.58 331 LR LR 10 21 28.0
comp=Z,468nm,18.0s,baz=168,slow=31
PMSA Palmer Station 71.20 192 LR LR 10 28 25.1
comp=Z,433nm,18.2s,baz=144,slow=36
LSA Lhasa 71.55 3 P **P** **09 56 40.7 -1.5**
CD2 Chengdu 74.11 14 P **P** **09 56 55.3 -1.5**
CD2 S **S** **10 06 28.6 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,470nm,22.6s
WHN Wuhan 76.25 23 P P 09 57 14.9 +5.9
JOW Kunigami 77.98 36 LR LR 10 29 45.6
comp=Z,100nm,21.0s,baz=333,slow=34
XAN Xi'an 78.17 17 P **P** **09 57 19.3 -0.6**
XAN pP pwP 09 57 24.4 -1.5
XAN pmax pmax
comp=Z,31nm,1.0s
XAN LR LR
comp=Z,440nm,17.2s
XAN LR LR
comp=Z,270nm,17.9s
XAN LR LR
comp=Z,760nm,22.0s
KBL Kabul 78.33 344 P **P** **09 57 19.9 -0.9**
KBL IAmb IAmb 09 57 27.1
comp=Z,11nm,0.8s
NJ2 Nanjing 79.05 26 *e*P **P** **09 57 25.9 +1.3**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
LZH Lanzhou 79.17 13 *e*P **P** **09 57 26.8 +1.3**
LZH pP PcP 09 57 33.0 -0.8
LZH pmax pmax
comp=Z,12nm,1.1s
LZH LR LR
comp=Z,380nm,17.2s
LZH LR LR
comp=Z,340nm,18.0s
LZH LR LR
comp=Z,400nm,20.6s
LYN LuoYang 79.51 20 *e*P P 09 57 32.1 +5.0
LYN pmax pmax
comp=Z,21nm,0.6s
GTA Gaotai 81.87 9 P **P** **09 57 39.3 -0.5**
GTA pP PcP 09 57 44.8 -0.6
GTA sP pwP 09 57 48.6 +2.7
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA LR LR
comp=Z,150nm,19.3s
GTA LR LR
comp=Z,230nm,19.3s
GTA LR LR
comp=Z,240nm,20.0s
TIA Tai'an 82.36 23 P P 09 57 47.0 +4.7
TIA S S 10 07 45.6 -12
TIA pmax pmax
comp=Z,12nm,0.8s
TIA pmax pmax
comp=Z,36nm,4.9s
TIA LR LR
comp=Z,160nm,19.4s
TIA LR LR
comp=Z,87nm,18.7s
TIA LR LR
comp=Z,100nm,18.7s
HNS HongShan 82.79 21 ⇑P **P** **09 57 48.7 +4.2**
HNS pmax pmax
comp=Z,10.0nm,0.6s
GEYT Alibeck 84.30 337 LR LR 10 30 17.1
comp=Z,200nm,21.5s,baz=170,slow=32
GYA0B ALIBECK ARRAY 84.30 337 P **P** **09 57 52.3 0.0**
JNU Nakatsue 84.54 35 LR LR 10 36 14.2
comp=Z,34nm,19.1s,baz=226,slow=36
HHC Hu-ho-hao-te 85.29 18 *e*P **P** **09 57 58.6 +1.3**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,100nm,5.1s
HHC LR LR
comp=Z,370nm,16.0s
HHC LR LR
comp=Z,150nm,17.6s
HHC LR LR
comp=Z,440nm,17.6s
AAK Ala-Archa 85.31 350 LR LR 10 33 50.0
comp=Z,445nm,18.1s,baz=186,slow=34
WMQ Urumqi 85.60 360 *e*P **P** **09 57 59.8 +1.1**
WMQ LR LR
comp=Z,520nm,12.7s
WMQ LR LR
comp=Z,250nm,19.1s
KKAR Karatay Array 86.36 347 P **P** **09 58 00.9 -1.5**
EIL Elat 86.69 316 LR LR 10 31 13.8
comp=Z,162nm,18.8s,baz=132,slow=32

MKAR Makanchi Array 88.72 356 P **P** **09 58 11.8 -1.9**
MKAR Makanchi Array 88.72 356 P **P** **09 58 12.1 -1.6**
comp=Z,0.6nm,0.8s,baz=181,slow=5.7,SNR=5.6
MKAR LR LR 10 37 10.6
comp=Z,214nm,18.2s,baz=204,slow=35
comp=Z,0.6nm,0.8s
MMAI Mount Meron Ar 89.14 318 LR LR 10 31 59.5
comp=Z,172nm,21.8s,baz=102,slow=31
MJAR Matsushiro Arr 90.66 38 LR LR 10 34 47.1
comp=Z,38nm,20.9s,baz=226,slow=33
GNI Garni 90.91 328 LR LR 10 34 15.5
comp=Z,240nm,21.9s,baz=148,slow=32
SONM Songino Array 91.04 12 P **P** **09 58 24.2 -0.5**
comp=Z,0.3nm,0.3s,baz=170,slow=11,SNR=1.9
SONM LR LR 10 39 14.3
comp=Z,241nm,19.1s,baz=186,slow=36
comp=Z,0.3nm,0.3s
RAR Rarotonga 91.12 120 LR LR 10 32 28.2
comp=Z,77nm,20.1s,baz=208,slow=31
KURBB Kurchatov Arra 92.79 354 LR LR 10 37 29.9
comp=Z,261nm,19.6s,baz=168,slow=34
USRK Ussuriysk Ar. 94.50 30 LR LR 10 41 16.2
comp=Z,58nm,19.4s,baz=213,slow=36
KBZ Khabaz 94.68 329 LR LR 10 36 50.4
comp=Z,134nm,20.3s,baz=138,slow=33
PLCA Paso Flores 95.28 196 LR LR 10 42 49.3
comp=Z,452nm,18.0s,baz=181,slow=36
BRTR Keskin Array B 95.35 321 P **P** **09 58 47.7 +2.9**
comp=Z,0.7nm,0.7s,baz=137,slow=8.9,SNR=3.1
BRTR LR LR 10 38 06.5
comp=Z,146nm,19.0s,baz=131,slow=33
ZALV Zalesovo Beam 95.78 358 P **P** **09 58 45.2 -0.9**
comp=Z,0.4nm,0.4s,baz=147,slow=2.6,SNR=2.2
ZALV LR LR 10 40 25.4
comp=Z,128nm,19.9s,baz=194,slow=35
comp=Z,0.4nm,0.4s
TBI Tubuai 95.85 129 *e*LR LR 10 29 46.6
comp=Z,696nm,23.5s
AKTO Aktyubinsk 95.92 341 LR LR 10 39 57.4
comp=Z,276nm,19.7s,baz=178,slow=34
BVAR Borovoye Array 96.05 349 LR LR 10 39 57.1
comp=Z,150nm,18.6s,baz=177,slow=34
TORD Torodi Ar. Bea 96.15 282 LR LR 10 38 16.4
comp=Z,204nm,22.0s,baz=239,slow=33
IDI Anoyia 96.40 313 LR LR 10 37 48.9
comp=Z,40nm,18.0s,baz=258,slow=33
DBIC Dimbokro 96.70 273 LR LR 10 37 51.1
comp=Z,136nm,18.3s,baz=114,slow=33
KLR Kul'dur 98.72 27 LR LR 10 41 59.8
comp=Z,92nm,20.3s,baz=225,slow=34
ASAJ Asahikawa 98.75 36 LR LR 10 44 45.4
comp=Z,42nm,19.1s,baz=12,slow=36
PPT2 Papeete2 100.21 125 *e*LR LR 10 31 42.6
PPT2 *e*LR LR 10 31 47.5
comp=Z,143nm,22.2s
TAOE Nuku Hiva Isla 112.70 127 *e*LR LR 10 37 39.7
comp=Z,237nm,25.4s
NEEM North Greenlan 140.88 347 *i* P **PKPdf** **10 04 49.5 -0.2**
NEEM IAmb IAmb 10 04 58.6
comp=Z,2.7nm,0.8s
SFJD Kangerlussuaq 146.60 332 *i* P **PKPab** **10 05 01.4 -0.8**
SFJD IAmb IAmb 10 05 14.4
comp=Z,6.9nm,0.7s
YKA Yellowknife Ar 155.57 26 PKPbc **PKPdf** **10 05 18.3 +5.0**
comp=Z,0.4nm,0.9s,baz=323,slow=1.3,SNR=4.7
NVAR Mina Array Bea 159.47 92 PKPab **PKPab** **10 05 57.1 -0.3**
comp=Z,1.0nm,0.8s,baz=232,slow=4.5,SNR=5.2
TXAR Lajitas Array 164.00 139 PKPab **PKPab** **10 06 16.5 -0.6**
comp=Z,0.2nm,0.6s,baz=202,slow=4.7,SNR=2.1
PDAR Pinedale Array 166.86 81 PKP **PKPdf** **10 05 25.8 -0.5**
comp=Z,0.7nm,0.9s,baz=180,slow=0.4,SNR=5.2
PDAR PKPab **PKPab** **10 06 29.2 -0.6**
comp=Z,0.3nm,0.6s,baz=212,slow=3.2,SNR=1.9

WEL 10 10:14:57.4±0.9, 35°S±5′×17°9E±1′0, h12km, M3.6/17, ML3.8/23, MLv3.6/17, Error ellipse: s-maj=0.0km s-min=0.0km az=91.1, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.32**	**185**	P	Pn	10 15 32.0	-3.5
MXZ				S	Sn	10 15 59.5	-4.4
WMGZ	**Waiomatatini S**	**2.57**	**183**	P	Pn	10 15 37.5	-1.4
WMGZ				S	Sn	10 16 12.3	+2.2
HAZ	**Te Kaha**	**2.58**	**194**	P	Pn	10 15 38.1	-0.9
PKGZ	**Pakihiroa**	**2.67**	**188**	P	Pn	10 15 38.2	-2.1
RUGZ	**Raukumara Rang**	**2.81**	**194**	P	Pn	10 15 41.2	-1.1
RUGZ				S	Sn	10 16 14.5	-1.6
PUZ	**Puketiti**	**2.83**	**185**	P	Pn	10 15 42.0	-0.5
PUZ				S	Sn	10 16 17.6	+1.0
TWGZ	**Tauwhareparae**	**2.96**	**189**	P	Pn	10 15 45.0	+0.7
TWGZ				S	Sn	10 16 23.1	+3.3
TGRZ	**Tauranga**	**3.10**	**216**	P	Pn	10 15 45.5	-0.6
MWZ	**Matawai**	**3.19**	**195**	P	Pn	10 15 46.3	-1.2
MWZ				S	Sn	10 16 27.3	+1.8
URZ	**Urewera**	**3.23**	**201**	P	Pn	10 15 45.5	-2.4
URZ				S	Sn	10 16 24.4	-1.9
TKGZ	**Te Karaka**	**3.24**	**190**	P	Pn	10 15 48.6	+0.5
TKGZ				S	Sn	10 16 29.1	+2.5
MKAZ	**Moumakai**	**3.32**	**235**	P	Pn	10 15 48.0	-1.2
OMRZ	**Omania**	**3.36**	**211**	P	Pb	10 15 54.4	-2.5
RAGZ	**Rawiri**	**3.37**	**196**	P	Pn	10 15 49.3	-0.7
RAGZ				S	Sb	10 16 34.2	-4.0
RRRZ	**Republican Roa**	**3.50**	**207**	P	Pn	10 15 53.6	+2.0
WCZ	**Waipu Caves**	**3.51**	**257**	P	Pn	10 15 50.9	-0.9
RIGZ	**Rimuhau**	**3.51**	**190**	P	Pn	10 15 51.6	-0.3
RIGZ				S	Sn	10 16 33.4	0.0
MUGZ	**Murupara**	**3.53**	**204**	P	Pn	10 15 52.2	0.0
MUGZ				S	Sn	10 16 30.9	-2.9
RTZ	**Ruatahuna**	**3.60**	**200**	P	Pn	10 15 52.2	-0.9
RTZ				S	Sn	10 16 32.5	-3.0
SNGZ	**Shannon Statio**	**3.66**	**195**	P	Pn	10 15 49.7	-4.2
SNGZ				S	Sn	10 16 38.7	+1.6
PRRZ	**Plateau Road**	**3.69**	**208**	P	Pn	10 15 57.2	+3.0
ALRZ	**Allen Road**	**3.76**	**208**	P	Pn	10 15 57.9	+2.7
RAHZ	**Arahi**	**3.85**	**197**	P	Pn	10 15 57.6	+1.1
RAHZ				S	Sn	10 16 43.6	+1.9
MTHZ	**Maungataniwha**	**3.86**	**200**	P	Pn	10 15 57.5	+0.9
MTHZ				S	Sn	10 16 39.1	-2.7
MRHZ	**Matea Rd**	**3.97**	**205**	P	Pn	10 15 58.5	+0.2
NMHZ	**Naumai**	**4.09**	**200**	P	Pn	10 16 01.0	+1.1
NMHZ				S	Sn	10 16 50.9	+3.2
ARHZ	**Aropaoanui**	**4.20**	**197**	P	Pn	10 16 01.6	+0.3
ARHZ				S	Sn	10 16 51.7	+1.4
BKZ	**Black Stump Fm**	**4.25**	**202**	P	Pn	10 16 03.1	+1.1
BKZ				S	Sn	10 16 53.6	+2.1
RITZ	**Rihia Road**	**4.31**	**209**	P	Pn	10 16 05.6	+2.8
MCHZ	**McNeill Hill**	**4.45**	**199**	P	Pn	10 16 04.8	+0.1
NTVZ	**North Tongarir**	**4.49**	**210**	P	Pn	10 16 07.9	+2.6
TMVZ	**Te Maari**	**4.49**	**210**	P	Pn	10 16 07.8	+2.5
ETVZ	**East Tongariro**	**4.50**	**210**	P	Pn	10 16 05.8	+0.2
KWHZ	**Kaweka Forest**	**4.51**	**202**	P	Pn	10 16 05.7	+0.2
OTVZ	**Oturere**	**4.54**	**210**	P	Pn	10 16 08.2	+2.1
BHHZ	**Black Hill Sta**	**4.68**	**204**	P	Pn	10 16 09.2	+1.2
KRHZ	**Kereru**	**4.72**	**201**	P	Pn	10 16 07.9	-0.7
KAHZ	**Kahuranaki**	**4.74**	**196**	P	Pn	10 16 07.7	-1.0
VRZ	**Vera Road**	**4.92**	**217**	P	Pn	10 16 16.6	+5.4
WAZ	**Wanganui**	**5.33**	**211**	P	Pn	10 16 19.0	+2.2

*TAP **10** 10:15:59.9,24°.10N×121°.67E, h9km, ML3.7, B*
*JMA **10** 10:15:59.7±0.2,24°.1N±0°.3×121°.7E±0°.8, h4km±2km, MV2.8/10, TAIWAN REGION*
*ASIES **10** 10:15:59.9,24°.10N×121°.67E, h9km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^20Nm; Mrr7.63; Mθθ-7.47; Mφφ-0.16; Mrθ6.88; Mrφ-4.57; Mθφ9.70; Fault plane solution: M0 14.80770×10^20 NP1: φs40.99000°, δ73.46000°, λ72.66000°. NP2: φs268.63000°, δ23.79000°, λ135.10000°. Principal axes: T Plg58.0340°, Azm287.5290°; N Plg16.6030°, Azm46.0710°; P Plg26.4670°, Azm144.6080°;*

ISC 10 10:15:60.0±0.8, 24°.09N±0°.01×121°.68E±0°.02, h8km±5km, n122, s0°67/196, 22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=250	**0.08**	**260**	⇓*i*P	**Pg**	**10 16 02.1**	**0.0**
TWD				*i* S	**Sg**	**10 16 03.6**	**0.0**

ETL Fush Village 0.09 319 ⇓*i*P **Pg** **10 16 02.3 +0.1**
baz=325
ETL *i* S **Sg** **10 16 03.8 +0.1**
baz=325
NACB Ninganchiao 0.11 314 P **Pg** **10 16 02.6 0.0**
NACB Ninganchiao 0.11 314 ⇓*i*P **Pg** **10 16 02.6 0.0**
baz=318
NACB *i* S **Sg** **10 16 04.4 0.0**
baz=318
HWA Hwalien 0.14 212 *e*P **Pg** **10 16 03.5 +0.6**
baz=204
HWA S **Sg** **10 16 06.4 +1.5**
baz=204
ETLH Xiulin Townshi 0.22 301 ⇓*i*P **Pg** **10 16 04.4 +0.1**
baz=302
ETLH *i* S **Sg** **10 16 07.6 +0.2**
baz=302
ETM Tongmen 0.22 234 P **Pg** **10 16 04.3 0.0**
baz=223
ETM S **Sg** **10 16 07.2 -0.1**
baz=223
EHP Heping Village 0.22 14 P **Pg** **10 16 04.6 +0.2**
baz=16
EHP S **Sg** **10 16 08.2 +0.7**
baz=16
EAHA Aohua 0.24 12 P **Pg** **10 16 04.8 +0.1**
baz=17
EAHA S **Sg** **10 16 08.5 +0.5**
baz=17
LXIB Xiulin Townshi 0.26 254 ⇓*i*P **Pg** **10 16 05.0 -0.1**
baz=241
LXIB *i* S **Sg** **10 16 08.6 -0.1**
baz=241
SHUL Shoufeng 0.33 200 P **Pb** **10 16 07.4 -0.7**
baz=204
SHUL S **Sb** **10 16 14.2 +0.8**
baz=204
ENA Nanau 0.34 9 ⇓*i*P **Pg** **10 16 06.7 +0.1**
baz=12
ENA S **Sg** **10 16 11.4 +0.3**
baz=12
EWUT Wuta 0.36 14 P **Pg** **10 16 07.1 +0.1**
baz=16
EWUT S **Sg** **10 16 12.1 +0.3**
baz=16
ESL Shilin 0.36 219 P **Pg** **10 16 06.8 -0.3**
baz=223
ESL *e*S **Sg** **10 16 11.6 -0.3**
baz=223
WHF Hehuan Shan 0.39 278 *i* P **Pg** **10 16 07.6 -0.1**
baz=276
WHF *i* S **Sg** **10 16 12.9 +0.1**
baz=276
TEGC Jichi Village 0.41 199 P **Pb** **10 16 09.1 -0.3**
baz=203
TEGC S **Sb** **10 16 17.4 +1.6**
baz=203
FUSS Fushou 0.43 291 P **Pg** **10 16 08.8 +0.3**
baz=290
FUSS S **Sg** **10 16 14.7 +0.6**
baz=290
NNSB Datong 0.43 320 ⇓*i*P **Pg** **10 16 08.7 +0.3**
baz=321
NNSB *i* S **Sg** **10 16 14.6 +0.5**
baz=321
NNSH Datong 0.43 320 P **Pg** **10 16 08.7 +0.3**
baz=321
NNSH S **Sg** **10 16 14.5 +0.4**
baz=321
NNS Nan Shan 0.45 321 ⇓*i*P **Pg** **10 16 08.9 +0.2**
baz=322
NNS *i* S **Sg** **10 16 15.0 +0.4**
baz=322
LATG Datong 0.46 342 ⇓*i*P **Pg** **10 16 09.2 +0.2**
baz=343
LATG S **Sg** **10 16 15.7 +0.6**
baz=343
WARBT Fenglin Townsh 0.46 216 ⇓*i*P **Pg** **10 16 08.7 -0.3**
baz=220
WARBT S **Sg** **10 16 15.7 +0.7**
baz=220
CHGB Renai 0.47 266 ⇓*i*P **Pg** **10 16 09.3 +0.2**
baz=255
CHGB *i* S **Sg** **10 16 15.4 +0.1**
baz=255
EGFH Guangfu 0.48 209 *e*P **Pg** **10 16 09.4 0.0**
baz=214
OWD Renai 0.48 253 P **Pg** **10 16 09.4 0.0**
baz=251
OWD S **Sg** **10 16 15.3 -0.5**
baz=251
TWT Tachien 0.49 289 *i* P **Pb** **10 16 10.0 -1.0**
baz=287
TWT *i* S **Sb** **10 16 16.7 -1.8**
baz=287
ESAO Su ao 0.50 17 P **Pg** **10 16 09.8 +0.1**
baz=17
ESAO *e*S **Sg** **10 16 16.4 +0.1**
baz=17
TDCB Techi 0.51 288 ⇓*i*P **Pb** **10 16 10.2 -1.1**
baz=287
TDCB *i* S **Sg** **10 16 16.8 +0.3**
baz=287
WUSB Renai 0.53 259 ⇓*i*P **Pg** **10 16 10.4 +0.2**
baz=257
WUSB *i* S **Sg** **10 16 17.0 -0.2**
baz=257
NDT Datong Townshi 0.53 343 ⇓*i*P **Pb** **10 16 10.7 -0.9**
baz=344
NDT *i* S **Sb** **10 16 17.9 -1.5**
baz=344
TWC Suao 0.53 16 ⇓*i*P **Pg** **10 16 10.4 +0.1**
baz=16
TWC S **Sg** **10 16 17.8 +0.4**
baz=16
NDS Dongshan 0.54 3 P **Pg** **10 16 10.7 +0.3**
baz=5.0
NDS S **Sg** **10 16 18.2 +0.7**
baz=5.0
ENTT Nioudou 0.55 349 ⇓*i*P **Pg** **10 16 11.1 +0.3**
baz=351
ENTT *i* S **Sg** **10 16 18.6 +0.7**
baz=351
EOS4 EOS4 0.58 87 *e*P **Pn** **10 16 14.6 +0.3**
baz=96
EOS2 EOS2 0.59 57 *e*P **Pb** **10 16 13.3 +0.7**
baz=36
VWDT VWDT 0.60 236 P **Pg** **10 16 11.7 +0.1**
baz=226
VWDT S **Sg** **10 16 19.5 0.0**
baz=226
EOS3 EOS3 0.61 72 *e*P **Pn** **10 16 13.8 -1.0**
baz=52
TWE Neicheng 0.62 359 ⇓*i*P **Pb** **10 16 12.4 -0.8**
baz=1.0
TWE S **Sg** **10 16 20.3 +0.1**
baz=1.0
YHNB Yeheng 0.64 334 P **Pb** **10 16 12.9 -0.6**
YHNB Yeheng 0.64 334 ⇓*i*P **Pb** **10 16 12.8 -0.7**
baz=335
YHNB S **Sg** **10 16 20.6 -0.1**
baz=335
HGSD Ruisui 0.65 202 P **Pb** **10 16 13.4 -0.1**
baz=209
NSK Sanguang 0.65 333 ⇓*i*P **Pb** **10 16 13.0 -0.7**
baz=334
NSK *i* S **Sg** **10 16 21.4 +0.3**
baz=334
FUSB Fushanzhiwuyua 0.67 352 ⇓*i*P **Pb** **10 16 13.3 -0.7**
baz=354
FUSB S **Sg** **10 16 21.9 +0.2**
baz=354
EHY Hungye 0.67 210 ⇓*i*P **Pg** **10 16 12.6 -0.3**
baz=214
EHY *e*S **Sb** **10 16 22.5 -1.0**
baz=214
WHP Taichung City 0.70 285 P **Pb** **10 16 14.0 -0.5**
baz=284
WHP S **Sb** **10 16 23.7 -0.6**
baz=284
NWLT Wulai 0.70 346 P **Pb** **10 16 13.8 -0.7**
baz=354
NWLT S **Sb** **10 16 23.2 -1.1**
baz=354
WCS Beigang Elemen 0.71 267 *e*P **Pb** **10 16 13.9 -0.6**
baz=257
WCS S **Sb** **10 16 23.7 -0.8**
baz=257

SSLB	**Suanglung**	**0.73**	**246**	P		**Pg**	**10 16 14.1**	**0.0**
SSLB	**Suanglung** baz=254	**0.73**	**246**	P		**Pg**	**10 16 14.1**	**0.0**
SSLB	baz=254			S		**Sg**	**10 16 23.1**	**-0.6**
NFF	**Wufeng Townshi** baz=316	**0.74**	**316**	*e*P		**Pb**	**10 16 14.9**	**-0.4**
NFF	baz=316			*e*S		**Sb**	**10 16 24.7**	**-0.9**
SMLT	**Sun Moon Lake** baz=252	**0.75**	**254**	⇓*i*P		**Pg**	**10 16 14.4**	**0.0**
SMLT	baz=252			*i* S		**Sg**	**10 16 24.2**	**0.0**
TYC	**Yuchr** baz=254	**0.78**	**256**	P		**Pg**	**10 16 15.0**	**0.0**
TYC	baz=254			S		**Sg**	**10 16 24.7**	**-0.4**
YULB	**Yu-li**	**0.78**	**207**	P		**Pb**	**10 16 15.5**	**-0.4**
YULB	**Yu-li** baz=217	**0.78**	**207**	P		**Pg**	**10 16 14.4**	**-0.6**
YULB	baz=217			*e*S		**Sb**	**10 16 26.2**	**-0.5**
EYUL	**Yuli** baz=217	**0.81**	**204**	*e*P		**Pn**	**10 16 17.1**	**-0.7**
TWF1	**Yuli** baz=218	**0.82**	**206**	*e*P		**Pg**	**10 16 15.9**	**+0.2**
LIOB	**Emei** baz=312	**0.82**	**312**	P		**Pb**	**10 16 16.5**	**-0.1**
LIOB	baz=312			S		**Sb**	**10 16 27.5**	**-0.3**
NSTT	**Nanjuang** baz=311	**0.82**	**311**	P		**Pb**	**10 16 16.4**	**-0.2**
NSTT	baz=311			S		**Sb**	**10 16 26.8**	**-1.0**
WHYT	**Xinyi Township** baz=248	**0.86**	**243**	*e*P		**Pb**	**10 16 17.3**	**+0.2**
WHYT	baz=248			*e*S		**Sb**	**10 16 29.0**	**+0.1**
TWQ1	**Liyutan** baz=299	**0.87**	**287**	P		**Pn**	**10 16 18.5**	**-0.1**
TWQ1	baz=299			S		**Sn**	**10 16 31.0**	**-0.4**
NHDH	**Xindian Distri** baz=342	**0.88**	**351**	*e*P		**Pb**	**10 16 17.4**	**-0.1**
TIPB	**Shuangxi**	**0.88**	**8**	P		**Pb**	**10 16 17.3**	**-0.3**
TWA	**Mucha** baz=356	**0.89**	**354**	P		**Pb**	**10 16 17.7**	**+0.1**
TWA	baz=356			*e*S		**Sb**	**10 16 29.1**	**-0.6**
TATO	**Taipei**	**0.90**	**349**	P		**Pb**	**10 16 17.8**	**0.0**
NSY	**Sanyi** baz=291	**0.90**	**291**	*e*P		**Pn**	**10 16 18.7**	**-0.3**
WJS	**Zhushan** baz=251	**0.92**	**253**	P		**Pn**	**10 16 18.9**	**-0.3**
WJS	baz=251			S		**Sn**	**10 16 31.9**	**-0.7**
TCU	**Taichung** baz=267	**0.92**	**273**	*e*P		**Pn**	**10 16 19.6**	**+0.3**
TCU	baz=267			*e*S		**Sn**	**10 16 33.3**	**+0.6**
NMLH	**Miaoli** baz=298	**0.93**	**299**	*e*P		**Pn**	**10 16 20.0**	**+0.7**
NMLH	baz=298			*e*S		**Sn**	**10 16 32.4**	**-0.5**
CHKH	**Chenggong** baz=190	**0.94**	**196**	*e*P		**Pg**	**10 16 17.6**	**-0.3**
WNT	**Mingjian** baz=250	**0.94**	**257**	P		**Pn**	**10 16 19.3**	**-0.2**
WNT	baz=250			S		**Sn**	**10 16 32.8**	**-0.4**
SBCB	**Hsinchu** baz=318	**0.94**	**318**	*e*P		**Pn**	**10 16 20.5**	**+0.9**
SBCB	baz=318			*e*S		**Sn**	**10 16 35.0**	**+1.7**
TWB1	**Santiao Chiao** baz=10.0	**0.95**	**17**	*e*P		**Pb**	**10 16 18.4**	**-0.3**
TAP	**Taipei** baz=343	**0.95**	**350**	*e*P		**Pn**	**10 16 19.1**	**-0.6**
HSN	**Hsinchu** baz=320	**0.96**	**317**	*e*P		**Pn**	**10 16 19.8**	**0.0**
HSN	baz=320			*e*S		**Sn**	**10 16 34.0**	**+0.3**
FULB	**Fuli** baz=216	**0.96**	**202**	*e*P		**Pb**	**10 16 19.1**	**+0.1**
NWF	**Wu-fen Shan** baz=5.0	**0.98**	**5**	*e*P		**Pb**	**10 16 19.3**	**0.0**
WFSB	**Wu-fen Shan** baz=6.0	**0.98**	**5**	*e*P		**Pb**	**10 16 19.1**	**0.0**
NCUH	**Zhongli** baz=333	**0.98**	**333**	*e*P		**Pn**	**10 16 20.4**	**+0.3**
NCUH	baz=333			*e*S		**Sn**	**10 16 35.6**	**+1.4**
NCU	**National Centr** baz=333	**0.98**	**333**	*e*P		**Pn**	**10 16 20.1**	**0.0**
NCU	baz=333			S		**Sn**	**10 16 35.7**	**+1.5**
WDJ	**Dajia District** baz=294	**0.99**	**285**	*e*P		**Pn**	**10 16 20.9**	**+0.8**
WDJ	baz=294			*e*S		**Sn**	**10 16 35.8**	**+1.4**
ALS	**Alishan** baz=232	**0.99**	**234**	P		**Pb**	**10 16 19.3**	**-0.4**
ALS	baz=232			*e*S		**Sb**	**10 16 33.4**	**+0.4**
SXI1	**Grass Mountain** baz=357	**1.01**	**10**	*e*P		**Pb**	**10 16 19.8**	**-0.1**
TWS1	**Kuangyinshan** baz=348	**1.03**	**346**	P		**Pn**	**10 16 21.3**	**+0.5**
TWS1	baz=348			S		**Sn**	**10 16 36.3**	**+0.9**
EHD	**Haiduan** baz=214	**1.04**	**205**	*e*P		**Pg**	**10 16 19.6**	**-0.3**
EHD	baz=214			*e*S		**Sn**	**10 16 35.6**	**0.0**
CHN5	**Tsauling** baz=230	**1.05**	**242**	P		**Pn**	**10 16 20.9**	**-0.1**
CHN5	baz=230			S		**Sn**	**10 16 36.3**	**+0.4**
YM01	**YM01** baz=6.0	**1.05**	**354**	*e*P		**Pn**	**10 16 20.6**	**-0.5**
ELDTW	**Lidau** baz=204	**1.09**	**214**	*e*P		**Pg**	**10 16 20.6**	**-0.3**
YM08	**YM08** baz=356	**1.09**	**356**	*e*P		**Pn**	**10 16 21.4**	**-0.3**
ANP	**Anpu** baz=353	**1.10**	**352**	*e*P		**Pb**	**10 16 21.2**	**-0.1**
WGK	**Gukeng** baz=247	**1.10**	**249**	*e*P		**Pn**	**10 16 22.1**	**+0.3**
WGK	baz=247			S		**Sn**	**10 16 39.4**	**+2.2**
WDLH	**Douliu** baz=248	**1.12**	**249**	*e*P		**Pn**	**10 16 22.6**	**+0.6**
WDLH	baz=248			*e*S		**Sn**	**10 16 39.3**	**+1.6**
WCKO	**Fanlu** baz=229	**1.19**	**237**	P		**Pn**	**10 16 23.4**	**+0.5**
WCKO	baz=229			S		**Sn**	**10 16 40.6**	**+1.4**
JYNG	**Yonagunijimaku**	**1.21**	**73**	*e*P		**Pb**	**10 16 23.0**	**-0.1**
WRL	**Guolierlin Hig** baz=260	**1.21**	**261**	*e*P		**Pg**	**10 16 23.7**	**+0.5**
WRL	baz=260			*e*S		**Sn**	**10 16 39.7**	**-0.1**
STYH	**Taoyuan** baz=220	**1.24**	**222**	*e*P		**Pn**	**10 16 23.2**	**-0.4**
TPUB	**Ta-pu**	**1.25**	**231**	P		**Pg**	**10 16 24.4**	**+0.4**
TPUB	**Ta-pu** baz=218	**1.25**	**231**	*e*P		**Pg**	**10 16 24.0**	**0.0**
WTK	**Tuku** baz=250	**1.25**	**251**	*e*P		**Pg**	**10 16 25.0**	**+0.9**
WTK	baz=250			*e*S		**Sn**	**10 16 41.9**	**+1.1**
YOJ	**Yonaguni jima**	**1.27**	**73**	P		**Pn**	**10 16 23.7**	**-0.3**
YOJ	**Yonaguni jima**	**1.27**	**73**	P		**Pn**	**10 16 23.8**	**-0.2**
YOJ				*e*S		**Sn**	**10 16 41.4**	**+0.3**
LONT	**Longtian** baz=206	**1.29**	**203**	*e*P		**Pg**	**10 16 24.6**	**-0.1**
WTP	**Ta-pu** baz=230	**1.29**	**229**	*e*P		**Pg**	**10 16 25.1**	**+0.3**
TWK	**Hsinying** baz=232	**1.37**	**233**	P		**Pg**	**10 16 26.4**	**+0.1**
TWK	baz=232			*e*S		**Sg**	**10 16 46.1**	**+2.0**
TWG	**Pinlang** baz=204	**1.39**	**204**	*e*P		**Pg**	**10 16 26.4**	**-0.2**
TWGBT	**Beinan**	**1.39**	**204**	P		**Pg**	**10 16 26.4**	**-0.2**
TWGBT	**Beinan** baz=206	**1.39**	**204**	*e*P		**Pn**	**10 16 25.6**	**-0.1**
CHN1	**Nanshi** baz=217	**1.39**	**230**	P		**Pg**	**10 16 26.6**	**-0.1**
CHN1	baz=217			S		**Sg**	**10 16 47.0**	**+2.1**
SNST	**Tainan City** baz=221	**1.39**	**232**	*e*P		**Pg**	**10 16 26.6**	**-0.1**
SGST	**Jiashian** baz=223	**1.43**	**225**	*e*P		**Pn**	**10 16 26.0**	**-0.3**
SGST	baz=223			*e*S		**Sg**	**10 16 47.0**	**+1.1**
LDUT	**Ludao** baz=178	**1.43**	**188**	*e*P		**Pn**	**10 16 23.6**	**-2.7**
SLGT	**Liugui** baz=222	**1.45**	**221**	*e*P		**Pg**	**10 16 27.5**	**-0.3**
ICHU	**Yijhu** baz=240	**1.48**	**241**	*e*P		**Pb**	**10 16 27.4**	**-0.3**
ICHU	baz=240			*e*S		**Sg**	**10 16 49.2**	**+1.6**
SCST	**Cishan** baz=224	**1.62**	**222**	*e*P		**Pb**	**10 16 29.7**	**-0.5**
ECL	**Taimali** baz=192	**1.63**	**204**	*e*P		**Pb**	**10 16 30.3**	**-0.1**
SSD	**Sandimen** baz=207	**1.65**	**216**	*e*P		**Pg**	**10 16 31.0**	**-0.7**
MASBT	**Mashibuluo** baz=205	**1.76**	**213**	*e*P		**Pn**	**10 16 31.1**	**+0.3**
EAST	**Anshuo** baz=193	**1.87**	**204**	*e*P		**Pb**	**10 16 33.5**	**-1.0**
PHUB	**P'eng-hu** baz=243	**2.02**	**254**	*e*P		**Pn**	**10 16 34.8**	**+0.4**
PHUB	baz=243			*e*S		**Sb**	**10 17 01.0**	**-1.2**
SLIU	**Shizi** baz=198	**2.04**	**204**	*e*P		**Pb**	**10 16 37.0**	**-0.3**
VWUC	**VWUC** baz=294	**2.22**	**294**	*e*P		**Pn**	**10 16 36.4**	**-0.7**
JIJ	**Ishigaki jima**	**2.26**	**83**	*e*S		**Sn**	**10 17 06.3**	**+0.5**
JISG	**Ishigakijimahi**	**2.45**	**78**	*e*S		**Sn**	**10 17 09.9**	**-0.5**

*NNC **10** 10:17:51.8±1.1,44.˚78N×82.˚64E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=10.4km s-min=3.3km az=121.0*
*SOME **10** 10:17:54.8,44.˚68N×82.˚58E,h25km*

ISC 10 10:17:54.4±2.8,44.˚66N±0.˚05×82.˚86E±0.˚06,h19km±7km, n47,σ1≤81/70,4C-5D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array** 1.1nm,0.2s,baz=175,slow=16,SNR=144	**2.17**	**350**	⇓Pn	**Pn**	**10 18 26.8**	**-2.9**
MK31	13nm,0.3s,baz=168,slow=26,SNR=20			⇓Sn	**Sn**	**10 18 54.4**	**-1.7**
KTMS	**Ketmen** 4.3nm,0.1s	**2.18**	**237**	*e*P	**Pn**	**10 18 31.6**	**+1.8**
KTMS	69nm,0.2s			*e*S	**Sn**	**10 18 58.2**	**+2.0**
DJR	**Jarkent** 2.9nm,0.1s	**2.22**	**263**	*e*P	**Pn**	**10 18 31.5**	**+1.2**
DJR	31nm,0.2s			*e*S	**Sn**	**10 18 57.7**	**+0.4**
MAKZ	**Makanchi** 2.4nm,0.3s	**2.24**	**344**	⇑Pn	**Pn**	**10 18 28.0**	**-2.5**
MAKZ	14nm,0.6s			⇓Sn	**Sn**	**10 18 55.4**	**-2.2**
KAPS	**Kapalarasan**	**2.57**	**285**	Pg	**Pb**	**10 18 37.6**	**-2.3**
KAPS				Lg	Lg	10 19 08.9	
KAPS	**Kapalarasan** 2.2nm,0.1s	**2.57**	**285**	*e*P	**Pb**	**10 18 37.6**	**-2.3**
KAPS	21nm,0.3s			*e*S	**Sn**	**10 19 08.5**	**+2.8**
KNOS	**Konyrlen** 29nm,0.1s	**2.65**	**265**	Pg	**Pb**	**10 18 39.5**	**-1.9**
KNOS	33nm,0.3s			Lg	Lg	10 19 12.2	
PDGK	**Podgornoye** 2.3nm,0.2s	**2.77**	**243**	Pg	**Pb**	**10 18 41.3**	**-2.1**
PDGK	16nm,0.3s			Lg	Lg	10 19 14.4	
PDGK	**Podgornoye** 1.8nm,0.3s	**2.77**	**243**	⇑Pg	**Pb**	**10 18 41.0**	**-2.4**
PDGK	20nm,0.5s			⇑Lg	Lg	10 19 16.8	
SHLS	**Shalkode** 5.5nm,0.2s	**2.88**	**240**	Pg	**Pn**	**10 18 39.4**	**0.0**
SHLS	67nm,0.4s			Lg	Lg	10 19 11.2	
SHLS	**Shalkode** 5.5nm,0.2s	**2.88**	**240**	*e*P	**Pn**	**10 18 39.4**	**0.0**
SHLS	67nm,0.4s			*e*S	**Sn**	**10 19 11.2**	**-2.3**
ZSN	**Zaisan** 5.0nm,0.3s	**3.12**	**26**	*e*P	**Pb**	**10 18 50.3**	**+1.0**
ZSN	16nm,0.3s			*e*S	**Sb**	**10 19 29.8**	**+2.8**
UZB	**Uzynbulak** 7.3nm,0.2s	**3.16**	**243**	Pg	**Pb**	**10 18 47.7**	**-2.3**
UZB	17nm,0.3s			Lg	Lg	10 19 25.6	
UZB	**Uzynbulak** 7.3nm,0.2s	**3.16**	**243**	*e*P	**Pb**	**10 18 47.7**	**-2.3**
UZB	17nm,0.3s			*e*S	**Sb**	**10 19 25.6**	**-2.6**
TDK	**Taldyqorghan** 22nm,0.1s	**3.19**	**278**	*e*P	**Pb**	**10 18 49.5**	**-0.9**
TDK	32nm,0.1s			*e*S	**Sb**	**10 19 28.5**	**-0.4**
KPKS	**Kokpek** 4.2nm,0.1s	**3.24**	**250**	Pg	**Pb**	**10 18 49.4**	**-2.0**
KPKS	74nm,0.3s			Lg	Lg	10 19 28.8	
KPKS	**Kokpek** 4.2nm,0.1s	**3.24**	**250**	*e*P	**Pb**	**10 18 49.4**	**-2.0**
KPKS	74nm,0.3s			*e*S	**Sb**	**10 19 28.8**	**-1.6**
ZHN	**Zhinishke**	**3.53**	**247**	Pg	**Pb**	**10 18 54.7**	**-1.6**
ZHN				Lg	Lg	10 19 37.4	
ZHN	**Zhinishke** 5.6nm,0.1s	**3.53**	**247**	*e*P	**Pb**	**10 18 54.7**	**-1.6**
ZHN	45nm,0.2s			*e*S	**Sb**	**10 19 37.5**	**-1.3**
KURS	**Kuram** 2.3nm,0.5s	**3.58**	**253**	Pg	**Pb**	**10 18 55.6**	**-1.4**
KURS	7.9nm,0.3s			Lg	Lg	10 19 39.9	
KURS	**Kuram** 2.3nm,0.5s	**3.58**	**253**	*e*P	**Pb**	**10 18 55.6**	**-1.4**
KURS	7.9nm,0.3s			*e*S	**Sb**	**10 19 39.9**	**-0.2**
SATY	**Saty** 2.6nm,0.1s	**3.60**	**245**	Pg	**Pb**	**10 18 55.7**	**-1.7**
SATY	28nm,0.3s			Lg	Lg	10 19 39.2	
SATY	**Saty** 2.6nm,0.1s	**3.60**	**245**	*e*P	**Pb**	**10 18 55.7**	**-1.7**
SATY	28nm,0.3s			*e*S	**Sb**	**10 19 39.2**	**-1.5**
ARXS	**Arharly** 5.9nm,0.3s	**3.63**	**265**	*e*P	**Pb**	**10 18 56.1**	**-1.9**
ARXS	8.3nm,0.3s			*e*S	**Sb**	**10 19 40.2**	**-1.5**
CHKK	**Chushkaly** 1.6nm,0.2s	**4.29**	**261**	Pg	**Pb**	**10 19 07.7**	**-1.6**
CHKK	13nm,0.2s			Lg	Lg	10 20 00.8	
CHKK	**Chushkaly** 1.6nm,0.2s	**4.29**	**261**	*e*P	**Pb**	**10 19 07.7**	**-1.6**
CHKK	13nm,0.2s			*e*S	**Sb**	**10 20 00.2**	**-0.6**
KOTS	**Kotyrbulak** 0.6nm,0.3s	**4.39**	**253**	Pg	**Pb**	**10 19 11.6**	**+0.6**
KOTS	18nm,0.3s			Lg	Lg	10 20 06.6	
KOTS	**Kotyrbulak** 0.6nm,0.3s	**4.39**	**253**	*e*P	**Pb**	**10 19 11.6**	**+0.6**
KOTS	18nm,0.3s			*e*S	**Sb**	**10 20 06.6**	**+3.1**
MDOK	**Medeo** 3.4nm,0.4s	**4.46**	**252**	Pg	**Pb**	**10 19 11.4**	**-0.8**
MDOK	3.7nm,0.6s			⇓Pg	Pg	10 19 13.5	-6.3
MDOK	9.2nm,0.4s			Lg	Lg	10 20 06.0	
MDOK	7.0nm,0.6s			Lg	Lg	10 20 08.8	
MDOK	**Medeo** 3.4nm,0.4s	**4.46**	**252**	*e*P	**Pb**	**10 19 11.4**	**-0.8**
MDOK	9.2nm,0.4s			*e*S	**Sb**	**10 20 06.0**	**+0.4**
KTBS	**Karatobe** 2.4nm,0.3s	**4.54**	**260**	Pg	**Pb**	**10 19 12.1**	**-1.4**
KTBS	12nm,0.5s			Lg	Lg	10 20 08.4	
KTBS	**Karatobe** 2.4nm,0.3s	**4.54**	**260**	*e*P	**Pb**	**10 19 12.2**	**-1.4**
KTBS	12nm,0.5s			*e*S	**Sb**	**10 20 08.4**	**+0.5**
TNSS	**Tian-Shan** 1.3nm,0.3s	**4.57**	**251**	Pg	**Pb**	**10 19 14.6**	**+0.3**
TNSS	3.8nm,0.5s			Lg	Lg	10 20 11.6	
TNSS	**Tian-Shan** 1.3nm,0.3s	**4.57**	**251**	*e*P	**Pb**	**10 19 14.6**	**+0.3**
TNSS	3.8nm,0.5s			*e*S	**Sb**	**10 20 11.6**	**+2.4**
KUU	**Kurty** 1.9nm,0.0s	**4.75**	**263**	Pg	**Pb**	**10 19 15.9**	**-1.1**
KUU	8.2nm,0.4s			Lg	Lg	10 20 14.0	
KUU	**Kurty** 1.9nm,0.0s	**4.75**	**263**	*e*P	**Pb**	**10 19 15.9**	**-1.1**
KUU	8.2nm,0.4s			*e*S	**Sb**	**10 20 14.0**	**+0.3**
IZV	**Izvestkoviy** 1.4nm,0.5s	**4.80**	**252**	Pg	**Pb**	**10 19 19.6**	**+1.6**
IZV	10nm,0.7s			Lg	Lg	10 20 20.5	
IZV	**Izvestkoviy** 0.7nm,0.2s	**4.80**	**252**	*e*P	**Pb**	**10 19 19.0**	**+1.0**
IZV	5.3nm,0.2s			*e*S	**Sb**	**10 20 19.1**	**+3.7**
MTBS	**Maitube** 6.1nm,0.2s	**4.89**	**254**	Pg	**Pb**	**10 19 18.9**	**-0.7**
MTBS				Lg	Lg	10 20 18.9	
MTBS	**Maitube** 0.8nm,0.1s	**4.89**	**254**	*e*P	**Pb**	**10 19 18.9**	**-0.7**
MTBS	6.5nm,0.2s			*e*S	**Sb**	**10 20 18.9**	**+0.9**
KRBS	**Karabastau** 2.1nm,0.5s	**5.26**	**262**	Pg	**Pb**	**10 19 25.9**	**+0.2**
KRBS	2.8nm,0.3s			Lg	Lg	10 20 31.4	
KRBS	**Karabastau** 2.1nm,0.5s	**5.26**	**262**	*e*P	**Pb**	**10 19 25.9**	**+0.2**
KRBS	2.8nm,0.3s			*e*S	**Sb**	**10 20 31.4**	**+3.0**
DGS	**Degeres** 2.6nm,0.3s	**5.31**	**257**	Pg	**Pb**	**10 19 26.8**	**+0.1**
DGS	7.4nm,0.3s			Lg	Lg	10 20 32.7	
DGS	**Degeres** 2.6nm,0.3s	**5.31**	**257**	*e*P	**Pb**	**10 19 26.8**	**+0.1**
DGS	7.4nm,0.3s			*e*S	**Sb**	**10 20 32.7**	**+2.7**
TKM2	**Tokmak 2** 4.4nm,1.1s	**5.54**	**254**	⇑Pg	**Pb**	**10 19 32.5**	**+1.9**
TKM2	1.8nm,0.4s			⇓Lg	Lg	10 20 44.5	
OTUK	**Ortayu** 0.2nm,0.1s	**8.10**	**300**	Pg	**Pb**	**10 20 18.3**	**+4.2**
OTUK	0.8nm,0.4s			Lg	Lg	10 22 00.7	
BRZS	**Berezniki** 0.7nm,0.4s	**8.73**	**311**	Pg		10 20 29.9	
BRZS	2.6nm,0.6s			Lg	Lg	10 22 20.9	

*IDC **10** 10:27:50.7±1.8,36.˚72S×176.˚95E,h228km±10km,mb3.7/5, mbtmp4.3/5,Error ellipse: s-maj=40.0km s-min=16.7km az=38.0*
*NOU **10** 10:27:51.1,37.˚16S×176.˚85E,h273km,MLv4.3/14,North Island, New Zealand*
*WEL **10** 10:27:54.6±0.9,37.˚5±5.˚×17.˚7E±.˚,h236km±7km,M3.6/67, MLv3.6/67,Error ellipse: s-maj=0.0km s-min=0.0km az=45.1,confirmed*

ISC 10 10:27:54.3±0.9,37.˚24S±0.˚09×176.˚73E±0.˚07,h250km±6km, n181,σ1≤21/178,mb3.8/5,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.61**	**217**	P	**Pn**	**10 28 27.1**	**-0.4**
MARZ	**Manawahe**	**0.74**	**183**	P	**Pn**	**10 28 28.2**	**+0.1**
LIRZ	**Lichensteins R**	**0.80**	**200**	P	**Pn**	**10 28 28.2**	**-0.1**
EDRZ	**Edgecumbe**	**0.86**	**179**	P	**Pn**	**10 28 29.0**	**+0.3**
KARZ	**Kaharoa**	**0.86**	**206**	P	**Pn**	**10 28 29.0**	**+0.3**
OMRZ	**Omania**	**0.91**	**198**	P	**Pn**	**10 28 29.2**	**+0.3**
HAZ	**Te Kaha**	**0.98**	**122**	P	**Pn**	**10 28 27.9**	**-1.3**
TARZ	**Mount Tarawera**	**1.00**	**190**	P	**Pn**	**10 28 30.3**	**+0.8**
UTU	**Utuhina**	**1.02**	**204**	P	**Pn**	**10 28 30.4**	**+1.0**
RUGZ	**Raukumara Rang**	**1.04**	**134**	P	**Pn**	**10 28 28.2**	**-1.5**
HLRZ	**Highlands Stat**	**1.05**	**196**	P	**Pn**	**10 28 30.2**	**+0.5**
URZ	**Urewera**	**1.06**	**163**	P	**Pn**	**10 28 29.4**	**-0.2**
URZ	**Urewera** 101nm,0.3s,baz=345,slow=2.9,SNR=267	**1.06**	**163**	P	**Pn**	**10 28 28.8**	**-0.8**
URZ	262nm,0.4s,baz=98,slow=21,SNR=29			S	**S**	**10 28 55.8**	**-1.6**
URZ	**Urewera**	**1.06**	**163**	P	**Pn**	**10 28 28.8**	**-0.8**
TOZ	**Tahuroa Road**	**1.09**	**243**	P	**Pn**	**10 28 30.0**	**+0.2**
RRRZ	**Republican Roa**	**1.10**	**189**	P	**Pn**	**10 28 30.2**	**+0.3**
RRRZ				S	**S**	**10 28 59.3**	**+1.2**
HSRZ	**Hossack Road**	**1.13**	**200**	P	**Pn**	**10 28 31.0**	**+0.9**
HRRZ	**Handcock Road**	**1.20**	**197**	P	**Pn**	**10 28 31.1**	**+0.6**
GRRZ	**Galatos Road**	**1.21**	**204**	P	**Pn**	**10 28 31.3**	**+0.7**
MUGZ	**Murupara**	**1.23**	**178**	P	**Pn**	**10 28 30.4**	**-0.3**
MUGZ				S	**S**	**10 28 57.6**	**-1.8**
PKGZ	**Pakihiroa**	**1.25**	**121**	P	**Pn**	**10 28 30.3**	**-0.6**
PKGZ				S	**S**	**10 28 57.6**	**-2.2**
MKAZ	**Moumakai**	**1.26**	**276**	P	**Pn**	**10 28 30.3**	**-0.6**
MWZ	**Matawai**	**1.26**	**150**	P	**Pn**	**10 28 30.4**	**-0.6**
MWZ				S	**S**	**10 28 58.1**	**-1.8**
PRRZ	**Plateau Road**	**1.28**	**192**	P	**Pn**	**10 28 31.5**	**+0.4**
MXZ	**Matakaoa Point**	**1.30**	**105**	P	**Pn**	**10 28 29.9**	**-1.2**
MXZ	**Matakaoa Point**	**1.30**	**105**	P	**Pn**	**10 28 30.0**	**-1.2**
MXZ				S	**S**	**10 28 57.5**	**-2.7**
WPRZ	**Whakapapatarin**	**1.35**	**199**	P	**Pn**	**10 28 32.1**	**+0.6**
ALRZ	**Allen Road**	**1.35**	**193**	P	**Pn**	**10 28 31.9**	**+0.4**
WIAZ	**Waiheke Island**	**1.35**	**289**	P	**Pn**	**10 28 30.5**	**-1.0**
RAGZ	**Rawiri**	**1.36**	**157**	P	**Pn**	**10 28 31.6**	**-0.1**
TWGZ	**Tauwhareparae**	**1.36**	**133**	P	**Pn**	**10 28 31.7**	**0.0**
TWGZ				S	**S**	**10 29 01.0**	**-0.1**
RTZ	**Ruatahuna**	**1.38**	**172**	P	**Pn**	**10 28 31.5**	**-0.3**
GRZ	**Great Barrier**	**1.42**	**314**	P	**Pn**	**10 28 30.1**	**-2.0**
KUTZ	**Kaahu Road**	**1.43**	**210**	P	**Pn**	**10 28 32.0**	**-0.1**
TLZ	**Tolley Road**	**1.43**	**221**	P	**Pn**	**10 28 33.0**	**+0.8**
WMGZ	**Waiomatatini S**	**1.46**	**114**	P	**Pn**	**10 28 31.6**	**-0.7**
WMGZ				S	**S**	**10 29 00.5**	**-1.7**
ETAZ	**East Tamaki Re**	**1.47**	**281**	P	**Pn**	**10 28 31.7**	**-0.6**
PUZ	**Puketiti**	**1.47**	**125**	P	**Pn**	**10 28 31.7**	**-0.7**
TKGZ	**Te Karaka**	**1.49**	**144**	P	**Pn**	**10 28 32.4**	**-0.1**
MBAZ	**Motutapu North**	**1.54**	**287**	P	**Pn**	**10 28 32.2**	**-0.7**
MRHZ	**Matea Rd**	**1.60**	**189**	P	**Pn**	**10 28 33.6**	**+0.1**
MTHZ	**Maungataniwha**	**1.61**	**177**	P	**Pn**	**10 28 33.4**	**-0.1**
SNGZ	**Shannon Statio**	**1.61**	**163**	P	**Pn**	**10 28 33.7**	**+0.3**
EPAZ	**Eden Park BICE**	**1.63**	**282**	P	**Pn**	**10 28 32.8**	**-0.7**
HBAZ	**Herne Bay Bore**	**1.64**	**283**	P	**Pn**	**10 28 32.9**	**-0.8**
ABAZ	**Army Bay**	**1.65**	**292**	P	**Pn**	**10 28 33.0**	**-0.8**
WATZ	**Wairara**	**1.66**	**208**	P	**Pn**	**10 28 34.9**	**+1.1**
AWAZ	**Awhitu Peninsu**	**1.67**	**276**	P	**Pn**	**10 28 33.4**	**-0.5**
RIGZ	**Rimuhau**	**1.67**	**151**	P	**Pn**	**10 28 34.2**	**+0.2**
RAHZ	**Arahi**	**1.69**	**170**	P	**Pn**	**10 28 34.6**	**+0.4**
CNGZ	**Carnagh Statio**	**1.71**	**137**	P	**Pn**	**10 28 34.8**	**+0.6**
WTAZ	**Waiatarua**	**1.75**	**280**	P	**Pn**	**10 28 34.1**	**-0.6**
RVAZ	**Riverhead Bore**	**1.78**	**285**	P	**Pn**	**10 28 33.8**	**-1.0**
RATZ	**Rangitukua**	**1.79**	**205**	P	**Pn**	**10 28 35.7**	**+0.8**
NMHZ	**Naumai**	**1.85**	**178**	P	**Pn**	**10 28 36.2**	**+0.7**
RITZ	**Rihia Road**	**1.86**	**201**	P	**Pn**	**10 28 36.4**	**+0.9**
WHHZ	**Waihua**	**1.87**	**168**	P	**Pn**	**10 28 36.1**	**+0.6**
PRGZ	**Paritu Road**	**1.91**	**152**	P	**Pn**	**10 28 36.5**	**+0.6**
KNZ	**Kokohu**	**1.93**	**157**	P	**Pn**	**10 28 35.9**	**-0.1**
BKZ	**Black Stump Fm**	**1.93**	**185**	P	**Pn**	**10 28 36.0**	**-0.1**
BKZ	**Black Stump Fm**	**1.93**	**185**	P	**Pn**	**10 28 36.0**	**-0.1**
HIZ	**Hauiti**	**1.95**	**229**	P	**Pn**	**10 28 37.4**	**+1.1**
HIZ	**Hauiti**	**1.95**	**229**	P	**Pn**	**10 28 37.3**	**+1.0**
ARHZ	**Aropaoanui**	**2.03**	**174**	P	**Pn**	**10 28 37.7**	**+0.7**
NTVZ	**North Tongarir**	**2.03**	**204**	P	**Pn**	**10 28 38.4**	**+1.3**
TMVZ	**Te Maari**	**2.03**	**203**	P	**Pn**	**10 28 37.9**	**+0.8**
ETVZ	**East Tongariro**	**2.05**	**203**	P	**Pn**	**10 28 37.9**	**+0.6**
WTVZ	**West Tongariro**	**2.07**	**205**	P	**Pn**	**10 28 38.5**	**+1.0**
NNVZ	**North Ngauruho**	**2.08**	**205**	P	**Pn**	**10 28 38.6**	**+1.0**
TWVZ	**Taurewa**	**2.09**	**209**	P	**Pn**	**10 28 37.3**	**-0.3**
OTVZ	**Oturere**	**2.09**	**203**	P	**Pn**	**10 28 37.5**	**-0.3**

SNVZ	South Ngauruho	2.12 203	P		Pn	10 28 39.0	+1.0		
MHGZ	Mahia Peninsul	2.12 154	P		Pn	10 28 38.5	+0.7		
NGZ	Ngauruhoe	2.12 204	P		Pn	10 28 39.6	+1.6		
COVZ	Chateau Observ	2.16 205	P		Pn	10 28 39.0	+0.6		
KWHZ	Kaweka Forest	2.19 186	P		Pn	10 28 38.8	+0.3		
TUVZ	Tukino	2.19 202	P		Pn	10 28 39.3	+0.7		
MCHZ	McNeill Hill	2.20 181	P		Pn	10 28 39.1	+0.6		
FWVZ	Far West T-bar	2.21 204	P		Pn	10 28 39.7	+0.8		
MAVZ	Matarangi	2.22 204	P		Pn	10 28 39.9	+0.8		
WHVZ	Whangaehu Hut	2.22 203	P		Pn	10 28 39.7	+0.7		
TRVZ	Turoa	2.25 204	P		Pn	10 28 40.1	+0.8		
WNVZ	Wahianoa	2.26 203	P		Pn	10 28 39.7	+0.4		
MOVZ	Moawhango	2.29 199	P		Pn	10 28 39.5	0.0		
BHHZ	Black Hill Sta	2.30 193	P		Pn	10 28 39.5	-0.1		
PKVZ	Pokaka	2.31 208	P		Pn	10 28 40.5	+0.8		
WCZ	Waipu Caves	2.32 304	P		Pn	10 28 38.3	-1.5		
MTVZ	Mangateitei	2.35 204	P		Pn	10 28 40.7	+0.5		
KRHZ	Kereru	2.41 187	P		Pn	10 28 40.8	+0.1		
CKHZ	Cape Kidnapper	2.43 174	P		Pn	10 28 41.1	+0.4		
VRZ	Vera Road	2.43 219	P		Pn	10 28 42.5	+1.7		
KAHZ	Kahuranaki	2.55 177	P		Pn	10 28 42.3	+0.3		
MHEZ	Mangahewa	2.63 225	P		Pn	10 28 45.8	+2.9		
PNHZ	Pukenui	2.70 189	P		Pn	10 28 43.4	-0.2		
PXZ	Pawanui	2.78 178	P		Pn	10 28 44.3	-0.1		
WPHZ	Waipukurau	2.82 184	P		Pn	10 28 44.7	-0.1		
WAZ	Wanganui	2.85 208	P		Pn	10 28 45.9	+0.7		
LREZ	Lake Rotokare	2.87 219	P		Pn	10 28 47.1	+1.8		
TSZ	Takapari Road	2.87 192	P		Pn	10 28 45.1	-0.3		
NEZ	North Egmont	2.89 225	P		Pn	10 28 48.0	+2.3		
PRHZ	Porangahau	3.02 181	P		Pn	10 28 46.6	-0.3		
NBEZ	Newall Road No	3.02 227	P		Pn	10 28 49.5	+2.6		
DVHZ	Dannevirke	3.08 188	P		Pn	10 28 47.2	-0.5		
NMEZ	Namu Road	3.12 225	P		Pn	10 28 50.1	+2.2		
OHWZ	Ohakea	3.16 200	P		Pn	10 28 48.9	+0.5		
ANWZ	Angora Road	3.22 183	P		Pn	10 28 48.8	-0.2		
POWZ	Post Office Ro	3.23 193	P		Pn	10 28 48.8	-0.4		
OUZ	Omahuta	3.24 308	P		Pn	10 28 47.6	-1.8		
OUZ	Omahuta	3.24 308	P		Pn	10 28 47.8	-1.6		
PRWZ	Pori Road	3.36 190	P		Pn	10 28 50.6	0.0		
BFZ	Birch Farm	3.45 186	P		Pn	10 28 49.9	-1.8		
BFZ	Birch Farm	3.45 186	P		Pn	10 28 48.7	-3.0		
MRZ	Mangatainoka R	3.53 194	P		Pn	10 28 51.7	-0.8		
TIWZ	Tintock	3.59 190	P		Pn	10 28 53.4	+0.1		
CPWZ	Castlepoint	3.68 186	P		Pn	10 28 54.9	+0.6		
HOWZ	Holdsworth Sta	3.77 194	P		Pn	10 28 54.4	-1.0		
OGWZ	Otaki Gorge	3.77 198	P		Pn	10 28 54.6	-0.7		
KIW	Kapiti Island	3.88 201	P		Pn	10 28 55.6	-1.0		
TMWZ	Te Maipa	3.91 189	P		Pn	10 28 56.4	-0.6		
MTW	Mount Morrison	4.02 193	P		Pn	10 28 57.0	-1.3		
CAW	Cannon Point	4.07 198	P		Pn	10 28 57.7	-1.1		
DUWZ	D'Urville Isla	4.17 211	P		Pn	10 28 58.9	-1.1		
TRWZ	Traveller	4.22 191	P		Pn	10 28 59.9	-0.7		
PAWZ	Paruwai Farm	4.25 193	P		Pn	10 28 59.6	-1.5		
WEL	Wellington	4.31 200	P		Pn	10 29 00.7	-0.9		
SNZO	South Karori	4.35 200	P		Pn	10 29 00.8	-1.3		
TCW	Tory Channel	4.39 205	P		Pn	10 29 01.5	-1.1		
BHW	Baring Head	4.40 198	P		Pn	10 29 01.3	-1.5		
PLWZ	Palliser	4.47 194	P		Pn	10 29 02.1	-1.4		
TUWZ	Tuamarina	4.70 206	P		Pn	10 29 05.1	-1.2		
NNZ	Nelson	4.74 212	P		Pn	10 29 05.5	-1.4		
TKNZ	Takaka Hill	4.78 217	P		Pn	10 29 06.0	-1.4		
QRZ	Quartz Range	4.84 221	P		Pn	10 29 06.5	-1.6		
QRZ	Quartz Range	4.84 221	P		Pn	10 29 06.5	-1.6		
CMWZ	Cape Campbell	4.90 203	P		Pn	10 29 08.2	-0.5		
BSWZ	Blackbirch Sta	4.98 205	P		Pn	10 29 08.6	-1.2		
MRNZ	Matariki Terra	5.16 215	P		Pn	10 29 10.1	-2.0		
THZ	Tophouse	5.39 212	P		Pn	10 29 13.3	-1.6		
KHZ	Kahutara	5.72 204	P		Pn	10 29 17.8	+1.0		
KHZ	Kahutara	5.72 204	P		Pn	10 29 17.8	-1.0		
DSZ	Denniston Nort	5.89 219	P		Pn	10 29 18.3	-2.7		
GVZ	Greta Valley S	6.38 205	P		Pn	10 29 25.6	-1.5		
LTZ	Lake Taylor	6.50 210	P		Pn	10 29 26.5	-2.1		
AMCZ	Amberley	6.69 206	P		Pn	10 29 29.2	-1.8		
INZ	Inchbonnie	6.81 215	P		Pn	10 29 30.5	-2.0		
OXZ	Oxford	7.05 209	P		Pn	10 29 32.8	-2.7		
MQZ	McQueen's Vall	7.16 204	P		Pn	10 29 34.3	-2.6		
AKCZ	Akaroa Harbour	7.23 202	P		Pn	10 29 36.1	-1.6		
RACZ	Rakaia	7.36 207	P		Pn	10 29 36.9	-2.4		
MHCZ	Mount Hutt	7.41 210	P		Pn	10 29 37.5	-2.6		
WVZ	Waitaha Valley	7.41 216	P		Pn	10 29 37.7	-2.3		
WACZ	Wakanui South	7.65 208	P		Pn	10 29 41.1	-2.0		
RPZ	Rata Peaks	7.77 212	P		Pn	10 29 42.3	-2.3		
RPZ	Rata Peaks 18nm,0.3s,baz=71,slow=1.6,SNR=63	7.77 212	P		P	10 29 42.5	-2.2		
RPZ			S		S	10 31 06.7	-6.7		
	35nm,0.5s,baz=26,slow=7.9,SNR=16								
RPZ	Rata Peaks	7.77 212	P		Pn	10 29 42.4	-2.3		
ARCZ	Arundel	7.91 210	P		Pn	10 29 44.2	-2.2		
FOZ	Fox Glacier	8.20 218	P		Pn	10 29 47.2	-2.8		
TMZ	Timaru	8.34 209	P		Pn	10 29 49.6	-2.2		
LBZ	Lake Benmore	8.69 213	P		Pn	10 29 54.2	-2.0		
ODZ	Otahua Downs	9.04 209	P		Pn	10 29 59.1	-1.5		
ODZ	Otahua Downs	9.04 209	P		Pn	10 29 59.1	-1.5		
JCZ	Jackson Bay	9.10 219	P		Pn	10 29 58.9	-2.6		
JCZ	Jackson Bay	9.10 219	P		Pn	10 29 58.8	-2.7		
WKZ	Wanaka	9.55 215	P		Pn	10 30 04.3	-2.8		
EAZ	Earnscleugh	9.73 213	P		Pn	10 30 06.6	-2.8		
HHSZ	Highcliff Hill	9.77 206	P		Pn	10 30 09.8	-0.1		
MSZ	Milford Sound	9.96 216	P		Pn	10 30 10.1	-2.2		
MLZ	Mavora Lakes	10.37 216	P		Pn	10 30 15.5	-2.0		
WHZ	Wether Hill Ro	10.85 214	P		Pn	10 30 20.7	-2.7		
SYZ	Scrubby Hill	10.87 209	P		Pn	10 30 22.9	-0.6		
SYZ	Scrubby Hill	10.87 209	P		Pn	10 30 22.9	-0.6		
APZ	The Paps	11.57 211	P		Pn	10 30 30.7	-1.6		
PYZ	Puysegur Point	11.64 217	P		Pn	10 30 31.7	-1.6		
PYZ	Puysegur Point	11.64 217	P		Pn	10 30 32.2	-1.1		
STKA	Stephens Creek 1.3nm,0.7s,baz=104,slow=12,SNR=1.6 1.3nm,0.7s	29.31 270	P		P	10 33 34.0	+0.2		
ASAR	Alice Springs 3.7nm,0.5s,baz=121,slow=8.1,SNR=110 3.7nm,0.5s	38.99 278	P		P	10 34 56.2	-0.7		
WRA	Warramunga Arr 2.2nm,0.5s,baz=123,slow=7.5,SNR=32 2.2nm,0.5s	40.64 283	P		P	10 35 09.2	-1.1		
QSPA	South Pole Qui 6.7nm,0.6s,baz=346,slow=0.9,SNR=64 6.7nm,0.6s	52.88 180	P		P	10 36 46.7	+2.3		
PLCA	Paso Flores 1.6nm,0.8s,baz=247,slow=7.7,SNR=4.1 1.6nm,0.8s	80.94 135	P		P	10 39 41.8	+0.8		
ARCES	ARCESS Array B 4.7nm,0.9s,baz=20,slow=2.9,SNR=4.4	144.11 343	PKP		PKPab	10 46 55.3	-2.0		
FINES	FINESS Array B 0.8nm,0.5s,baz=31,slow=4.4,SNR=5.3	149.62 332	PKPbc		PKPdf	10 47 10.5	+2.2		

*JMA **10** 10:37:55.7±0.1,24°.2N±0°.2×121°.7E±0°.4,h12km,MV3.0/13, TAIWAN REGION*

*ASIES **10** 10:37:55.4,24°.20N×121°.71E,h11km,ML3.6,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}5.73; $M_{\theta\theta}$-8.25; $M_{\phi\phi}$2.52; $M_{r\theta}$4.63; $M_{\theta\phi}$-4.38; $M_{\phi r}$-4.28; Fault plane solution: $M_0$10.60920×10^{20} NP1: ϕ_s103.83000°,δ66.69000°,λ131.76000°. NP2: ϕ_s217.73000°,δ46.76000°,λ32.90000°. Principal axes: T Plg49.8370°, Azm60.7290°; N Plg37.7090°, Azm264.3700°; P Plg11.8070°, Azm165.0690°;*

*TAP **10** 10:37:55.4,24°.20N×121°.71E,h11km,ML3.6,B*

ISC 10 10:37:55.6±0.8,24°.20N±0°.01×121°.73E±0°.01,h10km±4km, n140,σ0°83/243,17C-21D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res ISC
								h m s	
ETL	Fush Village baz=242	0.10	247	⇑	*i*	P	Pg	10 37 58.4	+0.2
ETL					*i*	S	Sg	10 38 00.3	+0.1
	baz=242								
EHP	Heping Village baz=17	0.11	8	⇓	*i*	P	Pg	10 37 58.6	+0.2
EHP					*i*	S	Sg	10 38 00.8	+0.4
	baz=17								
NACB	Ninganchiao	0.12	258		P		Pg	10 37 58.6	+0.1
NACB	Ninganchiao baz=256	0.12	258	⇑	*i*	P	Pg	10 37 58.6	+0.1
NACB					*i*	S	Sg	10 38 00.6	+0.1
	baz=256								
EAHA	Aohua baz=18	0.13	6	⇓	*i*	P	Pg	10 37 58.8	+0.2
EAHA					*i*	S	Sg	10 38 01.1	+0.3
	baz=18								
TWD	Chiawan	0.17	225	⇑	*i*	P	Pg	10 37 59.2	0.0
	baz=220								
TWD					*i*	S	Sg	10 38 01.9	+0.2
	baz=220								
ETLH	Xiulin Townshi baz=272	0.22	272	⇑	*i*	P	Pg	10 38 00.3	+0.1
ETLH					*i*	S	Sg	10 38 03.5	+0.1
	baz=272								
ENA	Nanau baz=8.0	0.23	4	⇓	*i*	P	Pg	10 38 00.5	+0.2
ENA					*i*	S	Sg	10 38 04.0	+0.4
	baz=8.0								
HWA	Hwalien baz=204	0.25	206		*i*	P	Pg	10 38 01.1	+0.5
HWA					e	S	Sg	10 38 06.4	+2.4
	baz=204								
EWUT	Wuta baz=13	0.25	11	⇓	*i*	P	Pg	10 38 00.8	+0.1
EWUT					*i*	S	Sg	10 38 04.3	+0.2
	baz=13								
ETM	Tongmen baz=213	0.31	222	⇑	*i*	P	Pg	10 38 01.7	-0.1
ETM					*i*	S	Sg	10 38 06.2	+0.1
	baz=213								
LXIB	Xiulin Townshi baz=237	0.34	238	⇑	e	P	Pg	10 38 02.1	-0.2
LXIB					e	S	Sg	10 38 06.7	-0.1
	baz=237								
LATG	Datong baz=332	0.38	332	⇓	*i*	P	Pg	10 38 03.5	+0.3
LATG					e	S	Sb	10 38 09.3	-1.2
	baz=332								
NNSB	Datong baz=307	0.39	306	⇓		P	Pg	10 38 03.6	+0.3
NNSB					e	S	Sg	10 38 08.8	+0.3
	baz=307								
NNSH	Datong baz=306	0.39	306	⇓	e	P	Pg	10 38 03.6	+0.3
NNSH					e	S	Sg	10 38 08.8	+0.3
	baz=306								
ESAO	Su ao baz=17	0.39	16	⇓	*i*	P	Pg	10 38 03.4	+0.1
ESAO						S	Sg	10 38 08.5	0.0
	baz=17								
NNS	Nan Shan baz=308	0.40	307	⇓	e	P	Pg	10 38 03.8	+0.3
NNS					e	S	Sg	10 38 09.2	+0.3
	baz=308								
WHF	Hehuan Shan baz=262	0.42	263	⇑	*i*	P	Pg	10 38 04.1	+0.1
WHF						S	Sg	10 38 09.8	+0.1
	baz=262								
TWC	Suao baz=11	0.42	15	⇓	*i*	P	Pg	10 38 04.1	+0.2
TWC					e	S	Sg	10 38 09.6	+0.1
	baz=11								
NDS	Dongshan baz=359	0.43	359	⇓		P	Pb	10 38 04.5	-0.8
NDS					e	S	Sg	10 38 10.6	+0.7
	baz=359								
SHUL	Shoufeng baz=206	0.43	200			P	Pb	10 38 04.8	-0.5
SHUL					e	S	Sb	10 38 14.0	+2.1
	baz=206								
FUSS	Fushou baz=276	0.44	276	⇓		P	Pb	10 38 04.7	-0.9
FUSS					e	S	Sg	10 38 10.4	+0.2
	baz=276								
NDT	Datong Townshi baz=335	0.45	334	⇓	*i*	P	Pb	10 38 04.9	-0.7
NDT					e	S	Sb	10 38 11.0	-1.2
	baz=335								
ENTT	Nioudou baz=343	0.46	342	⇓	*i*	P	Pb	10 38 05.1	-0.7
ENTT						S	Sb	10 38 11.6	-1.1
	baz=343								
ESL	Shilin baz=214	0.47	215	⇑	e	P	Pg	10 38 04.4	-0.3
ESL					e	S	Sb	10 38 11.9	-0.9
	baz=214								
TWT	Tachien baz=276	0.50	276			P	Pb	10 38 06.2	-0.3
TWT					e	S	Sb	10 38 12.7	-1.4
	baz=276								
EOS2	EOS2 baz=59	0.51	65		e	P	Pb	10 38 07.0	+0.4
TEGC	Jichi Village baz=189	0.52	199		e	P	Pb	10 38 06.9	+0.2
TEGC					e	S	Sn	10 38 15.9	-1.8
	baz=189								
TDCB	Techi baz=276	0.52	276		e	P	Pb	10 38 06.2	-0.6
TDCB					e	S	Sg	10 38 12.7	0.0
	baz=276								
CHGB	Renai baz=246	0.52	255	⇑	*i*	P	Pb	10 38 06.1	-0.8
CHGB						S	Sg	10 38 12.8	+0.1
	baz=246								
TWE	Neicheng baz=356	0.52	354	⇓	*i*	P	Pb	10 38 06.2	-0.6
TWE					e	S	Sb	10 38 13.3	-1.1
	baz=356								
EOS3	EOS3 baz=78	0.55	81		e	P	Pn	10 38 08.4	-0.9
EOS4	EOS4 baz=97	0.55	98		e	P	Pn	10 38 08.4	-0.7
EOS4					e	S	Sn	10 38 17.5	-0.5
	baz=97								
OWD	Renai baz=244	0.56	244	⇑	*i*	P	Pg	10 38 06.4	0.0
OWD					e	S	Sb	10 38 14.6	-0.9
	baz=244								
ILA	Ilan baz=3.0	0.56	2		e	P	Pb	10 38 07.2	-0.3
ILA					e	S	Sb	10 38 15.4	-0.2
	baz=3.0								
YHNB	Yeheng	0.57	326			P	Pb	10 38 07.2	-0.5
YHNB	Yeheng baz=326	0.57	326	⇓	*i*	P	Pb	10 38 07.1	-0.5
YHNB						S	Sb	10 38 14.6	-1.2
	baz=326								
WARBT	Fenglin Townsh baz=220	0.57	213	⇑		P	Pg	10 38 06.2	-0.4
WARBT					e	S	Sb	10 38 15.6	-0.2
	baz=220								
FUSB	Fushanzhiwuyua baz=348	0.57	347	⇓		P	Pb	10 38 07.2	-0.5
FUSB					e	S	Sb	10 38 14.8	-1.1
	baz=348								
NSK	Sanguang baz=326	0.58	325	⇓		P	Pb	10 38 07.3	-0.6
NSK					e	S	Sb	10 38 15.3	-0.8
	baz=326								
WUSB	Renai baz=242	0.59	250	⇑	*i*	P	Pb	10 38 07.3	-0.7
WUSB					e	S	Sg	10 38 14.8	-0.2
	baz=242								
EGFH	Guangfu baz=215	0.59	207	⇑		P	Pg	10 38 06.9	-0.2
EGFH					e	S	Sb	10 38 16.6	+0.1
	baz=215								
NWLT	Wulai baz=341	0.61	341	⇓		P	Pb	10 38 07.8	-0.5
NWLT					e	S	Sb	10 38 16.2	-0.8
	baz=341								
VWDT	VWDT baz=230	0.69	230	⇑		P	Pg	10 38 08.9	-0.1
VWDT					e	S	Sb	10 38 19.3	0.0
	baz=230								
NFF	Wufeng Townshi baz=315	0.70	308		e	P	Pb	10 38 09.6	-0.4
NFF					e	S	Sb	10 38 19.0	-0.6
	baz=315								
WHP	Taichung City baz=276	0.71	276		e	P	Pb	10 38 10.5	+0.4
WHP					e	S	Sb	10 38 19.9	-0.1
	baz=276								
WPL	Puli Township baz=247	0.73	255		e	P	Pb	10 38 10.0	-0.3
WPL					e	S	Sb	10 38 19.4	-0.9
	baz=247								
DPDB	Guoxing baz=257	0.75	257	⇑	e	P	Pb	10 38 10.5	-0.2
DPDB					e	S	Sb	10 38 19.9	-1.0
	baz=257								
HGSD	Ruisui baz=215	0.76	201		e	P	Pb	10 38 10.8	+0.1
HGSD					e	S	Sn	10 38 24.5	+0.8
	baz=215								
WCS	Beigang Elemen baz=259	0.76	259		e	P	Pb	10 38 10.6	-0.2
WCS					e	S	Sb	10 38 20.2	-1.0
	baz=259								
TIPB	Shuangxi baz=359	0.78	7	⇓	*i*	P	Pb	10 38 10.8	-0.3
TIPB					e	S	Sg	10 38 21.0	+0.3
	baz=359								
EHY	Hungye baz=216	0.78	208		e	P	Pg	10 38 10.1	-0.5
EHY					e	S	Sb	10 38 22.7	+0.8
	baz=216								
NHDH	Xindian Distri baz=347	0.78	347		e	P	Pb	10 38 11.2	0.0
LIOB	Emei baz=305	0.79	305		e	P	Pb	10 38 11.6	+0.3
LIOB					e	S	Sb	10 38 22.3	+0.3
	baz=305								
NSTT	Nanjuang baz=303	0.79	303		e	P	Pb	10 38 11.5	+0.2
NSTT					e	S	Sb	10 38 21.9	-0.2
	baz=303								
TWA	Mucha baz=351	0.79	351		e	P	Pb	10 38 11.6	+0.2
TWA					e	S	Sn	10 38 24.0	-0.6
	baz=351								
TATO	Taipei	0.80	344			P	Pb	10 38 11.8	+0.2
TATO	Taipei baz=344	0.80	344		e	P	Pb	10 38 11.4	-0.1
TATO					e	S	Sb	10 38 22.4	-0.1
	baz=344								
SSLB	Suanglung	0.81	240			P	Pg	10 38 11.2	-0.1
SSLB	Suanglung baz=240	0.81	240	⇑	e	P	Pg	10 38 11.1	-0.1
SSLB					e	S	Sg	10 38 20.9	-1.0
	baz=240								
SMLT	Sun Moon Lake baz=238	0.82	248		e	P	Pb	10 38 11.5	-0.4
SMLT					e	S	Sg	10 38 21.9	-0.1
	baz=238								
TWB1	Santiao Chiao baz=17	0.84	17		e	P	Pg	10 38 11.8	0.0
TWB1					e	S	Sg	10 38 22.7	-0.1
	baz=17								
TYC	Yuchr baz=240	0.85	250		e	P	Pb	10 38 11.8	-0.5
TYC					e	S	Sg	10 38 22.2	-0.7
	baz=240								
HSN1	Hsinchu baz=312	0.86	312		e	P	Pn	10 38 13.8	0.0
NWF	Wu-fen Shan baz=354	0.87	3		e	P	Pb	10 38 13.0	+0.2
NWF					e	S	Sb	10 38 24.0	-0.5
	baz=354								
WFSB	Wu-fen Shan baz=354	0.87	3		e	P	Pb	10 38 13.1	+0.3
WFSB					e	S	Sb	10 38 24.1	-0.4
	baz=354								
TWQ1	Liyutan baz=280	0.88	280		e	P	Pn	10 38 13.3	-0.7
TWQ1					e	S	Sn	10 38 25.9	-1.0
	baz=280								
YULB	Yu-li	0.89	206			P	Pg	10 38 12.0	-0.8
YULB	Yu-li baz=215	0.89	206		e	P	Pg	10 38 11.8	-1.0
YULB					e	S	Sn	10 38 26.1	-1.0
	baz=215								
SBCB	Hsinchu baz=312	0.90	311		e	P	Pn	10 38 14.7	+0.5
SXI1	Grass Mountain baz=16	0.90	9	⇓	e	P	Pb	10 38 13.4	+0.1
SXI1					e	S	Sb	10 38 25.9	+0.5
	baz=16								
NSY	Sanyi baz=284	0.91	284		e	P	Pn	10 38 14.4	+0.1
NCUH	Zhongli baz=327	0.91	327		e	P	Pn	10 38 14.4	0.0
NCUH					e	S	Sn	10 38 28.3	+0.7
	baz=327								
NCU	National Centr baz=328	0.91	328		e	P	Pn	10 38 14.8	+0.4
NCU					e	S	Sn	10 38 28.0	+0.4
	baz=328								
ECBN	Changbin baz=188	0.91	196		e	P	Pb	10 38 13.5	0.0
ECBN					e	S	Sn	10 38 27.0	-0.6
	baz=188								
HSN	Hsinchu baz=314	0.91	311		e	P	Pn	10 38 13.9	-0.5
HSN					e	S	Sn	10 38 27.9	+0.3
	baz=314								
NMLH	Miaoli baz=291	0.92	292		e	P	Pn	10 38 14.5	0.0
NMLH					e	S	Sn	10 38 27.3	-0.4
	baz=291								
EYUL	Yuli baz=214	0.93	204		e	P	Pg	10 38 13.1	-0.3
EYUL					e	S	Sn	10 38 27.4	-0.5
	baz=214								
TWF1	Yuli baz=215	0.93	205		e	P	Pg	10 38 12.3	-1.2
TWF1					e	S	Sn	10 38 27.9	-0.2
	baz=215								
TWS1	Kuangyinshan baz=351	0.94	343		e	P	Pn	10 38 14.8	0.0
TWS1					e	S	Sn	10 38 27.7	-0.6
	baz=351								
WHYT	Xinyi Township baz=245	0.94	238		e	P	Pg	10 38 13.5	-0.2
WHYT					e	S	Sn	10 38 27.1	-1.3
	baz=245								
TNOU	National Taiwa baz=3.0	0.95	3		e	P	Pn	10 38 14.5	-0.5
WWF	Wufeng baz=256	0.95	261		e	P	Pn	10 38 15.9	+1.0
WWF					e	S	Sn	10 38 29.9	+1.3
	baz=256								
YM01	YM01 baz=351	0.95	352		e	P	Pn	10 38 15.0	-0.1
YM01					e	S	Sn	10 38 28.0	-0.7
	baz=351								
TCU	Taichung baz=267	0.96	267		e	P	Pn	10 38 16.4	+1.3
TCU					e	S	Sn	10 38 29.6	+0.9
	baz=267								
WJS	Zhushan baz=243	0.98	248		e	P	Pn	10 38 15.0	-0.4
WJS					e	S	Sn	10 38 29.1	-0.3
	baz=243								
YM08	YM08 baz=353	0.99	353		e	P	Pn	10 38 15.4	-0.2
NTST	Danshui baz=346	0.99	345		e	P	Pn	10 38 15.8	+0.2
WNT1	Nantou City baz=248	1.00	253		e	P	Pn	10 38 16.5	+0.9
ANP	Anpu baz=350	1.00	349		e	P	Pn	10 38 15.5	-0.3
WDJ	Dajia District baz=288	1.00	279		e	P	Pn	10 38 16.5	+0.8
WDJ					e	S	Sn	10 38 30.8	+1.0
	baz=288								
WNT	Mingjian baz=247	1.00	252		e	P	Pn	10 38 16.2	+0.6
WNT					e	S	Sn	10 38 30.9	+1.1
	baz=247								
NHW	Xinwu Township baz=323	1.01	323		e	P	Pn	10 38 15.6	-0.3
CHKH	Chenggong baz=188	1.05	197		e	P	Pb	10 38 15.2	-0.5
CHKH					e	S	Sn	10 38 31.3	+0.5
	baz=188								
FULB	Fuli baz=215	1.07	202		e	P	Pb	10 38 15.9	-0.3
WCHH	Zhanghua baz=264	1.07	264		e	P	Pn	10 38 17.7	+1.1
TWY	Chenhua baz=355	1.08	354		e	P	Pn	10 38 17.6	+0.9
CHN5	Tsauling baz=238	1.13	238	⇑	e	P	Pn	10 38 17.9	+0.4
CHN5					e	S	Sn	10 38

baz=215
EHD eS Sn 10 38 34.8 +1.3
baz=215
WGK Gukeng 1.18 245 eP Pb 10 38 16.0 -2.0
baz=244
ECS Chishang 1.19 203 eP Pg 10 38 19.1 +0.6
baz=215
ELDTW Lidau 1.20 213 eP Pb 10 38 16.9 -1.5
ELDTW eS Sg 10 38 33.9 -0.2
baz=222
WDLH Douliu 1.20 245 eP Pg 10 38 19.6 +1.0
baz=245
YOJ Yonaguni jima 1.20 77 P Pg 10 38 18.6 -0.1
YOJ Yonaguni jima 1.20 77 P Pb 10 38 18.5 +0.1
YOJ eS Sb 10 38 34.2 +0.3
WRL Guolierlin Hig 1.27 257 eP Pg 10 38 21.0 +1.1
baz=257
WRL eS Sg 10 38 38.6 +2.2
baz=257
WCKO Fanlu 1.27 234 eP Pg 10 38 20.7 +0.6
baz=235
WCKO eS Sg 10 38 39.7 +3.1
baz=235
RLNB Erlin 1.28 256 eP Pg 10 38 21.0 +0.8
baz=257
WTK Tuku 1.32 248 eP Pg 10 38 21.2 +0.2
baz=236
WTK eS Sg 10 38 40.6 +2.4
baz=236
CHN4 Tsaushan 1.34 231 eP Pg 10 38 21.8 +0.6
baz=220
CHN4 eS Sg 10 38 41.4 +2.8
baz=220
STYH Taoyuan 1.34 221 eP Pb 10 38 20.6 -0.2
baz=221
TPUB Ta-pu 1.34 229 P Pg 10 38 21.5 +0.1
TPUB Ta-pu 1.34 229 eP Pg 10 38 21.5 +0.1
baz=222
TPUB eS Sg 10 38 40.5 +1.7
baz=222
STYT Tauyuan 1.36 221 eP Pb 10 38 20.9 -0.2
baz=221
STYT eS Sg 10 38 39.4 0.0
baz=221
WTP Ta-pu 1.39 227 eP Pg 10 38 22.2 -0.1
baz=216
WTP eS Sg 10 38 42.7 +2.3
baz=216
LONT Longtian 1.40 203 eP Pn 10 38 19.9 -1.2
baz=212
LONT eS Sg 10 38 42.0 +1.5
baz=212
TWK Hsinying 1.46 231 eP Pg 10 38 23.5 -0.2
baz=243
TWK eS Sg 10 38 44.6 +1.9
baz=243
SNST Tainan City 1.49 229 eP Pg 10 38 23.9 -0.3
baz=223
SNST eS Sg 10 38 44.7 +1.3
baz=223
CHN1 Nanshi 1.49 228 eP Pg 10 38 24.4 +0.2
baz=222
CHN1 eS Sg 10 38 44.9 +1.4
baz=222
TWG Pinlang 1.50 204 eP Pn 10 38 20.8 -1.7
baz=213
TWGBT Beinan 1.50 203 P Pb 10 38 23.6 +0.2
TWGBT Beinan 1.50 203 eP Pn 10 38 20.4 -2.1
baz=213
SGST Jiashian 1.53 224 eP Pn 10 38 22.4 -0.4
baz=218
SGST eS Sg 10 38 45.8 +1.1
baz=218
LDUT Ludao 1.54 189 eP Pn 10 38 21.0 -2.0
baz=180
LDUT eS Sn 10 38 41.7 -1.3
baz=180
SLGT Liugui 1.56 220 eP Pb 10 38 24.4 0.0
baz=215
SLGT eS Sg 10 38 47.5 +1.9
baz=215
ICHU Yijhu 1.56 238 eP Pg 10 38 25.1 -0.5
baz=239
ICHU eS Sg 10 38 47.2 +1.3
baz=239
SCST Cishan 1.73 221 eP Pg 10 38 27.9 -0.8
baz=223
ECL Taimali 1.74 204 eP Pn 10 38 26.4 +0.6
baz=192
SSD Sandimen 1.76 215 eP Pb 10 38 27.2 -0.7
baz=218
SSD eS Sb 10 38 50.7 +0.6
baz=218
TSMG Majia 1.79 214 eP Pb 10 38 28.2 -0.2
baz=227
MASBT Mashibuluo 1.87 213 eP Pn 10 38 27.7 +0.1
baz=227
MASBT eS Sg 10 38 54.6 -1.1
baz=227
HATJ Hateruma jima 1.91 94 eS Sn 10 38 53.0 +0.9
EAST Anshuo 1.98 204 eP Pb 10 38 30.3 -1.4
baz=194
SCZT Fangliau 2.08 209 eP Pb 10 38 31.9 -1.5
baz=207
JKRS Kuro-shima 2.09 88 P Pn 10 38 31.7 +1.1
JKRS eS Sn 10 38 57.6 +1.0
JIJ Ishigaki jima 2.21 85 P Pn 10 38 32.4 +0.1
JIJ S Sn 10 38 59.8 +0.1
JISG Ishigakijimahi 2.39 80 P Pn 10 38 35.0 +0.2
JISG eS Sn 10 39 04.5 +0.5
JTJ Tarama 2.75 80 eS Sn 10 39 13.7 +0.8

*NNC **10** 10:43:03.6±0.9, 51.°66N×75.°37E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=78.2km s-min=5.6km az=25.0, Suspected Mining explosion.*

*IDC **10** 10:43:05.6±1.2, 51.°69N×75.°45E, h0km, mbtmp2.6/2, ML2.0/2, Error ellipse: s-maj=35.4km s-min=8.8km az=28.0*

ISC 10 10:43:04.7±1.4, 51.°6N±0.°1×75.°37E±0.°08, h0km, n10, σ1§15/7, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.24**	**116**	⇓Pg		**Pb**	**10 43 45.4**	**-0.5**
KURBB	1.4nm,0.3s			⇑Lg		Lg	10 44 14.6	
	22nm,0.8s							
KURBB	**Kurchatov Arra**	**2.24**	**116**	Pg		**Pb**	**10 43 45.8**	**-0.1**
KURBB	0.2nm,0.3s,baz=303,slow=18,SNR=8.8			Lg		Lg	10 44 14.9	
	0.1nm,0.3s,baz=306,slow=30,SNR=4.4							
KURK	**Kurchatov**	**2.25**	**113**	⇑Pg		**Pb**	**10 43 44.6**	**-1.5**
KURK	7.8nm,1.5s			⇑Lg		Lg	10 44 14.2	
	10nm,0.9s							
BVA0	**Borovoye Array**	**3.35**	**296**	⇓Pg		**Pb**	**10 44 03.8**	**-1.2**
BVA0	1.7nm,0.9s,baz=258,slow=40,SNR=4.4			⇑Lg		Lg	10 44 51.1	
	5.2nm,0.8s,baz=112,slow=27,SNR=6.1							
BVAR	**Borovoye Array**	**3.35**	**296**	Pg		**Pb**	**10 44 05.1**	**+0.1**
BVAR	baz=114,slow=18,SNR=5.6			Lg		Lg	10 44 52.2	
	0.1nm,0.3s,baz=107,slow=25,SNR=9.0							
BRVK	**Borovoye**	**3.42**	**296**	⇑Lg		Lg	10 44 52.6	
	8.7nm,1.0s							
I46RU	**ZALESOVO INFRA**	**6.18**	**64**	I		I	11 17 10.0	
	baz=254,slow=340,SNR=0.6							
ZALV	**Zalesovo Beam**	**6.18**	**64**	Pn		**Pn**	**10 44 37.8**	**+0.7**
	0.1nm,0.3s,baz=264,slow=14,SNR=2.7							
	0.4nm,0.4s							
MK31	**Makanchi Array**	**6.64**	**134**	⇓Lg		Lg	10 46 33.1	
	1.9nm,0.8s,baz=322,slow=27,SNR=4.4							
MKAR	**Makanchi Array**	**6.64**	**134**	Pn		**Pn**	**10 44 44.3**	**+0.8**
MKAR	0.1nm,0.3s,baz=344,slow=9.8,SNR=2.3			Lg		Lg	10 46 32.2	
	0.1nm,0.3s,baz=320,slow=28,SNR=7.2							
	0.3nm,0.8s							

*IDC **10** 11:04:02.7±0.9, 43.°63N×150.°51E, h0km, mb3.9/13, mbtmp3.8/16, ML3.1/3, MS2.9/2, Error ellipse: s-maj=23.6km s-min=19.2km az=84.0*

*JMA **10** 11:04:07.5±0.8, 44.°N±4.°×15.°0E±.°, h30km, MV4.3/12, SE OFF ETOROFU*

*SKHL **10** 11:04:07.5±0.3, 43.°90N×150.°50E, h43km±2km, mb4.5/2*

ISC 10 11:04:10.2±0.8, 43.°85N±0.°09×150.°35E±0.°08, h47km, n32, σ1§18/42, mb4.0/13, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.25**	**309**	*i* P		**Pn**	**11 04 42.9**	**-2.0**
KUR	110nm,0.5s				AMB	AMB	11 04 45.0	
KUR				*i* S		**Sn**	**11 05 09.6**	**-1.7**
KUR	370nm,0.4s			A		A	11 05 13.0	
KUR	150nm,0.4s			A		A	11 05 13.0	
SHO	**Shikotan**	**2.54**	**272**	eP		**Pn**	**11 04 47.8**	**-1.1**
SHO				eS		**Sn**	**11 05 18.2**	**-0.4**
SHO	70nm,0.3s			A		A	11 05 24.0	
SHO	140nm,0.3s			A		A	11 05 24.0	
YUK	**Yuzh-Kuril'sk**	**3.24**	**275**	eP		**Pn**	**11 04 58.1**	**-0.4**
YUK	40nm,0.3s				AMB	AMB	11 05 01.3	
YUK				eS		**Sn**	**11 05 36.1**	**+0.2**
YUK	40nm,0.5s			A		A	11 05 41.4	
YUK	220nm,0.5s			A		A	11 05 41.4	
NEM2	**Nemuro 2**	**3.38**	**263**	eP		**Pn**	**11 04 60.0**	**-0.4**
NEM2				eS		**Sn**	**11 05 38.3**	**-0.9**
NMR	**Nemuro--Hokkai**	**3.39**	**263**	eP		**Pn**	**11 04 59.8**	**-0.7**
NMR				eS		**Sn**	**11 05 38.7**	**-0.7**
JRA	**Rausu**	**3.78**	**273**	eP		**Pn**	**11 05 06.8**	**+0.9**
JNK	**Nakash**	**4.09**	**268**	eP		**Pn**	**11 05 10.2**	**+0.1**
JNK				eS		**Sn**	**11 05 56.1**	**-0.6**
AKK	**Akkeshi**	**4.09**	**260**	eP		**Pn**	**11 05 11.1**	**+0.9**
JAK	**Akkeshi**	**4.20**	**260**	eP		**Pn**	**11 05 11.7**	**0.0**
JAK				eS		**Sn**	**11 05 58.9**	**-0.6**
JTKR	**Abashiri--Toko**	**4.65**	**274**	eP		**Pn**	**11 05 18.6**	**+0.7**
JAR	**Ashorobuto**	**4.81**	**266**	eP		**Pn**	**11 05 20.8**	**+0.8**
JAR				eS		**Sn**	**11 06 13.4**	**-1.1**
JOB	**Onbets**	**4.84**	**261**	eP		**Pn**	**11 05 20.7**	**+0.3**
JOB				eS		**Sn**	**11 06 15.6**	**+0.4**
JCH	**Churui**	**5.25**	**259**	eP		**Pn**	**11 05 26.9**	**+0.9**
JCH				eS		**Sn**	**11 06 26.1**	**+0.8**
ASAJ	**Asahikawa**	**5.60**	**275**	Pn		**Pn**	**11 05 29.6**	**-1.2**
	0.6nm,0.3s,baz=94,slow=13,SNR=2.6							
	3.0nm,0.7s							
JNBK	**Urakawa-nobuka**	**5.78**	**257**	eP		**Pn**	**11 05 34.0**	**+0.7**
JNBK				eS		**Sn**	**11 06 38.1**	**-0.2**
JANG	**Nango**	**7.43**	**245**	eS		**Sn**	**11 07 14.7**	**-4.1**
KLR	**Kul'dur**	**13.87**	**299**	Pn		**Pn**	**11 07 23.7**	**-0.2**
	0.1nm,0.3s,baz=116,slow=16,SNR=1.9							
KLR					LR	LR	11 14 04.6	
	comp=Z,34nm,18.6s,baz=31,slow=43							
	0.3nm,0.4s							
SEY	**Seymchan**	**19.15**	**3**	P		**P**	**11 08 28.3**	**-1.0**
	0.1nm,0.3s,baz=251,slow=22,SNR=4.5							
	0.6nm,0.5s							
YAK	**Yakutsk**	**21.88**	**333**	LR		LR	11 19 32.7	
	comp=Z,39nm,18.2s,baz=141,slow=42							
SONM	**Songino Array**	**30.56**	**293**	P		**P**	**11 10 19.6**	**+0.3**
	0.4nm,0.4s,baz=53,slow=5.6,SNR=2.5							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**46.58**	**299**	P		**P**	**11 12 34.1**	**+0.9**
	1.7nm,0.8s,baz=71,slow=7.5,SNR=13							
	1.7nm,0.8s							
KURBB	**Kurchatov Arra**	**47.47**	**305**	P		**P**	**11 12 40.3**	**+0.3**
	1.0nm,0.6s,baz=73,slow=8.6,SNR=6.7							
	1.0nm,0.6s							
BVAR	**Borovoye Array**	**51.21**	**310**	P		**P**	**11 13 09.2**	**+0.5**
	1.4nm,0.8s,baz=69,slow=8.1,SNR=4.7							
	1.4nm,0.8s							
RES	**Resolute Bay**	**54.19**	**17**	P		**P**	**11 13 31.8**	**+1.5**
	1.6nm,0.8s,baz=329,slow=7.2,SNR=8.2							
	1.6nm,0.8s							
WRA	**Warramunga Arr**	**65.16**	**197**	P		**P**	**11 14 43.5**	**-2.8**
	0.5nm,0.3s,baz=17,slow=7.0,SNR=38							
	0.5nm,0.3s							
NVAR	**Mina Array Bea**	**65.55**	**60**	P		**P**	**11 14 47.8**	**-1.3**
	1.1nm,0.7s,baz=293,slow=5.8,SNR=3.6							
	1.1nm,0.7s							
FINES	**FINESS Array B**	**65.81**	**334**	P		**P**	**11 14 49.9**	**-0.2**
	1.2nm,0.7s,baz=54,slow=9.7,SNR=7.7							
	1.2nm,0.7s							
GEYT	**Alibeck**	**66.40**	**300**	P		**P**	**11 14 54.7**	**+0.4**
	1.7nm,0.6s,baz=80,slow=7.9,SNR=2.6							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**68.86**	**196**	P		**P**	**11 15 08.9**	**-0.9**
	0.3nm,0.6s,baz=13,slow=5.5,SNR=6.0							
	0.3nm,0.6s							
NOA	**NORSAR Array B**	**70.31**	**340**	P		**P**	**11 15 19.6**	**+1.2**
	0.6nm,0.6s,baz=32,slow=7.1,SNR=4.0							
	0.6nm,0.6s							
KBZ	**Khabaz**	**71.44**	**313**	P		**P**	**11 15 26.4**	**+1.0**
	2.8nm,0.9s,baz=54,slow=4.5,SNR=4.9							
	2.8nm,0.9s							
AKASG	**Malin Array Be**	**72.84**	**325**	P		**P**	**11 15 34.7**	**+1.0**
	0.5nm,0.4s,baz=36,slow=6.4,SNR=2.9							
	0.5nm,0.4s							

*BGR **10** 11:03:57.7, 13.°90N×92.°97W, h33km, mb5.3*

*SNET **10** 11:04:02.6±0.9, 15.°55N×92.°79W, h0km±346km, ML5.0*

*IDC **10** 11:04:11.3±1.3, 15.°32N×91.°90W, h84km±10km, mb4.7/30, mbtmp5.0/32, MS3.7/47, Error ellipse: s-maj=16.9km s-min=9.6km az=50.0*

*NEIC **10** 11:04:13.5±2.7, 15.°11N±0.°06×92.°35W±0.°06, h95km±3km, mb5.4/188, Mww5.0/26, Md5.1/152(MEX), Error ellipse: s-maj=10.0km s-min=6.9km az=215.0*

*MEX **10** 11:04:13.2±0.8, 14.°99N×92.°51W, h104km±4km, MD5.1*

*GCMT **10** 11:04:13.5±0.2, 15.°16N±0.°01×92.°38W±0.°01, h93km±2km, MW5.1/121, Moment Tensor Solution. s75,c94; s121,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.59±.14; $M_{\theta\theta}$0.54±.15; $M_{\phi\phi}$1.05±.15; $M_{r\theta}$4.61±.08; $M_{\theta\phi}$-1.56±.17; $M_{\phi r}$-2.88±.09; Best double couple: M_o5.80800×10^{16} NP1:ϕ_s302.00000°, δ81.00000°, λ-99.00000°. NP2:ϕ_s166.00000°, δ13.00000°, λ-47.00000°. Principal axes: T 6.0680, Plg35.0000°, Azm40.0000°; N -0.5240, Plg9.0000°, Azm304.0000°; P -5.5480, Plg53.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 11:04:14.3, 15.°25N×92.°27W, h90km, Moment Tensor Solution. Duration: 1§7 Moment tensor: Scale 10^{16}Nm; M_{rr}0.18; $M_{\theta\theta}$0.64; $M_{\theta\phi}$-0.83; $M_{r\theta}$3.59; $M_{\theta\phi}$0.69; $M_{\phi r}$-2.78; Fault plane solution: M_o4.64000×10^{16} NP1: ϕ_s126.87000°, δ87.76000°, λ78.88000°. NP2:ϕ_s25.61000°, δ11.34000°, λ168.52000°. Principal axes: T 4.4491, Plg46.0000°, Azm26.0000°; N 0.3877, Plg11.0000°, Azm127.0000°; P -4.8368, Plg42.0000°, Azm227.0000°;*

*CATAC **10** 11:04:14.4±0.5, 15.°09N×92.°44W, h74km±4km, ML5.0*

*NEIC **10** 11:04:14.3, 15.°15N×92.°27W, h90km*

*MOS **10** 11:04:15.8±0.9, 15.°39N×92.°00W, h131km, mb5.2/27, Error ellipse: s-maj=10.6km s-min=4.8km az=107.3*

*BJI **10** 11:04:17.0±0.0, 15.°20N×92.°10W, h134km, mB5.2/1*

*GCG **10** 11:04:18.8±0.4, 15.°04N×92.°11W, h59km±14km, MD4.6*

ISC 10 11:04:12.8±0.4, 15.°09N±0.°03×92.°40W±0.°03, h102km±3km, h103km:pP-P, n1170, σ1§64/1276, mb5.2/162, 28C-32D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**0.16**	**80**	⇓eP		**Pn**	**11 04 26.3**	**-1.2**
PATR				eS		**Sn**	**11 04 37.3**	**-1.2**
THIG		**0.22**	**145**			**Pn**	**11 04 26.5**	**-0.9**
THIG						**Sn**	**11 04 37.4**	**-0.9**
THIG		**0.22**	**145**	⇑eP		**Pn**	**11 04 26.5**	**-0.9**
THIG				eS		**Sn**	**11 04 37.4**	**-0.9**
PAVE	**Pavencul**	**0.24**	**64**	⇓eP		**Pn**	**11 04 27.2**	**-0.6**
PAVE				eS		**Sn**	**11 04 38.7**	**-0.2**
CHUJ	**Union Juarez**	**0.28**	**89**	⇓eP		**Pn**	**11 04 27.2**	**-0.8**
CHUJ				eS		**Sn**	**11 04 38.7**	**-0.5**
SMCA	**Catarina**	**0.39**	**127**	*i* P		**Pn**	**11 04 27.0**	**-1.2**
SMCA				*i* S		**Sn**	**11 04 38.6**	**-1.1**
SMCA					IAML		11 04 47.2	
	comp=Z,72μm,1.0s							
SMSP	**San Marcos**	**0.60**	**101**	⇓eP		**Pn**	**11 04 30.1**	**0.0**
SMSP				eS		**Sn**	**11 04 43.2**	**+0.3**
SMSP	**San Marcos**	**0.60**	**101**	*i* P		**Pn**	**11 04 30.2**	**+0.2**
SMSP				*i* S		**Sn**	**11 04 43.2**	**+0.3**
SMSP					IAML		11 04 48.4	
	comp=Z,110μm,1.0s							
RTAL	**Retalhuleu**	**0.88**	**129**			**Pn**	**11 04 32.1**	**-0.1**
RTAL	**Retalhuleu**	**0.88**	**129**	⇑eP		**Pn**	**11 04 32.0**	**-0.2**
RTAL				eS		**Sn**	**11 04 46.4**	**-0.4**
RTAL	**Retalhuleu**	**0.88**	**129**	*i* P		**Pn**	**11 04 32.0**	**-0.2**
RTAL				*i* S		**Sn**	**11 04 46.5**	**-0.3**
RTAL					IAML		11 04 48.7	
	comp=Z,100μm,1.0s							
STG3	**Santiaguito 3,**	**0.88**	**115**	eP		**Pn**	**11 04 32.6**	**+0.2**
HUEH	**Huehuetenango**	**0.89**	**75**			**Pn**	**11 04 33.3**	**+0.7**
HUEH	**Huehuetenango**	**0.89**	**75**	⇓*i*P		**Pn**	**11 04 33.4**	**+0.7**
HUEH				eS		**Sn**	**11 04 49.1**	**+1.7**
HUEH	**Huehuetenango**	**0.89**	**75**	*i* P		**Pn**	**11 04 33.2**	**+0.7**
HUEH					IAML		11 04 58.1	
	comp=Z,71μm,1.0s							
PCIG		**1.00**	**308**			**Pn**	**11 04 33.0**	**-0.4**
PCIG						**Sn**	**11 04 48.2**	**-0.8**
PCIG		**1.00**	**308**	⇓eP		**Pn**	**11 04 33.0**	**-0.4**
PCIG				eS		**Sn**	**11 04 48.2**	**-0.8**
SULM	**Suchitepequez,**	**1.12**	**134**	eP		**Pn**	**11 04 35.5**	**+0.7**
CCIG	**Comitan**	**1.21**	**12**	Pn		**Pn**	**11 04 37.4**	**+1.4**
CCIG	**Comitan**	**1.21**	**12**	⇓eP		**Pn**	**11 04 37.5**	**+1.4**
CCIG				eS		**Sn**	**11 04 55.3**	**+1.8**
CCIG	**Comitan**	**1.21**	**12**	*i* P		**Pn**	**11 04 37.7**	**+1.7**
CCIG					IAML		11 04 57.6	
	comp=Z,31μm,1.0s							
QUIS	**Sacapulas**	**1.27**	**81**	*i* P		**Pn**	**11 04 37.7**	**+1.0**
QUIS					IAML		11 05 00.0	
	comp=Z,30μm,1.0s							
FUG	**Fuego 3**	**1.63**	**113**	eP		**Pn**	**11 04 42.2**	**+1.1**
GUMI	**Mixco**	**1.78**	**105**	*i* P		**Pn**	**11 04 43.9**	**+0.9**
GUMI					IAML		11 05 25.3	
	comp=Z,10μm,1.0s							
TGBT	**Tuxtla Gutierr**	**1.81**	**338**			**Pn**	**11 04 42.6**	**-0.5**
TGBT						**Sn**	**11 05 05.8**	**-0.3**
TGBT	**Tuxtla Gutierr**	**1.81**	**338**	eP		**Pn**	**11 04 42.6**	**-0.5**
TGBT				eS		**Sn**	**11 05 05.8**	**-0.3**
CARR	**Arriaga**	**1.86**	**308**	⇑eP		**Pn**	**11 04 44.2**	**+0.4**
CARR				*i* S		**Sn**	**11 05 07.9**	**+0.6**
PCG	**Pacaya**	**1.86**	**112**	eP		**Pn**	**11 04 45.6**	**+1.5**
APG	**El Apazote**	**1.87**	**92**	LR		LR	11 05 27.5	
	comp=Z,301nm,21.0s,baz=240,slow=54							
GCG4	**OSOP**	**1.87**	**105**	*i* P		**Pn**	**11 04 45.3**	**+1.3**
GCG4				*i* S		**Sn**	**11 05 08.5**	**+0.7**
GCG4					IAML		11 05 17.1	
	comp=Z,9μm,1.0s							
AVCB	**Coban**	**1.96**	**79**	*i* P		**Pn**	**11 04 46.5**	**+1.4**
AVCB				*i* S		**Sn**	**11 05 09.6**	**-0.2**
AVCB					IAML		11 05 14.5	
	comp=Z,22μm,1.0s							
GUNB	**GUNB**	**2.04**	**104**	*i* P		**Pn**	**11 04 47.3**	**+0.9**
GUNB					IAML		11 05 27.2	
	comp=Z,5μm,1.0s							
NBG	**Las Nubes**	**2.04**	**104**	eP		**Pn**	**11 04 48.3**	**+2.0**
NILT	**Santiago Nilte**	**2.59**	**305**	eP		**Pn**	**11 04 53.3**	**+0.1**
NILT				eS		**Sn**	**11 05 23.3**	**-1.0**
MRL	**Marmol**	**2.62**	**90**	eP		**Pn**	**11 04 55.9**	**+2.1**
SLOZ	**Alcaldia de Sa**	**2.74**	**112**	eP		**Pn**	**11 04 55.7**	**+0.5**
LOAL	**Lomas de Alarc**	**2.75**	**113**	*i* P		**Pn**	**11 04 57.5**	**+2.0**
LOAL					IAML		11 05 46.4	
	comp=Z,6μm,1.0s							
NUBE	**Las Nubes**	**2.79**	**115**	eP		**Pn**	**11 04 56.3**	**+0.2**
NUBE	**Las Nubes**	**2.79**	**115**	*i* P		**Pn**	**11 04 57.3**	**+1.2**
NUBE				*i* S		**Sn**	**11 05 31.0**	**+1.7**
NUBE					IAML		11 05 40.4	
	comp=Z,3μm,1.0s							
VHSA	**Villahermosa**	**2.92**	**350**	eP		**Pn**	**11 04 59.1**	**+1.4**
VHSA				eS		**Sn**	**11 05 34.7**	**+2.5**
SNJE	**San Jose**	**2.96**	**114**	eP		**Pn**	**11 04 58.4**	**+0.1**
CEVE	**Cerro Verde**	**2.96**	**115**	eP		**Pn**	**11 04 59.5**	**+1.1**
CEVE					IAML		11 05 40.0	
	comp=Z,3μm,0.5s							
CEVE	**Cerro Verde**	**2.96**	**115**	*i* P		**Pn**	**11 05 00.2**	**+1.8**
CEVE				*i* S		**Sn**	**11 05 37.9**	**+4.4**
CEVE					IAML		11 05 39.5	
	comp=Z,4μm,1.0s							
UNIC	**Universidad Ca**	**2.97**	**111**	*i* P		**Pn**	**11 05 00.0**	**+1.7**
UNIC					IAML		11 05 41.2	
	comp=Z,730nm,1.0s							
ESQI	**Esquipulas**	**3.00**	**100**			**Pn**	**11 04 59.8**	**+1.0**
ESQI	**Esquipulas**	**3.00**	**100**	*i* P		**Pn**	**11 04 59.7**	**+1.0**
ESQI					IAML		11 06 20.7	
	comp=Z,5μm,1.0s							
MTO3	**Montecristo**	**3.02**	**103**			**Pn**	**11 04 59.2**	**+0.2**
MTO3	**Montecristo**	**3.02**	**103**	*i* P		**Pn**	**11 04 59.6**	**+0.5**
PETF	**Flores**	**3.04**	**53**			**Pn**	**11 04 59.8**	**+0.7**
PETF	**Flores**	**3.04**	**53**	⇓eP		**Pn**	**11 05 00.6**	**+1.4**
PETF				eS		**Sn**	**11 05 35.2**	**+0.3**
PETF	**Flores**	**3.04**	**53**	*i* P		**Pn**	**11 05 01.0**	**+1.9**
PETF				*i* S		**Sn**	**11 05 36.2**	**+1.4**
PETF					IAML		11 05 42.1	
	comp=Z,19μm,1.0s							
CMIG	**Matias Romero**	**3.11**	**310**			**Pn**	**11 04 59.9**	**-0.3**
CMIG						**Sn**	**11 05 35.5**	**-1.2**
CMIG	**Matias Romero**	**3.11**	**310**	P		**Pn**	**11 05 00.3**	**+0.1**
	comp=Z,331nm,0.3s,baz=138,slow=12,SNR=766							
CMIG					S	**Sn**	**11 05 36.2**	**-0.5**
	comp=Z,2μm,0.4s,baz=88,slow=23,SNR=17							
CMIG	**Matias Romero**	**3.11**	**310**	⇑eP		**Pn**	**11 04 59.9**	**-0.3**
CMIG				eS		**Sn**	**11 05 35.5**	**-1.2**
JAYA	**Jayaque - finc**	**3.19**	**116**	eP		**Pn**	**11 05 02.3**	**+0.9**
JAYA	**Jayaque - finc**	**3.19**	**116**	*i* P		**Pn**	**11 05 02.7**	**+0.9**
JAYA				*i* S		**Sn**	**11 05 40.7**	**+1.9**
JAYA					IAML		11 05 49.8	
	comp=Z,4μm,1.0s							
PMON	**Piamonte**	**3.28**	**114**	*i* P		**Pn**	**11 05 03.9**	**+1.3**
PMON					IAML		11 06 01.3	
	comp=Z,2μm,1.0s							
PIC2	**El Picacho**	**3.32**	**113**	eP		**Pn**	**11 05 03.8**	**+0.6**
UEES	**Universidad Ev**	**3.35**	**114**	*i* P		**Pn**	**11 05 06.7**	**+3.3**
UEES				*i* S		**Sn**	**11 05 44.7**	**+2.2**
UEES					IAML		11 06 08.0	
	comp=Z,930nm,1.0s							
SNET	**Serv Nac Est T**	**3.37**	**114**	Pn		**Pn**	**11 05 04.5**	**+0.8**
LALI	**Alcalda de L**	**3.38**	**118**	eP		**Pn**	**11 05 04.4**	**+0.7**
LALI	**Alcalda de L**	**3.38**	**118**	*i* P		**Pn**	**11 05 04.1**	**+0.4**
LALI				*i* S		**Sn**	**11 05 45.6**	**+2.6**
LALI					IAML		11 05 48.6	
	comp=Z,590nm,1.0s							
LOMA	**Loma Larga**	**3.44**	**114**	eP		**Pn**	**11 05 05.0**	**+0.3**
LOMA	**Loma Larga**	**3.44**	**114**	*i* P		**Pn**	**11 05 06.0**	**+1.3**
LOMA				*i* S		**Sn**	**11 05 46.8**	**+2.1**
LOMA					IAML		11 06 00.3	
	comp=Z,2μm,1.0s							
PANCS	**Alcalda de**	**3.44**	**115**	*i* P		**Pn**	**11 05 06.0**	**+1.3**
PANCS				*i* S		**Sn**	**11 05 46.8**	**+2.0**
PANCS					IAML		11 05 51.7	
	comp=Z,3μm,1.0s							
LLGN	**La Laguna**	**3.46**	**105**	*i* P		**Pn**	**11 05 06.4**	**+1.4**
LLGN					IAML		11 06 20.5	
	comp=Z,1μm,1.0s							
TUIG	**Tuzandepetl**	**3.52**	**327**	⇓eP		**Pn**	**11 05 05.3**	**-0.3**
TUIG				eS		**Sn**	**11 05 44.0**	**-2.4**
MIHL	**Minatitlan**	**3.54**	**325**	eP		**Pn**	**11 05 05.9**	**0.0**
MIHL				eS		**Sn**	**11 05 46.4**	**-0.6**
SJTE	**Alcalda de S**	**3.60**	**114**	eP		**Pn**	**11 05 07.7**	**+1.0**
SJTE	**Alcalda de S**	**3.60**	**114**	*i* P		**Pn**	**11 05 07.9**	**+1.2**
SJTE				*i* S		**Sn**	**11 05 51.5**	**+3.1**
SJTE					IAML		11 05 57.3	
	comp=Z,910nm,1.0s							
PAVA	**Las Pavas**	**3.62**	**112**	eP		**Pn**	**11 05 07.7**	**+0.6**
PAVA	**Las Pavas**	**3.62**	**112**	*i* P		**Pn**	**11 05

PQSS **Presa 15 de Se** 3.99 111 *i* P **Pn** 11 05 13.4 +1.4
PQSS IAML 11 06 07.8
comp=Z,320nm,1.0s
SCIG Sabancuy 4.03 17⇑ *eP* **Pn** **11 05 12.8 +0.3**
SCIG *eS* **Sn** **11 05 58.3 -0.4**
NEUV Arroyo Zacate 4.18 309 *eP* **Pn** **11 05 14.1 -0.4**
NEUV *eS* **Sn** **11 06 00.4 -2.0**
PACA Pacayal 4.26 112 *i* P **Pn** **11 05 18.1 +2.3**
PACA IAML 11 06 42.4
comp=Z,5μm,1.0s
PMUV Sontecomapan 4.32 323 *eP* **Pn** **11 05 14.3 -2.1**
PMUV *eS* **Sn** **11 06 01.2 -4.6**
OXBJ Oaxaca 4.60 296 **Pn** **11 05 21.9 +1.5**
OXBJ Sn 11 06 04.0 -8.9
OXBJ Oaxaca 4.60 296 *i* P **Pn** **11 05 21.9 +1.5**
OXBJ *eS* Sn 11 06 04.0 -8.9
OXIG Oaxaca 4.61 296 **Pn** **11 05 21.5 +0.9**
OXIG **Sn** **11 06 09.1 -4.1**
VHO Vista Hermosa 4.61 296⇑ *eP* **Pn** **11 05 21.5 +0.9**
VHO *eS* **Sn** **11 06 09.1 -4.1**
PEIG Puerto Escondi 4.67 282 **Pn** **11 05 19.4 -1.8**
PEIG Sn 11 06 05.5 -8.7
PEIG Puerto Escondi 4.67 282⇑ *eP* **Pn** **11 05 19.4 -1.8**
PEIG *eS* Sn 11 06 05.5 -8.7
LCND La Caada 4.71 111 *eP* **Pn** **11 05 22.5 +0.8**
TGUH Tegucigalpa,Un 5.07 101 Pn **Pn** **11 05 26.9 +0.3**
TGUH Tegucigalpa,Un 5.07 101⇑ *iP* **Pn** **11 05 27.6 +1.0**
YOIG Yosondua 5.26 290 **Pn** **11 05 29.9 +0.6**
YOIG **Sn** **11 06 22.9 -6.0**
YOIG Yosondua 5.26 290 *eP* **Pn** **11 05 29.9 +0.6**
YOIG *eS* **Sn** **11 06 22.9 -6.0**
TOIG Toxpalan 5.38 304 **Pn** **11 05 30.9 0.0**
TOIG **Sn** **11 06 31.1 -0.6**
TOIG Toxpalan 5.38 304 *eP* **Pn** **11 05 30.9 0.0**
TOIG *eS* **Sn** **11 06 31.1 -0.6**
YUSH Yuscaran 5.50 101 *eP* **Pn** **11 05 33.3 +0.9**
TXIG Tlaxiaco 5.59 293 **Pn** **11 05 34.9 +1.0**
TXIG Sn 11 06 25.7 -11
TXIG Tlaxiaco 5.59 293⇑ *eP* **Pn** **11 05 34.9 +1.0**
TXIG *eS* Sn 11 06 25.7 -11
PNIG Pinotepa 5.67 284 **Pn** **11 05 33.7 -1.0**
PNIG Sn 11 06 29.8 -8.7
PNIG Pinotepa 5.67 284⇑ *eP* **Pn** **11 05 33.7 -1.0**
PNIG *eS* Sn 11 06 29.8 -8.7
CRIN San Cristobal 5.71 114 **Pn** **11 05 35.8 +0.5**
TPIG Tehuac#an 5.80 306 **Pn** **11 05 36.7 +0.1**
TPIG Sn 11 06 29.8 -12
TPIG Tehuac#an 5.80 306 *eP* **Pn** **11 05 36.7 +0.1**
TPIG *eS* Sn 11 06 29.8 -12
OZST Orizaba 5.86 311 *eP* **Pn** **11 05 33.7 -3.6**
OZST *eS* **Sn** **11 06 38.9 -4.3**
HLIG Huajuapan de L 5.86 298 **Pn** **11 05 38.8 +1.3**
HLIG **Sn** **11 06 38.3 -5.2**
HLIG Huajuapan de L 5.86 298 *eP* **Pn** **11 05 38.8 +1.3**
HLIG *eS* **Sn** **11 06 38.3 -5.2**
JAUV Jalcomulco 5.99 316 *eP* **Pn** **11 05 37.1 -1.9**
JAUV *eS* **Sn** **11 06 40.4 -5.9**
LVIG Laguna Verde 6.00 321 *eP* **Pn** **11 05 36.1 -3.0**
LVIG *eS* **Sn** **11 06 40.3 -6.2**
CNGN Cerro Negro 6.10 114 **Pn** **11 05 41.0 +0.3**
FTIG Fresnillo de T 6.18 298 **Pn** **11 05 43.3 +1.7**
FTIG **Sn** **11 06 50.3 -0.7**
FTIG Fresnillo de T 6.18 298⇓ *eP* **Pn** **11 05 43.3 +1.7**
FTIG *eS* **Sn** **11 06 50.3 -0.7**
MYIG Mrida 6.36 23⇑ *eP* **Pn** **11 05 43.7 -0.4**
MYIG *eS* **Sn** **11 06 54.2 -1.1**
MGIG Malinaltepec 6.36 290 **Pn** **11 05 45.1 +0.9**
MGIG **Sn** **11 06 49.8 -5.8**
MGIG Malinaltepec 6.36 290 *eP* **Pn** **11 05 45.1 +0.9**
MGIG *eS* **Sn** **11 06 49.8 -5.8**
TLIG Tlapa 6.42 293 Pn **Pn** **11 05 46.0 +1.1**
TLIG Tlapa 6.42 293⇑ *eP* **Pn** **11 05 46.2 +1.3**
TLIG *eS* **Sn** **11 06 53.5 -3.3**
TEIG Tepich 6.44 37 Pn **Pn** **11 05 44.4 -0.8**
TEIG Tepich 6.44 37⇑ *eP* **Pn** **11 05 45.0 -0.2**
TEIG *eS* **Sn** **11 06 57.9 +0.5**
MATN Matagalpa 6.64 108 **Pn** **11 05 49.6 +1.7**
CRIG Cruz Grande 6.68 285 **Pn** **11 05 48.0 -0.4**
CRIG Sn 11 06 52.8 -10
CRIG Cruz Grande 6.68 285⇓ *eP* **Pn** **11 05 48.0 -0.4**
CRIG *eS* Sn 11 06 52.8 -10
BOAB BOACO BROADBAN 7.04 111 **Pn** **11 05 53.6 +0.3**
PPM Popocatepetl 7.15 304⇓ *eP* Pn 11 05 59.4 +4.1
PPM *eS* **Sn** **11 07 17.3 +2.0**
PPIG Popocatepetl 7.15 304 Pn 11 05 59.4 +4.1
PPIG **Sn** **11 07 17.3 +2.0**
DAIG Los Arroyos 7.24 286 **Pn** **11 05 56.0 +0.1**
DAIG Sn 11 07 08.2 -8.4
DAIG Los Arroyos 7.24 286 *eP* **Pn** **11 05 56.0 +0.1**
DAIG *eS* Sn 11 07 08.2 -8.4
AMVM AMECAMECA 7.31 304 **Pn** **11 05 57.8 +0.5**
AMVM **Sn** **11 07 14.8 -4.1**
AMVM AMECAMECA 7.31 304 *eP* **Pn** **11 05 57.8 +0.5**
AMVM *eS* **Sn** **11 07 14.8 -4.1**
YAIG Yautepec 7.40 301 **Pn** **11 06 00.7 +2.3**
YAIG **Sn** **11 07 14.4 -6.5**
YAIG Yautepec 7.40 301 *eP* **Pn** **11 06 00.7 +2.3**
YAIG *eS* **Sn** **11 07 14.4 -6.5**
MEIG Mezcala 7.48 293 **Pn** **11 06 01.2 +1.8**
MEIG Sn 11 07 12.6 -10
MEIG Mezcala 7.48 293⇓ *eP* **Pn** **11 06 01.2 +1.8**
MEIG *eS* Sn 11 07 12.6 -10
MPVM San Francisco 7.53 304 *eP* **Pn** **11 05 59.6 -0.6**
MPVM *eS* **Sn** **11 07 20.1 -4.1**
PLIG Platanillo 7.56 297 **Pn** **11 06 02.6 +2.1**
PLIG **Sn** **11 07 23.9 -0.7**
PLIG Platanillo 7.56 297 *eP* **Pn** **11 06 02.6 +2.1**
PLIG *eS* **Sn** **11 07 23.9 -0.7**
THVM De Xico 7.56 305 *eP* **Pn** **11 06 00.5 -0.1**
THVM *i S* Sn 11 07 15.6 -9.3
TXVM Universitario 7.58 306 *eP* **Pn** **11 06 04.6 +3.6**
TXVM *eS* **Sn** **11 07 26.5 +1.1**
XCVM Xochimilco 7.64 304 *i* P Pn 11 06 06.2 +4.5
XCVM *eS* **Sn** **11 07 28.4 +1.5**
TLVM San Miguel Top 7.65 303 *eP* **Pn** **11 06 02.1 +0.2**
TLVM *i S* **Sn** **11 07 24.3 -2.9**
VTVM Tizayuca 7.66 308 **Pn** **11 07 23.1 -4.3**
VTVM Tizayuca 7.66 308 *eS* **Sn** **11 07 23.1 -4.3**
ACON Acoyapa 7.68 113 **Pn** **11 06 02.6 +0.6**
PBVM Pinon 7.72 305 **Pn** **11 06 06.0 +3.5**
PBVM **Sn** **11 07 21.9 -6.5**
PBVM Pinon 7.72 305 *eP* **Pn** **11 06 06.0 +3.5**
PBVM *eS* **Sn** **11 07 21.9 -6.5**
UNM Universidad Na 7.73 304 *eP* **Pn** **11 06 05.5 +2.6**
UNM *eS* Sn 11 07 21.0 -8.1
CAIG El Cayaco 7.81 286 **Pn** **11 06 04.1 +0.3**
CAIG Sn 11 07 19.6 -11
CAIG El Cayaco 7.81 286⇓ *eP* **Pn** **11 06 04.1 +0.3**
CAIG *eS* Sn 11 07 19.6 -11
AOVM Tlapan 7.81 303 *eP* **Pn** **11 06 05.8 +1.5**
AOVM *eS* Sn 11 07 22.1 -9.3
PTVM Pico Tres Padr 7.82 306 Pn 11 06 08.4 +4.2
PTVM Sn 11 07 21.9 -9.4
PTVM Pico Tres Padr 7.82 306 *eP* Pn 11 06 08.4 +4.2
PTVM *eS* Sn 11 07 21.9 -9.4
INVM La Marquesa 7.88 303 *eP* **Pn** **11 06 08.0 +3.0**
INVM *eS* **Sn** **11 07 29.7 -3.0**
HZTE Horizontes, Gu 7.93 122 Pn **Pn** **11 06 06.5 +1.1**
ZUVM ZUMPANGO 7.93 307 Pn 11 05 58.3 -7.3
ZUVM **Sn** **11 07 32.5 -1.3**
ZUVM ZUMPANGO 7.93 307 *eP* Pn 11 05 58.3 -7.3
ZUVM *eS* **Sn** **11 07 32.5 -1.3**
TOVM TOLUCA 8.11 302 **Pn** **11 06 12.0 +3.8**
TOVM **Sn** **11 07 34.1 -4.4**
TOVM TOLUCA 8.11 302 *eP* **Pn** **11 06 12.0 +3.8**
TOVM *eS* **Sn** **11 07 34.1 -4.4**
DEIG Demacu 8.18 310 *eP* **Pn** **11 06 12.2 +3.1**
DEIG *eS* **Sn** **11 07 40.6 +0.7**
DHIG Demacu 8.18 310 **Pn** **11 06 12.2 +3.2**
DHIG **Sn** **11 07 40.6 +0.7**
ORTG Ortega, Santa 8.24 124 Pn **Pn** **11 06 11.3 +1.7**
ARIG Puente Sto Nin 8.25 294 **Pn** **11 06 12.1 +2.3**
ARIG **Sn** **11 07 35.2 -6.3**
ARIG Puente Sto Nin 8.25 294⇓ *eP* **Pn** **11 06 12.1 +2.3**
ARIG *eS* **Sn** **11 07 35.2 -6.3**
DUNO Dulce Nombre, 8.38 126 **Pn** **11 06 13.2 +1.7**
ESPN Las Esperanzas 8.38 109 **Pn** **11 06 11.7 +0.1**
CTUV Llano Grande 8.51 319 *eP* **Pn** **11 06 14.2 +1.0**
CTUV *eS* **Sn** **11 07 44.1 -3.4**

ACIG Acambay 8.64 305 **Pn** **11 06 18.5 +3.3**
ACIG **Sn** **11 07 50.1 -0.9**
ACIG Acambay 8.64 305 *eP* **Pn** **11 06 18.5 +3.3**
ACIG *eS* **Sn** **11 07 50.1 -0.9**
JTS Las Juntas de 8.69 122 Pn **Pn** **11 06 16.5 +0.7**
JTS Las Juntas de 8.69 122 P **Pn** **11 06 16.7 +1.0**
comp=Z,34nm,0.4s,baz=326,slow=4.1,SNR=30
JTS S **Sn** **11 07 50.5 -1.6**
comp=Z,6.2nm,0.4s,baz=166,slow=19,SNR=0.8
ARE1 Arenal 1 8.79 121 **Pn** **11 06 18.5 +1.4**
JACO JACO, Garabito 9.28 125 **Pn** **11 06 24.3 +0.5**
JRQG Juriquilla Cam 9.48 307 Pn **Pn** **11 06 29.9 +3.2**
MOIG Morelia 9.55 300 *eP* **Pn** **11 06 30.9 +3.2**
MOIG *eS* **Sn** **11 08 14.0 +0.6**
LCR2 La Lucha 2 9.77 122 **Pn** **11 06 31.9 +1.3**
RIMA Rio Macho 9.87 121 Pn **Pn** **11 06 32.8 +0.8**
RPIG Rio Verde 9.87 314 **Pn** **11 06 35.2 +3.3**
RPIG **Sn** **11 08 22.4 +1.5**
RPIG Rio Verde 9.87 314⇓ *iP* **Pn** **11 06 35.2 +3.3**
RPIG *eS* **Sn** **11 08 22.4 +1.5**
GTIG Gomez Farias 10.20 322 **Pn** **11 06 37.6 +1.4**
GTIG **Sn** **11 08 22.8 -5.9**
GTIG Gomez Farias 10.20 322 *eP* **Pn** **11 06 37.6 +1.4**
GTIG *eS* **Sn** **11 08 22.8 -5.9**
PEZE Perez Zeledon, 10.23 123 Pn **Pn** **11 06 37.6 +0.7**
DRK0 Durika 10.65 122 **Pn** **11 06 43.0 +0.3**
MMIG Aquila 10.96 288 **Pn** **11 06 46.7 0.0**
MMIG **Sn** **11 08 42.2 -5.1**
MMIG Aquila 10.96 288 *eP* **Pn** **11 06 46.7 0.0**
MMIG *eS* **Sn** **11 08 42.2 -5.1**
LNIG Linares 11.80 327 *eP* **Pn** **11 06 57.8 -0.1**
ZAIG Zacatecas 12.28 310 *eP* **Pn** **11 07 07.6 +3.0**
CIHU Emiliano Zapat 12.50 291 *eP* **Pn** **11 07 09.2 +2.0**
MNIG Monterrey 12.82 326 **Pn** **11 07 10.2 -1.1**
MNIG Monterrey 12.82 326⇓ *eP* **Pn** **11 07 10.2 -1.1**
ESTA Talpa de Allen 12.98 296 *eP* Pn 11 07 08.6 -5.0
HBVL Hebbronville 13.27 335 Pn **Pn** **11 07 20.0 +2.7**
735A Kenedy 14.59 341 **Pn** **11 07 35.2 +1.0**
833A Chaparral WMA, 14.68 335 Pn **Pn** **11 07 36.5 +1.0**
833A Chaparral WMA, 14.68 335 P **Pn** **11 07 36.0 +0.6**
baz=152,SNR=34
EF01 Eagle Ford 01 15.03 339 **Pn** **11 07 40.2 +0.4**
HKT Hockley 15.13 348 *deP* **Pn** **11 07 43.4 +2.4**
HKT pmax pmax
comp=Z,15nm,1.1s
061Z Ochoppi 15.18 43 **Pn** **11 07 41.4 -0.3**
MCIG Muzquiz 15.27 328 **Pn** **11 07 43.9 +0.9**
MCIG Muzquiz 15.27 328 *eP* **Pn** **11 07 43.9 +0.9**
441A DeRidder 15.61 357 **Pn** **11 07 47.6 +0.5**
PDIG Papasquiaro 15.71 311 P **P** **11 07 52.1 +1.6**
PDIG Papasquiaro 15.71 311 *eP* **P** **11 07 52.1 +1.6**
HNDO Hondo 15.71 337 P **Pn** **11 07 50.2 +1.7**
PAYG Puerto Ayora 15.80 172 **P** **11 07 52.1 +0.8**
HNVL Huntsville, TX 15.85 350 P **Pn** **11 07 51.1 +1.0**
DRIO Del Rio 16.16 333 **Pn** **11 07 54.8 +0.8**
435B Jarrell 16.33 344 P **Pn** **11 07 56.9 +0.8**
435B Jarrell 16.33 344 P **Pn** **11 07 57.2 +1.1**
baz=162
060A Indiantown 16.34 41 P **Pn** **11 07 56.4 +0.2**
346A Big Creek Wild 16.45 9 P **Pn** **11 07 58.8 +1.3**
DWPF Disney Wildern 16.47 36 P **Pn** **11 07 58.8 +0.9**
DWPF Disney Wildern 16.47 36 P **Pn** **11 07 57.5 -0.4**
baz=220
451A Vernon 16.62 20 P **P** **11 08 02.2 +1.9**
553A Crawfordville 16.72 25 P **P** **11 08 02.1 +0.7**
NATX Nacogdoches 16.73 353 **P** **11 08 02.3 +0.8**
NATX Nacogdoches 16.73 353 P **Pn** **11 08 02.0 +1.1**
baz=172,SNR=20
BRAL Brewton 16.74 16 P **P** **11 08 02.8 +1.1**
BRAL Brewton 16.74 16 P **P** **11 08 04.3 +2.7**
baz=198,SNR=38
JCT Junction City 16.76 337 **Pn** **11 08 02.5 +1.0**
JCT Junction City 16.76 337 P **P** **11 08 04.5 +2.5**
baz=154,SNR=15
JCT Junction City 16.76 337 P **Pn** **11 08 02.5 +1.0**
JCT Junction City 16.76 337 *e* **P** **11 08 03.0 +1.0**
656A Willston 16.88 31 P **Pn** **11 08 03.0 +0.3**
HPIG 17.08 316 **P** **11 08 08.5 +2.8**
HPIG 17.08 316 *eP* **P** **11 08 08.0 +2.2**
VBMS Vicksburg 17.14 5 P **P** **11 08 07.0 +0.9**
VBMS Vicksburg 17.14 5 P **P** **11 08 07.8 +1.7**
baz=186,SNR=60
BRDY Brady 17.22 341 **Pn** **11 08 07.4 +0.4**
SAND Sanderson 17.30 330 **Pn** **11 08 09.2 +1.2**
BCIG La Boquilla 17.32 318 P **Pn** **11 08 10.4 +2.0**
BCIG La Boquilla 17.32 318⇑ *iP* **Pn** **11 08 10.4 +2.0**
WHTX Lake Whitney, 17.45 346 P **P** **11 08 10.4 +0.9**
WHTX Lake Whitney, 17.45 346 P **Pn** **11 08 11.0 +1.2**
baz=163,SNR=17
143A Socs Landing, 17.56 3 P **Pn** **11 08 11.9 +0.9**
TX31 Lajitas Ar. Si 17.59 326 P **Pn** **11 08 13.6 +2.1**
TXAR Lajitas Array 17.59 326 P **Pn** **11 08 13.4 +1.9**
TXAR Lajitas Array 17.59 326 P **Pn** **11 08 13.4 +1.9**
TXAR Lajitas Array 17.59 326 P **Pn** **11 08 14.2 +2.7**
comp=Z,33nm,0.9s,baz=152,slow=13,SNR=242
TXAR PcP **PcP** **11 12 45.8 +0.3**
comp=Z,5.2nm,0.8s,baz=152,slow=8.1,SNR=5.5
TXAR ScP **ScP** **11 16 14.3 +2.8**
comp=Z,6.2nm,1.0s,baz=147,slow=2.5,SNR=12
OZNA Ozona 17.68 335 **Pn** **11 08 13.7 +1.1**
352A Blakely 17.69 21 P **Pn** **11 08 14.2 +1.6**
250A Grady 17.72 17 P **Pn** **11 08 13.8 +0.8**
146A Union 17.73 9 P **P** **11 08 13.4 +0.8**
FW14 Alvarado 17.78 347 P **P** **11 08 14.0 +0.9**
FW13 Cleburne 17.79 346 P **P** **11 08 14.6 +1.4**
FW16 Waxahatchie 17.80 347 P **Pn** **11 08 15.0 +1.1**
TREL Terrell 17.88 350 P **P** **11 08 15.5 +1.3**
Z41A Richland Creek 18.09 359 P **Pn** **11 08 18.3 +0.8**
TIGA Tifton 18.16 25 P **P** **11 08 18.1 +0.8**
TIGA Tifton 18.16 25 P **Pn** **11 08 19.2 +0.9**
baz=208,SNR=32
FW07 Weatherford 18.21 345 P **P** **11 08 19.4 +1.6**
456A Hilliard 18.24 30 P **Pn** **11 08 20.3 +0.9**
Z38A Mt. Pleasant 18.24 353 P **P** **11 08 19.6 +1.4**
ALPN Alpine 18.39 328 P **Pn** **11 08 22.2 +0.9**
FW06 Azle 18.41 346 P **P** **11 08 21.2 +1.2**
PLPT Palo Pinto 18.45 344 P **P** **11 08 22.0 +1.5**
Z47A Carrollton 18.45 12 P **P** **11 08 21.6 +1.1**
LRAL Lakeview Retre 18.53 14 **Pn** **11 08 23.1 +0.5**
LRAL Lakeview Retre 18.53 14 P **Pn** **11 08 23.3 +0.6**
baz=196,SNR=57
WLAR White Oak Lake 18.53 358 P **P** **11 08 22.4 +1.1**
SGCY Sterling City 18.55 336 P **P** **11 08 22.8 +1.1**
FW03 Perrin-Whitt E 18.60 345 P **P** **11 08 23.1 +1.0**
ABTX Abilene, Hawle 18.66 341 P **P** **11 08 23.2 +0.4**
ABTX Abilene, Hawle 18.66 341 P **P** **11 08 23.7 +0.9**
baz=157,SNR=16
Z35A Perchaven, San 18.69 347 P **P** **11 08 24.2 +1.2**
MNHN Monahans 18.75 331 P **P** **11 08 25.6 +1.7**
CCAR Cane Creek 18.76 2 P **Pn** **11 08 25.6 +0.2**
152A Waverly Hall 18.84 20 P **P** **11 08 25.6 +0.9**
Y45A Yeager Farm, C 18.87 7 **P** **11 08 26.0 +0.9**
CSIG Choix 18.92 311 **Pn** **11 08 28.3 +0.8**
CSIG Choix 18.92 311 *eP* **Pn** **11 08 28.3 +0.8**
255A Hazlehurst 19.05 27 P **P** **11 08 28.2 +1.2**
LPIG La Paz 19.09 301 P **Pn** **11 08 32.4 +2.9**
comp=Z,12nm,0.6s,baz=253,slow=3.6,SNR=4.7
LPIG LR LR 11 15 14.7
comp=Z,233nm,21.5s,baz=124,slow=34
Z51A Franklin 19.29 19 P **P** **11 08 29.5 -0.2**
SN01 Snyder 1 19.30 338 P **P** **11 08 30.8 +0.9**
PECS Pecos 19.31 329 P **Pn** **11 08 32.4 +0.3**
LOOK Love County 19.31 348 **P** **11 08 30.4 +0.5**
ODSA Odessa 19.32 333 P **P** **11 08 31.3 +1.2**
154A Montrose 19.39 24 P **P** **11 08 31.5 +0.8**
WTFS Witchita Falls 19.39 345 **P** **11 08 31.5 +0.8**
MIAR Mount Ida 19.40 357 P **P** **11 08 31.4 +0.6**
MIAR Mount Ida 19.40 357 P **P** **11 08 31.5 +0.7**
baz=176,SNR=58
MIAR Mount Ida 19.40 357 P **P** **11 08 31.4 +0.6**
VHRN Van Horn 19.43 326 P **P** **11 08 32.9 +1.6**
Y49A Blount Mountai 19.46 15 **P** **11 08 33.2 +1.7**
APMT Aspermont 19.46 340 P **P** **11 08 32.2 +0.6**
OXF Oxford 19.53 7 P **P** **11 08 32.4 +0.2**
OXF Oxford 19.53 7 P **P** **11 08 33.2 +1.0**
baz=188,SNR=80
OXF Oxford 19.53 7 P **P** **11 08 32.4 +0.2**
UALR University of 19.60 0 P **P** **11 08 33.5 +0.4**
POST Post 19.71 337 P **P** **11 08 35.0 +0.7**
X48A Hartselle 19.88 13 P **P** **11 08 36.8 +0.8**
GOGA Godfrey 19.96 22 P **P** **11 08 38.2 +1.4**

GOGA Godfrey 19.96 22 P **P** **11 08 38.1 +1.2**
baz=206,SNR=50
GOGA Godfrey 19.96 22 P **P** **11 08 38.3 +1.4**
DKNS Dickens 20.04 339 P **P** **11 08 37.4 -0.5**
WHAR Wooly Hollow 20.12 0 P **P** **11 08 38.7 +0.2**
Y52A Lilburn 20.16 20 P **P** **11 08 39.9 +0.9**
PLAL Pickwick Lake 20.19 10 P **P** **11 08 39.4 0.0**
OTAV Otavalo 20.19 136 P **P** **11 08 41.8 +1.7**
OTAV Otavalo 20.19 136 *eP* **P** **11 08 42.3 +2.3**
FPAL Fort Paine 20.31 16 P **P** **11 08 41.4 +0.7**
MNTX Cornudas Mount 20.35 327 P **P** **11 08 42.8 +1.6**
baz=141,SNR=121
MNTX Cornudas Mount 20.35 327 *i* **P** **11 08 42.8 +1.6**
WMOK Wichita Mounta 20.39 345 **P** **11 08 41.9 +0.3**
WMOK Wichita Mounta 20.39 345 P **P** **11 08 41.3 -0.3**
baz=162,SNR=9.2
WMOK Wichita Mounta 20.39 345 P **P** **11 08 41.9 +0.3**
ROSC El Rosal 20.49 118 P **P** **11 08 43.3 +0.1**
comp=Z,7.8nm,0.3s,baz=102,slow=17,SNR=4.9
SDDR Presa de Saban 20.55 76 P **P** **11 08 43.7 +0.3**
X51A Calhoun 20.55 18 P **P** **11 08 42.9 -0.4**
FNO Franklin 20.58 348 **P** **11 08 43.9 +0.3**
SWET Sewanee 20.87 15 P **P** **11 08 46.6 -0.1**
CGIG 20.88 319 P **P** **11 08 50.1 +3.1**
CGIG 20.88 319 *iP* **P** **11 08 50.1 +3.1**
LCAR Lake Charles 20.93 3 P **P** **11 08 47.5 +0.2**
TUL3 Leonard 20.96 352 P **P** **11 08 47.0 -0.6**
TUL3 Leonard 20.96 352 P **P** **11 08 46.5 -1.1**
baz=170,SNR=18
MSTX Muleshoe 21.01 335 P **P** **11 08 48.8 +0.4**
baz=151,SNR=17
W50A Signal Mountai 21.02 16 P **P** **11 08 48.5 +0.3**
NHSC New Hope 21.09 30 P **P** **11 08 49.2 +0.2**
baz=214,SNR=22
SMWD Samnorwood 21.14 342 P **P** **11 08 50.1 +0.5**
HHAR Hobbs 21.15 357 P **P** **11 08 49.2 -0.5**
V48A Smith Brothers 21.16 13 P **P** **11 08 49.2 -0.7**
U38A Gravette 21.34 356 P **P** **11 08 51.0 -0.7**
WVT Waverly 21.35 10 P **P** **11 08 51.7 -0.1**
WVT Waverly 21.35 10 P **P** **11 08 50.6 -1.1**
baz=192
WVT Waverly 21.35 10 P **P** **11 08 51.7 -0.1**
AMTX Amarillo 21.41 339 P **P** **11 08 52.7 +0.1**
AMTX Amarillo 21.41 339 P **P** **11 08 53.1 +0.5**
baz=154
CPCT Cooper Cave 21.47 18 P **P** **11 08 53.0 -0.1**
BG3 Lake Jocassee 21.57 22 P **P** **11 08 55.2 +1.0**
COHC Cochancay 21.76 142 P **P** **11 08 56.6 +0.3**
V51A Loudon 21.85 18 P **P** **11 08 57.2 +0.1**
MGMO Mountain Grove 21.98 0 P **P** **11 08 58.1 -0.4**
SRIG Santa Rosalia 22.11 307 P **P** **11 09 02.7 +2.8**
U49A Red Boiling Sp 22.14 14 P **P** **11 08 59.9 -0.3**
SDV Santo Domingo 22.15 104 P **P** **11 08 57.6 -3.1**
comp=Z,32nm,0.6s,baz=310,slow=11,SNR=25
SDV PcP **PcP** **11 12 54.2 -0.1**
comp=Z,18nm,0.8s,baz=306,slow=4.7,SNR=7.6
SDV ScP **ScP** **11 16 25.1 +2.6**
comp=Z,6.2nm,0.6s,baz=281,slow=5.6,SNR=7.2
SDV LR LR 11 18 30.9
comp=Z,154nm,20.2s,baz=272,slow=40
comp=Z,32nm,0.6s
ARNL Arenillas 22.18 146 P **P** **11 09 01.6 +0.9**
V53A Saluda 22.22 21 P **P** **11 09 02.1 +1.0**
OK032 Salt Plains WL 22.24 348 **P** **11 08 59.9 -1.3**
KMSC Kings Mountain 22.31 24 P **P** **11 09 02.5 +0.6**
KMSC Kings Mountain 22.31 24 P **P** **11 09 02.6 +0.6**
baz=209,SNR=43
121A Cookes Peak, D 22.31 324 P **P** **11 09 04.4 +2.2**
121A Cookes Peak, D 22.31 324 P **P** **11 09 04.3 +2.1**
baz=137,SNR=85
121A Cookes Peak, D 22.31 324 *e* **P** **11 09 04.4 +2.2**
T47A Sharon Grove 22.31 11 P **P** **11 09 01.3 -0.7**
319A Douglas 22.39 319 P **P** **11 09 05.0 +2.0**
S39A Bolivar 22.53 358 P **P** **11 09 03.1 -1.1**
X58A Rowland 22.68 29 P **P** **11 09 05.0 -0.7**
S44A Carbondale 22.69 6 P **P** **11 09 05.2 -0.6**
TZTN Tazewell 22.78 19 P **P** **11 09 06.8 0.0**
baz=202,SNR=71
T50A Nancy 22.86 16 P **P** **11 09 07.0 -0.5**
CCM Cathedral Cave 22.90 2 P **P** **11 09 06.3 -1.6**
CCM Cathedral Cave 22.90 2 P **P** **11 09 06.0 -1.9**
baz=182
CCM Cathedral Cave 22.90 2 P **P** **11 09 06.3 -1.6**
MCRA Macar, Loja 22.93 147 P **P** **11 09 08.8 +0.4**
V55A Taylorsville 22.97 24 P **P** **11 09 08.0 -0.6**
Y22D IRIS PASSCAL I 23.01 328 P **P** **11 09 11.6 +2.4**
baz=142,SNR=12
Y22F Passcal Instru 23.01 328 P **P** **11 09 11.8 +2.6**
baz=142,SNR=12
DUN6 Lazy B Ranch 23.09 322 P **P** **11 09 11.8 +1.9**
R40A Maddies Statio 23.11 0 P **P** **11 09 08.3 -1.6**
RTBA Rita Blanca 23.18 338 P **P** **11 09 10.7 0.0**
ANMO Albuquerque 23.47 330 P **P** **11 09 14.6 +1.1**
ANMO Albuquerque 23.47 330 P **P** **11 09 15.2 +1.6**
baz=144
ANMO Albuquerque 23.47 330 *c iP* **P** **11 09 14.9 +1.3**
ANMO pmax pmax
comp=Z,38nm,1.3s
ANMO Albuquerque 23.47 330 *i* **P** **11 09 14.9 +1.3**
W59A Clinton 23.60 30 P **P** **11 09 13.5 -1.0**
WCI Wyandotte Cave 23.67 12 P **P** **11 09 14.3 -0.8**
WCI Wyandotte Cave 23.67 12 P **P** **11 09 14.3 -0.8**
baz=194
WCI Wyandotte Cave 23.67 12 P **P** **11 09 14.3 -0.8**
U56A King 23.73 25 P **P** **11 09 15.9 +0.2**
S51A Beattyville 23.78 18 P **P** **11 09 15.7 -0.3**
V58A Windy Hill, Pi 23.80 28 P **P** **11 09 15.4 -0.8**
CNNC Cliffs of the 23.92 30 P **P** **11 09 17.0 -0.3**
CNNC Cliffs of the 23.92 30 P **P** **11 09 17.0 -0.3**
baz=216,SNR=14
TUC Tucson 23.96 319 P **P** **11 09 19.2 +1.3**
TUC Tucson 23.96 319 P **P** **11 09 20.1 +2.2**
baz=131
TUC Tucson 23.96 319 P **P** **11 09 19.2 +1.3**
R49A Shelbyville 23.98 14 P **P** **11 09 16.8 -1.0**
R50A Paris 24.18 16 P **P** **11 09 18.9 -0.7**
KSU1 Kansas State U 24.21 352 P **P** **11 09 18.7 -1.2**
KSU1 Kansas State U 24.21 352 P **P** **11 09 18.7 -1.2**
baz=170,SNR=32
P40A Paris 24.35 1 P **P** **11 09 19.4 -1.8**
T25A Trinidad 24.42 336 P **P** **11 09 23.8 +1.7**
baz=151,SNR=15
BLA Blacksburg 24.47 24 P **P** **11 09 21.6 -0.7**
BLA Blacksburg 24.47 24 P **P** **11 09 22.6 +0.3**
baz=209,SNR=14
BLA Blacksburg 24.47 24 P **P** **11 09 21.6 -0.7**
CBKS Cedar Bluff 24.50 346 P **P** **11 09 21.9 -0.7**
baz=162,SNR=11
P43A Skaggs, Pawnee 24.59 5 P **P** **11 09 22.2 -1.1**
S54A Dingess, Beckl 24.66 21 P **P** **11 09 23.2 -0.8**
T57A Hurt 24.76 26 P **P** **11 09 24.3 -0.6**
P46A Rosedale 24.86 10 P **P** **11 09 24.9 -0.9**
SSFO Shawnee State 24.88 17 P **P** **11 09 26.1 +0.1**
X18A Snowflake 25.00 324 P **P** **11 09 29.4 +2.0**
P48A Milroy 25.04 13 P **P** **11 09 25.9 -1.6**
214A Organ Pipe Nat 25.07 316 P **P** **11 09 29.8 +1.9**
214A Organ Pipe Nat 25.07 316 P **P** **11 09 30.2 +2.3**
baz=127,SNR=31
214A Organ Pipe Nat 25.07 316 *i* **P** **11 09 30.3 +2.4**
Q51A Peebles 25.14 17 P **P** **11 09 27.7 -0.7**
P49A Miami Univ. Ec 25.27 14 P **P** **11 09 28.0 -1.6**
baz=197,SNR=14
W18A Petrified Fore 25.31 325 P **P** **11 09 30.4 +0.3**
baz=138
SJG San Juan 25.32 80 LR LR 11 20 44.9
comp=Z,113nm,18.3s,baz=240,slow=40
SDCO Great Sand Dun 25.38 335 P **P** **11 09 32.5 +1.5**
baz=149,SNR=16
KSCO Kaye Shedlock' 25.48 341 P **P** **11 09 31.0 -0.6**
baz=156,SNR=22
T59A Double "B" Far 25.48 28 P **P** **11 09 31.0 -0.5**
HDIL Hopedale 25.52 5 P **P** **11 09 30.1 -1.7**
baz=187,SNR=10
SFIN Lafayette 25.62 9 P **P** **11 09 31.4 -1.3**
SFIN Lafayette 25.62 9 P **P** **11 09 30.6 -2.1**
baz=192,SNR=22
P51A Williamsport 25.64 17

SFX San Felipe 25.97 312 P **P** **11 09 37.4 +1.4**
T60A Surry 26.00 29 P **P** **11 09 35.4 -0.7**
P52A Corning 26.06 18 P **P** **11 09 35.9 -0.7**
baz=203,SNR=12
R58B Mineral 26.16 27 P **P** **11 09 36.9 -0.7**
R58B IAmb IAmb 11 09 38.5
comp=Z,84nm,0.9s
113A Mohawk Valley, 26.20 316 P **P** **11 09 40.0 +2.0**
MVCO Mesa Verde 26.27 330 P **P** **11 09 40.8 +1.9**
baz=143,SNR=61
Q24A Divide 26.30 337 P **P** **11 09 40.0 +0.7**
baz=151
ACSO Alum Creek Sta 26.37 16 P **P** **11 09 38.7 -0.8**
baz=200,SNR=13
Y14A Wickenburg 26.44 319 P **P** **11 09 41.8 +1.6**
WUAZ Wupatki 26.52 324 P **P** **11 09 43.4 +2.3**
baz=135,SNR=16
CBN Corbin Frederi 26.58 27 P **P** **11 09 41.5 +0.2**
baz=214,SNR=17
BGNE Belgrade 26.70 350 P **P** **11 09 41.1 -1.4**
baz=167
SCIA State Center 26.73 359 P **P** **11 09 41.4 -1.3**
baz=178
MCWV Mont Chateau 26.84 22 P **P** **11 09 42.3 -1.4**
baz=207
O53A New Philadelph 26.90 19 P **P** **11 09 43.3 -1.0**
baz=204,SNR=10
O54A Avella 27.12 20 P **P** **11 09 45.4 -0.8**
O54A IAmb IAmb 11 09 46.7
comp=Z,86nm,0.5s
ISCO Idaho Springs 27.20 337 P **P** **11 09 48.6 +1.3**
baz=151,SNR=8.4
L44A Lake County Fo 27.27 7 P **P** **11 09 47.1 -0.5**
baz=189
BLYC Blythe 27.30 317 P **P** **11 09 49.8 +1.9**
L46A Eue Claire 27.34 10 P **P** **11 09 46.7 -1.4**
P57A Homestead Farm 27.38 25 P **P** **11 09 48.3 -0.3**
P57A IAmb IAmb 11 09 50.0
comp=Z,139nm,0.8s
PDMCI Parker Dam,Lak 27.39 318 P **P** **11 09 50.8 +2.1**
baz=129,SNR=46
PCRV Puerto La Cruz 27.51 97 LR LR 11 23 17.4
comp=Z,98nm,18.2s,slow=42
N53A Lisbon 27.53 19 P **P** **11 09 49.4 -0.4**
N53A IAmb IAmb 11 10 41.3
comp=Z,165nm,1.4s
YUH Yuha Desert 27.62 313 P **P** **11 09 52.7 +2.0**
L48A N Adams 27.63 13 P **P** **11 09 49.1 -1.7**
U15A North Rim 27.69 324 P **P** **11 09 53.7 +2.1**
SWSC Sam W. Stewart 27.70 314 P **P** **11 09 53.7 +2.2**
baz=124,SNR=9.6
W13A Hualapai Mount 27.74 320 P **P** **11 09 53.6 +1.6**
JFWS Jewell Farm 27.79 3 P **P** **11 09 51.4 -0.8**
baz=184,SNR=13
SDMD Soldier's Deli 27.81 26 P **P** **11 09 52.6 +0.2**
SDMD IAmb IAmb 11 09 53.1
comp=Z,54nm,0.8s
BC3 Big Chuckawall 27.87 316 P **P** **11 09 55.6 +2.5**
baz=126,SNR=85
HMU Henry Mountain 27.95 328 P **P** **11 09 55.6 +1.6**
HMU IAmb IAmb 11 09 57.7
comp=Z,66nm,1.1s
IRM Iron Mountain 27.96 317 P **P** **11 09 56.3 +2.5**
baz=127,SNR=45
NEE2 Needles Airpor 27.99 318 P **P** **11 09 55.8 +1.7**
baz=129
M52A Chesterland 28.04 18 P **P** **11 09 53.8 -0.6**
M52A IAmb IAmb 11 09 55.8
comp=Z,50nm,0.8s
MONP2 Monument Peak 28.10 313 P **P** **11 09 57.5 +2.2**
baz=123,SNR=7.7
AAM Ann Arbor 28.15 14 P **P** **11 09 54.0 -1.3**
AAM IAmb IAmb 11 09 55.6
comp=Z,47nm,0.8s
AAM Ann Arbor 28.15 14 P **P** **11 09 54.3 -1.0**
baz=198
AAM Ann Arbor 28.15 14 P **P** **11 09 54.0 -1.3**
AAM pmax pmax
comp=Z,47nm,0.8s
M53A WI Miller and 28.16 19 P **P** **11 09 54.6 -0.8**
M53A IAmb IAmb 11 10 41.6
comp=Z,85nm,0.8s
M53A WI Miller and 28.16 19 P **P** **11 09 54.8 -0.7**
baz=204,SNR=20
N23A Red Feather La 28.29 338 P **P** **11 09 57.7 +0.8**
baz=151
KNB Kanab 28.41 324 P **P** **11 10 00.3 +2.4**
KNB Kanab 28.41 324 P **P** **11 10 00.3 +2.4**
KNB pmax pmax
comp=Z,42nm,1.0s
SSPA Standing Stone 28.42 24 P **P** **11 09 57.1 -0.7**
SSPA IAmb IAmb 11 09 58.5
comp=Z,52nm,0.8s
SSPA Standing Stone 28.42 24 P **P** **11 09 57.2 -0.5**
baz=210
BELC Belle Mtn. Jos 28.44 316 P **P** **11 10 00.3 +2.1**
baz=126,SNR=12
PMD Palm Desert 28.49 315 P **P** **11 10 00.2 +1.7**
MVL Millersville 28.51 26 P **P** **11 09 58.4 -0.2**
MVL IAmb IAmb 11 09 59.5
comp=Z,96nm,0.7s
TPFO Pinon Flats 28.52 315 P **P** **11 10 01.4 +2.5**
baz=124,SNR=6.3
PFO Pinyon Flats O 28.53 315 P **P** **11 10 01.0 +2.0**
PFO Pinyon Flats O 28.53 315 P **P** **11 10 01.7 +2.7**
baz=124,SNR=6.4
PFO Pinyon Flats O 28.53 315*ce*P **P** **11 10 01.4 +2.4**
PFO pmax pmax
comp=Z,24nm,1.0s
PFO Pinyon Flats O 28.53 315 LR LR 11 21 03.0
comp=Z,203nm,20.7s,baz=118,slow=35
109C Camp Elliot, M 28.58 313 P **P** **11 10 00.9 +1.6**
109C Camp Elliot, M 28.58 313 P **P** **11 09 59.8 +0.5**
baz=122
LCMT Little Creek M 28.64 324 P **P** **11 10 02.0 +2.0**
GMRC Granite Mounta 28.68 317 P **P** **11 10 03.1 +2.8**
baz=127,SNR=40
V12A Nelson 28.75 320 P **P** **11 10 03.2 +2.4**
V12A IAmb IAmb 11 10 04.8
comp=Z,105nm,0.9s
WUPA West Chester U 28.78 27 P **P** **11 10 00.6 -0.4**
WUPA IAmb IAmb 11 10 01.5
comp=Z,34nm,0.7s
M55A Ridgway 28.82 22 P **P** **11 10 00.8 -0.5**
K50A Casco 28.84 15 P **P** **11 09 60.0 -1.5**
K50A IAmb IAmb 11 10 51.0
comp=Z,61nm,0.9s
ERPA Erie 28.99 19 P **P** **11 10 01.5 -1.3**
baz=205
MURC Murrieta 29.03 314 P **P** **11 10 05.9 +2.6**
baz=123,SNR=6.3
N58A Sunbury 29.06 25 P **P** **11 10 02.5 -0.9**
N58A IAmb IAmb 11 10 03.9
comp=Z,50nm,0.7s
P17A Butcher Ranch, 29.14 330 P **P** **11 10 06.2 +1.9**
WTNK Soaring Height 29.14 320 P **P** **11 10 05.7 +1.3**
HEC Hector,Ludlow 29.15 317 P **P** **11 10 06.6 +2.2**
baz=126,SNR=9.2
BBRC Big Bear Solar 29.21 315 P **P** **11 10 07.9 +2.7**
baz=125,SNR=7.9
TUQ Turquoise Moun 29.25 318 P **P** **11 10 07.5 +2.1**
baz=128,SNR=21
LUPA Lehigh Univers 29.43 27 P **P** **11 10 06.8 +0.1**
BFSC Mount Baldy Ra 29.70 314 P **P** **11 10 11.4 +2.0**
baz=124,SNR=5.0
GSC Goldstone, Bar 29.74 317 P **P** **11 10 11.7 +2.0**
GSC Goldstone, Bar 29.74 317 P **P** **11 10 12.0 +2.3**
baz=126,SNR=12
GSC Goldstone, Bar 29.74 317 P **P** **11 10 11.7 +2.0**
GSC pmax pmax
comp=Z,13nm,0.9s
SHOC Shoshone, Teco 29.75 319 P **P** **11 10 12.2 +2.5**
baz=128,SNR=10
CIS Catalina Islan 29.79 312 P **P** **11 10 09.4 -0.6**
baz=121
BRNJ Basking Ridge 29.85 28 P **P** **11 10 10.4 0.0**
PRN Pahroc Range 29.97 322 P **P** **11 10 13.1 +1.4**
MPU Maple Canyon 29.99 330 P **P** **11 10 12.9 +0.9**
K22A Casper 30.04 339 P **P** **11 10 12.5 +0.2**
baz=152
SPMN Marine on St. 30.04 359 P **P** **11 10 10.4 -1.7**
baz=179,SNR=6.5
ODNJ Ogdensburg 30.16 27 P **P** **11 10 13.0 -0.1**
ODNJ IAmb IAmb 11 10 14.2
comp=Z,72nm,1.0s
QSM Queen of Sheba 30.18 318 P **P** **11 10 16.2 +2.8**
QSM IAmb IAmb 11 10 17.2
comp=Z,42nm,0.9s
DECC Green Verdugo 30.18 314 P **P** **11 10 14.3 +0.8**
baz=123
CPNY Central Park 30.22 28 P **P** **11 10 12.3 -1.4**
CPNY IAmb IAmb 11 10 13.9
comp=Z,42nm,0.7s
EDW2 Edwards Air Fo 30.29 315 P **P** **11 10 16.8 +2.3**
baz=124,SNR=6.1
GLMI Grayling 30.36 11 P **P** **11 10 13.3 -1.6**
GLMI Grayling 30.36 11 P **P** **11 10 14.5 -0.5**
baz=195,SNR=13
TPNV Topopah Spring 30.39 320 P **P** **11 10 18.5 +3.0**
baz=129,SNR=27
PAL Palisades 30.41 28 P **P** **11 10 14.7 -0.7**
baz=217,SNR=31
LRMC Laurel Mtn Rad 30.42 316 P **P** **11 10 18.2 +2.5**
baz=125,SNR=5.4
FURC Furnace Creek, 30.48 319 P **P** **11 10 18.6 +2.6**
baz=128,SNR=30
BINY Binghamton 30.50 24 P **P** **11 10 15.1 -1.1**
BINY Binghamton 30.50 24 P **P** **11 10 16.0 -0.1**
baz=212,SNR=58
BBSR BB Station 30.51 51 P **P** **11 10 15.0 -1.3**
BBSR IAmb IAmb 11 10 18.0
comp=Z,70nm,0.9s
BBSR BB Station 30.51 51 P **P** **11 10 16.6 +0.2**
WCT Wildcat Mounta 30.53 320 P **P** **11 10 19.4 +2.8**
N62A Caumsett State 30.56 29 P **P** **11 10 15.7 -0.9**
N62A IAmb IAmb 11 10 17.0
comp=Z,88nm,0.8s
CTU Camp Tracy 30.57 330 P **P** **11 10 18.4 +1.4**
RSSD Black Hills 30.59 343 P **P** **11 10 16.7 -0.5**
RSSD Black Hills 30.59 343 P **P** **11 10 17.3 +0.1**
baz=157
RSSD Black Hills 30.59 343 P **P** **11 10 16.7 -0.5**
RSSD pmax pmax
comp=Z,8.0nm,0.9s
RSSD Black Hills 30.59 343 P **P** **11 10 17.3 +0.1**
RSSD PcP **PcP** **11 13 13.7 +0.2**
MPMC Manual Prospec 30.64 318 P **P** **11 10 20.4 +2.7**
baz=126,SNR=108
OSI Osito Audit: C 30.65 314 P **P** **11 10 20.1 +2.4**
baz=123
SPR3 Spring Creek 3 30.65 325 P **P** **11 10 19.7 +1.8**
DUG Dugway, Tooele 30.71 328 P **P** **11 10 20.0 +1.7**
DUG Dugway, Tooele 30.71 328 P **P** **11 10 20.4 +2.1**
baz=139,SNR=12
DUG Dugway, Tooele 30.71 328 P **P** **11 10 20.0 +1.7**
DUG pmax pmax
comp=Z,24nm,1.3s
K57A Scipio Center 30.74 23 P **P** **11 10 17.0 -1.3**
K57A IAmb IAmb 11 10 18.6
comp=Z,80nm,0.8s
L59A Walton 30.88 26 P **P** **11 10 19.0 -0.5**
R11B Troy Canyon, C 30.91 323 P **P** **11 10 23.0 +3.0**
baz=132,SNR=41
Q12A Willow Creek R 30.95 325 P **P** **11 10 23.0 +2.6**
Q12A IAmb IAmb 11 10 24.5
comp=Z,46nm,1.1s
ARVC Arvin 31.00 315 P **P** **11 10 23.4 +2.7**
baz=123,SNR=10
NNA Nana 31.00 149*ce*P **P** **11 10 21.9 +1.0**
NNA pmax pmax
comp=Z,24nm,1.3s
NNA Nana 31.00 149 LR LR 11 21 46.9
comp=Z,54nm,20.0s,baz=325,slow=34
ISA Isabella, Lake 31.06 316 P **P** **11 10 24.2 +3.0**
baz=124,SNR=9.9
GRAC Grapevine Rang 31.12 319 P **P** **11 10 24.0 +2.2**
GRAC IAmb IAmb 11 10 26.2
comp=Z,82nm,0.8s
GRAC Grapevine Rang 31.12 319 P **P** **11 10 24.3 +2.5**
baz=128,SNR=21
GMN Gold Mountain 31.24 320 P **P** **11 10 25.1 +2.0**
PDAR Pinedale Array 31.28 335 P **P** **11 10 23.6 +0.3**
comp=Z,2.9nm,0.8s,baz=146,slow=9.0,SNR=19
PDAR PcP **PcP** **11 13 15.6 +0.3**
comp=Z,5.6nm,0.4s,baz=133,slow=5.2,SNR=36
PDAR ScP **ScP** **11 16 51.4 +2.2**
comp=Z,2.1nm,0.8s,baz=141,slow=5.0,SNR=8.4
PDAR PKiKP **PKiKP** **11 20 44.5 -0.5**
comp=Z,1.0nm,0.6s,baz=125,slow=2.7,SNR=8.0
PDAR LR LR 11 25 18.0
comp=Z,104nm,19.7s,baz=105,slow=40
comp=Z,2.9nm,0.8s
J57A Williamstown 31.52 23 P **P** **11 10 23.9 -1.3**
J57A IAmb IAmb 11 10 25.2
comp=Z,62nm,0.7s
PKM Mcpherson Peak 31.55 314 P **P** **11 10 27.3 +1.6**
baz=122,SNR=5.9
VES Vestal, Rhdgr 31.57 316 P **P** **11 10 27.9 +2.3**
baz=124,SNR=39
MZP Montezuma Peak 31.57 320 P **P** **11 10 27.7 +1.7**
SADO Sadowa 31.65 18 LR LR 11 24 27.2
comp=Z,231nm,21.5s,baz=242,slow=39
TPH Tonopah 31.71 321 P **P** **11 10 29.3 +2.2**
TPH **PcP** **11 13 18.0 +1.4**
TIN Tinemaha, Big 31.71 318 P **P** **11 10 29.0 +2.0**
baz=127,SNR=7.1
DSP Deep Springs 31.73 319 P **P** **11 10 29.4 +2.4**
DSP IAmb IAmb 11 10 31.3
comp=Z,43nm,1.0s
HVU Hansel Valley 31.90 330 P **P** **11 10 30.1 +1.4**
HVU IAmb IAmb 11 10 32.1
comp=Z,51nm,1.3s
HVU Hansel Valley 31.90 330 P **P** **11 10 30.1 +1.4**
HVU pmax pmax
comp=Z,51nm,1.3s
SMMC Simmler 31.90 314 P **P** **11 10 29.5 +0.8**
baz=122,SNR=5.3
TRY Troy 31.90 27 P **P** **11 10 27.2 -1.2**
VOG Valley Oaks Go 32.03 316 P **P** **11 10 32.1 +2.4**
baz=124
L61B Northampton 32.12 28 P **P** **11 10 28.7 -1.6**
L61B Northampton 32.12 28 P **P** **11 10 29.5 -0.8**
baz=218
QUA2 Belchertown 32.13 29 P **P** **11 10 29.1 -1.4**
QUA2 IAmb IAmb 11 10 30.5
comp=Z,63nm,0.9s
REDW Red Top Meadow 32.30 334 P **P** **11 10 33.0 +0.7**
ELK Elko 32.38 327 P **P** **11 10 34.9 +1.9**
ELK Elko 32.38 327 P **P** **11 10 34.9 +1.9**
ELK pmax pmax
comp=Z,26nm,0.9s
M65A Busby, Falmout 32.41 31 P **P** **11 10 33.5 +0.7**
baz=222
MLAC Mammoth, Mammo 32.44 319 P **P** **11 10 35.6 +2.0**
baz=127
NVAR Mina Array Bea 32.59 320 P **P** **11 10 38.1 +3.2**
comp=Z,112nm,0.6s,baz=133,slow=8.8,SNR=1022
NVAR PcP **PcP** **11 13 20.6 +1.6**
comp=Z,16nm,0.7s,baz=133,slow=3.1,SNR=22
NVAR ScP **ScP** **11 16 55.8 +2.1**
comp=Z,1.3nm,0.8s,baz=117,slow=4.5,SNR=6.1
NVAR PKiKP **PKiKP** **11 20 47.0 +1.0**
comp=Z,0.4nm,0.5s,baz=226,slow=3.9,SNR=4.5
NVAR LR LR 11 25 34.4
comp=Z,146nm,19.5s,baz=128,slow=39
MDPB Devils Postpil 32.59 319 P **P** **11 10 37.3 +2.4**
MDPB IAmb IAmb 11 10 39.0
comp=Z,53nm,0.9s
HRV Adam Dziewonsk 32.68 29 P **P** **11 10 33.4 -1.9**
HRV IAmb IAmb 11 10 35.6
comp=Z,53nm,1.0s
HRV Adam Dziewonsk 32.68 29 P **P** **11 10 34.6 -0.7**
baz=219
HRV Adam Dziewonsk 32.68 29 P **P** **11 10 33.4 -1.9**
HRV pmax pmax
comp=Z,53nm,1.0s
HRV Adam Dziewonsk 32.68 29 P **P** **11 10 34.4 -0.9**
NCB Newcomb 32.69 25 P **P** **11 10 34.1 -1.2**
BCX Boston College 32.73 30 P **P** **11 10 35.3 -0.4**
BCX IAmb IAmb 11 10 36.2
comp=Z,64nm,1.0s
EYMN Ely 32.77 1 P **P** **11 10 36.3 +0.2**
baz=181
RYN Ryan 32.85 321 P **P** **11 10 39.4 +2.3**
RYN IAmb IAmb 11 10 41.2
comp=Z,60nm,1.0s
H17A Grant Village 33.04 336 P **P** **11 10 40.7 +2.0**
baz=146
LONY Lake Ozonia 33.09 24 P **P** **11 10 38.0 -0.8**
baz=212,SNR=27
RLMT Red Lodge 33.16 338 P **P** **11 10 41.0 +1.3**
baz=149,SNR=9.6
MDND Maddock 33.21 351 P **P** **11 10 38.7 -1.2**
baz=167,SNR=14
AGMN Agassiz Nation 33.24 356 P **P** **11 10 39.4 -0.7**
baz=174
BMN Battle Mountai 33.25 324 P **P** **11 10 42.5 +2.0**
BMN IAmb IAmb 11 10 44.3
comp=Z,64nm,0.9s
BMN Battle Mountai 33.25 324 P **P** **11 10 42.5 +2.0**
BMN pmax pmax
comp=Z,64nm,0.9s
WAKR Walker 33.34 320 P **P** **11 10 43.5 +2.1**
WAKR IAmb IAmb 11 10 45.7
comp=Z,49nm,1.2s
YERR Yerington 33.51 320 P **P** **11 10 45.9 +3.1**
YERR IAmb IAmb 11 10 46.8
comp=Z,62nm,0.7s
LBNH Lisbon 33.87 27 P **P** **11 10 44.7 -1.0**
baz=217,SNR=5.3
HLID Hailey 34.04 331 P **P** **11 10 49.1 +1.8**
HLID Hailey 34.04 331 P **P** **11 10 48.9 +1.5**
baz=140,SNR=47
BOZ Bozeman (W) 34.46 336 P **P** **11 10 51.7 +0.8**
baz=146,SNR=7.3
ULM Lac du Bonnet 35.18 356 P **P** **11 10 54.3 -2.5**
ULM Lac du Bonnet 35.18 356 P **P** **11 10 54.6 -2.2**
comp=Z,10.0nm,0.7s,baz=172,slow=10.0,SNR=15
ULM PcP **PcP** **11 13 25.0 -0.8**
comp=Z,16nm,0.7s,baz=219,slow=3.2,SNR=9.5
ULM ScP **ScP** **11 17 03.1 +0.8**
comp=Z,13nm,1.0s,baz=187,slow=2.9,SNR=7.7
ULM LR LR 11 28 36.9
comp=Z,142nm,18.9s,baz=142,slow=42
comp=Z,10.0nm,0.7s
G62A West of Eustis 35.25 27 P **P** **11 10 56.4 -1.2**
G62A IAmb IAmb 11 10 57.5
comp=Z,49nm,0.6s
ORV Oroville 35.26 319 P **P** **11 10 59.6 +1.9**
ORV IAmb IAmb 11 11 01.8
comp=Z,44nm,1.4s
ORV Oroville 35.26 319 P **P** **11 10 59.6 +1.9**
ORV pmax pmax
comp=Z,44nm,1.4s
WVOR Wild Horse Val 35.38 326 P **P** **11 11 00.9 +2.0**
WVOR IAmb IAmb 11 11 02.6
comp=Z,53nm,0.9s
WVOR Wild Horse Val 35.38 326 P **P** **11 11 00.9 +2.0**
WVOR pmax pmax
comp=Z,53nm,0.9s
EGMT Eagleton 35.84 340 P **P** **11 11 03.0 +0.4**
EGMT IAmb IAmb 11 11 05.7
comp=Z,45nm,1.4s
EGMT Eagleton 35.84 340 P **P** **11 11 03.1 +0.5**
baz=150,SNR=18
PKME Peaks-Kenny Pk 35.84 28 P **P** **11 11 01.7 -0.9**
PKME Peaks-Kenny Pk 35.84 28 P **P** **11 11 01.8 -0.7**
baz=220,SNR=17
LYMT Lyon Mountain 35.85 337 P **P** **11 11 03.3 +0.4**
BPMT Black Pine Rid 35.88 335 P **P** **11 11 04.0 +0.8**
J08A Circle Bar Ran 35.92 327 P **P** **11 11 05.7 +2.3**
PLID Pearl Lake 35.94 331 P **P** **11 11 04.9 +1.2**
PLID IAmb IAmb 11 11 06.2
comp=Z,31nm,0.8s
F63A Nahmakanta, Br 36.27 28 P **P** **11 11 04.7 -1.5**
F63A IAmb IAmb 11 11 05.9
comp=Z,32nm,0.6s
BMO Blue Mountains 36.39 330 P **P** **11 11 07.3 -0.1**
BMO Blue Mountains 36.39 330 P **P** **11 11 07.3 -0.1**
BMO pmax pmax
comp=Z,18nm,1.0s
LDAQ Lac Daran 37.15 24 P **P** **11 11 12.0 -1.7**
LDAQ IAmb IAmb 11 11 13.3
comp=Z,23nm,0.8s
LMQ La Malbaie 37.18 25 P **P** **11 11 12.7 -1.3**
LMQ IAmb IAmb 11 11 13.8
comp=Z,46nm,0.6s
YBH Yreka Blue Hor 37.28 321 P **P** **11 11 15.5 +0.5**
comp=Z,15nm,0.9s,baz=124,slow=4.7,SNR=42
YBH PcP **PcP** **11 13 32.6 +0.2**
comp=Z,5.8nm,0.8s,baz=84,slow=1.4,SNR=6.7
YBH LR LR 11 28 02.0
comp=Z,138nm,20.5s,baz=140,slow=38
comp=Z,15nm,0.9s
L04D Klamath Falls 37.33 322 P **P** **11 11 16.2 +0.8**
G08A Pilot Rock 37.52 329 P **P** **11 11 17.2 +0.2**
SAML Samuel 37.53 128 P **P** **11 11 14.8 -2.5**
SAML IAmb IAmb 11 11 16.2
comp=Z,37nm,0.8s
SAML Samuel 37.53 128 P **P** **11 11 14.8 -2.5**
SAML pmax pmax
comp=Z,37nm,0.8s
SAML Samuel 37.53 128 P **P** **11 11 15.2 -2.0**
SAML PcP **PcP** **11 13 34.0 +0.5**
SAML ScP **ScP** **11 17 13.3 +1.7**
PINE Pine Mountain 37.54 325 P **P** **11 11 18.1 +0.8**
PINE IAmb IAmb 11 11 19.8
comp=Z,46nm,0.9s
I04A Tendick Farm, 38.36 324 P **P** **11 11 25.6 +1.6**
I04A IAmb IAmb 11 11 26.4
comp=Z,52nm,0.8s
LMN Caledonia Moun 38.43 31 P **P** **11 11 23.3 -1.2**
H04A Detroit Lake 38.80 326 P **P** **11 11 29.2 +1.6**
BATG Bathurst New B 38.84 29 P **P** **11 11 26.8 -1.0**
BATG IAmb IAmb 11 11 27.9
comp=Z,34nm,1.1s
NEW Newport 38.86 334 P **P** **11 11 28.5 +0.4**
baz=140,SNR=6.7
NEW Newport 38.86 334 P **P** **11 11 28.2 +0.2**
comp=Z,5.4nm,0.7s,baz=143,slow=11,SNR=11
NEW PcP **PcP** **11 13 37.1 -0.1**
comp=Z,15nm,0.6s,baz=131,slow=3.4,SNR=14
NEW LR LR 11 32 16.7
comp=Z,131nm,18.6s,baz=126,slow=43
comp=Z,5.4nm,0.7s
BUCK Buck Mountain 38.94 324 P **P** **11 11 30.1 +1.3**
LPAZ La Paz 39.32 141 P **P** **11 11 32.8 -0.1**
LPAZ La Paz 39.32 141 P **P** **11 11 32.8 -0.1**
COR Corvallis 39.36 325 P **P** **11 11 33.2 +1.0**
COR Corvallis 39.36 325 P **P** **11 11 33.2 +1.0**
COR pmax pmax
comp=Z,126nm,1.0s
COR Corvallis 39.36 325 P **P** **11 11 34.0 +1.8**
COR PcP **PcP** **11 13 40.5 +1.8**
G03D McMinnville, O 39.73 325 P **P** **11 11 36.4 +1.1**
LTY Liberty 39.75 330 P **P** **11 11 37.2 +1.7**
LTY IAmb IAmb 11 11 38.2
comp=Z,28nm,0.8s
FFC Flin Flon 40.25 351 P **P** **11 11 38.4 -1.1**
FFC Flin Flon 40.25 351 P **P** **11 11 38.4 -1.1**
FFC pmax pmax
comp=Z,9.0nm,0.7s
FFC Flin Flon 40.25 351 P **P** **11 11 38.6 -0.9**
FFC pP **pP** **11 12 02.9 -0.6**
FFC PcP **PcP** **11 13 41.4 +0.1**
MDP Montagnes des 40.31 100 LR LR 11 29 30.9
comp=Z,42nm,18.2s,baz=277,slow=38
D05A Enumclaw 40.35 329 P **P** **11 11 41.9 +1.5**
D05A IAmb IAmb 11 11 43.6
comp=Z,67nm,0.9s
E03A Lebam 40.74 327 P **P** **11 11 44.9 +1.3**
GNW Green Mountain 41.03 328 P **P** **11 11 46.1 +0.2**
GNW IAmb IAmb 11 11 47.8
comp=Z,36nm,0.8s
NLWA Neilton Lookou 41.45 328 P **P** **11 11 51.4 +2.0**
NLWA IAmb IAmb 11 11 52.6
comp=Z,86nm,1.0s
EDM Edmonton 41.49 341 P **P** **11 11 49.3 -0.4**
EDM IAmb IAmb 11 11 51.8
comp=Z,24nm,0.7s
EDM Edmonton 41.49 341 P **P** **11 11 49.3 -0.4**
EDM pmax pmax
comp=Z,24nm,0.7s
PGC Sidney 42.06 329 P **P** **11 11 56.4 +2.0**
PGC IAmb IAmb 11 11 57.0
comp=Z,85nm,0.8s
FCC Fort Churchill 43.62 359 P **P** **11 12 05.1 -1.6**
FCC Fort Churchill 43.62 359 P **P** **11 12 05.1 -1.6**
FCC pmax pmax
comp=Z,8.0nm,0.6s
LVC Limon Verde 43.96 148 LR LR 11 29 48.6
comp=Z,33nm,19.4s,baz=308,slow=35
LVC Limon Verde 43.96 148 P **P** **11 12 11.8 +1.3**
LVC pP **pP** **11 12 35.7 +1.3**
LVC sP **sP** **11 12 47.2 +1.3**
LVC PcP **PcP** **11 13 57.4 +2.7**
SCHQ Schefferville 44.34 21 P **P** **11 12 10.8 -1.9**

SCHQ IAmb IAmb 11 12 12.0
comp=Z,35nm,1.1s
SCHQ Schefferville 44.34 21 P **P** **11 12 10.2 -2.5**
comp=Z,16nm,0.6s,baz=219,slow=7.1,SNR=39
SCHQ PcP **PcP** **11 13 53.5 -1.5**
comp=Z,11nm,0.5s,baz=229,slow=5.2,SNR=8.1
SCHQ LR LR 11 31 38.3
comp=Z,279nm,20.0s,baz=242,slow=38
comp=Z,16nm,0.6s
DRLN Deer Lake 44.39 32 P **P** **11 12 10.9 -2.3**
PTLB Pontes e Lacer 44.73 131 P **P** **11 12 15.2 -1.0**
PTLB IAmb IAmb 11 12 16.1
comp=Z,38nm,0.9s
RPN Rapa Nui 45.07 202 LR LR 11 27 39.3
comp=Z,48nm,18.2s,baz=18,slow=31
BBB Bella Bella 46.63 330 P **P** **11 12 31.6 +0.9**
comp=Z,26nm,1.0s,baz=126,slow=6.1,SNR=10
comp=Z,26nm,1.0s
AC02 Maricunga 47.41 151 P **P** **11 12 38.4 +0.8**
GRNB Grenville Isla 48.54 331 P **P** **11 12 47.4 +1.9**
LCO Las Campanas 48.60 154 P **P** **11 12 46.9 +0.4**
LCO pP **pP** **11 13 11.2 +0.4**
DIB Dawson Inlet, 49.36 329 P **P** **11 12 53.1 +1.4**
DIB IAmb IAmb 11 12 55.2
comp=Z,62nm,1.2s
U35K Hyder 49.87 333 P **P** **11 12 57.7 +2.2**
baz=129,SNR=9.2
YKA Yellowknife Ar 49.88 347 P **P** **11 12 55.3 -0.3**
YKA Yellowknife Ar 49.88 347 P **P** **11 12 55.0 -0.5**
comp=Z,23nm,0.7s,baz=149,slow=7.4,SNR=345
YKA PcP **PcP** **11 14 14.0 -0.5**
comp=Z,10nm,0.7s,baz=152,slow=3.2,SNR=13
YKA ScP **ScP** **11 18 02.0 +1.1**
comp=Z,0.9nm,0.8s,baz=146,slow=4.2,SNR=6.4
YKA PKiKP **PKiKP** **11 20 59.2 -1.1**
comp=Z,0.4nm,0.9s,baz=133,slow=2.0,SNR=4.0
comp=Z,23nm,0.7s
V35K Ketchikan 50.21 332 P **P** **11 12 59.4 +1.3**
baz=127,SNR=14
FLDN Fort Liard 50.44 340 P **P** **11 13 01.8 +2.0**
baz=140,SNR=6.5
KOTAN Kotaneelee Air 50.54 340 P **P** **11 13 01.5 +1.0**
baz=139,SNR=9.6
T35M Bob Quinn 50.65 334 P **P** **11 13 04.0 +2.5**
baz=130,SNR=17
CRAG Craig 50.99 331 P **P** **11 13 06.2 +2.3**
baz=126,SNR=6.8
WRAK Wrangell Islan 51.20 333 P **P** **11 13 07.6 +2.0**
baz=127
FRB Frobisher Bay 51.35 13 LR LR 11 37 53.0
comp=Z,102nm,19.2s,baz=193,slow=40
U33K Whale Pass 51.37 332 P **P** **11 13 08.8 +2.1**
baz=126
DLBC Dease Lake 51.51 336 P **P** **11 13 10.2 +2.3**
DLBC IAmb IAmb 11 13 11.6
comp=Z,48nm,0.8s
DLBC Dease Lake 51.51 336 P **P** **11 13 10.2 +2.3**
baz=131,SNR=46
DLBC Dease Lake 51.51 336 LR LR 11 40 00.1
comp=Z,66nm,18.2s,baz=111,slow=42
S34M Telegraph Cree 51.62 335 P **P** **11 13 11.2 +2.6**
baz=129,SNR=20
T33K Petersburg 51.71 333 P **P** **11 13 11.7 +2.4**
baz=127
WTLY Watson Lake, Y 52.17 338 P **P** **11 13 14.1 +1.3**
baz=133,SNR=21
R33M Jennings River 52.51 336 P **P** **11 13 17.1 +1.8**
R33M IAmb IAmb 11 13 18.8
comp=Z,27nm,0.9s
R33M Jennings River 52.51 336 P **P** **11 13 16.8 +1.5**
baz=130
MT09 Talagante 52.70 158 P **P** **11 13 17.1 -0.1**
MT09 IAmb IAmb 11 13 42.9
comp=Z,47nm,1.4s
Q32M Nakina River 52.74 335 P **P** **11 13 19.6 +2.3**
Q32M IAmb IAmb 11 13 20.9
comp=Z,54nm,1.0s
Q32M Nakina River 52.74 335 P **P** **11 13 19.5 +2.3**
baz=129
WRGLY Wrigley 52.75 343 P **P** **11 13 17.3 +0.4**
baz=141,SNR=7.8
S32K Killisnoo 52.81 333 P **P** **11 13 19.0 +1.6**
baz=125
SIT Sitka 52.91 332 P **P** **11 13 19.5 +1.3**
baz=124
R32K Eaglecrest 53.26 334 P **P** **11 13 22.6 +1.8**
baz=126
BDFB Brasilia 53.43 123 P **P** **11 13 21.3 -1.5**
comp=Z,11nm,0.7s,baz=297,slow=5.4,SNR=14
BDFB PcP **PcP** **11 14 29.2 +0.5**
comp=Z,4.4nm,0.7s,baz=52,slow=5.2,SNR=3.0
BDFB LR LR 11 37 05.3
comp=Z,65nm,18.2s,baz=298,slow=37
comp=Z,11nm,0.7s
CPUP Villa Florida 53.46 140 P **P** **11 13 21.6 -1.1**
comp=Z,4.5nm,0.8s,baz=325,slow=8.0,SNR=11
CPUP PcP **PcP** **11 14 28.8 +0.3**
comp=Z,3.7nm,0.6s,baz=343,slow=1.8,SNR=4.7
CPUP LR LR 11 34 43.2
comp=Z,46nm,20.8s,baz=324,slow=34
comp=Z,4.5nm,0.8s
CPUP Villa Florida 53.46 140 P **P** **11 13 21.5 -1.1**
CPUP pP **pP** **11 13 47.0 -0.4**
CPUP PcP **PcP** **11 14 29.2 +0.7**
P32M Atlin 53.72 335 P **P** **11 13 25.9 +1.8**
baz=128,SNR=21
P33M Teslin, Yukon 53.75 336 P **P** **11 13 25.9 +1.5**
P33M IAmb IAmb 11 14 31.0
comp=Z,26nm,1.0s
P33M Teslin, Yukon 53.75 336 P **P** **11 13 26.0 +1.5**
baz=129,SNR=21
S31K Pelican 53.82 333 P **P** **11 13 27.5 +2.7**
S31K IAmb IAmb 11 13 28.3
comp=Z,57nm,1.2s
S31K Pelican 53.82 333 P **P** **11 13 26.8 +2.0**
baz=124,SNR=9.3
R31K City Hall, Gus 53.86 333 P **P** **11 13 26.2 +1.1**
baz=125
SKAG Skagway 54.30 335 P **P** **11 13 29.9 +1.6**
baz=126,SNR=7.2
N32M Quiet Lake 54.45 337 P **P** **11 13 30.6 +1.2**
baz=129,SNR=7.0
PLBC Pleasant Camp 54.73 334 P **P** **11 13 33.6 +2.2**
baz=125,SNR=8.0
WHY Whitehorse 54.83 336 P **P** **11 13 33.7 +1.4**
WHY IAmb IAmb 11 13 34.8
comp=Z,24nm,1.1s
WHY Whitehorse 54.83 336 P **P** **11 13 33.5 +1.2**
baz=127,SNR=26
FARO Faro, Yukon 55.23 338 P **P** **11 13 35.9 +0.8**
baz=130,SNR=17
P30M Million Dollar 55.35 335 P **P** **11 13 38.3 +2.3**
baz=124
O30N Mendenhall 55.38 336 P **P** **11 13 37.4 +1.3**
baz=126,SNR=42
P29M Windy Craggy 55.41 334 P **P** **11 13 38.0 +1.6**
baz=123
M31M Drury Creek, Y 55.59 338 P **P** **11 13 39.3 +1.6**
baz=128,SNR=16
N31M Braeburn, Yuko 55.68 336 P **P** **11 13 40.0 +1.7**
baz=126,SNR=15
HYT Haines Junctio 55.98 335 P **P** **11 13 42.3 +1.8**
HYT IAmb IAmb 11 13 43.9
comp=Z,37nm,1.2s
HYT Haines Junctio 55.98 335 P **P** **11 13 42.0 +1.5**
baz=124,SNR=17
PNL Peninsula 56.14 333 P **P** **11 13 43.2 +1.6**
baz=122,SNR=14
ITQB Itaqui 56.31 142 P **P** **11 13 42.2 -0.9**
ITQB IAmb IAmb 11 13 43.0
comp=Z,19nm,0.7s
YUK6 Outpost Mounta 56.39 335 P **P** **11 13 45.7 +2.1**
baz=123,SNR=21
M30M Minto, Yukon 56.71 337 P **P** **11 13 46.5 +0.9**
baz=126,SNR=24
PINM Pinnacle 56.73 334 P **P** **11 13 47.7 +1.9**
baz=121,SNR=18
YUK4 Talbot Arm 56.73 335 P **P** **11 13 47.6 +1.7**
baz=124,SNR=24
NRS Narsarsuaq 56.92 25 *i* P **P** **11 13 43.5 -3.5**
NRS IAmb IAmb 11 13 47.0
comp=Z,22nm,0.7s
MAYO Mayo, Yukon 57.00 338 P **P** **11 13 49.2 +1.7**
baz=127,SNR=24
YUK8 Steele Glacier 57.15 335 P **P** **11 13 50.5 +1.5**
baz=122,SNR=25
TABL Table Mountain 57.28 334 P **P** **11 13 52.2 +2.3**

TABL IAmb IAmb 11 13 53.6
comp=Z,42nm,0.9s
MESA MESA 57.50 333 P **P** **11 13 53.4 +1.9**
baz=119,SNR=5.2
L29M L29M 57.52 337 P **P** **11 13 52.5 +1.2**
baz=125
CTG Chitna Glacier 57.63 334 P **P** **11 13 54.0 +1.8**
baz=120,SNR=12
YUK3 Moose Creek 57.69 335 P **P** **11 13 54.0 +1.2**
baz=122,SNR=14
K29M Barlow Dome 57.73 338 P **P** **11 13 53.5 +0.7**
K29M IAmb IAmb 11 14 46.0
comp=Z,32nm,0.7s
K29M Barlow Dome 57.73 338 P **P** **11 13 53.0 +0.2**
baz=126
J30M Hart River 57.75 339 P **P** **11 13 53.5 +0.5**
baz=128
C36M Paulatuk 57.76 347 P **P** **11 13 54.5 +1.7**
baz=143
SNH Sunshine Point 57.89 333 P **P** **11 13 56.1 +2.1**
BGLC Bering Glacier 58.06 333 P **P** **11 13 55.9 +0.9**
baz=118
I30M Mount Dempster 58.16 340 P **P** **11 13 56.2 +0.3**
baz=128
BVCY Beaver Creek 58.19 336 P **P** **11 13 57.4 +1.4**
baz=122,SNR=24
CRQE Cirque 58.28 333 P **P** **11 13 58.1 +1.3**
baz=118
J29N Klondike Camp 58.33 339 P **P** **11 13 57.6 +0.6**
baz=125,SNR=9.7
KAIM Kayak Island 58.48 332 P **P** **11 13 58.2 +0.2**
baz=117
DAWY Dawson 58.53 338 P **P** **11 13 58.5 +0.2**
baz=124
MCARA McCarthy VSAT 58.55 334 P **P** **11 14 00.4 +1.9**
MCARA McCarthy VSAT 58.55 334 P **P** **11 14 00.3 +1.8**
baz=119,SNR=24
M27K Edge Creek, AK 58.57 335 P **P** **11 13 59.7 +1.0**
baz=120
G31M Satah River 58.58 342 P **P** **11 13 58.6 0.0**
baz=131
SFJD Kangerlussuaq 58.60 18 LR LR 11 40 17.8
comp=Z,93nm,18.5s,baz=208,slow=37
F31M Tsiigehtchic 58.77 343 P **P** **11 13 59.7 -0.1**
F31M IAmb IAmb 11 14 49.3
comp=Z,12nm,0.7s
F31M Tsiigehtchic 58.77 343 P **P** **11 13 59.9 +0.1**
baz=132,SNR=13
BCAR Beaver Creek A 58.89 336 P **P** **11 14 01.6 +0.7**
L27K Beaver Creek, 58.91 336 P **P** **11 14 02.4 +1.4**
baz=121
EPYK Eagle Plains 58.98 341 P **P** **11 14 01.8 +0.4**
baz=128,SNR=8.9
BMRM Bremner River 59.03 333 P **P** **11 14 03.5 +1.6**
baz=117,SNR=15
PLCA Paso Flores 59.12 161 P **P** **11 14 03.5 +0.7**
PLCA IAmb IAmb 11 14 04.3
comp=Z,32nm,1.1s
PLCA Paso Flores 59.12 161 P **P** **11 14 03.5 +0.7**
PLCA pmax pmax
comp=Z,32nm,1.1s
PLCA Paso Flores 59.12 161 P **P** **11 14 03.4 +0.7**
comp=Z,13nm,0.9s,baz=337,slow=7.9,SNR=13
PLCA LR LR 11 34 51.3
comp=Z,44nm,18.8s,baz=343,slow=31
comp=Z,13nm,0.9s
PLCA Paso Flores 59.12 161 P **P** **11 14 02.9 +0.2**
G30M tAoh Zraii Nji 59.21 342 P **P** **11 14 03.8 +0.8**
baz=129
INK Inuvik 59.29 343 P **P** **11 14 03.3 -0.1**
comp=Z,13nm,0.6s,baz=123,slow=7.3,SNR=91
INK LR LR 11 42 19.9
comp=Z,50nm,20.6s,baz=172,slow=39
comp=Z,13nm,0.6s
N25K Chitina, Valde 59.32 334 P **P** **11 14 05.8 +1.9**
N25K Chitina, Valde 59.32 334 P **P** **11 14 05.9 +1.9**
baz=117,SNR=42
EYAK Cordova Ski Ar 59.35 333 P **P** **11 14 06.0 +2.1**
baz=116,SNR=18
H29M Whitestone 59.42 340 P **P** **11 14 05.1 +0.7**
baz=126
F30M Barrier River 59.48 342 P **P** **11 14 05.4 +0.7**
baz=130
L26K Log Cabin Wild 59.49 336 P **P** **11 14 06.3 +1.3**
baz=119
I28M Miner Creek 59.50 339 P **P** **11 14 06.6 +1.4**
baz=124
K27K Chicken 59.51 337 P **P** **11 14 06.2 +1.2**
baz=121
EGAK Eagle 59.56 338 P **P** **11 14 05.8 +0.4**
EGAK IAmb IAmb 11 14 06.8
comp=Z,22nm,0.9s
EGAK Eagle 59.56 338 P **P** **11 14 05.2 -0.2**
baz=122,SNR=9.4
RES Resolute Bay 59.61 359 P **P** **11 14 04.0 -1.5**
RES Resolute Bay 59.61 359 P **P** **11 14 04.0 -1.5**
RES pmax pmax
comp=Z,9.0nm,0.6s
RES Resolute Bay 59.61 359 P **P** **11 14 04.1 -1.5**
comp=Z,7.9nm,0.5s,baz=184,slow=10,SNR=36
RES LR LR 11 43 54.0
comp=Z,62nm,18.9s,baz=187,slow=40
comp=Z,7.9nm,0.5s
DY2G Dye2 59.63 20 *i* P **P** **11 14 03.1 -3.0**
DY2G IAmb IAmb 11 14 04.8
comp=Z,7.9nm,0.7s
RCBR Riachuelo 59.71 106 P **P** **11 14 05.3 -1.9**
KLU Klutina 59.84 334 P **P** **11 14 09.1 +1.7**
KLU Klutina 59.84 334 P **P** **11 14 09.0 +1.6**
baz=116,SNR=26
P23K Montague Islan 59.87 332 P **P** **11 14 09.1 +1.6**
baz=114
HARP HAARP 59.92 335 P **P** **11 14 09.2 +1.3**
baz=117,SNR=20
A36M Sachs Harbour 60.11 349 P **P** **11 14 08.2 -0.8**
A36M IAmb IAmb 11 14 54.9
comp=Z,41nm,0.8s
A36M Sachs Harbour 60.11 349 P **P** **11 14 08.3 -0.7**
baz=143,SNR=19
I27K Kandik River 60.17 339 P **P** **11 14 10.3 +0.7**
baz=122
SCRK Sand Creek 60.21 337 P **P** **11 14 10.8 +0.8**
baz=119,SNR=21
M24K Tolsona, Glenn 60.22 334 P **P** **11 14 11.6 +1.6**
M24K Tolsona, Glenn 60.22 334 P **P** **11 14 11.8 +1.8**
baz=116,SNR=15
J26L Joseph Creek 60.31 337 P **P** **11 14 11.8 +1.2**
baz=120,SNR=40
PAX Paxson 60.31 335 P **P** **11 14 11.5 +0.8**
baz=117,SNR=37
RIDG Independent Ri 60.43 336 P **P** **11 14 11.9 +0.6**
RIDG Independent Ri 60.43 336 P **P** **11 14 12.4 +1.0**
baz=118,SNR=16
H27K Steamboat Moun 60.48 339 P **P** **11 14 12.6 +0.9**
baz=123,SNR=26
I26K Coal Creek Min 60.56 338 P **P** **11 14 12.9 +0.7**
baz=121
E29M Blow River 60.59 342 P **P** **11 14 13.2 +0.9**
baz=128
SCM Sheep Creek Mo 60.59 334 P **P** **11 14 13.4 +0.9**
baz=115,SNR=9.6
UMMG Uummannaq 60.71 14 *i* P **P** **11 14 10.8 -2.3**
UMMG IAmb IAmb 11 14 14.1
comp=Z,4.9nm,0.7s
F28M Old Crow 60.72 341 P **P** **11 14 14.0 +0.7**
baz=125,SNR=86
M23K Glacier View 60.75 333 P **P** **11 14 14.3 +0.7**
baz=114,SNR=17
K24K Donnelly Dome 60.82 336 P **P** **11 14 15.1 +1.0**
baz=117,SNR=22
SEW Seward 60.85 331 P **P** **11 14 15.4 +1.1**
baz=112,SNR=5.6
KNK Knik Glacier 60.91 333 P **P** **11 14 16.0 +1.3**
KNK Knik Glacier 60.91 333 P **P** **11 14 15.8 +1.2**
baz=113,SNR=15
SML Sawmill 61.01 333 P **P** **11 14 16.3 +0.9**
baz=114,SNR=14
J25K Salcha River, 61.04 337 P **P** **11 14 16.7 +1.1**
baz=118
WAT6 Susitna Watana 61.08 334 P **P** **11 14 17.1 +1.1**
baz=115,SNR=37
O22K Cooper Landing 61.12 332 P **P** **11 14 16.8 +0.8**
baz=112
DHY Denali Highway 61.14 335 P **P** **11 14 16.4 +0.1**
baz=115,SNR=7.4
E28M Babbage River 61.20 342 P **P** **11 14 16.9 +0.4**
baz=126

PMR Palmer 61.28 333 P **P** **11 14 18.4 +1.3**
PMR Palmer 61.28 333 P **P** **11 14 18.0 +0.9**
baz=113,SNR=17
PMR Palmer 61.28 333 P **P** **11 14 18.4 +1.3**
PMR pmax pmax
comp=Z,52nm,0.8s
BRSE Bradley Lake S 61.33 331 P **P** **11 14 18.6 +1.1**
baz=110,SNR=10.0
RC01 Rabbit Creek A 61.35 332 P **P** **11 14 18.8 +1.2**
baz=112,SNR=25
D28M Stokes Point 61.41 343 P **P** **11 14 19.1 +1.4**
baz=127
WAT1 Susitna Watana 61.52 334 P **P** **11 14 19.5 +0.7**
baz=114
PRP Porcupine Dome 61.53 338 P **P** **11 14 19.7 +0.8**
baz=118,SNR=57
HDA Harding Lake 61.55 336 P **P** **11 14 19.1 +0.2**
baz=116,SNR=25
KDAK Kodiak Island 61.60 328 P **P** **11 14 20.5 +1.2**
KDAK Kodiak Island 61.60 328 P **P** **11 14 20.5 +1.2**
baz=108
KDAK Kodiak Island 61.60 328 *de* P **P** **11 14 20.8 +1.6**
KDAK pmax pmax
comp=Z,171nm,0.8s
KDAK Kodiak Island 61.60 328 P **P** **11 14 20.4 +1.2**
comp=Z,106nm,0.7s,baz=174,slow=1.3,SNR=50
KDAK LR LR 11 42 13.3
comp=Z,57nm,19.0s,baz=127,slow=37
comp=Z,106nm,0.7s
KDAK Kodiak Island 61.60 328 P **P** **11 14 20.9 +1.6**
G26K Porcupine Rive 61.63 340 P **P** **11 14 20.4 +1.0**
baz=121,SNR=22
IL31 61.69 337 P **P** **11 14 20.1 +0.3**
IL31 IAmb IAmb 11 14 22.2
comp=Z,46nm,0.8s
ILAR Eielson Array 61.69 337 P **P** **11 14 20.1 +0.3**
comp=Z,24nm,0.6s,baz=116,slow=5.2,SNR=250
ILAR PcP **PcP** **11 15 00.5 +0.2**
comp=Z,12nm,0.6s,baz=134,slow=1.8,SNR=20
ILAR LR LR 11 43 03.3
comp=Z,67nm,19.2s,baz=100,slow=38
comp=Z,24nm,0.6s
Q20K Shuyak Island 61.76 329 P **P** **11 14 21.8 +1.4**
baz=108,SNR=5.2
M22K Willow 61.78 333 P **P** **11 14 21.3 +0.9**
baz=112
OHAK Old Harbor 61.79 327 P **P** **11 14 22.3 +1.7**
baz=107
CAPN Captain Cook N 61.88 332 P **P** **11 14 23.3 +2.1**
baz=110
SUA Susitna One 61.95 332 P **P** **11 14 22.9 +1.2**
baz=111,SNR=25
D27M Malcolm River 61.99 342 P **P** **11 14 22.4 +0.5**
baz=125
MCK McKinley 62.05 335 P **P** **11 14 22.9 +0.6**
baz=114,SNR=20
POKR Poker Plat Res 62.06 337 P **P** **11 14 22.7 +0.4**
baz=116,SNR=13
SII Sitkinak Islan 62.08 326 P **P** **11 14 24.1 +1.5**
baz=105
CUT Chulitna 62.09 333 P **P** **11 14 23.4 +0.9**
CUT Chulitna 62.09 333 P **P** **11 14 23.1 +0.6**
baz=112,SNR=21
COLA College 62.11 337 P **P** **11 14 23.4 +0.8**
COLA College 62.11 337 P **P** **11 14 22.9 +0.3**
baz=116
COLA College 62.11 337 *e* P **P** **11 14 23.3 +0.8**
COLA College 62.11 337 P **P** **11 14 23.4 +0.8**
COLA PcP **PcP** **11 15 02.2 +0.3**
F26K Sheenjek River 62.14 340 P **P** **11 14 23.7 +0.9**
baz=121
BMAR Burnt Mountain 62.14 340 P **P** **11 14 23.6 +0.7**
ANGG Ammassalik, Gr 62.18 23 *i* P **P** **11 14 19.8 -3.2**
ANGG IAmb IAmb 11 14 21.3
comp=Z,20nm,0.6s
MDM Murphy Dome 62.29 337 P **P** **11 14 24.3 +0.4**
MDM IAmb IAmb 11 15 03.8
comp=Z,65nm,1.3s
O20K Slope Mountain 62.34 331 P **P** **11 14 25.0 +0.6**
baz=109,SNR=15
NEA2 Nenana 62.46 336 P **P** **11 14 25.2 +0.1**
baz=114,SNR=12
Q19K Cape Douglas, 62.47 329 P **P** **11 14 25.9 +0.7**
baz=107
SKT Skwentna 62.48 333 P **P** **11 14 26.5 +1.3**
SKT Skwentna 62.48 333 P **P** **11 14 26.1 +0.9**
baz=111,SNR=27
P19K Oil Pt 62.49 330 P **P** **11 14 26.1 +0.8**
baz=108,SNR=6.2
TRF Thorofare Moun 62.50 335 P **P** **11 14 26.3 +0.8**
baz=113,SNR=39
N20K Mount Spurr 62.51 332 P **P** **11 14 26.2 +0.7**
baz=110,SNR=21
H24K Noodor Dome 62.55 338 P **P** **11 14 26.4 +0.8**
H24K IAmb IAmb 11 14 27.6
comp=Z,48nm,0.7s
H24K Noodor Dome 62.55 338 P **P** **11 14 26.4 +0.8**
baz=116
F25K Christian Rive 62.58 340 P **P** **11 14 27.0 +1.2**
baz=119,SNR=44
CHIR Chirikof Islan 62.67 325 P **P** **11 14 27.9 +1.4**
baz=104
G24K Hadweenzic Riv 62.79 338 P **P** **11 14 28.2 +1.0**
baz=117
KTH Kantishna Hill 62.80 335 P **P** **11 14 28.0 +0.7**
I23K Minto, Yukon-K 62.81 337 P **P** **11 14 27.9 +0.6**
baz=114,SNR=70
E25K Arctic Village 62.82 340 P **P** **11 14 28.3 +0.9**
E25K IAmb IAmb 11 14 29.9
comp=Z,33nm,1.1s
E25K Arctic Village 62.82 340 P **P** **11 14 28.4 +1.1**
baz=120,SNR=35
PPLA Purkeypile 63.09 334 P **P** **11 14 29.7 +0.3**
baz=110,SNR=16
COYC Coyhaique 63.12 164 P **P** **11 14 30.1 +0.6**
COYC pP **pP** **11 14 55.9 +1.0**
M20K Styx River 63.16 332 P **P** **11 14 30.5 +0.7**
baz=109
ICESG Greenland Ices 63.17 19 *i* P **P** **11 14 27.2 -2.9**
ICESG IAmb IAmb 11 14 29.1
comp=Z,28nm,0.7s
O19K Port Alsworth 63.18 330 P **P** **11 14 30.4 +0.6**
O19K Port Alsworth 63.18 330 P **P** **11 14 30.2 +0.4**
baz=107,SNR=15
CAST Castle Rocks 63.23 334 P **P** **11 14 30.1 -0.1**
CAST Castle Rocks 63.23 334 P **P** **11 14 30.3 +0.1**
baz=111,SNR=47
MLY Manley 63.29 336 P **P** **11 14 30.9 +0.3**
baz=113,SNR=79
F24K Squaw Lake 63.30 339 P **P** **11 14 32.5 +1.9**
F24K Squaw Lake 63.30 339 P **P** **11 14 31.8 +1.2**
baz=117
P18K Big Mountain, 63.39 329 P **P** **11 14 31.7 +0.4**
baz=106
Q17K Contact Creek 63.42 328 P **P** **11 14 32.9 +1.3**
baz=105,SNR=8.2
N19K Bonanza Creek 63.44 331 P **P** **11 14 32.4 +0.7**
N19K Bonanza Creek 63.44 331 P **P** **11 14 32.2 +0.6**
baz=107,SNR=30
CHUM Lake Minchumin 63.50 335 P **P** **11 14 32.1 +0.3**
baz=111,SNR=11
O18K Koktuh Hills 63.51 330 P **P** **11 14 32.5 +0.4**
baz=106,SNR=9.9
D25K Kavik River 63.67 341 P **P** **11 14 33.8 +0.8**
baz=119,SNR=65
L20K Farewell, AK 63.69 333 P **P** **11 14 33.5 +0.3**
baz=109
G23K Bananza Creek 63.70 338 P **P** **11 14 34.0 +0.7**
baz=114
M19K Big River Lodg 63.73 332 P **P** **11 14 34.2 +0.8**
baz=108
E24K Your Creek 63.76 340 P **P** **11 14 34.9 +1.4**
E24K IAmb IAmb 11 14 36.1
comp=Z,43nm,1.4s
E24K Your Creek 63.76 340 P **P** **11 14 35.0 +1.4**
baz=116,SNR=28
I21K Tanana 63.84 336 P **P** **11 14 34.3 +0.3**
baz=112
H22K Ishtalitna Cre 63.88 337 P **P** **11 14 35.0 +0.7**
baz=113
Q16K King Salmon 63.91 328 P **P** **11 14 35.4 +0.7**
baz=104,SNR=18
P17K Kvichak River 63.94 329 P **P** **11 14 35.4 +0.6**
baz=105,SNR=5.7
COLD Coldfoot 63.98 338 P **P** **11 14 36.1 +1.1**
baz=114,SNR=31
L19K White Mountain 64.03 332 P **P** **11 14 35.9 +0.5**

L19K IAmb IAmb 11 14 37.0
comp=Z,46nm,0.9s
L19K White Mountain 64.03 332 P **P** **11 14 36.1 +0.8**
baz=108
K20K Telida 64.05 334 P **P** **11 14 36.0 +0.4**
baz=109,SNR=47
N18K Kilae Creek 64.06 331 P **P** **11 14 36.5 +0.8**
N18K Kilae Creek 64.06 331 P **P** **11 14 36.0 +0.3**
baz=106
R16K Pilot Point 64.12 327 P **P** **11 14 36.8 +0.7**
baz=103
E23K Chandalar 64.13 339 P **P** **11 14 37.9 +1.8**
baz=115
M18K Stony River 64.26 332 P **P** **11 14 37.5 +0.6**
baz=106,SNR=22
CHGN Chignik 64.30 326 P **P** **11 14 37.8 +0.6**
baz=102,SNR=7.0
G22K Bettles 64.33 338 P **P** **11 14 37.9 +0.7**
baz=113
H21K Melozitna Rive 64.33 336 P **P** **11 14 37.4 +0.1**
baz=111,SNR=35
J20K Nowinta River 64.36 335 P **P** **11 14 38.2 +0.7**
baz=109,SNR=35
D24K Happy Valley 64.36 341 P **P** **11 14 38.3 +0.9**
baz=117
TOLK Toolik Lake Re 64.37 340 P **P** **11 14 38.3 +0.7**
TOLK IAmb IAmb 11 14 39.8
comp=Z,46nm,0.6s
TOLK Toolik Lake Re 64.37 340 P **P** **11 14 38.5 +0.9**
baz=116,SNR=46
O17K Koliganek Bris 64.41 330 P **P** **11 14 38.7 +0.8**
baz=104,SNR=9.9
C24K Franklin Bluff 64.58 341 P **P** **11 14 39.4 +0.6**
baz=117
N17K Nushagak Hills 64.64 330 P **P** **11 14 39.8 +0.4**
N17K IAmb IAmb 11 14 41.4
comp=Z,74nm,0.9s
N17K Nushagak Hills 64.64 330 P **P** **11 14 40.3 +0.9**
baz=105
P16K Nushagak River 64.67 329 P **P** **11 14 40.4 +0.8**
baz=103
CHNA Chernabura Isl 64.68 324 P **P** **11 14 40.0 +0.2**
baz=100
I20K Naaghedeneel 64.70 335 P **P** **11 14 40.4 +0.7**
baz=109
TTA Tatalina 64.76 333 P **P** **11 14 40.3 0.0**
TTA IAmb IAmb 11 14 41.4
comp=Z,58nm,0.8s
TTA Tatalina 64.76 333 P **P** **11 14 40.2 0.0**
baz=107,SNR=36
TTA Tatalina 64.76 333 P **P** **11 14 40.3 0.0**
TTA pmax pmax
comp=Z,58nm,0.8s
IMAR Indian Mountai 64.81 337 P **P** **11 14 40.6 +0.2**
O16K Kokwok River B 64.85 329 P **P** **11 14 41.5 +0.7**
baz=103
L18K Granite Mounta 64.86 332 P **P** **11 14 41.4 +0.6**
L18K IAmb IAmb 11 14 42.4
comp=Z,66nm,1.1s
L18K Granite Mounta 64.86 332 P **P** **11 14 41.2 +0.4**
baz=106
D23K Nanushuk River 64.88 340 P **P** **11 14 42.2 +1.4**
baz=115
G21K Allakaket 64.91 337 P **P** **11 14 41.8 +0.8**
baz=111
J19K Poorman 64.91 334 P **P** **11 14 41.1 0.0**
J19K Poorman 64.91 334 P **P** **11 14 41.3 +0.2**
baz=108
E22K Anaktuvuk Pass 64.92 339 P **P** **11 14 42.0 +0.9**
baz=113,SNR=53
S14K Fog Glacier 64.92 325 P **P** **11 14 41.7 +0.3**
baz=100
M17K Holitna River 64.98 331 P **P** **11 14 42.0 +0.4**
baz=105
PPT Papeete 65.05 242 LR LR 11 36 25.3
comp=Z,62nm,21.1s,baz=180,slow=30
H20K Anotleneega Mo 65.09 336 P **P** **11 14 42.3 +0.1**
baz=109
F21K Alatna River 65.16 338 P **P** **11 14 44.7 +2.0**
baz=111,SNR=167
J18K Innoko River 65.22 334 P **P** **11 14 43.6 +0.5**
J18K IAmb IAmb 11 14 44.4
comp=Z,85nm,1.6s
J18K Innoko River 65.22 334 P **P** **11 14 43.0 -0.2**
baz=106
SDPT Sand Point 65.27 324 P **P** **11 14 43.8 +0.3**
SDPT Sand Point 65.27 324 P **P** **11 14 44.2 +0.7**
baz=99
SUMG Summit 65.30 16 P **P** **11 14 42.1 -1.9**
SUMG Summit 65.30 16 P **P** **11 14 42.1 -1.9**
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 65.30 16 *i* P **P** **11 14 42.0 -1.9**
SUMG IAmb IAmb 11 14 44.3
comp=Z,8.2nm,0.5s
N16K Nishlik Lake 65.39 330 P **P** **11 14 45.0 +0.7**
baz=103,SNR=12
SOEG Soedalen 65.50 21 *i* P P 11 14 41.0 -3.8
SOEG IAmb IAmb 11 14 43.5
comp=Z,8.6nm,0.7s
D22K Ayikyak River 65.50 340 P **P** **11 14 46.0 +1.1**
D22K IAmb IAmb 11 14 47.5
comp=Z,61nm,0.9s
D22K Ayikyak River 65.50 340 P **P** **11 14 46.3 +1.4**
baz=113
L17K Donlin 65.56 332 P **P** **11 14 45.8 +0.4**
baz=104
M16K Timber Creek 65.61 331 P **P** **11 14 46.6 +1.0**
baz=103
O15K Ungalikthiuk R 65.63 329 P **P** **11 14 45.6 -0.2**
baz=102
GCSA Galena City Sc 65.66 335 P **P** **11 14 46.4 +0.5**
baz=107,SNR=12
K17K Iditarod 65.71 333 P **P** **11 14 46.6 +0.3**
baz=104
H19K Roundabout Mou 65.72 336 P **P** **11 14 46.6 +0.4**
baz=108,SNR=69
NEEM North Greenlan 65.73 9 *i* P **P** **11 14 44.5 -2.0**
NEEM IAmb IAmb 11 14 48.5
comp=Z,13nm,0.8s
E21K Killik River 65.78 339 P **P** **11 14 47.2 +0.6**
baz=111
F20K Avaraart Lake 65.92 337 P **P** **11 14 48.8 +1.3**
baz=109
N15K Kwethluk River 65.96 330 P **P** **11 14 48.6 +0.6**
N15K IAmb IAmb 11 14 49.6
comp=Z,35nm,1.0s
N15K Kwethluk River 65.96 330 P **P** **11 14 48.2 +0.2**
baz=102,SNR=5.1
L16K Owhat River 66.00 331 P **P** **11 14 49.2 +1.1**
L16K IAmb IAmb 11 14 50.2
comp=Z,72nm,0.9s
L16K Owhat River 66.00 331 P **P** **11 14 48.9 +0.7**
baz=103,SNR=14
G19K Purcell Mounta 66.16 336 P **P** **11 14 49.5 +0.4**
G19K Purcell Mounta 66.16 336 P **P** **11 14 49.7 +0.7**
baz=107
C21K Knifeblade Rid 66.31 340 P **P** **11 14 51.4 +1.4**
baz=111
M15K Kasigluk River 66.36 330 P **P** **11 14 51.4 +0.9**
baz=101,SNR=6.5
O14K Tigyukauivet M 66.37 328 P **P** **11 14 50.6 +0.1**
baz=100
H18K Honhosa River 66.38 335 P **P** **11 14 51.6 +1.1**
baz=106
B21K Ikpikpuk River 66.42 340 P **P** **11 14 51.5 +0.8**
baz=111,SNR=45
E20K Nigu River 66.48 339 P **P** **11 14 52.6 +1.3**
baz=109
E19K Redstone River 66.61 338 P **P** **11 14 52.4 +0.5**
baz=108
F19K Shaleruckik Mo 66.62 337 P **P** **11 14 52.8 +0.8**
F19K Shaleruckik Mo 66.62 337 P **P** **11 14 52.7 +0.7**
baz=107,SNR=59
G18K Tagagawik 66.70 336 P **P** **11 14 53.7 +1.2**
baz=106,SNR=52
N14K Kuskokwak Cree 66.70 329 P **P** **11 14 52.9 +0.3**
baz=100
D20K Etivluk River 66.78 339 P **P** **11 14 53.9 +0.8**
baz=109,SNR=142
J16K Anvik River 66.87 333 P **P** **11 14 55.2 +1.5**
baz=103,SNR=31
FALS False Pass 66.88 324 P **P** **11 14 54.6 +0.8**
baz=96,SNR=9.2
H17K Granite Mounta 66.96 335 P **P** **11 14 55.6 +1.4**
baz=104
M14K Bethel 66.98 330 P **P** **11 14 55.5 +1.1**
baz=100,SNR=42
M14K Bethel 66.98 330 P **P** **11 14 55.9 +1.5**
baz=100,SNR=42
I17K Unalakleet 67.04 333 P **P** **11 14 56.4 +1.7**
baz=103,SNR=12
K15K Wolf Creek Mou 67.08 332 P **P** **11 14 56.6 +1.6**
baz=101
D19K Kuna River 67.24 339 P **P** **11 14 56.5 +0.5**
D19K IAmb IAmb 11 14 57.9
comp=Z,47nm,0.7s
D19K Kuna River 67.24 339 P **P** **11 14 56.9 +0.9**
baz=107,SNR=50
F18K Selawik 67.28 336 P **P** **11 14 57.1 +0.9**
baz=105,SNR=25
G17K Kiwalik Mounta 67.40 335 P **P** **11 14 58.2 +1.3**
baz=104
L14K Kuka Creek 67.44 331 P **P** **11 14 58.0 +0.8**
baz=100
M13K Dall Lake 67.60 330 P **P** **11 14 60.0 +1.6**
M13K Dall Lake 67.60 330 P **P** **11 14 59.9 +1.6**
baz=99,SNR=24
A21K Barrow 67.65 342 P **P** **11 14 59.2 +0.8**
baz=110,SNR=5.8
E18K Tukpahlearik C 67.85 337 P **P** **11 15 00.3 +0.6**
baz=104
F17K Baldwin Pennin 67.86 336 P **P** **11 15 00.6 +0.8**
baz=103,SNR=20
H16K Elim 67.86 334 P **P** **11 15 01.3 +1.4**
baz=102,SNR=74
C19K Lookout Ridge 67.93 339 P **P** **11 15 01.7 +1.4**
baz=106
G16K Koyuk River 68.07 335 P **P** **11 15 02.4 +1.2**
baz=102,SNR=46
J14K Nanvaranak Lak 68.08 332 P **P** **11 15 03.1 +1.8**
baz=100
E17K Hotham Inlet 68.23 337 P **P** **11 15 02.9 +0.8**
baz=103,SNR=166
C18K Utukok River 68.37 338 P **P** **11 15 03.7 +0.6**
C18K IAmb IAmb 11 15 04.7
comp=Z,45nm,0.9s
C18K Utukok River 68.37 338 P **P** **11 15 03.9 +0.8**
baz=104,SNR=46
UNV Unalaska Valle 68.59 322 P **P** **11 15 05.7 +1.2**
baz=94,SNR=7.9
G15K Niukluk 68.69 334 P **P** **11 15 06.4 +1.4**
baz=100
B18K Kokolik River 68.76 339 P **P** **11 15 06.6 +1.2**
baz=104
D17K Noatak River 68.84 337 P **P** **11 15 06.8 +0.9**
baz=102
RDOG Red Dog Mine 68.85 338 P **P** **11 15 06.7 +0.7**
baz=102,SNR=12
M11K Mekoryuk 69.00 329 P **P** **11 15 08.4 +1.4**
baz=96
C17K DeLong Mountai 69.04 338 P **P** **11 15 07.6 +0.4**
baz=102
F15K North Star Dit 69.06 335 P **P** **11 15 08.5 +1.1**
baz=100
ANM Nome 69.18 334 P **P** **11 15 09.5 +1.4**
ANM IAmb IAmb 11 15 10.2
comp=Z,37nm,0.8s
ANM Nome 69.18 334 P **P** **11 15 09.2 +1.1**
baz=99,SNR=32
ANM Nome 69.18 334 P **P** **11 15 09.5 +1.4**
ANM pmax pmax
comp=Z,37nm,0.8s
SCO Scoresbysund 69.37 20 *i* P **P** **11 15 06.0 -3.1**
SCO IAmb IAmb 11 15 09.7
comp=Z,5.9nm,0.7s
F14K Arctic Creek 69.72 335 P **P** **11 15 12.9 +1.6**
baz=98
C16K Lisburne Hills 69.78 338 P **P** **11 15 12.6 +0.9**
C16K IAmb IAmb 11 15 13.7
comp=Z,102nm,1.4s
C16K Lisburne Hills 69.78 338 P **P** **11 15 12.7 +1.0**
baz=100,SNR=43
NIKH Nikoloki High 69.95 321 P **P** **11 15 13.6 +0.5**
baz=91
TNA Tin City 70.39 335 P **P** **11 15 16.6 +1.1**
baz=97,SNR=27
SPIA Saint Paul Isl 70.87 326 P **P** **11 15 19.8 +1.2**
baz=92
GAMB Gambell 71.86 333 P **P** **11 15 25.7 +1.3**
baz=93
EFI East Falkland 72.89 158⇑ *e*P **P** **11 15 29.5 -1.0**
EFI pmax pmax
comp=Z,95nm,1.2s
JMIC Jan Mayen 73.85 20 LR LR 11 48 36.5
comp=Z,148nm,18.5s,baz=218,slow=36
RAR Rarotonga 75.31 243 LR LR 11 41 57.9
comp=Z,22nm,20.2s,baz=122,slow=30
PGAV Gavieira, Arco 75.76 50 *e*P **P** **11 15 44.8 -2.9**
PCAS Casmilo, Conde 75.84 52 *e*P **P** **11 15 45.9 -2.2**
comp=Z,53nm,1.7s
MORF Marmelete 76.11 55 *e*P **P** **11 15 47.5 -2.3**
comp=Z,64nm,1.8s
MORF Marmelete 76.11 55 *e*P **P** **11 15 47.4 -2.3**
MORF IAmb IAmb 11 15 51.6
comp=Z,69nm,1.4s
MORF Marmelete 76.11 55 *e*P **P** **11 15 47.4 -2.3**
PMTG Montargil 76.19 53 *e*P **P** **11 15 47.3 -2.8**
comp=Z,22nm,2.5s
POLO Lamas de Olo 76.19 50 *e*P **P** **11 15 47.6 -2.6**
PVRL Vila Real 76.26 51 *e*P **P** **11 15 47.7 -2.8**
comp=Z,56nm,1.8s
MESJ Messejana 76.37 54 *e*P **P** **11 15 48.7 -2.5**
comp=Z,24nm,2.0s
MESJ Messejana 76.37 54 *e*P **P** **11 15 48.6 -2.5**
MESJ IAmb IAmb 11 15 54.4
comp=Z,42nm,1.6s
MESJ Messejana 76.37 54 *e*P **P** **11 15 48.6 -2.6**
EVO Evora 76.43 53 *e*P **P** **11 15 49.0 -2.5**
comp=Z,35nm,1.7s
MTE Manteigas 76.52 51 *e*P **P** **11 15 48.6 -3.4**
comp=Z,53nm,2.1s
PBEJ Beja 76.62 54 *e*P P 11 15 48.0 -4.6
PCBR Castelo Branco 76.65 52 *e*P **P** **11 15 50.1 -2.6**
comp=Z,28nm,1.3s
PBDV Barranco-do-Ve 76.69 55 *e*P **P** **11 15 51.3 -1.7**
comp=Z,54nm,1.9s
PESTR Estremoz 76.71 53 *e*P P 11 15 47.7 -5.4
PMRV Marv??o 76.78 52 *e*P **P** **11 15 50.7 -2.7**
comp=Z,34nm,1.4s
MVO Moncorvo 76.79 51 *e*P **P** **11 15 51.1 -2.4**
PBRG Braganca 76.91 50 *e*P **P** **11 15 51.5 -2.7**
comp=Z,30nm,1.5s
PBAR Barrancos 77.24 54 *e*P **P** **11 15 53.2 -2.8**
comp=Z,26nm,1.9s
EKA Eskdalemuir Ar 77.31 36 P **P** **11 15 53.8 -2.3**
comp=Z,5.2nm,0.5s,baz=268,slow=5.4,SNR=21
comp=Z,5.2nm,0.5s
AMKA Amchitka 77.32 320 P **P** **11 15 56.4 +0.2**
SPITS Spitsbergen Ar 79.10 11 P **P** **11 16 04.7 -0.9**
comp=Z,4.3nm,0.4s,baz=270,slow=0.3,SNR=36
SPITS LR LR 11 52 20.3
comp=Z,121nm,20.6s,baz=242,slow=37
comp=Z,4.3nm,0.4s
ESDC Sonseca Array 79.35 52 P **P** **11 16 05.3 -2.4**
ESDC Sonseca Array 79.35 52 P **P** **11 16 05.4 -2.3**
comp=Z,7.2nm,0.7s,baz=282,slow=6.2,SNR=44
ESDC LR LR 11 51 22.1
comp=Z,41nm,18.6s,baz=288,slow=36
comp=Z,7.2nm,0.7s
MDT Midelt 80.16 59 LR LR 11 44 03.6
comp=Z,58nm,21.7s,baz=348,slow=30
BILL Bilibino 80.31 338 P **P** **11 16 13.3 +1.1**
BILL Bilibino 80.31 338 *i* P **P** **11 16 13.0 +0.8**
BGES Gesves 83.21 40 *d*P **P** **11 16 25.6 -2.2**
BCLA Clavier 83.34 40 *d*P **P** **11 16 26.2 -2.2**
BCLA *d*PcP **PcP** **11 16 31.7 -1.0**
RCHB Rochefort 83.36 40 *d*P **P** **11 16 26.1 -2.5**
NB2 NORSAR Subarra 83.38 28 P **P** **11 16 27.2 -1.3**
comp=Z,9.4nm,0.8s,baz=292,slow=5.1
NOA NORSAR Array B 83.38 28 P **P** **11 16 27.3 -1.2**
comp=Z,4.4nm,0.7s,baz=291,slow=5.2,SNR=17
NOA LR LR 11 52 20.8
comp=Z,70nm,20.8s,baz=275,slow=35
comp=Z,4.4nm,0.7s
BSTI Sart Tilman 83.45 39 *d*P **P** **11 16 27.3 -1.8**
MEM Membach 83.72 39 *d*P **P** **11 16 27.8 -2.6**
BHOU Houvegnez 83.79 40 *d*P **P** **11 16 29.2 -1.6**
WLF Walferdange 84.07 40 *d*P **P** **11 16 31.4 -0.8**
HFS Hagfors 84.84 29 P **P** **11 16 34.4 -1.5**
comp=Z,6.9nm,0.6s,baz=270,slow=2.2,SNR=20
HFS LR LR 11 52 08.1
comp=Z,106nm,21.4s,baz=306,slow=34
comp=Z,6.9nm,0.6s
ARCES ARCESS Array B 85.23 18 P **P** **11 16 36.2 -1.5**
comp=Z,4.5nm,0.4s,baz=282,slow=5.1,SNR=80
ARCES LR LR 11 54 29.1
comp=Z,66nm,21.4s,baz=294,slow=36
comp=Z,4.5nm,0.4s
SENIN Lac Senin/Sane 85.76 43 P **P** **11 16 39.6 -1.4**
SENIN IAmb IAmb 11 16 40.2
comp=Z,40nm,0.8s
TUE Stuetta 87.07 43 P **P** **11 16 46.1 -1.3**
GRF Grafenberg Arr 87.19 39 *e*P **P** **11 16 46.4 -1.3**
comp=Z,17nm,1.2s,baz=282,slow=5.4
DAVOX Davos/Dischmat 87.32 42 LR LR 11 57 57.9
comp=Z,42nm,18.0s,baz=252,slow=37
SEY Seymchan 87.61 336 *ce*P **P** **11 16 50.3 +0.9**
SEY pmax pmax
comp=Z,28nm,0.6s
SEY Seymchan 87.61 336 P **P** **11 16 50.4 +0.9**
comp=Z,30nm,0.6s,baz=86,slow=5.5,SNR=138
comp=Z,30nm,0.6s
FUORN Ofenpass-Fuorn 87.62 42 P **P** **11 16 48.2 -1.9**
CLL Collm 87.69 37 *e*P **P** **11 16 49.0 -1.0**
CLL *e**PP **pP** **11 17 21.0 +3.5**
CLL Collm 87.69 37 *e*P **P** **11 16 51.0 +1.0**
NKC Novy Kostel 87.74 38 *e*P **P** **11 16 48.8 -1.6**
NKC Novy Kostel 87.74 38 *e*P **P** **11 16 48.8 -1.6**
FETA Feichten 87.79 42 *i* P **P** **11 16 49.0 -1.9**
comp=Z,3.3nm,0.6s
MOTA Moosalm 87.92 41 *i* P **P** **11 16 49.2 -2.3**
comp=Z,0.7nm,0.3s
HSKC Hora Svate Kat 88.19 38 *e*P **P** **11 16 50.1 -2.4**
KHC Kasperske Hory 88.83 39 *e*P **P** **11 16 53.7 -1.8**
KHC Kasperske Hory 88.83 39⇓ *e*P **P** **11 16 54.1 -1.4**
KHC pmax pmax
comp=Z,2.0nm,0.7s
ZCCA Zocca 88.86 44 P **P** **11 16 53.9 -1.8**
ZCCA IAmb IAmb 11 16 57.3
comp=Z,56nm,1.6s
GERES GERESS Array B 89.01 39 P **P** **11 16 54.5 -2.0**
comp=Z,1.2nm,0.6s,baz=327,slow=6.5,SNR=6.0
comp=Z,1.2nm,0.6s
ZVC Zvikov 89.09 39 *e*P **P** **11 16 54.9 -1.8**
PRU Pruhonice 89.09 38 *e*P **P** **11 16 54.9 -1.8**
PRU Pruhonice 89.09 38 *e*P **P** **11 16 54.9 -1.8**
TIXI Tiksi 89.12 348 P **P** **11 16 55.1 -1.2**
TIXI Tiksi 89.12 348⇓ *e*P **P** **11 16 55.3 -1.0**
TIXI pmax pmax
comp=Z,34nm,0.8s
TIXI Tiksi 89.12 348 LR LR 12 01 34.3
comp=Z,37nm,20.5s,baz=20,slow=39
KBA Koelnbreinsper 89.44 41 *i* P **P** **11 16 56.9 -1.7**
comp=Z,1.9nm,0.3s
PETK Petropavlovsk- 89.54 325 P **P** **11 16 59.9 +1.2**
comp=Z,7.8nm,0.8s,baz=69,slow=11,SNR=16
comp=Z,7.8nm,0.8s
FINES FINESS Array B 89.68 25 P **P** **11 16 57.2 -1.9**
comp=Z,5.6nm,0.5s,baz=324,slow=2.7,SNR=98
FINES LR LR 11 58 18.6
comp=Z,86nm,18.5s,baz=302,slow=36
comp=Z,5.6nm,0.5s
MOA Molln 89.73 40 *i* P **P** **11 16 57.6 -2.2**
comp=Z,1.3nm,0.3s
CHVC Chvalec 89.75 37 *e*P **P** **11 16 58.2 -1.6**
CHVC Chvalec 89.75 37 *e*P **P** **11 16 58.2 -1.6**
OSTC Ostas 89.85 37 *e*P **P** **11 16 58.4 -1.9**
OSTC Ostas 89.85 37 *e*P **P** **11 16 58.4 -1.9**
MA2 Magadan 89.96 333 P **P** **11 17 01.5 +1.0**
comp=Z,54nm,0.8s,baz=67,slow=5.7,SNR=36
MA2 LR LR 12 01 22.7
comp=Z,45nm,18.3s,baz=45,slow=38
comp=Z,54nm,0.8s
DPC Dobruska-Polom 90.00 37 *e*P **P** **11 16 58.9 -2.1**
DPC Dobruska-Polom 90.00 37 *e*P **P** **11 16 58.9 -2.1**
KRLC Kraliky 90.38 37 *e*P **P** **11 17 01.0 -1.8**
KRLC Kraliky 90.38 37 *e*P **P** **11 17 01.0 -1.8**
TORD Torodi Ar. Bea 90.50 76 P **P** **11 17 01.4 -2.5**
comp=Z,6.4nm,0.2s,baz=301,slow=5.6,SNR=3.3
TORD LR LR 11 59 12.6
comp=Z,25nm,18.9s,baz=320,slow=37
comp=Z,6.4nm,0.2s
KEST Kesra 90.55 53 P **P** **11 17 03.4 -0.5**
comp=Z,4.4nm,0.5s,baz=268,slow=11,SNR=2.7
comp=Z,4.4nm,0.5s
VRAC Vranov 90.58 38 LR LR 11 58 36.4
comp=Z,36nm,19.4s,baz=332,slow=36
SOKA Soboth 90.67 41 *i* P **P** **11 17 01.9 -2.3**
comp=Z,1.0nm,0.5s
CONA Conrad Observa 90.69 40 *i* P **P** **11 17 02.3 -2.0**
comp=Z,2.1nm,0.6s
RONA Rosalia, Austr 91.05 40 *i* P **P** **11 17 03.9 -2.0**
comp=Z,4.5nm,0.7s
MODS Modra-Piesok 91.38 39 *e*P **P** **11 17 06.7 -0.7**
MODS Modra-Piesok 91.38 39 *e*P **P** **11 17 06.7 -0.7**
LANS Liptovska Anna 92.36 38 *e*P **P** **11 17 13.4 +1.5**
LANS Liptovska Anna 92.36 38 *e*P **P** **11 17 13.4 +1.5**
VAE Valguarnera 93.75 50 LR LR 11 54 13.4
comp=Z,93nm,19.2s,baz=328,slow=32
NRIK Noril'sk 95.80 0⇑ *e*P **P** **11 17 26.6 -0.6**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
NRIK Noril'sk 95.80 0 P **P** **11 17 26.2 -1.0**
comp=Z,1.6nm,0.5s,baz=27,slow=6.8,SNR=2.2
NRIK LR LR 12 04 04.7
comp=Z,104nm,19.3s,baz=10.0,slow=38
comp=Z,1.6nm,0.5s
YAK Yakutsk 96.31 341 *e*P P 11 17 26.4 -3.3
YAK *e*PPP PPP 11 23 27.5
YAK *e*S SKSac 11 27 47.5 -9.2
YAK *e*SS **SS** **11 35 11.8 -2.3**
YAK pmax pmax
comp=Z,18nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=Z,142nm,4.1s
YAK pmax pmax
comp=N,33nm,3.9s
YAK pmax pmax
comp=E,92nm,4.8s
YAK smax smax
comp=E,123nm,4.8s
YAK smax smax
comp=N,56nm,4.3s
YAK Yakutsk 96.31 341 LR LR 12 06 31.9
comp=N,34nm,20.3s,baz=350,slow=39
AKASG Malin Array Be 97.03 33 P **P** **11 17 29.9 -3.3**
comp=N,0.5nm,0.4s,baz=294,slow=4.0,SNR=3.2
AKASG LR LR 12 02 39.7
comp=N,33nm,19.2s,baz=296,slow=36
comp=N,0.5nm,0.4s
MLR Muntele Rosu 97.97 39 LR LR 12 04 23.0
comp=N,40nm,18.6s,baz=332,slow=37
KIRV Kirov 100.21 19 LR LR 12 03 06.5
comp=N,32nm,21.2s,baz=316,slow=35
YSS Yuzh-Sakhalins 100.93 325 *e*P **Pdif** **11 17 50.8 +0.1**
YSS pmax pmax
comp=Z,10.0nm,0.9s
BVAR Borovoye Array 110.56 11 PKiKP **PKiKP** **11 22 33.3 0.0**
comp=Z,3.9nm,0.5s,baz=22,slow=1.0,SNR=17
ZALV Zalesovo Beam 111.20 2 PKiKP **PKiKP** **11 22 34.3 -0.2**
comp=Z,1.5nm,0.3s,baz=252,slow=2.2,SNR=10
KURK Kurchatov 114.01 6*d* iPKiKP **PKiKP** **11 22 39.0 -0.9**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURBB Kurchatov Arra 114.09 6 PKiKP **PKiKP** **11 22 39.4 -0.8**
comp=Z,4.0nm,0.4s,baz=349,slow=1.7,SNR=46
SONM Songino Array 115.15 346 PKP **PKiKP** **11 22 42.2 -0.2**
comp=Z,1.2nm,0.4s,baz=193,slow=0.8,SNR=6.7
KSRS Korea Array 115.43 325 PKP **PKiKP** **11 22 43.6 +0.5**
comp=Z,4.7nm,0.7s,baz=15,slow=2.1,SNR=13
KSAR Wonju Array Be 115.46 325 **PKiKP** **11 22 42.9 -0.2**
KSAR Wonju Array Be 115.46 325 PKiKP **PKiKP** **11 22 42.9 -0.2**
DGZ Jazzator, Alta 115.50 0⇑ *i*PKiKP **PKiKP** **11 22 42.3 -0.8**
MK31 Makanchi Array 118.22 4 PKPdf **PKPdf** **11 22 47.0 -1.3**
MK31 Makanchi Array 118.22 4⇑ *i*PKiKP **PKPdf** **11 22 47.3 -0.9**
MKAR Makanchi Array 118.22 4 PKiKP **PKPdf** **11 22 47.0 -1.3**
MKAR Makanchi Array 118.22 4 PKP **PKPdf** **11 22 47.0 -1.3**
comp=Z,2.5nm,0.6s,baz=298,slow=2.6,SNR=29
BTLS Baital 118.90 11 *e*PKP **PKPdf** **11 22 49.8 +0.2**
baz=11
BTLS Baital 118.90 11 *e*PKiKP **PKPdf** **11 22 49.8 +0.2**
TDK Taldyqorghan 119.62 7 *e*PKP **PKPdf** **11 22 50.2 -0.8**
baz=7.6
TDK Taldyqorghan 119.62 7 *e*PKiKP **PKPdf** **11 22 50.1 -0.8**
HHC Hu-ho-hao-te 120.07 339 *e*PKiKP **PKPdf** **11 22 52.7 +0.6**
GEYT Alibeck 120.44 27 PKPdf **PKPdf** **11 22 52.0 -0.8**

GEYT	**Alibeck**	**120.44**	**27**	PKIKP	**PKPdf**	**11 22 52.0**	**-0.8**		
GEYT	**Alibeck**	**120.44**	**27**	PKP	**PKPdf**	**11 22 52.6**	**-0.2**		
	comp=Z,4.7nm,0.7s,baz=243,slow=2.7,SNR=8.7								
SGDS	**Sogindy**	**120.55**	**11**	*e*PKP	**PKPdf**	**11 22 52.9**	**-0.1**		
	baz=11								
SGDS	**Sogindy**	**120.55**	**11**	*e*PKIKP	**PKPdf**	**11 22 52.8**	**-0.1**		
CHKK	**Chushkaly**	**120.55**	**9**	*e*PKP	**PKPdf**	**11 22 52.4**	**-0.5**		
	baz=9.0								
CHKK	**Chushkaly**	**120.55**	**9**	*e*PKIKP	**PKPdf**	**11 22 52.3**	**-0.5**		
USP	**Ospenovka**	**120.70**	**11**	P	**PKPdf**	**11 22 53.1**	**-0.1**		
	SNR=12								
BTO	**Baotou**	**120.81**	**340**	*e*PKP	**PKPdf**	**11 22 51.7**	**-1.8**		
BTO				PP	**PP**	**11 24 26.2**	**+4.4**		
BTO				SS	SS	11 40 46.7	+2.5		
EKS2	**Erkin-Say**	**121.15**	**12**	P	**PKPdf**	**11 22 55.1**	**+0.9**		
	SNR=6.0								
BOSA	**Boshof**	**121.16**	**114**		**PKPdf**	**11 22 54.5**	**0.0**		
BOSA	**Boshof**	**121.16**	**114**	PKIKP	**PKPdf**	**11 22 54.5**	**0.0**		
BOSA	**Boshof**	**121.16**	**114**	PKP	**PKPdf**	**11 22 54.4**	**-0.1**		
	comp=Z,11nm,0.7s,baz=296,slow=1.6,SNR=20								
KPKS	**Kokpek**	**121.16**	**8**	*e*PKP	**PKPdf**	**11 22 53.3**	**-0.8**		
	baz=7.7								
KPKS	**Kokpek**	**121.16**	**8**	*e*PKIKP	**PKPdf**	**11 22 53.3**	**-0.8**		
MDOK	**Medeo**	**121.23**	**9**	*e*PKP	**PKPdf**	**11 22 54.1**	**-0.3**		
	baz=9.2								
MDOK	**Medeo**	**121.23**	**9**	*e*PKIKP	**PKPdf**	**11 22 54.0**	**-0.3**		
TKM2	**Tokmak 2**	**121.23**	**10**	P	**PKPdf**	**11 22 54.7**	**+0.3**		
	SNR=7.2								
AAK	**Ala-Archa**	**121.31**	**11**	P	**PKPdf**	**11 22 55.2**	**+0.7**		
	SNR=6.7								
AAK	**Ala-Archa**	**121.31**	**11**	PKPdf	**PKPdf**	**11 22 54.8**	**+0.3**		
AAK	**Ala-Archa**	**121.31**	**11**	PKIKP	**PKPdf**	**11 22 54.8**	**+0.3**		
TNSS	**Tian-Shan**	**121.34**	**9**	*e*PKP	**PKPdf**	**11 22 54.5**	**-0.3**		
	baz=9.3								
TNSS	**Tian-Shan**	**121.34**	**9**	*e*PKIKP	**PKPdf**	**11 22 54.5**	**-0.3**		
LBTB	**Lobatse**	**121.34**	**110**		**PKPdf**	**11 22 54.0**	**-0.9**		
LBTB	**Lobatse**	**121.34**	**110**	PKIKP	**PKPdf**	**11 22 54.0**	**-0.9**		
WMQ	**Urumqi**	**121.38**	**360**	*e*PKP	**PKPdf**	**11 22 54.9**	**+0.4**		
UZB	**Uzynbulak**	**121.52**	**7**	*e*PKP	**PKPdf**	**11 22 54.7**	**-0.2**		
	baz=7.5								
UZB	**Uzynbulak**	**121.52**	**7**	*e*PKIKP	**PKPdf**	**11 22 54.6**	**-0.2**		
SATY	**Saty**	**121.53**	**8**	*e*PKP	**PKPdf**	**11 22 54.3**	**-0.5**		
	baz=8.1								
SATY	**Saty**	**121.53**	**8**	*e*PKIKP	**PKPdf**	**11 22 54.3**	**-0.5**		
SHLS	**Shalkode**	**121.56**	**7**	*e*PKP	**PKPdf**	**11 22 54.6**	**-0.4**		
	baz=6.8								
SHLS	**Shalkode**	**121.56**	**7**	*e*PKIKP	**PKPdf**	**11 22 54.5**	**-0.4**		
UCH	**Uchtor**	**121.71**	**11**	P	**PKPdf**	**11 22 56.7**	**+1.0**		
	SNR=11								
TIA	**Tai'an**	**121.85**	**332**	⇓PKP	**PKPdf**	**11 22 55.3**	**-0.2**		
ULHL	**Ulahol**	**122.00**	**10**	P	**PKPdf**	**11 22 56.2**	**+0.3**		
	SNR=5.9								
CTAO	**Charters Tower**	**124.10**	**256**	PKPdf	**PKPdf**	**11 23 00.5**	**+0.3**		
CTAO	**Charters Tower**	**124.10**	**256**	PKIKP	**PKPdf**	**11 23 00.5**	**+0.3**		
NJ2	**Nanjing**	**124.38**	**328**	⇓PKP	**PKPdf**	**11 23 00.8**	**+0.4**		
GTA	**Gaotai**	**124.60**	**349**	PKP	**PKPdf**	**11 23 00.8**	**-0.1**		
GTA				LR	LR				
	comp=Z,69nm,17.1s								
GTA				LR	LR				
	comp=Z,92nm,18.9s								
GTA				LR	LR				
	comp=Z,100nm,18.5s								
KSH	**Kashi**	**124.61**	**11**	PKP	**PKPdf**	**11 23 02.4**	**+1.5**		
MAW	**Mawson**	**125.11**	**169**	PKP	**PKPdf**	**11 23 01.7**	**+1.1**		
	comp=Z,9.8nm,1.0s,baz=180,slow=1.0,SNR=2.1								
LYN	**LuoYang**	**125.27**	**335**	*e*PKP	**PKPdf**	**11 23 01.4**	**-0.7**		
LZH	**Lanzhou**	**126.84**	**344**	*e*PKP	**PKPdf**	**11 23 06.2**	**+0.9**		
XAN	**Xi'an**	**127.09**	**338**	⇑PKP	**PKPdf**	**11 23 05.6**	**-0.1**		
WHN	**Wuhan**	**127.84**	**331**	⇓PKP	**PKPdf**	**11 23 07.7**	**+0.6**		
STKA	**Stephens Creek**	**128.25**	**241**		**PKPdf**	**11 23 07.8**	**0.0**		
STKA	**Stephens Creek**	**128.25**	**241**	PKP	**PKPdf**	**11 23 08.6**	**+0.8**		
	comp=Z,5.2nm,0.8s,baz=62,slow=2.3,SNR=8.1								
GOMU	**GeErMu**	**128.54**	**353**	PKP	**PKPdf**	**11 23 09.8**	**+1.0**		
GYA	**Guiyang**	**134.74**	**336**	⇑PKP	**PKPdf**	**11 23 20.3**	**-0.1**		
WB2	**Warramunga Arr**	**135.27**	**257**	PKPdf	**PKPdf**	**11 23 23.4**	**+2.0**		
WRA	**Warramunga Arr**	**135.28**	**257**	PKhKP	PKPpre	11 23 15.3			
	comp=Z,0.7nm,0.6s,baz=93,slow=3.4,SNR=6.5								
WRA				PKP	**PKPdf**	**11 23 23.1**	**+1.7**		
	comp=Z,5.1nm,0.7s,baz=89,slow=3.0,SNR=30								
WRA				SKPbc	**SKPbc**	**11 26 46.0**	**+2.8**		
	comp=Z,1.6nm,1.0s,baz=86,slow=3.2,SNR=4.7								
ASAR	**Alice Springs**	**135.66**	**252**	PKPdf	**PKPdf**	**11 23 23.0**	**+1.0**		
ASAR	**Alice Springs**	**135.66**	**252**	PKhKP	PKPpre	11 23 09.1			
	comp=Z,0.6nm,0.8s,baz=103,slow=3.4,SNR=1.9								
ASAR				PKP	**PKPdf**	**11 23 23.4**	**+1.4**		
	comp=Z,2.5nm,0.6s,baz=84,slow=2.3,SNR=11								
ASAR				SKPbc	**SKPbc**	**11 26 47.6**	**+3.3**		
	comp=Z,0.8nm,1.0s,baz=89,slow=3.4,SNR=2.6								
PZH	**PanZhiHua**	**136.43**	**341**	PKP	**PKPdf**	**11 23 23.6**	**0.0**		
PZH				PP	**PP**	**11 26 07.8**	**+3.7**		
PZH				PKS	**PKSdf**	**11 26 56.0**	**-4.1**		
PZH				AMB	AMB				
	comp=Z,100nm,5.1s								
KMI	**Kunming**	**137.40**	**340**	⇑PKP	**PKPdf**	**11 23 25.8**	**+0.3**		
MTN	**Manton Dam**	**137.75**	**267**	PKPdf	**PKPdf**	**11 23 26.2**	**+0.2**		
CHTO	**Chiang Mai**	**144.51**	**341**	PKPdf	**PKPab**	**11 23 36.5**	**-0.2**		
CHTO	**Chiang Mai**	**144.51**	**341**	PKIKP	**PKPab**	**11 23 36.5**	**-0.2**		
CM31	**Chiang Mai Arr**	**144.84**	**341**		**PKPab**	**11 23 37.7**	**-0.2**		
CMAR	**Chiang Mai Arr**	**144.84**	**341**	PKP	**PKPab**	**11 23 38.1**	**+0.2**		
	comp=Z,72nm,0.7s,baz=341,slow=3.7,SNR=302								
CMAR				SKPbc	**SKPbc**	**11 27 11.2**	**+2.2**		
	comp=Z,1.8nm,0.7s,baz=323,slow=2.5,SNR=6.1								
UBPT	**Khong Chiam**	**145.04**	**329**		**PKPbc**	**11 23 39.2**	**+0.6**		
HYB	**Hyderabad**	**146.49**	**16**	*e*PKPdf	**PKPdf**	**11 23 41.4**	**-0.2**		
HYB				*e*PKiKP	**PKPab**	**11 23 46.4**	**+2.2**		
HYB				*ep*PKiKP	pPKPab	11 24 12.7	+0.4		
MSEY	**Mahe Island**	**146.75**	**75**		**PKPdf**	**11 23 42.5**	**+0.3**		
MSEY	**Mahe Island**	**146.75**	**75**	PKP2	**PKPdf**	**11 23 42.5**	**+0.3**		
PSA00	**Pilbara Seismi**	**148.76**	**253**		**PKPdf**	**11 23 48.5**	**+3.3**		
KULM	**Kulim**	**155.98**	**326**	PKPdf	**PKPdf**	**11 23 55.9**	**-0.2**		
KULM				PKPab	**pPKPdf**	**11 24 24.4**	**0.0**		
PSI	**Prapat**	**158.99**	**327**	PKIKP	**PKPdf**	**11 23 59.8**	**-0.2**		
PSI						11 24 36.9			
RPSI	**Rantau Prapat**	**159.08**	**327**	PKPdf	**PKPdf**	**11 23 59.8**	**-0.2**		
RPSI				PKPab	**sPKPdf**	**11 24 36.9**	**-1.9**		
GSI	**Gunungsitoli**	**160.96**	**328**	PKPdf	**PKPdf**	**11 24 02.5**	**+0.4**		
GSI				PKPab	**PKPab**	**11 24 45.4**	**+0.4**		

HEL 10 11:06:27.6±0.2, 67°57N×30°47E, h0km, ML1.4,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.38**	**299**	PG	Pg	11 06 34.3	-0.5
VRF				SG	Sg	11 06 39.2	-0.5
RAJF	**Raja-Jooseppi**	**1.22**	**319**	PG	Pg	11 07 05.2	-1.5
RAJF				SG	Sg	11 07 14.9	-1.6
SGF	**Sodankyl**	**1.52**	**267**	PG	Pn	11 06 55.2	-0.9
SGF				SG	Sg	11 07 14.9	-1.6
KU6	**Riekki**	**1.57**	**189**	PG	Pn	11 06 55.8	-0.8
KU6				MSG		11 07 14.5	
	comp=Z,1.6nm,0.2s						
KU6				SG	Sn	11 07 16.6	-1.0
LVZ	**Lovozero**	**1.63**	**76**	SN	Sn	11 07 18.5	-0.6
MSF	**Maaselka**	**1.76**	**200**	PG	Pn	11 06 59.1	-0.2
MSF				SN	Sn	11 07 22.5	+0.2
RNF	**Rovaniemi**	**1.99**	**243**	PG	Pn	11 07 02.9	+0.4
RNF				SG	Sb	11 07 29.5	-0.5
RANF	**Ranua**	**2.14**	**225**	PG	Pn	11 07 05.5	+1.0
	baz=40						
RANF				SG	Sb	11 07 33.2	-0.9
KEV	**Kevo**	**2.54**	**332**	*e*P	Pn	11 07 10.1	+0.2
KEV	**Kevo**	**2.54**	**332**	PB	Pn	11 07 10.6	+0.6
	baz=148						
KEV				MSG		11 07 42.5	
	comp=Z,1.7nm,0.2s						
KEV				SB	Sb	11 07 43.7	-1.9
KLF	**Kolari**	**2.54**	**265**	PN	Pn	11 07 10.0	0.0
KLF				MSG		11 07 42.5	
	comp=Z,1.2nm,0.2s						
KLF				SG	Sb	11 07 44.4	-1.2
ARA0	**ARCESS Array S**	**2.69**	**320**	PN	Pn	11 07 12.1	0.0
	baz=139						
ARA0				SG	Sb	11 07 49.0	-1.0
HEF	**Hetta**	**2.70**	**291**	*e*P	Pn	11 07 12.7	+0.5
HEF	**Hetta**	**2.70**	**291**	PB	Pb	11 07 14.6	-2.2
	baz=106						
HEF				MSG		11 07 47.1	
	comp=Z,1.7nm,0.2s						
HEF				SB	Sb	11 07 48.9	-1.5
TOF	**Tornio**	**2.85**	**241**	PN	Pn	11 07 13.9	-0.4
TOF				MSG		11 07 51.5	
	comp=Z,0.6nm,0.2s						
TOF				SB	Sb	11 07 54.4	-0.4
PAJU	**Pajala**	**2.91**	**263**	PN	Pn	11 07 14.9	-0.1
PAJU				SB	Sb	11 07 55.3	-1.0
KTK1	**Kautokeino**	**3.06**	**302**	PB	Pn	11 07 18.3	+1.3
KTK1				SG	Sb	11 08 00.2	-0.3
LANU	**Lannavaara**	**3.25**	**282**	PN	Pn	11 07 19.4	-0.4
LANU				SG	Sb	11 08 08.0	+1.7
LANU	**Lannavaara**	**3.25**	**282**	PB	Sb	11 08 08.0	+1.7
RMF	**Romuvaara**	**3.37**	**184**	PN	Pn	11 07 21.4	-0.1
RMF				SB	Sb	11 08 07.5	-2.2
RMF	**Romuvaara**	**3.37**	**184**	PN	Sb	11 08 07.5	-2.2

HEL 10 11:07:13.2±0.1, 67°56N×30°55E, h0km, ML1.7,
Suspected explosion, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.40**	**298**	PG	Pg	11 07 20.8	-0.2
	baz=122						
VRF				SG	Sg	11 07 25.8	-0.3
RAJF	**Raja-Jooseppi**	**1.25**	**319**	PG	Pg	11 07 36.2	-0.8
RAJF				SN	Sn	11 07 57.2	+1.9
SGF	**Sodankyl**	**1.55**	**267**	PN	Pn	11 07 42.3	+0.3
	baz=83						
SGF				SN	Sg	11 08 03.0	+0.1
KU6	**Riekki**	**1.56**	**190**	PN	Pn	11 07 42.2	0.0
	baz=9.0						
KU6				MSG		11 08 00.1	
	comp=Z,4.7nm,0.2s						
KU6				SN	Sn	11 08 02.2	-0.9
LVZ	**Lovozero**	**1.60**	**76**	PG	Pn	11 07 42.0	-0.8
LVZ				SN	Sg	11 08 06.0	+1.5
MSF	**Maaselka**	**1.76**	**201**	PG	Pn	11 07 45.5	+0.6
MSF				SN	Sb	11 08 08.8	-0.1
RNF	**Rovaniemi**	**2.02**	**244**	PG	Pn	11 07 49.4	+1.0
RNF				SG	Sb	11 08 16.3	+0.1
RANF	**Ranua**	**2.15**	**226**	PG	Pb	11 07 51.7	-1.3
	baz=40						
RANF				SG	Sb	11 08 19.2	-0.9
KEV	**Kevo**	**2.56**	**331**	MSG		11 08 28.6	
	comp=Z,4.0nm,0.2s						
KEV				SG	Sb	11 08 30.9	-0.9
KLF	**Kolari**	**2.56**	**266**	PG	Pb	11 07 59.2	-0.7
KLF				MSG		11 08 28.9	
	comp=Z,2.6nm,0.2s						
KLF				SG	Sb	11 08 31.2	-0.8
ARA0	**ARCESS Array S**	**2.71**	**319**	PB	Pn	11 07 59.4	+1.4
	baz=138						
ARA0				SB	Sb	11 08 34.2	-2.1
HEF	**Hetta**	**2.73**	**291**	PB	Pn	11 08 00.1	+1.9
HEF				MSG		11 08 33.5	
	comp=Z,2.1nm,0.2s						
HEF				SG	Sb	11 08 35.6	-1.2
TOF	**Tornio**	**2.88**	**242**	MSG		11 08 37.7	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sb	11 08 40.8	-0.1
PAJU	**Pajala**	**2.93**	**263**	SG	Sb	11 08 43.1	+0.4
KTK1	**Kautokeino**	**3.08**	**302**	PG	Pb	11 08 08.3	-0.6
KTK1				SG	Sb	11 08 47.7	+0.8
OUL	**Oulu**	**3.11**	**219**	SB	Sb	11 08 46.0	-1.8
JOF	**Joensuu**	**4.67**	**176**	SN	Sn	11 09 17.4	-2.4

NEIC ***10*** *11:34:46.3±1.7, 23°.93N×0°.06×122°.55E±0°.02, h28km±7km, mb4.3/15, Error ellipse: s-maj=8.4km s-min=1.8km az=167.0*

TAP ***10*** *11:34:47.2, 24°.01N×122°.45E, h27km, ML4.2, C*

NIED ***10*** *11:34:47.1, 23°.95N×122°.44E, h26km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.41; Mθθ-0.47; Mφφ0.06; Mrθ1.06; Mθφ-0.03; Mφr0.52; Fault plane solution: M₀1.26000×10¹⁵ NP1:φs65.00000°, δ81.00000°, λ82.00000°. NP2:φs288.00000°, δ13.00000°, λ131.00000°.*

ASIES ***10*** *11:34:47.2, 24°.01N×122°.45E, h27km, ML4.2, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr4.34; Mθθ-4.19; Mφφ-0.15; Mrθ6.58; Mθφ0.16; Mφr2.73; Fault plane solution: M₀8.30362×10²¹ NP1:φs71.74000°, δ75.18000°, λ80.08000°. NP2:φs286.11000°, δ17.77000°, λ123.07000°. Principal axes: T Plg58.6730°, Azm328.1970°; N Plg9.5860°, Azm74.3080°; P Plg29.5070°, Azm169.7930°;*

JMA ***10*** *11:34:47.1±0.2, 24°.1N×122°.4E±0°.5, h26km±4km, MD4.1/14, MV3.7/14, NW OFF ISHIGAKIJIMA IS*

IDC ***10*** *11:34:49.9±4.0, 24°.18N×122°.66E, h50km±41km, mb3.8/13, mbtmp4.0/14, ML3.6/1, MS3.2/6, Error ellipse: s-maj=30.0km s-min=17.5km az=60.0*

ISC 10 11:34:47.0±0.9, 23°.95N±0°.02×122°.46E±0°.02, h29km±6km,
n211, σ1s03/306, mb4.2/23, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.22**	**323**	P	**Pb**	**11 34 52.8**	**-0.2**
	baz=313						
EOS4				S	**Sb**	**11 34 56.6**	**-0.5**
	baz=313						
EOS3	**EOS3**	**0.36**	**338**	*i* P	**Pn**	**11 34 55.2**	**-0.9**
	baz=332						
EOS3				*e*S	**Sn**	**11 35 00.8**	**-1.5**
	baz=332						
EOS2	**EOS2**	**0.52**	**336**	*e*P	**Pn**	**11 34 58.0**	**-0.3**
	baz=324						
JYNG	**Yonagunijimaku**	**0.67**	**41**	P	**Pn**	**11 35 00.1**	**-0.4**
JYNG				*e*S	**Sb**	**11 35 08.6**	**-0.5**
JYNG	**Yonagunijimaku**	**0.67**	**41**	A	A	11 35 00.1	
	comp=E,10.0nm,0.5s,comp=N,11nm,1.3s						
YOJ	**Yonaguni jima**	**0.72**	**44**		**Pb**	**11 35 00.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.72**	**44**	P	**Pn**	**11 35 00.9**	**-0.2**
YOJ	**Yonaguni jima**	**0.72**	**44**	P	**Pn**	**11 35 01.0**	**-0.1**
	baz=55						
YOJ				S	**Sb**	**11 35 10.0**	**-0.5**
	baz=55						
YOJ	**Yonaguni jima**	**0.72**	**44**	P	**Pn**	**11 35 01.0**	**-0.1**
YOJ				S	**Sb**	**11 35 09.9**	**-0.6**
YOJ	**Yonaguni jima**	**0.72**	**44**	A	A	11 35 01.0	
	comp=E,7.0nm,1.5s,comp=N,7.0nm,0.7s						
EHP	**Heping Village**	**0.75**	**299**	*e*P	**Pn**	**11 35 01.5**	**-0.2**
	baz=295						
EAHA	**Aohua**	**0.76**	**300**	*e*P	**Pb**	**11 35 00.9**	**-0.9**
	baz=306						
EAHA				*e*S	**Sn**	**11 35 12.6**	**+0.2**
	baz=306						
HWA	**Hwalien**	**0.79**	**272**	*e*P	**Pb**	**11 35 02.1**	**0.0**
	baz=255						
HWA				S	**Sn**	**11 35 13.7**	**+0.8**
	baz=255						
ETL	**Fush Village**	**0.80**	**286**	*e*P	**Pb**	**11 35 01.7**	**-0.6**
	baz=266						
ETL				*e*S	**Sn**	**11 35 13.2**	**0.0**
	baz=266						
EWUT	**Wuta**	**0.80**	**309**	*i* P	**Pb**	**11 35 01.8**	**-0.6**
	baz=305						
EWUT				S	**Sn**	**11 35 13.1**	**-0.1**
	baz=305						
TWD	**Chiawan**	**0.81**	**280**	*i* P	**Pb**	**11 35 01.8**	**-0.7**
	baz=275						
TWD				*i* S	**Sb**	**11 35 12.7**	**-0.3**
	baz=275						
ENA	**Nanau**	**0.82**	**306**	*e*P	**Pb**	**11 35 02.0**	**-0.6**
	baz=303						
NACB	**Ninganchiao**	**0.83**	**286**	Pn	**Pb**	**11 35 02.1**	**-0.7**
NACB	**Ninganchiao**	**0.83**	**286**	P	**Pb**	**11 35 02.2**	**-0.6**
NACB	**Ninganchiao**	**0.83**	**286**	P	**Pb**	**11 35 02.0**	**-0.7**
	baz=267						
NACB				S	**Sb**	**11 35 13.0**	**-0.6**
	baz=267						
SHUL	**Shoufeng**	**0.84**	**259**	P	**Pb**	**11 35 02.4**	**-0.6**
	baz=254						
SHUL				*e*S	**Sn**	**11 35 14.4**	**+0.2**
	baz=254						
ESAO	**Su ao**	**0.84**	**318**	*e*P	**Pn**	**11 35 02.6**	**-0.3**
	baz=315						
TWC	**Suao**	**0.87**	**320**	*e*P	**Pb**	**11 35 02.6**	**-0.8**
	baz=318						
TEGC	**Jichi Village**	**0.88**	**255**	*e*S	**Sb**	**11 35 14.6**	**-0.5**
	baz=249						
ETM	**Tongmen**	**0.89**	**271**	P	**Pn**	**11 35 03.0**	**-0.5**
	baz=257						
ETM				*e*S	**Sn**	**11 35 15.6**	**+0.2**
	baz=257						
ETLH	**Xiulin Townshi**	**0.94**	**286**	*i* P	**Pn**	**11 35 03.9**	**-0.3**
	baz=270						
ETLH				*e*S	**Sn**	**11 35 16.3**	**-0.3**
	baz=270						
ESL	**Shilin**	**0.95**	**262**	*i* P	**Pn**	**11 35 03.5**	**-0.8**
	baz=248						
ESL				S	**Sb**	**11 35 16.4**	**-0.8**
	baz=248						
LXIB	**Xiulin Townshi**	**0.96**	**275**	*e*P	**Pn**	**11 35 04.4**	**-0.3**
	baz=261						
LXIB				S	**Sn**	**11 35 17.6**	**+0.1**
	baz=261						
NDS	**Dongshan**	**0.97**	**315**	*e*P	**Pb**	**11 35 04.9**	**-0.2**
	baz=313						
WARBT	**Fenglin Townsh**	**1.01**	**257**	*e*P	**Pn**	**11 35 04.5**	**-0.8**
	baz=243						
LATG	**Datong**	**1.04**	**305**	P	**Pb**	**11 35 05.9**	**-0.5**
	baz=302						
LATG				*e*S	**Sn**	**11 35 19.8**	**+0.6**
	baz=302						
ILA	**Ilan**	**1.04**	**321**	*e*P	**Pb**	**11 35 06.6**	**+0.1**
	baz=320						
ILA				*e*S	**Sn**	**11 35 21.6**	**+2.3**
	baz=320						
HGSD	**Ruisui**	**1.05**	**245**	*e*P	**Pn**	**11 35 05.3**	**-0.5**
	baz=241						
HGSD				*e*S	**Sn**	**11 35 18.0**	**-1.5**
	baz=241						
TWE	**Neicheng**	**1.06**	**317**	*e*P	**Pb**	**11 35 06.4**	**-0.4**
	baz=315						
TWE				*e*S	**Sb**	**11 35 20.5**	**+0.2**
	baz=315						
ENTT	**Nioudou**	**1.07**	**310**	*e*P	**Pb**	**11 35 06.5**	**-0.5**
	baz=293						
NDT	**Datong Townshi**	**1.09**	**307**	P	**Pb**	**11 35 07.0**	**-0.2**
	baz=304						
NDT				*e*S	**Sb**	**11 35 21.2**	**+0.2**
	baz=304						
NNSB	**Datong**	**1.10**	**296**	*e*P	**Pb**	**11 35 06.7**	**-0.7**
	baz=282						
NNS	**Nan Shan**	**1.11**	**297**	P	**Pn**	**11 35 06.7**	**0.0**
	baz=281						
WHF	**Hehuan Shan**	**1.11**	**281**	P	**Pn**	**11 35 06.5**	**-0.5**
	baz=264						
WHF				*e*S	**Sn**	**11 35 21.4**	**-0.2**
	baz=264						
ECBN	**Changbin**	**1.12**	**236**	S	Sn	**11 35 20.3**	**-0.8**
	baz=232						
EHY	**Hungye**	**1.13**	**248**	P	**Pn**	**11 35 06.5**	**-0.4**
	baz=243						
EHY				*e*S	**Sn**	**11 35 21.0**	**-0.5**
	baz=243						
FUSB	**Fushanzhiwuyua**	**1.14**	**316**	P	**Pb**	**11 35 07.6**	**-0.5**
	baz=313						
FUSB				*e*S	**Sb**	**11 35 22.7**	**+0.2**
	baz=313						
TWB1	**Santiao Chiao**	**1.14**	**338**	P	**Pb**	**11 35 07.2**	**-0.9**
	baz=354						
TWB1				*e*S	**Sb**	**11 35 22.6**	**-0.1**
	baz=354						
CHGB	**Renai**	**1.19**	**276**	*i* P	**Pn**	**11 35 08.0**	**+0.2**
	baz=260						
CHGB				*e*S	**Sb**	**11 35 23.5**	**-0.5**
	baz=260						
YULB	**Yu-li**	**1.20**	**243**		**Pn**	**11 35 07.8**	**-0.1**
YULB	**Yu-li**	**1.20**	**243**	P	**Pn**	**11 35 08.0**	**+0.2**
YULB	**Yu-li**	**1.20**	**243**	*i* P	**Pn**	**11 35 07.7**	**-0.1**
	baz=239						
YULB				*e*S	**Sn**	**11 35 23.0**	**-0.2**
	baz=239						
NWLT	**Wulai**	**1.21**	**314**	P	**Pb**	**11 35 08.9**	**-0.3**
	baz=311						
EYUL	**Yuli**	**1.21**	**241**	*i* P	**Pn**	**11 35 08.1**	**+0.2**
	baz=237						
EYUL				*e*S	**Sn**	**11 35 24.0**	**+0.7**
	baz=237						
TWT	**Tachien**	**1.22**	**285**	*e*P	**Pb**	**11 35 08.9**	**-0.5**
	baz=270						
TWF1	**Yuli**	**1.22**	**241**	P	**Pn**	**11 35 08.0**	**-0.1**
	baz=237						
TWF1				*e*S	**Sn**	**11 35 23.6**	**-0.1**
	baz=237						
VWDT	**VWDT**	**1.23**	**261**	P	**Pn**	**11 35 08.2**	**+0.1**
	baz=257						
VWDT				S	**Sn**	**11 35 23.5**	**-0.2**
	baz=257						
YHNB	**Yeheng**	**1.23**	**306**		**Pn**	**11 35 08.5**	**+0.2**
YHNB	**Yeheng**	**1.23**	**306**	P	**Pb**	**11 35 09.0**	**-0.7**
YHNB	**Yeheng**	**1.23**	**306**	*e*P	**Pb**	**11 35 08.9**	**-0.7**
	baz=303						
HATJ	**Hateruma jima**	**1.23**	**85**	*e*S	**Sb**	**11 35 25.8**	**+0.6**
HATJ	**Hateruma jima**	**1.23**	**85**	A	A	11 35 25.8	
	comp=E,9.0nm,3.1s,comp=N,11nm,3.7s						
TDCB	**Techi**	**1.23**	**285**	*e*P	**Pn**	**11 35 08.5**	**+0.2**
	baz=270						
WUSB	**Renai**	**1.23**	**272**	P	**Pn**	**11 35 08.4**	**+0.1**
	baz=268						
WUSB				*e*S	**Sn**	**11 35 24.5**	**+0.4**
	baz=268						
CHKH	**Chenggong**	**1.23**	**233**	*e*P	**Pn**	**11 35 09.4**	**+1.2**
	baz=229						
CHKH		

YM08	**YM08**		**1.47 327**	*e*P		**Pb**	**11 35 12.1**	**-1.6**
	baz=326								
LIOB	**Emei**		**1.49 298**	P		**Pb**	**11 35 13.7**	**-0.4**
	baz=295								
LIOB				*e*S		**Sb**	**11 35 32.2**	**-0.5**
	baz=295								
TWS1	**Kuangyinshan**		**1.49 321**	*e*P		**Pb**	**11 35 13.4**	**-0.7**
	baz=336								
NSTT	**Nanjuang**		**1.50 297**	P		**Pb**	**11 35 13.7**	**-0.5**
	baz=295								
NSTT				*e*S		**Sb**	**11 35 31.9**	**-0.9**
	baz=295								
ANP	**Anpu**		**1.50 325**	*e*P		**Pb**	**11 35 13.2**	**-1.1**
	baz=324								
NTST	**Danshui**		**1.52 323**	*e*P		**Pb**	**11 35 13.8**	**-0.8**
	baz=337								
ELDTW	**Lidau**		**1.53 241**	P		**Pn**	**11 35 12.1**	**-0.3**
	baz=237								
ELDTW				*e*S		**Sn**	**11 35 30.5**	**-0.8**
	baz=237								
TWY	**Chenhua**		**1.54 329**	*e*P		**Pb**	**11 35 14.1**	**-0.7**
	baz=328								
NCU	**National Centr**		**1.55 311**	*e*P		**Pn**	**11 35 13.2**	**+0.6**
	baz=309								
NCUH	**Zhongli**		**1.55 311**	*e*P		**Pb**	**11 35 13.8**	**-1.2**
	baz=309								
LDUT	**Ludao**		**1.56 216**	*e*P		**Pn**	**11 35 12.2**	**-0.5**
	baz=213								
LDUT				*e*S		**Sn**	**11 35 29.7**	**-2.3**
	baz=213								
ALS	**Alishan**		**1.58 254**	*e*P		**Pn**	**11 35 14.3**	**+1.0**
	baz=251								
ALS				*e*S		**Sn**	**11 35 34.1**	**+1.1**
	baz=251								
JIJ	**Ishigaki jima**		**1.59 74**	P		**Pn**	**11 35 14.2**	**+1.1**
JIJ				*e*S		**Sn**	**11 35 33.8**	**+1.1**
SBCB	**Hsinchu**		**1.59 302**	*e*P		**Pn**	**11 35 13.7**	**+0.5**
	baz=299								
WJS	**Zhushan**		**1.59 266**	*e*P		**Pb**	**11 35 15.2**	**-0.6**
	baz=262								
WJS				S		**Sb**	**11 35 35.9**	**+0.3**
	baz=262								
TWQ1	**Liyutan**		**1.60 285**	P		**Pb**	**11 35 14.9**	**-0.9**
	baz=282								
TWQ1				*i* S		**Sb**	**11 35 35.9**	**+0.3**
	baz=282								
LONT	**Longtian**		**1.60 230**	*e*P		**Pn**	**11 35 13.4**	**+0.1**
	baz=240								
LONT				*i* S		**Sn**	**11 35 33.3**	**+0.2**
	baz=240								
HSN	**Hsinchu**		**1.61 302**	*e*P		**Pn**	**11 35 14.2**	**+0.8**
	baz=301								
NSY	**Sanyi**		**1.62 287**	*e*P		**Pb**	**11 35 15.9**	**-0.4**
	baz=284								
NSY				*e*S		**Sb**	**11 35 36.1**	**-0.3**
	baz=284								
WNT	**Mingjian**		**1.63 268**	*e*P		**Pb**	**11 35 15.8**	**-0.6**
	baz=264								
WNT				S		**Sb**	**11 35 35.9**	**-0.6**
	baz=264								
NMLH	**Miaoli**		**1.64 291**	*e*P		**Pb**	**11 35 15.8**	**-0.7**
	baz=288								
NMLH				*e*S		**Sb**	**11 35 36.6**	**-0.2**
	baz=288								
TCU	**Taichung**		**1.65 277**	*e*P		**Pb**	**11 35 16.3**	**-0.4**
	baz=274								
TCU				*e*S		**Sb**	**11 35 37.3**	**+0.2**
	baz=274								
CHN5	**Tsauling**		**1.67 258**	*i* P		**Pb**	**11 35 16.2**	**-1.0**
	baz=244								
CHN5				*e*S		**Sb**	**11 35 37.3**	**-0.6**
	baz=244								
TWGBT	**Beinan**		**1.70 229**	P		**Pn**	**11 35 14.9**	**+0.3**
TWGBT	**Beinan**		**1.70 229**	*e*P		**Pn**	**11 35 14.6**	**-0.1**
	baz=238								
TWGBT				*e*S		**Sn**	**11 35 35.2**	**-0.2**
	baz=238								
TWG	**Pinlang**		**1.70 229**			**Pn**	**11 35 14.2**	**-0.5**
TWG	**Pinlang**		**1.70 229**	*e*P		**Pn**	**11 35 14.1**	**-0.5**
	baz=238								
TWG				*e*S		**Sn**	**11 35 34.2**	**-1.3**
	baz=238								
STYH	**Taoyuan**		**1.73 244**	*e*P		**Pn**	**11 35 16.0**	**+0.9**
	baz=231								
STYH				*e*S		**Sn**	**11 35 36.9**	**+0.7**
	baz=231								
WCHH	**Zhanghua**		**1.75 275**	*e*P		**Pb**	**11 35 17.8**	**-0.6**
	baz=271								
WCHH				S		**Sb**	**11 35 40.8**	**+0.9**
	baz=271								
WGK	**Gukeng**		**1.76 262**	*e*P		**Pb**	**11 35 17.7**	**-0.9**
	baz=258								
WGK				*e*S		**Sb**	**11 35 40.5**	**+0.2**
	baz=258								
WCKO	**Fanlu**		**1.78 254**	*e*P		**Pb**	**11 35 18.1**	**-0.8**
	baz=250								
WCKO				*e*S		**Sb**	**11 35 40.4**	**-0.4**
	baz=250								
WDLH	**Douliu**		**1.78 262**	*e*P		**Pn**	**11 35 17.6**	**+1.8**
	baz=258								
WDLH				*e*S		**Sb**	**11 35 41.2**	**+0.3**
	baz=258								
TPUB	**Ta-pu**		**1.80 249**			**Pb**	**11 35 18.4**	**-1.0**
TPUB	**Ta-pu**		**1.80 249**	*e*P		**Pn**	**11 35 18.0**	**+1.9**
	baz=246								
TPUB				*e*S		**Sn**	**11 35 40.3**	**+2.3**
	baz=246								
JISG	**Ishigakijimahi**		**1.80 69**	P		**Pn**	**11 35 17.1**	**+1.0**
JISG				*e*S		**Sn**	**11 35 39.2**	**+1.2**
CHN4	**Tsaushan**		**1.81 251**	*e*P		**Pn**	**11 35 18.3**	**+2.0**
	baz=248								
CHN4				S		**Sb**	**11 35 41.5**	**-0.4**
	baz=248								
WTP	**Ta-pu**		**1.83 248**	P		**Pn**	**11 35 18.1**	**+1.6**
	baz=234								
WTP				*e*S		**Sb**	**11 35 41.9**	**-0.6**
	baz=234								
CHN2	**Minshiung**		**1.87 258**	*e*P		**Pb**	**11 35 19.6**	**-0.9**
	baz=254								
CHN2				*e*S		**Sb**	**11 35 43.6**	**+0.2**
	baz=254								
WRL	**Guolierlin Hig**		**1.91 269**	*e*P		**Pb**	**11 35 19.6**	**-1.5**
	baz=280								
WRL				*e*S		**Sb**	**11 35 43.7**	**-0.9**
	baz=280								
WTK	**Tuku**		**1.92 263**	P		**Pb**	**11 35 20.3**	**-1.0**
	baz=259								
WTK				S		**Sb**	**11 35 44.5**	**-0.3**
	baz=259								
CHY	**Chiayi**		**1.92 257**	*e*S		**Sb**	**11 35 44.8**	**-0.1**
	baz=253								
SGST	**Jiashian**		**1.93 244**	*e*P		**Pn**	**11 35 18.9**	**+1.1**
	baz=231								
SGST				*e*S		**Sn**	**11 35 43.8**	**+2.6**
	baz=231								
CHN1	**Nanshi**		**1.93 247**	P		**Pb**	**11 35 20.7**	**-0.8**
	baz=244								
CHN1				S		**Sb**	**11 35 45.1**	**-0.2**
	baz=244								
ECL	**Taimali**		**1.93 226**	*e*P		**Pn**	**11 35 17.2**	**-0.6**
	baz=235								
TWK	**Hsinying**		**1.93 250**	*e*P		**Pb**	**11 35 20.3**	**-1.3**
	baz=246								
TWK				*e*S		**Sn**	**11 35 43.7**	**+2.4**
	baz=246								
SNST	**Tainan City**		**1.94 249**	*e*P		**Pb**	**11 35 20.4**	**-1.3**
	baz=245								
SNST				S		**Sb**	**11 35 45.2**	**-0.3**
	baz=245								
WTCT	**Ta-ch'eng**		**2.00 268**	*e*P		**Pn**	**11 35 20.5**	**+1.7**
	baz=279								
WTCT				S		**Sb**	**11 35 46.3**	**-0.9**
	baz=279								
SSD	**Sandimen**		**2.06 235**	*e*P		**Pn**	**11 35 21.1**	**+1.4**
	baz=226								
SSD				*e*S		**Sn**	**11 35 46.1**	**+1.7**
	baz=226								
LAY	**Lan-yu**		**2.08 204**	*e*P		**Pn**	**11 35 19.4**	**-0.5**
	baz=202								
LAY				*e*S		**Sn**	**11 35 42.8**	**-2.0**
	baz=202								
WSF	**Szhu**		**2.08 262**	*e*P		**Pn**	**11 35 22.1**	**+2.2**
	baz=258								
WSF				*e*S		**Sb**	**11 35 48.6**	**-0.8**
	baz=258								
TSMG	**Majia**		**2.08 234**	*e*P		**Pn**	**11 35 21.5**	**+1.6**
	baz=226								
TSMG				*e*S		**Sb**	**11 35 48.6**	**-0.8**
	baz=226								
ICHU	**Yijhu**		**2.09 254**	*e*P		**Pb**	**11 35 22.5**	**-1.7**
	baz=251								
ICHU				*e*S		**Sn**	**11 35 47.7**	**+2.8**
	baz=251								
WSL	**Shuilin Townsh**		**2.09 259**	*e*P		**Pb**	**11 35 22.6**	**-1.7**
	baz=255								
WSL				S		**Sb**	**11 35 48.9**	**-0.9**
	baz=255								
SCST	**Cishan**		**2.10 240**	*e*P		**Pn**	**11 35 22.8**	**+2.7**
	baz=225								
SCST				*e*S		**Sb**	**11 35 49.7**	**-0.2**
	baz=225								
LYUB	**Lan-yu**		**2.10 203**	*e*P		**Pn**	**11 35 18.9**	**-1.3**
	baz=202								
CHN3	**Shinhua**		**2.11 246**	*e*S		**Sb**	**11 35 50.6**	**+0.2**
	baz=243								
MASBT	**Mashibuluo**		**2.14 232**	*e*P		**Pn**	**11 35 21.8**	**+1.0**
	baz=224								
MASBT				*e*S		**Sb**	**11 35 50.9**	**-0.4**
	baz=224								
CHN8	**Yiju**		**2.15 254**	P		**Pn**	**11 35 23.1**	**+2.2**
	baz=251								
CHN8				*i* S		**Sb**	**11 35 49.5**	**-1.9**
	baz=251								
SHHT	**Tainan City**		**2.15 245**	*e*P		**Pb**	**11 35 24.2**	**-1.0**
	baz=242								
SHHT				S		**Sb**	**11 35 51.8**	**+0.3**
	baz=242								
EAST	**Anshuo**		**2.15 224**	*e*P		**Pn**	**11 35 23.1**	**+2.1**
	baz=222								
SSHA	**Shanhua**		**2.15 248**	*e*S		**Sb**	**11 35 51.4**	**-0.2**
	baz=245								
JTJ	**Tarama**		**2.16 71**	*e*S		**Sb**	**11 35 49.8**	**-1.9**
TAWH	**Dawu Township**		**2.16 223**	*e*P		**Pn**	**11 35 21.5**	**+0.5**
	baz=230								
TAWH				*e*S		**Sn**	**11 35 45.8**	**-0.9**
	baz=230								
TWM1	**Shoushan**		**2.18 240**	*e*P		**Pb**	**11 35 25.0**	**-0.8**
	baz=237								
TWM1				*e*S		**Sb**	**11 35 53.0**	**+0.6**
	baz=237								
SCLT	**Jiali**		**2.22 250**	*e*S		**Sb**	**11 35 51.8**	**-1.6**
	baz=247								
TAI1	**Yung-k'ang**		**2.24 247**	*e*S		**Sb**	**11 35 53.6**	**-0.4**
	baz=243								
SNJT	**Kaohsiung City**		**2.29 239**	*e*P		**Pb**	**11 35 26.2**	**-1.4**
	baz=236								
SNJT				*e*S		**Sb**	**11 35 55.5**	**0.0**
	baz=236								
SCZT	**Fangliau**		**2.31 228**	*e*P		**Pn**	**11 35 25.7**	**+2.6**
	baz=218								
SCZT				*e*S		**Sn**	**11 35 52.8**	**+2.3**
	baz=218								
TSCK	**Chigu Township**		**2.32 250**	*e*P		**Pn**	**11 35 25.2**	**+2.0**
	baz=247								
TSCK				*e*S		**Sn**	**11 35 53.0**	**+2.2**
	baz=247								
TSEB	**Hengchuen, Pin**		**2.50 216**	*e*S		**Sn**	**11 35 57.3**	**+2.3**
	baz=223								
HEN	**Hengchun**		**2.50 220**	*e*S		**Sn**	**11 35 56.7**	**+1.5**
	baz=218								
TWKBT	**Hengchun**		**2.51 218**	*e*P		**Pn**	**11 35 26.6**	**+0.7**
	baz=216								
TWKBT				*e*S		**Sn**	**11 35 56.7**	**+1.2**
	baz=216								
TWK1	**Hengchun**		**2.51 218**	*e*P		**Pn**	**11 35 27.2**	**+1.4**
	baz=216								
TWK1				*e*S		**Sn**	**11 35 56.8**	**+1.3**
	baz=216								
WDGT	**Dungji**		**2.66 256**	*e*P		**Pn**	**11 35 29.1**	**+1.2**
	baz=252								
WDGT				*e*S		**Sn**	**11 36 00.9**	**+1.8**
	baz=252								
PHUB	**P'eng-hu**		**2.69 261**	P		**Pn**	**11 35 29.7**	**+1.5**
	baz=258								
PHUB				S		**Sn**	**11 36 00.8**	**+1.0**
	baz=258								
PNG	**Penghu**		**2.69 263**	*e*P		**Pn**	**11 35 29.8**	**+1.5**
	baz=259								
PNG				S		**Sn**	**11 36 01.3**	**+1.4**
	baz=259								
VCHM	**Qimei**		**2.88 256**	*e*P		**Pn**	**11 35 32.8**	**+1.9**
	baz=253								
VCHM				S		**Sn**	**11 36 05.1**	**+0.6**
	baz=253								
VWUC	**VWUC**		**2.94 291**	*e*P		**Pn**	**11 35 32.0**	**+0.3**
	baz=288								
MATB	**Ma-tsu**		**3.17 314**	*e*P		**Pn**	**11 35 34.4**	**-0.5**
	baz=311								
PTMZ	**Houxiangcun**		**3.23 290**	P		**Pn**	**11 35 35.9**	**+0.2**
	baz=287								
PTMZ				*e*S		**Sn**	**11 36 12.5**	**-0.9**
	baz=287								
LYJJ	**Jianjiangzhen**		**3.57 317**	*e*P		**Pn**	**11 35 40.1**	**-0.2**
	baz=303								
XPSS	**Dashiqiu**		**3.61 326**	*e*P		**Pn**	**11 35 41.0**	**0.0**
	baz=323								
KNM	**Kinmen**		**3.71 278**	*e*P		**Pn**	**11 35 44.2**	**+1.9**
	baz=276								
KNMB	**Chin-men Tao**		**3.76 279**			**Pn**	**11 35 43.3**	**+0.3**
KNMB	**Chin-men Tao**		**3.76 279**	P		**Pn**	**11 35 43.0**	**+0.1**
	baz=275								
KNMB				*e*S		**Sn**	**11 36 24.5**	**-1.7**
	baz=275								
MHZQ	**Yeshan**		**3.78 305**	*e*P		**Pn**	**11 35 43.2**	**-0.1**
	baz=302								
AXDP	**Jialang**		**4.21 284**	*e*P		**Pn**	**11 35 49.4**	**+0.2**
	baz=282								
ZPLA	**Ao Xicun**		**4.31 271**	*e*P		**Pn**	**11 35 51.3**	**+0.7**
	baz=267								
ZPLA				*e*S		**Sn**	**11 36 38.7**	**-1.3**
	baz=267								
DSXP	**Dongshan**		**4.62 268**	*e*P		**Pn**	**11 35 55.3**	**+0.5**
	baz=264								
DSXP				*e*S		**Sn**	**11 36 46.2**	**-1.3**
	baz=264								
SXFK	**Yanhouchang**		**5.00 300**	*e*P		**Pn**	**11 35 60.0**	**-0.1**
	baz=296								
JOW	**Kunigami**		**5.99 60**	Pn		**Pn**	**11 36 12.1**	**-1.6**
JOW	**Kunigami**		**5.99 60**	P		**Pn**	**11 36 13.2**	**-0.5**
	comp=N,3.5nm,0.3s,baz=241,slow=13,SNR=8.7								
	comp=N,20nm,0.8s								
JNU	**Nakatsue**		**11.75 37**	LR		LR	11 42 05.9		
	comp=N,45nm,21.0s,baz=196,slow=38								
KSRS	**Korea Array**		**14.26 18**	P		**Pn**	**11 38 09.3**	**+2.5**
	comp=N,6.1nm,0.8s,baz=201,slow=14,SNR=6.5								
KSRS				LR		LR	11 44 28.0		
	comp=N,54nm,19.5s,baz=195,slow=41								
DAV	**Davao City (W)**		**17.04 169**	LR		LR	11 44 57.9		
	comp=N,55nm,20.5s,baz=12,slow=35								
JCJ	**Chichijima**		**18.07 76**	LR		LR	11 45 10.2		
	comp=N,114nm,20.6s,baz=102,slow=35								
GTA	**Gaotai**		**24.59 314**	P		**P**	**11 40 06.1**	**+1.4**
GTA				pP		pwP	11 40 15.1	-1.5
GTA				pmax		pmax			
	comp=Z,5.0nm,1.2s								
ASAJ	**Asahikawa**		**26.01 34**	P		**P**	**11 40 15.1**	**-2.3**
	comp=Z,0.9nm,0.3s,baz=153,slow=29,SNR=5.3								
	comp=Z,0.9nm,0.3s								
JKA	**Kamikawa-asahi**		**26.01 34**	P		**P**	**11 40 14.8**	**-2.6**
SONM	**Songino Array**		**27.05 336**	P		**P**	**11 40 26.8**	**-0.1**
SONM	**Songino Array**		**27.05 336**	P		**P**	**11 40 26.2**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=152,slow=9.2,SNR=6.2								
	comp=Z,1.7nm,0.6s								
MK31	**Makanchi Array**		**39.32 316**	P		**P**	**11 42 13.3**	**-0.2**
MKAR	**Makanchi Array**		**39.32 316**	P		**P**	**11 42 13.8**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=101,slow=9.6,SNR=25								
	comp=Z,1.9nm,0.5s								
MAKZ	**Makanchi**		**39.53 316**	P		**P**	**11 42 15.4**	**+0.2**
MAKZ				IAmb		IAmb	11 42 16.3		
	comp=Z,6.3nm,1.1s								
ZAA0	**Zalesovo Array**		**41.08 327**	P		**P**	**11 42 26.6**	**-1.3**
ZAA0				IAmb		IAmb	11 42 27.6		
	comp=Z,2.9nm,0.6s								
ZALV	**Zalesovo Beam**		**41.08 327**	P		**P**	**11 42 26.6**	**-1.3**
ZALV	**Zalesovo Beam**		**41.08 327**	P		**P**	**11 42 27.3**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=116,slow=8.6,SNR=13								
	comp=Z,3.5nm,0.6s								
KURBB	**Kurchatov Arra**		**43.05 320**	P		**P**	**11 42 43.9**	**0.0**
	comp=Z,1.3nm,0.6s,baz=111,slow=8.2,SNR=4.7								
	comp=Z,1.3nm,0.6s								
WB0	**Warramunga Arr**		**44.98 164**	P		**P**	**11 42 57.5**	**-2.2**
WB0				IAmb		IAmb	11 43 06.1		
	comp=Z,5.8nm,1.3s								
WRA	**Warramunga Arr**		**45.13 164**	P		**P**	**11 43 02.3**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=345,slow=8.7,SNR=4.4								
	comp=Z,1.0nm,0.7s								
WB2	**Warramunga Arr**		**45.13 164**	P		**P**	**11 42 59.0**	**-2.0**
WB2				IAmb		IAmb	11 43 17.3		
	comp=Z,7.2nm,1.4s								
WR0	**Warramunga Arr**		**45.20 164**	P		**P**	**11 43 01.0**	**-0.5**
BVAR	**Borovoye Array**		**48.60 321**	P		**P**	**11 43 27.7**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=104,slow=8.8,SNR=5.0								
BVAR				PcP		**PcP**	**11 44 53.4**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=123,slow=5.3,SNR=3.0								
	comp=Z,1.3nm,0.5s								
ASAR	**Alice Springs**		**48.61 166**	P		**P**	**11 43 30.4**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=339,slow=7.5,SNR=5.5								
	comp=Z,0.4nm,0.6s								
ABKAR	**Akbulak array**		**54.44 314**	P		**P**	**11 44 11.6**	**0.0**
ABKAR				IAmb		IAmb	11 44 13.5		
	comp=Z,2.0nm,0.6s								
GEYT	**Alibeck**		**55.93 301**	P		**P**	**11 44 24.5**	**+2.0**
	comp=Z,2.9nm,0.6s,baz=98,slow=6.1,SNR=4.5								
	comp=Z,2.9nm,0.6s								
STKA	**Stephens Creek**		**58.45 161**	LR		LR	12 09 28.5		
	comp=Z,16nm,22.0s,baz=27,slow=36								
D19K	**Kuna River**		**64.08 24**	P		**P**	**11 45 18.1**	**+0.1**
D19K				IAmb		IAmb	11 45 25.7		
	comp=Z,3.5nm,1.2s								
H19K	**Roundabout Mou**		**64.79 27**	P		**P**	**11 45 22.3**	**-0.3**
H19K				IAmb		IAmb	11 46 04.5		
	comp=Z,6.6nm,1.5s								
D22K	**Ayikyak River**		**66.05 23**	P		**P**	**11 45 30.5**	**-0.3**
D22K				IAmb		IAmb	11 45 32.5		
	comp=Z,1.6nm,0.8s								
E22K	**Anaktuvuk Pass**		**66.44 24**	P		**P**	**11 45 33.8**	**+0.6**
E22K				IAmb		IAmb	11 45 45.3		
	comp=Z,3.2nm,1.4s								
I23K	**Minto, Yukon-K**		**67.78 27**	P		**P**	**11 45 37.8**	**-3.9**
F24K	**Squaw Lake**		**67.99 25**	P		**P**	**11 45 42.3**	**-0.8**
ARCES	**ARCESS Array B**		**70.19 338**	P		**P**	**11 45 56.6**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=77,slow=7.8,SNR=1.4								
	comp=Z,2.0nm,0.8s								
FINES	**FINESS Array B**		**72.24 330**	P		**P**	**11 46 09.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=64,slow=4.4,SNR=5.1								
	comp=Z,0.8nm,0.6s								
BRTR	**Keskin Array B**		**74.25 307**	P		**P**	**11 46 21.9**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=108,slow=7.9,SNR=6.9								
	comp=Z,1.6nm,0.9s								
YKA	**Yellowknife Ar**		**82.73 23**	P		**P**	**11 47 07.2**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=311,slow=5.0,SNR=7.2								
	comp=Z,0.3nm,0.7s								
BORG	**Borgarnes**		**87.25 345**	LR		LR	12 31 03.0		
	comp=Z,51nm,18.1s,baz=96,slow=39								

TAP 10 11:34:52.2,24°.10N×121°.63E,h9km,ML1.5,5D,D,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**233**	⇓*i*P	Pg	11 34 54.4	+0.4
	baz=227						
TWD				*i* S	Sg	11 34 55.9	+0.7
	baz=227						
ETL	**Fush Village**	**0.06**	**352**	⇓*i*P	Pg	11 34 54.6	+0.4
	baz=352						
ETL				*e*S	Sg	11 34 56.2	+0.6
	baz=352						
NACB	**Ninganchiao**	**0.08**	**334**	⇓*i*P	Pg	11 34 54.9	+0.5
	baz=334						
NACB				*i* S	Sg	11 34 56.8	+0.8
	baz=334						
ETLH	**Xiulin Townshi**	**0.17**	**307**	*e*P	Pg	11 34 56.9	+1.0
	baz=307						
ETLH				*e*S	Sg	11 35 00.4	+2.0
	baz=307						
ETM	**Tongmen**	**0.19**	**223**	*e*P	Pg	11 34 56.7	+0.6
	baz=222						
LXIB	**Xiulin Townshi**	**0.21**	**248**	⇓*i*P	Pg	11 34 57.5	+0.8
	baz=247						
LXIB				*i* S	Sg	11 35 01.1	+1.4
	baz=247						
WHF	**Hehuan Shan**	**0.34**	**277**	*e*P	Pb	11 35 00.1	-0.6
	baz=276						
ESL	**Shilin**	**0.34**	**212**	*e*P	Pg	11 34 59.3	+0.3
	baz=210						
NNSB	**Datong**	**0.39**	**325**	⇓P	Pb	11 35 01.1	-0.4
	baz=325						
CHGB	**Renai**	**0.42**	**264**	P	Pb	11 35 01.7	-0.3
	baz=264						
LATG	**Datong**	**0.44**	**347**	*e*P	Pg	11 35 01.3	+0.4
	baz=347						
WARBT	**Fenglin Townsh**	**0.45**	**210**	*e*P	Pg	11 35 01.4	+0.5
	baz=210						
WUSB	**Renai**	**0.48**	**257**	P	Pb	11 35 02.8	-0.2
	baz=256						
NDT	**Datong Townshi**	**0.51**	**348**	*e*P	Pb	11 35 03.1	-0.3
	baz=347						
ENTT	**Nioudou**	**0.54**	**354**	*e*P	Pb	11 35 03.6	-0.3
	baz=354						

*NEIC **10** 11:41:19.1±0.6,35°.66N±0°.01×97°.173W±0°.009,h5km±1km,*
Error ellipse: s-maj=3.0km s-min=2.1km az=185.0
TUL 10 11:41:19.3±0.5,35°.65N±0°.01×97°.16W±0°.01,h5km±5km,
ML2.6,mb_Lg2.1/5(NEIC),ML2.2/26(NEIC),Error ellipse:
s-maj=1.8km s-min=1.2km az=192.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.17**	**270**	Pg	Pg	11 41 22.9	+0.2
ADOK				Sg	Sg	11 41 25.7	+0.8
OK029	**Liberty Lake**	**0.28**	**301**		Pg	11 41 24.8	0.0
OK029				Sg	Sg	11 41 29.1	+0.7
OK029				IAML		11 41 29.4	
	370nm,0.3s						
OK033	**Mehan**	**0.43**	**25**	Pg	Pg	11 41 28.0	+0.3
OK033				IAML		11 41 34.3	
	161nm,0.1s						
OK033				IAML		11 41 34.4	
	290nm,0.4s						
FNO	**Franklin**	**0.44**	**206**	Pg	Pg	11 41 27.5	-0.3
FNO				IAML		11 41 34.7	
	comp=E,340nm,0.2s						
FNO				IAML		11 41 34.7	
	comp=N,245nm,0.3s						
OK052	**Battle Ridge R**	**0.45**	**41**	Pg	Pg	11 41 28.4	+0.5
W35A	**Tecumseh**	**0.55**	**155**		Pg	11 41 30.0	+0.1
DEOK	**Depew**	**0.57**	**71**	Pg	Pg	11 41 30.3	0.0
DEOK				IAML		11 41 39.0	
	comp=N,73nm,0.3s						
DEOK				IAML		11 41 39.3	
	comp=E,76nm,0.1s						
OK048	**Pawnee

n109,σ1ˢ59/113, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**1.59**	**306**		**Pn**	**11 43 23.5**	**+0.7**
SII					**Sn**	**11 43 42.5**	**-1.0**
SII	**Sitkinak Islan** baz=123	**1.59**	**306**	P	**Pn**	**11 43 23.6**	**+0.7**
SII	baz=123			S	**Sn**	**11 43 42.6**	**-0.8**
OHAK	**Old Harbor**	**1.76**	**334**		**Pn**	**11 43 25.7**	**+0.5**
OHAK					**Sn**	**11 43 46.3**	**-1.4**
OHAK	**Old Harbor** baz=153	**1.76**	**334**	P	**Pn**	**11 43 25.7**	**+0.5**
OHAK	baz=153			S	**Sn**	**11 43 46.3**	**-1.4**
CHIR	**Chirikof Islan**	**2.13**	**276**		**Pn**	**11 43 30.7**	**+0.4**
CHIR					**Sn**	**11 43 54.7**	**-2.1**
CHIR	**Chirikof Islan** comp=N,368nm,3.4s	**2.13**	**276**	IAML		11 43 59.3	
CHIR	comp=E,298nm,3.4s			IAML		11 44 38.9	
CHIR	**Chirikof Islan** baz=92	**2.13**	**276**	P	**Pn**	**11 43 30.7**	**+0.4**
CHIR	baz=92			S	**Sn**	**11 43 54.7**	**-2.1**
KDAK	**Kodiak Island**	**2.17**	**350**		**Pn**	**11 43 31.7**	**+0.8**
KDAK					**Sn**	**11 43 54.8**	**-3.0**
Q20K	**Shuyak Island** baz=175	**2.98**	**355**	P	**Pn**	**11 43 43.2**	**+1.3**
SYI	**Shuyak Island**	**2.98**	**355**		**Pn**	**11 43 43.2**	**+1.3**
PLK3	**Peulik 3**	**3.17**	**312**		**Pn**	**11 43 46.4**	**+1.7**
ANCK	**Angle Creek**	**3.24**	**324**		**Pn**	**11 43 47.6**	**+2.1**
CNTC	**Contact Creek**	**3.42**	**322**		**Pn**	**11 43 49.3**	**+1.1**
Q17K	**Contact Creek** baz=138	**3.42**	**322**	P	**Pn**	**11 43 49.7**	**+1.6**
Q19K	**Cape Douglas,**	**3.42**	**344**		**Pn**	**11 43 50.1**	**+2.0**
Q19K	**Cape Douglas,** comp=N,241nm,1.7s	**3.42**	**344**	IAML		11 44 27.8	
Q19K	**Cape Douglas,** baz=163	**3.42**	**344**	P	**Pn**	**11 43 50.1**	**+2.0**
KAHC	**Katmai Hardscr**	**3.46**	**332**		**Pn**	**11 43 50.5**	**+1.8**
KAHC	**Katmai Hardscr** baz=149	**3.46**	**332**	P	**Pn**	**11 43 50.5**	**+1.8**
R16K	**Pilot Point**	**3.69**	**304**		**Pn**	**11 43 53.6**	**+1.9**
R16K	**Pilot Point** baz=118	**3.69**	**304**	P	**Pn**	**11 43 53.6**	**+1.9**
CHGN	**Chignik**	**3.74**	**283**	Pn	**Pn**	**11 43 52.9**	**+0.6**
CHGN	comp=E,108nm,3.3s			IAML		11 44 35.7	
CHGN	comp=N,88nm,4.4s			IAML		11 45 36.5	
CNPM	**China Poot**	**3.90**	**5**		**Pn**	**11 43 55.5**	**+0.9**
CNPM					**Sn**	**11 44 37.7**	**-2.8**
CNPM	**China Poot** comp=E,83nm,2.9s	**3.90**	**5**	IAML		11 46 10.9	
CNPM	comp=N,84nm,3.2s			IAML		11 46 27.7	
HOM	**Homer**	**4.02**	**2**	Pn	**Pn**	**11 43 57.5**	**+1.2**
P19K	**Oil Pt**	**4.08**	**350**		**Pn**	**11 43 58.7**	**+1.6**
P19K					**Sn**	**11 44 43.0**	**-1.9**
P19K	**Oil Pt** baz=169	**4.08**	**350**	P	**Pn**	**11 43 58.9**	**+1.8**
P19K	baz=169			S	**Sn**	**11 44 43.0**	**-1.9**
BRSE	**Bradley Lake S**	**4.14**	**8**		**Pn**	**11 43 58.5**	**+0.5**
BRSE	**Bradley Lake S** baz=189	**4.14**	**8**	P	**Pn**	**11 43 58.4**	**+0.5**
BRLK	**Bradley Lake**	**4.16**	**7**	Pn	**Pn**	**11 43 58.8**	**+0.6**
BRLK	comp=E,72nm,4.2s			IAML		11 44 41.5	
BRLK	comp=N,66nm,2.9s			IAML		11 44 57.4	
IVE	**Iliamna Volcan**	**4.42**	**352**		**Pn**	**11 44 03.5**	**+1.7**
O20K	**Slope Mountain**	**4.46**	**355**		**Pn**	**11 44 04.5**	**+2.1**
O20K	**Slope Mountain** baz=175	**4.46**	**355**	P	**Pn**	**11 44 04.5**	**+2.1**
O18K	**Koktuh Hills**	**4.58**	**338**		**Pn**	**11 44 05.7**	**+1.7**
O18K	**Koktuh Hills** comp=N,52nm,3.6s	**4.58**	**338**	IAML		11 45 03.7	
O18K	comp=E,50nm,4.2s			IAML		11 46 21.2	
O18K	**Koktuh Hills** baz=156	**4.58**	**338**	P	**Pn**	**11 44 05.7**	**+1.7**
O19K	**Port Alsworth**	**4.74**	**345**		**Pn**	**11 44 06.8**	**+0.7**
O19K	comp=N,105nm,0.4s			IAML		11 45 07.1	
P16K	**Nushagak River**	**4.74**	**318**		**Pn**	**11 44 07.6**	**+1.5**
P16K	**Nushagak River** baz=133	**4.74**	**318**	P	**Pn**	**11 44 07.6**	**+1.5**
RDSO	**Redoubt South**	**4.84**	**355**		**Pn**	**11 44 09.2**	**+1.6**
RSO	**Redoubt South**	**4.85**	**355**		**Pn**	**11 44 09.2**	**+1.4**
RDT	**Redoubt**	**4.95**	**357**		**Pn**	**11 44 10.6**	**+1.6**
O16K	**Kokwok River B**	**5.18**	**322**		**Pn**	**11 44 13.4**	**+1.3**
O16K	**Kokwok River B** comp=E,33nm,4.0s	**5.18**	**322**	IAML		11 46 19.0	
O16K	comp=N,27nm,3.8s			IAML		11 47 25.0	
O16K	**Kokwok River B** baz=137	**5.18**	**322**	P	**Pn**	**11 44 13.7**	**+1.5**
N19K	**Bonanza Creek**	**5.36**	**346**		**Pn**	**11 44 16.2**	**+1.5**
N19K	**Bonanza Creek** comp=E,33nm,3.8s	**5.36**	**346**	IAML		11 45 32.7	
N19K	comp=N,32nm,3.8s			IAML		11 47 21.7	
N18K	**Kilae Creek**	**5.47**	**339**		**Pn**	**11 44 17.7**	**+1.5**
HIN	**Hinchinbrook I**	**5.54**	**29**		**Pn**	**11 44 17.3**	**+0.1**
O15K	**Ungalikthiuk R**	**5.57**	**313**		**Pn**	**11 44 19.3**	**+1.8**
O15K	**Ungalikthiuk R** baz=126	**5.57**	**313**	P	**Pn**	**11 44 19.3**	**+1.8**
RC01	**Rabbit Creek A**	**5.57**	**11**		**Pn**	**11 44 17.9**	**+0.4**
RC01	**Rabbit Creek A** baz=193	**5.57**	**11**	P	**Pn**	**11 44 17.9**	**+0.4**
SVW2	**Sparrevohn**	**5.80**	**342**	Pn	**Pn**	**11 44 21.8**	**+1.1**
KAIM	**Kayak Island**	**5.85**	**40**	Pn	**Pn**	**11 44 22.9**	**+1.6**
PMR	**Palmer**	**6.13**	**12**	Pn	**Pn**	**11 44 26.5**	**+1.4**
HMT	**Hamilton**	**6.19**	**38**	Pn	**Pn**	**11 44 26.7**	**+0.6**
M18K	**Stony River**	**6.21**	**342**		**Pn**	**11 44 27.9**	**+1.6**
M18K	**Stony River** baz=159	**6.21**	**342**	P	**Pn**	**11 44 27.9**	**+1.6**
O14K	**Tigyukauivet M**	**6.23**	**309**	Pn	**Pn**	**11 44 27.3**	**+0.8**
M20K	**Styx River**	**6.28**	**354**	Pn	**Pn**	**11 44 28.7**	**+1.3**
N15K	**Kwethluk River**	**6.30**	**319**	Pn	**Pn**	**11 44 28.9**	**+1.3**
GHO	**Glory Hole Cre**	**6.33**	**13**	Pn	**Pn**	**11 44 29.9**	**+1.9**
SKT	**Skwentna**	**6.35**	**1**	Pn	**Pn**	**11 44 29.1**	**+0.8**
M19K	**Big River Lodg**	**6.41**	**349**	Pn	**Pn**	**11 44 30.8**	**+1.8**
BERG	**Berg Lake**	**6.43**	**39**	Pn	**Pn**	**11 44 29.8**	**+0.5**
SML	**Sawmill**	**6.44**	**15**	Pn	**Pn**	**11 44 30.0**	**+0.5**
M17K	**Holitna River**	**6.46**	**335**	Pn	**Pn**	**11 44 31.5**	**+1.7**
M16K	**Timber Creek**	**6.55**	**328**		**Pn**	**11 44 31.4**	**+0.4**
M16K	**Timber Creek** baz=142	**6.55**	**328**	P	**Pn**	**11 44 31.4**	**+0.4**
SNH	**Sunshine Point**	**6.61**	**43**	Pn	**Pn**	**11 44 32.5**	**+0.7**
KLU	**Klutina**	**6.63**	**25**	Pn	**Pn**	**11 44 31.9**	**-0.2**
SCM	**Sheep Creek Mo**	**6.63**	**19**	Pn	**Pn**	**11 44 32.9**	**+0.7**
L19K	**White Mountain**	**6.73**	**348**	Pn	**Pn**	**11 44 34.8**	**+1.3**
WAX	**Waxell Ridge**	**6.78**	**41**		**Pn**	**11 44 35.9**	**+1.7**
CRQM	**Cirque**	**6.88**	**38**	Pn	**Pn**	**11 44 36.2**	**+0.5**
BARK	**Barkley Ridge**	**6.88**	**42**		**Pn**	**11 44 37.5**	**+1.8**
L18K	**Granite Mounta**	**7.04**	**341**	Pn	**Pn**	**11 44 39.5**	**+1.8**
N25K	**Chitina, Valde**	**7.07**	**29**	Pn	**Pn**	**11 44 39.5**	**+1.3**
ISLE	**Juniper Island**	**7.07**	**42**	Pn	**Pn**	**11 44 39.7**	**+1.5**
BAGL	**Bagley Icefiel**	**7.09**	**43**		**Pn**	**11 44 40.5**	**+2.1**
VRDI	**Verde Repeater**	**7.12**	**35**	Pn	**Pn**	**11 44 40.0**	**+1.1**
GLB	**Gilahina Butte**	**7.17**	**33**	Pn	**Pn**	**11 44 40.9**	**+1.4**
KIAG	**Kiagna River**	**7.28**	**40**		**Pn**	**11 44 42.6**	**+1.5**
MCARA	**McCarthy VSAT**	**7.37**	**35**	Pn	**Pn**	**11 44 44.0**	**+1.7**
M14K	**Bethel**	**7.38**	**318**	Pn	**Pn**	**11 44 43.5**	**+1.2**
PTPK	**Patty Peak**	**7.42**	**38**		**Pn**	**11 44 45.5**	**+2.4**
TABL	**Table Mountain**	**7.44**	**45**		**Pn**	**11 44 45.5**	**+2.1**
TTA	**Tatalina**	**7.60**	**346**	Pn	**Pn**	**11 44 45.0**	**-0.4**
PCA	**Pinnacle**	**7.62**	**49**		**Pn**	**11 44 47.5**	**+1.8**
PINM	**Pinnacle** baz=240	**7.62**	**49**	P	**Pn**	**11 44 47.5**	**+1.8**
BARN	**Barnard Glacie**	**7.62**	**41**		**Pn**	**11 44 47.5**	**+1.7**
LOGN	**Logan Glacier**	**7.72**	**43**	Pn	**Pn**	**11 44 48.3**	**+1.1**
M13K	**Dall Lake**	**7.74**	**313**	Pn	**Pn**	**11 44 49.3**	**+2.1**
PNL	**Peninsula**	**7.80**	**54**		**Pn**	**11 44 49.9**	**+1.8**
PNL	**Peninsula** baz=245	**7.80**	**54**	P	**Pn**	**11 44 49.9**	**+1.8**
K17K	**Iditarod**	**7.81**	**338**	Pn	**Pn**	**11 44 50.5**	**+2.2**
BCPM	**Bancas Point**	**7.82**	**52**		**Pn**	**11 44 50.5**	**+2.1**
KTH	**Kantishna Hill**	**7.94**	**3**	Pn	**Pn**	**11 44 51.5**	**+1.4**
K15K	**Wolf Creek Mou**	**8.32**	**327**	Pn	**Pn**	**11 44 56.8**	**+1.6**
P29M	**Windy Craggy**	**8.56**	**56**	Pn	**Pn**	**11 45 00.1**	**+1.6**
J19K	**Poorman**	**8.58**	**349**	Pn	**Pn**	**11 45 01.0**	**+2.3**
J20K	**Nowinta River**	**8.63**	**353**	Pn	**Pn**	**11 45 01.8**	**+2.3**
J16K	**Anvik River**	**8.85**	**333**	Pn	**Pn**	**11 45 03.6**	**+1.2**
YUK6	**Outpost Mounta**	**8.86**	**48**		**Pn**	**11 45 05.1**	**+2.3**
YUK6	**Outpost Mounta** baz=240	**8.86**	**48**	P	**Pn**	**11 45 05.1**	**+2.3**
HYT	**Haines Junctio**	**9.17**	**50**	Pn	**Pn**	**11 45 10.6**	**+3.6**
SKAG	**Skagway**	**9.66**	**60**	Pn	**Pn**	**11 45 15.4**	**+1.8**
M29M	**Somme Creek**	**9.68**	**40**	Pn	**Pn**	**11 45 15.7**	**+1.7**

*RSNC **10** 12:49:34.6±1.0, 6°.86N×73°.13W, h147km±4km, **ML3.2, Mw3.6, 2C-4D, Northern Colombia***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**192**	⇓*i*P	Pn	12 49 54.2	-0.8
BARC				*e*S	Sn	12 50 09.2	-1.4
BARC	comp=Z,344nm,0.3s			*i*		12 50 18.0	
PAMC	**Pamplona, Colo**	**0.63**	**42**	*e*P	Pn	12 49 56.5	-0.5
PAMC				⇓*i*P		12 49 57.1	
PAMC				*e*S	Sn	12 50 14.0	+0.1
PAMC	comp=Z,251nm,0.2s			*i*		12 50 14.5	
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	*e*P	Pn	12 50 00.8	-1.7
PTBC				*e*S	Sn	12 50 22.3	-1.5
PTBC	comp=Z,214nm,0.5s			*i*		12 50 27.6	
OCAC	**Ocana**	**1.38**	**352**	*e*P	Pn	12 50 02.3	-0.6
OCAC				*e*S	Sn	12 50 24.7	+0.2
OCAC	comp=Z,504nm,0.2s			*i*		12 50 28.4	
TAMC	**Tame, Arauca**	**1.39**	**108**	⇑*i*P	Pn	12 50 02.6	-0.2
TAMC				*e*P		12 50 02.7	
TAMC				*e*S	Sn	12 50 24.4	-0.1
TAMC	comp=Z,170nm,0.3s			*i*		12 50 24.9	
SPBC	**San Pablo de B**	**1.53**	**218**	*e*P	Pn	12 50 03.4	-0.9
SPBC				*e*S	Sn	12 50 27.1	-0.1
SPBC	comp=Z,328nm,0.2s			*i*		12 50 33.1	
ROSC	**El Rosal**	**2.33**	**211**	⇓*e*P	Pn	12 50 14.4	+0.5
ROSC				*e*S	Sn	12 50 48.1	+3.9
ROSC	comp=Z,90nm,0.6s			*i*		12 50 58.2	
CVER	**Cruz Verde, Cu**	**2.51**	**202**	*e*P	Pn	12 50 16.3	+0.1
CVER	comp=Z,67nm,0.3s			*i*		12 50 51.0	
UREC	**San Jos de Ur**	**2.54**	**290**	*e*P	Pn	12 50 14.1	-2.1
UREC				*e*S	Sn	12 50 49.1	+0.9
UREC	comp=Z,136nm,0.2s			*i*		12 50 53.9	
GUY2C	**Guyana, Caldas**	**2.76**	**234**	*e*P	Pn	12 50 19.7	+0.4
GUY2C				*e*S	Sn	12 50 56.0	+2.3
GUY2C	comp=Z,168nm,0.5s			*i*		12 51 02.4	
VILC	**Villavicencio,**	**2.79**	**192**	*e*P	Pn	12 50 18.3	-1.1
VILC				*e*S	Sn	12 50 52.7	-1.2
VILC	comp=Z,109nm,0.3s			*i*		12 51 04.7	
PTGC	**Puerto Gaitan,**	**2.83**	**159**	⇓*e*P	Pn	12 50 17.8	-1.9
PTGC				*e*S	Sn	12 50 51.3	-3.2
PTGC	comp=Z,99nm,0.5s			*i*		12 50 53.1	
LL6C	**La Loma 6 Bece**	**2.86**	**357**	*e*P	Pn	12 50 19.4	-0.7
LL6C	comp=Z,33nm,0.6s			*i*		12 51 10.1	
RECRC	**Villamaria, Ca**	**2.91**	**230**	*e*P	Pn	12 50 22.3	+1.0
RECRC				*e*S	Sn	12 50 58.2	+1.0
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*e*P	Pn	12 50 22.1	-0.4
CBOC				*e*S	Sn	12 50 58.4	-1.1
CBOC	comp=Z,48nm,0.6s			*i*		12 51 14.9	
DBBC	**Dabeiba**	**3.06**	**273**	*e*P	Pn	12 50 21.8	-0.9
DBBC				*e*S	Sn	12 50 57.8	-2.2
DBBC	comp=Z,44nm,0.2s			*i*		12 51 05.2	
ARGC	**Ariguani, Magd**	**3.17**	**340**	*e*P	Pn	12 50 24.7	+0.6
ARGC				*e*S	Sn	12 51 01.6	-0.8
ARGC	comp=Z,37nm,0.3s			*i*		12 51 10.3	
SDV	**Santo Domingo**	**3.18**	**51**	*e*P	Pn	12 50 23.7	-0.7
SDV				*e*S	Sn	12 51 02.0	-0.9
ANIL	**Santa Ana**	**3.27**	**224**	*e*P	Pn	12 50 25.9	+0.3
ANIL				*e*S	Sn	12 51 06.4	+1.3
ANIL	comp=Z,187nm,0.4s			*i*		12 51 12.9	
APAC	**Apartado, Choc**	**3.58**	**287**	⇑*i*P	Pn	12 50 28.2	-1.0
APAC				*e*S	Sn	12 51 11.3	-0.4
APAC	comp=Z,36nm,0.6s			*i*		12 51 25.7	
PRAC	**Prado**	**3.59**	**209**	*e*P	Pn	12 50 27.8	-1.7
PRAC				*e*S	Sn	12 51 11.9	-0.2
PRAC	comp=Z,82nm,0.3s			*i*		12 51 17.8	
ORTC	**Ortega, Tolima**	**3.62**	**216**	*e*P	Pn	12 50 29.0	-0.8
ORTC				*e*S	Sn	12 51 13.1	+0.4
ORTC	comp=Z,61nm,0.5s			*i*		12 51 20.0	
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P	Pn	12 50 28.1	-2.0
SJCC				*e*S	Sn	12 51 09.4	-3.8
SJCC	comp=Z,46nm,0.6s			*i*		12 51 12.4	
PLMC	**San Jos del P**	**3.69**	**238**	*e*P	Pn	12 50 30.1	-0.8
PLMC				*e*S	Sn	12 51 15.8	+1.2
PLMC	comp=Z,41nm,0.3s			*i*		12 51 19.9	
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	*e*P	Pn	12 50 34.4	-2.3
CRJC				*e*S	Sn	12 51 24.1	-0.9
CRJC	comp=Z,32nm,0.2s			*i*		12 51 24.7	
YOTC	**Yotoco, Valle**	**4.30**	**228**	*e*P	Pn	12 50 39.3	+0.5
YOTC				*e*S	Sn	12 51 28.1	-0.6
YOTC	comp=Z,8.6nm,0.4s			*i*		12 51 38.5	
SMRC	**Santa Marta, M**	**4.41**	**346**	*e*P	Pn	12 50 39.4	-0.7
SMRC				*e*S	Sn	12 51 27.3	-3.9
SMRC	comp=Z,24nm,0.2s			*i*		12 51 29.8	
JAMC	**Jamundi, Valle**	**5.06**	**224**	*e*P	Pn	12 50 48.5	-0.5
GARC	**Garzon, Huila**	**5.21**	**207**	*e*P	Pn	12 50 49.7	-1.4
GARC	comp=Z,21nm,0.3s			*i*		12 51 49.9	
POPC	**Popayan, Colom**	**5.56**	**220**	*e*P	Pn	12 50 53.2	-2.5
POPC				*e*S	Sn	12 52 01.3	+2.3
POPC	comp=Z,2.3nm,0.3s			*i*		12 52 02.6	

*OSPL **10** 12:54:41.5±1.3, 20°.05N×70°.96W, h22km±4km, ML2.6*
*SDD **10** 12:54:43.6±2.7, 19°.95N×70°.93W, h15km±11km, MD2.9, ML2.8, MW3.1*

ISC 10 12:54:42.0±1.5, 19°.96N±0°.08×70°.95W±0°.04, h19km±1km, n11,σ0ˢ82/21, 7C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUDR	**Luperon**	**0.06**	**180**	⇑*e*Pg	**Pb**	**12 54 45.8**	**+0.2**
LUDR				⇑*e*Sg	**Sb**	**12 54 48.4**	**+0.6**
LUDR	comp=N,69µm,0.3s			IAML		12 54 48.9	
LOPP1	**Punta Rusia, P**	**0.25**	**246**	*i* P	**Pg**	**12 54 47.3**	**-0.6**
LOPP1				*e*S	**Sg**	**12 54 52.2**	**+0.3**
LOPP1	comp=Z,1µm,4.0s			IAML		12 54 55.6	
MADR	**Mao Valverde**	**0.41**	**200**	⇓*e*Pg	**Pg**	**12 54 50.3**	**-0.3**
MADR				⇓*e*Sg	**Sg**	**12 54 56.9**	**+0.5**
SC01	**Santiago de Io**	**0.57**	**158**	⇓*e*Pg	**Pb**	**12 54 53.6**	**+0.3**
SC01				⇑*e*Sg	**Sb**	**12 55 02.4**	**+1.5**
SC01	comp=N,339nm,0.7s			IAML		12 55 09.7	
SC01	**Santiago de Io**	**0.57**	**158**	*i* P	**Pb**	**12 54 54.1**	**+0.8**
SC01				*e*S	**Sb**	**12 55 02.5**	**+1.5**
SC01	comp=Z,67nm,0.1s			IAML		12 55 04.7	
MCDR	**Montecristi**	**0.67**	**265**	*e*Pg	**Pb**	**12 54 55.2**	**+0.3**
MCDR				⇑*e*Sg	**Sn**	**12 55 07.3**	**+1.1**
MCDR	comp=N,123nm,0.1s			IAML		12 55 10.2	
LODA1	**ITESIL, Dajabo**	**0.82**	**240**	*i* P	**Pg**	**12 54 57.2**	**-0.8**
LODA1				*e*S	**Sg**	**12 55 08.3**	**-0.6**
LODA1				IAML		12 55 15.0	
SDDR	**Presa de Saban**	**1.02**	**198**	⇓*e*Pg	**Pb**	**12 55 00.6**	**-0.5**
SDDR				⇓*e*Sg	**Sb**	**12 55 13.8**	**-0.4**
SDDR	comp=N,209nm,0.5s			IAML		12 55 14.6	
SDDR	**Presa de Saban**	**1.02**	**198**	*i* P	**Pb**	**12 55 00.5**	**-0.6**
SDDR				*e*S	**Sb**	**12 55 13.8**	**-0.4**
SDDR	comp=Z,134nm,0.2s			IAML		12 55 15.7	
DR08	**Loma La Naviza**	**1.32**	**138**	⇑*e*Sg	**Sg**	**12 55 24.1**	**-0.9**
HATOM	**Hato Mayor del**	**1.89**	**128**	⇑*e*Pg	**Pb**	**12 55 14.8**	**-1.0**
HATOM				⇑*e*Sg	**Sb**	**12 55 39.4**	**+0.3**
HATOM	comp=N,40nm,0.6s			IAML		12 55 43.6	

*KRNET **10** 13:00:05.7±0.1, 40°.25N×75°.03E, h18km, mb3.1*
*SOME **10** 13:00:07.0, 40°.45N×75°.02E, h0km*
*NNC **10** 13:00:11.1±1.8, 40°.48N×75°.05E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=13.7km s-min=10.1km az=162.0

ISC 10 13:00:05.7±1.0, 40°.26N±0°.04×75°.03E±0°.03, h10km, n71, σ2ˢ16/111, 31C-19D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** baz=59	**1.19**	**259**	⇓*i*P	**Pb**	**13 00 28.3**	**-0.2**
SFK	baz=59			⇓*i*S	**Sn**	**13 00 44.6**	**-0.4**
NRN	**Naryn** baz=31	**1.39**	**32**	⇑*i*P	**Pn**	**13 00 31.3**	**-0.1**
NRN	baz=31			⇑*i*S	**Sn**	**13 00 50.1**	**+0.1**
ARLS	**Aral** baz=42	**1.69**	**342**	⇑*i*P	**Pb**	**13 00 36.9**	**0.0**
ARLS	baz=42			⇑*i*S	**Sg**	**13 00 59.7**	**-0.3**
OHH	**Osh** baz=80	**1.73**	**280**	⇑*i*P	**Pb**	**13 00 37.7**	**+0.1**
OHH	baz=80			⇑*i*S	**Sg**	**13 01 01.2**	**-0.2**
ARSB	**Arslanbob** baz=5.0	**1.88**	**305**	⇑*i*P	**Pb**	**13 00 40.5**	**+0.3**
ARSB	baz=5.0			⇑*i*S	**Sg**	**13 01 05.9**	**-0.3**
UCH	**Uchtor** SNR=30	**2.01**	**349**	P	**Pg**	**13 00 43.6**	**-0.6**
UCH	**Uchtor** baz=49	**2.01**	**349**	⇓*i*P	**Pb**	**13 00 42.6**	**+0.1**
UCH	baz=49			⇓*i*S	**Sg**	**13 01 09.6**	**-0.6**
ULHL	**Ulahol** SNR=46	**2.19**	**24**	P	**Pb**	**13 00 46.6**	**+1.1**
ULHL	**Ulahol** baz=24	**2.19**	**24**	⇑*i*P	**Pb**	**13 00 44.9**	**-0.6**
ULHL	baz=24			⇑*i*S	**Sb**	**13 01 13.5**	**+0.7**
KBK	**Karagaybulak** SNR=14	**2.40**	**359**	P	**Pb**	**13 00 50.1**	**+1.1**
KBK	**Karagaybulak** baz=59	**2.40**	**359**	⇓*i*P	**Pb**	**13 00 48.0**	**-1.1**
KBK	baz=59			⇓*i*S	**Sb**	**13 01 18.6**	**-0.2**
AAK	**Ala-Archa** SNR=32	**2.41**	**351**	P	**Pb**	**13 00 50.6**	**+1.3**
AAK	**Ala-Archa** baz=51	**2.41**	**351**	⇓*i*P	**Pb**	**13 00 48.0**	**-1.3**
AAK	baz=51			⇓*i*S	**Sb**	**13 01 18.9**	**-0.2**
KDJ	**Kajisay** baz=40	**2.48**	**40**	⇓*i*P	**Pb**	**13 00 49.0**	**-1.4**
KDJ	baz=40			⇓*i*S	**Sb**	**13 01 20.5**	**-0.6**
FRU1	**Bishkek** baz=53	**2.57**	**354**	⇑*i*P	**Pb**	**13 00 50.5**	**-1.4**
FRU1	baz=53			⇑*i*S	**Sb**	**13 01 23.1**	**-0.5**
EKS2	**Erkin-Say** SNR=10	**2.58**	**339**	P	**Pb**	**13 00 53.0**	**+0.9**
EKS2	**Erkin-Say** baz=39	**2.58**	**339**	⇓*i*P	**Pb**	**13 00 50.3**	**-1.8**
EKS2	baz=39			⇓*i*S	**Sb**	**13 01 23.0**	**-0.9**
DRK	**Karamyk** baz=54	**2.60**	**254**	⇑*e*P	**Pb**	**13 00 50.4**	**-2.2**
DRK	baz=54			⇑*e*S	**Sb**	**13 01 23.4**	**-1.3**
TKM2	**Tokmak 2** SNR=45	**2.70**	**9**	P	**Pb**	**13 00 54.1**	**0.0**
TKM2	**Tokmak 2** 10.0nm,0.4s	**2.70**	**9**	⇑Pn	**Pb**	**13 00 53.9**	**-0.3**
TKM2	20nm,0.7s			⇑Lg	Lg	13 01 32.0	
TKM2	**Tokmak 2** baz=9.0	**2.70**	**9**	⇑*i*P	**Pb**	**13 00 52.1**	**-2.1**
TKM2	baz=9.0			⇑*i*S	**Sb**	**13 01 25.9**	**-1.5**
CHMS	**Chumysh** SNR=6.2	**2.75**	**356**	P	**Pg**	**13 00 57.1**	**-1.2**
CHMS	**Chumysh** 11nm,0.7s	**2.75**	**356**	⇓Pn	**Pb**	**13 00 54.9**	**0.0**
CHMS	20nm,1.0s			⇑Lg	Lg	13 01 33.8	
CHMS	**Chumysh** baz=56	**2.75**	**356**	⇑*i*P	**Pb**	**13 00 52.6**	**-2.3**
CHMS	baz=56			⇑*i*S	**Sb**	**13 01 26.6**	**-2.1**
ARK	**Arkit** baz=5.0	**2.78**	**305**	⇑*i*P	**Pb**	**13 00 53.3**	**-2.2**
ARK	baz=5.0			⇑*i*S	**Sb**	**13 01 28.0**	**-1.7**
MRKS	**Merke** 3.4nm,0.3s	**2.83**	**332**	Pg	**Pb**	**13 00 57.7**	**+1.3**
MRKS	42nm,0.6s			Lg	Lg	13 01 33.9	
MRKS	**Merke** 3.4nm,0.3s	**2.83**	**332**	*e*P	**Pb**	**13 00 57.7**	**+1.3**
MRKS	42nm,0.6s			*e*S	**Sg**	**13 01 33.9**	**-2.6**
KST	**Kastek** 14nm,0.2s	**2.87**	**14**	Pg	**Pb**	**13 00 58.8**	**+1.7**
KST	21nm,0.6s			Lg	Lg	13 01 36.2	
KST	**Kastek** 14nm,0.2s	**2.87**	**14**	*e*P	**Pb**	**13 00 58.8**	**+1.7**
KST	21nm,0.6s			*e*S	**Sg**	**13 01 36.2**	**-1.8**
MNAS	**Manas** baz=20	**2.93**	**320**	⇓*i*P	**Pb**	**13 00 55.1**	**+2.7**
MNAS	baz=20			⇓*i*S	**Sb**	**13 01 31.1**	**-2.8**
IZV	**Izvestkoviy** 5.8nm,0.3s	**3.02**	**23**	Pg	**Pg**	**13 01 01.8**	**-1.7**
IZV	16nm,0.5s			Lg	Lg	13 01 41.2	
IZV	**Izvestkoviy** 5.8nm,0.3s	**3.02**	**23**	*e*P	**Pg**	**13 01 01.8**	**-1.7**
IZV	16nm,0.5s			*e*S	**Sg**	**13 01 41.2**	**-1.6**
USP	**Ospenovka** SNR=6.9	**3.03**	**353**	P	**Pb**	**13 00 58.7**	**-1.1**
USP	**Ospenovka** baz=53	**3.03**	**353**	⇑*i*P	**Pn**	**13 00 56.6**	**+2.8**
USP	baz=53			⇑*i*S	**Sb**	**13 01 33.9**	**-3.0**
DGS	**Degeres** 20nm,0.5s	**3.04

	8.2nm,0.7s								
TRKS	**Terek-Say**	**3.21**	**295**	⇓*i*P		**Pn**	**13 00 58.5**	**+2.2**
	baz=94								
TRKS				⇓*i*S		**Sn**	**13 01 37.0**	**+2.3**
	baz=94								
ANVS	**Anan'yevo**	**3.21**	**37**	⇑*i*P		**Pn**	**13 00 59.1**	**+2.7**
	baz=37								
ANVS				⇑*i*S		**Sn**	**13 01 38.3**	**+3.5**
	baz=37								
BTK	**Batken**	**3.23**	**268**	⇑*i*P		**Pn**	**13 00 59.3**	**+2.8**
	baz=68								
BTK				⇑*i*S		**Sn**	**13 01 38.6**	**+3.5**
	baz=68								
MDOK	**Medeo**	**3.27**	**27**	Pn		**Pb**	**13 01 06.0**	**+2.0**
	7.8nm,0.4s								
MDOK				Pg		**Pb**	**13 01 06.1**	**+2.1**
	13nm,0.4s								
MDOK				Lg		Lg	13 01 48.5		
	9.6nm,0.5s								
MDOK				⇑Lg		Lg	13 01 49.2		
	7.8nm,0.6s								
MDOK	**Medeo**	**3.27**	**27**	*e*P		**Pb**	**13 01 06.1**	**+2.1**
	13nm,0.4s								
MDOK				*e*S		**Sg**	**13 01 48.5**	**-2.3**
	9.6nm,0.5s								
KOTS	**Kotyrbulak**	**3.36**	**27**	Pg		**Pg**	**13 01 08.0**	**-2.1**
	12nm,0.4s								
KOTS				Lg		Lg	13 01 51.6		
	24nm,0.5s								
KOTS	**Kotyrbulak**	**3.36**	**27**	*e*P		**Pg**	**13 01 08.0**	**-2.1**
	12nm,0.4s								
KOTS				*e*S		**Sg**	**13 01 51.6**	**-2.0**
	24nm,0.5s								
KRBS	**Karabastau**	**3.47**	**8**	Pg		**Pb**	**13 01 09.3**	**+2.0**
	9.8nm,0.3s								
KRBS				Lg		Lg	13 01 53.7		
	8.5nm,0.9s								
KRBS	**Karabastau**	**3.47**	**8**	*e*P		**Pb**	**13 01 09.3**	**+2.0**
	9.8nm,0.3s								
KRBS				*e*S		**Sg**	**13 01 53.7**	**-3.5**
	8.5nm,0.9s								
KTBS	**Karatobe**	**3.67**	**19**	Pg		**Pb**	**13 01 13.3**	**+2.7**
	8.8nm,0.4s								
KTBS				Lg		Lg	13 02 00.8		
	14nm,0.5s								
KTBS	**Karatobe**	**3.67**	**19**	*e*P		**Pb**	**13 01 13.3**	**+2.7**
	8.8nm,0.4s								
KTBS				*e*S		**Sg**	**13 02 00.8**	**-2.7**
	14nm,0.5s								
KUU	**Kurty**	**3.76**	**15**	Pg		**Pb**	**13 01 13.9**	**+1.7**
	7.5nm,0.5s								
KUU				Lg		Lg	13 02 01.8		
	13nm,0.8s								
KUU	**Kurty**	**3.76**	**15**	*e*P		**Pb**	**13 01 13.9**	**+1.7**
	7.5nm,0.5s								
KUU				*e*S		**Sb**	**13 02 01.8**	**+3.9**
	13nm,0.8s								
SATY	**Saty**	**3.78**	**41**	Pg		**Pg**	**13 01 15.7**	**-2.3**
	3.0nm,0.5s								
SATY				Lg		Lg	13 02 04.9		
	12nm,0.8s								
SATY	**Saty**	**3.78**	**41**	*e*P		**Pg**	**13 01 15.7**	**-2.3**
	3.0nm,0.5s								
SATY				*e*S		**Sg**	**13 02 04.9**	**-2.1**
	12nm,0.8s								
CHKK	**Chushkaly**	**3.88**	**21**	Pg		**Pb**	**13 01 17.0**	**+2.7**
	2.7nm,0.3s								
CHKK				Lg		Lg	13 02 07.0		
	8.2nm,0.5s								
CHKK	**Chushkaly**	**3.88**	**21**	*e*P		**Pb**	**13 01 17.0**	**+2.7**
	2.7nm,0.3s								
CHKK				*e*S		**Sg**	**13 02 07.0**	**-3.2**
	8.2nm,0.5s								
KURS	**Kuram**	**3.99**	**35**	Pg		**Pb**	**13 01 18.9**	**+2.7**
	2.9nm,0.7s								
KURS				Lg		Lg	13 02 10.6		
	5.0nm,0.5s								
KURS	**Kuram**	**3.99**	**35**	*e*P		**Pb**	**13 01 18.9**	**+2.7**
	2.9nm,0.7s								
KURS				*e*S		**Sg**	**13 02 10.6**	**-3.2**
	5.0nm,0.5s								
UZB	**Uzynbulak**	**4.16**	**45**	Pg		**Pb**	**13 01 20.7**	**+1.7**
	2.5nm,0.2s								
UZB				Lg		Lg	13 02 13.6		
	3.1nm,0.4s								
UZB	**Uzynbulak**	**4.16**	**45**	*e*P		**Pb**	**13 01 22.0**	**+3.0**
	1.7nm,0.1s								
UZB				*e*S		**Sg**	**13 02 15.2**	**-4.0**
	3.5nm,0.4s								
KPKS	**Kokpek**	**4.21**	**39**	Pg		**Pg**	**13 01 23.2**	**-3.2**
	2.1nm,0.1s								
KPKS				Lg		Lg	13 02 17.5		
	12nm,0.6s								
KPKS	**Kokpek**	**4.21**	**39**	*e*P		**Pg**	**13 01 23.2**	**-3.2**
	2.1nm,0.1s								
KPKS				*e*S		**Sg**	**13 02 17.5**	**-3.5**
	12nm,0.6s								
KK31	**Karatay Array**	**4.42**	**312**	⇓Pg		**Pb**	**13 01 26.8**	**+3.4**
	0.2nm,0.2s,baz=132,slow=17,SNR=5.0								
KK31				⇓Lg		Lg	13 02 25.2		
	1.6nm,0.5s,baz=125,slow=29,SNR=4.2								
ARXS	**Arharly**	**4.47**	**27**	Pg		**Pb**	**13 01 27.2**	**+2.9**
	3.6nm,0.5s								
ARXS				Lg		Lg	13 02 24.4		
	7.6nm,0.5s								
ARXS	**Arharly**	**4.47**	**27**	*e*P		**Pb**	**13 01 27.2**	**+2.9**
	3.6nm,0.5s								
ARXS				*e*S		**Sg**	**13 02 24.4**	**-4.7**
	7.6nm,0.5s								
PDGK	**Podgornoye**	**4.54**	**46**	Pg		**Pb**	**13 01 28.4**	**+3.0**
	1.7nm,1.0s								
PDGK				Lg		Lg	13 02 26.9		
	3.0nm,0.6s								
PDGK	**Podgornoye**	**4.54**	**46**	⇑Pg		**Pg**	**13 01 30.7**	**-1.8**
	4.3nm,1.1s								
PDGK				Lg		Lg	13 02 31.7		
	11nm,0.8s								
KTMS	**Ketmen**	**5.10**	**50**	Pg		**Pg**	**13 01 40.9**	**-2.3**
	0.5nm,0.1s								
KTMS				Lg		Lg	13 02 48.1		
	1.3nm,0.2s								
KTMS	**Ketmen**	**5.10**	**50**	*e*P		**Pg**	**13 01 41.0**	**-2.3**
	0.5nm,0.1s								
KTMS				*e*S		**Sg**	**13 02 48.1**	**-1.2**
	1.3nm,0.2s								
KNOS	**Konyrlen**	**5.13**	**36**	Pg		**Pb**	**13 01 39.6**	**+4.0**
	1.7nm,0.5s								
KNOS				Lg		Lg	13 02 46.0		
	3.7nm,0.9s								

IDC ***10*** *13:16:56.5±1.9,56˚.19N×149˚.19W,h0km,mb3.3/2, mbtmp3.3/7,ML3.2/5,MS2.8/2,Error ellipse: s-maj=30.7km s-min=22.8km az=41.0*

NEIC ***10*** *13:16:57×1.8,56˚.23N×0˚.06×149˚.38W×0˚.06,h23km±8km, mb3.7/2, ML3.7/54, ML3.5(AEIC), Error ellipse: s-maj=9.5km s-min=3.7km az=200.0˚*

AEIC ***10*** *13:17˚.00.1±1.8,56˚.26N×0˚.07×149˚.38W×0˚.06,h7km±6km, Error ellipse: s-maj=11.0km s-min=4.1km az=193.0*

ISC 10 13:16:55.5±0.9,56˚.32N×0˚.08×149˚.33W×0˚.05,h10km, n250,σ1s50/253,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.31**	**311**	Pn		**Pn**	**13 17 34.4**	**+0.9**
KDAK	**Kodiak Island**	**2.31**	**311**			**Sn**	**13 17 59.8**	**-2.2**
KDAK	**Kodiak Island**	**2.31**	**311**	Pn		**Pn**	**13 17 34.3**	**+0.8**
	3.9nm,0.3s,baz=135,slow=6.3,SNR=81							
KDAK				Sn		**Sn**	**13 18 00.1**	**-1.8**
	20nm,0.3s,baz=335,slow=22,SNR=28							
	14nm,0.2s							
OHAK	**Old Harbor**	**2.36**	**294**	Pn		**Pn**	**13 17 34.4**	**+0.1**
OHAK	**Old Harbor**	**2.36**	**294**			**Sn**	**13 18 00.8**	**-2.4**
OHAK	**Old Harbor**	**2.36**	**294**	P		**Pn**	**13 17 34.1**	**-0.1**
	baz=113							
OHAK				S		**Sn**	**13 18 00.8**	**-2.4**
	baz=113							
SII	**Sitkinak Islan**	**2.71**	**277**	Pn		**Pn**	**13 17 37.2**	**-1.8**
SII				IAML			13 18 10.1	
	comp=N,182nm,1.1s							
SII				IAML			13 18 21.1	
	comp=E,185nm,1.3s							
SII	**Sitkinak Islan**	**2.71**	**277**			**Sn**	**13 18 09.3**	**-2.6**
SII	**Sitkinak Islan**	**2.71**	**277**	P		**Pn**	**13 17 38.8**	**-0.2**
	baz=95							
SII				S		**Sn**	**13 18 09.5**	**-2.4**
	baz=95							

SYI	**Shuyak Island**	**2.83**	**326**		Pn	**Pn**	**13 17 41.7**	**+0.9**
SYI	**Shuyak Island**	**2.83**	**326**			**Sn**	**13 18 14.5**	**-0.4**
Q20K	**Shuyak Island**	**2.83**	**325**		P	**Pn**	**13 17 41.6**	**+0.8**
	baz=144							
Q20K					S	**Sn**	**13 18 14.5**	**-0.4**
	baz=144							
CNPM	**China Poot**	**3.38**	**343**		Pn	**Pn**	**13 17 49.1**	**+0.9**
CNPM					IAML		13 18 30.0	
	comp=E,90nm,0.6s							
CNPM					IAML		13 18 35.9	
	comp=N,101nm,0.4s							
CNPM	**China Poot**	**3.38**	**343**			**Sn**	**13 18 27.2**	**-1.1**
Q19K	**Cape Douglas,**	**3.50**	**320**		Pn	**Pn**	**13 17 51.2**	**+1.3**
Q19K	**Cape Douglas,**	**3.50**	**320**		P	**Pn**	**13 17 51.7**	**+1.8**
	baz=138							
Q23K	**Middleton Isla**	**3.50**	**26**			**Pn**	**13 17 50.4**	**+0.4**
Q23K	**Middleton Isla**	**3.50**	**26**		IAML		13 19 27.8	
	comp=N,192nm,1.4s							
Q23K					IAML		13 19 36.4	
	comp=E,188nm,1.3s							
Q23K	**Middleton Isla**	**3.50**	**26**		P	**Pn**	**13 17 50.4**	**+0.4**
	baz=208							
MID	**Middleton Isla**	**3.50**	**26**		Pn	**Pn**	**13 17 49.0**	**-0.9**
MID					IAML		13 18 37.6	
	comp=E,201nm,1.5s							
MID					IAML		13 19 27.1	
	comp=N,238nm,1.5s							
MID	**Middleton Isla**	**3.50**	**26**		P	**Pn**	**13 17 50.5**	**+0.6**
BRSE	**Bradley Lake S**	**3.52**	**348**			**Pn**	**13 17 50.6**	**+0.5**
BRSE	**Bradley Lake S**	**3.52**	**348**		P	**Pn**	**13 17 50.6**	**+0.5**
	baz=168							
BRLK	**Bradley Lake**	**3.56**	**347**			**Pn**	**13 17 51.2**	**+0.5**
BRLK					IAML		13 18 37.0	
	comp=E,79nm,0.9s							
CHIR	**Chirikof Islan**	**3.56**	**265**			**Pn**	**13 17 50.1**	**-0.7**
CHIR	**Chirikof Islan**	**3.56**	**265**		IAML		13 18 33.1	
	comp=E,181nm,1.3s							
CHIR					IAML		13 18 40.7	
	comp=N,141nm,1.4s							
CHIR	**Chirikof Islan**	**3.56**	**265**		P	**Pn**	**13 17 50.1**	**-0.7**
	baz=80							
KAHG	**Katmai Hook Gl**	**3.57**	**310**			**Pn**	**13 17 52.0**	**+1.0**
HOM	**Homer**	**3.57**	**341**		Pn	**Pn**	**13 17 49.9**	**-1.0**
SEW	**Seward**	**3.80**	**359**			**Pn**	**13 17 54.3**	**+0.3**
SEW	**Seward**	**3.80**	**359**		P	**Pn**	**13 17 54.3**	**+0.3**
	baz=179							
P23K	**Montague Islan**	**3.83**	**15**			**Pn**	**13 17 55.1**	**+0.7**
P23K	**Montague Islan**	**3.83**	**15**		P	**Pn**	**13 17 55.1**	**+0.7**
	baz=196							
P19K	**Oil Pt**	**3.94**	**330**		Pn	**Pn**	**13 17 57.4**	**+1.5**
P19K					IAML		13 18 45.3	
	comp=N,152nm,0.8s							
P19K					IAML		13 18 50.0	
	comp=E,154nm,0.5s							
P19K	**Oil Pt**	**3.94**	**330**		P	**Pn**	**13 17 56.8**	**+0.8**
	baz=147							
CNTC	**Contact Creek**	**4.06**	**301**			**Pn**	**13 17 58.8**	**+1.2**
Q17K	**Contact Creek**	**4.06**	**301**		P	**Pn**	**13 17 58.8**	**+1.1**
	baz=117							
O20K	**Slope Mountain**	**4.16**	**337**			**Pn**	**13 18 00.2**	**+1.1**
O20K	**Slope Mountain**	**4.16**	**337**		P	**Pn**	**13 18 00.4**	**+1.3**
	baz=155							
O22K	**Cooper Landing**	**4.18**	**357**			**Pn**	**13 17 59.2**	**-0.1**
O22K	**Cooper Landing**	**4.18**	**357**		P	**Pn**	**13 18 00.5**	**+1.2**
	baz=177							
IVE	**Iliamna Volcan**	**4.19**	**334**			**Pn**	**13 18 00.0**	**+0.5**
HIN	**Hinchinbrook I**	**4.35**	**19**			**Pn**	**13 18 02.5**	**+0.9**
HIN					IAML		13 18 57.3	
	comp=E,96nm,0.9s							
HIN					IAML		13 19 00.4	
	comp=N,99nm,0.7s							
KAIM	**Kayak Island**	**4.46**	**34**		Pn	**Pn**	**13 18 03.7**	**+0.6**
KAIM					IAML		13 18 59.8	
	comp=N,126nm,1.3s							
KAIM	**Kayak Island**	**4.46**	**34**		P	**Pn**	**13 18 04.1**	**+1.0**
	baz=218							
RED	**Redoubt Volcan**	**4.50**	**338**			**Pn**	**13 18 03.7**	**0.0**
RDSO	**Redoubt South**	**4.52**	**338**			**Pn**	**13 18 04.1**	**0.0**
RSO	**Redoubt South**	**4.53**	**338**		Pn	**Pn**	**13 18 05.2**	**+1.0**
RDT	**Redoubt**	**4.57**	**341**			**Pn**	**13 18 04.8**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.64**	**22**			**Pn**	**13 18 06.4**	**+0.8**
EYAK	**Cordova Ski Ar**	**4.64**	**22**		P	**Pn**	**13 18 06.5**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.64**	**22**		P	**Pn**	**13 18 06.4**	**+0.8**
	baz=205							
O18K	**Koktuh Hills**	**4.72**	**321**		Pn	**Pn**	**13 18 09.1**	**+2.3**
RAGM	**Ragged Mountai**	**4.76**	**29**			**Pn**	**13 18 08.3**	**+1.1**
SUCK	**Suckling Hills**	**4.78**	**36**			**Pn**	**13 18 08.4**	**+0.9**
SUCK					IAML		13 19 05.7	
	comp=E,56nm,0.9s							
SUCK					IAML		13 19 09.4	
	comp=N,71nm,0.8s							
P17K	**Kvichak River**	**4.78**	**310**			**Pn**	**13 18 08.8**	**+1.3**
P17K	**Kvichak River**	**4.78**	**310**		P	**Pn**	**13 18 09.0**	**+1.6**
	baz=125							
RC01	**Rabbit Creek A**	**4.79**	**358**			**Pn**	**13 18 08.5**	**+0.8**
RC01					IAML		13 19 03.8	
	comp=N,45nm,0.4s							
RC01					IAML		13 19 04.8	
	comp=E,47nm,0.9s							
RC01	**Rabbit Creek A**	**4.79**	**358**		P	**Pn**	**13 18 08.2**	**+0.5**
	baz=178							
HMT	**Hamilton**	**4.83**	**31**			**Pn**	**13 18 09.7**	**+1.4**
GOAT	**Goat Mountain**	**4.91**	**28**			**Pn**	**13 18 10.3**	**+1.0**
BGLC	**Bering Glacier**	**4.97**	**37**			**Pn**	**13 18 11.4**	**+1.3**
BGLC	**Bering Glacier**	**4.97**	**37**		P	**Pn**	**13 18 11.4**	**+1.3**
	baz=222							
BERG	**Berg Lake**	**5.05**	**34**			**Pn**	**13 18 12.0**	**+0.9**
CHGN	**Chignik**	**5.06**	**274**		Pn	**Pn**	**13 18 12.7**	**+1.4**
CHGN					IAML		13 19 14.2	
	comp=E,50nm,1.5s							
CHGN					IAML		13 21 26.5	
	comp=N,39nm,1.5s							
GRIN	**Grindle Hills**	**5.08**	**36**			**Pn**	**13 18 13.0**	**+1.3**
KNK	**Knik Glacier**	**5.13**	**5**		Pn	**Pn**	**13 18 12.0**	**-0.3**
KNK					IAML		13 19 26.5	
	comp=N,28nm,1.4s							
KNK					IAML		13 19 26.7	
	comp=E,32nm,0.6s							
KNK	**Knik Glacier**	**5.13**	**5**		P	**Pn**	**13 18 13.2**	**+0.9**
	baz=186							
DIV	**Divide**	**5.17**	**20**			**Pn**	**13 18 13.9**	**+1.0**
SNH	**Sunshine Point**	**5.17**	**39**			**Pn**	**13 18 13.9**	**+1.0**
SNH					IAML		13 19 13.0	
	comp=N,41nm,1.3s							
SNH					IAML		13 19 16.9	
	comp=E,36nm,0.7s							
SUA	**Susitna One**	**5.22**	**352**		Pn	**Pn**	**13 18 13.6**	**0.0**
SUA					IAML		13 19 06.2	
	comp=E,21nm,1.5s							
SUA	**Susitna One**	**5.22**	**352**		P	**Pn**	**13 18 14.0**	**+0.4**
	baz=172							
N19K	**Bonanza Creek**	**5.25**	**331**		Pn	**Pn**	**13 18 14.7**	**+0.6**
N19K	**Bonanza Creek**	**5.25**	**331**		P	**Pn**	**13 18 14.4**	**+0.3**
	baz=148							
BMRM	**Bremner River**	**5.28**	**26**			**Pn**	**13 18 15.4**	**+1.1**
BMRM	**Bremner River**	**5.28**	**26**		P	**Pn**	**13 18 15.4**	**+1.1**
	baz=210							
PMR	**Palmer**	**5.29**	**1**			**Pn**	**13 18 15.3**	**+0.8**
PMR					IAML		13 19 20.3	
	comp=E,24nm,0.6s							
PMR	**Palmer**	**5.29**	**1**		P	**Pn**	**13 18 15.7**	**+1.2**
	baz=182							
STLK	**Strandline Lak**	**5.36**	**347**			**Pn**	**13 18 16.1**	**+0.6**
WAX	**Waxell Ridge**	**5.36**	**37**			**Pn**	**13 18 16.4**	**+0.8**
P16K	**Nushagak River**	**5.39**	**304**			**Pn**	**13 18 16.4**	**+0.6**
P16K	**Nushagak River**	**5.39**	**304**		P	**Pn**	**13 18 16.3**	**+0.6**
	baz=118							
BARK	**Barkley Ridge**	**5.45**	**38**			**Pn**	**13 18 17.7**	**+0.9**
GHO	**Glory Hole Cre**	**5.48**	**2**			**Pn**	**13 18 18.8**	**+1.7**
KLU	**Klutina**	**5.48**	**17**			**Pn**	**13 18 18.6**	**+1.4**
KLU	**Klutina**	**5.48**	**17**		P	**Pn**	**13 18 18.5**	**+1.4**
	baz=200							
MESA	**MESA**	**5.49**	**42**			**Pn**	**13 18 19.1**	**+1.7**
MESA	**MESA**	**5.49**	**42**		P	**Pn**	**13 18 18.2**	**+0.8**
	baz=228							
CRQM	**Cirque**	**5.51**	**33**			**Pn**	**13 18 18.6**	**+1.0**
CRQE	**Cirque**	**5.52**	**34**		P	**Pn**	**13 18 18.6**	**+0.9**
	baz=219							
SML	**Sawmill**	**5.53**	**5**			**Pn**	**13 18 19.4**	**+1.5**
SML	**Sawmill**	**5.53**	**5**		P	**Pn**	**13 18 19.3**	**+1.5**
	baz=186							
M23K	**Glacier View**	**5.55**	**8**			**Pn**	**13 18 19.8**	**+1.6**
M23K	**Glacier View**	**5.55**	**8**		P	**Pn**	**13 18 19.8**	**+1.6**
	baz=189							
N18K	**Kilae Creek**	**5.57**	**325**		Pn	**Pn**	**13 18 20.3**	**+2.0**

N18K	**Kilae Creek**	**5.57**	**325**		P	**Pn**	**13 18 18.5**	**+0.2**
	baz=140								
SCM	**Sheep Creek Mo**	**5.63**	**10**			**Pn**	**13 18 21.5**	**+2.3**
ISLE	**Juniper Island**	**5.65**	**38**			**Pn**	**13 18 20.6**	**+1.1**
O16K	**Kokwok River B**	**5.71**	**309**			**Pn**	**13 18 21.4**	**+1.3**
O16K	**Kokwok River B**	**5.71**	**309**		P	**Pn**	**13 18 21.5**	**+1.3**
	baz=122								
SKT	**Skwentna**	**5.79**	**350**		Pn	**Pn**	**13 18 22.6**	**+1.1**
VRDI	**Verde Repeater**	**5.79**	**29**			**Pn**	**13 18 22.8**	**+1.2**
SVW2	**Sparrevohn**	**5.80**	**328**		Pn	**Pn**	**13 18 22.1**	**+0.7**
N25K	**Chitina, Valde**	**5.84**	**23**			**Pn**	**13 18 23.2**	**+1.1**
N25K	**Chitina, Valde**	**5.84**	**23**		P	**Pn**	**13 18 23.4**	**+1.3**
	baz=207								
KIAG	**Kiagna River**	**5.88**	**35**			**Pn**	**13 18 23.1**	**+0.3**
GLB	**Gilahina Butte**	**5.88**	**27**			**Pn**	**13 18 23.5**	**+0.9**
SAMH	**Samovar Hills**	**5.92**	**46**			**Pn**	**13 18 24.1**	**+1.0**
M20K	**Styx River**	**5.92**	**342**		Pn	**Pn**	**13 18 22.1**	**-1.1**
TABL	**Table Mountain**	**5.97**	**43**			**Pn**	**13 18 25.3**	**+1.3**
CNBA	**Chernabura Isl**	**6.01**	**260**		Pn	**Pn**	**13 18 24.2**	**-0.2**
M24K	**Tolsona, Glenn**	**6.03**	**14**			**Pn**	**13 18 27.0**	**+2.3**
M24K	**Tolsona, Glenn**	**6.03**	**14**		P	**Pn**	**13 18 26.3**	**+1.6**
	baz=197								
MCARA	**McCarthy VSAT**	**6.04**	**30**			**Pn**	**13 18 25.3**	**+0.5**
MCARA	**McCarthy VSAT**	**6.04**	**30**		P	**Pn**	**13 18 26.0**	**+1.2**
	baz=215								
PTPK	**Patty Peak**	**6.05**	**33**			**Pn**	**13 18 26.1**	**+1.0**
PCA	**Pinnacle**	**6.11**	**48**			**Pn**	**13 18 27.2**	**+1.4**
PINM	**Pinnacle**	**6.11**	**48**		P	**Pn**	**13 18 27.2**	**+1.4**
	baz=235								
CUT	**Chulitna**	**6.13**	**356**		Pn	**Pn**	**13 18 26.1**	**+0.2**
M19K	**Big River Lodg**	**6.18**	**337**		Pn	**Pn**	**13 18 27.8**	**+1.1**
M18K	**Stony River**	**6.18**	**330**			**Pn**	**13 18 26.9**	**+0.2**
M18K	**Stony River**	**6.18**	**330**		P	**Pn**	**13 18 27.0**	**+0.2**
	baz=145								
BARN	**Barnard Glacie**	**6.21**	**37**			**Pn**	**13 18 28.5**	**+1.2**
WASW	**Wrangell South**	**6.22**	**23**			**Pn**	**13 18 28.4**	**+1.0**
WACK	**Wrangell Chich**	**6.24**	**22**			**Pn**	**13 18 29.1**	**+1.4**
CTG	**Chitina Glacier**	**6.25**	**38**		P	**Pn**	**13 18 28.9**	**+1.2**
	baz=225								
CTGM	**Chitina Glacie**	**6.25**	**39**			**Pn**	**13 18 29.0**	**+1.1**
PNL	**Peninsula**	**6.26**	**53**			**Pn**	**13 18 28.9**	**+1.1**
PNL	**Peninsula**	**6.26**	**53**		P	**Pn**	**13 18 29.2**	**+1.4**
PNL	**Peninsula**	**6.26**	**53**		P	**Pn**	**13 18 28.9**	**+1.1**
	baz=241								
LOGN	**Logan Glacier**	**6.27**	**40**			**Pn**	**13 18 28.9**	**+0.7**
BCPM	**Bancas Point**	**6.29**	**51**			**Pn**	**13 18 29.9**	**+1.7**
O15K	**Ungalikthiuk R**	**6.31**	**301**			**Pn**	**13 18 30.0**	**+1.5**
O15K	**Ungalikthiuk R**	**6.31**	**301**		P	**Pn**	**13 18 30.0**	**+1.5**
	baz=113								
WAT6	**Susitna Watana**	**6.34**	**7**		P	**Pn**	**13 18 30.3**	**+1.3**
	baz=188								
WAZA	**Wrangell Mount**	**6.36**	**23**			**Pn**	**13 18 31.1**	**+1.8**
SDPT	**Sand Point**	**6.36**	**266**			**Pn**	**13 18 29.9**	**+0.8**
SDPT	**Sand Point**	**6.36**	**266**		P	**Pn**	**13 18 29.9**	**+0.8**
	baz=77								
HARP	**HAARP**	**6.46**	**18**			**Pn**	**13 18 32.5**	**+2.0**
HARP	**HAARP**	**6.46**	**18**		P	**Pn**	**13 18 32.5**	**+2.0**
	baz=201								
L19K	**White Mountain**	**6.53**	**337**		Pn	**Pn**	**13 18 32.2**	**+0.7**
L19K	**White Mountain**	**6.53**	**337**		P	**Pn**	**13 18 31.9**	**+0.4**
	baz=152								
WAT1	**Susitna Watana**	**6.55**	**3**			**Pn**	**13 18 33.3**	**+1.6**
WAT1	**Susitna Watana**	**6.55**	**3**		P	**Pn**	**13 18 33.3**	**+1.6**
	baz=184								
M17K	**Holitna River**	**6.61**	**324**		Pn	**Pn**	**13 18 33.3**	**+0.8**
M17K	**Holitna River**	**6.61**	**324**		P	**Pn**	**13 18 33.3**	**+0.8**
	baz=138								
DHY	**Denali Highway**	**6.85**	**7**			**Pn**	**13 18 37.8**	**+1.7**
M16K	**Timber Creek**	**6.89**	**317**		Pn	**Pn**	**13 18 38.5**	**+2.1**
O29M	**Mount Kennedy**	**6.93**	**50**			**Pn**	**13 18 38.7**	**+1.6**
O29M	**Mount Kennedy**	**6.93**	**50**		P	**Pn**	**13 18 38.7**	**+1.6**
	baz=239								
PAX	**Paxson**	**6.95**	**15**			**Pn**	**13 18 39.5**	**+2.1**
PAX	**Paxson**	**6.95**	**15**		P	**Pn**	**13 18 39.5**	**+2.1**
	baz=198								
P29M	**Windy Craggy**	**7.00**	**57**			**Pn**	**13 18 38.6**	**+0.7**
P29M	**Windy Craggy**	**7.00**	**57**		P	**Pn**	**13 18 38.7**	**+0.7**
	baz=246								
YUK2	**White River**	**7.01**	**35**			**Pn**	**13 18 40.3**	**+2.1**
L18K	**Granite Mounta**	**7.02**	**331**		Pn	**Pn**	**13 18 38.5**	**+0.3**
O14K	**Tigyukauivet M**	**7.03**	**300**		Pn	**Pn**	**13 18 39.5**	**+1.2**
YUK8	**Steele Glacier**	**7.03**	**41**			**Pn**	**13 18 41.0**	**+2.4**
YUK8	**Steele Glacier**	**7.03**	**41**		P	**Pn**	**13 18 41.0**	**+2.4**
	baz=229								
RND	**Reindeer**	**7.12**	**2**		Pn	**Pn**	**13 18 40.4**	**+

P33M	**Teslin, Yukon**	**9.53**	**59**			**Pn**	**13 19 13.6**	**+0.9**
K29M	**Barlow Dome**	**9.56**	**33**	Pn		**Pn**	**13 19 13.9**	**+0.7**
K29M	**Barlow Dome** baz=223	**9.56**	**33**	P		**Pn**	**13 19 15.3**	**+2.2**
H24K	**Noodor Dome**	**9.58**	**4**	Pn		**Pn**	**13 19 16.4**	**+3.1**
M31M	**Drury Creek, Y**	**9.64**	**46**			**Pn**	**13 19 15.9**	**+1.7**
H18K	**Honhosa River**	**9.89**	**337**	Pn		**Pn**	**13 19 17.9**	**+0.4**
IMAR	**Indian Mountai**	**9.93**	**349**	Pn		**Pn**	**13 19 19.6**	**+1.6**
FARO	**Faro, Yukon**	**10.08**	**47**	Pn		**Pn**	**13 19 21.4**	**+1.2**
I28M	**Miner Creek**	**10.23**	**23**	Pn		**Pn**	**13 19 24.4**	**+2.3**
R33M	**Jennings River**	**10.25**	**65**	Pn		**Pn**	**13 19 22.1**	**-0.5**
J30M	**Hart River**	**10.46**	**32**			**Pn**	**13 19 27.7**	**+2.3**
FYU	**Fort Yukon**	**10.47**	**9**	Pn		**Pn**	**13 19 26.7**	**+1.4**
DLBC	**Dease Lake** comp=E,0.2nm,0.3s,baz=250,slow=8.0,SNR=10	**10.63**	**70**	Pn		**Pn**	**13 19 29.0**	**+1.3**
DLBC					Sn	**Sn**	**13 21 21.3**	**-5.4**
	comp=E,0.1nm,0.3s,baz=342,slow=26,SNR=1.1 comp=E,0.7nm,0.4s							
I30M	**Mount Dempster**	**10.92**	**30**	Pn		**Pn**	**13 19 32.6**	**+0.9**
H29M	**Whitestone**	**11.22**	**23**	Pn		**Pn**	**13 19 38.7**	**+3.0**
BMAR	**Burnt Mountain**	**11.37**	**9**	Pn		**Pn**	**13 19 40.3**	**+2.5**
E24K	**Your Creek**	**11.81**	**2**	Pn		**Pn**	**13 19 45.5**	**+1.7**
TOLK	**Toolik Lake Re**	**12.37**	**360**	Pn		**Pn**	**13 19 54.4**	**+2.9**
G31M	**Satah River**	**12.77**	**28**	Pn		**Pn**	**13 19 58.5**	**+1.6**
F31M	**Tsiigehtchic**	**13.30**	**27**	Pn		**Pn**	**13 20 06.1**	**+2.0**
INK	**Inuvik** comp=E,0.1nm,0.3s,baz=216,slow=13,SNR=5.8 comp=E,0.9nm,0.8s	**14.03**	**25**	Pn		**Pn**	**13 20 17.5**	**+3.6**
C36M	**Paulatuk**	**17.22**	**31**			**Pn**	**13 20 56.8**	**+1.0**
C36M				IAmb	IAmb	13 21 00.2		
	comp=Z,5.0nm,1.3s							
YKA	**Yellowknife Ar**	**18.54**	**56**	P		**P**	**13 21 10.6**	**-1.3**
YKA	**Yellowknife Ar** baz=266,slow=9.5,SNR=2.4 comp=Z,0.1nm,0.7s	**18.54**	**56**	P		**Pn**	**13 21 14.3**	**+2.3**
A36M	**Sachs Harbour**	**18.66**	**23**			**P**	**13 21 11.1**	**-2.0**
A36M				IAmb	IAmb	13 21 18.4		
	comp=Z,5.5nm,0.8s							
AMKA	**Amchitka**	**19.05**	**268**	P		**P**	**13 21 13.4**	**-4.1**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.6s,baz=322,slow=12,SNR=3.1 comp=Z,0.3nm,0.6s	**27.25**	**118**	P		**P**	**13 22 41.2**	**+1.4**
MA2	**Magadan** comp=Z,27nm,18.1s,baz=87,slow=35	**31.02**	**301**	LR		LR	13 35 19.0	
MKAR	**Makanchi Array** comp=Z,0.1nm,0.5s,baz=37,slow=7.4,SNR=1.8 comp=Z,0.1nm,0.5s	**68.55**	**325**	P		**P**	**13 28 02.1**	**+4.2**

*IDC **10** 13:39:22.1±10.0, 5°.34S×146°.31E, h0km, mb4.0/2, mbtmp4.3/4, ML1.8/1, Error ellipse: s-maj=145.2km s-min=64.7km az=18.0*

ISC 10 13:39:33.7±3.5, **5°.8S**±0°.3×**146°.6E**±0°.2, **h100km, n20, σ1s35/21, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.66**	**172**	P	**Pn**	**13 40 26.9**	**-1.4**
PMG	**Port Moresby** 4.0nm,0.3s,baz=356,slow=14,SNR=15	**3.66**	**172**	Pn	**Pn**	**13 40 26.6**	**-1.6**
PMG				Sn	**Sn**	**13 41 09.4**	**-1.1**
	17nm,0.3s,baz=185,slow=21,SNR=21 11nm,0.2s						
COEN	**Coen**	**8.82**	**202**	P	**Pn**	**13 41 40.2**	**+1.8**
MTSU	**Mount Surprise**	**12.50**	**190**	P	**Pn**	**13 42 29.7**	**+1.6**
TV1H	**Townsville Har**	**13.42**	**179**	Pn	**Pn**	**13 42 42.0**	**+1.9**
CTA	**Charters Tower** 0.4nm,0.3s,baz=359,slow=13,SNR=10	**14.24**	**181**	Pn	**P**	**13 42 54.8**	**-0.4**
KDU	**Kakadu**	**15.56**	**243**	P	**Pn**	**13 43 07.3**	**-0.3**
QIS	**Mount Isa**	**16.21**	**204**	P	**P**	**13 43 17.3**	**+0.4**
MTN	**Manton Dam**	**16.82**	**244**	P	**Pn**	**13 43 23.3**	**+0.1**
WRA	**Warramunga Arr** 11nm,0.5s,baz=40,slow=12,SNR=155	**18.47**	**219**	P	**P**	**13 43 41.2**	**-0.7**
KNRA	**Kununurra**	**20.10**	**239**	P	**P**	**13 43 58.8**	**-0.8**
AS01	**Alice Springs**	**21.58**	**213**	P	**P**	**13 44 15.0**	**-0.4**
ASAR	**Alice Springs** 5.1nm,0.6s,baz=48,slow=8.1,SNR=214 5.1nm,0.6s	**21.60**	**213**	P	**P**	**13 44 15.2**	**-0.5**
INKA	**Innaminka**	**22.56**	**194**	P	**P**	**13 44 24.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**23.87**	**237**	P	**P**	**13 44 37.3**	**-0.8**
OOD	**Oodnadatta**	**24.25**	**204**	P	**P**	**13 44 41.0**	**-0.4**
LCRK	**Leigh Creek**	**25.80**	**197**	P	**P**	**13 44 56.2**	**+0.7**
WRKA	**Warakurna**	**26.00**	**221**	P	**P**	**13 44 56.0**	**-1.4**
STKA	**Stephens Creek** 0.9nm,0.4s,baz=16,slow=12,SNR=5.7 0.9nm,0.4s	**26.40**	**190**	P	**P**	**13 45 04.0**	**+3.1**
MULG	**Mulgathing**	**27.11**	**204**	P	**P**	**13 45 08.1**	**+0.8**

*IDC **10** 13:43:31.8±3.4, 25°.99S×29°.11E, h0km, mbtmp3.6/4, ML3.0/3, Error ellipse: s-maj=30.0km s-min=23.2km az=99.0*
*EAF **10** 13:43:33.3±1.2, 25°.99S×29°.27E, h10km, MD3.5*
*BUL **10** 13:43:35.0±1.0, 25°.98S×29°.22E, h10km±12km, MD3.6*

ISC 10 13:43:29.6±1.1, **25°.96S**±0°.06×**29°.15E**±0°.06, **h3km, n14, σ2s53/23, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.17**	**41**	*i* P	**Pn**	**13 44 22.2**	**+1.8**
MOPA				*i* S	**Sn**	**13 44 57.4**	**-1.4**
MOPA	**Mopani**	**3.17**	**41**	*i* P	**Pn**	**13 44 22.2**	**+1.8**
MOPA				*i* S	**Sn**	**13 44 57.4**	**-1.4**
LBTB	**Lobatse**	**3.35**	**285**	*i* P	**Pb**	**13 44 28.0**	**-1.7**
LBTB				*i* S	**Sn**	**13 45 05.2**	**+1.9**
LBTB	**Lobatse** 0.9nm,0.3s,baz=85,slow=6.6,SNR=27	**3.35**	**285**	Pn	**Pn**	**13 44 26.2**	**+3.3**
LBTB				Pg	**Pg**	**13 44 33.1**	**-0.7**
	3.9nm,0.3s,baz=102,slow=14,SNR=52						
LBTB				Lg	Lg	13 45 17.0	
	14nm,0.3s,baz=22,slow=23,SNR=16 2.6nm,0.2s						
LBTB	**Lobatse**	**3.35**	**285**	*i* P	**Pb**	**13 44 28.0**	**-1.7**
LBTB				*i* S	**Sn**	**13 45 05.2**	**+1.9**
MUSN	**Musina, Limpop**	**3.71**	**10**	*i* P	**Pn**	**13 44 30.8**	**+2.9**
MUSN				*i* S	**Sn**	**13 45 12.4**	**+0.3**
MUSN	**Musina, Limpop**	**3.71**	**10**	*i* P	**Pn**	**13 44 30.8**	**+2.9**
MUSN				*i* S	**Sn**	**13 45 12.4**	**+0.3**
BOSA	**Boshof**	**4.36**	**232**	*i* P	**Pn**	**13 44 40.5**	**+3.6**
BOSA				*i* S	**Sn**	**13 45 28.4**	**0.0**
BOSA	**Boshof** 0.2nm,0.3s,baz=54,slow=13,SNR=14	**4.36**	**232**	Pn	**Pn**	**13 44 37.9**	**+1.0**
BOSA				Pg	**Pg**	**13 44 51.6**	**-1.7**
	2.9nm,0.3s,baz=53,slow=14,SNR=23						
BOSA				Lg	Lg	13 45 47.7	
	11nm,0.3s,baz=143,slow=19,SNR=15 0.9nm,0.3s						
BOSA	**Boshof**	**4.36**	**232**	*i* P	**Pn**	**13 44 40.5**	**+3.6**
BOSA				*i* S	**Sn**	**13 45 28.4**	**0.0**
I47ZA	**BOSHOF INFRASO** 0.1nm,0.9s,baz=51,slow=331,SNR=1.2	**4.38**	**232**	I	I	14 10 27.3	
SUR	**Sutherland** 0.4nm,0.3s,baz=54,slow=17,SNR=16 2.1nm,0.3s	**9.70**	**227**	Pn	**Pn**	**13 45 51.8**	**+1.5**
LSZ	**Lusaka** 1.7nm,0.4s,baz=171,slow=14,SNR=2.5	**10.66**	**355**	Pn	**Pn**	**13 46 05.4**	**+2.0**
LSZ				Sn	**Sn**	**13 47 57.2**	**-6.3**
	0.1nm,0.3s,baz=113,slow=16,SNR=2.0						
I35NA	**TSUMEB INFRASO** baz=126,slow=313,SNR=6.6	**12.63**	**300**	I	I	15 01 20.0	

*SCB **10** 13:57:11.1±0.9, 17°.66S×68°.79W, h194km±7km, ML3.9/6, MW4.3, Error ellipse: s-maj=3.4km s-min=2.0km az=2.0*
*GUC **10** 13:57:13.5±0.8, 17°.84S×68°.99W, h215km±9km, ML3.6*

ISC 10 13:57:10.4±1.3, **17°.65S**±0°.06×**68°.82W**±0°.07, **h200km, n38, σ1s18/49, 5D, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEJ	**Jacaque**	**0.90**	**42**	Pg	**Pn**	**13 57 40.6**	**+0.4**
PB16	**IPOC Station P**	**0.94**	**224**	Pg	**Pn**	**13 57 41.2**	**+0.7**
BBOD	**La Paz, Gloria**	**1.03**	**12**	Pg	**Pn**	**13 57 41.7**	**+0.6**
BBOE	**La Paz, Chanca**	**1.16**	**44**	Pg	**Pn**	**13 57 42.1**	**+0.1**
SOEO	**Opoqueri**	**1.27**	**136**	Pg	**Pn**	**13 57 43.4**	**+0.7**
LPAZ	**La Paz**	**1.51**	**26**	Pg	**Pn**	**13 57 45.2**	**+0.3**
PB12	**IPOC Station P**	**1.73**	**236**	*e*P	**Pn**	**13 57 47.1**	**+0.8**
PB12				*i* S	**Sn**	**13 58 13.7**	**-0.5**
PB12				IAML		13 58 15.8	
	comp=N,253nm,0.1s						
PB12	**IPOC Station P**	**1.73**	**236**	Pg	**Pn**	**13 57 47.3**	**+1.0**
GO01	**Chusmiza**	**2.04**	**190**	*i*P	**Pn**	**13 57 51.7**	**+1.9**
GO01				*i* S	**Sn**	**13 58 21.3**	**+0.7**
GO01				IAML		13 58 23.8	
	comp=N,191nm,0.1s						
GO01	**Chusmiza**	**2.04**	**190**	Pg	**Pn**	**13 57 51.2**	**+1.4**
PB11	**IPOC Station P**	**2.24**	**201**	*i*P	**Pn**	**13 57 52.8**	**+1.2**
PB11				*i* S	**Sn**	**13 58 22.8**	**-1.1**
PB11				IAML		13 58 24.6	
	comp=N,268nm,0.5s						
PB11	**IPOC Station P**	**2.24**	**201**	Pg	**Pn**	**13 57 52.6**	**+1.0**
PB08	**IPOC Station P**	**2.50**	**187**	*i*P	**Pn**	**13 57 56.6**	**+2.0**
PB08				*i* S	**Sn**	**13 58 30.0**	**+0.7**
PB08				IAML		13 58 31.9	
	comp=N,265nm,0.6s						
PB08	**IPOC Station P**	**2.50**	**187**	Pg	**Pn**	**13 57 55.6**	**+1.0**
HMBC	**Humberstone**	**2.80**	**201**	*e*P	**Pn**	**13 57 58.3**	**+0.5**
HMBC				IAML		13 58 36.1	
	comp=E,116nm,0.3s						
HMBC	**Humberstone**	**2.80**	**201**	Pg	**Pn**	**13 57 58.9**	**+1.1**
SOET	**ToroToro**	**2.90**	**100**	Pg	**Pn**	**13 57 59.5**	**+0.3**
PB01	**IPOC Station P**	**3.43**	**190**	*i*P	**Pn**	**13 58 06.4**	**+1.2**
PB01				*i* S	**Sn**	**13 58 46.1**	**-2.3**
PB01	**IPOC Station P**	**3.43**	**190**	Pg	**Pn**	**13 58 06.5**	**+1.2**
PB01				Sg	**Sn**	**13 58 47.1**	**-1.3**
PB01				IAML		13 58 51.3	
	comp=E,174nm,0.4s						
AOEA	**Aiquile**	**3.46**	**99**	Pg	**Pn**	**13 58 06.3**	**+0.5**
AOEA	**Aiquile**	**3.46**	**99**	Pg	**Pn**	**13 58 06.4**	**+0.6**
PB02	**IPOC Station P**	**3.79**	**195**	*e*P	**Pn**	**13 58 10.5**	**+0.9**
PB02	**IPOC Station P**	**3.79**	**195**	Pg	**Pn**	**13 58 11.1**	**+1.5**
PB02				Sg	**Sn**	**13 58 55.2**	**-1.1**
PB02				IAML		13 59 10.0	
	comp=E,172nm,0.3s						
PB09	**IPOC Station P**	**4.14**	**185**	*e*P	**Pn**	**13 58 15.7**	**+1.6**
PB09	**IPOC Station P**	**4.14**	**185**	Pg	**Pn**	**13 58 15.5**	**+1.4**
PB07	**IPOC Station P**	**4.18**	**194**	*i*P	**Pn**	**13 58 16.0**	**+1.5**
PB07	**IPOC Station P**	**4.18**	**194**	Pg	**Pn**	**13 58 16.0**	**+1.5**
PB07				Sg	**Sn**	**13 59 03.7**	**-1.4**
PB07				IAML		13 59 15.5	
	comp=E,110nm,0.8s						
MOCB	**Mochara**	**4.67**	**141**	Pg	**Pn**	**13 58 22.1**	**+1.0**
MOCB				Sg	**Sn**	**13 59 15.4**	**-1.3**
MOCB				IAML		13 59 26.1	
	comp=E,13nm,0.7s						
PB04	**IPOC Station P**	**4.82**	**195**	Pg	**Pn**	**13 58 24.1**	**+1.4**
PB04				Sg	**Sn**	**13 59 18.8**	**-1.0**
PB04				IAML		13 59 23.0	
	comp=E,86nm,0.5s						
LVC	**Limon Verde**	**4.93**	**181**	Pg	**Pn**	**13 58 25.6**	**+1.3**
PB06	**IPOC Station P**	**5.08**	**188**	Pg	**Pn**	**13 58 27.1**	**+1.2**
PB05	**IPOC Station P**	**5.33**	**194**	Pg	**Pn**	**13 58 30.1**	**+0.9**
PB05				Sg	**Sn**	**13 59 28.9**	**-2.6**
PB05				IAML		13 59 33.7	
	comp=E,118nm,0.4s						
PB15	**IPOC Station P**	**5.56**	**186**	Pg	**Pn**	**13 58 33.5**	**+1.3**
PB10	**IPOC Station P**	**6.05**	**195**	Pg	**Pn**	**13 58 39.0**	**+0.7**
GO02	**Mina Guanaco**	**7.51**	**185**	Pg	**Pn**	**13 58 58.2**	**+0.7**
SIV	**San Ignacio**	**7.60**	**79**	Pg	**Pn**	**13 58 59.1**	**+0.6**
ETMB	**Extrema**	**8.19**	**18**	Pg	**Pn**	**13 59 06.6**	**+0.4**
VILB	**Vilhena**	**9.54**	**62**	Pg	**Pn**	**13 59 23.4**	**-0.3**

*NEIC **10** 14:12:22.0±2.3, 53°.40N±0°.09×167°.0W±0°.2, h107km±7km, mb3.7/29, ML3.5/6, ML3.4(AEIC), Error ellipse: s-maj=20.7km s-min=1.6km az=127.0*

AEIC 10 14:12:23.9±3.6, **53°.5N**±0°.1×**167°.0W**±0°.1, **h92km**±6km, **Error ellipse: s-maj=19.2km s-min=5.9km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.35**	**13**		Pn	14 12 38.4	+0.5
MGOD					Sn	14 12 50.2	+1.9
MAPS	**Pakushin South**	**0.35**	**6**		Pn	14 12 38.0	+0.2
MAPS					Sn	14 12 49.7	+1.5
MNAT	**Makushin Natee**	**0.47**	**24**		Pn	14 12 38.9	+0.3
MNAT					Sn	14 12 51.0	+1.5
MSW	**Makushin Switc**	**0.48**	**16**		Pn	14 12 38.9	+0.2
MSW					Sn	14 12 51.4	+1.7
UNV	**Unalaska Valle**	**0.49**	**37**		Pn	14 12 39.2	+0.5
UNV					Sn	14 12 51.5	+1.8
OKFG	**Magazine Ridge**	**0.55**	**266**		Pn	14 12 40.0	+0.8
OKFG					Sn	14 12 51.4	+0.8
OKER	**Okmok East Rim**	**0.63**	**270**		Pn	14 12 40.2	+0.2
AKRB	**Akutan Reef Bi**	**0.87**	**39**		Pn	14 12 43.1	+0.8
ZRO	**Akutan Zero**	**0.88**	**43**		Pn	14 12 43.2	+0.8
AKBBA	**Akutan Broad B**	**0.90**	**44**		Pn	14 12 43.7	+1.0
AKBBA					Sn	14 12 58.8	+2.1
LVA	**Lava Point**	**0.91**	**39**		Pn	14 12 43.2	+0.4
LVA					Sn	14 12 58.4	+1.5
AKV	**Akutan Volcano**	**0.91**	**42**		Sn	14 12 58.7	+1.7
AHB	**Akutan Harbor**	**0.96**	**46**		Pn	14 12 43.9	+0.6
AKUT	**Akutan**	**1.00**	**47**		Pn	14 12 44.4	+0.7
AKUT	**Akutan** comp=N,580nm,0.4s	**1.00**	**47**	IAML		14 13 02.8	
AKUT				IAML		14 13 02.9	
	comp=E,738nm,0.4s						
AKSA	**Akutan Strait**	**1.03**	**48**		Pn	14 12 44.4	+0.4
AKSA					Sn	14 13 00.2	+1.0
WESE	**West Dahl East**	**1.75**	**54**		Pn	14 12 54.1	+1.1
P08K	**Saint George I**	**3.48**	**336**		Pn	14 13 18.4	+2.7
PS1A	**Pavlof South-1**	**3.65**	**55**		Pn	14 13 19.6	+1.5
SDPT	**Sand Point**	**4.26**	**61**		Pn	14 13 27.2	+0.8
SDPT	**Sand Point** comp=N,48nm,1.5s	**4.26**	**61**	IAML		14 15 13.1	
CNBA	**Chernabura Isl**	**4.57**	**70**	Pn	Pn	14 13 31.2	+0.7
CNBA				IAML		14 14 12.6	
	comp=E,35nm,1.5s						
CHGN	**Chignik**	**5.72**	**57**	Pn	Pn	14 13 46.3	+0.1
O14K	**Tigyukauivet M**	**6.63**	**26**	Pn	Pn	14 13 58.6	+0.1
M14K	**Bethel**	**7.81**	**19**	Pn	Pn	14 14 13.6	-1.0
O16K	**Kokwok River B**	**7.88**	**35**	Pn	Pn	14 14 15.6	0.0
SII	**Sitkinak Islan**	**8.00**	**62**	Pn	Pn	14 14 15.7	-1.6
AMKA	**Amchitka**	**8.63**	**262**	Pn	Pn	14 14 25.4	-0.5
OHAK	**Old Harbor**	**8.68**	**59**	Pn	Pn	14 14 23.9	-2.5
O18K	**Koktuh Hills**	**9.12**	**41**	Pn	Pn	14 14 33.1	+0.6
KDAK	**Kodiak Island**	**9.23**	**56**	Pn	Pn	14 14 31.4	-2.6
K15K	**Wolf Creek Mou**	**9.32**	**16**	Pn	Pn	14 14 34.5	-0.8
K17K	**Iditarod**	**10.35**	**23**	Pn	Pn	14 14 50.0	+0.7
CNPM	**China Poot**	**10.61**	**49**	Pn	Pn	14 14 51.3	-1.5
L19K	**White Mountain**	**10.86**	**32**	Pn	Pn	14 14 55.0	-1.2
M20K	**Styx River**	**11.22**	**36**	Pn	Pn	14 15 01.6	+0.5
SKT	**Skwentna**	**11.86**	**38**	Pn	Pn	14 15 09.2	-0.4
RC01	**Rabbit Creek A**	**12.04**	**44**	Pn	Pn	14 15 08.7	-3.3
F15K	**North Star Dit**	**12.35**	**5**	Pn	Pn	14 15 12.4	-3.7
H18K	**Honhosa River**	**12.52**	**17**	Pn	Pn	14 15 16.3	-2.1
PMR	**Palmer**	**12.56**	**42**	Pn	Pn	14 15 16.2	-2.7
J20K	**Nowinta River**	**12.61**	**27**	Pn	Pn	14 15 20.1	+0.5
GHO	**Glory Hole Cre**	**12.74**	**42**	Pn	Pn	14 15 18.0	-3.4
KNIK	**Knik Glacier**	**12.74**	**44**	Pn	Pn	14 15 18.1	-3.3
SML	**Sawmill**	**12.99**	**43**	Pn	Pn	14 15 22.0	-2.8
HIN	**Hinchinbrook I**	**13.14**	**50**	Pn	Pn	14 15 23.2	-3.4
H19K	**Roundabout Mou**	**13.21**	**19**	Pn	Pn	14 15 25.6	-1.9
SCM	**Sheep Creek Mo**	**13.42**	**44**	Pn	Pn	14 15 27.1	-3.3
KLU	**Klutina**	**13.85**	**46**	Pn	Pn	14 15 32.3	-3.7
KAIM	**Kayak Island**	**13.95**	**53**	Pn	Pn	14 15 31.0	-6.3
H21K	**Melozitna Rive**	**14.14**	**25**		P	14 15 42.1	-2.3
IMAR	**Indian Mountai**	**14.18**	**23**		Pn	14 15 41.3	+1.1
BERG	**Berg Lake**	**14.44**	**52**	Pn	Pn	14 15 40.5	-3.1
N25K	**Chitina, Valde**	**14.47**	**47**	Pn	Pn	14 15 40.9	-3.1
G21K	**Allakaket**	**14.68**	**22**	Pn	Pn	14 15 45.3	-1.3
GLB	**Gilahina Butte**	**14.75**	**48**	Pn	Pn	14 15 44.4	-3.2
CRQM	**Cirque**	**14.82**	**51**	Pn	Pn	14 15 45.9	-2.7
VRDI	**Verde Repeater**	**14.83**	**49**	Pn	Pn	14 15 45.3	-3.5
WAX	**Waxell Ridge**	**14.86**	**52**	Pn	Pn	14 15 46.1	-2.8
MDM	**Murphy Dome**	**14.93**	**32**	Pn	Pn	14 15 47.4	-2.4
MCARA	**McCarthy VSAT**	**15.08**	**49**	Pn	Pn	14 15 49.4	-2.4
ISLE	**Juniper Island**	**15.14**	**52**		Pn	14 15 51.7	-1.0
BARN	**Barnard Glacie**	**15.60**	**51**	Pn	Pn	14 15 54.2	-4.3
BARN				IAmb	IAmb	14 16 27.0	
	comp=Z,4.8nm,1.1s						
H24K	**Noodor Dome**	**15.63**	**30**	Pn	Pn	14 15 56.1	-2.6
H24K				IAmb	IAmb	14 16 13.2	
	comp=Z,4.4nm,1.3s						
TABL	**Table Mountain**	**15.67**	**53**	Pn	Pn	14 15 55.6	-3.7
SCRK	**Sand Creek**	**15.83**	**39**		Pn	14 15 59.3	-1.9
J26L	**Joseph Creek**	**16.26**	**38**		Pn	14 16 04.4	-2.2
J26L				IAmb	IAmb	14 16 06.7	
	comp=Z,2.7nm,0.6s						
I26K	**Coal Creek Min**	**16.84**	**36**		Pn	14 16 10.6	-3.0
B21K	**Ikpikpuk River**	**17.20**	**15**	P	Pn	14 16 12.9	-5.0
B21K				IAmb	IAmb	14 16 20.3	
	comp=Z,4.1nm,1.3s						
HYT	**Haines Junctio**	**17.50**	**53**	Pn	Pn	14 16 22.6	+0.8
DAWY	**Dawson**	**17.66**	**42**		P	14 16 21.7	-1.7
BMAR	**Burnt Mountain**	**17.68**	**29**	Pn	P	14 16 22.4	-1.1
I28M	**Miner Creek**	**18.07**	**38**	Pn	P	14 16 26.3	-1.6
O30N	**Mendenhall**	**18.17**	**54**	Pn	Pn	14 16 30.0	+0.2
K29M	**Barlow Dome**	**18.34**	**44**	Pn	P	14 16 29.3	-1.6
WHY	**Whitehorse**	**18.74**	**55**	Pn	Pn	14 16 36.5	-0.3
WHY				IAmb	IAmb	14 16 36.6	
	comp=Z,3.3nm,0.7s						
H29M	**Whitestone**	**19.01**	**37**		P	14 16 35.8	-2.3
H29M				IAmb	IAmb	14 17 03.6	
	comp=Z,6.7nm,1.3s						
F28M	**Old Crow**	**19.23**	**32**	P	P	14 16 37.8	-2.6
F28M				IAmb	IAmb	14 16 39.2	
	comp=Z,1.6nm,0.7s						
M31M	**Drury Creek, Y**	**19.25**	**50**	P	P	14 16 37.7	-3.0
I30M	**Mount Dempster**	**19.32**	**40**	P	P	14 16 38.5	-3.0
I30M				IAmb	IAmb	14 17 16.0	
	comp=Z,4.4nm,1.5s						
EPYK	**Eagle Plains**	**19.67**	**37**	P	P	14 16 42.4	-2.9
N32M	**Quiet Lake**	**19.68**	**53**	P	P	14 16 41.8	-3.7
P33M	**Teslin, Yukon**	**19.71**	**56**	P	P	14 16 42.8	-3.0
P33M				IAmb	IAmb	14 16 47.6	
	comp=Z,2.9nm,0.7s						
D27M	**Malcolm River**	**19.89**	**27**	P	P	14 16 45.9	-1.7
G30M	**tAoh Zraii Nji**	**20.12**	**36**	P	P	14 16 46.6	-3.5
G30M				IAmb	IAmb	14 16 52.6	
	comp=Z,4.5nm,1.1s						
E29M	**Blow River**	**20.28**	**31**	P	P	14 16 48.9	-2.9
E29M				IAmb	IAmb	14 16 53.3	
	comp=Z,1.7nm,0.6s						
R33M	**Jennings River**	**20.60**	**59**	P	P	14 16 48.3	-7.2
R33M				IAmb	IAmb	14 17 30.4	
	comp=Z,6.7nm,1.4s						
G31M	**Satah River**	**20.79**	**37**	P	P	14 16 53.1	-4.2
G31M				IAmb	IAmb	14 17 01.0	
	comp=Z,5.8nm,1.2s						
F31M	**Tsiigehtchic**	**21.19**	**36**	P	P	14 16 56.6	-4.9
F31M				IAmb	IAmb	14 17 22.6	
	comp=Z,8.3nm,1.5s						
C36M	**Paulatuk**	**25.22**	**35**	P	P	14 17 37.4	-3.2
C36M				IAmb	IAmb	14 18 05.7	
	comp=Z,3.0nm,1.2s						

*NEIC **10** 14:27:04.7±1.9, 55°.97N±0°.07×149°.71W±0°.09, h8km±3km, mb4.3/5, ML4.3/50, ML4.0(AEIC), Error ellipse: s-maj=10.3km s-min=7.6km az=172.0*
*IDC **10** 14:27:05.3±1.0, 56°.12N×149°.62W, h0km, mb3.8/10, mbtmp3.9/14, ML3.8/4, MS2.8/5, Error ellipse: s-maj=27.9km s-min=14.5km az=27.0*
*AEIC **10** 14:27:10.6±1.9, 56°.07N±0°.08×149°.76W±0°.10, h11km±5km, Error ellipse: s-maj=11.3km s-min=7.8km az=181.0*

ISC 10 14:27:05.4±0.6, **56°.10N**±0°.06×**149°.72W**±0°.05, **h10km, n367, σ1s25/370, mb4.1/14, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.27**	**301**	Pn	**Pn**	**14 27 42.8**	**0.0**
OHAK				Sn	**Sn**	**14 28 08.4**	**-2.4**
OHAK				IAML		14 28 08.8	
	comp=N,1μm,0.7s						
OHAK				IAML		14 28 09.4	
	comp=E,1μm,1.0s						
OHAK	**Old Harbor**	**2.27**	**301**	P	**Pn**	**14 27 43.0**	**+0.1**
OHAK	**Old Harbor** baz=119	**2.27**	**301**	P	**Pn**	**14 27 42.9**	**0.0**
OHAK				S	**Sn**	**14 28 08.5**	**-2.4**
	baz=119						
KDAK	**Kodiak Island**	**2.31**	**318**	Pn	**Pn**	**14 27 43.8**	**+0.4**
KDAK				Sn	**Sn**	**14 28 09.8**	**-2.0**
KDAK	**Kodiak Island** comp=E,16nm,0.3s,baz=133,slow=5.2,SNR=759	**2.31**	**318**	Pn	**Pn**	**14 27 43.7**	**+0.4**
KDAK				Sn	**Sn**	**14 28 09.6**	**-2.2**
	comp=E,87nm,0.3s,baz=38,slow=22,SNR=13						
KDAK				LR	LR	14 28 49.6	
	comp=E,130nm,19.0s,baz=47,slow=45 comp=E,53nm,0.2s						
SII	**

O22K Cooper Landing 4.40 360 P Pn 14 28 12.0 -0.1
baz=180
P18K Big Mountain, 4.43 321 Pn Pn 14 28 13.3 +0.7
P18K Big Mountain, 4.43 321 P Pn 14 28 12.9 +0.4
baz=136
R16K Pilot Point 4.56 292 Pn 14 28 15.3 +1.1
R16K Pilot Point 4.56 292 P Pn 14 28 15.4 +1.1
baz=106
RED Redoubt Volcan 4.62 341 Pn 14 28 14.5 -0.8
HIN Hinchinbrook I 4.64 20 Pn Pn 14 28 15.9 +0.5
HIN IAML 14 29 07.2
comp=E,273nm,0.6s
HIN IAML 14 29 07.8
comp=N,267nm,0.5s
RSO Redoubt South 4.66 341 Pn 14 28 15.6 -0.3
RDWB Redoubt West 4.70 341 Pn 14 28 15.7 -0.7
CAPN Captain Cook N 4.75 351 Pn Pn 14 28 18.5 +1.7
CAPN IAML 14 31 20.2
comp=E,323nm,2.7s
CAPN Captain Cook N 4.75 351 P Pn 14 28 17.6 +0.7
baz=171
P17K Kvichak River 4.76 314 Pn 14 28 18.0 +0.9
P17K Kvichak River 4.76 314 P Pn 14 28 18.0 +0.9
baz=128
KAIM Kayak Island 4.76 34 Pn Pn 14 28 18.1 +0.9
KAIM IAML 14 29 15.2
comp=E,368nm,0.4s
KAIM Kayak Island 4.76 34 P Pn 14 28 17.8 +0.7
baz=219
O18K Koktuh Hills 4.77 324 Pn Pn 14 28 17.6 +0.4
O18K IAML 14 29 14.1
comp=N,238nm,0.8s
O18K IAML 14 29 14.2
comp=E,120nm,0.7s
O18K Koktuh Hills 4.77 324 P Pn 14 28 17.6 +0.4
baz=140
DFR Drift River 4.77 342 Pn 14 28 16.8 -0.5
O19K Port Alsworth 4.78 331 Pn 14 28 17.4 +0.1
O19K Port Alsworth 4.78 331 P Pn 14 28 17.4 +0.1
baz=148
NCT North Crescent 4.79 341 Pn 14 28 16.9 -0.7
RDJH Redoubt Jeurge 4.79 341 Pn 14 28 16.9 -0.7
CHGN Chignik 4.86 276 Pn 14 28 18.6 +0.1
CHGN IAML 14 29 13.4
comp=N,196nm,0.1s
CHGN IAML 14 29 16.4
comp=E,179nm,0.1s
EYAK Cordova Ski Ar 4.93 23 Pn 14 28 20.0 +0.6
EYAK Cordova Ski Ar 4.93 23 P Pn 14 28 20.2 +0.8
EYAK Cordova Ski Ar 4.93 23 P Pn 14 28 20.0 +0.6
baz=207
RC01 Rabbit Creek A 5.01 360 Pn Pn 14 28 20.6 +0.1
RC01 IAML 14 29 20.8
comp=E,130nm,0.8s
RC01 Rabbit Creek A 5.01 360 P Pn 14 28 20.4 -0.1
baz=180
RAGM Ragged Mountai 5.06 30 Pn 14 28 22.4 +1.1
SUCK Suckling Hills 5.08 36 Pn 14 28 22.5 +1.0
SUCK IAML 14 29 19.8
comp=E,187nm,0.8s
SUCK IAML 14 29 20.5
comp=N,289nm,0.4s
HMT Hamilton 5.14 32 Pn 14 28 23.6 +1.3
NICHA Nichawak Mount 5.15 34 Pn 14 28 23.6 +1.1
GOAT Goat Mountain 5.21 28 Pn 14 28 24.3 +1.0
N20K Mount Spurr 5.28 347 P Pn 14 28 23.8 -0.5
baz=165
SPCR Spurr Chakacha 5.28 347 Pn 14 28 23.8 -0.5
BGLC Bering Glacier 5.28 38 Pn 14 28 25.5 +1.3
BGLC Bering Glacier 5.28 38 P Pn 14 28 25.5 +1.3
baz=223
P16K Nushagak River 5.33 307 Pn 14 28 26.2 +1.2
P16K Nushagak River 5.33 307 P Pn 14 28 26.2 +1.2
baz=120
SPCP Crater Peak Br 5.34 347 Pn 14 28 25.5 +0.3
SPCG Spurr Capps Gl 5.35 348 Pn 14 28 25.3 +0.1
N19K Bonanza Creek 5.35 334 Pn 14 28 25.1 -0.2
N19K Bonanza Creek 5.35 334 P Pn 14 28 25.1 -0.2
baz=150
BERG Berg Lake 5.35 34 Pn 14 28 26.0 +0.8
SPBG Spurr Blockage 5.36 346 Pn 14 28 25.3 -0.1
KNK Knik Glacier 5.37 6 Pn 14 28 25.9 +0.4
KNK Knik Glacier 5.37 6 P Pn 14 28 25.6 +0.1
baz=188
GRIN Grindle Hills 5.39 36 Pn 14 28 26.9 +1.1
SUA Susitna One 5.41 355 Pn Pn 14 28 25.8 -0.3
SUA Susitna One 5.41 355 P Pn 14 28 25.8 -0.3
baz=174
DIV Divide 5.45 21 Pn 14 28 27.5 +0.9
SNH Sunshine Point 5.48 39 Pn 14 28 27.9 +0.9
SPNN North Nagishla 5.51 345 Pn 14 28 27.6 0.0
PMR Palmer 5.52 3 Pn 14 28 27.5 +0.1
PMR Palmer 5.52 3 P Pn 14 28 28.0 +0.5
PMR Palmer 5.52 3 P Pn 14 28 27.6 +0.1
baz=184
STLK Strandline Lak 5.53 349 Pn 14 28 27.6 -0.1
BMRM Bremner River 5.57 27 Pn 14 28 28.9 +0.7
BMRM Bremner River 5.57 27 P Pn 14 28 29.0 +0.7
baz=211
N18K Kilae Creek 5.62 327 Pn 14 28 29.1 +0.2
N18K Kilae Creek 5.62 327 P Pn 14 28 29.1 +0.2
baz=142
WAX Waxell Ridge 5.67 37 Pn 14 28 30.4 +0.7
O16K Kokwok River B 5.68 312 Pn 14 28 30.8 +1.1
O16K Kokwok River B 5.68 312 P Pn 14 28 30.8 +1.1
baz=125
GHO Glory Hole Cre 5.71 4 Pn 14 28 30.9 +0.7
CHNA Chernabura Isl 5.76 261 P Pn 14 28 30.3 -0.4
baz=74
CNBA Chernabura Isl 5.76 261 Pn 14 28 30.5 -0.3
KLU Klutina 5.76 18 Pn 14 28 31.7 +0.8
KLU Klutina 5.76 18 P Pn 14 28 31.7 +0.8
baz=202
BARK Barkley Ridge 5.76 38 Pn 14 28 31.9 +0.9
SML Sawmill 5.77 7 Pn Pn 14 28 32.0 +0.9
SML Sawmill 5.77 7 P Pn 14 28 31.7 +0.7
baz=188
MESA MESA 5.80 42 Pn 14 28 32.9 +1.3
MESA MESA 5.80 42 P Pn 14 28 32.3 +0.8
baz=228
M23K Glacier View 5.81 9 Pn 14 28 32.1 +0.7
M23K Glacier View 5.81 9 P Pn 14 28 32.2 +0.7
baz=191
CRQM Cirque 5.81 34 Pn 14 28 32.6 +1.0
CRQE Cirque 5.82 34 P Pn 14 28 32.7 +0.9
baz=220
SVW2 Sparrevohn 5.88 331 Pn Pn 14 28 32.6 +0.2
SCM Sheep Creek Mo 5.89 11 Pn 14 28 33.8 +1.2
SCM Sheep Creek Mo 5.89 11 P Pn 14 28 33.8 +1.2
baz=193
N17K Nushagak Hills 5.93 322 Pn 14 28 33.7 +0.5
N17K Nushagak Hills 5.93 322 P Pn 14 28 33.7 +0.5
baz=136
ISLE Juniper Island 5.96 38 Pn 14 28 34.2 +0.6
BAGL Bagley Icefiel 5.96 39 Pn 14 28 34.6 +1.0
SKT Skwentna 5.98 352 Pn 14 28 33.9 +0.1
SKT Skwentna 5.98 352 P Pn 14 28 33.9 +0.1
baz=170
M20K Styx River 6.07 345 Pn 14 28 35.0 -0.1
M20K Styx River 6.07 345 P Pn 14 28 35.0 -0.1
baz=162
SDPT Sand Point 6.12 267 Pn 14 28 35.9 +0.1
SDPT Sand Point 6.12 267 P Pn 14 28 36.3 +0.5
SDPT Sand Point 6.12 267 P Pn 14 28 35.9 +0.1
baz=79
N25K Chitina, Valde 6.13 24 Pn 14 28 37.4 +1.4
N25K Chitina, Valde 6.13 24 P Pn 14 28 37.4 +1.4
baz=208
GLB Gilahina Butte 6.18 27 Pn 14 28 37.4 +0.8
O15K Ungalikthiuk R 6.24 304 Pn 14 28 38.5 +1.1
O15K Ungalikthiuk R 6.24 304 P Pn 14 28 38.5 +1.1
baz=116
M18K Stony River 6.27 332 Pn 14 28 37.4 -0.4
M18K Stony River 6.27 332 P Pn 14 28 37.4 -0.4
baz=147
TABL Table Mountain 6.28 43 Pn 14 28 39.1 +1.0
M24K Tolsona, Glenn 6.30 15 Pn Pn 14 28 40.0 +1.7
M24K Tolsona, Glenn 6.30 15 P Pn 14 28 39.5 +1.3
baz=198
M19K Big River Lodg 6.30 339 Pn 14 28 38.2 -0.1
M19K Big River Lodg 6.30 339 P Pn 14 28 38.2 -0.1
baz=156
CUT Chulitna 6.33 358 Pn 14 28 39.3 +0.6
CUT Chulitna 6.33 358 P Pn 14 28 39.2 +0.6
baz=178
MCARA McCarthy VSAT 6.34 31 Pn 14 28 40.1 +1.3
MCARA McCarthy VSAT 6.34 31 P Pn 14 28 40.1 +1.3
baz=216
PTPK Patty Peak 6.35 34 Pn 14 28 40.1 +1.0
YKU2 Yakutat 6.37 53 Pn Pn 14 28 40.1 +1.0
YKU2 Yakutat 6.37 53 P Pn 14 28 41.0 +1.9
PINM Pinnacle 6.42 47 P Pn 14 28 41.2 +1.2
baz=235
N16K Nishlik Lake 6.48 316 Pn 14 28 41.9 +1.2
N16K Nishlik Lake 6.48 316 P Pn 14 28 41.9 +1.2
baz=129
BARN Barnard Glacie 6.52 37 Pn 14 28 42.5 +1.1
WACK Wrangell Chich 6.53 23 Pn 14 28 43.0 +1.4
CTG Chitna Glacier 6.56 38 P Pn 14 28 43.0 +1.1
baz=226
PNL Peninsula 6.57 53 P Pn 14 28 43.3 +1.4
PNL Peninsula 6.57 53 P Pn 14 28 42.6 +0.7
baz=241
WAT6 Susitna Watana 6.58 8 P Pn 14 28 43.1 +0.9
baz=190
LOGN Logan Glacier 6.58 40 Pn 14 28 43.2 +1.0
BCPM Bancas Point 6.60 50 Pn 14 28 43.7 +1.3
WAZA Wrangell Mount 6.65 23 Pn 14 28 45.0 +1.8
L19K White Mountain 6.65 339 Pn 14 28 42.5 -0.5
L19K White Mountain 6.65 339 P Pn 14 28 42.5 -0.5
baz=155
M17K Holitna River 6.66 326 Pn 14 28 43.8 +0.6
M17K Holitna River 6.66 326 P Pn 14 28 43.8 +0.6
baz=140
HARP HAARP 6.74 18 P Pn 14 28 45.9 +1.6
baz=202
WAT7 Susitna Watana 6.77 3 Pn 14 28 46.0 +1.2
WAT1 Susitna Watana 6.78 5 Pn 14 28 45.9 +1.1
WAT1 Susitna Watana 6.78 5 P Pn 14 28 45.9 +1.1
baz=186
PS1A Pavlof South-1 6.82 269 Pn 14 28 45.5 +0.1
N15K Kwethluk River 6.84 311 Pn 14 28 47.8 +2.2
PVV Pavlof Volcano 6.86 269 Pn 14 28 45.8 0.0
M16K Timber Creek 6.91 319 Pn 14 28 47.3 +0.8
M16K Timber Creek 6.91 319 P Pn 14 28 47.3 +0.8
baz=132
PPLA Purkeypile 6.94 351 Pn 14 28 49.4 +2.3
PPLA Purkeypile 6.94 351 P Pn 14 28 49.4 +2.3
baz=169
O14K Tigyukauivet M 6.95 302 Pn 14 28 48.5 +1.3
O14K Tigyukauivet M 6.95 302 P Pn 14 28 48.5 +1.3
baz=112
DHY Denali Highway 7.10 9 Pn 14 28 50.6 +1.3
DHY Denali Highway 7.10 9 P Pn 14 28 50.7 +1.3
baz=191
L18K Granite Mounta 7.11 333 Pn 14 28 49.1 -0.2
L18K Granite Mounta 7.11 333 P Pn 14 28 49.1 -0.2
baz=147
PAX Paxson 7.22 16 Pn 14 28 52.5 +1.5
PAX Paxson 7.22 16 P Pn 14 28 52.5 +1.5
baz=199
O29M Mount Kennedy 7.24 50 Pn 14 28 52.8 +1.6
O29M Mount Kennedy 7.24 50 P Pn 14 28 52.8 +1.6
baz=239
P29M Windy Craggy 7.30 56 Pn 14 28 52.8 +0.8
P29M Windy Craggy 7.30 56 P Pn 14 28 52.8 +0.8
baz=246
YUK2 White River 7.32 35 Pn 14 28 54.2 +1.9
YUK8 Steele Glacier 7.34 41 Pn 14 28 54.8 +2.1
YUK8 Steele Glacier 7.34 41 P Pn 14 28 54.8 +2.1
baz=229
RND Reindeer 7.35 3 Pn 14 28 53.9 +1.3
TRF Thorofare Moun 7.38 358 Pn Pn 14 28 53.5 +0.3
TRF Thorofare Moun 7.38 358 P Pn 14 28 53.6 +0.4
baz=178
CAST Castle Rocks 7.44 352 Pn Pn 14 28 54.3 +0.5
CAST Castle Rocks 7.44 352 P Pn 14 28 54.2 +0.3
baz=170
M27K Edge Creek, AK 7.45 29 Pn 14 28 55.7 +1.6
M27K Edge Creek, AK 7.45 29 P Pn 14 28 55.7 +1.6
baz=216
L17K Donlin 7.49 327 Pn 14 28 55.1 +0.6
L17K Donlin 7.49 327 P Pn 14 28 55.1 +0.6
baz=140
KTH Kantishna Hill 7.51 356 Pn 14 28 55.4 +0.5
MENT Mentasta 7.51 21 Pn 14 28 56.2 +1.4
L16K Owhat River 7.56 322 Pn Pn 14 28 55.8 +0.4
TTA Tatalina 7.56 338 Pn 14 28 55.9 +0.3
TTA Tatalina 7.56 338 P Pn 14 28 56.7 +1.1
TTA Tatalina 7.56 338 P Pn 14 28 55.9 +0.3
baz=152
S31K Pelican 7.59 70 Pn Pn 14 28 54.9 -1.0
S31K Pelican 7.59 70 P Pn 14 28 54.5 -1.4
baz=261
K20K Telida 7.61 345 Pn 14 28 55.5 -0.7
MCK McKinley 7.67 3 Pn 14 28 58.5 +1.5
MCK McKinley 7.67 3 P Pn 14 28 58.5 +1.5
baz=183
YUK6 Outpost Mounta 7.67 46 Pn 14 28 59.2 +2.0
YUK6 Outpost Mounta 7.67 46 P Pn 14 28 59.3 +2.0
baz=236
YUK4 Talbot Arm 7.80 43 P Pn 14 29 02.2 +3.3
baz=232
P30M Million Dollar 7.87 54 Pn 14 29 01.4 +1.6
P30M Million Dollar 7.87 54 P Pn 14 29 01.4 +1.6
baz=245
FALS False Pass 7.88 267 Pn 14 29 00.1 +0.2
FALS False Pass 7.88 267 P Pn 14 29 00.3 +0.4
FALS False Pass 7.88 267 P Pn 14 29 00.1 +0.2
baz=76
PLBC Pleasant Camp 7.89 59 Pn 14 29 01.2 +1.2
PLBC Pleasant Camp 7.89 59 P Pn 14 29 01.3 +1.2
baz=250
CHUM Lake Minchumin 7.92 352 Pn 14 29 00.1 -0.3
CHUM Lake Minchumin 7.92 352 P Pn 14 29 00.1 -0.3
baz=170
M14K Bethel 7.94 311 Pn Pn 14 29 02.2 +1.6
K17K Iditarod 7.95 330 Pn 14 29 00.4 -0.4
K17K Iditarod 7.95 330 P Pn 14 29 00.4 -0.4
baz=143
HYT Haines Junctio 7.96 48 Pn 14 29 02.4 +1.3
HYT Haines Junctio 7.96 48 P Pn 14 29 02.4 +1.3
baz=239
YUK5 Granite Creek 7.98 46 Pn 14 29 03.7 +2.3
SIT Sitka 8.01 77 Pn 14 28 59.2 -2.4
SIT Sitka 8.01 77 P Pn 14 29 00.3 -1.3
SIT Sitka 8.01 77 P Pn 14 28 59.2 -2.4
baz=269
L27K Beaver Creek, 8.05 27 Pn 14 29 03.7 +1.5
L27K Beaver Creek, 8.05 27 P Pn 14 29 03.7 +1.5
baz=213
RIDG Independent Ri 8.05 16 Pn 14 29 03.9 +1.7
RIDG Independent Ri 8.05 16 P Pn 14 29 03.9 +1.7
baz=200
BCAR Beaver Creek A 8.06 27 Pn Pn 14 29 04.8 +2.3
ISLZ Isanotski Laza 8.08 266 Pn 14 29 02.6 0.0
ISNN Isanotski Nort 8.09 267 Pn 14 29 03.2 +0.4
J18K Innoko River 8.19 337 Pn 14 29 04.3 +0.2
J18K Innoko River 8.19 337 P Pn 14 29 04.3 +0.2
baz=152
SSLS Shishaldin Sou 8.25 266 Pn 14 29 05.3 +0.4
M13K Dall Lake 8.38 307 Pn 14 29 08.3 +1.6
M13K Dall Lake 8.38 307 P Pn 14 29 08.3 +1.6
baz=115
SKAG Skagway 8.39 60 Pn 14 29 07.8 +0.9
SKAG Skagway 8.39 60 P Pn 14 29 08.3 +1.4
SKAG Skagway 8.39 60 P Pn 14 29 07.8 +0.9
baz=252
J20K Nowinta River 8.40 347 Pn 14 29 06.9 -0.1
J20K Nowinta River 8.40 347 P Pn 14 29 06.9 -0.1
baz=163
SCRK Sand Creek 8.41 18 Pn Pn 14 29 07.3 +0.1
SCRK Sand Creek 8.41 18 P Pn 14 29 08.6 +1.4
baz=203
S32K Killisnoo 8.43 74 Pn Pn 14 29 06.5 -0.9
S32K Killisnoo 8.43 74 P Pn 14 29 05.9 -1.5
baz=267
WRH Wood River Hil 8.44 5 Pn Pn 14 29 08.4 +0.8
J19K Poorman 8.45 342 Pn 14 29 06.7 -1.0
HDA Harding Lake 8.45 8 Pn 14 29 09.0 +1.3
NEA2 Nenana 8.53 2 Pn 14 29 09.8 +1.0
NEA2 Nenana 8.53 2 P Pn 14 29 09.8 +1.0
baz=183
R32K Eaglecrest 8.54 69 Pn Pn 14 29 09.3 +0.4
O30N Mendenhall 8.54 51 Pn Pn 14 29 10.5 +1.5
O30N Mendenhall 8.54 51 P Pn 14 29 10.4 +1.5
baz=243
L14K Kuka Creek 8.54 313 Pn Pn 14 29 10.7 +1.8
baz=122
M29M Somme Creek 8.58 38 Pn 14 29 11.3 +1.8
M29M Somme Creek 8.58 38 P Pn 14 29 11.3 +1.8
baz=227
JIS Juneau Island 8.61 69 Pn 14 29 10.0 +0.2
JIS Juneau Island 8.61 69 P Pn 14 29 10.4 +0.5
CCB Clear Creek Bu 8.63 6 Pn 14 29 11.3 +1.2
K15K Wolf Creek Mou 8.67 321 Pn Pn 14 29 11.9 +1.2
J25K Salcha River, 8.81 12 Pn 14 29 13.5 +0.9
J25K Salcha River, 8.81 12 P Pn 14 29 13.5 +0.9
baz=196
IL31 8.81 8 Pn Pn 14 29 14.2 +1.6
ILAR Eielson Array 8.81 8 Pn 14 29 14.4 +1.7
ILAR Eielson Array 8.81 8 Pn Pn 14 29 14.1 +1.4
comp=N,1.4nm,0.3s,baz=189,slow=13,SNR=59
ILAR Sn Sn 14 30 47.1 -4.8
comp=N,0.7nm,0.3s,baz=189,slow=23,SNR=5.5
ILAR LR LR 14 32 43.4
comp=N,50nm,18.2s,baz=14,slow=38
K27K Chicken 8.82 22 Pn 14 29 14.1 +1.3
K27K Chicken 8.82 22 P Pn 14 29 14.0 +1.3
baz=209
COLA College 8.86 5 Pn 14 29 14.3 +1.1
COLA College 8.86 5 P Pn 14 29 14.8 +1.6
MDM Murphy Dome 8.92 4 Pn 14 29 14.3 +0.1
MLY Manley 8.98 357 Pn Pn 14 29 14.6 -0.3
N31M Braeburn, Yuko 9.02 48 Pn Pn 14 29 17.2 +1.6
N31M Braeburn, Yuko 9.02 48 P Pn 14 29 17.0 +1.4
baz=239
WHY Whitehorse 9.03 53 Pn 14 29 17.2 +1.4
WHY Whitehorse 9.03 53 P Pn 14 29 17.1 +1.4
baz=246
J16K Anvik River 9.06 327 Pn 14 29 16.4 +0.5
J16K Anvik River 9.06 327 P Pn 14 29 16.4 +0.5
baz=138
I23K Minto, Yukon-K 9.09 1 Pn Pn 14 29 17.2 +0.8
I23K Minto, Yukon-K 9.09 1 P Pn 14 29 17.0 +0.7
baz=181
POKR Poker Plat Res 9.12 6 Pn 14 29 18.5 +1.7
POKR Poker Plat Res 9.12 6 P Pn 14 29 18.5 +1.7
baz=188
L29M L29M 9.15 35 Pn 14 29 18.7 +1.3
L29M L29M 9.15 35 P Pn 14 29 18.7 +1.3
baz=225
I21K Tanana 9.18 354 Pn 14 29 19.0 +1.3
P32M Atlin 9.22 61 P Pn 14 29 19.2 +0.9
baz=255
M30M Minto, Yukon 9.25 40 Pn Pn 14 29 20.3 +1.6
M30M Minto, Yukon 9.25 40 P Pn 14 29 20.2 +1.5
baz=231
U33K Whale Pass 9.28 83 Pn Pn 14 29 17.3 -1.7
CRAG Craig 9.38 87 Pn Pn 14 29 17.8 -2.5
CRAG Craig 9.38 87 P Pn 14 29 18.8 -1.5
CRAG Craig 9.38 87 P Pn 14 29 19.3 -1.0
baz=280
DAWY Dawson 9.50 29 Pn 14 29 23.5 +1.4
K13K Kusilvak Mount 9.66 313 Pn Pn 14 29 25.1 +1.0
PRP Porcupine Dome 9.67 10 Pn Pn 14 29 26.6 +2.1
PRP Porcupine Dome 9.67 10 P Pn 14 29 26.2 +1.7
baz=194
WRAK Wrangell Islan 9.68 81 Pn Pn 14 29 24.8 +0.4
H24K Noodor Dome 9.81 4 Pn 14 29 28.2 +1.8
P33M Teslin, Yukon 9.83 58 Pn Pn 14 29 27.5 +0.8
P33M Teslin, Yukon 9.83 58 P Pn 14 29 27.6 +1.0
baz=252
K29M Barlow Dome 9.87 33 Pn Pn 14 29 29.0 +1.8
K29M Barlow Dome 9.87 33 P Pn 14 29 29.8 +2.6
baz=224
UNV Unalaska Valle 9.91 264 P Pn 14 29 26.8 -0.9
H19K Roundabout Mou 10.01 344 Pn Pn 14 29 30.1 +1.1
IMAR Indian Mountai 10.11 351 Pn Pn 14 29 29.4 -1.0
V35K Ketchikan 10.25 87 Pn Pn 14 29 29.4 -2.8
S34M Telegraph Cree 10.30 72 Pn Pn 14 29 33.3 +0.3
FARO Faro, Yukon 10.39 47 Pn Pn 14 29 36.3 +2.0
DIB Dawson Inlet, 10.40 99 Pn Pn 14 29 33.2 -1.2
I28M Miner Creek 10.51 23 Pn 14 29 38.6 +2.6
G21K Allakaket 10.61 352 Pn Pn 14 29 37.2 0.0
FYU Fort Yukon 10.72 10 Pn Pn 14 29 39.8 +1.1
DLBC Dease Lake 10.91 69 Pn Pn 14 29 42.4 +0.9
DLBC Dease Lake 10.91 69 P Pn 14 29 42.1 +0.6
comp=N,2.1nm,0.3s,baz=254,slow=8.4,SNR=34
DLBC Sn Sn 14 31 41.0 -2.4
baz=186,slow=27
DLBC LR LR 14 33 23.1
comp=N,47nm,21.7s,baz=302,slow=35
comp=N,5.9nm,0.4s
ANM Nome 11.46 324 Pn Pn 14 29 50.4 +1.5
BMAR Burnt Mountain 11.62 10 Pn Pn 14 29 52.2 +1.1
WTLY Watson Lake, Y 11.76 61 Pn Pn 14 29 53.5 +0.5
E22K Anaktuvuk Pass 12.12 356 Pn 14 29 58.5 +0.6
E25K Arctic Village 12.22 7 Pn Pn 14 30 00.4 +1.2
TOLK Toolik Lake Re 12.59 0 Pn Pn 14 30 05.8 +1.4
F31M Tsiigehtchic 13.60 27 Pn Pn 14 30 19.0 +1.0
INK Inuvik 14.32 25 Pn Pn 14 30 29.5 +1.7
comp=N,0.1nm,0.3s,baz=202,slow=14,SNR=13
comp=N,3.7nm,1.0s
FLDN Fort Liard 14.41 62 Pn Pn 14 30 29.0 -0.1
HILA High Level 17.73 68 Pn Pn 14 31 09.3 -2.7
YKA Yellowknife Ar 18.85 56 P P 14 31 25.3 +0.2
YKA Yellowknife Ar 18.85 56 P Pn 14 31 27.0 +1.4
comp=N,0.1nm,0.3s,baz=266,slow=10.0,SNR=29
comp=N,1.9nm,0.9s
A36M Sachs Harbour 18.95 23 P Pn 14 31 28.1 +1.4
A36M IAmb IAmb 14 31 40.5
comp=Z,10nm,0.8s
SHEM Shemya Is, Ala 21.16 276 LR LR 14 39 35.3
comp=Z,35nm,19.6s,baz=192,slow=35
NEW Newport 21.30 98 P P 14 31 50.0 -2.0
NEW Newport 21.30 98 LR LR 14 38 58.0
comp=Z,33nm,18.2s,baz=336,slow=34
BILL Bilibino 23.22 318 P P 14 32 13.1 +1.0
BILL IAmb IAmb 14 32 18.1
comp=Z,7.4nm,1.4s
HOPS Hopland Field 24.59 123 P P 14 32 24.3 -1.1
HOPS IAmb IAmb 14 32 51.3
comp=Z,31nm,1.2s
NVAR Mina Array Bea 27.34 117 P P 14 32 51.5 +1.0
comp=Z,0.3nm,0.6s,baz=305,slow=9.8,SNR=2.4
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 28.87 100 P P 14 33 05.3 +1.1
comp=Z,0.5nm,0.6s,baz=318,slow=5.0,SNR=7.1
comp=Z,0.5nm,0.6s
TXAR Lajitas Array 41.99 110 P P 14 34 57.4 +0.8
comp=Z,0.5nm,0.8s,baz=324,slow=6.2,SNR=5.3
comp=Z,0.5nm,0.8s
H11N2 WAKE ISLAND Hy 48.58 240 T T 15 28 04.6
baz=31,slow=76,SNR=9.6
H11N3 WAKE ISLAND Hy 48.58 240 T T 15 28 10.7
baz=31,slow=76,SNR=10
H11N1 WAKE ISLAND Hy 48.59 240 T T 15 28 15.7
baz=31,slow=76,SNR=8.3
H11S1 WAKE ISLAND Hy 49.72 239 T T 15 29 39.4
baz=30,slow=76,SNR=9.0
H11S2 WAKE ISLAND Hy 49.73 239 T T 15 29 36.1
baz=30,slow=76,SNR=7.4
H11S3 WAKE ISLAND Hy 49.74 239 T T 15 29 31.6
baz=30,slow=76,SNR=7.0
SONM Songino Array 58.57 310 P P 14 37 04.3 +2.3
comp=Z,0.9nm,0.8s,baz=53,slow=5.7,SNR=4.2
comp=Z,0.9nm,0.8s
ZALV Zalesovo Beam 61.58 327 P P 14 37 24.1 +1.7
comp=Z,0.9nm,0.5s,baz=29,slow=7.1,SNR=5.5
comp=Z,0.9nm,0.5s
HHC Hu-ho-hao-te 61.63 302 eP P 14 37 23.1 +0.1
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,150nm,4.7s
FINES FINESS Array B 62.75 2 P P 14 37 30.1 +0.1
FINES FINESS Array B 62.75 2 P P 14 37 31.2 +1.1
comp=Z,1.3nm,0.7s,baz=11,slow=7.8,SNR=6.2
comp=Z,1.3nm,0.7s
HFS Hagfors 63.37 9 P P 14 37 35.4 +1.3
comp=Z,3.6nm,0.9s,baz=270,slow=2.9,SNR=4.3
comp=Z,3.6nm,0.9s
BVAR Borovoye Array 66.35 335 P P 14 37 55.2 +1.5
comp=Z,1.4nm,0.7s,baz=38,slow=7.5,SNR=8.3
comp=Z,1.4nm,0.7s
KURBB Kurchatov Arra 66.37 329 P P 14 37 55.3 +1.4
comp=Z,0.3nm,0.3s,baz=30,slow=6.7,SNR=2.9
comp=Z,0.3nm,0.3s
MKAR Makanchi Array 68.60 324 P P 14 38 09.3 +1.2
comp=Z,0.8nm,0.8s,baz=32,slow=6.7,SNR=6.3
comp=Z,0.8nm,0.8s
LZH Lanzhou 69.07 304 eP P 14 38 09.8 -1.5

LZH				pP	pwP	14 38 17.4	-2.0		
LZH				pmax	pmax				
	comp=Z,5.0nm,1.0s								
QSPA	**South Pole Qui**	**145.89**	**180**	PKPbc	**PKiKP**	**14 46 44.7**	**-2.2**		
	comp=Z,2.8nm,1.2s,baz=0.0,slow=3.0,SNR=1.9								

*IDC **10** 14:32:20.2±1.0, 1°.00N×127°.05E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=58.7km s-min=18.3km az=72.0*
*DJA **10** 14:32:25.3±0.7, 1°.1N±6°×12°.7E±°, h15km±6km, M4.1/10, mb4.2/3, mB5.6/2, MLv4.1/10, Mw(mB)5.0/2*
ISC 10 14:32:25.6±0.8, 0°.97N±0°.07×126°.92E±0°.07, h35km, n15, σ1°89/18, mb4.0/7, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.49**	**114**	P	**Pn**	**14 32 36.8**	**+0.7**
LBMI	**Labuha**	**1.70**	**160**	P	**Pn**	**14 32 54.4**	**+1.6**
LBMI				S	**Sn**	**14 33 16.4**	**+3.1**
KMSI	**Cibinong**	**2.97**	**262**	P	**Pn**	**14 33 11.9**	**+1.7**
SANI	**Sanana**	**3.14**	**197**	P	**Pn**	**14 33 12.4**	**-0.3**
NLAI	**Namlea**	**4.18**	**178**	P	**Pn**	**14 33 28.1**	**+1.1**
LUWI	**Luwuk**	**4.61**	**244**	P	**Pn**	**14 33 34.2**	**+1.4**
FAKI	**Fak Fak**	**6.58**	**126**	P	**Pn**	**14 34 02.3**	**+2.3**
	28nm,1.6s,0.1nm						
TTSI	**Tana Toraja**	**8.14**	**241**	P	**Pn**	**14 34 21.2**	**-0.2**
WRA	**Warramunga Arr**	**22.02**	**161**	P	**P**	**14 37 16.2**	**-1.0**
	2.4nm,0.3s,baz=339,slow=11,SNR=44						
WRA				S	**S**	**14 41 14.4**	**-4.0**
	0.4nm,0.6s,baz=321,slow=17,SNR=5.0						
	2.4nm,0.3s						
ASAR	**Alice Springs**	**25.41**	**165**	P	**P**	**14 37 49.7**	**-0.4**
	2.6nm,0.5s,baz=344,slow=11,SNR=65						
ASAR				S	**S**	**14 42 11.6**	**-3.2**
	0.4nm,0.8s,baz=350,slow=20,SNR=2.8						
	2.6nm,0.5s						
MJAR	**Matsushiro Arr**	**36.91**	**15**	P	**P**	**14 39 29.8**	**-1.4**
	1.6nm,0.8s,baz=189,slow=9.1,SNR=5.6						
	1.6nm,0.8s						
SONM	**Songino Array**	**49.96**	**342**	P	**P**	**14 41 17.2**	**+0.8**
	0.5nm,0.6s,baz=138,slow=6.7,SNR=2.2						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.93**	**326**	P	**P**	**14 42 28.5**	**+0.1**
	0.3nm,0.3s,baz=116,slow=7.9,SNR=15						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**64.16**	**328**	P	**P**	**14 42 56.4**	**-0.2**
	0.5nm,0.4s,baz=127,slow=6.2,SNR=5.1						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**69.73**	**328**	P	**P**	**14 43 32.5**	**+0.5**
	0.3nm,0.4s,baz=115,slow=9.7,SNR=2.5						
	0.3nm,0.4s						

WEL 10 14:38:23.4±1.0, 32°S±7°×178°0W±1°7, h378km±14km, M4.2/10, mB4.4/7, ML4.6/10, MLv4.8/10, Mw(mB)3.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=107.5, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.85**	**37**	P	Pn	14 39 21.6	-2.1
GLKZ				S	S	14 40 13.3	+1.0
MXZ	**Matakaoa Point**	**6.17**	**194**	P	Pn	14 39 58.4	+1.5
MXZ				S	S	14 41 16.2	+3.2
WMGZ	**Waiomatatini S**	**6.39**	**192**	P	Pn	14 40 01.4	+2.0
WMGZ				S	S	14 41 19.5	+1.8
HAZ	**Te Kaha**	**6.47**	**197**	P	Pn	14 40 00.3	+0.1
HAZ				S	S	14 41 19.8	+0.6
WCZ	**Waipu Caves**	**6.50**	**226**	P	Pn	14 40 01.7	+1.0
PKGZ	**Pakihiroa**	**6.53**	**194**	P	P	14 40 03.6	+1.6
PKGZ				S	S	14 41 19.8	-0.8
OUZ	**Omahuta**	**6.57**	**235**	P	Pn	14 40 01.7	+0.2
RUGZ	**Raukumara Rang**	**6.69**	**197**	P	Pn	14 40 03.1	+0.2
RUGZ				S	S	14 41 21.8	-2.3
TWGZ	**Tauwhareparae**	**6.82**	**194**	P	P	14 40 05.4	+0.1
TWGZ				S	S	14 41 27.9	+1.1
MARZ	**Manawahe**	**7.00**	**203**	P	Pn	14 40 03.3	-3.1
MWZ	**Matawai**	**7.08**	**197**	P	Pn	14 40 06.8	-0.5
MWZ				S	S	14 41 32.7	+0.6
TKGZ	**Te Karaka**	**7.11**	**195**	P	P	14 40 08.1	-0.3
TKGZ				S	S	14 41 32.1	-0.5
URZ	**Urewera**	**7.12**	**200**	P	Pn	14 40 05.8	-1.8
URZ				S	S	14 41 31.7	-1.1
TOZ	**Tahuroa Road**	**7.23**	**211**	P	P	14 40 11.0	+1.0
RIGZ	**Rimuhau**	**7.38**	**195**	P	Pn	14 40 10.9	+0.1
RIGZ				S	S	14 41 37.2	-1.3
MUGZ	**Murupara**	**7.42**	**201**	P	Pn	14 40 09.6	-1.6
MUGZ				S	S	14 41 39.9	+0.6
RTZ	**Ruatahuna**	**7.49**	**199**	P	Pn	14 40 11.5	-0.5
RTZ				S	S	14 41 42.0	+1.2
SNGZ	**Shannon Statio**	**7.55**	**197**	P	Pn	14 40 13.0	+0.3
SNGZ				S	S	14 41 41.1	-0.9

*TRN **10** 15:02:11.3, 10°.80N×62°.16W, h39km, MD3.2, North of the Paria peninsula.*
*FUNV **10** 15:02:12.2, 10°.76N×62°.03W, h62km, MW3.6*
ISC 10 15:02:08.7±1.5, 10°.72N±0°.04×62°.04W±0°.05, h95km±13km, n17, σ2s00/33, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.63**	**96**	*e*P	**Pn**	**15 02 25.8**	**+0.8**
TRN				*e*S	**Sn**	**15 02 35.5**	**-1.8**
TPP	**Pointe-a-Pierr**	**0.71**	**124**	*e*P	**Pn**	**15 02 27.6**	**+1.9**
TPP				*e*S	**Sn**	**15 02 38.2**	**-0.3**
CRUV	**Carupano**	**1.17**	**268**	ǁ *i* P	**Pn**	**15 02 31.1**	**+0.3**
CRUV				*e*S	**Sn**	**15 02 45.9**	**-1.5**
GRFF	**Grenada Fort F**	**1.36**	**13**	*e*P	**Pn**	**15 02 32.8**	**-0.2**
GRFF				*e*S	**Sn**	**15 02 49.9**	**-1.4**
GRGR	**Grenville**	**1.46**	**15**	*e*P	**Pn**	**15 02 34.8**	**+0.5**
GRGR				*e*S	**Sn**	**15 02 52.4**	**-1.1**
GRHS	**Sauteurs**	**1.55**	**15**	*e*P	**Pn**	**15 02 36.3**	**+1.0**
GRHS				*e*S	**Sn**	**15 02 54.0**	**-1.5**
GCMP	**Grenada, Carri**	**1.86**	**19**	*e*P	**Pn**	**15 02 41.0**	**+1.7**
GCMP				*e*S	**Sn**	**15 03 02.2**	**-0.3**
CUMV	**Cumana_UDO**	**2.13**	**262**	*e*P	**Pn**	**15 02 45.4**	**+2.5**
CUMV				*e*S	**Sn**	**15 03 10.1**	**+1.1**
PCRV	**Puerto La Cruz**	**2.61**	**258**	*e*P	**Pn**	**15 02 51.7**	**+2.5**
PCRV				*e*S	**Sn**	**15 03 20.0**	**-0.3**
MERV	**Las Mercedes**	**4.44**	**251**	*e*P	**Pn**	**15 03 16.2**	**+2.4**
MERV				*e*S	**Sn**	**15 04 03.4**	**-0.9**
LUEV	**Luepa**	**4.88**	**173**	*e*P	**Pn**	**15 03 22.0**	**+2.0**
LUEV				*e*S	**Sn**	**15 04 13.3**	**-2.1**
TACV	**Tcata**	**4.94**	**264**	*e*P	**Pn**	**15 03 23.4**	**+2.8**
TACV				*e*S	**Sn**	**15 04 14.2**	**-2.4**
CACV	**CAICARA DEL OR**	**5.43**	**235**	*e*P	**Pn**	**15 03 24.3**	**-3.1**
CACV				*e*S	Sn	15 03 17.2	-11
BENV	**Beln**	**5.52**	**263**	*e*P	**Pn**	**15 03 31.1**	**+2.6**
BENV				*e*S	**Sn**	**15 04 28.2**	**-2.6**
TURV	**Turiamo**	**5.71**	**268**	*e*P	**Pn**	**15 03 33.1**	**+2.1**
TURV				*e*S	**Sn**	**15 04 32.2**	**-3.0**
BAUV	**El Baul**	**6.17**	**254**	*e*P	**Pn**	**15 03 38.8**	**+1.5**
BAUV				*e*S	**Sn**	**15 04 43.6**	**-2.9**
BAUV	**El Baul**	**6.17**	**254**	*e*P	**Pn**	**15 03 39.4**	**+2.0**
BAUV				*e*S	**Sn**	**15 04 44.5**	**-2.1**

*BUL **10** 15:08:21.6±0.7, 18°.28S×26°.28E, h10km, MD3.3*
EAF 10 15:08:21.7±4.7, 18°.21S×26°.23E, h10km, MD3.3, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLWY	**Bulawayo**	**2.96**	**131**	*i* P	Pn	15 09 07.7	-1.2
BLWY				*i* S	Sn	15 09 41.0	-3.6
BLWY	**Bulawayo**	**2.96**	**131**	*i* P	Pn	15 09 07.7	-1.2
BLWY				*i* S	Sn	15 09 41.0	-3.6
LSZ	**Lusaka**	**3.47**	**33**	*i* P	Pn	15 09 15.7	-0.3
LSZ				*i* S	Sn	15 09 55.5	-1.7
LSZ	**Lusaka**	**3.47**	**33**	*i* P	Pn	15 09 15.7	-0.3
LSZ				*i* S	Sn	15 09 55.5	-1.7
KRI	**Karoi**	**3.51**	**68**	*i* P	Pn	15 09 18.9	+2.4
KRI				*i* S	Sn	15 09 59.5	+1.2
KRI	**Karoi**	**3.51**	**68**	*i* P	Pn	15 09 18.9	+2.4
KRI				*i* S	Sn	15 09 59.5	+1.2
MUSN	**Musina, Limpop**	**5.30**	**141**	*i* P	Pn	15 09 38.6	-2.4
MUSN				*i* S	Sn	15 10 35.2	-7.0
MUSN	**Musina, Limpop**	**5.30**	**141**	*i* P	Pn	15 09 38.6	-2.4
MUSN				*i* S	Sn	15 10 35.2	-7.0
LBTB	**Lobatse**	**6.80**	**185**	*i* P	Pn	15 09 59.8	-1.9
LBTB	**Lobatse**	**6.80**	**185**	*i* P	Pn	15 09 59.8	-1.9
MOPA	**Mopani**	**7.16**	**138**	*i* P	Pn	15 10 08.8	+2.2
MOPA				*i* S	Sn	15 11 28.6	+0.6
MOPA	**Mopani**	**7.16**	**138**	*i* P	Pn	15 10 08.8	+2.2
MOPA				*i* S	Sn	15 11 28.6	+0.6
BOSA	**Boshof**	**10.39**	**185**	*i* P	Pn	15 10 47.6	-3.4
BOSA	**Boshof**	**10.39**	**185**	*i* P	Pn	15 10 47.6	-3.4

*IDC **10** 15:15:33.0±2.4, 14°.55N×90°.85W, h84km±18km, mb3.6/9, mbtmp4.0/12, MS3.2/9, Error ellipse: s-maj=35.4km s-min=15.2km az=30.0*
*SNET **10** 15:15:32.8±1.1, 14°.47N×91°.19W, h95km±16km, ML4.5*
*NEIC **10** 15:15:32.6±2.2, 14°.2N±0°.1×91°.23W±0°.07, h83km±8km, mb4.3/31, Error ellipse: s-maj=16.5km s-min=6.6km az=209.0*
*CATAC **10** 15:15:33.1±0.4, 14°.01N×91°.41W, h64km±8km, ML4.8*
*GCG **10** 15:15:35.9±0.4, 14°.35N×91°.27W, h63km±11km, MD4.2*
ISC 10 15:15:32.4±0.7, 14°.17N±0°.05×91°.33W±0°.04, h92km±5km, n139, σ1s43/154, mb4.2/20, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.26**	**300**	*e*P	**Pn**	**15 15 46.3**	**+0.5**
RTAL	**Retalhuleu**	**0.50**	**315**	Pn	**Pn**	**15 15 46.9**	**-0.5**
RTAL				Sn	**Sn**	**15 15 57.9**	**-0.6**
RTAL	**Retalhuleu**	**0.50**	**315**	*i* P	**Pn**	**15 15 46.9**	**-0.5**
RTAL				*i* S	**Sn**	**15 15 58.1**	**-0.4**
RTAL				IAML		15 16 07.8	
	comp=Z,68μm,1.0s						
FUG	**Fuego 3**	**0.55**	**60**	*e*P	**Pn**	**15 15 48.1**	**+0.2**
STG3	**Santiaguito 3,**	**0.58**	**336**	*e*P	**Pn**	**15 15 48.4**	**+0.1**
PCG	**Pacaya**	**0.73**	**73**	*e*P	**Pn**	**15 15 50.4**	**+0.7**
GUMI	**Mixco**	**0.83**	**57**	*i* P	**Pn**	**15 15 50.7**	**+0.1**
GUMI				*i* S	**Sn**	**15 16 05.5**	**+1.2**
GUMI				IAML		15 16 12.4	
	comp=Z,39μm,1.0s						
GCG4	**OSOP**	**0.88**	**62**	*i* P	**Pn**	**15 15 51.3**	**+0.2**
GCG4				*i* S	**Sn**	**15 16 07.0**	**+2.0**
GCG4				IAML		15 16 16.0	
	comp=Z,15μm,1.0s						
SMSP	**San Marcos**	**0.91**	**331**	*i* P	**Pn**	**15 15 52.0**	**+0.4**
SMSP				*i* S	**Sn**	**15 16 06.8**	**+0.9**
SMSP				IAML		15 16 11.9	
	comp=Z,67μm,1.0s						
SMCA	**Catarina**	**0.99**	**313**	*i* P	**Pn**	**15 15 52.4**	**+0.2**
SMCA				*i* S	**Sn**	**15 16 07.1**	**+0.1**
SMCA				IAML		15 16 07.6	
	comp=Z,32μm,1.0s						
NBG	**Las Nubes**	**1.04**	**66**	*e*P	**Pn**	**15 15 54.2**	**+1.3**
GUNB	**GUNB**	**1.04**	**66**	*i* P	**Pn**	**15 15 53.4**	**+0.4**
GUNB				*i* S	**Sn**	**15 16 10.0**	**+1.5**
GUNB				IAML		15 16 14.2	
	comp=Z,12μm,1.0s						
QUIS	**Sacapulas**	**1.14**	**12**	*i* P	**Pn**	**15 15 54.9**	**+0.9**
QUIS				IAML		15 15 57.1	
	comp=Z,12μm,1.0s						
QUIS				*i* S	**Sn**	**15 16 12.0**	**+1.8**
HUEH	**Huehuetenango**	**1.15**	**352**		**Pn**	**15 15 55.3**	**+1.0**
HUEH	**Huehuetenango**	**1.15**	**352**	*i* P	**Pn**	**15 15 55.3**	**+1.0**
HUEH				IAML		15 15 55.6	
	comp=Z,26μm,1.0s						
HUEH				*i* S	**Sn**	**15 16 12.9**	**+2.3**
LOAL	**Lomas de Alarc**	**1.51**	**96**	*i* P	**Pn**	**15 15 58.7**	**+0.3**
LOAL				IAML		15 16 22.3	
	comp=Z,12μm,1.0s						
NUBE	**Las Nubes**	**1.53**	**100**	*e*P	**Pn**	**15 15 58.8**	**+0.1**
NUBE				*e*S	**Sn**	**15 16 18.2**	**-0.5**
NUBE				IAML		15 16 21.2	
	comp=Z,3μm,0.5s						
NUBE	**Las Nubes**	**1.53**	**100**	*i* P	**Pn**	**15 15 59.0**	**+0.3**
NUBE				*i* S	**Sn**	**15 16 19.0**	**+0.3**
NUBE				IAML		15 16 21.0	
	comp=Z,7μm,1.0s						
RTR	**El Retiro**	**1.66**	**99**	*e*P	**Pn**	**15 16 01.2**	**+0.8**
SBLS	**San Blas**	**1.69**	**101**	*e*P	**Pn**	**15 16 02.0**	**+1.1**
SBLS				*e*S	**Sn**	**15 16 24.2**	**+1.7**
CEVE	**Cerro Verde**	**1.69**	**101**	*e*P	**Pn**	**15 16 01.8**	**+0.9**
CEVE				*e*S	**Sn**	**15 16 23.9**	**+1.3**
CEVE				IAML		15 16 30.0	
	comp=Z,10μm,0.4s						
CEVE	**Cerro Verde**	**1.69**	**101**	*i* P	**Pn**	**15 16 02.0**	**+1.1**
CEVE				IAML		15 16 29.7	
	comp=Z,11μm,1.0s						
SNJE	**San Jose**	**1.70**	**100**	*e*P	**Pn**	**15 16 01.5**	**+0.5**
UNIC	**Universidad Ca**	**1.74**	**96**	*i* P	**Pn**	**15 16 01.8**	**+0.5**
UNIC				IAML		15 16 30.7	
	comp=Z,1μm,1.0s						
MRL	**Marmol**	**1.83**	**60**	*e*P	**Pn**	**15 16 04.2**	**+1.5**
JAYA	**Jayaque - finc**	**1.90**	**106**	*e*P	**Pn**	**15 16 04.1**	**+0.6**
JAYA				*e*S	**Sn**	**15 16 27.6**	**+0.5**
JAYA				*e*S		15 16 28.1	
JAYA	**Jayaque - finc**	**1.90**	**106**	*i* P	**Pn**	**15 16 03.7**	**+0.2**
JAYA				IAML		15 16 28.3	
	comp=Z,8μm,1.0s						
ESQI	**Esquipulas**	**1.96**	**78**		**Pn**	**15 16 04.6**	**+0.3**
ESQI				Sn	**Sn**	**15 16 25.4**	**-3.2**
ESQI	**Esquipulas**	**1.96**	**78**	*i* P	**Pn**	**15 16 05.7**	**+1.4**
ESQI				IAML		15 16 40.6	
	comp=Z,2μm,1.0s						
PMON	**Piamonte**	**2.01**	**103**	*i* P	**Pn**	**15 16 05.3**	**+0.4**
PMON				IAML		15 16 42.4	
	comp=Z,4μm,1.0s						
QUEZ	**Alcaldia de Qu**	**2.02**	**99**	*i* P	**Pn**	**15 16 07.5**	**+2.5**
BOQS	**Boqueron**	**2.04**	**102**	*e*P	**Pn**	**15 16 06.3**	**+0.9**
BOQS				*e*S	**Sn**	**15 16 32.9**	**+2.4**
PIC2	**El Picacho**	**2.06**	**102**	*e*P	**Pn**	**15 16 05.8**	**+0.1**
LALI	**Alcalda de L**	**2.07**	**109**	*e*P	**Pn**	**15 16 06.2**	**+0.7**
LALI	**Alcalda de L**	**2.07**	**109**	*i* P	**Pn**	**15 16 06.0**	**+0.5**
LALI				IAML		15 16 32.6	
	comp=Z,1μm,1.0s						
SNET	**Serv Nac Est T**	**2.09**	**103**	Pn	**Pn**	**15 16 05.0**	**-0.9**
LOMA	**Loma Larga**	**2.16**	**104**	*e*P	**Pn**	**15 16 06.8**	**-0.1**
LOMA	**Loma Larga**	**2.16**	**104**	*i* P	**Pn**	**15 16 08.2**	**+1.3**
LOMA				IAML		15 16 37.3	
	comp=Z,4μm,1.0s						
PANCS	**Alcalda de**	**2.16**	**105**	*i* P	**Pn**	**15 16 07.6**	**+0.8**
PANCS				IAML		15 16 37.5	
	comp=Z,6μm,1.0s						
CCIG	**Comitan**	**2.24**	**340**		**Pn**	**15 16 10.3**	**+2.3**
LFRS	**El Faro**	**2.27**	**104**	*e*P	**Pn**	**15 16 09.5**	**+1.2**
SJTE	**Alcalda de S**	**2.32**	**104**	*i* P	**Pn**	**15 16 09.9**	**+0.9**
SJTE				IAML		15 16 44.3	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**2.37**	**101**	*i* P	**Pn**	**15 16 10.1**	**+0.5**
PAVA				IAML		15 16 50.3	
	comp=Z,2μm,1.0s						
COEG	**Centro de Oper**	**2.44**	**103**	*e*P	**Pn**	**15 16 10.8**	**+0.2**
COEG	**Centro de Oper**	**2.44**	**103**	*i* P	**Pn**	**15 16 11.3**	**+0.7**
COEG				*i* S	**Sn**	**15 16 43.8**	**+4.0**
COEG				IAML		15 16 46.5	
	comp=Z,2μm,1.0s						
TECO	**Alcaldia de Te**	**2.55**	**104**	*i* P	**Pn**	**15 16 14.4**	**+2.4**
SCLA	**Alcalda de Sa**	**2.57**	**100**	*i* P	**Pn**	**15 16 12.8**	**+0.6**
SCLA				IAML		15 16 59.7	
	comp=Z,830nm,1.0s						
PQSS	**Presa 15 de Se**	**2.74**	**101**	*i* P	**Pn**	**15 16 16.4**	**+1.9**
PQSS				IAML		15 16 55.4	
	comp=Z,510nm,1.0s						
PACA	**Pacayal**	**3.00**	**103**	*e*P	**Pn**	**15 16 18.2**	**+0.1**
PACA	**Pacayal**	**3.00**	**103**	*i* P	**Pn**	**15 16 20.8**	**+2.7**
PETF	**Flores**	**3.07**	**27**		**Pn**	**15 16 20.2**	**+1.3**
PETF	**Flores**	**3.07**	**27**	*i* P	**Pn**	**15 16 20.4**	**+1.5**
PETF				IAML		15 16 58.2	
	comp=Z,2μm,1.0s						
BLLM	**Bellamira**	**3.09**	**103**	*e*P	**Pn**	**15 16 19.9**	**+0.6**
JUCU	**Jucuarįn**	**3.13**	**107**	*e*S	**Sn**	**15 16 57.6**	**+1.3**
LCND	**La Caada**	**3.45**	**104**	*e*P	**Pn**	**15 16 24.1**	**0.0**
LCND	**La Caada**	**3.45**	**104**	*i* P	**Pn**	**15 16 25.2**	**+1.2**
LCND				IAML		15 17 26.9	
	comp=Z,510nm,1.0s						
CNCH	**Conchagua**	**3.51**	**104**	*e*P	**Pn**	**15 16 25.3**	**+0.3**
CNCH				*e*S	**Sn**	**15 17 07.0**	**+1.4**
CNCH	**Conchagua**	**3.51**	**104**	*i* P	**Pn**	**15 16 25.8**	**+0.8**
CNCH				IAML		15 17 14.7	
	comp=Z,2μm,1.0s						
COMHN	**El Horno**	**3.67**	**85**	*i* P	**Pn**	**15 16 26.9**	**-0.3**
AMPH	**Amapala**	**3.67**	**103**	*e*P	**Pn**	**15 16 27.8**	**+0.8**
AMPH	**Amapala**	**3.67**	**103**	*i* P	**Pn**	**15 16 27.8**	**+0.8**
CSGN	**Cosiguina Volc**	**3.85**	**108**	*i* P	**Pn**	**15 16 31.2**	**+1.6**
CSGN				IAML		15 17 24.6	
	comp=Z,2μm,1.0s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**3.94**	**91**	Pn	**Pn**	**15 16 29.0**	**-1.8**
YUSH	**Yuscaran**	**4.36**	**92**	*i* P	**Pn**	**15 16 36.7**	**+0.3**
CRIN	**San Cristobal**	**4.41**	**109**		**Pn**	**15 16 38.6**	**+1.4**
CRIN	**San Cristobal**	**4.41**	**109**	*i* P	**Pn**	**15 16 39.3**	**+2.2**
CRIN				IAML		15 18 49.5	
	comp=Z,1μm,1.0s						
CMIG	**Matias Romero**	**4.49**	**311**	P	**Pn**	**15 16 39.4**	**+1.3**
	comp=Z,32nm,0.3s,baz=130,slow=11,SNR=66						
CMIG				S	**Sn**	**15 17 32.7**	**+3.5**
	comp=Z,80nm,0.4s,baz=55,slow=20,SNR=1.4						
CMIG				LR	LR	15 18 24.0	
	comp=Z,55nm,21.3s,baz=140,slow=37						
CNGN	**Cerro Negro**	**4.80**	**110**	Pn	**Pn**	**15 16 44.0**	**+1.5**
MATN	**Matagalpa**	**5.40**	**103**		**Pn**	**15 16 51.6**	**+1.0**
BOAB	**BOACO BROADBAN**	**5.77**	**107**	Pn	**Pn**	**15 16 56.6**	**+1.1**
ACON	**Acoyapa**	**6.38**	**109**	Pn	**Pn**	**15 17 04.4**	**+0.5**
HZTE	**Horizontes, Gu**	**6.57**	**121**		**Pn**	**15 17 08.3**	**+1.8**
TEIG	**Tepich**	**6.69**	**25**	Pn	**Pn**	**15 17 08.8**	**+0.7**
ORTG	**Ortega, Santa**	**6.87**	**123**	Pn	**Pn**	**15 17 12.8**	**+2.1**
DUNO	**Dulce Nombre,**	**7.01**	**125**	Pn	**Pn**	**15 17 14.3**	**+1.9**
JTS	**Las Juntas de**	**7.33**	**121**	Pn	**Pn**	**15 17 15.4**	**-1.4**
JTS	**Las Juntas de**	**7.33**	**121**	P	**Pn**	**15 17 19.2**	**+2.3**
	comp=Z,15nm,0.4s,baz=273,slow=11,SNR=9.0						
JTS				S	**Sn**	**15 18 40.6**	**+2.1**
	comp=Z,6.0nm,0.5s,baz=151,slow=20,SNR=1.1						
JTS				LR	LR	15 20 14.0	
	comp=Z,57nm,18.2s,baz=277,slow=39						
TLIG	**Tlapa**	**7.74**	**297**	Pn	**Pn**	**15 17 24.7**	**+2.3**
JACO	**JACO, Garabito**	**7.92**	**124**		**Pn**	**15 17 26.2**	**+1.4**
RIMA	**Rio Macho**	**8.52**	**120**		**Pn**	**15 17 33.1**	**-0.1**
SRBA	**San Rafael, Bu**	**9.22**	**121**		**Pn**	**15 17 44.8**	**+2.1**
DRK0	**Durika**	**9.30**	**121**		**Pn**	**15 17 45.7**	**+1.9**
SOR	**Soroa**	**11.65**	**41**	Pn	**Pn**	**15 18 16.4**	**+0.9**
KVTX	**Kingsville**	**14.65**	**336**	Pn	**P**	**15 18 56.7**	**-2.1**
PAYG	**Puerto Ayora**	**14.79**	**176**	Pn	**Pn**	**15 18 55.8**	**-1.1**
553A	**Crawfordville**	**17.16**	**21**	P	**P**	**15 19 29.8**	**+3.2**
BRDY	**Brady**	**18.43**	**339**	P	**Pn**	**15 19 41.2**	**-0.5**
SAND	**Sanderson**	**18.60**	**329**	P	**Pn**	**15 19 43.1**	**-0.7**
TXAR	**Lajitas Array**	**18.92**	**325**	P	**Pn**	**15 19 49.2**	**+1.5**
TXAR	**Lajitas Array**	**18.92**	**325**	P	**Pn**	**15 19 48.8**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=145,slow=13,SNR=20						
TXAR				PcP	**PcP**	**15 24 10.7**	**+2.1**
	comp=Z,0.6nm,0.9s,baz=134,slow=5.2,SNR=3.4						
TXAR				ScP	**ScP**	**15 27 37.3**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=126,slow=6.1,SNR=2.6						
TX31	**Lajitas Ar. Si**	**18.92**	**325**		**Pn**	**15 19 49.2**	**+1.5**
OZNA	**Ozona**	**18.95**	**333**		**Pn**	**15 19 48.9**	**+0.9**
OZNA				IAmb	IAmb	15 20 20.4	
	comp=Z,16nm,1.4s						
ROSC	**El Rosal**	**19.15**	**117**	P	**P**	**15 19 47.7**	**-1.3**
	comp=Z,6.4nm,0.3s,baz=319,slow=20,SNR=1.9						
255A	**Hazlehurst**	**19.44**	**23**	P	**P**	**15 19 52.1**	**+0.5**
Y49A	**Blount Mountai**	**20.10**	**12**	P	Pn	15 19 59.8	-1.6
Y49A				IAmb	IAmb	15 20 06.4	
	comp=Z,29nm,1.4s						
MIAR	**Mount Ida**	**20.39**	**355**	P	**P**	**15 20 02.2**	**+0.5**
GOGA	**Godfrey**	**20.44**	**19**	P	Pn	15 20 04.9	-0.5
GOGA				IAmb	IAmb	15 20 06.6	
	comp=Z,27nm,1.4s						
APMT	**Aspermont**	**20.68**	**339**		**P**	**15 20 04.8**	**-0.1**
APMT				IAmb	IAmb	15 20 37.2	
	comp=Z,9.3nm,0.8s						
VHRN	**Van Horn**	**20.77**	**325**	P	Pn	15 20 07.5	-1.8
SDV	**Santo Domingo**	**20.94**	**102**	P	**P**	**15 20 06.5**	**-1.6**
SDV				IAmb	IAmb	15 20 14.0	
	comp=Z,8.0nm,0.8s						
SDV	**Santo Domingo**	**20.94**	**102**	P	**P**	**15 20 06.2**	**-2.0**
	comp=Z,4.6nm,0.6s,baz=310,slow=10,SNR=7.8						
	comp=Z,4.6nm,0.6s						
WHAR	**Wooly Hollow**	**21.05**	**358**	P	**P**	**15 20 07.8**	**-1.0**
SWET	**Sewanee**	**21.51**	**12**	P	**P**	**15 20 12.6**	**-1.3**
SWET				IAmb	IAmb	15 20 36.7	
	comp=Z,13nm,0.9

*IDC **10** 15:27:31.9±2.2,6˚48S×150˚11E,h40km±18km,mb3.8/10, mbtmp4.0/12,ML3.0/2,MS3.7/16,Error ellipse: s-maj=25.0km s-min=12.5km az=112.0*
*DJA **10** 15:27:31.3±0.7,7˚S×15˚0E,˚,h37km±8km,M4.7/15, mB5.1/1,mb4.5/15,MLv4.8/3,Mw(mB)4.5/1*
*NEIC **10** 15:27:32.4±1.6,6˚67S±0.07×150˚33E±0.10,h49km±9km, mb4.6/24,Error ellipse: s-maj=13.9km s-min=10.5km az=105.0*

ISC 10 15:27:32.3±0.5,6˚57S±0.06×150˚18E±0.06,h43km,n88, σ1§60/78,mb4.5/22,MS3.6/13,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BULU	**Kimbe**	**1.04**	**8**	**P**	**Pn**	**15 27 49.1**	**-1.3**
RABL	**Rabaul**	**3.08**	**40**		**Pn**	**15 28 18.4**	**0.0**
RABL	**Rabaul**	**3.08**	**40**	P	**Pn**	**15 28 21.0**	**+2.5**
PMG	**Port Moresby**	**4.11**	**227**	Pn	**Pn**	**15 28 33.0**	**+0.5**
PMG	**Port Moresby**	**4.11**	**227**	P	**Pn**	**15 28 33.7**	**+1.2**
PMG	**Port Moresby**	**4.11**	**227**	P	**Pn**	**15 28 33.8**	**+1.2**
PMG	**Port Moresby**	**4.11**	**227**	Pn	**Pn**	**15 28 33.3**	**+0.8**
	24nm,0.3s,baz=43,slow=12,SNR=104						
PMG				Sn	**Sn**	**15 29 19.8**	**+0.4**
	23nm,0.3s,baz=73,slow=19,SNR=13						
PMG				LR	LR	15 30 16.9	
	comp=Z,673nm,21.9s,baz=25,slow=40 163nm,0.6s						
MANU	**Manus Island**	**5.30**	**328**	Pn	**Pn**	**15 28 51.7**	**+2.7**
COEN	**Coen**	**10.06**	**223**	Pn	**Pn**	**15 29 54.4**	**+0.1**
COEN	**Coen**	**10.06**	**223**	P	**Pn**	**15 29 54.9**	**+0.5**
HNR	**Honiara**	**10.08**	**107**	Pn	**Pn**	**15 29 56.0**	**+1.4**
	400nm,0.3s,baz=215,slow=11,SNR=2.1						
HNR				LR	LR	15 32 54.3	
	comp=Z,2μm,18.5s,baz=272,slow=32						
MTSU	**Mount Surprise**	**12.84**	**206**	P	**Pn**	**15 30 33.5**	**+1.2**
CTA	**Charters Tower**	**13.97**	**195**	Pn	**Pn**	**15 30 49.5**	**+1.8**
	0.1nm,0.3s,baz=38,slow=15,SNR=2.2						
CTA				LR	LR	15 36 10.5	
	comp=Z,244nm,18.0s,baz=11,slow=37 1.9nm,0.8s						
QIS	**Mount Isa**	**17.27**	**215**	P	**P**	**15 31 32.6**	**+1.1**
KDU	**Kakadu**	**18.48**	**249**	P	**P**	**15 31 44.8**	**0.0**
EIDS	**Eidsvold**	**18.71**	**177**		**P**	**15 31 46.9**	**-0.4**
MTN	**Manton Dam**	**19.77**	**250**	P	**P**	**15 31 59.5**	**+0.6**
MTN				IAmb	IAmb	15 32 00.3	
	comp=Z,14nm,0.7s						
MTN	**Manton Dam**	**19.77**	**250**	P	**Pn**	**15 32 00.0**	**-0.7**
WB0	**Warramunga Arr**	**20.18**	**228**	P	**P**	**15 32 03.0**	**-0.4**
WB0				IAmb	IAmb	15 32 08.1	
	comp=Z,25nm,0.8s						
WR0	**Warramunga Arr**	**20.19**	**227**	P	**P**	**15 32 02.4**	**-1.1**
WR0				IAmb	IAmb	15 32 08.3	
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**20.31**	**228**	P	**P**	**15 32 04.2**	**-0.6**
WRAB				IAmb	IAmb	15 32 09.0	
	comp=Z,29nm,0.8s						
WB2	**Warramunga Arr**	**20.32**	**228**	P	**P**	**15 32 04.3**	**-0.6**
WB2				IAmb	IAmb	15 32 09.1	
	comp=Z,37nm,1.1s						
WRA	**Warramunga Arr**	**20.33**	**228**	P	**P**	**15 32 03.8**	**-1.2**
WRA	**Warramunga Arr**	**20.33**	**228**	P	**P**	**15 32 04.9**	**-0.1**
	comp=Z,15nm,0.5s,baz=52,slow=11,SNR=223						
WRA				S	**S**	**15 35 45.5**	**-5.1**
	comp=Z,0.8nm,0.8s,baz=51,slow=20,SNR=3.4 comp=Z,15nm,0.5s						
QLP	**Quilpie**	**20.69**	**195**	P	Pn	15 32 11.9	+0.4
GUMO	**Guam**	**20.71**	**345**	LR	LR	15 38 19.8	
	comp=Z,126nm,21.1s,baz=155,slow=31						
DZM	**Mont Dzumac**	**22.00**	**136**	LR	LR	15 39 20.8	
	comp=Z,144nm,21.6s,baz=276,slow=32						
KNRA	**Kununurra**	**22.86**	**245**	P	**P**	**15 32 31.4**	**-0.7**
KNRA				IAmb	IAmb	15 32 35.2	
	comp=Z,17nm,0.8s						
KNRA	**Kununurra**	**22.86**	**245**	P	**P**	**15 32 34.6**	**+2.5**
AS31	**Alice Springs**	**23.10**	**221**	P	**P**	**15 32 34.4**	**-0.2**
ASAR	**Alice Springs**	**23.10**	**221**	P	**P**	**15 32 33.9**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=58,slow=8.7,SNR=52						
ASAR				S	**S**	**15 36 43.3**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=38,slow=20,SNR=7.2						
ASAR				LR	LR	15 42 02.5	
	comp=Z,171nm,18.1s,baz=51,slow=38 comp=Z,2.3nm,0.5s						
ARMA	**Armidale**	**23.76**	**177**	P	**P**	**15 32 37.5**	**-3.4**
ARMA				IAmb	IAmb	15 32 44.3	
	comp=Z,15nm,0.9s						
ARMA	**Armidale**	**23.76**	**177**	P	**P**	**15 32 43.3**	**+2.3**
OOD	**Oodnadatta**	**25.19**	**211**	P	**P**	**15 32 56.1**	**+2.2**
CMSA	**Cobar Meteorol**	**25.19**	**189**	P	**P**	**15 32 55.3**	**+1.4**
SOEI	**Soe**	**25.84**	**261**	P	**P**	**15 32 58.9**	**-1.2**
SOEI				IAmb	IAmb	15 33 36.2	
	comp=Z,30nm,1.0s						
SOEI	**Soe**	**25.84**	**261**	P	**P**	**15 33 01.0**	**+0.9**
	comp=Z,26nm,0.9s						
LCRK	**Leigh Creek**	**26.28**	**204**	P	**P**	**15 33 04.8**	**+1.1**
STKA	**Stephens Creek**	**26.42**	**197**	P	**P**	**15 33 04.8**	**-0.3**
STKA	**Stephens Creek**	**26.42**	**197**	P	**P**	**15 33 06.0**	**+0.9**
	comp=Z,9.2nm,1.0s,baz=22,slow=13,SNR=6.9						
STKA				S	**S**	**15 37 40.2**	**+4.4**
	comp=Z,2.4nm,1.0s,baz=70,slow=14,SNR=1.7						
STKA				LR	LR	15 44 41.3	
	comp=Z,172nm,18.0s,baz=31,slow=39 comp=Z,9.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**26.53**	**242**	P	**P**	**15 33 06.5**	**+0.3**
MMRI	**Maumere**	**27.77**	**264**	P	**P**	**15 33 19.7**	**+2.3**
WRKA	**Warakurna**	**27.85**	**226**	P	**P**	**15 33 18.4**	**+0.4**
MULG	**Mulgathing**	**28.03**	**211**	P	**P**	**15 33 21.8**	**+2.3**
EDFI	**Ende, Flores**	**28.31**	**264**	P	**P**	**15 33 19.0**	**-3.3**
	comp=Z,18nm,0.8s						
BBOO	**Buckleboo**	**29.23**	**205**	P	**P**	**15 33 28.6**	**-1.5**
BBOO				IAmb	IAmb	15 33 48.7	
	comp=Z,21nm,1.2s						
TOO	**Toolangi**	**31.15**	**187**	P	P	15 33 42.5	-4.6
TOO				IAmb	IAmb	15 34 19.2	
	comp=Z,21nm,1.2s						
FORT	**Forrest**	**31.79**	**218**	P	**P**	**15 33 51.5**	**-1.3**
FORT				IAmb	IAmb	15 34 02.9	
	comp=Z,26nm,1.0s						
FORT	**Forrest**	**31.79**	**218**	P	**P**	**15 33 54.1**	**+1.4**
JCJ	**Chichijima**	**34.35**	**347**	P	**P**	**15 34 12.8**	**-2.4**
MEEK	**Meekatharra**	**36.06**	**233**	P	**P**	**15 34 30.7**	**+0.7**
GIRL	**Giralia**	**38.13**	**241**	P	**P**	**15 34 45.4**	**-2.2**
URZ	**Urewera**	**39.88**	**146**	LR	LR	15 48 57.5	
	comp=Z,130nm,20.1s,baz=120,slow=32						
NWAO	**Narrogin (SRO)**	**40.30**	**225**	LR	LR	15 52 31.0	
	comp=Z,173nm,18.7s,baz=228,slow=37						
KPJI	**Karang Pucung**	**40.94**	**266**	P	**P**	**15 35 10.9**	**-0.2**
	comp=Z,23nm,0.9s						
KHZ	**Kahutara**	**41.25**	**154**	P	**P**	**15 35 10.9**	**-2.3**
RPZ	**Rata Peaks**	**41.29**	**157**	LR	LR	15 50 33.5	
	comp=Z,131nm,18.4s,baz=316,slow=33						
TPUB	**Ta-pu**	**41.42**	**317**	P	**P**	**15 35 15.2**	**+0.3**
JNU	**Nakatsue**	**43.53**	**336**	LR	LR	15 50 49.7	
	comp=Z,59nm,18.4s,baz=168,slow=32						
MJAR	**Matsushiro Arr**	**44.33**	**346**	LR	LR	15 54 29.3	
	comp=Z,74nm,18.7s,baz=134,slow=37						
KSRS	**Korea Array**	**46.48**	**336**	P	**P**	**15 36 09.6**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=155,slow=8.6,SNR=3.0 comp=Z,1.4nm,0.7s						
NJ2	**Nanjing**	**48.65**	**324**	*e*P	**P**	**15 36 14.1**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,17nm,0.9s						
PZH	**PanZhiHua**	**57.30**	**307**	P	**P**	**15 37 18.0**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,5.7s						
HHC	**Hu-ho-hao-te**	**59.01**	**326**	*e*P	**P**	**15 37 32.0**	**+4.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,82nm,4.0s						
LZH	**Lanzhou**	**60.73**	**318**	*e*P	P	15 37 49.1	+9.2
LZH				pP	sP	15 37 58.0	+2.1
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	**Songino Array**	**66.47**	**329**	P	**P**	**15 38 16.9**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=122,slow=5.4,SNR=2.4 comp=Z,0.2nm,0.5s						
VNDA	**Vanda**	**71.18**	**177**	P	**P**	**15 38 45.6**	**-0.6**
VNDA				IAmb	IAmb	15 39 16.1	
	comp=Z,8.4nm,1.5s						
SBA	**Scott Base**	**71.77**	**176**	P	**P**	**15 38 48.5**	**-1.2**
KDAK	**Kodiak Island**	**78.93**	**27**	LR	LR	16 08 04.9	
	comp=Z,31nm,21.2s,baz=210,slow=31						
MKAR	**Makanchi Array**	**79.96**	**320**	P	**P**	**15 39 37.6**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=103,slow=4.6,SNR=2.6 comp=Z,0.9nm,0.9s						
ZALV	**Zalesovo Beam**	**81.19**	**327**	P	**P**	**15 39 44.5**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=123,slow=5.3,SNR=1.8 comp=Z,0.5nm,0.4s						
QSPA	**South Pole Qui**	**83.40**	**180**	P	**P**	**15 39 54.9**	**-0.1**
QSPA	**South Pole Qui**	**83.40**	**180**	P	**P**	**15 39 54.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=338,slow=11,SNR=14 comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**84.78**	**23**	P	**P**	**15 39 59.7**	**-2.0**
	comp=Z,0.3nm,0.9s,baz=250,slow=2.7,SNR=2.1 comp=Z,0.3nm,0.9s						
BBB	**Bella Bella**	**90.08**	**38**	LR	LR	16 17 49.6	
	comp=Z,29nm,19.9s,baz=322,slow=34						
NVAR	**Mina Array Bea**	**95.22**	**52**	P	**P**	**15 40 52.1**	**+0.2**
	comp=Z,7nm,0.9s,baz=282,slow=4.5,SNR=4.2 comp=Z,0.7nm,0.9s						
PFO	**Pinyon Flats O**	**96.39**	**57**	LR	LR	16 17 01.2	
	comp=Z,72nm,20.2s,baz=225,slow=31						
ELK	**Elko**	**97.71**	**50**	LR	LR	16 18 50.2	
	comp=Z,42nm,19.8s,baz=68,slow=32						
ARSA	**Arzberg**	**123.98**	**324**	*i* PKiKP	**PKPdf**	**15 46 25.8**	**-0.3**
	comp=Z,1.3nm,0.4s						
GERES	**GERESS Array B**	**124.14**	**327**	PKP	**PKPdf**	**15 46 26.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=35,slow=3.6,SNR=6.6						
MYKA	**Terra Mystica**	**125.40**	**324**	*i* PKP	**PKPdf**	**15 46 28.1**	**-0.8**
	comp=Z,0.5nm,0.3s						
ABTA	**Abfaltersbach**	**125.98**	**325**	*i* PKP	**PKPdf**	**15 46 29.3**	**-0.7**
	comp=Z,1.3nm,0.5s						
WATA	**Walderalm**	**126.17**	**326**	*e*PKiKP	**PKPdf**	**15 46 30.1**	**-0.3**
	comp=Z,2.3nm,0.5s						
WTTA	**Wattenberg**	**126.18**	**326**	*i* PKiKP	**PKPdf**	**15 46 30.2**	**-0.3**
	comp=Z,1.8nm,0.6s						
MOTA	**Moosalm**	**126.43**	**326**	*i* PKiKP	**PKPdf**	**15 46 30.8**	**-0.2**
	comp=Z,1.3nm,0.4s						
FETA	**Feichten**	**126.83**	**326**	*e*PKiKP	**PKPdf**	**15 46 31.3**	**-0.4**
	comp=Z,6.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**148.29**	**284**	PKPbc	**PKPbc**	**15 47 13.8**	**-1.2**
	comp=Z,3.9nm,0.7s,baz=47,slow=5.8,SNR=16						
BDFB	**Brasilia**	**151.51**	**141**	PKPbc	**PKPbc**	**15 47 23.1**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=208,slow=4.5,SNR=4.8						

*NEIC **10** 15:38:14.4±1.9,55˚87N±0˚08×150˚1W±0˚1,h10km±2km, ML3.6/40,ML3.3(AEIC),Error ellipse: s-maj=13.2km s-min=9.9km az=167.0*
*AEIC **10** 15:38:20.5±1.8,55˚99N±0˚10×150˚0W±0˚1,h12km±8km, Error ellipse: s-maj=14.1km s-min=9.8km az=166.0*

ISC 10 15:38:15.1±2.0,56˚0N±0˚1×150˚17W±0˚07,h10km,n177, σ1§04/176,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.12**	**307**		**Pn**	**15 38 51.0**	**+0.5**
OHAK					**Sn**	**15 39 15.7**	**-1.2**
OHAK	**Old Harbor**	**2.12**	**307**	P	**Pn**	**15 38 51.0**	**+0.5**
OHAK	**Old Harbor**	**2.12**	**307**	P	**Pn**	**15 38 51.0**	**+0.5**
	baz=123						
OHAK				S	**Sn**	**15 39 15.7**	**-1.2**
	baz=123						
KDAK	**Kodiak Island**	**2.23**	**324**		**Pn**	**15 38 52.9**	**+0.8**
KDAK					**Sn**	**15 39 18.9**	**-0.8**
SII	**Sitkinak Islan**	**2.31**	**286**		**Pn**	**15 38 53.4**	**+0.2**
SII					**Sn**	**15 39 20.6**	**-1.1**
SII	**Sitkinak Islan**	**2.31**	**286**	IAML		15 39 32.6	
	comp=E,137nm,1.4s						
SII	**Sitkinak Islan**	**2.31**	**286**	P	**Pn**	**15 38 53.4**	**+0.2**
SII	**Sitkinak Islan**	**2.31**	**286**	P	**Pn**	**15 38 53.4**	**+0.2**
	baz=102						
SII				S	**Sn**	**15 39 20.6**	**-1.1**
	baz=102						
SYI	**Shuyak Island**	**2.88**	**336**		**Pn**	**15 39 02.0**	**+0.9**
SYI					**Sn**	**15 39 35.6**	**-0.2**
SYI	**Shuyak Island**	**2.88**	**336**	IAML		15 39 39.2	
	comp=N,83nm,1.4s						
Q20K	**Shuyak Island**	**2.89**	**336**	P	**Pn**	**15 39 02.0**	**+0.9**
	baz=153						
Q20K				S	**Sn**	**15 39 35.6**	**-0.2**
	baz=153						
CHIR	**Chirikof Islan**	**3.08**	**269**	Pn	**Pn**	**15 39 04.2**	**+0.5**
CHIR				IAML		15 40 30.7	
	comp=E,80nm,1.2s						
CHIR				IAML		15 41 00.1	
	comp=N,162nm,1.5s						
KAHG	**Katmai Hook Gl**	**3.45**	**318**		**Pn**	**15 39 11.5**	**+2.5**
Q19K	**Cape Douglas,**	**3.49**	**329**		**Pn**	**15 39 11.1**	**+1.7**
Q19K	**Cape Douglas,**	**3.49**	**329**	P	**Pn**	**15 39 11.1**	**+1.7**
	baz=145						
KCG	**Knife Ck. Glac**	**3.55**	**313**		**Pn**	**15 39 12.3**	**+2.0**
ACHA	**Angle Creek He**	**3.58**	**310**		**Pn**	**15 39 12.5**	**+1.7**
CNPM	**China Poot**	**3.58**	**351**		**Pn**	**15 39 10.9**	**+0.1**
CNPM					**Sn**	**15 39 51.7**	**-1.5**
CNPM	**China Poot**	**3.58**	**351**	IAML		15 39 54.2	
	comp=E,69nm,0.8s						
ANCK	**Angle Creek**	**3.65**	**309**		**Pn**	**15 39 13.6**	**+1.9**
HOM	**Homer**	**3.76**	**348**	Pn	**Pn**	**15 39 14.1**	**+1.1**
BRSE	**Bradley Lake S**	**3.77**	**356**		**Pn**	**15 39 13.1**	**-0.1**
BRSE					**Sn**	**15 39 55.8**	**-1.9**
BRSE	**Bradley Lake S**	**3.77**	**356**	P	**Pn**	**15 39 13.1**	**-0.1**
	baz=174						
BRSE				S	**Sn**	**15 39 55.8**	**-1.9**
	baz=174						
BRLK	**Bradley Lake**	**3.80**	**354**		**Pn**	**15 39 13.4**	**-0.3**
BRLK	**Bradley Lake**	**3.80**	**354**	IAML		15 39 59.1	
	comp=E,53nm,0.5s						
BRLK				IAML		15 40 00.9	
	comp=N,45nm,0.5s						
CNTC	**Contact Creek**	**3.86**	**308**		**Pn**	**15 39 15.8**	**+1.2**
Q17K	**Contact Creek**	**3.86**	**308**	P	**Pn**	**15 39 15.8**	**+1.2**
	baz=123						
Q23K	**Middleton Isla**	**4.00**	**29**		**Pn**	**15 39 16.5**	**0.0**
Q23K	**Middleton Isla**	**4.00**	**29**	P	**Pn**	**15 39 16.5**	**0.0**
	baz=211						
P19K	**Oil Pt**	**4.02**	**337**		**Pn**	**15 39 18.2**	**+1.5**
P19K	**Oil Pt**	**4.02**	**337**	IAML		15 40 07.4	
	comp=E,110nm,0.9s						
P19K				IAML		15 40 08.7	
	comp=N,96nm,0.8s						
P19K	**Oil Pt**	**4.02**	**337**	P	**Pn**	**15 39 18.2**	**+1.5**
	baz=154						
SEW	**Seward**	**4.14**	**5**		**Pn**	**15 39 18.0**	**-0.3**
SEW	**Seward**	**4.14**	**5**	P	**Pn**	**15 39 18.0**	**-0.3**
	baz=184						
P23K	**Montague Islan**	**4.27**	**19**		**Pn**	**15 39 20.0**	**-0.2**
P23K	**Montague Islan**	**4.27**	**19**	P	**Pn**	**15 39 20.0**	**-0.2**
	baz=200						
O20K	**Slope Mountain**	**4.30**	**343**		**Pn**	**15 39 21.2**	**+0.6**
O20K	**Slope Mountain**	**4.30**	**343**	P	**Pn**	**15 39 21.2**	**+0.6**
	baz=160						
IVE	**Iliamna Volcan**	**4.31**	**341**		**Pn**	**15 39 21.1**	**+0.4**
P18K	**Big Mountain,**	**4.36**	**324**		**Pn**	**15 39 22.5**	**+1.1**
P18K	**Big Mountain,**	**4.36**	**324**	P	**Pn**	**15 39 22.5**	**+1.1**
	baz=138						
CHGN	**Chignik**	**4.62**	**277**	Pn	**Pn**	**15 39 24.4**	**-0.5**
CHGN				IAML		15 41 14.7	
	comp=N,53nm,1.3s						
CHGN				IAML		15 42 24.8	
	comp=E,57nm,0.9s						
P17K	**Kvichak River**	**4.66**	**316**		**Pn**	**15 39 26.7**	**+1.3**
P17K	**Kvichak River**	**4.66**	**316**	P	**Pn**	**15 39 26.7**	**+1.3**
	baz=130						
RSO	**Redoubt South**	**4.68**	**344**	Pn	**Pn**	**15 39 26.3**	**+0.3**
O18K	**Koktuh Hills**	**4.71**	**327**		**Pn**	**15 39 27.1**	**+0.9**
O18K	**Koktuh Hills**	**4.71**	**327**	IAML		15 40 42.8	
	comp=N,19nm,0.7s						
O18K	**Koktuh Hills**	**4.71**	**327**	P	**Pn**	**15 39 27.1**	**+0.9**
	baz=142						
O19K	**Port Alsworth**	**4.75**	**334**		**Pn**	**15 39 27.4**	**+0.7**
O19K	**Port Alsworth**	**4.75**	**334**	P	**Pn**	**15 39 27.4**	**+0.7**
	baz=150						
HIN	**Hinchinbrook I**	**4.82**	**22**		**Pn**	**15 39 27.8**	**+0.1**
HIN	**Hinchinbrook I**	**4.82**	**22**	IAML		15 40 23.5	
	comp=N,60nm,1.5s						
HIN				IAML		15 41 17.8	
	comp=E,50nm,1.3s						
KAIM	**Kayak Island**	**4.99**	**35**		**Pn**	**15 39 30.0**	**0.0**
KAIM	**Kayak Island**	**4.99**	**35**	IAML		15 41 08.0	
	comp=N,74nm,1.5s						
KAIM	**Kayak Island**	**4.99**	**35**	P	**Pn**	**15 39 30.0**	**0.0**
	baz=219						
RC01	**Rabbit Creek A**	**5.11**	**2**		**Pn**	**15 39 31.8**	**0.0**
RC01	**Rabbit Creek A**	**5.11**	**2**	IAML		15 40 34.1	
	comp=N,26nm,0.3s						
RC01				IAML		15 40 34.7	
	comp=E,34nm,1.2s						
RC01	**Rabbit Creek A**	**5.11**	**2**	P	**Pn**	**15 39 31.8**	**0.0**
	baz=182						
EYAK	**Cordova Ski Ar**	**5.12**	**25**		**Pn**	**15 39 32.2**	**+0.3**
EYAK	**Cordova Ski Ar**	**5.12**	**25**	P	**Pn**	**15 39 32.7**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.12**	**25**	P	**Pn**	**15 39 32.2**	**+0.3**
	baz=208						
P16K	**Nushagak River**	**5.20**	**309**		**Pn**	**15 39 34.4**	**+1.5**
P16K	**Nushagak River**	**5.20**	**309**	P	**Pn**	**15 39 34.4**	**+1.5**
	baz=122						
RAGM	**Ragged Mountai**	**5.27**	**31**		**Pn**	**15 39 34.1**	**+0.1**
RAGM	**Ragged Mountai**	**5.27**	**31**	IAML		15 40 35.1	
	comp=E,56nm,1.2s						
SUCK	**Suckling Hills**	**5.31**	**37**		**Pn**	**15 39 34.6**	**+0.2**
SUCK	**Suckling Hills**	**5.31**	**37**	IAML		15 40 35.7	
	comp=E,37nm,1.3s						
SUCK				IAML		15 40 48.2	
	comp=N,33nm,1.3s						
N19K	**Bonanza Creek**	**5.34**	**337**	Pn	**Pn**	**15 39 35.3**	**+0.4**
HMT	**Hamilton**	**5.36**	**33**		**Pn**	**15 39 35.2**	**+0.1**
NICHA	**Nichawak Mount**	**5.37**	**35**		**Pn**	**15 39 35.2**	**-0.1**
GOAT	**Goat Mountain**	**5.42**	**30**		**Pn**	**15 39 36.1**	**+0.2**
SUA	**Susitna One**	**5.49**	**357**	Pn	**Pn**	**15 39 37.2**	**+0.2**
KNK	**Knik Glacier**	**5.50**	**9**		**Pn**	**15 39 36.9**	**-0.2**
KNK	**Knik Glacier**	**5.50**	**9**	P	**Pn**	**15 39 36.9**	**-0.2**
	baz=189						
BGLC	**Bering Glacier**	**5.52**	**39**		**Pn**	**15 39 37.4**	**+0.2**
BGLC	**Bering Glacier**	**5.52**	**39**	P	**Pn**	**15 39 37.4**	**+0.2**
	baz=224						
O16K	**Kokwok River B**	**5.56**	**314**		**Pn**	**15 39 39.4**	**+1.5**
O16K	**Kokwok River B**	**5.56**	**314**	P	**Pn**	**15 39 39.4**	**+1.5**
	baz=126						
BERG	**Berg Lake**	**5.58**	**35**		**Pn**	**15 39 37.9**	**-0.2**
N18K	**Kilae Creek**	**5.58**	**330**		**Pn**	**15 39 38.9**	**+0.7**
N18K	**Kilae Creek**	**5.58**	**330**	P	**Pn**	**15 39 38.8**	**+0.7**
	baz=144						
STLK	**Strandline Lak**	**5.59**	**352**		**Pn**	**15 39 38.2**	**-0.1**
GRIN	**Grindle Hills**	**5.62**	**37**		**Pn**	**15 39 39.2**	**+0.5**
DIV	**Divide**	**5.64**	**22**		**Pn**	**15 39 39.6**	**+0.6**
PMR	**Palmer**	**5.64**	**5**	Pn	**Pn**	**15 39 39.4**	**+0.5**
PMR	**Palmer**	**5.64**	**5**	P	**Pn**	**15 39 39.8**	**+0.9**
SNH	**Sunshine Point**	**5.72**	**40**		**Pn**	**15 39 40.0**	**-0.1**
KHIT	**Khitrov Hills**	**5.76**	**36**		**Pn**	**15 39 40.7**	**0.0**
BMRM	**Bremner River**	**5.77**	**28**		**Pn**	**15 39 41.0**	**+0.2**
BMRM	**Bremner River**	**5.77**	**28**	P	**Pn**	**15 39 41.0**	**+0.2**
	baz=212						
GHO	**Glory Hole Cre**	**5.83**	**6**		**Pn**	**15 39 42.5**	**+0.9**
SVW2	**Sparrevohn**	**5.85**	**333**	Pn	**Pn**	**15 39 42.5**	**+0.7**
WAX	**Waxell Ridge**	**5.90**	**38**		**Pn**	**15 39 42.7**	**0.0**
SMK	**Sawmill**	**5.91**	**8**	Pn	**Pn**	**15 39 43.3**	**+0.6**
KLU	**Klutina**	**5.94**	**20**		**Pn**	**15 39 43.6**	**+0.5**
KLU	**Klutina**	**5.94**	**20**	P	**Pn**	**15 39 43.6**	**+0.5**
	baz=203						
CRQM	**Cirque**	**6.04**	**35**		**Pn**	**15 39 44.6**	**0.0**
SKT	**Skwentna**	**6.04**	**354**	Pn	**Pn**	**15 39 45.0**	**+0.5**
MESA	**MESA**	**6.04**	**43**		**Pn**	**15 39 44.6**	**-0.1**
MESA	**MESA**	**6.04**	**43**	P	**Pn**	**15 39 44.6**	**-0.1**
	baz=229						
CRQE	**Cirque**	**6.05**	**35**	P	**Pn**	**15 39 44.6**	**-0.1**
	baz=220						
O15K	**Ungalikthiuk R**	**6.09**	**306**		**Pn**	**15 39 47.0**	**+1.8**
O15K	**Ungalikthiuk R**	**6.09**	**306**	P	**Pn**	**15 39 46.9**	**+1.8**
	baz=117						
M20K	**Styx River**	**6.10**	**347**	Pn	**Pn**	**15 39 46.1**	**+0.7**
ISLE	**Juniper Island**	**6.19**	**39**		**Pn**	**15 39 46.6**	**-0.1**
M18K	**Stony River**	**6.25**	**334**	P	**Pn**	**15 39 47.6**	**+0.4**
	baz=149						
VRDI	**Verde Repeater**	**6.31**	**31**		**Pn**	**15 39 48.3**	**0.0**
M19K	**Big River Lodg**	**6.31**	**342**	Pn	**Pn**	**15 39 49.0**	**+0.8**
N25K	**Chitina, Valde**	**6.32**	**25**		**Pn**	**15 39 48.8**	**+0.3**
N25K	**Chitina, Valde**	**6.32**	**25**	P	**Pn**	**15 39 48.8**	**+0.3**
	baz=209						
GLB	**Gilahina Butte**	**6.38**	**29**		**Pn**	**15 39 49.5**	**+0.4**
KIAG	**Kiagna River**	**6.42**	**36**		**Pn**	**15 39 49.8**	**0.0**
SAMH	**Samovar Hills**	**6.48**	**46**		**Pn**	**15 39 51.0**	**+0.5**
TABL	**Table Mountain**	**6.52**	**43**		**Pn**	**15 39 51.2**	**-0.1**
MCARA	**McCarthy VSAT**	**6.56**	**32**		**Pn**	**15 39 51.8**	**+0.2**
MCARA	**McCarthy VSAT**	**6.56**	**32**	P	**Pn**	**15 39 51.8**	**+0.2**
	baz=217						
PTPK	**Patty Peak**	**6.58**

SMAR	Somma	1.00	301	*e*P	Pn	15 42 04.6	+1.1
AVH	Avacha	1.03	300	*e*P	Pn	15 42 05.2	+1.3
KOK	Koryaka	1.10	299	*e*P	Pn	15 42 06.5	+1.7
RUS	Russkaya	1.10	253	*e*P	Pn	15 42 05.5	+0.8
RUS				*e*S	Sn	15 42 20.0	+1.4
KRX	Arik	1.12	303	*e*P	Pn	15 42 06.3	+1.1
KRMR	Karymshinskiy	1.28	274	*e*P	Pn	15 42 08.1	+0.9
MTVR	Mutnovka	1.28	258	*e*P	Pn	15 42 08.6	+1.3
MTVR				*e*S	Sn	15 42 25.4	+2.1
GRL	Gorelyy	1.33	262	*e*P	Pn	15 42 09.7	+1.7
GRL				*e*S	Sn	15 42 26.8	+2.2
KII	Karymskiy	1.36	340	*e*P	Pn	15 42 10.4	+2.0
KII				*e*S	Sn	15 42 27.5	+2.3
ASAK	Asacha	1.47	256	*e*P	Pn	15 42 11.8	+1.8
KDTR	Khodutka, Kamc	1.63	235	*e*P	Pn	15 42 13.4	+1.3
KDTR				*e*S	Sn	15 42 33.5	+1.8
GNL	Ganaly	1.66	305	*e*P	Pn	15 42 15.2	+2.6
APC	Apacha	1.87	276	*e*P	Pn	15 42 18.2	+2.9
APC				*e*S	Sn	15 42 41.8	+4.2
TUMD	Tumrok D	2.45	2	*e*P	Pn	15 42 25.2	+1.9
TUMD				*e*S	Sn	15 42 53.6	+1.7
PAU	Pauzhetka	2.48	240	*e*P	Pn	15 42 27.8	+4.2
TUMR	Tumrok	2.52	359	*e*P	Pn	15 42 27.1	+2.7
KMNR	Kamenistaya	3.00	0	*e*P	Pn	15 42 35.2	+4.3
KIRR	Kirishev	3.20	1	*e*P	Pn	15 42 38.6	+4.9
KPT	Kopyto	3.21	360	*e*P	Pn	15 42 38.8	+5.0
ESO	Esso	3.29	345	*e*P	Pn	15 42 38.2	+3.3
SKR	Severo-Kuril's	3.30	232	*e*P	Pn	15 42 38.8	+3.9
KOZ	Kozyrevsk	3.31	357	*e*P	Pn	15 42 38.0	+2.9
KLY	Klyuchi	3.57	4	*e*P	Pn	15 42 43.3	+4.7
SRDR	Sredinnyy	3.57	355	*e*P	Pn	15 42 41.9	+3.1
KBG	Krutoberegovo	3.78	21	*e*P	Pn	15 42 46.2	+4.6
BDR	Baidarnaya	3.85	8	*e*P	Pn	15 42 49.0	+6.3
SMKR	Semkarok	3.89	10	*e*P	Pn	15 42 46.6	+3.4

IDC ***10*** *15:46:21.5±0.9, 37°.02N× 141°.21E, h0km, mb3.6/9, mbtmp3.5/11, ML2.9/2, MS3.5/3, Error ellipse: s-maj=23.2km s-min=17.4km az=106.0*
NIED ***10*** *15:46:23.9, 37°.02N× 141°.18E, h20km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=2.22; Mθθ1.37; Mφφ0.85; Mrθ2.85; Mθφ2.38; Mφr0.78; Fault plane solution: Mo4.21000×10¹⁴ NP1: φs251.00000°, δ71.00000°, λ-66.00000°. NP2:φs19.00000°, δ30.00000°, λ-139.00000°.*
JMA ***10*** *15:46:23.9±0.1, 37°.0N±0°.2× 141°.2E±0°.4, h20km, MV3.9/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 10 15:46:23.8±2.5, 37°.02N±0°.05× 141°.18E±0°.07, h13km±14km, n32, σ1§26/30, mb3.4/9, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.32	285	*i* P		Pb	15 46 30.7	-0.7
ONAJ				S		Sb	15 46 35.4	-1.0
JFK	Kawauchi	0.42	325	*i* P		Pb	15 46 32.4	-0.7
JFFD	Fukushimafurud	0.50	278	*i* P		Pb	15 46 33.7	-0.8
JFFD				S		Sg	15 46 40.0	-0.3
JHO	Hitachi	0.64	230	⇓*i* P		Pb	15 46 35.9	-0.9
JHO				⇓S		Sb	15 46 44.8	-0.9
JOTO	OTAMA OYAMA	0.86	309	*i* P		Pb	15 46 40.5	-0.2
JOTO				S		Sb	15 46 52.3	+0.1
JMM	Marumori	0.90	340	*i* P		Pb	15 46 40.3	-0.9
JMM				S		Sb	15 46 52.4	-0.7
JSB	Shiboa	1.01	267	P		Pn	15 46 43.2	-0.5
JSB				S		Sn	15 46 56.9	-0.9
JFY	Yanaizu	1.24	289	*i* P		Pb	15 46 46.6	-0.5
JFY				S		Sg	15 47 02.9	-0.9
MJAR	Matsushiro Arr 0.7nm,0.3s,baz=80,slow=16,SNR=38	2.43	260	Pn		Pn	15 47 04.1	+0.9
MJAR				Sn		Sb	15 47 35.9	-1.4
	3.6nm,0.3s,baz=75,slow=29,SNR=9.7 9.4nm,0.3s							
INU	Inuyama	3.76	245	P		Pn	15 47 24.7	+3.3
ASAJ	Asahikawa 0.3nm,0.3s,baz=218,slow=12,SNR=2.0	7.17	8	Pn		Pn	15 48 07.2	-1.0
ASAJ				Sn		Sn	15 49 29.1	-0.5
	baz=178,slow=25 5.5nm,0.9s							
JCJ	Chichijima comp=Z,268nm,21.8s,baz=126,slow=35	9.93	175	LR		LR	15 52 06.1	
USRK	Ussuriysk Ar. 0.1nm,0.3s,baz=141,slow=12,SNR=2.0	10.01	319	Pn		Pn	15 48 51.0	+3.8
SONM	Songino Array 0.2nm,0.4s,baz=112,slow=6.4,SNR=2.2 0.2nm,0.4s	27.64	304	P		P	15 52 11.3	+0.2
H11N2	WAKE ISLAND Hy baz=313,slow=75,SNR=89	28.30	120	T		T	16 21 50.3	
H11N1	WAKE ISLAND Hy baz=313,slow=75,SNR=97	28.31	120	T		T	16 21 53.8	
H11N3	WAKE ISLAND Hy baz=313,slow=75,SNR=76	28.32	120	T		T	16 21 55.6	
H11S1	WAKE ISLAND Hy baz=314,slow=76,SNR=60	29.01	123	T		T	16 23 06.8	
H11S3	WAKE ISLAND Hy baz=314,slow=76,SNR=47	29.01	123	T		T	16 22 48.6	
H11S2	WAKE ISLAND Hy baz=314,slow=76,SNR=35	29.02	123	T		T	16 22 49.0	
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=57,slow=3.3,SNR=5.0 0.2nm,0.3s	41.31	255	P		P	15 54 07.8	-1.5
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=112,slow=6.4,SNR=2.2 0.3nm,0.3s	41.79	312	P		P	15 54 12.1	-0.6
ILAR	Eielson Array 0.2nm,0.8s,baz=259,slow=5.7,SNR=2.1	49.60	32	P		P	15 55 14.9	+0.6
ILAR				LR		LR	16 15 12.6	
	comp=Z,45nm,21.0s,baz=242,slow=35 0.2nm,0.8s							
BVAR	Borovoye Array 0.2nm,0.5s,baz=76,slow=6.1,SNR=2.1 0.2nm,0.5s	50.44	312	P		P	15 55 20.1	-0.9
WRA	Warramunga Arr 1.0nm,0.4s,baz=3.9,slow=7.3,SNR=32 1.0nm,0.4s	57.02	188	P		P	15 56 09.0	-0.3
ASAR	Alice Springs 0.6nm,0.8s,baz=4.4,slow=7.6,SNR=12 0.6nm,0.8s	60.75	188	P		P	15 56 35.1	-0.1
YKA	Yellowknife Ar 0.1nm,0.6s,baz=300,slow=7.6,SNR=2.1 0.1nm,0.6s	63.91	30	P		P	15 56 55.5	-0.4
FINES	FINESS Array B 2.6nm,0.9s,baz=42,slow=11,SNR=4.2 2.6nm,0.9s	68.74	332	P		P	15 57 27.3	+0.4
FRB	Frobisher Bay comp=Z,36nm,19.2s,baz=336,slow=38	76.83	13	LR		LR	16 35 01.7	
H03N2	Juan Fernandez baz=291,slow=76,SNR=5.0	147.21	96	T		T	18 50 53.0	
H03N3	Juan Fernandez baz=291,slow=76,SNR=5.8	147.22	96	T		T	18 50 38.3	
H03N1	Juan Fernandez baz=291,slow=76,SNR=6.6	147.22	96	T		T	18 50 37.7	

IDC ***10*** *15:48:31.6±2.6, 55°.93N× 148°.52W, h0km, mb3.5/4, mbtmp3.4/9, ML3.0/5, Error ellipse: s-maj=51.7km s-min=25.6km az=174.0*
NEIC ***10*** *15:48:33.9±1.5, 56°.14N±0°.09× 148°.6W±0°.1, h21km±10km, ML3.6/50, ML3.3(AEIC), Error ellipse: s-maj=13.0km s-min=8.3km az=160.0*
AEIC ***10*** *15:48:36.8±1.7, 56°.20N±0°.08× 148°.7W±0°.1, h0km±7km, Error ellipse: s-maj=13.1km s-min=7.6km az=152.0*

ISC 10 15:48:34.4±1.1, 56°.28N±0°.08× 148°.64W±0°.06, h10km, n177, σ1§10/177, mb3.7/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.63	307			Pn	15 49 16.5	-0.4
KDAK						Sn	15 49 47.2	-1.6
KDAK	Kodiak Island 3.0nm,0.3s,baz=148,slow=6.4,SNR=37	2.63	307	Pn		Pn	15 49 16.6	-0.3
KDAK				Sn		Sn	15 49 46.9	-1.9
	2.1nm,0.3s,baz=242,slow=21,SNR=1.2 10nm,0.4s							
OHAK	Old Harbor	2.73	292			Pn	15 49 17.3	-0.9
OHAK						Sn	15 49 48.6	-2.7
OHAK	Old Harbor baz=110	2.73	292	P		Pn	15 49 17.3	-0.9
OHAK				S		Sn	15 49 48.6	-2.7
SYI	Shuyak Island	3.09	321			Pn	15 49 23.1	-0.2
SYI						Sn	15 50 00.3	+0.1
Q20K	Shuyak Island baz=138	3.09	321	P		Pn	15 49 23.1	-0.2
Q20K				S		Sn	15 50 00.3	+0.1
	baz=138							
SII	Sitkinak Islan	3.09	277			Pn	15 49 22.2	-1.1
SII						Sn	15 49 57.2	-3.1
SII	Sitkinak Islan comp=N,194nm,1.3s	3.09	277	IAML			15 50 04.1	
SII				IAML			15 50 05.3	
	comp=E,107nm,0.6s							
SII	Sitkinak Islan baz=94	3.09	277	P		Pn	15 49 22.2	-1.1
SII				S		Sn	15 49 57.2	-3.1
	baz=94							
Q23K	Middleton Isla	3.38	20			Pn	15 49 26.5	-0.8
Q23K	Middleton Isla baz=202	3.38	20	P		Pn	15 49 27.6	+0.4
MID	Middleton Isla	3.39	20	Pn		Pn	15 49 26.5	-0.8
MID				IAML			15 51 38.1	
	comp=N,185nm,1.4s							
CNPM	China Poot	3.54	338			Pn	15 49 29.1	-0.3
CNPM						Sn	15 50 10.5	-0.8
BRSE	Bradley Lake S	3.65	343			Pn	15 49 30.5	-0.4
BRSE						Sn	15 50 12.9	-1.0
BRSE	Bradley Lake S baz=162	3.65	343	P		Pn	15 49 30.5	-0.4
BRSE				S		Sn	15 50 12.9	-1.0
	baz=162							
BRLK	Bradley Lake	3.69	342			Pn	15 49 31.2	-0.3
BRLK						Sn	15 50 13.8	-1.3
HOM	Homer	3.75	336	Pn		Pn	15 49 32.7	+0.5
Q19K	Cape Douglas,	3.78	317			Pn	15 49 33.1	+0.3
Q19K	Cape Douglas, baz=133	3.78	317	P		Pn	15 49 33.1	+0.3
P23K	Montague Islan	3.78	9			Pn	15 49 32.1	-0.7
P23K						Sn	15 50 15.4	-1.8
P23K	Montague Islan baz=190	3.78	9	P		Pn	15 49 32.1	-0.7
P23K				S		Sn	15 50 15.4	-1.8
	baz=190							
SEW	Seward	3.86	354			Pn	15 49 33.2	-0.6
SEW	Seward baz=173	3.86	354	P		Pn	15 49 33.2	-0.6
CHIR	Chirikof Islan	3.94	266	Pn		Pn	15 49 33.4	-1.6
CHIR				IAML			15 50 11.8	
	comp=N,102nm,1.4s							
CHIR				IAML			15 51 53.6	
	comp=E,126nm,1.5s							
P19K	Oil Pt	4.17	326			Pn	15 49 38.7	+0.6
P19K	Oil Pt comp=E,71nm,1.1s	4.17	326	IAML			15 50 32.2	
P19K				IAML			15 50 54.6	
	comp=N,74nm,1.5s							
P19K	Oil Pt baz=143	4.17	326	P		Pn	15 49 38.7	+0.6
ANCK	Angle Creek	4.19	300			Pn	15 49 38.8	+0.3
HIN	Hinchinbrook I	4.28	14			Pn	15 49 39.2	-0.3
HIN	Hinchinbrook I comp=N,104nm,1.1s	4.28	14	IAML			15 50 29.4	
HIN				IAML			15 50 38.0	
	comp=E,106nm,1.1s							
KAIM	Kayak Island	4.29	30	Pn		Pn	15 49 38.7	-0.9
KAIM				IAML			15 50 35.3	
	comp=N,96nm,1.2s							
SLKM	Skilak Lake	4.32	350			Pn	15 49 39.7	-0.4
O20K	Slope Mountain	4.36	333			Pn	15 49 40.1	-0.6
O20K	Slope Mountain baz=150	4.36	333	P		Pn	15 49 40.1	-0.6
IVE	Iliamna Volcan	4.41	330			Pn	15 49 41.0	-0.4
CNTC	Contact Creek	4.41	300			Pn	15 49 41.7	+0.3
Q17K	Contact Creek baz=115	4.41	300	P		Pn	15 49 41.7	+0.3
EYAK	Cordova Ski Ar	4.54	18			Pn	15 49 43.1	0.0
EYAK	Cordova Ski Ar baz=200	4.54	18	P		Pn	15 49 43.1	0.0
SUCK	Suckling Hills	4.59	32	Pn		Pn	15 49 42.5	-1.3
SUCK				IAML			15 50 44.8	
	comp=E,56nm,0.8s							
SUCK				IAML			15 50 46.2	
	comp=N,60nm,1.2s							
RAGM	Ragged Mountai	4.62	25			Pn	15 49 43.9	-0.4
NICHA	Nichawak Mount	4.67	30			Pn	15 49 44.3	-0.6
HMT	Hamilton	4.67	28			Pn	15 49 44.6	-0.4
RED	Redoubt Volcan	4.69	334			Pn	15 49 44.2	-1.0
RDSO	Redoubt South	4.71	334			Pn	15 49 44.6	-1.1
RSO	Redoubt South	4.72	334	Pn		Pn	15 49 45.6	-0.2
RDT	Redoubt	4.74	337			Pn	15 49 44.8	-1.1
RDWB	Redoubt West	4.76	334			Pn	15 49 45.5	-0.8
GOAT	Goat Mountain	4.78	24			Pn	15 49 45.9	-0.5
RC01	Rabbit Creek A	4.86	354			Pn	15 49 47.1	-0.4
RC01	Rabbit Creek A comp=E,21nm,1.0s	4.86	354	IAML			15 50 43.9	
RC01				IAML			15 50 52.7	
	comp=N,22nm,1.3s							
RC01	Rabbit Creek A baz=173	4.86	354	P		Pn	15 49 47.1	-0.4
BERG	Berg Lake	4.87	30			Pn	15 49 47.3	-0.4
BERG	Berg Lake comp=N,63nm,0.9s	4.87	30	IAML			15 50 44.8	
BERG				IAML			15 51 02.7	
	comp=E,62nm,1.1s							
GRIN	Grindle Hills	4.89	33			Pn	15 49 47.5	-0.5
O19K	Port Alsworth	4.94	325			Pn	15 49 47.9	-0.7
O19K	Port Alsworth comp=N,35nm,0.5s	4.94	325	IAML			15 50 50.5	
O19K				IAML			15 50 58.1	
	comp=E,46nm,1.1s							
O19K	Port Alsworth baz=141	4.94	325	P		Pn	15 49 47.9	-0.7
SNH	Sunshine Point	4.97	36			Pn	15 49 47.9	-1.1
SNH	Sunshine Point comp=E,28nm,1.0s	4.97	36	IAML			15 50 50.4	
SNH				IAML			15 50 59.1	
	comp=N,41nm,1.4s							
O18K	Koktuh Hills	5.00	318	Pn		Pn	15 49 49.1	-0.4
KHIT	Khitrov Hills	5.04	32			Pn	15 49 49.5	-0.7
KNK	Knik Glacier	5.15	1			Pn	15 49 51.3	-0.2
KNK	Knik Glacier comp=E,20nm,1.1s	5.15	1	IAML			15 50 56.3	
KNK				IAML			15 51 02.1	
	comp=N,16nm,1.2s							
KNK	Knik Glacier baz=181	5.15	1	P		Pn	15 49 51.3	-0.2
BMRM	Bremner River	5.15	22			Pn	15 49 51.4	-0.2
BMRM	Bremner River baz=206	5.15	22	P		Pn	15 49 51.4	-0.2
WAX	Waxell Ridge	5.17	34			Pn	15 49 51.3	-0.6
WAX	Waxell Ridge comp=N,50nm,0.7s	5.17	34	IAML			15 50 54.5	
WAX				IAML			15 50 56.9	
	comp=E,39nm,0.8s							
BARK	Barkley Ridge	5.25	36			Pn	15 49 52.0	-1.0
MESA	MESA	5.27	39	Pn		Pn	15 49 52.9	-0.4
MESA				IAML			15 50 52.8	
	comp=N,24nm,0.1s							
MESA				IAML			15 50 59.4	
	comp=E,21nm,1.5s							
N20K	Mount Spurr baz=158	5.27	341	P		Pn	15 49 52.9	-0.4
SPCR	Spurr Chakacha	5.27	341			Pn	15 49 52.9	-0.4
CRQM	Cirque	5.33	30			Pn	15 49 53.2	-1.0
PMR	Palmer	5.33	357	Pn		Pn	15 49 54.1	+0.1
CRQE	Cirque baz=215	5.34	31	P		Pn	15 49 53.2	-1.1
KLU	Klutina	5.41	14			Pn	15 49 55.1	0.0
KLU	Klutina baz=196	5.41	14	P		Pn	15 49 55.2	0.0
BAGL	Bagley Icefiel	5.45	37			Pn	15 49 55.1	-0.4
CHGN	Chignik	5.45	274	Pn		Pn	15 49 53.4	-2.1
ISLE	Juniper Island	5.45	35			Pn	15 49 55.1	-0.7
N19K	Bonanza Creek	5.48	328			Pn	15 49 55.2	-0.9
N19K	Bonanza Creek baz=144	5.48	328	P		Pn	15 49 55.2	-0.9
STLK	Strandline Lak	5.49	344			Pn	15 49 56.4	+0.1
GHO	Glory Hole Cre	5.51	359			Pn	15 49 57.3	+0.8
SML	Sawmill	5.54	2			Pn	15 49 57.1	+0.1
SML	Sawmill baz=182	5.54	2	P		Pn	15 49 57.1	+0.1
SCM	Sheep Creek Mo	5.61	6	Pn		Pn	15 49 59.4	+1.5
VRDI	Verde Repeater	5.65	26			Pn	15 49 58.0	-0.5
SAMH	Samovar Hills	5.67	44			Pn	15 49 58.2	-0.5
KIAG	Kiagna River	5.69	33			Pn	15 49 58.6	-0.6
N25K	Chitina, Valde	5.73	20			Pn	15 49 60.0	+0.3
N25K	Chitina, Valde baz=203	5.73	20	P		Pn	15 49 60.0	+0.3
TABL	Table Mountain	5.74	40			Pn	15 49 59.4	-0.4
GLB	Gilahina Butte	5.75	24			Pn	15 49 59.5	-0.3
N18K	Kilae Creek	5.82	322			Pn	15 50 00.3	-0.5
N18K	Kilae Creek baz=137	5.82	322	P		Pn	15 50 00.3	-0.5
PTPK	Patty Peak	5.88	31			Pn	15 50 01.3	-0.4
MCARA	McCarthy VSAT	5.89	27			Pn	15 50 01.7	0.0
MCARA	McCarthy VSAT baz=212	5.89	27	P		Pn	15 50 01.7	0.0
SKT	Skwentna	5.91	347	Pn		Pn	15 50 02.0	+0.1
PNL	Peninsula	5.97	52			Pn	15 50 02.5	-0.3
PNL	Peninsula baz=239	5.97	52	P		Pn	15 50 02.5	-0.3
M24K	Tolsona, Glenn	5.98	11			Pn	15 50 04.0	+1.1
M24K	Tolsona, Glenn baz=193	5.98	11	P		Pn	15 50 04.0	+1.1
BARN	Barnard Glacie	6.01	34			Pn	15 50 03.3	-0.3
O16K	Kokwok River B	6.03	307	Pn		Pn	15 50 03.8	+0.2
CTG	Chitna Glacier baz=222	6.05	36	P		Pn	15 50 02.8	-1.1
CTGM	Chitina Glacie	6.05	36			Pn	15 50 02.8	-1.2
LOGN	Logan Glacier	6.06	38			Pn	15 50 03.5	-0.6
M20K	Styx River	6.08	339	Pn		Pn	15 50 03.4	-0.9
M19K	Big River Lodg	6.37	335			Pn	15 50 07.5	-0.8
M19K	Big River Lodg baz=150	6.37	335	P		Pn	15 50 07.5	-0.8
HARP	HAARP	6.39	15			Pn	15 50 09.6	+1.1
HARP	HAARP baz=198	6.39	15	P		Pn	15 50 09.6	+1.1
M18K	Stony River	6.41	327			Pn	15 50 08.0	-0.8
M18K	Stony River baz=142	6.41	327	P		Pn	15 50 08.0	-0.8
P29M	Windy Craggy	6.70	55			Pn	15 50 11.8	-1.1
P29M	Windy Craggy baz=244	6.70	55	P		Pn	15 50 11.8	-1.1
L19K	White Mountain	6.72	334			Pn	15 50 12.6	-0.5
DHY	Denali Highway	6.85	5			Pn	15 50 15.2	+0.3
DHY	Denali Highway baz=186	6.85	5	P		Pn	15 50 15.2	+0.3
M17K	Holitna River	6.87	322			Pn	15 50 15.1	0.0
S31K	Pelican	6.96	71	Pn		Pn	15 50 13.8	-2.5
M27K	Edge Creek, AK	7.00	27	Pn		Pn	15 50 16.2	-0.9
RND	Reindeer	7.15	359	Pn		Pn	15 50 17.1	-1.9
M16K	Timber Creek	7.18	316	Pn		Pn	15 50 18.5	-0.8
N15K	Kwethluk River	7.19	308	Pn		Pn	15 50 18.1	-1.5
L18K	Granite Mounta	7.24	329	Pn		Pn	15 50 20.1	-0.1
CAST	Castle Rocks	7.37	348	Pn		Pn	15 50 21.6	-0.3
KTH	Kantishna Hill	7.38	352	Pn		Pn	15 50 22.0	-0.2
BCAR	Beaver Creek A	7.63	24	Pn		Pn	15 50 25.4	-0.2
JIS	Juneau Island	7.98	70	Pn		Pn	15 50 28.8	-1.5
M29M	Somme Creek	8.07	36			Pn	15 50 30.1	-1.5
K17K	Iditarod	8.11	327	Pn		Pn	15 50 31.6	-0.4
J18K	Innoko River	8.27	334	Pn		Pn	15 50 33.9	-0.3
J20K	Nowinta River	8.38	343	Pn		Pn	15 50 36.0	+0.3
K27K	Chicken	8.43	20	Pn		Pn	15 50 37.4	+0.9
J19K	Poorman	8.48	339	Pn		Pn	15 50 36.2	-1.0
ILAR	Eielson Array comp=E,0.1nm,0.3s,baz=190,slow=13,SNR=9.1	8.56	5	Pn		Pn	15 50 39.0	+0.8
ILAR				Sn		Sn	15 52 09.1	-5.7
	comp=E,0.1nm,0.3s,baz=189,slow=25,SNR=8.9 comp=E,0.4nm,0.4s							
P32M	Atlin	8.60	61	Pn		Pn	15 50 37.9	-1.0
J26L	Joseph Creek	8.62	15	Pn		Pn	15 50 39.5	+0.3
L29M	L29M	8.66	33	Pn		Pn	15 50 40.0	+0.4
MDM	Murphy Dome	8.71	1	Pn		Pn	15 50 40.8	+0.5
M13K	Dall Lake	8.77	304	Pn		Pn	15 50 38.9	-2.2
L14K	Kuka Creek	8.87	311	Pn		Pn	15 50 41.5	-1.0
POKR	Poker Plat Res	8.89	3	Pn		Pn	15 50 42.0	-0.8
I23K	Minto, Yukon-K	8.90	358	Pn		Pn	15 50 43.1	+0.2
P33M	Teslin, Yukon	9.22	58	Pn		Pn	15 50 46.3	-1.1
K29M	Barlow Dome	9.39	32	Pn		Pn	15 50 44.0	+0.4
M31M	Drury Creek, Y	9.39	45	Pn		Pn	15 50 45.0	+0.7
H21K	Melozitna Rive	9.62	350	Pn		Pn	15 50 52.8	0.0
S34M	Telegraph Cree	9.66	73	Pn		Pn	15 50 50.2	-3.2
FARO	Faro, Yukon	9.82	46	Pn		Pn	15 50 55.7	+0.1
R33M	Jennings River	9.92	64	Pn		Pn	15 50 55.7	-1.3
H19K	Roundabout Mou	10.02	341	Pn		Pn	15 50 58.5	+0.3
IMAR	Indian Mountai	10.04	348	Pn		Pn	15 50 58.5	0.0
H18K	Honhosa River	10.08	336	Pn		Pn	15 50 58.8	-1.0
DLBC	Dease Lake comp=E,0.1nm,0.3s,baz=270,slow=8.1,SNR=2.2 comp=E,1.1nm,0.7s	10.28	70	Pn		Pn	15 51 00.6	-1.3
G21K	Allakaket	10.53	349	Pn		Pn	15 51 06.1	+0.9
F21K	Alatna River	11.21	350	Pn		Pn	15 51 14.3	-0.3
F20K	Avaraart Lake	11.31	346	Pn		Pn	15 51 16.0	+0.2
E19K	Redstone River	11.91	344	Pn		Pn	15 51 24.8	+0.8
F15K	North Star Dit	12.19	327	Pn		Pn	15 51 29.7	+1.8
D22K	Ayikyak River	12.78	353	Pn		Pn	15 51 38.4	+2.5
INK	Inuvik baz=204,slow=10,SNR=5.6 comp=E,1.8nm,1.0s	13.90	24	Pn		Pn	15 51 54.2	+3.1
YKA	Yellowknife Ar baz=263,slow=11,SNR=7.1 comp=E,0.5nm,0.8s	18.24	56	P		P	15 52 48.5	+0.9
H11N2	WAKE ISLAND Hy baz=33	49.20	241	T		T	16 50 42.5	
H11N3	WAKE ISLAND Hy baz=33	49.20	241	T		T	16 50 35.6	
H11N1	WAKE ISLAND Hy baz=33	49.21	241	T		T	16 50 18.1	
H11S1	WAKE ISLAND Hy baz=29,slow=76,SNR=5.3	50.33	240	T		T	16 52 34.2	
H11S2	WAKE ISLAND Hy baz=29,slow=76,SNR=3.3	50.35	240	T		T	16 52 38.2	
H11S3	WAKE ISLAND Hy baz=29,slow=76,SNR=4.2	50.35	240	T		T	16 52 19.0	
SONM	Songino Array comp=E,0.3nm,0.6s,baz=43,slow=7.1,SNR=3.6 comp=E,0.3nm,0.6s	58.91	311	P		P	15 58 34.7	+1.3
BVAR	Borovoye Array comp=E,0.6nm,0.7s,baz=34,slow=11,SNR=3.0 comp=E,0.6nm,0.7s	66.43	335	P		P	15 59 25.1	+1.7
MKAR	Makanchi Array comp=E,0.1nm,0.5s,baz=30,slow=6.9,SNR=1.3 comp=E,0.1nm,0.5s	68.80	325	P		P	15 59 39.2	+0.8
AKASG	Malin Array Be comp=E,0.2nm,0.3s,baz=4.0,slow=6.7,SNR=

	baz=6.0								
EWUT	**Wuta**	**0.34**	**9**	P		**Pg**	**15 51 01.5**	**+0.1**
	baz=10.0								
EWUT				S		**Sg**	**15 51 05.8**	**0.0**
	baz=10.0								
SHUL	**Shoufeng**	**0.35**	**204**	P		**Pb**	**15 51 03.3**	**-0.1**
	baz=209								
ESL	**Shilin**	**0.40**	**222**	*i* P		**Pg**	**15 51 02.5**	**+0.1**
	baz=228								
ESL				S		**Sg**	**15 51 07.4**	**-0.2**
	baz=228								
WHF	**Hehuan Shan**	**0.42**	**275**	P		**Pg**	**15 51 03.1**	**+0.1**
	baz=273								
WHF				S		**Sg**	**15 51 08.1**	**-0.4**
	baz=273								
TEGC	**Jichi Village**	**0.43**	**203**	*e*P		**Pb**	**15 51 04.7**	**0.0**
	baz=205								
NNSB	**Datong**	**0.44**	**316**	⇓*i*P		**Pg**	**15 51 03.6**	**+0.2**
	baz=315								
NNSB				S		**Sg**	**15 51 09.3**	**+0.1**
	baz=315								
NNSH	**Datong**	**0.44**	**316**	P		**Pg**	**15 51 03.6**	**+0.2**
	baz=315								
NNSH				S		**Sg**	**15 51 09.6**	**+0.4**
	baz=315								
FUSS	**Fushou**	**0.46**	**288**	⇓*i*P		**Pg**	**15 51 04.0**	**+0.3**
	baz=286								
FUSS				S		**Sg**	**15 51 10.2**	**+0.5**
	baz=286								
NNS	**Nan Shan**	**0.46**	**316**	⇓*i*P		**Pg**	**15 51 03.7**	**+0.1**
	baz=316								
NNS				*i* S		**Sg**	**15 51 09.9**	**+0.2**
	baz=316								
LATG	**Datong**	**0.46**	**337**	⇓P		**Pg**	**15 51 03.8**	**+0.1**
	baz=337								
LATG				*e*S		**Sg**	**15 51 09.9**	**+0.2**
	baz=337								
ESAO	**Su ao**	**0.48**	**13**	*e*P		**Pg**	**15 51 04.1**	**+0.1**
	baz=12								
WARBT	**Fenglin Townsh**	**0.50**	**218**	P		**Pg**	**15 51 04.2**	**-0.1**
	baz=229								
CHGB	**Renai**	**0.50**	**265**	P		**Pg**	**15 51 04.8**	**+0.3**
	baz=255								
CHGB				*e*S		**Sg**	**15 51 11.4**	**+0.3**
	baz=255								
TWC	**Suao**	**0.51**	**13**	*e*P		**Pg**	**15 51 04.8**	**+0.2**
	baz=6.0								
TWT	**Tachien**	**0.52**	**286**	P		**Pb**	**15 51 05.4**	**-0.9**
	baz=284								
TWT				*e*S		**Sg**	**15 51 12.2**	**+0.6**
	baz=284								
NDS	**Dongshan**	**0.52**	**359**	P		**Pg**	**15 51 05.1**	**+0.3**
	baz=358								
NDS				*e*S		**Sg**	**15 51 12.1**	**+0.5**
	baz=358								
NDT	**Datong Townshi**	**0.53**	**339**	P		**Pg**	**15 51 05.3**	**+0.4**
	baz=338								
NDT				S		**Sg**	**15 51 12.5**	**+0.7**
	baz=338								
TDCB	**Techi**	**0.53**	**286**	P		**Pg**	**15 51 05.5**	**+0.4**
	baz=284								
TDCB				S		**Sg**	**15 51 12.4**	**+0.4**
	baz=284								
EOS4	**EOS4**	**0.55**	**89**	*e*P		**Pn**	**15 51 08.5**	**-0.1**
	baz=93								
EOS4				*e*S		**Sn**	**15 51 17.9**	**+0.1**
	baz=93								
ENTT	**Nioudou**	**0.55**	**345**	P		**Pg**	**15 51 05.6**	**+0.3**
	baz=344								
ENTT				S		**Sg**	**15 51 13.1**	**+0.6**
	baz=344								
WUSB	**Renai**	**0.56**	**258**	*i* P		**Pg**	**15 51 06.0**	**+0.3**
	baz=257								
WUSB				S		**Sg**	**15 51 13.0**	**0.0**
	baz=257								
TWE	**Neicheng**	**0.61**	**355**	P		**Pg**	**15 51 06.9**	**+0.4**
	baz=356								
TWE				*e*S		**Sg**	**15 51 15.0**	**+0.5**
	baz=356								
VWDT	**VWDT**	**0.64**	**236**	*e*P		**Pg**	**15 51 07.3**	**+0.3**
	baz=244								
YHNB	**Yeheng**	**0.64**	**331**	P		**Pg**	**15 51 07.6**	**+0.5**
YHNB	**Yeheng**	**0.64**	**331**	P		**Pg**	**15 51 07.4**	**+0.3**
	baz=330								
YHNB				*e*S		**Sg**	**15 51 15.2**	**-0.3**
	baz=330								
ILA	**Ilan**	**0.65**	**2**	*e*S		**Sb**	**15 51 17.0**	**-0.8**
	baz=2.0								
NSK	**Sanguang**	**0.65**	**330**	P		**Pg**	**15 51 07.7**	**+0.3**
	baz=329								
NSK				*e*S		**Sg**	**15 51 16.3**	**+0.4**
	baz=329								
FUSB	**Fushanzhiwuyua**	**0.66**	**349**	⇓P		**Pg**	**15 51 07.8**	**+0.4**
	baz=348								
FUSB				S		**Sg**	**15 51 16.6**	**+0.5**
	baz=348								
HGSD	**Ruisui**	**0.67**	**204**	*e*P		**Pb**	**15 51 09.0**	**+0.2**
	baz=194								
NWLT	**Wulai**	**0.69**	**343**	*i* P		**Pg**	**15 51 08.6**	**+0.4**
	baz=342								
NWLT				S		**Sg**	**15 51 17.3**	**+0.2**
	baz=342								
EHY	**Hungye**	**0.70**	**211**	*e*P		**Pg**	**15 51 08.3**	**0.0**
	baz=214								
WPL	**Puli Township**	**0.71**	**262**	P		**Pb**	**15 51 08.9**	**-0.6**
	baz=253								
WPL				*e*S		**Sg**	**15 51 17.4**	**-0.1**
	baz=253								
DPDB	**Guoxing**	**0.73**	**264**	P		**Pb**	**15 51 09.4**	**-0.5**
	baz=256								
DPDB				*e*S		**Sg**	**15 51 18.4**	**0.0**
	baz=256								
WCS	**Beigang Elemen**	**0.74**	**266**	P		**Pb**	**15 51 09.4**	**-0.7**
	baz=266								
NFF	**Wufeng Townshi**	**0.76**	**313**	P		**Pb**	**15 51 09.9**	**-0.4**
	baz=313								
NFF				*e*S		**Sb**	**15 51 19.7**	**-1.2**
	baz=313								
SSLB	**Suanglung**	**0.77**	**246**	P		**Pg**	**15 51 09.7**	**+0.1**
SSLB	**Suanglung**	**0.77**	**246**	⇓P		**Pg**	**15 51 09.6**	**0.0**
	baz=256								
SSLB				S		**Sg**	**15 51 18.9**	**-0.7**
	baz=256								
SMLT	**Sun Moon Lake**	**0.79**	**253**	P		**Pb**	**15 51 10.2**	**-0.6**
	baz=253								
SMLT				*e*S		**Sg**	**15 51 19.7**	**-0.4**
	baz=253								
YULB	**Yu-li**	**0.81**	**209**	P		**Pg**	**15 51 10.8**	**+0.4**
YULB	**Yu-li**	**0.81**	**209**	P		**Pg**	**15 51 09.9**	**-0.5**
	baz=225								
TYC	**Yuchr**	**0.82**	**256**	P		**Pg**	**15 51 10.6**	**+0.1**
	baz=256								
TYC				*e*S		**Sg**	**15 51 20.6**	**-0.5**
	baz=256								
LIOB	**Emei**	**0.84**	**310**	P		**Pb**	**15 51 11.7**	**0.0**
	baz=308								
NSTT	**Nanjuang**	**0.84**	**308**	*e*P		**Pb**	**15 51 11.6**	**-0.1**
	baz=308								
NSTT				*e*S		**Sb**	**15 51 22.3**	**-0.9**
	baz=308								
EYUL	**Yuli**	**0.84**	**206**	*e*P		**Pg**	**15 51 11.1**	**+0.1**
	baz=221								
TWF1	**Yuli**	**0.85**	**207**	*e*P		**Pg**	**15 51 10.5**	**-0.5**
	baz=223								
NJD	**Zhudong**	**0.85**	**317**	*e*P		**Pn**	**15 51 12.6**	**-0.6**
	baz=316								
NHDH	**Xindian Distri**	**0.87**	**348**	P		**Pg**	**15 51 11.7**	**+0.3**
	baz=336								
NHDH				*e*S		**Sb**	**15 51 23.4**	**-0.7**
	baz=336								
TWA	**Mucha**	**0.88**	**352**	*e*P		**Pb**	**15 51 12.1**	**-0.2**
	baz=349								
TATO	**Taipei**	**0.89**	**346**	P		**Pb**	**15 51 12.5**	**0.0**
TWQ1	**Liyutan**	**0.90**	**286**	*e*P		**Pn**	**15 51 14.0**	**+0.1**
	baz=285								
TWB1	**Santiao Chiao**	**0.93**	**15**	*e*P		**Pb**	**15 51 13.1**	**-0.1**
	baz=3.0								
NSY	**Sanyi**	**0.93**	**289**	*e*P		**Pn**	**15 51 13.7**	**-0.6**
	baz=289								
NMLH	**Miaoli**	**0.95**	**297**	*e*P		**Pn**	**15 51 14.1**	**-0.5**
	baz=304								
SBCB	**Hsinchu**	**0.96**	**316**	*e*P		**Pn**	**15 51 14.2**	**-0.5**
	baz=314								
TCU	**Taichung**	**0.96**	**272**	P		**Pn**	**15 51 14.8**	**+0.1**
	baz=266								
WNT	**Mingjian**	**0.98**	**257**	*e*P		**Pn**	**15 51 15.0**	**0.0**
	baz=252								
WNT				*e*S		**Sn**	**15 51 29.2**	**+0.1**
	baz=252								
SXI1	**Grass Mountain**	**0.99**	**8**	*e*P		**Pb**	**15 51 14.3**	**0.0**
	baz=352								
SXI1				*e*S		**Sg**	**15 51 27.0**	**+0.4**
	baz=352								
TWS1	**Kuangyinshan**	**1.02**	**344**	*e*P		**Pn**	**15 51 15.7**	**+0.1**
	baz=343								
TWS1				*e*S		**Sn**	**15 51 30.0**	**-0.3**
	baz=343								
ALS	**Alishan**	**1.03**	**235**	*e*P		**Pb**	**15 51 14.9**	**-0.2**
	baz=246								
YM01	**YM01**	**1.04**	**352**	*e*P		**Pg**	**15 51 14.1**	**-0.7**
YM01				*e*S		**Sb**	**15 51 29.6**	**+0.5**
EHD	**Haiduan**	**1.07**	**206**	*e*P		**Pg**	**15 51 14.8**	**-0.4**
	baz=224								
YM08	**YM08**	**1.08**	**354**	*e*P		**Pb**	**15 51 15.8**	**0.0**
	baz=335								
CHN5	**Tsauling**	**1.08**	**242**	*e*P		**Pn**	**15 51 16.3**	**-0.2**
	baz=243								
CHN5				*e*S		**Sn**	**15 51 32.4**	**+0.6**
	baz=243								
ANP	**Anpu**	**1.09**	**350**	*e*P		**Pb**	**15 51 16.1**	**+0.1**
	baz=346								
ELDTW	**Lidau**	**1.12**	**215**	*e*P		**Pg**	**15 51 15.7**	**-0.6**
	baz=210								
WGK	**Gukeng**	**1.14**	**249**	*e*P		**Pn**	**15 51 17.9**	**+0.8**
	baz=252								
EDH	**Donghe**	**1.20**	**199**	*e*P		**Pg**	**15 51 15.4**	**-2.3**
	baz=188								
EDH				*e*S		**Sg**	**15 51 32.8**	**-0.4**
	baz=188								
WCKO	**Fanlu**	**1.22**	**237**	*e*P		**Pn**	**15 51 18.7**	**+0.4**
	baz=239								
WCKO				*e*S		**Sn**	**15 51 36.1**	**+0.9**
	baz=239								
WRL	**Guolierlin Hig**	**1.25**	**261**	*e*P		**Pn**	**15 51 19.2**	**+0.5**
	baz=262								
STYH	**Taoyuan**	**1.28**	**223**	*e*P		**Pn**	**15 51 18.6**	**-0.4**
	baz=230								
STYH				*e*S		**Sn**	**15 51 36.3**	**-0.2**
	baz=230								
CHN4	**Tsaushan**	**1.28**	**234**	*e*P		**Pg**	**15 51 19.7**	**+0.4**
	baz=225								
CHN4				*e*S		**Sn**	**15 51 39.2**	**+2.7**
	baz=225								
TPUB	**Ta-pu**	**1.28**	**231**	P		**Pg**	**15 51 19.8**	**+0.4**
TPUB	**Ta-pu**	**1.28**	**231**	*e*P		**Pg**	**15 51 19.6**	**+0.2**
	baz=237								
WTK	**Tuku**	**1.29**	**251**	*e*P		**Pg**	**15 51 19.2**	**-0.3**
	baz=254								
LONT	**Longtian**	**1.31**	**205**	*e*P		**Pn**	**15 51 17.6**	**-2.0**
	baz=211								
WTP	**Ta-pu**	**1.33**	**230**	*e*P		**Pg**	**15 51 20.6**	**+0.4**
	baz=235								
TWK	**Hsinying**	**1.41**	**234**	*e*P		**Pg**	**15 51 22.1**	**+0.4**
	baz=237								
TWK				*e*S		**Sg**	**15 51 42.4**	**+2.4**
	baz=237								
TWG	**Pinlang**	**1.42**	**205**	*e*P		**Pn**	**15 51 21.2**	**+0.2**
	baz=210								
TWGBT	**Beinan**	**1.42**	**205**	P		**Pg**	**15 51 24.0**	**+2.1**
TWGBT	**Beinan**	**1.42**	**205**	*e*P		**Pn**	**15 51 18.7**	**-2.2**
	baz=209								
CHN1	**Nanshi**	**1.43**	**230**	*e*P		**Pg**	**15 51 22.8**	**+0.6**
	baz=234								
CHN1				*e*S		**Sg**	**15 51 43.5**	**+2.7**
	baz=234								
SNST	**Tainan City**	**1.43**	**232**	*e*P		**Pg**	**15 51 22.3**	**+0.1**
	baz=235								
SNST				*e*S		**Sg**	**15 51 42.1**	**+1.4**
	baz=235								
SGST	**Jiashian**	**1.46**	**226**	*e*P		**Pg**	**15 51 22.6**	**-0.2**
	baz=229								
SGST				*e*S		**Sg**	**15 51 43.2**	**+1.5**
	baz=229								
SCST	**Cishan**	**1.66**	**223**	*e*P		**Pg**	**15 51 26.1**	**-0.5**
	baz=228								
SCST				*e*S		**Sg**	**15 51 49.4**	**+1.3**
	baz=228								
SSD	**Sandimen**	**1.69**	**217**	*e*P		**Pn**	**15 51 25.1**	**+0.4**
	baz=233								
SSD				*e*S		**Sg**	**15 51 48.3**	**-0.6**
	baz=233								
TSMG	**Majia**	**1.71**	**216**	*e*P		**Pb**	**15 51 26.5**	**-0.1**
	baz=235								
TSCK	**Chigu Township**	**1.78**	**238**	*e*P		**Pn**	**15 51 26.7**	**+0.7**
	baz=241								
TSCK				*e*S		**Sg**	**15 51 51.2**	**-0.8**
	baz=241								
MASBT	**Mashibuluo**	**1.80**	**214**	*e*P		**Pb**	**15 51 27.7**	**-0.3**
	baz=213								
EAST	**Anshuo**	**1.90**	**205**	*e*P		**Pn**	**15 51 27.8**	**+0.1**
	baz=199								
JISG	**Ishigakijimahi**	**2.41**	**78**	P		**Pn**	**15 51 35.0**	**+0.4**
JISG				*e*S		**Sn**	**15 52 04.2**	**-0.3**

*SOME **10** 15:51:18.5,41.°12N×83.°32E,h10km*
*NNC **10** 15:51:18.9±1.8,41.°21N×83.°38E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=14.6km s-min=11.8km az=17.0
ISC 10 15:51:21.5±2.5,41°27N±0.°10×83°22E±0.°09,h10km,n37,
σ2ˢ59/54,6C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.04**	**317**	Pg	**Pg**	**15 52 18.9**	**-0.8**
	7.1nm,0.5s						
KTMS				Lg	Lg	15 53 02.4	
	12nm,0.5s						
KTMS	**Ketmen**	**3.04**	**317**	*e*P	**Pg**	**15 52 18.9**	**-0.8**
	7.1nm,0.5s						
KTMS				*e*S	**Sg**	**15 53 02.4**	**+3.3**
	12nm,0.5s						
SHLS	**Shalkode**	**3.37**	**305**	Pg	**Pb**	**15 52 18.2**	**-3.2**
	7.7nm,0.3s						
SHLS				Lg	Lg	15 53 01.6	
	39nm,0.4s						
SHLS	**Shalkode**	**3.37**	**305**	*e*P	**Pb**	**15 52 18.2**	**-3.2**
	7.7nm,0.3s						
SHLS				*e*S	**Sb**	**15 53 01.6**	**-0.8**
	39nm,0.4s						
PDGK	**Podgornoye**	**3.45**	**308**	Pg	**Pb**	**15 52 24.3**	**+1.6**
	3.7nm,0.4s						
PDGK				Lg	Lg	15 53 11.5	
	11nm,0.6s						
PDGK	**Podgornoye**	**3.45**	**308**	⇑Pn	**Pn**	**15 52 14.2**	**-1.1**
	1.0nm,0.4s						
PDGK				⇑Pg	**Pg**	**15 52 25.3**	**-2.2**
	6.5nm,0.6s						
PDGK				⇑Lg	Lg	15 53 11.2	
	40nm,0.8s						
UZB	**Uzynbulak**	**3.64**	**302**	Pg	**Pb**	**15 52 27.4**	**+1.5**
	3.3nm,0.4s						
UZB				Lg	Lg	15 53 17.0	
	32nm,0.5s						
UZB	**Uzynbulak**	**3.64**	**302**	*e*P	**Pb**	**15 52 27.4**	**+1.5**
	3.3nm,0.4s						
UZB				*e*S	**Sg**	**15 53 17.0**	**-1.3**
	32nm,0.5s						
DJR	**Jarkent**	**3.97**	**322**	Pg	**Pg**	**15 52 34.5**	**-3.0**
	5.5nm,0.3s						
DJR				Lg	Lg	15 53 29.6	
	10nm,0.5s						
DJR	**Jarkent**	**3.97**	**322**	*e*P	**Pg**	**15 52 34.5**	**-3.0**
	5.5nm,0.3s						
DJR				*e*S	**Sg**	**15 53 29.6**	**+0.8**
	10nm,0.5s						
SATY	**Saty**	**4.00**	**298**	*e*P	**Pg**	**15 52 36.1**	**-1.9**
	2.5nm,0.2s						
SATY				*e*S	**Sg**	**15 53 31.5**	**+1.6**
	26nm,0.7s						
KPKS	**Kokpek**	**4.01**	**305**	Pg	**Pb**	**15 52 34.4**	**+2.1**
	8.1nm,0.5s						
KPKS				Lg	Lg	15 53 29.2	
	25nm,0.4s						
KPKS	**Kokpek**	**4.01**	**305**	*e*P	**Pb**	**15 52 34.4**	**+2.1**
	8.1nm,0.5s						
KPKS				*e*S	**Sg**	**15 53 29.2**	**-1.1**
	25nm,0.4s						
ZHN	**Zhinishke**	**4.03**	**300**	Pg	**Pb**	**15 52 34.5**	**+2.0**
ZHN				Lg	Lg	15 53 28.8	
ZHN	**Zhinishke**	**4.03**	**300**	*e*P	**Pb**	**15 52 35.3**	**+2.8**
	1.2nm,0.1s						
ZHN				*e*S	**Sg**	**15 53 30.1**	**-0.7**
	21nm,0.6s						
KURS	**Kuram**	**4.35**	**302**	Pg	**Pb**	**15 52 41.3**	**+3.3**
KURS				Lg	Lg	15 53 40.3	
KURS	**Kuram**	**4.35**	**302**	*e*P	**Pb**	**15 52 41.3**	**+3.3**
	2.4nm,0.5s						
KURS				*e*S	**Sg**	**15 53 40.3**	**-0.7**
	7.8nm,0.7s						
BLB	**Baldybastay**	**4.49**	**311**	Pg	**Pg**	**15 52 44.7**	**-2.8**
	4.7nm,0.1s						
BLB				Lg	Lg	15 53 47.2	
	11nm,0.4s						
KAPS	**Kapalarasan**	**4.90**	**326**	Pg	**Pg**	**15 52 53.9**	**-1.5**
	4.7nm,0.5s						
KAPS				Lg	Lg	15 54 02.7	
	12nm,0.6s						
KAPS	**Kapalarasan**	**4.90**	**326**	*e*P	**Pg**	**15 52 52.4**	**-3.0**
	2.2nm,0.3s						
KAPS				*e*S	**Sg**	**15 53 59.4**	**+0.5**
	9.6nm,0.5s						
KOTS	**Kotyrbulak**	**4.94**	**295**	Pg	**Pg**	**15 52 52.8**	**-3.2**
	2.6nm,0.3s						
KOTS				Lg	Lg	15 54 01.5	
	32nm,0.7s						
KOTS	**Kotyrbulak**	**4.94**	**295**	*e*P	**Pg**	**15 52 52.9**	**-3.2**
	2.6nm,0.3s						
KOTS				*e*S	**Sg**	**15 54 01.5**	**+1.5**
	32nm,0.7s						
ARXS	**Arharly**	**4.94**	**308**	*e*P	**Pb**	**15 52 51.8**	**+3.7**
	2.4nm,0.7s						
ARXS				*e*S	**Sg**	**15 53 58.7**	**-1.4**
	12nm,0.7s						
TNSS	**Tian-Shan**	**4.99**	**293**	Pg	**Pg**	**15 52 53.6**	**-3.4**
	1.4nm,0.4s						
TNSS				Lg	Lg	15 54 01.9	
	6.3nm,1.0s						
TNSS	**Tian-Shan**	**4.99**	**293**	*e*P	**Pg**	**15 52 53.6**	**-3.4**
	1.4nm,0.4s						
TNSS				*e*S	**Sg**	**15 54 01.9**	**+0.4**
	6.3nm,1.0s						
IZV	**Izvestkoviy**	**5.22**	**292**	Pg	**Pb**	**15 52 56.7**	**+3.9**
	1.2nm,0.2s						
IZV				Lg	Lg	15 54 07.3	
	15nm,0.6s						
IZV	**Izvestkoviy**	**5.22**	**292**	*e*P	**Pb**	**15 52 56.7**	**+3.9**
	1.2nm,0.2s						
IZV				*e*S	**Sg**	**15 54 07.2**	**-1.7**
	15nm,0.6s						
CHKK	**Chushkaly**	**5.28**	**301**	Pg	**Pg**	**15 52 59.3**	**-3.2**
	0.7nm,0.1s						
CHKK				Lg	Lg	15 54 11.8	
	8.5nm,0.5s						
CHKK	**Chushkaly**	**5.28**	**301**	*e*P	**Pg**	**15 52 59.3**	**-3.2**
	0.7nm,0.1s						
CHKK				*e*S	**Sg**	**15 54 11.8**	**+1.0**
	8.5nm,0.5s						
KTBS	**Karatobe**	**5.41**	**299**	Pg	**Pb**	**15 53 00.5**	**+4.4**
	1.3nm,0.6s						
KTBS				Lg	Lg	15 54 13.4	
	12nm,0.6s						
KTBS	**Karatobe**	**5.41**	**299**	*e*P	**Pb**	**15 53 00.5**	**+4.4**
	1.3nm,0.6s						
KTBS				*e*S	**Sg**	**15 54 13.4**	**-1.8**
	12nm,0.6s						
MK31	**Makanchi Array**	**5.56**	**353**	⇑Pg	**Pb**	**15 52 59.8**	**+1.1**
	1.7nm,0.6s,baz=167,slow=15,SNR=2.6						
MK31				⇑Lg	Lg	15 54 15.2	
	20nm,0.9s,baz=163,slow=30,SNR=4.0						
MAKZ	**Makanchi**	**5.61**	**351**	⇓Lg	Lg	15 54 16.6	
	13nm,1.1s						
KST	**Kastek**	**5.68**	**291**	*e*P	**Pg**	**15 53 06.0**	**-4.2**
	0.9nm,0.2s						
KST				*e*S	**Sg**	**15 54 22.9**	**-0.8**
	8.5nm,0.5s						
TKM2	**Tokmak 2**	**5.91**	**289**	⇓Pn	**Pn**	**15 52 49.4**	**+0.3**
	0.8nm,0.3s						
TKM2				⇓Sn	**Sn**	**15 54 00.6**	**+3.6**
	1.9nm,0.5s						
TKM2				⇑Lg	Lg	15 54 29.9	
	5.0nm,0.5s						
KRBS	**Karabastau**	**6.08**	**296**	Pg	**Pb**	**15 53 11.3**	**+3.8**
	0.8nm,0.5s						
KRBS				Lg	Lg	15 54 32.5	
	3.1nm,0.5s						
KRBS	**Karabastau**	**6.08**	**296**	*e*P	Pb	15 53 12.5	+5.0
	0.6nm,0.2s						
KRBS				*e*S	**Sg**	**15 54 34.5**	**-2.2**
	2.7nm,0.4s						

IDC 10 15:59:39.6±5.5,30°19S×177°84W,h118km±29km,
mb3.1/2,mbtmp3.5/2,Error ellipse: s-maj=107.6km
s-min=42.6km az=150.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.94**	**356**	P	Pn	16 00 01.0	0.0
	132nm,0.3s,baz=74,slow=21,SNR=1.5						
RAO				S	Sn	16 00 17.6	+0.5
	574nm,0.3s,baz=214,slow=21,SNR=6.0						
ASAR	**Alice Springs**	**43.26**	**267**	P	P	16 07 29.3	-0.3
	0.2nm,0.6s,baz=106,slow=7.2,SNR=9.3						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**44.23**	**272**	P	P	16 07 37.5	+0.1
	0.5nm,0.3s,baz=112,slow=8.0,SNR=22						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	16 19 00.8	-0.9
	0.7nm,0.5s,baz=48,slow=2.1,SNR=8.6						

*IDC **10** 16:00:04.7±0.6,46.°52N×155.°35E,h0km,mb4.2/27,*
mbtmp4.2/34,ML3.8/6,MS3.4/25,Error ellipse:
s-maj=15.9km s-min=11.6km az=158.0
*NEIC **10** 16:00:08.5±1.9,46.°68N±0.°06×155.°3E±0.°1,h23km±6km,*
mb4.6/105,Error ellipse: s-maj=17.1km s-min=2.0km
az=123.0
*SKHL **10** 16:00:08.7±0.1,46.°80N×155.°00E,h36km±4km,mb4.9/5*
*MOS **10** 16:00:09.0±1.4,46.°40N×155.°25E,h47km,mb4.7/24,Error*
ellipse: s-maj=7.4km s-min=6.9km az=112.7
ISC 10 16:00:07.8±0.5,46°64N±0.°06×155°26E±0.°05,h18km,n258,
σ1ˢ52/233,mb4.6/95,MS3.6/22,18C-13D,East of Kuril
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.09**	**8**	*e*PN	**Pn**	**16 01 09.7**	**+0.4**
SKR				pmax	pmax		
	comp=Z,600nm,4.8s						
SKR				MLR	MLR		
	comp=Z,800nm,13.0s						
SKR	**Severo-Kuril's**	**4.09**	**8**	*e*P	**Pn**	**16 01 08.6**	**-0.7**
SKR				AMB	AMB	16 01 15.2	
	comp=Z,600nm,5.0s						
SKR				*e*S	**Sn**	**16 01 53.5**	**-3.2**
SKR				A	A	16 02 02.6	
	comp=Z,190nm,0.5s						
SKR				A	A	16 02 02.6	
	comp=Z,210nm,0.5s						
PAU	**Pauzhetka**	**4.94**	**11**	*e*P	**Pn**	**16 01 21.0**	**0.0**
PAU				AMB	AMB	16 01 25.4	
	comp=Z,40nm,0.3s						
PAU				*e*S	**Sn**	**16 02 15.3**	**-2.3**
PAU				A	A	16 02 17.6	
	comp=Z,240nm,0.3s						
PAU				A	A	16 02 17.6	
	comp=Z,180nm,0.3s						
KUR	**Kuril'sk**	**5.35**	**257**	*e*PN	**Pn**	**16 01 25.9**	**-0.7**
KUR				pmax	pmax		
	comp=Z,154nm,0.5s						
KUR				pmax	pmax		
	comp=N,45nm,0.4s						
KUR	**Kuril'sk**	**5.35**	**257**	*e*P	**Pn**	**16 01 26.0**	**-0.7**
KUR				AMB	AMB	16 01 26.9	
	comp=N,150nm,0.5s						
KUR				*e*S	**Sn**	**16 02 23.9**

comp=N,60nm,0.5s
SHO A A 16 03 05.8
comp=N,80nm,0.5s
PEA0B Petropavlovsk- 6.67 13 Pn **Pn 16 01 44.2 -0.6**
PEA0B Petropavlovsk- 6.67 13⇑ *e*PN **Pn 16 01 43.7 -1.0**
PETK Petropavlovsk- 6.67 13 Pn **Pn 16 01 42.5 -2.2**
PETK Petropavlovsk- 6.67 13 Pn **Pn 16 01 43.7 -1.0**
comp=N,2.1nm,0.3s,baz=183,slow=12,SNR=14
PETK Sn **Sn 16 03 00.5 +0.3**
baz=228,slow=18
PETK LR LR 16 04 43.1
comp=N,158nm,20.2s,baz=184,slow=41
comp=N,8.3nm,0.5s
PET Petropavlovsk 6.76 18 Pn **Pn 16 01 43.8 -2.2**
PET Petropavlovsk 6.76 18 *e*PN **Pn 16 01 44.3 -1.7**
PET pmax pmax
comp=Z,27nm,0.6s
PET Petropavlovsk 6.76 18 *e*P **Pn 16 01 44.3 -1.7**
PET AMB AMB 16 01 54.6
comp=Z,30nm,0.6s
PET *e*S **Sn 16 02 57.8 -4.6**
PET A A 16 03 06.4
comp=Z,80nm,0.6s
PET A A 16 03 06.4
comp=Z,100nm,0.6s
YUK Yuzh-Kuril'sk 7.12 252 *e*PN **Pn 16 01 49.2 -1.7**
YUK pmax pmax
comp=Z,94nm,0.5s
YUK Yuzh-Kuril'sk 7.12 252 *e*P **Pn 16 01 49.9 -1.0**
YUK AMB AMB 16 01 51.4
comp=Z,90nm,0.5s
YUK *e*S **Sn 16 03 05.9 -5.4**
YUK A A 16 03 10.8
comp=Z,150nm,0.6s
YUK A A 16 03 10.8
comp=Z,160nm,0.6s
RUSJ Misakicho 7.50 254 *e*PN **Pn 16 01 55.8 -0.3**
NMR Nemuro--Hokkai 7.51 248 *e*PN Pn 16 01 52.9 -3.4
NMR Nemuro--Hokkai 7.51 248 *e*P **Pn 16 01 53.1 -3.2**
NMR *e*S Sn 16 03 12.8 -8.1
AKK Akkeshi 8.24 248 *e*P **Pn 16 02 06.8 +0.4**
YSS Yuzh-Sakhalins 8.59 277 *e*PN **Pn 16 02 13.8 +2.7**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,200nm,13.0s
YSS Yuzh-Sakhalins 8.59 277 *e*P **Pn 16 02 10.3 -0.8**
YSS AMB AMB 16 02 12.5
comp=Z,10.0nm,0.6s
JKA Kamikawa-asahi 9.26 259 Pn **Pn 16 02 20.7 +0.3**
ASAJ Asahikawa 9.27 259 PN **Pn 16 02 20.7 +0.3**
ASAJ Asahikawa 9.27 259 Pn **Pn 16 02 19.3 -1.1**
comp=Z,1.0nm,0.3s,baz=40,slow=16,SNR=16
ASAJ LR LR 16 06 31.5
comp=Z,32nm,18.8s,baz=162,slow=42
comp=Z,16nm,0.8s
TYV Tymovskoe 9.34 302 *e*PN **Pn 16 02 24.4 +3.0**
TYV pmax pmax
comp=Z,5.0nm,1.1s
TYV pmax pmax
comp=Z,200nm,4.0s
TYV Tymovskoe 9.34 302 *e*P **Pn 16 02 20.8 -0.6**
TYV AMB AMB 16 02 26.2
TYV AMB AMB 16 02 29.0
comp=Z,200nm,4.0s
TYV *e*S **Sn 16 04 00.3 -5.5**
TYV A A 16 04 11.3
comp=Z,10.0nm,0.7s
TYV A A 16 04 12.1
comp=Z,200nm,5.0s
TYV A A 16 04 12.1
comp=Z,200nm,5.0s
ERM Erimo 9.83 246 Pn **Pn 16 02 29.1 +1.0**
ERM Erimo 9.83 246 PN **Pn 16 02 29.1 +1.0**
JTM Tenmabayashi 11.81 245 Pn Pn 16 02 50.7 -4.6
MA2 Magadan 13.23 350 Pn **Pn 16 03 12.5 -2.1**
MA2 Magadan 13.23 350⇑ *e*PN **Pn 16 03 12.1 -2.5**
MA2 Magadan 13.23 350 Pn **Pn 16 03 15.1 +0.5**
comp=Z,0.2nm,0.3s,baz=180,slow=19,SNR=2.5
MA2 LR LR 16 08 20.9
comp=Z,125nm,20.7s,baz=194,slow=37
SHEM Shemya Is, Ala 13.62 57 Pn **Pn 16 03 18.6 -1.2**
comp=Z,2.9nm,0.3s,baz=263,slow=17,SNR=1.6
SHEM LR LR 16 07 43.8
comp=Z,16nm,18.1s,baz=102,slow=34
comp=Z,19nm,0.6s
KLR Kul'dur 15.96 288 *ce*P **P 16 03 54.3 -0.4**
KLR pmax pmax
comp=Z,5.0nm,0.8s
KLR Kul'dur 15.96 288 Pn **Pn 16 03 53.1 +1.9**
comp=Z,0.1nm,0.3s,baz=105,slow=13,SNR=10
KLR LR LR 16 09 56.9
comp=Z,64nm,18.9s,baz=100,slow=37
comp=Z,2.4nm,0.9s
KLR Kul'dur 15.96 288 *e*P **Pn 16 03 46.9 -4.3**
MAJO Matsushiro 16.23 238 Pn **Pn 16 03 51.3 -3.5**
MAJO Matsushiro 16.23 238 P **Pn 16 03 51.3 -3.5**
MAJO pmax pmax
comp=Z,18nm,1.0s
MJAR Matsushiro Arr 16.23 238 Pn **Pn 16 03 53.3 -1.6**
comp=Z,1.3nm,0.8s,baz=30,slow=11,SNR=4.9
MJB9 Matsu-Tunnel 16.23 238 Pn **Pn 16 03 52.0 -2.8**
SEY Seymchan 16.41 355⇓ *e*P **Pn 16 03 54.9 -2.0**
SEY pmax pmax
comp=Z,3.0nm,1.4s
SEY Seymchan 16.41 355 Pn **P 16 03 58.9 -0.7**
comp=Z,0.2nm,0.3s,baz=94,slow=21,SNR=8.6
comp=Z,1.0nm,0.6s
SEY Seymchan 16.41 355 *e*P **Pn 16 03 54.9 -2.0**
USA0B Ussuriysk Arra 16.51 270 Pn **Pn 16 03 56.7 -1.6**
USA0B Ussuriysk Arra 16.51 270 P **Pn 16 03 56.7 -1.6**
USA0B pmax pmax
comp=Z,11nm,1.0s
USRK Ussuriysk Ar. 16.51 270 Pn **Pn 16 03 56.2 -2.1**
USRK Ussuriysk Ar. 16.51 270 Pn **Pn 16 03 56.9 -1.4**
comp=Z,0.6nm,0.3s,baz=76,slow=13,SNR=9.2
comp=Z,7.1nm,0.8s
MSHR Mys Shultsa 17.62 265⇓ *e*P **P 16 04 14.6 +1.5**
MSHR pmax pmax
comp=Z,39nm,1.2s
MDJ Mudanjiang 18.05 273 P **Pn 16 04 18.2 +0.7**
MDJ pmax pmax
comp=Z,11nm,1.9s
MDJ pmax pmax
comp=Z,370nm,5.2s
HEH HeiHe 18.78 291 *e*P **P 16 04 25.4 -0.4**
HEH pmax pmax
comp=Z,11nm,0.8s
CN2 Changchun 21.14 273 P **P 16 04 55.4 +3.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
YAK Yakutsk 21.23 326 P **P 16 04 50.2 -2.2**
YAK IAmb IAmb 16 04 56.6
comp=Z,14nm,0.7s
YAK Yakutsk 21.23 326 *e*P **P 16 04 51.8 -0.6**
YAK *e* 16 05 11.8
YAK *e*S **S 16 08 46.2 -1.2**
YAK *e**SS **pS 16 08 59.6 +5.2**
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,69nm,3.1s
YAK pmax pmax
comp=N,62nm,4.2s
YAK pmax pmax
comp=E,62nm,4.4s
YAK smax smax
comp=E,46nm,1.4s
YAK smax smax
comp=N,38nm,1.8s
YAK Yakutsk 21.23 326 P **P 16 04 52.1 -0.3**
comp=N,16nm,0.7s,baz=138,slow=2.5,SNR=1.8
YAK LR LR 16 12 49.8
comp=N,70nm,19.5s,baz=115,slow=36
comp=N,16nm,0.7s
YAK Yakutsk 21.23 326 *e*P **P 16 04 51.9 -0.5**
KSRS Korea Array 22.19 255 P **P 16 05 04.4 +1.5**
comp=N,1.7nm,0.6s,baz=57,slow=12,SNR=2.4
KSRS LR LR 16 14 30.6
comp=N,17nm,18.1s,baz=80,slow=39
comp=N,1.7nm,0.6s
BILL Bilibino 22.20 11 P **P 16 05 03.2 +0.5**

BILL Bilibino 22.20 11 *e*P **P 16 05 01.7 -1.0**
BILL Bilibino 22.20 11 *e*P **P 16 05 01.7 -1.0**
JNU Nakatsue 22.96 243 LR LR 16 16 07.4
comp=N,38nm,19.2s,baz=330,slow=42
ANM Nome 27.91 36 P **P 16 05 56.4 0.0**
ANM Nome 27.91 36 P **P 16 05 56.4 0.0**
ANM pmax pmax
comp=Z,5.0nm,1.2s
TIXI Tiksi 28.01 343 P **P 16 05 56.8 -0.4**
TIXI IAmb IAmb 16 06 01.9
comp=Z,18nm,1.4s
TIXI Tiksi 28.01 343⇑ *e*P **P 16 05 58.1 +0.9**
TIXI pmax pmax
comp=Z,17nm,1.7s
TIXI Tiksi 28.01 343 LR LR 16 17 59.0
comp=Z,65nm,18.6s,baz=199,slow=38
TIXI Tiksi 28.01 343 *e*P **P 16 05 58.1 +0.9**
G16K Koyuk River 29.40 35 P **P 16 06 08.9 -0.7**
H11S1 WAKE ISLAND Hy 29.59 158 T T 16 36 56.3
baz=344,slow=76,SNR=6.2
H11S3 WAKE ISLAND Hy 29.61 158 T T 16 36 58.8
baz=344,slow=76,SNR=6.6
H11S2 WAKE ISLAND Hy 29.61 158 T T 16 37 01.1
baz=344,slow=76,SNR=5.8
H18K Honhosa River 30.94 37 P **P 16 06 21.7 -1.5**
NJ2 Nanjing 31.39 255 *e*P P 16 06 21.0 -6.5
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
HHC Hu-ho-hao-te 31.78 276 *e*P **P 16 06 33.2 +2.2**
HHC pmax pmax
comp=Z,21nm,0.7s
HHC pmax pmax
comp=Z,86nm,4.4s
SONM Songino Array 32.76 290 P **P 16 06 39.1 -0.5**
SONM Songino Array 32.76 290 P **P 16 06 38.2 -1.5**
comp=Z,0.5nm,0.6s,baz=62,slow=9.6,SNR=3.6
SONM PcP **PcP 16 09 24.0 -0.5**
comp=Z,0.7nm,1.0s,baz=90,slow=1.4,SNR=3.3
comp=Z,0.5nm,0.6s
M22K Willow 34.18 44 P **P 16 06 50.3 -1.3**
POKR Poker Plat Res 35.50 38 P **P 16 07 02.6 -0.4**
POKR IAmb IAmb 16 07 05.5
comp=Z,5.9nm,0.9s
ILAR Eielson Array 35.72 38 P **P 16 07 04.0 -0.9**
ILAR Eielson Array 35.72 38 P **P 16 07 04.4 -0.5**
comp=Z,0.8nm,0.6s,baz=246,slow=7.0,SNR=26
comp=Z,0.8nm,0.6s
M24K Tolsona, Glenn 36.04 43 P **P 16 07 08.0 +0.3**
J25K Salcha River, 36.36 39 P **P 16 07 09.8 -0.7**
BMAR Burnt Mountain 36.78 34 P **P 16 07 14.8 +0.8**
SCRK Sand Creek 36.97 40 P **P 16 07 14.2 -1.5**
VRDI Verde Repeater 37.40 44 P **P 16 07 19.8 +0.3**
K27K Chicken 37.81 40 P **P 16 07 21.8 -0.9**
K27K IAmb IAmb 16 07 24.5
comp=Z,14nm,1.5s
L27K Beaver Creek, 37.99 41 P **P 16 07 24.1 -0.1**
BARN Barnard Glacie 38.28 44 P **P 16 07 26.8 -0.1**
BARN IAmb IAmb 16 07 32.1
comp=Z,11nm,1.2s
CTGM Chitina Glacie 38.45 45 P **P 16 07 28.5 +0.2**
CTGM IAmb IAmb 16 07 30.0
comp=Z,6.4nm,0.7s
LZH Lanzhou 39.37 273 *e*P **P 16 07 38.6 +2.3**
LZH pP sP 16 07 45.8 +4.0
LZH pmax pmax
comp=Z,12nm,1.2s
NRIK Noril'sk 39.62 329⇑ *e*P **P 16 07 38.1 +0.3**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
NRIK Noril'sk 39.62 329 P **P 16 07 38.4 +0.6**
comp=Z,1.5nm,0.5s,baz=82,slow=13,SNR=2.2
comp=Z,1.5nm,0.5s
L29M L29M 39.66 41 P **P 16 07 37.3 -0.9**
HYT Haines Junctio 40.32 44 P **P 16 07 45.2 +1.3**
HYT IAmb IAmb 16 07 46.5
comp=Z,7.6nm,0.8s
P29M Windy Craggy 40.45 46 P **P 16 07 44.1 -0.8**
P29M IAmb IAmb 16 07 47.0
comp=Z,13nm,1.1s
GTA Gaotai 40.45 280 P **P 16 07 49.8 +4.6**
GTA pP pwP 16 07 55.2 -1.5
GTA pmax pmax
comp=Z,2.0nm,1.4s
GTA LR LR
comp=N,77nm,16.4s
GTA LR LR
comp=E,94nm,16.0s
GTA LR LR
comp=Z,110nm,14.5s
O30N Mendenhall 41.01 44 P **P 16 07 48.4 -1.1**
P33M Teslin, Yukon 42.72 44 P **P 16 08 02.8 -0.7**
R33M Jennings River 43.84 45 P **P 16 08 13.9 +1.3**
ZAA0 Zalesovo Array 43.87 307 P **P 16 08 12.9 +0.2**
ZALV Zalesovo Beam 43.87 307 P **P 16 08 11.8 -0.9**
ZALV Zalesovo Beam 43.87 307 *i* P **P 16 08 14.0 +1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 43.87 307 P **P 16 08 12.3 -0.4**
comp=Z,0.9nm,0.5s,baz=70,slow=7.2,SNR=4.6
ZALV PcP **PcP 16 09 58.6 -0.1**
comp=Z,1.1nm,0.8s,baz=38,slow=5.4,SNR=3.9
ZALV LR LR 16 26 53.0
comp=Z,57nm,18.4s,baz=38,slow=37
comp=Z,0.9nm,0.5s
DGZ Jazzator, Alta 43.95 300⇑ *e*P **P 16 08 14.1 +0.5**
DGZ pmax pmax
comp=Z,2.0nm,1.2s
DLBC Dease Lake 44.61 46 P **P 16 08 20.0 +1.3**
DLBC IAmb IAmb 16 08 21.7
comp=Z,7.5nm,1.1s
T35M Bob Quinn 44.98 48 P **P 16 08 23.5 +1.9**
T35M IAmb IAmb 16 08 25.0
comp=Z,6.5nm,0.9s
DIB Dawson Inlet, 45.15 54 P **P 16 08 22.4 -0.5**
DIB IAmb IAmb 16 08 24.3
comp=Z,7.1nm,0.7s
GOMU GeErMu 45.49 279 P **P 16 08 28.2 +1.8**
GOMU pP sP 16 08 32.9 +1.1
GOMU sP pwP 16 08 36.6 -1.3
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GRNB Grenville Isla 46.29 52 P **P 16 08 32.8 +0.8**
WMQ Urumqi 46.34 292 *e*P **P 16 08 34.9 +2.3**
PZH PanZhiHua 46.47 264 P **P 16 08 34.6 +0.7**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
MK31 Makanchi Array 48.30 298 P **P 16 08 48.1 +0.3**
MK31 Makanchi Array 48.30 298 P **P 16 08 48.1 +0.3**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 48.30 298 P **P 16 08 46.8 -1.0**
MKAR Makanchi Array 48.30 298 P **P 16 08 48.6 +0.9**
comp=Z,1.8nm,0.8s,baz=66,slow=8.1,SNR=19
MKAR PcP **PcP 16 10 14.2 -0.1**
comp=Z,0.6nm,0.7s,baz=54,slow=4.1,SNR=2.2
MKAR LR LR 16 29 51.0
comp=Z,39nm,19.8s,baz=34,slow=37
comp=Z,1.8nm,0.8s
KURK Kurchatov 48.65 305 P **P 16 08 50.3 -0.1**
KURK IAmb IAmb 16 08 55.0
comp=Z,7.3nm,0.8s
KURK Kurchatov 48.65 305⇑ *e*P **P 16 08 50.9 +0.5**
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK Kurchatov 48.65 305 *e*P **P 16 08 50.9 +0.5**
KURBB Kurchatov Arra 48.75 304 P **P 16 08 51.8 +0.7**
comp=Z,5.0nm,0.7s,baz=67,slow=8.2,SNR=17
KURBB LR LR 16 31 58.8
comp=Z,55nm,18.7s,baz=170,slow=39
comp=Z,5.0nm,0.7s
YKA Yellowknife Ar 50.12 37 P **P 16 09 02.0 +0.6**
comp=Z,2.1nm,0.8s,baz=294,slow=7.5,SNR=22
YKA PcP **PcP 16 10 20.6 0.0**
comp=Z,0.4nm,0.8s,baz=300,slow=4.0,SNR=4.6
comp=Z,2.1nm,0.8s
LSA Lhasa 51.76 275 P **P 16 09 13.0 -1.7**
LSA IAmb IAmb 16 09 18.1
comp=Z,6.5nm,1.1s
LSA Lhasa 51.76 275 P **P 16 09 13.0 -1.7**
LSA pmax pmax
comp=Z,7.0nm,1.1s
C03A Quillayute Air 52.01 57 P **P 16 09 15.8 +0.1**
BVAR Borovoye Array 52.07 310 P **P 16 09 17.1 +0.9**
comp=Z,2.2nm,0.4s,baz=56,slow=8.2,SNR=23

BVAR PcP **PcP 16 10 28.6 +0.6**
comp=Z,0.8nm,0.6s,baz=50,slow=4.5,SNR=1.2
BVAR LR LR 16 32 37.7
comp=Z,62nm,20.3s,baz=53,slow=37
comp=Z,2.2nm,0.4s
BRVK Borovoye 52.11 310 P **P 16 09 15.2 -1.2**
BRVK IAmb IAmb 16 09 18.0
comp=Z,4.5nm,0.7s
BRVK Borovoye 52.11 310⇑ *e*P **P 16 09 17.5 +1.0**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 52.11 310 *e*P **P 16 09 17.5 +1.0**
NLWA Neilton Lookou 52.70 57 P **P 16 09 20.5 -0.4**
KBS Kingsbay 52.83 352 P **P 16 09 20.9 -0.6**
KBS Kingsbay 52.83 352 P **P 16 09 20.9 -0.6**
KBS pmax pmax
comp=Z,61nm,1.5s
SPITS Spitsbergen Ar 52.98 350 P **P 16 09 24.0 +1.4**
SPITS Spitsbergen Ar 52.98 350 P **P 16 09 23.9 +1.4**
comp=Z,6.4nm,0.8s,baz=69,slow=8.0,SNR=6.9
comp=Z,6.4nm,0.8s
CMAR Chiang Mai Arr 53.79 258 P **P 16 09 30.6 +1.2**
comp=Z,2.3nm,0.8s,baz=35,slow=7.7,SNR=20
comp=Z,2.3nm,0.8s
AAK Ala-Archa 55.20 298 P **P 16 09 39.2 -0.3**
AAK Ala-Archa 55.20 298 *ce*P **P 16 09 41.0 +1.5**
AAK pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 55.20 298 LR LR 16 34 32.4
comp=Z,27nm,20.4s,baz=55,slow=37
AAK Ala-Archa 55.20 298 *e*P **P 16 09 41.0 +1.5**
HNR Honiara 55.97 174 LR LR 16 33 03.3
comp=Z,402nm,18.7s,baz=15,slow=35
KSH Kashi 56.06 294 P **P 16 09 49.6 +3.9**
KSH pmax pmax
comp=Z,3.0nm,1.9s
ARU Arti 56.09 318 P **P 16 09 46.0 +0.6**
ARU IAmb IAmb 16 09 49.4
comp=Z,4.9nm,0.6s
ARU Arti 56.09 318 *c i*P **P 16 09 46.6 +1.1**
ARU S **S 16 17 33.8 +0.8**
ARU SS **SS 16 21 18.6 0.0**
ARU pmax pmax
comp=Z,4.0nm,0.7s
ARU Arti 56.09 318 *e*P **P 16 09 46.5 +1.1**
PINE Pine Mountain 56.38 60 P **P 16 09 48.9 +1.0**
J05D Fort Rock, OR 56.49 60 P **P 16 09 48.2 -0.6**
ARCES ARCESS Array B 58.44 342 P **P 16 10 03.3 +1.5**
comp=Z,4.1nm,0.8s,baz=7.5,slow=8.3,SNR=2.0
comp=Z,4.1nm,0.8s
PLID Pearl Lake 58.52 56 IAmb IAmb 16 10 04.4
comp=Z,6.1nm,0.8s
ABKAR Akbulak array 59.63 311 IAmb IAmb 16 10 16.2
comp=Z,3.8nm,0.8s
FFC Flin Flon 59.86 41 P **P 16 10 12.6 +0.7**
FFC Flin Flon 59.86 41 P **P 16 10 12.6 +0.7**
FFC pmax pmax
comp=Z,9.0nm,0.9s
AKTO Aktyubinsk 59.90 313 LR LR 16 37 23.2
comp=Z,20nm,21.1s,baz=176,slow=37
FCC Fort Churchill 60.54 34 P **P 16 10 16.8 +0.4**
FCC IAmb IAmb 16 10 17.1
comp=Z,3.4nm,0.7s
FCC Fort Churchill 60.54 34 P **P 16 10 16.8 +0.4**
FCC pmax pmax
comp=Z,3.0nm,0.7s
KVN Kaiserville 60.91 63 P **P 16 10 18.9 -0.6**
KVN IAmb IAmb 16 10 21.1
comp=Z,5.6nm,1.1s
KVN Kaiserville 60.91 63 P **P 16 10 19.0 -0.6**
KVN pmax pmax
comp=Z,6.0nm,1.1s
SIMJ Simiganj 60.92 297 P **P 16 10 17.8 -1.7**
SIMJ IAmb IAmb 16 10 21.3
comp=Z,4.5nm,0.8s
NVAR Mina Array Bea 61.17 63 P **P 16 10 19.6 -1.8**
NVAR Mina Array Bea 61.17 63 P **P 16 10 21.7 +0.3**
comp=Z,2.7nm,0.7s,baz=297,slow=7.4,SNR=17
comp=Z,2.7nm,0.7s
LKWY Lake 61.99 54 IAmb IAmb 16 10 31.3
comp=Z,4.5nm,1.1s
DSP Deep Springs 62.03 64 P **P 16 10 27.3 +0.4**
DSP IAmb IAmb 16 10 28.8
comp=Z,6.9nm,1.1s
RLMT Red Lodge 62.27 53 P **P 16 10 28.8 +0.1**
TPAW Teton Pass 62.36 55 IAmb IAmb 16 10 30.7
comp=Z,5.9nm,0.9s
REDW Red Top Meadow 62.50 55 P **P 16 10 28.5 -1.8**
R11B Troy Canyon, C 62.88 62 P **P 16 10 31.2 -1.6**
R11B IAmb IAmb 16 10 34.1
comp=Z,6.0nm,1.2s
TPNV Topopah Spring 63.36 64 P **P 16 10 35.9 -0.2**
TPNV Topopah Spring 63.36 64 P **P 16 10 35.9 -0.2**
TPNV pmax pmax
comp=Z,12nm,1.4s
KBL Kabul 63.48 293 P **P 16 10 36.6 -0.3**
KBL IAmb IAmb 16 10 38.3
comp=Z,7.1nm,1.2s
KBL Kabul 63.48 293 P **P 16 10 36.6 -0.3**
KBL pmax pmax
comp=Z,7.0nm,1.3s
QSM Queen of Sheba 63.61 65 P **P 16 10 37.1 -0.3**
QSM IAmb IAmb 16 10 38.6
comp=Z,4.9nm,0.9s
BW06 Boulder Array 63.61 55 IAmb IAmb 16 10 38.9
comp=Z,5.6nm,1.1s
PD31 Pinedale Array 63.61 55 IAmb IAmb 16 10 38.9
comp=Z,5.5nm,1.1s
PDAR Pinedale Array 63.61 55 P **P 16 10 37.9 +0.2**
comp=Z,2.4nm,0.9s,baz=291,slow=3.4,SNR=16
comp=Z,2.4nm,0.9s
FINES FINESS Array B 64.76 336 P **P 16 10 45.1 +0.5**
comp=Z,4.6nm,0.6s,baz=38,slow=7.3,SNR=33
FINES LR LR 16 39 46.8
comp=Z,43nm,19.1s,baz=2.0,slow=37
comp=Z,4.6nm,0.6s
LCMT Little Creek M 65.16 62 IAmb IAmb 16 10 49.5
comp=Z,5.3nm,0.9s
KNB Kanab 65.42 62 P **P 16 10 47.3 -2.2**
KNB Kanab 65.42 62 P **P 16 10 47.3 -2.2**
KNB pmax pmax
comp=Z,8.0nm,1.0s
SRU San Rafael Swe 65.42 59 P **P 16 10 49.0 -0.5**
SRU IAmb IAmb 16 10 50.7
comp=Z,6.5nm,0.9s
SRU San Rafael Swe 65.42 59 P **P 16 10 49.0 -0.5**
SRU pmax pmax
comp=Z,7.0nm,0.9s
ULM Lac du Bonnet 65.63 42 P **P 16 10 50.7 +0.3**
comp=Z,3.1nm,0.7s,baz=315,slow=7.5,SNR=7.6
comp=Z,3.1nm,0.7s
RSSD Black Hills 65.75 51 P **P 16 10 51.2 -0.4**
RSSD IAmb IAmb 16 10 52.7
comp=Z,8.6nm,1.2s
RSSD Black Hills 65.75 51 P **P 16 10 51.2 -0.4**
RSSD pmax pmax
comp=Z,9.0nm,1.2s
W13A Hualapai Mount 66.02 64 IAmb IAmb 16 10 54.0
comp=Z,4.4nm,1.0s
HMU Henry Mountain 66.06 60 P **P 16 10 53.1 -0.7**
SMCO Snowmass 67.44 57 IAmb IAmb 16 11 03.8
comp=Z,4.7nm,1.1s
ISCO Idaho Springs 67.80 55 IAmb IAmb 16 11 07.0
comp=Z,4.4nm,1.4s
B35A Bob, Littlefor 67.96 42 IAmb IAmb 16 11 05.9
comp=Z,5.5nm,0.8s
S22A 4UR Ranch, Cre 68.49 58 IAmb IAmb 16 11 11.0
comp=Z,7.1nm,1.3s
NOA NORSAR Array B 68.80 342 P **P 16 11 10.3 -0.1**
comp=Z,1.7nm,0.9s,baz=25,slow=6.2,SNR=3.3
NOA LR LR 16 46 55.0
comp=Z,39nm,18.3s,baz=355,slow=41
comp=Z,1.7nm,0.9s
WRA Warramunga Arr 68.91 201 P **P 16 11 09.4 -2.1**
comp=Z,1.6nm,0.9s,baz=18,slow=6.4,SNR=5.7
comp=Z,1.6nm,0.9s
HFS Hagfors 69.07 341 P **P 16 11 12.8 +0.8**
comp=Z,2.9nm,0.9s,baz=46,slow=4.2,SNR=14
comp=Z,2.9nm,0.9s
DZM Mont Dzumac 69.13 169 *e*LR LR 16 32 14.2
comp=Z,46nm,25.8s
DZM Mont Dzumac 69.13 169 LR LR 16 33 40.8
comp=Z,37nm,20.9s,baz=198,slow=29
ECSD EROS Data Cent 69.89 47 IAmb IAmb 16 11 17.3
comp=Z,3.5nm,0.8s
ANMO Albuquerque 70.63 60 P **P 16 11 22.3 0.0**
ANMO Albuquerque 70.63 60 P **P 16 11 22.3 0.0**

ANMO					pmax	pmax		
	comp=Z,3.0nm,1.2s							
KIV	**Kislovodsk**	**71.93**	**315**	*e*P	**P**	**16 11 30.8 +0.9**		
KIV					pmax	pmax		
	comp=Z,7.0nm,1.1s							
KIV	**Kislovodsk**	**71.93**	**315**	*e*P	**P**	**16 11 30.8 +0.9**		
KBZ	**Khabaz**	**71.99**	**315**	*ce*P	**P**	**16 11 32.1 +2.0**		
KBZ					pmax	pmax		
	comp=Z,6.0nm,0.9s							
KBZ	**Khabaz**	**71.99**	**315**	P	**P**	**16 11 32.2 +2.1**		
	comp=Z,5.4nm,0.9s,baz=75,slow=2.4,SNR=11							
	comp=Z,5.4nm,0.9s							
AKASG	**Malin Array Be**	**72.45**	**327**	P	**P**	**16 11 32.8 +0.1**		
	comp=Z,1.6nm,0.5s,baz=33,slow=5.9,SNR=5.1							
AKASG				LR	LR	16 45 49.0		
	comp=Z,44nm,18.8s,baz=7.5,slow=38							
	comp=Z,1.6nm,0.5s							
AKBB	**Malin Array Si**	**72.45**	**327**	⇓*e*P	**P**	**16 11 32.8 +0.1**		
KIEV	**Kiev**	**72.46**	**327**	⇑P	**P**	**16 11 33.4 +0.6**		
KIEV	**Kiev**	**72.46**	**327**	⇑P	**P**	**16 11 33.4 +0.6**		
ONI	**Oni**	**72.57**	**314**	IAmb	IAmb	16 11 42.7		
	comp=Z,4.2nm,0.9s							
ASAR	**Alice Springs**	**72.60**	**200**	P	**P**	**16 11 33.1 -0.8**		
	comp=Z,1.7nm,0.7s,baz=18,slow=5.2,SNR=16							
	comp=Z,1.7nm,0.7s							
GNI	**Garni**	**73.72**	**312**	LR	LR	16 48 11.2		
	comp=Z,38nm,18.7s,baz=45,slow=39							
VHRN	**Van Horn**	**74.42**	**62**	IAmb	IAmb	16 11 45.9		
	comp=Z,5.9nm,0.9s							
SORM	**Soroca**	**74.88**	**326**	⇓P	**P**	**16 11 47.5 +0.5**		
SORM	**Soroca**	**74.88**	**326**	P	**P**	**16 11 47.5 +0.5**		
WMOK	**Wichita Mounta**	**75.22**	**55**	P	**P**	**16 11 49.1 -0.2**		
WMOK	**Wichita Mounta**	**75.22**	**55**	P	**P**	**16 11 49.1 -0.2**		
WMOK					pmax	pmax		
	comp=Z,5.0nm,1.1s							
P40A	**Paris**	**75.29**	**48**	IAmb	IAmb	16 11 50.1		
	comp=Z,7.1nm,0.8s							
APMT	**Aspermont**	**75.48**	**57**	IAmb	IAmb	16 11 51.4		
	comp=Z,6.4nm,0.8s							
ALPN	**Alpine**	**75.52**	**61**	IAmb	IAmb	16 11 51.6		
	comp=Z,4.0nm,0.8s							
TXAR	**Lajitas Array**	**76.25**	**62**	P	**P**	**16 11 55.4 +0.1**		
	comp=Z,7.4nm,0.6s,baz=304,slow=4.4,SNR=130							
KOLS	**Kolonicke sedl**	**76.41**	**330**	*e*P	**P**	**16 11 57.8 +2.0**		
KOLS	**Kolonicke sedl**	**76.41**	**330**	*e*P	**P**	**16 11 57.8 +2.0**		
BUR08	**Bucovina Ar. S**	**76.47**	**328**	P	**P**	**16 11 57.0 +0.7**		
BUR08				IAmb	IAmb	16 11 57.8		
	comp=Z,5.7nm,0.9s							
BURAR	**Bucovina Array**	**76.48**	**328**	⇓P	**P**	**16 11 57.4 +1.0**		
BURAR	**Bucovina Array**	**76.48**	**328**	⇓P	**P**	**16 11 57.4 +1.0**		
SAND	**Sanderson**	**76.73**	**60**	IAmb	IAmb	16 11 58.9		
	comp=Z,7.6nm,1.1s							
EKA	**Eskdalemuir Ar**	**76.78**	**348**	P	**P**	**16 11 58.8 +1.0**		
	comp=Z,1.7nm,0.9s,baz=24,slow=5.5,SNR=1.7							
	comp=Z,1.7nm,0.9s							
TESR	**Tescani**	**76.87**	**326**	⇓P	**P**	**16 11 59.6 +1.1**		
DPC	**Dobruska-Polom**	**77.08**	**334**	*e*P	**P**	**16 12 00.8 +1.2**		
DPC	**Dobruska-Polom**	**77.08**	**334**	*e*P	**P**	**16 12 00.8 +1.2**		
LANS	**Liptovska Anna**	**77.16**	**332**	*e*P	**P**	**16 12 02.0 +1.9**		
LANS	**Liptovska Anna**	**77.16**	**332**	*e*P	**P**	**16 12 02.0 +1.9**		
CLL	**Collm**	**77.17**	**337**	*i* P	**P**	**16 12 00.3 +0.3**		
CLL				*i*		16 12 11.8		
CLL					pmax	pmax		
	comp=Z,5.0nm,0.9s							
CLL	**Collm**	**77.17**	**337**	*i* P	**P**	**16 12 00.3 +0.3**		
	comp=Z,5.0nm,0.9s							
CLL				*i* PcP	**PcP**	**16 12 11.8 +1.0**		
	comp=Z,9.0nm,1.3s							
CLL				*i* x	x	16 12 47.0		
BRDY	**Brady**	**77.61**	**58**	IAmb	IAmb	16 12 03.6		
	comp=Z,3.9nm,0.7s							
JCT	**Junction City**	**77.73**	**59**	IAmb	IAmb	16 12 04.4		
	comp=Z,7.2nm,0.9s							
VRAC	**Vranov**	**77.92**	**334**	LR	LR	16 49 22.8		
	comp=Z,59nm,18.5s,baz=356,slow=38							
MLR	**Muntele Rosu**	**78.00**	**326**	⇓P	**P**	**16 12 06.3 +1.4**		
MLR	**Muntele Rosu**	**78.00**	**326**	⇓P	**P**	**16 12 06.3 +1.4**		
MLR	**Muntele Rosu**	**78.00**	**326**	LR	LR	16 50 36.2		
	comp=Z,63nm,18.1s,baz=30,slow=39							
FCAR	**Ozark Folk Cen**	**78.00**	**50**	IAmb	IAmb	16 12 04.8		
	comp=Z,5.5nm,0.8s							
VOIR		**78.38**	**327**	⇑P	**P**	**16 12 08.3 +1.3**		
VOIR		**78.38**	**327**	⇑P	**P**	**16 12 08.3 +1.3**		
ARR	**Arges**	**78.60**	**327**	⇑P	**P**	**16 12 10.1 +1.9**		
P48A	**Milroy**	**78.60**	**44**	P	**P**	**16 12 07.1 -1.1**		
KHC	**Kasperske Hory**	**78.97**	**335**	*e*P	**P**	**16 12 11.5 +1.4**		
KHC				*ep*P	**PcP**	**16 12 19.5 +0.8**		
KHC	**Kasperske Hory**	**78.97**	**335**	⇑*e*P	**P**	**16 12 11.5 +1.4**		
KHC				pmax	pmax			
	comp=Z,8.0nm,1.0s							
CKRC	**Cesky Krumlov**	**79.04**	**335**	*e*P	**P**	**16 12 11.3 +0.8**		
CKRC	**Cesky Krumlov**	**79.04**	**335**	*e*P	**P**	**16 12 11.3 +0.8**		
STKA	**Stephens Creek**	**79.12**	**192**	LR	LR	16 47 19.8		
	comp=Z,20nm,19.0s,baz=50,slow=36							
GERES	**GERESS Array B**	**79.19**	**335**	P	**P**	**16 12 12.1 +0.7**		
	comp=Z,1.1nm,0.6s,baz=38,slow=5.0,SNR=5.6							
GERES				LR	LR	16 49 40.4		
	comp=Z,78nm,18.7s,baz=52,slow=38							
	comp=Z,1.1nm,0.6s							
BR131	**Keskin Array S**	**79.47**	**318**	⇑*e*P	**P**	**16 12 14.2 +1.0**		
BRTR	**Keskin Array B**	**79.47**	**318**	P	**P**	**16 12 14.1 +0.9**		
	comp=Z,2.2nm,0.9s,baz=85,slow=3.3,SNR=8.4							
	comp=Z,2.2nm,0.9s							
BZS	**Buzias**	**79.49**	**329**	⇓P	**P**	**16 12 14.0 +1.0**		
BZS	**Buzias**	**79.49**	**329**	⇓P	**P**	**16 12 14.0 +1.0**		
M55A	**Ridgway**	**79.98**	**38**	P	**P**	**16 12 15.2 -0.6**		
M55A				IAmb	IAmb	16 12 17.2		
	comp=Z,7.2nm,0.8s							
PPT2	**Papeete2**	**80.92**	**128**	*e*LR	LR	16 37 32.3		
	comp=Z,67nm,23.2s							
MMAI	**Mount Meron Ar**	**83.99**	**313**	P	**P**	**16 12 37.9 +0.8**		
	comp=Z,7.5nm,0.8s,baz=56,slow=5.4,SNR=10							
	comp=Z,7.5nm,0.8s							
RAYN	**Ar Rayn**	**85.77**	**300**	P	**P**	**16 12 45.8 -0.3**		
RAYN				IAmb	IAmb	16 12 47.3		
	comp=Z,5.3nm,1.3s							
RAYN	**Ar Rayn**	**85.77**	**300**	P	**P**	**16 12 45.8 -0.3**		
RAYN				pmax	pmax			
	comp=Z,5.0nm,1.3s							
TIP	**Timpagrande**	**86.86**	**329**	⇓P	P	16 13 00.1 +8.8		
EIL	**Elat**	**86.89**	**311**	LR	LR	16 55 37.8		
	comp=Z,25nm,20.6s,baz=70,slow=38							
ELIB	**Princess Elisa**	**146.32**	**205**	*d*PKPdf	**PKPdf**	**16 19 45.0 +0.2**		
CPUP	**Villa Florida**	**147.22**	**63**	PKPbc	**PKPdf**	**16 19 48.8 +1.2**		
	comp=Z,1.5nm,0.6s,baz=301,slow=19,SNR=4.5							

WEL 10 16:00:09.7±0.3, 40°S±2°×17°7E±°, h30km±3km, M3.3/21, ML3.5/21, MLv3.3/21, Error ellipse: s-maj=0.0km s-min=0.0km az=118.1, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PXZ	**Pawanui**	**0.12**	**151**	P	Pn	16 00 16.8	+1.1
PXZ				S	Sb	16 00 22.0	+3.1
KAHZ	**Kahuranaki**	**0.15**	**29**	P	Pn	16 00 16.9	+0.9
KAHZ				S	Sb	16 00 22.5	+3.1
WPWS	**Waipawa Distri**	**0.16**	**262**	P	Pn	16 00 16.9	+0.9
WPWS				S	Sb	16 00 21.9	+2.5
HNPS	**Havelock North**	**0.26**	**16**	P	Pn	16 00 17.7	+0.3
WPHZ	**Waipukurau**	**0.30**	**242**	P	Pn	16 00 18.8	+0.7
WPHZ				S	Sn	16 00 25.5	+1.9
CKHZ	**Cape Kidnapper**	**0.35**	**41**	P	Pn	16 00 18.8	+0.1
CKHZ				S	Sn	16 00 25.7	+1.0
PRHZ	**Porangahau**	**0.36**	**198**	P	Pn	16 00 19.4	+0.5
PRHZ				S	Sn	16 00 26.6	+1.5
PGFS	**Porangahau Fir**	**0.40**	**199**	P	Pn	16 00 19.9	+0.4
PGFS				S	Sn	16 00 27.4	+1.5
KRHZ	**Kereru**	**0.42**	**311**	P	Pn	16 00 20.0	+0.3
KRHZ				S	Sn	16 00 27.4	+0.8
NCDS	**Napier Civil D**	**0.43**	**9**	P	Pn	16 00 20.1	+0.3
NCDS				S	Sn	16 00 28.6	+2.0
NSPS	**Napier St Paul**	**0.44**	**13**	P	Pb	16 00 19.3	+0.1
NSPS				S	Sn	16 00 28.3	+1.3
NGHS	**Napier Girls H**	**0.45**	**13**	P	Pn	16 00 20.4	+0.4
NGHS				S	Sn	16 00 29.2	+2.1
PNHZ	**Pukenui**	**0.45**	**271**	P	Pn	16 00 20.5	+0.3
PNHZ				S	Sn	16 00 28.4	+1.1
NAAS	**Napier Airport**	**0.46**	**8**	P	Pb	16 00 19.3	-0.1
NAAS				S	Sn	16 00 28.2	+0.9
MCHZ	**McNeill Hill**	**0.48**	**352**	P	Pn	16 00 21.2	+0.7
MCHZ				S	Sn	16 00 30.0	+2.0
KWHZ	**Kaweka Forest**	**0.57**	**331**	P	Pn	16 00 22.1	+0.3
KWHZ				S	Sn	16 00 31.1	+0.8
ANWZ	**Angora Road**	**0.59**	**204**	P	Pn	16 00 22.2	+0.2
ANWZ				S	Sn	16 00 31.6	+1.1
DVHZ	**Dannevirke**	**0.60**	**231**	P	Pn	16 00 22.6	+0.3
DVHZ				S	Sn	16 00 32.1	+1.1
TSZ	**Takapari Road**	**0.65**	**258**	P	Pn	16 00 23.1	+0.3
TSZ				S	Sn	16 00 32.7	+0.6
ARHZ	**Aropaoanui**	**0.68**	**14**	P	Pn	16 00 23.7	+0.4
ARHZ				S	Sn	16 00 34.5	+1.7
BHHZ	**Black Hill Sta**	**0.70**	**308**	P	Pn	16 00 24.0	+0.3
BHHZ				S	Sn	16 00 34.1	+0.5
BKZ	**Black Stump Fm**	**0.79**	**343**	P	Pb	16 00 25.2	+0.3
NMHZ	**Naumai**	**0.82**	**1**	P	Pb	16 00 26.0	+0.4
BFZ	**Birch Farm**	**0.86**	**208**	P	Pn	16 00 25.6	-0.2
PRWZ	**Pori Road**	**0.89**	**224**	P	Pb	16 00 26.5	-0.1
POWZ	**Post Office Ro**	**0.91**	**239**	P	Pb	16 00 26.7	-0.2
WHHZ	**Waihua**	**0.91**	**23**	P	Pn	16 00 26.6	+0.1
MOVZ	**Moawhango**	**0.95**	**303**	P	Pb	16 00 28.0	+0.3
RAHZ	**Arahi**	**1.03**	**13**	P	Pn	16 00 28.3	+0.2
MTHZ	**Maungataniwha**	**1.07**	**2**	P	Pn	16 00 28.8	+0.2
CPWZ	**Castlepoint**	**1.08**	**204**	P	Pn	16 00 28.8	0.0
TUVZ	**Tukino**	**1.09**	**306**	P	Pb	16 00 30.7	+0.7
WNVZ	**Wahianoa**	**1.09**	**303**	P	Pb	16 00 30.5	+0.4
TIWZ	**Tintock**	**1.09**	**219**	P	Pn	16 00 28.8	-0.2
MRHZ	**Matea Rd**	**1.12**	**345**	P	Pb	16 00 30.3	-0.3
WHVZ	**Whangaehu Hut**	**1.12**	**304**	P	Pb	16 00 31.2	+0.5
KNZ	**Kokohu**	**1.13**	**38**	P	Pn	16 00 28.8	-0.7
TRVZ	**Turoa**	**1.14**	**303**	P	Pb	16 00 31.3	+0.4
ETVZ	**East Tongariro**	**1.14**	**313**	P	Pb	16 00 31.3	+0.3
MTVZ	**Mangateitei**	**1.15**	**297**	P	Pb	16 00 31.3	+0.4
MAVZ	**Matarangi**	**1.15**	**304**	P	Pb	16 00 31.5	+0.4
OTVZ	**Oturere**	**1.15**	**311**	P	Pb	16 00 31.4	+0.4
SNVZ	**South Ngauruho**	**1.15**	**309**	P	Pn	16 00 30.3	+0.4
MHGZ	**Mahia Peninsul**	**1.16**	**49**	P	Pn	16 00 29.3	-0.5
TMVZ	**Te Maari**	**1.16**	**314**	P	Pb	16 00 31.1	-0.1
FWVZ	**Far West T-bar**	**1.16**	**305**	P	Pb	16 00 31.5	+0.2
OHWZ	**Ohakea**	**1.16**	**255**	P	Pb	16 00 31.4	+0.2
MRZ	**Mangatainoka R**	**1.18**	**231**	P	Pn	16 00 30.1	-0.1
NGZ	**Ngauruhoe**	**1.18**	**309**	P	Pb	16 00 32.1	+0.5
RITZ	**Rihia Road**	**1.19**	**322**	P	Pb	16 00 31.9	+0.3
NTVZ	**North Tongarir**	**1.19**	**313**	P	Pb	16 00 31.4	-0.3
COVZ	**Chateau Observ**	**1.20**	**307**	P	Pb	16 00 32.2	+0.3
NNVZ	**North Ngauruho**	**1.20**	**311**	P	Pb	16 00 32.3	+0.4
SNGZ	**Shannon Statio**	**1.22**	**21**	P	Pn	16 00 30.6	-0.1
WTVZ	**West Tongariro**	**1.23**	**311**	P	Pb	16 00 32.9	+0.6
PRGZ	**Paritu Road**	**1.31**	**41**	P	Pn	16 00 31.3	-0.7
RATZ	**Rangitukua**	**1.31**	**323**	P	Pb	16 00 35.3	+1.5
RTZ	**Ruatahuna**	**1.31**	**7**	P	Pn	16 00 32.3	+0.2
TWVZ	**Taurewa**	**1.34**	**309**	P	Pb	16 00 34.2	-0.1
TMWZ	**Te Maipa**	**1.36**	**210**	P	Pn	16 00 31.9	-0.9
HOWZ	**Holdsworth Sta**	**1.37**	**224**	P	Pn	16 00 32.1	-0.7
WAZ	**Wanganui**	**1.40**	**226**	P	Pb	16 00 35.2	+0.1
ALRZ	**Allen Road**	**1.40**	**346**	P	Pn	16 00 34.0	+0.8
WHTZ	**Whakaora**	**1.41**	**333**	P	Pb	16 00 37.0	+1.6
RIGZ	**Rimuhau**	**1.43**	**32**	P	Pn	16 00 33.0	-0.6
MUGZ	**Murupara**	**1.44**	**360**	P	Pn	16 00 34.1	+0.3
PRRZ	**Plateau Road**	**1.45**	**348**	P	Pn	16 00 34.9	+0.9
WPRZ	**Whakapapatarin**	**1.48**	**341**	P	Pb	16 00 35.6	-1.0
RAGZ	**Rawiri**	**1.51**	**19**	P	Pn	16 00 34.3	-0.4
OGWZ	**Otaki Gorge**	**1.52**	**234**	P	Pn	16 00 34.5	-0.4
MTW	**Mount Morrison**	**1.57**	**218**	P	Pn	16 00 34.2	-1.4
HRRZ	**Handcock Road**	**1.58**	**346**	P	Pn	16 00 36.9	+1.2
RRRZ	**Republican Roa**	**1.59**	**352**	P	Pn	16 00 36.4	+0.5
HSRZ	**Hossack Road**	**1.66**	**345**	P	Pn	16 00 37.9	+1.1
URZ	**Urewera**	**1.68**	**9**	P	Pn	16 00 36.6	-0.4
MWZ	**Matawai**	**1.69**	**20**	P	Pn	16 00 36.4	-0.8
TRWZ	**Traveller**	**1.69**	**209**	P	Pn	16 00 35.6	-1.6
TKGZ	**Te Karaka**	**1.70**	**30**	P	Pn	16 00 36.4	-0.8
TARZ	**Mount Tarawera**	**1.70**	**353**	P	Pn	16 00 38.1	+0.8
KIW	**Kapiti Island**	**1.71**	**236**	P	Pn	16 00 37.1	-0.3
VRZ	**Vera Road**	**1.76**	**296**	P	Pn	16 00 39.4	+1.3
CAW	**Cannon Point**	**1.77**	**227**	P	Pn	16 00 37.2	-1.0
PAWZ	**Paruwai Farm**	**1.79**	**215**	P	Pn	16 00 37.0	-1.5
CNGZ	**Carnagh Statio**	**1.81**	**38**	P	Pn	16 00 37.5	-1.4
TLZ	**Tolley Road**	**1.86**	**328**	P	Pn	16 00 40.9	+1.3
LREZ	**Lake Rotokare**	**1.90**	**283**	P	Pb	16 00 45.1	+1.5
TWGZ	**Tauwhareparae**	**1.98**	**28**	P	Pn	16 00 40.2	-0.9
PLWZ	**Palliser**	**2.01**	**215**	P	Pn	16 00 39.6	-2.1
WEL	**Wellington**	**2.05**	**228**	P	Pn	16 00 40.9	-1.2
HIZ	**Hauiti**	**2.06**	**313**	P	Pn	16 00 43.4	+1.2
RUGZ	**Raukumara Rang**	**2.08**	**20**	P	Pn	16 00 41.9	-0.7
BHW	**Baring Head**	**2.08**	**224**	P	Pn	16 00 40.7	-1.8
DREZ	**Durham Road**	**2.13**	**289**	P	Pb	16 00 49.7	+2.2
PUZ	**Puketiti**	**2.17**	**32**	P	Pn	16 00 42.3	-1.6
NEZ	**North Egmont**	**2.18**	**287**	P	Pb	16 00 47.4	-1.0
PKGZ	**Pakihiroa**	**2.27**	**27**	P	Pn	16 00 44.3	-0.9
HAZ	**Te Kaha**	**2.30**	**49**	P	Pn	16 00 44.6	-0.9
TCW	**Tory Channel**	**2.30**	**235**	P	Pn	16 00 44.3	-1.2
DUWZ	**D'Urville Isla**	**2.36**	**247**	P	Pn	16 00 45.9	-0.4
TOZ	**Tahuroa Road**	**2.41**	**335**	P	Pn	16 00 47.5	+0.5
WMGZ	**Waiomatatini S**	**2.46**	**32**	P	Pn	16 00 46.3	-1.4
TUWZ	**Tuamarina**	**2.63**	**234**	P	Pn	16 00 48.4	-1.8
BSWZ	**Blackbirch Sta**	**2.84**	**230**	P	Pn	16 00 51.2	-1.8
NNZ	**Nelson**	**2.90**	**242**	P	Pn	16 00 52.9	-0.9
TKNZ	**Takaka Hill**	**3.12**	**248**	P	Pn	16 00 56.5	-0.4
MRNZ	**Matariki Terra**	**3.40**	**243**	P	Pn	16 00 59.9	-0.8
THZ	**Tophouse**	**3.47**	**237**	P	Pn	16 00 59.7	-2.0
KHZ	**Kahutara**	**3.49**	**223**	P	Pn	16 00 58.8	-3.1
GVZ	**Greta Valley S**	**4.15**	**222**	P	Pn	16 01 07.9	-3.0
DSZ	**Denniston Nort**	**4.19**	**243**	P	Pn	16 01 10.0	-1.6
LTZ	**Lake Taylor**	**4.44**	**228**	P	Pn	16 01 11.9	-3.1
MQZ	**McQueen's Vall**	**4.88**	**218**	P	Pn	16 01 16.9	-4.1
AKCZ	**Akaroa Harbour**	**4.89**	**215**	P	Pn	16 01 18.1	-3.1
INZ	**Inchbonnie**	**4.90**	**233**	P	Pn	16 01 18.3	-2.9
OXZ	**Oxford**	**4.92**	**225**	P	Pn	16 01 18.0	-3.5
MHCZ	**Mount Hutt**	**5.31**	**226**	P	Pn	16 01 23.8	-3.2
WACZ	**Wakanui South**	**5.45**	**221**	P	Pn	16 01 26.2	-2.7
RPZ	**Rata Peaks**	**5.72**	**227**	P	Pn	16 01 29.8	-2.7
ARCZ	**Arundel**	**5.80**	**224**	P	Pn	16 01 31.7	-2.0
TMZ	**Timaru**	**6.19**	**222**	P	Pn	16 01 35.8	-3.2
CTZ	**Chatham Island**	**6.23**	**130**	P	Pn	16 01 39.2	-0.3
LBZ	**Lake Benmore**	**6.63**	**226**	P	Pn	16 01 41.6	-3.5
ODZ	**Otahua Downs**	**6.84**	**220**	P	Pn	16 01 44.6	-3.3

IDC 10 16:02:55.2±1.2, 2°87N×127°04E, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=101.3km s-min=21.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.78**	**163**	P	P	16 08 09.8	+0.1
	6.3nm,0.6s,baz=336,slow=11,SNR=63						
	6.3nm,0.6s						
ASAR	**Alice Springs**	**27.21**	**166**	P	P	16 08 41.5	+0.6
	0.9nm,0.4s,baz=347,slow=7.8,SNR=51						
	0.9nm,0.4s						
STKA	**Stephens Creek**	**37.22**	**159**	P	P	16 10 08.8	+0.4
	4.4nm,0.6s,baz=337,slow=11,SNR=14						
	4.4nm,0.6s						
MKAR	**Makanchi Array**	**58.43**	**325**	P	P	16 12 53.7	+0.8
	0.3nm,0.4s,baz=117,slow=8.1,SNR=9.6						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**121.88**	**53**	PKP	PKPdf	16 21 49.6	-2.7
	0.3nm,0.5s,baz=291,slow=2.0,SNR=6.2						

*IDC **10** 16:08:31.7±0.6, 18°51N×145°61E, h213km±4km, mb4.1/28, mbtmp4.6/31, Error ellipse: s-maj=12.6km s-min=7.0km az=92.0*

*DJA **10** 16:08:31.8±0.6, 18°N±3°×14°6E±°, h215km±6km, M4.9/66, mB5.4/18, mb5.0/66, MLv5.0/1, Mw(mB)4.8/18*

*NEIC **10** 16:08:32.5±1.7, 18°47N±0°07×145°7E±0°1, h214km±4km, mb4.6/306, Error ellipse: s-maj=15.1km s-min=9.9km az=85.0*

ISC 10 16:08:32.3±0.5, 18°48N±0°04×145°62E±0°07, h216km±4km, n666, σ1§09/582, mb4.6/212, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.92**	**189**	Pn	**Pn**	**16 09 46.2**	**0.0**
GUMO	**Guam**	**4.92**	**189**	P	**Pn**	**16 09 45.0**	**-1.1**
	76nm,0.3s,baz=77,slow=6.8,SNR=18						
GUMO				S	**S**	**16 10 41.2**	**-3.1**
	318nm,0.3s,baz=328,slow=21,SNR=10						
JCJ	**Chichijima**	**9.14**	**340**	Pn	**Pn**	**16 10 39.7**	**-0.5**
JCJ	**Chichijima**	**9.14**	**340**	P	**Pn**	**16 10 40.4**	**+0.2**
JCJ	**Chichijima**	**9.14**	**340**	P	Pn	16 10 35.4	-4.8
	54nm,0.4s,baz=290,slow=21,SNR=9.0						
JCJ				S	S	16 12 11.1	-12
	143nm,0.5s,baz=287,slow=22,SNR=6.2						
JHJ2	**Mitsune**	**15.47**	**341**	P	**P**	**16 11 59.7**	**+0.4**
JHJ	**Hachijo jima 2**	**15.49**	**341**	P	**Pn**	**16 12 00.9**	**+1.2**
	121nm,0.8s,baz=93,slow=23,SNR=1.8						
JOW	**Kunigami**	**18.02**	**301**	P	**P**	**16 12 27.9**	**+0.6**
JOW	**Kunigami**	**18.02**	**301**	P	**P**	**16 12 28.9**	**+1.6**
JOW	**Kunigami**	**18.02**	**301**	P	**Pn**	**16 12 29.8**	**0.0**
	42nm,0.7s,baz=126,slow=12,SNR=6.4						
INU	**Inuyama**	**18.45**	**337**	P	**P**	**16 12 33.3**	**+1.4**
INU				IAmb	IAmb	16 12 38.1	
	comp=Z,21nm,1.0s						
JMN	**Monobe**	**18.46**	**328**	P	**P**	**16 12 30.7**	**-1.4**
JGF	**Kuroka**	**18.56**	**338**	P	**P**	**16 12 33.3**	**+0.2**
JGF				IAmb	IAmb	16 12 35.4	
	comp=Z,24nm,0.8s						
JGF	**Kuroka**	**18.56**	**338**	P	**P**	**16 12 34.6**	**+1.5**
MJAR	**Matsushiro Arr**	**19.14**	**342**	P	**P**	**16 12 38.1**	**-1.3**
	comp=Z,8.6nm,0.4s,baz=162,slow=9.4,SNR=42						
MJAR				S	**S**	**16 15 56.7**	**-7.9**
	comp=Z,1.1nm,0.9s,baz=164,slow=12,SNR=1.5						
MAJO	**Matsushiro**	**19.14**	**342**		**P**	**16 12 39.7**	**+0.3**
MAJO				IAmb	IAmb	16 12 45.7	
	comp=Z,21nm,0.6s						
MAJO	**Matsushiro**	**19.14**	**342**	P	**P**	**16 12 40.3**	**+0.9**
MJB9	**Matsu-Tunnel**	**19.15**	**342**	P	**P**	**16 12 40.1**	**+0.7**
MJB9				IAmb	IAmb	16 12 46.6	
	comp=Z,20nm,0.6s						
JNU	**Nakatsue**	**19.68**	**321**	P	**P**	**16 12 43.9**	**-1.3**
	comp=Z,12nm,1.0s,baz=84,slow=3.6,SNR=2.5						
JMM	**Marumori**	**19.77**	**349**		**P**	**16 12 46.8**	**+0.8**
JMM	**Marumori**	**19.77**	**349**	P	**P**	**16 12 47.7**	**+1.7**
H11S3	**WAKE ISLAND Hy**	**19.99**	**87**	T	T	16 33 55.1	
	baz=275,slow=74,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**20.00**	**87**	T	T	16 33 54.1	
	baz=275,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**20.00**	**87**	T	T	16 33 54.8	
	baz=275,slow=74,SNR=5.8						
H11N1	**WAKE ISLAND Hy**	**20.14**	**83**	T	T	16 34 18.1	
	baz=268						
H11N2	**WAKE ISLAND Hy**	**20.15**	**83**	T	T	16 34 21.0	
	baz=268						
H11N3	**WAKE ISLAND Hy**	**20.16**	**83**	T	T	16 34 16.6	
	baz=268						
MANU	**Manus Island**	**20.47**	**175**	P	**P**	**16 12 53.4**	**-0.4**
MANU	**Manus Island**	**20.47**	**175**	P	**P**	**16 12 54.5**	**+0.8**
SMPI	**Sarmi**	**21.45**	**199**	P	**P**	**16 13 04.2**	**+0.3**
	comp=Z,89nm,0.8s,comp=Z,19µm						
KAVG	**Kavieng**	**21.54**	**166**	P	**P**	**16 13 03.6**	**-1.3**
GENI	**Genyem**	**21.62**	**195**	P	**P**	**16 13 06.3**	**+0.7**
GENI	**Genyem**	**21.62**	**195**	P	**P**	**16 13 05.3**	**-0.3**
	comp=Z,249nm,0.7s						
JTM	**Tenmabayashi**	**22.57**	**351**	P	**P**

PLAI Plampang 38.61 228 P P 16 15 35.0 +0.1
PLAI Plampang 38.61 228 P P 16 15 34.4 -0.5
comp=Z,40nm,0.7s,comp=Z,695nm
TWSI Taliwang, Sumb 39.19 229 P P 16 15 39.2 -0.5
comp=Z,109nm,0.8s,comp=Z,1µm
SLVN Son La 39.24 281 P P 16 15 40.6 +0.4
WB0 Warramunga Arr 39.57 197 P P 16 15 42.8 0.0
WR0 Warramunga Arr 39.72 196 P P 16 15 44.0 +0.1
WRAB Tennant Creek 39.74 197 P P 16 15 44.4 +0.2
WRAB ScP ScP 16 21 14.2 -0.2
WB2 Warramunga Arr 39.75 197 P P 16 15 44.8 +0.5
WRA Warramunga Arr 39.76 197 P P 16 15 44.0 -0.3
WRA PcP PcP 16 17 46.3 0.0
WRA ScP ScP 16 21 13.1 -1.4
WRA Warramunga Arr 39.76 197 P P 16 15 44.5 +0.2
comp=Z,30nm,0.4s,baz=18,slow=8.7,SNR=378
WRA PcP PcP 16 17 46.1 -0.1
comp=Z,2.8nm,0.6s,baz=13,slow=3.5,SNR=4.7
WRA ScP ScP 16 21 12.7 -1.7
comp=Z,1.6nm,0.7s,baz=13,slow=4.0,SNR=6.4
WRA S S 16 21 32.6 +0.7
comp=Z,0.7nm,0.8s,baz=17,slow=14,SNR=2.5
CD2 Chengdu 39.77 296 P P 16 15 46.5 +2.0
CD2 pmax pmax
comp=Z,10.0nm,0.4s
SRBI Singaraja 39.96 231 P P 16 15 46.8 +0.8
comp=Z,40nm,0.8s
LZH Lanzhou 40.70 304 eP P 16 15 54.0 +1.8
LZH pP pP 16 16 36.3 -0.2
LZH pmax pmax
comp=Z,9.0nm,1.2s
BLJI Banyuglugur 40.95 233 P P 16 15 55.1 +0.9
comp=Z,75nm,1.0s
JAGI Jajag, Banyuwa 41.00 232 P P 16 15 55.3 +0.7
JAGI Jajag, Banyuwa 41.00 232 P P 16 15 54.3 -0.3
comp=Z,43nm,1.1s
PZH PanZhiHua 41.16 289 P P 16 15 57.0 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,110nm,4.7s
MA2 Magadan 41.21 4 P P 16 15 56.4 +0.7
FITZ Fitzroy Crossi 41.31 209 P P 16 15 57.0 -0.1
FITZ Fitzroy Crossi 41.31 209 P P 16 15 57.9 +0.9
KOUNC Koumac, New Ca 42.89 154 P P 16 16 09.0 -0.7
KOUNC IAmb IAmb 16 16 11.1
comp=Z,18nm,0.8s
KOUNC Koumac, New Ca 42.89 154 P P 16 16 09.7 0.0
SONM Songino Array 43.26 322 P P 16 16 12.5 -0.2
SONM Songino Array 43.26 322 P P 16 16 12.4 -0.2
comp=Z,2.5nm,0.7s,baz=136,slow=9.8,SNR=16
SONM ScP ScP 16 21 25.2 -3.1
comp=Z,0.6nm,0.6s,baz=90,slow=0.6,SNR=2.8
comp=Z,2.5nm,0.7s
AS31 Alice Springs 43.42 196 P P 16 16 14.5 +0.5
ASAR Alice Springs 43.42 196 P P 16 16 14.3 +0.3
ASAR ScP ScP 16 21 27.9 -1.1
ASAR Alice Springs 43.42 196 P P 16 16 13.9 -0.1
comp=Z,8.4nm,0.4s,baz=14,slow=7.1,SNR=260
ASAR ScP ScP 16 21 27.4 -1.7
comp=Z,1.4nm,0.6s,baz=24,slow=4.1,SNR=8.1
ASAR S S 16 22 26.7 +0.9
comp=Z,0.9nm,0.8s,baz=15,slow=22,SNR=5.1
comp=Z,8.4nm,0.4s
UGM Wanagama 43.43 236 P P 16 16 14.7 +0.4
UGM Wanagama 43.43 236 P P 16 16 14.8 +0.5
UGM Wanagama 43.43 236 P P 16 16 14.8 +0.5
comp=Z,78nm,1.4s
EIDS Eidsvold 43.91 173 P P 16 16 15.9 -1.9
TNCH TengChong 44.05 287 eP P 16 16 20.7 +1.4
TNCH pmax pmax
comp=Z,6.0nm,0.8s
MYKOM Kota Tinggi 44.17 253 P P 16 16 22.1 +2.0
MYKOM IAmb IAmb 16 16 23.2
comp=Z,33nm,0.8s
CMAR Chiang Mai Arr 44.17 278 P P 16 16 21.3 +1.2
comp=Z,1.9nm,0.7s,baz=67,slow=8.1,SNR=23
CMAR PcP PcP 16 18 00.6 -0.5
comp=Z,1.0nm,0.6s,baz=82,slow=2.9,SNR=2.4
comp=Z,1.9nm,0.7s
KPJI Karang Pucung 44.36 238 P P 16 16 22.0 +0.5
comp=Z,46nm,0.9s
ADK Adak 44.55 33 P P 16 16 21.8 -0.7
ADK Adak 44.55 33 P P 16 16 24.1 +1.6
GTA Gaotai 44.62 308 P P 16 16 24.7 +1.2
GTA sP sP 16 17 36.4 +4.2
GTA PcP PcP 16 18 02.8 +0.4
GTA pmax pmax
comp=Z,3.0nm,1.1s
QLP Quilpie 44.81 182 P P 16 16 25.0 +0.1
YAK Yakutsk 44.92 349 P P 16 16 24.0 -1.3
comp=Z,15nm,0.5s,baz=92,slow=4.3,SNR=8.1
comp=Z,15nm,0.5s
LEM Lembang 45.13 240 P P 16 16 27.9 +0.1
comp=Z,30nm,0.7s,baz=138,slow=23,SNR=8.8
comp=Z,30nm,0.7s
LEM Lembang 45.13 240 P P 16 16 28.0 +0.1
comp=Z,45nm,0.8s
DZM Mont Dzumac 45.16 152 P P 16 16 27.4 -0.5
DZM IAmb IAmb 16 16 29.0
comp=Z,27nm,0.7s
DZM Mont Dzumac 45.16 152 P P 16 16 28.3 +0.5
YATNC Mamie plateau, 45.35 152 P P 16 16 30.1 +0.9
BBJI Bungbulang 45.47 239 P P 16 16 31.0 +0.6
OUENC Ouen Island, N 45.64 152 P P 16 16 29.8 -1.7
OUENC Ouen Island, N 45.64 152 P P 16 16 32.4 +0.9
IPM Ipoh 45.71 258 P P 16 16 32.7 +0.5
IPM IAmb IAmb 16 16 35.2
comp=Z,24nm,0.8s
IPM Ipoh 45.71 258 P P 16 16 34.4 +2.1
KULM Kulim 45.77 259 P P 16 16 33.8 +1.1
KULM IAmb IAmb 16 16 35.9
comp=Z,29nm,0.8s
ATKA Atka Island 46.01 34 P P 16 16 34.7 +0.8
ATKA Atka Island 46.01 34 P P 16 16 34.8 +0.8
PINNC Pines Island, 46.08 152 P P 16 16 33.3 -1.6
PINNC IAmb IAmb 16 16 36.4
comp=Z,39nm,0.9s
PINNC Pines Island, 46.08 152 P P 16 16 35.9 +1.0
INKA Innaminka 46.19 186 P P 16 16 36.1 +0.4
WRKA Warakurna 46.43 202 P P 16 16 38.4 +0.8
OOD Oodnadatta 47.00 192 P P 16 16 42.1 +0.2
KASI Kota Agung 47.03 243 P P 16 16 41.6 -0.9
comp=Z,61nm,0.9s
PSA00 Pilbara Seismi 47.13 214 P P 16 16 43.8 +0.7
PSA00 IAmb IAmb 16 16 44.7
comp=Z,28nm,1.2s
PSA00 Pilbara Seismi 47.13 214 P P 16 16 43.9 +0.8
GOMU GeErMu 47.90 302 P P 16 16 51.3 +1.9
GOMU pmax pmax
comp=Z,7.0nm,0.7s
ARMA Armidale 48.96 173 P P 16 16 55.1 -2.0
ARMA PcP PcP 16 18 18.0 +0.2
ARMA Armidale 48.96 173 P P 16 16 58.0 +0.9
LCRK Leigh Creek 49.16 188 P P 16 16 58.8 +0.3
NIKH Nikolski High 49.23 35 P P 16 16 59.6 +0.9
NIKH Nikolski High 49.23 35 P P 16 16 59.0 +0.3
baz=243
CMSA Cobar Meteorol 49.73 180 P P 16 17 02.8 +0.1
MULG Mulgathing 49.74 193 P P 16 17 03.2 +0.4
SISI Saibi 49.79 252 P P 16 17 03.7 +0.1
comp=Z,73nm,0.6s
GSI Gunungsitoli 50.10 256 P P 16 17 06.0 +0.2
GSI Gunungsitoli 50.10 256 P P 16 17 07.4 +1.5
GSI Gunungsitoli 50.10 256 P P 16 17 06.7 +0.8
comp=Z,86nm,0.8s
STKA Stephens Creek 50.22 184 P P 16 17 05.7 -0.7
STKA Stephens Creek 50.22 184 P P 16 17 06.3 -0.1
STKA Stephens Creek 50.22 184 P P 16 17 05.7 -0.7
comp=Z,7.3nm,0.5s,baz=352,slow=8.8,SNR=26
comp=Z,7.3nm,0.5s
SPIA Saint Paul Isl 50.56 29 P P 16 17 10.6 +1.9
SPIA Saint Paul Isl 50.56 29 P P 16 17 09.7 +1.0
baz=239
P08K Saint George I 50.60 30 P P 16 17 10.3 +1.3
baz=240
UNV Unalaska Valle 50.88 35 P P 16 17 11.6 +0.5
UNV Unalaska Valle 50.88 35 P P 16 17 11.5 +0.4
baz=245
GIRL Giralia 51.10 218 P P 16 17 14.2 +1.0
BILL Bilibino 51.25 10 P P 16 17 13.1 -0.5
BILL IAmb IAmb 16 17 15.3
comp=Z,30nm,1.2s
AKUT Akutan 51.39 34 P P 16 17 15.1 +0.2
FORT Forrest 51.80 199 P P 16 17 19.1 +0.9

FORT Forrest 51.80 199 P P 16 17 19.8 +1.6
BBOO Buckleboo 51.81 190 P P 16 17 18.3 0.0
BBOO IAmb IAmb 16 17 22.6
comp=Z,32nm,0.9s
BBOO Buckleboo 51.81 190 P P 16 17 18.6 +0.4
MEEK Meekatharra 51.95 211 P P 16 17 19.9 +0.5
HTT Hallett 52.01 187 P P 16 17 21.0 +1.2
FALS False Pass 52.94 34 P P 16 17 26.6 +0.4
baz=247
CAN Canberra 53.60 177 P P 16 17 31.6 +0.3
CNB Canberra Magne 53.62 176 P P 16 17 32.5 +1.0
GAMB Gambell 53.68 22 P P 16 17 31.8 +0.3
baz=233
TIXI Tiksi 54.08 354 P P 16 17 33.2 -1.0
WMQ Urumqi 54.39 311 eP P 16 17 39.1 +2.0
SDPT Sand Point 54.69 34 P P 16 17 38.8 -0.1
SDPT Sand Point 54.69 34 P P 16 17 39.9 +1.0
SDPT Sand Point 54.69 34 P P 16 17 39.5 +0.6
baz=250
CNBA Chernabura Isl 55.00 35 P P 16 17 39.5 -1.6
CHNA Chernabura Isl 55.00 35 P P 16 17 41.6 +0.5
baz=251
ARPS Mount Arapiles 55.07 184 P P 16 17 42.3 +0.5
MORW Morawa 55.23 212 P P 16 17 43.0 -0.1
MORW Morawa 55.23 212 P P 16 17 43.9 +0.8
M13K Dall Lake 55.27 28 P P 16 17 44.8 +1.9
baz=244
S14K Fog Glacier 55.50 34 P P 16 17 45.5 +0.6
baz=250
O14K Tigyukauivet M 55.74 30 P P 16 17 46.7 +0.3
O14K IAmb IAmb 16 18 16.8
comp=Z,33nm,1.2s
O14K Tigyukauivet M 55.74 30 P P 16 17 47.7 +1.4
baz=247
TOO Toolangi 55.75 180 P P 16 17 46.3 -0.4
TOO IAmb IAmb 16 17 47.8
comp=Z,12nm,0.9s
TOO Toolangi 55.75 180 P P 16 17 46.7 0.0
N14K Kuskokwak Cree 55.81 29 P P 16 17 48.2 +1.3
baz=246
L14K Kuka Creek 55.97 27 P P 16 17 47.3 -0.7
L14K Kuka Creek 55.97 27 P P 16 17 49.4 +1.5
baz=244,SNR=5.4
M14K Bethel 56.03 28 P P 16 17 50.0 +1.6
baz=245,SNR=6.2
TNA Tin City 56.05 21 P P 16 17 49.2 +0.8
baz=236
CHGN Chignik 56.11 34 P P 16 17 49.3 +0.3
CHGN Chignik 56.11 34 P P 16 17 49.2 +0.3
baz=251
BLDU Ballidu 56.18 210 P P 16 17 50.6 +0.8
J14K Nanvaranak Lak 56.24 25 P P 16 17 51.2 +1.4
J14K IAmb IAmb 16 17 51.8
comp=Z,12nm,0.9s
J14K Nanvaranak Lak 56.24 25 P P 16 17 51.3 +1.5
baz=242
O15K Ungalikthiuk R 56.40 30 P P 16 17 52.2 +1.2
baz=248
ANM Nome 56.43 23 IAmb IAmb 16 17 52.8
comp=Z,7.6nm,0.7s
ANM Nome 56.43 23 P P 16 17 52.1 +0.9
baz=239,SNR=6.6
KLBR Kellerberrin 56.51 209 P P 16 17 52.5 +0.3
F14K Arctic Creek 56.56 22 P P 16 17 53.5 +1.4
baz=238
M15K Kasigluk River 56.58 28 P P 16 17 53.3 +1.0
baz=246
L15K Ungalak Mounta 56.63 27 P P 16 17 53.7 +1.1
baz=245
N15K Kwethluk River 56.65 29 P P 16 17 54.0 +1.2
baz=247,SNR=6.0
K15K Wolf Creek Mou 56.88 26 P P 16 17 55.3 +0.9
K15K IAmb IAmb 16 17 56.2
comp=Z,8.6nm,0.8s
K15K Wolf Creek Mou 56.88 26 P P 16 17 55.7 +1.4
baz=244
G15K Niukluk 57.14 23 P P 16 17 57.1 +1.0
baz=240
P16K Nushagak River 57.23 31 P P 16 17 57.7 +0.9
baz=250
F15K North Star Dit 57.27 22 P P 16 17 58.3 +1.2
baz=239
N16K Nishlik Lake 57.37 29 P P 16 17 59.3 +1.4
baz=236,SNR=5.1
O16K Kokwok River B 57.37 30 IAmb IAmb 16 17 59.8
comp=Z,16nm,0.8s
O16K Kokwok River B 57.37 30 P P 16 17 58.9 +1.1
baz=250
CHIR Chirikof Islan 57.46 35 P P 16 17 58.9 +0.3
M16K Timber Creek 57.49 28 P P 16 17 59.4 +0.8
M16K IAmb IAmb 16 18 00.3
comp=Z,14nm,0.9s
M16K Timber Creek 57.49 28 P P 16 17 59.6 +1.0
baz=248
L16K Owhat River 57.52 28 P P 16 17 59.2 +0.3
L16K IAmb IAmb 16 18 05.2
comp=Z,24nm,1.5s
L16K Owhat River 57.52 28 P P 16 17 59.7 +0.8
baz=247
MUN Mundaring 57.55 210 P P 16 17 59.7 +0.3
H16K Elim 57.64 24 P P 16 18 00.4 +0.8
baz=242,SNR=7.6
J16K Anvik River 57.69 26 IAmb IAmb 16 18 02.0
comp=Z,12nm,0.7s
J16K Anvik River 57.69 26 P P 16 18 01.2 +1.2
baz=245
NWAO Narrogin (SRO) 57.87 208 P P 16 18 01.4 -0.3
NWAO Narrogin (SRO) 57.87 208 IAmb IAmb 16 18 02.9
comp=Z,90nm,0.8s
NWAO Narrogin (SRO) 57.87 208 P P 16 18 03.1 +1.4
I17K Unalakleet 57.91 25 P P 16 18 02.0 +0.5
I17K IAmb IAmb 16 18 27.1
comp=Z,32nm,1.4s
I17K Unalakleet 57.91 25 P P 16 18 02.8 +1.3
baz=244
O17K Koliganek Bris 57.91 30 P P 16 18 02.4 +0.9
baz=250
G16K Koyuk River 57.95 23 P P 16 18 02.0 +0.3
G16K Koyuk River 57.95 23 P P 16 18 02.4 +0.6
baz=242
Q17K Contact Creek 58.02 32 P P 16 18 03.0 +0.5
baz=252
P17K Kvichak River 58.04 31 P P 16 18 03.7 +1.3
baz=251
N17K Nushagak Hills 58.12 29 P P 16 18 04.1 +1.1
baz=250
ZAA0 Zalesovo Array 58.14 323 P P 16 18 02.0 -1.3
ZALV Zalesovo Beam 58.14 323 P P 16 18 01.9 -1.4
ZALV Zalesovo Beam 58.14 323 P P 16 18 02.1 -1.2
comp=Z,2.3nm,0.4s,baz=103,slow=8.5,SNR=12
ZALV ScP ScP 16 22 28.8 -2.9
comp=Z,0.4nm,0.5s,baz=122,slow=1.9,SNR=1.8
comp=Z,2.3nm,0.4s
L17K Donlin 58.20 27 P P 16 18 03.7 +0.1
baz=248
M17K Holitna River 58.31 28 P P 16 18 04.2 -0.2
M17K IAmb IAmb 16 18 06.2
comp=Z,32nm,1.4s
M17K Holitna River 58.31 28 P P 16 18 04.9 +0.6
baz=249
C16K Lisburne Hills 58.40 19 IAmb IAmb 16 18 06.4
comp=Z,12nm,0.9s
C16K Lisburne Hills 58.40 19 P P 16 18 05.5 +0.7
baz=237,SNR=9.5
K17K Iditarod 58.42 27 IAmb IAmb 16 18 07.2
comp=Z,14nm,0.8s
K17K Iditarod 58.42 27 P P 16 18 06.4 +1.4
baz=248
SII Sitkinak Islan 58.43 34 P P 16 18 07.1 +1.8
SII Sitkinak Islan 58.43 34 P P 16 18 05.8 +0.5
baz=255
MK31 Makanchi Array 58.56 314 P P 16 18 06.1 -0.2
MKAR Makanchi Array 58.56 314 P P 16 18 06.5 +0.2
comp=Z,1.4nm,0.5s,baz=90,slow=7.5,SNR=22
MKAR pP pP 16 18 52.8 -1.1
comp=Z,1.2nm,0.5s,baz=90,slow=7.5,SNR=2.8
comp=Z,1.4nm,0.5s
G17K Kiwalik Mounta 58.64 23 P P 16 18 07.5 +1.0
baz=244
H17K Granite Mounta 58.67 24 IAmb IAmb 16 18 08.5
comp=Z,10nm,0.6s
H17K Granite Mounta 58.67 24 P P 16 18 07.8 +1.1
baz=245
N18K Kilae Creek 58.78 29 P P 16 18 07.5 -0.1
N18K IAmb IAmb 16 18 10.0
comp=Z,19nm,1.1s

N18K Kilae Creek 58.78 29 P P 16 18 08.8 +1.2
baz=251
D17K Noatak River 58.82 20 P P 16 18 08.9 +1.1
baz=240,SNR=7.7
O18K Koktuh Hills 58.84 30 P P 16 18 08.7 +0.6
O18K Koktuh Hills 58.84 30 P P 16 18 09.1 +1.1
baz=252
F17K Baldwin Pennin 58.84 22 IAmb IAmb 16 18 10.2
comp=Z,14nm,0.7s
F17K Baldwin Pennin 58.84 22 P P 16 18 09.2 +1.3
baz=242,SNR=15
L18K Granite Mounta 58.94 28 P P 16 18 09.6 +0.9
L18K IAmb IAmb 16 18 10.7
comp=Z,6.8nm,0.8s
L18K Granite Mounta 58.94 28 P P 16 18 10.1 +1.4
baz=249
E17K Hotham Inlet 58.94 21 P P 16 18 09.7 +1.1
baz=242,SNR=9.9
SVW2 Sparrevohn 59.05 29 P P 16 18 09.7 +0.2
RDOG Red Dog Mine 59.06 20 P P 16 18 10.4 +1.0
RDOG IAmb IAmb 16 18 11.4
comp=Z,10nm,1.0s
RDOG Red Dog Mine 59.06 20 P P 16 18 10.3 +1.0
baz=240,SNR=6.6
M18K Stony River 59.07 29 P P 16 18 10.8 +1.2
baz=251
OHAK Old Harbor 59.08 34 P P 16 18 10.4 +0.8
OHAK Old Harbor 59.08 34 P P 16 18 11.3 +1.7
OHAK Old Harbor 59.08 34 P P 16 18 11.1 +1.5
baz=256
C17K DeLong Mountai 59.19 20 P P 16 18 11.3 +1.1
baz=239
Q19K Cape Douglas, 59.34 32 P P 16 18 11.8 +0.4
baz=254
H18K Honhosa River 59.36 24 IAmb IAmb 16 18 12.6
comp=Z,9.3nm,0.6s
H18K Honhosa River 59.36 24 P P 16 18 11.9 +0.4
baz=246
O19K Port Alsworth 59.37 30 P P 16 18 12.3 +0.7
baz=253
J18K Innoko River 59.37 26 P P 16 18 11.2 -0.4
J18K Innoko River 59.37 26 P P 16 18 12.6 +1.0
baz=249
N19K Bonanza Creek 59.47 29 IAmb IAmb 16 18 14.4
comp=Z,11nm,0.7s
N19K Bonanza Creek 59.47 29 P P 16 18 13.5 +1.1
baz=252
TTA Tatalina 59.48 27 P P 16 18 12.0 -0.4
TTA Tatalina 59.48 27 P P 16 18 13.4 +1.0
TTA Tatalina 59.48 27 P P 16 18 13.4 +1.0
baz=250
F18K Selawik 59.49 22 P P 16 18 13.2 +0.9
baz=244
E18K Tukpahlearik C 59.52 21 IAmb IAmb 16 18 14.7
comp=Z,8.5nm,0.8s
E18K Tukpahlearik C 59.52 21 P P 16 18 13.8 +1.2
baz=243
G18K Tagagawik 59.55 23 IAmb IAmb 16 18 14.4
comp=Z,10nm,0.9s
G18K Tagagawik 59.55 23 P P 16 18 14.0 +1.2
baz=245
KDAK Kodiak Island 59.58 33 P P 16 18 13.5 +0.4
L19K White Mountain 59.73 28 P P 16 18 14.7 +0.6
L19K IAmb IAmb 16 18 16.3
comp=Z,20nm,1.4s
L19K White Mountain 59.73 28 P P 16 18 15.3 +1.2
baz=251
P19K Oil Pt 59.74 31 P P 16 18 14.9 +0.7
baz=254
GCSA Galena City Sc 59.78 25 P P 16 18 15.2 +0.9
baz=248
M19K Big River Lodg 59.85 28 P P 16 18 15.9 +1.0
baz=252
C18K Utukok River 59.91 20 IAmb IAmb 16 18 16.2
comp=Z,8.5nm,0.6s
C18K Utukok River 59.91 20 P P 16 18 15.8 +0.6
baz=241,SNR=11
J19K Poorman 60.02 26 IAmb IAmb 16 18 17.9
comp=Z,7.6nm,0.7s
J19K Poorman 60.02 26 P P 16 18 17.1 +1.1
baz=250
B18K Kokolik River 60.06 19 P P 16 18 17.5 +1.3
baz=240
G19K Purcell Mounta 60.24 23 IAmb IAmb 16 18 19.2
comp=Z,12nm,0.8s
G19K Purcell Mounta 60.24 23 P P 16 18 18.2 +0.7
baz=247
H19K Roundabout Mou 60.24 24 IAmb IAmb 16 18 19.1
comp=Z,11nm,0.8s
H19K Roundabout Mou 60.24 24 P P 16 18 18.6 +1.2
baz=248
L20K Farewell, AK 60.26 28 P P 16 18 18.8 +1.1
baz=252
F19K Shaleruckik Mo 60.26 22 P P 16 18 18.5 +0.9
baz=246
M20K Styx River 60.41 29 IAmb IAmb 16 18 20.7
comp=Z,8.2nm,0.8s
M20K Styx River 60.41 29 P P 16 18 19.8 +1.0
baz=253
K20K Telida 60.45 27 IAmb IAmb 16 18 21.3
comp=Z,26nm,1.4s
K20K Telida 60.45 27 P P 16 18 20.4 +1.5
baz=251
C19K Lookout Ridge 60.63 20 P P 16 18 21.6 +1.4
baz=243
N20K Mount Spurr 60.65 29 P P 16 18 21.3 +0.9
baz=254
J20K Nowinta River 60.69 26 IAmb IAmb 16 18 22.5
comp=Z,8.6nm,0.7s
J20K Nowinta River 60.69 26 P P 16 18 22.1 +1.6
baz=251
CNPM China Poot 60.69 31 P P 16 18 20.5 -0.1
E19K Redstone River 60.71 22 IAmb IAmb 16 18 22.6
comp=Z,9.2nm,1.0s
E19K Redstone River 60.71 22 P P 16 18 21.8 +1.1
baz=246
I20K Naaghedeneel 60.76 25 P P 16 18 21.7 +0.8
baz=250
H20K Anotleneega Mo 60.84 24 P P 16 18 22.6 +1.1
baz=249
D19K Kuna River 60.84 21 IAmb IAmb 16 18 22.8
comp=Z,8.9nm,0.7s
D19K Kuna River 60.84 21 P P 16 18 22.2 +0.7
baz=245,SNR=11
BRLK Bradley Lake 60.92 31 P P 16 18 21.0 -1.2
F20K Avaraart Lake 61.09 22 IAmb IAmb 16 18 25.3
comp=Z,7.1nm,0.7s
F20K Avaraart Lake 61.09 22 P P 16 18 24.3 +1.2
baz=248
PPLA Purkeypile 61.13 28 P P 16 18 23.9 +0.2
baz=253
SKT Skwentna 61.17 29 IAmb IAmb 16 18 24.5
comp=Z,16nm,1.2s
SKT Skwentna 61.17 29 P P 16 18 24.2 +0.3
baz=254
CAST Castle Rocks 61.32 27 P P 16 18 25.8 +0.9
CAST Castle Rocks 61.32 27 P P 16 18 25.7 +0.9
baz=253,SNR=15
CHUM Lake Minchumin 61.36 26 P P 16 18 26.2 +1.2
baz=253,SNR=5.9
KURK Kurchatov 61.38 318 P P 16 18 25.1 -0.3
E20K Nigu River 61.40 21 P P 16 18 26.3 +1.0
baz=247
SUA Susitna One 61.40 29 IAmb IAmb 16 18 39.2
comp=Z,28nm,1.5s
SUA Susitna One 61.40 29 P P 16 18 26.1 +0.7
baz=256
KURBB Kurchatov Arra 61.43 318 P P 16 18 25.1 -0.6
comp=Z,4.9nm,0.4s,baz=98,slow=7.5,SNR=41
KURBB pP pP 16 19 12.3 -1.5
comp=Z,3.5nm,0.7s,baz=98,slow=6.6,SNR=2.5
comp=Z,4.9nm,0.4s
D20K Etiviuk River 61.44 21 P P 16 18 26.5 +1.0
baz=246
O22K Cooper Landing 61.65 31 P P 16 18 27.2 +0.2
baz=257,SNR=5.6
SEW Seward 61.70 31 P P 16 18 27.9 +0.6
baz=258
H21K Melozitna Rive 61.71 24 IAmb IAmb 16 18 29.0
comp=Z,7.9nm,0.6s
H21K Melozitna Rive 61.71 24 P P 16 18 28.6 +1.3
baz=251
G21K Allakaket 61.72 23 P P 16 18 28.3 +0.9
baz=250
M22K Willow 61.76 29 P P 16 18 28.0 +0.3
baz=256
RC01 Rabbit Creek A 61.78 30 P P 16 18 28.0 +0.1
baz=257

NRIK **Noril'sk** 61.79 340 P P 16 18 26.8 -1.0
NRIK IAmb IAmb 16 18 29.1
comp=Z,7.7nm,0.5s
NRIK **Noril'sk** 61.79 340 P P 16 18 27.8 0.0
comp=Z,6.3nm,0.5s,baz=107,slow=10.0,SNR=21
comp=Z,6.3nm,0.5s
CUT **Chulitna** 61.85 28 P P 16 18 26.3 -2.0
CUT **Chulitna** 61.85 28 P P 16 18 28.4 +0.1
baz=256
KTH **Kantishna Hill** 61.86 27 IAmb IAmb 16 18 29.9
comp=Z,17nm,1.0s
I21K **Tanana** 61.89 25 IAmb IAmb 16 18 30.3
comp=Z,9.7nm,0.6s
I21K **Tanana** 61.89 25 P P 16 18 29.5 +1.0
baz=252
F21K **Alatna River** 61.97 23 P P 16 18 30.0 +0.9
baz=250
TRF **Thorofare Moun** 62.11 27 IAmb IAmb 16 18 30.7
comp=Z,10.0nm,0.7s
TRF **Thorofare Moun** 62.11 27 P P 16 18 30.4 +0.2
baz=255,SNR=5.8
PMR **Palmer** 62.18 29 P P 16 18 29.0 -1.4
PMR IAmb IAmb 16 18 31.6
comp=Z,20nm,1.3s
PMR **Palmer** 62.18 29 P P 16 18 30.7 +0.2
PMR **Palmer** 62.18 29 P P 16 18 31.0 +0.5
baz=257
C21K **Knifeblade Rid** 62.22 20 P P 16 18 31.4 +0.7
baz=248
E21K **Killik River** 62.23 21 P P 16 18 31.4 +0.7
baz=249
GHO **Glory Hole Cre** 62.32 29 IAmb IAmb 16 18 32.4
comp=Z,13nm,0.6s
H22K **Ishtalitna Cre** 62.34 24 P P 16 18 32.6 +1.0
baz=253
MLY **Manley** 62.35 25 P P 16 18 32.4 +0.7
baz=254,SNR=20
B21K **Ikpikpuk River** 62.45 20 IAmb IAmb 16 18 34.2
comp=Z,18nm,1.2s
B21K **Ikpikpuk River** 62.45 20 P P 16 18 33.1 +0.9
baz=248
KNK **Knik Glacier** 62.45 30 P P 16 18 32.8 +0.4
baz=258,SNR=6.3
A21K **Barrow** 62.52 18 P P 16 18 33.5 +0.8
baz=245
SML **Sawmill** 62.60 29 P P 16 18 33.8 +0.5
baz=258,SNR=5.6
G22K **Bettles** 62.60 23 P P 16 18 33.6 +0.4
baz=252
RND **Reindeer** 62.72 27 IAmb IAmb 16 18 35.1
comp=Z,8.7nm,0.7s
WAT1 **Susitna Watana** 62.72 28 P P 16 18 34.1 -0.1
baz=257
MCK **McKinley** 62.77 27 P P 16 18 34.8 +0.4
baz=256
D22K **Ayikyak River** 62.83 21 P P 16 18 36.0 +1.3
baz=250
E22K **Anaktuvuk Pass** 62.88 22 IAmb IAmb 16 18 37.1
comp=Z,11nm,0.7s
E22K **Anaktuvuk Pass** 62.88 22 P P 16 18 36.2 +1.1
baz=251,SNR=14
M23K **Glacier View** 62.88 29 P P 16 18 35.5 +0.3
baz=258
NEA2 **Nenana** 62.92 26 IAmb IAmb 16 18 36.9
comp=Z,6.5nm,0.6s
NEA2 **Nenana** 62.92 26 P P 16 18 36.0 +0.6
baz=256,SNR=5.3
KSH **Kashi** 62.93 305 P P 16 18 40.1 +4.0
KSH pP pP 16 19 25.2 +0.8
KSH pmax pmax
comp=Z,3.0nm,1.0s
I23K **Minto, Yukon-K** 62.94 25 P P 16 18 36.1 +0.6
baz=255,SNR=14
WAT6 **Susitna Watana** 63.03 28 P P 16 18 36.5 +0.1
baz=258
SCM **Sheep Creek Mo** 63.07 29 P P 16 18 37.2 +0.7
baz=259,SNR=5.9
G23K **Bananza Creek** 63.10 24 IAmb IAmb 16 18 38.6
comp=Z,6.5nm,0.7s
G23K **Bananza Creek** 63.10 24 P P 16 18 37.7 +1.1
baz=254
COLD **Coldfoot** 63.18 23 P P 16 18 38.1 +1.1
baz=253,SNR=8.1
HIN **Hinchinbrook I** 63.20 31 P P 16 18 37.2 -0.1
WRH **Wood River Hil** 63.30 26 P P 16 18 37.5 -0.4
WRH IAmb IAmb 16 18 38.5
comp=Z,7.8nm,0.6s
DHY **Denali Highway** 63.30 28 P P 16 18 37.1 -1.0
DHY IAmb IAmb 16 18 46.5
comp=Z,19nm,1.5s
DHY **Denali Highway** 63.30 28 P P 16 18 38.5 +0.4
baz=258
COLA **College** 63.49 26 P P 16 18 39.6 +0.5
baz=257
D23K **Nanushuk River** 63.54 21 P P 16 18 40.9 +1.5
baz=252
EYAK **Cordova Ski Ar** 63.59 31 P P 16 18 40.9 +1.1
EYAK **Cordova Ski Ar** 63.59 31 P P 16 18 41.0 +1.1
baz=261
E23K **Chandalar** 63.64 22 P P 16 18 41.5 +1.3
baz=253,SNR=18
KLU **Klutina** 63.67 30 IAmb IAmb 16 18 41.8
comp=Z,9.0nm,0.8s
KLU **Klutina** 63.67 30 P P 16 18 41.1 +0.7
baz=260
H24K **Noodor Dome** 63.71 25 IAmb IAmb 16 18 42.8
comp=Z,6.8nm,0.6s
H24K **Noodor Dome** 63.71 25 P P 16 18 41.5 +0.9
baz=256,SNR=9.7
URZ **Urewera** 63.72 153 P P 16 18 40.8 -0.1
POKR **Poker Plat Res** 63.72 26 P P 16 18 39.0 -1.6
POKR **Poker Plat Res** 63.72 26 P P 16 18 40.3 -0.3
baz=257
HDA **Harding Lake** 63.77 27 IAmb IAmb 16 18 41.1
comp=Z,8.0nm,0.6s
HDA **Harding Lake** 63.77 27 P P 16 18 40.6 -0.3
baz=258,SNR=6.3
TOLK **Toolik Lake Re** 63.82 22 P P 16 18 42.3 +1.0
baz=253,SNR=16
IL31 63.87 26 IAmb IAmb 16 18 41.2
comp=Z,8.3nm,0.7s
ILAR **Eielson Array** 63.87 26 P P 16 18 40.8 -0.9
comp=Z,6.6nm,0.7s,baz=251,slow=5.2,SNR=128
comp=Z,6.6nm,0.7s
AAK **Ala-Archa** 63.95 309 P P 16 18 42.2 -0.5
RTZ **Ruatahuna** 63.96 153 P P 16 18 41.8 -0.8
E24K **Your Creek** 64.05 22 IAmb IAmb 16 18 44.9
comp=Z,8.1nm,0.8s
E24K **Your Creek** 64.05 22 P P 16 18 44.0 +1.2
baz=254
G24K **Hadweenzic Riv** 64.08 24 P P 16 18 44.5 +1.5
baz=256
F24K **Squaw Lake** 64.13 23 P P 16 18 44.7 +1.4
baz=255
PAX **Paxson** 64.13 28 P P 16 18 44.1 +0.6
baz=260,SNR=9.0
K24K **Donnelly Dome** 64.15 27 P P 16 18 44.0 +0.5
baz=259
HARP **HAARP** 64.18 29 P P 16 18 44.7 +1.0
baz=260,SNR=5.9
BMRM **Bremner River** 64.21 31 P P 16 18 44.7 +0.8
baz=262
D24K **Happy Valley** 64.23 21 P P 16 18 45.1 +1.3
baz=254
HMT **Hamilton** 64.29 31 P P 16 18 43.9 -0.5
N25K **Chitina, Valde** 64.31 30 IAmb IAmb 16 18 46.2
comp=Z,6.8nm,0.7s
N25K **Chitina, Valde** 64.31 30 P P 16 18 45.5 +0.9
baz=261
C24K **Franklin Bluff** 64.43 21 P P 16 18 46.1 +1.0
baz=253
J25K **Salcha River,** 64.48 26 IAmb IAmb 16 18 46.1
comp=Z,6.4nm,0.6s
J25K **Salcha River,** 64.48 26 P P 16 18 45.4 -0.3
baz=259
RIDG **Independent Ri** 64.55 27 IAmb IAmb 16 18 46.8
comp=Z,12nm,0.8s
RIDG **Independent Ri** 64.55 27 P P 16 18 46.1 0.0
baz=260
PRP **Porcupine Dome** 64.59 25 P P 16 18 45.0 -1.4
PRP **Porcupine Dome** 64.59 25 P P 16 18 47.0 +0.5
baz=258
GLB **Gilahina Butte** 64.66 30 P P 16 18 46.9 0.0
GLB IAmb IAmb 16 18 48.9
comp=Z,19nm,1.2s
MRNZ **Matariki Terra** 64.67 158 P P 16 18 47.4 +0.4
NNZ **Nelson** 64.74 157 P P 16 18 46.8 -0.7

VRDI **Verde Repeater** 64.80 30 P P 16 18 48.1 +0.2
VRDI IAmb IAmb 16 18 49.4
comp=Z,8.4nm,0.8s
CRQE **Cirque** 64.92 31 P P 16 18 49.2 +0.6
baz=263
FYU **Fort Yukon** 64.92 24 IAmb IAmb 16 18 49.9
comp=Z,11nm,0.6s
SCRK **Sand Creek** 64.96 27 P P 16 18 48.8 -0.1
SCRK IAmb IAmb 16 18 50.1
comp=Z,15nm,1.2s
SCRK **Sand Creek** 64.96 27 P P 16 18 48.7 -0.1
baz=261,SNR=11
F25K **Christian Rive** 64.98 23 P P 16 18 49.9 +1.1
baz=257,SNR=16
WAX **Waxell Ridge** 65.00 31 P P 16 18 49.7 +0.6
WAX IAmb IAmb 16 19 11.7
comp=Z,25nm,1.3s
MCARA **McCarthy VSAT** 65.03 30 IAmb IAmb 16 18 50.9
comp=Z,12nm,0.6s
MCARA **McCarthy VSAT** 65.03 30 P P 16 18 49.6 +0.5
baz=263
L26K **Log Cabin Wild** 65.10 28 P P 16 18 50.5 +0.8
baz=262
MRZ **Mangatainoka R** 65.10 155 P P 16 18 48.5 -1.4
MRZ IAmb IAmb 16 19 07.0
comp=Z,29nm,1.4s
D25K **Kavik River** 65.12 21 IAmb IAmb 16 18 51.2
comp=Z,12nm,0.7s
D25K **Kavik River** 65.12 21 P P 16 18 50.6 +1.0
baz=256
E25K **Arctic Village** 65.12 23 IAmb IAmb 16 18 51.6
comp=Z,6.2nm,0.8s
E25K **Arctic Village** 65.12 23 P P 16 18 50.8 +1.1
baz=257,SNR=9.1
J26L **Joseph Creek** 65.23 27 IAmb IAmb 16 18 51.8
comp=Z,22nm,1.3s
J26L **Joseph Creek** 65.23 27 P P 16 18 50.6 +0.1
baz=261
ISLE **Juniper Island** 65.27 31 P P 16 18 51.2 +0.4
ISLE IAmb IAmb 16 18 52.4
comp=Z,11nm,1.0s
SNZO **South Karori** 65.32 156 P P 16 18 49.7 -1.4
SNZO **South Karori** 65.32 156 P P 16 18 51.7 +0.5
INZ **Inchbonnie** 65.39 159 P P 16 18 49.5 -2.1
MESA **MESA** 65.41 32 P P 16 18 52.2 +0.3
baz=264
I26K **Coal Creek Min** 65.53 26 P P 16 18 52.3 0.0
baz=261
G26K **Porcupine Rive** 65.56 24 P P 16 18 53.7 +1.3
baz=260,SNR=9.7
F26K **Sheenjek River** 65.56 23 P P 16 18 54.0 +1.5
baz=259
BARN **Barnard Glacie** 65.64 31 P P 16 18 53.4 0.0
BARN IAmb IAmb 16 19 08.7
comp=Z,20nm,1.5s
M27K **Edge Creek, AK** 65.68 29 P P 16 18 54.2 +0.6
baz=263
LTZ **Lake Taylor** 65.72 159 P P 16 18 51.9 -1.9
LTZ IAmb IAmb 16 19 19.5
comp=Z,30nm,1.5s
PLWZ **Palliser** 65.75 156 P P 16 18 52.0 -2.0
CTG **Chitna Glacier** 65.79 31 P P 16 18 55.2 +1.0
baz=264,SNR=5.0
L27K **Beaver Creek,** 65.79 28 IAmb IAmb 16 18 55.2
comp=Z,6.1nm,0.7s
L27K **Beaver Creek,** 65.79 28 P P 16 18 54.6 +0.6
baz=263
CTGM **Chitna Glacie** 65.80 31 IAmb IAmb 16 18 56.3
comp=Z,9.6nm,0.7s
K27K **Chicken** 65.80 27 P P 16 18 55.1 +1.0
baz=262
BCAR **Beaver Creek A** 65.81 28 P P 16 18 54.7 +0.5
LOGN **Logan Glacier** 65.94 31 IAmb IAmb 16 18 57.1
comp=Z,8.8nm,0.8s
BVCY **Beaver Creek** 66.16 29 P P 16 18 57.3 +0.9
baz=264
I27K **Kandik River** 66.21 26 P P 16 18 57.4 +0.7
baz=262
PINM **Pinnacle** 66.25 32 P P 16 18 58.0 +0.9
baz=266
YUK3 **Moose Creek** 66.29 30 P P 16 18 58.2 +0.8
baz=265
EGAK **Eagle** 66.29 27 IAmb IAmb 16 18 59.3
comp=Z,4.8nm,0.6s
EGAK **Eagle** 66.29 27 P P 16 18 58.0 +0.8
baz=263,SNR=5.5
H27K **Steamboat Moun** 66.33 25 P P 16 18 58.4 +0.9
baz=262,SNR=14
LBZ **Lake Benmore** 66.47 161 P P 16 18 57.4 -1.1
LBZ IAmb IAmb 16 19 32.5
comp=Z,26nm,1.3s
YUK8 **Steele Glacier** 66.58 30 P P 16 19 00.8 +1.4
baz=266,SNR=5.5
BVAR **Borovoye Array** 66.59 320 P P 16 18 58.8 -0.5
comp=Z,6.6nm,0.5s,baz=100,slow=8.3,SNR=35
comp=Z,6.6nm,0.5s
BRVK **Borovoye** 66.66 321 P P 16 18 59.8 +0.1
PNL **Peninsula** 66.66 32 P P 16 19 00.7 +1.1
PNL **Peninsula** 66.66 32 P P 16 19 00.5 +1.0
baz=267
MQZ **McQueen's Vall** 66.67 159 P P 16 18 59.7 0.0
MLZ **Mavora Lakes** 66.76 163 P P 16 18 58.7 -1.6
MLZ IAmb IAmb 16 19 39.4
comp=Z,17nm,1.2s
I28M **Miner Creek** 66.89 26 P P 16 19 01.4 +0.3
baz=264
DAWY **Dawson** 66.98 27 P P 16 19 02.4 +0.8
baz=265
D27M **Malcolm River** 66.99 22 IAmb IAmb 16 19 03.4
comp=Z,7.4nm,0.7s
D27M **Malcolm River** 66.99 22 P P 16 19 02.9 +1.3
baz=261
O29M **Mount Kennedy** 67.10 32 IAmb IAmb 16 19 05.1
comp=Z,10nm,0.8s
O29M **Mount Kennedy** 67.10 32 P P 16 19 04.0 +1.5
baz=267
YUK4 **Tatlot Arm** 67.12 30 P P 16 19 04.3 +1.6
baz=267,SNR=8.7
F28M **Old Crow** 67.16 24 P P 16 19 03.6 +1.0
baz=263,SNR=12
WHZ **Wether Hill Ro** 67.19 163 P P 16 19 01.4 -1.6
YUK6 **Outpost Mounta** 67.24 31 P P 16 19 04.9 +1.4
baz=267,SNR=6.0
M29M **Somme Creek** 67.28 29 IAmb IAmb 16 19 05.8
comp=Z,11nm,0.8s
M29M **Somme Creek** 67.28 29 P P 16 19 05.0 +1.4
baz=266
E28M **Babbage River** 67.41 23 IAmb IAmb 16 19 06.8
comp=Z,17nm,1.3s
E28M **Babbage River** 67.41 23 P P 16 19 05.4 +1.3
baz=263
L29M **L29M** 67.47 29 IAmb IAmb 16 19 07.1
comp=Z,16nm,0.8s
L29M **L29M** 67.47 29 P P 16 19 06.2 +1.6
baz=266,SNR=18
P29M **Windy Craggy** 67.50 32 IAmb IAmb 16 19 07.3
comp=Z,11nm,0.7s
P29M **Windy Craggy** 67.50 32 P P 16 19 06.5 +1.6
baz=268
J29N **Klondike Camp** 67.52 27 IAmb IAmb 16 19 07.0
comp=Z,6.4nm,0.6s
J29N **Klondike Camp** 67.52 27 P P 16 19 06.2 +1.2
baz=266
H29M **Whitestone** 67.60 25 IAmb IAmb 16 19 06.7
comp=Z,8.2nm,0.7s
H29M **Whitestone** 67.60 25 P P 16 19 06.6 +1.2
baz=265
HYT **Haines Junctio** 67.65 31 IAmb IAmb 16 19 08.4
comp=Z,16nm,0.8s
HYT **Haines Junctio** 67.65 31 P P 16 19 07.6 +1.6
baz=268,SNR=16
D28M **Stokes Point** 67.78 22 P P 16 19 07.6 +1.2
baz=263
K29M **Barlow Dome** 67.79 28 IAmb IAmb 16 19 08.8
comp=Z,9.2nm,0.8s
K29M **Barlow Dome** 67.79 28 P P 16 19 07.9 +1.2
baz=267,SNR=11
P30M **Million Dollar** 67.90 32 P P 16 19 08.9 +1.5
baz=269
E29M **Blow River** 67.99 23 P P 16 19 08.6 +0.9
baz=264
M30M **Minto, Yukon** 68.06 29 P P 16 19 09.7 +1.3
baz=268,SNR=7.6
PLBC **Pleasant Camp** 68.19 33 P P 16 19 10.3 +1.1
baz=269,SNR=9.5
EPYK **Eagle Plains** 68.28 25 IAmb IAmb 16 19 11.1
comp=Z,8.0nm,0.7s

EPYK **Eagle Plains** 68.28 25 P P 16 19 10.2 +0.6
baz=266,SNR=5.6
O30N **Mendenhall** 68.34 31 P P 16 19 11.1 +0.9
baz=269
J30M **Hart River** 68.34 27 P P 16 19 11.1 +0.9
baz=267
I30M **Mount Dempster** 68.36 26 P P 16 19 11.2 +0.9
baz=267
SIMJ **Simiganj** 68.40 305 P P 16 19 12.3 +1.3
MAYO **Mayo, Yukon** 68.50 28 P P 16 19 12.1 +1.0
baz=268
N31M **Braeburn, Yuko** 68.51 30 IAmb IAmb 16 19 13.5
comp=Z,12nm,0.8s
N31M **Braeburn, Yuko** 68.51 30 P P 16 19 12.6 +1.5
baz=269,SNR=5.4
G30M **tAoh Zraii Nji** 68.52 24 P P 16 19 11.8 +0.7
baz=267
F30M **Barrier River** 68.72 24 P P 16 19 13.5 +1.2
baz=267
SKAG **Skagway** 68.72 33 IAmb IAmb 16 19 14.3
comp=Z,7.0nm,0.6s
SKAG **Skagway** 68.72 33 P P 16 19 13.9 +1.5
SKAG **Skagway** 68.72 33 P P 16 19 13.9 +1.5
baz=270,SNR=5.7
SIT **Sitka** 68.76 35 P P 16 19 13.9 +1.2
baz=271
KBL **Kabul** 68.92 301 P P 16 19 13.6 -0.8
KBL IAmb IAmb 16 19 15.9
comp=Z,7.4nm,0.8s
WHY **Whitehorse** 68.94 31 P P 16 19 15.2 +1.3
baz=270,SNR=5.6
S32K **Killisnoo** 69.15 35 P P 16 19 16.1 +1.0
baz=272
R32K **Eaglecrest** 69.16 34 P P 16 19 16.2 +1.0
baz=272
M31M **Drury Creek, Y** 69.17 30 IAmb IAmb 16 19 16.5
comp=Z,5.3nm,0.6s
M31M **Drury Creek, Y** 69.17 30 P P 16 19 16.1 +0.9
baz=270,SNR=5.7
G31M **Satah River** 69.28 25 P P 16 19 16.4 +0.6
baz=268,SNR=16
F31M **Tsiigehtchic** 69.50 24 IAmb IAmb 16 19 18.1
comp=Z,28nm,1.5s
F31M **Tsiigehtchic** 69.50 24 P P 16 19 17.1 0.0
baz=269,SNR=10
P32M **Atlin** 69.54 32 IAmb IAmb 16 19 19.6
comp=Z,6.9nm,0.8s
P32M **Atlin** 69.54 32 P P 16 19 18.9 +1.3
baz=272,SNR=5.5
FARO **Faro, Yukon** 69.66 30 P P 16 19 19.0 +0.8
baz=271,SNR=5.7
P33M **Teslin, Yukon** 69.97 32 P P 16 19 21.1 +0.9
baz=272,SNR=5.3
Q32M **Nakina River** 70.31 33 P P 16 19 22.9 +0.5
Q32M **Nakina River** 70.31 33 P P 16 19 23.8 +1.4
baz=273
WRAK **Wrangell Islan** 70.43 36 P P 16 19 24.0 +1.1
baz=274
DIB **Dawson Inlet,** 70.61 39 P P 16 19 24.4 +0.4
V35K **Ketchikan** 70.92 37 P P 16 19 27.0 +1.1
baz=275
R33M **Jennings River** 70.95 33 P P 16 19 25.9 -0.3
R33M **Jennings River** 70.95 33 P P 16 19 27.4 +1.2
baz=274
S34M **Telegraph Cree** 70.98 34 IAmb IAmb 16 19 28.6
comp=Z,7.4nm,0.8s
S34M **Telegraph Cree** 70.98 34 P P 16 19 27.7 +1.5
baz=274,SNR=8.3
DLBC **Dease Lake** 71.52 33 IAmb IAmb 16 19 31.9
comp=Z,17nm,1.3s
DLBC **Dease Lake** 71.52 33 P P 16 19 30.9 +1.4
baz=275,SNR=8.0
T35M **Bob Quinn** 71.53 35 IAmb IAmb 16 19 31.9
comp=Z,12nm,1.4s
T35M **Bob Quinn** 71.53 35 P P 16 19 30.9 +1.3
baz=276
WTLY **Watson Lake, Y** 71.98 32 P P 16 19 33.6 +1.3
baz=276,SNR=6.8
A36M **Sachs Harbour** 72.31 19 IAmb IAmb 16 19 35.2
comp=Z,13nm,0.8s
A36M **Sachs Harbour** 72.31 19 P P 16 19 34.4 +0.6
baz=275,SNR=16
C36M **Paulatuk** 72.98 22 P P 16 19 37.8 0.0
baz=277,SNR=30
ARU **Arti** 73.20 325 P P 16 19 38.1 -1.2
KOTAN **Kotaneelee Air** 74.33 31 P P 16 19 47.3 +1.3
baz=280
GEYT **Alibeck** 76.96 306 P P 16 20 01.9 +0.6
comp=Z,4.3nm,0.9s,baz=85,slow=3.1,SNR=7.0
comp=Z,4.3nm,0.9s
NLWA **Neilton Lookou** 76.97 44 P P 16 20 01.1 -0.1
NLWA IAmb IAmb 16 20 23.9
comp=Z,11nm,1.1s
YKA **Yellowknife, Ar** 78.22 28 P P 16 20 07.8 +0.1
comp=Z,5.0nm,0.8s,baz=290,slow=5.6,SNR=79
comp=Z,5.0nm,0.8s
YKAB2 **New Yellowknif** 78.24 28 P P 16 20 07.5 -0.3
H04A **Detroit Lake** 78.77 47 IAmb IAmb 16 20 12.9
comp=Z,15nm,1.2s
I04A **Tendick Farm,** 78.83 48 IAmb IAmb 16 20 13.3
comp=Z,9.3nm,0.9s
LTY **Liberty** 79.12 44 IAmb IAmb 16 20 14.7
comp=Z,8.0nm,0.8s
YBH **Yreka Blue Hor** 79.15 50 IAmb IAmb 16 20 15.7
comp=Z,10nm,1.1s
L04D **Klamath Falls** 79.32 49 IAmb IAmb 16 20 16.2
comp=Z,14nm,1.0s
SPITS **Spitsbergen Ar** 79.37 351 P P 16 20 13.3 -0.4
comp=Z,0.6nm,0.3s,baz=79,slow=7.5,SNR=10
comp=Z,0.6nm,0.3s
MXC **Moxie City** 79.55 44 IAmb IAmb 16 20 17.3
comp=Z,13nm,1.2s
J05D **Fort Rock, OR** 79.80 48 P P 16 20 16.7 -0.2
J05D IAmb IAmb 16 20 19.1
comp=Z,16nm,0.9s
HAWA **Hanford** 80.10 44 IAmb IAmb 16 20 19.8
comp=Z,7.0nm,0.6s
NEW **Newport** 81.13 42 IAmb IAmb 16 20 24.9
comp=Z,5.2nm,0.6s
NEW **Newport** 81.13 42 P P 16 20 24.2 +0.5
baz=288,SNR=5.0
CMB **Columbia Colle** 81.89 53 IAmb IAmb 16 20 29.6
comp=Z,6.7nm,0.7s
PAHR **Pah Rah Range** 82.14 51 IAmb IAmb 16 20 31.0
comp=Z,10nm,1.1s
PNTR **Pine Nut** 82.17 52 IAmb IAmb 16 20 31.6
comp=Z,14nm,0.8s
WAKR **Walker** 82.46 52 IAmb IAmb 16 20 33.2
comp=Z,6.2nm,0.7s
YERR **Yerington** 82.47 52 IAmb IAmb 16 20 32.9
comp=Z,10nm,0.8s
ARCES **ARCESS Array B** 82.67 342 P P 16 20 30.6 -0.7
comp=Z,2.2nm,0.6s,baz=84,slow=8.3,SNR=38
comp=Z,2.2nm,0.6s
SMMC **Simmler** 83.00 55 P P 16 20 34.1 +0.4
baz=288
RYN **Ryan** 83.11 52 IAmb IAmb 16 20 36.2
comp=Z,8.0nm,0.8s
PKM **Mcpherson Peak** 83.27 56 P P 16 20 36.2 +1.0
baz=288
KVN **Kaiserville** 83.29 51 IAmb IAmb 16 20 37.0
comp=Z,9.1nm,0.7s
NVAR **Mina Array Bea** 83.33 52 P P 16 20 36.2 +0.6
NVAR **Mina Array Bea** 83.33 52 P P 16 20 36.7 +1.1
comp=Z,10nm,0.7s,baz=267,slow=6.0,SNR=54
NVAR pP pP 16 21 27.9 +1.2
comp=Z,7.9nm,0.8s,baz=263,slow=6.4,SNR=8.7
comp=Z,10nm,0.7s
SBC **Santa Barbara** 83.48 56 P P 16 20 36.5 +0.4
baz=288
VES **Vestal, Richgr** 83.54 55 P P 16 20 37.0 +0.6
baz=288
ARVC **Arvin** 83.96 55 P P 16 20 39.3 +0.8
baz=288
CWC **Cottonwood Cre** 84.13 54 P P 16 20 40.0 +0.5
baz=289
HLID **Hailey** 84.44 46 P P 16 20 41.6 +0.6
baz=290,SNR=5.2
GMN **Gold Mountain** 84.48 53 IAmb IAmb 16 20 43.1
comp=Z,7.1nm,0.7s
MPMC **Manual Prospec** 84.70 54 P P 16 20 43.4 +0.9
baz=289,SNR=6.3
LRMC **Laurel Mtn Rad** 84.74 54 P P 16 20 43.7 +1.1
baz=289
FURC **Furnace Creek,** 85.05 53 P P 16 20 45.4 +1.5
baz=289
WCT **Wildcat Mounta** 85.12 53 IAmb IAmb 16 20 46.1
comp=Z,7.1nm,0.7s

BFSC	Mount Baldy Ra baz=289	85.16	56	P	P	16 20 45.3	+0.5	
TPNV	Topopah Spring comp=Z,10.0nm,0.6s	85.35	53	IAmb	IAmb	16 20 47.3		
TPNV	Topopah Spring baz=290,SNR=15	85.35	53	P	P	16 20 46.6	+0.9	
R11B	Troy Canyon, C comp=Z,12nm,1.5s	85.38	51	IAmb	IAmb	16 20 47.9		
R11B	Troy Canyon, C baz=290,SNR=7.0	85.38	51	P	P	16 20 46.6	+0.8	
GSC	Goldstone, Bar baz=289	85.47	54	P	P	16 20 46.6	+0.4	
BOZ	Bozeman (W) comp=Z,5.1nm,0.6s	85.57	43	IAmb	IAmb	16 20 48.0		
BOZ	Bozeman (W) baz=292,SNR=12	85.57	43	P	P	16 20 47.2	+0.7	
SHOC	Shoshone, Teco baz=290	85.69	54	P	P	16 20 47.6	+0.4	
EGMT	Eagleton baz=293	85.84	41	P	P	16 20 48.0	+0.2	
TUQ	Turquoise Moun baz=290	86.11	54	P	P	16 20 49.9	+0.5	
YHL	Hebgen Lake comp=Z,7.0nm,0.6s	86.14	44	IAmb	IAmb	16 20 52.7		
KBZ	Khabaz comp=Z,1.7nm,0.8s,baz=106,slow=7.4,SNR=2.7 comp=Z,1.7nm,0.8s	86.24	315	P	P	16 20 49.9	+0.3	
PFO	Pinyon Flats O baz=290	86.31	56	P	P	16 20 51.0	+0.6	
GMRC	Granite Mounta baz=290	86.53	55	P	P	16 20 51.9	+0.4	
BELC	Belle Mtn. Jos baz=290	86.54	55	P	P	16 20 51.8	+0.3	
H17A	Grant Village baz=293	86.72	44	P	P	16 20 54.1	+1.8	
DUG	Dugway, Tooele comp=Z,6.2nm,0.6s	86.75	49	IAmb	IAmb	16 20 54.0		
DUG	Dugway, Tooele baz=291,SNR=9.6	86.75	49	P	P	16 20 53.2	+0.8	
FLWY	Flagg Ranch comp=Z,6.4nm,0.6s	86.75	45	IAmb	IAmb	16 20 54.8		
V12A	Nelson comp=Z,6.8nm,0.7s	86.83	53	IAmb	IAmb	16 20 54.8		
IKP	In-Ko-Pah, Jac baz=290	86.91	57	P	P	16 20 53.7	+0.5	
FINES	FINESS Array B comp=Z,2.5nm,0.3s,baz=63,slow=4.6,SNR=67	87.05	335	P	P	16 20 50.8	-2.4	
FINES				pP	pP	16 21 44.3	-0.4	
	comp=Z,2.1nm,0.4s,baz=78,slow=5.0,SNR=3.6 comp=Z,2.5nm,0.3s							
SWSC	Sam W. Stewart baz=290	87.05	56	P	P	16 20 55.2	+1.4	
BC3	Big Chuckawall baz=290	87.08	56	P	P	16 20 55.1	+1.0	
IRM	Iron Mountain baz=290	87.15	55	P	P	16 20 54.8	+0.5	
RLMT	Red Lodge comp=Z,5.1nm,0.8s	87.29	43	IAmb	IAmb	16 20 58.1		
RLMT	Red Lodge baz=294,SNR=6.9	87.29	43	P	P	16 20 56.6	+1.6	
FFC	Flin Flon	87.32	32	P	P	16 20 54.8	+0.2	
FFC				IAmb	IAmb	16 20 55.8		
	comp=Z,5.8nm,0.8s							
NEE2	Needles Airpor baz=291	87.34	54	P	P	16 20 56.2	+1.0	
TCUT	Toone Canyon comp=Z,6.4nm,0.6s	87.40	47	IAmb	IAmb	16 20 57.6		
SZCU	Shurtz Canyon comp=Z,5.2nm,0.7s	87.49	51	IAmb	IAmb	16 20 57.9		
PDMCI	Parker Dam,Lak baz=291	87.88	55	P	P	16 20 58.6	+0.9	
KNB	Kanab comp=Z,11nm,0.9s	87.90	52	IAmb	IAmb	16 21 00.3		
BW06	Boulder Array baz=293	88.03	45	P	P	16 20 58.8	+0.2	
PDAR	Pinedale Array	88.03	45	P	P	16 20 58.3	-0.2	
PDAR	Pinedale Array comp=Z,1.1nm,0.4s,baz=169,slow=1.0,SNR=32	88.03	45	P	P	16 20 58.6	+0.1	
PDAR				pP	pP	16 21 49.2	-1.1	
	comp=Z,0.7nm,0.4s,baz=234,slow=1.2,SNR=4.9 comp=Z,1.1nm,0.4s							
Q16A	Castle Valley comp=Z,6.7nm,0.8s	88.40	49	IAmb	IAmb	16 21 03.2		
U15A	North Rim comp=Z,6.4nm,0.7s	88.51	52	IAmb	IAmb	16 21 03.1		
LAO	LASA Array baz=296	88.57	41	P	P	16 21 01.1	+0.3	
SRU	San Rafael Swe comp=Z,6.4nm,0.6s	88.79	49	IAmb	IAmb	16 21 03.5		
Y14A	Wickenburg comp=Z,9.4nm,0.6s	88.89	55	IAmb	IAmb	16 21 04.4		
DGMT	Dagmar baz=297	89.01	39	P	P	16 21 03.4	+0.6	
214A	Organ Pipe Nat baz=292	89.76	56	P	P	16 21 07.7	+1.0	
O20A	White River Ci baz=294	90.00	47	P	P	16 21 08.4	+0.6	
K22A	Casper baz=296	90.12	45	P	P	16 21 08.9	+0.7	
MVCO	Mesa Verde baz=294	91.01	50	P	P	16 21 13.2	+0.6	
TUC	Tucson baz=293	91.22	55	P	P	16 21 14.3	+0.8	
N23A	Red Feather La baz=296	91.27	46	P	P	16 21 14.5	+0.8	
ISCO	Idaho Springs baz=296	91.97	47	P	P	16 21 17.8	+0.7	
S22A	4UR Ranch, Cre baz=295	92.00	49	P	P	16 21 17.9	+0.7	
HFS	Hagfors comp=Z,0.9nm,0.3s,baz=48,slow=2.1,SNR=11 comp=Z,0.9nm,0.3s	92.56	338	P	P	16 21 16.5	-2.4	
Q24A	Divide baz=296	92.66	47	P	P	16 21 21.0	+0.8	
NOA	NORSAR Array B comp=Z,0.8nm,0.8s,baz=51,slow=5.1,SNR=2.2 comp=Z,0.8nm,0.8s	92.75	340	P	P	16 21 17.7	-2.1	
ULM	Lac du Bonnet comp=Z,1.5nm,0.6s,baz=319,slow=11,SNR=3.8	92.82	34	P	P	16 21 20.3	-0.1	
ULM				pP	pP	16 22 12.6	+0.2	
	comp=Z,4.7nm,0.8s,baz=301,slow=6.5,SNR=7.8 comp=Z,1.5nm,0.6s							
ANMO	Albuquerque baz=295	93.46	52	P	P	16 21 24.7	+0.9	
121A	Cookes Peak, D baz=294	93.46	54	P	P	16 21 24.9	+1.0	
BRTR	Keskin Array B comp=Z,0.4nm,0.4s,baz=48,slow=2.1,SNR=6.1 comp=Z,0.4nm,0.4s	94.21	314	P	P	16 21 25.4	-1.7	

TAP 10 16:13:00.8, 24.05N×121.62E, h8km, ML1.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TWD	Chiawan baz=339	0.04	328	↓P		Pg	16 13 03.1	+0.6
TWD				*e*S		Sg	16 13 04.7	+1.1
	baz=339							
ETL	Fush Village baz=1.0	0.11	2	*i* P		Pg	16 13 04.1	+0.7
ETL				*e*S		Sg	16 13 06.4	+1.1
	baz=1.0							
NACB	Ninganchiao baz=349	0.13	350	*i* P		Pg	16 13 04.4	+0.7
NACB				S		Sg	16 13 06.9	+1.3
	baz=349							
ETM	Tongmen baz=235	0.14	235	P		Pg	16 13 04.3	+0.5
ETM				S		Sg	16 13 06.8	+0.9
	baz=235							
LXIB	Xiulin Townshi baz=262	0.19	263	P		Pg	16 13 05.5	+0.8
LXIB				S		Sg	16 13 09.0	+1.5
	baz=262							
ETLH	Xiulin Townshi baz=321	0.20	322	*i* P		Pg	16 13 06.1	+1.0
ETLH				*e*S		Sg	16 13 09.7	+1.8
	baz=321							
SHUL	Shoufeng baz=191	0.26	191	*e*P		Pb	16 13 07.7	-0.1
SHUL				*e*S		Sb	16 13 13.6	+1.1
	baz=191							
ESL	Shilin baz=214	0.29	216	*e*P		Pg	16 13 06.7	+0.2
ESL				*e*S		Sg	16 13 09.8	-0.6
	baz=214							
EAHA	Aohua baz=21	0.30	21	P		Pb	16 13 07.8	-0.7
EAHA				*e*S		Sb	16 13 13.5	-0.2
	baz=21							
WHF	Hehuan Shan baz=286	0.34	287	*e*P		Pb	16 13 08.7	-0.7
WHF				*e*S		Sb	16 13 13.8	-1.3
	baz=286							
TEGC	Jichi Village baz=191	0.34	192	P		Pb	16 13 08.7	-0.5
TEGC				S		Sb	16 13 14.3	-0.5
	baz=191							
WARBT	Fenglin Townsh baz=213	0.39	213	*e*P		Pb	16 13 09.7	-0.3
WARBT				*e*S		Sb	16 13 15.9	-0.3
	baz=213							
ENA	Nanau baz=17	0.40	16	*e*P		Pg	16 13 09.2	+0.6
ENA				*e*S		Sb	16 13 15.5	-0.9
	baz=17							
FUSS	Fushou baz=300	0.40	300	*e*P		Pb	16 13 10.3	0.0
FUSS				*e*S		Sb	16 13 16.7	0.0
	baz=300							
CHGB	Renai baz=271	0.41	272	*e*P		Pb	16 13 10.2	-0.2
CHGB				*e*S		Sb	16 13 16.9	0.0
	baz=271							
EWUT	Wuta baz=20	0.42	20	P		Pg	16 13 09.7	+0.6
EWUT				S		Sb	16 13 16.7	-0.5
	baz=20							
NNSB	Datong baz=330	0.44	331	*i* P		Pb	16 13 10.7	-0.2
NNSB				*i* S		Sb	16 13 17.2	-0.5
	baz=330							
NNS	Nan Shan baz=330	0.45	330	*e*P		Pb	16 13 11.1	0.0
NNS				*e*S		Sb	16 13 17.9	-0.3
	baz=330							
WUSB	Renai baz=263	0.46	263	*e*P		Pb	16 13 11.2	-0.1
WUSB				S		Sb	16 13 18.4	0.0
	baz=263							
TDCB	Techi baz=295	0.47	296	*e*P		Pb	16 13 11.2	-0.3
TDCB				*e*S		Sb	16 13 18.2	-0.4
	baz=295							
LATG	Datong baz=350	0.49	350	*e*P		Pb	16 13 12.0	+0.1
LATG				S		Sb	16 13 19.0	-0.4
	baz=350							
VWDT	VWDT baz=236	0.53	236	P		Pb	16 13 12.0	-0.3
VWDT				*e*S		Sb	16 13 19.8	-0.3
	baz=236							
NDT	Datong Townshi baz=350	0.56	350	*e*P		Pb	16 13 13.0	0.0
NDT				S		Sb	16 13 20.7	-0.5
	baz=350							
HGSD	Ruisui baz=197	0.58	198	*e*P		Pb	16 13 13.0	-0.3
HGSD				*e*S		Sb	16 13 22.3	+0.7
	baz=197							
ENTT	Nioudou baz=355	0.59	355	*e*P		Pb	16 13 13.6	0.0
ENTT				*e*S		Sb	16 13 21.9	-0.2
	baz=355							
EHY	Hungye baz=206	0.60	207	P		Pb	16 13 13.8	+0.1
EHY				S		Sb	16 13 22.7	+0.4
	baz=206							
YHNB	Yeheng baz=340	0.66	340	P		Pb	16 13 15.2	+0.5
YHNB				*i* S		Sb	16 13 25.3	+1.3
	baz=340							
SSLB	Suanglung baz=247	0.66	247	*e*P		Pb	16 13 14.7	0.0

IDC 10 16:34:09.8±3.4, 1.61S×102.79E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=200.1km s-min=25.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
WRA	Warramunga Arr 0.6nm,1.1s,baz=306,slow=8.7,SNR=1.6 0.6nm,1.1s	35.82	123	P		P	16 41 12.2	+0.9
ASAR	Alice Springs 0.2nm,0.7s,baz=302,slow=7.7,SNR=5.3	37.27	129	P		P	16 41 23.2	-0.5
ASAR				PcP		PcP	16 43 42.3	-1.2
	0.2nm,1.0s,baz=299,slow=3.1,SNR=0.9 0.2nm,0.7s							
MKAR	Makanchi Array 0.2nm,0.4s,baz=158,slow=8.7,SNR=4.1 0.2nm,0.4s	51.46	342	P		P	16 43 16.8	-0.2
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=156,slow=8.8,SNR=2.8 0.5nm,0.3s	57.35	347	P		P	16 43 60.0	+0.4

*WEL **10** 16:40:06.8, 42.39S×174.15E, h12km, ML3.8, Mw3.9, Moment Tensor Solution. s3 Moment tensor: Mrr=29.08; Mθθ=39.28; Mφφ=-10.20; Mrθ=11.82; Mθφ=80.16; Mφr=-10.32; Fault plane solution: NP1:φs=170.00000°, δ=76.00000°, λ=-12.00000°. NP2:φs=263.00000°, δ=78.00000°, λ=-165.00000°. Principal axes: T 98.5200, Plg1.0000°, Azm=36.0000°; N -74.5200, Plg=71.0000°, Azm=302.0000°; P -24.0000, Plg=19.0000°, Azm=127.0000°; OFF E. COAST OF S. ISLAND*

*NOU **10** 16:40:06.6, 42.41S×174.19E, h5km, MLv3.9/9, Off E. Coast of S. Island, N.Z.*

*WEL **10** 16:40:08.1±0.5, 42.5S±4.4×174.7E±11, h13km±4km, M3.6/15, ML3.9/15, MLv3.6/15, Error ellipse: s-maj=0.0km s-min=0.0km az=132.9, confirmed*

ISC 10 16:40:06.6±1.3, 42.37S±0.03×174.15E±0.03, h6km±11km, n112, σ0.80/120, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KIKS	Kaikoura	0.35	261	P		Pb	16 40 15.1	-0.1
KIKS				S		Sb	16 40 21.9	+0.9
KEKS	Kekerengu Vall	0.43	343	P		Pg	16 40 15.2	+0.2
KEKS				S		Sg	16 40 21.1	+0.5
KHZ	Kahutara	0.46	264	P		Pg	16 40 16.1	+0.8
KHZ	Kahutara	0.46	264	P		Pg	16 40 16.2	+0.8
KHZ				S		Sb	16 40 23.3	-0.6
WDFS	Ward Fire Stat	0.54	359	P		Pb	16 40 18.3	-0.1
CMWZ	Cape Campbell	0.62	4	P		Pb	16 40 20.3	+0.5
BSWZ	Blackbirch Sta	0.69	343	P		Pg	16 40 19.8	+0.1
SEDS	Seddon Fire St	0.70	356	P		Pb	16 40 21.1	-0.1
MOLW	Molesworth Sta	0.72	293	P		Pg	16 40 19.7	-0.7
MOLW				S		Sg	16 40 28.8	-1.0
TUWZ	Tuamarina	0.95	351	P		Pg	16 40 25.1	+0.3
TUWZ				S		Sn	16 40 39.6	-0.7
GVZ	Greta Valley S	1.01	234	P		Pb	16 40 27.3	+0.8
GVZ				S		Sn	16 40 43.0	+1.0
BHW	Baring Head	1.10	29	P		Pg	16 40 28.4	+0.7
BHW				S		Sn	16 40 43.8	-0.2
THZ	Tophouse	1.11	303	P		Pg	16 40 27.0	-0.8
THZ				S		Sg	16 40 40.5	-1.7
SNZO	South Karori	1.14	22	P		Pg	16 40 28.9	+0.5
PLWZ	Palliser	1.15	46	P		Pg	16 40 29.2	+0.6
TCW	Tory Channel	1.16	5	P		Pb	16 40 28.6	-0.4
WEL	Wellington	1.18	23	P		Pb	16 40 29.6	+0.3
NNZ	Nelson	1.29	333	P		Pn	16 40 30.1	-0.9
AMCZ	Amberley	1.36	233	P		Pn	16 40 32.4	+0.3
PAWZ	Paruwai Farm	1.37	44	P		Pn	16 40 32.0	-0.3
MRNZ	Matariki Terra	1.42	313	P		Pn	16 40 32.6	-0.4
CAW	Cannon Point	1.44	29	P		Pn	16 40 33.0	-0.1
LTZ	Lake Taylor	1.45	253	P		Pn	16 40 33.0	-0.3
TRWZ	Traveller	1.50	50	P		Pn	16 40 33.9	-0.1
DUWZ	D'Urville Isla	1.58	354	P		Pn	16 40 34.5	-0.6
MTW	Mount Morrison	1.58	40	P		Pn	16 40 34.8	-0.3
TKNZ	Takaka Hill	1.61	326	P		Pn	16 40 35.2	-0.3
KIW	Kapiti Island	1.61	21	P		Pn	16 40 35.6	0.0
MQZ	McQueen's Vall	1.73	219	P		Pn	16 40 36.2	-0.9
OGWZ	Otaki Gorge	1.73	27	P		Pn	16 40 37.0	-0.2
AKCZ	Akaroa Harbour	1.75	211	P		Pn	16 40 37.4	-0.1
HOWZ	Holdsworth Sta	1.79	35	P		Pn	16 40 37.7	-0.3
TMWZ	Te Maipa	1.81	46	P		Pn	16 40 37.5	-0.9
OXZ	Oxford	1.82	238	P		Pn	16 40 37.7	-0.8
DSZ	Denniston Nort	1.85	289	P		Pn	16 40 38.9	0.0
QRZ	Quartz Range	1.97	321	P		Pn	16 40 41.1	+0.7
QRZ	Quartz Range	1.97	321	P		Pn	16 40 41.2	+0.7
RACZ	Rakaia	2.00	227	P		Pn	16 40 40.7	-0.1
MRZ	Mangatainoka R	2.02	33	P		Pn	16 40 40.6	-0.5
INZ	Inchbonnie	2.03	259	P		Pn	16 40 41.2	-0.1
CPWZ	Castlepoint	2.12	47	P		Pn	16 40 42.8	+0.3
MHCZ	Mount Hutt	2.22	238	P		Pn	16 40 43.1	-0.9
PRWZ	Pori Road	2.27	38	P		Pn	16 40 44.2	-0.4
WACZ	Wakanui South	2.31	226	P		Pn	16 40 44.8	-0.3
BFZ	Birch Farm	2.31	44	P		Pn	16 40 44.4	-0.7
BFZ	Birch Farm	2.31	44	P		Pn	16 40 44.3	-0.8
POWZ	Post Office Ro	2.32	32	P		Pn	16 40 44.9	-0.4
OHWZ	Ohakea	2.33	22	P		Pn	16 40 46.8	+1.3
DVHZ	Dannevirke	2.57	37	P		Pn	16 40 47.6	-1.1
ANWZ	Angora Road	2.59	43	P		Pn	16 40 48.1	-0.8
WVZ	Waitaha Valley	2.61	253	P		Pn	16 40 49.6	+0.3
RPZ	Rata Peaks	2.64	238	P		Pn	16 40 49.4	-0.2
RPZ	Rata Peaks	2.64	238	P		Pn	16 40 49.0	-0.6
ARCZ	Arundel	2.69	233	P		Pn	16 40 49.8	-0.5
TSZ	Takapari Road	2.69	31	P		Pn	16 40 49.6	-0.7
WAZ	Wanganui	2.69	14	P		Pn	16 40 51.8	+1.5
PRHZ	Porangahau	2.82	42	P		Pn	16 40 51.0	-1.1
WPHZ	Waipukurau	2.88	38	P		Pn	16 40 52.1	-0.9
PNHZ	Pukenui	2.90	33	P		Pn	16 40 52.4	-0.9
LREZ	Lake Rotokare	2.92	4	P		Pn	16 40 56.0	+2.5
TMZ	Timaru	3.05	228	P		Pn	16 40 54.9	-0.4
NEZ	North Egmont	3.10	359	P		Pb	16 41 02.4	+0.3
MTVZ	Mangateitei	3.15	19	P		Pn	16 40 57.6	+0.9
DREZ	Durham Road	3.18	1	P		Pn	16 40 56.3	-0.7
KRHZ	Kereru	3.20	32	P		Pn	16 40 56.2	-1.2
MOVZ	Moawhango	3.20	23	P		Pn	16 40 57.3	-0.2
BHHZ	Black Hill Sta	3.22	27	P		Pn	16 40 57.4	-0.4
WNVZ	Wahianoa	3.23	20	P		Pn	16 40 58.5	+0.5
TRVZ	Turoa	3.25	20	P		Pn	16 40 59.7	+1.4
WHVZ	Whangaehu Hut	3.27	20	P		Pn	16 40 59.3	+0.7
VRZ	Vera Road	3.28	8	P		Pn	16 40 59.7	+1.3
MAVZ	Matarangi	3.28	20	P		Pn	16 41 00.1	+1.3
FWVZ	Far West T-bar	3.29	19	P		Pn	16 41 00.2	+1.4
KAHZ	Kahuranaki	3.30	40	P		Pn	16 40 56.0	-2.8
TUVZ	Tukino	3.30	21	P		Pn	16 40 59.4	+0.4
COVZ	Chateau Observ	3.34	19	P		Pn	16 41 00.3	+0.9
FOZ	Fox Glacier	3.39	249	P		Pn	16 41 00.5	+0.6
OTVZ	Oturere	3.41	20	P		Pn	16 41 00.8	+0.5
KWHZ	Kaweka Forest	3.41	31	P		Pn	16 40 59.4	-0.9
NNVZ	North Ngauruho	3.42	19	P		Pn	16 41 01.6	+1.1
ETVZ	East Tongariro	3.44	21	P		Pn	16 41 01.3	+0.5
TMVZ	Te Maari	3.46	20	P		Pn	16 41 01.2	+0.1
NTVZ	North Tongarir	3.47	20	P		Pn	16 41 01.5	+0.3
LBZ	Lake Benmore	3.52	234	P		Pn	16 41 02.2	+0.4
RITZ	Rihia Road	3.63	22	P		Pn	16 41 04.9	+1.6
BKZ	Black Stump Fm	3.66	30	P		Pn	16 41 04.5	+0.7
ODZ	Otahua Downs	3.69	222	P		Pn	16 41 04.2	+0.2
ODZ	Otahua Downs	3.69	222	P		Pn	16 41 03.8	-0.3
HIZ	Hauiti	3.89	8	P		Pn	16 41 08.0	+1.1
HIZ	Hauiti	3.89	8	P		Pn	16 41 07.9	+1.1
MRHZ	Matea Rd	3.93	27	P		Pn	16 41 06.2	-1.3
MTHZ	Maungataniwha	4.07	31	P		Pn	16 41 09.7	+0.3
TLZ	Tolley Road	4.17	15	P		Pn	16 41 11.2	+0.4
JCZ	Jackson Bay	4.27	245	P		Pn	16 41 12.4	+0.2
JCZ	Jackson Bay	4.27	245	P		Pn	16 41 12.4	+0.2
HHSZ	Highcliff Hill	4.34	215	P		Pn	16 41 13.3	+0.2
MUGZ	Murupara	4.37	28	P		Pn	16 41 13.1	-0.4
EAZ	Earnscleugh	4.52	229	P		Pn	16 41 15.2	-0.3
URZ	Urewera	4.69	30	P		Pn	16 41 17.5	-0.4
TOZ	Tahuroa Road	4.75	13	P		Pn	16 41 19.1	+0.5
TUZ	Tuapeka	4.84	221	P		Pn	16 41 19.8	0.0
TWGZ	Tauwhareparae	5.11	36	P		Pn	16 41 23.4	-0.3
MLZ	Mavora Lakes	5.29	233	P		Pn	16 41 25.4	-0.7
AWAZ	Awhitu Peninsu	5.32	4	P		Pn	16 41 27.7	+1.3
MKAZ	Moumakai	5.32	9	P		Pn	16 41 26.6	+0.1
ETAZ	East Tamaki Re	5.45	7	P		Pn	16 41 29.0	+0.8
SYZ	Scrubby Hill	5.50	219	P		Pn	16 41 29.7	+0.8
SYZ	Scrubby Hill	5.50	219	P		Pn	16 41 29.5	+0.7
RVAZ	Riverhead Bore	5.60	4	P		Pn	16 41 31.6	+1.2
WHZ	Wether Hill Ro	5.68	230	P		Pn	16 41 30.4	-1.1
APZ	The Paps	6.26	222	P		Pn	16 41 39.4	0.0
CTZ	Chatham Island	6.90	105	P		Pn	16 41 48.8	+0.6

IDC 10 17:03:36.3±56.0, 16.87S×175.39W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1062.0km s-min=182.2km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
H11S2	WAKE ISLAND Hy baz=151	39.31	333	T		T	17 53 04.1	
H11S3	WAKE ISLAND Hy baz=151	39.32	333	T		T	17 53 04.0	
H11S1	WAKE ISLAND Hy baz=151	39.33	333	T		T	17 53 00.5	
H11N3	WAKE ISLAND Hy baz=151	40.31	334	T		T	17 54 17.3	
H11N1	WAKE ISLAND Hy baz=151	40.31	334	T		T	17 54 15.5	
H11N2	WAKE ISLAND Hy baz=151	40.33	334	T		T	17 54 26.2	
STKA	Stephens Creek 0.7nm,0.3s,baz=63,slow=6.8,SNR=2.3 0.7nm,0.3s	41.65	241	P		P	17 11 27.0	+0.3
WRA	Warramunga Arr 0.1nm,0.3s,baz=96,slow=7.2,SNR=7.7 0.1nm,0.3s	47.66	258	P		P	17 12 14.5	-0.3
ASAR	Alice Springs 0.8nm,0.4s,baz=90,slow=7.6,SNR=36 0.8nm,0.4s	47.85	253	P		P	17 12 16.1	-0.2

*NEIC **10** 17:06:12.4±1.4, 46.85N±0.03×112.54W±0.06, h10km±8km, ML2.4/34, ML2.6/10(BUT), Error ellipse: s-maj=5.9km s-min=3.6km az=61.0*

BUT 10 17:06:12.9±1.1, 46.88N±0.03×112.53W±0.08, h13km±8km, Error ellipse: s-maj=8.1km s-min=3.8km az=93.0, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LYMT	Lyon Mountain	0.19	59			Pg	17 06 17.3	0.0
BPMT	Black Pine Rid	0.77	236			Pg	17 06 27.2	-0.7
BOZ	Bozeman (W)	1.42	154			Pb	17 06 39.3	-0.1
BOZ						Sb	17 06 57.5	0.0
BOZ				IAML			17 06 59.5	
	46nm,0.5s							
EGMT	Eagleton	2.20	58			Pn	17 06 50.2	+0.9
EGMT						Sb	17 07 21.2	+1.2
YHL	Hebgen Lake	2.23	155			Pn	17 06 50.5	+0.6
YHL						Sn	17 07 18.1	+0.6
YHL				IAML			17 07 24.3	
	comp=N,22nm,0.8s							
YHL				IAML			17 07 26.9	
	comp=E,24nm,0.9s							
YHH	Holmes Hill	2.39	150			Pn	17 06 51.8	-0.3
H17A	Grant Village	2.83	150			Pn	17 06 58.1	0.0
H17A				IAML			17 07 20.8	
	comp=E,13nm,0.1s							
H17A				IAML			17 07 23.3	
	comp=N,16nm,0.1s							
RLMT	Red Lodge	2.87	126	Pn		Pn	17 06 59.5	+0.9
FLWY	Flagg Ranch	3.07	155	Pn		Pn	17 07 02.0	+0.6
FLWY				IAML			17 07 32.0	
	comp=N,9.1nm,4.3s							
FLWY				IAML			17 08 48.0	
	comp=N,8.4nm,4.2s							
IMW	Indian Meadow	3.18	159			Pn	17 07 02.4	-0.6
IMW				IAML			17 07 52.8	
	comp=N,11nm,0.4s							
MOOW	Moose Ponds	3.37	157	Pn		Pn	17 07 05.9	+0.4
F10A	Beach Ranch, E	3.38	256		

BMO	**Blue Mountains**	**3.90**	**241**	Pn	Pn	17 07 13.2	+0.5
BMO				IAML		17 07 48.0	
	comp=N,4.6nm,4.3s						
BMO				IAML		17 08 03.0	
	comp=N,5.8nm,4.6s						
C09A	**Chrisman Ranch**	**4.02**	**285**	Pn	Pn	17 07 14.4	+0.3
MFID	**Camas Ranch**	**4.17**	**215**	Pn	Pn	17 07 13.9	-2.5
MFID				IAML		17 08 15.3	
	comp=N,7.4nm,4.8s						
MFID				IAML		17 08 25.6	
	comp=N,7.2nm,4.4s						
AHID	**Auburn Hatcher**	**4.23**	**166**	Pn	Pn	17 07 15.9	-1.4

*SJA **10** 17:07:52.5±0.6,20°.46S×69°.08W,h104km±3km, ML3.5, MW3.5*
*GUC **10** 17:07:54.6±0.7,20°.49S×69°.06W,h94km±3km, ML3.4*
ISC 10 17:07:54.1±1.5,**20°.50S**±0°.03×**69°.12W**±0°.06,**h99**km±9km, **n35**,σ0s**85**/59,**5C-4D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.36**	**356**	*eP*	**Pn**	**17 08 08.6**	**-0.8**
PB08				IAML		17 08 20.7	
	comp=Z,1μm,0.2s						
PB08				*eS*	**Sn**	**17 08 20.7**	**-0.1**
PB08	**IPOC Station P**	**0.36**	**356**	⇓*iP*	**Pn**	**17 08 09.0**	**-0.4**
PB08				*iS*	**Sn**	**17 08 20.2**	**-0.5**
PB08				IAML		17 08 21.2	
	comp=E,3μm,0.2s						
PB01	**IPOC Station P**	**0.64**	**212**	*eP*	**Pn**	**17 08 11.1**	**0.0**
PB01				*eS*	**Sn**	**17 08 24.4**	**+0.6**
PB01				IAML		17 08 24.8	
	comp=Z,869nm,0.2s						
PB01	**IPOC Station P**	**0.64**	**212**	⇑*iP*	**Pn**	**17 08 10.8**	**-0.3**
PB01				*iS*	**Sn**	**17 08 23.9**	**+0.2**
PB01				IAML		17 08 26.4	
	comp=E,2μm,0.1s						
HMBC	**Humberstone**	**0.75**	**287**	*eP*	**Pn**	**17 08 11.9**	**-0.2**
HMBC				*eS*	**Sn**	**17 08 26.3**	**+0.7**
HMBC				IAML		17 08 27.7	
	comp=Z,1μm,0.3s						
HMBC	**Humberstone**	**0.75**	**287**	⇑*iP*	**Pn**	**17 08 11.8**	**-0.3**
HMBC				*iS*	**Sn**	**17 08 25.6**	**0.0**
HMBC				IAML		17 08 26.3	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**0.83**	**355**	*eP*	**Pn**	**17 08 12.7**	**-0.5**
GO01	**Chusmiza**	**0.83**	**355**	*iP*	**Pn**	**17 08 12.8**	**-0.5**
GO01				*iS*	**Sn**	**17 08 27.2**	**-0.3**
PB11	**IPOC Station P**	**0.89**	**326**	*eP*	**Pn**	**17 08 13.0**	**-0.5**
PB11				*eS*	**Sn**	**17 08 28.0**	**0.0**
PB11				IAML		17 08 29.8	
	comp=Z,607nm,0.1s						
PB11	**IPOC Station P**	**0.89**	**326**	⇓*iP*	**Pn**	**17 08 13.0**	**-0.5**
PB11				*iS*	**Sn**	**17 08 27.8**	**-0.2**
PB11				IAML		17 08 29.0	
	comp=E,2μm,0.3s						
TA02	**Huaiquique**	**0.97**	**283**	*eP*	**Pn**	**17 08 14.1**	**-0.1**
TA02				*eS*	**Sn**	**17 08 30.0**	**+0.7**
TA02				IAML		17 08 31.2	
	comp=Z,2μm,0.1s						
TA02	**Huaiquique**	**0.97**	**283**	*iP*	**Pn**	**17 08 14.1**	**-0.1**
TA02				*iS*	**Sn**	**17 08 29.4**	**+0.2**
TA01	**Diego Aracena**	**0.99**	**266**	*eP*	**Pn**	**17 08 14.1**	**-0.3**
TA01	**Diego Aracena**	**0.99**	**266**	⇑*iP*	**Pn**	**17 08 14.1**	**-0.3**
TA01				*iS*	**Sn**	**17 08 29.8**	**+0.2**
TA01				IAML		17 08 30.4	
	comp=N,501nm,0.3s						
PATCX	**Punta Patache**	**1.02**	**251**	*eP*	**Pn**	**17 08 14.8**	**0.0**
PATCX				*eS*	**Sn**	**17 08 31.9**	**+1.6**
PATCX				IAML		17 08 35.5	
	comp=Z,397nm,0.5s						
PATCX	**Punta Patache**	**1.02**	**251**	⇑*iP*	**Pn**	**17 08 14.6**	**-0.1**
PATCX				*iS*	**Sn**	**17 08 31.1**	**+0.8**
PB02	**IPOC Station P**	**1.09**	**221**	*eP*	**Pn**	**17 08 15.8**	**+0.1**
PB02				*eS*	**Sn**	**17 08 33.2**	**+1.4**
PB02				IAML		17 08 33.7	
	comp=Z,1μm,0.4s						
PB02	**IPOC Station P**	**1.09**	**221**	⇑*iP*	**Pn**	**17 08 15.7**	**+0.1**
PB02				*iS*	**Sn**	**17 08 32.5**	**+0.7**
PB02				IAML		17 08 33.8	
	comp=N,2μm,0.4s						
PB09	**IPOC Station P**	**1.30**	**185**	*eP*	**Pn**	**17 08 18.4**	**+0.4**
PB09				*eS*	**Sn**	**17 08 37.6**	**+1.4**
PB09				IAML		17 08 38.0	
	comp=Z,479nm,0.6s						
PB09	**IPOC Station P**	**1.30**	**185**	⇓*iP*	**Pn**	**17 08 18.5**	**+0.4**
PB09				*iS*	**Sn**	**17 08 37.0**	**+0.8**
PB09				IAML		17 08 40.4	
	comp=E,564nm,0.4s						
PB07	**IPOC Station P**	**1.42**	**210**	*eP*	**Pn**	**17 08 18.9**	**-0.6**
PB07				IAML		17 08 40.6	
	comp=Z,370nm,0.1s						
PB07	**IPOC Station P**	**1.42**	**210**	⇓*iP*	**Pn**	**17 08 19.4**	**-0.1**
PB07				*eS*	**Sn**	**17 08 38.8**	**+0.1**
PB07				IAML		17 08 41.1	
	comp=E,701nm,0.2s						
PB04	**IPOC Station P**	**2.06**	**207**	*eP*	**Pn**	**17 08 28.1**	**+0.4**
PB04				IAML		17 09 04.7	
	comp=Z,163nm,0.1s						
PB04	**IPOC Station P**	**2.06**	**207**	*iP*	**Pn**	**17 08 28.0**	**+0.4**
PB04				*iS*	**Sn**	**17 08 51.5**	**-1.7**
LVC	**Limon Verde**	**2.11**	**175**	*eP*	**Pn**	**17 08 29.0**	**+0.6**
LVC	**Limon Verde**	**2.11**	**175**	*iP*	**Pn**	**17 08 29.1**	**+0.6**
PB16	**IPOC Station P**	**2.18**	**350**	*eP*	**Pn**	**17 08 30.6**	**+1.0**
PB16	**IPOC Station P**	**2.18**	**350**	*iP*	**Pn**	**17 08 30.3**	**+0.7**
PB16				*iS*	**Sn**	**17 08 58.6**	**+2.0**
PB12	**IPOC Station P**	**2.19**	**329**	*eP*	**Pn**	**17 08 28.9**	**-0.4**
PB12	**IPOC Station P**	**2.19**	**329**	*iP*	**Pn**	**17 08 28.4**	**-0.8**
PB12				*iS*	**Sn**	**17 08 55.4**	**-0.7**
PB12				IAML		17 09 01.4	
	comp=E,211nm,0.3s						
PB06	**IPOC Station P**	**2.24**	**191**	*eP*	**Pn**	**17 08 29.9**	**0.0**
PB06				IAML		17 09 03.4	
	comp=Z,187nm,0.3s						
PB06	**IPOC Station P**	**2.24**	**191**	*iP*	**Pn**	**17 08 29.5**	**-0.4**
PB06				*iS*	**Sn**	**17 08 56.4**	**-0.8**
PB06				IAML		17 09 04.8	
	comp=N,224nm,0.5s						
PB05	**IPOC Station P**	**2.55**	**203**	*eP*	**Pn**	**17 08 34.6**	**+0.7**
PB05				IAML		17 09 14.7	
	comp=Z,94nm,0.4s						
PB05	**IPOC Station P**	**2.55**	**203**	*iP*	**Pn**	**17 08 33.9**	**0.0**
PB05				*iS*	**Sn**	**17 09 00.8**	**-3.7**
PB05				IAML		17 09 14.4	
	comp=E,151nm,0.5s						
GO02	**Mina Guanaco**	**4.66**	**185**	*eP*	**Pn**	**17 09 02.2**	**-0.3**

*BUL **10** 17:39:42.3±1.0,21°.73S×32°.95E,h10km, MD3.7*
*EAF **10** 17:39:43.0±1.8,21°.65S×32°.89E,h10km, MD3.5*
PRE 10 17:39:30.8±0.8,**21°.56S×33°.52E**,**h5**km,**ML2.6, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**2.77**	**225**	*iP*	Pb	17 40 20.5	-0.3
MOPA				*iS*	Sn	17 40 50.4	+0.6
MOPA	**Mopani**	**2.77**	**225**	*iP*	Pb	17 40 20.5	-0.3
MOPA				*iS*	Sn	17 40 50.4	+0.6
MUSN	**Musina, Limpop**	**3.48**	**257**	*iP*	Pn	17 40 27.8	+2.1
MUSN				*iS*	Sn	17 41 02.1	-5.2
MUSN	**Musina, Limpop**	**3.48**	**257**	*eP*	Pn	17 40 26.9	+1.2
MUSN				*eS*	Sn	17 41 06.6	-0.7
MUSN				IAML		17 41 30.5	
	comp=Z,44nm,0.6s						
MUSN	**Musina, Limpop**	**3.48**	**257**	*iP*	Pn	17 40 27.8	+2.1
MUSN				*iS*	Sn	17 41 02.1	-5.2
PILG	**Pilgrimsrest,**	**4.24**	**217**	*eP*	Pn	17 40 37.2	+0.8
PILG				*eS*	Sn	17 41 26.0	-0.4
PILG				IAML		17 41 58.0	
	comp=Z,21nm,0.5s						
BLWY	**Bulawayo**	**4.81**	**286**	*iP*	Pn	17 40 47.5	+3.5
BLWY				*iS*	Sn	17 41 34.4	-5.8
BLWY	**Bulawayo**	**4.81**	**286**	*iP*	Pn	17 40 47.5	+3.5
BLWY				*iS*	Sn	17 41 34.4	-5.8
KRI	**Karoi**	**5.98**	**321**	*iP*	Pn	17 40 58.6	-1.5
KRI				*iS*	Sn	17 41 53.9	-15
KRI	**Karoi**	**5.98**	**321**	*iP*	Pn	17 40 58.6	-1.5
KRI				*iS*	Sn	17 41 53.9	-15
PRYS	**Parys**	**7.76**	**225**	*eP*	Pn	17 41 25.5	+0.9
PRYS				*eS*	Sn	17 42 49.6	-3.4
PRYS				IAML		17 43 35.0	
	comp=Z,3.1nm,0.5s						
LBTB	**Lobatse**	**8.06**	**243**	*iP*	Pn	17 41 29.8	+1.2
LBTB	**Lobatse**	**8.06**	**243**	*eP*	Pn	17 41 29.2	+0.6
LBTB				*eS*	Sn	17 42 57.6	-2.7
LBTB				IAML		17 43 45.5	
	comp=Z,8.3nm,0.6s						
LBTB	**Lobatse**	**8.06**	**243**	*iP*	Pn	17 41 29.8	+1.2
KSTD	**Kokstad**	**9.79**	**202**	*eP*	Pn	17 41 54.1	+1.7
KSTD				*eS*	Sn	17 43 37.5	-5.3
KSTD				IAML		17 43 45.0	
	comp=Z,1.7nm,0.4s						
BOSA	**Boshof**	**10.27**	**225**	*iP*	Pn	17 42 00.5	+1.5
BOSA	**Boshof**	**10.27**	**225**	*iP*	Pn	17 42 00.5	+1.5

*ISN **10** 17:41:21.1±0.6,33°.71N×45°.62E,h9km±3km, ML3.6*
*IDC **10** 17:41:22.0±1.1,33°.76N×45°.78E,h0km, mb3.7/8, mbtmp3.7/13, ML3.4/5, Error ellipse: s-maj=31.4km s-min=13.5km az=165.0*
*TEH **10** 17:41:22.6,33°.71N×45°.71E,h8km±64km, ML3.6*
ISC 10 17:41:23.5±0.5,**33°.71N**±0°.03×**45°.73E**±0°.03,**h13**km,**n48**, σ1s**58**/54,**mb3.5/9**,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.62**	**165**	*eP*	**Pg**	**17 41 34.0**	**-1.7**
IBDR				*eSg*	**Sg**	**17 41 43.0**	**-1.0**
KGS1	**Ghasr-e-Shirin**	**0.80**	**352**	Pg	Pb	**17 41 38.4**	**-0.9**
IGHG	**Ghaleghazi**	**0.93**	**48**	Pg	Pb	**17 41 41.2**	**-0.4**
IGHG				Sg	**Sn**	**17 41 56.1**	**+0.3**
IDHR	**Dehrash**	**1.12**	**29**	Pg	Pn	**17 41 44.4**	**-0.8**
IDHR				Sg	**Sn**	**17 42 00.1**	**-0.5**
BHD	**Baghdad**	**1.21**	**249**	*eP*	**Pb**	**17 41 45.0**	**-1.3**
BHD				*eSn*	**Sg**	**17 42 02.0**	**-0.6**
BHD				AML	AML	17 42 09.1	
	comp=E,1μm,0.4s						
KCHF	**Cheshme Sefid,**	**1.22**	**62**	Pg	**Pg**	**17 41 46.5**	**-0.6**
ILIN	**Lien**	**1.58**	**40**	Pg	**Pg**	**17 41 53.3**	**-0.5**
IKFM	**Kafar-mosalman**	**1.78**	**96**	Pg	**Pg**	**17 41 56.1**	**-1.5**
IBZA	**Bozab**	**1.92**	**66**	Pn	**Pb**	**17 41 58.3**	**-0.3**
RAFI	**Al-Rafai**	**2.01**	**171**	*eP*	**Pn**	**17 41 57.0**	**-0.1**
RAFI				*eSn*	**Sb**	**17 42 24.0**	**-0.9**
IDOB	**Doab**	**2.04**	**87**	Pn	**Pb**	**17 41 59.7**	**-0.8**
IALM	**Almabolaq**	**2.32**	**60**	Pn	**Pb**	**17 42 03.7**	**-1.7**
HSAM	**Samen**	**2.44**	**77**	Pn	**Pb**	**17 42 05.1**	**-2.2**
SDS1	**Sardasht. Az.**	**2.44**	**355**	Pn	**Pb**	**17 42 05.1**	**-2.2**
HAGD	**Aghdareh**	**3.03**	**68**	Pn	**Pn**	**17 42 13.6**	**+2.2**
MAHB	**Mahabad**	**3.05**	**360**	Pn	**Pb**	**17 42 13.8**	**-3.9**
IHSH	**Hashtrud**	**3.79**	**19**	Pn	**Pn**	**17 42 23.7**	**+1.7**
IRAZ	**Razeghan**	**3.85**	**63**	Pn	**Pn**	**17 42 24.8**	**+2.1**
JHBN	**Jahan bin**	**4.40**	**108**	Pn	**Pn**	**17 42 31.7**	**+1.4**
IQOM	**Qom**	**4.56**	**74**	Pn	**Pn**	**17 42 34.0**	**+1.5**
ZNGN	**Zangian**	**4.59**	**109**	Pn	**Pn**	**17 42 34.1**	**+1.1**
QAMS	**Qamsar**	**4.72**	**88**	Pn	**Pn**	**17 42 36.8**	**+2.1**
IKLH	**Kolahrood**	**4.90**	**93**	Pn	**Pn**	**17 42 39.4**	**+2.3**
IMRD	**Marand**	**4.99**	**360**	Pn	**Pn**	**17 42 40.0**	**+1.8**
IVRN	**Varamin**	**5.12**	**74**	Pn	**Pn**	**17 42 41.4**	**+1.4**
KLST	**Kelardasht - M**	**5.19**	**56**	Pn	**Pn**	**17 42 43.1**	**+2.0**
KRSH	**Karshahi**	**5.34**	**85**	Pn	**Pn**	**17 42 45.0**	**+2.0**
ISFB	**Sefidab**	**5.44**	**81**	Pn	**Pn**	**17 42 45.5**	**+1.0**
IMZPU	**Pul - Mazandar**	**5.50**	**59**	Pn	**Pn**	**17 42 47.5**	**+2.1**
IDMV	**Damavand**	**5.52**	**69**	Pn	**Pn**	**17 42 47.0**	**+1.3**
IZEF	**Zefreh**	**5.58**	**97**	Pn	**Pn**	**17 42 49.2**	**+2.6**
KLNJ	**Kolanjah**	**5.64**	**117**	Pn	**Pn**	**17 42 50.1**	**+2.6**
IRAM	**Ramesheh**	**5.92**	**107**	Pn	**Pn**	**17 42 52.9**	**+1.9**
DSBU	**Dashti - Bushe**	**7.14**	**137**	Pn	**Pn**	**17 43 09.1**	**+1.4**
ASF	**Jabal al Asfar**	**7.58**	**261**	Pn	**Pn**	**17 43 13.6**	**-0.2**
	comp=E,0.4nm,0.3s,baz=61,slow=23,SNR=2.1						
ASF				Pg	**Pg**	**17 43 51.4**	**+2.7**
	comp=E,0.4nm,0.3s,baz=64,slow=23,SNR=2.7						
ASF				Lg	Lg	17 45 26.9	
	comp=E,0.8nm,0.3s,baz=78,slow=22,SNR=5.1						
	comp=E,1.2nm,0.3s						
MMAI	**Mount Meron Ar**	**8.67**	**268**	Pn	**Pn**	**17 43 28.2**	**-0.5**
	comp=E,0.6nm,0.3s,baz=79,slow=15,SNR=2.0						
MMAI				Lg	Lg	17 45 59.5	
	comp=E,0.5nm,0.3s,baz=234,slow=39,SNR=1.6						
	comp=E,0.1nm,0.3s						
EIL	**Elat**	**10.03**	**249**	Pn	**Pn**	**17 43 47.7**	**+0.4**
	comp=E,0.2nm,0.3s,baz=56,slow=11,SNR=1.8						
EIL				Lg	Lg	17 46 48.7	
	comp=E,0.2nm,0.3s,baz=61,slow=8.0,SNR=2.3						
	comp=E,1.1nm,0.5s						
WSAR	**Wadi Sarin**	**15.40**	**129**	Pn	**Pn**	**17 44 59.5**	**-1.1**
	comp=E,0.3nm,0.3s,baz=349,slow=11,SNR=7.0						
	comp=E,2.0nm,0.6s						
BELG	**Belogornoye**	**18.72**	**4**	Pn	**Pn**	**17 45 41.0**	**-1.0**
	comp=E,0.2nm,0.3s,baz=190,slow=14,SNR=2.2						
	comp=E,4.1nm,0.7s						
BVAR	**Bovoye Array**	**26.12**	**35**	P	**P**	**17 46 56.8**	**-0.2**
	comp=E,0.7nm,0.6s,baz=216,slow=14,SNR=5.1						
	comp=E,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**29.29**	**45**	P	**P**	**17 47 24.6**	**-0.8**
	comp=E,0.3nm,0.5s,baz=252,slow=8.4,SNR=3.8						
	comp=E,0.3nm,0.5s						
MKAR	**Makanchi Array**	**30.52**	**54**	P	**P**	**17 47 37.4**	**+0.9**
	comp=E,1.0nm,0.5s,baz=252,slow=10,SNR=21						
	comp=E,1.0nm,0.5s						
HFS	**Hagfors**	**33.70**	**331**	P	**P**	**17 48 03.2**	**-0.9**
	comp=E,2.3nm,0.9s,baz=106,slow=16,SNR=1.1						
	comp=E,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**34.10**	**42**	P	**P**	**17 48 07.6**	**-0.1**
	comp=E,0.8nm,0.3s,baz=254,slow=10,SNR=8.4						
	comp=E,0.8nm,0.3s						
ESDC	**Sonseca Array**	**39.88**	**293**	P	**P**	**17 48 57.7**	**+0.7**
	comp=E,0.6nm,0.9s,baz=86,slow=7.9,SNR=2.3						
	comp=E,0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**44.88**	**254**	P	**P**	**17 49 39.5**	**+1.5**
	comp=E,0.3nm,0.3s,baz=61,slow=6.8,SNR=2.9						
SONM	**Songino Array**	**46.89**	**54**	P	**P**	**17 49 55.5**	**+1.9**
	comp=E,0.1nm,0.4s,baz=280,slow=9.4,SNR=2.0						
	comp=E,0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**49.63**	**94**	P	**P**	**17 50 14.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=289,slow=8.2,SNR=4.1						
	comp=E,0.2nm,0.3s						

*AFAD **10** 18:06:49.4±0.0,37°.45N×44°.60E,h7km±1km,ML2.6*
*ISK **10** 18:06:50.3,37°.36N×44°.56E,h6km, ML2.4/5*
*TEH **10** 18:06:55.5,37°.62N×44°.98E,h10km±649km, ML1.8*
ISC 10 18:06:50.3±1.3,**37°.45N**±0°.04×**44°.59E**±0°.03,**h1**km±12km, **n19**,σ1s**34**/29,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOVA	**Hakkari_Yksek**	**0.27**	**300**	P	**Pg**	**18 06 55.5**	**0.0**
YOVA				S	**Sg**	**18 06 58.5**	**-0.5**
HAKT	**HAKKARI**	**0.71**	**279**	P	**Pg**	**18 07 03.3**	**-0.6**
HAKT				S	**Sg**	**18 07 13.9**	**+0.9**
HAKT				*i* AML	AML	18 07 17.0	
	comp=E,199nm,0.5s						
HAKT				*i* AML	AML	18 07 19.0	
	comp=N,298nm,0.4s						
CUKT	**Cukurca**	**0.81**	**256**	Pg	**Pg**	**18 07 05.4**	**-0.3**
CUKT				Sg	**Sg**	**18 07 16.4**	**+0.2**
CUKT	**Cukurca**	**0.81**	**256**	P	**Pg**	**18 07 05.2**	**-0.5**
CUKT				S	**Sb**	**18 07 17.5**	**-1.2**
CUKT				*i* AML	AML	18 07 23.0	
	comp=N,195nm,0.5s						
CUKT				*i* AML	AML	18 07 23.0	
	comp=E,288nm,0.5s						
MAHB	**Mahabad**	**1.13**	**127**	Pg	**Pn**	**18 07 14.8**	**+1.4**
MAHB				Sg	**Sn**	**18 07 29.3**	**-0.3**
IAZR	**Azarshahr**	**1.13**	**78**	Pg	**Pg**	**18 07 12.2**	**+0.3**
ISHB	**Shabestar**	**1.17**	**44**	Pg	**Pb**	**18 07 10.7**	**-2.8**
OZAP	**Van, Ozalp-Mer**	**1.29**	**339**	P	**Pb**	**18 07 15.1**	**-0.5**
OZAP				S	**Sn**	**18 07 36.5**	**+2.6**
ITBZ	**Tabriz**	**1.46**	**57**	Pg	**Pn**	**18 07 16.6**	**-1.5**
GEVA	**Gevas**	**1.48**	**306**	P	**Pb**	**18 07 17.9**	**-0.9**
GEVA				S	**Sg**	**18 07 37.2**	**+0.7**
VANB	**Van**	**1.48**	**321**	Pn	**Pb**	**18 07 17.8**	**-0.5**
VANB				Sn	**Sg**	**18 07 37.9**	**0.0**
IMRD	**Marand**	**1.54**	**35**	Pg	**Pb**	**18 07 19.5**	**-0.2**
AKDM	**Akdamar-Van**	**1.54**	**305**	Pn	**Pb**	**18 07 19.4**	**-0.4**
AKDM				Sn	**Sg**	**18 07 41.1**	**+1.2**
PERV	**Siirt/Pervari-**	**1.69**	**288**	P	**Pb**	**18 07 21.7**	**-0.7**
PERV				S	**Sg**	**18 07 47.9**	**+3.1**
PERV				*i* AML	AML	18 07 50.0	
	comp=E,116nm,0.7s						
PERV				*i* AML	AML	18 07 55.0	
	comp=N,113nm,0.5s						
MAKU	**Maku**	**1.90**	**2**	Pg	**Pg**	**18 07 28.0**	**+1.3**
IHSH	**Hashtrud**	**2.14**	**93**	Pn	**Pb**	**18 07 30.2**	**+0.1**
AGRB	**Hanur-Agry**	**2.46**	**330**	Pn	**Pb**	**18 07 33.0**	**-2.5**
ISRB	**Sarab**	**2.47**	**80**	Pn	**Pb**	**18 07 34.8**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.77**	**286**	Pn	**Pn**	**18 07 36.5**	**+0.6**

IDC 10 18:13:57.9±2.6,**4°.92S×151°.54E**,**h0**km,**mb3.1**/3, **mbtmp3.2**/3,**Error ellipse: s-maj=228.0km s-min=31.4km az=126.0**,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.44**	**227**	P	P	18 18 58.2	-0.4
	0.3nm,0.7s,baz=51,slow=9.8,SNR=1.2						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**25.23**	**221**	P	P	18 19 26.0	+0.3
	0.2nm,0.6s,baz=59,slow=9.1,SNR=1.3						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**82.74**	**22**	P	P	18 26 23.4	0.0
	0.4nm,0.7s,baz=246,slow=5.5,SNR=5.1						
	0.4nm,0.7s						

IDC 10 18:40:53.7±265.0,**60°.81N×155°.25W**,**h0**km,**Error ellipse: s-maj=186.2km s-min=84.4km az=21.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I53US	**FAIRBANKS INFR**	**5.30**	**36**	I	I	19 16 00.0	
	baz=225,slow=335,SNR=0.4						
I56US	**NEWPORT INFRAS**	**25.02**	**103**	I	I	21 13 40.0	
	baz=324,slow=320,SNR=0.9						
I44RU	**PETROPAVLOVSK**	**26.26**	**274**	I	I	21 21 40.0	
	baz=59,slow=333,SNR=1.3						
I10CA	**LAC DU BONNET**	**34.00**	**81**	I	I	22 06 10.0	
	baz=302,slow=331,SNR=1.0						

*NEIC **10** 18:47:40.0±1.8,55°.9N±0°.1×149°.71W±0°.06,h8km±8km, ML3.5/32,ML3.2(AEIC), Error ellipse: s-maj=15.3km s-min=4.3km az=170.0*
AEIC 10 18:47:44.8±1.9,**55°.81N**±0°.09×**149°.7W**±0°.1,**h12**km±8km, **Error ellipse: s-maj=12.5km s-min=10.0km az=171.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.45**	**307**		Pn	18 48 19.6	-5.0
OHAK					Sn	18 48 47.2	-7.3
KDAK	**Kodiak Island**	**2.55**	**322**		Pn	18 48 21.3	-4.6
KDAK					Sn	18 48 49.7	-7.0
SII	**Sitkinak Islan**	**2.63**	**288**		Pn	18 48 22.3	-4.8
SII	**Sitkinak Islan**	**2.63**	**288**	IAML		18 49 07.9	
	comp=N,140nm,1.9s						
SYI	**Shuyak Island**	**3.17**	**333**		Pn	18 48 30.1	-4.3
SYI	**Shuyak Island**	**3.17**	**333**		Sn	18 49 06.2	-6.0
SYI	**Shuyak Island**	**3.17**	**333**	IAML		18 49 03.8	
	comp=N,90nm,1.9s						
CHIR	**Chirikof Islan**	**3.36**	**273**		Pn	18 48 32.4	-4.6
CHIR	**Chirikof Islan**	**3.36**	**273**	IAML		18 49 37.5	
	comp=N,136nm,1.8s						
CHIR				IAML		18 49 43.4	
	comp=E,97nm,1.8s						
Q19K	**Cape Douglas,**	**3.80**	**327**		Pn	18 48 39.5	-3.6
CNPM	**China Poot**	**3.82**	**348**		Pn	18 48 38.6	-4.8
CNPM					Sn	18 49 20.8	-7.5
CNPM	**China Poot**	**3.82**	**348**	IAML		18 50 24.6	
	comp=E,47nm,1.8s						
BRSE	**Bradley Lake S**	**3.99**	**352**		Pn	18 48 40.9	-4.7
BRSE					Sn	18 49 24.4	-7.9
BRLK	**Bradley Lake**	**4.02**	**351**	Pn	Pn	18 48 39.8	-6.3
BRLK				IAML		18 50 25.8	
	comp=N,40nm,1.6s						
BRLK				IAML		18 50 58.1	
	comp=E,33nm,1.7s						
CNTC	**Contact Creek**	**4.19**	**309**		Pn	18 48 44.2	-4.4
P19K	**Oil Pt**	**4.30**	**335**	Pn	Pn	18 48 44.6	-5.4
P19K				IAML		18 50 10.7	
	comp=N,123nm,0.4s						
P19K				IAML		18 50 11.6	
	comp=E,99nm,0.5s						
P23K	**Montague Islan**	**4.37**	**15**		Pn	18 48 46.1	-4.8
O20K	**Slope Mountain**	**4.56**	**341**		Pn	18 48 49.0	-4.7
IVE	**Iliamna Volcan**	**4.58**	**338**		Pn	18 48 49.2	-4.7
HIN	**Hinchinbrook I**	**4.90**	**19**		Pn	18 48 53.2	-5.0
CHGN	**Chignik**	**4.92**	**279**	Pn	Pn	18 48 54.8	-3.7
CHGN				IAML		18 49 55.2	
	comp=N,43nm,1.7s						
CHGN				IAML		18 51 27.7	
	comp=E,42nm,1.7s						
RSO	**Redoubt South**	**4.94**	**342**	Pn	Pn	18 48 52.2	-6.7
O18K	**Koktuh Hills**	**5.02**	**326**	Pn	Pn	18 48 54.2	-5.7
O18K				IAML		18 51 57.0	
	comp=N,21nm,1.9s						
EYAK	**Cordova Ski

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.47**	**108**	P	**P**	**19 02 33.0**	**-1.9**
DAV	**Davao City (W)**	**3.55**	**42**	P	**P**	**19 02 40.5**	**-1.0**
DAV	**Davao City (W)**	**3.55**	**42**	P	**P**	**19 02 41.2**	**-0.3**
	152nm,0.3s,baz=249,slow=14,SNR=4.8						
DAV				S	**S**	**19 03 46.0**	**+0.1**
	113nm,0.4s,baz=266,slow=22,SNR=9.8						
KMSI	**Cibinong**	**3.92**	**168**	P	**P**	**19 02 43.6**	**-0.6**
TOLI2	**Tolitoli**	**4.08**	**216**	P	**P**	**19 02 45.3**	**-0.1**
MRSI	**Marisa**	**4.12**	**197**	P	**P**	**19 02 46.1**	**+0.4**
MPSI	**Mapaga**	**5.22**	**219**	P	**P**	**19 02 53.8**	**-0.7**
	39nm,1.0s,858nm0.1nm						
LUWI	**Luwuk**	**5.46**	**184**	P	**P**	**19 02 56.5**	**-0.1**
LUWI	**Luwuk**	**5.46**	**184**	P	**P**	**19 02 55.5**	**-1.1**
	88nm,0.5s,1.2nm						
TNTI	**Ternate**	**5.55**	**131**	P	**P**	**19 02 57.2**	**-0.3**
TNTI	**Ternate**	**5.55**	**131**	P	**P**	**19 02 55.5**	**-1.9**
	92nm,1.2s,1μm0.7nm						
LBMI	**Labuha**	**6.65**	**139**	P	**P**	**19 03 07.7**	**+0.3**
	109nm,0.5s,2μm2.6nm						
SANI	**Sanana**	**7.03**	**156**	P	**P**	**19 03 08.5**	**-2.5**
	58nm,0.7s,1μm0.5nm						
KKM	**Kota Kinabalu**	**7.11**	**283**	P	**P**	**19 03 11.6**	**-0.2**
TTSI	**Tana Toraja**	**8.15**	**204**	P	**P**	**19 03 22.5**	**+0.6**
	31nm,1.1s						
BKB	**Balikpapan**	**8.45**	**228**	P	**P**	**19 03 23.4**	**-1.4**
NLAI	**Namlea**	**8.58**	**153**	P	**P**	**19 03 26.8**	**+0.6**
	17nm,0.6s,1μm						
SBUM	**Sibu**	**11.11**	**260**		**P**	**19 03 52.7**	**+0.8**
FAKI	**Fak Fak**	**11.65**	**129**	P	**P**	**19 03 58.0**	**+0.5**
FAKI	**Fak Fak**	**11.65**	**129**	P	**P**	**19 03 57.4**	**-0.1**
KSM	**Kuching**	**13.18**	**257**	P	**P**	**19 04 13.4**	**+0.1**
EDFI	**Ende, Flores**	**13.18**	**186**	P	**P**	**19 04 15.1**	**+1.7**
	6.7nm,0.9s						
SOEI	**Soe**	**14.14**	**176**	P	**P**	**19 04 23.1**	**-0.3**
SOEI	**Soe**	**14.14**	**176**	P	P	19 04 14.5	-8.8
SOEI	**Soe**	**14.14**	**176**	P	**P**	**19 04 23.0**	**-0.3**
	18nm,1.1s						
PLAI	**Plampang**	**14.23**	**202**	P	**P**	**19 04 23.4**	**-0.7**
	16nm,0.6s						
TWSI	**Taliwang, Sumb**	**14.51**	**206**	P	**P**	**19 04 27.4**	**+0.4**
	12nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.66**	**215**	P	**P**	**19 04 39.5**	**+0.8**
JAGI	**Jajag, Banyuwa**	**15.66**	**215**	P	**P**	**19 04 37.9**	**-0.7**
	52nm,0.8s						
SMPI	**Sarmi**	**16.79**	**112**	P	**P**	**19 04 49.1**	**-0.1**
	49nm,1.6s						
MTN	**Manton Dam**	**18.91**	**155**	P	**P**	**19 05 08.7**	**+0.2**
MTN				IAmb	IAmb	19 05 12.5	
	comp=Z,12nm,0.9s						
MTN	**Manton Dam**	**18.91**	**155**	P	**P**	**19 05 09.0**	**+0.6**
TPUB	**Ta-pu**	**18.91**	**353**	P	**P**	**19 05 08.4**	**0.0**
KDU	**Kakadu**	**19.36**	**152**	P	**P**	**19 05 12.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**22.53**	**174**	P	**P**	**19 05 41.0**	**0.0**
SISI	**Saibi**	**24.73**	**257**	P	**P**	**19 06 00.5**	**-0.3**
	comp=Z,29nm,0.8s						
GSI	**Gunungsitoli**	**25.75**	**264**	P	**P**	**19 06 09.0**	**-0.8**
PSA00	**Pilbara Seismi**	**26.05**	**187**	P	**P**	**19 06 11.9**	**-0.4**
PSA00				IAmb	IAmb	19 06 12.3	
	comp=Z,3.3nm,0.7s						
WB0	**Warramunga Arr**	**26.47**	**156**	P	**P**	**19 06 15.5**	**-0.5**
WRA	**Warramunga Arr**	**26.60**	**156**	P	**P**	**19 06 15.8**	**-1.4**
WRA	**Warramunga Arr**	**26.60**	**156**	P	**P**	**19 06 17.0**	**-0.1**
	comp=Z,9.0nm,0.4s,baz=333,slow=10,SNR=188						
WRA				S	**S**	**19 10 09.2**	**-4.3**
	comp=Z,1.0nm,0.5s,baz=335,slow=16,SNR=4.8						
WRA				ScP	**ScP**	**19 12 08.7**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=339,slow=2.8,SNR=2.6						
	comp=Z,9.0nm,0.4s						
COEN	**Coen**	**26.98**	**133**	P	**P**	**19 06 19.9**	**-0.6**
COEN				IAmb	IAmb	19 06 43.8	
	comp=Z,16nm,1.4s						
COEN	**Coen**	**26.98**	**133**	P	**P**	**19 06 20.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**27.47**	**302**	P	**P**	**19 06 24.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**27.47**	**302**	P	**P**	**19 06 26.1**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=118,slow=6.8,SNR=17						
CMAR				PcP	**PcP**	**19 09 25.4**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=139,slow=2.0,SNR=6.4						
	comp=Z,2.1nm,1.0s						
PMG	**Port Moresby**	**27.58**	**120**	P	**P**	**19 06 24.5**	**-1.4**
	comp=Z,9.7nm,1.0s,baz=294,slow=18,SNR=1.6						
	comp=Z,9.7nm,1.0s						
CHTO	**Chiang Mai**	**27.64**	**303**	P	**P**	**19 06 26.3**	**0.0**
CHTO				IAmb	IAmb	19 06 28.1	
	comp=Z,4.8nm,0.9s						
ENH	**Enshi**	**28.76**	**335**	P	**P**	**19 06 36.5**	**+0.6**
QIS	**Mount Isa**	**29.62**	**148**	P	**P**	**19 06 44.4**	**+0.9**
WRKA	**Warakurna**	**29.72**	**171**	P	**P**	**19 06 45.1**	**+0.8**
AS31	**Alice Springs**	**29.83**	**160**	P	**P**	**19 06 45.8**	**+0.5**
AS31				IAmb	IAmb	19 06 46.5	
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**29.83**	**160**	P	**P**	**19 06 45.7**	**+0.4**
ASAR	**Alice Springs**	**29.83**	**160**	P	**P**	**19 06 45.9**	**+0.5**
	comp=Z,6.2nm,0.3s,baz=340,slow=7.2,SNR=437						
ASAR				S	**S**	**19 11 01.9**	**-1.7**
	comp=Z,5.2nm,0.9s,baz=350,slow=22,SNR=18						
ASAR				ScP	**ScP**	**19 12 20.2**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=342,slow=2.8,SNR=19						
	comp=Z,6.2nm,0.3s						
AS01	**Alice Springs**	**29.85**	**160**	P	**P**	**19 06 46.1**	**+0.7**
PZH	**PanZhiHua**	**30.02**	**319**	P	**P**	**19 06 48.1**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LYN	**LuoYang**	**31.57**	**343**	*e*P	**P**	**19 07 01.4**	**+1.4**
LYN				pmax	pmax		
	comp=Z,16nm,0.6s						
XAN	**Xi'an**	**32.30**	**338**	P	**P**	**19 07 06.8**	**+0.6**
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
KSRS	**Korea Array**	**33.15**	**7**	P	**P**	**19 07 13.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=190,slow=9.7,SNR=2.2						
	comp=Z,1.2nm,0.7s						
CTA	**Charters Tower**	**33.30**	**138**	P	**P**	**19 07 15.8**	**+0.9**
	comp=Z,4.5nm,0.7s,baz=330,slow=9.7,SNR=12						
CTA				ScP	**ScP**	**19 12 32.8**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=325,slow=4.9,SNR=5.7						
	comp=Z,4.5nm,0.7s						
CTAO	**Charters Tower**	**33.30**	**138**	P	**P**	**19 07 15.9**	**+1.0**
CTAO				IAmb	IAmb	19 07 17.3	
	comp=Z,4.9nm,0.7s						
CTAO	**Charters Tower**	**33.30**	**138**	P	**P**	**19 07 16.4**	**+1.5**
MORW	**Morawa**	**34.01**	**191**	P	**P**	**19 07 20.9**	**+0.2**
OOD	**Oodnadatta**	**34.25**	**160**	P	**P**	**19 07 23.6**	**+0.9**
MJAR	**Matsushiro Arr**	**34.81**	**21**	P	**P**	**19 07 26.3**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=185,slow=8.1,SNR=4.3						
	comp=Z,1.6nm,0.7s						
FORT	**Forrest**	**35.33**	**173**	P	**P**	**19 07 32.2**	**+0.5**
FORT	**Forrest**	**35.33**	**173**	P	**P**	**19 07 32.5**	**+0.8**
MULG	**Mulgathing**	**36.06**	**164**	P	**P**	**19 07 38.7**	**+0.9**
LZH	**Lanzhou**	**36.18**	**333**	*e*P	**P**	**19 07 40.2**	**+1.4**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
INKA	**Innaminka**	**36.21**	**153**	P	**P**	**19 07 40.9**	**+1.9**
LCRK	**Leigh Creek**	**37.56**	**158**	P	**P**	**19 07 51.2**	**+1.2**
NWAO	**Narrogin (SRO)**	**37.59**	**188**	P	**P**	**19 07 49.8**	**-0.4**
NWAO	**Narrogin (SRO)**	**37.59**	**188**	P	**P**	**19 07 50.9**	**+0.7**
	comp=Z,3.1nm,0.3s,baz=27,slow=8.2,SNR=6.4						
	comp=Z,3.1nm,0.3s						
HHC	**Hu-ho-hao-te**	**37.72**	**346**	*e*P	**P**	**19 07 54.9**	**+3.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,89nm,5.1s						
RK1H	**Rockhampton Ha**	**38.42**	**137**	P	**P**	**19 07 58.3**	**+1.2**
BBOO	**Buckleboo**	**39.01**	**163**	P	**P**	**19 08 02.6**	**+0.8**
BBOO	**Buckleboo**	**39.01**	**163**	P	**P**	**19 08 03.1**	**+1.3**
LSA	**Lhasa**	**39.34**	**313**	P	**P**	**19 08 06.1**	**+1.0**
LSA				IAmb	IAmb	19 08 07.6	
	comp=Z,6.3nm,0.7s						
JTM	**Tenmabayashi**	**39.61**	**21**	P	**P**	**19 08 06.1**	**-0.3**
STKA	**Stephens Creek**	**40.15**	**155**	P	**P**	**19 08 11.8**	**+0.9**
STKA	**Stephens Creek**	**40.15**	**155**	P	**P**	**19 08 12.3**	**+1.4**
STKA	**Stephens Creek**	**40.15**	**155**	P	**P**	**19 08 11.9**	**+0.9**
	comp=Z,5.7nm,0.6s,baz=333,slow=8.6,SNR=14						
	comp=Z,5.7nm,0.6s						
EIDS	**Eidsvold**	**40.16**	**139**	P	**P**	**19 08 11.5**	**+0.4**
EIDS				IAmb	IAmb	19 08 12.5	
	comp=Z,10nm,1.1s						
HTT	**Hallett**	**40.51**	**160**	P	**P**	**19 08 15.5**	**+1.7**
GTA	**Gaotai**	**40.73**	**332**	P	**P**	**19 08 16.9**	**+1.2**
GTA				PcP	**PcP**	**19 10 04.5**	**+1.0**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMSA	**Cobar Meteorol**	**41.72**	**151**	P	**P**	**19 08 25.4**	**+2.0**
ARMA	**Armidale**	**44.07**	**144**	P	**P**	**19 08 44.2**	**+2.3**
ARMA				IAmb	IAmb	19 08 52.8	
	comp=Z,13nm,1.4s						
ARPS	**Mount Arapiles**	**44.55**	**159**	P	**P**	**19 08 46.4**	**+1.1**
SONM	**Songino Array**	**45.57**	**344**	P	**P**	**19 08 53.4**	**+0.2**
SONM	**Songino Array**	**45.57**	**344**	P	**P**	**19 08 53.7**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=156,slow=9.3,SNR=13						
	comp=Z,2.1nm,0.7s						
HEH	**HeiHe**	**45.80**	**4**	*e*P	**P**	**19 08 53.9**	**-0.7**
HEH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CAN	**Canberra**	**46.40**	**151**	P	**P**	**19 09 01.3**	**+1.8**
WMQ	**Urumqi**	**50.15**	**327**	*e*P	**P**	**19 09 27.8**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
MK31	**Makanchi Array**	**54.98**	**327**	P	**P**	**19 10 02.0**	**+0.3**
MK31				IAmb	IAmb	19 10 03.1	
	comp=Z,4.0nm,0.8s						
MK31				PcP	**PcP**	**19 10 54.6**	**-0.4**
MKAR	**Makanchi Array**	**54.98**	**327**	P	**P**	**19 10 02.3**	**+0.6**
	comp=Z,5.0nm,0.4s,baz=121,slow=7.6,SNR=155						
MKAR				PcP	**PcP**	**19 10 54.9**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=120,slow=4.1,SNR=11						
MKAR				ScP	**ScP**	**19 14 00.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=117,slow=4.0,SNR=4.0						
	comp=Z,5.0nm,0.4s						
KSH	**Kashi**	**55.05**	**316**	P	**P**	**19 10 03.9**	**+1.4**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRN	**Naryn**	**55.92**	**318**	P	**P**	**19 10 09.1**	**+0.3**
PETK	**Petropavlovsk-**	**56.18**	**24**	P	**P**	**19 10 10.1**	**+0.2**
PETK	**Petropavlovsk-**	**56.18**	**24**	P	**P**	**19 10 09.6**	**-0.3**
	comp=Z,3.9nm,1.1s,baz=234,slow=2.5,SNR=5.7						
	comp=Z,3.9nm,1.1s						
AAK	**Ala-Archa**	**57.47**	**319**	P	**P**	**19 10 19.8**	**+0.6**
YAK	**Yakutsk**	**57.67**	**4**	P	**P**	**19 10 19.8**	**0.0**
YAK				IAmb	IAmb	19 10 21.1	
	comp=Z,11nm,0.8s						
ARSB	**Arslanbob**	**57.90**	**317**	P	**P**	**19 10 22.5**	**+0.4**
KBL	**Kabul**	**58.28**	**308**	P	**P**	**19 10 24.7**	**-0.2**
KBL				IAmb	IAmb	19 10 25.8	
	comp=Z,5.2nm,0.7s						
ZAA0	**Zalesovo Array**	**58.38**	**334**	P	**P**	**19 10 24.1**	**-0.7**
ZALV	**Zalesovo Beam**	**58.38**	**334**	P	**P**	**19 10 24.1**	**-0.8**
ZALV	**Zalesovo Beam**	**58.38**	**334**	P	**P**	**19 10 24.4**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=121,slow=4.6,SNR=10.0						
	comp=Z,1.8nm,0.5s						
BTK	**Batken**	**58.89**	**315**	P	**P**	**19 10 28.4**	**-0.3**
MA2	**Magadan**	**58.94**	**16**	P	**P**	**19 10 29.1**	**+0.6**
MA2				IAmb	IAmb	19 10 30.5	
	comp=Z,4.6nm,0.8s						
KURBB	**Kurchatov Arra**	**59.26**	**329**	P	**P**	**19 10 31.2**	**+0.4**
	comp=Z,5.7nm,0.5s,baz=127,slow=6.2,SNR=72						
	comp=Z,5.7nm,0.5s						
KURK	**Kurchatov**	**59.27**	**329**	P	**P**	**19 10 31.0**	**+0.1**
SIMJ	**Simiganj**	**59.68**	**313**	P	**P**	**19 10 33.9**	**-0.1**
KK31	**Karatay Array**	**60.31**	**318**	P	**P**	**19 10 37.7**	**-0.3**
KK31				IAmb	IAmb	19 10 39.0	
	comp=Z,3.6nm,0.7s						
KKAR	**Karatay Array**	**60.31**	**318**	P	**P**	**19 10 38.0**	**0.0**
KKAR				PcP	**PcP**	**19 11 16.1**	**-0.2**
LBZ	**Lake Benmore**	**64.29**	**144**	P	**P**	**19 11 04.5**	**+0.8**
LBZ				IAmb	IAmb	19 11 18.5	
	comp=Z,19nm,1.3s						
BVAR	**Borovoye Array**	**64.81**	**328**	P	**P**	**19 11 06.8**	**0.0**
	comp=Z,2.5nm,0.5s,baz=139,slow=8.3,SNR=26						
	comp=Z,2.5nm,0.5s						
BRVK	**Borovoye**	**64.89**	**328**	P	**P**	**19 11 07.2**	**0.0**
BRVK				IAmb	IAmb	19 11 08.1	
	comp=Z,7.9nm,1.0s						
TIXI	**Tiksi**	**67.22**	**2**	P	**P**	**19 11 21.0**	**-0.4**
TIXI				IAmb	IAmb	19 11 21.5	
	comp=Z,4.7nm,0.8s						
GEYT	**Alibeck**	**67.69**	**309**	P	**P**	**19 11 24.6**	**-0.4**
GEYT				IAmb	IAmb	19 11 26.5	
	comp=Z,5.4nm,0.9s						
GEYT	**Alibeck**	**67.69**	**309**	P	**P**	**19 11 25.7**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=125,slow=7.4,SNR=7.2						
	comp=Z,3.4nm,0.7s						
NRIK	**Noril'sk**	**68.93**	**347**	P	**P**	**19 11 31.9**	**+0.1**
	comp=Z,3.7nm,0.5s,baz=133,slow=6.4,SNR=5.6						
	comp=Z,3.7nm,0.5s						
ABKAR	**Akbulak array**	**69.37**	**321**	P	**P**	**19 11 34.4**	**-0.5**
ABKAR	**Akbulak array**	**69.37**	**321**	P	**P**	**19 11 34.3**	**-0.5**
ABKAR				IAmb	IAmb	19 11 35.5	
	comp=Z,4.0nm,0.7s						
ARU	**Arti**	**72.45**	**328**	P	**P**	**19 11 52.4**	**-0.4**
ARU				IAmb	IAmb	19 11 52.8	
	comp=Z,5.5nm,0.7s						
RAYN	**Ar Rayn**	**76.94**	**293**	P	**P**	**19 12 18.0**	**-0.7**
RAYN				IAmb	IAmb	19 12 19.6	
	comp=Z,5.4nm,0.8s						
VOI	**Vohitsoka**	**79.07**	**247**	P	**P**	**19 12 29.6**	**-0.7**
VOI				IAmb	IAmb	19 12 40.5	
	comp=Z,13nm,1.2s						
C16K	**Lisburne Hills**	**79.09**	**21**	P	**P**	**19 12 29.9**	**+0.7**
GURO	**Guroymak-BITLI**	**80.32**	**308**	P	**P**	**19 12 36.9**	**+0.3**
GURO				IAmb	IAmb	19 12 38.3	
	comp=Z,5.1nm,0.8s						
C19K	**Lookout Ridge**	**81.33**	**21**	P	**P**	**19 12 42.5**	**+1.5**
E19K	**Redstone River**	**81.93**	**23**	P	**P**	**19 12 45.2**	**+1.1**
E19K				IAmb	IAmb	19 12 46.6	
	comp=Z,3.7nm,0.8s						
IMAR	**Indian Mountai**	**83.15**	**24**	P	**P**	**19 12 51.3**	**+1.1**
E24K	**Your Creek**	**85.29**	**22**	P	**P**	**19 13 01.8**	**+1.0**
E24K				IAmb	IAmb	19 13 27.5	
	comp=Z,3.8nm,1.5s						
MMAI	**Mount Meron Ar**	**85.74**	**303**	P	**P**	**19 13 04.2**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=78,slow=8.1,SNR=2.5						
	comp=Z,1.2nm,0.5s						
ILAR	**Eielson Array**	**85.99**	**25**	P	**P**	**19 13 03.0**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=232,slow=5.1,SNR=5.4						
	comp=Z,0.3nm,0.8s						
BMAR	**Burnt Mountain**	**86.80**	**23**	P	**P**	**19 13 08.9**	**+1.0**
BRTR	**Keskin Array B**	**86.83**	**309**	P	**P**	**19 13 07.8**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=126,slow=6.3,SNR=5.4						
	comp=Z,0.8nm,0.7s						
SPITS	**Spitsbergen Ar**	**89.09**	**349**	P	**P**	**19 13 17.8**	**-0.6**
	comp=Z,11nm,1.0s,baz=96,slow=5.8,SNR=5.0						
	comp=Z,11nm,1.0s						
FIA1	**FINESS Array S**	**89.52**	**332**	P	**P**	**19 13 19.4**	**-1.2**
FINES	**FINESS Array B**	**89.53**	**332**	P	**P**	**19 13 19.0**	**-1.6**
FINES	**FINESS Array B**	**89.53**	**332**	P	**P**	**19 13 19.8**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=65,slow=5.4,SNR=14						
	comp=Z,2.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**119.32**	**288**	PKP	**PKPdf**	**19 19 09.5**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=52,slow=3.4,SNR=5.4						

IDC 10 19:07:51.0±2.0, 31.68S×179.05W, h0km, mb4.3/3, mbtmp4.3/4, ML3.7/1, Error ellipse: s-maj=50.2km s-min=30.7km az=56.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.28**	**205**	Pn	Pn	19 09 36.7	-1.8
	1.2nm,0.3s,baz=1.3,slow=4.1,SNR=21						
URZ				Sn	Sn	19 10 48.6	-13
	5.1nm,0.3s,baz=13,slow=4.0,SNR=19						
	3.8nm,0.2s						
ASAR	**Alice Springs**	**42.16**	**269**	P	P	19 15 45.3	-0.2
	1.7nm,0.7s,baz=106,slow=7.7,SNR=25						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**43.27**	**274**	P	P	19 15 54.6	+0.2
	2.1nm,0.3s,baz=114,slow=8.0,SNR=39						
	2.1nm,0.3s						
QSPA	**South Pole Qui**	**58.43**	**180**	P	P	19 17 48.6	+0.3
	4.1nm,0.7s,baz=21,slow=0.6,SNR=26						
	4.1nm,0.7s						
FINES	**FINESS Array B**	**146.02**	**339**	PKPbc	PKPdf	19 27 30.8	-0.4
	4.3nm,1.2s,baz=62,slow=4.5,SNR=3.9						

*ISN **10** 19:10:04.6±1.0, 33.61N×45.60E, h10km±6km, ML2.7*
*TEH **10** 19:10:05.9, 33.68N×45.70E, h10km±49km, ML2.7*
ISC 10 19:10:06.1±1.0, 33.63N±0.04×45.71E±0.04, h13km, n11, σ1§06/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.42**	**91**	Pg	**Pg**	**19 10 14.7**	**+0.3**
ILBA				Sg	**Sg**	**19 10 21.2**	**+1.2**
IBDR	**Badra**	**0.55**	**160**	*e*Pg	**Pg**	**19 10 15.5**	**-1.4**
IBDR				*e*Sg	**Sg**	**19 10 25.0**	**+0.8**
KGS1	**Ghasr-e-Shirin**	**0.88**	**354**	Pg	**Pg**	**19 10 22.2**	**-0.9**
IGHG	**Ghaleghazi**	**1.00**	**46**	Pg	**Pb**	**19 10 25.0**	**-0.4**
BHD	**Baghdad**	**1.17**	**252**	*e*Pn	**Pg**	**19 10 29.0**	**+0.5**
BHD				*e*Sn	**Sn**	**19 10 46.0**	**+2.1**
BHD				AML	AML	19 11 07.8	
	comp=E,14nm,0.7s						
IDHR	**Dehrash**	**1.21**	**28**	Pg	**Pn**	**19 10 27.9**	**-0.9**
KCHF	**Cheshme Sefid,**	**1.28**	**60**	Pg	**Pg**	**19 10 31.0**	**+0.3**
ILIN	**Lien**	**1.65**	**39**	Pg	**Pb**	**19 10 36.3**	**-0.2**
IKFM	**Kafar-mosalman**	**1.79**	**93**	Pg	**Pb**	**19 10 39.6**	**+1.0**
RAFI	**Al-Rafai**	**1.93**	**170**	*e*Pn	**Pb**	**19 10 41.0**	**-0.2**
RAFI				*e*Sn	**Sg**	**19 11 07.0**	**-1.3**
IBZA	**Bozab**	**1.97**	**64**	Pn	**Pb**	**19 10 41.5**	**-0.5**

*NIED **10** 19:14:11.9, 36.26N×140.94E, h38km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr=0.10; Mθθ=0.02; Mφφ=0.97; Mrθ=0.19; Mθφ=0.07; Mφr=0.98; Fault plane solution: M0=1.01000×10^15 NP1: φs=191.00000°, δ=87.00000°, λ=-93.00000°. NP2: φs=61.00000°, δ=4.00000°, λ=-41.00000°.*
*JMA **10** 19:14:11.9±0.1, 36.3N±0.3×140.9E±0.8, h38km±1km, MD4.2/35, MV4.0/35, E OFF IBARAKI PREF*
JMA Felt III J1 at E OFF IBARAKI PREF .
*IDC **10** 19:14:15.1±2.0, 36.20N×140.90E, h47km±19km, mb3.5/15, mbtmp3.8/20, ML3.4/5, MS2.9/7, Error ellipse: s-maj=21.6km s-min=12.1km az=79.0*
*NEIC **10** 19:14:15.9±1.7, 36.42N±0.05×140.85E±0.02, h46km±8km, mb4.4/25, Error ellipse: s-maj=8.1km s-min=1.0km az=194.0*
ISC 10 19:14:12.6±1.3, 36.30N±0.03×140.96E±0.06, h27km±8km, n100, σ1§33/85, mb4.2/27, MS3.0/3, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.30**	**278**	*i*P	**Pb**	**19 14 19.9**	**0.0**
JHYU				⇓S	**Sn**	**19 14 25.0**	**-2.0**
JHYU	**Hitachinakayam**	**0.30**	**278**	A	A	19 14 19.9	
	comp=E,72nm,0.4s,comp=N,90nm,0.3s						
JHO	**Hitachi**	**0.44**	**315**	*i*P	**Pb**	**19 14 21.8**	**-0.3**
JHO				S	**Sb**	**19 14 28.3**	**-0.2**
JHO	**Hitachi**	**0.44**	**315**	A	A	19 14 21.8	
	comp=E,9.0nm,1.0s,comp=N,20nm,0.7s						
JIHU	**Itakohorinouch**	**0.48**	**227**	P	**Pb**	**19 14 22.4**	**-0.3**
JIHU				S	**Sb**	**19 14 29.4**	**-0.1**
JIHU	**Itakohorinouch**	**0.48**	**227**	A	A	19 14 22.4	
	comp=E,57nm,1.0s,comp=N,82nm,1.4s						
JYT	**Yasato**	**0.62**	**264**	*i*P	**Pn**	**19 14 23.8**	**-1.9**
JYT				S	**Sb**	**19 14 32.2**	**-1.2**
JYT	**Yasato**	**0.62**	**264**	A	A	19 14 23.8	
	comp=E,38nm,0.4s,comp=N,62nm,0.4s						
JSMT	**Sammumatsuo**	**0.78**	**213**	P	**Pn**	**19 14 26.1**	**-1.6**
JSMT				S	**Sn**	**19 14 36.4**	**-2.1**
JSMT	**Sammumatsuo**	**0.78**	**213**	A	A	19 14 26.1	
	comp=E,17nm,3.9s,comp=N,10.0nm,1.0s						
ONAJ	**Iwakimizuishiy**	**0.81**	**351**	P	**Pn**	**19 14 27.0**	**-1.4**
ONAJ				*e*S	**Sn**	**19 14 37.7**	**-1.9**
JFK	**Kawauchi**	**1.07**	**356**	*i*P	**Pn**	**19 14 30.6**	**-1.3**
JSB	**Shiboa**	**1.07**	**309**	A	A	19 14 31.0	
	comp=E,6.0nm,5.6s,comp=N,10.0nm,0.8s						
TOK	**Tokyo**	**1.15**	**238**	A	A	19 14 31.5	
	comp=E,9.0nm,1.3s,comp=N,9.0nm,1.7s						
JAG	**Ashikaga**	**1.22**	**276**	*i*P	**Pn**	**19 14 32.6**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.36**	**338**	A	A	19 14 35.4	
	comp=E,16nm,1.0s,comp=N,12nm,0.7s						
JMM	**Marumori**	**1.57**	**355**		**Pn**	**19 14 38.2**	**-0.5**
JMM				Sn	**Sn**	**19 14 57.0**	**-1.2**
JMM	**Marumori**	**1.57**	**355**	P	**Pn**	**19 14 38.5**	**-0.2**
JOD2	**Odawara 2**	**1.84**	**236**	A	A	19 14 41.6	
	comp=E,2.0nm,4.5s,comp=N,3.0nm,2.0s						
JGK	**Kuni**	**1.89**	**279**	A	A	19 14 42.7	
	comp=E,4.0nm,1.1s,comp=N,3.0nm,3.2s						
JOU	**Okura**	**2.08**	**354**	A

K20K				IAmb	IAmb	19 22 45.9		
	comp=Z,7.6nm,1.3s							
B21K	**Ikpikpuk River**	**47.61**	**25**	P	**P**	**19 22 46.7**	**+1.0**
D22K	**Ayikyak River**	**48.18**	**26**	P	**P**	**19 22 51.7**	**+1.5**
D22K				IAmb	IAmb	19 22 57.1		
	comp=Z,4.6nm,1.2s							
TARG	**Taragay, Kyrgy**	**48.40**	**297**	P	**P**	**19 22 54.0**	**+1.2**
TARG				IAmb	IAmb	19 22 54.4		
	comp=Z,4.3nm,0.9s							
NRN	**Naryn**	**49.79**	**297**	P	**P**	**19 23 03.6**	**+0.3**
NRN				IAmb	IAmb	19 23 33.7		
	comp=Z,4.0nm,1.5s							
ILAR	**Eielson Array**	**50.31**	**32**	P	**P**	**19 23 06.5**	**-0.1**
ILAR	**Eielson Array**	**50.31**	**32**	P	**P**	**19 23 07.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=274,slow=6.4,SNR=10							
	comp=Z,0.9nm,0.8s							
BVAR	**Borovoye Array**	**50.80**	**313**	P	**P**	**19 23 10.2**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=90,slow=7.6,SNR=6.3							
	comp=Z,0.6nm,0.4s							
BMAR	**Burnt Mountain**	**51.15**	**29**	P	**P**	**19 23 14.1**	**+1.2**
ARSB	**Arslanbob**	**51.99**	**298**	P	**P**	**19 23 19.9**	**+0.2**
BCAR	**Beaver Creek A**	**52.71**	**34**	P	**P**	**19 23 24.6**	**+0.1**
KK31	**Karatay Array**	**53.18**	**300**	P	**P**	**19 23 27.9**	**-0.4**
KKAR	**Karatay Array**	**53.18**	**300**	P	**P**	**19 23 28.1**	**-0.2**
EPYK	**Eagle Plains**	**54.34**	**29**	P	**P**	**19 23 37.8**	**+1.3**
EPYK				IAmb	IAmb	19 23 39.0		
	comp=Z,3.7nm,0.8s							
G30M	**tAoh Zraii Nji**	**54.43**	**29**	P	**P**	**19 23 38.7**	**+1.6**
G30M				IAmb	IAmb	19 23 54.4		
	comp=Z,6.6nm,1.4s							
I30M	**Mount Dempster**	**54.69**	**31**	P	**P**	**19 23 41.1**	**+2.0**
I30M				IAmb	IAmb	19 23 42.0		
	comp=Z,2.8nm,0.8s							
G31M	**Satah River**	**55.20**	**29**	P	**P**	**19 23 43.1**	**+0.6**
SIMJ	**Simiganj**	**55.76**	**296**	P	**P**	**19 23 46.7**	**-0.5**
SIMJ				IAmb	IAmb	19 24 00.1		
	comp=Z,3.9nm,1.1s							
FITZ	**Fitzroy Crossi**	**56.01**	**198**	P	**P**	**19 23 50.1**	**+1.2**
FITZ				IAmb	IAmb	19 24 23.9		
	comp=Z,3.9nm,1.4s							
WB0	**Warramunga Arr**	**56.10**	**187**	P	**P**	**19 23 48.9**	**-0.7**
WR0	**Warramunga Arr**	**56.28**	**187**	P	**P**	**19 23 49.9**	**-1.0**
WB2	**Warramunga Arr**	**56.28**	**187**	P	**P**	**19 23 50.0**	**-0.9**
WRA	**Warramunga Arr**	**56.28**	**187**	P	**P**	**19 23 50.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=2.9,slow=7.5,SNR=8.0							
	comp=Z,0.5nm,0.5s							
ARU	**Arti**	**56.67**	**319**	P	**P**	**19 23 52.3**	**-1.0**
ABKAR	**Akbulak array**	**58.14**	**310**	P	**P**	**19 24 03.1**	**-0.6**
AKTO	**Aktyubinsk**	**58.90**	**312**	LR	LR	19 53 17.2		
	comp=Z,48nm,19.2s,baz=314,slow=40							
ASAR	**Alice Springs**	**60.01**	**187**	P	**P**	**19 24 17.8**	**+0.8**
ASAR	**Alice Springs**	**60.01**	**187**	P	**P**	**19 24 16.8**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=15,slow=11,SNR=6.5							
	comp=Z,0.6nm,0.8s							
YKA	**Yellowknife Ar**	**64.62**	**30**	P	**P**	**19 24 47.3**	**0.0**
	comp=Z,0.4nm,0.9s,baz=304,slow=7.1,SNR=5.6							
	comp=Z,0.4nm,0.9s							
FINES	**FINESS Array B**	**69.29**	**332**	P	**P**	**19 25 16.8**	**-0.2**
FINES	**FINESS Array B**	**69.29**	**332**	P	**P**	**19 25 17.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=46,slow=8.2,SNR=4.0							
	comp=Z,1.3nm,0.7s							
AKASG	**Malin Array B**	**74.66**	**322**	P	**P**	**19 25 48.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=50,slow=5.5,SNR=2.5							
	comp=Z,0.8nm,0.5s							
NOA	**NORSAR Array B**	**74.72**	**337**	P	**P**	**19 25 49.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=44,slow=5.3,SNR=2.1							
	comp=Z,0.9nm,0.8s							
PDAR	**Pinedale Array**	**78.44**	**45**	P	**P**	**19 26 12.4**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=290,slow=5.3,SNR=2.6							
	comp=Z,0.3nm,0.7s							
BURAR	**Bucovina Array**	**78.66**	**322**	P	**P**	**19 26 11.9**	**-0.3**
BRTR	**Keskin Array B**	**79.06**	**311**	P	**P**	**19 26 16.1**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=64,slow=7.6,SNR=1.4							
	comp=Z,0.2nm,0.4s							
H03N2	**Juan Fernandez**	**147.30**	**97**	T	T	22 18 33.4		
	baz=291,slow=76,SNR=7.9							
H03N3	**Juan Fernandez**	**147.31**	**97**	T	T	22 18 35.9		
	baz=291,slow=76,SNR=7.3							
H03N1	**Juan Fernandez**	**147.32**	**97**	T	T	22 18 33.4		
	baz=291,slow=76,SNR=12							

IDC 10 19:21:56.7±3.2, 30°85N×140°27E, h0km, mb3.3/3, mbtmp3.2/4, ML2.1/1, MS3.1/2, Error ellipse: s-maj=135.1km s-min=27.2km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.93**	**344**	Pn	Pn	19 23 25.5	-0.4
	0.1nm,0.3s,baz=157,slow=11,SNR=5.2						
MJAR				Sn	Sn	19 24 25.4	-9.2
	baz=12,slow=18,SNR=1.3						
	0.4nm,0.3s						
PMG	**Port Moresby**	**40.56**	**170**	LR	LR	19 44 49.0	
	comp=Z,33nm,21.4s,baz=149,slow=34						
MKAR	**Makanchi Array**	**46.84**	**307**	P	P	19 30 28.4	0.0
	0.2nm,0.6s,baz=101,slow=7.5,SNR=2.4						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**50.82**	**187**	P	P	19 30 59.0	0.0
	0.4nm,0.5s,baz=4.7,slow=7.5,SNR=5.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**54.55**	**187**	P	P	19 31 26.4	-0.3
	0.2nm,0.5s,baz=1.9,slow=5.6,SNR=4.2						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**62.39**	**179**	LR	LR	19 58 37.5	
	comp=Z,11nm,18.4s,baz=196,slow=35						

*CATAC **10** 19:35:38.5±1.1, 8°23N×82°82W, h10km, ML3.2*
*UPA **10** 19:35:41.0±1.4, 8°36N×82°83W, h13km±5km, ML3.5*
ISC 10 19:35:40.8±1.0, 8°37N±0°04×82°86W±0°03, h14km±8km, n17, σ0°81/29, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.17**	**188**	*e*P	**Pg**	**19 35 45.0**	**+0.1**
PTPM				*e*S	**Sb**	**19 35 49.1**	**+0.1**
CDITO	**Canoas**	**0.20**	**355**	*e*P	**Pb**	**19 35 46.8**	**+0.5**
LIMO3	**Limones**	**0.27**	**182**	*e*P	**Pg**	**19 35 46.0**	**-0.5**
DVD	**David**	**0.41**	**81**	*e*P	**Pg**	**19 35 48.8**	**-0.1**
DVD				*e*S	**Sb**	**19 35 55.2**	**-0.7**
LOCO3	**Loma Colorada,**	**0.43**	**85**	*e*P	**Pg**	**19 35 49.1**	**-0.4**
BRU2	**Volcan**	**0.45**	**21**	*e*P	**Pb**	**19 35 50.7**	**+0.1**
BRU2				*e*S	**Sb**	**19 35 58.8**	**+1.5**
BCO2	**Palmira**	**0.47**	**43**	*e*P	**Pb**	**19 35 50.7**	**-0.3**
BCO2				AMP		19 35 52.7	
	comp=Z,4μm,0.1s						
BCO2				*e*S	**Sb**	**19 35 58.8**	**+0.8**
PIRO	**Carate, Puerto**	**0.48**	**274**	*i* P	**Pg**	**19 35 48.3**	**-1.9**
PIRO				*i* S	**Sg**	**19 35 57.1**	**+0.5**
PIRO				IAML		19 36 04.5	
	comp=Z,870nm,1.0s						
BC3P	**Paso Ancho**	**0.50**	**29**	*e*P	**Pb**	**19 35 51.4**	**-0.2**
PLAN	**Los Planes de**	**0.87**	**290**	*i* P	**Pg**	**19 35 56.8**	**-0.8**
PLAN				*i* S	**Sn**	**19 36 11.6**	**+0.4**
PLAN				IAML		19 36 13.0	
	comp=Z,1μm,1.0s						
CHGR2	**Aguacate**	**0.90**	**51**	*e*P	**Pg**	**19 35 56.6**	**-1.6**
SRBA	**San Rafael, Bu**	**0.99**	**330**	*i* P	**Pb**	**19 35 59.7**	**-0.1**
SRBA				*i* S	**Sb**	**19 36 13.2**	**+0.4**
SRBA				IAML		19 36 15.3	
	comp=Z,160nm,1.0s						
CDM	**Cerro de Muert**	**1.48**	**323**	*i* P	**Pn**	**19 36 07.5**	**0.0**
CDM				*i* S	**Sn**	**19 36 27.8**	**+0.9**
CDM				IAML		19 36 36.2	
	comp=Z,140nm,1.0s						
LCR2	**La Lucha 2**	**1.77**	**320**	*i* P	**Pb**	**19 36 13.2**	**-0.1**
LCR2				*i* S	**Sg**	**19 36 37.7**	**-0.3**
JACO	**JACO, Garabito**	**2.20**	**306**	*i* P	**Sn**	**19 36 45.3**	**+1.4**
JACO				*i* S	**Sg**	**19 36 52.4**	**+0.9**
CACAO	**El Cacao, Vera**	**2.22**	**117**	*e*P	**Pn**	**19 36 17.3**	**0.0**
CACAO				*e*S	**Sn**	**19 36 44.3**	**-0.3**
SAJU	**San Juanillo,**	**3.28**	**301**	*i* P	**Pn**	**19 36 32.1**	**+0.2**
SAJU				*i* S	**Sn**	**19 37 10.0**	**-0.8**
SAJU				IAML		19 37 46.1	
	comp=Z,52nm,1.0s						

*IDC **10** 19:53:48.1±1.0, 4°52N×125°64E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=47.7km s-min=19.5km az=68.0*
ISC 10 19:54:07.2±1.0, 4°4N±0°2×125°5E±0°3, h176km, n7, σ0°27/6, mb3.6/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.67**	**1**	Lg	Lg	19 55 08.5	
	baz=70,slow=22						
WRA	**Warramunga Arr**	**25.68**	**161**	P	**P**	**19 59 21.4**	**+0.2**
	2.6nm,0.6s,baz=337,slow=11,SNR=14						
	2.6nm,0.6s						
ASAR	**Alice Springs**	**29.06**	**164**	P	**P**	**19 59 50.9**	**-0.3**
	0.6nm,0.4s,baz=340,slow=7.1,SNR=11						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**29.50**	**300**	P	**P**	**19 59 55.2**	**0.0**
	0.4nm,0.6s,baz=104,slow=7.6,SNR=4.3						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**39.17**	**158**	P	**P**	**20 01 18.3**	**+0.2**
	3.6nm,0.8s,baz=331,slow=9.1,SNR=5.0						
	3.6nm,0.8s						
PETK	**Petropavlovsk-**	**55.29**	**23**	P	**P**	**20 03 22.2**	**-0.1**
	1.0nm,0.6s,baz=215,slow=5.1,SNR=5.7						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**56.34**	**326**	P	**P**	**20 03 30.0**	**+0.1**
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.4						
	0.2nm,0.7s						

*BJI **10** 20:03:01.5±0.0, 35°97N×129°52E, h12km, mb4.6/67, mB5.0/41, ML5.0/5, Ms4.7/73, Ms7 4.4/70*
*NIED **10** 20:03:02.0, 36°10N×129°46E, h4km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr6.97; Mθθ1.85; Mϕϕ-8.82; Mrθ2.25; Mrϕ-0.93; Mθϕ5.46; Fault plane solution: M₀9.94000×10¹⁵ NP1:ϕs17.00000°, δ64.00000°, λ103.00000°. NP2:ϕs169.00000°, δ29.00000°, λ65.00000°.*
*IDC **10** 20:03:02.7±0.4, 36°08N×129°34E, h0km, mb4.7/30, mbtmp4.6/35, ML3.6/5, MS3.8/35 Error ellipse: s-maj=14.0km s-min=8.4km az=59.0*
*MOS **10** 20:03:02.2±0.8, 36°06N×129°32E, h10km, mb5.2/54, MS4.2/8, Error ellipse: s-maj=6.4km s-min=3.7km az=123.5*
*JMA **10** 20:03:02.0±0.2, 36°1N±0°7×129°5E±0°6, h4km, MD4.6/35, MW4.8/35, S KOREAN PENINSULA REG*
*KMA **10** 20:03:03.5±0.1, 36°08N×129°33E, h14km, Error ellipse: s-maj=0.6km s-min=0.5km az=86.0*
*NEIC **10** 20:03:03.9±1.2, 36°08N±0°03×129°30E±0°04, h5km±3km, mb5.0/150, Mwr4.8/11, Mww4.7/16, Error ellipse: s-maj=4.5km s-min=4.2km az=96.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr2.08; Mθθ-0.02; Mϕϕ-2.06; Mrθ0.35; Mθϕ0.51; Mrϕ0.40; Fault plane solution: M₀2.20000×10¹⁶ NP1:ϕs358.10000°, δ50.29000°, λ105.15000°. NP2:ϕs155.14000°, δ42.05000°, λ72.54000°. Principal axes: T 2.1962, Plg78.0000°, Azm328.0000°; N 0.0118, Plg12.0000°, Azm168.0000°; P -2.2080, Plg4.0000°, Azm77.0000°;*
*NEIC **10** 20:03:04.6, 36°17N×129°42E, h12km, Moment Tensor Solution. Duration: 1s1 Moment tensor: Scale 10¹⁶Nm; Mrr0.96; Mθθ0.18; Mϕϕ-1.14; Mrθ-0.35; Mθϕ0.13; Mrϕ0.69; Fault plane solution: M₀1.31000×10¹⁶ NP1: ϕs340.65000°, δ63.63000°, λ75.78000°. NP2: ϕs190.36000°, δ29.71000°, λ116.36000°. Principal axes: T 1.2504, Plg68.0000°, Azm223.0000°; N 0.1289, Plg13.0000°, Azm347.0000°; P -1.3792, Plg17.0000°, Azm81.0000°;*
*NEIC **10** 20:03:04.6, 36°07N×129°30E, h12km*
*NEIC **10** 20:03:04.8, 36°07N×129°29E, h10km*
*GCMT **10** 20:03:04.9±0.3, 36°15N±0°04×129°26E±0°02, h14km±1km, MW4.7/73, Moment Tensor Solution. s9,c10; s73,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.13±.13; Mθθ0.27±.07; Mϕϕ-1.40±.09; Mrθ-0.91±.29; Mθϕ-0.13±.04; Mϕr0.25±.15; Best double couple: M₀1.57600×10¹⁶ NP1:ϕs335.00000°, δ58.00000°, λ51.00000°. NP2: ϕs212.00000°, δ49.00000°, λ135.00000°. Principal axes: T 1.7270, Plg57.0000°, Azm189.0000°; N -0.2990, Plg32.0000°, Azm359.0000°; P -1.4250, Plg5.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KEA **10** 20:03:07.5, 36°16N×129°25E, h18km, ML4.9/3*
ISC 10 20:03:04.4±0.5, 36°09N±0°01×129°33E±0°02, h11km±2km, n884, σ1s27/921, mb4.9/174, MS4.2/47, 32C-24D, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSPHA	**Pohang**	**0.11**	**16**	P	**Pg**	**20 03 06.6**	**-0.7**
YOCB	**Yeongcheon**	**0.33**	**250**	P	**Pg**	**20 03 10.2**	**-0.8**
YOCB				P	**Pg**	**20 03 10.2**	**-0.8**
KSUSN	**Ulsan**	**0.42**	**204**	P	**Pg**	**20 03 11.9**	**-0.9**
	SNR=1555						
KSUSN				P	**Pg**	**20 03 11.9**	**-0.9**
	SNR=1555						
KSUSN				S	**Sg**	**20 03 17.6**	**-0.7**
KSUSN				S	**Sg**	**20 03 17.6**	**-0.7**
KSADO	**Andong**	**0.45**	**316**	P	**Pg**	**20 03 12.7**	**-0.6**
KSADO				P	**Pg**	**20 03 12.7**	**-0.6**
KSADO				S	**Sg**	**20 03 19.0**	**-0.2**
KSADO				S	**Sg**	**20 03 19.0**	**-0.2**
YODB	**Yeongdeok**	**0.45**	**8**	P	**Pg**	**20 03 12.6**	**-0.6**
	SNR=6841						
YODB				P	**Pg**	**20 03 12.6**	**-0.6**
	SNR=6841						
JEJB	**Jeongja**	**0.46**	**169**	P	**Pg**	**20 03 12.6**	**-0.8**
JEJB				P	**Pg**	**20 03 12.6**	**-0.8**
KSDAG	**Daegu**	**0.48**	**228**	P	**Pg**	**20 03 12.9**	**-0.9**
KSDAG				P	**Pg**	**20 03 12.9**	**-0.9**
KSDAG				S	**Sg**	**20 03 19.3**	**-0.8**
KSDAG				S	**Sg**	**20 03 19.3**	**-0.8**
YEYB	**Yeongyang**	**0.57**	**340**	P	**Pg**	**20 03 14.9**	**-0.7**
	SNR=928						
YEYB				P	**Pg**	**20 03 14.9**	**-0.7**
	SNR=928						
EUSB	**Uiseong**	**0.59**	**297**	P	**Pg**	**20 03 15.0**	**-0.8**
	SNR=5436						
EUSB				P	**Pg**	**20 03 15.0**	**-0.8**
	SNR=5436						
GUWB	**Gunwi**	**0.61**	**279**	P	**Pg**	**20 03 15.3**	**-0.9**
	SNR=8717						
GUWB				P	**Pg**	**20 03 15.3**	**-0.9**
	SNR=8717						
KSDAU	**Deagu-acc**	**0.61**	**251**	P	**Pg**	**20 03 15.4**	**-0.9**
	SNR=493						
KSULJ	**Uljin**	**0.62**	**6**	P	**Pg**	**20 03 15.6**	**-0.8**
	SNR=7374						
KSULJ				P	**Pg**	**20 03 15.6**	**-0.8**
	SNR=7374						
ADOA	**Andong Acc Bor**	**0.70**	**314**	P	**Pg**	**20 03 17.3**	**-0.8**
	SNR=446						
MIYA	**Miryang-si**	**0.76**	**219**	P	**Pg**	**20 03 18.1**	**-1.1**
	SNR=264						
KSCIG	**Chilgok**	**0.77**	**267**	P	**Pg**	**20 03 18.3**	**-1.0**
	SNR=4598						
KSCIG				P	**Pg**	**20 03 18.3**	**-1.0**
	SNR=4598						
KSBUS	**Busan**	**0.86**	**192**	P	**Pg**	**20 03 19.6**	**-1.4**
	SNR=1270						
KSBUS				P	**Pg**	**20 03 19.6**	**-1.4**
	SNR=1270						
KSGUM	**GUMI**	**0.86**	**280**	P	**Pg**	**20 03 19.8**	**-1.1**
	SNR=551						
KSCHR	**CHANGNYEONG**	**0.87**	**232**	P	**Pg**	**20 03 20.0**	**-1.3**
	SNR=470						
UJN	**ULJIN**	**0.90**	**4**	P	**Pg**	**20 03 21.0**	**-0.9**
	SNR=973						
KSYCH	**Yecheon**	**0.91**	**307**	P	**Pb**	**20 03 21.1**	**-1.1**
	SNR=89						
CHYB	**Chungyang**	**0.92**	**339**	P	**Pg**	**20 03 21.0**	**-1.2**
	SNR=2042						
CHYB				P	**Pg**	**20 03 21.0**	**-1.2**
	SNR=2042						
KSGIC	**Gimchen**	**1.00**	**270**	P	**Pb**	**20 03 22.3**	**-1.4**
	SNR=1149						
KSSAJ	**Sangju**	**1.00**	**289**	P	**Pb**	**20 03 22.3**	**-1.5**
	SNR=730						
KSBSA	**Busan_acc**	**1.01**	**194**	P	**Pb**	**20 03 22.5**	**-1.4**
	SNR=174						
YOJB	**Youngju**	**1.02**	**320**	P	**Pb**	**20 03 22.8**	**-1.3**
	SNR=864						
YOJB				P	**Pb**	**20 03 22.8**	**-1.3**
	SNR=864						
KSTBA	**Taebaek**	**1.08**	**344**	P	**Pb**	**20 03 24.0**	**-1.1**
	SNR=1989						
KSTBA				P	**Pb**	**20 03 24.0**	**-1.1**
	SNR=1989						
KSHAC	**HAPCHEON**	**1.08**	**241**	P	**Pb**	**20 03 23.6**	**-1.6**
	SNR=301						
KSCPR	**CHUPUNGNYEONG**	**1.11**	**277**	P	**Pb**	**20 03 24.3**	**-1.4**
	SNR=360						
KSCPR				P	**Pb**	**20 03 24.3**	**-1.4**
	SNR=360						
EURB	**Uiryeong-eup**	**1.14**	**228**	P	**Pb**	**20 03 24.7**	**-1.4**
	SNR=438						
EURB				P	**Pb**	**20 03 24.7**	**-1.4**
	SNR=438						
IMWB	**Imwonan-gil**	**1.15**	**0**	P	**Pb**	**20 03 25.3**	**-1.0**
IMWB				P	**Pb**	**20 03 25.3**	**-1.0**
GDDB	**Gadeokdo**	**1.17**	**201**	P	**Pb**	**20 03 25.1**	**-1.5**
	SNR=1435						
GDDB				P	**Pb**	**20 03 25.1**	**-1.5**
	SNR=1435						
KSMGY	**Mungyeong**	**1.17**	**299**	P	**Pb**	**20 03 25.4**	**-1.3**
	SNR=2332						
KSMGY				P	**Pb**	**20 03 25.4**	**-1.3**
	SNR=2332						
JTU	**Tsushima**	**1.56**	**178**		**Pb**	**20 03 31.8**	**-1.5**
JTU				Sn	**Sn**	**20 03 50.6**	**-1.7**
JTU	**Tsushima**	**1.56**	**178**	P	**Pg**	**20 03 33.5**	**-0.9**
JTU	**Tsushima**	**1.56**	**178**	*i* P	**Pn**	**20 03 30.8**	**-1.3**
JTU				S	**Sb**	**20 03 51.9**	**-1.1**
JTU	**Tsushima**	**1.56**	**178**	A	A	20 03 30.8	
	comp=E,11nm,7.4s,comp=N,10.0nm,6.5s						
TJN	**Taejon**	**1.62**	**281**		**Pn**	**20 03 32.0**	**-0.8**
TJN				Sn	**Sb**	**20 03 53.8**	**-0.9**
TJN	**Taejon**	**1.62**	**281**	P	**Pb**	**20 03 33.4**	**-0.9**
JTSM	**Tsushimamitsus**	**1.75**	**179**	P	**Pn**	**20 03 33.4**	**-1.3**
JTSM				S	**Sb**	**20 03 56.5**	**-1.9**
JTSM	**Tsushimamitsus**	**1.75**	**179**	A	A	20 03 33.4	
	comp=E,12nm,1.4s,comp=N,9.0nm,4.6s						
KSRS	**Korea Array**	**1.77**	**321**	Pn	**Pn**	**20 03 34.6**	**-0.3**
	comp=N,193nm,0.3s,baz=138,slow=13,SNR=702						
KSRS				Lg	Lg	20 04 00.3	
	comp=N,2μm,0.3s,baz=141,slow=31,SNR=62						
KSAR	**Wonju Array Be**	**1.78**	**320**		**Pn**	**20 03 34.1**	**-1.0**
KSAR	**Wonju Array Be**	**1.78**	**320**	P	**Pn**	**20 03 34.1**	**-1.0**
KS19	**Wonju Array Si**	**1.84**	**321**		**Pn**	**20 03 34.6**	**-1.3**
KS19				Sn	**Sn**	**20 03 57.8**	**-1.4**
JHGM	**Hagimishima**	**1.97**	**131**	P	**Pn**	**20 03 36.3**	**-1.4**
JHGM				S	**Sn**	**20 04 00.6**	**-1.8**
JHGM	**Hagimishima**	**1.97**	**131**	A	A	20 03 36.3	
	comp=E,22nm,2.7s,comp=N,15nm,1.6s						
JTY	**Toyota**	**2.31**	**142**	P	**Pn**	**20 03 40.6**	**-1.7**
JTY				S	**Sn**	**20 04 09.7**	**-1.1**
JII	**Iki**	**2.31**	**172**	*e*P	**Pn**	**20 03 41.6**	**-0.7**
JII	**Iki**	**2.31**	**172**	A	A	20 03 41.6	
	comp=E,13nm,4.2s,comp=N,12nm,0.9s						
INCN	**Inchon**	**2.58**	**304**		**Pn**	**20 03 45.6**	**-0.5**
INCN				Sn	**Sn**	**20 04 16.7**	**-0.7**
INCN	**Inchon**	**2.58**	**304**	P	**Pn**	**20 03 46.2**	**+0.1**
INCN	**Inchon**	**2.58**	**304**	P	**Pn**	**20 03 45.6**	**-0.5**
INCN						20 04 16.7	
JHIK	**Hikimi**	**2.63**	**125**	A	A	20 03 45.2	
	comp=E,7.0nm,3.9s,comp=N,7.0nm,4.3s						
JGT2	**ShimaneMisato**	**2.78**	**111**	*i* P	**Pn**	**20 03 47.0**	**-1.9**
JGT2				*i* S	**Sn**	**20 04 19.9**	**-2.5**
JGT2	**ShimaneMisato**	**2.78**	**111**	A	A	20 03 47.0	
	comp=E,4.0nm,1.9s,comp=N,7.0nm,1.5s						
JHT	**Toyohira**	**2.90**	**119**	P	**Pn**	**20 03 48.6**	**-1.9**
JHT	**Toyohira**	**2.90**	**119**	A	A	20 03 48.6	
	comp=E,5.0nm,2.7s,comp=N,5.0nm,3.7s						
JISK	**Izumosakura**	**2.92**	**101**	A	A	20 03 49.0	
	comp=E,9.0nm,2.0s,comp=N,9.0nm,3.8s						
JOI	**OKI**	**3.17**	**85**	P	**Pn**	**20 03 53.1**	**-1.1**
JOI	**OKI**	**3.17**	**85**	A	A	20 03 53.1	
	comp=E,7.0nm,3.6s,comp=N,7.0nm,1.4s						
JNU	**Nakatsue**	**3.22**	**156**	P	**Pn**	**20 03 55.3**	**+0.3**
JNU	**Nakatsue**	**3.22**	**156**	Pn	**Pn**	**20 03 54.6**	**-0.4**
	comp=N,14nm,0.3s,baz=272,slow=2.9,SNR=76						
JNU				Sn	**Sn**	**20 04 32.0**	**-1.4**
	comp=N,60nm,0.3s,baz=76,slow=19,SNR=7.5						
JNU				Lg	Lg	20 04 44.9	
	comp=N,63nm,0.3s,baz=104,slow=23,SNR=6.7						
	comp=N,74nm,0.5s						
JBEP	**Beppuamama**	**3.23**	**148**	A	A	20 03 54.3	
	comp=E,19nm,1.5s,comp=N,12nm,1.8s						
JHM	**Kurahashi**	**3.26**	**126**	A	A	20 03 54.2	
	comp=E,4.0nm,2.2s,comp=N,4.0nm,5.2s						
JTA	**Tamana**	**3.27**	**162**	A	A	20 03 55.1	
	comp=E,4.0nm,3.6s,comp=N,4.0nm,2.3s						
JHS	**Saijyo**	**3.27**	**108**	P	**Pn**	**20 03 54.1**	**-1.6**
WOSN	**Wonsan**	**3.43**	**334**	Pg	**Pg**	**20 04 07.1**	**-3.0**
WOSN				Sg	**Sg**	**20 04 50.5**	**-4.0**
WOSN				AML	AML		
	comp=N,3μm,0.8s						
WOSN				AML	AML		
	comp=E,5μm,1.1s						
WOSN				AML	AML		
	comp=Z,3μm,0.9s						
HJU	**Haeju**	**3.48**	**305**	Pg	**Pb**	**20 04 07.6**	**+1.5**
HJU				Sg	**Sg**	**20 04 51.3**	**-5.0**
HJU				AML	AML		
	comp=N,12μm,0.8s						
HJU				AML	AML		
	comp=E,6μm,1.0s						
HJU				AML	AML		
	comp=Z,4μm,0.9s						
JNA	**Nagahama**	**3.62**	**133**	P	**Pn**	**20 03 59.8**	**-0.6**
HHU	**Hamhung**	**4.09**	**340**	Pg	**Pb**	**20 04 18.2**	**+1.8**
HHU				Sg	**Sg**	**20 05 10.7**	**-5.0**
HHU				AML	AML		
	comp=N,2μm,1.0s						
HHU				AML	AML		
	comp=E,2μm,1.7s						
HHU				AML	AML		
	comp=Z,2μm,0.8s						
PYS	**Pyongsong**	**4.19**	**320**	Sg	**Sg**	**20 05 14.1**	**-5.0**
JTO	**Tosashimizu**	**4.31**	**137**	P	**Pn**	**20 04 09.4**	**-0.5**
JMN	**Monobe**	**4.42**	**121**	P

USRK	**Ussuriysk Ar.**	**8.35**	**13**			**Pn**	**Pn**	**20 05 06.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**8.35**	**13**		P	**Pn**	**Pn**	**20 05 06.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**8.35**	**13**		Pn	**Pn**	**Pn**	**20 05 06.0**	**+0.6**
	comp=Z,2.7nm,0.3s,baz=199,slow=13,SNR=61								
USRK					Sn	**Sn**	**Sn**	**20 06 38.1**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=207,slow=31,SNR=2.5								
	comp=Z,32nm,0.6s								
SSE	**Sheshan**	**8.42**	**236**		P	**Pn**	**Pn**	**20 05 06.6**	**+0.2**
SSE					S	**Sn**	**Sn**	**20 06 39.1**	**-2.3**
SSE					smax	smax			
	comp=Z,450nm,1.0s								
SSE					smax	smax			
	comp=Z,350nm,1.2s								
SSE					LR	LR			
	comp=Z,2μm,10.2s								
SSE					LR	LR			
	comp=Z,3μm,10.1s								
MDJ	**Mudanjiang**	**8.52**	**1**		P	**Pn**	**Pn**	**20 05 09.4**	**+1.7**
MDJ					pP	Pg	20 05 11.6	-36	
MDJ					sP		20 05 13.6		
MDJ					S	**Sn**	**20 06 43.2**	**-0.6**	
MDJ					pmax	pmax			
	comp=Z,11nm,1.2s								
MDJ					pmax	pmax			
	comp=Z,520nm,4.4s								
MDJ					LR	LR			
	comp=Z,1μm,9.6s								
MDJ					LR	LR			
	comp=Z,1μm,8.2s								
MDJ					LR	LR			
	comp=Z,2μm,10.3s								
MDJ	**Mudanjiang**	**8.52**	**1**		Pn	**Pn**	**Pn**	**20 05 08.4**	**+0.7**
MDJ	**Mudanjiang**	**8.52**	**1**		P	**Pn**	**Pn**	**20 05 09.9**	**+2.2**
JMM	**Marumori**	**9.34**	**76**			**Pn**	**Pn**	**20 05 19.4**	**+0.5**
JMM	**Marumori**	**9.34**	**76**		P	**Pn**	**Pn**	**20 05 21.6**	**+2.6**
NJ2	**Nanjing**	**9.58**	**248**	*e*P		**Pn**	**Pn**	**20 05 20.9**	**-1.3**
NJ2					pmax	pmax			
	comp=Z,15nm,0.8s								
NJ2					LR	LR			
	comp=Z,2μm,4.7s								
NJ2					LR	LR			
	comp=Z,670nm,6.2s								
NJ2					LR	LR			
	comp=Z,2μm,8.1s								
BNX	**BinXian**	**9.75**	**352**	⇓P		**Pn**	**Pn**	**20 05 26.3**	**+1.7**
TIA	**Tai'an**	**9.88**	**274**	P		Pn	Pn	20 05 32.0	+5.7
TIA					pmax	pmax			
	comp=Z,3.0nm,0.7s								
TIA					pmax	pmax			
	comp=Z,120nm,3.5s								
TIA					LR	LR			
	comp=Z,730nm,8.6s								
TIA					LR	LR			
	comp=Z,1μm,10.8s								
TIA					LR	LR			
	comp=Z,1μm,7.9s								
JTM	**Tenmabayashi**	**10.33**	**59**			**Pn**	**Pn**	**20 05 35.0**	**+2.5**
JTM	**Tenmabayashi**	**10.33**	**59**		P	**Pn**	**Pn**	**20 05 35.4**	**+2.9**
BJT	**Baijiatuau**	**11.10**	**295**		Pn	**Pn**	**Pn**	**20 05 43.4**	**+0.4**
BJT	**Baijiatuau**	**11.10**	**295**		P	**Pn**	**Pn**	**20 05 44.3**	**+1.3**
BJT	**Baijiatuau**	**11.10**	**295**		P	**Pn**	**Pn**	**20 05 43.4**	**+0.4**
BJI	**Beijing**	**11.10**	**295**		P	**Pn**	**Pn**	**20 05 44.3**	**+1.3**
BJI					pmax	pmax			
	comp=Z,10.0nm,0.5s								
BJI					LR	LR			
	comp=Z,1μm,13.5s								
BJI					LR	LR			
	comp=Z,670nm,12.9s								
BJI					LR	LR			
	comp=Z,550nm,10.8s								
HNS	**HongShan**	**11.81**	**281**	⇑P		**Pn**	**Pn**	**20 05 55.6**	**+2.9**
HNS					S	Sn	20 08 14.5	+10	
HNS					LR	LR			
	comp=Z,940nm,14.3s								
HNS					LR	LR			
	comp=Z,1μm,14.3s								
HNS					LR	LR			
	comp=Z,1μm,15.1s								
ERM	**Erimo**	**12.26**	**57**		Pn	**Pn**	**Pn**	**20 05 59.1**	**+0.2**
ERM	**Erimo**	**12.26**	**57**		P	**Pn**	**Pn**	**20 05 59.1**	**+0.2**
XLT	**XiLinHaoTe**	**12.80**	**312**	*e*P		**Pn**	**Pn**	**20 06 09.1**	**+2.7**
XLT					pmax	pmax			
	comp=Z,22nm,1.2s								
XLT					pmax	pmax			
	comp=Z,220nm,3.9s								
XLT					LR	LR			
	comp=Z,340nm,8.6s								
XLT					LR	LR			
	comp=Z,2μm,6.4s								
XLT					LR	LR			
	comp=Z,1μm,7.7s								
ASAJ	**Asahikawa**	**12.93**	**48**		Pn	**Pn**	**Pn**	**20 06 09.2**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=232,slow=15,SNR=1.8								
ASAJ					LR	LR	20 10 27.1		
	comp=Z,562nm,19.1s,baz=226,slow=34								
	comp=Z,7.5nm,0.8s								
KLR	**Kul'dur**	**13.25**	**7**		Pn	**Pn**	**Pn**	**20 06 13.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=189,slow=11,SNR=18								
KLR					LR	LR	20 10 55.2		
	comp=Z,160nm,20.4s,baz=186,slow=36								
	comp=Z,4.9nm,0.8s								
YHNB	**Yeheng**	**13.28**	**213**		Pn	**Pn**	**Pn**	**20 06 13.0**	**0.0**
TIY	**Taiyuan**	**13.62**	**282**	*e*P		**P**	**P**	**20 06 22.7**	**-3.9**
TIY					S	**Sn**	**Sn**	**20 08 51.5**	**+2.5**
TIY					pmax	pmax			
	comp=Z,12nm,0.6s								
TIY					pmax	pmax			
	comp=Z,260nm,4.4s								
TIY					LR	LR			
	comp=Z,460nm,11.7s								
TIY					LR	LR			
	comp=Z,1μm,13.8s								
TIY					LR	LR			
	comp=Z,1μm,13.8s								
WHN	**Wuhan**	**13.69**	**250**		P	P	20 06 22.1	-5.2	
WHN					LR	LR			
	comp=Z,6μm,12.9s								
LYN	**LuoYang**	**13.86**	**269**	*e*P		**Pn**	**Pn**	**20 06 22.8**	**+2.0**
LYN					sP	P	20 06 28.0	-1.1	
LYN					PP	**PnPn**	**20 06 34.0**	**+5.4**	
LYN					S	**Sn**	**20 09 01.2**	**+6.6**	
LYN					pmax	pmax			
	comp=Z,13nm,0.8s								
LYN					pmax	pmax			
	comp=Z,340nm,3.5s								
LYN					LR	LR			
	comp=Z,1μm,10.2s								
LYN					LR	LR			
	comp=Z,3μm,15.9s								
LYN					LR	LR			
	comp=Z,4μm,15.1s								
JCJ	**Chichijima**	**14.14**	**126**		LR	LR	20 10 58.4		
	comp=Z,409nm,21.9s,baz=100,slow=34								
HEH	**HeiHe**	**14.23**	**355**	*e*P		**Pn**	**Pn**	**20 06 27.6**	**+1.9**
HEH					pmax	pmax			
	comp=Z,7.0nm,1.4s								
HEH					LR	LR			
	comp=Z,2μm,10.9s								
HEH					LR	LR			
	comp=Z,980nm,11.0s								
HEH					LR	LR			
	comp=Z,2μm,11.8s								
SSLB	**Suanglung**	**14.24**	**213**		Pn	**Pn**	**Pn**	**20 06 28.3**	**+2.2**
HHC	**Hu-ho-hao-te**	**14.71**	**294**	*e*P		**P**	**P**	**20 06 34.7**	**-3.9**
HHC					S	**Sn**	**Sn**	**20 09 20.7**	**+5.3**
HHC					pmax	pmax			
	comp=Z,19nm,0.8s								
HHC					pmax	pmax			
	comp=Z,290nm,4.8s								
HHC					LR	LR			
	comp=Z,1μm,7.6s								
HHC					LR	LR			
	comp=Z,830nm,8.4s								
HHC					LR	LR			
	comp=Z,1μm,9.6s								
YSS	**Yuzh-Sakhalins**	**14.77**	**39**			**Pn**	**Pn**	**20 06 33.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**14.77**	**39**		P	**P**	**P**	**20 06 36.6**	**-2.6**
YSS	**Yuzh-Sakhalins**	**14.77**	**39**	⇓*i*P		**P**	**P**	**20 06 37.8**	**-1.4**
YSS				*e*S		**S**	**S**	**20 09 27.3**	**-8.1**
YSS					pmax	pmax			
	comp=Z,20nm,1.1s								
YSS					pmax	pmax			
	comp=Z,300nm,3.8s								
YSS					pmax	pmax			
	comp=N,200nm,5.7s								
YSS					pmax	pmax			
	comp=E,300nm,3.6s								
YSS					MLR	MLR			
	comp=Z,300nm,13.0s								
YSS					MLR	MLR			
	comp=N,300nm,15.0s								
YSS					MLR	MLR			
	comp=E,300nm,13.0s								
TPUB	**Ta-pu**	**14.81**	**213**		Pn	**Pn**	**Pn**	**20 06 34.1**	**+0.3**
HIA	**Hailar**	**14.92**	**335**			**Pn**	**Pn**	**20 06 36.0**	**+0.8**
HIA	**Hailar**	**14.92**	**335**		P	**P**	**P**	**20 06 38.3**	**-2.6**
HIA	**Hailar**	**14.92**	**335**		P	**Pn**	**Pn**	**20 06 36.0**	**+0.8**
GRNR	**Gornyy**	**15.54**	**17**	*e*P		**Pn**	**Pn**	**20 06 43.9**	**+0.5**
GRNR					MLR	MLR			
	comp=N,350nm,12.0s								
GRNR					MLR	MLR			
	comp=Z,390nm,10.0s								
BTO	**Baotou**	**15.80**	**292**	*e*P		**P**	**P**	**20 06 48.0**	**-2.8**
BTO					pP	**pP**	**P**	**20 06 51.5**	**-2.5**
BTO					sP	**sP**	**P**	**20 06 55.3**	**-0.2**
BTO					PP	**PnPn**	**P**	**20 07 01.1**	**+5.7**
BTO					S	**Sn**	**P**	**20 09 45.0**	**+2.9**
BTO					sS	**S**	**P**	**20 09 49.8**	**-7.0**
BTO					SS	**SnSn**	**P**	**20 10 02.9**	**+8.1**
BTO					pmax	pmax			
	comp=Z,11nm,0.8s								
BTO					pmax	pmax			
	comp=Z,340nm,3.9s								
BTO					LR	LR			
	comp=Z,3μm,10.4s								
BTO					LR	LR			
	comp=Z,2μm,15.7s								
BTO					LR	LR			
	comp=Z,3μm,15.9s								
XAN	**Xi'an**	**16.84**	**269**		P	**P**	**P**	**20 07 00.8**	**-1.5**
XAN					S	**Sn**	**P**	**20 10 09.9**	**+2.7**
XAN					pmax	pmax			
	comp=Z,36nm,1.2s								
XAN					LR	LR			
	comp=Z,1μm,21.0s								
XAN					LR	LR			
	comp=Z,2μm,16.1s								
XAN					LR	LR			
	comp=Z,2μm,15.1s								
ENH	**Enshi**	**17.59**	**256**		P	**P**	**P**	**20 07 08.9**	**-1.6**
ENH	**Enshi**	**17.59**	**256**		P	**P**	**P**	**20 07 11.4**	**+0.8**
TYV	**Tymovskoe**	**17.61**	**29**	*e*P		**P**	**P**	**20 07 12.5**	**+1.9**
TYV				*e*S		**S**	**S**	**20 10 33.7**	**+0.5**
TYV					pmax	pmax			
	comp=Z,400nm,3.2s								
TYV					pmax	pmax			
	comp=Z,23nm,1.3s								
TYV					smax	smax			
	comp=N,200nm,5.4s								
TYV					smax	smax			
	comp=E,200nm,5.4s								
ZEA	**Zeya**	**17.71**	**356**	*e*P		**P**	**P**	**20 07 14.1**	**+2.4**
ZEA					pmax	pmax			
	comp=Z,100nm,2.2s								
ZEA					pmax	pmax			
	comp=N,30nm,1.1s								
ZEA					pmax	pmax			
	comp=Z,40nm,0.9s								
ZEA					MLR	MLR			
	comp=E,400nm,5.0s								
ZEA					MLR	MLR			
	comp=N,600nm,7.0s								
GZH	**Guangzhou**	**18.97**	**231**		P	P	20 07 18.2	-7.6	
GZH					S	Sn	20 10 44.4	-14	
HKPS	**Hong Kong Po S**	**19.08**	**228**		P	**Pn**	**20 07 28.0**	**+0.2**	
HKPS					IAmb	IAmb	20 08 02.6		
	comp=Z,112nm,1.3s								
CIT	**Chita**	**19.48**	**330**	*e*P		**Pn**	**20 07 33.3**	**+0.8**	
CIT					pmax	pmax			
	comp=Z,148nm,1.6s								
SZP	**Santa**	**20.07**	**205**		P	Pn	20 07 39.8	+0.2	
ULN	**Ulaanbaatar**	**20.24**	**312**		P	Pn	20 07 40.4	-1.2	
ULN	**Ulaanbaatar**	**20.24**	**312**		P	Pn	20 07 40.4	-1.2	
ULN					pmax	pmax			
	comp=Z,37nm,1.3s								
LZH	**Lanzhou**	**20.59**	**278**	⇑*i*P		Pn	20 07 45.0	-0.8	
LZH					sP	sP	20 07 54.5	+6.3	
LZH					S	**S**	**20 11 33.6**	**-0.1**	
LZH					sS	pS	20 11 45.2	+1.4	
LZH					pmax	pmax			
	comp=Z,96nm,1.0s								
LZH					pmax	pmax			
	comp=Z,320nm,4.8s								
LZH					LR	LR			
	comp=Z,960nm,12.4s								
LZH					LR	LR			
	comp=Z,980nm,11.3s								
LZH					LR	LR			
	comp=Z,950nm,12.4s								
SONM	**Songino Array**	**20.62**	**312**		P	Pn	20 07 44.5	-1.5	
SONM					IAmb	IAmb	20 07 47.0		
	comp=Z,37nm,0.8s								
SONM	**Songino Array**	**20.62**	**312**		P	Pn	20 07 44.6	-1.5	
SONM					pmax	pmax			
	comp=Z,37nm,0.8s								
SONM	**Songino Array**	**20.62**	**312**		P	Pn	20 07 45.3	-0.8	
	comp=Z,29nm,0.7s,baz=124,slow=11,SNR=248								
SONM					LR	LR	20 15 52.1		
	comp=Z,247nm,21.1s,baz=126,slow=37								
	comp=Z,29nm,0.7s								
GYA	**Guiyang**	**21.58**	**250**	⇓P		**P**	**P**	**20 07 54.1**	**-0.2**
GYA					S	**S**	**S**	**20 11 49.9**	**-3.5**
GYA					pmax	pmax			
	comp=Z,14nm,0.8s								
GYA					pmax	pmax			
	comp=Z,150nm,4.2s								
GYA					LR	LR			
	comp=Z,480nm,6.2s								
GYA					LR	LR			
	comp=Z,530nm,4.6s								
GYA					LR	LR			
	comp=Z,500nm,7.5s								
CD2	**Chengdu**	**21.92**	**264**		P	**P**	**P**	**20 07 57.3**	**-0.5**
CD2					S	**S**	**S**	**20 11 59.6**	**-0.2**
CD2					pmax	pmax			
	comp=Z,20nm,0.8s								
CD2					LR	LR			
	comp=Z,590nm,11.8s								
CD2					LR	LR			
	comp=Z,970nm,11.4s								
CD2					LR	LR			
	comp=Z,2μm,14.7s								
GTA	**Gaotai**	**23.53**	**287**		P	**P**	**P**	**20 08 14.9**	**+0.2**
GTA					pP	sP	20 08 21.5	+2.1	
GTA					sP	pP	20 08 25.2	+7.2	
GTA					S	**S**	**20 12 29.0**	**+0.4**	
GTA					sS	sS	20 12 35.5	+1.2	
GTA					pmax	pmax			
	comp=Z,29nm,1.4s								
GTA					pmax	pmax			
	comp=Z,250nm,4.4s								
GTA					LR	LR			
	comp=Z,500nm,18.9s								
GTA					LR	LR			
	comp=Z,540nm,17.4s								
GTA					LR	LR			
	comp=Z,660nm,18.9s								
ZAK	**Zakamensk**	**23.60**	**315**	*e*P		**P**	**P**	**20 08 14.4**	**-0.8**
ZAK					pmax	pmax			
	comp=Z,25nm,1.2s								
ZAK					pmax	pmax			
	comp=Z,24nm,1.6s								
IRK	**Irkutsk**	**23.99**	**320**	*e*P		**P**	**P**	**20 08 20.6**	**+1.8**
IRK					pmax	pmax			
	comp=Z,38nm,3.2s								
BOD	**Bodaibo**	**24.01**	**340**	*e*P		**P**	**P**	**20 08 18.5**	**-0.5**
BOD					pmax	pmax			
	comp=Z,20nm,1.4s								
QIZ	**Qiongzhong**	**24.16**	**230**		P	**P**	**P**	**20 08 19.3**	**-1.4**
QIZ					S	**S**	**S**	**20 12 39.6**	**+1.0**
QIZ					LR	LR			
	comp=Z,2μm,13.0s								
QIZ					LR	LR			
	comp=Z,2μm,13.7s								
QIZ					LR	LR			
	comp=Z,640nm,10.4s								
KMI	**Kunming**	**25.29**	**252**	⇓P		**P**	**P**	**20 08 31.7**	**+0.5**
KMI					S	**S**	**S**	**20 13 02.7**	**+5.6**
KMI					pmax	pmax			
	comp=Z,19nm,0.8s								
KMI					LR	LR			
	comp=Z,1μm,18.4s								
KMI					LR	LR			
	comp=Z,590nm,14.9s								
KMI					LR	LR			
	comp=Z,850nm,16.0s								
PZH	**PanZhiHua**	**25.37**	**256**		P	**P**	**P**	**20 08 32.2**	**+0.4**
PZH					PP	**PnPn**	**P**	**20 09 08.1**	**+1.6**
PZH					S	**S**	**P**	**20 12 56.8**	**-1.4**
PZH					pmax	pmax			
	comp=Z,10.0nm,0.8s								
PZH					pmax	pmax			
	comp=Z,150nm,5.6s								
PZH					LR	LR			
	comp=Z,1μm,14.9s								
PZH					LR	LR			
	comp=Z,560nm,13.9s								
PZH					LR	LR			
	comp=Z,570nm,16.5s								
MOY	**Mondy**	**25.47**	**317**	*e*P		**P**	**P**	**20 08 32.7**	**+0.2**
MOY					pmax	pmax			
	comp=Z,31nm,2.9s								
YAK	**Yakutsk**	**25.97**	**0**	P		**P**	**P**	**20 08 36.5**	**-0.1**
YAK					IAmb	IAmb	20 08 38.1		
	comp=Z,34nm,0.7s								
YAK	**Yakutsk**	**25.97**	**0**	*c i*P		**P**	**P**	**20 08 36.3**	**-0.4**
YAK				*e**PP		**sP**	**P**	**20 08 44.5**	**+3.0**
YAK				*e*				20 09 12.5	
YAK				*e*				20 12 03.5	
YAK				*e*S		**S**	**P**	**20 13 05.5**	**-1.3**
YAK				*e*SS		SnSn		20 14 29.3	+26
YAK					pmax	pmax			
	comp=Z,36nm,1.0s								
YAK					pmax	pmax			
	comp=N,23nm,1.1s								
YAK					pmax	pmax			
	comp=E,6.0nm,1.4s								
YAK					pmax	pmax			
	comp=Z,63nm,2.9s								
YAK					pmax	pmax			
	comp=N,37nm,2.5s								
YAK					pmax	pmax			
	comp=E,112nm,4.5s								
YAK					smax	smax			
	comp=E,122nm,3.7s								
YAK					smax	smax			
	comp=N,78nm,3.5s								
YAK					MLR	MLR			
	comp=Z,210nm,14.0s								
YAK					MLR	MLR			
	comp=N,176nm,16.0s								
YAK					MLR	MLR			
	comp=E,87nm,16.0s								
YAK	**Yakutsk**	**25.97**	**0**		LR	LR	20 18 43.0		
	comp=E,117nm,19.5s,baz=120,slow=36								
PETK	**Petropavlovsk-**	**26.16**	**41**		LR	LR	20 18 34.7		
	comp=E,142nm,19.9s,baz=225,slow=36								
SLVN	**Son La**	**26.61**	**243**		P	**P**	**P**	**20 08 42.2**	**-0.8**
MA2	**Magadan**	**27.31**	**24**		P	**P**	**P**	**20 08 48.1**	**-0.8**
MA2	**Magadan**	**27.31**	**24**		P	**P**	**P**	**20 08 49.2**	**+0.3**
MA2	**Magadan**	**27.31**	**24**		P	**P**	**P**	**20 08 48.1**	**-0.8**
MA2					pmax	pmax			
	comp=Z,16nm,1.1s								
MA2	**Magadan**	**27.31**	**24**		LR	LR	20 19 59.0		
	comp=Z,132nm,18.2s,baz=261,slow=37								
GOMU	**GeErMu**	**27.79**	**281**		P	**P**	**P**	**20 08 54.4**	**+0.5**
GOMU					S	**S**	**S**	**20 13 43.2**	**+6.3**
GOMU					pmax	pmax			
	comp=Z,8.0nm,1.5s								
GOMU					LR	LR			
	comp=Z,270nm,13.1s								
GOMU					LR	LR			
	comp=Z,440nm,13.0s								
GOMU					LR	LR			
	comp=Z,440nm,13.1s								
TNCH	**TengChong**	**28.62**	**256**	*e*P		**P**	**P**	**20 09 01.8**	**+0.7**
TNCH					pP	sP	20 09 04.7	-1.2	
TNCH					PcP	**PcP**	**20 12 11.4**	**-0.7**	
TNCH					S	**S**	**20 13 48.4**	**-1.3**	
TNCH					pmax	pmax			
	comp=Z,6.0nm,0.7s								
TNCH					pmax	pmax			
	comp=Z,88nm,3.8s								
TNCH					LR	LR			
	comp=Z,670nm,13.9s								
TNCH					LR	LR			
	comp=Z,350nm,14.9s								
TNCH					LR	LR			
	comp=Z,560nm,12.5s								
UBPT	**Khong Chiam**	**29.72**	**232**		P	**P**	**P**	**20 09 10.9**	**+0.2**
CRAI	**Chiangrai**	**29.88**	**246**		P	**P**	**P**	**20 09 11.2**	**-0.9**
CRAI					IAmb	IAmb	20 09 14.2		
	comp=Z,20nm,1.4s								
CHTO	**Chiang Mai**	**31.81**	**245**		P	**P**	**P**	**20 09 28.4**	**-0.8**
CHTO	**Chiang Mai**	**31.81**	**245**		P	**P**	**P**	**20 09 30.0**	**+0.8**
CHTO	**Chiang Mai**	**31.81**	**245**		P	**P**	**P**	**20 09 28.4**	**-0.8**
CHTO					pmax	pmax			
	comp=Z,5.0nm,0.9s								
CM31	**Chiang Mai Arr**	**32.03**	**245**		P	**P**	**P**	**20 09 30.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**32.03**	**245**		P	**P**	**P**	**20 09 31.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**32.03**	**245**		P	**P**	**P**	**20 09 31.5**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=41,slow=7.0,SNR=19								
CMAR					PcP	**PcP**	**20 12 21.5**	**+0.7**	
	comp=Z,1.2nm,0.9s,baz=15,slow=1.6,SNR=5.3								
CMAR					LR	LR	20 23 33.4		
	comp=Z,182nm,18.3s,baz=50,slow=38								
	comp=Z,2.0nm,0.7s								
MND	**Mandalay**	**32.07**	**253**		P	**P**	**P**	**20 09 32.0**	**+0.6**
SGSI	**Sangihe**	**32.43**	**187**		P	**P**	**P**	**20 09 35.3**	**+0.7**
	comp=Z,267nm,0.6s,comp=Z,3μm								
LSA	**Lhasa**	**32.54**	**270**		P	**P**	**P**	**20 09 34.6**	**-1.4**
LSA	**Lhasa**	**32.54**	**270**		P	**P**	**P**	**20 09 34.6**	**-1.4**
LSA					pmax	pmax			
	comp=Z,7.0nm,1.5s								
WMQ	**Urumqi**	**32.56**	**297**	*e*P		**P**	**P**	**20 09 37.1**	**+1.5**
WMQ					pmax	pmax			
	comp=Z,19nm,1.3s								
WMQ					LR	LR			
	comp=Z,750nm,16.7s								
WMQ					LR	LR			
	comp=Z,230nm,17.3s								
ZSN	**Zaisan**	**34.61**	**303**	*e*P		**P**	**P**	**20 09 53.9**	**+0.4**
	comp=Z,8.1nm,0.8s,baz=303								
ZSN	**Zaisan**	**34.61**	**303**	*e*P		**P**	**P**	**20 09 53.8**	**+0.4**
ZSN					pmax	pmax			
	comp=Z,8.0nm,0.8s								
SRDT	**SRDT**	**34.63**	**239**		P	**P**	**P**	**20 09 54.9**	**+1.1**
SHEM	**Shemya Is, Ala**	**35.39**	**48**		LR	LR	20 25 50.1		
	comp=Z,42nm,18.7s,baz=262,slow=39								
ZAA0	**Zalesovo Array**	**35.47**	**314**		P	**P**	**P**	**20 09 59.8**	**-0.9**
ZALV	**Zalesovo Beam**	**35.47**	**314**		P	**P**	**P**	**20 09 59.9**	**-0.7**
ZALV	**Zalesovo Beam**	**35.47**	**314**		P	**P**	**P**	**20 10 00.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=95,slow=8.5,SNR=15								
ZALV					PcP	**PcP**	**20 12 29.4**	**-0.5**	
	comp=Z,3.5nm,0.8s,baz=106,slow=4.8,SNR=8.5								
ZALV					LR	LR	20 25 45.3		
	comp=Z,79nm,19.7s,baz=106,slow=38								
	comp=Z,3.2nm,0.7s								
TIXI	**Tiksi**	**35.63**	**360**		P	**P**	**P**	**20 10 01.1**	**-0.7**
TIXI					IAmb	IAmb	20 10 04.1		
	comp=Z,17nm,0.8s								
TIXI	**Tiksi**	**35.63**	**360**		P	**P**	**P**	**20 10 01.1**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,17nm,0.8s								
TIXI	**Tiksi**	**35.63**	**360**		LR	LR	20 24 17.8		
	comp=Z,106nm,19.4s,baz=200,slow=36								
MK31	**Makanchi Array**	**36.36**	**302**		P	**P**	**P**	**20 10 08.0**	**-0.4**
MK31	**Makanchi Array**	**36.36**	**302**		P	**P**	**P**	**20 10 08.0**	**-0.4**
MK31					pmax	pmax			
	comp=Z,6.0nm,1.0s								
MKAR	**Makanchi Array**	**36.36**	**302**		P	**P**	**P**	**20 10 08.1**	**-0.3**
MKAR	**Makanchi Array**	**36.36**	**302**		P	**P**	**P**	**20 10 08.4**	**0.0**
	comp=Z,4.2nm,0.8s,baz=92,slow=9.8,SNR=41								
MKAR					PcP	**PcP**	**20 12 32.2**	**-0.5**	
	comp=Z,2.2nm,0.9s,baz=66,slow=3.3,SNR=4.7								
	comp=Z,4.2nm,

SHLS Shalkode 38.58 296 *e*P P 20 10 24.4 -3.1
baz=296
SHLS Shalkode 38.58 296 *e*P P 20 10 24.3 -3.1
KURK Kurchatov 38.85 308 P P 20 10 29.0 -0.4
KURK Kurchatov 38.85 308 P P 20 10 29.0 -0.4
KURK pmax pmax
comp=Z,14nm,0.9s
FAKI Fak Fak 38.90 175 P P 20 10 30.4 +0.3
FAKI IAmb IAmb 20 10 32.9
comp=Z,31nm,0.8s
FAKI Fak Fak 38.90 175 P P 20 10 30.9 +0.8
FAKI Fak Fak 38.90 175 P P 20 10 30.7 +0.6
comp=Z,45nm,1.0s
UZB Uzynbulak 38.90 296 *e*P P 20 10 29.8 -0.4
baz=296
UZB Uzynbulak 38.90 296 *e*P P 20 10 29.7 -0.4
KURBB Kurchatov Arra 38.91 308 P P 20 10 29.9 0.0
comp=Z,11nm,0.8s,baz=96,slow=9.3,SNR=89
KURBB PcP PcP 20 12 39.8 -0.7
comp=Z,2.8nm,0.9s,baz=94,slow=3.2,SNR=5.5
KURBB LR LR 20 26 16.0
comp=Z,160nm,20.2s,baz=162,slow=36
comp=Z,11nm,0.8s
KPKS Kokpek 39.11 297 *e*P P 20 10 31.5 -0.3
baz=297
KPKS Kokpek 39.11 297 *e*P P 20 10 31.5 -0.3
TDK Taldyqorghan 39.15 299 *e*P P 20 10 32.4 +0.3
baz=299
TDK Taldyqorghan 39.15 299 *e*P P 20 10 32.3 +0.3
ZHN Zhinishke 39.33 296 *e*P P 20 10 33.2 -0.5
baz=296
ZHN Zhinishke 39.33 296 *e*P P 20 10 33.2 -0.5
SATY Saty 39.36 296 *e*P P 20 10 33.9 -0.1
baz=296
SATY Saty 39.36 296 *e*P P 20 10 33.8 -0.1
PRZ Przheval'sk 39.45 295 P P 20 10 35.1 +0.3
PRZ IAmb IAmb 20 10 37.2
comp=Z,37nm,1.4s
PRZ Przheval'sk 39.45 295 P P 20 10 35.1 +0.3
PRZ pmax pmax
comp=Z,37nm,1.4s
TARG Taragay, Kyrgy 40.00 294 P P 20 10 39.7 +0.1
TARG IAmb IAmb 20 10 41.3
comp=Z,22nm,1.0s
TARG Taragay, Kyrgy 40.00 294 P P 20 10 39.7 +0.1
TARG pmax pmax
comp=Z,22nm,1.0s
CHKK Chushkaly 40.28 298 *e*P P 20 10 41.4 -0.2
baz=298
CHKK Chushkaly 40.28 298 *e*P P 20 10 41.3 -0.2
NRIK Noril'sk 40.30 339 P P 20 10 40.9 -0.4
NRIK Noril'sk 40.30 339 P P 20 10 40.9 -0.4
NRIK pmax pmax
comp=Z,7.0nm,1.0s
NRIK Noril'sk 40.30 339 P P 20 10 41.6 +0.4
comp=Z,4.3nm,0.6s,baz=119,slow=7.1,SNR=6.9
comp=Z,4.3nm,0.6s
MDOK Medeo 40.33 297 *e*P P 20 10 42.4 +0.3
baz=297
MDOK Medeo 40.33 297 *e*P P 20 10 42.3 +0.3
KULM Kulim 40.42 227 P P 20 10 42.8 0.0
KULM IAmb IAmb 20 10 45.5
comp=Z,18nm,0.8s
AAA Alma-Ata 40.42 297 *e*P P 20 10 43.2 +0.5
comp=Z,27nm,1.0s,baz=297
AAA Alma-Ata 40.42 297 *e*P P 20 10 43.2 +0.5
AAA pmax pmax
comp=Z,27nm,1.0s
TNSS Tian-Shan 40.42 296 *e*P P 20 10 43.5 +0.3
baz=296
TNSS Tian-Shan 40.42 296 *e*P P 20 10 43.4 +0.3
NRN Naryn 41.38 294 P P 20 10 50.8 -0.2
NRN Naryn 41.38 294 P P 20 10 50.8 -0.2
NRN pmax pmax
comp=Z,7.0nm,1.0s
TKM2 Tokmak 2 41.42 296 P P 20 10 51.9 +0.8
SNR=36
KSH Kashi 41.79 291 P P 20 10 57.5 +3.4
KSH sP sP 20 11 04.6 +5.6
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH LR LR
comp=Z,540nm,15.8s
KSH LR LR
comp=Z,370nm,16.1s
KSH LR LR
comp=Z,400nm,13.7s
KBK Karagaybulak 41.94 296 P P 20 10 56.3 +1.0
SNR=8.8
CHMS Chumysh 42.02 297 P P 20 10 56.3 +0.4
SNR=7.5
FRU1 Bishkek 42.14 296 P P 20 10 56.7 -0.2
FRU1 Bishkek 42.14 296 P P 20 10 56.7 -0.2
FRU1 pmax pmax
comp=Z,14nm,0.8s
USP Ospenovka 42.16 297 P P 20 10 57.1 +0.2
SNR=10
BTLS Baital 42.22 300 *e*P P 20 10 57.1 -0.2
baz=300
BTLS Baital 42.22 300 *e*P P 20 10 57.1 -0.2
AAK Ala-Archa 42.27 296 P P 20 10 58.4 +0.4
SNR=8.7
AAK Ala-Archa 42.27 296 P P 20 10 57.8 -0.2
AAK Ala-Archa 42.27 296 P P 20 10 57.8 -0.2
AAK pmax pmax
comp=Z,8.0nm,0.9s
UCH Uchtor 42.33 296 P P 20 10 59.9 +1.1
SNR=13
TABU Tabubil 42.62 162 P P 20 11 02.7 +1.8
BRZS Berezniki 42.67 307 *e*P P 20 11 01.2 +0.2
baz=307
BRZS Berezniki 42.67 307 *e*P P 20 11 01.1 +0.2
PSI Prapat 43.43 227 P P 20 11 08.3 +0.7
PSI pmax pmax
comp=Z,8.0nm,1.0s
RPSI Rantau Prapat 43.52 227 P P 20 11 08.3 +0.1
BVAR Borovoye Array 43.97 312 P P 20 11 11.8 +0.5
comp=Z,7.9nm,0.6s,baz=104,slow=9.6,SNR=58
BVAR PcP PcP 20 12 56.6 -0.4
comp=Z,4.3nm,0.7s,baz=85,slow=3.2,SNR=6.2
BVAR LR LR 20 30 20.7
comp=Z,256nm,18.8s,baz=82,slow=37
comp=Z,7.9nm,0.6s
BRVK Borovoye 44.03 312 P P 20 11 12.2 +0.3
BRVK IAmb IAmb 20 11 13.8
comp=Z,9.9nm,0.7s
BRVK Borovoye 44.03 312 P P 20 11 12.2 +0.3
BRVK pmax pmax
comp=Z,10.0nm,0.7s
GAMB Gambell 44.69 33 P P 20 11 18.4 +1.4
baz=261
SPIA Saint Paul Isl 44.80 42 P P 20 11 19.4 +1.5
baz=269
KK31 Karatay Array 45.06 298 P P 20 11 20.1 -0.2
KK31 IAmb IAmb 20 11 21.6
comp=Z,21nm,1.1s
KK31 Karatay Array 45.06 298 P P 20 11 20.1 -0.2
KK31 pmax pmax
comp=Z,21nm,1.1s
KKAR Karatay Array 45.06 298 P P 20 11 20.1 -0.2
KKAR IAmb IAmb 20 11 21.6
comp=Z,21nm,1.1s
KKAR Karatay Array 45.06 298 P P 20 11 20.1 -0.2
GSI Gunungsitoli 45.43 228 P P 20 11 22.4 -1.1
GSI IAmb IAmb 20 11 25.1
comp=Z,19nm,1.0s
GSI Gunungsitoli 45.43 228 P P 20 11 23.6 +0.2
comp=Z,25nm,1.2s
BTK Batken 45.52 293 P P 20 11 23.2 -0.9
BTK Batken 45.52 293 P P 20 11 23.2 -0.9
BTK pmax pmax
comp=Z,9.0nm,0.9s
NIL Nilore 45.53 284 P P 20 11 24.1 -0.1
NIL Nilore 45.53 284 P P 20 11 24.1 -0.1
NIL pmax pmax
comp=Z,38nm,1.1s
BRLS Boroldaу 45.56 298 *e*P P 20 11 25.5 +1.2
baz=298
BRLS Boroldaу 45.56 298 *e*P P 20 11 25.4 +1.2
IUG luzhnay 45.61 297 *i*P P 20 11 25.2 +0.4
comp=Z,10.0nm,0.8s,baz=296
IUG luzhnay 45.61 297 *c i*P P 20 11 25.1 +0.4
IUG pmax pmax
comp=Z,10.0nm,0.8s
NIKH Nikolski High 45.70 48 P P 20 11 25.8 +0.7
baz=274

TNA Tin City 46.56 31 P P 20 11 33.0 +1.3
baz=263,SNR=8.9
F14K Arctic Creek 47.21 31 P P 20 11 37.7 +0.9
baz=264
SIMJ Simiganj 47.25 292 P P 20 11 37.3 -0.4
LEM Lembang 47.31 210 P P 20 11 39.4 +1.0
comp=Z,11nm,0.6s,baz=67,slow=15,SNR=2.2
comp=Z,11nm,0.6s
ANM Nome 47.53 32 P P 20 11 39.2 -0.2
ANM IAmb IAmb 20 11 41.7
comp=Z,16nm,0.9s
ANM Nome 47.53 32 P P 20 11 39.8 +0.4
baz=266,SNR=9.5
ANM Nome 47.53 32 P P 20 11 39.2 -0.2
ANM pmax pmax
comp=Z,16nm,0.9s
C16K Lisburne Hills 47.92 27 P P 20 11 42.2 -0.1
baz=263,SNR=41
F15K North Star Dit 47.92 31 P P 20 11 42.9 +0.5
baz=266
G15K Niukluk 48.13 32 P P 20 11 44.5 +0.5
baz=267
J14K Nanvaranak Lak 48.27 35 P P 20 11 45.9 +0.8
baz=269
M13K Dall Lake 48.38 38 P P 20 11 46.9 +1.0
baz=272
HYB Hyderabad 48.44 261 *e*P P 20 11 46.8 -0.2
KBL Kabul 48.52 287 P P 20 11 46.9 -0.8
KBL IAmb IAmb 20 11 49.3
comp=Z,13nm,0.8s
KBL Kabul 48.52 287 P P 20 11 46.9 -0.8
KBL pmax pmax
comp=Z,13nm,0.8s
L14K Kuka Creek 48.69 37 P P 20 11 48.7 +0.4
L14K IAmb IAmb 20 11 51.0
comp=Z,22nm,0.9s
L14K Kuka Creek 48.69 37 P P 20 11 49.6 +1.3
baz=271
MTN Manton Dam 48.70 178 P P 20 11 47.6 -1.2
MTN IAmb IAmb 20 11 50.5
comp=Z,15nm,0.9s
MTN Manton Dam 48.70 178 P P 20 11 48.2 -0.6
FALS False Pass 48.73 45 P P 20 11 50.2 +1.5
baz=276
C17K DeLong Mountai 48.74 27 P P 20 11 49.4 +0.7
baz=264
RDOG Red Dog Mine 48.80 28 P P 20 11 48.6 -0.5
RDOG IAmb IAmb 20 11 50.3
comp=Z,7.6nm,0.7s
RDOG Red Dog Mine 48.80 28 P P 20 11 50.2 +1.0
baz=265
G16K Koyuk River 48.86 31 P P 20 11 50.8 +1.1
baz=268
H16K Elim 48.89 32 P P 20 11 50.9 +1.0
baz=269,SNR=11
M14K Bethel 49.06 37 P P 20 11 52.1 +0.9
baz=272
E17K Hotham Inlet 49.15 29 P P 20 11 52.9 +1.1
baz=267,SNR=6.9
K15K Wolf Creek Mou 49.21 35 P P 20 11 53.7 +1.4
baz=272
N14K Kuskokwak Cree 49.24 38 P P 20 11 54.5 +2.0
baz=273
L15K Ungalak Mounta 49.25 36 P P 20 11 54.2 +1.5
baz=272
B18K Kokolik River 49.32 26 P P 20 11 54.5 +1.5
baz=265
SVE Sverdlovsk 49.33 318 *d i*P P 20 11 54.3 +0.9
SVE pmax pmax
comp=Z,70nm,1.1s
F17K Baldwin Pennin 49.35 30 P P 20 11 54.7 +1.4
baz=268
C18K Utukok River 49.48 27 P P 20 11 54.7 +0.3
baz=266,SNR=20
O14K Tigyukauivet M 49.49 39 P P 20 11 54.9 +0.3
baz=274
I17K Unalakleet 49.56 33 P P 20 11 55.4 +0.4
baz=271
G17K Kiwalik Mounta 49.58 31 P P 20 11 56.0 +0.9
baz=270
J16K Anvik River 49.61 34 P P 20 11 56.4 +1.0
baz=271
E18K Tukpahlearik C 49.64 28 P P 20 11 56.2 +0.6
E18K IAmb IAmb 20 11 57.6
comp=Z,12nm,0.8s
E18K Tukpahlearik C 49.64 28 P P 20 11 56.6 +1.1
baz=268
M15K Kasigluk River 49.69 37 P P 20 11 56.8 +0.8
baz=274
H17K Granite Mounta 49.89 32 P P 20 11 58.5 +1.0
baz=271
F18K Selawik 49.99 30 P P 20 11 59.4 +1.2
baz=270,SNR=12
N15K Kwethluk River 50.02 38 P P 20 11 59.9 +1.4
baz=274
C19K Lookout Ridge 50.09 26 P P 20 12 00.2 +1.2
baz=267
L16K Owhat River 50.21 36 P P 20 12 00.9 +1.0
baz=274
O15K Ungalikthiuk R 50.24 39 P P 20 12 01.4 +1.1
baz=276
G18K Tagagawik 50.40 30 P P 20 12 01.8 +0.4
baz=271
M16K Timber Creek 50.51 37 P P 20 12 03.0 +0.8
baz=275
ARU Arti 50.52 317 P P 20 12 02.2 -0.1
ARU Arti 50.52 317 *c i*P P 20 12 02.6 +0.2
ARU 20 13 16.9
ARU 20 13 54.0
ARU S S 20 19 19.4 +3.3
ARU SS SS 20 22 51.5 +1.9
ARU pmax pmax
comp=Z,60nm,0.9s
ARU Arti 50.52 317 LR LR 20 35 55.9
comp=Z,164nm,18.5s,baz=86,slow=39
H18K Honhosa River 50.54 31 P P 20 12 03.0 +0.6
baz=272
D19K Kuna River 50.60 27 P P 20 12 03.3 +0.4
D19K IAmb IAmb 20 12 04.7
comp=Z,21nm,0.8s
D19K Kuna River 50.60 27 P P 20 12 03.2 +0.4
baz=269
K17K Iditarod 50.69 35 P P 20 12 04.6 +1.0
baz=274
F19K Shaleruckik Mo 50.74 29 P P 20 12 04.1 +0.2
baz=271
E19K Redstone River 50.94 28 P P 20 12 05.9 +0.5
baz=271
ABKAR Akbulak array 50.96 308 P P 20 12 05.3 -0.5
ABKAR Akbulak array 50.96 308 P P 20 12 05.0 -0.8
ABKAR IAmb IAmb 20 12 08.3
comp=Z,9.0nm,0.8s
B20K Meade River 50.97 25 P P 20 12 05.9 +0.4
baz=269
G19K Purcell Mounta 51.03 30 P P 20 12 06.2 0.0
G19K Purcell Mounta 51.03 30 P P 20 12 07.0 +0.8
baz=272
O16K Kokwok River B 51.08 39 P P 20 12 07.0 +0.5
baz=277
D20K Etivluk River 51.16 27 P P 20 12 07.4 +0.3
baz=270
A21K Barrow 51.18 23 P P 20 12 07.4 +0.3
baz=268
M17K Holitna River 51.20 36 P P 20 12 08.8 +1.3
baz=276
E20K Nigu River 51.32 27 P P 20 12 09.1 +0.8
baz=271
H19K Roundabout Mou 51.33 31 P P 20 12 09.2 +0.9
baz=273
J18K Innoko River 51.35 34 P P 20 12 09.7 +1.1
baz=275
N17K Nushagak Hills 51.42 37 P P 20 12 10.7 +1.6
baz=277
COEN Coen 51.47 163 P P 20 12 10.1 +0.2
COEN IAmb IAmb 20 12 23.5
comp=Z,12nm,0.9s
L18K Granite Mounta 51.48 35 P P 20 12 10.6 +1.1
baz=276
F20K Avaraart Lake 51.54 29 P P 20 12 10.6 +0.8
baz=273
R16K Pilot Point 51.62 41 P P 20 12 10.9 +0.3
baz=279
J19K Poorman 51.79 33 P P 20 12 12.4 +0.5
J19K IAmb IAmb 20 12 13.7
comp=Z,26nm,1.3s
J19K Poorman 51.79 33 P P 20 12 12.4 +0.5
baz=275

C21K Knifeblade Rid 51.81 26 P P 20 12 12.7 +0.8
baz=272
B21K Ikpikpuk River 51.85 26 P P 20 12 12.9 +0.8
B21K Ikpikpuk River 51.85 26 P P 20 12 13.2 +1.0
baz=272
M18K Stony River 51.97 36 P P 20 12 14.2 +1.0
baz=277
P17K Kvichak River 51.97 39 P P 20 12 14.4 +1.3
baz=278
H20K Anotleneega Mo 51.98 31 P P 20 12 14.0 +0.7
baz=275
N18K Kilae Creek 52.04 37 P P 20 12 14.2 +0.5
baz=278
E21K Killik River 52.13 27 P P 20 12 14.9 +0.5
baz=273
I20K Naaghedeneel 52.21 32 P P 20 12 15.6 +0.7
baz=276
L19K White Mountain 52.34 35 P P 20 12 17.0 +1.1
baz=277
F21K Alatna River 52.40 29 P P 20 12 16.9 +0.6
baz=275
IMAR Indian Mountai 52.40 30 P P 20 12 16.6 +0.3
IMAR PcP PcP 20 13 28.3 +1.3
J20K Nowinta River 52.42 33 P P 20 12 17.7 +1.2
baz=276,SNR=9.0
G21K Allakaket 52.45 30 P P 20 12 17.6 +0.9
baz=275
K20K Telida 52.55 34 P P 20 12 18.7 +1.2
K20K IAmb IAmb 20 12 19.8
comp=Z,11nm,0.7s
K20K Telida 52.55 34 P P 20 12 18.4 +0.9
baz=277
D22K Ayikyak River 52.58 27 P P 20 12 18.3 +0.7
D22K IAmb IAmb 20 12 19.6
comp=Z,20nm,0.9s
D22K Ayikyak River 52.58 27 P P 20 12 18.8 +1.1
baz=274
M19K Big River Lodg 52.59 35 P P 20 12 19.1 +1.3
baz=278
N19K Bonanza Creek 52.70 37 P P 20 12 19.7 +1.0
baz=279
L20K Farewell, AK 52.75 35 P P 20 12 20.1 +1.1
baz=278
PALK Pallekele 52.78 249 LR LR 20 37 23.5
comp=Z,73nm,19.0s,baz=154,slow=39
H21K Melozitna Rive 52.82 31 P P 20 12 20.3 +0.8
baz=276
O19K Port Alsworth 52.88 38 P P 20 12 21.0 +1.1
baz=279
E22K Anaktuvuk Pass 52.96 27 P P 20 12 21.1 +0.5
E22K IAmb IAmb 20 12 22.2
comp=Z,15nm,0.8s
E22K Anaktuvuk Pass 52.96 27 P P 20 12 20.9 +0.4
baz=275,SNR=19
M20K Styx River 53.18 35 P P 20 12 23.2 +0.9
baz=279
G22K Bettles 53.20 29 P P 20 12 22.7 +0.4
baz=277
I21K Tanana 53.22 31 P P 20 12 23.5 +1.1
baz=277
C23K Itkillik River 53.23 25 P P 20 12 23.5 +1.1
baz=275
CHUM Lake Minchumin 53.26 33 P P 20 12 24.0 +1.4
baz=278
D23K Nanushuk River 53.29 26 P P 20 12 23.9 +1.0
baz=276
H22K Ishtalitna Cre 53.38 30 P P 20 12 24.6 +1.0
baz=277
CAST Castle Rocks 53.42 33 P P 20 12 24.8 +0.8
CAST IAmb IAmb 20 12 26.1
comp=Z,11nm,0.7s
CAST Castle Rocks 53.42 33 P P 20 12 25.1 +1.1
baz=279,SNR=7.5
Q19K Cape Douglas, 53.44 39 P P 20 12 25.3 +1.2
baz=281
PPLA Purkeypile 53.46 34 P P 20 12 25.6 +1.2
baz=279
P19K Oil Pt 53.51 38 P P 20 12 26.0 +1.4
baz=280
COLD Coldfoot 53.67 28 P P 20 12 26.5 +0.8
baz=278,SNR=7.0
HNR Honiara 53.68 141 LR LR 20 34 52.9
comp=Z,381nm,19.2s,baz=330,slow=36
TOLK Toolik Lake Re 53.73 27 P P 20 12 26.5 +0.3
TOLK Toolik Lake Re 53.73 27 P P 20 12 26.9 +0.7
baz=277
N20K Mount Spurr 53.73 36 P P 20 12 27.5 +1.2
baz=280,SNR=5.2
O20K Slope Mountain 53.73 37 P P 20 12 26.9 +0.5
baz=281
MLY Manley 53.76 31 P P 20 12 27.7 +1.2
baz=279,SNR=7.2
E23K Chandalar 53.79 27 P P 20 12 27.6 +0.9
baz=277,SNR=10.0
HRA Herat 53.81 289 P P 20 12 27.4 -0.1
HRA IAmb IAmb 20 12 28.7
comp=Z,7.1nm,0.8s
G23K Bananza Creek 53.81 29 P P 20 12 27.5 +0.7
baz=278
C24K Franklin Bluff 53.91 25 P P 20 12 28.2 +0.9
baz=277
SKT Skwentna 53.91 35 P P 20 12 28.6 +1.1
baz=280
KTH Kantishna Hill 53.92 33 P P 20 12 28.3 +0.7
KTH IAmb IAmb 20 12 29.8
comp=Z,17nm,0.9s
D24K Happy Valley 53.93 26 P P 20 12 28.2 +0.6
D24K IAmb IAmb 20 12 29.2
comp=Z,14nm,0.8s
D24K Happy Valley 53.93 26 P P 20 12 28.0 +0.4
baz=277
FITZ Fitzroy Crossi 54.00 184 P P 20 12 29.1 +0.5
E24K Your Creek 54.20 27 P P 20 12 30.4 +0.7
E24K IAmb IAmb 20 12 31.5
comp=Z,15nm,1.1s
E24K Your Creek 54.20 27 P P 20 12 30.2 +0.5
baz=278,SNR=16
TRF Thorofare Moun 54.22 33 P P 20 12 30.1 +0.2
baz=280
I23K Minto, Yukon-K 54.32 31 P P 20 12 31.1 +0.6
baz=280
SUA Susitna One 54.38 36 P P 20 12 31.7 +0.6
baz=281,SNR=5.6
CUT Chulitna 54.42 34 P P 20 12 32.2 +1.0
baz=281
F24K Squaw Lake 54.52 28 P P 20 12 32.6 +0.7
baz=279
NEA2 Nenana 54.54 32 P P 20 12 32.8 +0.7
baz=280
M22K Willow 54.61 35 P P 20 12 33.2 +0.7
baz=282
MCK McKinley 54.76 33 P P 20 12 33.9 +0.2
baz=281
D25K Kavik River 54.77 26 P P 20 12 34.6 +0.8
baz=279
H24K Noodor Dome 54.81 30 P P 20 12 35.0 +1.0
baz=280
G24K Hadweenzic Riv 54.81 29 P P 20 12 35.0 +1.0
baz=280
RC01 Rabbit Creek A 54.93 36 P P 20 12 35.4 +0.5
baz=282
KIRV Kirov 54.98 321 LR LR 20 39 05.1
comp=Z,166nm,20.2s,baz=80,slow=39
COLA College 55.00 31 P P 20 12 35.5 +0.1
COLA IAmb IAmb 20 12 37.1
comp=Z,18nm,0.8s
COLA College 55.00 31 P P 20 12 37.3 +1.9
COLA College 55.00 31 P P 20 12 36.1 +0.8
baz=281
COLA College 55.00 31 P P 20 12 35.5 +0.1
COLA pmax pmax
comp=Z,18nm,0.8s
PMR Palmer 55.11 35 P P 20 12 36.5 +0.3
baz=282
WAT1 Susitna Watana 55.11 34 P P 20 12 37.1 +0.8
baz=282
POKR Poker Plat Res 55.13 31 P P 20 12 36.8 +0.4
POKR IAmb IAmb 20 12 38.5
comp=Z,18nm,0.8s
POKR Poker Plat Res 55.13 31 P P 20 12 37.5 +1.2
baz=281,SNR=7.3
C26K Camden Bay 55.18 25 P P 20 12 37.4 +0.9
baz=280
E25K Arctic Village 55.28 27 P P 20 12 38.5 +1.1
baz=281,SNR=5.4
SEW Seward 55.28 37 P P 20 12 37.9 +0.4
baz=283

F25K Christian Rive 55.35 28 P P 20 12 38.7 +0.7
baz=281,SNR=7.8
ILAR Eielson Array 55.43 31 P P 20 12 38.2 -0.3
comp=Z,5.6nm,0.6s,baz=279,slow=6.1,SNR=57
comp=Z,5.6nm,0.6s
SML Sawmill 55.43 35 P P 20 12 39.4 +0.8
baz=283
KNK Knik Glacier 55.46 35 P P 20 12 39.2 +0.4
baz=283
HDA Harding Lake 55.48 32 P P 20 12 38.7 -0.2
HDA IAmb IAmb 20 12 39.5
comp=Z,15nm,0.7s
HDA Harding Lake 55.48 32 P P 20 12 38.8 0.0
baz=282,SNR=14
DHY Denali Highway 55.58 33 P P 20 12 39.9 +0.1
baz=283
GEYT Alibeck 55.58 295 P P 20 12 39.9 -0.2
GEYT IAmb IAmb 20 12 42.3
comp=Z,14nm,0.8s
GEYT Alibeck 55.58 295 P P 20 12 39.9 -0.2
GEYT pmax pmax
comp=Z,14nm,0.8s
GEYT Alibeck 55.58 295 P P 20 12 40.7 +0.6
comp=Z,13nm,0.7s,baz=69,slow=8.1,SNR=39
comp=Z,13nm,0.7s
GYA0B ALIBECK ARRAY 55.58 295 P P 20 12 39.9 -0.2
GYA0B IAmb IAmb 20 12 46.3
comp=Z,12nm,0.8s
M23K Glacier View 55.72 35 P P 20 12 41.1 +0.4
baz=283
WB0 Warramunga Arr 55.76 174 P P 20 12 40.6 -0.7
MTSU Mount Surprise 55.76 163 P P 20 12 42.0 +0.6
BMAR Burnt Mountain 55.78 28 P P 20 12 42.0 +1.0
PRP Porcupine Dome 55.83 30 P P 20 12 41.7 +0.2
PRP IAmb IAmb 20 12 43.0
comp=Z,7.5nm,0.6s
PRP Porcupine Dome 55.83 30 P P 20 12 41.9 +0.4
baz=283
F26K Sheenjek River 55.89 27 P P 20 12 42.3 +0.5
baz=282
SCM Sheep Creek Mo 55.89 35 P P 20 12 43.1 +1.2
baz=284
WRAB Tennant Creek 55.92 174 P P 20 12 42.1 -0.3
WRAB IAmb IAmb 20 12 43.1
comp=Z,21nm,0.8s
WRAB Tennant Creek 55.92 174 P P 20 12 42.1 -0.3
WRAB pmax pmax
comp=Z,21nm,0.8s
WRA Warramunga Arr 55.93 174 P P 20 12 42.1 -0.4
WRA Warramunga Arr 55.93 174 P P 20 12 42.1 -0.4
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 55.93 174 P P 20 12 42.0 -0.4
comp=Z,20nm,0.8s,baz=350,slow=7.7,SNR=82
comp=Z,20nm,0.8s
J25K Salcha River, 56.10 31 P P 20 12 43.3 -0.1
baz=284
K24K Donnelly Dome 56.11 32 P P 20 12 43.8 +0.4
baz=284,SNR=5.5
G26K Porcupine Rive 56.19 28 P P 20 12 44.7 +0.8
baz=283,SNR=7.2
P23K Montague Islan 56.31 37 P P 20 12 45.0 +0.1
baz=285
M24K Tolsona, Glenn 56.35 34 P P 20 12 45.7 +0.5
baz=284
PAX Paxson 56.45 33 P P 20 12 46.3 +0.3
baz=284
RIDG Independent Ri 56.53 32 P P 20 12 46.5 0.0
baz=284
KLU Klutina 56.62 35 P P 20 12 47.6 +0.4
baz=285
D27M Malcolm River 56.67 25 P P 20 12 47.9 +0.5
baz=284
HARP HAARP 56.74 34 P P 20 12 48.9 +1.0
baz=285
SCRK Sand Creek 56.84 32 P P 20 12 48.8 +0.1
baz=285,SNR=14
I26K Coal Creek Min 56.84 30 P P 20 12 48.6 0.0
baz=285
J26L Joseph Creek 56.88 31 P P 20 12 48.9 -0.1
baz=285
Q23K Middleton Isla 56.97 37 P P 20 12 50.5 +0.9
baz=286
QIS Mount Isa 57.17 169 P P 20 12 51.1 -0.3
N25K Chitina, Valde 57.20 35 P P 20 12 52.0 +0.7
N25K IAmb IAmb 20 12 54.2
comp=Z,8.1nm,0.8s
N25K Chitina, Valde 57.20 35 P P 20 12 52.2 +0.9
baz=286
MENT Mentasta 57.23 33 P P 20 12 53.0 +1.6
H27K Steamboat Moun 57.25 29 P P 20 12 52.5 +1.1
baz=286,SNR=14
E28M Babbage River 57.34 26 P P 20 12 53.2 +1.2
baz=286
L26K Log Cabin Wild 57.37 33 P P 20 12 53.7 +1.3
baz=286
BMRM Bremner River 57.38 35 P P 20 12 53.7 +1.2
baz=286
I27K Kandik River 57.38 30 P P 20 12 53.8 +1.3
baz=286
F28M Old Crow 57.49 27 P P 20 12 54.4 +1.2
baz=286,SNR=11
K27K Chicken 57.63 31 P P 20 12 54.9 +0.7
baz=287
BELG Belogomoye 57.66 314 LR LR 20 37 23.6
comp=Z,196nm,18.1s,baz=296,slow=36
M26K Nabesna, AK 57.70 33 P P 20 12 55.6 +0.8
baz=287
EGAK Eagle 57.80 30 P P 20 12 55.5 +0.2
EGAK IAmb IAmb 20 12 56.5
comp=Z,10nm,1.1s
EGAK Eagle 57.80 30 P P 20 12 56.0 +0.6
baz=287,SNR=7.2
E29M Blow River 57.98 26 P P 20 12 57.5 +0.9
baz=287
MCARA McCarthy VSAT 57.99 35 P P 20 12 57.4 +0.6
baz=287
L27K Beaver Creek, 58.02 32 P P 20 12 57.9 +0.8
baz=287
BCAR Beaver Creek A 58.04 32 P P 20 12 58.2 +1.1
PSA00 Pilbara Seismi 58.05 190 P P 20 12 56.6 -0.9
I28M Miner Creek 58.10 29 P P 20 12 58.3 +0.8
baz=288
CTA Charters Tower 58.12 161 P P 20 12 58.7 +0.6
CTA Charters Tower 58.12 161 P P 20 12 57.8 -0.2
comp=Z,6.2nm,0.9s,baz=331,slow=8.5,SNR=7.5
comp=Z,6.2nm,0.9s
CTAO Charters Tower 58.12 161 P P 20 12 57.9 -0.2
CTAO IAmb IAmb 20 13 00.9
comp=Z,7.3nm,0.8s
CTAO Charters Tower 58.12 161 P P 20 12 58.6 +0.5
CTAO Charters Tower 58.12 161 P P 20 12 57.9 -0.2
CTAO pmax pmax
comp=Z,7.0nm,0.9s
M27K Edge Creek, AK 58.22 33 P P 20 12 59.6 +1.2
baz=288
H29M Whitestone 58.47 28 P P 20 13 01.1 +1.1
baz=288
BVCY Beaver Creek 58.65 33 P P 20 13 02.2 +0.8
baz=288
DAWY Dawson 58.75 31 P P 20 13 02.2 +0.1
DAWY Dawson 58.75 31 P P 20 13 02.9 +0.8
baz=289
MESA MESA 58.87 36 P P 20 13 03.9 +0.7
baz=289
CTG Chitna Glacier 58.90 35 P P 20 13 03.8 +0.6
baz=289
CTGM Chitina Glacie 58.90 35 P P 20 13 04.0 +0.8
CTGM IAmb IAmb 20 13 06.9
comp=Z,9.4nm,1.0s
F30M Barrier River 58.98 26 P P 20 13 04.1 +0.6
baz=290
G30M tAoh Zraii Nji 59.04 27 P P 20 13 04.2 +0.1
baz=290,SNR=14
EPYK Eagle Plains 59.06 28 P P 20 13 04.5 +0.3
EPYK Eagle Plains 59.06 28 P P 20 13 04.4 +0.3
baz=290,SNR=16
J29N Klondike Camp 59.11 30 P P 20 13 05.7 +1.1
baz=290
KLMR Klimovskoe 59.16 325 eP P 20 13 02.5 -2.4
KLMR pmax pmax
comp=Z,55nm,1.5s
SPITS Spitsbergen Ar 59.42 347 P P 20 13 07.1 +0.6
SPITS pmax pmax
comp=Z,126nm,1.5s
SPITS Spitsbergen Ar 59.42 347 P P 20 13 06.7 +0.2
comp=Z,23nm,1.1s,baz=68,slow=14,SNR=5.3
comp=Z,23nm,1.1s
INK Inuvik 59.54 25 LR LR 20 42 53.4
comp=Z,55nm,18.2s,baz=18,slow=40
I30M Mount Dempster 59.58 29 P P 20 13 08.5 +0.6
baz=291
AS31 Alice Springs 59.59 175 P P 20 13 08.0 -0.3
ASAR Alice Springs 59.59 175 P P 20 13 07.7 -0.6
ASAR Alice Springs 59.59 175 P P 20 13 08.0 -0.2
ASAR Alice Springs 59.59 175 P P 20 13 08.0 -0.2
comp=Z,7.6nm,0.9s,baz=357,slow=5.6,SNR=51
comp=Z,7.6nm,0.9s
AS01 Alice Springs 59.59 175 P P 20 13 08.9 +0.7
comp=Z,15nm,0.8s
K29M Barlow Dome 59.60 31 P P 20 13 08.9 +0.8
baz=290
L29M L29M 59.60 32 P P 20 13 09.2 +1.2
baz=290,SNR=8.7
M29M Somme Creek 59.69 33 P P 20 13 10.1 +1.4
baz=290
PINM Pinnacle 59.70 35 P P 20 13 08.2 -0.5
baz=290
G31M Satah River 59.78 27 P P 20 13 08.6 -0.4
baz=291
F31M Tsiigehtchic 59.78 26 P P 20 13 08.8 -0.2
baz=292,SNR=8.4
J30M Hart River 59.83 30 P P 20 13 10.4 +0.7
baz=291
YUK4 Talbot Arm 60.00 34 P P 20 13 11.8 +0.9
baz=291,SNR=6.5
PNL Peninsula 60.25 36 P P 20 13 14.0 +1.5
baz=291
YUK6 Outpost Mounta 60.27 34 P P 20 13 13.9 +1.1
baz=291
M30M Minto, Yukon 60.37 32 P P 20 13 14.2 +1.0
M30M Minto, Yukon 60.37 32 P P 20 13 15.2 +1.9
baz=292
MAYO Mayo, Yukon 60.37 31 P P 20 13 14.5 +1.3
baz=292
A36M Sachs Harbour 60.64 20 P P 20 13 15.2 +0.3
A36M Sachs Harbour 60.64 20 P P 20 13 15.3 +0.5
baz=296,SNR=27
N30M Aishikik Lake 60.65 33 P P 20 13 15.8 +0.5
baz=292
KEV Kevo 60.69 337 P P 20 13 15.2 0.0
KEV Kevo 60.69 337 P P 20 13 15.2 0.0
KEV pmax pmax
comp=Z,47nm,1.3s
HYT Haines Junctio 60.70 34 P P 20 13 16.5 +0.8
HYT IAmb IAmb 20 13 18.3
comp=Z,12nm,0.9s
HYT Haines Junctio 60.70 34 P P 20 13 17.0 +1.3
baz=292,SNR=8.7
WRKA Warakurna 60.80 181 P P 20 13 16.3 -0.2
P29M Windy Craggy 61.05 35 P P 20 13 19.0 +1.1
baz=292
MAK Makhachkala 61.13 304 eP P 20 13 14.6 -4.1
MAK eS S 20 21 33.8 -4.0
MAK pmax pmax
comp=Z,213nm,1.1s
MAK MLR MLR
comp=Z,113nm,12.0s
P30M Million Dollar 61.22 35 P P 20 13 20.6 +1.4
baz=293
N31M Braeburn, Yuko 61.22 33 P P 20 13 20.7 +1.6
baz=293,SNR=5.6
ARCES ARCESS Array B 61.26 337 P P 20 13 18.8 -0.3
ARCES IAmb IAmb 20 13 23.0
comp=Z,25nm,1.4s
ARCES ARCESS Array B 61.26 337 P P 20 13 18.8 -0.3
ARCES pmax pmax
comp=Z,25nm,1.4s
ARCES ARCESS Array B 61.26 337 P P 20 13 18.6 -0.5
comp=Z,8.2nm,0.8s,baz=64,slow=7.9,SNR=21
comp=Z,8.2nm,0.8s
O30N Mendenhall 61.37 34 P P 20 13 21.4 +1.3
baz=293
VRH Novokhopyorsk 61.51 314 eP P 20 13 19.7 -1.4
VRH pmax pmax
comp=Z,50nm,0.6s
M31M Drury Creek, Y 61.54 32 P P 20 13 22.2 +1.0
baz=294
WSAR Wadi Sarin 61.56 279 LR LR 20 43 43.1
comp=Z,87nm,19.9s,baz=57,slow=40
PLBC Pleasant Camp 61.76 35 P P 20 13 23.6 +1.0
baz=294
WHY Whitehorse 61.95 34 P P 20 13 24.6 +0.5
WHY Whitehorse 61.95 34 P P 20 13 25.0 +0.9
baz=294,SNR=5.2
MOS Moscow 61.97 320 eP P 20 13 22.5 -1.6
MOS pmax pmax
comp=Z,74nm,1.0s
FARO Faro, Yukon 61.98 32 P P 20 13 24.9 +0.8
baz=294,SNR=17
LKRN Lenkeran, Azer 62.01 299 P P 20 13 23.5 -1.2
SEKA Sheki 62.06 302 P P 20 13 23.3 -1.8
C36M Paulatuk 62.21 23 P P 20 13 25.1 -0.4
C36M PcP PcP 20 14 05.1 -0.3
C36M Paulatuk 62.21 23 P P 20 13 25.7 +0.2
baz=299,SNR=36
SKAG Skagway 62.24 35 P P 20 13 25.5 -0.4
SKAG Skagway 62.24 35 P P 20 13 26.8 +0.9
baz=294
ZKTA Zakatala 62.28 303 P P 20 13 25.1 -1.4
MNGR Mingechevir, A 62.32 302 P P 20 13 25.5 -1.2
S31K Pelican 62.43 37 P P 20 13 27.5 +0.4
baz=294
LPSR Galich'ya Gora 62.53 317 eP P 20 13 27.0 -0.9
LPSR pmax pmax
comp=Z,50nm,0.8s
N32M Quiet Lake 62.55 33 P P 20 13 28.9 +0.9
baz=295
MMPY Sheldon Lake, 62.69 31 P P 20 13 29.5 +0.6
MMPY IAmb IAmb 20 13 31.1
comp=Z,8.6nm,1.0s
MMPY Sheldon Lake, 62.69 31 P P 20 13 30.3 +1.3
baz=296,SNR=7.5
VORR Voronezh 62.76 316 eP P 20 13 31.1 +1.6
VORR pmax pmax
comp=Z,60nm,0.4s
OBN Obninsk 62.77 320 P P 20 13 29.1 -0.4
OBN Obninsk 62.77 320 c iP P 20 13 28.9 -0.6
OBN e*PP sP 20 13 36.0 +1.5
OBN 20 15 51.0
OBN SS SS 20 26 08.0 +5.8
OBN pmax pmax
comp=Z,41nm,1.7s
OBN MLR MLR
comp=Z,237nm,15.0s
GANJ Ganja 62.90 302 P P 20 13 29.3 -1.4
P32M Atlin 62.93 35 P P 20 13 31.4 +0.8
baz=296
VSR Storozhevoye 62.97 315 eP P 20 13 29.7 -1.2
VSR pmax pmax
comp=Z,40nm,0.7s
VORD Divnogorie 63.00 315 eP P 20 13 30.0 -1.1
VORD pmax pmax
comp=Z,20nm,1.0s
P33M Teslin, Yukon 63.07 34 P P 20 13 32.9 +1.3
baz=296,SNR=9.4
R32K Eaglecrest 63.12 36 P P 20 13 33.3 +1.5
baz=296
SIT Sitka 63.26 38 P P 20 13 34.1 +1.4
baz=296
ZEI Tsey 63.61 305 eP P 20 13 34.6 -1.0
ZEI pmax pmax
comp=Z,16nm,1.0s
OOD Oodnadatta 63.82 174 P P 20 13 36.5 -0.1
KBZ Khabaz 63.87 306 P P 20 13 37.9 +1.0
comp=Z,23nm,0.9s,baz=66,slow=2.6,SNR=44
comp=Z,23nm,0.9s
Q32M Nakina River 63.88 35 P P 20 13 38.6 +1.6
baz=297
QLP Quilpie 63.90 165 P P 20 13 38.4 +1.2
KIV Kislovodsk 63.91 307 ⇓P P 20 13 38.5 +1.1
KIV Kislovodsk 63.91 307 P P 20 13 37.6 +0.2
KIV Kislovodsk 63.91 307 eP P 20 13 37.9 +0.5
KIV pmax pmax
comp=Z,77nm,1.1s
KIV MLR MLR
comp=Z,123nm,17.0s
ONI Oni 64.00 305 P P 20 13 38.6 +0.7
ONI Oni 64.00 305 P P 20 13 38.6 +0.7
ONI pmax pmax
comp=Z,18nm,1.0s
NAX Nakhchivan 64.12 301 P P 20 13 37.5 -1.3
GNI Garni 64.20 302 P P 20 13 39.7 +0.2
GNI IAmb IAmb 20 13 42.0
comp=Z,19nm,1.0s
GNI Garni 64.20 302 P P 20 13 39.7 +0.2
GNI pmax pmax
comp=Z,19nm,1.0s
R33M Jennings River 64.28 34 P P 20 13 41.0 +1.4
baz=298
INKA Innaminka 64.39 169 P P 20 13 41.8 +1.4
TGTN Hyland Airport 64.44 31 P P 20 13 41.8 +1.3
baz=299,SNR=7.7
AKH Akhalkalaki 64.49 304 P P 20 13 42.4 +1.0
AKH Akhalkalaki 64.49 304 P P 20 13 42.4 +1.0
AKH pmax pmax
comp=Z,61nm,1.0s
ERBR Yeremizino-Bor 64.54 309 eP P 20 13 41.9 +0.5
ERBR pmax pmax
comp=Z,60nm,1.1s
U33K Whale Pass 64.77 38 P P 20 13 44.0 +1.4
baz=298
FIA1 FINESS Array S 64.84 329 P P 20 13 42.6 -0.4
FINES FINESS Array B 64.85 329 P P 20 13 42.6 -0.4
comp=Z,10nm,0.8s,baz=64,slow=6.5,SNR=33
FINES LR LR 20 43 42.6
comp=Z,173nm,19.2s,baz=75,slow=38
comp=Z,10nm,0.8s
LABN Labinsk 64.87 308 eP P 20 13 44.6 +1.1
LABN pmax pmax
comp=Z,50nm,1.5s
S34M Telegraph Cree 64.89 36 P P 20 13 44.8 +1.4
baz=298
WTLY Watson Lake, Y 64.90 33 P P 20 13 45.0 +1.4
baz=299
WRAK Wrangell Islan 65.01 37 P P 20 13 45.1 +0.9
baz=298
CRAG Craig 65.07 38 P P 20 13 45.5 +0.9
baz=298
KARS Kars 65.12 303 P P 20 13 45.8 +0.4
KARS Kars 65.12 303 P P 20 13 45.8 +0.4
KARS pmax pmax
comp=Z,33nm,0.7s
DLBC Dease Lake 65.16 35 P P 20 13 46.6 +1.4
baz=299
RES Resolute Bay 65.72 12 P P 20 13 48.1 -0.5
RES IAmb IAmb 20 13 49.4
comp=Z,9.7nm,0.8s
RES Resolute Bay 65.72 12 P P 20 13 48.1 -0.5
RES pmax pmax
comp=Z,10.0nm,0.8s
BCA Borcka 65.73 305 ⇑P P 20 13 49.6 +0.4
T35M Bob Quinn 65.76 36 P P 20 13 50.4 +1.3
baz=299,SNR=6.4
SOC Sochi 66.00 307 eP P 20 13 49.4 -1.4
SOC ePPP PPP 20 17 47.8
SOC eS S 20 22 39.2 +0.8
SOC pmax pmax
comp=Z,21nm,0.7s
SOC MLR MLR
comp=Z,193nm,19.0s
VSU Vasula 66.04 326 eP P 20 13 52.2 +1.4
MULG Mulgathing 66.17 176 P P 20 13 51.8 -0.1
MEF Metsahovi 66.18 328 eP P 20 13 52.8 +1.1
FORT Forrest 66.53 181 P P 20 13 53.9 -0.2
FORT Forrest 66.53 181 P P 20 13 54.0 -0.2
NEEM North Greenlan 66.73 0 i P P 20 13 54.4 -1.0
NEEM IAmb IAmb 20 13 58.3
comp=Z,7.5nm,0.8s
GURO Guroymak-BITLI 66.80 302 P P 20 13 57.1 +0.8
GURO IAmb IAmb 20 13 58.5
comp=Z,20nm,1.1s
ANN Anapa 66.88 309 eP P 20 13 56.2 -0.2
ANN pmax pmax
comp=Z,90nm,0.9s
ANN MLR MLR
comp=Z,161nm,8.0s
KOTAN Kotaneelee Air 66.94 31 P P 20 13 57.6 +1.0
baz=302
MTSE Matsula 67.22 327 eP P 20 13 58.5 +0.1
MNK Minsk 67.51 322 i P P 20 13 59.1 -1.2
MNK i 20 16 26.7
MNK i PPP PPP 20 18 07.7
MNK i S S 20 22 56.3 0.0
MNK i SS SS 20 27 18.7 +2.8
MNK pmax pmax
comp=N,21nm,1.3s
MNK pmax pmax
comp=Z,27nm,1.3s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=Z,196nm,14.0s
MNK MLR MLR
comp=N,128nm,14.0s
MNK MLR MLR
comp=E,53nm,10.0s
IDID Didziasalis 67.65 323 eP P 20 13 59.5 -1.7
DZM Mont Dzumac 67.66 143 P P 20 14 02.3 +0.6
DZM IAmb IAmb 20 14 05.4
comp=Z,8.7nm,0.8s
DZM Mont Dzumac 67.66 143 P P 20 14 02.3 +0.6
comp=Z,6.2nm,0.7s,baz=306,slow=9.2,SNR=6.3
DZM LR LR 20 40 23.4
comp=Z,37nm,20.9s,baz=321,slow=33
comp=Z,6.2nm,0.7s
IIGN Ignalina 67.89 323 eP P 20 14 02.5 -0.1
STKA Stephens Creek 68.58 169 P P 20 14 08.8 +1.7
VSVD Vaisvydziai 68.65 324 eP P 20 14 07.7 +0.4
AKASG Malin Array Be 68.77 318 P P 20 14 07.9 -0.4
AKASG IAmb IAmb 20 14 09.0
comp=Z,16nm,1.0s
AKASG Malin Array Be 68.77 318 P P 20 14 07.7 -0.5
comp=Z,16nm,0.7s,baz=52,slow=6.4,SNR=43
comp=Z,16nm,0.7s
AKBB Malin Array Si 68.77 318 P P 20 14 07.8 -0.4
AKBB Malin Array Si 68.77 318 P P 20 14 07.8 -0.4
AKBB pmax pmax
comp=Z,32nm,0.9s
KIEV Kiev 68.78 318 ⇑P P 20 14 07.7 -0.6
KIEV Kiev 68.78 318 P P 20 14 07.5 -0.8
KIEV Kiev 68.78 318 P P 20 14 07.5 -0.8
KIEV pmax pmax
comp=Z,31nm,1.0s
BBOO Buckleboo 68.83 174 P P 20 14 08.2 -0.5
SIM Simferopol' 68.86 311 eP P 20 14 09.0 0.0
SIM pmax pmax
comp=Z,79nm,0.8s
PABE Paberze 68.89 324 eP P 20 14 09.2 +0.3
CMSA Cobar Meteorol 69.00 165 P P 20 14 11.1 +1.4
ARPR Arapgir-MALATY 69.06 304 P P 20 14 11.1 +0.6
YKA Yellowknife Ar 69.26 26 P P 20 14 10.8 -0.3
YKA Yellowknife Ar 69.26 26 P P 20 14 11.4 +0.3
comp=Z,11nm,0.9s,baz=306,slow=6.9,SNR=131
comp=Z,11nm,0.9s
BBB Bella Bella 69.28 40 LR LR 20 42 12.0
comp=Z,21nm,19.8s,baz=280,slow=34
SUW Suwalki 70.10 323 P P 20 14 15.7 -0.7
SUW Suwalki 70.10 323 P P 20 14 15.7 -0.7
SUW pmax pmax
comp=Z,48nm,1.2s
SUW Suwalki 70.10 323 eP P 20 14 16.4 0.0
PURM Purcari 70.59 314 ⇓P P 20 14 19.5 0.0
HFS Hagfors 70.59 331 P P 20 14 18.4 -0.9
comp=Z,2.3nm,0.6s,baz=68,slow=5.5,SNR=13
comp=Z,2.3nm,0.6s
SORM Soroca 70.61 316 ⇑P P 20 14 19.1 -0.5
SORM Soroca 70.61 316 P P 20 14 19.1 -0.5
HILA High Level 70.79 31 P P 20 14 20.3 -0.2
GAZ Gaziantep 70.80 302 P P 20 14 21.3 +0.2
BNN Bunyan 70.86 304 P P 20 14 21.5 -0.1
NB2 NORSAR Subarra 70.94 333 P P 20 14 20.6 -1.0
comp=Z,1.3nm,0.6s,baz=46,slow=6.2
NB2 NORSAR Subarra 70.94 333 P P 20 14 20.6 -1.0
NOA NORSAR Array B 70.94 333 P P 20 14 20.5 -1.0
comp=Z,4.2nm,0.9s,baz=48,slow=6.0,SNR=6.5
NOA LR LR 20 49 51.3
comp=Z,45nm,18.6s,baz=355,slow=40
comp=Z,4.2nm,0.9s
MILM Milestii Mici 71.00 315 eP P 20 14 21.0 -1.0
comp=Z,26nm,0.8s
MILM Milestii Mici 71.00 315 ⇓P P 20 14 21.5 -0.5
MILM Milestii Mici 71.00 315 eP P 20 14 21.0 -1.0
MILM pmax pmax
comp=Z,26nm,0.8s
SUMG Summit 71.30 356 P P 20 14 24.3 +0.4
SUMG Summit 71.30 356 P P 20 14 24.3 +0.4
SUMG Summit 71.30 356 i P P 20 14 23.1 -0.8

SUMG IAmb IAmb 20 14 25.2
comp=Z,6.2nm,0.8s
UPNV Upernavik 71.36 2 *i* P **P** **20 14 22.8 -0.9**
UPNV IAmb IAmb 20 14 24.2
comp=Z,8.2nm,0.7s
VASR Vaslui 71.74 315 ⇓P **P** **20 14 27.3 +0.8**
RAYN Ar Rayn 71.78 286 P **P** **20 14 26.8 -0.4**
RAYN Ar Rayn 71.78 286 P **P** **20 14 26.8 -0.4**
RAYN pmax pmax
comp=Z,24nm,0.9s
BR131 Keskin Array S 71.86 306 P **P** **20 14 27.2 -0.3**
BR131 Keskin Array S 71.86 306 P **P** **20 14 27.3 -0.3**
BR131 pmax pmax
comp=Z,22nm,0.9s
BRTR Keskin Array B 71.86 306 P **P** **20 14 27.5 -0.1**
BRTR Keskin Array B 71.86 306 P **P** **20 14 27.5 -0.1**
BRTR Keskin Array B 71.86 306 P **P** **20 14 27.7 +0.1**
comp=Z,17nm,0.9s,baz=87,slow=6.7,SNR=67
comp=Z,17nm,0.9s
VLDR Vladesti 72.01 314 ⇓P **P** **20 14 28.6 +0.5**
BIR Birlad 72.04 314 ⇓P **P** **20 14 28.6 +0.2**
BIR Birlad 72.04 314 P **P** **20 14 28.5 +0.2**
LVV L'vov 72.04 319 *e*P **P** **20 14 27.9 -0.4**
GHRR 72.28 314 ⇓P **P** **20 14 29.9 +0.1**
ANTO Ankara 72.33 307 P **P** **20 14 30.2 -0.1**
ANTO Ankara 72.33 307 P **P** **20 14 30.3 -0.1**
ANTO pmax pmax
comp=Z,25nm,0.9s
CFR Carcaliu 72.34 313 ⇑P **P** **20 14 29.8 -0.4**
CFR Carcaliu 72.34 313 P **P** **20 14 29.7 -0.4**
TPGR Topolog 72.35 313 ⇑P **P** **20 14 30.4 +0.2**
BR231 Keskin MP Arra 72.36 307 P **P** **20 14 30.4 -0.2**
TESR Tescani 72.47 315 ⇑P **P** **20 14 30.7 -0.1**
PANC Panciu 72.53 314 ⇓P **P** **20 14 32.3 +1.0**
BUR08 Bucovina Ar. S 72.64 317 P **P** **20 14 32.1 0.0**
BUR08 IAmb IAmb 20 14 33.5
comp=Z,16nm,0.9s
ODBI Odobesti 72.65 314 ⇑P **P** **20 14 32.6 +0.6**
BURAR Bucovina Array 72.65 317 ⇓P **P** **20 14 32.7 +0.5**
BURAR Bucovina Array 72.65 317 P **P** **20 14 32.3 +0.1**
BURAR IAmb IAmb 20 14 33.9
comp=Z,15nm,0.8s
BURAR Bucovina Array 72.65 317 P **P** **20 14 32.6 +0.5**
TLBR Topalu 72.75 313 ⇑P **P** **20 14 33.1 +0.6**
VRI Vrincioaia 72.78 314 ⇓P **P** **20 14 33.7 +0.8**
VRI Vrincioaia 72.78 314 P **P** **20 14 33.6 +0.8**
PLOR Plostina 72.83 314 ⇑P **P** **20 14 33.2 +0.1**
PLOR Plostina 72.83 314 P **P** **20 14 33.2 +0.1**
KWP Kalwaria Pacla 72.85 319 P **P** **20 14 33.3 +0.1**
KWP Kalwaria Pacla 72.85 319 P **P** **20 14 33.3 +0.1**
KWP pmax pmax
comp=Z,29nm,1.0s
BISRR Bisoca 72.97 314 ⇑P **P** **20 14 35.3 +1.3**
MDUB Mudurnu 73.04 308 P **P** **20 14 34.3 -0.2**
TURR Turia 73.08 315 ⇑P **P** **20 14 35.7 +1.1**
COVR Voineasa-Covas 73.10 315 ⇑P **P** **20 14 35.6 +0.9**
ICOR Ion Corvin 73.13 312 ⇓P **P** **20 14 34.8 0.0**
OZUR 73.19 315 ⇑P **P** **20 14 36.2 +1.0**
AUMAG Moama Anglican 73.24 167 P **P** **20 14 34.9 -0.4**
NEHR Nehoiu 73.28 314 ⇑P **P** **20 14 37.2 +1.4**
ARPS Mount Arapiles 73.42 170 P **P** **20 14 38.1 +1.7**
ARCR ARCALIA 73.44 316 ⇑P **P** **20 14 38.5 +1.9**
MLR Muntele Rosu 73.45 314 ⇑P **P** **20 14 37.3 +0.4**
MLR Muntele Rosu 73.45 314 P **P** **20 14 36.2 -0.7**
MLR IAmb IAmb 20 14 38.9
comp=Z,20nm,1.1s
MLR Muntele Rosu 73.45 314 P **P** **20 14 36.2 -0.7**
MLR pmax pmax
comp=Z,20nm,1.1s
MLR Muntele Rosu 73.45 314 LR LR 20 47 32.5
comp=Z,204nm,18.7s,baz=46,slow=36
KOLS Kolonicke sedl 73.49 319 *e*P **P** **20 14 38.6 +1.7**
KOLS Kolonicke sedl 73.49 319 *e*P **P** **20 14 38.6 +1.7**
DOPR Dopca 73.50 315 ⇑P **P** **20 14 37.9 +0.8**
OJC Ojcow 74.01 321 P **P** **20 14 39.9 0.0**
OJC IAmb IAmb 20 14 44.0
comp=Z,20nm,1.1s
OJC Ojcow 74.01 321 P **P** **20 14 39.9 0.0**
OJC pmax pmax
comp=Z,20nm,1.1s
MMAI Mount Meron Ar 74.25 299 P **P** **20 14 41.9 +0.1**
comp=Z,5.5nm,0.7s,baz=70,slow=7.2,SNR=12
comp=Z,5.5nm,0.7s
ARR Arges 74.27 315 ⇑P **P** **20 14 42.5 +0.8**
LOZB Loznitsa 74.28 312 ⇓P **P** **20 14 42.4 +0.8**
MARR Marisel-Cluj 74.36 317 ⇓P **P** **20 14 43.4 +1.2**
DRGR 74.52 317 ⇑P **P** **20 14 43.5 +0.4**
DRGR 74.52 317 P **P** **20 14 43.4 +0.4**
CSS Mathiatis 74.64 302 P **P** **20 14 43.2 -0.7**
CSS IAmb IAmb 20 14 44.7
comp=Z,27nm,1.0s
LOT Lotru 74.72 315 ⇓P **P** **20 14 45.1 +0.8**
TOO Toolangi 74.81 167 P **P** **20 14 44.8 +0.3**
TOO IAmb IAmb 20 15 18.1
comp=Z,17nm,1.1s
TOO Toolangi 74.81 167 P **P** **20 14 44.8 +0.3**
TOO pmax pmax
comp=Z,17nm,1.2s
ICESG Greenland Ices 74.82 356 *i* P **P** **20 14 42.5 -2.2**
ICESG IAmb IAmb 20 14 46.0
comp=Z,11nm,0.8s
LANS Liptovska Anna 74.83 320 *e*P **P** **20 14 48.5 +3.7**
LANS Liptovska Anna 74.83 320 *e*P **P** **20 14 48.5 +3.7**
ELND Elena 74.96 312 ⇑P **P** **20 14 46.2 +0.6**
GHAJ Ghor Haditha 75.07 298 P **P** **20 14 46.8 +0.4**
GZR Gura Zlata 75.32 316 ⇓P **P** **20 14 48.3 +0.6**
GZR Gura Zlata 75.32 316 P **P** **20 14 48.3 +0.6**
SIRR Siria 75.42 317 ⇑P **P** **20 14 49.0 +0.8**
PLVB Pleven 75.44 313 ⇓P **P** **20 14 48.9 +0.5**
SURR Surduc 75.47 316 ⇑P **P** **20 14 48.1 -0.3**
KRLC Kraliky 75.62 322 *e*P **P** **20 14 49.5 +0.2**
KRLC Kraliky 75.62 322 *e*P **P** **20 14 49.5 +0.2**
DPC Dobruska-Polom 75.67 323 *e*P **P** **20 14 50.2 +0.6**
DPC Dobruska-Polom 75.67 323 *e*P **P** **20 14 50.2 +0.6**
EDM Edmonton 75.81 33 P **P** **20 14 50.6 +0.2**
EDM IAmb IAmb 20 14 53.0
comp=Z,14nm,1.3s
EDM Edmonton 75.81 33 P **P** **20 14 50.6 +0.2**
EDM pmax pmax
comp=Z,14nm,1.3s
HERR Herculane 75.83 315 ⇑P **P** **20 14 50.3 -0.3**
BZS Buzias 75.83 316 ⇑P **P** **20 14 50.5 -0.1**
BZS Buzias 75.83 316 P **P** **20 14 50.4 -0.1**
ELL Elmali 75.95 305 P **P** **20 14 51.2 -0.4**
ELL Elmali 75.95 305 P **P** **20 14 51.2 -0.4**
ELL pmax pmax
comp=Z,103nm,0.8s
VRAC Vranov 76.20 322 LR LR 20 52 36.8
comp=Z,183nm,18.4s,baz=46,slow=39
MDVR Moldovita 76.29 316 ⇑P **P** **20 14 52.5 -0.7**
EIL Elat 76.41 297 LR LR 20 51 59.5
comp=Z,46nm,19.6s,baz=66,slow=38
BLKB Belogradchik 76.44 314 ⇓P **P** **20 14 54.7 +0.6**
MODS Modra-Piesok 76.45 321 *e*P **P** **20 14 54.7 +0.6**
MODS Modra-Piesok 76.45 321 *e*P **P** **20 14 54.7 +0.6**
CLL Collm 76.64 325 *i* P **P** **20 14 55.0 0.0**
CLL *i* 20 15 02.8
CLL Collm 76.64 325 *i* P **P** **20 14 55.0 0.0**
CLL *i* x x 20 15 02.8
CLL *e*PP **PP** **20 17 49.0 +2.3**
CLL *e*(PPP) 20 19 27.0
CLL *e*S **S** **20 24 42.0 +0.7**
CLL AMS AMS 20 45 00.0
comp=N,200nm,21.9s
CLL AMS AMS 20 45 00.0
comp=E,300nm,20.8s
H04A Detroit Lake 76.83 44 P **P** **20 14 56.5 +0.2**
H04A IAmb IAmb 20 14 57.9
comp=Z,7.7nm,0.9s
HSKC Hora Svate Kat 76.91 324 *e*P **P** **20 14 57.0 +0.4**
D08A Wollman Farm, 77.13 41 P **P** **20 14 58.0 +0.2**
D08A IAmb IAmb 20 14 59.5
comp=Z,6.8nm,0.8s
DBO Dodson Butte 77.19 46 P **P** **20 14 58.8 +0.4**
DBO IAmb IAmb 20 15 01.1
comp=Z,15nm,1.1s
HAWA Hanford 77.22 41 P **P** **20 14 59.2 +0.7**
HAWA IAmb IAmb 20 15 00.4
comp=Z,9.6nm,0.8s
SFJD Kangerlussuaq 77.24 360 *i* P **P** **20 14 57.6 -0.5**
SFJD IAmb IAmb 20 14 59.5
comp=Z,8.9nm,0.8s
NEW Newport 77.28 39 P **P** **20 14 59.1 +0.3**
NEW Newport 77.28 39 P **P** **20 15 00.1 +1.3**
baz=310
NEW Newport 77.28 39 P **P** **20 14 59.1 +0.3**
NEW pmax pmax
comp=Z,9.0nm,1.2s
NEW Newport 77.28 39 LR LR 20 46 43.3
comp=Z,15nm,21.7s,baz=332,slow=34
RONA Rosalia, Austr 77.39 320 *e*pP **P** **20 15 00.1 +0.7**
comp=Z,7.3nm,1.0s
CONA Conrad Observa 77.47 321 *e*pP pP 20 15 00.9 -2.7
comp=Z,7.6nm,1.3s
CKRC Cesky Krumlov 77.66 322 *e*P **P** **20 15 01.3 +0.4**
CKRC Cesky Krumlov 77.66 322 *e*P **P** **20 15 01.3 +0.4**
DY2G Dye2 77.71 358 *i* P **P** **20 15 00.2 -0.8**
DY2G IAmb IAmb 20 15 02.1
comp=Z,9.1nm,0.8s
KHC Kasperske Hory 77.82 323 *e*P **P** **20 15 01.8 0.0**
KHC Kasperske Hory 77.82 323 *e*P **P** **20 15 01.8 0.0**
GERES GERESS Array B 77.95 322 P **P** **20 15 02.3 -0.3**
comp=Z,1.7nm,0.8s,baz=29,slow=6.1,SNR=7.8
GERES LR LR 20 53 32.3
comp=Z,183nm,19.4s,baz=48,slow=39
comp=Z,1.7nm,0.8s
ARSA Arzberg 78.08 320 *e*P **P** **20 15 03.7 +0.4**
comp=Z,4.4nm,0.9s
SOKA Soboth 78.71 320 *i* P **P** **20 15 07.2 +0.4**
comp=Z,6.8nm,0.8s
BIOA Bad Ischl, Aus 78.75 322 *i* pP pP 20 15 08.0 -2.7
comp=Z,4.7nm,1.1s
FCC Fort Churchill 78.82 21 P **P** **20 15 06.9 -0.1**
FCC IAmb IAmb 20 15 08.1
comp=Z,24nm,1.4s
FCC Fort Churchill 78.82 21 P **P** **20 15 06.9 -0.1**
FCC pmax pmax
comp=Z,24nm,1.4s
OBKA Obir 79.07 320 *i* pP **P** **20 15 09.6 +0.8**
comp=Z,8.7nm,0.8s
FFC Flin Flon 79.40 27 P **P** **20 15 09.8 -0.4**
FFC IAmb IAmb 20 15 11.5
comp=Z,16nm,0.9s
FFC Flin Flon 79.40 27 P **P** **20 15 09.9 -0.4**
FFC pmax pmax
comp=Z,16nm,1.0s
BMO Blue Mountains 79.41 42 P **P** **20 15 10.7 0.0**
BMO Blue Mountains 79.41 42 P **P** **20 15 10.7 0.0**
BMO pmax pmax
comp=Z,5.0nm,0.9s
LESA Schwarzleotal 79.41 322 *i* pP pP 20 15 11.6 -2.7
comp=Z,5.2nm,0.9s
PRED Cave del Predi 79.62 321 P **P** **20 15 11.4 -0.4**
PRED IAmb IAmb 20 15 33.9
comp=Z,21nm,1.5s
WATA Walderalm 80.02 322 *i* P **P** **20 15 13.9 -0.1**
comp=Z,3.9nm,1.1s
SQTA Sankt Quirin 80.28 322 *i* P **P** **20 15 15.0 -0.4**
comp=Z,5.6nm,1.1s
EKA Eskdalemuir Ar 80.29 335 P **P** **20 15 13.8 -1.3**
comp=Z,3.2nm,0.8s,baz=36,slow=5.9,SNR=5.2
comp=Z,3.2nm,0.8s
RETA Reute 80.31 323 *i* pP pP 20 15 16.5 -2.7
comp=Z,8.1nm,1.8s
BPMT Black Pine Rid 80.37 39 P **P** **20 15 16.2 +0.2**
ATD Arta Tunnel 80.50 277 P **P** **20 15 16.9 -0.1**
ATD IAmb IAmb 20 15 19.5
comp=Z,26nm,1.2s
DAVA Damuels 80.89 323 *i* pP **P** **20 15 19.5 +0.8**
comp=Z,7.5nm,1.2s
BFO Black Forest 80.89 325 P **P** **20 15 18.5 0.0**
BFO IAmb IAmb 20 15 19.5
comp=Z,10nm,1.1s
BFO Black Forest 80.89 325 P **P** **20 15 18.5 0.0**
BFO pmax pmax
comp=Z,10.0nm,1.1s
EGMT Eagleton 81.06 36 P **P** **20 15 20.1 +0.5**
EGMT IAmb IAmb 20 15 21.2
comp=Z,18nm,0.9s
EGMT Eagleton 81.06 36 P **P** **20 15 20.2 +0.7**
baz=315
MFID Camas Ranch 81.16 42 P **P** **20 15 20.8 +0.7**
MFID IAmb IAmb 20 15 22.2
comp=Z,11nm,0.8s
FUORN Ofenpass-Fuorn 81.16 322 P **P** **20 15 20.2 -0.1**
DAVOX Davos/Dischmat 81.24 323 LR LR 20 55 36.5
comp=Z,122nm,19.8s,baz=48,slow=39
HLID Hailey 81.82 41 P **P** **20 15 24.7 +0.9**
baz=313,SNR=10.0
BOZ Bozeman (W) 81.86 38 P **P** **20 15 25.1 +1.3**
baz=314,SNR=5.1
CMB Columbia Colle 82.06 48 P **P** **20 15 25.0 +0.1**
CMB Columbia Colle 82.06 48 P **P** **20 15 25.0 +0.1**
CMB pmax pmax
comp=Z,6.0nm,1.0s
NVAR Mina Array Bea 83.05 47 P **P** **20 15 30.4 +0.1**
NVAR Mina Array Bea 83.05 47 P **P** **20 15 31.5 +1.1**
comp=Z,4.4nm,0.7s,baz=294,slow=4.2,SNR=12
comp=Z,4.4nm,0.7s
H17A Grant Village 83.24 39 P **P** **20 15 34.2 +3.0**
baz=315,SNR=8.4
DGMT Dagmar 83.26 33 P **P** **20 15 31.0 +0.1**
DGMT Dagmar 83.26 33 P **P** **20 15 31.5 +0.5**
baz=319
RLMT Red Lodge 83.37 37 P **P** **20 15 32.7 +0.9**
baz=316
TPH Tonopah 83.93 47 P **P** **20 15 35.1 +0.3**
TPH Tonopah 83.93 47 P **P** **20 15 35.1 +0.3**
TPH pmax pmax
comp=Z,71nm,1.1s
TIN Tinemaha, Big 84.00 48 P **P** **20 15 36.2 +1.1**
baz=311
VES Vestal, Richgr 84.27 49 P **P** **20 15 36.8 +0.5**
baz=311
PKM Mcpherson Peak 84.44 51 P **P** **20 15 38.1 +0.6**
baz=311
CWC Cottonwood Cre 84.49 48 P **P** **20 15 38.1 +0.4**
baz=311
GRAC Grapevine Rang 84.56 48 P **P** **20 15 38.3 +0.5**
baz=312
R11B Troy Canyon, C 84.70 46 P **P** **20 15 39.2 +0.5**
baz=313
ISA Isabella, Lake 84.77 49 P **P** **20 15 39.0 +0.1**
baz=311
ARVC Arvin 84.90 50 P **P** **20 15 39.7 +0.2**
baz=311
BW06 Boulder Array 84.92 39 P **P** **20 15 39.6 -0.2**
baz=316
PD31 Pinedale Array 84.92 39 P **P** **20 15 39.7 -0.1**
PDAR Pinedale Array 84.92 39 P **P** **20 15 39.7 -0.1**
PDAR Pinedale Array 84.92 39 P **P** **20 15 40.2 +0.5**
comp=Z,3.6nm,0.9s,baz=318,slow=2.0,SNR=9.3
PDAR LR LR 20 52 53.6
comp=Z,20nm,18.2s,baz=9.5,slow=35
comp=Z,3.6nm,0.9s
DUG Dugway, Tooele 85.00 43 P **P** **20 15 41.1 +1.0**
baz=314
MPMC Manual Prospec 85.10 48 P **P** **20 15 41.1 +0.3**
baz=312,SNR=7.7
FURC Furnace Creek, 85.21 48 P **P** **20 15 42.0 +1.0**
baz=312
ULM Lac du Bonnet 85.22 27 P **P** **20 15 40.4 -0.5**
comp=Z,3.3nm,0.7s,baz=320,slow=6.4,SNR=7.8
comp=Z,3.3nm,0.7s
TPNV Topopah Spring 85.25 47 P **P** **20 15 42.1 +0.6**
baz=312
OSI Osito Audit: C 85.30 50 P **P** **20 15 42.5 +0.9**
baz=311
LRMC Laurel Mtn Rad 85.37 49 P **P** **20 15 42.9 +0.8**
baz=312
EDW2 Edwards Air Fo 85.58 50 P **P** **20 15 43.9 +0.9**
baz=312
MDND Maddock 85.70 31 P **P** **20 15 44.1 +0.8**
baz=322
SHOC Shoshone, Teco 85.94 48 P **P** **20 15 45.7 +0.9**
baz=312
GSC Goldstone, Bar 86.02 49 P **P** **20 15 46.0 +0.7**
baz=312
TUQ Turquoise Moun 86.47 48 P **P** **20 15 48.4 +0.9**
baz=313,SNR=5.1
SCI2 San Clemente I 86.48 51 P **P** **20 15 48.1 +0.7**
baz=311
RSSD Black Hills 86.63 35 P **P** **20 15 48.4 +0.1**
baz=320
AGMN Agassiz Nation 86.83 28 P **P** **20 15 49.1 +0.3**
baz=325
GMRC Granite Mounta 87.06 48 P **P** **20 15 51.3 +0.9**
baz=313
TPFO Pinon Flats 87.37 50 P **P** **20 15 52.4 +0.5**
baz=312
BELC Belle Mtn. Jos 87.39 49 P **P** **20 15 52.2 +0.2**
baz=313
O20A White River Ci 87.50 40 P **P** **20 15 52.8 +0.3**
baz=317
IRM Iron Mountain 87.80 48 P **P** **20 15 54.6 +0.7**
baz=313
MONP2 Monument Peak 87.87 50 P **P** **20 15 55.0 +0.6**
baz=312
RAR Rarotonga 87.91 118 LR LR 20 46 20.8
comp=Z,92nm,21.1s,baz=318,slow=30
U15A North Rim 87.92 45 P **P** **20 15 55.4 +0.7**
U15A IAmb IAmb 20 15 57.4
comp=Z,12nm,0.9s
BC3 Big Chuckawall 87.95 49 P **P** **20 15 55.5 +0.8**
baz=313
N23A Red Feather La 88.13 39 P **P** **20 15 56.3 +0.7**
baz=318
PDMCI Parker Dam,Lak 88.31 48 P **P** **20 15 56.6 +0.4**
baz=314
SUSD Miller 88.67 32 P **P** **20 15 58.9 +1.1**
baz=323
EYMN Ely 88.73 26 P **P** **20 15 58.4 +0.4**
baz=328
WUAZ Wupatki 89.09 45 P **P** **20 16 00.9 +0.8**
baz=315
ISCO Idaho Springs 89.11 39 P **P** **20 16 00.4 +0.1**
baz=319
MVCO Mesa Verde 89.49 43 P **P** **20 16 02.7 +0.6**
baz=317
S22A 4UR Ranch, Cre 90.00 41 P **P** **20 16 05.0 +0.5**
baz=318
OGNE Ogallala 90.01 36 P **P** **20 16 04.6 +0.4**
baz=321
ECSD EROS Data Cent 90.25 31 P **P** **20 16 05.1 0.0**
ECSD IAmb IAmb 20 16 06.5
comp=Z,7.5nm,0.9s
W18A Petrified Fore 90.31 45 P **P** **20 16 06.7 +0.9**
baz=316
SPMN Marine on St. 90.55 28 P **P** **20 16 07.5 +1.0**
baz=327
SDCO Great Sand Dun 90.71 40 P **P** **20 16 08.7 +0.9**
baz=319
TUC Tucson 91.71 47 P **P** **20 16 14.1 +1.8**
baz=316
ANMO Albuquerque 92.28 43 P **P** **20 16 15.5 +0.5**
ANMO IAmb IAmb 20 16 17.9
comp=Z,7.2nm,1.4s
ANMO Albuquerque 92.28 43 P **P** **20 16 16.6 +1.6**
baz=318
ANMO Albuquerque 92.28 43 P **P** **20 16 15.5 +0.5**
ANMO pmax pmax
comp=Z,7.0nm,1.4s
PPT Papeete 93.23 109 LR LR 20 56 13.5
comp=Z,40nm,18.5s,baz=224,slow=34
KSU1 Kansas State U 94.01 34 P **P** **20 16 23.0 +0.4**
baz=324
AMTX Amarillo 94.88 40 P **P** **20 16 27.2 +0.4**
baz=321
TRQ Mont Tremblant 95.29 16 P **P** **20 16 27.9 -0.5**
WMOK Wichita Mounta 96.47 38 P **P** **20 16 34.8 +0.8**
baz=323
TUL3 Leonard 96.98 35 P **P** **20 16 37.0 +0.8**
baz=325
PKME Peaks-Kenny Pk 97.29 13 P **P** **20 16 36.3 -1.1**
baz=345
MBAR Mbarara 97.31 275 LR LR 21 02 27.0
comp=Z,71nm,19.3s,baz=28,slow=37
TXAR Lajitas Array 98.04 45 P Pdif 20 16 41.7 +0.4
comp=Z,0.9nm,0.9s,baz=264,slow=3.8,SNR=8.6
comp=Z,0.9nm,0.9s
ACSO Alum Creek Sta 98.44 24 P Pdif 20 16 42.1 -0.7
baz=334
P49A Miami Univ. Ec 98.47 26 P Pdif 20 16 42.1 -0.8
baz=333
BINY Binghamton 98.72 19 P Pdif 20 16 43.6 -0.4
baz=340
NHSC New Hope 105.83 25 P **PKiKP** **20 21 28.2 -0.1**
baz=336
VNDA Vanda 115.08 173 PKP **PKPdf** **20 21 44.3 0.0**
comp=Z,0.6nm,0.7s,baz=288,slow=3.2,SNR=2.4
QSPA South Pole Qui 125.83 180 PKP **PKiKP** **20 22 05.1 -0.6**
comp=Z,4.2nm,0.8s,baz=298,slow=1.4,SNR=13
ELIB Princess Elisa 128.81 203 *d*PKPdf **PKiKP** **20 22 11.1 -0.5**

NEIC ***10*** *20:09:43.8±1.1, 12°.8N±0°.2×143°.4E±0°.2, h125km±13km, mb4.0/6, Error ellipse: s-maj=34.9km s-min=9.9km az=127.0*
IDC ***10*** *20:09:45.0±1.5, 12°.68N×143°.85E, h161km±26km, mb3.3/10, mbtmp3.8/10, Error ellipse: s-maj=59.4km s-min=17.3km az=89.0*
ISC 10 20:09:44.4±0.9, 12°.7N±0°.1×143°.7E±0°.1, h150km, n20, σ0s57/21, mb4.0/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.45**	**53**	P	**Pn**	**20 10 13.4**	**0.0**
	76nm,0.3s,baz=307,slow=1.6,SNR=18						
GUMO				S	**Sn**	**20 10 36.2**	**+0.5**
	215nm,0.4s,baz=53,slow=23,SNR=22						
MJAR	**Matsushiro Arr**	**24.23**	**349**	P	**P**	**20 14 46.6**	**-0.7**
	0.9nm,0.6s,baz=165,slow=9.9,SNR=4.4						
	0.9nm,0.6s						
MAJO	**Matsushiro**	**24.23**	**349**	P	**P**	**20 14 46.4**	**-0.9**
WB0	**Warramunga Arr**	**33.55**	**196**	P	**P**	**20 16 11.0**	**+0.8**
WB0				IAmb	IAmb	20 16 28.4	
	comp=Z,6.8nm,1.4s						
WRA	**Warramunga Arr**	**33.73**	**196**	P	**P**	**20 16 11.6**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=19,slow=9.3,SNR=4.6						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**37.41**	**195**	P	**P**	**20 16 42.4**	**-0.8**
	comp=Z,0.2nm,0.8s,baz=12,slow=9.6,SNR=1.7						
	comp=Z,0.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.38**	**283**	P	**P**	**20 17 32.8**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=80,slow=6.5,SNR=2.0						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**46.78**	**326**	P	**P**	**20 17 59.3**	**+0.3**
SONM				IAmb	IAmb	20 18 15.1	
	comp=Z,2.4nm,1.4s						
SONM	**Songino Array**	**46.78**	**326**	P	**P**	**20 17 59.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=134,slow=6.2,SNR=5.5						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**61.31**	**317**	P	**P**	**20 19 44.0**	**-0.2**
MKAR	**Makanchi Array**	**61.31**	**317**	P	**P**	**20 19 44.6**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=88,slow=8.4,SNR=5.4						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**61.66**	**325**	P	**P**	**20 19 45.5**	**-0.8**
ZALV	**Zalesovo Beam**	**61.66**	**325**	P	**P**	**20 19 46.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=118,slow=8.1,SNR=5.5						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**64.50**	**320**	P	**P**	**20 20 05.4**	**+0.3**
KURK				IAmb	IAmb	20 20 06.1	
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**64.54**	**320**	P	**P**	**20 20 05.5**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=106,slow=6.7,SNR=7.4						
	comp=Z,1.2nm,0.5s						
BVAR	**Borovoye Array**	**69.89**	**322**	P	**P**	**20 20 39.6**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=103,slow=7.8,SNR=20						
	comp=Z,1.6nm,0.5s						
BRVK	**Borovoye**	**69.96**	**322**	P	**P**	**20 20 40.0**	**+0.6**
BRVK				IAmb	IAmb	20 20 48.0	
	comp=Z,3.6nm,1.4s						
ABKAR	**Akbulak array**	**76.41**	**318**	P	**P**	**20 21 17.1**	**-0.3**
ABKAR	**Akbulak array**	**76.41**	**318**	P	**P**	**20 21 17.2**	**-0.1**
ABKAR				IAmb	IAmb	20 21 26.9	
	comp=Z,1.8nm,1.4s						
FINES	**FINESS Array B**	**91.45**	**335**	P	**P**	**20 22 33.0**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=60,slow=4.6,SNR=5.3						
	comp=Z,1.2nm,0.9s						

KRNET ***10*** *20:18:44.8±0.1, 41°.42N×69°.26E, h30km, mb3.0*
NNC ***10*** *20:18:44.6±1.4, 41°.37N×69°.37E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=9.7km s-min=6.8km az=48.0*
SOME ***10*** *20:18:44.7, 41°.42N×69°.40E, h5km*
ISU ***10*** *20:18:47.1, 41°.39N×69°.05E, h12km*
ISC 10 20:18:44.8±1.1, 41°.59N±0°.02×69°.37E±0°.02, h9km±9km, n52, σ2s27/89, 18C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.27**	**191**	P	**Pb**	**20 18 51.6**	**-0.2**
TAS				S	**Sg**	**20 18 55.1**	**+1.4**
IUG	**Iuzhnay**	**0.75**	**41**	*e*P	**Pn**	**20 19 02.2**	**+0.4**
	48nm,0.2s						
IUG				*e*S	**Sn**	**20 19 15.0**	**+1.7**
	276nm,0.3s						

IUG	**Iuzhnay**	**0.75**	**41**	*e*P		**Pn**	**20 19 02.2**	**+0.4**
	baz=38							
IUG				*e*S		**Sn**	**20 19 15.0**	**+1.7**
	baz=38							
TRKS	**Terek-Say**	**1.33**	**92**	⇓*i*P		**Pb**	**20 19 10.8**	**+0.7**
	baz=88							
TRKS				⇓*i*S		**Sn**	**20 19 30.2**	**+2.4**
	baz=88							
BRLS	**Boroldaу**	**1.48**	**13**	*e*P		**Pn**	**20 19 10.8**	**-1.0**
	21nm,0.2s							
BRLS				*e*S		**Sb**	**20 19 29.6**	**-2.0**
	112nm,0.1s							
BRLS	**Boroldaу**	**1.48**	**13**	*e*P		**Pn**	**20 19 10.8**	**-1.0**
	baz=16							
BRLS				*e*S		**Sb**	**20 19 29.7**	**-2.0**
	baz=16							
KSNS	**Kasansay**	**1.68**	**104**	P		Pg	20 19 21.1	+4.1
KSNS				S		Sg	20 19 46.4	+7.7
KK31	**Karatay Array**	**1.74**	**29**	⇓Pn		**Pg**	**20 19 17.8**	**-0.3**
	3.2nm,0.3s,baz=70,slow=19,SNR=153							
KK31				⇓Sn		**Sg**	**20 19 45.1**	**+4.4**
	12nm,0.2s,baz=99,slow=25,SNR=24							
KKAR	**Karatay Array**	**1.74**	**29**	⇑*i*P		**Pg**	**20 19 18.0**	**-0.1**
	baz=29							
KKAR				⇑*i*S		**Sg**	**20 19 43.1**	**+2.4**
	baz=29							
DZI	**Dzhizak**	**1.88**	**219**	P		**Pn**	**20 19 16.1**	**-1.0**
DZI				S		**Sn**	**20 19 37.7**	**-3.3**
BTK	**Batken**	**1.88**	**144**	⇓*i*P		**Pn**	**20 19 16.8**	**-0.5**
	baz=39							
BTK				⇓*i*S		**Sn**	**20 19 40.3**	**-0.9**
	baz=39							
ARK	**Arkit**	**1.96**	**83**	⇑*i*P		**Pb**	**20 19 20.3**	**-0.4**
	baz=79							
ARK				⇑*i*S		**Sg**	**20 19 46.5**	**-1.2**
	baz=79							
DZA	**Taraz**	**1.96**	**48**	*e*P		**Pg**	**20 19 23.8**	**+1.5**
	16nm,0.2s							
DZA				*e*S		**Sg**	**20 19 51.8**	**+4.1**
	116nm,0.4s							
FRG	**Fergana**	**2.19**	**123**	P		**Pg**	**20 19 27.9**	**+1.0**
FRG				S		**Sg**	**20 19 59.0**	**+3.7**
ANR	**Andizhan**	**2.41**	**109**	P		**Pg**	**20 19 31.8**	**+0.9**
ANR				S		**Sg**	**20 20 06.4**	**+4.3**
MNAS	**Manas**	**2.51**	**68**	⇑*i*P		**Pb**	**20 19 28.5**	**-1.6**
	baz=65							
MNAS				⇑*i*S		**Sb**	**20 20 00.5**	**-0.6**
	baz=65							
TSTA	**Tashata**	**2.56**	**112**	P		**Pg**	**20 19 33.7**	**-0.1**
TSTA				S		**Sg**	**20 20 09.8**	**+2.8**
OHH	**Osh**	**2.79**	**111**	⇑*e*P		**Pn**	**20 19 31.2**	**+1.4**
	baz=7.0							
OHH				⇑*e*S		**Sn**	**20 20 04.6**	**+0.9**
	baz=7.0							
AGL	**Agalyk**	**2.80**	**223**	P		**Pn**	**20 19 30.6**	**+0.7**
AGL				S		**Sn**	**20 20 04.3**	**+0.4**
DRK	**Karamyk**	**2.81**	**138**	⇑*e*P		**Pn**	**20 19 30.4**	**+0.2**
	baz=34							
DRK				⇑*e*S		**Sn**	**20 20 02.8**	**-1.5**
	baz=34							
NUT	**Nurota**	**2.97**	**251**	P		**Pn**	**20 19 33.2**	**+1.0**
NUT				S		**Sn**	**20 20 09.0**	**+1.0**
MRKS	**Merke**	**3.10**	**67**	Pg		**Pg**	**20 19 43.5**	**-0.6**
	6.9nm,0.5s							
MRKS				Lg		Lg	20 20 25.4	
	28nm,0.5s							
MRKS	**Merke**	**3.10**	**67**	*e*P		**Pg**	**20 19 42.9**	**-1.2**
	6.9nm,0.5s							
MRKS				*e*S		**Sg**	**20 20 24.3**	**+0.1**
	33nm,0.5s							
EKS2	**Erkin-Say**	**3.45**	**70**	⇑*i*P		**Pn**	**20 19 41.6**	**+2.7**
	baz=68							
EKS2				⇑*i*S		**Sn**	**20 20 23.3**	**+3.3**
	baz=68							
SFK	**Sufi-Kurgan**	**3.51**	**115**	⇑*i*P		**Pn**	**20 19 40.9**	**+1.1**
	baz=12							
SFK				⇑*i*S		**Sn**	**20 20 21.4**	**-0.2**
	baz=12							
TMD	**Tamdy-Bulak**	**3.54**	**274**	P		**Pn**	**20 19 42.4**	**+2.4**
TMD				S		**Sn**	**20 20 26.5**	**+4.4**
ARLS	**Aral**	**3.72**	**84**	⇑*i*P		**Pn**	**20 19 44.9**	**+2.3**
	baz=82							
ARLS				⇑*i*S		**Sn**	**20 20 28.8**	**+2.1**
	baz=82							
PKMR	**Pachkamar**	**3.80**	**218**	P		**Pn**	**20 19 45.0**	**+1.4**
PKMR				S		**Sn**	**20 20 31.8**	**+3.3**
USP	**Ospenovka**	**4.16**	**64**	⇓*i*P		**Pn**	**20 19 51.2**	**+2.7**
	baz=63							
USP				⇓*i*S		**Sn**	**20 20 40.4**	**+3.2**
	baz=63							
CHMS	**Chumysh**	**4.24**	**69**	⇓Pg		**Pg**	**20 20 03.4**	**-2.6**
	2.4nm,0.8s							
CHMS				⇑Lg		Lg	20 21 00.3	
	5.1nm,0.5s							
DZN	**Dzhankel'dy**	**4.60**	**263**	P		**Pn**	**20 19 56.8**	**+2.2**
DZN				S		**Sb**	**20 20 56.7**	**-4.6**
TKM2	**Tokmak 2**	**4.81**	**72**	⇑Pg		**Pg**	**20 20 14.1**	**-2.9**
TKM2				⇓Lg		Lg	20 21 19.2	
	2.9nm,0.5s							
BTLS	**Baital**	**4.86**	**43**	Pg		**Pg**	**20 20 15.9**	**-1.9**
	1.6nm,0.4s							
BTLS				Lg		Lg	20 21 21.6	
	3.1nm,0.3s							
BTLS	**Baital**	**4.86**	**43**	*e*P		**Pg**	**20 20 15.9**	**-1.9**
	1.6nm,0.4s							
BTLS				*e*S		**Sg**	**20 21 21.6**	**+0.9**
	3.1nm,0.3s							
DGS	**Degeres**	**5.02**	**69**	Pg		**Pg**	**20 20 17.5**	**-3.5**
	1.6nm,0.5s							
DGS				Lg		Lg	20 21 23.7	
	7.0nm,0.7s							
DGS	**Degeres**	**5.02**	**69**	*e*P		**Pg**	**20 20 17.4**	**-3.5**
	1.6nm,0.5s							
DGS				*e*S		**Sg**	**20 21 23.7**	**-2.3**
	7.0nm,0.7s							
KST	**Kastek**	**5.10**	**71**	Pg		**Pg**	**20 20 19.5**	**-3.0**
	1.7nm,0.2s							
KST				Lg		Lg	20 21 27.7	
	13nm,0.6s							
KST	**Kastek**	**5.10**	**71**	*e*P		**Pg**	**20 20 19.5**	**-3.0**
	1.7nm,0.2s							
KST				*e*S		**Sg**	**20 21 27.7**	**-0.9**
	13nm,0.6s							
KRBS	**Karabastau**	**5.11**	**64**	Pg		**Pg**	**20 20 19.7**	**-2.9**
	0.7nm,0.1s							
KRBS				Lg		Lg	20 21 28.0	
	3.2nm,0.5s							
KRBS	**Karabastau**	**5.11**	**64**	*e*P		**Pg**	**20 20 19.8**	**-2.9**
	0.7nm,0.1s							
KRBS				*e*S		**Sg**	**20 21 28.0**	**-0.8**
	3.2nm,0.5s							
IZV	**Izvestkoviy**	**5.57**	**73**	Pg		**Pg**	**20 20 29.1**	**-2.2**
	0.9nm,0.2s							
IZV				Lg		Lg	20 21 43.8	
	5.5nm,0.5s							
IZV	**Izvestkoviy**	**5.57**	**73**	*e*P		**Pg**	**20 20 29.1**	**-2.2**
	0.9nm,0.2s							
IZV				*e*S		**Sg**	**20 21 43.8**	**+0.4**
	5.5nm,0.5s							
KUU	**Kurty**	**5.63**	**63**	Pg		**Pg**	**20 20 29.0**	**-3.6**
	1.0nm,0.2s							
KUU				Lg		Lg	20 21 43.5	
	5.8nm,0.4s							
KUU	**Kurty**	**5.63**	**63**	*e*P		**Pg**	**20 20 30.0**	**-2.6**
	0.9nm,0.1s							
KUU				*e*S		**Sg**	**20 21 45.0**	**-0.4**
	5.8nm,0.4s							
KTBS	**Karatobe**	**5.80**	**66**	Pg		**Pg**	**20 20 32.7**	**-3.1**
	1.1nm,0.5s							
KTBS				Lg		Lg	20 21 49.9	
	8.1nm,0.4s							
KTBS	**Karatobe**	**5.80**	**66**	*e*P		**Pg**	**20 20 32.7**	**-3.1**
	1.1nm,0.5s							
KTBS				*e*S		**Sg**	**20 21 49.9**	**-1.0**
	8.1nm,0.4s							
TNSS	**Tian-Shan**	**5.81**	**73**	Pg		**Pg**	**20 20 33.5**	**-2.5**
	1.3nm,0.2s							
TNSS				Lg		Lg	20 21 51.8	
	3.6nm,0.6s							
TNSS	**Tian-Shan**	**5.81**	**73**	*e*P		**Pg**	**20 20 32.8**	**-3.2**
	1.3nm,0.2s							
TNSS				*e*S		**Sg**	**20 21 49.8**	**-1.4**
	1.9nm,0.4s							
KOTS	**Kotyrbulak**	**5.97**	**71**	Pg		**Pg**	**20 20 36.4**	**-2.6**
	2.0nm,0.8s							
KOTS				Lg		Lg	20 21 56.3	
	7.0nm,0.8s							
KOTS	**Kotyrbulak**	**5.97**	**71**	*e*P		**Pg**	**20 20 36.4**	**-2.6**
	2.0nm,0.8s							
KOTS				*e*S		**Sg**	**20 21 56.3**	**0.0**
	7.0nm,0.8s							
CHKK	**Chushkaly**	**6.05**	**65**	Pg		**Pg**	**20 20 37.5**	**-3.2**
	0.4nm,0.1s							
CHKK				Lg		Lg	20 21 58.5	
	5.5nm,0.6s							
CHKK	**Chushkaly**	**6.05**	**65**	*e*P		**Pg**	**20 20 37.5**	**-3.2**
	0.4nm,0.1s							
CHKK				*e*S		**Sg**	**20 21 58.5**	**-0.6**
	5.5nm,0.6s							

*ISN **10** 20:44:55.8±1.5,34°.83N×45°.71E,h21km±999km,ML2.7*
*TEH **10** 20:44:57.6,34°.72N×45°.62E,h10km±141km,ML2.7*
ISC 10 20:44:58.1±1.9,34°.71N±0°.10×45°.64E±0°.08,h10km,n9,
σ0$60/13,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.21**	**191**	Pg		**Pg**	**20 45 02.0**	**-0.4**
KGS1				Sg		**Sg**	**20 45 06.4**	**+0.9**
IDHR	**Dehrash**	**0.62**	**91**	Pg		**Pg**	**20 45 10.3**	**+0.2**
IGHG	**Ghaleghazi**	**0.86**	**116**	Pg		**Pg**	**20 45 14.4**	**-0.3**
ILIN	**Lien**	**1.11**	**79**	Pg		**Pn**	**20 45 19.7**	**-0.2**
ILBA	**Ilam Banvizeh**	**1.19**	**156**	Pg		**Pb**	**20 45 20.3**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.24**	**110**	Pg		**Pg**	**20 45 22.0**	**+0.1**
IBDR	**Badra**	**1.62**	**171**	*e*Pn		**Pn**	**20 45 27.0**	**+0.3**
IBDR				*e*Sn		**Sb**	**20 45 48.0**	**-0.5**
BHD	**Baghdad**	**1.78**	**216**	*e*Pn		**Pn**	**20 45 29.0**	**+0.1**
BHD				*e*Sn		**Sb**	**20 45 53.0**	**-0.1**
BHD				AML		AML	20 46 10.6	
	comp=E,24nm,0.7s							
RAFI	**Al-Rafai**	**3.01**	**172**	*e*Pn		**Pn**	**20 45 45.0**	**-0.8**
RAFI				*e*Sn		**Sn**	**20 46 23.0**	**+1.1**

*IDC **10** 20:48:38.0±5.6,45°.66N×151°.77E,h0km,mb3.5/3,*
mbtmp3.4/4,ML2.2/1,MS2.9/3,Error ellipse:
s-maj=132.6km s-min=39.8km az=160.0
*SKHL **10** 20:48:45.5±0.2,45°.70N×151°.80E,h60km±4km,mb4.4/4*
ISC 10 20:48:45.4±1.8,45°.8N±0°.3×151°.8E±0°.2,h50km,n17,
σ1$21/13,mb3.3/3,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**2.79**	**261**	*i* P		**Pn**	**20 49 27.9**	**+0.3**
KUR				AMB		AMB	20 49 29.7	
	70nm,0.4s							
KUR				*i* S		**Sn**	**20 49 59.5**	**-0.5**
KUR				A		A	20 50 05.2	
	120nm,0.4s							
KUR				A		A	20 50 05.2	
	100nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**4.54**	**250**	*e*P		**Pn**	**20 49 52.4**	**+0.9**
YUK				AMB		AMB	20 49 52.7	
	30nm,0.4s							
YUK				*e*S		**Sn**	**20 50 42.7**	**-0.2**
YUK				A		A	20 50 54.1	
	100nm,0.5s							
YUK				A		A	20 50 54.1	
	80nm,0.5s							
NMR	**Nemuro--Hokkai**	**4.93**	**243**	*e*P		**Pn**	**20 49 57.3**	**+0.4**
NMR				*e*S		**Sn**	**20 50 51.0**	**-1.6**
AKK	**Akkeshi**	**5.67**	**244**	*e*P		**Pn**	**20 50 08.7**	**+1.7**
AKK				*e*S		**Sn**	**20 51 10.1**	**-0.6**
SKR	**Severo-Kuril's**	**5.72**	**29**	*e*P		**Pn**	**20 50 09.4**	**+1.7**
SKR				AMB		AMB	20 50 10.5	
	40nm,0.8s							
PETK	**Petropavlovsk-**	**8.31**	**26**	Pn		**Pn**	**20 50 42.2**	**-0.9**
	0.1nm,0.3s,baz=181,slow=11,SNR=5.6							
PETK				LR		LR	20 54 04.0	
	comp=Z,28nm,18.9s,baz=237,slow=39							
	0.6nm,0.5s							
MA2	**Magadan**	**13.86**	**358**	LR		LR	20 56 37.7	
	comp=Z,34nm,19.4s,baz=90,slow=34							
H11N2	**WAKE ISLAND Hy**	**28.80**	**149**	T		T	21 25 04.4	
	baz=338,slow=76,SNR=98							
H11N1	**WAKE ISLAND Hy**	**28.82**	**149**	T		T	21 25 05.8	
	baz=338,slow=76,SNR=111							
H11N3	**WAKE ISLAND Hy**	**28.82**	**149**	T		T	21 25 05.8	
	baz=338,slow=76,SNR=92							
H11S1	**WAKE ISLAND Hy**	**29.86**	**151**	T		T	21 26 21.6	
	baz=339,slow=76,SNR=52							
H11S3	**WAKE ISLAND Hy**	**29.87**	**151**	T		T	21 26 27.5	
	baz=339,slow=76,SNR=66							
H11S2	**WAKE ISLAND Hy**	**29.88**	**151**	T		T	21 26 33.7	
	baz=339,slow=76,SNR=44							
MKAR	**Makanchi Array**	**46.57**	**298**	P		**P**	**20 57 09.1**	**+1.0**
	0.2nm,0.7s,baz=68,slow=7.1,SNR=1.5							
	0.2nm,0.7s							
YKA	**Yellowknife Ar**	**52.28**	**36**	P		**P**	**20 57 51.4**	**+0.1**
	0.3nm,0.9s,baz=299,slow=7.0,SNR=4.3							
	0.3nm,0.9s							
FINES	**FINES Array B**	**64.54**	**334**	P		**P**	**20 59 15.0**	**-1.6**
	3.7nm,1.1s,baz=27,slow=9.9,SNR=1.9							
	3.7nm,1.1s							
LPIG	**La Paz**	**78.36**	**68**	LR		LR	21 28 26.4	
	comp=Z,20nm,19.4s,baz=216,slow=30							

*AFAD **10** 20:54:37.3±0.0,35°.00N×32°.38E,h20km±1km,ML2.4*
*GII **10** 20:54:37.1±0.5,34°.735N±0°.003×32°.445E±0°.001,h10km,*
Mws2.6,confirmed
*NIC **10** 20:54:38.3,34°.91N×32°.54E,h9km±31km,Ml2.7/9*
*ISK **10** 20:54:41.6,35°.20N×32°.82E,h7km,ML2.5/21*
ISC 10 20:54:37.4±1.1,34°.84N±0°.03×32°.50E±0°.04,h19km±3km,
n76,σ1$08/94,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NATA	**Nata**	**0.08**	**132**	P		**Pg**	**20 54 41.3**	**+0.3**
NATA				S		**Sg**	**20 54 44.9**	**+1.4**
NATA				AML		AML	20 54 45.7	
	36nm,0.3s							
NATA				AML		AML	20 54 45.8	
	26nm,0.3s							
AKMS	**Akamas**	**0.23**	**324**	P		**Pg**	**20 54 42.5**	**-0.3**
AKMS				S		**Sg**	**20 54 46.9**	**+0.4**
AKMS				AML		AML	20 54 47.1	
	4.8nm,0.3s							
AKMS				AML		AML	20 54 47.6	
	7.2nm,0.3s							
TROD	**Troodos**	**0.32**	**70**	P		**Pg**	**20 54 43.8**	**-0.8**
TROD				S		**Sg**	**20 54 48.7**	**-0.8**
TROD				AML		AML	20 54 51.2	
	2.0nm,0.3s							
TROD				AML		AML	20 54 51.5	
	2.1nm,0.3s							
ALFC	**Alefka**	**0.33**	**15**	P		**Pg**	**20 54 43.7**	**-0.9**
ALFC				S		**Sg**	**20 54 48.9**	**-0.6**
ALFC				AML		AML	20 54 50.0	
	5.3nm,0.3s							
ALFC				AML		AML	20 54 51.2	
	4.1nm,0.3s							
LEF	**Lefka**	**0.43**	**49**	Pg		**Pg**	**20 54 44.5**	**-1.8**
LEF	**Lefka**	**0.43**	**49**	P		**Pg**	**20 54 45.5**	**-0.7**
LEF				S		**Sg**	**20 54 51.6**	**-0.6**
ASGA	**Asgata**	**0.62**	**94**	P		**Pg**	**20 54 49.3**	**-0.4**
ASGA				S		**Sb**	**20 54 59.9**	**+2.0**
ASGA				AML		AML	20 55 01.5	
	2.6nm,0.2s							
ASGA				AML		AML	20 55 01.8	
	2.9nm,0.6s							
CSS	**Mathiatis**	**0.70**	**79**	Pg		**Pg**	**20 54 50.2**	**-1.0**
CSS	**Mathiatis**	**0.70**	**79**	P		**Pg**	**20 54 50.0**	**-1.2**
CSS				S		**Sn**	**20 55 02.3**	**-0.3**
CSS				AML		AML	20 55 02.9	
	0.9nm,0.5s							
CSS				AML		AML	20 55 03.8	
	1.0nm,0.4s							
CSS	**Mathiatis**	**0.70**	**79**	P		**Pg**	**20 54 50.7**	**-0.4**
CSS				S		**Sn**	**20 55 03.0**	**+0.4**
ATHAL	**Athalassa**	**0.80**	**67**	P		**Pg**	**20 54 52.6**	**-0.4**
ATHAL				S		**Sn**	**20 55 05.7**	**+0.6**
ATHAL				AML		AML	20 55 13.8	
	1.7nm,0.5s							
ATHAL				AML		AML	20 55 19.0	
	1.4nm,0.6s							
AKIN	**Akıncılar- Kıb**	**0.82**	**77**	Pg		**Pg**	**20 54 53.3**	**-0.1**
MVOU	**Mavrovouni**	**0.95**	**79**	P		**Pb**	**20 54 55.0**	**-0.2**
MVOU				S		**Sn**	**20 55 09.3**	**+0.4**
MVOU				AML		AML	20 55 14.0	
	0.5nm,0.4s							
MVOU				AML		AML	20 55 14.6	
	0.4nm,0.3s							
LFK	**Lefkose**	**0.96**	**62**	Pg		**Pb**	**20 54 54.0**	**-1.5**
PARAL	**Paralimni**	**1.28**	**82**	P		**Pg**	**20 55 01.9**	**-0.2**
PARAL				S		**Sg**	**20 55 19.8**	**+0.9**
PARAL				AML		AML	20 55 32.6	
	0.5nm,0.6s							
PARAL				AML		AML	20 55 33.2	
	0.5nm,0.9s							
GAZI	**Gazipasa**	**1.41**	**354**	P		**Pn**	**20 55 00.6**	**-1.5**
GAZI				S		**Sn**	**20 55 18.2**	**-1.9**
GAZI				*i* AML		AML	20 55 21.0	
	comp=N,81nm,0.5s							
AKK2	**Akkuyu-Mersin**	**1.56**	**33**	Pn		**Pn**	**20 55 03.1**	**-1.0**
AKK1	**Akkuyu-Mersin**	**1.56**	**33**	Pn		**Pn**	**20 55 03.1**	**-1.0**
AKKU	**Akkuyu-Mersin**	**1.58**	**33**	Pn		**Pn**	**20 55 03.5**	**-0.9**
GULN	**MERSIN_Gulnar**	**1.59**	**32**	P		**Pn**	**20 55 03.9**	**-0.7**
GULN				S		**Sn**	**20 55 26.2**	**+1.4**
TISA	**Tisan-Mersin**	**1.64**	**36**	Pn		**Pn**	**20 55 04.7**	**-0.5**
YESI	**Yesilovacik-Me**	**1.65**	**34**	Pn		**Pn**	**20 55 04.9**	**-0.5**
KARG	**Kargicak-Mersi**	**1.69**	**36**	Pn		**Pn**	**20 55 05.9**	**0.0**
KARG				S		**Sn**	**20 55 23.5**	**-3.5**
IKL	**Isikli**	**1.70**	**34**	Pn		**Pn**	**20 55 05.7**	**-0.4**
TEVE	**Tevekalti-Mers**	**1.77**	**25**	Pn		**Pn**	**20 55 07.5**	**+0.3**
SILI	**Silifke-Mersin**	**1.92**	**37**	Pn		**Pn**	**20 55 09.4**	**+0.3**
KIZK	**Mersin**	**2.12**	**39**	P		**Pn**	**20 55 12.8**	**+1.0**
KIZK				S		**Sb**	**20 55 40.6**	**-0.6**
KIZK				*i* AML		AML	20 55 44.0	
	comp=N,45nm,0.5s							
KIZK				*i* AML		AML	20 55 45.0	
	comp=E,38nm,0.3s							
HDMB	**Hadim**	**2.12**	**360**	Pn		**Pn**	**20 55 13.5**	**+1.4**
KEPZ	**Antalya-Kepez**	**2.19**	**341**	P		**Pn**	**20 55 12.5**	**-0.3**
KEPZ				S		**Sn**	**20 55 39.3**	**-0.1**
KKBE	**Karaman, Kazim**	**2.41**	**8**	P		**Pn**	**20 55 16.8**	**+0.9**
KKBE				S		**Sn**	**20 55 47.9**	**+3.0**
KKBE				*i* AML		AML	20 55 52.0	
	comp=E,35nm,0.5s							
KKBE				*i* AML		AML	20 55 55.0	
	comp=N,26nm,0.9s							
SEYD	**Seydisehir-KON**	**2.62**	**348**	Pn		**Pn**	**20 55 21.2**	**+2.3**
HNTI	**Hanita**	**2.83**	**127**	P		**Pn**	**20 55 22.7**	**+1.1**
HNTI	**Hanita**	**2.83**	**127**	P		**Pn**	**20 55 21.3**	**-0.3**
MMA0B	**Mount Meron ar**	**3.02**	**126**	S		**Sn**	**20 56 01.1**	**+1.0**
MMA0B	**Mount Meron ar**	**3.02**	**126**	P		**Pn**	**20 55 24.5**	**+0.2**
MMB1	**Mount Meron ar**	**3.03**	**126**	P		**Pn**	**20 55 23.8**	**-0.6**
OFRI	**`Ofer**	**3.03**	**136**	P		**Pn**	**20 55 23.8**	**-0.6**
GULE	**Gulek**	**3.06**	**36**	P		**Pn**	**20 55 27.5**	**+2.5**
GULE				S		**Sn**	**20 56 04.2**	**+3.0**
GEM	**Giv'at Ha'Em**	**3.09**	**121**	S		**Sn**	**20 56 02.1**	**+0.5**
GEM	**Giv'at Ha'Em**	**3.09**	**121**	P		**Pn**	**20 55 24.8**	**-0.4**
KONT	**Konya--Tatoy**	**3.11**	**358**	Pn		**Pn**	**20 55 27.8**	**+2.3**
NATI	**Neve Ativ**	**3.11**	**119**	P		**Pn**	**20 55 25.6**	**+0.1**
KARA	**Karaisali**	**3.19**	**40**	Pn		**Pn**	**20 55 27.3**	**+0.7**
KSHT	**Keshet**	**3.32**	**123**	P		**Pn**	**20 55 29.0**	**+0.6**
KSHT	**Keshet**	**3.32**	**123**	S		**Sn**	**20 56 08.1**	**+0.7**
SLTI	**Sal'it**	**3.35**	**140**	P		**Pn**	**20 55 28.5**	**-0.3**
SLTI	**Sal'it**	**3.35**	**140**	P		**Pn**	**20 55 28.3**	**-0.4**
SLTI	**Sal'it**	**3.35**	**140**	S		**Sn**	**20 56 07.6**	**-0.4**
LADK	**Ladik-KONYA**	**3.36**	**358**	Pn		**Pn**	**20 55 31.1**	**+2.1**
TAHT	**Tahtakopru-Hat**	**3.38**	**62**	Pn		**Pn**	**20 55 30.4**	**+1.3**
CMRD	**Camardi-Nigde**	**3.47**	**35**	Pn		**Pn**	**20 55 31.3**	**+0.8**
SALP	**Salfit**	**3.56**	**140**	P		**Pn**	**20 55 31.0**	**-0.7**
SALP	**Salfit**	**3.56**	**140**	P		**Pn**	**20 55 31.5**	**-0.3**
QRNJ	**Al-Qirein**	**3.58**	**133**	P		**Pn**	**20 55 32.6**	**+0.7**
HMDT	**Nahal Hemdat**	**3.61**	**135**	P		**Pn**	**20 55 33.4**	**+1.0**
HMDT	**Nahal Hemdat**	**3.61**	**135**	S		**Sn**	**20 56 15.4**	**+0.9**
KOZT	**Kozan**	**3.77**	**45**	Pn		**Pn**	**20 55 35.9**	**+1.3**
UJAP	**Al Uja**	**3.80**	**138**	P		**Pn**	**20 55 35.2**	**+0.3**
AMAZ	**Amatzia**	**3.87**	**148**	P		**Pn**	**20 55 36.2**	**+0.3**
AMAZ	**Amatzia**	**3.87**	**148**	S		**Sn**	**20 56 20.9**	**0.0**
DSI	**Dead Sea**	**4.05**	**143**	P		**Pn**	**20 55 38.7**	**+0.2**
DSI	**Dead Sea**	**4.05**	**143**	P		**Pn**	**20 55 38.6**	**+0.1**
DSI	**Dead Sea**	**4.05**	**143**	S		**Sn**	**20 56 25.1**	**-0.3**
YTIR	**Yattir**	**4.10**	**147**	P		**Pn**	**20 55 39.3**	**+0.1**
KZIT	**Kziot**	**4.23**	**157**	S		**Sn**	**20 56 28.9**	**-0.9**
KZIT	**Kziot**	**4.23**	**157**	P		**Pn**	**20 55 40.6**	**-0.3**
MSBI	**Mazada**	**4.25**	**145**	P		**Pn**	**20 55 41.5**	**+0.4**
GHAJ	**Ghor Haditha**	**4.36**	**143**	P		**Pn**	**20 55 43.4**	**+0.7**
ASF	**Jabal al Asfar**	**4.54**	**125**	P		**Pn**	**20 55 46.3**	**+1.1**
PRNI	**Paran**	**4.95**	**154**	P		**Pn**	**20 55 50.9**	**+0.1**
PRNI	**Paran**	**4.95**	**154**	P		**Pn**	**20 55 50.9**	**+0.1**
HRFI	**Mount Harif**	**5.24**	**155**	P		**Pn**	**20 55 55.2**	**+0.3**
HRFI	**Mount Harif**	**5.24**	**155**	S		**Sn**	**20 56 54.1**	**-0.7**
HRFI	**Mount Harif**	**5.24**	**155**	P		**Pn**	**20 55 55.0**	**+0.2**
EIL	**Elat**	**5.55**	**157**	P		**Pn**	**20 55 59.6**	**+0.5**
EIL	**Elat**	**5.55**	**157**	S		**Sn**	**20 57 01.2**	**-1.3**

*JMA **10** 21:02:40.8±0.2,36°.3N±0°.8×137°.7E±°,h281km±1km,*
MV3.3/36,TOYAMA GIFU BORDER REG
*IDC **10** 21:02:41.1±0.5,36°.35N×136°.99E,h279km±4km,mb3.1/14,*
mbtmp3.8/20,Error ellipse: s-maj=13.0km s-min=9.2km
az=84.0
**ISC 10

YAK	**Yakutsk**	**26.04**	**352**	P		**P**	**21 07 49.5**	**+0.5**
	2.2nm,0.3s,baz=166,slow=10.0,SNR=2.3							
	2.2nm,0.3s							
SEY	**Seymchan**	**28.19**	**15**	P		**P**	**21 08 09.0**	**+0.9**
	0.5nm,0.5s,baz=204,slow=19,SNR=1.6							
	0.5nm,0.5s							
TIXI	**Tiksi**	**35.55**	**356**	P		**P**	**21 09 11.8**	**-0.1**
	1.8nm,0.2s,baz=160,slow=5.5,SNR=12							
	1.8nm,0.2s							
MKAR	**Makanchi Array**	**41.43**	**302**	P		**P**	**21 10 01.0**	**0.0**
	0.2nm,0.6s,baz=85,slow=13,SNR=4.5							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**43.58**	**308**	P		**P**	**21 10 18.2**	**+0.1**
	0.6nm,0.6s,baz=86,slow=8.1,SNR=5.3							
	0.6nm,0.6s							
BVAR	**Borovoye Array**	**48.35**	**312**	P		**P**	**21 10 55.6**	**+0.5**
	0.2nm,0.3s,baz=98,slow=7.3,SNR=5.3							
	0.2nm,0.3s							
ILAR	**Eielson Array**	**51.90**	**32**	P		**P**	**21 11 21.8**	**+0.3**
	0.4nm,0.5s,baz=263,slow=5.6,SNR=9.5							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**56.11**	**183**	P		**P**	**21 11 51.0**	**-1.1**
	5.9nm,0.4s,baz=358,slow=7.6,SNR=66							
ASAR	**Alice Springs**	**59.83**	**183**	P		**P**	**21 12 17.0**	**-0.9**
	1.4nm,0.3s,baz=360,slow=6.3,SNR=32							
	1.4nm,0.3s							
YKA	**Yellowknife Ar**	**66.09**	**29**	P		**P**	**21 12 59.1**	**+0.8**
	0.2nm,0.7s,baz=299,slow=7.6,SNR=4.3							
	0.2nm,0.7s							
FINES	**FINESS Array B**	**67.66**	**331**	P		**P**	**21 13 07.8**	**-0.5**
	1.1nm,0.8s,baz=51,slow=10.0,SNR=5.0							
	1.1nm,0.8s							
PDAR	**Pinedale Array**	**80.59**	**43**	P		**P**	**21 14 22.6**	**-0.8**
	0.5nm,0.7s,baz=290,slow=3.7,SNR=3.9							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**93.27**	**50**	P		**P**	**21 15 26.6**	**+1.6**
	0.3nm,0.5s,baz=180,slow=1.0,SNR=4.1							
	0.3nm,0.5s							

*NEIC **10** 21:07:39.1±1.2, 43.71N±0.06×105.31W±0.09, h0km±1km, ML3.1/62, Error ellipse: s-maj=11.7km s-min=9.2km az=74.0*
*IDC **10** 21:07:40.6±1.6, 44.07N×105.82W, h0km, mbtmp3.0/3, ML3.1/3, Error ellipse: s-maj=48.4km s-min=7.6km az=146.0*

ISC 10 21:07:39.3±1.1, 43.76N±0.06×105.29W±0.06, h0km, n34, σ1s57/35, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.98**	**68**		**Pg**	**21 07 59.6**	**+1.5**
K22A	**Casper**	**1.43**	**220**		**Pn**	**21 08 05.1**	**-1.5**
PHWY	**Pilot Hill**	**2.46**	**183**		**Pn**	**21 08 21.3**	**+0.4**
RWWY	**Rawlins**	**2.50**	**215**		**Pn**	**21 08 22.9**	**+1.4**
RWWY				IAML		21 08 57.8	
	128nm,0.3s						
N23A	**Red Feather La**	**2.90**	**190**		**Pn**	**21 08 27.7**	**+0.7**
N23A				IAML		21 09 12.0	
	comp=E,59nm,0.4s						
N23A				IAML		21 09 20.5	
	comp=N,47nm,0.9s						
LAO	**LASA Array**	**3.00**	**348**		**Pn**	**21 08 30.1**	**+1.9**
LAO				IAML		21 09 27.2	
	comp=N,66nm,0.9s						
LAO				IAML		21 09 29.2	
	comp=N,61nm,0.5s						
RLMT	**Red Lodge**	**3.16**	**297**	Pn	**Pn**	**21 08 31.1**	**+0.7**
RLMT				IAML		21 09 25.9	
	comp=N,31nm,0.7s						
RLMT				IAML		21 09 27.7	
	comp=N,40nm,0.3s						
BRIGG	**Briggsdale**	**3.26**	**167**		**Pn**	**21 08 32.3**	**+0.6**
PD31	**Pinedale Array**	**3.27**	**254**		**Pn**	**21 08 32.5**	**+0.5**
PDAR	**Pinedale Array**	**3.27**	**254**		**Pn**	**21 08 32.9**	**+0.9**
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**21 08 32.6**	**+0.6**
	comp=N,1.6nm,0.3s,baz=70,slow=16,SNR=41						
PDAR				Lg	Lg	21 09 15.5	
	comp=N,17nm,0.3s,baz=64,slow=30,SNR=17 comp=N,1.5nm,0.3s						
YMP	**Mirror Lake Pl**	**3.63**	**287**		**Pn**	**21 08 38.4**	**+1.3**
LKWY	**Lake**	**3.76**	**284**		**Pn**	**21 08 41.0**	**+2.2**
LKWY				IAML		21 09 50.4	
	comp=N,21nm,1.6s						
LKWY				IAML		21 09 50.8	
	comp=N,30nm,1.2s						
LOHW	**Long Hollow**	**3.85**	**270**		**Pn**	**21 08 42.5**	**+2.4**
LOHW				IAML		21 09 46.7	
	comp=N,19nm,1.2s						
H17A	**Grant Village**	**3.86**	**281**		**Pn**	**21 08 41.9**	**+1.8**
H17A				IAML		21 09 49.3	
	comp=N,21nm,1.6s						
FLWY	**Flagg Ranch**	**3.92**	**277**		**Pn**	**21 08 42.8**	**+1.8**
FLWY				IAML		21 09 51.6	
	comp=N,33nm,1.1s						
FLWY				IAML		21 09 57.6	
	comp=N,26nm,1.8s						
MOOW	**Moose Ponds**	**3.95**	**272**		**Pn**	**21 08 42.8**	**+1.4**
ISCO	**Idaho Springs**	**3.96**	**184**		**Pn**	**21 08 42.1**	**+0.5**
REDW	**Red Top Meadow**	**4.06**	**266**		**Pn**	**21 08 44.1**	**+1.3**
IMW	**Indian Meadow**	**4.09**	**274**		**Pn**	**21 08 43.2**	**-0.1**
IMW				IAML		21 10 04.7	
	comp=N,21nm,0.4s						
IMW				IAML		21 10 04.7	
	comp=N,25nm,0.4s						
YHH	**Holmes Hill**	**4.12**	**286**		**Pn**	**21 08 44.0**	**+0.2**
O20A	**White River Ci**	**4.24**	**212**		**Pn**	**21 08 46.3**	**+1.0**
AHID	**Auburn Hatcher**	**4.36**	**259**		**Pn**	**21 08 47.6**	**+0.7**
AHID				IAML		21 10 09.7	
	comp=N,27nm,1.5s						
YHL	**Hebgen Lake**	**4.37**	**287**		**Pn**	**21 08 47.7**	**+0.6**
YHL				IAML		21 10 12.5	
	comp=E,23nm,1.5s						
YHL				IAML		21 10 24.3	
	comp=N,22nm,1.3s						
DGMT	**Dagmar**	**4.77**	**9**	Pn	**Pn**	**21 08 55.3**	**+2.9**
Q24A	**Divide**	**4.79**	**179**		**Pn**	**21 08 53.5**	**+0.4**
BOZ	**Bozeman (W)**	**4.88**	**294**		**Pn**	**21 08 54.6**	**+0.5**
BOZ				IAML		21 10 16.8	
	comp=N,13nm,1.3s						
KSCO	**Kaye Shedlock'**	**5.15**	**156**		**Pn**	**21 08 58.0**	**+0.2**
BSUT	**Blindstream Ca**	**5.18**	**233**	Pn	**Pn**	**21 08 59.2**	**+0.8**
BSUT				IAML		21 10 32.8	
	comp=N,8.0nm,1.1s						
BSUT				IAML		21 11 07.1	
	comp=E,9.5nm,3.1s						
EGMT	**Eagleton**	**5.28**	**325**		**Pn**	**21 09 02.0**	**+2.5**
LYMT	**Lyon Mountain**	**5.88**	**306**	Pn	**Pn**	**21 09 09.9**	**+2.1**
ECSD	**EROS Data Cent**	**6.29**	**87**	Pn	**Pn**	**21 09 14.2**	**+0.9**
ULM	**Lac du Bonnet**	**9.14**	**41**	Pn	**Pn**	**21 09 51.9**	**-0.4**
	comp=E,1.2nm,0.3s,baz=230,slow=11,SNR=12						
ULM				Sn	**Sn**	**21 11 32.7**	**-3.1**
	comp=E,0.3nm,0.3s,baz=264,slow=19,SNR=2.0						
ULM				Lg	Lg	21 12 25.3	
	comp=E,0.2nm,0.3s,baz=157,slow=22,SNR=1.6 comp=E,2.1nm,0.3s						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**P**	**21 12 04.9**	**-3.2**
	baz=152,slow=10,SNR=1.4						

*NEIC **10** 21:10:40.8±1.4, 5.21S±0.09×146.07E±0.09, h135km±6km, mb4.3/29, Error ellipse: s-maj=13.7km s-min=12.5km az=92.0*
*IDC **10** 21:10:41.9±2.3, 5.19S×146.17E, h157km±21km, mb3.6/12, mbtmp4.1/14, Error ellipse: s-maj=26.4km s-min=10.7km az=96.0*

ISC 10 21:10:41.7±0.5, 5.21S±0.06×146.03E±0.08, h150km, n65, σ1s32/68, mb4.2/22, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BULU	**Kimbe**	**4.28**	**94**	P	**Pn**	**21 11 44.5**	**-1.1**
PMG	**Port Moresby**	**4.31**	**165**		**Pn**	**21 11 44.4**	**-1.7**
PMG	**Port Moresby**	**4.31**	**165**	P	**Pn**	**21 11 45.4**	**-0.7**
	7.6nm,0.3s,baz=129,slow=22,SNR=2.1						
PMG				S	**Sn**	**21 12 33.3**	**-2.9**
	108nm,0.3s,baz=325,slow=23,SNR=53						
GENI	**Genyem**	**6.40**	**294**	P	**Pn**	**21 12 14.7**	**+0.9**
COEN	**Coen**	**9.13**	**198**	Pn	**Pn**	**21 12 50.5**	**+0.3**
MTSU	**Mount Surprise**	**12.95**	**187**	P	**P**	**21 13 48.8**	**+3.5**
FAKI	**Fak Fak**	**13.94**	**279**	Pn	**Pn**	**21 13 52.6**	**-0.3**
TV1H	**Townsville Har**	**13.98**	**177**	P	**P**	**21 13 59.9**	**+3.2**
CTA	**Charters Tower**	**14.79**	**179**	P	**P**	**21 14 08.6**	**+3.0**
CTA	**Charters Tower**	**14.79**	**179**	P	**P**	**21 14 07.2**	**+1.6**
	3.9nm,0.6s,baz=355,slow=12,SNR=8.1						
CTAO	**Charters Tower**	**14.79**	**179**	P	**P**	**21 14 04.2**	**-1.4**
CTAO	**Charters Tower**	**14.79**	**179**	P	**P**	**21 14 08.7**	**+3.1**
MTN	**Manton Dam**	**16.54**	**242**		**Pn**	**21 14 25.3**	**+0.1**
MTN				IAmb	IAmb	21 14 33.5	
	comp=E,9.8nm,0.6s						
WB0	**Warramunga Arr**	**18.38**	**217**	P	**Pn**	**21 14 45.8**	**-1.3**
WB0				IAmb	IAmb	21 14 52.5	
	comp=Z,13nm,0.5s						
WRA	**Warramunga Arr**	**18.54**	**217**	P	**P**	**21 14 46.3**	**-0.7**
WRA	**Warramunga Arr**	**18.54**	**217**	P	**Pn**	**21 14 48.1**	**-0.9**
	comp=Z,6.5nm,0.4s,baz=41,slow=10,SNR=60						
WRA				S	**S**	**21 18 07.9**	**-2.8**
	comp=Z,0.4nm,0.8s,baz=36,slow=18,SNR=0.8						
EIDS	**Eidsvold**	**20.62**	**167**	P	**P**	**21 15 07.4**	**-1.9**
EIDS				IAmb	IAmb	21 15 12.9	
	comp=Z,8.0nm,1.0s						
QLP	**Quilpie**	**21.32**	**184**	P	**P**	**21 15 19.3**	**+2.5**
AS01	**Alice Springs**	**21.73**	**211**	P	**P**	**21 15 22.5**	**+1.2**
AS31	**Alice Springs**	**21.75**	**211**		**P**	**21 15 22.1**	**+0.6**
ASAR	**Alice Springs**	**21.75**	**211**	P	**P**	**21 15 22.2**	**+0.7**
	comp=Z,7.4nm,0.6s,baz=43,slow=7.3,SNR=156						
ASAR				S	**S**	**21 19 13.7**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=28,slow=23,SNR=9.8 comp=Z,7.4nm,0.6s						
SOEI	**Soe**	**22.04**	**257**	P	**P**	**21 15 24.7**	**0.0**
INKA	**Innaminka**	**22.96**	**192**	P	**P**	**21 15 34.9**	**+1.8**
FITZ	**Fitzroy Crossi**	**23.69**	**236**	P	**P**	**21 15 40.3**	**+0.4**
FITZ				IAmb	IAmb	21 15 42.6	
	comp=Z,6.6nm,0.6s						
MMRI	**Maumere**	**23.86**	**260**	P	**P**	**21 15 40.3**	**-1.2**
AULRC	**Lightning Ridg**	**24.16**	**176**	P	**P**	**21 15 44.7**	**+0.7**
OOD	**Oodnadatta**	**24.52**	**203**	P	**P**	**21 15 49.0**	**+1.7**
ARMA	**Armidale**	**25.62**	**169**	P	**P**	**21 15 58.7**	**+1.3**
ARMA				IAmb	IAmb	21 15 59.8	
	comp=Z,7.3nm,0.9s						
WRKA	**Warakurna**	**26.04**	**219**	P	**P**	**21 16 02.0**	**+0.8**
STKA	**Stephens Creek**	**26.85**	**188**	P	**P**	**21 16 08.4**	**+0.1**
STKA	**Stephens Creek**	**26.85**	**188**	P	**P**	**21 16 08.6**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=19,slow=8.6,SNR=5.4 comp=Z,1.6nm,0.4s						
BBOO	**Buckleboo**	**28.99**	**198**	P	**P**	**21 16 27.5**	**+0.1**
PSA00	**Pilbara Seismi**	**30.14**	**235**	P	**P**	**21 16 36.8**	**-0.8**
PSA00				IAmb	IAmb	21 16 50.7	
	comp=Z,6.3nm,1.3s						
FORT	**Forrest**	**30.54**	**212**	P	**P**	**21 16 41.0**	**-0.1**
TOO	**Toolangi**	**32.21**	**181**	P	**P**	**21 16 57.0**	**+1.3**
MJAR	**Matsushiro Arr**	**42.18**	**351**	P	**P**	**21 18 19.1**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=184,slow=7.7,SNR=1.4 comp=Z,0.7nm,0.7s						
TUWZ	**Tuamarina**	**43.84**	**149**	P	**P**	**21 18 33.9**	**+0.9**
KSRS	**Korea Array**	**45.68**	**340**	P	**P**	**21 18 47.7**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=154,slow=8.8,SNR=4.9 comp=Z,2.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.79**	**347**	P	**P**	**21 19 26.5**	**0.0**
	comp=Z,2.2nm,0.7s,baz=153,slow=9.7,SNR=2.3 comp=Z,2.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.03**	**298**	P	**P**	**21 19 36.9**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=118,slow=6.0,SNR=7.6 comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**63.25**	**331**	P	**P**	**21 20 54.7**	**+0.3**
SONM	**Songino Array**	**63.25**	**331**	P	**P**	**21 20 54.1**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=116,slow=7.5,SNR=4.8 comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**72.75**	**176**	P	**P**	**21 21 53.6**	**+0.6**
VNDA	**Vanda**	**72.75**	**176**	P	**P**	**21 21 53.5**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=328,slow=9.1,SNR=7.9 comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**76.28**	**321**	P	**P**	**21 22 13.6**	**-0.4**
MKAR	**Makanchi Array**	**76.28**	**321**	P	**P**	**21 22 13.4**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=97,slow=4.7,SNR=4.3 comp=Z,0.4nm,0.7s						
K15K	**Wolf Creek Mou**	**78.23**	**22**	P	**P**	**21 22 24.8**	**+0.3**
K15K				IAmb	IAmb	21 22 33.0	
	comp=Z,16nm,1.4s						
J16K	**Anvik River**	**79.16**	**22**	P	**P**	**21 22 30.2**	**+0.7**
J16K				IAmb	IAmb	21 22 36.8	
	comp=Z,14nm,1.4s						
F17K	**Baldwin Pennin**	**80.80**	**19**	P	**P**	**21 22 39.0**	**+0.7**
G18K	**Tagagawik**	**81.34**	**20**	P	**P**	**21 22 41.5**	**+0.4**
K20K	**Telida**	**81.68**	**23**	P	**P**	**21 22 44.1**	**+1.1**
E19K	**Redstone River**	**82.68**	**19**	P	**P**	**21 22 49.0**	**+0.9**
E19K				IAmb	IAmb	21 22 49.5	
	comp=Z,3.5nm,0.7s						
IMAR	**Indian Mountai**	**83.10**	**21**	P	**P**	**21 22 50.4**	**+0.1**
MLY	**Manley**	**83.76**	**22**	P	**P**	**21 22 53.9**	**+0.2**
MLY				IAmb	IAmb	21 22 54.8	
	comp=Z,3.1nm,0.8s						
SCM	**Sheep Creek Mo**	**83.80**	**26**	P	**P**	**21 22 55.4**	**+1.3**
B20K	**Meade River**	**84.10**	**17**	P	**P**	**21 22 55.9**	**+0.6**
B20K				IAmb	IAmb	21 22 58.0	
	comp=Z,1.9nm,0.7s						
WRH	**Wood River Hil**	**84.55**	**23**	P	**P**	**21 22 56.8**	**-0.8**
WRH				IAmb	IAmb	21 22 58.2	
	comp=Z,5.9nm,1.2s						
QSPA	**South Pole Qui**	**84.75**	**180**	P	**P**	**21 22 58.9**	**0.0**
QSPA				IAmb	IAmb	21 22 59.6	
	comp=Z,4.7nm,0.7s						
QSPA	**South Pole Qui**	**84.75**	**180**	P	**P**	**21 22 58.4**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=1.8,slow=2.8,SNR=42 comp=Z,4.9nm,0.7s						
IL31		**85.14**	**23**	P	**P**	**21 22 59.3**	**-1.3**
IL31				IAmb	IAmb	21 23 00.1	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	**85.14**	**23**	P	**P**	**21 22 59.3**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=252,slow=5.2,SNR=38 comp=Z,3.0nm,0.7s						
BVAR	**Borovoye Array**	**85.57**	**324**	P	**P**	**21 23 01.4**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=109,slow=7.8,SNR=2.0 comp=Z,0.4nm,0.8s						
LOGN	**Logan Glacier**	**86.31**	**28**	P	**P**	**21 23 06.6**	**-0.1**
BCAR	**Beaver Creek A**	**86.65**	**26**	P	**P**	**21 23 08.5**	**+0.4**
BMAR	**Burnt Mountain**	**87.01**	**21**	P	**P**	**21 23 10.6**	**+0.8**

IDC 10 21:21:18.1±3.2, 7.11N×126.46E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=321.7km s-min=22.6km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.98**	**164**	P	P	21 27 09.2	-1.6
	0.6nm,0.8s,baz=342,slow=8.7,SNR=1.3 0.6nm,0.8s						
ASAR	**Alice Springs**	**31.45**	**167**	P	P	21 27 43.0	+1.5
	0.2nm,0.7s,baz=346,slow=8.7,SNR=1.1 0.2nm,0.7s						
MKAR	**Makanchi Array**	**54.66**	**324**	P	P	21 30 49.4	+0.5
	0.5nm,0.4s,baz=117,slow=7.7,SNR=18 0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**58.77**	**326**	P	P	21 31 17.3	-0.7
	0.8nm,0.3s,baz=128,slow=6.0,SNR=1.5 0.8nm,0.3s						
BVAR	**Borovoye Array**	**64.36**	**326**	P	P	21 31 55.5	-0.3
	0.3nm,0.4s,baz=124,slow=7.7,SNR=5.5 0.3nm,0.4s						

*IDC **10** 21:39:18.6±2.7, 43.02N×105.11W, h0km, mb2.3/1, mbtmp2.9/3, ML2.9/2, MS3.0/1, Error ellipse: s-maj=48.7km s-min=10.0km az=156.0*
*NEIC **10** 21:39:19.8±1.3, 43.58N±0.04×105.14W±0.09, h0km±1km, ML3.0/44, Error ellipse: s-maj=11.4km s-min=6.1km az=279.0*

ISC 10 21:39:21.3±1.0, 43.55N±0.05×105.17W±0.05, h0km, n26, σ0s90/25, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.00**	**55**	Pg	**Pg**	**21 39 38.7**	**-1.8**
K22A	**Casper**	**1.34**	**228**		**Pg**	**21 39 45.2**	**-1.8**
K22A				IAML		21 40 15.9	
	comp=N,166nm,0.3s						
PHWY	**Pilot Hill**	**2.26**	**185**		**Pn**	**21 40 00.3**	**+0.1**
PHWY				IAML		21 41 24.3	
	comp=N,65nm,4.0s						
RWWY	**Rawlins**	**2.39**	**220**	Pn	**Pn**	**21 40 03.0**	**+1.0**
N23A	**Red Feather La**	**2.71**	**192**		**Pn**	**21 40 07.0**	**+0.5**
N23A				IAML		21 40 51.3	
	comp=N,83nm,1.0s						
N23A				IAML		21 40 55.2	
	comp=E,70nm,0.7s						
BRIGG	**Briggsdale**	**3.04**	**168**	Pn	**Pn**	**21 40 10.6**	**-0.2**
LAO	**LASA Array**	**3.22**	**347**	Pn	**Pn**	**21 40 13.4**	**+0.1**
PD31	**Pinedale Array**	**3.30**	**258**	Pn	**Pn**	**21 40 15.1**	**+0.6**
PDAR	**Pinedale Array**	**3.30**	**258**	Pn	**Pn**	**21 40 15.9**	**+1.4**
PDAR	**Pinedale Array**	**3.30**	**258**	Pn	**Pn**	**21 40 14.4**	**-0.1**
	comp=E,0.7nm,0.3s,baz=94,slow=14,SNR=10						
PDAR				Pg	**Pb**	**21 40 21.2**	**+0.2**
	comp=E,3.6nm,0.3s,baz=89,slow=13,SNR=23						
PDAR				Lg	Lg	21 41 01.1	
	comp=E,7.6nm,0.3s,baz=87,slow=16,SNR=5.5 comp=E,1.1nm,0.4s						
RLMT	**Red Lodge**	**3.33**	**300**	Pn	**Pn**	**21 40 14.4**	**-0.5**
RLMT				IAML		21 41 14.0	
	comp=E,22nm,0.5s						
RLMT				IAML		21 41 21.9	
	comp=E,23nm,0.8s						
OGNE	**Ogallala**	**3.50**	**137**	Pn	**Pn**	**21 40 17.7**	**+0.7**
ISCO	**Idaho Springs**	**3.76**	**185**		**Pn**	**21 40 22.1**	**+1.1**
YMP	**Mirror Lake Pl**	**3.78**	**290**		**Pn**	**21 40 21.8**	**+0.6**
YMP				IAML		21 41 33.1	
	comp=N,37nm,0.9s						
LOHW	**Long Hollow**	**3.95**	**273**		**Pn**	**21 40 23.9**	**+0.6**
LOHW				IAML		21 41 40.4	
	comp=N,14nm,1.4s						
LOHW				IAML		21 42 52.4	
	comp=N,13nm,4.3s						
MOOW	**Moose Ponds**	**4.05**	**275**		**Pn**	**21 40 24.6**	**-0.1**
AHID	**Auburn Hatcher**	**4.41**	**262**	Pn	**Pn**	**21 40 29.5**	**-0.2**
AHID				IAML		21 41 48.1	
	comp=N,18nm,1.1s						
AHID				IAML		21 42 01.8	
	comp=N,14nm,1.4s						
YHL	**Hebgen Lake**	**4.51**	**289**		**Pn**	**21 40 32.2**	**+1.0**
YHL				IAML		21 41 47.9	
	comp=N,16nm,3.6s						
YHL				IAML		21 42 04.2	
	comp=E,20nm,1.1s						
Q24A	**Divide**	**4.58**	**180**	Pn	**Pn**	**21 40 32.9**	**+0.8**
Q24A				IAML		21 43 04.2	
	comp=N,16nm,3.7s						
BOZ	**Bozeman (W)**	**5.04**	**296**		**Pn**	**21 40 38.8**	**+0.4**
BOZ				IAML		21 42 10.0	
	comp=N,7.4nm,0.9s						
BOZ				IAML		21 42 12.1	
	comp=N,8.3nm,4.5s						
HWUT	**Hardware Ranch**	**5.10**	**250**	Pn	**Pn**	**21 40 39.6**	**+0.4**
HWUT				IAML		21 42 11.0	
	comp=N,14nm,1.4s						
HWUT				IAML		21 42 39.2	
	comp=N,10nm,1.3s						
TCUT	**Toone Canyon**	**5.22**	**244**	Pn	**Pn**	**21 40 40.4**	**-0.6**
I10CA	**LAC DU BONNET**	**9.13**	**40**	I	I	22 33 40.0	
	comp=N,0.1nm,1.6s,baz=215,slow=310,SNR=2.6						
ULM	**Lac du Bonnet**	**9.24**	**40**	Pn	**Pn**	**21 41 36.5**	**+0.8**
	comp=N,0.3nm,0.3s,baz=225,slow=14,SNR=1.6						
ULM				Pg		21 42 10.1	
	comp=N,0.2nm,0.3s,baz=225,slow=15,SNR=1.6						
ULM				Lg	Lg	21 44 11.8	
	comp=N,0.2nm,0.3s,baz=320,slow=21,SNR=2.1 comp=N,0.9nm,0.4s						
YBH	**Yreka Blue Hor**	**13.04**	**268**	LR	LR	21 47 48.9	
	comp=N,65nm,18.5s,baz=74,slow=39						
YKA	**Yellowknife Ar**	**19.77**	**347**	P	**Pn**	**21 43 55.5**	**+1.5**
	comp=N,1.0nm,0.6s,baz=152,slow=12,SNR=2.6 comp=N,0.1nm,0.6s						

*ISK **10** 21:49:05.2, 34.79N×32.41E, h14km, ML2.7/7*
*GII **10** 21:49:07.3±0.5, 34.701N±0.004×32.579E±0.001, h1km, Mws2.6, confirmed*
*NIC **10** 21:49:08.7, 34.90N×32.54E, h8km±1km, Ml2.3/8*
*AFAD **10** 21:49:08.8±0.0, 35.03N×32.45E, h15km±1km, ML2.1*

ISC 10 21:49:07.4±1.0, 34.84N±0.03×32.46E±0.04, h19km±3km, n67, σ1s00/85, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.11**	**123**	P	**Pg**	**21 49 11.4**	**0.0**
NATA				S	**Sg**	**21 49 15.0**	**+0.9**
NATA				AML	AML	21 49 15.2	
	36nm,0.3s						
NATA				AML	AML	21 49 16.2	
	41nm,0.5s						
AKMS	**Akamas**	**0.20**	**331**	P	**Pg**	**21 49 12.8**	**+0.2**
AKMS				S	**Sg**	**21 49 17.4**	**+1.2**
AKMS				AML	AML	21 49 17.6	
	3.2nm,0.3s						
AKMS				AML	AML	21 49 18.7	
	2.7nm,0.2s						
ALFC	**Alefka**	**0.34**	**20**	P	**Pg**	**21 49 14.1**	**-0.6**
ALFC				S	**Sg**	**21 49 19.4**	**-0.3**
ALFC				AML	AML	21 49 21.1	
	1.7nm,0.2s						
ALFC				AML	AML	21 49 21.1	
	2.1nm,0.1s						
TROD	**Troodos**	**0.35**	**72**	P	**Pg**	**21 49 14.0**	**-1.1**
TROD				S	**Sg**	**21 49 19.3**	**-1.0**
TROD				AML	AML	21 49 19.6	
	1.4nm,0.3s						
TROD				AML	AML	21 49 19.7	
	1.1nm,0.3s						
LEF	**Lefka**	**0.45**	**52**	Pg	**Pg**	**21 49 15.2**	**-1.5**
LEF				Sg	**Sg**	**21 49 22.4**	**-0.6**
LEF	**Lefka**	**0.45**	**52**	P	**Pg**	**21 49 15.8**	**-0.9**
LEF				S	**Sg**	**21 49 20.8**	**-2.2**
AKDN	**Akdeniz- Kıbrı**	**0.62**	**42**	Pg	**Pb**	**21 49 18.9**	**-0.6**
ASGA	**Asgata**	**0.65**	**94**	P	**Pb**	**21 49 19.8**	**-0.3**
ASGA				S	**Sg**	**21 49 30.0**	**+0.9**
ASGA				AML	AML	21 49 31.4	
	1.4nm,0.6s						
ASGA				AML	AML	21 49 31.5	
	1.1nm,0.4s						
CSS	**Mathiatis**	**0.73**	**80**	Pg	**Pb**	**21 49 20.7**	**-0.8**
CSS				Sg	**Sg**	**21 49 32.1**	**+0.6**
CSS	**Mathiatis**	**0.73**	**80**	P	**Pb**	**21 49 21.0**	**-0.5**
CSS				S	**Sb**	**21 49 31.6**	**+0.6**

MMB1	**Mount Meron ar**	**3.06**	**126**	P		**Pn**	**21 49 54.1**	**-0.6**
GULE	**Gulek**	**3.08**	**37**	P		**Pn**	**21 49 57.5**	**+2.4**
GULE				S		**Sn**	**21 50 35.3**	**+3.8**
GEM	**Giv'at Ha'Em**	**3.12**	**120**	P		**Pn**	**21 49 56.2**	**+0.7**
GEM	**Giv'at Ha'Em**	**3.12**	**120**	P		**Pn**	**21 49 56.0**	**+0.5**
GEM	**Giv'at Ha'Em**	**3.12**	**120**	S		**Sn**	**21 50 31.6**	**-0.6**
MMLI	**Mount Malkishu**	**3.44**	**133**	P		**Pn**	**21 50 00.0**	**0.0**
CMRD	**Camardi-Nigde**	**3.48**	**35**	Pn		**Pn**	**21 50 01.9**	**+1.3**
SALP	**Salfit**	**3.59**	**140**	P		**Pn**	**21 50 01.9**	**-0.1**
SALP	**Salfit**	**3.59**	**140**	P		**Pn**	**21 50 02.1**	**+0.1**
SALP	**Salfit**	**3.59**	**140**	S		**Sn**	**21 50 43.4**	**-0.4**
QRNJ	**Al-Qirein**	**3.61**	**133**	P		**Pn**	**21 50 02.8**	**+0.6**
BALJ	**Balqa**	**3.82**	**135**	P		**Pn**	**21 50 06.6**	**+1.4**
AMAZ	**Amatzia**	**3.89**	**147**	P		**Pn**	**21 50 06.1**	**0.0**
AMAZ	**Amatzia**	**3.89**	**147**	S		**Sn**	**21 50 50.6**	**-0.6**
DSI	**Dead Sea**	**4.08**	**142**	P		**Pn**	**21 50 09.0**	**+0.3**
DSI	**Dead Sea**	**4.08**	**142**	S		**Sn**	**21 50 55.9**	**0.0**
DSI	**Dead Sea**	**4.08**	**142**	P		**Pn**	**21 50 09.0**	**+0.3**
YTIR	**Yattir**	**4.12**	**146**	P		**Pn**	**21 50 10.5**	**+1.1**
KZIT	**Kziot**	**4.25**	**157**	S		**Sn**	**21 50 59.4**	**-0.7**
KZIT	**Kziot**	**4.25**	**157**	P		**Pn**	**21 50 10.5**	**-0.6**
MSBI	**Mazada**	**4.28**	**144**	P		**Pn**	**21 50 11.9**	**+0.5**
MSBI	**Mazada**	**4.28**	**144**	P		**Pn**	**21 50 11.6**	**+0.2**
MSBI	**Mazada**	**4.28**	**144**	S		**Sn**	**21 51 01.7**	**+0.9**
GHAJ	**Ghor Haditha**	**4.39**	**143**	P		**Pn**	**21 50 14.1**	**+1.2**
GHAJ	**Ghor Haditha**	**4.39**	**143**	P		**Pn**	**21 50 13.5**	**+0.6**
LISJ	**El Lisan**	**4.40**	**144**	P		**Pn**	**21 50 14.2**	**+1.2**
KARJ	**KARJ**	**4.58**	**143**	P		Pn	21 50 06.2	-9.4
PRNI	**Paran**	**4.96**	**154**	P		**Pn**	**21 50 22.0**	**+1.1**
KRMI	**Paran Flat**	**5.08**	**157**	P		**Pn**	**21 50 24.5**	**+2.0**
HRFI	**Mount Harif**	**5.26**	**155**	P		**Pn**	**21 50 25.6**	**+0.6**
HRFI	**Mount Harif**	**5.26**	**155**	S		**Sn**	**21 51 24.9**	**-0.2**
HRFI	**Mount Harif**	**5.26**	**155**	P		**Pn**	**21 50 25.7**	**+0.7**
EIL	**Elat**	**5.57**	**157**	P		**Pn**	**21 50 30.1**	**+0.9**

*IDC **10** 21:53:44.5±0.6,23°.26N×123°.51E,h0km,mb4.0/22, mbtmp4.1/24,ML3.4/2,MS3.5/16,Error ellipse: s-maj=19.9km s-min=14.4km az=73.0*

*NIED **10** 21:53:45.8,23°.11N×123°.51E,h52km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr2.95; Mθθ-2.80; Mφφ-0.15; Mrθ0.44; Mrφ-0.57; Mθφ-1.16; Fault plane solution: M₀3.16000×10¹⁵ NP1:φ₁97.00000°, δ50.00000°,λ116.00000°. NP2:φ₂240.00000°,δ46.00000°, λ62.00000°.*

*JMA **10** 21:53:45.8±0.2,23°.1N±0°.9×123°.5E±0°.6,h52km,MV4.0/18, NEAR ISHIGAKIJIMA ISLAND*

*NEIC **10** 21:53:48.4±1.4,23°.23N±0°.06×123°.36E±0°.08,h25km±6km, mb4.6/52,Error ellipse: s-maj=11.3km s-min=6.8km az=119.0*

ISC 10 21:53:46.4±2.1,**23°.20N**±0°.05×**123°.47E**±0°.04,**h16**km±13km, **n128,**σθ**93**/128,**mb4.4**/44,**MS3.4**/14,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.90**	**20**	P		**Pb**	**21 54 03.6**	**-0.1**
HATJ				*e*S		**Sg**	**21 54 16.2**	**+0.3**
JKRS	**Kuro-shima**	**1.14**	**25**	P		**Pn**	**21 54 07.4**	**-0.4**
JKRS				S		**Sb**	**21 54 22.6**	**+0.2**
JIJ	**Ishigaki jima**	**1.31**	**28**	P		**Pn**	**21 54 08.9**	**-1.1**
JIJ				*e*S		**Sn**	**21 54 25.9**	**-1.3**
YOJ	**Yonaguni jima**	**1.32**	**341**			**Pn**	**21 54 10.1**	**-0.2**
YOJ				Sn		**Sn**	**21 54 26.8**	**-0.8**
YOJ	**Yonaguni jima**	**1.32**	**341**	P		**Pn**	**21 54 10.1**	**-0.2**
YOJ	**Yonaguni jima**	**1.32**	**341**	P		**Pn**	**21 54 09.9**	**-0.4**
YOJ				*e*S		**Sn**	**21 54 27.3**	**-0.3**
JYNG	**Yonagunijimaku**	**1.33**	**339**	*e*P		**Pn**	**21 54 10.5**	**+0.1**
JYNG				*e*S		**Sb**	**21 54 28.2**	**+0.2**
JISG	**Ishigakijimahi**	**1.58**	**29**	P		**Pn**	**21 54 12.6**	**-1.2**
JISG				*e*S		**Sn**	**21 54 32.8**	**-1.1**
JTJ	**Tarama**	**1.82**	**38**	P		**Pn**	**21 54 16.4**	**-0.7**
JTJ				*e*S		**Sn**	**21 54 39.0**	**-0.8**
NACB	**Ninganchiao**	**1.98**	**300**			**Pn**	**21 54 17.9**	**-1.3**
NACB				Sn		**Sn**	**21 54 40.1**	**-3.6**
NACB	**Ninganchiao**	**1.98**	**300**	P		**Pn**	**21 54 17.9**	**-1.3**
YULB	**Yu-li**	**2.01**	**276**			**Pn**	**21 54 18.5**	**-1.3**
YULB	**Yu-li**	**2.01**	**276**	P		**Pn**	**21 54 18.5**	**-1.3**
TWGBT	**Beinan**	**2.24**	**261**	P		**Pn**	**21 54 22.0**	**-0.9**
JIRB	**Irabujima**	**2.24**	**43**	*e*P		**Pn**	**21 54 22.0**	**-1.0**
JIRB				S		**Sn**	**21 54 48.8**	**-1.5**
TWG	**Pinlang**	**2.25**	**261**			**Pn**	**21 54 22.1**	**-0.9**
JMJ2	**Miyako jima3**	**2.29**	**48**	*e*P		**Pn**	**21 54 22.6**	**-0.9**
JMJ2				*e*S		**Sn**	**21 54 50.4**	**-1.0**
JOGS	**Gusukube**	**2.35**	**48**	P		**Pn**	**21 54 23.7**	**-0.7**
JOGS				S		**Sn**	**21 54 52.0**	**-1.0**
JIKM	**Ikemajima**	**2.36**	**43**	P		**Pn**	**21 54 23.7**	**-0.8**
JIKM				*e*S		**Sn**	**21 54 52.1**	**-1.1**
SSLB	**Suanglung**	**2.39**	**285**			**Pn**	**21 54 24.2**	**-0.8**
SSLB	**Suanglung**	**2.39**	**285**	P		**Pn**	**21 54 24.3**	**-0.6**
YHNB	**Yeheng**	**2.41**	**308**			**Pn**	**21 54 25.3**	**-0.1**
YHNB	**Yeheng**	**2.41**	**308**	P		**Pn**	**21 54 25.4**	**+0.1**
TATO	**Taipei**	**2.53**	**315**			**Pn**	**21 54 27.7**	**+0.8**
TPUB	**Ta-pu**	**2.62**	**273**			**Pn**	**21 54 28.8**	**+0.7**
TPUB	**Ta-pu**	**2.62**	**273**	P		**Pn**	**21 54 28.9**	**+0.8**
KNMB	**Chin-men Tao**	**4.82**	**286**	Pn		**Pn**	**21 54 58.0**	**-0.4**
KSRS	**Korea Array**	**14.71**	**14**	Pn		**Pn**	**21 57 12.8**	**-1.1**
	0.3nm,0.3s,baz=122,slow=35,SNR=5.3							
KSRS				LR		LR	22 03 03.8	
	comp=Z,94nm,19.7s,baz=175,slow=38 3.0nm,0.8s							
KS19	**Wonju Array Si**	**14.74**	**14**	Pn		**Pn**	**21 57 14.1**	**-0.3**
INU	**Inuyama**	**16.89**	**41**			**P**	**21 57 44.0**	**-0.1**
INU				IAmb		IAmb	21 57 55.9	
	comp=Z,64nm,1.5s							
JGF	**Kuroka**	**17.27**	**41**	Pn		**Pn**	**21 57 47.8**	**+0.8**
JHJ	**Hachijo jima 2**	**17.43**	**52**	LR		LR	22 04 18.7	
	comp=Z,144nm,18.9s,baz=348,slow=36							
BJT	**Baijiatuau**	**17.87**	**341**			**Pn**	**21 57 54.5**	**+0.1**
MAJO	**Matsushiro**	**18.41**	**40**	P		**P**	**21 58 00.6**	**-0.4**
MJAR	**Matsushiro Arr**	**18.41**	**40**	P		**Pn**	**21 58 01.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=225,slow=8.6,SNR=20 comp=Z,6.9nm,0.9s							
MJB9	**Matsu-Tunnel**	**18.41**	**40**			**Pn**	**21 58 01.7**	**+0.7**
KKM	**Kota Kinabalu**	**18.44**	**203**	P		**P**	**21 57 59.6**	**-1.9**
JMM	**Marumori**	**20.83**	**41**	P		**P**	**21 58 25.7**	**-1.7**
JMM				IAmb		IAmb	21 58 54.6	
	comp=Z,37nm,1.1s							
USRK	**Ussuriysk Ar.**	**22.08**	**16**	P		**P**	**21 58 42.1**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=193,slow=8.4,SNR=4.3 comp=Z,1.7nm,0.6s							
JTM	**Tenmabayashi**	**22.95**	**36**	P		**P**	**21 58 48.5**	**-1.5**
SBUM	**Sibu**	**23.34**	**209**	P		**P**	**21 58 52.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**23.40**	**263**	P		**P**	**21 58 57.2**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=75,slow=10,SNR=1.5							
CMAR				LR		LR	22 08 45.9	
	comp=Z,69nm,18.4s,baz=70,slow=38 comp=Z,0.2nm,0.3s							
ERM	**Erimo**	**24.93**	**37**	P		**P**	**21 59 07.7**	**-1.2**
HIA	**Hailar**	**26.18**	**354**	P		**P**	**21 59 18.4**	**-1.7**
HIA				IAmb		IAmb	21 59 31.8	
	comp=Z,8.2nm,0.8s							
KLR	**Kul'dur**	**26.79**	**12**	LR		LR	22 09 45.3	
	comp=Z,62nm,19.9s,baz=183,slow=36							
ULN	**Ulaanbaatar**	**27.89**	**336**	P		**P**	**21 59 34.9**	**-0.8**
ULN				IAmb		IAmb	21 59 46.3	
	comp=Z,4.8nm,0.7s							
SONM	**Songino Array**	**28.11**	**335**	P		**P**	**21 59 37.0**	**-0.7**
SONM				IAmb		IAmb	21 59 48.4	
	comp=Z,8.4nm,0.7s							
SONM	**Songino Array**	**28.11**	**335**	P		**P**	**21 59 37.4**	**-0.3**
	comp=Z,6.2nm,0.6s,baz=151,slow=9.4,SNR=54							
SONM				PcP		**PcP**	**22 02 52.3**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=114,slow=3.6,SNR=1.4							
SONM				LR		LR	22 10 13.7	
	comp=Z,53nm,20.4s,baz=122,slow=35 comp=Z,6.2nm,0.6s							
YAK	**Yakutsk**	**39.04**	**5**			**P**	**22 01 11.2**	**-0.9**
YAK	**Yakutsk**	**39.04**	**5**	LR		LR	22 18 20.3	
	comp=Z,39nm,18.2s,baz=276,slow=38							
PEA0B	**Petropavlovsk-**	**39.54**	**32**	P		**P**	**22 01 16.9**	**+0.4**
PETK	**Petropavlovsk-**	**39.54**	**32**	P		**P**	**22 01 16.9**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=186,slow=4.1,SNR=15							
PETK				LR		LR	22 18 20.4	
	comp=Z,54nm,19.2s,baz=255,slow=37 comp=Z,1.4nm,0.6s							
H11N1	**WAKE ISLAND Hy**	**40.45**	**86**	T		T	22 45 08.2	
	baz=284							
H11N2	**WAKE ISLAND Hy**	**40.45**	**86**	T		T	22 45 09.7	
	baz=284							
H11N3	**WAKE ISLAND Hy**	**40.47**	**86**	T		T	22 45 09.1	
	baz=284							
MK31	**Makanchi Array**	**40.50**	**316**	P		**P**	**22 01 24.3**	**-0.4**
MKAR	**Makanchi Array**	**40.50**	**316**	P		**P**	**22 01 24.8**	**+0.1**
MKAR	**Makanchi Array**	**40.50**	**316**	P		**P**	**22 01 25.6**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=103,slow=10,SNR=21							
MKAR				LR		LR	22 17 25.4	
	comp=Z,89nm,18.4s,baz=143,slow=35 comp=Z,1.4nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**40.55**	**88**	T		T	22 45 25.8	
	baz=287							
H11S1	**WAKE ISLAND Hy**	**40.55**	**88**	T		T	22 45 24.1	
	baz=287							
H11S2	**WAKE ISLAND Hy**	**40.56**	**88**	T		T	22 45 25.8	
	baz=287							
ZAA0	**Zalesovo Array**	**42.21**	**327**	P		**P**	**22 01 37.6**	**-0.9**
ZALV	**Zalesovo Beam**	**42.21**	**327**	P		**P**	**22 01 37.6**	**-0.9**
ZALV	**Zalesovo Beam**	**42.21**	**327**	P		**P**	**22 01 38.0**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=117,slow=8.0,SNR=17							
ZALV				LR		LR	22 21 11.3	
	comp=Z,64nm,18.9s,baz=70,slow=39 comp=Z,3.1nm,0.6s							
NRN	**Naryn**	**43.46**	**306**	P		**P**	**22 01 48.6**	**-0.6**
NRN				IAmb		IAmb	22 02 02.1	
	comp=Z,4.6nm,0.6s							
WB0	**Warramunga Arr**	**44.02**	**165**	P		**P**	**22 01 53.4**	**-0.1**
WB0				IAmb		IAmb	22 01 54.9	
	comp=Z,6.9nm,1.1s							
WRA	**Warramunga Arr**	**44.17**	**165**	P		**P**	**22 01 55.0**	**+0.3**
WRA	**Warramunga Arr**	**44.17**	**165**	P		**P**	**22 01 55.5**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=347,slow=9.3,SNR=13 comp=Z,2.2nm,0.7s							
KURBB	**Kurchatov Arra**	**44.21**	**320**	P		**P**	**22 01 55.3**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=110,slow=8.6,SNR=6.6 comp=Z,1.0nm,0.3s							
WR0	**Warramunga Arr**	**44.24**	**165**	P		**P**	**22 01 55.0**	**-0.2**
WR0				IAmb		IAmb	22 02 09.7	
	comp=Z,5.5nm,0.8s							
PSA00	**Pilbara Seismi**	**44.64**	**185**	P		**P**	**22 01 58.1**	**-0.3**
PSA00				IAmb		IAmb	22 02 09.5	
	comp=Z,5.8nm,0.8s							
AAK	**Ala-Archa**	**44.77**	**308**	LR		LR	22 20 31.9	
	comp=Z,87nm,19.6s,baz=92,slow=36							
AS31	**Alice Springs**	**47.68**	**167**	P		**P**	**22 02 23.1**	**+0.8**
ASAR	**Alice Springs**	**47.68**	**167**	P		**P**	**22 02 23.3**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=350,slow=14,SNR=41 comp=Z,1.1nm,0.5s							
KK31	**Karatay Array**	**47.73**	**308**	P		**P**	**22 02 22.8**	**+0.1**
KKAR	**Karatay Array**	**47.73**	**308**	P		**P**	**22 02 23.1**	**+0.5**
CTA	**Charters Tower**	**48.43**	**151**	LR		LR	22 22 26.8	
	comp=Z,20nm,19.7s,baz=270,slow=36							
KBL	**Kabul**	**48.48**	**296**	P		**P**	**22 02 27.7**	**-1.1**
KBL				IAmb		IAmb	22 02 51.8	
	comp=Z,2.7nm,0.8s							
TIXI	**Tiksi**	**48.57**	**2**	P		**P**	**22 02 28.5**	**-0.1**
TIXI				IAmb		IAmb	22 02 29.5	
	comp=Z,4.8nm,0.7s							
TIXI	**Tiksi**	**48.57**	**2**	LR		LR	22 26 06.0	
	comp=Z,129nm,19.4s,baz=189,slow=40							
BVAR	**Borovoye Array**	**49.76**	**321**	P		**P**	**22 02 38.8**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=99,slow=7.4,SNR=7.1							
BVAR				LR		LR	22 25 58.3	
	comp=Z,34nm,18.8s,baz=76,slow=39 comp=Z,1.5nm,0.6s							
BRVK	**Borovoye**	**49.83**	**321**	P		**P**	**22 02 38.1**	**-0.4**
BRVK				IAmb		IAmb	22 02 50.5	
	comp=Z,4.8nm,0.8s							
NRIK	**Noril'sk**	**50.90**	**344**	P		**P**	**22 02 46.5**	**+0.1**
NRIK				IAmb		IAmb	22 02 57.8	
	comp=Z,3.4nm,0.7s							
NRIK	**Noril'sk**	**50.90**	**344**	P		**P**	**22 02 46.3**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=134,slow=6.9,SNR=4.6							
NRIK				LR		LR	22 24 34.1	
	comp=Z,39nm,18.5s,baz=128,slow=36 comp=Z,2.7nm,0.6s							
ABKAR	**Akbulak array**	**55.62**	**315**			**P**	**22 03 21.2**	**-0.2**
ABKAR	**Akbulak array**	**55.62**	**315**	P		**P**	**22 03 21.8**	**+0.4**
GEYT	**Alibeck**	**57.10**	**301**	P		**P**	**22 03 32.3**	**0.0**
	comp=Z,1.1nm,0.7s,baz=98,slow=6.0,SNR=2.5 comp=Z,1.1nm,0.7s							
ARU	**Arti**	**57.15**	**323**	P		**P**	**22 03 32.3**	**0.0**
ARU				IAmb		IAmb	22 03 43.4	
	comp=Z,6.9nm,0.7s							
STKA	**Stephens Creek**	**57.45**	**162**	P		**P**	**22 03 35.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=332,slow=8.0,SNR=3.2 comp=Z,1.8nm,0.8s							
WSAR	**Wi Sarin**	**59.11**	**284**	LR		LR	22 31 46.0	
	comp=Z,44nm,21.9s,baz=250,slow=39							
F15K	**North Star Dit**	**61.64**	**27**	P		**P**	**22 04 04.5**	**+1.4**
F15K				IAmb		IAmb	22 04 18.1	
	comp=Z,8.4nm,1.4s							
KIRV	**Kirov**	**62.22**	**325**	LR		LR	22 33 56.5	
	comp=Z,99nm,19.0s,baz=104,slow=39							
F17K	**Baldwin Pennin**	**63.08**	**26**	P		**P**	**22 04 14.4**	**+1.7**
F17K				IAmb		IAmb	22 04 34.5	
	comp=Z,5.3nm,1.2s							
C18K	**Utukok River**	**63.27**	**23**	P		**P**	**22 04 14.9**	**+0.8**
C18K				IAmb		IAmb	22 04 42.5	
	comp=Z,7.2nm,1.5s							
N15K	**Kwethluk River**	**63.44**	**33**	P		**P**	**22 04 16.2**	**+1.0**
K17K	**Iditarod**	**64.27**	**30**	P		**P**	**22 04 21.9**	**+1.3**
D19K	**Kuna River**	**64.39**	**24**	P		**P**	**22 04 22.5**	**+1.1**
B20K	**Meade River**	**64.77**	**22**	P		**P**	**22 04 24.8**	**+1.0**
B20K				IAmb		IAmb	22 04 38.0	
	comp=Z,8.8nm,1.4s							
B21K	**Ikpikpuk River**	**65.65**	**22**	P		**P**	**22 04 31.0**	**+1.5**
B21K				IAmb		IAmb	22 04 44.7	
	comp=Z,5.4nm,0.8s							
IMAR	**Indian Mountai**	**66.12**	**26**	P		**P**	**22 04 33.1**	**+0.5**
CAST	**Castle Rocks**	**67.05**	**29**	P		**P**	**22 04 39.8**	**+1.2**
CAST				IAmb		IAmb	22 04 44.7	
	comp=Z,3.0nm,0.8s							
MLY	**Manley**	**67.46**	**27**	P		**P**	**22 04 42.4**	**+1.2**
MLY				IAmb		IAmb	22 04 56.2	
	comp=Z,3.6nm,0.9s							
KBZ	**Khabaz**	**67.73**	**309**	P		**P**	**22 04 44.4**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=63,slow=4.5,SNR=2.2 comp=Z,0.8nm,0.8s							
SUA	**Susitna One**	**67.91**	**31**	P		**P**	**22 04 45.0**	**+0.8**
F24K	**Squaw Lake**	**68.28**	**24**	P		**P**	**22 04 47.5**	**+1.1**
F24K				IAmb		IAmb	22 05 01.3	
	comp=Z,5.4nm,0.8s							
RND	**Reindeer**	**68.49**	**29**	P		**P**	**22 04 48.0**	**+0.2**
MDM	**Murphy Dome**	**68.52**	**27**	P		**P**	**22 04 48.9**	**+1.0**
MDM				IAmb		IAmb	22 05 03.1	
	comp=Z,5.6nm,0.9s							
ILAR	**Eielson Array**	**69.12**	**27**	P		**P**	**22 04 51.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=268,slow=6.4,SNR=11 comp=Z,0.6nm,0.6s							
SCM	**Sheep Creek Mo**	**69.45**	**30**	P		**P**	**22 04 54.6**	**+0.8**
BMAR	**Burnt Mountain**	**69.56**	**24**	P		**P**	**22 04 56.2**	**+1.9**
SCRK	**Sand Creek**	**70.51**	**28**	P		**P**	**22 05 00.7**	**+0.4**
SCRK				IAmb		IAmb	22 05 13.8	
	comp=Z,2.8nm,0.9s							
BCAR	**Beaver Creek A**	**71.69**	**29**	P		**P**	**22 05 09.2**	**+1.8**
FIA1	**FINESS Array S**	**73.34**	**330**	P		**P**	**22 05 16.4**	**-0.7**
FINES	**FINESS Array B**	**73.34**	**330**	P		**P**	**22 05 16.7**	**-0.5**
FINES	**FINESS Array B**	**73.34**	**330**	P		**P**	**22 05 17.7**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=61,slow=6.7,SNR=8.4 comp=Z,2.7nm,0.8s							
AKASG	**Malin Array Be**	**74.99**	**319**	P		**P**	**22 05 26.5**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=58,slow=6.8,SNR=2.9 comp=Z,0.8nm,0.6s							
BRTR	**Keskin Array B**	**75.44**	**307**	P		**P**	**22 05 30.1**	**+0.1**
BRTR	**Keskin Array B**	**75.44**	**307**	P		**P**	**22 05 31.2**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=76,slow=5.2,SNR=3.7 comp=Z,0.8nm,0.8s							
BUR08	**Bucovina Ar. S**	**78.52**	**317**	P		**P**	**22 05 47.3**	**+0.1**
BUR08				IAmb		IAmb	22 05 53.2	
	comp=Z,5.8nm,1.4s							
BURAR	**Bucovina Array**	**78.52**	**317**	P		**P**	**22 05 47.1**	**0.0**
MLR	**Muntele Rosu**	**78.83**	**315**	P		**P**	**22 05 49.1**	**+0.1**
MLR				IAmb		IAmb	22 05 55.2	
	comp=Z,13nm,1.5s							
KWP	**Kalwaria Pacla**	**79.29**	**319**	P		**P**	**22 05 51.4**	**+0.2**
HFS	**Hagfors**	**79.44**	**331**	P		**P**	**22 05 51.6**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=70,slow=4.9,SNR=5.2 comp=Z,2.3nm,0.7s							
NC405	**NORSAR Array S**	**79.81**	**333**	P		**P**	**22 05 54.1**	**+0.2**
NB2	**NORSAR Subarra**	**80.06**	**333**	P		**P**	**22 05 55.5**	**+0.3**
	comp=Z,2.2nm,1.0s,baz=62,slow=5.3							
NOA	**NORSAR Array B**	**80.06**	**333**	P		**P**	**22 05 55.1**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=56,slow=5.6,SNR=4.0 comp=Z,1.9nm,0.7s							
YKA	**Yellowknife Ar**	**83.05**	**23**	P		**P**	**22 06 11.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=309,slow=5.2,SNR=11 comp=Z,0.6nm,0.7s							
GERES	**GERESS Array B**	**84.92**	**321**	P		**P**	**22 06 20.8**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=60,slow=5.8,SNR=4.0 comp=Z,0.7nm,0.6s							

*JMA **10** 22:27:25.0±0.1,23°.9N±0°.6×12°.2E±°,h6km, TAIWAN REGION*

*TAP **10** 22:27:24.7,23°.90N×121°.55E,h10km,ML3.6,B*

*ASIES **10** 22:27:24.7,23°.90N×121°.55E,h10km,ML3.6,Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr-0.76; Mθθ2.78; Mφφ-2.01; Mrθ4.12; Mθφ-5.56; Mrr1.23; Fault plane solution: M₀7.45389×10²⁰ NP1: φ₁260.16000°,δ85.01000°,λ-144.45000°. NP2: φ₂166.60000°,δ54.60000°,λ-6.13000°. Principal axes: T Plg20.3690°, Azm28.0130°; N Plg54.1420°, Azm267.1030°; P Plg28.1100°, Azm129.4520°;*

ISC 10 22:27:25.1±0.8,**23.89N**±0°.01×**121°.57E**±0°.02,**h10**km±4km, **n114,**σθ**91**/215,**6C-20D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.09**	**20**	*i* P		**Pg**	**22 27 27.7**	**+0.2**
	baz=38							
HWA				*i* S		**Sg**	**22 27 30.0**	**+0.7**
	baz=38							
ETM	**Tongmen**	**0.10**	**314**	⇓*i*P		**Pg**	**22 27 27.5**	**-0.2**
	baz=322							
ETM				*i* S		**Sg**	**22 27 29.3**	**-0.4**
	baz=322							
SHUL	**Shoufeng**	**0.11**	**185**	⇑*i*P		**Pg**	**22 27 27.9**	**+0.1**
	baz=174							
SHUL				*i* S		**Sg**	**22 27 30.5**	**+0.8**
	baz=174							
ESL	**Shilin**	**0.15**	**238**	⇑*i*P		**Pg**	**22 27 28.1**	**-0.4**
	baz=228							
ESL				*i* S		**Sg**	**22 27 30.2**	**-0.6**
	baz=228							
TWD	**Chiawan**	**0.19**	**6**	⇓*i*P		**Pg**	**22 27 29.1**	**0.0**
	baz=16							
TWD				*e*S		**Sg**	**22 27 31.8**	**0.0**
	baz=16							
TEGC	**Jichi Village**	**0.19**	**189**	P		**Pb**	**22 27 29.6**	**-1.0**
	baz=180							
TEGC				*e*S		**Sg**	**22 27 34.0**	**+2.2**
	baz=180							
LXIB	**Xiulin Townshi**	**0.19**	**311**	⇓*i*P		**Pg**	**22 27 29.1**	**-0.2**
	baz=314							
LXIB				*i* S		**Sg**	**22 27 32.0**	**-0.1**
	baz=314							
WARBT	**Fenglin Townsh**	**0.24**	**224**	⇑*i*P		**Pg**	**22 27 29.7**	**-0.4**
	baz=219							
WARBT				S		**Sg**	**22 27 32.9**	**-0.6**
	baz=219							
ETL	**Fush Village**	**0.27**	**10**	*i* P		**Pg**	**22 27 30.4**	**-0.1**
	baz=15							
ETL				*i* S		**Sg**	**22 27 34.1**	**-0.1**
	baz=15							
NACB	**Ninganchiao**	**0.28**	**4**	⇓*i*P		**Pg**	**22 27 30.5**	**-0.2**
	baz=9.0							
NACB				*i* S		**Sg**	**22 27 34.3**	**-0.2**
	baz=9.0							
ETLH	**Xiulin Townshi**	**0.32**	**345**	⇓*i*P		**Pg**	**22 27 31.4**	**-0.2**
	baz=349							
ETLH				S		**Sg**	**22 27 35.5**	**-0.4**
	baz=349							
WHF	**Hehuan Shan**	**0.38**	**312**	⇓*i*P		**Pg**	**22 27 32.5**	**-0.1**
	baz=314							
WHF				S		**Sg**	**22 27 37.7**	**0.0**
	baz=314							
CHGB	**Renai**	**0.40**	**294**	⇓*i*P		**Pb**	**22 27 33.4**	**-1.0**
	baz=295							
CHGB				S		**Sb**	**22 27 39.0**	**-1.7**
	baz=295							
VWDT	**VWDT**	**0.42**	**251**

	baz=358							
TYC	**Yuchr**	**0.66**	**271**	⇓	*e*P	**Pb**	**22 27 37.9**	**-0.7**
	baz=270							
TYC					*e*S	**Sb**	**22 27 46.5**	**-1.2**
	baz=270							
NDT	**Datong Townshi**	**0.71**	**356**		*e*P	**Pb**	**22 27 38.9**	**-0.6**
	baz=357							
NDT					*e*S	**Sb**	**22 27 48.1**	**-1.2**
	baz=357							
CHKH	**Chenggong**	**0.72**	**193**		*e*P	**Pg**	**22 27 37.1**	**-1.9**
	baz=191							
EOS4	**EOS4**	**0.72**	**72**	P		**Pb**	**22 27 39.5**	**+0.1**
	baz=73							
EOS4					*e*S	**Sn**	**22 27 50.7**	**-1.1**
	baz=73							
ESAO	**Su ao**	**0.72**	**20**		*e*P	**Pg**	**22 27 38.8**	**-0.3**
	baz=22							
ESAO					*e*S	**Sg**	**22 27 48.7**	**+0.2**
	baz=22							
ENTT	**Nioudou**	**0.74**	**360**		*e*P	**Pb**	**22 27 39.6**	**-0.5**
	baz=2.0							
ENTT					*e*S	**Sb**	**22 27 49.8**	**-0.6**
	baz=2.0							
NDS	**Dongshan**	**0.75**	**10**		*e*P	**Pb**	**22 27 39.6**	**-0.5**
	baz=12							
NDS					*e*S	**Sb**	**22 27 49.7**	**-0.7**
	baz=12							
TWC	**Suao**	**0.76**	**19**		*e*P	**Pg**	**22 27 39.6**	**0.0**
	baz=22							
TWC					*e*S	**Sb**	**22 27 50.3**	**-0.4**
	baz=22							
WJS	**Zhushan**	**0.78**	**265**		*e*P	**Pn**	**22 27 41.0**	**-1.1**
	baz=264							
WJS					*e*S	**Sn**	**22 27 52.9**	**-0.9**
	baz=264							
EOS3	**EOS3**	**0.78**	**60**		*e*P	**Pn**	**22 27 42.0**	**0.0**
	baz=61							
EOS3					*e*S	**Sn**	**22 27 53.2**	**-0.6**
	baz=61							
YHNB	**Yeheng**	**0.79**	**347**	⇓	P	**Pb**	**22 27 40.7**	**-0.3**
	baz=348							
YHNB					*e*S	**Sb**	**22 27 50.8**	**-1.0**
	baz=348							
EOS2	**EOS2**	**0.80**	**49**		*e*P	**Pn**	**22 27 42.4**	**+0.1**
	baz=50							
ALS	**Alishan**	**0.80**	**242**		*e*P	**Pb**	**22 27 40.9**	**-0.4**
	baz=240							
ALS					*e*S	**Sb**	**22 27 51.5**	**-0.8**
	baz=240							
NSK	**Sanguang**	**0.80**	**346**	⇓	*e*P	**Pb**	**22 27 40.9**	**-0.3**
	baz=348							
NSK					*e*S	**Sb**	**22 27 50.9**	**-1.2**
	baz=348							
CHKT	**Chengkung**	**0.81**	**194**		*e*P	**Pg**	**22 27 40.2**	**-0.5**
	baz=191							
CHKT					*e*S	**Sb**	**22 27 53.1**	**+0.8**
	baz=191							
WNT	**Mingjian**	**0.81**	**269**		*e*P	**Pn**	**22 27 42.1**	**-0.5**
	baz=268							
WNT					*e*S	**Sn**	**22 27 54.0**	**-0.7**
	baz=268							
WWF	**Wufeng**	**0.81**	**281**		*e*P	**Pn**	**22 27 42.7**	**+0.1**
	baz=280							
WWF					*e*S	**Sn**	**22 27 53.9**	**-0.8**
	baz=280							
EHD	**Haiduan**	**0.81**	**204**		*e*P	**Pg**	**22 27 40.4**	**-0.4**
	baz=203							
EHD					*e*S	**Sb**	**22 27 52.4**	**0.0**
	baz=203							
WNT1	**Nantou City**	**0.82**	**271**		*e*P	**Pn**	**22 27 42.5**	**-0.2**
	baz=271							
WNT1					*e*S	**Sn**	**22 27 55.0**	**+0.2**
	baz=271							
TWE	**Neicheng**	**0.83**	**6**		*e*P	**Pb**	**22 27 41.1**	**-0.4**
	baz=9.0							
TWE					*e*S	**Sb**	**22 27 52.5**	**-0.3**
	baz=9.0							
NFF	**Wufeng Townshi**	**0.84**	**331**		*e*P	**Pb**	**22 27 41.8**	**-0.1**
	baz=332							
NFF					*e*S	**Sb**	**22 27 52.7**	**-0.5**
	baz=332							
TCU	**Taichung**	**0.86**	**287**		*e*P	**Pn**	**22 27 43.7**	**+0.5**
	baz=287							
TCU					*e*S	**Sn**	**22 27 57.2**	**+1.4**
	baz=287							
ECS	**Chishang**	**0.86**	**202**		*e*P	**Pn**	**22 27 42.6**	**-0.6**
	baz=201							
TWQ1	**Liyutan**	**0.86**	**302**		*e*P	**Pn**	**22 27 42.9**	**-0.3**
	baz=302							
TWQ1					*e*S	**Sn**	**22 27 54.9**	**-1.0**
	baz=302							
FUSB	**Fushanzhiwuyua**	**0.86**	**1**		*e*P	**Pb**	**22 27 42.0**	**-0.2**
	baz=2.0							
FUSB					*e*S	**Sb**	**22 27 52.9**	**-0.9**
	baz=2.0							
ELDTW	**Lidau**	**0.87**	**216**		*e*P	**Pg**	**22 27 40.9**	**-1.0**
	baz=214							
ELDTW					*e*S	**Sg**	**22 27 51.9**	**-1.2**
	baz=214							
NWLT	**Wulai**	**0.88**	**356**		*e*P	**Pb**	**22 27 42.3**	**-0.2**
	baz=357							
NWLT					*e*S	**Sg**	**22 27 52.8**	**-0.8**
	baz=357							
ILA	**Ilan**	**0.88**	**10**		*e*P	**Pb**	**22 27 42.4**	**-0.1**
	baz=12							
ILA					*e*S	**Sb**	**22 27 54.8**	**+0.5**
	baz=12							
NSTT	**Nanjuang**	**0.90**	**325**		*e*P	**Pn**	**22 27 43.1**	**-0.6**
	baz=326							
NSTT					*e*S	**Sb**	**22 27 54.7**	**-0.1**
	baz=326							
LIOB	**Emei**	**0.91**	**326**	⇓	*e*P	**Pn**	**22 27 43.4**	**-0.5**
	baz=327							
LIOB					*e*S	**Sb**	**22 27 55.1**	**+0.1**
	baz=327							
NSY	**Sanyi**	**0.91**	**305**		*e*P	**Pn**	**22 27 44.0**	**+0.1**
	baz=306							
NSY					*e*S	**Sn**	**22 27 56.7**	**-0.3**
	baz=306							
WYL	**Yuanlin Townsh**	**0.91**	**274**		*e*P	**Pn**	**22 27 44.2**	**+0.3**
	baz=274							
WYL					*e*S	**Sn**	**22 27 58.1**	**+1.1**
	baz=274							
WCHH	**Zhanghua**	**0.95**	**281**		*e*P	**Pn**	**22 27 43.9**	**-0.5**
	baz=281							
WCHH					*e*S	**Sn**	**22 28 00.3**	**+2.3**
	baz=281							
NJD	**Zhudong**	**0.95**	**332**		*e*P	**Pn**	**22 27 44.8**	**+0.4**
	baz=333							
NJD					*e*S	**Sn**	**22 27 58.0**	**-0.1**
	baz=333							
WGK	**Gukeng**	**0.95**	**258**		*e*P	**Pn**	**22 27 44.9**	**+0.5**
	baz=257							
WGK					*e*S	**Sn**	**22 27 59.1**	**+1.1**
	baz=257							
NMLH	**Miaoli**	**0.96**	**312**		*e*P	**Pn**	**22 27 45.1**	**+0.5**
	baz=313							
NMLH					*e*S	**Sn**	**22 27 58.0**	**-0.4**
	baz=313							
WDLH	**Douliu**	**0.97**	**258**		*e*P	**Pn**	**22 27 45.1**	**+0.4**
	baz=257							
WDLH					*e*S	**Sn**	**22 27 59.3**	**+0.8**
	baz=257							
WCKO	**Fanlu**	**1.00**	**243**		*e*P	**Pn**	**22 27 45.4**	**+0.3**
	baz=242							
WCKO					*e*S	**Sn**	**22 27 58.8**	**-0.4**
	baz=242							
NJN	**Zhunan**	**1.01**	**321**		*e*P	**Pn**	**22 27 46.3**	**+0.9**
	baz=322							
NJN					*e*S	**Sn**	**22 28 00.9**	**+1.3**
	baz=322							
HSN1	**Hsinchu**	**1.01**	**330**		*e*P	**Pn**	**22 27 46.9**	**+1.6**
	baz=331							
STYH	**Taoyuan**	**1.03**	**226**		*e*P	**Pb**	**22 27 44.6**	**-0.3**
	baz=224							
STYH					*e*S	**Sb**	**22 27 58.2**	**-0.3**
	baz=224							
SBCB	**Hsinchu**	**1.04**	**329**		*e*P	**Pn**	**22 27 47.1**	**+1.4**
	baz=330							
STYT	**Tauyuan**	**1.04**	**226**		*e*P	**Pn**	**22 27 45.4**	**-0.4**
	baz=224							
STYT					*e*S	**Sn**	**22 27 59.8**	**-0.7**
	baz=224							
TPUB	**Ta-pu**	**1.05**	**236**		*e*P	**Pn**	**22 27 45.9**	**+0.1**
	baz=235							
TPUB					*e*S	**Sn**	**22 28 00.3**	**-0.2**
	baz=235							
CHN4	**Tsaushan**	**1.05**	**239**		*e*P	**Pn**	**22 27 46.2**	**+0.3**
	baz=238							
CHN4					*e*S	**Sn**	**22 28 02.0**	**+1.5**
	baz=238							
HSN	**Hsinchu**	**1.06**	**329**		*e*P	**Pn**	**22 27 46.9**	**+1.0**
	baz=332							
HSN					*e*S	**Sn**	**22 28 01.7**	**+1.0**
	baz=332							
LONT	**Longtian**	**1.06**	**203**		*e*P	**Pg**	**22 27 45.0**	**-0.5**
	baz=201							
LONT					*e*S	**Sn**	**22 28 03.8**	**+2.9**
	baz=201							
NHDH	**Xindian Distri**	**1.06**	**358**		*e*P	**Pn**	**22 27 46.2**	**+0.1**
	baz=359							
TATO	**Taipei**	**1.08**	**356**		*e*P	**Pn**	**22 27 46.5**	**+0.3**
	baz=357							
TWA	**Mucha**	**1.08**	**1**		*e*P	**Pn**	**22 27 46.5**	**+0.2**
	baz=2.0							
TWA					*e*S	**Sb**	**22 27 60.0**	**-0.1**
	baz=2.0							
WTP	**Ta-pu**	**1.09**	**234**		*e*P	**Pn**	**22 27 46.7**	**+0.3**
	baz=232							
WTP					*e*S	**Sn**	**22 28 02.2**	**+0.6**
	baz=232							
WRL	**Guolierlin Hig**	**1.09**	**271**		*e*P	**Pn**	**22 27 47.0**	**+0.5**
	baz=270							
WRL					*e*S	**Sn**	**22 28 02.3**	**+0.7**
	baz=270							
RLNB	**Erlin**	**1.11**	**270**		*e*P	**Pn**	**22 27 47.6**	**+1.0**
	baz=270							
RLNB					*e*S	**Sn**	**22 28 03.3**	**+1.3**
	baz=270							
NCUH	**Zhongli**	**1.13**	**342**		*e*P	**Pn**	**22 27 48.1**	**+1.2**
	baz=343							
NCUH					*e*S	**Sn**	**22 28 05.9**	**+3.5**
	baz=343							
NCU	**National Centr**	**1.13**	**342**		*e*P	**Pn**	**22 27 48.3**	**+1.4**
	baz=343							
NCU					*e*S	**Sn**	**22 28 02.9**	**+0.4**
	baz=343							
NTY	**Taoyuan**	**1.13**	**347**		*e*P	**Pn**	**22 27 48.5**	**+1.6**
	baz=348							
NTY					*e*S	**Sn**	**22 28 03.4**	**+0.9**
	baz=348							
TAP	**Taipei**	**1.14**	**357**		*e*P	**Pn**	**22 27 47.8**	**+0.7**
	baz=358							
TAP					*e*S	**Sn**	**22 28 02.5**	**-0.3**
	baz=358							
TWG	**Pinlang**	**1.16**	**203**		*e*P	**Pg**	**22 27 47.1**	**-0.3**
	baz=202							
TWG					*e*S	**Sn**	**22 28 03.5**	**+0.1**
	baz=202							
TWGBT	**Beinan**	**1.16**	**203**		*e*P	**Pg**	**22 27 47.1**	**-0.3**
	baz=202							
TWK	**Hsinying**	**1.18**	**238**		*e*P	**Pg**	**22 27 48.2**	**+0.5**
	baz=237							
TWK					*e*S	**Sn**	**22 28 04.5**	**+0.8**
	baz=237							
NWF	**Wu-fen Shan**	**1.19**	**9**		*e*P	**Pg**	**22 27 48.5**	**+0.6**
	baz=10.0							
NWF					*e*S	**Sn**	**22 28 03.6**	**-0.5**
	baz=10.0							
WFSB	**Wu-fen Shan**	**1.19**	**9**		*e*P	**Pg**	**22 27 48.6**	**+0.7**
	baz=10.0							
CHN1	**Nanshi**	**1.19**	**234**		*e*P	**Pg**	**22 27 48.5**	**+0.5**
	baz=233							
CHN1					*e*S	**Sn**	**22 28 05.4**	**+1.3**
	baz=233							
SNST	**Tainan City**	**1.19**	**236**		*e*P	**Pg**	**22 27 48.4**	**+0.4**
	baz=235							
SNST					*e*S	**Sn**	**22 28 05.2**	**+1.1**
	baz=235							
TWS1	**Kuangyinshan**	**1.21**	**353**		*e*P	**Pg**	**22 27 49.2**	**+0.9**
	baz=355							
SGST	**Jiashian**	**1.22**	**229**		*e*P	**Pb**	**22 27 47.6**	**-0.6**
	baz=227							
SGST					*e*S	**Sn**	**22 28 05.5**	**+0.8**
	baz=227							
SXI1	**Grass Mountain**	**1.23**	**13**		*e*P	**Pg**	**22 27 49.1**	**+0.4**
	baz=14							
YM01	**YM01**	**1.25**	**360**		*e*P	**Pg**	**22 27 49.8**	**+0.7**
	baz=1.0							
YM01					*e*S	**Sn**	**22 28 07.2**	**+1.8**
	baz=1.0							
ICHU	**Yijhu**	**1.30**	**246**		*e*P	**Pg**	**22 27 50.5**	**+0.4**
	baz=245							
ICHU					*e*S	**Sg**	**22 28 09.3**	**+2.3**
	baz=245							
ECL	**Taimali**	**1.41**	**204**		*e*P	**Pb**	**22 27 51.1**	**-0.4**
	baz=203							
ECL					*e*S	**Sg**	**22 28 10.9**	**+0.4**
	baz=203							
SCST	**Cishan**	**1.41**	**225**		*e*P	**Pg**	**22 27 52.2**	**0.0**
	baz=224							
SHHT	**Tainan City**	**1.42**	**233**		*e*P	**Pg**	**22 27 54.0**	**+1.7**
	baz=232							
SHHT					*e*S	**Sg**	**22 28 15.8**	**+5.0**
	baz=232							
SSD	**Sandimen**	**1.43**	**217**		*e*P	**Pn**	**22 27 50.6**	**-0.5**
	baz=216							
SSD					*e*S	**Sg**	**22 28 11.4**	**+0.2**
	baz=216							
TSMG	**Majia**	**1.46**	**216**		*e*P	**Pg**	**22 27 52.3**	**-0.7**
	baz=215							
TSMG					*e*S	**Sg**	**22 28 13.9**	**+1.8**
	baz=215							
MASBT	**Mashibuluo**	**1.54**	**214**		*e*P	**Pn**	**22 27 52.5**	**-0.1**
	baz=213							
JIJ	**Ishigaki jima**	**2.39**	**78**		P	**Pn**	**22 28 04.2**	**-0.1**
JIJ					S	**Sn**	**22 28 33.6**	**-0.1**
JISG	**Ishigakijimahi**	**2.59**	**74**		P	**Pn**	**22 28 07.2**	**+0.2**
JISG					S	**Sn**	**22 28 38.1**	**-0.5**

*JMA **10** 22:30:56.5±0.2, 23°N±1°×123°.5E±0°.6, h59km±4km, MV3.0/16, NEAR ISHIGAKIJIMA ISLAND*

*IDC **10** 22:31:00.8±1.5, 21°.60N×120°.63E, h0km, mb3.4/7, mbtmp3.4/7, Error ellipse: s-maj=158.3km s-min=19.9km az=65.0*

ISC 10 22:30:59.5±1.2, **23°.24N**±0°.09×**123°.53E**±0°.07, **h35**km, **n17**, σ**0**s**90**/**23**, **mb3.5/7, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.85**	**17**	P	**Pn**	**22 31 13.9**	**-1.1**
HATJ				*e*S	**Sn**	**22 31 26.5**	**+0.3**
JKRS	**Kuro-shima**	**1.09**	**24**	*e*P	**Pn**	**22 31 17.6**	**-0.7**
JKRS				S	**Sn**	**22 31 32.7**	**+0.7**
JIJ	**Ishigaki jima**	**1.25**	**27**	P	**Pn**	**22 31 19.4**	**-1.1**
JIJ				*e*S	**Sn**	**22 31 35.8**	**-0.4**
YOJ	**Yonaguni jima**	**1.30**	**339**	P	**Pn**	**22 31 19.9**	**-1.3**
YOJ				S	**Sn**	**22 31 37.3**	**-0.1**
JISG	**Ishigakijimahi**	**1.52**	**28**	*e*P	**Pn**	**22 31 23.1**	**-1.1**
JISG				*e*S	**Sn**	**22 31 42.5**	**-0.2**
JTJ	**Tarama**	**1.76**	**37**	P	**Pn**	**22 31 26.6**	**-0.8**
JTJ				S	**Sn**	**22 31 49.0**	**+0.3**
JIRB	**Irabujima**	**2.18**	**43**	*e*P	**Pn**	**22 31 32.5**	**-0.8**
JIRB				*S*	**Sn**	**22 31 59.4**	**+0.3**
JMJ2	**Miyako jima3**	**2.22**	**47**	*e*P	**Pn**	**22 31 33.0**	**-0.8**
JMJ2				*i* S	**Sn**	**22 32 00.4**	**+0.3**
JOGS	**Gusukube**	**2.29**	**48**	*e*P	**Pn**	**22 31 34.0**	**-0.8**
JOGS				S	**Sn**	**22 32 02.2**	**+0.5**
JIKM	**Ikemajima**	**2.30**	**43**	S	**Sn**	**22 32 02.2**	**+0.3**
SONM	**Songino Array**	**28.09**	**335**	P	P	22 36 57.4	+9.5
	0.8nm,0.7s,baz=145,slow=8.7,SNR=4.5 0.8nm,0.7s						
MKAR	**Makanchi Array**	**40.51**	**316**	P	**P**	**22 38 35.8**	**+0.7**
	0.1nm,0.4s,baz=99,slow=8.9,SNR=4.4 0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**42.20**	**327**	P	P	22 38 55.8	+7.0
	0.5nm,0.5s,baz=147,slow=8.2,SNR=2.1 0.5nm,0.5s						
WRA	**Warramunga Arr**	**44.20**	**165**	P	**P**	**22 39 04.4**	**-0.9**
	0.5nm,0.8s,baz=346,slow=8.9,SNR=2.5 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**44.21**	**320**	P	**P**	**22 39 07.3**	**+2.2**
	0.1nm,0.3s,baz=116,slow=7.2,SNR=2.6 0.1nm,0.3s						
ASAR	**Alice Springs**	**47.70**	**167**	P	**P**	**22 39 32.8**	**-0.1**
	0.2nm,0.4s,baz=350,slow=8.3,SNR=7.3 0.2nm,0.4s						
FINES	**FINESS Array B**	**73.33**	**330**	P	P	22 42 36.2	+8.9
	0.8nm,0.7s,baz=56,slow=8.5,SNR=1.0 0.8nm,0.7s						

*MOS **10** 22:50:46.7±0.8, 3°.77S×151°.88E, h264km, mb5.7/68, Error ellipse: s-maj=6.8km s-min=4.5km az=111.5*

*BJI **10** 22:50:47.1±0.0, 3°.59S×152°.23E, h276km, mb5.5/92, mB5.5/66*

*IPGP **10** 22:50:48.0, 3°.81S×151°.92E, h270km, Mw5.9, Fault plane solution: NP1:ϕs3.00000°, δ83.00000°, λ-114.00000°. NP2:ϕs257.00000°, δ25.00000°, λ-18.00000°*

*NEIC **10** 22:50:48.9±1.5, 3°.82S±0°.08×151°.93E±0°.07, h268km±1km, mb5.6/205, Mwb5.8/39, Mww5.8/54, Error ellipse: s-maj=13.5km s-min=11.5km az=210.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-2.85; Mθθ2.07; Mϕϕ0.78; Mrθ0.22; Mθϕ1.83; Mϕr-6.28; Fault plane solution: M₀7.03000×10¹⁷ NP1:ϕs8.30000°, δ80.12000°, λ-107.87000°. NP2:ϕs250.29000°, δ20.34000°, λ-29.57000°. Principal axes: T 5.9778, Plg33.0000°, Azm113.0000°; N 1.7642, Plg18.0000°, Azm11.0000°; P -7.7420, Plg52.0000°, Azm258.0000°;*

*DJA **10** 22:50:48.6±0.3, 4°S±2°×151°.2E±°, h275km±3km, M5.8/136, mB6.2/109, mb6.0/136, MLv5.9/3, Mw(mB)5.9/109, MwMwp5.5/74, Mwp5.7/74*

*GCMT **10** 22:50:48.9±0.1, 3°.80S±0°.01×151°.97E, h273km, MW5.8/172, Moment Tensor Solution. s163,c327; s172,c520; Duration: 2ⁿ0 Moment tensor: Scale 10¹⁷ Nm; Mrr-1.12±.04; Mθθ1.92±.04; Mϕϕ-0.80±.04; Mrθ0.21±.04; Mθϕ1.69±.04; Mϕr-7.04±.04; Best double couple: M₀7.26100×10¹⁷ NP1:ϕs4.00000°, δ88.00000°, λ-105.00000°. NP2:ϕs269.00000°, δ15.00000°, λ-6.00000°. Principal axes: T 6.3420, Plg42.0000°, Azm109.0000°; N 1.8350, Plg15.0000°, Azm5.0000°; P -8.1800, Plg45.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **10** 22:50:49.0±0.4, 3°.84S×151°.85E, h277km±3km, mb5.3/33, mbtmp5.9/37 Error ellipse: s-maj=8.4km s-min=4.7km az=81.0*

*NEIC **10** 22:50:48.9, 3°.91S×152°.11E, h270km, Moment Tensor Solution. Duration: 4ⁿ3 Moment tensor: Scale 10¹⁷Nm; Mrr-1.81; Mθθ1.41; Mϕϕ0.41; Mrθ0.19; Mθϕ2.57; Mϕr-6.81; Fault plane solution: M₀7.40000×10¹⁷ NP1:ϕs5.61000°, δ83.83000°, λ-111.37000°. NP2:ϕs260.25000°, δ22.20000°, λ-16.52000°. Principal axes: T 6.8443, Plg35.0000°, Azm114.0000°; N 1.1197, Plg21.0000°, Azm8.0000°; P -7.9640, Plg47.0000°, Azm253.0000°;*

*NEIC **10** 22:50:48.9, 3°.81S×151°.91E, h270km*

*NEIC **10** 22:50:49, 3°.81S×151°.91E, h268km*

ISC 10 22:50:48.6±0.2, **3°.84S**±0°.03×**151°.93E**±0°.03, **h276**km±1km, **h277**km:**pP-P, n1681**, σ**1**s**25**/1916, **mb5.7**/272, **59C-108D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.42**	**146**	Pn	**Pn**	**22 51 23.9**	**-0.4**
RABL				Sn	**S**	**22 51 51.1**	**-1.5**
RABL	**Rabaul**	**0.42**	**146**	P	**Pn**	**22 51 24.2**	**-0.1**
I40PG	**Keravat**	**0.47**	**169**	P	**Pn**	**22 51 23.7**	**-0.7**
	baz=195,slow=84,SNR=0.6						
KAVG	**Kavieng**	**1.68**	**318**	P	**Pn**	**22 51 30.4**	**-0.3**
BULU	**Kimbe**	**2.33**	**224**	P	**Pn**	**22 51 35.9**	**-0.2**
MANU	**Manus Island**	**4.89**	**291**	Pn	**Pn**	**22 52 04.6**	**+0.7**
MANU	**Manus Island**	**4.89**	**291**	P	**Pn**	**22 52 05.0**	**+1.0**
PMG	**Port Moresby**	**7.28**	**220**	P	**Pn**	**22 52 33.1**	**0.0**
PMG	**Port Moresby**	**7.28**	**220**	P	**Pn**	**22 52 32.7**	**-0.4**
	243nm,0.5s,baz=60,slow=6.1,SNR=60						
PMG				S	**S**	**22 53 56.3**	**-1.0**
	2µm,1.1s,baz=7.8,slow=10,SNR=12						
HNR	**Honiara**	**9.71**	**125**		**Pn**	**22 53 02.1**	**-1.3**
HNR	**Honiara**	**9.71**	**125**	P	**Pn**	**22 53 03.7**	**+0.3**
HNR	**Honiara**	**9.71**	**125**	P	**Pn**	**22 53 03.3**	**-0.1**
	16µm,0.9s,baz=270,slow=3.0,SNR=26						
TABU	**Tabubil**	**10.76**	**262**	P	**Pn**	**22 53 17.8**	**+1.3**
GENI	**Genyem**	**11.80**	**276**	P	**Pn**	**22 53 29.7**	**+0.4**
GENI	**Genyem**	**11.80**	**276**	P	**Pn**	**22 53 29.7**	**+0.4**
	3µm,0.6s,38µm12µm						
MMPI	**Merauke**	**12.36**	**248**	P	**P**	**22 53 41.1**	**+3.3**
PATS	**Pohnpei**	**12.37**	**31**	P	**Pn**	**22 53 36.0**	**-0.3**
	baz=12,SNR=23						
PATS	**Pohnpei**	**12.37**	**31**		**Pn**	**22 53 35.1**	**-1.1**
PATS	**Pohnpei**	**12.37**	**31**	P	**Pn**	**22 53 37.1**	**+0.8**
COEN	**Coen**	**13.25**	**220**	P	**P**	**22 53 48.4**	**+0.7**
	baz=13,SNR=347						
COEN	**Coen**	**13.25**	**220**		**P**	**22 53 48.1**	**+0.3**
COEN	**Coen**	**13.25**	**220**	P	**P**	**22 53 48.8**	**+1.1**
SMPI	**Sarmi**	**13.32**	**278**	P	**P**	**22 53 48.6**	**0.0**
	5µm,1.2s,46µm25µm						
MTSU	**Mount Surprise**	**16.04**	**207**	P	**Pn**	**22 54 20.7**	**+0.5**
	baz=16,SNR=849						
MTSU	**Mount Surprise**	**16.04**	**207**	P	**Pn**	**22 54 21.0**	**+0.8**
TV1H	**Townsville Har**	**16.13**	**198**	P	**Pn**	**22 54 22.0**	**+0.8**
AUAYR	**Ayr State High**	**16.25**	**195**	P	**Pn**	**22 54 23.2**	**+0.6**
CTA	**Charters Tower**	**17.07**	**198**	P	**Pn**	**22 54 32.1**	**-0.2**
CTA	**Charters Tower**	**17.07**	**198**	P	**Pn**	**22 54 31.8**	**-0.5**
	851nm,0.7s,baz=19,slow=11,SNR=1408						
CTA				S	**S**	**22 57 35.2**	**+1.9**
	58nm,1.0s,baz=267,slow=21,SNR=9.2						
CTA				P3KP		23 29 52.0	
	1.0nm,0.4s,baz=311,slow=2.9,SNR=3.5						
CTAO	**Charters Tower**	**17.07**	**198**	P	**Pn**	**22 54 31.6**	**-0.7**
CTAO	**Charters Tower**	**17.07**	**198**	P	**Pn**	**22 54 32.3**	**+0.0**
CTAO	**Charters Tower**	**17.07**	**198**	P	**Pn**	**22 54 31.6**	**-0.7**
GUMO	**Guam**	**18.68**	**338**	P	**P**	**22 54 47.7**	**+0.7**
GUMO	**Guam**	**18.68**	**338**	P	**Pn**	**22 54 49.7**	**-1.3**
GUMO	**Guam**	**18.68**	**338**	P	**P**	**22 54 47.5**	**+0.4**
	848nm,1.0s,baz=169,slow=12,SNR=15						
GUMO				S	**S**	**22 58 05.7**	**+0.7**
	126nm,0.9s,baz=230,slow=24,SNR=7.1						
RK1H	**Rockhampton Ha**	**19.48**	**184**	P	**P**	**22 54 56.6**	**+1.1**
FAKI	**Fak Fak**	**19.66**	**272**	P	**P**	**22 54 57.3**	**-0.3**
FAKI	**Fak Fak**	**19.66**	**272**	P	**P**	**22 54 58.9**	**+1.3**
FAKI	**Fak Fak**	**19.66**	**272**	P	**P**	**22 54 57.5**	**-0.1**
	954nm,0.6s,25µm20µm						
GD1S	**Gladstone Soft**	**19.90**	**182**	P	**P**	**22 55 01.1**	**+1.2**
QIS	**Mount Isa**	**20.50**	**215**	P	**P**	**22 55 06.4**	**+0.1**
	baz=21,SNR=408						
QIS	**Mount Isa**	**20.50**	**215**	P	**P**	**22 55 06.7**	**+0.4**
KOUNC	**Koumac, New Ca**	**20.51**	**145**	P	**P**	**22 55 06.5**	**+0.1**
KOUNC	**Koumac, New Ca**	**20.51**	**145**	P	**P**	**22 55 07.2**	**+0.8**
SWI	**Sorong**	**20.86**	**278**	P	**P**	**22 55 10.2**	**+0.2**
SWI	**Sorong**	**20.86**	**278**	P	**P**	**22 55 10.0**	**0.0**
	2µm,0.7s,33µm18µm						
SAUI	**Saumlaki**	**20.92**	**258**	P	**P**	**22 55 10.2**	**-0.4**
SAUI	**Saumlaki**	**20.92**	**258**	P	**P**	**22 55 11.3**	**+0.6**
SAUI	**Saumlaki**	**20.92**	**258**	P	**P**	**22 55 10.3**	**-0.4**
	4µm,1.4s,51µm20µm						
KDU	**Kakadu

comp=Z,9µm,0.4s,baz=47,slow=9.8,SNR=9591
WRA S **S** **22 59 25.6 -1.1**
comp=Z,38nm,0.5s,baz=48,slow=16,SNR=5.7
WRA ScP **ScP** **23 02 23.4 0.0**
comp=Z,61nm,0.8s,baz=48,slow=2.9,SNR=10
I07AU WARRAMUNGA INT 23.46 226 P **P** **22 55 35.0 +1.1**
baz=44,slow=8.7,SNR=9.3
QLP Quilpie 23.78 197 P **P** **22 55 37.5 +0.8**
baz=24,SNR=100
QLP Quilpie 23.78 197 P **P** **22 55 38.5 +1.7**
PINNC Pines Island, 23.96 142 P **P** **22 55 39.5 +1.1**
PINNC Pines Island, 23.96 142 P **P** **22 55 40.0 +1.6**
GC1S Gold Coast 1 S 24.24 177 P **P** **22 55 42.2 +1.4**
LBMI Labuha 24.61 277 P **P** **22 55 45.9 +1.5**
comp=Z,2µm,1.9s,comp=Z,32µm
NLAI Namlea 24.79 271 P **P** **22 55 46.0 0.0**
comp=Z,611nm,0.5s,comp=Z,9µm
TNTI Ternate 24.97 280 P **P** **22 55 47.4 -0.2**
TNTI IAmb IAmb 22 55 50.9
comp=Z,383nm,1.3s
TNTI Ternate 24.97 280 P **P** **22 55 48.0 +0.4**
TNTI Ternate 24.97 280 P **P** **22 55 47.8 +0.2**
comp=Z,160nm,1.2s,comp=Z,4µmcomp=Z,6µm
KNRA Kununurra 25.64 241 P **P** **22 55 52.5 -1.2**
baz=26,SNR=11
KNRA Kununurra 25.64 241 P **P** **22 55 52.5 -1.2**
KNRA IAmb IAmb 22 56 52.5
comp=Z,214nm,0.8s
KNRA Kununurra 25.64 241 P **P** **22 55 53.4 -0.2**
AULRC Lightning Ridg 25.73 188 P **P** **22 55 55.4 +1.2**
SANI Sanana 25.96 273 P **P** **22 55 57.3 +0.7**
SANI Sanana 25.96 273 P **P** **22 55 53.1 -3.4**
SANI Sanana 25.96 273 P **P** **22 55 55.6 -1.0**
comp=Z,898nm,0.8s,comp=Z,9µmcomp=Z,12µm
INKA Innaminka 26.05 203 P **P** **22 55 57.9 +0.8**
AS01 Alice Springs 26.27 220 P **P** **22 55 59.6 +0.4**
AS31 Alice Springs 26.29 220 P **P** **22 55 59.1 -0.4**
AS31 IAmb IAmb 22 56 49.8
comp=Z,148nm,0.6s
ASAR Alice Springs 26.30 220 P **P** **22 55 59.3 -0.1**
comp=Z,320nm,0.5s,baz=52,slow=8.3,SNR=4755
ASAR pP **pP** **22 56 47.6 -4.9**
comp=Z,264nm,0.8s,baz=42,slow=12,SNR=3.8
ASAR S **S** **23 00 11.0 -0.5**
comp=Z,15nm,0.5s,baz=52,slow=15,SNR=2.4
ASAR ScP **ScP** **23 02 31.8 +0.4**
comp=Z,18nm,0.9s,baz=46,slow=2.7,SNR=4.4
comp=Z,320nm,0.5s
ARMA Armidale 26.44 181 P **P** **22 56 02.0 +1.3**
baz=27,SNR=75
ARMA Armidale 26.44 181 P **P** **22 56 02.0 +1.3**
ARMA IAmb IAmb 22 56 03.3
comp=Z,215nm,0.9s
ARMA Armidale 26.44 181 P **P** **22 56 02.4 +1.7**
AUPHS Peel High Scho 27.13 182 P **P** **22 56 08.4 +1.6**
SGSI Sangihe 27.42 286 P **P** **22 56 10.9 +1.4**
comp=Z,669nm,0.8s,comp=Z,17µmcomp=Z,7µm
FUNA Funafuti 27.50 101 P **P** **22 56 09.9 -0.3**
FUNA Funafuti 27.50 101 P **P** **22 56 10.9 +0.7**
SOEI Soe 28.07 256 P **P** **22 56 15.3 -0.2**
SOEI Soe 28.07 256 P **P** **22 56 16.6 +1.2**
SOEI Soe 28.07 256 P **P** **22 56 12.0 -3.4**
SOEI Soe 28.07 256 P **P** **22 56 15.1 -0.3**
comp=Z,500nm,0.8s,comp=Z,5µmcomp=Z,7µm
CMSA Cobar Meteorol 28.17 191 P **P** **22 56 16.6 +0.8**
baz=28,SNR=88
CMSA Cobar Meteorol 28.17 191 P **P** **22 56 16.7 +0.8**
YSA Yasawairara 28.24 119 P **P** **22 56 17.4 +0.7**
KMSI Cibinong 28.27 278 P **P** **22 56 18.4 +1.4**
comp=Z,2µm,0.6s,comp=Z,24µmcomp=Z,8µm
LHI Lord Howe Isla 28.34 167 P **P** **22 56 17.5 +0.1**
baz=28,SNR=7.3
LHI Lord Howe Isla 28.34 167 P **P** **22 56 17.9 +0.5**
LHI IAmb IAmb 22 56 19.1
comp=Z,289nm,1.0s
LHI Lord Howe Isla 28.34 167 P **P** **22 56 18.6 +1.2**
AUDCS Dubbo College 28.41 186 P **P** **22 56 19.2 +1.2**
OOD Oodnadatta 28.41 211 P **P** **22 56 18.6 +0.5**
DAV Davao City (W) 28.44 292 P **P** **22 56 19.5 +0.9**
NTLH Newcastle Hard 28.91 180 P **P** **22 56 24.2 +1.8**
MGCD Mangrove Creek 29.23 181 P **P** **22 56 26.3 +1.1**
baz=29,SNR=26
MGCD Mangrove Creek 29.23 181 P **P** **22 56 27.0 +1.8**
LUWI Luwuk 29.26 275 P **P** **22 56 26.2 +0.4**
LUWI Luwuk 29.26 275 P **P** **22 56 27.3 +1.5**
LUWI Luwuk 29.26 275 P P 22 56 20.4 -5.4
LUWI Luwuk 29.26 275 P **P** **22 56 25.9 +0.1**
comp=Z,2µm,1.1s,comp=Z,26µmcomp=Z,9µm
BBSI Bau Bau 29.30 266 P **P** **22 56 27.4 +1.2**
comp=Z,304nm,1.2s,comp=Z,6µmcomp=Z,4µm
NFK Norfolk Island 29.32 150 P **P** **22 56 25.7 -0.4**
baz=29,SNR=3.2
FITZ Fitzroy Crossi 29.37 239 P **P** **22 56 25.3 -1.4**
baz=29,SNR=574
FITZ Fitzroy Crossi 29.37 239 P **P** **22 56 25.3 -1.4**
FITZ IAmb IAmb 22 56 26.7
comp=Z,196nm,1.1s
FITZ Fitzroy Crossi 29.37 239 P **P** **22 56 25.8 -0.9**
LCRK Leigh Creek 29.47 205 P **P** **22 56 28.0 +0.6**
STKA Stephens Creek 29.53 198 P **P** **22 56 28.1 +0.1**
baz=30,SNR=223
STKA Stephens Creek 29.53 198 P **P** **22 56 27.9 0.0**
STKA Stephens Creek 29.53 198 P **P** **22 56 28.3 +0.4**
STKA Stephens Creek 29.53 198 P **P** **22 56 27.9 0.0**
STKA pmax pmax
comp=Z,28nm,0.7s
STKA Stephens Creek 29.53 198 P **P** **22 56 27.7 -0.2**
comp=Z,119nm,0.5s,baz=25,slow=13,SNR=128
STKA S **S** **23 01 00.5 -1.5**
comp=Z,29nm,0.8s,baz=124,slow=21,SNR=4.6
comp=Z,119nm,0.5s
SYDH Sydney Hard Ro 29.79 182 P **P** **22 56 31.4 +1.2**
RIV Riverview 29.85 181 P **P** **22 56 31.4 +0.7**
baz=30,SNR=4.4
RIV Riverview 29.85 181 P **P** **22 56 31.9 +1.3**
MMRI Maumere 29.88 259 P **P** **22 56 29.7 -1.6**
MMRI Maumere 29.88 259 P **P** **22 56 30.7 -0.6**
MMRI Maumere 29.88 259 P **P** **22 56 29.4 -1.9**
comp=Z,1µm,0.8s,comp=Z,12µmcomp=Z,5µm
DGTI Dogotuki 30.00 116 P **P** **22 56 34.0 +1.8**
MRSI Marisa 30.27 278 P **P** **22 56 34.0 -0.7**
comp=Z,235nm,0.5s,comp=Z,4µmcomp=Z,6µm
EDFI Ende, Flores 30.43 259 P **P** **22 56 33.7 -2.5**
comp=Z,2µm,0.9s,comp=Z,12µmcomp=Z,5µm
TAVE Taveuni 30.46 117 P **P** **22 56 38.2 +1.9**
YNG Young 30.48 186 P **P** **22 56 37.3 +1.0**
baz=31
YNG Young 30.48 186 P **P** **22 56 37.7 +1.4**
WRKA Warakurna 31.00 225 P **P** **22 56 40.1 -0.9**
baz=31,SNR=1000
WRKA Warakurna 31.00 225 P **P** **22 56 40.5 -0.4**
MULG Mulgathing 31.26 211 P **P** **22 56 43.2 +0.1**
FUTU Fugatoga 31.31 111 P **P** **22 56 45.8 +2.1**
AUUHS Ulladulla High 31.39 182 P **P** **22 56 46.3 +2.1**
CNB Canberra Magne 31.41 184 P **P** **22 56 45.4 +1.0**
baz=32,SNR=25
CNB Canberra Magne 31.41 184 P **P** **22 56 46.0 +1.6**
CAN Canberra 31.44 185 P **P** **22 56 45.6 +0.9**
CAN Canberra 31.44 185 P **P** **22 56 46.2 +1.5**
CAN Canberra 31.44 185 P **P** **22 56 45.6 +0.9**
CAN pmax pmax
comp=Z,83nm,1.0s
CAN Canberra 31.44 185 P **P** **22 56 46.1 +1.4**
CAN ScP **ScP** **23 02 50.1 +2.6**
TOLI2 Tolitoli 31.51 278 P **P** **22 56 44.4 -1.2**
TOLI2 IAmb IAmb 22 56 46.7
comp=Z,461nm,1.6s
TOLI2 Tolitoli 31.51 278 P **P** **22 56 45.7 +0.2**
BASI Baing, Sumba 31.73 257 P **P** **22 56 46.4 -1.0**
comp=Z,3µm,0.9s,comp=Z,28µmcomp=Z,6µm
BKSI Bulukumba 31.73 266 P **P** **22 56 47.6 +0.1**
comp=Z,160nm,0.6s,comp=Z,3µmcomp=Z,5µm
HTT Hallett 31.85 201 P **P** **22 56 48.5 +0.3**
baz=32,SNR=92
HTT Hallett 31.85 201 P **P** **22 56 48.9 +0.7**
PTPS Port Pirie 31.96 202 P **P** **22 56 50.0 +0.9**
WHYH Whyalla 32.00 203 P **P** **22 56 49.8 +0.3**
LKBA Tubou, Lakemba 32.01 119 P **P** **22 56 50.6 +0.9**
TTSI Tana Toraja 32.06 270 P **P** **22 56 51.7 +1.4**
comp=Z,259nm,0.9s,comp=Z,5µmcomp=Z,5µm
KAPI Kappang 32.10 267 P **P** **22 56 50.1 -0.5**
KAPI Kappang 32.10 267 P **P** **22 56 50.1 -0.5**
KAPI pmax pmax
comp=Z,303nm,0.7s
JCJ Chichijima 32.16 344 P **P** **22 56 48.3 -2.6**
JCJ Chichijima 32.16 344 S **S** **23 01 42.4 -0.6**
comp=Z,79nm,0.8s,baz=92,slow=22,SNR=2.3
MPSI Mapaga 32.27 277 P **P** **22 56 51.9 -0.3**
comp=Z,864nm,0.7s,comp=Z,11µmcomp=Z,4µm
BBOO Buckleboo 32.42 205 P **P** **22 56 52.8 -0.4**
baz=32,SNR=116
BBOO Buckleboo 32.42 205 P **P** **22 56 53.0 -0.2**
BBOO Buckleboo 32.42 205 P **P** **22 56 53.5 +0.3**
AUMAG Moama Anglican 32.78 191 P **P** **22 56 57.0 +0.8**
MILA Mila 33.15 184 P **P** **22 57 00.6 +1.1**
baz=33,SNR=9.6
ARPS Mount Arapiles 34.06 195 P **P** **22 57 08.0 +0.8**
baz=34,SNR=44
ARPS Mount Arapiles 34.06 195 P **P** **22 57 08.4 +1.2**
TOO Toolangi 34.09 189 P **P** **22 57 08.2 +0.7**
baz=34,SNR=15
TOO Toolangi 34.09 189 P **P** **22 57 08.2 +0.7**
TOO IAmb IAmb 22 57 10.7
comp=Z,323nm,1.9s
TOO Toolangi 34.09 189 P **P** **22 57 09.6 +2.1**
TOO Toolangi 34.09 189 P **P** **22 57 08.2 +0.7**
TOO pmax pmax
comp=Z,323nm,2.0s
PLAI Plampang 34.29 260 P **P** **22 57 06.2 -3.3**
comp=Z,2µm,0.6s,comp=Z,12µmcomp=Z,3µm
BRAT Ballarat 34.34 191 P **P** **22 57 11.2 +1.6**
GEXS Deakin Univers 34.91 191 P **P** **22 57 16.7 +2.3**
FORT Forrest 35.00 217 P **P** **22 57 14.9 -0.4**
baz=35,SNR=879
FORT Forrest 35.00 217 P **P** **22 57 14.9 -0.4**
FORT Forrest 35.00 217 P **P** **22 57 15.3 0.0**
BKB Balikpapan 35.09 273 P **P** **22 57 18.4 +2.1**
BKB Balikpapan 35.09 273 P **P** **22 57 18.4 +2.1**
BKB Balikpapan 35.09 273 P **P** **22 57 18.6 +2.3**
comp=Z,1µm,1.1s,comp=Z,13µmcomp=Z,12µm
TWSI Taliwang, Sumb 35.16 260 P **P** **22 57 13.4 -3.5**
comp=Z,717nm,0.9s,comp=Z,6µm
PSA00 Pilbara Seismi 35.78 238 P **P** **22 57 20.7 -1.5**
PSA00 Pilbara Seismi 35.78 238 P **P** **22 57 20.7 -1.5**
PSA00 IAmb IAmb 22 57 22.1
comp=Z,255nm,1.1s
PSA00 Pilbara Seismi 35.78 238 P **P** **22 57 21.4 -0.8**
SRBI Singaraja 36.74 262 P **P** **22 57 29.0 -1.3**
comp=Z,362nm,0.8s,comp=Z,5µmcomp=Z,4µm
DNP Denpasar 36.80 261 P **P** **22 57 29.9 -0.9**
comp=Z,1µm,0.7s,comp=Z,20µm
KKM Kota Kinabalu 36.99 285 P **P** **22 57 32.3 -0.2**
KKM IAmb IAmb 22 57 35.0
comp=Z,302nm,0.8s
KKM Kota Kinabalu 36.99 285 P **P** **22 57 34.4 +1.9**
MTKI Muara Teweh, K 37.10 273 P **P** **22 57 33.7 +0.3**
comp=Z,837nm,0.8s,comp=Z,8µmcomp=Z,5µm
GLAD Gladstone 37.15 185 P **P** **22 57 34.5 +1.2**
AFI Afiamalu 37.18 108 P **P** **22 57 34.6 +0.6**
AFI Afiamalu 37.18 108 P **P** **22 57 34.6 +0.6**
AFI pmax pmax
comp=Z,844nm,1.0s
AFI Afiamalu 37.18 108 ⇑P **P** **22 57 35.3 +1.2**
AFI ScP **ScP** **23 03 12.8 +4.3**
SZP Santa 37.63 305 P **P** **22 57 38.2 +0.5**
JAGI Jajag, Banyuwa 37.82 261 P **P** **22 57 36.2 -3.2**
JAGI Jajag, Banyuwa 37.82 261 P **P** **22 57 37.9 -1.5**
JAGI Jajag, Banyuwa 37.82 261 P **P** **22 57 35.9 -3.5**
comp=Z,742nm,0.7s,comp=Z,7µmcomp=Z,3µm
JOW Kunigami 38.11 324 P **P** **22 57 41.7 +0.2**
JOW Kunigami 38.11 324 P **P** **22 57 43.7 +2.1**
RAO Raoul Island 38.16 135 P **P** **22 57 41.2 -0.8**
RAO Raoul Island 38.16 135 P **P** **22 57 41.0 -1.0**
RAO Raoul Island 38.16 135 P **P** **22 57 41.2 -0.8**
RAO pmax pmax
comp=Z,1µm,1.1s
RAO Raoul Island 38.16 135 P **P** **22 57 41.2 -0.8**
comp=Z,399nm,0.4s,baz=257,slow=19,SNR=1.7
comp=Z,399nm,0.4s
BLJI Banyuglugur 38.32 262 P **P** **22 57 41.9 -1.6**
comp=Z,652nm,1.0s,comp=Z,5µm
GMJI Gumukmas 38.50 262 P **P** **22 57 42.9 -2.1**
MOO Moorlands 38.67 186 P **P** **22 57 47.1 +1.1**
baz=39,SNR=12
MOO Moorlands 38.67 186 P **P** **22 57 48.1 +2.1**
MEEK Meekatharra 39.10 231 P **P** **22 57 49.2 -0.7**
baz=39,SNR=1000
MEEK Meekatharra 39.10 231 P **P** **22 57 49.7 -0.2**
TAU Tasmania Unive 39.12 185 P **P** **22 57 51.4 +1.7**
TAU IAmb IAmb 22 59 04.0
comp=Z,303nm,1.6s
TAU Tasmania Unive 39.12 185 P **P** **22 57 51.4 +1.7**
TAU pmax pmax
comp=Z,303nm,1.6s
TAU Tasmania Unive 39.12 185 P **P** **22 57 51.4 +1.7**
BWJI Bawean 39.17 265 P **P** **22 57 50.4 -0.2**
comp=Z,1µm,1.4s,comp=Z,18µmcomp=Z,6µm
KMBL Kambalda 39.35 222 P **P** **22 57 50.9 -0.9**
baz=39,SNR=358
KMBL Kambalda 39.35 222 P **P** **22 57 51.1 -0.7**
GRJI Gresik 39.38 264 P **P** **22 57 52.1 -0.2**
comp=Z,444nm,1.2s
KUZ Kuaotunu 39.38 149 P **P** **22 57 54.2 +2.3**
YOJ Yonaguni jima 39.78 316 P **P** **22 57 55.8 +0.4**
YOJ Yonaguni jima 39.78 316 P **P** **22 57 56.5 +1.2**
YOJ Yonaguni jima 39.78 316 P **P** **22 57 55.8 +0.4**
YOJ pmax pmax
comp=Z,733nm,1.0s
TOZ Tahuroa Road 40.04 150 P **P** **22 57 58.8 +1.5**
TOZ IAmb IAmb 22 58 00.6
comp=Z,443nm,1.1s
TWGBT Beinan 40.11 313 P **P** **22 57 59.5 +1.4**
TWG Pinlang 40.12 313 P **P** **22 57 57.0 -1.2**
SBUM Sibu 40.17 278 P **P** **22 58 00.2 +1.4**
SBUM IAmb IAmb 22 58 01.8
comp=Z,258nm,1.1s
NIUE Niue 40.21 115 P **P** **22 58 00.8 +1.8**
baz=40,SNR=11
NIUE Niue 40.21 115 P **P** **22 57 59.4 +0.4**
NIUE Niue 40.21 115 P **P** **22 58 00.9 +1.9**
YULB Yu-li 40.31 314 P **P** **22 58 00.0 +0.3**
YULB IAmb IAmb 22 58 02.1
comp=Z,199nm,0.7s
YULB Yu-li 40.31 314 P **P** **22 58 00.2 +0.5**
NGJI Ngawi 40.41 263 P **P** **22 57 59.5 -1.2**
comp=Z,308nm,1.0s,comp=Z,4µm
JSG Sagara 40.43 342 P **P** **22 57 59.6 -0.9**
JSG IAmb IAmb 22 58 03.1
comp=Z,214nm,0.9s
NACB Ninganchiao 40.58 315 P **P** **22 58 01.5 -0.5**
NACB IAmb IAmb 22 58 03.9
comp=Z,389nm,1.0s
NACB Ninganchiao 40.58 315 P **P** **22 58 02.1 +0.2**
STKI Sintang 40.60 275 P **P** **22 58 02.9 +0.6**
comp=Z,1µm,1.2s,comp=Z,13µm
TPUB Ta-pu 40.74 313 P **P** **22 58 02.5 -0.7**
TPUB IAmb IAmb 22 58 04.0
comp=Z,137nm,0.7s
TPUB Ta-pu 40.74 313 P **P** **22 58 03.5 +0.3**
SSLB Suanglung 40.80 314 P **P** **22 58 04.1 +0.3**
SSLB Suanglung 40.80 314 P **P** **22 58 04.9 +1.2**
GIRL Giralia 40.98 239 P **P** **22 58 05.0 -0.3**
baz=41,SNR=28
GIRL Giralia 40.98 239 P **P** **22 58 05.0 -0.3**
GIRL Giralia 40.98 239 P **P** **22 58 05.7 +0.4**
YHNB Yeheng 41.05 315 P **P** **22 58 06.2 +0.3**
YHNB IAmb IAmb 22 58 12.4
comp=Z,705nm,1.3s
YHNB Yeheng 41.05 315 P **P** **22 58 07.6 +1.8**
JMN Monobe 41.07 337 P **P** **22 58 06.7 +0.9**
TATO Taipei 41.16 316 P **P** **22 58 06.6 0.0**
TATO IAmb IAmb 22 58 08.5
comp=Z,447nm,1.1s
TATO Taipei 41.16 316 P **P** **22 58 07.5 +0.8**
TATO Taipei 41.16 316 P **P** **22 58 07.4 +0.8**
TATO Taipei 41.16 316 P **P** **22 58 07.4 +0.8**
TATO pP **pP** **22 59 04.2 +1.3**
QRZ Quartz Range 41.23 156 P **P** **22 58 08.6 +1.6**
QRZ IAmb IAmb 22 58 10.2
comp=Z,494nm,0.9s
QRZ Quartz Range 41.23 156 P **P** **22 58 09.2 +2.3**
URZ Urewera 41.25 149 P **P** **22 58 08.9 +1.7**
URZ Urewera 41.25 149 P **P** **22 58 07.5 +0.4**
comp=Z,287nm,0.9s,baz=11,slow=2.8,SNR=56
comp=Z,287nm,0.9s
UGM Wanagama 41.37 262 P **P** **22 58 08.1 -0.4**
UGM Wanagama 41.37 262 P **P** **22 58 08.4 -0.1**
UGM Wanagama 41.37 262 P **P** **22 58 07.3 -1.2**
comp=Z,922nm,1.0s,comp=Z,8µmcomp=Z,5µm
SMRI Semarang 41.41 264 P **P** **22 58 08.9 +0.1**
SMRI IAmb IAmb 22 58 09.9
comp=Z,633nm,1.1s
SMRI Semarang 41.41 264 P **P** **22 58 09.0 +0.1**
SMRI Semarang 41.41 264 P **P** **22 58 08.5 -0.4**
comp=Z,450nm,0.9s
INU Inuyama 41.42 341 P **P** **22 58 07.4 -1.1**
INU Inuyama 41.42 341 P **P** **22 58 08.0 -0.5**
INU Inuyama 41.42 341 P **P** **22 58 07.5 -1.1**
INU ScP **ScP** **23 03 25.9 +1.5**
RTZ Ruatahuna 41.46 150 P **P** **22 58 10.1 +1.2**
RTZ IAmb IAmb 22 58 11.1
comp=Z,511nm,0.9s
JGF Kuroka 41.54 342 P **P** **22 58 08.6 -1.0**
JGF Kuroka 41.54 342 P **P** **22 58 09.5 -0.1**
TKNZ Takaka Hill 41.58 156 P **P** **22 58 11.9 +2.1**
BKZ Black Stump Fm 41.64 151 P **P** **22 58 11.3 +0.8**
BKZ Black Stump Fm 41.64 151 P **P** **22 58 11.7 +1.3**
DUWZ D'Urville Isla 41.79 155 P **P** **22 58 12.9 +1.3**
MRNZ Matariki Terra 41.81 156 P **P** **22 58 13.3 +1.6**
JNU Nakatsue 41.82 333 P **P** **22 58 12.5 +0.7**
JNU Nakatsue 41.82 333 P **P** **22 58 12.7 +0.9**
JNU Nakatsue 41.82 333 P **P** **22 58 11.9 +0.1**
comp=Z,443nm,0.9s,baz=126,slow=3.1,SNR=124
JNU ScP **ScP** **23 03 27.1 +1.0**
comp=Z,17nm,0.8s,baz=271,slow=1.7,SNR=4.0
comp=Z,443nm,0.9s
NNZ Nelson 41.91 156 P **P** **22 58 13.5 +1.1**
KSM Kuching 41.93 276 P **P** **22 58 14.2 +1.1**
KSM Kuching 41.93 276 P **P** **22 58 14.5 +1.5**
MJAR Matsushiro Arr 42.17 343 P **P** **22 58 12.8 -1.8**
comp=Z,76nm,0.9s,baz=167,slow=8.2,SNR=79
MJAR PcP **PcP** **23 00 04.0 +0.6**
comp=Z,26nm,0.7s,baz=157,slow=4.0,SNR=10
MJAR ScP **ScP** **23 03 28.3 +1.0**
comp=Z,45nm,1.2s,baz=174,slow=5.0,SNR=15
comp=Z,76nm,0.9s
MAJO Matsushiro 42.17 343 P **P** **22 58 13.3 -1.3**
MAJO Matsushiro 42.17 343 P **P** **22 58 14.2 -0.4**
MAJO Matsushiro 42.17 343*d* *i*P **P** **22 58 12.9 -1.7**
MAJO pmax pmax
comp=Z,91nm,0.9s
MAJO Matsushiro 42.17 343 P **P** **22 58 13.1 -1.5**
MAJO PcP **PcP** **23 00 03.8 +0.4**
MAJO ScP **ScP** **23 03 28.6 +1.2**
MJB9 Matsu-Tunnel 42.17 343 P **P** **22 58 14.2 -0.4**
TOP Tophouse 42.17 156 P **P** **22 58 15.3 +0.7**
KIW Kapiti Island 42.26 154 P **P** **22 58 16.7 +1.3**
TCW Tory Channel 42.28 155 P **P** **22 58 16.7 +1.3**
MORW Morawa 42.28 230 P **P** **22 58 14.6 -1.1**
baz=42,SNR=194
MORW Morawa 42.28 230 P **P** **22 58 14.9 -0.8**
MORW Morawa 42.28 230 P **P** **22 58 14.9 -0.8**
TUWZ Tuamarina 42.32 155 P **P** **22 58 16.8 +1.1**
KLBR Kellerberrin 42.34 225 P **P** **22 58 14.6 -1.5**
baz=42,SNR=227
KLBR Kellerberrin 42.34 225 P **P** **22 58 15.0 -1.1**
OGWZ Otaki Gorge 42.34 154 P **P** **22 58 16.6 +0.7**
PRWZ Pori Road 42.49 153 P **P** **22 58 18.0 +0.8**
WVZ Waitaha Valley 42.49 160 P **P** **22 58 17.4 +0.3**
CAW Cannon Point 42.53 154 P **P** **22 58 18.4 +0.9**
SNZO South Karori 42.54 154 P **P** **22 58 17.7 +0.2**
SNZO IAmb IAmb 22 58 19.3
comp=Z,630nm,1.4s
SNZO South Karori 42.54 154 P **P** **22 58 18.8 +1.3**
SNZO South Karori 42.54 154 P **P** **22 58 17.9 +0.4**
SNZO sP **sP** **22 59 45.4 +2.0**
BLDU Ballidu 42.57 227 P **P** **22 58 16.7 -1.2**
baz=43,SNR=614
BLDU Ballidu 42.57 227 P **P** **22 58 17.1 -0.8**
FOZ Fox Glacier 42.59 161 P **P** **22 58 18.9 +1.1**
BFZ Birch Farm 42.72 153 P **P** **22 58 19.8 +0.8**
JCZ Jackson Bay 42.75 162 P **P** **22 58 21.1 +1.9**
JMM Marumori 42.76 347 P **P** **22 58 18.6 -0.7**
JMM Marumori 42.76 347 P **P** **22 58 19.4 +0.1**
MTW Mount Morrison 42.77 154 P **P** **22 58 19.9 +0.5**
PAWZ Paruwai Farm 42.91 154 P **P** **22 58 21.0 +0.4**
KPJI Karang Pucung 42.92 263 P **P** **22 58 20.2 -0.7**
comp=Z,802nm,1.0s,comp=Z,8µm
KHZ Kahutara 42.98 156 P **P** **22 58 21.2 +0.3**
KHZ Kahutara 42.98 156 P **P** **22 58 21.5 +0.6**
PLWZ Palliser 42.99 154 P **P** **22 58 21.5 +0.4**
KNMB Chin-men Tao 43.07 313 P **P** **22 58 21.8 -0.2**
KNMB IAmb IAmb 22 58 24.1
comp=Z,355nm,1.0s
RPZ Rata Peaks 43.17 160 P **P** **22 58 23.0 +0.5**
RPZ Rata Peaks 43.17 160 P **P** **22 58 22.7 +0.2**
comp=Z,702nm,0.9s,baz=357,slow=6.6,SNR=160
RPZ ScP **ScP** **23 03 37.2 +5.9**
comp=Z,45nm,0.8s,baz=143,slow=2.3,SNR=8.1
RPZ S **S** **23 04 28.7 +0.9**
comp=Z,9.6nm,0.9s,baz=95,slow=15,SNR=6.0
comp=Z,702nm,0.9s
QZH Quanzhou 43.21 313⇑ *i*P **P** **22 58 23.2 +0.1**
QZH S **S** **23 04 28.8 0.0**
QZH pmax pmax
comp=Z,320nm,1.0s
QZH pmax pmax
comp=Z,2µm,8.4s
QZH LR LR
comp=Z,2µm,17.2s
JOHN Johnston Islan 43.22 61 P **P** **22 58 23.7 +0.4**
JOHN IAmb IAmb 22 58 25.0
comp=Z,611nm,1.6s
CMJI Cimerak 43.41 263 P **P** **22 58 23.6 -1.3**
comp=Z,3µm,0.9s,comp=Z,25µmcomp=Z,4µm
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 23.6 -1.3**
baz=44,SNR=52
NWAO P **P** **22 58 23.6 -1.3**
baz=44,SNR=52
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 23.7 -1.2**
NWAO IAmb IAmb 23 00 10.6
comp=Z,374nm,0.9s
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 24.1 -0.8**
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 23.7 -1.2**
NWAO pmax pmax
comp=Z,374nm,1.0s
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 23.9 -1.1**
NWAO Narrogin (SRO) 43.45 224 P **P** **22 58 23.6 -1.3**
NWAO PcP **PcP** **23 00 08.3 +0.4**
JCJI Jatiwangi 43.55 265 P **P** **22 58 25.4 -0.6**
comp=Z,1µm,1.6s,comp=Z,18µm
MUN Mundaring 43.66 226 P **P** **22 58 25.4 -1.1**
baz=44,SNR=79
MUN Mundaring 43.66 226 P **P** **22 58 25.8 -0.8**
JTU Tsushima 43.66 333 P **P** **22 58 26.1 -0.4**
JTU Tsushima 43.66 333 P **P** **22 58 27.3 +0.8**
MTKN Mount Kenneth 43.94 226 P **P** **22 58 30.1 +1.3**
PYZ Puysegur Point 44.08 165 P **P** **22 58 30.9 +1.2**
BBJI Bungbulang 44.19 263 P **P** **22 58 30.3 -0.9**
LEM Lembang 44.20 264 P **P** **22 58 30.2 -1.2**
comp=Z,497nm,0.9s,comp=Z,7µmcomp=Z,4µm
AUALB St Joseph's Co 44.20 221 P **P** **22 58 31.3 +0.5**
ODZ Otahua Downs 44.20 161 P **P** **22 58 31.4 +0.7**
RKGY Rocky Gully 44.59 222 P **P** **22 58 33.3 -0.6**
baz=45,SNR=192
RKGY Rocky Gully 44.59 222 P **P** **22 58 33.8 -0.1**
CNJI Cibinong 44.70 264 P **P** **22 58 32.9 -2.2**
comp=Z,1µm,1.1s,comp=Z,11µmcomp=Z,2µm
CBJI Citeko 44.96 265 P **P** **22 58 36.6 -0.5**
comp=Z,572nm,0.9s
DBJI Dramaga 45.06 265 P **P** **22 58 36.1 -1.8**
comp=Z,334nm,1.4s,comp=Z,6µmcomp=Z,4µm
SYZ Scrubby Hill 45.09 163 P **P** **22 58 38.3 +0.8**
HKPS Hong Kong Po S 45.14 307 P **P** **22 58 39.4 +1.0**
HKPS IAmb IAmb 22 58 41.5
comp=Z,362nm,1.0s
HKPS Hong Kong Po S 45.14 307 P **P** **22 58 40.2 +1.8**
SKJI Sukabumi 45.26 264 P **P** **22 58 37.2 -2.3**
comp=Z,875nm,1.0s,comp=Z,10µmcomp=Z,4µm
SSE Sheshan 45.45 322 P **P** **22 58 40.8 +0.1**
SSE sP **sP** **23 00 08.5 -0.4**
SSE S **S** **23 04 59.1 -1.8**
SSE pmax pmax
comp=Z,100nm,1.2s
SSE pmax pmax
comp=Z,1.0nm,2.7s
SSE LR LR
comp=Z,650nm,9.7s
SSE Sheshan 45.45 322 P **P** **22 58 41.4 +0.7**
SSE PcP **PcP** **23 00 15.2 +0.5**
JTM Tenmabayashi 45.51 348 P **P** **22 58 41.2 +0.3**
PPBI Pangkal Pinang 45.75 271 P **P** **22 58 43.3 0.0**
comp=Z,395nm,0.8s,comp=Z,5µm

DLV	**T Lat**	**45.95**	**291**	P	**P**	**22**	**58**	**45.4**	**+0.3**
DLV				IAmb	IAmb	22	58	48.3	
	comp=Z,724nm,1.2s								
DLV	**T Lat**	**45.95**	**291**	P	**P**	**22**	**58**	**45.9**	**+0.9**
TJN	**Taejon**	**46.12**	**332**	P	**P**	**22**	**58**	**45.9**	**+0.1**
TJN	**Taejon**	**46.12**	**332**	P	**P**	**22**	**58**	**46.7**	**+0.9**
TJN	**Taejon**	**46.12**	**332**	*d* iP	**P**	**22**	**58**	**46.2**	**+0.4**
XMI	**Christmas Isla**	**46.30**	**259**	P	**P**	**22**	**58**	**47.9**	**+0.3**
ERM	**Erimo**	**46.33**	**351**	P	**P**	**22**	**58**	**47.7**	**+0.5**
ERM	**Erimo**	**46.33**	**351**	P	**P**	**22**	**58**	**47.8**	**+0.5**
ERM	**Erimo**	**46.33**	**351**	*de*P	**P**	**22**	**58**	**47.3**	**0.0**
ERM				pmax	pmax				
	comp=Z,39nm,0.6s								
ERM	**Erimo**	**46.33**	**351**	P	**P**	**22**	**58**	**47.8**	**+0.5**
ERM				PcP	**PcP**	**23**	**00**	**19.7**	**+2.2**
JEM	**Erimo**	**46.33**	**351**	P	**P**	**22**	**58**	**48.2**	**+0.9**
XMIS	**Christmas Isla**	**46.34**	**259**	P	**P**	**22**	**58**	**47.8**	**-0.1**
XMIS	**Christmas Isla**	**46.34**	**259**	P	**P**	**22**	**58**	**47.9**	**0.0**
KSRS	**Korea Array**	**46.76**	**334**	P	**P**	**22**	**58**	**51.3**	**+0.7**
	comp=Z,103nm,0.8s,baz=150,slow=8.8,SNR=174								
KSRS				PcP	**PcP**	**23**	**00**	**20.1**	**+1.0**
	comp=Z,14nm,0.7s,baz=155,slow=3.5,SNR=10.0								
KSRS				ScP	**ScP**	**23**	**03**	**47.9**	**+1.7**
	comp=Z,6.1nm,0.8s,baz=137,slow=4.8,SNR=6.6								
	comp=Z,103nm,0.8s								
KSAR	**Wonju Array Be**	**46.76**	**334**	P	**P**	**22**	**58**	**50.8**	**+0.1**
KSAR	**Wonju Array Be**	**46.76**	**334**	P	**P**	**22**	**58**	**50.8**	**+0.1**
KS19	**Wonju Array Si**	**46.82**	**334**	P	**P**	**22**	**58**	**51.4**	**+0.2**
PMBI	**Palembang**	**47.08**	**270**	P	**P**	**22**	**58**	**54.0**	**+0.5**
PMBI				IAmb	IAmb	22	58	55.4	
	comp=Z,495nm,1.0s								
PMBI	**Palembang**	**47.08**	**270**	P	**P**	**22**	**58**	**54.7**	**+1.1**
PMBI	**Palembang**	**47.08**	**270**	P	**P**	**22**	**58**	**53.6**	**0.0**
	comp=Z,657nm,1.1s,comp=Z,7μmcomp=Z,3μm								
QIZ	**Qiongzhong**	**47.23**	**300**	P	**P**	**22**	**58**	**55.8**	**+1.1**
QIZ				pP	**pP**	**22**	**59**	**53.4**	**+1.3**
QIZ				sP	**sP**	**23**	**00**	**22.4**	**-0.1**
QIZ				S	**S**	**23**	**05**	**28.0**	**+1.5**
QIZ				sS	**sS**	**23**	**07**	**09.3**	**+0.5**
QIZ				pmax	pmax				
	comp=Z,99nm,1.3s								
QIZ				pmax	pmax				
	comp=Z,1μm,11.4s								
QIZ				LR	LR				
	comp=Z,1μm,12.0s								
QIZ				LR	LR				
	comp=Z,770nm,15.5s								
QIZ				LR	LR				
	comp=Z,1μm,19.5s								
QIZ	**Qiongzhong**	**47.23**	**300**	P	**P**	**22**	**58**	**55.4**	**+0.8**
QIZ	**Qiongzhong**	**47.23**	**300**	P	**P**	**22**	**58**	**57.1**	**+2.4**
QIZ	**Qiongzhong**	**47.23**	**300**	P	**P**	**22**	**58**	**55.8**	**+1.1**
QIZ				pP	**pwP**	**22**	**59**	**54.8**	**+0.1**
QIZ				PcP	**PcP**	**23**	**00**	**21.8**	**+0.6**
KASI	**Kota Agung**	**47.29**	**266**	P	**P**	**22**	**58**	**52.7**	**-2.5**
	comp=Z,420nm,1.2s,comp=Z,5μm								
INCN	**Inchon**	**47.36**	**332**	P	**P**	**22**	**58**	**56.2**	**+0.8**
INCN	**Inchon**	**47.36**	**332**	P	**P**	**22**	**58**	**56.2**	**+0.8**
INCN	**Inchon**	**47.36**	**332**	P	**P**	**22**	**58**	**56.2**	**+0.8**
INCN				pmax	pmax				
	comp=Z,764nm,1.0s								
INCN	**Inchon**	**47.36**	**332**	P	**P**	**22**	**58**	**56.6**	**+1.2**
INCN	**Inchon**	**47.36**	**332**	P	**P**	**22**	**58**	**56.3**	**+0.9**
INCN				pP	**pP**	**22**	**59**	**53.5**	**+0.7**
INCN				PcP	**PcP**	**23**	**00**	**22.2**	**+0.8**
DSRI	**Dabo**	**47.42**	**273**	P	**P**	**22**	**58**	**56.5**	**+0.3**
	comp=Z,730nm,1.2s,comp=Z,8μm								
NJ2	**Nanjing**	**47.55**	**321**	⇓P	**P**	**22**	**58**	**58.1**	**+1.2**
NJ2				pP	**pP**	**22**	**59**	**53.7**	**-1.2**
NJ2				PcP	**PcP**	**23**	**00**	**22.7**	**+0.6**
NJ2				sP	**sP**	**23**	**00**	**28.0**	**+2.3**
NJ2				ScP	**ScP**	**23**	**03**	**50.1**	**+0.4**
NJ2				S	**S**	**23**	**05**	**33.6**	**+3.0**
NJ2				sS	**sS**	**23**	**07**	**16.4**	**+3.4**
NJ2				ScS	**ScS**	**23**	**08**	**21.6**	**+0.7**
NJ2				pmax	pmax				
	comp=Z,110nm,1.1s								
NJ2				pmax	pmax				
	comp=Z,2μm,3.6s								
TPRI	**Tanjung Pinang**	**47.60**	**275**	P	**P**	**22**	**58**	**57.6**	**0.0**
	comp=Z,639nm,1.2s,comp=Z,8μmcomp=Z,5μm								
LWLI	**Liwa**	**47.73**	**267**	P	**P**	**22**	**58**	**57.0**	**-1.7**
	comp=Z,641nm,1.3s,comp=Z,7μmcomp=Z,4μm								
HJU	**Haeju**	**48.24**	**332**	P	**P**	**22**	**59**	**02.1**	**+0.1**
HJU				S	**S**	**23**	**05**	**39.6**	**-0.4**
HJU				AmB					
	comp=Z,2μm,2.7s								
MYKOM	**Kota Tinggi**	**48.37**	**276**	P	**P**	**22**	**59**	**03.5**	**0.0**
MYKOM				IAmb	IAmb	22	59	05.5	
	comp=Z,504nm,0.9s								
JKA	**Kamikawa-asahi**	**48.47**	**351**	P	**P**	**22**	**59**	**04.3**	**+0.6**
JKA				IAmb	IAmb	22	59	05.5	
	comp=Z,171nm,0.9s								
ASAJ	**Asahikawa**	**48.47**	**351**	P	**P**	**22**	**59**	**04.3**	**+0.6**
ASAJ				pmax	pmax				
	comp=Z,171nm,0.9s								
ASAJ	**Asahikawa**	**48.47**	**351**	P	**P**	**22**	**59**	**04.1**	**+0.4**
	comp=Z,141nm,0.8s,baz=180,slow=6.1,SNR=89								
	comp=Z,141nm,0.8s								
CTZ	**Chatham Island**	**48.49**	**150**	P	**P**	**22**	**59**	**06.0**	**+2.2**
MNAI	**Manna**	**48.84**	**268**	P	**P**	**22**	**59**	**05.1**	**-1.9**
MNAI	**Manna**	**48.84**	**268**	P	**P**	**22**	**59**	**06.9**	**-0.2**
MNAI	**Manna**	**48.84**	**268**	P	**P**	**22**	**59**	**05.3**	**-1.8**
	comp=Z,442nm,1.0s								
HHU	**Hamhung**	**48.99**	**335**	P	**P**	**22**	**59**	**08.1**	**+0.5**
HHU				AmB					
	comp=Z,279nm,1.0s								
KUR	**Kuril'sk**	**48.99**	**356**	⇑*i*P	**P**	**22**	**59**	**08.5**	**+1.0**
KUR				*i* S	**S**	**23**	**05**	**50.5**	**+0.3**
PYAG	**Pyongyang**	**49.04**	**333**	P	**P**	**22**	**59**	**08.4**	**+0.4**
PYAG				pP	**pP**	**23**	**00**	**05.1**	**-0.9**
PYAG				S	**S**	**23**	**05**	**51.5**	**+0.4**
PYAG				AmB					
	comp=Z,456nm,1.1s								
CNSH	**ChangSha**	**49.21**	**313**	⇓P	**P**	**22**	**59**	**11.2**	**+1.7**
CNSH				S	**S**	**23**	**05**	**57.7**	**+3.9**
CNSH				pmax	pmax				
	comp=Z,130nm,1.0s								
CNSH				LR	LR				
	comp=Z,1μm,16.7s								
CNSH				LR	LR				
	comp=Z,1μm,18.6s								
CNSH				LR	LR				
	comp=Z,1μm,17.7s								
WHN	**Wuhan**	**49.56**	**316**	⇓*i*P	**P**	**22**	**59**	**13.3**	**+1.1**
WHN				pP	**pP**	**23**	**00**	**11.9**	**+1.2**
WHN				sP	**sP**	**23**	**00**	**36.9**	**-4.5**
WHN				ScP	**ScP**	**23**	**04**	**00.2**	**+1.9**
WHN				S	**S**	**23**	**06**	**02.5**	**+3.8**
WHN				sS	**sS**	**23**	**07**	**44.7**	**+2.9**
WHN				SS	**SS**	**23**	**09**	**36.8**	**+2.0**
WHN				pmax	pmax				
	comp=Z,300nm,1.0s								
WHN				pmax	pmax				
	comp=Z,3μm,3.8s								
UBPT	**Khong Chiam**	**49.76**	**294**	P	**P**	**22**	**59**	**14.1**	**+0.2**
UBPT	**Khong Chiam**	**49.76**	**294**	P	**P**	**22**	**59**	**14.7**	**+0.8**
MSHR	**Mys Shultsa**	**49.89**	**340**	*de*P	**P**	**22**	**59**	**14.6**	**+0.2**
MSHR				pmax	pmax				
	comp=Z,141nm,1.3s								
RAR	**Rarotonga**	**49.97**	**115**	P	**P**	**22**	**59**	**16.9**	**+1.5**
RAR				IAmb	IAmb	22	59	17.8	
	comp=Z,455nm,1.1s								
RAR	**Rarotonga**	**49.97**	**115**	P	**P**	**22**	**59**	**17.5**	**+2.1**
RAR	**Rarotonga**	**49.97**	**115**	P	**P**	**22**	**59**	**16.9**	**+1.5**
RAR				pmax	pmax				
	comp=Z,455nm,1.1s								
RAR	**Rarotonga**	**49.97**	**115**	P	**P**	**22**	**59**	**17.4**	**+2.1**
PSTR	**Posyet**	**50.08**	**340**	*d* iP	**P**	**22**	**59**	**15.9**	**+0.1**
KRJI	**Kerinci**	**50.42**	**270**	P	**P**	**22**	**59**	**18.5**	**-0.5**
	comp=Z,1μm,0.8s,comp=Z,14μmcomp=Z,4μm								
SUJ	**Sinuiju**	**50.46**	**333**	P	**P**	**22**	**59**	**18.9**	**+0.2**
SUJ				S	**S**	**23**	**06**	**10.6**	**-0.1**
SUJ				AmB					
	comp=Z,534nm,3.5s								
TEY	**Ternei**	**50.55**	**346**	⇑*e*P	**P**	**22**	**59**	**18.9**	**-0.3**
TEY				pmax	pmax				
	comp=Z,30nm,1.2s								
TEY				pmax	pmax				
	comp=Z,100nm,3.4s								
MCQ	**Macquarie Isla**	**50.83**	**175**	P	**P**	**22**	**59**	**22.3**	**+1.1**
	baz=51,SNR=3.9								
MCQ	**Macquarie Isla**	**50.83**	**175**	P	**P**	**22**	**59**	**22.2**	**+1.0**
MCQ				IAmb	IAmb	22	59	23.3	
	comp=Z,188nm,0.9s								
MCQ	**Macquarie Isla**	**50.83**	**175**	P	**P**	**22**	**59**	**22.6**	**+1.4**
MCQ	**Macquarie Isla**	**50.83**	**175**	P	**P**	**22**	**59**	**22.2**	**+1.0**
MCQ				pmax	pmax				
	comp=Z,189nm,1.0s								
DL2	**Dalian**	**50.91**	**330**	⇑*i*P	**P**	**22**	**59**	**22.8**	**+0.8**
DL2				S	**S**	**23**	**06**	**18.6**	**+1.7**
DL2				ScS	**ScS**	**23**	**08**	**41.7**	**-1.7**
DL2				pmax	pmax				
	comp=Z,340nm,1.0s								
DL2				pmax	pmax				
	comp=Z,830nm,7.6s								
XMAS	**Kiritimati**	**50.94**	**84**	P	**P**	**22**	**59**	**23.8**	**+1.1**
XMAS	**Kiritimati**	**50.94**	**84**	P	**P**	**22**	**59**	**24.4**	**+1.7**
XMAS	**Kiritimati**	**50.94**	**84**	P	**P**	**22**	**59**	**23.9**	**+1.1**
XMAS				ScP	**ScP**	**23**	**04**	**03.4**	**-1.2**
BKNI	**Bangkinang**	**51.02**	**274**	P	**P**	**22**	**59**	**23.3**	**0.0**
BKNI	**Bangkinang**	**51.02**	**274**	P	**P**	**22**	**59**	**23.6**	**+0.2**
BKNI	**Bangkinang**	**51.02**	**274**	P	**P**	**22**	**59**	**19.0**	**-4.4**
BKNI	**Bangkinang**	**51.02**	**274**	P	**P**	**22**	**59**	**23.1**	**-0.3**
	comp=Z,1μm,1.1s,comp=Z,11μmcomp=Z,5μm								
USA0B	**Ussuriysk Arra**	**51.06**	**342**	P	**P**	**22**	**59**	**23.7**	**+0.6**
USA0B				IAmb	IAmb	22	59	24.9	
	comp=Z,180nm,0.9s								
USA0B	**Ussuriysk Arra**	**51.06**	**342**	*d* iP	**P**	**22**	**59**	**23.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**51.06**	**342**	P	**P**	**22**	**59**	**23.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**51.06**	**342**	P	**P**	**22**	**59**	**23.6**	**+0.5**
	comp=Z,123nm,0.8s,baz=171,slow=8.2,SNR=146								
USRK				ScP	**ScP**	**23**	**04**	**05.5**	**+1.1**
	comp=Z,44nm,1.2s,baz=132,slow=2.8,SNR=13								
USRK				S	**S**	**23**	**06**	**19.3**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=138,slow=42,SNR=1.6								
	comp=Z,123nm,0.8s								
YSS	**Yuzh-Sakhalins**	**51.22**	**352**	P	**P**	**22**	**59**	**24.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**51.22**	**352**	P	**P**	**22**	**59**	**24.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	**51.22**	**352**	*i*P	**P**	**22**	**59**	**24.4**	**+0.2**
YSS				*e**PP	**pP**	**23**	**00**	**16.8**	**-5.8**
YSS				*e*		23	00	36.1	
YSS				*e**SP	**sP**	**23**	**00**	**50.8**	**-2.2**
YSS				*e*		23	01	21.0	
YSS				*e*S	**S**	**23**	**06**	**20.5**	**-0.4**
YSS				*e**SP	**sS**	**23**	**08**	**00.5**	**-4.1**
YSS				*e*		23	08	47.9	
YSS				pmax	pmax				
	comp=Z,120nm,1.0s								
YSS				pmax	pmax				
	comp=Z,300nm,3.5s								
YSS				pmax	pmax				
	comp=N,200nm,3.8s								
YSS				pmax	pmax				
	comp=E,200nm,3.4s								
YSS				smax	smax				
	comp=E,1μm,9.0s								
YSS	**Yuzh-Sakhalins**	**51.22**	**352**	P	**P**	**22**	**59**	**24.4**	**+0.2**
YSS				PcP	**PcP**	**23**	**00**	**36.2**	**+1.0**
TIA	**Tai'an**	**51.43**	**324**	⇓P	**P**	**22**	**59**	**25.8**	**-0.2**
TIA				PcP	**PcP**	**23**	**00**	**37.4**	**+1.1**
TIA				ScP	**ScP**	**23**	**04**	**06.9**	**+0.7**
TIA				S	**S**	**23**	**06**	**23.2**	**-1.0**
TIA				ScS	**ScS**	**23**	**08**	**44.9**	**-2.3**
TIA				pmax	pmax				
	comp=E,100nm,0.9s								
TIA				pmax	pmax				
	comp=E,520nm,4.3s								
TIA				LR	LR				
	comp=E,140nm,14.4s								
TIA				LR	LR				
	comp=E,460nm,16.5s								
TIA				LR	LR				
	comp=E,470nm,20.1s								
PDSI	**Padang**	**51.49**	**272**	P	**P**	**22**	**59**	**25.6**	**-1.3**
	comp=E,687nm,0.7s,comp=E,6μmcomp=E,4μm								
IPM	**Ipoh**	**51.52**	**279**	P	**P**	**22**	**59**	**27.3**	**+0.2**
IPM	**Ipoh**	**51.52**	**279**	P	**P**	**22**	**59**	**27.7**	**+0.6**
PPSI	**Pulau Pagai**	**51.84**	**270**	P	**P**	**22**	**59**	**28.3**	**-1.1**
	comp=E,209nm,0.8s,comp=E,4μm								
KULM	**Kulim**	**52.01**	**280**	P	**P**	**22**	**59**	**30.5**	**-0.2**
MDJ	**Mudanjiang**	**52.22**	**340**	P	**P**	**22**	**59**	**31.8**	**+0.2**
MDJ				pP	pP	23	00	28.7	-1.6
MDJ				PcP	**PcP**	**23**	**00**	**36.4**	**-2.7**
MDJ				S	**S**	**23**	**06**	**31.9**	**-2.7**
MDJ				sS	sS	23	08	16.3	-2.5
MDJ				ScS	**ScS**	**23**	**08**	**50.0**	**-2.4**
MDJ				pmax	pmax				
	comp=E,190nm,1.0s								
MDJ				pmax	pmax				
	comp=E,780nm,4.8s								
MDJ	**Mudanjiang**	**52.22**	**340**	P	**P**	**22**	**59**	**32.1**	**+0.5**
MDJ				IAmb	IAmb	22	59	33.3	
	comp=Z,147nm,0.9s								
MDJ	**Mudanjiang**	**52.22**	**340**	P	**P**	**22**	**59**	**32.4**	**+0.8**
MDJ	**Mudanjiang**	**52.22**	**340**	P	**P**	**22**	**59**	**32.1**	**+0.5**
MDJ				PcP	**PcP**	**23**	**00**	**39.7**	**+0.6**
MDJ				ScP	**ScP**	**23**	**04**	**10.5**	**+1.1**
SNY	**Shenyang**	**52.26**	**333**	⇓P	**P**	**22**	**59**	**31.6**	**-0.3**
SNY				S	**S**	**23**	**06**	**34.8**	**-0.4**
SNY				pmax	pmax				
	comp=Z,36nm,0.9s								
SNY				pmax	pmax				
	comp=Z,560nm,3.5s								
SNY				LR	LR				
	comp=Z,380nm,14.1s								
SNY				LR	LR				
	comp=Z,230nm,13.1s								
SNY				LR	LR				
	comp=Z,460nm,21.2s								
SKLT	**Songkhla**	**52.36**	**282**	P	**P**	**22**	**59**	**33.6**	**+0.4**
NONG	**Nongkai**	**52.77**	**296**	P	**P**	**22**	**59**	**37.0**	**+0.9**
SISI	**Saibi**	**52.83**	**271**	P	**P**	**22**	**59**	**36.2**	**-0.5**
	comp=Z,895nm,1.5s,comp=Z,11μm								
ENH	**Enshi**	**52.87**	**313**	P	**P**	**22**	**59**	**37.5**	**+0.8**
ENH				IAmb	IAmb	22	59	38.6	
	comp=Z,306nm,1.0s								
ENH	**Enshi**	**52.87**	**313**	P	**P**	**22**	**59**	**38.1**	**+1.4**
ENH	**Enshi**	**52.87**	**313**	P	**P**	**22**	**59**	**37.2**	**+0.5**
ENH				pP	**pP**	**23**	**00**	**36.6**	**+0.6**
ENH				PcP	**PcP**	**23**	**00**	**42.7**	**+0.8**
ENH				ScP	**ScP**	**23**	**04**	**12.4**	**-0.2**
CN2	**Changchun**	**53.07**	**336**	⇓P	**P**	**22**	**59**	**37.7**	**-0.2**
CN2				PcP	**PcP**	**23**	**00**	**42.1**	**-0.2**
CN2				ScP	**ScP**	**23**	**04**	**11.1**	**-2.1**
CN2				S	**S**	**23**	**06**	**44.5**	**-1.6**
CN2				pmax	pmax				
	comp=Z,110nm,0.9s								
CN2				pmax	pmax				
	comp=Z,500nm,4.0s								
GYA	**Guiyang**	**53.12**	**307**	⇓*i*P	**P**	**22**	**59**	**40.0**	**+1.3**
GYA				pP	pP	23	00	40.1	+2.1
GYA				ScP	**ScP**	**23**	**04**	**14.4**	**+0.4**
GYA				S	**S**	**23**	**06**	**48.8**	**+1.1**
GYA				sS	sS	23	08	35.9	+3.8
GYA				ScS	**ScS**	**23**	**08**	**59.8**	**0.0**
GYA				pmax	pmax				
	comp=Z,110nm,1.2s								
GYA				pmax	pmax				
	comp=Z,1μm,5.9s								
GYA				LR	LR				
	comp=Z,490nm,15.1s								
GYA				LR	LR				
	comp=Z,510nm,12.3s								
GYA				LR	LR				
	comp=Z,380nm,11.7s								
LYN	**LuoYang**	**53.25**	**319**	⇓P	**P**	**22**	**59**	**39.8**	**+0.5**
LYN				pP	PcP	23	00	44.1	+0.9
LYN				PP	**PP**	**23**	**01**	**44.9**	**+2.1**
LYN				ScP	**ScP**	**23**	**04**	**14.8**	**+0.6**
LYN				S	**S**	**23**	**06**	**49.0**	**+0.2**
LYN				sS	sS	23	08	33.4	+0.1
LYN				pmax	pmax				
	comp=Z,97nm,1.1s								
LYN				pmax	pmax				
	comp=Z,2μm,8.3s								
SLVN	**Son La**	**53.26**	**300**	P	**P**	**22**	**59**	**40.8**	**+1.0**
NAYO	**Nakonayok**	**53.31**	**291**	P	**P**	**22**	**59**	**41.0**	**+0.9**
RPSI	**Rantau Prapat**	**53.37**	**276**	P	**P**	**22**	**59**	**39.5**	**-1.0**
RPSI				IAmb	IAmb	22	59	41.1	
	comp=Z,574nm,1.5s								
PSI	**Prapat**	**53.38**	**276**	P	**P**	**22**	**59**	**40.6**	**-0.2**
PSI	**Prapat**	**53.38**	**276**	P	**P**	**22**	**59**	**39.6**	**-1.2**
PSI				pmax	pmax				
	comp=Z,574nm,1.5s								
SRIT	**Nakonsritamara**	**53.62**	**284**	P	**P**	**22**	**59**	**42.5**	**+0.1**
SRIT				IAmb	IAmb	22	59	44.0	
	comp=Z,330nm,0.8s								
SRIT	**Nakonsritamara**	**53.62**	**284**	P	**P**	**22**	**59**	**42.9**	**+0.6**
HNS	**HongShan**	**53.66**	**323**	⇓P	**P**	**22**	**59**	**42.8**	**+0.6**
HNS				pP	**pP**	**23**	**00**	**40.5**	**-1.2**
HNS				sP	**sP**	**23**	**01**	**10.0**	**-2.1**
HNS				ScP	**ScP**	**23**	**04**	**16.4**	**+0.5**
HNS				S	**S**	**23**	**06**	**54.8**	**+0.6**
HNS				sS	**sS**	**23**	**08**	**38.0**	**-0.9**
HNS				ScS	**ScS**	**23**	**09**	**02.2**	**-0.6**
HNS				pmax	pmax				
	comp=Z,320nm,1.4s								
HNS				LR	LR				
	comp=Z,960nm,15.0s								
HNS				LR	LR				
	comp=Z,690nm,15.4s								
HNS				LR	LR				
	comp=Z,530nm,13.5s								
SURA	**Surathani**	**53.70**	**284**	P	**P**	**22**	**59**	**44.3**	**+1.4**
PBSI	**Pulau Batu**	**53.73**	**273**	P	**P**	**22**	**59**	**41.8**	**-1.4**
	comp=Z,293nm,1.7s,comp=Z,5μm								
BNX	**BinXian**	**53.97**	**339**	⇓P	**P**	**22**	**59**	**44.0**	**-0.3**
BNX				pP	**PcP**	**23**	**00**	**44.6**	**-1.1**
BNX				sP	**sP**	**23**	**01**	**14.0**	**+0.4**
BNX				PP	**PP**	**23**	**01**	**49.7**	**+0.8**
BNX				S	**S**	**23**	**06**	**55.4**	**-2.6**
BNX				pmax	pmax				
	comp=Z,320nm,1.1s								
BNX				pmax	pmax				
	comp=Z,350nm,4.3s								
GSI	**Gunungsitoli**	**54.56**	**274**	P	**P**	**22**	**59**	**47.9**	**-1.3**
GSI	**Gunungsitoli**	**54.56**	**274**	P	**P**	**22**	**59**	**48.6**	**-0.6**
GSI	**Gunungsitoli**	**54.56**	**274**	P	**P**	**22**	**59**	**47.3**	**-1.9**
	comp=Z,1μm,1.1s,comp=Z,11μmcomp=Z,5μm								
BJT	**Baijiatuao**	**54.60**	**327**	P	**P**	**22**	**59**	**48.8**	**-0.2**
BJT				IAmb	IAmb	22	59	50.7	
	comp=Z,330nm,1.9s								
BJT	**Baijiatuao**	**54.60**	**327**	P	**P**	**22**	**59**	**49.6**	**+0.6**
BJT	**Baijiatuao**	**54.60**	**327**	P	**P**	**22**	**59**	**48.8**	**-0.2**
BJT				pmax	pmax				
	comp=Z,330nm,1.9s								
BJT	**Baijiatuao**	**54.60**	**327**	P	**P**	**22**	**59**	**49.3**	**+0.3**
BJT				PcP	**pP**	**23**	**00**	**49.1**	**+0.7**
BJT				sP	**sP**	**23**	**01**	**19.1**	**+0.4**
BJT				ScP	**ScP**	**23**	**04**	**20.6**	**+0.6**
KCSI	**Kotacane, Aceh**	**54.61**	**277**	P	**P**	**22**	**59**	**48.0**	**-1.5**
	comp=Z,567nm,0.9s,comp=Z,6μm								
BJI	**Beijing**	**54.62**	**327**	P	**P**	**22**	**59**	**48.8**	**-0.2**
BJI				pP	**pP**	**23**	**00**	**49.4**	**+0.9**
BJI				sP	**sP**	**23**	**01**	**18.7**	**-0.1**
BJI				ScP	**ScP**	**23**	**04**	**20.6**	**+0.6**
BJI				S	**S**	**23**	**07**	**07.1**	**+0.2**
BJI				sS	**sS**	**23**	**08**	**46.5**	**-5.4**
BJI				pmax	pmax				
	comp=Z,38nm,1.4s								
BJI				pmax	pmax				
	comp=Z,380nm,3.5s								
BJI				LR	LR				
	comp=Z,290nm,19.0s								
BJI				LR	LR				
	comp=Z,330nm,19.3s								
BJI				LR	LR				
	comp=Z,320nm,17.8s								
HON	**Honolulu**	**55.04**	**61**	P	**P**	**22**	**59**	**52.0**	**-0.4**
HON				IAmb	IAmb	22	59	54.4	
	comp=Z,554nm,1.6s								
HON	**Honolulu**	**55.04**	**61**	P	**P**	**22**	**59**	**52.0**	**-0.4**
HON				pmax	pmax				
	comp=Z,554nm,1.6s								
KIP	**Kipapa**	**55.06**	**61**	P	**P**	**22**	**59**	**52.7**	**+0.1**
KIP				IAmb	IAmb	22	59	54.4	
	comp=Z,421nm,1.5s								
KIP	**Kipapa**	**55.06**	**61**	P	**P**	**22**	**59**	**54.7**	**+2.1**
KIP	**Kipapa**	**55.06**	**61**	P	**P**	**22**	**59**	**54.6**	**+2.0**
KIP	**Kipapa**	**55.06**	**61**	⇓*e*P	**P**	**22**	**59**	**53.6**	**+1.0**
KIP				pmax	pmax				
	comp=Z,214nm,1.3s								
TYV	**Tymovskoe**	**55.07**	**353**	*e*P	**P**	**22**	**59**	**52.6**	**+0.6**
TYV				*e*S	**S**	**23**	**07**	**12.1**	**-0.4**
TYV				pmax	pmax				
	comp=Z,200nm,1.9s								
TYV				pmax	pmax				
	comp=Z,107nm,0.8s								
TYV				smax	smax				
	comp=N,26nm,2.0s								
TYV				smax	smax				
	comp=E,22nm,2.0s								
TYV				smax	smax				
	comp=N,500nm,6.7s								
TYV				smax	smax				
	comp=E,700nm,6.7s								
COCO	**West Island**	**55.09**	**258**	P	**P**	**22**	**59**	**52.9**	**0.0**
COCO				IAmb	IAmb	22	59	54.7	
	comp=Z,452nm,1.2s								
COCO	**West Island**	**55.09**	**258**	P	**P**	**22**	**59**	**52.9**	**0.0**
COCO				pmax	pmax				
	comp=Z,452nm,1.3s								
OPA	**Opana**	**55.16**	**60**	P	**P**	**22**	**59**	**53.9

CRAI Chiangrai 55.96 297 P P 22 59 59.8 +0.8
CRAI IAmb IAmb 23 00 01.9
comp=Z,350nm,1.8s
GRNR Gornyy 56.00 348 ⇓*i* P **P 22 59 59.1 +0.4**
GRNR pmax pmax
comp=E,6.0nm,0.7s
GRNR pmax pmax
comp=N,20nm,1.1s
GRNR pmax pmax
comp=Z,40nm,0.8s
GRNR MLR MLR
comp=E,4µm,15.0s
MLSI Meulaboh, Aceh 56.06 278 P P 22 59 59.6 -0.2
comp=E,1µm,0.9s,comp=E,9µmcomp=E,359nm
HLK Haleakala 56.38 62 P P 23 00 02.2 0.0
HLK IAmb IAmb 23 00 04.2
comp=Z,367nm,1.1s
CM31 Chiang Mai Arr 56.68 295 P P 23 00 05.2 +1.1
CM31 IAmb IAmb 23 00 07.8
comp=Z,128nm,0.8s
CM31 Chiang Mai Arr 56.68 295 P P 23 00 06.4 +2.3
SNR=70
CMAR Chiang Mai Arr 56.68 295 P P 23 00 05.0 +0.9
CMAR Chiang Mai Arr 56.68 295 P P 23 00 05.0 +0.9
CMAR Chiang Mai Arr 56.68 295 P P 23 00 05.3 +1.2
comp=Z,75nm,0.9s,baz=122,slow=5.1,SNR=187
CMAR PKP2bc 23 30 07.2
comp=Z,1.9nm,0.3s,baz=291,slow=3.8,SNR=9.6
CMAR PKP2ab 23 30 24.3
comp=Z,1.3nm,0.3s,baz=284,slow=5.3,SNR=5.1
comp=Z,75nm,0.9s
HMH Humu'ula Sheep 56.68 64 P P 23 00 05.3 +0.9
HMH IAmb IAmb 23 00 07.3
comp=Z,503nm,1.4s
POHA Pohakuloa 56.69 63 P P 23 00 04.5 +0.2
POHA IAmb IAmb 23 00 06.2
comp=Z,222nm,1.0s
POHA Pohakuloa 56.69 63 P P 23 00 06.1 +1.7
POHA Pohakuloa 56.69 63 P P 23 00 05.3 +0.9
POHA pP **pP 23 01 05.1 +1.1**
CHTO Chiang Mai 56.79 295 P P 23 00 05.2 +0.3
CHTO IAmb IAmb 23 00 07.6
comp=Z,383nm,1.8s
CHTO Chiang Mai 56.79 295 P P 23 00 06.3 +1.4
CHTO Chiang Mai 56.79 295 P P 23 00 05.2 +0.3
CHTO pmax pmax
comp=Z,383nm,1.8s
CHTO Chiang Mai 56.79 295 P P 23 00 06.1 +1.2
CHTO Chiang Mai 56.79 295 P P 23 00 05.7 +0.9
CHTO PcP **PcP 23 00 58.0 +0.7**
CHTO pP **pP 23 01 05.9 +1.6**
PET Petropavlovsk 56.94 5 P P 23 00 05.2 0.0
PET Petropavlovsk 56.94 5 P P 23 00 06.1 +0.9
PET Petropavlovsk 56.94 5 *eP* **P 23 00 05.7 +0.5**
PET *e* 23 00 56.9
PET *eS* **S 23 07 37.1 +0.2**
PET *e* 23 09 19.2
PET pmax pmax
comp=Z,41nm,0.7s
PET Petropavlovsk 56.94 5 P P 23 00 05.2 0.0
PET PcP **PcP 23 00 57.4 +0.4**
PEA0B Petropavlovsk- 56.95 4 P P 23 00 05.7 +0.4
PEA0B IAmb IAmb 23 00 08.2
comp=Z,123nm,1.1s
PEA0B Petropavlovsk- 56.95 4*ceP* **P 23 00 06.2 +0.9**
PETK Petropavlovsk- 56.95 4 P P 23 00 05.4 +0.2
PETK Petropavlovsk- 56.95 4 P P 23 00 05.3 0.0
comp=Z,56nm,0.9s,baz=157,slow=6.3,SNR=108
PETK pP **pP 23 01 06.0 +0.8**
comp=Z,39nm,1.0s,baz=150,slow=3.3,SNR=2.0
comp=Z,56nm,0.9s
PZH PanZhiHua 57.11 305 P P 23 00 07.6 +0.5
PZH PcP **PcP 23 00 59.0 +0.4**
PZH pP **pP 23 01 05.7 -1.2**
PZH ScP **ScP 23 04 30.8 -0.7**
PZH S **S 23 07 40.4 -0.1**
PZH ScS **ScS 23 09 26.9 -1.6**
PZH pmax pmax
comp=Z,50nm,1.5s
PZH pmax pmax
comp=Z,870nm,7.2s
PZH LR LR
comp=Z,800nm,18.4s
PZH LR LR
comp=Z,490nm,19.2s
PZH LR LR
comp=Z,800nm,23.5s
XLT XiLinHaoTe 57.40 330 ⇓*i* P **P 23 00 08.8 0.0**
XLT PcP **PcP 23 01 00.0 +0.7**
XLT pP pP 23 01 13.5 +4.7
XLT sP sP 23 01 43.6 +4.7
XLT S **S 23 07 43.2 -0.4**
XLT sS ScS 23 09 31.8 +1.9
XLT SS **SS 23 11 34.6 -3.7**
XLT pmax pmax
comp=Z,310nm,0.8s
CD2 Chengdu 57.45 311 P P 23 00 10.0 +0.7
CD2 S **S 23 07 45.1 +0.5**
CD2 sS sS 23 09 28.8 -1.8
CD2 pmax pmax
comp=Z,220nm,0.8s
CD2 pmax pmax
comp=Z,1µm,4.9s
HHC Hu-ho-hao-te 57.76 324 *eP* **P 23 00 12.0 +0.6**
HHC pP pP 23 01 11.2 -0.4
HHC sP sP 23 01 40.8 -1.0
HHC S **S 23 07 49.8 +1.4**
HHC ScS **ScS 23 09 31.0 -1.7**
HHC pmax pmax
comp=Z,140nm,1.1s
HEH HeiHe 57.87 342 *eP* **P 23 00 11.1 -0.7**
HEH PcP **PcP 23 01 00.8 0.0**
HEH sP **sP 23 01 39.1 -2.6**
HEH PP **PP 23 02 24.2 +0.6**
HEH ScP **ScP 23 04 33.3 -0.8**
HEH S **S 23 07 47.7 -1.5**
HEH sS **ScS 23 09 29.5 -3.3**
HEH pmax pmax
comp=Z,160nm,1.0s
HEH pmax pmax
comp=Z,520nm,4.9s
BTO Baotou 58.52 323 *eP* **P 23 00 18.5 +1.9**
BTO pP **pP 23 01 22.0 +4.9**
BTO sP **sP 23 01 53.0 +5.7**
BTO PP **PP 23 02 34.3 +4.7**
BTO S **S 23 07 58.4 +0.3**
BTO SS **SS 23 11 59.5 +3.6**
BTO pmax pmax
comp=Z,300nm,0.9s
BTO pmax pmax
comp=Z,2µm,7.9s
BTO LR LR
comp=Z,2µm,18.3s
BTO LR LR
comp=Z,2µm,20.1s
BTO LR LR
comp=Z,2µm,23.5s
PPT Papeete 58.85 108 P P 23 00 21.2 +2.0
comp=Z,540nm,0.9s,baz=315,slow=8.6,SNR=39
comp=Z,540nm,0.9s
PPTF Pamatai, Papee 58.86 108 P P 23 00 20.6 +1.3
PPTF Pamatai, Papee 58.86 108 P P 23 00 21.5 +2.2
PPTF Pamatai, Papee 58.86 108 P P 23 00 21.7 +2.4
TNCH TengChong 59.23 302 ⇓ P **P 23 00 22.5 +0.7**
TNCH PcP **PcP 23 01 07.9 +0.8**
TNCH pP pP 23 01 22.4 +0.4
TNCH sP sP 23 01 51.2 -0.7
TNCH ScP **ScP 23 04 41.6 +0.6**
TNCH S **S 23 08 11.2 +3.2**
TNCH ScS **ScS 23 09 43.9 -0.4**
TNCH pmax pmax
comp=Z,170nm,1.1s
TNCH pmax pmax
comp=Z,1µm,5.0s
TNCH LR LR
comp=Z,210nm,10.5s
TNCH LR LR
comp=Z,300nm,16.0s
TNCH LR LR
comp=Z,400nm,24.7s
HIA Hailar 59.81 336 P P 23 00 25.3 +0.2
HIA IAmb IAmb 23 00 26.7
comp=Z,130nm,1.0s
HIA Hailar 59.81 336 P P 23 00 26.0 +0.9
comp=Z,130nm,1.0s
HIA Hailar 59.81 336 P P 23 00 25.6 +0.5
HIA PcP **PcP 23 01 09.0 +0.4**
HIA pP **pP 23 01 26.1 +0.5**
LZH Lanzhou 59.94 316 ⇓ P **P 23 00 27.6 +1.2**
LZH pP pP 23 01 26.2 -1.2
LZH sP sP 23 01 57.5 +0.3
LZH S **S 23 08 18.2 +1.6**
LZH pmax pmax
comp=Z,290nm,1.3s
LZH pmax pmax
comp=Z,2µm,4.9s
LZH LR LR
comp=Z,1µm,14.4s
LZH LR LR
comp=Z,750nm,19.1s
LZH LR LR
comp=Z,1µm,19.6s
MND Mandalay 60.30 298 P P 23 00 29.6 +0.7
DGPR DIGLIPUR 60.95 287 *eP* **P 23 00 33.3 -0.1**
DGPR IAmb IAmb 23 00 34.9
comp=Z,108nm,0.7s
ZEA Zeya 60.98 344 *eP* **P 23 00 32.9 +0.1**
ZEA *e* 23 01 35.8
ZEA *e* 23 08 27.9
ZEA pmax pmax
comp=N,50nm,1.0s
ZEA pmax pmax
comp=Z,80nm,0.9s
KIWB Kanaga Island 61.40 21 P P 23 00 36.4 +0.7
ADK Adak 61.59 22 P P 23 00 37.2 +0.2
ADK IAmb IAmb 23 00 38.5
comp=Z,237nm,1.6s
ADK Adak 61.59 22 P P 23 00 37.2 +0.2
ADK pmax pmax
comp=Z,237nm,1.6s
ADK Adak 61.59 22 P P 23 00 37.6 +0.7
ADK pP **pP 23 01 38.3 +0.7**
IMP Imphal 63.07 300 *eP* **P 23 00 46.8 -0.6**
SAIH SAIHA 63.20 297 *eP* **P 23 00 48.8 +0.4**
SAIH IAmb IAmb 23 00 50.4
comp=Z,194nm,0.9s
KOHI KOHIMA 63.21 301 *eP* **P 23 00 47.9 -0.5**
KOHI IAmb IAmb 23 00 49.6
comp=Z,276nm,1.1s
MA2 Magadan 63.23 359 P P 23 00 47.7 0.0
MA2 IAmb IAmb 23 00 49.3
comp=Z,105nm,1.2s
MA2 Magadan 63.23 359 P P 23 00 48.3 +0.7
MA2 Magadan 63.23 359*d iP* **P 23 00 47.3 -0.3**
MA2 pmax pmax
comp=Z,74nm,1.0s
MA2 Magadan 63.23 359 P P 23 00 47.8 +0.2
comp=Z,57nm,1.0s,baz=164,slow=6.1,SNR=9.6
MA2 pP **pP 23 01 48.5 -0.4**
comp=Z,35nm,1.1s,baz=167,slow=7.5,SNR=2.4
MA2 S **S 23 08 56.5 0.0**
comp=Z,1.4nm,0.3s,baz=275,slow=17,SNR=6.5
comp=Z,57nm,1.0s
MA2 Magadan 63.23 359 P P 23 00 47.6 0.0
MA2 PcP **PcP 23 01 22.2 -0.1**
MA2 pP **pP 23 01 50.0 +1.1**
DRV Dumont d'Urvil 63.26 185 P **P 23 00 48.4 +0.7**
ITAN ITANAGAR 64.00 303 *eP* **P 23 00 54.6 +1.3**
ZIRO ZIRO 64.02 303 *eP* **P 23 00 54.2 +0.5**
ZIRO IAmb IAmb 23 00 56.0
comp=Z,184nm,0.7s
GTA Gaotai 64.36 317 P P 23 00 56.5 +0.9
GTA PcP **PcP 23 01 29.1 +1.5**
GTA pP pP 23 01 58.6 +1.2
GTA sP sP 23 02 25.0 -2.3
GTA ScP 23 05 03.9
GTA S **S 23 09 13.3 +1.7**
GTA ScS **ScS 23 10 23.0 +0.4**
GTA sS sS 23 11 02.4 +2.3
GTA pmax pmax
comp=Z,150nm,1.5s
GTA pmax pmax
comp=Z,1µm,4.4s
GTA LR LR
comp=Z,450nm,17.1s
GTA LR LR
comp=Z,370nm,20.0s
GTA LR LR
comp=Z,460nm,19.3s
CIT Chita 64.46 335 *eP* **P 23 00 56.6 +0.7**
CIT *e* 23 01 28.2
CIT *e* 23 01 58.1
CIT *e* 23 05 02.7
CIT pmax pmax
comp=Z,308nm,1.6s
TEZP TEZPUR 64.61 302 *eP* **P 23 00 57.4 +0.1**
TEZP IAmb IAmb 23 00 59.0
comp=Z,154nm,0.8s
ULN Ulaanbaatar 64.72 328 P P 23 00 59.1 +1.4
ULN IAmb IAmb 23 01 00.4
comp=Z,127nm,1.1s
ULN Ulaanbaatar 64.72 328*d iP* **P 23 00 58.6 +0.8**
ULN *i* *PP **pP 23 01 59.2 -0.2**
ULN pmax pmax
comp=Z,97nm,0.9s
ULN Ulaanbaatar 64.72 328 P P 23 00 59.5 +1.7
ULN Ulaanbaatar 64.72 328 P P 23 00 59.2 +1.4
ULN PcP **PcP 23 01 29.6 +0.6**
ULN pP **pP 23 02 00.9 +1.5**
SONM Songino Array 65.05 328 P P 23 01 01.1 +1.2
SONM IAmb IAmb 23 01 02.3
comp=Z,242nm,1.5s
SONM Songino Array 65.05 328 P P 23 01 01.1 +1.2
SONM pmax pmax
comp=Z,242nm,1.5s
SONM Songino Array 65.05 328 P P 23 01 00.8 +0.9
comp=Z,45nm,0.8s,baz=147,slow=4.8,SNR=260
SONM PKPPKP **P'P'df 23 29 38.3 -5.7**
comp=Z,1.3nm,1.0s,baz=292,slow=2.3,SNR=5.8
SONM PKP2bc 23 29 46.4
comp=Z,2.2nm,0.8s,baz=289,slow=2.2,SNR=10.0
comp=Z,45nm,0.8s
SHL Shillong 65.07 300 *eP* **P 23 01 00.6 +0.1**
SHL IAmb IAmb 23 01 02.3
comp=Z,156nm,0.7s
GUWA GUWAHATI 65.43 301 *eP* **P 23 01 02.7 +0.2**
NIKH Nikolski High 65.51 25 P P 23 01 02.5 0.0
baz=224
GOMU GeErMu 66.47 312 P P 23 01 10.6 +1.1
GOMU S **S 23 09 40.9 +3.1**
GOMU SS **SS 23 14 06.1 +5.4**
GOMU pmax pmax
comp=Z,63nm,1.0s
GOMU LR LR
comp=Z,290nm,17.3s
GOMU LR LR
comp=Z,240nm,17.1s
GOMU LR LR
comp=Z,420nm,16.9s
SEY Seymchan 66.59 0 ⇑ *eP* **P 23 01 09.7 +0.6**
SEY pmax pmax
comp=Z,54nm,1.3s
SEY Seymchan 66.59 0 P P 23 01 09.2 +0.1
comp=Z,23nm,1.0s,baz=172,slow=6.2,SNR=38
SEY pP **pP 23 02 11.0 -0.2**
comp=Z,14nm,1.0s,baz=196,slow=13,SNR=3.0
SEY S **S 23 09 38.1 +0.8**
comp=Z,0.6nm,0.3s,baz=359,slow=20,SNR=1.3
comp=Z,23nm,1.0s
LSA Lhasa 66.98 304 P P 23 01 14.2 +1.3
LSA IAmb IAmb 23 01 15.5
comp=Z,111nm,0.8s
LSA Lhasa 66.98 304 P P 23 01 14.3 +1.4
LSA Lhasa 66.98 304 P P 23 01 14.2 +1.3
LSA pmax pmax
comp=Z,111nm,0.8s
LSA Lhasa 66.98 304 P P 23 01 14.1 +1.3
LSA PcP **PcP 23 01 39.4 +0.2**
UNV Unalaska Valle 67.12 25 P P 23 01 12.7 +0.1
baz=226
TAOE Nuku Hiva Isla 67.62 98 P P 23 01 17.1 +0.3
TAOE IAmb IAmb 23 01 18.8
comp=Z,196nm,1.0s
TAOE Nuku Hiva Isla 67.62 98 P P 23 01 17.9 +1.2
YAK Yakutsk 67.87 349 P P 23 01 17.0 0.0
YAK IAmb IAmb 23 01 19.2
comp=Z,134nm,0.9s
YAK Yakutsk 67.87 349*d iP* **P 23 01 17.1 0.0**
YAK pmax pmax
comp=Z,202nm,1.3s
YAK Yakutsk 67.87 349 P P 23 01 17.4 +0.3
comp=Z,101nm,1.0s,baz=161,slow=3.7,SNR=68
comp=Z,101nm,1.0s
YAK Yakutsk 67.87 349 P P 23 01 17.4 +0.3
YAK pP **pP 23 02 20.3 +1.1**
YAK sP **sP 23 02 49.1 +0.3**
P08K Saint George I 67.90 22 P P 23 01 17.3 -0.1
baz=222
SPIA Saint Paul Isl 68.07 21 P P 23 01 18.5 +0.1
baz=221
ZAK Zakamensk 68.22 329 *eP* **P 23 01 19.6 -0.1**
ZAK *e* 23 02 21.6
ZAK pmax pmax
comp=Z,138nm,1.1s
ZAK pmax pmax
comp=Z,72nm,1.6s
GTK Tadong 68.40 301 *eP* **P 23 01 22.4 +1.1**
GTK IAmb IAmb 23 01 24.5
comp=Z,131nm,0.8s
BOD Bodaibo 68.59 339 *eP* **P 23 01 21.1 -0.6**
BOD pmax pmax
comp=Z,110nm,1.0s
CASY Casey 68.67 197 P P 23 01 22.3 +0.2
CASY IAmb IAmb 23 01 23.0
comp=Z,62nm,0.6s
CASY Casey 68.67 197 P P 23 01 22.3 +0.2
IRK Irkutsk 68.85 331 *eP* **P 23 01 23.0 -0.4**
IRK *e* 23 02 26.0
IRK pmax pmax
comp=Z,148nm,1.4s
FALS False Pass 69.14 26 P P 23 01 25.2 +0.2
baz=229
BOK Bokaro 69.85 297 *eP* **P 23 01 30.8 +0.7**
BOK IAmb IAmb 23 01 32.6
comp=Z,109nm,1.0s
MOY Mondy 70.15 329 *eP* **P 23 01 32.2 +0.7**
MOY *e* 23 02 35.2
MOY pmax pmax
comp=Z,216nm,2.0s
KNTI KHUNTI 70.22 296 *eP* **P 23 01 32.0 -0.4**
SDPT Sand Point 70.75 27 P P 23 01 34.3 -0.5
baz=231
CHNA Chernabura Isl 70.83 27 P P 23 01 34.4 -0.9
baz=232
VIS Vishakhapatnam 70.92 290 *eP* **P 23 01 37.3 +0.7**
VIS IAmb IAmb 23 01 39.0
comp=Z,371nm,1.1s
S14K Fog Glacier 71.74 26 P P 23 01 39.9 -0.9
baz=232
M11K Mekoryuk 71.86 20 P P 23 01 41.1 -0.3
baz=224
PALK Pallekele 71.92 279 P P 23 01 42.3 -0.5
PALK Pallekele 71.92 279*d iP* **P 23 01 42.9 +0.1**
PALK pmax pmax
comp=Z,468nm,1.0s
PALK Pallekele 71.92 279 P P 23 01 43.9 +1.1
MALK Mahakanadarawa 72.21 280 P P 23 01 43.0 -1.4
CHGN Chignik 72.25 26 P P 23 01 43.9 +0.1
baz=233
BILL Bilibino 72.42 6 P P 23 01 45.2 +0.6
BILL Bilibino 72.42 6 *i P* **P 23 01 45.9 +1.3**
GAMB Gambell 72.70 16 P P 23 01 46.7 +0.5
baz=218
M13K Dall Lake 72.90 21 P P 23 01 48.7 +1.3
M13K Dall Lake 72.90 21 P P 23 01 47.9 +0.5
baz=227
O14K Tigyukauivet M 72.91 23 P P 23 01 48.2 +0.6
O14K Tigyukauivet M 72.91 23 P P 23 01 47.9 +0.3
baz=230
MDRS Chennai 73.10 285 *eP* **P 23 01 50.1 +0.5**
N14K Kuskokwak Cree 73.19 22 P P 23 01 49.8 +0.7
baz=229
CHIR Chirikof Islan 73.25 28 P P 23 01 49.4 -0.2
baz=236
R16K Pilot Point 73.38 26 P P 23 01 51.0 +0.7
baz=233
O15K Ungalikthiuk R 73.43 24 P P 23 01 51.1 +0.5
baz=231,SNR=12
M14K Bethel 73.64 22 P P 23 01 52.3 +0.6
baz=228,SNR=9.4
L14K Kuka Creek 73.77 21 P P 23 01 53.2 +0.7
baz=226
VNDA Vanda 73.82 178 P P 23 01 53.0 +0.4
VNDA Vanda 73.82 178 P P 23 01 53.0 +0.4
VNDA pmax pmax
comp=Z,36nm,1.0s
VNDA Vanda 73.82 178 P P 23 01 53.4 +0.8
comp=Z,29nm,0.9s,baz=333,slow=6.5,SNR=57
comp=Z,29nm,0.9s
N15K Kwethluk River 73.96 23 P P 23 01 54.1 +0.5
baz=230
M15K Kasigluk River 74.07 22 P P 23 01 54.6 +0.3
baz=230
P16K Nushagak River 74.09 24 P P 23 01 54.8 +0.4
baz=233
SII Sitkinak Islan 74.33 28 P P 23 01 56.2 +0.3
baz=237
SBA Scott Base 74.38 177 P P 23 01 57.5 +1.7
SBA Scott Base 74.38 177 P P 23 01 57.5 +1.7
SBA pmax pmax
comp=Z,85nm,1.3s
O16K Kokwok River B 74.39 24 P P 23 01 56.2 +0.1
O16K Kokwok River B 74.39 24 P P 23 01 56.6 +0.5
baz=232
L15K Ungalak Mounta 74.42 21 P P 23 01 56.8 +0.5
baz=229
J14K Nanvaranak Lak 74.43 20 P P 23 01 57.5 +1.3
baz=226
Q16K King Salmon 74.43 25 P P 23 01 57.1 +0.7
baz=234
WMQ Urumqi 74.45 317 P P 23 01 58.0 +1.0
WMQ S **S 23 11 10.0 +1.2**
WMQ SKS **SKSac 23 11 37.9 -0.5**
WMQ sS sS 23 13 05.5 +5.4
WMQ pmax pmax
comp=Z,260nm,1.3s
WMQ pmax pmax
comp=Z,2µm,4.3s
Q17K Contact Creek 74.52 26 P P 23 01 57.4 +0.3
baz=235,SNR=6.3
N16K Nishlik Lake 74.66 23 P P 23 01 58.9 +1.1
baz=232
R18K Karluk 74.76 27 P P 23 01 59.1 +0.9
baz=236
K15K Wolf Creek Mou 74.81 21 P P 23 01 59.5 +1.0
baz=229
P17K Kvichak River 74.83 25 P P 23 01 58.6 0.0
baz=234
O17K Koliganek Bris 74.90 24 P P 23 01 59.3 +0.2
baz=233,SNR=5.4
M16K Timber Creek 74.93 22 P P 23 01 59.8 +0.6
baz=231
OHAK Old Harbor 75.10 27 P P 23 02 01.6 +1.4
OHAK Old Harbor 75.10 27 P P 23 02 00.2 -0.1
baz=238
TNA Tin City 75.12 16 P P 23 02 00.7 +0.5
baz=222,SNR=8.3
ANM Nome 75.13 18 P P 23 02 01.6 +1.3
baz=224,SNR=30
L16K Owhat River 75.17 22 P P 23 02 01.4 +0.8
baz=231
N17K Nushagak Hills 75.32 23 P P 23 02 02.8 +1.4
baz=233
HYB Hyderabad 75.36 289 *eP* **P 23 02 02.9 +0.3**
HYB *epP* **pP 23 03 05.2 -0.7**
HYB *ePP* **PP 23 04 58.6 +2.9**
HYB *eS* **S 23 11 21.4 +1.8**
KOD Kodaikanal 75.44 282 ⇑ *eP* **P 23 02 03.2 -0.2**
P18K Big Mountain, 75.45 25 P P 23 02 03.3 +1.0
baz=235
F14K Arctic Creek 75.50 17 P P 23 02 03.5 +1.1
baz=223,SNR=13
KDAK Kodiak Island 75.72 27 P P 23 02 04.5 +0.7
baz=238
O18K Koktuh Hills 75.72 25 P P 23 02 04.6 +0.8
baz=235
TRD Trivandrum 75.75 280 *eP* **P 23 02 05.7 +0.9**
TRD IAmb IAmb 23 02 07.4
comp=Z,472nm,0.9s
M17K Holitna River 75.75 23 P P 23 02 04.8 +0.9
baz=233
J16K Anvik River 75.79 20 P P 23 02 05.4 +1.4
baz=229

G15K Niukluk 75.84 18 P P 23 02 05.5 +1.2
baz=226
Q19K Cape Douglas, 75.87 26 P P 23 02 04.9 +0.3
baz=237,SNR=5.9
L17K Donlin 75.88 22 P P 23 02 05.5 +0.9
baz=232
N18K Kilae Creek 75.92 24 P P 23 02 06.0 +1.1
N18K IAmb IAmb 23 02 07.6
comp=Z,313nm,1.9s
N18K Kilae Creek 75.92 24 P P 23 02 06.4 +1.5
baz=234,SNR=12
LGTI Lohaghat 76.05 301⇑ *e*P P 23 02 06.8 +0.5
H16K Elim 76.15 19 P P 23 02 07.0 +1.0
baz=228,SNR=13
I17K Unalakleet 76.15 20 P P 23 02 07.3 +1.2
baz=229
F15K North Star Dit 76.16 17 P P 23 02 07.0 +0.9
baz=225
FRKB FARRUKHABAD 76.20 299⇑ *e*P P 23 02 06.6 -0.6
K17K Iditarod 76.24 21 P P 23 02 07.7 +1.2
baz=232
Q20K Shuyak Island 76.24 26 P P 23 02 07.6 +0.9
baz=238
O19K Port Alsworth 76.28 25 P P 23 02 07.2 +0.3
baz=236,SNR=6.3
SVW2 Sparrevohn 76.29 23 P P 23 02 08.3 +1.4
M18K Stony River 76.42 23 P P 23 02 08.2 +0.6
baz=234
P19K Oil Pt 76.44 25 P P 23 02 07.7 -0.1
baz=237,SNR=8.4
L18K Granite Mounta 76.53 22 P P 23 02 08.8 +0.6
baz=233
N19K Bonanza Creek 76.57 24 P P 23 02 08.9 +0.3
baz=236
G16K Koyuk River 76.63 18 P P 23 02 09.4 +0.7
G16K Koyuk River 76.63 18 P P 23 02 09.3 +0.7
baz=227
DGZ Jazzator, Alta 76.80 323 *d i*P P 23 02 10.4 +0.2
DGZ pmax pmax
comp=Z,248nm,1.0s
TIXI Tiksi 76.84 353 P P 23 02 09.4 -0.3
TIXI Tiksi 76.84 353⇓ *e*P P 23 02 08.8 -0.9
TIXI pmax pmax
comp=Z,38nm,1.3s
TIXI Tiksi 76.84 353 P P 23 02 09.2 -0.5
comp=Z,15nm,0.6s,baz=156,slow=4.7,SNR=61
comp=Z,15nm,0.6s
O20K Slope Mountain 76.93 25 P P 23 02 11.0 +0.4
baz=238
H17K Granite Mounta 77.10 19 P P 23 02 12.3 +0.9
baz=230,SNR=40
HOM Homer 77.13 26 P P 23 02 11.9 +0.3
baz=238
L19K White Mountain 77.20 23 P P 23 02 12.7 +0.7
baz=235
TTA Tatalina 77.20 22 P P 23 02 12.8 +0.8
baz=234
M19K Big River Lodg 77.22 23 P P 23 02 12.9 +0.8
baz=236
G17K Kiwalik Mounta 77.23 18 P P 23 02 13.3 +1.3
baz=229
CNPM China Poot 77.23 26 P P 23 02 12.7 +0.5
J18K Innoko River 77.27 21 P P 23 02 13.1 +0.8
baz=233,SNR=42
AKL Akola 77.30 292 *e*P P 23 02 12.1 -1.4
NRDN NARMADA NAGAR 77.49 294 *e*P P 23 02 17.1 +2.7
BRSE Bradley Lake S 77.56 26 P P 23 02 14.3 +0.3
baz=239,SNR=7.5
ZSN Zaisan 77.58 320 ⇓ *i*P P 23 02 15.2 +0.7
baz=320
ZSN *e*S S 23 11 43.9 +1.4
baz=320
ZSN Zaisan 77.58 320 *d i*P P 23 02 15.1 +0.7
ZSN *e*S S 23 11 43.9 +1.4
F17K Baldwin Pennin 77.67 17 P P 23 02 15.1 +0.7
baz=228
M20K Styx River 77.70 23 P P 23 02 15.2 +0.4
baz=237
N20K Mount Spurr 77.71 24 P P 23 02 14.6 -0.3
baz=238
H18K Honhosa River 77.74 19 P P 23 02 15.3 +0.4
baz=231
L20K Farewell, AK 77.75 23 P P 23 02 15.7 +0.7
baz=236
C16K Lisburne Hills 77.81 15 P P 23 02 16.1 +0.9
baz=224
CAPN Captain Cook N 77.92 25 P P 23 02 17.1 +1.2
baz=239
E17K Hotham Inlet 77.93 17 P P 23 02 17.0 +1.1
baz=228,SNR=75
J19K Poorman 77.97 21 P P 23 02 17.4 +1.2
baz=234
GCSA Galena City Sc 77.99 20 P P 23 02 16.9 +0.7
baz=233,SNR=12
DDI Dehra Dun 78.10 302 *e*P P 23 02 18.3 +0.6
DDI IAmb IAmb 23 02 19.6
comp=Z,277nm,0.9s
G18K Tagagawik 78.12 19 P P 23 02 17.4 +0.4
baz=231
K20K Telida 78.17 22 P P 23 02 18.4 +1.1
baz=236
F18K Selawik 78.26 18 P P 23 02 18.6 +0.9
baz=230,SNR=18
RDOG Red Dog Mine 78.30 16 P P 23 02 18.7 +0.8
RDOG Red Dog Mine 78.30 16 P P 23 02 18.6 +0.8
baz=226,SNR=20
SEW Seward 78.31 26 P P 23 02 18.6 +0.6
baz=240,SNR=9.5
O22K Cooper Landing 78.38 25 P P 23 02 18.5 +0.1
baz=240
SKT Skwentna 78.40 24 P P 23 02 17.9 -0.7
SKT Skwentna 78.40 24 P P 23 02 18.3 -0.2
baz=238
JMIU JAMIA UNIVERSI 78.41 300 *e*P P 23 02 21.3 +1.9
SUA Susitna One 78.44 24 P P 23 02 18.9 0.0
baz=239,SNR=14
NDI New Delhi 78.50 300⇑ *e*P P 23 02 18.3 -1.5
E18K Tukpahlearik C 78.52 17 P P 23 02 19.8 +0.7
baz=229
C17K DeLong Mountai 78.52 15 P P 23 02 20.4 +1.3
baz=226
NPLP NPLP New Delhi 78.53 300 *e*P P 23 02 18.3 -1.7
H19K Roundabout Mou 78.61 19 P P 23 02 20.0 +0.5
baz=233
J20K Nowinta River 78.61 21 P P 23 02 20.0 +0.4
baz=235
PPLA Purkeypile 78.63 23 P P 23 02 19.7 -0.3
baz=237
RC01 Rabbit Creek A 78.67 25 P P 23 02 19.9 -0.1
baz=240,SNR=16
G19K Purcell Mounta 78.77 19 P P 23 02 20.9 +0.4
baz=232
I20K Naaghedeneel 78.85 21 P P 23 02 21.9 +1.0
baz=235,SNR=6.4
M22K Willow 78.85 24 P P 23 02 20.8 -0.2
baz=240,SNR=11
CAST Castle Rocks 78.95 22 P P 23 02 21.2 -0.3
baz=237,SNR=29
F19K Shaleruckik Mo 78.98 18 P P 23 02 21.9 +0.3
baz=231
KAAM Kaadhehdhoo 78.99 271 P P 23 02 23.2 +0.5
KAAM Kaadhehdhoo 78.99 271 P P 23 02 24.3 +1.5
SNR=16
SMLA Simla 79.00 303 *e*P P 23 02 22.6 +0.1
SMLA IAmb IAmb 23 02 25.4
comp=Z,221nm,0.8s
MK31 Makanchi Array 79.03 319 P P 23 02 22.7 +0.4
MK31 IAmb IAmb 23 02 24.4
comp=Z,221nm,1.1s
MK31 Makanchi Array 79.03 319 *d i*P P 23 02 22.9 +0.5
MK31 pmax pmax
comp=Z,337nm,1.1s
MKAR Makanchi Array 79.03 319 P P 23 02 22.9 +0.5
comp=Z,145nm,0.9s,baz=104,slow=5.9,SNR=687
MKAR PKiKP **PKiKP** 23 07 53.1 -0.8
comp=Z,1.7nm,0.7s,baz=146,slow=3.3,SNR=4.4
MKAR S S 23 11 58.2 +0.2
comp=Z,1.6nm,1.1s,baz=113,slow=11,SNR=3.6
MKAR PKKPbc **PKKPbc** 23 21 12.8 -2.1
comp=Z,0.7nm,0.7s,baz=230,slow=1.4,SNR=7.6
MKAR PKPPKP **P'P'df** 23 29 19.1 0.0
comp=Z,1.4nm,0.9s,baz=270,slow=2.4,SNR=8.5
comp=Z,145nm,0.9s
DGAR Diego Garcia 79.09 263 P P 23 02 23.3 0.0
DGAR Diego Garcia 79.09 263 *d i*P P 23 02 23.4 +0.1
DGAR pmax pmax
comp=Z,232nm,0.9s

DGAR Diego Garcia 79.09 263 P P 23 02 24.0 +0.7
H20K Anotleneega Mo 79.11 20 P P 23 02 22.5 +0.2
baz=234
CHUM Lake Minchumin 79.11 22 P P 23 02 23.1 +0.7
baz=237,SNR=45
CUT Chulitna 79.12 24 P P 23 02 23.0 +0.6
baz=239
P23K Montague Islan 79.16 26 P P 23 02 23.5 +0.9
baz=240
C18K Utukok River 79.17 16 P P 23 02 23.4 +0.7
baz=228
PMR Palmer 79.18 25 P P 23 02 23.5 +0.8
PMR Palmer 79.18 25 P P 23 02 23.1 +0.4
baz=240,SNR=12
MAKZ Makanchi 79.24 319 P P 23 02 24.1 +0.6
MAKZ Makanchi 79.24 319 P P 23 02 24.1 +0.6
MAKZ pmax pmax
comp=Z,321nm,1.0s
KNK Knik Glacier 79.37 25 P P 23 02 24.2 +0.4
baz=241,SNR=9.2
Q23K Middleton Isla 79.37 27 P P 23 02 23.7 -0.1
baz=243
B18K Kokolik River 79.50 15 P P 23 02 25.5 +1.2
baz=227,SNR=20
E19K Redstone River 79.54 18 P P 23 02 25.7 +1.1
baz=232
MNCY Minicoy 79.59 279 *e*P P 23 02 26.7 +0.7
GOA Goa 79.59 286 *e*P P 23 02 26.3 +0.4
SML Sawmill 79.62 25 P P 23 02 25.2 0.0
baz=241,SNR=23
TRF Thorofare Moun 79.65 23 P P 23 02 24.7 -0.8
baz=239,SNR=16
BHK Bhakra 79.69 303 *e*P P 23 02 25.7 -0.5
HIN Hinchinbrook I 79.74 26 P P 23 02 26.5 +0.6
HIN IAmb IAmb 23 02 27.4
comp=Z,273nm,1.6s
F20K Avaraart Lake 79.76 18 P P 23 02 26.5 +0.8
baz=233
IMAR Indian Mountai 79.78 20 P P 23 02 26.4 +0.5
M23K Glacier View 79.86 25 P P 23 02 27.1 +0.6
baz=242,SNR=9.6
ZAA0 Zalesovo Array 79.88 326 P P 23 02 26.0 -0.6
ZAA0 IAmb IAmb 23 02 27.5
comp=Z,128nm,0.8s
ZALV Zalesovo Beam 79.88 326 P P 23 02 26.2 -0.5
comp=Z,130nm,0.8s,baz=109,slow=5.4,SNR=435
ZALV S S 23 12 05.0 -1.5
comp=Z,9.7nm,1.1s,baz=142,slow=5.6,SNR=9.6
ZALV PKKPbc **PKKPbc** 23 21 11.3 -2.0
comp=Z,0.4nm,0.4s,baz=320,slow=4.4,SNR=3.5
ZALV PKPPKP **P'P'df** 23 29 19.0 +1.3
comp=Z,0.8nm,0.8s,baz=352,slow=3.0,SNR=3.6
comp=Z,130nm,0.8s
C19K Lookout Ridge 79.91 16 P P 23 02 27.1 +0.5
baz=229
H21K Melozitna Rive 79.92 20 P P 23 02 27.4 +0.7
baz=236
D19K Kuna River 79.93 17 P P 23 02 27.6 +0.9
baz=231
SHLS Shalkode 79.94 315 ⇓ *i*P P 23 02 26.5 -1.0
comp=Z,71nm,0.7s,baz=315
SHLS Shalkode 79.94 315 *d i*P P 23 02 26.4 -1.0
SHLS pmax pmax
comp=Z,71nm,0.7s
I21K Tanana 79.94 21 P P 23 02 27.2 +0.4
baz=237
POO Poona 79.94 289 *e*P P 23 02 27.6 -0.3
POO IAmb IAmb 23 02 28.8
comp=Z,151nm,0.9s
DHRM DHARAMSHALA 79.95 304 *e*P P 23 02 27.6 -0.3
WAT1 Susitna Watana 80.02 24 P P 23 02 27.0 -0.3
baz=241
SCM Sheep Creek Mo 80.05 25 P P 23 02 27.5 0.0
SCM Sheep Creek Mo 80.05 25 P P 23 02 27.9 +0.4
baz=242,SNR=9.4
SCM Sheep Creek Mo 80.05 25 P P 23 02 27.5 0.0
SCM pmax pmax
comp=Z,59nm,1.0s
EYAK Cordova Ski Ar 80.14 26 P P 23 02 29.5 +1.6
EYAK Cordova Ski Ar 80.14 26 P P 23 02 28.1 +0.2
baz=244
G21K Allakaket 80.16 19 P P 23 02 28.3 +0.4
baz=236
RND Reindeer 80.19 23 P P 23 02 27.8 -0.4
RND Reindeer 80.19 23 P P 23 02 27.8 -0.4
WAT6 Susitna Watana 80.23 24 P P 23 02 28.5 -0.1
baz=242,SNR=12
UZB Uzunbulak 80.25 315 ⇓ *i*P P 23 02 29.8 +0.6
comp=Z,128nm,1.1s,baz=315
UZB *e*S S 23 12 12.2 +1.1
baz=315
UZB Uzunbulak 80.25 315 *d i*P P 23 02 29.7 +0.6
UZB *e*S S 23 12 12.2 +1.1
UZB pmax pmax
comp=Z,128nm,1.1s
MLY Manley 80.31 21 P P 23 02 28.8 -0.1
baz=238,SNR=94
MCK McKinley 80.32 23 P P 23 02 28.5 -0.4
baz=240,SNR=36
E20K Nigu River 80.34 17 P P 23 02 29.4 +0.5
baz=233
THN Thein Dam 80.47 304⇑ *e*P P 23 02 30.5 +0.2
KAIM Kayak Island 80.47 27 P P 23 02 30.3 +0.6
baz=245
KLU Klutina 80.49 25 P P 23 02 30.4 +0.5
baz=243,SNR=15
D20K Etivluk River 80.50 17 P P 23 02 30.2 +0.5
baz=232
PRZ Przheval'sk 80.53 314 P P 23 02 32.1 +1.4
PRZ Przheval'sk 80.53 314 P P 23 02 32.1 +1.4
PRZ pmax pmax
comp=Z,446nm,1.0s
H22K Ishtalitna Cre 80.54 20 P P 23 02 31.2 +1.3
baz=238,SNR=14
KPKS Kokpek 80.57 315 ⇓ *i*P P 23 02 31.3 +0.5
comp=Z,64nm,1.0s,baz=315
KPKS *e*S S 23 12 15.4 +1.0
baz=315
KPKS Kokpek 80.57 315 *d i*P P 23 02 31.2 +0.5
KPKS *e*S S 23 12 15.3 +1.0
KPKS pmax pmax
comp=Z,64nm,1.0s
F21K Alatna River 80.57 19 P P 23 02 30.7 +0.6
baz=236
DHY Denali Highway 80.61 24 P P 23 02 30.8 +0.2
baz=242,SNR=12
M24K Tolsona, Glenn 80.66 25 P P 23 02 31.2 +0.4
baz=243,SNR=11
SATY Saty 80.66 315 ⇓ *i*P P 23 02 32.1 +0.7
comp=Z,42nm,0.7s,baz=315
SATY *e*S S 23 12 15.6 +0.1
baz=315
SATY Saty 80.66 315 *d i*P P 23 02 32.0 +0.7
SATY *e*S S 23 12 15.5 +0.1
SATY pmax pmax
comp=Z,43nm,0.7s
ZHN Zhinishke 80.67 315 ⇓ *i*P P 23 02 31.9 +0.6
baz=315
ZHN Zhinishke 80.67 315 *d i*P P 23 02 31.8 +0.5
NEA2 Nenana 80.70 22 P P 23 02 30.4 -0.5
baz=240,SNR=21
HMT Hamilton 80.72 27 P P 23 02 31.5 +0.5
HMT IAmb IAmb 23 02 34.9
comp=Z,70nm,1.0s
TARG Taragay, Kyrgy 80.78 313 P P 23 02 33.7 +1.4
TARG IAmb IAmb 23 02 34.8
comp=Z,112nm,1.0s
TARG Taragay, Kyrgy 80.78 313 P P 23 02 33.7 +1.4
TARG pmax pmax
comp=Z,112nm,1.0s
BMRM Brnner River 80.83 26 P P 23 02 31.6 -0.1
baz=245
I23K Minto, Yukon-K 80.87 21 P P 23 02 32.1 +0.4
baz=240,SNR=23
BERG Berg Lake 80.99 27 P P 23 02 33.2 +0.7
BERG IAmb IAmb 23 02 34.4
comp=Z,85nm,0.8s
G22K Bettles 81.05 19 P P 23 02 32.9 +0.3
baz=237
N25K Chitina, Valde 81.11 26 P P 23 02 33.3 +0.1
baz=245,SNR=6.1
E21K Killik River 81.12 18 P P 23 02 33.5 +0.5
baz=235
TDK Taldyqorghan 81.14 316 *e*P P 23 02 34.5 +0.9
comp=Z,171nm,0.9s,baz=316
TDK Taldyqorghan 81.14 316 *e*P P 23 02 34.5 +0.9
TDK pmax pmax

comp=Z,171nm,0.9s
B20K Meade River 81.15 16 P P 23 02 33.6 +0.6
baz=232
HARP HAARP 81.22 25 P P 23 02 33.8 +0.2
baz=244
COLA College 81.29 22 P P 23 02 33.3 -0.6
COLA IAmb IAmb 23 02 35.1
comp=Z,59nm,0.7s
COLA College 81.29 22 P P 23 02 35.7 +1.8
COLA College 81.29 22 P P 23 02 33.8 -0.1
baz=241
COLA College 81.29 22 P P 23 02 33.3 -0.6
COLA pmax pmax
comp=Z,59nm,0.7s
C21K Knifeblade Rid 81.29 17 P P 23 02 34.5 +0.6
baz=234,SNR=15
PAX Paxson 81.34 24 P P 23 02 34.0 -0.3
baz=244
SEM Semipalatinsk 81.39 322 ⇓ *i*P P 23 02 37.0 +1.8
baz=322
SEM Semipalatinsk 81.39 322 *d i*P P 23 02 36.9 +1.8
HDA Harding Lake 81.41 23 P P 23 02 34.2 -0.4
baz=242,SNR=20
CRQE Cirque 81.41 27 P P 23 02 34.9 0.0
baz=246
G23K Bananza Creek 81.44 20 P P 23 02 34.8 +0.1
baz=239
POKR Poker Plat Res 81.56 22 P P 23 02 35.1 -0.3
baz=242,SNR=9.8
K24K Donnelly Dome 81.59 23 P P 23 02 35.4 -0.1
baz=243,SNR=7.8
ILAR Eielson Array 81.61 22 P P 23 02 34.7 -0.9
comp=Z,30nm,0.6s,baz=247,slow=5.3,SNR=253
ILAR pP **pP** 23 03 41.0 +1.1
comp=Z,12nm,0.9s,baz=258,slow=5.9,SNR=2.8
ILAR S S 23 12 20.4 -3.5
comp=Z,6.8nm,1.2s,baz=250,slow=4.6,SNR=11
ILAR PKKPbc **PKKPbc** 23 21 05.9 -4.1
comp=Z,0.4nm,0.5s,baz=340,slow=1.4,SNR=5.5
comp=Z,30nm,0.6s
E22K Anaktuvuk Pass 81.61 18 P P 23 02 35.9 +0.3
baz=237
B21K Ikpikpuk River 81.62 17 P P 23 02 35.7 +0.2
baz=234,SNR=24
COLD Coldfoot 81.64 19 P P 23 02 36.2 +0.5
baz=239,SNR=27
MDOK Medeo 81.66 314 *i*P P 23 02 37.4 +0.9
baz=314
MDOK *e*S S 23 12 26.9 +1.2
baz=314
MDOK Medeo 81.66 314 *i*P P 23 02 37.4 +0.9
MDOK *e*S S 23 12 26.8 +1.2
TNSS Tian-Shan 81.70 314 *e*P P 23 02 38.1 +1.0
baz=314
TNSS Tian-Shan 81.70 314 *e*P P 23 02 38.0 +1.0
PAF Port-aux-Franc 81.70 221 P P 23 02 36.9 +0.5
PAF Port-aux-Franc 81.70 221 P P 23 02 36.9 +0.5
PAF pmax pmax
comp=Z,402nm,1.2s
MCARA McCarthy VSAT 81.70 26 P P 23 02 36.2 +0.1
baz=246,SNR=12
MESA MESA 81.71 28 P P 23 02 36.0 -0.4
baz=247
H24K Noodor Dome 81.75 21 P P 23 02 36.4 0.0
baz=241
D22K Ayikyak River 81.75 18 P P 23 02 36.3 0.0
baz=236
AAA Alma-Ata 81.76 314 *e*P P 23 02 38.2 +1.2
comp=Z,104nm,0.9s,baz=314
AAA Alma-Ata 81.76 314 *e*P P 23 02 38.1 +1.2
AAA pmax pmax
comp=Z,104nm,0.9s
CHKK Chushkaly 81.86 315 ⇓ *i*P P 23 02 37.7 +0.3
baz=315
CHKK Chushkaly 81.86 315 ⇓ *i*P P 23 02 37.7 +0.3
RIDG Independent Ri 81.93 24 P P 23 02 37.3 -0.1
baz=244,SNR=13
ULHL Ulahol 82.03 313 P P 23 02 40.1 +1.5
SNR=19
NRN Naryn 82.03 313 P P 23 02 39.4 +0.6
NRN IAmb IAmb 23 02 42.4
comp=Z,73nm,0.8s
NRN Naryn 82.03 313 P P 23 02 39.4 +0.6
NRN pmax pmax
comp=Z,73nm,0.8s
MENT Mentasta 82.05 25 P P 23 02 38.9 +0.9
A21K Barrow 82.11 15 P P 23 02 38.0 0.0
baz=232
J25K Salcha River, 82.11 23 P P 23 02 38.0 -0.3
baz=244,SNR=90
M26K Nabesna, AK 82.13 25 P P 23 02 38.2 -0.2
baz=246
TABL Table Mountain 82.18 27 P P 23 02 39.7 +0.8
L26K Log Cabin Wild 82.24 25 P P 23 02 38.9 0.0
baz=246,SNR=17
E23K Chandalar 82.27 19 P P 23 02 39.4 +0.3
baz=239
CTG Chitna Glacier 82.29 27 P P 23 02 39.6 +0.2
baz=248,SNR=13
G24K Hadweenzic Riv 82.31 20 P P 23 02 39.4 +0.2
baz=241
KUU Kurty 82.32 315 ⇓ *i*P P 23 02 39.2 -0.7
baz=315
KUU Kurty 82.32 315 *d i*P P 23 02 39.1 -0.7
SCRK Sand Creek 82.38 24 P P 23 02 39.9 +0.2
baz=245,SNR=21
D23K Nanushuk River 82.41 18 P P 23 02 40.2 +0.6
baz=238
PRP Porcupine Dome 82.46 22 P P 23 02 40.5 +0.3
baz=243,SNR=6.2
PINM Pinnacle 82.46 28 P P 23 02 40.4 +0.2
baz=249,SNR=8.7
KURK Kurchatov 82.48 322 P P 23 02 40.6 +0.2
KURK Kurchatov 82.48 322 *d i*P P 23 02 40.3 -0.1
KURK pmax pmax
comp=Z,256nm,1.1s
KURK Kurchatov 82.48 322 P P 23 02 40.9 +0.5
KURBB Kurchatov Arra 82.51 322 P P 23 02 40.5 0.0
comp=Z,115nm,1.0s,baz=108,slow=4.3,SNR=567
KURBB pP **pP** 23 03 45.0 -0.8
comp=Z,11nm,1.0s,baz=111,slow=4.3,SNR=1.1
KURBB PKiKP **PKiKP** 23 07 59.0 -0.1
comp=Z,1.0nm,0.8s,baz=108,slow=1.6,SNR=4.2
KURBB S S 23 12 31.0 -2.6
comp=Z,1.2nm,0.9s,baz=84,slow=11,SNR=3.5
KURBB PKKPbc **PKKPbc** 23 21 05.2 -1.9
comp=Z,1.4nm,0.7s,baz=292,slow=2.9,SNR=13
KURBB PKPPKP **P'P'df** 23 29 11.2 -1.5
comp=Z,0.7nm,0.9s,baz=199,slow=26,SNR=1.3
comp=Z,115nm,1.0s
F24K Squaw Lake 82.57 20 P P 23 02 41.5 +0.9
baz=241
TOLK Toolik Lake Re 82.58 18 P P 23 02 41.0 +0.4
TOLK IAmb IAmb 23 03 53.5
comp=Z,103nm,1.5s
TOLK Toolik Lake Re 82.58 18 P P 23 02 40.9 +0.3
baz=239,SNR=24
M27K Edge Creek, AK 82.59 25 P P 23 02 41.1 +0.2
baz=247
TKM2 Tokmak 2 82.64 314 P P 23 02 42.4 +0.7
SNR=204
TKM2 Tokmak 2 82.64 314 *i*P P 23 02 41.9 +0.2
TKM2 pmax pmax
comp=Z,126nm,0.6s
E24K Your Creek 82.64 19 P P 23 02 41.5 +0.6
baz=240
PNL Peninsula 82.71 28 P P 23 02 42.9 +1.5
PNL Peninsula 82.71 28 P P 23 02 41.5 +0.1
baz=250,SNR=10
NIL Nilore 82.72 304 P P 23 02 42.5 +0.4
NIL Nilore 82.72 304 P P 23 02 42.5 +0.4
NIL pmax pmax
comp=Z,566nm,0.7s
NIL Nilore 82.72 304 P P 23 02 43.1 +1.0
J26L Joseph Creek 82.77 23 P P 23 02 41.8 +0.1
baz=245
L27K Beaver Creek, 82.89 25 P P 23 02 42.5 +0.3
baz=247
C23K Itkillik River 82.89 17 P P 23 02 42.7 +0.6
baz=238
BCAR Beaver Creek A 82.91 25 P P 23 02 43.2 +0.8
YUK3 Moose Creek 82.98 26 P P 23 02 43.3 +0.2
baz=248,SNR=13
FYU Fort Yukon 83.04 21 P P 23 02 43.7 +0.8
BVCY Beaver Creek 83.05 26 P P 23 02 43.6 +0.5
baz=248,SNR=16
KBK Karagaybulak 83.05 314 P P 23 02 44.7 +0.9

SNR=154
D24K Happy Valley 83.08 18 P P 23 02 43.9 +0.8
baz=240
YUK8 Steele Glacier 83.12 27 P P 23 02 44.3 +0.5
baz=249,SNR=13
K27K Chicken 83.17 24 P P 23 02 44.5 +0.9
baz=247
CHMS Chumysh 83.26 314 P P 23 02 45.9 +1.3
SNR=9.2
I26K Coal Creek Min 83.26 23 P P 23 02 44.8 +0.7
baz=246
UCH Uchtor 83.28 313 P P 23 02 46.8 +1.5
SNR=366
FRU1 Bishkek 83.31 314 P P 23 02 45.7 +0.7
FRU1 Bishkek 83.31 314 P P 23 02 45.7 +0.7
FRU1 pmax pmax
comp=Z,228nm,0.9s
O29M Mount Kennedy 83.32 28 P P 23 02 45.3 +0.6
baz=250
F25K Christian Rive 83.36 20 P P 23 02 45.1 +0.4
baz=243
AAK Ala-Archa 83.38 314 P P 23 02 46.9 +1.5
SNR=18
AAK Ala-Archa 83.38 314 P P 23 02 46.2 +0.8
AAK Ala-Archa 83.38 314 *i* P P 23 02 46.4 +1.0
SNR=374
AAK Ala-Archa 83.38 314 *d i* P P 23 02 46.2 +0.8
AAK pmax pmax
comp=Z,239nm,0.7s
AAK Ala-Archa 83.38 314 P P 23 02 47.0 +1.5
C24K Franklin Bluff 83.40 18 P P 23 02 45.5 +0.8
baz=240
SGDS Sogindy 83.44 314 ⇓ *i* P P 23 02 46.1 +0.5
comp=Z,85nm,0.8s,baz=314
SGDS Sogindy 83.44 314 *d i* P P 23 02 46.1 +0.5
SGDS pmax pmax
comp=Z,85nm,0.8s
P29M Windy Craggy 83.49 29 P P 23 02 46.2 +0.7
baz=251
USP Ospenovka 83.50 314 P P 23 02 46.5 +0.7
SNR=396
E25K Arctic Village 83.63 20 P P 23 02 46.3 +0.3
baz=243,SNR=17
YUK6 Outpost Mounta 83.64 27 P P 23 02 47.0 +0.6
baz=250,SNR=6.5
YUK4 Talbot Arm 83.64 27 P P 23 02 47.2 +0.8
baz=250,SNR=18
BMAR Burnt Mountain 83.65 20 P P 23 02 47.0 +0.9
S31K Pelican 83.72 31 P P 23 02 46.9 +0.4
baz=252
G26K Porcupine Rive 83.72 21 P P 23 02 47.0 +0.6
baz=245
JASL Jaisalmer 83.74 297 ⇑ *e* P P 23 02 46.4 -0.9
EGAK Eagle 83.83 23 P P 23 02 47.6 +0.7
EGAK Eagle 83.83 23 P P 23 02 47.8 +0.8
baz=247,SNR=20
EKS2 Erkin-Say 83.90 313 P P 23 02 49.8 +1.8
SNR=45
SIT Sitka 83.92 32 P P 23 02 48.9 +1.4
SIT Sitka 83.92 32 P P 23 02 48.3 +0.8
baz=253,SNR=5.1
F26K Sheenjek River 83.92 20 P P 23 02 48.2 +0.8
baz=244
D25K Kavik River 83.92 18 P P 23 02 47.9 +0.5
baz=242
I27K Kandik River 83.97 23 P P 23 02 48.4 +0.6
baz=247,SNR=36
HYT Haines Junctio 83.99 28 P P 23 02 49.1 +1.0
HYT lAmb lAmb 23 02 52.4
comp=Z,55nm,0.9s
HYT Haines Junctio 83.99 28 P P 23 02 49.3 +1.2
baz=251,SNR=31
P30M Million Dollar 84.02 28 P P 23 02 49.0 +0.9
baz=252,SNR=19
M29M Somme Creek 84.10 26 P P 23 02 49.5 +0.9
baz=250,SNR=23
PLBC Pleasant Camp 84.10 29 P P 23 02 49.2 +0.8
baz=252
BTLS Baital 84.17 316 ⇓ *i* P P 23 02 49.7 +0.6
comp=Z,121nm,0.8s,baz=316
BTLS Baital 84.17 316 *d i* P P 23 02 49.7 +0.6
BTLS pmax pmax
comp=Z,121nm,0.8s
H27K Steamboat Moun 84.25 22 P P 23 02 49.6 +0.5
baz=247
DAWY Dawson 84.28 24 P P 23 02 50.0 +0.7
DAWY lAmb lAmb 23 02 51.7
comp=Z,126nm,1.7s
DAWY Dawson 84.28 24 P P 23 02 50.0 +0.7
baz=249
N30M Aishikik Lake 84.39 27 P P 23 02 51.0 +1.0
baz=251
BHUJ Bhuj 84.42 294 *e* P P 23 02 51.1 +0.3
BHUJ lAmb lAmb 23 02 52.7
comp=Z,403nm,1.1s
S32K Killisnoo 84.42 31 P P 23 02 51.0 +0.9
baz=254,SNR=10
L29M L29M 84.47 25 P P 23 02 51.6 +1.3
baz=250
DIB Dawson Inlet, 84.48 36 P P 23 02 50.3 -0.1
DIB lAmb lAmb 23 02 53.7
comp=Z,130nm,2.0s
I28M Miner Creek 84.56 23 P P 23 02 51.5 +0.8
baz=248,SNR=48
SKAG Skagway 84.61 29 P P 23 02 53.0 +2.0
SKAG Skagway 84.61 29 P P 23 02 51.7 +0.8
baz=253,SNR=6.0
O30N Mendenhall 84.63 28 P P 23 02 52.0 +0.8
baz=252,SNR=11
CRAG Craig 84.67 34 P P 23 02 52.1 +0.8
baz=255
R32K Eaglecrest 84.68 31 P P 23 02 52.3 +0.9
baz=254
JIS Juneau Island 84.75 31 P P 23 02 52.5 +0.9
JIS Juneau Island 84.75 31 P P 23 02 53.0 +1.4
NRIK Noril'sk 84.78 341 P P 23 02 51.8 +0.2
NRIK lAmb lAmb 23 02 52.9
comp=Z,56nm,0.7s
NRIK Noril'sk 84.78 341 P P 23 02 51.4 -0.2
comp=Z,46nm,0.5s,baz=102,slow=4.9,SNR=130
NRIK pP pP 23 03 58.4 +1.6
comp=Z,50nm,1.1s,baz=125,slow=4.3,SNR=4.1
NRIK S SKSac 23 12 47.3 -1.4
comp=Z,9.7nm,1.1s,baz=176,slow=22,SNR=34
comp=Z,46nm,0.5s
U33K Whale Pass 84.84 33 P P 23 02 52.8 +0.7
baz=255,SNR=7.0
M30M Minto, Yukon 84.88 26 P P 23 02 53.4 +1.0
baz=252,SNR=25
J29N Klondike Camp 84.89 24 P P 23 02 53.6 +1.2
baz=250,SNR=12
K29M Barlow Dome 84.97 25 P P 23 02 54.1 +1.2
baz=251
N31M Braeburn, Yuko 84.99 27 P P 23 02 54.0 +1.0
baz=253,SNR=11
T33K Petersburg 85.10 32 P P 23 02 54.8 +1.4
baz=255
WHY Whitehorse 85.17 28 P P 23 02 54.6 +0.7
baz=253,SNR=14
WRAK Wrangell Islan 85.33 33 P P 23 02 55.3 +0.7
baz=256,SNR=8.4
F28M Old Crow 85.38 21 P P 23 02 55.3 +0.6
baz=248,SNR=58
P32M Atlin 85.44 29 P P 23 02 55.7 +0.5
baz=254,SNR=8.5
H29M Whitestone 85.44 22 P P 23 02 55.6 +0.6
baz=250,SNR=9.8
V35K Ketchikan 85.47 34 P P 23 02 56.0 +0.6
baz=257,SNR=15
MAYO Mayo, Yukon 85.58 25 P P 23 02 56.4 +0.7
baz=252,SNR=8.4
D27M Malcolm River 85.63 19 P P 23 02 57.3 +1.4
baz=247
BTK Batken 85.66 310 P P 23 02 57.5 +0.7
BTK Batken 85.66 310 P P 23 02 57.5 +0.7
BTK pmax pmax
comp=Z,302nm,0.8s
J30M Hart River 85.70 24 P P 23 02 57.1 +0.6
baz=252
DZA Taraz 85.71 313 *e* P P 23 02 57.2 +0.3
comp=Z,70nm,0.5s,baz=313
DZA Taraz 85.71 313 *e* P P 23 02 57.2 +0.3
DZA pmax pmax
comp=Z,70nm,0.5s
M31M Drury Creek, Y 85.83 27 P P 23 02 57.6 +0.6
baz=254,SNR=21
E28M Babbage River 85.87 20 P P 23 02 57.7 +0.6
baz=249
I30M Mount Dempster 85.89 24 P P 23 02 58.0 +0.6
baz=252
Q32M Nakina River 85.99 30 P P 23 02 59.2 +1.1
baz=256
RUBB Prince Rupert 86.02 35 P P 23 02 58.7 +0.7
BRZS Berezniki 86.02 321 ⇓ *i* P P 23 02 57.5 -0.7
baz=326
BRZS Berezniki 86.02 321 *d i* P P 23 02 57.5 -0.7
P33M Teslin, Yukon 86.03 29 P P 23 02 58.7 +0.6
baz=255,SNR=19
GRNB Grenville Isla 86.09 36 P P 23 02 58.9 +0.5
QSPA South Pole Qui 86.11 180 P P 23 02 58.4 -0.1
QSPA lAmb lAmb 23 04 07.9
comp=Z,115nm,1.1s
QSPA South Pole Qui 86.11 180 P P 23 02 58.9 +0.4
comp=Z,48nm,0.7s,baz=337,slow=2.9,SNR=283
QSPA pP pP 23 04 05.6 +1.2
comp=Z,49nm,1.0s,baz=326,slow=1.2,SNR=3.6
QSPA S SKSac 23 12 54.7 -2.8
comp=Z,4.0nm,1.2s,baz=117,slow=23,SNR=2.2
QSPA PKKPbc PKKPbc 23 20 56.4 -3.6
comp=Z,3.1nm,0.5s,baz=317,slow=0.9,SNR=23
comp=Z,48nm,0.7s
MAW Mawson 86.12 203 P P 23 02 58.6 +0.4
baz=86,SNR=13
MAW Mawson 86.12 203 P P 23 02 58.2 0.0
MAW Mawson 86.12 203 P P 23 02 58.2 0.0
MAW pmax pmax
comp=Z,18nm,0.6s
MAW Mawson 86.12 203 P P 23 02 58.3 0.0
comp=Z,67nm,0.8s,baz=101,slow=6.9,SNR=9.7
comp=Z,67nm,0.8s
EPYK Eagle Plains 86.12 23 P P 23 02 59.1 +0.8
baz=251,SNR=52
N32M Quiet Lake 86.15 28 P P 23 02 59.5 +0.9
baz=255
KBU Kabul Universi 86.22 305 P P 23 02 55.2 -4.6
KBL Kabul 86.30 305 P P 23 02 59.3 -0.9
KBL lAmb lAmb 23 03 00.5
comp=Z,110nm,0.7s
KBL Kabul 86.30 305 P P 23 02 59.3 -0.9
KBL pmax pmax
comp=Z,110nm,0.7s
KBL Kabul 86.30 305 P P 23 02 59.7 -0.5
SNR=60
FARO Faro, Yukon 86.31 27 P P 23 03 00.0 +0.7
baz=255,SNR=41
S34M Telegraph Cree 86.33 31 P P 23 03 00.8 +1.3
baz=257,SNR=36
KK31 Karatay Array 86.34 313 P P 23 03 00.0 +0.1
KK31 lAmb lAmb 23 03 01.3
comp=Z,79nm,0.7s
KK31 Karatay Array 86.34 313 P P 23 03 00.0 +0.1
KK31 pmax pmax
comp=Z,79nm,0.7s
KKAR Karatay Array 86.34 313 P P 23 02 59.9 0.0
KKAR Karatay Array 86.34 313 P P 23 02 59.9 0.0
E29M Blow River 86.36 20 P P 23 03 00.4 +1.0
baz=250
U35K Hyder 86.48 33 P P 23 03 01.0 +0.7
baz=258
G30M tAoh Zraii Nji 86.50 22 P P 23 03 01.3 +1.1
baz=252
IUG Iuzhnay 86.55 312 ⇓ *i* P P 23 03 01.6 +0.5
comp=Z,80nm,0.8s,baz=312
IUG Iuzhnay 86.55 312 *d i* P P 23 03 01.5 +0.5
IUG pmax pmax
comp=Z,81nm,0.8s
HOLB Holberg 86.58 39 P P 23 03 01.4 +0.5
HOLB lAmb lAmb 23 03 03.1
comp=Z,123nm,1.3s
T35M Bob Quinn 86.59 32 P P 23 03 02.1 +1.4
baz=258,SNR=14
R33M Jennings River 86.75 30 P P 23 03 02.8 +1.1
baz=257
BRLS Boroldav 86.82 313 ⇓ *i* P P 23 03 02.5 +0.3
baz=313
BRLS Boroldav 86.82 313 *d i* P P 23 03 02.5 +0.3
SIMJ Simiganj 86.85 309 P P 23 03 02.7 +0.1
F30M Barrier River 86.86 21 P P 23 03 02.8 +0.9
baz=252
DLBC Dease Lake 87.01 31 P P 23 03 04.0 +1.2
DLBC lAmb lAmb 23 04 11.5
comp=Z,221nm,1.9s
DLBC Dease Lake 87.01 31 P P 23 03 04.1 +1.2
baz=258,SNR=23
G31M Satah River 87.22 22 P P 23 03 04.2 +0.7
baz=254
MMPY Sheldon Lake, 87.35 27 P P 23 03 05.2 +0.9
baz=256,SNR=24
ROCAM Rodrigues Isla 87.36 250 P P 23 03 05.4 +0.2
F31M Tsiigehtchic 87.56 22 P P 23 03 05.5 +0.3
baz=254,SNR=26
INK Inuvik 87.87 21 S SKSac 23 13 07.1 -0.6
comp=Z,3.4nm,1.2s,baz=53,slow=32,SNR=44
INK PKKPbc PKKPbc 23 20 52.0 -3.2
comp=Z,2.5nm,0.6s,baz=22,slow=3.9,SNR=15
BVAR Borovoye Array 87.95 323 P P 23 03 07.0 -0.4
BVAR Borovoye Array 87.95 323 P P 23 03 07.0 -0.4
comp=Z,265nm,0.7s,baz=103,slow=5.6,SNR=1186
BVAR S SKSac 23 13 05.1 -3.8
comp=Z,23nm,1.2s,baz=134,slow=4.3,SNR=14
comp=Z,265nm,0.7s
WTLY Watson Lake, Y 87.97 29 P P 23 03 08.3 +1.0
WTLY lAmb lAmb 23 04 15.9
comp=Z,110nm,1.4s
WTLY Watson Lake, Y 87.97 29 P P 23 03 08.5 +1.2
baz=259,SNR=29
BRVK Borovoye 88.02 323 P P 23 03 07.1 -0.5
BRVK Borovoye 88.02 323 *d i* P P 23 03 06.8 -0.8
BRVK pmax pmax
comp=Z,176nm,0.9s
BRVK Borovoye 88.02 323 P P 23 03 07.4 -0.3
KHMM Horse Mountain 88.21 49 P P 23 03 09.6 +0.5
KHMM lAmb lAmb 23 03 11.4
comp=Z,74nm,1.4s
K02D Willamette Mer 88.47 47 P P 23 03 10.9 +0.8
TGTN Hyland Airport 88.49 28 P P 23 03 10.6 +0.8
baz=259,SNR=25
RADR Rader Ridge 88.81 44 P P 23 03 12.4 +0.9
RADR lAmb lAmb 23 03 13.5
comp=Z,64nm,1.1s
NLWA Neilton Lookou 88.87 43 P P 23 03 12.5 +0.7
HUMO Hull Mountain 88.98 47 P P 23 03 13.3 +0.8
HUMO lAmb lAmb 23 03 14.6
comp=Z,77nm,1.1s
PGC Sidney 89.30 41 P P 23 03 14.2 +0.5
KOTAN Kotaneelee Air 90.32 30 P P 23 03 19.2 +1.0
baz=263,SNR=9.6
FLDN Fort Liard 90.62 30 P P 23 03 20.6 +1.0
baz=263
SMMC Simmler 90.62 55 P P 23 03 21.8 +1.5
baz=266
PKM Mcpherson Peak 90.74 55 P P 23 03 22.1 +1.0
baz=266,SNR=9.3
SBC Santa Barbara 90.79 56 P P 23 03 22.0 +1.0
baz=266
WRGLY Wrigley 90.97 27 P P 23 03 22.1 +1.0
baz=264
BCW Bitter Crk WRg 91.08 55 P P 23 03 23.0 +0.6
BCW lAmb lAmb 23 03 25.1
comp=Z,143nm,1.3s
VOG Valley Oaks Go 91.19 54 P P 23 03 23.2 +0.4
baz=266
A36M Sachs Harbour 91.40 18 P P 23 03 22.8 -0.2
A36M Sachs Harbour 91.40 18 P P 23 03 23.4 +0.4
baz=262
C36M Paulatuk 91.44 21 P P 23 03 23.4 +0.2
baz=263
ARVC Arvin 91.56 55 P P 23 03 25.2 +0.6
baz=266
OSI Osito Audit: C 91.62 56 P P 23 03 25.7 +0.7
baz=266
SCI2 San Clemente I 91.67 57 P P 23 03 26.0 +0.9
baz=266
MLAC Mammoth, Mammo 91.71 53 P P 23 03 26.1 +0.6
baz=266
HAWA Hanford 91.74 44 P P 23 03 25.3 +0.1
CIS Catalina Islan 91.80 57 P P 23 03 26.3 +0.5
baz=267,SNR=9.5
HRA Herat 91.88 304 P P 23 03 25.5 -0.8
HRA lAmb lAmb 23 03 27.0
comp=Z,109nm,1.1s
ISA Isabella, Lake 91.89 55 P P 23 03 26.7 +0.6
baz=267,SNR=10
DECC Green Verdugo 91.92 56 P P 23 03 26.8 +0.5
baz=267
FMP Fort Macarthur 91.92 57 P P 23 03 27.4 +1.1
baz=267
WVOR Wild Horse Val 92.15 48 P P 23 03 27.5 +0.2
WVOR lAmb lAmb 23 03 29.0
comp=Z,72nm,1.4s
WVOR Wild Horse Val 92.15 48 P P 23 03 27.5 +0.2
WVOR pmax pmax
comp=Z,72nm,1.4s
TIN Tinemaha, Big 92.16 53 P P 23 03 27.9 +0.5
baz=267
NVAR Mina Array Bea 92.18 52 P P 23 03 28.1 +0.5
NVAR Mina Array Bea 92.18 52 P P 23 03 27.9 +0.3
comp=Z,25nm,1.0s,baz=260,slow=5.9,SNR=71
NVAR pP pwP 23 04 35.7 +0.2
comp=Z,7.7nm,1.0s,baz=263,slow=6.8,SNR=2.8
NVAR S SKSac 23 13 34.1 -0.3
comp=Z,0.2nm,0.4s,baz=1.4,slow=26,SNR=1.1
comp=Z,25nm,1.0s
EDW2 Edwards Air Fo 92.24 55 P P 23 03 28.3 +0.5
baz=267,SNR=16
CWC Cottonwood Cre 92.25 54 P P 23 03 28.3 +0.4
baz=267
NGCH Negor - Chabah 92.34 295 P P 23 03 29.0 +0.6
BFSC Mount Baldy Ra 92.48 56 P P 23 03 29.3 +0.3
baz=267,SNR=11
LRMC Laurel Mtn Rad 92.52 55 P P 23 03 29.9 +0.7
baz=267,SNR=9.8
MPMC Manual Prospec 92.71 54 P P 23 03 30.7 +0.6
baz=267,SNR=46
MURC Murrieta 92.83 57 P P 23 03 31.1 +0.6
baz=267,SNR=8.3
GRAC Grapevine Rang 92.85 53 P P 23 03 31.1 +0.5
baz=267
109C Camp Elliot, M 92.87 57 P P 23 03 31.5 +0.9
109C lAmb lAmb 23 03 33.0
comp=Z,79nm,1.1s
109C Camp Elliot, M 92.87 57 P P 23 03 31.9 +1.2
baz=267,SNR=6.9
TPH Tonopah 93.01 52 P P 23 03 31.9 +0.4
TPH Tonopah 93.01 52 P P 23 03 31.9 +0.4
TPH pmax pmax
comp=Z,281nm,1.3s
RRX Edison Barstow 93.05 55 P P 23 03 32.3 +0.9
baz=268
BBRC Big Bear Solar 93.09 56 P P 23 03 32.3 +0.3
baz=268
CBX Cerro Bola 93.22 58 P P 23 03 33.5 +1.0
CBX lAmb lAmb 23 03 35.6
comp=Z,61nm,1.2s
BMO Blue Mountains 93.23 45 P P 23 03 31.7 -0.4
BMO lAmb lAmb 23 04 46.5
comp=Z,51nm,1.3s
BMO Blue Mountains 93.23 45 P P 23 03 31.7 -0.4
BMO pmax pmax
comp=Z,51nm,1.3s
GSC Goldstone, Bar 93.23 55 P P 23 03 32.9 +0.5
baz=268,SNR=22
FURC Furnace Creek, 93.23 54 P P 23 03 33.2 +1.0
baz=268,SNR=14
PFO Pinyon Flats O 93.45 57 P P 23 03 34.0 +0.6
PFO lAmb lAmb 23 03 35.4
comp=Z,55nm,1.1s
PFO Pinyon Flats O 93.45 57 P P 23 03 34.2 +0.8
baz=268,SNR=14
PFO Pinyon Flats O 93.45 57 *c i* P P 23 03 33.6 +0.1
PFO pmax pmax
comp=Z,73nm,1.0s
MONP2 Monument Peak 93.45 57 P P 23 03 34.6 +1.0
baz=268,SNR=31
TPFO Pinon Flats 93.45 57 P P 23 03 34.3 +0.8
baz=268,SNR=14
NEW Newport 93.47 42 P P 23 03 33.3 +0.2
NEW Newport 93.47 42 P P 23 03 33.3 +0.2
baz=268,SNR=14
NEW Newport 93.47 42 P P 23 03 33.3 +0.2
NEW pmax pmax
comp=Z,42nm,1.3s
NEW Newport 93.47 42 S SKSac 23 13 42.2 +1.5
comp=Z,0.5nm,0.5s,baz=57,slow=22,SNR=6.0
BRLDA Berland Lookou 93.48 36 P P 23 03 33.7 +0.6
BRLDA lAmb lAmb 23 03 37.0
comp=Z,63nm,0.8s
HEC Hector,Ludlow 93.60 55 P P 23 03 34.5 +0.4
baz=268,SNR=9.9
IKP In-Ko-Pah, Jac 93.70 58 P P 23 03 35.6 +1.0
baz=268,SNR=9.1
TPNV Topopah Spring 93.74 53 P P 23 03 35.5 +0.7
baz=268
JLN Jalan Bani Buh 93.76 292 P P 23 03 34.4 -0.5
SNR=6.6
BELC Belle Mtn. Jos 93.84 56 P P 23 03 35.9 +0.7
baz=268,SNR=31
SVE Sverdlovsk 93.89 327 *c i* P P 23 03 33.7 -1.1
SVE *e* S SKSac 23 13 40.4 -2.1
SVE pmax pmax
comp=Z,91nm,1.3s
TUQ Turquoise Moun 93.95 55 P P 23 03 36.1 +0.3
baz=268,SNR=5.2
SWSC Sam W. Stewart 93.97 57 P P 23 03 36.4 +0.7
baz=268,SNR=16
GMRC Granite Mounta 94.15 56 P P 23 03 37.4 +0.7
baz=268,SNR=40
ABKAR Akbulak array 94.18 319 P P 23 03 34.2 -2.0
ABKAR lAmb lAmb 23 03 35.8
comp=Z,53nm,1.0s
ABKAR Akbulak array 94.18 319 P P 23 03 34.4 -1.9
WBK Wadi Bani Khal 94.18 292 P P 23 03 36.7 -0.2
SNR=7.5
BC3 Big Chuckawall 94.29 57 P P 23 03 38.4 +1.2
baz=268,SNR=29
R11B Troy Canyon, C 94.31 52 P P 23 03 37.5 +0.1
R11B lAmb lAmb 23 03 40.0
comp=Z,42nm,1.4s
R11B Troy Canyon, C 94.31 52 P P 23 03 37.8 +0.4
baz=268,SNR=34
WSAR Wadi Sarin 94.52 293 P P 23 03 38.3 -0.1
SNR=5.7
IRM Iron Mountain 94.56 56 P P 23 03 39.4 +1.0
baz=268,SNR=49
ELK Elko 94.63 50 P P 23 03 38.3 -0.6
ELK lAmb lAmb 23 03 41.6
comp=Z,43nm,1.6s
ELK Elko 94.63 50 P P 23 03 38.3 -0.6
ELK pmax pmax
comp=Z,43nm,1.6s
ELK Elko 94.63 50 S SKSac 23 13 49.6 +1.9
comp=Z,0.4nm,0.4s,baz=270,slow=20,SNR=1.2
GLA Glamis 94.79 57 P P 23 03 40.5 +1.0
baz=269
JMDO Jabal Madar 94.98 292 P P 23 03 39.6 -1.0
SNR=5.2
YKA Yellowknife Ar 94.99 28 P P 23 03 39.3 -0.3
YKA Yellowknife Ar 94.99 28 P P 23 03 39.9 +0.2
comp=Z,6.3nm,0.7s,baz=272,slow=4.8,SNR=106
YKA pP pP 23 04 46.1 +0.6
comp=Z,6.2nm,1.1s,baz=270,slow=4.7,SNR=4.0
YKA PKiKP PKiKP 23 08 20.3 +0.7
comp=Z,0.7nm,0.8s,baz=295,slow=2.4,SNR=3.5
YKA S SKSac 23 13 47.9 -0.1
comp=Z,0.9nm,1.0s,baz=277,slow=5.6,SNR=3.9
YKA PKKPbc PKKPdf 23 20 33.2 -2.4
comp=Z,1.4nm,0.8s,baz=92,slow=2.9,SNR=15
comp=Z,6.3nm,0.7s
BIDO Bidbid 95.00 293 P P 23 03 40.3 -0.2
SNR=13
NEE2 Needles Airpor 95.01 56 P P 23 03 41.2 +0.8
baz=269,SNR=6.8
ARU Arti 95.04 326 P P 23 03 38.2 -1.8
ARU Arti 95.04 326 *d i* P P 23 03 38.1 -1.9
ARU 23 07 31.3
ARU S SKSac 23 13 46.9 -1.7
ARU SP SP 23 15 46.2 -2.3
ARU pmax pmax
comp=Z,136nm,1.1s
MHTO MHTO 95.05 291 P P 23 03 40.0 -0.8
SNR=19
SMDO Samad 95.05 293 P P 23 03 40.2 -0.8
SNR=5.0
HLID Hailey 95.28 47 P P 23 03 41.9 +0.2
baz=270,SNR=11
JASK Jask - Hormozg 95.31 296 P P 23 03 42.7 +0.7
SNR=5.3
GEYT Alibeck 95.34 308 P P 23 03 40.9 -1.0
GEYT lAmb lAmb 23 03 42.7
comp=Z,26nm,0.9s
GEYT Alibeck 95.34 308 P P 23 03 40.9 -1.0

GEYT pmax pmax
comp=Z,26nm,1.0s
GEYT Alibeck 95.34 308 P **P** **23 03 41.7 -0.3**
comp=Z,17nm,0.8s,baz=103,slow=4.6,SNR=46
GEYT PP **PP** **23 07 37.8 +1.4**
comp=Z,15nm,1.1s,baz=94,slow=5.9,SNR=8.1
GEYT S **SKSac** **23 13 50.5 -0.7**
comp=Z,1.0nm,0.7s,baz=225,slow=57,SNR=1.5
comp=Z,17nm,0.8s
GYA0B ALIBECK ARRAY 95.34 308 P **P** **23 03 41.0 -0.9**
PDMCI Parker Dam,Lak 95.39 56 P **P** **23 03 43.2 +1.1**
baz=269,SNR=13
DQM DQM 95.41 290 P **P** **23 03 41.1 -1.4**
W13A Hualapai Mount 95.61 55 P **P** **23 03 43.9 +0.4**
W13A IAmb IAmb 23 03 45.6
comp=Z,45nm,1.2s
BSY Bisya 95.82 292 P **P** **23 03 43.2 -1.2**
EDM Edmonton 95.89 37 P **P** **23 03 44.8 +0.8**
EDM IAmb IAmb 23 03 45.8
comp=Z,71nm,1.3s
EDM Edmonton 95.89 37 P **P** **23 03 44.8 +0.8**
EDM pmax pmax
comp=Z,71nm,1.3s
MSEY Mahe Island 96.10 265 P **P** **23 03 44.8 -1.1**
MSEY Mahe Island 96.10 265 P **P** **23 03 44.8 -1.1**
MSEY Mahe Island 96.10 265 P **P** **23 03 44.8 -1.1**
MSEY pmax pmax
comp=Z,14nm,0.9s
MSEY Mahe Island 96.10 265 P **P** **23 03 44.9 -1.1**
LCMT Little Creek M 96.15 53 P **P** **23 03 46.0 +0.2**
LCMT IAmb IAmb 23 03 47.9
comp=Z,42nm,1.3s
ARQ Araqi 96.46 293 P **P** **23 03 46.4 -0.9**
SNR=11
SOHO SOHO 96.47 294 *i* P **P** **23 03 46.0 -1.3**
SNR=27
SOHO SOHO 96.47 294 P **P** **23 03 46.3 -1.0**
214A Organ Pipe Nat 96.48 58 P **P** **23 03 48.3 +1.1**
baz=270
DUG Dugway, Tooele 96.48 50 P **P** **23 03 47.5 +0.3**
baz=270
MDH Madha 96.71 295 P **P** **23 03 47.5 -0.8**
MDH Madha 96.71 295 P **P** **23 03 47.0 -1.4**
BANOM Banah 96.72 296 P **P** **23 03 48.3 -0.1**
UOSS Minazif 96.79 295 P **P** **23 03 46.8 -1.9**
UOSS IAmb IAmb 23 03 48.3
comp=Z,79nm,1.4s
UOSS Minazif 96.79 295 *i* P **P** **23 03 47.1 -1.6**
SNR=6.0
UOSS Minazif 96.79 295 P **P** **23 03 47.6 -1.1**
MASF Masafi 96.84 295 P **P** **23 03 48.2 -0.7**
SNR=5.8
MSFE Esma-Masafi 96.84 295 *i* P **P** **23 03 48.2 -0.8**
SNR=14
HATD Hatta, Dubai 96.85 294 *i* P **P** **23 03 48.1 -0.9**
SNR=6.4
HATD Hatta, Dubai 96.85 294 P **P** **23 03 48.1 -0.9**
SHME Shamm 96.86 296 *i* P **P** **23 03 48.5 -0.5**
SNR=7.3
SHME Shamm 96.86 296 P **P** **23 03 48.9 -0.1**
ASHO Ashiyiah 96.92 294 *i* P **P** **23 03 48.7 -0.6**
SNR=8.2
ASHO Ashiyiah 96.92 294 P **P** **23 03 48.5 -0.8**
SHAO Shalim 97.16 288 P **P** **23 03 49.6 -1.0**
SHAO Shalim 97.16 288 P **P** **23 03 49.5 -1.0**
ALNE Al Ain 97.19 294 *i* P **P** **23 03 50.0 -0.5**
SNR=16
ALNE Al Ain 97.19 294 P **P** **23 03 49.7 -0.8**
SNR=8.2
BOZ Bozeman (W) 97.24 45 P Pdif 23 03 51.1 +0.6
baz=272,SNR=6.4
NAZ Nazwa, Dubai 97.28 295 P **P** **23 03 49.2 -1.7**
NAZ Nazwa, Dubai 97.28 295 P **P** **23 03 49.9 -1.0**
UMQ Umm Al-Quwin 97.29 295 P **P** **23 03 49.9 -1.0**
FAQ Al Faqa, Dubai 97.34 294 P **P** **23 03 49.8 -1.4**
FAQ Al Faqa, Dubai 97.34 294 P **P** **23 03 50.4 -0.8**
ELIB Princess Elisa 97.52 194 *d* P Pdif 23 03 51.2 +0.1
comp=Z,5.9nm,0.8s
ASUD Al Ashush, Dub 97.58 294 *i* P Pdif 23 03 53.0 +0.7
SNR=7.3
ASUD Al Ashush, Dub 97.58 294 P **P** **23 03 51.8 -0.4**
WUAZ Wupatki 97.67 55 Pdiff Pdif 23 03 53.6 +0.9
baz=271
UMZA Um Al Zommool 97.70 292 P **P** **23 03 51.5 -1.3**
DMTO DMTO 97.80 287 P **P** **23 03 52.2 -1.1**
YFT Old Faithful 97.84 46 P Pdif 23 03 53.9 +0.6
REDW Red Top Meadow 97.87 47 P **P** **23 03 53.4 -0.1**
AJN Ajban 97.89 294 P **P** **23 03 52.4 -1.2**
H17A Grant Village 98.03 46 Pdiff Pdif 23 03 55.0 +0.8
baz=272
HSIG 98.08 61 P Pdif 23 03 55.1 +0.7
TUC Tucson 98.20 58 P Pdif 23 03 56.0 +1.0
TUC Tucson 98.20 58 Pdiff Pdif 23 03 55.3 +0.4
baz=271
TUC Tucson 98.20 58 P Pdif 23 03 56.0 +1.0
TUC pmax pmax
comp=Z,14nm,1.5s
BELA Belgrano 2 98.31 179 P **P** **23 03 54.2 -0.2**
EGMT Eagleton 98.41 42 Pdiff **P** **23 03 55.8 +0.2**
baz=274
RBK Rabkut 98.50 287 P Pdif 23 03 55.7 -0.8
SNR=14
DOK Doka 98.60 288 P Pdif 23 03 55.5 -1.4
SNR=16
BW06 Boulder Array 98.85 47 Pdiff Pdif 23 03 57.5 -0.3
baz=273
PDAR Pinedale Array 98.85 47 P Pdif 23 03 57.2 -0.6
comp=Z,4.9nm,0.9s,baz=255,slow=2.9,SNR=34
PDAR S **SKSac** **23 14 09.9 +0.6**
comp=Z,0.2nm,0.6s,baz=100,slow=41,SNR=1.5
PDAR PKKPbc **PKKPbc** **23 20 23.5 -2.3**
comp=Z,1.6nm,0.9s,baz=113,slow=4.5,SNR=7.0
comp=Z,4.9nm,0.9s
MZWR Madinat Zayed 98.89 293 P Pdif 23 03 57.3 -0.8
WHFO Wadi Hawf 98.92 287 P Pdif 23 03 57.0 -1.4
SNR=10
RLMT Red Lodge 98.92 45 Pdiff **P** **23 03 58.9 +0.7**
baz=274
W18A Petrified Fore 99.02 55 Pdiff **Pdif** **23 03 59.8 +1.1**
baz=272
ABTO Aybut 99.36 287 P **Pdif** **23 03 59.3 -1.1**
SNR=13
KIRV Kirov 99.78 329 *ce* P **Pdif** **23 04 00.1 -1.1**
GHWR Ruwais 99.81 294 P **Pdif** **23 04 01.5 -0.7**
JRN Qarnain Island 99.83 295 P **Pdif** **23 04 01.3 -0.9**
MVCO Mesa Verde 99.94 53 Pdiff **Pdif** **23 04 03.3 +0.5**
baz=273
O20A White River Ci 99.98 50 Pdiff **Pdif** **23 04 03.4 +0.6**
baz=273
121A Cookes Peak, D 100.73 58 Pdiff **Pdif** **23 04 07.2 +0.9**
baz=272
SLWR Sila 100.89 294 P **Pdif** **23 04 07.4 +0.4**
LAO LASA Array 100.91 43 Pdiff **Pdif** **23 04 07.3 +0.6**
baz=276
K22A Casper 101.09 47 Pdiff **Pdif** **23 04 07.8 +0.1**
baz=275
S22A 4UR Ranch, Cre 101.23 52 Pdiff **Pdif** **23 04 09.2 +0.6**
baz=274
TRNA Turayna 101.32 294 P **Pdif** **23 04 07.9 -1.0**
SHMA Al-Shehemyia 101.53 295 P **Pdif** **23 04 08.7 -1.1**
N23A Red Feather La 101.67 49 Pdiff **Pdif** **23 04 11.4 +0.9**
baz=275
SMRA Abu-Samra 101.68 294 P **Pdif** **23 04 09.6 -0.8**
ANMO Albuquerque 101.71 55 Pdiff **Pdif** **23 04 11.8 +1.1**
baz=274
ANMO Albuquerque 101.71 55 *ce* P **Pdif** **23 04 11.6 +0.9**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
BELG Belogornoye 101.75 323 *d* P **Pdif** **23 04 08.1 -2.0**
BELG pmax pmax
comp=Z,12nm,1.0s
TROLL Troll, Antarti 101.75 189 ⇑Pdiff **Pdif** **23 04 09.5 -0.5**
comp=Z,368nm,0.8s
SAKB Bahrain 101.91 296 P **Pdif** **23 04 10.8 -0.7**
ISCO Idaho Springs 102.02 50 Pdiff **Pdif** **23 04 12.7 +0.6**
baz=275
DGMT Dagmar 102.06 41 Pdiff **Pdif** **23 04 12.6 +0.9**
baz=278
SPITS Spitsbergen Ar 102.24 352 PKKPbc PKKPbc 23 20 15.3 -1.8
comp=Z,19nm,0.9s,baz=152,slow=5.4,SNR=5.8
SDCO Great Sand Dun 102.28 52 Pdiff **Pdif** **23 04 13.9 +0.6**
baz=275
Q24A Divide 102.45 51 Pdiff **Pdif** **23 04 14.7 +0.7**
baz=275
VOI Vohitsoka 102.55 247 P **Pdif** **23 04 13.7 -0.9**
VOI Vohitsoka 102.55 247 P **Pdif** **23 04 13.4 -1.2**

RSSD Black Hills 102.74 46 Pdiff **Pdif** **23 04 15.2 +0.1**
baz=277
MNTX Cornudas Mount 102.81 59 Pdiff **Pdif** **23 04 15.7 +0.3**
baz=273
MAK Makhachkala 103.15 313 *i* P **Pdif** **23 04 13.3 -3.3**
MAK *e* 23 08 36.3
MAK *e*PPP PPP 23 10 44.0
MAK *e* 23 14 26.9
MAK *e*SSS SSS 23 26 56.6
MAK pmax pmax
comp=Z,56nm,0.7s
KLMR Klimovskoe 104.13 332 *e*P **Pdif** **23 04 17.5 -3.1**
KLMR pmax pmax
comp=Z,53nm,1.5s
APA Apatity 104.14 340 ⇓ *i* P **Pdif** **23 04 12.0 -8.4**
APA *i* 23 14 27.0
APA *i* 23 17 21.0
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,900nm,14.0s
TXAR Lajitas Array 104.43 61 Pdiff **Pdif** **23 04 24.1 +1.4**
comp=Z,0.1nm,0.3s,baz=294,slow=35,SNR=2.0
TXAR PKiKP **PKiKP** **23 08 38.5 +0.8**
comp=Z,2.1nm,1.1s,baz=200,slow=2.5,SNR=4.1
TXAR PKKPbc **PKKPbc** **23 20 08.1 -0.8**
comp=Z,2.2nm,0.7s,baz=113,slow=4.4,SNR=13
TXAR PKKP **PKKPdf** **23 20 18.4 +0.5**
comp=Z,0.9nm,0.6s,baz=116,slow=5.1,SNR=4.2
OGNE Ogallala 104.61 49 Pdiff **Pdif** **23 04 23.7 +0.4**
MSTX Muleshoe 104.82 56 Pdiff **Pdif** **23 04 25.1 +0.7**
baz=276
VRH Novokhopyorsk 105.58 322 *e*P **Pdif** **23 04 23.8 -3.4**
VRH pmax pmax
comp=Z,20nm,0.8s
ARCES ARCESS Array B 105.70 343 Pdiff **Pdif** **23 04 26.0 -1.4**
comp=Z,2.5nm,0.8s,baz=64,slow=5.7,SNR=7.7
ARCES PKiKP **PKiKP** **23 08 38.4 -0.4**
comp=Z,4.1nm,0.6s,baz=77,slow=1.3,SNR=25
ARCES PKKPbc **PKKPbc** **23 20 02.8 -3.7**
comp=Z,2.9nm,0.7s,baz=232,slow=3.5,SNR=16
ZEI Tsey 105.80 313 *e*P **Pdif** **23 04 24.2 -4.5**
ZEI pmax pmax
comp=Z,14nm,0.9s
KBZ Khabaz 106.36 314 Pdiff **Pdif** **23 04 30.1 -0.7**
comp=Z,5.5nm,0.9s,baz=152,slow=2.5,SNR=9.7
KIV Kislovodsk 106.47 315 *e*P **Pdif** **23 04 28.1 -3.4**
KIV *e* 23 08 56.9
KIV *e* 23 14 41.8
KIV *e*PS **PS** **23 18 18.9 -6.1**
KIV *e*SS SS 23 23 38.9 -2.4
KIV pmax pmax
comp=Z,10.0nm,1.1s
MOS Moscow 106.68 327 *e*P **Pdif** **23 04 29.8 -2.2**
MOS *e* 23 08 59.8
MOS *e* 23 15 31.1
MOS pmax pmax
comp=Z,57nm,1.1s
LPSR Galich'ya Gora 106.89 324 *e*P **Pdif** **23 04 30.0 -3.0**
LPSR pmax pmax
comp=Z,20nm,0.8s
VORR Voronezh 106.98 323 *e*P **Pdif** **23 04 30.0 -3.4**
VORR pmax pmax
comp=Z,20nm,0.4s
ULM Lac du Bonnet 107.04 38 Pdiff **Pdif** **23 04 34.1 +0.4**
comp=Z,1.0nm,0.6s,baz=294,slow=4.7,SNR=3.2
ULM PKKPab **PKKPab** **23 20 16.2 +0.2**
comp=Z,1.5nm,0.5s,baz=102,slow=4.8,SNR=9.4
VSR Storozhevoye 107.13 323 *e*P **Pdif** **23 04 30.5 -3.6**
VSR pmax pmax
comp=Z,8.0nm,0.8s
OBN Obninsk 107.45 327 *ce* P **Pdif** **23 04 34.7 -0.7**
OBN pmax pmax
comp=Z,53nm,1.4s
ERBR Yeremizino-Bor 107.64 317 *i* P **Pdif** **23 04 36.3 -0.2**
ERBR *e* 23 09 08.2
ERBR *e* 23 14 45.6
ERBR pmax pmax
comp=Z,31nm,1.3s
ERBR pmax pmax
comp=Z,34nm,1.0s
KSU1 Kansas State U 109.02 50 PKiKP **PKiKP** **23 08 45.8 0.0**
baz=281
WHTX Lake Whitney, 109.49 58 PKiKP **PKiKP** **23 08 46.9 0.0**
baz=278
FINES FINESS Array B 109.82 336 Pdiff **Pdif** **23 04 44.4 -1.4**
comp=Z,3.5nm,0.4s,baz=68,slow=4.9,SNR=69
FINES PKiKP **PKiKP** **23 08 46.9 +0.3**
comp=Z,6.0nm,0.7s,baz=100,slow=3.6,SNR=26
FINES PKKPbc **PKKPbc** **23 19 51.3 -2.1**
comp=Z,2.2nm,0.8s,baz=120,slow=2.8,SNR=9.9
FINES PKKPab **PKKPab** **23 20 03.5 0.0**
comp=Z,4.8nm,0.8s,baz=336,slow=4.2,SNR=7.1
ANN Anapa 109.95 316 *e*P **Pdif** **23 04 54.1 +7.3**
ANN *e* 23 09 24.9
ANN *e* 23 14 57.0
ANN *e*SP SP 23 18 24.5 -0.3
ANN *e*SS **SS** **23 24 29.5 +1.8**
TUL3 Leonard 110.24 53 PKiKP **PKiKP** **23 08 48.3 +0.1**
baz=280
SPMN Marine on St. 110.37 43 PKiKP **PKiKP** **23 08 48.8 +0.6**
baz=286
EYMN Ely 110.45 40 PKiKP **PKiKP** **23 08 49.1 +0.8**
baz=288
VSU Vasula 111.03 333 *e*P **Pdif** **23 04 49.9 -1.3**
NATX Nacogdoches 111.88 57 PKiKP **PKiKP** **23 08 51.7 +0.3**
baz=279
MTSE Matsula 112.22 334 *e*P **Pdif** **23 04 55.1 -1.4**
MIAR Mount Ida 112.28 54 PKiKP **PKiKP** **23 08 52.9 +0.8**
baz=281
MNK Minsk 112.32 329 *i* P **Pdif** **23 04 56.4 -0.7**
MNK *i* 23 09 40.7
MNK *i* PPP PPP 23 12 06.1
MNK *i* 23 15 37.0
MNK *i* SS SS 23 24 59.4 +1.0
MNK *i* SSS SSS 23 29 14.0
MNK MLR MLR
comp=E,111nm,19.0s
MNK MLR MLR
comp=Z,343nm,20.0s
MNK MLR MLR
comp=N,116nm,13.0s
JFWS Jewell Farm 112.79 45 PKiKP **PKiKP** **23 08 53.8 +1.0**
baz=287
AKASG Malin Array Be 113.21 324 *i* PKiKP **PKiKP** **23 08 53.0 -0.4**
AKASG Malin Array Be 113.21 324 Pdiff **Pdif** **23 05 00.1 -1.1**
comp=N,5.2nm,0.9s,baz=54,slow=3.8,SNR=8.5
AKASG PKiKP **PKiKP** **23 08 53.0 -0.4**
comp=N,4.2nm,0.5s,baz=52,slow=2.4,SNR=12
AKASG SKP 23 12 01.2
comp=N,1.3nm,0.6s,baz=68,slow=1.5,SNR=4.2
AKASG PKKPbc **PKKPbc** **23 19 39.3 -2.5**
comp=N,2.1nm,0.5s,baz=265,slow=3.4,SNR=4.7
KIEV Kiev 113.22 324 ⇓P **PKiKP** **23 08 53.3 -0.1**
KIEV Kiev 113.22 324 ⇓PKiKP **PKiKP** **23 08 53.3 -0.1**
CCM Cathedral Cave 113.35 50 PKiKP **PKiKP** **23 08 54.8 +0.8**
baz=284
FRB Frobisher Bay 113.40 18 PKiKP **PKiKP** **23 08 53.1 -0.2**
comp=N,4.4nm,0.6s,baz=331,slow=1.8,SNR=14
KIBK Kibwezi 113.63 266 P **PKiKP** **23 08 55.3 -0.1**
PABE Paberze 113.82 331 *e*P **Pdif** **23 05 03.0 -0.7**
BR131 Keskin Array S 114.02 312 P PKPdf 23 08 54.6 -0.9
BRTR Keskin Array B 114.02 312 Pdiff **Pdif** **23 05 04.0 -1.2**
comp=N,1.2nm,0.8s,baz=96,slow=5.0,SNR=6.3
BRTR PKiKP PKPdf 23 08 54.8 -0.7
comp=N,4.2nm,0.7s,baz=144,slow=2.3,SNR=21
BRTR PKKPbc **PKKPbc** **23 19 38.7 -0.2**
comp=N,1.3nm,0.8s,baz=202,slow=5.1,SNR=5.1
HDIL Hopedale 114.15 47 PKiKP **PKiKP** **23 08 56.3 +0.8**
baz=287
MMAI Mount Meron Ar 114.23 304 Pdiff **Pdif** **23 05 04.5 -1.7**
comp=N,1.3nm,0.6s,baz=89,slow=9.2,SNR=2.2
MMAI PKP PKPdf 23 08 55.3 -0.7
comp=N,3.8nm,0.7s,baz=67,slow=2.8,SNR=8.1
MMAI PKKPbc **PKKPbc** **23 19 37.7 -0.1**
comp=N,2.3nm,0.7s,baz=52,slow=1.4,SNR=4.5
PURM Purcari 114.44 320 ⇓P **PKiKP** **23 08 56.4 +0.6**
KMBO Kilima Mbogo 114.53 267 P PKPdf 23 08 57.3 -0.1
KMBO Kilima Mbogo 114.53 267 P **PKiKP** **23 08 57.7 +0.4**
ANTO Ankara 114.60 312 ⇑P **PKiKP** **23 08 56.7 +0.2**
ANTO Ankara 114.60 312 ⇑PKiKP **PKiKP** **23 08 56.7 +0.2**
ANTO Ankara 114.60 312 P PKPdf 23 08 56.5 0.0
L44A Lake County Fo 114.65 45 PKiKP **PKiKP** **23 08 57.5 +1.1**
baz=288

SORM Soroca 114.77 322 ⇓P **PKiKP** **23 08 55.9 -0.5**
SORM Soroca 114.77 322 ⇓PKiKP **PKiKP** **23 08 55.9 -0.5**
MILM Milestii Mici 114.97 321 *i* PKiKP **PKiKP** **23 08 56.0 -0.8**
comp=N,75nm,1.9s
MILM Milestii Mici 114.97 321 *i* PKiKP **PKiKP** **23 08 56.0 -0.8**
MILM pmax pmax
comp=Z,75nm,1.9s
SUW Suwalki 114.98 329 *e*P **Pdif** **23 05 08.9 -0.1**
SFJD Kangerlussuaq 115.05 10 PKP **PKiKP** **23 08 55.1 -1.3**
comp=Z,7.6nm,0.6s,baz=47,slow=0.5,SNR=8.3
HFS Hagfors 115.47 338 Pdiff **Pdif** **23 05 09.4 -1.6**
comp=Z,3.1nm,0.9s,baz=94,slow=9.2,SNR=5.2
HFS PKP **PKiKP** **23 08 56.5 -0.9**
comp=Z,4.5nm,0.5s,baz=77,slow=3.1,SNR=22
HFS PKKPbc **PKKPbc** **23 19 31.2 -3.3**
comp=Z,2.4nm,0.7s,baz=193,slow=5.9,SNR=5.0
TLCR 115.62 319 ⇑P **PKiKP** **23 08 58.3 +0.1**
TLCR 115.62 319 ⇑PKiKP **PKiKP** **23 08 58.3 +0.1**
OXF Oxford 115.64 53 PKiKP **PKiKP** **23 08 59.5 +0.9**
baz=284
NB2 NORSAR Subarra 115.72 340 PKPdf **PKPdf** **23 08 57.0 -1.0**
comp=Z,3.5nm,0.8s,baz=44,slow=1.9
NB2 SKPd 23 12 06.9
comp=Z,1.9nm,0.8s,baz=47,slow=1.9
NOA NORSAR Array B 115.72 340 PKP **PKPdf** **23 08 57.3 -0.6**
comp=Z,0.4nm,0.4s,baz=130,slow=12,SNR=16
NOA SKP 23 12 06.8
comp=Z,3.8nm,0.9s,baz=48,slow=1.8,SNR=4.9
SFIN Lafayette 115.80 47 PKiKP **PKiKP** **23 08 59.4 +0.7**
baz=288
NC602 NORSAR Array S 115.82 340 **PKPdf** **23 08 57.6 -0.5**
GLMI Grayling 115.99 41 PKiKP **PKiKP** **23 08 59.9 +1.0**
baz=292
CFR Carcaliu 116.07 319 ⇑P **PKPdf** **23 08 58.6 -0.4**
CFR Carcaliu 116.07 319 ⇑PKiKP **PKPdf** **23 08 58.6 -0.4**
GHRR 116.19 320 ⇑P **PKiKP** **23 08 59.9 +0.7**
WVT Waverly 116.48 51 PKiKP **PKiKP** **23 09 00.8 +0.7**
baz=286
TESR Tescani 116.49 321 ⇑P **PKPdf** **23 08 59.6 -0.3**
LVV L'vov 116.59 325 *e*PKiKP **PKiKP** **23 09 00.4 +0.5**
LVV *e* 23 10 1.2
LODK Lodwar 116.70 272 P **PKPdf** **23 09 00.5 -0.8**
VRI Vrincioaia 116.71 320 ⇑P **PKPdf** **23 08 59.7 -0.6**
VRI Vrincioaia 116.71 320 ⇑PKiKP **PKPdf** **23 08 59.7 -0.6**
BUR08 Bucovina Ar. S 116.90 323 **PKPdf** **23 09 01.3 +0.6**
BURAR Bucovina Array 116.90 323 ⇑P **PKPdf** **23 09 00.7 0.0**
BURAR Bucovina Array 116.90 323 ⇑PKiKP **PKPdf** **23 09 00.7 0.0**
WCI Wyandotte Cave 117.06 49 **PKPdf** **23 09 00.9 -0.3**
WCI Wyandotte Cave 117.06 49 PKiKP **PKiKP** **23 09 01.9 +0.7**
baz=288
WCI Wyandotte Cave 117.06 49 PKiKP **PKPdf** **23 09 00.9 -0.3**
BLEU Blekinge 117.13 334 *i* P **PKPdf** **23 08 59.3 -1.4**
STRU Stroemstad 117.16 338 *i* P **PKPdf** **23 08 59.6 -1.1**
NEHR Nehoiu 117.17 320 ⇓P **PKPdf** **23 09 00.7 -0.5**
L48A N Adams 117.17 44 **PKPdf** **23 09 01.3 0.0**
OZUR 117.21 321 ⇓P **PKPdf** **23 09 01.0 -0.3**
O48B Farmland 117.25 46 PKiKP **PKiKP** **23 09 02.4 +0.9**
baz=290
MLR Muntele Rosu 117.36 320 ⇓P **PKPdf** **23 09 01.5 -0.2**
MLR Muntele Rosu 117.36 320 ⇓PKiKP **PKPdf** **23 09 01.5 -0.2**
KWP Kalwaria Pacla 117.44 325 *e*PKP **PKiKP** **23 09 01.7 +0.1**
KWP Kalwaria Pacla 117.44 325 **PKPdf** **23 09 01.4 -0.1**
KWP Kalwaria Pacla 117.44 325 PKiKP **PKPdf** **23 09 01.4 -0.1**
DOPR Dopca 117.52 321 ⇑P **PKiKP** **23 09 02.2 +0.3**
BORU Boraas 117.52 337 *i* P **PKPdf** **23 09 00.9 -0.5**
AAM Ann Arbor 117.58 44 PKiKP **PKiKP** **23 09 03.0 +0.9**
baz=292
TJOU Tjoern 117.69 337 *i* P **PKPdf** **23 09 01.3 -0.4**
P49A Miami Univ. Ec 117.81 47 PKiKP **PKiKP** **23 09 03.2 +0.6**
baz=290
DEL Delary 117.85 335 *i* P **PKPdf** **23 09 02.0 -0.1**
LRAL Lakeview Retre 117.95 55 PKiKP **PKiKP** **23 09 03.4 +0.3**
baz=285
VOIR 117.96 320 ⇑P **PKiKP** **23 09 03.1 +0.3**
VOIR 117.96 320 ⇑PKiKP **PKiKP** **23 09 03.1 +0.3**
ONAU Onsala 118.02 337 *i* P **PKPdf** **23 09 00.7 -1.7**
KOLS Kolonicke sedl 118.03 325 *e*P **Pdif** **23 05 24.5 +1.8**
KOLS *e* 23 09 03.5
KOLS Kolonicke sedl 118.03 325 *e*PDIFF **Pdif** **23 05 24.5 +1.8**
KOLS Kolonicke sedl 118.03 325 *e*PKP **PKiKP** **23 09 03.5 +0.7**
ARR Arges 118.25 320 ⇓P **PKiKP** **23 09 04.1 +0.7**
BSD Bornholm Skovb 118.28 334 *i* P **PKPdf** **23 09 02.1 -0.8**
CJR Cluj-Napoca 118.30 322 ⇓P **PKPdf** **23 09 03.3 -0.1**
CJR Cluj-Napoca 118.30 322 ⇓PKiKP **PKPdf** **23 09 03.3 -0.1**
CBBR Cluj-Babes-Bol 118.30 322 ⇓P **PKPdf** **23 09 00.5 -2.8**
BRAL Brewton 118.36 57 PKiKP **PKiKP** **23 09 04.2 +0.3**
baz=284
STHS Stebnicka Huta 118.37 326 *e*PKiKP **PKPdf** **23 09 03.2 -0.2**
STHS Stebnicka Huta 118.37 326 *e*PKP **PKPdf** **23 09 03.2 -0.2**
HUMR Humele 118.39 319 ⇑P **PKPdf** **23 09 03.4 -0.1**
ELND Elena 118.45 318 ⇓P **PKiKP** **23 09 03.8 0.0**
BJUU Bjuv 118.47 335 *i* P **PKPdf** **23 09 02.4 -0.9**
CRVS Cervenica-Dubn 118.51 325 *e*P **Pdif** **23 05 25.4 +0.6**
CRVS *e* 23 09 04.2
CRVS Cervenica-Dubn 118.51 325 *e*PDIFF **Pdif** **23 05 25.4 +0.6**
CRVS Cervenica-Dubn 118.51 325 *e*PKP **PKiKP** **23 09 04.2 +0.5**
LUNU Lund 118.58 335 *i* P **PKPdf** **23 09 03.5 -0.1**
MARR Marisel-Cluj 118.61 322 ⇑P **PKPdf** **23 09 02.7 -1.4**
DRGR 118.80 323 ⇓P **PKPdf** **23 09 03.8 -0.6**
ACSO Alum Creek Sta 118.81 46 PKiKP **PKiKP** **23 09 05.1 +0.6**
baz=291
NIE Niedzica 118.89 326 *e*PKP **PKiKP** **23 09 05.2 +0.7**
SNART Snartemo 119.08 340 *i* P **PKPdf** **23 09 04.0 -0.4**
PLVB Pleven 119.10 318 ⇑P **PKiKP** **23 09 05.3 +0.3**
DEV Deva 119.11 322 ⇓P **PKiKP** **23 09 05.4 +0.5**
GZR Gura Zlata 119.41 321 ⇑P **PKPdf** **23 09 05.4 -0.2**
BOSA Boshof 119.49 234 PKP **PKPdf** **23 09 05.8 -0.5**
comp=Z,4.5nm,0.5s,baz=131,slow=2.9,SNR=14
BOSA pPKP **pPKPdf** **23 10 15.8 0.0**
comp=Z,4.1nm,0.7s,baz=125,slow=6.8,SNR=2.4
BOSA PKKPab **PKKPab** **23 19 21.3 -0.6**
comp=Z,8.2nm,1.2s,baz=288,slow=6.2,SNR=3.0
LANS Liptovska Anna 119.50 326 *e*PKiKP **PKiKP** **23 09 06.7 +1.0**
LANS Liptovska Anna 119.50 326 *e*PKP **PKiKP** **23 09 06.7 +1.0**
P52A Corning 119.64 46 PKPdf **PKPdf** **23 09 05.8 -0.3**
P52A Corning 119.64 46 PKiKP **PKiKP** **23 09 06.7 +0.5**
baz=292
SURR Surduc 119.65 322 ⇑P **PKPdf** **23 09 05.4 -0.5**
TZTN Tazewell 119.66 50 PKiKP **PKiKP** **23 09 06.9 +0.5**
baz=289
BAIL Bailesti 119.67 320 ⇑P **PKiKP** **23 09 06.7 +0.7**
SIRR Siria 119.69 322 ⇑P **PKiKP** **23 09 06.4 +0.3**
OKC Ostrava-Krasne 119.85 327 *e*PKPDF **PKiKP** **23 09 06.6 +0.3**
OKC Ostrava-Krasne 119.85 327 *e*PKiKP **PKiKP** **23 09 06.6 +0.3**
HERR Herculane 119.87 321 ⇓P **PKiKP** **23 09 06.2 -0.2**
PSZ Piszkesteto 119.91 325 ⇓P **PKPdf** **23 09 06.5 0.0**
PSZ Piszkesteto 119.91 325 **PKPdf** **23 09 06.1 -0.3**
PSZ Piszkesteto 119.91 325 ⇓PKiKP **PKPdf** **23 09 06.5 0.0**
M53A WI Miller and 119.97 44 PKiKP **PKiKP** **23 09 07.4 +0.7**
baz=294
BZS Buzias 120.03 322 ⇑P **PKiKP** **23 09 06.7 0.0**
BZS Buzias 120.03 322 ⇑PKiKP **PKiKP** **23 09 06.7 0.0**
O53A New Philadelph 120.06 45 PKiKP **PKiKP** **23 09 07.6 +0.6**
baz=293
ERPA Erie 120.16 43 PKiKP **PKiKP** **23 09 07.8 +0.7**
baz=295
MORC Moravsky Berou 120.20 328 ⇓P **PKiKP** **23 09 07.5 +0.4**
MORC Moravsky Berou 120.20 328 **PKPdf** **23 09 06.8 -0.2**
MORC Moravsky Berou 120.20 328 *e*PKP **PKiKP** **23 09 07.4 +0.4**
MORC *e* 23 12 16.9
MORC Moravsky Berou 120.20 328 ⇓PKiKP **PKiKP** **23 09 07.5 +0.4**
KSP Ksiaz 120.24 329 *e*PKP **PKiKP** **23 09 07.1 +0.1**
BLKB Belogradchik 120.28 319 ⇓P **PKiKP** **23 09 07.4 0.0**
MAUC Maruska 120.28 327 *e*PKPDF **PKiKP** **23 09 07.8 +0.6**
SCHQ Schefferville 120.29 25 **PKiKP** **23 09 07.3 +0.3**
SCHQ Schefferville 120.29 25 PKP **PKiKP** **23 09 07.4 +0.4**
comp=Z,6.1nm,0.7s,baz=311,slow=2.5,SNR=13
SCHQ PKKPbc **PKKPbc** **23 19 15.4 -1.8**
comp=Z,3.0nm,0.6s,baz=98,slow=2.5,SNR=7.1
MDVR Moldovita 120.36 321 ⇑P **PKiKP** **23 09 07.5 0.0**
KRLC Kraliky 120.44 328 *e*PKPDF **PKiKP** **23 09 07.7 +0.2**
KRLC Kraliky 120.44 328 *e*PKiKP **PKiKP** **23 09 07.7 +0.2**
RUE Ruedersdorf 120.47 332 *e*PKPdf **PKiKP** **23 09 08.0 +0.6**
baz=49,slow=2.0
CHVC Chvalec 120.52 329 *e*PKPDF **PKiKP** **23 09 07.9 +0.3**
CHVC Chvalec 120.52 329 *e*PKiKP **PKiKP** **23 09 07.9 +0.3**
DPC Dobruska-Polom 120.52 329 *e*PKPDF **PKiKP** **23 09 08.1 +0.5**
DPC *e*PP **PP** **23 10 32.2 -5.9**
DPC Dobruska-Polom 120.52 329 *e*PKiKP **PKiKP** **23 09 08.1 +0.5**
LBTB Lobatse 120.55 238 **PKPdf** **23 09 07.8 -0.6**
LBTB Lobatse 120.55 238 PKiKP **PKPdf** **23 09 07.9 -0.6**
UPC Upice 120.58 329 *e*PKPDF **PKiKP** **23 09 07.9 +0.2**
UPC Upice 120.58 329 *e*PKiKP **PKiKP** **23 09 07.9 +0.2**

JAVC Velka Javorina 120.65 327 ePKP PKiKP 23 09 09.3 +1.3
JAVC e 23 12 18.6
GOGA Godfrey 120.69 53 PKiKP PKiKP 23 09 08.9 +0.5
baz=287
BOVS Bovan 120.90 320 ⇑P PKPdf 23 09 07.4 -1.0
VRAC Vranov 120.98 328 ⇓P PKiKP 23 09 08.8 +0.3
VRAC Vranov 120.98 328 ePKP PKiKP 23 09 08.8 +0.3
VRAC e 23 12 18.0
VRAC Vranov 120.98 328 ⇓PKIKP PKiKP 23 09 08.8 +0.3
MBAR Mbarara 121.06 267 PKiKP PKPdf 23 09 09.4 -0.4
MBAR Mbarara 121.06 267 c iPKIKP PKiKP 23 09 10.6 +0.7
MBAR pmax pmax
comp=Z,16nm,1.0s
MBAR Mbarara 121.06 267 P PKiKP 23 09 10.2 +0.3
PLCA Paso Flores 121.06 143 PKiKP 23 09 09.2 +0.1
PLCA Paso Flores 121.06 143 PKP PKiKP 23 09 09.4 +0.3
comp=Z,3.7nm,0.5s,baz=238,slow=1.7,SNR=31
PLCA SKP 23 12 19.9
comp=Z,22nm,1.0s,baz=220,slow=4.1,SNR=14
PLCA PKKPbc PKKPbc 23 19 13.2 -0.8
comp=Z,10nm,0.8s,baz=53,slow=4.7,SNR=29
MODS Modra-Piesok 121.14 326 ePKIKP PKiKP 23 09 09.4 +0.5
MODS Modra-Piesok 121.14 326 ePKP PKiKP 23 09 09.4 +0.5
TIGA Tifton 121.16 55 PKiKP PKiKP 23 09 09.8 +0.4
baz=286
LSZ Lusaka 121.16 250 PKPdf 23 09 09.1 -0.7
LSZ Lusaka 121.16 250 PKIKP PKPdf 23 09 09.1 -0.7
LSZ Lusaka 121.16 250 P PKiKP 23 09 10.0 0.0
SANT Santorini 121.19 311 ⇑P PKiKP 23 09 09.8 +0.4
KRUC Moravsky 121.23 327 ePKP PKiKP 23 09 09.2 +0.2
KRUC e 23 12 18.3
MCWV Mont Chateau 121.26 45 PKiKP PKiKP 23 09 09.9 +0.5
baz=294
PVCC Panska Ves 121.31 330 ePKPDF PKiKP 23 09 09.4 +0.3
PVCC Panska Ves 121.31 330 ePKIKP PKiKP 23 09 09.4 +0.3
SUR Sutherland 121.31 228 PKP PKPdf 23 09 09.8 -0.1
comp=Z,5.1nm,0.6s,baz=149,slow=5.9,SNR=6.2
ZST Bratislava 121.33 326 ePKIKP PKiKP 23 09 09.2 0.0
ZST Bratislava 121.33 326 ePKP PKiKP 23 09 09.2 0.0
FRGS Fruska Gora 121.36 322 ⇓P PKPdf 23 09 09.0 -0.3
FRGS Fruska Gora 121.36 322 eP PKPdf 23 09 08.1 -1.2
BRG Berggiesshubel 121.41 330 i PKP PKiKP 23 09 09.7 +0.4
BRG Amp 23 09 11.3
comp=Z,19nm,1.0s
BRG Berggiesshubel 121.41 330 P PKiKP 23 09 15.4 +6.2
BRG Amp 23 09 17.8
comp=Z,8.1nm,0.9s
BRG Berggiesshubel 121.41 330 SS SS 23 27 01.0 +5.1
BRG Amp 23 52 05.0
comp=Z,0.3nm,16.3s
BRG Amp 23 52 08.0
comp=N,0.5nm,18.6s
BRG Amp 23 52 20.0
comp=E,0.4nm,19.9s
BRG Berggiesshubel 121.41 330 i PKIKP PKiKP 23 09 09.6 +0.4
BRG 23 10 51.3
BRG 23 15 42.6
BRG pmax pmax
comp=Z,19nm,1.0s
BRG Berggiesshubel 121.41 330 ePKPdf PKiKP 23 09 09.7 +0.4
baz=49,slow=2.0
MORH Mrgy, Hungar 121.52 324 ⇓P PKPdf 23 09 09.2 -0.3
GOPC GO Pecny, Ondr 121.57 329 ePKPDF PKiKP 23 09 09.9 +0.2
GOPC GO Pecny, Ondr 121.57 329 ePKIKP PKiKP 23 09 09.9 +0.2
TREC Trest 121.58 328 ePKPDF PKiKP 23 09 10.0 +0.3
TREC Trest 121.58 328 ePKIKP PKiKP 23 09 10.0 +0.3
CLL Collm 121.59 331 PKPdf 23 09 09.5 -0.1
CLL Collm 121.59 331 ⇓iPKIKP PKPdf 23 09 09.4 -0.1
CLL e 23 10 19.0
CLL pmax pmax
comp=Z,19nm,0.9s
CLL Collm 121.59 331 ePdif Pdif 23 05 38.0 -0.5
CLL ⇓iPKPdf PKPdf 23 09 09.4 -0.1
comp=Z,19nm,0.9s
CLL i x x 23 09 19.0
CLL epPKPdf pPKPdf 23 10 19.0 +0.5
CLL ePP PP 23 10 47.0 +1.8
CLL ex x 23 12 04.0
CLL eSKPdf SKiKP 23 12 19.0 +0.1
comp=Z,14nm,1.0s
CLL esPPP 23 14 54.0
CLL eSKKSac SKKSac 23 17 06.0 -10
CLL ePKKPbc PKKPab 23 19 10.0 -1.6
CLL ex x 23 20 22.0
CLL ePS PS 23 20 42.0 -0.5
CLL ePPS PPS 23 21 58.0
CLL esPPS 23 23 31.0
CLL eSS SS 23 26 57.0 -1.2
CLL esSS 23 28 37.0
CLL ex x 23 30 12.0
CLL eSSS SSS 23 31 24.0
CLL eSSSS 23 34 54.0
CLL AMS AMS 00 02 00.0
comp=Z,300nm,19.1s
PRU Pruhonice 121.65 329 ePKPDF PKiKP 23 09 09.9 +0.1
PRU Pruhonice 121.65 329 ePKIKP PKiKP 23 09 09.9 +0.1
FLTG Flechtingen 121.75 333 ePKPdf PKiKP 23 09 10.2 +0.3
baz=49,slow=2.0
BLA Blacksburg 121.78 48 PKiKP PKiKP 23 09 10.9 +0.4
baz=292
KMSC Kings Mountain 121.82 51 PKiKP PKiKP 23 09 11.0 +0.4
baz=290
HSKC Hora Svate Kat 121.83 330 ePKPDF PKiKP 23 09 10.4 +0.2
TEKS Tekeris 121.84 322 eP PKPdf 23 09 09.1 -1.1
RONA Rosalia, Austr 122.06 326 ePKP PKPdf 23 09 10.5 -0.1
comp=Z,3.2nm,0.5s,SNR=5.4
ASSE Asse, Remlinge 122.14 333 ePKPdf PKiKP 23 09 11.1 +0.5
baz=49,slow=2.0
NRDL Niedersach Rie 122.15 333 ePKPdf PKiKP 23 09 11.4 +0.8
baz=49,slow=2.0
CONA Conrad Observa 122.17 327 i PKP PKiKP 23 09 11.0 0.0
comp=Z,8.2nm,0.5s,SNR=7.9
SJES Sjenica 122.19 320 ⇑iP PKPdf 23 09 09.6 -1.4
SSPA Standing Stone 122.22 43 PKiKP 23 09 11.4 +0.2
SSPA Standing Stone 122.22 43 PKiKP PKiKP 23 09 11.7 +0.5
baz=296
NEUB Neuenburg 122.25 332 ePKPdf PKiKP 23 09 11.3 +0.4
baz=49,slow=2.0
BBLS Lazići 122.25 321 eP PKiKP 23 09 11.4 +0.1
RETH Rethem/Aller, 122.31 334 ePKPdf PKiKP 23 09 11.5 +0.6
baz=49,slow=2.0
RUDO Rudo 122.40 321 ⇑iP PKPdf 23 09 10.1 -1.2
FNA Florina 122.40 317 PKPdf 23 09 11.1 -0.4
FNA Florina 122.40 317 PKIKP PKPdf 23 09 11.1 -0.4
HAPS Han Pijesak,Bl 122.43 321 ⇑iP PKiKP 23 09 11.8 +0.1
TANN Tannenbergstha 122.43 330 ePKPdf PKiKP 23 09 11.8 +0.4
baz=49,slow=2.0
CLZ Clausthal 122.48 333 ePKPdf PKiKP 23 09 12.1 +0.7
baz=49,slow=2.0
LONY Lake Ozonia 122.48 38 PKiKP PKiKP 23 09 12.2 +0.5
baz=301
CKRC Cesky Krumlov 122.48 328 ePKPDF PKiKP 23 09 11.5 0.0
CKRC ex x 23 10 23.2
CKRC Cesky Krumlov 122.48 328 ePKIKP PKiKP 23 09 11.5 0.0
PLN Plauen 122.53 331 ePKPdf PKiKP 23 09 12.0 +0.4
baz=49,slow=2.0
KHC Kasperske Hory 122.67 329 PKiKP 23 09 12.2 +0.3
KHC Kasperske Hory 122.67 329 ePKPDF PKiKP 23 09 12.1 +0.2
KHC eSKP 23 12 20.5
KHC Kasperske Hory 122.67 329 ePKIKP PKiKP 23 09 12.1 +0.2
MOX Moxa 122.69 331 ePKPdf PKiKP 23 09 12.2 +0.3
baz=49,slow=2.0
ARSA Arzberg 122.75 326 ePKP PKPdf 23 09 11.6 -0.3
comp=Z,2.9nm,0.6s
BINY Binghamton 122.78 41 PKiKP PKiKP 23 09 13.0 +0.7
baz=298
GEC2 GERESS Array S 122.78 328 PKiKP 23 09 12.4 +0.2
GEC2 GERESS Array S 122.78 328 ePKPdf PKiKP 23 09 12.5 +0.2
baz=49,slow=2.0
GERES GERESS Array B 122.78 328 PKPdf 23 09 12.1 +0.1
GERES GERESS Array B 122.78 328 PKP PKPdf 23 09 11.7 -0.3
comp=Z,14nm,0.7s,baz=56,slow=2.3,SNR=69
GERES pPKP pPKPdf 23 10 22.3 +1.3
comp=Z,3.2nm,0.7s,baz=46,slow=3.9,SNR=2.6
GERES SKP 23 12 21.1
comp=Z,5.0nm,0.8s,baz=41,slow=4.3,SNR=5.1
GERES PKKPbc PKKPab 23 19 06.4 -0.2
comp=Z,0.9nm,0.7s,baz=259,slow=1.4,SNR=4.8
KALN Kalnik 122.85 325 i P PKPdf 23 09 11.6 -0.5
GTTG Gottingen 122.87 333 ePKPdf PKiKP 23 09 12.8 +0.6
baz=49,slow=2.0
MANZ Manzenberg 122.88 330 ePKPdf PKiKP 23 09 12.7 +0.4
baz=49,slow=2.0
MCD Coleburn Disti 122.95 344 eP PKPdf 23 09 11.6 -0.3

MOSL Moslavina 122.96 324 i P PKPdf 23 09 12.3 -0.1
ROTZ Rotzenmuhle 122.97 330 ePKPdf PKiKP 23 09 12.6 +0.1
baz=49,slow=2.0
FRNY Flat Rock 122.97 37 PKiKP 23 09 12.6 0.0
WET Wettzell 123.03 329 ePKPdf PKiKP 23 09 12.9 +0.3
baz=49,slow=2.0
LOBO Lobor 123.06 325 i P PKPdf 23 09 11.9 -0.6
MOA Molln 123.09 327 ePKP PKPdf 23 09 12.3 -0.2
comp=Z,4.3nm,0.7s
BLY Banja Luka 123.17 323 ⇑iP PKiKP 23 09 13.3 +0.3
A051A Mrakovica 123.20 323 ⇑iP PKPdf 23 09 12.8 -0.1
DRME Dracevica, Mon 123.22 319 ePKP PKPdf 23 09 11.1 -1.8
IBBN Ibbenburen 123.31 335 ePKPdf PKiKP 23 09 13.5 +0.6
baz=49,slow=2.0
LMQ La Malbaie 123.31 33 PKiKP 23 09 13.1 -0.1
UBBA Unterbreizbach 123.34 332 ePKPdf PKiKP 23 09 13.3 +0.3
baz=49,slow=2.0
SOKA Soboth 123.35 326 i PKP PKPdf 23 09 12.8 -0.3
comp=Z,4.5nm,0.6s,SNR=5.5
GOLS Golise 123.40 325 i PKPdf PKiKP 23 09 13.5 +0.1
NHSC New Hope 123.41 53 PKiKP PKiKP 23 09 14.5 +0.7
baz=290
MGRS Mrkonjic Grad 123.41 323 eP PKPdf 23 09 12.7 -0.5
GRA1 Grafenberg Arr 123.51 330 PKiKP 23 09 13.4 -0.1
GRF Grafenberg Arr 123.51 330 PKIKP PKiKP 23 09 13.4 -0.1
BIOA Bad Ischl, Aus 123.52 327 ePKP PKPdf 23 09 13.1 -0.3
comp=Z,1.5nm,0.4s,SNR=6.6
CRES Cresnjev 123.60 325 eP PKPdf 23 09 13.0 -0.5
LEGS Legarje 123.61 325 i PKPdf PKiKP 23 09 13.7 +0.1
CBN Corbin Frederi 123.61 46 PKiKP PKiKP 23 09 14.8 +0.8
baz=295
DBRK Dubrovnik 123.65 320 i P PKPdf 23 09 13.2 -0.5
A050A Klekovaca 123.71 323 eP PKPdf 23 09 12.7 -1.2
OBKA Obir 123.72 326 eP PKPdf 23 09 07.3 -6.6
KASTN Kahler Asten 123.81 333 ePKPdf PKiKP 23 09 14.7 +0.6
baz=49,slow=2.0
STON Ston 123.83 321 i P PKPdf 23 09 12.7 -1.3
STON Ston 123.83 321 ⇑iP PKPdf 23 09 12.1 -1.9
DWPF Disney Wildern 123.86 59 PKiKP PKiKP 23 09 15.5 +0.7
baz=286
RICI Ricice 123.86 322 i P PKPdf 23 09 13.7 -0.5
BOJS Bojanci 123.90 324 ⇑iP PKiKP 23 09 14.4 0.0
LJU Ljubljana 124.01 325 ePKPdf PKiKP 23 09 14.6 0.0
PLIT Plitvice 124.03 324 i P PKPdf 23 09 13.8 -0.6
KBA Koelnbreinsper 124.05 327 ePKP PKPdf 23 09 13.9 -0.7
comp=Z,2.6nm,0.4s
UDBI Udbina 124.14 323 i P PKPdf 23 09 14.5 -0.1
BUG Bochum--Univer 124.14 334 ePKPdf PKiKP 23 09 15.0 +0.3
baz=49,slow=2.0
MYKA Terra Mystica 124.16 326 ePKP PKPdf 23 09 14.1 -0.6
comp=Z,4.2nm,0.6s
INVG Invergeldie, C 124.17 344 eP PKPdf 23 09 13.4 -0.8
LESA Schwarzleotal 124.20 328 i PKP PKPdf 23 09 14.5 -0.2
comp=Z,11nm,0.5s
CEY Cerknica 124.24 325 ⇑iP PKPdf 23 09 14.6 -0.2
LBNH Lisbon 124.29 37 PKiKP PKiKP 23 09 16.2 +1.0
baz=303
LSTV Lastovo 124.39 321 i P PKPdf 23 09 14.4 -0.7
CNNC Cliffs of the 124.42 49 PKiKP PKiKP 23 09 16.3 +0.6
baz=293
BO02 Sierra Bellavi 124.45 137 PKiKP 23 09 16.0 0.0
TNS Taunus Mts 124.47 332 ePKPdf PKiKP 23 09 15.8 +0.4
baz=49,slow=2.0
MORI Morici 124.54 323 i P PKPdf 23 09 14.7 -0.7
MT01 Popeta 124.65 136 PKPdf 23 09 15.8 -0.1
CLUD Cludinico 124.68 327 PKPdf 23 09 15.0 -0.6
VIRC Vir 124.70 323 i P PKPdf 23 09 15.3 -0.4
ABTA Abfaltersbach 124.70 327 ePKP PKPdf 23 09 15.5 -0.2
comp=Z,8.6nm,0.6s,SNR=7.8
PAL Palisades 124.72 41 PKiKP PKiKP 23 09 16.8 +0.7
baz=300
L61B Northampton 124.78 39 PKiKP PKiKP 23 09 16.9 +0.7
baz=302
WATA Walderalm 124.84 328 ePKP PKPdf 23 09 15.9 -0.1
comp=Z,8.4nm,0.6s,SNR=8.6
WTTA Wattenberg 124.85 328 ePKP PKPdf 23 09 16.3 +0.2
comp=Z,9.5nm,0.4s,SNR=8.9
EKA Eskdalemuir Ar 124.86 343 PKP PKPdf 23 09 15.7 +0.1
comp=Z,6.2nm,0.4s,baz=14,slow=2.6,SNR=45
EKA PKKPbc PKKPab 23 18 57.0 -0.5
comp=Z,2.0nm,0.7s,baz=218,slow=4.0,SNR=5.4
AHRW Bad Neuenahr-A 124.87 333 ePKPdf PKiKP 23 09 16.6 +0.5
baz=49,slow=2.0
ESK Eskdalemuir 124.89 343 eP PKPdf 23 09 15.5 -0.2
STAL STALIGIAL 124.89 326 PKPdf 23 09 15.9 -0.1
EDMD Edmundbyers 124.93 342 eP PKPdf 23 09 15.9 +0.2
MOTA Moosalm 125.08 328 ePKP PKPdf 23 09 16.6 +0.1
comp=Z,15nm,0.6s,SNR=12
SQTA Sankt Quirin 125.11 328 ePKP PKPdf 23 09 16.5 0.0
comp=Z,9.7nm,0.6s,SNR=7.4
BRJN Brijuni 125.11 325 i P PKPdf 23 09 16.3 -0.1
STU Stuttgart 125.11 331 PKPdf 23 09 16.1 -0.3
STU Stuttgart 125.11 331 PKIKP PKPdf 23 09 16.1 -0.3
STU Stuttgart 125.11 331 ePKPdf PKiKP 23 09 17.0 +0.3
baz=49,slow=2.0
RETA Reutte 125.17 329 ePKP PKPdf 23 09 16.4 -0.1
comp=Z,3.5nm,0.4s,SNR=5.6
PKME Peaks-Kenny Pk 125.25 35 PKiKP PKiKP 23 09 18.0 +0.9
baz=306
BTNL Tetnell 125.26 334 dPcP PKiKP 23 09 17.1 +0.1
MEM Membach 125.30 334 dPKP PKiKP 23 09 17.0 0.0
UBR Ueberruh 125.38 329 ePKPdf PKPdf 23 09 17.0 0.0
baz=49,slow=2.0
MT13 San Alfonso 125.38 137 PKiKP 23 09 18.1 +0.2
PEL Peldehue 125.44 136 PKiKP 23 09 17.8 -0.2
PEL Peldehue 125.44 136 PKIKP PKiKP 23 09 17.8 -0.2
HRV Adam Dziewonsk 125.46 39 PKiKP PKiKP 23 09 18.5 +1.0
baz=303
BHOU Houvegnez 125.48 334 dPKP PKPdf 23 09 16.6 -0.4
FETA Feichten 125.49 328 ePKP PKiKP 23 09 17.6 -0.2
comp=Z,8.2nm,0.6s,SNR=8.1
KESW Keswick, Cumbr 125.49 342 eP PKiKP 23 09 17.5 +0.2
BSTI Sart Tilman 125.51 334 dPKP PKiKP 23 09 17.7 +0.3
BCLA Clavier 125.74 334 dPKP PKPdf 23 09 17.6 +0.1
VA03 San Esteban 125.75 135 PKPdf 23 09 18.3 +0.1
DAVA Damuels 125.75 329 ePKP PKiKP 23 09 18.2 -0.1
comp=Z,8.7nm,0.6s,SNR=6.0
BGES Gesves 125.86 334 dPKP PKPdf 23 09 16.9 -0.8
WLF Walferdange 125.92 333 PKiKP 23 09 18.4 +0.1
WLF Walferdange 125.92 333 dPKP PKiKP 23 09 18.4 +0.1
WLF Walferdange 125.92 333 PKP PKiKP 23 09 18.1 -0.1
WLF Walferdange 125.92 333 PKIKP PKiKP 23 09 18.4 +0.1
WLF Walferdange 125.92 333 ePKPdf PKiKP 23 09 18.9 +0.7
baz=49,slow=2.0
RCHB Rochefort 125.97 334 dPKP PKPdf 23 09 16.7 -1.2
BMRD Maredsous 126.06 335 dPKP PKiKP 23 09 19.4 +0.9
CO02 Combarbal 126.28 134 PKiKP 23 09 19.7 -0.1
DOU Dourbes 126.29 334 dPKP PKiKP 23 09 19.3 +0.3
ECH Echery 126.48 331 PKPdf 23 09 18.9 -0.1
ECH Echery 126.48 331 PKIKP PKPdf 23 09 18.9 -0.1
CO03 El Pedregal 126.70 133 PKPdf 23 09 20.1 +0.1
MCRA Macar, Loja 127.53 98 PKPdf 23 09 21.7 -0.3
CO01 Juntas del Tor 127.60 133 PKiKP 23 09 23.0 +0.4
WOL Wolverton 127.62 339 eP PKiKP 23 09 22.0 +0.4
LCO Las Campanas 127.66 131 PKiKP 23 09 23.1 +0.4
LCO Las Campanas 127.66 131 PKIKP PKiKP 23 09 23.1 +0.4
MCH1 Michaelchurch 127.66 341 eP PKiKP 23 09 21.6 -0.1
SWN1 Swindon 127.66 340 eP PKiKP 23 09 22.1 +0.4
SENIN Lac Senin/Sane 127.69 330 PKPdf 23 09 21.4 -0.2
AC05 El Transito 128.07 132 PKiKP 23 09 23.6 +0.2
ATAH Atahualpa 128.61 102 PKP PKiKP 23 09 26.1 +0.9
comp=Z,29nm,1.0s,baz=225,slow=1.4,SNR=14
NNA Nana 129.03 109 c iPKIKP PKiKP 23 09 26.8 +1.2
NNA pmax pmax
comp=Z,44nm,1.0s
NNA Nana 129.03 109 PKP PKiKP 23 09 25.4 -0.2
comp=Z,29nm,1.0s,baz=284,slow=4.2,SNR=4.4
NNA SKP 23 12 32.3
comp=Z,53nm,1.1s,baz=108,slow=5.2,SNR=5.7
PB14 IPOC Station P 130.07 127 PKiKP 23 09 27.5 -0.2
PB15 IPOC Station P 131.50 126 PKiKP 23 09 30.4 -0.2
LVC Limon Verde 132.23 125 PKP PKiKP 23 09 32.5 +0.3
comp=Z,7.0nm,0.5s,baz=267,slow=1.0,SNR=5.3
LVC SKPab SKPab 23 12 34.2 +1.4
comp=Z,102nm,1.0s,baz=225,slow=2.2,SNR=27
PB11 IPOC Station P 132.89 121 PKPdf 23 09 32.3 +0.1
KEST Kesra 133.11 317 PKhKP PKPpre 23 09 17.1
comp=Z,4.1nm,0.9s,baz=289,slow=2.0,SNR=4.6
KEST PKP PKiKP 23 09 33.5 +0.2
comp=Z,8.1nm,0.7s,baz=127,slow=1.8,SNR=14
KEST SKPab SKPbc 23 12 34.4 +0.6
comp=Z,64nm,0.9s,baz=319,slow=2.6,SNR=17
ROSC El Rosal 133.88 87 PKhKP PKPpre 23 09 32.3
comp=Z,37nm,0.7s,baz=135,slow=13,SNR=9.9

ROSC PKP PKiKP 23 09 36.0 +0.2
comp=Z,37nm,0.7s,baz=233,slow=5.1,SNR=7.3
ROSC SKP 23 12 41.6
comp=Z,73nm,0.8s,baz=135,slow=2.1,SNR=20
CZSB Cruzeiro do Su 134.01 105 PKPdf 23 09 34.1 -0.1
LPAZ La Paz 135.64 118 PKPdf 23 09 38.0 +0.1
LPAZ La Paz 135.64 118 PKIKP PKPdf 23 09 38.1 +0.1
SDV Santo Domingo 137.43 81 SKP 23 12 50.6
comp=Z,37nm,1.0s,baz=251,slow=2.5,SNR=15
PBRG Bragança 137.65 336 ePKPdf PKiKP 23 09 42.3 0.0
PGAV Gavieira, Arco 138.11 338 ePKPdf PKiKP 23 09 42.9 -0.4
ESDC Sonseca Array 138.18 332 PKhKP PKPpre 23 09 29.1
comp=Z,3.7nm,1.1s,baz=22,slow=3.5,SNR=9.2
ESDC SKPab SKPab 23 12 58.3 +0.4
comp=Z,3.4nm,0.8s,baz=40,slow=3.9,SNR=5.7
MVO Moncorvo 138.31 336 ePKPdf PKPdf 23 09 42.6 +1.1
PVRL Vila Real 138.49 337 ePKPdf PKiKP 23 09 43.7 -0.3
CPUP Villa Florida 138.75 138 PKhKP PKPpre 23 09 32.9
comp=Z,1.9nm,0.8s,baz=269,slow=6.5,SNR=3.4
CPUP PKP PKPdf 23 09 42.5 -0.1
comp=Z,7.7nm,0.9s,baz=243,slow=2.9,SNR=5.9
CPUP SKPbc SKPbc 23 12 52.5 +1.3
comp=Z,33nm,1.0s,baz=285,slow=2.1,SNR=11
PTO Porto 138.95 337 ePKPdf PKiKP 23 09 44.5 -0.4
MTE Manteigas 139.16 336 ePKPdf PKiKP 23 09 45.4 0.0
PCBR Castelo Branco 139.60 335 ePKPdf PKiKP 23 09 45.7 -0.6
ETMB Extrema 139.66 110 PKPdf PKPdf 23 09 44.0 -0.6
COI Coimbra 139.67 337 ePKPdf PKiKP 23 09 45.7 -0.7
OBIP Obispado Ponce 139.74 67 PKPdf 23 09 44.3 -0.3
PCAS Casmilo, Conde 139.84 336 ePKPdf PKPdf 23 09 45.1 +0.8
PMRV Marv??o 139.91 335 ePKPdf PKiKP 23 09 43.9 -0.5
PESTR Estremoz 140.47 335 ePKPdf PKiKP 23 09 47.9 -0.2
PMTG Montargil 140.56 335 ePKPdf PKPdf 23 09 42.8 -2.8
PBAR Barrancos 140.80 333 ePKPdf PKPdf 23 09 41.2 -4.8
EVO Evora 140.93 335 ePKPdf PKPdf 23 09 40.3 -6.0
PBEJ Beja 141.29 334 ePKPdf PKPdf 23 09 42.1 -4.8
ITAB Concordia 141.35 144 eP PKPdf 23 09 44.3 -3.1
PNCL Nicolau / Gran 141.50 335 ePKPdf PKPdf 23 09 43.0 -4.3
MESJ Messejana 141.59 334 ePKPdf PKPdf 23 09 43.1 -4.4
PCVE Castro Verde 141.69 334 ePKPdf PKPdf 23 09 43.2 -4.5
PVAQ Vaqueiros 141.74 333 ePKPdf PKPdf 23 09 43.9 -3.9
SIV San Ignacio 141.87 122 PKhKP PKPpre 23 09 43.3
comp=Z,14nm,0.7s,baz=230,slow=2.4,SNR=54
SIV SKPbc SKiKP 23 13 01.7 +0.5
comp=Z,91nm,1.1s,baz=224,slow=1.6,SNR=18
PBDV Barranco-do-Ve 141.97 334 ePKPdf PKPdf 23 09 45.5 -2.7
PTEO Sao Teotonio 142.06 335 ePKPdf PKPdf 23 09 45.3 -3.0
MORF Marmelete 142.23 334 ePKPdf PKPdf 23 09 45.3 -3.4
PFVI Vila Bisbo 142.45 334 ePKPdf PKPdf 23 09 46.8 -2.2
SAML Samuel 142.77 110 eP PKPdf 23 09 46.9 -3.3
BDQN Bodoquena, MS 142.92 132 eP PKPdf 23 09 47.3 -3.0
PCRV Puerto La Cruz 143.19 78 PKhKP PKPpre 23 09 46.4
comp=Z,80nm,0.5s,baz=328,slow=1.3,SNR=14
PTGB Pitanga 143.26 142 eP PKPbc 23 09 49.6 +0.9
PTLB Pontes e Lacer 143.77 123 PKPdf PKPab 23 09 49.9 +0.4
VILB Vilhena 144.00 118 PKPbc 23 09 50.8 -0.2
VILB Vilhena 144.00 118 eP PKPab 23 09 48.5 -2.0
H07N1 FLORES T-PHASE 144.21 4 ePKP PKPdf 23 09 52.7 +0.6
TRCB Terra Rica 144.28 139 PKPab 23 09 51.6 +0.2
TRCB Terra Rica 144.28 139 eP PKPab 23 09 49.0 -2.4
H07S1 FLORES T-PHASE 144.51 4 ePKP PKiKP 23 09 56.0 -0.4
LDASE Londrina, Braz 144.82 141 eP PKPbc 23 09 51.3 -2.0
SRBC Serra Branca 144.97 360 ePKP PKPbc 23 09 53.3 0.0
PGRA Graciosa 144.97 360 ePKP PKiKP 23 10 04.3 +7.0
RPRD Ribas do Rio P 145.12 135 eP PKPdf 23 09 51.1 -3.0
PAGU Aguiva, Azore 145.22 359 ePKP PKPab 23 09 56.1 +1.7
PSBA Serra de Santa 145.23 359 ePKP PKPab 23 09 55.6 +1.1
ROSA Rosais 145.28 0 ePKP PKPab 23 09 55.8 +1.1
PSCM Serra do Cume 145.29 359 ePKP PKPab 23 09 55.5 +0.8
GDSD La Dsirade Is 145.31 67 PKPdf 23 09 54.2 -0.4
ADH Angra Heroismo 145.34 359 ePKP PKPdf 23 09 39.0 -15
PMAN Manadas 145.37 0 ePKP PKPab 23 09 55.6 +0.6
CALA Caldeira 145.41 1 ePKP PKPab 23 09 55.9 +0.6
HOR Horta 145.47 1 ePKP PKPab 23 09 56.7 +1.3
PICO Pico 145.50 0 ePKP PKPab 23 09 56.4 +0.8
PPNO Prainha do Nor 145.53 0 ePKP PKPab 23 09 56.9 +1.2
PCAN Candelaria 145.53 1 ePKP PKPab 23 09 56.4 +0.7
PID Ribeirinha 145.56 0 ePKP PKPab 23 09 56.5 +0.7
BIM Bigot 145.80 70 PKPbc 23 09 56.1 -0.4
PCMB Pacaembu 146.01 139 eP PKPdf 23 09 54.7 -0.9
PSET Sete Cidades 146.11 357 ePKP PKPab 23 09 57.8 -0.1
BART Pico Bartolome 146.12 356 ePKP PKPab 23 09 57.5 -0.5
CMLA Cha da Macela 146.16 356 ePKP PKPab 23 09 57.9 -0.2
PDA Ponta Delgada 146.18 357 ePKP PKPab 23 09 57.8 -0.3
SALV Santo Antonio 146.36 126 eP PKPdf 23 09 54.2 -2.1
SPB Sao Paulo 146.84 146 PKPbc 23 09 58.5 -0.7
PSMN Pico do Norte, 146.88 356 ePKP PKPab 23 10 00.1 -0.8
PSMA Santa Maria 146.89 356 ePKP PKPbc 23 09 59.8 +0.8
BOAV Boa Vista 147.57 92 PKPdf 23 09 59.0 +0.5
BOAV Boa Vista 147.57 92 eP PKPdf 23 09 57.3 -1.2
PDRB Porto dos Gac 147.63 119 eP PKPdf 23 09 56.8 -1.8
CLDB Colider 148.78 118 eP PKPdf 23 09 56.8 -3.6
PMPST Porto Santo, M 148.91 341 ePKP PKiKP 23 10 06.0 +0.4
TOA0 Torodi Ar. Sit 149.17 289 PKPdf 23 10 00.1 -0.9
TOA0 PKPbc PKPbc 23 10 05.1 -0.4
TORD Torodi Ar. Bea 149.17 289 PKPbc 23 10 05.0 -0.6
TORD Torodi Ar. Bea 149.17 289 PKPbc PKPbc 23 10 05.4 -0.2
comp=Z,75nm,0.4s,baz=59,slow=4.4,SNR=15
PMOZ Porto Moniz, M 149.42 342 ePKP PKiKP 23 10 07.5 +0.7
PMAR Madeira 149.42 341 ePKP PKiKP 23 10 07.3 +0.4
FUL Funchal 149.49 341 ePKP PKiKP 23 10 07.4 +0.6
ARAG Araguaiana, MT 149.52 130 eP PKPdf 23 10 00.5 -1.0
VAS01 Vassouras-RJ 150.00 151 eP PKPdf 23 09 59.5 -2.7
BSCB Bom Sucesso 150.38 147 eP PKPdf 23 09 59.0 -3.9
IPMB Ipameri, GO 150.60 138 eP PKPdf 23 10 00.7 -2.6
DUB01 Friburgo-RJ 150.69 152 eP PKPdf 23 10 01.3 -2.0
NPGB Novo Progresso 150.70 112 eP PKPdf 23 10 01.5 -2.0
ITTB Itaituba 151.19 106 eP PKPdf 23 10 02.5 -1.7
BDFB Brasilia 152.36 135 PKPdf 23 10 06.3 +0.3
BDFB PKPbc PKPbc 23 10 12.5 -0.6
BDFB Brasilia 152.36 135 PKiKP PKPdf 23 10 06.3 +0.3
BDFB Brasilia 152.36 135 PKP PKPdf 23 10 07.3 +1.3
comp=Z,6.5nm,0.8s,baz=141,slow=1.9,SNR=10
BDFB PKPbc PKiKP 23 10 13.4 +0.1
comp=Z,55nm,0.5s,baz=237,slow=1.3,SNR=120
DIAM Diamantina, MG 153.16 146 eP PKPdf 23 10 05.7 -1.5
MALB Monte Alegre 153.22 102 eP PKPdf 23 10 04.1 -3.1
MDP Montagnes des 155.48 86 PKPbc PKPdf 23 10 19.8 +9.4
comp=Z,18nm,0.9s,baz=281,slow=2.5,SNR=6.1
KIC Kosan Boka 156.63 277 ⇑eP PKPdf 23 10 22.0 +10
comp=Z,31nm,0.9s
DBIC Dimbokro 156.71 278 PKP PKPdf 23 10 10.9 -1.0
comp=Z,4.0nm,1.0s,baz=75,slow=3.6,SNR=2.3
DBIC PKPbc PKPab 23 10 22.5 -20
comp=Z,8.8nm,0.6s,baz=75,slow=2.1,SNR=4.5
DBIC PKPab PKPab 23 10 43.1 +0.3
comp=Z,43nm,0.4s,baz=87,slow=5.8,SNR=23
TIC Toumodi 156.88 278 ⇑eP PKPdf 23 10 23.3 +11
comp=Z,20nm,0.9s
LIC Lamto 156.92 277 ⇑eP PKPdf 23 10 23.2 +11
comp=Z,53nm,0.9s
BBTS Babate 164.35 314 PKPab PKPab 23 11 17.0 +1.1
comp=Z,124nm,0.9s,baz=324,slow=1.3,SNR=13
RCBR Riachuelo 167.62 141 PKPab 23 11 28.4 -2.0
RCBR Riachuelo 167.62 141 PKP2 PKPab 23 11 28.5 -2.0

*NNC **10** 22:51:44.9±3.0, 38°.90N×71°.12E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=23.9km s-min=15.4km az=3.0
*KRNET **10** 22:51:45.1±0.1, 39°.15N×71°.25E, h10km, mb2.9*
*SOME **10** 22:51:46.3, 39°.52N×71°.50E, h5km*

ISC 10 22:51:48.5±1.6, 39°.29N±0°.08×71°.23E±0°.04, h10km, n27, α2°76/39, 17C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.48**	**66**	⇑eP		**Pg**	**22 51 55.2**	**-2.8**
baz=52								
DRK				⇑eS		**Sg**	**22 52 03.1**	**-1.3**
baz=52								
BTK	**Batken**	**0.84**	**338**	⇑eP		**Pb**	**22 52 04.1**	**-1.1**
baz=40								
BTK				⇑eS		**Sb**	**22 52 17.6**	**+1.1**
baz=40								
OHH	**Osh**	**1.72**	**44**	⇑eP		**Pg**	**22 52 19.4**	**-2.1**
baz=40								
OHH				⇑eS		**Sg**	**22 52 44.1**	**+0.2**
baz=40								
SFK	**Sufi-Kurgan**	**1.90**	**67**	⇓eP		**Pb**	**22 52 21.5**	**-1.9**
baz=63								
SFK				⇓eS		**Sg**	**22 52 48.1**	**-1.5**
baz=63								
TRKS	**Terek-Say**	**2.24**	**358**	⇑iP		**Pb**	**22 52 26.6**	**-2.6**

	baz=59								
TRKS				⇑	*e*S		**Sb**	22 52 56.7	**-0.4**
	baz=59								
ARK	**Arkit**	**2.57**	**12**	⇓	*e*P		**Pb**	22 52 32.1	**-2.7**
	baz=11								
ARK				⇓	*e*S		**Sb**	22 53 06.2	**-0.3**
	baz=11								
IUG	**Iuzhnay**	**3.00**	**343**		*e*P		**Pb**	22 52 41.2	**-0.9**
	25nm,0.5s								
IUG					*e*S		**Sb**	22 53 19.2	**+0.3**
	18nm,0.4s								
MNAS	**Manas**	**3.34**	**16**	⇑	*e*P		**Pn**	22 52 42.8	**+1.9**
	baz=15								
MNAS				⇑	*e*S		**Sn**	22 53 24.7	**+3.9**
	baz=15								
ARLS	**Aral**	**3.49**	**41**	⇓	*e*P		**Pn**	22 52 44.3	**+1.3**
	baz=40								
ARLS				⇓	*e*S		**Sn**	22 53 27.7	**+3.3**
	baz=40								
MRKS	**Merke**	**3.77**	**23**		*e*P		**Pb**	22 52 52.7	**-2.6**
	4.4nm,0.4s								
MRKS					*e*S		**Sb**	22 53 39.0	**-2.1**
	11nm,0.8s								
KK31	**Karatay Array**	**3.85**	**352**		P		**Pn**	22 52 50.6	**+2.8**
	3.1nm,0.4s,baz=175,slow=13,SNR=45								
KK31				⇓	S		**Sb**	22 53 42.2	**-1.1**
	9.1nm,0.4s,baz=164,slow=28,SNR=6.5								
UCH	**Uchtor**	**3.85**	**39**		P		Pb	22 52 51.6	-5.3
	SNR=8.3								
UCH	**Uchtor**	**3.85**	**39**	⇑	*e*P		**Pn**	22 52 49.6	**+1.3**
	baz=38								
UCH				⇑	*e*S		**Sn**	22 53 36.7	**+2.9**
	baz=38								
EKS2	**Erkin-Say**	**3.88**	**29**		P		Pb	22 52 51.5	-5.7
	SNR=10								
EKS2	**Erkin-Say**	**3.88**	**29**	⇓	*e*P		**Pn**	22 52 50.0	**+1.6**
	baz=28								
EKS2				⇓	*e*S		**Sn**	22 53 37.3	**+3.2**
	baz=28								
BRLS	**Borolday**	**3.89**	**345**		*e*P		**Pb**	22 52 53.6	**-3.6**
	1.3nm,0.2s								
BRLS					*e*S		**Sb**	22 53 40.2	**-4.1**
	7.0nm,0.4s								
AAK	**Ala-Archa**	**4.16**	**35**		P		Pb	22 52 55.6	-6.3
	SNR=14								
NRN	**Naryn**	**4.23**	**58**	⇑	*e*P		**Pn**	22 52 53.4	**+0.1**
	baz=56								
NRN				⇑	*e*S		**Sn**	22 53 44.0	**+1.1**
	baz=56								
KBK	**Karagaybulak**	**4.39**	**39**		P		Pb	22 52 59.7	-6.1
	SNR=15								
CHMS	**Chumysh**	**4.56**	**34**		P		Pn	22 53 01.2	+3.6
	SNR=13								
CHMS	**Chumysh**	**4.56**	**34**	⇑	P		Pn	22 53 00.8	+3.2
	5.8nm,0.4s								
CHMS				⇓	S		**Sb**	22 53 59.4	**-4.4**
	4.2nm,0.4s								
USP	**Ospenovka**	**4.68**	**31**		P		**Pn**	22 53 01.8	**+2.6**
	SNR=8.0								
TKM2	**Tokmak 2**	**4.91**	**41**		P		Pn	22 53 05.9	+3.4
	SNR=7.6								
TKM2	**Tokmak 2**	**4.91**	**41**	⇑	P		Pn	22 53 05.6	+3.1
	1.8nm,0.4s								
TKM2				⇓	S		**Sb**	22 54 06.3	**-7.5**
	3.1nm,0.6s								
DGS	**Degeres**	**5.23**	**39**		*e*P		**Pb**	22 53 19.5	**-0.5**
	0.6nm,0.5s								
DGS					*e*S		**Sb**	22 54 25.8	**+2.9**
	2.7nm,0.5s								
KOTS	**Kotyrbulak**	**5.93**	**46**		*e*P		**Pb**	22 53 32.5	**+0.5**
	1.9nm,0.6s								
KOTS					*e*S		**Sb**	22 54 48.0	**+4.8**
	2.5nm,0.4s								
AB31	**Akbulak array**	**12.82**	**325**	⇓	P		**Pn**	22 54 49.6	**-1.1**
	0.8nm,0.6s,baz=149,slow=11,SNR=5.4								
AB31				⇑	S		**Sn**	22 57 17.5	**+4.1**
	1.3nm,0.6s,baz=135,slow=23,SNR=9.4								

TAP 10 22:57:57.3,24.09N×121.48E,h4km±1km,ML1.6,1C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LXIB	**Xiulin Townshi**	**0.09**	**221**	⇑ *i* P	Pg	22 57 59.0	-0.3
	baz=221						
LXIB				S	Sg	22 58 00.6	0.0
	baz=221						
TWD	**Chiawan**	**0.11**	**95**	*i* P	Pg	22 57 59.6	+0.1
	baz=94						
TWD				*i* S	Sg	22 58 01.5	+0.5
	baz=94						
ETLH	**Xiulin Townshi**	**0.12**	**1**	P	Pg	22 57 59.6	-0.2
	baz=1.0						
ETLH				S	Sg	22 58 01.2	-0.2
	baz=1.0						
ETM	**Tongmen**	**0.12**	**174**	P	Pg	22 57 59.8	0.0
	baz=174						
ETM				S	Sg	22 58 01.8	+0.3
	baz=174						
NACB	**Ninganchiao**	**0.14**	**52**	*i* P	Pg	22 57 59.7	-0.3
	baz=51						
ETL	**Fush Village**	**0.15**	**62**	*e*P	Pg	22 58 00.3	0.0
	baz=62						
WHF	**Hehuan Shan**	**0.20**	**286**	P	Pg	22 58 01.2	-0.2
	baz=285						
WHF				*e*S	Sg	22 58 04.0	-0.1
	baz=285						
FUSS	**Fushou**	**0.27**	**306**	*e*P	Pg	22 58 02.7	+0.2
	baz=306						
FUSS				*e*S	Sg	22 58 06.7	+0.6
	baz=306						
ESL	**Shilin**	**0.28**	**189**	*e*P	Pg	22 58 02.5	-0.2
	baz=187						
CHGB	**Renai**	**0.28**	**264**	*i* P	Pg	22 58 02.9	0.0
	baz=263						
CHGB				*e*S	Sg	22 58 06.3	-0.2
	baz=263						
TWT	**Tachien**	**0.32**	**300**	*e*P	Pg	22 58 03.5	0.0
	baz=298						
TWT				*e*S	Sg	22 58 08.8	+0.9
	baz=298						
WUSB	**Renai**	**0.34**	**254**	*e*P	Pg	22 58 04.1	+0.1
	baz=253						
NNS	**Nan Shan**	**0.36**	**345**	*e*P	Pg	22 58 04.8	+0.4
	baz=345						
WARBT	**Fenglin Townsh**	**0.38**	**193**	*e*P	Pg	22 58 04.4	-0.3
	baz=192						

UPP 10 23:10:19.8±0.1,67.18N×20.70E,h0km,ML2.1, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.08**	**220**	P	Pg	23 10 21.6	+0.3
DUNU				S	Sg	23 10 22.6	+0.2
RATU	**Laukkuluspa**	**0.77**	**327**	P	Pg	23 10 34.2	-0.3
PAJU	**Pajala**	**0.96**	**98**	P	Pg	23 10 37.5	-0.6
LANU	**Lannavaara**	**1.00**	**29**	P	Pg	23 10 38.7	-0.2
KALU	**Kalix**	**1.70**	**140**	P	Pb	23 10 51.5	-0.4
SJUU	**Sjulsmark**	**1.72**	**167**	P	Pn	23 10 50.8	-0.2
LILU	**Lilltraesk**	**1.94**	**191**	P	Pn	23 10 54.4	+0.5

ISC 10 23:11:03.0±2.1,56.2N±0.1×149.79W±0.06,h10km,n31, σ0.77/35,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.19**	**300**	P	**Pn**	**23 11 40.2**	**+0.7**
	baz=117						
OHAK				S	**Sn**	**23 12 05.1**	**-1.5**
	baz=117						
SII	**Sitkinak Islan**	**2.47**	**280**	P	**Pn**	**23 11 44.0**	**+0.6**
	baz=98						
SII				S	**Sn**	**23 12 12.4**	**-1.2**
	baz=98						
Q20K	**Shuyak Island**	**2.81**	**331**	P	**Pn**	**23 11 49.0**	**+1.1**
	baz=149						
Q20K				S	**Sn**	**23 12 21.9**	**+0.1**
	baz=149						
R18K	**Karluk**	**2.91**	**300**	P	**Pn**	**23 11 50.2**	**+0.9**
	baz=117						
R18K				S	**Sn**	**23 12 24.0**	**-0.3**
	baz=117						
CHIR	**Chirikof Islan**	**3.29**	**266**	P	**Pn**	**23 11 54.3**	**-0.4**
	baz=82						
BRSE	**Bradley Lake S**	**3.60**	**352**	P	**Pn**	**23 11 58.9**	**+0.1**
	baz=171						
BRSE				S	**Sn**	**23 12 39.9**	**-1.4**
	baz=171						
P19K	**Oil Pt**	**3.93**	**334**	P	**Pn**	**23 12 03.7**	**+0.4**
	baz=151						
P23K	**Montague Islan**	**4.03**	**17**	P	**Pn**	**23 12 04.8**	**+0.1**
	baz=199						
O20K	**Slope Mountain**	**4.18**	**340**	P	**Pn**	**23 12 07.6**	**+0.7**
	baz=158						
O22K	**Cooper Landing**	**4.31**	**0**	P	**Pn**	**23 12 08.3**	**-0.2**
	baz=180						
O18K	**Koktuh Hills**	**4.67**	**324**	P	**Pn**	**23 12 14.5**	**+1.0**
	baz=140						
O19K	**Port Alsworth**	**4.68**	**331**	P	**Pn**	**23 12 13.8**	**+0.2**
	baz=147						
KAIM	**Kayak Island**	**4.71**	**35**	P	**Pn**	**23 12 14.5**	**+0.4**
	baz=219						
EYAK	**Cordova Ski Ar**	**4.86**	**24**	P	**Pn**	**23 12 16.7**	**+0.6**
	baz=207						
RC01	**Rabbit Creek A**	**4.92**	**0**	P	**Pn**	**23 12 17.2**	**+0.3**
	baz=180						
BGLC	**Bering Glacier**	**5.24**	**38**	P	**Pn**	**23 12 21.4**	**+0.2**
	baz=224						
N19K	**Bonanza Creek**	**5.25**	**334**	P	Pn	23 12 21.4	-0.2
	baz=150						
KNK	**Knik Glacier**	**5.29**	**7**	P	**Pn**	**23 12 22.5**	**+0.5**
	baz=188						
BMRM	**Bremner River**	**5.51**	**27**	P	**Pn**	**23 12 25.5**	**+0.5**
	baz=211						
KLU	**Klutina**	**5.69**	**19**	P	**Pn**	**23 12 27.8**	**+0.3**
	baz=202						
CRQE	**Cirque**	**5.77**	**35**	P	**Pn**	**23 12 28.4**	**-0.3**
	baz=220						
SCM	**Sheep Creek Mo**	**5.80**	**12**	P	**Pn**	**23 12 30.1**	**+1.0**
	baz=194						
N25K	**Chitina, Valde**	**6.06**	**24**	P	**Pn**	**23 12 33.6**	**+0.9**
	baz=208						
M18K	**Stony River**	**6.17**	**332**	P	**Pn**	**23 12 34.3**	**+0.2**
	baz=147						
PINM	**Pinnacle**	**6.39**	**48**	P	**Pn**	**23 12 37.7**	**+0.6**
	baz=236						
CTG	**Chitna Glacier**	**6.51**	**39**	P	**Pn**	**23 12 39.7**	**+0.7**
	baz=226						
PNL	**Peninsula**	**6.54**	**53**	P	**Pn**	**23 12 39.5**	**+0.3**
	baz=242						
M17K	**Holitna River**	**6.56**	**326**	P	**Pn**	**23 12 40.8**	**+1.3**
	baz=140						
HARP	**HAARP**	**6.67**	**19**	P	**Pn**	**23 12 41.8**	**+0.9**
	baz=203						
O29M	**Mount Kennedy**	**7.21**	**50**	P	**Pn**	**23 12 49.7**	**+1.2**
	baz=240						
P29M	**Windy Craggy**	**7.29**	**57**	P	**Pn**	**23 12 50.2**	**+0.8**
	baz=247						

HEL 10 23:11:11.6±0.6,67.21N×20.69E,h0km,ML0.9, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAJU	**Pajala**	**0.96**	**100**	PG	Pg	23 11 29.1	-1.0
	baz=281						
PAJU				SB	Sg	23 11 42.1	-0.4
KLF	**Kolari**	**1.27**	**88**	MSG		23 11 50.0	
	comp=Z,0.8nm,0.2s						
KLF				SB	Sg	23 11 51.6	-0.8
HEF	**Hetta**	**1.65**	**42**	MSG		23 12 00.8	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sn	23 12 03.8	+0.2
KALU	**Kalix**	**1.73**	**141**	SN	Sb	23 12 06.7	+0.3
TOF	**Tornio**	**1.84**	**127**	PG	Pn	23 11 44.8	+0.4
TOF				MSG		23 12 06.5	
	comp=Z,0.7nm,0.2s						
TOF				SG	Sn	23 12 08.7	+0.4
KTK1	**Kautokeino**	**2.04**	**27**	SG	Sn	23 12 14.2	+0.8
RNF	**Rovaniemi**	**2.18**	**104**	PG	Pn	23 11 50.2	+1.1
RNF				SG	Sb	23 12 18.6	-0.8
SGF	**Sodankyl**	**2.27**	**82**	SG	Sb	23 12 22.2	+0.2
RANF	**Ranua**	**2.71**	**114**	SG	Sb	23 12 34.6	-0.1
KMNF	**Kaamanen**	**3.05**	**48**	SN	Sn	23 12 38.3	+0.1

*SOME **10** 23:22:00.6,39.08N×71.35E,h0km*
*NNC **10** 23:22:03.6±3.4,38.77N×71.38E,h0km,mb4.1,mpv3.7,*
Error ellipse: s-maj=24.9km s-min=17.0km az=17.0
ISC 10 23:22:11.1±2.8,39.2N±0.1×71.30E±0.06,h10km,n20, σ3.42/32,6C,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**3.12**	**342**	Pg	**Pb**	**23 23 07.5**	**+0.8**
	49nm,0.4s						
IUG				Lg	Lg	23 23 53.0	
	78nm,0.6s						
IUG	**Iuzhnay**	**3.12**	**342**	*e*P	**Pb**	**23 23 05.2**	**-1.5**
	16nm,0.3s						
IUG				*e*S	**Sb**	**23 23 48.5**	**+3.8**
	59nm,0.5s						
MRKS	**Merke**	**3.85**	**22**	*e*P	**Pb**	**23 23 18.2**	**-0.9**
	6.5nm,0.3s						
MRKS				*e*S	**Sb**	**23 24 10.8**	**+5.0**
	13nm,0.5s						
KK31	**Karatay Array**	**3.96**	**352**	Pn	**Pn**	**23 23 10.9**	**-1.1**
	10nm,0.6s,baz=182,slow=15,SNR=100						
KK31				⇑Sn	**Sn**	**23 24 04.4**	**+5.9**
	4.1nm,0.4s						
KK31				⇑Lg	Lg	23 24 22.5	
	14nm,0.6s						
BRLS	**Borolday**	**4.00**	**344**	Pg	**Pb**	**23 23 21.6**	**-0.1**
	3.9nm,0.4s						
BRLS				Lg	Lg	23 24 17.2	
	12nm,0.6s						
BRLS	**Borolday**	**4.00**	**344**	*e*P	**Pb**	**23 23 18.2**	**-3.5**
	2.6nm,0.2s						
BRLS				*e*S	**Sb**	**23 24 10.9**	**+0.7**
	8.0nm,0.4s						
CHMS	**Chumysh**	**4.62**	**33**	⇑Pn	**Pn**	**23 23 20.2**	**-0.9**
	13nm,0.8s						
CHMS				⇑Sn	**Sn**	**23 24 21.3**	**+6.5**
	15nm,1.1s						
SGDS	**Sogindy**	**4.95**	**29**	Pg	**Pb**	**23 23 38.2**	**+0.3**
	3.2nm,0.5s						
SGDS				Lg	Lg	23 24 45.6	
	7.2nm,1.2s						
TKM2	**Tokmak 2**	**4.95**	**40**	⇑Pn	**Pn**	**23 23 22.1**	**-3.7**
	6.9nm,1.1s						
TKM2				⇑Lg	Lg	23 24 55.4	
	11nm,1.3s						
KST	**Kastek**	**5.22**	**41**	*e*P	**Pb**	**23 23 43.3**	**+0.7**
	1.7nm,0.3s						
KST				*e*S	**Sg**	**23 24 53.8**	**-5.0**
	6.0nm,0.7s						
DGS	**Degeres**	**5.28**	**38**	Pg	**Pb**	**23 23 44.4**	**+0.9**
	3.8nm,0.6s						
DGS				Lg	Lg	23 24 56.3	
	8.1nm,0.6s						
DGS	**Degeres**	**5.28**	**38**	*e*P	**Pb**	**23 23 44.4**	**+0.9**
	3.8nm,0.6s						
DGS				*e*S	**Sg**	**23 24 56.3**	**-4.2**
	8.1nm,0.6s						
KRBS	**Karabastau**	**5.58**	**35**	Pg	**Pb**	**23 23 49.4**	**+0.7**
	2.8nm,0.4s						
KRBS				Lg	Lg	23 25 04.6	
	4.2nm,0.6s						
KRBS	**Karabastau**	**5.58**	**35**	*e*P	**Pb**	**23 23 49.4**	**+0.7**
	2.8nm,0.4s						
KRBS				*e*S	**Sg**	**23 25 04.5**	**-5.7**
	4.2nm,0.6s						
KOTS	**Kotyrbulak**	**5.97**	**45**	*e*P	**Pb**	**23 23 57.1**	**+1.8**
	2.1nm,0.4s						
KOTS				*e*S	**Sg**	**23 25 18.2**	**-4.4**
	11nm,0.8s						
KUU	**Kurty**	**6.04**	**37**	*e*P	**Pb**	**23 23 59.3**	**+2.9**
	2.8nm,0.5s						
KUU				*e*S	**Sg**	**23 25 21.1**	**-3.8**
	4.8nm,0.6s						
KTBS	**Karatobe**	**6.07**	**40**	Pg	**Pb**	**23 23 57.4**	**+0.4**
	2.0nm,0.5s						
KTBS				Lg	Lg	23 25 18.7	
	7.4nm,0.9s						
KTBS	**Karatobe**	**6.07**	**40**	*e*P	**Pb**	**23 23 59.4**	**+2.4**
	0.3nm,0.2s						
KTBS				*e*S	**Sg**	**23 25 21.5**	**-4.5**
	5.3nm,0.5s						
CHKK	**Chushkaly**	**6.33**	**41**	Pg	**Pb**	**23 24 03.3**	**+2.0**
	0.4nm,0.1s						
CHKK				Lg	Lg	23 25 28.5	
	3.7nm,1.0s						
CHKK	**Chushkaly**	**6.33**	**41**	*e*P	**Pb**	**23 24 03.3**	**+2.0**
	0.4nm,0.1s						
CHKK				*e*S	**Sg**	**23 25 28.5**	**-5.7**
	3.7nm,1.0s						

JMA 11 00:06:19.6±0.3,26.7N±2.2×12.4E±.2,h184km,MV3.7/27, EAST CHINA SEA REGION,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**1.54**	**142**	S	Sn	00 07 17.9	+0.3
JISG	**Ishigakijimahi**	**1.55**	**176**	P	Pn	00 06 52.7	+0.3
JISG				S	Sn	00 07 17.3	-0.5
JTJ	**Tarama**	**1.56**	**163**	P	Pn	00 06 52.9	+0.4
JTJ				S	Sn	00 07 18.0	0.0
JIRB	**Irabujima**	**1.57**	**146**	S	Sn	00 07 18.1	-0.1
JMJ2	**Miyako jima3**	**1.73**	**143**	P	Pn	00 06 55.1	+1.0
JMJ2				S	Sn	00 07 21.1	+0.2
JOGS	**Gusukube**	**1.75**	**141**	*e*P	Pn	00 06 55.5	+1.1
JOGS				S	Sn	00 07 21.8	+0.4
JIJ	**Ishigaki jima**	**1.77**	**182**	P	Pn	00 06 54.3	-0.3
JIJ				S	Sn	00 07 19.9	-1.8
JKRS	**Kuro-shima**	**1.90**	**185**	P	Pn	00 06 55.8	-0.1
JKRS				S	Sn	00 07 23.0	-1.1
YOJ	**Yonaguni jima**	**1.98**	**213**	*e*P	Pn	00 06 57.3	+0.5
JYNG	**Yonagunijimaku**	**2.03**	**214**	P	Pn	00 06 57.3	0.0
HATJ	**Hateruma jima**	**2.10**	**190**	P	Pn	00 06 57.9	-0.2
HATJ				S	Sn	00 07 27.1	-0.9
JKE	**Kume jima 2**	**2.33**	**85**	P	Pn	00 07 01.3	+0.6
JJT3	**Tamagusuku3**	**3.22**	**89**	P	Pn	00 07 11.8	+0.6
JJT3				*e*S	Sn	00 07 50.4	-1.0
JNTH	**Nagotoyohara**	**3.45**	**83**	*e*P	Pn	00 07 13.6	-0.4
JNTH				S	Sn	00 07 53.2	-3.3
JIH	**Iheya**	**3.49**	**74**	*e*P	Pn	00 07 14.3	-0.1
JIH				*e*S	Sn	00 07 55.3	-2.1
JOW	**Kunigami**	**3.72**	**78**	*e*P	Pn	00 07 16.5	-0.8
JOW				S	Sn	00 07 58.4	-4.1
JYRO	**Yoronjima**	**3.91**	**76**	*e*P	Pn	00 07 18.6	-1.1
JYRO				S	Sn	00 08 02.7	-4.1
JOKE	**Okinoerabujima**	**4.10**	**72**	P	Pn	00 07 21.5	-0.5
JOKE				*e*S	Sn	00 08 07.8	-3.3
JTK	**Tokunoshima**	**4.55**	**68**	P	Pn	00 07 26.5	-1.3
JTK				S	Sn	00 08 17.5	-3.9

*CATAC **11** 00:10:27.1±0.9,7.89N×82.96W,h2km±3km,ML4.1*
*UCR **11** 00:10:28.3±0.4,8.02N×82.93W,h1km±8km,MW4.1*
*UPA **11** 00:10:30.6±1.5,8.13N×82.89W,h6km±4km,ML4.2*
ISC 11 00:10:29.0±1.3,8.02N±0.05×82.96W±0.03,h11km±8km, n66,σ1.07/84,1D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIMO3	**Limones**	**0.12**	**49**	⇓ *i* P	**Pg**	**00 10 32.4**	**+0.3**
PIRO	**Carate, Puerto**	**0.54**	**316**	*e*P	**Pg**	**00 10 39.7**	**+0.2**
PIRO	**Carate, Puerto**	**0.54**	**316**	*i* P	**Pg**	**00 10 39.7**	**+0.2**
PIRO				*i* S	**Sb**	**00 10 48.0**	**-0.1**
PIRO				IAML		00 10 51.1	
	comp=Z,19μm,1.0s						
CDITO	**Canoas**	**0.56**	**9**	*e*P	**Pb**	**00 10 39.9**	**-0.8**
CDITO	**Canoas**	**0.56**	**9**	*e*P	**Pb**	**00 10 39.9**	**-0.8**
CDITO	**Canoas**	**0.56**	**9**	*i* P	**Pb**	**00 10 39.9**	**-0.8**
CDITO				*i* S	**Sb**	**00 10 50.6**	**+1.9**
CDITO				IAML		00 10 54.5	
	comp=Z,4μm,1.0s						
PTJ1	**Puerto Jimnez**	**0.62**	**326**	*e*P	**Pb**	**00 10 41.5**	**-0.3**
FITO	**Golfito**	**0.63**	**342**	*e*P	**Pg**	**00 10 40.8**	**-0.5**
PEDE3	**Pedregal, Chir**	**0.64**	**56**	*e*P	**Pb**	**00 10 41.1**	**-1.1**
DVD	**David**	**0.65**	**50**	*e*P	**Pb**	**00 10 41.3**	**-1.0**
DVD				*e*S	**Sb**	**00 10 50.0**	**-1.3**
LOCO3	**Loma Colorada,**	**0.66**	**54**	*e*P	**Pb**	**00 10 41.7**	**-0.8**
EDAD	**Golfito**	**0.66**	**342**	*e*P	**Pg**	**00 10 41.2**	**-0.7**
MLIR3	**Monte Lirio, C**	**0.78**	**10**	*e*P	**Pb**	**00 10 44.9**	**+0.3**
VITO	**San Vito**	**0.79**	**359**	*e*P	**Pb**	**00 10 44.7**	**-0.2**
BCO2	**Palmira**	**0.81**	**31**	*i* P	**Pg**	**00 10 44.2**	**-0.6**
BCO2				AMP		00 10 45.3	
	comp=Z,18μm,0.2s						
BCO2				*e*S	**Sb**	**00 10 55.4**	**-0.9**
BRU2	**Volcan**	**0.81**	**19**	*e*S	**Sb**	**00 10 56.4**	**+0.2**
BRU2	**Volcan**	**0.81**	**19**	*e*P	**Pb**	**00 10 44.0**	**-0.7**
BRU2	**Volcan**	**0.81**	**19**	*i* P	**Pb**	**00 10 44.9**	**-0.3**
BRU2				*i* S	**Sb**	**00 10 57.3**	**+1.0**
BRU2				IAML		00 11 06.4	
	comp=Z,5μm,1.0s						
LNBQ3	**Los Naranjos,**	**0.92**	**34**	*e*P	**Pg**	**00 10 45.9**	**-0.9**
PLAN	**Los Planes de**	**0.96**	**312**	*i* P	**Pg**	**00 10 47.0**	**-0.6**
PLAN				*i* S	**Sb**	**00 11 01.4**	**+0.9**
PLAN				IAML		00 11 05.3	
	comp=Z,15μm,1.0s						
POTG	**Potrero Grande**	**1.04**	**351**	*e*P	**Pg**	**00 10 48.2**	**-0.8**
POTG	**Potrero Grande**	**1.04**	**351**	*i* P	**Pg**	**00 10 48.7**	**-0.3**
POTG				*i* S	**Sn**	**00 11 04.8**	**+0.7**
POTG				IAML		00 11 09.9	
	comp=Z,7μm,1.0s						
CHGR2	**Aguacate**	**1.22**	**41**	*e*P	**Pg**	**00 10 50.1**	**-2.3**
NANC3	**Nancito, Chiri**	**1.23**	**80**	*e*P	**Pg**	**00 10 50.8**	**-1.9**
DRK0	**Durika**	**1.27**	**347**	*e*P	**Pg**	**00 10 51.8**	**-1.6**
OCHAL	**Ojochal**	**1.27**	**328**	*i* P	**Pg**	**00 10 51.8**	**-1.6**
OCHAL				*i* S	**Sn**	**00 11 10.9**	**+1.2**
OCHAL				IAML		00 11 13.6	
	comp=Z,39nm,1.0s						
CNI2	**El Empalme, Bo**	**1.48**	**19**	*e*P	**Pn**	**00 10 55.1**	**-0.3**
PEZE	**Perez Zeledon,**	**1.53**	**332**	*e*P	**Pn**	**00 10 56.1**	**-0.2**
PEZE	**Perez Zeledon,**	**1.53**	**332**	*i* P	**Pn**	**00 10 56.1**	**-0.2**
PEZE				*i* S	**Sg**	**00 11 18.6**	**+0.3**
PEZE				IAML		00 11 22.2	
	comp=Z,2μm,1.0s						
CDM	**Cerro de Muert**	**1.72**	**332**	*e*P	**Pn**	**00 10 58.9**	**-0.3**
CDM	**Cerro de Muert**	**1.72**	**332**	*i* P	**Pn**	**00 10 59.3**	**0.0**
CDM				IAML		00 11 00.4	
	comp=Z,930nm,1.0s						
CDM				*i* S	**Sb**	**00 11 23.7**	**+1.0**
GMAL	**Guarumal, Vera**	**1.73**	**98**	*e*P	**Pn**	**00 10 59.3**	**+0.3**
LLNJ	**Naranjito**	**1.83**	**322**	*e*P	**Pn**	**00 11 00.8**	**+0.4**
SAFE3	**Santa Fe, Vera**	**1.92**	**75**	*e*P	**Pb**	**00 11 03.0**	**-1.1**
RAZU	**San Marcos de**	**1.94**	**327**	*e*P	**Pb**	**00 11 04.4**	**-0.1**
RIMA	**Rio Macho**	**1.95**	**333**	*e*P	**Pn**	**00 11 02.2**	**-0.1**
STIA3	**Santiago, Vera**	**1.97**	**88**	*e*P	**Pn**	**00 11 03.3**	**+1.1**
MARI3	**Mariato, Verag**	**1.98**	**101**	*e*P	**Pn**	**00 11 03.3**	**+0.9**
LCR2	**La Lucha 2**	**2.00**	**329**	*e*P	**Pn**	**00 11 03.3**	**+0.4**
**LCR2

JTS	**Las Juntas de**	**3.00**	**319**	*e*P	**Pn**	**00 11 17.9**	**+1.4**
INDI	**Punta indio, G**	**3.11**	**306**	*i* P	**Pn**	**00 11 17.9**	**-0.1**
INDI				*i* S	**Sn**	**00 11 52.9**	**-2.3**
INDI				IAML		00 12 14.6	
	comp=Z,170nm,1.0s						
DUNO	**Dulce Nombre,**	**3.23**	**309**	*i* P	**Pn**	**00 11 20.2**	**+0.5**
DUNO				*i* S	**Sn**	**00 11 58.1**	**-0.1**
DUNO				IAML		00 11 59.2	
	comp=Z,400nm,1.0s						
BCIP	**Isla Barro Col**	**3.29**	**70**	*i* P	**Pn**	**00 11 22.8**	**+2.4**
ORTG	**Ortega, Santa**	**3.39**	**313**	*i* P	**Pn**	**00 11 22.9**	**+0.9**
ORTG				*i* S	**Sn**	**00 12 04.5**	**+2.2**
ORTG				IAML		00 12 18.2	
	comp=Z,110nm,1.0s						
SAJU	**San Juanillo,**	**3.40**	**307**	*i* P	**Pn**	**00 11 22.0**	**+0.1**
SAJU				*i* S	**Sn**	**00 12 00.7**	**-1.5**
SAJU				IAML		00 12 22.9	
	comp=Z,130nm,1.0s						

*IDC **11** 00:10:30.0±0.6,52°.93S×10°.48E,h0km,mb4.5/13, mbtmp4.6/14,ML4.7/1,MS4.0/23,Error ellipse: s-maj=23.0km s-min=16.5km az=79.0*
*NEIC **11** 00:10:32.5±1.5,53°.0S±0°.1×10°.3E±0°.1,h10km±1km, mb5.0/25,Error ellipse: s-maj=20.7km s-min=10.1km az=158.0*
ISC 11 00:10:31.8±0.5,52°.95S±0°.08×10°.4E±0°.1,h10km,n95, σ0§90/69,mb4.9/19,MS4.0/22,5C,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TROLL	**Troll, Antarti**	**19.44**	**187**	⇑P	**Pn**	**00 14 59.3**	**-0.1**
	comp=Z,3μm,0.8s						
VNA1	**Neumayer--Stat**	**19.66**	**198**	⇑P	**Pn**	**00 15 03.1**	**+1.3**
	comp=Z,41nm,0.8s						
SNAA	**Sanae**	**19.68**	**192**		**P**	**00 15 01.0**	**+0.2**
SNAA				IAmb	IAmb	00 15 04.6	
	comp=Z,76nm,0.9s						
SNAA	**Sanae**	**19.68**	**192**	⇑P	**Pn**	**00 15 01.8**	**-0.4**
	comp=Z,2μm,0.8s						
SNAA	**Sanae**	**19.68**	**192**	P	**Pn**	**00 15 01.7**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=21,slow=14,SNR=66						
SNAA				LR	LR	00 20 52.0	
	comp=Z,408nm,21.0s,baz=16,slow=32						
	comp=Z,66nm,0.8s						
VNA2	**Neumayer--Watz**	**19.73**	**197**	⇑P	**Pn**	**00 15 03.2**	**+0.6**
	comp=Z,35nm,0.7s,baz=28,slow=13						
VNA3	**Neumayer Olymp**	**20.41**	**199**	⇑P	**P**	**00 15 09.1**	**+0.4**
	comp=Z,27nm,0.8s						
SUR	**Sutherland**	**21.89**	**24**	P	**P**	**00 15 26.3**	**+1.2**
SUR				IAmb	IAmb	00 15 42.4	
	comp=Z,77nm,1.4s						
SUR	**Sutherland**	**21.89**	**24**	P	**P**	**00 15 24.3**	**-0.7**
	comp=Z,16nm,1.0s,baz=221,slow=6.4,SNR=3.9						
SUR				LR	LR	00 21 47.5	
	comp=Z,339nm,21.4s,baz=178,slow=31						
	comp=Z,16nm,1.0s						
BOSA	**Boshof**	**26.68**	**30**	LR	LR	00 24 38.7	
	comp=Z,315nm,21.0s,baz=204,slow=32						
H04S2	**CROZET ISLANDS**	**27.12**	**94**	T	T	00 44 43.9	
	baz=244,slow=75						
H04S3	**CROZET ISLANDS**	**27.13**	**94**	T	T	00 44 46.7	
	baz=244,slow=75						
H04S1	**CROZET ISLANDS**	**27.14**	**94**	T	T	00 44 45.0	
	baz=244,slow=75						
MAW	**Mawson**	**28.77**	**141**	LR	LR	00 25 34.6	
	comp=Z,201nm,21.5s,baz=271,slow=32						
BELA	**Belgrano 2**	**29.71**	**198**	P	**P**	**00 16 37.4**	**-0.1**
LBTB	**Lobatse**	**30.16**	**28**	LR	LR	00 26 54.0	
	comp=Z,278nm,20.0s,baz=201,slow=33						
TSUM	**Tsumeb**	**34.14**	**12**	LR	LR	00 28 52.8	
	comp=Z,514nm,20.4s,baz=169,slow=32						
QSPA	**South Pole Qui**	**37.29**	**180**	P	**P**	**00 17 42.5**	**-1.2**
QSPA	**South Pole Qui**	**37.29**	**180**	P	**P**	**00 17 43.4**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=228,slow=1.9,SNR=14						
QSPA				LR	LR	00 32 07.6	
	comp=Z,463nm,20.6s,baz=218,slow=35						
	comp=Z,3.9nm,0.9s						
PMSA	**Palmer Station**	**37.92**	**222**	LR	LR	00 30 21.2	
	comp=Z,141nm,19.3s,baz=108,slow=31						
LSZ	**Lusaka**	**40.14**	**27**	LR	LR	00 33 20.3	
	comp=Z,222nm,19.0s,baz=206,slow=34						
VNDA	**Vanda**	**48.59**	**172**	P	**P**	**00 19 15.6**	**+0.8**
VNDA				IAmb	IAmb	00 19 18.2	
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**48.59**	**172**	P	**P**	**00 19 14.6**	**-0.3**
	comp=Z,8.0nm,0.9s,baz=228,slow=6.4,SNR=18						
VNDA				LR	LR	00 38 48.5	
	comp=Z,306nm,19.8s,baz=196,slow=35						
	comp=Z,8.0nm,0.9s						
SBA	**Scott Base**	**48.65**	**174**	P	**P**	**00 19 16.6**	**+1.3**
PLTB	**Pedras Altas**	**49.98**	**269**	P	**P**	**00 19 27.0**	**+1.0**
TRQA	**Tornquist**	**50.70**	**256**	P	**P**	**00 19 31.6**	**+0.3**
AY01	**Puyuhuapi**	**52.56**	**244**	P	**P**	**00 19 44.9**	**-0.3**
AY01				IAmb	IAmb	00 19 46.2	
	comp=Z,17nm,1.1s						
LL02	**Futaleuf**	**52.93**	**245**	P	**P**	**00 19 47.1**	**-0.9**
ITQB	**Itaqui**	**53.29**	**268**	P	**P**	**00 19 49.7**	**-1.0**
PLCA	**Paso Flores**	**53.85**	**248**	P	**P**	**00 19 54.5**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=149,slow=13,SNR=3.7						
	comp=Z,2.2nm,0.9s						
MBAR	**Mbarara**	**54.85**	**25**	LR	LR	00 41 29.9	
	comp=Z,269nm,21.7s,baz=174,slow=34						
LR05	**Currie**	**55.00**	**248**	P	**P**	**00 20 03.4**	**+0.3**
LR05				IAmb	IAmb	00 20 36.1	
	comp=Z,24nm,1.2s						
CPUP	**Villa Florida**	**56.14**	**270**	P	**P**	**00 20 11.2**	**-0.2**
CPUP				IAmb	IAmb	00 20 12.6	
	comp=Z,20nm,0.9s						
CPUP	**Villa Florida**	**56.14**	**270**	P	**P**	**00 20 11.0**	**-0.4**
	comp=Z,14nm,0.8s,baz=127,slow=6.5,SNR=28						
	comp=Z,14nm,0.8s						
BDFB	**Brasilia**	**58.75**	**286**	P	**P**	**00 20 30.1**	**+0.1**
BDFB				IAmb	IAmb	00 20 31.5	
	comp=Z,10nm,0.9s						
BDFB	**Brasilia**	**58.75**	**286**	P	**P**	**00 20 30.0**	**-0.1**
	comp=Z,7.7nm,0.8s,baz=153,slow=5.7,SNR=9.9						
	comp=Z,7.7nm,0.8s						
AQDB	**Aquidauana**	**59.55**	**276**	P	**P**	**00 20 35.0**	**-0.5**
DBIC	**Dimbokro**	**60.78**	**343**	P	**P**	**00 20 43.9**	**0.0**
DBIC				IAmb	IAmb	00 20 44.6	
	comp=Z,9.7nm,0.7s						
DBIC	**Dimbokro**	**60.78**	**343**	P	**P**	**00 20 43.5**	**-0.3**
	comp=Z,9.3nm,0.7s,baz=157,slow=7.2,SNR=12						
DBIC				LR	LR	00 39 59.4	
	comp=Z,223nm,21.1s,baz=226,slow=29						
	comp=Z,9.3nm,0.7s						
CO01	**Juntas del Tor**	**61.14**	**258**	P	**P**	**00 20 47.5**	**+0.9**
AC02	**Maricunga**	**62.88**	**261**	P	**P**	**00 20 59.2**	**+0.7**
PTLB	**Pontes e Lacer**	**65.49**	**277**	P	**P**	**00 21 15.1**	**0.0**
PTLB				IAmb	IAmb	00 21 16.5	
	comp=Z,15nm,1.3s						
LVC	**Limon Verde**	**65.91**	**264**	P	**P**	**00 21 18.8**	**+0.4**
LVC				IAmb	IAmb	00 21 23.2	
	comp=Z,17nm,1.3s						
LVC	**Limon Verde**	**65.91**	**264**	P	**P**	**00 21 19.3**	**+1.0**
	comp=Z,9.9nm,1.1s,baz=126,slow=8.0,SNR=4.2						
	comp=Z,9.9nm,1.1s						
SIV	**San Ignacio**	**66.23**	**275**	P	**P**	**00 21 19.8**	**-0.2**
	comp=Z,3.0nm,1.1s,baz=164,slow=4.8,SNR=6.3						
	comp=Z,3.0nm,1.1s						
TOA0	**Torodi Ar. Sit**	**66.25**	**351**	P	**P**	**00 21 20.0**	**+0.1**
TOA0				IAmb	IAmb	00 21 21.4	
	comp=Z,15nm,1.4s						
TORD	**Torodi Ar. Bea**	**66.25**	**351**	P	**P**	**00 21 19.5**	**-0.4**
	comp=Z,5.8nm,0.3s,baz=163,slow=8.5,SNR=4.0						
	comp=Z,5.8nm,0.3s						
PB16	**IPOC Station P**	**69.53**	**267**	P	**P**	**00 21 42.5**	**+1.1**
PB16				IAmb	IAmb	00 23 09.1	
	comp=Z,18nm,1.6s						
LPAZ	**La Paz**	**70.27**	**269**	P	**P**	**00 21 46.6**	**+0.5**
H01W2	**Cape Leeuwin H**	**70.42**	**122**	T	T	01 39 14.2	
	baz=218,slow=75,SNR=7.4						
H01W3	**Cape Leeuwin H**	**70.43**	**122**	T	T	01 39 14.9	
	baz=218,slow=75,SNR=6.5						
H01W1	**Cape Leeuwin H**	**70.43**	**122**	T	T	01 39 13.7	
	baz=218,slow=75,SNR=10						
BBTS	**Babate**	**71.22**	**332**	LR	LR	00 47 02.9	
	comp=Z,109nm,21.7s,baz=230,slow=31						
SAML	**Samuel**	**73.01**	**278**	P	**P**	**00 22 01.5**	**-0.3**
ETMB	**Extrema**	**74.15**	**275**	P	**P**	**00 22 07.9**	**-0.7**
FORT	**Forrest**	**80.59**	**129**	P	**P**	**00 22 44.8**	**+0.4**
FORT				IAmb	IAmb	00 23 30.1	
	comp=Z,23nm,1.1s						
RPZ	**Rata Peaks**	**82.29**	**166**	LR	LR	00 56 40.1	
	comp=Z,126nm,21.9s,baz=186,slow=34						

EIL	**Elat**	**85.01**	**21**	LR	LR	01 00 45.6	
	comp=Z,115nm,18.3s,baz=246,slow=36						
STKA	**Stephens Creek**	**85.46**	**140**	P	**P**	**00 23 08.8**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=229,slow=3.5,SNR=4.9						
	comp=Z,3.2nm,0.8s						
MDT	**Midelt**	**86.40**	**347**	LR	LR	00 56 46.0	
	comp=Z,73nm,20.1s,baz=164,slow=32						
KEST	**Kesra**	**88.31**	**359**	LR	LR	01 02 06.9	
	comp=Z,97nm,18.1s,baz=265,slow=35						
MMAI	**Mount Meron Ar**	**88.34**	**21**	LR	LR	01 02 50.8	
	comp=Z,100nm,18.3s,baz=192,slow=36						
URZ	**Urewera**	**88.44**	**170**	LR	LR	01 01 00.5	
	comp=Z,43nm,20.0s,baz=302,slow=34						
ASAR	**Alice Springs**	**89.35**	**130**	P	**P**	**00 23 28.1**	**-0.5**
ASAR	**Alice Springs**	**89.35**	**130**	P	**P**	**00 23 27.9**	**-0.6**
	comp=Z,2.1nm,1.1s,baz=205,slow=5.3,SNR=7.0						
	comp=Z,2.1nm,1.1s						
ESDC	**Sonseca Array**	**93.08**	**349**	P	**P**	**00 23 45.9**	**+0.7**
	comp=Z,1.3nm,1.0s,baz=172,slow=3.0,SNR=4.7						
	comp=Z,1.3nm,1.0s						
GNI	**Garni**	**97.38**	**26**	LR	LR	01 08 41.2	
	comp=Z,46nm,18.1s,baz=254,slow=36						
MLR	**Muntele Rosu**	**98.96**	**11**	LR	LR	01 10 59.1	
	comp=Z,36nm,18.7s,baz=195,slow=37						
DAVOX	**Davos/Dischmat**	**99.35**	**360**	LR	LR	01 07 31.5	
	comp=Z,43nm,19.0s,baz=204,slow=34						
GEYT	**Alibeck**	**99.52**	**36**	LR	LR	01 09 30.2	
	comp=Z,50nm,21.3s,baz=206,slow=36						
DZM	**Mont Dzumac**	**102.45**	**157**	*e*LR	LR	00 57 57.8	
	comp=Z,101nm,25.4s						
PPT2	**Papeete2**	**107.65**	**200**	*e*LR	LR	01 00 07.1	
	comp=Z,104nm,27.0s						
PPT2				*e*LR	LR	01 00 16.6	
	comp=Z,114nm,25.0s						
PZH	**PanZhiHua**	**111.48**	**74**	PKP	**PKiKP**	**00 29 07.1**	**+0.9**
WMQ	**Urumqi**	**116.94**	**52**	*e*P	**PKiKP**	**00 29 18.5**	**+2.5**
SCHQ	**Schefferville**	**124.88**	**317**	PKP	**PKPdf**	**00 29 30.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=188,slow=6.0,SNR=4.5						
NJ2	**Nanjing**	**125.68**	**83**	*e*P	**PKiKP**	**00 29 35.4**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TXAR	**Lajitas Array**	**127.11**	**271**	PKP	**PKPdf**	**00 29 35.8**	**-0.3**
	comp=Z,2.4nm,1.1s,baz=143,slow=3.1,SNR=11						
HHC	**Hu-ho-hao-te**	**127.42**	**70**	*e*P	**PKPdf**	**00 29 33.9**	**-2.4**
FRB	**Frobisher Bay**	**131.41**	**324**	PKP	**PKPdf**	**00 29 42.4**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=106,slow=7.2,SNR=6.0						
ULM	**Lac du Bonnet**	**135.99**	**298**	PKhKP	PKPpre	00 29 46.6	
	comp=Z,0.8nm,0.5s,baz=101,slow=5.2,SNR=1.5						
PDAR	**Pinedale Array**	**139.56**	**280**	PKhKP	PKPpre	00 29 50.6	
	comp=Z,0.8nm,0.8s,baz=91,slow=6.3,SNR=3.6						
PDAR				PKP	**PKPdf**	**00 29 57.2**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=118,slow=3.3,SNR=5.7						
NVAR	**Mina Array Bea**	**142.18**	**268**	PKP	**PKPdf**	**00 30 04.3**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=168,slow=2.2,SNR=6.5						
RES	**Resolute Bay**	**144.09**	**334**	PKPdf	**PKPdf**	**00 30 05.5**	**-0.5**
RES	**Resolute Bay**	**144.09**	**334**	PKP	PKPbc	00 30 04.0	0.0
	comp=Z,6.3nm,1.2s,baz=93,slow=4.8,SNR=8.0						
PLID	**Pearl Lake**	**144.71**	**279**	PKPdf	**PKPab**	**00 30 07.1**	**+0.1**
WVOR	**Wild Horse Val**	**144.81**	**274**		**PKPdf**	**00 30 08.1**	**-0.3**
BMO	**Blue Mountains**	**145.36**	**278**		**PKPbc**	**00 30 08.8**	**-0.3**
I07A	**Izee**	**146.26**	**275**		**PKPdf**	**00 30 10.9**	**+0.2**
EDM	**Edmonton**	**146.95**	**294**	PKPdf	**PKPdf**	**00 30 11.5**	**0.0**
PINE	**Pine Mountain**	**146.97**	**274**		**PKPbc**	**00 30 14.8**	**+0.7**
TIXI	**Tiksi**	**147.84**	**32**	PKPdf	**PKPdf**	**00 30 13.9**	**+1.6**
YKA	**Yellowknife Ar**	**150.02**	**310**	PKPdf	**PKPdf**	**00 30 14.0**	**-2.1**
YKA				PKPbc	**PKPbc**	**00 30 20.8**	**-0.3**
YKA	**Yellowknife Ar**	**150.02**	**310**	PKP	**PKPdf**	**00 30 14.1**	**-2.1**
	comp=Z,1.2nm,1.0s,baz=79,slow=1.4,SNR=11						
YKA				PKPbc	**PKPbc**	**00 30 21.1**	**0.0**
	comp=Z,9.3nm,1.0s,baz=92,slow=2.5,SNR=72						
A36M	**Sachs Harbour**	**153.02**	**331**		**PKPbc**	**00 30 27.3**	**-0.5**
ILAR	**Eielson Array**	**163.44**	**324**	PKP	**PKPdf**	**00 30 33.7**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=287,slow=2.4,SNR=4.8						

IDC 11 00:38:08.5±2.3,9°.71S×123°.43E,h0km,mb3.3/1, mbtmp3.3/3,ML3.3/2,MS3.4/1,Error ellipse: s-maj=214.8km s-min=33.9km az=54.0,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.64**	**135**	Pn	Pn	00 41 35.6	-1.5
	0.1nm,0.3s,baz=308,slow=14,SNR=7.9						
WRA				Sn	Sn	00 44 05.4	-15
	0.6nm,0.3s,baz=318,slow=26,SNR=11						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**17.11**	**146**	P	P	00 42 10.4	-0.7
	0.1nm,0.3s,baz=320,slow=12,SNR=15						
ASAR				S	Sn	00 45 08.2	-12
	0.6nm,0.6s,baz=322,slow=24,SNR=8.1						
	0.5nm,0.5s						
DZM	**Mont Dzumac**	**43.01**	**112**	LR	LR	01 03 50.3	
	comp=Z,47nm,21.9s,baz=260,slow=36						
MKAR	**Makanchi Array**	**67.15**	**331**	P	P	00 49 04.1	0.0
	0.2nm,0.5s,baz=138,slow=5.9,SNR=2.3						
	0.2nm,0.5s						

DJA 11 01:05:39.0±1.5,9°.5S±5°.1×112°.2E±°,h17km±13km,M3.8/10, mb4.1/4,MLv3.7/10,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.34**	**307**	P	Pb	01 06 03.9	+0.2
UGM				S	Sg	01 06 21.5	-0.9
NGJI	**Ngawi**	**1.36**	**354**	P	Pn	01 06 02.3	-0.9
GMJI	**Gumukmas**	**1.88**	**76**	P	Pn	01 06 11.0	+0.6
GMJI				S	Sn	01 06 34.6	+0.9
SMRI	**Semarang**	**2.03**	**325**	P	Pn	01 06 10.1	-2.3
BLJI	**Banyuglugur**	**2.20**	**64**	P	Pn	01 06 14.3	-0.5
JAGI	**Jajag, Banyuwa**	**2.54**	**84**	P	Pn	01 06 19.8	+0.4
KPJI	**Karang Pucung**	**2.98**	**298**	P	Pn	01 06 25.0	-0.6
CMJI	**Cimerak**	**3.26**	**287**	P	Pn	01 06 28.9	-0.4
TWSI	**Taliwang, Sumb**	**5.22**	**90**	P	Pn	01 06 56.0	-0.4
	10nm,1.1s,0.1nm						
PLAI	**Plampang**	**6.11**	**91**	P	Pn	01 07 08.9	+0.4
	11nm,0.9s,0.1nm						

*ATH **11** 01:52:37.6,38°.45N×20°.46E,h16km±3km,ML2.7/1,Error ellipse: s-maj=4.1km s-min=0.9km az=109.0*
*THE **11** 01:52:38.8,38°.43N×20°.45E,h7km±1km,ML2.5/2,Error ellipse: s-maj=2.4km s-min=0.6km az=268.0*
ISC 11 01:52:38.2±0.9,38°.45N±0°.03×20°.45E±0°.05,h10km±8km, n17,σ0§55/27,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**85**	P	**Pg**	**01 52 40.5**	**-0.1**
FSK				S	**Sg**	**01 52 42.6**	**+0.2**
FSK				AML	AML	01 52 42.7	
	comp=N,11169μm,0.2s						
FSK				AML	AML	01 52 42.9	
	comp=E,7108μm,0.2s						
KEF4	**Livadi, Kephal**	**0.19**	**185**	P	**Pg**	**01 52 42.2**	**-0.1**
KEF4				S	**Sg**	**01 52 46.0**	**+1.0**
	comp=E,3μm,0.1s						
KEF4	**Livadi, Kephal**	**0.19**	**185**	P	**Pg**	**01 52 42.2**	**-0.1**
KEF4				S	**Sg**	**01 52 45.8**	**+0.8**
DMLN	**Damoulianata-K**	**0.22**	**195**	P	**Pg**	**01 52 42.9**	**+0.2**
EVGI	**Lefkada island**	**0.24**	**44**	P	**Pg**	**01 52 42.6**	**-0.4**
EVGI				S	**Sg**	**01 52 46.6**	**+0.3**
DRAG	**Dragano-Lefkad**	**0.25**	**24**	P	**Pg**	**01 52 42.9**	**-0.5**
DRAG				S	**Sg**	**01 52 47.1**	**+0.3**
KEF3	**Kipouria, Keph**	**0.26**	**197**	P	**Pg**	**01 52 43.0**	**-0.4**
KEF3				S	**Sg**	**01 52 47.1**	**+0.2**
	comp=E,1μm,0.1s						
KEF3	**Kipouria, Keph**	**0.26**	**197**	P	**Pg**	**01 52 42.7**	**-0.8**
KEF3				S	**Sg**	**01 52 46.6**	**-0.3**
VLS	**Valsamata**	**0.30**	**157**	P	**Pg**	**01 52 44.0**	**-0.1**
VLS	**Valsamata**	**0.30**	**157**	P	**Pg**	**01 52 43.5**	**-0.6**
VLS				S	**Sg**	**01 52 48.4**	**+0.3**
LKD2	**Lefkada island**	**0.38**	**26**	P	**Pg**	**01 52 45.8**	**+0.2**
LKD2				S	**Sb**	**01 52 52.1**	**-0.9**
LKD2	**Lefkada island**	**0.38**	**26**	P	**Pg**	**01 52 44.9**	**-0.8**
TSLK	**Tsoukalades, L**	**0.41**	**24**	P	**Pg**	**01 52 45.8**	**-0.4**
IGT	**Igoumenitsa**	**1.08**	**355**	P	**Pg**	**01 52 59.3**	**+0.3**
IGT				S	**Sn**	**01 53 15.7**	**+1.1**
EVR	**Evrytania**	**1.16**	**66**	P	**Pg**	**01 53 01.1**	**+0.5**
KEK	**Kerkira**	**1.36**	**338**	P	**Pb**	**01 53 03.7**	**0.0**
TYRN	**Tyrnavos**	**1.88**	**47**	P	**Pn**	**01 53 10.0**	**-0.3**

*ISK **11** 02:03:48.8,35°.83N×31°.86E,h7km,ML2.5/12*
*AFAD **11** 02:03:52.5±0.0,36.07N×31.72E,h7km±1km,ML2.3*

*GII **11** 02:03:52.6±0.6,35°.800N±0°.006×32°.170E±0°.002, h1km,Mws2.2,confirmed*
*NIC **11** 02:03:54.5,35°.68N×32°.18E,h25km±31km,Ml2.2/5*
ISC 11 02:03:50.5±1.3,35°.83N±0°.02×32°.04E±0°.06,h4km±10km, n42,σ1§36/50,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.46**	**29**	P	**Pb**	**02 04 02.5**	**+1.2**
GAZI				S	**Sb**	**02 04 09.8**	**+1.3**
GAZI				*i* AML	AML	02 04 10.0	
	comp=N,285nm,0.4s						
ALAN	**Alanya-ANTALYA**	**0.72**	**360**	Pg	**Pg**	**02 04 03.7**	**-0.7**
ALAN				Sg	**Sg**	**02 04 13.9**	**+0.1**
BOZY	**Bozyazi-Mersin**	**0.81**	**70**	Pg	**Pb**	**02 04 07.6**	**+0.4**
ALFC	**Alefka**	**0.82**	**146**	P	**Pg**	**02 04 07.2**	**+1.0**
ALFC				S	**Sg**	**02 04 17.1**	**+0.3**
ALFC				AML	AML	02 04 18.7	
	0.8nm,0.1s						
ALFC				AML	AML	02 04 19.5	
	0.6nm,0.2s						
AKMS	**Akamas**	**0.85**	**163**	P	**Pg**	**02 04 07.4**	**+0.6**
AKMS				S	**Sg**	**02 04 18.0**	**+0.2**
AKMS				AML	AML	02 04 18.8	
	0.8nm,0.1s						
AKMS				AML	AML	02 04 18.9	
	0.4nm,0.2s						
AKDN	**Akdeniz- Kıbrı**	**0.93**	**125**	Pg	**Pb**	**02 04 09.3**	**+0.1**
AKDN				Sg	**Sn**	**02 04 24.2**	**0.0**
LEF	**Lefka**	**1.00**	**135**	Pg	**Pg**	**02 04 09.7**	**+0.1**
MNVG	**Manavgat-Antal**	**1.08**	**332**	Pg	Pg	02 04 09.3	-2.0
TROD	**Troodos**	**1.11**	**142**	P	**Pg**	**02 04 11.9**	**0.0**
TROD				S	**Sg**	**02 04 25.1**	**-1.2**
TROD				AML	AML	02 04 28.8	
	0.1nm,0.3s						
TROD				AML	AML	02 04 43.1	
	0.1nm,0.6s						
KEPZ	**Antalya-Kepez**	**1.12**	**342**	P	Pg	02 04 10.0	-2.1
KEPZ				S	Sg	02 04 20.8	-5.8
KEPZ				*i* AML	AML	02 04 23.0	
	comp=N,86nm,0.8s						
NATA	**Nata**	**1.14**	**157**	P	**Pg**	**02 04 13.4**	**+1.1**
NATA				AML	AML	02 04 39.2	
	0.6nm,0.6s						
NATA				AML	AML	02 04 40.0	
	0.8nm,0.8s						
AKKU	**Akkuyu-Mersin**	**1.27**	**75**	Pn	**Pn**	**02 04 15.6**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.29**	**62**	Pn	**Pg**	**02 04 15.6**	**+0.4**
TEVE				Sn	**Sn**	**02 04 35.2**	**+2.0**
ATHAL	**Athalassa**	**1.31**	**122**	P	**Pg**	**02 04 14.9**	**-0.7**
ATHAL				S	**Sg**	**02 04 30.0**	**-2.5**
LFK	**Lefkose**	**1.34**	**114**	Pn	**Pb**	**02 04 16.1**	**-0.2**
CSS	**Mathiatis**	**1.37**	**129**	Pn	**Pn**	**02 04 16.7**	**+0.2**
CSS	**Mathiatis**	**1.37**	**129**	P	**Pn**	**02 04 15.0**	**-1.5**
CSS				S	**Sb**	**02 04 31.4**	**-3.2**
CSS	**Mathiatis**	**1.37**	**129**	P	**Pn**	**02 04 15.0**	**-1.5**
IKL	**Isikli**	**1.39**	**73**	Pn	**Pg**	**02 04 17.5**	**+0.2**
KARG	**Kargicak-Mersi**	**1.40**	**74**	Pn	**Pg**	**02 04 17.7**	**+0.3**
ASGA	**Asgata**	**1.44**	**136**	P	**Pn**	**02 04 16.9**	**-0.5**
ASGA				AML	AML	02 04 44.4	
	0.1nm,0.5s						
ASGA				AML	AML	02 04 44.5	
	0.1nm,0.4s						
AKUM	**Antalya-Kumluc**	**1.46**	**290**	P	Pn	02 04 13.1	-4.6
AKUM				S	Sn	02 04 30.9	-6.4
AKUM				*i* AML	AML	02 04 41.0	
	comp=E,58nm,0.8s						
MVOU	**Mavrovouni**	**1.54**	**122**	P	**Pn**	**02 04 17.4**	**-1.4**
MVOU				S	**Sn**	**02 04 35.5**	**-3.7**
KKBE	**Karaman, Kazim**	**1.56**	**27**	P	**Pn**	**02 04 19.7**	**+0.5**
KKBE				S	**Sn**	**02 04 39.6**	**-0.4**
SEDI	**Konya, Seydise**	**1.63**	**352**	P	**Pn**	**02 04 19.5**	**-0.7**
SEDI				S	**Sn**	**02 04 37.9**	**-3.8**
ELL	**Elmali**	**1.95**	**299**	Pn	Pn	02 04 21.3	-3.3
KONT	**Konya--Tatoy**	**2.12**	**7**	P	**Pn**	**02 04 27.7**	**+0.8**
KARA	**Karaisali**	**2.81**	**59**	Pn	**Pn**	**02 04 37.4**	**+1.0**
MMA0B	**Mount Meron ar**	**3.95**	**134**	P	**Pn**	**02 04 53.2**	**+1.1**
MMA0B	**Mount Meron ar**	**3.95**	**134**	S	**Sn**	**02 05 39.6**	**+0.6**
GEM	**Giv'at Ha'Em**	**3.98**	**130**	S	**Sn**	**02 05 39.6**

HEF	**Hetta**	**3.87**	**286**	*eP*	**Pn**	**02 19 21.9**	**+1.0**
HEF	**Hetta**	**3.87**	**286**	*eP*	**Pn**	**02 19 21.6**	**+0.7**
KIF	**Kilpisjarvi**	**4.99**	**292**	*eP*	**Pn**	**02 19 37.0**	**+0.8**
FINES	**FINESS Array B**	**7.04**	**212**	Pn	**Pn**	**02 20 03.4**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=20,slow=14,SNR=6.8						
FINES				Sn	**Sn**	**02 21 25.5**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=27,slow=22,SNR=6.6						
FINES				Lg	Lg	02 21 56.8	
	comp=Z,0.7nm,0.3s,baz=27,slow=25,SNR=5.0						
	comp=Z,2.0nm,0.8s						
FAUS	**Fauske**	**7.08**	**276**	S	**Sn**	**02 21 22.1**	**-3.9**
HFS	**Hagfors**	**11.55**	**239**	Pn	**Pn**	**02 21 04.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=55,slow=18,SNR=2.0						
HFS				Sn	**Sn**	**02 23 09.0**	**-6.8**
	comp=Z,0.2nm,0.3s,baz=56,slow=23,SNR=1.9						
HFS				Lg	Lg	02 24 18.7	
	comp=Z,0.3nm,0.3s,baz=68,slow=29,SNR=5.4						
	comp=Z,2.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**02 21 05.2**	**-2.3**
	comp=Z,8.6nm,0.9s,baz=148,slow=16,SNR=5.4						
NOA	**NORSAR Array B**	**11.74**	**246**	Pn	**Pn**	**02 21 07.6**	**-1.1**
	baz=50,slow=11,SNR=1.3						
	comp=Z,0.7nm,0.7s						
ARU	**Arti**	**16.02**	**122**	Pn	**Pn**	**02 22 03.5**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=290,slow=15,SNR=4.3						
	comp=Z,1.1nm,0.3s						
AKTO	**Aktyubinsk**	**21.04**	**133**	P	**P**	**02 23 04.9**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=324,slow=6.4,SNR=5.2						
	comp=Z,1.4nm,0.7s						
BVAR	**Borovoye Array**	**22.82**	**112**	P	**P**	**02 23 25.7**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=340,slow=8.2,SNR=4.2						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**32.29**	**105**	P	**P**	**02 24 50.8**	**+0.5**
	comp=Z,0.1nm,0.7s,baz=343,slow=7.3,SNR=1.8						
	comp=Z,0.1nm,0.7s						

CATAC ***11*** *02:31:44.9±1.3, 14°.09N×91°.96W, h23km±7km, ML3.7*
GCG ***11*** *02:31:49.8±0.3, 14°.41N×91°.66W, h50km±43km, MD3.6*
ISC 11 02:31:45.3±3.0, 14°.1N±0°.1×92°.0W±0°.2, h54km, n16,
σ0s73/18, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SULM	**Suchitepequez,**	**0.46**	**64**	*eP*			**Pn**	**02 31 57.7**	**+1.3**
RTAL	**Retalhuleu**	**0.51**	**34**	*i P*			**Pn**	**02 31 56.6**	**-0.4**
RTAL				*i S*			**Sn**	**02 32 04.6**	**-0.8**
RTAL				IAML				02 32 08.0	
	comp=Z,3μm,1.0s								
STG3	**Santiaguito 3,**	**0.73**	**34**	*eP*			**Pn**	**02 31 59.7**	**-0.1**
SMCA	**Catarina**	**0.76**	**354**	*i P*			**Pn**	**02 31 59.5**	**-0.5**
SMCA				IAML				02 32 15.3	
	comp=Z,790nm,1.0s								
SMSP	**San Marcos**	**0.89**	**13**	*i P*			**Pn**	**02 32 01.5**	**-0.6**
SMSP				*i S*			**Sn**	**02 32 14.0**	**-0.3**
SMSP				IAML				02 32 16.0	
	comp=Z,4μm,1.0s								
FUG	**Fuego 3**	**1.16**	**73**	*eP*			**Pn**	**02 32 05.3**	**-0.2**
HUEH	**Huehuetenango**	**1.30**	**21**	*i P*			**Pn**	**02 32 07.9**	**+0.5**
HUEH				IAML				02 32 08.9	
	comp=Z,1μm,1.0s								
PCG	**Pacaya**	**1.37**	**78**	*eP*			**Pn**	**02 32 08.7**	**+0.3**
NBG	**Las Nubes**	**1.66**	**73**	*eP*			**Pn**	**02 32 13.6**	**+1.3**
GUNB	**GUNB**	**1.67**	**73**	*i P*			**Pn**	**02 32 13.0**	**+0.5**
GUNB				IAML				02 32 38.0	
	comp=Z,610nm,1.0s								
LOAL	**Lomas de Alarc**	**2.15**	**92**	*i P*			**Pn**	**02 32 19.0**	**+0.2**
LOAL				IAML				02 32 51.7	
	comp=Z,2μm,1.0s								
NUBE	**Las Nubes**	**2.15**	**95**	*i P*			**Pn**	**02 32 18.5**	**-0.5**
NUBE				IAML				02 32 44.1	
	comp=Z,230nm,1.0s								
CCIG	**Comitan**	**2.17**	**356**	*i P*			**Pn**	**02 32 20.8**	**+1.5**
CCIG				IAML				02 32 53.4	
	comp=Z,140nm,1.0s								
CEVE	**Cerro Verde**	**2.31**	**96**	*i P*			**Pn**	**02 32 21.3**	**+0.1**
CEVE				IAML				02 32 53.4	
	comp=Z,390nm,1.0s								
JAYA	**Jayaque - finc**	**2.50**	**100**	*i P*			**Pn**	**02 32 23.5**	**-0.3**
JAYA				IAML				02 32 53.3	
	comp=Z,1μm,1.0s								
PMON	**Piamonte**	**2.62**	**98**	*i P*			**Pn**	**02 32 25.5**	**+0.1**
PMON				IAML				02 33 02.8	
	comp=Z,560nm,1.0s								

KRNET ***11*** *02:50:26.5±0.1, 40°.74N×74°.14E, h14km, mb3.3*
SOME ***11*** *02:50:27.6, 40°.75N×74°.22E, h15km*
KNET ***11*** *02:50:29.8±0.6, 40°.90N×74°.26E, h3km±3km, ml3.0, Error ellipse: s-maj=4.9km s-min=4.6km az=168.0*
NNC ***11*** *02:50:30.6±1.1, 40°.90N×74°.16E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=9.1km s-min=4.8km az=170.0*
ISC 11 02:50:26.2±0.8, 40°.74N±0°.03×74°.19E±0°.02, h10km, n92,
σ1s69/144, 39C-35D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.90**	**216**	⇓*iP*			**Pg**	**02 50 43.1**	**-0.4**
SFK				⇓*iS*			**Sg**	**02 50 55.7**	**+0.5**
	baz=14								
OHH	**Osh**	**1.09**	**259**	⇑*iP*			**Pb**	**02 50 46.5**	**-0.7**
OHH				⇑*iS*			**Sg**	**02 51 01.3**	**-0.1**
	baz=59								
ARLS	**Aral**	**1.12**	**5**	⇓*iP*			**Pb**	**02 50 47.7**	**-0.2**
ARLS				⇓*iS*			**Sn**	**02 51 03.7**	**-0.1**
	baz=7.0								
UCH	**Uchtor**	**1.51**	**9**	⇓P			**Pg**	**02 50 55.7**	**+0.5**
UCH				⇓S			**Sg**	**02 51 16.5**	**+1.7**
	63nm,0.4s,SNR=86								
	366nm,0.6s								
UCH	**Uchtor**	**1.51**	**9**	⇑*iP*			**Pg**	**02 50 55.2**	**0.0**
UCH				⇑*iS*			**Sg**	**02 51 16.0**	**+1.3**
	baz=11								
NRN	**Naryn**	**1.53**	**63**	⇑*iP*			**Pg**	**02 50 55.4**	**-0.3**
NRN				⇑*iS*			**Sg**	**02 51 16.9**	**+1.3**
	baz=63								
AAK	**Ala-Archa**	**1.91**	**7**	⇓P			**Pg**	**02 51 03.0**	**+0.1**
AAK				⇓S			**Sg**	**02 51 28.8**	**+1.2**
	24nm,0.3s,SNR=27								
	55nm,0.3s								
AAK	**Ala-Archa**	**1.91**	**7**	⇓*iP*			**Pg**	**02 51 02.2**	**-0.6**
AAK				⇓*iS*			**Sg**	**02 51 28.0**	**+0.4**
	baz=8.0								
EKS2	**Erkin-Say**	**1.94**	**351**	⇑P			**Pg**	**02 51 03.5**	**0.0**
EKS2				⇓S			**Sg**	**02 51 29.1**	**+0.4**
	9.3nm,0.2s,SNR=20								
	57nm,0.3s								
EKS2	**Erkin-Say**	**1.94**	**351**	⇑*iP*			**Pg**	**02 51 02.6**	**-0.9**
EKS2				⇑*iS*			**Sg**	**02 51 28.9**	**+0.2**
	baz=52								
ARK	**Arkit**	**1.98**	**303**	⇓*iP*			**Pb**	**02 51 03.0**	**+0.5**
ARK				⇓*iS*			**Sg**	**02 51 29.4**	**-0.6**
	baz=4.0								
KBK	**Karagaybulak**	**2.00**	**16**	⇑P			**Pg**	**02 51 05.2**	**+0.6**
KBK				⇓S			**Sg**	**02 51 32.1**	**+1.6**
	24nm,0.2s,SNR=32								
	152nm,0.3s								
KBK	**Karagaybulak**	**2.00**	**16**	⇑*iP*			**Pg**	**02 51 03.6**	**-0.9**
KBK				⇑*iS*			**Sg**	**02 51 30.8**	**+0.4**
	baz=17								
FRU1	**Bishkek**	**2.10**	**9**	⇑*iP*			**Pg**	**02 51 05.3**	**-1.1**
FRU1				⇑*iS*			**Sg**	**02 51 33.3**	**-0.2**
	baz=10.0								
MRKS	**Merke**	**2.13**	**341**	Pg			**Pg**	**02 51 06.5**	**-0.5**
MRKS				Lg			Lg	02 51 34.5	
	46nm,0.3s								
	158nm,0.6s								
MRKS	**Merke**	**2.13**	**341**	*eP*			**Pg**	**02 51 06.5**	**-0.5**
MRKS				*eS*			**Sg**	**02 51 34.5**	**-0.1**
	46nm,0.3s								
	158nm,0.6s								
ULHL	**Ulahol**	**2.15**	**45**	⇓P			**Pg**	**02 51 06.9**	**-0.6**
ULHL				⇓S			**Sg**	**02 51 35.4**	**0.0**
	21nm,0.3s,SNR=5.8								
	95nm,0.4s								
ULHL	**Ulahol**	**2.15**	**45**	⇑*iP*			**Pg**	**02 51 06.0**	**-1.5**
	baz=46								
ULHL				⇑*iS*			**Sg**	**02 51 35.0**	**-0.5**
	baz=46								
MNAS	**Manas**	**2.15**	**325**	⇓*iP*			**Pb**	**02 51 05.5**	**+0.1**
	baz=26								
MNAS				⇓*iS*			**Sb**	**02 51 34.0**	**+1.7**
	baz=26								
BOOM	**Boomskoye usch**	**2.19**	**36**	⇑*iP*			**Pb**	**02 51 06.4**	**+0.4**
	baz=37								
BOOM				⇑*iS*			**Sg**	**02 51 35.7**	**-0.8**
	baz=37								
DRK	**Karamyk**	**2.22**	**236**	⇓*eP*			**Pb**	**02 51 06.3**	**-0.4**
	baz=36								
DRK				⇓*eS*			**Sb**	**02 51 35.4**	**+1.1**
	baz=36								
CHMS	**Chumysh**	**2.30**	**10**	⇓P			**Pg**	**02 51 09.6**	**-0.6**
	40nm,0.4s,SNR=52								
CHMS				⇓S			**Sg**	**02 51 39.9**	**-0.1**
	92nm,0.8s								
CHMS	**Chumysh**	**2.30**	**10**	⇓Pn			**Pg**	**02 51 09.8**	**-0.4**
	44nm,0.6s								
CHMS				⇑Lg			Lg	02 51 39.6	
	43nm,0.6s								
CHMS	**Chumysh**	**2.30**	**10**	⇑*iP*			**Pb**	**02 51 07.5**	**-0.2**
	baz=11								
CHMS				⇑*iS*			**Sg**	**02 51 37.9**	**-2.1**
	baz=11								
TKM2	**Tokmak 2**	**2.42**	**25**	⇓P			**Pg**	**02 51 11.2**	**-1.4**
	14nm,0.2s,SNR=42								
TKM2				⇓S			**Sg**	**02 51 42.6**	**-1.4**
	270nm,0.6s								
TKM2	**Tokmak 2**	**2.42**	**25**	⇑Pn			**Pg**	**02 51 11.4**	**-1.2**
	6.2nm,0.3s								
TKM2				⇓Lg			Lg	02 51 45.1	
	162nm,0.6s								
TKM2	**Tokmak 2**	**2.42**	**25**	⇑*iP*			**Pb**	**02 51 09.7**	**-0.3**
	baz=26								
TKM2				⇑*iS*			**Sb**	**02 51 41.1**	**+1.2**
	baz=26								
TRKS	**Terek-Say**	**2.44**	**290**	⇓*iP*			**Pb**	**02 51 08.6**	**-1.6**
	baz=89								
TRKS				⇓*iS*			**Sb**	**02 51 39.3**	**-1.0**
	baz=89								
USP	**Ospenovka**	**2.54**	**5**	⇓P			**Pb**	**02 51 12.8**	**+0.9**
	38nm,0.6s,SNR=30								
USP	**Ospenovka**	**2.54**	**5**	⇑*iP*			**Pb**	**02 51 11.0**	**-0.8**
	baz=6.0								
USP				⇑*iS*			**Sb**	**02 51 43.6**	**+0.5**
	baz=6.0								
KDJ	**Kajisay**	**2.64**	**57**	⇑*iP*			**Pb**	**02 51 12.9**	**-0.8**
	baz=58								
KDJ				⇑*iS*			**Sb**	**02 51 47.2**	**+0.9**
	baz=58								
KST	**Kastek**	**2.66**	**29**	Pg			**Pg**	**02 51 16.4**	**-0.7**
	19nm,0.5s								
KST				Lg			Lg	02 51 51.4	
	99nm,0.5s								
KST	**Kastek**	**2.66**	**29**	*eP*			**Pg**	**02 51 16.4**	**-0.7**
	19nm,0.5s								
KST				*eS*			**Sg**	**02 51 51.4**	**-0.1**
	99nm,0.5s								
BTK	**Batken**	**2.66**	**256**	⇑*iP*			**Pb**	**02 51 12.3**	**-1.7**
	baz=56								
BTK				⇑*iS*			**Sb**	**02 51 45.8**	**-1.0**
	baz=56								
SGDS	**Sogindy**	**2.73**	**7**	Pg			**Pg**	**02 51 17.8**	**-0.7**
	8.5nm,0.3s								
SGDS				Lg			Lg	02 51 53.8	
	52nm,0.7s								
DGS	**Degeres**	**2.77**	**25**	Pg			**Pg**	**02 51 18.3**	**-0.9**
	36nm,0.6s								
DGS				Lg			Lg	02 51 54.6	
	148nm,0.9s								
DGS	**Degeres**	**2.77**	**25**	*eP*			**Pg**	**02 51 18.3**	**-0.9**
	36nm,0.6s								
DGS				*eS*			**Sg**	**02 51 54.6**	**-0.4**
	148nm,0.9s								
MTBS	**Maitube**	**2.92**	**34**	Pg			**Pg**	**02 51 21.1**	**-0.9**
	14nm,0.5s								
MTBS				Lg			Lg	02 51 59.5	
	74nm,0.4s								
MTBS	**Maitube**	**2.92**	**34**	*eP*			**Pg**	**02 51 21.1**	**-0.9**
	14nm,0.5s								
MTBS				*eS*			**Sg**	**02 51 59.5**	**-0.3**
	74nm,0.4s								
IZV	**Izvestkoviy**	**2.92**	**37**	Pg			**Pg**	**02 51 20.9**	**-1.3**
	12nm,0.6s								
IZV				Lg			Lg	02 51 59.1	
	94nm,0.5s								
IZV	**Izvestkoviy**	**2.92**	**37**	*eP*			**Pg**	**02 51 20.9**	**-1.3**
	12nm,0.6s								
IZV				*eS*			**Sg**	**02 51 59.1**	**-1.0**
	94nm,0.5s								
DZA	**Taraz**	**3.03**	**316**	Pg			**Pg**	**02 51 23.2**	**-1.1**
	24nm,0.1s								
DZA				Lg			Lg	02 52 03.3	
	125nm,0.3s								
DZA	**Taraz**	**3.03**	**316**	*eP*			**Pg**	**02 51 23.2**	**-1.1**
	24nm,0.1s								
DZA				*eS*			**Sg**	**02 52 03.2**	**-0.3**
	125nm,0.3s								
KASK	**Kaskelen**	**3.08**	**36**	⇑Lg			Lg	02 52 05.6	
TNSS	**Tian-Shan**	**3.08**	**41**	Pg			**Pg**	**02 51 24.3**	**-1.0**
	14nm,0.3s								
TNSS				Lg			Lg	02 52 05.2	
	26nm,0.5s								
TNSS	**Tian-Shan**	**3.08**	**41**	*eP*			**Pg**	**02 51 24.3**	**-1.0**
	14nm,0.3s								
TNSS				*eS*			**Sg**	**02 52 05.2**	**-0.1**
	26nm,0.5s								
KRBS	**Karabastau**	**3.15**	**20**	Pg			**Pg**	**02 51 25.3**	**-1.4**
	13nm,0.2s								
KRBS				Lg			Lg	02 52 06.6	
	39nm,0.8s								
KRBS	**Karabastau**	**3.15**	**20**	*eP*			**Pg**	**02 51 25.3**	**-1.4**
	13nm,0.2s								
KRBS				*eS*			**Sg**	**02 52 06.6**	**-0.9**
	39nm,0.8s								
MDOK	**Medeo**	**3.23**	**40**	⇑Pn			**Pb**	**02 51 22.3**	**-1.4**
	12nm,0.5s								
MDOK				Pg			**Pg**	**02 51 26.8**	**-1.2**
	17nm,0.5s								
MDOK				Lg			Lg	02 52 09.1	
	48nm,0.5s								
MDOK				Lg			Lg	02 52 10.0	
	44nm,0.6s								
MDOK	**Medeo**	**3.23**	**40**	*eP*			**Pg**	**02 51 26.9**	**-1.2**
	17nm,0.5s								
MDOK				*eS*			**Sg**	**02 52 09.1**	**-0.7**
	48nm,0.5s								
KNDC	**Almaty**	**3.23**	**39**	⇑Pn			**Pb**	**02 51 24.4**	**+0.8**
	39nm,0.8s								
KNDC				⇓Lg			Lg	02 52 10.7	
	206nm,1.1s								
ANVS	**Anan'yevo**	**3.31**	**51**	⇓*eP*			**Pb**	**02 51 22.4**	**-2.7**
	baz=51								
ANVS				⇓*eS*			**Sb**	**02 52 03.1**	**-2.3**
	baz=51								
KOTS	**Kotyrbulak**	**3.31**	**40**	Pg			**Pg**	**02 51 27.8**	**-1.8**
	24nm,0.4s								
KOTS				Lg			Lg	02 52 11.0	
	97nm,0.8s								
KOTS	**Kotyrbulak**	**3.31**	**40**	*eP*			**Pg**	**02 51 27.8**	**-1.8**
	24nm,0.4s								
KOTS				*eS*			**Sg**	**02 52 11.0**	**-1.5**
	97nm,0.8s								
IUG	**Iuzhnay**	**3.43**	**296**	*eP*			**Pg**	**02 51 30.2**	**-1.6**
	8.4nm,0.2s								
IUG				*eS*			**Sg**	**02 52 15.1**	**-1.2**
	174nm,0.5s								
KTBS	**Karatobe**	**3.50**	**31**	Pg			**Pg**	**02 51 31.4**	**-1.9**
	9.8nm,0.5s								
KTBS				Lg			Lg	02 52 17.2	
	44nm,0.6s								
KTBS	**Karatobe**	**3.50**	**31**	*eP*			**Pg**	**02 51 31.4**	**-1.9**
	9.8nm,0.5s								
KTBS				*eS*			**Sg**	**02 52 17.2**	**-1.4**
	44nm,0.6s								
KUU	**Kurty**	**3.53**	**26**	Pg			**Pg**	**02 51 31.0**	**-2.9**
	9.0nm,0.5s								
KUU				Lg			Lg	02 52 16.7	
	49nm,0.9s								
KUU	**Kurty**	**3.53**	**26**	*eP*			**Pg**	**02 51 31.0**	**-2.9**
	9.0nm,0.5s								
KUU				*eS*			**Sg**	**02 52 16.7**	**-2.9**
	49nm,0.9s								
KK31	**Karatay Array**	**3.62**	**312**	⇑Pn			**Pb**	**02 51 26.7**	**-3.6**
	0.2nm,0.3s,baz=129,slow=12,SNR=31								
KK31				⇓Pg			**Pg**	**02 51 34.4**	**-1.2**
	3.4nm,0.6s,baz=126,slow=16,SNR=22								
KK31				Lg			Lg	02 52 20.9	
	34nm,0.4s,baz=137,slow=29,SNR=10.0								
KKAR	**Karatay Array**	**3.62**	**312**	⇑*iP*			**Pn**	**02 51 25.7**	**+3.3**
	baz=12								
KKAR				⇑*iS*			**Sn**	**02 52 08.6**	**+3.4**
	baz=12								
CHKK	**Chushkaly**	**3.74**	**33**	Pg			**Pg**	**02 51 35.9**	**-1.9**
	7.3nm,0.4s								
CHKK				Lg			Lg	02 52 25.1	
	33nm,0.2s								
CHKK	**Chushkaly**	**3.74**	**33**	*eP*			**Pg**	**02 51 35.9**	**-1.9**
	7.3nm,0.4s								
CHKK				*eS*			**Sg**	**02 52 25.1**	**-1.3**
	33nm,0.2s								
SATY	**Saty**	**3.91**	**52**	Pg			**Pg**	**02 51 38.4**	**-2.7**
	6.7nm,0.6s								
SATY				Lg			Lg	02 52 29.3	
	24nm,0.7s								
SATY	**Saty**	**3.91**	**52**	*eP*			**Pg**	**02 51 38.4**	**-2.7**
	6.7nm,0.6s								
SATY				*eS*			**Sg**	**02 52 29.3**	**-2.4**
	24nm,0.7s								
BRLS	**Borolday**	**3.98**	**307**	Pg			**Pg**	**02 51 39.9**	**-2.4**
	5.6nm,0.3s								
BRLS				Lg			Lg	02 52 32.1	
	22nm,0.7s								
BRLS	**Borolday**	**3.98**	**307**	*eP*			**Pg**	**02 51 39.9**	**-2.4**
	5.6nm,0.3s								
BRLS				*eS*			**Sg**	**02 52 32.1**	**-1.8**
	22nm,0.7s								
KURS	**Kuram**	**4.04**	**46**	Pg			**Pg**	**02 51 41.4**	**-2.1**
	3.5nm,0.5s								
KURS				Lg			Lg	02 52 34.4	
	9.9nm,0.8s								
KURS	**Kuram**	**4.04**	**46**	*eP*			**Pg**	**02 51 41.4**	**-2.1**
	3.5nm,0.5s								
KURS				*eS*			**Sg**	**02 52 34.4**	**-1.5**
	9.9nm,0.8s								
BTLS	**Baital**	**4.30**	**359**	Pg			**Pg**	**02 51 46.9**	**-1.6**
	3.0nm,0.7s								
BTLS				Lg			Lg	02 52 43.9	
	18nm,0.7s								
BTLS	**Baital**	**4.30**	**359**	*eP*			**Pg**	**02 51 46.9**	**-1.6**
	3.0nm,0.7s								
BTLS				*eS*			**Sg**	**02 52 43.9**	**-0.3**
	18nm,0.7s								
KPKS	**Kokpek**	**4.31**	**49**	Pg			**Pg**	**02 51 45.8**	**-3.0**
	9.5nm,0.6s								
KPKS				Lg			Lg	02 52 42.0	
	20nm,0.7s								
KPKS	**Kokpek**	**4.31**	**49**	*eP*			**Pg**	**02 51 45.8**	**-3.0**
	9.5nm,0.6s								
KPKS				*eS*			**Sg**	**02 52 42.0**	**-2.7**
	20nm,0.7s								
UZB	**Uzynbulak**	**4.33**	**55**	Pg			**Pg**	**02 51 46.6**	**-2.6**
	7.1nm,0.3s								
UZB				Lg			Lg	02 52 42.7	
	14nm,0.6s								
UZB	**Uzynbulak**	**4.33**	**55**	*eP*			**Pg**	**02 51 46.6**	**-2.6**
	7.1nm,0.3s								
UZB				*eS*			**Sg**	**02 52 42.7**	**-2.6**
	14nm,0.6s								
ARXS	**Arharly**	**4.39**	**37**	Pg			**Pg**	**02 51 46.9**	**-3.4**
	7.5nm,0.7s								
ARXS				Lg			Lg	02 52 43.9	
	34nm,0.9s								
ARXS	**Arharly**	**4.39**	**37**	*eP*			**Pg**	**02 51 46.9**	**-3.4**
	7.5nm,0.7s								
ARXS				*eS*			**Sg**	**02 52 43.9**	**-3.2**
	34nm,0.9s								
SHLS	**Shalkode**	**4.61**	**57**	Pg			**Pg**	**02 51 56.8**	**+2.3**
	7.2nm,0.3s								
SHLS				Lg			Lg	02 53 00.7	
	16nm,0.4s								
SHLS	**Shalkode**	**4.61**	**57**	*eP*			**Pg**	**02 51 56.8**	**+2.3**
	7.2nm,0.3s								
SHLS				*eS*			**Sg**	**02 53 00.7**	**+6.4**
	16nm,0.4s								
BLB	**Baldybastay**	**4.62**	**42**	Pg			**Pg**	**02 51 51.9**	**-2.7**
	6.8nm,0.1s								
BLB				Lg			Lg	02 52 52.5	
	18nm,0.4s								
PDGK	**Podgornoye**	**4.72**	**55**	Pg			**Pg**	**02 51 53.7**	**-2.9**
	2.2nm,0.7s								
PDGK				Lg			Lg	02 52 55.3	
	5.0nm,0.8s								
PDGK	**Podgornoye**	**4.72**	**55**	⇑Pg			**Pg**	**02 51 58.3**	**+1.7**
	4.4nm,0.7s								
PDGK				⇑Lg			Lg	02 53 00.6	
	21nm,0.9s								
KNOS	**Konyrlen**	**5.16**	**44**	Pg			**Pg**	**02 52 02.4**	**-2.7**
	5.8nm,0.5s								
KNOS				Lg			Lg	02 53 10.3	
	12nm,0.6s								
KTMS	**Ketmen**	**5.32**	**57**	Pg			**Pg**	**02 52 06.9**	**-1.2**
	1.5nm,0.4s								
KTMS				Lg			Lg	02 53 18.2	
	3.2nm,0.2s								
KTMS	**Ketmen**	**5.32**	**57**	*eP*			**Pg**	**02 52 06.9**	**-1.2**
	1.5nm,0.4s								
KTMS				*eS*			**Sg**	**02 53 18.2**	**+1.2**
	3.2nm,0.2s								
DJR	**Jarkent**	**5.48**	**47**	Pg			**Pg**	**02 52 09.4**	**-1.7**
	3.8nm,0.4s								
DJR				Lg			Lg	02 53 22.2	
	7.6nm,0.7s								
DJR	**Jarkent**	**5.48**	**47**	*eP*			**Pg**	**02 52 09.4**	**-1.7**
	3.8nm,0.4s								
DJR				*eS*			**Sg**	**02 53 22.2**	**+0.2**
	7.6nm,0.7s								
KAPS	**Kapalarasan**	**5.91**	**38**	Pg			**Pg**	**02 52 17.3**	**-2.2**
	2.5nm,0.5s								
KAPS				Lg			Lg	02 53 35.9	
	5.8nm,0.6s								
KAPS	**Kapalarasan**	**5.91**	**38**	*eP*			**Pg**	**02 52 17.3**	**-2.2**
	2.5nm,0.5s								
KAPS				*eS*			**Sg**	**02 53 35.9**	**-0.1**
	5.8nm,0.6s								
OTUK	**Ortayu**	**7.62**	**351**	⇑Lg			Lg	02 54 25.3	
	16nm,1.0s				

BEO ***11*** *03:33:45.3±0.5, 41°10'N×20°21'E, h0km, ML2.3/6*
ISC 11 03:33:44.7±0.9, 41°19'N±0'02×20°23'E±0'02, h15km±8km, n35, σ1936/63, 4C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**300**	P	**Pg**	**03 33 50.2**	**-1.0**
	baz=298						
TIR				S	**Sg**	**03 33 56.0**	**+0.3**
	baz=298						
TIR				AMP			
	comp=N,1.7nm,0.2s,baz=298						
TIR	**Tirane**	**0.32**	**300**	*e*Pg	**Pg**	**03 33 50.1**	**-1.2**
TIR				*e*Sg	**Sb**	**03 33 56.7**	**-0.3**
OHR	**Ohrid**	**0.44**	**100**	*e*Pg	**Pg**	**03 33 52.7**	**-0.8**
OHR				*e*Sg	**Sb**	**03 34 00.2**	**-0.4**
OHR	**Ohrid**	**0.44**	**100**	↑*i*Pg	**Pg**	**03 33 52.7**	**-0.8**
OHR				*i* Sg	**Sg**	**03 34 00.1**	**+0.6**
OHR				*e*Lg	Lg	03 34 01.0	
	comp=N,162nm,0.4s						
OHR				*e*Lg	Lg	03 34 01.5	
	comp=E,153nm,0.5s						
PHP	**Peshkopia**	**0.52**	**18**	P	**Pg**	**03 33 54.3**	**-0.7**
	baz=15						
PHP				S	**Sb**	**03 34 02.4**	**-0.6**
	baz=15						
PHP				AMP			
	comp=E,0.3nm,0.4s,baz=15						
PUK	**Puka**	**0.89**	**344**	P	**Pb**	**03 34 01.5**	**-0.4**
	baz=343						
PUK				S	**Sn**	**03 34 14.9**	**-0.6**
	baz=343						
PUK				AMP			
	comp=E,0.5nm,0.2s,baz=343						
VLO	**Vlora**	**0.91**	**218**	P	**Pb**	**03 34 02.5**	**+0.4**
	baz=219						
VLO				S	**Sn**	**03 34 15.6**	**-0.1**
	baz=219						
FNA	**Florina**	**0.96**	**115**	P	**Pb**	**03 34 01.6**	**-1.5**
	baz=115						
FNA				S	**Sn**	**03 34 16.6**	**-0.6**
	baz=115						
FNA	**Florina**	**0.96**	**115**	*e*Pg	**Pb**	**03 34 01.2**	**-1.9**
FNA				*e*Sg	**Sn**	**03 34 16.5**	**-0.6**
FNA	**Florina**	**0.96**	**115**	*i* Pg	**Pb**	**03 34 01.2**	**-1.9**
FNA				*i* Sg	**Sn**	**03 34 16.8**	**-0.3**
ULC	**Ulcinj**	**1.07**	**317**	↑*i*Pg	**Pb**	**03 34 03.7**	**-1.2**
ULC				*i* Sg	**Sg**	**03 34 21.5**	**+2.2**
ULC	**Ulcinj**	**1.07**	**317**	*i* Pg	**Pb**	**03 34 03.5**	**-1.4**
LSK	**Leskovik**	**1.08**	**165**	P	**Pb**	**03 34 04.3**	**-0.7**
	baz=165						
LSK				S	**Sg**	**03 34 20.2**	**+0.7**
	baz=165						
BCI	**Bajram Curri**	**1.18**	**354**	P	**Pn**	**03 34 06.3**	**-0.5**
	baz=354						
BCI				S	**Sg**	**03 34 23.2**	**+0.3**
	baz=354						
BCI				AMP			
	comp=E,0.4nm,0.5s,baz=354						
SKO	**Skopje**	**1.20**	**49**	*e*Pg	**Pb**	**03 34 07.2**	**+0.1**
SKO				*e*Sg	**Sg**	**03 34 24.6**	**+1.1**
SKO	**Skopje**	**1.20**	**49**	*i* Pg	**Pb**	**03 34 07.1**	**0.0**
SKO				*i* Sg	**Sg**	**03 34 24.0**	**+0.5**
DRME	**Dracevica, Mon**	**1.27**	**322**	↑*i*Pg	**Pn**	**03 34 07.3**	**-0.6**
DRME				*i* Sg	**Sg**	**03 34 27.6**	**+2.0**
SRN	**Sarande**	**1.32**	**188**	P	**Pg**	**03 34 10.1**	**0.0**
	baz=189						
SRN				S	**Sg**	**03 34 28.8**	**+1.5**
	baz=189						
BUM	**Brajici-Budva**	**1.49**	**319**	↑*i*Pg	**Pb**	**03 34 11.7**	**-0.5**
BUM				*i* Sg	**Sg**	**03 34 35.7**	**+2.9**
STIP	**Stip**	**1.56**	**70**	*i* Pg	**Pg**	**03 34 15.1**	**+0.5**
STIP				*i* Sg	**Sg**	**03 34 41.2**	**+6.4**
IGT	**Igoumenitsa**	**1.66**	**177**	P	**Pb**	**03 34 14.9**	**0.0**
	baz=178						
IGT				S	**Sg**	**03 34 38.5**	**+0.4**
	baz=178						
GRG	**Griva**	**1.66**	**97**	*i* Pg	**Pn**	**03 34 13.6**	**+0.3**
CEME	**Cevo**	**1.67**	**325**	*e*Pn	**Pb**	**03 34 15.1**	**-0.1**
CEME				*i* Sn	**Sg**	**03 34 41.0**	**+2.4**
IVA	**Berane**	**1.70**	**352**	*e*Pn	**Pg**	**03 34 16.9**	**-0.5**
IVA				*i* Sn	**Sg**	**03 34 40.9**	**+1.5**
KOME	**Kolasin**	**1.74**	**343**	↓*i*Pn	**Pb**	**03 34 17.0**	**+0.5**
KOME				*i* Sn	**Sg**	**03 34 42.7**	**+1.9**
VAY	**Valandovo**	**1.77**	**85**	*i* Pn	**Pb**	**03 34 17.0**	**+0.1**
VAY				*e*Lg	Lg	03 34 44.9	
	comp=N,27nm,0.8s						
VAY				*e*Lg	Lg	03 34 46.4	
	comp=E,26nm,0.8s						
HCY	**Herceg Novi**	**1.81**	**315**	↓*i*Pn	**Pb**	**03 34 16.9**	**-0.6**
HCY				*i* Sn	**Sg**	**03 34 43.7**	**+0.9**
PRVS	**Prvonek**	**1.91**	**46**	*e*Pn	**Pg**	**03 34 20.3**	**-1.0**
PRVS				*e*Sn	**Sg**	**03 34 44.3**	**-1.8**
KNT	**Kendrikon**	**2.02**	**90**	*i* Pn	**Pn**	**03 34 18.5**	**+0.3**
TREB	**Trebinje**	**2.07**	**318**	*e*Pn	**Pb**	**03 34 20.7**	**-1.3**
TREB				*e*Sn	**Sb**	**03 34 49.2**	**+1.6**
SJES	**Sjenica**	**2.08**	**355**	*e*Pn	**Pg**	**03 34 24.0**	**-0.6**
SJES				*e*Sn	**Sg**	**03 34 51.1**	**-0.5**
PEHC	**Pehcevo**	**2.09**	**73**	*i* Pn	**Pg**	**03 34 20.6**	**+1.2**
PEHC				*i* Sg	**Sg**	**03 34 52.8**	**+0.8**
PLE	**Pljevlja**	**2.23**	**344**	*e*Pn	**Pb**	**03 34 24.0**	**-0.7**
IVAS	**Ivanjica**	**2.39**	**359**	*e*Pn	**Pb**	**03 34 27.7**	**+0.3**
DIVS	**Divibare**	**2.91**	**357**	*e*Pn	**Pb**	**03 34 35.5**	**-0.9**

IDC ***11*** *03:40:07.0±1.2, 56°59N×148°66W, h0km, mb3.7/10, mbtmp3.8/14, ML3.5/4, MS2.9/6, Error ellipse: s-maj=30.2km s-min=15.7km az=19.0*
NEIC ***11*** *03:40:09.7±1.4, 56°46N±0°06×148°82W±0°06, h25km±8km, mb3.8/2, ML4.0/72, ML3.8(AEIC), Error ellipse: s-maj=9.6km s-min=3.9km az=195.0*
AEIC ***11*** *03:40:11.8±1.7, 56°41N±0°07×148°74W±0°09, h14km±6km, Error ellipse: s-maj=11.0km s-min=7.3km az=166.0*
ISC 11 03:40:10.4±1.4, 56°49N±0°08×148°77W±0°05, h28km±23km, n339, σ1103/202, mb3.8/11, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.45**	**304**	Pn	Pn	03 40 47.6	-0.8
KDAK				Sn	**Sn**	**03 41 14.5**	**-2.8**
KDAK	**Kodiak Island**	**2.45**	**304**	Pn	Pn	03 40 47.7	-0.8
	6.8nm,0.3s,baz=116,slow=6.3,SNR=238						
KDAK				Sn	**Sn**	**03 41 14.7**	**-2.7**
	19nm,0.3s,baz=232,slow=21,SNR=56						
KDAK				LR	LR	03 41 56.3	
	comp=Z,124nm,18.5s,baz=63,slow=45 17nm,0.3s						
OHAK	**Old Harbor**	**2.59**	**288**		Pn	03 40 49.3	-1.1
OHAK				Sn	**Sn**	**03 41 17.1**	**-3.6**
OHAK	**Old Harbor**	**2.59**	**288**	P	Pn	03 40 49.1	-1.2
OHAK	**Old Harbor**	**2.59**	**288**	P	Pn	03 40 49.2	-1.1
	baz=107						
OHAK				S	**Sn**	**03 41 17.2**	**-3.6**
	baz=107						
Q20K	**Shuyak Island**	**2.88**	**319**	P	Pn	03 40 54.2	-0.3
	baz=137						
Q20K				S	**Sn**	**03 41 26.4**	**-1.7**
	baz=137						
SYI	**Shuyak Island**	**2.88**	**319**		Pn	03 40 53.8	-0.6
SYI				Sn	**Sn**	**03 41 26.8**	**-1.3**
SYI				IAML		03 41 27.9	
	comp=E,277nm,0.3s						
SYI				IAML		03 41 28.0	
	comp=N,249nm,0.3s						
SII	**Sitkinak Islan**	**3.00**	**274**	Pn	Pn	03 40 54.8	-1.2
SII				IAML		03 41 28.2	
	comp=N,419nm,0.7s						
SII				IAML		03 41 28.5	
	comp=E,332nm,0.7s						
SII	**Sitkinak Islan**	**3.00**	**274**	P	Pn	03 40 54.6	-1.4
SII	**Sitkinak Islan**	**3.00**	**274**	P	Pn	03 40 54.8	-1.2
	baz=91						
SII				S	**Sn**	**03 41 27.9**	**-3.1**
	baz=91						
Q23K	**Middleton Isla**	**3.22**	**23**	Pn	Pn	03 40 58.3	-0.7
Q23K				Sn	**Sn**	**03 41 32.7**	**-3.6**
Q23K				IAML		03 41 35.5	
	comp=N,309nm,1.1s						
Q23K				IAML		03 41 40.7	
	comp=E,254nm,1.4s						
Q23K	**Middleton Isla**	**3.22**	**23**	P	Pn	03 40 58.5	-0.5
	baz=204						
Q23K				S	**Sn**	**03 41 34.3**	**-2.0**
	baz=204						
MID	**Middleton Isla**	**3.22**	**23**	Pn	Pn	03 40 58.4	-0.6
MID					**Sn**	**03 41 32.8**	**-3.5**
MID				IAML		03 41 35.5	
	comp=N,290nm,0.8s						
MID				IAML		03 42 47.8	
	comp=E,274nm,1.4s						
MID	**Middleton Isla**	**3.22**	**23**	P	Pn	03 40 58.5	-0.5
CNPM	**China Poot**	**3.31**	**338**		Pn	03 40 59.2	-1.1
CNPM				Sn	**Sn**	**03 41 36.2**	**-2.5**
BRSE	**Bradley Lake S**	**3.42**	**343**		Pn	03 41 00.8	-1.0
BRSE					**Sn**	**03 41 38.6**	**-2.8**
BRSE	**Bradley Lake S**	**3.42**	**343**	P	Pn	03 41 00.8	-1.0
	baz=162						
BRSE				S	**Sn**	**03 41 39.2**	**-2.2**
	baz=162						
BRLK	**Bradley Lake**	**3.47**	**342**	Pn	Pn	03 41 01.2	-1.2
BRLK				Sn	**Sn**	**03 41 39.7**	**-2.9**
HOM	**Homer**	**3.52**	**336**		Pn	03 41 02.7	-0.4
HOM				IAML		03 41 44.9	
	comp=N,300nm,0.7s						
HOM				IAML		03 41 50.5	
	comp=E,358nm,0.8s						
HOM	**Homer**	**3.52**	**336**	P	Pn	03 41 02.4	-0.8
	baz=154						
HOM				S	**Sn**	**03 41 43.2**	**-0.6**
	baz=154						
Q19K	**Cape Douglas,**	**3.58**	**315**		Pn	03 41 03.6	-0.4
Q19K				IAML		03 41 52.5	
	comp=E,531nm,1.0s						
Q19K	**Cape Douglas,**	**3.58**	**315**	P	Pn	03 41 03.7	-0.3
	baz=132						
Q19K				S	**Sn**	**03 41 44.9**	**-0.4**
	baz=132						
P23K	**Montague Islan**	**3.59**	**11**		Pn	03 41 03.5	-0.6
P23K					**Sn**	**03 41 43.3**	**-2.2**
P23K	**Montague Islan**	**3.59**	**11**	P	Pn	03 41 03.5	-0.6
	baz=192						
P23K				S	**Sn**	**03 41 43.3**	**-2.2**
	baz=192						
SEW	**Seward**	**3.64**	**355**	Pn	Pn	03 41 03.3	-1.5
SEW	**Seward**	**3.64**	**355**	P	Pn	03 41 03.8	-1.0
	baz=174						
KAHG	**Katmai Hook Gl**	**3.71**	**305**		**Pn**	**03 41 06.2**	**+0.4**
AU22	**Augustine Moun**	**3.78**	**322**		**Pn**	**03 41 06.8**	**+0.1**
CHIR	**Chirikof Islan**	**3.89**	**263**	Pn	Pn	03 41 06.9	-1.3
CHIR				IAML		03 41 50.3	
	comp=E,210nm,0.5s						
CHIR	**Chirikof Islan**	**3.89**	**263**	P	Pn	03 41 07.1	-1.1
	baz=79						
P19K	**Oil Pt**	**3.96**	**325**		**Pn**	**03 41 09.2**	**0.0**
P19K				IAML		03 41 57.6	
	comp=E,300nm,0.5s						
P19K				IAML		03 41 58.5	
	comp=N,386nm,0.5s						
P19K	**Oil Pt**	**3.96**	**325**	P	Pn	03 41 08.6	-0.5
	baz=142						
O22K	**Cooper Landing**	**4.03**	**353**		Pn	03 41 09.2	-0.9
O22K				IAML		03 41 59.1	
	comp=N,349nm,0.8s						
O22K				IAML		03 42 01.9	
	comp=E,307nm,0.4s						
O22K	**Cooper Landing**	**4.03**	**353**	P	Pn	03 41 09.6	-0.6
	baz=172						
HIN	**Hinchinbrook I**	**4.09**	**16**		Pn	03 41 10.7	-0.3
SLKM	**Skilak Lake**	**4.10**	**350**		Pn	03 41 10.1	-1.0
O20K	**Slope Mountain**	**4.13**	**332**	P	Pn	03 41 11.0	-0.6
	baz=149						
KAIM	**Kayak Island**	**4.14**	**32**	Pn	**Pn**	**03 41 11.7**	**0.0**
KAIM	**Kayak Island**	**4.14**	**32**	P	**Pn**	**03 41 11.8**	**+0.1**
	baz=215						
CNTC	**Contact Creek**	**4.24**	**298**		Pn	03 41 12.1	-1.1
Q17K	**Contact Creek**	**4.24**	**298**	P	Pn	03 41 12.1	-1.1
	baz=113						
EYAK	**Cordova Ski Ar**	**4.37**	**20**		**Pn**	**03 41 14.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.37**	**20**	P	**Pn**	**03 41 14.8**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.37**	**20**	P	**Pn**	**03 41 14.7**	**-0.1**
	baz=202						
SUCK	**Suckling Hills**	**4.45**	**34**		**Pn**	**03 41 16.1**	**+0.1**
SUCK				IAML		03 42 09.7	
	comp=E,180nm,1.4s						
RAGM	**Ragged Mountai**	**4.46**	**27**	Pn	**Pn**	**03 41 16.3**	**+0.2**
CAPN	**Captain Cook N**	**4.47**	**345**	Pn	Pn	03 41 15.4	-0.7
CAPN				IAML		03 42 12.3	
	comp=E,243nm,0.5s						
CAPN				IAML		03 42 15.9	
	comp=N,241nm,0.7s						
RDSO	**Redoubt South**	**4.49**	**334**		Pn	03 41 15.4	-1.2
RSO	**Redoubt South**	**4.50**	**334**	Pn	Pn	03 41 16.1	-0.6
P18K	**Big Mountain,**	**4.50**	**313**		Pn	03 41 15.9	-0.9
P18K	**Big Mountain,**	**4.50**	**313**	P	Pn	03 41 15.8	-0.9
	baz=128						
RDT	**Redoubt**	**4.51**	**337**		Pn	03 41 15.4	-1.4
HMT	**Hamilton**	**4.53**	**30**	Pn	**Pn**	**03 41 17.5**	**+0.5**
NICHA	**Nichawak Mount**	**4.53**	**32**		**Pn**	**03 41 17.3**	**+0.3**
DFR	**Drift River**	**4.59**	**335**		Pn	03 41 16.8	-1.2
NCT	**North Crescent**	**4.63**	**334**		Pn	03 41 17.3	-1.1
RC01	**Rabbit Creek A**	**4.64**	**354**	Pn	Pn	03 41 17.4	-1.1
RC01				IAML		03 42 10.8	
	comp=N,61nm,0.5s						
RC01				IAML		03 42 11.6	
	comp=E,120nm,0.4s						
RC01	**Rabbit Creek A**	**4.64**	**354**	P	Pn	03 41 17.9	-0.6
	baz=173						
O19K	**Port Alsworth**	**4.72**	**324**	Pn	Pn	03 41 18.7	-0.9
O19K	**Port Alsworth**	**4.72**	**324**	P	Pn	03 41 18.8	-0.8
	baz=140						
BERG	**Berg Lake**	**4.73**	**32**		**Pn**	**03 41 19.8**	**0.0**
O18K	**Koktuh Hills**	**4.79**	**317**	Pn	Pn	03 41 19.3	-1.4
O18K				IAML		03 42 14.8	
	comp=N,68nm,1.1s						
O18K	**Koktuh Hills**	**4.79**	**317**	P	Pn	03 41 20.0	-0.6
	baz=133						
SNH	**Sunshine Point**	**4.84**	**38**		**Pn**	**03 41 21.8**	**+0.4**
SNH				IAML		03 42 15.5	
	comp=E,144nm,1.3s						
SNH				IAML		03 42 15.6	
	comp=N,121nm,0.3s						
DIV	**Divide**	**4.91**	**17**	Pn	**Pn**	**03 41 22.4**	**+0.1**
KHIT	**Khitrov Hills**	**4.91**	**34**		**Pn**	**03 41 22.4**	**0.0**
P17K	**Kvichak River**	**4.91**	**307**		**Pn**	**03 41 22.4**	**+0.1**
P17K	**Kvichak River**	**4.91**	**307**	P	**Pn**	**03 41 22.4**	**+0.1**
	baz=121						
KNK	**Knik Glacier**	**4.94**	**2**		**Pn**	**03 41 22.5**	**-0.1**
KNK				IAML		03 42 24.4	
	comp=E,74nm,0.8s						
KNK				IAML		03 42 29.6	
	comp=N,52nm,0.6s						
KNK	**Knik Glacier**	**4.94**	**2**	P	**Pn**	**03 41 22.6**	**-0.1**
	baz=182						
BMRM	**Bremner River**	**4.99**	**24**	Pn	**Pn**	**03 41 23.1**	**-0.2**
BMRM	**Bremner River**	**4.99**	**24**	P	**Pn**	**03 41 23.5**	**+0.2**
	baz=207						
WAX	**Waxell Ridge**	**5.04**	**36**		**Pn**	**03 41 24.2**	**+0.1**
SPCR	**Spurr Chakacha**	**5.05**	**341**		Pn	03 41 23.1	-1.1
SPCN	**Chakachatna No**	**5.07**	**341**		Pn	03 41 23.8	-0.6
SUA	**Susitna One**	**5.09**	**349**		Pn	03 41 23.7	-1.2
SUA	**Susitna One**	**5.09**	**349**	P	Pn	03 41 23.8	-1.0
	baz=168						
SPCP	**Crater Peak Br**	**5.10**	**341**		Pn	03 41 24.2	-0.8
SPCG	**Spurr Capps Gl**	**5.10**	**342**		Pn	03 41 24.3	-0.6
PMR	**Palmer**	**5.12**	**358**		Pn	03 41 24.4	-0.7
PMR	**Palmer**	**5.12**	**358**	P	Pn	03 41 24.9	-0.2
PMR	**Palmer**	**5.12**	**358**	P	Pn	03 41 24.6	-0.5
	baz=178						
SPBG	**Spurr Blockage**	**5.13**	**340**		Pn	03 41 24.6	-0.8
MESA	**MESA**	**5.16**	**41**		**Pn**	**03 41 25.8**	**0.0**
MESA				IAML		03 42 32.0	
	comp=E,115nm,1.2s						
MESA	**MESA**	**5.16**	**41**	P	**Pn**	**03 41 26.0**	**+0.2**
	baz=226						
CRQM	**Cirque**	**5.19**	**32**	Pn	Pn	03 41 25.8	-0.4
CRQM				IAML		03 42 25.5	
	comp=E,114nm,0.6s						
KLU	**Klutina**	**5.23**	**15**	P	**Pn**	**03 41 26.8**	**+0.1**
	baz=197						
N19K	**Bonanza Creek**	**5.26**	**328**	Pn	Pn	03 41 26.2	-1.0
N19K	**Bonanza Creek**	**5.26**	**328**	P	Pn	03 41 26.1	-1.0
	baz=144						
STLK	**Strandline Lak**	**5.26**	**344**		Pn	03 41 26.5	-0.7
SPNN	**North Nagishla**	**5.29**	**339**		Pn	03 41 27.2	-0.5
ISLE	**Juniper Island**	**5.32**	**37**	Pn	Pn	03 41 27.6	-0.4
ISLE				IAML		03 42 25.6	
	comp=E,81nm,0.3s						
ISLE				IAML		03 42 28.8	
	comp=N,95nm,1.0s						
M22K	**Willow**	**5.32**	**353**	Pn	**Pn**	**03 41 27.9**	**+0.1**
M22K				IAML		03 42 41.7	
	comp=E,62nm,0.6s						
M22K				IAML		03 42 51.8	
	comp=N,91nm,1.4s						
SML	**Sawmill**	**5.34**	**2**	Pn	**Pn**	**03 41 28.2**	**+0.1**
SML				IAML		03 42 32.4	
	comp=N,75nm,0.5s						
SML				IAML		03 42 37.2	
	comp=E,54nm,0.6s						
SML	**Sawmill**	**5.34**	**2**	P	**Pn**	**03 41 28.4**	**+0.3**
	baz=182						
M23K	**Glacier View**	**5.34**	**5**		**Pn**	**03 41 28.3**	**0.0**
M23K	**Glacier View**	**5.34**	**5**	P	**Pn**	**03 41 28.3**	**0.0**
	baz=186						
CHGN	**Chignik**	**5.36**	**272**		Pn	03 41 27.3	-1.1
CHGN				IAML		03 42 25.6	
	comp=N,74nm,0.7s						
CHGN				IAML		03 42 30.9	
	comp=E,82nm,0.5s						
SCM	**Sheep Creek Mo**	**5.41**	**7**	Pn	**Pn**	**03 41 29.2**	**0.0**
SCM	**Sheep Creek Mo**	**5.41**	**7**	P	**Pn**	**03 41 29.7**	**+0.5**
	baz=188						
VRDI	**Verde Repeater**	**5.49**	**28**	Pn	Pn	03 41 30.1	-0.3
P16K	**Nushagak River**	**5.55**	**301**		**Pn**	**03 41 31.4**	**+0.4**
P16K	**Nushagak River**	**5.55**	**301**	P	**Pn**	**03 41 31.5**	**+0.4**
	baz=114						
N25K	**Chitina, Valde**	**5.56**	**21**	P	**Pn**	**03 41 31.6**	**+0.3**
	baz=204						
SAMH	**Samovar Hills**	**5.57**	**46**		**Pn**	**03 41 32.3**	**+0.9**
GLB	**Gilahina Butte**	**5.59**	**25**		**Pn**	**03 41 31.7**	**+0.1**
N18K	**Kilae Creek**	**5.61**	**321**	Pn	Pn	03 41 31.0	-0.9
N18K	**Kilae Creek**	**5.61**	**321**	P	Pn	03 41 30.9	-0.9
	baz=136						
TABL	**Table Mountain**	**5.63**	**42**		**Pn**	**03 41 33.0**	**+0.7**
SKT	**Skwentna**	**5.68**	**347**		Pn	03 41 32.2	-0.7
MCARA	**McCarthy VSAT**	**5.74**	**29**		**Pn**	**03 41 34.2**	**+0.6**
MCARA	**McCarthy VSAT**	**5.74**	**29**	P	**Pn**	**03 41 34.5**	**+0.9**
	baz=213						
PCA	**Pinnacle**	**5.76**	**48**		**Pn**	**03 41 34.5**	**+0.5**
PINM	**Pinnacle**	**5.76**	**48**	P	**Pn**	**03 41 34.6**	**+0.6**
	baz=234						
M24K	**Tolsona, Glenn**	**5.79**	**12**		**Pn**	**03 41 34.2**	**-0.1**
M24K	**Tolsona, Glenn**	**5.79**	**12**	P	**Pn**	**03 41 35.3**	**+0.9**
	baz=194						
SVW2	**Sparrevohn**	**5.82**	**325**		Pn	03 41 33.5	-1.2
SVW2	**Sparrevohn**	**5.82**	**325**	P	Pn	03 41 33.4	-1.3
O16K	**Kokwok River B**	**5.84**	**306**		Pn	03 41 34.5	-0.6
O16K	**Kokwok River B**	**5.84**	**306**	P	**Pn**	**03 41 34.9**	**-0.1**
	baz=119						
M20K	**Styx River**	**5.85**	**339**	Pn	Pn	03 41 34.7	-0.6
M20K	**Styx River**	**5.85**	**339**	P	Pn	03 41 34.4	-0.8
	baz=156						
BARN	**Barnard Glacie**	**5.89**	**36**		**Pn**	**03 41 36.2**	**+0.4**
PNL	**Peninsula**	**5.91**	**53**		**Pn**	**03 41 36.3**	**+0.4**
PNL	**Peninsula**	**5.91**	**53**	P	**Pn**	**03 41 36.8**	**+0.9**
PNL	**Peninsula**	**5.91**	**53**	P	**Pn**	**03 41 36.3**	**+0.4**
	baz=240						
CTG	**Chitna Glacier**	**5.92**	**38**	P	**Pn**	**03 41 36.7**	**+0.4**
	baz=223						
WASW	**Wrangell South**	**5.94**	**21**		**Pn**	**03 41 36.9**	**+0.3**
WACK	**Wrangell Chich**	**5.96**	**21**		**Pn**	**03 41 37.3**	**+0.4**
CUT	**Chulitna**	**5.98**	**353**	Pn	Pn	03 41 36.7	-0.2
N17K	**Nushagak Hills**	**5.98**	**316**	Pn	Pn	03 41 36.4	-0.5
N17K	**Nushagak Hills**	**5.98**	**316**	P	Pn	03 41 36.6	-0.3
	baz=130						
WAT6	**Susitna Watana**	**6.13**	**4**	P	**Pn**	**03 41 39.2**	**+0.1**
	baz=185						
M19K	**Big River Lodg**	**6.15**	**334**	Pn	Pn	03 41 38.2	-1.0
M19K	**Big River Lodg**	**6.15**	**334**	P	Pn	03 41 38.1	-1.1
	baz=150						
M18K	**Stony River**	**6.20**	**327**		Pn	03 41 38.8	-1.0
M18K	**Stony River**	**6.20**	**327**	P	Pn	03 41 38.9	-1.0
	baz=141						
HARP	**HAARP**	**6.21**	**16**		**Pn**	**03 41 41.0**	**+1.0**
HARP	**HAARP**	**6.21**	**16**	P	**Pn**	**03 41 41.0**	**+1.0**
	baz=198						
CHNA	**Chernabura Isl**	**6.34**	**259**	P	Pn	03 41 40.9	-1.0
	baz=71						
CNBA	**Chernabura Isl**	**6.35**	**259**	Pn	Pn	03 41 41.0	-0.9
WAT1	**Susitna Watana**	**6.36**	**1**		**Pn**	**03 41 42.4**	**+0.3**
WAT1	**Susitna Watana**	**6.36**	**1**	P	**Pn**	**03 41 42.6**	**+0.4**
	baz=181						
WAT7	**Susitna Watana**	**6.36**	**360**		**Pn**	**03 41 42.5**	**+0.2**
O15K	**Ungalikthiuk R**	**6.49**	**299**		**Pn**	**03 41 44.3**	**+0.4**
O15K	**Ungalikthiuk R**	**6.49**	**299**	P	**Pn**	**03 41 44.3**	**+0.4**
	baz=110						
L19K	**White Mountain**	**6.50**	**334**		Pn	03 41 42.7	-1.3
L19K	**White Mountain**	**6.50**	**334**	P	Pn	03 41 42.7	-1.3
	baz=149						
L20K	**Farewell, AK**	**6.54**	**339**		Pn	03 41 43.3	-1.4
L20K	**Farewell, AK**	**6.54**	**339**	P	Pn	03 41 43.3	-1.4
	baz=155						
O29M	**Mount Kennedy**	**6.58**	**50**	Pn	**Pn**	**03 41 46.1**	**+0.9**
O29M	**Mount Kennedy**	**6.58**	**50**	P	**Pn**	**03 41 45.7**	**+0.4**
	baz=238						
N16K	**Nishlik Lake**	**6.59**	**311**		**Pn**	**03 41 45.2**	**0.0**
N16K	**Nishlik Lake**	**6.59**	**311**	P	**Pn**	**03 41 45.2**	**0.0**
	baz=124						
M26K	**Nabesna, AK**	**6.62**	**24**		**Pn**	**03 41 46.0**	**+0.3**
M26K	**Nabesna, AK**	**6.62**	**24**	P	**Pn**	**03 41 46.3**	**+0.6**
	baz=208						
DHY	**Denali Highway**	**6.64**	**6**	Pn	**Pn**	**03 41 46.2**	**+0.1**
DHY	**Denali Highway**	**6.64**	**6**	P	**Pn**	**03 41 46.6**	**+0.5**
	baz=186						
P29M	**Windy Craggy**	**6.64**	**57**		**Pn**	**03 41 46.3**	**+0.2**
P29M	**Windy Craggy**	**6.64**	**57**	P	**Pn**	**03 41 46.5**	**+0.4**
	baz=246						
M17K	**Holitna

L17K	Donlin	7.46	323	P		Pn		03 41 56.5	-0.7
	baz=135								
BCAR	Beaver Creek A	7.47	25	Pn		Pn		03 41 58.1	+0.7
K24K	Donnelly Dome	7.49	10			Pn		03 41 58.8	+1.2
K24K	Donnelly Dome	7.49	10	P		Pn		03 41 58.8	+1.2
	baz=193								
RIDG	Independent Ri	7.53	13			Pn		03 41 58.8	+0.6
RIDG	Independent Ri	7.53	13	P		Pn		03 41 59.4	+1.2
	baz=196								
L16K	Owhat River	7.59	318	Pn		Pn		03 41 58.5	-0.5
L16K	Owhat River	7.59	318	P		Pn		03 41 58.7	-0.3
	baz=129								
SKAG	Skagway	7.74	62	Pn		Pn		03 42 02.0	+1.0
SKAG	Skagway	7.74	62	P		Pn		03 42 02.2	+1.2
BESE	Bessie Mountai	7.78	69			Pn		03 42 01.6	0.0
S32K	Killisnoo	7.82	77	Pn		Pn		03 42 01.6	-0.5
S32K	Killisnoo	7.82	77	P		Pn		03 42 01.3	-0.8
	baz=268								
SCRK	Sand Creek	7.88	16			Pn		03 42 02.8	-0.3
SCRK	Sand Creek	7.88	16	P		Pn		03 42 03.2	+0.2
	baz=199								
O30N	Mendenhall	7.88	52			Pn		03 42 04.0	+1.0
O30N	Mendenhall	7.88	52	P		Pn		03 42 03.8	+0.8
	baz=242								
K17K	Iditarod	7.89	326	Pn		Pn		03 42 02.0	-1.1
K17K	Iditarod	7.89	326	P		Pn		03 42 01.9	-1.1
	baz=138								
R32K	Eaglecrest	7.91	71			Pn		03 42 04.1	+0.8
M29M	Somme Creek	7.94	37			Pn		03 42 04.9	+1.0
M29M	Somme Creek	7.94	37	P		Pn		03 42 04.9	+1.0
	baz=225								
JIS	Juneau Island	7.98	71	Pn		Pn		03 42 04.6	+0.3
HDA	Harding Lake	8.00	6			Pn		03 42 04.9	+0.3
WRH	Wood River Hil	8.01	2			Pn		03 42 05.2	+0.4
J18K	Innoko River	8.04	334	Pn		Pn		03 42 03.6	-1.6
J18K	Innoko River	8.04	334	P		Pn		03 42 04.2	-1.0
	baz=147								
M14K	Bethel	8.10	307	Pn		Pn		03 42 06.9	+1.1
NEA2	Nenana	8.13	359			Pn		03 42 06.3	-0.1
NEA2	Nenana	8.13	359	P		Pn		03 42 06.0	-0.4
	baz=179								
J20K	Nowinta River	8.15	343	Pn		Pn		03 42 06.4	-0.3
J20K	Nowinta River	8.15	343	P		Pn		03 42 06.5	-0.3
	baz=159								
CCB	Clear Creek Bu	8.20	3			Pn		03 42 07.5	+0.3
J19K	Poorman	8.26	339	Pn		Pn		03 42 06.8	-1.3
J19K	Poorman	8.26	339	P		Pn		03 42 06.9	-1.2
	baz=153								
IL31		8.36	6			Pn		03 42 09.4	-0.1
ILAR	Eielson Array	8.36	6	Pn		Pn		03 42 09.3	-0.2
ILAR	Eielson Array	8.36	6	Pn		Pn		03 42 08.8	-0.8
	comp=E,0.9nm,0.3s,baz=189,slow=13,SNR=30								
ILAR				Sn		Sn		03 43 38.3	-4.5
	comp=E,1.1nm,0.3s,baz=177,slow=21,SNR=16								
ILAR				LR		LR		03 45 39.6	
	comp=E,75nm,19.8s,baz=156,slow=40								
WHY	Whitehorse	8.37	54			Pn		03 42 09.6	-0.2
COLA	College	8.42	3			Pn		03 42 10.3	0.0
J26L	Joseph Creek	8.43	16			Pn		03 42 10.6	0.0
J26L	Joseph Creek	8.43	16	P		Pn		03 42 10.6	0.0
	baz=200								
MDM	Murphy Dome	8.50	2	Pn		Pn		03 42 12.0	+0.5
L29M	L29M	8.52	35	Pn		Pn		03 42 12.8	+1.0
P32M	Atlin	8.57	63	Pn		Pn		03 42 13.1	+0.6
P32M	Atlin	8.57	63	P		Pn		03 42 12.5	0.0
	baz=255								
M30M	Minto, Yukon	8.61	40			Pn		03 42 13.4	+0.5
M30M	Minto, Yukon	8.61	40	P		Pn		03 42 13.6	+0.6
	baz=230								
MLY	Manley	8.62	354			Pn		03 42 12.4	-0.8
MLY	Manley	8.62	354	P		Pn		03 42 12.4	-0.8
	baz=173								
ISLZ	Isanotski Laza	8.64	264			Pn		03 42 12.5	-0.9
L14K	Kuka Creek	8.68	310	Pn		Pn		03 42 13.9	0.0
POKR	Poker Plat Res	8.68	4	Pn		Pn		03 42 13.8	-0.2
I23K	Minto, Yukon-K	8.69	358			Pn		03 42 14.2	+0.2
I23K	Minto, Yukon-K	8.69	358	P		Pn		03 42 13.7	-0.3
	baz=178								
U33K	Whale Pass	8.71	86			Pn		03 42 12.5	-1.8
U33K	Whale Pass	8.71	86	P		Pn		03 42 12.3	-2.1
	baz=278								
K15K	Wolf Creek Mou	8.72	317	Pn		Pn		03 42 14.3	-0.1
CRAG	Craig	8.84	90	Pn		Pn		03 42 14.5	-1.5
CRAG	Craig	8.84	90	P		Pn		03 42 15.0	-1.0
CRAG	Craig	8.84	90	P		Pn		03 42 13.3	-2.7
	baz=282								
Q32M	Nakina River	9.17	68	Pn		Pn		03 42 21.6	+0.8
P33M	Teslin, Yukon	9.17	59			Pn		03 42 21.0	+0.3
P33M	Teslin, Yukon	9.17	59	P		Pn		03 42 21.0	+0.3
	baz=252								
PRP	Porcupine Dome	9.19	8			Pn		03 42 21.0	0.0
PRP	Porcupine Dome	9.19	8	P		Pn		03 42 21.5	+0.4
	baz=191								
K29M	Barlow Dome	9.25	33	Pn		Pn		03 42 22.8	+1.0
N32M	Quiet Lake	9.37	54	Pn		Pn		03 42 24.4	+1.0
H24K	Noodor Dome	9.39	2	Pn		Pn		03 42 24.6	+1.0
H21K	Melozitna Rive	9.40	350			Pn		03 42 23.4	-0.4
H21K	Melozitna Rive	9.40	350	P		Pn		03 42 23.7	-0.1
	baz=166								
J29N	Klondike Camp	9.52	29	Pn		Pn		03 42 25.2	-0.3
MAYO	Mayo, Yukon	9.59	37	Pn		Pn		03 42 26.1	-0.3
S34M	Telegraph Cree	9.68	74	Pn		Pn		03 42 28.0	+0.4
V35K	Ketchikan	9.71	90	Pn		Pn		03 42 26.9	-1.1
FARO	Faro, Yukon	9.73	47			Pn		03 42 29.6	+1.2
J14K	Nanvaranak Lak	9.75	316	Pn		Pn		03 42 27.9	-0.6
H19K	Roundabout Mou	9.79	341	Pn		Pn		03 42 28.0	-1.1
IMAR	Indian Mountai	9.82	348	Pn		Pn		03 42 28.6	-0.8
H19K	Honhosa River	9.86	336	Pn		Pn		03 42 28.3	-1.7
R33M	Jennings River	9.90	66	Pn		Pn		03 42 31.4	+0.7
I28M	Miner Creek	9.95	22			Pn		03 42 32.7	+1.3
AKUT	Akutan	9.97	263	Pn		Pn		03 42 29.6	-2.1
J30M	Hart River	10.14	32			Pn		03 42 35.7	+1.7
T35M	Bob Quinn	10.19	80	Pn		Pn		03 42 35.2	+0.6
FYU	Fort Yukon	10.25	8	Pn		Pn		03 42 35.2	-0.2
G23K	Bananza Creek	10.27	357	Pn		Pn		03 42 35.5	-0.3
DLBC	Dease Lake	10.28	71	Pn		Pn		03 42 37.0	+1.1
DLBC	Dease Lake	10.28	71	Pn		Pn		03 42 36.1	+0.2
	comp=E,0.6nm,0.3s,baz=261,slow=5.1,SNR=18								
DLBC				Sn		Sn		03 44 25.8	-4.3
	comp=E,0.5nm,0.3s,baz=187,slow=27,SNR=6.5								
DLBC				LR		LR		03 45 49.9	
	comp=E,101nm,19.8s,baz=254,slow=34 comp=E,1.6nm,0.2s								
G21K	Allakaket	10.31	349	Pn		Pn		03 42 36.3	+0.2
G19K	Purcell Mounta	10.46	341			Pn		03 42 38.5	+0.2
I30M	Mount Dempster	10.62	29	Pn		Pn		03 42 43.0	+2.4
H29M	Whitestone	10.94	23	Pn		Pn		03 42 45.8	+0.9
G16K	Koyuk River	11.07	329	Pn		Pn		03 42 46.2	-0.4
F20K	Avaraart Lake	11.08	346	Pn		Pn		03 42 46.5	-0.3
BMAR	Burnt Mountain	11.15	8	Pn		Pn		03 42 47.6	-0.1
ANM	Nome	11.47	322	Pn		Pn		03 42 51.9	-0.1
F17K	Baldwin Pennin	11.60	334	Pn		Pn		03 42 53.1	-0.7
E24K	Your Creek	11.63	1	Pn		Pn		03 42 54.6	+0.4
E19K	Redstone River	11.68	344	Pn		Pn		03 42 55.0	0.0
F25K	Arctic Village	11.77	6	Pn		Pn		03 42 56.3	+0.2
F28M	Old Crow	11.90	17	Pn		Pn		03 42 59.1	+1.2
F15K	North Star Dit	11.97	327	Pn		Pn		03 42 59.1	+0.2
G30M	tAoh Zraii Nji	12.05	24	Pn		Pn		03 43 00.7	+0.7
TOLK	Toolik Lake Re	12.20	359	Pn		Pn		03 43 03.0	+1.0
G31M	Satah River	12.48	27	Pn		Pn		03 43 06.5	+0.8
D22K	Ayikyak River	12.56	353	Pn		Pn		03 43 07.8	+0.9
D19K	Kuna River	12.77	344	Pn		Pn		03 43 09.1	-0.8
E29M	Blow River	12.92	18	Pn		Pn		03 43 13.6	+1.7
F31M	Tsiigehtchic	13.01	26	Pn		Pn		03 43 13.8	+0.8
B21K	Ikpikpuk River	13.43	351	Pn		Pn		03 43 18.0	-0.8
INK	Inuvik	13.74	24			Pn		03 43 24.3	+1.3
INK	Inuvik	13.74	24	Pn		Pn		03 43 23.1	+0.1
	comp=E,0.2nm,0.3s,baz=209,slow=15,SNR=10								
INK				LR		LR		03 48 11.9	
	comp=E,42nm,19.5s,baz=177,slow=36 comp=E,2.5nm,0.8s								
B20K	Meade River	14.06	348	Pn		Pn		03 43 25.8	-1.5
WRGLY	Wrigley	14.32	52	Pn		Pn		03 43 27.8	-3.1
YKA	Yellowknife Ar	18.19	57			Pn		03 44 19.9	-0.6
YKA	Yellowknife Ar	18.19	57	P		Pn		03 44 20.5	0.0
	comp=E,0.1nm,0.3s,baz=265,slow=10,SNR=12 comp=E,1.2nm,0.9s								
A36M	Sachs Harbour	18.38	23	P		P		03 44 22.4	-0.1
A36M				IAmb		IAmb		03 44 28.2	
	comp=Z,5.6nm,0.8s								
HUMO	Hull Mountain	21.59	119	P		P		03 44 57.4	-0.3
HUMO				IAmb		IAmb		03 45 01.0	
	comp=Z,3.9nm,1.0s								
SHEM	Shemya Is, Ala	21.65	276	LR		LR		03 54 06.0	
	comp=Z,18nm,18.9s,baz=316,slow=39								
NVAR	Mina Array Bea	27.06	119	P		P		03 45 50.4	-0.1
	comp=Z,0.6nm,0.8s,baz=292,slow=7.7,SNR=2.2 comp=Z,0.6nm,0.8s								
PDAR	Pinedale Array	28.43	102	P		P		03 46 02.5	-0.2
	comp=Z,0.2nm,0.6s,baz=318,slow=3.9,SNR=3.4 comp=Z,0.2nm,0.6s								
FRB	Frobisher Bay	38.08	45	LR		LR		04 03 22.7	
	comp=Z,50nm,18.6s,baz=282,slow=37								
TXAR	Lajitas Array	41.64	111	P		P		03 47 57.2	+1.1
	comp=Z,0.5nm,1.0s,baz=333,slow=4.2,SNR=3.6 comp=Z,0.5nm,1.0s								
H11N2	WAKE ISLAND Hy	49.23	240	T		T		04 40 34.3	
	baz=34,slow=74								
H11N3	WAKE ISLAND Hy	49.24	240	T		T		04 40 34.2	
	baz=34,slow=74								
H11N1	WAKE ISLAND Hy	49.25	240	T		T		04 40 42.0	
	baz=34								
USRK	Ussuriysk Ar.	49.26	291	P		P		03 48 58.9	+2.7
	comp=Z,1.7nm,0.7s,baz=60,slow=10,SNR=2.9 comp=Z,1.7nm,0.7s								
H11S1	WAKE ISLAND Hy	50.38	240	T		T		04 44 16.4	
	baz=29								
H11S2	WAKE ISLAND Hy	50.39	240	T		T		04 44 13.0	
	baz=29								
H11S3	WAKE ISLAND Hy	50.39	240	T		T		04 44 04.0	
	baz=29								
FINES	FINESS Array B	62.33	3	P		P		03 50 29.4	-0.2
	comp=Z,2.3nm,1.0s,baz=7.7,slow=11,SNR=1.7 comp=Z,2.3nm,1.0s								
KURBB	Kurchatov Arra	66.30	329	P		P		03 50 55.2	-0.5
	comp=Z,0.2nm,0.5s,baz=27,slow=6.2,SNR=2.2 comp=Z,0.2nm,0.5s								
AKASG	Malin Array Be	73.16	1	P		P		03 51 37.6	-0.3
	comp=Z,1.0nm,0.5s,baz=357,slow=5.4,SNR=2.1 comp=Z,1.0nm,0.5s								
GERES	GERESS Array B	74.02	12	P		P		03 51 43.6	+0.4
	comp=Z,0.7nm,0.6s,baz=347,slow=4.0,SNR=3.2 comp=Z,0.7nm,0.6s								
ESDC	Sonseca Array	79.67	27	P		P		03 52 15.5	+0.4
	comp=Z,0.9nm,0.9s,baz=348,slow=6.3,SNR=3.2 comp=Z,0.9nm,0.9s								
BRTR	Keskin Array B	84.13	358	P		P		03 52 38.8	+0.2
	comp=Z,0.8nm,0.8s,baz=49,slow=3.8,SNR=4.0 comp=Z,0.8nm,0.8s								

IDC ***11*** *03:49:40.8±2.0, 1.°85N×85.°47W, h0km, mb3.1/3, mbtmp3.7/7, ML3.5/4, MS3.4/7, Error ellipse: s-maj=50.6km s-min=28.4km az=57.0*

CATAC ***11*** *03:51:37.5±0.6, 9.°90N×85.°54W, h2km±4km, ML2.2*

ISC 11 03:49:42.3±1.2, 1.°78N±0.°10×85.°4W±0.°1, h10km, n43, σ1s88/31, mb3.3/3, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
PPLP	Puerto Lpez	5.70	125	*eP*		Pn	03 51 03.9	-3.2
PAC1	Pacto, Paraso	6.79	103	*eP*		Pn	03 51 19.7	-2.6
OTAV	Otavalo	7.13	102	*eP*		Pn	03 51 24.8	-2.3
CUSE	Cuicocha Este	7.17	102	*eP*		Pn	03 51 26.6	-1.1
COHC	Cochancay	7.47	124	*eP*		Pn	03 51 28.8	-2.5
CMBC	Cumbal	7.63	96	*eP*		Pb	03 51 56.7	+1.5
PIAT	Ana Tenorio	7.67	111	*eP*		Pn	03 51 33.0	-1.4
BONI	La Bonita	8.00	99	*eP*		Pn	03 51 31.9	-7.0
INDI	Punta indio, G	8.03	359	*i P*		Pn	03 51 39.2	+0.1
INDI				IAML			03 51 39.9	
	comp=Z,40nm,1.0s							
BBAC	Balboa, Cauca	8.17	88	*eP*		Pn	03 51 39.2	-2.0
MCRA	Macar, Loja	8.19	138	*eP*		Pn	03 51 39.5	-1.9
SAJU	San Juanillo,	8.24	358	*i P*		Pn	03 51 42.0	+0.1
SAJU				IAML			03 51 48.2	
	comp=Z,44nm,1.0s							
DUNO	Dulce Nombre,	8.24	359	*i P*		Pn	03 51 42.7	+0.7
DUNO				IAML			03 51 43.5	
	comp=Z,40nm,1.0s							
HDC3	Heredia 3	8.27	9	*i P*		Pb	03 52 03.1	-2.6
HDC3				IAML			03 52 04.9	
	comp=Z,110nm,1.0s							
CRUC	La Cruz	8.46	91	*eP*		Pn	03 51 34.3	-11
JTS	Las Juntas de	8.47	3	Pn		Pn	03 51 46.1	+1.0
	comp=Z,1.4nm,0.3s,baz=96,slow=22,SNR=11							
JTS				Sn		Sn	03 53 18.1	-2.7
	comp=Z,0.4nm,0.3s,baz=153,slow=22,SNR=1.4							
JTS				LR		LR	03 54 24.4	
	comp=Z,177nm,20.0s,baz=206,slow=34 comp=Z,7.6nm,0.4s							
JTS	Las Juntas de	8.47	3	*eP*		Pn	03 51 34.8	-10
ORTG	Ortega, Santa	8.53	360	*i P*		Pn	03 51 46.2	+0.2
ORTG				IAML			03 51 58.5	
	comp=Z,34nm,1.0s							
POPC	Popayan, Colom	8.77	85	*eP*		Pn	03 51 48.0	-1.4
JAMC	Jamundi, Valle	8.85	81	*eP*		Pn	03 51 47.5	-3.0
HZTE	Horizontes, Gu	8.88	359	*i P*		Pn	03 51 52.0	+1.3
HZTE				IAML			03 51 59.4	
	comp=Z,150nm,1.0s							
COVE	Coope Vega, Sa	8.94	6	*i P*		Pn	03 52 03.2	+12
COVE				IAML			03 52 04.9	
	comp=Z,400nm,1.0s							
PLMC	San Jos del P	9.63	71	*eP*		Pn	03 51 57.1	-4.0
UPD2	Meteti	9.97	47	*eP*		Pn	03 52 01.4	-4.3
CBOC	Ciudad Bolivar	10.22	66	*eP*		Pn	03 52 09.8	+0.4
ORTC	Ortega, Tolima	10.38	78	*eP*		Pn	03 52 12.1	+0.7
COPN	Copaltepe	10.40	354	*i P*		Pn	03 52 14.5	+2.9
GUY2C	Guyana, Caldas	10.60	71	*eP*		Pn	03 52 13.5	-1.3
TELN	Telica	10.84	353	*i P*		Pn	03 52 26.4	+8.6
HERN	Volcan Telica	10.85	353	*i P*		Pn	03 52 27.0	+9.2
HERN				IAML			03 52 33.3	
	comp=Z,3µm,1.0s							
CRIN	San Cristobal	10.97	352	*eP*		Pn	03 52 22.9	+3.5
ATAH	Atahualpa	11.29	142	Pn		Pn	03 52 25.6	+1.4
	comp=Z,2.3nm,0.3s,baz=343,slow=7.2,SNR=25							
ATAH				LR		LR	03 56 14.8	
	comp=Z,150nm,20.3s,baz=325,slow=35 comp=Z,11nm,0.5s							
TGUH	Tegucigalpa,Un	12.33	352	*eP*		Pn	03 52 39.5	+1.3
BARC	Barichara	13.10	68	*eP*		Pn	03 52 48.1	-0.7
NNA	Nana	16.12	148	LR		LR	03 58 53.1	
	comp=Z,63nm,18.4s,baz=322,slow=34							
SDV	Santo Domingo	16.32	64	Pn		Pn	03 53 32.7	+0.8
	comp=Z,0.2nm,0.3s,baz=248,slow=7.9,SNR=9.0							
SDV				LR		LR	03 58 52.1	
	comp=Z,64nm,18.3s,baz=321,slow=34 comp=Z,6.2nm,0.8s							
SDV	Santo Domingo	16.32	64	*eP*		Pn	03 53 34.2	+2.4
CMIG	Matias Romero	17.84	329	P		Pn	03 53 50.5	-0.2
	comp=Z,0.1nm,0.3s,baz=129,slow=9.5,SNR=2.2							
CMIG				LR		LR	03 59 22.4	
	comp=Z,79nm,20.3s,baz=152,slow=33 comp=Z,0.9nm,0.7s							
TEIG	Tepich	18.54	352	LR		LR	04 00 30.9	
	comp=Z,654nm,20.2s,baz=10,slow=35							
TXAR	Lajitas Array	32.44	329	P		P	03 56 13.4	+0.4
	comp=Z,0.2nm,0.5s,baz=146,slow=9.8,SNR=4.8 comp=Z,0.2nm,0.5s							
PDAR	Pinedale Array	46.17	335	P		P	03 58 06.4	-1.1
	comp=Z,0.2nm,0.5s,baz=129,slow=7.1,SNR=2.2 comp=Z,0.2nm,0.5s							
ELK	Elko	47.24	329	LR		LR	04 17 49.1	
	comp=Z,67nm,19.1s,baz=86,slow=36							
YKA	Yellowknife Ar	64.37	345	P		P	04 00 16.2	-1.9
	comp=Z,0.1nm,0.6s,baz=135,slow=7.0,SNR=2.8 comp=Z,0.1nm,0.6s							

NEIC ***11*** *04:11:09.7±1.8, 16.°66S±0.°06×74.°16W±0.°08, h10km±1km, mb5.7/792, Ms_20 4.9/120, Mww5.4/35, Error ellipse: s-maj=13.2km s-min=8.7km az=239.0*

BJI ***11*** *04:11:09.4±0.0, 16.°60S×74.°10W, h7km, mB5.5/10, Ms5.5/24, Ms7 5.3/27*

MOS ***11*** *04:11:09.8±1.2, 16.°44S×74.°14W, h16km, mb5.8/59, MS4.9/23, Error ellipse: s-maj=10.1km s-min=4.7km az=110.6*

NEIC ***11*** *04:11:10, 16.°66S×74.°27W, h26km, Moment Tensor Solution. Duration: 2s5 Moment tensor: Scale 1017Nm; Mrr=0.11; Mθθ=0.41; Mφφ=-0.31; Mrθ=0.96; Mrφ=1.01; Mθφ=0.00; Fault plane solution: M0=1.43000×1017 NP1: φs=277.46000°, δ=88.76000°, λ=-41.83000°. NP2: φs=8.57000°, δ=48.18000°, λ=-178.34000°. Principal axes: T 1.5290, Plg27.0000°, Azm331.0000°; N -0.2004, Plg48.0000°, Azm96.0000°; P -1.3286, Plg29.0000°, Azm225.0000°;*

NEIC ***11*** *04:11:10, 16.°66S×74.°17W, h26km*

VAO ***11*** *04:11:11.7±0.2, 16.°49S×73.°91W, h10km, mb5.3*

GCMT ***11*** *04:11:14.7±0.1, 16.°77S±0.°01×74.°26W±0.°01, h25km, MW5.4/148, Moment Tensor Solution. s112,c175; s148,c263; Duration: 1s2 Moment tensor: Scale 1017 Nm; Mrr=0.01±.02; Mθθ=0.62±.02; Mφφ=-0.62±.02; Mrθ=0.99±.05; Mθφ=1.12±.01; Mrφ=-0.29±.04; Best double couple: M0=1.64100×1017 NP1:φs=285.00000°, δ=90.00000°, λ=-39.00000°. NP2:φs=15.00000°, δ=51.00000°, λ=-180.00000°. Principal axes: T 1.6250, Plg26.0000°, Azm337.0000°; N 0.0320, Plg51.0000°, Azm104.0000°; P -1.6570, Plg26.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***11*** *04:11:14.8±0.5, 16.°52S×73.°95W, h40km±4km, mb5.0/25, mbtmp5.2/29, ML4.6/4, MS4.7/56 Error ellipse: s-maj=17.2km s-min=9.8km az=59.0*

ISC 11 04:11:12.4±0.2, 16.°66S±0.°04×74.°13W±0.°05, h30km, n1616, σ1s15/1533, mb5.7/431, MS4.9/130, 23C-11D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
					Op		h m s	ISC
AP01	Chacalluta	3.99	116			Pn	04 12 11.1	-0.5
AP01					Sn	Sn	04 12 55.9	-1.5
AP01	Chacalluta	3.99	116	*eP*		Pn	04 12 12.0	+0.4
AP01				*eS*		Sn	04 12 55.3	-2.1
PB12	IPOC Station P	4.11	119	Pn		Pn	04 12 12.5	-0.9
PB12	IPOC Station P	4.11	119	*iP*		Pn	04 12 12.5	-0.9
PB12				*eS*		Sn	04 13 01.8	+1.3
PB18	Visviri	4.54	102	*iP*		Pn	04 12 23.0	+3.4
PB16	IPOC Station P	4.71	111			Pn	04 12 21.2	-0.8
PB16					Sn	Sn	04 13 17.1	+1.1
PB16	IPOC Station P	4.71	111	*eP*		Pn	04 12 22.8	+0.8
TA02	Huaiquique	5.22	134	Pn		Pn	04 12 28.5	0.0
TA02					Sn	Sn	04 13 23.0	-4.8
TA02	Huaiquique	5.22	134	*eP*		Pn	04 12 28.6	0.0
PB11	IPOC Station P	5.25	127	Pn		Pn	04 12 29.0	0.0
PB11					Sn	Sn	04 13 24.5	-4.2
PB11	IPOC Station P	5.25	127	*iP*		Pn	04 12 29.1	0.0
NNA	Nana	5.34	330	Pn		Pn	04 12 28.0	-2.1
NNA	Nana	5.34	330	*deP*		Pn	04 12 28.4	-1.8
NNA				pmax		pmax		
	comp=Z,332nm,1.3s							
NNA	Nana	5.34	330	Pn		Pn	04 12 29.0	-1.2
	comp=Z,45nm,0.3s,baz=146,slow=15,SNR=45							
NNA				Sn		Sn	04 13 27.3	-3.4
	baz=200,slow=18							
NNA				LR		LR	04 14 43.3	
	comp=Z,14µm,19.9s,baz=156,slow=39							
NNA	Nana	5.34	330	*eP*		Pn	04 12 29.0	-1.2
TA01	Diego Aracena	5.39	137			Pn	04 12 30.3	-0.6
TA01					Sn	Sn	04 13 27.1	-4.9
TA01	Diego Aracena	5.39	137	*eP*		Pn	04 12 30.6	-0.2
HMBC	Humberstone	5.40	132	*iP*		Pn	04 12 31.2	+0.1
GO01	Chusmiza	5.56	123			Pn	04 12 34.0	+0.3
GO01	Chusmiza	5.56	123	*iP*		Pn	04 12 34.3	+0.6
PATCX	Punta Patache	5.60	138			Pn	04 12 32.8	-0.9
PATCX	Punta Patache	5.60	138	*iP*		Pn	04 12 33.4	-0.3
LPAZ	La Paz	5.76	87	Pn		Pn	04 12 39.2	+2.7
LPAZ	La Paz	5.76	87	P		Pn	04 12 39.3	+2.7
PB08	IPOC Station P	5.86	127			Pn	04 12 37.7	+0.1
PB08	IPOC Station P	5.86	127	*iP*		Pn	04 12 38.0	+0.4
PB02	IPOC Station P	6.12	140			Pn	04 12 39.6	-1.4
PB02	IPOC Station P	6.12	140	*iP*		Pn	04 12 40.7	-0.3
PB01	IPOC Station P	6.19	136			Pn	04 12 42.0	+0.1
PB01	IPOC Station P	6.19	136	*iP*		Pn	04 12 42.1	+0.2
PB07	IPOC Station P	6.44	142	Pn		Pn	04 12 43.0	-2.5
PB07	IPOC Station P	6.44	142	*iP*		Pn	04 12 44.9	-0.5
PB04	IPOC Station P	6.78	147			Pn	04 12 48.5	-1.6
PB09	IPOC Station P	6.88	139			Pn	04 12 50.8	-0.8
PB09	IPOC Station P	6.88	139	*iP*		Pn	04 12 52.2	+0.7
PB05	IPOC Station P	7.18	150			Pn	04 12 53.6	-2.0
PB06	IPOC Station P	7.39	145			Pn	04 12 57.0	-1.4
PB10	IPOC Station P	7.60	154	Pn		Pn	04 12 59.3	-1.9
LVC	Limon Verde	7.69	141	Pn		Pn	04 13 02.5	-0.

baz=17,slow=74,SNR=219
H03N2 Juan Fernandez 17.26 194 T T 04 33 48.4
baz=17,slow=74,SNR=233
H03N3 Juan Fernandez 17.27 194 T T 04 33 47.7
baz=17,slow=74,SNR=1399
MT09 Talagante 17.28 171 Pn **Pn** **04 15 09.5 -2.1**
IMBA Imbabura, San 17.30 346 **Pn** **04 15 11.5 -0.8**
OTAV Otavalo 17.32 345 **Pn** **04 15 11.9 -0.7**
OTAV Otavalo 17.32 345 P **Pn** **04 15 11.9 -0.7**
OTAV pmax pmax
comp=Z,33nm,1.0s
OTAV Otavalo 17.32 345 *eP* **Pn** **04 15 12.2 -0.3**
OTAV Otavalo 17.32 345 *eP* **Pn** **04 15 10.0 -2.6**
MT01 Popeta 17.33 172 Pn **Pn** **04 15 11.3 -0.8**
BONI La Bonita 17.33 349 *eP* **Pn** **04 15 10.3 -2.2**
MT13 San Alfonso 17.36 169 Pn **Pn** **04 15 11.0 -1.6**
CUSE Cuicocha Este 17.38 346 *eP* **Pn** **04 15 12.4 -0.8**
PAC1 Pacto, Paraso 17.44 344 *eP* **Pn** **04 15 10.8 -2.9**
LMEL Las Melosas 17.48 169 Pn **Pn** **04 15 12.8 -1.3**
BO04 La Punta 17.55 170 **Pn** **04 15 11.8 -3.1**
BO04 **P** **04 15 12.6 -3.1**
PDRB Porto dos Gac 17.60 76 *eP* **Pn** **04 15 13.0 -2.6**
TULM Tulcn-Chalpat 17.64 348 **Pn** **04 15 14.1 -2.4**
TULM Tulcn-Chalpat 17.64 348 *eP* **P** **04 15 17.6 +0.2**
SALV Santo Antonio 17.71 90 *eP* **Pn** **04 15 15.7 -1.3**
CMBC Cumbal 17.86 348 *eP* **P** **04 15 20.5 +0.7**
AQDB Aquidauana 17.88 105 Pn **Pn** **04 15 17.0 -2.0**
AQDB Aquidauana 17.88 105 *eP* **Pn** **04 15 17.6 -1.4**
ANTJ Antonio Joao (17.90 110 *eP* **Pn** **04 15 18.7 -0.7**
GCUF Volcan Galeras 18.05 350 *eP* **Pn** **04 15 19.2 -2.5**
BO02 Sierra Bellavi 18.31 171 **P** **04 15 22.8 -1.4**
CRUC La Cruz 18.32 351 *eP* **P** **04 15 25.5 +0.8**
CPUP Villa Florida 18.34 124 **P** **04 15 23.0 -1.5**
CPUP Villa Florida 18.34 124 P **P** **04 15 23.0 -1.5**
CPUP pmax pmax
comp=Z,92nm,1.6s
CPUP Villa Florida 18.34 124 P **P** **04 15 23.7 -0.8**
comp=Z,0.4nm,0.3s,baz=301,slow=13,SNR=22
CPUP LR LR 04 23 08.0
comp=Z,2µm,20.3s,baz=304,slow=39
comp=Z,16nm,0.9s
GO05 Huala 18.38 174 Pn **P** **04 15 22.5 -2.4**
RVDE Rio Verde (Bra 18.42 100 *eP* **P** **04 15 24.4 -1.0**
CLDB Colider 18.70 74 *eP* **P** **04 15 27.4 -1.3**
GARC Garzon, Huila 18.77 356 *eP* **P** **04 15 27.6 -2.0**
BBAC Balboa, Cauca 18.82 350 *eP* **Pn** **04 15 30.0 -0.7**
MACA Manacapuru-AM 18.83 46 P **P** **04 15 28.0 -2.0**
MACA Manacapuru-AM 18.83 46 *eP* **P** **04 15 28.6 -1.3**
TUMC Tumaco 18.92 346 *eP* **P** **04 15 28.4 -2.5**
ML02 Panimavida 19.18 173 P **P** **04 15 32.2 -1.5**
POPC Popayan, Colom 19.24 352 *eP* **P** **04 15 34.4 -0.3**
BETC Betania 19.26 356 *eP* **Pn** **04 15 36.8 +0.9**
JAMC Jamundi, Valle 19.91 353 *eP* **P** **04 15 41.2 -0.7**
GR1C Gorgona, Isla 19.94 348 *eP* **P** **04 15 40.5 -1.5**
BI05 Punta Hualpn 20.03 178 P **P** **04 15 42.0 -0.9**
PRAC Prado 20.26 358 *eP* **P** **04 15 43.5 -2.1**
MCR1 Marechal Candi 20.33 116 *eP* Pn 04 15 48.7 +0.2
ORTC Ortega, Tolima 20.47 357 *eP* Pn 04 15 48.5 -1.6
ITQB Itaqui 20.62 132 P **P** **04 15 49.1 -0.3**
ITQB Itaqui 20.62 132 *eP* **P** **04 15 51.3 +1.9**
YOTC Yotoco, Valle 20.63 354 *eP* **P** **04 15 45.9 -3.8**
VILC Villavicencio, 20.64 1 *eP* Pn 04 15 51.2 -1.1
NPGB Novo Progresso 20.69 65 *eP* **P** **04 15 48.6 -1.6**
PSAL Palomas, Salto 20.80 137 *eP* **P** **04 15 54.1 +2.8**
PTGC Puerto Gaitan, 20.82 6 *eP* **P** **04 15 49.5 -2.2**
CVER Cruz Verde, Cu 21.05 0 *eP* **P** **04 15 54.8 +0.2**
ANIL Santa Ana 21.05 356 *eP* **P** **04 15 53.6 -0.9**
TRCB Terra Rica 21.12 110 P **P** **04 15 55.1 +0.1**
TRCB Terra Rica 21.12 110 *eP* **P** **04 15 56.4 +1.4**
ROSC El Rosal 21.36 359 P **P** **04 15 59.0 +1.2**
ROSC IAmb IAmb 04 16 10.6
comp=Z,194nm,0.8s
ROSC El Rosal 21.36 359 P **P** **04 15 59.1 +1.2**
ROSC pmax pmax
comp=Z,194nm,0.8s
ROSC El Rosal 21.36 359 P **P** **04 15 58.6 +0.7**
comp=Z,35nm,0.9s,baz=191,slow=8.8,SNR=8.8
ROSC LR LR 04 26 17.5
comp=Z,8µm,18.7s,baz=210,slow=42
ROSC El Rosal 21.36 359 *eP* **P** **04 15 56.6 -1.2**
UNIS Unistalda (Bra 21.43 129 *eP* **P** **04 16 00.2 +2.0**
ARAG Araguaiana, MT 21.45 91 *eP* **P** **04 15 58.5 0.0**
CRSM Crissiumal (Br 21.48 124 *eP* **P** **04 16 00.2 +1.5**
PLMC San Jos del P 21.53 354 *eP* **P** **04 15 58.8 -0.6**
FRBT Francisco Belt 21.68 119 *eP* **P** **04 16 02.0 +1.1**
PIZC Pizarro, Choco 21.72 351 *eP* **P** **04 15 55.4 -5.9**
GUY2C Guyana, Caldas 21.78 357 *eP* **P** **04 16 01.2 -1.2**
ITTB Itaituba 21.79 58 *eP* **P** **04 16 01.0 -1.2**
RODS Rosario do Sul 22.02 132 *eP* **P** **04 16 06.2 +1.7**
PTGB Pitanga 22.12 115 *eP* **P** **04 16 06.7 +1.0**
PCMB Pacaembu 22.15 106 *eP* **P** **04 16 06.5 +0.5**
SPBC San Pablo de B 22.17 0 *eP* **P** **04 16 05.9 -0.3**
TBOT Tacuaremb 22.29 135 *eP* **P** **04 16 09.0 +1.7**
CBOC Ciudad Bolivar 22.46 355 *eP* **P** **04 16 08.2 -1.2**
PAYG Puerto Ayora 22.49 313 P **P** **04 16 10.2 +0.6**
PAYG IAmb IAmb 04 16 14.1
comp=Z,196nm,0.9s
PAYG Puerto Ayora 22.49 313 *eP* **P** **04 16 09.3 -0.3**
SNDB Serra Nova Dou 22.60 81 *eP* **P** **04 16 09.8 -1.0**
LDASE Londrina, Braz 22.62 111 *eP* **P** **04 16 10.6 -0.4**
ITRB Iturama 22.78 101 *eP* **P** **04 16 13.4 +0.6**
ALGR Alto Alegre (B 22.86 126 *eP* **P** **04 16 13.4 -0.1**
ITAB Concordia 22.92 121 P **P** **04 16 13.5 -0.6**
ITAB IAmb IAmb 04 16 37.2
comp=Z,419nm,1.8s
ITAB Concordia 22.92 121 *eP* **P** **04 16 16.9 +2.9**
LR03 Panguipulli 22.94 176 P **P** **04 16 15.0 +0.8**
GO06 Curarrehue 22.96 175 P **P** **04 16 15.0 +0.6**
GO06 IAmb IAmb 04 16 18.2
comp=Z,301nm,1.4s
SOLC Bahia Solano 22.97 352 *eP* **P** **04 16 18.6 +4.0**
PTBC PUERTO BERRIO, 23.05 359 *eP* **P** **04 16 11.3 -4.2**
TAMC Tame, Arauca 23.06 6 *eP* **P** **04 16 16.4 +0.8**
BARC Barichara 23.12 2 *eP* **P** **04 16 15.1 -1.3**
LR04 Corral 23.14 179 P **P** **04 16 15.1 -1.1**
LR04 IAmb IAmb 04 16 19.7
comp=Z,284nm,1.4s
BOAV Boa Vista 23.22 37 P **P** **04 16 16.2 -0.9**
BOAV Boa Vista 23.22 37 *eP* **P** **04 16 16.9 -0.2**
CPSB Cacapava Do Su 23.33 130 *eP* **P** **04 16 18.0 -0.2**
LR05 Currie 23.56 176 P **P** **04 16 19.4 -0.9**
DBBC Dabeiba 23.61 355 *eP* **P** **04 16 21.3 +0.2**
TRQA Tornquist 23.84 156 P **P** **04 16 23.1 0.0**
TRQA Tornquist 23.84 156 P **P** **04 16 23.1 0.0**
TRQA pmax pmax
comp=Z,151nm,1.6s
TRQA MLR MLR
comp=Z,3µm,20.0s
PAMC Pamplona, Colo 23.89 4 *eP* **P** **04 16 22.8 -1.3**
PTAC Punta Ardita, 23.93 351 *eP* **P** **04 16 23.9 -0.2**
PLTB Pedras Altas 23.95 133 P **P** **04 16 24.2 +0.1**
PLTB Pedras Altas 23.95 133 *eP* **P** **04 16 26.6 +2.5**
FRTB Fartura 24.00 110 *eP* **P** **04 16 25.6 +0.9**
PLCA Paso Flores 24.19 173 P **P** **04 16 26.1 -0.2**
PLCA IAmb IAmb 04 16 29.6
comp=Z,120nm,0.8s
PLCA Paso Flores 24.19 173 P **P** **04 16 27.9 +1.6**
comp=Z,99nm,0.8s,baz=349,slow=10,SNR=142
PLCA LR LR 04 24 11.3
comp=Z,2µm,20.3s,baz=342,slow=32
comp=Z,99nm,0.8s
PLCA Paso Flores 24.19 173 *eP* **P** **04 16 28.2 +1.9**
UREC San Jos de Ur 24.29 357 *eP* P 04 16 17.0 -10
MALB Monte Alegre 24.46 55 *eP* **P** **04 16 28.4 -0.6**
APAC Apartado, Choc 24.52 354 *eP* **P** **04 16 31.8 +2.4**
BB19B Bebedouro 24.61 104 *eP* **P** **04 16 31.4 +1.1**
LL05 Los Muermos 24.67 179 P **P** **04 16 30.4 -0.1**
LL05 IAmb IAmb 04 16 46.5
comp=Z,180nm,1.4s
OCAC Ocana 24.75 2 *eP* **P** **04 16 27.8 -3.9**
CACAO El Cacao, Vera 24.76 344 *eP* **P** **04 16 30.0 -1.6**
IPMB Ipameri, GO 24.77 97 *eP* **P** **04 16 32.7 +0.8**
CNLB Canela 24.80 125 *eP* **P** **04 16 33.8 +1.8**
AZU Azuero 25.04 345 *eP* **P** **04 16 32.0 -2.2**
BDFB Brasilia 25.10 91 P **P** **04 16 34.9 0.0**
BDFB Brasilia 25.10 91 P **P** **04 16 34.9 0.0**
BDFB pmax pmax
comp=Z,57nm,1.1s
BDFB Brasilia 25.10 91 P **P** **04 16 35.0 +0.1**
comp=Z,76nm,1.2s,baz=264,slow=10,SNR=27
BDFB LR LR 04 26 26.7
comp=Z,1µm,20.9s,baz=270,slow=37
comp=Z,76nm,1.2s
GMAL Guarumal, Vera 25.26 343 *eP* **P** **04 16 39.2 +3.0**
UPD2 Meteti 25.34 351 *eP* **P** **04 16 38.5 +1.7**
LL06 Loncomilla 25.47 179 P **P** **04 16 38.2 +0.4**
LL06 IAmb IAmb 04 16 40.6
comp=Z,111nm,0.9s
SDV Santo Domingo 25.62 8 P **P** **04 16 38.0 -1.5**
SDV Santo Domingo 25.62 8 LR LR 04 27 20.1
comp=Z,2µm,21.3s,baz=200,slow=38
SDV Santo Domingo 25.62 8 *eP* **P** **04 16 38.8 -0.8**
SDV Santo Domingo 25.62 8 *eP* **P** **04 16 38.8 -0.8**
LL01 San Ignacio de 25.68 177 P **P** **04 16 40.4 +0.7**
RCLB Rio Claro- Sao 25.69 107 *eP* **P** **04 16 41.3 +1.2**
SPB Sao Paulo 25.97 110 P **P** **04 16 41.5 -1.1**
SPB Sao Paulo 25.97 110 *eP* **P** **04 16 44.7 +2.1**
UPA Univ. de Panam 26.03 348 *eP* **P** **04 16 43.5 +0.3**
LL07 Hotel Espejo d 26.09 179 P **P** **04 16 42.3 -1.2**
LL07 IAmb IAmb 04 16 46.7
comp=Z,244nm,1.2s
BAUV El Baul 26.14 14 P **P** **04 16 43.3 -0.9**
BAUV IAmb IAmb 04 16 45.1
comp=Z,198nm,0.9s
LL6C La Loma 6 Bece 26.24 2 *eP* P 04 16 34.4 -11
BCIP Isla Barro Col 26.27 347 P **P** **04 16 45.5 +0.2**
BCIP IAmb IAmb 04 17 22.7
comp=Z,198nm,1.6s
BCIP IAMs_20 IAMs_20 04 27 46.6
comp=Z,4µm,21.0s
BCIP Isla Barro Col 26.27 347 P **P** **04 16 45.5 +0.2**
BCIP pmax pmax
comp=Z,198nm,1.6s
BCIP MLR MLR
comp=Z,4µm,21.0s
BCIP Isla Barro Col 26.27 347 *eP* **P** **04 16 45.1 -0.2**
ARGC Ariguani, Magd 26.35 360 *eP* **P** **04 16 46.7 +0.7**
SJCC San Jacinto, C 26.41 358 *eP* **P** **04 16 45.9 -0.7**
PMNB Patos De Minas 26.45 98 *eP* **P** **04 16 48.4 +1.3**
LL02 Futaleuf 26.52 176 P **P** **04 16 47.6 +0.3**
CDITO Canoas 26.52 340 P **P** **04 16 46.5 -1.1**
CDITO IAmb IAmb 04 16 51.0
comp=Z,168nm,1.6s
BRU2 Volcan 26.67 341 P **P** **04 16 49.1 0.0**
BRU2 IAmb IAmb 04 16 57.7
comp=Z,119nm,1.1s
SMTB Santa Maria do 26.99 77 *eP* **P** **04 16 52.1 +0.1**
MCPB Macapa, AP 27.12 56 *eP* **P** **04 16 53.0 -0.1**
DRK0 Durika 27.29 340 P **P** **04 16 53.0 -1.7**
DRK0 IAmb IAmb 04 17 00.3
comp=Z,153nm,1.1s
CRJC Cerrejon, Guaj 27.53 3 *eP* **P** **04 16 50.3 -6.4**
PEZE Perez Zeledon, 27.55 339 P **P** **04 16 56.4 -0.5**
PARB Paraibuna 27.57 109 *eP* **P** **04 16 59.1 +2.1**
AY01 Puyuhuapi 27.70 178 P **P** **04 16 56.3 -1.6**
RIMA Rio Macho 27.97 339 P **P** **04 17 00.3 -0.5**
RIMA IAmb IAmb 04 17 04.1
comp=Z,199nm,1.6s
LCR2 La Lucha 2 27.99 339 P **P** **04 17 01.0 -0.1**
BSCB Bom Sucesso 28.09 103 *eP* **P** **04 17 03.2 +1.4**
JACO JACO, Garabito 28.15 338 P **P** **04 17 02.2 0.0**
JACO IAmb IAmb 04 17 05.5
comp=Z,146nm,1.6s
PCRV Puerto La Cruz 28.27 20 LR LR 04 27 58.3
comp=Z,2µm,20.2s,slow=36
HDC Heredia 28.27 339 P **P** **04 17 03.0 -0.4**
HDC IAmb IAmb 04 17 07.1
comp=Z,104nm,0.8s
HDC Heredia 28.27 339 *eP* **P** **04 17 06.0 +2.6**
SDBA SAO DESIDERIO 28.59 85 *eP* **P** **04 17 06.4 +0.1**
JANB Januaria 28.71 91 *eP* **P** **04 17 07.1 -0.3**
JTS Las Juntas de 28.84 337 P **P** **04 17 07.9 -0.5**
JTS Las Juntas de 28.84 337 P **P** **04 17 07.9 -0.5**
JTS pmax pmax
comp=Z,34nm,1.2s
JTS Las Juntas de 28.84 337 LR LR 04 27 54.9
comp=Z,2µm,20.8s,baz=156,slow=35
JTS Las Juntas de 28.84 337 *eP* **P** **04 17 07.5 -0.9**
DUNO Dulce Nombre, 28.85 336 P **P** **04 17 07.0 -1.4**
COYC Coyhaique 28.88 177 P **P** **04 17 07.7 -0.7**
ARE1 Arenal 1 28.91 338 P **P** **04 17 08.4 -0.6**
COVE Coope Vega, Sa 29.04 339 P **P** **04 17 10.9 +0.8**
COVE IAmb IAmb 04 17 13.2
comp=Z,146nm,0.8s
DIAM Diamantina, MG 29.08 98 *eP* **P** **04 17 11.7 +1.0**
ORTG Ortega, Santa 29.09 337 P **P** **04 17 09.8 -0.9**
HATO Hato, Curacao 29.11 10 IAMs_20 IAMs_20 04 29 53.9
comp=Z,3µm,19.0s
TMAB Tom-Au,PA,Br 29.27 64 *eP* **P** **04 17 12.8 +0.5**
HZTE Horizontes, Gu 29.47 337 P **P** **04 17 14.5 +0.6**
HZTE IAmb IAmb 04 17 17.9
comp=Z,222nm,1.1s
AY02 Valle Explorad 29.75 179 P **P** **04 17 15.4 -0.6**
AY02 IAmb IAmb 04 17 25.9
comp=Z,72nm,0.7s
MDP Montagnes des 30.31 46 LR LR 04 30 42.4
comp=Z,2µm,21.3s,baz=226,slow=39
ACON Acoyapa 30.47 338 P **P** **04 17 21.9 -0.9**
ACON IAmb IAmb 04 17 25.2
comp=Z,69nm,0.9s
ACON Acoyapa 30.47 338 *eP* **P** **04 17 22.3 -0.4**
AY03 Cochrane 30.53 178 P **P** **04 17 22.6 -0.4**
AY03 IAmb IAmb 04 17 26.5
comp=Z,62nm,0.9s
BOAB BOACO BROADBAN 30.09 338 P **P** **04 17 26.3 -1.9**
BOAB IAmb IAmb 04 17 30.3
comp=Z,88nm,1.1s
SJMB Sao Joao De Ma 31.43 99 *eP* **P** **04 17 32.5 +1.2**
CNGN Cerro Negro 31.52 336 P **P** **04 17 32.0 -0.1**
CNGN IAmb IAmb 04 17 34.5
comp=Z,111nm,1.0s
MATN Matagalpa 31.63 338 P **P** **04 17 31.4 -1.7**
GO08 Villa O'Higgin 31.75 178 P **P** **04 17 32.1 -1.6**
CRIN San Cristobal 31.84 336 P **P** **04 17 35.0 +0.1**
CRIN IAmb IAmb 04 17 58.8
comp=Z,82nm,1.0s
RIB01 Linhares ES 32.16 100 *eP* **P** **04 17 39.1 +1.3**
ROSB Rosrio 32.50 68 *eP* **P** **04 17 41.0 +0.2**
TGUH Tegucigalpa,Un 33.17 336 P **P** **04 17 46.1 -0.5**
TGUH IAmb IAmb 04 17 48.9
comp=Z,135nm,0.9s
TGUH Tegucigalpa,Un 33.17 336 *eP* **P** **04 17 47.4 +0.7**
CMC01 Camacan, BA 33.27 93 *eP* **P** **04 17 46.5 -1.0**
GDU01 Guandu, BA 33.45 90 *eP* **P** **04 17 49.5 +0.4**
BIM Bigot 33.55 23 IAMs_20 IAMs_20 04 32 21.9
comp=Z,2µm,20.0s
MPOM Morne Pois Mar 33.57 24 IAMs_20 IAMs_20 04 32 11.3
comp=Z,3µm,22.0s
SNET Serv Nac Est T 33.64 333 P **P** **04 17 51.8 +1.0**
RPN Rapa Nui 34.18 246 LR LR 04 28 11.8
comp=Z,2µm,20.6s,baz=80,slow=30
MTO3 Montecristo 34.33 333 P **P** **04 17 57.1 +0.2**
MTO3 IAmb IAmb 04 17 59.8
comp=Z,152nm,1.0s
ESQI Esquipulas 34.47 333 P **P** **04 17 58.4 +0.5**
ESQI IAmb IAmb 04 18 01.2
comp=Z,142nm,0.9s
GO09 Cerro Castillo 34.56 178 P **P** **04 17 57.9 -0.4**
OBIP Obispado Ponce 35.27 12 P **P** **04 18 06.4 +1.7**
APG El Apazote 35.35 332 LR LR 04 31 08.2
comp=Z,152nm,21.8s,baz=259,slow=34
SJG San Juan 35.43 13 IAMs_20 IAMs_20 04 34 28.5
comp=Z,2µm,21.0s
RTAL Retalhuleu 35.51 330 P **P** **04 18 06.8 0.0**
SDDR Presa de Saban 35.53 5 IAMs_20 IAMs_20 04 33 51.0
comp=Z,2µm,20.0s
GCPR Guaynabo City 35.64 13 P **P** **04 18 07.6 -0.3**
SABA Saba 35.71 18 IAMs_20 IAMs_20 04 33 26.0
comp=Z,2µm,19.0s
HUEH Huehuetenango 36.11 331 P **P** **04 18 11.8 -0.4**
GO10 Punta Arenas 36.50 177 P **P** **04 18 15.6 +0.6**
GO10 IAmb IAmb 04 18 34.3
comp=Z,283nm,1.6s
PETF Flores 36.79 334 P **P** **04 18 17.7 -0.1**
EFI East Falkland 37.20 163 *eP* **P** **04 18 20.3 -0.6**
EFI pmax pmax
comp=Z,83nm,1.4s
CCIG Comitan 37.24 331 P **P** **04 18 21.7 -0.1**
MG01 Puerto William 38.52 174 P **P** **04 18 30.9 -1.0**
RCBR Riachuelo 38.93 78 P **P** **04 18 34.5 -1.5**
RCBR Riachuelo 38.93 78 P **P** **04 18 34.5 -1.5**
RCBR pmax pmax
comp=Z,40nm,1.0s
RCBR MLR MLR
comp=Z,2µm,19.0s
RCBR Riachuelo 38.93 78 LR LR 04 36 24.0
comp=Z,1µm,19.8s,baz=251,slow=39
RCBR Riachuelo 38.93 78 *eP* **P** **04 18 36.5 +0.5**
TEIG Tepich 39.20 339 P **P** **04 18 37.1 -0.9**
TEIG IAmb IAmb 04 18 40.0
comp=Z,274nm,1.4s
TEIG IAMs_20 IAMs_20 04 33 11.0
comp=Z,1µm,21.0s
TEIG Tepich 39.20 339 LR LR 04 33 33.1
comp=Z,14µm,21.5s,baz=288,slow=34
TEIG Tepich 39.20 339 *eP* **P** **04 18 37.9 -0.1**
CMIG Matias Romero 39.28 328 P **P** **04 18 39.6 +0.8**
comp=Z,45nm,0.9s,baz=136,slow=5.5,SNR=98
CMIG PcP **PcP** **04 20 48.3 +1.0**
comp=Z,5.0nm,0.9s,baz=188,slow=3.9,SNR=2.2
CMIG LR LR 04 34 06.2
comp=Z,850nm,19.0s,baz=145,slow=35
comp=Z,45nm,0.9s
SOR Soroa 40.16 347 P **P** **04 18 45.8 -0.2**
SOR Soroa 40.16 347 P **P** **04 18 45.8 -0.2**
SOR pmax pmax
comp=Z,44nm,1.1s
TLIG Tlapa 41.66 324 P **P** **04 19 00.0 +1.4**
UNM Universidad Na 43.42 324 P **P** **04 19 13.5 +0.4**
UNM IAMs_20 IAMs_20 04 35 51.6
comp=Z,1µm,19.0s
UNM Universidad Na 43.42 324 P **P** **04 19 13.5 +0.4**
UNM pmax pmax
comp=Z,236nm,0.8s
MOIG Morelia 44.85 323 P **P** **04 19 25.4 +1.0**
MOIG IAmb IAmb 04 19 28.0
comp=Z,142nm,1.1s
DWPF Disney Wildern 45.06 351 P **P** **04 19 25.4 -0.3**
baz=170
JRQG Juriquilla Cam 45.23 324 P **P** **04 19 27.6 +0.1**
656A Willston 46.47 350 P **P** **04 19 35.1 -1.8**
553A Crawfordville 47.62 348 P **P** **04 19 45.5 -0.3**
ZAIG Zacatecas 48.06 324 P **P** **04 19 49.4 -0.3**
ZAIG IAmb IAmb 04 19 53.4
comp=Z,146nm,1.3s
PMSA Palmer Station 48.56 174 *eP* **P** **04 19 55.8 +3.2**
TIGA Tifton 48.68 349 P **P** **04 19 53.8 -0.1**
baz=168
255A Hazlehurst 48.97 351 P **P** **04 19 55.7 -0.4**
352A Blakely 48.97 348 P **P** **04 19 54.3 -1.9**
352A IAmb IAmb 04 19 58.5
comp=Z,72nm,1.1s
BRAL Brewton 49.15 345 P **P** **04 19 57.1 -0.4**
BRAL Brewton 49.15 345 P **P** **04 19 57.5 0.0**
baz=164
HBVL Hebbronville 49.56 331 P **P** **04 20 00.9 +0.1**
BBSR BB Station 49.58 10 P **P** **04 20 01.2 +0.3**
BBSR IAmb IAmb 04 20 43.5
comp=Z,110nm,1.6s
KVTX Kingsville 49.62 332 P **P** **04 20 01.9 +0.7**
154A Montrose 49.74 350 P **P** **04 20 01.4 -0.7**
250A Grady 49.74 346 P **P** **04 20 00.3 -1.7**
250A IAmb IAmb 04 20 03.0
comp=Z,154nm,1.4s
NHSC New Hope 49.82 353 P **P** **04 20 01.2 -1.5**
NHSC IAMs_20 IAMs_20 04 41 42.5
comp=Z,1µm,22.0s
NHSC New Hope 49.82 353 P **P** **04 20 03.3 +0.7**
baz=172,SNR=13
346A Big Creek Wild 49.99 343 P **P** **04 20 02.9 -1.1**
346A IAmb IAmb 04 20 05.5
comp=Z,98nm,1.1s
152A Waverly Hall 50.09 348 P **P** **04 20 03.5 -1.1**
152A IAmb IAmb 04 20 05.5
comp=Z,114nm,1.4s
Y60A Bolivia 50.53 356 P **P** **04 20 07.5 -0.5**
Y60A IAmb IAmb 04 20 09.2
comp=Z,54nm,0.8s
Y58A Scranton 50.56 354 P **P** **04 20 08.0 -0.2**
Y58A IAmb IAmb 04 20 09.7
comp=Z,160nm,1.0s
441A DeRidder 50.58 339 P **P** **04 20 09.0 +0.5**
GOGA Godfrey 50.58 350 P **P** **04 20 07.2 -1.2**
GOGA IAmb IAmb 04 20 09.3
comp=Z,81nm,1.4s
GOGA Godfrey 50.58 350 IAMs_20 IAMs_20 04 43 52.5
comp=Z,1µm,20.0s
GOGA Godfrey 50.58 350 P **P** **04 20 08.1 -0.3**
baz=168,SNR=11
GOGA Godfrey 50.58 350 P **P** **04 20 07.2 -1.2**
GOGA pmax pmax
comp=Z,81nm,1.4s
GOGA MLR MLR
comp=Z,1µm,20.0s
735A Kenedy 50.71 333 P **P** **04 20 09.7 +0.2**
Y57A Sumter 50.74 353 IAmb IAmb 04 20 10.8
comp=Z,104nm,0.8s
Z51A Franklin 50.80 348 P **P** **04 20 09.2 -0.9**
Z51A IAmb IAmb 04 20 11.1
comp=Z,100nm,1.5s
HKT Hockley 50.84 336 **P** **04 20 10.8 +0.4**
HKT Hockley 50.84 336 P **P** **04 20 10.5 +0.1**
HKT IAmb IAmb 04 20 12.8
comp=Z,325nm,1.8s
HKT Hockley 50.84 336 *eP* **P** **04 20 10.9 +0.5**
LRAL Lakeview Retre 50.92 346 P **P** **04 20 10.5 -0.4**
LRAL Lakeview Retre 50.92 346 P **P** **04 20 10.6 -0.4**
baz=164,SNR=17
833A Chaparral WMA, 50.97 331 P **P** **04 20 11.2 -0.3**
833A Chaparral WMA, 50.97 331 P **P** **04 20 12.5 +1.0**
baz=148,SNR=29
146A Union 51.06 344 P **P** **04 20 11.1 -0.9**
146A IAmb IAmb 04 20 13.3
comp=Z,158nm,1.4s
VBMS Vicksburg 51.08 342 P **P** **04 20 11.9 -0.2**
VBMS IAmb IAmb 04 20 13.6
comp=Z,112nm,1.4s
VBMS Vicksburg 51.08 342 P **P** **04 20 12.0 -0.2**
baz=160
JSC Jenkinsville 51.11 352 P **P** **04 20 10.3 -2.0**
JSC Jenkinsville 51.11 352 P **P** **04 20 10.3 -2.0**
JSC pmax pmax
comp=Z,80nm,1.3s
Y52A Lilburn 51.13 349 P **P** **04 20 11.9 -0.6**
X58A Rowland 51.17 354 P **P** **04 20 11.9 -0.9**
EF01 Eagle Ford 01 51.20 333 P **P** **04 20 13.3 +0.2**
EF01 IAmb IAmb 04 20 14.3
comp=Z,110nm,0.8s
HODGE Hodges 51.20 351 P **P** **04 20 11.9 -1.1**
HODGE IAmb IAmb 04 20 14.1
comp=Z,129nm,1.9s
Z47A Carrollton 51.34 345 P **P** **04 20 13.3 -0.7**
Z47A IAmb IAmb 04 20 14.8
comp=Z,258nm,1.7s
BIRD Birdtown, Kers 51.37 353 P **P** **04 20 13.6 -0.7**
BIRD IAmb IAmb 04 20 15.6
comp=Z,174nm,1.4s
HNVL Huntsville, TX 51.42 336 P **P** **04 20 15.0 +0.3**
Y49A Blount Mountai 51.58 347 P **P** **04 20 14.6 -1.4**
Y49A IAmb IAmb 04 20 16.8
comp=Z,170nm,1.9s
W59A Clinton 51.70 355 P **P** **04 20 16.5 -0.3**
PAULI Pauline 51.71 352 P **P** **04 20 16.7 -0.2**
PAULI IAmb IAmb 04 20 18.2
comp=Z,110nm,1.4s
CNNC Cliffs of the 51.73 356 P **P** **04 20 17.2 +0.1**
CNNC IAmb IAmb 04 21 10.7
comp=Z,134nm,1.4s
CNNC Cliffs of the 51.73 356 P **P** **04 20 16.9 -0.1**
baz=176
143A Socs Landing, 51.79 341 P **P** **04 20 17.7 +0.2**
143A IAmb IAmb 04 20 20.5
comp=Z,94nm,1.4s
W57A Gilead 51.83 354 P **P** **04 20 17.1 -0.6**
W57A IAmb IAmb 04 20 18.9
comp=Z,112nm,1.2s
HNDO Hondo 51.94 332 P **P** **04 20 18.9 +0.2**
X51A Calhoun 51.95 349 P **P** **04 20 17.8 -0.9**
X51A IAmb IAmb 04 20 19.5
comp=Z,78nm,1.1s
KMSC Kings Mountain 51.97 353 P **P** **04 20 18.0 -0.8**
KMSC IAmb IAmb 04 20 20.1
comp=Z,146nm,1.4s
KMSC Kings Mountain 51.97 353 P **P** **04 20 18.9 +0.1**
baz=171,SNR=19
NATX Nacogdoches 52.02 338 P **P** **04 20 18.8 -0.4**
NATX IAmb IAmb 04 20 21.6
comp=Z,133nm,1.1s
NATX IAMs_20 IAMs_20 04 43 46.4
comp=Z,858nm,20.0s
NATX Nacogdoches 52.02 338 P **P** **04 20 20.4 +1.2**

baz=155,SNR=19
BG3 Lake Jocassee 52.04 351 IAmb IAmb 04 20 20.8
comp=Z,108nm,1.7s
FPAL Fort Paine 52.07 348 P **P** **04 20 18.7 -1.0**
435B Jarrell 52.29 334 P **P** **04 20 21.4 +0.1**
435B IAmb IAmb 04 20 23.0
comp=Z,105nm,0.8s
435B Jarrell 52.29 334 P **P** **04 20 21.8 +0.6**
baz=151
X48A Hartselle 52.29 346 P **P** **04 20 20.3 -0.9**
X48A IAmb IAmb 04 20 21.8
comp=Z,226nm,1.9s
W52A Murphy 52.30 350 P **P** **04 20 19.6 -1.7**
Y45A Yeager Farm, C 52.35 344 P **P** **04 20 20.7 -0.9**
Y45A IAmb IAmb 04 20 22.9
comp=Z,269nm,1.8s
V58A Windy Hill, Pi 52.38 355 P **P** **04 20 21.0 -0.8**
V58A IAmb IAmb 04 20 23.0
comp=Z,125nm,1.6s
DRIO Del Rio 52.47 331 P **P** **04 20 22.5 -0.1**
DRIO IAmb IAmb 04 20 24.2
comp=Z,113nm,0.9s
V55A Taylorsville 52.65 353 P **P** **04 20 23.0 -0.9**
W50A Signal Mountai 52.66 348 P **P** **04 20 22.9 -1.0**
237A Washetta, Mont 52.66 337 P **P** **04 20 24.4 +0.5**
V53A Saluda 52.69 351 P **P** **04 20 23.6 -0.5**
Z41A Richland Creek 52.74 340 P **P** **04 20 24.1 -0.5**
Z41A IAmb IAmb 04 20 26.6
comp=Z,148nm,1.3s
CPCT Cooper Cave 52.75 349 P **P** **04 20 23.8 -0.8**
SWET Sewanee 52.79 348 P **P** **04 20 23.4 -1.6**
U59A Littleton 52.84 356 P **P** **04 20 24.7 -0.5**
OXF Oxford 52.92 344 P **P** **04 20 24.9 -1.0**
OXF IAmb IAmb 04 20 26.6
comp=Z,244nm,1.8s
OXF Oxford 52.92 344 P **P** **04 20 24.7 -1.2**
baz=162,SNR=12
OXF Oxford 52.92 344 P **P** **04 20 24.9 -1.0**
OXF pmax pmax
comp=Z,244nm,1.8s
V52A Sevierville 52.98 350 P **P** **04 20 25.3 -1.0**
V52A IAmb IAmb 04 20 27.1
comp=Z,140nm,1.2s
JCT Junction City 52.99 332 P **P** **04 20 26.5 0.0**
JCT IAmb IAmb 04 20 28.2
comp=Z,75nm,1.1s
JCT Junction City 52.99 332 P **P** **04 20 26.9 +0.5**
baz=149,SNR=42
JCT Junction City 52.99 332 P **P** **04 20 26.5 0.0**
JCT pmax pmax
comp=Z,75nm,1.1s
JCT MLR MLR
comp=Z,500nm,22.0s
CCAR Cane Creek 53.03 342 P **P** **04 20 27.4 +0.8**
PLAL Pickwick Lake 53.04 346 P **P** **04 20 25.6 -1.1**
U56A King 53.05 354 P **P** **04 20 25.8 -1.0**
U56A IAmb IAmb 04 20 28.4
comp=Z,115nm,1.1s
HPIG 53.06 324 P **P** **04 20 27.7 +0.4**
HPIG IAmb IAmb 04 20 30.0
comp=Z,212nm,1.3s
V51A Loudon 53.07 350 P **P** **04 20 25.9 -1.1**
SLBS Sierra La Lagu 53.22 318 P **P** **04 20 28.9 +0.5**
SLBS IAmb IAmb 04 20 31.1
comp=Z,68nm,0.9s
WLAR White Oak Lake 53.24 340 P **P** **04 20 28.1 -0.1**
WHTX Lake Whitney, 53.30 335 P **P** **04 20 28.1 -0.6**
WHTX Lake Whitney, 53.30 335 P **P** **04 20 29.1 +0.5**
baz=152,SNR=33
BRDY Brady 53.32 333 P **P** **04 20 28.5 -0.5**
BRDY IAmb IAmb 04 20 30.2
comp=Z,78nm,1.0s
U54A Nelsons Funny 53.39 352 P **P** **04 20 28.1 -1.2**
U54A IAmb IAmb 04 20 30.4
comp=Z,100nm,1.1s
TREL Terrell 53.42 337 P **P** **04 20 29.0 -0.5**
T59A Double "B" Far 53.44 357 P **P** **04 20 29.2 -0.4**
T59A IAmb IAmb 04 20 31.3
comp=Z,103nm,1.2s
V48A Smith Brothers 53.48 347 P **P** **04 20 28.8 -1.2**
V48A IAmb IAmb 04 20 30.5
comp=Z,83nm,1.3s
Z38A Mt. Pleasant 53.49 338 P **P** **04 20 30.4 +0.3**
Z38A IAmb IAmb 04 20 32.1
comp=Z,122nm,0.8s
FW16 Waxahatchie 53.51 336 P **P** **04 20 30.9 +0.7**
FW14 Alvarado 53.55 336 P **P** **04 20 30.7 +0.2**
FW14 IAmb IAmb 04 20 32.2
comp=Z,152nm,1.1s
T60A Surry 53.56 357 P **P** **04 20 30.2 -0.4**
T60A IAmb IAmb 04 20 32.3
comp=Z,88nm,1.1s
T57A Hurt 53.59 355 P **P** **04 20 30.6 -0.1**
T57A IAmb IAmb 04 20 32.1
comp=Z,120nm,1.2s
FW13 Cleburne 53.60 335 P **P** **04 20 30.9 0.0**
SAND Sanderson 53.63 330 P **P** **04 20 30.4 -0.9**
SAND IAmb IAmb 04 20 33.4
comp=Z,145nm,1.1s
MET Memphis--Engin 53.64 344 P **P** **04 20 30.2 -0.9**
TZTN Tazewell 53.66 351 P **P** **04 20 30.4 -0.9**
TZTN IAMs_20 IAMs_20 04 45 10.0
comp=Z,1μm,20.0s
TZTN Tazewell 53.66 351 P **P** **04 20 30.9 -0.4**
baz=169,SNR=11
CLTN Cedars of Leba 53.72 348 P **P** **04 20 30.2 -1.5**
CLTN IAmb IAmb 04 20 32.2
comp=Z,105nm,1.8s
LPIG La Paz 53.75 318 P **P** **04 20 33.4 +1.3**
comp=Z,15nm,0.4s,baz=227,slow=3.9,SNR=5.7
comp=Z,15nm,0.4s
X40A Basin Creek Fa 53.89 341 P **P** **04 20 30.8 -2.1**
TX31 Lajitas Ar. Si 53.89 328 P **P** **04 20 32.9 -0.4**
TX31 IAmb IAmb 04 20 35.2
comp=Z,105nm,0.9s
TXAR Lajitas Array 53.89 328 P **P** **04 20 33.0 -0.2**
TXAR Lajitas Array 53.89 328 P **P** **04 20 34.0 +0.7**
TXAR Lajitas Array 53.89 328 P **P** **04 20 34.0 +0.7**
comp=Z,68nm,0.7s,baz=149,slow=8.8,SNR=812
TXAR LR LR 04 42 05.1
comp=Z,404nm,18.9s,baz=136,slow=34
comp=Z,68nm,0.7s
BLA Blacksburg 53.91 354 P **P** **04 20 31.6 -1.5**
BLA IAmb IAmb 04 20 34.6
comp=Z,72nm,1.3s
BLA Blacksburg 53.91 354 P **P** **04 20 33.0 -0.1**
baz=173,SNR=6.1
BLA Blacksburg 53.91 354 P **P** **04 20 31.7 -1.5**
BLA pmax pmax
comp=Z,72nm,1.3s
BLA MLR MLR
comp=Z,800nm,21.0s
OZNA Ozona 53.96 331 P **P** **04 20 33.5 -0.1**
UALR University of 54.00 341 P **P** **04 20 33.2 -0.6**
UALR IAmb IAmb 04 20 35.1
comp=Z,176nm,1.6s
RCRC Randolf Colleg 54.02 355 P **P** **04 20 33.5 -0.4**
U49A Red Boiling Sp 54.02 348 P **P** **04 20 32.7 -1.2**
FW07 Weatherford 54.05 335 P **P** **04 20 34.2 0.0**
WVT Waverly 54.08 346 **P** **04 20 32.4 -1.9**
WVT Waverly 54.08 346 P **P** **04 20 32.0 -2.3**
WVT IAmb IAmb 04 20 34.1
comp=Z,36nm,1.0s
WVT IAMs_20 IAMs_20 04 43 47.1
comp=Z,825nm,21.0s
WVT Waverly 54.08 346 P **P** **04 20 33.0 -1.4**
baz=164
WVT Waverly 54.08 346 P **P** **04 20 32.0 -2.3**
WVT *PP pP 04 20 32.4 -10
WVT MLR MLR
comp=Z,800nm,21.0s
MIAR Mount Ida 54.18 340 P **P** **04 20 34.6 -0.5**
MIAR IAmb IAmb 04 20 36.7
comp=Z,195nm,1.6s
MIAR Mount Ida 54.18 340 P **P** **04 20 35.2 +0.1**
baz=157,SNR=34
MIAR Mount Ida 54.18 340 P **P** **04 20 34.6 -0.5**
MIAR pmax pmax
comp=Z,195nm,1.7s
MIAR MLR MLR
comp=Z,400nm,20.0s
FW06 Azle 54.20 336 P **P** **04 20 35.0 -0.3**
HALT Halls 54.23 345 P **P** **04 20 34.2 -1.2**
HBAR Harrisburg 54.24 343 P **P** **04 20 34.9 -0.7**
HBAR IAmb IAmb 04 22 14.6
comp=Z,54nm,0.6s
S57A Dark Hollow, R 54.32 355 IAmb IAmb 04 20 37.6
comp=Z,111nm,1.3s
T50A Nancy 54.34 349 P **P** **04 20 34.8 -1.5**
T50A IAmb IAmb 04 20 36.7
comp=Z,188nm,2.0s
PLPT Palo Pinto 54.36 335 P **P** **04 20 36.5 0.0**
Z35A Perchaven, San 54.40 336 P **P** **04 20 36.2 -0.5**
R58B Mineral 54.45 356 P **P** **04 20 36.9 -0.1**
R58B IAmb IAmb 04 20 39.0
comp=Z,164nm,1.4s
LNXT Lenox 54.45 345 P **P** **04 20 36.5 -0.5**
LNXT IAmb IAmb 04 21 42.1
comp=Z,60nm,1.0s
GNAR Gosnell 54.46 344 P **P** **04 20 36.4 -0.7**
FW03 Perrin-Whitt E 54.46 335 P **P** **04 20 36.4 -0.8**
FW03 IAmb IAmb 04 20 39.1
comp=Z,186nm,1.6s
WHAR Wooly Hollow 54.46 342 P **P** **04 20 36.6 -0.6**
UTMT University of 54.52 345 P **P** **04 20 36.3 -1.3**
UTMT IAmb IAmb 04 20 37.9
comp=Z,170nm,1.4s
PEBM Pemiscott Bayo 54.56 344 P **P** **04 20 37.4 -0.4**
PEBM IAmb IAmb 04 20 38.4
comp=Z,158nm,1.4s
GLAT Glass 54.56 345 P **P** **04 20 36.9 -0.9**
GLAT IAmb IAmb 04 20 38.1
comp=Z,101nm,1.3s
S54A Dingess, Beckl 54.59 353 P **P** **04 20 37.0 -1.0**
S54A IAmb IAmb 04 20 39.0
comp=Z,91nm,1.1s
CBN Corbin Frederi 54.66 357 P **P** **04 20 38.5 +0.1**
CBN IAmb IAmb 04 20 40.3
comp=Z,89nm,1.3s
CBN Corbin Frederi 54.66 357 P **P** **04 20 38.9 +0.4**
baz=176,SNR=5.4
ALPN Alpine 54.72 329 P **P** **04 20 39.5 +0.2**
S51A Beattyville 54.74 351 P **P** **04 20 38.1 -1.0**
T47A Sharon Grove 54.74 347 P **P** **04 20 37.5 -1.6**
ABTX Abilene, Hawle 54.75 334 P **P** **04 20 38.7 -0.6**
ABTX Abilene, Hawle 54.75 334 P **P** **04 20 40.0 +0.6**
baz=150,SNR=65
PVMO Portageville 54.80 345 P **P** **04 20 39.0 -0.5**
SGCY Sterling City 54.80 332 P **P** **04 20 39.6 -0.1**
SGCY IAmb IAmb 04 20 42.1
comp=Z,54nm,1.0s
HICK Hickman 54.80 345 P **P** **04 20 38.1 -1.5**
HICK IAmb IAmb 04 20 39.8
comp=Z,108nm,1.1s
LCAR Lake Charles 54.86 343 P **P** **04 20 39.1 -0.9**
LCAR IAmb IAmb 04 20 40.6
comp=Z,196nm,1.9s
R55A Marlinton 54.94 354 P **P** **04 20 40.6 -0.1**
R55A IAmb IAmb 04 20 42.4
comp=Z,63nm,1.1s
LOOK Love County 54.95 337 **P** **04 20 39.9 -0.8**
FCAR Ozark Folk Cen 54.97 342 P **P** **04 20 39.9 -1.0**
FCAR IAmb IAmb 04 20 41.7
comp=Z,172nm,2.0s
PARMO Parma 55.05 345 P **P** **04 20 39.9 -1.5**
MNHN Monahans 55.08 330 P **P** **04 20 41.7 -0.1**
T45A Paducah 55.12 346 P **P** **04 20 40.5 -1.4**
T45A IAmb IAmb 04 20 42.0
comp=Z,86nm,0.8s
R53A Hurricane 55.19 353 P **P** **04 20 41.1 -1.3**
WTFS Witchita Falls 55.26 335 P **P** **04 20 42.5 -0.4**
PBMO Poplar Bluff 55.33 344 P **P** **04 20 42.2 -1.2**
R50A Paris 55.48 350 P **P** **04 20 43.6 -0.9**
R50A IAmb IAmb 04 20 45.1
comp=Z,82nm,1.1s
SN01 Snyder 1 55.49 333 P **P** **04 20 44.8 +0.1**
SN01 IAmb IAmb 04 20 46.3
comp=Z,111nm,1.0s
SN05 Snyder 5 55.51 333 P **P** **04 20 44.0 -0.8**
SN05 IAmb IAmb 04 20 46.4
comp=Z,119nm,1.1s
APMT Aspermont 55.56 334 P **P** **04 20 45.3 +0.1**
CGM3 Cape Girardeau 55.63 345 P **P** **04 20 44.5 -1.1**
CGM3 IAmb IAmb 04 20 46.0
comp=Z,51nm,1.0s
ODSA Odessa 55.63 331 P **P** **04 20 45.7 0.0**
R49A Shelbyville 55.63 349 P **P** **04 20 44.8 -0.7**
R49A IAmb IAmb 04 20 46.0
comp=Z,135nm,1.4s
PECS Pecos 55.64 329 P **P** **04 20 46.3 +0.4**
Q54A Coxs Mills 55.70 354 P **P** **04 20 44.7 -1.4**
Q54A IAmb IAmb 04 20 46.7
comp=Z,62nm,1.0s
SSFO Shawnee State 55.71 351 P **P** **04 20 45.0 -1.1**
VHRN Van Horn 55.73 328 P **P** **04 20 46.8 +0.1**
X34A Smith Ranch, M 55.74 336 **P** **04 20 46.2 -0.2**
WCI Wyandotte Cave 55.78 348 P **P** **04 20 45.1 -1.4**
WCI Wyandotte Cave 55.78 348 IAMs_20 IAMs_20 04 44 35.1
comp=Z,1μm,22.0s
WCI Wyandotte Cave 55.78 348 P **P** **04 20 45.8 -0.8**
baz=166
WCI Wyandotte Cave 55.78 348 P **P** **04 20 45.2 -1.4**
WCI pmax pmax
comp=Z,159nm,0.9s
WCI MLR MLR
comp=Z,1μm,22.0s
USIN University of 55.80 347 P **P** **04 20 45.2 -1.6**
SDMD Soldier's Deli 55.83 357 P **P** **04 20 46.3 -0.6**
Q52A Bidwell 55.85 352 P **P** **04 20 46.3 -0.8**
Q52A IAmb IAmb 04 20 47.8
comp=Z,68nm,1.2s
W35A Tecumseh 55.87 337 **P** **04 20 46.3 -1.1**
W35A IAmb IAmb 04 20 47.9
comp=Z,76nm,0.9s
HHAR Hobbs 55.89 341 P **P** **04 20 47.1 -0.3**
S44A Carbondale 55.91 346 P **P** **04 20 46.7 -0.8**
S44A IAmb IAmb 04 20 48.1
comp=Z,91nm,0.9s
SIUC Southern Illin 55.92 346 P **P** **04 20 46.5 -1.0**
SIUC IAmb IAmb 04 20 48.2
comp=Z,100nm,0.9s
POST Post 55.94 332 P **P** **04 20 48.0 0.0**
P57A Homestead Farm 55.97 356 P **P** **04 20 48.2 +0.3**
P57A IAmb IAmb 04 20 50.2
comp=Z,82nm,1.2s
Q51A Peebles 56.06 351 P **P** **04 20 47.6 -1.0**
Q51A IAmb IAmb 04 20 49.1
comp=Z,64nm,0.9s
RLO Rose Lookout 56.13 340 P **P** **04 20 48.8 -0.4**
RLO IAmb IAmb 04 20 50.0
comp=Z,43nm,0.8s
FNO Franklin 56.16 337 **P** **04 20 48.5 -0.9**
FNO IAmb IAmb 04 20 50.4
comp=Z,133nm,1.2s
TUL3 Leonard 56.16 339 P **P** **04 20 48.4 -1.0**
TUL3 IAMs_20 IAMs_20 04 45 40.2
comp=Z,902nm,22.0s
TUL3 Leonard 56.16 339 P **P** **04 20 49.5 +0.1**
baz=155,SNR=52
U38A Gravette 56.17 340 P **P** **04 20 48.8 -0.7**
U38A IAmb IAmb 04 20 50.9
comp=Z,258nm,1.9s
MGMO Mountain Grove 56.19 343 P **P** **04 20 48.6 -1.0**
DKNS Dickens 56.20 333 P **P** **04 20 49.7 -0.1**
WMOK Wichita Mounta 56.23 336 P **P** **04 20 48.8 -1.1**
WMOK IAmb IAmb 04 20 51.0
comp=Z,113nm,1.7s
WMOK Wichita Mounta 56.23 336 P **P** **04 20 49.6 -0.4**
baz=151,SNR=28
WMOK Wichita Mounta 56.23 336 P **P** **04 20 48.8 -1.1**
WMOK pmax pmax
comp=Z,113nm,1.7s
P53A Whipple 56.26 353 P **P** **04 20 48.6 -1.4**
P53A IAmb IAmb 04 20 50.9
comp=Z,90nm,1.1s
MCWV Mont Chateau 56.28 355 P **P** **04 20 49.8 -0.4**
MCWV IAmb IAmb 04 20 51.5
comp=Z,61nm,1.0s
MCWV IAMs_20 IAMs_20 04 45 41.4
comp=Z,815nm,20.0s
MCWV Mont Chateau 56.28 355 P **P** **04 20 50.4 +0.3**
baz=174,SNR=11
OKCSW OKLAHOMA CITY 56.30 337 **P** **04 20 49.9 -0.5**
OKCSW IAmb IAmb 04 20 51.2
comp=Z,69nm,0.8s
WUPA West Chester U 56.31 359 P **P** **04 20 48.9 -1.4**
DEOK Depew 56.35 338 **P** **04 20 50.1 -0.6**
DEOK IAmb IAmb 04 20 51.8
comp=Z,156nm,1.3s
CLNB Carlsbad 56.38 330 P **P** **04 20 51.1 0.0**
MVL Millersville 56.40 358 P **P** **04 20 50.7 -0.3**
MVL IAmb IAmb 04 20 53.2
comp=Z,177nm,1.7s
P51A Williamsport 56.47 352 P **P** **04 20 50.1 -1.4**
P51A IAmb IAmb 04 20 51.8
comp=Z,79nm,0.8s
CLN7 Carlsbad 7 56.47 330 P **P** **04 20 52.2 +0.4**
FVM French Village 56.47 345 P **P** **04 20 50.3 -1.2**
FVM IAmb IAmb 04 20 52.2
comp=Z,216nm,1.9s
FVM French Village 56.47 345 P **P** **04 20 50.3 -1.2**
FVM pmax pmax
comp=Z,216nm,2.0s
P52A Corning 56.50 353 P **P** **04 20 50.5 -1.2**
P52A IAmb IAmb 04 20 52.1
comp=Z,75nm,0.9s
P52A IAMs_20 IAMs_20 04 45 12.1
comp=Z,1μm,22.0s
P52A Corning 56.50 353 P **P** **04 20 50.9 -0.8**
baz=171,SNR=21
ADOK Arcadia Dam 56.50 337 P **P** **04 20 51.0 -0.8**
GDL2 Guadalupe Moun 56.56 329 P **P** **04 20 52.9 +0.4**
OK052 Battle Ridge R 56.59 338 **P** **04 20 51.6 -0.9**
OK052 IAmb IAmb 04 20 53.4
comp=Z,83nm,0.9s
OK052 IAMs_20 IAMs_20 04 46 55.6
comp=Z,881nm,22.0s
OLIL Olney 56.63 347 P **P** **04 20 51.4 -1.3**
OLIL IAmb IAmb 04 20 53.0
comp=Z,108nm,1.0s
OK029 Liberty Lake 56.66 337 **P** **04 20 52.0 -0.9**
OK029 IAmb IAmb 04 20 53.7
comp=Z,137nm,1.1s
OK029 IAMs_20 IAMs_20 04 45 06.3
comp=Z,840nm,22.0s
MNTX Cornudas Mount 56.67 328 P **P** **04 20 52.4 -0.7**
MNTX IAmb IAmb 04 20 54.5
comp=Z,97nm,0.9s
MNTX Cornudas Mount 56.67 328 P **P** **04 20 53.2 +0.1**
baz=144,SNR=84
OK033 Mehan 56.69 338 **P** **04 20 52.1 -1.0**
OK033 IAmb IAmb 04 20 54.1
comp=Z,87nm,0.9s
OK033 IAMs_20 IAMs_20 04 45 50.1
comp=Z,878nm,22.0s
QUOK Quay 56.72 338 **P** **04 20 52.8 -0.6**
QUOK IAmb IAmb 04 20 53.9
comp=Z,65nm,0.8s
BLO Bloomington 56.74 348 P **P** **04 20 51.6 -1.8**
BLO IAmb IAmb 04 20 53.6
comp=Z,224nm,1.7s
BLO Bloomington 56.74 348 P **P** **04 20 51.6 -1.8**
BLO pmax pmax
comp=Z,224nm,1.7s
CCM Cathedral Cave 56.75 344 P **P** **04 20 52.2 -1.3**
CCM Cathedral Cave 56.75 344 P **P** **04 20 52.9 -0.6**
baz=160
CCM Cathedral Cave 56.75 344 P **P** **04 20 52.2 -1.3**
CCM pmax pmax
comp=Z,30nm,0.9s
P49A Miami Univ. Ec 56.77 350 P **P** **04 20 51.6 -2.1**
P49A IAmb IAmb 04 20 53.6
comp=Z,125nm,1.1s
P49A IAMs_20 IAMs_20 04 45 42.3
comp=Z,1μm,21.0s
P49A Miami Univ. Ec 56.77 350 P **P** **04 20 52.3 -1.3**
baz=168,SNR=31
P48A Milroy 56.82 350 P **P** **04 20 52.0 -2.0**
P48A IAmb IAmb 04 20 53.8
comp=Z,162nm,1.6s
O54A Avella 56.84 354 P **P** **04 20 53.0 -1.2**
O52A Adamsville 56.94 353 P **P** **04 20 53.7 -1.1**
O52A IAmb IAmb 04 20 55.3
comp=Z,62nm,0.8s
LUPA Lehigh Univers 56.97 359 P **P** **04 20 54.3 -0.7**
CSTR Hydro, Custer 56.99 336 **P** **04 20 55.0 -0.4**
O53A New Philadelph 57.00 354 P **P** **04 20 54.0 -1.2**
O53A IAmb IAmb 04 20 55.9
comp=Z,56nm,1.1s
O53A IAMs_20 IAMs_20 04 47 30.4
comp=Z,801nm,19.0s
O53A New Philadelph 57.00 354 P **P** **04 20 54.8 -0.4**
baz=172,SNR=12
S39A Bolivar 57.00 342 P **P** **04 20 54.2 -1.1**
S39A IAmb IAmb 04 20 56.2
comp=Z,52nm,0.8s
Q44A Meyer Farm, Va 57.00 346 P **P** **04 20 53.8 -1.5**
CPRX Cap Rock 57.00 330 P **P** **04 20 56.4 +0.8**
OK048 Pawnee Station 57.02 338 **P** **04 20 54.8 -0.7**
OK048 IAMs_20 IAMs_20 04 46 09.0
comp=Z,866nm,22.0s
SLM Saint Louis 57.04 345 P **P** **04 20 55.1 -0.5**
SLM IAmb IAmb 04 20 55.6
comp=Z,43nm,0.8s
SLM Saint Louis 57.04 345 P **P** **04 20 55.1 -0.5**
SLM pmax pmax
comp=Z,43nm,0.9s
BRNJ Basking Ridge 57.05 360 P **P** **04 20 55.1 -0.4**
BRNJ IAmb IAmb 04 22 36.2
comp=Z,85nm,1.6s
OK051 E0350 and S346 57.06 338 **P** **04 20 55.4 -0.5**
OK051 IAmb IAmb 04 20 57.1
comp=Z,116nm,1.0s
OK051 IAMs_20 IAMs_20 04 45 55.1
comp=Z,777nm,19.0s
SSPA Standing Stone 57.11 357 P **P** **04 20 56.1 +0.1**
SSPA IAmb IAmb 04 20 57.9
comp=Z,154nm,1.4s
SSPA Standing Stone 57.11 357 P **P** **04 20 56.5 +0.5**
baz=176
SMWD Samnorwood 57.14 335 P **P** **04 20 56.4 0.0**
ACSO Alum Creek Sta 57.19 352 P **P** **04 20 55.4 -1.2**
ACSO IAMs_20 IAMs_20 04 45 22.6
comp=Z,1μm,22.0s
ACSO Alum Creek Sta 57.19 352 P **P** **04 20 56.0 -0.6**
baz=170,SNR=47
R40A Maddies Statio 57.25 343 P **P** **04 20 56.0 -1.1**
R40A IAmb IAmb 04 20 57.7
comp=Z,50nm,0.9s
SRIG Santa Rosalia 57.25 319 P **P** **04 20 56.1 -1.2**
SRIG IAmb IAmb 04 21 00.3
comp=Z,106nm,1.0s
N58A Sunbury 57.25 358 P **P** **04 20 57.1 +0.1**
N58A IAmb IAmb 04 20 59.1
comp=Z,177nm,1.6s
MSTX Muleshoe 57.27 332 P **P** **04 20 57.0 -0.4**
MSTX Muleshoe 57.27 332 P **P** **04 20 57.6 +0.2**
baz=147,SNR=28
P46A Rosedale 57.30 348 P **P** **04 20 55.7 -1.7**
P46A IAmb IAmb 04 20 57.4
comp=Z,97nm,0.9s
EPT El Paso 57.30 327 P **P** **04 20 57.1 -0.6**
EPT IAmb IAmb 04 20 59.3
comp=Z,92nm,0.9s
EPT IAMs_20 IAMs_20 04 43 44.3
comp=Z,872nm,19.0s
T35A Sooner Cattle 57.32 339 P **P** **04 20 57.2 -0.5**
T35A IAmb IAmb 04 20 59.1
comp=Z,106nm,1.1s
O49A Covington 57.35 351 P **P** **04 20 56.3 -1.4**
O49A IAmb IAmb 04 20 57.8
comp=Z,80nm,0.9s
PAL Palisades 57.37 0 P **P** **04 20 56.1 -1.7**
PAL Palisades 57.37 0 P **P** **04 20 59.8 +2.0**
baz=180
PAL Palisades 57.37 0 P **P** **04 20 56.1 -1.7**
PAL pmax pmax
comp=Z,38nm,1.5s
BLOK Blackwell 57.43 338 **P** **04 20 57.2 -1.2**
BLOK IAmb IAmb 04 20 59.6
comp=Z,125nm,1.1s
ODNJ Ogdensburg 57.45 360 P **P** **04 20 57.0 -1.4**
CROK Carrier 57.48 337 **P** **04 20 58.3 -0.5**
TRNY Table Rock, Ra 57.51 360 P **P** **04 20 58.4 -0.5**
N53A Lisbon 57.51 354 P **P** **04 20 57.9 -1.0**
N53A IAmb IAmb 04 20 59.6
comp=Z,60nm,1.0s
WSPT Westport, CT 57.54 1 P **P** **04 20 58.3 -0.7**
O48B Farmland 57.55 350 P **P** **04 20 57.7 -1.4**
O48B IAMs_20 IAMs_20 04 46 25.9
comp=Z,979nm,20.0s
O48B Farmland 57.55 350 P **P** **04 20 57.9 -1.2**
baz=168,SNR=47
AMTX Amarillo 57.56 333 P **P** **04 20 59.1 -0.3**
AMTX IAmb IAmb 04 21 00.7

comp=Z,125nm,1.6s
AMTX Amarillo 57.56 333 P P 04 20 59.2 -0.3
baz=148
ELIS Ellis County 57.64 336 P P 04 20 60.0 0.0
HSIG 57.69 322 P P 04 21 00.6 +0.2
YLE Yale 57.69 1 P P 04 20 59.5 -0.5
YLE IAMs_20 IAMs_20 04 45 22.0
comp=Z,996nm,22.0s
GC02 Grant County # 57.74 338 P P 04 20 59.3 -1.3
KAN13 South Haven SW 57.75 338 P 04 21 00.2 -0.4
U32A Winter Ranch, 57.76 336 P 04 21 00.2 -0.5
U32A IAmb IAmb 04 21 02.1
comp=Z,159nm,1.4s
M57A Sunshine Farm, 57.77 357 P P 04 21 00.7 +0.1
N51A Ashland 57.79 353 P P 04 20 59.3 -1.5
N51A IAmb IAmb 04 21 01.0
comp=Z,60nm,0.8s
P43A Skaggs, Pawnee 57.82 346 P P 04 20 59.6 -1.4
P43A IAmb IAmb 04 21 01.3
comp=Z,95nm,0.8s
OK032 Salt Plains WL 57.83 337 P 04 21 01.0 -0.2
KAN14 Manchester OK 57.87 338 P P 04 21 00.9 -0.6
KAN17 Caldwell West 57.88 338 P 04 21 01.4 -0.2
KAN17 IAmb IAmb 04 21 02.1
comp=Z,45nm,0.8s
KAN01 Argonia South 57.98 338 P P 04 21 01.1 -1.2
KAN01 IAmb IAmb 04 21 02.9
comp=Z,52nm,0.7s
KAN05 Bluff City Nor 57.98 338 P P 04 21 01.8 -0.5
M55A Ridgway 57.99 356 P P 04 21 01.7 -0.5
M55A IAmb IAmb 04 21 03.6
comp=Z,96nm,1.0s
M65A Busby, Falmout 58.01 3 IAMs_20 IAMs_20 04 44 51.5
comp=Z,1µm,22.0s
SFIN Lafayette 58.01 348 P P 04 21 00.6 -1.8
SFIN IAmb IAmb 04 21 01.9
comp=Z,56nm,0.8s
SFIN Lafayette 58.01 348 P P 04 21 00.9 -1.5
baz=165,SNR=23
N49A Columbus Grove 58.04 351 P P 04 21 01.4 -1.2
KS21 Milan North St 58.06 338 P P 04 21 02.8 0.0
O44A Mansfield 58.08 347 P P 04 21 00.7 -2.1
O44A IAmb IAmb 04 21 02.5
comp=Z,111nm,1.6s
KAN06 Argonia West S 58.09 338 P P 04 21 02.0 -1.0
KAN06 IAmb IAmb 04 21 03.8
comp=Z,46nm,0.8s
KAN08 Anthony NE Sta 58.12 338 P P 04 21 01.5 -1.7
M53A WI Miller and 58.12 354 P P 04 21 02.6 -0.5
M53A IAmb IAmb 04 21 03.9
comp=Z,90nm,1.0s
M53A WI Miller and 58.12 354 P P 04 21 02.8 -0.4
baz=173,SNR=26
KAN12 Harper NE Stat 58.19 338 P P 04 21 03.0 -0.7
N47A Urbana 58.24 350 P P 04 21 02.2 -1.8
ALLY Alegheny Colle 58.28 355 P P 04 21 03.5 -0.8
ALLY IAmb IAmb 04 21 05.1
comp=Z,118nm,1.0s
M52A Chesterland 58.29 354 P P 04 21 03.4 -0.9
M52A IAmb IAmb 04 21 04.8
comp=Z,69nm,0.8s
P40A Paris 58.35 344 P P 04 21 04.0 -0.8
M50A Fremont 58.35 352 P P 04 21 03.8 -0.9
319A Douglas 58.48 325 P P 04 21 06.8 +0.7
L59A Walton 58.56 359 P P 04 21 06.0 -0.2
L59A IAmb IAmb 04 21 08.4
comp=Z,82nm,1.2s
121A Cookes Peak, D 58.57 327 P P 04 21 07.7 +1.0
121A Cookes Peak, D 58.57 327 P P 04 21 08.4 +1.7
baz=142,SNR=87
L56A Greenwood 58.59 357 P P 04 21 06.5 0.0
BINY Binghamton 58.59 358 P P 04 21 05.9 -0.5
BINY Binghamton 58.59 358 P P 04 21 07.3 +0.9
baz=178,SNR=19
HDIL Hopedale 58.64 347 P P 04 21 05.1 -1.7
HDIL IAmb IAmb 04 21 06.6
comp=Z,65nm,0.8s
HDIL IAMs_20 IAMs_20 04 47 34.9
comp=Z,943nm,21.0s
HDIL Hopedale 58.64 347 P P 04 21 05.7 -1.1
baz=163,SNR=14
QUA2 Belchertown 58.66 2 IAMs_20 IAMs_20 04 45 58.6
comp=Z,902nm,22.0s
ERPA Erie 58.73 355 P P 04 21 06.3 -1.1
ERPA IAMs_20 IAMs_20 04 47 26.3
comp=Z,765nm,21.0s
ERPA Erie 58.73 355 P P 04 21 07.1 -0.2
baz=174,SNR=31
BCX Boston College 58.76 3 IAMs_20 IAMs_20 04 48 34.2
comp=Z,937nm,21.0s
WES Weston 58.80 2 P P 04 21 06.4 -1.5
WES IAmb IAmb 04 21 54.3
comp=Z,104nm,1.9s
WES IAMs_20 IAMs_20 04 45 36.4
comp=Z,1µm,22.0s
WES Weston 58.80 2 P P 04 21 06.4 -1.5
WES pmax pmax
comp=Z,104nm,1.9s
L61B Northampton 58.83 1 P P 04 21 08.0 0.0
L61B IAMs_20 IAMs_20 04 45 42.0
comp=Z,911nm,22.0s
L61B Northampton 58.83 1 P P 04 21 08.1 0.0
baz=182
P38A Dawn 58.85 343 P P 04 21 07.3 -0.9
P38A IAmb IAmb 04 21 09.2
comp=Z,48nm,0.8s
WVNY West Valley, N 58.91 356 P P 04 21 08.2 -0.5
HRV Adam Dziewonsk 58.92 2 P P 04 21 09.1 +0.5
baz=183
L48A N Adams 59.08 351 P P 04 21 08.6 -1.2
TRY Troy 59.09 0 P P 04 21 10.2 +0.3
TRY IAmb IAmb 04 21 11.9
comp=Z,86nm,1.7s
TRY IAMs_20 IAMs_20 04 46 40.0
comp=Z,761nm,21.0s
K57A Scipio Center 59.13 358 P P 04 21 10.3 +0.1
CRNM Carthage 59.15 329 P P 04 21 10.9 +0.2
N41A Harden Midland 59.15 345 P P 04 21 08.6 -1.7
N41A IAmb IAmb 04 21 10.4
comp=Z,75nm,0.9s
M44A Midewin, Midew 59.17 348 P P 04 21 07.9 -2.5
M44A IAmb IAmb 04 21 09.8
comp=Z,31nm,0.8s
DUN6 Lazy B Ranch 59.28 326 P P 04 21 12.3 +0.7
AAM Ann Arbor 59.32 352 P P 04 21 10.7 -0.8
AAM IAmb IAmb 04 21 11.7
comp=Z,54nm,0.8s
AAM Ann Arbor 59.32 352 P P 04 21 10.7 -0.8
baz=169
AAM Ann Arbor 59.32 352 P P 04 21 10.7 -0.8
AAM pmax pmax
comp=Z,54nm,0.8s
AAM MLR MLR
comp=Z,2µm,20.0s
KSU1 Kansas State U 59.32 340 P P 04 21 10.7 -0.8
KSU1 IAmb IAmb 04 21 12.1
comp=Z,40nm,0.8s
KSU1 Kansas State U 59.32 340 P P 04 21 11.1 -0.5
baz=155,SNR=21
RTBA Rita Blanca 59.33 333 P P 04 21 11.4 -0.4
RTBA IAmb IAmb 04 21 13.2
comp=Z,62nm,1.1s
Y22D IRIS PASSCAL I 59.34 328 P P 04 21 11.8 -0.2
Y22D IAMs_20 IAMs_20 04 44 37.2
comp=Z,724nm,20.0s
Y22D IRIS PASSCAL I 59.34 328 P P 04 21 13.4 +1.5
baz=143,SNR=8.1
Y22F Passcal Instru 59.34 328 P P 04 21 13.4 +1.4
baz=143,SNR=8.1
LENM Lemitar 59.44 329 P P 04 21 14.3 +1.6
R32A Long Quarter, 59.45 338 P P 04 21 12.3 -0.2
L46A Eue Claire 59.45 349 P P 04 21 10.7 -1.6
K50A Casco 59.65 353 P P 04 21 12.3 -1.5
MEDO Medina 59.66 356 P P 04 21 13.5 -0.3
MEDO IAmb IAmb 04 21 14.9
comp=Z,117nm,1.2s
J56A Wolcott 59.69 358 P P 04 21 13.7 -0.3
J55A Hilton 59.72 357 P P 04 21 14.2 0.0
J61A Chester 59.73 1 P P 04 21 14.5 +0.3
J58A Remsen 59.73 359 P P 04 21 14.1 -0.2
J58A IAmb IAmb 04 21 16.0
comp=Z,121nm,2.0s
J54A Appleton 59.78 356 P P 04 21 14.1 -0.4
J54A IAmb IAmb 04 21 15.7
comp=Z,86nm,1.1s

J57A Williamstown 59.80 358 P P 04 21 14.8 +0.1
J57A IAmb IAmb 04 21 16.3
comp=Z,89nm,1.1s
ANMO Albuquerque 59.81 329 P P 04 21 15.0 -0.2
ANMO IAmb IAmb 04 21 17.5
comp=Z,94nm,1.1s
ANMO Albuquerque 59.81 329 P P 04 21 16.2 +1.0
baz=144
ANMO Albuquerque 59.81 329 P P 04 21 15.0 -0.2
ANMO pmax pmax
comp=Z,94nm,1.1s
ANMO Albuquerque 59.81 329 P P 04 21 15.8 +0.6
comp=Z,63nm,0.9s,baz=235,slow=8.4,SNR=153
ANMO PcP PcP 04 22 02.7 +1.0
comp=Z,8.1nm,0.9s,baz=142,slow=3.7,SNR=1.5
ANMO LR LR 04 48 08.8
comp=Z,432nm,18.2s,baz=220,slow=37
comp=Z,63nm,0.9s
J59A Piesco 59.83 360 P P 04 21 14.5 -0.5
J59A IAmb IAmb 04 21 16.9
comp=Z,74nm,1.4s
N38A Joes South For 59.85 343 P P 04 21 14.4 -0.8
N38A IAmb IAmb 04 21 15.8
comp=Z,85nm,1.1s
L44A Lake County Fo 59.91 348 P P 04 21 14.1 -1.4
L44A IAmb IAmb 04 21 15.2
comp=Z,104nm,1.1s
L44A Lake County Fo 59.91 348 P P 04 21 14.3 -1.2
baz=165,SNR=6.5
TUC Tucson 60.03 324 P P 04 21 16.9 +0.2
TUC IAmb IAmb 04 21 19.2
comp=Z,80nm,0.9s
TUC Tucson 60.03 324 P P 04 21 17.9 +1.2
baz=139
TUC Tucson 60.03 324 P P 04 21 16.9 +0.2
TUC pmax pmax
comp=Z,80nm,1.0s
TUC MLR MLR
comp=Z,1µm,18.0s
HNH Hanover 60.09 2 IAMs_20 IAMs_20 04 47 11.4
comp=Z,841nm,20.0s
L42A Oliver, Polo 60.11 347 P P 04 21 15.1 -1.8
L42A IAmb IAmb 04 21 16.9
comp=Z,65nm,1.2s
CBKS Cedar Bluff 60.17 337 P P 04 21 17.3 -0.2
CBKS IAmb IAmb 04 21 18.8
comp=Z,71nm,0.9s
CBKS IAMs_20 IAMs_20 04 47 59.2
comp=Z,845nm,21.0s
CBKS Cedar Bluff 60.17 337 P P 04 21 17.8 +0.3
baz=152,SNR=19
CBKS Cedar Bluff 60.17 337 P P 04 21 17.3 -0.2
CBKS pmax pmax
comp=Z,71nm,0.9s
CBKS MLR MLR
comp=Z,800nm,21.0s
NCB Newcomb 60.33 360 P P 04 21 18.0 -0.4
J47A Sunmer 60.41 351 P P 04 21 16.9 -2.0
K43A Burlington 60.50 348 P P 04 21 18.2 -1.4
L40A Anamosa 60.52 345 P P 04 21 18.6 -1.1
L40A IAmb IAmb 04 21 19.9
comp=Z,79nm,1.1s
N35A Tabor 60.61 341 P P 04 21 19.2 -1.2
LBNH Lisbon 60.63 2 P P 04 21 20.8 +0.3
LBNH IAMs_20 IAMs_20 04 48 44.8
comp=Z,774nm,20.0s
LBNH Lisbon 60.63 2 P P 04 21 21.1 +0.6
baz=182
LBNH Lisbon 60.63 2 P P 04 21 20.8 +0.3
T25A Trinidad 60.65 332 P P 04 21 20.6 -0.4
T25A Trinidad 60.65 332 P P 04 21 21.9 +0.9
baz=145,SNR=6.4
I49A Point Hope 60.83 353 P P 04 21 20.0 -1.7
SCIA State Center 60.88 344 P P 04 21 20.9 -1.3
SCIA IAmb IAmb 04 21 22.9
comp=Z,44nm,0.9s
SCIA State Center 60.88 344 P P 04 21 21.8 -0.4
baz=159,SNR=12
214A Organ Pipe Nat 60.92 323 P P 04 21 23.0 +0.3
214A Organ Pipe Nat 60.92 323 P P 04 21 24.7 +1.9
baz=137,SNR=32
LONY Lake Ozonia 60.98 360 P P 04 21 22.7 -0.1
LONY IAmb IAmb 04 21 24.6
comp=Z,121nm,1.9s
LONY IAMs_20 IAMs_20 04 49 34.0
comp=Z,685nm,19.0s
LONY Lake Ozonia 60.98 360 P P 04 21 23.2 +0.4
baz=180,SNR=8.7
PIX Pinacate 61.02 322 P P 04 21 22.8 -0.5
PIX IAmb IAmb 04 21 26.0
comp=Z,78nm,1.3s
WVL Waterville 61.06 4 IAMs_20 IAMs_20 04 46 29.1
comp=Z,792nm,21.0s
N33A J Bar K, Exete 61.08 340 P P 04 21 22.2 -1.4
JFWS Jewell Farm 61.10 347 P P 04 21 22.0 -1.7
JFWS Jewell Farm 61.10 347 IAMs_20 IAMs_20 04 47 44.1
comp=Z,792nm,21.0s
JFWS Jewell Farm 61.10 347 P P 04 21 23.0 -0.7
baz=162,SNR=15
JFWS Jewell Farm 61.10 347 P P 04 21 22.0 -1.7
JFWS pmax pmax
comp=Z,24nm,0.7s
JFWS MLR MLR
comp=Z,800nm,21.0s
FRNY Flat Rock 61.20 0 P P 04 21 23.7 -0.5
FRNY IAmb IAmb 04 21 26.2
comp=Z,43nm,1.1s
X18A Snowflake 61.25 327 P P 04 21 25.6 +0.4
SADO Sadowa 61.30 356 P P 04 21 24.1 -0.8
SADO IAmb IAmb 04 21 25.6
comp=Z,79nm,0.9s
SADO Sadowa 61.30 356 LR LR 04 50 40.9
comp=Z,539nm,19.6s,baz=183,slow=39
EMMW East Machias 61.37 5 IAMs_20 IAMs_20 04 50 40.3
comp=Z,854nm,20.0s
WBO Williamsburg 61.37 359 P P 04 21 25.3 -0.1
I45A Fountain 61.41 350 P P 04 21 23.9 -1.7
I45A IAmb IAmb 04 21 25.4
comp=Z,106nm,1.4s
K38A Parkersburg 61.46 344 P P 04 21 24.7 -1.4
K38A IAmb IAmb 04 21 25.8
comp=Z,36nm,0.9s
KSCO Kaye Shedlock' 61.47 335 P P 04 21 25.8 -0.6
KSCO Kaye Shedlock' 61.47 335 P P 04 21 27.1 +0.7
baz=149,SNR=17
SFX San Felipe 61.48 320 P P 04 21 26.4 -0.1
W18A Petrified Fore 61.59 327 P P 04 21 27.4 0.0
W18A Petrified Fore 61.59 327 P P 04 21 28.9 +1.5
baz=141,SNR=25
SDCO Great Sand Dun 61.63 332 P P 04 21 27.7 0.0
SDCO Great Sand Dun 61.63 332 P P 04 21 28.9 +1.2
baz=146,SNR=37
G62A West of Eustis 61.67 3 P P 04 21 28.2 +0.7
I42A Draeger Farm, 61.76 348 P P 04 21 27.1 -0.9
I42A IAmb IAmb 04 21 28.7
comp=Z,80nm,1.1s
PKME Peaks-Kenny Pk 61.78 4 IAMs_20 IAMs_20 04 46 49.2
comp=Z,729nm,22.0s
PKME Peaks-Kenny Pk 61.78 4 P P 04 21 28.7 +0.6
baz=185
GGN Saint George 61.84 6 P P 04 21 26.4 -2.1
GGN IAmb IAmb 04 22 58.0
comp=Z,95nm,1.6s
L34A Svendsen Farm, 61.85 341 P P 04 21 27.8 -0.9
G65A Princeton 61.85 5 P P 04 21 28.8 +0.1
MNTQ Montreal, Queb 61.86 0 P P 04 21 28.9 +0.2
MNTQ IAmb IAmb 04 21 30.4
comp=Z,89nm,1.3s
BGNE Belgrade 61.91 340 P P 04 21 28.7 -0.5
BGNE Belgrade 61.91 340 P P 04 21 29.1 -0.1
baz=154,SNR=34
GLMI Grayling 61.93 352 P P 04 21 28.2 -1.0
GLMI Grayling 61.93 352 P P 04 21 28.4 -0.9
baz=169,SNR=12
X16A Lo Mia Camp, P 61.97 325 P P 04 21 30.6 +0.7
113A Mohawk Valley, 62.07 323 P P 04 21 30.9 +0.5
113A IAmb IAmb 04 21 33.3
comp=Z,90nm,1.2s
H43A Windswept, Lux 62.09 349 P P 04 21 29.0 -1.3
I40A Norwalk 62.12 347 P P 04 21 29.8 -0.7
S22A 4UR Ranch, Cre 62.24 331 P P 04 21 31.2 -0.6
S22A IAmb IAmb 04 21 34.1
comp=Z,49nm,1.0s
S22A 4UR Ranch, Cre 62.24 331 P P 04 21 32.9 +1.0
baz=144,SNR=50
G45A Suttons Bay 62.29 351 P P 04 21 30.5 -1.2

VTX Valle De La Tr 62.30 320 P P 04 21 32.9 +0.8
VTX IAmb IAmb 04 21 35.3
comp=Z,72nm,1.3s
F64A Sherman 62.45 5 P P 04 21 32.4 -0.2
Y14A Wickenburg 62.48 324 P P 04 21 33.8 +0.6
Q24A Divide 62.49 333 P P 04 21 33.9 +0.4
Q24A IAmb IAmb 04 21 35.6
comp=Z,87nm,1.1s
Q24A Divide 62.49 333 P P 04 21 34.3 +0.8
baz=146,SNR=44
TRQ Mont Tremblant 62.59 360 P P 04 21 33.3 -0.3
TRQ IAmb IAmb 04 21 35.0
comp=Z,47nm,1.1s
MVCO Mesa Verde 62.61 329 P P 04 21 34.2 -0.1
MVCO IAmb IAmb 04 21 36.5
comp=Z,99nm,1.2s
MVCO IAMs_20 IAMs_20 04 49 48.4
comp=Z,881nm,18.0s
MVCO Mesa Verde 62.61 329 P P 04 21 35.3 +1.1
baz=143,SNR=40
CPBX Cerro Prieto 62.73 321 P P 04 21 37.0 +2.2
WUAZ Wupatki 62.76 326 P P 04 21 35.7 +0.5
WUAZ IAMs_20 IAMs_20 04 46 45.8
comp=Z,895nm,21.0s
WUAZ Wupatki 62.76 326 P P 04 21 37.1 +1.9
baz=139,SNR=48
LMN Caledonia Moun 62.78 7 P P 04 21 34.7 -0.2
LMN IAmb IAmb 04 21 36.5
comp=Z,40nm,1.0s
ESJX Sierra Juarez 62.83 320 P P 04 21 36.1 +0.3
OGNE Ogallala 62.89 337 P P 04 21 35.8 -0.1
OGNE IAmb IAmb 04 21 37.5
comp=Z,68nm,1.0s
OGNE Ogallala 62.89 337 P P 04 21 36.2 +0.3
baz=150
GLA Glamis 62.89 322 P P 04 21 36.4 +0.4
GLA Glamis 62.89 322 P P 04 21 37.6 +1.7
baz=136
GLA Glamis 62.89 322 P P 04 21 36.4 +0.4
I37A Lemond, Waseca 62.90 344 P P 04 21 34.8 -1.0
I37A IAmb IAmb 04 21 36.0
comp=Z,52nm,0.9s
E62A Clayton Lake 63.12 4 P P 04 21 37.3 +0.2
E62A IAmb IAmb 04 21 39.7
comp=Z,98nm,1.7s
CCX Cicese 63.17 320 P P 04 21 37.7 -0.1
CCX IAmb IAmb 04 21 41.0
comp=Z,69nm,1.4s
BLYC Blythe 63.21 323 P P 04 21 38.1 +0.1
YUH Yuha Desert 63.26 321 P P 04 21 38.2 -0.1
YUH IAmb IAmb 04 21 41.8
comp=Z,93nm,1.2s
PQI Presque Isle 63.27 5 P P 04 21 38.4 +0.2
RMX La Rumorosa 63.32 321 P P 04 21 39.9 +1.0
G40A Rib Lake 63.34 347 P P 04 21 37.5 -1.1
PV01 Paradox Valley 63.37 330 P P 04 21 39.2 -0.1
PV01 IAmb IAmb 04 21 41.9
comp=Z,86nm,1.1s
IKP In-Ko-Pah, Jac 63.38 321 P P 04 21 41.6 +2.3
baz=134,SNR=15
ISCO Idaho Springs 63.38 333 P P 04 21 39.0 -0.4
ISCO IAmb IAmb 04 21 41.4
comp=Z,47nm,1.3s
ISCO Idaho Springs 63.38 333 P P 04 21 40.2 +0.9
baz=146,SNR=36
ISCO Idaho Springs 63.38 333 P P 04 21 39.0 -0.4
ISCO pmax pmax
comp=Z,47nm,1.3s
ISCO MLR MLR
comp=Z,500nm,20.0s
PDMCI Parker Dam,Lak 63.39 323 P P 04 21 40.9 +1.7
baz=137,SNR=11
SWSC Sam W. Stewart 63.40 321 P P 04 21 41.2 +2.0
baz=135,SNR=18
E46A Sault Ste Mari 63.40 352 P P 04 21 37.7 -1.3
F42A Maple Grove Fa 63.41 349 P P 04 21 37.7 -1.3
F42A IAmb IAmb 04 21 39.7
comp=Z,64nm,1.1s
SMCO Snowmass 63.47 332 P P 04 21 40.4 +0.3
SMCO IAmb IAmb 04 21 42.6
comp=Z,45nm,1.0s
CBX Cerro Bola 63.48 320 P P 04 21 39.5 -0.4
BRIGG Briggsdale 63.49 335 P 04 21 40.0 +0.1
BRIGG IAmb IAmb 04 21 41.6
comp=Z,44nm,0.9s
PV15 Paradox Valley 63.50 330 P P 04 21 40.9 +0.7
ECSD EROS Data Cent 63.53 342 P P 04 21 38.6 -1.3
ECSD IAmb IAmb 04 21 40.3
comp=Z,55nm,0.8s
K30B Basset 63.53 339 P P 04 21 39.9 -0.1
D62A Allapoint, All 63.61 4 P P 04 21 40.3 0.0
D62A IAmb IAmb 04 21 42.4
comp=Z,101nm,1.6s
TKX Tecate 63.62 320 P P 04 21 41.9 +1.1
PV18 Skein Mesa, Pa 63.62 330 P P 04 21 41.1 +0.2
PV18 IAmb IAmb 04 21 42.5
comp=Z,34nm,1.0s
PV12 Saucer Basin, 63.63 330 P P 04 21 41.5 +0.5
PV12 IAmb IAmb 04 21 44.4
comp=Z,53nm,1.1s
PV11 David Mesa, Pa 63.65 330 P P 04 21 41.2 +0.1
PV07 Paradox Valley 63.65 330 P P 04 21 41.5 +0.4
PV17 East Wray Mesa 63.67 330 P P 04 21 40.4 -0.9
PV16 Nyswonger Mesa 63.68 330 P P 04 21 41.8 +0.5
PV16 IAmb IAmb 04 21 43.7
comp=Z,148nm,1.9s
BC3 Big Chuckawall 63.69 322 P P 04 21 43.4 +2.1
baz=135,SNR=38
PV19 Morning Glory 63.71 330 P P 04 21 41.4 -0.1
PV19 IAmb IAmb 04 21 43.9
comp=Z,163nm,1.9s
PV20 West Nyswonger 63.73 330 P P 04 21 41.5 0.0
MONP2 Monument Peak 63.73 321 P P 04 21 43.7 +1.9
baz=134,SNR=24
BAR Barrett 63.74 321 P P 04 21 40.7 -0.9
PV04 Paradox Valley 63.74 330 P P 04 21 42.0 +0.4
PV14 Lion Creek, Pa 63.78 330 P P 04 21 41.2 -0.8
PV14 IAmb IAmb 04 21 44.2
comp=Z,56nm,1.1s
PV10 Paradox Valley 63.79 330 P P 04 21 41.2 -0.8
PV10 IAmb IAmb 04 21 43.1
comp=Z,42nm,1.0s
PV22 Blue Mesa, Par 63.80 330 P P 04 21 42.5 +0.5
E43A Lone Tree Farm 63.81 350 P P 04 21 40.7 -1.0
W13A Hualapai Mount 63.82 324 P P 04 21 42.4 +0.1
PV23 Carpenter Ridg 63.84 330 P P 04 21 41.5 -0.8
IRM Iron Mountain 63.86 323 P P 04 21 44.3 +2.0
baz=136,SNR=29
SPMN Marine on St. 63.88 345 P P 04 21 41.6 -0.6
SPMN Marine on St. 63.88 345 P P 04 21 42.0 -0.2
baz=160,SNR=65
PV21 Cone Mtn., Par 63.91 330 P 04 21 44.7 +1.9
COWI Conover 63.92 348 P P 04 21 41.7 -0.8
COWI IAmb IAmb 04 21 42.8
comp=Z,40nm,0.8s
COWI IAMs_20 IAMs_20 04 49 35.6
comp=Z,966nm,20.0s
U15A North Rim 63.94 326 P P 04 21 43.6 +0.5
U15A IAmb IAmb 04 21 46.4
comp=Z,110nm,1.2s
NEE2 Needles Airpor 64.00 324 P P 04 21 44.6 +1.4
baz=136
LMQ La Malbaie 64.00 3 P P 04 21 43.1 +0.2
BATG Bathurst New B 64.05 6 P P 04 21 42.8 -0.5
BATG IAmb IAmb 04 21 44.7
comp=Z,34nm,1.0s
109C Camp Elliot, M 64.15 320 P P 04 21 44.9 +0.7
109C Camp Elliot, M 64.15 320 P P 04 21 45.9 +1.8
baz=134,SNR=10
BELA Belgrano 2 64.22 171 P P 04 21 43.9 -0.2
PMD Palm Desert 64.23 321 P P 04 21 45.2 +0.5
TPFO Pinon Flats 64.25 321 P P 04 21 47.3 +2.3
baz=134,SNR=66
BELC Belle Mtn. Jos 64.25 322 P P 04 21 47.2 +2.1
baz=135,SNR=25
PFO Pinyon Flats O 64.25 321 P P 04 21 45.8 +0.7
PFO Pinyon Flats O 64.25 321 P P 04 21 47.1 +2.0
baz=134,SNR=69
PFO Pinyon Flats O 64.25 321 P P 04 21 45.8 +0.7
PFO pmax pmax
comp=Z,155nm,1.1s
PFO Pinyon Flats O 64.25 321 P P 04 21 46.5 +1.5
comp=Z,92nm,1.0s,baz=129,slow=5.5,SNR=91
PFO LR LR 04 45 42.6
comp=Z,252nm,20.2s,baz=122,slow=32

comp=Z,92nm,1.0s
HMU Henry Mountain 64.28 328 P **P** **04 21 46.3 +1.0**
LDAQ Lac Daran 64.38 2 P **P** **04 21 45.6 +0.1**
LDAQ IAmb IAmb 04 21 47.3
comp=Z,81nm,1.1s
N23A Red Feather La 64.43 334 P **P** **04 21 46.0 -0.2**
N23A IAmb IAmb 04 21 48.3
comp=Z,69nm,1.5s
N23A Red Feather La 64.43 334 P **P** **04 21 47.1 +0.9**
baz=146,SNR=16
VLDQ Val d'Or 64.54 358 P **P** **04 21 46.1 -0.3**
PHWY Pilot Hill 64.56 334 P **P** **04 21 47.3 +0.2**
PHWY IAmb IAmb 04 21 49.2
comp=Z,100nm,1.6s
GMRC Granite Mounta 64.61 323 P **P** **04 21 49.2 +1.9**
baz=135,SNR=21
KNB Kanab 64.66 326 P **P** **04 21 48.8 +1.1**
KNB Kanab 64.66 326 P **P** **04 21 48.8 +1.1**
KNB pmax pmax
comp=Z,202nm,1.2s
F36A Milaca 64.66 345 P **P** **04 21 46.6 -0.6**
MURC Murrieta 64.69 321 P **P** **04 21 50.0 +2.2**
baz=134,SNR=21
PKCU Pink Cliffs 64.71 327 P **P** **04 21 48.2 0.0**
D41A Chassel 64.74 349 P **P** **04 21 47.5 -0.3**
BBTS Babate 64.82 65 LR LR 04 48 36.3
comp=Z,684nm,18.8s,baz=212,slow=35
O20A White River Ci 64.82 332 P **P** **04 21 49.3 +0.6**
O20A IAmb IAmb 04 21 51.1
comp=Z,83nm,1.1s
O20A White River Ci 64.82 332 P **P** **04 21 49.9 +1.2**
baz=144,SNR=43
V12A Nelson 64.82 324 P **P** **04 21 49.5 +0.8**
V12A IAmb IAmb 04 21 51.6
comp=Z,105nm,1.3s
ELS Elsinore Mount 64.86 321 P **P** **04 21 49.0 +0.1**
LCMT Little Creek M 64.88 326 P **P** **04 21 50.3 +1.2**
LCMT IAmb IAmb 04 21 52.2
comp=Z,104nm,1.3s
SUSD Miller 64.89 341 P **P** **04 21 48.4 -0.5**
SUSD IAmb IAmb 04 21 49.5
comp=Z,74nm,0.9s
SUSD Miller 64.89 341 P **P** **04 21 48.6 -0.3**
baz=154
E38A The Farm, Brul 64.90 347 P **P** **04 21 47.8 -1.0**
E38A IAmb IAmb 04 21 49.7
comp=Z,83nm,0.9s
BBRC Big Bear Solar 64.98 322 P **P** **04 21 52.1 +2.2**
baz=134
HEC Hector,Ludlow 65.03 322 P **P** **04 21 52.4 +2.4**
baz=135,SNR=14
SRU San Rafael Swe 65.08 329 P **P** **04 21 51.0 +0.6**
SRU San Rafael Swe 65.08 329 P **P** **04 21 51.0 +0.6**
SRU pmax pmax
comp=Z,99nm,1.0s
MTPU Mount Pierson 65.10 328 P **P** **04 21 50.2 -0.6**
SCI2 San Clemente I 65.10 320 P **P** **04 21 52.4 +2.0**
baz=132,SNR=6.0
TUQ Turquoise Moun 65.22 323 P **P** **04 21 53.0 +1.6**
baz=135,SNR=17
SZCU Shurtz Canyon 65.23 327 P **P** **04 21 52.2 +0.7**
SZCU IAmb IAmb 04 21 54.8
comp=Z,130nm,1.4s
WTNK Soaring Height 65.25 324 P **P** **04 21 52.3 +0.9**
Q16A Castle Valley 65.25 329 P **P** **04 21 52.1 +0.5**
CIS Catalina Islan 65.30 320 P **P** **04 21 53.4 +1.7**
baz=133,SNR=9.1
P18A Preston Nutter 65.35 330 P **P** **04 21 52.9 +0.6**
F33A 5 Mile Ranch, 65.36 343 P **P** **04 21 51.1 -0.8**
BFSC Mount Baldy Ra 65.41 321 P **P** **04 21 54.7 +2.1**
baz=134,SNR=9.0
FMP Fort Macarthur 65.43 320 P **P** **04 21 54.8 +2.2**
baz=133
MSU Marysvale 65.45 328 P **P** **04 21 53.8 +0.9**
MSU Marysvale 65.45 328 P **P** **04 21 53.8 +0.9**
RRX Edison Barstow 65.45 322 P **P** **04 21 55.0 +2.3**
baz=134
MVU Marysvale 65.46 328 P **P** **04 21 54.1 +1.2**
P17A Butcher Ranch, 65.47 330 P **P** **04 21 52.5 -0.4**
SHPR Sheep Range 65.56 324 P **P** **04 21 54.0 +0.5**
SHPR IAmb IAmb 04 21 56.8
comp=Z,53nm,1.2s
TMUT Trail Mountain 65.56 329 P **P** **04 21 53.2 -0.4**
TMUT IAmb IAmb 04 21 55.7
comp=Z,39nm,1.0s
RWWY Rawlins 65.62 333 P **P** **04 21 53.1 -0.9**
GSC Goldstone, Bar 65.64 323 P **P** **04 21 54.5 +0.5**
GSC IAmb IAmb 04 21 57.3
comp=Z,68nm,1.1s
GSC Goldstone, Bar 65.64 323 P **P** **04 21 56.2 +2.2**
baz=135,SNR=24
GSC Goldstone, Bar 65.64 323 P **P** **04 21 54.5 +0.5**
GSC pmax pmax
comp=Z,68nm,1.2s
TCRU Three Creeks R 65.66 328 P **P** **04 21 55.1 +0.9**
TCRU IAmb IAmb 04 21 57.4
comp=Z,90nm,1.1s
PASC Pasadena Art C 65.68 321 P **P** **04 21 54.8 +0.6**
SHOC Shoshone, Teco 65.75 323 P **P** **04 21 56.5 +1.9**
baz=135
RDMU Red Mountain 65.78 331 P **P** **04 21 55.5 +0.5**
RDMU IAmb IAmb 04 21 57.0
comp=Z,60nm,0.9s
DECC Green Verdugo 65.83 321 P **P** **04 21 57.5 +2.4**
baz=133,SNR=11
EDW2 Edwards Air Fo 66.05 321 P **P** **04 21 58.4 +1.8**
baz=134,SNR=32
K22A Casper 66.12 334 P **P** **04 21 56.7 -0.3**
K22A IAmb IAmb 04 21 58.4
comp=Z,38nm,0.8s
K22A Casper 66.12 334 P **P** **04 21 57.9 +0.8**
baz=146,SNR=29
QSM Queen of Sheba 66.14 323 P **P** **04 21 57.9 +0.8**
EYMN Ely 66.16 347 P **P** **04 21 56.0 -1.0**
EYMN IAmb IAmb 04 21 57.7
comp=Z,86nm,0.9s
EYMN Ely 66.16 347 P **P** **04 21 56.6 -0.4**
baz=162,SNR=53
GWY Greenwater Val 66.18 323 P **P** **04 21 57.7 +0.1**
GWY IAmb IAmb 04 22 00.4
comp=Z,79nm,1.1s
VNA3 Neumayer Olymp 66.22 161 ⇓P **P** **04 21 59.1 +2.0**
comp=Z,16nm,0.9s
CCAC Calif City Air 66.25 322 P **P** **04 21 58.2 +0.4**
LRMC Laurel Mtn Rad 66.28 322 P **P** **04 21 59.9 +1.7**
baz=134,SNR=5.4
OSI Osito Audit: C 66.31 321 P **P** **04 21 60.0 +1.7**
baz=133
BSUT Blindstream Ca 66.31 330 P **P** **04 21 59.0 +0.4**
BSUT IAmb IAmb 04 22 01.3
comp=Z,62nm,1.0s
MPU Maple Canyon 66.33 329 P **P** **04 21 58.6 +0.2**
MPU IAmb IAmb 04 22 01.2
comp=Z,86nm,1.2s
RSSD Black Hills 66.38 337 P **P** **04 21 58.7 0.0**
RSSD Black Hills 66.38 337 P **P** **04 21 59.3 +0.6**
baz=149
RSSD Black Hills 66.38 337 P **P** **04 21 58.7 0.0**
RSSD pmax pmax
comp=Z,26nm,0.8s
RSSD MLR MLR
comp=Z,500nm,19.0s
TPNV Topopah Spring 66.48 324 P **P** **04 21 59.6 +0.1**
TPNV IAmb IAmb 04 22 03.0
comp=Z,110nm,1.2s
TPNV Topopah Spring 66.48 324 P **P** **04 22 01.9 +2.4**
baz=136,SNR=51
TPNV Topopah Spring 66.48 324 P **P** **04 21 59.6 +0.1**
TPNV pmax pmax
comp=Z,110nm,1.2s
FURC Furnace Creek, 66.49 323 P **P** **04 22 01.4 +2.1**
baz=135,SNR=11
NLU North Lily Min 66.50 329 P **P** **04 22 00.2 +0.6**
NLU IAmb IAmb 04 22 02.5
comp=Z,72nm,1.2s
MPMC Manual Prospec 66.56 323 P **P** **04 22 01.7 +1.7**
baz=134,SNR=31
WCT Wildcat Mounta 66.58 324 P **P** **04 22 00.4 +0.4**
S11A Rachel 66.70 325 P **P** **04 22 00.4 -0.4**
ARVC Arvin 66.72 321 P **P** **04 22 02.9 +2.1**
baz=133,SNR=10
SBC Santa Barbara 66.80 320 P **P** **04 22 03.1 +1.8**
baz=132
VNA2 Neumayer--Watz 66.82 161 ⇓P **P** **04 22 02.7 +1.7**
comp=Z,12nm,0.8s,baz=284,slow=6.4
ISA Isabella, Lake 66.87 322 IAmb IAmb 04 22 05.2
comp=Z,97nm,1.2s
ISA Isabella, Lake 66.87 322 P **P** **04 22 04.0 +2.2**
baz=133,SNR=44
CTU Camp Tracy 66.91 330 IAmb IAmb 04 22 04.4
comp=Z,29nm,0.8s
SPR3 Spring Creek 3 66.93 327 P **P** **04 22 02.6 +0.1**
BCW Bitter Crk WRg 66.94 321 P **P** **04 22 01.7 -0.7**
DUG Dugway, Tooele 67.05 329 P **P** **04 22 02.8 -0.2**
DUG IAMs_20 IAMs_20 04 51 29.2
comp=Z,665nm,18.0s
DUG Dugway, Tooele 67.05 329 P **P** **04 22 04.8 +1.9**
baz=140,SNR=92
DUG Dugway, Tooele 67.05 329 P **P** **04 22 02.8 -0.2**
DUG pmax pmax
comp=Z,170nm,1.2s
DUG MLR MLR
comp=Z,700nm,18.0s
B35A Bob, Littlefor 67.05 346 P **P** **04 22 02.1 -0.5**
TCUT Toone Canyon 67.07 330 P **P** **04 22 03.8 +0.6**
R11B Troy Canyon, C 67.12 326 P **P** **04 22 03.8 +0.3**
R11B Troy Canyon, C 67.12 326 P **P** **04 22 05.9 +2.4**
baz=137,SNR=77
GRAC Grapevine Rang 67.15 323 P **P** **04 22 04.0 +0.4**
GRAC Grapevine Rang 67.15 323 P **P** **04 22 06.0 +2.5**
baz=135,SNR=5.1
PKM Mcpherson Peak 67.15 320 P **P** **04 22 06.0 +2.2**
baz=132,SNR=21
CWC Cottonwood Cre 67.17 323 P **P** **04 22 05.9 +2.0**
baz=134
Q12A Willow Creek R 67.22 327 P **P** **04 22 04.3 +0.2**
DRLN Deer Lake 67.26 12 P **P** **04 22 03.4 -0.5**
GMN Gold Mountain 67.30 324 P **P** **04 22 05.4 +0.6**
GMN IAmb IAmb 04 22 08.1
comp=Z,141nm,1.5s
E28A Huff 67.35 340 P **P** **04 22 05.2 +0.6**
VES Vestal, Richgr 67.35 322 P **P** **04 22 07.0 +2.2**
baz=133,SNR=34
AGMN Agassiz Nation 67.51 344 P **P** **04 22 04.2 -1.4**
AGMN IAmb IAmb 04 22 06.6
comp=Z,63nm,0.9s
BW06 Boulder Array 67.52 332 P **P** **04 22 05.4 -0.6**
BW06 IAMs_20 IAMs_20 04 52 39.7
comp=Z,821nm,22.0s
BW06 Boulder Array 67.52 332 P **P** **04 22 06.4 +0.4**
baz=143,SNR=27
PD31 Pinedale Array 67.52 332 P **P** **04 22 05.7 -0.3**
PDAR Pinedale Array 67.52 332 P **P** **04 22 05.7 -0.3**
PDAR Pinedale Array 67.52 332 P **P** **04 22 06.2 +0.2**
comp=Z,11nm,1.0s,baz=149,slow=6.1,SNR=60
PDAR LR LR 04 52 59.4
comp=Z,459nm,18.9s,baz=133,slow=37
comp=Z,11nm,1.0s
HWUT Hardware Ranch 67.52 330 P **P** **04 22 04.9 -1.2**
HWUT IAmb IAmb 04 22 08.1
comp=Z,65nm,0.9s
SMMC Simmler 67.55 321 P **P** **04 22 08.6 +2.4**
baz=132,SNR=17
MZP Montezuma Peak 67.65 324 P **P** **04 22 08.5 +1.5**
MZP IAmb IAmb 04 22 10.2
comp=Z,58nm,1.3s
TIN Tinemaha, Big 67.68 323 P **P** **04 22 09.2 +2.2**
baz=134
BGU Big Grassy Mou 67.71 329 P **P** **04 22 08.0 +0.8**
BGU IAmb IAmb 04 22 09.7
comp=Z,87nm,1.4s
SPUT South Promonto 67.72 330 P **P** **04 22 07.6 +0.4**
SPUT IAmb IAmb 04 22 09.7
comp=Z,118nm,1.3s
DSP Deep Springs 67.75 323 P **P** **04 22 08.2 +1.0**
DSP IAmb IAmb 04 22 10.8
comp=Z,95nm,1.3s
TPH Tonopah 67.83 324 P **P** **04 22 08.7 +0.7**
TPH Tonopah 67.83 324 P **P** **04 22 08.7 +0.7**
TPH pmax pmax
comp=Z,705nm,1.5s
VOG Valley Oaks Go 67.86 322 P **P** **04 22 09.1 +1.1**
baz=133
MDND Maddock 68.14 342 P **P** **04 22 09.8 +0.3**
MDND Maddock 68.14 342 P **P** **04 22 10.6 +1.0**
baz=154,SNR=31
AHID Auburn Hatcher 68.21 332 P **P** **04 22 10.6 +0.2**
AHID IAmb IAmb 04 22 12.3
comp=Z,53nm,0.9s
HVU Hansel Valley 68.23 330 P **P** **04 22 09.9 -0.6**
HVU IAmb IAmb 04 22 12.6
comp=Z,56nm,0.9s
HVU Hansel Valley 68.23 330 P **P** **04 22 09.9 -0.6**
HVU pmax pmax
comp=Z,56nm,0.9s
Q09A Carvers 68.34 325 P **P** **04 22 11.8 +0.6**
MLAC Mammoth, Mammo 68.43 323 P **P** **04 22 13.8 +1.9**
baz=134,SNR=5.3
SNAA Sanae 68.44 161 P **P** **04 22 11.3 +0.1**
SNAA IAmb IAmb 04 22 14.3
comp=Z,44nm,1.2s
SNAA Sanae 68.44 161 ⇓P **P** **04 22 13.1 +1.9**
comp=Z,252nm,0.6s
SNAA Sanae 68.44 161 P **P** **04 22 11.3 +0.1**
SNAA pmax pmax
comp=Z,44nm,1.2s
SNAA Sanae 68.44 161 P **P** **04 22 12.8 +1.6**
comp=Z,24nm,1.0s,baz=278,slow=8.0,SNR=25
comp=Z,24nm,1.0s
REDW Red Top Meadow 68.57 332 P **P** **04 22 12.4 -0.2**
MDPB Devils Postpil 68.57 323 P **P** **04 22 12.3 -0.4**
MDPB IAmb IAmb 04 22 15.9
comp=Z,64nm,1.1s
NV11 Mina Array Sit 68.60 324 P **P** **04 22 12.7 -0.1**
NV11 IAmb IAmb 04 22 16.1
comp=Z,90nm,1.5s
SNOW Snow King Moun 68.60 332 P **P** **04 22 12.5 -0.4**
PMPB Monarch Peak 68.64 321 P **P** **04 22 12.7 -0.2**
LOHW Long Hollow 68.65 332 P **P** **04 22 13.1 0.0**
LHV Little Huntoon 68.67 324 P **P** **04 22 13.8 +0.8**
NVAR Mina Array Bea 68.68 324 P **P** **04 22 13.9 +0.5**
NVAR Mina Array Bea 68.68 324 P **P** **04 22 14.4 +1.0**
comp=Z,19nm,0.9s,baz=145,slow=6.5,SNR=98
NVAR LR LR 04 49 10.7
comp=Z,284nm,20.4s,baz=124,slow=33
comp=Z,19nm,0.9s
ELK Elko 68.69 328 P **P** **04 22 13.5 +0.1**
ELK IAmb IAmb 04 22 16.1
comp=Z,73nm,1.4s
ELK Elko 68.69 328 P **P** **04 22 13.5 +0.1**
ELK pmax pmax
comp=Z,73nm,1.5s
ELK MLR MLR
comp=Z,1µm,18.0s
ELK Elko 68.69 328 P **P** **04 22 14.4 +1.0**
comp=Z,18nm,0.9s,baz=133,slow=4.7,SNR=56
ELK LR LR 04 52 11.7
comp=Z,915nm,18.0s,baz=137,slow=36
comp=Z,18nm,0.9s
TPAW Teton Pass 68.71 332 P **P** **04 22 12.3 -1.2**
TPAW IAmb IAmb 04 22 15.0
comp=Z,119nm,1.7s
MOOW Moose Ponds 68.82 332 P **P** **04 22 14.4 +0.2**
FXWY Fox Creek 68.86 332 P **P** **04 22 14.5 +0.1**
FXWY IAmb IAmb 04 22 16.6
comp=Z,37nm,0.9s
FXWY IAMs_20 IAMs_20 04 52 59.3
comp=Z,710nm,20.0s
RYN Ryan 68.94 324 P **P** **04 22 15.2 +0.3**
RYN IAmb IAmb 04 22 18.1
comp=Z,105nm,1.5s
KVN Kaiserville 69.00 325 P **P** **04 22 15.9 +0.5**
KVN IAmb IAmb 04 22 18.2
comp=Z,58nm,1.2s
KVN Kaiserville 69.00 325 P **P** **04 22 15.9 +0.5**
KVN pmax pmax
comp=Z,58nm,1.2s
BBGB Big Mountain B 69.02 321 P **P** **04 22 15.3 -0.1**
IMW Indian Meadow 69.03 332 P **P** **04 22 15.7 +0.2**
IMW IAmb IAmb 04 22 17.8
comp=Z,142nm,1.6s
FLWY Flagg Ranch 69.07 333 P **P** **04 22 15.5 -0.2**
FLWY IAMs_20 IAMs_20 04 54 15.7
comp=Z,742nm,19.0s
H17A Grant Village 69.26 333 P **P** **04 22 16.1 -0.8**
H17A Grant Village 69.26 333 P **P** **04 22 19.4 +2.4**
baz=143,SNR=5.2
RLMT Red Lodge 69.28 334 P **P** **04 22 17.0 0.0**
RLMT IAmb IAmb 04 22 19.2
comp=Z,59nm,1.1s
RLMT Red Lodge 69.28 334 P **P** **04 22 18.1 +1.1**
baz=144,SNR=38
LKWY Lake 69.32 333 P **P** **04 22 17.9 +0.6**
LKWY IAmb IAmb 04 22 20.6
comp=Z,45nm,0.9s
LKWY Lake 69.32 333 P **P** **04 22 17.9 +0.6**
LKWY pmax pmax
comp=Z,45nm,0.9s
LKWY MLR MLR
comp=Z,1µm,21.0s
ULM Lac du Bonnet 69.32 345 P **P** **04 22 16.2 -0.6**
ULM Lac du Bonnet 69.32 345 P **P** **04 22 16.2 -0.6**
ULM pmax pmax
comp=Z,221nm,1.5s
ULM Lac du Bonnet 69.32 345 P **P** **04 22 16.4 -0.4**
comp=Z,52nm,0.8s,baz=157,slow=6.0,SNR=138
ULM LR LR 04 56 16.3
comp=Z,552nm,18.8s,baz=144,slow=39
comp=Z,52nm,0.8s
YMP Mirror Lake Pl 69.35 333 P **P** **04 22 16.7 -0.8**
LAO LASA Array 69.37 337 P **P** **04 22 17.3 0.0**
LAO IAmb IAmb 04 22 19.1
comp=Z,48nm,1.0s
LAO LASA Array 69.37 337 P **P** **04 22 17.9 +0.6**
baz=147,SNR=10
WAKR Walker 69.37 323 P **P** **04 22 17.2 -0.5**
SAO San Andreas Ge 69.39 321 P **P** **04 22 17.8 +0.3**
SAO IAmb IAmb 04 22 20.9
comp=Z,183nm,1.9s
SAO San Andreas Ge 69.39 321 P **P** **04 22 17.8 +0.3**
SAO pmax pmax
comp=Z,183nm,2.0s
YFT Old Faithful 69.42 333 P **P** **04 22 18.8 +0.9**
BMN Battle Mountai 69.50 326 P **P** **04 22 18.4 +0.1**
BMN Battle Mountai 69.50 326 P **P** **04 22 18.4 +0.1**
BMN pmax pmax
comp=Z,23nm,1.0s
YNR Norris Junctio 69.56 333 P **P** **04 22 19.4 +0.7**
YERR Yerington 69.59 324 P **P** **04 22 19.8 +0.8**
CMB Columbia Colle 69.60 323 P **P** **04 22 19.5 +0.6**
CMB Columbia Colle 69.60 323 P **P** **04 22 19.5 +0.6**
CMB pmax pmax
comp=Z,50nm,1.4s
YHH Holmes Hill 69.69 333 P **P** **04 22 19.5 -0.1**
PNTR Pine Nut 69.87 324 P **P** **04 22 19.0 -1.8**
PNTR IAmb IAmb 04 22 24.3
comp=Z,83nm,0.8s
YHL Hebgen Lake 69.89 333 P **P** **04 22 21.6 +0.7**
YHL IAmb IAmb 04 22 24.1
comp=Z,106nm,1.2s
TROLL Troll, Antarti 70.15 161 ⇓P **P** **04 22 24.0 +2.0**
comp=Z,622nm,0.9s
DGMT Dagmar 70.16 339 P **P** **04 22 22.2 +0.1**
DGMT Dagmar 70.16 339 P **P** **04 22 23.4 +1.3**
baz=149,SNR=24
PAHR Pah Rah Range 70.17 324 P **P** **04 22 23.3 +0.8**
MPK Martis Peak 70.25 324 P **P** **04 22 21.9 -1.2**
HLID Hailey 70.37 330 P **P** **04 22 24.5 +0.8**
HLID IAMs_20 IAMs_20 04 52 38.3
comp=Z,524nm,20.0s
HLID Hailey 70.37 330 P **P** **04 22 25.5 +1.8**
baz=139,SNR=53
AFDM Forest Hills D 70.56 323 P **P** **04 22 24.4 -0.3**
BOZ Bozeman (W) 70.67 333 P **P** **04 22 26.2 +0.8**
BOZ IAmb IAmb 04 22 27.7
comp=Z,94nm,1.6s
BOZ Bozeman (W) 70.67 333 P **P** **04 22 26.6 +1.1**
baz=142,SNR=42
BOZ Bozeman (W) 70.67 333 P **P** **04 22 26.2 +0.8**
BOZ pmax pmax
comp=Z,94nm,1.6s
MFID Camas Ranch 70.95 329 P **P** **04 22 27.3 +0.2**
MFID IAMs_20 IAMs_20 04 52 44.5
comp=Z,803nm,19.0s
ORV Oroville 71.27 323 P **P** **04 22 29.8 +0.8**
ORV Oroville 71.27 323 P **P** **04 22 29.8 +0.8**
ORV pmax pmax
comp=Z,200nm,1.2s
SCHQ Schefferville 71.48 4 P **P** **04 22 29.8 -0.1**
SCHQ IAmb IAmb 04 22 31.3
comp=Z,64nm,1.0s
SCHQ Schefferville 71.48 4 P **P** **04 22 29.5 -0.4**
comp=Z,43nm,0.9s,baz=193,slow=4.4,SNR=48
SCHQ LR LR 04 53 33.5
comp=Z,319nm,21.1s,baz=238,slow=36
comp=Z,43nm,0.9s
GDXM Geysers 71.53 322 P **P** **04 22 30.1 -0.6**
GDXM IAmb IAmb 04 22 34.2
comp=Z,48nm,1.1s
PPT Papeete 71.63 257 LR LR 04 45 31.8
comp=Z,131nm,18.0s,baz=145,slow=29
WVOR Wild Horse Val 71.67 327 P **P** **04 22 31.2 -0.3**
WVOR IAmb IAmb 04 22 34.2
comp=Z,104nm,1.9s
WVOR Wild Horse Val 71.67 327 P **P** **04 22 31.2 -0.3**
WVOR pmax pmax
comp=Z,104nm,1.9s
HOPS Hopland Field 71.82 322 P **P** **04 22 31.5 -0.8**
HOPS IAmb IAmb 04 22 35.9
comp=Z,85nm,1.4s
EGMT Eagleton 71.83 336 P **P** **04 22 31.7 -0.6**
EGMT IAmb IAmb 04 22 34.2
comp=Z,38nm,0.9s
EGMT Eagleton 71.83 336 P **P** **04 22 33.1 +0.8**
baz=144,SNR=22
BPMT Black Pine Rid 72.12 333 P **P** **04 22 34.5 +0.3**
J08A Circle Bar Ran 72.24 328 P **P** **04 22 34.4 -0.5**
PLID Pearl Lake 72.27 330 P **P** **04 22 35.3 +0.1**
PLID IAmb IAmb 04 22 37.6
comp=Z,57nm,1.2s
DBIC Dimbokro 72.29 77 P **P** **04 22 35.4 -0.3**
DBIC Dimbokro 72.29 77 P **P** **04 22 35.4 -0.3**
DBIC pmax pmax
comp=Z,50nm,1.3s
DBIC Dimbokro 72.29 77 P **P** **04 22 35.2 -0.5**
comp=Z,7.8nm,0.7s,baz=260,slow=3.1,SNR=8.3
DBIC pP **sP** **04 22 46.9 -0.1**
comp=Z,18nm,1.0s,baz=246,slow=6.6,SNR=7.0
DBIC LR LR 04 53 50.7
comp=Z,712nm,18.0s,baz=229,slow=35
comp=Z,7.8nm,0.7s
BMO Blue Mountains 72.73 329 P **P** **04 22 38.1 +0.4**
BMO Blue Mountains 72.73 329 P **P** **04 22 38.2 +0.4**
BMO pmax pmax
comp=Z,38nm,1.0s
KMRM Mail Ridge 72.99 322 P **P** **04 22 39.0 -0.4**
KMRM IAmb IAmb 04 22 43.0
comp=Z,114nm,1.3s
K05A Summer Lake 73.07 326 P **P** **04 22 39.7 -0.2**
K05A IAmb IAmb 04 22 43.6
comp=Z,79nm,1.0s
NVL N'lazarevskaya 73.07 160 *e*P **P** **04 22 39.2 -0.1**
NVL pmax pmax
comp=Z,56nm,1.3s
I07A Izee 73.28 328 P **P** **04 22 41.0 -0.1**
I07A IAmb IAmb 04 22 44.5
comp=Z,201nm,1.8s
KMPM Mount Pierce 73.35 322 P **P** **04 22 41.5 0.0**
KMPM IAmb IAmb 04 22 44.6
comp=Z,51nm,0.8s
YBH Yreka Blue Hor 73.40 324 P **P** **04 22 42.1 +0.3**
YBH Yreka Blue Hor 73.40 324 P **P** **04 22 42.1 +0.3**
YBH pmax pmax
comp=Z,33nm,1.0s
YBH Yreka Blue Hor 73.40 324 LR LR 04 53 46.4
comp=Z,372nm,22.0s,baz=130,slow=35
KHMM Horse Mountain 73.42 323 P **P** **04 22 41.6 -0.4**
K04D Chiloquin, OR 73.47 325 P **P** **04 22 42.4 +0.2**
K04D IAmb IAmb 04 22 45.1
comp=Z,96nm,1.0s
L04D Klamath Falls 73.50 325 P **P** **04 22 42.8 +0.4**
L04D IAmb IAmb 04 22 44.2
comp=Z,43nm,0.8s
QSPA South Pole Qui 73.50 180 P **P** **04 22 43.2 +1.0**
QSPA South Pole Qui 73.50 180 P **P** **04 22 44.1 +2.0**
comp=Z,36nm,1.0s,baz=148,slow=2.0,SNR=97
QSPA LR LR 04 52 18.6
comp=Z,349nm,18.1s,baz=155,slow=34
comp=Z,36nm,1.0s
F10A Beach Ranch, E 73.51 330 P **P** **04 22 43.6 +1.3**
J05D Fort Rock, OR 73.63 326 IAmb IAmb 04 22 46.3
comp=Z,80nm,1.2s
KRPM Rodgers 73.77 323 P **P** **04 22 44.3 +0.3**
KRPM IAmb IAmb 04 22 47.6
comp=Z,99nm,1.1s
PINE Pine Mountain 73.82 327 P **P** **04 22 44.2 -0.2**
PINE IAmb IAmb 04 22 47.8

comp=Z,85nm,1.1s
G08A Pilot Rock 73.86 329 P P 04 22 43.5 -0.9
KRMB Red Mountain 73.94 323 P P 04 22 44.7 -0.3
KRMB IAmb IAmb 04 22 48.4
comp=Z,68nm,1.1s
HUMO Hull Mountain 74.12 325 P P 04 22 45.9 0.0
KSXB Camp Six Broad 74.12 324 P P 04 22 46.3 +0.3
KSXB IAmb IAmb 04 22 48.9
comp=Z,50nm,0.8s
L02F Cave Junction 74.14 324 P P 04 22 46.0 0.0
L02F IAmb IAmb 04 22 49.2
comp=Z,115nm,1.4s
E09A Wood Farm, Sta 74.34 330 P P 04 22 48.0 +1.0
E09A IAmb IAmb 04 22 49.5
comp=Z,60nm,1.1s
I05D Terrebonne, OR 74.41 327 P P 04 22 48.5 +0.9
I05D IAmb IAmb 04 22 50.9
comp=Z,86nm,0.8s
K02D Willamette Mer 74.57 324 P P 04 22 48.6 +0.1
K02D IAmb IAmb 04 22 52.0
comp=Z,212nm,1.7s
I04A Tendick Farm, 74.61 326 P P 04 22 48.6 -0.1
I04A IAmb IAmb 04 22 51.1
comp=Z,50nm,1.0s
DBO Dodson Butte 74.61 325 P P 04 22 49.6 +0.8
DBO IAmb IAmb 04 22 51.4
comp=Z,51nm,0.9s
G06A Carlson Farm, 74.66 328 P P 04 22 50.1 +1.0
E08A Dider Farm, El 74.76 330 P P 04 22 49.2 -0.2
F07A Phinny Hill Vi 74.77 329 IAmb IAmb 04 22 53.3
comp=Z,56nm,1.1s
HAWA Hanford 74.92 329 P P 04 22 50.5 0.0
HAWA IAmb IAmb 04 22 53.6
comp=Z,90nm,1.1s
FFC Flin Flon 74.96 344 P P 04 22 49.9 -0.5
FFC Flin Flon 74.96 344 P P 04 22 49.9 -0.5
FFC pmax pmax
comp=Z,38nm,1.1s
G05A Wamic 75.01 328 P P 04 22 51.0 -0.1
G05A IAmb IAmb 04 22 54.8
comp=Z,130nm,1.2s
J01E Myrtle Point 75.02 325 P P 04 22 51.3 +0.2
J01E IAmb IAmb 04 22 54.0
comp=Z,46nm,0.9s
I03D Drain, OR 75.05 325 P P 04 22 51.6 +0.4
I03D IAmb IAmb 04 22 54.3
comp=Z,53nm,0.9s
KEBM Edson Butte 75.06 324 P P 04 22 50.5 -0.9
KEBM IAmb IAmb 04 22 54.9
comp=Z,121nm,1.1s
H04A Detroit Lake 75.09 327 IAmb IAmb 04 22 53.9
comp=Z,56nm,1.0s
D08A Wollman Farm, 75.10 330 P P 04 22 52.0 +0.6
NEW Newport 75.14 332 P P 04 22 52.1 +0.5
NEW Newport 75.14 332 P P 04 22 52.9 +1.2
baz=138,SNR=15
NEW Newport 75.14 332 P P 04 22 52.2 +0.5
NEW pmax pmax
comp=Z,35nm,1.2s
NEW MLR MLR
comp=Z,800nm,20.0s
NEW Newport 75.14 332 LR LR 04 58 28.8
comp=Z,407nm,18.7s,baz=124,slow=38
BUCK Buck Mountain 75.19 326 P P 04 22 52.2 +0.1
BUCK IAmb IAmb 04 22 54.9
comp=Z,101nm,0.9s
E07A Sunnyside 75.19 329 P P 04 22 53.6 +1.5
E07A IAmb IAmb 04 22 55.5
comp=Z,91nm,1.1s
HOOD Mount Hood Mea 75.24 327 P P 04 22 53.4 +0.9
HOOD IAmb IAmb 04 22 55.8
comp=Z,125nm,1.2s
H04D Lebanon 75.27 326 P P 04 22 52.7 +0.2
H04D IAmb IAmb 04 22 55.2
comp=Z,167nm,1.9s
C09A Chrisman Ranch 75.33 331 P P 04 22 53.0 +0.2
C09A IAmb IAmb 04 22 56.0
comp=Z,52nm,1.1s
MXC Moxie City 75.42 329 P P 04 22 54.6 +1.3
COR Corvallis 75.61 326 P P 04 22 55.1 +0.7
COR Corvallis 75.61 326 P P 04 22 55.1 +0.7
COR pmax pmax
comp=Z,124nm,1.0s
G03D McMinnville, O 76.01 327 P P 04 22 57.3 +0.6
F04A Amboy 76.05 328 P P 04 22 57.7 +0.8
LTY Liberty 76.08 329 P P 04 22 58.1 +1.0
LTY IAmb IAmb 04 23 00.3
comp=Z,73nm,1.1s
B08A Colville Reser 76.22 331 P P 04 22 58.7 +0.8
HEBO Mount Hebo 76.27 326 P P 04 22 57.2 -1.0
LON Longmire 76.30 328 P P 04 22 58.0 -0.4
LON Longmire 76.30 328 P P 04 22 58.0 -0.4
LON pmax pmax
comp=Z,18nm,1.0s
F04D Rainier, OR 76.46 327 P P 04 23 00.8 +1.6
F04D IAmb IAmb 04 23 02.2
comp=Z,49nm,0.8s
ELIB Princess Elisa 76.59 161 *d*P **P 04 22 59.6 -0.3**
comp=Z,8.9nm,0.9s
F03A Seaside 76.64 327 P P 04 22 59.9 -0.4
F03A IAmb IAmb 04 23 06.4
comp=Z,57nm,1.2s
D05A Enumclaw 76.69 329 P P 04 23 00.6 +0.1
FCC Fort Churchill 76.92 349 P P 04 23 01.4 -0.1
FCC IAmb IAmb 04 23 03.0
comp=Z,153nm,1.4s
FCC Fort Churchill 76.92 349 P P 04 23 01.4 -0.1
FCC pmax pmax
comp=Z,153nm,1.5s
E03A Lebam 77.05 327 P P 04 23 02.3 -0.2
E03A IAmb IAmb 04 23 06.0
comp=Z,110nm,1.1s
RADR Rader Ridge 77.09 327 P P 04 23 03.0 +0.1
RADR IAmb IAmb 04 23 06.4
comp=Z,78nm,0.9s
EDM Edmonton 77.36 337 P P 04 23 04.0 -0.2
EDM Edmonton 77.36 337 P P 04 23 04.0 -0.2
EDM pmax pmax
comp=Z,206nm,0.9s
GNW Green Mountain 77.36 329 P P 04 23 04.2 0.0
GNW IAmb IAmb 04 23 07.0
comp=Z,72nm,1.3s
WISH Wishkah 77.54 328 P P 04 23 05.3 +0.1
WISH IAmb IAmb 04 23 09.2
comp=Z,90nm,1.0s
NLWA Neilton Lookou 77.77 328 P P 04 23 06.1 -0.5
NLWA IAmb IAmb 04 23 10.2
comp=Z,116nm,1.1s
PGC Sidney 78.40 329 P P 04 23 10.6 +0.6
PGC IAmb IAmb 04 23 13.4
comp=Z,124nm,1.3s
C03A Quillayute Air 78.49 328 P P 04 23 09.5 -1.0
C03A IAmb IAmb 04 23 14.7
comp=Z,117nm,1.3s
CLRS Cowichan Lake 78.85 329 P P 04 23 12.8 +0.3
BRLDA Berland Lookou 79.58 336 P P 04 23 16.4 -0.1
BRLDA IAmb IAmb 04 23 17.9
comp=Z,85nm,1.1s
OZB Mount Ozzard 79.62 328 P P 04 23 17.3 +0.5
OZB IAmb IAmb 04 23 20.1
comp=Z,64nm,0.9s
RAR Rarotonga 80.19 251 LR LR 04 50 13.3
comp=Z,233nm,21.8s,baz=114,slow=29
CBB Campbell River 80.25 329 P P 04 23 20.4 +0.3
CBB IAmb IAmb 04 23 23.4
comp=Z,63nm,1.0s
FRB Frobisher Bay 80.27 3 LR LR 04 58 08.5
comp=Z,503nm,21.4s,baz=186,slow=35
TOA0 Torodi Ar. Sit 80.54 73 P P 04 23 23.1 +0.6
TOA0 IAmb IAmb 04 23 35.7
comp=Z,55nm,1.1s
TORD Torodi Ar. Bea 80.54 73 P P 04 23 22.6 +0.1
comp=Z,9.8nm,0.4s,baz=263,slow=3.7,SNR=41
pP **pwP 04 23 34.5 -1.0**
comp=Z,29nm,1.0s,baz=278,slow=5.0,SNR=19
TORD LR LR 04 56 35.3
comp=Z,786nm,21.1s,baz=245,slow=34
comp=Z,9.8nm,0.4s
VNDA Vanda 80.71 191 P P 04 23 22.7 +0.4
VNDA Vanda 80.71 191 P P 04 23 22.7 +0.4
VNDA pmax pmax
comp=Z,14nm,1.0s
VNDA Vanda 80.71 191 P P 04 23 24.8 +2.5
comp=Z,11nm,0.9s,baz=131,slow=4.3,SNR=19
VNDA LR LR 04 53 14.0
comp=Z,896nm,19.4s,baz=126,slow=31
comp=Z,11nm,0.9s
NRS Narsarsuaq 80.88 14 *i* P **P 04 23 23.0 -0.2**
NRS IAmb IAmb 04 23 24.7
comp=Z,25nm,0.9s
HOLB Holberg 82.01 329 P P 04 23 29.3 -0.2
HOLB IAmb IAmb 04 23 32.6
comp=Z,183nm,1.9s
PNCL Nicolau / Gran 82.11 46 *e*P **P 04 23 31.8 +1.5**
MESJ Messejana 82.20 47 *e*P **P 04 23 33.4 +2.6**
PCVE Castro Verde 82.23 47 *e*P **P 04 23 33.3 +2.4**
NUUK Nuuk 82.42 10 *i* P **P 04 23 31.4 +0.2**
NUUK IAmb IAmb 04 23 33.1
comp=Z,20nm,0.8s
MDT Midelt 82.60 53 LR LR 04 58 19.0
comp=Z,539nm,20.0s,baz=280,slow=34
PMTG Montargil 82.77 46 *e*P **P 04 23 35.9 +2.2**
HILA High Level 82.79 339 P **P 04 23 33.5 +0.1**
BBB Bella Bella 82.96 330 P **P 04 23 34.7 +0.4**
BBB IAmb IAmb 04 23 37.3
comp=Z,147nm,1.6s
BBB Bella Bella 82.96 330 P **P 04 23 35.4 +1.0**
comp=Z,22nm,0.8s,baz=201,slow=4.6,SNR=6.4
BBB LR LR 05 03 20.1
comp=Z,327nm,19.6s,baz=118,slow=38
comp=Z,22nm,0.8s
PCAS Casmilo, Conde 83.05 45 *e*P **P 04 23 37.5 +2.3**
PESTR Estremoz 83.11 46 *e*P **P 04 23 38.0 +2.5**
PBAR Barrancos 83.18 47 *e*P **P 04 23 38.3 +2.4**
comp=Z,47nm,1.9s
COI Coimbra 83.18 45 *e*P **P 04 23 38.4 +2.6**
PMRV Marv??o 83.51 46 *e*P **P 04 23 38.6 +1.0**
MTE Manteigas 83.86 45 *e*P **P 04 23 41.4 +2.0**
MTE Manteigas 83.86 45 P **P 04 23 39.3 -0.1**
MTE IAmb IAmb 04 23 52.9
comp=Z,44nm,1.2s
MVO Moncorvo 84.56 44 *e*P **P 04 23 44.6 +1.7**
comp=Z,66nm,1.4s
GRNB Grenville Isla 84.87 331 P **P 04 23 44.6 +0.5**
GRNB IAmb IAmb 04 23 46.9
comp=Z,26nm,0.8s
YKA Yellowknife Ar 85.06 342 P **P 04 23 44.6 -0.2**
YKA Yellowknife Ar 85.06 342 P **P 04 23 45.2 +0.4**
comp=Z,56nm,0.9s,baz=138,slow=5.0,SNR=516
YKA LR LR 05 05 52.3
comp=Z,366nm,18.4s,baz=154,slow=39
comp=Z,56nm,0.9s
SFJD Kangerlussuaq 85.21 9 P **P 04 23 44.8 -0.7**
SFJD Kangerlussuaq 85.21 9 P **P 04 23 44.8 -0.7**
SFJD pmax pmax
comp=Z,33nm,1.1s
SFJD Kangerlussuaq 85.21 9 *i* P **P 04 23 44.7 -0.8**
SFJD IAmb IAmb 04 23 46.7
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 85.21 9 LR LR 05 03 22.9
comp=Z,431nm,19.8s,baz=198,slow=37
RUBB Prince Rupert 85.29 331 P **P 04 23 46.5 +0.4**
SUR Sutherland 85.30 122 LR LR 04 59 43.8
comp=Z,547nm,18.3s,baz=250,slow=34
DY2G Dye2 85.46 11 *i* P **P 04 23 46.6 -0.4**
DY2G IAmb IAmb 04 23 48.4
comp=Z,54nm,0.7s
PAB San Pablo 85.67 47 P **P 04 23 49.0 +0.4**
PAB IAmb IAmb 04 24 02.9
comp=Z,95nm,1.5s
PAB San Pablo 85.67 47 P **P 04 23 49.0 +0.4**
PAB pmax pmax
comp=Z,95nm,1.5s
DIB Dawson Inlet, 85.70 329 P **P 04 23 48.8 +0.6**
ESDC Sonseca Array 85.99 47 P **P 04 23 50.8 +0.7**
ESDC IAmb IAmb 04 24 04.7
comp=Z,60nm,1.5s
ESDC Sonseca Array 85.99 47 P **P 04 23 50.8 +0.7**
comp=Z,9.5nm,1.1s,baz=254,slow=5.4,SNR=24
ESDC pP **sP 04 24 02.9 +1.4**
comp=Z,23nm,1.2s,baz=254,slow=5.0,SNR=16
ESDC LR LR 05 00 53.4
comp=Z,510nm,18.1s,baz=248,slow=35
comp=Z,9.5nm,1.1s
ESBB Sonseca Array 86.00 47 P **P 04 23 51.2 +1.1**
ESBB IAmb IAmb 04 24 04.7
comp=Z,58nm,1.4s
TOAD Toad River Com 86.02 336 P **P 04 23 51.9 +2.2**
baz=132
ISOG Isortoq, Green 86.15 14 *i* P **P 04 23 50.1 -0.1**
ISOG IAmb IAmb 04 23 51.8
comp=Z,28nm,0.8s
U35K Hyder 86.15 332 P **P 04 23 51.3 +1.0**
baz=127
TSUM Tsumeb 86.21 109 LR LR 04 59 27.9
comp=Z,461nm,19.9s,baz=268,slow=34
FLDN Fort Liard 86.30 338 P **P 04 23 51.9 +0.9**
FLDN IAmb IAmb 04 23 53.7
comp=Z,62nm,0.8s
FLDN Fort Liard 86.30 338 P **P 04 23 52.5 +1.5**
baz=133,SNR=10
KOTAN Kotaneelee Air 86.43 337 P **P 04 23 53.2 +1.4**
baz=133,SNR=29
ANGG Ammassalik, Gr 86.52 14 *i* P **P 04 23 51.2 -0.7**
ANGG IAmb IAmb 04 23 53.6
comp=Z,19nm,1.1s
V35K Ketchikan 86.53 331 P **P 04 23 52.1 -0.1**
V35K Ketchikan 86.53 331 P **P 04 23 53.4 +1.1**
baz=126,SNR=5.5
T35M Bob Quinn 86.90 333 P **P 04 23 54.7 +0.6**
T35M IAmb IAmb 04 23 56.9
comp=Z,46nm,0.8s
T35M Bob Quinn 86.90 333 P **P 04 23 55.6 +1.5**
baz=127,SNR=26
TAM Tamanrasset 87.18 65 P **P 04 23 57.7 +1.3**
TAM Tamanrasset 87.18 65 P **P 04 23 57.7 +1.3**
TAM pmax pmax
comp=Z,107nm,1.3s
ILULI Ilulissat 87.20 8 P **P 04 23 54.9 -0.3**
ILULI IAmb IAmb 04 23 56.6
comp=Z,81nm,1.1s
ILULI Ilulissat 87.20 8 P **P 04 23 54.9 -0.3**
ILULI pmax pmax
comp=Z,81nm,1.1s
ILULI Ilulissat 87.20 8 *i* P **P 04 23 54.7 -0.6**
ILULI IAmb IAmb 04 23 56.9
comp=Z,24nm,0.9s
CRAG Craig 87.31 331 P **P 04 23 57.2 +1.2**
baz=125
WRAK Wrangell Islan 87.50 332 P **P 04 23 57.6 +0.6**
WRAK IAmb IAmb 04 23 59.2
comp=Z,41nm,0.9s
WRAK Wrangell Islan 87.50 332 P **P 04 23 58.0 +1.0**
baz=125,SNR=8.8
U33K Whale Pass 87.68 331 P **P 04 23 58.9 +1.1**
baz=125
DLBC Dease Lake 87.69 334 P **P 04 23 58.6 +0.7**
DLBC Dease Lake 87.69 334 P **P 04 23 59.5 +1.5**
baz=128,SNR=45
DLBC Dease Lake 87.69 334 P **P 04 23 59.5 +1.5**
comp=Z,52nm,0.8s,baz=124,slow=4.0,SNR=110
DLBC PP **PP 04 27 21.1 -2.7**
comp=Z,3.4nm,1.0s,baz=119,slow=6.3,SNR=2.1
DLBC LR LR 05 07 30.2
comp=Z,368nm,18.2s,baz=116,slow=38
comp=Z,52nm,0.8s
S34M Telegraph Cree 87.84 333 P **P 04 23 59.4 +0.8**
S34M IAmb IAmb 04 24 01.3
comp=Z,47nm,1.1s
S34M Telegraph Cree 87.84 333 P **P 04 24 00.1 +1.5**
baz=126,SNR=16
HUH Hualalai 88.00 291 P **P 04 23 59.9 -0.6**
WTLY Watson Lake, Y 88.22 336 P **P 04 24 01.2 +0.8**
WTLY Watson Lake, Y 88.22 336 P **P 04 24 01.9 +1.5**
baz=129,SNR=42
WRGLY Wrigley 88.35 340 P **P 04 24 01.5 +0.7**
WRGLY Wrigley 88.35 340 P **P 04 24 01.9 +1.1**
baz=133,SNR=12
UMMG Uummannaq 88.44 7 *i* P **P 04 24 00.4 -0.7**
R33M Jennings River 88.66 335 P **P 04 24 03.0 +0.4**
R33M IAmb IAmb 04 24 05.2
comp=Z,49nm,1.0s
R33M Jennings River 88.66 335 P **P 04 24 04.1 +1.6**
baz=127
TGTN Hyland Airport 88.91 337 P **P 04 24 05.5 +1.9**
baz=129,SNR=82
Q32M Nakina River 88.94 334 P **P 04 24 04.3 +0.3**
Q32M IAmb IAmb 04 24 06.2
comp=Z,25nm,0.8s
Q32M Nakina River 88.94 334 P **P 04 24 05.7 +1.6**
baz=126,SNR=11
ICESG Greenland Ices 88.98 12 *i* P **P 04 24 04.1 -0.1**
ICESG IAmb IAmb 04 24 06.3
comp=Z,35nm,0.8s
S32K Killisnoo 89.10 332 P **P 04 24 04.1 -0.4**
S32K Killisnoo 89.10 332 P **P 04 24 05.6 +1.1**
baz=124
JIS Juneau Island 89.46 333 P **P 04 24 06.7 +0.6**
JIS IAmb IAmb 04 24 08.6
comp=Z,26nm,0.8s
R32K Eaglecrest 89.52 333 P **P 04 24 07.7 +1.1**
R32K IAmb IAmb 04 24 09.0
comp=Z,26nm,0.8s
R32K Eaglecrest 89.52 333 P **P 04 24 08.2 +1.7**
baz=124,SNR=12
BESE Bessie Mountai 89.84 333 P **P 04 24 08.3 +0.2**
BESE IAmb IAmb 04 24 10.6
comp=Z,50nm,0.8s
P33M Teslin, Yukon 89.89 335 P **P 04 24 08.8 +0.4**
P33M IAmb IAmb 04 24 10.7
comp=Z,37nm,0.8s
P33M Teslin, Yukon 89.89 335 P **P 04 24 09.3 +0.9**
baz=125,SNR=24
P32M Atlin 89.91 334 P **P 04 24 07.7 -0.7**
P32M IAmb IAmb 04 24 10.7
comp=Z,34nm,0.8s
P32M Atlin 89.91 334 P **P 04 24 09.8 +1.4**
baz=124,SNR=13
UPNV Upernavik 90.03 5 *i* P **P 04 24 08.5 0.0**
UPNV IAmb IAmb 04 24 10.8
comp=Z,6.7nm,1.0s
BOSA Boshof 90.10 120 LR LR 05 02 33.3
comp=Z,452nm,19.1s,baz=249,slow=34
S31K Pelican 90.11 332 P **P 04 24 10.4 +1.1**
baz=122
MAW Mawson 90.31 165 P **P 04 24 11.6 +1.4**
comp=Z,10nm,0.7s,baz=191,slow=5.2,SNR=1.6
MAW LR LR 05 02 30.8
comp=Z,945nm,20.9s,baz=228,slow=34
comp=Z,10nm,0.7s
KIP Kipapa 90.48 292⇑ *e*P **P 04 24 11.0 -0.8**
KIP pmax pmax
comp=Z,88nm,1.4s
BORG Borgarnes 90.50 20 LR LR 05 02 08.1
comp=Z,367nm,20.6s,baz=219,slow=34
SKAG Skagway 90.52 333 P **P 04 24 11.9 +0.8**
SKAG Skagway 90.52 333 P **P 04 24 12.3 +1.1**
baz=123,SNR=7.0
N32M Quiet Lake 90.54 335 P **P 04 24 11.9 +0.6**
N32M IAmb IAmb 04 24 13.7
comp=Z,53nm,0.9s
N32M Quiet Lake 90.54 335 P **P 04 24 12.3 +1.0**
baz=125
PLBC Pleasant Camp 90.97 333 P **P 04 24 14.4 +1.2**
baz=122,SNR=10
WHY Whitehorse 90.99 335 P **P 04 24 13.6 +0.1**
WHY IAmb IAmb 04 24 29.3
comp=Z,49nm,1.6s
WHY Whitehorse 90.99 335 P **P 04 24 14.3 +0.8**
baz=123,SNR=6.2
FARO Faro, Yukon 91.26 336 P **P 04 24 15.6 +1.0**
FARO IAmb IAmb 04 24 17.0
comp=Z,35nm,0.9s
FARO Faro, Yukon 91.26 336 P **P 04 24 15.8 +1.2**
baz=125,SNR=44
LBTB Lobatse 91.55 117 LR LR 05 03 23.0
comp=Z,344nm,19.0s,baz=252,slow=34
O30N Mendenhall 91.55 334 P **P 04 24 16.7 +0.7**
O30N IAmb IAmb 04 24 18.5
comp=Z,91nm,1.9s
O30N Mendenhall 91.55 334 P **P 04 24 17.1 +1.1**
baz=122,SNR=9.7
P30M Million Dollar 91.58 334 P **P 04 24 17.6 +1.5**
baz=122
M31M Drury Creek, Y 91.65 336 P **P 04 24 16.8 +0.4**
M31M Drury Creek, Y 91.65 336 P **P 04 24 17.6 +1.2**
baz=124,SNR=16
P29M Windy Craggy 91.66 333 P **P 04 24 16.2 -0.2**
P29M Windy Craggy 91.66 333 P **P 04 24 16.6 +0.2**
baz=121
N31M Braeburn, Yuko 91.81 335 P **P 04 24 17.5 +0.4**
N31M IAmb IAmb 04 24 19.3
comp=Z,26nm,0.8s
N31M Braeburn, Yuko 91.81 335 P **P 04 24 18.4 +1.2**
baz=122,SNR=11
RES Resolute Bay 92.09 355 P **P 04 24 18.2 +0.1**
RES Resolute Bay 92.09 355 P **P 04 24 18.2 +0.1**
RES pmax pmax
comp=Z,9.0nm,1.2s
RES Resolute Bay 92.09 355 LR LR 05 11 37.0
comp=Z,283nm,18.1s,baz=176,slow=39
SUMG Summit 92.12 10 P **P 04 24 19.4 +0.6**
SUMG Summit 92.12 10 P **P 04 24 19.4 +0.6**
SUMG pmax pmax
comp=Z,94nm,1.2s
SUMG Summit 92.12 10 *i* P **P 04 24 19.0 +0.2**
SUMG IAmb IAmb 04 24 22.8
comp=Z,24nm,0.8s
HYT Haines Junctio 92.17 334 P **P 04 24 19.6 +0.7**
HYT Haines Junctio 92.17 334 P **P 04 24 20.2 +1.2**
baz=121
O29M Mount Kennedy 92.36 333 P **P 04 24 20.2 +0.4**
O29M IAmb IAmb 04 24 23.1
comp=Z,45nm,1.9s
O29M Mount Kennedy 92.36 333 P **P 04 24 20.4 +0.6**
baz=120
PNL Peninsula 92.41 333 P **P 04 24 20.6 +0.7**
baz=120
YUK6 Outpost Mounta 92.59 334 P **P 04 24 22.1 +1.1**
baz=120
BCPM Bancas Point 92.65 333 P **P 04 24 20.1 -0.9**
BCPM IAmb IAmb 04 25 36.9
comp=Z,100nm,2.0s
C36M Paulatuk 92.72 344 P **P 04 24 21.8 +0.7**
C36M Paulatuk 92.72 344 P **P 04 24 22.4 +1.3**
baz=133
M30M Minto, Yukon 92.79 336 P **P 04 24 21.8 +0.1**
M30M Minto, Yukon 92.79 336 P **P 04 24 22.4 +0.7**
baz=122,SNR=7.4
YUK4 Talbot Arm 92.92 334 P **P 04 24 23.0 +0.5**
baz=120,SNR=6.0
MAYO Mayo, Yukon 92.99 337 P **P 04 24 23.0 +0.5**
MAYO IAmb IAmb 04 24 24.4
comp=Z,32nm,0.7s
MAYO Mayo, Yukon 92.99 337 P **P 04 24 23.1 +0.6**
baz=122
PINM Pinnacle 92.99 333 P **P 04 24 23.7 +1.0**
baz=119
EKA Eskdalemuir Ar 93.17 33 P **P 04 24 23.7 +0.2**
comp=Z,1.3nm,0.8s,baz=215,slow=6.0,SNR=2.0
comp=Z,1.3nm,0.8s
YUK8 Steele Glacier 93.36 334 P **P 04 24 25.4 +0.8**
baz=119
M29M Somme Creek 93.39 335 P **P 04 24 24.4 -0.1**
M29M IAmb IAmb 04 24 26.7
comp=Z,23nm,1.0s
M29M Somme Creek 93.39 335 P **P 04 24 25.2 +0.7**
baz=120
L29M L29M 93.59 336 P **P 04 24 24.9 -0.5**
L29M IAmb IAmb 04 24 27.3
comp=Z,45nm,0.9s
L29M L29M 93.59 336 P **P 04 24 26.4 +1.0**
baz=120,SNR=40
J30M Hart River 93.67 338 P **P 04 24 25.9 +0.1**
J30M Hart River 93.67 338 P **P 04 24 26.4 +0.6**
baz=122
K29M Barlow Dome 93.73 337 P **P 04 24 26.0 -0.1**
K29M IAmb IAmb 04 24 27.7
comp=Z,19nm,0.8s
K29M Barlow Dome 93.73 337 P **P 04 24 26.8 +0.7**
baz=121,SNR=22
MESA MESA 93.78 332 P **P 04 24 27.0 +0.5**
baz=117
URZ Urewera 93.84 228 LR LR 04 57 13.9
comp=Z,277nm,21.9s,baz=122,slow=29
CTG Chitna Glacier 93.88 333 P **P 04 24 27.5 +0.7**
baz=118
YUK3 Moose Creek 93.88 334 P **P 04 24 27.3 +0.3**
baz=118
SSB Saint Sauveur 93.94 44 P **P 04 24 27.3 -0.1**
SSB IAmb IAmb 04 27 21.8
comp=Z,67nm,2.0s
SSB Saint Sauveur 93.94 44 P **P 04 24 27.3 -0.1**
SSB pmax pmax
comp=Z,67nm,2.0s
I30M Mount Dempster 94.03 338 P **P 04 24 27.1 -0.3**
I30M IAmb IAmb 04 24 29.3
comp=Z,21nm,0.9s

I30M	Mount Dempster	94.03	338	P		P	04 24 28.2	+0.7
	baz=122							
ISLE	Juniper Island	94.14	333	P		P	04 24 27.1	-1.0
ISLE				IAmb		IAmb	04 25 56.4	
	comp=Z,36nm,1.5s							
G31M	Satah River	94.23	340	P		P	04 24 27.2	-0.9
G31M	Satah River	94.23	340	P		P	04 24 28.1	+0.1
	baz=124,SNR=9.2							
J29N	Klondike Camp	94.31	337	P		P	04 24 28.0	-0.6
J29N				IAmb		IAmb	04 24 30.5	
	comp=Z,16nm,0.8s							
J29N	Klondike Camp	94.31	337	P		P	04 24 29.5	+0.8
	baz=120,SNR=9.5							
F31M	Tsiigehtchic	94.35	341	P		P	04 24 28.2	-0.4
F31M	Tsiigehtchic	94.35	341	P		P	04 24 28.9	+0.3
	baz=124,SNR=11							
BVCY	Beaver Creek	94.35	335	P		P	04 24 28.7	-0.2
	baz=118							
KEST	Kesra	94.42	54	LR		LR	05 06 08.7	
	comp=Z,532nm,20.9s,baz=218,slow=35							
CRQE	Cirque	94.54	333	P		P	04 24 28.9	-1.0
	baz=116							
DAWY	Dawson	94.56	336	P		P	04 24 29.2	-0.6
DAWY	Dawson	94.56	336	P		P	04 24 30.1	+0.3
	baz=119							
CRQM	Cirque	94.57	333	P		P	04 24 28.9	-1.1
CRQM				IAmb		IAmb	04 24 31.3	
	comp=Z,22nm,0.9s							
M27K	Edge Creek, AK	94.75	334	P		P	04 24 30.0	-0.8
M27K	Edge Creek, AK	94.75	334	P		P	04 24 31.0	+0.1
	baz=117,SNR=6.2							
EPYK	Eagle Plains	94.75	339	P		P	04 24 29.6	-1.0
EPYK				IAmb		IAmb	04 24 46.4	
	comp=Z,43nm,1.6s							
EPYK	Eagle Plains	94.75	339	P		P	04 24 30.9	+0.3
	baz=121							
INK	Inuvik	94.77	341	P		P	04 24 30.0	-0.5
INK				IAmb		IAmb	04 24 31.9	
	comp=Z,25nm,1.2s							
INK	Inuvik	94.77	341	P		P	04 24 30.9	+0.4
	baz=124,SNR=19							
INK	Inuvik	94.77	341	P		P	04 24 30.0	-0.5
INK				pmax		pmax		
	comp=Z,25nm,1.2s							
INK	Inuvik	94.77	341	P		P	04 24 30.4	-0.1
	comp=Z,16nm,1.0s,baz=110,slow=4.8,SNR=44							
INK				LR		LR	05 11 52.6	
	comp=Z,560nm,19.4s,baz=174,slow=38							
	comp=Z,16nm,1.0s							
KAIM	Kayak Island	94.78	332	P		P	04 24 31.0	+0.2
	baz=115							
MCARA	McCarthy VSAT	94.79	333	P		P	04 24 29.5	-1.3
MCARA	McCarthy VSAT	94.79	333	P		P	04 24 31.1	+0.2
	baz=116							
A36M	Sachs Harbour	94.80	346	P		P	04 24 29.4	-1.2
A36M				IAmb		IAmb	04 24 31.8	
	comp=Z,59nm,1.4s							
A36M	Sachs Harbour	94.80	346	P		P	04 24 30.6	0.0
	baz=132,SNR=18							
NEEM	North Greenlan	94.88	5	*i* P		P	04 24 31.7	+0.4
NEEM				IAmb		IAmb	04 24 37.0	
	comp=Z,9.3nm,0.8s							
G30M	tAoh Zraii Nji	94.91	340	P		P	04 24 30.1	-1.2
G30M	tAoh Zraii Nji	94.91	340	P		P	04 24 31.6	+0.3
	baz=122							
VRDI	Verde Repeater	94.91	333	P		P	04 24 31.2	-0.5
BCAR	Beaver Creek A	95.03	335	P		P	04 24 31.3	-0.7
OXZ	Oxford	95.04	222	P		P	04 24 31.0	-1.6
OXZ				IAmb		IAmb	04 24 32.5	
	comp=Z,72nm,1.7s							
L27K	Beaver Creek,	95.05	335	P		P	04 24 31.2	-0.8
L27K	Beaver Creek,	95.05	335	P		P	04 24 32.4	+0.4
	baz=117							
F30M	Barrier River	95.10	340	P		P	04 24 32.5	+0.4
	baz=122							
THZ	Tophouse	95.21	224	P		P	04 24 31.8	-1.6
THZ				IAmb		IAmb	04 25 42.8	
	comp=Z,76nm,1.6s							
M26K	Nabesna, AK	95.23	334	P		P	04 24 33.2	+0.3
	baz=116							
H29M	Whitestone	95.25	338	P		P	04 24 31.8	-1.1
H29M	Whitestone	95.25	338	P		P	04 24 33.3	+0.4
	baz=120							
BMRM	Bremner River	95.31	333	P		P	04 24 33.4	+0.1
	baz=115							
I28M	Miner Creek	95.44	337	P		P	04 24 33.3	-0.5
I28M	Miner Creek	95.44	337	P		P	04 24 33.7	-0.1
	baz=119							
RPZ	Rata Peaks	95.48	221	LR		LR	04 57 32.3	
	comp=Z,523nm,21.7s,baz=111,slow=29							
EGAK	Eagle	95.58	337	P		P	04 24 34.8	+0.5
	baz=118							
K27K	Chicken	95.59	336	P		P	04 24 34.1	-0.3
K27K				IAmb		IAmb	04 24 36.7	
	comp=Z,46nm,2.0s							
K27K	Chicken	95.59	336	P		P	04 24 35.1	+0.7
	baz=117							
L26K	Log Cabin Wild	95.65	335	P		P	04 24 35.2	+0.4
	baz=116							
MENT	Mentasta	95.77	334	P		P	04 24 34.2	-1.1
KLU	Klutina	96.10	333	P		P	04 24 36.3	-0.6
KLU				IAmb		IAmb	04 24 37.9	
	comp=Z,20nm,0.9s							
KLU	Klutina	96.10	333	P		P	04 24 37.0	+0.1
	baz=114,SNR=7.5							
I27K	Kandik River	96.13	337	P		P	04 24 37.1	+0.1
	baz=117							
HARP	HAARP	96.14	334	P		P	04 24 37.5	+0.5
	baz=114							
E29M	Blow River	96.18	340	P		P	04 24 35.9	-1.2
E29M				IAmb		IAmb	04 24 38.1	
	comp=Z,20nm,0.8s							
E29M	Blow River	96.18	340	P		P	04 24 37.1	+0.1
	baz=120,SNR=30							
SCRK	Sand Creek	96.32	335	P		P	04 24 37.2	-0.7
SCRK	Sand Creek	96.32	335	P		P	04 24 37.9	0.0
	baz=115,SNR=6.0							
J26L	Joseph Creek	96.38	336	P		P	04 24 37.9	-0.2
J26L				IAMs_20		IAMs_20	05 10 56.9	
	comp=Z,439nm,20.0s							
J26L	Joseph Creek	96.38	336	P		P	04 24 38.3	+0.2
	baz=116							
H27K	Steamboat Moun	96.38	338	P		P	04 24 38.5	+0.5
	baz=117,SNR=11							
F28M	Old Crow	96.45	339	P		P	04 24 37.2	-1.1
F28M	Old Crow	96.45	339	P		P	04 24 38.0	-0.3
	baz=118,SNR=13							
M24K	Tolsona, Glenn	96.46	333	P		P	04 24 38.7	+0.2
	baz=114							
PAX	Paxson	96.51	334	P		P	04 24 38.4	-0.4
	baz=114,SNR=6.1							
RIDG	Independent Ri	96.57	335	P		P	04 24 38.3	-0.6
RIDG	Independent Ri	96.57	335	P		P	04 24 38.9	-0.1
	baz=114							
I26K	Coal Creek Min	96.57	337	P		P	04 24 38.0	-0.8
I26K				IAmb		IAmb	04 24 40.6	
	comp=Z,27nm,1.6s							
I26K	Coal Creek Min	96.57	337	P		P	04 24 38.4	-0.5
	baz=116							
E28M	Babbage River	96.81	340	P		P	04 24 39.6	-0.3
E28M	Babbage River	96.81	340	P		P	04 24 39.5	-0.4
	baz=119							
SCM	Sheep Creek Mo	96.85	333	P		P	04 24 40.0	-0.3
	baz=112							
K24K	Donnelly Dome	96.97	335	P		P	04 24 41.3	+0.5
	baz=114							
M23K	Glacier View	97.01	333	P		P	04 24 41.5	+0.5
	baz=112							
LSZ	Lusaka	97.05	108	LR		LR	05 09 07.5	
	comp=Z,290nm,18.2s,baz=256,slow=36							
J25K	Salcha River,	97.14	336	P		P	04 24 40.9	-0.6
J25K	Salcha River,	97.14	336	P		Pdif	04 24 41.8	+0.2
	baz=114							
SEW	Seward	97.18	331	P		P	04 24 41.8	+0.1
	baz=111							
KNK	Knik Glacier	97.20	332	P		Pdif	04 24 42.3	+0.3
	baz=112							
SML	Sawmill	97.29	333	P		Pdif	04 24 42.7	+0.4
	baz=112							
WAT6	Susitna Watana	97.32	333	P		P	04 24 42.5	0.0
	baz=112							
DHY	Denali Highway	97.35	334	P		P	04 24 41.6	-1.1
DHY				IAmb		IAmb	04 26 56.6	
	comp=Z,42nm,2.0s							
DHY	Denali Highway	97.35	334	P		P	04 24 42.6	0.0
	baz=112							
O22K	Cooper Landing	97.44	331	P		P	04 24 42.9	+0.1
	baz=111							
G26K	Porcupine Rive	97.51	338	P		Pdif	04 24 43.5	+0.4
	baz=115,SNR=5.7							
PRP	Porcupine Dome	97.56	337	P		P	04 24 42.7	-0.9
PRP	Porcupine Dome	97.56	337	P		Pdif	04 24 44.0	+0.4
	baz=114							
PMR	Palmer	97.56	332	P		Pdif	04 24 43.7	+0.2
	baz=111							
D27M	Malcolm River	97.57	341	P		P	04 24 43.3	-0.1
D27M				IAmb		IAmb	04 24 44.9	
	comp=Z,12nm,0.8s							
D27M	Malcolm River	97.57	341	P		Pdif	04 24 44.1	+0.6
	baz=117							
RC01	Rabbit Creek A	97.66	332	P		Pdif	04 24 44.1	+0.2
	baz=110							
BRSE	Bradley Lake S	97.66	330	P		Pdif	04 24 44.3	+0.3
	baz=110							
HDA	Harding Lake	97.68	335	P		P	04 24 44.1	+0.1
	baz=112							
WAT1	Susitna Watana	97.76	333	P		P	04 24 44.4	+0.1
	baz=111							
IL31		97.80	336	P		P	04 24 43.5	-0.9
IL31				IAmb		IAmb	04 28 27.1	
	comp=Z,28nm,1.9s							
ILAR	Eielson Array	97.80	336			P	04 24 43.2	-1.2
ILAR	Eielson Array	97.80	336	P		P	04 24 44.0	-0.4
	comp=Z,1.9nm,0.8s,baz=162,slow=3.8,SNR=30							
ILAR				PP		PP	04 28 31.3	-12
	comp=Z,1.0nm,0.8s,baz=120,slow=5.2,SNR=5.2							
ILAR				LR		LR	05 12 42.9	
	comp=Z,342nm,18.7s,baz=86,slow=38							
	comp=Z,1.9nm,0.8s							
FYU	Fort Yukon	97.87	338	P		P	04 24 44.6	0.0
FYU				IAmb		IAmb	04 27 00.2	
	comp=Z,13nm,0.5s							
KDAK	Kodiak Island	97.92	328	P		P	04 24 45.1	0.0
	baz=109							
DAVOX	Davos/Dischmat	97.94	44	LR		LR	05 07 04.9	
	comp=Z,454nm,19.7s,baz=259,slow=34							
F26K	Sheenjek River	97.95	339	P		Pdif	04 24 45.8	+0.6
	baz=115							
BMAR	Burnt Mountain	97.99	338	P		P	04 24 44.8	-0.5
M22K	Willow	98.06	332	P		P	04 24 44.9	-0.7
M22K	Willow	98.06	332	P		Pdif	04 24 46.4	+0.7
	baz=110							
HOM	Homer	98.06	330	P		Pdif	04 24 46.2	+0.5
	baz=109							
DAVA	Damuels	98.08	43	*e* P		Pdif	04 24 47.1	+0.8
	comp=Z,5.2nm,1.0s							
Q20K	Shuyak Island	98.09	329	P		Pdif	04 24 46.2	+0.3
	baz=109							
RND	Reindeer	98.09	334	P		P	04 24 44.5	-1.4
RND				IAmb		IAmb	04 24 47.2	
	comp=Z,54nm,1.8s							
RND	Reindeer	98.09	334	P		P	04 24 44.5	-1.4
RND				pmax		pmax		
	comp=Z,54nm,1.8s							
OHAK	Old Harbor	98.11	327	P		Pdif	04 24 46.4	+0.4
	baz=108							
POKR	Poker Plat Res	98.14	336	P		Pdif	04 24 46.7	+0.6
	baz=112							
CAPN	Captain Cook N	98.20	331	P		Pdif	04 24 46.6	+0.3
	baz=109							
COLA	College	98.22	336	P		P	04 24 45.1	-1.2
COLA				IAmb		IAmb	04 24 47.2	
	comp=Z,11nm,0.8s							
COLA	College	98.22	336	P		Pdif	04 24 46.8	+0.5
	baz=112							
COLA	College	98.22	336	P		P	04 24 45.1	-1.2
COLA				pmax		pmax		
	comp=Z,11nm,0.8s							
MCK	McKinley	98.24	334	P		P	04 24 46.7	+0.2
	baz=111							
SUA	Susitna One	98.24	332	P		P	04 24 45.7	-0.9
SUA	Susitna One	98.24	332	P		P	04 24 46.8	+0.2
	baz=110							
CUT	Chulitna	98.35	333	P		Pdif	04 24 47.3	+0.4
	baz=110							
SII	Sitkinak Islan	98.37	327	P		P	04 24 47.4	+0.1
	baz=108							
MDM	Murphy Dome	98.40	336	P		P	04 24 46.7	-0.4
MDM				IAmb		IAmb	04 24 48.1	
	comp=Z,14nm,0.7s							
F25K	Christian Rive	98.43	338	P		Pdif	04 24 48.1	+0.8
	baz=113							
FETA	Feichten	98.57	44	*e* Pdiff		Pdif	04 24 49.0	+0.4
	comp=Z,3.4nm,1.1s							
H24K	Noodor Dome	98.58	336	P		P	04 24 47.5	-0.4
H24K	Noodor Dome	98.58	336	P		Pdif	04 24 48.5	+0.5
	baz=112							
NEA2	Nenana	98.60	335	P		P	04 24 46.8	-1.3
NEA2	Nenana	98.60	335	P		Pdif	04 24 48.3	+0.2
	baz=111,SNR=6.4							
E25K	Arctic Village	98.61	339			P	04 24 48.0	-0.1
E25K				IAmb		IAmb	04 24 50.0	
	comp=Z,36nm,1.9s							
E25K	Arctic Village	98.61	339	P		Pdif	04 24 49.3	+1.2
	baz=113,SNR=7.4							
BWN	Browne	98.62	335	P		P	04 24 47.1	-1.0
BWN				IAmb		IAmb	04 24 50.2	
	comp=Z,20nm,0.8s							
RETA	Reutte	98.71	43	*e* Pdiff		Pdif	04 24 49.6	+0.5
	comp=Z,7.6nm,1.4s							
TRF	Thorofare Moun	98.71	334	P		P	04 24 48.9	+0.1
	baz=110							
G24K	Hadweenzic Riv	98.75	337	P		Pdif	04 24 49.7	+1.0
	baz=112							
SKT	Skwentna	98.77	332			P	04 24 48.8	-0.1
SKT				IAmb		IAmb	04 24 53.1	
	comp=Z,8.8nm,0.7s							
SKT	Skwentna	98.77	332	P		Pdif	04 24 49.3	+0.4
	baz=109							
Q19K	Cape Douglas,	98.81	329	P		Pdif	04 24 49.8	+0.7
	baz=108							
VAE	Valguarnera	98.81	54	LR		LR	05 11 14.4	
	comp=Z,522nm,18.1s,baz=234,slow=36							
N20K	Mount Spurr	98.83	331	P		Pdif	04 24 49.7	+0.5
	baz=106							
P19K	Oil Pt	98.83	330	P		Pdif	04 24 49.7	+0.5
	baz=108							
RSO	Redoubt South	98.85	331	P		P	04 24 48.4	-1.0
MOTA	Moosalm	98.90	43	*e* Pdiff		Pdif	04 24 50.3	+0.3
	comp=Z,6.4nm,1.1s							
I23K	Minto, Yukon-K	98.92	336	P		P	04 24 49.2	-0.2
I23K	Minto, Yukon-K	98.92	336	P		Pdif	04 24 49.8	+0.4
	baz=110							
CHIR	Chirikof Islan	98.93	326	P		P	04 24 49.6	-0.1
	baz=106							
SQTA	Sankt Quirin	98.94	43	*e* Pdiff		Pdif	04 24 50.8	+0.7
	comp=Z,5.8nm,1.1s							
F24K	Squaw Lake	99.20	338	P		Pdif	04 24 50.9	+0.2
F24K	Squaw Lake	99.20	338	P		Pdif	04 24 51.5	+0.8
	baz=111							
WATA	Walderalm	99.21	43	*e* Pdiff		Pdif	04 24 52.0	+0.7
	comp=Z,6.2nm,1.1s							
WTTA	Wattenberg	99.23	43	*e* Pdiff		Pdif	04 24 52.0	+0.5
	comp=Z,12nm,1.5s							
PPLA	Purkeypile	99.35	333	P		Pdif	04 24 51.7	+0.1
	baz=108							
D25K	Kavik River	99.35	340	P		Pdif	04 24 51.7	+0.3
D25K	Kavik River	99.35	340	P		Pdif	04 24 51.9	+0.5
	baz=112							
MLY	Manley	99.42	335	P		Pdif	04 24 50.8	-1.0
MLY	Manley	99.42	335	P		Pdif	04 24 51.5	-0.3
	baz=109							
M20K	Styx River	99.46	332	P		Pdif	04 24 52.2	+0.1
	baz=108							
CAST	Castle Rocks	99.47	334			Pdif	04 24 50.6	-1.3
CAST	Castle Rocks	99.47	334	P		Pdif	04 24 51.6	-0.3
	baz=108,SNR=6.7							
E24K	Your Creek	99.61	338	P		Pdif	04 24 52.7	+0.2
E24K	Your Creek	99.61	338	P		Pdif	04 24 53.4	+0.8
	baz=111							
JOHN	Johnston Islan	99.67	285	Pdif		Pdif	04 24 52.0	-1.8
G23K	Bananza Creek	99.70	337	Pdif		Pdif	04 24 52.4	-0.6
G23K	Bananza Creek	99.70	337	P		Pdif	04 24 53.7	+0.8
	baz=110							
CHUM	Lake Minchumin	99.71	334	P		Pdif	04 24 52.9	0.0
	baz=108							
P18K	Big Mountain,	99.72	329	Pdif		Pdif	04 24 51.9	-1.3
N19K	Bonanza Creek	99.77	331	P		Pdif	04 24 53.5	+0.1
	baz=106							
O18K	Koktuh Hills	99.84	330	P		Pdif	04 24 53.8	+0.1
	baz=106							
COLD	Coldfoot	99.94	337	Pdif		Pdif	04 24 54.4	+0.5
COLD	Coldfoot	99.94	337	P		Pdif	04 24 54.6	+0.6
	baz=109,SNR=5.3							
H22K	Ishtalitna Cre	99.96	336	P		Pdif	04 24 54.9	+0.8
	baz=108							
L20K	Farewell, AK	99.97	332	P		Pdif	04 24 54.8	+0.5
	baz=107							
I21K	Tanana	99.97	335	P		Pdif	04 24 54.8	+0.7
	baz=108							
E23K	Chandalar	100.01	338	P		Pdif	04 24 55.0	+0.7
	baz=110							
M19K	Big River Lodg	100.03	332	Pdif		Pdif	04 24 54.1	-0.4
M19K	Big River Lodg	100.03	332	P		Pdif	04 24 54.7	+0.2
	baz=106							
D24K	Happy Valley	100.11	339	P		Pdif	04 24 55.2	+0.6
	baz=110							
TOLK	Toolik Lake Re	100.19	339	Pdif		Pdif	04 24 57.8	+2.7
TOLK	Toolik Lake Re	100.19	339	P		Pdif	04 24 55.5	+0.4
	baz=110							
Q16K	King Salmon	100.24	328	P		Pdif	04 24 55.9	+0.5
	baz=105							
C24K	Franklin Bluff	100.26	340	P		Pdif	04 24 55.9	+0.6
	baz=110							
P17K	Kvichak River	100.27	329	P		Pdif	04 24 55.9	+0.3
	baz=105							
K20K	Telida	100.30	333	P		Pdif	04 24 55.8	+0.1
	baz=106							
L19K	White Mountain	100.32	332	P		Pdif	04 24 56.1	+0.3
	baz=106							
G22K	Bettles	100.33	337	P		Pdif	04 24 56.3	+0.7
	baz=108							
N18K	Kilae Creek	100.39	330	P		Pdif	04 24 56.5	+0.4
	baz=105							
R16K	Pilot Point	100.43	327	P		Pdif	04 24 56.9	+0.6
	baz=104							
H21K	Melozitna Rive	100.44	336	P		Pdif	04 24 56.4	+0.2
	baz=107							
CHGN	Chignik	100.56	326	P		Pdif	04 24 57.8	+0.9
	baz=104							
J20K	Nowinta River	100.57	334	P		Pdif	04 24 57.5	+0.7
	baz=106							
M18K	Stony River	100.58	331	P		Pdif	04 24 57.4	+0.5
	baz=105							
D23K	Nanushuk River	100.67	339	P		Pdif	04 24 58.0	+0.8
	baz=108							
O17K	Koliganek Bris	100.74	329	P		Pdif	04 24 57.9	+0.3
	baz=104							
G21K	Allakaket	100.97	336	P		Pdif	04 24 59.3	+0.8
	baz=106,SNR=5.2							
OBKA	Obir	101.00	45	*e* Pdiff		Pdif	04 25 00.4	+1.1
	comp=Z,3.2nm,0.7s							
CLL	Collm	101.05	40	*i* P		Pdif	04 25 00.9	+1.7
CLL				pmax		pmax		
	comp=Z,22nm,1.8s							
CLL				MLR		MLR		
	comp=Z,700nm,18.1s							
CLL	Collm	101.05	40	*i* Pdif		Pdif	04 25 00.9	+1.7
	comp=Z,22nm,1.8s							
CLL				AMS		AMS	05 09 00.0	
	comp=N,300nm,21.0s							
CLL				AMS		AMS	05 09 00.0	
	comp=E,500nm,21.4s							
CLL				AMS		AMS	05 09 00.0	
	comp=Z,700nm,18.1s							
J19K	Poorman	101.14	334	P		Pdif	04 25 00.1	+0.8
	baz=105							
F21K	Alatna River	101.16	337	P		Pdif	04 25 00.3	+0.9
	baz=106							
L18K	Granite Mounta	101.16	332	P		Pdif	04 24 60.0	+0.5
	baz=104							
S14K	Fog Glacier	101.18	325	P		Pdif	04 25 00.3	+0.5
	baz=103							
O16K	Kokwok River B	101.19	329	P		Pdif	04 24 59.9	+0.3
	baz=104							
H20K	Anotleneega Mo	101.23	335	P		Pdif	04 25 00.0	+0.3
	baz=105							
M17K	Holitna River	101.31	331	P		Pdif	04 25 00.5	+0.4
	baz=104							
D22K	Ayikyak River	101.34	339	P		Pdif	04 25 00.7	+0.6
	baz=107							
BRG	Berggiesshubel	101.54	40	*e* P		Pdif	04 25 03.3	+1.8
BRG				Amp			04 25 04.9	
	comp=Z,3.7nm,1.2s							
BRG	Berggiesshubel	101.54	40	*e* P		Pdif	04 25 03.2	+1.8
BRG				pmax		pmax		
	comp=Z,4.0nm,1.2s							
BRG				MLR		MLR		
	comp=Z,614nm,15.4s							
E21K	Killik River	101.67	338	P		Pdif	04 25 02.6	+0.9
	baz=106							
H19K	Roundabout Mou	101.87	335	P		Pdif	04 25 03.5	+1.0
	baz=104							
L17K	Donlin	101.87	331	P		Pdif	04 25 03.8	+1.2
	baz=103							
M16K	Timber Creek	101.94	330	P		Pdif	04 25 04.0	+1.0
	baz=104							
F20K	Avaraart Lake	101.96	337	P		Pdif	04 25 03.8	+0.9
	baz=104							
O15K	Ungalikthiuk R	101.96	328	P		Pdif	04 25 03.6	+0.5
	baz=102							
K17K	Iditarod	102.01	332	P		Pdif	04 25 03.9	+0.7
	baz=103							
C21K	Knifeblade Rid	102.14	339	P		Pdif	04 25 04.8	+1.0
	baz=105							
B21K	Ikpikpuk River	102.20	339	P		Pdif	04 25 04.9	+1.0
	baz=105							
G19K	Purcell Mounta	102.27	336	P		Pdif	04 25 04.7	+0.4
	baz=103							
N15K	Kwethluk River	102.30	329	P		Pdif	04 25 05.3	+0.7
	baz=102							
L16K	Owhat River	102.33	331	P		Pdif	04 25 05.4	+0.8
	baz=102							
E20K	Nigu River	102.42	338	P		Pdif	04 25 05.9	+0.8
	baz=104							
H18K	Honhosa River	102.56	334	P		Pdif	04 25 06.4	+0.7
	baz=102							
E19K	Redstone River	102.62	337	P		Pdif	04 25 06.7	+0.8
	baz=103							
D20K	Etivluk River	102.68	338	P		Pdif	04 25 06.9	+0.8
	baz=103							
G18K	Tagagawik	102.84	335	P		Pdif	04 25 08.0	+1.1
	baz=102							
N14K	Kuskokwak Cree	103.04	329	P		Pdif	04 25 09.2	+1.4
	baz=101							
J16K	Anvik River	103.15	332	P		Pdif	04 25 09.4	+1.1
	baz=101							
B20K	Meade River	103.15	339	P		Pdif	04 25 09.8	+1.7
	baz=102							
H17K	Granite Mounta	103.17	334	P		Pdif	04 25 09.5	+1.2
	baz=101							
D19K	Kuna River	103.17	338	P		Pdif	04 25 09.8	+1.4
	baz=102							
M14K	Bethel	103.32	330	P		Pdif	04 25 10.5	+1.4
	baz=100							
F18K	Selawik	103.38	336	P		Pdif	04 25 10.9	+1.7
	baz=101							
G17K	Kiwalik Mounta	103.58	335	P		Pdif	04 25 12.0	+1.9
	baz=100							
C19K	Lookout Ridge	103.81	338	P		Pdif	04 25 12.5	+1.3
	baz=100							
E18K	Tukpahlearik C	103.89	337	IAMs_20		IAMs_20	05 09 41.4	
	comp=Z,434nm,21.0s							
E18K	Tukpahlearik C	103.89	337	P		Pdif	04 25 12.9	+1.3
	baz=100							
M13K	Dall Lake

MNK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
MNK					pmax	pmax			
	comp=N,10.0nm,0.9s								
MNK					pmax	pmax			
	comp=E,2.0nm,0.9s								
MNK					MLR	MLR			
	comp=E,186nm,18.0s								
MNK					MLR	MLR			
	comp=Z,549nm,19.0s								
MNK					MLR	MLR			
	comp=N,183nm,19.0s								
BRTR	**Keskin Array B**	**114.01**	**54**		PKiKP	**PKiKP**	**04 29 49.9**	**+0.8**	
	comp=N,0.7nm,0.8s,baz=217,slow=5.9,SNR=3.7								
MMAI	**Mount Meron Ar**	**115.07**	**61**		PKiKP	**PKiKP**	**04 29 52.3**	**+1.1**	
	comp=N,0.2nm,0.3s,baz=335,slow=6.5,SNR=1.4								
OBN	**Obninsk**	**115.33**	**36**	*e*	PKIKP	**PKiKP**	**04 29 49.9**	**-0.9**	
OBN				e			04 30 52.0		
OBN				*e*	PPP	PPP	04 33 20.4		
OBN					pmax	pmax			
	comp=Z,5.0nm,1.2s								
OBN					MLR	MLR			
	comp=Z,619nm,17.0s								
ARPR	**Arapgir-MALATY**	**117.64**	**54**		IAMs_20	IAMs_20	05 23 01.0		
	comp=Z,231nm,19.0s								
ATD	**Arta Tunnel**	**118.86**	**86**		IAMs_20	IAMs_20	05 21 31.4		
	comp=Z,273nm,19.0s								
KIV	**Kislovodsk**	**120.62**	**49**	*i*	PKIKP	**PKiKP**	**04 30 02.4**	**+0.8**	
KIV					pmax	pmax			
	comp=Z,4.0nm,1.1s								
KBZ	**Khabaz**	**120.80**	**49**	*d*	PKIKP	**PKiKP**	**04 30 03.2**	**+1.4**	
KBZ	**Khabaz**	**120.80**	**49**		PKP	**PKiKP**	**04 30 02.3**	**+0.5**	
	comp=Z,3.7nm,0.9s,baz=191,slow=3.0,SNR=7.3								
ZEI	**Tsey**	**121.63**	**50**	*i*	PKIKP	**PKPdf**	**04 30 04.1**	**+0.4**	
ZEI					pmax	pmax			
	comp=Z,6.0nm,1.1s								
H11N3	**WAKE ISLAND Hyd**	**122.20**	**283**		T	T	06 44 04.8		
	baz=98,slow=75,SNR=14								
H11N2	**WAKE ISLAND Hyd**	**122.21**	**283**		T	T	06 44 04.8		
	baz=98,slow=75,SNR=17								
H11N1	**WAKE ISLAND Hyd**	**122.21**	**283**		T	T	06 44 04.2		
	baz=98,slow=75,SNR=8.2								
H11S2	**WAKE ISLAND Hyd**	**122.22**	**282**		T	T	06 44 08.7		
	baz=99,slow=75,SNR=53								
H11S1	**WAKE ISLAND Hyd**	**122.23**	**282**		T	T	06 44 13.1		
	baz=99,slow=75,SNR=32								
H11S3	**WAKE ISLAND Hyd**	**122.24**	**282**		T	T	06 44 09.8		
	baz=99,slow=75,SNR=65								
GNI	**Garni**	**122.53**	**53**	⇑*i*	PKIKP	**PKiKP**	**04 30 06.7**	**+1.1**	
TIXI	**Tiksi**	**123.35**	**351**	⇑*i*	PKIKP	**PKiKP**	**04 30 06.6**	**+0.5**	
SEY	**Seymchan**	**123.72**	**336**	⇑*i*	PKIKP	**PKiKP**	**04 30 07.4**	**+0.4**	
PETK	**Petropavlovsk-**	**125.77**	**324**		PKP	**PKPdf**	**04 30 11.5**	**+0.5**	
	comp=Z,2.6nm,0.8s,baz=123,slow=7.3,SNR=3.5								
CTAO	**Charters Tower**	**126.09**	**229**		IAMs_20	IAMs_20	05 16 17.5		
	comp=Z,252nm,19.0s								
NRIK	**Noril'sk**	**126.11**	**8**	⇑*i*	PKIKP	**PKPdf**	**04 30 11.2**	**0.0**	
ARU	**Arti**	**126.72**	**31**	*i*	PKIKP	**PKiKP**	**04 30 14.0**	**+0.8**	
ARU							04 32 09.5		
ARU							04 37 25.3		
ARU					MLR	MLR			
	comp=Z,615nm,22.0s								
ABKAR	**Akbulak array**	**130.70**	**38**		PKPdf	**PKPdf**	**04 30 20.7**	**+0.2**	
ASAR	**Alice Springs**	**131.46**	**215**		PKhKP	PKPpre	04 30 08.0		
	comp=Z,0.3nm,0.8s,baz=132,slow=3.5,SNR=2.6								
ASAR					PKP	**PKPdf**	**04 30 22.2**	**-0.7**	
	comp=Z,2.6nm,1.0s,baz=149,slow=2.6,SNR=10								
ASAR					SKPbc	**SKPbc**	**04 33 46.5**	**+0.4**	
	comp=Z,1.7nm,1.0s,baz=128,slow=4.0,SNR=5.2								
YAK	**Yakutsk**	**131.66**	**345**	*e*	PKIKP	PKiKP	04 30 32.5	+10	
YAK				*e*	*PP	sPKPdf	04 30 34.4	+0.9	
YAK				*e*			04 30 39.3		
YAK					pmax	pmax			
	comp=Z,6.0nm,0.8s								
YAK					pmax	pmax			
	comp=E,3.0nm,0.9s								
GEYT	**Alibeck**	**133.16**	**53**		PKP	**PKiKP**	**04 30 27.2**	**+0.5**	
	comp=E,1.3nm,0.6s,baz=307,slow=2.9,SNR=2.6								
WRA	**Warramunga Arr**	**134.12**	**219**		PKhKP	PKPpre	04 30 14.9		
	comp=E,0.6nm,0.9s,baz=93,slow=1.0,SNR=2.2								
WRA					PKP	**PKPdf**	**04 30 28.5**	**+0.6**	
	comp=E,2.9nm,0.7s,baz=151,slow=2.0,SNR=16								
WRA					SKPbc	**SKPbc**	**04 33 55.4**	**+0.1**	
	comp=E,5.4nm,1.2s,baz=132,slow=3.4,SNR=8.8								
BRVK	**Borovoye**	**134.24**	**29**	⇓*i*	PKIKP	**PKiKP**	**04 30 29.1**	**+0.7**	
BVAR	**Borovoye Array**	**134.31**	**29**		PKP	**PKiKP**	**04 30 28.8**	**+0.2**	
	comp=E,1.5nm,0.7s,baz=248,slow=2.6,SNR=6.8								
BVAR					pPKP	**sPKPdf**	**04 30 40.3**	**+1.5**	
	comp=E,6.3nm,1.1s,baz=309,slow=0.9,SNR=9.1								
ZALV	**Zalesovo Beam**	**139.34**	**19**		PKPdf	**PKPdf**	**04 30 35.8**	**-0.6**	
ZALV	**Zalesovo Beam**	**139.34**	**19**		PKhKP	PKPpre	04 30 23.8		
	comp=E,0.4nm,0.4s,baz=297,slow=1.0,SNR=2.1								
ZALV					PKP	**PKPdf**	**04 30 36.8**	**+0.3**	
	comp=E,9.9nm,0.8s,baz=298,slow=2.2,SNR=26								
ZALV					pPKP	sPKPdf	04 30 49.9	+1.8	
	comp=E,37nm,1.1s,baz=307,slow=3.2,SNR=14								
KURK	**Kurchatov**	**139.61**	**27**	*c*	*i*PKIKP	**PKPdf**	**04 30 38.4**	**+1.3**	
KURBB	**Kurchatov Arra**	**139.64**	**27**		PKhKP	PKPpre	04 30 27.1		
KURBB					PKP	**PKPdf**	**04 30 37.3**	**+0.1**	
	comp=E,1.7nm,1.0s,baz=307,slow=2.2,SNR=4.2								
KURBB					PP	**PP**	**04 33 31.9**	**0.0**	
	comp=E,0.1nm,0.4s,baz=320,slow=5.3,SNR=1.8								
BRLS	**Borolday**	**139.65**	**42**	*e*	PKIKP	**PKPdf**	**04 30 38.8**	**+1.3**	
	baz=42								
BRLS	**Borolday**	**139.65**	**42**	*e*	PKIKP	**PKPdf**	**04 30 38.7**	**+1.3**	
SEM	**Semipalatinsk**	**140.53**	**26**	*e*	PKP	**PKPdf**	**04 30 38.9**	**-0.2**	
	baz=26								
SEM	**Semipalatinsk**	**140.53**	**26**	*e*	PKIKP	**PKPdf**	**04 30 38.8**	**-0.3**	
DZA	**Taraz**	**140.67**	**41**	*e*	PKP	**PKPdf**	**04 30 39.0**	**-0.4**	
	baz=41								
DZA	**Taraz**	**140.67**	**41**	*e*	PKIKP	**PKPdf**	**04 30 38.9**	**-0.4**	
BTLS	**Baital**	**141.11**	**37**	*e*	PKP	**PKPdf**	**04 30 41.1**	**+1.1**	
	baz=36								
BTLS	**Baital**	**141.11**	**37**	*e*	PKIKP	**PKPdf**	**04 30 41.1**	**+1.1**	
KLR	**Kul'dur**	**141.31**	**333**	⇑*i*	PKIKP	**PKPdf**	**04 30 41.2**	**+1.0**	
HEH	**HeiHe**	**142.26**	**337**	*e*	PKP	**PKPdf**	**04 30 36.8**	**-5.1**	
CHKK	**Chushkaly**	**143.50**	**36**	*e*	PKP	**PKPdf**	**04 30 44.3**	**-0.1**	
	baz=36								
CHKK	**Chushkaly**	**143.50**	**36**	*e*	PKIKP	**PKPdf**	**04 30 44.2**	**-0.1**	
DGZ	**Jazzator, Alta**	**143.82**	**20**	⇑*e*	PKIKP	**PKPdf**	**04 30 44.5**	**-0.4**	
AAA	**Alma-Ata**	**143.86**	**37**	*e*	PKP	**PKPdf**	**04 30 44.5**	**-0.5**	
	baz=37								
AAA	**Alma-Ata**	**143.86**	**37**	*e*	PKIKP	**PKPdf**	**04 30 44.5**	**-0.5**	
MDOK	**Medeo**	**143.97**	**37**	*e*	PKP	**PKPdf**	**04 30 44.8**	**-0.6**	
	baz=37								
MDOK	**Medeo**	**143.97**	**37**	*e*	PKIKP	**PKPdf**	**04 30 44.8**	**-0.6**	
TNSS	**Tian-Shan**	**143.99**	**37**	*e*	PKP	**PKPdf**	**04 30 45.3**	**-0.4**	
	baz=37								
TNSS	**Tian-Shan**	**143.99**	**37**	*e*	PKIKP	**PKPdf**	**04 30 45.3**	**-0.4**	
MAKZ	**Makanchi**	**144.00**	**28**		PKPdf	PKPbc	04 30 43.0	0.0	
MAKZ	**Makanchi**	**144.00**	**28**		PKIKP	PKPbc	04 30 43.0	0.0	
MK31	**Makanchi Array**	**144.16**	**28**		PKPdf	PKPbc	04 30 43.8	+0.3	
MK31	**Makanchi Array**	**144.16**	**28**	*d*	*i*PKIKP	PKPbc	04 30 44.3	+0.8	
MKAR	**Makanchi Array**	**144.16**	**28**		PKPdf	**PKPab**	**04 30 43.0**	**-0.1**	
MKAR	**Makanchi Array**	**144.16**	**28**		PKP	PKPbc	04 30 43.8	+0.3	
	comp=E,9.7nm,1.1s,baz=339,slow=3.1,SNR=13								
NRN	**Naryn**	**144.37**	**40**		PKPdf	**PKPdf**	**04 30 46.0**	**-0.3**	
NRN	**Naryn**	**144.37**	**40**		PKIKP	**PKPdf**	**04 30 46.1**	**-0.3**	
IRK	**Irkutsk**	**144.47**	**2**	*e*	PKIKP	PKPbc	04 30 45.0	+0.7	
IRK					pmax	pmax			
	comp=Z,73nm,2.3s								
KPKS	**Kokpek**	**144.70**	**35**	*i*	PKP	**PKPdf**	**04 30 47.1**	**+0.5**	
	baz=35								
KPKS	**Kokpek**	**144.70**	**35**	*i*	PKIKP	**PKPdf**	**04 30 47.0**	**+0.5**	
ZSN	**Zaisan**	**144.74**	**25**	*i*	PKP	**PKPdf**	**04 30 46.6**	**+0.1**	
	baz=25								
ZSN	**Zaisan**	**144.74**	**25**	*i*	PKIKP	**PKPdf**	**04 30 46.5**	**+0.1**	
ZHN	**Zhinishke**	**144.75**	**36**	*e*	PKP	**PKPdf**	**04 30 46.9**	**+0.2**	
	baz=36								
ZHN	**Zhinishke**	**144.75**	**36**	*e*	PKIKP	**PKPdf**	**04 30 46.9**	**+0.2**	
USA0B	**Ussuriysk Arra**	**144.78**	**327**		PKPdf	**PKPab**	**04 30 45.0**	**-0.4**	
USA0B	**Ussuriysk Arra**	**144.78**	**327**	*ce*	PKIKP	PKPbc	04 30 46.2	+0.7	
USRK	**Ussuriysk Ar.**	**144.78**	**327**		PKPdf	**PKPab**	**04 30 44.9**	**-0.6**	
USRK	**Ussuriysk Ar.**	**144.78**	**327**		PKP	**PKPdf**	**04 30 46.8**	**+0.3**	
	comp=Z,29nm,0.9s,baz=100,slow=2.0,SNR=32								
SATY	**Saty**	**144.81**	**36**	*i*	PKP	**PKPdf**	**04 30 47.1**	**+0.3**	
	baz=36								
SATY	**Saty**	**144.81**	**36**	*i*	PKIKP	**PKPdf**	**04 30 47.1**	**+0.3**	
MOY	**Mondy**	**144.86**	**5**	*e*	PKIKP	**PKPdf**	**04 30 47.2**	**+0.6**	
MOY					pmax	pmax			
	comp=Z,78nm,2.1s								
UZB	**Uzynbulak**	**145.09**	**35**	*i*	PKP	**PKPdf**	**04 30 48.4**	**+1.0**	
	baz=35								
UZB	**Uzynbulak**	**145.09**	**35**	*i*	PKIKP	**PKPdf**	**04 30 48.3**	**+1.0**	
MJAR	**Matsushiro Arr**	**145.20**	**311**		PKPbc	**PKPab**	**04 30 47.8**	**+0.5**	
	comp=Z,22nm,0.8s,baz=84,slow=4.6,SNR=46								

KSH	**Kashi**	**145.42**	**43**		PKPbc	**PKPdf**	**04 30 50.4**	**+2.4**	
KSH					LR	LR			
	comp=Z,350nm,19.9s								
KSH					LR	LR			
	comp=Z,280nm,19.6s								
KSH					LR	LR			
	comp=Z,410nm,22.0s								
HIA	**Hailar**	**145.58**	**344**		PKPdf	**PKPbc**	**04 30 47.6**	**-0.3**	
HIA	**Hailar**	**145.58**	**344**		PKIKP	**PKPbc**	**04 30 47.6**	**-0.3**	
MDJ	**Mudanjiang**	**145.71**	**329**		PKPbc	**PKPbc**	**04 30 48.9**	**+0.4**	
BNX	**BinXian**	**145.88**	**333**	⇑	PKPbc	**PKPdf**	**04 30 49.0**	**+0.7**	
ZAK	**Zakamensk**	**146.30**	**3**	*e*	PKP2	**PKPab**	**04 30 50.9**	**-0.1**	
ZAK					pmax	pmax			
	comp=Z,41nm,1.6s								
WMQ	**Urumqi**	**148.85**	**26**		PKPbc	**PKPbc**	**04 30 57.7**	**+0.3**	
WMQ					PKPab	**PKPab**	**04 31 01.6**	**+0.4**	
WMQ					LR	LR			
	comp=Z,310nm,20.1s								
ULN	**Ulaanbaatar**	**148.87**	**358**			**PKPbc**	**04 30 57.9**	**+0.5**	
ULN	**Ulaanbaatar**	**148.87**	**358**		PKP2	**PKPbc**	**04 30 57.9**	**+0.5**	
SONM	**Songino Array**	**148.91**	**359**		PKPbc	**PKPdf**	**04 30 55.5**	**+2.0**	
SONM	**Songino Array**	**148.91**	**359**		PKPbc	**PKiKP**	**04 30 58.6**	**-0.3**	
	comp=Z,32nm,0.8s,baz=330,slow=1.4,SNR=130								
SONM					pPKPbc	**pPKPab**	**04 31 10.4**	**+0.7**	
	comp=Z,25nm,1.0s,baz=303,slow=0.8,SNR=12								
SONM					PP	**PP**	**04 34 25.8**	**-1.3**	
	comp=Z,3.2nm,0.9s,baz=344,slow=4.6,SNR=5.8								
EDFI	**Ende, Flores**	**150.30**	**213**		PKP	**PKPbc**	**04 31 01.3**	**-0.6**	
XLT	**XiLinHaoTe**	**151.50**	**344**	*e*	PKPbc	**PKPbc**	**04 31 04.3**	**+0.5**	
XLT					pPKP	sPKPbc	04 31 15.1	-0.2	
KSRS	**Korea Array**	**151.59**	**321**		PKP	**PKPdf**	**04 30 57.6**	**-0.2**	
	comp=Z,4.3nm,0.9s,baz=29,slow=2.9,SNR=5.4								
KSRS					PKPbc	**PKiKP**	**04 31 05.3**	**+0.8**	
	comp=Z,15nm,0.8s,baz=344,slow=1.7,SNR=28								
KSAR	**Wonju Array Be**	**151.62**	**321**		PKPdf	**PKPdf**	**04 30 57.8**	**-0.1**	
KSAR	**Wonju Array Be**	**151.62**	**321**		PKIKP	**PKPdf**	**04 30 57.8**	**-0.1**	
PLAI	**Plampang**	**152.07**	**206**		PKP	**PKPbc**	**04 31 04.4**	**-1.5**	
BTO	**Baotou**	**155.87**	**352**	*e*	PKP	**PKPdf**	**04 31 05.7**	**+1.7**	
BTO					PP	**PP**	**04 35 12.4**	**+5.7**	
BTO					AMB	AMB			
	comp=Z,230nm,4.8s								
BTO					LR	LR			
	comp=Z,820nm,18.8s								
BTO					LR	LR			
	comp=Z,680nm,19.2s								
BTO					LR	LR			
	comp=Z,980nm,18.7s								
GTA	**Gaotai**	**156.72**	**12**		PKP	**PKPdf**	**04 31 07.7**	**+2.5**	
GTA					PKPab	**PKPab**	**04 31 34.1**	**-0.3**	
GTA					LR	LR			
	comp=Z,200nm,20.4s								
GTA					LR	LR			
	comp=Z,210nm,20.0s								
GTA					LR	LR			
	comp=Z,280nm,20.4s								
HNS	**HongShan**	**157.92**	**341**	⇓	PKP	**PKPab**	**04 31 39.9**	**+0.5**	
GOMU	**GeErMu**	**158.20**	**25**		PKP	**PKPdf**	**04 31 10.6**	**+3.1**	
GOMU					pPKP	pPKPdf	04 31 12.6	-3.5	
GOMU					SS	SS	04 55 25.6	+7.6	
GOMU					LR	LR			
	comp=Z,450nm,21.9s								
GOMU					LR	LR			
	comp=Z,300nm,21.3s								
GOMU					LR	LR			
	comp=Z,750nm,21.3s								
NJ2	**Nanjing**	**160.67**	**325**	*e*	PKP	**PKPdf**	**04 31 10.0**	**+0.1**	
LYN	**LuoYang**	**161.23**	**343**	*e*	PKP	**PKPdf**	**04 31 07.6**	**-2.9**	
LYN					PKPab	**PKPab**	**04 31 54.1**	**+0.2**	
LYN					PP	**PP**	**04 35 35.3**	**-0.7**	
LYN					LR	LR			
	comp=Z,640nm,25.0s								
LYN					LR	LR			
	comp=Z,730nm,21.0s								
PZH	**PanZhiHua**	**169.48**	**21**		PKP	**PKPdf**	**04 31 16.3**	**-1.5**	
PZH					PKPab	**PKPab**	**04 32 30.4**	**-0.2**	
PZH					AMB	AMB			
	comp=Z,140nm,10.0s								
PZH					LR	LR			
	comp=Z,240nm,19.2s								
PZH					LR	LR			
	comp=Z,200nm,20.2s								
PZH					LR	LR			
	comp=Z,310nm,19.8s								
GYA	**Guiyang**	**170.22**	**356**	⇓	PKP	**PKPdf**	**04 31 16.5**	**-1.7**	
CMAR	**Chiang Mai Arr**	**173.15**	**74**		PKP	**PKPdf**	**04 31 18.5**	**-1.1**	
	comp=Z,0.8nm,0.3s,baz=299,slow=1.9,SNR=1.7								
CMAR					PKPab	**PKPab**	**04 32 47.6**	**+0.3**	
	comp=Z,1.1nm,0.3s,baz=282,slow=4.5,SNR=1.8								
QIZ	**Qiongzhong**	**175.54**	**303**		PKP	**PKPdf**	**04 31 18.1**	**-2.3**	
QIZ					PP	**PP**	**04 36 49.4**	**-0.9**	
QIZ					SS	SS	04 58 16.3	+1.2	
QIZ					LR	LR			
	comp=Z,270nm,9.6s								
QIZ					LR	LR			
	comp=Z,180nm,8.0s								
QIZ					LR	LR			
	comp=Z,270nm,13.5s								

*NNC **11** 04:25:19.4±0.6, 51°.76N×75°.38E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=6.0km s-min=3.1km az=8.0, Suspected Mining explosion.*

*IDC **11** 04:25:24.9±4.7, 51°.59N×75°.59E, h0km, mbtmp2.6/2, ML2.0/2, Error ellipse: s-maj=42.7km s-min=25.3km az=94.0*

ISC 11 04:25:20.8±0.9, 51°.57N±0°.06×75°.33E±0°.05, h0km, n17, σ2s76/16, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.23**	**114**	⇑Pg	**Pn**	**04 26 01.3**	**+2.4**
	4.2nm,0.8s						
KURBB				⇑Lg	Lg	04 26 31.9	
	47nm,0.7s						
KURK	**Kurchatov**	**2.24**	**111**	⇑Pg	**Pn**	**04 26 01.0**	**+1.9**
	4.4nm,0.9s						
KURK				⇓Lg	Lg	04 26 30.0	
	41nm,1.1s						
BRZS	**Berezniki**	**2.32**	**228**	Pg	**Pb**	**04 26 03.7**	**+0.2**
	3.5nm,0.6s						
BRZS				Lg	Lg	04 26 37.5	
	15nm,0.7s						
BVA0	**Borovoye Array**	**3.37**	**298**	Pg	**Pb**	**04 26 20.5**	**-0.8**
	1.7nm,0.7s,baz=116,slow=17,SNR=6.2						
BVA0				⇓Lg	Lg	04 27 02.6	
	6.9nm,0.7s,baz=115,slow=24,SNR=12						
BVAR	**Borovoye Array**	**3.37**	**298**	Sn	**Sn**	**04 26 57.1**	**+1.8**
	0.1nm,0.3s,baz=114,slow=25,SNR=4.4						
OTUK	**Ortayu**	**3.85**	**211**	Pg	**Pg**	**04 26 32.5**	**-2.1**
	0.8nm,0.7s						
OTUK				Lg	Lg	04 27 27.2	
	3.5nm,0.6s						
OTUK	**Ortayu**	**3.85**	**211**	⇑Lg	Lg	04 27 27.3	
	12nm,0.9s						
I46RU	**ZALESOVO INFRA**	**6.23**	**64**	I	I	05 00 00.0	
	baz=253,slow=320,SNR=1.1						
ZALV	**Zalesovo Beam**	**6.23**	**64**	Pn	**Pn**	**04 26 55.2**	**+1.3**
	0.2nm,0.3s,baz=248,slow=16,SNR=2.4						
ZALV				Sn	**Sn**	**04 28 01.7**	**-4.1**
	0.2nm,0.3s,baz=254,slow=27,SNR=3.7						
ZALV				Lg	Lg	04 28 39.1	
	0.3nm,0.3s,baz=246,slow=28,SNR=3.5						
	0.4nm,0.4s						
BTLS	**Baital**	**6.59**	**188**	Pg	**Pg**	**04 27 23.2**	**-3.8**
	1.0nm,0.4s						
BTLS				Lg	Lg	04 28 53.9	
	4.7nm,0.8s						
MK31	**Makanchi Array**	**6.61**	**134**	⇑Sn	**Sn**	**04 28 17.7**	**+2.6**
	1.4nm,0.8s,baz=327,slow=23,SNR=6.1						
MK31				⇓Lg	Lg	04 28 51.5	
	5.6nm,0.7s,baz=318,slow=28,SNR=10						
MKAR	**Makanchi Array**	**6.61**	**134**	Pn	**Pn**	**04 27 01.6**	**+2.4**
	baz=324,slow=14,SNR=4.3						
MKAR				Sn	**Sn**	**04 28 15.2**	**+0.1**
	0.1nm,0.3s,baz=318,slow=21,SNR=2.9						
MKAR				Lg	Lg	04 28 51.0	
	0.6nm,0.3s,baz=321,slow=28,SNR=12						
	0.2nm,0.6s						
KAPS	**Kapalarasan**	**6.83**	**155**	Pg	**Pg**	**04 27 28.6**	**-3.1**
	1.4nm,0.3s						
KAPS				Lg	Lg	04 29 03.3	
	4.5nm,0.6s						
ZSN	**Zaisan**	**7.45**	**120**	Pg	**Pb**	**04 27 32.9**	**+2.0**
	2.6nm,0.3s						
ZSN				Lg	Lg	04 29 11.1	
	4.5nm,1.4s						
ARXS	**Arharly**	**7.55**	**166**	Pg	**Pg**	**04 27 42.1**	**-3.3**
	0.8nm,0.2s						
ARXS				Lg	Lg	04 29 26.4	
	7.1nm,0.7s						
KUU	**Kurty**	**7.71**	**175**	Pg	**Pg**	**04 27 45.2**	**-3.3**
	1.2nm,0.5s						
KUU				Lg	Lg	04 29 31.9	
	10nm,0.5s						
PDGK	**Podgornoye**	**8.71**	**160**	⇑Lg	Lg	04 29 58.7	
	12nm,1.2s						

*IDC **11** 04:42:49.4±2.0, 50°.85N×160°.33E, h0km, mb3.9/10, mbtmp4.0/12, ML4.1/2, MS4.2/4, Error ellipse: s-maj=59.5km s-min=18.0km az=11.0*

*NEIC **11** 04:42:52.5±0.6, 51°.1N±0°.1×160°.44E±0°.09, h10km±2km, mb4.0/9, Error ellipse: s-maj=21.1km s-min=8.8km az=188.0*

*KRSC **11** 04:42:53.9±1.9, 51°.31N×160°.69E, h61km±32km, Ml4.5*

*MOS **11** 04:42:55.7±0.7, 51°.29N×160°.60E, h49km, mb4.3/5, Error ellipse: s-maj=11.2km s-min=3.8km az=102.4*

ISC 11 04:42:53.5±3.3, 51°.24N±0°.05×160°.70E±0°.05, h16km±21km, n119, σ1s50/151, mb4.1/19, MS4.5/5, 9C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.73**	**290**	PN	**Pn**	**04 43 22.9**	**0.0**
KDTR				S	**Sn**	**04 43 42.6**	**-2.0**
KDTR	**Khodutka, Kamc**	**1.73**	**290**	*eP*	**Pn**	**04 43 23.1**	**+0.1**
KDTR				*eS*	**Sn**	**04 43 42.6**	**-2.0**
RUS	**Russkaya**	**1.80**	**312**	PN	**Pn**	**04 43 23.5**	**-0.4**
RUS				S	**Sn**	**04 43 44.4**	**-2.0**
RUS	**Russkaya**	**1.80**	**312**	*eP*	**Pn**	**04 43 23.6**	**-0.3**
RUS				*eS*	**Sn**	**04 43 44.5**	**-2.0**
SPN	**Mys Shipunski**	**1.90**	**348**	PN	**Pn**	**04 43 25.1**	**-0.2**
SPN				S	**Sn**	**04 43 45.9**	**-3.0**
SPN	**Mys Shipunski**	**1.90**	**348**	*eP*	**Pn**	**04 43 25.0**	**-0.2**
SPN				*eS*	**Sn**	**04 43 46.0**	**-2.9**
MTVR	**Mutnovka**	**1.99**	**309**	PN	**Pn**	**04 43 27.0**	**+0.3**
MTVR				S	**Sn**	**04 43 49.7**	**-1.6**
MTVR	**Mutnovka**	**1.99**	**309**	*eP*	**Pn**	**04 43 26.9**	**+0.3**
MTVR				*eS*	**Sn**	**04 43 49.9**	**-1.4**
ASAK	**Asacha**	**2.08**	**304**	PN	**Pn**	**04 43 28.5**	**+0.7**
ASAK				S	**Sn**	**04 43 52.2**	**-1.2**
ASAK	**Asacha**	**2.08**	**304**	*eP*	**Pn**	**04 43 28.5**	**+0.7**
ASAK				*eS*	**Sn**	**04 43 52.2**	**-1.2**
GRL	**Gorelyy**	**2.09**	**310**	PN	**Pn**	**04 43 28.8**	**+0.8**
GRL				S	**Sn**	**04 43 53.5**	**-0.1**
GRL	**Gorelyy**	**2.09**	**310**	*eP*	**Pn**	**04 43 28.8**	**+0.8**
GRL				*eS*	**Sn**	**04 43 53.6**	**-0.1**
DALK	**Dalny**	**2.15**	**327**	PN	**Pn**	**04 43 28.8**	**+0.1**
DALK				S	**Sn**	**04 43 53.5**	**-1.6**
DALK	**Dalny**	**2.15**	**327**	*eP*	**Pn**	**04 43 28.8**	**+0.1**
DALK				*eS*	**Sn**	**04 43 53.4**	**-1.7**
PET	**Petropavlovsk**	**2.18**	**326**		**Pn**	**04 43 28.7**	**-0.4**
PET	**Petropavlovsk**	**2.18**	**326**	PN	**Pn**	**04 43 29.3**	**+0.2**
PET				S	**Sn**	**04 43 54.4**	**-1.4**
PET	**Petropavlovsk**	**2.18**	**326**	*eP*	**Pn**	**04 43 29.5**	**+0.4**
PET				*eS*	**Sn**	**04 43 54.9**	**-0.9**
INSR	**Institute**	**2.23**	**326**	*eS*	**Sn**	**04 43 56.7**	**-0.3**
KRMR	**Karymshinskiy**	**2.25**	**316**	PN	**Pn**	**04 43 30.5**	**+0.5**
KRMR				S	**Sn**	**04 43 56.0**	**-1.3**
KRMR	**Karymshinskiy**	**2.25**	**316**	*eP*	**Pn**	**04 43 30.0**	**+0.1**
KRMR				*eS*	**Sn**	**04 43 56.3**	**-1.0**
UGLR	**Uglova

	comp=Z,3.0nm,0.8s							
YAK	**Yakutsk**	**19.97**	**315**⇑	*e*P		**P**	**04 47 22.5**	**-2.2**
YAK				pmax		pmax		
	comp=Z,8.0nm,0.8s							
USA0B	**Ussuriysk Arra**	**20.47**	**261**	P		**P**	**04 47 27.8**	**-2.5**
USA0B				IAmb		IAmb	04 47 53.0	
	comp=Z,7.3nm,1.1s							
USA0B	**Ussuriysk Arra**	**20.47**	**261**	P		**P**	**04 47 27.8**	**-2.5**
USA0B				pmax		pmax		
	comp=Z,7.0nm,1.1s							
PSTR	**Posyet**	**22.02**	**259***c*	eP		**P**	**04 47 47.3**	**+0.3**
C16K	**Lisburne Hills**	**23.66**	**31**	P		**P**	**04 48 04.4**	**+0.7**
TIXI	**Tiksi**	**24.92**	**337**	P		**P**	**04 48 15.2**	**-0.2**
TIXI	**Tiksi**	**24.92**	**337**⇑	*e*P		**P**	**04 48 15.0**	**-0.4**
TIXI				pmax		pmax		
	comp=Z,7.0nm,0.7s							
H18K	**Honhosa River**	**25.10**	**41**	P		**P**	**04 48 18.0**	**+0.9**
H18K				IAmb		IAmb	04 48 42.8	
	comp=Z,6.8nm,1.5s							
C18K	**Utukok River**	**25.20**	**32**	P		**P**	**04 48 19.6**	**+1.6**
C18K				IAmb		IAmb	04 48 48.2	
	comp=Z,2.6nm,1.2s							
IMAR	**Indian Mountai**	**27.16**	**40**	P		**P**	**04 48 37.3**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**31.82**	**169**	T		T	05 23 48.4	
	baz=352							
H11N3	**WAKE ISLAND Hy**	**31.84**	**169**	T		T	05 23 47.9	
	baz=352							
H11N1	**WAKE ISLAND Hy**	**31.84**	**169**	T		T	05 23 49.6	
	baz=352							
L27K	**Beaver Creek,**	**32.19**	**46**	P		**P**	**04 49 21.8**	**+1.5**
L27K				IAmb		IAmb	04 49 23.0	
	comp=Z,2.5nm,1.1s							
BCAR	**Beaver Creek A**	**32.20**	**46**	P		**P**	**04 49 21.8**	**+1.3**
H11S1	**WAKE ISLAND Hy**	**33.01**	**170**	T		T	05 25 14.5	
	baz=350							
H11S3	**WAKE ISLAND Hy**	**33.02**	**170**	T		T	05 25 11.8	
	baz=350							
H11S2	**WAKE ISLAND Hy**	**33.03**	**170**	T		T	05 25 14.9	
	baz=350							
L29M	**L29M**	**33.85**	**46**	P		**P**	**04 49 36.4**	**+1.6**
L29M				IAmb		IAmb	04 49 37.8	
	comp=Z,4.2nm,1.1s							
NRIK	**Noril'sk**	**37.64**	**326**⇑	*e*P		**P**	**04 50 07.6**	**+0.4**
NRIK				pmax		pmax		
	comp=Z,2.0nm,1.2s							
ZALV	**Zalesovo Beam**	**44.11**	**305**	P		**P**	**04 50 59.3**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=46,slow=8.3,SNR=2.1							
	comp=Z,0.3nm,0.3s							
DGZ	**Jazzator, Alta**	**44.84**	**298**⇑	*e*P		**P**	**04 51 06.4**	**-0.4**
DGZ				pmax		pmax		
	comp=Z,10.0nm,3.6s							
SPITS	**Spitsbergen Ar**	**49.02**	**351**	P		**P**	**04 51 40.4**	**+1.5**
	comp=Z,11nm,0.9s,baz=58,slow=14,SNR=8.2							
SPITS				LR		LR	05 13 30.4	
	comp=Z,291nm,20.8s,baz=242,slow=37							
	comp=Z,11nm,0.9s							
KURK	**Kurchatov**	**49.05**	**304**	P		**P**	**04 51 37.0**	**-2.4**
KURK	**Kurchatov**	**49.05**	**304**⇑	*e*P		**P**	**04 51 38.6**	**-0.8**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KURBB	**Kurchatov Arra**	**49.15**	**303**	P		**P**	**04 51 38.7**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=60,slow=7.5,SNR=11							
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**49.31**	**297**	P		**P**	**04 51 39.7**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=57,slow=4.9,SNR=2.8							
	comp=Z,0.2nm,0.5s							
BVAR	**Borovoye Array**	**51.84**	**310**	P		**P**	**04 51 59.3**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=57,slow=6.9,SNR=8.1							
	comp=Z,1.5nm,0.5s							
ARCES	**ARCESS Array B**	**55.16**	**342**	P		**P**	**04 52 25.0**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=45,slow=9.1,SNR=1.3							
	comp=Z,3.3nm,0.9s							
NVAR	**Mina Array Bea**	**56.04**	**69**	P		**P**	**04 52 32.3**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=308,slow=7.3,SNR=4.1							
	comp=Z,0.6nm,0.6s							
KIRV	**Kirov**	**57.11**	**324**	LR		LR	05 19 32.9	
	comp=Z,404nm,20.5s,baz=293,slow=38							
KSH	**Kashi**	**57.48**	**294**	P		**P**	**04 52 44.0**	**+2.3**
KSH				pmax		pmax		
	comp=Z,12nm,0.5s							
PDAR	**Pinedale Array**	**58.11**	**60**	P		**P**	**04 52 47.8**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=348,slow=2.1,SNR=5.3							
	comp=Z,0.5nm,0.7s							
PMG	**Port Moresby**	**61.53**	**195**	LR		LR	05 15 58.6	
	comp=Z,91nm,21.5s,baz=152,slow=33							
FINES	**FINESS Array B**	**61.97**	**337**	P		**P**	**04 53 11.2**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=39,slow=9.0,SNR=1.6							
	comp=Z,1.1nm,0.8s							
OBN	**Obninsk**	**64.28**	**328**	*i* P		**P**	**04 53 25.6**	**-1.9**
OBN				*e*			04 55 53.9	
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
OBN				MLR		MLR		
	comp=Z,587nm,16.0s							
TXAR	**Lajitas Array**	**71.02**	**67**	P		**P**	**04 54 11.5**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=297,slow=4.5,SNR=12							
	comp=Z,0.9nm,0.7s							
PALK	**Pallekele**	**78.10**	**267**	LR		LR	05 33 58.9	
	comp=Z,237nm,20.6s,baz=347,slow=39							

IDC ***11*** *04:45:10.0±1.0,9.°74N×79.°38W,h37km±6km, mb3.4/8, mbtmp3.8/11,ML3.8/3,MS3.8/1, Error ellipse: s-maj=24.6km s-min=19.0km az=29.0*

NEIC ***11*** *04:45:10.2±0.8,9.°59N±0.°07×79.°41W±0.°07,h37km±24km, mb4.3/2, Error ellipse: s-maj=11.4km s-min=8.3km az=136.0*

UCR ***11*** *04:45:10.0±2.3,9.°59N×79.°41W,h37km, MB4.3(NEIC)*

UPA ***11*** *04:45:11.1±0.9,9.°47N×79.°40W,h13km±2km, MW4.2, Fault plane solution: NP1:φs128.00000°, δ40.00000°, λ138.00000°.*

CATAC ***11*** *04:45:11.3±0.7,9.°70N×79.°66W,h10km, MB5.2, mb4.6, ML4.5*

ISC 11 04:45:08.5±0.5,9.°71N±0.°03×79.°44W±0.°03,h27km±3km, n211,σ1§82/247,mb4.0/11,9C-20D,Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FRIJ	**El Hiral**				**0.56 210**⇓	*i* P	**Pb**	**04 45 19.6**	**-0.1**
FRIJ						*e* S	**Sb**	**04 45 25.7**	**-1.7**
MLIR	**Monte Lirio**				**0.62 221**⇓	*i* P	**Pn**	**04 45 20.9**	**-0.6**
MLIR						*e* S	**Sb**	**04 45 28.4**	**-0.6**
BCIP	**Isla Barro Col**				**0.67 216**	Pn	**Pb**	**04 45 21.4**	**-0.1**
BCIP						Sn	**Sb**	**04 45 29.7**	**-0.7**
BCIP	**Isla Barro Col**				**0.67 216**⇓	*i* P	**Pb**	**04 45 21.4**	**-0.1**
BCIP						*e* S	**Sb**	**04 45 29.5**	**-0.9**
BCIP	**Isla Barro Col**				**0.67 216**	*e* P	**Pb**	**04 45 21.0**	**-0.5**
BCIP						*e* S	**Sb**	**04 45 29.9**	**-0.5**
BCIP	**Isla Barro Col**				**0.67 216**	*i* P	**Pb**	**04 45 21.3**	**-0.2**
BCIP				IAML				04 45 21.7	
	comp=Z,21μm,1.0s								
BCIP						*i* S	**Sb**	**04 45 29.9**	**-0.5**
UPA	**Univ. de Panam**				**0.73 187**⇓	*i* P	**Pb**	**04 45 21.9**	**-0.6**
UPA						*e* S	**Sb**	**04 45 28.9**	**-3.3**
UPA	**Univ. de Panam**				**0.73 187**⇓	*i* P	**Pb**	**04 45 21.9**	**-0.6**
UPA						*e* S	**Sb**	**04 45 30.1**	**-2.1**
CNTA3	**Canitas, Panam**				**0.73 132**	*e* P	**Pn**	**04 45 22.4**	**-0.6**
CNTA3						⇑ *i* P		04 45 22.5	
CNTA3						*i* S	**Sb**	**04 45 31.5**	**-0.7**
FLAM	**Flamenco Islan**				**0.80 187**⇓	*e* P	**Pb**	**04 45 23.0**	**-0.7**
FLAM						*e* S	**Sb**	**04 45 31.2**	**-2.9**
ZANG	**Zanguenga, Cho**				**0.86 209**⇓	*i* P	**Pb**	**04 45 24.3**	**-0.5**
ZANG						*e* S	**Sb**	**04 45 35.9**	**0.0**
TABO3	**Taboga, Panama**				**0.91 187**⇓	*e* P	**Pb**	**04 45 24.8**	**-1.0**
TABO3						*i* S	**Sb**	**04 45 35.5**	**-2.0**
TOTI	**Torti**				**1.36 125**⇑	*i* P	**Pb**	**04 45 32.1**	**-1.1**
TOTI						*e* S	**Sn**	**04 45 47.3**	**-1.5**
PNME	**Penonome**				**1.50 216**⇓	*e* P	**Pb**	**04 45 34.7**	**-0.9**
PNME						*i* S	**Sn**	**04 45 52.3**	**0.0**
PNME	**Penonome**				**1.50 216**	*e* P	**Pb**	**04 45 34.8**	**-0.9**
PNME						*e* S	**Sn**	**04 45 52.9**	**+0.7**
UPD2	**Meteti**				**1.82 129**⇑	*e* P	**Pn**	**04 45 38.8**	**+0.7**
UPD2						*e* S	**Sn**	**04 45 59.4**	**-0.9**
UPD2	**Meteti**				**1.82 129**	*e* P	**Pn**	**04 45 38.7**	**+0.7**
CRIS3	**El Cristo, Coc**				**1.85 219**⇓	*e* P	**Pb**	**04 45 40.0**	**-1.7**
CRIS3						*e* P		04 45 40.2	
CALO3	**Calobre, Verag**				**1.95 225**⇑	*i* P	**Pb**	**04 45 41.9**	**-1.5**
CHIT3	**Chitre**				**1.99 209**⇓	*e* P	**Pn**	**04 45 40.3**	**-0.1**
CHIT3						*e* S	**Sn**	**04 46 02.6**	**-1.8**
SAFE3	**Santa Fe, Vera**				**2.00 234**⇑	*i* P	**Pb**	**04 45 43.2**	**-1.1**
SAFE3						*i* S	**Sb**	**04 46 08.0**	**-0.8**
AZU	**Azuero**				**2.07 203**⇓	*i* P	**Pn**	**04 45 41.3**	**-0.3**
AZU						*e* S	**Sn**	**04 46 05.9**	**-0.7**
AZU	**Azuero**				**2.07 203**	*e* P	**Pn**	**04 45 41.3**	**-0.3**
STIA3	**Santiago, Vera**				**2.20 224**⇓	*e* P	**Pn**	**04 45 45.2**	**+1.8**
STIA3						*e* P		04 45 46.2	
MESA3	**La Mesa, Verag**				**2.32 228**⇓	*e* P	**Pb**	**04 45 47.5**	**-2.2**
MESA3						*i* S	**Sb**	**04 46 16.6**	**-1.3**
CAPC	**Capurgana**				**2.32 117**	*e* P	**Pn**	**04 45 45.2**	**+0.2**
CAPC						*e* S	**Sn**	**04 46 14.1**	**+1.5**
ACHO3	**Achotines, Los**				**2.39 198**⇓	*e* P	**Pn**	**04 45 46.3**	**+0.4**
ACHO3						*e* S	**Sn**	**04 46 12.6**	**-1.8**
MARI3	**Mariato, Verag**				**2.56 217**⇑	*i* P	**Pn**	**04 45 49.9**	**+1.7**
MARI3						*i* S	**Sn**	**04 46 20.1**	**+1.6**
GMAL	**Guarumal, Vera**				**2.62 223**	*e* P	**Pn**	**04 45 50.5**	**+1.4**
GMAL						*e* S	**Sb**	**04 46 24.1**	**-2.5**
GMAL	**Guarumal, Vera**				**2.62 223**	*e* P	**Pn**	**04 45 48.6**	**-0.5**
GMAL	**Guarumal, Vera**				**2.62 223**	*e* P	**Pb**	**04 45 52.2**	**-2.6**
NANC3	**Nancito, Chiri**				**2.69 237**	*e* P	**Pn**	**04 45 52.5**	**+2.3**
NANC3						⇑ *e* P		04 45 53.8	
NANC3						*i* S	**Sb**	**04 46 25.3**	**-3.3**
CACAO	**El Cacao, Vera**				**2.73 211**⇑	*e* P	**Pn**	**04 45 52.1**	**+1.4**
CACAO						*i* S	**Sn**	**04 46 23.3**	**+0.4**
CACAO	**El Cacao, Vera**				**2.73 211**	*e* P	**Pn**	**04 45 51.9**	**+1.3**
CHGR2	**Aguacate**				**2.78 254**	*e* P	**Pb**	**04 45 56.4**	**-1.1**
CNI2	**El Empalme, Bo**				**3.00 265**	*e* P	**Pb**	**04 46 00.3**	**-1.0**
PTAC	**Punta Ardita,**				**3.01 147**	*e* P	**Pn**	**04 45 53.6**	**-0.9**
PTAC						*e* S	**Sn**	**04 46 28.1**	**-1.7**
PTAC	**Punta Ardita,**				**3.01 147**	*e* P	**Pn**	**04 45 53.3**	**-1.2**
LNBQ3	**Los Naranjos,**				**3.10 253**	*e* P	**Pn**	**04 45 59.4**	**+3.5**
BCO2	**Palmira**				**3.20 252**	*e* P	**Pn**	**04 45 59.0**	**+1.7**
BCO2						⇓ *e* P		04 45 59.9	
LOCO3	**Loma Colorada,**				**3.21 247**	*e* P	**Pn**	**04 45 59.6**	**+2.4**
PEDE3	**Pedregal, Chir**				**3.23 246**	*e* P	**Pn**	**04 46 01.2**	**-3.9**
DVD	**David**				**3.23 247**	*e* P	**Pn**	**04 46 00.7**	**+3.2**
BC3P	**Paso Ancho**				**3.25 254**	*e* P	**Pb**	**04 46 02.0**	**-3.7**
BRU2	**Volcan**				**3.33 254**		**Pn**	**04 46 00.2**	**+1.1**
BRU2	**Volcan**				**3.33 254**	*e* P	**Pn**	**04 46 00.5**	**+1.5**
BRU2						⇓ *e* P		04 46 02.2	
BRU2	**Volcan**				**3.33 254**	*e* P	**Pn**	**04 46 00.5**	**+1.5**
BRU2	**Volcan**				**3.33 254**	*i* P	**Pn**	**04 46 00.6**	**+1.5**
BRU2				IAML				04 47 04.0	
	comp=Z,850nm,1.0s								
APAC	**Apartado, Choc**				**3.35 122**	*e* P	**Pn**	**04 46 01.4**	**+2.3**
MLIR3	**Monte Lirio, C**				**3.46 255**	*e* P	**Pn**	**04 46 04.0**	**+3.3**
CDITO	**Canoas**				**3.57 252**		**Pn**	**04 46 03.5**	**+1.3**
CDITO	**Canoas**				**3.57 252**	*e* P	**Pn**	**04 46 05.0**	**+2.8**
CDITO	**Canoas**				**3.57 252**	*e* P	**Pn**	**04 46 05.0**	**+2.8**
CDITO	**Canoas**				**3.57 252**	*i* P	**Pn**	**04 46 05.0**	**+2.8**
CDITO				IAML				04 47 13.6	
	comp=Z,860nm,1.0s								
VITO	**San Vito**				**3.59 256**	*e* P	**Pb**	**04 46 09.1**	**-2.3**
POTG	**Potrero Grande**				**3.69 260**	*e* P	**Pn**	**04 46 05.9**	**+2.0**
POTG	**Potrero Grande**				**3.69 260**	*i* P	**Pn**	**04 46 05.7**	**+1.8**
POTG				IAML				04 46 54.8	
	comp=Z,690nm,1.0s								
PTPM	**Petroterminale**				**3.71 247**	*e* P	**Pn**	**04 46 07.2**	**+3.1**
LIMO3	**Limones**				**3.74 245**	*e* P	**Pn**	**04 46 06.5**	**+2.0**
DRK0	**Durika**				**3.78 264**		**Pn**	**04 46 06.3**	**+1.1**
DRK0	**Durika**				**3.78 264**	*e* P	**Pn**	**04 46 06.0**	**+0.8**
EDAD	**Golfito**				**3.83 254**	*e* P	**Pn**	**04 46 07.7**	**+2.0**
BURE	**Buenos Aires**				**3.88 262**	*e* P	**Pn**	**04 46 07.6**	**+1.1**
SOLC	**Bahia Solano**				**4.00 150**	*e* P	**Pn**	**04 46 07.7**	**-0.4**
IRES	**Siquirres**				**4.02 276**⇓	*i* P	**Pn**	**04 46 09.8**	**+1.4**
EDPN	**Palmar Norte**				**4.03 260**	*e* P	**Pn**	**04 46 12.7**	**+4.1**
LCOCO	**El Coco**				**4.07 276**	*e* P	**Pn**	**04 46 10.8**	**+1.7**
PRVC	**Isla de Provid**				**4.11 333**	*e* P	**Pn**	**04 46 12.8**	**+3.3**
PRVC						*e* S	**Sn**	**04 46 55.6**	**-1.1**
PRVC	**Isla de Provid**				**4.11 333**	*i* P	**Pn**	**04 46 10.2**	**+0.7**
PRVC				IAML				04 46 58.2	
	comp=Z,140nm,1.0s								
RVLA	**Villa Bonita**				**4.11 276**	*e* P	**Pn**	**04 46 11.2**	**+1.6**
RVSTA	**Santa Teresita**				**4.16 274**	*e* P	**Pn**	**04 46 11.5**	**+1.2**
DBBC	**Dabeiba**				**4.17 130**	*e* P	**Pn**	**04 46 12.4**	**+2.0**
DBBC						*e* S	**Sb**	**04 47 12.5**	**+1.4**
PEZE	**Perez Zeledon,**				**4.19 266**		**Pn**	**04 46 12.2**	**+1.4**
PEZE	**Perez Zeledon,**				**4.19 266**	*e* P	**Pn**	**04 46 11.8**	**+1.0**
PEZE	**Perez Zeledon,**				**4.19 266**	*i* P	**Pn**	**04 46 14.1**	**+3.3**
PEZE						*i* S	**Sn**	**04 46 56.9**	**-2.1**
PEZE				IAML				04 46 58.5	
	comp=Z,280nm,1.0s								
OCHAL	**Ojochal**				**4.19 262**	*i* P	**Pn**	**04 46 14.5**	**+3.7**
OCHAL						*i* S	**Sn**	**04 46 59.3**	**+0.4**
OCHAL				IAML				04 47 13.3	
	comp=Z,2.5nm,1.0s								
VERB	**Verbena**				**4.20 274**	*e* P	**Pn**	**04 46 11.8**	**+0.8**
SJCC	**San Jacinto, C**				**4.20 87**	*e* P	**Pn**	**04 46 13.1**	**+2.2**
SJCC						*e* S	**Sn**	**04 46 56.6**	**-2.6**
SJCC	**San Jacinto, C**				**4.20 87**	*e* P	**Pn**	**04 46 12.5**	**+1.6**
VTCV	**VTCV, Calle Va**				**4.23 274**	*i* P	**Pn**	**04 46 13.0**	**+1.5**
VTCV				IAML				04 47 04.7	
	comp=Z,460nm,1.0s								
VTLO	**VTLO**				**4.24 275**	*e* P	**Pn**	**04 46 12.7**	**+1.0**
CVTV	**Tajo**				**4.26 274**	*e* P	**Pn**	**04 46 13.1**	**+1.2**
CDM	**Cerro de Muert**				**4.27 268**	*e* P	**Pn**	**04 46 12.7**	**+0.5**
CDM	**Cerro de Muert**				**4.27 268**	*i* P	**Pn**	**04 46 13.3**	**+1.1**
CDM				IAML				04 47 03.8	
	comp=Z,280nm,1.0s								
VTRT	**Volcan Turrial**				**4.30 274**	*i* P	**Pn**	**04 46 14.0**	**+1.5**
VTRT				IAML				04 47 06.9	
	comp=Z,480nm,1.0s								
PLAN	**Los Planes de**				**4.31 257**	*i* P	**Pn**	**04 46 15.0**	**+2.6**
PLAN				IAML				04 46 33.4	
	comp=Z,250nm,1.0s								
PCAYA	**Pacayas**				**4.31 273**	*e* P	**Pn**	**04 46 13.9**	**+1.3**
RAFA	**San Farael, Vo**				**4.32 274**	*e* P	**Pn**	**04 46 14.0**	**+1.3**
UREC	**San Jos de Ur**				**4.32 116**⇓	*i* P	**Pn**	**04 46 13.7**	**+1.2**
UREC						*e* P	**Pn**	**04 46 13.7**	**+1.2**
UREC	**San Jos de Ur**				**4.32 116**	*e* P	**Pn**	**04 46 13.4**	**+0.9**
ICR3	**Volcano Irazu**				**4.34 274**	*e* P	**Pn**	**04 46 14.2**	**+1.1**
HAYA	**Volcan Irazu**				**4.35 274**	*i* P	**Pn**	**04 46 14.5**	**+1.3**
HAYA				IAML				04 47 08.9	
	comp=Z,250nm,1.0s								
RIMA	**Rio Macho**				**4.36 271**		**Pn**	**04 46 14.2**	**+1.0**
RIMA	**Rio Macho**				**4.36 271**	*e* P	**Pn**	**04 46 14.4**	**+1.2**
RIMA	**Rio Macho**				**4.36 271**	*i* P	**Pn**	**04 46 14.7**	**+1.5**
RIMA				IAML				04 47 08.6	
	comp=Z,120nm,1.0s								
VIRE	**VIRE**				**4.40 274**	*i* P	**Pn**	**04 46 15.3**	**+1.4**
VIRE				IAML				04 47 13.4	
	comp=Z,210nm,1.0s								
RIFO	**Rio Frio, Sara**				**4.46 278**	*e* P	**Pn**	**04 46 15.4**	**+1.0**
RIFO	**Rio Frio, Sara**				**4.46 278**	*i* P	**Pn**	**04 46 15.5**	**+1.1**
RIFO				IAML				04 47 07.7	
	comp=Z,460nm,1.0s								
OCM	**Ochomogo**				**4.46 273**	*e* P	**Pn**	**04 46 15.9**	**+1.4**
OCM	**Ochomogo**				**4.46 273**	*i* P	**Pn**	**04 46 16.0**	**+1.4**
OCM				IAML				04 46 41.9	
	comp=Z,230nm,1.0s								
LCR2	**La Lucha 2**				**4.50 271**		**Pn**	**04 46 16.2**	**+1.1**
LCR2	**La Lucha 2**				**4.50 271**	*e* P	**Pn**	**04 46 16.4**	**+1.2**
LCR2	**La Lucha 2**				**4.50 271**	*i* P	**Pn**	**04 46 17.0**	**+1.8**
LCR2				IAML				04 47 10.8	
	comp=Z,150nm,1.0s								
LLNJ	**Naranjito**				**4.60 268**	*e* P	**Pn**	**04 46 19.5**	**+3.1**
HDC	**Heredia**				**4.62 274**	Pn	**Pn**	**04 46 17.8**	**+1.1**
HDC	**Heredia**				**4.62 274**	*e* P	Pb	04 46 34.5	+5.7
HDC						*e* S	**Sn**	**04 47 06.6**	**-2.9**
ACOS	**Acosta**				**4.66 271**	*e* P	**Pn**	**04 46 18.9**	**+1.6**
SANTA	**Santa Ana**				**4.68 273**	*e* P	**Pn**	**04 46 19.7**	**+2.1**
BELE	**Belen**				**4.69 274**	*e* P	**Pn**	**04 46 20.3**	**+2.7**
BLUN	**Bluefields**				**4.83 299**	*i* P	**Pn**	**04 46 19.7**	**+0.2**
BLUN				IAML				04 47 15.7	
	comp=Z,2μm,1.0s								
CPMI	**Catarata Coope**				**4.90 277**	*e* P	**Pn**	**04 46 22.4**	**+1.7**
CPMI	**Catarata Coope**				**4.90 277**	*i* P	**Pn**	**04 46 22.9**	**+2.2**
CPMI				IAML				04 47 20.8	
	comp=Z,190nm,1.0s								
SRA1	**San Ramn**				**4.98 275**	*e* P	**Pn**	**04 46 24.3**	**+2.6**
COVE	**Coope Vega, Sa**				**4.99 282**		**Pn**	**04 46 23.1**	**+1.4**
COVE	**Coope Vega, Sa**				**4.99 282**	*e* P	**Pn**	**04 46 23.1**	**+1.4**
COVE	**Coope Vega, Sa**				**4.99 282**	*i* P	**Pn**	**04 46 22.9**	**+1.2**
COVE				IAML				04 47 21.1	
	comp=Z,650nm,1.0s								
CBOC	**Ciudad Bolivar**				**5.11 138**	*e* P	**Pn**	**04 46 23.2**	**-0.3**
ARGC	**Ariguani, Magd**				**5.12 88**	*e* P	**Pn**	**04 46 25.6**	**+2.1**
SOCE	**Pocosol**				**5.14 278**	Pn	**Pn**	**04 46 24.4**	**+0.6**
SOCE	**Pocosol**				**5.14 278**	*e* P	**Pn**	**04 46 26.3**	**+2.4**
SOCE	**Pocosol**				**5.14 278**	*i* P	**Pn**	**04 46 25.6**	**+1.7**
SOCE				IAML				04 47 28.5	
	comp=Z,120nm,1.0s								
JACO	**JACO, Garabito**				**5.15 270**		**Pn**	**04 46 25.1**	**+1.3**
JACO	**JACO, Garabito**				**5.15 270**	*e* P	**Pn**	**04 46 27.4**	**+3.5**
JACO	**JACO, Garabito**				**5.15 270**	*i* P	**Pn**	**04 46 27.2**	**+3.4**
JACO				IAML				04 47 29.5	
	comp=Z,71nm,1.0s								
CEDE	**Laguna Cedeo**				**5.24 279**	*e* P	**Pn**	**04 46 27.1**	**+1.8**
ARE1	**Arenal 1**				**5.25 279**		**Pn**	**04 46 26.9**	**+1.6**
ARE1	**Arenal 1**				**5.25 279**⇓	*i* P	**Pn**	**04 46 27.6**	**+2.2**
LCHIL	**Los Chiles**				**5.36 285**	*e* P	**Pn**	**04 46 29.1**	**+2.4**
ESPN	**Las Esperanzas**				**5.38 298**		**Pn**	**04 46 28.5**	**+1.5**
ESPN	**Las Esperanzas**				**5.38 298**	*i* P	**Pn**	**04 46 29.0**	**+2.0**
ESPN				IAmb			IAmb	04 46 46.6	
	comp=Z,42nm,0.4s								
ESPN				IAML				04 47 30.1	
	comp=Z,360nm,1.0s								
JTS	**Las Juntas de**				**5.46 277**⇓	*e* P	**Pn**	**04 46 29.9**	**+1.7**
JTS						*e* P		04 46 30.6	
JTS						*e* S	**Sn**	**04 47 28.6**	**-1.6**
JTS	**Las Juntas de**				**5.46 277**	Pn	**Pn**	**04 46 29.8**	**+1.7**
	comp=Z,18nm,0.3s,baz=50,slow=9.1,SNR=73								
JTS						Sn	**Sn**	**04 47 28.7**	**-1.6**
	comp=Z,4.3nm,0.3s,baz=87,slow=19,SNR=2.0								
	comp=Z,44nm,0.4s								
JTS	**Las Juntas de**				**5.46 277**	*e* P	**Pn**	**04 46 29.9**	**+1.7**
JTS	**Las Juntas de**				**5.46 277**	*e* P	**Pn**	**04 46 30.1**	**+1.9**
VERA	**Finca Concepci**				**5.46 283**	*e* P	**Pn**	**04 46 29.8**	**+1.6**
VMAR	**Armenia, Volca**				**5.69 282**	*e* P	**Pn**	**04 46 33.3**	**+1.9**
PLMC	**San Jos del P**				**5.71 146**	*e* P	**Pn**	**04 46 30.0**	**-1.7**
COLC	**Colonia**				**5.75 280**	*e* P	**Pn**	**04 46 34.0**	**+1.8**
PTBC	**PUERTO BERRIO,**				**5.85 122**	*e* P	**Pn**	**04 46 34.3**	**+0.7**
ORTG	**Ortega, Santa**				**5.96 277**	Pn	**Pn**	**04 46 36.8**	**+1.6**
ORTG	**Ortega, Santa**				**5.96 277**	*i* P	**Pn**	**04 46 37.6**	**+2.4**
ORTG				IAmb			IAmb	04 46 41.6	
	comp=Z,26nm,0.8s								
ORTG				IAML				04 48 01.0	
	comp=Z,47nm,1.0s								
DUNO	**Dulce Nombre,**				**5.98 274**	Pn	**Pn**	**04 46 38.0**	**+2.7**
GUY2C	**Guyana, Caldas**				**6.01 138**	*e* P	**Pn**	**04 46 37.2**	**+1.0**
JUD3	**Juan Diaz 3**				**6.03 275**	*e* P	**Pn**	**04 46 39.5**	**+3.5**
ACON	**Acoyapa**				**6.06 292**		**Pn**	**04 46 37.7**	**+1.2**

IDC 11 04:53:48.2±51.0, 22°79S×173°30W, h0km, mb3.7/3, mbtmp3.7/3, MS3.7/3, Error ellipse: s-maj=979.1km s-min=191.7km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.66**	**266**	LR	LR	05 16 09.9	
	comp=Z,182nm,19.8s,baz=96,slow=36						
STKA	**Stephens Creek**	**40.84**	**247**	P	P	05 01 29.8	-2.1
	0.8nm,0.5s,baz=97,slow=13,SNR=3.9						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**48.29**	**258**	P	P	05 02 32.0	+0.4
	0.5nm,0.5s,baz=97,slow=7.2,SNR=14						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**48.64**	**263**	P	P	05 02 35.3	+1.0
	0.4nm,0.5s,baz=98,slow=7.0,SNR=4.0						
	0.4nm,0.5s						
VNDA	**Vanda**	**56.07**	**186**	LR	LR	05 22 15.3	
	comp=Z,45nm,20.6s,baz=137,slow=30						
ULM	**Lac du Bonnet**	**99.58**	**39**	LR	LR	05 46 31.9	
	comp=Z,32nm,19.5s,baz=82,slow=32						

ISK 11 05:11:15.4, 37°.63N×26°.88E, h11km, ML2.5/10
AFAD 11 05:11:15.5±0.0, 37°.63N×26°.87E, h7km±2km, ML2.4
ATH 11 05:11:16.3, 37°.63N×26°.84E, h9km±1km, ML3.0/3, Error ellipse: s-maj=3.5km s-min=1.0km az=74.0
THE 11 05:11:16.4, 37°.65N×26°.89E, h1km±1km, ML2.9/4, Error ellipse: s-maj=1.6km s-min=0.6km az=75.0

ISC 11 05:11:16.1±0.8, 37°64N±0°.02×26°88E±0°.02, h10km±5km, n40, σ0°61/60, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.08**	**331**	P	**Pg**	**05 11 18.5**	**0.0**
SMG				S	**Sg**	**05 11 20.3**	**0.0**
	25μm,0.3s						
SMG	**Samos**	**0.08**	**331**	P	**Pg**	**05 11 18.4**	**0.0**
SMG				S	**Sg**	**05 11 20.2**	**0.0**
SMG				AML	AML	05 11 20.6	
	comp=N,62775μm,0.3s						
SMG				AML	AML	05 11 21.1	
	comp=E,36444μm,0.4s						
GCAM	**G?zelcaml?**	**0.28**	**78**	P	**Pg**	**05 11 22.2**	**+0.4**
GCAM				S	**Sg**	**05 11 26.4**	**+0.7**
DGB	**zmir**	**0.41**	**360**	P	**Pg**	**05 11 23.9**	**-0.3**
DGB				S	**Sg**	**05 11 29.2**	**-0.5**
DGB				*i* AML	AML	05 11 31.0	
	comp=E,311nm,0.2s						
DGB				*i* AML	AML	05 11 32.0	
	comp=E,400nm,0.2s						
GMLD	**Gumuldur**	**0.44**	**3**	Pg	**Pg**	**05 11 24.6**	**-0.1**
GMLD				Sg	**Sg**	**05 11 31.3**	**+0.9**
YKAV	**Yalikavak-Bodr**	**0.60**	**148**	Pg	**Pg**	**05 11 27.4**	**-0.4**
BODT	**Bodrum**	**0.67**	**149**	Pg	**Pg**	**05 11 28.6**	**-0.4**
BODT				Sg	**Sg**	**05 11 38.4**	**+0.6**
BODT	**Bodrum**	**0.67**	**149**	P	**Pg**	**05 11 28.8**	**-0.2**
BODT				S	**Sb**	**05 11 40.2**	**+1.1**
KLNA	**Kalymnos**	**0.69**	**174**	P	**Pg**	**05 11 28.8**	**-0.5**
KLNA				S	**Sg**	**05 11 38.3**	**0.0**
KLNA				AML	AML	05 11 41.5	
	comp=E,4672μm,0.2s						
KLNA				AML	AML	05 11 44.3	
	comp=N,3218μm,0.2s						
BDRM	**Kayabasi**	**0.73**	**142**	P	**Pg**	**05 11 30.0**	**-0.1**
BDRM				S	**Sg**	**05 11 39.2**	**-0.4**
BDRM				*i* AML	AML	05 11 43.0	
	comp=N,202nm,0.8s						
BLCB	**Balcova**	**0.76**	**9**	Pg	**Pg**	**05 11 30.5**	**-0.1**
BLCB				Sg	**Sg**	**05 11 41.6**	**+1.1**
BLCB	**Balcova**	**0.76**	**9**	P	**Pg**	**05 11 30.6**	**-0.1**
BLCB				S	**Sb**	**05 11 41.7**	**+0.1**
MLSB	**Milas**	**0.79**	**116**	Pg	**Pg**	**05 11 31.0**	**-0.3**
RFTAA	**Mazikoy-Bodrum**	**0.94**	**133**	Pg	**Pg**	**05 11 33.8**	**-0.3**
IZMR	**zmir-demi**	**0.98**	**59**	P	**Pg**	**05 11 34.8**	**-0.1**
IZMR				S	**Sg**	**05 11 47.1**	**-0.6**
IZMR				*i* AML	AML	05 11 49.0	
	comp=N,109nm,0.5s						
CHOS	**Chios island**	**0.99**	**319**	P	**Pg**	**05 11 34.8**	**-0.4**
CHOS				S	**Sb**	**05 11 49.4**	**+0.9**
	comp=N,408nm,0.1s						
CHOS	**Chios island**	**0.99**	**319**	P	**Pg**	**05 11 34.6**	**-0.6**
CHOS				S	**Sg**	**05 11 47.8**	**-0.3**
CHOS				AML	AML	05 11 51.0	
	comp=E,1138μm,0.3s						
CHOS				AML	AML	05 11 51.0	
	comp=N,592μm,0.2s						
YAZI	**Mula-Dat§a-**	**1.06**	**154**	P	**Pg**	**05 11 35.8**	**-0.6**
YAZI				S	**Sb**	**05 11 50.6**	**+0.3**
YAZI				*i* AML	AML	05 11 55.0	
	comp=N,96nm,0.4s						
DAT	**Datca**	**1.06**	**148**	Pg	**Pg**	**05 11 36.2**	**-0.3**
DAT	**Datca**	**1.06**	**148**	P	**Pg**	**05 11 36.1**	**-0.4**
DAT				S	**Sb**	**05 11 50.9**	**+0.3**
FOCM	**Foa**	**1.08**	**354**	Pn	**Pg**	**05 11 36.6**	**-0.2**
EAG2	**Marmaro, Chios**	**1.09**	**326**	P	**Pg**	**05 11 36.7**	**-0.3**
EAG2				S	**Sg**	**05 11 51.5**	**+0.3**
ESEN	**Aydn-Nazilli**	**1.17**	**82**	P	**Pb**	**05 11 37.9**	**-0.5**
ESEN				S	**Sb**	**05 11 51.6**	**-1.9**
MULA	**Mugla, Merkez-**	**1.21**	**108**	P	**Pb**	**05 11 38.3**	**-0.7**
APE	**Apeiranthos**	**1.22**	**243**	P	**Pb**	**05 11 38.5**	**-0.7**
APE				S	**Sn**	**05 11 57.3**	**+1.6**
	comp=N,295nm,0.2s						
APE	**Apeiranthos**	**1.22**	**243**	P	**Pb**	**05 11 38.3**	**-1.0**
YER	**Yerkesik**	**1.22**	**114**	Pn	**Pb**	**05 11 38.7**	**-0.6**
RFT7	**Candarli**	**1.32**	**1**	Pn	**Pn**	**05 11 40.2**	**-0.3**
EAG3	**Mitilini, Lesv**	**1.46**	**350**	P	**Pn**	**05 11 42.0**	**-0.5**
KULA	**Kula-Manisa**	**1.65**	**58**	P	**Pn**	**05 11 46.0**	**+0.8**
PRK	**Paraskevi**	**1.68**	**343**	P	**Pn**	**05 11 45.7**	**+0.3**
PRK				S	**Sb**	**05 12 08.5**	**+0.4**
PRK	**Paraskevi**	**1.68**	**343**	P	**Pn**	**05 11 44.8**	**-0.6**
ARG	**Arkhangelos**	**1.73**	**145**	P	**Pn**	**05 11 45.9**	**-0.3**
ARG	**Arkhangelos**	**1.73**	**145**	P	**Pn**	**05 11 47.0**	**+0.7**
EZN	**Ezine**	**2.23**	**349**	P	**Pn**	**05 11 52.7**	**-0.3**
DION	**Dionisos Attik**	**2.38**	**282**	P	**Pn**	**05 11 55.3**	**+0.2**
LIA	**Limnos Island**	**2.62**	**330**	P	**Pn**	**05 11 58.1**	**-0.2**
IDI	**Anoyia**	**2.84**	**215**	P	**Pn**	**05 12 02.7**	**+1.1**
IDI	**Anoyia**	**2.84**	**215**	P	**Pn**	**05 12 01.3**	**-0.2**
SMTH	**Samothraki Isl**	**3.02**	**340**	P	**Pn**	**05 12 04.0**	**+0.1**

NOU 11 05:26:16.0, 18°.80S×168°.59E, h9km, MLv4.7/9, Vanuatu Islands
IDC 11 05:26:18.3±4.4, 18°.87S×168°.58E, h67km±38km, mb3.8/11, mbtmp4.1/12, ML4.4/1, MS2.8/1, Error ellipse: s-maj=27.5km s-min=22.3km az=43.0
NEIC 11 05:26:20.2±1.5, 18°.9S±0°.1×168°.53E±0°.04, h71km±11km, mb4.2/10, Error ellipse: s-maj=14.8km s-min=5.9km az=174.0

ISC 11 05:26:15.3±0.6, 18°69S±0°.08×168°64E±0°09, h37km, n53, σ1§23/51, mb4.2/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YATNC	**Mamie plateau,**	**3.73**	**206**	P	**Pn**	**05 27 12.3**	**+1.8**
DZM	**Mont Dzumac**	**3.95**	**211**	P	**Pn**	**05 27 14.9**	**+1.4**
DZM	**Mont Dzumac**	**3.95**	**211**	P	**Pn**	**05 27 14.5**	**+1.1**
	32nm,0.3s,baz=81,slow=9.0,SNR=496						
DZM				S	**Sn**	**05 27 56.7**	**-1.9**
	286nm,0.3s,baz=307,slow=20,SNR=12						
DZM				LR	LR	05 28 26.4	
	comp=Z,127nm,20.2s,baz=8.5,slow=34						
	126nm,0.5s						
PINNC	**Pines Island,**	**4.06**	**196**		**Pn**	**05 27 15.5**	**+0.6**
PINNC	**Pines Island,**	**4.06**	**196**	P	**Pn**	**05 27 17.0**	**+2.0**
OUENC	**Ouen Island, N**	**4.08**	**204**		**Pn**	**05 27 16.6**	**+1.5**
OUENC	**Ouen Island, N**	**4.08**	**204**	P	**Pn**	**05 27 17.0**	**+1.8**
ONTNC	**Ouen Toro**	**4.14**	**209**		**Pn**	**05 27 17.7**	**+1.6**
ONTNC	**Ouen Toro**	**4.14**	**209**	P	**Pn**	**05 27 17.9**	**+1.8**
KOUNC	**Koumac, New Ca**	**4.50**	**245**		**Pn**	**05 27 23.3**	**+2.3**
KOUNC	**Koumac, New Ca**	**4.50**	**245**	P	**Pn**	**05 27 23.3**	**+2.3**
URZ	**Urewera**	**20.86**	**161**	P	**P**	**05 30 54.9**	**+0.9**
	19nm,1.1s,baz=12,slow=9.3,SNR=1.7						
	19nm,1.1s						
CTA	**Charters Tower**	**21.16**	**263**	P	**P**	**05 30 58.3**	**+0.8**
	3.7nm,0.7s,baz=84,slow=8.2,SNR=4.2						
	3.7nm,0.7s						
MRZ	**Mangatainoka R**	**22.70**	**166**	P	**P**	**05 31 14.8**	**+1.1**
MRZ				IAmb	IAmb	05 31 33.5	
	comp=Z,9.2nm,0.9s						
CAN	**Canberra**	**24.02**	**222**	P	**P**	**05 31 26.2**	**-0.7**
CAN				IAmb	IAmb	05 31 46.6	
	comp=Z,9.9nm,1.0s						
STKA	**Stephens Creek**	**27.67**	**236**	P	**P**	**05 31 58.9**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=349,slow=16,SNR=1.5						
	comp=Z,0.7nm,0.4s						
RAR	**Rarotonga**	**29.77**	**100**	P	**P**	**05 32 19.9**	**+1.2**
WR0	**Warramunga Arr**	**32.17**	**262**	P	**P**	**05 32 38.7**	**-1.1**
WB0	**Warramunga Arr**	**32.32**	**262**	P	**P**	**05 32 39.9**	**-1.3**
WB0				IAmb	IAmb	05 33 00.7	
	comp=Z,3.8nm,0.9s						
WB2	**Warramunga Arr**	**32.35**	**262**	P	**P**	**05 32 40.4**	**-1.0**
WB2				IAmb	IAmb	05 33 03.1	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**32.36**	**262**	P	**P**	**05 32 40.2**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=89,slow=8.4,SNR=4.7						
	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**32.71**	**255**	P	**P**	**05 32 44.5**	**-0.1**
AS31				IAmb	IAmb	05 32 45.4	
	comp=Z,2.4nm,0.8s						
ASAR	**Alice Springs**	**32.71**	**255**	P	**P**	**05 32 44.5**	**-0.1**
ASAR	**Alice Springs**	**32.71**	**255**	P	**P**	**05 32 44.3**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=86,slow=8.9,SNR=98						
	comp=Z,5.6nm,0.7s						
MTN	**Manton Dam**	**36.51**	**274**	P	**P**	**05 33 18.0**	**+0.5**
MTN				IAmb	IAmb	05 33 21.0	
	comp=Z,7.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.73**	**264**	P	**P**	**05 33 53.4**	**+0.5**
MJAR	**Matsushiro Arr**	**62.00**	**332**	P	**P**	**05 36 32.4**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=161,slow=6.7,SNR=2.5						
	comp=Z,1.7nm,0.8s						
MAJO	**Matsushiro**	**62.00**	**332**	P	**P**	**05 36 33.1**	**+1.3**
QSPA	**South Pole Qui**	**71.36**	**180**	P	**P**	**05 37 30.7**	**-0.6**
QSPA	**South Pole Qui**	**71.36**	**180**	P	**P**	**05 37 29.9**	**-1.4**
	comp=Z,2.2nm,0.7s,baz=300,slow=1.3,SNR=13						
	comp=Z,2.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**77.76**	**294**	P	**P**	**05 38 10.3**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=167,slow=4.8,SNR=4.5						
	comp=Z,0.9nm,0.3s						
SONM	**Songino Array**	**86.44**	**323**	P	**P**	**05 38 53.8**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=169,slow=7.6,SNR=3.4						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**89.88**	**17**	P	**P**	**05 39 08.2**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=233,slow=5.2,SNR=5.1						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**97.00**	**62**	P	**P**	**05 39 45.2**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=236,slow=5.9,SNR=3.9						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**100.44**	**27**	P	**Pdif**	**05 39 58.3**	**+0.2**
	comp=Z,0.1nm,0.6s,baz=260,slow=4.8,SNR=4.0						
MKAR	**Makanchi Array**	**100.95**	**316**	P	**Pdif**	**05 40 01.8**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=102,slow=6.3,SNR=2.3						
ARCES	**ARCESS Array B**	**124.39**	**345**	PKP	**PKPdf**	**05 45 07.9**	**-1.8**
	comp=Z,0.9nm,0.5s,baz=93,slow=1.5,SNR=11						
FINES	**FINESS Array B**	**129.86**	**338**	PKP	**PKPdf**	**05 45 18.8**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=46,slow=8.2,SNR=6.0						
RONA	**Rosalia, Austr**	**143.32**	**328**	*e*PKP	**PKPdf**	**05 45 45.6**	**-0.1**
	comp=Z,1.6nm,0.7s						
CONA	**Conrad Observa**	**143.38**	**329**	*e*PKP	PKPbc	05 45 44.0	+0.9
	comp=Z,3.0nm,0.8s						
GERES	**GERESS Array B**	**143.74**	**332**	PKP	PKPbc	05 45 44.4	+0.3
	comp=Z,0.4nm,0.5s,baz=37,slow=4.1,SNR=2.2						
MOA	**Molln**	**144.20**	**330**	*i* PKP	PKPbc	05 45 45.4	-0.1
	comp=Z,1.8nm,0.6s						
SOKA	**Soboth**	**144.65**	**328**	*i* PKP	**PKPab**	**05 45 46.2**	**-0.6**
	comp=Z,1.5nm,0.5s						
KBA	**Koelnbreinsper**	**145.19**	**330**	*i* PKP	**PKPbc**	**05 45 47.5**	**-1.3**
	comp=Z,4.2nm,0.5s						
LESA	**Schwarzleotal**	**145.25**	**331**	*e*PKP	**PKPbc**	**05 45 47.8**	**-1.1**
	comp=Z,3.2nm,0.5s						
MYKA	**Terra Mystica**	**145.37**	**329**	*i* PKP	**PKPbc**	**05 45 48.2**	**-1.1**
	comp=Z,3.7nm,0.7s						
WATA	**Walderalm**	**145.81**	**332**	*e*PKP	**PKPdf**	**05 45 49.9**	**-0.3**
	comp=Z,1.1nm,0.4s						
WTTA	**Wattenberg**	**145.84**	**332**	*i* PKP	**PKPdf**	**05 45 50.2**	**-0.2**
	comp=Z,3.1nm,0.5s						
MOTA	**Moosalm**	**146.02**	**332**	*i* PKP	**PKPdf**	**05 45 50.4**	**-0.2**
	comp=Z,1.8nm,0.4s						
RETA	**Reutte**	**146.06**	**333**	*i* PKP	**PKPdf**	**05 45 50.4**	**-0.1**
	comp=Z,1.7nm,0.5s						
SQTA	**Sankt Quirin**	**146.06**	**332**	*i* PKP	**PKPdf**	**05 45 50.8**	**+0.2**
	comp=Z,5.0nm,0.6s						
FETA	**Feichten**	**146.43**	**332**	*i* PKP	**PKPbc**	**05 45 52.0**	**-0.6**
	comp=Z,2.7nm,0.5s						
DAVA	**Damuels**	**146.59**	**333**	*e*PKP	**PKPbc**	**05 45 52.5**	**-0.7**
	comp=Z,1.4nm,0.4s						

CNRM 11 05:32:04.0, 36°.63N×12°.63W, h28km
MDD 11 05:32:09.4±1.0, 36°.69N×12°.40W, h0km, Mb4.2/8, M_mb3.5/8, Error ellipse: s-maj=7.9km s-min=7.3km az=9.0
INMG 11 05:32:12.5±1.3, 36°.58N×12°.68W, h10km, ML2.0, Error ellipse: s-maj=6.3km s-min=4.3km az=92.0

ISC 11 05:32:10.7±3.7, 36°8N±0°.1×12°3W±0°2, h10km, n37, σ1§25/52, 8C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.78**	**82**	*e*Pn	**Pn**	**05 32 55.8**	**+0.5**
PFVI				*e*Sn	**Sn**	**05 33 28.9**	**-0.1**
PFVI				A	A	05 33 30.2	
	3.7nm,0.2s						
PTEO	**Sao Teotonio**	**2.93**	**74**	*e*Sn	**Sn**	**05 33 32.9**	**+0.2**
PTEO				A	A	05 33 35.5	
	7.8nm,0.8s						
PMAFR	**Mafra**	**3.20**	**47**	*e*Pn	**Pn**	**05 33 02.0**	**+0.9**
PMAFR				*e*Sn	**Sn**	**05 33 40.5**	**+1.2**
PMAFR				A	A	05 33 40.6	
	12nm,0.3s						
PMAFR	**Mafra**	**3.20**	**47**	Sn	**Sn**	**05 33 40.1**	**+0.8**
PMAFR				Pn	**Pn**	**05 33 01.8**	**+0.7**
PNCL	**Nicolau / Gran**	**3.26**	**65**	*e*Pn	**Pn**	**05 33 03.7**	**+1.9**
PNCL				*e*Sn	**Sn**	**05 33 41.4**	**+0.8**
PNCL				A	A	05 33 46.8	
	3.7nm,0.6s						
PNCL	**Nicolau / Gran**	**3.26**	**65**	Pn	**Pn**	**05 33 02.9**	**+1.1**
PNCL				Sn	**Sn**	**05 33 41.0**	**+0.4**
MESJ	**Messejana**	**3.40**	**71**	*e*Pn	**Pn**	**05 33 05.2**	**+1.4**
MESJ				*e*Sn	**Sn**	**05 33 43.8**	**-0.3**
MESJ				A	A	05 33 46.6	
	2.3nm,0.6s						
PCVE	**Castro Verde**	**3.48**	**75**	*e*Pn	**Pn**	**05 33 06.4**	**+1.4**
PCVE				*e*Sn	**Sn**	**05 33 45.8**	**-0.5**
PCVE	**Castro Verde**	**3.48**	**75**	Pn	**Pn**	**05 33 06.3**	**+1.4**
PCVE				Sn	**Sn**	**05 33 46.6**	**+0.3**
PVAQ	**Vaqueiros**	**3.69**	**79**	*e*Sn	**Sn**	**05 33 51.3**	**-0.2**
PVAQ	**Vaqueiros**	**3.69**	**79**	Sn	**Sn**	**05 33 52.2**	**+0.8**
PBEJ	**Beja**	**3.72**	**69**	*e*Sn	**Sn**	**05 33 51.5**	**-0.6**
PBEJ				A	A	05 33 53.9	
	2.6nm,0.3s						
EVO	**Evora**	**3.80**	**62**	*e*Pn	**Pn**	**05 33 10.0**	**+0.7**
EVO				*e*Sn	**Sn**	**05 33 53.8**	**-0.2**
EVO				A	A	05 33 55.5	
	2.8nm,0.3s						
EVO	**Evora**	**3.80**	**62**	Sn	**Sn**	**05 33 53.0**	**-1.1**
EGRO	**El Granado**	**3.90**	**78**	*i* Vmb_V		05 33 11.6	
	125nm,SNR=1.2						
EGRO				S	**Sn**	**05 33 56.2**	**-0.3**
PMTG	**Montargil**	**3.92**	**54**	*e*Pn	**Pn**	**05 33 11.9**	**+0.9**
PMTG				*e*Sn	**Sn**	**05 33 56.4**	**-0.7**
PMTG				A	A	05 33 59.0	
	1.2nm,0.2s						
PESTR	**Estremoz**	**4.25**	**60**	*e*Sn	**Sn**	**05 34 04.4**	**-0.7**
PESTR	**Estremoz**	**4.25**	**60**	P	Pn	05 33 11.3	-4.1
PESTR	**Estremoz**	**4.25**	**60**	S	**Sn**	**05 34 04.3**	**-0.7**
PBAR	**Barrancos**	**4.39**	**70**	*e*Pn	**Pn**	**05 33 19.2**	**+1.8**
PBAR				*e*Sn	**Sn**	**05 34 07.3**	**-1.2**
PBAR				A	A	05 34 10.0	
	1.0nm,0.2s						
PCAS	**Casmilo, Conde**	**4.40**	**41**	*e*Pn	**Pn**	**05 33 18.4**	**+0.8**
PCAS				*e*Sn	**Sn**	**05 34 07.9**	**-0.9**
PCAS				A	A	05 34 10.5	
	1.3nm,0.4s						
EBAD	**Badajoz**	**4.60**	**63**	Sn	**Sn**	**05 34 12.9**	**-1.0**
EBAD	**Badajoz**	**4.60**	**63**	P	**Pn**	**05 33 21.3**	**+1.0**
EBAD				*i* Vmb_V		05 33 21.3	
EBAD				S	**Sn**	**05 34 12.7**	**-1.2**
PMRV	**Marv??o**	**4.66**	**54**	*e*Pn	**Pn**	**05 33 22.3**	**+1.1**
PMRV				*e*Sn	**Sn**	**05 34 14.1**	**-1.2**
PMRV				A	A	05 34 15.8	
	1.2nm,0.2s						
PCBR	**Castelo Branco**	**4.84**	**50**	*e*Pn	**Pn**	**05 33 24.6**	**+1.0**
PCBR				*e*Sn	**Sn**	**05 34 18.4**	**-1.4**
MTE	**Manteigas**	**5.16**	**44**	*e*Pn	**Pn**	**05 33 28.8**	**+0.7**
MTE				*e*Sn	**Sn**	**05 34 27.7**	**-0.1**
ECAB	**El Cabril**	**5.60**	**75**	P	**Pn**	**05 33 34.9**	**+0.7**
ECAB				*i* Vmb_V		05 33 36.2	
	80nm,SNR=0.7						
ECAB				S	**Sn**	**05 34 36.9**	**-1.7**
MVO	**Moncorvo**	**5.97**	**42**	*e*Sn	**Sn**	**05 34 45.2**	**-2.6**
EZAM	**Zamans**	**6.02**	**26**	P	**Pn**	**05 33 40.7**	**+0.9**
EZAM				*i* Vmb_V		05 33 41.0	
	296nm,SNR=0.8						
ELOB	**Lobios**	**6.02**	**32**	P	**Pn**	**05 33 41.0**	**+1.1**
ELOB				*i* Vmb_V		05 33 42.2	
	227nm,SNR=1.3						
ELOB				S	**Sn**	**05 34 46.5**	**-2.5**
EADA	**Adamuz**	**6.27**	**75**	P	**Pn**	**05 33 44.1**	**+0.8**
EADA				*i* Vmb_V		05 33 48.6	
	75nm,SNR=0.8						
EADA				S	**Sn**	**05 34 54.6**	**-0.5**
ECAL	**Calabor**	**6.69**	**38**	P	**Pn**	**05 33 49.1**	**0.0**
ECAL				*i* Vmb_V		05 33 49.6	
	88nm,SNR=0.7						
EAGO	**Agolada(Pontev**	**6.80**	**27**	P	**Pn**	**05 33 50.9**	**+0.3**
EAGO				*i* Vmb_V		05 33 54.6	
	191nm,SNR=1.1						
TTIG	**Tnine Tigouga,**	**7.01**	**152**	P	Pn	05 33 44.9	-8.6
MD31	**MD31**	**7.32**	**120**	P	**Pn**	**05 33 53.1**	**-4.7**
OUZM	**OUZ**	**7.45**	**140**	P	Pn	05 33 50.1	-10
MDT	**Midelt**	**7.46**	**120**	P	Pn	05 33 51.4	-8.2

NEIC 11 05:46:22.2±1.3, 56°.07N±0°.09×149°.3W±0°.1, h21km±9km, ML3.6/50, ML3.3(AEIC), Error ellipse: s-maj=13.6km s-min=8.3km az=161.0
AEIC 11 05:46:23.6±2.2, 55°.95N±0°.10×149°.14W±0°.09, h7km±8km, Error ellipse: s-maj=14.3km s-min=6.6km az=171.0

ISC 11 05:46:19.1±1.6, 56°00N±0°.08×149°24W±0°06, h10km, n146, σ1§36/151, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.55**	**300**	Pn	**Pn**	**05 47 01.4**	**+1.0**
OHAK	**Old Harbor**	**2.55**	**300**		**Sn**	**05 47 29.2**	**-2.3**
OHAK	**Old Harbor**	**2.55**	**300**	P	**Pn**	**05 47 01.3**	**+0.8**
	baz=117						
OHAK				S	**Sn**	**05 47 29.2**	**-2.3**
	baz=117						
KDAK	**Kodiak Island**	**2.56**	**316**	Pn	**Pn**	**05 47 01.4**	**+0.9**
KDAK	**Kodiak Island**	**2.56**	**316**		**Sn**	**05 47 29.9**	**-1.8**
KDAK	**Kodiak Island**	**2.56**	**316**	S	**Sn**	**05 47 29.9**	**-1.8**
	baz=133						
SII	**Sitkinak Islan**	**2.81**	**283**	Pn	**Pn**	**05 47 04.8**	**+0.7**
SII				IAML		05 47 44.8	
	comp=E,182nm,1.0s						
SII				IAML		05 47 46.3	
	comp=N,164nm,1.7s						
SII	**Sitkinak Islan**	**2.81**	**283**		**Sn**	**05 47 37.2**	**-0.9**
SII	**Sitkinak Islan**	**2.81**	**283**	P	**Pn**	**05 47 05.1**	**+1.0**
	baz=100						
SII				S	**Sn**	**05 47 37.2**	**-0.9**
	baz=100						
Q20K	**Shuyak Island**	**3.12**	**328**	P	**Pn**	**05 47 09.5**	**+1.2**
	baz=145						
Q20K				S	**Sn**	**05 47 45.9**	**+0.3**
	baz=145						
SYI	**Shuyak Island**	**3.12**	**328**	Pn	**Pn**	**05 47 09.3**	**+0.9**
SYI	**Shuyak Island**	**3.12**	**328**		**Sn**	**05 47 45.9**	**+0.3**
CHIR	**Chirikof Islan**	**3.60**	**270**	Pn	**Pn**	**05 47 16.2**	**+1.3**
CHIR				IAML		05 48 01.9	
	comp=N,151nm,2.0s						
CHIR				IAML		05 48 08.0	
	comp=E,111nm,1.9s						
CHIR	**Chirikof Islan**	**3.60**	**270**		**Sn**	**05 47 55.0**	**-2.3**
CHIR	**Chirikof Islan**	**3.60**	**270**	S	**Sn**	**05 47 55.0**	**-2.3**
	baz=85						
CNPM	**China Poot**	**3.69**	**344**	Pn	**Pn**	**05 47 16.8**	**+0.6**
CNPM	**China Poot**	**3.69**	**344**		**Sn**	**05 47 59.0**	**-0.7**
Q23K	**Middleton Isla**	**3.77**	**23**	Pn	**Pn**	**05 47 16.9**	**-0.2**
Q23K	**Middleton Isla**	**3.77**	**23**	P	**Pn**	**05 47 17.7**	**+0.6**
	baz=204						
MID	**Middleton Isla**	**3.77**	**23**	Pn	**Pn**	**05 47 17.1**	**-0.1**
Q19K	**Cape Douglas,**	**3.78**	**323**	Pn	**Pn**	**05 47 17.2**	**-0.2**
Q19K				IAML		05 48 35.5	
	comp=N,212nm,1.4s						
Q19K	**Cape Douglas,**	**3.78**	**323**	P	**Pn**	**05 47 18.2**	**+0.8**
	baz=139						
BRSE	**Bradley Lake S**	**3.83**	**349**		**Pn**	**05 47 18.7**	**+0.5**
BRSE					**Sn**	**05 48 01.7**	**-1.5**
BRSE	**Bradley Lake S**	**3.83**	**349**	P	**Pn**	**05 47 18.7**	**+0.5**
	baz=167						
BRSE				S	**Sn**	**05 48 01.7**	**-1.5**
	baz=167						
BRLK	**Bradley Lake**	**3.87**	**348**	Pn	**

RC01				IAML			05 48 43.7
	comp=N,19nm,1.9s						
CHGN	**Chignik**	**5.14**	**277**	Pn	**Pn**	**05 47 38.4**	**+2.4**
CHGN				IAML		05 48 43.2	
	comp=E,47nm,1.8s						
CHGN				IAML		05 49 23.5	
	comp=N,34nm,1.4s						
GOAT	**Goat Mountain**	**5.17**	**26**		**Pn**	**05 47 37.6**	**+1.1**
BERG	**Berg Lake**	**5.29**	**31**	Pn	**Pn**	**05 47 39.3**	**+1.2**
BERG				IAML		05 48 38.0	
	comp=N,47nm,1.5s						
BERG				IAML		05 48 42.5	
	comp=E,57nm,1.0s						
GRIN	**Grindle Hills**	**5.31**	**34**		**Pn**	**05 47 39.3**	**+0.8**
SNH	**Sunshine Point**	**5.39**	**36**	Pn	**Pn**	**05 47 42.1**	**+2.6**
KNK	**Knik Glacier**	**5.44**	**4**	Pn	**Pn**	**05 47 40.9**	**+0.7**
KNK				IAML		05 50 02.5	
	comp=N,18nm,2.0s						
KNK				IAML		05 51 00.8	
	comp=E,16nm,1.8s						
KHIT	**Khitrov Hills**	**5.46**	**33**		**Pn**	**05 47 41.2**	**+0.7**
SUA	**Susitna One**	**5.53**	**352**	Pn	**Pn**	**05 47 42.4**	**+0.8**
BMRM	**Bremner River**	**5.54**	**24**		**Pn**	**05 47 42.7**	**+1.1**
BMRM	**Bremner River**	**5.54**	**24**	P	**Pn**	**05 47 42.7**	**+1.1**
	baz=207						
N19K	**Bonanza Creek**	**5.55**	**332**	Pn	**Pn**	**05 47 40.5**	**-1.4**
N19K	**Bonanza Creek**	**5.55**	**332**	P	**Pn**	**05 47 42.3**	**+0.5**
	baz=148						
WAX	**Waxell Ridge**	**5.59**	**34**	Pn	**Pn**	**05 47 43.1**	**+0.8**
PMR	**Palmer**	**5.61**	**1**	Pn	**Pn**	**05 47 44.0**	**+1.6**
STLK	**Strandline Lak**	**5.67**	**347**		**Sn**	**05 48 48.1**	**-0.6**
CRQM	**Cirque**	**5.75**	**31**		**Pn**	**05 47 45.4**	**+0.9**
CRQE	**Cirque**	**5.75**	**32**	P	**Pn**	**05 47 45.4**	**+0.8**
	baz=216						
KLU	**Klutina**	**5.77**	**16**	Pn	**Pn**	**05 47 46.0**	**+1.2**
KLU	**Klutina**	**5.77**	**16**	P	**Pn**	**05 47 45.5**	**+0.8**
	baz=198						
GHO	**Glory Hole Cre**	**5.79**	**1**	Pn	**Pn**	**05 47 45.6**	**+0.6**
SML	**Sawmill**	**5.84**	**4**	Pn	**Pn**	**05 47 46.9**	**+1.2**
N18K	**Kilae Creek**	**5.85**	**326**	Pn	**Pn**	**05 47 45.6**	**-0.2**
N18K	**Kilae Creek**	**5.85**	**326**	P	**Pn**	**05 47 46.4**	**+0.6**
	baz=140						
M23K	**Glacier View**	**5.86**	**7**	S	**Sn**	**05 48 51.4**	**-1.7**
	baz=188						
ISLE	**Juniper Island**	**5.87**	**35**	Pn	**Pn**	**05 47 49.0**	**+2.8**
SCM	**Sheep Creek Mo**	**5.93**	**9**	Pn	**Pn**	**05 47 49.0**	**+2.0**
O16K	**Kokwok River B**	**5.95**	**311**		**Pn**	**05 47 48.3**	**+1.2**
O16K	**Kokwok River B**	**5.95**	**311**	P	**Pn**	**05 47 48.3**	**+1.2**
	baz=124						
VRDI	**Verde Repeater**	**6.05**	**28**	Pn	**Pn**	**05 47 51.0**	**+2.4**
SVW2	**Sparrevohn**	**6.09**	**330**	Pn	**Pn**	**05 47 49.1**	**0.0**
SKT	**Skwentna**	**6.11**	**350**	Pn	**Pn**	**05 47 50.1**	**+0.7**
N25K	**Chitina, Valde**	**6.11**	**21**	Pn	**Pn**	**05 47 51.3**	**+1.8**
N25K	**Chitina, Valde**	**6.11**	**21**	P	**Pn**	**05 47 50.9**	**+1.5**
	baz=205						
GLB	**Gilahina Butte**	**6.14**	**25**		**Pn**	**05 47 51.5**	**+1.7**
TABL	**Table Mountain**	**6.17**	**41**	Pn	**Pn**	**05 47 51.6**	**+1.3**
MCARA	**McCarthy VSAT**	**6.29**	**28**	Pn	**Pn**	**05 47 53.8**	**+2.0**
MCARA	**McCarthy VSAT**	**6.29**	**28**	P	**Pn**	**05 47 53.1**	**+1.3**
	baz=213						
M24K	**Tolsona, Glenn**	**6.32**	**13**	Pn	**Pn**	**05 47 54.8**	**+2.5**
SDPT	**Sand Point**	**6.39**	**269**	Pn	**Pn**	**05 47 54.7**	**+1.5**
PNL	**Peninsula**	**6.41**	**51**		**Pn**	**05 47 54.4**	**+0.9**
PNL	**Peninsula**	**6.41**	**51**	P	**Pn**	**05 47 54.4**	**+0.9**
	baz=239						
BARN	**Barnard Glacie**	**6.44**	**35**	Pn	**Pn**	**05 47 55.0**	**+1.0**
CUT	**Chulitna**	**6.44**	**356**	Pn	**Pn**	**05 47 53.9**	**0.0**
BCPM	**Bancas Point**	**6.46**	**48**	Pn	**Pn**	**05 47 54.7**	**+0.5**
CTGM	**Chitina Glacie**	**6.47**	**37**	Pn	**Pn**	**05 47 55.9**	**+1.5**
M18K	**Stony River**	**6.48**	**331**		**Pn**	**05 47 54.9**	**+0.5**
M18K	**Stony River**	**6.48**	**331**	P	**Pn**	**05 47 54.9**	**+0.5**
	baz=145						
LOGN	**Logan Glacier**	**6.49**	**38**	Pn	**Pn**	**05 47 56.0**	**+1.3**
O15K	**Ungalikthiuk R**	**6.52**	**304**		**Pn**	**05 47 56.7**	**+1.7**
O15K	**Ungalikthiuk R**	**6.52**	**304**	P	**Pn**	**05 47 56.7**	**+1.7**
	baz=115						
WAT6	**Susitna Watana**	**6.64**	**6**	S	**Sn**	**05 49 10.1**	**-2.4**
	baz=187						
WAT1	**Susitna Watana**	**6.86**	**3**	S	**Sn**	**05 49 17.0**	**-0.7**
	baz=183						
M17K	**Holitna River**	**6.89**	**325**		**Pn**	**05 48 01.0**	**+0.9**
M17K	**Holitna River**	**6.89**	**325**	P	**Pn**	**05 48 01.0**	**+0.9**
	baz=136						
O29M	**Mount Kennedy**	**7.10**	**48**		**Pn**	**05 48 04.2**	**+1.2**
O29M	**Mount Kennedy**	**7.10**	**48**	P	**Pn**	**05 48 04.2**	**+1.2**
	baz=237						
P29M	**Windy Craggy**	**7.14**	**55**		**Pn**	**05 48 04.5**	**+1.1**
P29M	**Windy Craggy**	**7.14**	**55**	P	**Pn**	**05 48 04.5**	**+1.1**
	baz=244						
M16K	**Timber Creek**	**7.15**	**319**		**Pn**	**05 48 05.1**	**+1.5**
M16K	**Timber Creek**	**7.15**	**319**	P	**Pn**	**05 48 05.1**	**+1.5**
	baz=130						
S31K	**Pelican**	**7.37**	**69**	Pn	**Pn**	**05 48 06.4**	**-0.2**
S31K	**Pelican**	**7.37**	**69**	P	**Pn**	**05 48 06.9**	**+0.3**
	baz=260						
RND	**Reindeer**	**7.43**	**1**	Pn	**Pn**	**05 48 09.2**	**+1.7**
SIT	**Sitka**	**7.77**	**76**	Pn	**Pn**	**05 48 11.3**	**-0.8**
SIT	**Sitka**	**7.77**	**76**	P	**Pn**	**05 48 11.4**	**-0.6**
	baz=268						
L16K	**Owhat River**	**7.80**	**321**		**Pn**	**05 48 13.4**	**+1.0**
L16K	**Owhat River**	**7.80**	**321**	P	**Pn**	**05 48 13.4**	**+1.0**
	baz=133						
RIDG	**Independent Ri**	**8.07**	**14**	Pn	**Pn**	**05 48 17.1**	**+0.8**
M14K	**Bethel**	**8.20**	**311**	Pn	**Pn**	**05 48 18.4**	**+0.4**
SKAG	**Skagway**	**8.21**	**59**	Pn	**Pn**	**05 48 20.3**	**+2.2**
R32K	**Eaglecrest**	**8.32**	**68**	Pn	**Pn**	**05 48 21.4**	**+1.7**
O30N	**Mendenhall**	**8.39**	**50**	Pn	**Pn**	**05 48 22.1**	**+1.4**
JIS	**Juneau Island**	**8.39**	**68**	Pn	**Pn**	**05 48 22.4**	**+1.8**
SCRK	**Sand Creek**	**8.42**	**16**	Pn	**Pn**	**05 48 21.2**	**+0.1**
M29M	**Somme Creek**	**8.49**	**36**	Pn	**Pn**	**05 48 24.1**	**+2.0**
J19K	**Poorman**	**8.62**	**341**	Pn	**Pn**	**05 48 25.5**	**+1.7**
WHY	**Whitehorse**	**8.87**	**52**	Pn	**Pn**	**05 48 29.4**	**+2.1**
ILAR	**Eielson Array**	**8.87**	**7**	Pn	**Pn**	**05 48 28.6**	**+1.4**
MDM	**Murphy Dome**	**9.00**	**3**	Pn	**Pn**	**05 48 29.3**	**+0.3**
P32M	**Atlin**	**9.03**	**60**	Pn	**Pn**	**05 48 30.7**	**+1.3**
P33M	**Teslin, Yukon**	**9.65**	**57**	Pn	**Pn**	**05 48 39.9**	**+1.9**
M31M	**Drury Creek, Y**	**9.83**	**45**	Pn	**Pn**	**05 48 42.8**	**+2.4**
J14K	**Nanvaranak Lak**	**9.94**	**319**	Pn	**Pn**	**05 48 42.6**	**+0.9**
FARO	**Faro, Yukon**	**10.26**	**46**	Pn	**Pn**	**05 48 48.7**	**+2.5**
R33M	**Jennings River**	**10.34**	**63**	Pn	**Pn**	**05 48 50.1**	**+2.7**
TOLK	**Toolik Lake Re**	**12.69**	**359**	Pn	**Pn**	**05 49 20.6**	**+1.2**

*IDC **11** 05:51:40.4±0.7,5°.74S×153°.36E,h0km,mb4.2/17, mbtmp4.2/19,ML2.3/1,MS3.6/3,Error ellipse: s-maj=23.9km s-min=14.6km az=101.0*
*NEIC **11** 05:51:42.7±1.5,5°.88S±0°.08×153°.4E±0°.1,h10km±1km, mb4.3/23,Error ellipse: s-maj=21.2km s-min=13.3km az=88.0*
*DJA **11** 05:51:43.2±0.9,6°S±6°×15°3E±1°2,h10km,M4.5/8, mB5.0/1,mb4.4/8,MLv4.5/2,Mw(mB)4.3/1*

ISC 11 05:51:45.5±0.5,5°.87S±0°.06×153°.41E±0°.09,h32km,n57, σ1$39/56,mb4.3/31,MS3.6/3,1C,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.08**	**323**		**Pn**	**05 52 17.3**	**-0.9**
PMG	**Port Moresby**	**7.12**	**240**		**Pn**	**05 53 25.8**	**-1.7**
PMG	**Port Moresby**	**7.12**	**240**	Pn	**Pn**	**05 53 28.2**	**+0.7**
	3.1nm,0.3s,baz=45,slow=7.1,SNR=7.1						
PMG				Sn	**Sn**	**05 54 48.4**	**+1.0**
	3.0nm,0.3s,baz=108,slow=20,SNR=3.0						
	30nm,0.6s						
COEN	**Coen**	**12.89**	**231**	Pn	**Pn**	**05 54 45.5**	**-1.1**
CTA	**Charters Tower**	**15.75**	**206**	Pn	**P**	**05 55 26.9**	**-1.8**
	11nm,1.2s,baz=43,slow=11,SNR=7.4						
CTAO	**Charters Tower**	**15.75**	**206**	P	**P**	**05 55 28.4**	**-0.3**
KOUNC	**Koumac, New Ca**	**18.01**	**145**	P	**Pn**	**05 55 53.4**	**-0.1**
KOUNC				IAmb	IAmb	05 56 13.3	
	comp=Z,18nm,1.0s						
EIDS	**Eidsvold**	**19.51**	**186**	P	**P**	**05 56 10.9**	**+0.6**
EIDS				IAmb	IAmb	05 56 13.1	
	comp=Z,14nm,1.0s						
DZM	**Mont Dzumac**	**20.45**	**143**	P	**P**	**05 56 22.0**	**+1.5**
	comp=Z,8.6nm,0.9s,baz=334,slow=16,SNR=3.7						
	comp=Z,8.6nm,0.9s						
MTN	**Manton Dam**	**23.03**	**251**	P	**P**	**05 56 46.7**	**-1.6**
MTN				IAmb	IAmb	05 57 14.3	
	comp=Z,12nm,0.6s						
WR0	**Warramunga Arr**	**23.08**	**231**	P	**P**	**05 56 47.9**	**-0.7**
WR0				IAmb	IAmb	05 57 06.0	
	comp=Z,9.8nm,1.0s						
WB0	**Warramunga Arr**	**23.08**	**232**	P	**P**	**05 56 47.9**	**-0.8**
WB0				IAmb	IAmb	05 57 11.0	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**23.21**	**231**	P	**P**	**05 56 49.1**	**-0.9**
WRAB				IAmb	IAmb	05 57 12.3	
	comp=Z,7.3nm,0.8s						
WB2	**Warramunga Arr**	**23.21**	**231**	P	**P**	**05 56 47.5**	**-2.5**
WB2				IAmb	IAmb	05 57 12.4	
	comp=Z,5.8nm,0.8s						
WRA	**Warramunga Arr**	**23.22**	**231**	P	**P**	**05 56 48.4**	**-1.7**
WRA	**Warramunga Arr**	**23.22**	**231**	P	**P**	**05 56 48.4**	**-1.7**
	comp=Z,2.8nm,0.7s,baz=54,slow=10,SNR=7.8						
	comp=Z,2.8nm,0.7s						
ARMA	**Armidale**	**24.47**	**184**	P	**P**	**05 57 01.2**	**-0.7**
ARMA				IAmb	IAmb	05 57 04.7	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**25.79**	**225**	P	**P**	**05 57 13.6**	**-0.3**
ASAR	**Alice Springs**	**25.80**	**225**	P	**P**	**05 57 13.5**	**-0.4**
ASAR	**Alice Springs**	**25.80**	**225**	P	**P**	**05 57 13.3**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=56,slow=8.7,SNR=53						
	comp=Z,5.6nm,0.8s						
STKA	**Stephens Creek**	**28.13**	**202**	P	**P**	**05 57 34.9**	**+0.1**
STKA	**Stephens Creek**	**28.13**	**202**	P	**P**	**05 57 34.0**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=22,slow=11,SNR=4.0						
	comp=Z,4.1nm,0.8s						
SOEI	**Soe**	**29.12**	**261**	P	**P**	**05 57 42.4**	**-1.6**
FITZ	**Fitzroy Crossi**	**29.70**	**243**	P	**P**	**05 57 48.4**	**-0.5**
FORT	**Forrest**	**34.36**	**221**	P	**P**	**05 58 29.3**	**-0.3**
RPZ	**Rata Peaks**	**40.76**	**160**	LR	LR	06 17 04.2	
	comp=Z,66nm,18.2s,baz=318,slow=37						
USRK	**Ussuriysk Ar.**	**53.45**	**341**	P	**P**	**06 01 00.0**	**-2.5**
	comp=Z,2.3nm,0.8s,baz=151,slow=9.9,SNR=2.5						
	comp=Z,2.3nm,0.8s						
BNX	**BinXian**	**56.39**	**338**	⇑P	**P**	**06 01 24.3**	**+0.6**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,140nm,3.5s						
KLR	**Kul'dur**	**58.04**	**343**	P	**P**	**06 01 34.6**	**-0.7**
	comp=Z,4.1nm,0.9s,baz=156,slow=5.6,SNR=12						
	comp=Z,4.1nm,0.9s						
PETK	**Petropavlovsk-**	**58.87**	**3**	P	**P**	**06 01 40.3**	**-0.8**
	comp=Z,5.1nm,0.9s,baz=166,slow=7.6,SNR=7.0						
	comp=Z,5.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.88**	**296**	P	**P**	**06 01 41.1**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=111,slow=5.3,SNR=6.5						
	comp=Z,1.5nm,0.3s						
PZH	**PanZhiHua**	**59.48**	**305**	P	**P**	**06 01 49.0**	**+3.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
XLT	**XiLinHaoTe**	**59.90**	**330**	*e*P	**P**	**06 01 48.7**	**+0.2**
XLT				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC	**Hu-ho-hao-te**	**60.27**	**324**	*e*P	**P**	**06 01 53.1**	**+2.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
SHEM	**Shemya Is, Ala**	**60.97**	**14**	LR	LR	06 24 42.7	
	comp=Z,49nm,20.1s,baz=112,slow=33						
GTA	**Gaotai**	**66.85**	**317**	*e*P	**P**	**06 02 37.4**	**+2.7**
GTA				pP	sP	06 02 45.1	-0.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ULN	**Ulaanbaatar**	**67.22**	**328**	P	**P**	**06 02 36.2**	**-0.7**
ULN				IAmb	IAmb	06 02 39.3	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**67.55**	**328**	P	**P**	**06 02 38.0**	**-0.9**
SONM				IAmb	IAmb	06 02 42.5	
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**67.55**	**328**	P	**P**	**06 02 37.2**	**-1.7**
	comp=Z,1.3nm,0.5s,baz=143,slow=5.9,SNR=10						
	comp=Z,1.3nm,0.5s						
YAK	**Yakutsk**	**70.14**	**348**	P	**P**	**06 02 54.8**	**+0.2**
SBA	**Scott Base**	**72.28**	**177**	P	**P**	**06 03 07.2**	**-0.1**
BILL	**Bilibino**	**74.30**	**5**	P	**P**	**06 03 19.9**	**+0.6**
BILL				IAmb	IAmb	06 03 20.7	
	comp=Z,6.0nm,1.1s						
ANM	**Nome**	**76.61**	**17**	P	**P**	**06 03 33.2**	**+0.6**
ANM				IAmb	IAmb	06 03 33.8	
	comp=Z,2.1nm,0.9s						
WMQ	**Urumqi**	**76.94**	**317**	*e*P	**P**	**06 03 37.2**	**+2.2**
MKAR	**Makanchi Array**	**81.53**	**319**	P	**P**	**06 04 00.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=97,slow=6.0,SNR=5.5						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**82.38**	**326**	P	**P**	**06 04 03.8**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=114,slow=6.1,SNR=7.7						
	comp=Z,1.6nm,0.6s						
ILAR	**Eielson Array**	**82.92**	**22**	P	**P**	**06 04 04.6**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=254,slow=5.0,SNR=6.7						
ILAR				LR	LR	06 37 26.2	
	comp=Z,39nm,20.0s,baz=296,slow=33						
	comp=Z,0.3nm,0.6s						
KSH	**Kashi**	**84.09**	**311**	P	**P**	**06 04 17.9**	**+4.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**06 04 14.4**	**+1.3**
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**06 04 13.2**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=355,slow=1.3,SNR=11						
	comp=Z,4.8nm,0.9s						
KURBB	**Kurchatov Arra**	**85.01**	**322**	P	**P**	**06 04 17.4**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=109,slow=4.0,SNR=8.1						
	comp=Z,0.9nm,0.9s						
NRIK	**Noril'sk**	**87.17**	**341**	P	**P**	**06 04 27.3**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=104,slow=4.2,SNR=4.7						
	comp=Z,1.6nm,0.3s						
BVAR	**Borovoye Array**	**90.46**	**323**	P	**P**	**06 04 43.2**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=100,slow=4.5,SNR=10						
	comp=Z,2.6nm,0.8s						
YKA	**Yellowknife Ar**	**96.09**	**28**	P	**P**	**06 05 07.7**	**-1.9**
	comp=Z,0.2nm,0.9s,baz=266,slow=7.4,SNR=2.5						
	comp=Z,0.2nm,0.9s						
GERES	**GERESS Array B**	**125.28**	**328**	PKP	**PKiKP**	**06 10 44.1**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=64,slow=2.3,SNR=3.6						
BDFB	**Brasilia**	**149.88**	**135**	PKPbc	**PKiKP**	**06 11 34.9**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=149,slow=1.2,SNR=9.5						
TORD	**Torodi Ar. Bea**	**151.21**	**287**	PKPbc	**PKiKP**	**06 11 37.7**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=62,slow=2.8,SNR=8.6						

*NAO **11** 06:09:51.3±7.5,76°.56N×7°.18E,ML2.5*
*BER **11** 06:09:57.9±3.5,76°.53N×8°.86E,h10km,mb(Pn)3.5, ML2.5(NAO),Confirmed Earthquake*

ISC 11 06:09:50.6±2.3,76°.48N±0°.07×7°.7E±0°.2,h10km,n11, σ3$29/20,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**1.89**	**70**	*e*P	**Pn**	**06 10 25.9**	**+3.0**
HSPB				*e*S	**Sn**	**06 10 45.0**	**-1.6**
HSPB				IAML		06 10 47.0	
	comp=Z,15nm,0.3s						
HSPB	**Hornsund (broa**	**1.89**	**70**	Pn	**Pn**	**06 10 25.7**	**+2.9**
HSPB				Sn	**Sn**	**06 10 46.2**	**-0.5**
BRBA	**Barentsburg A**	**2.15**	**39**	*e*P	**Pn**	**06 10 29.2**	**+2.8**
BRBB	**Barentsburg B**	**2.17**	**39**	*e*P	**Pn**	**06 10 30.3**	**+3.6**
BRBB				*e*S	**Sn**	**06 10 49.5**	**-4.1**
BRBB	**Barentsburg B**	**2.17**	**39**	Pn	**Pn**	**06 10 28.1**	**+1.4**
BRBB				Sn	**Sn**	**06 10 49.1**	**-4.5**
SPA0	**Spitsbergen Ar**	**2.57**	**44**	Pn	**Pn**	**06 10 34.9**	**+2.8**
	baz=216,slow=18						
SPA0				Sn	**Sn**	**06 11 03.0**	**-0.4**
	baz=217,slow=14						
SPA0	**Spitsbergen Ar**	**2.57**	**44**	Pn	**Pn**	**06 10 34.9**	**+2.8**
	baz=216,slow=18						
SPA0				Sn	**Sn**	**06 11 03.0**	**-0.4**
	baz=217,slow=14						
KBS	**Kingsbay**	**2.62**	**18**	*e*P	**Pn**	**06 10 34.8**	**+2.0**
KBS	**Kingsbay**	**2.62**	**18**	Pn	**Pn**	**06 10 34.5**	**+1.7**
KBS				Sn	**Sn**	**06 11 01.8**	**-2.9**
ARA0	**ARCESS Array S**	**8.66**	**134**	Pn	**Pn**	**06 11 59.7**	**+4.0**
	baz=329,slow=11						
ARA0				Sn	**Sn**	**06 13 28.7**	**-4.6**
	baz=332,slow=22						
ARA0	**ARCESS Array S**	**8.66**	**134**	Pn	**Pn**	**06 11 59.7**	**+4.0**
	baz=329,slow=11						
ARA0				Sn	**Sn**	**06 13 28.7**	**-4.6**
	baz=332,slow=22						

*JMA **11** 06:17:42.8±0.1,39°.2N±0°.2×142°.1E±0°.5,h52km,MV3.8/40, E OFF IWATE PREF*
JMA Felt I J1 at E OFF IWATE PREF .
*IDC **11** 06:17:44.8±2.1,39°.20N×142°.22E,h84km±17km,mb3.4/9, mbtmp3.7/12,Error ellipse: s-maj=25.4km s-min=11.3km az=111.0*

ISC 11 06:17:41.5±1.2,39°.18N±0°.04×142°.21E±0°.09,h49km±10km, n31,σ1$58/36,mb3.8/9,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.43**	**257**	*i*P	**Pn**	**06 17 52.5**	**+0.6**
OFUJ				S	**Sn**	**06 17 59.4**	**+0.1**
MIYJ	**Miyakonagasawa**	**0.50**	**323**	*i*P	**Pn**	**06 17 53.0**	**+0.2**
MIYJ				S	**Sn**	**06 17 59.9**	**-0.8**
JKMT	**Kesennumamotoy**	**0.68**	**238**	*i*P	**Pn**	**06 17 55.5**	**+0.5**
JKMT				S	**Sn**	**06 18 04.8**	**+0.1**
JOM	**Ohasama**	**0.77**	**293**	⇓*i*P	**Pn**	**06 17 56.0**	**-0.2**
JOM				⇓*e*S	**Sn**	**06 18 05.4**	**-1.4**
JTH	**Tanohata**	**0.81**	**341**	*i*P	**Pn**	**06 17 56.8**	**+0.2**
JMK	**Ichinoseki**	**0.81**	**254**	⇓*i*P	**Pn**	**06 17 56.8**	**+0.2**
JIO	**Ouri**	**0.99**	**223**	*i*P	**Pn**	**06 17 59.7**	**+0.7**
JIO				S	**Sn**	**06 18 11.8**	**-0.2**
JRG	**Rokugo**	**1.24**	**281**	⇓P	**Pn**	**06 18 02.2**	**-0.3**
JANG	**Nango**	**1.31**	**336**	P	**Pn**	**06 18 03.5**	**+0.1**
JANG				*e*S	**Sn**	**06 18 19.2**	**-0.5**
JOU	**Okura**	**1.46**	**237**	⇓*i*P	**Pn**	**06 18 06.1**	**+0.6**
JOU				⇓S	**Sn**	**06 18 23.9**	**+0.5**
JYK	**Kaneyama**	**1.47**	**260**	⇓*i*P	**Pn**	**06 18 05.8**	**+0.2**
JYK				⇓S	**Sn**	**06 18 23.3**	**-0.3**
JAH	**Hinai**	**1.58**	**310**	P	**Pn**	**06 18 07.3**	**+0.2**
MJAR	**Matsushiro Arr**	**4.12**	**232**	P	**Pn**	**06 18 44.3**	**+2.3**
	5.3nm,0.5s,baz=43,slow=12,SNR=26						
MJAR				S	**Sn**	**06 19 34.7**	**+5.9**
	3.4nm,0.5s,baz=94,slow=17,SNR=4.3						
ASAJ	**Asahikawa**	**4.94**	**3**	P	**Pn**	**06 18 56.1**	**+3.0**
	6.6nm,0.3s,baz=199,slow=13,SNR=12						
ASAJ				S	**Sn**	**06 19 51.5**	**+2.5**
	5.5nm,0.3s,baz=213,slow=16,SNR=1.8						
JHJ	**Hachijo jima 2**	**6.36**	**199**	P	**Pn**	**06 19 12.2**	**-0.4**
	59nm,0.4s,baz=69,slow=18,SNR=1.6						
JHJ				S	**Sn**	**06 20 21.7**	**-2.2**
	151nm,1.0s,baz=45,slow=20,SNR=1.3						
USRK	**Ussuriysk Ar.**	**9.14**	**307**	P	**Pn**	**06 19 53.5**	**+2.7**
	2.3nm,0.5s,baz=106,slow=15,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**28.79**	**125**	T	T	06 53 59.4	
	baz=318,slow=76,SNR=219						
H11N1	**WAKE ISLAND Hy**	**28.80**	**125**	T	T	06 54 02.5	
	baz=318,slow=76,SNR=99						
H11N3	**WAKE ISLAND Hy**	**28.80**	**125**	T	T	06 54 15.9	
	baz=318,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy**	**29.57**	**127**	T	T	06 54 56.9	
	baz=318,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.57**	**127**	T	T	06 55 07.5	
	baz=318,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	**29.59**	**127**	T	T	06 55 08.7	
	baz=318,slow=76,SNR=23						
ZALV	**Zalesovo Beam**	**40.97**	**311**	P	**P**	**06 25 18.6**	**-0.6**
	1.0nm,0.5s,baz=86,slow=8.5,SNR=1.6						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**43.55**	**300**	P	**P**	**06 25 39.6**	**-0.8**
	0.3nm,0.5s,baz=85,slow=12,SNR=6.9						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**45.21**	**306**	P	**P**	**06 25 52.9**	**-0.7**
	0.6nm,0.3s,baz=80,slow=8.5,SNR=4.9						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**47.35**	**33**	P	**P**	**06 26 11.2**	**+1.0**
	0.3nm,0.6s,baz=273,slow=5.1,SNR=6.4						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**49.62**	**311**	P	**P**	**06 26 27.1**	**-0.6**
	0.6nm,0.5s,baz=61,slow=7.8,SNR=5.3						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**59.27**	**189**	P	**P**	**06 27 36.0**	**-2.1**
	1.1nm,0.8s,baz=4.1,slow=7.3,SNR=4.9						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**63.00**	**189**	P	**P**	**06 28 03.4**	**+0.1**
	0.2nm,0.8s,baz

WRA Warramunga Arr 28.33 120 P **P** 06 54 25.6 +0.1
comp=Z,0.6nm,0.4s,baz=308,slow=9.0,SNR=19
comp=Z,0.6nm,0.4s
WRAB Tennant Creek 28.33 120 P **P** 06 54 25.5 0.0
WRAB IAmb IAmb 06 54 39.4
comp=Z,4.7nm,1.1s
WB2 Warramunga Arr 28.34 120 P **P** 06 54 26.0 +0.5
WB2 IAmb IAmb 06 54 48.4
comp=Z,3.2nm,1.0s
WR0 Warramunga Arr 28.51 120 P **P** 06 54 27.8 +0.7
WR0 IAmb IAmb 06 54 28.7
comp=Z,2.7nm,0.6s
AS31 Alice Springs 29.67 127 P **P** 06 54 38.1 +0.8
AS31 IAmb IAmb 06 54 39.4
comp=Z,1.1nm,0.7s
ASAR Alice Springs 29.67 127 P **P** 06 54 38.5 +1.2
ASAR Alice Springs 29.67 127 P **P** 06 54 37.8 +0.5
comp=Z,2.1nm,0.6s,baz=305,slow=8.8,SNR=43
ASAR S **S** 06 59 12.8 -1.6
comp=Z,0.3nm,0.7s,baz=297,slow=14,SNR=3.1
comp=Z,2.1nm,0.6s
AS01 Alice Springs 29.71 127 P **P** 06 54 38.3 +0.7
FORT Forrest 30.16 145 P **P** 06 54 43.0 +1.6
FORT Forrest 30.16 145 P **P** 06 54 42.9 +1.5
QIS Mount Isa 33.14 118 P **P** 06 55 08.5 +0.9
OOD Oodnadatta 33.23 132 P **P** 06 55 09.2 +1.0
MULG Mulgathing 33.56 138 P **P** 06 55 12.4 +1.4
COEN Coen 34.85 105 P **P** 06 55 22.1 -0.1
COEN IAmb IAmb 06 55 31.5
comp=Z,7.8nm,1.1s
BBOO Buckleboo 36.48 139 P **P** 06 55 36.5 +0.6
BBOO IAmb IAmb 06 55 57.1
comp=Z,6.9nm,1.0s
BBOO Buckleboo 36.48 139 P **P** 06 55 36.6 +0.7
LCRK Leigh Creek 36.54 134 P **P** 06 55 37.7 +1.2
HTT Hallett 38.75 137 P **P** 06 55 55.9 +0.9
STKA Stephens Creek 39.75 133 P **P** 06 56 04.8 +1.7
STKA Stephens Creek 39.75 133 P **P** 06 56 04.4 +1.2
comp=Z,3.5nm,0.5s,baz=307,slow=8.1,SNR=7.3
comp=Z,3.5nm,0.5s
JCJ Chichijima 46.85 43 P P 06 56 51.1 -8.6
comp=Z,54nm,0.7s,baz=266,slow=16,SNR=2.0
MKAR Makanchi Array 58.14 339 P P 06 58 12.4 -10
comp=Z,0.1nm,0.4s,baz=145,slow=8.4,SNR=1.6
QSPA South Pole Qui 83.26 180 P **P** 07 00 54.1 +1.2
QSPA IAmb IAmb 07 01 19.0
comp=Z,2.6nm,1.1s
QSPA South Pole Qui 83.26 180 P **P** 07 00 53.8 +0.9
comp=Z,0.7nm,0.7s,baz=49,slow=15,SNR=1.5
comp=Z,0.7nm,0.7s
CPUP Villa Florida 144.37 202 PKPbc PKPbc 07 08 00.8 +0.3
comp=Z,1.4nm,0.6s,baz=148,slow=0.9,SNR=6.1
BDFB Brasilia 147.81 226 PKPbc **PKPbc** 07 08 11.5 +0.6
comp=Z,0.6nm,0.4s,baz=100,slow=4.5,SNR=3.0

BJI ***11*** *07:05:16.1±0.0,1.˚50N×129.˚01E,h86km,mb5.0/64, mB5.2/28,Ms4.6/7,Ms7 4.4/7*
MOS ***11*** *07:05:17.8±1.0,2.˚18N×128.˚45E,h48km,mb5.2/50,Error ellipse: s-maj=10.4km s-min=5.0km az=116.8*
NEIC ***11*** *07:05:23.5±1.2,2.˚13N±0.˚07×128.˚40E±0.˚08,h76km±7km, mb4.9/140,Error ellipse: s-maj=11.9km s-min=9.8km az=84.0*
IDC ***11*** *07:05:24.0±1.9,2.˚15N×128.˚50E,h92km±16km,mb4.4/23, mbtmp4.8/25,MS3.3/9,Error ellipse: s-maj=22.0km s-min=9.5km az=73.0*
DJA ***11*** *07:05:24.2±0.4,2.˚N±3.˚×12.˚8E±.˚,h78km±4km,M5.0/32, mb5.1/32,mB5.5/14,MLv5.1/13,Mw(mB)4.9/14, MwMwp6.1/2,Mwp6.1/2*
ISC 11 07:05:23.3±0.4,2.˚11N±0.˚04×128.˚40E±0.˚05,h82km±3km, h82km:pP-P,n572,σ1§14/568,mb4.9/149,31C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.68**	**218**	Pn	**Pn**	**07 05 51.9**	**+0.8**
TNTI	**Ternate**	**1.68**	**218**	P	**Pn**	**07 05 51.7**	**+0.6**
TNTI	**Ternate**	**1.68**	**218**	P	**Pn**	**07 05 51.5**	**+0.4**
TNTI				S	**Sn**	**07 06 12.9**	**+0.8**
LBMI	**Labuha**	**2.87**	**198**	P	**Pn**	**07 06 07.0**	**0.0**
SGSI	**Sangihe**	**3.27**	**299**	P	**Pn**	**07 06 13.1**	**+0.7**
SWI	**Sorong**	**4.11**	**136**	P	**Pn**	**07 06 25.0**	**+1.3**
KMSI	**Cibinong**	**4.67**	**251**	P	**Pn**	**07 06 32.4**	**+0.9**
SANI	**Sanana**	**4.78**	**210**	P	**Pn**	**07 06 33.2**	**+0.3**
SANI	**Sanana**	**4.78**	**210**	P	**Pn**	**07 06 33.0**	**+0.1**
NLAI	**Namlea**	**5.46**	**194**	P	**Pn**	**07 06 43.7**	**+1.4**
	97nm,0.7s,929µm0.4nm						
DAV	**Davao City (W)**	**5.68**	**330**	Pn	**Pn**	**07 06 45.1**	**-0.1**
DAV	**Davao City (W)**	**5.68**	**330**	P	**Pn**	**07 06 45.8**	**+0.6**
	159nm,0.5s,baz=305,slow=3.4,SNR=2.2						
DAV				S	**Sn**	**07 07 50.9**	**+1.9**
	170nm,0.4s,baz=76,slow=11,SNR=1.7						
FAKI	**Fak Fak**	**6.30**	**142**	Pn	**Pn**	**07 06 55.4**	**+1.6**
FAKI	**Fak Fak**	**6.30**	**142**	P	**Pn**	**07 06 55.1**	**+1.4**
	189nm,0.9s,2µm0.7nm						
LUWI	**Luwuk**	**6.44**	**241**	Pn	**Pn**	**07 06 56.5**	**+0.9**
LUWI	**Luwuk**	**6.44**	**241**	P	**Pn**	**07 06 57.0**	**+1.4**
LUWI	**Luwuk**	**6.44**	**241**	P	**Pn**	**07 06 56.4**	**+0.9**
	380nm,0.7s,5µm1.6nm						
MRSI	**Marisa**	**6.66**	**256**	P	**Pn**	**07 06 59.5**	**+0.9**
	219nm,0.7s,3µm0.7nm						
BNDI	**Bandanaira**	**6.75**	**167**	P	**Pn**	**07 07 01.7**	**+1.8**
	493nm,1.3s,2.8nm						
TOLI2	**Tolitoli**	**7.68**	**263**		**Pn**	**07 07 13.2**	**+0.7**
TOLI2	**Tolitoli**	**7.68**	**263**	P	**Pn**	**07 07 13.2**	**+0.7**
MPSI	**Mapaga**	**8.68**	**258**	P	**Pn**	**07 07 27.2**	**+1.0**
	34nm,0.5s,950nm						
TTSI	**Tana Toraja**	**9.99**	**239**	P	**Pn**	**07 07 44.1**	**+0.1**
	598nm,0.8s,5µm						
BKSI	**Bulukumba**	**11.08**	**228**	P	**Pn**	**07 08 00.9**	**+1.9**
	294nm,0.6s,2µm						
KAPI	**Kappang**	**11.17**	**231**	Pn	**Pn**	**07 08 00.2**	**+0.1**
KAPI	**Kappang**	**11.17**	**231**	P	**Pn**	**07 08 00.2**	**+0.1**
BKB	**Balikpapan**	**11.98**	**254**	Pn	**Pn**	**07 08 08.8**	**-2.4**
MMRI	**Maumere**	**12.31**	**210**	Pn	**Pn**	**07 08 12.7**	**-3.0**
SOEI	**Soe**	**12.48**	**199**		**Pn**	**07 08 17.1**	**-1.0**
SOEI	**Soe**	**12.48**	**199**	P	P	07 08 32.2	+5.6
EDFI	**Ende, Flores**	**12.69**	**212**	P	**Pn**	**07 08 22.6**	**+1.7**
	40nm,0.9s,570nm						
KKM	**Kota Kinabalu**	**12.77**	**288**	Pn	**Pn**	**07 08 22.4**	**+0.5**
TGY	**Tagaytay City**	**14.02**	**329**	P	**Pn**	**07 08 38.5**	**+0.1**
	72nm,0.3s,baz=139,slow=21,SNR=6.4						
TGY				LR	LR	07 15 14.5	
	comp=Z,79nm,18.8s,baz=49,slow=42						
BASI	**Baing, Sumba**	**14.51**	**212**	P	**Pn**	**07 08 46.3**	**+1.6**
	147nm,1.0s						
MTN	**Manton Dam**	**15.10**	**170**	Pn	**Pn**	**07 08 51.8**	**-0.5**
PLAI	**Plampang**	**15.17**	**224**	P	**Pn**	**07 08 54.2**	**+1.0**
PLAI	**Plampang**	**15.17**	**224**	P	**Pn**	**07 08 54.0**	**+0.8**
	160nm,1.1s,2µm						
TWSI	**Taliwang, Sumb**	**15.74**	**227**	P	**P**	**07 09 02.0**	**-0.8**
	99nm,1.2s,1µm						
SBUM	**Sibu**	**16.17**	**272**		**P**	**07 09 07.2**	**-0.3**
SRBI	**Singaraja**	**16.60**	**232**	P	**P**	**07 09 12.5**	**+0.3**
	70nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.67**	**233**		**P**	**07 09 23.9**	**-0.2**
JAGI				IAmb	IAmb	07 09 27.7	
	comp=Z,68nm,1.0s						
JAGI	**Jajag, Banyuwa**	**17.67**	**233**	P	**Pn**	**07 09 26.8**	**+2.5**
JAGI	**Jajag, Banyuwa**	**17.67**	**233**	P	**Pn**	**07 09 25.8**	**+1.5**
	comp=Z,90nm,1.1s						
BLJI	**Banyuglugur**	**17.72**	**236**	P	**Pn**	**07 09 26.1**	**+1.3**
	comp=Z,160nm,0.7s,comp=Z,3µm						
KSM	**Kuching**	**18.09**	**268**	P	**P**	**07 09 28.4**	**-0.4**
KSM				IAmb	IAmb	07 09 33.2	
	comp=Z,49nm,1.0s						
GMJI	**Gumukmas**	**18.13**	**235**	P	**Pn**	**07 09 31.0**	**+1.1**
	comp=Z,74nm,1.1s						
NGJI	**Ngawi**	**19.35**	**241**	P	**Pn**	**07 09 46.1**	**+1.8**
GUMO	**Guam**	**19.89**	**54**	LR	LR	07 17 07.4	
	comp=Z,27nm,18.0s,baz=184,slow=36						
FITZ	**Fitzroy Crossi**	**20.26**	**188**	P	**P**	**07 09 52.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.26**	**188**	P	**P**	**07 09 51.9**	**-0.4**
UGM	**Wanagama**	**20.42**	**241**	P	**P**	**07 09 54.5**	**+0.3**
UGM				IAmb	IAmb	07 10 18.3	
	comp=Z,78nm,1.0s						
UGM	**Wanagama**	**20.42**	**241**	P	Pn	07 09 57.2	+0.2
UGM	**Wanagama**	**20.42**	**241**	P	**P**	**07 09 55.1**	**+0.9**
	comp=Z,80nm,1.3s						
KPJI	**Karang Pucung**	**21.57**	**244**	P	**P**	**07 10 07.8**	**+1.3**
	comp=Z,57nm,0.8s						
TWG	**Pinlang**	**21.79**	**342**	P	**P**	**07 10 06.6**	**-2.1**
TWG				IAmb	IAmb	07 10 12.5	
	comp=Z,33nm,0.5s						
PMG	**Port Moresby**	**21.91**	**122**	LR	LR	07 19 04.1	
	comp=Z,114nm,19.3s,baz=292,slow=38						
DLV	**T Lat**	**22.03**	**297**	P	**P**	**07 10 11.1**	**-0.5**
DLV				IAmb	IAmb	07 10 15.1	
	comp=Z,60nm,1.3s						
YULB	**Yu-li**	**22.25**	**343**	P	**P**	**07 10 12.0**	**-1.7**
YULB	**Yu-li**	**22.25**	**343**	P	**P**	**07 10 13.3**	**-0.4**
TPUB	**Ta-pu**	**22.38**	**341**	P	**P**	**07 10 13.5**	**-1.6**
TPUB				IAmb	IAmb	07 10 18.7	
	comp=Z,56nm,0.9s						
TPUB	**Ta-pu**	**22.38**	**341**	P	**P**	**07 10 15.9**	**+0.9**
WB0	**Warramunga Arr**	**22.52**	**165**	P	**P**	**07 10 16.5**	**-0.1**
WB0				IAmb	IAmb	07 10 23.2	
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**22.67**	**165**	P	**P**	**07 10 18.0**	**-0.1**
WRAB				IAmb	IAmb	07 10 25.1	
	comp=Z,32nm,0.9s						
WRAB	**Tennant Creek**	**22.67**	**165**	P	**P**	**07 10 18.0**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,32nm,1.0s						
WRA	**Warramunga Arr**	**22.67**	**165**	P	**P**	**07 10 17.3**	**-0.9**
WRA	**Warramunga Arr**	**22.67**	**165**	P	**P**	**07 10 17.6**	**-0.5**
	comp=Z,14nm,0.7s,baz=338,slow=11,SNR=89						
WRA				S	**S**	**07 14 20.9**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=338,slow=15,SNR=4.2						
WRA				ScP	**ScP**	**07 17 36.6**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=348,slow=2.8,SNR=3.5						
	comp=Z,14nm,0.7s						
WB2	**Warramunga Arr**	**22.68**	**165**	P	**P**	**07 10 17.9**	**-0.3**
WB2				IAmb	IAmb	07 10 25.2	
	comp=Z,30nm,0.8s						
SSLB	**Suanglung**	**22.73**	**342**	P	**P**	**07 10 17.4**	**-1.3**
SSLB				IAmb	IAmb	07 10 26.2	
	comp=Z,31nm,0.8s						
SSLB	**Suanglung**	**22.73**	**342**	P	**P**	**07 10 19.3**	**+0.6**
WR0	**Warramunga Arr**	**22.74**	**165**	P	**P**	**07 10 18.7**	**-0.2**
BBJI	**Bungbulang**	**22.78**	**245**	P	**P**	**07 10 22.2**	**+2.7**
YOJ	**Yonaguni jima**	**22.83**	**347**	P	**P**	**07 10 19.2**	**-0.4**
YOJ	**Yonaguni jima**	**22.83**	**347**	P	**P**	**07 10 19.3**	**-0.4**
YOJ				pmax	pmax		
	comp=Z,134nm,0.9s						
NACB	**Ninganchiao**	**22.91**	**344**	P	**P**	**07 10 19.7**	**-0.8**
NACB				IAmb	IAmb	07 10 20.0	
	comp=Z,74nm,1.3s						
YHNB	**Yeheng**	**23.44**	**344**	P	**P**	**07 10 25.5**	**-0.1**
YHNB				IAmb	IAmb	07 10 33.5	
	comp=Z,65nm,0.9s						
YHNB	**Yeheng**	**23.44**	**344**	P	**P**	**07 10 26.5**	**+0.9**
PSA00	**Pilbara Seismi**	**24.98**	**199**	P	**P**	**07 10 38.9**	**-0.6**
QIS	**Mount Isa**	**25.06**	**155**	P	**P**	**07 10 41.3**	**+1.0**
AS31	**Alice Springs**	**26.17**	**168**	P	**P**	**07 10 50.9**	**+0.5**
ASAR	**Alice Springs**	**26.17**	**169**	P	**P**	**07 10 50.9**	**+0.5**
ASAR	**Alice Springs**	**26.17**	**169**	P	**P**	**07 10 50.4**	**0.0**
	comp=Z,2.7nm,0.6s,baz=346,slow=8.3,SNR=45						
ASAR				PcP	**PcP**	**07 14 15.3**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=350,slow=2.8,SNR=5.2						
ASAR				ScP	**ScP**	**07 17 46.5**	**-1.9**
	comp=Z,0.7nm,0.4s,baz=339,slow=2.9,SNR=8.6						
ASAR				LR	LR	07 22 32.5	
	comp=Z,98nm,19.2s,baz=355,slow=39						
	comp=Z,2.7nm,0.6s						
AS01	**Alice Springs**	**26.18**	**168**	P	**P**	**07 10 50.7**	**+0.3**
MNAI	**Manna**	**26.23**	**256**	P	**P**	**07 10 50.7**	**-0.3**
WRKA	**Warakurna**	**26.98**	**180**	P	**P**	**07 10 57.0**	**-0.6**
KULM	**Kulim**	**27.87**	**277**	P	**P**	**07 11 06.2**	**+0.6**
JCJ	**Chichijima**	**28.14**	**27**	P	**P**	**07 11 07.4**	**-0.5**
JCJ	**Chichijima**	**28.14**	**27**	P	**P**	**07 11 07.5**	**-0.5**
CTA	**Charters Tower**	**28.16**	**142**	LR	LR	07 23 57.1	
	comp=Z,56nm,20.2s,baz=298,slow=40						
GIRL	**Giralia**	**28.22**	**209**	P	**P**	**07 11 07.8**	**-0.8**
GIRL				IAmb	IAmb	07 11 22.5	
	comp=Z,69nm,1.1s						
GIRL	**Giralia**	**28.22**	**209**	P	**P**	**07 11 09.4**	**+0.8**
RPSI	**Rantau Prapat**	**29.46**	**272**	P	**P**	**07 11 20.5**	**+0.7**
PSI	**Prapat**	**29.46**	**272**	P	**P**	**07 11 20.5**	**+0.6**
PSI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MEEK	**Meekatharra**	**30.10**	**198**	P	**P**	**07 11 25.6**	**+0.3**
OOD	**Oodnadatta**	**30.54**	**167**	P	**P**	**07 11 29.5**	**+0.3**
GSI	**Gunungsitoli**	**30.82**	**269**	P	**P**	**07 11 32.0**	**+0.1**
GSI	**Gunungsitoli**	**30.82**	**269**	P	**P**	**07 11 32.0**	**+0.1**
GSI	**Gunungsitoli**	**30.82**	**269**	P	**P**	**07 11 31.6**	**-0.3**
JNU	**Nakatsue**	**30.94**	**4**	P	**P**	**07 11 32.4**	**-0.3**
JNU				IAmb	IAmb	07 11 34.2	
	comp=Z,37nm,1.1s						
NJ2	**Nanjing**	**31.12**	**344**	*eP*	**P**	**07 11 35.6**	**+1.4**
NJ2				pP	**pP**	**07 11 52.7**	**-0.1**
NJ2				sP	**sP**	**07 12 01.0**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,160nm,3.9s						
WHN	**Wuhan**	**31.26**	**336**	⇑P	**P**	**07 11 38.0**	**+2.5**
JMN	**Monobe**	**31.88**	**9**	P	**P**	**07 11 39.6**	**-1.3**
GYA	**Guiyang**	**31.97**	**321**	⇓P	**P**	**07 11 44.0**	**+2.1**
GYA				pmax	pmax		
	comp=Z,19nm,1.0s						
MULG	**Mulgathing**	**32.66**	**171**	P	**P**	**07 11 47.8**	**+0.1**
FORT	**Forrest**	**32.70**	**181**	P	**P**	**07 11 48.3**	**+0.2**
FORT				IAmb	IAmb	07 11 48.9	
	comp=Z,17nm,0.8s						
CRAI	**Chiangrai**	**32.76**	**305**	P	**P**	**07 11 47.3**	**-1.5**
CM31	**Chiang Mai Arr**	**33.13**	**301**	P	**P**	**07 11 51.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**33.13**	**301**	P	**P**	**07 11 52.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**33.13**	**301**	P	**P**	**07 11 52.8**	**+0.7**
	comp=Z,2.3nm,0.4s,baz=118,slow=7.2,SNR=26						
CMAR				LR	LR	07 26 05.4	
	comp=Z,18nm,19.8s,baz=125,slow=37						
	comp=Z,2.3nm,0.4s						
MORW	**Morawa**	**33.18**	**200**	P	**P**	**07 11 52.0**	**-0.3**
ENH	**Enshi**	**33.26**	**329**	P	**P**	**07 11 52.7**	**-0.4**
ENH				IAmb	IAmb	07 11 54.7	
	comp=Z,14nm,0.9s						
ENH	**Enshi**	**33.26**	**329**	P	**P**	**07 11 54.2**	**+1.1**
CHTO	**Chiang Mai**	**33.29**	**302**	P	**P**	**07 11 53.6**	**+0.2**
CHTO				IAmb	IAmb	07 11 56.6	
	comp=Z,9.9nm,0.8s						
CHTO	**Chiang Mai**	**33.29**	**302**	P	**P**	**07 11 53.6**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	**Chiang Mai**	**33.29**	**302**	P	**P**	**07 11 55.5**	**+2.1**
CHTO				sP	**sP**	**07 12 24.6**	**+3.0**
LCRK	**Leigh Creek**	**33.70**	**165**	P	**P**	**07 11 57.4**	**+0.6**
KMI	**Kunming**	**33.70**	**315**	⇑P	**P**	**07 11 59.4**	**+2.3**
KMI				pmax	pmax		
	comp=Z,38nm,1.1s						
KMI	**Kunming**	**33.70**	**315**	P	**P**	**07 11 59.5**	**+2.3**
INU	**Inuyama**	**34.03**	**13**	P	**P**	**07 11 59.5**	**-0.1**
INU	**Inuyama**	**34.03**	**13**	P	**P**	**07 11 59.7**	**0.0**
INU	**Inuyama**	**34.03**	**13**	P	**P**	**07 11 59.6**	**0.0**
INU				pP	**pP**	**07 12 18.4**	**-0.4**
JGF	**Kuroka**	**34.35**	**13**	P	**P**	**07 12 02.4**	**-0.1**
JGF	**Kuroka**	**34.35**	**13**	P	**P**	**07 12 03.0**	**+0.6**
BLDU	**Ballidu**	**34.40**	**198**	P	**P**	**07 12 02.9**	**+0.1**
EIDS	**Eidsvold**	**35.05**	**143**	P	**P**	**07 12 08.6**	**0.0**
EIDS				IAmb	IAmb	07 12 32.6	
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**35.18**	**359**	P	**P**	**07 12 09.3**	**-0.1**
	comp=Z,13nm,0.8s,baz=176,slow=9.8,SNR=23						
	comp=Z,13nm,0.8s						
KS19	**Wonju Array Si**	**35.23**	**359**	P	**P**	**07 12 09.8**	**-0.2**
KS19				IAmb	IAmb	07 12 11.1	
	comp=Z,27nm,1.1s						
PZH	**PanZhiHua**	**35.26**	**316**	P	**P**	**07 12 11.6**	**+1.0**
PZH				pmax	pmax		
	comp=Z,30nm,1.1s						
PZH				pmax	pmax		
	comp=Z,90nm,6.1s						
MJAR	**Matsushiro Arr**	**35.45**	**14**	P	**P**	**07 12 10.7**	**-1.2**
	comp=Z,10nm,0.5s,baz=188,slow=9.0,SNR=32						
	comp=Z,10nm,0.5s						
MAJO	**Matsushiro**	**35.45**	**14**	P	**P**	**07 12 10.7**	**-1.1**
MAJO	**Matsushiro**	**35.45**	**14**	P	**P**	**07 12 11.0**	**-0.8**
MAJO	**Matsushiro**	**35.45**	**14**	P	**P**	**07 12 10.7**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s						
MAJO	**Matsushiro**	**35.45**	**14**	P	**P**	**07 12 10.6**	**-1.3**
MAJO				pP	**pP**	**07 12 30.3**	**-0.7**
MJB9	**Matsu-Tunnel**	**35.45**	**14**	P	**P**	**07 12 10.6**	**-1.3**
BBOO	**Buckleboo**	**35.47**	**169**	P	**P**	**07 12 12.2**	**+0.1**
BBOO				IAmb	IAmb	07 12 17.1	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**35.47**	**169**	P	**P**	**07 12 12.6**	**+0.5**
LYN	**LuoYang**	**35.54**	**337**	*eP*	**P**	**07 12 13.9**	**+1.3**
LYN				pmax	pmax		
	comp=Z,19nm,0.8s						
MUN	**Mundaring**	**35.82**	**198**	P	**P**	**07 12 14.7**	**-0.3**
STKA	**Stephens Creek**	**36.04**	**161**	P	**P**	**07 12 17.0**	**0.0**
STKA	**Stephens Creek**	**36.04**	**161**	P	**P**	**07 12 17.5**	**+0.5**
STKA	**Stephens Creek**	**36.04**	**161**	P	**P**	**07 12 17.0**	**0.0**
STKA	**Stephens Creek**	**36.04**	**161**	P	**P**	**07 12 17.0**	**0.0**
	comp=Z,4.0nm,0.5s,baz=334,slow=10.0,SNR=11						
STKA				LR	LR	07 30 53.7	
	comp=Z,40nm,19.5s,baz=13,slow=42						
	comp=Z,4.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**36.41**	**196**	P	**P**	**07 12 20.4**	**+0.3**
NWAO				IAmb	IAmb	07 12 38.9	
	comp=Z,17nm,1.3s						
NWAO	**Narrogin (SRO)**	**36.41**	**196**	P	**P**	**07 12 20.4**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,17nm,1.3s						
NWAO	**Narrogin (SRO)**	**36.41**	**196**	LR	LR	07 27 27.8	
	comp=Z,45nm,21.4s,baz=239,slow=36						
XAN	**Xi'an**	**36.62**	**332**	⇑P	**P**	**07 12 22.2**	**+0.3**
XAN				sP	sP	07 12 52.2	+1.8
XAN				PcP	**PcP**	**07 14 42.2**	**-1.3**
XAN				pmax	pmax		
	comp=Z,40nm,0.8s						
XAN	**Xi'an**	**36.62**	**332**	P	**P**	**07 12 22.1**	**+0.2**
HTT	**Hallett**	**36.71**	**165**	P	**P**	**07 12 23.4**	**+0.7**
TNCH	**TengChong**	**36.74**	**311**	*eP*	**P**	**07 12 24.1**	**+0.9**
TNCH				pP	pP	07 12 42.0	-0.2
TNCH				pmax	pmax		
	comp=Z,26nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,81nm,3.6s						
CD2	**Chengdu**	**36.93**	**323**	P	**P**	**07 12 25.5**	**+0.8**
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
HNS	**HongShan**	**37.32**	**342**	⇑P	**P**	**07 12 27.8**	**+0.1**
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
JMM	**Marumori**	**37.37**	**16**	P	**P**	**07 12 27.0**	**-1.1**
JMM	**Marumori**	**37.37**	**16**	P	**P**	**07 12 28.7**	**+0.6**
ARMA	**Armidale**	**39.20**	**147**	P	**P**	**07 12 44.3**	**+0.5**
ARMA				IAmb	IAmb	07 13 09.3	
	comp=Z,15nm,1.0s						
ARMA	**Armidale**	**39.20**	**147**	P	**P**	**07 12 43.9**	**+0.1**
BJT	**Baijiatuan**	**39.34**	**345**	P	**P**	**07 12 44.0**	**-0.7**
BJT				IAmb	IAmb	07 12 45.1	
	comp=Z,12nm,0.7s						
BJT	**Baijiatuan**	**39.34**	**345**	P	**P**	**07 12 44.8**	**+0.1**
BJT	**Baijiatuan**	**39.34**	**345**	P	**P**	**07 12 44.0**	**-0.7**
BJT				pmax	pmax		
	comp=Z,13nm,0.7s						
BJT	**Baijiatuan**	**39.34**	**345**	P	**P**	**07 12 44.6**	**0.0**
BJI	**Beijing**	**39.36**	**345**	P	**P**	**07 12 44.5**	**-0.3**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,47nm,3.7s						
JTM	**Tenmabayashi**	**40.17**	**15**	P	**P**	**07 12 52.6**	**+1.0**
ARPS	**Mount Arapiles**	**40.65**	**163**	P	**P**	**07 12 57.2**	**+1.7**
LZH	**Lanzhou**	**40.74**	**329**	⇑P	**P**	**07 12 58.5**	**+1.9**
LZH				pP	pP	07 13 15.3	-0.4
LZH				pmax	pmax		
	comp=Z,51nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**40.90**	**64**	T	T	07 56 51.6	
	baz=251,slow=74,SNR=18						
H11S2	**WAKE ISLAND Hy**	**40.91**	**64**	T	T	07 56 33.2	
	baz=251,slow=74,SNR=19						
H11S1	**WAKE ISLAND Hy**	**40.91**	**64**	T	T	07 56 30.8	
	baz=251,slow=74,SNR=16						
HHC	**Hu-ho-hao-te**	**41.46**	**341**	*eP*	**P**	**07 13 02.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
H11N1	**WAKE ISLAND Hy**	**41.48**	**62**	T	T	07 57 15.5	
	baz=249,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**41.49**	**62**	T	T	07 57 16.1	
	baz=249,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**41.50**	**62**	T	T	07 57 28.5	
	baz=249,slow=75,SNR=24						
USA0B	**Ussuriysk Arra**	**42.04**	**4**	P	**P**	**07 13 05.5**	**-1.3**
USA0B				IAmb	IAmb	07 13 08.1	
	comp=Z,14nm,1.1s						
USA0B	**Ussuriysk Arra**	**42.04**	**4**	P	**P**	**07 13 05.5**	**-1.3**
USA0B				pmax	pmax		
	comp=Z,14nm,1.1s						
USRK	**Ussuriysk Ar.**	**42.04**	**4**	P	**P**	**07 13 05.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**42.04**	**4**	P	**P**	**07 13 05.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**42.04**	**4**	P	**P**	**07 13 05.0**	**-1.8**
	comp=Z,3.6nm,0.6s,baz=181,slow=8.1,SNR=10.0						
	comp=Z,3.6nm,0.6s						
MDJ	**Mudanjiang**	**42.35**	**1**	P	**P**	**07 13 06.4**	**-2.9**
MDJ				pP	pP	07 13 23.8	-5.1
MDJ				PP	**PP**	**07 14

ZAK Zakamensk 52.61 340 *e*P **P** **07 14 28.8 -0.1**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
MOY Mondy 54.48 339 *e*P **P** **07 14 43.2 +0.6**
MOY pmax pmax
comp=Z,25nm,2.6s
WMQ Urumqi 55.01 325 *e*P **P** **07 14 47.5 +1.0**
WMQ pmax pmax
comp=Z,34nm,1.1s
PETK Petropavlovsk- 56.32 21 P **P** **07 14 55.1 -0.5**
comp=Z,10nm,0.8s,baz=188,slow=4.4,SNR=9.4
comp=Z,10nm,0.8s
PET Petropavlovsk 56.60 21 *e*P **P** **07 14 58.9 +1.3**
PET *e**PP **pP** **07 15 17.8 -0.4**
PET *e*S **S** **07 22 46.6 +3.4**
PET pmax pmax
comp=Z,9.0nm,0.4s
ZSN Zaisan 58.77 327 *e*P **P** **07 15 13.1 +0.1**
baz=327
ZSN Zaisan 58.77 327 *e*P **P** **07 15 13.1 +0.1**
DGZ Jazzator, Alta 58.82 330 *i* P **P** **07 15 12.8 -0.7**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
WUS Wushi 58.88 318 P **P** **07 15 14.9 +0.8**
SHLS Shalkode 59.66 320 *e*P **P** **07 15 18.2 -1.2**
comp=Z,19nm,0.9s,baz=320
SHLS Shalkode 59.66 320 *e*P **P** **07 15 18.1 -1.2**
SHLS pmax pmax
comp=Z,19nm,0.9s
PDGK Podgornoye 59.72 320 P **P** **07 15 19.1 -0.7**
YAK Yakutsk 59.79 1 P **P** **07 15 19.6 0.0**
YAK Yakutsk 59.79 1 *e*P **P** **07 15 18.7 -0.9**
YAK *e**PP **pP** **07 15 33.6 -6.8**
YAK *e*S S 07 23 15.6 -8.9
YAK *e*SS **SS** **07 27 29.7 +7.9**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.7s
YAK smax smax
comp=E,68nm,3.6s
YAK smax smax
comp=N,117nm,3.7s
YAK Yakutsk 59.79 1 P **P** **07 15 19.6 0.0**
YAK pP **pP** **07 15 40.0 -0.4**
MK31 Makanchi Array 59.83 325 P **P** **07 15 20.8 +0.4**
MK31 Makanchi Array 59.83 325 P **P** **07 15 20.8 +0.4**
MK31 pmax pmax
comp=Z,13nm,0.6s
MKAR Makanchi Array 59.83 325 P **P** **07 15 20.9 +0.5**
comp=Z,15nm,0.4s,baz=115,slow=8.0,SNR=260
comp=Z,15nm,0.4s
UZB Uzynbulak 59.93 320 *e*P **P** **07 15 21.8 +0.6**
comp=Z,11nm,0.6s,baz=320
UZB Uzynbulak 59.93 320 *e*P **P** **07 15 21.8 +0.6**
UZB pmax pmax
comp=Z,11nm,0.6s
PRZ Przheval'sk 60.02 319 P **P** **07 15 23.4 +1.5**
PRZ Przheval'sk 60.02 319 P **P** **07 15 23.4 +1.5**
PRZ pmax pmax
comp=Z,32nm,0.6s
MAKZ Makanchi 60.02 325 P **P** **07 15 21.8 +0.2**
MAKZ Makanchi 60.02 325 P **P** **07 15 21.8 +0.2**
MAKZ pmax pmax
comp=Z,49nm,1.2s
MAKZ Makanchi 60.02 325 ⇑P **P** **07 15 22.0 +0.4**
MAKZ sP **sP** **07 15 51.0 -0.4**
TARG Taragay, Kyrgy 60.06 318 IAmb IAmb 07 15 34.1
comp=Z,14nm,1.0s
NIL Nilore 60.23 308 P **P** **07 15 22.3 -1.1**
NIL Nilore 60.23 308 P **P** **07 15 22.3 -1.1**
NIL pmax pmax
comp=Z,43nm,0.6s
SATY Saty 60.29 320⇑ *i*P **P** **07 15 24.5 +0.8**
comp=Z,17nm,0.6s,baz=320
SATY Saty 60.29 320*c i*P **P** **07 15 24.4 +0.8**
SATY pmax pmax
comp=Z,17nm,0.6s
KPKS Kokpek 60.30 320⇑ *i*P **P** **07 15 24.3 +0.6**
comp=Z,16nm,0.7s,baz=320
KPKS Kokpek 60.30 320*c i*P **P** **07 15 24.3 +0.6**
KPKS pmax pmax
comp=Z,16nm,0.7s
ZHN Zhinishke 60.32 320⇑ *i*P **P** **07 15 24.5 +0.6**
baz=320
ZHN Zhinishke 60.32 320*c i*P **P** **07 15 24.4 +0.6**
KSH Kashi 60.37 315 P **P** **07 15 26.2 +1.9**
KSH pmax pmax
comp=Z,23nm,0.9s
NRN Naryn 61.15 317 P **P** **07 15 29.9 +0.2**
NRN IAmb IAmb 07 15 31.1
comp=Z,12nm,0.9s
NRN Naryn 61.15 317 P **P** **07 15 30.0 +0.2**
NRN pmax pmax
comp=Z,12nm,0.9s
MDOK Medeo 61.22 319 *i* P **P** **07 15 30.9 +0.8**
baz=319
MDOK Medeo 61.22 319 *i* P **P** **07 15 30.8 +0.8**
TDK Taldyqorghan 61.22 322 *e*P **P** **07 15 30.2 +0.4**
comp=Z,16nm,1.0s,baz=322
TDK Taldyqorghan 61.22 322 *e*P **P** **07 15 30.2 +0.4**
TDK pmax pmax
comp=Z,16nm,1.0s
AAA Alma-Ata 61.32 319 *e*P **P** **07 15 31.4 +0.8**
comp=Z,25nm,0.9s,baz=319
AAA Alma-Ata 61.32 319 *e*P **P** **07 15 31.4 +0.8**
AAA pmax pmax
comp=Z,25nm,0.9s
CHKK Chushkaly 61.57 320⇑ *i*P **P** **07 15 32.5 +0.2**
baz=320
CHKK Chushkaly 61.57 320⇑ *i*P **P** **07 15 32.4 +0.2**
TKM2 Tokmak 2 62.06 319 P **P** **07 15 36.4 +0.7**
SNR=17
TKM2 Tokmak 2 62.06 319 P **P** **07 15 35.5 -0.3**
KBK Karagaybulak 62.38 318 P **P** **07 15 38.9 +1.0**
SNR=5.5
UCH Uchtor 62.49 317 P **P** **07 15 40.0 +1.1**
SNR=23
CHMS Chumysh 62.66 318 P **P** **07 15 39.9 +0.4**
SNR=6.3
AAK Ala-Archa 62.67 318 P **P** **07 15 40.7 +0.9**
SNR=6.5
AAK Ala-Archa 62.67 318 P **P** **07 15 39.3 -0.5**
AAK Ala-Archa 62.67 318*ce*P **P** **07 15 40.8 +1.0**
AAK pmax pmax
comp=Z,13nm,1.7s
AAK Ala-Archa 62.67 318⇑P **P** **07 15 40.5 +0.7**
ZAA0 Zalesovo Array 62.78 333 P **P** **07 15 38.6 -1.4**
ZAA0 IAmb IAmb 07 15 40.2
comp=Z,9.7nm,0.9s
ZALV Zalesovo Beam 62.78 333 P **P** **07 15 39.2 -0.9**
comp=Z,5.1nm,0.7s,baz=103,slow=6.4,SNR=26
comp=Z,5.1nm,0.7s
SGDS Sogindy 62.93 319⇑ *i*P **P** **07 15 41.5 +0.1**
baz=319
SGDS Sogindy 62.93 319*c i*P **P** **07 15 41.4 +0.1**
USP Ospenovka 62.94 318 P **P** **07 15 42.0 +0.6**
SNR=30
EKS2 Erkin-Say 63.17 318 P **P** **07 15 44.0 +1.0**
SNR=23
SEY Seymchan 63.25 12*ce*P **P** **07 15 44.9 +2.0**
SEY pmax pmax
comp=Z,17nm,2.5s
KBL Kabul 63.83 308 P **P** **07 15 47.3 -0.4**
KBL IAmb IAmb 07 15 48.6
comp=Z,16nm,0.9s
KBL Kabul 63.83 308 P **P** **07 15 47.3 -0.4**
KBL pmax pmax
comp=Z,16nm,1.0s
BTLS Baital 63.98 320⇑ *i*P **P** **07 15 48.1 -0.1**
baz=320
BTLS Baital 63.98 320*c i*P **P** **07 15 48.1 -0.1**
KURBB Kurchatov Arra 64.00 327 P **P** **07 15 48.4 +0.2**
comp=Z,18nm,0.5s,baz=127,slow=6.1,SNR=42
comp=Z,18nm,0.5s
KURK Kurchatov 64.00 327 P **P** **07 15 48.0 -0.1**
KURK Kurchatov 64.00 327*ce*P **P** **07 15 48.1 -0.1**
KURK pmax pmax
comp=Z,50nm,1.0s
KURK Kurchatov 64.00 327 P **P** **07 15 48.2 0.0**
KURK sP **sP** **07 16 18.9 +0.8**
KURK PcP **PcP** **07 16 23.1 +0.2**
BTK Batken 64.24 314 P **P** **07 15 49.7 -0.4**
BTK IAmb IAmb 07 15 52.3
comp=Z,18nm,1.0s
BTK Batken 64.24 314 P **P** **07 15 49.7 -0.4**
BTK pmax pmax
comp=Z,18nm,1.0s
DZA Taraz 64.91 317 *e*P **P** **07 15 54.3 0.0**
comp=Z,16nm,0.8s,baz=317
DZA Taraz 64.91 317 *e*P **P** **07 15 54.3 0.0**
DZA pmax pmax
comp=Z,16nm,0.8s
SIMJ Simiganj 65.10 312 P **P** **07 15 55.3 -0.5**
SIMJ IAmb IAmb 07 15 56.9
comp=Z,25nm,1.2s
SIMJ Simiganj 65.10 312 P **P** **07 15 55.8 0.0**
SIMJ PcP **PcP** **07 16 27.6 -0.3**
KK31 Karatay Array 65.55 317 P **P** **07 15 58.6 +0.2**
KK31 Karatay Array 65.55 317 P **P** **07 15 58.6 +0.2**
KK31 pmax pmax
comp=Z,30nm,1.0s
KKAR Karatay Array 65.55 317 P **P** **07 15 58.8 +0.4**
KKAR Karatay Array 65.55 317 P **P** **07 15 58.8 +0.4**
BRLS Borolday 65.98 317⇑ *i*P **P** **07 16 01.6 +0.3**
comp=Z,10nm,0.4s,baz=316
BRLS Borolday 65.98 317*c i*P **P** **07 16 01.6 +0.3**
BRLS pmax pmax
comp=Z,10.0nm,0.4s
OTUK Ortayu 66.42 323 P **P** **07 16 03.8 -0.1**
BRZS Berezniki 66.97 325⇑ *i*P **P** **07 16 07.4 0.0**
comp=Z,13nm,1.1s,baz=324
BRZS Berezniki 66.97 325*c i*P **P** **07 16 07.3 0.0**
BRZS pmax pmax
comp=Z,13nm,1.1s
ADK Adak 67.38 33 P **P** **07 16 10.3 +0.5**
ADK Adak 67.38 33 P **P** **07 16 10.4 +0.6**
ADK Adak 67.38 33 P **P** **07 16 10.3 +0.5**
ADK pmax pmax
comp=Z,79nm,1.4s
ADK Adak 67.38 33 P **P** **07 16 10.1 +0.3**
ATKA Atka Island 68.89 34 P **P** **07 16 19.6 +0.4**
ATKA Atka Island 68.89 34 P **P** **07 16 19.7 +0.4**
TIXI Tiksi 69.44 0 P **P** **07 16 21.9 -0.4**
TIXI IAmb IAmb 07 16 22.6
comp=Z,8.5nm,0.7s
TIXI Tiksi 69.44 0*ce*P **P** **07 16 21.7 -0.7**
TIXI pmax pmax
comp=Z,10.0nm,0.8s
TIXI Tiksi 69.44 0 P **P** **07 16 21.8 -0.5**
TIXI pP **pP** **07 16 43.3 -0.2**
BVA0 Borovoye Array 69.58 327 *i* P **P** **07 16 23.2 -0.4**
BVAR Borovoye Array 69.58 327 P **P** **07 16 23.4 -0.2**
comp=Z,35nm,0.8s,baz=122,slow=7.2,SNR=88
comp=Z,35nm,0.8s
BRVK Borovoye 69.66 327 P **P** **07 16 24.1 0.0**
BRVK Borovoye 69.66 327 P **P** **07 16 24.1 0.0**
BRVK pmax pmax
comp=Z,46nm,1.0s
BRVK Borovoye 69.66 327 P **P** **07 16 24.0 -0.1**
NRIK Noril'sk 72.40 346 P **P** **07 16 40.7 +0.4**
NRIK Noril'sk 72.40 346 P **P** **07 16 40.7 +0.4**
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 72.40 346 P **P** **07 16 40.3 0.0**
comp=Z,4.8nm,0.7s,baz=121,slow=6.2,SNR=12
comp=Z,4.8nm,0.7s
UOSS Minazif 72.98 295 P **P** **07 16 44.2 -0.5**
GEYT Alibeck 73.21 309 P **P** **07 16 46.5 +0.7**
GEYT IAmb IAmb 07 16 47.3
comp=Z,17nm,0.8s
GEYT Alibeck 73.21 309 P **P** **07 16 46.5 +0.7**
GEYT pmax pmax
comp=Z,17nm,0.8s
GEYT Alibeck 73.21 309 P **P** **07 16 46.1 +0.3**
comp=Z,13nm,0.7s,baz=129,slow=5.9,SNR=33
comp=Z,13nm,0.7s
GYA0 ALIBECK ARRAY 73.21 309 P **P** **07 16 45.7 -0.1**
GYA0B ALIBECK ARRAY 73.21 309 P **P** **07 16 46.6 +0.8**
GYA0B IAmb IAmb 07 16 47.3
comp=Z,15nm,0.8s
UNV Unalaska Valle 73.81 34 P **P** **07 16 49.3 +0.4**
UNV Unalaska Valle 73.81 34 P **P** **07 16 49.8 +0.9**
NRIK Unalaska Valle 73.81 34 P **P** **07 16 50.0 +1.0**
baz=251
AB31 Akbulak array 74.46 321 *i* P **P** **07 16 52.0 -0.8**
ABKAR Akbulak array 74.46 321 P **P** **07 16 52.7 -0.1**
ABKAR IAmb IAmb 07 16 53.3
comp=Z,15nm,0.7s
GAMB Gambell 75.20 23 P **P** **07 16 57.5 +0.7**
baz=243
AKTO Aktyubinsk 75.96 322 P **P** **07 17 00.4 -1.0**
SVE Sverdlovsk 76.21 328⇓ *e*P **P** **07 17 02.0 -0.7**
SVE pmax pmax
comp=Z,36nm,0.9s
M11K Mekoryuk 76.21 28 P **P** **07 17 04.7 +2.1**
baz=249
ARU Arti 77.19 328 P **P** **07 17 07.9 -0.3**
ARU IAmb IAmb 07 17 08.3
comp=Z,21nm,0.8s
ARU Arti 77.19 328*c i*P **P** **07 17 07.3 -0.9**
ARU *PP **pP** **07 17 28.4 -1.4**
ARU S **S** **07 26 52.9 +1.8**
ARU SS **SS** **07 31 48.4 -2.0**
ARU pmax pmax
comp=Z,24nm,0.8s
TNA Tin City 77.44 22 P **P** **07 17 09.4 0.0**
baz=247
K13K Kusilvak Mount 77.45 26 IAmb IAmb 07 17 12.0
comp=Z,19nm,1.1s
K13K Kusilvak Mount 77.45 26 P **P** **07 17 10.9 +1.4**
baz=250
M13K Dall Lake 77.56 28 P **P** **07 17 11.5 +1.3**
baz=252
SDPT Sand Point 77.61 34 P **P** **07 17 11.1 +0.6**
SDPT Sand Point 77.61 34 P **P** **07 17 11.4 +0.9**
SDPT Sand Point 77.61 34 P **P** **07 17 11.5 +1.0**
baz=256
F14K Arctic Creek 78.02 23 P **P** **07 17 13.8 +1.2**
baz=248
ANM Nome 78.06 24 P **P** **07 17 14.5 +1.6**
baz=249
L14K Kuka Creek 78.16 27 P **P** **07 17 15.1 +1.7**
L14K IAmb IAmb 07 17 15.9
comp=Z,20nm,1.0s
L14K Kuka Creek 78.16 27 P **P** **07 17 15.0 +1.5**
baz=252
J14K Nanvaranak Lak 78.21 26 P **P** **07 17 15.4 +1.6**
baz=251
M14K Bethel 78.31 28 P **P** **07 17 15.5 +1.1**
baz=253
S14K Fog Glacier 78.34 33 P **P** **07 17 15.2 +0.4**
baz=256
G15K Niukluk 78.75 24 P **P** **07 17 17.4 +0.8**
baz=250
F15K North Star Dit 78.75 23 P **P** **07 17 17.4 +0.7**
baz=250
M15K Kasigluk River 78.90 28 P **P** **07 17 18.2 +0.7**
baz=254
O15K Ungalikthiuk R 78.92 30 P **P** **07 17 18.5 +0.8**
baz=255
K15K Wolf Creek Mou 78.96 27 IAmb IAmb 07 17 19.9
comp=Z,18nm,1.1s
K15K Wolf Creek Mou 78.96 27 P **P** **07 17 19.4 +1.5**
baz=253
CHGN Chignik 78.96 33 P **P** **07 17 18.2 +0.2**
CHGN Chignik 78.96 33 P **P** **07 17 19.6 +1.6**
baz=257
N15K Kwethluk River 79.04 29 P **P** **07 17 19.6 +1.2**
baz=255
H16K Elim 79.36 24 P **P** **07 17 21.0 +0.9**
baz=252
C16K Lisburne Hills 79.42 20 P **P** **07 17 21.1 +0.8**
baz=248
G16K Koyuk River 79.55 23 P **P** **07 17 22.4 +1.4**
baz=252
J16K Anvik River 79.65 26 P **P** **07 17 23.0 +1.3**
baz=254
L16K Owhat River 79.73 27 P **P** **07 17 23.0 +0.9**
baz=255
N16K Nishlik Lake 79.76 29 P **P** **07 17 23.1 +0.8**
baz=256
O16K Kokwok River B 79.88 30 P **P** **07 17 23.9 +1.0**
baz=257
D17K Noatak River 80.01 21 P **P** **07 17 24.7 +1.2**
baz=251
C17K DeLong Mountai 80.24 20 P **P** **07 17 26.3 +1.6**
baz=250
G17K Kiwalik Mounta 80.26 24 P **P** **07 17 26.0 +1.1**
baz=253
E17K Hotham Inlet 80.28 22 P **P** **07 17 26.4 +1.4**
baz=252,SNR=6.5
F17K Baldwin Pennin 80.30 23 P **P** **07 17 26.4 +1.3**
baz=253
L17K Donlin 80.38 27 P **P** **07 17 26.7 +1.1**
baz=256
H17K Granite Mounta 80.40 24 P **P** **07 17 26.8 +1.1**
baz=254
O17K Koliganek Bris 80.41 30 P **P** **07 17 25.8 0.0**
baz=258
K17K Iditarod 80.52 27 P **P** **07 17 27.9 +1.5**
K17K IAmb IAmb 07 17 28.5
comp=Z,13nm,0.9s
K17K Iditarod 80.52 27 P **P** **07 17 27.6 +1.3**
baz=256
Q17K Contact Creek 80.72 31 P **P** **07 17 27.4 -0.2**
baz=259
E18K Tukpahlearik C 80.83 22 P **P** **07 17 29.7 +1.8**
baz=253
F18K Selawik 80.96 23 P **P** **07 17 29.7 +1.2**
baz=254
C18K Utukok River 80.98 20 P **P** **07 17 29.5 +0.7**
baz=252
B18K Kokolik River 81.00 20 P **P** **07 17 30.1 +1.3**
baz=252
H18K Honhosa River 81.09 24 P **P** **07 17 30.2 +0.9**
baz=256
L18K Granite Mounta 81.13 27 P **P** **07 17 30.8 +1.2**
baz=258
G18K Tagagawik 81.16 23 P **P** **07 17 30.8 +1.1**
baz=255
N18K Kilae Creek 81.19 29 P **P** **07 17 31.3 +1.3**
baz=258
SII Sitkinak Islan 81.32 33 P **P** **07 17 32.2 +1.5**
baz=261
O18K Koktuh Hills 81.36 30 P **P** **07 17 32.5 +1.5**
baz=259
M18K Stony River 81.38 28 P **P** **07 17 32.4 +1.4**
baz=258
J18K Innoko River 81.39 26 P **P** **07 17 32.0 +1.0**
baz=257
TTA Tatalina 81.59 27 P **P** **07 17 33.3 +1.2**
TTA Tatalina 81.59 27 P **P** **07 17 33.0 +0.9**
baz=258
GCSA Galena City Sc 81.61 25 P **P** **07 17 33.3 +1.3**
baz=257,SNR=5.7
VNDA Vanda 81.62 173 P **P** **07 17 31.4 -0.5**
comp=Z,1.0nm,0.5s,baz=314,slow=7.8,SNR=2.4
VNDA LR LR 07 53 08.0
comp=Z,52nm,19.0s,baz=282,slow=35
comp=Z,1.0nm,0.5s
C19K Lookout Ridge 81.68 20 IAmb IAmb 07 17 35.0
comp=Z,9.0nm,0.8s
C19K Lookout Ridge 81.68 20 P **P** **07 17 33.9 +1.5**
baz=254
G19K Purcell Mounta 81.84 23 P **P** **07 17 34.5 +1.2**
G19K IAmb IAmb 07 17 35.0
comp=Z,8.1nm,0.8s
G19K Purcell Mounta 81.84 23 P **P** **07 17 34.6 +1.2**
baz=257,SNR=9.1
N19K Bonanza Creek 81.89 29 P **P** **07 17 34.8 +1.0**
baz=260
OHAK Old Harbor 81.91 33 P **P** **07 17 34.6 +0.8**
OHAK IAmb IAmb 07 17 35.8
comp=Z,43nm,1.5s
OHAK Old Harbor 81.91 33 P **P** **07 17 34.9 +1.1**
OHAK Old Harbor 81.91 33 P **P** **07 17 34.3 +0.5**
baz=261
H19K Roundabout Mou 81.96 24 IAmb IAmb 07 17 36.5
comp=Z,26nm,1.2s
H19K Roundabout Mou 81.96 24 P **P** **07 17 34.8 +0.9**
baz=257
L19K White Mountain 81.97 27 P **P** **07 17 35.4 +1.4**
baz=259
J19K Poorman 81.98 26 IAmb IAmb 07 17 36.5
comp=Z,10.0nm,1.0s
J19K Poorman 81.98 26 P **P** **07 17 35.3 +1.2**
baz=258
Q19K Cape Douglas, 81.99 31 P **P** **07 17 34.1 -0.2**
Q19K Cape Douglas, 81.99 31 P **P** **07 17 34.5 +0.2**
baz=261
D19K Kuna River 82.03 21 P **P** **07 17 35.6 +1.3**
baz=255
E19K Redstone River 82.10 22 IAmb IAmb 07 17 37.1
comp=Z,16nm,0.9s
E19K Redstone River 82.10 22 P **P** **07 17 35.7 +1.1**
baz=256
M19K Big River Lodg 82.13 28 P **P** **07 17 36.1 +1.2**
baz=260
P19K Oil Pt 82.31 30 P **P** **07 17 36.8 +0.9**
baz=261
KDAK Kodiak Island 82.37 32 P **P** **07 17 37.0 +0.8**
KDAK Kodiak Island 82.37 32 P **P** **07 17 37.3 +1.1**
baz=262
KDAK Kodiak Island 82.37 32 P **P** **07 17 37.0 +0.8**
KDAK pmax pmax
comp=Z,113nm,1.5s
KIRV Kirov 82.47 329*ce*P **P** **07 17 36.5 -0.2**
L20K Farewell, AK 82.47 27 P **P** **07 17 38.1 +1.4**
baz=260
K20K Telida 82.54 26 IAmb IAmb 07 17 39.6
comp=Z,10nm,0.9s
K20K Telida 82.54 26 P **P** **07 17 38.8 +1.8**
baz=260
F20K Avaraart Lake 82.58 23 IAmb IAmb 07 17 39.7
comp=Z,12nm,1.1s
F20K Avaraart Lake 82.58 23 P **P** **07 17 38.8 +1.7**
baz=258
H20K Anotleneega Mo 82.59 24 P **P** **07 17 38.7 +1.4**
baz=259
D20K Etivluk River 82.62 21 P **P** **07 17 38.8 +1.5**
baz=257
I20K Naaghedeneel 82.63 25 IAmb IAmb 07 17 40.0
comp=Z,32nm,1.1s
I20K Naaghedeneel 82.63 25 P **P** **07 17 38.8 +1.5**
baz=259
J20K Nowinta River 82.65 26 IAmb IAmb 07 17 40.1
comp=Z,11nm,0.9s
J20K Nowinta River 82.65 26 P **P** **07 17 38.8 +1.3**
baz=260,SNR=6.3
RAYN Ar Rayn 82.65 293 P **P** **07 17 38.1 -0.4**
RAYN IAmb IAmb 07 17 38.7
comp=Z,9.7nm,0.8s
RAYN Ar Rayn 82.65 293 P **P** **07 17 38.1 -0.4**
RAYN pmax pmax
comp=Z,10.0nm,0.8s
E20K Nigu River 82.67 21 P **P** **07 17 38.7 +1.0**
baz=257
O20K Slope Mountain 82.68 30 P **P** **07 17 38.3 +0.4**
baz=262
BELG Belogornoye 82.70 322 *i* P **P** **07 17 37.7 -0.3**
BELG pmax pmax
comp=Z,11nm,0.9s
M20K Styx River 82.72 28 IAmb IAmb 07 17 40.4
comp=Z,11nm,0.9s
B20K Meade River 82.73 20 P **P** **07 17 39.6 +1.8**
baz=256
VOI Vohitsoka 83.00 248 P **P** **07 17 39.8 -0.6**
VOI IAmb IAmb 07 17 40.8
comp=Z,10nm,0.8s
N20K Mount Spurr 83.05 29 P **P** **07 17 40.7 +1.0**
baz=262
A21K Barrow 83.22 18 P **P** **07 17 41.6 +1.2**
baz=256
PPLA Purkeypile 83.31 27 P **P** **07 17 42.3 +1.2**
baz=262
G21K Allakaket 83.33 23 P **P** **07 17 42.3 +1.2**
baz=260
C21K Knifeblade Rid 83.36 21 P **P** **07 17 42.2 +1.1**
baz=258
CHUM Lake Minchumin 83.40 26 P **P** **07 17 42.2 +0.8**
baz=256,SNR=6.9
CAST Castle Rocks 83.43 26 P **P** **07 17 41.8 +0.1**
CAST Castle Rocks 83.43 26 P **P** **07 17 42.6 +1.0**
baz=262,SNR=7.2
F21K Alatna River 83.47 23 P **P** **07 17 42.8 +1.0**
baz=260
H21K Melozitna River 83.47 24 IAmb IAmb 07 17 44.1
comp=Z,10nm,1.1s
H21K Melozitna Rive 83.47 24 P **P** **07 17 43.4 +1.6**
baz=261
SKT Skwentna 83.48 28 IAmb IAmb 07 17 42.6
comp=Z,12nm,0.8s
SKT Skwentna 83.48 28 P **P** **07 17 42.1 +0.2**
baz=262,SNR=6.8
CAPN Captain Cook N 83.50 29 P **P** **07 17 43.1 +1.2**
baz=263
B21K Ikpikpuk River 83.51 20 IAmb IAmb 07 17 44.1
comp=Z,12nm,0.8s

B21K	**Ikpikpuk River** baz=258	83.51	20	P		P	07 17 43.0	+1.1
BRSE	**Bradley Lake S** baz=263	83.58	30	P		P	07 17 42.7	+0.2
I21K	**Tanana** baz=261	83.74	25	P		P	07 17 44.5	+1.4
SUA	**Susitna One** baz=263,SNR=7.4	83.78	28	P		P	07 17 43.9	+0.3
KTH	**Kantishna Hill** comp=Z,26nm,1.4s	83.97	26	IAmb		IAmb	07 17 46.8	
D22K	**Ayikyak River** baz=260	84.05	21	P		P	07 17 46.1	+1.4
H22K	**Ishtalitna Cre** baz=262	84.09	24	P		P	07 17 46.1	+1.2
M22K	**Willow** baz=264,SNR=5.2	84.11	28	P		P	07 17 45.8	+0.7
CUT	**Chulitna** baz=263	84.12	28	P		P	07 17 44.8	-0.3
O22K	**Cooper Landing** baz=264	84.17	30	P		P	07 17 45.5	+0.1
G22K	**Bettles** baz=262	84.19	23	P		P	07 17 45.8	+0.4
RC01	**Rabbit Creek A** comp=Z,21nm,0.9s	84.22	29	IAmb		IAmb	07 17 46.7	
RC01	**Rabbit Creek A** baz=264,SNR=5.1	84.22	29	P		P	07 17 46.2	+0.5
TRF	**Thorofare Moun** baz=263	84.23	27	P		P	07 17 46.1	+0.2
MLY	**Manley** baz=263	84.24	25	P		P	07 17 46.6	+0.9
ZEI	**Tsey**	84.54	313	*e*P		P	07 17 45.5	-2.4
ZEI	comp=Z,13nm,1.4s			pmax		pmax		
PMR	**Palmer** comp=Z,18nm,0.9s	84.57	28	IAmb		IAmb	07 17 48.4	
PMR	**Palmer** baz=264,SNR=5.7	84.57	28	P		P	07 17 47.8	+0.5
COLD	**Coldfoot** baz=263	84.73	23	P		P	07 17 48.7	+0.6
G23K	**Bananza Creek** baz=263	84.74	23	P		P	07 17 49.5	+1.3
D23K	**Nanushuk River** baz=262	84.78	21	P		P	07 17 49.6	+1.2
I23K	**Minto, Yukon-K** baz=264	84.83	25	P		P	07 17 49.7	+1.1
ONI	**Oni** comp=Z,12nm,1.1s	84.86	312	IAmb		IAmb	07 18 01.3	
MCK	**McKinley** baz=264	84.87	26	P		P	07 17 49.5	+0.6
KNK	**Knik Glacier** baz=265,SNR=5.0	84.87	29	P		P	07 17 49.4	+0.4
RND	**Reindeer** comp=Z,9.7nm,1.0s	84.87	27	IAmb		IAmb	07 17 49.8	
WAT1	**Susitna Watana** baz=265	84.95	27	P		P	07 17 50.0	+0.6
SML	**Sawmill** baz=265,SNR=5.8	84.97	28	P		P	07 17 50.5	+1.0
E23K	**Chandalar** baz=263	85.06	22	P		P	07 17 50.6	+0.8
TOLK	**Toolik Lake Re** baz=263	85.14	21	P		P	07 17 51.0	+0.7
M23K	**Glacier View** baz=266,SNR=5.1	85.25	28	P		P	07 17 51.7	+0.9
KBZ	**Khabaz**	85.30	314	*ce*P		P	07 17 51.9	+0.5
KBZ	**Khabaz** comp=Z,4.3nm,0.8s,baz=91,slow=6.6,SNR=7.6	85.30	314	P		P	07 17 51.2	-0.2
WAT6	comp=Z,4.3nm,0.8s **Susitna Watana** baz=266,SNR=6.9	85.31	28	P		P	07 17 52.2	+0.9
SCM	**Sheep Creek Mo** baz=266	85.44	28	P		P	07 17 52.9	+1.0
KIV	**Kislovodsk**	85.46	314	*e*P		P	07 17 52.0	-0.4
KIV	comp=Z,7.0nm,1.1s			pmax		pmax		
D24K	**Happy Valley** baz=264	85.47	21	P		P	07 17 53.0	+1.2
E24K	**Your Creek** baz=264	85.48	22	P		P	07 17 52.9	+0.9
DHY	**Denali Highway** baz=266	85.51	27	P		P	07 17 53.4	+1.1
H24K	**Noodor Dome** baz=265	85.51	24	P		P	07 17 53.2	+1.1
C24K	**Franklin Bluff** baz=264	85.57	20	P		P	07 17 52.4	+0.2
F24K	**Squaw Lake** baz=265	85.65	23	P		P	07 17 53.2	+0.4
Q23K	**Middleton Isla** baz=267	85.78	31	P		P	07 17 53.4	0.0
HDA	**Harding Lake** baz=266	85.80	26	P		P	07 17 53.8	+0.3
ILAR	**Eielson Array** comp=Z,0.9nm,0.6s,baz=254,slow=5.1,SNR=11	85.85	25	P		P	07 17 52.6	-1.1
ILAR	comp=Z,0.3nm,0.8s,baz=292,slow=7.6,SNR=4.1			PP		PP	07 21 13.6	-0.5
GURO	comp=Z,0.9nm,0.6s **Guroymak-BITLI** baz=Z,21nm,0.9s	85.86	308	IAmb		IAmb	07 17 56.3	
M24K	**Tolsona, Glenn** baz=267	86.00	28	P		P	07 17 54.4	-0.3
KLU	**Klutina** baz=267	86.09	29	P		P	07 17 55.2	+0.1
K24K	**Donnelly Dome** baz=267	86.27	26	P		P	07 17 55.5	-0.4
VRH	**Novokhopyorsk**	86.29	321	*e*P		P	07 17 53.3	-2.8
VRH	comp=Z,30nm,0.6s			pmax		pmax		
D25K	**Kavik River** baz=266	86.35	21	P		P	07 17 56.7	+0.5
PAX	**Paxson** baz=268	86.37	27	P		P	07 17 56.8	+0.3
HARP	**HAARP** baz=268	86.49	28	P		P	07 17 56.6	-0.4
F25K	**Christian Rive** baz=267	86.52	23	P		P	07 17 57.1	0.0
E25K	**Arctic Village** baz=267	86.57	22	P		P	07 17 57.4	+0.1
RIDG	**Independent Ri** baz=268	86.68	26	P		P	07 17 58.1	+0.2
BMRM	**Bremner River** baz=268	86.71	29	P		P	07 17 58.4	+0.3
N25K	**Chitina, Valde** baz=268	86.73	29	P		P	07 17 59.2	+0.9
BMAR	**Burnt Mountain**	86.92	23	P		P	07 17 59.8	+0.8
SCRK	**Sand Creek** baz=269	87.07	26	P		P	07 18 01.0	+1.1
F26K	**Sheenjek River** baz=268	87.09	22	P		P	07 18 01.1	+1.3
G26K	**Porcupine Rive** baz=269	87.22	23	P		P	07 18 01.1	+0.7
J26L	**Joseph Creek** baz=269	87.27	26	P		P	07 18 00.8	0.0
I26K	**Coal Creek Min** baz=270	87.45	25	P		P	07 18 02.8	+1.3
M26K	**Nabesna, AK** baz=270	87.50	28	P		P	07 18 02.6	+0.7
KLMR	**Klimovskoe**	87.63	331	*e*P		P	07 17 59.7	-2.8
KLMR	comp=Z,15nm,0.6s			pmax		pmax		
VORD	**Divnogorie**	87.82	321	*e*P		P	07 18 01.1	-2.5
VORD	comp=Z,10.0nm,0.4s			pmax		pmax		
VORR	**Voronezh**	87.86	321	*e*P		P	07 18 02.5	-1.3
VORR	comp=Z,40nm,0.5s			pmax		pmax		
VSR	**Storozhevoye**	87.89	321	*e*P		P	07 18 01.4	-2.5
VSR	comp=Z,10.0nm,1.0s			pmax		pmax		
K27K	**Chicken** baz=270	87.91	26	P		P	07 18 04.6	+0.8
M27K	**Edge Creek, AK** baz=271	88.02	28	P		P	07 18 05.1	+0.6
LPSR	**Galich'ya Gora**	88.02	322	*e*P		P	07 18 02.3	-2.2
LPSR	comp=Z,10.0nm,0.6s			pmax		pmax		
L27K	**Beaver Creek,** baz=271	88.03	27	P		P	07 18 05.0	+0.5
I27K	**Kandik River** baz=271	88.09	25	P		P	07 18 05.4	+0.8
H27K	**Steamboat Moun** baz=271	88.12	24	P		P	07 18 05.6	+0.8
CTG	**Chitna Glacier** baz=271	88.30	29	P		P	07 18 07.2	+1.4
F28M	**Old Crow** baz=272	88.73	23	P		P	07 18 08.0	+0.4
I28M	**Miner Creek** baz=272	88.80	25	P		P	07 18 08.3	+0.3
E28M	**Babbage River** baz=273	88.81	22	P		P	07 18 08.4	+0.5

DAWY	**Dawson** comp=Z,8.0nm,1.4s	89.09	26	IAmb		IAmb	07 18 10.9	
DAWY	**Dawson** baz=273	89.09	26	P		P	07 18 09.8	+0.4
PNL	**Peninsula** baz=273	89.31	30	P		P	07 18 11.4	+0.9
OBN	**Obninsk**	89.34	325	*e*P		P	07 18 09.6	-1.0
OBN				*e*			07 21 42.7	
OBN				*e*PPP		PPP	07 23 38.4	
OBN				*e*S		SKSac	07 28 30.0	-3.4
OBN	comp=Z,35nm,1.7s			pmax		pmax		
OBN	comp=Z,124nm,16.0s			MLR		MLR		
H29M	**Whitestone** baz=274	89.40	24	P		P	07 18 11.8	+1.0
E29M	**Blow River** baz=274	89.43	22	P		P	07 18 10.8	0.0
K29M	**Barlow Dome** baz=275	89.93	26	P		P	07 18 12.8	-0.6
EPYK	**Eagle Plains** baz=275	90.05	24	P		P	07 18 13.7	-0.1
HYT	**Haines Junctio** baz=275	90.18	29	P		P	07 18 13.9	-0.7
G30M	**tAoh Zrai Nji** baz=276	90.19	23	P		P	07 18 14.0	-0.5
F30M	**Barrier River** baz=276	90.29	22	P		P	07 18 14.6	-0.3
I30M	**Mount Dempster** baz=276	90.30	25	P		P	07 18 15.5	+0.4
M30M	**Minto, Yukon** baz=275	90.37	27	P		P	07 18 16.3	+0.9
J30M	**Hart River** baz=276	90.38	25	P		P	07 18 16.3	+0.8
P30M	**Million Dollar** baz=275	90.51	30	P		P	07 18 17.1	+1.0
MAYO	**Mayo, Yukon** baz=276	90.68	26	P		P	07 18 17.1	+0.4
PLBC	**Pleasant Camp** baz=276	90.87	31	P		P	07 18 18.3	+0.6
G31M	**Satah River** baz=278	90.96	23	P		P	07 18 17.3	-0.6
INK	**Inuvik** baz=278	91.05	22	P		P	07 18 17.5	-0.8
M31M	**Drury Creek, Y** baz=277	91.52	28	P		P	07 18 22.0	+1.3
FARO	**Faro, Yukon**	92.00	28	P		P	07 18 23.5	+0.6
FARO	comp=Z,8.3nm,1.0s			IAmb		IAmb	07 18 24.4	
FARO	**Faro, Yukon** baz=278	92.00	28	P		P	07 18 23.8	+0.8
BRTR	**Keskin Array B** comp=Z,1.1nm,0.8s,baz=144,slow=8.6,SNR=5.5	92.34	310	P		P	07 18 23.6	-1.6
BRTR	comp=Z,1.7nm,1.0s,baz=94,slow=5.0,SNR=4.8			PP		PP	07 22 08.9	+2.2
SPITS	comp=Z,1.1nm,0.8s **Spitsbergen Ar** comp=Z,16nm,1.1s,baz=125,slow=7.2,SNR=1.4	92.38	349	P		P	07 18 22.8	-1.6
ARCES	comp=Z,16nm,1.1s **ARCESS Array B** comp=Z,9.5nm,0.9s,baz=81,slow=6.7,SNR=16	92.54	340	P		P	07 18 23.8	-1.4
WRAK	comp=Z,9.5nm,0.9s **Wrangell Islan** baz=279	93.38	33	P		P	07 18 30.3	+1.0
R33M	**Jennings River** baz=280	93.61	30	P		P	07 18 30.9	+0.4
FINES	**FINESS Array B** comp=Z,2.2nm,0.6s,baz=58,slow=5.6,SNR=26	94.04	332	P		P	07 18 30.8	-1.5
C36M	comp=Z,2.2nm,0.6s **Paulatuk** comp=Z,5.1nm,1.1s	94.17	20	IAmb		IAmb	07 18 33.1	
C36M	**Paulatuk** baz=282	94.17	20	P		P	07 18 33.0	+0.4
AKASG	**Malin Array Be** comp=Z,0.6nm,0.5s,baz=79,slow=3.5,SNR=6.2	94.20	321	P		P	07 18 31.0	-2.2
DLBC	comp=Z,0.6nm,0.5s **Dease Lake** baz=281	94.27	31	P		P	07 18 33.6	+0.1
TGTN	**Hyland Airport** baz=283	94.49	28	P		P	07 18 34.5	0.0
WTLY	**Watson Lake, Y** comp=Z,11nm,1.3s	94.55	29	IAmb		IAmb	07 18 37.0	
WTLY	**Watson Lake, Y** baz=282	94.55	29	P		P	07 18 34.9	+0.2
WRGLY	**Wrigley** baz=287	96.22	26	P		P	07 18 42.8	+0.6
KOTAN	**Kotaneelee Air** baz=286	96.85	29	P		P	07 18 45.6	+0.4
CRVS	**Cervenica-Dubn**	99.48	320	*e*P		Pdif	07 18 57.4	+0.2
CRVS	**Cervenica-Dubn**	99.48	320	*e*PDIFF		Pdif	07 18 57.4	+0.2
HFS	**Hagfors** comp=Z,3nm,0.5s,baz=108,slow=4.8,SNR=8.6	100.22	332	P		Pdif	07 18 58.6	-1.6
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.8s,baz=295,slow=4.6,SNR=6.6	100.27	25	P		Pdif	07 18 59.5	-0.8
NOA	**NORSAR Array B** comp=Z,0.7nm,0.9s,baz=73,slow=5.1,SNR=3.8	100.97	334	P		Pdif	07 19 01.3	-2.3
W18A	**Petrified Fore** baz=292	114.30	50	P		PKPdf	07 23 53.7	-0.7
RSSD	**Black Hills** baz=300	114.42	39	P		PKiKP	07 23 53.9	-0.5
MVCO	**Mocho Verde** baz=293	114.44	47	P		PKPdf	07 23 54.4	-0.3
TUC	**Tucson** baz=290	114.46	53	P		PKiKP	07 23 55.1	+0.5
N23A	**Red Feather La** baz=297	114.70	43	P		PKPdf	07 23 55.3	+0.2
ISCO	**Idaho Springs** baz=297	115.41	44	P		PKiKP	07 23 56.6	0.0
S22A	**4UR Ranch, Cre** baz=295	115.44	46	P		PKPdf	07 23 56.9	+0.3
ANMO	**Albuquerque** baz=294	116.86	49	P		PKiKP	07 23 59.9	+0.5
MNTX	**Cornudas Mount** baz=293	118.96	52	P		PKPdf	07 24 03.1	-0.2
BGNE	**Belgrade** baz=304	119.53	39	P		PKPdf	07 24 04.1	0.0
CBKS	**Cedar Bluff** baz=301	119.88	42	P		PKPdf	07 24 04.8	-0.1
TXAR	**Lajitas Array** comp=Z,0.9nm,0.7s,baz=255,slow=1.3,SNR=12	121.24	54	PKP		PKiKP	07 24 08.1	+0.2
TXAR	comp=Z,0.4nm,0.8s,baz=108,slow=5.8,SNR=3.8			PKKPbc		PKKPbc	07 34 10.1	-0.1
KSU1	**Kansas State U** baz=304	121.79	40	P		PKPdf	07 24 08.0	-0.5
WMOK	**Wichita Mounta** baz=300	122.59	46	P		PKPdf	07 24 10.0	-0.2
JFWS	**Jewell Farm** baz=312	123.27	33	P		PKPdf	07 24 10.1	-1.0
JCT	**Junction City** baz=296	123.82	51	P		PKPdf	07 24 12.6	-0.1
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.3s,baz=86,slow=2.5,SNR=6.9	125.00	288	PKP		PKPdf	07 24 14.6	-0.6
CCM	**Cathedral Cave** baz=308	125.81	38	P		PKPdf	07 24 15.8	-0.3
MIAR	**Mount Ida** baz=304	126.34	43	P		PKPdf	07 24 17.5	+0.2
WVT	**Waverly** baz=310	129.14	38	P		PKPdf	07 24 22.1	-0.4
SSPA	**Standing Stone** baz=324	131.16	27	P		PKPdf	07 24 26.6	+0.3
TZTN	**Tazewell** baz=315	131.39	35	P		PKPdf	07 24 27.1	+0.3
LRAL	**Lakeview Retre** baz=309	131.64	41	P		PKiKP	07 24 28.3	-0.1
DBIC	**Dimbokro** comp=Z,1.8nm,0.8s,baz=154,slow=6.5,SNR=3.7	132.53	281	PKP		PKPdf	07 24 29.5	-0.1

ISC 11 07:26:24.8±0.8, 61°16N±0.02×139°91W±0.02, h10km, n21, σ0.72/39, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YUK8	**Steele Glacier** baz=211,SNR=1000	0.14	28	P		Pg		07 26 28.0	-0.3
YUK8				S		Sg		07 26 30.0	-0.7
YUK4	**Talbot Arm** baz=248,SNR=17	0.64	72	P		Pb		07 26 38.2	0.0
YUK4				S		Sb		07 26 47.6	+0.5
YUK3	**Moose Creek** baz=157,SNR=52	0.67	337	P		Pg		07 26 37.5	-0.3
YUK3				S		Sg		07 26 46.5	-0.2
CTG	**Chitna Glacier** baz=73,SNR=41	0.72	255	P		Pg		07 26 39.0	+0.2
CTG	baz=73			S		Sb		07 26 49.1	-0.5
YUK6	**Outpost Mounta** baz=287,SNR=216	0.78	105	P		Pg		07 26 39.7	-0.2
YUK6	baz=287			S		Sg		07 26 50.4	+0.3
O29M	**Mount Kennedy** baz=323	1.08	142	P		Pg		07 26 45.0	-0.5
O29M	baz=323			S		Sg		07 26 59.6	+0.1
PINM	**Pinnacle** baz=8.7	1.08	189	Sg		Sn		07 27 01.8	+0.7
HYT	**Haines Junctio** baz=287,SNR=26	1.22	105	P		Pn		07 26 46.9	-1.1
HYT	baz=287			S		Sb		07 27 03.4	-0.4
BVCY	**Beaver Creek** baz=160	1.34	341	P		Pn		07 26 48.3	-1.3
M29M	**Somme Creek** baz=209	1.46	27	Pg		Pb		07 26 51.9	-0.3
M29M	baz=209			Sg		Sg		07 27 11.5	-0.3
PNL	**Peninsula** baz=351	1.52	170	Pg		Pg		07 26 53.9	+0.1
PNL	baz=351			Sg		Sg		07 27 15.3	+1.9
MCARA	**McCarthy VSAT** baz=97	1.52	280	Pg		Pg		07 26 53.7	-0.3
MCARA	baz=97			Sb		Sg		07 27 13.8	+0.1
M27K	**Edge Creek, AK** baz=141	1.53	323	Pb		Pn		07 26 52.4	+0.2
M27K	baz=141			Sb		Sg		07 27 13.2	-0.7
CRQE	**Cirque** baz=74	1.61	257	Pb		Pb		07 26 54.5	-0.1
CRQE	baz=74			Sb		Sg		07 27 15.9	-0.6
P30M	**Million Dollar** baz=307	1.79	124	Pb		Pb		07 26 57.3	-0.3
P30M	baz=307			Sb		Sb		07 27 21.3	+1.2
P29M	**Windy Craggy** baz=326	1.87	144	Pb		Pb		07 26 59.1	0.0
P29M	baz=326			Sb		Sg		07 27 24.3	-0.6
O30N	**Mendenhall** baz=284	1.90	100	Pb		Pb		07 26 59.0	-0.6
O30N	baz=284			Sb		Sb		07 27 24.1	+0.7
M26K	**Nabesna, AK** baz=129	1.93	312	Pb		Pb		07 27 00.0	0.0
M30M	**Minto, Yukon** baz=228	2.05	45	Pg		Pb		07 27 02.7	+0.6
M30M	baz=228			Sb		Sb		07 27 28.9	+1.2
L27K	**Beaver Creek,** baz=154	2.11	336	Pg		Pb		07 27 03.9	+0.7
L27K	baz=154			Sb		Sb		07 27 30.6	+1.1
L29M	**L29M** baz=204	2.13	22	Pg		Pb		07 27 04.2	+0.7
L29M	baz=204			Sb		Sb		07 27 31.4	+1.4

MOS **11** *07:31:00.6±1.1, 32°.28N×140°.36E, h13km, mb4.9/50, Error ellipse: s-maj=9.4km s-min=4.4km az=107.9*
BJI **11** *07:31:00.0±0.0, 32°.41N×140°.94E, h23km, mb4.4/45, mB4.8/25, Ms4.4/38, Ms7 4.2/39*
NEIC **11** *07:31:02.5±1.8, 32°.33N±0°.04×140°.40E±0°.07, h10km±1km, mb4.8/322, Error ellipse: s-maj=12.0km s-min=2.8km az=239.0*
IDC **11** *07:31:05.0±1.7, 32°.23N×140°.29E, h32km±11km, mb4.3/32, mbtmp4.5/34, ML5.0/2, MS3.9/50, Error ellipse: s-maj=14.3km s-min=10.1km az=70.0*
NIED **11** *07:31:05.1, 32°.45N×140°.43E, h29km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr5.52; Mθθ-6.48; Mφφ0.97; Mrθ-3.00; Mrφ-2.08; Mθφ-2.60; Fault plane solution: M₀7.49000×10¹⁵ NP1: φs239.00000°, δ62.00000°, λ72.00000°. NP2: φs94.00000°, δ33.00000°, λ120.00000°.*
JMA **11** *07:31:05.1±0.2, 32°.5N±0°.4×140°.4E±0°.7, h29km, MD4.9/37, MW4.7/37, E OFF HACHIJOJIMA ISLAND.*
JMA Felt II J1 at E OFF HACHIJOJIMA ISLAND.
ISC 11 07:31:02.8±0.5, 32°33N±0°.03×140°47E±0°.04, h15km±2km, h16km: pP-P, n830, σ1.9/58/713, mb4.8/243, MS4.0/57, 22C-25D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	0.61	283	P		Pn		07 31 16.2	-0.8
JAOM				*e*S		Sn		07 31 24.8	-1.8
JAOM	**Aogashimamukai** comp=E,202nm,1.4s,comp=N,343nm,0.5s	0.61	283	A		A		07 31 16.2	
JHCJ	**Hachijojimakas**	0.93	323	⇓P		Pb		07 31 20.3	-0.4
JHCJ				⇓*e*S		Sg		07 31 31.2	-2.0
JHCJ	**Hachijojimakas** comp=E,53nm,1.2s,comp=N,40nm,0.7s	0.93	323	A		A		07 31 20.3	
JHJ2	**Mitsune**	0.95	325			Pg		07 31 20.2	-1.1
JHJ2				Sg		Sg		07 31 32.0	-1.8
JHJ2	**Mitsune**	0.95	325	P		Pb		07 31 21.0	0.0
JHJ2	**Mitsune**	0.95	325	⇓P		Pg		07 31 20.5	-0.9
JHJ2				⇓*e*S		Sg		07 31 32.3	-1.6
JHJ2	**Mitsune** comp=E,50nm,5.2s,comp=N,43nm,1.3s	0.95	325	A		A		07 31 20.5	
JHJ	**Hachijo jima 2** comp=N,960nm,0.3s,baz=198,slow=19,SNR=400	0.98	324	Pn		Pg		07 31 20.8	-1.0
JHJ	comp=N,6μm,0.3s,baz=77,slow=21,SNR=20			Sn		Sg		07 31 31.9	-2.7
JMKN	**Mikurajimanish**	1.72	335	P		Pn		07 31 31.9	-0.3
JMKN				*e*S		Sn		07 31 51.7	-2.2
JMKN	**Mikurajimanish** comp=E,23nm,5.9s,comp=N,24nm,3.7s	1.72	335	A		A		07 31 31.9	
JMYK	**Miyake Tsubota**	1.89	336	P		Pn		07 31 34.7	+0.2
JMYK				*e*S		Sn		07 31 57.4	-0.7
JMYK	**Miyake Tsubota** comp=E,30nm,2.7s,comp=N,35nm,3.6s	1.89	336	A		A		07 31 34.7	
JKO	**Kozu shima**	2.16	329	P		Pn		07 31 39.1	+0.8
JKO	**Kozu shima** comp=E,36nm,3.7s,comp=N,25nm,2.6s	2.16	329	A		A		07 31 39.1	
BSO1	**Boso 1**	2.35	10	⇓P		Pn		07 31 39.7	-0.7
BSO1				⇓*e*S		Sn		07 32 05.5	-3.2
BSO3	**Boso 3**	2.46	1	⇓P		Pn		07 31 41.9	-0.3
JIM2	**Oshima 3**	2.53	340	P		Pn		07 31 43.6	+0.2
JIM2	**Oshima 3** comp=E,17nm,0.6s,comp=N,17nm,1.3s	2.53	340	A		A		07 31 43.6	
JIZS	**Izushimoda**	2.73	331	⇓P		Pn		07 31 47.0	+1.0
JIZS	**Izushimoda** comp=E,7.0nm,3.0s,comp=N,8.0nm,2.1s	2.73	331	A		A		07 31 47.0	
TK02	**Tokai 2**	2.79	306	*e*P		Pn		07 31 47.8	+1.1
TK04	**Tokai 4**	2.98	314	P		Pn		07 31 51.0	+1.5
JSG	**Sagara**	3.02	321			Pn		07 31 51.3	+1.3
JSG	**Sagara**	3.02	321	P		Pn		07 31 52.0	+2.0
JOD2	**Odawara 2**	3.14	339	⇓P		Pn		07 31 52.3	+0.5
JFNN	**Fujinakano**	3.22	333	P		Pn		07 31 54.8	+2.0
SHZ3	**Shizuoka 3**	3.31	326	P		Pn		07 31 55.9	+1.7
JYN	**Shimob**	3.54	334	P		Pn		07 31 59.3	+2.0
JIE	**Ise**	3.76	304	P		Pn		07 32 01.1	+0.9
JRY	**Ryogami san**	3.90	341	⇓P		Pn		07 32 03.5	+1.3
INU	**Inuyama**	4.16	317			Pn		07 32 06.4	+0.7
INU	**Inuyama**	4.16	317	P		Pn		07 32 07.5	+1.8
JGF	**Kuroka**	4.16	322			Pn		07 32 07.9	+2.2
JGF	**Kuroka**	4.16	322	P		Pn		07 32 08.0	+2.2
MJAR	**Matsushiro Arr** comp=N,43nm,0.3s,baz=164,slow=14,SNR=2417	4.60	337	Pn		Pn		07 32 14.0	+2.2
MJAR	baz=41,slow=20			Sn		Sn		07 33 05.8	+0.9
MJAR	comp=N,1μm,19.3s,baz=129,slow=39			LR		LR		07 34 07.3	
MAJO	**Matsushiro**	4.60	337			Pn		07 32 14.7	+2.9
MAJO	**Matsushiro**	4.60	337	P		Pn		07 32 14.4	+2.6
MAJO	**Matsushiro**	4.60	337	*i* P		Pn		07 32 13.1	+1.3
MJB9	**Matsu-Tunnel**	4.60	337			Pn		07 32 14.7	+2.8
JCJ	**Chichijima**	5.43	164			Pn		07 32 22.4	-0.8
JCJ	**Chichijima**	5.43	164	P		Pn		07 32 22.8	-0.4
JCJ	**Chichijima** comp=N,44nm,0.3s,baz=280,slow=22,SNR=31	5.43	164	Pn		Pn		07 32 18.1	-5.0
JCJ	comp=N,46nm,0.3s,baz=270,slow=22,SNR=1.7			Sn		Sn		07 33 13.9	-11
JMM	**Marumori**	5.53	3			Pn		07 32 24.5	0.0
JMM	**Marumori**	5.53	3	P		Pn		07 32 24.7	+0.2
JMN	**Monobe**	5.71	286			Pn		07 32 28.7	+1.6
JMN	**Monobe**	5.71	286	P		Pn		07 32 28.6	+1.6
JNU	**Nakatsue**	8.12	278	Pn		Pn		07 33 00.1	0.0

JNU Nakatsue 8.12 278 Pn **Pn 07 33 02.2 +2.0**
comp=N,0.9nm,0.3s,baz=5.6,slow=5.5,SNR=8.3
JNU Sn **Sn 07 34 30.5 -1.2**
comp=N,0.7nm,0.3s,baz=174,slow=18,SNR=1.3
JNU LR LR 07 36 10.5
comp=N,824nm,18.8s,baz=108,slow=38
JTM Tenmabayashi 8.45 3 Pn **Pn 07 33 04.5 -0.2**
JTM Tenmabayashi 8.45 3 P **Pn 07 33 04.6 -0.1**
ERM Erimo 9.90 12 Pn **Pn 07 33 23.7 -1.2**
ERM Erimo 9.90 12 P **Pn 07 33 23.7 -0.8**
ERM Erimo 9.90 12 *ce*P **Pn 07 33 23.2 -1.2**
ERM pmax pmax
comp=Z,110nm,1.0s
JEM Erimo 9.90 12 P **Pn 07 33 23.9 -0.6**
JMZ Minamidaito 2 10.37 234 Pn **Pn 07 33 30.9 0.0**
KSRS Korea Array 11.50 300 Pn **Pn 07 33 50.6 +4.2**
comp=Z,0.3nm,0.3s,baz=114,slow=13,SNR=17
KSRS LR LR 07 38 27.3
comp=Z,837nm,18.4s,baz=110,slow=39
KS19 Wonju Array Si 11.56 300 Pn 07 33 47.7 +0.5
NMR Nemuro--Hokkai 11.77 19 *eP* **Pn 07 33 46.4 -3.7**
ASAJ Asahikawa 11.88 7 P **Pn 07 33 49.5 -2.1**
ASAJ Asahikawa 11.88 7 Pn **Pn 07 33 49.4 -2.3**
comp=Z,9.0nm,0.3s,baz=219,slow=12,SNR=115
ASAJ Sn Sn 07 35 53.3 -11
comp=Z,1.0nm,0.3s,baz=192,slow=20,SNR=3.0
ASAJ LR LR 07 39 45.1
comp=Z,241nm,19.3s,baz=103,slow=43
JKA Kamikawa-asahi 11.88 7 Pn 07 33 49.5 -2.2
JOW Kunigami 11.94 246 LR LR 07 38 02.2
comp=Z,436nm,21.9s,baz=50,slow=36
RUSJ Misakicho 12.34 16 *eP* **Pn 07 33 55.6 -2.2**
YUK Yuzh-Kuril'sk 12.43 18 *eP* **Pn 07 33 58.9 -0.1**
YUK pmax pmax
comp=Z,92nm,0.5s
YUK pmax pmax
comp=N,35nm,0.3s
YUK pmax pmax
comp=E,32nm,0.3s
INCN Inchon 12.46 298 Pn **Pn 07 33 57.3 -2.3**
INCN Inchon 12.46 298 P **Pn 07 33 57.3 -2.3**
SHO Shikotan 12.55 22 P **Pn 07 34 02.5 +1.7**
SHO pmax pmax
comp=Z,9.0nm,0.3s
USA0B Ussuriysk Arra 13.58 333 Pn **Pn 07 34 12.7 -2.2**
USA0B Ussuriysk Arra 13.58 333 *i*P **Pn 07 34 14.1 -0.7**
USRK Ussuriysk Ar. 13.58 333 Pn **Pn 07 34 13.3 -1.5**
comp=Z,3.2nm,0.8s,baz=84,slow=17,SNR=3.3
USRK LR LR 07 39 19.5
comp=Z,507nm,19.5s,baz=148,slow=36
KUR Kuril'sk 14.11 22 *eP* **Pn 07 34 20.1 -1.9**
YSS Yuzh-Sakhalins 14.71 6 Pn **Pn 07 34 27.7 -2.5**
YSS Yuzh-Sakhalins 14.71 6 *eP* **Pn 07 34 27.4 -2.8**
YSS *eS* **Sn 07 37 08.1 -4.7**
YSS pmax pmax
comp=Z,70nm,0.7s
YSS MLR MLR
comp=N,500nm,13.0s
YSS MLR MLR
comp=Z,700nm,13.0s
MDJ Mudanjiang 14.92 328 P **Pn 07 34 32.4 -0.6**
MDJ S **Sn 07 37 21.7 +3.8**
MDJ sS S 07 37 30.1 -5.7
MDJ SS **SnSn 07 37 42.2 +12**
MDJ pmax pmax
comp=Z,190nm,3.6s
MDJ LR LR
comp=Z,520nm,11.4s
MDJ LR LR
comp=Z,450nm,13.5s
MDJ LR LR
comp=Z,850nm,15.0s
CN2 Changchun 16.43 318 P **P 07 34 55.8 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,600nm,16.0s
BNX BinXian 16.77 327 ⇑P **Pn 07 34 56.6 -0.4**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,230nm,4.6s
UGL Uglegorsk 16.77 4 *eP* **P 07 35 01.6 +2.4**
UGL pmax pmax
comp=Z,100nm,0.9s
KLR Kul'dur 18.11 341 *ce*P **Pn 07 35 10.5 -3.1**
KLR pmax pmax
comp=Z,15nm,1.3s
KLR Kul'dur 18.11 341 P **Pn 07 35 11.0 -2.6**
comp=Z,6.5nm,0.5s,baz=136,slow=11,SNR=18
KLR S S 07 38 52.1 +11
comp=Z,0.5nm,0.3s,baz=180,slow=20,SNR=6.0
KLR LR LR 07 42 03.5
comp=Z,239nm,20.2s,baz=160,slow=36
NJ2 Nanjing 18.30 275 *eP* **P 07 35 16.9 +0.7**
NJ2 pP **pwP 07 35 20.8 -2.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NJ2 pmax pmax
comp=Z,310nm,6.0s
NJ2 LR LR
comp=Z,1μm,10.0s
NJ2 LR LR
comp=Z,790nm,10.9s
NJ2 LR LR
comp=Z,1μm,10.7s
YHNB Yeheng 18.42 250 P **Pn 07 35 16.4 -1.4**
YHNB IAmb IAmb 07 35 31.1
comp=Z,57nm,0.8s
TYV Tymovskoe 18.59 4 *eP* **P 07 35 18.7 -0.5**
TYV *eS* **S 07 38 50.8 +0.3**
TYV pmax pmax
comp=Z,200nm,2.4s
TYV pmax pmax
comp=Z,47nm,0.7s
TYV smax smax
comp=E,8.0nm,2.1s
TYV smax smax
comp=N,300nm,5.8s
TYV smax smax
comp=E,400nm,5.8s
GRNR Gornyy 18.66 352 ⇑*i*P **Pn 07 35 21.9 +1.5**
GRNR pmax pmax
comp=N,10.0nm,0.8s
GRNR pmax pmax
comp=Z,30nm,0.5s
GRNR MLR MLR
comp=E,150nm,11.0s
GRNR MLR MLR
comp=Z,280nm,14.0s
GUMO Guam 19.09 167 P **P 07 35 24.4 -0.5**
GUMO Guam 19.09 167 P **P 07 35 24.4 -0.5**
GUMO pmax pmax
comp=Z,464nm,1.1s
GUMO Guam 19.09 167 P **P 07 35 23.5 -1.4**
comp=Z,8.4nm,0.3s,baz=17,slow=19,SNR=4.2
GUMO LR LR 07 42 18.0
comp=Z,209nm,19.3s,baz=44,slow=35
comp=Z,105nm,0.8s
YULB Yu-li 19.13 247 P **P 07 35 23.7 -1.6**
YULB Yu-li 19.13 247 P **Pn 07 35 27.9 +1.7**
SSLB Suanglung 19.19 249 P **P 07 35 26.6 +0.5**
SSLB IAmb IAmb 07 35 39.5
comp=Z,62nm,0.8s
SSLB Suanglung 19.19 249 P **Pn 07 35 27.3 +0.3**
TWG Pinlang 19.61 246 P **Pn 07 35 32.2 +0.2**
TWG IAmb IAmb 07 35 52.4
comp=Z,67nm,0.8s
TPUB Ta-pu 19.70 248 Pn 07 35 34.0 +0.9
TPUB IAmb IAmb 07 35 46.6
comp=Z,68nm,0.9s
TPUB Ta-pu 19.70 248 P **Pn 07 35 33.1 0.0**
HEH HeiHe 20.36 335 *eP* **P 07 35 36.0 -2.6**
HEH pP Pn 07 35 38.6 -2.1
HEH PP **PnPn 07 35 52.5 -3.2**
HEH S **S 07 39 24.2 -2.0**
HEH sS Sn 07 39 28.8 -0.9
HEH pmax pmax
comp=Z,12nm,0.8s
HEH pmax pmax
comp=Z,140nm,5.2s
HEH LR LR
comp=N,280nm,16.3s
HEH LR LR
comp=E,530nm,16.7s
HEH LR LR
comp=Z,710nm,17.0s
HNS HongShan 21.71 291 ⇓P **P 07 35 55.1 +1.9**
HNS S Sn 07 39 59.9 -2.3
HNS pmax pmax
comp=Z,11nm,0.7s
HNS LR LR
comp=Z,480nm,15.0s
HNS LR LR
comp=Z,700nm,14.2s
HNS LR LR
comp=Z,650nm,13.9s
XLT XiLinHaoTe 22.31 308 *eP* **P 07 36 01.4 +1.6**
XLT pP pwP 07 36 05.7 -0.6
XLT PP **PnPn 07 36 29.3 +6.8**
XLT pmax pmax
comp=Z,6.0nm,0.4s
XLT pmax pmax
comp=Z,160nm,4.2s
WHN Wuhan 22.34 272 P P 07 36 07.6 +7.5
WHN sP pwP 07 36 11.5 +4.7
HIA Hailar 22.95 324 P **P 07 36 05.8 -0.7**
HIA IAmb IAmb 07 36 15.2
comp=Z,18nm,0.6s
HIA Hailar 22.95 324 P **P 07 36 07.7 +1.2**
HIA Hailar 22.95 324 P **P 07 36 05.8 -0.7**
HIA pmax pmax
comp=Z,18nm,0.6s
ZEA Zeya 23.40 340 *eP* **P 07 36 11.2 +0.3**
ZEA pmax pmax
comp=Z,200nm,0.9s
ZEA pmax pmax
comp=N,100nm,0.7s
ZEA pmax pmax
comp=E,50nm,0.6s
ZEA pmax pmax
comp=N,80nm,0.9s
ZEA pmax pmax
comp=Z,190nm,0.8s
ZEA MLR MLR
comp=Z,200nm,17.0s
LYN LuoYang 23.44 283 *eP* **P 07 36 12.0 +0.5**
LYN sP pwP 07 36 21.4 +3.2
LYN pmax pmax
comp=Z,11nm,0.6s
LYN LR LR
comp=Z,1μm,8.6s
LYN LR LR
comp=Z,350nm,8.7s
LYN LR LR
comp=Z,750nm,8.9s
PETK Petropavlovsk- 24.20 26 P **P 07 36 16.2 -2.3**
PETK Petropavlovsk- 24.20 26 P **P 07 36 19.6 +1.0**
comp=Z,2.9nm,0.8s,baz=200,slow=5.6,SNR=4.0
comp=Z,2.9nm,0.8s
PET Petropavlovsk 24.49 27 *eP* **P 07 36 24.2 +3.0**
PET pmax pmax
comp=Z,17nm,1.2s
HHC Hu-ho-hao-te 24.63 298 *eP* **P 07 36 22.8 0.0**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.7s
HHC LR LR
comp=Z,300nm,12.6s
HHC LR LR
comp=Z,500nm,12.6s
HHC LR LR
comp=Z,650nm,13.0s
BTO Baotou 25.75 297 *eP* **P 07 36 34.1 +1.3**
BTO pP **pwP 07 36 38.2 -1.4**
BTO sP **sP 07 36 41.5 +2.9**
BTO PP **PnPn 07 37 14.5 +5.0**
BTO S **S 07 41 02.9 +1.6**
BTO SS **SnSn 07 42 07.7 +11**
BTO pmax pmax
comp=Z,19nm,0.5s
BTO pmax pmax
comp=Z,140nm,4.4s
BTO LR LR
comp=Z,840nm,16.3s
BTO LR LR
comp=Z,1μm,19.7s
BTO LR LR
comp=Z,2μm,17.0s
XAN Xi'an 26.41 282 ⇑P **P 07 36 40.9 +2.1**
XAN pP pwP 07 36 45.6 0.0
XAN sP sP 07 36 48.3 +3.7
XAN pmax pmax
comp=Z,5.0nm,1.2s
XAN LR LR
comp=Z,570nm,13.1s
XAN LR LR
comp=Z,470nm,14.1s
XAN LR LR
comp=Z,390nm,13.1s
ENH Enshi 26.51 274 P 07 36 39.6 -0.2
H11N2 WAKE ISLAND Hy 26.77 111 T T 08 05 27.5
baz=300,slow=75
H11N1 WAKE ISLAND Hy 26.78 112 T T 08 05 37.2
baz=300,slow=75
H11N3 WAKE ISLAND Hy 26.79 111 T T 08 05 38.7
baz=300,slow=75
H11S3 WAKE ISLAND Hy 27.30 114 T T 08 06 00.9
baz=305,slow=75,SNR=371
H11S1 WAKE ISLAND Hy 27.31 114 T T 08 05 55.7
baz=305,slow=75,SNR=540
H11S2 WAKE ISLAND Hy 27.32 114 T T 08 05 49.5
baz=305,slow=75,SNR=323
MA2 Magadan 28.11 11 P **P 07 36 53.9 +0.1**
MA2 IAmb IAmb 07 37 08.8
comp=Z,15nm,0.8s
MA2 Magadan 28.11 11 P **P 07 36 53.9 +0.1**
MA2 pmax pmax
comp=Z,15nm,0.8s
ULN Ulaanbaatar 29.62 311 P **P 07 37 06.4 -1.1**
ULN Ulaanbaatar 29.62 311 *i*P **P 07 37 08.0 +0.5**
ULN pmax pmax
comp=Z,4.0nm,0.9s
SONM Songino Array 30.03 311 P **P 07 37 10.9 -0.2**
SONM Songino Array 30.03 311 P **P 07 37 10.9 -0.2**
SONM pmax pmax
comp=Z,5.0nm,0.7s
SONM Songino Array 30.03 311 P **P 07 37 11.4 +0.3**
comp=Z,2.4nm,0.8s,baz=114,slow=7.9,SNR=14
SONM PcP **PcP 07 40 12.1 -0.8**
comp=Z,0.7nm,0.6s,baz=113,slow=3.5,SNR=2.5
SONM ScP **ScP 07 43 51.3 -3.2**
comp=Z,1.6nm,1.0s,baz=134,slow=4.2,SNR=6.4
SONM LR LR 07 48 35.9
comp=Z,186nm,20.9s,baz=141,slow=35
comp=Z,2.4nm,0.8s
YAK Yakutsk 30.52 350 P **P 07 37 14.5 -0.6**
YAK Yakutsk 30.52 350 *eP* **P 07 37 14.5 -0.6**
YAK *e**PP **pwP 07 37 19.9 -2.1**
YAK *e* 07 38 14.5
YAK *e*PPP PPP 07 38 31.5
YAK *eS* **S 07 42 13.1 -2.7**
YAK *e**SS **sS 07 42 23.4 +0.8**
YAK *e*SSS SSS 07 44 03.5
YAK *e* 07 47 45.8
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK smax smax
comp=N,27nm,1.5s
YAK MLR MLR
comp=Z,264nm,17.0s
YAK MLR MLR
comp=E,111nm,14.0s
YAK MLR MLR
comp=N,155nm,16.0s
YAK Yakutsk 30.52 350 LR LR 07 49 53.9
comp=N,236nm,19.0s,baz=122,slow=37
BOD Bodaibo 31.22 333 *eP* **P 07 37 20.9 -0.4**
BOD pmax pmax
comp=Z,11nm,1.6s
SEY Seymchan 31.54 10 LR LR 07 51 03.9
comp=Z,142nm,19.8s,baz=14,slow=38
SHEM Shemya Is, Ala 31.66 40 LR LR 07 49 45.2
comp=Z,60nm,18.6s,baz=192,slow=35
ZAK Zakamensk 32.79 314 *eP* **P 07 37 35.7 +0.3**
ZAK pmax pmax
comp=Z,3.0nm,1.4s
GTA Gaotai 33.48 294 *eP* **P 07 37 41.3 -0.2**
GTA pP pwP 07 37 53.8 +5.4
GTA pmax pmax
comp=Z,1.0nm,1.0s
GTA LR LR
comp=Z,220nm,17.1s
GTA LR LR
comp=Z,260nm,17.8s
GTA LR LR
comp=Z,240nm,17.4s
KMI Kunming 33.73 268 ⇑P P 07 37 50.3 +6.3
KMI pmax pmax
comp=Z,8.0nm,0.8s
KMI LR LR
comp=Z,310nm,9.1s
KMI LR LR
comp=Z,340nm,10.2s
KMI LR LR
comp=Z,280nm,10.1s
PZH PanZhiHua 34.10 270 P **P 07 37 48.5 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,5.5s
SLVN Son La 34.27 261 P **P 07 37 47.6 -0.9**
MOY Mondy 34.57 316 *eP* **P 07 37 51.4 +0.5**
MANU Manus Island 34.81 168 P **P 07 37 53.4 +0.4**
KIWB Kanaga Island 36.35 45 P **P 07 38 05.2 -0.9**
ADK Adak 36.64 45 P **P 07 38 08.0 -0.4**
ADK Adak 36.64 45 P **P 07 38 09.2 +0.8**
ADK Adak 36.64 45 P **P 07 38 08.0 -0.4**
ADK pmax pmax
comp=Z,54nm,1.2s
SANI Sanana 36.84 205 P **P 07 38 14.6 +4.1**
GOMU GeErMu 37.66 289 P **P 07 38 19.9 +2.1**
GOMU pP pwP 07 38 23.1 -1.6
GOMU sP sP 07 38 29.1 +5.4
GOMU S **S 07 44 03.6 -3.9**
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GOMU LR LR
comp=Z,190nm,17.9s
GOMU LR LR
comp=Z,240nm,17.7s
GOMU LR LR
comp=Z,330nm,18.7s
ATKA Atka Island 38.21 45 P **P 07 38 22.4 +0.7**
ATKA Atka Island 38.21 45 P **P 07 38 22.6 +0.9**
BILL Bilibino 38.75 15 P **P 07 38 26.5 +0.3**
BILL Bilibino 38.75 15 *eP* **P 07 38 26.9 +0.8**
BILL pmax pmax
comp=Z,10.0nm,1.0s
CMAR Chiang Mai Arr 39.73 260 P **P 07 38 34.9 0.0**
CMAR Chiang Mai Arr 39.73 260 *i*P **P 07 38 34.5 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 39.73 260 P **P 07 38 33.1 -1.7**
comp=Z,1.8nm,0.4s,baz=54,slow=6.9,SNR=7.5
CMAR LR LR 07 55 29.7
comp=Z,64nm,19.3s,baz=80,slow=37
comp=Z,1.8nm,0.4s
TIXI Tiksi 39.87 354 P **P 07 38 35.3 -0.1**
TIXI Tiksi 39.87 354 *ce*P **P 07 38 35.1 -0.3**
TIXI pmax pmax
comp=Z,8.0nm,0.7s
TIXI Tiksi 39.87 354 LR LR 07 56 01.2
comp=Z,96nm,20.1s,baz=190,slow=38
NIKH Nikolski High 41.55 45 P **P 07 38 50.3 +0.8**
NIKH Nikolski High 41.55 45 P **P 07 38 50.4 +0.9**
baz=261
SPIA Saint Paul Isl 41.66 38 P **P 07 38 51.6 +1.3**
baz=255
WMQ Urumqi 42.44 301 *eP* **P 07 38 59.3 +2.2**
WMQ LR LR
comp=Z,180nm,24.9s
DGZ Jazzator, Alta 42.67 310 *i*P **P 07 38 59.1 +0.2**
ZAA0 Zalesovo Array 44.63 316 P **P 07 39 14.2 -0.2**
ZALV Zalesovo Beam 44.63 316 P **P 07 39 14.3 -0.1**
ZALV Zalesovo Beam 44.63 316 *i*P **P 07 39 11.6 -2.8**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 44.63 316 P **P 07 39 14.0 -0.4**
comp=Z,2.5nm,0.5s,baz=107,slow=8.9,SNR=8.1
ZALV PcP **PcP 07 40 56.1 -0.8**
comp=Z,2.0nm,0.6s,baz=100,slow=5.3,SNR=2.7
ZALV ScP **ScP 07 44 44.6 -4.0**
comp=Z,2.4nm,0.8s,baz=105,slow=3.3,SNR=6.6
ZALV LR LR 07 58 40.2
comp=Z,171nm,20.0s,baz=94,slow=37
comp=Z,2.5nm,0.5s
TNA Tin City 45.35 27 P **P 07 39 21.0 +1.0**
baz=249
HNR Honiara 45.51 153 LR LR 07 55 51.0
comp=Z,μm,21.9s,baz=326,slow=33
K13K Kusilvak Mount 45.63 33 P **P 07 39 23.5 +1.3**
baz=256
MTN Manton Dam 45.80 193 P **P 07 39 22.1 -1.9**
MTN IAmb IAmb 07 39 28.7
comp=Z,9.8nm,0.7s
M13K Dall Lake 45.90 35 P **P 07 39 25.7 +1.4**
baz=258
F14K Arctic Creek 45.95 28 P **P 07 39 26.1 +1.4**
baz=251
ANM Nome 46.04 29 P **P 07 39 27.4 +1.9**
ANM IAmb IAmb 07 39 28.5
comp=Z,8.9nm,0.8s
ANM Nome 46.04 29 P **P 07 39 27.2 +1.7**
baz=252
ANM Nome 46.04 29 P **P 07 39 27.4 +1.9**
ANM pmax pmax
comp=Z,9.0nm,0.8s
COEN Coen 46.10 176 P **P 07 39 26.1 -0.3**
COEN IAmb IAmb 07 39 28.0
comp=Z,9.8nm,0.6s
COEN Coen 46.10 176 P **P 07 39 26.2 -0.2**
MK31 Makanchi Array 46.10 306 P **P 07 39 26.7 +0.5**
MK31 Makanchi Array 46.10 306 P **P 07 39 26.7 +0.5**
MK31 pmax pmax
comp=Z,5.0nm,1.0s
MKAR Makanchi Array 46.10 306 P **P 07 39 26.6 +0.3**
MKAR Makanchi Array 46.10 306 *c i*P **P 07 39 26.3 +0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 46.10 306 P **P 07 39 25.3 -1.0**
comp=Z,2.5nm,0.6s,baz=90,slow=10,SNR=22
MKAR PcP **PcP 07 41 01.2 -1.1**
comp=Z,1.3nm,0.8s,baz=99,slow=4.7,SNR=1.3
MKAR ScP **ScP 07 44 51.2 -3.7**
comp=Z,1.9nm,0.7s,baz=84,slow=5.0,SNR=10
MKAR LR LR 07 59 34.4
comp=Z,187nm,19.2s,baz=92,slow=37
comp=Z,2.5nm,0.6s
MAKZ Makanchi 46.31 306 P **P 07 39 27.2 -0.7**
MAKZ Makanchi 46.31 306 P **P 07 39 27.2 -0.7**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
J14K Nanvaranak Lak 46.33 32 P **P 07 39 28.8 +1.2**
baz=256
L14K Kuka Creek 46.41 34 P **P 07 39 30.4 +2.1**
baz=258
N14K Kuskokwak Cree 46.63 36 P **P 07 39 31.7 +1.6**
baz=260
M14K Bethel 46.64 35 P **P 07 39 31.7 +1.6**
baz=259
F15K North Star Dit 46.68 28 IAmb IAmb 07 39 33.6
comp=Z,9.6nm,0.9s
F15K North Star Dit 46.68 28 P **P 07 39 32.9 +2.4**
baz=252,SNR=7.5
G15K Niukluk 46.71 29 P **P 07 39 32.9 +2.2**
baz=253
K15K Wolf Creek Mou 47.14 33 P **P 07 39 36.4 +2.3**
baz=258
NRIK Noril'sk 47.25 337 P **P 07 39 35.0 +0.1**
NRIK IAmb IAmb 07 39 41.3
comp=Z,11nm,0.8s
NRIK Noril'sk 47.25 337 *ce*P **P 07 39 34.4 -0.5**
NRIK pmax pmax
comp=Z,8.0nm,1.0s
NRIK Noril'sk 47.25 337 P **P 07 39 34.5 -0.3**
comp=Z,4.5nm,0.6s,baz=111,slow=11,SNR=11
NRIK ScP **ScP 07 44 56.2 -3.0**
comp=Z,3.1nm,0.7s,baz=109,slow=5.2,SNR=5.1
NRIK LR LR 08 00 08.3
comp=Z,317nm,20.1s,baz=121,slow=37

comp=Z,4.5nm,0.6s
C16K Lisburne Hills 47.28 24 IAmb IAmb 07 39 37.4
comp=Z,8.7nm,0.8s
C16K Lisburne Hills 47.28 24 P **P** **07 39 36.5 +1.4**
baz=249
H16K Elim 47.36 30 P **P** **07 39 37.3 +1.5**
baz=256
N15K Kwethluk River 47.45 36 P **P** **07 39 38.6 +1.9**
baz=262
O15K Ungalikthiuk R 47.45 37 P **P** **07 39 37.5 +0.9**
baz=263
D17K Noatak River 47.89 25 P **P** **07 39 41.7 +1.8**
baz=252
CHGN Chignik 47.95 41 P **P** **07 39 40.4 0.0**
L16K Owhat River 47.99 34 P **P** **07 39 42.0 +1.3**
baz=261
C17K DeLong Mountai 48.10 24 P **P** **07 39 43.5 +1.9**
baz=251
M16K Timber Creek 48.13 35 P **P** **07 39 43.3 +1.5**
baz=262
N16K Nishlik Lake 48.15 35 P **P** **07 39 43.7 +1.7**
baz=263
E17K Hotham Inlet 48.17 26 P **P** **07 39 44.0 +1.9**
baz=254,SNR=10
F17K Baldwin Pennin 48.22 27 IAmb IAmb 07 39 46.8
comp=Z,10nm,0.8s
F17K Baldwin Pennin 48.22 27 P **P** **07 39 44.7 +2.3**
baz=255,SNR=10
G17K Kiwalik Mounta 48.22 29 P **P** **07 39 44.3 +1.8**
baz=256
KURK Kurchatov 48.34 311 P **P** **07 39 43.6 +0.1**
KURK Kurchatov 48.34 311 P **P** **07 39 43.6 +0.1**
KURK pmax pmax
comp=Z,17nm,0.8s
P16K Nushagak River 48.38 37 P **P** **07 39 45.5 +1.7**
baz=265
O16K Kokwok River B 48.38 37 P **P** **07 39 45.6 +1.9**
baz=264
KURBB Kurchatov Arra 48.40 311 P **P** **07 39 43.5 -0.5**
comp=Z,8.6nm,0.6s,baz=86,slow=6.8,SNR=52
KURBB PcP **PcP** **07 41 09.0 -1.3**
comp=Z,0.9nm,0.3s,baz=82,slow=6.6,SNR=1.2
KURBB ScP **ScP** **07 45 00.3 -4.2**
comp=Z,0.2nm,0.3s,baz=99,slow=3.2,SNR=3.3
KURBB LR LR 08 00 53.1
comp=Z,200nm,20.2s,baz=153,slow=37
comp=Z,8.6nm,0.6s
H17K Granite Mounta 48.40 29 P **P** **07 39 45.5 +1.7**
baz=258
R16K Pilot Point 48.48 39 P **P** **07 39 45.8 +1.3**
baz=266
L17K Donlin 48.60 33 P **P** **07 39 47.0 +1.5**
baz=262
K17K Iditarod 48.69 33 P **P** **07 39 47.8 +1.7**
baz=261
E18K Tukpahlearik C 48.72 26 IAmb IAmb 07 39 49.3
comp=Z,8.9nm,0.8s
E18K Tukpahlearik C 48.72 26 P **P** **07 39 48.4 +2.1**
baz=255
C18K Utukok River 48.85 24 P **P** **07 39 49.0 +1.7**
baz=253,SNR=18
B18K Kokolik River 48.86 23 P **P** **07 39 49.4 +2.1**
baz=252
F18K Selawik 48.88 27 P **P** **07 39 49.6 +2.1**
baz=256,SNR=8.3
O17K Koliganek Bris 48.91 37 P **P** **07 39 49.9 +2.1**
baz=265
M17K Holitna River 48.91 34 P **P** **07 39 49.3 +1.5**
baz=263
N17K Nushagak Hills 48.93 36 P **P** **07 39 49.5 +1.5**
baz=264
Q16K King Salmon 49.04 38 P **P** **07 39 50.6 +1.7**
baz=266
H18K Honhosa River 49.09 29 IAmb IAmb 07 39 53.0
comp=Z,6.6nm,0.7s
H18K Honhosa River 49.09 29 P **P** **07 39 50.8 +1.6**
baz=259
G18K Tagagawik 49.12 28 IAmb IAmb 07 39 51.8
comp=Z,11nm,1.1s
G18K Tagagawik 49.12 28 P **P** **07 39 51.0 +1.6**
baz=258
L18K Granite Mounta 49.36 33 P **P** **07 39 52.5 +1.3**
baz=263
Q17K Contact Creek 49.42 39 P **P** **07 39 53.2 +1.3**
baz=267
J18K Innoko River 49.51 32 P **P** **07 39 54.1 +1.7**
baz=262
C19K Lookout Ridge 49.54 24 P **P** **07 39 54.7 +2.1**
baz=254
GCSA Galena City Sc 49.64 30 P **P** **07 39 54.4 +1.1**
baz=261
F19K Shaleruckik Mo 49.66 27 P **P** **07 39 55.5 +2.0**
baz=258
M18K Stony River 49.69 34 P **P** **07 39 55.5 +1.7**
baz=264
TTA Tatalina 49.76 32 P **P** **07 39 55.1 +0.7**
TTA Tatalina 49.76 32 P **P** **07 39 55.8 +1.4**
baz=263
G19K Purcell Mounta 49.79 28 P **P** **07 39 55.9 +1.4**
baz=259
P18K Big Mountain, 49.82 37 P **P** **07 39 56.3 +1.4**
baz=267
O18K Koktuh Hills 49.86 37 P **P** **07 39 56.6 +1.4**
baz=266
D19K Kuna River 49.90 25 IAmb IAmb 07 39 57.7
comp=Z,12nm,0.8s
D19K Kuna River 49.90 25 P **P** **07 39 57.2 +1.8**
baz=256
H19K Roundabout Mou 49.94 29 P **P** **07 39 57.0 +1.3**
baz=260
E19K Redstone River 50.00 26 P **P** **07 39 57.7 +1.6**
baz=258
J19K Poorman 50.07 31 P **P** **07 39 57.7 +1.0**
baz=263
L19K White Mountain 50.21 33 P **P** **07 39 59.2 +1.4**
baz=265
N19K Bonanza Creek 50.28 35 P **P** **07 39 59.5 +1.1**
baz=266
O19K Port Alsworth 50.33 36 P **P** **07 40 00.1 +1.5**
baz=267
M19K Big River Lodg 50.41 34 P **P** **07 40 01.0 +1.8**
baz=266
D20K Etivluk River 50.49 25 P **P** **07 40 01.6 +1.9**
baz=258
F20K Avaraart Lake 50.49 27 P **P** **07 40 01.4 +1.7**
baz=260
E20K Nigu River 50.55 26 P **P** **07 40 01.8 +1.6**
baz=258
H20K Anotteneega Mo 50.59 29 P **P** **07 40 02.1 +1.6**
baz=262
B20K Meade River 50.59 23 P **P** **07 40 02.4 +1.9**
baz=256
I20K Naaghedeneel 50.66 30 IAmb IAmb 07 40 05.0
comp=Z,19nm,0.9s
I20K Naaghedeneel 50.66 30 P **P** **07 40 03.2 +2.1**
baz=263
K20K Telida 50.68 32 IAmb IAmb 07 40 04.1
comp=Z,10nm,0.7s
K20K Telida 50.68 32 P **P** **07 40 03.2 +1.9**
baz=265
L20K Farewell, AK 50.69 33 P **P** **07 40 03.2 +1.8**
baz=266
J20K Nowinta River 50.73 31 IAmb IAmb 07 40 09.4
comp=Z,10nm,1.1s
J20K Nowinta River 50.73 31 P **P** **07 40 03.4 +1.7**
baz=264
OHAK Old Harbor 50.79 40 P **P** **07 40 02.8 +0.7**
OHAK Old Harbor 50.79 40 P **P** **07 40 02.9 +0.8**
baz=270
GSI Gunungsitoli 50.80 241 P **P** **07 40 02.1 -0.7**
GSI Gunungsitoli 50.80 241 P P 07 40 12.6 +10
P19K Oil Pt 50.85 37 P **P** **07 40 03.3 +0.6**
baz=268
M20K Styx River 51.00 34 P **P** **07 40 05.2 +1.3**
baz=267
A21K Barrow 51.09 22 P **P** **07 40 06.1 +1.9**
baz=256,SNR=8.6
IMAR Indian Mountai 51.11 29 P **P** **07 40 05.6 +1.1**
KDAK Kodiak Island 51.17 39 P **P** **07 40 05.7 +0.7**
KDAK Kodiak Island 51.17 39 P **P** **07 40 06.0 +1.0**
baz=270
KDAK Kodiak Island 51.17 39 P **P** **07 40 05.7 +0.7**
KDAK pmax pmax
comp=Z,36nm,1.0s
O20K Slope Mountain 51.17 36 P **P** **07 40 05.5 +0.4**
baz=269
C21K Knifeblade Rid 51.23 25 P **P** **07 40 07.2 +1.9**
baz=259
G21K Allakaket 51.28 28 P **P** **07 40 07.6 +1.8**
baz=263
B21K Ikpikpuk River 51.37 24 P **P** **07 40 08.3 +1.9**
baz=259
F21K Alatna River 51.39 27 P **P** **07 40 08.2 +1.7**
baz=262
E21K Killik River 51.39 26 IAmb IAmb 07 40 21.9
comp=Z,8.2nm,0.6s
E21K Killik River 51.39 26 P **P** **07 40 08.3 +1.7**
baz=261
N20K Mount Spurr 51.41 35 P **P** **07 40 08.8 +1.9**
baz=268,SNR=7.2
H21K Melozitna Rive 51.46 29 P **P** **07 40 09.2 +2.1**
baz=264,SNR=6.0
PPLA Purkeypile 51.50 33 P **P** **07 40 09.5 +1.9**
baz=267
CHUM Lake Minchumin 51.51 31 P **P** **07 40 09.5 +2.1**
baz=266
CAST Castle Rocks 51.58 32 P **P** **07 40 09.8 +1.7**
CAST Castle Rocks 51.58 32 P **P** **07 40 10.0 +1.9**
baz=266,SNR=6.4
I21K Tanana 51.76 30 P **P** **07 40 11.0 +1.7**
baz=265
SKT Skwentna 51.76 34 P **P** **07 40 10.5 +1.1**
baz=268
D22K Ayikyak River 51.92 25 IAmb IAmb 07 40 13.3
comp=Z,12nm,0.7s
D22K Ayikyak River 51.92 25 P **P** **07 40 12.7 +2.2**
baz=262,SNR=12
H22K Ishtalitna Cre 52.07 29 P **P** **07 40 13.9 +2.3**
baz=265,SNR=5.0
FITZ Fitzroy Crossi 52.12 198 P **P** **07 40 11.2 -1.2**
G22K Bettles 52.12 28 P **P** **07 40 13.5 +1.5**
baz=264
SUA Susitna One 52.12 35 IAmb IAmb 07 40 15.4
comp=Z,14nm,0.9s
SUA Susitna One 52.12 35 P **P** **07 40 13.1 +0.8**
baz=269
WB0 Warramunga Arr 52.13 187 P **P** **07 40 10.6 -2.0**
WB0 IAmb IAmb 07 40 32.0
comp=Z,12nm,0.7s
AAK Ala-Archa 52.15 301 P **P** **07 40 12.9 0.0**
AAK Ala-Archa 52.15 301 P **P** **07 40 12.9 0.0**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 52.15 301 LR LR 08 02 37.2
comp=Z,113nm,21.8s,baz=81,slow=36
MLY Manley 52.27 30 P **P** **07 40 15.0 +1.7**
MLY IAmb IAmb 07 40 15.9
comp=Z,11nm,1.2s
MLY Manley 52.27 30 P **P** **07 40 15.1 +1.9**
baz=266,SNR=6.6
WR0 Warramunga Arr 52.30 187 P **P** **07 40 11.8 -2.1**
WR0 IAmb IAmb 07 40 14.9
comp=Z,8.0nm,0.6s
WB2 Warramunga Arr 52.31 187 P **P** **07 40 11.8 -2.1**
WB2 IAmb IAmb 07 40 33.5
comp=Z,8.4nm,0.8s
WRA Warramunga Arr 52.31 187 P **P** **07 40 11.9 -2.0**
WRA Warramunga Arr 52.31 187 P **P** **07 40 11.9 -2.0**
comp=Z,5.9nm,0.6s,baz=2.3,slow=7.6,SNR=58
WRA PcP **PcP** **07 41 25.0 0.0**
comp=Z,6.2nm,0.8s,baz=1.1,slow=3.9,SNR=7.1
comp=Z,5.9nm,0.6s
CUT Chulitna 52.37 33 P **P** **07 40 14.6 +0.8**
CUT IAmb IAmb 07 40 40.0
comp=Z,12nm,0.8s
CUT Chulitna 52.37 33 P **P** **07 40 15.1 +1.3**
baz=269
TRF Thorofare Moun 52.39 32 P **P** **07 40 16.0 +1.7**
TRF Thorofare Moun 52.39 32 P **P** **07 40 15.0 +0.8**
baz=268
CTA Charters Tower 52.42 173 P **P** **07 40 13.6 -1.1**
comp=Z,2.6nm,0.6s,baz=6.3,slow=8.8,SNR=9.2
CTA LR LR 08 02 14.5
comp=Z,61nm,20.3s,baz=312,slow=36
comp=Z,2.6nm,0.6s
CTAO Charters Tower 52.42 173 P **P** **07 40 14.9 +0.3**
CTAO Charters Tower 52.42 173 P **P** **07 40 14.9 +0.3**
CTAO pmax pmax
comp=Z,5.0nm,0.9s
M22K Willow 52.42 34 P **P** **07 40 15.4 +1.1**
baz=269
QIS Mount Isa 52.60 181 P **P** **07 40 17.2 +1.2**
RC01 Rabbit Creek A 52.61 35 P **P** **07 40 16.5 +0.8**
RC01 IAmb IAmb 07 40 31.0
comp=Z,17nm,1.2s
RC01 Rabbit Creek A 52.61 35 P **P** **07 40 16.2 +0.5**
baz=270
O22K Cooper Landing 52.62 36 P **P** **07 40 16.9 +1.1**
baz=271
D23K Nanushuk River 52.65 25 P **P** **07 40 17.9 +2.0**
baz=263
COLD Coldfoot 52.66 27 P **P** **07 40 16.8 +0.8**
baz=265
G23K Bananza Creek 52.68 28 P **P** **07 40 17.5 +1.3**
baz=266
SEW Seward 52.76 36 P **P** **07 40 17.6 +0.8**
baz=271
BWN Browne 52.78 31 P **P** **07 40 18.5 +1.6**
BWN IAmb IAmb 07 40 21.9
comp=Z,15nm,0.8s
BWN PcP **PcP** **07 41 26.4 +0.2**
I23K Minto, Yukon-K 52.86 30 P **P** **07 40 19.0 +1.5**
baz=268
PMR Palmer 52.90 34 IAmb IAmb 07 40 32.5
comp=Z,17nm,1.1s
PMR Palmer 52.90 34 P **P** **07 40 18.8 +1.0**
baz=270
E23K Chandalar 52.95 26 P **P** **07 40 20.1 +1.8**
baz=265
NEA2 Nenana 52.96 31 IAmb IAmb 07 40 20.6
comp=Z,13nm,0.9s
NEA2 Nenana 52.96 31 P **P** **07 40 20.2 +1.9**
baz=268,SNR=11
GHO Glory Hole Cre 52.99 34 IAmb IAmb 07 40 21.9
comp=Z,14nm,0.8s
MCK McKinley 53.00 32 P **P** **07 40 19.3 +0.7**
baz=269
TOLK Toolik Lake Re 53.02 26 IAmb IAmb 07 40 24.1
comp=Z,7.5nm,0.8s
TOLK Toolik Lake Re 53.02 26 P **P** **07 40 20.5 +1.8**
baz=265,SNR=13
RND Reindeer 53.03 32 IAmb IAmb 07 40 37.6
comp=Z,7.7nm,0.8s
WAT1 Susitna Watana 53.16 33 P **P** **07 40 20.9 +1.0**
baz=270
KNK Knik Glacier 53.22 35 IAmb IAmb 07 40 35.2
comp=Z,16nm,0.8s
KNK Knik Glacier 53.22 35 P **P** **07 40 21.3 +1.0**
baz=271
BVAR Borovoye Array 53.24 315 P **P** **07 40 20.1 -0.4**
comp=Z,7.0nm,0.7s,baz=98,slow=7.8,SNR=33
BVAR ScP **ScP** **07 45 22.4 -2.9**
comp=Z,1.0nm,0.7s,baz=90,slow=7.4,SNR=4.0
BVAR LR LR 08 04 06.5
comp=Z,149nm,18.5s,baz=75,slow=37
comp=Z,7.0nm,0.7s
SML Sawmill 53.27 34 P **P** **07 40 22.0 +1.4**
baz=271,SNR=6.8
BRVK Borovoye 53.30 315 P **P** **07 40 21.6 +0.6**
BRVK IAmb IAmb 07 40 28.0
comp=Z,11nm,0.9s
BRVK Borovoye 53.30 315 P **P** **07 40 21.6 +0.6**
BRVK pmax pmax
comp=Z,11nm,1.0s
MDM Murphy Dome 53.33 30 P **P** **07 40 22.5 +1.5**
MDM IAmb IAmb 07 40 23.4
comp=Z,11nm,0.8s
D24K Happy Valley 53.34 25 IAmb IAmb 07 40 23.5
comp=Z,15nm,0.8s
D24K Happy Valley 53.34 25 P **P** **07 40 22.7 +1.7**
baz=265,SNR=19
E24K Your Creek 53.38 26 P **P** **07 40 22.9 +1.5**
baz=266
C24K Franklin Bluff 53.43 24 P **P** **07 40 23.3 +1.7**
baz=265
COLA College 53.49 30 P **P** **07 40 23.7 +1.6**
baz=269
H24K Noodor Dome 53.50 29 P **P** **07 40 24.0 +1.7**
baz=268
WAT6 Susitna Watana 53.54 33 P **P** **07 40 23.6 +0.9**
baz=271
M23K Glacier View 53.56 34 P **P** **07 40 24.1 +1.4**
baz=272
F24K Squaw Lake 53.57 27 P **P** **07 40 24.4 +1.6**
baz=267
POKR Poker Plat Res 53.67 30 IAmb IAmb 07 40 26.1
comp=Z,9.6nm,0.7s
POKR Poker Plat Res 53.67 30 P **P** **07 40 24.8 +1.3**
baz=269
G24K Hadweenzic Riv 53.70 28 P **P** **07 40 25.3 +1.7**
baz=268
DHY Denali Highway 53.70 33 P **P** **07 40 24.9 +1.0**
baz=271
SCM Sheep Creek Mo 53.75 34 P **P** **07 40 25.2 +1.0**
baz=272
HDA Harding Lake 53.88 31 IAmb IAmb 07 40 27.7
comp=Z,9.4nm,0.8s
HDA Harding Lake 53.88 31 P **P** **07 40 25.6 +0.6**
baz=270,SNR=6.7
IL31 53.91 30 IAmb IAmb 07 40 40.0
comp=Z,6.4nm,0.8s
ILAR Eielson Array 53.91 30 P **P** **07 40 25.4 +0.2**
comp=Z,3.2nm,0.6s,baz=267,slow=6.2,SNR=52
comp=Z,3.2nm,0.6s
D25K Kavik River 54.22 25 P **P** **07 40 28.7 +1.2**
baz=267
M24K Tolsona, Glenn 54.28 34 P **P** **07 40 29.4 +1.3**
baz=273
K24K Donnelly Dome 54.40 32 P **P** **07 40 29.9 +1.0**
baz=272
F25K Christian Rive 54.43 27 P **P** **07 40 31.2 +2.2**
baz=269
KLU Klutina 54.44 34 IAmb IAmb 07 40 33.3
comp=Z,9.3nm,0.7s
KLU Klutina 54.44 34 P **P** **07 40 30.6 +1.4**
baz=273
E25K Arctic Village 54.47 26 IAmb IAmb 07 40 32.3
comp=Z,5.9nm,0.7s
E25K Arctic Village 54.47 26 P **P** **07 40 31.5 +2.2**
baz=269,SNR=10
PRP Porcupine Dome 54.48 29 P **P** **07 40 31.1 +1.6**
baz=271
J25K Salcha River, 54.56 31 P **P** **07 40 31.5 +1.4**
baz=272
PAX Paxson 54.57 33 P **P** **07 40 31.9 +1.7**
baz=273
EYAK Cordova Ski Ar 54.58 36 P **P** **07 40 30.3 +0.2**
EYAK Cordova Ski Ar 54.58 36 P **P** **07 40 31.7 +1.5**
baz=274
HARP HAARP 54.74 33 P **P** **07 40 32.9 +1.5**
baz=273
RIDG Independent Ri 54.82 32 P **P** **07 40 32.7 +0.8**
baz=273
BMAR Burnt Mountain 54.84 27 P **P** **07 40 34.4 +2.3**
KK31 Karatay Array 54.91 303 P **P** **07 40 33.1 +0.2**
KK31 IAmb IAmb 07 40 38.9
comp=Z,8.0nm,0.8s
KK31 Karatay Array 54.91 303 P **P** **07 40 33.1 +0.2**
KK31 pmax pmax
comp=Z,8.0nm,0.9s
KKAR Karatay Array 54.91 303 P **P** **07 40 33.1 +0.2**
KKAR IAmb IAmb 07 40 38.9
comp=Z,7.9nm,0.8s
KKAR Karatay Array 54.91 303 P **P** **07 40 33.1 +0.2**
KKAR pmax pmax
comp=Z,8.0nm,0.9s
F26K Sheenjek River 55.01 27 P **P** **07 40 35.1 +1.9**
baz=270
N25K Chitina, Valde 55.06 34 IAmb IAmb 07 40 36.3
comp=Z,5.1nm,0.6s
N25K Chitina, Valde 55.06 34 P **P** **07 40 34.9 +1.2**
baz=274
BMRM Bremner River 55.11 35 P **P** **07 40 35.5 +1.4**
baz=275
G26K Porcupine Rive 55.16 28 P **P** **07 40 35.8 +1.6**
baz=271
SCRK Sand Creek 55.19 31 P **P** **07 40 35.7 +1.1**
SCRK IAmb IAmb 07 40 36.3
comp=Z,7.6nm,0.8s
SCRK Sand Creek 55.19 31 P **P** **07 40 35.8 +1.1**
baz=273,SNR=7.7
J26L Joseph Creek 55.34 31 IAmb IAmb 07 40 37.0
comp=Z,5.1nm,0.7s
J26L Joseph Creek 55.34 31 P **P** **07 40 36.2 +0.5**
baz=273
MENT Mentasta 55.37 33 IAmb IAmb 07 40 38.5
comp=Z,9.2nm,0.7s
L26K Log Cabin Wild 55.54 32 IAmb IAmb 07 40 41.6
comp=Z,11nm,0.7s
L26K Log Cabin Wild 55.54 32 P **P** **07 40 38.9 +1.8**
baz=274,SNR=10
M26K Nabesna, AK 55.75 33 P **P** **07 40 40.4 +1.8**
baz=275
MCARA McCarthy VSAT 55.83 34 P **P** **07 40 41.1 +1.9**
baz=276
BGLC Bering Glacier 55.84 36 P **P** **07 40 40.6 +1.4**
baz=276
CRQE Cirque 55.87 35 P **P** **07 40 40.5 +0.9**
baz=276
K27K Chicken 56.02 31 P **P** **07 40 41.8 +1.3**
baz=275
AS01 Alice Springs 56.03 187 P **P** **07 40 40.2 -0.8**
AS31 Alice Springs 56.03 187 P **P** **07 40 39.6 -1.4**
ASAR Alice Springs 56.03 187 P **P** **07 40 39.5 -1.5**
ASAR Alice Springs 56.03 187 P **P** **07 40 39.5 -1.5**
ASAR Alice Springs 56.03 187 P **P** **07 40 39.2 -1.8**
comp=Z,2.6nm,0.5s,baz=11,slow=8.7,SNR=36
comp=Z,2.6nm,0.5s
H27K Steamboat Moun 56.09 29 P **P** **07 40 42.8 +1.8**
baz=274
I27K Kandik River 56.10 29 P **P** **07 40 42.8 +1.7**
baz=274
D27M Malcolm River 56.14 25 P **P** **07 40 42.3 +0.9**
baz=272
L27K Beaver Creek, 56.22 32 IAmb IAmb 07 40 44.5
comp=Z,7.3nm,0.8s
L27K Beaver Creek, 56.22 32 P **P** **07 40 43.8 +1.8**
baz=276,SNR=6.3
M27K Edge Creek, AK 56.27 33 IAmb IAmb 07 40 45.0
comp=Z,6.9nm,0.9s
M27K Edge Creek, AK 56.27 33 P **P** **07 40 44.0 +1.5**
baz=276
EGAK Eagle 56.36 30 P **P** **07 40 44.6 +1.8**
baz=275
MESA MESA 56.49 36 P **P** **07 40 45.6 +1.5**
baz=278
F28M Old Crow 56.64 27 P **P** **07 40 46.8 +1.8**
baz=274
CTG Chitna Glacier 56.69 35 P **P** **07 40 46.6 +1.1**
baz=278
CTGM Chitina Glacie 56.70 35 IAmb IAmb 07 40 49.0
comp=Z,10nm,0.9s
E28M Babbage River 56.70 26 P **P** **07 40 47.1 +1.9**
baz=274
BVCY Beaver Creek 56.74 33 P **P** **07 40 46.9 +1.2**
baz=277
I28M Miner Creek 56.81 29 IAmb IAmb 07 40 49.5
comp=Z,6.4nm,0.7s
I28M Miner Creek 56.81 29 P **P** **07 40 47.4 +1.2**
baz=276
YUK3 Moose Creek 57.01 34 P **P** **07 40 48.6 +0.8**
baz=278
PSA00 Pilbara Seismi 57.12 203 P **P** **07 40 47.1 -1.6**
SIMJ Simiganj 57.19 298 P **P** **07 40 49.7 +0.3**
SIMJ IAmb IAmb 07 40 54.8
comp=Z,11nm,0.8s
DAWY Dawson 57.20 31 P **P** **07 40 50.1 +1.2**
DAWY Dawson 57.20 31 P **P** **07 40 49.9 +1.0**
baz=277
E29M Blow River 57.31 26 P **P** **07 40 51.4 +1.8**
baz=276
PINM Pinnacle 57.35 36 P **P** **07 40 51.7 +1.6**
baz=279
H29M Whitestone 57.37 28 P **P** **07 40 52.0 +2.0**
baz=277
YUK8 Steele Glacier 57.40 34 P **P** **07 40 52.3 +1.6**
baz=279
J29N Klondike Camp 57.65 30 IAmb IAmb 07 41 04.8
comp=Z,5.6nm,0.8s
J29N Klondike Camp 57.65 30 P **P** **07 40 53.9 +1.7**
baz=278
M29M Somme Creek 57.84 33 IAmb IAmb 07 40 56.5
comp=Z,8.9nm,0.8s
M29M Somme Creek 57.84 33 P **P** **07 40 55.7 +2.1**
baz=279
PNL Peninsula 57.84 36 P **P** **07 40 53.8 +0.3**
PNL Peninsula 57.84 36 P **P** **07 40 55.5 +2.0**
baz=280
L29M L29M 57.89 32 IAmb IAmb 07 40 57.0
comp=Z,13nm,0.9s
L29M L29M 57.89 32 P **P** **07 40 56.2 +2.4**
baz=279
YUK4 Talbot Arm 57.93 34 P **P** **07 40 56.5 +2.2**

baz=280
EPYK Eagle Plains 58.01 28 P P 07 40 56.3 +1.7
baz=278,SNR=11
K29M Barlow Dome 58.04 31 IAmb IAmb 07 41 20.8
comp=Z,7,3nm,0.9s
K29M Barlow Dome 58.04 31 P P 07 40 56.5 +1.6
baz=279
G30M tAoh Zraii Nji 58.12 27 IAmb IAmb 07 41 20.6
comp=Z,10nm,0.9s
G30M tAoh Zraii Nji 58.12 27 P P 07 40 56.7 +1.3
baz=278
YUK6 Outpost Mounta 58.13 35 P P 07 40 57.9 +2.1
baz=280
O29M Mount Kennedy 58.14 35 P P 07 40 57.9 +2.2
baz=280
F30M Barrier River 58.20 27 P P 07 40 57.9 +2.1
baz=278
SVE Sverdlovsk 58.21 320 *e*P P 07 41 01.1 +5.0
I30M Mount Dempster 58.32 29 P P 07 40 58.6 +1.7
baz=279
J30M Hart River 58.44 30 IAmb IAmb 07 41 23.3
comp=Z,5.0nm,0.8s
J30M Hart River 58.44 30 P P 07 40 59.3 +1.5
baz=280
HYT Haines Junctio 58.56 35 IAmb IAmb 07 41 01.8
comp=Z,10nm,1.0s
HYT Haines Junctio 58.56 35 P P 07 41 00.7 +2.0
baz=281,SNR=5.5
M30M Minto, Yukon 58.58 33 P P 07 41 00.3 +1.6
baz=280
P29M Windy Craggy 58.68 36 P P 07 41 01.2 +1.9
baz=281,SNR=5.3
G31M Satah River 58.89 27 IAmb IAmb 07 41 02.2
comp=Z,7.8nm,0.7s
G31M Satah River 58.89 27 P P 07 41 01.7 +1.1
baz=280
INK Inuvik 58.93 26 IAmb IAmb 07 41 16.4
comp=Z,5.3nm,0.8s
INK Inuvik 58.93 26 P P 07 41 01.8 +0.8
baz=280,SNR=5.5
P30M Million Dollar 58.97 35 P P 07 41 03.1 +1.7
baz=282
F31M Tsiigehtchic 59.00 27 IAmb IAmb 07 41 03.2
comp=Z,4.3nm,0.6s
F31M Tsiigehtchic 59.00 27 P P 07 41 02.2 +0.8
baz=280,SNR=5.0
H31M Peel River 59.05 29 P P 07 41 03.1 +1.2
baz=280
O30N Mendenhall 59.26 35 P P 07 41 05.1 +1.7
baz=282
N31M Braeburn, Yuko 59.26 34 IAmb IAmb 07 41 24.7
comp=Z,7.2nm,0.9s
N31M Braeburn, Yuko 59.26 34 P P 07 41 05.1 +1.7
baz=282
PLBC Pleasant Camp 59.40 36 P P 07 41 06.4 +2.1
baz=282,SNR=6.3
ARU Arti 59.42 320 P P 07 41 04.0 -0.4
ARU Arti 59.42 320 *d* i P P 07 41 03.7 -0.7
ARU S S 07 49 15.9 +3.1
ARU SS SS 07 53 07.4 +0.2
ARU pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 59.42 320 P P 07 41 03.8 -0.7
comp=Z,6.3nm,0.5s,baz=97,slow=3.7,SNR=12
ARU LR LR 08 08 53.2
comp=Z,117nm,18.7s,baz=88,slow=38
comp=Z,6.3nm,0.5s
DZM Mont Dzumac 59.53 152 P P 07 41 07.0 +1.3
DZM Mont Dzumac 59.53 152 P P 07 41 06.5 +0.8
DZM Mont Dzumac 59.53 152 LR LR 08 06 17.5
comp=Z,92nm,19.5s,baz=23,slow=36
M31M Drury Creek, Y 59.75 33 IAmb IAmb 07 41 25.3
comp=Z,7.5nm,1.1s
M31M Drury Creek, Y 59.75 33 P P 07 41 08.4 +1.7
baz=282,SNR=5.2
S31K Pelican 59.80 38 P P 07 41 07.8 +0.7
baz=284
WHY Whitehorse 59.86 35 IAmb IAmb 07 41 09.9
comp=Z,5.8nm,0.8s
WHY Whitehorse 59.86 35 P P 07 41 09.5 +1.9
baz=283
SKAG Skagway 59.91 36 P P 07 41 10.2 +2.4
baz=283
OOD Oodnadatta 59.97 185 P P 07 41 09.9 +1.4
FARO Faro, Yukon 60.22 33 IAmb IAmb 07 41 11.8
comp=Z,4.5nm,0.5s
FARO Faro, Yukon 60.22 33 P P 07 41 11.6 +1.6
baz=283,SNR=5.8
ABKAR Akbulak array 60.44 312 P P 07 41 11.4 -0.2
N32M Quiet Lake 60.60 34 P P 07 41 14.1 +1.5
baz=284
R32K Eaglecrest 60.61 37 P P 07 41 14.6 +2.0
baz=285
PALK Pallekele 60.67 259 LR LR 08 08 17.1
comp=Z,34nm,19.4s,baz=171,slow=37
P32M Atlin 60.68 36 P P 07 41 15.1 +1.9
baz=284
A36M Sachs Harbour 60.91 21 P P 07 41 15.9 +1.5
baz=285,SNR=13
P33M Teslin, Yukon 60.96 35 IAmb IAmb 07 41 18.4
comp=Z,5.5nm,0.8s
P33M Teslin, Yukon 60.96 35 P P 07 41 16.1 +1.0
baz=285
AKTO Aktyubinsk 61.30 314 P P 07 41 16.9 -0.6
comp=Z,3.9nm,0.7s,baz=79,slow=4.6,SNR=9.7
AKTO LR LR 08 08 23.6
comp=Z,103nm,19.9s,baz=210,slow=36
comp=Z,3.9nm,0.7s
Q32M Nakina River 61.56 36 P P 07 41 20.4 +1.1
baz=286
C36M Paulatuk 62.03 24 IAmb IAmb 07 41 24.9
comp=Z,6.7nm,0.8s
C36M Paulatuk 62.03 24 P P 07 41 22.6 +0.6
baz=288,SNR=9.9
R33M Jennings River 62.08 35 P P 07 41 25.1 +2.3
baz=287
S34M Telegraph Cree 62.44 37 P P 07 41 26.9 +1.9
baz=287
MULG Mulgathing 62.57 186 P P 07 41 26.5 +0.4
TGTN Hyland Airport 62.73 33 P P 07 41 28.5 +1.5
baz=288,SNR=8.5
DLBC Dease Lake 62.84 36 P P 07 41 28.1 +0.4
DLBC IAmb IAmb 07 41 33.5
comp=Z,5.0nm,0.9s
DLBC Dease Lake 62.84 36 P P 07 41 29.6 +1.9
baz=288
WTLY Watson Lake, Y 62.92 34 P P 07 41 29.6 +1.4
baz=288
DIB Dawson Inlet, 63.17 42 P P 07 41 30.4 +0.5
T35M Bob Quinn 63.18 38 IAmb IAmb 07 41 34.9
comp=Z,5.5nm,0.8s
T35M Bob Quinn 63.18 38 P P 07 41 31.9 +1.9
baz=288
ARMA Armidale 63.30 169 P P 07 41 32.1 +1.0
KIRV Kirov 63.56 324 *ce*P P 07 41 32.3 -0.1
KIRV Kirov 63.56 324 LR LR 08 10 29.5
comp=Z,194nm,19.4s,baz=66,slow=37
CMSA Cobar Meteorol 63.72 175 P P 07 41 34.0 +0.4
FORT Forrest 63.86 192 P P 07 41 34.2 -0.4
FORT Forrest 63.86 192 P P 07 41 34.8 +0.2
STKA Stephens Creek 63.87 179 P P 07 41 35.0 +0.3
STKA Stephens Creek 63.87 179 P P 07 41 35.0 +0.3
STKA pmax pmax
comp=Z,1.0nm,0.9s
STKA Stephens Creek 63.87 179 P P 07 41 33.2 -1.4
comp=Z,3.7nm,0.9s,baz=2.0,slow=8.9,SNR=6.1
comp=Z,3.7nm,0.9s
WRGLY Wrigley 64.28 30 P P 07 41 38.3 +1.2
WRGLY IAmb IAmb 07 41 59.2
comp=Z,6.6nm,0.8s
WRGLY Wrigley 64.28 30 P P 07 41 38.9 +1.8
baz=291
GRNB Grenville Isla 64.37 41 P P 07 41 38.9 +1.0
GRNB IAmb IAmb 07 41 53.0
comp=Z,9.1nm,1.0s
BBOO Buckleboo 64.93 184 P P 07 41 43.3 +1.7
EUNU Eureka 64.94 8 IAmb IAmb 07 41 47.0
comp=Z,5.3nm,0.8s
SPITS Spitsbergen Ar 64.98 349 P P 07 41 42.2 +0.7
comp=Z,24nm,1.1s,baz=95,slow=6.2,SNR=2.2
SPITS LR LR 08 11 16.4
comp=Z,72nm,18.1s,baz=14,slow=37
comp=Z,24nm,1.1s
KOTAN Kotaneelee Air 65.14 33 P P 07 41 44.0 +1.2
baz=292
GEYT Alibeck 65.49 301 P P 07 41 44.3 -1.2
comp=Z,1.5nm,0.6s,baz=69,slow=7.9,SNR=2.5
comp=Z,1.5nm,0.6s
BELG Belogornoye 66.74 318 *i* P P 07 41 52.3 -0.9
BELG pmax pmax
comp=Z,3.0nm,0.8s
KLMR Klimovskoe 67.33 329 *e*P P 07 41 53.6 -3.2
KLMR pmax pmax
comp=Z,21nm,1.7s
RES Resolute Bay 67.34 14 P P 07 41 57.4 +0.8
RES IAmb IAmb 07 41 57.9
comp=Z,4.5nm,0.8s
RES Resolute Bay 67.34 14 P P 07 41 57.4 +0.8
RES pmax pmax
comp=Z,5.0nm,0.9s
RES Resolute Bay 67.34 14 LR LR 08 15 15.5
comp=Z,34nm,18.1s,baz=5.0,slow=39
ARCES ARCESS Array B 68.12 340 P P 07 42 01.1 -0.6
ARCES IAmb IAmb 07 42 06.7
comp=Z,9.7nm,1.1s
ARCES ARCESS Array B 68.12 340 P P 07 42 01.1 -0.6
ARCES pmax pmax
comp=Z,10.0nm,1.2s
ARCES ARCESS Array B 68.12 340 P P 07 42 01.0 -0.7
comp=Z,1.6nm,0.6s,baz=73,slow=9.0,SNR=9.7
ARCES LR LR 08 15 30.5
comp=Z,147nm,20.4s,baz=82,slow=39
comp=Z,1.6nm,0.6s
YKA Yellowknife Ar 68.27 29 P P 07 42 02.0 -0.7
YKA Yellowknife Ar 68.27 29 P P 07 42 02.9 +0.2
comp=Z,2.4nm,0.8s,baz=297,slow=6.2,SNR=38
YKA LR LR 08 16 48.4
comp=Z,19nm,18.8s,baz=358,slow=40
comp=Z,2.4nm,0.8s
NWAO Narrogin (SRO) 68.51 201 P P 07 42 03.4 -1.0
NWAO Narrogin (SRO) 68.51 201 P P 07 42 03.4 -1.0
NWAO pmax pmax
comp=Z,14nm,0.7s
HILA High Level 69.08 33 P P 07 42 08.4 +0.6
TOO Toolangi 69.70 176 P P 07 42 12.2 +0.4
TOO IAmb IAmb 07 42 12.7
comp=Z,8.7nm,0.8s
TOO Toolangi 69.70 176 P P 07 42 12.2 +0.4
TOO pmax pmax
comp=Z,9.0nm,0.9s
CLRS Cowichan Lake 69.71 45 IAmb IAmb 07 42 14.4
comp=Z,6.9nm,0.8s
NEEM North Greenlan 70.25 3 *i* P P 07 42 13.9 -1.2
NEEM IAmb IAmb 07 42 21.3
comp=Z,12nm,0.8s
NLWA Neilton Lookou 70.50 46 IAmb IAmb 07 42 19.9
comp=Z,8.5nm,0.8s
MAK Makhachkala 70.78 309 *e*P P 07 42 13.3 -5.2
MAK *e* 07 44 50.2
MAK *e*S S 07 51 24.0 -8.6
MAK *e*SS SS 07 56 00.1 -4.2
MAK *e*SSS SSS 07 59 18.1
MAK MLR MLR
comp=Z,495nm,18.0s
GNW Green Mountain 71.05 45 P P 07 42 20.9 +0.8
GNW IAmb IAmb 07 42 23.2
comp=Z,8.6nm,1.1s
OBN Obninsk 71.41 324 *e*P P 07 42 20.3 -1.8
OBN *e* 07 42 25.2
OBN *e* 07 42 43.9
OBN *e* 07 45 02.8
OBN *e*PPP PPP 07 46 44.4
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,214nm,19.0s
OBN Obninsk 71.41 324 LR LR 08 15 56.2
comp=Z,210nm,19.2s,baz=156,slow=38
LPSR Galich'ya Gora 71.43 321 *e*P P 07 42 20.8 -1.5
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 71.73 320 *e*P P 07 42 27.4 +3.3
VSR Storozhevoye 71.97 320 *e*P P 07 42 25.3 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORD Divnogorie 72.03 319 *e*P P 07 42 25.3 -0.6
VORD pmax pmax
comp=Z,10.0nm,0.6s
LTY Liberty 72.49 45 IAmb IAmb 07 42 30.3
comp=Z,4.6nm,0.6s
BUCK Buck Mountain 72.52 49 IAmb IAmb 07 42 32.3
comp=Z,14nm,0.9s
FINES FINESS Array B 72.62 333 P P 07 42 28.9 -0.3
comp=Z,3.2nm,0.5s,baz=66,slow=5.7,SNR=25
FINES LR LR 08 16 03.6
comp=Z,92nm,19.9s,baz=20,slow=37
comp=Z,3.2nm,0.5s
H04A Detroit Lake 72.79 48 IAmb IAmb 07 42 32.6
comp=Z,7.6nm,0.7s
HOOD Mount Hood Mea 72.82 47 IAmb IAmb 07 42 35.2
comp=Z,9.6nm,0.8s
DBO Don Butte 72.86 50 IAmb IAmb 07 42 33.8
comp=Z,6.0nm,0.8s
MXC Moxie City 73.05 45 IAmb IAmb 07 42 34.1
comp=Z,6.1nm,0.7s
I04A Tendick Farm, 73.08 49 IAmb IAmb 07 42 34.7
comp=Z,10nm,0.8s
ZEI Tsey 73.20 310 *e*P P 07 42 33.7 +0.3
ZEI pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 73.40 311 *ce*P P 07 42 34.4 +0.2
KBZ pmax pmax
comp=Z,22nm,0.9s
KBZ Khabaz 73.40 311 P P 07 42 33.5 -0.7
comp=Z,3.5nm,0.7s,baz=80,slow=6.4,SNR=13
KBZ LR LR 08 17 20.2
comp=Z,90nm,19.0s,baz=140,slow=38
comp=Z,3.5nm,0.7s
KIV Kislovodsk 73.42 312 ⇓P P 07 42 36.6 +2.1
KIV Kislovodsk 73.42 312 *e*P P 07 42 35.9 +1.4
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,62nm,18.0s
I05D Terrebonne, OR 73.49 48 IAmb IAmb 07 42 36.8
comp=Z,7.2nm,0.7s
EDM Edmonton 73.53 37 P P 07 42 35.5 +0.6
EDM IAmb IAmb 07 42 36.4
comp=Z,10nm,0.8s
EDM Edmonton 73.53 37 P P 07 42 35.5 +0.6
EDM pmax pmax
comp=Z,10.0nm,0.8s
D08A Wollman Farm, 73.63 44 P P 07 42 35.5 -0.1
D08A IAmb IAmb 07 42 37.2
comp=Z,7.2nm,0.7s
C09A Chrisman Ranch 73.64 44 IAmb IAmb 07 42 54.6
comp=Z,6.4nm,0.8s
E08A Dider Farm, El 73.83 45 P P 07 42 36.9 +0.2
YBH Yreka Blue Hor 73.88 51 IAmb IAmb 07 42 39.9
comp=Z,6.6nm,0.8s
YBH Yreka Blue Hor 73.88 51 LR LR 08 09 14.2
comp=Z,37nm,20.0s,baz=326,slow=31
GNI Garni 73.92 307 LR LR 08 17 00.1
comp=Z,51nm,18.1s,baz=77,slow=37
NEW Newport 74.07 43 P P 07 42 39.6 +1.4
baz=301,SNR=5.3
NEW Newport 74.07 43 P P 07 42 39.0 +0.8
NEW pmax pmax
comp=Z,7.0nm,1.2s
J05D Fort Rock, OR 74.07 49 IAmb IAmb 07 42 40.8
comp=Z,9.8nm,0.7s
VSU Vasula 74.12 330 *e*P P 07 42 39.1 +1.0
E09A Wood Farm, Sta 74.36 45 IAmb IAmb 07 42 42.1
comp=Z,9.0nm,0.8s
SUMG Summit 75.37 360 *i* P P 07 42 46.0 +0.3
SUMG IAmb IAmb 07 43 09.9
comp=Z,8.5nm,0.9s
SOC Sochi 75.47 312 *e*P P 07 42 43.4 -2.9
SOC *e* 07 45 32.2
SOC *e*PPP PPP 07 47 19.9
SOC *e*S S 07 52 24.1 -1.9
SOC *e*SS SS 07 57 17.2 +1.3
SOC *e*SSS SSS 08 00 35.0
SOC MLR MLR
comp=Z,91nm,14.0s
BMO Blue Mountains 75.72 46 IAmb IAmb 07 42 50.0
comp=Z,8.9nm,0.7s
ORV Oroville 75.75 52 P P 07 42 48.2 +0.2
ORV Oroville 75.75 52 P P 07 42 48.2 +0.2
ORV pmax pmax
comp=Z,4.0nm,0.7s
J08A Circle Bar Ran 75.78 48 P P 07 42 48.2 0.0
MNK Minsk 75.95 326 *i* P P 07 42 53.4 +4.6
MNK *i* 07 43 05.4
MNK *i* 07 45 43.7
MNK *i* PPP PPP 07 47 30.0
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK pmax pmax
comp=Z,21nm,0.9s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=Z,129nm,17.0s
MNK MLR MLR
comp=N,92nm,17.0s
MNK MLR MLR
comp=E,36nm,17.0s
ISAL Salakas 76.12 328 *e*P P 07 42 51.2 +1.5
WVOR Wild Horse Val 76.15 48 IAmb IAmb 07 42 52.2
comp=Z,4.6nm,0.7s
IIGN Ignalina 76.21 328 *e*P P 07 42 51.6 +1.4
PLID Pearl Lake 76.39 45 P P 07 42 51.9 +0.1
PLID IAmb IAmb 07 42 56.9
comp=Z,4.3nm,0.7s
AFDM Forest Hills D 76.41 52 IAmb IAmb 07 42 54.8
comp=Z,6.8nm,1.1s
VSVD Vaisvydziai 76.84 329 *e*P P 07 42 55.2 +1.4
MFID Camas Ranch 77.39 47 IAmb IAmb 07 42 59.6
comp=Z,7.4nm,0.8s
AKASG Malin Array Be 77.54 323 *i* P P 07 42 57.4 -0.5
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG Malin Array Be 77.54 323 P P 07 42 57.0 -0.8
comp=Z,4.3nm,0.5s,baz=47,slow=5.8,SNR=11
AKASG LR LR 08 19 19.3
comp=Z,188nm,20.5s,baz=40,slow=37
comp=Z,4.3nm,0.5s
AKBB Malin Array Si 77.54 323 *ce*P P 07 42 58.9 +1.0
YERR Yerington 77.55 52 IAmb IAmb 07 43 02.1
comp=Z,10nm,1.2s
KIEV Kiev 77.56 323 ⇑P P 07 42 57.5 -0.3
KIEV Kiev 77.56 323 P P 07 42 57.6 -0.3
KIEV Kiev 77.56 323 ⇑P P 07 42 57.6 -0.3
HFS Hagfors 78.05 336 P P 07 42 59.8 -0.7
comp=Z,3.5nm,0.6s,baz=75,slow=6.7,SNR=15
HFS LR LR 08 20 43.3
comp=Z,105nm,18.5s,baz=10.0,slow=38
comp=Z,3.5nm,0.6s
URZ Urewera 78.08 151 LR LR 08 13 19.9
comp=Z,44nm,21.5s,baz=121,slow=32
FFC Flin Flon 78.09 32 P P 07 43 01.1 +0.2
FFC IAmb IAmb 07 43 01.9
comp=Z,8.2nm,0.8s
FFC Flin Flon 78.09 32 P P 07 43 01.1 +0.2
FFC pmax pmax
comp=Z,8.0nm,0.8s
RAR Rarotonga 78.09 125 LR LR 08 09 52.8
comp=Z,65nm,20.4s,baz=329,slow=30
BMN Battle Mountai 78.11 50 IAmb IAmb 07 43 03.9
comp=Z,8.3nm,1.0s
HLID Hailey 78.17 46 P P 07 43 03.1 +1.4
baz=304,SNR=8.4
NB2 NORSAR Subarra 78.22 337 P P 07 43 01.4 -0.1
comp=Z,3.8nm,0.7s,baz=42,slow=5.3
NOA NORSAR Array B 78.22 337 P P 07 43 01.0 -0.5
NOA NORSAR Array B 78.22 337 P P 07 43 01.0 -0.5
comp=Z,1.5nm,0.6s,baz=55,slow=6.5,SNR=9.6
NOA LR LR 08 19 39.6
comp=Z,85nm,21.0s,baz=40,slow=37
comp=Z,1.5nm,0.6s
KVN Kaiserslie 78.27 51 IAmb IAmb 07 43 04.0
comp=Z,5.5nm,0.8s
EGMT Eagleton 78.33 40 IAmb IAmb 07 43 04.8
comp=Z,6.8nm,0.8s
EGMT Eagleton 78.33 40 P P 07 43 03.3 +0.8
baz=306,SNR=5.1
LHV Little Huntoon 78.42 52 IAmb IAmb 07 43 08.0
comp=Z,10nm,0.9s
NVAR Mina Array Bea 78.46 52 P P 07 43 04.5 +1.0
comp=Z,4.3nm,0.8s,baz=294,slow=5.6,SNR=25
comp=Z,4.3nm,0.8s
MLAC Mammoth, Mammo 78.53 53 P P 07 43 05.3 +1.4
baz=302
FCC Fort Churchill 78.56 26 IAmb IAmb 07 43 03.8
comp=Z,6.6nm,0.6s
BOZ Bozeman (W) 78.68 43 IAmb IAmb 07 43 05.9
comp=Z,4.8nm,0.6s
BOZ Bozeman (W) 78.68 43 P P 07 43 05.6 +1.1
baz=305,SNR=8.9
ICESG Greenland Ices 78.88 0 *i* P P 07 43 08.7 +3.3
ICESG IAmb IAmb 07 43 12.2
comp=Z,7.6nm,0.9s
ELK Elko 79.21 49 IAmb IAmb 07 43 11.1
comp=Z,5.8nm,0.7s
PKM Mcpherson Peak 79.30 56 P P 07 43 10.0 +1.9
baz=302
VES Vestal, Richgr 79.31 54 P P 07 43 08.6 +0.8
baz=302
SORM Soroca 79.53 321 ⇓P P 07 43 08.2 -0.7
SORM Soroca 79.53 321 ⇓P P 07 43 08.2 -0.7
CWC Cottonwood Cre 79.67 53 P P 07 43 10.7 +0.6
baz=303
ISA Isabella, Lake 79.82 54 P P 07 43 11.0 +0.2
baz=303
GRAC Grapevine Rang 79.86 53 P P 07 43 12.3 +1.3
baz=303
ARVC Arvin 79.86 55 P P 07 43 12.2 +1.3
baz=302
H17A Grant Village 79.98 44 IAmb IAmb 07 43 15.7
comp=Z,11nm,0.8s
H17A Grant Village 79.98 44 P P 07 43 14.9 +3.2
baz=306,SNR=8.6
LKWY Lake 79.98 43 IAmb IAmb 07 43 15.6
comp=Z,9.1nm,0.9s
FLWY Flagg Ranch 80.09 44 IAmb IAmb 07 43 15.4
comp=Z,12nm,1.1s
HVU Hansel Valley 80.17 47 IAmb IAmb 07 43 15.1
comp=Z,11nm,0.8s
MPMC Manual Prospec 80.28 54 P P 07 43 14.4 +1.0
baz=303,SNR=5.3
TPAW Teton Pass 80.29 44 IAmb IAmb 07 43 15.0
comp=Z,6.4nm,0.8s
R11B Troy Canyon, C 80.30 51 P P 07 43 14.6 +1.1
baz=304,SNR=12
RLMT Red Lodge 80.31 42 P P 07 43 14.8 +1.3
baz=306,SNR=7.5
Q12A Willow Creek R 80.41 50 IAmb IAmb 07 43 16.2
comp=Z,6.3nm,0.7s
FURC Furnace Creek, 80.48 53 P P 07 43 15.3 +1.1
baz=303
BGU Big Grassy Mou 80.50 47 IAmb IAmb 07 43 16.6
comp=Z,5.3nm,0.6s
EDW2 Edwards Air Fo 80.57 55 P P 07 43 15.8 +1.0
baz=303
TPNV Topopah Spring 80.63 52 IAmb IAmb 07 43 17.1
comp=Z,8.8nm,0.7s
TPNV Topopah Spring 80.63 52 P P 07 43 16.4 +1.1
baz=304,SNR=11
DECC Green Verdugo 80.67 55 P P 07 43 16.5 +1.1
baz=303
GWY Greenwater Val 80.77 53 IAmb IAmb 07 43 17.3
comp=Z,8.0nm,0.6s
HWUT Hardware Ranch 81.01 46 IAmb IAmb 07 43 19.6
comp=Z,13nm,0.9s
DGMT Dagmar 81.01 38 P P 07 43 17.7 +0.8
baz=309
DUG Dugway, Tooele 81.05 48 P P 07 43 18.8 +1.3
baz=305,SNR=20
LAO LASA Array 81.06 40 IAmb IAmb 07 43 19.1
comp=Z,10nm,0.8s
LAO LASA Array 81.06 40 P P 07 43 18.3 +1.0
baz=308,SNR=5.3
CIS Catalina Islan 81.08 56 P P 07 43 18.1 +0.6
baz=303
PRAR RASCA 81.14 321 ⇑P P 07 43 07.2 -10
BFSC Mount Baldy Ra 81.15 55 P P 07 43 18.6 +0.6
baz=303
GSC Goldstone, Bar 81.16 54 P P 07 43 19.2 +1.2
baz=304
DY2G Dye2 81.37 3 *i* P P 07 43 21.4 +2.6
DY2G IAmb IAmb 07 43 21.5
comp=Z,7.6nm,3.0s
BR131 Keskin Array S 81.39 312 IAmb IAmb 07 43 25.5
comp=Z,8.7nm,0.8s
BRTR Keskin Array B 81.39 312 *i* P P 07 43 19.2 0.0
BRTR pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 81.39 312 P P 07 43 18.9 -0.3
comp=Z,3.0nm,0.9s,baz=126,slow=2.4,SNR=9.6
BRTR LR LR 08 21 23.9
comp=Z,65nm,19.7s,baz=64,slow=37

	comp=Z,3.0nm,0.9s							
CTU	**Camp Tracy**	**81.42**	**47**	IAmb	IAmb	07 43 21.4		
	comp=Z,9.1nm,0.7s							
BUR08	**Bucovina Ar. S**	**81.50**	**322**	IAmb	IAmb	07 43 26.1		
	comp=Z,6.1nm,0.7s							
BURAR	**Bucovina Array**	**81.51**	**322**	⇑P	**P**	**07 43 19.7**	**+0.1**	
BURAR	**Bucovina Array**	**81.51**	**322**	P	**P**	**07 43 19.8**	**+0.1**	
BURAR				IAmb	IAmb	07 43 26.5		
	comp=Z,8.0nm,0.7s							
BURAR	**Bucovina Array**	**81.51**	**322**	⇑P	**P**	**07 43 19.7**	**+0.1**	
BW06	**Boulder Array**	**81.54**	**44**	P	**P**	**07 43 20.7**	**+0.6**	
	baz=307,SNR=6.4							
PDAR	**Pinedale Array**	**81.54**	**44**	P	**P**	**07 43 20.4**	**+0.4**	
	comp=Z,3.2nm,0.6s,baz=269,slow=1.8,SNR=44							
PDAR				LR	LR	08 22 40.4		
	comp=Z,18nm,18.0s,baz=17,slow=38							
	comp=Z,3.2nm,0.6s							
NLU	**North Lily Min**	**81.65**	**48**	IAmb	IAmb	07 43 22.7		
	comp=Z,11nm,0.8s							
BBRC	**Big Bear Solar**	**81.65**	**55**	P	**P**	**07 43 21.9**	**+1.1**	
	baz=304							
RAYN	**Ar Rayn**	**81.72**	**292**	P	**P**	**07 43 21.0**	**-0.2**	
RAYN	**Ar Rayn**	**81.72**	**292**	P	**P**	**07 43 21.0**	**-0.2**	
RAYN				pmax	pmax			
	comp=Z,20nm,0.7s							
HEC	**Hector,Ludlow**	**81.74**	**54**	P	**P**	**07 43 22.2**	**+1.1**	
	baz=304							
ODZ	**Otahua Downs**	**81.75**	**159**	P	**P**	**07 43 22.2**	**+1.7**	
ODZ				IAmb	IAmb	07 43 43.2		
	comp=Z,10nm,1.1s							
VRI	**Vrincioaia**	**81.80**	**320**	⇑P	**P**	**07 43 22.1**	**+0.9**	
VRI	**Vrincioaia**	**81.80**	**320**	⇑P	**P**	**07 43 22.1**	**+0.9**	
MURC	**Murrieta**	**81.82**	**55**	P	**P**	**07 43 22.6**	**+1.1**	
	baz=304							
BSUT	**Blindstream Ca**	**82.13**	**47**	IAmb	IAmb	07 43 27.7		
	comp=Z,4.2nm,0.7s							
KOLS	**Kolonicke sedl**	**82.16**	**324**	*e*P	**P**	**07 43 24.3**	**+1.3**	
KOLS				pmax	pmax			
	comp=Z,7.0nm,0.9s							
KOLS	**Kolonicke sedl**	**82.16**	**324**	*e*P	**P**	**07 43 24.3**	**+1.3**	
OZUR		**82.17**	**320**	⇓P	**P**	**07 43 22.8**	**-0.3**	
TCRU	**Three Creeks R**	**82.19**	**49**	IAmb	IAmb	07 43 26.6		
	comp=Z,7.2nm,0.7s							
GMRC	**Granite Mounta**	**82.23**	**54**	P	**P**	**07 43 24.8**	**+1.1**	
	baz=304							
109C	**Camp Elliot, M**	**82.28**	**56**	P	**P**	**07 43 24.7**	**+0.9**	
	baz=304							
PFO	**Pinyon Flats O**	**82.33**	**55**	P	**P**	**07 43 24.8**	**+0.5**	
PFO				IAmb	IAmb	07 43 25.9		
	comp=Z,6.9nm,0.8s							
PFO	**Pinyon Flats O**	**82.33**	**55**	P	**P**	**07 43 25.0**	**+0.7**	
	baz=304							
PFO	**Pinyon Flats O**	**82.33**	**55**	P	**P**	**07 43 24.8**	**+0.5**	
PFO				pmax	pmax			
	comp=Z,7.0nm,0.9s							
PFO	**Pinyon Flats O**	**82.33**	**55**	LR	LR	08 13 27.0		
	comp=Z,34nm,19.5s,baz=95,slow=31							
TPFO	**Pinon Flats**	**82.33**	**55**	P	**P**	**07 43 25.0**	**+0.7**	
	baz=304							
PMD	**Palm Desert**	**82.36**	**55**	IAmb	IAmb	07 43 25.4		
	comp=Z,5.6nm,0.7s							
BELC	**Belle Mtn. Jos**	**82.43**	**55**	P	**P**	**07 43 25.3**	**+0.4**	
	baz=304							
DOPR	**Dopca**	**82.47**	**320**	⇑P	**P**	**07 43 25.9**	**+1.3**	
OJC	**Ojcow**	**82.50**	**326**	P	**P**	**07 43 24.6**	**0.0**	
OJC	**Ojcow**	**82.50**	**326**	P	**P**	**07 43 24.7**	**0.0**	
OJC				pmax	pmax			
	comp=Z,16nm,1.1s							
TMUT	**Trail Mountain**	**82.58**	**48**	IAmb	IAmb	07 43 29.2		
	comp=Z,6.4nm,0.6s							
CRVS	**Cervenica-Dubn**	**82.59**	**324**	*e*P	**P**	**07 43 26.4**	**+1.2**	
CRVS	**Cervenica-Dubn**	**82.59**	**324**	*e*P	**P**	**07 43 26.4**	**+1.2**	
LCMT	**Little Creek M**	**82.59**	**51**	IAmb	IAmb	07 43 27.8		
	comp=Z,6.8nm,0.9s							
MTPU	**Mount Pierson**	**82.68**	**49**	IAmb	IAmb	07 43 28.9		
	comp=Z,6.8nm,0.7s							
MONP2	**Monument Peak**	**82.75**	**56**	P	**P**	**07 43 27.1**	**+0.5**	
	baz=304							
KNB	**Kanab**	**82.86**	**51**	IAmb	IAmb	07 43 42.6		
	comp=Z,7.6nm,0.9s							
SSRD	**Sdr. Stenderup**	**82.97**	**334**	*i* P	P	07 43 35.0	+8.1	
BC3	**Big Chuckawall**	**83.00**	**55**	P	**P**	**07 43 28.6**	**+0.8**	
	baz=304							
IKP	**In-Ko-Pah, Jac**	**83.11**	**56**	P	**P**	**07 43 29.4**	**+1.1**	
	baz=304							
SWSC	**Sam W. Stewart**	**83.16**	**55**	P	**P**	**07 43 29.6**	**+1.2**	
	baz=304							
MARR	**Marisel-Cluj**	**83.21**	**322**	⇑P	**P**	**07 43 29.0**	**+0.4**	
ARR	**Arges**	**83.26**	**320**	⇑P	**P**	**07 43 29.9**	**+1.1**	
PPT	**Papeete**	**83.27**	**116**	LR	LR	08 10 33.2		
	comp=Z,63nm,21.8s,baz=264,slow=28							
DRGR		**83.35**	**322**	⇓P	**P**	**07 43 27.9**	**-1.4**	
DRGR		**83.35**	**322**	⇓P	**P**	**07 43 27.9**	**-1.4**	
K22A	**Casper**	**83.39**	**43**	P	**P**	**07 43 30.5**	**+0.9**	
	baz=308,SNR=8.9							
LANS	**Liptovska Anna**	**83.39**	**325**	*e*P	**P**	**07 43 30.3**	**+0.9**	
LANS				pmax	pmax			
	comp=Z,5.0nm,0.8s							
LANS	**Liptovska Anna**	**83.39**	**325**	*e*P	**P**	**07 43 30.3**	**+0.9**	
U15A	**North Rim**	**83.55**	**51**	IAmb	IAmb	07 43 34.1		
	comp=Z,5.6nm,0.9s							
MORC	**Moravsky Berou**	**83.86**	**327**	⇓P	**P**	**07 43 32.0**	**+0.2**	
MORC	**Moravsky Berou**	**83.86**	**327**	IAmb	IAmb	07 43 38.1		
	comp=Z,4.5nm,0.7s							
MORC	**Moravsky Berou**	**83.86**	**327**	*e*P	**P**	**07 43 31.8**	**0.0**	
MORC	**Moravsky Berou**	**83.86**	**327**	⇓P	**P**	**07 43 32.0**	**+0.2**	
ULM	**Lac du Bonnet**	**83.86**	**33**	P	**P**	**07 43 31.0**	**-0.7**	
	comp=Z,1.6nm,0.4s,baz=9.8,slow=2.2,SNR=4.7							
	comp=Z,1.6nm,0.4s							
RSSD	**Black Hills**	**83.87**	**41**	P	**P**	**07 43 31.9**	**-0.3**	
RSSD				IAmb	IAmb	07 43 36.2		
	comp=Z,3.5nm,0.7s							
RSSD	**Black Hills**	**83.87**	**41**	P	**P**	**07 43 32.7**	**+0.5**	
	baz=310							
RSSD	**Black Hills**	**83.87**	**41**	P	**P**	**07 43 31.9**	**-0.3**	
RSSD				pmax	pmax			
	comp=Z,4.0nm,0.7s							
O20A	**White River Ci**	**83.91**	**46**	P	**P**	**07 43 33.2**	**+0.8**	
	baz=308,SNR=13							
OSTC	**Ostas**	**83.92**	**328**	*e*P	**P**	**07 43 34.9**	**+2.9**	
OSTC	**Ostas**	**83.92**	**328**	*e*P	**P**	**07 43 34.9**	**+2.9**	
KRLC	**Kraliky**	**84.00**	**327**	*e*P	**P**	**07 43 32.8**	**+0.3**	
KRLC	**Kraliky**	**84.00**	**327**	*e*P	**P**	**07 43 32.8**	**+0.3**	
DPC	**Dobruska-Polom**	**84.02**	**328**	*e*P	**P**	**07 43 33.0**	**+0.4**	
DPC	**Dobruska-Polom**	**84.02**	**328**	*e*P	**P**	**07 43 33.0**	**+0.4**	
UPC	**Upice**	**84.04**	**328**	*e*P	**P**	**07 43 33.1**	**+0.4**	
UPC				*e*pP	**PcP**	**07 43 37.4**	**+0.8**	
UPC	**Upice**	**84.04**	**328**	*e*P	**P**	**07 43 33.1**	**+0.4**	
UPC				*e*		07 43 37.4		
MMAI	**Mount Meron Ar**	**84.05**	**305**	P	**P**	**07 43 33.2**	**+0.1**	
	comp=Z,0.6nm,0.2s,baz=46,slow=7.1,SNR=5.7							
	comp=Z,0.6nm,0.2s							
SURR	**Surduc**	**84.34**	**322**	⇓P	**P**	**07 43 34.1**	**-0.1**	
BALJ	**Balqa**	**84.41**	**304**	IAmb	IAmb	07 43 41.2		
	comp=Z,16nm,0.8s							
JAVC	**Velka Javorina**	**84.44**	**326**	*e*P	**P**	**07 43 35.8**	**+1.0**	
Y14A	**Wickenburg**	**84.52**	**53**	IAmb	IAmb	07 43 37.1		
	comp=Z,6.6nm,0.9s							
VRAC	**Vranov**	**84.63**	**327**	⇓P	**P**	**07 43 36.1**	**+0.4**	
VRAC	**Vranov**	**84.63**	**327**	*e*P	**P**	**07 43 35.5**	**-0.2**	
VRAC	**Vranov**	**84.63**	**327**	⇓P	**P**	**07 43 36.1**	**+0.4**	
VRAC	**Vranov**	**84.63**	**327**	LR	LR	08 23 46.5		
	comp=Z,113nm,18.9s,baz=21,slow=37							
113A	**Mohawk Valley,**	**84.67**	**55**	IAmb	IAmb	07 43 37.7		
	comp=Z,6.7nm,0.9s							
PVCC	**Panska Ves**	**84.67**	**329**	*e*P	**P**	**07 43 36.0**	**+0.2**	
PVCC	**Panska Ves**	**84.67**	**329**	*e*P	**P**	**07 43 36.0**	**+0.2**	
WUAZ	**Wupatki**	**84.69**	**51**	P	**P**	**07 43 37.9**	**+1.4**	
	baz=306,SNR=7.1							
BRG	**Berggiesshubel**	**84.69**	**329**	*i* P	**P**	**07 43 36.2**	**+0.2**	
BRG				Amp		07 43 37.4		
	comp=Z,6.5nm,0.7s							
BRG	**Berggiesshubel**	**84.69**	**329**	P	**P**	**07 43 40.3**	**+4.4**	
BRG				Amp		07 43 42.1		
	comp=Z,7.0nm,0.8s							
BRG	**Berggiesshubel**	**84.69**	**329**	*i* P	**P**	**07 43 36.1**	**+0.2**	
BRG						07 43 40.2		
BRG				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CLL	**Collm**	**84.77**	**330**	P	**P**	**07 43 36.2**	**-0.1**	
CLL	**Collm**	**84.77**	**330**	*i* P	**P**	**07 43 35.9**	**-0.4**	
CLL				*i*		07 43 40.5		
CLL				pmax	pmax			
	comp=Z,11nm,0.8s							
CLL	**Collm**	**84.77**	**330**	*i* P	**P**	**07 43 35.9**	**-0.4**	
	comp=Z,11nm,0.8s							
CLL				*i* pP	**PcP**	**07 43 40.5**	**+0.8**	
	comp=Z,19nm,0.8s							
CLL				*ex*	x	07 43 46.0		
CLL				*e*PP	**PP**	**07 46 53.0**	**+1.2**	
N23A	**Red Feather La**	**84.82**	**44**	P	**P**	**07 43 38.6**	**+1.5**	
	baz=309,SNR=13							
PHWY	**Pilot Hill**	**84.85**	**44**	IAmb	IAmb	07 43 39.0		
	comp=Z,6.4nm,0.9s							
KRUC	**Moravsky**	**84.90**	**327**	*e*P	**P**	**07 43 36.8**	**-0.2**	
GOPC	**GO Pecny, Ondr**	**85.02**	**328**	*e*P	**P**	**07 43 37.5**	**-0.1**	
GOPC	**GO Pecny, Ondr**	**85.02**	**328**	*e*P	**P**	**07 43 37.5**	**-0.1**	
PRU	**Pruhonice**	**85.07**	**328**	*e*P	**P**	**07 43 37.6**	**-0.2**	
PRU				*e*pP	**sP**	**07 43 42.6**	**-1.2**	
PRU	**Pruhonice**	**85.07**	**328**	*e*P	**P**	**07 43 37.6**	**-0.2**	
PRU				*e*		07 43 42.6		
HSKC	**Hora Svate Kat**	**85.11**	**329**	*e*P	**P**	**07 43 37.6**	**-0.5**	
MDVR	**Moldovita**	**85.20**	**321**	⇓P	**P**	**07 43 39.3**	**+0.6**	
MVCO	**Mesa Verde**	**85.53**	**48**	P	**P**	**07 43 41.7**	**+0.9**	
	baz=308							
ISCO	**Idaho Springs**	**85.70**	**45**	IAmb	IAmb	07 43 43.6		
	comp=Z,4.1nm,0.8s							
ISCO	**Idaho Springs**	**85.70**	**45**	P	**P**	**07 43 42.7**	**+1.1**	
	baz=309,SNR=7.9							
214A	**Organ Pipe Nat**	**85.80**	**55**	P	**P**	**07 43 42.7**	**+0.9**	
	baz=306							
RONA	**Rosalia, Austr**	**85.91**	**326**	*e*P	**P**	**07 43 41.6**	**-0.6**	
	comp=Z,0.5nm,0.4s							
CONA	**Conrad Observa**	**85.96**	**326**	*e*P	**P**	**07 43 40.7**	**-1.7**	
	comp=Z,0.3nm,0.5s							
CKRC	**Cesky Krumlov**	**86.03**	**328**	*e*P	**P**	**07 43 42.6**	**-0.1**	
CKRC	**Cesky Krumlov**	**86.03**	**328**	*e*P	**P**	**07 43 42.6**	**-0.1**	
KHC	**Kasperske Hory**	**86.13**	**328**	*e*P	**P**	**07 43 43.0**	**-0.2**	
KHC	**Kasperske Hory**	**86.13**	**328**	*e*P	**P**	**07 43 43.0**	**-0.2**	
S22A	**4UR Ranch, Cre**	**86.25**	**47**	IAmb	IAmb	07 43 46.5		
	comp=Z,5.2nm,0.9s							
S22A	**4UR Ranch, Cre**	**86.25**	**47**	P	**P**	**07 43 45.5**	**+1.1**	
	baz=309,SNR=8.0							
GERES	**GERESS Array B**	**86.28**	**328**	P	**P**	**07 43 44.1**	**+0.1**	
	comp=Z,1.8nm,0.7s,baz=46,slow=5.7,SNR=5.8							
GERES				LR	LR	08 24 47.4		
	comp=Z,105nm,19.4s,baz=11,slow=37							
	comp=Z,1.8nm,0.7s							
SUSD	**Miller**	**86.39**	**38**	P	**P**	**07 43 44.8**	**+0.3**	
	baz=313							
Q24A	**Divide**	**86.51**	**45**	P	**P**	**07 43 46.4**	**+0.8**	
	baz=310							
ARSA	**Arzberg**	**86.60**	**326**	*e*P	**P**	**07 43 43.7**	**-1.8**	
	comp=Z,0.3nm,0.3s							
MOA	**Molln**	**86.76**	**327**	*e*P	**P**	**07 43 44.5**	**-1.7**	
	comp=Z,0.1nm,0.1s							
TUC	**Tucson**	**86.98**	**53**	P	**P**	**07 43 48.9**	**+1.1**	
	baz=307							
OGNE	**Ogallala**	**87.06**	**42**	P	**P**	**07 43 48.3**	**+0.3**	
	baz=311							
EKA	**Eskdalemuir Ar**	**87.29**	**340**	P	**P**	**07 43 49.5**	**+0.8**	
	comp=Z,3.5nm,0.8s,baz=39,slow=5.4,SNR=6.9							
	comp=Z,3.5nm,0.8s							
EYMN	**Ely**	**87.52**	**32**	P	**P**	**07 43 50.1**	**+0.2**	
	baz=318							
KBA	**Koelnbreinsper**	**87.75**	**327**	*e*P	**P**	**07 43 51.0**	**-0.2**	
	comp=Z,0.9nm,0.4s							
LESA	**Schwarzleotal**	**87.80**	**328**	*e*P	**P**	**07 43 51.1**	**-0.3**	
	comp=Z,1.1nm,0.3s							
ECSD	**EROS Data Cent**	**88.10**	**38**	IAmb	IAmb	07 43 53.6		
	comp=Z,7.3nm,0.9s							
ANMO	**Albuquerque**	**88.23**	**49**	P	**P**	**07 43 53.8**	**0.0**	
ANMO	**Albuquerque**	**88.23**	**49**	P	**P**	**07 43 54.2**	**+0.4**	
	baz=309							
ANMO	**Albuquerque**	**88.23**	**49**	P	**P**	**07 43 53.8**	**0.0**	
ANMO				pmax	pmax			
	comp=Z,2.0nm,0.9s							
ANMO	**Albuquerque**	**88.23**	**49**	LR	LR	08 16 32.0		
	comp=Z,37nm,20.3s,baz=46,slow=31							
WATA	**Walderalm**	**88.36**	**328**	*i* P	**P**	**07 43 53.0**	**-1.2**	
	comp=Z,0.5nm,0.2s							
ABTA	**Abfaltersbach**	**88.38**	**327**	*e*P	**P**	**07 43 52.6**	**-1.6**	
	comp=Z,0.9nm,0.4s							
WTTA	**Wattenberg**	**88.39**	**328**	*i* P	**P**	**07 43 53.2**	**-1.1**	
	comp=Z,0.5nm,0.3s							
CLUD	**Cludinico**	**88.42**	**327**	P	**P**	**07 43 52.9**	**-1.4**	
CLUD				IAmb	IAmb	07 44 07.5		
	comp=Z,6.3nm,0.7s							
319A	**Douglas**	**88.56**	**53**	IAmb	IAmb	07 43 54.5		
	comp=Z,6.9nm,0.8s							
MOTA	**Moosalm**	**88.56**	**328**	*i* P	**P**	**07 43 54.3**	**-0.9**	
	comp=Z,0.8nm,0.5s							
RETA	**Reutte**	**88.61**	**329**	*e*P	**P**	**07 43 54.0**	**-1.3**	
	comp=Z,0.9nm,0.4s							
SQTA	**Sankt Quirin**	**88.61**	**328**	*i* P	**P**	**07 43 55.1**	**-0.2**	
	comp=Z,1.4nm,0.4s							
121A	**Cookes Peak, D**	**88.86**	**52**	P	**P**	**07 43 57.1**	**+0.3**	
	baz=308							
BGNE	**Belgrade**	**88.91**	**40**	P	**P**	**07 43 56.9**	**+0.2**	
	baz=314							
SPMN	**Marine on St.**	**88.92**	**35**	IAmb	IAmb	07 43 57.5		
	comp=Z,7.1nm,0.9s							
SPMN	**Marine on St.**	**88.92**	**35**	P	**P**	**07 43 57.3**	**+0.6**	
	baz=317							
FETA	**Feichten**	**88.98**	**328**	*i* P	**P**	**07 43 56.5**	**-0.6**	
	comp=Z,1.0nm,0.6s							
DAVA	**Damuels**	**89.15**	**329**	*e*P	**P**	**07 43 57.5**	**-0.3**	
	comp=Z,0.9nm,0.3s							
FUORN	**Ofenpass-Fuorn**	**89.49**	**328**	IAmb	IAmb	07 44 05.4		
	comp=Z,6.4nm,0.8s							
DAVOX	**Davos/Dischmat**	**89.54**	**329**	LR	LR	08 28 29.3		
	comp=Z,109nm,19.2s,baz=9.0,slow=38							
CBKS	**Cedar Bluff**	**89.79**	**43**	P	**P**	**07 44 01.2**	**+0.3**	
	baz=313							
COWI	**Conover**	**89.97**	**32**	IAmb	IAmb	07 44 02.3		
	comp=Z,5.0nm,0.9s							
TUE	**Stuetta**	**90.01**	**329**	IAmb	IAmb	07 44 08.9		
	comp=Z,6.9nm,0.9s							
SCHQ	**Schefferville**	**90.06**	**15**	P	**P**	**07 44 02.6**	**+0.8**	
	comp=Z,1.9nm,0.9s,baz=344,slow=13,SNR=1.2							
	comp=Z,1.9nm,0.9s							
G40A	**Rib Lake**	**90.12**	**33**	IAmb	IAmb	07 44 03.3		
	comp=Z,6.8nm,0.8s							
E43A	**Lone Tree Farm**	**90.70**	**31**	IAmb	IAmb	07 44 05.9		
	comp=Z,7.5nm,0.8s							
MNTX	**Cornudas Mount**	**90.97**	**51**	P	**P**	**07 44 07.2**	**+0.7**	
	baz=310							
SCIA	**State Center**	**91.15**	**37**	P	**P**	**07 44 07.7**	**+0.6**	
	baz=317							
AMTX	**Amarillo**	**91.27**	**47**	P	**P**	**07 44 08.5**	**+0.6**	
	baz=312							
KSU1	**Kansas State U**	**91.36**	**41**	P	**P**	**07 44 08.4**	**+0.3**	
	baz=315							
VHRN	**Van Horn**	**91.81**	**52**	IAmb	IAmb	07 44 13.2		
	comp=Z,4.9nm,1.0s							
JFWS	**Jewell Farm**	**91.87**	**35**	P	**P**	**07 44 10.3**	**-0.1**	
	baz=319							
LPIG	**La Paz**	**92.21**	**60**	LR	LR	08 27 10.8		
	comp=Z,22nm,18.2s,baz=320,slow=36							
MNHN	**Monahans**	**92.91**	**50**	IAmb	IAmb	07 44 18.1		
	comp=Z,3.4nm,0.7s							
GLMI	**Grayling**	**92.95**	**30**	P	**P**	**07 44 15.9**	**+0.5**	
	baz=323							
ALPN	**Alpine**	**92.96**	**51**	IAmb	IAmb	07 44 17.4		
	comp=Z,4.4nm,0.9s							
WMOK	**Wichita Mounta**	**93.13**	**45**	IAmb	IAmb	07 44 17.5		
	comp=Z,3.5nm,0.7s							
WMOK	**Wichita Mounta**	**93.13**	**45**	P	**P**	**07 44 16.7**	**+0.3**	
	baz=313							
L44A	**Lake County Fo**	**93.55**	**34**	P	**P**	**07 44 18.4**	**+0.2**	
	baz=321							
TXAR	**Lajitas Array**	**93.61**	**52**	P	**P**	**07 44 19.8**	**+0.9**	
	comp=Z,8.3nm,0.7s,baz=298,slow=3.2,SNR=124							
ABTX	**Abilene, Hawle**	**94.04**	**47**	P	**P**	**07 44 21.0**	**+0.4**	
	baz=313							
TUL3	**Leonard**	**94.07**	**43**	P	**P**	**07 44 21.1**	**+0.4**	
	baz=315							
HDIL	**Hopedale**	**94.12**	**36**	P	**P**	**07 44 20.6**	**-0.3**	
	baz=320							
S39A	**Bolivar**	**94.17**	**40**	IAmb	IAmb	07 44 21.2		
	comp=Z,4.7nm,0.8s							
R40A	**Maddies Statio**	**94.30**	**39**	IAmb	IAmb	07 44 22.1		
	comp=Z,4.9nm,0.8s							
CCM	**Cathedral Cave**	**95.01**	**38**	P	**P**	**07 44 25.1**	**+0.1**	
	baz=318							
JCT	**Junction City**	**95.38**	**49**	P	**P**	**07 44 26.8**	**-0.1**	
	baz=313							
MIAR	**Mount Ida**	**96.31**	**42**	P	**P**	**07 44 30.9**	**0.0**	
	baz=317							
833A	**Chaparral WMA,**	**97.09**	**50**	P	**P**	**07 44 34.3**	**-0.3**	
	baz=313							
KEST	**Kesra**	**98.25**	**322**	LR	LR	08 32 31.7		
	comp=Z,53nm,19.6s,baz=236,slow=38							
HRV	**Adam Dziewonsk**	**99.93**	**23**	P	**Pdif**	**07 44 47.1**	**0.0**	
	baz=333							
TORD	**Torodi Ar. Bea**	**120.00**	**312**	PKP	**PKPdf**	**07 49 52.2**	**-1.2**	
	comp=Z,12nm,0.3s,baz=32,slow=2.4,SNR=3.7							
QSPA	**South Pole Qui**	**122.08**	**180**	PKP	**PKPdf**	**07 49 54.9**	**-1.0**	
	comp=Z,2.9nm,0.6s,baz=305,slow=1.8,SNR=16							
BOSA	**Boshof**	**124.80**	**256**	PKP	**PKPdf**	**07 50 01.6**	**-0.7**	
	comp=Z,4.2nm,1.0s,baz=87,slow=2.0,SNR=6.1							
ELIB	**Princess Elisa**	**128.76**	**201**	*e*PKP	**PKPdf**	**07 50 08.9**	**+0.2**	
ROSC	**El Rosal**	**130.41**	**48**	PKIKP	**PKPdf**	**07 50 15.0**	**+1.1**	
ROSC	**El Rosal**	**130.41**	**48**	PKP	**PKPdf**	**07 50 15.0**	**+1.1**	
	comp=Z,2.4nm,0.5s,baz=313,slow=1.1,SNR=1.8							
PLCA	**Paso Flores**	**153.81**	**117**	PKPbc	**PKPbc**	**07 51 01.8**	**+0.5**	
	comp=Z,4.2nm,0.9s,baz=231,slow=3.7,SNR=14							
BDFB	**Brasilia**	**161.68**	**27**	PKPab	**PKPab**	**07 51 49.0**	**+0.2**	
	comp=Z,3.1nm,0.7s,baz=63,slow=2.9,SNR=6.1							
CPUP	**Villa Florida**	**163.37**	**73**	PKP	**PKPdf**	**07 51 04.5**	**-0.6**	
	comp=Z,2.0nm,0.9s,baz=31,slow=3.4,SNR=4.2							
CPUP				PKPab	**PKPab**	**07 51 56.2**	**+0.1**	
	comp=Z,2.1nm,0.9s,baz=328,slow=2.5,SNR=4.8							

IDC ***11*** *07:34:05.3±6.3, 36.17N×65.55E, h0km, mb3.4/1, mbtmp3.5/7, ML3.4/5, MS3.7/2, Error ellipse: s-maj=92.6km s-min=19.4km az=177.0*
NNC ***11*** *07:34:10.2±6.1, 36.03N×65.71E, h35km±139km, mb3.7, mpv3.5, Error ellipse: s-maj=78.3km s-min=24.6km az=162.0*

ISC 11 07:34:07.3±2.8,**36.0N**±0.2×**65.53E**±0.09,**h35**km,**n15**, σ2°**08**/17,**4C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEYT	**Alibeck**	**6.23**	**290**	Pn	**Pn**	**07 35 37.9**	**+1.0**
	1.0nm,0.3s,baz=125,slow=13,SNR=6.1						
GEYT				Sn	**Sn**	**07 36 49.2**	**+2.3**
	1.1nm,0.3s,baz=134,slow=11,SNR=1.5						
GEYT				Lg	Lg	07 37 23.4	
	baz=115,slow=39						
	2.3nm,0.4s						
GYA0B	**ALIBECK ARRAY**	**6.23**	**290**	⇓Pn	Pn	07 35 40.9	+4.0
GYA0B				⇑Sn	**Sn**	**07 36 48.4**	**+1.5**
KK31	**Karatay Array**	**8.06**	**27**	Pn	**Pn**	**07 36 03.1**	**+1.2**
	0.7nm,0.2s,baz=197,slow=63,SNR=33						
KK31				⇑Sn	**Sn**	**07 37 31.6**	**-0.2**
	1.0nm,0.3s,baz=288,slow=54,SNR=5.8						
AAK	**Ala-Archa**	**9.59**	**44**	Pn	**Pn**	**07 36 21.5**	**-1.5**
	0.7nm,0.3s,baz=216,slow=9.7,SNR=11						
AAK				Sn	**Sn**	**07 38 11.8**	**+2.2**
	0.2nm,0.3s,baz=195,slow=23,SNR=2.5						
	2.2nm,0.5s						
TKM2	**Tokmak 2**	**10.40**	**45**	⇑Pn	**Pn**	**07 36 34.0**	**-0.1**
	2.1nm,0.5s						
TKM2				⇓Sn	**Sn**	**07 38 31.7**	**+2.3**
	6.4nm,1.5s						
AB31	**Akbulak array**	**13.86**	**345**	P	**P**	**07 37 26.1**	**-2.8**
	0.2nm,0.3s,baz=151,slow=12,SNR=6.2						
AKTO	**Aktyubinsk**	**15.41**	**342**	⇑P	**P**	**07 37 44.1**	**-2.1**
	1.2nm,0.7s						
AKTO	**Aktyubinsk**	**15.41**	**342**	Pn	**Pn**	**07 37 39.0**	**-2.9**
	0.2nm,0.3s,baz=157,slow=7.7,SNR=2.2						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**16.53**	**44**	Pn	**Pn**	**07 37 53.3**	**-3.1**
	0.1nm,0.3s,baz=240,slow=14,SNR=3.9						
	0.2nm,0.6s						
BVA0	**Borovoye Array**	**17.36**	**10**	P	**P**	**07 38 09.6**	**+1.9**
	2.9nm,0.9s,baz=172,slow=9.4,SNR=11						
BVAR	**Borovoye Array**	**17.36**	**10**	P	**Pn**	**07 38 07.2**	**+0.6**
	0.1nm,0.3s,baz=197,slow=12

HGSD Ruisui 0.43 203⇓*i*P Pb 07 39 16.8 +0.1
baz=207
EAHA Aohua 0.45 15 *e*P Pg 07 39 16.0 0.0
baz=10.0
VWDT VWDT 0.45 252⇓*i*P Pg 07 39 16.1 +0.1
baz=251
VWDT *i* S Sg 07 39 21.5 -0.4
baz=251
WUSB Renai 0.46 283⇓*i*P Pg 07 39 16.2 +0.1
baz=292
WUSB *i* S Sg 07 39 21.8 -0.5
baz=292
EHY Hungye 0.47 215 *e*P Pg 07 39 16.1 -0.1
baz=212
FUSS Fushou 0.49 317 *e*P Pg 07 39 16.5 -0.1
baz=323
TWT Tachien 0.54 312⇓*i*P Pg 07 39 17.9 +0.3
baz=302
TWT S Sg 07 39 24.8 +0.1
baz=302
ENA Nanau 0.55 13⇓*i*P Pg 07 39 17.8 0.0
baz=4.0
TDCB Techi 0.55 311⇓*i*P Pg 07 39 17.8 +0.1
baz=304
TDCB *i* S Sg 07 39 24.4 -0.6
baz=304
EWUT Wuta 0.57 16⇓*i*P Pg 07 39 18.3 +0.1
baz=6.0
NNSB Datong 0.57 339⇓*i*P Pg 07 39 18.3 +0.1
baz=332
NNSB S Sg 07 39 25.4 -0.5
baz=332
NNSH Datong 0.57 339⇓*i*P Pg 07 39 18.3 0.0
baz=333
NNSH *e*S Sg 07 39 25.5 -0.4
baz=333
YULB Yu-li 0.57 210 Pg 07 39 18.2 0.0
YULB Yu-li 0.57 210 P Pg 07 39 18.4 +0.2
YULB Yu-li 0.57 210 *e*P Pg 07 39 17.9 -0.3
baz=217
NNS Nan Shan 0.59 338⇓*i*P Pg 07 39 18.6 0.0
baz=334
ECBN Changbin 0.59 194 *e*P Pg 07 39 18.9 +0.4
baz=181
EYUL Yuli 0.60 206 *e*P Pb 07 39 19.7 +0.1
baz=215
SSLB Suanglung 0.61 260 Pg 07 39 18.6 -0.4
SSLB Suanglung 0.61 260 P Pg 07 39 18.8 -0.1
SSLB Suanglung 0.61 260⇓*i*P Pg 07 39 18.7 -0.3
baz=260
SSLB *i* S Sg 07 39 25.6 -1.4
baz=260
TWF1 Yuli 0.61 208 *e*P Pg 07 39 18.9 0.0
baz=216
WPL Puli Township 0.61 281⇓*i*P Pg 07 39 19.1 +0.2
baz=282
WPL *e*S Sg 07 39 26.2 -0.8
baz=282
DPDB Guoxing 0.64 283⇓*i*P Pg 07 39 19.8 +0.2
baz=283
LATG Datong 0.65 353⇓*i*P Pg 07 39 19.6 -0.1
baz=345
LATG S Sb 07 39 29.3 -0.1
baz=345
SMLT Sun Moon Lake 0.65 269⇓*i*P Pg 07 39 19.6 -0.1
baz=269
SMLT *i* S Sg 07 39 27.6 -0.7
baz=269
WCS Beigang Elemen 0.66 285⇓*i*P Pb 07 39 20.2 -0.3
baz=285
WCS *e*S Sg 07 39 28.1 -0.5
baz=285
EOS4 EOS4 0.69 70 *e*P Pb 07 39 21.4 +0.7
baz=80
EOS4 *e*S Sn 07 39 32.6 -0.1
baz=80
TYC Yuchr 0.69 271 ⇓P Pg 07 39 20.2 -0.2
baz=280
TYC *e*S Sg 07 39 28.7 -0.8
baz=280
NDT Datong Townshi 0.71 353 ⇓P Pg 07 39 21.0 +0.1
baz=346
ESAO Su ao 0.71 17 *e*P Pg 07 39 21.2 +0.3
baz=10.0
CHKH Chenggong 0.72 196 *e*P Pb 07 39 21.9 +0.3
baz=183
NDS Dongshan 0.74 7 ⇓P Pg 07 39 21.6 +0.1
baz=7.0
NDS *e*S Sg 07 39 31.4 +0.2
baz=7.0
ENTT Nioudou 0.75 357⇓*i*P Pg 07 39 21.7 +0.2
baz=356
TWC Suao 0.75 17 ⇓P Pg 07 39 21.6 0.0
baz=9.0
TWC *e*S Sb 07 39 32.3 +0.1
baz=9.0
EOS3 EOS3 0.76 59 *e*P Pn 07 39 23.1 -0.3
baz=54
EOS2 EOS2 0.77 47 *e*P Pn 07 39 24.8 +1.1
baz=56
YHNB Yeheng 0.80 345 Pb 07 39 23.3 +0.2
YHNB Yeheng 0.80 345 P Pb 07 39 22.9 -0.2
YHNB Yeheng 0.80 345⇓*i*P Pb 07 39 22.9 -0.2
baz=345
YHNB S Sg 07 39 32.5 -0.6
baz=345
WJS Zhushan 0.81 265 *e*P Pb 07 39 23.3 +0.2
baz=260
NSK Sanguang 0.81 344⇓*i*P Pb 07 39 23.1 -0.1
baz=344
NSK S Sg 07 39 33.3 -0.2
baz=344
EHD Haiduan 0.83 207 *e*P Pb 07 39 23.6 +0.2
baz=218
TWE Neicheng 0.83 4⇓*i*P Pb 07 39 23.3 -0.1
baz=4.0
TWE S Sg 07 39 34.0 +0.1
baz=4.0
ALS Alishan 0.83 243 *e*P Pg 07 39 23.0 -0.1
baz=252
WNT Mingjian 0.85 269 *e*P Pb 07 39 24.3 +0.6
baz=275
WNT *e*S Sb 07 39 36.0 +0.9
baz=275
WWF Wufeng 0.85 280 *e*P Pn 07 39 24.5 -0.3
baz=286
WNT1 Nantou City 0.85 271 *e*P Pn 07 39 24.6 -0.3
baz=272
WNT1 *e*S Sb 07 39 36.2 +1.0
baz=272
NFF Wufeng Townshi 0.86 329 *e*P Pb 07 39 24.0 -0.1
baz=335
FUSB Fushanzhiwuyua 0.86 359⇓*i*P Pg 07 39 23.9 +0.2
baz=358
FUSB *i* S Sb 07 39 35.5 -0.2
baz=358
ECS Chishang 0.87 204 *e*P Pb 07 39 24.7 +0.6
baz=206
ILA Ilan 0.88 8 *e*P Pb 07 39 24.2 -0.1
baz=7.0
ELDTW Lidau 0.89 218 *e*P Pg 07 39 24.0 -0.2
baz=218
NWLT Wulai 0.89 354 ⇓P Pg 07 39 24.3 +0.1
baz=353
NWLT *e*S Sb 07 39 36.6 +0.3
baz=353
TWQ1 Liyutan 0.89 301 *e*P Pb 07 39 24.7 +0.2
baz=301
TWQ1 *e*S Sn 07 39 38.8 +0.5
baz=301
TCU Taichung 0.89 287 *e*P Pn 07 39 25.9 +0.4
baz=287
CHN5 Tsauling 0.90 251 P Pb 07 39 25.2 +0.5
baz=241
CHN5 S Sb 07 39 37.4 +0.6
baz=241
NSTT Nanjuang 0.92 323 ⇓P Pb 07 39 25.2 +0.2
baz=323
NSTT *e*S Sg 07 39 37.1 +0.2
baz=323
LIOB Emei 0.93 324 ⇓P Pb 07 39 25.5 +0.4
baz=323
WYL Yuanlin Townsh 0.94 274 *e*P Pb 07 39 25.3 -0.1
baz=275
EDH Donghe 0.96 197 *e*P Pg 07 39 25.0 -0.5
baz=187
NJD Zhudong 0.97 331 *e*P Pn 07 39 26.8 +0.3
baz=329

WCHH Zhanghua 0.98 281 *e*P Pn 07 39 27.2 +0.5
baz=282
WGK Gukeng 0.98 258 *e*P Pn 07 39 27.4 +0.7
baz=260
WGK *e*S Sn 07 39 40.8 +0.3
baz=260
NMLH Miaoli 0.99 311 *e*P Pn 07 39 27.2 +0.4
baz=310
WDLH Douliu 1.00 259 *e*P Pn 07 39 27.2 +0.3
baz=260
WCKO Fanlu 1.03 244 *e*P Pb 07 39 27.0 +0.2
baz=246
HSN1 Hsinchu 1.03 329 *e*P Pn 07 39 28.6 +1.2
baz=327
STYH Taoyuan 1.05 227 *e*P Pb 07 39 27.3 +0.2
baz=229
SBCB Hsinchu 1.06 328 P Pn 07 39 28.7 +0.9
SBCB *e*S Sn 07 39 42.3 -0.2
baz=335
STYT Tauyuan 1.07 227 *e*P Pg 07 39 27.6 0.0
baz=229
NHDH Xindian Distri 1.07 356 *e*P Pb 07 39 27.6 +0.1
baz=353
LONT Longtian 1.07 204 *e*P Pb 07 39 27.8 +0.2
baz=206
TPUB Ta-pu 1.07 237 Pn 07 39 28.5 +0.5
TPUB Ta-pu 1.07 237 P Pn 07 39 28.5 +0.5
TPUB Ta-pu 1.07 237 *e*P Pn 07 39 28.1 +0.1
baz=239
TPUB S Sb 07 39 42.3 +0.6
baz=239
CHN4 Tsaushan 1.08 240⇓*e*P Pn 07 39 28.4 +0.4
baz=235
CHN4 *e*S Sn 07 39 43.6 +0.7
baz=235
HSN Hsinchu 1.08 327 *e*P Pn 07 39 29.3 +1.3
baz=337
HSN *e*S Sn 07 39 44.2 +1.3
baz=337
TATO Taipei 1.08 354 Pn 07 39 28.4 +0.3
TATO Taipei 1.08 354 P Pn 07 39 28.6 +0.5
TATO Taipei 1.08 354 P Pn 07 39 28.4 +0.3
baz=352
TATO S Sg 07 39 41.4 -0.6
baz=352
TWA Mucha 1.08 359⇑*e*P Pn 07 39 28.2 +0.1
baz=347
TWA *e*S Sg 07 39 41.7 -0.4
baz=347
CHN2 Minshiung 1.10 251 *e*P Pn 07 39 29.6 +1.3
baz=253
CHN2 *e*S Sn 07 39 44.5 +1.0
baz=253
WTP Ta-pu 1.12 235 *e*P Pn 07 39 28.8 +0.2
baz=237
WRL Guolierlin Hig 1.13 271 *e*P Pn 07 39 29.1 +0.4
baz=272
WTK Tuku 1.14 260 *e*P Pn 07 39 29.7 +0.9
baz=262
NCUH Zhongli 1.14 340 *e*P Pn 07 39 29.6 +0.8
baz=338
NCU National Centr 1.14 340 *e*P Pn 07 39 30.1 +1.2
baz=348
NCU S Sn 07 39 46.3 +1.8
baz=348
NHY Taipei 1.14 358 *e*P Pn 07 39 29.3 +0.4
baz=5.0
RLNB Erlin 1.14 270 *e*P Pn 07 39 29.8 +0.9
baz=272
RLNB *e*S Sn 07 39 45.4 +0.8
baz=272
TAP Taipei 1.15 355 *e*P Pn 07 39 29.5 +0.6
baz=353
TAP *e*S Sn 07 39 45.1 +0.5
baz=353
TWB1 Santiao Chiao 1.16 17 *e*P Pn 07 39 29.8 +0.6
baz=6.0
TWG Pinlang 1.18 205 Pb 07 39 27.6 -1.8
TWG Pinlang 1.18 205 *e*P Pb 07 39 28.2 -1.2
baz=213
TWGBT Beinan 1.18 205 P Pb 07 39 27.6 -1.7
TWGBT Beinan 1.18 205 *e*P Pb 07 39 28.0 -1.4
baz=213
NWF Wu-fen Shan 1.18 8 *e*P Pn 07 39 30.2 +0.7
baz=5.0
NWF S Sg 07 39 45.0 -0.3
baz=5.0
WFSB Wu-fen Shan 1.18 8 ⇓P Pn 07 39 29.9 +0.4
baz=5.0
WFSB S Sb 07 39 45.3 +0.5
baz=5.0
TWK Hsinying 1.20 239 *e*P Pn 07 39 30.7 +0.9
baz=241
TWK *e*S Sn 07 39 46.7 +0.6
baz=241
TWS1 Kuangyinshan 1.22 352 *e*P Pg 07 39 30.7 +0.3
baz=349
TWS1 *e*S Sn 07 39 47.6 +1.3
baz=349
CHN1 Nanshi 1.22 235 *e*P Pg 07 39 30.8 +0.4
baz=237
CHN1 *e*S Sn 07 39 47.9 +1.5
baz=237
WTCT Ta-ch'eng 1.22 269 *e*P Pb 07 39 30.1 +0.1
baz=270
LDUT Ludao 1.22 186 *e*P Pb 07 39 27.7 -2.4
baz=173
SNST Tainan City 1.22 237 *e*P Pg 07 39 30.6 0.0
baz=239
SXI1 Grass Mountain 1.22 11 *e*P Pg 07 39 30.6 0.0
baz=360
SXI1 *e*S Sn 07 39 47.6 +1.0
baz=360
NHW Xinwu Township 1.22 335 *e*P Pg 07 39 31.3 +0.8
baz=333
SGST Jiashian 1.24 230 *e*P Pb 07 39 30.6 +0.2
baz=232
SGST *e*S Sn 07 39 49.1 +2.1
baz=232
YM01 YM01 1.25 358 *e*P Pg 07 39 31.3 +0.2
baz=4.0
YM01 *e*S Sn 07 39 47.6 +0.4
baz=4.0
TNOU National Taiwa 1.26 7 *e*P Pn 07 39 30.4 -0.1
baz=3.0
NTST Danshui 1.27 353 *e*P Pn 07 39 30.7 0.0
baz=350
ANP Anpu 1.29 356 *e*P Pb 07 39 31.6 +0.3
baz=353
WSF Szhu 1.30 259 *e*P Pb 07 39 31.6 +0.3
baz=261
ICHU Yijhu 1.33 247 *e*P Pg 07 39 33.1 +0.6
baz=250
JYNG Yonaguni jima 1.34 65 *e*P Pb 07 39 32.2 +0.1
JYNG S Sg 07 39 50.1 -0.1
TWY Chenhua 1.38 360 *e*P Pn 07 39 32.6 +0.4
baz=357
CHN8 Yiju 1.39 247 *e*P Pb 07 39 33.0 0.0
baz=251
CHN8 *e*S Sg 07 39 52.0 +0.1
baz=251
YOJ Yonaguni jima 1.40 66 Pn 07 39 32.7 +0.3
YOJ Yonaguni jima 1.40 66 P Pb 07 39 33.3 +0.2
YOJ Yonaguni jima 1.40 66 *e*P Pn 07 39 32.9 +0.4
baz=64
YOJ *e*S Sb 07 39 50.6 -0.4
baz=64
YOJ Yonaguni jima 1.40 66 P Pn 07 39 32.8 +0.4
YOJ *e*S Sg 07 39 51.8 -0.4
CHN3 Shinhua 1.40 235 *e*P Pg 07 39 35.1 +1.2
baz=238
ECL Taimali 1.42 205 *e*P Pn 07 39 33.3 +0.5
baz=192
SCST Cishan 1.43 226 *e*P Pg 07 39 34.7 +0.2
baz=215
SHHT Tainan City 1.45 233 *e*P Pg 07 39 35.0 +0.1
baz=237
SSD Sandimen 1.45 218 *e*P Pn 07 39 33.4 +0.2
baz=213
TSMG Majia 1.48 217 *e*P Pn 07 39 34.2 +0.7
baz=213
TWM1 Shoushan 1.52 226 *e*P Pg 07 39 36.4 +0.1
baz=229
SGLT Jiouru 1.55 222 *e*P Pb 07 39 36.2 +0.5
baz=213
MASBT Mashibuluo 1.56 215 *e*P Pn 07 39 35.0 +0.4
baz=222

MASBT *e*S Sb 07 39 56.4 +0.8
baz=222
TSCK Chigu Township 1.58 242 *e*P Pb 07 39 36.1 -0.1
baz=246
EAST Anshuo 1.66 205 *e*P Pn 07 39 36.4 +0.4
baz=195
TAWH Dawu Township 1.68 203 *e*P Pb 07 39 38.1 +0.1
baz=191
SCZT Fangliau 1.77 211 *e*P Pb 07 39 38.8 -0.6
baz=215
PCYT Pengchaiyu 1.78 14 *e*P Pn 07 39 37.5 -0.1
baz=10.0
SLIU Shizi 1.83 204 *e*P Pn 07 39 39.5 +1.1
baz=193
LYUB Lan-yu 1.88 181 *e*P Pn 07 39 35.9 -3.2
baz=170
WDGT Dungji 1.90 251 *e*P Pn 07 39 39.8 +0.5
baz=255
PHUB P'eng-hu 1.91 259 P Pn 07 39 40.5 +1.2
baz=262
PHUB *e*S Sn 07 40 04.3 +0.9
baz=262
PNG Penghu 1.91 261 *e*P Pn 07 39 40.2 +0.8
baz=263
PNG *e*S Sn 07 40 03.8 +0.3
baz=263
IRIF Iriomote-Funau 1.99 77 *e*P Pn 07 39 41.4 +0.9
IRIF *e*S Sn 07 40 06.8 +1.4
HATJ Hateruma jima 2.02 85 *e*S Sn 07 40 06.5 +0.4
TWKBT Hengchun 2.08 201 *e*P Pn 07 39 43.2 +1.4
baz=189
VCHM Qimei 2.11 252 P Pn 07 39 42.6 +0.3
baz=242
VCHM S Sn 07 40 09.2 +0.7
baz=242
JKRS Kuro-shima 2.22 81 P Pn 07 39 45.3 +1.6
JKRS S Sn 07 40 13.2 +2.1
VWUC VWUC 2.25 300 *e*P Pn 07 39 43.6 -0.5
baz=300
JIJ Ishigaki jima 2.36 78 P Pn 07 39 45.9 +0.2
JIJ *e*S Sn 07 40 15.0 +0.4
PTMZ Houxiangcun 2.54 297 *e*P Pn 07 39 48.0 -0.1
baz=299
JISG Ishigakijimahi 2.56 74 P Pn 07 39 48.5 +0.1
JISG *e*S Sn 07 40 20.0 +0.4
MATB Ma-tsu 2.71 326 *e*P Pn 07 39 51.1 +0.6
baz=311
MSUT Lienchiang 2.73 326 *e*P Pn 07 39 49.8 -1.0
baz=312
JTJ Tarama 2.92 75 *e*P Pn 07 39 54.6 +1.2
JTJ *e*S Sn 07 40 30.5 +2.1
QZH Quanzhou 2.94 291⇑*i*Pn Pn 07 39 53.3 -0.4
QZH Sn Sn 07 40 28.6 -0.4
QZH smax smax
comp=N,350nm,0.7s
QZH smax smax
comp=E,340nm,0.7s
KNM Kinmen 2.95 281 *e*P Pn 07 39 54.7 +0.9
baz=283
KNMB Chin-men Tao 3.00 282 Pn 07 39 55.1 +0.7
KNMB Chin-men Tao 3.00 282 *e*P Pn 07 39 55.0 +0.7
baz=284
LYJJ Jianjiangzhen 3.13 328 *e*P Pn 07 39 56.4 +0.1
baz=315
MHZQ Yeshan 3.21 314 *e*P Pn 07 39 57.8 +0.5
baz=314
XPSS Dashiqiu 3.29 337 *e*P Pn 07 39 58.2 -0.1
baz=334
AXDP Jialang 3.47 288 *e*P Pn 07 40 01.1 +0.3
baz=290
JMJ Miyako jima 2 3.48 74 *e*P Pn 07 40 03.3 +2.2
baz=77
JMJ *e*S Sn 07 40 42.1 -0.2
baz=77
ZPLA Ao Xicun 3.53 271 *e*P Pn 07 40 02.5 +0.7
baz=275
DSXP Dongshan 3.84 268 *e*P Pn 07 40 06.8 +0.8
baz=272
SXFK Yanhouchang 4.38 306 *e*P Pn 07 40 13.8 +0.4
baz=306
JOW Kunigami 6.70 63 Pn Pn 07 40 44.7 -0.6
comp=E,3.8nm,0.3s,baz=354,slow=19,SNR=2.0
comp=E,11nm,0.3s
WHN Wuhan 9.25 317 P Pn 07 41 29.1 +8.8
WHN S Sn 07 43 06.0 +1.6
WHN LR LR
comp=Z,2μm,8.8s
KSRS Korea Array 14.56 20 Pn P 07 42 37.0 -2.5
comp=Z,0.6nm,0.3s,baz=203,slow=12,SNR=12
MJAR Matsushiro Arr 19.06 45 P P 07 43 27.9 -1.5
baz=228,slow=9.7,SNR=2.5
comp=Z,0.3nm,0.3s
CHTO Chiang Mai 21.70 261 P P 07 43 58.0 -0.1
CMAR Chiang Mai Arr 21.81 260 P P 07 44 00.1 +0.8
comp=Z,0.5nm,0.3s,baz=63,slow=8.2,SNR=1.3
comp=Z,0.5nm,0.3s
USRK Ussuriysk Ar. 21.97 20 P P 07 43 59.6 -1.2
comp=Z,2.4nm,0.9s,baz=196,slow=10,SNR=4.1
comp=Z,2.4nm,0.9s
KLR Kul'dur 26.52 15 P P 07 44 44.5 0.0
comp=Z,0.8nm,0.3s,baz=248,slow=9.1,SNR=3.8
KLR LR LR 07 55 28.6
comp=Z,37nm,19.8s,baz=203,slow=37
comp=Z,0.8nm,0.3s
SONM Songino Array 26.79 337 P P 07 44 47.1 +0.1
comp=Z,0.9nm,0.6s,baz=156,slow=8.8,SNR=5.4
comp=Z,0.9nm,0.6s
MK31 Makanchi Array 38.82 316 P P 07 46 31.9 0.0
MKAR Makanchi Array 38.82 316 P P 07 46 32.4 +0.5
MKAR Makanchi Array 38.82 316 P P 07 46 31.9 +0.1
comp=Z,0.9nm,0.6s,baz=101,slow=10.0,SNR=8.8
comp=Z,0.9nm,0.6s
ZAA0 Zalesovo Array 40.70 327 P P 07 46 46.6 -0.8
ZALV Zalesovo Beam 40.70 327 P P 07 46 47.0 -0.4
ZALV Zalesovo Beam 40.70 327 P P 07 46 46.7 -0.6
comp=Z,1.2nm,0.4s,baz=114,slow=8.7,SNR=5.7
comp=Z,1.2nm,0.4s
H11N1 WAKE ISLAND Hy 42.12 87 T T 08 32 21.4
baz=276,slow=75,SNR=15
H11N2 WAKE ISLAND Hy 42.12 87 T T 08 31 59.0
baz=276,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 42.13 87 T T 08 32 22.0
baz=276,slow=75,SNR=11
H11S3 WAKE ISLAND Hy 42.24 88 T T 08 32 02.0
baz=284,slow=75,SNR=72
H11S1 WAKE ISLAND Hy 42.25 88 T T 08 32 05.3
baz=284,slow=75,SNR=43
H11S2 WAKE ISLAND Hy 42.26 88 T T 08 32 03.8
baz=284,slow=75,SNR=33
KURK Kurchatov 42.56 320 P P 07 47 03.3 +0.6
KURBB Kurchatov Arra 42.58 320 P P 07 47 03.2 +0.3
comp=Z,0.4nm,0.5s,baz=112,slow=9.6,SNR=5.6
comp=Z,0.4nm,0.5s
WB0 Warramunga Arr 45.15 163 P P 07 47 22.9 -0.9
WRA Warramunga Arr 45.30 163 P P 07 47 23.3 -1.7
comp=Z,1.1nm,0.8s,baz=344,slow=8.8,SNR=5.0
comp=Z,1.1nm,0.8s
WB2 Warramunga Arr 45.30 163 P P 07 47 24.2 -0.8
WB2 IAmb IAmb 07 47 32.7
comp=Z,4.2nm,1.0s
WR0 Warramunga Arr 45.37 163 P P 07 47 24.6 -0.9
KKAR Karatay Array 45.96 308 P P 07 47 30.1 +0.1
BVAR Borovoye Array 48.15 321 P P 07 47 46.6 -0.4
comp=Z,0.6nm,0.5s,baz=101,slow=7.5,SNR=4.1
comp=Z,0.6nm,0.5s
BRVK Borovoye 48.22 321 P P 07 47 47.8 +0.3
BRVK IAmb IAmb 07 47 56.1
comp=Z,2.3nm,0.9s
ASAR Alice Springs 48.76 165 P P 07 47 49.5 -2.5
comp=Z,0.8nm,0.8s,baz=339,slow=5.9,SNR=6.8
comp=Z,0.8nm,0.8s
ABKAR Akbulak array 53.92 314 P P 07 48 31.0 +0.5
FORT Forrest 54.71 173 P P 07 48 36.2 0.0
GEYT Alibeck 55.28 301 P P 07 48 40.2 -0.4
comp=Z,1.0nm,0.7s,baz=62,slow=3.9,SNR=1.9
comp=Z,1.0nm,0.7s
ARU Arti 55.57 323 P P 07 48 42.1 -0.2
ARU IAmb IAmb 07 48 48.0
comp=Z,3.3nm,0.9s
STKA Stephens Creek 58.66 160 P P 07 49 04.8 +0.4
comp=Z,1.1nm,0.2s,baz=326,slow=7.3,SNR=1.1
comp=Z,1.1nm,0.2s
ARMA Armidale 61.20 150 P P 07 49 21.6 -0.4
L14K Kuka Creek 62.50 32 P P 07 49 31.4 +1.1
D19K Kuna River 64.44 24 P P 07 49 43.6 +0.5
D19K IAmb IAmb 07 49 45.2
comp=Z,2.7nm,0.7s

B20K	**Meade River**	**64.78**	**22**	P	**P**	**07 49 45.6**	**+0.5**
B20K				IAmb	IAmb	07 49 50.4	
	comp=Z,1.6nm,0.8s						
H19K	**Roundabout Mou**	**65.19**	**27**	P	**P**	**07 49 48.6**	**+0.7**
H19K				IAmb	IAmb	07 49 51.0	
	comp=Z,4.1nm,0.9s						
B21K	**Ikpikpuk River**	**65.67**	**22**	P	**P**	**07 49 51.7**	**+0.8**
D22K	**Ayikyak River**	**66.41**	**23**	P	**P**	**07 49 56.6**	**+0.8**
D22K				IAmb	IAmb	07 49 58.0	
	comp=Z,3.6nm,0.8s						
D24K	**Happy Valley**	**67.76**	**23**	P	**P**	**07 50 05.0**	**+0.7**
D24K				IAmb	IAmb	07 50 06.2	
	comp=Z,2.3nm,0.8s						
E24K	**Your Creek**	**68.05**	**24**	P	**P**	**07 50 07.1**	**+0.9**
E24K				IAmb	IAmb	07 50 11.6	
	comp=Z,2.1nm,0.9s						
F24K	**Squaw Lake**	**68.37**	**24**	P	**P**	**07 50 09.1**	**+0.9**
F24K				IAmb	IAmb	07 50 10.4	
	comp=Z,3.7nm,0.8s						
NEA2	**Nenana**	**68.41**	**28**	P	**P**	**07 50 09.2**	**+0.8**
MDM	**Murphy Dome**	**68.69**	**27**	P	**P**	**07 50 11.0**	**+0.7**
RND	**Reindeer**	**68.72**	**29**	P	**P**	**07 50 10.7**	**+0.2**
ILAR	**Eielson Array**	**69.29**	**27**	P	**P**	**07 50 14.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=278,slow=6.1,SNR=8.1						
	comp=Z,0.4nm,0.5s						
BMAR	**Burnt Mountain**	**69.63**	**24**	P	**P**	**07 50 17.5**	**+1.4**
SCM	**Sheep Creek Mo**	**69.73**	**30**	P	**P**	**07 50 17.6**	**+0.7**
J26L	**Joseph Creek**	**70.75**	**27**	P	**P**	**07 50 23.1**	**+0.1**
J26L				IAmb	IAmb	07 50 24.3	
	comp=Z,2.8nm,0.8s						
K27K	**Chicken**	**71.50**	**27**	IAmb	IAmb	07 50 30.0	
	comp=Z,3.4nm,0.8s						
L27K	**Beaver Creek,**	**71.89**	**28**	IAmb	IAmb	07 50 32.6	
	comp=Z,4.8nm,1.0s						
FINES	**FINESS Array B**	**71.89**	**330**	P	**P**	**07 50 29.7**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=58,slow=5.2,SNR=6.2						
	comp=Z,1.0nm,0.7s						
DAWY	**Dawson**	**72.62**	**27**	P	**P**	**07 50 34.4**	**+0.1**
DAWY				IAmb	IAmb	07 50 36.2	
	comp=Z,3.2nm,0.9s						
INK	**Inuvik**	**73.35**	**22**	P	**P**	**07 50 38.3**	**-0.1**
I30M	**Mount Dempster**	**73.44**	**25**		**P**	**07 50 39.5**	**+0.3**
L29M	**L29M**	**73.47**	**28**	IAmb	IAmb	07 50 43.0	
	comp=Z,4.9nm,1.0s						
M29M	**Somme Creek**	**73.55**	**29**	IAmb	IAmb	07 50 42.8	
	comp=Z,5.9nm,1.0s						
BRTR	**Keskin Array B**	**73.66**	**307**	P	**P**	**07 50 42.7**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=33,slow=3.4,SNR=1.7						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**83.09**	**23**	P	**P**	**07 51 31.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=348,slow=3.6,SNR=8.1						
	comp=Z,0.5nm,0.8s						

JMA ***11*** *07:42:49.0±0.1,23˚.9N±0˚.3×12˚2E±˚, h4km, TAIWAN REGION*
TAP ***11*** *07:42:49.0,23˚.90N×121˚.56E, h10km, ML3.6, C*
ASIES ***11*** *07:42:49.0,23˚.90N×121˚.56E, h10km, ML3.6, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}-1.76; $M_{\theta\theta}$0.73; $M_{\phi\phi}$-0.14; $M_{r\theta}$2.12; $M_{\theta\phi}$-0.34; $M_{\phi r}$0.42; Fault plane solution: M_o2.56752×10^{21} NP1: ϕ_s264.37000°, δ75.21000°, λ-100.51000°. NP2: ϕ_s120.38000°, δ18.07000°, λ-55.35000°. Principal axes: T Plg29.4590°, Azm2.8810°; N Plg10.1580°, Azm267.0730°; P Plg58.5020°, Azm160.0720°;*
ISC 11 07:42:49.4±0.8, 23˚.90N±0˚.01×121˚.57E±0˚.02, h12km±4km, n106, σ0§67/184, 6C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.08**	**26**	**⇓*i*P**		**Pg**	**07 42 52.0**	**0.0**
HWA	baz=28			S		**Sg**	**07 42 54.2**	**+0.3**
ETM	**Tongmen**	**0.09**	**312**	**⇓*i*P**		**Pg**	**07 42 51.8**	**-0.3**
ETM	baz=314			S		**Sg**	**07 42 53.5**	**-0.6**
SHUL	**Shoufeng**	**0.12**	**182**	**⇑*i*P**		**Pg**	**07 42 52.5**	**+0.1**
SHUL	baz=184			S		**Sg**	**07 42 55.0**	**+0.4**
ESL	**Shilin**	**0.15**	**234**	**⇑*i*P**		**Pg**	**07 42 52.5**	**-0.4**
ESL	baz=240			S		**Sg**	**07 42 54.7**	**-0.8**
TWD	**Chiawan**	**0.18**	**9**	**⇓*i*P**		**Pg**	**07 42 53.3**	**-0.1**
TWD	baz=3.0			S		**Sg**	**07 42 56.1**	**0.0**
LXIB	**Xiulin Townshi**	**0.18**	**310**	**⇓*i*P**		**Pg**	**07 42 53.4**	**-0.2**
LXIB	baz=311			S		**Sg**	**07 42 56.1**	**-0.4**
TEGC	**Jichi Village**	**0.20**	**187**	P		**Pg**	**07 42 54.0**	**+0.3**
TEGC	baz=186			S		**Sg**	**07 42 59.1**	**+2.5**
WARBT	**Fenglin Townsh**	**0.25**	**222**	**⇑*i*P**		**Pg**	**07 42 54.2**	**-0.4**
WARBT	baz=229			S		**Sg**	**07 42 57.2**	**-0.9**
ETL	**Fush Village**	**0.26**	**11**	*e*P		**Pg**	**07 42 54.6**	**-0.2**
ETL	baz=8.0			*e*S		**Sg**	**07 42 58.1**	**-0.4**
NACB	**Ninganchiao**	**0.27**	**5**	**⇓*i*P**		**Pg**	**07 42 54.7**	**-0.3**
NACB	baz=10.0			*e*S		**Sg**	**07 42 58.2**	**-0.5**
ETLH	**Xiulin Townshi**	**0.31**	**346**	**⇓*i*P**		**Pg**	**07 42 55.7**	**-0.1**
ETLH	baz=344			*e*S		**Sg**	**07 42 59.8**	**-0.2**
WHF	**Hehuan Shan**	**0.36**	**311**	**⇓*i*P**		**Pg**	**07 42 56.9**	**0.0**
WHF	baz=312			*e*S		**Sg**	**07 43 01.9**	**0.0**
CHGB	**Renai**	**0.39**	**293**	**⇓*i*P**		**Pb**	**07 42 57.7**	**-0.7**
CHGB	baz=294			*e*S		**Sb**	**07 43 03.5**	**-1.1**
VWDT	**VWDT**	**0.42**	**249**	**⇑*i*P**		**Pb**	**07 42 58.1**	**-0.6**
VWDT	baz=251			*e*S		**Sg**	**07 43 03.2**	**0.0**
WUSB	**Renai**	**0.42**	**282**	**⇓*i*P**		**Pb**	**07 42 58.3**	**-0.6**
WUSB	baz=283			*e*S		**Sb**	**07 43 04.1**	**-1.1**
HGSD	**Ruisui**	**0.43**	**198**	*e*P		**Pb**	**07 42 58.4**	**-0.5**
EAHA	**Aohua**	**0.45**	**20**	*e*P		**Pg**	**07 42 58.0**	**-0.3**
EAHA	baz=23			*e*S		**Sg**	**07 43 04.6**	**+0.2**
FUSS	**Fushou**	**0.45**	**319**	**⇓P**		**Pb**	**07 42 58.8**	**-0.7**
FUSS	baz=319			*e*S		**Sb**	**07 43 05.1**	**-1.2**
EHY	**Hungye**	**0.46**	**210**	**⇑*i*P**		**Pg**	**07 42 58.0**	**-0.4**
EHY	baz=218			*e*S		**Sg**	**07 43 03.6**	**-0.9**
TWT	**Tachien**	**0.50**	**314**	**⇓P**		**Pb**	**07 42 59.9**	**-0.4**
TWT	baz=305			*e*S		**Sb**	**07 43 06.6**	**-0.9**
TDCB	**Techi**	**0.51**	**313**	**⇓P**		**Pb**	**07 42 59.9**	**-0.5**
TDCB	baz=305			*e*S		**Sg**	**07 43 06.0**	**-0.2**
ENA	**Nanau**	**0.55**	**17**	**⇑P**		**Pg**	**07 42 60.0**	**-0.1**
ENA	baz=4.0			*e*S		**Sg**	**07 43 07.4**	**+0.1**
NNSB	**Datong**	**0.55**	**342**	**⇓*i*P**		**Pb**	**07 43 00.4**	**-0.7**
NNSB	baz=340			S		**Sg**	**07 43 07.6**	**+0.1**
NNS	**Nan Shan**	**0.56**	**342**	**⇓*i*P**		**Pb**	**07 43 00.6**	**-0.7**
NNS	baz=340			*e*S		**Sg**	**07 43 07.8**	**-0.1**
YULB	**Yu-li**	**0.57**	**206**	*e*P		**Pg**	**07 43 00.0**	**-0.4**
YULB	baz=217			*e*S		**Sg**	**07 43 07.9**	**-0.1**
EWUT	**Wuta**	**0.57**	**20**	*e*P		**Pg**	**07 43 00.4**	**-0.2**
EWUT	baz=7.0			S		**Sg**	**07 43 08.4**	**+0.3**
SSLB	**Suanglung**	**0.57**	**258**	*i*P		**Pb**	**07 43 00.9**	**-0.6**
SSLB	baz=268			S		**Sg**	**07 43 08.2**	**0.0**
ECBN	**Changbin**	**0.59**	**190**	*e*P		**Pb**	**07 43 01.3**	**-0.4**
ECBN	baz=182			*e*S		**Sb**	**07 43 11.0**	**+0.8**
EYUL	**Yuli**	**0.60**	**202**	*e*P		**Pb**	**07 43 01.5**	**-0.4**
EYUL	baz=217			*e*S		**Sb**	**07 43 10.6**	**+0.3**
TWF1	**Yuli**	**0.60**	**204**	*e*P		**Pg**	**07 43 00.7**	**-0.4**
TWF1	baz=215			*e*S		**Sg**	**07 43 09.0**	**-0.1**
SMLT	**Sun Moon Lake**	**0.61**	**268**	*e*P		**Pb**	**07 43 01.7**	**-0.4**
SMLT	baz=269			S		**Sb**	**07 43 10.2**	**-0.6**
WCS	**Beigang Elemen**	**0.62**	**284**	*e*P		**Pb**	**07 43 02.2**	**+0.1**
WCS	baz=285			*e*S		**Sb**	**07 43 10.1**	**-0.7**
LATG	**Datong**	**0.63**	**357**	P		**Pg**	**07 43 01.6**	**-0.1**
LATG	baz=345			*e*S		**Sg**	**07 43 10.0**	**-0.1**
TYC	**Yuchr**	**0.65**	**270**	*e*P		**Pb**	**07 43 02.4**	**-0.3**
TYC	baz=281			S		**Sg**	**07 43 10.4**	**-0.2**
NDT	**Datong Townshi**	**0.70**	**356**	*e*P		**Pb**	**07 43 03.2**	**-0.3**
NDT	baz=347			*i*S		**Sg**	**07 43 12.3**	**+0.2**
ESAO	**Su ao**	**0.71**	**21**	*e*P		**Pg**	**07 43 02.9**	**-0.3**
ESAO	baz=10.0			*e*S		**Sg**	**07 43 12.3**	**-0.4**
EOS4	**EOS4**	**0.72**	**72**	*e*P		**Pb**	**07 43 03.4**	**-0.3**
EOS4	baz=78			*e*S		**Sn**	**07 43 15.1**	**-0.9**
CHKH	**Chenggong**	**0.73**	**193**	*e*P		**Pb**	**07 43 03.4**	**-0.6**
ENTT	**Nioudou**	**0.73**	**360**	**⇓*i*P**		**Pb**	**07 43 03.8**	**-0.4**
ENTT	baz=358			*e*S		**Sb**	**07 43 13.6**	**-0.6**
NDS	**Dongshan**	**0.74**	**11**	*e*P		**Pg**	**07 43 03.5**	**-0.2**
NDS	baz=8.0			*e*S		**Sb**	**07 43 14.5**	**+0.2**
TWC	**Suao**	**0.75**	**20**	P		**Pg**	**07 43 03.8**	**-0.1**
TWC	baz=10.0			*e*S		**Sg**	**07 43 13.6**	**-0.1**
WJS	**Zhushan**	**0.77**	**264**	*e*P		**Pn**	**07 43 06.0**	**-0.2**
WJS	baz=272			*e*S		**Sn**	**07 43 17.7**	**0.0**
YHNB	**Yeheng**	**0.78**	**347**	**⇓P**		**Pb**	**07 43 04.8**	**-0.2**
YHNB	baz=345			*e*S		**Sg**	**07 43 14.3**	**-0.5**
EOS3	**EOS3**	**0.78**	**61**	*e*P		**Pb**	**07 43 05.1**	**+0.2**
NSK	**Sanguang**	**0.79**	**346**	**⇓*i*P**		**Pb**	**07 43 05.1**	**-0.1**
NSK	baz=345			*e*S		**Sg**	**07 43 14.6**	**-0.5**
ALS	**Alishan**	**0.80**	**241**	*e*P		**Pb**	**07 43 05.3**	**-0.1**
WNT	**Mingjian**	**0.81**	**268**	*e*P		**Pn**	**07 43 06.7**	**+0.1**
WNT	baz=270			*e*S		**Sb**	**07 43 16.6**	**+0.3**
TWE	**Neicheng**	**0.82**	**6**	**⇓P**		**Pb**	**07 43 05.3**	**-0.3**
TWE	baz=5.0			*e*S		**Sg**	**07 43 16.0**	**0.0**
EHD	**Haiduan**	**0.82**	**204**	*e*P		**Pg**	**07 43 05.0**	**-0.3**
EHD	baz=218			*e*S		**Sb**	**07 43 16.4**	**-0.3**
CHKT	**Chengkung**	**0.82**	**193**	*e*P		**Pg**	**07 43 05.1**	**-0.2**
CHKT	baz=196			*e*S		**Sb**	**07 43 17.3**	**+0.6**
NFF	**Wufeng Townshi**	**0.83**	**331**	*e*P		**Pb**	**07 43 06.0**	**+0.2**
NFF	baz=329			*e*S		**Sb**	**07 43 16.5**	**-0.6**
TWQ1	**Liyutan**	**0.85**	**301**	*e*P		**Pn**	**07 43 06.8**	**-0.4**
TWQ1	baz=302			*e*S		**Sb**	**07 43 17.4**	**-0.1**
TCU	**Taichung**	**0.85**	**287**	*e*P		**Pn**	**07 43 07.6**	**+0.4**
FUSB	**Fushanzhiwuyua**	**0.85**	**1**	*e*P		**Pb**	**07 43 06.0**	**-0.2**
FUSB	baz=358			*e*S		**Sb**	**07 43 17.4**	**-0.3**
ECS	**Chishang**	**0.87**	**202**	*e*P		**Pn**	**07 43 07.6**	**+0.1**
CHN5	baz=241 **Tsauling**	**0.87**	**250**	*e*P		**Pn**	**07 43 07.4**	**-0.2**
CHN5				*e*S		**Sb**	**07 43 18.8**	**+0.6**
NWLT	baz=241 **Wulai**	**0.87**	**356**	*e*P		**Pb**	**07 43 06.3**	**-0.2**
NWLT	baz=353			*e*S		**Sg**	**07 43 16.9**	**-0.7**
ELDTW	baz=353 **Lidau**	**0.87**	**215**	*e*P		**Pg**	**07 43 05.3**	**-1.0**
ELDTW	baz=209			*e*S		**Sg**	**07 43 16.5**	**-1.2**
NSTT	**Nanjuang**	**0.89**	**325**	*e*P		**Pn**	**07 43 07.4**	**-0.4**
NSTT	baz=324			*e*S		**Sb**	**07 43 18.9**	**+0.3**
LIOB	**Emei**	**0.89**	**326**	*e*P		**Pn**	**07 43 07.6**	**-0.3**
LIOB	baz=325			*e*S		**Sb**	**07 43 19.2**	**+0.4**
WCHH	**Zhanghua**	**0.94**	**281**	*e*P		**Pn**	**07 43 08.7**	**+0.2**
NMLH	baz=282 **Miaoli**	**0.95**	**312**	*e*P		**Pn**	**07 43 09.6**	**+1.0**
NMLH	baz=322			*e*S		**Sn**	**07 43 21.9**	**-0.2**
EDH	baz=322 **Donghe**	**0.96**	**195**	*e*P		**Pg**	**07 43 06.0**	**-1.9**
EDH	baz=200			*e*S		**Sb**	**07 43 21.0**	**+0.4**
WDLH	**Douliu**	**0.97**	**257**	*e*P		**Pn**	**07 43 09.3**	**+0.5**
WDLH	baz=260			*e*S		**Sn**	**07 43 23.4**	**+0.9**
WCKO	**Fanlu**	**1.00**	**242**	*e*P		**Pn**	**07 43 09.9**	**+0.7**
WCKO	baz=241			*e*S		**Sn**	**07 43 23.6**	**+0.3**
STYH	**Taoyuan**	**1.03**	**225**	*e*P		**Pn**	**07 43 09.6**	**-0.1**
STYH	baz=229			*e*S		**Sg**	**07 43 21.6**	**-1.0**
SBCB	baz=229 **Hsinchu**	**1.03**	**329**	*e*P		**Pn**	**07 43 11.3**	**+1.5**
HSN	baz=328 **Hsinchu**	**1.05**	**329**	*e*P		**Pg**	**07 43 08.3**	**-1.3**
CHN4	baz=330 **Tsaushan**	**1.05**	**239**	*e*P		**Pn**	**07 43 10.6**	**+0.7**
CHN4	baz=235			*e*S		**Sb**	**07 43 23.7**	**+0.4**
TPUB	**Ta-pu**	**1.05**	**235**	*e*P		**Pn**	**07 43 10.3**	**+0.3**
TPUB	baz=239			*e*S		**Sb**	**07 43 23.5**	**+0.2**
NHDH	**Xindian Distri**	**1.05**	**358**	*e*P		**Pn**	**07 43 09.8**	**-0.2**
	baz=355							
CHN2	**Minshiung**	**1.07**	**250**	*e*P		**Pn**	**07 43 12.2**	**+2.0**
	baz=252							
LONT	**Longtian**	**1.07**	**202**	*e*P		**Pg**	**07 43 08.3**	**-1.8**
	baz=205							
TWA	**Mucha**	**1.07**	**1**	*e*P		**Pb**	**07 43 10.0**	**0.0**
TWA	baz=349			*e*S		**Sb**	**07 43 23.9**	**-0.1**
	baz=349							
WRL	**Guolierlin Hig**	**1.09**	**270**	*e*P		**Pn**	**07 43 10.9**	**+0.4**
	baz=272							
WRL				*e*S		**Sn**	**07 43 26.7**	**+1.2**
	baz=272							
WTP	**Ta-pu**	**1.09**	**233**	*e*P		**Pn**	**07 43 11.0**	**+0.4**
	baz=237							
WTP				*e*S		**Sn**	**07 43 25.3**	**-0.4**
	baz=237							
WTK	**Tuku**	**1.10**	**259**	*e*P		**Pn**	**07 43 11.2**	**+0.6**
	baz=262							
WTK				*e*S		**Sn**	**07 43 26.7**	**+0.9**
	baz=262							
NCUH	**Zhongli**	**1.11**	**342**	*e*P		**Pn**	**07 43 12.8**	**+2.0**
	baz=341							
NCU	**National Centr**	**1.12**	**342**	*e*P		**Pn**	**07 43 12.0**	**+1.1**
	baz=349							
NCU				*e*S		**Sn**	**07 43 27.6**	**+1.3**
	baz=349							
TWB1	**Santiao Chiao**	**1.16**	**19**	*e*P		**Pn**	**07 43 11.9**	**+0.4**
	baz=8.0							
TWB1				*e*S		**Sg**	**07 43 27.0**	**0.0**
	baz=8.0							
TWG	**Pinlang**	**1.17**	**203**	*e*P		**Pb**	**07 43 11.2**	**-0.4**
	baz=192							
TWGBT	**Beinan**	**1.17**	**203**	*e*P		**Pb**	**07 43 11.1**	**-0.5**
	baz=192							
TWK	**Hsinying**	**1.18**	**238**	*e*P		**Pn**	**07 43 12.7**	**+0.9**
	baz=241							
TWK				*e*S		**Sn**	**07 43 29.3**	**+1.5**
	baz=241							
NWF	**Wu-fen Shan**	**1.18**	**9**	*e*P		**Pn**	**07 43 12.5**	**+0.7**
	baz=6.0							
NWF				S		**Sg**	**07 43 27.2**	**-0.2**
	baz=6.0							
WFSB	**Wu-fen Shan**	**1.18**	**9**	*e*P		**Pg**	**07 43 12.4**	**+0.4**
	baz=7.0							
CHN1	**Nanshi**	**1.19**	**233**	*e*P		**Pg**	**07 43 13.0**	**+0.6**
	baz=238							
CHN1				*e*S		**Sn**	**07 43 29.9**	**+1.7**
	baz=238							
SNST	**Tainan City**	**1.20**	**235**	*e*P		**Pg**	**07 43 13.3**	**+0.9**
	baz=240							
SNST				*e*S		**Sn**	**07 43 28.7**	**+0.6**
	baz=240							
TWS1	**Kuangyinshan**	**1.20**	**354**	*e*P		**Pg**	**07 43 13.6**	**+1.1**
	baz=352							
SXI1	**Grass Mountain**	**1.22**	**13**	*e*P		**Pg**	**07 43 12.8**	**-0.1**
	baz=354							
SGST	**Jiashian**	**1.22**	**228**	*e*P		**Pg**	**07 43 12.8**	**0.0**
	baz=232							
SGST				*e*S		**Sn**	**07 43 30.2**	**+1.5**
	baz=232							
YM01	**YM01**	**1.24**	**0**	*e*P		**Pg**	**07 43 13.6**	**+0.4**
	baz=359							
NTST	**Danshui**	**1.26**	**355**	*e*P		**Pg**	**07 43 14.1**	**+0.5**
	baz=12							
ICHU	**Yijhu**	**1.30**	**246**	*e*P		**Pg**	**07 43 14.6**	**+0.2**
	baz=249							
JYNG	**Yonagunijimaku**	**1.37**	**66**	S		**Sg**	**07 43 33.2**	**-0.4**
SCST	**Cishan**	**1.41**	**224**	*e*P		**Pg**	**07 43 17.3**	**+0.8**
	baz=214							
SHHT	**Tainan City**	**1.42**	**232**	*e*P		**Pg**	**07 43 17.4**	**+0.7**
	baz=235							
YOJ	**Yonaguni jima**	**1.43**	**67**	*e*P		**Pn**	**07 43 15.2**	**0.0**
YOJ				*e*S		**Sb**	**07 43 34.3**	**+0.1**
SSD	**Sandimen**	**1.44**	**217**	*e*P		**Pn**	**07 43 15.4**	**+0.1**
	baz=224							
SSD				*e*S		**Sg**	**07 43 35.2**	**-0.5**
	baz=224							
TSMG	**Majia**	**1.46**	**216**	*e*P		**Pb**	**07 43 16.2**	**-0.4**
	baz=211							
TWM1	**Shoushan**	**1.50**	**225**	*e*P		**Pg**	**07 43 19.7**	**+1.4**
	baz=228							
MASBT	**Mashibuluo**	**1.55**	**214**	*e*P		**Pn**	**07 43 17.0**	**+0.2**
	baz=222							
MASBT				*e*S		**Sg**	**07 43 39.5**	**+0.3**
	baz=222							
TSCK	**Chigu Township**	**1.55**	**241**	*e*P		**Pn**	**07 43 17.1**	**+0.2**
	baz=247							
TSCK				*e*S		**Sg**	**07 43 38.6**	**-0.9**
	baz=247							
SCZT	**Fangliau**	**1.76**	**210**	*e*P		**Pb**	**07 43 21.4**	**-0.1**
	baz=214							
SLIU	**Shizi**	**1.82**	**203**	*e*P		**Pn**	**07 43 20.5**	**-0.1**
	baz=191							
PHUB	**P'eng-hu**	**1.87**	**258**	*e*P		**Pb**	**07 43 22.2**	**-1.3**
	baz=262							
PHUB				*e*S		**Sn**	**07 43 45.5**	**+0.7**
	baz=262							
JISG	**Ishigakijimahi**	**2.59**	**74**	P		**Pn**	**07 43 30.9**	**-0.3**
JISG				*e*S		**Sn**	**07 44 01.8**	**-0.9**

IDC ***11*** *07:59:09.7±5.2,31˚.63S×179˚.98W, h286km±43km, mb3.1/3, mbtmp3.8/4, Error ellipse: s-maj=50.2km s-min=23.3km az=51.0*
ISC 11 07:59:17.7±2.0, 32˚.3S±0˚.2×180˚.0E±0˚.3, h350km, n32, σ1§92/28, mb3.0/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**5.78**	**197**	P		**Pn**	**08 00 47.9**	**+2.0**
PKGZ	**Pakihiroa**	**5.83**	**195**	P		**Pn**	**08 00 48.4**	**+1.9**
MYRZ	**Mayor Island**	**5.88**	**210**	P		Pn	08 00 57.0	+10
RUGZ	**Raukumara Rang**	**6.00**	**198**	P		**Pn**	**08 00 51.0**	**+2.5**
MWZ	**Matawai**	**6.39**	**198**	P		**Pn**	**08 00 54.7**	**+1.8**
TKGZ	**Te Karaka**	**6.41**	**195**	P		**Pn**	**08 00 54.4**	**+1.3**
URZ	**Urewera**	**6.43**	**200**	P		**Pn**	**08 00 52.1**	**-1.2**
	3.5nm,0.3s,baz=360,slow=4.9,SNR=20							
URZ				S		**S**	**08 02 11.8**	**+0.8**
	16nm,0.6s,baz=318,slow=23,SNR=12							
URZ	**Urewera**	**6.43**	**200**	P		**Pn**	**08 00 53.7**	**+0.4**
TOZ	**Tahuroa Road**	**6.58**	**213**	P		**Pn**	**08 00 59.6**	**+4.5**
RIGZ	**Rimuhau**	**6.69**	**195**	P		**Pn**	**08 00 56.4**	**+0.1**
MUGZ	**Murupara**	**6.74**	**202**	P		**Pn**	**08 00 59.4**	**+2.5**
NMHZ	**Naumai**	**7.30**	**200**	P		**Pn**	**08 01 04.5**	**+1.0**
ARHZ	**Aropaoanui**	**7.40**	**198**	P		**Pn**	**08 01 06.4**	**+1.7**
MCHZ	**McNeill Hill**	**7.65**	**199**	P		**Pn**	**08 01 08.7**	**+1.1**
COVZ	**Chateau Observ**	**7.81**	**206**	P		Pn	08 01 16.6	+7.0
BFZ	**Birch Farm**	**8.93**	**199**	P		**P**	**08 01 22.9**	**-2.2**
HOWZ	**Holdsworth Sta**	**9.34**	**201**	P		**Pn**	**08 01 26.6**	**-1.0**
OGWZ	**Otaki Gorge**	**9.38**	**203**	P		**Pn**	**08 01 26.4**	**-1.7**
TMWZ	**Te Maipa**	**9.42**	**199**	P		**P**	**08 01 28.6**	**-2.0**
CAW	**Cannon Point**	**9.67**	**203**	P		**Pn**	**08 01 30.1**	**-1.5**
WEL	**Wellington**	**9.93**	**203**	P		**Pn**	**08 01 31.4**	**-3.3**
BHW	**Baring Head**	**10.01**	**203**	P		**Pn**	**08 01 34.1**	**-1.4**
TCW	**Tory Channel**	**10.04**	**205**	P		**Pn**	**08 01 34.9**	**-1.1**
NNZ	**Nelson**	**10.39**	**209**	P		**Pn**	**08 01 38.8**	**-1.3**
TKNZ	**Takaka Hill**	**10.41**	**211**	P		Pn	08 01 33.6	-6.8
MRNZ	**Matariki Terra**	**10.80**	**210**	P		**Pn**	**08 01 44.5**	**-0.5**
THZ	**Tophouse**	**11.04**	**209**	P		**Pn**	**08 01 47.7**	**-0.3**
KHZ	**Kahutara**	**11.36**	**205**	P		**P**	**08 01 51.4**	**-0.6**
ASAR	**Alice Springs**	**41.32**	**270**	P		P	08 06 28.4	-2.3
	0.1nm,0.3s,baz=105,slow=7.5,SNR=1.8							
	0.1nm,0.3s							
WRA	**Warramunga Arr**	**42.48**	**275**	P		P	08 06 37.4	-2.5
	0.4nm,0.4s,baz=112,slow=7.9,SNR=8.8							
	0.4nm,0.4s							
QSPA	**South Pole Qui**	**57.86**	**180**	P		**P**	**08 08 36.0**	**+2.3**
	2.7nm,0.7s,baz=64,slow=1.8,SNR=14							
	2.7nm,0.7s							
FINES	**FINESS Array B**	**146.24**	**338**	PKPbc		**PKPdf**	**08 18 13.1**	**-1.8**
	1.5nm,0.4s,baz=48,slow=4.1,SNR=17							

IDC ***11*** *08:05:49.3±0.9, 37˚.62N×144˚.33E, h0km, mb3.5/7, mbtmp3.5/10, ML3.2/3, MS2.7/1, Error ellipse: s-maj=24.1km s-min=19.7km az=123.0*
NIED ***11*** *08:05:53.1, 37˚.78N×144˚.17E, h44km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.25; $M_{\theta\theta}$1.23; $M_{\phi\phi}$3.02; $M_{r\theta}$-0.84; $M_{\theta\phi}$0.09; $M_{\phi r}$2.72; Fault plane solution: M_o4.59000×10^{14} NP1: ϕ_s171.00000°, δ64.00000°, λ-96.00000°. NP2: ϕ_s5.00000°, δ27.00000°, λ-77.00000°.*
JMA ***11*** *08:05:53.1±0.2, 37˚.8N±0˚.9×14˚4E±˚, h44km, MV3.5/31, FAR E OFF NORTH HONSHU*

ISC 11 08:05:55.0±1.4, 37.84N±0.07×144.20E±0.07, h42km±15km, n29, σ1937/28, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.21**	**283**	*eP*		**Pn**	08 06 28.1	-1.1
JIKH				*eS*		**Sn**	**08 06 54.5**	**-0.8**
JIO	**Ouri**	**2.33**	**286**	P		Pn	08 06 30.0	-0.9
JIO				S		**Sn**	**08 06 57.5**	**-0.8**
OFUJ	**Ofunato**	**2.34**	**303**	P		Pn	08 06 30.6	-0.5
OFUJ				*eS*		**Sn**	**08 06 58.1**	**-0.5**
JKMT	**Kesennumamotoy**	**2.36**	**295**	P		Pn	08 06 30.5	-0.7
JKMT				*eS*		**Sn**	**08 06 58.3**	**-0.6**
JMK	**Ichinoseki**	**2.59**	**296**	P		Pn	08 06 34.1	-0.4
JMK				S		**Sn**	**08 07 04.7**	**-0.1**
JOM	**Ohasama**	**2.80**	**307**	P		**Pn**	**08 06 37.5**	**+0.2**
JOM				S		**Sn**	**08 07 10.3**	**+0.4**
JOTO	**OTAMA OYAMA**	**3.08**	**266**	*eP*		**Pn**	**08 06 41.5**	**+0.3**
JOTO				S		**Sn**	**08 07 16.1**	**-0.7**
JYK	**Kaneyama**	**3.21**	**291**	P		**Pn**	**08 06 43.4**	**+0.5**
JYK				*eS*		**Sn**	**08 07 20.6**	**+0.7**
JANG	**Nango**	**3.29**	**321**	S		**Sn**	**08 07 21.0**	**-0.8**
JOT	**Ohata**	**4.30**	**326**	*eS*		**Sn**	**08 07 45.8**	**-0.9**
JRY	**Ryogami san**	**4.62**	**248**	P		Pn	08 07 00.2	-2.1
JRY				S		Sn	08 07 50.2	-4.5
JCH	**Churui**	**4.82**	**353**	P		**Pn**	**08 07 04.8**	**-0.2**
JCH				*eS*		**Sn**	**08 07 57.4**	**-2.1**
JOD2	**Odawara 2**	**4.85**	**240**	*eP*		Pn	08 07 04.4	-1.2
JOD2				*eS*		Sn	08 07 55.9	-4.5
MJAR	**Matsushiro Arr**	**4.96**	**257**	Pn		**Pn**	**08 07 06.8**	**-0.2**
	0.2nm,0.3s,baz=91,slow=15,SNR=22							
MJAR				Sn		**Sn**	**08 08 03.4**	**+0.4**
	baz=51,slow=24,SNR=2.1							
MJAR				LR		LR	08 09 08.1	
	comp=Z,73nm,18.2s,baz=52,slow=40							
	5.1nm,0.6s							
NEM2	**Nemuro 2**	**5.65**	**11**	P		Pn	08 07 13.9	-2.5
NEM2				S		Sn	08 08 14.7	-5.2
JTKR	**Abashiri--Toko**	**6.13**	**358**	P		Pn	08 07 22.2	-0.9
JTKR				*eS*		**Sn**	**08 08 29.9**	**-2.0**
JHR	**Hokuryu**	**6.19**	**343**	*eP*		**Pn**	**08 07 25.3**	**+1.4**
ASAJ	**Asahikawa**	**6.39**	**350**	Pn		Pn	08 07 26.0	-0.6
	1.2nm,0.3s,baz=169,slow=16,SNR=7.4							
ASAJ				Sn		**Sn**	**08 08 34.9**	**-3.3**
	0.4nm,0.3s,baz=85,slow=22,SNR=1.6							
	3.5nm,0.4s							
USRK	**Ussuriysk Ar.**	**11.20**	**308**	Pn		**Pn**	**08 08 33.0**	**+0.6**
	0.1nm,0.3s,baz=121,slow=13,SNR=1.4							
	1.4nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**26.73**	**126**	T		T	08 39 12.2	
	baz=320							
H11N1	**WAKE ISLAND Hy**	**26.74**	**126**	T		T	08 39 11.7	
	baz=320							
H11N3	**WAKE ISLAND Hy**	**26.75**	**126**	T		T	08 39 21.2	
	baz=320							
MKAR	**Makanchi Array**	**45.58**	**302**	P		**P**	**08 14 13.6**	**+2.8**
	0.2nm,0.7s,baz=87,slow=9.0,SNR=2.8							
	0.2nm,0.7s							
ILAR	**Eielson Array**	**47.62**	**33**	P		**P**	**08 14 28.2**	**+1.7**
	0.7nm,0.8s,baz=261,slow=6.8,SNR=8.4							
	0.7nm,0.8s							
BVAR	**Borovoye Array**	**51.68**	**312**	P		**P**	**08 14 59.0**	**+1.5**
	0.2nm,0.5s,baz=86,slow=8.8,SNR=1.7							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**58.21**	**191**	P		**P**	**08 15 43.4**	**-1.6**
	1.2nm,0.6s,baz=11,slow=7.3,SNR=6.8							
	1.2nm,0.6s							
ASAR	**Alice Springs**	**61.94**	**191**	P		**P**	**08 16 09.5**	**-1.0**
	0.5nm,0.7s,baz=16,slow=8.1,SNR=5.3							
	0.5nm,0.7s							
YKA	**Yellowknife Ar**	**61.99**	**31**	P		**P**	**08 16 11.2**	**+0.8**
	0.1nm,0.6s,baz=304,slow=6.6,SNR=2.1							
	0.1nm,0.6s							
NVAR	**Mina Array Bea**	**72.72**	**55**	P		**P**	**08 17 20.1**	**+1.0**
	0.6nm,0.7s,baz=288,slow=6.5,SNR=5.6							
	0.6nm,0.7s							

*CATAC **11** 08:13:59.8±1.5, 13.12N×89.77W, h13km±7km, ML3.0*
*SNET **11** 08:14:01.1±1.1, 13.17N×89.76W, h24km±8km, ML2.6*

ISC 11 08:14:00.4±2.8, 13.1N±0.1×89.77W±0.09, h27km±13km, n51, σ041/59, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LALI	**Alcalde de L**	**0.56**	**51**	*eP*		**Pb**	**08 14 11.4**	**-0.3**
LALI				*eS*		**Sn**	**08 14 20.1**	**-0.9**
LALI	**Alcalde de L**	**0.56**	**51**	*iP*		**Pb**	**08 14 11.1**	**-0.6**
LALI				IAML			08 14 20.0	
	comp=Z,200nm,1.0s							
JAYA	**Jayaque - finc**	**0.60**	**31**	*eP*		**Pb**	**08 14 12.8**	**+0.4**
JAYA				*eS*		**Sb**	**08 14 21.0**	**+0.2**
JAYA				IAML			08 14 23.5	
	comp=Z,874nm,0.2s							
JAYA	**Jayaque - finc**	**0.60**	**31**	*i* P		**Pb**	**08 14 12.9**	**+0.4**
JAYA				IAML			08 14 23.3	
	comp=Z,2μm,1.0s							
CEVE	**Cerro Verde**	**0.70**	**11**	*eP*		**Pb**	**08 14 14.3**	**+0.1**
CEVE				*eS*		**Sn**	**08 14 24.7**	**-0.2**
CEVE	**Cerro Verde**	**0.70**	**11**	*iP*		**Pb**	**08 14 14.3**	**+0.1**
CEVE				*iS*		**Sn**	**08 14 24.2**	**-0.7**
CEVE				IAML			08 14 26.6	
	comp=Z,500nm,1.0s							
SBLS	**San Blas**	**0.71**	**11**	*eP*		**Pb**	**08 14 14.5**	**0.0**
PMON	**Piamonte**	**0.72**	**38**	*eP*		**Pb**	**08 14 14.4**	**0.0**
PMON				*eS*		**Sn**	**08 14 25.7**	**+0.5**
PMON	**Piamonte**	**0.72**	**38**	*iP*		**Pb**	**08 14 14.5**	**0.0**
PMON				IAML			08 14 27.7	
	comp=Z,580nm,1.0s							
PANCS	**Alcalde de**	**0.74**	**50**	*eP*		**Pb**	**08 14 14.6**	**-0.3**
PANCS				*eS*		**Sb**	**08 14 24.2**	**-0.4**
PANCS	**Alcalde de**	**0.74**	**50**	*iP*		**Pb**	**08 14 14.5**	**-0.3**
PANCS				IAML			08 14 27.3	
	comp=Z,2μm,1.0s							
SNJE	**San Jose**	**0.75**	**12**	*eP*		**Pb**	**08 14 14.8**	**-0.2**
CEDA	**San Andres**	**0.76**	**29**	*eP*		**Pb**	**08 14 15.1**	**0.0**
CEDA	**San Andres**	**0.76**	**29**	*iP*		**Pb**	**08 14 15.0**	**0.0**
CEDA				IAML			08 14 28.9	
	comp=Z,450nm,1.0s							
SNET	**Serv Nac Est T**	**0.76**	**44**	*iP*		**Pb**	**08 14 14.7**	**-0.3**
SNET				IAML			08 14 31.4	
	comp=Z,470nm,1.0s							
BOQS	**Boqueron**	**0.76**	**38**	*eP*		**Pb**	**08 14 15.3**	**+0.1**
BOQS				*eS*		**Sb**	**08 14 25.7**	**+0.4**
NUBE	**Las Nubes**	**0.76**	**359**	*eP*		**Pb**	**08 14 14.8**	**-0.4**
NUBE	**Las Nubes**	**0.76**	**359**	*iP*		**Pb**	**08 14 14.8**	**-0.4**
NUBE				IAML			08 14 26.5	
	comp=Z,250nm,1.0s							
RTR	**El Retiro**	**0.77**	**9**	*eP*		**Pb**	**08 14 15.1**	**-0.2**
RTR				*eS*		**Sn**	**08 14 26.0**	**-0.4**
LOMA	**Loma Larga**	**0.77**	**49**	*eP*		**Pb**	**08 14 15.0**	**-0.3**
LOMA	**Loma Larga**	**0.77**	**49**	*iP*		**Pb**	**08 14 15.2**	**-0.1**
LOMA				IAML			08 14 27.8	
	comp=Z,450nm,1.0s							
UEES	**Universidad Ev**	**0.77**	**42**	*eP*		**Pb**	**08 14 15.1**	**-0.2**
UEES	**Universidad Ev**	**0.77**	**42**	*iP*		**Pb**	**08 14 15.2**	**-0.2**
UEES				IAML			08 14 26.5	
	comp=Z,190nm,1.0s							
PIC2	**El Picacho**	**0.78**	**39**	*eP*		**Pb**	**08 14 15.7**	**+0.1**
UTEC	**Universidad Te**	**0.79**	**44**	*iP*		**Pb**	**08 14 15.4**	**-0.1**
UTEC				IAML			08 14 26.5	
	comp=Z,240nm,1.0s							
UESS	**Universidad de**	**0.80**	**43**	*eP*		**Pb**	**08 14 15.6**	**-0.2**
IGN	**Direccin Gen**	**0.82**	**45**	*iP*		**Pb**	**08 14 15.7**	**-0.4**
IGN				IAML			08 14 59.3	
	comp=Z,3μm,1.0s							
UDBS	**Universidad Do**	**0.83**	**46**	*eP*		**Pb**	**08 14 16.1**	**-0.1**
UDBS	**Universidad Do**	**0.83**	**46**	*iP*		**Pb**	**08 14 16.1**	**-0.1**
UDBS				IAML			08 14 30.1	
	comp=Z,330nm,1.0s							
LFRS	**El Faro**	**0.84**	**55**	*eP*		**Pb**	**08 14 16.5**	**0.0**
QUEZ	**Alcaldia de Qu**	**0.85**	**35**	*iP*		**Pb**	**08 14 16.4**	**-0.1**
QUEZ				IAML			08 14 21.0	
	comp=Z,1μm,1.0s							
LOAL	**Lomas de Alarc**	**0.86**	**359**	*iP*		**Pb**	**08 14 16.6**	**-0.1**
LOAL				IAML			08 14 33.4	
	comp=Z,2μm,1.0s							
UNIC	**Universidad Ca**	**0.87**	**14**	*iP*		**Pb**	**08 14 16.5**	**-0.4**
UNIC				IAML			08 14 20.5	
	comp=Z,180nm,1.0s							
SJTE	**Alcalde de S**	**0.88**	**57**	*eP*		**Pb**	**08 14 16.7**	**-0.4**
SJTE				IAML			08 14 31.9	
	comp=Z,86nm,0.2s							
SJTE	**Alcalde de S**	**0.88**	**57**	*iP*		**Pb**	**08 14 16.8**	**-0.4**
SJTE				IAML			08 14 31.8	
	comp=Z,190nm,1.0s							
SLOZ	**Alcaldia de Sa**	**0.89**	**359**	*eP*		**Pb**	**08 14 16.6**	**-0.6**
COEG	**Centro de Oper**	**0.99**	**61**	*eP*		**Pb**	**08 14 18.4**	**-0.5**
COEG	**Centro de Oper**	**0.99**	**61**	*iP*		**Pb**	**08 14 18.5**	**-0.5**
COEG				IAML			08 14 32.4	
	comp=Z,170nm,1.0s							
PAVA	**Las Pavas**	**0.99**	**54**	*eP*		**Pb**	**08 14 18.8**	**-0.3**
PAVA	**Las Pavas**	**0.99**	**54**	*iP*		**Pb**	**08 14 19.2**	**+0.5**
PAVA				IAML			08 14 35.4	
	comp=Z,270nm,1.0s							
UESV	**Universidad de**	**1.08**	**62**	*eP*		**Pn**	**08 14 19.8**	**0.0**
UESV	**Universidad de**	**1.08**	**62**	*iP*		**Pn**	**08 14 19.8**	**0.0**
UESV				IAML			08 14 36.8	
	comp=Z,250nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.16**	**61**	*eP*		**Pn**	**08 14 21.2**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.16**	**61**	*iP*		**Pn**	**08 14 21.3**	**+0.4**
SCLA				IAML			08 14 39.0	
	comp=Z,52nm,1.0s							
PQSS	**Presa 15 de Se**	**1.27**	**67**	*eP*		**Pn**	**08 14 22.8**	**+0.4**
PQSS	**Presa 15 de Se**	**1.27**	**67**	*iP*		**Pn**	**08 14 22.7**	**+0.4**
PQSS				IAML			08 14 40.0	
	comp=Z,170nm,1.0s							
LLGN	**La Laguna**	**1.30**	**38**	*iP*		**Pb**	**08 14 24.1**	**-0.1**
LLGN				IAML			08 15 29.2	
	comp=Z,810nm,1.0s							
PACA	**Pacayal**	**1.45**	**77**	*eP*		**Pn**	**08 14 26.1**	**+1.1**
PACA	**Pacayal**	**1.45**	**77**	*iP*		**Pn**	**08 14 26.0**	**+1.1**
PACA				IAML			08 14 49.2	
	comp=Z,880nm,1.0s							
BLLM	**Bellamira**	**1.52**	**78**	*eP*		**Pn**	**08 14 26.7**	**+0.8**
CNRM	**Centro Naciona**	**1.59**	**78**	*iP*		**Pn**	**08 14 26.5**	**-0.3**
CNRM				IAML			08 14 49.1	
	comp=Z,2μm,1.0s							

SNET 11 08:14:17.2±0.3, 13.24N×87.75W, h5km±4km, ML1.7, Honduras

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CNCH	**Conchagua**	**0.09**	**297**	*eP*		Pg	08 14 19.9	+0.8
CNCH				*eS*		Sg	08 14 22.0	+1.5
CNCH				IAML			08 14 23.9	
	comp=Z,377nm,0.1s							
CNCH	**Conchagua**	**0.09**	**297**	*iP*		Pg	08 14 20.0	+0.9
AMPH	**Amapala**	**0.10**	**62**	*eP*		Pg	08 14 19.8	+0.4
AMPH				*eS*		Sg	08 14 21.9	+1.1
AMPH	**Amapala**	**0.10**	**62**	*iP*		Pg	08 14 19.6	+0.2
LCND	**La Caada**	**0.15**	**299**	*eP*		Pg	08 14 20.9	+0.7
LCND				*e*			08 14 20.9	
LCND				*eS*		Sg	08 14 23.8	+1.5
LCND	**La Caada**	**0.15**	**299**	*iP*		Pg	08 14 20.9	+0.7

*JMA **11** 08:20:07.3±0.1, 23.9N±0.2×121.6E±1.0, h3km, MV3.3/15, TAIWAN REGION*
*TAP **11** 08:20:07.6, 23.94N×121.58E, h8km, ML4.0, B*
*ASIES **11** 08:20:07.6, 23.94N×121.58E, h8km, ML4.0, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.07; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$-0.23; $M_{r\theta}$2.19; $M_{\theta\phi}$-0.49; $M_{\phi r}$2.02; Fault plane solution: $M_0$3.17479×10^{21} NP1:ϕs48.22000°, δ80.15000°, λ85.48000°. NP2:ϕs253.00000°, δ10.83000°, λ114.39000°. Principal axes: T Plg54.6390°, Azm312.6990°; N Plg4.4500°, Azm48.9950°; P Plg34.9950°, Azm142.1180°;*
*IDC **11** 08:20:17.1±7.2, 23.81N×121.50E, h93km±69km, mb3.2/8, mbtmp3.6/9, ML3.8/1, MS2.9/4 Error ellipse: s-maj=38.3km s-min=19.3km az=69.0*

ISC 11 08:20:07.8±0.7, 23.94N±0.01×121.60E±0.02, h10km±4km, n156, σ078/229, mb3.5/8, MS3.0/4, 8C-23D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
HWA	**Hwalien**	**0.04**	**3**	⇓*iP*		**Pg**	**08 20 09.8**	**+0.1**
HWA	baz=37			S		**Sg**	**08 20 11.9**	**+0.7**
ETM	**Tongmen**	**0.10**	**285**	⇓P		**Pg**	**08 20 10.2**	**-0.3**
ETM	baz=288			*i* S		**Sg**	**08 20 11.8**	**-0.6**
TWD	**Chiawan**	**0.14**	**358**	⇓*iP*		**Pg**	**08 20 11.0**	**0.0**
TWD	baz=6.0			S		**Sg**	**08 20 13.5**	**+0.2**
SHUL	**Shoufeng**	**0.15**	**194**	⇑P		**Pg**	**08 20 11.7**	**+0.5**
SHUL	baz=197			*e*S		**Sg**	**08 20 15.0**	**+1.4**
LXIB	**Xiulin Townshi**	**0.19**	**296**	⇓*iP*		**Pg**	**08 20 11.7**	**-0.2**
LXIB	baz=291			S		**Sg**	**08 20 14.5**	**-0.3**
ESL	**Shilin**	**0.20**	**232**	⇑*iP*		**Pg**	**08 20 11.6**	**-0.4**
ESL	baz=234			*e*S		**Sg**	**08 20 13.9**	**-0.9**
ETL	**Fush Village**	**0.22**	**5**	⇓P		**Pg**	**08 20 12.4**	**0.0**
ETL	baz=7.0			*e*S		**Sg**	**08 20 15.6**	**0.0**
NACB	**Ninganchiao**	**0.23**	**358**	P		**Pg**	**08 20 12.5**	**-0.1**
NACB	**Ninganchiao**	**0.23**	**358**	⇓*iP*		**Pg**	**08 20 12.5**	**-0.1**
NACB	baz=10.0			*e*S		**Sg**	**08 20 16.0**	**0.0**
TEGC	**Jichi Village**	**0.23**	**194**	*eP*		**Pg**	**08 20 13.6**	**+1.0**
TEGC	baz=202			*e*S		**Sg**	**08 20 18.7**	**+2.8**
ETLH	**Xiulin Townshi**	**0.29**	**338**	⇓*iP*		**Pg**	**08 20 13.6**	**0.0**
ETLH	baz=340			*e*S		**Sg**	**08 20 17.1**	**-0.5**
WARBT	**Fenglin Townsh**	**0.29**	**222**	⇑*iP*		**Pg**	**08 20 13.4**	**-0.4**
WARBT	baz=231			*e*S		**Sg**	**08 20 17.1**	**-0.7**
WHF	**Hehuan Shan**	**0.37**	**304**	⇓P		**Pg**	**08 20 15.1**	**-0.2**
WHF	baz=305			*e*S		**Sg**	**08 20 19.5**	**-0.8**
EAHA	**Aohua**	**0.41**	**18**	*eP*		**Pg**	**08 20 15.8**	**0.0**
CHGB	**Renai**	**0.41**	**287**	⇓*iP*		**Pg**	**08 20 16.1**	**+0.1**
CHGB	baz=288			*e*S		**Sg**	**08 20 21.9**	**+0.5**
WUSB	**Renai**	**0.45**	**277**	⇓*iP*		**Pb**	**08 20 16.8**	**-1.0**
WUSB	baz=278			*i* S		**Sb**	**08 20 23.1**	**-1.5**
FUSS	**Fushou**	**0.45**	**313**	⇓*eP*		**Pg**	**08 20 16.9**	**+0.2**
FUSS	baz=323			*i* S		**Sb**	**08 20 23.6**	**-1.1**
VWDT	**VWDT**	**0.46**	**247**	⇑*iP*		**Pb**	**08 20 17.1**	**-0.9**
VWDT	baz=249			*e*S		**Sg**	**08 20 23.0**	**+0.1**
HGSD	**Ruisui**	**0.47**	**200**	*eP*		**Pb**	**08 20 17.8**	**-0.4**
EHY	**Hungye**	**0.50**	**211**	⇑*iP*		**Pg**	**08 20 17.2**	**-0.3**
TWT	**Tachien**	**0.50**	**309**	⇓*iP*		**Pb**	**08 20 18.1**	**-0.7**
TWT	baz=300			*e*S		**Sb**	**08 20 25.4**	**-0.7**
ENA	**Nanau**	**0.50**	**15**	⇓*iP*		**Pg**	**08 20 17.6**	**0.0**
ENA	baz=14			*e*S		**Sg**	**08 20 24.8**	**+0.5**
TDCB	**Techi**	**0.51**	**308**	⇓*iP*		**Pb**	**08 20 18.2**	**-0.8**
TDCB	baz=300			*e*S		**Sg**	**08 20 24.6**	**-0.1**
NNSB	**Datong**	**0.53**	**338**	⇓*iP*		**Pg**	**08 20 18.3**	**+0.2**
NNSB	baz=330			*e*S		**Sg**	**08 20 24.8**	**-0.4**
EWUT	**Wuta**	**0.53**	**18**	⇓*eP*		**Pg**	**08 20 18.2**	**+0.1**
EWUT	baz=17			*e*S		**Sg**	**08 20 25.4**	**+0.3**
NNS	**Nan Shan**	**0.54**	**337**	⇓*iP*		**Pg**	**08 20 18.5**	**+0.2**
NNS	baz=330			*e*S		**Sg**	**08 20 25.6**	**0.0**
LATG	**Datong**	**0.60**	**353**	⇓*iP*		**Pg**	**08 20 19.4**	**0.0**
	baz=343							
YULB	**Yu-li**	**0.61**	**207**	P		**Pb**	**08 20 20.1**	**-0.4**
YULB	**Yu-li**	**0.61**	**207**	*eP*		**Pg**	**08 20 19.3**	**-0.3**
YULB	baz=219			*e*S		**Sg**	**08 20 27.9**	**+0.3**
	baz=219							
SSLB	**Suanglung**	**0.61**	**256**	P		**Pb**	**08 20 19.8**	**-0.8**
SSLB	**Suanglung**	**0.61**	**256**	⇑*iP*		**Pb**	**08 20 19.7**	**-0.8**
SSLB	baz=267			*e*S		**Sg**	**08 20 27.1**	**-0.6**
	baz=267							
ECBN	**Changbin**	**0.63**	**193**	*eP*		**Pb**	**08 20 20.6**	**-0.3**
ECBN	baz=182			*e*S		**Sb**	**08 20 31.2**	**+1.4**
	baz=182							
EYUL	**Yuli**	**0.64**	**204**	*eP*		**Pb**	**08 20 20.9**	**-0.2**
EYUL	baz=217			*e*S		**Sg**	**08 20 28.9**	**+0.2**
	baz=217							
WCS	**Beigang Elemen**	**0.64**	**281**	P		**Pb**	**08 20 20.8**	**-0.3**
WCS	baz=282			*e*S		**Sb**	**08 20 28.8**	**-1.2**
	baz=282							
SMLT	**Sun Moon Lake**	**0.65**	**265**	⇑*iP*		**Pb**	**08 20 20.6**	**-0.6**
SMLT	baz=266			*e*S		**Sg**	**08 20 28.9**	**0.0**
	baz=266							
TWF1	**Yuli**	**0.65**	**206**	*eP*		**Pg**	**08 20 20.0**	**-0.3**
TWF1	baz=216			*e*S		**Sg**	**08 20 28.0**	**-0.8**
	baz=216							
NDT	**Datong Townshi**	**0.67**	**353**	⇓*iP*		**Pb**	**08 20 21.0**	**-0.5**
NDT	baz=344			S		**Sg**	**08 20 29.5**	**+0.1**
	baz=344							
ESAO	**Su ao**	**0.67**	**19**	*eP*		**Pg**	**08 20 20.7**	**-0.1**
ESAO	baz=10.0			*e*S		**Sg**	**08 20 29.5**	**-0.1**
	baz=10.0							
EOS4	**EOS4**	**0.68**	**74**	*eP*		**Pb**	**08 20 22.0**	**+0.5**
EOS4	baz=92			*e*S		**Sn**	**08 20 33.1**	**-0.4**
	baz=92							
TYC	**Yuchr**	**0.68**	**267**	⇑*iP*		**Pb**	**08 20 21.1**	**-0.7**
TYC	baz=269			*e*S		**Sg**	**08 20 29.6**	**-0.3**
	baz=269							
ENTT	**Nioudou**	**0.70**	**357**	⇓*iP*		**Pg**	**08 20 21.5**	**+0.2**
ENTT	baz=357			S		**Sg**	**08 20 30.9**	**+0.4**
	baz=357							
NDS	**Dongshan**	**0.70**	**8**	P		**Pg**	**08 20 21.6**	**+0.2**
NDS	baz=8.0			S		**Sb**	**08 20 31.2**	**-0.6**
	baz=8.0							
TWC	**Suao**	**0.70**	**19**	⇓*iP*		**Pg**	**08 20 21.5**	**+0.1**
TWC	baz=10.0			*e*S		**Sb**	**08 20 31.4**	**-0.5**
	baz=10.0							
YHNB	**Yeheng**	**0.76**	**344**	P		**Pb**	**08 20 23.2**	**+0.1**
YHNB	**Yeheng**	**0.76**	**344**	⇓*iP*		**Pb**	**08 20 22.9**	**-0.2**
YHNB	baz=344			*e*S		**Sg**	**08 20 32.1**	**-0.3**
	baz=344							
CHKH	**Chenggong**	**0.77**	**194**	*eP*		**Pb**	**08 20 23.2**	**+0.1**
CHKH	baz=186			*e*S		**Sn**	**08 20 35.4**	**-0.8**
	baz=186							
NSK	**Sanguang**	**0.77**	**343**	⇓*iP*		**Pb**	**08 20 22.9**	**-0.3**
NSK	baz=343			*i* S		**Sg**	**08 20 32.6**	**-0.1**
	baz=343							
TWE	**Neicheng**	**0.78**	**4**	P		**Pg**	**08 20 23.1**	**+0.2**
TWE	baz=4.0			*e*S		**Sb**	**08 20 33.6**	**-0.5**
	baz=4.0							
WJS	**Zhushan**	**0.81**	**262**	*eP*		**Pn**	**08 20 24.6**	**-0.6**
WJS	baz=264			*e*S		**Sb**	**08 20 35.6**	**+0.7**
	baz=264							
FUSB	**Fushanzhiwuyua**	**0.82**	**359**	*eP*		**Pb**	**08 20 23.8**	**-0.3**
FUSB	baz=358			*e*S		**Sg**	**08 20 34.6**	**+0.4**
	baz=358							
NFF	**Wufeng Townshi**	**0.82**	**327**	*eP*		**Pb**	**08 20 24.2**	**+0.1**
NFF	baz=327			*e*S		**Sb**	**08 20 34.7**	**-0.6**
	baz=327							
ILA	**Ilan**	**0.83**	**9**	*eP*		**Pb**	**08 20 24.3**	**0.0**
NWLT	**Wulai**	**0.84**	**354**	*eP*		**Pb**	**08 20 24.2**	**-0.3**
NWLT	baz=353			*e*S		**Sg**	**08 20 34.6**	**-0.4**
	baz=353							
WNT	**Mingjian**	**0.84**	**266**	*eP*		**Pn**	**08 20 25.3**	**-0.3**
WNT	baz=268			*e*S		**Sn**	**08 20 37.2**	**-0.9**
	baz=268							
ALS	**Alishan**	**0.85**	**240**	*iP*		**Pb**	**08 20 24.5**	**-0.2**
ALS	baz=242			*e*S		**Sb**	**08 20 36.4**	**+0.2**
	baz=242							
TWQ1	**Liyutan**	**0.86**	**298**	*eP*		**Pn**	**08 20 25.6**	**-0.4**
TWQ1	baz=299			*e*S		**Sb**	**08 20 37.1**	**+0.7**
	baz=299							
CHKT	**Chengkung**	**0.86**	**195**	*eP*		**Pg**	**08 20 24.1**	**-0.3**
CHKT	baz=198			*e*S		**Sn**	**08 20 38.5**	**-0.1**
	baz=198							
EHD	**Haiduan**	**0.87**	**205**	*eP*		**Pg**	**08 20 24.1**	**-0.3**
TCU	**Taichung**	**0.87**	**284**	*eP*		**Pn**	**08 20 26.2**	**+0.1**
NSTT	**Nanjuang**	**0.88**	**322**	P		**Pb**	**08 20 25.6**	**+0.4**
NSTT	baz=322			*e*S		**Sb**	**08 20 36.6**	**-0.4**
	baz=322							
LIOB	**Emei**	**0.89**	**323**	P		**Pn**	**08 20 25.8**	**-0.5**
LIOB	baz=323			*e*S		**Sb**	**08 20 37.0**	**-0.2**
	baz=323							
NSY	**Sanyi**	**0.90**	**302**	*eP*		**Pn**	**08 20 26.8**	**+0.3**
ECS	**Chishang**	**0.91**	**203**	*eP*		**Pn**	**08 20 26.4**	**-0.1**
CHN5	**Tsauling**	**0.91**	**248**	P		**Pn**	**08 20 26.4**	**-0.3**
CHN5	baz=240			*e*S		**Sb**	**08 20 38.6**	**+0.7**
	baz=240							
ELDTW	**Lidau**	**0.92**	**216**	*eP*		**Pg**	**08 20 24.4**	**-1.1**
ELDTW	baz=210			S		**Sb**	**08 20 37.8**	**-0.4**
	baz=210							
NMLH	**Miaoli**	**0.95**	**309**	*eP*		**Pn**	**08 20 27.7**	**+0.6**
WCHH	**Zhanghua**	**0.96**	**279**	*eP*		**Pn**	**08 20 27.8**	**+0.5**
WGK	**Gukeng**	**0.98**	**255**	*eP*		**Pn**	**08 20 28.4**	**+0.7**
WGK	baz=258			*e*S		**Sn**	**08 20 42.9**	**+1.3**
	baz=258							
EDH	**Donghe**	**1.00**	**196**	*eP*		**Pg**	**08 20 25

baz=229
STYH eS Sb 08 20 42.9 +0.3
baz=229
NCUH Zhongli 1.09 340 eP Pn 08 20 30.4 +1.2
baz=337
CHN4 Tsaushan 1.09 238 eP Pn 08 20 29.6 +0.5
baz=242
NCU National Centr 1.09 340 eP Pn 08 20 30.0 +0.9
baz=349
NCU eS Sn 08 20 45.8 +1.5
baz=349
TPUB Ta-pu 1.09 235 P Pn 08 20 29.6 +0.4
TPUB Ta-pu 1.09 235 P Pn 08 20 29.4 +0.2
baz=238
TPUB eS Sg 08 20 42.4 -0.7
baz=238
CHN2 Minshiung 1.11 249 eP Pn 08 20 30.5 +1.2
baz=267
CHN2 eS Sn 08 20 45.5 +0.8
baz=267
LONT Longtian 1.11 203 eP Pn 08 20 29.6 +0.2
baz=208
TWB1 Santiao Chiao 1.12 18 eP Pn 08 20 29.6 +0.1
baz=8.0
TWB1 S Sb 08 20 44.1 +0.2
baz=8.0
WRL Guolierlin Hig 1.12 268 eP Pn 08 20 29.6 +0.1
baz=271
WRL eS Sn 08 20 45.9 +0.9
baz=271
WTK Tuku 1.14 258 eP Pn 08 20 30.4 +0.7
baz=261
WTK S Sn 08 20 46.8 +1.4
baz=261
WTP Ta-pu 1.14 233 eP Pn 08 20 30.2 +0.5
baz=237
NWF Wu-fen Shan 1.14 8 eP Pn 08 20 30.3 +0.5
baz=5.0
NWF eS Sb 08 20 44.6 +0.1
baz=5.0
WFSB Wu-fen Shan 1.14 8 eP Pn 08 20 30.1 +0.3
baz=5.0
WFSB eS Sg 08 20 44.2 -0.3
baz=5.0
TWS1 Kuangyinshan 1.17 352 eP Pn 08 20 31.1 +1.0
baz=348
SXI1 Grass Mountain 1.18 12 eP Pn 08 20 30.6 +0.2
baz=351
YM01 YM01 1.20 359 eP Pn 08 20 30.9 +0.2
baz=354
TWG Pinlang 1.21 204 eP Pb 08 20 30.5 -0.3
baz=209
TWGBT Beinan 1.21 203 P Pb 08 20 29.8 -1.0
TWGBT Beinan 1.21 203 eP Pb 08 20 28.4 -2.5
baz=209
TWK Hsinying 1.22 237 eP Pn 08 20 32.0 +1.1
baz=242
NTST Danshui 1.23 354 eP Pg 08 20 31.6 +0.2
baz=359
NTST eS Sn 08 20 48.5 +0.9
baz=359
CHN1 Nanshi 1.24 233 eP Pg 08 20 32.6 +1.0
baz=237
CHN1 eS Sn 08 20 48.9 +1.0
baz=237
SNST Tainan City 1.24 235 eP Pg 08 20 32.2 +0.6
baz=240
YM08 YM08 1.24 359 eP Pn 08 20 30.4 -0.8
baz=355
ANP Anpu 1.25 357 eP Pg 08 20 31.8 +0.1
baz=353
SGST Jiashian 1.27 228 eP Pg 08 20 32.0 0.0
baz=232
SGST eS Sn 08 20 49.8 +1.2
baz=232
JYNG Yonagunijimaku 1.33 67 eP Pn 08 20 31.9 -0.4
TWY Chenhua 1.33 360 eP Pg 08 20 33.5 +0.2
baz=356
ICHU Yijhu 1.34 245 eP Pg 08 20 34.0 +0.5
baz=250
ICHU eS Sg 08 20 52.8 +1.8
baz=250
YOJ Yonaguni jima 1.39 68 P Pg 08 20 35.5 +1.1
YOJ Yonaguni jima 1.39 68 S Sg 08 20 52.5 0.0
CHN8 Yiju 1.41 245 eP Pg 08 20 35.1 +0.3
baz=250
CHN8 eS Sg 08 20 54.4 +1.4
baz=250
SCST Cishan 1.46 224 *i* P Pg 08 20 37.0 +1.2
baz=231
SCST eS Sg 08 20 57.7 +2.9
baz=231
SHHT Tainan City 1.47 232 eP Pg 08 20 37.2 +1.2
baz=238
SSD Sandimen 1.48 217 eP Pn 08 20 34.1 -0.4
baz=211
TSMG Majia 1.51 216 eP Pg 08 20 36.1 -0.7
baz=211
TWM1 Shoushan 1.55 225 eP Pg 08 20 38.6 +1.0
baz=230
MASBT Mashibuluo 1.59 214 eP Pn 08 20 35.7 -0.3
baz=223
MASBT eS Sg 08 20 59.6 +0.6
baz=223
TSCK Chigu Township 1.60 241 eP Pb 08 20 37.3 -0.1
baz=246
EAST Anshuo 1.70 204 eP Pb 08 20 39.5 +0.4
baz=198
TAWH Dawu Township 1.72 203 eP Pb 08 20 38.9 -0.6
baz=193
SCZT Fangliau 1.80 210 eP Pb 08 20 40.9 0.0
baz=217
SLIU Shizi 1.87 204 eP Pb 08 20 41.4 -0.5
baz=195
PHUB P'eng-hu 1.91 258 eP Pn 08 20 41.0 +0.7
baz=262
PHUB eS Sb 08 21 06.3 -0.2
baz=262
PNG Penghu 1.91 259 eP Pn 08 20 41.0 +0.6
baz=263
PNG eS Sb 08 21 06.9 +0.3
baz=263
LYUB Lan-yu 1.93 181 eP Pn 08 20 36.7 -3.9
baz=173
IRIF Iriomote-Funau 1.98 78 eP Pn 08 20 42.3 +0.9
IRIF eS Sn 08 21 07.2 +1.0
HATJ Hateruma jima 2.02 86 eP Pn 08 20 42.6 +0.8
HATJ eS Sn 08 21 08.2 +1.1
VCHM Qimei 2.12 250 eP Pn 08 20 44.1 +0.9
baz=256
JKRS Kuro-shima 2.22 82 eP Pn 08 20 45.0 +0.4
VWUC VWUC 2.23 299 eP Pn 08 20 44.0 -0.6
baz=298
JIJ Ishigaki jima 2.36 79 eP Pn 08 20 46.0 -0.6
JIJ eS Sn 08 21 14.2 -1.3
PTMZ Houxiangcun 2.51 296 eP Pn 08 20 48.2 -0.4
baz=296
JISG Ishigakijimahi 2.56 75 P Pn 08 20 48.9 -0.4
JISG eS Sn 08 21 19.8 -0.5
MATB Ma-tsu 2.67 326 eP Pn 08 20 50.7 -0.1
baz=309
JTJ Tarama 2.91 75 S Sn 08 21 30.3 +1.1
KNM Kinmen 2.93 280 eP Pn 08 20 56.2 +1.8
baz=281
KNMB Chin-men Tao 2.98 281 eP Pn 08 20 54.9 -0.2
baz=282
LYJJ Jianjiangzhen 3.09 328 eP Pn 08 20 56.7 +0.2
baz=313
MHZQ Yeshan 3.17 313 eP Pn 08 20 57.0 -0.8
baz=312
XPSS Dashiqiu 3.24 337 eP Pn 08 20 58.1 -0.5
baz=332
AXDP Jialang 3.45 287 eP Pn 08 21 01.8 +0.4
baz=287
ZPLA Ao Xicun 3.52 271 eP Pn 08 21 02.7 +0.1
baz=273
DSXP Dongshan 3.83 267 eP Pn 08 21 06.9 +0.1
baz=271
SXFK Yanhouchang 4.34 305 eP Pn 08 21 13.8 0.0
baz=304
KSRS Korea Array 14.52 20 P P 08 23 40.0 +0.1
0.4nm,0.3s,baz=200,slow=12,SNR=12
3.3nm,0.7s
GUMO Guam 24.28 111 LR LR 08 35 38.2
comp=Z,11nm,18.3s,baz=82,slow=38
SONM Songino Array 26.74 337 P P 08 25 48.6 +1.1
0.5nm,0.6s,baz=165,slow=11,SNR=2.4
SONM LR LR 08 36 33.8
comp=Z,49nm,18.7s,baz=171,slow=36
0.5nm,0.6s
MKAR Makanchi Array 38.78 316 P P 08 27 32.9 +0.4
0.2nm,0.5s,baz=106,slow=11,SNR=5.8
0.2nm,0.5s
ZALV Zalesovo Beam 40.66 327 P P 08 27 47.0 -1.0
0.9nm,0.7s,baz=134,slow=6.2,SNR=2.0
ZALV LR LR 08 47 42.2
comp=Z,29nm,21.1s,baz=348,slow=40
0.9nm,0.7s
H11S3 WAKE ISLAND Hy 42.24 88 T T 09 13 05.8
baz=284,slow=74,SNR=32
H11S1 WAKE ISLAND Hy 42.25 88 T T 09 13 06.0
baz=284,slow=74,SNR=15
H11S2 WAKE ISLAND Hy 42.26 88 T T 09 13 06.7
baz=284,slow=74,SNR=13
KURBB Kurchatov Arra 42.54 320 P P 08 28 04.4 +1.0
0.3nm,0.3s,baz=108,slow=8.9,SNR=1.9
0.3nm,0.3s
WRA Warramunga Arr 45.35 163 P P 08 28 24.4 -1.9
0.4nm,0.6s,baz=343,slow=8.7,SNR=1.9
0.4nm,0.6s
SHEM Shemya Is, Ala 48.77 40 LR LR 08 49 56.5
comp=Z,12nm,21.3s,baz=296,slow=36
ASAR Alice Springs 48.80 165 P P 08 28 52.9 -0.3
0.2nm,0.3s,baz=340,slow=7.1,SNR=4.3
0.2nm,0.3s
ILAR Eielson Array 69.25 27 P P 08 31 14.8 +0.1
0.2nm,0.5s,baz=272,slow=5.5,SNR=2.4
0.2nm,0.5s
YKA Yellowknife Ar 83.05 23 P P 08 32 32.8 -0.3
0.5nm,0.7s,baz=314,slow=4.9,SNR=12
0.5nm,0.7s

KRSC 11 08:22:36.7±2.1,52°65N×154°05E,h529km±41km,MI3.8,
Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**1.91**	**80**	*eP*		P	08 23 45.0	+1.2
ASAK	**Asacha**	**2.37**	**95**	*eP*		P	08 23 48.0	+1.7
MTVR	**Mutnovka**	**2.53**	**92**	*eP*		P	08 23 49.3	+2.1
GNL	**Ganaly**	**2.57**	**64**	*eP*		P	08 23 48.3	+1.0
KDTR	**Khodutka, Kamc**	**2.62**	**107**	*eP*		P	08 23 48.3	+0.7
KDTR				*eS*		S	08 24 45.9	+0.5
RUS	**Russkaya**	**2.73**	**93**	*eP*		P	08 23 49.1	+0.9
RUS				*eS*		S	08 24 47.3	+0.7
KOK	**Koryaka**	**2.85**	**75**	*eP*		P	08 23 51.2	+2.2
KRX	**Arik**	**2.87**	**74**	*eP*		P	08 23 51.4	+2.2
DALK	**Dalny**	**2.88**	**80**	*eP*		P	08 23 50.4	+1.4
AVH	**Avacha**	**2.90**	**76**	*eP*		P	08 23 51.8	+2.5
SMAR	**Somma**	**2.94**	**76**	*eP*		P	08 23 51.4	+1.7
UGLR	**Uglovaya**	**2.94**	**77**	*eP*		P	08 23 52.1	+2.5
SPN	**Mys Shipunski**	**3.65**	**21**	*eS*		S	08 24 56.0	-1.7
ESO	**Esso**	**4.26**	**38**	*eP*		P	08 23 59.7	+0.7
TUMR	**Tumrok**	**4.46**	**51**	*eP*		P	08 24 04.2	+3.6
TUMD	**Tumrok D**	**4.54**	**53**	*eP*		P	08 24 03.7	+2.5
KMNR	**Kamenistaya**	**4.78**	**47**	*eP*		P	08 24 04.8	+1.5
SRDR	**Sredinnyy**	**4.94**	**40**	*eP*		P	08 24 05.9	+1.4

*NCEDC **11** 08:28:29.9±2.1,40°29N×0°01×121°20W±0°02,h13km±1km,*
Mwr3.4/4,ML3.0/80(NEIC),Mwr3.3(REN),Error ellipse:
s-maj=2.1km s-min=1.5km az=218.0
*REN **11** 08:28:29.6±1.7,40°28N±0°01×121°18W±0°02,h6km±6km,*
Error ellipse: s-maj=2.1km s-min=1.6km az=56.0
NEIC 11 08:28:29.8±1.7,40°27N±0°01×121°21W±0°01,h9km±6km,
Error ellipse: s-maj=1.9km s-min=1.3km az=190.0,
Northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCMM	**Colby Mountain**	**0.27**	**243**			Pg	08 29 35.9	+0.6
LMEM	**Manzanita Entr**	**0.38**	**314**			Pg	08 28 37.6	+0.2
O03E	**Paynes Creek**	**0.45**	**273**			Pg	08 28 38.5	-0.2
O03E						Sg	08 28 44.6	-0.1
LDBM	**Digger Butte**	**0.47**	**290**			Pg	08 28 38.8	-0.2
LBCM	**Butte Creek Ri**	**0.58**	**349**			Pg	08 28 40.7	-0.3
HATC	**Hat Creek Radi**	**0.58**	**341**			Pg	08 28 40.9	-0.1
HATC						Sg	08 28 49.2	+0.6
OBHM	**Bloomer Hill**	**0.65**	**198**			Pg	08 28 42.3	0.0
OBHM						Sb	08 28 51.8	-0.8
OGOM	**Van Goodin Ran**	**0.69**	**207**			Pg	08 28 43.1	0.0
KPK	**Kanaka Peak**	**0.69**	**186**			Pg	08 28 42.6	-0.5
LTCM	**Tuscan Springs**	**0.70**	**265**			Pg	08 28 43.5	+0.1
BMRR	**Black Mountain**	**0.72**	**103**			Pg	08 28 43.1	-0.7
ORV	**Oroville**	**0.75**	**197**	Pg		Pg	08 28 44.0	-0.3
ORV				Sg		Sg	08 28 53.8	-0.2
ORV				IAML			08 28 56.6	
	comp=E,576nm,0.4s							
ORV				IAML			08 29 02.6	
	comp=N,373nm,0.5s							
BEKR	**Beckworth**	**0.77**	**121**			Pg	08 28 44.1	-0.5
BEKR	**Beckworth**	**0.77**	**121**			Sg	08 28 55.0	+0.4
LSHM	**Sage Hen Hill**	**0.82**	**310**			Pg	08 28 44.8	-0.9
OWYM	**Wyandotte**	**0.84**	**195**			Pg	08 28 45.3	-0.8
PAM	**Palermo**	**0.85**	**196**			Pg	08 28 45.5	-0.8
LTIM	**Timbered Crate**	**0.93**	**347**			Pg	08 28 47.1	-0.6
OSTM	**Stimpson Lane**	**0.95**	**198**			Pg	08 28 47.4	-0.6
OHCM	**Honcut**	**0.96**	**193**			Pg	08 28 47.4	-0.8
LOY	**Loyalton**	**0.97**	**129**			Pg	08 28 47.9	-0.5
BABR	**Babbit Peak**	**1.08**	**128**			Pg	08 28 50.1	-0.5
OSUM	**Sutter Buttes**	**1.11**	**207**			Pg	08 28 50.9	-0.3
SUTB	**Sutter Butte**	**1.13**	**203**			Pg	08 28 51.0	-0.6
DONR	**Donner Summit**	**1.15**	**143**			Pg	08 28 51.1	-0.8
PEAR	**Peavine Mounta**	**1.17**	**124**			Sg	08 28 51.7	-0.5
PEAR	**Peavine Mounta**	**1.17**	**124**			Sg	08 29 07.5	+0.1
GCK	**Clark Valley**	**1.19**	**233**			Pb	08 28 52.5	-0.1
LBFM	**Black Fox Moun**	**1.19**	**335**			Pg	08 28 51.6	-1.1
O02D	**Mt. Diablo Mer**	**1.21**	**266**			Pb	08 28 51.6	-1.4
M03C	**McCloud**	**1.22**	**326**			Pb	08 28 52.3	-0.9
GVV	**Valley View**	**1.23**	**247**			Pb	08 28 52.3	-1.1
GFC	**Funks Creek**	**1.26**	**222**			Pn	08 28 53.6	0.0
LBPM	**Beegum Peak**	**1.28**	**273**			Pn	08 28 52.1	-1.9
LGBM	**Gray Butte**	**1.31**	**325**			Pn	08 28 54.0	-0.6
MPK	**Martis Peak**	**1.33**	**137**			Pn	08 28 54.9	0.0
MPK				IAML			08 29 17.2	
	comp=E,457nm,0.5s							
AFDM	**Forest Hills D**	**1.33**	**172**	Pn		Pn	08 28 54.1	-0.6
AFDM				IAML			08 29 12.4	
	comp=N,322nm,0.5s							
N02D	**Trinity Center**	**1.34**	**302**			Pn	08 28 53.1	-1.8
LASM	**Arnica Sink**	**1.36**	**348**			Pn	08 28 54.2	-1.0
LBKM	**Bonanza King**	**1.37**	**307**			Pn	08 28 53.7	-1.7
LGPM	**Granite Peak**	**1.39**	**298**			Pn	08 28 53.8	-1.8
LGMM	**Garner Mountai**	**1.41**	**341**			Pn	08 28 55.5	-0.4
LMPM	**Military Pass**	**1.42**	**330**			Pn	08 28 55.9	-0.2
RUBR	**Rubicon Trail**	**1.46**	**146**			Pb	08 28 57.3	-0.1
PAHR	**Pah Rah Range**	**1.51**	**111**			Pn	08 28 57.3	0.0
PAHR				IAML			08 29 18.9	
	comp=N,181nm,0.4s							
PAHR				IAML			08 29 21.7	
	comp=E,197nm,0.4s							
GHMM	**Hull Mountain**	**1.53**	**240**			Pn	08 28 57.3	-0.3
LHEM	**Herd Peak**	**1.56**	**331**			Pn	08 28 58.2	+0.2
KBNM	**Bluenose Ridge**	**1.57**	**257**			Pn	08 28 57.9	-0.1
KHBM	**Hayfork Bally**	**1.58**	**285**			Pn	08 28 57.3	-1.0
M04C	**Macdoel**	**1.58**	**343**			Pn	08 28 58.5	+0.3
NDHM	**Dunnigan Hills**	**1.60**	**200**			Pb	08 28 59.6	+0.1
MNRC	**McLaughlin Min**	**1.69**	**215**			Pn	08 28 59.5	-0.1
PNTR	**Pine Nut**	**1.71**	**133**			Pb	08 29 01.6	-0.1
PNTR				IAML			08 29 29.9	
	comp=E,218nm,0.7s							
LAMM	**Antelope Mount**	**1.71**	**322**			Pn	08 28 59.5	-0.6
GRTM	**Round Top Moun**	**1.74**	**221**			Pn	08 29 00.2	-0.1
NMTM	**Middletown**	**1.75**	**214**			Pn	08 28 59.9	-0.5
NBPM	**Berryessa Peak**	**1.77**	**206**			Pb	08 29 02.2	-0.3
KPM	**Iron Peak**	**1.80**	**256**			Pb	08 29 02.3	-0.8
B040	**Montague**	**1.81**	**330**			Pn	08 29 02.1	+0.8
GSGM	**Seigler Mounta**	**1.82**	**220**			Pn	08 29 00.2	-1.1
DCMP	**DeCamp, Califo**	**1.82**	**245**			Pn	08 29 02.3	+0.9
YBH	**Yreka Blue Hor**	**1.85**	**323**			Pn	08 29 02.6	+0.7
GHLM	**Highland Sprin**	**1.86**	**229**			Pn	08 29 02.3	+0.3
GDXM	**Geysers**	**1.91**	**221**			Pn	08 29 03.6	+1.0
KMRM	**Mail Ridge**	**1.91**	**269**	Pn		Pn	08 29 03.2	+0.4
KCPM	**Cahto Peak**	**1.91**	**253**			Pn	08 29 03.7	+0.9
KCPM				IAML			08 29 54.3	
	comp=N,188nm,0.9s							
HOPS	**Hopland Field**	**1.92**	**229**	Pn		Pn	08 29 03.5	+0.7
NHSM	**Mount Saint He**	**1.94**	**214**			Pn	08 29 02.9	-0.3
YERR	**Yerington**	**1.99**	**130**			Pn	08 29 05.1	+1.2
YERR				IAML			08 29 34.1	
	comp=E,176nm,0.5s							
YERR				IAML			08 29 40.6	
	comp=N,100nm,0.6s							
GTC	**Three Chop Rid**	**2.00**	**245**			Pn	08 29 04.6	+0.6
KHMM	**Horse Mountain**	**2.01**	**288**			Pb	08 29 06.2	-0.5
KHMM				IAML			08 29 47.9	
	comp=N,185nm,0.8s							
LKVW	**Lakeview**	**2.05**	**18**			Pn	08 29 06.1	+1.3
L04D	**Klamath Falls**	**2.11**	**337**			Pb	08 29 07.7	-0.8
CVS	**Carmenet Viney**	**2.15**	**207**			Pn	08 29 06.5	+0.5
JCC	**Jacoby Creek,**	**2.22**	**285**			Pn	08 29 07.4	+0.6
JCC				IAML			08 29 32.5	
	comp=N,113nm,0.8s							
WAKR	**Walker**	**2.23**	**142**			Pb	08 29 09.1	-1.5
WAKR				IAML			08 29 44.5	
	comp=E,78nm,0.7s							
CMB	**Columbia Colle**	**2.32**	**164**	Pn		Pn	08 29 08.9	+0.6
CMB				IAML			08 29 52.2	
	comp=E,82nm,0.6s							
CMB				IAML			08 29 52.0	
	comp=N,76nm,0.6s							
CTAM	**Taylor**	**2.33**	**196**			Pg	08 29 13.5	-0.9
K04D	**Chiloquin, OR**	**2.39**	**350**			Pn	08 29 08.8	-0.5
KCTM	**Capetown**	**2.40**	**276**			Pg	08 29 16.1	+0.4
KRMB	**Red Mountain**	**2.40**	**302**			Pn	08 29 10.1	+0.6
KRMB				IAML			08 29 50.8	
	comp=E,54nm,1.0s							
K05A	**Summer Lake**	**2.46**	**5**			Pn	08 29 11.7	+1.2
K05A				IAML			08 29 47.8	
	comp=N,93nm,0.8s							
K05A				IAML			08 29 50.9	
	comp=E,69nm,1.1s							
MCCM	**Marconi Confer**	**2.49**	**212**	Pn		Pn	08 29 10.7	+0.1
MCCM				IAML			08 29 43.3	
	comp=E,109nm,0.8s							
KSXB	**Camp Six Broad**	**2.55**	**309**			Pn	08 29 13.1	+1.6
KSXB				IAML			08 29 54.5	
	comp=E,48nm,0.8s							
KSXB				IAML			08 30 01.1	
	comp=N,44nm,1.5s							
L02F	**Cave Junction**	**2.57**	**317**			Pn	08 29 12.7	+1.0
RYN	**Ryan**	**2.65**	**127**			Pn	08 29 14.2	+1.2
RYN				IAML			08 29 55.5	
	comp=N,44nm,0.7s							
RYN				IAML			08 29 57.3	
	comp=E,44nm,0.6s							
HUMO	**Hull Mountain**	**2.68**	**331**			Pn	08 29 15.2	+2.0
KVN	**Kaiserville**	**2.69**	**116**			Pn	08 29 14.3	+0.7
KVN				IAML			08 29 55.7	
	comp=E,51nm,0.9s							
KVN				IAML			08 29 57.5	
	comp=N,51nm,1.0s							
NV09	**Mina Array Sit**	**2.88**	**129**			Pn	08 29 17.5	+1.3
WVOR	**Wild Horse Val**	**2.90**	**41**			Pn	08 29 16.7	+0.3
WVOR				IAML			08 30 02.5	
	comp=N,49nm,0.9s							
WVOR				IAML			08 30 09.9	
	comp=N,55nm,0.8s							
NVAR	**Mina Array Bea**	**2.91**	**128**			Pn	08 29 16.1	-0.5
LHV	**Little Huntoon**	**2.91**	**133**			Pn	08 29 17.4	+1.1
LHV				IAML			08 30 15.7	
	comp=N,42nm,1.4s							
LHV				IAML			08 30 16.6	
	comp=E,57nm,1.4s							
NV08	**Mina Array Sit**	**2.92**	**129**			Pn	08 29 17.9	+1.3
NV11	**Mina Array Sit**	**3.00**	**127**			Pn	08 29 18.8	+1.1
J05D	**Fort Rock, OR**	**3.01**	**360**			Pn	08 29 20.4	+2.4
J05D				IAML			08 30 16.6	
	comp=N,43nm,1.2s							
J05D				IAML			08 30 20.6	
	comp=E,52nm,2.4s							
K02D	**Willamette Mer**	**3.04**	**324**			Pn	08 29 18.4	0.0
MDPB	**Devils Postpil**	**3.11**	**147**			Pn	08 29 21.5	+2.0
MDPB				IAML			08 30 08.4	
	comp=E,58nm,0.7s							
BENR	**Benton**	**3.27**	**140**			Pn	08 29 23.7	+2.0
Q09A	**Carvers**	**3.43**	**113**	Pn		Pn	08 29 24.6	+0.9
HJGM	**San Juan Grade**	**3.48**	**185**			Pn	08 29 19.7	-4.5
KEBM	**Edson Butte**	**3.50**	**319**	Pn		Pn	08 29 24.8	+0.2
KEBM				IAML			08 30 36.5	
	comp=E,51nm,1.9s							
KEBM				IAML			08 30 50.9	
	comp=N,49nm,3.0s							
SAO	**San Andreas Ge**	**3.51**	**183**			Pn	08 29 26.5	+1.9
J08A	**Circle Bar Ran**	**3.70**	**33**			Pn	08 29 27.8	+0.5
TPH	**Tonopah**	**3.80**	**124**	Pn		Pn	08 29 30.2	+1.5
DSP	**Deep Springs**	**3.85**	**138**			Pn	08 29 30.9	+1.7
MZP	**Montezuma Peak**	**3.93**	**130**			Pn	08 29 32.0	+1.3
PMPB	**Monarch Peak**	**4.06**	**175**	Pn		Pn	08 29 32.9	+0.6
GMN	**Gold Mountain**	**4.28**	**133**	Pn		Pn	08 29 37.2	+1.7
G05A	**Wamic**	**4.97**	**359**	Pn		Pn	08 29 44.5	-0.2
WCT	**Wildcat Mounta**	**5.00**	**133**			Pn	08 29 44.9	-0.3
S11A	**Rachel**	**5.00**	**120**			Pn	08 29 45.1	-0.2
Q12A	**Willow Creek R**	**5.08**	**102**			Pn	08 29 46.3	0.0
TPNV	**Topopah Spring**	**5.11**	**129**	Pn		Pn	08 29 47.2	+0.4
TPNV				IAML			08 31 40.9	
	comp=N,9.6nm,3.1s							
TPNV				IAML			08 31 44.9	
	comp=N,12nm,2.0s							
SPR3	**Spring Creek 3**	**5.46**	**101**			Pn	08 29 51.3	-0.4
MCY	**Mercury**	**5.47**	**130**			Pn	08 29 54.6	+2.9

*ANF **11** 09:02:29.3±0.2,33°64N×117°36W,h9km±1km,ML3.6/35,*
Error ellipse: s-maj=1.6km s-min=1.3km az=3.0
*NEIC **11** 09:02:29.9±1.0,33°656N±0°004×117°331W±0°008,*
h10km±4km,Error ellipse: s-maj=1.1km s-min=0.1km
az=120.0
*PAS **11** 09:02:30.1±0.8,33°653N±0°007×117°342W±0°008,*
h4km±1km,ML3.5/341,ML3.4/58(NEIC),Error ellipse:
s-maj=1.1km s-min=1.0km az=213.0
ISC 11 09:02:29.8±0.8,33°64N±0°01×117°35W±0°01,h12km±5km,
n151,σ0°79/232,Southern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELS	**Elsinore Mount**	**0.06**	**278**	Pg		**Pg**	**09 02 31.8**	**-0.5**
ELS				Sg		**Sg**	**09 02 32.8**	**-1.3**
ELS				IAML			09 02 33.2	
	comp=E,21μm,0.4s							
MURC	**Murrieta**	**0.14**	**107**			**Pg**	**09 02 33.2**	**+0.1**
MURC						**Sg**	**09 02 35.5**	**0.0**
MURC	**Murrieta**	**0.14**	**107**	P		**Pg**	**09 02 33.2**	**+0.1**
	baz=294,SNR=1000							
MURC				S		**Sg**	**09 02 35.5**	**0.0**
	baz=294							
BACC	**Bachelor Mtn.**	**0.26**	**96**			**Pg**	**09 02 35.0**	**-0.2**
CRNC	**Corona**	**0.29**	**324**			**Pg**	**09 02 35.6**	**-0.3**
CRNC						**Sg**	**09 02 39.7**	**-0.2**
PEC	**Perris**	**0.30**	**32**			**Pg**	**09 02 35.5**	**-0.4**
PEC						**Sg**	**09 02 39.4**	**-0.6**
RVR	**Riverside**	**0.35**	**357**			**Pg**	**09 02 36.5**	**-0.5**
RVR						**Sg**	**09 02 41.0**	**-0.7**
POB	**Polly Butte**	**0.36**	**82**			**Pg**	**09 02 37.0**	**-0.1**
POB						**Sg**	**09 02 41.9**	**-0.1**
MLSC	**Mira Loma**	**0.41**	**334**			**Pg**	**09 02 37.6**	**-0.3**
MLSC						**Sg**	**09 02 43.0**	**-0.3**
CFT	**Crafton Hills**	**0.44**	**27**			**Pg**	**09 02 38.4**	**-0.2**
SANC	**Santa Ana**	**0.45**	**279**			**Pg**	**09 02 39.2**	**+0.5**
SANC						**Sg**	**09 02 46.3**	**-0.1**
CHNC	**Chino**	**0.45**	**323**			**Pg**	**09 02 38.8**	**0.0**
CHNC						**Sg**	**09 02 45.3**	**+0.5**
CLTC	**Calectric**	**0.45**	**4**			**Pg**	**09 02 38.7**	**-0.1**
CLTC						**Sg**	**09 02 44.5**	**-0.4**
FON	**Fontana**	**0.47**	**351**			**Pg**	**09 02 38.9**	**-0.1**
FON						**Sg**	**09 02 44.6**	**-0.6**
CFSC	**Central Fire S**	**0.47**	**7**			**Pg**	**09 02 39.0**	**-0.1**
CFSC	**Central Fire S**	**0.47**	**7**			**Pg**	**09 02 38.9**	**-0.2**
CFSC						**Sg**	**09 02 45.5**	**+0.2**
GORC	**Green Oak Ranc**	**0.49**	**168**			**Pg**	**09 02 39.5**	**0.0**
GORC						**Sg**	**09 02 46.9**	**+0.9**
HLNC	**Highland**	**0.49**	**13**			**Pg**	**09 02 39.2**	**-0.3**
HLNC						**Sg**	**09 02 46.1**	**0.0**
PLM	**Palomar**	**0.50**	**125**			**Pg**	**09 02 39.8**	**+0.2**
PLM						**Sb**	**09 02 47.4**	**-0.6**
SVD	**Seven Oaks Dam**	**0.51**	**24**			**Pg**	**09 02 39.6**	**-0.3**
SVD						**Sg**	**09 02 46.3**	**-0.4**
CRY	**Cary Ranch**	**0.52**	**98**			**Pg**	**09 02 39.8**	**-0.1**
CRY						**Sg**	**09 02 46.9**	**+0.1**
FULC	**Fullerton**	**0.53**	**296**			**Pg**	**09 02 40.5**	**+0.3**
BREC	**Barre Substati**	**0.55**	**288**			**Pb**	**09 02 41.3**	**-0.2**
GVDA	**Garner Valley**	**0.56**	**87**			**Pg**	**09 02 40.8**	**-0.1**

GVDA Sg 09 02 48.5 0.0
SS2 San Sevaine 0.58 348 Pg 09 02 40.8 -0.4
BZNA Buzz No.'s Pla 0.59 104 Pg 09 02 41.3 0.0
BZNA Sg 09 02 49.4 +0.2
PSRC Puddingstone R 0.59 320 Pg 09 02 41.3 0.0
PSRC Sg 09 02 49.4 +0.2
DNR Dunn Ranch,Anz 0.60 97 Pg 09 02 41.7 0.0
DNR Sg 09 02 50.0 +0.4
SNDA J Saunders Pla 0.62 98 Pg 09 02 42.0 0.0
SNDA Sg 09 02 50.6 +0.5
SSK Sunset Peak 0.64 334 Pg 09 02 42.0 -0.3
FRD Ford Ranch, An 0.64 103 Pg 09 02 42.2 -0.1
FRD Sg 09 02 50.9 +0.1
FRD Ford Ranch, An 0.64 103 Pg 09 02 42.2 -0.1
FRD Sg 09 02 50.9 +0.1
BFSC Mount Baldy Ra 0.65 337 Pg 09 02 41.9 -0.6
BFSC Sg 09 02 50.6 -0.6
BFSC Mount Baldy Ra 0.65 337 P Pg 09 02 41.9 -0.6
baz=156,SNR=137
BFSC S Sg 09 02 50.4 -0.7
baz=156
RHC Rose Hills Cem 0.66 303 Pb 09 02 43.5 +0.1
PEM Pine Mountain 0.68 321 Pg 09 02 42.9 -0.1
DEVC Devers 0.71 65 Pg 09 02 43.5 0.0
DEVC Sg 09 02 52.2 -0.6
BBRC Big Bear Solar 0.72 30 Pg 09 02 43.4 -0.4
BBRC Sg 09 02 53.0 -0.3
BBRC Big Bear Solar 0.72 30 P Pg 09 02 43.3 -0.5
baz=210,SNR=44
BBRC S Sg 09 02 53.0 -0.3
baz=210
DPP Dos Picos Cty 0.72 152 Pg 09 02 43.3 -0.6
DPP Sg 09 02 53.0 -0.4
MATG Mataguay Scout 0.73 126 Pg 09 02 43.8 -0.2
MATG Sg 09 02 54.1 +0.4
PFO Pinyon Flats O 0.74 92 Pg Pg 09 02 44.0 -0.2
PFO Sg Sg 09 02 53.7 -0.3
PFO Pinyon Flats O 0.74 92 Pg 09 02 44.0 -0.2
PFO Sg 09 02 53.7 -0.3
PFO Pinyon Flats O 0.74 92 P Pg 09 02 44.0 -0.3
baz=273,SNR=150
PFO S Sg 09 02 53.8 -0.2
baz=273
XPFO Pion Flat 0.75 92 Pg 09 02 44.0 -0.3
XPFO Sg 09 02 53.8 -0.4
GVRC Garvey Reservo 0.76 303 Pb 09 02 45.2 +0.2
109C Camp Elliot, M 0.78 165 Pg Pg 09 02 44.2 -0.6
109C Sg Sg 09 02 54.6 -0.3
109C IAML 09 02 56.8
comp=E,2µm,0.3s
109C IAML 09 02 59.5
comp=N,1µm,0.3s
109C Camp Elliot, M 0.78 165 P Pg 09 02 44.2 -0.6
baz=346,SNR=88
109C S Sg 09 02 55.0 +0.1
baz=346
CPE Camp Elliot 0.78 165 Pg 09 02 44.2 -0.6
CPE Sg 09 02 55.0 0.0
XTL Crystal Lake, 0.78 327 Pg 09 02 44.4 -0.6
FMP Fort Macarthur 0.79 276 Pg 09 02 44.4 -0.7
FMP Fort Macarthur 0.79 276 P Pg 09 02 44.3 -0.8
baz=94,SNR=17
FMP Sb Sb 09 02 56.7 +0.5
baz=94
CACC Caltech Cellar 0.81 308 Pg 09 02 45.2 -0.3
CACC Sg 09 02 56.2 +0.1
PMD Palm Desert 0.81 89 Pg Pg 09 02 45.1 -0.4
PMD IAML 09 02 58.1
comp=N,948nm,0.4s
PMD IAML 09 02 58.4
comp=E,1µm,0.3s
PMD Palm Desert 0.81 89 Sg 09 02 55.4 -0.7
WTT2 Watts, South G 0.81 293 Pb 09 02 46.0 +0.1
WTT2 Sn 09 02 58.6 -0.6
GSA Caltech--GSA 0.82 308 Sb 09 02 56.8 -0.2
CBCC Caltech Broad 0.82 308 Sb 09 02 57.3 +0.3
MWC Mount Wilson 0.83 315 Pg 09 02 45.5 -0.4
SIL Silver Peak 0.83 31 Pg 09 02 45.4 -0.6
EW2 E Wide Canyon 0.84 69 Pg 09 02 45.8 -0.3
EW2 Sg 09 02 56.9 -0.2
JUEM Julian Eagle M 0.84 131 Pg 09 02 45.3 -0.8
EML El Monte Cty P 0.86 150 Pg 09 02 45.5 -0.9
EML Sg 09 02 57.0 -0.6
BORC Borrego Spring 0.86 115 Pg 09 02 46.4 -0.1
BORC Sg 09 02 57.8 0.0
SDMC San Diego Miss 0.87 168 Pg 09 02 46.1 -0.6
SDMC Sg 09 02 58.0 0.0
PASC Pasadena Art C 0.87 308 Pg Pg 09 02 46.1 -0.6
PASC Sg Sg 09 02 58.0 -0.2
PASC IAML 09 03 00.3
comp=E,1µm,0.4s
PASC IAML 09 03 00.7
comp=N,1µm,0.4s
RPV Rancho Palos V 0.89 277 Pg 09 02 45.8 -1.1
RPV Sb 09 03 00.3 +1.3
CHFC Chilao Flat St 0.89 321 Pg 09 02 46.4 -0.7
CHFC Sg 09 02 57.8 -0.9
BLAC Blackrock camp 0.91 62 Pg 09 02 47.0 -0.4
BLAC Sg 09 02 59.0 -0.3
ADO Adelanto Recei 0.91 356 Pg 09 02 46.9 -0.5
ADO Sb 09 02 59.4 -0.5
CIAC Catalina I. Ai 0.92 255 Pg 09 02 47.1 -0.4
CIAC Sg 09 02 60.0 +0.4
CIS Catalina Islan 0.92 255 P Pg 09 02 47.0 -0.5
baz=74,SNR=53
CIS S Sg 09 02 58.8 -0.8
baz=74
VTV Victorville 0.92 1 Pg 09 02 46.6 -1.0
VTV Sg 09 02 58.6 -1.0
JNH Juniper Hills 0.95 328 Pg 09 02 47.2 -0.9
JNH Sg 09 02 59.7 -0.9
SDRC San Diego Road 0.96 159 Pg 09 02 47.5 -0.9
SDRC Sg 09 03 00.4 -0.5
DECC Green Verdugo 1.02 307 Pg 09 02 48.8 -0.7
DECC Sg 09 03 02.5 -0.3
DECC Green Verdugo 1.02 307 P Pg 09 02 49.0 -0.5
baz=126,SNR=50
DECC S Sg 09 03 02.6 -0.3
baz=126
DJJ Donna J Jenkin 1.03 297 Pg 09 02 49.1 -0.6
DJJ Sg 09 03 03.2 +0.1
MONP2 Monument Peak 1.08 134 Pg 09 02 49.6 -1.0
MONP2 Sg 09 03 04.2 -0.4
MONP2 Monument Peak 1.08 134 P Pg 09 02 49.5 -1.0
baz=315,SNR=112
MONP2 S Sg 09 03 04.3 -0.3
baz=315
OLP Otay Lakes Par 1.09 161 Pg 09 02 49.5 -1.3
OLP Sg 09 03 04.2 -0.7
BAR Barrett 1.11 149 Pg 09 02 49.8 -1.4
BAR IAML 09 03 06.5
comp=N,1µm,0.3s
BAR Barrett 1.11 149 Sg 09 03 04.6 -1.1
SBB Saddle Back Bu 1.12 340 Pg 09 02 50.2 -1.2
SBB Sg 09 03 04.6 -1.4
CTCC Cactus City 1.14 89 Pg 09 02 51.4 -0.3
CTCC Sb 09 03 06.3 +0.1
TJX Tijuana 1.15 167 Pb 09 02 51.0 -0.7
TJX Tijuana 1.15 167 Sg 09 03 07.5 +0.5
TJX Tijuana 1.15 167 IAML 09 03 13.4
comp=E,3µm,0.5s
TJX IAML 09 03 15.1
comp=N,3µm,0.6s
TPC Twentynine Pal 1.18 66 Pb 09 02 51.6 -0.6
BELC Belle Mtn. Jos 1.18 72 Pb 09 02 51.8 -0.5
BELC Sg 09 03 07.3 -0.7
BELC Belle Mtn. Jos 1.18 72 P Pb 09 02 51.9 -0.5
baz=253,SNR=231
BELC S Sg 09 03 07.3 -0.7
baz=253
SCI2 San Clemente I 1.20 237 Pb 09 02 51.7 -0.8
SCI2 San Clemente I 1.20 237 P Pb 09 02 51.7 -0.8
baz=56,SNR=43
SCI2 S Sb 09 03 07.4 -0.6
baz=56
TKX Tecate 1.24 149 Pn 09 02 52.0 -1.0
TKX IAML 09 03 12.1
comp=N,983nm,0.3s
TKX IAML 09 03 12.1
comp=E,783nm,0.2s
RRX Edison Barstow 1.27 13 P Pn 09 02 53.3 -0.2
baz=193,SNR=35
RRX S Sg 09 03 10.3 -0.4
baz=193
EDW2 Edwards Air Fo 1.35 337 P Pn 09 02 54.4 -0.2
baz=156,SNR=107
EDW2 S Sb 09 03 11.9 -0.5
baz=156
IKP In-Ko-Pah, Jac 1.43 133 P Pn 09 02 55.8 0.0
baz=314,SNR=76
IKP S Sn 09 03 14.6 0.0
baz=314
CBX Cerro Bola 1.44 156 Pn 09 02 55.9 -0.1
HEC Hector,Ludlow 1.46 35 P Pb 09 02 56.6 -0.4
baz=216,SNR=47
HEC S Sg 09 03 15.8 -0.9
baz=216
SWSC Sam W. Stewart 1.47 118 P Pn 09 02 56.0 -0.2
baz=299,SNR=36
SWSC S Sg 09 03 16.8 -0.4
baz=299
RMX La Rumorosa 1.49 134 Pb 09 02 57.6 +0.2
RMX IAML 09 03 21.9
comp=E,397nm,0.4s
OSI Osito Audit: C 1.50 311 P Pn 09 02 56.5 -0.1
baz=130,SNR=52
OSI S Sn 09 03 16.5 +0.3
baz=130
YUH Yuha Desert 1.55 129 Pn 09 02 57.5 +0.1
BC3 Big Chuckawall 1.58 89 P Pn 09 02 58.0 +0.1
baz=270,SNR=8.0
BC3 S Sb 09 03 19.0 -0.2
baz=270
CCAC Calif City Air 1.61 340 Pn 09 02 58.2 +0.1
GSC Goldstone, Bar 1.72 15 Pn 09 02 59.5 -0.2
GSC Goldstone, Bar 1.72 15 P Pn 09 03 00.3 +0.6
baz=195,SNR=107
GSC S Sn 09 03 22.0 +0.3
baz=195
GMRC Granite Mounta 1.81 50 P Pn 09 03 01.1 +0.1
baz=231,SNR=79
GMRC S Sn 09 03 24.8 +0.8
baz=231
LRMC Laurel Mtn Rad 1.86 352 P Pn 09 03 02.2 +0.5
baz=171,SNR=16
LRMC S Sn 09 03 25.6 +0.5
baz=171
CCX Cicese 1.86 162 Pn 09 03 02.0 +0.5
CCX IAML 09 03 33.1
comp=E,346nm,0.5s
IRM Iron Mountain 1.91 74 P Pn 09 03 02.6 +0.4
baz=255,SNR=37
IRM Sb Sg 09 03 30.3 -0.8
baz=255
ARVC Arvin 1.92 321 P Pn 09 03 03.1 +0.6
baz=140,SNR=64
ARVC Sb Sg 09 03 30.5 -1.2
baz=140
ESJX Sierra Juarez 2.01 144 Pn 09 03 05.5 +1.6
ESJX IAML 09 03 32.7
comp=E,255nm,0.2s
ESJX IAML 09 03 36.1
comp=N,224nm,0.6s
BCW Bitter Crk WRg 2.15 308 Pn 09 03 06.6 +1.0
BCW IAML 09 03 39.4
comp=N,343nm,0.5s
TUQ Turquoise Moun 2.15 33 Sb Sg 09 03 37.0 -1.8
baz=214
ISA Isabella, Lake 2.22 336 Pn Pn 09 03 06.7 +0.1
ISA Isabella, Lake 2.22 336 P Pn 09 03 07.1 +0.4
baz=155,SNR=27
ISA Sb Sg 09 03 39.4 -1.8
baz=155
QSM Queen of Sheba 2.35 10 Pn Pn 09 03 08.2 -0.2
QSM IAML 09 03 47.1
comp=E,248nm,0.5s
QSM IAML 09 03 51.0
comp=N,201nm,0.6s
BLYC Blythe 2.36 87 Pn Pn 09 03 08.8 +0.4
BLYC IAML 09 03 45.4
comp=N,164nm,0.9s
BLYC IAML 09 03 48.1
comp=E,229nm,0.6s
PKM Mcpherson Peak 2.39 302 Sb Sb 09 03 43.8 +1.3
baz=120
MPMC Manual Prospec 2.42 357 P Pn 09 03 09.8 +0.4
baz=177,SNR=27
MPMC Sb Sb 09 03 44.6 +1.4
baz=177
SHOC Shoshone, Teco 2.42 21 Sb Sg 09 03 45.9 -1.8
baz=202
NEE2 Needles Airpor 2.53 63 Pb Pb 09 03 16.1 +0.9
baz=244,SNR=18
NEE2 Sb Sg 09 03 48.6 -2.5
baz=244
GWY Greenwater Val 2.60 12 Pn Pn 09 03 12.3 +0.3
GWY IAML 09 03 54.8
comp=N,197nm,0.5s
VES Vestal, Richgr 2.62 327 S Sn 09 03 44.7 +1.0
baz=146
PDMCI Parker Dam,Lak 2.75 75 Sb Sg 09 03 55.5 -2.6
baz=257
FURC Furnace Creek, 2.85 8 Pg Pg 09 03 23.1 -1.3
baz=188,SNR=12
V12A Nelson 2.93 44 Pn Pn 09 03 17.2 +0.8
V12A IAML 09 04 02.5
comp=E,123nm,0.4s
V12A IAML 09 04 07.7
comp=N,81nm,0.7s
WCT Wildcat Mounta 3.20 10 Pn 09 03 20.5 +0.4
WCT IAML 09 04 13.5
comp=E,82nm,0.5s
W13A Hualapai Mount 3.21 62 Pn 09 03 21.6 +1.2
W13A IAML 09 04 12.6
comp=E,65nm,0.5s
W13A IAML 09 04 12.7
comp=N,78nm,0.4s
GRAC Grapevine Rang 3.35 360 Pn 09 03 21.9 -0.2
GRAC IAML 09 04 25.9
comp=E,109nm,0.5s
GRAC Grapevine Rang 3.35 360 P Pn 09 03 23.4 +1.3
baz=180,SNR=7.8
SHPR Sheep Range 3.38 32 Pn 09 03 22.9 +0.3
TPNV Topopah Spring 3.42 15 Pn 09 03 23.8 +0.6
TPNV IAML 09 04 20.7
comp=E,130nm,0.5s
TPNV Topopah Spring 3.42 15 P Pn 09 03 24.4 +1.1
baz=195,SNR=17
Y14A Wickenburg 3.63 84 Pn 09 03 26.1 +0.1
GMN Gold Mountain 3.65 1 Pn 09 03 27.4 +0.9
DSP Deep Springs 3.76 352 Pn 09 03 29.0 +1.4
MZP Montezuma Peak 4.05 360 Pn 09 03 33.9 +1.9
MDPB Devils Postpil 4.23 341 Pn 09 03 36.4 +2.0
TPH Tonopah 4.43 1 Pn 09 03 38.5 +1.4
LHV Little Huntoon 4.70 349 Pn 09 03 42.6 +2.1
LCMT Little Creek M 4.75 44 Pn 09 03 43.0 +1.6
NV11 Mina Array Sit 4.83 352 Pn 09 03 45.0 +2.5
NVAR Mina Array Bea 4.84 351 Pn 09 03 44.4 +1.6
X16A Lo Mia Camp, P 4.97 79 Pn 09 03 45.3 +0.8
U15A North Rim 5.00 55 Pn Pn 09 03 47.3 +2.3
KNB Kanab 5.01 46 Pn Pn 09 03 47.0 +2.0
WUAZ Wupatki 5.27 68 P Pn 09 03 50.9 +2.2
baz=251,SNR=5.7
KVN Kaiserville 5.43 354 Pn 09 03 53.0 +2.1
SPR3 Spring Creek 3 5.88 24 Pn 09 03 57.7 +0.6

CATAC ***11*** *09:12:52.7±0.9, 13°.18N×89°.75W, h20km±7km, ML3.5*
SNET ***11*** *09:12:53.8±0.9, 13°.24N×89°.73W, h40km±14km, ML3.3*
GCG ***11*** *09:12:54.8±0.3, 13°.15N×89°.97W, h49km±126km, MD3.6*
ISC 11 09:12:52.9±1.7, 13°.20N±0°.07×89°.73W±0°.04, h26km±14km, n63, σ0°39/76, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.49**	**54**	*eP*	**Pn**	**09 13 04.0**	**-0.3**
LALI				*eS*	**Sn**	**09 13 11.7**	**-0.2**
LALI	**Alcalda de L**	**0.49**	**54**	*i P*	**Pn**	**09 13 03.8**	**-0.5**
LALI				IAML		09 13 11.9	
comp=Z,1µm,1.0s							
JAYA	**Jayaque - finc**	**0.53**	**31**	*eP*	**Pn**	**09 13 04.7**	**-0.2**
JAYA				*eS*	**Sn**	**09 13 12.6**	**-0.5**
JAYA				IAML		09 13 15.4	
comp=Z,4µm,0.2s							
JAYA	**Jayaque - finc**	**0.53**	**31**	*i P*	**Pn**	**09 13 04.6**	**-0.4**
JAYA				IAML		09 13 15.2	
comp=Z,10µm,1.0s							
CEVE	**Cerro Verde**	**0.63**	**9**	*eP*	**Pn**	**09 13 06.1**	**-0.4**
CEVE				IAML		09 13 18.5	
comp=Z,4µm,0.3s							
CEVE	**Cerro Verde**	**0.63**	**9**	*i P*	**Pn**	**09 13 06.4**	**-0.1**
CEVE				*i S*	**Sn**	**09 13 15.7**	**-0.1**
CEVE				IAML		09 13 18.6	
comp=Z,3µm,1.0s							
ITCA	**Escuela Especi**	**0.64**	**43**	*i P*	**Pn**	**09 13 06.0**	**-0.5**
ITCA				*i S*	**Sn**	**09 13 16.3**	**+0.4**
ITCA				IAML		09 13 19.8	
comp=Z,3µm,1.0s							
PMON	**Piamonte**	**0.65**	**38**	*i P*	**Pn**	**09 13 06.3**	**-0.3**
PMON				IAML		09 13 19.6	
comp=Z,2µm,1.0s							
PANCS	**Alcalda de**	**0.67**	**53**	*i P*	**Pn**	**09 13 07.8**	**+0.9**
PANCS				*i S*	**Sn**	**09 13 16.8**	**+0.2**
PANCS				IAML		09 13 17.6	
comp=Z,4µm,1.0s							
SNJE	**San Jose**	**0.67**	**10**	*eP*	**Pn**	**09 13 06.7**	**-0.3**
CEDA	**San Andres**	**0.68**	**29**	*eP*	**Pb**	**09 13 05.9**	**-0.4**
CEDA	**San Andres**	**0.68**	**29**	*i P*	**Pn**	**09 13 07.1**	**+0.1**
CEDA				IAML		09 13 20.0	
comp=Z,3µm,1.0s							
SNET	**Serv Nac Est T**	**0.68**	**45**	*eP*	**Pb**	**09 13 06.4**	**0.0**
SNET	**Serv Nac Est T**	**0.68**	**45**	*i P*	**Pn**	**09 13 06.8**	**-0.3**
SNET				IAML		09 13 18.9	
comp=Z,2µm,1.0s							
BOQS	**Boqueron**	**0.69**	**39**	*eP*	**Pn**	**09 13 07.1**	**-0.1**
BOQS				*eS*	**Sn**	**09 13 17.5**	**+0.3**
RTR	**El Retiro**	**0.70**	**7**	*eP*	**Pn**	**09 13 07.0**	**-0.4**
NUBE	**Las Nubes**	**0.70**	**356**	*eP*	**Pb**	**09 13 06.7**	**+0.1**
NUBE	**Las Nubes**	**0.70**	**356**	*i P*	**Pb**	**09 13 06.7**	**+0.1**
NUBE				IAML		09 13 18.4	
comp=Z,990nm,1.0s							
LOMA	**Loma Larga**	**0.70**	**51**	*eP*	**Pn**	**09 13 07.1**	**-0.2**
LOMA	**Loma Larga**	**0.70**	**51**	*i P*	**Pn**	**09 13 07.1**	**-0.2**
LOMA				IAML		09 13 19.7	
comp=Z,2µm,1.0s							
UEES	**Universidad Ev**	**0.70**	**43**	*eP*	**Pn**	**09 13 06.9**	**-0.3**
UEES	**Universidad Ev**	**0.70**	**43**	*i P*	**Pn**	**09 13 07.1**	**-0.2**
UEES				IAML		09 13 18.3	
comp=Z,870nm,1.0s							
SEMO	**Seminario San**	**0.70**	**45**	*i P*	**Pn**	**09 13 07.6**	**+0.3**
SEMO				IAML		09 13 23.4	
comp=Z,2µm,1.0s							
PIC2	**El Picacho**	**0.71**	**40**	*eP*	**Pn**	**09 13 07.9**	**+0.4**
UTEC	**Universidad Te**	**0.71**	**46**	*i P*	**Pn**	**09 13 07.4**	**-0.1**
UTEC				*i S*	**Sn**	**09 13 18.5**	**+0.8**
UTEC				IAML		09 13 19.1	
comp=Z,730nm,1.0s							
IGN	**Direccin Gen**	**0.74**	**47**	*i P*	**Pn**	**09 13 07.6**	**-0.3**
IGN				*i S*	**Sn**	**09 13 19.1**	**+0.7**
IGN				IAML		09 13 23.0	
comp=Z,5µm,1.0s							
UDBS	**Universidad Do**	**0.76**	**48**	*i P*	**Pn**	**09 13 08.2**	**+0.2**
UDBS				IAML		09 13 20.3	
comp=Z,1µm,1.0s							
QUEZ	**Alcaldia de Qu**	**0.77**	**35**	*i P*	**Pn**	**09 13 08.3**	**+0.1**
QUEZ				IAML		09 13 27.0	
comp=Z,3µm,1.0s							
LFRS	**El Faro**	**0.77**	**57**	*eP*	**Pn**	**09 13 08.2**	**-0.2**
LFRS				*eS*	**Sn**	**09 13 18.9**	**-0.3**
LOAL	**Lomas de Alarc**	**0.79**	**356**	*i P*	**Pn**	**09 13 09.0**	**+0.5**
LOAL				IAML		09 13 22.3	
comp=Z,2µm,1.0s							
UNIC	**Universidad Ca**	**0.80**	**13**	*i P*	**Pn**	**09 13 08.4**	**-0.2**
UNIC				IAML		09 13 23.4	
comp=Z,300nm,1.0s							
LFU	**La Fuente**	**0.81**	**48**	*eP*	**Pn**	**09 13 08.8**	**+0.1**
LFU				*eS*	**Sn**	**09 13 20.7**	**+0.7**
SJTE	**Alcalda de S**	**0.81**	**60**	*eP*	**Pn**	**09 13 08.6**	**-0.2**
SJTE				IAML		09 13 24.4	
comp=Z,330nm,0.2s							
SJTE	**Alcalda de S**	**0.81**	**60**	*i P*	**Pn**	**09 13 08.7**	**-0.2**
SJTE				IAML		09 13 23.0	
comp=Z,760nm,1.0s							
SLOZ	**Alcaldia de Sa**	**0.82**	**356**	*eP*	**Pn**	**09 13 08.7**	**-0.2**
SLOZ				IAML		09 13 24.6	
comp=Z,271nm,0.4s							
PAVA	**Las Pavas**	**0.92**	**57**	*eP*	**Pb**	**09 13 10.8**	**+0.4**
PAVA	**Las Pavas**	**0.92**	**57**	*i P*	**Pb**	**09 13 11.0**	**+0.6**
PAVA				IAML		09 13 29.3	
comp=Z,1µm,1.0s							
COEG	**Centro de Oper**	**0.93**	**63**	*eP*	**Pb**	**09 13 10.4**	**0.0**
COEG	**Centro de Oper**	**0.93**	**63**	*i P*	**Pb**	**09 13 10.4**	**0.0**
COEG				IAML		09 13 27.5	
comp=Z,910nm,1.0s							
TECO	**Alcaldia de Te**	**0.98**	**70**	*eP*	**Pn**	**09 13 10.7**	**-0.4**
TECO	**Alcaldia de Te**	**0.98**	**70**	*i P*	**Pn**	**09 13 10.8**	**-0.3**
TECO				IAML		09 13 27.6	
comp=Z,450nm,1.0s							
UESV	**Universidad de**	**1.01**	**65**	*i P*	**Pn**	**09 13 11.6**	**+0.1**
UESV				IAML		09 13 28.1	
comp=Z,580nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.09**	**63**	*eP*	**Pb**	**09 13 13.0**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.09**	**63**	*i P*	**Pb**	**09 13 13.2**	**0.0**
SCLA				IAML		09 13 30.9	
comp=Z,230nm,1.0s							
PQSS	**Presa 15 de Se**	**1.21**	**70**	*eP*	**Pn**	**09 13 14.3**	**+0.1**
PQSS				IAML		09 13 32.6	
comp=Z,192nm,0.2s							
PQSS	**Presa 15 de Se**	**1.21**	**70**	*i P*	**Pn**	**09 13 14.6**	**+0.4**
PQSS				IAML		09 13 31.4	
comp=Z,470nm,1.0s							
LLGN	**La Laguna**	**1.22**	**39**	*i P*	**Pb**	**09 13 14.9**	**-0.6**
LLGN				IAML		09 15 22.3	
comp=Z,500nm,1.0s							
TECA	**Tecapa**	**1.23**	**76**	*eP*	**Pn**	**09 13 14.6**	**-0.1**
PACA	**Pacayal**	**1.39**	**79**	*eP*	**Pb**	**09 13 17.7**	**-0.7**
PACA				*eS*	**Sb**	**09 13 35.5**	**-0.4**
PACA				IAML		09 13 41.8	
comp=Z,4µm,0.3s							
PACA	**Pacayal**	**1.39**	**79**	*i P*	**Pb**	**09 13 18.2**	**-0.2**
PACA				IAML		09 13 41.7	
comp=Z,4µm,1.0s							
JUCU	**Jucuarįn**	**1.44**	**88**	*eP*	**Pn**	**09 13 17.2**	**-0.2**
JUCU				IAML		09 13 39.6	
comp=Z,418nm,0.3s							
BLLM	**Bellamira**	**1.47**	**80**	*eP*	**Pn**	**09 13 18.1**	**+0.2**
NBG	**Las Nubes**	**1.50**	**337**	*eP*	**Pb**	**09 13 20.1**	**-0.3**
NBG				*eS*	**Sb**	**09 13 39.6**	**+0.5**
FUG	**Fuego 3**	**1.64**	**319**	*eP*	**Pn**	**09 13 20.5**	**+0.2**
FUG				*eS*	**Sn**	**09 13 40.7**	**-0.1**
LCND	**La Caada**	**1.79**	**86**	*eP*	**Pn**	**09 13 22.5**	**+0.2**
LCND				IAML		09 13 51.6	
comp=Z,244nm,0.3s							
LCND	**La Caada**	**1.79**	**86**	*i P*	**Pn**	**09 13 22.8**	**+0.5**
LCND				IAML		09 13 51.4	
comp=Z,270nm,1.0s							
CNCH	**Conchagua**	**1.85**	**87**	*eP*	**Pn**	**09 13 23.1**	**0.0**
CNCH	**Conchagua**	**1.85**	**87**	*i P*	**Pn**	**09 13 23.4**	**+0.3**
CNCH				IAML		09 13 52.3	
comp=Z,450nm,1.0s							
AMPH	**Amapala**	**2.02**	**87**	*eP*	**Pn**	**09 13 25.4**	**+0.1**
AMPH	**Amapala**	**2.02**	**87**	*i P*	**Pn**	**09 13 26.7**	**+1.4**
STG3	**Santiaguito 3,**	**2.33**	**310**	*eP*	**Pn**	**09 13 29.7**	**-0.2**
COPN	**Copaltepe**	**3.23**	**108**	*i P*	**Pn**	**09 13 41.9**	**-0.1**
COPN				IAML		09 14 30.7	
comp=Z,93nm,1.0s							
LIMN	**Finca el Limon**	**3.28**	**92**	*i P*	**Pn**	**09 13 42.5**	**-0.3**
LIMN				IAML		09 14 29.0	
comp=Z,30nm,1.0s							

SOME ***11*** *09:19:01.8, 42°.22N×80°.62E, h20km*
KRNET ***11*** *09:19:02.1±0.1, 42°.26N×80°.58E, h20km, mb3.5*
NNC ***11*** *09:19:03.7±0.7, 42°.33N×80°.52E, h0km, mb3.7, mpv3.6,*
Error ellipse: s-maj=4.6km s-min=4.1km az=114.0
ISC 11 09:19:06.1±1.6, 42°.40N±0°.06×80°.35E±0°.06, h10km, n62,
σ1§41/101, 19C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.00**	**319**	P	**Pg**	**09 19 21.9**	**-3.5**
SHLS	21nm,0.1s			S	**Sg**	**09 19 36.6**	**-1.9**
217nm,0.1s							
SHLS	**Shalkode**	**1.00**	**319**	*eP*	**Pg**	**09 19 21.9**	**-3.5**
SHLS	21nm,0.1s			*eS*	**Sg**	**09 19 36.6**	**-1.9**
217nm,0.1s							
SHLS	**Shalkode**	**1.00**	**319**	*eP*	**Pg**	**09 19 21.9**	**-3.5**
SHLS	baz=30			*eS*	**Sg**	**09 19 36.6**	**-1.9**
baz=30							
KTMS	**Ketmen**	**1.05**	**360**	P	**Pg**	**09 19 24.4**	**-1.9**

	8.4nm,0.2s							
KTMS				S		Sb	09 19 40.9	+0.6
	24nm,0.1s							
KTMS	**Ketmen**	**1.05**	**360**	*eP*		**Pg**	09 19 24.4	-1.9
	8.4nm,0.2s							
KTMS				*eS*		**Sb**	09 19 40.9	+0.6
	24nm,0.1s							
KTMS	**Ketmen**	**1.05**	**360**	*eP*		**Pg**	09 19 24.4	-1.9
	baz=52							
KTMS				*eS*		**Sb**	09 19 40.9	+0.6
	baz=52							
PDGK	**Podgornoye**	**1.13**	**326**	P		**Pb**	09 19 26.7	-1.1
	2.9nm,0.1s							
PDGK				S		**Sn**	09 19 44.9	+1.2
	27nm,0.2s							
PDGK	**Podgornoye**	**1.13**	**326**	⇑P		**Pb**	09 19 26.5	-1.3
	4.6nm,0.3s							
PDGK				⇑S		**Sn**	09 19 44.4	+0.7
	39nm,0.3s							
UZB	**Uzynbulak**	**1.23**	**308**	P		**Pn**	09 19 28.6	-1.0
	4.7nm,0.1s							
UZB				S		**Sn**	09 19 48.1	+1.7
	35nm,0.2s							
UZB	**Uzynbulak**	**1.23**	**308**	*eP*		**Pn**	09 19 28.6	-1.0
	4.7nm,0.1s							
UZB				*eS*		**Sn**	09 19 48.1	+1.7
	35nm,0.2s							
UZB	**Uzynbulak**	**1.23**	**308**	*eP*		**Pn**	09 19 28.6	-1.0
	baz=8.0							
UZB				*eS*		**Sn**	09 19 48.0	+1.7
	baz=8.0							
PRZ	**Przheval'sk**	**1.45**	**274**	⇑*eP*		**Pn**	09 19 32.2	-0.4
	baz=79							
PRZ				⇑*eS*		**Sg**	09 19 54.4	+1.6
	baz=79							
SATY	**Saty**	**1.58**	**295**	P		**Pb**	09 19 35.2	-0.3
	20nm,0.2s							
SATY				S		**Sg**	09 19 59.5	+2.5
	76nm,0.1s							
SATY	**Saty**	**1.58**	**295**	*eP*		**Pb**	09 19 35.2	-0.3
	20nm,0.2s							
SATY				*eS*		**Sg**	09 19 59.5	+2.5
	76nm,0.1s							
SATY	**Saty**	**1.58**	**295**	*eP*		**Pb**	09 19 35.2	-0.3
	baz=97							
SATY				*eS*		**Sg**	09 19 59.4	+2.5
	baz=97							
ZHN	**Zhinishke**	**1.61**	**299**	P		**Pb**	09 19 35.7	-0.3
	31nm,0.1s							
ZHN				S		**Sg**	09 20 00.4	+2.5
	62nm,0.1s							
ZHN	**Zhinishke**	**1.61**	**299**	*eP*		**Pb**	09 19 35.7	-0.3
	31nm,0.1s							
ZHN				*eS*		**Sg**	09 20 00.3	+2.5
	62nm,0.1s							
ZHN	**Zhinishke**	**1.61**	**299**	*eP*		**Pb**	09 19 35.7	-0.3
	baz=1.0							
ZHN				*eS*		**Sg**	09 20 00.3	+2.5
	baz=1.0							
KPKS	**Kokpek**	**1.62**	**312**	P		**Pb**	09 19 35.9	-0.4
	47nm,0.2s							
KPKS				S		**Sg**	09 20 00.6	+2.2
	221nm,0.2s							
KPKS	**Kokpek**	**1.62**	**312**	*eP*		**Pb**	09 19 35.9	-0.4
	47nm,0.2s							
KPKS				*eS*		**Sg**	09 20 00.6	+2.2
	221nm,0.2s							
KPKS	**Kokpek**	**1.62**	**312**	*eP*		**Pb**	09 19 35.9	-0.4
	baz=12							
KPKS				*eS*		**Sg**	09 20 00.6	+2.2
	baz=12							
KURS	**Kuram**	**1.94**	**305**	Pg		**Pb**	09 19 41.7	+0.2
	22nm,0.3s							
KURS				Lg		Lg	09 20 10.5	
	43nm,0.3s							
KURS	**Kuram**	**1.94**	**305**	*eP*		**Pb**	09 19 41.7	+0.2
	22nm,0.3s							
KURS				*eS*		**Sg**	09 20 10.5	+2.1
	43nm,0.3s							
DJR	**Jarkent**	**1.98**	**348**	Pg		**Pb**	09 19 41.7	-0.5
	8.1nm,0.2s							
DJR				Lg		Lg	09 20 10.4	
	60nm,0.2s							
DJR	**Jarkent**	**1.98**	**348**	*eP*		**Pb**	09 19 41.7	-0.5
	8.1nm,0.2s							
DJR				*eS*		**Sg**	09 20 10.4	+0.8
	60nm,0.2s							
TARG	**Taragay, Kyrgy**	**2.01**	**251**	⇓*eP*		**Pn**	09 19 40.1	-0.4
	baz=57							
TARG				⇓*eS*		**Sb**	09 20 08.0	-0.3
	baz=57							
ANVS	**Anan'yevo**	**2.02**	**282**	⇑*eP*		**Pn**	09 19 41.3	+0.9
	baz=85							
ANVS				⇑*eS*		**Sb**	09 20 09.6	+1.3
	baz=85							
KNOS	**Konyrlen**	**2.14**	**337**	Pg		**Pb**	09 19 44.8	-0.3
	16nm,0.1s							
KNOS				Lg		Lg	09 20 15.8	
	59nm,0.1s							
KDJ	**Kajisay**	**2.37**	**265**	⇓*eP*		**Pn**	09 19 45.6	+0.3
	baz=68							
KDJ				⇓*eS*		**Sb**	09 20 17.2	-1.2
	baz=68							
KOTS	**Kotyrbulak**	**2.53**	**290**	Pg		**Pb**	09 19 52.1	+0.5
	39nm,0.2s							
KOTS				Lg		Lg	09 20 28.4	
	221nm,0.4s							
KOTS	**Kotyrbulak**	**2.53**	**290**	*eP*		**Pb**	09 19 52.1	+0.5
	39nm,0.2s							
KOTS				*eS*		**Sg**	09 20 28.4	+1.1
	221nm,0.4s							
MDOK	**Medeo**	**2.55**	**289**	⇑Pn		**Pn**	09 19 49.7	+2.0
	9.8nm,0.4s							
MDOK				Pg		**Pb**	09 19 51.9	-0.2
	14nm,0.3s							
MDOK				Lg		Lg	09 20 27.9	
	35nm,0.5s							
MDOK				⇑Lg		Lg	09 20 29.1	
	34nm,0.7s							
MDOK	**Medeo**	**2.55**	**289**	*eP*		**Pb**	09 19 51.9	-0.2
	14nm,0.3s							
MDOK				*eS*		**Sg**	09 20 27.9	-0.2
	35nm,0.5s							
ARXS	**Arharly**	**2.59**	**315**	*eP*		**Pb**	09 19 53.0	+0.4
	6.8nm,0.3s							
ARXS				*eS*		**Sg**	09 20 29.7	+0.5
	60nm,0.2s							
TNSS	**Tian-Shan**	**2.59**	**285**	*eP*		**Pb**	09 19 52.6	-0.3
	14nm,0.2s							
TNSS				*eS*		**Sg**	09 20 29.2	-0.1
	23nm,0.2s							
KNDC	**Almaty**	**2.62**	**289**	⇑Pn		**Pn**	09 19 50.5	+1.8
	47nm,0.6s							
KNDC				⇓Lg		Lg	09 20 31.3	
	101nm,0.8s							
IZV	**Izvestkoviy**	**2.83**	**284**	*eP*		**Pb**	09 19 56.6	-0.2
	5.4nm,0.1s							
IZV				*eS*		**Sg**	09 20 36.2	-0.8
	77nm,0.4s							
CHKK	**Chushkaly**	**2.86**	**302**	Pg		**Pb**	09 19 58.4	+1.1
	3.6nm,0.1s							
CHKK				Lg		Lg	09 20 38.9	
	57nm,0.2s							
CHKK	**Chushkaly**	**2.86**	**302**	*eP*		**Pb**	09 19 58.4	+1.1
	3.6nm,0.1s							
CHKK				*eS*		**Sg**	09 20 38.9	+0.9
	57nm,0.2s							
KAPS	**Kapalarasan**	**2.97**	**346**	Pg		**Pb**	09 19 59.6	+0.4
	2.6nm,0.1s							
KAPS				Lg		Lg	09 20 41.2	
	40nm,0.2s							
KAPS	**Kapalarasan**	**2.97**	**346**	*eP*		**Pb**	09 19 59.6	+0.4
	2.6nm,0.1s							
KAPS				*eS*		**Sg**	09 20 41.2	-0.4
	40nm,0.2s							
MTBS	**Maitube**	**2.98**	**286**	*eP*		**Pb**	09 19 59.3	-0.1
	4.8nm,0.2s							
MTBS				*eS*		**Sg**	09 20 40.4	-1.5
	28nm,0.2s							
KTBS	**Karatobe**	**2.99**	**297**	Pg		**Pb**	09 20 00.0	+0.5
	3.8nm,0.2s							
KTBS				Lg		Lg	09 20 42.0	
	113nm,0.3s							
KTBS	**Karatobe**	**2.99**	**297**	*eP*		**Pb**	09 20 00.0	+0.5
	3.8nm,0.2s							
KTBS				*eS*		**Sg**	09 20 42.0	-0.2
	113nm,0.3s							
ULHL	**Ulahol**	**3.05**	**268**	⇑*eP*		**Pn**	09 19 55.4	+0.7
	baz=71							
ULHL				⇑*eS*		**Sn**	09 20 34.1	+2.7
	baz=71							
KUU	**Kurty**	**3.30**	**298**	Pg		**Pb**	09 20 05.2	+0.5
	3.5nm,0.2s							
KUU				Lg		Lg	09 20 50.7	
	24nm,0.3s							
KUU	**Kurty**	**3.30**	**298**	*eP*		**Pb**	09 20 05.2	+0.5
	3.5nm,0.2s							
KUU				*eS*		**Sg**	09 20 50.8	-1.2
	24nm,0.3s							
KST	**Kastek**	**3.30**	**283**	Pg		**Pb**	09 20 04.8	0.0
	7.9nm,0.2s							
KST				Lg		Lg	09 20 50.4	
	28nm,0.3s							
KST	**Kastek**	**3.30**	**283**	*eP*		**Pb**	09 20 04.8	0.0
	7.9nm,0.2s							
KST				*eS*		**Sg**	09 20 50.4	-1.7
	28nm,0.3s							
DGS	**Degeres**	**3.47**	**286**	Pg		**Pb**	09 20 08.4	+0.6
	5.5nm,0.2s							
DGS				Lg		Lg	09 20 56.3	
	30nm,0.4s							
DGS	**Degeres**	**3.47**	**286**	*eP*		**Pb**	09 20 08.4	+0.6
	5.5nm,0.2s							
DGS				*eS*		**Sg**	09 20 56.3	-1.4
	30nm,0.4s							
TKM2	**Tokmak 2**	**3.55**	**280**	⇓Pn		**Pn**	09 20 02.2	+0.7
	5.6nm,0.9s							
TKM2				⇓Lg		Lg	09 20 59.7	
	17nm,0.6s							
TKM2	**Tokmak 2**	**3.55**	**280**	⇑*iP*		**Pn**	09 20 02.5	+1.1
	baz=82							
TKM2				⇑*eS*		**Sn**	09 20 46.3	+2.8
	baz=82							
KRBS	**Karabastau**	**3.67**	**292**	Pg		**Pb**	09 20 11.9	+0.8
	2.7nm,0.2s							
KRBS				Lg		Lg	09 21 02.3	
	13nm,0.2s							
KRBS	**Karabastau**	**3.67**	**292**	*eP*		**Pb**	09 20 11.9	+0.8
	2.7nm,0.2s							
KRBS				*eS*		**Sg**	09 21 02.3	-1.6
	13nm,0.2s							
CHMS	**Chumysh**	**4.17**	**280**	⇑Pn		**Pn**	09 20 09.4	-0.5
	1.6nm,0.8s							
CHMS				⇑Pg		**Pg**	09 20 23.8	-2.3
	3.6nm,0.7s							
CHMS				⇓Lg		Lg	09 21 20.1	
	9.2nm,0.8s							
MAKZ	**Makanchi**	**4.56**	**14**	⇓Pn		**Pn**	09 20 16.5	+1.4
	2.5nm,0.5s							
MAKZ				⇓Lg		Lg	09 21 28.8	
	2.3nm,0.5s							
MK31	**Makanchi Array**	**4.61**	**17**	⇑Pn		**Pn**	09 20 16.8	+1.0
	0.3nm,0.2s,baz=192,slow=14,SNR=42							
MK31				⇑Lg		Lg	09 21 30.4	
	1.4nm,0.4s,baz=197,slow=22,SNR=5.6							
KK31	**Karatay Array**	**7.28**	**279**	⇓Pg		Pg	09 21 19.0	-6.4
	0.8nm,0.7s,baz=88,slow=16,SNR=5.1							
KK31				⇑Lg		Lg	09 23 00.8	
	2.1nm,0.8s,baz=93,slow=26,SNR=6.1							
OTUK	**Ortayu**	**8.12**	**319**	⇓Lg		Lg	09 23 25.0	
	3.3nm,0.9s							
KURBB	**Kurchatov Arra**	**8.32**	**352**	⇑Lg		Lg	09 23 32.2	
	6.1nm,0.8s							
KURK	**Kurchatov**	**8.40**	**352**	⇓Lg		Lg	09 23 33.3	
	5.7nm,1.2s							

IDC ***11*** *09:20:10.8±16.0, 7°.98S×116°.01E, h179km±144km, mb3.3/6, mbtmp3.8/6, Error ellipse: s-maj=167.5km s-min=22.6km az=63.0*
DJA ***11*** *09:20:23.6±1.0, 8°.3S±32°×117°.7E±°, h285km±9km, M3.6/7, MLv3.6/7*
ISC 11 09:20:20.5±0.9,**7°.4S**±0°.1×**116°.87E**±0°.09,**h250**km,**n14**, σ²**43**/16,**mb3.7/6**,**Bali Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
TWSI	**Taliwang, Sumb**	**1.37**	**179**	P		**Pn**	**09**	**21**	**00.8**	**+2.9**
PLAI	**Plampang**	**1.71**	**148**	P		**Pn**	**09**	**21**	**03.9**	**+3.3**
PLAI				S		**S**	**09**	**21**	**35.5**	**+3.4**
JAGI	**Jajag, Banyuwa**	**2.91**	**248**	P		**Pn**	**09**	**21**	**12.4**	**+0.3**
BLJI	**Banyuglugur**	**3.27**	**263**	P		**Pn**	**09**	**21**	**19.1**	**+3.1**
GMJI	**Gumukmas**	**3.51**	**255**	P		**Pn**	**09**	**21**	**19.5**	**+0.8**
BASI	**Baing, Sumba**	**4.64**	**128**	P		**Pn**	**09**	**21**	**32.5**	**+0.5**
EDFI	**Ende, Flores**	**4.97**	**106**	P		**Pn**	**09**	**21**	**39.1**	**+3.0**
SOEI	**Soe**	**7.70**	**109**	P		**Pn**	**09**	**22**	**12.5**	**+2.3**
WRA	**Warramunga Arr**	**21.06**	**128**	P		**P**	**09**	**24**	**43.8**	**-2.0**
	1.5nm,0.5s,baz=302,slow=12,SNR=21									
	1.5nm,0.5s									
ASAR	**Alice Springs**	**23.03**	**137**	P		**P**	**09**	**25**	**02.1**	**-1.9**
	1.7nm,0.6s,baz=309,slow=8.7,SNR=37									
ASAR				PcP		**PcP**	**09**	**28**	**43.1**	**-2.6**
	0.1nm,0.6s,baz=303,slow=1.9,SNR=1.4									
	1.7nm,0.6s									
STKA	**Stephens Creek**	**33.55**	**140**	P		**P**	**09**	**26**	**35.2**	**-2.0**
	1.0nm,0.6s,baz=293,slow=10,SNR=3.2									
	1.0nm,0.6s									
SONM	**Songino Array**	**55.73**	**351**	P		**P**	**09**	**29**	**32.5**	**+1.0**
	0.5nm,0.5s,baz=173,slow=7.8,SNR=5.8									
	0.5nm,0.5s									
KURBB	**Kurchatov Arra**	**66.58**	**334**	P		**P**	**09**	**30**	**43.1**	**-0.8**
	0.3nm,0.5s,baz=151,slow=6.3,SNR=2.0									
	0.3nm,0.5s									
ZALV	**Zalesovo Beam**	**66.78**	**340**	P		**P**	**09**	**30**	**44.1**	**-1.0**
	0.6nm,0.4s,baz=152,slow=4.8,SNR=2.8									
	0.6nm,0.4s									

IDC ***11*** *09:22:13.1±2.1, 7°.33N×83°.33W, h0km, mb3.5/6, mbtmp3.7/8, ML2.3/1, MS3.5/16, Error ellipse: s-maj=64.8km s-min=25.9km az=30.0*
UCR ***11*** *09:22:17.5±0.6, 7°.95N×82°.89W, h5km±12km, MW4.7*
CATAC ***11*** *09:22:20.2±0.6, 8°.08N×82°.94W, h4km±2km, MB4.8, ML4.6*
UPA ***11*** *09:22:20.4±2.1, 8°.14N×82°.94W, h8km±3km, MW4.6*
ISC 11 09:22:18.9±1.0,**8°.00N**±0°.04×**82°.93W**±0°.02,**h15**km±6km, **n166**,σ1°**72**/174,**mb3.6**/7,**MS3.7**/10,**1C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
LIMO3	**Limones**	**0.12**	**31**	⇓*iP*		**Pg**	**09**	**22**	**22.3**	**0.0**
PTPM	**Petroterminale**	**0.21**	**13**	⇓*iP*		**Pg**	**09**	**22**	**23.9**	**+0.2**
PTPM				*i* S		**Sg**	**09**	**22**	**25.8**	**-1.1**
LESP3	**La Esperanza,**	**0.42**	**18**	⇓*iP*		**Pg**	**09**	**22**	**27.1**	**-0.3**
CDITO	**Canoas**	**0.57**	**5**	*eP*		**Pg**	**09**	**22**	**29.6**	**-0.6**
PIRO	**Carate, Puerto**	**0.57**	**315**	*eP*		**Pg**	**09**	**22**	**29.9**	**-0.3**
PIRO	**Carate, Puerto**	**0.57**	**315**	*iP*		**Pg**	**09**	**22**	**29.9**	**-0.3**
PIRO				*i* S		**Sg**	**09**	**22**	**37.1**	**-0.7**
PIRO				IAML			09	22	41.4	
	comp=Z,52μm,1.0s									
PEDE3	**Pedregal, Chir**	**0.63**	**52**	⇓*iP*		**Pg**	**09**	**22**	**30.8**	**-0.4**
DVD	**David**	**0.64**	**47**	⇓*iP*		**Pg**	**09**	**22**	**31.1**	**-0.4**
DVD				*i* S		**Sg**	**09**	**22**	**39.6**	**-0.3**
LOCO3	**Loma Colorada,**	**0.65**	**51**	⇓*iP*		**Pg**	**09**	**22**	**31.3**	**-0.3**
LOCO3				*i* S		**Sb**	**09**	**22**	**40.7**	**0.0**
PTJ1	**Puerto Jimnez**	**0.65**	**325**	*eP*		**Pg**	**09**	**22**	**31.6**	**-0.1**
FITO	**Golfito**	**0.66**	**340**	*eP*		**Pg**	**09**	**22**	**30.7**	**-1.2**
JIME	**Puerto Jimenez**	**0.67**	**323**	*eP*		**Pb**	**09**	**22**	**31.9**	**-0.3**
EDAD	**Golfito**	**0.69**	**340**	*eP*		**Pg**	**09**	**22**	**31.1**	**-1.3**
MLIR3	**Monte Lirio, C**	**0.79**	**7**	⇓*eP*		**Pb**	**09**	**22**	**34.4**	**-0.1**
MLIR3				*i* S		**Sg**	**09**	**22**	**44.4**	**-0.5**
BCO2	**Palmira**	**0.81**	**29**	⇓*iP*		**Pg**	**09**	**22**	**34.2**	**-0.6**
BCO2				*i* S		**Sb**	**09**	**22**	**45.9**	**+0.1**
VITO	**San Vito**	**0.81**	**357**	*eP*		**Pg**	**09**	**22**	**34.1**	**-0.7**
BRU2	**Volcan**	**0.82**	**16**	⇓*iP*		**Pg**	**09**	**22**	**34.3**	**-0.7**
BRU2	**Volcan**	**0.82**	**16**	*eP*		**Pg**	**09**	**22**	**34.2**	**-0.7**
BRU2	**Volcan**	**0.82**	**16**	*iP*		**Pg**	**09**	**22**	**34.2**	**-0.7**
BRU2				*i* S		**Sb**	**09**	**22**	**46.2**	**+0.2**
BRU2				IAML			09	22	52.7	
	comp=Z,17μm,1.0s									
BC3P	**Paso Ancho**	**0.87**	**21**	⇓*iP*		**Pg**	**09**	**22**	**34.9**	**-0.9**
BC3P				*i* S		**Sb**	**09**	**22**	**47.5**	**+0.1**
LNBQ3	**Los Naranjos,**	**0.92**	**31**	⇓*iP*		**Pb**	**09**	**22**	**35.4**	**-1.3**
LNBQ3				*i* S		**Sg**	**09**	**22**	**48.8**	**-0.1**
PLAN	**Los Planes de**	**1.00**	**312**	*iP*		**Pb**	**09**	**22**	**37.0**	**-1.0**
PLAN				*i* S		**Sb**	**09**	**22**	**50.9**	**-0.1**
PLAN				IAML			09	22	55.8	
	comp=Z,28μm,1.0s									
POTG	**Potrero Grande**	**1.06**	**350**	*eP*		**Pb**	**09**	**22**	**38.3**	**-0.8**
POTG	**Potrero Grande**	**1.06**	**350**	*iP*		**Pb**	**09**	**22**	**38.4**	**-0.7**
POTG				*i* S		**Sg**	**09**	**22**	**53.2**	**-0.2**
POTG				IAML			09	22	59.2	
	comp=Z,26μm,1.0s									

EDPN	**Palmar Norte**	**1.09**	**331**	*eP*		**Pb**	**09**	**22** **38.4**	**-1.1**
NANC3	**Nancito, Chiri**	**1.21**	**78**	⇓*eP*		**Pn**	**09**	**22** **40.3**	**-1.0**
EDBA	**Buenos Aires**	**1.21**	**343**	*eP*		**Pn**	**09**	**22** **40.8**	**-0.5**
CHGR2	**Aguacate**	**1.21**	**40**	*eP*		**Pn**	**09**	**22** **40.4**	**-0.9**
CHGR2				*i* S		**Sb**	**09**	**22** **56.4**	**-0.6**
BURE	**Buenos Aires**	**1.23**	**341**	*eP*		**Pn**	**09**	**22** **41.1**	**-0.6**
DRK0	**Durika**	**1.29**	**346**	*eP*		**Pn**	**09**	**22** **41.7**	**-1.0**
OCHAL	**Ojochal**	**1.30**	**327**	*iP*		**Pb**	**09**	**22** **43.3**	**+0.2**
OCHAL				*i* S		**Sg**	**09**	**23** **00.3**	**-0.7**
OCHAL				IAML			09	23	03.7	
	comp=Z,98nm,1.0s									
CNI2	**El Empalme, Bo**	**1.48**	**18**	*iP*		**Pn**	**09**	**22** **45.2**	**+0.1**
PEZE	**Perez Zeledon,**	**1.56**	**332**	*eP*		**Pn**	**09**	**22** **45.8**	**-0.4**
PEZE	**Perez Zeledon,**	**1.56**	**332**	*iP*		**Pn**	**09**	**22** **46.1**	**-0.2**
PEZE				*i* S		**Sb**	**09**	**23** **07.6**	**+0.3**
PEZE				IAML			09	23	11.6	
	comp=Z,4μm,1.0s									
GMAL	**Guarumal, Vera**	**1.69**	**98**	*eP*		**Pn**	**09**	**22** **47.5**	**-0.5**
GMAL				*i* S		**Sb**	**09**	**23** **12.2**	**+1.3**
GMAL	**Guarumal, Vera**	**1.69**	**98**	*eP*		**Pn**	**09**	**22** **43.8**	**-4.2**
GMAL				*eS*		**Sb**	**09**	**23** **11.4**	**+0.5**
GMAL				*i*			09	23	22.7	
	comp=Z,840nm,0.8s									
MESA3	**La Mesa, Verag**	**1.73**	**85**	⇓*iP*		**Pn**	**09**	**22** **49.1**	**+0.6**
MESA3				*i* S		**Sb**	**09**	**23** **12.9**	**+1.0**
CDM	**Cerro de Muert**	**1.75**	**332**	*eP*		**Pn**	**09**	**22** **49.0**	**-0.1**
CDM	**Cerro de Muert**	**1.75**	**332**	*iP*		**Pn**	**09**	**22** **49.1**	**-0.1**
CDM				*i* S		**Sb**	**09**	**23** **12.6**	**-0.5**
CDM				IAML			09	23	20.1	
	comp=Z,3μm,1.0s									
SAFE3	**Santa Fe, Vera**	**1.90**	**74**	⇓*eP*		**Pb**	**09**	**22** **52.7**	**-0.6**
STIA3	**Santiago, Vera**	**1.94**	**87**	*eP*		**Pb**	**09**	**22** **53.8**	**-0.1**
MARI3	**Mariato, Verag**	**1.95**	**100**	⇓*eP*		**Pb**	**09**	**22** **53.6**	**-0.6**
RIMA	**Rio Macho**	**1.98**	**332**	*eP*		**Pn**	**09**	**22** **52.3**	**0.0**
RIMA	**Rio Macho**	**1.98**	**332**	*iP*		**Pn**	**09**	**22** **52.2**	**0.0**
RIMA				IAML			09	23	23.7	
	comp=Z,2μm,1.0s									
LCR2	**La Lucha 2**	**2.03**	**328**	*eP*		**Pn**	**09**	**22** **53.2**	**+0.4**
LCR2	**La Lucha 2**	**2.03**	**328**	*iP*		**Pn**	**09**	**22** **53.6**	**+0.7**
LCR2				IAML			09	23	23.9	
	comp=Z,5μm,1.0s									
CALO3	**Calobre, Verag**	**2.09**	**81**	⇓*eP*		**Pn**	**09**	**22** **54.4**	**+1.0**
CALO3				*i* S		**Sb**	**09**	**23** **23.4**	**+1.1**
VTCV	**VTCV, Calle Va**	**2.12**	**338**	*iP*		**Pn**	**09**	**22** **55.1**	**+1.0**
VTCV				*i* S		**Sn**	**09**	**23** **21.6**	**+1.2**
VTCV				IAML			09	23	28.4	
	comp=Z,6μm,1.0s									
RAFA	**San Farael, Vo**	**2.13**	**336**	*eP*		**Pn**	**09**	**22** **54.9**	**+0.5**
OCM	**Ochomogo**	**2.14**	**332**	*iP*		**Pn**	**09**	**22** **55.0**	**+0.6**
OCM				IAML			09	23	27.8	
	comp=Z,2μm,1.0s									
CACAO	**El Cacao, Vera**	**2.15**	**108**	*eP*		**Pn**	**09**	**22** **55.0**	**+0.8**
CACAO	**El Cacao, Vera**	**2.15**	**108**	*eP*		**Pn**	**09**	**22** **55.7**	**+1.5**
CACAO				*eS*		**Sb**	**09**	**23** **23.0**	**-1.0**
IRES	**Siquirres**	**2.16**	**345**	*eP*		**Pn**	**09**	**22** **55.9**	**+1.5**
HAYA	**Volcan Irazu**	**2.17**	**335**	*iP*		**Pn**	**09**	**22** **55.9**	**+1.0**
HAYA				IAML			09	23	33.7	
	comp=Z,5μm,1.0s									
VTRT	**Volcan Turrial**	**2.17**	**337**	*iP*		**Pn**	**09**	**22** **56.0**	**+1.2**
VTRT				IAML			09	23	37.3	
	comp=Z,7μm,1.0s									
VIRE	**VIRE**	**2.18**	**334**	*iP*		**Pn**	**09**	**22** **55.7**	**+0.7**
VIRE				*i* S		**Sn**	**09**	**23** **22.6**	**+0.7**
VIRE				IAML			09	23	28.4	
	comp=Z,6μm,1.0s									
AMPA	**Desamparados**	**2.19**	**329**	*eP*		**Pn**	**09**	**22** **55.8**	**+0.8**
CRIS3	**El Cristo, Coc**	**2.30**	**84**	*eP*		**Pb**	**09**	**22** **58.7**	**-1.5**
HDC3	**Heredia 3**	**2.31**	**330**	*iP*		**Pn**	**09**	**22** **57.9**	**+1.3**
HDC3				IAML			09	23	36.0	
	comp=Z,4μm,1.0s									
HDC	**Heredia**	**2.31**	**330**	*iP*		**Pn**	**09**	**22** **57.8**	**+1.2**
HDC				*i* S		**Sn**	**09**	**23** **26.2**	**+1.4**
HDC				IAML			09	23	36.1	
	comp=Z,4μm,1.0s									
JACO	**JACO, Garabito**	**2.38**	**314**	*iP*		**Pb**	**09**	**23** **01.8**	**+0.3**
JACO				IAML			09	23	36.6	
	comp=Z,2μm,1.0s									
CHIT3	**Chitre**	**2.48**	**91**	*eP*		**Pb**	**09**	**23** **01.7**	**-1.5**
RIFO	**Rio Frio, Sara**	**2.50**	**337**	*iP*		**Pb**	**09**	**23** **01.3**	**-2.3**
RIFO				IAML			09	23	55.1	
	comp=Z,3μm,1.0s									
PNME	**Pen

COPN Copaltepe 5.50 319 *i* P **Pn 09 23 41.6 +1.2**
COPN Copaltepe 5.50 319 *i* P **Pn 09 23 41.6 +1.2**
COPN IAML 09 24 04.0
comp=Z,200nm,1.0s
MATN Matagalpa 5.72 329 *i* P **Pn 09 23 44.5 +1.0**
MATN IVmB_BB 09 24 37.7
comp=Z,880nm,1.0s
MATN IAML 09 25 35.8
comp=Z,65nm,1.0s
MATN Matagalpa 5.72 329 *i* P Pn 09 23 49.3 +5.8
MATN IAML 09 25 35.8
comp=Z,65nm,1.0s
SOLC Bahia Solano 5.75 107 *e*P Pn 09 23 37.6 -6.2
MACN El Madrono 5.77 321 *i* P **Pn 09 23 47.1 +3.0**
MACN El Madrono 5.77 321 *i* P **Pn 09 23 47.1 +3.0**
MACN IAML 09 23 52.5
comp=Z,76nm,1.0s
LIMN Finca el Limon 6.06 326 *i* P **Pn 09 23 49.9 +1.7**
LIMN IAML 09 23 58.7
comp=Z,99nm,1.0s
LIMN Finca el Limon 6.06 326 *i* P **Pn 09 23 50.1 +1.9**
LIMN IAML 09 23 58.7
comp=Z,99nm,1.0s
CRIN San Cristobal 6.19 319 *e*P **Pn 09 23 52.6 +2.7**
APAC Apartado, Choc 6.29 90 *e*P Pn 09 23 56.6 +5.4
CSGN Cosiguina Volc 6.72 318 *i* P **Pn 09 23 59.4 +2.1**
CSGN Cosiguina Volc 6.72 318 *i* P **Pn 09 23 59.4 +2.1**
CSGN IAML 09 24 03.0
comp=Z,410nm,1.0s
DBBC Dabeiba 6.73 98 *e*P **Pn 09 24 00.8 +3.5**
AMPH Amapala 7.02 319 *i* P **Pn 09 24 04.2 +3.0**
YUSH Yuscaran 7.06 327 *i* P **Pn 09 24 05.1 +3.2**
CBOC Ciudad Bolivar 7.18 107 *e*P **Pn 09 24 02.2 -1.4**
LCND La Caada 7.19 318 *i* P **Pn 09 24 06.3 +2.8**
LCND La Caada 7.19 318 *i* P **Pn 09 24 06.3 +2.8**
LCND IAML 09 25 32.0
comp=Z,44nm,1.0s
PLMC San Jos del P 7.28 115 *e*P **Pn 09 24 05.5 +0.6**
UREC San Jos de Ur 7.33 91 *e*P **Pn 09 24 07.9 +2.4**
TGUH Tegucigalpa,Un 7.38 325 *e*P **Pn 09 24 08.8 +2.5**
YOTC Yotoco, Valle 7.66 121 *e*P **Pn 09 24 07.5 -2.7**
JAMC Jamundi, Valle 7.83 127 *e*P **Pn 09 24 14.0 +1.5**
SJCC San Jacinto, C 7.88 76 *e*P **Pn 09 24 13.7 +0.5**
GUY2C Guyana, Caldas 8.00 110 *e*P **Pn 09 24 18.3 +3.2**
SCLA Alcaldia de Sa 8.04 315 *i* P **Pn 09 24 18.1 +2.8**
SCLA Alcaldia de Sa 8.04 315 *i* P **Pn 09 24 18.1 +2.8**
SCLA IAML 09 24 25.8
comp=Z,51nm,1.0s
SJTE Alcalda de S 8.17 314 *i* P **Pn 09 24 19.8 +2.6**
SJTE IAML 09 24 23.1
comp=Z,57nm,1.0s
BBAC Balboa, Cauca 8.20 136 *e*P **Pn 09 24 21.3 +3.6**
POPC Popayan, Colom 8.25 131 *e*P Pn 09 24 23.4 +5.0
UDBS Universidad Do 8.35 313 *i* P Pn 09 24 13.4 -6.2
PMON Piamonte 8.46 313 *i* P **Pn 09 24 25.0 +3.8**
PMON IAML 09 24 25.1
comp=Z,110nm,1.0s
JAYA Jayaque - finc 8.52 312 *i* P **Pn 09 24 24.9 +2.9**
JAYA IAML 09 24 47.5
comp=Z,270nm,1.0s
PTBC PUERTO BERRIO, 8.53 99 *e*P Pn 09 24 29.0 +7.1
ORTC Ortega, Tolima 8.65 118 *e*P Pn 09 24 29.6 +5.9
GCUF Volcan Galeras 8.73 140 *e*P **Pn 09 24 26.3 +1.1**
SPBC San Pablo de B 9.09 104 *e*P **Pn 09 24 31.0 +1.2**
VILC Villavicencio, 9.96 112 *e*P **Pn 09 24 45.3 +3.6**
SDV Santo Domingo 12.19 85 Pn **Pn 09 25 16.1 +3.7**
comp=Z,0.2nm,0.3s,baz=317,slow=14,SNR=3.9
SDV LR LR 09 30 39.9
comp=Z,144nm,19.4s,baz=258,slow=40
comp=Z,2.3nm,0.6s
TEIG Tepich 13.21 337 LR LR 09 30 31.7
comp=Z,1um,18.6s,baz=259,slow=36
CMIG Matias Romero 14.75 309 Pn **Pn 09 25 49.4 +2.2**
comp=Z,0.4nm,0.3s,baz=104,slow=9.7,SNR=10.0
ATAH Atahualpa 15.70 163 LR LR 09 31 23.0
comp=Z,208nm,19.7s,baz=348,slow=36
PCRV Puerto La Cruz 18.19 82 LR LR 09 34 53.7
comp=Z,197nm,22.0s,slow=41
SJG San Juan 19.17 57 LR LR 09 33 34.6
comp=Z,92nm,19.2s,baz=192,slow=34
NNA Nana 20.76 163 P Pn 09 27 02.2 +0.3
comp=Z,18nm,0.8s,baz=336,slow=7.5,SNR=6.0
SAML Samuel 25.89 130 *e*P **P 09 27 51.7 +1.2**
LVC Limon Verde 33.38 156 LR LR 09 41 50.3
comp=Z,27nm,18.6s,baz=320,slow=36
SADO Sadowa 36.78 5 LR LR 09 44 02.4
comp=Z,88nm,18.6s,baz=329,slow=35
PDAR Pinedale Array 41.80 330 P **P 09 30 07.5 -0.8**
comp=Z,0.2nm,0.5s,baz=105,slow=7.4,SNR=1.6
comp=Z,0.2nm,0.5s
RPN Rapa Nui 43.29 215 LR LR 09 43 43.3
comp=Z,80nm,21.4s,baz=54,slow=30
ULM Lac du Bonnet 43.48 348 P **P 09 30 21.1 -0.4**
comp=Z,1.5nm,0.7s,baz=150,slow=5.5,SNR=2.9
comp=Z,1.5nm,0.7s
NVAR Mina Array Bea 43.96 319 P **P 09 30 25.4 -0.5**
comp=Z,0.6nm,0.7s,baz=137,slow=8.3,SNR=4.6
comp=Z,0.6nm,0.7s
SCHQ Schefferville 48.45 12 LR LR 09 53 16.7
comp=Z,38nm,18.1s,baz=192,slow=38
FRB Frobisher Bay 56.60 8 LR LR 09 57 07.9
comp=Z,67nm,18.5s,baz=196,slow=36
YKA Yellowknife Ar 59.09 343 P **P 09 32 19.3 +0.9**
comp=Z,0.3nm,0.7s,baz=132,slow=7.5,SNR=7.5
comp=Z,0.3nm,0.7s
ILAR Eielson Array 71.87 336 P **P 09 33 41.1 0.0**
comp=Z,0.4nm,0.8s,baz=91,slow=4.8,SNR=3.1
comp=Z,0.4nm,0.8s
ESDC Sonseca Array 76.45 51 P **P 09 34 09.7 +1.3**
comp=Z,0.6nm,0.7s,baz=273,slow=5.9,SNR=5.7
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 83.01 78 P **P 09 34 43.3 -1.1**
comp=Z,0.6nm,0.7s,baz=295,slow=4.0,SNR=1.7
SPITS Spitsbergen Ar 84.13 12 LR LR 10 14 40.9
comp=Z,40nm,18.3s,baz=199,slow=37
GERES GERESS Array B 86.38 41 LR LR 10 10 17.3
comp=Z,28nm,18.8s,baz=287,slow=32
VRAC Vranov 90.15 40 LR LR 10 14 41.1
comp=Z,49nm,19.0s,baz=332,slow=35
FINES FINESS Array B 91.93 27 LR LR 10 18 05.2
comp=Z,45nm,18.2s,baz=275,slow=36
TIXI Tiksi 97.79 350 LR LR 10 24 33.8
comp=Z,19nm,18.1s,baz=14,slow=38
ASAR Alice Springs 141.45 242 PKP **PKPdf 09 41 46.4 -4.0**
comp=Z,0.5nm,0.7s,baz=135,slow=3.6,SNR=7.5
WRA Warramunga Arr 142.04 248 PKP **PKPdf 09 41 45.9 -5.5**
comp=Z,0.7nm,0.8s,baz=97,slow=3.0,SNR=3.5
CMAR Chiang Mai Arr 153.65 356 PKPbc **PKPbc 09 42 15.2 -3.0**
comp=Z,2.3nm,0.3s,baz=27,slow=3.2,SNR=4.7

NNC ***11*** *09:28:09.1±0.4, 50.02N×78.90E, h0km, mb2.9, mpv2.4, Error ellipse: s-maj=11.0km s-min=2.0km az=66.0, Suspected Mining explosion.*
IDC ***11*** *09:28:11.3±1.0, 50.08N×78.80E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=11.4km s-min=6.2km az=62.0*
ISC 11 09:28:10.7±1.1, 50.01N±0.06×78.7E±0.1, h0km, n17, σ0s84/28, 6C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**349**	P		**Pg**	**09 28 21.2**	**-0.6**
KUR07				S		**Sg**	**09 28 30.0**	**+0.6**
KUR06	**Kurchatov Arra**	**0.60**	**349**	P		**Pg**	**09 28 21.6**	**-0.6**
KUR06				S		**Sg**	**09 28 31.0**	**+1.0**
KUR14	**Kurchatov Arra**	**0.61**	**354**	P		**Pg**	**09 28 21.6**	**-0.7**
KUR14				S		**Sg**	**09 28 30.3**	**+0.1**
KUR15	**Kurchatov Arra**	**0.61**	**352**	P		**Pg**	**09 28 21.6**	**-0.9**
KUR15				S		**Sg**	**09 28 30.9**	**+0.5**
KURBB	**Kurchatov Arra**	**0.62**	**350**	⇓P		**Pg**	**09 28 21.7**	**-0.9**
	6.9nm,0.3s							
KURBB				⇑S		**Sg**	**09 28 31.3**	**+0.7**
	60nm,0.7s							
KURBB	**Kurchatov Arra**	**0.62**	**350**	Pg		**Pg**	**09 28 21.9**	**-0.7**
	0.9nm,0.3s,baz=164,slow=17,SNR=80							
KURBB				Lg		Lg	09 28 31.5	
	1.1nm,0.3s,baz=160,slow=32,SNR=14							
KUR16	**Kurchatov Arra**	**0.63**	**348**	P		**Pg**	**09 28 22.0**	**-0.7**
KUR16				S		**Sg**	**09 28 31.3**	**+0.4**
KUR17	**Kurchatov Arra**	**0.64**	**347**	⇑P		**Pg**	**09 28 22.3**	**-0.6**
	1.2nm,0.3s							
KUR17				⇑S		**Sg**	**09 28 31.6**	**+0.4**
	2.6nm,0.4s							
KUR05	**Kurchatov Arra**	**0.64**	**351**	P		**Pg**	**09 28 22.3**	**-0.7**
KUR05				S		**Sg**	**09 28 31.6**	**+0.3**
KUR04	**Kurchatov Arra**	**0.66**	**351**	P		**Pg**	**09 28 22.5**	**-0.8**
KUR04				S		**Sg**	**09 28 32.4**	**+0.5**
KURK	**Kurchatov**	**0.70**	**356**	⇓P		**Pg**	**09 28 22.6**	**-1.6**
	2.2nm,0.3s							
KURK				⇑S		**Sg**	**09 28 33.3**	**-0.1**
	8.0nm,0.5s							
MAKZ	**Makanchi**	**3.88**	**144**	⇓Lg		Lg	09 30 09.9	
	2.5nm,0.7s							
MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn		**Pn**	**09 29 12.2**	**-1.2**
	baz=320,slow=10.0,SNR=11							
MK31				⇓Pg		**Pb**	**09 29 21.5**	**-0.8**
	0.5nm,0.5s,baz=324,slow=14,SNR=9.7							
MK31				⇑Lg		Lg	09 30 14.8	
	1.2nm,0.5s,baz=324,slow=26,SNR=8.5							
MKAR	**Makanchi Array**	**4.01**	**142**	Pn		**Pn**	**09 29 14.0**	**+0.6**
	0.1nm,0.3s,baz=321,slow=10,SNR=6.7							
MKAR				Pg		**Pb**	**09 29 22.0**	**-0.2**
	0.3nm,0.3s,baz=321,slow=14,SNR=13							
MKAR				Sn		**Sn**	**09 30 03.2**	**+2.1**
	0.2nm,0.3s,baz=338,slow=23,SNR=2.7							
MKAR				Lg		Lg	09 30 16.6	
	0.5nm,0.3s,baz=329,slow=24,SNR=11							
	0.2nm,0.4s							
I46RU	**ZALESOVO INFRA**	**5.46**	**41**	I		I	09 58 10.0	
	baz=225,slow=325,SNR=1.3							
ZALV	**Zalesovo Beam**	**5.46**	**41**	Pn		**Pn**	**09 29 33.7**	**+0.4**
	0.3nm,0.3s,baz=230,slow=13,SNR=3.8							
	0.7nm,0.3s							
BVAR	**Borovoye Array**	**6.00**	**303**	Sn		**Sn**	**09 30 50.5**	**+0.5**
	baz=116,slow=26,SNR=5.9							

NIED ***11*** *09:32:46.3, 43.79N×147.85E, h0km, MW3.5, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr1.15; Mθθ-0.46; Mφφ-0.68; Mrθ0.91; Mθφ-0.77; Mφr0.94; Fault plane solution: M₀1.81000×10¹⁴ NP1:φs44.00000°, δ68.00000°, λ92.00000°. NP2:φs217.00000°, δ22.00000°, λ84.00000°.*
JMA ***11*** *09:32:46.3±0.4, 44.2N×142.8E±, h0km, MV3.5/29, E OFF HOKKAIDO*
SKHL ***11*** *09:32:47.9±0.2, 43.90N×148.10E, h31km±1km, mb4.3/3*
ISC 11 09:32:45.6±3.4, 43.9N±0.1×148.1E±0.1, h12km±16km, n14, σ1s22/22, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.89**	**266**	*i* P		**Pb**	**09 33 02.9**	**0.0**
SHO						AMB	09 33 05.2	
	50nm,0.1s							
SHO				*e*S		**Sg**	**09 33 14.2**	**-0.2**
SHO				A		A	09 33 15.2	
	380nm,0.2s							
SHO				A		A	09 33 15.2	
	650nm,0.2s							
KUR	**Kuril'sk**	**1.31**	**354**	*e*P		**Pn**	**09 33 09.9**	**+0.3**
KUR						AMB	09 33 11.4	
	150nm,0.4s							
KUR				*i* S		**Sn**	**09 33 26.3**	**-0.7**
KUR				A		A	09 33 27.3	
	250nm,0.4s							
KUR				A		A	09 33 27.3	
	510nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.59**	**274**	*e*P		**Pn**	**09 33 13.7**	**+0.2**
YUK						AMB	09 33 14.7	
	100nm,0.3s							
YUK				*e*S		**Sn**	**09 33 33.0**	**-0.9**
YUK				A		A	09 33 38.4	
	270nm,0.4s							
YUK				A		A	09 33 38.4	
	260nm,0.4s							
NEM2	**Nemuro 2**	**1.77**	**252**	*e*P		**Pn**	**09 33 15.8**	**-0.3**
NEM2				*e*S		**Sn**	**09 33 37.3**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.78**	**252**	*e*P		**Pn**	**09 33 16.0**	**-0.2**
NMR				*e*S		**Sn**	**09 33 37.4**	**-1.3**
JRA	**Rausu**	**2.12**	**271**	*e*P		**Pn**	**09 33 21.8**	**+0.9**
JRA				*e*S		**Sb**	**09 33 48.5**	**-1.7**
JNSB	**Nemuroshibetsu**	**2.21**	**267**	*e*P		**Pn**	**09 33 22.6**	**+0.5**
JKHN	**Kushirohamanak**	**2.27**	**249**	*e*P		**Pn**	**09 33 23.5**	**+0.6**
JNK	**Nakash**	**2.44**	**263**	*e*P		**Pn**	**09 33 25.5**	**+0.2**
AKK	**Akkeshi**	**2.51**	**250**	*e*P		**Pn**	**09 33 27.0**	**+0.8**
JAK	**Akkeshi**	**2.62**	**250**	*e*P		**Pn**	**09 33 27.5**	**-0.1**
JTKR	**Abashiri--Toko**	**3.00**	**272**	*e*P		**Pn**	**09 33 34.9**	**+2.0**
JTKR				*e*S		**Sn**	**09 34 10.7**	**+2.1**
JAR	**Ashorobuto**	**3.18**	**260**	*e*P		**Pn**	**09 33 37.8**	**+2.5**
JAR				*e*S		**Sn**	**09 34 13.9**	**+0.8**
JOB	**Onbets**	**3.25**	**253**	*e*P		**Pn**	**09 33 37.7**	**+1.5**

TAP ***11*** *09:54:13.9, 24.24N×121.76E, h10km, ML3.3, B*
JMA ***11*** *09:54:14.2±0.1, 24.2N±0.4×121.7E±0.7, h11km±1km, TAIWAN REGION*
ISC 11 09:54:13.8±0.9, 24.22N±0.02×121.79E±0.02, h9km±6km, n101, σ0s56/156, 6C-14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**335**	⇑*i*P		**Pg**	**09 54 16.3**	**0.0**
	baz=353							
EHP				*i* S		**Sg**	**09 54 18.1**	**+0.1**
	baz=353							
EAHA	**Aohua**	**0.12**	**338**	⇑*i*P		**Pg**	**09 54 16.6**	**+0.1**
	baz=349							
EAHA				S		**Sg**	**09 54 18.3**	**-0.1**
	baz=349							
ETL	**Fush Village**	**0.16**	**249**	P		**Pg**	**09 54 17.5**	**+0.2**
	baz=236							
ETL				*e*S		**Sg**	**09 54 19.9**	**+0.3**
	baz=236							
NACB	**Ninganchiao**	**0.18**	**256**	⇓*i*P		**Pg**	**09 54 17.6**	**+0.1**
	baz=238							
NACB				*i* S		**Sg**	**09 54 20.1**	**0.0**
	baz=238							
ENA	**Nanau**	**0.21**	**348**	⇑P		**Pg**	**09 54 18.2**	**0.0**
	baz=357							
ENA				S		**Sg**	**09 54 21.0**	**-0.1**
	baz=357							
TWD	**Chiawan**	**0.22**	**232**	⇓*i*P		**Pg**	**09 54 18.5**	**+0.2**
	baz=221							
TWD				*e*S		**Sg**	**09 54 21.6**	**+0.3**
	baz=221							
EWUT	**Wuta**	**0.23**	**358**	⇓P		**Pg**	**09 54 18.5**	**+0.1**
	baz=5.0							
EWUT				S		**Sg**	**09 54 21.5**	**0.0**
	baz=5.0							
ETLH	**Xiulin Townshi**	**0.28**	**268**	⇓P		**Pg**	**09 54 19.4**	**0.0**
	baz=262							
ETLH				*e*S		**Sg**	**09 54 23.3**	**+0.2**
	baz=262							
HWA	**Hwalien**	**0.29**	**215**	*e*P		**Pb**	**09 54 20.6**	**-0.6**
	baz=215							
ESAO	**Su ao**	**0.36**	**8**	⇓P		**Pg**	**09 54 20.9**	**0.0**
	baz=13							
ESAO				*e*S		**Sg**	**09 54 25.8**	**+0.1**
	baz=13							
ETM	**Tongmen**	**0.37**	**227**	⇓P		**Pg**	**09 54 21.1**	**0.0**
	baz=214							
ETM				*e*S		**Sg**	**09 54 26.6**	**+0.6**
	baz=214							
TWC	**Suao**	**0.39**	**8**	⇓*i*P		**Pg**	**09 54 21.6**	**+0.1**
	baz=6.0							
TWC				*e*S		**Sg**	**09 54 27.1**	**+0.4**
	baz=6.0							
LXIB	**Xiulin Townshi**	**0.40**	**240**	⇓*i*P		**Pg**	**09 54 21.4**	**-0.2**
	baz=235							
LXIB				*e*S		**Sg**	**09 54 27.4**	**+0.6**
	baz=235							
LATG	**Datong**	**0.40**	**323**	⇑*i*P		**Pg**	**09 54 21.6**	**0.0**
	baz=324							
LATG				*e*S		**Sg**	**09 54 27.0**	**+0.1**
	baz=324							
NDS	**Dongshan**	**0.42**	**351**	*i* P		**Pg**	**09 54 22.2**	**+0.2**
	baz=354							
NDS				S		**Sg**	**09 54 27.6**	**+0.1**
	baz=354							
NNSB	**Datong**	**0.42**	**300**	⇓*i*P		**Pg**	**09 54 22.2**	**+0.1**
	baz=298							
NNSB				S		**Sg**	**09 54 27.3**	**-0.4**
	baz=298							
NNS	**Nan Shan**	**0.44**	**300**	⇓P		**Pg**	**09 54 22.4**	**0.0**
	baz=299							
NNS				S		**Sg**	**09 54 27.7**	**-0.5**
	baz=299							
NDT	**Datong Townshi**	**0.46**	**327**	⇑P		**Pg**	**09 54 23.0**	**+0.3**
	baz=328							
NDT				*e*S		**Sg**	**09 54 28.8**	**+0.1**
	baz=328							
ENTT	**Nioudou**	**0.47**	**334**	⇑*i*P		**Pg**	**09 54 23.0**	**+0.1**
	baz=337							
ENTT				S		**Sg**	**09 54 29.1**	**0.0**
	baz=337							
SHUL	**Shoufeng**	**0.48**	**206**	*e*P		**Pb**	**09 54 24.5**	**+0.1**
	baz=208							
SHUL				*e*S		**Sb**	**09 54 31.9**	**+0.4**
	baz=208							
WHF	**Hehuan Shan**	**0.48**	**261**	*e*P		**Pg**	**09 54 23.4**	**+0.1**
	baz=258							
WHF				*e*S		**Sg**	**09 54 29.7**	**0.0**
	baz=258							
EOS3	**EOS3**	**0.49**	**82**	*e*P		**Pb**	**09 54 25.1**	**+0.7**
	baz=84							
FUSS	**Fushou**	**0.50**	**273**	*e*P		**Pg**	**09 54 23.8**	**+0.3**
	baz=271							
FUSS				*e*S		**Sg**	**09 54 29.9**	**-0.1**
	baz=271							
TWE	**Neicheng**	**0.51**	**348**	⇓*i*P		**Pg**	**09 54 24.0**	**+0.2**
	baz=352							
TWE				S		**Sg**	**09 54 30.3**	**-0.2**
	baz=352							
ESL	**Shilin**	**0.52**	**219**	⇓*i*P		**Pg**	**09 54 23.8**	**-0.1**
	baz=223							
ILA	**Ilan**	**0.55**	**356**	*e*P		**Pg**	**09 54 24.5**	**+0.1**
	baz=354							
ILA				*e*S		**Sg**	**09 54 31.7**	**+0.2**
	baz=354							
TWT	**Tachien**	**0.56**	**274**	*e*P		**Pb**	**09 54 25.3**	**-0.7**
	baz=271							
TWT				*e*S		**Sg**	**09 54 32.3**	**+0.3**
	baz=271							
FUSB	**Fushanzhiwuyua**	**0.57**	**341**	*e*P		**Pg**	**09 54 25.3**	**+0.4**
	baz=343							
FUSB				*e*S		**Sg**	**09 54 32.0**	**-0.3**
	baz=343							
TDCB	**Techi**	**0.58**	**274**	*e*P		**Pg**	**09 54 25.1**	**+0.1**
	baz=271							
TDCB				*e*S		**Sg**	**09 54 32.2**	**-0.4**
	baz=271							
CHGB	**Renai**	**0.58**	**254**	⇓P		**Pg**	**09 54 25.3**	**+0.2**
	baz=244							
CHGB				S		**Sg**	**09 54 33.4**	**+0.6**
	baz=244							
YHNB	**Yeheng**	**0.59**	**320**	P		**Pg**	**09 54 25.4**	**+0.3**
	baz=320							
YHNB				*e*S		**Sg**	**09 54 32.5**	**-0.4**
	baz=320							
NSK	**Sanguang**	**0.60**	**319**	*e*P		**Pg**	**09 54 25.6**	**+0.2**
	baz=320							
NSK				*i* S		**Sg**	**09 54 33.1**	**-0.2**
	baz=320							
NWLT	**Wulai**	**0.61**	**335**	*e*P		**Pg**	**09 54 25.9**	**+0.2**
	baz=336							
NWLT				*i* S		**Sg**	**09 54 33.4**	**-0.3**
	baz=336							
WARBT	**Fenglin Townsh**	**0.62**	**217**	*e*P		**Pg**	**09 54 25.7**	**-0.1**
	baz=220							
WUSB	**Renai**	**0.65**	**250**	⇓*i*P		**Pg**	**09 54 26.6**	**+0.2**
	baz=240							
WUSB				*e*S		**Sg**	**09 54 34.8**	**-0.2**
	baz=240							
NFF	**Wufeng Townshi**	**0.74**	**304**	*e*P		**Pb**	**09 54 28.5**	**-0.4**
	baz=303							
NFF				*e*S		**Sg**	**09 54 37.9**	**+0.3**
	baz=303							
VWDT	**VWDT**	**0.75**	**232**	*e*P		**Pg**	**09 54 28.2**	**-0.1**
	baz=229							
VWDT				*e*S		**Sg**	**09 54 36.2**	**-1.8**
	baz=229							
NHDH	**Xindian Distri**	**0.78**	**342**	*e*P		**Pb**	**09 54 29.2**	**-0.3**
	baz=343							
NHDH				*e*S		**Sg**	**09 54 38.5**	**-0.5**
	baz=343							
TWA	**Mucha**	**0.78**	**346**	*e*P		**Pb**	**09 54 29.8**	**+0.2**
	baz=348							
TWA				*e*S		**Sg**	**09 54 38.9**	**-0.2**
	baz=348							
HGSD	**Ruisui**	**0.80**	**205**	*e*P		**Pb**	**09 54 30.1**	**+0.3**
	baz=191							
TWB1	**Santiao Chiao**	**0.81**	**13**	P		**Pg**	**09 54 29.4**	**+0.1**
	baz=16							
TWB1				*i* S		**Sg**	**09 54 39.7**	**-0.1**
	baz=16							
WCS	**Beigang Elemen**	**0.82**	**259**	*e*P		**Pb**	**09 54 29.7**	**-0.5**
	baz=257							
WCS				*e*S		**Sg**	**09 54 40.1**	**-0.1**
	baz=257							
LIOB	**Emei**	**0.82**	**301**	*e*P		**Pb**	**09 54 30.4**	**0.0**
	baz=301							
LIOB				*e*S		**Sb**	**09 54 40.7**	**-0.8**
	baz=301							
NSTT	**Nanjuang**	**0.83**	**300**	*e*P		**Pb**	**09 54 30.1**	**-0.3**
	baz=299							
NSTT				*e*S		**Sg**	**09 54 40.4**	**-0.1**
	baz=299							
EHY	**Hungye**	**0.83**	**211**	*e*P		**Pg**	**09 54 29.6**	**-0.1**
	baz=208							
NWF	**Wu-fen Shan**	**0.85**	**360**	*i* P		**Pb**	**09 54 30.7**	**-0.1**
	baz=352							
NWF				*e*S		**Sg**	**09 54 40.8**	**-0.4**
	baz=352							
WFSB	**Wu-fen Shan**	**0.85**	**360**	*e*P		**Pb**	**09 54 30.6**	**-0.1**
	baz=354							
WFSB				*e*S		**Sg**	**09 54 40.8**	**-0.4**
	baz=354							
SSLB	**Suanglung**	**0.88**	**241**	*i* P		**Pg**	**09 54 30.5**	**-0.1**
	baz=239							
SSLB				S		**Sg**	**09 54 41.9**	**-0.1**
	baz=239							
SXI1	**Grass Mountain**	**0.88**	**5**	*e*P		**Pb**	**09 54 31.0**	**-0.3**
	baz=14							
SXI1				*e*S		**Sg**	**09 54 41.8**	**-0.3**
	baz=14							
SMLT	**Sun Moon Lake**	**0.88**	**248**	*e*P		**Pg**	**09 54 30.4**	**-0.3**
	baz=236							
SMLT				*e*S		**Sg**	**09 54 42.1**	**-0.1**
	baz=236							
TYC	**Yuchr**	**0.91**	**250**	*e*P		**Pg**	**09 54 31.3**	**+0.1**
	baz=239							
TYC				*e*S		**Sg**	**09 54 43.1**	**+0.1**
	baz=239							
NCUH	**Zhongli**	**0.93**	**324**	*e*P		**Pn**	**09 54 32.8**	**-0.2**
	baz=324							
NCUH				S		**Sn**	**09 54 46.5**	**0.0**
	baz=324							
SBCB	**Hsinchu**	**0.93**	**308**	*e*P		**Pn**	**09 54 32.7**	**-0.4**
	baz=308							
TWQ1	**Liyutan**	**0.94**	**278**	*e*P		**Pg**	**09 54 32.5**	**+0.3**
	baz=276							
YULB	**Yu-li**	**0.94**	**209**	*e*P		**Pg**	**09 54 31.1**	**-0.8**
	baz=218							
TWS1	**Kuangyinshan**	**0.94**	**339**	*e*P		**Pn**	**09 54 33.0**	**-0.3**
	baz=340							
TWS1				*e*S		**Sb**	**09 54 45.1**	**+0.2**
	baz=340							
YM01	**YM01**	**0.94**	**348**	*e*P		**Pb**	**09 54 32.2**	**-0.2**
	baz=333							
HSN	**Hsinchu**	**0.95**	**308**	*e*P		**Pn**	**09 54 32.9**	**-0.4**
	baz=311							
HSN				*e*S		**Sn**	**09 54 46.7**	**-0.3**
	baz=311							
NSY	**Sanyi**	**0.96**	**282**	*e*P		**Pn**	**09 54 33.4**	**-0.1**
	baz=281							
NMLH	**Miaoli**	**0.96**	**289**	*e*P		**Pn**	**09 54 33.8**	**+0.2**
	baz=288							
EYUL	**Yuli**	**0.97**	**206**	*e*P		**Pn**	**09 54 33.5**	**-0.1**
	baz=219							
TWF1	**Yuli**	**0.97**	**208**	*e*P		**Pg**	**09 54 32.6**	**+0.1**
	baz=218							
YM08	**YM08**	**0.98**	**349**	*e*P		**Pb**	**09 54 33.0**	**0.0**
	baz=334							
NTST	**Danshui**	**0.99**	**342**	*e*P		**Pn**	**09 54 34.2**	**+0.2**
	baz=343							
**

JYNG	**Yonagunijimaku**	**1.08**	**77**	*eP*		**Pn**	**09 54 35.5**	**+0.3**
WCHH	**Zhanghua** baz=261	**1.13**	**263**	*eP*		**Pn**	**09 54 37.7**	**+1.9**
YOJ	**Yonaguni jima**	**1.14**	**77**	*eP*		**Pn**	**09 54 36.2**	**+0.2**
ALS	**Alishan** baz=216	**1.14**	**232**	*eP*		**Pn**	**09 54 36.2**	**-0.1**
CHKT	**Chengkung** baz=183	**1.18**	**199**	*eP*		**Pg**	**09 54 36.5**	**0.0**
CHN5	**Tsauling** baz=238	**1.19**	**239**	*i* P		**Pn**	**09 54 37.4**	**+0.6**
CHN5	baz=238			*eS*		**Sn**	**09 54 54.0**	**+0.8**
EHD	**Haiduan** baz=206	**1.19**	**207**	*eP*		**Pn**	**09 54 36.8**	**+0.1**
WGK	**Gukeng** baz=226	**1.24**	**245**	*eP*		**Pg**	**09 54 38.5**	**+0.9**
ELDTW	**Lidau** baz=198	**1.25**	**215**	*eP*		**Pn**	**09 54 37.1**	**-0.4**
WDLH	**Douliu** baz=227	**1.26**	**246**	*eP*		**Pg**	**09 54 38.4**	**+0.4**
EDH	**Donghe** baz=185	**1.32**	**200**	*eP*		**Pg**	**09 54 36.4**	**-2.0**
WRL	**Guolierlin Hig** baz=255	**1.33**	**257**	*eP*		**Pg**	**09 54 39.1**	**-0.2**
WRL	baz=255			*eS*		**Sg**	**09 54 57.4**	**+0.8**
WCKO	**Fanlu** baz=234	**1.33**	**235**	*eP*		**Pg**	**09 54 39.4**	**0.0**
CHN2	**Minshiung** baz=224	**1.38**	**241**	*eP*		**Pg**	**09 54 41.8**	**+1.4**
CHN4	**Tsaushan** baz=231	**1.39**	**232**	*eP*		**Pg**	**09 54 41.0**	**+0.4**
CHN4	baz=231			*eS*		**Sg**	**09 55 01.8**	**+3.2**
STYH	**Taoyuan** baz=221	**1.40**	**222**	*eP*		**Pn**	**09 54 39.6**	**+0.1**
TPUB	**Ta-pu** baz=229	**1.40**	**230**	*eP*		**Pg**	**09 54 40.9**	**+0.2**
WTP	**Ta-pu** baz=228	**1.45**	**228**	*eP*		**Pg**	**09 54 41.3**	**-0.2**
TWK	**Hsinying** baz=231	**1.52**	**232**	*eP*		**Pg**	**09 54 42.6**	**-0.4**
TWGBT	**Beinan** baz=188	**1.54**	**205**	*eP*		**Pn**	**09 54 39.6**	**-1.9**
SNST	**Tainan City** baz=230	**1.54**	**230**	*eP*		**Pg**	**09 54 43.4**	**0.0**
CHN1	**Nanshi** baz=228	**1.55**	**229**	*eP*		**Pg**	**09 54 43.3**	**-0.2**
SGST	**Jiashian** baz=224	**1.58**	**225**	*eP*		**Pg**	**09 54 44.0**	**-0.2**
ICHU	**Yijhu** baz=222	**1.62**	**239**	*eP*		**Pg**	**09 54 45.1**	**+0.2**
ICHU	baz=222			S		**Sg**	**09 55 07.7**	**+1.6**
SCST	**Cishan** baz=223	**1.78**	**222**	*eP*		**Pg**	**09 54 47.4**	**-0.6**
SSD	**Sandimen** baz=217	**1.81**	**216**	*eP*		**Pn**	**09 54 45.8**	**+0.6**
TSMG	**Majia** baz=216	**1.84**	**215**	*eP*		**Pb**	**09 54 47.4**	**-0.1**
TSCK	**Chigu Township** baz=238	**1.89**	**236**	*eP*		**Pb**	**09 54 48.3**	**-0.2**
TSCK	baz=238			*i* S		**Sg**	**09 55 14.6**	**0.0**
MASBT	**Mashibuluo** baz=209	**1.92**	**214**	*eP*		**Pn**	**09 54 47.5**	**+0.8**
MASBT	baz=209			*eS*		**Sg**	**09 55 14.6**	**-0.9**
SCZT	**Fangliau** baz=195	**2.13**	**211**	*eP*		**Pb**	**09 54 51.8**	**-0.8**
SLIU	**Shizi** baz=194	**2.19**	**205**	*eP*		**Pb**	**09 54 52.2**	**-1.5**
JISG	**Ishigakijimahi**	**2.33**	**80**	*eP*		**Pn**	**09 54 53.0**	**+0.7**

TAP 11 09:54:58.4, 23.04N×120.61E, h10km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGST	**Jiashian** baz=339	**0.05**	**332**	*i* P	Pg	09 55 00.6	+0.2
SGST	baz=339			*i* S	Sg	09 55 02.9	+1.1
CHN1	**Nanshi** baz=335	**0.16**	**333**	*i* P	Pg	09 55 03.2	+1.2
CHN1	baz=335			S	Sg	09 55 06.2	+1.8
STYH	**Taoyuan** baz=51	**0.20**	**50**	*eP*	Pg	09 55 04.2	+1.6
STYH	baz=51			*eS*	Sg	09 55 07.2	+1.7
WTP	**Ta-pu** baz=5.0	**0.21**	**2**	*i* P	Pg	09 55 03.9	+1.2
WTP	baz=5.0			S	Sg	09 55 07.8	+2.1
SNST	**Tainan City** baz=338	**0.21**	**330**	*eP*	Pg	09 55 04.2	+1.4
SNST	baz=338			*eS*	Sg	09 55 08.5	+2.8
TWK	**Hsinying** baz=338	**0.25**	**334**	*eP*	Pb	09 55 04.8	-0.4
TWK	baz=338			*eS*	Sb	09 55 09.3	-0.4
TWK	**Hsinying** baz=231	**0.25**	**334**	*eS*	Pb	09 55 04.9	-0.3
SSD	**Sandimen** baz=164	**0.29**	**176**	*eP*	Pb	09 55 05.7	-0.1
SSD	baz=164			*eS*	Sb	09 55 11.4	+0.7

*NAO **11** 10:16:49.9±6.9, 76.58N×7.40E, ML2.8*
*BER **11** 10:16:53.9±3.5, 76.58N×8.06E, h10km, mb(Pn)3.6, ML2.8(NAO), Confirmed Earthquake*
*FCIAR **11** 10:16:53.0, 76.57N×8.45E, h10km, station SPA0 has station magnitude of 2.80*
*KOLA **11** 10:16:55.9, 76.78N×9.54E, h0km, ML2.0, Error ellipse: s-maj=19.7km s-min=13.9km az=50.0, Greenland sea*

ISC 11 10:16:50.2±2.4, 76.62N±0.06×8.22E±0.10, h6km±11km, n22, σ2s07/39, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**1.72**	**74**	P	**Pb**	**10 17 22.6**	**+0.4**
HSPB				S	**Sn**	**10 17 40.7**	**-2.2**
HSPB	**Hornsund (broa**	**1.72**	**74**	*eP*	**Pg**	**10 17 23.0**	**-0.1**
HSPB				*eS*	**Sb**	**10 17 43.5**	**-0.5**
HSPB	comp=Z,16nm,0.1s			IAML		10 17 44.5	
HSPB	**Hornsund (broa**	**1.72**	**74**	Pn	**Pg**	**10 17 23.0**	**-0.1**
HSPB				Sn	**Sg**	**10 17 44.1**	**-1.3**
BRBA	**Barentsburg A**	**1.96**	**40**	*eP*	**Pb**	**10 17 26.5**	**+0.3**
BRBA	**Barentsburg A**	**1.96**	**40**	Pn	**Pg**	**10 17 27.6**	**0.0**
BRBA				Sn	**Sg**	**10 17 51.5**	**-1.5**
BRBB	**Barentsburg B**	**1.98**	**39**	P	**Pb**	**10 17 27.2**	**+0.6**
BRBB				S	**Sn**	**10 17 49.6**	**+0.3**
BRBB	**Barentsburg B**	**1.98**	**39**	*eP*	**Pb**	**10 17 27.5**	**+0.9**
BRBB	**Barentsburg B**	**1.98**	**39**	Pn	**Pg**	**10 17 27.9**	**-0.2**
SPA0	**Spitsbergen Ar** baz=226,slow=16	**2.37**	**45**	Pn	**Pb**	**10 17 32.4**	**-1.0**
SPA0	baz=211,slow=28			Sn	**Sn**	**10 18 00.3**	**+1.3**
SPA0	**Spitsbergen Ar** baz=226,slow=16	**2.37**	**45**	Pn	**Pb**	**10 17 32.4**	**-1.0**
SPA0	baz=211,slow=28			Sn	**Sn**	**10 18 00.3**	**+1.3**
SPA0	**Spitsbergen Ar**	**2.37**	**45**	⇑*i* P	**Pb**	**10 17 32.3**	**-1.0**
SPA0				*i* S	**Sb**	**10 18 01.1**	**-1.7**
SPITS	**Spitsbergen Ar**	**2.37**	**45**	P	**Pn**	**10 17 31.9**	**+2.3**
SPITS				S	**Sn**	**10 17 59.1**	**+0.1**
KBS	**Kingsbay**	**2.45**	**17**	*eP*	**Pn**	**10 17 31.7**	**+1.1**
KBS				*eS*	**Sn**	**10 17 59.1**	**-1.7**
KBS	comp=Z,5.5nm,0.5s			IAML		10 18 06.4	
KBS	**Kingsbay**	**2.45**	**17**	Pn	**Pn**	**10 17 31.0**	**+0.4**
KBS				Sn	**Sn**	**10 17 59.9**	**-1.0**
KBS	**Kingsbay**	**2.45**	**17**	*eP*	**Pn**	**10 17 30.8**	**+0.2**
KBS				*eS*	**Sn**	**10 17 59.8**	**-1.0**
HOPEN	**Hopen**	**3.91**	**83**	*eP*	**Pn**	**10 17 53.8**	**+3.1**
HOPEN				*eS*	**Sn**	**10 18 37.8**	**+0.9**
HOPEN	comp=Z,11nm,0.2s			IAML		10 18 41.5	
HOPEN	**Hopen**	**3.91**	**83**	Pn	**Pn**	**10 17 53.8**	**+3.1**
HOPEN				Sn	**Sn**	**10 18 38.4**	**+1.5**
HOPEN	**Hopen**	**3.91**	**83**	*eP*	**Pn**	**10 17 53.7**	**+2.9**
HOPEN				*eS*	**Sn**	**10 18 37.7**	**+0.8**
ZFI2	**Zemlya Franca-**	**8.59**	**43**	P	**Pn**	**10 18 57.7**	**+2.9**
OMEGA	**Omega**	**8.60**	**43**	*eP*	**Pn**	**10 18 57.8**	**+2.8**
ARA0	**ARCESS Array S** baz=336,slow=9.3	**8.67**	**136**	Pn	**Pn**	**10 18 57.9**	**+1.9**
ARA0	baz=338,slow=22			Sn	**Sn**	**10 20 28.2**	**-5.7**
ARA0	**ARCESS Array S** baz=336,slow=9.3	**8.67**	**136**	Pn	**Pn**	**10 18 57.9**	**+1.9**
ARA0	baz=338,slow=22			Sn	**Sn**	**10 20 28.2**	**-5.7**

IDC 11 10:20:23.7±4.5, 51.53S×138.63E, h0km, mb3.7/2, mbtmp3.7/2, MS3.2/3, Error ellipse: s-maj=263.5km s-min=76.4km az=88.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek** comp=Z,55nm,20.9s,baz=204,slow=33	**19.75**	**7**	LR	LR	10 31 07.6	
ASAR	**Alice Springs** 0.4nm,0.7s,baz=166,slow=9.9,SNR=8.6 0.4nm,0.7s	**28.05**	**351**	P	P	10 26 16.7	+0.1
WRA	**Warramunga Arr** 1.2nm,0.8s,baz=176,slow=7.8,SNR=7.2 1.2nm,0.8s	**31.70**	**352**	P	P	10 26 48.9	-0.1
CTA	**Charters Tower** comp=Z,58nm,18.1s,baz=162,slow=35	**31.94**	**14**	LR	LR	10 39 08.0	
DZM	**Mont Dzumac** comp=Z,34nm,19.1s,baz=208,slow=32	**36.46**	**47**	LR	LR	10 39 42.0	
ARCES	**ARCESS Array B** 3.5nm,1.0s,baz=94,slow=2.5,SNR=4.4	**144.81**	**326**	PKP	PKPbc	10 40 00.4	+0.3

*KRNET **11** 10:25:22.9±0.1, 40.63N×77.65E, h21km, mb2.6*
*SOME **11** 10:25:22.3, 40.60N×77.65E, h10km*
*NNC **11** 10:25:25.0±0.6, 40.71N×77.67E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=4.0km s-min=3.3km az=172.0*

ISC 11 10:25:25.1±1.8, 40.67N±0.08×77.52E±0.04, h10km, n54, σ1s39/83, 16C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy** baz=6.0	**1.08**	**11**	⇓*eP*	**Pg**	**10 25 43.7**	**-2.3**
TARG	baz=6.0			⇓*eS*	**Sg**	**10 25 59.1**	**-1.0**
NRN	**Naryn** baz=2.0	**1.38**	**304**	⇑*eP*	**Pb**	**10 25 50.8**	**-0.4**
NRN	baz=2.0			⇑*eS*	**Sg**	**10 26 11.0**	**+1.4**
KDJ	**Kajisay** baz=47	**1.48**	**350**	⇑*eP*	**Pn**	**10 25 51.3**	**-0.7**
KDJ	baz=47			⇑*eS*	**Sb**	**10 26 12.0**	**+0.1**
ULHL	**Ulahol** baz=27	**1.85**	**329**	⇓*eP*	**Pb**	**10 25 58.2**	**-0.9**
ULHL	baz=27			⇓*eS*	**Sb**	**10 26 24.0**	**+1.7**
ANVS	**Anan'yevo** baz=0.0	**2.12**	**3**	⇑*eP*	**Pn**	**10 26 01.6**	**+0.8**
ANVS	baz=0.0			⇑*eS*	**Sb**	**10 26 29.4**	**-0.7**
BOOM	**Boomskoye usch** baz=26	**2.17**	**327**	⇓*eP*	**Pb**	**10 26 02.8**	**-1.8**
BOOM	baz=26			⇓*eS*	**Sb**	**10 26 31.9**	**+0.2**
TNSS	**Tian-Shan** 10nm,0.2s	**2.41**	**350**	Pg	**Pb**	**10 26 08.9**	**+0.1**
TNSS	19nm,0.5s			Lg	Lg	10 26 42.1	
TNSS	**Tian-Shan** 10nm,0.2s	**2.41**	**350**	*eP*	**Pb**	**10 26 08.9**	**+0.1**
TNSS	19nm,0.5s			*eS*	**Sg**	**10 26 42.1**	**-0.4**
IZV	**Izvestkoviy** 2.9nm,0.2s	**2.46**	**344**	Pg	**Pb**	**10 26 10.3**	**+0.7**
IZV	38nm,0.3s			Lg	Lg	10 26 44.6	
IZV	**Izvestkoviy** 2.9nm,0.2s	**2.46**	**344**	*eP*	**Pb**	**10 26 10.3**	**+0.7**
IZV	38nm,0.3s			*eS*	**Sg**	**10 26 44.6**	**+0.4**
SATY	**Saty** 22nm,0.4s	**2.48**	**15**	Pg	**Pb**	**10 26 08.9**	**-1.0**
SATY	17nm,0.2s			Lg	Lg	10 26 42.1	
SATY	**Saty** 22nm,0.4s	**2.48**	**15**	*eP*	**Pb**	**10 26 08.9**	**-1.0**
SATY	17nm,0.2s			*eS*	**Sb**	**10 26 42.1**	**+1.6**
MDOK	**Medeo** 6.4nm,0.4s	**2.52**	**352**	Pn	**Pn**	**10 26 07.0**	**+0.8**
MDOK	8.1nm,0.2s			Pg	**Pb**	**10 26 10.5**	**0.0**
MDOK	28nm,0.3s			Lg	Lg	10 26 45.0	
MDOK	41nm,0.8s			Lg	Lg	10 26 45.4	
MDOK	**Medeo** 8.1nm,0.2s	**2.52**	**352**	*eP*	**Pb**	**10 26 10.5**	**0.0**
MDOK	28nm,0.3s			*eS*	**Sg**	**10 26 45.0**	**-1.1**
AAA	**Alma-Ata** 38nm,0.1s	**2.58**	**350**	Pg	**Pb**	**10 26 12.4**	**+0.9**
AAA	72nm,0.2s			Lg	Lg	10 26 48.1	
AAA	**Alma-Ata** 38nm,0.1s	**2.58**	**350**	*eP*	**Pb**	**10 26 12.4**	**+0.9**
AAA	72nm,0.2s			*eS*	**Sg**	**10 26 48.1**	**+0.2**
KOTS	**Kotyrbulak** 6.5nm,0.2s	**2.58**	**353**	Pg	**Pb**	**10 26 11.8**	**+0.1**
KOTS	45nm,0.3s			Lg	Lg	10 26 47.2	
KOTS	**Kotyrbulak** 6.5nm,0.2s	**2.58**	**353**	*eP*	**Pb**	**10 26 11.8**	**+0.1**
KOTS	45nm,0.3s			*eS*	**Sg**	**10 26 47.2**	**-0.9**
MTBS	**Maitube** 4.9nm,0.3s	**2.59**	**342**	Pg	**Pb**	**10 26 12.2**	**+0.5**
MTBS	23nm,0.3s			Lg	Lg	10 26 48.0	
MTBS	**Maitube** 4.9nm,0.3s	**2.59**	**342**	*eP*	**Pb**	**10 26 12.2**	**+0.5**
MTBS	23nm,0.3s			*eS*	**Sb**	**10 26 48.0**	**-0.4**
TKM2	**Tokmak 2** 2.1nm,0.6s	**2.67**	**328**	⇓Pn	**Pn**	**10 26 09.9**	**+1.5**
TKM2	7.1nm,0.5s			⇓Lg	Lg	10 26 50.3	
TKM2	**Tokmak 2** baz=27	**2.67**	**328**	⇑*eP*	**Pn**	**10 26 09.7**	**+1.3**
TKM2	baz=27			⇑*eS*	**Sn**	**10 26 43.9**	**+3.0**
ARLS	**Aral** baz=97	**2.69**	**297**	⇑*eP*	**Pn**	**10 26 10.4**	**+1.8**
ARLS	baz=97			⇑*eS*	**Sb**	**10 26 44.4**	**-2.1**
UZB	**Uzynbulak** 4.9nm,0.3s	**2.72**	**24**	Pg	**Pb**	**10 26 13.0**	**-0.9**
UZB	8.2nm,0.4s			Lg	Lg	10 26 49.4	
UZB	**Uzynbulak** 4.9nm,0.3s	**2.72**	**24**	*eP*	**Pb**	**10 26 13.1**	**-0.9**
UZB	8.2nm,0.4s			*eS*	**Sb**	**10 26 49.4**	**+2.0**
UCH	**Uchtor** baz=5.0	**2.75**	**306**	⇑*eP*	**Pn**	**10 26 11.2**	**+1.6**
UCH	baz=5.0			⇑*eS*	**Sb**	**10 26 46.4**	**-2.0**
KBK	**Karagaybulak** baz=16	**2.77**	**317**	⇑*eP*	**Pn**	**10 26 11.1**	**+1.4**
KBK	baz=16			⇑*iS*	**Sn**	**10 26 46.4**	**+3.1**
KURS	**Kuram** 4.2nm,0.3s	**2.86**	**10**	Pg	**Pb**	**10 26 16.1**	**-0.1**
KURS	4.9nm,0.3s			Lg	Lg	10 26 54.7	
KURS	**Kuram** 4.2nm,0.3s	**2.86**	**10**	*eP*	**Pb**	**10 26 16.1**	**-0.1**
KURS	4.9nm,0.3s			*eS*	**Sg**	**10 26 54.7**	**-2.3**
SHLS	**Shalkode** 9.2nm,0.2s	**2.88**	**30**	Pg	**Pg**	**10 26 18.8**	**-1.5**
SHLS	668nm,0.2s			Lg	Lg	10 26 59.2	
SHLS	**Shalkode**	**2.88**	**30**	*eP*	**Pg**	**10 26 18.8**	**-1.5**
SHLS	9.2nm,0.2s			*eS*	**Sg**	**10 26 59.2**	**+1.6**
DGS	**Degeres** 3.6nm,0.4s	**2.88**	**334**	Pg	**Pb**	**10 26 17.4**	**+0.7**
DGS	22nm,0.2s			Lg	Lg	10 26 56.9	
DGS	**Degeres** 3.6nm,0.4s	**2.88**	**334**	*eP*	**Pb**	**10 26 17.4**	**+0.7**
DGS	22nm,0.2s			*eS*	**Sg**	**10 26 56.9**	**-0.9**
KPKS	**Kokpek** 7.7nm,0.3s	**2.93**	**17**	Pg	**Pb**	**10 26 16.7**	**-0.7**
KPKS	19nm,0.3s			Lg	Lg	10 26 55.6	
KPKS	**Kokpek** 7.7nm,0.3s	**2.93**	**17**	*eP*	**Pb**	**10 26 16.7**	**-0.7**
KPKS	19nm,0.3s			*eS*	**Sb**	**10 26 55.6**	**+2.2**
PDGK	**Podgornoye** 3.8nm,0.3s	**3.04**	**28**	Pg	**Pb**	**10 26 18.2**	**-1.2**
PDGK	10nm,0.4s			Lg	Lg	10 26 57.9	
PDGK	**Podgornoye** 6.6nm,0.8s	**3.04**	**28**	⇓Pg	**Pb**	**10 26 18.6**	**-0.8**
PDGK	20nm,0.7s			⇑Lg	Lg	10 26 57.9	
KTBS	**Karatobe** 3.0nm,0.2s	**3.11**	**349**	Pg	**Pb**	**10 26 20.9**	**+0.4**
KTBS	18nm,0.2s			Lg	Lg	10 27 02.8	
KTBS	**Karatobe** 3.0nm,0.2s	**3.11**	**349**	*eP*	**Pb**	**10 26 20.9**	**+0.4**
KTBS	18nm,0.2s			*eS*	**Sg**	**10 27 02.9**	**-2.0**
CHMS	**Chumysh** 1.7nm,0.5s	**3.12**	**319**	⇑Pn	**Pb**	**10 26 17.4**	**-3.2**
CHMS	6.8nm,0.5s			⇓Lg	Lg	10 27 04.2	
CHKK	**Chushkaly** 3.9nm,0.2s	**3.21**	**353**	Pg	**Pb**	**10 26 22.4**	**+0.2**
CHKK	17nm,0.2s			Lg	Lg	10 27 05.5	
CHKK	**Chushkaly** 3.9nm,0.2s	**3.21**	**353**	*eP*	**Pb**	**10 26 22.4**	**+0.2**
CHKK	17nm,0.2s			*eS*	**Sg**	**10 27 05.5**	**-2.7**
KRBS	**Karabastau** 1.4nm,0.2s	**3.32**	**336**	Pg	**Pb**	**10 26 25.0**	**+0.9**
KRBS	10nm,0.4s			Lg	Lg	10 27 10.0	
KRBS	**Karabastau** 1.4nm,0.2s	**3.32**	**336**	*eP*	**Pb**	**10 26 25.1**	**+0.9**
KRBS	10nm,0.4s			*eS*	**Sg**	**10 27 10.0**	**-1.8**
KUU	**Kurty** 1.2nm,0.3s	**3.34**	**345**	Pg	**Pb**	**10 26 25.2**	**+0.7**
KUU	11nm,0.3s			Lg	Lg	10 27 10.1	
KUU	**Kurty** 1.2nm,0.3s	**3.34**	**345**	*eP*	**Pb**	**10 26 25.2**	**+0.7**
KUU	11nm,0.3s			*eS*	**Sg**	**10 27 10.1**	**-2.3**
KTMS	**Ketmen** 1.5nm,0.2s	**3.49**	**36**	*eP*	**Pb**	**10 26 25.9**	**-1.1**
KTMS	3.3nm,0.2s			*eS*	**Sb**	**10 27 11.0**	**+1.6**
BLB	**Baldybastay** 15nm,0.1s	**3.50**	**11**	Pg	**Pb**	**10 26 27.6**	**+0.4**
BLB	10nm,0.2s			Lg	Lg	10 27 14.2	
SGDS	**Sogindy** 0.6nm,0.1s	**3.52**	**323**	Pg	**Pb**	**10 26 29.4**	**+1.9**
SGDS	7.8nm,0.3s			Lg	Lg	10 27 17.4	
ARXS	**Arharly** 4.1nm,0.3s	**3.55**	**4**	Pg	**Pb**	**10 26 28.6**	**+0.5**
ARXS	14nm,0.3s			Lg	Lg	10 27 15.9	
ARXS	**Arharly** 4.1nm,0.3s	**3.55**	**4**	*eP*	**Pb**	**10 26 28.6**	**+0.5**
ARXS	14nm,0.3s			*eS*	**Sg**	**10 27 15.9**	**-3.2**
MRKS	**Merke** 0.9nm,0.2s	**3.83**	**304**	*eP*	**Pg**	**10 26 35.8**	**-2.6**
MRKS	2.3nm,0.3s			*eS*	**Sg**	**10 27 28.3**	**+0.3**
KNOS	**Konyrlen** 5.8nm,0.3s	**3.89**	**18**	Pg	**Pb**	**10 26 34.9**	**+1.0**
KNOS	4.4nm,0.3s			Lg	Lg	10 27 26.7	
KK31	**Karatay Array** 1.0nm,0.7s	**5.77**	**297**	⇓Lg	Lg	10 28 29.3	

TEH 11 10:25:28.6, 30.69N×57.37E, h11km±40km, ML3.7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRM1	**Kerman Provinc**	**0.20**	**205**	Pg	Pg	10 25 33.8	+0.7
ZRDN	**Zarand Kerman**	**0.77**	**291**	Pg	Pg	10 25 43.4	-0.2
KHGB	**Koh Gabri**	**0.83**	**248**	Pg	Pg	10 25 44.4	-0.3
CHMN	**Cheshme madani**	**0.84**	**170**	Pg	Pb	10 25 45.6	+0.2
CHMN				Sg	Sb	10 25 56.5	-0.4
TVBK	**TV Kerman**	**0.88**	**217**	Pg	Pb	10 25 46.3	+0.2
NGRK	**Negar Kerman**	**1.18**	**208**	Pg	Pn	10 25 51.6	+0.1
IBAF	**Bafgh**	**1.79**	**301**	Pg	Pb	10 26 01.8	+0.3
KBAM	**BAM**	**1.81**	**149**	Pn	Pb	10 26 02.0	+0.2
BSRN	**Basiran**	**1.97**	**49**	Pn	Pb	10 26 03.7	-0.9
IKOO	**Kooshah**	**2.22**	**38**	Pn	Pb	10 26 07.8	-1.2
NHDN	**Nehbandan**	**2.40**	**72**	Pn	Pb	10 26 10.5	-1.5
TPRV	**Parvadeh(Tabas**	**2.40**	**346**	Pn	Pn	10 26 09.6	+1.6
IMEH	**Mehriz**	**2.47**	**287**	Pn	Pn	10 26 11.0	+2.0
ITEG	**Tejag**	**2.49**	**28**	Pn	Pn	10 26 11.3	+2.0
TKDS	**Koohdasht(Taba**	**2.92**	**356**	Pn	Pn	10 26 16.9	+1.7
AFRZ	**Afriz**	**3.06**	**27**	Pn	Pn	10 26 18.8	+1.7
SHRT	**Shahrakht**	**3.85**	**39**	Pn	Pn	10 26 30.0	+2.2
ANAR	**Anarak**	**3.98**	**310**	Pn	Pn	10 26 31.8	+2.1
IZEF	**Zefreh**	**4.83**	**298**	Pn	Pn	10 26 43.7	+2.2
ISFB	**Sefidab**	**5.67**	**311**	Pn	Pn	10 26 55.2	+2.3

*IDC **11** 10:29:15.2±0.9, 7.75N×83.29W, h0km, mb3.8/11, mbtmp3.8/14, ML2.3/3, MS4.5/52, Error ellipse: s-maj=36.6km s-min=14.9km az=43.0*
*UPA **11** 10:29:18.3±1.4, 8.08N×83.14W, h2km±3km, MW5.3*
*UCR **11** 10:29:20.3±0.6, 8.00N×82.92W, h8km±6km, MW5.2*
*CATAC **11** 10:29:21.8±0.5, 7.96N×83.03W, h10km, MB5.4, mb5.3, ML5.0*
*NEIC **11** 10:29:22.9, 8.06N×83.02W, h18km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^17 Nm; Mrr0.73; Mθθ-0.42; Mφφ-0.32; Mrθ0.38; Mθφ0.43; Mφr-0.91; Fault plane solution: M0 1.25000×10^17 NP1: φs151.33000°, δ71.91000°, λ103.55000°. NP2: φs293.52000°, δ22.47000°, λ54.35000°. Principal axes: T 1.2702, Plg61.0000°, Azm81.0000°; N -0.0321, Plg13.0000°, Azm327.0000°; P -1.2381, Plg26.0000°, Azm231.0000°;*
*NEIC **11** 10:29:22.9, 8.16N×83.02W, h18km*
*NEIC **11** 10:29:23.4±1.9, 8.17N±0.03×83.00W±0.05, h12km±4km, mb4.8/106, Mww5.3/31, Error ellipse: s-maj=7.8km s-min=4.6km az=89.0*
*GCMT **11** 10:29:26.4±0.1, 8.07N±0.01×82.86W±0.01, h12km, MW5.2/142, Moment Tensor Solution. s91,c135; s142,c255; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.71±.01; Mθθ-0.42±.01; Mφφ-0.29±.01; Mrθ0.16±.03; Mθφ0.45±.01; Mφr-0.14±.03; Best double couple: M0 0.79000×10^17 NP1:φs131.00000°, δ53.00000°, λ90.00000°. NP2:φs311.00000°, δ37.00000°, λ90.00000°. Principal axes: T 0.7380, Plg82.0000°, Azm39.0000°; N 0.1020, Plg0.0000°, Azm131.0000°; P -0.8410, Plg8.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 10:29:22.1±0.7, 8.09N±0.03×82.98W±0.02, h16km±4km, n380, σ1s76/365, mb4.8/66, MS4.6/55, 5C-19D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIMO3	**Limones**	**0.12**	**83**	⇓*i*P	**Pg**	**10 29 23.8**	**-1.8**

LIMO3 *i* S **Sg** **10 29 29.1 +1.2**
PTPM Petroterminale 0.15 41 ||*i* P **Pg** **10 29 25.3 -0.8**
PTPM *i* S **Sg** **10 29 29.6 +0.8**
PIRO Carate, Puerto 0.47 312 *e* P **Pg** **10 29 31.3 -0.2**
PIRO Carate, Puerto 0.47 312 *i* P **Pg** **10 29 31.3 -0.2**
PIRO IAML 10 29 42.1
comp=Z,69µm,1.0s
CDITO Canoas 0.49 13 **Pg** **10 29 31.3 -0.6**
CDITO Sg **Sg** **10 29 35.6 -3.0**
CDITO Canoas 0.49 13 ||*e* P **Pg** **10 29 31.3 -0.6**
CDITO *i* S **Sg** **10 29 39.2 +0.5**
CDITO Canoas 0.49 13 *e* P **Pg** **10 29 31.1 -0.8**
CDITO Canoas 0.49 13 *i* P **Pg** **10 29 31.4 -0.6**
CDITO IAML 10 29 49.5
comp=Z,39µm,1.0s
PTJ1 Puerto Jimnez 0.55 325 *e* P **Pb** **10 29 33.1 -0.3**
FITO Golfito 0.56 342 *e* P **Pg** **10 29 32.3 -0.9**
JIME Puerto Jimenez 0.56 323 *e* P **Pg** **10 29 33.3 0.0**
EDAD Golfito 0.59 342 *e* P **Pg** **10 29 32.9 -0.8**
PEDE3 Pedregal, Chir 0.63 62 ||*e* P **Pg** **10 29 32.3 -2.2**
DVD David 0.63 57 ||*i* P **Pg** **10 29 32.6 -1.9**
DVD *i* S **Sb** **10 29 45.8 +2.4**
LOCO3 Loma Colorada, 0.64 60 ||*e* P **Pg** **10 29 33.6 -1.2**
MLIR3 Monte Lirio, C 0.72 12 ||*i* P **Pg** **10 29 34.9 -1.3**
MLIR3 *i* S **Sg** **10 29 46.3 +0.5**
VITO San Vito 0.73 1 *e* P **Pg** **10 29 36.1 -0.3**
BRU2 Volcan 0.76 22 **Pg** **10 29 35.8 -1.2**
BRU2 Sg **Sb** **10 29 49.1 +1.8**
BRU2 Volcan 0.76 22 ||*i* P **Pg** **10 29 35.8 -1.2**
BRU2 *i* S **Sn** **10 29 49.7 +0.1**
BRU2 Volcan 0.76 22 *e* P **Pg** **10 29 35.7 -1.3**
BRU2 Volcan 0.76 22 *i* P **Pg** **10 29 36.5 -0.5**
BRU2 IAML 10 30 02.9
comp=Z,29µm,1.0s
BCO2 Palmira 0.77 35 ||*i* P **Pg** **10 29 35.6 -1.6**
BCO2 *i* S **Sn** **10 29 50.3 +0.4**
BC3P Paso Ancho 0.81 27 *e* P **Pg** **10 29 36.3 -1.7**
LNBQ3 Los Naranjos, 0.88 37 ||*e* P **Pg** **10 29 37.8 -1.5**
LNBQ3 *i* S **Sb** **10 29 52.4 +1.6**
PLAN Los Planes de 0.90 310 *i* P **Pb** **10 29 39.9 +0.5**
PLAN *i* S **Sb** **10 29 51.7 +0.4**
PLAN IAML 10 29 54.8
comp=Z,62µm,1.0s
POTG Potrero Grande 0.97 352 *e* P **Pg** **10 29 40.0 -1.0**
POTG Potrero Grande 0.97 352 *i* P **Pn** **10 29 41.8 +0.6**
POTG IAML 10 30 02.1
comp=Z,55µm,1.0s
EDPN Palmar Norte 0.99 332 *e* P **Pg** **10 29 39.9 -1.4**
EDBA Buenos Aires 1.11 345 *e* P **Pb** **10 29 42.4 -0.6**
BURE Buenos Aires 1.14 342 *e* P **Pb** **10 29 42.7 -0.7**
CHGR2 Aguacate 1.18 44 *e* P **Pn** **10 29 41.6 -2.5**
CHGR2 *i* S **Sb** **10 29 58.3 -1.1**
DRK0 Durika 1.20 347 **Pb** **10 29 43.4 -1.2**
DRK0 **Sb** **10 30 00.7 +0.7**
DRK0 Durika 1.20 347 *e* P **Pb** **10 29 43.5 -1.1**
OCHAL Ojochal 1.20 327 *i* P **Pg** **10 29 45.0 -0.3**
OCHAL *i* S **Sn** **10 30 02.9 +2.6**
OCHAL IAML 10 30 07.8
comp=Z,190nm,1.0s
NANC3 Nancito, Chiri 1.25 83 ||*i* P **Pn** **10 29 43.2 -1.7**
NANC3 *i* S **Sn** **10 30 03.4 +1.9**
CNI2 El Empalme, Bo 1.42 21 *e* P **Pn** **10 29 46.5 -0.8**
CNI2 *i* S **Sn** **10 30 02.1 -3.7**
PEZE Perez Zeledon, 1.46 332 **Pn** **10 29 47.5 -0.4**
PEZE Perez Zeledon, 1.46 332 *e* P **Pn** **10 29 47.5 -0.4**
PEZE Perez Zeledon, 1.46 332 *i* P **Pg** **10 29 50.3 +0.1**
PEZE *i* S **Sg** **10 30 11.4 +2.1**
PEZE IAML 10 30 18.4
comp=Z,9µm,1.0s
RGM0 Gandoca 1.54 14 **Pn** **10 29 50.2 +1.2**
RGM0 Gandoca 1.54 14 *e* P **Pn** **10 29 49.8 +0.9**
RGM0 Gandoca 1.54 14 *i* P **Pb** **10 29 54.4 +0.1**
RGM0 *i* S **Sg** **10 30 15.8 +4.0**
RGM0 IAML 10 30 54.3
comp=Z,15µm,1.0s
CDM Cerro de Muert 1.65 332 *e* P **Pn** **10 29 50.7 -0.2**
CDM Cerro de Muert 1.65 332 *i* P **Pn** **10 29 51.9 +1.0**
CDM *i* S **Sg** **10 30 15.5 +0.1**
CDM IAML 10 30 27.3
comp=Z,9µm,1.0s
GMAL Guarumal, Vera 1.76 100 *e* P **Pn** **10 29 51.1 -0.9**
GMAL *i* S **Sb** **10 30 16.9 +0.9**
GMAL Guarumal, Vera 1.76 100 *e* P **Pn** **10 29 50.1 -1.9**
GMAL Guarumal, Vera 1.76 100 *e* P **Pn** **10 29 49.1 -2.9**
MESA3 La Mesa, Verag 1.78 88 ||*e* P **Pn** **10 29 51.0 -1.2**
MESA3 *i* S **Sb** **10 30 16.7 +0.2**
RIMA Rio Macho 1.88 332 **Pn** **10 29 54.2 +0.3**
RIMA Rio Macho 1.88 332 *i* P **Pb** **10 29 55.8 -0.5**
RIMA *i* S **Sb** **10 30 21.1 +1.4**
RIMA IAML 10 30 30.0
comp=Z,4µm,1.0s
LCR2 La Lucha 2 1.93 328 **Pn** **10 29 54.7 +0.2**
LCR2 La Lucha 2 1.93 328 *i* P **Pb** **10 29 56.3 -0.8**
LCR2 *i* S **Sb** **10 30 21.5 +0.4**
LCR2 IAML 10 30 28.2
comp=Z,8µm,1.0s
SAFE3 Santa Fe, Vera 1.93 77 *e* P **Pn** **10 29 54.0 -0.4**
SAFE3 *i* S **Sn** **10 30 20.3 +1.9**
STIA3 Santiago, Vera 1.99 90 *e* P **Pn** **10 29 55.4 +0.2**
STIA3 *i* S **Sn** **10 30 21.1 +1.3**
PCAYA Pacayas 2.00 336 *e* P **Pn** **10 29 56.1 +0.6**
MARI3 Mariato, Verag 2.02 102 ||*e* P **Pn** **10 29 55.3 -0.2**
MARI3 *i* S **Sb** **10 30 25.6 +2.2**
VTCV VTCV, Calle Va 2.02 339 *i* P **Pn** **10 29 56.7 +0.9**
VTCV *i* S **Sb** **10 30 25.1 +1.4**
VTCV IAML 10 30 31.8
comp=Z,14µm,1.0s
OCM Ochomogo 2.04 332 *e* P **Pn** **10 29 56.0 0.0**
OCM Ochomogo 2.04 332 *i* P **Pn** **10 29 56.6 +0.6**
OCM *i* S **Sb** **10 30 25.1 +0.9**
OCM IAML 10 30 35.2
comp=Z,5µm,1.0s
ICR3 Volcano Irazu 2.06 336 *e* P **Pn** **10 29 56.8 +0.3**
ACOS Acosta 2.06 326 *e* P **Pn** **10 29 56.5 +0.2**
HAYA Volcan Irazu 2.06 336 *i* P **Pn** **10 29 57.7 +1.1**
HAYA IAML 10 30 37.3
comp=Z,9µm,1.0s
VTRT Volcan Turrial 2.06 337 *i* P **Pn** **10 29 57.5 +1.0**
VTRT IAML 10 30 33.5
comp=Z,15µm,1.0s
VTUN Crater Central 2.07 338 *i* P **Pb** **10 29 59.3 -0.3**
VTUN IAML 10 30 40.4
comp=Z,8µm,1.0s
VTUC Crater, Volcan 2.07 338 *i* P **Pb** **10 29 59.4 -0.3**
VTUC IAML 10 30 35.9
comp=Z,6µm,1.0s
VIRE VIRE 2.08 334 *i* P **Pn** **10 29 57.7 +1.0**
VIRE IAML 10 30 38.2
comp=Z,10µm,1.0s
CALO3 Calobre, Verag 2.13 84 *e* P **Pn** **10 29 56.6 -0.5**
CALO3 *i* S **Sb** **10 30 27.0 +0.3**
HDC Heredia 2.21 330 **Pn** **10 29 59.2 +0.9**
HDC Heredia 2.21 330 *i* P **Pn** **10 29 59.8 +1.5**
HDC IAML 10 30 40.8
comp=Z,10µm,1.0s
HDC3 Heredia 3 2.21 330 *e* P **Pn** **10 29 59.5 +1.2**
HDC3 Heredia 3 2.21 330 *i* P **Pn** **10 29 59.5 +1.2**
HDC3 IAML 10 30 40.8
comp=Z,10µm,1.0s
BELE Belen 2.22 328 *e* P **Pb** **10 30 00.9 -1.1**
CACAO El Cacao, Vera 2.23 109 *e* P **Pn** **10 29 58.1 -0.3**
CACAO *i* S **Sn** **10 30 28.2 +2.6**
CACAO El Cacao, Vera 2.23 109 *e* P **Pn** **10 29 58.9 +0.5**
JACO JACO, Garabito 2.28 313 **Pn** **10 29 58.3 -0.9**
JACO JACO, Garabito 2.28 313 *i* P **Pn** **10 30 00.0 +0.8**
JACO IAML 10 30 50.6
comp=Z,4µm,1.0s
CRIS3 El Cristo, Coc 2.35 86 ||*e* P **Pn** **10 30 00.3 +0.3**
RIFO Rio Frio, Sara 2.40 337 *i* P **Pn** **10 30 02.8 +1.9**
RIFO IAML 10 30 51.9
comp=Z,5µm,1.0s
CHIT3 Chitre 2.54 93 ||*i* P **Pn** **10 30 03.2 +0.4**
LAFE Finca La Fe, P 2.56 312 *i* P **Pn** **10 30 05.0 +2.0**
LAFE IAML 10 31 04.3
comp=Z,24nm,1.0s
CBL1 Cabuya 2.56 306 *e* P **Pn** **10 30 02.0 -1.0**
CPMI Catarata Coope 2.58 328 *e* P **Pn** **10 30 04.2 +0.6**
CPMI Catarata Coope 2.58 328 *i* P **Pn** **10 30 05.5 +2.0**
CPMI IAML 10 30 51.3
comp=Z,5µm,1.0s
PNME Penonome 2.66 81 ||*e* P **Pn** **10 30 05.4 +1.1**
PNME Penonome 2.66 81 *e* P **Pn** **10 30 05.7 +1.4**

AZU Azuero 2.70 96 ||*e* P **Pn** **10 30 04.9 0.0**
AZU *i* S **Sn** **10 30 39.8 +2.6**
AZU Azuero 2.70 96 *e* P **Pn** **10 30 06.7 +1.8**
SOCE Pocosol 2.80 325 **Pn** **10 30 08.2 +1.9**
SOCE Pocosol 2.80 325 *i* P **Pn** **10 30 08.9 +2.6**
SOCE IAML 10 30 19.1
comp=Z,1µm,1.0s
ACHO3 Achotines, Los 2.86 103 *e* P **Pn** **10 30 07.7 +0.6**
ACHO3 *i* S **Sn** **10 30 42.7 +1.4**
ARE1 Arenal 1 2.92 324 **Pn** **10 30 10.2 +2.3**
JTS Las Juntas de 2.93 319 Pn **Pn** **10 30 08.4 +0.3**
JTS Las Juntas de 2.93 319 Pn Pn 10 30 03.2 -4.9
comp=Z,0.1nm,0.3s,baz=198,slow=16,SNR=2.3
JTS Sn **Sn** **10 30 41.4 -1.6**
comp=Z,84nm,0.3s,baz=203,slow=15,SNR=4.5
JTS Las Juntas de 2.93 319 *e* P **Pn** **10 30 09.6 +1.5**
COVE Coope Vega, Sa 2.97 332 **Pn** **10 30 10.4 +1.8**
COVE Coope Vega, Sa 2.97 332 *i* P **Pn** **10 30 11.2 +2.6**
COVE IAML 10 31 31.0
comp=Z,4µm,1.0s
INDI Punta indio, G 3.05 306 *i* P **Pn** **10 30 10.3 +0.5**
INDI IAML 10 31 26.2
comp=Z,2µm,1.0s
DUNO Dulce Nombre, 3.17 309 **Pn** **10 30 11.2 -0.3**
DUNO Dulce Nombre, 3.17 309 *i* P **Pn** **10 30 12.0 +0.5**
DUNO IAML 10 30 53.5
comp=Z,3µm,1.0s
ZANG Zanguenga, Cho 3.20 74 ||*e* P **Pn** **10 30 13.2 +1.4**
BCIP Isla Barro Col 3.29 71 **Pn** **10 30 14.4 +1.4**
BCIP Isla Barro Col 3.29 71 *e* P **Pn** **10 30 13.1 0.0**
BCIP Isla Barro Col 3.29 71 *e* P **Pn** **10 30 13.5 +0.5**
BCIP Isla Barro Col 3.29 71 *e* P **Pn** **10 30 13.1 0.0**
BCIP Isla Barro Col 3.29 71 *i* P **Pn** **10 30 15.8 +2.8**
BCIP IAML 10 31 29.7
comp=Z,5µm,1.0s
MLIR Monte Lirio 3.30 69 ||*e* P **Pn** **10 30 15.5 +2.3**
ORTG Ortega, Santa 3.33 313 Pn **Pn** **10 30 14.1 +0.4**
ORTG Ortega, Santa 3.33 313 *i* P **Pn** **10 30 15.1 +1.4**
ORTG IAML 10 31 28.7
comp=Z,1µm,1.0s
SAJU San Juanillo, 3.34 306 *i* P **Pn** **10 30 14.3 +0.6**
SAJU IAML 10 31 35.2
comp=Z,2µm,1.0s
FRIJ El Hiral 3.41 70 *e* P **Pn** **10 30 16.6 +1.9**
TABO3 Taboga, Panama 3.46 78 *e* P **Pn** **10 30 19.6 +4.1**
UPA Univ. de Panam 3.52 75 ||*e* P **Pn** **10 30 17.4 +1.2**
UPA Univ. de Panam 3.52 75 *e* P **Pb** **10 30 22.3 -1.8**
HZTE Horizontes, Gu 3.67 316 **Pn** **10 30 20.4 +2.0**
HZTE Horizontes, Gu 3.67 316 *i* P **Pn** **10 30 20.3 +2.0**
HZTE IAML 10 32 03.6
comp=Z,2µm,1.0s
BLUN Bluefields 3.97 349 *i* P **Pn** **10 30 22.6 +0.2**
BLUN IAML 10 30 25.4
comp=Z,1µm,1.0s
CNTA3 Canitas, Panam 4.20 74 *e* P **Pn** **10 30 27.3 +1.7**
ESPN Las Esperanzas 4.28 342 **Pn** **10 30 27.1 +0.3**
ESPN Las Esperanzas 4.28 342 *i* P **Pn** **10 30 29.0 +2.3**
ESPN IAML 10 31 46.7
comp=Z,730nm,1.0s
JAPN Al SSO del Vol 4.33 322 *i* P **Pn** **10 30 29.6 +2.2**
JAPN IAML 10 30 44.9
comp=Z,320nm,1.0s
ACON Acoyapa 4.42 331 **Pn** **10 30 29.2 +0.6**
ACON Acoyapa 4.42 331 *e* P **Pn** **10 30 31.1 +2.4**
ACON Acoyapa 4.42 331 *e* P **Pn** **10 30 28.9 +0.3**
ACON Acoyapa 4.42 331 *i* P **Pn** **10 30 31.0 +2.4**
ACON IAML 10 30 39.1
comp=Z,890nm,1.0s
TOTI Torti 4.70 79 ||*e* P **Pn** **10 30 33.7 +1.3**
UPD2 Meteti 4.94 84 ||*e* P **Pn** **10 30 36.5 +0.8**
UPD2 Meteti 4.94 84 *e* P **Pn** **10 30 37.0 +1.2**
BOAB BOACO BROADBAN 5.08 329 Pn **Pn** **10 30 39.0 +1.4**
BOAB BOACO BROADBAN 5.08 329 *i* P **Pn** **10 30 39.0 +1.4**
BOAB IVmB_BB 10 30 54.9
comp=Z,4µm,1.0s
BOAB IAmb IAmb 10 31 07.9
comp=Z,330nm,0.9s
BOAB IAML 10 32 59.6
comp=Z,470nm,1.0s
PTAC Punta Ardita, 5.21 100 *e* P **Pn** **10 30 39.4 -0.1**
PTAC Punta Ardita, 5.21 100 *e* P **Pn** **10 30 38.9 -0.6**
COPN Copaltepe 5.40 319 *i* P **Pn** **10 30 43.2 +1.1**
PRVC Isla de Provid 5.49 17 *e* P **Pn** **10 30 41.0 -2.3**
PRVC Isla de Provid 5.49 17 *e* P **Pn** **10 30 41.8 -1.5**
CAPC Capurgana 5.60 84 *e* P **Pn** **10 30 49.3 +4.5**
MATN Matagalpa 5.62 329 **Pn** **10 30 47.0 +1.9**
SOLC Bahia Solano 5.83 108 *e* P **Pn** **10 30 45.7 -2.3**
CRIN San Cristobal 6.08 319 **Pn** **10 30 53.0 +1.4**
CRIN San Cristobal 6.08 319 *e* P **Pn** **10 30 54.5 +2.9**
APAC Apartado, Choc 6.34 91 *e* P **Pn** **10 30 58.4 +3.4**
DBBC Dabeiba 6.80 99 *e* P **Pn** **10 31 02.6 +1.2**
CBOC Ciudad Bolivar 7.26 107 *e* P **Pn** **10 31 07.2 -0.7**
TGUH Tegucigalpa,Un 7.28 325 Pn **Pn** **10 31 09.9 +1.9**
TGUH Tegucigalpa,Un 7.28 325 *e* P **Pn** **10 31 12.1 +4.1**
PLMC San Jos del P 7.37 115 *e* P **Pn** **10 31 10.1 +0.9**
UREC San Jos de Ur 7.39 92 ||*e* P **Pn** **10 31 10.6 +1.2**
UREC San Jos de Ur 7.39 92 *e* P **Pn** **10 31 10.1 +0.7**
TUMC Tumaco 7.53 146 *e* P **Pn** 10 31 15.9 +4.6
YOTC Yotoco, Valle 7.76 121 *e* P **Pn** **10 31 13.0 -1.5**
SJCC San Jacinto, C 7.91 76 *e* P **Pn** **10 31 16.9 +0.2**
GUY2C Guyana, Caldas 8.08 110 *e* P **Pn** **10 31 21.4 +2.0**
BBAC Balboa, Cauca 8.30 136 *e* P **Pn** **10 31 24.3 +2.1**
POPC Popayan, Colom 8.35 131 *e* P **Pn** **10 31 24.7 +1.9**
PTBC PUERTO BERRIO, 8.60 100 *e* P **Pn** **10 31 29.1 +3.1**
ORTC Ortega, Tolima 8.74 118 *e* P **Pn** **10 31 31.6 +3.5**
ARGC Ariguani, Magd 8.81 78 *e* P **Pn** **10 31 29.6 +0.7**
GCUF Volcan Galeras 8.83 140 *e* P **Pn** **10 31 29.6 0.0**
CRUC La Cruz 8.83 137 *e* P **Pn** **10 31 30.6 +1.0**
MTO3 Montecristo 8.86 316 **Pn** **10 31 31.4 +1.6**
TULM Tulcn-Chalpat 8.97 144 **Pn** **10 31 35.5 +3.9**
TULM Tulcn-Chalpat 8.97 144 *e* P **Pn** 10 31 37.4 +5.9
OTAV Otavalo 9.01 150 Pn **Pn** **10 31 33.8 +1.7**
OTAV Otavalo 9.01 150 *e* P **Pn** **10 31 32.5 +0.4**
IMBA Imbabura, San 9.11 148 **Pn** **10 31 36.8 +3.4**
SPBC San Pablo de B 9.17 105 *e* P **Pn** **10 31 36.0 +2.0**
ROSC El Rosal 9.19 110 Pn **Pn** 10 31 40.5 +5.9
ROSC El Rosal 9.19 110 Pn **Pn** **10 31 31.5 -3.0**
comp=Z,0.9nm,0.3s,baz=312,slow=21,SNR=1.8
ROSC LR LR 10 34 42.0
comp=Z,1µm,21.6s,baz=5.0,slow=35
comp=Z,3.0nm,0.3s
ROSC El Rosal 9.19 110 *e* P **Pn** 10 31 40.4 +5.8
GARC Garzon, Huila 9.48 128 *e* P **Pn** **10 31 39.9 +1.5**
OCAC Ocana 9.57 88 *e* P **Pn** **10 31 40.4 +0.9**
BARC Barichara 9.83 98 *e* P **Pn** **10 31 47.2 +4.0**
SLOR San Lorenzo - 9.83 153 **Pn** **10 31 46.0 +2.6**
VILC Villavicencio, 10.04 113 *e* P **Pn** **10 31 49.1 +3.1**
PAMC Pamplona, Colo 10.22 93 *e* P **Pn** **10 31 51.1 +2.4**
CHSH Refugio Sur-Vo 10.36 157 **Pn** 10 31 55.4 +4.6
COHC Cochancay 11.12 160 **Pn** **10 32 02.6 +2.0**
COHC Cochancay 11.12 160 *e* P **Pn** **10 32 00.4 -0.3**
TAMC Tame, Arauca 11.22 98 *e* P **Pn** **10 32 03.8 +1.7**
PTLC Puerto Leguiza 11.33 134 *e* P **Pn** **10 32 06.5 +2.9**
ARNL Arenillas 11.92 166 **Pn** **10 32 14.0 +2.5**
BOSC San Juan Bosco 12.03 158 Pn **Pn** 10 32 18.3 +5.1
SDV Santo Domingo 12.24 85 Pn **Pn** **10 32 19.6 +3.5**
SDV Santo Domingo 12.24 85 Pn **Pn** **10 32 14.6 -1.5**
comp=Z,0.2nm,0.3s,baz=348,slow=7.6,SNR=3.4
SDV Sn **Sn** **10 34 32.6 +0.2**
comp=Z,0.3nm,0.3s,baz=336,slow=20,SNR=1.6
SDV LR LR 10 37 42.7
comp=Z,3µm,20.8s,baz=262,slow=40
comp=Z,4.2nm,0.8s
SDV Santo Domingo 12.24 85 *e* P **Pn** **10 32 20.1 +4.0**
MCRA Macar, Loja 12.74 166 **Pn** **10 32 24.6 +1.8**
MCRA Macar, Loja 12.74 166 *e* P **Pn** **10 32 22.2 -0.6**
SOR Soroa 14.62 360 P **P** **10 32 56.1 +1.3**
CMIG Matias Romero 14.66 309 Pn **Pn** **10 32 45.4 -3.6**
comp=Z,0.6nm,0.3s,baz=35,slow=15,SNR=0.8
BAUV El Baul 14.80 86 **Pn** **10 32 51.5 +0.5**
ATAH Atahualpa 15.80 163 Pn **Pn** **10 33 00.2 -4.3**
comp=Z,0.2nm,0.3s,baz=336,slow=9.7,SNR=1.9
ATAH LR LR 10 38 24.7
comp=Z,4µm,20.8s,baz=334,slow=35
PCRV Puerto La Cruz 18.23 82 LR LR 10 42 07.1
comp=Z,4µm,21.7s,slow=41
SJG San Juan 19.17 57 LR LR 10 40 36.9
comp=Z,2µm,19.7s,baz=228,slow=35
GCPR Guaynabo City 19.32 57 P **Pn** **10 33 51.2 +3.3**
NNA Nana 20.86 163 P **P** **10 34 01.2 -2.4**
comp=Z,27nm,0.9s,baz=358,slow=9.3,SNR=7.1
BOAV Boa Vista 23.06 103 P **P** **10 34 29.0 +1.8**

ZAIG Zacatecas 23.82 310 P **P** **10 34 36.5 +1.6**
ZAIG IAmb IAmb 10 34 48.1
comp=Z,45nm,1.9s
ETMB Extrema 24.40 136 P **P** **10 34 40.6 +0.5**
ETMB IAmb IAmb 10 34 47.7
comp=Z,25nm,1.3s
154A Montrose 24.41 360 P **P** **10 34 40.9 +0.9**
152A Waverly Hall 24.51 356 P **P** **10 34 41.4 +0.5**
MACA Manacapuru-AM 24.89 116 P **P** **10 34 44.7 +0.1**
146A Union 25.07 348 P **P** **10 34 47.6 +1.7**
LRAL Lakeview Retre 25.10 352 P **P** **10 34 48.5 +2.3**
LRAL IAmb IAmb 10 35 00.2
comp=Z,40nm,1.2s
GOGA Godfrey 25.20 359 P **P** **10 34 47.9 +0.8**
GOGA IAmb IAmb 10 34 56.9
comp=Z,25nm,1.2s
833A Chaparral WMA, 25.40 324 P **P** **10 34 50.6 +1.6**
833A IAmb IAmb 10 35 03.3
comp=Z,40nm,1.4s
Y52A Lilburn 25.67 358 P **P** **10 34 52.8 +1.4**
Y52A IAmb IAmb 10 35 10.9
comp=Z,32nm,1.1s
SAML Samuel 25.99 130 P **P** **10 34 55.8 +1.3**
SAML IAmb IAmb 10 35 05.4
comp=Z,30nm,1.4s
SAML Samuel 25.99 130 *e* P **P** **10 34 55.6 +1.1**
HODGE Hodges 26.03 1 P **P** **10 34 55.8 +1.2**
HODGE IAmb IAmb 10 35 20.8
comp=Z,20nm,1.2s
435B Jarrell 26.39 331 P **P** **10 35 00.8 +2.8**
435B IAmb IAmb 10 35 06.9
comp=Z,29nm,0.9s
UALR University of 27.92 343 P **P** **10 35 11.4 -0.3**
MIAR Mount Ida 28.08 341 P **P** **10 35 13.3 +0.2**
MIAR IAmb IAmb 10 35 20.9
comp=Z,16nm,1.3s
WHAR Wooly Hollow 28.39 344 P **P** **10 35 16.0 +0.1**
WHAR IAmb IAmb 10 35 23.4
comp=Z,10nm,0.8s
TXAR Lajitas Array 28.72 320 P **P** **10 35 15.5 -3.5**
comp=Z,0.1nm,0.3s,baz=134,slow=5.2,SNR=1.3
TXAR LR LR 10 46 59.5
comp=Z,188nm,20.1s,baz=112,slow=37
comp=Z,0.1nm,0.3s
LCAR Lake Charles 28.84 346 P **P** **10 35 20.1 +0.3**
FCAR Ozark Folk Cen 28.91 345 P **P** **10 35 19.5 -1.0**
FCAR IAmb IAmb 10 35 32.1
comp=Z,27nm,1.6s
H06E1 SOCORRO T-PHAS 29.14 294 T T 11 05 33.7
SNR=29
S51A Beattyville 29.43 359 P **P** **10 35 24.8 -0.2**
S51A IAmb IAmb 10 35 28.2
comp=Z,11nm,0.9s
R49A Shelbyville 30.14 357 P **P** **10 35 31.4 +0.1**
R49A IAmb IAmb 10 35 44.6
comp=Z,29nm,1.2s
MGMO Mountain Grove 30.14 345 P **P** **10 35 31.7 +0.3**
MGMO IAmb IAmb 10 35 41.2
comp=Z,30nm,1.4s
WCI Wyandotte Cave 30.16 355 P **P** **10 35 31.2 -0.3**
WCI IAmb IAmb 10 35 41.3
comp=Z,16nm,1.1s
MDP Montagnes des 30.28 94 LR LR 10 49 15.0
comp=Z,1µm,19.6s,baz=281,slow=39
VHRN San Horn 30.54 321 P **P** **10 35 36.6 +1.4**
QUOK Quay 30.64 338 P **P** **10 35 37.2 +1.5**
QUOK IAmb IAmb 10 35 42.0
comp=Z,19nm,1.2s
CCM Cathedral Cave 30.76 347 P **P** **10 35 36.7 -0.1**
CCM IAmb IAmb 10 35 42.8
comp=Z,31nm,1.6s
Q51A Peebles 30.81 359 P **P** **10 35 36.7 -0.5**
Q51A IAmb IAmb 10 35 39.6
comp=Z,13nm,0.9s
S39A Bolivar 30.93 344 P **P** **10 35 37.2 -1.1**
P48A Milroy 31.32 356 P **P** **10 35 41.3 -0.4**
P48A IAmb IAmb 10 35 54.5
comp=Z,25nm,1.2s
ACSO Alum Creek Sta 32.01 360 P **P** **10 35 48.3 +0.5**
ACSO IAmb IAmb 10 35 49.8
comp=Z,18nm,0.9s
SIV San Ignacio 32.30 138 LR LR 10 49 34.0
comp=Z,678nm,19.0s,baz=322,slow=38
P38A Dawn 32.80 345 P **P** **10 35 55.6 +0.8**
P38A IAmb IAmb 10 35 59.8
comp=Z,16nm,1.4s
N41A Harden Midland 33.23 349 P **P** **10 35 59.2 +0.7**
N41A IAmb IAmb 10 36 06.0
comp=Z,19nm,1.1s
LVC Limon Verde 33.48 156 LR LR 10 50 48.8
comp=Z,414nm,20.8s,baz=320,slow=39
N38A Joes South For 33.83 346 P **P** **10 36 03.8 0.0**
L40A Anamosa 34.61 349 P **P** **10 36 11.8 +1.3**
TUC Tucson 35.31 317 P **P** **10 36 18.6 +1.7**
SADO Sadowa 36.70 5 LR LR 10 51 48.5
comp=Z,883nm,19.3s,baz=210,slow=36
AC02 Maricunga 37.22 159 P **P** **10 36 35.2 +1.6**
AC02 IAmb IAmb 10 36 38.3
comp=Z,15nm,1.2s
K30B Basset 37.43 340 P **P** **10 36 35.5 +0.8**
K30B IAmb IAmb 10 36 42.1
comp=Z,17nm,0.9s
ECSD EROS Data Cent 37.46 344 P **P** **10 36 34.6 -0.3**
ECSD IAmb IAmb 10 37 21.9
comp=Z,24nm,1.7s
113A Mohawk Valley, 37.63 315 P **P** **10 36 39.1 +2.6**
113A IAmb IAmb 10 36 41.1
comp=Z,30nm,1.6s
Y14A Wickenburg 37.78 317 P **P** **10 36 39.6 +1.8**
SPMN Marine on St. 37.97 349 P **P** **10 36 39.2 +0.1**
F36A Milaca 38.72 348 P **P** **10 36 45.8 +0.3**
SRU San Rafael Swe 39.57 326 P **P** **10 36 53.3 +0.4**
PFO Pinyon Flats O 39.98 314 LR LR 10 55 19.7
comp=Z,373nm,18.1s,baz=136,slow=39
V12A Nelson 40.05 318 P **P** **10 36 57.9 +1.0**
SHPR Sheep Range 40.71 319 P **P** **10 37 04.7 +2.3**
LMQ La Malbaie 40.77 13 P **P** **10 37 03.5 +0.9**
LMQ IAmb IAmb 10 37 04.9
comp=Z,27nm,1.5s
GSC Goldstone, Bar 41.13 316 P **P** **10 37 06.6 +0.8**
H03N2 Juan Fernandez 41.48 175 T T 11 21 12.3
baz=354,slow=76,SNR=55
H03N1 Juan Fernandez 41.48 175 T T 11 21 15.4
baz=354,slow=76,SNR=36
H03N3 Juan Fernandez 41.49 175 T T 11 21 14.3
baz=354,slow=76,SNR=38
TPNV Topopah Spring 41.68 319 P **P** **10 37 12.4 +2.0**
TPNV IAmb IAmb 10 37 16.9
comp=Z,35nm,1.9s
PDAR Pinedale Array 41.70 330 P **P** **10 37 07.3 -3.2**
comp=Z,0.6nm,1.0s,baz=199,slow=18,SNR=2.6
PDAR LR LR 10 57 05.8
comp=Z,311nm,21.9s,baz=139,slow=40
comp=Z,0.6nm,1.0s
HWUT Hardware Ranch 41.88 327 P **P** **10 37 12.7 +0.7**
BDFB Brasilia 41.90 124 P P 10 37 07.9 -4.5
comp=Z,3.1nm,1.1s,baz=270,slow=5.1,SNR=1.8
BDFB LR LR 10 55 08.6
comp=Z,980nm,19.2s,baz=315,slow=37
comp=Z,3.1nm,1.1s
R11B Troy Canyon, C 42.08 321 P **P** **10 37 15.5 +1.8**
BGU Big Grassy Mou 42.21 326 P **P** **10 37 16.1 +1.4**
CPUP Villa Florida 42.32 145 P P 10 37 09.3 -6.2
comp=Z,1.1nm,0.9s,baz=331,slow=12,SNR=1.6
comp=Z,1.1nm,0.9s
REDW Red Top Meadow 42.78 330 P **P** **10 37 20.3 +1.0**
TPH Tonopah 42.96 319 P **P** **10 37 20.9 +0.1**
MOOW Moose Ponds 43.01 330 P **P** **10 37 20.5 -0.7**
DSP Deep Springs 43.05 318 P **P** **10 37 22.8 +1.5**
LAO LASA Array 43.31 337 P **P** **10 37 24.5 +1.2**
RPN Rapa Nui 43.33 215 LR LR 10 50 44.0
comp=Z,2µm,21.7s,baz=24,slow=30
ELK Elko 43.36 324 P **P** **10 37 25.9 +1.8**
ULM Lac du Bonnet 43.38 348 P **P** **10 37 24.1 +0.3**
ULM IAmb IAmb 10 37 28.4
comp=Z,26nm,1.4s
ULM Lac du Bonnet 43.38 348 P **P** **10 37 20.7 -3.1**
comp=Z,1.2nm,0.7s,baz=152,slow=12,SNR=2.5
ULM LR LR 10 56 56.2
comp=Z,300nm,18.8s,baz=142,slow=38
comp=Z,1.2nm,0.7s
NVAR Mina Array Bea 43.86 319 P **P** **10 37 28.0 -0.1**
NVAR Mina Array Bea 43.86 319 P P 10 37 23.6 -4.5
comp=Z,0.1nm,0.3s,baz=134,slow=6.4,SNR=2.0
NVAR LR LR 10 56 37.1

comp=Z,514nm,20.5s,baz=132,slow=38
comp=Z,0.1nm,0.3s
LHV Little Huntoon 43.89 319 P **P** **10 37 28.2 +0.2**
LHV IAmb IAmb 10 37 44.4
comp=Z,20nm,1.4s
MDPB Devils Postpil 43.93 318 P **P** **10 37 30.1 +1.3**
DGMT Dagmar 44.06 340 P **P** **10 37 29.9 +0.6**
DGMT IAmb IAmb 10 37 32.4
comp=Z,14nm,1.0s
BMN Battle Mountai 44.35 322 P **P** **10 37 33.5 +1.6**
BMN IAmb IAmb 10 37 41.5
comp=Z,14nm,1.1s
HLID Hailey 44.75 327 P **P** **10 37 36.2 +1.0**
YERR Yerington 44.78 319 P **P** **10 37 37.3 +1.8**
YERR IAmb IAmb 10 38 02.4
comp=Z,16nm,1.5s
PAHR Pah Rah Range 45.27 320 P **P** **10 37 40.8 +1.5**
PAHR IAmb IAmb 10 37 45.8
comp=Z,32nm,1.8s
ITQB Itaqui 45.30 147 P **P** **10 37 39.7 +0.2**
MFID Camas Ranch 45.42 326 P **P** **10 37 40.9 +0.5**
ITAB Concordia 46.11 141 P **P** **10 37 47.3 +1.5**
WVOR Wild Horse Val 46.40 323 P **P** **10 37 49.5 +1.3**
WVOR IAmb IAmb 10 37 57.1
comp=Z,10nm,1.1s
ORV Oroville 46.56 318 P **P** **10 37 51.0 +1.7**
ORV IAmb IAmb 10 37 53.5
comp=Z,16nm,1.3s
PLID Pearl Lake 46.62 328 P **P** **10 37 49.5 -0.5**
BMO Blue Mountains 47.16 327 P **P** **10 37 53.3 -0.8**
BMO IAmb IAmb 10 38 37.6
comp=Z,13nm,2.0s
F10A Beach Ranch, E 47.86 328 P **P** **10 37 59.4 0.0**
F10A IAmb IAmb 10 38 38.0
comp=Z,11nm,1.4s
SCHQ Schefferville 48.37 12 P **P** **10 38 02.9 -0.2**
SCHQ IAmb IAmb 10 38 04.2
comp=Z,7.0nm,0.9s
SCHQ Schefferville 48.37 12 P **P** **10 38 00.9 -2.2**
comp=Z,6.2nm,0.9s,baz=171,slow=7.4,SNR=7.6
SCHQ LR LR 11 00 20.0
comp=Z,863nm,18.1s,baz=206,slow=38
comp=Z,6.2nm,0.9s
YBH Yreka Blue Hor 48.50 320 LR LR 10 59 43.7
comp=Z,294nm,21.0s,baz=147,slow=38
FFC Flin Flon 48.93 345 P **P** **10 38 07.4 0.0**
FFC IAmb IAmb 10 38 44.2
comp=Z,20nm,1.9s
RCBR Riachuelo 48.95 105 LR LR 11 00 47.7
comp=Z,948nm,18.5s,baz=304,slow=38
NEW Newport 49.34 330 LR LR 11 03 08.5
comp=Z,262nm,18.4s,baz=128,slow=41
HOOD Mount Hood Mea 49.88 325 P **P** **10 38 16.5 +1.5**
PLCA Paso Flores 49.91 168 P **P** **10 38 14.1 -1.1**
comp=Z,4.3nm,1.1s,baz=336,slow=7.5,SNR=7.2
PLCA LR LR 10 55 20.7
comp=Z,214nm,20.2s,baz=350,slow=32
FCC Fort Churchill 51.27 353 P **P** **10 38 25.6 +0.6**
FCC IAmb IAmb 10 38 34.0
comp=Z,8.8nm,0.9s
FRB Frobisher Bay 56.52 8 LR LR 11 03 51.8
comp=Z,961nm,18.6s,baz=198,slow=36
BBB Bella Bella 57.30 329 LR LR 11 05 27.9
comp=Z,187nm,22.0s,baz=132,slow=38
YKA Yellowknife Ar 58.99 343 P **P** **10 39 17.4 -3.3**
comp=Z,1.0nm,1.0s,baz=135,slow=7.3,SNR=14
YKA LR LR 11 07 55.4
comp=Z,429nm,18.7s,baz=148,slow=39
comp=Z,1.0nm,1.0s
TAOE Nuku Hiva Isla 59.39 255 *e*S **S** **10 47 32.4 -1.0**
comp=Z,238nm,26.1s
TAOE *e*LR LR 10 56 48.7
comp=Z,591nm,26.7s
DLBC Dease Lake 61.72 334 LR LR 11 08 57.2
comp=Z,406nm,18.7s,baz=128,slow=38
SFJD Kangerlussuaq 62.79 14 LR LR 11 07 02.0
comp=Z,453nm,21.2s,baz=217,slow=36
BBTS Babate 65.29 78 LR LR 11 10 02.0
comp=Z,116nm,18.3s,baz=239,slow=37
RES Resolute Bay 66.91 357 P **P** **10 40 13.2 -0.1**
RES Resolute Bay 66.91 357 LR LR 11 09 11.6
comp=Z,522nm,21.5s,baz=177,slow=36
ICESG Greenland Ices 67.11 16 *i* P **P** **10 40 13.1 -2.0**
ICESG IAmb IAmb 10 40 15.0
comp=Z,5.2nm,0.9s
I30M Mount Dempster 67.94 339 P **P** **10 40 20.8 +0.7**
I30M IAmb IAmb 10 40 30.3
comp=Z,7.2nm,1.1s
J29N Klondike Camp 68.24 337 P **P** **10 40 22.4 +0.4**
J29N IAmb IAmb 10 40 30.8
comp=Z,24nm,0.3s
INK Inuvik 68.67 342 P **P** **10 40 25.4 +0.9**
INK Inuvik 68.67 342 LR LR 11 14 18.5
comp=Z,805nm,18.1s,baz=179,slow=39
A36M Sachs Harbour 68.85 347 P **P** **10 40 25.3 -0.2**
BCAR Beaver Creek A 69.02 335 P **P** **10 40 27.9 +1.0**
L27K Beaver Creek, 69.04 335 P **P** **10 40 27.7 +0.7**
L27K IAmb IAmb 10 40 38.2
comp=Z,11nm,1.2s
SUMG Summit 69.76 13 *i* P **P** **10 40 30.0 -1.7**
SUMG IAmb IAmb 10 40 32.6
comp=Z,4.5nm,0.8s
J26L Joseph Creek 70.34 336 P **P** **10 40 35.8 +0.8**
F28M Old Crow 70.35 340 P **P** **10 40 35.6 +0.7**
I26K Coal Creek Min 70.51 337 P **P** **10 40 37.2 +1.3**
PPT Papeete 70.53 248 LR LR 11 03 53.8
comp=Z,418nm,18.5s,baz=87,slow=30
PPT2 Papeete2 70.54 248 *e*S **S** **10 49 46.3 -4.1**
comp=Z,173nm,26.0s
PPT2 *e*SS **SS** **10 54 20.3 -1.8**
comp=Z,136nm,31.5s
PPT2 *e*LR LR 11 01 58.5
comp=Z,476nm,26.8s
PPT2 *e*LR LR 11 01 58.6
comp=Z,370nm,27.5s
BORG Borgarnes 70.86 24 LR LR 11 08 38.3
comp=Z,525nm,19.9s,baz=228,slow=33
NEEM North Greenlan 71.32 7 *i* P **P** **10 40 39.4 -1.6**
NEEM IAmb IAmb 10 40 42.2
comp=Z,8.0nm,0.7s
HDA Harding Lake 71.66 336 P **P** **10 40 43.7 +0.8**
IL31 71.77 336 P **P** **10 40 44.7 +1.2**
ILAR Eielson Array 71.77 336 P **P** **10 40 45.0 +1.4**
ILAR Eielson Array 71.77 336 P **P** **10 40 41.1 -2.4**
comp=Z,1.9nm,1.1s,baz=117,slow=4.3,SNR=9.6
ILAR LR LR 11 15 06.5
comp=Z,223nm,20.0s,baz=94,slow=38
comp=Z,1.9nm,1.1s
TBI Tubuai 72.06 242 *e*P **P** **10 40 46.5 +0.5**
comp=Z,513nm,37.2s
TBI Tubuai 72.06 242 *e*SS SS 10 54 42.7 -2.4
comp=Z,589nm,30.8s
TBI *e*LR LR 11 02 51.3
comp=Z,2µm,25.0s
RND Reindeer 72.12 334 P **P** **10 40 46.9 +1.1**
KDAK Kodiak Island 72.37 328 LR LR 11 15 41.2
comp=Z,179nm,19.8s,baz=120,slow=38
E25K Arctic Village 72.52 340 P **P** **10 40 48.9 +0.9**
E25K IAmb IAmb 10 40 55.8
comp=Z,13nm,1.5s
NEA2 Nenana 72.59 336 P **P** **10 40 49.6 +1.1**
NEA2 IAmb IAmb 10 40 50.9
comp=Z,22nm,1.7s
I23K Minto, Yukon-K 72.88 336 P **P** **10 40 51.6 +1.4**
D25K Kavik River 73.25 341 P **P** **10 40 52.6 +0.2**
D25K IAmb IAmb 10 41 01.7
comp=Z,9.0nm,0.9s
PMSA Palmer Station 74.03 172 LR LR 11 08 08.1
comp=Z,101nm,19.3s,baz=338,slow=32
G21K Allakaket 74.91 337 P **P** **10 41 02.9 +0.9**
G21K IAmb IAmb 10 41 07.8
comp=Z,20nm,1.4s
F21K Alatna River 75.08 338 P **P** **10 41 04.6 +1.5**
F21K IAmb IAmb 10 41 06.4
comp=Z,10nm,1.1s
MDT Midelt 75.91 58 LR LR 11 09 35.0
comp=Z,221nm,21.8s,baz=322,slow=32
ESDC Sonseca Array 76.44 51 P **P** **10 41 12.0 +0.6**
ESDC IAmb IAmb 10 41 15.1
comp=Z,21nm,1.8s
ESDC Sonseca Array 76.44 51 P **P** **10 41 10.2 -1.3**
comp=Z,2.7nm,0.8s,baz=276,slow=5.7,SNR=15
ESDC LR LR 11 10 39.8
comp=Z,413nm,19.3s,baz=268,slow=32
comp=Z,2.7nm,0.8s
B20K Meade River 77.05 340 P **P** **10 41 15.0 +0.8**
B20K IAmb IAmb 10 41 21.4
comp=Z,8.7nm,1.2s
DBIC Dimbokro 77.38 85 P **P** **10 41 18.1 +1.0**
DBIC Dimbokro 77.38 85 P **P** **10 41 15.6 -1.5**
comp=Z,2.1nm,0.7s,baz=281,slow=6.1,SNR=2.1
comp=Z,2.1nm,0.7s
C19K Lookout Ridge 77.72 339 P **P** **10 41 19.2 +1.2**
C19K IAmb IAmb 10 41 28.9
comp=Z,21nm,1.6s
F15K North Star Dit 79.25 335 P **P** **10 41 27.5 +1.1**
F15K IAmb IAmb 10 41 30.1
comp=Z,21nm,1.5s
C16K Lisburne Hills 79.71 338 P **P** **10 41 29.6 +0.8**
RAR Rarotonga 80.75 247 LR LR 11 09 42.8
comp=Z,179nm,20.3s,baz=28,slow=30
TOA0 Torodi Ar. Sit 83.05 78 P **P** **10 41 48.7 +1.0**
TORD Torodi Ar. Bea 83.05 78 P **P** **10 41 46.0 -1.6**
comp=Z,0.5nm,0.6s,baz=330,slow=3.3,SNR=3.6
TORD LR LR 11 20 38.8
comp=Z,109nm,19.0s,baz=300,slow=37
SPITS Spitsbergen Ar 84.06 12 LR LR 11 21 44.7
comp=Z,377nm,18.4s,baz=237,slow=37
NOA NORSAR Array B 85.02 29 LR LR 11 17 46.0
comp=Z,154nm,19.2s,baz=270,slow=34
DAVOX Davos/Dischmat 86.13 43 LR LR 11 13 48.6
comp=Z,323nm,21.7s,baz=256,slow=31
HFS Hagfors 86.37 30 LR LR 11 20 58.1
comp=Z,253nm,18.5s,baz=287,slow=36
KEST Kesra 87.22 54 LR LR 11 16 10.0
comp=Z,135nm,21.5s,baz=7.5,slow=32
GERES GERESS Array B 88.35 41 LR LR 11 15 51.9
comp=Z,507nm,20.8s,baz=282,slow=32
ARCES ARCESS Array B 88.83 19 LR LR 11 22 59.4
comp=Z,205nm,18.3s,baz=270,slow=36
VAE Valguarnera 90.96 52 LR LR 11 16 42.0
comp=Z,464nm,21.9s,baz=284,slow=31
SHEM Shemya Is, Ala 91.36 324 LR LR 11 23 24.4
comp=Z,49nm,21.9s,baz=103,slow=36
FINES FINESS Array B 91.88 27 LR LR 11 18 31.5
comp=Z,312nm,22.0s,baz=276,slow=32
MLR Muntele Rosu 97.27 42 LR LR 11 24 38.9
comp=Z,363nm,18.9s,baz=286,slow=34
AKASG Malin Array Be 97.48 36 LR LR 11 24 25.4
comp=Z,337nm,20.0s,baz=274,slow=34
SEY Seymchan 97.65 338 LR LR 11 33 23.9
comp=Z,362nm,18.5s,baz=18,slow=39
QSPA South Pole Qui 98.08 180 LR LR 11 18 25.0
comp=Z,132nm,20.3s,baz=150,slow=30
DZM Mont Dzumac 112.02 250 *e*LR LR 11 21 11.8
comp=Z,129nm,28.0s
HEH HeiHe 116.18 339 *e*PKP **PKPdf** **10 48 10.7 +5.9**
KURBB Kurchatov Arra 119.37 13 PKP **PKPdf** **10 48 07.5 -3.4**
comp=Z,0.3nm,0.3s,baz=297,slow=6.1,SNR=2.6
MDJ Mudanjiang 119.88 334 PKP **PKiKP** **10 48 14.2 +2.0**
MDJ SS SS 11 06 04.5 +5.3
MDJ AMB AMB
comp=Z,290nm,3.9s
SONM Songino Array 123.71 352 PKP **PKPdf** **10 48 15.8 -3.7**
comp=Z,0.2nm,0.4s,baz=96,slow=1.4,SNR=3.5
MKAR Makanchi Array 123.81 12 PKP **PKPdf** **10 48 17.2 -2.5**
comp=Z,0.1nm,0.4s,baz=47,slow=3.0,SNR=2.0
KSRS Korea Array 126.26 330 PKP **PKPdf** **10 48 20.0 -4.6**
comp=Z,1.5nm,1.0s,baz=351,slow=2.0,SNR=2.1
WMQ Urumqi 127.65 9 *e*PKP **PKiKP** **10 48 28.5 +0.8**
WMQ LR LR
comp=Z,160nm,18.3s
WMQ LR LR
comp=Z,530nm,23.9s
HHC Hu-ho-hao-te 129.50 346 *e*PKP **PKPdf** **10 48 28.3 -2.5**
HHC LR LR
comp=Z,240nm,19.1s
HHC LR LR
comp=Z,200nm,19.9s
HHC LR LR
comp=Z,310nm,17.6s
GTA Gaotai 132.67 357 PKP **PKiKP** **10 48 38.7 +0.7**
GTA LR LR
comp=Z,260nm,20.4s
GTA LR LR
comp=Z,220nm,19.3s
GTA LR LR
comp=Z,350nm,20.7s
NJ2 Nanjing 134.97 333 *e*PKP **PKPdf** **10 48 42.0 +0.8**
LZH Lanzhou 135.60 352 *e*PKP **PKiKP** **10 48 46.2 +2.1**
LZH LR LR
comp=Z,460nm,19.6s
LZH LR LR
comp=Z,290nm,16.5s
LZH LR LR
comp=Z,500nm,19.1s
CD2 Chengdu 140.69 351 PKP **PKPdf** **10 48 51.6 -0.3**
ASAR Alice Springs 141.44 242 PKP **PKPdf** **10 48 47.3 -6.1**
comp=Z,0.9nm,0.7s,baz=119,slow=3.7,SNR=12
WRA Warramunga Arr 142.02 248 PKP **PKPdf** **10 48 48.8 -5.6**
comp=Z,3.5nm,1.0s,baz=102,slow=2.9,SNR=5.5
PZH PanZhiHua 145.31 353 PKPbc **PKPbc** **10 48 59.5 -0.4**
PZH PP **PP** **10 52 23.8 +6.0**
PZH AMB AMB
comp=Z,120nm,6.3s
PZH LR LR
comp=Z,200nm,19.6s
PZH LR LR
comp=Z,170nm,18.0s
PZH LR LR
comp=Z,200nm,21.6s
KMI Kunming 146.52 351 ⇑PKPbc **PKPdf** **10 49 02.0 -0.5**
KMI LR LR
comp=Z,280nm,20.8s
KMI LR LR
comp=Z,240nm,15.4s
KMI LR LR
comp=Z,300nm,21.0s
TNCH TengChong 147.05 357 PKPbc **PKPdf** **10 49 01.6 -1.7**
TNCH PP **PP** **10 52 31.8 +3.7**
TNCH AMB AMB
comp=Z,170nm,5.3s
TNCH LR LR
comp=Z,340nm,21.7s
TNCH LR LR
comp=Z,410nm,17.4s
TNCH LR LR
comp=Z,350nm,20.5s
QIZ Qiongzhong 150.24 335 PKPbc **PKPdf** **10 49 10.0 +1.6**
QIZ PP **PP** **10 52 48.3 +1.4**
QIZ SS SS 11 12 06.5 +2.6
QIZ LR LR
comp=Z,400nm,15.7s
QIZ LR LR
comp=Z,300nm,13.7s
QIZ LR LR
comp=Z,340nm,22.7s
CMAR Chiang Mai Arr 153.56 356 PKP **PKPdf** **10 49 09.9 -3.5**
comp=Z,0.4nm,0.3s,baz=327,slow=1.5,SNR=4.2
CMAR PKPbc **pPKPdf** **10 49 15.6 -3.2**
comp=Z,0.5nm,0.3s,baz=0.0,slow=0.9,SNR=1.4

*CATAC **11** 10:36:17.3±1.3, 7.°98N×82.°95W, h2km±4km, ML3.4*
*UCR **11** 10:36:17.4±0.4, 7.°98N×82.°93W, h7km±5km, MW3.6*
ISC 11 10:36:17.2±3.2, 8.°0N±0.°1×82.°93W±0.°07, h12km±14km, n26, σ0°98/31, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIRO	**Carate, Puerto**	**0.57**	**315**	*e*P		**Pb**	**10 36 28.8**	**-0.4**
PIRO	**Carate, Puerto**	**0.57**	**315**	*i* P		**Pb**	**10 36 28.7**	**-0.4**
PIRO				*i* S		**Sg**	**10 36 36.3**	**+0.4**
PIRO				IAML			10 36 40.9	
	comp=Z,2µm,1.0s							
CDITO	**Canoas**	**0.57**	**6**	*e*P		**Pb**	**10 36 28.7**	**-0.4**
CDITO	**Canoas**	**0.57**	**6**	*i* P		**Pg**	**10 36 28.2**	**-0.2**
CDITO				*i* S		**Sb**	**10 36 37.0**	**-0.2**
CDITO				IAML			10 36 52.6	
	comp=Z,740nm,1.0s							
JIME	**Puerto Jimenez**	**0.66**	**324**	*e*P		**Pb**	**10 36 30.7**	**0.0**
BRU2	**Volcan**	**0.82**	**17**	*e*P		**Pb**	**10 36 33.3**	**-0.2**
BRU2	**Volcan**	**0.82**	**17**	*i* P		**Pb**	**10 36 33.4**	**-0.1**
BRU2				IAML			10 36 49.4	
	comp=Z,750nm,1.0s							
PLAN	**Los Planes de**	**1.00**	**312**	*i* P		**Pb**	**10 36 36.0**	**-0.4**
PLAN				*i* S		**Sb**	**10 36 50.1**	**+0.6**
PLAN				IAML			10 36 53.6	
	comp=Z,2µm,1.0s							
POTG	**Potrero Grande**	**1.06**	**350**	*i* P		**Pn**	**10 36 38.1**	**+0.1**
POTG				*i* S		**Sg**	**10 36 52.0**	**+0.5**
POTG				IAML			10 36 57.9	

comp=Z,1µm,1.0s
EDPN Palmar Norte 1.09 331 *e*P **Pb** **10 36 37.5 -0.5**
DRK0 Durika 1.29 346 *e*P **Pn** **10 36 40.8 -0.4**
OCHAL Ojochal 1.30 327 *i* P **Pg** **10 36 42.5 +0.3**
OCHAL IAML 10 37 00.9
comp=Z,5.7nm,1.0s
PEZE Perez Zeledon, 1.56 332 *e*P **Pn** **10 36 45.0 +0.1**
PEZE Perez Zeledon, 1.56 332 *i* P **Pb** **10 36 45.4 -0.7**
PEZE *i* S **Sb** **10 37 06.2 +0.4**
PEZE IAML 10 37 10.4
comp=Z,240nm,1.0s
CDM Cerro de Muert 1.75 332 *i* P **Pb** **10 36 48.7 -0.8**
CDM IAML 10 37 18.9
comp=Z,190nm,1.0s
RIMA Rio Macho 1.98 332 *i* P **Pb** **10 36 51.9 -1.4**
RIMA IAML 10 37 10.4
comp=Z,170nm,1.0s
LCR2 La Lucha 2 2.03 328 *i* P **Pn** **10 36 52.5 +1.1**
LCR2 IAML 10 37 25.0
comp=Z,240nm,1.0s
VTCV VTCV, Calle Va 2.12 338 *i* P **Pb** **10 36 54.0 -1.7**
VTCV IAML 10 36 58.2
comp=Z,270nm,1.0s
OCM Ochomogo 2.14 332 *i* P **Pb** **10 36 54.5 -1.5**
OCM IAML 10 37 37.8
comp=Z,150nm,1.0s
HAYA Volcan Irazu 2.16 335 *i* P **Pn** **10 36 54.7 +1.3**
HAYA IAML 10 37 29.2
comp=Z,240nm,1.0s
VIRE VIRE 2.17 334 *i* P **Pb** **10 36 55.0 -1.7**
VIRE IAML 10 37 30.1
comp=Z,260nm,1.0s
HDC3 Heredia 3 2.31 330 *i* P **Pb** **10 36 57.1 -1.7**
HDC3 IAML 10 37 36.7
comp=Z,230nm,1.0s
HDC Heredia 2.31 330 *i* P **Pb** **10 36 56.9 -1.9**
HDC IAML 10 37 36.7
comp=Z,220nm,1.0s
JACO JACO, Garabito 2.38 314 *i* P **Pn** **10 36 55.8 -0.2**
JACO IAML 10 36 55.9
comp=Z,230nm,1.0s
RIFO Rio Frio, Sara 2.50 337 *i* P **Pn** **10 36 59.3 +1.6**
RIFO IAML 10 37 06.8
comp=Z,150nm,1.0s
LAFE Finca La Fe, P 2.66 313 *i* P **Pn** **10 37 00.1 +0.3**
LAFE IAML 10 37 47.2
comp=Z,1.2nm,1.0s

*JMA **11** 10:38:21.9±0.2, 23.°9N±0.°4×12.°2E±°, h2km, TAIWAN REGION*
*TAP **11** 10:38:22.1, 23.°96N×121.°58E, h8km, ML3.4, C*
ISC 11 10:38:22.8±0.8, 23.°95N±0.°01×121.°62E±0.°02, h8km±5km, n108, σ0°64/165, 1C-22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**338**	⇓*i* P		**Pg**	**10 38 24.2**	**-0.1**
	baz=61							
HWA				S		**Sg**	**10 38 25.8**	**+0.6**
	baz=61							
ETM	**Tongmen**	**0.11**	**277**	⇓*i* P		**Pg**	**10 38 24.7**	**-0.6**
	baz=275							
ETM				*i* S		**Sg**	**10 38 26.3**	**-0.8**
	baz=275							
TWD	**Chiawan**	**0.13**	**352**	⇓*i* P		**Pg**	**10 38 25.4**	**-0.2**
	baz=8.0							
TWD				S		**Sg**	**10 38 27.5**	**-0.1**
	baz=8.0							
SHUL	**Shoufeng**	**0.17**	**196**	⇑*i* P		**Pg**	**10 38 26.4**	**+0.1**
	baz=195							
SHUL				*e*S		**Sg**	**10 38 29.8**	**+1.1**
	baz=195							
LXIB	**Xiulin Townshi**	**0.20**	**290**	⇓*i* P		**Pg**	**10 38 26.2**	**-0.6**
	baz=285							
LXIB				*i* S		**Sg**	**10 38 28.8**	**-0.9**
	baz=285							
ETL	**Fush Village**	**0.21**	**2**	⇓*i* P		**Pg**	**10 38 26.7**	**-0.3**
	baz=9.0							
ETL				S		**Sg**	**10 38 29.7**	**-0.1**
	baz=9.0							
ESL	**Shilin**	**0.22**	**231**	⇓*i* P		**Pg**	**10 38 26.3**	**-0.9**
	baz=229							
ESL				S		**Sg**	**10 38 29.1**	**-1.0**
	baz=229							
NACB	**Ninganchiao**	**0.22**	**355**	P		**Pg**	**10 38 26.9**	**-0.4**
NACB	**Ninganchiao**	**0.22**	**355**	⇓*i* P		**Pg**	**10 38 26.9**	**-0.4**
	baz=7.0							
NACB				S		**Sg**	**10 38 29.2**	**-1.1**
	baz=7.0							
TEGC	**Jichi Village**	**0.25**	**196**	*e*P		**Pg**	**10 38 28.3**	**+0.5**
	baz=200							
TEGC				S		**Sb**	**10 38 33.5**	**-0.7**
	baz=200							
ETLH	**Xiulin Townshi**	**0.28**	**334**	⇓*i* P		**Pg**	**10 38 28.0**	**-0.4**
	baz=338							
ETLH				*e*S		**Sg**	**10 38 31.9**	**-0.4**
	baz=338							
WARBT	**Fenglin Townsh**	**0.31**	**222**	⇓P		**Pg**	**10 38 28.2**	**-0.8**
	baz=227							
WARBT				*e*S		**Sg**	**10 38 32.1**	**-1.1**
	baz=227							
WHF	**Hehuan Shan**	**0.37**	**301**	⇓P		**Pg**	**10 38 29.6**	**-0.7**
	baz=303							
WHF				*e*S		**Sg**	**10 38 34.7**	**-0.5**
	baz=303							
EAHA	**Aohua**	**0.39**	**17**	*e*P		**Pg**	**10 38 30.1**	**-0.3**
	baz=27							
EAHA				*e*S		**Sg**	**10 38 35.8**	**+0.2**
	baz=27							
CHGB	**Renai**	**0.42**	**285**	⇓*i* P		**Pg**	**10 38 30.6**	**-0.4**
	baz=285							
CHGB				*e*S		**Sg**	**10 38 36.2**	**-0.4**
	baz=285							
FUSS	**Fushou**	**0.45**	**311**	*e*P		**Pg**	**10 38 31.4**	**-0.2**
	baz=321							
WUSB	**Renai**	**0.46**	**275**	⇓*i* P		**Pg**	**10 38 31.4**	**-0.3**
	baz=284							
WUSB				*e*S		**Sg**	**10 38 37.6**	**-0.2**
	baz=284							
VWDT	**VWDT**	**0.48**	**246**	⇓P		**Pg**	**10 38 31.7**	**-0.4**
	baz=245							
VWDT				*e*S		**Sg**	**10 38 37.5**	**-0.8**
	baz=245							
ENA	**Nanau**	**0.49**	**14**	*e*P		**Pg**	**10 38 32.0**	**-0.3**
	baz=16							
ENA				*e*S		**Sg**	**10 38 38.9**	**+0.2**
	baz=16							
HGSD	**Ruisui**	**0.49**	**201**	*e*P		**Pg**	**10 38 32.5**	**+0.2**
	baz=207							
TWT	**Tachien**	**0.50**	**307**	⇓P		**Pg**	**10 38 32.5**	**0.0**
	baz=306							
TWT				*e*S		**Sg**	**10 38 38.1**	**-1.0**
	baz=306							
EWUT	**Wuta**	**0.51**	**17**	*e*P		**Pg**	**10 38 32.4**	**-0.3**
	baz=18							
EWUT				*e*S		**Sg**	**10 38 39.4**	**-0.1**
	baz=18							
TDCB	**Techi**	**0.51**	**306**	⇓*i* P		**Pg**	**10 38 32.6**	**-0.2**
	baz=306							
TDCB				*e*S		**Sg**	**10 38 38.6**	**-0.9**
	baz=306							
NNSB	**Datong**	**0.52**	**336**	⇓*i* P		**Pg**	**10 38 32.7**	**-0.2**
	baz=337							
NNSB				*e*S		**Sg**	**10 38 39.1**	**-0.6**
	baz=337							
EHY	**Hungye**	**0.52**	**211**	P		**Pg**	**10 38 32.1**	**-0.8**
	baz=219							
EHY				*e*S		**Sg**	**10 38 39.4**	**-0.2**
	baz=219							
NNS	**Nan Shan**	**0.53**	**336**	⇓*i* P		**Pg**	**10 38 32.9**	**-0.2**
	baz=337							
NNS				S		**Sg**	**10 38 39.9**	**-0.3**
	baz=337							
LATG	**Datong**	**0.59**	**352**	⇓*i* P		**Pg**	**10 38 33.7**	**-0.5**
	baz=343							
SSLB	**Suanglung**	**0.63**	**255**	P		**Pg**	**10 38 34.6**	**-0.3**
SSLB	**Suanglung**	**0.63**	**255**	⇓*i* P		**Pg**	**10 38 34.4**	**-0.5**
	baz=265							
SSLB				*e*S		**Sg**	**10 38 41.9**	**-1.3**
	baz=265							
YULB	**Yu-li**	**0.63**	**208**	P		**Pg**	**10 38 34.4**	**-0.6**
YULB	**Yu-li**	**0.63**	**208**	*e*P		**Pg**	**10 38 34.4**	**-0.6**
	baz=215							
WCS	**Beigang Elemen**	**0.65**	**279**	⇓P		**Pg**	**10 38 35.4**	**0.0**
	baz=280							
WCS				*e*S		**Sg**	**10 38 42.9**	**-1.0**

baz=280
ESAO Su ao 0.65 19 *e*P Pg 10 38 35.1 -0.4
baz=12
NDT Datong Townshi 0.65 352 *e*P Pg 10 38 35.4 -0.1
baz=344
NDT *e*S Sg 10 38 43.7 -0.3
baz=344
SMLT Sun Moon Lake 0.66 264 ⇓ *i*P Pg 10 38 35.2 -0.3
baz=264
SMLT *e*S Sg 10 38 43.8 -0.4
baz=264
EYUL Yuli 0.66 204 *e*P Pg 10 38 35.4 -0.2
baz=216
TWF1 Yuli 0.67 206 *e*P Pg 10 38 35.1 -0.6
baz=214
TWF1 *e*S Sg 10 38 44.5 +0.2
baz=214
NDS Dongshan 0.68 8 *e*P Pg 10 38 35.9 -0.1
baz=8.0
ENTT Nioudou 0.69 356 ⇓ *i*P Pg 10 38 35.9 -0.2
baz=357
TWC Suao 0.69 18 *e*P Pg 10 38 35.9 -0.2
baz=12
TYC Yuchr 0.70 266 *i* P Pg 10 38 35.7 -0.5
baz=266
TYC *i* S Sg 10 38 44.7 -0.6
baz=266
YHNB Yeheng 0.75 343 P Pg 10 38 37.4 +0.2
YHNB Yeheng 0.75 343 *e*P Pg 10 38 37.1 -0.1
baz=344
YHNB *e*S Sg 10 38 46.1 -0.9
baz=344
NSK Sanguang 0.76 342 P Pg 10 38 37.4 0.0
baz=343
NSK *i* S Sg 10 38 47.0 -0.4
baz=343
TWE Neicheng 0.77 3 *e*P Pg 10 38 37.5 -0.1
baz=5.0
TWE *e*S Sg 10 38 47.4 -0.2
baz=5.0
CHKH Chenggong 0.78 195 *e*P Pg 10 38 37.4 -0.5
baz=196
CHKH *e*S Sb 10 38 51.0 +1.4
baz=196
FUSB Fushanzhiwuyua 0.80 358 *e*P Pg 10 38 38.2 -0.1
baz=358
NFF Wufeng Townshi 0.81 326 *e*P Pg 10 38 38.6 +0.1
baz=327
NFF *e*S Sg 10 38 49.0 -0.2
baz=327
WJS Zhushan 0.82 261 *e*P Pb 10 38 39.1 -0.3
baz=256
NWLT Wulai 0.83 353 *e*P Pg 10 38 38.6 -0.2
baz=353
NWLT *e*S Sg 10 38 48.3 -1.2
baz=353
WNT Mingjian 0.86 265 *e*P Pb 10 38 39.7 -0.2
baz=259
ALS Alishan 0.86 240 *e*P Pg 10 38 39.2 -0.3
baz=240
ALS *e*S Sg 10 38 50.5 -0.3
baz=240
TWQ1 Liyutan 0.86 297 *e*P Pb 10 38 39.8 -0.3
baz=297
NSTT Nanjuang 0.88 320 *e*P Pb 10 38 40.0 -0.4
baz=321
NSTT *e*S Sg 10 38 50.7 -0.5
baz=321
CHKT Chengkung 0.88 195 *e*P Pg 10 38 38.6 -1.1
baz=197
CHKT S Sb 10 38 53.6 +1.3
baz=197
LIOB Emei 0.88 322 *e*P Pb 10 38 40.3 -0.1
baz=322
LIOB *e*S Sg 10 38 51.0 -0.2
baz=322
TCU Taichung 0.88 283 *e*P Pb 10 38 40.7 +0.4
baz=283
EHD Haiduan 0.88 205 *e*P Pg 10 38 39.2 -0.7
baz=208
NSY Sanyi 0.91 301 *e*P Pb 10 38 41.2 +0.4
baz=301
CHN5 Tsauling 0.93 248 *i* P Pb 10 38 41.2 0.0
baz=238
CHN5 *e*S Sb 10 38 53.4 -0.4
baz=238
ELDTW Lidau 0.94 216 *e*P Pg 10 38 39.8 -1.0
baz=209
ELDTW *e*S Sg 10 38 53.0 0.0
baz=209
NMLH Miaoli 0.95 308 *e*P Pb 10 38 41.9 +0.3
baz=307
WCHH Zhanghua 0.97 278 *e*P Pb 10 38 42.1 +0.2
baz=278
WGK Gukeng 1.00 255 *e*P Pb 10 38 42.6 +0.2
baz=257
NHDH Xindian Distri 1.01 355 *e*P Pb 10 38 42.5 -0.1
baz=354
EDH Donghe 1.02 196 *e*P Pg 10 38 40.6 -1.7
baz=216
WDLH Douliu 1.02 255 *e*P Pb 10 38 43.1 +0.4
baz=257
WDLH *e*S Sn 10 38 58.1 +0.1
baz=257
TWA Mucha 1.02 358 *e*P Pg 10 38 42.3 -0.2
baz=357
WCKO Fanlu 1.06 241 *e*P Pb 10 38 43.4 -0.1
baz=238
WCKO *e*S Sg 10 38 56.7 -0.2
baz=238
NCUH Zhongli 1.08 339 *e*P Pn 10 38 44.8 +0.5
baz=337
STYH Taoyuan 1.09 225 *e*P Pg 10 38 43.5 -0.4
baz=215
TWB1 Santiao Chiao 1.10 18 *e*P Pg 10 38 42.5 -1.5
baz=8.0
CHN4 Tsaushan 1.11 238 *e*P Pb 10 38 44.6 +0.3
baz=241
TPUB Ta-pu 1.11 235 P Pb 10 38 44.4 0.0
TPUB Ta-pu 1.11 235 *i* P Pb 10 38 44.2 -0.1
baz=238
NWF Wu-fen Shan 1.12 8 *e*P Pg 10 38 44.0 -0.4
baz=5.0
CHN2 Minshiung 1.13 248 *e*P Pn 10 38 45.4 +0.5
baz=264
CHN2 *e*S Sn 10 39 01.9 +1.3
baz=264
LONT Longtian 1.13 203 *e*P Pg 10 38 44.2 -0.3
baz=207
WRL Guolierlin Hig 1.13 268 *e*P Pn 10 38 45.0 0.0
baz=269
WRL S Sn 10 39 00.8 -0.1
baz=269
WTK Tuku 1.15 257 *e*P Pb 10 38 45.2 +0.2
baz=259
WTK *i* S Sn 10 39 01.6 +0.4
baz=259
TWS1 Kuangyinshan 1.16 351 *e*P Pb 10 38 45.3 +0.2
baz=356
WTP Ta-pu 1.16 233 *e*P Pb 10 38 45.2 +0.1
baz=235
WTP *e*S Sb 10 39 00.7 +0.4
baz=235
SXI1 Grass Mountain 1.16 12 *e*P Pb 10 38 45.3 +0.1
baz=358
YM01 1.19 358 *e*P Pn 10 38 46.1 +0.3
baz=356
NTST Danshui 1.22 353 *e*P Pn 10 38 46.6 +0.4
baz=350
YM08 YM08 1.23 359 *e*P Pb 10 38 46.4 0.0
baz=356
TWG Pinlang 1.23 204 *e*P Pg 10 38 45.3 -1.1
baz=194
TWGBT Beinan 1.23 204 P Pn 10 38 46.9 +0.5
TWGBT Beinan 1.23 204 *e*P Pg 10 38 44.8 -1.7
baz=194
TWK Hsinying 1.24 237 *e*P Pn 10 38 47.2 +0.6
baz=240
CHN1 Nanshi 1.26 233 *e*P Pn 10 38 47.2 +0.5
baz=236
CHN1 *e*S Sb 10 39 03.5 +0.3
baz=236
SNST Tainan City 1.26 235 *e*P Pg 10 38 46.6 -0.4
baz=227
SNST S Sn 10 39 04.5 +0.6
baz=227
SGST Jiashian 1.28 228 *e*P Pg 10 38 46.9 -0.5
baz=231
SGST *i* S Sn 10 39 05.8 +1.2
baz=231
WSF Szhu 1.31 256 *e*P Pb 10 38 49.1 +1.3
baz=258
WSF *e*S Sg 10 39 04.1 -1.0
baz=258
ICHU Yijhu 1.36 245 *e*P Pg 10 38 48.7 -0.2
baz=248
ICHU S Sn 10 39 08.1 +1.7
baz=248
CHN8 Yiju 1.42 245 *e*P Pg 10 38 49.8 -0.3
baz=248
CHN8 *e*S Sg 10 39 09.6 +1.0
baz=248
ECL Taimali 1.48 204 *e*P Pn 10 38 48.1 -1.6
baz=195
SCST Cishan 1.48 224 *e*P Pg 10 38 51.0 -0.2
baz=214
SHHT Tainan City 1.49 232 *e*P Pg 10 38 51.7 +0.4
baz=236
SSD Sandimen 1.50 217 *e*P Pn 10 38 49.1 -1.0
baz=211
TSMG Majia 1.53 216 *e*P Pn 10 38 50.2 -0.2
baz=210
MASBT Mashibuluo 1.61 214 *e*P Pn 10 38 50.4 -1.2
baz=208
TSCK Chigu Township 1.62 241 *e*P Pn 10 38 51.9 +0.2
baz=244
TSCK *e*S Sg 10 39 14.4 -0.4
baz=244
SCZT Fangliau 1.82 210 *e*P Pn 10 38 55.5 +1.0
baz=215
PHUB P'eng-hu 1.92 257 *e*P Pn 10 38 56.0 +0.1
baz=259
PHUB *i* S Sb 10 39 21.6 -0.7
baz=259
PNG Penghu 1.93 259 *e*P Pn 10 38 55.9 0.0
baz=261
PNG *e*S Sn 10 39 21.3 +1.0
baz=261
JIJ Ishigaki jima 2.34 79 *e*P Pn 10 39 00.5 -1.2
JISG Ishigakijimahi 2.54 75 *e*P Pn 10 39 03.5 -0.8
JISG *e*S Sn 10 39 36.4 +0.9

*ISN **11** 10:45:40.4±1.3,32°.61N×47°.67E,h19km±9km, ML3.0*
*TEH **11** 10:45:41.2,32°.64N×47°.55E,h8km±49km, ML2.9*
ISC 11 10:45:41.9±1.5,32°.60N±0°.08×47°.67E±0°.06,h23km,n10,
σ1§03/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.93**	**9**	Sg	**Sn**	**10 46 12.3**	**+0.2**
IDOB	**Doab**	**1.25**	**20**	Pg	**Pb**	**10 46 05.3**	**+0.3**
IBDR	**Badra**	**1.55**	**289**	*e*Pg	**Pb**	**10 46 09.0**	**-0.9**
IBDR				*e*Sg	**Sb**	**10 46 28.0**	**-1.1**
IBDR				AML	AML	10 46 34.7	
	comp=N,130nm,0.5s						
IBDR				AML	AML	10 46 35.2	
	comp=E,139nm,0.9s						
RAFI	**Al-Rafai**	**1.58**	**237**	*e*Pg	**Pn**	**10 46 09.0**	**+0.5**
RAFI				*e*Sg	**Sb**	**10 46 30.0**	**-0.1**
ILBA	**Ilam Banvizeh**	**1.59**	**310**	Pg	**Pb**	**10 46 09.7**	**-1.0**
ILBA				Sg	**Sb**	**10 46 31.6**	**+1.2**
KCHF	**Cheshme Sefid,**	**1.75**	**343**	Pg	**Pb**	**10 46 12.6**	**-0.8**
HSAM	**Samen**	**1.78**	**26**	Pg	**Pb**	**10 46 14.2**	**+0.2**
IBZA	**Bozab**	**1.87**	**5**	Pn	**Pb**	**10 46 14.9**	**-0.5**
HAGD	**Aghdareh**	**2.53**	**29**	Pn	**Pb**	**10 46 24.9**	**-1.9**
BHD	**Baghdad**	**2.84**	**284**	*e*Pn	**Pn**	**10 46 26.0**	**+0.1**
BHD				*e*Sn	**Sn**	**10 47 01.0**	**+1.6**
BHD				AML	AML	10 47 15.1	
	comp=E,263nm,0.5s						

*IDC **11** 10:46:53.9±3.4,35°.85N×22°.26E,h0km, mb3.8/8, mbtmp3.7/9, ML3.0/1, MS4.0/2, Error ellipse: s-maj=69.8km s-min=24.4km az=7.0*
*ATH **11** 10:46:53.6,35°.15N×21°.64E,h24km±10km, ML3.3/2, Error ellipse: s-maj=13.5km s-min=1.4km az=224.0*
ISC 11 10:46:53.9±2.7,35°.2N±0°.2×21°.6E±0°.1,h41km±21km,n34,
σ1§48/35,mb3.8/7,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.71**	**3**	P	**Pn**	**10 47 22.9**	**+1.6**
PYL	**PYLOS**	**1.71**	**3**	P	**Pn**	**10 47 21.6**	**+0.3**
PYL				S	**Sn**	**10 47 42.8**	**+0.8**
MNVA	**Monemvasia**	**1.89**	**37**	P	**Pn**	**10 47 24.1**	**+0.4**
MNVA				S	**Sn**	**10 47 46.2**	**-0.1**
IMMV	**Iera Moni Meta**	**1.95**	**81**	P	**Pn**	**10 47 24.6**	**+0.1**
IMMV	**Iera Moni Meta**	**1.95**	**81**	P	**Pn**	**10 47 24.8**	**+0.3**
IMMV				S	**Sn**	**10 47 47.3**	**-0.5**
IMMV				AML	AML	10 48 01.6	
	comp=N,1161μm,0.5s						
IMMV				AML	AML	10 48 07.9	
	comp=E,1022μm,1.0s						
IDI	**Anoyia**	**2.68**	**87**	P	**Pn**	**10 47 35.1**	**+0.5**
IDI	**Anoyia**	**2.68**	**87**	P	**Pn**	**10 47 34.7**	**+0.1**
IDI				S	**Sn**	**10 48 04.9**	**-1.0**
IDI				AML	AML	10 48 06.3	
	comp=N,434μm,0.5s						
IDI				AML	AML	10 48 06.5	
	comp=E,358μm,0.5s						
DRO	**Drossia**	**2.77**	**1**	P	**Pn**	**10 47 37.0**	**+1.2**
DRO				S	**Sn**	**10 48 08.2**	**+0.2**
GUR	**Goura**	**2.81**	**12**	P	**Pn**	**10 47 37.0**	**+0.6**
RLS	**Riolos of Patr**	**2.87**	**358**	P	**Pn**	**10 47 38.2**	**+1.0**
KLV	**Kalavryta, Ach**	**2.89**	**8**	P	**Pn**	**10 47 38.5**	**+1.0**
THAL	**Thalero**	**2.97**	**16**	P	**Pn**	**10 47 39.9**	**+1.4**
LTK	**Loutraki**	**3.04**	**21**	P	**Pn**	**10 47 40.6**	**+1.1**
VLS	**Valsamata**	**3.10**	**345**	P	**Pn**	**10 47 41.3**	**+0.9**
VLY	**Voula,Athens**	**3.19**	**33**	P	**Pn**	**10 47 40.9**	**-0.7**
DBRK	**Dubrovnik**	**7.95**	**341**	*e*Pn	**Pn**	**10 48 44.7**	**-2.2**
STON	**Ston**	**8.26**	**340**	*e*Pn	**Pn**	**10 48 47.8**	**-3.3**
LSTV	**Lastovo**	**8.42**	**336**	*e*Pn	**Pn**	**10 48 50.8**	**-2.6**
MAKA	**Makarska**	**8.84**	**338**	*e*Pn	**Pn**	**10 48 57.2**	**-1.9**
RICI	**Ricice**	**9.00**	**339**	*e*Pn	**Pn**	**10 48 58.8**	**-2.5**
ZIRJ	**Zirje**	**9.64**	**333**	*e*Pn	**Pn**	**10 49 08.2**	**-1.8**
MORI	**Morici**	**9.80**	**334**	*e*Pn	**Pn**	**10 49 10.5**	**-1.7**
DUGI	**Dugi Otok**	**10.15**	**332**	*e*Pn	**Pn**	**10 49 15.2**	**-1.8**
BRTR	**Keskin Array B**	**10.57**	**61**	Pn	Pn	10 49 17.2	-5.8
	comp=E,0.1nm,0.3s,baz=248,slow=14,SNR=2.8 comp=E,0.2nm,0.4s						
ESDC	**Sonseca Array**	**20.78**	**290**	P	Pn	10 51 39.5	+5.3
	comp=E,0.3nm,0.5s,baz=91,slow=11,SNR=1.9 comp=E,0.3nm,0.5s						
HFS	**Hagfors**	**25.49**	**351**	P	**P**	**10 52 17.9**	**-0.1**
	comp=E,2.1nm,0.8s,baz=184,slow=12,SNR=5.7 comp=E,2.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**26.40**	**327**	P	**P**	**10 52 29.4**	**+3.1**
	comp=E,3.5nm,0.8s,baz=128,slow=9.0,SNR=3.6 comp=E,3.5nm,0.8s						
FINES	**FINESS Array B**	**26.43**	**5**	P	**P**	**10 52 26.2**	**-0.3**
	comp=E,2.2nm,0.9s,baz=161,slow=11,SNR=4.8 comp=E,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**34.47**	**2**	P	**P**	**10 53 37.4**	**-0.1**
	σ=E,2.6nm,1.0s,baz=181,slow=8.2,SNR=5.5 comp=E,2.6nm,1.0s						
DBIC	**Dimbokro**	**37.39**	**227**	LR	LR	11 11 51.1	
	comp=E,94nm,18.8s,baz=260,slow=39						
KURBB	**Kurchatov Arra**	**43.36**	**51**	P	**P**	**10 54 51.3**	**-0.6**
	comp=E,0.4nm,0.5s,baz=276,slow=8.7,SNR=2.8 comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**46.17**	**56**	P	**P**	**10 55 14.2**	**-0.2**
	comp=E,1.5nm,0.6s,baz=279,slow=7.1,SNR=23 comp=E,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**47.08**	**46**	P	**P**	**10 55 19.4**	**-2.0**
	comp=E,0.5nm,0.4s,baz=269,slow=7.9,SNR=2.4 comp=E,0.5nm,0.4s						
SUR	**Sutherland**	**67.21**	**181**	LR	LR	11 28 05.6	
	comp=E,247nm,21.4s,baz=272,slow=36						

*IDC **11** 11:09:42.7±3.3,37°.65N×73°.04E,h0km, mb3.6/2, mbtmp3.5/6, ML2.9/4, Error ellipse: s-maj=63.6km s-min=28.3km az=141.0*
ISC 11 11:09:45.0±2.2,37°.3N±0°.2×73°.1E±0°.2,h35km,n6,σ1§42/7,
Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.45**	**11**	Pn	**Pn**	**11 11 04.4**	**+0.6**
	0.2nm,0.3s,baz=204,slow=20,SNR=2.0						
AAK				Sn	**Sn**	**11 12 05.1**	**-0.4**
	0.2nm,0.3s,baz=168,slow=17,SNR=1.7						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**11.70**	**33**	Pn	**Pn**	**11 12 29.2**	**-0.2**
	baz=213,slow=16,SNR=2.2 0.2nm,0.7s						
GEYT	**Alibeck**	**11.88**	**278**	Pn	**Pn**	**11 12 30.7**	**-1.1**
	0.5nm,0.3s,baz=106,slow=15,SNR=3.8 0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**18.53**	**22**	P	**P**	**11 13 56.5**	**-1.8**
	0.4nm,0.3s,baz=213,slow=11,SNR=8.7 1.8nm,0.5s						
FINES	**FINESS Array B**	**37.77**	**325**	P	**P**	**11 16 58.9**	**+1.5**
	2.1nm,1.0s,baz=108,slow=8.1,SNR=3.6 2.1nm,1.0s						
YKA	**Yellowknife Ar**	**80.37**	**4**	P	**P**	**11 21 53.1**	**+0.8**
	0.2nm,0.6s,baz=355,slow=5.6,SNR=5.2 0.2nm,0.6s						

*IDC **11** 11:40:25.8±2.2,35°.90N×97°.58W,h0km,mbtmp3.1/3, ML3.7/2, Error ellipse: s-maj=32.7km s-min=14.2km az=100.0*
*NEIC **11** 11:40:25.7±0.4,36°.030N±0°.005×97°.91W±0°.01,h2km±4km, Error ellipse: s-maj=1.6km s-min=0.6km az=66.0*
*TUL **11** 11:40:26.2±0.3,36°.03N±0°.01×97°.91W±0°.01,h6km±4km, ML3.5,mb_Lg3.4/135(NEIC),ML3.6/60(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=152.0*
ISC 11 11:40:25.6±0.9,36°.05N±0°.03×97°.90W±0°.03,h10km,n98,
σ0§93/40,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.45**	**125**	Pg	**Pg**	**11 40 34.9**	**+0.6**
OK029				Sg	**Sg**	**11 40 41.0**	**+0.8**
OK029				IAML		11 40 41.4	
	4μm,0.4s						
OK029				IAML		11 40 41.5	
	8μm,0.5s						
CROK	**Carrier**	**0.46**	**352**	Pg	**Pg**	**11 40 35.6**	**+1.1**
CROK				IAML		11 40 42.9	
	comp=E,7μm,0.3s						
CROK				IAML		11 40 44.4	
	comp=N,4μm,0.2s						
ADOK	**Arcadia Dam**	**0.59**	**133**	Pg	**Pg**	**11 40 37.5**	**+0.5**
ADOK				Sg	**Sg**	**11 40 45.5**	**+0.8**
OKCSW	**OKLAHOMA CITY**	**0.75**	**150**	Pg	**Pg**	**11 40 40.2**	**+0.1**
OKCSW				IAML		11 40 53.2	
	comp=E,3μm,0.4s						
CSTR	**Hydro, Custer**	**0.76**	**238**	Pg	**Pg**	**11 40 40.6**	**+0.3**
OK033	**Mehan**	**0.78**	**90**	Pg	**Pg**	**11 40 41.2**	**+0.6**
OK032	**Salt Plains WL**	**0.79**	**342**	Pg	**Pg**	**11 40 41.5**	**+0.6**
OK032				IAML		11 40 54.7	
	comp=E,3μm,0.1s						
GC02	**Grant County #**	**0.80**	**2**	Pg	**Pg**	**11 40 41.7**	**+0.7**
OK048	**Pawnee Station**	**0.85**	**65**	Pg	**Pg**	**11 40 42.7**	**+0.6**
OK048				IAML		11 41 00.0	
	comp=E,1μm,0.4s						
FNO	**Franklin**	**0.89**	**153**	Pg	**Pg**	**11 40 42.7**	**-0.2**
FNO				IAML		11 40 56.4	
	comp=E,2μm,0.2s						
FNO				IAML		11 41 02.5	
	comp=N,1μm,0.6s						
BLOK	**Blackwell**	**0.90**	**38**	Pg	**Pg**	**11 40 43.6**	**+0.7**
KAN14	**Manchester OK**	**0.90**	**357**		**Pg**	**11 40 43.5**	**+0.5**
KAN14				IAML		11 41 00.4	
	comp=N,1μm,0.1s						
KAN14				IAML		11 41 05.5	
	comp=E,1μm,0.1s						
U32A	**Winter Ranch,**	**0.95**	**290**		**Pg**	**11 40 44.1**	**+0.2**
U32A				IAML		11 40 59.5	
	comp=E,2μm,0.2s						
U32A				IAML		11 41 00.2	
	comp=N,3μm,0.3s						
OK051	**E0350 and S346**	**0.97**	**62**		**Pg**	**11 40 44.9**	**+0.6**
QUOK	**Quay**	**0.97**	**83**		**Pg**	**11 40 44.4**	**0.0**
QUOK				IAML		11 40 59.5	
	comp=N,1μm,0.3s						
QUOK				IAML		11 41 03.7	
	comp=E,1μm,0.2s						
KAN17	**Caldwell West**	**0.99**	**6**		**Pg**	**11 40 45.2**	**+0.4**
KAN17				IAML		11 40 59.9	
	comp=E,2μm,0.3s						
KAN17				IAML		11 41 03.2	
	comp=N,3μm,0.2s						
KAN13	**South Haven SW**	**1.02**	**20**		**Pg**	**11 40 45.8**	**+0.6**
KAN05	**Bluff City Nor**	**1.05**	**1**		**Pg**	**11 40 46.2**	**+0.3**
KAN05				IAML		11 41 05.6	
	comp=N,2μm,0.2s						
KAN05				IAML		11 41 05.7	
	comp=E,2μm,0.2s						
KAN10	**Anthony SW Sta**	**1.08**	**352**		**Pb**	**11 40 46.6**	**+0.2**
KAN10				IAML		11 41 05.7	
	comp=N,1μm,0.3s						
KAN10				IAML		11 41 06.3	
	comp=E,1μm,0.2s						
KAN01	**Argonia South**	**1.10**	**6**		**Pb**	**11 40 47.0**	**+0.2**
KAN09	**Caldwell North**	**1.10**	**12**		**Pb**	**11 40 47.1**	**+0.3**
DEOK	**Depew**	**1.16**	**100**		**Pb**	**11 40 47.4**	**-0.3**
DEOK				IAML		11 41 08.2	
	comp=N,881nm,0.4s						
DEOK				IAML		11 41 11.7	
	comp=E,1μm,0.3s						
KAN08	**Anthony NE Sta**	**1.17**	**357**		**Pb**	**11 40 48.2**	**+0.2**
KAN06	**Argonia West S**	**1.19**	**2**		**Pn**	**11 40 48.6**	**+0.2**
KAN06				IAML		11 41 09.8	
	comp=E,871nm,0.2s						
ELIS	**Ellis County**	**1.23**	**271**	Pg	**Pn**	**11 40 49.1**	**+0.2**
ELIS				IAML		11 41 25.5	
	comp=N,2μm,0.3s						
W35A	**Tecumseh**	**1.23**	**137**		**Pn**	**11 40 48.5**	**-0.4**
KAN12	**Harper NE Stat**	**1.24**	**356**		**Pn**	**11 40 49.4**	**+0.3**
KAN12				IAML		11 41 16.0	
	comp=N,2μm,0.3s						
KAN12				IAML		11 41 24.0	
	comp=E,1μm,0.3s						
KS21	**Milan North St**	**1.25**	**9**	IAML		11 41 09.5	
	comp=E,1μm,0.2s						
KS21				IAML		11 41 10.7	
	comp=E,1μm,0.3s						
KS21	**Milan North St**	**1.25**	**9**		**Pn**	**11 40 49.5**	**+0.4**
T35A	**Sooner Cattle**	**1.41**	**52**		**Pn**	**11 40 52.6**	**+1.2**
X34A	**Smith Ranch, M**	**1.45**	**178**		**Pn**	**11 40 52.8**	**+0.9**
WMOK	**Wichita Mounta**	**1.50**	**209**		**Pn**	**11 40 52.7**	**+0.1**
TUL3	**Leonard**	**1.72**	**94**		**Pn**	**11 40 56.8**	**+1.2**
TUL3				IAmb_Lg		11 41 24.8	
	comp=Z,252nm,0.8s						
SMWD	**Samnorwood**	**2.13**	**244**		**Pn**	**11 41 03.2**	**+1.9**
SMWD				IAmb_Lg		11 41 36.3	
	comp=Z,168nm,0.8s						
LOOK	**Love County**	**2.14**	**164**		**Pn**	**11 41 03.1**	**+1.7**
WTFS	**Witchita Falls**	**2.33**	**192**		**Pn**	**11 41 05.8**	**+1.8**
R32A	**Long Quarter,**	**2.45**	**345**		**Pn**	**11 41 07.2**	**+1.5**
R32A				IAmb_Lg		11 41 51.3	
	comp=Z,130nm,0.8s						
CBKS	**Cedar Bluff**	**3.12**	**333**	IAmb_Lg		11 42 09.8	
	comp=Z,86nm,0.8s						
AMTX	**Amarillo**	**3.30**	**250**	IAmb_Lg		11 42 09.0	
	comp=Z,120nm,0.8s						
TREL	**Terrell**	**3.64**	**155**	IAmb_Lg		11 42 24.4	
	comp=Z,70nm,0.8s						
Z38A	**Mt. Pleasant**	**3.68**	**138**	IAmb_Lg		11 42 25.5	
	comp=Z,151nm,0.8s						
MIAR	**Mount Ida**	**3.84**	**112**	IAmb_Lg		11 42 37.8	
	comp=Z,61nm,0.7s						
RTBA	**Rita Blanca**	**3.93**	**277**	IAmb_Lg		11 42 40.5	
	comp=Z,53nm,0.8s						
S39A	**Bolivar**	**4.02**	**65**	IAmb_Lg		11 42 40.0	
	comp=Z,88nm,0.8s						
SN01	**Snyder 1**	**4.03**	**219**	IAmb_Lg		11 42 41.1	
	comp=Z,140nm,0.9s						
POST	**Post**	**4.21**	**226**	IAmb_Lg		11 42 43.7	
	comp=Z,134nm,0.8s						
237A	**Washetta, Mont**	**4.40**	**156**	IAmb_Lg		11 42 54.2	
	comp=Z,46nm,0.8s						
X40A	**Basin Creek Fa**	**4.43**	**109**	IAmb_Lg		11 42 47.8	
	comp=Z,96nm,1.0s						
WLAR	**White Oak Lake**	**4.59**	**120**	IAmb_Lg		11 42 54.0	
	comp=Z,54nm,0.7s						
WHAR	**Wooly Hollow**	**4.63**	**98**	IAmb_Lg		11 42 53.4	
	comp=Z,70nm,1.0s						
MGMO	**Mountain Grove**	**4.66**	**75**	IAmb_Lg		11 43 02.1	
	comp=Z,100nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.69**	**90**	IAmb_Lg		11 42 58.6	
	comp=Z,47nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.78**	**310**	IAmb_Lg		11 43 06.5	
	comp=Z,109nm,0.9s						

SGCY	**Sterling City**	**4.92**	**214**	lAmb_Lg			11 43 11.9	
	comp=Z,98nm,0.8s							
P38A	**Dawn**	**4.97**	**43**	lAmb_Lg			11 43 10.6	
	comp=Z,73nm,0.7s							
R40A	**Maddies Statio**	**5.02**	**62**	lAmb_Lg			11 43 11.0	
	comp=Z,89nm,0.8s							
Z41A	**Richland Creek**	**5.04**	**122**	lAmb_Lg			11 43 18.4	
	comp=Z,58nm,0.8s							
435B	**Jarrell**	**5.26**	**177**	lAmb_Lg			11 43 12.7	
	comp=Z,52nm,0.8s							
T25A	**Trinidad**	**5.35**	**284**	lAmb_Lg			11 43 17.5	
	comp=Z,67nm,0.8s							
BGNE	**Belgrade**	**5.35**	**358**	lAmb_Lg			11 43 21.4	
	comp=Z,48nm,0.8s							
CCAR	**Cane Creek**	**5.46**	**111**	lAmb_Lg			11 43 29.0	
	comp=Z,77nm,0.9s							
LCAR	**Lake Charles**	**5.47**	**88**	lAmb_Lg			11 43 27.2	
	comp=Z,36nm,0.8s							
ODSA	**Odessa**	**5.50**	**226**	lAmb_Lg			11 43 23.9	
	comp=Z,42nm,1.1s							
CCM	**Cathedral Cave**	**5.69**	**67**	lAmb_Lg			11 43 34.4	
	comp=Z,84nm,0.7s							
JCT	**Junction City**	**5.78**	**197**	lAmb_Lg			11 43 42.1	
	comp=Z,51nm,0.7s							
OZNA	**Ozona**	**5.78**	**209**	lAmb_Lg			11 43 39.2	
	comp=Z,54nm,0.8s							
MNHN	**Monahans**	**6.20**	**222**	lAmb_Lg			11 43 50.2	
	comp=Z,32nm,0.8s							
FVM	**French Village**	**6.28**	**70**	lAmb_Lg			11 43 45.6	
	comp=Z,73nm,0.8s							
143A	**Socs Landing,**	**6.33**	**120**	lAmb_Lg			11 44 02.5	
	comp=Z,60nm,0.9s							
Q24A	**Divide**	**6.45**	**299**	lAmb_Lg			11 43 53.2	
	comp=Z,51nm,0.8s							
HNDO	**Hondo**	**6.61**	**190**	lAmb_Lg			11 43 54.3	
	comp=Z,42nm,0.9s							
CGM3	**Cape Girardeau**	**6.74**	**77**	lAmb_Lg			11 43 56.7	
	comp=Z,76nm,0.9s							
K30B	**Basset**	**6.74**	**349**	lAmb_Lg			11 44 18.7	
	comp=Z,59nm,0.7s							
BRIGG	**Briggsdale**	**6.77**	**314**	lAmb_Lg			11 44 12.7	
	comp=Z,59nm,0.8s							
PECS	**Pecos**	**6.82**	**228**	lAmb_Lg			11 44 10.3	
	comp=Z,45nm,0.8s							
EF01	**Eagle Ford 01**	**6.92**	**183**	lAmb_Lg			11 44 12.2	
	comp=Z,32nm,0.7s							
DRIO	**Del Rio**	**7.00**	**200**	lAmb_Lg			11 44 09.3	
	comp=Z,44nm,0.9s							
SAND	**Sanderson**	**7.04**	**211**	lAmb_Lg			11 44 22.8	
	comp=Z,44nm,0.8s							
OXF	**Oxford**	**7.11**	**100**	lAmb_Lg			11 44 12.0	
	comp=Z,38nm,0.8s							
S44A	**Carbondale**	**7.12**	**74**	lAmb_Lg			11 44 21.4	
	comp=Z,60nm,0.8s							
ISCO	**Idaho Springs**	**7.15**	**304**	lAmb_Lg			11 44 18.9	
	comp=Z,29nm,0.9s							
Y45A	**Yeager Farm, C**	**7.20**	**105**	lAmb_Lg			11 44 32.8	
	comp=Z,29nm,0.7s							
VBMS	**Vicksburg**	**7.22**	**120**	lAmb_Lg			11 44 19.6	
	comp=Z,32nm,1.1s							
UTMT	**University of**	**7.31**	**85**	lAmb_Lg			11 44 21.1	
	comp=Z,70nm,0.7s							
ALPN	**Alpine**	**7.43**	**222**	lAmb_Lg			11 44 26.7	
	comp=Z,28nm,0.8s							
MNTX	**Cornudas Mount**	**7.58**	**237**	lAmb_Lg			11 44 26.6	
	comp=Z,28nm,0.8s							
PHWY	**Pilot Hill**	**7.90**	**314**	lAmb_Lg			11 44 46.6	
	comp=Z,30nm,0.9s							
VHRN	**Van Horn**	**7.91**	**230**	lAmb_Lg			11 44 41.8	
	comp=Z,25nm,0.8s							
N23A	**Red Feather La**	**7.94**	**310**	lAmb_Lg			11 44 45.4	
	comp=Z,61nm,0.8s							
OLIL	**Olney**	**8.25**	**68**	lAmb_Lg			11 45 04.5	
	comp=Z,40nm,0.9s							
TXAR	**Lajitas Array**	**8.28**	**218**	Pn		**Pn**	**11 42 25.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=42,slow=11,SNR=10							
TXAR				Pg		Pb	11 42 55.1	+6.0
	comp=Z,1.3nm,0.3s,baz=45,slow=15,SNR=11							
TXAR				Lg		Lg	11 44 44.2	
	comp=Z,1.5nm,0.3s,baz=40,slow=33,SNR=3.5 comp=Z,0.2nm,0.4s							
SUSD	**Miller**	**8.42**	**355**	lAmb_Lg			11 45 08.5	
	comp=Z,25nm,0.8s							
I37A	**Lemond, Waseca**	**8.67**	**22**	lAmb_Lg			11 45 21.4	
	comp=Z,30nm,0.9s							
RSSD	**Black Hills**	**9.32**	**332**	lAmb_Lg			11 45 33.9	
	comp=Z,22nm,0.9s							
I40A	**Norwalk**	**9.62**	**33**	lAmb_Lg			11 45 39.3	
	comp=Z,22nm,0.8s							
SPMN	**Marine on St.**	**9.94**	**21**	lAmb_Lg			11 45 44.8	
	comp=Z,30nm,1.2s							
PDAR	**Pinedale Array**	**11.23**	**310**	Pn		Pn	11 43 15.5	+9.1
	comp=Z,0.1nm,0.3s,baz=123,slow=16,SNR=2.4							
PDAR				Pg			11 43 49.8	
	comp=Z,0.1nm,0.3s,baz=116,slow=16,SNR=2.1							
PDAR				Lg		Lg	11 46 20.0	
	comp=Z,0.5nm,0.3s,baz=123,slow=33,SNR=10 comp=Z,0.2nm,0.5s							
ULM	**Lac du Bonnet**	**14.27**	**5**	Pn		**Pn**	**11 43 44.5**	**-3.0**
	comp=Z,0.4nm,0.4s,baz=184,slow=15,SNR=1.5							
ULM				Lg		Lg	11 47 46.7	
	comp=Z,0.1nm,0.3s,baz=181,slow=14,SNR=1.9							

KRSC 11 12:02:25.0±1.4, 53.84N×168.80E, h29km±23km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.14**	**311**	*e*P	Pn	12 03 00.4	+1.8
BKI				*e*S	Sb	12 03 27.4	-1.6
SMKR	**Semkarok**	**5.01**	**306**	*e*P	Pn	12 03 43.1	+4.9
TUMD	**Tumrok D**	**5.08**	**289**	*e*P	Pn	12 03 43.1	+4.0
TUMD				*e*S	Sn	12 04 40.8	+4.2
TUMR	**Tumrok**	**5.24**	**289**	*e*P	Pn	12 03 46.1	+4.7
KMNR	**Kamenistaya**	**5.31**	**295**	*e*P	Pn	12 03 46.8	+4.5
KMNR				*e*S	Sn	12 04 48.4	+5.9
KPT	**Kopyto**	**5.38**	**297**	*e*P	Pn	12 03 48.5	+5.2
UGLR	**Uglovaya**	**5.98**	**268**	*e*P	Pn	12 03 56.5	+4.9
SMAR	**Somma**	**5.99**	**268**	*e*P	Pn	12 03 56.3	+4.6
AVH	**Avacha**	**6.02**	**269**	*e*P	Pn	12 03 56.5	+4.3
DALK	**Dalny**	**6.06**	**266**	*e*P	Pn	12 03 57.5	+5.1
KRX	**Arik**	**6.06**	**269**	*e*P	Pn	12 03 57.4	+4.7
KOK	**Koryaka**	**6.08**	**269**	*e*P	Pn	12 03 57.9	+5.0
RUS	**Russkaya**	**6.35**	**261**	*e*P	Pn	12 04 02.1	+5.7
GNL	**Ganaly**	**6.44**	**273**	*e*P	Pn	12 04 03.3	+5.5
KRMR	**Karymshinskiy**	**6.47**	**265**	*e*P	Pn	12 04 03.4	+5.2
MTVR	**Mutnovka**	**6.53**	**262**	*e*P	Pn	12 04 04.4	+5.3
GRL	**Gorelyy**	**6.57**	**263**	*e*P	Pn	12 04 04.0	+4.3
ASAK	**Asacha**	**6.72**	**262**	*e*P	Pn	12 04 07.2	+5.5

UCR 11 12:13:12.8±0.7, 8.56N×83.62W, h20km±17km, MW3.6
CATAC 11 12:13:13.3±0.6, 8.61N×83.59W, h3km±2km, ML3.0
ISC 11 12:13:12.8±1.2, 8.58N±0.06×83.63W±0.06, h12km, n25, σ1s12/25, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAN	**Los Planes de**	**0.10**	**330**	*i* S	**Sg**	**12 13 17.7**	**-0.1**
JIME	**Puerto Jimenez**	**0.31**	**99**	*e*P	**Pb**	**12 13 19.8**	**-0.5**
PTJ1	**Puerto Jimnez**	**0.33**	**98**	*e*P	**Pg**	**12 13 19.7**	**+0.2**
PIRO	**Carate, Puerto**	**0.34**	**122**	*e*P	**Pg**	**12 13 19.7**	**-0.1**
PIRO	**Carate, Puerto**	**0.34**	**122**	*i* P	**Pg**	**12 13 19.8**	**+0.1**
PIRO				lAML		12 13 33.7	
	comp=Z,3μm,1.0s						
EDAD	**Golfito**	**0.47**	**82**	*e*P	**Pg**	**12 13 21.2**	**-0.8**
OCHAL	**Ojochal**	**0.51**	**358**	*i* P	**Pg**	**12 13 22.7**	**-0.2**
OCHAL				lAML		12 13 34.1	
	comp=Z,41nm,1.0s						
POTG	**Potrero Grande**	**0.69**	**47**	*i* P	**Pg**	**12 13 25.9**	**-0.3**
POTG				lAML		12 13 49.5	
	comp=Z,380nm,1.0s						
DRK0	**Durika**	**0.78**	**29**	*e*P	**Pg**	**12 13 28.0**	**+0.1**
PEZE	**Perez Zeledon,**	**0.80**	**357**	*e*P	**Pg**	**12 13 28.2**	**0.0**
PEZE	**Perez Zeledon,**	**0.80**	**357**	*i* P	**Pg**	**12 13 28.5**	**+0.2**
PEZE				lAML		12 13 43.7	
	comp=Z,490nm,1.0s						
BRU2	**Volcan**	**0.95**	**77**	*i* P	**Pg**	**12 13 31.0**	**-0.3**
BRU2				lAML		12 13 55.9	
	comp=Z,200nm,1.0s						
CDM	**Cerro de Muert**	**0.97**	**352**	*e*P	**Pg**	**12 13 31.3**	**-0.4**
CDM	**Cerro de Muert**	**0.97**	**352**	*i* P	**Pg**	**12 13 30.8**	**-0.9**
CDM				lAML		12 13 52.2	
	comp=Z,270nm,1.0s						
RIMA	**Rio Macho**	**1.20**	**349**	*i* P	**Pn**	**12 13 34.9**	**-0.7**
RIMA				lAML		12 13 35.6	
	comp=Z,140nm,1.0s						
LCR2	**La Lucha 2**	**1.21**	**342**	*i* P	**Pn**	**12 13 34.8**	**-1.0**
LCR2				lAML		12 13 55.0	
	comp=Z,200nm,1.0s						
OCM	**Ochomogo**	**1.34**	**346**	*i* P	**Pn**	**12 13 37.7**	**+0.1**
OCM				lAML		12 13 59.5	
	comp=Z,210nm,1.0s						
VIRE	**VIRE**	**1.40**	**349**	*i* P	**Pb**	**12 13 39.3**	**+0.1**
VIRE				lAML		12 14 05.8	
	comp=Z,510nm,1.0s						
HAYA	**Volcan Irazu**	**1.40**	**351**	*i* P	**Pn**	**12 13 39.1**	**+0.5**
HAYA				lAML		12 14 04.3	
	comp=Z,580nm,1.0s						
JACO	**JACO, Garabito**	**1.48**	**317**	*e*P	**Pn**	**12 13 38.1**	**-1.1**
JACO	**JACO, Garabito**	**1.48**	**317**	*i* P	**Pn**	**12 13 38.2**	**-1.1**
JACO				lAML		12 13 42.3	
	comp=Z,82nm,1.0s						
HDC	**Heredia**	**1.49**	**341**	*i* P	**Pb**	**12 13 40.8**	**+0.3**
HDC				lAML		12 14 05.9	
	comp=Z,210nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.75**	**351**	*i* P	**Pb**	**12 13 44.8**	**-0.1**
RIFO				lAML		12 14 14.9	
	comp=Z,280nm,1.0s						
ORTG	**Ortega, Santa**	**2.52**	**315**	*i* P	**Pb**	**12 13 56.8**	**-1.4**
ORTG				lAML		12 14 03.2	
	comp=Z,190nm,1.0s						
CNGA	**Al SSO del Vol**	**4.92**	**322**	*i* P	**Pn**	**12 14 31.1**	**+4.4**

AFAD 11 12:17:32.1±0.0, 38.43N×45.01E, h3km±2km, ML1.9
TEH 11 12:17:33.4, 38.42N×44.89E, h10km±990km, ML2.5
AZER 11 12:17:35.3, 38.59N×44.94E, h10km, ml2.3
ISC 11 12:17:33.1±1.2, 38.42N±0.03×44.96E±0.03, h5km±11km, n17, σ0s69/30, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.54**	**104**	Pg	**Pb**	**12 17 45.1**	**0.0**
ISHB				Sg	**Sb**	**12 17 53.6**	**+0.3**
IMRD	**Marand**	**0.66**	**63**	Pg	**Pb**	**12 17 48.0**	**+0.9**
OZAP	**Van, Ozalp-Mer**	**0.80**	**288**	P	**Pg**	**12 17 48.4**	**0.0**
OZAP				S	**Sb**	**12 18 00.1**	**-0.6**
OZAP				*i* AML	AML	12 18 09.0	
	comp=N,36nm,0.6s						
NAX	**Nakhchivan**	**0.86**	**29**	P	**Pn**	**12 17 51.5**	**-0.6**
NAX				S	**Sn**	**12 18 04.1**	**-1.0**
ITBZ	**Tabriz**	**0.95**	**101**	Pg	**Pn**	**12 17 52.8**	**-0.5**
ORD	**Ordubad**	**0.96**	**58**	P	**Pn**	**12 17 53.8**	**+0.4**
ORD				S	**Sn**	**12 18 07.0**	**-0.4**
MAKU	**Maku**	**0.96**	**347**	Pg	**Pg**	**12 17 51.4**	**-0.1**
YOVA	**Hakkari_Yksek**	**0.98**	**213**	P	**Pg**	**12 17 51.4**	**-0.5**
YOVA				S	**Sg**	**12 18 05.1**	**+0.4**
SBZ	**Shahbuz**	**1.08**	**25**	P	**Pn**	**12 17 55.1**	**+0.1**
SBZ				S	**Sb**	**12 18 08.8**	**-0.1**
IAZR	**Azarshahr**	**1.09**	**132**	Pg	**Pn**	**12 17 55.7**	**+0.4**
TVAN	**Van**	**1.22**	**276**	P	**Pb**	**12 17 55.3**	**-1.5**
TVAN				S	**Sn**	**12 18 14.8**	**+0.7**
TVAN				*i* AML	AML	12 18 30.0	
	comp=N,30nm,1.4s						
VMUR	**Van-Muradiye**	**1.23**	**298**	P	**Pb**	**12 17 56.5**	**-0.4**
VMUR				S	**Sn**	**12 18 14.2**	**+0.1**
VMUR				*i* AML	AML	12 18 22.0	
	comp=N,21nm,0.7s						
HYR	**Heyderabad**	**1.30**	**356**	P	**Pb**	**12 17 58.0**	**-0.1**
HYR				S	**Sg**	**12 18 15.8**	**+0.8**
HAKT	**HAKKARI**	**1.31**	**229**	P	**Pb**	**12 17 58.0**	**-0.2**
HAKT				S	**Sn**	**12 18 17.6**	**+1.3**
KOTA	**Agri, Merkez-K**	**1.94**	**316**	P	**Pb**	**12 18 09.5**	**+0.5**
KOTA				S	**Sg**	**12 18 36.8**	**+1.3**
GDB	**GEDABAY**	**2.38**	**15**	Pn	**Pb**	**12 18 16.3**	**-0.3**
GDB				Sn	**Sb**	**12 18 46.7**	**+0.4**
YRD	**Yardimli**	**2.62**	**78**	Pn	**Pb**	**12 18 20.4**	**-0.2**
YRD				Sn	**Sg**	**12 18 56.1**	**-1.1**

IDC 11 12:17:25.1±9.6, 35.31N×22.13E, h0km, mb3.7/2, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=338.6km s-min=111.6km az=165.0
ATH 11 12:17:45.3, 36.18N×23.43E, h49km±4km, ML3.2/16, Error ellipse: s-maj=4.1km s-min=0.8km az=215.0
THE 11 12:17:46.3, 36.23N×23.52E, h22km±1km, ML3.1/5, Error ellipse: s-maj=1.5km s-min=0.4km az=193.0
ISC 11 12:17:44.7±1.0, 36.17N±0.04×23.44E±0.04, h54km±11km, n69, σ1s80/98, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.32**	**200**	P	**Pn**	**12 17 54.5**	**+0.2**
ANKY				S	**Sn**	**12 18 01.3**	**0.0**
	2μm,0.4s						
ANKY	**Antikythira Is**	**0.32**	**200**	P	**Pn**	**12 17 54.6**	**+0.2**
ANKY				S	**Sn**	**12 18 01.2**	**0.0**
ANKY				AML	AML	12 18 01.7	
	comp=N,3246μm,0.4s						
ANKY				AML	AML	12 18 01.8	
	comp=E,3444μm,0.4s						
RODP	**Rodopos**	**0.66**	**157**	P	**Pn**	**12 17 59.0**	**+0.8**
RODP				S	**Sn**	**12 18 10.1**	**+2.2**
CHAN	**Chania**	**0.81**	**143**	P	**Pn**	**12 17 59.6**	**-0.5**
CHAN				S	**Sn**	**12 18 11.4**	**+0.1**
CHAN				AML	AML	12 18 15.5	
	comp=N,2953μm,0.4s						
CHAN				AML	AML	12 18 23.2	
	comp=E,2866μm,0.4s						
IMMV	**Iera Moni Meta**	**0.83**	**148**	P	**Pn**	**12 18 02.1**	**+1.8**
IMMV				S	**Sn**	**12 18 13.8**	**+2.0**
IMMV	**Iera Moni Meta**	**0.83**	**148**	P	**Pn**	**12 18 00.5**	**+0.2**
IMMV				S	**Sn**	**12 18 11.4**	**-0.4**
IMMV				AML	AML	12 18 17.9	
	comp=N,2049μm,0.3s						
IMMV				AML	AML	12 18 20.1	
	comp=E,2282μm,0.3s						
MHLO	**Agia Marina, M**	**0.93**	**56**	P	**Pn**	**12 18 02.2**	**+0.6**
MHLO				S	**Sn**	**12 18 13.6**	**-0.5**
	comp=E,3μm,0.5s						
MHLO	**Agia Marina, M**	**0.93**	**56**	P	**Pn**	**12 18 02.2**	**+0.6**
MHLO				S	**Sn**	**12 18 13.4**	**-0.8**
MHLO				AML	AML	12 18 16.6	
	comp=N,5688μm,0.5s						
MHLO				AML	AML	12 18 17.7	
	comp=E,5790μm,0.5s						
YDRA	**Hydra**	**1.18**	**1**	P	**Pn**	**12 18 05.2**	**+0.3**
YDRA				S	**Sn**	**12 18 20.3**	**+0.3**
YDRA				AML	AML	12 18 23.6	
	comp=N,1694μm,0.2s						
YDRA				AML	AML	12 18 23.7	
	comp=E,2881μm,0.3s						
KRND	**KRANIDI**	**1.23**	**349**	P	**Pn**	**12 18 06.4**	**+0.7**
KRND				S	**Sn**	**12 18 22.4**	**+1.1**
	comp=E,1μm,0.2s						
KRND	**KRANIDI**	**1.23**	**349**	P	**Pn**	**12 18 06.2**	**+0.5**
KRND				S	**Sn**	**12 18 21.2**	**-0.1**
KRND				AML	AML	12 18 24.0	
	comp=E,2510μm,0.3s						
KRND				AML	AML	12 18 26.1	
	comp=N,1811μm,0.2s						
EPID	**Epidavros**	**1.47**	**350**	P	**Pn**	**12 18 09.8**	**+1.0**
EPID				S	**Sn**	**12 18 29.0**	**+2.1**
IDI	**Anoyia**	**1.47**	**126**	P	**Pn**	**12 18 10.3**	**+1.3**
IDI				S	**Sn**	**12 18 29.2**	**+2.0**
	comp=N,530nm,0.4s						
IDI	**Anoyia**	**1.47**	**126**	P	**Pn**	**12 18 09.4**	**+0.4**
IDI				S	**Sn**	**12 18 26.8**	**-0.3**
IDI				AML	AML	12 18 37.7	
	comp=N,1236μm,0.5s						
IDI				AML	AML	12 18 37.9	
	comp=E,1443μm,0.4s						
PYL	**PYLOS**	**1.55**	**298**	P	**Pn**	**12 18 11.7**	**+1.8**
PYL				S	**Sn**	**12 18 32.9**	**+4.0**
PYL	**PYLOS**	**1.55**	**298**	P	**Pn**	**12 18 09.6**	**-0.3**
PYL				AML	AML	12 18 40.3	
	comp=N,418μm,0.7s						
PYL				AML	AML	12 18 41.1	
	comp=E,772μm,0.4s						
HRKL	**Herakleio**	**1.60**	**122**	P	**Pn**	**12 18 12.3**	**+1.7**
HRKL				S	**Sn**	**12 18 32.0**	**+1.8**
HRKL	**Herakleio**	**1.60**	**122**	P	**Pn**	**12 18 11.8**	**+1.2**
HRKL				S	**Sn**	**12 18 30.7**	**+0.6**
HRKL				AML	AML	12 18 35.6	
	comp=E,5552μm,0.2s						
HRKL				AML	AML	12 18 37.4	
	comp=N,4076μm,0.5s						

VLY	**Voula,Athens**	**1.70**	**9**	P		**Pn**	**12 18 12.6**	**+0.5**
VLY	**Voula,Athens**	**1.70**	**9**	P		**Pn**	**12 18 12.1**	**0.0**
VLY				S		**Sn**	**12 18 32.0**	**-0.7**
VLY				AML		AML	12 18 35.0	
	comp=N,518μm,0.2s							
VLY				AML		AML	12 18 38.9	
	comp=E,733μm,0.4s							
ATHU	**Athens Univers**	**1.81**	**9**	P		**Pn**	**12 18 14.2**	**+0.6**
ATHU				S		**Sn**	**12 18 37.5**	**+2.1**
LOUT	**Loutraki**	**1.85**	**349**	P		**Pn**	**12 18 15.3**	**+1.2**
LOUT				S		**Sn**	**12 18 38.4**	**+2.0**
LTK	**Loutraki**	**1.89**	**349**	P		**Pn**	**12 18 15.4**	**+0.8**
PTL	**Penteli**	**1.91**	**10**	P		**Pn**	**12 18 16.1**	**+1.3**
PTL				S		**Sn**	**12 18 39.9**	**+2.2**
APE	**Apeiranthos**	**1.91**	**61**	P		**Pn**	**12 18 15.4**	**+0.5**
APE	**Apeiranthos**	**1.91**	**61**	P		**Pn**	**12 18 15.1**	**+0.3**
DION	**Dionisos Attik**	**1.94**	**12**	P		**Pn**	**12 18 17.0**	**+1.6**
DION	**Dionisos Attik**	**1.94**	**12**	P		**Pn**	**12 18 16.2**	**+0.9**
DION				AML		AML	12 18 41.7	
	comp=N,1881μm,0.3s							
DION				AML		AML	12 18 44.1	
	comp=E,1551μm,0.7s							
THAL	**Thalero**	**1.96**	**342**	P		**Pn**	**12 18 16.6**	**+1.0**
THAL				S		**Sn**	**12 18 42.2**	**+3.1**
GUR	**Goura**	**1.97**	**334**	P		**Pn**	**12 18 16.4**	**+0.6**
GUR				S		**Sn**	**12 18 40.9**	**+1.5**
GUR	**Goura**	**1.97**	**334**	P		**Pn**	**12 18 16.2**	**+0.4**
GUR				S		**Sn**	**12 18 37.9**	**-1.5**
GUR				AML		AML	12 18 45.8	
	comp=N,1394μm,0.3s							
GUR				AML		AML	12 18 49.7	
	comp=E,1595μm,0.3s							
VILL	**Villia**	**1.99**	**357**	P		**Pn**	**12 18 16.7**	**+0.6**
VILL				S		**Sn**	**12 18 41.4**	**+1.5**
VIL2	**Platees**	**2.04**	**356**	P		**Pn**	**12 18 16.3**	**-0.4**
VIL2				AML		AML	12 18 43.4	
	comp=E,738μm,0.3s							
VIL2				AML		AML	12 18 44.2	
	comp=N,608μm,0.5s							
KLV	**Kalavryta, Ach**	**2.14**	**332**	P		**Pn**	**12 18 19.0**	**+1.0**
KLV				S		**Sn**	**12 18 45.0**	**+1.6**
KLV	**Kalavryta, Ach**	**2.14**	**332**	P		**Pn**	**12 18 18.6**	**+0.6**
KLV				S		**Sn**	**12 18 42.3**	**-1.1**
KLV				AML		AML	12 18 52.4	
	comp=E,347μm,0.3s							
KLV				AML		AML	12 18 52.7	
	comp=N,256μm,0.3s							
DRO	**Drossia**	**2.25**	**323**	P		**Pn**	**12 18 21.5**	**+1.9**
DRO	**Drossia**	**2.25**	**323**	P		**Pn**	**12 18 20.7**	**+1.1**
DRO				AML		AML	12 19 00.4	
	comp=N,502μm,0.4s							
DRO				AML		AML	12 19 00.8	
	comp=E,621μm,0.7s							
ZKR	**Zakros**	**2.50**	**114**	P		**Pn**	**12 18 23.6**	**+0.7**
KYMI	**Kymi, Euboea I**	**2.52**	**12**	P		**Pn**	**12 18 23.8**	**+0.7**
KYMI				S		**Sn**	**12 18 54.1**	**+1.5**
	comp=E,130nm,0.2s							
KYMI	**Kymi, Euboea I**	**2.52**	**12**	P		**Pn**	**12 18 23.6**	**+0.5**
EFP	**Efpalio**	**2.56**	**332**	P		**Pn**	**12 18 24.8**	**+1.0**
EFP	**Efpalio**	**2.56**	**332**	P		**Pn**	**12 18 24.7**	**+1.0**
LTHK	**Lithakia**	**2.59**	**307**	P		**Pn**	**12 18 24.4**	**+0.3**
AXAR	**Agios Charalam**	**2.67**	**347**	P		**Pn**	**12 18 26.6**	**+1.4**
AXAR				S		**Sn**	**12 18 59.5**	**+3.2**
AXAR	**Agios Charalam**	**2.67**	**347**	P		**Pn**	**12 18 26.1**	**+0.9**
AXAR				AML		AML	12 19 03.5	
	comp=N,854μm,0.5s							
AXAR				AML		AML	12 19 05.5	
	comp=E,728μm,0.4s							
MAKR	**Makrakomi, Fth**	**3.02**	**340**	P		**Pn**	**12 18 32.0**	**+1.9**
MAKR	**Makrakomi, Fth**	**3.02**	**340**	P		**Pn**	**12 18 31.9**	**+1.7**
EVR	**Evrytania**	**3.03**	**335**	P		**Pn**	**12 18 32.1**	**+1.8**
NEO	**Neokhori**	**3.14**	**357**	P		**Pn**	**12 18 32.4**	**+0.7**
XOR	**Xorichti**	**3.20**	**357**	P		**Pn**	**12 18 33.3**	**+0.8**
PAIG	**Paliouri**	**3.76**	**3**	P		**Pn**	**12 18 41.7**	**+1.6**
KPRO	**Kipourio**	**4.12**	**337**	P		**Pn**	**12 18 47.2**	**+2.0**
KPRO	**Kipourio**	**4.12**	**337**	P		**Pn**	**12 18 46.5**	**+1.3**
IGT	**Igoumenitsa**	**4.16**	**325**	P		**Pn**	**12 18 47.9**	**+2.2**
HORT	**Hortiatis**	**4.43**	**357**	P		**Pn**	**12 18 51.1**	**+1.7**
DBRK	**Dubrovnik**	**7.67**	**329**	*e*Pn		**Pn**	**12 19 30.0**	**-3.8**
DBRK				Sn		Sn	12 20 49.4	-10
STON	**Ston**	**8.03**	**328**	*e*Pn		**Pn**	**12 19 35.1**	**-3.5**
STON				Sn		Sn	12 20 57.3	-11
LSTV	**Lastovo**	**8.31**	**324**	*e*Pn		**Pn**	**12 19 38.5**	**-3.9**
MAKA	**Makarska**	**8.66**	**327**	*e*Pn		**Pn**	**12 19 43.6**	**-3.6**
RICI	**Ricice**	**8.78**	**328**	*e*Pn		**Pn**	**12 19 45.9**	**-2.9**
BRTR	**Keskin Array B**	**8.80**	**63**	Pn		**Pn**	**12 19 54.1**	**+4.7**
	comp=E,0.1nm,0.3s,baz=245,slow=12,SNR=5.8 comp=E,1.6nm,0.8s							
KIJV	**Kijevo**	**9.50**	**328**	*e*Pn		**Pn**	**12 19 54.9**	**-3.9**
ZIRJ	**Zirje**	**9.57**	**324**	*e*Pn		**Pn**	**12 19 56.4**	**-3.3**
MORI	**Morici**	**9.70**	**325**	*e*Pn		**Pn**	**12 19 58.8**	**-2.8**
DUGI	**Dugi Otok**	**10.11**	**323**	*e*Pn		**Pn**	**12 20 04.4**	**-2.7**
VIRC	**Vir**	**10.33**	**324**	*e*Pn		**

Azm125.0000°; N -0.6700, Plg11.0000°, Azm31.0000°; P -2.6500, Plg70.0000°, Azm267.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
PRU 11 13:05:38.4, 43.60N, 19.61E, h10km, M4.4
ISC 11 13:05:23.1±0.8, 42.64N±0.01, 19.87E±0.01, h6km±5km, n410, σ1.96/507, mb3.9/24, 31C-19D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PVY	**Plav**	**0.08**	**125**	⇑*i*Pg		**Pg**	**13 05 24.8**	**-0.1**
PVY				*i* Sg		**Sg**	**13 05 26.7**	**+0.4**
IVA	**Berane**	**0.23**	**3**	⇑*i*Pg		**Pg**	**13 05 27.6**	**-0.1**
IVA				*i* Sg		**Sg**	**13 05 31.3**	**+0.5**
BCI	**Bajram Curri**	**0.31**	**152**	P		**Pg**	**13 05 27.9**	**-1.2**
	baz=167							
BCI				S		**Sg**	**13 05 32.7**	**-0.4**
	baz=167							
BCI				AMP				
	comp=E,472nm,0.3s,baz=167							
KOME	**Kolasin**	**0.34**	**309**	⇑*i*Pg		**Pg**	**13 05 29.3**	**-0.4**
KOME				*i* Sg		**Sg**	**13 05 34.3**	**+0.1**
PUK	**Puka**	**0.60**	**179**			**Pg**	**13 05 33.3**	**-0.8**
PUK				Sg		**Sg**	**13 05 42.1**	**-0.2**
PUK	**Puka**	**0.60**	**179**	P		**Pg**	**13 05 33.3**	**-1.2**
	baz=186							
PUK				AMP				
	comp=N,149nm,0.3s,baz=186							
SJES	**Sjenica**	**0.63**	**7**	*e*Pg		**Pg**	**13 05 34.7**	**-0.5**
SJES				*e*Sg		**Sg**	**13 05 43.4**	**+0.1**
SJES	**Sjenica**	**0.63**	**7**	⇑*i*Pg		**Pg**	**13 05 34.6**	**-0.6**
SJES				*e*Sg		**Sg**	**13 05 42.9**	**-0.4**
DRME	**Dracevica, Mon**	**0.68**	**229**	⇑*i*Pg		**Pg**	**13 05 34.7**	**-1.5**
DRME				*i* Sg		**Sg**	**13 05 45.3**	**+0.3**
DRME	**Dracevica, Mon**	**0.68**	**229**	⇑*i*Pg		**Pg**	**13 05 34.6**	**-1.6**
DRME				*e*Sg		**Sg**	**13 05 45.7**	**+0.7**
NKME	**Niksic**	**0.69**	**281**	⇑*i*Pg		**Pg**	**13 05 34.9**	**-1.5**
NKME				*i* Sg		**Sg**	**13 05 46.2**	**+0.9**
CEME	**Cevo**	**0.71**	**263**	⇑*i*Pg		**Pg**	**13 05 35.2**	**-1.6**
CEME				*i* Sg		**Sg**	**13 05 46.2**	**+0.2**
PLE	**Pljevlja**	**0.78**	**333**	P		**Pg**	**13 05 37.1**	**-0.9**
PLE	**Pljevlja**	**0.78**	**333**	⇑*i*Pg		**Pg**	**13 05 37.1**	**-0.9**
PLE				*i* Sg		**Sg**	**13 05 47.6**	**-0.5**
BUM	**Brajici-Budva**	**0.80**	**245**	⇑*i*Pg		**Pg**	**13 05 36.8**	**-1.6**
BUM				*i* Sg		**Sg**	**13 05 49.4**	**+0.6**
ULC	**Ulcinj**	**0.82**	**215**	P		**Pg**	**13 05 37.9**	**-0.9**
ULC	**Ulcinj**	**0.82**	**215**	⇑*i*Pg		**Pg**	**13 05 37.8**	**-1.0**
ULC				*i* Sg		**Sg**	**13 05 50.1**	**+0.6**
UPM	**Unac-Piva**	**0.91**	**309**	⇑*i*Pg		**Pg**	**13 05 39.3**	**-1.3**
UPM				*i* Sg		**Sb**	**13 05 53.9**	**+0.1**
UPM	**Unac-Piva**	**0.91**	**309**	⇑*i*Pg		**Pg**	**13 05 39.2**	**-1.3**
UPM				*e*Sg		**Sg**	**13 05 52.7**	**+0.4**
IVAS	**Ivanjica**	**0.96**	**12**	*e*Pg		**Pg**	**13 05 40.0**	**-1.5**
IVAS				*e*Sg		**Sg**	**13 05 54.5**	**+0.6**
BRY	**Bratogost**	**1.02**	**285**	P		**Pg**	**13 05 40.6**	**-2.0**
BRY				S		**Sb**	**13 05 57.0**	**+0.1**
BRY	**Bratogost**	**1.02**	**285**	⇓*i*Pg		**Pg**	**13 05 40.5**	**-2.0**
BRY				*i* Sg		**Sb**	**13 05 57.0**	**+0.1**
BRY	**Bratogost**	**1.02**	**285**	*e*Pg		**Pg**	**13 05 40.7**	**-1.9**
BRY				*e*Sg		**Sg**	**13 05 55.7**	**-0.1**
HCY	**Herceg Novi**	**1.04**	**260**	P		**Pg**	**13 05 40.6**	**-2.4**
HCY				S		**Sb**	**13 05 57.0**	**-0.3**
HCY	**Herceg Novi**	**1.04**	**260**	⇓*i*Pg		**Pg**	**13 05 41.2**	**-1.8**
HCY				*i* Sg		**Sb**	**13 05 57.8**	**+0.5**
HCY	**Herceg Novi**	**1.04**	**260**	⇑*i*Pg		**Pg**	**13 05 41.9**	**-1.1**
HCY				*e*Sg		**Sg**	**13 05 56.3**	**-0.1**
PHP	**Peshkopia**	**1.04**	**156**	P		**Pg**	**13 05 41.1**	**-2.0**
	baz=160							
PHP				S		**Sb**	**13 05 56.9**	**-0.6**
	baz=160							
PHP	**Peshkopia**	**1.04**	**156**	P		**Pg**	**13 05 41.4**	**-1.7**
RUDO	**Rudo**	**1.05**	**340**	*e*Pg		**Pg**	**13 05 41.0**	**-2.1**
RUDO	**Rudo**	**1.05**	**340**	⇓*i*Pg		**Pg**	**13 05 40.8**	**-2.3**
RUDO				*e*Sg		**Sg**	**13 05 56.1**	**-0.6**
SELS	**Selova**	**1.08**	**57**	*e*Pg		**Pg**	**13 05 42.5**	**-1.4**
SELS				*e*Sg		**Sg**	**13 05 56.4**	**-1.5**
TREB	**Trebinje**	**1.13**	**275**	*e*Pg		**Pg**	**13 05 42.9**	**-1.8**
TREB				*e*Sn		**Sn**	**13 06 00.7**	**-0.5**
TREB	**Trebinje**	**1.13**	**275**	⇓*i*Pg		**Pg**	**13 05 42.4**	**-2.3**
TREB				*e*Sg		**Sg**	**13 05 58.7**	**-0.6**
BBLS	**Lazići**	**1.27**	**345**	*e*Pn		**Pn**	**13 05 45.9**	**-1.6**
BBLS	**Lazići**	**1.27**	**345**	⇑*i*Pg		**Pn**	**13 05 45.9**	**-1.6**
BBLS				*e*Sg		**Sg**	**13 06 03.9**	**-0.1**
DBRK	**Dubrovnik**	**1.27**	**272**	*e*Pn		**Pn**	**13 05 46.1**	**-1.4**
TIR	**Tirane**	**1.29**	**180**	⇑P		**Pg**	**13 05 48.1**	**+0.3**
TIR	**Tirane**	**1.29**	**180**			**Pn**	**13 05 46.6**	**-1.0**
TIR	**Tirane**	**1.29**	**180**	P		**Pn**	**13 05 46.4**	**-1.3**
	baz=184							
TIR				S		**Sn**	**13 06 08.3**	**+3.1**
	baz=184							
TIR				AMP				
	comp=N,24nm,0.6s,baz=184							
TIR	**Tirane**	**1.29**	**180**	P		**Pg**	**13 05 48.2**	**+0.3**
TIR				S		**Sn**	**13 06 07.5**	**+2.2**
TIR	**Tirane**	**1.29**	**180**	P		**Pg**	**13 05 48.1**	**+0.3**
SKO	**Skopje**	**1.34**	**119**	*e*Pg		**Pn**	**13 05 47.2**	**-1.1**
SKO				*e*Sg		**Sn**	**13 06 06.7**	**+0.2**
SKO	**Skopje**	**1.34**	**119**	P		**Pn**	**13 05 46.8**	**-1.6**
SKO	**Skopje**	**1.34**	**119**	⇓*i*Pn		**Pn**	**13 05 47.2**	**-1.1**
SKO				*i* Sn		**Sn**	**13 06 08.1**	**+1.6**
GRUS	**Gruza**	**1.39**	**26**	*e*Pn		**Pn**	**13 05 49.0**	**-0.1**
GRUS				*e*Sn		**Sg**	**13 06 09.4**	**+1.6**
BARS	**Barje**	**1.44**	**82**	*e*Pg		**Pn**	**13 05 49.3**	**-0.5**
BARS				*e*Sg		**Sb**	**13 06 06.9**	**-2.1**
NEVS	**Nevesinje**	**1.46**	**298**	*e*Pg		**Pn**	**13 05 49.8**	**-0.3**
DIVS	**Divibare**	**1.46**	**3**	*e*Pn		**Pn**	**13 05 49.8**	**-0.3**
DIVS				*e*Sn		**Sg**	**13 06 11.7**	**+1.6**
HAPS	**Han Pijesak,BI**	**1.60**	**335**	*e*Pn		**Pn**	**13 05 51.7**	**-0.3**
HAPS				*e*Sn		**Sg**	**13 06 14.2**	**-0.2**
HAPS	**Han Pijesak,BI**	**1.60**	**335**	⇑*i*Pn		**Pn**	**13 05 51.6**	**-0.4**
HAPS				*e*Sn		**Sb**	**13 06 13.6**	**+0.1**
STON	**Ston**	**1.62**	**279**	*e*Pn		**Pn**	**13 05 52.3**	**+0.1**
STON				*e*Sn		**Sg**	**13 06 15.5**	**+0.5**
STON	**Ston**	**1.62**	**279**	*e*Pn		**Pn**	**13 05 52.4**	**+0.3**
STON				Sn		**Sg**	**13 06 16.6**	**+1.6**
STON	**Ston**	**1.62**	**279**	⇓*i*Pn		**Pn**	**13 05 51.9**	**-0.3**
STON				*e*Sn		**Sb**	**13 06 13.9**	**-0.1**
TRUS	**Trudelj**	**1.63**	**14**	*e*Pn		**Pn**	**13 05 52.1**	**-0.3**
PRVS	**Prvonek**	**1.63**	**94**	*e*Pn		**Pn**	**13 05 52.1**	**-0.3**
PRVS				*e*Sn		**Sg**	**13 06 16.0**	**+0.5**
BOVS	**Bovan**	**1.67**	**53**	⇓P		**Pn**	**13 05 52.1**	**-0.8**
BOVS				⇑S		**Sg**	**13 06 16.2**	**-0.5**
BOVS	**Bovan**	**1.67**	**53**			**Pn**	**13 05 52.1**	**-0.8**
BOVS	**Bovan**	**1.67**	**53**	*e*Pn		**Pn**	**13 05 51.7**	**-1.2**
BOVS				*e*Sn		**Sg**	**13 06 16.4**	**-0.3**
OHR	**Ohrid**	**1.68**	**155**	*e*Pn		**Pn**	**13 05 53.4**	**+0.4**
OHR				*e*Sn		**Sg**	**13 06 17.5**	**+0.6**
OHR	**Ohrid**	**1.68**	**155**	P		**Pn**	**13 05 52.8**	**-0.2**
OHR	**Ohrid**	**1.68**	**155**	⇓*i*Pn		**Pn**	**13 05 53.2**	**+0.2**
OHR				*i* Sn		**Sg**	**13 06 18.8**	**+1.9**
SVIS	**Svilajnac**	**1.90**	**31**	*e*Pn		**Pb**	**13 05 57.0**	**-1.1**
TEKS	**Tekeris**	**1.93**	**353**	*e*Pn		**Pn**	**13 05 55.3**	**-1.2**
TEKS	**Tekeris**	**1.93**	**353**	*e*Pn		**Pn**	**13 05 55.7**	**-0.8**
TEKS				*e*Sn		**Sn**	**13 06 21.5**	**+0.5**
BOSS	**Bosilegrad**	**1.93**	**93**	*e*Pn		**Pn**	**13 05 56.2**	**-0.3**
BOSS				*e*Sn		**Sn**	**13 06 21.3**	**+0.2**
STIP	**Stip**	**1.96**	**118**	*i* Pn		**Pb**	**13 05 58.0**	**-1.2**
ZAGS	**Zajecar**	**2.09**	**55**	*e*Pn		**Pn**	**13 05 57.5**	**-1.1**
ZAPS	**Zavoj**	**2.12**	**72**	*e*Pn		**Pn**	**13 05 58.6**	**-0.6**
KBN	**Korca**	**2.13**	**161**			**Pn**	**13 05 59.4**	**+0.2**
KBN	**Korca**	**2.13**	**161**	P		**Pb**	**13 06 01.8**	**-0.3**
	baz=163							
KBN				S		**Sg**	**13 06 32.2**	**+0.8**
	baz=163							
KBN				AMP				
	comp=E,11nm,0.7s,baz=163							
KBN	**Korca**	**2.13**	**161**	P		**Pb**	**13 06 00.5**	**-1.6**
KBN				S		**Sb**	**13 06 29.6**	**+0.8**
	comp=E,7μm,0.6s							
KBN	**Korca**	**2.13**	**161**	P		**Pn**	**13 05 59.4**	**+0.2**
FNA	**Florina**	**2.17**	**148**			**Pn**	**13 06 00.6**	**+0.9**
FNA	**Florina**	**2.17**	**148**	P		**Pn**	**13 06 00.7**	**+0.9**
	baz=150							
FNA				S		**Sb**	**13 06 30.9**	**+1.0**
	baz=150							
FNA				AMP				
	comp=E,6.3nm,0.6s,baz=150							
FNA	**Florina**	**2.17**	**148**	P		**Pn**	**13 06 00.7**	**+0.9**
FNA				S		**Sg**	**13 06 31.1**	**-1.6**
FNA	**Florina**	**2.17**	**148**	P		**Pn**	**13 06 00.1**	**+0.3**
RICI	**Ricice**	**2.18**	**294**	*i* Pn		**Pb**	**13 06 02.1**	**-0.9**
VLO	**Vlora**	**2.19**	**188**			**Pn**	**13 06 00.6**	**+0.6**
VLO	**Vlora**	**2.19**	**188**	P		**Pb**	**13 06 01.6**	**-1.5**
	baz=190							
VLO				S		**Sb**	**13 06 31.4**	**+1.0**
	baz=190							
VLO				AMP				
	comp=N,22nm,0.6s,baz=190							
VLO	**Vlora**	**2.19**	**188**	P		**Pn**	**13 06 01.1**	**+1.1**
VLO				S		**Sb**	**13 06 30.4**	**0.0**
	comp=N,5μm,0.7s							
VLO	**Vlora**	**2.19**	**188**	P		**Pn**	**13 06 00.6**	**+0.6**
MAKA	**Makarska**	**2.19**	**288**	*e*Pn		**Pb**	**13 06 02.0**	**-1.1**
LSTV	**Lastovo**	**2.20**	**274**	*e*Pn		**Pn**	**13 06 01.2**	**+1.1**
BEO	**Beograd**	**2.21**	**11**	*e*Pn		**Pn**	**13 06 00.6**	**+0.3**
BEO	**Beograd**	**2.21**	**11**	P		**Pb**	**13 06 03.8**	**+0.3**
BLKB	**Belogradchik**	**2.27**	**63**	⇑P		**Pn**	**13 06 01.2**	**-0.1**
BLKB	**Belogradchik**	**2.27**	**63**			**Pn**	**13 06 01.2**	**-0.1**
NEST	**Nestorio**	**2.39**	**158**	P		**Pb**	**13 06 04.8**	**-1.8**
NEST				S		**Sb**	**13 06 36.9**	**+0.5**
	comp=N,2μm,0.7s							
VAY	**Valandovo**	**2.40**	**122**	*e*Pn		**Pn**	**13 06 02.8**	**-0.2**
VAY	**Valandovo**	**2.40**	**122**	P		**Pn**	**13 06 03.4**	**+0.4**
VAY	**Valandovo**	**2.40**	**122**	⇓*i*Pn		**Pn**	**13 06 03.0**	**+0.1**
VAY				*i* Sn		**Sg**	**13 06 43.1**	**+2.9**
PEHC	**Pehcevo**	**2.41**	**110**	*i* Pn		**Pn**	**13 06 03.2**	**+0.1**
DOB	**Doboj**	**2.46**	**329**	*e*Pn		**Pn**	**13 06 04.2**	**+0.5**
DOB				*e*Sn		**Sn**	**13 06 34.7**	**+0.6**
FRGS	**Fruska Gora**	**2.52**	**359**	*e*Pn		**Pn**	**13 06 03.7**	**-0.8**
FRGS	**Fruska Gora**	**2.52**	**359**	*e*Pn		**Pn**	**13 06 03.8**	**-0.8**
FRGS				*e*Sn		**Sn**	**13 06 35.4**	**-0.2**
MDVR	**Moldovita**	**2.52**	**31**	⇑P		**Pn**	**13 06 04.6**	**-0.1**
GRG	**Griva**	**2.53**	**131**	P		**Pn**	**13 06 05.2**	**+0.5**
GRG	**Griva**	**2.53**	**131**	P		**Pn**	**13 06 05.3**	**+0.5**
LSK	**Leskovik**	**2.55**	**167**	P		**Pb**	**13 06 08.2**	**-1.0**
	baz=169							
LSK				S		**Sb**	**13 06 38.9**	**-2.0**
	baz=169							
LSK				AMP				
	comp=E,11nm,0.7s,baz=169							
LSK	**Leskovik**	**2.55**	**167**	P		**Pn**	**13 06 06.8**	**+1.8**
LSK				S		**Sb**	**13 06 40.3**	**-0.5**
	comp=E,3μm,0.7s							
PENT	**Pentalofos**	**2.62**	**158**	P		**Pn**	**13 06 07.9**	**+1.9**
KNT	**Kendrikon**	**2.70**	**122**	P		**Pn**	**13 06 07.1**	**+0.1**
KNT	**Kendrikon**	**2.70**	**122**	P		**Pn**	**13 06 07.2**	**+0.2**
MGRS	**Mrkonjic Grad**	**2.70**	**312**	⇑*i*Pn		**Pn**	**13 06 08.0**	**+0.9**
MGRS				*e*Sn		**Sn**	**13 06 41.0**	**+0.9**
SRN	**Sarande**	**2.76**	**178**	P		**Pn**	**13 06 09.2**	**+1.4**
	baz=179							
SRN				S		**Sb**	**13 06 48.0**	**+1.2**
	baz=179							
SRN				AMP				
	comp=E,3.0nm,0.9s,baz=179							
SRN	**Sarande**	**2.76**	**178**	P		**Pn**	**13 06 09.4**	**+1.6**
SCTE	**Santa Cesarea**	**2.77**	**203**			**Pn**	**13 06 07.5**	**-0.6**
DJES	**Djerdap**	**2.79**	**43**	⇓P		**Pn**	**13 06 08.8**	**+0.4**
DJES	**Djerdap**	**2.79**	**43**	Pn		**Pn**	**13 06 08.7**	**+0.4**
DJES	**Djerdap**	**2.79**	**43**	*e*Pn		**Pn**	**13 06 08.7**	**+0.4**
KTI	**Kastanea**	**2.81**	**142**	P		**Pn**	**13 06 09.7**	**+1.1**
BLY	**Banja Luka**	**2.87**	**318**	*e*Pn		**Pn**	**13 06 10.8**	**+1.4**
BLY	**Banja Luka**	**2.87**	**318**	⇓*i*Pn		**Pn**	**13 06 10.1**	**+0.7**
BLY				*e*Sn		**Sn**	**13 06 44.5**	**+0.2**
KUV	**Kijevo**	**2.88**	**300**	*e*Pn		**Pb**	**13 06 08.8**	**-1.9**
HERR	**Herculane**	**2.90**	**39**	⇓P		**Pn**	**13 06 08.8**	**-1.1**
KPRO	**Kipourio**	**2.91**	**157**	P		**Pn**	**13 06 11.7**	**+1.7**
KPRO				S		**Sb**	**13 06 48.6**	**-2.6**
	comp=E,1μm,1.1s							
KEK	**Kerkira**	**2.92**	**181**	Pn		**Pn**	**13 06 08.8**	**-1.3**
KEK	**Kerkira**	**2.92**	**181**	P		**Pn**	**13 06 10.0**	**-0.1**
A050A	**Klekovaca**	**3.05**	**308**	⇑*i*Pn		**Pn**	**13 06 12.6**	**+0.7**
A050A				*e*Sn		**Sn**	**13 06 49.1**	**+0.3**
THE	**Thessaloniki**	**3.06**	**130**	P		**Pn**	**13 06 12.3**	**+0.3**
THE	**Thessaloniki**	**3.06**	**130**	P		**Pn**	**13 06 12.4**	**+0.4**
JAN	**Janina**	**3.07**	**166**	P		**Pn**	**13 06 14.5**	**+2.3**
MATE	**Matera**	**3.10**	**231**	⇑P		**Pn**	**13 06 13.1**	**+0.6**
MATE	**Matera**	**3.10**	**231**			**Pn**	**13 06 13.1**	**+0.6**
IGT	**Igoumenitsa**	**3.12**	**173**	P		**Pn**	**13 06 14.5**	**+1.6**
IGT				S		**Sb**	**13 06 53.8**	**-3.5**
	comp=E,945nm,0.6s							
HORT	**Hortiatis**	**3.16**	**129**	P		**Pn**	**13 06 13.8**	**+0.3**
SRS	**Serrai**	**3.17**	**117**	P		**Pn**	**13 06 13.8**	**+0.3**
SRS	**Serrai**	**3.17**	**117**	P		**Pn**	**13 06 13.3**	**-0.2**
SOH	**Sokhos**	**3.17**	**124**	P		**Pn**	**13 06 14.2**	**+0.6**
SGRT	**San Giovanni R**	**3.19**	**255**			**Pn**	**13 06 14.3**	**+0.4**
A051A	**Mrakovica**	**3.20**	**319**	⇓*i*Pn		**Pn**	**13 06 13.9**	**-0.1**
A051A				*e*Sn		**Sn**	**13 06 52.6**	**+0.1**
BZS	**Buzias**	**3.23**	**22**	⇑P		**Pn**	**13 06 13.7**	**-0.6**
BZS	**Buzias**	**3.23**	**22**	P		**Pn**	**13 06 13.7**	**-0.6**
NVR	**Nevrokopi**	**3.24**	**112**	P		**Pn**	**13 06 15.0**	**+0.5**
ZIRJ	**Zirje**	**3.26**	**290**	*e*Pn		**Pn**	**13 06 16.6**	**+1.9**
ZIRJ				Sn		**Sn**	**13 06 57.0**	**+3.2**
PRIJ	**Prijedor**	**3.27**	**317**	*e*Pn		**Pn**	**13 06 14.8**	**-0.1**
PRIJ				*e*Sn		**Sn**	**13 06 54.2**	**+0.1**
MORI	**Morici**	**3.28**	**293**	*e*Pn		**Pn**	**13 06 17.8**	**+2.7**
TYRN	**Tyrnavos**	**3.42**	**148**	P		**Pn**	**13 06 18.0**	**+1.0**
GZR	**Gura Zlata**	**3.46**	**36**	⇓P		**Pn**	**13 06 16.9**	**-0.6**
THL	**Klokotos Trika**	**3.47**	**152**	P		**Pn**	**13 06 18.9**	**+1.3**
SURR	**Surduc**	**3.51**	**27**	⇑P		**Pn**	**13 06 18.0**	**-0.2**
SURR	**Surduc**	**3.51**	**27**			**Pn**	**13 06 18.0**	**-0.2**
UDBI	**Udbina**	**3.53**	**304**	*e*Pn		**Pn**	**13 06 21.8**	**+3.2**
KOKK	**Kokkinochori,**	**3.58**	**119**	P		**Pn**	**13 06 20.1**	**+0.9**
A251A	**Rujevac**	**3.60**	**315**	*e*Pn		**Pn**	**13 06 21.1**	**+1.6**
MOSL	**Moslavina**	**3.73**	**324**	*e*Pn		**Pn**	**13 06 21.0**	**-0.2**
DUGI	**Dugi Otok**	**3.77**	**293**	*e*Pn		**Pn**	**13 06 23.5**	**+1.8**
PLIT	**Plitvice**	**3.81**	**307**	*e*Pn		**Pn**	**13 06 25.3**	**+3.0**
KAVA	**Kavala**	**3.84**	**114**	P		**Pn**	**13 06 23.1**	**+0.4**
SIRR	**Siria**	**3.85**	**19**	⇑P		**Pn**	**13 06 22.8**	**-0.1**
VIRC	**Vir**	**3.88**	**297**	*e*Pn		**Pn**	**13 06 25.3**	**+2.1**
LKD2	**Lefkada island**	**3.89**	**171**	P		**Pn**	**13 06 24.6**	**+1.1**
LKD2				S		**Sn**	**13 07 13.9**	**+4.4**
PAIG	**Paliouri**	**3.94**	**132**	P		**Pn**	**13 06 24.4**	**+0.2**
NYDR	**Nydri-Lefkada**	**3.97**	**171**	P		**Pn**	**13 06 25.7**	**+1.2**
LOT	**Lotru**	**3.97**	**44**	⇑P		**Pn**	**13 06 24.3**	**-0.3**
DRAG	**Dragano-Lefkad**	**3.99**	**172**	P		**Pn**	**13 06 25.9**	**+1.1**
CUC	**Castrocucco**	**4.04**	**231**			**Pn**	**13 06 26.0**	**+0.4**
EVGI	**Lefkada island**	**4.06**	**171**	P		**Pn**	**13 06 26.8**	**+1.1**
AGG	**Agios Georgios**	**4.07**	**152**	Pn		**Pn**	**13 06 24.4**	**+0.5**
AGG	**Agios Georgios**	**4.07**	**152**	P		**Pn**	**13 06 27.0**	**+1.1**
AGG	**Agios Georgios**	**4.07**	**152**	P		**Pn**	**13 06 26.4**	**+0.5**
NVLJ	**Novalja**	**4.11**	**300**	*e*Pn		**Pn**	**13 06 28.1**	**+1.7**
XOR	**Xorichti**	**4.12**	**141**	P		**Pn**	**13 06 27.3**	**+0.7**
HUMR	**Humele**	**4.16**	**61**	⇑P		**Pn**	**13 06 27.8**	**+0.7**
NEO	**Neokhori**	**4.18**	**142**	P		**Pn**	**13 06 27.9**	**+0.4**
TIP	**Timpagrande**	**4.18**	**215**	⇑P		**Pn**	**13 06 27.3**	**-0.2**
TIP	**Timpagrande**	**4.18**	**215**	Pn		**Pn**	**13 06 27.3**	**-0.2**
RABC	**Rab**	**4.25**	**301**	*e*Pn		**Pn**	**13 06 30.8**	**+2.5**
KALN	**Kalnik**	**4.26**	**326**	*e*Pn		**Pn**	**13 06 28.3**	**-0.3**
PAOL	**Paolisi**	**4.28**	**250**			**Pn**	**13 06 29.5**	**+0.7**
ANX	**Ano Chora**	**4.33**	**158**	P		**Pn**	**13 06 31.5**	**+1.9**
ANX				S		**Sn**	**13 07 24.8**	**+4.4**
OZLJ	**Ozalj**	**4.35**	**315**	*e*Pn		**Pn**	**13 06 30.8**	**+1.2**
ARR	**Arges**	**4.38**	**50**	⇓P		**Pn**	**13 06 30.9**	**+0.6**
BOJS	**Bojanci**	**4.39**	**312**	*i* Pn		**Pn**	**13 06 31.6**	**+1.2**
BOJS				*i*			13 06 44.5	
BOJS				*i* Sn		**Sn**	**13 07 25.0**	**+3.2**
BOJS				*i* Sg		**Sg**	**13 07 50.9**	**+6.8**
BOJS				IAML			13 08 06.5	
	comp=Z,675nm,1.4s							
BOJS	**Bojanci**	**4.39**	**312**	*e*Pn		**Pn**	**13 06 30.4**	**+0.1**
BOJS				*e*Sn		**Sn**	**13 07 21.3**	**-0.5**
AXAR	**Agios Charalam**	**4.41**	**150**	P		**Pn**	**13 06 31.8**	**+1.2**
LOBO	**Lobor**	**4.45**	**324**	*e*Pn		**Pn**	**13 06 31.1**	**0.0**
INTR	**Introdacqua**	**4.47**	**264**	Pn		**Pn**	**13 06 32.3**	**+0.8**
EFP	**Efpalio**	**4.48**	**159**	P		**Pn**	**13 06 34.3**	**+2.7**
RDO	**Rodhopi**	**4.48**	**108**			**Pn**	**13 06 31.7**	**+0.1**
RDO	**Rodhopi**	**4.48**	**108**	P		**Pn**	**13 06 31.5**	**0.0**
CRES	**Cresnjev**	**4.50**	**317**	⇓*i*Pn		**Pn**	**13 06 31.9**	**+0.1**
CRES				*e*Sn		**Sn**	**13 07 23.7**	**-0.7**
DRGR		**4.62**	**25**	⇓P		**Pn**	**13 06 33.3**	**-0.3**
DRGR		**4.62**	**25**	P		**Pn**	**13 06 33.2**	**-0.3**
MARR	**Marisel-Cluj**	**4.65**	**29**	⇓P		**Pn**	**13 06 33.7**	**-0.3**
MARR	**Marisel-Cluj**	**4.65**	**29**			**Pn**	**13 06 33.7**	**-0.3**
VOIR		**4.66**	**51**	⇓P		**Pn**	**13 06 34.8**	**+0.6**
VOIR		**4.66**	**51**	P		**Pn**	**13 06 34.7**	**+0.6**
RIY	**Rijeka**	**4.73**	**306**	*e*Pn		**Pn**	**13 06 38.0**	**+3.1**
CAMP	**Campotosto**	**4.77**	**271**			**Pn**	**13 06 37.0**	**+1.3**
SMRN	**Sveta Marina**	**4.78**	**302**	*e*Pn		**Pn**	**13 06 37.4**	**+1.8**
GUMA	**Gualdo di Mace**	**4.83**	**277**			**Pn**	**13 06 37.6**	**+1.3**
DRO	**Drossia**	**4.89**	**163**	P		**Pn**	**13 06 39.0**	**+1.9**
ALN	**Alexandroupoli**	**4.93**	**109**			**Pn**	**13 06 38.1**	**+0.4**
ALN	**Alexandroupoli**	**4.93**	**109**	P		**Pn**	**13 06 38.1**	**+0.4**
BRJN	**Brijuni**	**4.98**	**299**	*e*Pn		**Pn**	**13 06 40.2**	**+1.8**
NRCA	**Norcia**	**4.98**	**275**			**Pn**	**13 06 39.6**	**+1.1**
CEY	**Cerknica**	**4.99**	**310**	*e*Pn		**Pn**	**13 06 38.5**	**-0.1**
CEY				*e*Sn		**Sn**	**13 07 35.2**	**-1.5**
FDMO	**Fiordimonte**	**5.01**	**277**			**Pn**	**13 06 40.2**	**+1.4**
GUR	**Goura**	**5.06**	**157**	P		**Pn**	**13 06 41.4**	**+1.8**
MLR	**Muntele Rosu**	**5.22**	**55**			**Pn**	**13 06 42.9**	**+1.1**
MLR	**Muntele Rosu**	**5.22**	**55**	Pn		**Pn**	**13 06 43.1**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=237,slow=16,SNR=5.9							
MLR				Sn		**Sn**	**13 07 41.4**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=287,slow=19,SNR=1.3							
MLR				Lg		Lg	13 08 09.4	
	comp=Z,0.1nm,0.3s,baz=225,slow=20,SNR=1.6							
	comp=Z,1.8nm,0.4s							
PSZ	**Piszkesteto**	**5.28**	**0**	⇑P		**Pn**	**13 06 42.0**	**-0.5**
PSZ	**Piszkesteto**	**5.28**	**0**	Pn		**Pn**	**13 06 41.7**	**-0.9**
PSZ	**Piszkesteto**	**5.28**	**0**			**Pn**	**13 06 42.0**	**-0.5**
PSZ	**Piszkesteto**	**5.28**	**0**	P		**Pn**	**13 06 41.7**	**-0.9**
SRO	**Srobarova**	**5.29**	**349**	*e*P		**Pn**	**13 06 43.5**	**+0.9**
SRO	**Srobarova**	**5.29**	**349**	*e*PN		**Pn**	**13 06 43.5**	**+0.9**
SOKA	**Soboth**	**5.31**	**321**	*i* Pn		**Pn**	**13 06 43.8**	**+0.8**

SENIN Lac Senin/Sane 9.72 297 Pn Pn 13 07 45.2 +1.5
BALST Balsthal 9.82 303 *e*Pn **Pn 13 07 46.6 +1.7**
LMR La Mourre 9.82 279 *e*Pn **Pn 13 07 44.5 -0.3**
LMR *e*Sn **Sn 13 09 28.7 -6.7**
comp=Z,0.9nm,0.3s
BNI Bardonecchia 9.84 289 Pn 13 07 44.4 -0.7
BNI Bardonecchia 9.84 289 P **Pn 13 07 44.4 -0.7**
LPG La Plagne 9.87 291 *e*Pn **Pn 13 07 45.5 -0.2**
LPG *e*Sn **Sn 13 09 30.3 -6.6**
comp=Z,6.0nm,0.5s
LPL La Plagne 9.89 291 *e*Pn **Pn 13 07 46.0 +0.1**
LPL *e*Sn **Sn 13 09 30.6 -6.7**
comp=Z,7.7nm,0.4s
BFO Black Forest 9.90 309 Pn 13 07 47.0 +1.1
BFO Black Forest 9.90 309 P **Pn 13 07 47.0 +1.1**
BFO Black Forest 9.90 309 *e*Pn **Pn 13 07 47.9 +2.0**
AKASG Malin Array Be 10.30 35 Pn **Pn 13 07 51.7 +0.3**
comp=Z,0.5nm,0.3s,baz=221,slow=12,SNR=1.7
AKASG LR LR 13 13 04.9
comp=Z,88nm,18.8s,baz=238,slow=45
comp=Z,0.2nm,0.3s
AKBB Malin Array Si 10.30 35 *i*P **Pn 13 07 51.3 -0.1**
AKBB pmax pmax
comp=Z,1.0nm,0.2s
ORIF Oris-en-Rattie 10.38 287 *e*Pn **Pn 13 07 52.8 +0.3**
ORIF *e*Sn **Sn 13 09 42.0 -7.1**
comp=Z,12nm,0.6s
SMRF Simiane la Rot 10.51 282 *e*P **Pn 13 07 58.4 +4.1**
SMRF *e*Sn **Sn 13 09 45.3 -7.0**
comp=Z,0.6nm,0.3s
ECH Echery 10.53 306 Pn **Pn 13 07 54.9 +0.4**
ECH Echery 10.53 306 P **Pn 13 07 54.9 +0.4**
HINF Hinteralfeld 10.54 304 *e*Pn **Pn 13 07 54.3 -0.4**
HINF *e*Sn **Sn 13 09 46.1 -6.9**
comp=Z,3.9nm,0.4s
CDF Champ du Feu 10.55 307 *e*Pn **Pn 13 07 54.3 -0.6**
CDF *e*Sn **Sn 13 09 46.3 -7.1**
comp=Z,2.1nm,0.3s
CDF Champ du Feu 10.55 307 *e*P **Pn 13 07 57.3 +2.4**
CABF La Chapelle 10.60 297 *e*Pn **Pn 13 07 56.1 +0.6**
CABF *e*Sn **Sn 13 09 47.7 -6.8**
comp=Z,2.9nm,0.4s
KEST Kesra 10.69 233 Pn **Pn 13 07 56.4 -0.4**
comp=Z,0.1nm,0.3s,baz=117,slow=18,SNR=1.9
comp=Z,4.8nm,1.0s
BRTR Keskin Array B 10.78 101 Pn **Pn 13 07 56.7 -1.3**
comp=Z,0.1nm,0.3s,baz=297,slow=13,SNR=2.0
BRTR LR LR 13 12 52.7
comp=Z,128nm,21.1s,baz=296,slow=42
comp=Z,0.2nm,0.3s
HAU Haudompre 10.93 304 *e*Pn **Pn 13 08 00.9 +1.0**
HAU *e*Sn **Sn 13 09 55.4 -7.1**
comp=Z,2.8nm,0.4s
VIVF Saint-Julien-l 11.22 287 *e*Pn **Pn 13 08 03.3 -0.7**
VIVF *e*Sn **Sn 13 10 03.0 -6.7**
comp=Z,2.2nm,0.6s
VIVF Saint-Julien-l 11.22 287 *e*P **Pn 13 08 03.6 -0.4**
SSB Saint Sauveur 11.36 289 Pn 13 08 05.1 -0.9
SSB Saint Sauveur 11.36 289 P **Pn 13 08 05.1 -0.9**
LASF Ste Croix 11.75 282 *e*Pn **Pn 13 08 10.8 -0.5**
SMF Signal de Mont 12.10 295 *e*Pn **Pn 13 08 14.8 -1.2**
SMF *e*Sn **Sn 13 10 23.5 -7.7**
comp=Z,3.0nm,0.4s
LOR Lormes 12.25 298 *e*Pn **Pn 13 08 17.4 -0.6**
LOR *e*Sn **Sn 13 10 26.9 -8.0**
comp=Z,7.8nm,0.5s
SSF Saint Saulge 12.43 296 *e*Pn **Pn 13 08 20.0 -0.4**
SSF *e*Sn **Sn 13 10 31.0 -8.1**
comp=Z,4.2nm,0.5s
AVF Avril sur Loir 12.46 295 *e*Pn **Pn 13 08 20.3 -0.6**
AVF *e*Sn **Sn 13 10 32.0 -8.0**
comp=Z,1.7nm,0.5s
BGF Bois d'Agland 12.75 294 *e*Pn **Pn 13 08 24.6 -0.3**
BGF *e*Sn **Sn 13 10 39.8 -7.3**
comp=Z,7.6nm,0.5s
GIVF Givet 12.78 311 *e*Pn **Pn 13 08 24.5 -0.8**
ANN Anapa 12.89 74 *i*P **Pn 13 08 25.2 -1.5**
HYF Humbligny 13.05 297 *e*Pn **Pn 13 08 28.2 -0.8**
CAF Calviac 13.07 286 *e*Pn **Pn 13 08 28.4 -0.9**
CAF Calviac 13.07 286 *e*P **Pn 13 08 31.1 +1.8**
BAIF Baives 13.11 310 *e*Pn **Pn 13 08 27.9 -1.8**
TCF Toulx Ste Croi 13.13 292 *e*Pn **Pn 13 08 28.9 -1.2**
TCF *e*Sn Sn 13 10 46.8 -10
comp=Z,4.0nm,0.6s
TCF Toulx Ste Croi 13.13 292 *e*P **Pn 13 08 32.8 +2.7**
LDF La Druitiere 15.19 300 *e*P **P 13 09 07.1 +3.9**
FLN La Foliniere 15.46 300 *e*P **P 13 09 09.3 +3.1**
MMAI Mount Meron Ar 15.56 123 LR LR 13 15 48.8
comp=Z,37nm,18.6s,baz=267,slow=40
VSR Storozhevoye 15.69 50 *e*P **P 13 09 10.2 +1.5**
VSR pmax pmax
comp=Z,6.0nm,1.0s
LPSR Galich'ya Gora 16.21 46 *e*P **Pn 13 09 06.5 -4.8**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VSU Vasula 16.42 13 *i*P **P 13 09 15.6 -1.1**
OBN Obninsk 16.57 35 P **Pn 13 09 16.1 +0.3**
KBZ Khabaz 16.82 78 LR LR 13 16 14.1
comp=Z,33nm,21.3s,baz=284,slow=39
HFS Hagfors 17.92 350 P **P 13 09 35.4 +2.0**
comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=2.5
HFS LR LR 13 17 21.4
comp=Z,185nm,18.8s,baz=315,slow=40
comp=Z,3.8nm,0.8s
ESDC Sonseca Array 18.18 269 P **P 13 09 37.5 +1.1**
baz=65,slow=9.2,SNR=2.5
comp=Z,0.7nm,0.9s
NAO01 NORSAR Array S 19.03 346 P **P 13 09 45.5 -0.1**
NAO01 IAmb IAmb 13 09 48.0
comp=Z,30nm,1.5s
NC405 NORSAR Array S 19.15 348 P **Pn 13 09 48.4 +0.7**
NC405 IAmb IAmb 13 10 02.9
comp=Z,40nm,1.5s
NOA NORSAR Array B 19.16 347 P **Pn 13 09 49.1 +1.2**
baz=173,slow=9.5,SNR=1.6
comp=Z,0.7nm,0.6s
FINES FINESS Array B 19.20 9 P **Pn 13 09 48.6 +0.3**
FINES FINESS Array B 19.20 9 *e*P **Pn 13 09 49.4 +1.1**
FINES FINESS Array B 19.20 9 P **Pn 13 09 48.2 0.0**
comp=Z,0.3nm,0.3s,baz=212,slow=6.8,SNR=14
comp=Z,4.1nm,1.0s
FIA1 FINESS Array S 19.20 9 P **Pn 13 09 48.2 0.0**
FIA1 IAmb IAmb 13 09 51.3
comp=Z,32nm,1.2s
EKA Eskdalemuir Ar 19.63 318 P **P 13 09 52.3 +0.2**
baz=110,slow=9.2
comp=Z,2.1nm,0.6s
PBRG Braganca 19.71 277 *e*P **Pn 13 09 54.4 -0.2**
MTE Manteigas 20.62 273 *e*P **P 13 10 03.5 +0.4**
PBAR Barrancos 20.93 267 *e*P **P 13 10 06.5 0.0**
BELG Belogornoye 21.01 53 *i*P **P 13 10 07.4 +0.3**
BELG pmax pmax
comp=Z,2.0nm,1.0s
BELG Belogornoye 21.01 53 P **P 13 10 07.3 +0.1**
comp=Z,13nm,0.8s,baz=252,slow=3.2,SNR=3.0
comp=Z,13nm,0.8s
PESTR Estremoz 21.11 269 *e*P **P 13 10 08.2 -0.1**
PESTR Estremoz 21.11 269 P **P 13 10 08.0 -0.4**
PCAS Casmilo, Conde 21.42 273 *e*P **P 13 10 12.9 +1.2**
PMTG Montargil 21.51 270 *e*P **P 13 10 14.4 +1.7**
EVO Evora 21.53 268 *e*P **P 13 10 15.0 +2.1**
PBEJ Beja 21.60 267 *e*P **P 13 10 15.8 +2.2**
MDT Midelt 21.64 251 P **P 13 10 13.7 -0.6**
comp=Z,3.3nm,0.7s,baz=351,slow=12,SNR=5.9
MDT LR LR 13 18 36.1
comp=Z,22nm,19.2s,baz=328,slow=37
comp=Z,3.3nm,0.7s
KLMR Klimovskoe 21.77 26 *e*P **P 13 10 15.4 +0.2**
KLMR pmax pmax
comp=Z,19nm,1.2s
PCVE Castro Verde 21.87 266 *e*P **P 13 10 16.8 +0.3**
PNCL Nicolau / Gran 22.05 268 *e*P **P 13 10 19.2 +0.7**
ARU Arti 28.22 47 P **P 13 11 16.2 -0.3**
ARU IAmb IAmb 13 11 29.0
comp=Z,4.0nm,0.9s
TOA0 Torodi Ar. Sit 33.34 214 P **P 13 12 02.6 +0.7**
TOA0 IAmb IAmb 13 12 04.7
comp=Z,6.4nm,1.0s
TORD Torodi Ar. Bea 33.34 214 P **P 13 12 01.4 -0.5**
comp=Z,3.3nm,0.8s,baz=23,slow=11,SNR=15
BRVK Borovoye 34.72 55 P **P 13 12 13.6 -0.1**
BRVK IAmb IAmb 13 12 14.7
comp=Z,4.3nm,0.8s
BRVK Borovoye 34.72 55 *i*P **P 13 12 13.2 -0.4**
BRVK pmax pmax
comp=Z,16nm,2.5s
BVAR Borovoye Array 34.78 55 P **P 13 12 14.6 +0.3**
comp=Z,1.9nm,0.8s,baz=266,slow=8.3,SNR=6.9
comp=Z,1.9nm,0.8s
KKAR Karatay Array 36.65 72 P **P 13 12 30.8 +0.4**
KKAR Karatay Array 36.65 72 P **P 13 12 30.8 +0.4**
AAK Ala-Archa 39.58 71 *i*P **P 13 12 53.4 -1.8**
AAK pmax pmax
comp=Z,2.0nm,1.1s
KURBB Kurchatov Arra 40.11 58 P **P 13 12 58.8 -0.5**
comp=Z,0.4nm,0.5s,baz=288,slow=9.8,SNR=2.5
comp=Z,0.4nm,0.5s
KURK Kurchatov 40.15 57 P **P 13 13 00.4 +0.7**
KURK Kurchatov 40.15 57 *i*P **P 13 12 59.8 +0.2**
KURK pmax pmax
comp=Z,3.0nm,1.5s
KSH Kashi 41.75 75 P **P 13 13 15.5 +2.4**
KSH pmax pmax
comp=Z,3.0nm,1.7s
DBIC Dimbokro 41.96 218 P **P 13 13 14.6 -0.3**
DBIC Dimbokro 41.96 218 P **P 13 13 14.6 -0.3**
DBIC pmax pmax
comp=Z,12nm,0.9s
DBIC Dimbokro 41.96 218 P **P 13 13 13.6 -1.2**
comp=Z,9.2nm,0.8s,baz=16,slow=9.0,SNR=8.6
comp=Z,9.2nm,0.8s
NRIK Noril'sk 43.08 29 *i*P **P 13 13 23.8 +0.4**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
ZALV Zalesovo Beam 43.19 51 P **P 13 13 23.6 -0.9**
comp=Z,1.0nm,0.6s,baz=279,slow=9.6,SNR=7.4
ZALV LR LR 13 33 29.8
comp=Z,53nm,18.7s,baz=249,slow=39
comp=Z,1.0nm,0.6s
MAKZ Makanchi 43.31 62 P **P 13 13 26.0 +0.4**
MAKZ Makanchi 43.31 62 P **P 13 13 26.0 +0.4**
MAKZ pmax pmax
comp=Z,4.0nm,1.5s
MK31 Makanchi Array 43.52 62 P **P 13 13 26.9 -0.4**
MK31 Makanchi Array 43.52 62 P **P 13 13 26.9 -0.4**
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 43.52 62 P **P 13 13 27.6 +0.2**
MKAR Makanchi Array 43.52 62 *e*P **P 13 13 27.9 +0.6**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 43.52 62 P **P 13 13 26.6 -0.7**
comp=Z,1.0nm,0.8s,baz=285,slow=5.8,SNR=11
comp=Z,1.0nm,0.8s
WMQ Urumqi 48.14 64 *e*P **P 13 14 03.3 -0.6**
SONM Songino Array 58.07 52 P **P 13 15 16.9 -0.2**
comp=Z,1.0nm,0.9s,baz=170,slow=34,SNR=3.9
comp=Z,1.0nm,0.9s
HHC Hu-ho-hao-te 64.96 57 *e*P **P 13 16 04.2 +0.5**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,140nm,4.8s
PZH PanZhiHua 66.85 75 P **P 13 16 17.2 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
XAN Xi'an 67.28 64 P **P 13 16 20.7 +2.0**
XAN pP sP 13 16 25.5 +3.7
XAN sP pP 13 16 28.0 +7.1
YKA Yellowknife Ar 69.04 339 *e*P **P 13 16 31.6 +2.4**
YKA Yellowknife Ar 69.04 339 P **P 13 16 31.1 +1.9**
comp=Z,0.2nm,0.6s,baz=36,slow=5.7,SNR=5.1
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 83.60 325 P **P 13 17 54.1 +1.6**
comp=Z,0.3nm,0.7s,baz=57,slow=3.3,SNR=2.2
comp=Z,0.3nm,0.7s
TXAR Lajitas Array 91.55 313 P **P 13 18 30.4 -0.6**
comp=Z,0.5nm,1.0s,baz=46,slow=3.9,SNR=2.9
comp=Z,0.5nm,1.0s
ASAR Alice Springs 123.02 93 PKP **PKPdf 13 24 19.7 -0.9**
comp=Z,0.4nm,0.9s,baz=312,slow=0.9,SNR=2.1

IDC ***11*** *13:12:20.5±0.8,30.˚14N×87.˚62E, h0km, mb3.8/12, mbtmp3.8/15, ML3.5/3, MS3.2/6, Error ellipse: s-maj=29.7km s-min=15.9km az=56.0*
NDI ***11*** *13:12:22.7±2.7,30.˚92N×87.˚88E, h10km, ML3.5, MW4.0, mb4.2(NEIC)*
NEIC ***11*** *13:12:25.6±1.7,30.˚48N±0.˚07×87.˚49E±0.˚08, h12km±4km, mb4.2/24, Error ellipse: s-maj=11.7km s-min=7.7km az=223.0*
ISC 11 13:12:23.7±0.4,30.˚34N±0.˚05×87.˚59E±0.˚05, h10km, n68, σ1s85/72, mb4.1/22, MS3.3/4, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GTK	**Tadong**	**3.14**	**163**	*e*P		**Pb**	**13 13 18.4**	**-1.3**
GTK				*e*S		**Sb**	**13 14 01.6**	**+3.5**
GTK				IAML			13 14 03.0	
	comp=N,952nm,0.7s							
GTK				IAML			13 14 03.9	
	comp=E,842nm,0.5s							
LSA	**Lhasa**	**3.16**	**101**	Pn		**Pn**	**13 13 16.6**	**+2.7**
GUWA	**GUWAHATI**	**5.49**	**138**	*e*P		**Pn**	**13 13 46.8**	**+1.2**
ZIRO	**ZIRO**	**6.16**	**116**	*e*P		**Pn**	**13 13 55.7**	**+0.8**
ZIRO				*ex*		x	13 15 06.2	
LGTI	**Lohaghat**	**6.43**	**264**	*e*P		Pn	13 14 04.4	+5.9
LGTI				*e*S		**Sn**	**13 15 17.7**	**+5.7**
PTH	**Pithoragarh**	**6.44**	**265**	*e*P		**Pn**	**13 14 00.6**	**+1.8**
PTH				*e*S		**Sn**	**13 15 13.8**	**+1.3**
MOKO	**MOKOCHONG**	**7.30**	**122**	*e*P		**Pn**	**13 14 11.6**	**+1.0**
MOKO				*e*S		**Sn**	**13 15 30.8**	**-2.9**
MOKO				IAML			13 15 42.2	
	comp=E,22nm,0.3s							
MOKO				IAML			13 15 43.0	
	comp=N,15nm,0.1s							
KOHI	**KOHIMA**	**7.38**	**127**	*e*P		**Pn**	**13 14 11.5**	**-0.1**
KOHI				*e*S		**Sn**	**13 15 30.8**	**-4.6**
KOHI				IAML			13 15 37.7	
	comp=E,32nm,1.0s							
KOHI				IAML			13 15 46.9	
	comp=N,25nm,0.8s							
SAIH	**SAIHA**	**9.20**	**147**	*ex*		**Pn**	**13 14 35.3**	**-1.2**
SAIH				*e*S		**Sn**	**13 16 20.4**	**+0.2**
SAIH				IAML			13 16 25.1	
	comp=N,10nm,1.1s							
SAIH				IAML			13 16 28.9	
	comp=E,15nm,1.1s							
KUDL	**Kundal**	**9.94**	**260**	*e*P		**Pn**	**13 14 47.7**	**+1.1**
KUDL				*e*S		**Sn**	**13 16 37.9**	**-0.3**
THN	**Thein Dam**	**10.36**	**285**	*e*P		**Pn**	**13 14 51.5**	**-0.8**
THN				*e*S		**Sn**	**13 16 41.9**	**-6.5**
NIL	**Nilore**	**12.61**	**289**	Pn		**Pn**	**13 15 21.2**	**-1.9**
KSH	**Kashi**	**13.20**	**317**	P		**Pn**	**13 15 33.4**	**+2.1**
KSH				sP		P	13 15 41.8	+0.4
KSH				S		**Sn**	**13 17 58.3**	**+0.1**
KSH				pmax		pmax		
	comp=Z,12nm,0.8s							
WMQ	**Urumqi**	**13.46**	**0**	*e*P		**Pn**	**13 15 35.3**	**+0.6**
WMQ				smax		smax		
	comp=N,11nm,0.7s							
WMQ				smax		smax		
	comp=E,10.0nm,0.9s							
NRN	**Naryn**	**14.50**	**323**	Pn		**Pn**	**13 15 49.7**	**+0.4**
LZH	**Lanzhou**	**14.76**	**63**	*e*P		**Pn**	**13 15 54.9**	**+2.2**
LZH				pP		P	13 16 00.0	+1.3
LZH				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BOOM	**Boomskoye usch**	**15.31**	**326**	Pn		**Pn**	**13 15 59.3**	**-0.7**
BOOM				IAmb		IAmb	13 16 10.0	
	comp=Z,11nm,1.4s							
CHTO	**Chiang Mai**	**15.43**	**135**			**Pn**	**13 16 03.9**	**+2.4**
CMAR	**Chiang Mai Arr**	**15.70**	**136**			**Pn**	**13 16 07.7**	**+2.6**
CMAR	**Chiang Mai Arr**	**15.70**	**136**	Pn		**Pn**	**13 16 02.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=325,slow=10,SNR=16							
CMAR				LR		LR	13 21 52.5	
	comp=Z,42nm,19.2s,baz=325,slow=37							
	comp=Z,0.5nm,0.3s							
ARSB	**Arslanbob**	**16.11**	**317**	Pn		**Pn**	**13 16 10.5**	**+0.1**
AAK	**Ala-Archa**	**16.14**	**323**	Pn		**Pn**	**13 16 11.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=172,slow=10,SNR=2.6							
AAK				LR		LR	13 23 30.7	
	comp=Z,58nm,20.2s,baz=112,slow=41							
	comp=Z,1.0nm,0.7s							
KBL	**Kabul**	**16.20**	**290**			**Pn**	**13 16 09.5**	**-2.1**
KBL				IAmb		IAmb	13 16 19.3	
	comp=Z,13nm,0.7s							
BTK	**Batken**	**16.76**	**310**	Pn		**Pn**	**13 16 16.6**	**-2.1**
MK31	**Makanchi Array**	**16.93**	**347**			**P**	**13 16 22.4**	**-0.2**
MKAR	**Makanchi Array**	**16.93**	**347**	Pn		**Pn**	**13 16 20.1**	**-0.5**
MKAR	**Makanchi Array**	**16.93**	**347**	P		**Pn**	**13 16 20.8**	**+0.1**
	baz=158,slow=12,SNR=5.7							
	comp=Z,0.7nm,0.7s							
XAN	**Xi'an**	**18.43**	**73**	⇑P		**Pn**	**13 16 37.8**	**-1.5**
XAN				pP		pP	13 16 41.5	-2.1
XAN				pmax		pmax		
	comp=Z,6.0nm,1.5s							
XAN				pmax		pmax		
	comp=Z,8.0nm,1.2s							
KK31	**Karatay Array**	**18.65**	**318**			**P**	**13 16 41.6**	**-0.1**
KKAR	**Karatay Array**	**18.65**	**318**	P		**P**	**13 16 41.6**	**0.0**
KURBB	**Kurchatov Arra**	**21.37**	**344**	P		**P**	**13 17 10.0**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=158,slow=10,SNR=11							
	comp=Z,2.1nm,0.9s							
KURK	**Kurchatov**	**21.43**	**344**	P		**P**	**13 17 11.8**	**0.0**
KURK				IAmb		IAmb	13 17 14.6	
	comp=Z,7.4nm,1.2s							
HHC	**Hu-ho-hao-te**	**22.07**	**55**	*e*P		**P**	**13 17 21.0**	**+2.1**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,110nm,5.0s							
SONM	**Songino Array**	**22.66**	**34**	P		**P**	**13 17 25.2**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=219,slow=6.9,SNR=6.6							
	comp=Z,1.3nm,1.0s							
ZALV	**Zalesovo Beam**	**23.68**	**356**	P		**P**	**13 17 35.2**	**0.0**
ZALV	**Zalesovo Beam**	**23.68**	**356**	P		**P**	**13 17 36.1**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=178,slow=7.2,SNR=7.0							
	comp=Z,1.1nm,0.5s							
BVAR	**Borovoye Array**	**25.92**	**336**	P		**P**	**13 17 57.8**	**+2.0**
	comp=Z,0.8nm,0.5s,baz=147,slow=10,SNR=5.3							
	comp=Z,0.8nm,0.5s							
ABKAR	**Akbulak array**	**28.18**	**320**	P		**P**	**13 18 16.5**	**+0.3**
ABKAR				IAmb		IAmb	13 18 20.1	
	comp=Z,2.4nm,0.9s							
KSRS	**Korea Array**	**34.03**	**67**	LR		LR	13 34 09.7	
	comp=Z,31nm,21.4s,baz=205,slow=38							
KKM	**Kota Kinabalu**	**36.17**	**126**	P		**P**	**13 19 29.0**	**+2.3**
KKM				IAmb		IAmb	13 19 53.2	
	comp=Z,7.8nm,0.9s							
JNU	**Nakatsue**	**36.73**	**74**	LR		LR	13 35 39.2	
	comp=Z,38nm,19.3s,baz=128,slow=38							
KBZ	**Khabaz**	**37.65**	**303**	LR		LR	13 36 09.5	
	comp=Z,46nm,18.3s,baz=72,slow=38							
MJAR	**Matsushiro Arr**	**42.30**	**68**	LR		LR	13 40 36.4	
	comp=Z,39nm,18.1s,baz=192,slow=40							
BRTR	**Keskin Array B**	**44.57**	**297**	P		**P**	**13 20 36.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=92,slow=11,SNR=3.6							
	comp=Z,0.6nm,0.6s							
BURAR	**Bucovina Array**	**50.10**	**309**	P		**P**	**13 21 19.2**	**+0.2**
BURAR				IAmb		IAmb	13 21 38.8	
	comp=Z,2.5nm,1.3s							
FIA1	**FINESS Array S**	**50.28**	**327**	P		**P**	**13 21 19.8**	**-0.2**
FINES	**FINESS Array B**	**50.29**	**327**	P		**P**	**13 21 19.7**	**-0.3**
FINES	**FINESS Array B**	**50.29**	**327**	P		**P**	**13 21 19.1**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=106,slow=14,SNR=7.0							
	comp=Z,1.6nm,0.7s							
ARCES	**ARCESS Array B**	**52.20**	**337**	P		**P**	**13 21 34.4**	**0.0**
	comp=Z,1.2nm,0.4s,baz=101,slow=7.9,SNR=14							
	comp=Z,1.2nm,0.4s							
HFS	**Hagfors**	**56.28**	**325**	P		**P**	**13 22 03.0**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=99,slow=9.2,SNR=6.6							
	comp=Z,2.6nm,0.6s							
NOA	**NORSAR Array B**	**57.44**	**326**	P		**P**	**13 22 11.7**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=85,slow=7.2,SNR=3.3							
	comp=Z,1.3nm,0.7s							
ESK	**Eskdalemuir**	**66.07**	**321**	P		**P**	**13 23 10.4**	**-0.2**
WRA	**Warramunga Arr**	**67.24**	**132**	P		**P**	**13 23 15.9**	**-2.6**
	comp=Z,0.9nm,0.7s,baz=323,slow=6.7,SNR=6.4							
	comp=Z,0.9nm,0.7s							
C18K	**Utukok River**	**69.32**	**21**	P		**P**	**13 23 31.9**	**+0.9**
C18K				IAmb		IAmb	13 24 14.8	
	comp=Z,3.8nm,1.3s							
C19K	**Lookout Ridge**	**69.58**	**21**	P		**P**	**13 23 33.5**	**+0.9**
C19K				IAmb		IAmb	13 24 14.3	
	comp=Z,6.0nm,1.5s							
ASAR	**Alice Springs**	**69.71**	**135**	P		**P**	**13 23 31.6**	**-2.4**
	comp=Z,1.2nm,0.8s,baz=319,slow=7.1,SNR=8.3							
	comp=Z,1.2nm,0.8s							
D19K	**Kuna River**	**70.36**	**21**	P		**P**	**13 23 39.3**	**+1.9**
BMAR	**Burnt Mountain**	**74.99**	**18**	P		**P**	**13 24 05.4**	**+0.4**
P19K	**Oil Pt**	**77.35**	**27**	P		**P**	**13 24 17.8**	**-0.6**
J26L	**Joseph Creek**	**77.39**	**20**	P		**P**	**13 24 18.7**	**+0.1**
J26L				IAmb		IAmb	13 24 28.3	
	comp=Z,3.0nm,1.4s							
SML	**Sawmill**	**77.75**	**24**	P		**P**	**13 24 20.2**	**-0.5**
BCAR	**Beaver Creek A**	**78.98**	**21**	P		**P**	**13 24 28.4**	**+1.0**
N25K	**Chitina, Valde**	**79.16**	**23**	P		**P**	**13 24 28.5**	**0.0**
N25K				IAmb		IAmb	13 25 01.3	
	comp=Z,5.7nm,1.2s							
TORD	**Torodi Ar. Bea**	**79.98**	**279**	P		**P**	**13 24 32.8**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=51,slow=6.2,SNR=6.0							
R32K	**Eaglecrest**	**84.96**	**21**	P		**P**	**13 25 00.1**	**+1.2**
YKA	**Yellowknife Ar**	**85.78**	**10**	P		**P**	**13 25 03.0**	**+0.1**
	comp=Z,0.1nm,0.7s,baz=334,slow=4.1,SNR=2.3							
	comp=Z,0.1nm,0.7s							
TXAR	**Lajitas Array**	**119.69**	**11**	PKP		**PKPdf**	**13 31 11.8**	**-2.8**
	comp=Z,0.3nm,0.9s,baz=321,slow=1.2,SNR=2.0							
CPUP	**Villa Florida**	**148.94**	**269**	PKPbc		**PKPdf**	**13 32 09.9**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=88,slow=3.7,SNR=5.3							

IDC 11 13:14:13.2±1.9,3.˚83S×153.˚01E, h0km, mb3.8/4, mbtmp3.7/4, MS3.0/4, Error ellipse: s-maj=150.7km s-min=25.5km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HNR	**Honiara**	**8.86**	**129**	LR		LR	13 19 39.7	
	comp=Z,3μm,19.5s,baz=278,slow=37							
CTA	**Charters Tower**	**17.45**	**202**	LR		LR	13 24 48.5	
	comp=Z,26nm,18.1s,baz=71,slow=36							
GUMO	**Guam**	**19.09**	**335**	LR		LR	13 24 42.9	
	comp=Z,22nm,20.9s,baz=114,slow=33							
DZM	**Mont Dzumac**	**22.34**	**145**	LR		LR	13 26 42.4	
	comp=Z,80nm,18.6s,baz=250,slow=34							
WRA	**Warramunga Arr**	**24.25**	**227**	P		P	13 19 32.5	+0.3
	2.8nm,0.8s,baz=53,slow=9.8,SNR=18							
	2.8nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**25.96**	**31**	T		T	13 46 33.4	
	baz=210,slow=74							
H11S2	**WAKE ISLAND Hy**	**25.96**	**31**	T		T	13 46 33.8	
	baz=210,slow=74							
H11S1	**WAKE ISLAND Hy**	**25.98**	**31**	T		T	13 46 34.8	
	baz=210							
ASAR	**Alice Springs**	**27.01**	**221**	P		P	13 19 57.3	+0.2
	0.4nm,0.7s,baz=55,slow=8.8,SNR=6.7							
	0.4nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**27.09**	**30**	T		T	13 48 15.2	
	baz=216							
H11N3	**WAKE ISLAND Hy**	**27.10**	**30**	T		T	13 48 16.1	
	baz=216							
H11N2	**WAKE ISLAND Hy**	**27.10**	**30**	T		T	13 48 18.5	
	baz=216							
SHEM	**Shemya Is, Ala**	**59.10**	**15**	LR		LR	13 45 11.9	
	comp=Z,32nm,20.5s,baz=289,slow=31							
ILAR	**Eielson Array**	**81.19**	**22**	P		P	13 26 30.3	-0.3
	1.5nm,1.1s,baz=255,slow=5.0,SNR=6.0							
	1.5nm,1.1s							
YKA	**Yellowknife Ar**	**94.48**	**28**	P		P	13 27 35.8	+0.7
	0.1nm,0.4s,baz=273,slow=1.4,SNR=3.7							
	0.1nm,0.4s							
TORD	**Torodi Ar. Bea**	**150.19**	**290**	PKPbc		PKPbc	13 34 06.1	-1.2
	0.7nm,0.6s,baz=59,slow=2.8,SNR=3.9							

NEIC ***11*** *13:18:24.0±0.7,20.˚4S±0.˚2×177.

URZ				S	**S**	**13 25 07.0**	**-0.2**
	comp=Z,9.2nm,0.8s,baz=24,slow=20,SNR=1.6						
TCW	**Tory Channel**	**21.86**	**196**	P	**P**	**13 22 36.1**	**-1.8**
LTZ	**Lake Taylor**	**23.87**	**198**	P	**P**	**13 22 55.3**	**-0.7**
MLZ	**Mavora Lakes**	**27.52**	**202**	P	**P**	**13 23 27.6**	**-0.4**
CTA	**Charters Tower**	**33.61**	**264**	P	**P**	**13 24 20.6**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=90,slow=12,SNR=12						
	comp=Z,1.5nm,0.3s						
BBOO	**Buckleboo**	**42.72**	**243**	P	**P**	**13 25 34.6**	**-0.1**
BBOO				IAmb	IAmb	13 25 46.3	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**44.66**	**257**	P	**P**	**13 25 49.6**	**-0.4**
ASAR	**Alice Springs**	**44.66**	**257**	P	**P**	**13 25 49.8**	**-0.1**
ASAR	**Alice Springs**	**44.66**	**257**	P	**P**	**13 25 49.6**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=88,slow=9.1,SNR=23						
	comp=Z,2.3nm,0.8s						
WB0	**Warramunga Arr**	**44.71**	**262**	P	**P**	**13 25 50.1**	**-0.2**
WB2	**Warramunga Arr**	**44.72**	**262**	P	**P**	**13 25 50.4**	**0.0**
WRA	**Warramunga Arr**	**44.73**	**262**	P	**P**	**13 25 50.4**	**-0.1**
WRA	**Warramunga Arr**	**44.73**	**262**	P	**P**	**13 25 49.6**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=97,slow=7.9,SNR=22						
	comp=Z,0.9nm,0.4s						
FORT	**Forrest**	**49.46**	**246**	P	**P**	**13 26 25.6**	**-0.4**
PSA00	**Pilbara Seismi**	**57.81**	**257**	P	**P**	**13 27 25.3**	**+0.1**
PSA00				IAmb	IAmb	13 27 31.1	
	comp=Z,22nm,1.5s						
QSPA	**South Pole Qui**	**69.74**	**180**	P	**P**	**13 28 40.7**	**0.0**
QSPA				IAmb	IAmb	13 28 44.9	
	comp=Z,6.9nm,1.3s						
QSPA	**South Pole Qui**	**69.74**	**180**	P	**P**	**13 28 40.5**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=307,slow=1.1,SNR=13						
	comp=Z,2.3nm,0.7s						
DSP	**Deep Springs**	**80.44**	**44**	P	**P**	**13 29 40.6**	**-0.1**
L04D	**Klamath Falls**	**80.63**	**38**	P	**P**	**13 29 41.9**	**+0.1**
L04D				IAmb	IAmb	13 30 11.8	
	comp=Z,10nm,1.3s						
NVAR	**Mina Array Bea**	**80.83**	**43**	P	**P**	**13 29 42.6**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=224,slow=7.6,SNR=4.7						
	comp=Z,0.8nm,0.8s						
K05A	**Summer Lake**	**81.77**	**39**	P	**P**	**13 29 48.4**	**+0.7**
K05A				IAmb	IAmb	13 30 22.2	
	comp=Z,8.0nm,1.4s						
J05D	**Fort Rock, OR**	**81.91**	**38**	P	**P**	**13 29 48.8**	**+0.5**
J05D				IAmb	IAmb	13 29 49.9	
	comp=Z,3.7nm,0.7s						
H04A	**Detroit Lake**	**82.23**	**36**	P	**P**	**13 29 49.7**	**0.0**
H04A				IAmb	IAmb	13 29 58.5	
	comp=Z,8.0nm,1.4s						
M16K	**Timber Creek**	**82.49**	**9**	P	**P**	**13 29 51.2**	**+0.6**
OZB	**Mount Ozzard**	**83.24**	**32**	P	**P**	**13 29 54.7**	**0.0**
SCM	**Sheep Creek Mo**	**85.44**	**14**	P	**P**	**13 30 05.3**	**0.0**
TXAR	**Lajitas Array**	**86.88**	**57**	P	**P**	**13 30 13.3**	**+0.4**
TXAR	**Lajitas Array**	**86.88**	**57**	P	**P**	**13 30 12.9**	**0.0**
	comp=Z,0.4nm,0.8s,baz=235,slow=4.4,SNR=5.5						
	comp=Z,0.4nm,0.8s						
I21K	**Tanana**	**87.52**	**11**	P	**P**	**13 30 14.8**	**-0.1**
WRH	**Wood River Hil**	**87.61**	**12**	P	**P**	**13 30 14.9**	**-0.5**
WRH				IAmb	IAmb	13 30 30.8	
	comp=Z,7.8nm,1.4s						
HDA	**Harding Lake**	**87.79**	**13**	P	**P**	**13 30 15.3**	**-0.9**
HDA				IAmb	IAmb	13 30 42.8	
	comp=Z,7.3nm,1.4s						
CCB	**Clear Creek Bu**	**87.83**	**12**	P	**P**	**13 30 15.8**	**-0.6**
CCB				IAmb	IAmb	13 30 45.7	
	comp=Z,5.0nm,1.3s						
IMAR	**Indian Mountai**	**87.97**	**10**	P	**P**	**13 30 17.1**	**0.0**
ILAR	**Eielson Array**	**88.12**	**13**	P	**P**	**13 30 16.4**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=222,slow=5.7,SNR=5.3						
	comp=Z,0.7nm,0.8s						
G21K	**Allakaket**	**88.50**	**10**	P	**P**	**13 30 19.7**	**+0.2**
G21K				IAmb	IAmb	13 30 20.4	
	comp=Z,4.4nm,1.1s						
PDAR	**Pinedale Array**	**88.77**	**43**	P	**P**	**13 30 20.7**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=122,slow=1.9,SNR=3.9						
	comp=Z,0.4nm,0.8s						

*IDC **11** 13:18:52.3±5.6, 6°.76S×121°.96E, h170km±54km, mb2.5/2, mbtmp3.0/3, Error ellipse: s-maj=131.5km s-min=15.5km az=56.0*
*DJA **11** 13:18:54.1±1.0, 8°.3S±6°×12°.0E±°, h189km±18km, M3.5/9, MLv3.5/9*
ISC 11 13:18:52.6±1.0, **8°.30S**±0°.08×**120°.27E**±0°.06, **h200**km, **n10, σ1s04/13, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.47**	**108**	P	**Pn**	**13 19 26.6**	**+0.4**
BASI	**Baing, Sumba**	**1.93**	**171**	P	**Pn**	**13 19 31.4**	**+1.0**
BASI				S	**Sn**	**13 19 59.5**	**-0.4**
MMRI	**Maumere**	**1.98**	**100**	P	**Pn**	**13 19 31.6**	**+0.8**
PLAI	**Plampang**	**2.52**	**258**	P	**Pn**	**13 19 38.0**	**+1.3**
PLAI				S	**Sn**	**13 20 10.2**	**-0.9**
BKSI	**Bulukumba**	**2.96**	**357**	P	**Pn**	**13 19 42.9**	**+1.1**
TWSI	**Taliwang, Sumb**	**3.38**	**262**	P	**Pn**	**13 19 47.9**	**+1.2**
TWSI				S	**Sn**	**13 20 28.6**	**-0.5**
SOEI	**Soe**	**4.21**	**110**	P	**Pn**	**13 19 58.6**	**+1.5**
WRA	**Warramunga Arr**	**17.87**	**132**	P	**Pn**	**13 22 48.3**	**-0.9**
	0.3nm,0.8s,baz=307,slow=12,SNR=1.8						
WRA				S	**S**	**13 26 02.3**	**+0.2**
	0.2nm,0.3s,baz=317,slow=24,SNR=1.6						
ASAR	**Alice Springs**	**20.10**	**141**	P	Pn	13 23 15.7	-0.1
	0.1nm,0.4s,baz=322,slow=11,SNR=4.8						
ASAR				S	S	13 26 56.8	+11
	0.2nm,0.8s,baz=312,slow=21,SNR=2.1						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**64.42**	**332**	P	**P**	**13 29 06.8**	**-0.7**
	0.2nm,0.6s,baz=152,slow=6.5,SNR=4.6						
	0.2nm,0.6s						

*AUST **11** 13:24:53.9±0.8, 39°.14S×145°.94E, h10km, Error ellipse: s-maj=9.2km s-min=8.3km az=61.0*
*NOU **11** 13:24:53.1, 39°.21S×145°.90E, h0km, MLv3.7/10, Bass Strait, Australia*
ISC 11 13:24:53.7±1.4, **39°.19S**±0°.05×**145°.92E**±0°.06, **h10**km, **n18, σ0s70/21, Bass Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEXS	**Deakin Univers**	**1.61**	**307**	P	**Pn**	**13 25 22.5**	**+0.4**
TOO	**Toolangi**	**1.65**	**348**	P	**Pn**	**13 25 22.6**	**-0.2**
	baz=1.6,SNR=38						
TOO				S	**Sn**	**13 25 43.2**	**-0.9**
	baz=1.6						
TOO	**Toolangi**	**1.65**	**348**	P	**Pn**	**13 25 22.6**	**-0.2**
AUMTC	**Mt Clear Colle**	**2.25**	**314**	P	**Pn**	**13 25 31.5**	**+0.6**
	baz=2.2						
BRAT	**Ballarat**	**2.26**	**316**	P	**Pn**	**13 25 31.4**	**+0.3**
AULHS	**Lilydale High**	**2.29**	**154**	P	**Pn**	**13 25 31.3**	**-0.1**
	baz=2.3						
GLAD	**Gladstone**	**2.40**	**139**	P	**Pn**	**13 25 33.2**	**+0.1**
MILA	**Mila**	**3.33**	**51**	P	**Pn**	**13 25 46.2**	**+0.4**
	baz=3.3,SNR=7.6						
MILA				S	**Sn**	**13 26 24.1**	**-1.4**
	baz=3.3						
MILA	**Mila**	**3.33**	**51**	P	**Pn**	**13 25 46.2**	**+0.4**
MOO	**Moorlands**	**3.39**	**164**	P	**Pn**	**13 25 47.3**	**+0.7**
	baz=3.4,SNR=4.9						
MOO	**Moorlands**	**3.39**	**164**	P	**Pn**	**13 25 47.1**	**+0.5**
ARPS	**Mount Arapiles**	**4.03**	**306**	P	**Pn**	**13 25 55.6**	**+0.2**
	baz=4.0						
ARPS	**Mount Arapiles**	**4.03**	**306**	P	**Pn**	**13 25 55.8**	**+0.4**
CAN	**Canberra**	**4.58**	**33**	P	**Pn**	**13 26 04.0**	**+0.9**
AUMTS	**Mt Stromlo**	**4.58**	**33**	P	**Pn**	**13 26 04.0**	**+0.9**
	baz=4.5						
AUMTS				S	**Sn**	**13 26 56.2**	**-0.2**
	baz=4.5						
AUMHS	**Melrose High S**	**4.59**	**34**	P	**Pn**	**13 26 03.5**	**+0.3**
	baz=4.5						
CNB	**Canberra Magne**	**4.75**	**36**	P	**Pn**	**13 26 05.8**	**+0.4**
YNG	**Young**	**5.28**	**23**	P	**Pn**	**13 26 14.1**	**+1.5**

*SJA **11** 13:58:38.8±0.7, 31°.64S×69°.76W, h121km±3km, ML3.3, MW3.5*
*GUC **11** 13:58:40.4±0.8, 31°.69S×70°.36W, h134km±4km, ML3.8*
ISC 11 13:58:39.6±1.4, **31°.65S**±0°.02×**69°.81W**±0°.03, **h122**km±9km, **n58, σ0s95/101, 4C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.46**	**109**	*eP*	**Pn**	**13 58 57.1**	**-0.8**
DOCA	**Reserva Natura**	**0.94**	**42**	*eP*	**Pn**	**13 59 01.2**	**-0.5**
DOCA				*eS*	**Sn**	**13 59 17.4**	**-0.9**
RTCV	**Cerro Valdivia**	**1.10**	**101**	*eP*	**Pn**	**13 59 02.5**	**-0.3**
RTCV				*eS*	**Sn**	**13 59 19.9**	**-0.7**
RTCV				IAML		13 59 21.0	
	comp=Z,173nm,1.6s						
CO03	**El Pedregal**	**1.11**	**317**	*eP*	**Pn**	**13 59 03.1**	**+0.1**
CO03				*eS*	**Sn**	**13 59 21.5**	**+0.8**
CO03	**El Pedregal**	**1.11**	**317**	*iP*	**Pn**	**13 59 03.1**	**+0.1**
CO03				*eS*	**Sn**	**13 59 20.9**	**+0.2**
CO03				IAML		13 59 21.9	
	comp=E,4μm,0.2s						
CO02	**Combarbal**	**1.11**	**293**	*eP*	**Pn**	**13 59 03.0**	**0.0**
CO02				*eS*	**Sn**	**13 59 21.6**	**+0.8**
RTLL	**Cerro Villicun**	**1.19**	**75**	*eP*	**Pn**	**13 59 03.2**	**-0.6**
RTLL				*eS*	**Sn**	**13 59 20.8**	**-1.3**
RTLL				IAML		13 59 24.8	
	comp=Z,280nm,0.3s						
RTLL	**Cerro Villicun**	**1.19**	**75**	*iP*	**Pn**	**13 59 03.0**	**-0.7**
RTLL				*i* S	**Sn**	**13 59 20.1**	**-2.0**
ACCO	**Cerro Coronel**	**1.24**	**31**	*eP*	**Pn**	**13 59 04.6**	**-0.1**
ACCO				*eS*	**Sn**	**13 59 23.9**	**+0.3**
ACCO				IAML		13 59 25.2	
	comp=Z,619nm,0.3s						
ASAL	**Salagasta**	**1.25**	**139**	*eP*	**Pn**	**13 59 04.6**	**+0.1**
ASAL				IAML		13 59 23.9	
	comp=Z,563nm,0.4s						
ASAL				*eS*	**Sn**	**13 59 24.0**	**+0.6**
VA03	**San Esteban**	**1.27**	**209**	*eP*	**Pn**	**13 59 05.0**	**+0.3**
VA03				*eS*	**Sn**	**13 59 24.3**	**+0.4**
VA03				IAML		13 59 26.3	
	comp=Z,470nm,0.2s						
VA03	**San Esteban**	**1.27**	**209**	*iP*	**Pn**	**13 59 04.8**	**+0.1**
VA03				*eS*	**Sn**	**13 59 23.9**	**+0.1**
VA03				IAML		13 59 24.9	
	comp=E,1μm,0.3s						
ARCO	**CERRO ARCO**	**1.40**	**148**	*eP*	**Pn**	**13 59 06.7**	**+0.5**
ARCO				*eS*	**Sn**	**13 59 27.6**	**+1.1**
AROD	**Rodeo**	**1.51**	**11**	*eP*	**Pn**	**13 59 08.6**	**+0.9**
AROD				*eS*	**Sn**	**13 59 29.2**	**+0.3**
VA06	**Catapilco**	**1.55**	**234**	*iP*	**Pn**	**13 59 06.8**	**-0.9**
ACDV	**Cuesta del Vie**	**1.59**	**22**	*eP*	**Pn**	**13 59 09.3**	**+0.8**
ACDV				*eS*	**Sn**	**13 59 32.0**	**+1.7**
ACDV				IAML		13 59 32.5	
	comp=Z,203nm,0.4s						
AAGR	**Agrelo**	**1.65**	**150**	*eP*	**Pn**	**13 59 09.4**	**+0.4**
AAGR				*eS*	**Sn**	**13 59 31.9**	**+0.4**
AAGR				IAML		13 59 34.2	
	comp=Z,338nm,0.2s						
PEL	**Peldehue**	**1.66**	**206**	*eP*	**Pn**	**13 59 09.2**	**+0.1**
PEL				*eS*	**Sn**	**13 59 31.8**	**+0.2**
PEL	**Peldehue**	**1.66**	**206**	*eP*	**Pn**	**13 59 08.9**	**-0.2**
PEL				*i* S	**Sn**	**13 59 31.0**	**-0.6**
ROCH	**El Roble**	**1.66**	**217**	*iP*	**Pn**	**13 59 09.0**	**-0.3**
ROCH				*eP*	**Pn**	**13 59 09.0**	**-0.3**
ROCH				*i* S	**Sn**	**13 59 30.6**	**-1.3**
ROCH				*eS*		13 59 31.1	
ROC1	**El Roble**	**1.67**	**217**	*eP*	**Pn**	**13 59 09.0**	**-0.4**
ROC1				*eS*	**Sn**	**13 59 31.7**	**-0.4**
CO01	**Juntas del Tor**	**1.69**	**352**	*eP*	**Pn**	**13 59 11.0**	**+1.4**
CO01	**Juntas del Tor**	**1.69**	**352**	*eP*	**Pn**	**13 59 11.0**	**+1.4**
GO04	**Tololo Observa**	**1.70**	**330**	*eP*	**Pn**	**13 59 10.0**	**+0.2**
GO04				*eS*	**Sn**	**13 59 33.4**	**+0.6**
GO04	**Tololo Observa**	**1.70**	**330**	*iP*	**Pn**	**13 59 09.7**	**-0.1**
GO04				IAML		13 59 35.5	
	comp=E,2μm,0.2s						
FCH	**Farellones**	**1.72**	**193**	*eP*	**Pn**	**13 59 11.2**	**+1.1**
FCH				*i* S	**Sn**	**13 59 34.6**	**+1.3**
FCH				IAML		13 59 38.0	
	comp=E,716nm,0.2s						
MT10	**Hacienda Santa**	**1.73**	**201**	*eP*	**Pn**	**13 59 10.8**	**+0.8**
MT10				*eS*	**Sn**	**13 59 33.6**	**+0.4**
MT04	**Ro Olivares**	**1.77**	**189**	*eP*	**Pn**	**13 59 12.2**	**+1.6**
MT04				*i* S	**Sn**	**13 59 36.9**	**+2.7**
CO06	**Fray Jorge**	**1.84**	**301**	*eP*	**Pn**	**13 59 10.5**	**-0.8**
CO06				IAML		13 59 34.5	
	comp=E,602nm,0.3s						
MT14	**Cerro Cal¡n**	**1.84**	**199**	*eP*	**Pn**	**13 59 11.8**	**+0.5**
MT14				*eS*	**Sn**	**13 59 36.0**	**+0.5**
MT14				IAML		13 59 39.7	
	comp=N,845nm,0.6s						
MT05	**Renca**	**1.90**	**204**	*eP*	**Pn**	**13 59 12.6**	**+0.6**
MT05				*eS*	**Sn**	**13 59 37.6**	**+0.8**
MT05	**Renca**	**1.90**	**204**	*eP*	**Pn**	**13 59 12.3**	**+0.3**
MT05				*i* S	**Sn**	**13 59 37.0**	**+0.2**
MT05				IAML		13 59 39.4	
	comp=N,1μm,0.2s						
MT03	**Universidad Ad**	**1.93**	**198**	*eP*	**Pn**	**13 59 12.9**	**+0.5**
MT03				*eS*	**Sn**	**13 59 39.5**	**+2.1**
MT03	**Universidad Ad**	**1.93**	**198**	*eP*	**Pn**	**13 59 13.1**	**+0.7**
MT03				*i* S	**Sn**	**13 59 38.7**	**+1.3**
MT02	**Curacav**	**1.96**	**215**	*eP*	**Pn**	**13 59 12.1**	**-0.5**
MT02				*eS*	**Sn**	**13 59 38.3**	**+0.4**
MT02				IAML		13 59 38.4	
	comp=Z,154nm,0.3s						
MT02	**Curacav**	**1.96**	**215**	*eP*	**Pn**	**13 59 11.9**	**-0.7**
MT02				*i* S	**Sn**	**13 59 35.6**	**-2.3**
MT15	**Las Vizcachas**	**2.03**	**197**	*eP*	**Pn**	**13 59 14.2**	**+0.6**
MT15				*i* S	**Sn**	**13 59 40.3**	**+0.8**
MT15				IAML		13 59 42.1	
	comp=N,1μm,0.3s						
VA01	**Torpederas**	**2.07**	**228**	*eP*	**Pn**	**13 59 13.4**	**-0.6**
VA01				IAML		13 59 45.6	
	comp=Z,80nm,0.3s						
AVIZ	**Vizcacheras**	**2.12**	**149**	*eP*	**Pn**	**13 59 14.8**	**0.0**
CO05	**La Serena**	**2.12**	**324**	*eP*	**Pn**	**13 59 14.2**	**-0.4**
CO05				*eS*	**Sn**	**13 59 39.9**	**-1.6**
CO05				IAML		13 59 42.7	
	comp=E,969nm,0.5s						
MT13	**San Alfonso**	**2.12**	**191**	*eP*	**Pn**	**13 59 15.9**	**+1.0**
MT13				*eS*	**Sn**	**13 59 43.5**	**+1.7**
MT13				IAML		13 59 46.9	
	comp=E,447nm,0.3s						
LMEL	**Las Melosas**	**2.21**	**188**	*eP*	**Pn**	**13 59 16.8**	**+0.8**
LMEL				*i* S	**Sn**	**13 59 46.0**	**+2.1**
LMEL				IAML		13 59 50.2	
	comp=N,636nm,0.1s						
AVFE	**Valle Fertil**	**2.25**	**64**	*eP*	**Pn**	**13 59 16.2**	**-0.2**
AVFE				IAML		13 59 47.5	
	comp=Z,79nm,0.3s						
MT09	**Talagante**	**2.34**	**205**	*eP*	**Pn**	**13 59 17.0**	**-0.6**
MT09				*i* S	**Sn**	**13 59 45.7**	**-0.9**
MT09				IAML		13 59 52.1	
	comp=N,421nm,0.3s						
BO04	**La Punta**	**2.42**	**196**	*eP*	**Pn**	**13 59 18.6**	**+0.1**
BO04				*i* S	**Sn**	**13 59 48.5**	**0.0**
BO04				IAML		13 59 50.0	
	comp=E,431nm,0.4s						
AGUA	**GUANDACOL**	**2.44**	**28**	*eP*	**Pn**	**13 59 20.1**	**+1.3**
AGUA				IAML		13 59 55.5	
	comp=Z,135nm,0.6s						
MT01	**Popeta**	**2.52**	**208**	*eP*	**Pn**	**13 59 19.1**	**-0.6**
MT01				*eS*	**Sn**	**13 59 48.9**	**-1.6**
MT01				IAML		13 59 54.1	
	comp=Z,135nm,0.2s						
MT01	**Popeta**	**2.52**	**208**	*eP*	**Pn**	**13 59 18.8**	**-0.9**
MT01				*i* S	**Sn**	**13 59 48.0**	**-2.5**
MT01				IAML		13 59 54.5	
	comp=E,228nm,0.2s						
ACHE	**Chepes**	**2.74**	**81**	*eP*	**Pn**	**13 59 22.5**	**-0.1**
ACHE				*eS*	**Sn**	**13 59 54.9**	**-0.9**
LCO	**Las Campanas**	**2.74**	**343**	*eP*	**Pn**	**13 59 23.1**	**+0.2**
LCO				*eS*	**Sn**	**13 59 55.9**	**-0.3**
AC05	**El Transito**	**2.83**	**352**	*eP*	**Pn**	**13 59 24.8**	**+0.9**
AC05				*eS*	**Sn**	**13 59 59.0**	**+0.9**
BO01	**Tunca**	**2.93**	**201**	*eS*	**Sn**	**13 59 59.0**	**-1.2**
VCA	**Vinchina**	**3.22**	**26**	*eP*	**Pn**	**13 59 30.4**	**+1.4**
VCA				IAML		14 00 12.1	
	comp=Z,113nm,0.3s						
RFA	**San Rafael**	**3.31**	**160**	*eP*	**Pn**	**13 59 29.8**	**-0.2**
RFA				*eP*	**Pn**	**13 59 29.8**	**-0.2**
RFA				IAML		14 00 40.4	
	comp=Z,38nm,0.4s						
ACLC	**CERRO LA CRUZ**	**3.32**	**49**	*eP*	**Pn**	**13 59 30.2**	**-0.1**
ACLC				IAML		14 00 10.8	
	comp=Z,79nm,0.3s						
AC04	**Llanos de Chal**	**3.61**	**342**	*eP*	**Pn**	**13 59 33.5**	**-0.5**
AC04				IAML		14 00 25.4	
	comp=Z,74nm,0.3s						
AC04				IAML		14 00 25.4	
	comp=Z,74nm,0.3s						
CYA	**Choya**	**4.72**	**48**	*eP*	**Pn**	**13 59 47.6**	**-1.3**
AC02	**Maricunga**	**4.84**	**7**	*eP*	**Pn**	**13 59 51.3**	**+0.4**
AC02				IAML		14 01 18.0	
	comp=Z,17nm,0.3s						

*NEIC **11** 14:07:36.7±1.4, 19°.1N±0°.2×64°.5W±0°.1, h35km±2km, ML2.7/18, Md3.6/6(RSPR), Error ellipse: s-maj=34.8km s-min=14.4km az=146.0*
RSPR 11 14:07:38.0, 18°.83N×64°.65W, h112km±6km, **MD3.5/6, 5C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.33**	**239**	*eP*	Pn	14 08 02.8	-0.2
HUMP	**Col San Antoni**	**1.33**	**239**	*eS*	Sn	14 08 21.2	-0.6
HUMP	**Col San Antoni**	**1.33**	**239**		Pn	14 08 02.8	-0.2
HUMP					Sn	14 08 21.2	-0.6
HUMP	**Col San Antoni**	**1.33**	**239**	IAML		14 08 25.6	
	comp=E,91nm,0.2s						
HUMP				IAML		14 08 27.1	
	comp=N,66nm,0.2s						
GCPR	**Guaynabo City**	**1.45**	**250**	*eS*	Sn	14 08 22.3	-2.2
GCPR	**Guaynabo City**	**1.45**	**250**		Sn	14 08 22.3	-2.2
GCPR	**Guaynabo City**	**1.45**	**250**	Pn	Pn	14 08 02.7	-1.7
SJG	**San Juan**	**1.59**	**244**	*eP*	Pn	14 08 05.9	-0.1
SJG	**San Juan**	**1.59**	**244**	*eS*	Sn	14 08 27.9	+0.6
SJG	**San Juan**	**1.59**	**244**		Pn	14 08 05.1	-0.9
SJG				IAML		14 08 30.2	
	comp=N,46nm,0.3s						
IGPR	**InterUniversit**	**1.63**	**238**	Pn	Pn	14 08 05.4	-1.1
IGPR				IAML		14 08 35.8	
	comp=E,86nm,0.2s						
CELP	**Cerrillos**	**1.98**	**248**	*eP*	Pn	14 08 10.4	-0.4
CELP	**Cerrillos**	**1.98**	**248**	*eS*	Sn	14 08 35.8	-0.1
CELP	**Cerrillos**	**1.98**	**248**		Pn	14 08 10.4	-0.4
CELP					Sn	14 08 35.8	-0.1
CELP	**Cerrillos**	**1.98**	**248**	IAML		14 08 48.4	
	comp=N,42nm,3.4s						
OBIP	**Obispado Ponce**	**2.01**	**248**	*eP*	Pn	14 08 10.9	-0.4
OBIP	**Obispado Ponce**	**2.01**	**248**	*eS*	Sn	14 08 37.1	+0.4
OBIP	**Obispado Ponce**	**2.01**	**248**		Pn	14 08 10.9	-0.4
OBIP					Sn	14 08 37.1	+0.4
OBIP	**Obispado Ponce**	**2.01**	**248**	IAML		14 08 40.5	
	comp=N,36nm,1.4s						
OBIP				IAML		14 08 45.3	
	comp=E,44nm,3.3s						
AOPR	**Arecibo Observ**	**2.05**	**257**	*eP*	Pn	14 08 11.7	-0.1
AOPR	**Arecibo Observ**	**2.05**	**257**	*eS*	Sn	14 08 37.6	0.0
AOPR	**Arecibo Observ**	**2.05**	**257**		Pn	14 08 11.7	-0.1
AOPR					Sn	14 08 37.6	0.0
MLPR	**Magueyes Islan**	**2.43**	**250**	*eP*	Pn	14 08 16.1	-0.5
MLPR	**Magueyes Islan**	**2.43**	**250**	*eS*	Sn	14 08 46.3	+0.1
MLPR	**Magueyes Islan**	**2.43**	**250**		Pn	14 08 16.1	-0.5
MLPR					Sn	14 08 46.3	+0.1
MLPR	**Magueyes Islan**	**2.43**	**250**	IAML		14 09 01.1	
	comp=N,37nm,2.8s						
MLPR				IAML		14 09 35.4	
	comp=E,40nm,2.6s						
CRPR	**Cabo Rojo, PR**	**2.47**	**251**	Pn	Pn	14 08 17.8	+0.6
CRPR				IAML		14 09 36.1	
	comp=E,34nm,2.1s						

*CATAC **11** 14:21:00.3±0.5, 7°.91N×82°.95W, h5km, ML3.5*
*UCR **11** 14:21:02.1±0.8, 8°.02N×82°.97W, h3km±4km, MW3.9*
ISC 11 14:20:59.7±2.4, **7°.9N**±0°.1×**82°.96W**±0°.05, **h5**km±12km, **n27, σ0s71/40, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.46**	**358**	*eP*	**Pb**	**14 21 10.6**	**+0.2**
PIRO	**Carate, Puerto**	**0.60**	**321**	*eP*	**Pb**	**14 21 13.2**	**+0.6**
CDITO	**Canoas**	**0.63**	**7**	*iP*	**Pb**	**14 21 12.7**	**-0.6**
CDITO				IAML		14 21 22.9	
	comp=Z,2μm,1.0s						
JIME	**Puerto Jimenez**	**0.70**	**328**	*eP*	**Pn**	**14 21 15.3**	**-1.0**
JIME				*eS*	**Sb**	**14 21 23.6**	**-0.7**
BRU2	**Volcan**	**0.89**	**17**	*eP*	**Pb**	**14 21 17.4**	**-0.3**
BRU2	**Volcan**	**0.89**	**17**	*iP*	**Pg**	**14 21 17.0**	**+0.3**
BRU2				*i* S	**Sb**	**14 21 30.6**	**+0.7**
BRU2				IAML		14 21 33.8	
	comp=Z,2μm,1.0s						
PLAN	**Los Planes de**	**1.02**	**315**	*i* P	**Pb**	**14 21 19.7**	**-0.2**
PLAN				*i* S	**Sn**	**14 21 34.5**	**-1.0**
PLAN				IAML		14 21 37.5	
	comp=Z,6μm,1.0s						
POTG	**Potrero Grande**	**1.12**	**352**	*eP*	**Pb**	**14 21 21.8**	**+0.2**
POTG	**Potrero Grande**	**1.12**	**352**	*iP*	**Pg**	**14 21 21.3**	**+0.2**
POTG				*i* S	**Sn**	**14 21 37.8**	**-0.1**
POTG				IAML		14 21 41.7	
	comp=Z,2μm,1.0s						
EDPN	**Palmar Norte**	**1.13**	**334**	*eP*	**Pb**	**14 21 21.8**	**0.0**
OCHAL	**Ojochal**	**1.34**	**329**	*iP*	**Pn**	**14 21 24.9**	**-0.2**
OCHAL				*i* S	**Sn**	**14 21 43.7**	**+0.4**
OCHAL				IAML		14 21 45.4	
	comp=Z,13nm,1.0s						
DRK0	**Durika**	**1.34**	**

TXAR	**Lajitas Array**	**86.03**	**58**	P		**P**	**14 39 16.0**	**-0.1**
	0.3nm,0.7s,baz=238,slow=5.2,SNR=2.8								
	0.3nm,0.7s								

*TAP **11** 14:36:39.0,24˙.43N×121˙.92E,h23km,ML3.9,B*
*JMA **11** 14:36:39.2±0.1,24˙.4N±0˙.5×121˙.9E±0˙.6,h34km±2km,*
MV3.1/15,TAIWAN REGION
ISC 11 14:36:38.3±0.8,24˙42N±0˙.01×122˙02E±0˙.02,h17km±5km,
n128,σ0982/225,12C-8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.20**	**91**	⇑*eP*		**Pb**		**14 36 46.4**	**+3.0**
	baz=93								
ESAO	**Su ao**	**0.22**	**314**	⇓P		**Pb**		**14 36 44.0**	**+0.2**
	baz=335								
ESAO				S		**Sg**		**14 36 47.0**	**+0.1**
	baz=335								
EWUT	**Wuta**	**0.22**	**276**	⇓*iP*		**Pg**		**14 36 43.6**	**+0.3**
	baz=278								
EWUT				*i* S		**Sg**		**14 36 46.8**	**0.0**
	baz=278								
TWC	**Suao**	**0.24**	**321**	⇓*iP*		**Pb**		**14 36 44.4**	**+0.2**
	baz=343								
TWC				*e*S		**Sg**		**14 36 47.6**	**+0.2**
	baz=343								
ENA	**Nanau**	**0.25**	**271**	⇓*iP*		**Pg**		**14 36 44.0**	**0.0**
	baz=269								
ENA				*e*S		**Sg**		**14 36 47.2**	**-0.5**
	baz=269								
EAHA	**Aohua**	**0.27**	**249**	⇑P		**Pg**		**14 36 44.4**	**+0.1**
	baz=242								
EAHA				S		**Sg**		**14 36 48.1**	**-0.1**
	baz=242								
EHP	**Heping Village**	**0.28**	**246**	*eP*		**Pg**		**14 36 44.5**	**+0.1**
	baz=235								
EHP				*e*S		**Sg**		**14 36 48.7**	**+0.2**
	baz=235								
EOS3	**EOS3**	**0.31**	**116**	⇑*eP*		**Pn**		**14 36 48.0**	**+0.1**
	baz=116								
NDS	**Dongshan**	**0.34**	**307**	⇓*iP*		**Pg**		**14 36 45.8**	**+0.3**
	baz=318								
NDS				*e*S		**Sg**		**14 36 50.0**	**-0.4**
	baz=318								
EOS4	**EOS4**	**0.41**	**138**	⇑*iP*		**Pn**		**14 36 48.9**	**-0.3**
	baz=123								
EOS4				S		**Sn**		**14 36 56.5**	**+0.3**
	baz=123								
ILA	**Ilan**	**0.42**	**324**	P		**Pb**		**14 36 47.6**	**+0.3**
	baz=332								
ILA				*i* S		**Sb**		**14 36 53.4**	**0.0**
	baz=332								
TWE	**Neicheng**	**0.43**	**313**	⇓*iP*		**Pg**		**14 36 47.3**	**+0.2**
	baz=323								
TWE				S		**Sg**		**14 36 52.6**	**-0.4**
	baz=323								
ETL	**Fush Village**	**0.45**	**234**	⇓P		**Pg**		**14 36 47.3**	**0.0**
	baz=230								
ETL				*e*S		**Sg**		**14 36 53.6**	**+0.2**
	baz=230								
NACB	**Ninganchiao**	**0.46**	**237**	P		**Pg**		**14 36 47.4**	**-0.2**
NACB	**Ninganchiao**	**0.46**	**237**	*i* P		**Pg**		**14 36 47.3**	**-0.3**
	baz=234								
NACB				*e*S		**Sg**		**14 36 53.5**	**-0.3**
	baz=234								
LATG	**Datong**	**0.46**	**284**	⇑*iP*		**Pg**		**14 36 47.3**	**-0.3**
	baz=287								
LATG				S		**Sg**		**14 36 53.1**	**-0.8**
	baz=287								
NTC	**Toucheng**	**0.46**	**339**	*eP*		**Pb**		**14 36 48.3**	**+0.3**
	baz=349								
NTC				*e*S		**Sb**		**14 36 54.7**	**+0.1**
	baz=349								
ENTT	**Nioudou**	**0.46**	**298**	⇑*iP*		**Pg**		**14 36 47.5**	**-0.1**
	baz=304								
ENTT				S		**Sg**		**14 36 53.1**	**-0.9**
	baz=304								
NDT	**Datong Townshi**	**0.49**	**291**	⇑*iP*		**Pg**		**14 36 48.1**	**-0.1**
	baz=295								
NDT				*i* S		**Sg**		**14 36 54.1**	**-0.8**
	baz=295								
FUSB	**Fushanzhiwuyua**	**0.51**	**311**	⇑*iP*		**Pg**		**14 36 48.7**	**+0.1**
	baz=318								
FUSB				S		**Sg**		**14 36 54.4**	**-1.1**
	baz=318								
TWD	**Chiawan**	**0.51**	**228**	*eP*		**Pg**		**14 36 48.6**	**0.0**
	baz=221								
TWD				*e*S		**Sg**		**14 36 56.0**	**+0.5**
	baz=221								
ETLH	**Xiulin Townshi**	**0.53**	**246**	*i* P		**Pg**		**14 36 48.5**	**-0.5**
	baz=245								
ETLH				*e*S		**Sg**		**14 36 56.0**	**-0.2**
	baz=245								
NNSB	**Datong**	**0.58**	**271**	*eP*		**Pg**		**14 36 49.4**	**-0.4**
	baz=277								
NNSB				*e*S		**Sg**		**14 36 55.6**	**-2.0**
	baz=277								
HWA	**Hwalien**	**0.58**	**220**	*eP*		**Pb**		**14 36 50.7**	**+0.6**
	baz=211								
TWB1	**Santiao Chiao**	**0.58**	**358**	⇓P		**Pn**		**14 36 50.8**	**-1.1**
	baz=2.0								
TWB1				S		**Sb**		**14 36 58.3**	**+0.2**
	baz=2.0								
NWLT	**Wulai**	**0.58**	**307**	⇑P		**Pg**		**14 36 49.7**	**-0.2**
	baz=313								
NWLT				*e*S		**Sg**		**14 36 56.3**	**-1.5**
	baz=313								
NNS	**Nan Shan**	**0.59**	**272**	*i* P		**Pg**		**14 36 49.4**	**-0.6**
	baz=278								
NNS				S		**Sg**		**14 36 56.3**	**-1.5**
	baz=278								
YHNB	**Yeheng**	**0.63**	**293**	P		**Pg**		**14 36 50.5**	**-0.3**
YHNB	**Yeheng**	**0.63**	**293**	⇑*iP*		**Pg**		**14 36 50.4**	**-0.5**
	baz=296								
YHNB				S		**Sg**		**14 36 57.0**	**-2.3**
	baz=296								
NSK	**Sanguang**	**0.65**	**293**	⇑*iP*		**Pg**		**14 36 50.6**	**-0.6**
	baz=296								
NSK				*e*S		**Sg**		**14 36 58.0**	**-1.9**
	baz=296								
ETM	**Tongmen**	**0.66**	**226**	*eP*		**Pg**		**14 36 51.2**	**-0.2**
	baz=230								
ETM				*e*S		**Sg**		**14 37 00.5**	**+0.3**
	baz=230								
NWF	**Wu-fen Shan**	**0.68**	**342**	*eP*		**Pb**		**14 36 52.4**	**+0.6**
	baz=342								
NWF				*e*S		**Sb**		**14 37 01.5**	**+0.6**
	baz=342								
WFSB	**Wu-fen Shan**	**0.68**	**342**	P		**Pb**		**14 36 52.3**	**+0.6**
	baz=342								
WFSB				S		**Sb**		**14 37 01.5**	**+0.6**
	baz=342								
SXI1	**Grass Mountain**	**0.68**	**349**	*eP*		**Pn**		**14 36 52.5**	**-0.8**
	baz=359								
SXI1				S		**Sb**		**14 37 01.1**	**+0.2**
	baz=359								
TWA	**Mucha**	**0.68**	**325**	P		**Pn**		**14 36 52.6**	**-0.7**
	baz=323								
TWA				*e*S		**Sg**		**14 37 00.5**	**-0.2**
	baz=323								
LXIB	**Xiulin Townshi**	**0.68**	**234**	P		**Pg**		**14 36 51.3**	**-0.5**
	baz=229								
LXIB				S		**Sg**		**14 37 01.6**	**+0.8**
	baz=229								
NHDH	**Xindian Distri**	**0.70**	**320**	*i* P		**Pb**		**14 36 52.2**	**+0.2**
	baz=319								
NHDH				*e*S		**Sg**		**14 37 00.3**	**-1.0**
	baz=319								
FUSS	**Fushou**	**0.72**	**256**	*eP*		**Pg**		**14 36 52.3**	**-0.3**
	baz=259								
FUSS				*e*S		**Sg**		**14 37 01.7**	**-0.5**
	baz=259								
TATO	**Taipei**	**0.73**	**319**	P		**Pb**		**14 36 53.1**	**+0.5**
NHY	**Taipei**	**0.73**	**327**	*eP*		**Pn**		**14 36 53.8**	**-0.2**
	baz=326								
NHY				*e*S		**Sb**		**14 37 03.2**	**+0.7**
	baz=326								
WHF	**Hehuan Shan**	**0.74**	**248**	*i* P		**Pg**		**14 36 52.4**	**-0.5**
	baz=252								
WHF				*e*S		**Sg**		**14 37 02.1**	**-0.7**
	baz=252								
TNOU	**National Taiwa**	**0.76**	**343**	*eP*		**Pn**		**14 36 53.7**	**-0.6**
	baz=345								
TNOU				*e*S		**Sb**		**14 37 03.1**	**0.0**
	baz=345								
SHUL	**Shoufeng**	**0.76**	**213**	*eP*		**Pg**		**14 36 53.7**	**+0.6**
	baz=207								
SHUL				*e*S		**Sn**		**14 37 05.4**	**+0.1**
	baz=207								
TAP	**Taipei**	**0.77**	**323**	*eP*		**Pg**		**14 36 53.7**	**+0.4**
	baz=323								
TAP				*e*S		**Sb**		**14 37 03.4**	**0.0**
	baz=323								
TWT	**Tachien**	**0.79**	**258**	*eP*		**Pb**		**14 36 54.0**	**+0.3**
	baz=256								
TWT				*e*S		**Sb**		**14 37 03.7**	**-0.4**
	baz=256								
TDCB	**Techi**	**0.80**	**258**	*eP*		**Pb**		**14 36 54.1**	**+0.2**
	baz=257								
TDCB				*e*S		**Sb**		**14 37 03.6**	**-0.9**
	baz=257								
ESL	**Shilin**	**0.81**	**221**	*eP*		**Pb**		**14 36 53.7**	**-0.2**
	baz=231								
ESL				*e*S		**Sb**		**14 37 05.4**	**+0.9**
	baz=231								
YM01	**YM01**	**0.82**	**331**	*eP*		**Pn**		**14 36 54.9**	**-0.4**
	baz=336								
YM01				S		**Sg**		**14 37 05.5**	**+0.1**
	baz=336								
TEGC	**Jichi Village**	**0.83**	**211**	*eP*		**Pn**		**14 36 55.4**	**+0.1**
	baz=205								
NFF	**Wufeng Townshi**	**0.84**	**284**	*eP*		**Pb**		**14 36 54.9**	**+0.3**
	baz=290								
NFF				*e*S		**Sb**		**14 37 04.1**	**-1.6**
	baz=290								
JYNG	**Yonagunijimaku**	**0.85**	**88**	*eP*		**Pn**		**14 36 56.4**	**+0.9**
JYNG				S		**Sn**		**14 37 08.8**	**+1.2**
CHGB	**Renai**	**0.85**	**245**	*eP*		**Pb**		**14 36 54.4**	**-0.4**
	baz=248								
CHGB				S		**Sb**		**14 37 05.7**	**-0.3**
	baz=248								
YM08	**YM08**	**0.85**	**333**	*eP*		**Pg**		**14 36 55.1**	**+0.1**
	baz=339								
YM08				*e*S		**Sb**		**14 37 05.5**	**-0.4**
	baz=339								
TWS1	**Kuangyinshan**	**0.87**	**321**	*eP*		**Pn**		**14 36 55.5**	**-0.3**
	baz=337								
TWS1				*e*S		**Sg**		**14 37 07.0**	**+0.4**
	baz=337								
ANP	**Anpu**	**0.88**	**329**	*eP*		**Pn**		**14 36 56.0**	**-0.1**
	baz=335								
NTST	**Danshui**	**0.90**	**325**	*eP*		**Pn**		**14 36 56.3**	**0.0**
	baz=340								
NTST				*e*S		**Sg**		**14 37 07.5**	**-0.2**
	baz=340								
WARBT	**Fenglin Townsh**	**0.91**	**219**	*eP*		**Pb**		**14 36 54.7**	**-1.0**
	baz=227								
WARBT				*e*S		**Sb**		**14 37 08.1**	**+0.6**
	baz=227								
YOJ	**Yonaguni jima**	**0.91**	**87**	P		**Pn**		**14 36 58.0**	**+1.6**
YOJ	**Yonaguni jima**	**0.91**	**87**	*eP*		**Pn**		**14 36 57.1**	**+0.8**
	baz=79								
YOJ				*e*S		**Sn**		**14 37 10.4**	**+1.3**
	baz=79								
YOJ	**Yonaguni jima**	**0.91**	**87**	P		**Pn**		**14 36 57.4**	**+1.0**
YOJ				*e*S		**Sn**		**14 37 10.3**	**+1.2**
WUSB	**Renai**	**0.93**	**242**	P		**Pb**		**14 36 55.8**	**-0.2**
	baz=245								
WUSB				*e*S		**Sb**		**14 37 08.6**	**+0.4**
	baz=245								
TWY	**Chenhua**	**0.93**	**336**	*eP*		**Pn**		**14 36 56.8**	**+0.2**
	baz=342								
TWY				*e*S		**Sg**		**14 37 08.3**	**-0.3**
	baz=342								
NCU	**National Centr**	**0.93**	**306**	*eP*		**Pg**		**14 36 56.6**	**+0.2**
	baz=315								
NCU				S		**Sg**		**14 37 09.0**	**+0.4**
	baz=315								
NCUH	**Zhongli**	**0.93**	**306**	*eP*		**Pn**		**14 36 56.7**	**+0.1**
	baz=295								
NCUH				*e*S		**Sb**		**14 37 08.3**	**+0.1**
	baz=295								
LIOB	**Emei**	**0.94**	**284**	*eP*		**Pb**		**14 36 56.6**	**+0.4**
	baz=285								
LIOB				*e*S		**Sb**		**14 37 07.8**	**-0.6**
	baz=285								
NSTT	**Nanjuang**	**0.95**	**283**	⇑P		**Pb**		**14 36 56.8**	**+0.5**
	baz=284								
NSTT				S		**Sb**		**14 37 07.5**	**-1.1**
	baz=284								
SBCB	**Hsinchu**	**1.01**	**292**	P		**Pn**		**14 36 58.0**	**+0.3**
	baz=294								
SBCB				*e*S		**Sg**		**14 37 11.8**	**+0.7**
	baz=294								
HSN	**Hsinchu**	**1.02**	**292**	*eP*		**Pb**		**14 36 57.6**	**0.0**
	baz=296								
HSN				*e*S		**Sb**		**14 37 09.8**	**-1.0**
	baz=296								
VWDT	**VWDT**	**1.04**	**230**	P		**Pb**		**14 36 57.8**	**-0.1**
	baz=227								
VWDT				*e*S		**Sb**		**14 37 11.8**	**+0.5**
	baz=227								
WCS	**Beigang Elemen**	**1.07**	**250**	*eP*		**Pb**		**14 36 58.7**	**+0.3**
	baz=249								
WCS				*e*S		**Sb**		**14 37 12.1**	**-0.1**
	baz=249								
HGSD	**Ruisui**	**1.07**	**210**	*eP*		**Pb**		**14 36 58.2**	**-0.3**
	baz=205								
HGSD				*e*S		**Sb**		**14 37 12.9**	**+0.6**
	baz=205								
EHY	**Hungye**	**1.11**	**215**	*eP*		**Pn**		**14 36 57.6**	**-1.6**
	baz=210								
EHY				*e*S		**Sb**		**14 37 13.2**	**-0.2**
	baz=210								
NMLH	**Miaoli**	**1.12**	**276**	*eP*		**Pg**		**14 37 00.1**	**+0.1**
	baz=277								
NMLH				*e*S		**Sb**		**14 37 14.6**	**+1.0**
	baz=277								
TWQ1	**Liyutan**	**1.14**	**266**	*eP*		**Pg**		**14 37 00.5**	**+0.1**
	baz=266								
TWQ1				*e*S		**Sb**		**14 37 14.5**	**+0.5**
	baz=266								
NSY	**Sanyi**	**1.14**	**270**	*eP*		**Pg**		**14 37 00.9**	**+0.4**
	baz=270								
NSY				*e*S		**Sb**		**14 37 15.0**	**+0.7**
	baz=270								
SMLT	**Sun Moon Lake**	**1.15**	**242**	*eP*		**Pn**		**14 36 60.0**	**+0.1**
	baz=233								
SMLT				*e*S		**Sb**		**14 37 15.3**	**+0.7**
	baz=233								
SSLB	**Suanglung**	**1.16**	**237**	P		**Pn**		**14 36 59.9**	**+0.1**
SSLB	**Suanglung**	**1.16**	**237**	*eP*		**Pn**		**14 36 59.4**	**-0.4**
	baz=235								
SSLB				*e*S		**Sb**		**14 37 14.1**	**-0.7**
	baz=235								
TYC	**Yuchr**	**1.18**	**244**	*eP*		**Pn**		**14 36 60.0**	**-0.1**
	baz=250								
TYC				*e*S		**Sb**		**14 37 14.3**	**-1.0**
	baz=250								
ECBN	**Changbin**	**1.22**	**205**	*eP*		**Pg**		**14 37 01.9**	**0.0**
	baz=188								
YULB	**Yu-li**	**1.22**	**213**	P		**Pb**		**14 37 01.3**	**+0.3**
YULB	**Yu-li**	**1.22**	**213**	*eP*		**Pn**		**14 36 59.1**	**-1.5**
	baz=208								
YULB				*e*S		**Sb**		**14 37 15.4**	**-1.0**
	baz=208								
EYUL	**Yuli**	**1.25**	**211**	*eP*		**Pn**		**14 37 01.5**	**+0.5**
	baz=220								
TCU	**Taichung**	**1.25**	**258**	*eP*		**Pn**		**14 37 00.9**	**-0.2**
	baz=257								
TCU				*e*S		**Sn**		**14 37 18.7**	**+1.1**
	baz=257								
TWF1	**Yuli**	**1.25**	**212**	*eP*		**Pn**		**14 37 00.2**	**-0.9**
	baz=207								
TWF1				*e*S		**Sb**		**14 37 17.3**	**-0.1**
	baz=207								
WJS	**Zhushan**	**1.32**	**243**	*eP*		**Pb**		**14 37 03.4**	**+0.7**
	baz=226								
WJS				*e*S		**Sg**		**14 37 21.7**	**+0.7**
	baz=226								
WNT	**Mingjian**	**1.33**	**246**	P		**Pb**		**14 37 03.7**	**+0.8**
	baz=244								
WNT				*e*S		**Sg**		**14 37 22.1**	**+0.7**
	baz=244								
CHKH	**Chenggong**	**1.35**	**205**	*eP*		**Pn**		**14 37 02.2**	**-0.3**
	baz=183								
CHKH				*e*S		**Sn**		**14 37 19.9**	**-0.1**
	baz=183								
ALS	**Alishan**	**1.43**	**231**	P		**Pb**		**14 37 04.7**	**-0.1**
	baz=216								
ALS				*e*S		**Sn**		**14 37 22.6**	**+0.1**
	baz=216								
CHKT	**Chengkung**	**1.45**	**204**	*eP*		**Pn**		**14 37 01.9**	**-1.8**
	baz=184								
CHKT				*e*S		**Sn**		**14 37 20.6**	**-1.8**
	baz=184								
EHD	**Haiduan**	**1.47**	**210**	*eP*		**Pn**		**14 37 04.5**	**+0.4**
	baz=206								
EHD				*e*S		**Sn**		**14 37 21.4**	**-1.6**
	baz=206								
CHN5	**Tsauling**	**1.47**	**236**	P		**Pb**		**14 37 05.5**	**+0.2**
	baz=234								
CHN5				*e*S		**Sb**		**14 37 25.8**	**+1.9**
	baz=234								
ECS	**Chishang**	**1.51**	**209**	*eP*		**Pn**		**14 37 05.2**	**+0.5**
	baz=218								
ECS				*e*S		**Sn**		**14 37 23.6**	**-0.4**
	baz=218								
WGK	**Gukeng**	**1.52**	**241**	*eP*		**Pb**		**14 37 06.3**	**+0.2**
	baz=239								
WGK				*e*S		**Sg**		**14 37 27.3**	**0.0**
	baz=239								
ELDTW	**Lidau**	**1.53**	**217**	P		**Pn**		**14 37 04.3**	**-0.8**
	baz=201								
IRIF	**Iriomote-Funau**	**1.57**	**93**	P		**Pb**		**14 37 07.0**	**+0.2**
IRIF				S		**Sg**		**14 37 27.2**	**-1.7**
WRL	**Guolierlin Hig**	**1.58**	**251**	*eP*		**Pn**		**14 37 06.3**	**+0.6**
	baz=248								
EDH	**Donghe**	**1.58**	**204**	*eP*		**Pn**		**14 37 04.6**	**-1.1**
	baz=188								
EDH				*e*S		**Sn**		**14 37 25.2**	**-0.6**
	baz=188								
WCKO	**Fanlu**	**1.62**	**233**	*eP*		**Pn**		**14 37 06.9**	**+0.7**
	baz=230								
WTK	**Tuku**	**1.66**	**244**	*eP*		**Pb**		**14 37 08.0**	**-0.4**
	baz=242								
WTK				*i* S		**Sb**		**14 37 30.4**	**+1.3**
	baz=242								
CHN2	**Minshiung**	**1.67**	**238**	*eP*		**Pb**		**14 37 09.2**	**+0.6**
	baz=222								
HATJ	**Hateruma jima**	**1.67**	**102**	*eS*		**Sg**		**14 37 31.4**	**-1.0**
CHN4	**Tsaushan**	**1.68**	**231**	*eP*		**Pb**		**14 37 08.9**	**0.0**
	baz=228								
STYH	**Taoyuan**	**1.69**	**223**	*eP*		**Pn**		**14 37 07.8**	**+0.7**
	baz=207								
STYH				*e*S		**Sn**		**14 37 29.7**	**+1.4**
	baz=207								
TPUB	**Ta-pu**	**1.69**	**229**	P		**Pb**		**14 37 09.3**	**+0.3**
TPUB	**Ta-pu**	**1.69**	**229**	P		**Pn**		**14 37 08.3**	**+1.1**
	baz=226								
TPUB				*e*S		**Sb**		**14 37 30.6**	**+0.6**
	baz=226								
LONT	**Longtian**	**1.71**	**208**	*eP*		**Pn**		**14 37 06.0**	**-1.5**
	baz=191								
WTP	**Ta-pu**	**1.74**	**228**	*eP*		**Pb**		**14 37 09.4**	**-0.5**
	baz=225								
WTP				*e*S		**Sb**		**14 37 32.5**	**+1.1**
	baz=225								
TWK	**Hsinying**	**1.81**	**231**	*eP*		**Pb**		**14 37 10.4**	**-0.7**
	baz=226								
TWGBT	**Beinan**	**1.81**	**208**	*eP*		**Pn**		**14 37 07.4**	**-1.4**
	baz=205								
TWGBT				S		**Sn**		**14 37 31.9**	**+0.4**
	baz=205								
TWG	**Pinlang**	**1.82**	**209**	*eP*		**Pn**		**14 37 07.5**	**-1.3**
	baz=205								
TWG				*e*S		**Sn**		**14 37 31.2**	**-0.3**
	baz=205								
JKRS	**Kuro-shima**	**1.83**	**95**	*eS*		**Sb**		**14 37 33.5**	**-0.4**
SNST	**Tainan City**	**1.84**	**230**	*eP*		**Pb**		**14 37 11.0**	**-0.5**
	baz=226								
SNST				*e*S		**Sb**		**14 37 34.7**	**+0.5**
	baz=226								
CHN1	**Nanshi**	**1.84**	**228**	*eP*		**Pb**		**14 37 11.1**	**-0.5**
	baz=224								
SGST	**Jiashian**	**1.87**	**225**	*eP*		**Pn**		**14 37 10.6**	**+0.9**
	baz=208								
SGST				*e*S		**Sb**		**14 37 36.1**	**+0.8**
	baz=208								
ICHU	**Yijhu**	**1.91**	**237**	*eP*		**Pb**		**14 37 12.3**	**-0.5**
	baz=219								
ICHU				*e*S		**Sb**		**14 37 36.5**	**+0.2**
	baz=219								
JIJ	**Ishigaki jima**	**1.94**	**91**	P		**Pb**		**14 37 12.2**	**-1.1**
JIJ				*e*S		**Sb**		**14 37 35.8**	**-1.5**
ECL	**Taimali**	**2.06**	**208**	*eP*		**Pn**		**14 37 12.5**	**+0.2**
	baz=194								
SCST	**Cishan**	**2.07**	**223**	*eP*		**Pb**		**14 37 14.7**	**-0.8**
	baz=220								
SCST				*e*S		**Sb**		**14 37 41.6**	**+0.6**
	baz=220								
JISG	**Ishigakijimahi**	**2.10**	**85**	*eP*		**Pb**		**14 37 14.2**	**-1.7**
JISG				*e*S		**Sb**		**14 37 40.3**	**-1.4**
SSD	**Sandimen**	**2.10**	**218**	*eP*		**Pn**		**14 37 14.0**	**+1.2**
	baz=214								
TSMG	**Majia**	**2.12**	**217**	*eP*		**Pb**		**14 37 15.1**	**-1.3**
	baz=223								
TSCK	**Chigu Township**	**2.18**	**235**	*eP*		**Pn**		**14 37 15.3**	**+1.5**
	baz=232								
TSCK				*e*S		**Sb**		**14 37 43.6**	**-0.4**
	baz=232								
MASBT	**Mashibuluo**	**2.21**	**215**	*eP*		**Pn**		**14 37 16.0**	**+1.8**
	baz=213								
MASBT				*e*S		**Sn**		**14 37 43.4**	**+2.2**
	baz=213								
EAST	**Anshuo**	**2.30**	**208**	*eP*		**Pn**		**14 37 16.8**	**+1.2**
	baz=195								
TAWH	**Dawu Township**	**2.32**	**207**	*eP*		**Pb**		**14 37 18.5**	**-1.3**
	baz=194								
SCZT	**Fangliau**	**2.41**	**212**	*eP*		**Pn**		**14 37 19.4**	**+2.4**
	baz=197								
JTJ	**Tarama**	**2.46**	**84**	*eS*		**Sb**		**14 37 50.3**	**-1.8**

*IDC **11** 14:41:12.9±2.2,6˙.45S×146˙.69E,h110km±22km,mb3.6/6,*
mbtmp4.0/8,Error ellipse: s-maj=30.0km s-min=15.2km
az=105.0
*NEIC **11** 14:41:14.5±1.4,6˙.5S±0˙.1×146˙.6E±0˙.2,h111km±8km,*
mb4.3/33,Error ellipse: s-maj=22.8km s-min=16.7km
az=93.0
ISC 11 14:41:14.1±0.8,6˙53S±0˙.07×146˙5E±0˙.1,h110km,n58,
σ1946/62,mb4.3/19,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.93**	**167**			**Pn**		**14 41 59.5**	**+0.3**
PMG	**Port Moresby**	**2.93**	**167**	P		**Pn**		**14 42 00.0**	**+0.7**
PMG	**Port Moresby**	**2.93**	**167**	P		**Pn**		**14 41 59.9**	**+0.7**
PMG	**Port Moresby**	**2.93**	**167**	P		**Pn**		**14 41 59.7**	**+0.5**
	98nm,0.3s,baz=9.5,slow=5.9,SNR=166								
PMG					S	**Sn**		**14 42 34.0**	**0.0**
	148nm,0.4s,baz=165,slow=21,SNR=26								
COEN	**Coen**	**8.07**	**204**			**Pn**		**14 43 10.0**	**+1.4**
COEN	**Coen**	**8.07**	**204**	P		**Pn**		**14 43 10.2**	**+1.6**
MTSU	**Mount Surprise**	**11.72**	**190**	P		**Pn**		**14 44 00.4**	**+2.4**
CTA	**Charters Tower**	**13.48**	**181**	P		**P**		**14 44 25.9**	**-0.4**
	8.4nm,0.5s,baz=359,slow=13,SNR=16								
CTA					S	**Sn**		**14 46 47.0**	**-2.4**
	1.1nm,0.2s,baz=278,slow=15,SNR=1.5

PSA00						IAmb	IAmb	14 47 17.2			
	comp=E,11nm,1.1s										
MORW	**Morawa**	**36.44**	**228**		P	**P**		**14 48 08.6**	**+0.2**		
CRAI	**Chiangrai**	**52.56**	**302**		P	**P**		**14 50 17.9**	**+1.2**		
CRAI						IAmb	IAmb	14 50 26.0			
	comp=E,2.4nm,1.2s										
CMAR	**Chiang Mai Arr**	**53.06**	**299**		P	**P**		**14 50 21.1**	**+0.6**		
	comp=E,0.8nm,0.5s,baz=123,slow=5.8,SNR=7.4										
	comp=E,0.8nm,0.5s										
MKAR	**Makanchi Array**	**77.58**	**321**		P	**P**		**14 52 56.5**	**-1.6**		
	comp=E,0.2nm,0.3s,baz=103,slow=6.8,SNR=8.3										
	comp=E,0.2nm,0.3s										
J17K	**VABM Dome**	**80.83**	**22**		P	**P**		**14 53 16.0**	**+0.5**		
J17K						IAmb	IAmb	14 53 17.8			
	comp=E,14nm,1.4s										
G16K	**Koyuk River**	**80.89**	**19**		P	**P**		**14 53 16.3**	**+0.6**		
QSPA	**South Pole Qui**	**83.44**	**180**		P	**P**		**14 53 29.1**	**-0.1**		
QSPA						IAmb	IAmb	14 53 40.1			
	comp=E,12nm,1.5s										
QSPA	**South Pole Qui**	**83.44**	**180**		P	**P**		**14 53 28.3**	**-0.9**		
	comp=E,1.6nm,1.0s,baz=278,slow=1.4,SNR=9.6										
	comp=E,1.6nm,1.0s										
C19K	**Lookout Ridge**	**84.01**	**17**		P	**P**		**14 53 32.0**	**+0.1**		
C19K						IAmb	IAmb	14 53 32.7			
	comp=E,8.5nm,1.4s										
F20K	**Avaraart Lake**	**84.04**	**19**		P	**P**		**14 53 32.0**	**0.0**		
D19K	**Kuna River**	**84.09**	**18**		P	**P**		**14 53 31.8**	**-0.5**		
D19K						IAmb	IAmb	14 53 32.4			
	comp=E,1.4nm,0.7s										
KKAR	**Karatay Array**	**84.30**	**314**		P	**P**		**14 53 33.5**	**-0.4**		
I21K	**Tanana**	**84.41**	**22**		P	**P**		**14 53 33.9**	**0.0**		
I21K						IAmb	IAmb	14 53 35.5			
	comp=E,7.2nm,1.4s										
SCM	**Sheep Creek Mo**	**84.78**	**26**		P	**P**		**14 53 35.5**	**-0.5**		
MLY	**Manley**	**84.80**	**22**		P	**P**		**14 53 35.1**	**-0.9**		
MLY						IAmb	IAmb	14 53 35.9			
	comp=E,2.6nm,0.6s										
DHY	**Denali Highway**	**85.27**	**25**		P	**P**		**14 53 38.3**	**-0.3**		
DHY						IAmb	IAmb	14 53 50.0			
	comp=E,5.1nm,1.2s										
M24K	**Tolsona, Glenn**	**85.39**	**26**		P	**P**		**14 53 38.9**	**-0.1**		
B21K	**Ikpikpuk River**	**85.76**	**18**		P	**P**		**14 53 40.1**	**-0.5**		
B21K						IAmb	IAmb	14 53 41.0			
	comp=E,2.7nm,0.8s										
D22K	**Ayikyak River**	**85.97**	**18**		P	**P**		**14 53 41.9**	**+0.2**		
D22K						IAmb	IAmb	14 53 42.5			
	comp=E,2.4nm,0.6s										
IL31		**86.17**	**23**		P	**P**		**14 53 40.8**	**-1.9**		
IL31						IAmb	IAmb	14 53 41.1			
	comp=E,4.1nm,0.7s										
ILAR	**Eielson Array**	**86.17**	**23**		P	**P**		**14 53 40.8**	**-1.9**		
ILAR	**Eielson Array**	**86.17**	**23**		P	**P**		**14 53 40.5**	**-2.2**		
	comp=E,3.0nm,0.6s,baz=255,slow=4.8,SNR=40										
	comp=E,3.0nm,0.6s										
VRDI	**Verde Repeater**	**86.27**	**27**		P	**P**		**14 53 43.5**	**0.0**		
J25K	**Salcha River,**	**86.70**	**24**		P	**P**		**14 53 44.2**	**-1.2**		
J25K						IAmb	IAmb	14 53 44.9			
	comp=E,2.9nm,0.7s										
BARN	**Barnard Glacie**	**87.03**	**28**		P	**P**		**14 53 47.2**	**-0.1**		
LOGN	**Logan Glacier**	**87.26**	**28**		P	**P**		**14 53 48.4**	**+0.1**		
K27K	**Chicken**	**87.83**	**25**		P	**P**		**14 53 51.0**	**+0.2**		
K27K						IAmb	IAmb	14 53 54.5			
	comp=E,2.1nm,1.0s										
HYT	**Haines Junctio**	**88.90**	**28**		P	**P**		**14 53 56.4**	**+0.3**		
K29M	**Barlow Dome**	**89.70**	**25**		P	**P**		**14 53 59.8**	**+0.1**		
K29M						IAmb	IAmb	14 54 23.2			
	comp=E,1.8nm,0.8s										

*IDC **11** 14:47:46.8±1.0,53.87N×163.41E,h0km,mb3.5/6, mbtmp3.5/7,ML2.5/1,Error ellipse: s-maj=40.4km s-min=23.5km az=151.0*
*KRSC **11** 14:47:48.7±0.8,54.99N×162.36E,h41km±16km,Ml4.1*
ISC 11 14:47:52.1±1.4,55.07N±0.04×162.2E±0.1,h56km±18km, n43,σ1s09/53,mb3.5/8,1D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TUMD	**Tumrok D**	**1.02**	**278**	*e*	P	Pn	14 48 09.6	-0.6
TUMD					*e*S	**Sn**	**14 48 23.6**	**0.0**
TUMR	**Tumrok**	**1.17**	**281**	*e*	P	**Pn**	**14 48 12.3**	**-0.1**
TUMR					*e*S	**Sn**	**14 48 28.6**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**1.20**	**317**	*e*	P	**Pn**	**14 48 12.7**	**-0.1**
BZGR					*e*S	**Sn**	**14 48 29.6**	**+1.5**
ZLN	**Zelenaya**	**1.22**	**321**	*e*	P	**Pn**	**14 48 13.1**	**+0.1**
ZLN					*e*S	**Sn**	**14 48 30.1**	**+1.5**
KBG	**Krutoberegovo**	**1.22**	**14**	*e*	P	Pn	14 48 11.4	-1.5
BZMR	**Bezymyannaya**	**1.28**	**313**	*e*	P	**Pn**	**14 48 13.8**	**-0.1**
BZMR					*e*S	**Sn**	**14 48 31.6**	**+1.4**
KMNR	**Kamenistaya**	**1.29**	**303**	*e*	P	**Pn**	**14 48 14.1**	**+0.1**
KMNR					*e*S	**Sn**	**14 48 31.3**	**+1.0**
BZWR	**Bezymyannyi-We**	**1.30**	**314**	*e*	P	**Pn**	**14 48 13.8**	**-0.3**
KIRR	**Kirishev**	**1.36**	**311**	*e*	P	**Pn**	**14 48 15.3**	**+0.4**
KPT	**Kopyto**	**1.42**	**310**	*e*	P	**Pn**	**14 48 15.9**	**+0.2**
KRSR	**Krestovskiy**	**1.46**	**322**	*e*	P	**Pn**	**14 48 15.8**	**-0.4**
KRSR					*e*S	**Sn**	**14 48 35.2**	**+0.9**
KLY	**Klyuchi**	**1.51**	**326**	*e*	P	Pn	14 48 15.5	-1.2
SMKR	**Semkarok**	**1.56**	**346**	*e*	P	**Pn**	**14 48 17.5**	**-0.1**
SMKR					*e*S	**Sn**	**14 48 37.9**	**+1.2**
BDR	**Baidarnaya**	**1.59**	**341**	*e*	P	**Pn**	**14 48 18.1**	**+0.1**
KOZ	**Kozyrevsk**	**1.63**	**308**	*e*	P	**Pn**	**14 48 19.0**	**+0.6**
SRKR	**Sorokina**	**1.68**	**341**	*e*	P	**Pn**	**14 48 19.5**	**+0.3**
KII	**Karymskiy**	**1.89**	**238**	*e*	P	**Pn**	**14 48 22.0**	**0.0**
SPN	**Mys Shipunski**	**2.35**	**213**	*e*	P	Pn	14 48 27.0	-1.1
SPN					*e*S	**Sn**	**14 48 54.0**	**-1.8**
SMAR	**Somma**	**2.68**	**229**	*e*	P	**Pn**	**14 48 33.4**	**+0.4**
SMAR					*e*S	**Sn**	**14 49 04.3**	**0.0**
KRX	**Arik**	**2.68**	**232**	*e*	P	**Pn**	**14 48 33.9**	**+1.0**
AVH	**Avacha**	**2.71**	**229**	*e*	P	**Pn**	**14 48 33.7**	**+0.5**
UGLR	**Uglovaya**	**2.71**	**228**	*e*	P	**Pn**	**14 48 33.7**	**+0.5**
UGLR					*e*S	**Sn**	**14 49 06.2**	**+1.4**
KOK	**Koryaka**	**2.73**	**231**	*e*	P	**Pn**	**14 48 34.1**	**+0.6**
GNL	**Ganaly**	**2.83**	**242**	*e*	P	**Pn**	**14 48 35.4**	**+0.5**
DALK	**Dalny**	**2.87**	**226**	*e*	P	**Pn**	**14 48 35.4**	**+0.2**
DALK					*e*S	**Sn**	**14 49 09.5**	**+1.0**
PET	**Petropavlovsk**	**2.91**	**227**	*e*	P	**Pn**	**14 48 36.4**	**+0.5**
KRMR	**Karymshinskiy**	**3.27**	**228**	*e*	P	**Pn**	**14 48 41.8**	**+1.0**
PETK	**Petropavlovsk-**	**3.28**	**235**		Pn	**Pn**	**14 48 41.2**	**+0.2**
	2.0nm,0.3s,baz=63,slow=17,SNR=47							
PETK					Sn	**Sn**	**14 49 21.8**	**+3.0**
	2.2nm,0.3s,baz=172,slow=12,SNR=2.6							
	5.9nm,0.4s							
RUS	**Russkaya**	**3.42**	**221**	*e*	P	**Pn**	**14 48 42.7**	**-0.1**
GRL	**Gorelyy**	**3.50**	**225**	*e*	P	**Pn**	**14 48 45.1**	**+1.0**
GRL					*e*S	**Sn**	**14 49 26.1**	**+1.8**
MTVR	**Mutnovka**	**3.51**	**224**	*e*	P	**Pn**	**14 48 45.0**	**+0.8**
MTVR					*e*S	**Sn**	**14 49 26.4**	**+1.9**
APC	**Apacha**	**3.65**	**236**	*e*	P	**Pn**	**14 48 47.8**	**+1.8**
ASAK	**Asacha**	**3.70**	**225**	*e*	P	**Pn**	**14 48 48.1**	**+1.4**
ASAK					*e*S	**Sn**	**14 49 30.9**	**+1.9**
KDTR	**Khodutka, Kamc**	**4.08**	**218**	*e*	P	**Pn**	**14 48 52.8**	**+0.9**
OSSR	**Ossora**	**4.22**	**6**	*e*	P	**Pn**	**14 48 54.6**	**+0.9**
HNS	**HongShan**	**36.44**	**261**	⇓	P	P	14 54 55.5	+4.3
HNS					pmax	pmax		
	comp=E,15nm,1.0s							
YKA	**Yellowknife Ar**	**40.89**	**45**		P	**P**	**14 55 28.2**	**+0.1**
	comp=E,0.3nm,0.7s,baz=299,slow=7.9,SNR=5.9							
NVAR	**Mina Array Bea**	**53.96**	**73**		P	**P**	**14 57 10.9**	**+0.7**
	comp=E,0.3nm,0.6s,baz=292,slow=7.7,SNR=3.1							
	comp=E,0.3nm,0.6s							
PDAR	**Pinedale Array**	**55.52**	**63**		P	**P**	**14 57 21.6**	**+0.1**
	comp=E,0.3nm,0.6s,baz=304,slow=6.4,SNR=3.4							
	comp=E,0.3nm,0.6s							
FINES	**FINESS Array B**	**58.77**	**337**		P	P	14 57 56.1	+12
	comp=E,2.0nm,1.0s,baz=52,slow=9.0,SNR=4.2							
	comp=E,2.0nm,1.0s							
TXAR	**Lajitas Array**	**68.77**	**69**		P	**P**	**14 58 50.5**	**+0.3**
	comp=E,0.3nm,0.6s,baz=291,slow=5.7,SNR=3.0							
	comp=E,0.3nm,0.6s							
WRA	**Warramunga Arr**	**78.40**	**207**		P	**P**	**14 59 43.6**	**-2.8**
	comp=E,0.2nm,0.8s,baz=27,slow=7.5,SNR=1.4							
	comp=E,0.2nm,0.8s							
ASAR	**Alice Springs**	**82.07**	**206**		P	**P**	**15 00 06.2**	**0.0**
	comp=E,0.4nm,0.9s,baz=16,slow=5.2,SNR=6.6							
	comp=E,0.4nm,0.9s							

*IDC **11** 14:49:25.1±0.8,42.82N×145.69E,h0km,mb4.0/21, mbtmp4.0/24,ML3.7/3,MS3.1/10,Error ellipse: s-maj=18.6km s-min=15.3km az=156.0*
*MOS **11** 14:49:29.9±1.2,42.75N×145.68E,h47km,mb4.7/13,Error ellipse: s-maj=9.3km s-min=6.0km az=100.7*

*NEIC **11** 14:49:31.8±0.8,42.85N±0.09×145.70E±0.05, h46km±10km,mb4.5/18,Error ellipse: s-maj=13.6km s-min=2.8km az=162.0*
*JMA **11** 14:49:32.4±0.1,42.9N±0.4×145.5E±0.5,h46km,MD4.0/39, MV4.2/39,OFF NEMURO PENINSULA*
JMA Felt II J1 at OFF NEMURO PENINSULA .
*SKHL **11** 14:49:32.6±0.6,42.90N×145.60E,h57km±3km,mb5.0/3*
*NIED **11** 14:49:32.4,42.94N×145.49E,h46km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr0.95; Mθθ-0.44; Mφφ-0.51; Mrθ0.25; Mθφ-0.56; Mφr0.87; Fault plane solution: M0 1.34000×1015 NP1:φ=26.00000°, δ67.00000°,λ75.00000°. NP2:φ=240.00000°,δ28.00000°, λ121.00000°.*
ISC 11 14:49:31.8±0.8,42.88N±0.05×145.59E±0.04,h41km±7km, n150,σ1s27/153,mb4.3/40,MS3.2/7,6C-17D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKHN	**Kushirohamanak**	**0.37**	**303**	⇓	*e*P	**Pn**	**14 49 41.1**	**+0.1**
JKHN				⇓	*e*S	**Sn**	**14 49 47.2**	**-0.1**
JKHN	**Kushirohamanak**	**0.37**	**303**		A	A	14 49 41.1	
	comp=E,58nm,1.3s,comp=N,38nm,1.1s							
NEM2	**Nemuro 2**	**0.50**	**13**		*e*P	**Pn**	**14 49 42.9**	**+0.3**
NEM2					*e*S	**Sn**	**14 49 50.1**	**0.0**
NEM2	**Nemuro 2**	**0.50**	**13**		A	A	14 49 42.9	
	comp=E,50nm,0.6s,comp=N,37nm,0.6s							
NMR	**Nemuro--Hokkai**	**0.50**	**12**	⇑	*i*PN	**Pn**	**14 49 42.9**	**+0.3**
NMR					*i* S	**Sn**	**14 49 50.2**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.50**	**12**		*i* P	**Pn**	**14 49 42.9**	**+0.3**
NMR					*i* S	**Sn**	**14 49 50.3**	**+0.1**
AKK	**Akkeshi**	**0.56**	**284**		*e*P	**Pn**	**14 49 43.2**	**-0.2**
JAK	**Akkeshi**	**0.66**	**280**	⇓	*e*P	**Pn**	**14 49 44.5**	**-0.3**
JAK				⇓	*e*S	**Sn**	**14 49 53.2**	**-0.8**
JAK	**Akkeshi**	**0.66**	**280**		A	A	14 49 44.5	
	comp=E,14nm,0.7s,comp=N,16nm,0.9s							
JNK	**Nakash**	**0.95**	**318**	⇓	*e*P	**Pn**	**14 49 48.0**	**-0.6**
JNK				⇓	*e*S	**Sn**	**14 49 58.9**	**-2.1**
JNSB	**Nemuroshibetsu**	**0.99**	**335**	⇓	*e*P	**Pn**	**14 49 48.9**	**-0.3**
JNSB				⇓	*e*S	**Sn**	**14 50 00.9**	**-1.1**
JNSB	**Nemuroshibetsu**	**0.99**	**335**		A	A	14 49 48.9	
	comp=E,11nm,1.5s,comp=N,8.0nm,2.3s							
JRA	**Rausu**	**1.11**	**342**	⇓	*e*P	**Pn**	**14 49 50.7**	**-0.2**
JRA				⇓	*e*S	**Sn**	**14 50 04.2**	**-0.7**
JRA	**Rausu**	**1.11**	**342**		A	A	14 49 50.7	
	comp=E,5.0nm,1.5s,comp=N,4.0nm,1.0s							
YUK	**Yuzh-Kuril'sk**	**1.17**	**10**	*d*	*i*PN	**Pn**	**14 49 51.6**	**-0.1**
YUK					*i* S	**Sn**	**14 50 05.6**	**-0.9**
YUK					pmax	pmax		
	comp=E,325nm,0.2s							
YUK					pmax	pmax		
	comp=Z,1μm,0.2s							
YUK					pmax	pmax		
	comp=N,177nm,0.1s							
YUK					smax	smax		
	comp=E,6μm,0.5s							
YUK					smax	smax		
	comp=N,8μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.17**	**10**	*i*	P	**Pn**	**14 49 51.6**	**-0.1**
YUK					AMB	AMB	14 49 53.4	
	comp=N,880nm,0.2s							
YUK					*i* S	**Sn**	**14 50 05.7**	**-0.8**
YUK					A	A	14 50 10.8	
	comp=N,8μm,0.5s							
YUK					A	A	14 50 10.8	
	comp=N,6μm,0.5s							
RUSJ	**Misakicho**	**1.25**	**349**	⇓	*i*PN	**Pn**	**14 49 53.1**	**+0.3**
RUSJ					*i* S	**Sn**	**14 50 08.3**	**0.0**
JOB	**Onbets**	**1.29**	**272**	⇓	*e*P	**Pn**	**14 49 53.0**	**-0.3**
JOB	**Onbets**	**1.29**	**272**		A	A	14 49 53.0	
	comp=E,4.0nm,2.8s,comp=N,4.0nm,1.3s							
SHO	**Shikotan**	**1.34**	**42**	⇓	*i*PN	**Pn**	**14 49 54.2**	**+0.1**
SHO					*i* S	**Sn**	**14 50 11.0**	**+0.3**
SHO					pmax	pmax		
	comp=E,158nm,0.1s							
SHO					smax	smax		
	comp=N,2μm,0.2s							
SHO					smax	smax		
	comp=E,2μm,0.2s							
SHO	**Shikotan**	**1.34**	**42**	*i*	P	**Pn**	**14 49 54.2**	**+0.1**
SHO					AMB	AMB	14 49 56.0	
	comp=E,160nm,0.1s							
SHO					*i* S	**Sn**	**14 50 10.4**	**-0.3**
SHO					A	A	14 50 12.8	
	comp=E,2μm,0.2s							
SHO					A	A	14 50 12.8	
	comp=E,2μm,0.2s							
JAR	**Ashorobuto**	**1.39**	**288**	⇓	*e*P	**Pn**	**14 49 54.5**	**-0.3**
JAR	**Ashorobuto**	**1.39**	**288**		A	A	14 49 54.5	
	comp=E,4.0nm,0.6s,comp=N,3.0nm,2.3s							
JTKR	**Abashiri--Toko**	**1.64**	**312**	⇓	*e*P	**Pn**	**14 49 58.3**	**+0.2**
ERM	**Erimo**	**1.99**	**245**			**Pn**	**14 50 05.5**	**+2.5**
ERM	**Erimo**	**1.99**	**245**		PN	**Pn**	**14 50 05.5**	**+2.5**
JKA	**Kamikawa-asahi**	**2.50**	**301**		Pn	**Pn**	**14 50 11.0**	**+1.1**
JKA	**Kamikawa-asahi**	**2.50**	**301**		*e*P	**Pn**	**14 50 10.7**	**+0.8**
ASAJ	**Asahikawa**	**2.50**	**301**		Pn	**Pn**	**14 50 10.7**	**+0.7**
	comp=N,37nm,0.3s,baz=141,slow=12,SNR=136							
ASAJ					Sn	**Sn**	**14 50 42.2**	**+3.0**
	comp=N,21nm,0.3s,baz=356,slow=31,SNR=9.1							
ASAJ					LR	LR	14 51 25.5	
	comp=N,368nm,18.2s,baz=348,slow=46							
	comp=N,220nm,0.5s							
KUR	**Kuril'sk**	**2.87**	**34**		*e*PN	**Pn**	**14 50 17.2**	**+2.2**
KUR					*e*S	**Sn**	**14 50 50.2**	**+1.9**
KUR					pmax	pmax		
	comp=E,44nm,0.4s							
KUR					pmax	pmax		
	comp=Z,124nm,0.4s							
KUR					pmax	pmax		
	comp=N,84nm,0.2s							
KUR					smax	smax		
	comp=N,502nm,0.2s							
KUR					smax	smax		
	comp=E,175nm,0.2s							
KUR	**Kuril'sk**	**2.87**	**34**	*e*	P	**Pn**	**14 50 16.4**	**+1.4**
KUR					AMB	AMB	14 50 25.5	
	comp=E,90nm,0.3s							
KUR					*e*S	**Sn**	**14 50 49.2**	**+0.9**
KUR					A	A	14 50 56.8	
	comp=E,370nm,0.3s							
KUR					A	A	14 50 56.8	
	comp=E,560nm,0.3s							
JTM	**Tenmabayashi**	**3.97**	**240**			**Pn**	**14 50 30.6**	**+0.4**
YSS	**Yuzh-Sakhalins**	**4.54**	**335**		Pn	**Pn**	**14 50 38.7**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.54**	**335**		*e*PN	**Pn**	**14 50 40.5**	**+2.5**
YSS					pmax	pmax		
	comp=Z,20nm,0.8s							
YSS					MLR	MLR		
	comp=Z,700nm,13.0s							
YSS	**Yuzh-Sakhalins**	**4.54**	**335**		*e*P	**Pn**	**14 50 40.4**	**+2.5**
YSS					AMB	AMB	14 50 44.4	
	comp=Z,10.0nm,0.4s							
YSS					*e*S	**Sn**	**14 51 30.8**	**+1.3**
YSS					A	A	14 51 36.8	
	comp=Z,40nm,0.6s							
YSS					A	A	14 51 36.8	
	comp=Z,10.0nm,0.6s							
JMM	**Marumori**	**6.20**	**218**		Pn	**Pn**	**14 50 59.5**	**-1.3**
TYV	**Tymovskoe**	**8.23**	**347**		*e*PN	**Pn**	**14 51 31.7**	**+3.1**
TYV					*e*S	**Sn**	**14 53 07.8**	**+7.6**
TYV					pmax	pmax		
	comp=Z,6.0nm,1.2s							
TYV					pmax	pmax		
	comp=Z,200nm,4.5s							
TYV					smax	smax		
	comp=N,4.0nm,2.1s							
TYV					smax	smax		
	comp=E,7.0nm,2.1s							
TYV					smax	smax		
	comp=N,200nm,5.6s							
TYV					smax	smax		
	comp=E,500nm,5.6s							
TYV	**Tymovskoe**	**8.23**	**347**	*e*	P	**Pn**	**14 51 31.7**	**+3.1**
TYV					AMB	AMB	14 51 34.4	
	comp=E,40nm,0.6s							
TYV					AMB	AMB	14 51 39.7	
	comp=E,200nm,5.0s							
TYV					*e*S	**Sn**	**14 53 00.5**	**+0.3**
TYV					A	A	14 53 06.4	
	comp=E,30nm,0.7s							
TYV					A	A	14 53 06.4	
	comp=E,50nm,0.7s							
TYV					A	A	14 53 12.5	
	comp=E,200nm,6.0s							
TYV					A	A	14 53 12.5	
	comp=E,500nm,6.0s							
MJAR	**Matsushiro Arr**	**8.51**	**224**		Pn	**Pn**	**14 51 31.0**	**-1.4**
	comp=E,0.2nm,0.3s,baz=30,slow=14,SNR=9.5							
MJAR					Sn	**Sn**	**14 53 07.9**	**+0.8**
	comp=E,0.1nm,0.3s,baz=287,slow=26,SNR=1.6							
	comp=E,2.5nm,0.5s							
MJB9	**Matsu-Tunnel**	**8.51**	**224**		Pn	**Pn**	**14 51 32.9**	**+0.5**
MAJO	**Matsushiro**	**8.51**	**224**		Pn	**Pn**	**14 51 32.3**	**-0.1**
MAJO	**Matsushiro**	**8.51**	**224**	*i*	PN	**Pn**	**14 51 32.3**	**-0.1**
MAJO					pmax	pmax		
	comp=Z,4.0nm,0.4s							
JGF	**Kuroka**	**9.67**	**224**		Pn	**Pn**	**14 51 49.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.96**	**282**		PN	**Pn**	**14 51 52.0**	**-0.3**
USRK	**Ussuriysk Ar.**	**9.96**	**282**		Pn	**Pn**	**14 51 52.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=98,slow=12,SNR=1.4							
	comp=Z,3.2nm,1.0s							
KLR	**Kul'dur**	**11.51**	**308**	*ce*	PN	**Pn**	**14 52 17.3**	**+3.8**
KLR					pmax	pmax		
	comp=Z,9.0nm,1.3s							
KLR	**Kul'dur**	**11.51**	**308**		Pn	**Pn**	**14 52 15.3**	**+1.9**
	comp=E,0.1nm,0.3s,baz=112,slow=16,SNR=7.3							
KLR					LR	LR	14 57 10.9	
	comp=Z,75nm,18.1s,baz=130,slow=40							
KLR	**Kul'dur**	**11.51**	**308**	*e*	P	**Pn**	**14 52 16.0**	**+2.5**
PETK	**Petropavlovsk-**	**13.04**	**34**		Pn	**Pn**	**14 52 34.3**	**0.0**
	comp=E,0.1nm,0.3s,baz=205,slow=12,SNR=2.2							
BNX	**BinXian**	**13.33**	**289**	⇓	P	**Pn**	**14 52 36.3**	**-2.0**
BNX					pmax	pmax		
	comp=Z,3.0nm,1.4s							
BNX					pmax	pmax		
	comp=Z,170nm,3.5s							
PET	**Petropavlovsk**	**13.38**	**36**		Pn	**Pn**	**14 52 37.8**	**-1.1**
HEH	**HeiHe**	**14.49**	**307**	*e*	P	**P**	**14 52 58.6**	**-1.4**
HEH					pmax	pmax		
	comp=E,6.0nm,1.1s							
HEH					pmax	pmax		
	comp=E,140nm,4.5s							
KSRS	**Korea Array**	**14.54**	**254**		LR	LR	14 57 49.7	
	comp=Z,56nm,20.1s,baz=90,slow=34							
JNU	**Nakatsue**	**15.12**	**235**		LR	LR	14 59 13.8	
	comp=Z,36nm,20.8s,baz=26,slow=39							
TJN	**Taejon**	**15.46**	**251**		Pn	**Pn**	**14 53 06.6**	**-0.2**
TJN	**Taejon**	**15.46**	**251**		P	**Pn**	**14 53 06.6**	**-0.2**
TJN					pmax	pmax		
	comp=Z,334nm,1.5s							
ZEA	**Zeya**	**16.28**	**318**		P	**P**	**14 53 18.9**	**-0.9**
ZEA	**Zeya**	**16.28**	**318**	*e*	P	**Pn**	**14 53 15.9**	**-1.4**
SEY	**Seymchan**	**20.48**	**9**	*i*	P	**P**	**14 54 06.6**	**+0.8**
SEY					pmax	pmax		
	comp=Z,1.0nm,0.5s							
SEY	**Seymchan**	**20.48**	**9**		P	**P**	**14 54 03.4**	**-2.4**
	comp=Z,0.8nm,0.5s,baz=197,slow=19,SNR=3.0							
	comp=Z,0.8nm,0.5s							
YAK	**Yakutsk**	**21.38**	**339**		LR	LR	15 02 26.4	
	comp=Z,24nm,19.3s,baz=105,slow=36							
NJ2	**Nanjing**	**23.72**	**252**	*e*	P	**P**	**14 54 39.2**	**-0.8**
NJ2					pP	**pP**	**14 54 51.2**	**+0.6**
NJ2					pmax	pmax		
	comp=Z,5.0nm,0.5s							
NJ2					pmax	pmax		
	comp=Z,240nm,10.4s							
HHC	**Hu-ho-hao-te**	**25.32**	**277**	*e*	P	**P**	**14 54 55.9**	**+1.2**
HHC					pmax	pmax		
	comp=Z,9.0nm,0.7s							
HHC					pmax	pmax		
	comp=Z,110nm,5.5s							
LYN	**LuoYang**	**27.01**	**263**	*e*	P	**P**	**14 55 11.2**	**+1.3**
LYN					pP	pP	14 55 22.5	+1.5
LYN					pmax	pmax		
	comp=Z,13nm,0.6s							
SONM	**Songino Array**	**27.77**	**294**		P	**P**	**14 55 15.8**	**-0.9**
SONM	**Songino Array**	**27.77**	**294**		P	**P**	**14 55 15.8**	**-0.9**
SONM					pmax	pmax		
	comp=Z,3.0nm,0.9s							
SONM	**Songino Array**	**27.77**	**294**		P	**P**	**14 55 16.6**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=82,slow=8.3,SNR=22							
SONM					LR	LR	15 07 17.9	
	comp=Z,62nm,19.8s,baz=88,slow=38							
	comp=Z,3.4nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**29.24**	**135**		T	T	15 26 27.9	
	baz=327,slow=75							
H11N1	**WAKE ISLAND Hy**	**29.25**	**136**		T	T	15 26 16.2	
	baz=327,slow=75							
H11N3	**WAKE ISLAND Hy**	**29.25**	**135**		T	T	15 26 29.3	
	baz=327,slow

ABKAR	**Akbulak array**	**56.71**	**309**	P		**P**		**14 59 11.2**	**+0.1**
ABKAR	**Akbulak array**	**56.71**	**309**	P		**P**		**14 59 11.1**	**+0.1**
ABKAR				IAmb		IAmb		14 59 11.9	
	comp=Z,4.7nm,0.6s								
YKA	**Yellowknife Ar**	**57.16**	**33**	P		**P**		**14 59 12.0**	**-2.0**
YKA	**Yellowknife Ar**	**57.16**	**33**	P		**P**		**14 59 12.0**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=302,slow=7.1,SNR=2.5								
	comp=Z,0.1nm,0.4s								
WRA	**Warramunga Arr**	**63.36**	**192**	P		**P**		**14 59 56.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=6.8,slow=6.5,SNR=2.1								
	comp=Z,0.2nm,0.5s								
GEYT	**Alibeck**	**63.85**	**298**	P		**P**		**14 59 59.7**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=73,slow=16,SNR=4.2								
GEYT				LR		LR		15 31 19.8	
	comp=Z,54nm,19.4s,baz=106,slow=39								
	comp=Z,1.6nm,0.7s								
FIA1	**FINESS Array S**	**65.12**	**333**	P		**P**		**15 00 07.8**	**-0.1**
FINES	**FINESS Array B**	**65.12**	**333**	P		**P**		**15 00 07.7**	**-0.1**
FINES	**FINESS Array B**	**65.12**	**333**	*i* P		**P**		**15 00 07.8**	**-0.1**
FINES				pmax		pmax			
	comp=Z,6.0nm,0.7s								
FINES	**FINESS Array B**	**65.12**	**333**	P		**P**		**15 00 07.4**	**-0.5**
	comp=Z,6.3nm,0.7s,baz=47,slow=7.7,SNR=43								
	comp=Z,6.3nm,0.7s								
OBN	**Obninsk**	**65.33**	**323**	*e*P		**P**		**15 00 10.8**	**+1.5**
OBN				*e*				15 00 43.0	
OBN				*e*				15 02 33.9	
OBN				pmax		pmax			
	comp=Z,3.0nm,0.7s								
OBN				MLR		MLR			
	comp=Z,83nm,12.0s								
OBN	**Obninsk**	**65.33**	**323**	*e*P		**P**		**15 00 10.8**	**+1.5**
ASAR	**Alice Springs**	**67.09**	**192**	P		**P**		**15 00 18.9**	**-2.0**
	comp=Z,0.3nm,0.8s,baz=11,slow=5.8,SNR=2.3								
	comp=Z,0.3nm,0.8s								
NVAR	**Mina Array Bea**	**69.01**	**57**	P		**P**		**15 00 33.9**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=296,slow=6.7,SNR=3.9								
	comp=Z,0.4nm,0.6s								
KBZ	**Khabaz**	**69.51**	**311**	*ce*P		**P**		**15 00 36.8**	**+0.8**
KBZ				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KBZ	**Khabaz**	**69.51**	**311**	P		**P**		**15 00 36.1**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=56,slow=3.8,SNR=6.5								
	comp=Z,4.3nm,0.9s								
KBZ	**Khabaz**	**69.51**	**311**	*e*P		**P**		**15 00 36.8**	**+0.8**
NC405	**NORSAR Array S**	**69.80**	**338**	P		**P**		**15 00 37.2**	**-0.3**
NC303	**NORSAR Array S**	**69.80**	**338**	P		**P**		**15 00 37.3**	**-0.1**
NC204	**NORSAR Array S**	**69.92**	**339**	P		**P**		**15 00 38.3**	**0.0**
NB201	**NORSAR Array S**	**69.96**	**338**	P		**P**		**15 00 38.4**	**-0.1**
NB201				IAmb		IAmb		15 00 51.2	
	comp=Z,5.5nm,0.8s								
NOA	**NORSAR Array B**	**69.99**	**338**	P		**P**		**15 00 38.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=288,slow=8.2,SNR=20								
	comp=Z,0.7nm,0.3s								
HFS	**Hagfors**	**70.04**	**337**	P		**P**		**15 00 38.6**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=38,slow=7.1,SNR=23								
	comp=Z,2.0nm,0.3s								
PDAR	**Pinedale Array**	**71.34**	**49**	P		**P**		**15 00 46.8**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=252,slow=2.3,SNR=3.5								
	comp=Z,0.2nm,0.4s								
AKASG	**Malin Array Be**	**71.59**	**323**	P		**P**		**15 00 48.3**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=41,slow=6.3,SNR=9.3								
	comp=Z,3.4nm,0.5s								
AKBB	**Malin Array Si**	**71.59**	**323**	P		**P**		**15 00 48.2**	**-0.3**
AKBB				IAmb		IAmb		15 00 49.4	
	comp=Z,11nm,1.1s								
AKBB	**Malin Array Si**	**71.59**	**323**	P		**P**		**15 00 48.2**	**-0.3**
AKBB				pmax		pmax			
	comp=Z,11nm,1.2s								
KIEV	**Kiev**	**71.61**	**323**	P		**P**		**15 00 48.1**	**-0.5**
KIEV				IAmb		IAmb		15 00 49.4	
	comp=Z,10nm,1.1s								
KIEV	**Kiev**	**71.61**	**323**	P		**P**		**15 00 48.1**	**-0.5**
KIEV				pmax		pmax			
	comp=Z,10.0nm,1.2s								
BUR08	**Bucovina Ar. S**	**75.63**	**323**	P		**P**		**15 01 13.0**	**+0.5**
BUR08				IAmb		IAmb		15 01 13.7	
	comp=Z,4.8nm,0.8s								
BURAR	**Bucovina Array**	**75.65**	**323**	P		**P**		**15 01 13.1**	**+0.5**
BURAR				IAmb		IAmb		15 01 14.1	
	comp=Z,3.5nm,0.8s								
BURAR	**Bucovina Array**	**75.65**	**323**	P		**P**		**15 01 13.0**	**+0.5**
BURAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
KOLS	**Kolonicke sedl**	**75.91**	**325**	*e*P		**P**		**15 01 14.9**	**+1.0**
KOLS	**Kolonicke sedl**	**75.91**	**325**	*e*P		**P**		**15 01 14.9**	**+1.0**
OJC	**Ojcow**	**75.91**	**328**	P		**P**		**15 01 14.4**	**+0.5**
OJC				IAmb		IAmb		15 01 15.3	
	comp=Z,6.3nm,1.0s								
OJC	**Ojcow**	**75.91**	**328**	P		**P**		**15 01 14.4**	**+0.5**
OJC				pmax		pmax			
	comp=Z,6.0nm,1.0s								
CRVS	**Cervenica-Dubn**	**76.27**	**326**	*e*P		**P**		**15 01 16.3**	**+0.3**
CRVS	**Cervenica-Dubn**	**76.27**	**326**	*e*P		**P**		**15 01 16.3**	**+0.3**
LANS	**Liptovska Anna**	**76.88**	**327**	*e*P		**P**		**15 01 21.4**	**+1.9**
LANS	**Liptovska Anna**	**76.88**	**327**	*e*P		**P**		**15 01 21.4**	**+1.9**
BRTR	**Keskin Array B**	**77.31**	**313**	P		**P**		**15 01 22.2**	**0.0**
BRTR	**Keskin Array B**	**77.31**	**313**	*ce*P		**P**		**15 01 22.7**	**+0.6**
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**77.31**	**313**	P		**P**		**15 01 21.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=98,slow=3.7,SNR=4.3								
	comp=Z,0.9nm,0.7s								
MODS	**Modra-Piesok**	**78.37**	**328**	*e*P		**P**		**15 01 29.4**	**+1.6**
MODS	**Modra-Piesok**	**78.37**	**328**	*e*P		**P**		**15 01 29.4**	**+1.6**
EKA	**Eskdalemuir Ar**	**78.61**	**342**	P		**P**		**15 01 29.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=28,slow=5.4,SNR=7.2								
	comp=Z,0.6nm,0.4s								
H03N2	**Juan Fernandez**	**144.11**	**90**	T		T		17 49 52.3	
	baz=302,slow=76,SNR=31								
H03N3	**Juan Fernandez**	**144.12**	**90**	T		T		17 49 58.4	
	baz=302,slow=76,SNR=38								
H03N1	**Juan Fernandez**	**144.12**	**90**	T		T		17 49 51.2	
	baz=302,slow=76,SNR=46								

*TIR **11** 14:59:29.4,40˚.07N×19˚.90E,h0km±2km,Ml2.9*
*PDG **11** 14:59:29.6±0.8,40˚.11N×19˚.72E,h9km±2km,ML3.0/9,*
Error ellipse: s-maj=1.2km s-min=2.6km az=0.0
*ATH **11** 14:59:30.0,40˚.14N×19˚.87E,h6km±1km,ML2.9/10,*
Manual Solution by F.Xalaris This location: 2020/05/22
08:50:54 ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 1 km
*THE **11** 14:59:30.4,40˚.08N×19˚.79E,h0km±3km,ML2.8/3,Error*
ellipse: s-maj=3.5km s-min=1.1km az=287.0

ISC 11 14:59:30.2±1.0,40˚.09N±0˚.02×19˚.85E±0˚.02,h7km±9km,
n72,σ1§13/106,6C-3D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.24**	**150**	P	**Pg**	**14 59 34.0**	**-1.0**
SRN	baz=157			S	**Sg**	**14 59 38.7**	**+0.5**
	baz=157						
SRN				AMP			
	comp=N,15nm,0.3s,baz=157						
SRN	**Sarande**	**0.24**	**150**	P	**Pg**	**14 59 35.1**	**+0.1**
SRN				S	**Sg**	**14 59 39.4**	**+1.2**
KASA	**Kassiopi**	**0.35**	**169**	P	**Pg**	**14 59 37.0**	**-0.1**
KASA				S	**Sg**	**14 59 43.0**	**+1.3**
KEK	**Kerkira**	**0.38**	**185**	P	**Pg**	**14 59 35.5**	**-2.1**
KEK				S	**Sg**	**14 59 42.6**	**0.0**
	comp=N,2μm,0.2s						
VLO	**Vlora**	**0.46**	**325**	P	**Pb**	**14 59 40.5**	**-0.3**
	baz=323						
VLO				S	**Sb**	**14 59 49.4**	**+1.6**
	baz=323						
VLO				AMP			
	comp=E,10.0nm,0.3s,baz=323						
VLO	**Vlora**	**0.46**	**325**	P	**Pg**	**14 59 39.6**	**+0.4**
KRK1	**kERKIRA**	**0.47**	**173**	P	**Pg**	**14 59 40.1**	**+0.7**
KRK1				S	**Sb**	**14 59 47.3**	**-0.8**
LSK	**Leskovik**	**0.58**	**84**	P	**Pg**	**14 59 40.1**	**-1.4**
	baz=81						
LSK				S	**Sg**	**14 59 49.3**	**+0.3**
	baz=81						
LSK				AMP			
	comp=E,3.0nm,0.5s,baz=81						
IGT	**Igoumenitsa**	**0.67**	**146**	P	**Pg**	**14 59 42.6**	**-0.5**
	baz=148						
IGT				S	**Sb**	**14 59 53.5**	**-0.4**
	baz=148						
IGT	**Igoumenitsa**	**0.67**	**146**	P	**Pg**	**14 59 43.0**	**-0.1**
IGT				S	**Sb**	**14 59 53.9**	**+0.1**
	comp=E,735nm,0.5s						
IGT	**Igoumenitsa**	**0.67**	**146**	P	**Pg**	**14 59 42.7**	**-0.5**
IGT				S	**Sb**	**14 59 53.2**	**-0.6**
JAN	**Janina**	**0.89**	**119**	P	**Pn**	**14 59 48.5**	**-0.7**
KBN	**Korca**	**0.90**	**53**	P	**Pg**	**14 59 47.0**	**-0.5**
	baz=50						
KBN				S	**Sb**	**15 00 00.8**	**+0.4**
	baz=50						
KBN				AMP			
	comp=N,1.5nm,0.4s,baz=50						
KBN	**Korca**	**0.90**	**53**	P	**Pb**	**14 59 47.7**	**-0.5**
KBN				S	**Sn**	**15 00 02.3**	**-0.3**
NEST	**Nestorio**	**0.98**	**70**	P	**Pg**	**14 59 48.7**	**-0.3**
NEST	**Nestorio**	**0.98**	**70**	P	**Pg**	**14 59 48.3**	**-0.7**
NEST				S	**Sg**	**15 00 01.9**	**+0.2**
PENT	**Pentalofos**	**1.00**	**84**	P	**Pg**	**14 59 48.6**	**-0.8**
SCTE	**Santa Cesarea**	**1.06**	**269**	P	**Pn**	**14 59 51.2**	**-0.3**
	baz=271						
SCTE				S	**Sn**	**15 00 07.2**	**+0.7**
	baz=271						
SCTE	**Santa Cesarea**	**1.06**	**269**	P	**Pb**	**14 59 51.0**	**+0.1**
KPRO	**Kipourio**	**1.17**	**96**	P	**Pg**	**14 59 52.5**	**-0.2**
KPRO	**Kipourio**	**1.17**	**96**	P	**Pg**	**14 59 51.9**	**-0.9**
KPRO				S	**Sb**	**15 00 08.2**	**-0.1**
LMS2	**Laimos Florina**	**1.24**	**53**	P	**Pb**	**14 59 53.6**	**-0.4**
OHR	**Ohrid**	**1.25**	**35**	*i* Pn	**Pn**	**14 59 53.9**	**-0.3**
TIR	**Tirane**	**1.26**	**1**	P	**Pg**	**14 59 55.4**	**+1.1**
	baz=359						
TIR				S	**Sn**	**15 00 15.6**	**+4.1**
	baz=359						
TIR				AMP			
	comp=N,0.6nm,0.5s,baz=359						
ART2	**Arta**	**1.29**	**136**	P	**Pg**	**14 59 55.1**	**+0.1**
FNA	**Florina**	**1.36**	**59**	P	**Pn**	**14 59 55.5**	**-0.2**
FNA				S	**Sn**	**15 00 15.8**	**+1.8**
	comp=N,425nm,0.4s						
FNA	**Florina**	**1.36**	**59**	P	**Pn**	**14 59 55.1**	**-0.6**
FNA				S	**Sb**	**15 00 12.5**	**-1.2**
TSLK	**Tsoukalades, L**	**1.41**	**153**	P	**Pg**	**14 59 57.7**	**+0.4**
LKD2	**Lefkada island**	**1.44**	**154**	P	**Pg**	**14 59 58.2**	**+0.3**
LKD2	**Lefkada island**	**1.44**	**154**	P	**Pb**	**14 59 57.2**	**-0.3**
DRAG	**Dragano-Lefkad**	**1.51**	**158**	P	**Pb**	**14 59 58.6**	**0.0**
DRAG	**Dragano-Lefkad**	**1.51**	**158**	P	**Pb**	**14 59 58.7**	**0.0**
NYDR	**Nydri-Lefkada**	**1.53**	**154**	P	**Pb**	**14 59 58.6**	**-0.2**
NYDR				S	**Sg**	**15 00 19.8**	**+0.6**
NYDR	**Nydri-Lefkada**	**1.53**	**154**	P	**Pn**	**14 59 58.3**	**+0.4**
EVGI	**Lefkada island**	**1.60**	**157**	P	**Pb**	**15 00 00.3**	**+0.2**
EVGI	**Lefkada island**	**1.60**	**157**	P	**Pb**	**14 59 59.4**	**-0.6**
PHP	**Peshkopia**	**1.66**	**16**	P	**Pb**	**15 00 01.3**	**+0.1**
	baz=14						
PHP				S	**Sg**	**15 00 27.1**	**+3.7**
	baz=14						
PHP				AMP			
	comp=N,0.4nm,0.6s,baz=14						
THL	**Klokotos Trika**	**1.75**	**107**	P	**Pb**	**15 00 02.1**	**-0.6**
THL	**Klokotos Trika**	**1.75**	**107**	P	**Pn**	**15 00 01.3**	**+0.3**
KTI	**Kastanea**	**1.77**	**79**	P	**Pb**	**15 00 02.3**	**-0.7**
EVR	**Evrytania**	**1.92**	**127**	P	**Pb**	**15 00 04.6**	**-1.0**
EVR	**Evrytania**	**1.92**	**127**	P	**Pn**	**15 00 03.7**	**+0.2**
ULC	**Ulcinj**	**1.93**	**347**	⇑*i* Pn	**Pn**	**15 00 01.7**	**-1.8**
ULC				*i* Sn	**Sb**	**15 00 29.9**	**-0.1**
PUK	**Puka**	**1.95**	**1**	P	**Pb**	**15 00 06.3**	**+0.2**
	baz=0.0						
PUK				S	**Sg**	**15 00 35.9**	**+2.9**
	baz=0.0						
VLS	**Valsamata**	**2.00**	**163**	P	**Pn**	**15 00 04.6**	**+0.2**
MAKR	**Makrakomi, Fth**	**2.07**	**121**	P	**Pn**	**15 00 06.4**	**+1.0**
GRG	**Griva**	**2.13**	**65**	P	**Pn**	**15 00 06.7**	**+0.4**
DRME	**Dracevica, Mon**	**2.15**	**347**	⇑*i* Pn	**Pn**	**15 00 05.5**	**-1.1**
DRME				*i* Sn	**Sb**	**15 00 35.1**	**-1.4**
AGG	**Agios Georgios**	**2.20**	**118**	P	**Pn**	**15 00 08.6**	**+1.4**
ANX	**Ano Chora**	**2.20**	**132**	P	**Pn**	**15 00 08.4**	**+1.1**
BCI	**Bajram Curri**	**2.28**	**4**	P	**Pg**	**15 00 12.9**	**-1.0**
	baz=3.0						
BCI				S	**Sg**	**15 00 44.2**	**+0.7**
	baz=3.0						
BUM	**Brajici-Budva**	**2.32**	**342**	⇑*i* Pn	**Pn**	**15 00 07.4**	**-1.6**
BUM				*i* Sn	**Sn**	**15 00 39.1**	**+1.3**
STIP	**Stip**	**2.39**	**47**	*i* Pn	**Pb**	**15 00 13.4**	**-0.2**
VAY	**Valandovo**	**2.41**	**58**	*i* Pn	**Pb**	**15 00 11.8**	**-2.1**
PVY	**Plav**	**2.50**	**2**	⇑*i* Pn	**Pn**	**15 00 11.9**	**+0.4**
PVY				*i* Sn	**Sb**	**15 00 44.4**	**-2.3**
CEME	**Cevo**	**2.55**	**344**	⇑*i* Pn	**Pn**	**15 00 10.7**	**-1.4**
CEME				*i* Sn	**Sn**	**15 00 44.2**	**+0.7**
HCY	**Herceg Novi**	**2.57**	**337**	⇓*i* Pn	**Pn**	**15 00 10.3**	**-1.9**
HCY				*i* Sn	**Sn**	**15 00 44.2**	**+0.5**
NKME	**Niksic**	**2.76**	**346**	⇓*i* Pn	**Pn**	**15 00 13.7**	**-1.2**
NKME				*i* Sn	**Sn**	**15 00 49.5**	**+1.0**
IVA	**Berane**	**2.78**	**1**	⇓*i* Pn	**Pn**	**15 00 15.5**	**+0.2**
IVA				*i* Sn	**Sn**	**15 00 50.7**	**+1.6**
DBRK	**Dubrovnik**	**2.88**	**334**	*e*Pn	**Pn**	**15 00 14.8**	**-1.7**
DBRK				Sn	**Sn**	**15 00 49.6**	**-1.8**
BRY	**Bratogost**	**2.98**	**341**	⇑*i* Pn	**Pn**	**15 00 16.4**	**-1.6**
BRY				*i* Sn	**Sn**	**15 00 54.1**	**+0.1**
STON	**Ston**	**3.21**	**331**	*e*Pn	**Pn**	**15 00 19.4**	**-1.7**
LSTV	**Lastovo**	**3.48**	**321**	*e*Pn	**Pn**	**15 00 23.2**	**-1.6**
MAKA	**Makarska**	**3.83**	**327**	*e*Pn	**Pn**	**15 00 28.7**	**-0.9**
RICI	**Ricice**	**3.96**	**330**	*e*Pn	**Pn**	**15 00 30.1**	**-1.3**
RICI				Sn	**Sn**	**15 01 16.1**	**-2.1**
KIJV	**Kijevo**	**4.67**	**328**	*e*Pn	**Pn**	**15 00 40.9**	**-0.4**
KIJV				Sn	**Sn**	**15 01 35.2**	**-0.6**
ZIRJ	**Zirje**	**4.75**	**320**	*e*Pn	**Pn**	**15 00 40.9**	**-1.3**
MORI	**Morici**	**4.87**	**322**	*e*Pn	**Pn**	**15 00 43.1**	**-0.9**
DUGI	**Dugi Otok**	**5.28**	**319**	*e*Pn	**Pn**	**15 00 49.0**	**-0.5**
UDBI	**Udbina**	**5.37**	**327**	*e*Pn	**Pn**	**15 00 50.9**	**+0.1**
NVLJ	**Novalja**	**5.79**	**322**	*e*Pn	**Pn**	**15 00 55.8**	**-0.8**
RABC	**Rab**	**5.98**	**323**	*e*Pn	**Pn**	**15 00 58.1**	**-1.0**

*IDC **11** 15:04:35.1±1.3,8˚.20N×91˚.93E,h0km,mb3.5/6,*
mbtmp3.6/8,ML3.6/2,MS2.8/1,Error ellipse: s-maj=38.8km
s-min=20.9km az=61.0

ISC 11 15:04:38.6±1.1,8˚.2N±0˚.2×91˚.9E±0˚.1,h25km,n11,σ0§35/8,
mb3.5/6,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.13**	**266**	Pn	**Pn**	**15 07 16.2**	**-0.2**
	0.2nm,0.3s,baz=142,slow=12,SNR=3.0						
PALK				Sn	Sn	15 09 05.6	-15
	0.5nm,0.3s,baz=282,slow=19,SNR=1.3						
PALK				LR	LR	15 10 51.4	
	comp=Z,42nm,18.6s,baz=201,slow=34						
	7.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**12.28**	**33**	Pn	**Pn**	**15 07 31.7**	**-0.3**
	0.2nm,0.3s,baz=229,slow=15,SNR=2.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**39.32**	**350**	P	**P**	**15 12 06.2**	**+0.5**
	0.6nm,0.5s,baz=165,slow=8.5,SNR=10						
	0.6nm,0.5s						
SONM	**Songino Array**	**41.37**	**15**	P	**P**	**15 12 22.8**	**0.0**
	1.1nm,0.8s,baz=197,slow=9.4,SNR=9.1						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**43.72**	**348**	P	**P**	**15 12 42.0**	**+0.3**
	0.4nm,0.6s,baz=174,slow=7.1,SNR=7.6						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**45.97**	**354**	P	**P**	**15 12 59.5**	**0.0**
	0.4nm,0.5s,baz=188,slow=9.0,SNR=3.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**50.27**	**124**	P	**P**	**15 13 33.2**	**-0.2**
	0.4nm,0.8s,baz=303,slow=8.9,SNR=5.3						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**51.84**	**129**	P	**P**	**15 13 45.4**	**+0.3**
	0.2nm,0.6s,baz=302,slow=8.1,SNR=7.1						
	0.2nm,0.6s						
H04N2	**CROZET ISLANDS**	**64.89**	**210**	T	T	16 26 23.4	
	baz=46,slow=75						
H04N1	**CROZET ISLANDS**	**64.90**	**210**	T	T	16 26 24.6	
	baz=46,slow=75						
H04N3	**CROZET ISLANDS**	**64.91**	**210**	T	T	16 26 29.1	
	baz=46,slow=75						

KRSC 11 15:06:36.5±1.5,49˚.22N×156˚.49E,h7km±22km,MI4.2,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.48**	**351**	*e*P	Pn	15 07 02.8	-0.8
SKR				*e*S	Sn	15 07 22.1	-1.0
PAU	**Pauzhetka**	**2.25**	**5**	*e*S	Sb	15 07 44.9	-0.7
KDTR	**Khodutka, Kamc**	**2.78**	**21**	*e*P	Pb	15 07 24.4	-2.0
KDTR				*e*S	Sb	15 07 58.9	-1.7
ASAK	**Asacha**	**3.29**	**15**	*e*P	Pn	15 07 31.5	+3.1
MTVR	**Mutnovka**	**3.43**	**18**	*e*P	Pb	15 07 34.2	-3.5
MTVR				*e*S	Sb	15 08 15.9	-3.8
RUS	**Russkaya**	**3.46**	**21**	*e*P	Pn	15 07 33.5	+2.8
RUS				*e*S	Sn	15 08 14.7	+2.8
GRL	**Gorelyy**	**3.48**	**16**	*e*P	Pn	15 07 34.6	+3.5
GRL				*e*S	Sn	15 08 16.6	+4.0
KRMR	**Karymshinskiy**	**3.76**	**15**	*e*P	Pn	15 07 38.9	+4.1
DALK	**Dalny**	**4.07**	**20**	*e*P	Pn	15 07 42.6	+3.5
UGLR	**Uglovaya**	**4.25**	**19**	*e*P	Pn	15 07 45.4	+3.7
AVH	**Avacha**	**4.29**	**18**	*e*P	Pn	15 07 47.0	+4.9
KOK	**Koryaka**	**4.29**	**17**	*e*P	Pn	15 07 46.9	+4.7
SMAR	**Somma**	**4.30**	**19**	*e*P	Pn	15 07 47.3	+4.9
KRX	**Arik**	**4.36**	**17**	*e*P	Pn	15 07 47.3	+4.1
SPN	**Mys Shipunski**	**4.47**	**28**	*e*P	Pn	15 07 47.7	+3.1
GNL	**Ganaly**	**4.57**	**11**	*e*P	Pn	15 07 49.7	+3.7

*NEIC **11** 15:08:22.6±2.0,56˚.18N±0˚.07×149˚.85W±0˚.08,h10km±2km,*
mb3.6/3,ML3.6/54,ML3.4(AEIC),Error ellipse:
s-maj=12.0km s-min=7.6km az=165.0
*AEIC **11** 15:08:28.3±1.5,56˚.28N±0˚.07×149˚.9W±0˚.1,h11km±6km,*
Error ellipse: s-maj=10.6km s-min=7.8km az=151.0
*IDC **11** 15:08:30.6±2.9,56˚.52N×149˚.03W,h0km,mb3.4/2,*
mbtmp3.3/4,ML2.6/2,MS3.0/9,Error ellipse: s-maj=51.8km
s-min=33.5km az=132.0

ISC 11 15:08:22.9±0.9,56˚.30N±0˚.06×149˚.85W±0˚.04,h10km,
n235,σ1§42/236,MS3.2/5,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.11**	**298**		**Pn**	**15 08 58.1**	**-0.1**
OHAK	**Old Harbor**	**2.11**	**298**		**Sn**	**15 09 21.8**	**-2.6**
OHAK	**Old Harbor**	**2.11**	**298**	P	**Pn**	**15 08 58.2**	**0.0**
OHAK	**Old Harbor**	**2.11**	**298**	P	**Pn**	**15 08 58.2**	**0.0**
OHAK	baz=116			S	**Sn**	**15 09 21.8**	**-2.6**
	baz=116						
KDAK	**Kodiak Island**	**2.11**	**316**	Pn	**Pn**	**15 08 58.7**	**+0.5**
KDAK				IAML		15 09 23.5	
	168nm,0.4s						
SII	**Sitkinak Islan**	**2.42**	**278**	Pn	**Pn**	**15 09 02.4**	**-0.2**
SII				IAML		15 09 46.1	
	comp=N,164nm,1.5s						
SII	**Sitkinak Islan**	**2.42**	**278**		**Sn**	**15 09 29.6**	**-2.6**
SII	**Sitkinak Islan**	**2.42**	**278**	P	**Pn**	**15 09 02.7**	**+0.2**
SII	**Sitkinak Islan**	**2.42**	**278**	P	**Pn**	**15 09 02.6**	**0.0**
	baz=95						
SII				S	**Sn**	**15 09 29.6**	**-2.6**
	baz=95						
SYI	**Shuyak Island**	**2.69**	**330**	Pn	**Pn**	**15 09 07.2**	**+0.9**
SYI	**Shuyak Island**	**2.69**	**330**		**Sn**	**15 09 37.9**	**-0.9**
Q20K	**Shuyak Island**	**2.69**	**330**	P	**Pn**	**15 09 07.2**	**+0.9**
	baz=149						
Q20K				S	**Sn**	**15 09 37.9**	**-0.9**
	baz=149						
CHIR	**Chirikof Islan**	**3.27**	**264**	Pn	**Pn**	**15 09 13.9**	**-0.2**
CHIR				IAML		15 09 53.8	
	comp=N,86nm,1.5s						
CHIR				IAML		15 09 56.1	
	comp=E,83nm,1.2s						
CHIR	**Chirikof Islan**	**3.27**	**264**		**Sn**	**15 09 50.1**	**-3.0**
CHIR	**Chirikof Islan**	**3.27**	**264**	P	**Pn**	**15 09 14.0**	**-0.2**
	baz=80						
CHIR				S	**Sn**	**15 09 50.1**	**-3.0**
	baz=80						
CNPM	**China Poot**	**3.32**	**348**	Pn	**Pn**	**15 09 15.4**	**+0.5**
CNPM				IAML		15 09 55.7	
	comp=E,70nm,0.9s						
CNPM	**China Poot**	**3.32**	**348**		**Sn**	**15 09 53.8**	**-0.6**
Q19K	**Cape Douglas,**	**3.33**	**324**	Pn	**Pn**	**15 09 16.8**	**+1.7**
Q19K				IAML		15 10 00.2	
	comp=N,265nm,0.8s						
Q19K	**Cape Douglas,**	**3.33**	**324**	P	**Pn**	**15 09 16.3**	**+1.2**
	baz=141						
BRSE	**Bradley Lake S**	**3.49**	**353**		**Pn**	**15 09 17.5**	**+0.3**
BRSE					**Sn**	**15 09 57.1**	**-1.4**
BRSE	**Bradley Lake S**	**3.49**	**353**	P	**Pn**	**15 09 17.5**	**+0.3**
	baz=172						
BRSE				S	**Sn**	**15 09 57.1**	**-1.4**
	baz=172						
HOM	**Homer**	**3.50**	**345**	Pn	**Pn**	**15 09 18.2**	**+0.8**
HOM				IAML		15 10 07.3	
	comp=E,175nm

baz=209
RC01 Rabbit Creek A 4.81 1 Pn **Pn** 15 09 35.6 +0.4
RC01 IAML 15 10 32.4
comp=E,47nm,0.5s
RC01 IAML 15 10 34.0
comp=N,35nm,0.3s
RC01 Rabbit Creek A 4.81 1 P **Pn** 15 09 35.7 +0.4
baz=181
RAGM Ragged Mountai 4.92 31 **Pn** 15 09 37.4 +0.5
RAGM IAML 15 10 43.8
comp=E,84nm,1.0s
HMT Hamilton 5.01 34 **Pn** 15 09 39.5 +1.5
NICHA Nichawak Mount 5.02 36 **Pn** 15 09 39.4 +1.2
GOAT Goat Mountain 5.07 30 **Pn** 15 09 39.9 +0.9
N20K Mount Spurr 5.07 347 P **Pn** 15 09 39.5 +0.6
baz=165
N20K S **Sn** 15 10 36.1 -1.4
baz=165
SPCR Spurr Chakacha 5.07 347 **Pn** 15 09 39.5 +0.6
SPCR **Sn** 15 10 36.1 -1.4
N19K Bonanza Creek 5.14 334 Pn **Pn** 15 09 40.0 +0.2
N19K Bonanza Creek 5.14 334 P **Pn** 15 09 40.2 +0.3
baz=150
KNK Knik Glacier 5.18 7 Pn **Pn** 15 09 40.5 0.0
KNK IAML 15 10 49.0
comp=N,28nm,1.2s
KNK IAML 15 10 53.1
comp=E,28nm,0.5s
KNK Knik Glacier 5.18 7 P **Pn** 15 09 41.2 +0.8
baz=189
SUA Susitna One 5.20 355 Pn **Pn** 15 09 40.7 -0.1
SUA IAML 15 10 40.7
comp=N,15nm,1.3s
SUA Susitna One 5.20 355 P **Pn** 15 09 40.8 -0.1
baz=175
BERG Berg Lake 5.23 36 Pn **Pn** 15 09 42.1 +1.0
BERG IAML 15 10 49.5
comp=E,73nm,0.9s
GRIN Grindle Hills 5.27 38 **Pn** 15 09 43.0 +1.3
DIV Divide 5.29 22 **Pn** 15 09 43.1 +1.1
STLK Strandline Lak 5.32 350 **Pn** 15 09 42.8 +0.5
PMR Palmer 5.32 4 Pn **Pn** 15 09 43.0 +0.7
PMR Palmer 5.32 4 P **Pn** 15 09 44.5 +2.2
SNH Sunshine Point 5.37 41 Pn **Pn** 15 09 43.9 +0.9
KHIT Khitrov Hills 5.42 37 **Pn** 15 09 44.7 +1.0
KHIT **Sn** 15 10 43.6 -2.5
N18K Kilae Creek 5.42 327 Pn **Pn** 15 09 44.2 +0.5
BMRM Bremner River 5.42 28 **Pn** 15 09 45.1 +1.3
BMRM Bremner River 5.42 28 P **Pn** 15 09 45.1 +1.3
baz=213
O16K Kokwok River B 5.49 310 Pn **Pn** 15 09 45.5 +0.8
GHO Glory Hole Cre 5.51 5 **Pn** 15 09 46.1 +1.1
WAX Waxell Ridge 5.56 39 **Pn** 15 09 46.6 +1.0
SML Sawmill 5.58 7 Pn **Pn** 15 09 47.2 +1.2
SML Sawmill 5.58 7 P **Pn** 15 09 47.3 +1.3
baz=189
KLU Klutina 5.59 20 **Pn** 15 09 47.2 +1.1
KLU Klutina 5.59 20 **Sn** 15 10 47.7 -2.7
KLU Klutina 5.59 20 P **Pn** 15 09 47.3 +1.2
baz=203
KLU S **Sn** 15 10 47.7 -2.7
baz=203
M23K Glacier View 5.62 10 **Pn** 15 09 47.8 +1.3
M23K Glacier View 5.62 10 P **Pn** 15 09 47.8 +1.3
baz=192
BARK Barkley Ridge 5.65 40 **Pn** 15 09 48.7 +1.7
SVW2 Sparrevohn 5.66 331 Pn **Pn** 15 09 47.5 +0.5
SVW2 Sparrevohn 5.66 331 P **Pn** 15 09 47.6 +0.6
SCM Sheep Creek Mo 5.70 12 Pn **Pn** 15 09 49.4 +1.8
SCM Sheep Creek Mo 5.70 12 P **Pn** 15 09 49.2 +1.6
baz=195
MESA MESA 5.70 44 Pn **Pn** 15 09 48.8 +1.1
CNBA Chernabura Isl 5.72 259 Pn **Pn** 15 09 46.4 -1.4
N17K Nushagak Hills 5.73 321 Pn **Pn** 15 09 48.3 +0.4
SKT Skwentna 5.76 352 Pn **Pn** 15 09 49.0 +0.6
SKT Skwentna 5.76 352 P **Pn** 15 09 48.9 +0.5
baz=171
ISLE Juniper Island 5.84 39 **Pn** 15 09 50.6 +0.9
M20K Styx River 5.85 345 **Pn** 15 09 49.8 +0.1
M20K Styx River 5.85 345 P **Pn** 15 09 49.8 +0.1
baz=162
BAGL Bagley Icefiel 5.86 41 **Pn** 15 09 51.0 +1.3
VRDI Verde Repeater 5.96 31 **Pn** 15 09 52.7 +1.4
VRDI Verde Repeater 5.96 31 **Sn** 15 10 56.5 -3.0
N25K Chitina, Valde 5.98 25 Pn **Pn** 15 09 53.0 +1.6
N25K Chitina, Valde 5.98 25 P **Pn** 15 09 53.1 +1.7
baz=210
GLB Gilahina Butte 6.03 29 **Pn** 15 09 53.8 +1.6
M18K Stony River 6.06 332 **Pn** 15 09 52.5 +0.1
M18K Stony River 6.06 332 P **Pn** 15 09 52.5 +0.1
baz=147
SDPT Sand Point 6.07 265 **Pn** 15 09 52.7 +0.1
SDPT Sand Point 6.07 265 P **Pn** 15 09 54.0 +1.5
SDPT Sand Point 6.07 265 P **Pn** 15 09 52.7 +0.1
baz=77
KIAG Kiagna River 6.07 37 **Pn** 15 09 53.7 +1.0
M19K Big River Lodg 6.09 339 **Pn** 15 09 52.9 0.0
M19K Big River Lodg 6.09 339 P **Pn** 15 09 52.9 0.0
baz=156
M24K Tolsona, Glenn 6.12 16 Pn **Pn** 15 09 55.6 +2.2
TABL Table Mountain 6.18 44 **Pn** 15 09 55.5 +1.2
MCARA McCarthy VSAT 6.21 32 Pn **Pn** 15 09 56.2 +1.7
MCARA McCarthy VSAT 6.21 32 P **Pn** 15 09 55.9 +1.4
baz=218
PTPK Patty Peak 6.23 35 **Pn** 15 09 56.2 +1.2
PCA Pinnacle 6.34 49 **Pn** 15 09 57.5 +1.1
PINM Pinnacle 6.34 49 P **Pn** 15 09 57.5 +1.1
baz=237
WAT6 Susitna Watana 6.39 9 **Pn** 15 09 58.7 +1.5
WAT6 Susitna Watana 6.39 9 P **Pn** 15 09 58.7 +1.5
baz=191
BARN Barnard Glacie 6.40 38 **Pn** 15 09 58.7 +1.3
L19K White Mountain 6.43 339 **Pn** 15 09 57.7 +0.1
L19K White Mountain 6.43 339 P **Pn** 15 09 57.7 +0.1
baz=155
M17K Holitna River 6.45 326 Pn **Pn** 15 09 59.0 +1.1
LOGN Logan Glacier 6.48 42 **Pn** 15 09 59.5 +1.1
PNL Peninsula 6.50 54 **Pn** 15 10 00.0 +1.5
PNL Peninsula 6.50 54 P **Pn** 15 10 00.8 +2.2
PNL Peninsula 6.50 54 P **Pn** 15 10 00.0 +1.5
baz=243
L20K Farewell, AK 6.53 343 **Pn** 15 09 58.8 -0.1
L20K Farewell, AK 6.53 343 P **Pn** 15 09 58.8 -0.1
baz=160
BCPM Bancas Point 6.53 52 **Pn** 15 10 00.5 +1.6
HARP HAARP 6.57 19 **Pn** 15 10 01.3 +1.8
HARP HAARP 6.57 19 P **Pn** 15 10 01.3 +1.8
baz=204
WAT7 Susitna Watana 6.58 4 **Pn** 15 10 00.2 +0.6
WAT1 Susitna Watana 6.59 5 **Pn** 15 10 00.9 +1.2
WAT1 Susitna Watana 6.59 5 P **Pn** 15 10 00.9 +1.2
baz=187
M16K Timber Creek 6.71 319 Pn **Pn** 15 10 02.8 +1.4
O14K Tigyukauivet M 6.78 301 Pn **Pn** 15 10 03.6 +1.3
L18K Granite Mounta 6.89 332 **Pn** 15 10 03.8 0.0
L18K Granite Mounta 6.89 332 P **Pn** 15 10 03.8 0.0
baz=147
DHY Denali Highway 6.91 9 **Pn** 15 10 05.8 +1.5
RND Reindeer 7.15 4 Pn **Pn** 15 10 08.7 +1.3
O29M Mount Kennedy 7.17 51 Pn **Pn** 15 10 09.5 +1.7
O29M Mount Kennedy 7.17 51 P **Pn** 15 10 09.5 +1.7
baz=241
TRF Thorofare Moun 7.18 358 **Pn** 15 10 08.7 +0.7
TRF Thorofare Moun 7.18 358 P **Pn** 15 10 08.7 +0.7
baz=178
CAST Castle Rocks 7.23 352 Pn **Pn** 15 10 09.5 +1.0
CAST Castle Rocks 7.23 352 P **Pn** 15 10 09.5 +1.0
baz=170
P29M Windy Craggy 7.25 58 **Pn** 15 10 09.9 +1.0
P29M Windy Craggy 7.25 58 P **Pn** 15 10 10.1 +1.2
baz=248
KTH Kantishna Hill 7.30 356 **Pn** 15 10 10.9 +1.4
MENT Mentasta 7.35 22 **Pn** 15 10 12.1 +1.9
MENT Mentasta 7.35 22 P **Pn** 15 10 13.1 +3.0
L16K Owhat River 7.35 322 Pn **Pn** 15 10 11.6 +1.4
S31K Pelican 7.60 72 P **Pn** 15 10 13.1 -0.4
baz=263
K17K Iditarod 7.73 330 Pn **Pn** 15 10 16.1 +0.7
P30M Million Dollar 7.81 55 **Pn** 15 10 18.2 +1.7
P30M Million Dollar 7.81 55 P **Pn** 15 10 18.2 +1.7
baz=246
FALS False Pass 7.83 265 P **Pn** 15 10 17.3 +0.6
RIDG Independent Ri 7.87 16 Pn **Pn** 15 10 19.9 +2.5
HYT Haines Junctio 7.88 50 Pn **Pn** 15 10 19.2 +1.6

L27K Beaver Creek, 7.90 28 Pn **Pn** 15 10 19.9 +2.2
BWN Browne 7.90 1 Pn **Pn** 15 10 20.2 +2.5
BCAR Beaver Creek A 7.91 28 Pn **Pn** 15 10 20.1 +2.2
J18K Innoko River 7.97 337 Pn **Pn** 15 10 19.3 +0.6
SIT Sitka 8.04 79 **Pn** 15 10 18.3 -1.3
SIT Sitka 8.04 79 P **Pn** 15 10 18.7 -0.9
SIT Sitka 8.04 79 P **Pn** 15 10 18.3 -1.3
baz=271
J20K Nowinta River 8.19 347 **Pn** 15 10 21.8 +0.2
J20K Nowinta River 8.19 347 P **Pn** 15 10 21.8 +0.2
baz=163
HDA Harding Lake 8.26 9 **Pn** 15 10 24.1 +1.5
SKAG Skagway 8.36 62 Pn **Pn** 15 10 25.3 +1.4
SKAG Skagway 8.36 62 P **Pn** 15 10 26.5 +2.5
BESE Bessie Mountai 8.41 68 **Pn** 15 10 25.3 +0.6
CCB Clear Creek Bu 8.44 6 Pn **Pn** 15 10 26.9 +1.9
S32K Killisnoo 8.45 76 **Pn** 15 10 25.2 +0.1
S32K Killisnoo 8.45 76 P **Pn** 15 10 25.2 +0.1
baz=268
JIS Juneau Island 8.61 70 Pn **Pn** 15 10 28.2 +0.9
JIS Juneau Island 8.61 70 P **Pn** 15 10 28.3 +0.9
IL31 8.62 8 **Pn** 15 10 29.7 +2.1
ILAR Eielson Array 8.62 8 Pn **Pn** 15 10 29.4 +1.8
comp=E,0.4nm,0.3s,baz=191,slow=14,SNR=21
ILAR Sn **Sn** 15 12 00.0 -4.8
comp=E,0.4nm,0.3s,baz=193,slow=22,SNR=8.4
ILAR LR LR 15 13 24.9
comp=E,32nm,21.1s,baz=50,slow=35
comp=E,0.8nm,0.3s
COLA College 8.66 6 P **Pn** 15 10 30.8 +2.7
K27K Chicken 8.66 23 Pn **Pn** 15 10 30.7 +2.6
MDM Murphy Dome 8.73 5 Pn **Pn** 15 10 30.8 +1.7
J26L Joseph Creek 8.79 18 Pn **Pn** 15 10 31.6 +1.6
I23K Minto, Yukon-K 8.88 1 **Pn** 15 10 32.6 +1.5
WHY Whitehorse 8.97 55 **Pn** 15 10 33.9 +1.4
I21K Tanana 8.97 354 **Pn** 15 10 32.5 +0.1
I21K Tanana 8.97 354 P **Pn** 15 10 32.5 +0.1
baz=173
L29M L29M 9.03 36 **Pn** 15 10 35.2 +2.0
M30M Minto, Yukon 9.14 41 Pn **Pn** 15 10 36.6 +1.9
P32M Atlin 9.19 62 Pn **Pn** 15 10 36.9 +1.5
U33K Whale Pass 9.33 84 **Pn** 15 10 35.6 -1.6
U33K Whale Pass 9.33 84 P **Pn** 15 10 35.6 -1.6
baz=278
DAWY Dawson 9.36 29 Pn **Pn** 15 10 39.5 +1.8
CRAG Craig 9.44 88 P **Pn** 15 10 39.0 +0.3
H24K Noodor Dome 9.62 5 Pn **Pn** 15 10 43.4 +2.1
K29M Barlow Dome 9.74 34 Pn **Pn** 15 10 45.2 +2.2
UNV Unalaska Valle 9.86 263 P **Pn** 15 10 44.8 +0.2
M31M Drury Creek, Y 9.87 47 Pn **Pn** 15 10 46.4 +1.7
FARO Faro, Yukon 10.31 48 **Pn** 15 10 52.9 +2.2
G21K Allakaket 10.40 352 Pn **Pn** 15 10 53.3 +1.4
G23K Bananza Creek 10.45 360 **Pn** 15 10 53.3 +0.7
FYU Fort Yukon 10.53 10 Pn **Pn** 15 10 55.6 +1.9
DLBC Dease Lake 10.91 70 Pn **Pn** 15 11 00.2 +1.2
DLBC Dease Lake 10.91 70 LR LR 15 14 29.8
comp=E,73nm,21.7s,baz=253,slow=34
U35K Hyder 11.07 84 **Pn** 15 11 00.5 -0.6
BMAR Burnt Mountain 11.44 10 Pn **Pn** 15 11 08.0 +1.9
D22K Ayikyak River 12.69 355 Pn **Pn** 15 11 25.2 +1.9
BBB Bella Bella 13.34 99 LR LR 15 15 31.4
comp=E,61nm,18.3s,baz=337,slow=32
GNW Green Mountain 18.71 106 P **P** 15 12 40.1 -1.1
GNW IAmb IAmb 15 12 51.3
comp=Z,1.8nm,0.9s
A36M Sachs Harbour 18.79 24 **Pn** 15 12 44.5 +2.0
A36M IAmb IAmb 15 12 57.0
comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 18.80 56 P **Pn** 15 12 44.6 +2.0
baz=267,slow=11,SNR=6.0
YKA LR LR 15 19 53.1
comp=Z,49nm,18.2s,baz=98,slow=37
comp=Z,0.5nm,0.9s
F04A Amboy 19.97 110 P **P** 15 12 53.9 -1.2
F04A IAmb IAmb 15 13 29.0
comp=Z,7.5nm,1.1s
SHEM Shemya Is, Ala 21.07 275 LR LR 15 20 52.3
comp=Z,19nm,18.7s,baz=274,slow=34
PETK Petropavlovsk- 29.87 286 LR LR 15 26 46.4
comp=Z,22nm,18.4s,baz=90,slow=36
PFO Pinyon Flats O 32.24 121 LR LR 15 25 40.8
comp=Z,46nm,18.1s,baz=46,slow=32
H11N2 WAKE ISLAND Hy 48.62 239 T T 16 09 26.4
baz=30,slow=74
H11N3 WAKE ISLAND Hy 48.62 239 T T 16 09 29.0
baz=30,slow=74
H11N1 WAKE ISLAND Hy 48.63 239 T T 16 09 28.0
baz=30
H11S1 WAKE ISLAND Hy 49.76 239 T T 16 10 54.0
baz=30
H11S2 WAKE ISLAND Hy 49.77 239 T T 16 10 52.8
baz=30,slow=74
H11S3 WAKE ISLAND Hy 49.78 239 T T 16 10 53.7
baz=30,slow=74
JMIC Jan Mayen 50.08 15 LR LR 15 38 57.1
comp=Z,76nm,21.5s,baz=294,slow=37
MJAR Matsushiro Arr 50.85 279 LR LR 15 39 59.2
comp=Z,30nm,20.2s,baz=189,slow=37
SONM Songino Array 58.39 310 P P 15 18 29.5 +11
comp=Z,0.4nm,0.7s,baz=32,slow=5.6,SNR=2.4
comp=Z,0.4nm,0.7s
MKAR Makanchi Array 68.40 324 P P 15 19 33.9 +10
comp=Z,0.3nm,0.8s,baz=33,slow=5.8,SNR=1.9
comp=Z,0.3nm,0.8s

*IDC **11** 15:18:56.9±0.8, 6.°07N×133.°83E, h0km, mb4.0/12, mbtmp3.9/12, MS3.3/12, Error ellipse: s-maj=37.0km s-min=16.3km az=74.0*
*NEIC **11** 15:19:01.6±1.2, 6.°2N±0.°1×133.°5E±0.°1, h10km±1km, mb4.6/29, Error ellipse: s-maj=24.0km s-min=17.8km az=100.0*
ISC 11 15:19:04.4±0.6, 6.°15N±0.°08×133.°5E±0.°1, h35km, n64,
σ1§43/48, mb4.5/26, MS3.2/10, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
DAV	**Davao City (W)**	**7.93**	**277**	LR	LR	15	25 14.6	
	comp=Z,154nm,18.0s,baz=110,slow=46							
TNTI	**Ternate**	**8.13**	**229**	Pn	**Pn**	**15**	**21 01.9**	**+1.8**
FAKI	**Fak Fak**	**9.09**	**188**	Pn	**Pn**	**15**	**21 15.8**	**+2.6**
GUMO	**Guam**	**13.41**	**56**	LR	LR	15	26 41.6	
	comp=Z,68nm,20.8s,baz=242,slow=35							
TOLI2	**Tolitoli**	**13.65**	**249**	Pn	**Pn**	**15**	**22 14.9**	**-0.8**
PMG	**Port Moresby**	**20.58**	**139**	LR	LR	15	31 58.7	
	comp=Z,44nm,18.8s,baz=286,slow=38							
COEN	**Coen**	**22.16**	**154**	P	**P**	**15**	**23 59.1**	**+1.6**
FITZ	**Fitzroy Crossi**	**25.31**	**198**	P	**P**	**15**	**24 27.7**	**-0.2**
WB0	**Warramunga Arr**	**25.77**	**178**	P	**P**	**15**	**24 31.8**	**-0.3**
WRA	**Warramunga Arr**	**25.94**	**178**	P	**P**	**15**	**24 33.2**	**-0.4**
WRA	**Warramunga Arr**	**25.94**	**178**	P	**P**	**15**	**24 30.8**	**-2.9**
	1.2nm,0.8s,baz=357,slow=9.9,SNR=12							
	1.2nm,0.8s							
WB2	**Warramunga Arr**	**25.94**	**178**	P	**P**	**15**	**24 33.3**	**-0.4**
WR0	**Warramunga Arr**	**25.96**	**178**	P	**P**	**15**	**24 33.4**	**-0.5**
WR0				IAmb	IAmb	15	25 04.6	
	comp=Z,6.0nm,1.2s							
LEM	**Lembang**	**28.87**	**244**	LR	LR	15	37 46.1	
	comp=Z,48nm,18.2s,baz=24,slow=39							
CTA	**Charters Tower**	**28.93**	**155**	LR	LR	15	36 02.3	
	comp=Z,62nm,21.5s,baz=280,slow=36							
AS31	**Alice Springs**	**29.63**	**179**	P	**P**	**15**	**25 06.1**	**-0.6**
ASAR	**Alice Springs**	**29.63**	**179**	P	**P**	**15**	**25 06.5**	**-0.3**
ASAR	**Alice Springs**	**29.63**	**179**	P	**P**	**15**	**25 03.7**	**-3.1**
	comp=Z,0.3nm,0.7s,baz=5.8,slow=14,SNR=6.8							
ASAR				LR	LR	15	37 40.8	
	comp=Z,42nm,19.2s,baz=0.5,slow=38							
	comp=Z,0.3nm,0.7s							
HNR	**Honiara**	**30.55**	**120**	LR	LR	15	37 29.2	
	comp=Z,439nm,18.3s,baz=266,slow=37							
H11S3	**WAKE ISLAND Hy**	**34.58**	**66**	T	T	16	02 23.2	
	baz=252,slow=75							
H11S1	**WAKE ISLAND Hy**	**34.60**	**66**	T	T	16	02 26.6	
	baz=252,slow=75							
H11S2	**WAKE ISLAND Hy**	**34.60**	**66**	T	T	16	02 24.3	
	baz=252,slow=75							
H11N1	**WAKE ISLAND Hy**	**35.12**	**64**	T	T	16	03 07.2	
	baz=254,slow=75							
H11N2	**WAKE ISLAND Hy**	**35.13**	**64**	T	T	16	03 23.2	
	baz=254,slow=75							
H11N3	**WAKE ISLAND Hy**	**35.14**	**64**	T	T	16	03 08.8	
	baz=254,slow=75							
CMAR	**Chiang Mai Arr**	**35.84**	**293**	P	**P**	**15**	**26 00.1**	**-1.0**
	comp=Z,1.3nm,1.1s,baz=116,slow=7.4,SNR=7.0							
CMAR				LR	LR	15	40 12.6	
	comp=Z,12nm,22.0s,baz=130,slow=35							
	comp=Z,1.3nm,1.1s							
FORT	**Forrest**	**37.09**	**188**	P	**P**	**15**	**26 11.2**	**-0.3**
FORT				IAmb	IAmb	15	26 34.0	
	comp=Z,14nm,0.9s							
STKA	**Stephens Creek**	**38.59**	**169**	P	**P**	**15**	**26 24.3**	**+0.1**
STKA	**Stephens Creek**	**38.59**	**169**	P	**P**	**15**	**26 20.4**	**-3.8**
	comp=Z,0.7nm,0.7s,baz=7.6,slow=15,SNR=1.2							
	comp=Z,0.7nm,0.7s							
LZH	**Lanzhou**	**40.34**	**322**	*e*P	**P**	**15**	**26 41.8**	**+2.8**
LZH				pP	pwP	15	26 51.0	-1.7
LZH				pmax	pmax			
	comp=Z,18nm,1.5s							
NWAO	**Narrogin (SRO)**	**41.83**	**201**	P	**P**	**15**	**26 50.2**	**-0.8**
DZM	**Mont Dzumac**	**42.74**	**132**	LR	LR	15	41 14.4	
	comp=Z,75nm,18.1s,baz=106,slow=32							
TOO	**Toolangi**	**44.91**	**166**	P	**P**	**15**	**27 16.7**	**+0.9**
TOO				IAmb	IAmb	15	27 58.9	
	comp=Z,12nm,1.2s							
SONM	**Songino Array**	**47.55**	**335**	P	**P**	**15**	**27 37.2**	**+0.5**
SONM				IAmb	IAmb	15	27 49.2	
	comp=Z,13nm,1.5s							
SONM	**Songino Array**	**47.55**	**335**	P	**P**	**15**	**27 37.3**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=155,slow=8.5,SNR=11							
	comp=Z,1.7nm,0.7s							
PALK	**Pallekele**	**52.44**	**274**	LR	LR	15	51 00.5	
	comp=Z,10nm,20.7s,baz=212,slow=36							
MKAR	**Makanchi Array**	**59.66**	**322**	P	**P**	**15**	**29 05.7**	**+0.4**
MKAR	**Makanchi Array**	**59.66**	**322**	P	**P**	**15**	**29 05.4**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=111,slow=7.9,SNR=14							
	comp=Z,1.6nm,0.8s							
MAKZ	**Makanchi**	**59.86**	**322**	P	**P**	**15**	**29 07.2**	**+0.6**
MAKZ				IAmb	IAmb	15	29 08.6	
	comp=Z,3.4nm,1.0s							
RPZ	**Rata Peaks**	**60.10**	**149**	LR	LR	15	54 32.1	
	comp=Z,25nm,18.7s,baz=266,slow=36							
ZALV	**Zalesovo Beam**	**61.72**	**330**	P	**P**	**15**	**29 16.9**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=101,slow=6.2,SNR=6.3							
	comp=Z,1.2nm,0.7s							
KURBB	**Kurchatov Arra**	**63.55**	**324**	P	**P**	**15**	**29 31.3**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=115,slow=5.3,SNR=19							
	comp=Z,1.5nm,0.6s							
BVAR	**Borovoye Array**	**69.13**	**325**	P	**P**	**15**	**30 07.0**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=108,slow=7.7,SNR=14							
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**69.20**	**325**	P	**P**	**15**	**30 07.3**	**-0.2**
BRVK				IAmb	IAmb	15	30 09.0	
	comp=Z,4.2nm,0.7s							
K15K	**Wolf Creek Mou**	**73.10**	**26**	P	**P**	**15**	**30 31.6**	**+0.7**
K15K				IAmb	IAmb	15	31 10.2	
	comp=Z,12nm,1.4s							
J16K	**Anvik River**	**73.83**	**25**	P	**P**	**15**	**30 36.6**	**+1.3**
J17K	**VABM Dome**	**74.52**	**26**	P	**P**	**15**	**30 40.5**	**+1.3**
K17K	**Iditarod**	**74.65**	**26**	P	**P**	**15**	**30 41.3**	**+1.2**
L18K	**Granite Mounta**	**75.24**	**27**	P	**P**	**15**	**30 44.2**	**+0.7**
L18K				IAmb	IAmb	15	30 46.0	
	comp=Z,9.8nm,1.2s							
N19K	**Bonanza Creek**	**75.92**	**29**	P	**P**	**15**	**30 48.6**	**+1.1**
N19K				IAmb	IAmb	15	30 49.3	
	comp=Z,5.9nm,0.8s							
H19K	**Roundabout Mou**	**76.23**	**24**	P	**P**	**15**	**30 49.5**	**+0.5**
H19K				IAmb	IAmb	15	31 01.7	
	comp=Z,6.0nm,1.1s							
J20K	**Nowinta River**	**76.84**	**25**	P	**P**	**15**	**30 53.3**	**+0.8**
IMAR	**Indian Mountai**	**77.42**	**24**	P	**P**	**15**	**30 56.4**	**+0.6**
H21K	**Melozitna Rive**	**77.73**	**24**	P	**P**	**15**	**30 58.1**	**+0.6**
H21K				IAmb	IAmb	15	31 04.3	
	comp=Z,6.0nm,1.4s							
MLY	**Manley**	**78.45**	**25**	P	**P**	**15**	**31 02.1**	**+0.5**
MLY				IAmb	IAmb	15	31 18.2	
	comp=Z,7.1nm,1.4s							
KNK	**Knik Glacier**	**78.91**	**29**	P	**P**	**15**	**31 04.4**	**+0.3**
TOLK	**Toolik Lake Re**	**79.55**	**21**	P	**P**	**15**	**31 08.2**	**+0.7**
TOLK				IAmb	IAmb	15	31 49.8	
	comp=Z,6.9nm,1.4s							
ILAR	**Eielson Array**	**80.04**	**25**	P	**P**	**15**	**31 06.5**	**-3.7**
	comp=Z,0.5nm,0.6s,baz=243,slow=5.1,SNR=11							
	comp=Z,0.5nm,0.6s							
BMAR	**Burnt Mountain**	**81.25**	**23**	P	**P**	**15**	**31 17.5**	**+0.8**
I28M	**Miner Creek**	**83.02**	**25**	P	**P**	**15**	**31 27.2**	**+1.1**
I28M				IAmb	IAmb	15	32 03.4	
	comp=Z,5.5nm,1.4s							
H29M	**Whitestone**	**83.66**	**24**	P	**P**	**15**	**31 30.4**	**+1.1**
ARCES	**ARCESS Array B**	**90.49**	**340**	P	**P**	**15**	**32 01.0**	**-1.4**
	comp=Z,3.0nm,0.8s,baz=65,slow=7.3,SNR=5.1							
	comp=Z,3.0nm,0.8s							
YKA	**Yellowknife Ar**	**94.47**	**26**	P	**P**	**15**	**32 19.9**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=287,slow=4.6,SNR=5.3							
	comp=Z,0.6nm,0.9s							
HFS	**Hagfors**	**98.94**	**334**	LR	LR	16	21 27.6	
	comp=Z,47nm,18.5s,baz=310,slow=38							

*CATAC **11** 15:29:43.9±0.4, 8.°81N×84.°67W, h17km, ML3.6*
*UCR **11** 15:29:44.8±0.9, 8.°81N×84.°69W, h21km±3km, MW4.0*
ISC 11 15:29:43.7±1.8, 8.°78N±0.°05×84.°70W±0.°04, h20km±6km,
n65, σ0§80/79, 1C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JACO	**JACO, Garabito**	**0.87**	**3**	*i* P	**Pb**	**15**	**29 59.6**	**-0.6**
JACO				*i* S	**Sb**	**15**	**30 11.8**	**+0.3**
JACO				IAML		15	30 22.4	
	comp=Z,660nm,1.0s							
CBL1	**Cabuya**	**0.89**	**334**	*e*P	**Pb**	**15**	**30 00.3**	**-0.1**
PLAN	**Los Planes de**	**1.01**	**96**	*i* P	**Pb**	**15**	**30 02.0**	**-0.6**
PLAN				IAML		15	30 03.2	
	comp=Z,4μm,1.0s							
PLAN				*i* S	**Sb**	**15**	**30 15.4**	**-0.1**
LAFE	**Finca La Fe, P**	**1.04**	**348**	*i* P	**Pb**	**15**	**30 02.3**	**-0.7**
LAFE				*i* S	**Sb**	**15**	**30 16.0**	**-0.2**
LAFE				IAML		15	30 24.7	
	comp=Z,3.4nm,1.0s							
OCHAL	**Ojochal**	**1.09**	**73**	*i* P	**Pb**	**15**	**30 03.2**	**-0.6**
OCHAL				IAML		15	30 04.0	
	comp=Z,100nm,1.0s							
RAZU	**San Marcos de**	**1.10**	**37**	*e*P	**Pg**	**15**	**30 05.1**	**+0.1**
ACOS	**Acosta**	**1.14**	**28**	*e*P	**Pb**	**15**	**30 04.4**	**-0.4**
ACOS				*e*S	**Sb**	**15**	**30 18.8**	**-0.4**
ZELE	**Perez Zeledon**	**1.14**	**59**	*i* P	**Pn**	**15**	**30 04.7**	**+0.1**
ZELE				*e*S	**Sb**	**15**	**30 18.9**	**-0.4**
TRB2	**Turrubares**	**1.15**	**12**	*e*P	**Pn**	**15**	**30 04.5**	**-0.2**
PEZE	**Perez Zeledon,**	**1.17**	**59**	*i* P	**Pn**	**15**	**30 04.3**	**-0.8**
PEZE				IAML		15	30 05.0	
	comp=Z,930nm,1.0s							
PEZE				*i* S	**Sb**	**15**	**30 19.9**	**-0.2**
LCR2	**La Lucha 2**	**1.17**	**36**	*e*P	**Pn**	**15**	**30 04.9**	**-0.3**
LCR2	**La Lucha 2**	**1.17**	**36**	*i* P	**Pn**	**15**	**30 04.3**	**-0.9**
LCR2				*i* S	**Sb**	**15**	**30 20.0**	**-0.3**
LCR2				IAML		15	30 20.9	
	comp=Z,1μm,1.0s							
CDM	**Cerro de Muert**	**1.20**	**50**	*i* P	**Pn**	**15**	**30 04.9**	**-0.9**
CDM				*i* S	**Sb**	**15**	**30 20.5**	**-0.8**
CDM				IAML		15	30 22.4	
	comp=Z,1μm,1.0s							
EDPN	**Palmar Norte**	**1.24**	**82**	*e*P	**Pn**	**15**	**30 06.2**	**+0.3**
AMPA	**Desamparados**	**1.27**	**30**	*e*P	**Pn**	**15**	**30 02.3**	**-4.2**
BELE	**Belen**	**1.29**	**23**	*e*P	**Pb**	**15**	**30 07.9**	**+0.6**
BELE			

VIRE				IAML		15 30 33.8			
	comp=Z,2µm,1.0s								
PCAYA	Pacayas	1.43	38	*e*P	Pb	15 30 09.7	-0.1		
EDBA	Buenos Aires	1.46	75	*e*P	Pn	15 30 09.0	0.0		
HAYA	Volcan Irazu	1.46	35	*i* P	Pn	15 30 09.5	+0.2		
HAYA				IAML		15 30 31.5			
	comp=Z,3µm,1.0s								
RAFA	San Farael, Vo	1.46	37	*e*P	Pn	15 30 09.9	+0.7		
ICR3	Volcano Irazu	1.46	36	*e*P	Pb	15 30 10.5	0.0		
VPS6	Volcano Poas	1.47	18	*e*P	Pn	15 30 09.7	+0.2		
JUNT	Juntas	1.51	350	*e*P	Pn	15 30 10.1	+0.4		
DRK0	Durika	1.51	72	*e*P	Pn	15 30 10.1	+0.3		
DRK0				*e*S	Sn	15 30 28.4	-0.7		
JTS	Las Juntas de	1.52	351	*e*P	Pn	15 30 09.9	+0.1		
VERB	Verbena	1.52	41	*e*P	Pn	15 30 10.6	+0.7		
CPMI	Catarata Coope	1.52	12	*i* P	Pn	15 30 10.0	0.0		
CPMI				IAML		15 30 46.1			
	comp=Z,390nm,1.0s								
EDAD	Golfito	1.52	95	*e*P	Pn	15 30 09.7	-0.2		
VTCV	VTCV, Calle Va	1.53	39	*i* P	Pn	15 30 10.5	+0.4		
VTCV				IAML		15 30 31.5			
	comp=Z,2µm,1.0s								
NICO	Nicoya	1.53	331	*e*P	Pn	15 30 09.8	-0.1		
CVTV	Tajo	1.53	38	*e*P	Pn	15 30 10.9	+0.7		
VTR0	Volcan Turrial	1.54	37	*e*P	Pg	15 30 12.9	-0.5		
VTR0				*e*S	Sn	15 30 29.6	-0.4		
POTG	Potrero Grande	1.58	80	*i* P	Pn	15 30 11.1	+0.4		
POTG				IAML		15 30 14.8			
	comp=Z,1µm,1.0s								
SOCE	Pocosol	1.59	3	*e*P	Pn	15 30 11.7	+0.9		
SOCE	Pocosol	1.59	3	*i* P	Pn	15 30 11.5	+0.7		
SOCE				IAML		15 31 08.8			
	comp=Z,400nm,1.0s								
SAJU	San Juanillo,	1.62	322	*i* P	Pn	15 30 10.8	-0.3		
SAJU				IAML		15 30 31.9			
	comp=Z,160nm,1.0s								
ARE1	Arenal 1	1.67	359	*e*P	Pb	15 30 13.3	-0.4		
ARE1				*e*S	Sb	15 30 35.2	+0.8		
PLVR	Palo Verde	1.68	338	*e*P	Pn	15 30 12.1	-0.1		
CEDE	Laguna Cedeo	1.69	360	*e*P	Pb	15 30 13.9	-0.3		
RIFO	Rio Frio, Sara	1.71	27	*i* P	Pb	15 30 13.7	-0.7		
RIFO				IAML		15 30 38.5			
	comp=Z,750nm,1.0s								
VITO	San Vito	1.71	89	⇓*i* P	Pn	15 30 13.8	+1.4		
LCOCO	El Coco	1.71	41	*e*P	Pn	15 30 13.2	+0.8		
RVLA	Villa Bonita	1.71	40	*e*P	Pb	15 30 14.8	+0.3		
ORTG	Ortega, Santa	1.74	335	*i* P	Pn	15 30 13.2	+0.3		
ORTG				IAML		15 30 50.0			
	comp=Z,150nm,1.0s								
CCOL	Caracol de Cor	1.75	102	*i* P	Pn	15 30 13.1	+0.2		
CCOL				IAML		15 30 40.4			
	comp=Z,1µm,1.0s								
CDITO	Canoas	1.82	96	*i* P	Pn	15 30 14.1	+0.2		
CDITO				IAML		15 30 14.8			
	comp=Z,580nm,1.0s								
CUI	Cuipilapa	1.92	346	*e*P	Pn	15 30 16.8	+1.4		
COVE	Coope Vega, Sa	1.94	9	*i* P	Pn	15 30 16.7	+1.1		
COVE				IAML		15 30 42.4			
	comp=Z,330nm,1.0s								
BRU2	Volcan	1.98	90	⇓*i* P	Pn	15 30 17.3	+1.0		
BRU2				*e*S	Sn	15 30 42.2	+1.5		
GB1A	Borinquen Arri	2.14	341	*e*P	Pn	15 30 19.5	+1.2		
ESPN	Las Esperanzas	3.41	7	*i* P	Pn	15 30 37.8	+2.0		
ESPN				IAML		15 31 42.5			
	comp=Z,61nm,1.0s								

IDC ***11*** *15:39:59.8±4.0, 7.˚47N×81.˚91W, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=128.4km s-min=80.8km az=84.0*

ISC 11 15:40:01.4±2.5, 7.˚4N±0.˚3×81.˚8W±0.˚8, h18km, n6, σ1°68/6, mb3.6/4, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	44.33	347	P	P	15 48 09.7	-0.6
	1.0nm,0.6s,baz=171,slow=9.2,SNR=3.0 1.0nm,0.6s						
NVAR	Mina Array Bea	45.14	319	P	P	15 48 16.9	-0.4
	0.7nm,0.7s,baz=122,slow=7.6,SNR=5.0 0.7nm,0.7s						
YKA	Yellowknife Ar	60.00	343	P	P	15 50 05.7	-1.0
	0.1nm,0.4s,baz=134,slow=7.7,SNR=1.8 0.1nm,0.4s						
ILAR	Eielson Array	72.88	336	P	P	15 51 31.6	+2.5
	0.3nm,0.6s,baz=105,slow=5.2,SNR=7.2 0.3nm,0.6s						
ASAR	Alice Springs	142.08	241	PKP	PKPdf	15 59 33.1	-0.4
	0.2nm,0.8s,baz=108,slow=3.0,SNR=1.6						
WRA	Warramunga Arr	142.78	247	PKP	PKPdf	15 59 34.2	-0.6
	0.5nm,0.8s,baz=106,slow=2.7,SNR=4.9						

IDC 11 15:40:36.8±6.8, 1.˚46S×153.˚00E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=210.2km s-min=41.0km az=100.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.89	224	P	P	15 46 11.0	+0.4
	0.1nm,0.3s,baz=49,slow=9.8,SNR=6.1 0.1nm,0.3s						
ASAR	Alice Springs	28.80	218	P	P	15 46 36.4	-0.4
	0.2nm,0.8s,baz=46,slow=8.4,SNR=1.4 0.2nm,0.8s						
MKAR	Makanchi Array	77.96	318	P	P	15 52 37.0	0.0
	0.2nm,0.7s,baz=123,slow=7.1,SNR=1.7 0.2nm,0.7s						

IDC ***11*** *15:51:13.0±6.1, 0.˚01S×123.˚47E, h130km±58km, mb3.5/13, mbtmp3.9/13, Error ellipse: s-maj=28.8km s-min=12.1km az=71.0*

NEIC ***11*** *15:51:13.7±2.2, 0.˚16S±0.˚07×123.˚28E±0.˚06, h130km±4km, mb4.5/42, Error ellipse: s-maj=9.9km s-min=8.4km az=205.0*

DJA ***11*** *15:51:14.4±0.3, 0.˚5S±3.˚×12.˚3E±.˚, h114km±6km, M4.4/12, mb4.3/4, mB4.9/1, MLv4.4/12, Mw(mB)4.2/1*

ISC 11 15:51:15.2±0.4, 0.˚17S±0.˚05×123.˚33E±0.˚06, h150km, n90, σ1°77/91, mb4.2/34, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.99	42	P	Pn	15 51 37.2	-2.6
LUWI	Luwuk	1.03	213		Pn	15 51 36.6	-3.7
LUWI				Sn	Sn	15 51 53.4	-5.9
LUWI	Luwuk	1.03	213	P	Pn	15 51 36.7	-3.5
LUWI				S	Sn	15 51 54.0	-5.4
MRSI	Marisa	1.53	295	P	Pn	15 51 41.0	-4.0
TOLI2	Tolitoli	2.84	297		Pn	15 51 57.2	-3.4
TOLI2	Tolitoli	2.84	297	P	Pn	15 51 57.5	-3.1
SANI	Sanana	3.25	125	P	Pn	15 52 02.3	-3.5
SANI	Sanana	3.25	125	P	Pn	15 52 02.2	-3.5
MPSI	Mapaga	3.46	278	P	Pn	15 52 06.9	-1.6
TNTI	Ternate	4.15	77	Pn	Pn	15 52 15.1	-2.3
TNTI	Ternate	4.15	77	P	Pn	15 52 15.4	-2.0
TNTI	Ternate	4.15	77	P	Pn	15 52 15.6	-1.8
LBMI	Labuha	4.20	96	P	Pn	15 52 15.9	-2.2
TTSI	Tana Toraja	4.52	231	P	Pn	15 52 21.3	-1.0
NLAI	Namlea	4.85	129	P	Pn	15 52 25.6	-1.1
KAPI	Kappang	5.99	217	Pn	Pn	15 52 35.4	-6.4
BKSI	Bulukumba 18nm,1.2s,0.1nm	6.04	212	P	Pn	15 52 42.1	-0.3
EDFI	Ende, Flores	8.68	191	P	Pn	15 53 18.8	+1.0
FAKI	Fak Fak	9.33	107	Pn	Pn	15 53 24.0	-2.4
FAKI	Fak Fak	9.33	107	P	Pn	15 53 24.3	-2.1
KKM	Kota Kinabalu	9.41	311		Pn	15 53 27.9	+0.4
KKM	Kota Kinabalu	9.41	311	P	Pn	15 53 29.9	+2.4
SOEI	Soe	9.57	174	Pn	Pn	15 53 27.6	-2.1
JAGI	Jajag, Banyuwa	12.31	228	P	Pn	15 54 01.2	-4.4
MTN	Manton Dam	14.78	149	Pn	Pn	15 54 36.6	-0.4
KNRA	Kununurra	16.32	161	Pn	Pn	15 54 53.9	-2.0
KNRA				IAmb	IAmb	15 54 59.0	
	comp=Z,76nm,1.2s						
FITZ	Fitzroy Crossi	17.96	173	P	P	15 55 13.4	-0.7
WB0	Warramunga Arr	22.29	152	P	P	15 56 00.1	-0.3
WRAB	Tennant Creek	22.42	152	P	P	15 56 01.6	0.0
WRA	Warramunga Arr comp=Z,5.3nm,0.7s,baz=333,slow=10,SNR=62 comp=Z,5.3nm,0.7s	22.42	152	P	P	15 56 01.0	-0.7
WB2	Warramunga Arr	22.42	152	P	P	15 56 01.7	0.0
WR0	Warramunga Arr	22.53	151	P	P	15 56 02.6	-0.1
WR0				IAmb	IAmb	15 56 04.8	
	comp=Z,8.3nm,1.1s						
TPUB	Ta-pu	23.48	354	P	P	15 56 12.3	+0.9
YULB	Yu-li	23.50	355	P	P	15 56 12.1	+0.5
YULB				IAmb	IAmb	15 56 26.1	
	comp=Z,65nm,1.5s						
COEN	Coen	23.95	126	P	P	15 56 16.1	+0.3
COEN				IAmb	IAmb	15 56 18.2	
	comp=Z,6.8nm,0.8s						
COEN	Coen	23.95	126	P	P	15 56 16.5	+0.6
WRKA	Wakurung	25.19	169	P	P	15 56 28.1	+1.1
PMG	Port Moresby	25.44	112	P	P	15 56 30.6	+1.3
PMG				IAmb	IAmb	15 56 55.4	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	25.52	157	P	P	15 56 30.6	+0.6
ASAR	Alice Springs	25.52	157	P	P	15 56 30.8	+0.9
ASAR	Alice Springs comp=Z,0.6nm,0.6s,baz=340,slow=12,SNR=22	25.52	157	P	P	15 56 30.6	+0.6
ASAR				PcP	PcP	15 59 58.3	+0.6
	comp=Z,0.5nm,0.4s,baz=349,slow=2.3,SNR=10 comp=Z,0.6nm,0.6s						
AS01	Alice Springs	25.53	157	P	P	15 56 31.0	+0.9
QIS	Mount Isa	25.77	143	P	P	15 56 33.7	+1.4
MORW	Morawa	29.57	193	P	P	15 57 06.4	+0.4
MORW				IAmb	IAmb	15 57 33.6	
	comp=Z,23nm,1.3s						
CMAR	Chiang Mai Arr comp=Z,0.5nm,0.6s,baz=131,slow=7.0,SNR=7.3 comp=Z,0.5nm,0.6s	30.28	309	P	P	15 57 13.2	+0.8
CHTO	Chiang Mai	30.48	310	P	P	15 57 14.2	+0.1
CHTO				IAmb	IAmb	15 57 28.8	
	comp=Z,5.8nm,1.4s						
FORT	Forrest	30.77	172	P	P	15 57 17.3	+0.8
FORT				IAmb	IAmb	15 57 18.2	
	comp=Z,9.5nm,0.6s						
FORT	Forrest	30.77	172	P	P	15 57 17.2	+0.6
BLDU	Ballidu	30.93	191	P	P	15 57 18.2	+0.3
NWAO	Narrogin (SRO)	33.09	189	P	P	15 57 36.7	-0.1
BBOO	Buckleboo	34.62	161	P	P	15 57 50.7	+0.7
BBOO				IAmb	IAmb	15 58 31.8	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	35.96	153	P	P	15 58 02.9	+1.4
STKA	Stephens Creek comp=Z,2.5nm,0.5s,baz=329,slow=7.2,SNR=9.1 comp=Z,2.5nm,0.5s	35.96	153	P	P	15 58 02.3	+0.8
INU	Inuyama	37.57	18	P	P	15 58 14.3	-0.8
KSRS	Korea Array comp=Z,1.0nm,0.6s,baz=185,slow=8.8,SNR=4.5	37.68	6	P	P	15 58 18.4	+2.5
MAJO	Matsushiro	39.05	19	P	P	15 58 25.1	-2.4
MAJO				IAmb	IAmb	15 58 27.2	
	comp=Z,17nm,1.1s						
MJAR	Matsushiro Arr comp=Z,2.5nm,0.7s,baz=186,slow=9.3,SNR=11 comp=Z,2.5nm,0.7s	39.05	19	P	P	15 58 25.3	-2.2
ARMA	Armidale	40.36	141	P	P	15 58 40.6	+2.0
ARMA				IAmb	IAmb	15 59 10.6	
	comp=Z,23nm,1.4s						
CAN	Canberra	42.38	148	P	P	15 58 55.7	+0.8
CAN				IAmb	IAmb	15 59 04.7	
	comp=Z,15nm,1.2s						
TOO	Toolangi	42.47	154	P	P	15 58 57.6	+2.0
TOO				IAmb	IAmb	15 59 31.3	
	comp=Z,31nm,1.3s						
JTM	Tematabayashi	43.84	20	P	P	15 59 05.7	-0.7
USRK	Ussuriysk Ar. comp=Z,1.8nm,0.7s,baz=188,slow=7.7,SNR=2.6 comp=Z,1.8nm,0.7s	44.84	9	P	P	15 59 13.1	-1.3
GTA	Gaotai	44.88	334	*e*P	P	15 59 15.9	+1.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DZM	Mont Dzumac	47.30	120	P	P	15 59 36.2	+2.2
DZM				IAmb	IAmb	16 00 06.0	
	comp=Z,16nm,1.5s						
JKA	Kamikawa-asahi	47.32	19	P	P	15 59 33.8	+0.1
SONM	Songino Array	50.03	345	P	P	15 59 54.0	-0.6
SONM	Songino Array comp=Z,1.1nm,0.5s,baz=161,slow=9.5,SNR=10 comp=Z,1.1nm,0.5s	50.03	345	P	P	15 59 53.3	-1.2
MK31	Makanchi Array	58.93	328	P	P	16 00 58.2	-0.5
MKAR	Makanchi Array comp=Z,0.5nm,0.5s,baz=119,slow=8.7,SNR=15 comp=Z,0.5nm,0.5s	58.93	328	P	P	16 00 57.9	-0.8
PEA0B	Petropavlovsk-	60.31	23	P	P	16 01 07.4	-0.6
PETK	Petropavlovsk-	60.31	23	P	P	16 01 08.0	0.0
PETK	Petropavlovsk- comp=Z,3.4nm,0.9s,baz=213,slow=4.0,SNR=6.4 comp=Z,3.4nm,0.9s	60.31	23	P	P	16 01 07.5	-0.5
RPZ	Rata Peaks	60.68	142	P	P	16 01 10.5	-0.2
KBL	Kabul	61.30	310	P	P	16 01 14.8	-0.5
KBL				IAmb	IAmb	16 01 16.1	
	comp=Z,3.0nm,0.5s						
MQZ	McQueen's Vall	61.66	141	P	P	16 01 19.1	+1.8
BKZ	Black Stump Fm	62.10	135	P	P	16 01 21.7	+1.3
RTZ	Ruatahuna	62.22	135	P	P	16 01 22.2	+1.0
KURBB	Kurchatov Arra comp=Z,0.4nm,0.6s,baz=122,slow=5.7,SNR=5.8 comp=Z,0.4nm,0.6s	63.27	330	P	P	16 01 26.3	-1.5
KURK	Kurchatov	63.28	330	P	P	16 01 26.5	-1.3
KURK				IAmb	IAmb	16 01 29.1	
	comp=Z,3.4nm,1.2s						
MA2	Magadan	63.31	15	P	P	16 01 27.9	+0.1
MA2				IAmb	IAmb	16 01 28.6	
	comp=Z,6.6nm,0.8s						
BVAR	Borovoye Array comp=Z,0.3nm,0.5s,baz=140,slow=9.1,SNR=2.8 comp=Z,0.3nm,0.5s	68.79	329	P	P	16 02 02.6	-0.4
C16K	Lisburne Hills	83.31	21	P	P	16 03 25.0	+0.2
C16K				IAmb	IAmb	16 03 27.5	
	comp=Z,6.2nm,1.4s						
G16K	Koyuk River	83.66	24	P	P	16 03 27.5	+0.8
G16K				IAmb	IAmb	16 03 28.1	
	comp=Z,3.3nm,1.1s						
G19K	Purcell Mounta	85.94	24	P	P	16 03 38.1	0.0
H19K	Roundabout Mou	86.10	24	P	P	16 03 39.5	+0.7
IMAR	Indian Mountai	87.26	24	P	P	16 03 44.2	-0.4
B21K	Ikpikpuk River	87.38	20	P	P	16 03 44.7	-0.3
B21K				IAmb	IAmb	16 04 27.0	
	comp=Z,4.8nm,1.5s						
QSPA	South Pole Qui	89.77	180	P	P	16 03 56.4	-0.1
QSPA				IAmb	IAmb	16 04 28.6	
	comp=Z,5.0nm,1.4s						
QSPA	South Pole Qui comp=Z,0.8nm,0.7s,baz=157,slow=1.3,SNR=6.6 comp=Z,0.8nm,0.7s	89.77	180	P	P	16 03 57.4	+0.9
ILAR	Eielson Array comp=Z,0.1nm,0.5s,baz=238,slow=5.2,SNR=1.2 comp=Z,0.1nm,0.5s	90.06	25	P	P	16 03 55.6	-2.1

IDC 11 16:16:53.5±3.3, 29.˚75S×177.˚95W, h0km, mb3.5/2, mbtmp3.5/2, MS2.8/1, Error ellipse: s-maj=74.4km s-min=16.0km az=115.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.50	3	Pn	Pn	16 17 08.1	+0.1
	1µm,0.3s,baz=95,slow=8.3,SNR=64						
RAO				Sn	Sn	16 17 17.9	+0.6
	1µm,0.3s,baz=22,slow=23,SNR=10						
DZM	Mont Dzumac	15.98	295	LR	LR	16 25 30.2	
	comp=Z,33nm,20.9s,baz=118,slow=32						
ASAR	Alice Springs 0.4nm,0.7s,baz=105,slow=7.2,SNR=12 0.4nm,0.7s	43.19	266	P	P	16 24 55.7	-0.8
WRA	Warramunga Arr 0.8nm,0.9s,baz=110,slow=8.1,SNR=14 0.8nm,0.9s	44.12	271	P	P	16 25 04.5	+0.5
FINES	FINESS Array B 0.7nm,0.5s,baz=44,slow=2.9,SNR=12	144.55	340	PKP	PKPbc	16 36 30.6	+0.6

NEIC ***11*** *16:30:24.8±0.7, 56.˚36N±0.˚05×148.˚47W±0.˚09, h10km±1km, ML3.5/48, ML3.2(AEIC), Error ellipse: s-maj=9.4km s-min=6.8km az=51.0*

AEIC ***11*** *16:30:30.0±0.6, 56.˚4N±0.˚1×148.˚5W±0.˚1, h12km±8km, Error ellipse: s-maj=14.9km s-min=8.5km az=175.0*

ISC 11 16:30:23.1±1.6, 56.˚33N±0.˚09×148.˚49W±0.˚05, h10km, n114, σ1°36/112, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.67	305		Pn	16 31 07.3	+1.3
KDAK	Kodiak Island	2.67	305		Sn	16 31 36.6	-1.7
KDAK	Kodiak Island baz=121	2.67	305	S	Sn	16 31 36.8	-1.6
OHAK	Old Harbor	2.79	291		Pn	16 31 08.6	+0.9
OHAK					Sn	16 31 39.2	-2.1
	baz=106						
OHAK				S	Sn	16 31 40.1	-1.2
	baz=106						
SYI	Shuyak Island	3.11	319		Pn	16 31 13.6	+1.5
SYI					Sn	16 31 48.5	-0.7
SYI	Shuyak Island comp=N,60nm,1.2s	3.11	319	IAML		16 31 57.4	
Q20K	Shuyak Island baz=135	3.11	319	P	Pn	16 31 13.9	+1.8
Q20K				S	Sn	16 31 48.8	-0.5
	baz=135						
SII	Sitkinak Islan	3.17	277		Sn	16 31 50.0	-0.7
SII	Sitkinak Islan	3.17	277	Pn	Pn	16 31 14.9	+1.9
SII				IAML		16 32 02.2	
	comp=E,96nm,1.4s						
SII	Sitkinak Islan baz=92	3.17	277	S	Sn	16 31 50.0	-0.7
Q23K	Middleton Isla	3.31	19		Pn	16 31 15.5	+0.7
Q23K					Sn	16 31 52.2	-2.0
Q23K	Middleton Isla baz=201	3.31	19	S	Sn	16 31 52.6	-1.6
MID	Middleton Isla	3.31	19	Pn	Pn	16 31 15.8	+1.0
CNPM	China Poot	3.52	337		Pn	16 31 18.9	+1.1
CNPM					Sn	16 31 58.6	-0.9
BRSE	Bradley Lake S	3.62	342		Pn	16 31 20.2	+1.0
BRSE	Bradley Lake S baz=159	3.62	342	P	Pn	16 31 20.2	+1.0
BRLK	Bradley Lake	3.67	341		Pn	16 31 20.4	+0.6
P23K	Montague Islan	3.72	8		Pn	16 31 21.3	+0.8
P23K					Sn	16 32 02.3	-2.1
P23K	Montague Islan baz=189	3.72	8	P	Pn	16 31 21.3	+0.8
P23K				S	Sn	16 32 02.3	-2.1
	baz=189						
Q19K	Cape Douglas,	3.80	315		Pn	16 31 23.8	+2.1
SEW	Seward	3.82	353		Pn	16 31 22.4	+0.5
KAHG	Katmai Hook Gl	3.93	306		Pn	16 31 25.3	+1.9
P19K	Oil Pt	4.18	325	Pn	Pn	16 31 28.7	+1.9
P19K				IAML		16 32 19.7	
	comp=E,70nm,0.5s						
P19K				IAML		16 32 25.8	
	comp=N,67nm,0.8s						
KAIM	Kayak Island	4.20	29		Pn	16 31 28.1	+0.9
KAIM	Kayak Island comp=N,61nm,1.3s	4.20	29	IAML		16 32 27.5	
KAIM				IAML		16 32 30.1	
	comp=E,62nm,1.4s						
KAIM	Kayak Island baz=212	4.20	29	P	Pn	16 31 28.1	+0.9
HIN	Hinchinbrook I	4.21	14		Pn	16 31 28.3	+1.0
HIN	Hinchinbrook I comp=E,74nm,1.2s	4.21	14	IAML		16 32 16.9	
HIN				IAML		16 32 23.5	
	comp=N,54nm,0.8s						
SLKM	Skilak Lake	4.29	348		Pn	16 31 29.3	+1.0
O20K	Slope Mountain	4.35	332		Pn	16 31 30.7	+1.4
O20K	Slope Mountain baz=148	4.35	332	P	Pn	16 31 30.7	+1.4
IVE	Iliamna Volcan	4.40	329		Pn	16 31 31.1	+1.1
EYAK	Cordova Ski Ar	4.47	18		Pn	16 31 32.0	+1.2
EYAK	Cordova Ski Ar baz=200	4.47	18	P	Pn	16 31 32.0	+1.2
SUCK	Suckling Hills	4.50	32		Pn	16 31 32.6	+1.3
SUCK	Suckling Hills comp=N,54nm,1.5s	4.50	32	IAML		16 32 30.3	
SUCK				IAML		16 32 48.4	
	comp=E,44nm,1.5s						
RAGM	Ragged Mountai	4.54	25		Pn	16 31 33.1	+1.3
RAGM	Ragged Mountai comp=E,54nm,1.2s	4.54	25	IAML		16 32 37.3	
NICHA	Nichawak Mount	4.59	30		Pn	16 31 33.7	+1.2
HMT	Hamilton	4.59	27		Pn	16 31 33.6	+1.0
GOAT	Goat Mountain	4.70	23		Pn	16 31 35.2	+1.2
RSO	Redoubt South	4.71	333		Pn	16 31 35.4	+1.1
RDT	Redoubt	4.72	336		Pn	16 31 35.1	+0.7
P18K	Big Mountain,	4.73	313		Pn	16 31 34.9	+0.5
P18K	Big Mountain, baz=127	4.73	313	P	Pn	16 31 34.9	+0.5
RDWB	Redoubt West	4.75	333		Pn	16 31 35.5	+0.6
BERG	Berg Lake	4.79	30		Pn	16 31 36.2	+0.9
BERG	Berg Lake comp=N,45nm,1.2s	4.79	30	IAML		16 32 38.3	
BERG				IAML		16 32 53.1	
	comp=E,55nm,1.1s						
GRIN	Grindle Hills	4.81	32		Pn	16 31 36.8	+1.3
SNH	Sunshine Point	4.88	35		Pn	16 31 37.7	+1.2
SNH	Sunshine Point comp=N,38nm,1.5s	4.88	35	IAML		16 33 02.5	
SNH				IAML		16 33 26.4	
	comp=E,38nm,1.4s						
O19K	Port Alsworth	4.95	324		Pn	16 31 38.8	+1.5
O19K				IAML		16 32 37.8	
	comp=N,49nm,0.5s						
KHIT	Khitrov Hills	4.96	32		Pn	16 31 38.6	+0.9
O18K	Koktuh Hills	5.01	318		Pn	16 31 39.7	+1.3
O18K	Koktuh Hills comp=E,13nm,1.4s	5.01	318	IAML		16 32 40.6	
O18K				IAML		16 32 58.9	
	comp=N,14nm,1.3s						
BMRM	Bremner River	5.07	22		Pn	16 31 40.2	+1.1
BMRM	Bremner River baz=205	5.07	22	P	Pn	16 31 40.2	+1.1
WAX	Waxell Ridge	5.08	33		Pn	16 31 40.4	+1.0
BARK	Barkley Ridge	5.16	35		Pn	16 31 41.6	+1.2
CRQM	Cirque	5.25	30		Pn	16 31 42.8	+1.1
CRQM	Cirque comp=E,20nm,1.0s	5.25	30	IAML		16 32 45.4	
CRQM				IAML		16 32 46.2	
	comp=N,27nm,1.1s						
CRQE	Cirque baz=215	5.26	30	P	Pn	16 31 42.8	+1.0
KLU	Klutina	5.34	13		Pn	16 31 44.4	+1.4
KLU				IAML		16 32 45.8	
	comp=E,20nm,0.8s						
KLU				IAML		16 32 46.4	
	comp=N,19nm,0.7s						
KLU	Klutina baz=195	5.34	13	P	Pn	16 31 44.5	+1.6
BAGL	Bagley Icefiel	5.36	36		Pn	16 31 44.3	+1.3
ISLE	Juniper Island	5.36	34		Pn	16 31 44.3	+1.1
ISLE	Juniper Island comp=N,26nm,1.5s	5.36	34	IAML		16 32 42.8	
ISLE				IAML		16 32 48.6	
	comp=E,23nm,1.0s						
GHO	Glory Hole Cre	5.46	358		Pn	16 31 46.2	+1.7
STLK	Strandline Lak	5.46	343		Pn	16 31 45.8	+1.3
SML	Sawmill	5.49	1		Pn	16 31 46.7	+

M17K	Holitna River	6.88	321		Pn	16 32 05.2 +1.3
P30M	Million Dollar	7.18	53		Pn	16 32 09.9 +1.9
P30M	Million Dollar baz=243	7.18	53	P	Pn	16 32 09.9 +1.9
SKAG	Skagway	7.68	60		Pn	16 32 17.2 +2.3
SKAG	Skagway baz=252	7.68	60	P	Pn	16 32 17.2 +2.3
S32K	Killisnoo	7.71	76		Pn	16 32 15.9 +0.7
S32K	Killisnoo baz=267	7.71	76	P	Pn	16 32 15.9 +0.7
O30N	Mendenhall	7.86	50		Pn	16 32 19.2 +1.8
O30N	Mendenhall baz=241	7.86	50	P	Pn	16 32 19.2 +1.8
WHY	Whitehorse	8.34	53		Pn	16 32 25.7 +1.7
WHY	Whitehorse baz=244	8.34	53	P	Pn	16 32 25.7 +1.7
P32M	Atlin	8.51	61		Pn	16 32 27.7 +1.4
P32M	Atlin baz=254	8.51	61	P	Pn	16 32 27.7 +1.4
U33K	Whale Pass	8.57	85		Pn	16 32 26.4 -0.7
U33K	Whale Pass baz=278	8.57	85	P	Pn	16 32 26.3 -0.7

WEL 11 16:37:21.3±0.3, 38°S±2°×17°7E±°, h5km, M3.4/32, ML3.7/32, MLv3.4/32, Error ellipse: s-maj=0.0km s-min=0.0km az=173.9, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.14	345	P	Pg	16 37 24.4	+0.4
WIZ				S	Sg	16 37 26.9	+1.1
WSRZ	White Island S	0.15	342	P	Pg	16 37 24.6	+0.4
WHRZ	Whale Island	0.29	226	P	Pg	16 37 27.4	+0.6
WHRZ				S	Sg	16 37 32.0	+1.4
HAZ	Te Kaha	0.45	103	P	Pg	16 37 29.8	-0.1
HAZ				S	Sg	16 37 36.4	+0.7
RUGZ	Raukumara Rang	0.47	131	P	Pg	16 37 30.1	-0.2
MARZ	Manawahe	0.55	233	P	Pb	16 37 32.8	-0.7
EDRZ	Edgecumbe	0.59	221	P	Pg	16 37 33.0	+0.3
EDRZ				S	Sg	16 37 41.6	+1.1
URZ	Urewera	0.61	189	P	Pg	16 37 32.7	-0.3
URZ				S	Sg	16 37 41.0	+0.1
PKGZ	Pakihiroa	0.71	109	P	Pg	16 37 34.8	-0.1
PKGZ				S	Sg	16 37 44.6	+0.6
MWZ	Matawai	0.71	161	P	Pg	16 37 34.7	-0.3
LIRZ	Lichensteins R	0.76	243	P	Pb	16 37 36.5	-0.4
MKRZ	Makatiti	0.77	231	P	Pb	16 37 36.9	-0.4
TGRZ	Tauranga	0.78	264	P	Pg	16 37 35.8	-0.4
TWGZ	Tauwhareparae	0.79	132	P	Pg	16 37 36.7	+0.3
TARZ	Mount Tarawera	0.81	225	P	Pb	16 37 37.6	-0.4
OMRZ	Omania	0.82	236	P	Pg	16 37 37.1	+0.1
RAGZ	Rawiri	0.85	170	P	Pg	16 37 37.3	-0.2
RAGZ				S	Sb	16 37 50.3	0.0
MXZ	Matakaoa Point	0.86	84	P	Pb	16 37 38.2	-0.4
KARZ	Kaharoa	0.86	245	P	Pg	16 37 37.5	-0.3
RRRZ	Republican Roa	0.89	220	P	Pn	16 37 41.3	+0.9
MUGZ	Murupara	0.90	204	P	Pg	16 37 37.8	-0.7
MUGZ				S	Sg	16 37 50.2	+0.1
PUZ	Puketiti	0.91	117	P	Pg	16 37 39.1	+0.4
TKGZ	Te Karaka	0.92	148	P	Pb	16 37 39.5	-0.2
NGRZ	Ngongotaha	0.94	241	P	Pb	16 37 40.0	-0.1
WMGZ	Waiomatatini S	0.95	100	P	Pb	16 37 40.3	+0.1
UTU	Utuhina	0.97	237	P	Pn	16 37 42.1	+0.5
RTZ	Ruatahuna	0.98	192	P	Pg	16 37 39.4	-0.6
KMRZ	Kaimai	1.04	259	P	Pb	16 37 41.7	-0.1
HRRZ	Handcock Road	1.05	225	P	Pb	16 37 42.1	+0.2
PRRZ	Plateau Road	1.07	218	P	Pg	16 37 40.4	-1.4
SNGZ	Shannon Statio	1.13	176	P	Pg	16 37 42.2	-0.6
RIGZ	Rimuhau	1.13	158	P	Pb	16 37 43.4	+0.2
CNGZ	Carnagh Statio	1.13	137	P	Pn	16 37 44.1	+0.4
ALRZ	Allen Road	1.15	218	P	Pg	16 37 42.9	-0.3
WPRZ	Whakapapataran	1.21	224	P	Pn	16 37 45.7	+0.9
MTHZ	Maungataniwha	1.23	194	P	Pg	16 37 44.0	-0.9
RAHZ	Arahi	1.26	185	P	Pg	16 37 44.8	-0.7
MRHZ	Matea Rd	1.34	208	P	Pn	16 37 44.5	-2.2
PRGZ	Paritu Road	1.36	158	P	Pb	16 37 47.2	0.0
TOZ	Tahuroa Road	1.38	266	P	Pn	16 37 46.4	-0.7
KNZ	Kokohu	1.41	166	P	Pn	16 37 47.2	-0.4
WHHZ	Waihua	1.42	180	P	Pn	16 37 47.6	-0.1
NMHZ	Naumai	1.48	193	P	Pn	16 37 47.5	-1.1
MHGZ	Mahia Peninsul	1.58	161	P	Pn	16 37 49.7	-0.3
ARHZ	Aropaoanui	1.61	187	P	Pn	16 37 50.7	+0.3
BKZ	Black Stump Fm	1.61	201	P	Pn	16 37 48.8	-1.7
RATZ	Rangitukua	1.67	223	P	Pg	16 37 55.3	+2.0
RITZ	Rihia Road	1.71	219	P	Pg	16 37 54.7	+0.8
MKAZ	Moumakai	1.74	288	P	Pn	16 37 49.3	-2.9
MCHZ	McNeill Hill	1.83	193	P	Pn	16 37 53.7	+0.3
KWHZ	Kaweka Forest	1.88	200	P	Pn	16 37 52.9	-1.2
WIAZ	Waiheke Island	1.89	297	P	Pn	16 37 52.1	-2.0
TMVZ	Te Maari	1.89	219	P	Pb	16 37 56.9	+0.6
NTVZ	North Tongarir	1.89	220	P	Pb	16 37 56.7	+0.3
ETVZ	East Tongariro	1.90	219	P	Pb	16 37 56.4	-0.1
KRVZ	Karewarewa	1.90	221	P	Pb	16 37 56.9	+0.3
OTVZ	Oturere	1.94	219	P	Pb	16 37 56.3	-1.0
NNVZ	North Ngauruho	1.95	220	P	Pg	16 37 58.8	+0.3
ETAZ	East Tamaki Re	1.97	290	P	Pn	16 37 53.4	-1.9
SNVZ	South Ngauruho	1.97	219	P	Pb	16 37 57.9	+0.1
TWVZ	Taurewa	2.00	224	P	Pg	16 37 59.5	-0.1
GRZ	Great Barrier	2.00	314	P	Pn	16 37 53.0	-2.7
BHHZ	Black Hill Sta	2.05	206	P	Pn	16 37 55.1	-1.3
HIZ	Hauiti	2.06	245	P	Pn	16 37 56.5	-0.1
MBAZ	Motutapu North	2.06	295	P	Pn	16 37 54.3	-2.3
MAVZ	Matarangi	2.08	219	P	Pb	16 37 59.8	+0.2
KRHZ	Kereru	2.10	199	P	Pn	16 37 56.8	-0.3
MOVZ	Moawhango	2.10	213	P	Pn	16 37 58.3	+1.2
WNVZ	Wahianoa	2.10	217	P	Pb	16 37 59.2	-0.8
AWAZ	Awhitu Peninsu	2.15	285	P	Pn	16 37 56.1	-1.6
KAHZ	Kahuranaki	2.15	187	P	Pn	16 37 57.1	-0.7
PXZ	Pawanui	2.39	187	P	Pn	16 37 59.1	-1.9
PNHZ	Pukenui	2.39	199	P	Pn	16 38 00.2	-0.9
VRZ	Vera Road	2.44	232	P	Pb	16 38 05.4	-0.1
WPHZ	Waipukurau	2.48	194	P	Pn	16 38 00.7	-1.6
TSZ	Takapari Road	2.60	202	P	Pn	16 38 03.1	-0.8
PRHZ	Porangahau	2.65	190	P	Pn	16 38 02.7	-1.9
WAZ	Wanganui	2.73	219	P	Pn	16 38 07.4	+1.6
LREZ	Lake Rotokare	2.86	230	P	Pn	16 38 09.4	+1.9
ANWZ	Angora Road	2.86	192	P	Pn	16 38 05.5	-2.0
WCZ	Waipu Caves	2.88	306	P	Pn	16 38 05.5	-2.3
BFZ	Birch Farm	3.12	194	P	Pn	16 38 09.5	-1.6
MRZ	Mangatainoka R	3.26	203	P	Pn	16 38 11.5	-1.6
KIW	Kapiti Island	3.67	209	P	Pn	16 38 16.6	-2.1
ARCZ	Arundel	7.78	214	P	Pn	16 39 13.2	-2.0

*BJI **11** 16:38:12.9±0.0, 20°.51S×179°.15W, h612km, mb4.7/49, mB5.0/28*

*NEIC **11** 16:38:13.9, 20°.85S×179°.16W, h660km*

*NEIC **11** 16:38:13.9, 20°.65S×179°.37W, h660km, Moment Tensor Solution. Duration: 2⁄4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.50; $M_{\theta\theta}$0.72; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.23; $M_{\theta\phi}$-1.35; $M_{r\phi}$-0.92; Fault plane solution: $M_0$1.94000×10^{17} NP1: ϕ_s166.08000°, δ81.45000°, λ32.83000°. NP2:ϕ_s70.60000°, δ57.58000°, λ169.86000°. Principal axes: T 1.7652, Plg29.0000°, Azm33.0000°; N 0.3537, Plg56.0000°, Azm179.0000°; P -2.1189, Plg16.0000°, Azm294.0000°;*

*NOU **11** 16:38:14.5, 20°.81S×179°.16W, h632km, ML4.9/112, Fiji Islands Region*

*NEIC **11** 16:38:14.7±1.4, 20°.9S±0°.1×179°.1W±0°.1, h631km±6km, mb5.0/341, Mww5.5/12, Error ellipse: s-maj=17.1km s-min=14.3km az=119.0*

*IDC **11** 16:38:15.1±0.5, 20°.84S×179°.28W, h634km±5km, mb4.2/23, mbtmp5.1/26, Error ellipse: s-maj=9.1km s-min=7.6km az=160.0*

*MOS **11** 16:38:15.1±2.7, 20°.68S×179°.49W, h615km, mb4.9/22, Error ellipse: s-maj=12.5km s-min=11.0km az=120.4*

*GCMT **11** 16:38:17.7±0.2, 20°.95S±0°.03×179°.12W±0°.02, h645km±2km, MW5.4/108, Moment Tensor Solution. s108,c159; Duration: 1⁄3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.56±.03; $M_{\theta\theta}$0.50±.05; $M_{\phi\phi}$-1.06±.05; $M_{r\theta}$0.42±.05; $M_{\theta\phi}$-1.15±.05; $M_{r\phi}$-0.81±.04; Best double couple: $M_0$1.72700×10^{17} NP1:ϕ_s169.00000°, δ75.00000°, λ37.00000°. NP2:ϕ_s68.00000°, δ54.00000°, λ162.00000°. Principal axes: T 1.6580, Plg36.0000°, Azm35.0000°; N 0.1380, Plg51.0000°, Azm187.0000°; P -1.7950, Plg13.0000°, Azm294.0000°; nsta1 refers to body waves,*

cutoff=40s. Triangular moment-rate function

ISC 11 16:38:14.5±0.3, 20.82S±0°.04×179.14W±0°.04, h628km±3km, h630km; pP-P, n1084, σ1⁄3 13/992, mb5.0/243, 76C-51D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSA	Yasawairara	5.15	322	P	P	16 39 51.4	+1.0
RAO	Raoul Island	8.46	173	P	P	16 40 17.9	-1.1
RAO	Raoul Island	8.46	173	P	P	16 40 18.7	-0.3
RAO	Raoul Island	8.46	173	P	P	16 40 17.9	-1.1
RAO	Raoul Island 471nm,0.3s,baz=89,slow=17,SNR=6.0	8.46	173	P	P	16 40 18.3	-0.7
RAO	656nm,0.3s,baz=270,slow=23,SNR=18			S	S	16 41 58.4	-2.7
NIUE	Niue baz=8.8,SNR=7.5	8.84	80	P	P	16 40 22.3	-0.5
NIUE	baz=8.8			S	S	16 42 13.6	+5.8
NIUE	Niue	8.84	80	P	P	16 40 21.9	-0.8
NIUE	Niue	8.84	80	P	P	16 40 22.2	-0.5
PINNC	Pines Island,	12.60	259	P	P	16 40 58.5	-0.4
PINNC	Pines Island,	12.60	259	P	P	16 40 59.3	+0.4
YATNC	Mamie plateau,	13.07	262	P	P	16 41 03.5	0.0
OUENC	Ouen Island, N	13.13	261	P	P	16 41 04.0	-0.1
OUENC	Ouen Island, N	13.13	261	P	P	16 41 04.2	+0.1
DZM	Mont Dzumac	13.48	262	P	P	16 41 07.5	-0.1
DZM	Mont Dzumac	13.48	262	P	P	16 41 07.4	-0.1
DZM	Mont Dzumac 167nm,1.0s	13.48	262	*e*Pn	P	16 41 05.9	-1.6
DZM	284nm,1.4s			*e*Sn	S	16 43 29.4	+0.3
DZM	Mont Dzumac 52nm,0.5s,baz=87,slow=11,SNR=59	13.48	262	P	P	16 41 05.5	-2.1
DZM	94nm,1.2s,baz=330,slow=16,SNR=8.8			S	S	16 43 29.3	+0.2
ONTNC	Ouen Toro	13.49	261	P	P	16 41 07.6	+0.1
ONTNC	Ouen Toro	13.49	261	P	P	16 41 07.8	+0.3
NFK	Norfolk Island baz=14,SNR=12	14.29	233	P	P	16 41 17.3	+2.4
NFK	Norfolk Island	14.29	233	P	P	16 41 17.3	+2.4
KOUNC	Kounac, New Ca	15.51	268	P	P	16 41 28.2	+2.0
OUZ	Omahuta	15.70	202	P	P	16 41 30.3	+2.6
KUZ	Kuaotunu	16.48	195	P	P	16 41 35.9	+1.1
MXZ	Matakaoa Point	16.83	187	P	P	16 41 37.3	-0.7
MXZ	Matakaoa Point	16.83	187	P	P	16 41 38.4	+0.5
URZ	Urewera	17.68	190	P	P	16 41 44.0	-1.6
URZ	Urewera 90nm,0.6s,baz=141,slow=2.7,SNR=8.1	17.68	190	P	P	16 41 44.1	-1.6
URZ	34nm,0.9s,baz=336,slow=23,SNR=6.3			S	S	16 44 41.0	+3.9
RAR	Rarotonga 12nm,0.5s,baz=174,slow=9.1,SNR=3.9	18.09	95	P	P	16 41 50.1	+0.4
BKZ	Black Stump Fm	18.66	191	P	P	16 41 55.2	+0.5
BFZ	Birch Farm	20.18	190	P	P	16 42 07.4	-0.9
SNZO	South Karori	21.08	193	P	P	16 42 15.1	-1.2
BHW	Baring Head	21.14	193	P	P	16 42 15.2	-1.7
QRZ	Quartz Range	21.16	198	P	P	16 42 16.3	-0.8
TKNZ	Takaka Hill	21.23	197	P	P	16 42 16.8	-1.0
TUWZ	Tuamarina	21.36	194	P	P	16 42 17.2	-1.6
THZ	Tophouse	21.93	196	P	P	16 42 22.9	-1.1
DSZ	Denniston Nort	22.22	198	P	P	16 42 25.9	-0.7
LHI	Lord Howe Isla baz=22	22.23	237	P	P	16 42 28.0	+1.2
KHZ	Kahutara	22.39	194	P	P	16 42 25.7	-2.3
LTZ	Lake Taylor	23.05	196	P	P	16 42 31.9	-2.1
HNR	Honiara	23.11	296	P	P	16 42 34.2	-0.6
HNR	Honiara 1μm,0.5s,baz=185,slow=6.0,SNR=23	23.11	296	P	P	16 42 33.6	-1.2
INZ	Inchbonnie	23.23	198	P	P	16 42 34.0	-1.4
RPZ	Rata Peaks	24.25	198	P	P	16 42 43.3	-1.2
RPZ	Rata Peaks	24.25	198	P	P	16 42 44.7	+0.3
RPZ	Rata Peaks 19nm,0.5s,baz=39,slow=2.4,SNR=4.2 19nm,0.5s	24.25	198	P	P	16 42 43.1	-1.4
FOZ	Fox Glacier	24.45	200	P	P	16 42 44.7	-1.5
JCZ	Jackson Bay	25.27	201	P	P	16 42 53.1	-0.4
MLZ	Mavora Lakes	26.63	200	P	P	16 43 05.4	0.0
DCZ	Deep Cove	27.04	202	P	P	16 43 08.3	-0.6
WHZ	Wether Hill Ro	27.16	200	P	P	16 43 09.6	-0.3
SYZ	Scrubby Hill	27.38	198	P	P	16 43 11.8	0.0
TBI	Tubuai	27.59	101	*e*P	P	16 43 13.6	-0.4
TBI	2μm,29.5s			*e*S	S	16 47 11.6	-1.9
TBI	786nm,29.2s			*e*sS	sS	16 50 12.3	-2.2
EIDS	Eidsvold baz=28,SNR=19	27.73	255	P	P	16 43 14.7	-0.5
EIDS	Eidsvold	27.73	255	P	P	16 43 14.8	-0.4
EIDS	comp=Z,30nm,0.5s			IAmb	IAmb	16 43 16.6	
EIDS	Eidsvold	27.73	255	P	P	16 43 15.2	0.0
ARMA	Armidale baz=28,SNR=15	27.97	244	P	P	16 43 18.1	+0.8
ARMA	Armidale	27.97	244	P	P	16 43 17.9	+0.6
PPT2	Papeete2 comp=Z,217nm,25.8s	28.08	89	*e*S	S	16 47 13.5	-7.9
PPT2	comp=Z,232nm,26.0s			*e*sS	sS	16 50 13.0	-10
PPT	Papeete comp=Z,19nm,0.7s,baz=97,slow=20,SNR=1.7 comp=Z,19nm,0.7s	28.09	88	P	P	16 43 19.0	+0.6
RK1H	Rockhampton Ha	28.23	259	P	P	16 43 19.3	-0.2
MGCD	Mangrove Creek baz=29,SNR=5.2	29.13	239	P	P	16 43 28.0	+0.9
MGCD	Mangrove Creek	29.13	239	P	P	16 43 27.0	-0.2
SYDH	Sydney Hard Ro	29.59	238	P	P	16 43 32.6	+1.5
XMAS	Kiritimati	31.11	46	P	P	16 43 45.4	+1.0
CNB	Canberra Magne baz=31,SNR=19	31.16	236	P	P	16 43 45.1	+0.5
CNB	Canberra Magne	31.16	236	P	P	16 43 45.4	+0.8
CAN	Canberra	31.45	236	P	P	16 43 48.1	+1.1
CAN	Canberra	31.45	236	P	P	16 43 46.9	-0.1
CAN	comp=Z,20nm,1.4s			pmax	pmax		
CAN	Canberra	31.45	236	P	P	16 43 47.8	+0.8
MILA	Mila baz=32,SNR=3.2	31.93	233	P	P	16 43 51.4	+0.4
MILA	Mila	31.93	233	P	P	16 43 52.3	+1.3
TV1H	Townsville Har	32.01	267	P	P	16 43 51.6	-0.3
CTA	Charters Tower	32.40	265	P	P	16 43 55.2	-0.1
CTA	Charters Tower comp=Z,127nm,0.4s,baz=89,slow=9.8,SNR=538	32.40	265	P	P	16 43 55.1	-0.1
CTA	comp=Z,2.7nm,0.8s,baz=188,slow=23,SNR=3.8 comp=Z,127nm,0.4s			S	S	16 48 26.4	-0.9
CTAO	Charters Tower	32.40	265	P	P	16 43 55.2	-0.1
CTAO	Charters Tower	32.40	265	P	P	16 43 55.1	-0.1
CTAO	Charters Tower	32.40	265	P	P	16 43 55.2	-0.1
CTAO	comp=Z,143nm,0.5s			pmax	pmax		
CTAO	Charters Tower	32.40	265	↓P	P	16 43 55.1	-0.1
CTAO				PcP	PcP	16 46 23.1	+0.1
RABL	Rabaul	32.43	297	P	P	16 43 55.8	+0.3
CMSA	Cobar Meteorol baz=33,SNR=35	33.19	244	P	P	16 44 01.4	-0.2
CMSA	Cobar Meteorol	33.19	244	P	P	16 44 01.6	0.0
QLP	Quilpie baz=34,SNR=46	33.94	253	P	P	16 44 07.8	-0.3
QLP	Quilpie	33.94	253	P	P	16 44 08.0	0.0
PMG	Port Moresby	34.38	284	P	P	16 44 11.4	-0.4
PMG	Port Moresby	34.38	284	P	P	16 44 11.5	-0.3
PMG	Port Moresby	34.38	284	*i*P	P	16 44 11.5	-0.3
PMG	comp=Z,126nm,0.7s			pmax	pmax		
PMG	Port Moresby	34.38	284	P	P	16 44 11.5	-0.3
KAVG	Kavieng	34.44	298	P	P	16 44 11.8	-0.5
MTSU	Mount Surprise baz=34,SNR=470	34.51	268	P	P	16 44 12.7	-0.2
MTSU	Mount Surprise	34.51	268	P	P	16 44 12.7	-0.2
TOO	Toolangi baz=35,SNR=20	34.85	234	P	P	16 44 15.6	+0.3
TOO	Toolangi	34.85	234	P	P	16 44 15.7	+0.3
TAU	Tasmania Unive	35.65	224	P	P	16 44 22.3	+0.5
COEN	Coen baz=37,SNR=192	36.54	275	P	P	16 44 29.6	+0.1
COEN	Coen	36.54	275	P	P	16 44 29.7	+0.1
COEN	Coen	36.54	275	P	P	16 44 29.7	+0.1
STKA	Stephens Creek baz=37,SNR=44	36.69	244	P	P	16 44 30.8	+0.2
STKA	Stephens Creek	36.69	244	P	P	16 44 30.7	+0.2
STKA	Stephens Creek	36.69	244	↓P	P	16 44 30.5	-0.1
STKA	Stephens Creek comp=Z,13nm,0.5s,baz=91,slow=10,SNR=45	36.69	244	P	P	16 44 30.7	+0.2
STKA				ScP	ScP	16 49 24.2	+0.5
INKA	Innaminka comp=Z,3.0nm,0.8s,baz=64,slow=6.8,SNR=3.1 comp=Z,13nm,0.5s	37.09	251	P	P	16 44 34.4	+0.6
ARPS	Mount Arapiles baz=38,SNR=28	37.42	236	P	P	16 44 36.5	+0.1
ARPS	Mount Arapiles	37.42	236	P	P	16 44 36.6	+0.2
MCQ	Macquarie Isla baz=38,SNR=3.6	37.50	201	P	P	16 44 38.3	+1.6
MCQ	Macquarie Isla	37.50	201	P	P	16 44 38.7	+2.0
MANU	Manus Island	37.61	295	P	P	16 44 38.1	-0.2
MANU	Manus Island	37.61	295	P	P	16 44 38.9	+0.6
JOHN	Johnston Islan	38.50	15	P	P	16 44 46.2	+0.9
JOHN	Johnston Islan	38.50	15	P	P	16 44 46.1	+0.9
JOHN				ScP	ScP	16 49 30.1	-0.6
QIS	Mount Isa baz=38,SNR=43	38.52	263	P	P	16 44 44.6	-1.0
QIS	Mount Isa	38.52	263	P	P	16 44 44.9	-0.7
HTT	Hallett baz=39,SNR=17	39.13	242	P	P	16 44 50.2	-0.2
HTT	Hallett	39.13	242	P	P	16 44 50.0	-0.3
LCRK	Leigh Creek	39.43	247	P	P	16 44 52.4	-0.3
TABU	Tabubil	41.44	286	P	P	16 45 09.6	+0.7
BBOO	Buckleboo baz=42,SNR=125	41.45	244	P	P	16 45 07.9	-0.7
BBOO	Buckleboo	41.45	244	P	P	16 45 08.2	-0.4
OOD	Oodnadatta	41.57	251	P	P	16 45 09.9	+0.3
MULG	Mulgathing	43.01	248	P	P	16 45 20.3	-0.5
AS01	Alice Springs	43.36	257	P	P	16 45 23.4	-0.3
AS31	Alice Springs comp=Z,35nm,0.5s	43.41	257	IAmb	IAmb	16 45 24.9	
ASAR	Alice Springs comp=Z,106nm,0.5s,baz=92,slow=7.7,SNR=1697	43.41	257	P	P	16 45 23.5	-0.5
ASAR	comp=Z,5.9nm,0.7s,baz=100,slow=4.2,SNR=4.4			PcP	PcP	16 46 57.7	-0.1
ASAR	comp=Z,3.0nm,0.7s,baz=98,slow=4.2,SNR=6.5			ScP	ScP	16 49 51.8	+1.4
ASAR	comp=Z,15nm,0.7s,baz=93,slow=16,SNR=36 comp=Z,106nm,0.5s			S	S	16 51 05.8	-2.7
ASPA	Alice Springs baz=43	43.41	257	P	P	16 45 23.5	-0.5
WC3	Warramunga Arr baz=44	43.47	263	P	P	16 45 23.5	-1.0
WB0	Warramunga Arr	43.48	263	P	P	16 45 23.8	-0.8
WB2	Warramunga Arr	43.49	263	P	P	16 45 23.6	-1.1
WRAB	Tennant Creek	43.49	263	P	P	16 45 23.4	-1.3
WRAB	Tennant Creek	43.49	263	P	P	16 45 23.4	-1.3
WRAB				pmax	pmax		
WRA	comp=Z,61nm,0.7s Warramunga Arr comp=Z,58nm,0.4s,baz=98,slow=8.1,SNR=862	43.50	263	P	P	16 45 23.6	-1.2
WRA				ScP	ScP	16 49 52.1	+1.3
WRA	comp=Z,1.3nm,0.7s,baz=102,slow=3.6,SNR=5.1			S	S	16 51 06.6	-3.3
GENI	comp=Z,2.7nm,0.8s,baz=96,slow=13,SNR=10 comp=Z,58nm,0.4s Genyem comp=Z,240nm,0.7s,comp=Z,4μm	43.58	289	P	P	16 45 26.5	+1.1
SMPI	Sarmi comp=Z,103nm,1.0s,comp=Z,2μm	45.15	289	P	P	16 45 37.5	+0.1
KHLU	Kahalu`u	46.17	31	P	P	16 45 45.2	+0.1
HMH	Humu'ula Sheep	46.38	32	P	P	16 45 47.2	+0.3
KEKH	Kekaha	46.58	25	P	P	16 45 48.2	+0.2
KIP	Kipapa	46.79	27	P	P	16 45 50.1	+0.5
KDU	Kakadu baz=47,SNR=157	46.89	272	P	P	16 45 49.4	-1.1
KDU	Kakadu	46.89	272	P	P	16 45 49.9	-0.6
MTN	Manton Dam baz=48,SNR=56	48.10	271	P	P	16 45 58.3	-1.3
MTN	Manton Dam	48.10	271	P	P	16 45 58.5	-1.0
FORT	Forrest baz=48,SNR=84	48.19	247	P	P	16 45 58.9	-1.0
FORT	Forrest	48.19	247	P	P	16 45 58.8	-1.1
FORT	Forrest	48.19	247	P	P	16 45 59.2	-0.7
WRKA	Warakurna baz=48,SNR=370	48.35	255	P	P	16 46 00.6	-0.7
WRKA	Warakurna	48.35	255	P	P	16 46 00.7	-0.7
GUMO	Guam comp=Z,120nm,0.7s,baz=170,slow=13,SNR=5.1 comp=Z,120nm,0.7s	49.20	311	P	P	16 46 07.5	0.0
GUMO	Guam	49.20	311	P	P	16 46 07.7	+0.2
KNRA	Kununurra baz=50,SNR=3.9	49.57	267	P	P	16 46 10.4	+0.1
FAKI	Fak Fak	50.54	284	P	P	16 46 16.8	-0.6
FITZ	Fitzroy Crossi baz=52,SNR=45	51.93	263	P	P	16 46 26.8	-0.4
FITZ	Fitzroy Crossi	51.93	263	P	P	16 46 26.9	-0.4
BNDI	Bandanaira	52.04	281	P	P	16 46 27.5	-0.6
SWI	Sorong comp=Z,400nm,0.8s,comp=Z,3μm	52.30	286	P	P	16 46 30.2	+0.2
DRV	Dumont d'Urvil	52.70	199	P	P	16 46 32.5	+0.6
KMBL	Kambalda baz=54,SNR=5.1	53.45	246	P	P	16 46 37.1	-0.9
KMBL	Kambalda	53.45	246	P	P	16 46 37.7	-0.3
NLAI	Namlea comp=Z,58nm,0.5s	55.11	281	P	P	16 46 50.3	+0.6
SOEI	Soe	55.45	272	P	P	16 46 53.1	+0.9
SOEI	Soe comp=Z,320nm,0.7s,comp=Z,3μm	55.45	272	P	P	16 46 52.9	+0.7
LBMI	Labuha comp=Z,100nm,0.6s,comp=Z,3μm	55.80	284	P	P	16 46 55.1	+0.6
PSA00	Pilbara Seismi comp=Z,63nm,0.7s	56.55	257	IAmb	IAmb	16 47 00.0	
PSA00	Pilbara Seismi comp=Z,20nm,0.8s	56.55	257	IAmb	IAmb	16 47 00.8	
PSA00	Pilbara Seismi	56.55	257	P	P	16 46 58.5	-1.1
SANI	Sanana	56.60	282	P	P	16 46 59.7	-0.3
SANI	Sanana comp=Z,59nm,0.7s,comp=Z,799nm	56.60	282	P	P	16 46 59.2	-0.8
MEEK	Meekatharra baz=57,SNR=16	56.80	251	P	P	16 46 59.9	-1.4
MEEK	Meekatharra	56.80	251	P	P	16 46 59.9	-1.4
KLBR	Kellerberrin baz=57,SNR=22	56.95	245	P	P	16 47 01.3	-0.

JAGI Jajag, Banyuwa 65.31 270 P P 16 47 55.7 -1.1
JAGI IAmb IAmb 16 47 57.1
comp=Z,51nm,1.0s
JAGI Jajag, Banyuwa 65.31 270 P P 16 47 55.9 -0.9
JAGI Jajag, Banyuwa 65.31 270 P P 16 47 55.2 -1.6
comp=Z,62nm,0.9s,comp=Z,928nm
BLJI Banyuglugur 66.07 271 P P 16 48 01.5 0.0
comp=Z,83nm,0.6s,comp=Z,1µm
MTKI Muara Teweh, K 67.25 278 P P 16 48 09.0 +0.3
comp=Z,52nm,0.7s
KKM Kota Kinabalu 68.81 285 P P 16 48 18.4 +0.1
UGM Wanagama 68.89 269 P P 16 48 18.1 -0.6
QSPA South Pole Qui 69.24 180 P P 16 48 20.3 +0.4
comp=Z,27nm,0.9s,baz=10,slow=1.1,SNR=69
comp=Z,27nm,0.9s
QSPA South Pole Qui 69.24 180 P P 16 48 20.4 +0.4
QSPA pP **pP 16 50 28.5 +3.6**
JGF Kuroka 69.63 323 P P 16 48 22.2 -0.4
MJAR Matsushiro Arr 69.84 324 P P 16 48 23.7 -0.1
comp=Z,12nm,0.7s,baz=154,slow=5.3,SNR=41
comp=Z,12nm,0.7s
MAJO Matsushiro 69.85 324 P P 16 48 23.7 -0.2
MAJO IAmb IAmb 16 50 20.2
comp=Z,79nm,1.7s
MAJO Matsushiro 69.85 324 P P 16 48 23.7 -0.2
MAJO Matsushiro 69.85 324 *i* P P 16 48 23.6 -0.2
MAJO pmax pmax
comp=Z,78nm,2.2s
MAJO Matsushiro 69.85 324 P P 16 48 23.5 -0.3
MJB9 Matsu-Tunnel 69.85 324 IAmb IAmb 16 50 21.2
comp=Z,79nm,1.7s
STKI Sintang 70.79 278 P P 16 48 30.9 +1.0
comp=Z,41nm,0.7s
SBUM Sibu 71.01 280 P P 16 48 30.5 -0.6
BBJI Bungbulang 71.73 269 P P 16 48 35.0 -0.4
LEM Lembang 71.97 269 P P 16 48 36.7 -0.2
LEM pmax pmax
comp=Z,74nm,0.9s
KIWB Kanaga Island 72.38 1 P P 16 48 38.2 0.0
KSM Kuching 72.40 279 P P 16 48 39.1 0.0
KSM IAmb IAmb 16 48 40.7
comp=Z,38nm,0.6s
ADK Adak 72.43 2 P P 16 48 37.8 -0.6
ADK Adak 72.43 2 P P 16 48 37.9 -0.6
ADK Adak 72.43 2 P P 16 48 37.8 -0.6
ADK pmax pmax
comp=Z,60nm,0.6s
TWG Pinlang 72.66 303 IAmb IAmb 16 48 40.3
comp=Z,44nm,0.6s
YULB Yu-li 72.79 304 P P 16 48 40.8 -0.4
ATKA Atka Island 72.84 3 P P 16 48 40.2 -0.6
TPUB Ta-pu 73.26 304 P P 16 48 42.4 -1.5
TPUB Ta-pu 73.26 304 P P 16 48 43.2 -0.7
SSLB Suanglung 73.27 304 IAmb IAmb 16 48 44.2
comp=Z,50nm,0.7s
SSLB Suanglung 73.27 304 P P 16 48 42.8 -1.1
NIKH Nikolski High 74.03 6 P P 16 48 47.3 -0.2
NIKH Nikolski High 74.03 6 P P 16 48 47.1 -0.4
baz=190
UNV Unalaska Valle 75.16 8 P P 16 48 53.1 -0.6
UNV Unalaska Valle 75.16 8 P P 16 48 52.7 -1.1
baz=192
KASI Kota Agung 75.33 270 P P 16 48 54.9 -0.8
comp=Z,41nm,0.9s
AKUT Akutan 75.53 8 P P 16 48 55.1 -0.7
YSS Yuzh-Sakhalins 75.71 334 *e* P P 16 48 57.4 +0.4
YSS *e* 16 57 49.9
YSS pmax pmax
comp=Z,20nm,1.0s
LWLI Liwa 75.91 270 P P 16 49 01.7 +2.7
comp=Z,117nm,0.7s
PET Petropavlovsk 76.03 346 P P 16 48 58.3 -0.2
PEA0B Petropavlovsk- 76.32 346 *ce* P P 16 49 00.4 +0.2
PETK Petropavlovsk- 76.32 346 P P 16 48 59.5 -0.6
comp=Z,13nm,0.6s,baz=112,slow=5.9,SNR=48
comp=Z,13nm,0.6s
KSRS Korea Array 76.43 319 P P 16 49 02.1 +1.0
comp=Z,3.7nm,0.8s,baz=128,slow=6.0,SNR=8.2
comp=Z,3.7nm,0.8s
FALS False Pass 76.57 9 P P 16 49 01.0 -0.4
baz=195
MNAI Manna 77.17 270 P P 16 49 06.3 +0.6
CHNA Chernabura Isl 77.19 11 P P 16 49 04.6 -0.2
baz=199
SDPT Sand Point 77.52 11 P P 16 49 06.2 -0.4
SDPT Sand Point 77.52 11 P P 16 49 06.2 -0.4
baz=198
MYKOM Kota Tinggi 78.51 276 P P 16 49 12.8 -0.2
MYKOM IAmb IAmb 16 51 50.6
comp=Z,62nm,1.5s
S14K Fog Glacier 78.57 11 P P 16 49 12.5 +0.1
baz=199
USA0B Ussuriysk Arra 78.64 326 *i* P P 16 49 13.6 +0.7
USRK Ussuriysk Ar. 78.64 326 P P 16 49 13.8 +1.0
comp=Z,16nm,0.8s,baz=125,slow=3.1,SNR=26
comp=Z,16nm,0.8s
SCI2 San Clemente I 78.78 48 P P 16 49 14.3 +0.4
baz=236
CHGN Chignik 78.80 12 P P 16 49 13.2 -0.1
baz=200
TYV Tymovskoe 78.90 336 *e* P P 16 49 14.4 +0.3
TYV *e* S S 16 58 17.9 -4.3
TYV pmax pmax
comp=Z,19nm,1.0s
TYV pmax pmax
comp=Z,200nm,4.1s
TYV smax smax
comp=N,500nm,5.6s
TYV smax smax
comp=E,500nm,5.6s
CHIR Chirikof Islan 78.91 13 P P 16 49 14.9 +0.9
baz=202
PKM Mcpherson Peak 78.98 46 P P 16 49 15.6 +0.4
baz=235
CIS Catalina Islan 79.11 48 P P 16 49 16.5 +0.9
baz=236
NJ2 Nanjing 79.27 310 ⇑P P 16 49 17.1 +0.6
NJ2 pmax pmax
comp=E,10.0nm,0.8s
BCW Bitter Crk WRg 79.28 46 IAmb IAmb 16 49 19.8
comp=Z,28nm,0.7s
HOPS Hopland Field 79.31 41 IAmb IAmb 16 49 18.8
comp=Z,32nm,0.7s
FMP Fort Macarthur 79.36 48 P P 16 49 18.8 +1.8
baz=236
GDXM Geysers 79.37 41 IAmb IAmb 16 49 19.9
comp=Z,84nm,1.9s
BELA Belgrano 2 79.37 173 P P 16 49 16.1 -0.2
KMPM Mount Pierce 79.56 40 IAmb IAmb 16 49 22.6
comp=Z,40nm,0.7s
DECC Green Verdugo 79.63 47 P P 16 49 20.0 +1.6
baz=236
109C Camp Elliot, M 79.74 49 P P 16 49 20.1 +1.2
baz=237
ARVC Arvin 79.78 46 P P 16 49 20.6 +1.5
baz=236
SII Sitkinak Islan 79.91 14 P P 16 49 19.9 +0.6
SII Sitkinak Islan 79.91 14 P P 16 49 19.9 +0.6
baz=204
VES Vestal, Richgr 80.02 46 P P 16 49 21.9 +1.6
baz=235,SNR=13
MURC Murrieta 80.06 48 P P 16 49 21.8 +1.2
baz=237
KHMM Horse Mountain 80.08 39 IAmb IAmb 16 49 24.2
comp=Z,26nm,0.7s
BFSC Mount Baldy Ra 80.09 48 P P 16 49 22.0 +1.1
baz=236,SNR=8.5
MDJ Mudanjiang 80.18 326 P P 16 49 22.0 +1.1
MDJ PcP **PcP 16 49 25.4 -0.4**
MDJ pP pP 16 51 30.4 -0.6
MDJ sP sP 16 52 33.1 -0.9
MDJ PP **PP 16 52 38.6 +2.8**
MDJ S **SKSac 16 58 41.4 +2.0**
MDJ ScS **ScS 16 58 48.2 -1.8**
MDJ pmax pmax
comp=Z,22nm,1.6s
MDJ pmax pmax
comp=Z,390nm,3.6s
EDW2 Edwards Air Fo 80.22 47 P P 16 49 22.7 +1.3
baz=236,SNR=11
MONP2 Monument Peak 80.23 49 P P 16 49 22.9 +1.1
baz=237,SNR=11
IKP In-Ko-Pah, Jac 80.32 50 P P 16 49 23.3 +1.2
baz=238,SNR=7.7
ISA Isabella, Lake 80.33 46 P P 16 49 23.4 +1.4
baz=236,SNR=15

PFO Pinyon Flats O 80.59 49 P P 16 49 24.1 +0.7
PFO Pinyon Flats O 80.59 49 P P 16 49 24.8 +1.4
baz=237,SNR=5.9
PFO Pinyon Flats O 80.59 49 *i* P P 16 49 24.2 +0.7
PFO pmax pmax
comp=Z,47nm,2.0s
TPFO Pinon Flats 80.59 49 P P 16 49 24.5 +1.0
baz=237
KSXB Camp Six Broad 80.59 39 IAmb IAmb 16 49 27.3
comp=Z,56nm,1.4s
AFDM Forest Hills D 80.59 42 IAmb IAmb 16 49 25.7
comp=Z,69nm,1.7s
SLBS Sierra La Lagu 80.59 60 P P 16 49 23.6 -0.1
ORV Oroville 80.62 41 IAmb IAmb 16 49 25.8
comp=Z,133nm,1.9s
PDSI Padang 80.70 273 P P 16 49 24.4 0.0
comp=Z,16nm,0.8s
OHAK Old Harbor 80.71 14 P P 16 49 23.3 0.0
OHAK Old Harbor 80.71 14 P P 16 49 23.8 +0.4
baz=204
LRMC Laurel Mtn Rad 80.76 47 P P 16 49 25.5 +1.2
baz=236,SNR=11
L02F Cave Junction 80.95 38 IAmb IAmb 16 49 29.0
comp=Z,70nm,1.9s
CWC Cottonwood Cre 81.02 46 P P 16 49 27.3 +1.5
baz=236
MDPB Devils Postpil 81.04 44 IAmb IAmb 16 49 29.1
comp=Z,50nm,1.6s
BELC Belle Mtn. Jos 81.12 49 P P 16 49 27.6 +1.4
baz=237,SNR=6.9
Q17K Contact Creek 81.12 12 P P 16 49 25.4 -0.2
baz=202
O14K Tigyukauivet M 81.13 9 P P 16 49 25.3 -0.1
baz=197
MLAC Mammoth, Mammo 81.20 44 P P 16 49 28.2 +1.5
baz=235
MPMC Manual Prospec 81.21 46 P P 16 49 27.7 +1.0
baz=236,SNR=33
YBH Yreka Blue Hor 81.21 39 IAmb IAmb 16 49 29.3
comp=Z,30nm,0.6s
K02D Willamette Mer 81.25 38 IAmb IAmb 16 49 29.5
comp=Z,122nm,2.0s
GSC Goldstone, Bar 81.26 47 IAmb IAmb 16 49 29.4
comp=Z,68nm,1.8s
GSC Goldstone, Bar 81.26 47 P P 16 49 27.7 +0.8
baz=237,SNR=13
TIN Tinemaha, Big 81.27 45 P P 16 49 28.3 +1.4
baz=236,SNR=9.2
O15K Ungalikthiuk R 81.28 10 P P 16 49 26.1 -0.1
baz=198
WAKR Walker 81.31 43 IAmb IAmb 16 49 30.9
comp=Z,94nm,1.5s
BC3 Big Chuckawall 81.32 49 P P 16 49 28.4 +1.2
baz=238
HEC Hector,Ludlow 81.33 48 P P 16 49 27.9 +0.7
baz=236,SNR=29
Q16K King Salmon 81.36 12 P P 16 49 26.9 +0.2
baz=201
KDAK Kodiak Island 81.38 14 P P 16 49 27.3 +0.5
baz=205
M11K Mekoryuk 81.60 6 P P 16 49 29.3 +1.5
baz=192
HUMO Hull Mountain 81.61 38 IAmb IAmb 16 49 32.4
comp=Z,97nm,1.7s
YERR Yerington 81.71 43 IAmb IAmb 16 49 31.4
comp=Z,33nm,0.6s
N14K Kuskokwak Cree 81.71 9 P P 16 49 29.4 +1.1
baz=196
DBO Dodson Butte 81.76 38 IAmb IAmb 16 49 32.1
comp=Z,93nm,1.9s
LHV Little Huntoon 81.76 44 IAmb IAmb 16 49 33.0
comp=Z,68nm,1.5s
GMRC Granite Mounta 81.77 48 P P 16 49 30.3 +0.8
baz=238,SNR=14
WHN Wuhan 81.78 307 ⇑P P 16 49 30.2 +0.7
IRM Iron Mountain 81.80 49 P P 16 49 31.2 +1.6
baz=238,SNR=6.7
GRAC Grapevine Rang 81.81 45 IAmb IAmb 16 49 32.5
comp=Z,34nm,0.7s
GRAC Grapevine Rang 81.81 45 P P 16 49 30.7 +1.2
baz=236,SNR=25
GWY Greenwater Val 81.83 46 IAmb IAmb 16 49 31.6
comp=Z,21nm,0.6s
FURC Furuse Creek, 81.86 46 P P 16 49 30.9 +1.2
baz=237
P17K Kvichak River 81.89 12 P P 16 49 29.4 +0.1
baz=201
CN2 Changchun 81.91 323 P P 16 49 30.3 +0.5
CN2 pmax pmax
comp=Z,10.0nm,1.2s
TUQ Turquoise Moun 81.94 47 P P 16 49 31.6 +1.3
baz=237
SHOC Shoshone, Teco 81.95 47 P P 16 49 31.3 +1.1
baz=237
O16K Kokwok River B 81.96 11 P P 16 49 29.3 -0.4
baz=200
NVAR Mina Array Bea 82.00 44 P P 16 49 31.4 +0.7
comp=Z,10nm,0.6s,baz=225,slow=7.7,SNR=116
comp=Z,10nm,0.6s
GMN Gold Mountain 82.05 45 IAmb IAmb 16 49 33.1
comp=Z,79nm,1.9s
113A Mohawk Valley, 82.06 51 IAmb IAmb 16 49 33.6
comp=Z,113nm,1.9s
BNX BinXian 82.08 325 ⇓P P 16 49 30.3 -0.3
BNX pmax pmax
comp=Z,25nm,0.8s
BNX pmax pmax
comp=Z,130nm,4.3s
NV11 Mina Array Sit 82.09 44 IAmb IAmb 16 49 33.6
comp=Z,82nm,1.6s
IPM Ipoh 82.11 278 IAmb IAmb 16 49 33.1
comp=Z,38nm,0.7s
IPM Ipoh 82.11 278 P P 16 49 32.5 +0.9
N15K Kwethluk River 82.18 9 P P 16 49 32.0 +1.2
baz=198
WCT Wildcat Mounta 82.19 46 IAmb IAmb 16 49 34.2
comp=Z,22nm,0.6s
Q19K Cape Douglas, 82.20 13 P P 16 49 31.1 +0.2
baz=204
KLR Kul'dur 82.27 330 *ce* P P 16 49 32.0 +0.5
KLR pmax pmax
comp=Z,12nm,1.0s
P18K Big Mountain, 82.30 12 P P 16 49 31.0 -0.4
baz=202,SNR=5.8
O17K Koliganek Bris 82.31 11 P P 16 49 31.3 -0.1
baz=201
K04D Chiloquin, OR 82.32 39 IAmb IAmb 16 52 33.1
comp=Z,39nm,0.7s
214A Organ Pipe Nat 82.35 52 P P 16 49 33.9 +1.5
baz=240
GULI GuiLin 82.38 301 ⇓P P 16 49 30.7 -1.9
GULI pmax pmax
comp=Z,20nm,0.9s
M14K Bethel 82.47 8 IAmb IAmb 16 49 33.5
comp=Z,28nm,0.7s
M14K Bethel 82.47 8 P P 16 49 33.0 +0.8
baz=196,SNR=6.6
NEE2 Needles Airpor 82.49 49 P P 16 49 34.8 +1.8
baz=238,SNR=5.5
TPNV Topopah Spring 82.53 46 P P 16 49 34.2 +0.9
baz=237,SNR=23
PDMCI Parker Dam,Lak 82.59 49 P P 16 49 34.5 +1.0
baz=239,SNR=6.4
M15K Kasigluk River 82.60 9 P P 16 49 33.7 +0.9
baz=197
COR Corvallis 82.64 37 P P 16 49 35.0 +1.6
COR IAmb IAmb 16 49 37.1
comp=Z,29nm,0.9s
COR Corvallis 82.64 37 P P 16 49 35.0 +1.6
COR pmax pmax
comp=Z,29nm,1.0s
I04A Tendick Farm, 82.65 38 IAmb IAmb 16 49 36.1
comp=Z,21nm,0.8s
N16K Nishlik Lake 82.68 10 P P 16 49 34.3 +0.9
baz=199
O18K Koktuh Hills 82.73 12 P P 16 49 33.5 -0.1
baz=202,SNR=14
V12A Nelson 82.83 48 IAmb IAmb 16 49 37.6
comp=Z,50nm,1.7s
L14K Kuka Creek 82.94 8 P P 16 49 35.1 +0.6
baz=195
P19K Oil Pt 82.95 13 P P 16 49 34.5 -0.2
baz=204
M16K Timber Creek 83.17 10 P P 16 49 37.3 +1.6
baz=199,SNR=8.4
O19K Port Alsworth 83.22 12 P P 16 49 35.7 -0.3
baz=203,SNR=21
S11A Rachel 83.25 46 IAmb IAmb 16 49 39.4
comp=Z,93nm,1.8s
H04A Detroit Lake 83.33 37 IAmb IAmb 16 49 38.4
comp=Z,25nm,0.6s
N18K Kilae Creek 83.37 11 P P 16 49 36.5 -0.2
baz=202
L15K Ungalak Mounta 83.43 8 P P 16 49 37.7 +0.8
baz=197
PSI Prapat 83.46 275 P P 16 49 36.2 -2.2
PSI pmax pmax
comp=Z,21nm,0.8s
O20K Slope Mountain 83.47 13 P P 16 49 36.8 -0.4
baz=205
SKLT Songkhla 83.48 280 P P 16 49 40.1 +1.8
PINE Pine Mountain 83.50 38 IAmb IAmb 16 49 40.8
comp=Z,36nm,0.7s
RADR Rader Ridge 83.52 35 IAmb IAmb 16 49 41.6
comp=Z,69nm,1.4s
BRSE Bradley Lake S 83.57 14 P P 16 49 37.8 +0.1
baz=206
I05D Terrebonne, OR 83.60 38 IAmb IAmb 16 49 40.2
comp=Z,19nm,0.7s
R11B Troy Canyon, C 83.73 45 P P 16 49 39.2 -0.1
baz=237,SNR=9.6
L16K Owhat River 83.75 9 P P 16 49 39.4 +0.8
baz=198
N19K Bonanza Creek 83.76 12 IAmb IAmb 16 49 39.4
comp=Z,80nm,1.8s
N19K Bonanza Creek 83.76 12 P P 16 49 38.6 -0.1
baz=203
M17K Holitna River 83.78 10 P P 16 49 39.5 +0.8
baz=200
BMN Battle Mountai 83.81 43 IAmb IAmb 16 49 42.1
comp=Z,93nm,1.9s
SVW2 Sparrevohn 83.82 11 IAmb IAmb 16 50 15.9
comp=Z,48nm,1.8s
F04A Amboy 83.97 36 IAmb IAmb 16 49 42.4
comp=Z,26nm,0.7s
K15K Wolf Creek Mou 84.01 8 P P 16 49 40.8 +0.9
baz=196
HOOD Mount Hood Mea 84.02 37 IAmb IAmb 16 49 42.7
comp=Z,89nm,1.9s
TUC Tucson 84.02 52 P P 16 49 42.0 +1.3
TUC IAmb IAmb 16 49 43.8
comp=Z,91nm,1.9s
TUC Tucson 84.02 52 P P 16 49 42.7 +2.0
baz=241
TUC Tucson 84.02 52 P P 16 49 42.0 +1.3
TUC pmax pmax
comp=Z,91nm,1.9s
WVOR Wild Horse Val 84.06 40 IAmb IAmb 16 51 59.8
comp=Z,27nm,0.6s
C03A Quillayute Air 84.09 33 IAmb IAmb 16 49 44.7
comp=Z,77nm,1.4s
M18K Stony River 84.14 11 P P 16 49 40.9 +0.5
baz=202
G05A Wamic 84.16 37 IAmb IAmb 16 49 43.5
comp=Z,102nm,1.8s
GSI Gunungsitoli 84.18 274 P P 16 49 42.5 +0.7
GSI Gunungsitoli 84.18 274 P P 16 49 42.7 +0.9
comp=Z,75nm,0.8s
SEW Seward 84.19 14 P P 16 49 41.1 +0.4
baz=208
J14K Nanvaranak Lak 84.20 7 P P 16 49 40.6 -0.1
baz=195
L17K Donlin 84.33 10 P P 16 49 41.7 +0.3
baz=200
O22K Cooper Landing 84.46 14 P P 16 49 41.6 -0.5
baz=207
I07A Izee 84.50 39 IAmb IAmb 16 49 45.7
comp=Z,83nm,1.6s
G06A Carlson Farm, 84.54 37 IAmb IAmb 16 49 45.2
comp=Z,43nm,1.4s
N20K Mount Spurr 84.57 13 P P 16 49 42.2 -0.5
baz=205
X16A Lo Mia Camp, P 84.57 50 IAmb IAmb 16 49 46.5
comp=Z,48nm,1.7s
P23K Montague Islan 84.59 15 P P 16 49 43.1 +0.4
baz=210
L18K Granite Mounta 84.67 10 IAmb IAmb 16 49 44.9
comp=Z,53nm,1.8s
L18K Granite Mounta 84.67 10 P P 16 49 43.8 +0.8
baz=201
J08A Circle Bar Ran 84.69 40 IAmb IAmb 16 49 46.4
comp=Z,66nm,1.5s
319A Douglas 84.70 54 IAmb IAmb 16 49 46.7
comp=Z,24nm,0.7s
GNW Green Mountain 84.76 34 IAmb IAmb 16 49 46.1
comp=Z,15nm,0.6s
M19K Big River Lodg 84.79 11 P P 16 49 43.6 0.0
baz=203,SNR=5.5
K17K Iditarod 84.88 9 P P 16 49 45.0 +1.0
baz=200
L19K White Mountain 84.96 11 P P 16 49 45.2 +0.7
baz=203
HNS HongShan 84.98 313 ⇑P P 16 49 46.1 +1.0
HNS pmax pmax
comp=Z,17nm,1.0s
RC01 Rabbit Creek A 85.00 14 P P 16 49 44.7 0.0
baz=207
M20K Styx River 85.01 12 P P 16 49 44.9 +0.2
baz=204
SZCU Shurtz Canyon 85.02 47 IAmb IAmb 16 49 48.5
comp=Z,57nm,2.0s
HEH HeiHe 85.03 329 *e* P P 16 49 45.2 +0.2
HEH S S **16 59 24.9 +1.8**
HEH pmax pmax
comp=Z,23nm,0.6s
HEH pmax pmax
comp=Z,120nm,6.0s
CBB Campbell River 85.04 31 IAmb IAmb 16 49 47.7
comp=Z,101nm,1.8s
J16K Anvik River 85.09 8 P P 16 49 45.4 +0.3
baz=197
PGC Sidney 85.11 33 IAmb IAmb 16 49 47.2
comp=Z,14nm,0.6s
SUA Susitna One 85.11 13 IAmb IAmb 16 49 45.9
comp=Z,25nm,0.6s
SUA Susitna One 85.11 13 P P 16 49 45.2 -0.1
baz=206,SNR=12
LYN LuoYang 85.14 310 ⇑P P 16 49 47.0 +1.1
LYN S S **16 59 29.0 +4.2**
LYN pmax pmax
comp=Z,37nm,0.8s
WUAZ Wupatki 85.16 49 P P 16 49 47.5 +1.2
baz=240
BJI Beijing 85.38 316 P P 16 49 47.2 +0.3
BJI S S **16 59 29.2 +2.4**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI pmax pmax
comp=Z,39nm,4.6s
J17K VABM Dome 85.41 9 P P 16 49 46.4 -0.1
baz=199
L20K Farewell, AK 85.41 11 P P 16 49 46.6 0.0
baz=204
SKT Skwentna 85.42 13 P P 16 49 46.4 -0.2
baz=206
TTA Tatalina 85.45 10 IAmb IAmb 16 49 48.4
comp=Z,37nm,1.6s
TTA Tatalina 85.45 10 P P 16 49 47.4 +0.5
TTA Tatalina 85.45 10 P P 16 49 47.2 +0.3
baz=202
EYAK Cordova Ski Ar 85.48 16 P P 16 49 46.6 -0.3
EYAK Cordova Ski Ar 85.48 16 P P 16 49 47.1 +0.1
baz=211
M22K Willow 85.51 13 IAmb IAmb 16 49 47.8
comp=Z,27nm,0.9s
M22K Willow 85.51 13 P P 16 49 47.1 +0.1
baz=207
G08A Pilot Rock 85.52 38 IAmb IAmb 16 49 50.4
comp=Z,21nm,0.7s
KNK Knik Glacier 85.58 14 IAmb IAmb 16 49 48.4
comp=Z,18nm,0.6s
KNK Knik Glacier 85.58 14 P P 16 49 47.7 +0.2
baz=208,SNR=6.3
PMR Palmer 85.58 14 P P 16 49 47.3 -0.1
PMR Palmer 85.58 14 P P 16 49 47.7 +0.3
baz=208,SNR=6.0
LTY Liberty 85.73 36 IAmb IAmb 16 49 50.0
comp=Z,14nm,0.6s
E07A Sunnyside 85.76 37 IAmb IAmb 16 49 50.6
comp=Z,24nm,0.7s
ANM Nome 85.78 6 P P 16 49 48.6 +0.3
baz=193
J18K Innoko River 85.83 10 IAmb IAmb 16 49 49.8
comp=Z,41nm,1.6s
J18K Innoko River 85.83 10 P P 16 49 48.4 -0.2
baz=201

HAWA	**Hanford**		**85.84**	**37**	IAmb	IAmb	16 49 52.4		
	comp=Z,37nm,1.1s								
MTPU	**Mount Pierson**		**85.86**	**47**	IAmb	IAmb	16 49 53.1		
	comp=Z,65nm,1.8s								
GYA	**Guiyang**		**85.89**	**300**	⇓P	**P**	**16 49 51.0**	**+1.1**	
GYA					pmax	pmax			
	comp=Z,9.0nm,0.8s								
U33K	**Whale Pass**		**85.92**	**24**	P	**P**	**16 49 49.9**	**+0.8**	
	baz=222								
V35K	**Ketchikan**		**85.93**	**25**	P	**P**	**16 49 50.2**	**+1.1**	
	baz=224								
SML	**Sawmill**		**85.95**	**14**	P	**P**	**16 49 49.1**	**-0.2**	
	baz=209,SNR=5.2								
CUT	**Chulitna**		**86.06**	**13**	P	**P**	**16 49 49.1**	**-0.5**	
	baz=207,SNR=17								
MVU	**Marysvale**		**86.07**	**46**	IAmb	IAmb	16 49 53.6		
	comp=Z,28nm,0.9s								
M23K	**Glacier View**		**86.08**	**14**	P	**P**	**16 49 49.2**	**-0.6**	
	baz=209								
PPLA	**Purkeypile**		**86.11**	**12**	P	**P**	**16 49 49.9**	**-0.2**	
	baz=205								
BMRM	**Bremner River**		**86.14**	**16**	P	**P**	**16 49 49.9**	**-0.2**	
	baz=212,SNR=7.7								
E08A	**Dider Farm, El**		**86.17**	**37**	IAmb	IAmb	16 49 53.8		
	comp=Z,21nm,0.8s								
K20K	**Telida**		**86.18**	**11**	P	**P**	**16 49 49.9**	**-0.3**	
	baz=203								
H16K	**Elim**		**86.19**	**7**	P	**P**	**16 49 50.6**	**+0.4**	
	baz=196,SNR=8.8								
MESA	**MESA**		**86.19**	**18**	P	**P**	**16 49 50.6**	**0.0**	
	baz=214								
ELIB	**Princess Elisa**		**86.20**	**187**	*d*P	**P**	**16 49 50.2**	**-0.3**	
	comp=Z,13nm,0.7s								
SCM	**Sheep Creek Mo**		**86.21**	**15**	P	**P**	**16 49 50.5**	**+0.1**	
	baz=210,SNR=20								
KLU	**Klutina**		**86.25**	**15**	IAmb	IAmb	16 49 52.3		
	comp=Z,17nm,0.6s								
KLU	**Klutina**		**86.25**	**15**	P	**P**	**16 49 51.5**	**+0.8**	
	baz=211,SNR=11								
G15K	**Niukluk**		**86.33**	**6**	P	**P**	**16 49 51.2**	**+0.3**	
	baz=194								
CRQE	**Cirque**		**86.36**	**17**	P	**P**	**16 49 51.7**	**+0.4**	
	baz=213								
S32K	**Killisnoo**		**86.40**	**22**	P	**P**	**16 49 52.9**	**+1.6**	
	baz=221								
WRAK	**Wrangell Islan**		**86.44**	**24**	P	**P**	**16 49 52.5**	**+1.0**	
	baz=223								
SEY	**Seymchan**		**86.45**	**347**	*ce*P	**P**	**16 49 51.4**	**-0.1**	
SEY					pmax	pmax			
	comp=Z,28nm,1.3s								
J19K	**Poorman**		**86.51**	**10**	P	**P**	**16 49 52.1**	**+0.4**	
	baz=202,SNR=7.1								
PNL	**Peninsula**		**86.53**	**19**	P	**P**	**16 49 52.1**	**+0.1**	
PNL	**Peninsula**		**86.53**	**19**	P	**P**	**16 49 52.0**	**+0.1**	
	baz=217								
DUG	**Dugway, Tooele**		**86.53**	**45**	P	**P**	**16 49 53.5**	**+0.9**	
	baz=239								
TNA	**Tin City**		**86.54**	**5**	P	**P**	**16 49 51.9**	**+0.1**	
	baz=190								
F14K	**Arctic Creek**		**86.58**	**5**	P	**P**	**16 49 52.5**	**+0.4**	
	baz=192								
CAST	**Castle Rocks**		**86.61**	**12**	IAmb	IAmb	16 49 52.8		
	comp=Z,21nm,0.7s								
CAST	**Castle Rocks**		**86.61**	**12**	P	**P**	**16 49 51.6**	**-0.7**	
	baz=205,SNR=22								
PINM	**Pinnacle**		**86.62**	**18**	P	**P**	**16 49 52.7**	**+0.3**	
	baz=216								
VRDI	**Verde Repeater**		**86.66**	**16**	IAmb	IAmb	16 49 54.3		
	comp=Z,81nm,1.8s								
N25K	**Chitina, Valde**		**86.68**	**16**	IAmb	IAmb	16 49 54.5		
	comp=Z,27nm,0.6s								
N25K	**Chitina, Valde**		**86.68**	**16**	P	**P**	**16 49 53.0**	**+0.3**	
	baz=212,SNR=18								
E09A	**Wood Farm, Sta**		**86.69**	**37**	IAmb	IAmb	16 49 55.9		
	comp=Z,76nm,1.7s								
TIY	**Taiyuan**		**86.70**	**312**	*e*P	**P**	**16 49 54.6**	**+1.2**	
TIY					S	**S**	**16 59 47.8**	**+8.2**	
TIY					pmax	pmax			
	comp=Z,7.0nm,0.5s								
TIY					pmax	pmax			
	comp=Z,120nm,3.9s								
M24K	**Tolsona, Glenn**		**86.72**	**15**	IAmb	IAmb	16 49 54.5		
	comp=Z,25nm,0.6s								
M24K	**Tolsona, Glenn**		**86.72**	**15**	P	**P**	**16 49 53.9**	**+1.0**	
	baz=211,SNR=7.0								
GLB	**Gilahina Butte**		**86.74**	**16**	IAmb	IAmb	16 49 54.1		
	comp=Z,22nm,0.6s								
H17K	**Granite Mounta**		**86.76**	**8**	P	**P**	**16 49 52.7**	**-0.2**	
	baz=198								
WAT6	**Susitna Watana**		**86.77**	**14**	P	**P**	**16 49 53.0**	**-0.2**	
	baz=209,SNR=21								
WAT1	**Susitna Watana**		**86.81**	**14**	P	**P**	**16 49 52.6**	**-0.6**	
	baz=208								
G16K	**Koyuk River**		**86.90**	**7**	P	**P**	**16 49 53.5**	**0.0**	
	baz=196								
MCARA	**McCarthy VSAT**		**86.90**	**17**	IAmb	IAmb	16 49 55.4		
	comp=Z,27nm,1.3s								
J20K	**Nowinta River**		**86.93**	**11**	P	**P**	**16 49 54.1**	**+0.4**	
	baz=203								
F15K	**North Star Dit**		**86.97**	**6**	P	**P**	**16 49 53.8**	**-0.1**	
	baz=194								
Q16A	**Castle Valley**		**86.98**	**46**	IAmb	IAmb	16 49 58.9		
	comp=Z,83nm,1.8s								
CHUM	**Lake Minchumin**		**86.99**	**12**	P	**P**	**16 49 53.0**	**-1.0**	
	baz=205,SNR=15								
TRF	**Thorofare Moun**		**86.99**	**13**	P	**P**	**16 49 53.3**	**-0.9**	
	baz=207,SNR=27								
LOGN	**Logan Glacier**		**87.00**	**18**	IAmb	IAmb	16 49 55.3		
	comp=Z,23nm,0.6s								
BARN	**Barnard Glacie**		**87.00**	**17**	IAmb	IAmb	16 49 56.7		
	comp=Z,27nm,0.7s								
GCSA	**Galena City Sc**		**87.01**	**9**	P	**P**	**16 49 54.5**	**+0.4**	
	baz=201,SNR=10								
P29M	**Windy Craggy**		**87.01**	**20**	P	**P**	**16 49 55.0**	**+0.7**	
	baz=218								
CTG	**Chitna Glacier**		**87.02**	**17**	P	**P**	**16 49 54.6**	**+0.3**	
	baz=215,SNR=9.8								
R32K	**Eaglecrest**		**87.03**	**22**	P	**P**	**16 49 55.2**	**+0.8**	
	baz=221								
JIS	**Juneau Island**		**87.08**	**22**	P	**P**	**16 49 55.5**	**+1.0**	
TMUT	**Trail Mountain**		**87.15**	**46**	IAmb	IAmb	16 49 59.5		
	comp=Z,44nm,1.5s								
H18K	**Honhosa River**		**87.18**	**9**	P	**P**	**16 49 54.3**	**-0.6**	
	baz=199								
G17K	**Kiwalik Mounta**		**87.21**	**8**	P	**P**	**16 49 54.8**	**-0.2**	
	baz=197								
HARP	**HAARP**		**87.22**	**15**	P	**P**	**16 49 55.3**	**+0.2**	
	baz=212,SNR=5.9								
MPU	**Maple Canyon**		**87.22**	**45**	IAmb	IAmb	16 49 59.3		
	comp=Z,36nm,1.7s								
HLID	**Hailey**		**87.27**	**41**	IAmb	IAmb	16 49 59.6		
	comp=Z,31nm,1.4s								
HLID	**Hailey**		**87.27**	**41**	P	**P**	**16 49 57.1**	**+1.0**	
	baz=238,SNR=28								
DHY	**Denali Highway**		**87.28**	**14**	IAmb	IAmb	16 49 57.2		
	comp=Z,11nm,0.6s								
DHY	**Denali Highway**		**87.28**	**14**	P	**P**	**16 49 55.3**	**-0.3**	
	baz=210,SNR=8.7								
O29M	**Mount Kennedy**		**87.28**	**19**	IAmb	IAmb	16 49 57.4		
	comp=Z,58nm,1.7s								
O29M	**Mount Kennedy**		**87.28**	**19**	P	**P**	**16 49 55.8**	**+0.2**	
	baz=217								
C09A	**Chrisman Ranch**		**87.36**	**36**	IAmb	IAmb	16 49 59.0		
	comp=Z,23nm,0.8s								
ZEA	**Zeya**		**87.40**	**331**	P	**P**	**16 49 56.9**	**+0.8**	
TROLL	**Troll, Antarti**		**87.40**	**181**	⇑P	**P**	**16 49 56.2**	**0.0**	
	comp=Z,397nm,0.5s								
I20K	**Naaghedeneel**		**87.44**	**10**	P	**P**	**16 49 56.6**	**+0.5**	
	baz=203								
CTU	**Camp Tracy**		**87.48**	**45**	IAmb	IAmb	16 50 00.2		
	comp=Z,32nm,1.5s								
XAN	**Xi'an**		**87.48**	**308**	⇓P	**P**	**16 49 57.8**	**+0.7**	
XAN					S	**S**	**16 59 46.6**	**-0.4**	
XAN					pmax	pmax			
	comp=Z,25nm,0.8s								
SRU	**San Rafael Swe**		**87.52**	**46**	IAmb	IAmb	16 50 00.3		
	comp=Z,54nm,1.4s								
MCK	**McKinley**		**87.52**	**13**	P	**P**	**16 49 56.0**	**-0.6**	
	baz=208,SNR=15								
PAX	**Paxson**		**87.63**	**15**	P	**P**	**16 49 56.7**	**-0.4**	
	baz=211								
P30M	**Million Dollar**		**87.64**	**20**	P	**P**	**16 49 58.7**	**+1.5**	
	baz=219								
T35M	**Bob Quinn**		**87.65**	**24**	P	**P**	**16 49 58.1**	**+0.8**	
	baz=225								
SKAG	**Skagway**		**87.66**	**21**	IAmb	IAmb	16 49 60.0		
	comp=Z,49nm,1.6s								
SKAG	**Skagway**		**87.66**	**21**	P	**P**	**16 49 58.7**	**+1.5**	
SKAG	**Skagway**		**87.66**	**21**	P	**P**	**16 49 59.2**	**+2.0**	
	baz=220								
SNAA	**Sanae**		**87.71**	**179**	⇑P	**P**	**16 49 57.2**	**-0.4**	
	comp=Z,83nm,0.6s								
SNAA	**Sanae**		**87.71**	**179**	*i* P	**P**	**16 49 57.0**	**-0.6**	
SNAA					pmax	pmax			
	comp=Z,9.0nm,1.3s								
SNAA	**Sanae**		**87.71**	**179**	P	**P**	**16 49 57.4**	**-0.2**	
	comp=Z,2.3nm,0.5s,baz=192,slow=12,SNR=10								
	comp=Z,2.3nm,0.5s								
YUK8	**Steele Glacier**		**87.72**	**18**	P	**P**	**16 49 58.5**	**+0.7**	
	baz=216,SNR=25								
M26K	**Nabesna, AK**		**87.76**	**16**	P	**P**	**16 49 58.9**	**+1.2**	
	baz=213								
MNTX	**Cornudas Mount**		**87.81**	**55**	P	**P**	**16 49 59.4**	**+0.8**	
	baz=244								
H19K	**Roundabout Mou**		**87.81**	**9**	P	**P**	**16 49 57.9**	**+0.2**	
	baz=201								
G18K	**Tagagawik**		**87.84**	**8**	P	**P**	**16 49 57.7**	**-0.2**	
	baz=199								
YUK6	**Outpost Mounta**		**87.86**	**19**	P	**P**	**16 49 59.2**	**+0.8**	
	baz=218,SNR=6.8								
VNA3	**Neumayer Olymp**		**87.89**	**177**	⇑P	**P**	**16 49 58.1**	**-0.2**	
	comp=Z,26nm,0.6s								
TCUT	**Toone Canyon**		**87.92**	**44**	IAmb	IAmb	16 50 02.5		
	comp=Z,39nm,1.0s								
YUK3	**Moose Creek**		**87.92**	**17**	P	**P**	**16 49 58.8**	**+0.1**	
	baz=216,SNR=17								
P18A	**Preston Nutter**		**87.96**	**46**	IAmb	IAmb	16 50 01.9		
	comp=Z,47nm,1.8s								
S34M	**Telegraph Cree**		**87.98**	**23**	IAmb	IAmb	16 50 01.2		
	comp=Z,14nm,0.7s								
S34M	**Telegraph Cree**		**87.98**	**23**	P	**P**	**16 50 00.1**	**+1.4**	
	baz=224,SNR=12								
MVCO	**Mesa Verde**		**88.01**	**49**	P	**P**	**16 50 00.1**	**+0.4**	
	baz=242								
M27K	**Edge Creek, AK**		**88.02**	**16**	P	**P**	**16 49 59.7**	**+0.6**	
	baz=214								
H20K	**Anotleneega Mo**		**88.02**	**10**	P	**P**	**16 49 59.5**	**+0.7**	
	baz=203,SNR=18								
HYT	**Haines Junctio**		**88.02**	**19**	IAmb	IAmb	16 50 00.8		
	comp=Z,54nm,1.8s								
HYT	**Haines Junctio**		**88.02**	**19**	P	**P**	**16 50 00.1**	**+1.0**	
	baz=218,SNR=6.1								
MENT	**Mentasta**		**88.03**	**15**	IAmb	IAmb	16 49 59.8		
	comp=Z,11nm,0.6s								
F17K	**Baldwin Pennin**		**88.04**	**7**	IAmb	IAmb	16 50 00.0		
	comp=Z,41nm,1.7s								
F17K	**Baldwin Pennin**		**88.04**	**7**	P	**P**	**16 49 58.9**	**+0.1**	
	baz=197,SNR=6.8								
YUK4	**Talbot Arm**		**88.09**	**18**	P	**P**	**16 50 00.5**	**+1.0**	
	baz=217,SNR=7.0								
TX31	**Lajitas Ar. Si**		**88.13**	**58**	IAmb	IAmb	16 50 04.0		
	comp=Z,16nm,1.0s								
TXAR	**Lajitas Array**		**88.13**	**58**	P	**P**	**16 50 02.0**	**+1.7**	
	comp=Z,8.9nm,0.6s,baz=220,slow=6.0,SNR=51								
TXAR					pP	**pwP**	**16 52 17.6**	**+0.9**	
	comp=Z,1.6nm,1.0s,baz=181,slow=5.0,SNR=1.9								
	comp=Z,8.9nm,0.6s								
L26K	**Log Cabin Wild**		**88.19**	**15**	IAmb	IAmb	16 50 01.4		
	comp=Z,12nm,0.6s								
L26K	**Log Cabin Wild**		**88.19**	**15**	P	**P**	**16 50 00.5**	**+0.8**	
	baz=213,SNR=8.5								
I21K	**Tanana**		**88.23**	**11**	IAmb	IAmb	16 50 00.5		
	comp=Z,21nm,0.6s								
I21K	**Tanana**		**88.23**	**11**	P	**P**	**16 49 59.5**	**-0.2**	
	baz=205,SNR=22								
NEA2	**Nenana**		**88.26**	**12**	IAmb	IAmb	16 50 00.4		
	comp=Z,12nm,0.6s								
NEA2	**Nenana**		**88.26**	**12**	P	**P**	**16 49 59.2**	**-0.7**	
	baz=208,SNR=15								
NEW	**Newport**		**88.26**	**36**	P	**P**	**16 50 00.5**	**+0.1**	
	baz=236,SNR=6.9								
NEW	**Newport**		**88.26**	**36**	P	**P**	**16 49 59.9**	**-0.5**	
NEW					pmax	pmax			
	comp=Z,13nm,1.4s								
K24K	**Donnelly Dome**		**88.28**	**14**	P	**P**	**16 50 00.6**	**+0.6**	
	baz=211								
G19K	**Purcell Mounta**		**88.29**	**9**	P	**P**	**16 50 00.2**	**+0.1**	
	baz=200								
P32M	**Atlin**		**88.30**	**21**	IAmb	IAmb	16 50 02.6		
	comp=Z,65nm,1.9s								
P32M	**Atlin**		**88.30**	**21**	P	**P**	**16 50 00.8**	**+0.5**	
	baz=222								
VNA2	**Neumayer--Watz**		**88.31**	**177**	⇑P	**P**	**16 50 00.5**	**+0.2**	
	comp=Z,14nm,0.6s,baz=173,slow=4.3								
MLY	**Manley**		**88.32**	**12**	IAmb	IAmb	16 50 00.2		
	comp=Z,13nm,0.5s								
MLY	**Manley**		**88.32**	**12**	P	**P**	**16 49 59.5**	**-0.8**	
	baz=206,SNR=29								
Q32M	**Nakina River**		**88.33**	**22**	IAmb	IAmb	16 50 03.3		
	comp=Z,12nm,0.6s								
Q32M	**Nakina River**		**88.33**	**22**	P	**P**	**16 50 02.0**	**+1.3**	
	baz=223								
BVCY	**Beaver Creek**		**88.33**	**17**	P	**P**	**16 50 00.9**	**+0.6**	
	baz=215,SNR=13								
WRH	**Wood River Hil**		**88.35**	**13**	IAmb	IAmb	16 50 00.8		
	comp=Z,23nm,0.6s								
F18K	**Selawik**		**88.38**	**8**	P	**P**	**16 49 59.8**	**-0.6**	
	baz=198								
O30N	**Mendenhall**		**88.42**	**20**	P	**P**	**16 50 01.9**	**+1.1**	
	baz=220,SNR=10								
RIDG	**Independent Ri**		**88.44**	**15**	P	**P**	**16 50 00.7**	**-0.1**	
	baz=212,SNR=6.6								
ANMO	**Albuquerque**		**88.44**	**52**	P	**P**	**16 50 02.0**	**+0.3**	
ANMO	**Albuquerque**		**88.44**	**52**	P	**P**	**16 50 02.6**	**+0.9**	
	baz=243								
ANMO	**Albuquerque**		**88.44**	**52**	*i* P	**P**	**16 50 02.7**	**+0.9**	
ANMO					pmax	pmax			
	comp=Z,17nm,1.3s								
H21K	**Melozitna Rive**		**88.52**	**11**	P	**P**	**16 50 01.3**	**+0.2**	
	baz=204								
HDA	**Harding Lake**		**88.54**	**13**	P	**P**	**16 50 00.9**	**-0.3**	
	baz=210,SNR=40								
KMI	**Kunming**		**88.55**	**297**	⇑P	**P**	**16 50 04.2**	**+1.7**	
KMI					pmax	pmax			
	comp=Z,11nm,0.8s								
ALPN	**Alpine**		**88.59**	**57**	IAmb	IAmb	16 50 05.2		
	comp=Z,21nm,0.6s								
E17K	**Hotham Inlet**		**88.59**	**7**	P	**P**	**16 50 01.2**	**-0.2**	
	baz=196,SNR=15								
L27K	**Beaver Creek,**		**88.61**	**16**	P	**P**	**16 50 01.8**	**+0.2**	
	baz=214								
I23K	**Minto, Yukon-K**		**88.69**	**12**	IAmb	IAmb	16 50 02.3		
	comp=Z,14nm,0.6s								
I23K	**Minto, Yukon-K**		**88.69**	**12**	P	**P**	**16 50 01.2**	**-0.7**	
	baz=208,SNR=22								
WHY	**Whitehorse**		**88.72**	**20**	IAmb	IAmb	16 50 04.1		
	comp=Z,9.2nm,0.6s								
WHY	**Whitehorse**		**88.72**	**20**	P	**P**	**16 50 03.1**	**+0.8**	
	baz=221,SNR=6.2								
MDM	**Murphy Dome**		**88.75**	**13**	IAmb	IAmb	16 50 02.5		
	comp=Z,14nm,0.8s								
COLA	**College**		**88.75**	**13**	P	**P**	**16 50 01.7**	**-0.4**	
COLA	**College**		**88.75**	**13**	P	**P**	**16 50 01.4**	**-0.8**	
COLA	**College**		**88.75**	**13**	P	**P**	**16 50 02.2**	**0.0**	
	baz=209								
COLA	**College**		**88.75**	**13**	P	**P**	**16 50 01.7**	**-0.4**	
COLA					pmax	pmax			
	comp=Z,25nm,0.6s								
DLBC	**Dease Lake**		**88.77**	**23**	IAmb	IAmb	16 50 04.7		
	comp=Z,50nm,2.0s								
DLBC	**Dease Lake**		**88.77**	**23**	P	**P**	**16 50 03.1**	**+0.5**	
	baz=225								
HHC	**Hu-ho-hao-te**		**88.82**	**315**	*e*P	**P**	**16 50 06.9**	**+3.7**	
HHC					S	**S**	**17 00 03.4**	**+4.4**	
HHC					pmax	pmax			
	comp=Z,16nm,0.9s								
HHC					pmax	pmax			
	comp=Z,200nm,4.7s								
SCRK	**Sand Creek**		**88.84**	**15**	P	**P**	**16 50 02.8**	**0.0**	
	baz=212,SNR=6.1								
F19K	**Shaleruckik Mo**		**88.85**	**8**	P	**P**	**16 50 02.6**	**0.0**	
	baz=200								
RDMU	**Red Mountain**		**88.87**	**46**	IAmb	IAmb	16 50 05.4		
	comp=Z,15nm,0.6s								
IL31			**88.87**	**13**	IAmb	IAmb	16 50 02.6		
	comp=Z,10nm,0.6s								
ILAR	**Eielson Array**		**88.87**	**13**	P	**P**	**16 50 01.6**	**-1.2**	
	comp=Z,6.9nm,0.5s,baz=220,slow=5.7,SNR=210								
ILAR					pP	**pP**	**16 52 18.0**	**+0.8**	
	comp=Z,1.7nm,1.0s,baz=229,slow=6.8,SNR=4.6								
ILAR					PKiKP	**PKiKP**	**16 54 56.5**	**-0.8**	
	comp=Z,0.3nm,0.5s,baz=242,slow=3.2,SNR=7.1								
ILAR					PKKPbc	**PKKPdf**	**17 07 37.0**	**+1.3**	
	comp=Z,0.2nm,0.6s,baz=3.0,slow=1.0,SNR=4.9								
	comp=Z,6.9nm,0.5s								
AHID	**Auburn Hatcher**		**88.94**	**43**	IAmb	IAmb	16 50 06.3		
	comp=Z,18nm,0.8s								
H22K	**Ishtalitna Cre**		**88.98**	**11**	P	**P**	**16 50 03.2**	**-0.1**	
	baz=206								
M29M	**Somme Creek**		**89.02**	**18**	IAmb	IAmb	16 50 05.2		
	comp=Z,19nm,0.7s								
M29M	**Somme Creek**		**89.02**	**18**	P	**P**	**16 50 04.5**	**+0.8**	
	baz=218								
POKR	**Poker Plat Res**		**89.06**	**13**	IAmb	IAmb	16 50 03.7		
	comp=Z,12nm,0.6s								
POKR	**Poker Plat Res**		**89.06**	**13**	P	**P**	**16 50 02.8**	**-0.8**	
	baz=209,SNR=10								
E18K	**Tukpahlearik C**		**89.06**	**7**	IAmb	IAmb	16 50 04.8		
	comp=Z,9.8nm,0.7s								
E18K	**Tukpahlearik C**		**89.06**	**7**	P	**P**	**16 50 04.2**	**+0.7**	
	baz=197								
D17K	**Noatak River**		**89.06**	**6**	P	**P**	**16 50 04.3**	**+0.7**	
	baz=195,SNR=6.8								
P33M	**Teslin, Yukon**		**89.06**	**21**	P	**P**	**16 50 04.1**	**+0.2**	
	baz=222								
J25K	**Salcha River,**		**89.06**	**14**	IAmb	IAmb	16 50 05.0		
	comp=Z,16nm,0.6s								
J25K	**Salcha River,**		**89.06**	**14**	P	**P**	**16 50 03.4**	**-0.4**	
	baz=211								
N31M	**Braeburn, Yuko**		**89.07**	**19**	IAmb	IAmb	16 50 05.5		
	comp=Z,52nm,1.7s								
N31M	**Braeburn, Yuko**		**89.07**	**19**	P	**P**	**16 50 04.1**	**+0.3**	
	baz=220								
R33M	**Jennings River**		**89.11**	**22**	P	**P**	**16 50 05.3**	**+1.2**	
	baz=224								
G21K	**Allakaket**		**89.19**	**10**	P	**P**	**16 50 04.5**	**+0.3**	
	baz=204								
CM31	**Chiang Mai Arr**		**89.22**	**290**	IAmb	IAmb	16 50 08.2		
	comp=Z,13nm,0.8s								
CMAR	**Chiang Mai Arr**		**89.22**	**290**	*ce*P	**P**	**16 50 07.0**	**+1.5**	
CMAR					pmax	pmax			
	comp=Z,12nm,0.8s								
CMAR	**Chiang Mai Arr**		**89.22**	**290**	P	**P**	**16 50 06.1**	**+0.7**	
	comp=Z,12nm,0.9s,baz=128,slow=3.1,SNR=86								
CMAR					PKKPbc	**PKKPbc**	**17 07 38.6**	**+0.7**	
	comp=Z,0.6nm,0.5s,baz=290,slow=3.6,SNR=4.7								
	comp=Z,12nm,0.9s								
BILL	**Bilibino**		**89.25**	**355**	P	**P**	**16 50 04.1**	**-0.3**	
BILL	**Bilibino**		**89.25**	**355**	P	**P**	**16 50 04.1**	**-0.3**	
BILL					pmax	pmax			
	comp=Z,9.0nm,1.2s								
F20K	**Avaraart Lake**		**89.34**	**9**	P	**P**	**16 50 05.1**	**+0.3**	
	baz=202								
K27K	**Chicken**		**89.35**	**15**	IAmb	IAmb	16 50 06.8		
	comp=Z,30nm,1.6s								
K27K	**Chicken**		**89.35**	**15**	P	**P**	**16 50 05.7**	**+0.7**	
	baz=214,SNR=11								
CHTO	**Chiang Mai**		**89.35**	**290**	P	**P**	**16 50 06.4**	**+0.3**	
CHTO					IAmb	IAmb	16 50 08.3		
	comp=Z,11nm,0.8s								
CHTO	**Chiang Mai**		**89.35**	**290**	P	**P**	**16 50 06.4**	**+0.3**	
CHTO					pmax	pmax			
	comp=Z,11nm,0.8s								
J26L	**Joseph Creek**		**89.39**	**15**	P	**P**	**16 50 05.9**	**+0.6**	
	baz=213								
C16K	**Lisburne Hills**		**89.42**	**5**	P	**P**	**16 50 05.8**	**+0.6**	
	baz=193								
FXWY	**Fox Creek**		**89.42**	**42**	IAmb	IAmb	16 50 08.8		
	comp=Z,44nm,1.8s								
S22A	**4UR Ranch, Cre**		**89.43**	**49**	IAmb	IAmb	16 50 08.9		
	comp=Z,51nm,1.8s								
S22A	**4UR Ranch, Cre**		**89.43**	**49**	P	**P**	**16 50 07.8**	**+1.4**	
	baz=243								
SNOW	**Snow King Moun**		**89.50**	**43**	IAmb	IAmb	16 50 09.8		
	comp=Z,11nm,0.8s								
E19K	**Redstone River**		**89.51**	**8**	P	**P**	**16 50 05.8**	**+0.1**	
	baz=200								
O20A	**White River Ci**		**89.55**	**46**	IAmb	IAmb	16 50 08.7		
	comp=Z,17nm,0.6s								
O20A	**White River Ci**		**89.55**	**46**	P	**P**	**16 50 07.5**	**+0.7**	
	baz=242								
H24K	**Noodor Dome**		**89.60**	**12**	P	**P**	**16 50 05.0**	**-1.2**	
	baz=209								
M30M	**Minto, Yukon**		**89.61**	**18**	P	**P**	**16 50 06.6**	**+0.3**	
	baz=219,SNR=28								
L29M	**L29M**		**89.64**	**17**	P	**P**	**16 50 07.5**	**+1.0**	
	baz=218								
MOOW	**Moose Ponds**		**89.65**	**42**	IAmb	IAmb	16 50 09.6		
	comp=Z,28nm,1.8s								
LOHW	**Long Hollow**		**89.67**	**43**	IAmb	IAmb	16 50 09.7		
	comp=Z,46nm,1.8s								
BTO	**Baotou**		**89.73**	**314**	*e*P	**P**	**16 50 08.1**	**+0.6**	
BTO					pP	**pP**	**16 52 18.5**	**-2.5**	
BTO					sP	**sP**	**16 53 17.7**	**-5.0**	
BTO					PP	**PP**	**16 53 55.5**	**+3.4**	
BTO					S	S	16 59 57.7	-10	
BTO					sS	**sS**	**17 04 03.8**	**-2.5**	
BTO					pmax	pmax			
	comp=Z,13nm,0.9s								
BTO					pmax	pmax			
	comp=Z,330nm,5.1s								
C17K	**DeLong Mountai**		**89.80**	**6**	P	**P**	**16 50 07.3**	**+0.3**	
	baz=195								
PRP	**Porcupine Dome**		**89.81**	**13**	IAmb	IAmb	16 50 08.7		
	comp=Z,24nm,1.6s								
PRP	**Porcupine Dome**		**89.81**	**13**	P	**P**	**16 50 08.0**	**+0.8**	
	baz=211								
PLCA	**Paso Fiores**		**89.82**	**134**	P

baz=226
E20K Nigu River 90.40 8 P P 16 50 10.1 +0.2
baz=201
G24K Hadweenzic Riv 90.43 12 P P 16 50 10.0 0.0
baz=209
J29N Klondike Camp 90.69 17 IAmb IAmb 16 50 12.9
comp=Z,18nm,0.6s
J29N Klondike Camp 90.69 17 P P 16 50 11.9 +0.7
baz=218,SNR=16
MSTX Muleshoe 90.76 54 IAmb IAmb 16 50 14.3
comp=Z,12nm,0.8s
MSTX Muleshoe 90.76 54 P P 16 50 12.9 +0.5
baz=245
I27K Kandik River 90.76 15 P P 16 50 11.6 0.0
baz=215
D20K Etivluk River 90.77 8 P P 16 50 11.8 +0.3
baz=201
C19K Lookout Ridge 90.78 7 P P 16 50 11.7 +0.1
baz=198
OZNA Ozona 90.79 57 IAmb IAmb 16 50 14.5
comp=Z,16nm,0.7s
B18K Kokolik River 90.80 6 P P 16 50 12.0 +0.4
baz=196
T25A Trinidad 90.89 50 P P 16 50 13.4 +0.3
baz=244
I28M Miner Creek 91.04 15 P P 16 50 12.8 -0.2
baz=216
F24K Squaw Lake 91.07 12 P P 16 50 13.5 +0.5
baz=209
833A Chaparral WMA, 91.15 60 P P 16 50 15.3 +1.1
baz=247
Q24A Divide 91.16 49 IAmb IAmb 16 50 17.5
comp=Z,25nm,1.6s
Q24A Divide 91.16 49 P P 16 50 14.3 -0.1
baz=244
ISCO Idaho Springs 91.20 48 P P 16 50 14.7 +0.2
baz=244
E23K Chandalar 91.24 11 P P 16 50 14.5 +0.7
baz=207
RLMT Red Lodge 91.24 42 IAmb IAmb 16 51 53.2
comp=Z,22nm,1.9s
RLMT Red Lodge 91.24 42 P P 16 50 15.2 +0.7
baz=241
J30M Hart River 91.29 17 P P 16 50 14.8 +0.7
baz=219
H27K Steamboat Moun 91.30 14 P P 16 50 14.7 +0.7
baz=215
G26K Porcupine Rive 91.40 13 P P 16 50 15.0 +0.6
baz=213
C21K Knifeblade Rid 91.43 8 P P 16 50 15.0 +0.5
baz=203
E24K Your Creek 91.45 11 P P 16 50 15.1 +0.4
baz=208
N23A Red Feather La 91.46 47 IAmb IAmb 16 50 17.8
comp=Z,37nm,1.6s
N23A Red Feather La 91.46 47 P P 16 50 15.7 0.0
baz=244
D22K Ayikyak River 91.48 9 P P 16 50 15.3 +0.6
baz=205
TGTN Hyland Airport 91.56 22 P P 16 50 16.2 +0.9
baz=226,SNR=6.8
F25K Christian Rive 91.57 12 P P 16 50 16.1 +0.8
baz=211
JCT Junction City 91.66 58 IAmb IAmb 16 50 18.2
comp=Z,7.5nm,0.6s
JCT Junction City 91.66 58 P P 16 50 16.5 0.0
baz=247
TOLK Toolik Lake Re 91.76 10 IAmb IAmb 16 50 18.5
comp=Z,27nm,1.7s
TOLK Toolik Lake Re 91.76 10 P P 16 50 16.5 +0.4
baz=208
I30M Mount Dempster 91.78 17 IAmb IAmb 16 50 17.3
comp=Z,43nm,1.9s
I30M Mount Dempster 91.78 17 P P 16 50 16.2 -0.1
baz=219
RTBA Rita Blanca 91.81 52 IAmb IAmb 16 50 18.3
comp=Z,41nm,2.0s
K22A Casper 91.86 45 P P 16 50 17.7 +0.4
baz=243
D23K Nanushuk River 91.87 10 P P 16 50 16.8 +0.2
baz=206
B21K Ikpikpuk River 91.89 8 P P 16 50 16.8 +0.3
baz=203
F26K Sheenjek River 91.96 13 P P 16 50 18.4 +0.5
baz=212
AMTX Amarillo 91.96 53 P P 16 50 18.4 +0.5
baz=246
PHWY Pilot Hill 91.97 46 IAmb IAmb 16 50 38.9
comp=Z,8.9nm,0.8s
YAK Yakutsk 92.02 338 P P 16 50 16.8 -0.5
YAK IAmb IAmb 16 50 17.6
comp=Z,16nm,0.7s
YAK Yakutsk 92.02 338 *e*P P 16 50 15.9 -1.4
YAK *e**PP **pP** 16 52 31.6 -0.2
YAK *e*S **SKSac** 16 59 48.0 -2.4
YAK *e*SS **SS** 17 06 56.9 +0.7
YAK *e*SSS SSS 17 10 43.4
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK smax smax
comp=N,21nm,1.7s
YAK smax smax
comp=E,93nm,4.0s
E25K Arctic Village 92.04 12 IAmb IAmb 16 50 19.9
comp=Z,18nm,1.9s
E25K Arctic Village 92.04 12 P P 16 50 18.4 +1.1
baz=211
H29M Whitestone 92.05 15 P P 16 50 17.9 +0.5
baz=218
LZH Lanzhou 92.12 308 ⇑P P 16 50 19.8 +1.1
LZH pP pP 16 52 34.0 +1.6
LZH S **S** 17 00 33.2 +4.5
LZH pmax pmax
comp=Z,14nm,1.1s
KOTAN **Kotaneelee Air** 92.18 24 P P 16 50 19.3 +1.2
baz=230
EGMT Eagleton 92.34 39 P P 16 50 20.1 +0.9
baz=241
D24K Happy Valley 92.35 10 P P 16 50 19.4 +0.7
baz=208
APMT Aspermont 92.53 55 IAmb IAmb 16 50 23.5
comp=Z,8.1nm,0.6s
EPYK Eagle Plains 92.58 16 IAmb IAmb 16 50 42.4
comp=Z,11nm,0.6s
EPYK Eagle Plains 92.58 16 P P 16 50 20.2 +0.3
baz=219,SNR=7.7
ABTX Abilene, Hawle 92.62 56 IAmb IAmb 16 50 22.6
comp=Z,10nm,0.6s
ABTX Abilene, Hawle 92.62 56 P P 16 50 21.5 +0.6
baz=247
H31M Peel River 92.78 17 P P 16 50 20.7 -0.1
baz=221
F28M Old Crow 92.81 14 IAmb IAmb 16 50 34.0
comp=Z,15nm,1.8s
F28M Old Crow 92.81 14 P P 16 50 20.6 -0.3
baz=216
C24K Franklin Bluff 92.87 10 P P 16 50 21.7 +0.7
baz=208
D25K Kavik River 92.92 11 P P 16 50 21.4 0.0
baz=210
KSCO Kaye Shedlock' 92.96 49 P P 16 50 23.1 +0.7
baz=246
EDM Edmonton 92.97 33 IAmb IAmb 16 50 22.3
comp=Z,6.1nm,0.6s
G30M tAoh Zraii Nji 93.18 16 P P 16 50 22.7 0.0
baz=220
A21K Barrow 93.22 7 P P 16 50 22.9 +0.3
baz=201
G31M Satah River 93.64 16 P P 16 50 24.7 +0.1
baz=221
E28M Babbage River 93.69 14 P P 16 50 25.2 +0.3
baz=217
F30M Barrier River 93.78 15 P P 16 50 25.7 +0.4
baz=220
LAO LASA Array 93.85 41 P P 16 50 26.4 +0.2
baz=244
E29M Blow River 93.88 14 P P 16 50 25.1 -0.6
baz=218
RSSD Black Hills 94.13 44 P P 16 50 27.5 -0.2
RSSD IAmb IAmb 16 50 30.6
comp=Z,6.8nm,0.6s
RSSD Black Hills 94.13 44 P P 16 50 27.7 0.0
baz=245
RSSD Black Hills 94.13 44 P P 16 50 27.5 -0.2
RSSD pmax pmax
comp=Z,7.0nm,0.6s

F31M Tsiigehtchic 94.16 16 P P 16 50 26.6 -0.4
baz=222
INK Inuvik 94.86 15 IAmb IAmb 16 50 30.9
comp=Z,9.0nm,1.5s
INK Inuvik 94.86 15 P P 16 50 30.0 -0.2
baz=222
ULN Ulaanbaatar 94.91 320 *i*P P 16 50 30.8 -0.3
ULN pmax pmax
comp=Z,1.0nm,0.4s
SONM Songino Array 95.30 319 P P 16 50 32.4 -0.4
comp=Z,0.4nm,0.6s,baz=148,slow=3.7,SNR=4.2
comp=Z,0.4nm,0.6s
R32A Long Quarter, 95.54 51 IAmb IAmb 16 50 37.2
comp=Z,11nm,1.0s
DGMT Dagmar 95.86 40 P P 16 50 35.2 0.0
baz=245
GTA Gaotai 96.36 310 P P 16 50 37.9 +0.2
GTA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 97.25 25 P Pdif 16 50 40.6 -0.4
comp=Z,1.2nm,0.6s,baz=246,slow=4.5,SNR=27
comp=Z,1.2nm,0.6s
TIXI Tiksi 98.79 345 *i*P P 16 50 48.1 +0.5
TIXI pmax pmax
comp=Z,1.0nm,1.1s
ECSD EROS Data Cent 98.93 47 IAmb IAmb 16 54 59.0
comp=Z,20nm,1.9s
A36M Sachs Harbour 99.46 15 IAmb IAmb 16 54 58.3
comp=Z,4.2nm,0.8s
A36M Sachs Harbour 99.46 15 P Pdif 16 50 51.3 +0.7
baz=230
ZALV Zalesovo Beam 110.08 321 PKiKP PKiKP 16 55 34.1 -1.5
comp=Z,2.4nm,0.6s,baz=82,slow=0.6,SNR=17
MK31 Makanchi Array 110.64 313*c* *i*PKIKP PKiKP 16 55 35.5 -1.6
MKAR Makanchi Array 110.64 313 PKiKP PKiKP 16 55 36.0 -1.1
comp=Z,1.1nm,0.4s,baz=126,slow=0.6,SNR=29
MKAR PKKPbc PKKPbc 17 06 38.3 -0.4
comp=Z,0.5nm,0.6s,baz=256,slow=2.3,SNR=5.5
KURK Kurchatov 113.51 317*c* *i*PKIKP PKiKP 16 55 40.8 -1.5
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURBB Kurchatov Arra 113.56 317 PKiKP PKiKP 16 55 41.2 -1.3
comp=Z,1.7nm,0.5s,baz=104,slow=2.0,SNR=14
KURBB PP PP 16 56 45.5 -1.7
comp=Z,0.7nm,0.6s,baz=98,slow=6.2,SNR=4.3
KURBB PKKPbc PKKPbc 17 06 28.6 -0.6
comp=Z,0.5nm,0.6s,baz=279,slow=4.0,SNR=5.0
KSH Kashi 114.20 305 PKP PKiKP 16 55 44.4 +0.2
NEEM North Greenlan 118.10 11 *i*P PKPdf 16 55 49.5 -1.4
BVAR Borovoye Array 118.64 320 PKP PKPdf 16 55 51.0 -1.1
comp=Z,8.7nm,0.5s,baz=111,slow=1.7,SNR=72
BRVK Borovoye 118.70 320 PKPdf 16 55 51.1 -1.2
BRVK Borovoye 118.70 320*c* *i*PKIKP PKPdf 16 55 51.3 -1.0
BRVK pmax pmax
comp=Z,7.0nm,1.0s
KBL Kabul 119.11 299 PKPdf 16 55 53.0 -0.9
KBL Kabul 119.11 299 PKiKP PKPdf 16 55 53.0 -0.9
UPNV Upernavik 119.28 17 *i*P PKPdf 16 55 50.9 -1.9
SCHQ Schefferville 119.58 38 PKP PKPdf 16 55 52.8 -1.1
comp=Z,1.8nm,0.6s,baz=256,slow=12,SNR=2.8
BDFB Brasilia 119.87 123 PKP PKPdf 16 55 55.0 -0.9
comp=Z,0.8nm,0.4s,baz=65,slow=2.1,SNR=4.1
UMMG Uummannaq 121.38 18 *i*P PKPdf 16 55 55.3 -1.6
SPITS Spitsbergen Ar 122.12 356 PKP PKPdf 16 55 57.7 -0.5
comp=Z,12nm,0.5s,baz=90,slow=5.0,SNR=31
SPB2 Spitsbergen Ar 122.12 356 PKPdf 16 55 57.8 -0.5
ILULI Ilulissat 122.41 19 PKPdf 16 55 57.8 -1.1
ILULI Ilulissat 122.41 19 PKiKP PKPdf 16 55 57.8 -1.1
ILULI Ilulissat 122.41 19 *i*P PKPdf 16 55 57.0 -1.9
SFJD Kangerlussuaq 123.64 23 *i*P PKPdf 16 55 58.9 -2.4
ARU Arti 124.86 325 PKPdf 16 56 03.1 -0.9
ARU Arti 124.86 325 *i*PKIKP PKPdf 16 56 04.1 +0.1
ARU 16 58 00.4
ARU 17 02 18.8
DY2G Dye2 125.39 21 *i*P PKPdf 16 56 04.0 -1.0
BOSA Boshof 125.50 206 PKP PKPdf 16 56 06.5 +0.2
comp=Z,2.6nm,0.8s,baz=143,slow=5.6,SNR=4.4
ABKAR Akbulak array 125.58 316 PKPdf 16 56 04.6 -1.0
ICESG Greenland Ices 125.82 17 *i*P PKPdf 16 56 04.0 -1.9
GEYT Alibeck 128.06 302 PKP PKPdf 16 56 11.0 +0.2
comp=Z,3.5nm,0.6s,baz=273,slow=5.8,SNR=11
GEYT pPKP **pPKPdf** 16 58 33.7 -0.3
comp=Z,1.8nm,0.8s,baz=222,slow=1.9,SNR=3.2
ISOG Isortoq, Green 128.34 20 *i*P PKPdf 16 56 08.6 -1.7
NRS Narsarsuaq 128.50 27 *i*P PKPdf 16 56 09.1 -1.6
KIRV Kirov 128.71 330*c* *i*PKIKP PKiKP 16 56 11.7 -0.3
APA Apatity 128.97 345 ⇓*i*PKIKP PKPdf 16 56 09.8 -1.7
APA pmax pmax
comp=Z,6.0nm,0.5s
ARCES ARCESS Array B 129.04 349 PKPdf 16 56 11.0 -0.6
ARCES ARCESS Array B 129.04 349 PKiKP PKPdf 16 56 11.0 -0.6
ARCES ARCESS Array B 129.04 349 PKhKP PKPpre 16 55 58.2
comp=Z,7.8nm,1.2s,baz=5.7,slow=2.4,SNR=4.8
ARCES PKP PKPdf 16 56 11.1 -0.5
comp=Z,12nm,0.5s,baz=13,slow=1.1,SNR=92
ARCES pPKP pPKPdf 16 58 34.8 -0.6
comp=Z,3.9nm,0.7s,baz=66,slow=3.0,SNR=4.2
KLMR Klimovskoe 131.74 336 *e*PKIKP PKPdf 16 56 16.1 -0.8
KLMR *e* 16 58 44.4
KLMR pmax pmax
comp=Z,39nm,1.5s
FINES FINESS Array B 135.78 343 PKhKP PKPpre 16 56 11.5
comp=Z,1.4nm,0.5s,baz=26,slow=2.6,SNR=9.5
FINES PKP PKPdf 16 56 24.1 -0.3
comp=Z,5.2nm,0.5s,baz=35,slow=4.2,SNR=27
OBN Obninsk 136.53 331 *i*PKIKP PKPdf 16 56 24.3 -1.7
OBN *e* 16 59 17.7
OBN pmax pmax
comp=Z,13nm,0.7s
VSU Vasula 137.99 340 *e*P PKPdf 16 56 28.9 +0.3
KBZ Khabaz 138.34 313 PKP PKPdf 16 56 28.0 -1.7
comp=Z,3.4nm,0.9s,baz=190,slow=3.7,SNR=4.1
KIV Kislovodsk 138.41 313 *i*PKIKP PKiKP 16 56 32.4 +0.1
KIV pmax pmax
comp=Z,8.0nm,1.0s
NB2 NORSAR Subarra 139.17 352 PKP PKPpre 16 56 22.3
comp=Z,5.5nm,0.7s,baz=14,slow=4.0
NOA NORSAR Array B 139.17 352 PKhKP PKPpre 16 56 22.9
comp=Z,1.5nm,0.5s,baz=50,slow=1.7,SNR=17
NOA PKP PKPdf 16 56 30.5 -0.3
comp=Z,2.2nm,0.5s,baz=14,slow=4.0,SNR=8.1
HFS Hagfors 139.68 350 PKhKP PKPpre 16 56 23.9
comp=Z,5.3nm,0.5s,baz=70,slow=4.9,SNR=30
HFS PKP PKPdf 16 56 30.3 -1.4
comp=Z,5.5nm,0.7s,baz=72,slow=4.8,SNR=7.4
IIGN Ignalina 140.62 337 *e*P PKPdf 16 56 27.0 -6.5
VSVD Vaisvydziai 140.90 340 *e*P PKPdf 16 56 28.7 -5.2
PABE Paberze 141.28 339 *e*P PKPdf 16 56 30.3 -4.3
TJOU Tjoern 142.01 351 *i*P PKPdf 16 56 29.0 -6.8
BORU Boraas 142.21 350 *i*P PKPdf 16 56 31.3 -5.0
SUW Suwalki 142.75 338 *e*P PKPdf 16 56 35.0 -2.4
AKASG **Malin Array Be** 142.77 330 PKhKP PKPpre 16 56 34.1
comp=Z,32nm,0.5s,baz=42,slow=4.0,SNR=237
AKASG SKPbc **SKPbc** 16 59 16.9 -0.5
comp=Z,1.1nm,0.6s,baz=38,slow=2.1,SNR=5.9
KIEV Kiev 142.78 330 ⇑P PKPdf 16 56 34.5 -3.0
KIEV Kiev 142.78 330 PKPpre 16 56 33.5
KIEV Kiev 142.78 330 ⇑PKHKP PKPpre 16 56 34.5
FABU Falkenberg 142.82 349 *i*P PKPdf 16 56 33.8 -3.6
BLEU Blekinge 142.86 346 *i*P PKPdf 16 56 33.7 -3.7
SHEL Horse Pasture 142.88 169 PKPdf 16 56 37.4 -1.4
SHEL Horse Pasture 142.88 169 PKHKP PKPdf 16 56 37.4 -1.4
ARPR Arapgir-MALATY 143.10 308 PKPbc 16 56 37.6 +0.4
DEL Delary 143.11 348 *i*P PKPab 16 56 35.0 -1.0
DEL Delary 143.11 348 *i*P PKPab 16 56 35.0 -1.0
KPL Plockton 143.22 6 *e*P PKPab 16 56 36.1 -0.3
SIM Simferopol' 143.55 319 *e*PKHKP PKPdf 16 56 38.3 -0.7
SIM *e* 16 56 41.2
SIM pmax pmax
comp=Z,113nm,0.8s
SIM pmax pmax
comp=Z,95nm,1.4s
BJUU Bjuv 143.65 349 *i*P PKPbc 16 56 36.5 -1.5
MBAR Mbarara 143.84 238*c* *i*PKIKP PKPdf 16 56 40.6 -0.1
MBAR pmax pmax
comp=Z,32nm,1.3s
MUD Monsted U'grnd 143.88 352 *i*P PKPbc 16 56 38.3 -0.4
LUNU Lund 143.98 348 *i*P PKPbc 16 56 38.0 -1.0
BSD Bornholm Skovb 144.16 346 *i*P PKPbc 16 56 37.0 -2.6
BSD Bornholm Skovb 144.16 346 *i*P PKPbc 16 56 37.0 -2.6
INVG Invergeldie, C 144.26 5 *e*P PKPdf 16 56 39.3 -0.6
LAWE Loch Awe, Argy 144.31 6 *e*P PKPdf 16 56 39.5 -0.4
PGBU Glenifferbraes 144.84 5 *e*P PKPdf 16 56 40.8 -0.1
SORM Soroca 144.91 327 ⇑P PKPdf 16 56 41.7 +0.4
SORM Soroca 144.91 327 ⇑PKIKP PKPbc 16 56 41.7 -0.4

GKP Gorka Klasztor 145.25 343 *e*PKP PKPbc 16 56 42.9 0.0
GKP Gorka Klasztor 145.25 343 *e*P PKPbc 16 56 43.1 +0.2
BEL Belsk 145.37 338 *e*PKP PKPbc 16 56 43.7 +0.3
EKA Eskdalemuir Ar 145.41 4 PKPbc PKPbc 16 56 42.8 -0.5
comp=Z,13nm,0.6s,baz=344,slow=2.7,SNR=48
MILM Milestii Mici 145.46 325 *e*PKP PKPbc 16 56 43.0 -0.8
comp=Z,70nm,0.8s
MILM Milestii Mici 145.46 325 ⇑P PKPbc 16 56 43.3 -0.5
MILM Milestii Mici 145.46 325 ⇑PKIKP PKPbc 16 56 43.3 -0.5
NEWG New Galloway 145.54 5 *e*P PKPbc 16 56 43.2 -0.5
LVV L'viv 145.72 333 *e*PKIKP PKPbc 16 56 43.9 -0.5
DRBR Darabani 145.72 329 ⇑P PKPbc 16 56 43.8 -0.7
GAL1 Galloway 145.75 6 *e*P PKPdf 16 56 42.8 +0.3
EDMD Edmundbyers 145.98 3 *e*P PKPbc 16 56 44.5 -0.4
BSEG Bad Segeberg 146.16 350 *e*PKPbc PKPbc 16 56 46.2 +0.7
baz=20,slow=2.4
VASR Vaslui 146.18 326 ⇑P PKPbc 16 56 46.0 +0.2
BRTR Keskin Array B 146.26 311 PKPbc 16 56 45.9 -0.5
BRTR Keskin Array B 146.26 311 PKiKP PKPbc 16 56 45.9 -0.5
BRTR Keskin Array B 146.26 311 PKPbc PKPbc 16 56 46.0 -0.5
comp=Z,7.7nm,0.5s,baz=140,slow=2.8,SNR=59
BRTR pPKPbc **pPKPdf** 16 59 10.2 +2.5
comp=Z,6.5nm,1.2s,baz=129,slow=1.8,SNR=6.9
IOMK Kirk Michael 146.36 6 *e*P PKPbc 16 56 45.7 -0.3
KWP Kalwaria Pacla 146.42 334 *e*PKP PKPbc 16 56 46.4 0.0
KWP Kalwaria Pacla 146.42 334 PKPbc 16 56 46.2 -0.2
KWP Kalwaria Pacla 146.42 334 PKiKP PKPbc 16 56 46.2 -0.2
WIM Isle of Man 146.47 6 *e*P PKPdf 16 56 44.8 +1.1
PRAR RASCA 146.49 328 ⇑P PKPbc 16 56 47.1 +0.4
VLDR Vladesti 146.53 325 ⇑P PKPbc 16 56 47.6 +0.9
TLCR 146.54 323 ⇓P PKPbc 16 56 46.9 +0.1
TLCR 146.54 323 ⇓PKIKP PKPbc 16 56 46.9 +0.1
SCTR Scanteiesti 146.69 324 ⇓P PKPbc 16 56 47.2 0.0
GHRR 146.76 325 ⇑P PKiKP 16 56 48.4 -0.8
ANTO Ankara 146.79 312 ⇑P PKPbc 16 56 48.0 +0.2
ANTO Ankara 146.79 312 PKPbc 16 56 47.6 -0.2
ANTO Ankara 146.79 312 ⇑PKIKP PKPbc 16 56 48.0 +0.2
BURAR Bucovina Array 146.81 329 ⇓P PKPbc 16 56 47.6 0.0
BURAR Bucovina Array 146.81 329 ⇓PKIKP PKPbc 16 56 47.6 0.0
RUE Ruedersdorf 146.85 346 *e*P PKPbc 16 56 47.9 +0.5
RUE Ruedersdorf 146.85 346 *e*PKPbc PKPbc 16 56 47.7 +0.4
baz=20,slow=2.4
TESR Tescani 146.86 327 ⇓P PKPbc 16 56 47.5 -0.1
HPK Haverah Park 146.87 3 *e*P PKPbc 16 56 46.6 -0.8
TPGR Topolog 146.96 323 ⇓P PKPbc 16 56 48.4 +0.4
PANC Panciu 147.02 325 ⇓P PKPbc 16 56 48.8 +0.8
MMAI Mount Meron Ar 147.04 299 PKPbc PKPbc 16 56 49.1 +0.4
comp=Z,14nm,0.5s,baz=72,slow=5.4,SNR=31
MMAI pPKPbc **pPKPab** 16 59 11.7 +2.0
comp=Z,5.8nm,0.8s,baz=22,slow=9.2,SNR=3.3
OJC Ojcow 147.06 337 *e*PKP PKPbc 16 56 48.1 +0.1
ODBI Odobesti 147.14 325 ⇑P PKiKP 16 56 49.7 -0.3
KOLS Kolonicke sedl 147.14 334 *e*PKHKP PKPdf 16 56 45.7 +0.7
KOLS *e* 16 56 48.9
KOLS Kolonicke sedl 147.14 334 *e*PKP PKPdf 16 56 45.7 +0.7
KOLS *e* 16 56 48.9
STHS Stebnicka Huta 147.17 335 *e*PKIKP PKPbc 16 56 48.0 -0.4
STHS *e* 16 56 52.9
STHS Stebnicka Huta 147.17 335 *e*PKP PKPbc 16 56 48.0 -0.4
STHS *e* 16 56 52.9
VRI Vrincioaia 147.25 326 ⇓P PKPbc 16 56 48.8 +0.1
VRI Vrincioaia 147.25 326 ⇓PKIKP PKPbc 16 56 48.8 +0.1
PLOR Plostina 147.29 326 ⇓P PKPbc 16 56 48.7 -0.1
PLOR Plostina 147.29 326 ⇓PKIKP PKPbc 16 56 48.7 -0.1
TURR Turia 147.49 327 ⇓P PKPbc 16 56 49.9 +0.6
CRVS Cervenica-Dubn 147.50 334 *e*PKHKP PKPdf 16 56 46.2 +0.6
CRVS *e* 16 56 49.6
CRVS Cervenica-Dubn 147.50 334 *e*PKP PKPdf 16 56 46.2 +0.6
CRVS *e* 16 56 49.6
COVR Voineasa-Covas 147.53 326 ⇑P PKPbc 16 56 47.9 -0.6
FLTG Flechtingen 147.54 348 *e*PKPbc PKPbc 16 56 49.4 +0.3
baz=20,slow=2.4
NIE Niedzica 147.54 336 *e*PKP PKiKP 16 56 50.1 -0.7
OZUR 147.58 327 ⇑P PKPbc 16 56 49.9 +0.3
BOSR Bodos 147.66 327 ⇓P PKPbc 16 56 50.4 +0.6
KSP Ksiaz 147.67 342 *e*PKP PKPbc 16 56 50.1 +0.5
NEHR Nehoiu 147.76 325 ⇓P PKPbc 16 56 50.2 +0.1
SBD1 Bryn Du 147.82 5 *e*P PKPab 16 56 54.8 0.0
FOEL Foel Wylfa 147.84 5 *e*P PKPbc 16 56 49.7 -0.3
DOPR Dopca 147.87 327 ⇑P PKiKP 16 56 51.0 -0.6
MLR Muntele Rosu 147.90 326 ⇓P PKPbc 16 56 50.4 -0.1
MLR Muntele Rosu 147.90 326 ⇓PKIKP PKPbc 16 56 50.4 -0.1
OSTC Ostas 147.95 341⇑*e*PKP PKPbc 16 56 50.7 +0.4
OSTC Ostas 147.95 341 *e*PKIKP PKPbc 16 56 50.7 +0.4
CHVC Chvalec 147.97 342⇑*e*PKP PKPbc 16 56 50.3 -0.1
CHVC Chvalec 147.97 342 *e*PKIKP PKPbc 16 56 50.3 -0.1
UPC Upice 148.05 342⇑*e*PKP PKPbc 16 56 50.8 +0.2
UPC Upice 148.05 342 *e*PKHKP PKPbc 16 56 50.8 +0.2
LANS Liptovska Anna 148.07 337 *e*PKIKP PKiKP 16 56 51.8 -0.1
LANS *e* 16 56 57.4
LANS Liptovska Anna 148.07 337 *e*PKP PKiKP 16 56 51.8 -0.1
LANS *e* 16 56 57.4
DPC Dobruska-Polom 148.10 341⇑*e*PKP PKPbc 16 56 51.3 +0.5
DPC Dobruska-Polom 148.10 341 *e*PKHKP PKPbc 16 56 51.3 +0.5
CLL Collm 148.12 346 *i*PKHKP PKPbc 16 56 50.6 -0.1
CLL *i* 16 56 55.5
CLL pmax pmax
comp=Z,40nm,0.7s
CLL pmax pmax
comp=Z,12nm,0.7s
CLL Collm 148.12 346 *i*PKPbc PKPbc 16 56 50.6 -0.1
comp=Z,40nm,0.7s
CLL *i*PKPab **PKPab** 16 56 55.5 -0.5
comp=Z,12nm,0.7s
CLL *e*pPKPab **pPKPab** 16 59 18.0 +4.3
CLL Collm 148.12 346 *e*PKPbc PKPbc 16 56 51.2 +0.5
baz=20,slow=2.4
IBBN Ibbenburen 148.12 352 *e*PKPbc PKPbc 16 56 51.1 +0.5
baz=20,slow=2.4
CLZ Clausthal 148.16 349 *e*PKPbc PKiKP 16 56 51.6 -0.5
baz=20,slow=2.4
KRLC Kraliky 148.20 340⇑*e*PKP PKPbc 16 56 51.5 +0.5
KRLC *e*PKPAB PKPab 16 56 56.7 +0.2
KRLC Kraliky 148.20 340 *e*PKHKP PKPbc 16 56 51.5 +0.5
KRLC *e* 16 56 56.7
MESR Meseseni 148.20 331 ⇑P PKPbc 16 56 51.3 +0.3
CBBR Cluj-Babes-Bol 148.21 330 ⇑P PKPdf 16 56 48.4 +1.6
MORC Moravsky Berou 148.21 339 ⇑P PKPbc 16 56 51.2 +0.1
MORC Moravsky Berou 148.21 339 *e*PKP PKPbc 16 56 51.2 +0.1
MORC Moravsky Berou 148.21 339 ⇑PKHKP PKPbc 16 56 51.2 +0.1
KECS Kecovo 148.22 335 *e*PKP2 PKPab 16 56 57.1 +0.5
KECS Kecovo 148.22 335 *e*PKP PKPab 16 56 57.1 +0.5
CJR Cluj-Napoca 148.22 330 ⇑P PKPbc 16 56 51.6 +0.4
CJR Cluj-Napoca 148.22 330 ⇑PKHKP PKPbc 16 56 51.6 +0.4
MDB Medias 148.25 328 ⇑P PKiKP 16 56 52.0 -0.4
MDB Medias 148.25 328 ⇑PKHKP PKiKP 16 56 52.0 -0.4
BRG Berggiesshubel 148.29 344 *i*PKP PKPbc 16 56 51.4 +0.3
BRG Amp 16 56 52.9
comp=Z,20nm,0.7s
BRG Berggiesshubel 148.29 344 *i*PKHKP PKPbc 16 56 51.4 +0.3
BRG pmax pmax
comp=Z,20nm,0.7s
BRG Berggiesshubel 148.29 344 *e*PKPbc PKiKP 16 56 51.8 -0.5
baz=20,slow=2.4
VOIR 148.41 327 ⇓P PKPbc 16 56 51.8 +0.1
VOIR 148.41 327 ⇓PKHKP PKPbc 16 56 51.8 +0.1
MAUC Maruska 148.47 339⇑*e*PKP PKPbc 16 56 52.1 +0.4
MARR Marisel-Cluj 148.48 330 ⇑P PKPbc 16 56 51.8 0.0
NEUB Neuenburg 148.49 347 *e*PKPbc PKPbc 16 56 52.1 +0.5
baz=20,slow=2.4
GTTG Gottingen 148.52 349 *e*PKPbc PKiKP 16 56 52.3 -0.4
baz=20,slow=2.4
DRGR 148.58 331 ⇑P PKPbc 16 56 52.0 -0.1
DRGR 148.58 331 ⇑PKHKP PKPbc 16 56 52.0 -0.1
ARR Arges 148.67 327 ⇓P PKiKP 16 56 53.4 +0.1
HSKC Hora Svate Kat 148.67 345⇑*e*PKP PKPbc 16 56 51.9 -0.2
MCH1 Michaelchurch 148.74 5 *e*P PKPbc 16 56 51.5 -0.6
PRA Prague 148.90 343⇑*e*PKP PKiKP 16 56 53.1 -0.4
PRA Prague 148.90 343 *e*PKHKP PKiKP 16 56 53.1 -0.4
PSZ Piszkesteto 148.91 335 ⇓P PKPbc 16 56 52.8 -0.1
PSZ Piszkesteto 148.91 335 PKPbc 16 56 52.5 -0.3
PSZ Piszkesteto 148.91 335 ⇓PKHKP PKPbc 16 56 52.8 -0.1
MONM Monmouth 148.91 4 *e*P PKPbc 16 56 52.1 -0.5
VRAC Vranov 148.93 340 ⇑P PKPbc 16 56 53.0 +0.2
VRAC Vranov 148.93 340 *e* PKPab 16 56 59.9 +0.4
VRAC Vranov 148.93 340 ⇑PKHKP PKPbc 16 56 53.0 +0.2
VRAC Vranov 148.93 340 *e*PKP PKPbc 16 56 52.8 0.0
GOPC GO Pecny, Ondr 148.94 342⇑*e*PKP PKPbc 16 56 52.9 +0.1
GOPC GO Pecny, Ondr 148.94 342 *e*PKHKP PKPbc 16 56 52.9 +0.1
PRU Pruhonice 148.94 343⇑*e*PKP PKPbc 16 56 52.8 +0.1
PRU Pruhonice 148.94 343 *e*PKHKP PKPbc 16 56 52.8 +0.1

JAVC	Velka Javorina	148.96	338	*e*PKP		PKiKP	16 56 54.2	+0.4
BUG	Bochum--Univer	149.03	352	*e*PKPbc		PKPbc	16 56 53.1	+0.2
	baz=20,slow=2.4							
LOT	Lotru	149.05	328	⇑P		PKPbc	16 56 52.7	-0.6
MOX	Moxa	149.06	347	*e*PKPbc		PKiKP	16 56 53.6	-0.3
	baz=20,slow=2.4							
TANN	Tannenbergstha	149.08	346	*e*PKPbc		PKiKP	16 56 53.8	-0.2
	baz=20,slow=2.4							
PLN	Plauen	149.08	346	*e*PKPbc		PKiKP	16 56 53.6	-0.3
	baz=20,slow=2.4							
KASTN	Kahler Asten	149.11	351	*e*PKPbc		PKiKP	16 56 53.6	-0.4
	baz=20,slow=2.4							
DEV	Deva	149.16	329	⇑P		PKPbc	16 56 53.4	0.0
DEV	Deva	149.16	329	⇑PKHKP		PKPbc	16 56 53.4	0.0
KRUC	Moravsky	149.21	340	*e*		PKPab	16 57 00.9	+0.3
KRUC	Moravsky	149.21	340	*e*PKP		PKPbc	16 56 53.5	+0.1
NKC	Novy Kostel	149.25	345	⇑*e*PKP		PKPbc	16 56 53.5	0.0
NKC	Novy Kostel	149.25	345	*e*PKHKP		PKPbc	16 56 53.5	0.0
SIRR	Siria	149.45	331	⇑P		PKPbc	16 56 54.4	+0.2
MODS	Modra-Piesok	149.51	338	*e*PKHKP		PKPbc	16 56 54.7	+0.5
MODS				*e*			16 57 03.5	
MODS	Modra-Piesok	149.51	338	*e*		PKPab	16 57 03.5	+1.6
MODS	Modra-Piesok	149.51	338	*e*PKP		PKPbc	16 56 54.7	+0.5
WOL	Wolverton	149.53	3	*e*P		PKPbc	16 56 53.6	-0.5
ZVC	Zvikov	149.53	343	⇑*e*PKP		PKPbc	16 56 54.1	-0.1
ZVC				*e*PKPAB		PKPab	16 57 02.2	+0.2
MANZ	Manzenberg	149.56	346	*e*PKPbc		PKiKP	16 56 54.9	-0.1
	baz=20,slow=2.4							
GZR	Gura Zlata	149.57	329	⇓P		PKPbc	16 56 54.0	-0.5
GZR	Gura Zlata	149.57	329	⇓PKIKP		PKPbc	16 56 54.0	-0.5
ELND	Elena	149.59	322	⇑P		PKPbc	16 56 54.6	0.0
SRO	Srobarova	149.61	336	*e*PKHKP		PKPbc	16 56 54.9	+0.5
SRO				*e*			16 57 03.4	
SRO	Srobarova	149.61	336	*e*PKP		PKPbc	16 56 54.9	+0.5
SRO				*e*			16 57 03.4	
SURR	Surduc	149.62	330	⇑P		PKPbc	16 56 54.3	-0.2
ROTZ	Rotzenmuhle	149.74	345	*e*PKPbc		PKiKP	16 56 55.2	-0.1
	baz=20,slow=2.4							
BEBN	Eben Emael	149.85	354	*d*PKPbc		PKPbc	16 56 54.7	-0.1
BEBN				*d*PKP		PKPab	16 57 02.9	-0.3
SRE	Strehaia	149.88	327	⇓P		PKiKP	16 56 55.8	0.0
SRE	Strehaia	149.88	327	⇓PKHKP		PKiKP	16 56 55.8	0.0
BZS	Buzias	149.96	330	⇑P		PKPbc	16 56 55.2	-0.1
BZS	Buzias	149.96	330	⇑PKHKP		PKPbc	16 56 55.2	-0.1
KHC	Kasperske Hory	149.98	343	⇑*e*PKP		PKPbc	16 56 55.4	+0.1
KHC				*e*PKPAB		PKPab	16 57 04.2	+0.3
KHC	Kasperske Hory	149.98	343	*e*PKHKP		PKPbc	16 56 55.4	+0.1
KHC				*e*			16 57 04.2	
MEM	Membach	150.00	353	*d*PKPbc		PKPbc	16 56 55.0	-0.2
PLVB	Pleven	150.01	324	⇑P		PKPbc	16 56 55.6	+0.1
BTNL	Ternell	150.01	353	*d*PKPbc		PKPbc	16 56 54.4	-0.9
TNS	Taunus Mts	150.05	350	*e*PKPab		PKPab	16 57 04.3	+0.1
CKRC	Cesky Krumlov	150.06	342	⇑*e*PKP		PKPbc	16 56 55.3	-0.2
CKRC	Cesky Krumlov	150.06	342	*e*PKHKP		PKPbc	16 56 55.3	-0.2
BSTI	Sart Tilman	150.07	354	*d*PKPbc		PKPbc	16 56 54.8	0.0
HERR	Herculane	150.12	328	⇓P		PKPbc	16 56 54.0	-1.7
WET	Wettzell	150.16	344	*e*PKPbc		PKiKP	16 56 56.1	-0.1
	baz=20,slow=2.4							
WET				*e*PKPab		PKPab	16 57 05.2	+0.6
GEC2	GERESS Array S	150.21	343	*e*PKPbc		PKiKP	16 56 56.2	-0.2
	baz=20,slow=2.4							
GEC2				*e*PKPab		PKPab	16 57 05.2	+0.2
GERES	GERESS Array B	150.21	343	PKP		PKPdf	16 56 50.1	0.0
	comp=Z,6.7nm,0.6s,baz=148,slow=5.8,SNR=5.3							
GERES				PKPbc		PKPbc	16 56 55.8	-0.1
	comp=Z,8.2nm,0.5s,baz=22,slow=3.8,SNR=38							
BHOU	Houvegnez	150.25	353	*d*PKPbc		PKPbc	16 56 56.1	+0.2
BCLA	Clavier	150.26	354	*d*PKPbc		PKPbc	16 56 55.2	-0.6
BCLA				*d*PKP		PKPab	16 57 04.0	-0.9
BGES	Gesves	150.31	355	*d*PKPbc		PKPbc	16 56 55.6	-0.3
CONA	Conrad Observa	150.37	339	*i* PKP		PKPbc	16 56 56.4	0.0
	comp=Z,19nm,0.5s,SNR=13							
CONA				*i* PKP		PKPab	16 57 06.5	+0.8
	comp=Z,8.5nm,0.7s							
BMRD	Maredsous	150.42	355	*d*PKPbc		PKPbc	16 56 55.9	-0.3
BMRD				*d*PKP		PKPab	16 57 05.2	-0.4
RONA	Rosalia, Austr	150.42	339	*i* PKP		PKPbc	16 56 56.3	-0.1
	comp=Z,90nm,0.0s,SNR=17							
RONA				*i* PKP		PKPab	16 57 06.7	+0.9
	comp=Z,7.6nm,0.6s							
RCHB	Rochefort	150.53	354	*d*PKPbc		PKPbc	16 56 56.3	-0.1
MDVR	Moldovita	150.54	329	⇓P		PKPbc	16 56 56.3	-0.4
DOU	Dourbes	150.64	355	*d*PKPbc		PKPbc	16 56 56.5	-0.3
DOU				*d*PKP		PKPab	16 57 05.9	-0.7
MORH	Mrgy, Hungar	150.79	334	⇑P		PKPbc	16 56 56.9	-0.2
BLKB	Belogradchik	150.89	326	⇑P		PKPbc	16 56 57.4	-0.1
WLF	Walferdange	150.91	353	*d*PKPbc		PKiKP	16 56 57.6	-0.1
WLF	Walferdange	150.91	353	*e*PKPbc		PKiKP	16 56 58.4	+0.7
	baz=20,slow=2.4							
MOA	Molln	150.94	341	*i* PKP		PKPbc	16 56 57.0	-0.6
	comp=Z,7.4nm,0.5s							
ARSA	Arzberg	151.07	339	*i* PKP		PKPbc	16 56 57.2	-0.7
	comp=Z,4.1nm,0.6s							
FRGS	Fruska Gora	151.13	332	⇑P		PKPbc	16 56 58.0	-0.1
FRGS	Fruska Gora	151.13	332	*e*P		PKPbc	16 56 57.4	-0.6
BIOA	Bad Ischl, Aus	151.27	342	*e*PKP		PKPdf	16 56 51.3	-0.3
	comp=Z,1.1nm,0.4s							
BIOA				*i* PKP		PKPbc	16 56 57.5	-0.7
	comp=Z,4.5nm,0.5s							
STU	Stuttgart	151.32	348	*e*PKPbc		PKiKP	16 56 58.7	+0.1
	baz=20,slow=2.4							
BOVS	Bovan	151.38	327	⇑P		PKPbc	16 56 57.7	-0.9
FUR	Furstenfeldbru	151.46	345	*e*PKPbc		PKiKP	16 56 59.0	0.0
	baz=20,slow=2.4							
FUR				*e*PKPab		PKPab	16 57 10.7	+0.5
RJOB	Jochberg	151.47	343	*e*PKPbc		PKPbc	16 56 58.6	-0.2
	baz=20,slow=2.4							
RJOB				*e*PKPab		PKPab	16 57 11.1	+0.8
TEKS	Tekeris	151.73	331	*e*P		PKPbc	16 56 58.8	-0.6
SOKA	Soboth	151.74	339	*i* PKP		PKPbc	16 56 58.5	-0.9
	comp=Z,8.0nm,0.6s,SNR=7.4							
LESA	Schwarzleotal	151.79	343	*i* PKP		PKPdf	16 56 52.4	0.0
	comp=Z,0.2nm,0.1s							
LESA				*i* PKP		PKPbc	16 56 59.1	-0.4
	comp=Z,12nm,0.5s							
BFO	Black Forest	151.91	349			PKPbc	16 56 59.4	-0.3
BFO	Black Forest	151.91	349	PKIKP		PKPbc	16 56 59.4	-0.3
BFO	Black Forest	151.91	349	*e*PKPbc		PKiKP	16 56 59.8	0.0
	baz=20,slow=2.4							
KBA	Koelnbreinsper	151.91	342	*i* PKP		PKPbc	16 56 59.3	-0.6
	comp=Z,6.4nm,0.5s							
PEHC	Pehcevo	152.02	323	*i* P		PKPbc	16 57 00.1	-0.1
OBKA	Obir	152.05	340	*i* PKP		PKPbc	16 56 59.0	-1.1
	comp=Z,6.2nm,0.6s							
OBKA	Obir	152.05	340	*e*P		PKPbc	16 56 58.8	-1.3
WATA	Walderalm	152.16	344	*e*PKP		PKPdf	16 56 51.8	-1.3
	comp=Z,1.6nm,0.4s							
WATA				*i* PKP		PKPbc	16 56 59.5	-0.9
	comp=Z,8.2nm,0.5s,SNR=6.4							
WATA				*i* PKP		PKPab	16 57 14.0	+0.7
	comp=Z,8.4nm,0.6s							
UBR	Ueberruh	152.18	347	*e*PKPbc		PKPbc	16 57 00.4	0.0
	baz=20,slow=2.4							
WTTA	Wattenberg	152.21	344	*i* PKP		PKPbc	16 56 59.7	-0.9
	comp=Z,14nm,0.5s,SNR=12							
WTTA				*i* PKP		PKPab	16 57 13.9	+0.3
	comp=Z,12nm,0.6s							
RETA	Reutte	152.22	346	*i* PKP		PKPbc	16 57 00.0	-0.4
	comp=Z,6.6nm,0.6s							
RETA				*e*PKP		PKPab	16 57 13.6	+0.1
	comp=Z,4.6nm,0.5s							
MYKA	Terra Mystica	152.23	341	*i* PKP		PKPbc	16 56 59.2	-1.3
	comp=Z,9.9nm,0.5s							
MOTA	Moosalm	152.27	345	*i* PKP		PKPdf	16 56 52.5	-0.7
	comp=Z,2.0nm,0.7s							
MOTA				*i* PKP		PKPbc	16 56 59.9	-0.7
	comp=Z,6.4nm,0.7s							
MOTA				*i* PKP		PKPab	16 57 13.8	+0.1
	comp=Z,8.2nm,0.6s							
BBLS	Lazići	152.32	330	*e*P		PKPbc	16 57 00.5	-0.3
CRES	Cresnjev	152.33	338	*e*P		PKPbc	16 56 59.7	-1.0
HAPS	Han Pijesak,BI	152.35	331	*e*P		PKPbc	16 57 00.3	-0.6
SQTA	Sankt Quirin	152.36	345	*i* PKP		PKPbc	16 57 00.1	-0.7
	comp=Z,9.1nm,0.6s							
ABTA	Abfaltersbach	152.45	343	*i* PKP		PKPdf	16 56 52.5	-1.0
	comp=Z,2.4nm,0.9s							
ABTA				*i* PKP		PKPbc	16 56 60.0	-1.0
	comp=Z,14nm,0.6s,SNR=7.5							
LJU	Ljubljana	152.46	339	*i* PKPbc		PKPbc	16 57 00.6	-0.3
A051A	Mrakovica	152.48	335	*e*P		PKPbc	16 56 59.7	-1.4
STIP	Stip	152.48	324	*i* P		PKPbc	16 56 57.6	-3.5
SJES	Sjenica	152.51	329	*e*P		PKPbc	16 56 58.7	-2.6
VAY	Valandovo	152.51	323	*i* P		PKiKP	16 57 07.5	+6.2
CRNS	Crni Vrh	152.52	340	*i* PKPbc		PKPbc	16 57 00.3	-0.8
RUDO	Rudo	152.52	330	*e*P		PKPbc	16 57 00.1	-1.1
BLY	Banja Luka	152.58	334	*e*P		PKPbc	16 57 00.7	-0.5
DAVA	Damuels	152.60	347	*e*PKP		PKPbc	16 57 00.9	-0.5
	comp=Z,7.5nm,0.5s							
DAVA				*i* PKP		PKPab	16 57 15.4	+0.2
	comp=Z,8.5nm,0.7s							
FETA	Feichten	152.66	345	*e*PKP		PKPdf	16 56 53.0	-0.8
	comp=Z,2.4nm,0.7s							
FETA				*i* PKP		PKPbc	16 57 01.0	-0.6
	comp=Z,6.3nm,0.6s							
BOJS	Bojanci	152.68	338	*e*P		PKPbc	16 57 01.4	0.0
VOJS	Vojsko	152.68	340	*i* PKPbc		PKPbc	16 57 00.7	-0.9
CEY	Cerknica	152.76	339	*e*P		PKPbc	16 57 00.8	-0.8
MGRS	Mrkonjic Grad	152.90	334	*e*P		PKiKP	16 57 05.1	+3.1
A050A	Klekovaca	153.06	335	*e*P		PKPbc	16 57 00.9	-1.5
BRY	Bratogost	153.46	330	*e*P		PKPbc	16 57 02.1	-1.3
OHR	Ohrid	153.63	325	*i* P		PKPbc	16 57 03.3	-0.4
TREB	Trebinje	153.69	330	*e*P		PKPbc	16 57 01.8	-1.9
DRME	Dracevica, Mon	153.69	328	*e*P		PKPbc	16 57 03.0	-0.7
STON	Ston	153.87	331	*e*P		PKPbc	16 57 02.3	-1.7
PBRG	Braganca	158.12	15	*e*PKPab		PKPab	16 57 39.4	+0.4
MVO	Moncorvo	158.65	17	*e*PKPab		PKPab	16 57 41.6	+0.3
MTE	Manteigas	159.21	18	*e*PKPab		PKPab	16 57 44.3	+0.5
PCAS	Casmilo, Conde	159.23	21	*e*PKPab		PKPab	16 57 43.7	-0.1
PCBR	Castelo Branco	159.75	19	*e*PKPab		PKPab	16 57 46.7	+0.6
PMAFR	Mafra	159.93	24	*e*PKPab		PKPab	16 57 47.0	+0.1
PMRV	Marv??o	160.15	19	*e*PKPab		PKPab	16 57 48.2	+0.3
PESTR	Estremoz	160.60	20	*e*PKPab		PKPab	16 57 49.2	-0.7
ESDC	Sonseca Array	160.76	11			PKPab	16 57 49.6	-1.0
ESDC	Sonseca Array	160.76	11	PKP		PKPdf	16 57 03.9	-0.2
	comp=Z,0.6nm,0.9s,baz=336,slow=1.6,SNR=2.7							
ESDC				PKPab		PKPab	16 57 50.2	-0.4
	comp=Z,1.1nm,0.5s,baz=343,slow=5.1,SNR=10							
EVO	Evora	160.76	22	*e*PKPab		PKPab	16 57 50.5	-0.1
PNCL	Nicolau / Gran	160.95	23	*e*PKPab		PKPab	16 57 51.2	-0.2
PBEJ	Beja	161.27	22	*e*PKPab		PKPab	16 57 53.4	+0.6
MESJ	Messejana	161.31	23	*e*PKPab		PKPab	16 57 52.6	-0.4
MESJ	Messejana	161.31	23	*e*PKPab		PKPab	16 57 52.7	-0.4
PBAR	Barrancos	161.41	20	*e*PKPab		PKPab	16 57 53.6	+0.2
PCVE	Castro Verde	161.56	23	*e*PKPab		PKPab	16 57 54.5	+0.4
KEST	Kesra	163.39	335	PKPab		PKPab	16 58 01.8	-0.5
	comp=Z,2.9nm,0.7s,baz=49,slow=1.5,SNR=5.2							
DBIC	Dimbokro	164.88	158	PKP		PKPdf	16 57 08.0	-0.7
	comp=Z,3.8nm,0.6s,baz=348,slow=1.3,SNR=9.2							
DBIC				PKPab		PKPab	16 58 09.8	+0.6
	comp=Z,2.8nm,0.5s,baz=298,slow=1.7,SNR=3.5							
TOA0	Torodi Ar. Sit	172.32	186			PKPab	16 58 41.5	-0.6
TORD	Torodi Ar. Bea	172.32	186	PKP		PKPdf	16 57 12.2	-1.2
	comp=Z,2.1nm,0.8s,baz=42,slow=1.6,SNR=9.5							
TORD				PKPab		PKPab	16 58 41.7	-0.3
	comp=Z,6.1nm,1.0s,baz=197,slow=22,SNR=9.9							

WEL 11 16:40:02.7±0.5, 42°S 17°3E±°, h59km±7km, M3.3/16, ML3.6/16, MLv3.3/16, Error ellipse: s-maj=0.0km s-min=0.0km az=116.6, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOLW	Molesworth Sta	0.14	85	P	Pn	16 40 14.1	+2.2
MOLW				S	Sn	16 40 22.3	+3.8
THZ	Tophouse	0.36	340	P	Pn	16 40 14.8	+1.5
THZ				S	Sn	16 40 23.0	+2.0
KHZ	Kahutara	0.47	132	P	Pn	16 40 16.1	+1.8
KHZ				S	Sn	16 40 25.8	+3.1
WVFS	Wairau Valley	0.53	24	P	Pn	16 40 15.0	+0.1
WVFS				S	Sn	16 40 24.4	+0.7
KIKS	Kaikoura	0.56	126	P	Pn	16 40 17.2	+1.9
KIKS				S	Sn	16 40 27.7	+3.3
KEKS	Kekerengu Vall	0.70	78	P	Pn	16 40 18.3	+1.4
KEKS				S	Sn	16 40 30.1	+2.8
BSWZ	Blackbirch Sta	0.72	58	P	Pn	16 40 18.4	+1.3
BSWZ				S	Sn	16 40 30.0	+2.4
MRNZ	Matariki Terra	0.74	342	P	Pn	16 40 18.2	+0.8
MRNZ				S	Sn	16 40 29.4	+1.3
GVZ	Greta Valley S	0.87	182	P	Pn	16 40 20.2	+1.2
GVZ				S	Sn	16 40 32.9	+1.9
LTZ	Lake Taylor	0.90	221	P	Pn	16 40 20.1	+0.6
LTZ				S	Sn	16 40 33.0	+1.2
NNZ	Nelson	0.91	15	P	Pn	16 40 20.2	+0.6
NNZ				S	Sn	16 40 33.2	+1.2
CMWZ	Cape Campbell	0.93	68	P	Pn	16 40 21.0	+1.3
CMWZ				S	Sn	16 40 35.3	+2.9
TUWZ	Tuamarina	0.94	45	P	Pn	16 40 20.5	+0.6
TUWZ				S	Sn	16 40 33.0	+0.4
DSZ	Denniston Nort	1.01	290	P	Pn	16 40 21.2	+0.3
DSZ				S	Sn	16 40 34.8	+0.5
TKNZ	Takaka Hill	1.07	356	P	Pn	16 40 22.4	+0.7
TKNZ				S	Sn	16 40 36.9	+1.2
AMCZ	Amberley	1.12	196	P	Pn	16 40 22.9	+0.7
TCW	Tory Channel	1.27	46	P	Pn	16 40 24.5	+0.2
TCW				S	Sn	16 40 39.8	-0.7
QRZ	Quartz Range	1.34	342	P	Pn	16 40 25.3	+0.1
QRZ				S	Sn	16 40 41.8	-0.2
INZ	Inchbonnie	1.35	242	P	Pn	16 40 25.6	+0.2
INZ				S	Sn	16 40 42.9	+0.6
OXZ	Oxford	1.44	211	P	Pn	16 40 26.1	-0.4
OXZ				S	Sn	16 40 44.2	-0.2
DUWZ	D'Urville Isla	1.45	27	P	Pn	16 40 27.5	+0.8
WEL	Wellington	1.51	58	P	Pn	16 40 27.5	-0.1
BHW	Baring Head	1.52	63	P	Pn	16 40 27.3	-0.3
BHW				S	Sn	16 40 45.4	-0.9
MQZ	McQueen's Vall	1.63	191	P	Pn	16 40 28.3	-0.8
MQZ				S	Sn	16 40 47.9	-1.2
PLWZ	Palliser	1.72	73	P	Pn	16 40 29.5	-0.9
RACZ	Rakaia	1.76	202	P	Pn	16 40 30.3	-0.6
AKCZ	Akaroa Harbour	1.77	184	P	Pn	16 40 30.8	-0.3
AKCZ				S	Sn	16 40 51.9	-0.7
CAW	Cannon Point	1.80	57	P	Pn	16 40 30.9	-0.5
MHCZ	Mount Hutt	1.81	217	P	Pn	16 40 30.8	-0.8
KIW	Kapiti Island	1.86	49	P	Pn	16 40 32.2	-0.1
PAWZ	Paruwai Farm	1.91	69	P	Pn	16 40 31.8	-1.2
WVZ	Waitaha Valley	1.98	240	P	Pn	16 40 33.8	0.0
OGWZ	Otaki Gorge	2.04	52	P	Pn	16 40 34.1	-0.5
WACZ	Wakanui South	2.05	206	P	Pn	16 40 33.9	-0.9
MTW	Mount Morrison	2.06	64	P	Pn	16 40 33.6	-1.3
TRWZ	Traveller	2.08	71	P	Pn	16 40 34.0	-1.3
RPZ	Rata Peaks	2.19	222	P	Pn	16 40 36.2	-0.6
HOWZ	Holdsworth Sta	2.20	58	P	Pn	16 40 35.6	-1.3
ARCZ	Arundel	2.31	216	P	Pn	16 40 37.6	-0.7
TMWZ	Te Maipa	2.34	66	P	Pn	16 40 37.2	-1.6
MRZ	Mangatainoka R	2.38	54	P	Pn	16 40 38.1	-1.2
TIWZ	Tintock	2.50	59	P	Pn	16 40 39.6	-1.4
POWZ	Post Office Ro	2.66	51	P	Pn	16 40 41.8	-1.3
PRWZ	Pori Road	2.68	56	P	Pn	16 40 41.9	-1.5
TMZ	Timaru	2.73	213	P	Pn	16 40 43.1	-1.1
WAZ	Wanganui	2.76	32	P	Pn	16 40 45.3	+0.8
BFZ	Birch Farm	2.78	60	P	Pn	16 40 42.6	-2.2
FOZ	Fox Glacier	2.79	238	P	Pn	16 40 44.2	-0.7
LREZ	Lake Rotokare	2.83	21	P	Pn	16 40 47.0	+1.6
DVHZ	Dannevirke	2.95	53	P	Pn	16 40 45.1	-2.1
PKE	Pukeiti	2.99	14	P	Pn	16 40 48.5	+0.8
TSZ	Takapari Road	2.99	48	P	Pn	16 40 46.1	-1.6
ANWZ	Angora Road	3.05	59	P	Pn	16 40 46.1	-2.3
LBZ	Lake Benmore	3.10	222	P	Pn	16 40 48.5	-0.8
PNHZ	Pukenui	3.23	48	P	Pn	16 40 49.0	-2.0
VRZ	Vera Road	3.24	24	P	Pn	16 40 51.7	+0.6
PRHZ	Porangahau	3.26	57	P	Pn	16 40 48.8	-2.6
WPHZ	Waipukurau	3.26	53	P	Pn	16 40 49.4	-2.0
WNVZ	Wahianoa	3.37	36	P	Pn	16 40 52.9	-0.2
ODZ	Otahua Downs	3.43	210	P	Pn	16 40 52.4	-1.2
BHHZ	Black Hill Sta	3.46	42	P	Pn	16 40 52.9	-1.3
KRHZ	Kereru	3.51	47	P	Pn	16 40 52.9	-1.9
PXZ	Pawanui	3.54	55	P	Pn	16 40 52.3	-2.9
OTTZ	Otturere	3.54	35	P	Pn	16 40 52.9	-2.5
NNVZ	North Ngauruho	3.54	34	P	Pn	16 40 55.6	+0.2
KAHZ	Kahuranaki	3.69	53	P	Pn	16 40 54.6	-2.7
JCZ	Jackson Bay	3.70	236	P	Pn	16 40 55.8	-1.7
MCHZ	McNeill Hill	3.83	47	P	Pn	16 40 56.1	-3.0
HIZ	Hauiti	3.84	21	P	Pn	16 40 59.0	-0.3
WKZ	Wanaka	4.01	226	P	Pn	16 40 59.3	-2.4
EAZ	Earnscleugh	4.15	220	P	Pn	16 41 01.7	-1.8
TLZ	Tolley Road	4.22	27	P	Pn	16 41 05.5	+1.0
MHGZ	Mahia Peninsul	4.72	53	P	Pn	16 41 11.2	-0.1
MLZ	Mavora Lakes	4.85	226	P	Pn	16 41 10.5	-2.6
MWZ	Matawai	5.08	44	P	Pn	16 41 13.2	-3.1
SYZ	Scrubby Hill	5.25	211	P	Pn	16 41 17.5	-1.1
TWGZ	Tauwhareparae	5.43	45	P	Pn	16 41 18.5	-2.7
GRZ	Great Barrier	6.13	18	P	Pn	16 41 33.1	+2.5
WCZ	Waipu Caves	6.23	10	P	Pn	16 41 33.9	+1.8

*NEIC **11** 16:49:47.1±0.9, 4°.3S±0°.1×151°.9E±0°.1, h172km±6km, mb4.4/13, Error ellipse: s-maj=23.8km s-min=16.7km az=130.0*
*IDC **11** 16:49:56.1±2.6, 4°.88S×151°.80E, h240km±27km, mb3.4/4, mbtmp3.9/5, Error ellipse: s-maj=25.1km s-min=12.5km az=81.0*

ISC 11 16:49:45.9±0.7, 4°.26S±0°.07×151°.76E±0°.09, h153km, n27, σ1°89/28, mb4.2/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.40	81	Pn	Pn	16 50 10.4	+3.2
RABL				Sn	Sn	16 50 27.5	+4.2
MANU	Manus Island	4.91	296	Pn	Pn	16 50 57.9	-0.3
PMG	Port Moresby	6.86	222	Pn	Pn	16 51 26.1	+1.9
PMG	Port Moresby	6.86	222	P	Pn	16 51 27.6	+3.4
	9.8nm,1.0s,baz=294,slow=4.6,SNR=5.8						
COEN	Coen	12.83	221	P	P	16 52 49.2	+1.3
GUMO	Guam	19.00	339	P	Pn	16 54 07.5	+9.1
	45nm,0.3s,baz=11,slow=19,SNR=16						
GUMO				S	Sn	16 57 34.2	+1.3
	109nm,1.0s,baz=26,slow=18,SNR=2.1						
MTN	Manton Dam	22.10	246	P	P	16 54 29.6	+0.6
MTN				IAmb	IAmb	16 54 59.3	
	comp=Z,28nm,1.4s						
DZM	Mont Dzumac	22.72	143	P	P	16 54 32.8	-2.2
DZM				IAmb	IAmb	16 54 43.5	
	comp=Z,18nm,1.4s						
DZM	Mont Dzumac	22.72	143	P	P	16 54 32.6	-2.5
	comp=Z,3.6nm,0.6s,baz=310,slow=11,SNR=6.7						
	comp=Z,3.6nm,0.6s						
WB0	Warramunga Arr	22.90	226	P	P	16 54 36.4	-0.3
WR0	Warramunga Arr	22.92	226	P	P	16 54 36.3	-0.5
WR0				IAmb	IAmb	16 54 37.8	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	23.04	226	P	P	16 54 37.1	-0.9
WRAB				IAmb	IAmb	16 54 38.9	
	comp=Z,7.6nm,0.9s						
WB2	Warramunga Arr	23.04	226	P	P	16 54 37.3	-0.7
WRA	Warramunga Arr	23.05	226	P	P	16 54 37.4	-0.7
	comp=Z,3.8nm,0.5s,baz=45,slow=9.5,SNR=45						
	comp=Z,3.8nm,0.5s						
OUENC	Ouen Island, N	23.22	142	P	P	16 54 38.2	-1.3
OUENC				IAmb	IAmb	16 54 46.9	
	comp=Z,9.4nm,0.9s						
AS31	Alice Springs	25.87	220	P	P	16 55 02.8	-0.8
ASAR	Alice Springs	25.88	220	P	P	16 55 02.8	-0.9
ASAR

n35,σ0$60/59, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGE1	**Gennadi, Rhode**	**0.14**	**292**	P	**Pg**	**17 32 48.0**	**-0.1**
RGE1				S	**Sg**	**17 32 50.5**	**0.0**
ARG	**Arkhangelos**	**0.24**	**8**	Pg	**Pg**	**17 32 49.3**	**-0.6**
ARG				Sg	**Sg**	**17 32 53.4**	**+0.1**
ARG	**Arkhangelos**	**0.24**	**8**	P	**Pg**	**17 32 49.6**	**-0.3**
ARG				S	**Sg**	**17 32 54.2**	**+0.9**
	3μm,0.2s						
ARG	**Arkhangelos**	**0.24**	**8**	P	**Pg**	**17 32 49.5**	**-0.3**
ARG				S	**Sg**	**17 32 53.3**	**+0.1**
RODB	**Rodos**	**0.48**	**13**	P	**Pb**	**17 32 55.0**	**-0.1**
RODB				S	**Sg**	**17 33 01.1**	**+0.5**
TURN	**Turunc**	**0.81**	**9**	P	**Pg**	**17 32 59.5**	**-0.9**
TURN				S	**Sb**	**17 33 12.2**	**+0.7**
KRPA	**Karpathos**	**0.85**	**237**	P	**Pb**	**17 33 01.2**	**-0.3**
KRPA				S	**Sb**	**17 33 13.0**	**+0.3**
DAT	**Datca**	**0.86**	**331**	Pg	**Pg**	**17 33 00.8**	**-0.5**
DAT				Sg	**Sb**	**17 33 13.2**	**+0.2**
KARP	**Karpathos**	**0.87**	**241**	Pg	**Pg**	**17 33 00.8**	**-0.7**
KARP				Sg	**Sb**	**17 33 13.4**	**+0.2**
KARP	**Karpathos**	**0.87**	**241**	P	**Pb**	**17 33 01.6**	**-0.1**
KARP				S	**Sn**	**17 33 14.5**	**-0.8**
KARP	**Karpathos**	**0.87**	**241**	P	**Pb**	**17 33 01.4**	**-0.3**
KARP				S	**Sb**	**17 33 13.9**	**+0.7**
YAZI	**Mula-Dat§a-**	**0.87**	**324**	P	**Pb**	**17 33 02.1**	**+0.3**
YAZI				S	**Sg**	**17 33 12.4**	**-0.5**
DALY	**Dalyan (Mula)**	**0.96**	**28**	Pg	**Pg**	**17 33 02.6**	**-0.6**
DALY				Sg	**Sb**	**17 33 16.3**	**+0.5**
IZZE	**Mula-Seydike**	**1.03**	**63**	P	**Pg**	**17 33 03.7**	**-0.9**
IZZE				S	**Sn**	**17 33 20.1**	**+0.8**
IZZE				*i* AML	AML	17 33 25.0	
	comp=N,445nm,0.5s						
FETY	**Fethiye**	**1.04**	**50**	Pg	**Pg**	**17 33 04.2**	**-0.6**
FETY				Sg	**Sb**	**17 33 19.1**	**+0.9**
FETI	**Fethiye-Mugla**	**1.08**	**49**	Pn	**Pg**	**17 33 04.9**	**-0.7**
YER	**Yerkesik**	**1.17**	**8**	Pn	**Pb**	**17 33 06.4**	**-0.4**
YER	**Yerkesik**	**1.17**	**8**	P	**Pb**	**17 33 06.4**	**-0.4**
BDRM	**Kayabasi**	**1.20**	**335**	P	**Pb**	**17 33 06.9**	**-0.6**
BDRM				S	**Sb**	**17 33 23.1**	**+0.1**
BDRM				*i* AML	AML	17 33 24.0	
	comp=E,152nm,0.3s						
BODT	**Bodrum**	**1.25**	**330**	Pn	**Pn**	**17 33 08.1**	**+0.1**
BODT	**Bodrum**	**1.25**	**330**	P	**Pn**	**17 33 07.9**	**-0.1**
BODT				S	**Sg**	**17 33 24.8**	**-0.3**
BODT	**Bodrum**	**1.25**	**330**	P	**Pn**	**17 33 06.7**	**-1.3**
BODT				S	**Sb**	**17 33 23.9**	**-0.4**
BODT				*i* AML	AML	17 33 26.0	
	comp=E,206nm,0.6s						
MULA	**Mugla, Merkez-**	**1.29**	**8**	P	**Pg**	**17 33 09.1**	**-0.5**
MLSB	**Milas**	**1.34**	**349**	Pn	**Pn**	**17 33 09.4**	**+0.2**
MLSB	**Milas**	**1.34**	**349**	P	**Pg**	**17 33 10.8**	**+0.3**
MLSB				S	**Sb**	**17 33 25.7**	**-1.2**
CAME	**Cameli-Denizli**	**1.38**	**45**	Pn	**Pn**	**17 33 09.8**	**0.0**
CAEL	**Denizli, Camel**	**1.52**	**41**	P	**Pb**	**17 33 12.7**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.63**	**24**	P	**Pb**	**17 33 14.9**	**+0.2**
TAVA				S	**Sg**	**17 33 36.9**	**-0.3**
GOLH	**Golhisar**	**1.73**	**43**	P	**Pb**	**17 33 16.7**	**+0.3**
GOLH				S	**Sg**	**17 33 39.5**	**-0.9**
GOLH				*i* AML	AML	17 33 47.0	
	comp=N,55nm,1.0s						
ZKR	**Zakros**	**1.75**	**241**	P	**Pn**	**17 33 15.6**	**+0.8**
ZKR				S	**Sn**	**17 33 38.0**	**+0.9**
APMY	**Acipayam-Deniz**	**1.78**	**33**	Pn	**Pn**	**17 33 15.7**	**+0.3**
DNIZ	**Denizli-Tavas-**	**1.81**	**25**	P	**Pb**	**17 33 18.1**	**+0.2**
DNIZ				S	**Sg**	**17 33 42.2**	**-0.9**
DNIZ				*i* AML	AML	17 33 47.0	
	comp=N,158nm,0.3s						
ESEN	**Aydn-Nazilli**	**1.83**	**7**	P	**Pb**	**17 33 18.4**	**+0.3**
ESEN				S	**Sn**	**17 33 40.0**	**+0.9**
SMG	**Samos**	**2.00**	**330**	P	**Pn**	**17 33 19.6**	**+1.3**
IDI	**Anoyia**	**2.69**	**256**	P	**Pn**	**17 33 27.8**	**-0.1**

IDC 11 17:33:54.6±1.9,3°37N×123°53E,h0km,mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=211.4km s-min=27.8km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.49**	**156**	P	P	17 39 24.2	-0.6
	0.4nm,0.8s,baz=334,slow=11,SNR=7.1						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**28.71**	**160**	P	P	17 39 54.5	+0.6
	0.1nm,0.7s,baz=339,slow=7.1,SNR=4.0						
	0.1nm,0.7s						
MKAR	**Makanchi Array**	**56.07**	**327**	P	P	17 43 35.5	0.0
	0.1nm,0.4s,baz=134,slow=7.3,SNR=4.2						
	0.1nm,0.4s						

*IDC **11** 18:04:56.5±1.3,10°72S×164°45E,h0km,mb3.9/7, mbtmp4.0/9,ML4.0/2,MS3.6/13, Error ellipse: s-maj=31.6km s-min=23.3km az=123.0*
*NEIC **11** 18:04:58.4±1.0,10°80S±0°03×164°4E±0°1,h10km±2km, mb4.4/8, Error ellipse: s-maj=21.9km s-min=4.8km az=83.0*

ISC 11 18:05:00.7±0.9,10°85S±0°09×164°4E±0°1,h29km,n31, σ0$71/25,mb4.1/10,MS3.6/9, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.63**	**287**		**Pn**	**18 06 08.1**	**-0.7**
HNR	**Honiara**	**4.63**	**287**	Pn	**Pn**	**18 06 09.4**	**+0.6**
	200nm,0.3s,baz=203,slow=4.4,SNR=10						
HNR				Sn	**Sn**	**18 07 01.4**	**-0.2**
	345nm,0.3s,baz=137,slow=9.0,SNR=5.7						
HNR				LR	LR	18 08 06.7	
	comp=Z,4μm,20.8s,baz=175,slow=41						
KOUNC	**Koumac, New Ca**	**9.64**	**181**		**Pn**	**18 07 17.7**	**+0.2**
DZM	**Mont Dzumac**	**11.32**	**170**		**Pn**	**18 07 40.1**	**-0.5**
DZM	**Mont Dzumac**	**11.32**	**170**	Pn	**Pn**	**18 07 40.9**	**+0.2**
	0.7nm,0.3s,baz=326,slow=22,SNR=16						
DZM				Sn	**Sn**	**18 09 45.5**	**-0.8**
	0.3nm,0.3s,baz=34,slow=22,SNR=1.2						
DZM				LR	LR	18 11 19.6	
	comp=Z,290nm,18.5s,baz=72,slow=34						
	7.4nm,0.8s						
OUENC	**Ouen Island, N**	**11.73**	**169**	Pn	**Pn**	**18 07 46.8**	**+0.6**
PINNC	**Pines Island,**	**12.05**	**167**	Pn	**Pn**	**18 07 50.0**	**-0.5**
PMG	**Port Moresby**	**17.06**	**273**	LR	LR	18 14 53.0	
	comp=Z,129nm,20.7s,baz=106,slow=35						
CTA	**Charters Tower**	**19.76**	**240**	P	**P**	**18 09 29.3**	**+0.7**
	0.3nm,0.3s,baz=62,slow=11,SNR=18						
CTA				LR	LR	18 15 43.4	
	comp=Z,107nm,21.9s,baz=79,slow=33						
	14nm,0.9s						
CTAO	**Charters Tower**	**19.76**	**240**	P	**P**	**18 09 28.7**	**+0.1**
CTAO				IAmb	IAmb	18 09 34.4	
	comp=Z,15nm,0.9s						
COEN	**Coen**	**20.99**	**259**	P	**P**	**18 09 42.0**	**+0.1**
STKA	**Stephens Creek**	**29.71**	**222**	P	**P**	**18 11 05.9**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=222,slow=19,SNR=3.2						
STKA				LR	LR	18 21 58.3	
	comp=Z,55nm,21.8s,baz=25,slow=34						
	comp=Z,1.8nm,0.7s						
WB0	**Warramunga Arr**	**30.25**	**249**	P	**P**	**18 11 08.6**	**-0.8**
WB0				IAmb	IAmb	18 11 12.0	
	comp=Z,5.2nm,0.9s						
WRAB	**Tennant Creek**	**30.33**	**249**	P	**P**	**18 11 09.4**	**-0.6**
WRAB				IAmb	IAmb	18 11 13.2	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**30.34**	**249**	P	**P**	**18 11 11.7**	**+1.6**
	comp=Z,2.7nm,1.0s,baz=76,slow=9.1,SNR=8.3						
	comp=Z,2.7nm,1.0s						
GUMO	**Guam**	**31.09**	**321**	LR	LR	18 23 45.8	
	comp=Z,77nm,18.4s,baz=118,slow=36						
ASAR	**Alice Springs**	**31.73**	**242**	P	**P**	**18 11 22.3**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=65,slow=10,SNR=10						
	comp=Z,0.5nm,0.6s						
RPZ	**Rata Peaks**	**33.24**	**171**	LR	LR	18 24 11.1	
	comp=Z,108nm,19.2s,baz=336,slow=35						
BBOO	**Buckleboo**	**34.03**	**226**	P	**P**	**18 11 41.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**38.18**	**255**	P	**P**	**18 12 18.4**	**+0.4**
NWAO	**Narrogin (SRO)**	**48.50**	**235**	LR	LR	18 33 33.7	
	comp=Z,90nm,20.8s,baz=91,slow=35						
CMAR	**Chiang Mai Arr**	**70.85**	**294**	P	**P**	**18 16 14.8**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=105,slow=2.6,SNR=2.8						
	comp=Z,0.2nm,0.4s						
MA2	**Magadan**	**71.05**	**353**	LR	LR	18 45 22.3	
	comp=Z,23nm,18.2s,baz=78,slow=34						
SONM	**Songino Array**	**77.75**	**324**	P	**P**	**18 16 54.5**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=132,slow=5.9,SNR=3.9						
	comp=Z,0.5nm,0.8s						
E19K	**Redstone River**	**82.85**	**14**	P	**P**	**18 17 22.4**	**+0.4**
ILAR	**Eielson Array**	**83.75**	**19**	P	**P**	**18 17 27.1**	**+0.5**
	comp=Z,2.1nm,1.0s,baz=232,slow=5.5,SNR=8.8						
ILAR				LR	LR	18 48 53.2	
	comp=Z,22nm,20.6s,baz=23,slow=32						
	comp=Z,2.1nm,1.0s						
D22K	**Ayikyak River**	**85.04**	**14**	P	**P**	**18 17 34.1**	**+0.9**
D22K				IAmb	IAmb	18 17 37.8	
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**86.89**	**50**	LR	LR	18 54 34.6	
	comp=Z,21nm,18.1s,baz=269,slow=34						
PFO	**Pinyon Flats O**	**87.03**	**55**	LR	LR	18 53 47.7	
	comp=Z,30nm,18.3s,baz=128,slow=34						
MKAR	**Makanchi Array**	**92.50**	**317**	P	**P**	**18 18 08.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=88,slow=6.1,SNR=5.9						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**95.40**	**27**	LR	LR	19 01 24.9	
	comp=Z,19nm,18.4s,baz=283,slow=36						

*IDC **11** 18:06:33.1±1.4,15°68S×74°42W,h0km,mb4.1/4, mbtmp4.1/4,MS3.3/6, Error ellipse: s-maj=45.0km s-min=37.0km az=109.0*
*NEIC **11** 18:06:34±2.4,16°05S±0°05×74°78W±0°06,h10km±2km, mb4.5/12, Error ellipse: s-maj=12.4km s-min=4.1km az=307.0*

ISC 11 18:06:34.8±0.7,16°10S±0°07×74°69W±0°09,h10km,n56, σ1$89/45,mb4.2/7,MS3.4/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.59**	**333**	Pn	**Pn**	**18 07 44.0**	**-0.4**
AP01	**Chacalluta**	**4.73**	**119**	eS	**Sb**	**18 08 56.2**	**+1.3**
PB12	**IPOC Station P**	**4.86**	**122**	Pn	**Pn**	**18 07 50.0**	**+1.9**
PB16	**IPOC Station P**	**5.43**	**115**		**Pn**	**18 07 59.1**	**+2.7**
PB11	**IPOC Station P**	**6.02**	**128**	Pn	**Pn**	**18 08 05.2**	**+1.1**
TA01	**Diego Aracena**	**6.17**	**137**		**Pn**	**18 08 06.6**	**+0.5**
LPAZ	**La Paz**	**6.31**	**93**	Pn	**Pn**	**18 08 09.4**	**+0.9**
GO01	**Chusmiza**	**6.32**	**125**		**Pn**	**18 08 09.7**	**+1.1**
GO01	**Chusmiza**	**6.32**	**125**	*i* P	**Pn**	**18 08 11.3**	**+2.6**
PATCX	**Punta Patache**	**6.37**	**138**	Pn	**Pn**	**18 08 09.5**	**+0.6**
PB08	**IPOC Station P**	**6.62**	**128**		**Pn**	**18 08 13.2**	**+0.6**
PB02	**IPOC Station P**	**6.90**	**140**		**Pn**	**18 08 17.1**	**+1.0**
PB01	**IPOC Station P**	**6.97**	**136**		**Pn**	**18 08 18.0**	**+0.9**
PB07	**IPOC Station P**	**7.21**	**142**		**Pn**	**18 08 21.3**	**+0.8**
PB04	**IPOC Station P**	**7.54**	**146**	Pn	**Pn**	**18 08 25.2**	**+0.2**
PB09	**IPOC Station P**	**7.66**	**139**		**Pn**	**18 08 26.1**	**-0.6**
PB05	**IPOC Station P**	**7.94**	**148**		**Pn**	**18 08 30.6**	**+0.1**
LVC	**Limon Verde**	**8.47**	**141**	Pn	**Pn**	**18 08 38.4**	**+0.4**
LVC	**Limon Verde**	**8.47**	**141**	LR	LR	18 11 51.5	
	comp=Z,77nm,21.6s,baz=356,slow=37						
CZSB	**Cruzeiro do Su**	**8.54**	**13**	Pn	**Pn**	**18 08 37.4**	**-1.3**
PB15	**IPOC Station P**	**8.61**	**146**		**Pn**	**18 08 41.1**	**+1.4**
PB14	**IPOC Station P**	**9.38**	**155**	Pn	**Pn**	**18 08 49.5**	**-1.0**
GO02	**Mina Guanaco**	**10.20**	**153**	Pn	**Pn**	**18 08 60.0**	**-1.7**
ETMB	**Extrema**	**10.36**	**54**	Pn	**Pn**	**18 09 02.5**	**-1.1**
SIV	**San Ignacio**	**13.10**	**91**	LR	LR	18 15 08.8	
	comp=Z,168nm,20.7s,baz=290,slow=40						
SAML	**Samuel**	**13.29**	**59**		Pn	18 09 40.2	-3.6
BOSC	**San Juan Bosco**	**13.40**	**343**		**Pn**	**18 09 45.6**	**+0.3**
COHC	**Cochancay**	**14.28**	**341**	P	**Pn**	**18 10 01.5**	**+4.3**
VILB	**Vilhena**	**14.38**	**79**	P	**P**	**18 10 04.2**	**-1.4**
CO06	**Fray Jorge**	**14.77**	**170**	Pn	Pn	18 09 59.8	-4.2
CO03	**El Pedregal**	**15.12**	**167**	Pn	**Pn**	**18 10 05.1**	**-3.6**
CO03				IAmb	IAmb	18 10 26.8	
	comp=Z,34nm,1.2s						
CO02	**Combarbal**	**15.41**	**168**	Pn	**Pn**	**18 10 10.2**	**-2.3**
CO02				IAmb	IAmb	18 10 30.6	
	comp=Z,45nm,1.2s						
VA06	**Catapilco**	**16.67**	**170**		**Pn**	**18 10 29.9**	**+1.2**
VA06				IAmb	IAmb	18 10 35.0	
	comp=Z,32nm,1.1s						
MT16	**CCHEN**	**17.66**	**168**	Pn	**Pn**	**18 10 39.0**	**-2.1**
H03N1	**Juan Fernandez**	**17.68**	**192**	T	T	18 29 20.9	
	baz=14,slow=74,SNR=3627						
H03N2	**Juan Fernandez**	**17.68**	**192**	T	T	18 29 24.1	
	baz=14,slow=74,SNR=2524						
H03N3	**Juan Fernandez**	**17.70**	**192**	T	T	18 29 19.7	
	baz=14,slow=74,SNR=2543						
VA04	**Juan Fernndez**	**17.86**	**191**	P	**Pn**	**18 10 40.3**	**-3.2**
MT01	**Popeta**	**17.96**	**171**	Pn	**Pn**	**18 10 42.2**	**-2.5**
CPUP	**Villa Florida**	**19.10**	**125**	LR	LR	18 19 37.4	
	comp=Z,83nm,19.3s,baz=320,slow=41						
LR04	**Corral**	**23.72**	**178**	P	**P**	**18 11 44.0**	**-3.0**
PLCA	**Paso Flores**	**24.80**	**172**	P	**P**	**18 12 00.6**	**+3.4**
	comp=Z,1.9nm,0.9s,baz=343,slow=11,SNR=3.6						
	comp=Z,1.9nm,0.9s						
SDV	**Santo Domingo**	**25.15**	**9**	P	**P**	**18 11 58.5**	**-2.1**
SDV				IAmb	IAmb	18 12 01.2	
	comp=Z,6.2nm,1.0s						
BDFB	**Brasilia**	**25.66**	**93**	P	**P**	**18 12 04.1**	**-1.2**
BDFB	**Brasilia**	**25.66**	**93**	P	**P**	**18 12 02.7**	**-2.5**
	comp=Z,3.9nm,0.9s,baz=268,slow=8.6,SNR=6.1						
	comp=Z,3.9nm,0.9s						
BAUV	**El Baul**	**25.74**	**15**	P	**P**	**18 12 03.6**	**-2.1**
LL06	**Loncomilla**	**26.04**	**178**	P	**P**	**18 12 09.8**	**+1.6**
LL06				IAmb	IAmb	18 12 27.4	
	comp=Z,10.0nm,1.1s						
LL01	**San Ignacio de**	**26.26**	**176**	P	**P**	**18 12 09.0**	**-1.2**
LL01				IAmb	IAmb	18 12 11.8	
	comp=Z,20nm,1.1s						
JTS	**Las Juntas de**	**28.12**	**338**	LR	LR	18 21 39.2	
	comp=Z,47nm,18.4s,baz=38,slow=33						
MDP	**Montagnes des**	**30.33**	**48**	LR	LR	18 25 32.0	
	comp=Z,112nm,18.2s,baz=189,slow=38						
RPN	**Rapa Nui**	**33.91**	**245**	LR	LR	18 23 56.3	
	comp=Z,66nm,19.4s,baz=91,slow=30						
SNAA	**Sanae**	**69.13**	**161**	P	**P**	**18 17 43.0**	**+2.0**
	comp=Z,3.0nm,0.7s,baz=279,slow=9.6,SNR=9.4						
	comp=Z,3.0nm,0.7s						
QSPA	**South Pole Qui**	**74.06**	**180**	P	**P**	**18 18 13.2**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=354,slow=0.3,SNR=5.7						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**131.59**	**216**	PKP	**PKPdf**	**18 25 49.1**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=126,slow=1.6,SNR=8.2						
WRA	**Warramunga Arr**	**134.21**	**220**	PKP	**PKPdf**	**18 25 54.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=134,slow=1.6,SNR=3.2						
SONM	**Songino Array**	**148.34**	**359**	PKPbc	**PKPdf**	**18 26 20.1**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=349,slow=2.2,SNR=5.2						

*NEIC **11** 18:32:15.3±1.6,56°0N±0°1×149°7W±0°1,h21km±10km, ML3.5/32, ML3.2(AEIC), Error ellipse: s-maj=15.5km s-min=9.0km az=174.0*
*AEIC **11** 18:32:16.3±2.9,55°9N±0°1×149°5W±0°1,h8km±8km, Error ellipse: s-maj=15.8km s-min=9.3km az=171.0*

ISC 11 18:32:13.8±2.0,56°1N±0°1×149°67W±0°06,h10km,n141, σ0$91/142, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.31**	**302**		**Pn**	**18 32 51.8**	**0.0**
OHAK	**Old Harbor**	**2.31**	**302**		**Sn**	**18 33 19.2**	**-1.1**
OHAK	**Old Harbor**	**2.31**	**302**	P	**Pn**	**18 32 52.3**	**+0.5**
	baz=120						
OHAK				S	**Sn**	**18 33 19.2**	**-1.1**
	baz=120						
KDAK	**Kodiak Island**	**2.35**	**318**		**Pn**	**18 32 53.0**	**+0.7**
KDAK	**Kodiak Island**	**2.35**	**318**		**Sn**	**18 33 20.3**	**-0.9**
SII	**Sitkinak Islan**	**2.56**	**283**		**Pn**	**18 33 25.8**	**-0.7**
SII	**Sitkinak Islan**	**2.56**	**283**	S	**Sn**	**18 33 25.8**	**-0.7**
	baz=102						
Q20K	**Shuyak Island**	**2.95**	**331**	P	**Pn**	**18 33 01.1**	**+0.5**
	baz=148						
Q20K				S	**Sn**	**18 33 37.1**	**+1.1**
	baz=148						
SYI	**Shuyak Island**	**2.95**	**331**		**Pn**	**18 33 01.1**	**+0.5**
SYI					**Sn**	**18 33 37.1**	**+1.1**
CNPM	**China Poot**	**3.57**	**347**		**Pn**	**18 33 09.5**	**+0.3**
CNPM					**Sn**	**18 33 52.0**	**+0.6**
CNPM	**China Poot**	**3.57**	**347**	IAML		18 33 55.0	
	comp=E,51nm,0.6s						
CNPM				IAML		18 33 55.2	
	comp=N,40nm,1.0s						
Q19K	**Cape Douglas,**	**3.58**	**325**		**Pn**	**18 33 10.4**	**+1.1**
Q19K	**Cape Douglas,**	**3.58**	**325**	IAML		18 34 08.4	
	comp=N,157nm,0.8s						
Q19K	**Cape Douglas,**	**3.58**	**325**	P	**Pn**	**18 33 10.4**	**+1.1**
	baz=142						
BRSE	**Bradley Lake S**	**3.73**	**352**		**Pn**	**18 33 11.2**	**-0.2**
BRSE					**Sn**	**18 33 55.4**	**0.0**
BRSE	**Bradley Lake S**	**3.73**	**352**	P	**Pn**	**18 33 11.2**	**-0.2**
	baz=169						
BRSE				S	**Sn**	**18 33 55.4**	**0.0**
	baz=169						
BRLK	**Bradley Lake**	**3.77**	**351**		**Pn**	**18 33 11.7**	**-0.2**
BRLK					**Sn**	**18 33 55.4**	**-0.8**
BRLK	**Bradley Lake**	**3.77**	**351**	IAML		18 34 01.5	
	comp=E,45nm,0.9s						
BRLK				IAML		18 34 05.2	
	comp=N,34nm,1.1s						
CNTC	**Contact Creek**	**4.04**	**306**		**Pn**	**18 33 16.2**	**+0.6**
Q17K	**Contact Creek**	**4.04**	**306**	P	**Pn**	**18 33 16.2**	**+0.6**
	baz=121						
SEW	**Seward**	**4.05**	**2**		**Sn**	**18 34 01.0**	**-2.2**
SEW	**Seward**	**4.05**	**2**	S	**Sn**	**18 34 01.0**	**-2.2**
	baz=180						
P19K	**Oil Pt**	**4.07**	**334**		**Pn**	**18 33 16.7**	**+0.6**
P19K	**Oil Pt**	**4.07**	**334**	IAML		18 34 10.7	
	comp=N,83nm,1.2s						
P19K				IAML		18 34 14.1	
	comp=E,65nm,1.4s						
P19K	**Oil Pt**	**4.07**	**334**	P	**Pn**	**18 33 16.7**	**+0.6**
	baz=150						
P23K	**Montague Islan**	**4.12**	**16**		**Sn**	**18 34 03.6**	**-1.4**
P23K	**Montague Islan**	**4.12**	**16**	S	**Sn**	**18 34 03.6**	**-1.4**
	baz=196						
O20K	**Slope Mountain**	**4.32**	**340**		**Pn**	**18 33 19.8**	**+0.2**
O20K	**Slope Mountain**	**4.32**	**340**	P	**Pn**	**18 33 19.8**	**+0.2**
	baz=157						
O22K	**Cooper Landing**	**4.43**	**360**		**Pn**	**18 33 22.2**	**+1.2**
SLKM	**Skilak Lake**	**4.47**	**357**		**Pn**	**18 33 21.2**	**-0.3**
P18K	**Big Mountain,**	**4.47**	**321**		**Pn**	**18 33 22.0**	**+0.5**
P18K	**Big Mountain,**	**4.47**	**321**	P	**Pn**	**18 33 22.0**	**+0.5**
	baz=136						
HIN	**Hinchinbrook I**	**4.66**	**20**	Pn	**Pn**	**18 33 25.1**	**+1.0**
HIN				IAML		18 34 04.5	
	comp=E,50nm,1.5s						
HIN				IAML		18 34 41.3	
	comp=N,51nm,1.4s						
RED	**Redoubt Volcan**	**4.66**	**341**		**Pn**	**18 33 24.3**	**0.0**
RSO	**Redoubt South**	**4.70**	**341**	Pn	**Pn**	**18 33 25.2**	**+0.4**
RDT	**Redoubt**	**4.75**	**343**		**Pn**	**18 33 25.5**	**+0.1**
KAIM	**Kayak Island**	**4.78**	**34**	Pn	**Pn**	**18 33 25.2**	**-0.5**
O18K	**Koktuh Hills**	**4.81**	**325**		**Pn**	**18 33 26.5**	**+0.3**
O18K	**Koktuh Hills**	**4.81**	**325**	IAML		18 34 31.7	
	comp=N,15nm,1.3s						
O18K				IAML		18 34 39.5	
	comp=E,13nm,0.9s						
O18K	**Koktuh Hills**	**4.81**	**325**	P	**Pn**	**18 33 26.5**	**+0.3**
	baz=140						
O19K	**Port Alsworth**	**4.82**	**331**		**Pn**	**18 33 26.7**	**+0.5**
O19K	**Port Alsworth**	**4.82**	**331**	IAML		18 34 27.8	
	comp=E,66nm,0.5s						
O19K				IAML		18 34 29.1	
	comp=N,55nm,0.4s						
O19K	**Port Alsworth**	**4.82**	**331**	P	**Pn**	**18 33 26.7**	**+0.5**
	baz=147						
RC01	**Rabbit Creek A**	**5.04**	**360**		**Pn**	**18 33 29.4**	**0.0**
RC01	**Rabbit Creek A**	**5.04**	**360**	P	**Pn**	**18 33 29.4**	**0.0**
	baz=178						
RAGM	**Ragged Mountai**	**5.08**	**29**	Pn	**Pn**	**18 33 30.5**	**+0.7**
RAGM				IAML		18 34 54.9	
	comp=E,51nm,1.3s						
SUCK	**Suckling Hills**	**5.09**	**35**	Pn	**Pn**	**18 33 29.5**	**-0.6**
SUCK				IAML		18 34 31.1	
	comp=E,40nm,1.2s						
SUCK				IAML		18 34 46.0	
	comp=N,37nm,1.3s						
HMT	**Hamilton**	**5.15**	**32**		**Pn**	**18 33 31.7**	**+0.9**
N20K	**Mount Spurr**	**5.32**	**347**	P	**Pn**	**18 33 33.0**	**-0.3**
	baz=164						
SPCR	**Spurr Chakacha**	**5.32**	**347**		**Pn**	**18 33 33.0**	**-0.3**
BERG	**Berg Lake**	**5.37**	**34**		**Pn**	**18 33 33.6**	**-0.2**
N19K	**Bonanza Creek**	**5.39**	**334**		**Pn**	**18 33 34.3**	**+0.1**
N19K	**Bonanza Creek**	**5.39**	**334**	P	**Pn**	**18 33 34.3**	**+0.1**
	baz=150						
KNK	**Knik Glacier**	**5.40**	**6**	Pn	**Pn**	**18 33 36.3**	**+2.0**
SUA	**Susitna One**	**5.45**	**355**	Pn	**Pn**	**18 33 34.4**	**-0.6**
SNH	**Sunshine Point**	**5.49**	**38**	Pn	**Pn**	**18 33 37.0**	**+1.4**
STLK	**Strandline Lak**	**5.56**	**349**		**Pn**	**18 33 36.5**	**-0.1**
BMRM	**Bremner River**	**5.59**	**26**		**Pn**	**18 33 36.5**	**-0.4**
BMRM	**Bremner River**	**5.59**	**26**	P	**Pn**	**18 33 36.5**	**-0.4**
	baz=209						
N18K	**Kilae Creek**	**5.67**	**327**		**Pn**	**18 33 38.1**	**+0.2**

K15K	Wolf Creek Mou	8.71	321	Pn		Pn	18 34 20.3	+0.7
IL31		8.84	8	Pn		Pn	18 34 21.5	+0.1
MDM	Murphy Dome	8.95	4	Pn		Pn	18 34 24.6	+1.6
J26L	Joseph Creek	8.99	17	Pn		Pn	18 34 24.9	+1.3
MLY	Manley	9.01	357	Pn		Pn	18 34 24.4	+0.6
N31M	Braeburn, Yuko	9.02	47	Pn		Pn	18 34 24.1	+0.1
I23K	Minto, Yukon-K	9.12	1	Pn		Pn	18 34 25.8	+0.7
L29M	L29M	9.16	35	Pn		Pn	18 34 27.5	+1.6
H21K	Melozitna Rive	9.74	352	Pn		Pn	18 34 34.8	+1.0
K29M	Barlow Dome	9.88	33	Pn		Pn	18 34 37.4	+1.6
M31M	Drury Creek, Y	9.96	46	Pn		Pn	18 34 36.5	-0.2
IMAR	Indian Mountai	10.14	350	Pn		Pn	18 34 39.8	+0.5

NEIC ***11*** *18:37:33.6±1.9, 31°.77N±0°.01×115°.89W±0°.03, h5km±1km, Error ellipse: s-maj=3.3km s-min=2.0km az=75.0*
PAS ***11*** *18:37:34.5±1.5, 31°.77N±0°.02×115°.87W±0°.02, h11km±6km, ML2.5/20, ML2.3/26(NEIC), Error ellipse: s-maj=2.9km s-min=2.4km az=102.0*
MEX ***11*** *18:37:35.6±0.6, 31°.58N×116°.10W, h20km±10km, MD2.8*
ECX 11 18:37:34.9±0.6, 31°.78N×115°.85W, h6km±2km, MD2.2, ML2.5, 8C-7D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJX	San Joaquin	0.09	257	⇓*i*P	Pg	18 37 39.4	+2.5
SJX				*e*S	Sg	18 37 42.8	+4.5
SJX				IAML		18 37 43.5	
	comp=N,2μm,0.1s						
SJX				⇓*e*		18 37 43.5	
ESJX	Sierra Juarez	0.23	340		Pg	18 37 39.4	-0.2
ESJX					Sg	18 37 42.8	0.0
ESJX	Sierra Juarez	0.23	340	IAML		18 37 43.4	
	comp=E,2μm,0.1s						
ESJX				IAML		18 37 43.5	
	comp=N,1μm,0.1s						
ALAMX	Rancho Alamar	0.26	29	⇑*i*P	Pg	18 37 39.7	-0.3
ALAMX				*e*S	Sg	18 37 43.4	0.0
ALAMX				*e*		18 37 44.1	
ALAMX				IAML		18 37 44.1	
	comp=N,729nm,0.1s						
ALAMX				IAML		18 37 44.4	
	comp=E,930nm,0.2s						
ALAMX				⇓*e*		18 37 44.4	
VTX	Valle De La Tr	0.40	171		Pg	18 37 42.0	-0.6
VTX				IAML		18 37 47.9	
	comp=E,422nm,0.1s						
VTX	Valle De La Tr	0.40	171		Sg	18 37 47.2	-0.6
VTX	Valle De La Tr	0.40	171	⇓*i*P	Pg	18 37 42.0	-0.6
VTX				*e*S	Sg	18 37 47.5	-0.3
VTX				⇑*e*		18 37 47.9	
VTX				IAML		18 37 47.9	
	comp=E,573nm,0.1s						
VTX				⇑*e*		18 37 48.0	
VTX				IAML		18 37 48.0	
	comp=N,614nm,0.1s						
SV2X	San Vicente	0.55	217	⇑*e*P	Pg	18 37 44.9	-0.6
SV2X				*e*S	Sg	18 37 52.0	-0.7
RHX	Rio Hardy	0.60	54	*e*P	Pg	18 37 45.9	-0.5
RHX				*e*S	Sg	18 37 53.9	-0.3
CCX	Cicese	0.69	277		Pg	18 37 46.9	-1.4
CCX					Sg	18 37 57.1	-0.2
CCX	Cicese	0.69	277	IAML		18 37 58.1	
	comp=N,122nm,0.3s						
CCX	Cicese	0.69	277	*e*S	Sg	18 37 57.0	-0.3
PBX	Punta Banda	0.74	267	⇑*e*P	Pg	18 37 48.5	-0.7
PBX				*e*S	Sg	18 37 58.3	-0.6
ECBX	El Chinero	0.75	114	⇓*e*P	Pg	18 37 48.5	-0.8
ECBX				*e*S	Sg	18 37 58.1	-0.9
SPIG	San Pedro Mart	0.81	156	*e*P	Pg	18 37 49.5	-1.0
SPIG				*e*S	Sg	18 37 60.0	-1.0
SPIG	San Pedro Mart	0.81	156	⇓*e*P	Pg	18 37 49.4	-1.0
SPIG				*e*S	Sg	18 38 00.3	-0.6
RMX	La Rumorosa	0.84	347		Pg	18 37 48.9	-2.1
RMX					Pn	18 37 59.3	+5.9
RMX	La Rumorosa	0.84	347	IAML		18 37 59.5	
	comp=E,113nm,0.1s						
RMX				IAML		18 37 59.8	
	comp=N,88nm,0.2s						
RMX	La Rumorosa	0.84	347	*e*P	Pg	18 37 48.9	-2.2
RMX				*e*S	Sg	18 37 59.0	-3.0
RMX				⇑*e*		18 37 59.5	
RMX				IAML		18 37 59.5	
	comp=E,110nm,0.1s						
YUH	Yuha Desert	0.86	356	Pg	Pg	18 37 50.1	-1.4
YUH				IAML		18 38 02.4	
	comp=E,129nm,0.1s						
YUH				IAML		18 38 02.5	
	comp=N,62nm,0.1s						
YUH	Yuha Desert	0.86	356		Pn	18 38 01.3	+7.7
YUH2	Yuha Desert	0.86	356	*e*P	Pg	18 37 50.3	-1.2
YUH2				*e*S	Sg	18 38 01.2	-1.5
CBX	Cerro Bola	0.87	308		Pg	18 37 50.6	-1.0
CBX					Sg	18 38 02.2	-0.6
CBX	Cerro Bola	0.87	308	IAML		18 38 02.8	
	comp=E,79nm,0.2s						
CBX	Cerro Bola	0.87	308	*e*P	Pg	18 37 50.3	-1.3
CBX				*e*S	Sg	18 38 01.9	-1.0
CBX	Cerro Bola	0.87	308	*e*P	Pg	18 37 50.5	-1.1
CBX				*e*S	Sg	18 38 02.2	-0.6
SGL	Mount Signal	0.87	7		Pg	18 37 51.0	-0.7
SGL					Sg	18 38 02.6	-0.4
IKP	In-Ko-Pah, Jac	0.89	346		Pg	18 37 50.9	-1.1
IKP					Sg	18 38 02.5	-1.2
IKP	In-Ko-Pah, Jac	0.89	346	*e*P	Pg	18 37 50.8	-1.2
IKP				*e*S	Sg	18 38 02.2	-1.5
UABX	UABC, Campus M	0.92	22		Sb	18 38 05.7	0.0
TJIG	Tijuana	0.95	313	*e*P	Pg	18 37 51.7	-1.5
TJIG				*e*S	Sg	18 38 03.9	-1.6
TJIG	Tijuana	0.95	313	*e*P	Pg	18 37 51.8	-1.4
TJIG				*e*S	Sg	18 38 04.0	-1.5
WESC	Westside Schoo	0.98	6		Pg	18 37 53.1	-0.6
WESC					Sg	18 38 06.6	+0.2
TKX	Tecate	1.01	321		Pg	18 37 52.8	-1.5
TKX					Sg	18 38 06.0	-1.5
TKX	Tecate	1.01	321	IAML		18 38 07.7	
	comp=N,107nm,0.1s						
TKX	Tecate	1.01	321	*e*P	Pg	18 37 52.6	-1.7
TKX				*e*S	Sg	18 38 06.0	-1.5
CRR	Carrizo Plain	1.10	355		Pg	18 37 54.7	-1.5
BAR	Barrett	1.13	322		Pg	18 37 54.6	-2.1
BAR				IAML		18 38 09.9	
	comp=N,48nm,0.2s						
BAR	Barrett	1.13	322	*e*P	Pg	18 37 54.6	-2.0
BAR				*e*S	Sg	18 38 09.4	-1.9
BAR				⇓*e*		18 38 09.9	
BAR				IAML		18 38 09.9	
	comp=N,58nm,0.2s						
DUZA	Dulzura	1.13	317		Pg	18 37 54.7	-1.9
DUZA					Sg	18 38 09.2	-2.2
SFX	San Felipe	1.14	131		Pg	18 37 52.7	-4.0
SFX	San Felipe	1.14	131	IAML		18 38 11.3	
	comp=N,53nm,0.7s						
SFX	San Felipe	1.14	131	*e*P	Pg	18 37 55.7	-1.0
SFX				*e*S	Sg	18 38 09.4	-2.0
SWSC	Sam W. Stewart	1.16	2		Pg	18 37 55.9	-1.3
SQX	San Quintin	1.20	181	*e*P	Pg	18 37 55.5	-2.4
SQX				*e*S	Sg	18 38 11.3	-2.2
SQX				IAML		18 38 12.1	
	comp=N,82nm,0.2s						
SQX				*e*		18 38 12.1	
SQX				⇑*e*		18 38 13.0	
SQX				IAML		18 38 13.0	
	comp=E,80nm,0.1s						
MONP2	Monument Peak	1.21	337		Pg	18 37 56.6	-1.5
MONP2					Sg	18 38 11.9	-1.9
MONP2	Monument Peak	1.21	337	*e*S	Sg	18 38 12.1	-1.6
OLP	Otay Lakes Par	1.23	312		Pg	18 37 56.5	-2.0
OLP					Sg	18 38 12.2	-2.2
OLP	Otay Lakes Par	1.23	312	⇑*i*P	Pg	18 37 56.4	-2.0
OLP				*e*S	Sg	18 38 12.3	-2.1
SDRC	San Diego Road	1.32	316		Pn	18 37 57.9	-2.0
SDRC					Sb	18 38 14.9	-2.5
EML	El Monte Cty P	1.39	323		Pn	18 38 58.1	-2.7
109C	Camp Elliot, M	1.53	316	Pn	Pn	18 38 01.0	-1.8
109C				IAML		18 38 22.3	
	comp=N,49nm,0.2s						
109C				IAML		18 38 22.4	
	comp=E,51nm,0.2s						
CPE	Camp Elliot	1.53	316		Pn	18 38 01.5	-1.3
MATG	Mataguay Scout	1.56	335		Pn	18 38 02.9	-0.5
PLM	Palomar	1.78	332		Pn	18 38 05.9	-0.5

PFO	Pinyon Flats O	1.89	345		Pn		18 38 06.4	-1.5
PMD	Palm Desert	1.91	347	Pn	Pn		18 38 06.6	-1.4
RVR	Riverside	2.55	330		Pb		18 38 19.0	-2.0
PASC	Pasadena Art C	3.08	321	IAML			18 39 40.4	
	comp=N,10nm,0.1s							
PASC				IAML			18 39 50.0	
	comp=E,10nm,5.0s							

IDC ***11*** *19:00:33.6±2.2, 55°.86N×149°.48W, h0km, mb3.5/3, mbtmp3.5/8, ML3.1/5, MS3.0/5, Error ellipse: s-maj=37.9km s-min=25.2km az=167.0*
NEIC ***11*** *19:00:36.2±2.0, 56°.01N±0°.08×149°.60W±0°.09, h23km±4km, mb3.9/3, ML3.8/48, ML3.5(AEIC), Error ellipse: s-maj=11.1km s-min=7.3km az=166.0*
AEIC ***11*** *19:00:38.7±2.4, 55°.98N±0°.06×149°.52W±0°.08, h12km±6km, Error ellipse: s-maj=9.5km s-min=4.7km az=209.0*
ISC 11 19:00:34.9±0.8, 56°.07N±0°.07×149°.60W±0°.05, h10km, n256, σ1§03/257, mb3.7/4, MS2.9/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.34	301		Pn	19 01 13.3	0.0
OHAK					Sn	19 01 40.1	-2.1
OHAK	Old Harbor	2.34	301	P	Pn	19 01 13.1	-0.2
	baz=120						
OHAK				S	Sn	19 01 39.8	-2.4
	baz=120						
KDAK	Kodiak Island	2.38	318		Pn	19 01 14.1	+0.2
KDAK					Sn	19 01 41.2	-1.8
KDAK	Kodiak Island	2.38	318		Pn	19 01 14.0	+0.2
	4.7nm,0.3s,baz=123,slow=5.9,SNR=55						
KDAK					Sn	19 01 40.2	-2.8
	10.0nm,0.3s,baz=3.3,slow=21,SNR=15						
KDAK				LR	LR	19 02 16.8	
	comp=Z,188nm,21.2s,baz=229,slow=40 13nm,0.3s						
SII	Sitkinak Islan	2.60	283		Pn	19 01 16.6	-0.4
SII					Sn	19 01 46.7	-1.9
SII				IAML		19 01 47.6	
	comp=E,497nm,0.7s						
SII				IAML		19 01 49.4	
	comp=N,276nm,0.6s						
SII	Sitkinak Islan	2.60	283	P	Pn	19 01 16.8	-0.1
	baz=101						
SII				S	Sn	19 01 47.1	-1.6
	baz=101						
SYI	Shuyak Island	2.97	330	Pn	Pn	19 01 22.2	+0.2
SYI	Shuyak Island	2.97	330		Sn	19 01 57.4	-0.1
Q20K	Shuyak Island	2.97	330	P	Pn	19 01 22.2	+0.3
	baz=148						
Q20K				S	Sn	19 01 57.4	-0.2
	baz=148						
CHIR	Chirikof Islan	3.40	268	Pn	Pn	19 01 27.8	-0.1
CHIR				IAML		19 02 05.9	
	comp=E,270nm,0.6s						
CHIR				IAML		19 02 15.9	
	comp=N,186nm,1.5s						
CHIR	Chirikof Islan	3.40	268		Sn	19 02 04.7	-3.5
CHIR	Chirikof Islan	3.40	268	S	Sn	19 02 05.6	-2.6
	baz=85						
CNPM	China Poot	3.58	346		Pn	19 01 30.3	-0.1
CNPM	China Poot	3.58	346		Sn	19 02 10.8	-1.9
CNPM	China Poot	3.58	346	IAML		19 02 12.7	
	comp=N,65nm,0.7s						
CNPM				IAML		19 02 12.9	
	comp=E,94nm,0.7s						
Q19K	Cape Douglas,	3.61	324		Pn	19 01 32.3	+1.6
Q19K	Cape Douglas,	3.61	324	P	Pn	19 01 31.5	+0.8
	baz=141						
KAHG	Katmai Hook Gl	3.63	314		Pn	19 01 32.4	+1.4
BRSE	Bradley Lake S	3.74	351		Pn	19 01 32.2	-0.4
BRSE					Sn	19 02 14.3	-2.3
BRSE	Bradley Lake S	3.74	351	P	Pn	19 01 32.2	-0.4
	baz=170						
BRSE				S	Sn	19 02 15.4	-1.2
	baz=170						
HOM	Homer	3.77	344	Pn	Pn	19 01 33.3	+0.4
HOM				IAML		19 02 30.4	
	comp=N,210nm,1.0s						
HOM	Homer	3.77	344	P	Pn	19 01 33.2	+0.4
	baz=162						
BRLK	Bradley Lake	3.77	350		Pn	19 01 32.6	-0.5
BRLK				IAML		19 02 20.1	
	comp=E,102nm,0.6s						
Q23K	Middleton Isla	3.80	26	Pn	Pn	19 01 32.4	-0.9
Q23K				IAML		19 03 21.9	
	comp=N,179nm,1.4s						
Q23K				IAML		19 03 55.1	
	comp=E,227nm,1.2s						
Q23K	Middleton Isla	3.80	26	P	Pn	19 01 33.1	-0.2
	baz=208						
MID	Middleton Isla	3.80	26	Pn	Pn	19 01 32.4	-0.9
MID				IAML		19 03 18.8	
	comp=E,199nm,1.5s						
MID				IAML		19 03 21.8	
	comp=N,172nm,1.4s						
SEW	Seward	4.05	1		Pn	19 01 36.2	-0.6
SEW	Seward	4.05	1	P	Pn	19 01 36.6	-0.2
	baz=180						
CNTC	Contact Creek	4.07	305		Pn	19 01 37.9	+0.6
Q17K	Contact Creek	4.07	305	P	Pn	19 01 38.1	+0.9
	baz=121						
P19K	Oil Pt	4.09	333	Pn	Pn	19 01 37.2	-0.1
P19K				IAML		19 02 30.3	
	comp=N,132nm,0.7s						
P19K				IAML		19 02 36.4	
	comp=E,129nm,0.5s						
P19K	Oil Pt	4.09	333	P	Pn	19 01 37.5	+0.1
	baz=150						
P19K				S	Sn	19 02 24.9	-0.4
	baz=150						
P23K	Montague Islan	4.11	16		Pn	19 01 37.6	-0.1
P23K	Montague Islan	4.11	16	P	Pn	19 01 37.6	-0.1
	baz=196						
O20K	Slope Mountain	4.34	340		Pn	19 01 40.8	-0.1
O20K	Slope Mountain	4.34	340	P	Pn	19 01 40.8	-0.1
	baz=157						
IVE	Iliamna Volcan	4.36	337		Pn	19 01 40.7	-0.4
IVE					Sn	19 02 31.1	-0.9
O22K	Cooper Landing	4.43	359		Pn	19 01 42.6	+0.6
O22K	Cooper Landing	4.43	359	P	Pn	19 01 41.9	-0.1
	baz=179						
SLKM	Skilak Lake	4.47	356		Pn	19 01 41.9	-0.7
P18K	Big Mountain,	4.50	320		Pn	19 01 43.4	+0.4
P18K	Big Mountain,	4.50	320	P	Pn	19 01 43.1	+0.1
	baz=136						
Q16K	King Salmon	4.63	307		Pn	19 01 44.9	+0.1
Q16K	King Salmon	4.63	307	P	Pn	19 01 44.9	+0.1
	baz=122						
HIN	Hinchinbrook I	4.64	19	Pn	Pn	19 01 45.3	+0.3
HIN				IAML		19 02 39.9	
	comp=E,77nm,0.9s						
HIN				IAML		19 02 41.4	
	comp=N,69nm,0.9s						
HIN	Hinchinbrook I	4.64	19		Sn	19 02 35.5	-3.4
RED	Redoubt Volcan	4.68	340		Pn	19 01 44.5	-1.0
RDSO	Redoubt South	4.70	341		Pn	19 01 45.2	-0.8
RSO	Redoubt South	4.71	341		Pn	19 01 45.7	-0.4
KAIM	Kayak Island	4.75	33	Pn	Pn	19 01 45.3	-1.1
KAIM				IAML		19 03 59.8	
	comp=N,74nm,1.5s						
RDT	Redoubt	4.76	343		Pn	19 01 45.6	-1.0
O18K	Koktuh Hills	4.83	324		Pn	19 01 47.7	+0.1
O18K				IAML		19 02 54.2	
	comp=N,36nm,1.0s						
O18K	Koktuh Hills	4.83	324	P	Pn	19 01 47.7	+0.1
	baz=140						
P17K	Kvichak River	4.83	313		Pn	19 01 48.8	+1.2
O19K	Port Alsworth	4.84	331		Pn	19 01 47.6	0.0
CHGN	Chignik	4.93	276	Pn	Pn	19 01 49.6	+0.7
CHGN				IAML		19 02 45.5	
	comp=N,55nm,0.6s						
CHGN				IAML		19 02 45.8	
	comp=E,49nm,1.3s						
EYAK	Cordova Ski Ar	4.93	23		Pn	19 01 48.8	-0.1
EYAK	Cordova Ski Ar	4.93	23	P	Pn	19 01 49.1	+0.2
	baz=205						
RC01	Rabbit Creek A	5.04	359		Pn	19 01 50.3	-0.1
RC01				IAML		19 02 52.0	
	comp=E,39nm,0.5s						
RC01	Rabbit Creek A	5.04	359	P	Pn	19 01 50.2	-0.1
	baz=179						
RAGM	Ragged Mountai	5.05	29		Pn	19 01 50.9	+0.3

SUCK	Suckling Hills	5.07	35	Pn		Pn	19 01 50.6	-0.2
SUCK				IAML			19 02 54.1	
	comp=N,64nm,1.2s							
SUCK				IAML			19 02 59.4	
	comp=E,56nm,1.2s							
HMT	Hamilton	5.13	31			Pn	19 01 51.9	+0.3
NICHA	Nichawak Mount	5.14	33			Pn	19 01 52.0	+0.2
GOAT	Goat Mountain	5.20	28			Pn	19 01 53.1	+0.4
N20K	Mount Spurr	5.33	346	P		Pn	19 01 53.7	-0.8
	baz=164							
SPCR	Spurr Chakacha	5.33	346			Pn	19 01 53.7	-0.8
BERG	Berg Lake	5.34	33			Pn	19 01 54.6	0.0
BERG				IAML			19 03 05.3	
	comp=N,54nm,0.5s							
BERG				IAML			19 03 05.5	
	comp=E,58nm,1.2s							
GRIN	Grindle Hills	5.38	36			Pn	19 01 55.3	+0.3
SPCP	Crater Peak Br	5.38	347			Pn	19 01 54.7	-0.6
KNK	Knik Glacier	5.40	6	Pn		Pn	19 01 56.4	+1.0
KNK	Knik Glacier	5.40	6	P		Pn	19 01 54.8	-0.5
	baz=186							
N19K	Bonanza Creek	5.41	334			Pn	19 01 54.9	-0.7
N19K	Bonanza Creek	5.41	334	P		Pn	19 01 55.4	-0.2
	baz=150							
P16K	Nushagak River	5.41	307			Pn	19 01 56.3	+0.8
P16K	Nushagak River	5.41	307	P		Pn	19 01 56.3	+0.8
	baz=120							
SUA	Susitna One	5.45	354	Pn		Pn	19 01 56.0	-0.2
O17K	Koliganek Bris	5.46	316			Pn	19 01 56.6	+0.5
O17K	Koliganek Bris	5.46	316	P		Pn	19 01 56.6	+0.5
	baz=130							
SNH	Sunshine Point	5.46	38	Pn		Pn	19 01 57.4	+1.2
KHIT	Khitrov Hills	5.52	35			Pn	19 01 56.3	-0.8
PMR	Palmer	5.55	2	Pn		Pn	19 01 58.6	+1.3
BMRM	Bremner River	5.57	26			Pn	19 01 58.3	+0.6
BMRM	Bremner River	5.57	26	P		Pn	19 01 58.3	+0.6
	baz=209							
STLK	Strandline Lak	5.57	349			Pn	19 01 57.6	-0.2
WAX	Waxell Ridge	5.66	36			Pn	19 01 59.5	+0.6
N18K	Kilae Creek	5.69	327			Pn	19 01 59.2	-0.1
N18K	Kilae Creek	5.69	327	P		Pn	19 01 59.3	-0.1
	baz=142							
GHO	Glory Hole Cre	5.74	3			Pn	19 02 01.3	+1.3
BARK	Barkley Ridge	5.74	38			Pn	19 02 00.3	+0.1
O16K	Kokwok River B	5.75	311	Pn		Pn	19 02 00.2	0.0
O16K	Kokwok River B	5.75	311	P		Pn	19 02 00.7	+0.5
	baz=125							
KLU	Klutina	5.77	18			Pn	19 02 01.2	+0.7
KLU	Klutina	5.77	18	P		Pn	19 02 00.6	+0.1
	baz=200							
MESA	MESA	5.78	41	Pn		Pn	19 02 01.3	+0.6
MESA	MESA	5.78	41	P		Pn	19 02 00.6	-0.1
	baz=227							
SML	Sawmill	5.80	6			Pn	19 02 01.9	+1.1
SML	Sawmill	5.80	6	P		Pn	19 02 01.8	+0.9
	baz=186							
CRQM	Cirque	5.80	33			Pn	19 01 59.6	-1.4
SCM	Sheep Creek Mo	5.90	11	Pn		Pn	19 02 03.5	+1.2
SVW2	Sparrevohn	5.94	331	Pn		Pn	19 02 01.8	-1.0
ISLE	Juniper Island	5.94	37			Pn	19 02 03.6	+0.7
BAGL	Bagley Icefiel	5.95	39			Pn	19 02 03.0	+0.2
N17K	Nushagak Hills	6.00	321	Pn		Pn	19 02 04.5	+0.9
SKT	Skwentna	6.02	351			Pn	19 02 03.9	+0.1
SKT	Skwentna	6.02	351	P		Pn	19 02 03.8	0.0
	baz=169							
VRDI	Verde Repeater	6.09	29	Pn		Pn	19 02 04.3	-0.6
M20K	Styx River	6.11	344			Pn	19 02 04.8	-0.4
M20K	Styx River	6.11	344	P		Pn	19 02 04.8	-0.4
	baz=161							
N25K	Chitina, Valde	6.13	23	Pn		Pn	19 02 06.3	+0.9
N25K	Chitina, Valde	6.13	23	P		Pn	19 02 05.8	+0.3
	baz=206							
GLB	Gilahina Butte	6.17	27			Pn	19 02 06.9	+0.9
GRNC	Granite Creek	6.23	38			Pn	19 02 07.6	+0.6
TABL	Table Mountain	6.25	42			Pn	19 02 08.0	+0.7
O15K	Ungalikthiuk R	6.32	304			Pn	19 02 08.7	+0.7
O15K	Ungalikthiuk R	6.32	304	P		Pn	19 02 08.7	+0.7
	baz=116							
M18K	Stony River	6.33	332			Pn	19 02 07.8	-0.3
M18K	Stony River	6.33	332	P		Pn	19 02 07.8	-0.3
	baz=147							
MCARA	McCarthy VSAT	6.33	30			Pn	19 02 08.8	+0.6
MCARA	McCarthy VSAT	6.33	30	P		Pn	19 02 08.7	+0.5
	baz=215							
PTPK	Patty Peak	6.34	33			Pn	19 02 08.8	+0.4
M19K	Big River Lodg	6.36	339			Pn	19 02 08.3	-0.1
M19K	Big River Lodg	6.36	339	P		Pn	19 02 08.4	-0.1
	baz=155							
PCA	Pinnacle	6.39	47			Pn	19 02 09.7	+0.6
PINM	Pinnacle	6.39	47	P		Pn	19 02 09.7	+0.6
	baz=234							
BARN	Barnard Glacie	6.50	36			Pn	19 02 11.6	+0.9
PNL	Peninsula	6.53	52			Pn	19 02 11.4	+0.6
PNL	Peninsula	6.53	52	P		Pn	19 02 11.4	+0.6
	baz=240							
CTG	Chitna Glacier	6.54	38	P		Pn	19 02 11.6	+0.5
	baz=224							
CTGM	Chitina Glacie	6.54	38			Pn	19 02 11.8	+0.6
N16K	Nishlik Lake	6.55	316			Pn	19 02 11.4	+0.3
N16K	Nishlik Lake	6.55	316	P		Pn	19 02 11.5	+0.3
	baz=129							
LOGN	Logan Glacier	6.56	40			Pn	19 02 12.5	+1.0
BCPM	Bancas Point	6.57	50			Pn	19 02 11.4	0.0
L19K	White Mountain	6.70	338	Pn		Pn	19 02 12.8	-0.5
L19K	White Mountain	6.70	338	P		Pn	19 02 13.0	-0.2
	baz=154							
M17K	Holitna River	6.73	326	Pn		Pn	19 02 13.6	0.0
M17K	Holitna River	6.73	326	P		Pn	19 02 13.6	0.0
	baz=139							
HARP	HAARP	6.75	18			Pn	19 02 14.2	+0.4
HARP	HAARP	6.75	18	P		Pn	19 02 14.3	+0.4
	baz=201							
L20K	Farewell, AK	6.80	343			Pn	19 02 14.2	-0.4
L20K	Farewell, AK	6.80	343	P		Pn	19 02 14.2	-0.4
	baz=159							
N15K	Kwethluk River	6.91	311	Pn		Pn	19 02 17.2	+1.1
M16K	Timber Creek	6.97	319			Pn	19 02 17.4	+0.4
M16K	Timber Creek	6.97	319	P		Pn	19 02 17.4	+0.4
	baz=132							
O14K	Tigyukauivet M	7.03	302	Pn		Pn	19 02 19.4	+1.8
DHY	Denali Highway	7.12	8			Pn	19 02 20.4	+1.3
L18K	Granite Mounta	7.17	332	Pn		Pn	19

J19K	**Poorman**	**8.50**	**342**	Pn		**Pn**	19 02 38.5	**+0.7**
O30N	**Mendenhall**	**8.51**	**51**	Pn		**Pn**	19 02 38.6	**+0.6**
JIS	**Juneau Island**	**8.56**	**69**	Pn		**Pn**	19 02 39.3	**+0.7**
M29M	**Somme Creek**	**8.56**	**37**			**Pn**	19 02 40.4	**+1.7**
M29M	**Somme Creek**	**8.56**	**37**	P		**Pn**	19 02 40.0	**+1.3**
	baz=226							
L14K	**Kuka Creek**	**8.62**	**313**	Pn		**Pn**	19 02 40.9	**+1.5**
CCB	**Clear Creek Bu**	**8.66**	**5**			**Pn**	19 02 39.9	**0.0**
K15K	**Wolf Creek Mou**	**8.74**	**320**	Pn		**Pn**	19 02 42.7	**+1.6**
K27K	**Chicken**	**8.82**	**22**	Pn		**Pn**	19 02 43.1	**+0.8**
ILAR	**Eielson Array**	**8.84**	**8**	Pn		**Pn**	19 02 44.8	**+2.3**
ILAR	**Eielson Array**	**8.84**	**6**	Pn		**Pn**	19 02 43.7	**+1.2**
	comp=E,0.3nm,0.3s,baz=191,slow=13,SNR=12							
ILAR				Sn		**Sn**	19 04 18.1	**-3.9**
	comp=E,0.4nm,0.3s,baz=201,slow=22,SNR=5.5							
	comp=E,0.6nm,0.4s							
MDM	**Murphy Dome**	**8.95**	**4**	Pn		**Pn**	19 02 44.1	**+0.1**
J26L	**Joseph Creek**	**8.97**	**17**			**Pn**	19 02 45.2	**+0.8**
N31M	**Braeburn, Yuko**	**8.99**	**47**			**Pn**	19 02 45.7	**+1.0**
WHY	**Whitehorse**	**8.99**	**53**	Pn		**Pn**	19 02 45.3	**+0.6**
MLY	**Manley**	**9.01**	**357**	Pn		**Pn**	19 02 45.2	**+0.3**
I23K	**Minto, Yukon-K**	**9.12**	**1**	Pn		**Pn**	19 02 47.0	**+0.8**
J16K	**Anvik River**	**9.12**	**327**	Pn		**Pn**	19 02 46.5	**+0.1**
L29M	**L29M**	**9.14**	**35**			**Pn**	19 02 47.9	**+1.3**
POKR	**Poker Plat Res**	**9.14**	**6**	Pn		**Pn**	19 02 47.7	**+1.0**
P32M	**Attin**	**9.18**	**61**	Pn		**Pn**	19 02 47.5	**+0.4**
I21K	**Tanana**	**9.22**	**354**			**Pn**	19 02 48.8	**+1.1**
I21K	**Tanana**	**9.22**	**354**	P		**Pn**	19 02 48.6	**+0.9**
	baz=171							
M30M	**Minto, Yukon**	**9.23**	**40**	Pn		**Pn**	19 02 48.1	**+0.2**
CRAG	**Craig**	**9.31**	**87**	Pn		**Pn**	19 02 48.8	**-0.1**
DAWY	**Dawson**	**9.49**	**28**	Pn		**Pn**	19 02 51.6	**+0.1**
H21K	**Melozitna Rive**	**9.75**	**352**			**Pn**	19 02 54.4	**-0.6**
J14K	**Nanvaranak Lak**	**9.76**	**319**	Pn		**Pn**	19 02 54.9	**-0.1**
I26K	**Coal Creek Min**	**9.79**	**16**	Pn		**Pn**	19 02 55.5	**0.0**
P33M	**Teslin, Yukon**	**9.79**	**58**	Pn		**Pn**	19 02 55.7	**+0.1**
P33M	**Teslin, Yukon**	**9.79**	**58**	P		**Pn**	19 02 55.9	**+0.3**
	baz=252							
H24K	**Noodor Dome**	**9.84**	**4**	Pn		**Pn**	19 02 57.6	**+1.4**
K29M	**Barlow Dome**	**9.86**	**33**			**Pn**	19 02 58.0	**+1.4**
K29M	**Barlow Dome**	**9.86**	**33**	P		**Pn**	19 02 56.7	**+0.1**
	baz=223							
M31M	**Drury Creek, Y**	**9.93**	**46**	Pn		**Pn**	19 02 59.1	**+1.7**
H19K	**Roundabout Mou**	**10.06**	**343**	Pn		**Pn**	19 02 59.2	**+0.1**
H18K	**Honhosa River**	**10.07**	**338**	Pn		**Pn**	19 02 58.2	**-1.2**
IMAR	**Indian Mountai**	**10.15**	**350**	Pn		**Pn**	19 02 59.6	**-0.9**
H17K	**Granite Mounta**	**10.23**	**335**	Pn		Pn	19 02 60.0	-1.6
FARO	**Faro, Yukon**	**10.36**	**47**	Pn		**Pn**	19 03 04.7	**+1.3**
R33M	**Jennings River**	**10.50**	**64**	Pn		**Pn**	19 03 06.0	**+0.7**
I28M	**Miner Creek**	**10.52**	**23**	Pn		**Pn**	19 03 07.1	**+1.6**
G21K	**Allakaket**	**10.65**	**352**	Pn		**Pn**	19 03 08.8	**+1.5**
G23K	**Bananza Creek**	**10.69**	**359**	Pn		**Pn**	19 03 09.5	**+1.7**
FYU	**Fort Yukon**	**10.74**	**9**	Pn		**Pn**	19 03 09.8	**+1.4**
J30M	**Hart River**	**10.75**	**31**	Pn		**Pn**	19 03 10.8	**+2.0**
DLBC	**Dease Lake**	**10.86**	**69**	Pn		**Pn**	19 03 10.0	**-0.2**
	comp=E,0.1nm,0.3s,baz=169,slow=15,SNR=1.6							
	comp=E,0.9nm,0.5s							
F21K	**Alatna River**	**11.35**	**352**	Pn		**Pn**	19 03 16.5	**-0.3**
F20K	**Avaraart Lake**	**11.39**	**348**	Pn		**Pn**	19 03 17.3	**-0.1**
MMPY	**Sheldon Lake,**	**11.40**	**47**	Pn		**Pn**	19 03 19.3	**+1.7**
ANM	**Nome**	**11.53**	**324**	Pn		**Pn**	19 03 20.4	**+1.1**
BMAR	**Burnt Mountain**	**11.64**	**10**	Pn		**Pn**	19 03 20.3	**-0.6**
E19K	**Redstone River**	**11.97**	**346**	Pn		**Pn**	19 03 25.9	**+0.6**
F15K	**North Star Dit**	**12.09**	**329**	Pn		**Pn**	19 03 28.1	**+1.1**
G31M	**Satah River**	**13.07**	**27**	Pn		**Pn**	19 03 42.4	**+2.2**
INK	**Inuvik**	**14.32**	**25**	Pn		**Pn**	19 03 55.9	**-1.4**
INK	**Inuvik**	**14.32**	**25**	Pn		**Pn**	19 03 59.7	**+2.4**
	baz=218,slow=18,SNR=3.9							
INK				LR		LR	19 09 38.9	
	comp=E,59nm,20.4s,baz=214,slow=38							
	comp=E,1.3nm,0.9s							
KIWB	**Kanaga Island**	**16.70**	**267**	Pn		**Pn**	19 04 27.8	**-0.9**
YKA	**Yellowknife Ar**	**18.81**	**56**	P		**P**	19 04 55.5	**+1.4**
	baz=264,slow=12,SNR=10							
	comp=E,1.0nm,0.9s							
A36M	**Sachs Harbour**	**18.95**	**23**	P		**P**	19 04 55.5	**-0.2**
A36M				IAmb		IAmb	19 05 02.6	
	comp=Z,6.7nm,0.8s							
LTY	**Liberty**	**19.86**	**104**	P		**P**	19 05 05.9	**0.0**
LTY				IAmb		IAmb	19 05 48.4	
	comp=Z,3.1nm,1.0s							
L04D	**Klamath Falls**	**22.41**	**117**	P		**P**	19 05 31.6	**-1.9**
L04D				IAmb		IAmb	19 05 59.0	
	comp=Z,17nm,1.4s							
YBH	**Yreka Blue Hor**	**22.57**	**118**	LR		LR	19 12 21.8	
	comp=Z,28nm,21.3s,baz=0.5,slow=32							
H11N2	**WAKE ISLAND Hy**	**48.62**	**240**	T		T	20 01 59.8	
	baz=30,slow=74							
H11N3	**WAKE ISLAND Hy**	**48.63**	**240**	T		T	20 01 45.7	
	baz=30,slow=74							
H11N1	**WAKE ISLAND Hy**	**48.64**	**240**	T		T	20 02 13.4	
	baz=30							
H11S1	**WAKE ISLAND Hy**	**49.76**	**239**	T		T	20 04 05.5	
	baz=29							
H11S2	**WAKE ISLAND Hy**	**49.77**	**239**	T		T	20 04 04.8	
	baz=29							
H11S3	**WAKE ISLAND Hy**	**49.78**	**239**	T		T	20 04 01.5	
	baz=29							
KSRS	**Korea Array**	**55.96**	**288**	LR		LR	19 33 32.8	
	comp=Z,9.5nm,19.9s,baz=5.0,slow=35							
SONM	**Songino Array**	**58.64**	**310**	P		**P**	19 10 34.0	**+2.0**
	comp=Z,0.6nm,0.9s,baz=58,slow=8.7,SNR=3.7							
	comp=Z,0.6nm,0.9s							
ARU	**Arti**	**65.56**	**343**	LR		LR	19 42 20.2	
	comp=Z,34nm,18.1s,baz=332,slow=38							
KURBB	**Kurchatov Arra**	**66.43**	**329**	P		**P**	19 11 25.1	**+1.3**
	comp=Z,0.3nm,0.6s,baz=28,slow=5.9,SNR=3.4							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**68.67**	**325**	P		**P**	19 11 39.6	**+1.5**
	comp=Z,0.2nm,0.7s,baz=41,slow=8.1,SNR=3.0							
	comp=Z,0.2nm,0.7s							

ISC 11 19:03:17.5±2.4,56°1N±0.1×149°61W±0.07,h10km,n22,
σ1°14/18,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**2.31**	**300**	P		Pn	19 03 55.6	+0.1
	baz=118							
OHAK				S		**Sn**	**19 04 22.1**	**-1.7**
	baz=118							
SII	**Sitkinak Islan**	**2.58**	**282**	S		**Sn**	**19 04 29.3**	**-1.4**
	baz=99							
Q20K	**Shuyak Island**	**2.91**	**330**	P		**Pn**	**19 04 04.4**	**+0.7**
	baz=148							
Q20K				S		**Sn**	**19 04 39.6**	**+0.9**
	baz=148							
BRSE	**Bradley Lake S**	**3.67**	**351**	P		Pn	19 04 14.3	0.0
	baz=170							
BRSE				S		**Sn**	**19 04 57.6**	**-0.1**
	baz=170							
SEW	**Seward**	**3.99**	**1**	S		**Sn**	**19 05 02.8**	**-2.5**
	baz=181							
P23K	**Montague Islan**	**4.05**	**16**	S		**Sn**	**19 05 06.0**	**-1.0**
	baz=197							
P18K	**Big Mountain,**	**4.44**	**320**	P		**Pn**	**19 04 25.2**	**+0.4**
	baz=135							
O18K	**Koktuh Hills**	**4.78**	**324**	P		Pn	19 04 29.6	+0.2
	baz=139							
P17K	**Kvichak River**	**4.78**	**313**	P		**Pn**	**19 04 30.8**	**+1.3**
	baz=128							
N19K	**Bonanza Creek**	**5.35**	**333**	P		Pn	19 04 36.9	-0.4
	baz=149							
BMRM	**Bremner River**	**5.51**	**26**	P		**Pn**	**19 04 40.3**	**+0.7**
	baz=210							
O16K	**Kokwok River B**	**5.71**	**311**	P		**Pn**	**19 04 43.3**	**+1.2**
	baz=124							
KLU	**Kluina**	**5.71**	**18**	P		**Pn**	**19 04 43.2**	**+0.9**
	baz=200							
M18K	**Stony River**	**6.27**	**332**	P		Pn	19 04 49.9	0.0
	baz=146							
O15K	**Ungalikthiuk R**	**6.28**	**303**	P		**Pn**	**19 04 50.9**	**+0.9**
	baz=115							
PINM	**Pinnacle**	**6.36**	**47**	P		**Pn**	**19 04 51.5**	**+0.3**
	baz=234							
PNL	**Peninsula**	**6.50**	**53**	P		**Pn**	**19 04 53.2**	**+0.2**
	baz=240							
M16K	**Timber Creek**	**6.92**	**319**	P		Pn	19 04 58.7	-0.2
	baz=131							
P29M	**Windy Craggy**	**7.24**	**56**	P		**Pn**	**19 05 03.0**	**-0.2**
	baz=245							
M27K	**Edge Creek, AK**	**7.39**	**29**	P		**Pn**	**19 05 06.0**	**+0.6**
	baz=215							
M15K	**Kasigluk River**	**7.40**	**313**	P		**Pn**	**19 05 06.1**	**+0.8**
	baz=124							
S31K	**Pelican**	**7.53**	**70**	P		**Pn**	19 05 05.4	**-1.7**
	baz=261							

*KRNET **11** 19:27:00.8±0.1, 39°.42N×73°.24E, h13km, mb4.0*
*MOS **11** 19:27:01.2±1.1, 39°.33N×73°.06E, h11km, mb4.5/3, Error ellipse: s-maj=8.3km s-min=4.1km az=81.0*
*IDC **11** 19:27:01.1±0.9, 39°.29N×73°.19E, h0km, mb3.8/12, mbtmp3.7/20, ML3.0/7, MS3.5/6, Error ellipse: s-maj=16.5km s-min=13.0km az=146.0*
*SOME **11** 19:27:02.3, 39°.57N×73°.15E, h0km*
*NNC **11** 19:27:07.8±1.2, 39°.74N×73°.13E, h0km±5km, mb4.4, mpv4.1, Error ellipse: s-maj=8.8km s-min=4.8km az=178.0*

ISC 11 19:27:02.4±0.5,39°.47N±0°.04×73°.28E±0°.02,h10km,n145,
σ2°28/209,mb3.7/17,MS3.5/6,42C-25D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.57**	**17**	*i* PG		**Pg**	**19 27 13.0**	**-0.6**
SFK				*i* S		**Sb**	**19 27 22.0**	**-1.0**
SFK	**Sufi-Kurgan**	**0.57**	**17**	⇑*i*P		**Pg**	**19 27 13.0**	**-0.6**
	baz=19							
SFK				⇑*i*S		**Sb**	**19 27 22.0**	**-1.0**
	baz=19							
OHH	**Osh**	**1.12**	**340**	*i* PG		**Pb**	**19 27 22.9**	**-1.1**
OHH				*i* S		**Sb**	**19 27 39.0**	**+0.3**
OHH	**Osh**	**1.12**	**340**	⇑*i*P		**Pb**	**19 27 22.9**	**-1.1**
	baz=43							
OHH				⇑*i*S		**Sb**	**19 27 39.0**	**+0.3**
	baz=43							
DRK	**Karamyk**	**1.15**	**271**	⇓*e*P		**Pg**	**19 27 21.9**	**-2.6**
	baz=74							
DRK				⇓*e*S		**Sg**	**19 27 37.0**	**-2.4**
	baz=74							
ARSB	**Arslanbob**	**1.87**	**353**	*i* PN		**Pb**	**19 27 36.4**	**-0.4**
ARSB				*i* S		**Sg**	**19 28 02.3**	**-0.2**
ARSB	**Arslanbob**	**1.87**	**353**	⇓*i*P		**Pb**	**19 27 36.4**	**-0.4**
	baz=54							
ARSB				⇓*i*S		**Sg**	**19 28 02.3**	**-0.2**
	baz=54							
BTK	**Batken**	**1.99**	**288**	*i* PN		**Pb**	**19 27 37.7**	**-1.1**
BTK				*i* S		**Sb**	**19 28 04.5**	**+0.9**
BTK	**Batken**	**1.99**	**288**	⇑*i*P		**Pb**	**19 27 37.7**	**-1.1**
	baz=90							
BTK				⇑*i*S		**Sb**	**19 28 04.5**	**+0.9**
	baz=90							
KSH	**Kashi**	**2.08**	**88**	Pn		**Pn**	**19 27 36.8**	**-0.8**
KSH				Sn		**Sn**	**19 28 03.3**	**-0.3**
KSH				pmax		pmax		
	comp=Z,200nm,0.6s							
KSH				smax		smax		
	comp=N,540nm,0.6s							
KSH				smax		smax		
	comp=E,430nm,0.9s							
ARLS	**Aral**	**2.52**	**18**	*i* PN		**Pb**	**19 27 45.7**	**-2.2**
ARLS				*i* S		**Sb**	**19 28 18.3**	**-0.7**
ARLS	**Aral**	**2.52**	**18**	⇑*i*P		**Pb**	**19 27 45.7**	**-2.2**
	baz=19							
ARLS				⇑*i*S		**Sb**	**19 28 18.3**	**-0.7**
	baz=19							
ARK	**Arkit**	**2.54**	**337**	*i* PN		**Pb**	**19 27 45.8**	**-2.3**
ARK				*i* S		**Sb**	**19 28 18.6**	**-0.8**
ARK	**Arkit**	**2.54**	**337**	⇑*i*P		**Pb**	**19 27 45.8**	**-2.3**
	baz=38							
ARK				⇑*i*S		**Sb**	**19 28 18.6**	**-0.8**
	baz=38							
TRKS	**Terek-Say**	**2.63**	**322**	*i* PN		**Pn**	**19 27 46.1**	**+1.0**
TRKS				*i* S		**Sn**	**19 28 19.0**	**+1.9**
TRKS	**Terek-Say**	**2.63**	**322**	⇓*i*P		**Pn**	**19 27 46.1**	**+1.0**
	baz=23							
TRKS				⇓*i*S		**Sn**	**19 28 19.0**	**+1.9**
	baz=23							
NRN	**Naryn**	**2.86**	**46**	*i* PN		**Pn**	**19 27 50.2**	**+1.8**
NRN				*i* S		**Sb**	**19 28 26.4**	**-2.5**
NRN	**Naryn**	**2.86**	**46**	⇓*i*P		**Pn**	**19 27 50.2**	**+1.8**
	baz=45							
NRN				⇓*i*S		**Sb**	**19 28 26.4**	**-2.5**
	baz=45							
UCH	**Uchtor**	**2.91**	**18**	P		**Pb**	**19 27 53.5**	**-1.2**
	SNR=48							
UCH	**Uchtor**	**2.91**	**18**	*i* PN		**Pn**	**19 27 51.7**	**+2.4**
UCH				*i* S		**Sb**	**19 28 28.5**	**-2.1**
UCH	**Uchtor**	**2.91**	**18**	⇑*i*P		**Pn**	**19 27 51.7**	**+2.4**
	baz=19							
UCH				⇑*i*S		**Sb**	**19 28 28.5**	**-2.1**
	baz=19							
MNAS	**Manas**	**3.07**	**349**	*i* PN		**Pn**	**19 27 53.5**	**+2.3**
MNAS				*i* S		**Sb**	**19 28 31.8**	**-3.1**
MNAS	**Manas**	**3.07**	**349**	⇓*i*P		**Pn**	**19 27 53.5**	**+2.3**
	baz=50							
MNAS				⇓*i*S		**Sb**	**19 28 31.8**	**-3.1**
	baz=50							
EKS2	**Erkin-Say**	**3.21**	**7**	P		**Pb**	**19 27 58.0**	**-1.7**
	SNR=26							
EKS2	**Erkin-Say**	**3.21**	**7**	*i* PN		**Pn**	**19 27 55.4**	**+2.3**
EKS2				*i* S		**Sb**	**19 28 35.3**	**-3.6**
EKS2	**Erkin-Say**	**3.21**	**7**	⇑*i*P		**Pn**	**19 27 55.4**	**+2.3**
	baz=7.0							
EKS2				⇑*i*S		**Sb**	**19 28 35.3**	**-3.6**
	baz=7.0							
MRKS	**Merke**	**3.27**	**359**	Pg		**Pg**	**19 28 02.9**	**-2.3**
	comp=E,44nm,0.4s							
MRKS				Lg		Lg	19 28 45.0	
	comp=E,161nm,0.3s							
MRKS	**Merke**	**3.27**	**359**	*e*P		**Pb**	**19 28 01.7**	**+1.0**
	comp=E,44nm,0.4s							
MRKS				*e*S		**Sg**	**19 28 45.0**	**-2.6**
	comp=E,161nm,0.3s							
AAK	**Ala-Archa**	**3.30**	**16**	P		**Pb**	**19 27 59.1**	**-2.0**
	SNR=51							
AAK	**Ala-Archa**	**3.30**	**16**	Pn		**Pb**	**19 27 59.1**	**-2.0**
	comp=E,7.5nm,0.3s,baz=191,slow=7.8,SNR=161							
AAK				Sn		**Sb**	**19 28 42.0**	**+0.6**
	comp=E,9.0nm,0.3s,baz=342,slow=23,SNR=12							
	comp=E,26nm,0.4s							
AAK	**Ala-Archa**	**3.30**	**16**	⇑*i*P		**Pn**	**19 27 56.8**	**+2.5**
	baz=16							
AAK				⇑*i*S		**Sb**	**19 28 37.4**	**-4.0**
	baz=16							
KBK	**Karagaybulak**	**3.43**	**21**	P		**Pb**	**19 28 01.7**	**-1.7**
	SNR=18							
KBK	**Karagaybulak**	**3.43**	**21**	*i* PN		**Pb**	**19 27 59.6**	**-3.7**
KBK				*i* S		**Sb**	**19 28 42.4**	**-2.7**
KBK	**Karagaybulak**	**3.43**	**21**	⇓*i*P		**Pn**	**19 27 58.6**	**+2.5**
	baz=21							
KBK				⇓*i*S		**Sn**	**19 28 40.7**	**+3.9**
	baz=21							
FRU1	**Bishkek**	**3.49**	**17**	⇑*i*P		**Pn**	**19 27 59.6**	**+2.7**
	baz=17							
FRU1				⇑*i*S		**Sb**	**19 28 42.4**	**-4.5**
	baz=17							
ULHL	**Ulahol**	**3.57**	**38**	P		**Pb**	**19 28 04.8**	**-1.0**
	SNR=6.8							
ULHL	**Ulahol**	**3.57**	**38**	*i* PN		**Pn**	**19 28 00.5**	**+2.4**
ULHL				*i* S		**Sn**	**19 28 44.2**	**+3.8**
ULHL	**Ulahol**	**3.57**	**38**	⇑*i*P		**Pn**	**19 28 00.5**	**+2.4**
	baz=38							
ULHL				⇑*i*S		**Sn**	**19 28 44.2**	**+3.8**
	baz=38							
IUG	**luzhnay**	**3.64**	**318**	*e*P		**Pb**	**19 28 08.1**	**+1.1**
	comp=E,70nm,0.3s							
IUG				*e*S		**Sg**	**19 28 56.3**	**-3.1**
	comp=E,262nm,0.3s							
CHMS	**Chumysh**	**3.70**	**17**	P		**Pb**	**19 28 04.8**	**-3.1**
	SNR=12							
CHMS	**Chumysh**	**3.70**	**17**	⇑Pn		**Pb**	**19 28 04.1**	**-3.8**
	comp=E,17nm,0.5s							
CHMS				⇓Lg		Lg	19 28 57.3	
	comp=E,57nm,0.7s							
CHMS	**Chumysh**	**3.70**	**17**	*i* PN		**Pn**	**19 28 02.1**	**+2.4**
CHMS				*i* S		**Sn**	**19 28 46.8**	**+3.5**
CHMS	**Chumysh**	**3.70**	**17**	⇑*i*P		**Pn**	**19 28 02.1**	**+2.4**
	baz=17							
CHMS				⇑*i*S		**Sn**	**19 28 46.8**	**+3.5**
	baz=17							
DZA	**Taraz**	**3.72**	**337**	Pg		**Pb**	**19 28 10.1**	**+1.8**
	comp=E,28nm,0.1s							
DZA				Lg		Lg	19 28 57.2	
	comp=E,207nm,0.3s							
DZA	**Taraz**	**3.72**	**337**	*e*P		**Pb**	**19 28 09.0**	**+0.7**
	comp=E,28nm,0.1s							
DZA				*e*S		**Sb**	**19 28 57.0**	**+3.5**
	comp=E,207nm,0.3s							
TKM2	**Tokmak 2**	**3.87**	**26**	P		**Pb**	**19 28 07.1**	**-3.7**
	SNR=19							
TKM2	**Tokmak 2**	**3.87**	**26**	⇓Pn		**Pb**	**19 28 06.5**	**-4.4**
	comp=E,6.7nm,0.5s							
TKM2				⇑Pg		**Pg**	**19 28 15.4**	**-1.1**
	comp=E,25nm,0.8s							
TKM2				⇓Lg		Lg	19 29 03.3	
	comp=E,103nm,1.4s							
TKM2	**Tokmak 2**	**3.87**	**26**	*i* PN		**Pn**	**19 28 04.6**	**+2.4**
TKM2				*i* S		**Sn**	**19 28 51.2**	**+3.4**
TKM2	**Tokmak 2**	**3.87**	**26**	⇓*i*P		**Pn**	**19 28 04.6**	**+2.4**
	baz=26							
TKM2				⇓*i*S		**Sn**	**19 28 51.2**	**+3.4**
	baz=26							
KDJ	**Kajisay**	**3.98**	**47**	*i* PN		**Pn**	**19 28 06.2**	**+2.5**
KDJ				*i* S		**Sn**	**19 28 53.9**	**+3.4**
KDJ	**Kajisay**	**3.98**	**47**	⇓*i*P		**Pn**	**19 28 06.2**	**+2.5**
	baz=47							
KDJ				⇓*i*S		**Sn**	**19 28 53.9**	**+3.4**
	baz=47							
CHM	**Chimkent**	**3.98**	**317**	*e*P		**Pb**	**19 28 15.3**	**+2.6**
	comp=E,45nm,0.2s							
CHM				*e*S		**Sg**	**19 29 08.0**	**-2.5**
	comp=E,279nm,0.3s							
KST	**Kastek**	**4.11**	**29**	Pg		**Pg**	**19 28 19.6**	**-1.4**
	comp=E,21nm,0.3s							
KST				Lg		Lg	19 29 13.6	
	comp=E,94nm,0.5s							
KST	**Kastek**	**4.11**	**29**	*e*P		**Pg**	**19 28 18.2**	**-2.9**
	comp=E,21nm,0.3s							
KST				*e*S		**Sg**	**19 29 13.6**	**-0.7**
	comp=E,94nm,0.5s							
SGDS	**Sogindy**	**4.11**	**14**	Pg		**Pg**	**19 28 17.9**	**-3.3**
	comp=E,9.8nm,0.2s							
SGDS				Lg		Lg	19 29 10.8	
	comp=E,59nm,0.6s							
KK31	**Karatay Array**	**4.19**	**331**	⇓Pn		**Pn**	**19 28 08.4**	**+2.0**
	comp=E,3.3nm,0.3s,baz=134,slow=12,SNR=111							
KK31				Pg		**Pb**	**19 28 18.3**	**+2.1**
	comp=E,14nm,0.6s,baz=142,slow=15,SNR=16							
KK31				⇓Lg		Lg	19 29 07.8	
	comp=E,38nm,0.3s,baz=158,slow=27,SNR=8.4							
KK31	**Karatay Array**	**4.19**	**331**	PN		**Pn**	**19 28 08.4**	**+2.0**
KK31				PG		**Pb**	**19 28 18.3**	**+2.1**
KK31				LG		Lg	19 29 07.8	
KKAR	**Karatay Array**	**4.19**	**331**	*i* PN		**Pn**	**19 28 08.6**	**+2.2**
KKAR				*i* S		**Sn**	**19 28 58.2**	**+2.8**
KKAR	**Karatay Array**	**4.19**	**331**	⇑*i*P		**Pn**	**19 28 08.6**	**+2.2**
	baz=32							
KKAR				⇑*i*S		**Sn**	**19 28 58.2**	**+2.8**
	baz=32							
DGS	**Degeres**	**4.21**	**26**	Pg		**Pg**	**19 28 21.6**	**-1.6**
	comp=E,28nm,0.2s							
DGS				Lg		Lg	19 29 16.9	
	comp=E,72nm,0.5s							
DGS	**Degeres**	**4.21**	**26**	*e*P		**Pg**	**19 28 20.3**	**-2.8**
	comp=E,28nm,0.2s							
DGS				*e*S		**Sg**	**19 29 16.9**	**-0.8**
	comp=E,72nm,0.5s							
MTBS	**Maitube**	**4.36**	**32**	Pg		**Pg**	**19 28 24.0**	**-2.0**
	comp=E,17nm,0.5s							
MTBS				Lg		Lg	19 29 20.9	
	comp=E,43nm,0.4s							
MTBS	**Maitube**	**4.36**	**32**	*e*P		**Pg**	**19 28 22.9**	**-3.1**
	comp=E,17nm,0.5s							
MTBS				*e*S		**Sg**	**19 29 20.9**	**-1.5**
	comp=E,43nm,0.4s							
IZV	**Izvestkoviy**	**4.36**	**34**	Pg		**Pg**	**19 28 24.9**	**-1.1**
	comp=E,14nm,0.5s							
IZV				Lg		Lg	19 29 22.6	
	comp=E,90nm,0.4s							
IZV	**Izvestkoviy**	**4.36**	**34**	*e*P		**Pg**	**19 28 23.9**	**-2.0**
	comp=E,14nm,0.5s							
IZV				*e*S		**Sg**	**19 29 22.6**	**+0.1**
	comp=E,90nm,0.4s							
BRLS	**Borolday**	**4.41**	**325**	*e*P		**Pb**	**19 28 20.9**	**+0.9**
	comp=E,21nm,0.4s							
BRLS				*e*S		**Sg**	**19 29 18.8**	**-5.1**
	comp=E,77nm,0.6s							
TNSS	**Tian-Shan**	**4.51**	**37**	Pg		**Pg**	**19 28 27.0**	**-1.9**
	comp=E,17nm,0.2s							
TNSS				Lg		Lg	19 29 26.3	
	comp=E,31nm,0.4s							
TNSS	**Tian-Shan**	**4.51**	**37**	*e*P		**Pg**	**19 28 26.0**	**-2.9**
	comp=E,9.7nm,0.8s							
TNSS				*e*S		**Sg**	**19 29 26.4**	**-0.9**
	comp=E,31nm,0.4s							
KRBS	**Karabastau**	**4.59**	**22**	Pg		**Pg**	**19 28 27.6**	**-2.8**
	comp=E,23nm,0.3s							
KRBS

comp=E,33nm,0.4s
CHKK Chushkaly 5.19 31 *e*P **Pg 19 28 38.8 -3.0**
comp=E,5.6nm,0.3s
CHKK *e*S **Sg 19 29 48.2 -0.7**
comp=E,33nm,0.4s
SATY Saty 5.27 45 *e*P **Pg 19 28 40.4 -3.0**
comp=E,9.7nm,0.5s
SATY *e*S **Sg 19 29 51.3 -0.4**
comp=E,38nm,0.9s
KURS Kuram 5.44 41 Pg **Pg 19 28 45.1 -1.6**
comp=E,9.5nm,0.5s
KURS Lg Lg 19 29 57.2
comp=E,22nm,1.1s
KURS Kuram 5.44 41 *e*P **Pg 19 28 43.9 -2.7**
comp=E,9.5nm,0.5s
KURS *e*S **Sg 19 29 57.2 +0.1**
comp=E,22nm,1.1s
BTLS Baital 5.60 6 Pg **Pg 19 28 46.4 -3.3**
comp=E,5.5nm,0.3s
BTLS Lg Lg 19 29 59.6
comp=E,19nm,0.8s
BTLS Baital 5.60 6 *e*P **Pg 19 28 45.5 -4.2**
comp=E,5.5nm,0.3s
BTLS *e*S **Sg 19 29 59.6 -2.5**
comp=E,19nm,0.8s
UZB Uzynbulak 5.67 48 *e*P **Pg 19 28 49.0 -2.1**
comp=E,7.6nm,0.3s
UZB *e*S **Sg 19 30 05.8 +1.2**
comp=E,16nm,0.8s
KPKS Kokpek 5.69 44 *e*P **Pg 19 28 48.3 -3.2**
comp=E,14nm,0.5s
KPKS *e*S **Sg 19 30 05.0 -0.2**
comp=E,22nm,0.6s
ARXS Arharly 5.83 34 *e*P **Pg 19 28 50.4 -3.7**
comp=E,9.3nm,0.8s
ARXS *e*S **Sg 19 30 08.1 -1.5**
comp=E,34nm,0.8s
PDGK Podgornoye 6.06 48 ⇓Pn Pn 19 28 38.9 +6.8
comp=E,7.0nm,0.8s
PDGK ⇑Pg **Pg 19 28 56.3 -2.1**
comp=E,15nm,0.8s
PDGK ⇑Lg Lg 19 30 17.6
comp=E,33nm,0.8s
PDGK Podgornoye 6.06 48 PN Pn 19 28 38.9 +6.7
PDGK PG **Pg 19 28 56.3 -2.1**
DJR Jarkent 6.87 43 *e*P **Pg 19 29 10.6 -3.4**
comp=E,3.8nm,0.3s
DJR *e*S **Sg 19 30 42.9 +0.1**
comp=E,14nm,0.8s
OTUK Ortayu 8.80 356 ⇓Pn **Pn 19 29 11.4 +1.7**
comp=E,3.5nm,0.6s
OTUK ⇓Lg Lg 19 31 36.5
comp=E,25nm,0.9s
OTUK Ortayu 8.80 356 P **Pn 19 29 11.4 +1.7**
MK31 Makanchi Array 9.84 39 Pn Pn 19 29 29.7 +5.7
comp=E,1.2nm,0.7s,baz=210,slow=7.6,SNR=7.0
MK31 ⇑Lg Lg 19 32 17.3
comp=E,2.5nm,0.8s,baz=229,slow=30,SNR=3.7
MK31 Makanchi Array 9.84 39*c**e*P Pn 19 29 29.1 +5.1
MKAR Makanchi Array 9.84 39 Pn **Pn 19 29 28.4 +4.4**
baz=208,slow=11,SNR=9.9
MKAR Lg Lg 19 32 11.6
comp=E,0.1nm,0.3s,baz=238,slow=22,SNR=2.8
comp=E,1.0nm,0.9s
WMQ Urumqi 11.63 63 *e*P **Pn 19 29 51.7 +3.2**
WMQ smax smax
comp=N,11nm,0.9s
WMQ smax smax
comp=E,7.0nm,0.7s
KURBB Kurchatov Arra 11.75 17 Pn **Pn 19 29 51.7 +1.6**
comp=E,0.3nm,0.5s,baz=209,slow=12,SNR=1.3
KURBB Lg Lg 19 33 06.2
baz=331,slow=16,SNR=4.4
KURK Kurchatov 11.86 17 P **Pn 19 29 51.7 +0.2**
GEYT Alibeck 11.95 267 Pn **Pn 19 29 49.7 -3.2**
comp=E,0.2nm,0.3s,baz=85,slow=18,SNR=3.1
GEYT Sn **Sn 19 32 03.5 -2.7**
comp=E,0.4nm,0.3s,baz=314,slow=45,SNR=1.8
comp=E,1.1nm,0.5s
AB31 Akbulak array 13.65 320 Pn **Pn 19 30 15.0 -0.9**
comp=E,1.1nm,0.4s,baz=133,slow=13,SNR=33
AB31 Akbulak array 13.65 320 P **Pn 19 30 15.0 -0.9**
AB31 SN **Sn 19 32 45.8 -1.7**
BVA0 Borovoye Array 13.71 353 Pn **Pn 19 30 16.1 -0.7**
comp=E,3.2nm,0.6s,baz=138,slow=15,SNR=12
BVAR Borovoye Array 13.71 353 Pn **Pn 19 30 16.5 -0.2**
baz=153,slow=13,SNR=10
BVAR Lg Lg 19 34 15.3
baz=148,slow=20,SNR=5.5
comp=E,1.6nm,0.7s
BRVK Borovoye 13.75 352*c**e*P **Pn 19 30 17.5 +0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
DGZ Jazzator, Alta 14.34 40 *i* P **P 19 30 30.6 -2.1**
AKTO Aktyubinsk 15.36 321 P **Pn 19 30 38.0 -1.2**
AKTO Aktyubinsk 15.36 321 Pn **Pn 19 30 38.0 -1.2**
comp=Z,0.2nm,0.3s,baz=126,slow=10,SNR=5.7
comp=Z,1.6nm,0.6s
ZALV Zalesovo Beam 16.47 25 Pn **P 19 30 55.9 -0.3**
comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=8.0
comp=Z,0.5nm,0.3s
ARU Arti 19.55 335 P **Pn 19 31 32.4 +1.0**
comp=Z,0.2nm,0.3s,baz=152,slow=9.1,SNR=3.6
comp=Z,1.4nm,0.6s
GTA Gaotai 20.47 82 P Pn 19 31 44.2 +1.6
GTA pP sP 19 31 49.6 +3.2
GTA pmax pmax
comp=Z,6.0nm,1.0s
SONM Songino Array 25.22 60 P **P 19 32 31.0 +2.5**
SONM Songino Array 25.22 60 P **P 19 32 31.0 +2.5**
comp=Z,1.5nm,0.8s,baz=266,slow=8.6,SNR=12
comp=Z,1.5nm,0.8s
OBN Obninsk 28.99 315 *e*P P 19 32 56.8 -5.2
OBN *e*PPP PPP 19 33 54.7
OBN pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 30.38 283 P **P 19 33 15.2 +0.5**
comp=Z,1.0nm,0.9s,baz=69,slow=6.8,SNR=4.3
comp=Z,1.0nm,0.9s
NRIK Noril'sk 30.89 10 LR LR 19 45 29.5
comp=Z,68nm,19.8s,baz=332,slow=36
XLT XiLinHaoTe 32.00 68 *e*P **P 19 33 26.9 -2.0**
XLT pmax pmax
comp=Z,4.0nm,0.9s
XLT pmax pmax
comp=Z,220nm,4.7s
FINES FINESS Array B 36.11 323 P **P 19 34 04.8 +0.7**
comp=Z,1.3nm,0.6s,baz=105,slow=9.4,SNR=16
comp=Z,1.3nm,0.6s
ARCES ARCESS Array B 39.14 336 P **P 19 34 30.9 +1.2**
comp=Z,1.1nm,0.6s,baz=106,slow=6.7,SNR=7.7
comp=Z,1.1nm,0.6s
YAK Yakutsk 40.51 37*c**e*P **P 19 34 42.7 +1.5**
YAK pmax pmax
comp=Z,4.0nm,0.7s
VRAC Vranov 40.81 303 LR LR 19 52 41.7
comp=Z,70nm,19.7s,baz=353,slow=38
HFS Hagfors 41.91 320 P **P 19 34 53.7 +1.0**
comp=Z,1.7nm,0.5s,baz=110,slow=13,SNR=11
HFS LR LR 19 52 02.7
comp=Z,210nm,19.0s,baz=318,slow=36
comp=Z,1.7nm,0.5s
KSRS Korea Array 42.28 75 LR LR 19 53 57.3
comp=Z,13nm,19.7s,baz=135,slow=38
TIXI Tiksi 42.35 23*c**e*P **P 19 34 58.1 +1.9**
TIXI pmax pmax
comp=Z,9.0nm,2.5s
GERES GERESS Array B 42.76 303 P **P 19 35 00.6 +0.6**
comp=Z,0.4nm,0.6s,baz=81,slow=13,SNR=1.7
comp=Z,0.4nm,0.6s
CLL Collm 42.80 307 *e*P **P 19 35 00.0 -0.1**
CLL Collm 42.80 307 *e*P **P 19 35 00.0 -0.1**
NOA NORSAR Array B 43.15 321 P **P 19 35 03.8 +0.9**
comp=Z,0.6nm,0.6s,baz=88,slow=8.5,SNR=2.3
comp=Z,0.6nm,0.6s
DAVOX Davos/Dischmat 45.73 301 LR LR 19 57 59.0
comp=Z,116nm,19.3s,baz=265,slow=41
SEY Seymchan 50.96 35 LR LR 20 00 49.1
comp=Z,42nm,19.0s,baz=340,slow=40
ESDC Sonseca Array 57.69 297 P **P 19 36 54.2 +1.0**
comp=Z,0.5nm,0.7s,baz=64,slow=7.4,SNR=2.2
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 67.59 269 P **P 19 37 59.4 -0.2**
comp=Z,0.5nm,0.5s,baz=55,slow=5.4,SNR=3.4
ILAR Eielson Array 71.43 17 P **P 19 38 23.7 +1.2**
comp=Z,0.4nm,0.7s,baz=310,slow=5.7,SNR=5.4
comp=Z,0.4nm,0.7s
YKA Yellowknife Ar 78.19 4 P **P 19 39 03.0 +1.4**
comp=Z,1.0nm,0.7s,baz=350,slow=5.7,SNR=19
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 82.08 124 P **P 19 39 21.6 -1.7**
comp=Z,0.4nm,0.7s,baz=322,slow=5.2,SNR=6.1
comp=Z,0.4nm,0.7s
ASAR Alice Springs 84.52 127 P **P 19 39 36.5 +0.7**
comp=Z,0.4nm,0.9s,baz=310,slow=3.5,SNR=2.3
comp=Z,0.4nm,0.9s

*IDC **11** 19:57:40.7±0.7,2°.82N×126°.43E,h0km,mb4.0/12, mbtmp4.0/12,MS2.9/2,Error ellipse: s-maj=41.3km s-min=14.3km az=76.0*
*NEIC **11** 19:57:47.9±2.5,2°.99N±0°.09×126°.77E±0°.09,h56km±6km, mb4.3/23,Error ellipse: s-maj=15.1km s-min=10.8km az=46.0*
*DJA **11** 19:57:49.6±0.6,3°.N±5°×12°.7E±°,h45km±46km,M4.4/9, mb4.5/4,mB5.0/4,MLv4.4/9,Mw(mB)4.3/4*

ISC 11 19:57:48.5±0.5,2°.93N±0°.05×126°.69E±0°.07,h63km,n54, σ1°38/56,mb4.2/24,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.38**	**303**	P		P	**Pn**	**19 58 11.8**	**+0.1**
SGSI				S		S	**Sn**	**19 58 29.2**	**+0.1**
TNTI	**Ternate**	**2.25**	**163**	P		P	**Pn**	**19 58 23.5**	**+0.2**
TNTI	**Ternate**	**2.25**	**163**	P		P	**Pn**	**19 58 23.5**	**+0.2**
TNTI				S		S	**Sn**	**19 58 50.6**	**+0.6**
KMSI	**Cibinong**	**3.58**	**229**	P		P	**Pn**	**19 58 41.2**	**-0.4**
LBMI	**Labuha**	**3.63**	**167**	P		P	**Pn**	**19 58 43.4**	**+1.1**
MRSI	**Marisa**	**5.34**	**243**	P		P	**Pn**	**19 59 07.7**	**+2.1**
LUWI	**Luwuk**	**5.56**	**225**				**Pn**	**19 59 09.1**	**+0.4**
LUWI	**Luwuk**	**5.56**	**225**	P		P	**Pn**	**19 59 08.9**	**+0.2**
	104nm,1.1s,1μm0.5nm								
SWI	**Sorong**	**5.92**	**129**	P		P	**Pn**	**19 59 15.1**	**+1.5**
	21nm,1.0s,1μm0.1nm								
NLAI	**Namlea**	**6.14**	**176**	P		P	**Pn**	**19 59 15.8**	**-0.8**
TOLI2	**Tolitoli**	**6.18**	**253**				**Pn**	**19 59 17.1**	**-0.1**
KKM	**Kota Kinabalu**	**10.89**	**287**	Pn		Pn	**Pn**	**20 00 23.1**	**+1.3**
SBUM	**Sibu**	**14.46**	**268**	P		P	**Pn**	**20 01 16.2**	**+1.2**
MTN	**Manton Dam**	**16.28**	**164**	Pn		Pn	**Pn**	**20 01 30.1**	**-3.2**
MTN				IAmb		IAmb		20 01 53.8	
	comp=Z,55nm,1.4s								
FITZ	**Fitzroy Crossi**	**20.92**	**183**	P		P	**P**	**20 02 25.5**	**-0.5**
YULB	**Yu-li**	**21.00**	**346**	P		P	**Pn**	**20 02 24.3**	**-2.6**
YULB				IAmb		IAmb		20 02 30.3	
	comp=Z,22nm,1.1s								
TPUB	**Ta-pu**	**21.08**	**344**	P		P	**P**	**20 02 25.2**	**-2.6**
TPUB				IAmb		IAmb		20 02 34.3	
	comp=Z,65nm,1.3s								
SSLB	**Suanglung**	**21.46**	**346**	P		P	**P**	**20 02 29.0**	**-2.9**
SSLB				IAmb		IAmb		20 02 40.3	
	comp=Z,23nm,1.1s								
YHNB	**Yeheng**	**22.21**	**347**	P		P	**P**	**20 02 40.2**	**+0.3**
YHNB				IAmb		IAmb		20 03 11.0	
	comp=Z,44nm,1.2s								
WB0	**Warramunga Arr**	**23.79**	**162**	P		P	**P**	**20 02 54.9**	**-0.7**
WB0				IAmb		IAmb		20 03 05.4	
	comp=Z,6.1nm,0.8s								
WRAB	**Tennant Creek**	**23.93**	**162**	P		P	**P**	**20 02 56.3**	**-0.6**
WRAB				IAmb		IAmb		20 03 06.4	
	comp=Z,6.0nm,0.9s								
WRA	**Warramunga Arr**	**23.94**	**162**	P		P	**P**	**20 02 54.9**	**-2.1**
WRA	**Warramunga Arr**	**23.94**	**162**	P		P	**P**	**20 02 56.8**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=337,slow=11,SNR=9.7								
	comp=Z,2.5nm,0.7s								
WB2	**Warramunga Arr**	**23.94**	**162**	P		P	**P**	**20 02 55.8**	**-1.2**
WB2				IAmb		IAmb		20 03 06.0	
	comp=Z,5.9nm,0.7s								
WR0	**Warramunga Arr**	**24.02**	**162**	P		P	**P**	**20 02 57.2**	**-0.4**
AS31	**Alice Springs**	**27.35**	**165**	P		P	**P**	**20 03 28.9**	**+1.0**
ASAR	**Alice Springs**	**27.35**	**165**	P		P	**P**	**20 03 27.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=345,slow=7.0,SNR=20								
ASAR				PcP		PcP	**PcP**	**20 06 49.3**	**+3.3**
	comp=Z,0.2nm,0.6s,baz=11,slow=0.9,SNR=2.1								
	comp=Z,0.7nm,0.5s								
GSI	**Gunungsitoli**	**29.14**	**267**	P		P	**P**	**20 03 42.3**	**-1.6**
GSI				IAmb		IAmb		20 03 48.8	
	comp=Z,9.3nm,1.0s								
JNU	**Nakatsue**	**30.29**	**7**	P		P	**P**	**20 03 52.3**	**-1.5**
FORT	**Forrest**	**33.55**	**178**	P		P	**P**	**20 04 23.4**	**+1.0**
KSRS	**Korea Array**	**34.38**	**2**	P		P	**P**	**20 04 32.1**	**+2.6**
	comp=Z,1.7nm,0.4s,baz=178,slow=9.7,SNR=10								
KSRS				LR		LR		20 17 56.8	
	comp=Z,6.8nm,20.9s,baz=60,slow=35								
	comp=Z,1.7nm,0.4s								
MAJO	**Matsushiro**	**35.09**	**16**	P		P	**P**	**20 04 34.3**	**-1.4**
MJAR	**Matsushiro Arr**	**35.09**	**16**	P		P	**P**	**20 04 36.4**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=192,slow=8.4,SNR=5.2								
	comp=Z,0.8nm,0.5s								
MJB9	**Matsu-Tunnel**	**35.10**	**16**	P		P	**P**	**20 04 33.5**	**-2.3**
STKA	**Stephens Creek**	**37.40**	**159**	P		P	**P**	**20 04 56.1**	**+0.7**
STKA	**Stephens Creek**	**37.40**	**159**	P		P	**P**	**20 04 54.2**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=352,slow=11,SNR=5.1								
	comp=Z,1.2nm,0.6s								
USRK	**Ussuriysk Ar.**	**41.36**	**6**	P		P	**P**	**20 05 27.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**41.36**	**6**	P		P	**P**	**20 05 28.6**	**+0.3**
	comp=Z,6.6nm,0.8s,baz=188,slow=7.9,SNR=9.8								
	comp=Z,6.6nm,0.8s								
SONM	**Songino Array**	**48.04**	**342**	P		P	**P**	**20 06 23.2**	**+1.6**
SONM				IAmb		IAmb		20 06 25.2	
	comp=Z,1.4nm,1.1s								
SONM	**Songino Array**	**48.04**	**342**	P		P	**P**	**20 06 22.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=155,slow=8.7,SNR=6.4								
	comp=Z,0.7nm,0.7s								
PEA0B	**Petropavlovsk-**	**56.18**	**22**	P		P	**P**	**20 07 21.6**	**-0.2**
PETK	**Petropavlovsk-**	**56.18**	**22**	P		P	**P**	**20 07 20.1**	**-1.7**
PETK	**Petropavlovsk-**	**56.18**	**22**	P		P	**P**	**20 07 23.9**	**+2.1**
	comp=Z,3.4nm,0.9s,baz=246,slow=1.4,SNR=4.9								
	comp=Z,3.4nm,0.9s								
MK31	**Makanchi Array**	**58.19**	**326**	P		P	**P**	**20 07 35.6**	**-0.5**
MK31				IAmb		IAmb		20 07 40.5	
	comp=Z,1.3nm,1.1s								
MKAR	**Makanchi Array**	**58.19**	**326**	P		P	**P**	**20 07 35.7**	**-0.4**
MKAR	**Makanchi Array**	**58.19**	**326**	P		P	**P**	**20 07 36.3**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=120,slow=7.6,SNR=17								
	comp=Z,0.5nm,0.3s								
ZALV	**Zalesovo Beam**	**61.28**	**333**	P		P	**P**	**20 07 56.6**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=116,slow=6.6,SNR=3.0								
	comp=Z,0.6nm,0.4s								
KURBB	**Kurchatov Arra**	**62.39**	**328**	P		P	**P**	**20 08 04.6**	**0.0**
	comp=Z,7.3nm,0.2s,baz=127,slow=6.2,SNR=8.6								
KURK	**Kurchatov**	**62.39**	**328**	P		P	**P**	**20 08 04.7**	**+0.1**
KURK				IAmb		IAmb		20 08 07.5	
	comp=Z,2.5nm,0.8s								
BVAR	**Borovoye Array**	**67.97**	**327**	P		P	**P**	**20 08 41.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=91,slow=5.9,SNR=4.2								
	comp=Z,0.4nm,0.4s								
TIXI	**Tiksi**	**68.64**	**1**	P		P	**P**	**20 08 45.0**	**+0.5**
TIXI				IAmb		IAmb		20 08 46.2	
	comp=Z,3.5nm,1.1s								
NRIK	**Noril'sk**	**71.19**	**346**	P		P	**P**	**20 09 00.6**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=145,slow=7.3,SNR=3.5								
	comp=Z,1.3nm,0.3s								
GEYT	**Alibeck**	**71.36**	**309**	LR		LR		20 43 51.8	
	comp=Z,21nm,19.3s,baz=195,slow=39								
ABKAR	**Akbulak array**	**72.74**	**321**	P		P	**P**	**20 09 08.3**	**-1.6**

DJA 11 20:05:26.7±0.6,3°S±4°×12°6E±°,h10km,M3.8/6,mb4.0/3, MLv3.7/6,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.21**	**119**	P		Pn		20 05 48.4	-1.4
NLAI				S		Sb		20 06 05.2	-0.3
LBMI	**Labuha**	**2.47**	**36**	P		Pn		20 06 07.4	+0.4
LBMI				S		Sn		20 06 36.9	-0.3
LUWI	**Luwuk**	**3.63**	**296**	P		Pn		20 06 22.7	-0.3
SWI	**Sorong**	**5.51**	**71**	P		Pn		20 06 49.7	+0.9
	15nm,0.6s,0.1nm								
FAKI	**Fak Fak**	**6.21**	**93**	P		Pn		20 06 58.5	0.0

*JMA **11** 20:12:55.4±0.3,25°.N±2°×123°.5E±0°.7,h166km±3km, MV2.8/19,NW OFF ISHIGAKIJIMA IS*

ISC 11 20:12:55.6±2.3,25°.2N±0°.1×123°.46E±0°.07,h163km±21km, n17,σ0°65/25,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.84**	**209**	P		P	**Pn**	**20 13 19.0**	**-1.4**
YOJ	**Yonaguni jima**	**0.84**	**209**	P		P	**Pn**	**20 13 20.6**	**+0.1**
JYNG	**Yonagunijimaku**	**0.88**	**212**	*e*P		P	**Pn**	**20 13 20.7**	**0.0**
IRIF	**Iriomote-Funau**	**0.90**	**164**	*e*P		P	**Pn**	**20 13 20.7**	**-0.1**
IRIF				S		S	**Sn**	**20 13 40.1**	**0.0**
JISG	**Ishigakijimahi**	**0.99**	**128**	P		P	**Pn**	**20 13 21.5**	**0.0**
JISG				*e*S		S	**Sn**	**20 13 41.1**	**-0.2**
JIJ	**Ishigaki jima**	**1.04**	**143**	P		P	**Pn**	**20 13 22.0**	**0.0**
JIJ				S		S	**Sn**	**20 13 41.6**	**-0.5**
JKRS	**Kuro-shima**	**1.08**	**152**	P		P	**Pn**	**20 13 22.6**	**+0.2**
JKRS				S		S	**Sn**	**20 13 43.1**	**+0.4**
HATJ	**Hateruma jima**	**1.18**	**164**	P		P	**Pn**	**20 13 23.5**	**+0.4**
HATJ				S		S	**Sn**	**20 13 44.6**	**+0.3**
JTJ	**Tarama**	**1.26**	**116**	P		P	**Pn**	**20 13 24.3**	**+0.4**
JTJ				S		S	**Sn**	**20 13 45.6**	**+0.1**
JIRB	**Irabujima**	**1.60**	**103**	*e*P		P	**Pn**	**20 13 27.2**	**0.0**
JIRB				*e*S		S	**Sn**	**20 13 50.7**	**-0.7**
JIKM	**Ikemajima**	**1.65**	**99**	*e*S		S	**Sn**	**20 13 52.6**	**+0.3**
JMJ2	**Miyako jima3**	**1.76**	**105**	*e*P		P	**Pn**	**20 13 29.2**	**+0.4**
JMJ2				*e*S		S	**Sn**	**20 13 55.6**	**+1.1**
TATO	**Taipei**	**1.80**	**263**	P		P	**Pn**	**20 13 29.9**	**+0.6**
YHNB	**Yeheng**	**1.96**	**255**	P		P	**Pn**	**20 13 31.5**	**+0.3**
YULB	**Yu-li**	**2.67**	**228**	P		P	**Pn**	**20 13 38.3**	**-1.2**
SSLB	**Suanglung**	**2.68**	**239**	P		P	**Pn**	**20 13 40.3**	**+0.7**
JKE	**Kume jima 2**	**3.21**	**69**	*e*S		S	**Sn**	**20 14 24.0**	**-1.2**

*MOS **11** 20:32:04.3±1.1,34°.63N×25°.83E,h12km,mb4.2/10,Error ellipse: s-maj=7.7km s-min=4.5km az=78.5*
*IDC **11** 20:32:05.0±0.7,34°.90N×25°.91E,h0km,mb4.0/20, mbtmp4.0/31,ML3.5/10,MS3.2/7,Error ellipse: s-maj=16.3km s-min=11.2km az=0.0*
*NEIC **11** 20:32:06.8±1.7,34°.81N±0°.08×25°.80E±0°.07,h10km±1km, mb4.2/26,Error ellipse: s-maj=13.2km s-min=9.4km az=196.0*
*HLW **11** 20:32:08.4,34°.99N×25°.95E,h10km±14km,Md4.1,Ml4.4*
*GII **11** 20:32:08.8±0.5,34°.671N±0°.003×25°.896E±0°.001,h40km, mB4.3/5,Md4.1/2,Mws4.1,confirmed*
*ISK **11** 20:32:09.5,34°.99N×25°.90E,h10km,ML3.9/19*
*THE **11** 20:32:09.0,34°.83N×25°.93E,h0km,ML3.9/4,Error ellipse: s-maj=1.6km s-min=0.6km az=163.0*
*AFAD **11** 20:32:10.0±0.0,35°.11N×25°.85E,h40km±53km,MW4.1*
*ATH **11** 20:32:10.1,34°.93N×25°.87E,h14km±1km,ML3.8/22,Error ellipse: s-maj=2.1km s-min=0.8km az=352.0*

ISC 11 20:32:08.1±0.9,34°.85N±0°.03×25°.93E±0°.02,h18km±4km, n347,σ1°75/373,mb4.2/37,MS3.3/4,13C-6D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.23**	**315**	P		P	**Pg**	**20 32 13.3**	**-0.1**
FRMA				S		S	**Sg**	**20 32 16.8**	**-0.2**
FRMA	**Ierapetra Chan**	**0.23**	**315**	P		P	**Pg**	**20 32 13.2**	**-0.1**
FRMA				S		S	**Sg**	**20 32 15.8**	**-1.2**
FRMA						AML	AML	20 32 17.8	
FRMA						AML	AML	20 32 17.8	
ZKR	**Zakros**	**0.35**	**42**	Pg		Pg	**Pg**	**20 32 15.9**	**+0.4**
ZKR	**Zakros**	**0.35**	**42**	P		P	**Pb**	**20 32 16.3**	**+0.4**
ZKR				S		S	**Sb**	**20 32 22.6**	**+1.5**
	38μm,0.3s								
ZKR	**Zakros**	**0.35**	**42**	P		P	**Pg**	**20 32 16.2**	**+0.7**
ZKR				S		S	**Sb**	**20 32 21.7**	**+0.5**
ZKR						AML	AML	20 32 24.3	
	comp=N,50406μm,0.3s								
ZKR						AML	AML	20 32 25.7	
HRKL	**Herakleio**	**0.82**	**304**	Pg		Pg	**Pb**	**20 32 24.1**	**+0.3**
HRKL				Sg		Sg	**Sb**	**20 32 34.7**	**+0.2**
HRKL	**Herakleio**	**0.82**	**304**	P		P	**Pn**	**20 32 25.2**	**+0.5**
HRKL				S		S	**Sn**	**20 32 39.1**	**+2.7**
HRKL	**Herakleio**	**0.82**	**304**	P		P	**Pg**	**20 32 23.0**	**-1.0**
HRKL				S		S	**Sb**	**20 32 35.0**	**+0.5**
HRKL						AML	AML	20 32 39.6	
	comp=N,80639μm,0.5s								
HRKL						AML	AML	20 32 42.4	
KSTL	**Kastelli Herak**	**0.83**	**303**	P		Pg		20 32 19.1	-5.3
KSTL				S		S	**Sg**	**20 32 27.5**	**-7.9**
KSTL						AML	AML	20 32 31.9	
	comp=E,12404μm,0.4s								
KSTL						AML	AML	20 32 36.1	
	comp=N,16253μm,0.4s								
IACM	**Heraklion**	**0.83**	**303**	P		Pb	**Pb**	**20 32 25.2**	**+1.1**
IDI	**Anoyia**	**0.95**	**297**	Pg		Pg	**Pb**	**20 32 26.9**	**+0.7**
IDI				Sg		Sb	**Sb**	**20 32 39.7**	**+1.2**
IDI	**Anoyia**	**0.95**	**297**	P		Pb	**Pb**	**20 32 27.2**	**+1.0**
IDI				S		Sn	**Sn**	**20 32 41.9**	**+2.0**
	comp=N,4μm,0.6s								
IDI	**Anoyia**	**0.95**	**297**	P		Pg	**Pg**	**20 32 25.4**	**-1.3**
IDI				S		Sg	**Sg**	**20 32 38.2**	**-1.1**
IDI						AML	AML	20 32 42.4	
	comp=E,9628μm,0.7s								
IDI						AML	AML	20 32 42.5	
	comp=N,11239μm,0.5s								
TMBK	**Timbaki Herakl**	**0.98**	**283**	P		Pn	**Pn**	**20 32 27.7**	**+0.8**
KARP	**Karpathos**	**1.22**	**55**	Pn		Pn	**Pn**	**20 32 31.9**	**+1.6**
KARP				Sn		Sn	**Sn**	**20 32 49.2**	**+2.7**
KARP	**Karpathos**	**1.22**	**55**	Pn		Pn	**Pn**	**20 32 31.6**	**+1.3**
KARP	**Karpathos**	**1.22**	**55**	P		Pn	**Pn**	**20 32 31.9**	**+1.6**
KARP				S		Sn	**Sn**	**20 32 50.6**	**+4.1**
	comp=N,7μm,0.6s								
KARP	**Karpathos**	**1.22**	**55**	P		P	**Pn**	**20 32 32.0**	**+1.6**
KARP	**Karpathos**	**1.22**	**55**	P		P	**Pn**	**20 32 31.7**	**+1.3**
KARP				S		S	**Sn**	**20 32 48.5**	**+2.0**
KARP						AML	AML	20 32 54.9	
	comp=N,14943μm,0.6s								
KARP						AML	AML	20 32 56.1	
	comp=E,14292μm,0.5s								
PRNS	**Prines Rethymn**	**1.28**	**294**	P		Pg	**Pg**	**20 32 33.3**	**+0.6**
GVDS	**Gavdos**	**1.51**	**270**	Pn		Pg	**Pg**	**20 32 37.5**	**+0.3**
GVDS	**Gavdos**	**1.51**	**270**	P		Pg	**Pg**	**20 32 37.1**	**-0.1**
GVDS				S		S	**Sg**	**20 32 58.3**	**+1.4**
	comp=E,2μm,0.7s								
GVD	**Gavdhos**	**1.51**	**270**	Pn		Pb	**Pb**	**20 32 36.9**	**+1.3**
GVD				Sn		Sg	**Sg**	**20 32 57.3**	**+0.3**
GVD	**Gavdhos**	**1.51**	**270**	P		Pb	**Pb**	**20 32 36.2**	**+0.6**
GVD	**Gavdhos**	**1.51**	**270**	P		Pb	**Pb**	**20 32 36.1**	**+0.4**
GVD				S		Sn	**Sn**	**20 32 54.4**	**+0.8**
GVD						AML	AML	20 33 05.2	
	comp=E,5423μm,0.6s								
GVD						AML	AML	20 33 08.6	
	comp=N,5110μm,0.5s								
THR6	**Thira Island,**	**1.56**	**344**	P		Pn	**Pn**	**20 32 36.1**	**+1.2**
SANT	**Santorini**	**1.56**	**346**	⇑P		Pg	**Pn**	**20 32 37.5**	**-0.6**
SANT	**Santorini**	**1.56**	**346**	Pn		Pn	**Pn**	**20 32 36.0**	**+1.0**
SANT	**Santorini**	**1.56**	**346**				**Pn**	**20 32 35.3**	**+0.3**
**

MHLO Agia Marina, M 2.21 326 P **Pn** **20 32 44.4 +0.4**
MHLO AML AML 20 33 22.3
comp=E,4982µm,0.4s
MHLO AML AML 20 33 29.7
comp=N,6670µm,0.6s
APE Apeiranthos 2.23 352 ⇓P **Pb** **20 32 47.0 -0.9**
APE Apeiranthos 2.23 352 Pn **Pn** **20 32 44.9 +0.6**
APE Apeiranthos 2.23 352 P **Pn** **20 32 45.3 +1.0**
APE Apeiranthos 2.23 352 P **Pn** **20 32 44.0 -0.2**
APE Apeiranthos 2.23 352 *i* P **Pn** **20 32 44.6 +0.3**
APE Apeiranthos 2.23 352 P **Pn** **20 32 44.9 +0.6**
APE Apeiranthos 2.23 352 P **Pn** **20 32 44.5 +0.3**
APE S **Sn** **20 33 10.3 -1.1**
APE AML AML 20 33 19.0
comp=N,1083µm,0.4s
APE AML AML 20 33 20.6
comp=E,1405µm,0.5s
ARG Arkhangelos 2.25 52 Pn **Pn** **20 32 46.9 +2.5**
ARG Arkhangelos 2.25 52 Pn **Pn** **20 32 47.2 +2.8**
ARG Arkhangelos 2.25 52 P **Pn** **20 32 46.6 +2.2**
ARG Arkhangelos 2.25 52 P **Pn** **20 32 47.3 +2.8**
ARG Arkhangelos 2.25 52 P **Pn** **20 32 46.4 +2.0**
ARG AML AML 20 33 32.6
comp=N,1629µm,0.9s
ARG AML AML 20 33 40.4
comp=E,2081µm,0.8s
KLNA Kalymnos 2.26 22 P **Pn** **20 32 45.3 +0.7**
DAT Datca 2.30 35 Pn **Pn** **20 32 47.5 +2.2**
DATC Datca-Mugla 2.37 36 Pn **Pn** **20 32 48.3 +2.3**
DATC Datca-Mugla 2.37 36 P **Pn** **20 32 46.8 +0.8**
DATC *i* AML AML 20 33 35.0
comp=E,2µm,0.6s
DATC *i* AML AML 20 33 43.0
comp=E,3µm,1.0s
ANKY Antikythira Is 2.37 296 P **Pn** **20 32 48.6 +2.5**
ANKY Antikythira Is 2.37 296 P **Pn** **20 32 47.1 +1.0**
ANKY AML AML 20 33 36.4
comp=E,2264µm,0.7s
ANKY AML AML 20 33 46.0
comp=N,1664µm,1.2s
BODT Bodrum 2.47 27 Pn **Pn** **20 32 49.6 +2.1**
BODT Bodrum 2.47 27 P **Pn** **20 32 49.3 +1.8**
BODT Bodrum 2.47 27 P **Pn** **20 32 50.3 +2.8**
BDRM Kayabasi 2.53 29 P **Pn** **20 32 45.4 -2.9**
TURN Turunc 2.69 44 P **Pn** **20 32 52.0 +1.6**
TURN *i* AML AML 20 33 40.0
comp=N,228nm,0.6s
TURN *i* AML AML 20 33 43.0
comp=N,133nm,0.4s
MLSB Milas 2.86 31 Pn **Pn** **20 32 55.3 +2.4**
MLSB Milas 2.86 31 P **Pn** **20 32 55.5 +2.7**
SMG Samos 2.94 14 P **Pn** **20 32 55.1 +1.1**
SMG Samos 2.94 14 P **Pn** **20 32 55.2 +1.3**
SMG AML AML 20 33 45.9
comp=N,525µm,0.4s
SMG AML AML 20 33 47.7
comp=E,726µm,0.6s
DALY Dalyan (Mula) 2.96 48 Pn **Pn** **20 32 56.8 +2.7**
YER Yerkesik 2.97 39 Pn **Pn** **20 32 56.9 +2.5**
YER Yerkesik 2.97 39 P **Pn** **20 32 57.0 +2.5**
YER Yerkesik 2.97 39 P **Pn** **20 32 55.5 +1.1**
YER *i* AML AML 20 33 38.0
comp=E,49nm,0.6s
YER *i* AML AML 20 33 45.0
comp=E,29nm,0.6s
YER Yerkesik 2.97 39 P **Pn** **20 32 56.9 +2.5**
GCAM G?zelcaml? 3.03 20 P **Pb** **20 32 59.4 -2.1**
VLI Veliai 3.06 308 P **Pn** **20 32 57.0 +1.4**
VLI Veliai 3.06 308 P **Pn** **20 32 57.2 +1.6**
VLI AML AML 20 33 42.2
comp=N,848µm,0.5s
VLI AML AML 20 33 46.7
comp=E,763µm,0.6s
MULA Mugla, Merkez- 3.08 38 P **Pn** **20 32 58.3 +2.3**
MULA *i* AML AML 20 33 48.0
comp=E,86nm,0.6s
MULA *i* AML AML 20 33 48.0
comp=E,152nm,0.9s
IZZE Mula-Seydike 3.12 59 P **Pn** **20 32 57.3 +0.9**
FETY Fethiye 3.12 54 Pn **Pn** **20 32 58.1 +1.6**
DGB zmir 3.28 13 P **Pn** **20 32 58.3 -0.3**
DGB *i* AML AML 20 33 56.0
comp=E,82nm,0.4s
KRND KRANIDI 3.38 319 P **Pn** **20 33 01.9 +1.9**
KRND KRANIDI 3.38 319 P **Pn** **20 33 01.4 +1.4**
KRND AML AML 20 33 51.7
comp=N,591µm,0.8s
KRND AML AML 20 33 54.0
comp=E,724µm,0.7s
ZEYE Izmir, Urla-Ze 3.41 8 P **Pn** **20 33 01.1 +0.7**
ZEYE *i* AML AML 20 34 04.0
comp=E,73nm,0.6s
VLY Voula,Athens 3.45 331 P **Pn** **20 33 04.4 +3.4**
VLY Voula,Athens 3.45 331 P **Pn** **20 33 02.3 +1.4**
VLY AML AML 20 33 59.3
comp=E,364µm,0.9s
VLY AML AML 20 34 08.3
comp=N,366µm,0.5s
CHOS Chios island 3.53 2 P **Pn** **20 33 02.9 +0.9**
ESEN Aydn-Nazilli 3.53 33 P **Pn** **20 33 03.9 +1.9**
ESEN *i* AML AML 20 33 48.0
comp=N,68nm,1.3s
ESEN *i* AML AML 20 33 53.0
comp=N,53nm,0.6s
URLA Izmir 3.54 9 P **Pn** **20 33 01.8 -0.4**
URLA *i* AML AML 20 34 18.0
comp=N,154nm,1.0s
URLA *i* AML AML 20 34 18.0
comp=N,133nm,0.6s
TAVA DENIZLI_Tavas 3.55 42 P **Pn** **20 33 04.6 +2.1**
TAVA *i* AML AML 20 34 02.0
comp=N,97nm,0.5s
TAVA *i* AML AML 20 34 18.0
comp=N,73nm,0.6s
ATHU Athens Univers 3.56 332 P **Pn** **20 33 04.2 +1.8**
CAEL Denizli, Camel 3.56 50 P **Pn** **20 33 04.9 +2.3**
CAEL *i* AML AML 20 34 11.0
comp=N,347nm,1.2s
CAEL *i* AML AML 20 34 31.0
comp=N,263nm,0.9s
ATH Athens Observa 3.59 331 P **Pn** **20 33 07.1 +4.3**
DION Dionisos Attik 3.60 334 P **Pn** **20 33 04.4 +1.4**
DION AML AML 20 34 02.6
comp=E,702µm,0.9s
DION AML AML 20 34 06.8
comp=N,752µm,1.0s
BLCB Balcova 3.64 14 Pn **Pn** **20 33 04.9 +1.4**
BLCB Balcova 3.64 14 P **Pn** **20 33 05.4 +1.9**
BLCB Balcova 3.64 14 P **Pn** **20 33 03.2 -0.3**
BLCB S **Sn** **20 33 43.3 -2.7**
BLCB *i* AML AML 20 33 50.0
comp=N,162nm,0.3s
BLCB *i* AML AML 20 34 12.0
comp=N,101nm,1.2s
DNIZ Denizli-Tavas- 3.74 41 P **Pn** **20 33 06.7 +1.7**
DNIZ *i* AML AML 20 34 00.0
comp=N,181nm,0.4s
DNIZ *i* AML AML 20 34 14.0
comp=N,130nm,0.4s
ELL Elmali 3.75 59 Pn **Pn** **20 33 07.5 +2.4**
ELL Elmali 3.75 59 P **Pn** **20 33 07.6 +2.4**
GOLH Golhisar 3.79 50 P **Pn** **20 33 08.1 +2.4**
GOLH *i* AML AML 20 34 12.0
comp=N,197nm,0.5s
GOLH *i* AML AML 20 34 19.0
comp=N,152nm,1.2s
KARB zmir-Karabur 3.82 6 P **Pn** **20 33 04.6 -1.5**
KIRA zmir-Kiraz 3.88 30 P **Pn** **20 33 10.2 +3.1**
LOUT Loutraki 3.93 324 P **Pn** **20 33 09.7 +2.1**
PYL PYLOS 3.96 302 P **Pn** **20 33 08.4 +0.5**
VIL2 Platees 3.98 328 P **Pn** **20 33 08.9 +0.7**
KYMI Kymi, Euboea I 4.05 339 P **Pn** **20 33 11.4 +2.2**
KYMI Kymi, Euboea I 4.05 339 P **Pn** **20 33 10.3 +1.1**
INCE Denizli-Bozkur 4.10 45 P **Pn** **20 33 11.2 +1.3**
INCE *i* AML AML 20 34 16.0
comp=N,63nm,0.6s
INCE *i* AML AML 20 34 25.0
comp=N,66nm,1.1s
THAL Thalero 4.12 321 P **Pn** **20 33 13.3 +3.1**
GUR Goura 4.22 318 P **Pn** **20 33 13.9 +2.2**
GUR Goura 4.22 318 P **Pn** **20 33 12.3 +0.7**
GUR AML AML 20 34 12.8
comp=N,846µm,0.4s
GUR AML AML 20 34 16.4
comp=E,585µm,0.6s
KULA Kula-Manisa 4.26 30 P **Pn** **20 33 14.7 +2.5**
PRK Paraskevi 4.39 3 P **Pn** **20 33 15.1 +1.2**
DB3 El Dabaa 4.40 149 P **Pn** **20 33 14.7 +0.7**
baz=150
KLV Kalavryta, Ach 4.41 317 P **Pn** **20 33 15.3 +1.1**
KLV AML AML 20 34 17.9
comp=E,247µm,0.6s
KLV AML AML 20 34 22.5
comp=N,291µm,0.7s
DRO Drossia 4.60 313 P **Pn** **20 33 18.8 +2.0**
AXAR Agios Charalam 4.70 327 P **Pn** **20 33 21.3 +3.1**
AXAR Agios Charalam 4.70 327 P **Pn** **20 33 20.3 +2.1**
ISP Isparta 4.75 50 Pn **Pn** **20 33 23.2 +4.3**
ISP Isparta 4.75 50 *i* P **Pn** **20 33 20.8 +1.9**
ANX Ano Chora 4.93 320 P **Pn** **20 33 24.2 +2.9**
AGG Agios Georgios 5.06 326 Pn **Pn** **20 33 26.2 +3.1**
AGG Agios Georgios 5.06 326 Pn **Pn** **20 33 25.2 +2.1**
AGG Agios Georgios 5.06 326 P **Pn** **20 33 26.2 +3.1**
AGG Agios Georgios 5.06 326 P **Pn** **20 33 25.2 +2.1**
EVR Evrytania 5.23 322 P **Pn** **20 33 28.0 +2.5**
PAIG Paliouri 5.37 341 P **Pn** **20 33 29.2 +1.9**
SWA2 5.61 184 P **Pn** **20 33 31.9 +1.3**
baz=185
SWA2 S **Sn** **20 34 32.7 -1.9**
baz=185
THL Klokotos Trika 5.64 328 P **Pn** **20 33 33.1 +2.1**
OUR Ouranopolis 5.69 345 P **Pn** **20 33 33.4 +1.8**
ALN Alexandroupoli 6.03 1 Pn **Pn** **20 33 37.8 +1.4**
ALN Alexandroupoli 6.03 1 P **Pn** **20 33 37.8 +1.4**
CSS Mathiatis 6.08 87 **Pn** **20 33 36.8 -0.3**
CSS Mathiatis 6.08 87 P **Pn** **20 33 37.5 +0.3**
CSS Mathiatis 6.08 87 S **Sn** **20 34 46.6 +0.3**
RDO Rodhopi 6.29 357 Pn **Pn** **20 33 41.4 +1.4**
RYAN Fayoum 6.84 146 P **Pn** **20 33 48.4 +0.9**
baz=146
KEK Kerkira 6.88 317 Pn **Pn** **20 33 45.7 -2.4**
FNA Florina 6.93 330 Pn **Pn** **20 33 50.5 +1.7**
FNA Florina 6.93 330 P **Pn** **20 33 50.5 +1.7**
KOT Kottamia 7.00 133 P **Pn** **20 33 50.4 +0.6**
baz=133
ANTO Ankara 7.41 46 ⇓P **Pn** **20 33 59.0 +3.5**
ANTO Ankara 7.41 46 P **Pn** **20 33 58.9 +3.5**
BR131 Keskin Array S 7.83 49 Pn **Pn** **20 34 03.0 +1.7**
BR131 Keskin Array S 7.83 49 P **Pn** **20 34 03.0 +1.7**
BRTR Keskin Array B 7.83 49 Pn **Pn** **20 34 02.0 +0.7**
BRTR Keskin Array B 7.83 49 Pn **Pn** **20 34 02.8 +1.5**
comp=N,0.4nm,0.3s,baz=218,slow=14,SNR=13
BRTR Sn **Sn** **20 35 29.5 -0.1**
baz=222,slow=25
BRTR LR LR 20 37 52.7
comp=N,126nm,19.6s,baz=264,slow=44
comp=N,1.6nm,0.5s
OFRI `Ofer 7.87 104 P **Pn** **20 34 00.4 -1.2**
SCTE Santa Cesarea 7.89 313 Pn **Pn** **20 34 00.0 -1.9**
HFRF Wahat Farafira 7.95 164 P **Pn** **20 34 03.8 +1.0**
baz=164
SLTI Sal'it 8.04 106 P **Pn** **20 34 03.0 -1.0**
MMAI Mount Meron Ar 8.09 100 Pn **Pn** **20 34 03.8 -0.9**
comp=N,7.8nm,0.3s,baz=262,slow=12,SNR=63
MMAI Sn **Sn** **20 35 34.3 -1.4**
comp=N,4.0nm,0.3s,baz=288,slow=24,SNR=2.1
KZIT Kziot 8.14 117 P **Pn** **20 34 04.3 -1.0**
KZIT Kziot 8.14 117 P **Pn** **20 34 04.0 -1.3**
SALP Salfit 8.22 107 P **Pn** **20 34 05.8 -0.7**
AMAZ Amatzia 8.23 111 S **Sn** **20 35 36.4 -2.7**
AMAZ Amatzia 8.23 111 P **Pn** **20 34 05.9 -0.7**
GEM Giv'at Ha'Em 8.25 99 S **Sn** **20 35 39.4 -0.1**
GEM Giv'at Ha'Em 8.25 99 P **Pn** **20 34 06.1 -0.7**
NATI Neve Ativ 8.29 98 P **Pn** **20 34 06.1 -1.3**
NATI Neve Ativ 8.29 98 S **Sn** **20 35 39.2 -1.5**
HMDT Nahal Hemdat 8.42 105 P **Pn** **20 34 08.7 -0.5**
HMDT Nahal Hemdat 8.42 105 P **Pn** **20 34 09.0 -0.3**
KSHT Keshet 8.42 100 P **Pn** **20 34 10.5 +1.2**
QRNJ Al-Qirein 8.43 105 P **Pn** **20 34 09.1 -0.2**
YTIR Yattir 8.46 112 P **Pn** **20 34 09.0 -0.8**
YTIR Yattir 8.46 112 S **Sn** **20 35 42.2 -2.7**
UJAP Al Uja 8.48 107 P **Pn** **20 34 09.7 -0.3**
UJAP Al Uja 8.48 107 P **Pn** **20 34 09.5 -0.5**
TIP Timpagrande 8.51 303 ⇓P **Pn** **20 34 09.2 -1.3**
TIP Timpagrande 8.51 303 Pn **Pn** **20 34 09.1 -1.3**
DSI Dead Sea 8.57 110 P **Pn** **20 34 10.9 -0.4**
DSI Dead Sea 8.57 110 P **Pn** **20 34 10.5 -0.8**
DSI Dead Sea 8.57 110 S **Sn** **20 35 46.2 -1.3**
BALJ Balqa 8.57 106 Pn **Pn** **20 34 11.4 +0.1**
MDBI Mazsada 8.66 111 P **Pn** **20 34 11.6 -0.9**
MDBI Mazsada 8.66 111 P **Pn** **20 34 11.6 -0.9**
MSBI Mazada 8.66 111 P **Pn** **20 34 12.1 -0.4**
MSBI Mazada 8.66 111 P **Pn** **20 34 11.6 -0.9**
CEL Celeste 8.76 296 Pn **Pn** **20 34 13.3 -0.6**
GRB Gharib 8.79 136 P **Pn** **20 34 13.5 -0.8**
baz=137
LISJ El Lisan 8.79 112 P **Pn** **20 34 14.4 +0.2**
KRMI Paran Flat 8.80 120 P **Pn** **20 34 13.1 -1.4**
GHAJ Ghor Haditha 8.83 111 **Pn** **20 34 13.9 -0.9**
GHAJ Ghor Haditha 8.83 111 P **Pn** **20 34 15.0 +0.2**
GHAJ Ghor Haditha 8.83 111 P **Pn** **20 34 14.6 -0.2**
PRNI Paran 8.87 118 P **Pn** **20 34 15.0 -0.5**
PRNI Paran 8.87 118 S **Sn** **20 35 51.9 -3.1**
PRNI Paran 8.87 118 P **Pn** **20 34 14.4 -1.1**
ZFRI Zfri 8.89 116 P **Pn** **20 34 14.6 -1.1**
ZFRI Zfri 8.89 116 P **Pn** **20 34 14.0 -1.7**
ZFRI Zfri 8.89 116 S **Sn** **20 35 52.2 -3.3**
HRFI Mount Harif 9.07 119 S **Sn** **20 35 56.7 -3.2**
HRFI Mount Harif 9.07 119 P **Pn** **20 34 17.2 -1.0**
BLKB Belogradchik 9.11 345 ⇓P **Pn** **20 34 21.1 +2.4**
MBRI Mt Berech 9.12 121 P **Pn** **20 34 18.5 -0.4**
MBRI Mt Berech 9.12 121 P **Pn** **20 34 18.2 -0.8**
VLAD Vladila 9.21 353 ⇑P **Pn** **20 34 23.9 +3.9**
EIL Elat 9.22 122 Pn **Pn** **20 34 19.7 -0.5**
comp=N,3.2nm,0.3s,baz=345,slow=6.6,SNR=52
EIL Sn **Sn** **20 35 59.0 -4.5**
comp=N,3.2nm,0.3s,baz=99,slow=3.3,SNR=5.3
comp=N,16nm,0.6s
EIL Elat 9.22 122 P **Pn** **20 34 20.4 +0.2**
EIL Elat 9.22 122 S **Sn** **20 36 00.5 -3.1**
EIL Elat 9.22 122 P **Pn** **20 34 19.5 -0.7**
AQBJ Aqaba 9.26 121 P **Pn** **20 34 20.4 -0.3**
CUC Castrocucco 9.54 306 Pn **Pn** **20 34 23.1 -1.4**
ASF Jabal al Asfar 9.54 103 Pn **Pn** **20 34 23.9 -0.7**
comp=N,1.5nm,0.3s,baz=330,slow=2.8,SNR=15
ASF Sn **Sn** **20 36 11.6 +0.1**
comp=N,0.3nm,0.3s,baz=333,slow=23,SNR=1.2
comp=N,3.0nm,0.3s
ASF Jabal al Asfar 9.54 103 P **Pn** **20 34 25.0 +0.3**
RAFF Raffo Rosso 9.66 288 Pn **Pn** **20 34 25.9 -0.3**
VAE Valguarnera 9.67 289 Pn **Pn** **20 34 26.2 -0.2**
comp=N,0.9nm,0.3s,baz=151,slow=19,SNR=2.7
VAE Sn **Sn** **20 36 10.6 -4.0**
comp=N,1.2nm,0.3s,baz=174,slow=20,SNR=1.4
VAE LR LR 20 38 31.8
comp=N,99nm,20.7s,baz=130,slow=40
comp=N,9.1nm,0.5s
HERR Herculane 10.37 346 ⇑P **Pn** **20 34 39.0 +3.2**
MDVR Moldovita 10.43 343 ⇑P **Pn** **20 34 40.0 +3.3**
SGRT San Giovanni R 10.55 314 Pn **Pn** **20 34 37.0 -1.6**
VOIR 10.59 357 ⇑P **Pn** **20 34 42.4 +3.3**
VOIR 10.59 357 P **Pn** **20 34 42.3 +3.3**
MLR Muntele Rosu 10.62 0 ⇑P **Pn** **20 34 43.1 +3.6**
MLR Muntele Rosu 10.62 0 P **Pn** **20 34 43.1 +3.6**
MLR Muntele Rosu 10.62 0 Pn **Pn** **20 34 39.6 +0.1**
comp=N,0.1nm,0.3s,baz=194,slow=17,SNR=2.0
comp=N,1.7nm,0.8s
GZR Gura Zlata 10.80 348 ⇑P **Pn** **20 34 45.5 +3.6**
GZR Gura Zlata 10.80 348 P **Pn** **20 34 45.4 +3.6**
VRI Vrincioaia 11.02 3 ⇓P **Pn** **20 34 48.9 +4.2**
VRI Vrincioaia 11.02 3 P **Pn** **20 34 48.9 +4.2**
BZS Buzias 11.24 344 ⇑P **Pn** **20 34 50.9 +3.0**
BZS Buzias 11.24 344 P **Pn** **20 34 50.8 +3.0**
INTR Introdacqua 11.82 311 Pn **Pn** **20 34 55.0 -0.9**
DRGR 12.17 349 ⇑P **Pn** **20 35 04.2 +3.5**
DRGR 12.17 349 P **Pn** **20 35 04.1 +3.5**
NRCA Norcia 12.77 312 Pn **Pn** **20 35 07.7 -1.0**
KEST Kesra 13.58 278 Pn **Pn** **20 35 19.7 -0.1**
comp=N,0.1nm,0.3s,baz=53,slow=20,SNR=1.2
KEST LR LR 20 41 08.3
comp=N,111nm,21.6s,baz=27,slow=40
comp=N,3.5nm,1.0s
CONA Conrad Observa 15.07 333 *i* P **P** **20 35 48.1 +2.8**
comp=N,0.3nm,0.4s
TEOL Teolo 15.11 318 Pn **Pn** **20 35 38.0 -2.7**
TEOL IAmb IAmb 20 35 44.6
comp=Z,8.5nm,1.0s
KBA Koelnbreinsper 15.45 326 *e*P **P** **20 35 50.8 +1.1**
comp=Z,0.3nm,0.3s
CTI Castel Tesino 15.57 320 Pn **Pn** **20 35 45.5 -1.2**
CTI Castel Tesino 15.57 320 P **Pn** **20 35 45.5 -1.2**
CTI pmax pmax
comp=Z,9.0nm,1.4s
ABTA Abfaltersbach 15.60 324 *e*P **P** **20 35 50.4 -0.9**
comp=Z,1.0nm,0.7s
ONI Oni 15.69 55 P **P** **20 35 53.5 +1.3**
ONI IAmb IAmb 20 36 09.5
comp=Z,14nm,1.2s
ONI Oni 15.69 55 P **P** **20 35 53.6 +1.3**
ONI pmax pmax
comp=Z,14nm,1.2s
KIV Kislovodsk 15.80 50 P **P** **20 35 54.9 +1.4**
KIV Kislovodsk 15.80 50 *e*P **Pn** **20 35 50.0 +0.3**
KIV pmax pmax
comp=Z,11nm,1.1s
KVAR Kislovodsk Arr 15.81 50 Pn **Pn** **20 35 50.7 +0.9**
baz=270,slow=20
comp=Z,4.5nm,1.0s
KBZ Khabaz 15.82 51 *i* P **Pn** **20 35 50.6 +0.7**
KBZ Khabaz 15.82 51 Pn **Pn** **20 35 52.6 +2.8**
comp=Z,0.3nm,0.3s,baz=169,slow=4.3,SNR=15
comp=Z,9.4nm,0.9s
GNI Garni 15.83 65 LR LR 20 43 23.9
comp=Z,108nm,18.5s,baz=274,slow=43
KIEV Kiev 16.01 8 ⇓P **P** **20 35 55.8 +0.2**
KIEV Kiev 16.01 8 Pn **Pn** **20 35 52.7 +0.5**
KIEV Kiev 16.01 8 P **P** **20 36 00.8 +5.2**
KIEV Kiev 16.01 8 P **P** **20 35 55.8 +0.2**
LESA Schwarzleotal 16.01 326 *e*P **P** **20 35 56.1 +0.3**
comp=Z,0.8nm,0.3s
AKASG Malin Array Be 16.02 8 *ce*P **P** **20 35 57.4 +1.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 16.02 8 Pn **Pn** **20 35 53.9 +1.6**
comp=Z,1.7nm,0.3s,baz=196,slow=10,SNR=6.3
AKBB Malin Array Si 16.02 8 Pn **Pn** **20 35 52.9 +0.6**
AKBB Malin Array Si 16.02 8 *i* P **Pn** **20 35 55.1 +2.7**
ZEI Tsey 16.07 55 *e*P **Pn** **20 35 55.9 +2.6**
ZEI pmax pmax
comp=Z,11nm,1.2s
WTTA Wattenberg 16.39 323 *e*P **P** **20 36 01.7 +1.5**
comp=Z,0.7nm,0.4s
WATA Walderalm 16.47 324 *e*Pn **P** **20 36 00.8 -0.2**
comp=Z,0.7nm,0.3s
SQTA Sankt Quirin 16.58 323 *e*Pn **P** **20 36 02.0 -0.1**
comp=Z,0.7nm,0.4s
GERES GERESS Array B 16.65 331 **Pn** **20 36 01.8 +1.2**
GERES GERESS Array B 16.65 331 Pn **Pn** **20 36 01.9 +1.3**
comp=Z,0.2nm,0.3s,baz=142,slow=15,SNR=3.0
comp=Z,0.6nm,0.5s
FUORN Ofenpass-Fuorn 16.67 320 **Pn** **20 36 02.6 +1.7**
FETA Feichten 16.68 321 *e*pP pP 20 36 07.5 -0.7
comp=Z,2.8nm,0.8s
MOTA Moosalm 16.71 323 *e*P **P** **20 36 05.5 +1.9**
comp=Z,0.3nm,0.3s
DAVOX Davos/Dischmat 16.98 319 P **Pn** **20 36 03.0 -1.8**
DAVOX Davos/Dischmat 16.98 319 Pn **Pn** **20 36 03.0 -1.8**
baz=153,slow=3.3,SNR=2.6
comp=Z,1.6nm,0.9s
RETA Reutte 16.98 323 *e*P **P** **20 36 09.4 +2.9**
comp=Z,0.7nm,0.4s
TUE Stuetta 17.08 318 **P** **20 36 08.2 +0.5**
DAVA Damuels 17.30 321 *e*P **P** **20 36 13.1 +3.0**
comp=Z,0.6nm,0.3s
SENIN Lac Senin/Sane 18.18 315 P **Pn** **20 36 18.4 -1.2**
SENIN IAmb IAmb 20 36 55.8
comp=Z,30nm,1.0s
CLL Collm 18.91 334 *e*P **P** **20 36 26.0 -1.7**
RAYN Ar Rayn 20.44 118 P **P** **20 36 46.6 +1.9**
RAYN Ar Rayn 20.44 118 P **P** **20 36 46.9 +2.2**
RAYN Ar Rayn 20.44 118 P **P** **20 36 46.6 +1.9**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
OBN Obninsk 21.56 17 *e*P **P** **20 36 56.5 +0.1**
OBN *e*PPP PPP 20 37 27.7
OBN pmax pmax
comp=Z,3.0nm,1.0s
OBN MLR MLR
comp=Z,43nm,8.0s
BELG Belogornoye 23.39 35 *i* P **P** **20 37 14.8 -0.8**
BELG pmax pmax
comp=Z,3.0nm,1.2s
ESBB Sonseca Array 24.21 290 P **P** **20 37 21.9 -1.8**
ESBB IAmb IAmb 20 37 30.4
comp=Z,9.0nm,1.4s
ESDC Sonseca Array 24.21 290 P **P** **20 37 22.0 -1.8**
ESDC IAmb IAmb 20 37 24.6
comp=Z,5.2nm,1.4s
ESDC Sonseca Array 24.21 290 P **P** **20 37 22.4 -1.4**
comp=Z,0.9nm,0.5s,baz=81,slow=9.5,SNR=15
comp=Z,0.9nm,0.5s
PAB San Pablo 24.50 290 P **P** **20 37 24.9 -1.6**
PAB San Pablo 24.50 290 P **P** **20 37 24.9 -1.6**
PAB pmax pmax
comp=Z,16nm,1.4s
GEYT Alibeck 26.02 74 P **P** **20 37 39.2 -1.0**
GEYT IAmb IAmb 20 37 54.3
comp=Z,5.0nm,0.7s
GEYT Alibeck 26.02 74 P **P** **20 37 39.2 -1.0**
GEYT pmax pmax
comp=Z,5.0nm,0.7s
GEYT Alibeck 26.02 74 P **P** **20 37 39.7 -0.5**
comp=Z,2.7nm,0.4s,baz=262,slow=9.9,SNR=13
comp=Z,2.7nm,0.4s
GYA0B ALIBECK ARRAY 26.02 74 P **P** **20 37 38.2 -2.0**
GYA0B IAmb IAmb 20 37 55.6
comp=Z,6.0nm,0.8s
HFS Hagfors 26.52 346 P **P** **20 37 43.0 -1.4**
HFS Hagfors 26.52 346 P **P** **20 37 43.0 -1.4**
comp=Z,3.1nm,0.9s,baz=163,slow=11,SNR=1.6
comp=Z,3.1nm,0.9s
FINES FINESS Array B 26.61 0 P **P** **20 37 44.2 -0.9**
FINES FINESS Array B 26.61 0 *i* P **P** **20 37 43.5 -1.6**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 26.61 0 P **P** **20 37 43.6 -1.5**
comp=Z,1.0nm,0.5s,baz=166,slow=10,SNR=9.8
comp=Z,1.0nm,0.5s
MZR Muzera 26.76 109 P **P** **20 37 48.4 +1.5**
NAZ Nazwa, Dubai 27.50 103 P **P** **20 37 55.2 +1.7**
FAQ Al Faqa, Dubai 27.55 103 P **P** **20 37 55.4 +1.4**
NOA NORSAR Array B 27.86 345 P **P** **20 37 56.0 -0.5**
NOA NORSAR Array B 27.86 345 P **P** **20 37 56.0 -0.5**
comp=Z,0.6nm,0.7s,baz=158,slow=8.3,SNR=1.2
comp=Z,0.6nm,0.7s
MDH Madha 27.86 102 P **P** **20 37 58.2 +1.4**
HATD Hatta, Dubai 27.95 103 *i* P **P** **20 37 59.0 +1.4**
SNR=5.9
UOSS Minazif 27.95 102 P **P** **20 37 57.5 -0.1**
UOSS IAmb IAmb 20 38 08.5
comp=Z,7.5nm,0.9s
UOSS Minazif 27.95 102 P **P** **20 37 58.4 +0.8**
ASHO Ashiyiah 27.96 103 *i* P **P** **20 37 58.6 +1.0**
SNR=6.8
ALNE Al Ain 28.01 105 *i* P **P** **20 37 59.5 +1.3**
SNR=8.4
NC204 NORSAR Array S 28.17 344 P **P** **20 37 57.6 -1.6**
KIRV Kirov 28.39 26 *i* P **P** **20 38 02.5 +1.3**
SOHO SOHO 28.60 104 *i* P **P** **20 38 04.6 +1.3**
SNR=5.5
EKA Eskdalemuir Ar 28.65 325 P **P** **20 38 04.0 +0.5**
comp=Z,0.6nm,0.5s,baz=111,slow=9.2,SNR=4.7
comp=Z,0.6nm,0.5s
ABKAR Akbulak array 28.79 50 P **P** **20 38 04.3 -0.5**
ABKAR IAmb IAmb 20 38 12.4
comp=Z,2.7nm,1.1s
ABKAR Akbulak array 28.79 50 P **P** **20 38 04.7 -0.1**
TOA0 Torodi Ar. Sit 30.78 231 P **P** **20 38 21.9 -0.9**
TORD Torodi Ar. Bea 30.78 231 P **P** **20 38 22.9 +0.1**
comp=Z,3.5nm,0.4s,baz=37,slow=9.7,SNR=23
ARU Arti 30.93 36 LR LR 20 52 07.9
comp=Z,48nm,18.5s,baz=318,slow=39
ARCES ARCESS Array B 34.74 360 P **P** **20 38 55.9 -0.9**
ARCES ARCESS Array B 34.74 360 P **P** **20 38 55.9 -0.9**
ARCES pmax pmax
comp=Z,14nm,1.3s
ARCES ARCESS Array B 34.74 360 P **P** **20 38 55.0 -1.8**
comp=Z,0.3nm,0.4s,baz=184,slow=9.0,SNR=10
comp=Z,0.3nm,0.4s
BVAR Borovoye Array 36.10 46 P **P** **20 39 08.3 -0.4**
comp=Z,1.1nm,0.5s,baz=262,slow=4.4,SNR=6.4
comp=Z,1.1nm,0.5s
AAK Ala-Archa 38.23 63 P **P** **20 39 27.6 +0.5**

AAK					IAmb	IAmb	20 39 28.6		
	comp=Z,1.7nm,0.6s								
AAK	**Ala-Archa**	**38.23**	**63**	P	**P**		**20 39 28.3**	**+1.1**	
AAK	**Ala-Archa**	**38.23**	**63**	*ce*P	**P**		**20 39 28.3**	**+1.1**	
AAK				pmax	pmax				
	comp=Z,9.0nm,2.5s								
KSH	**Kashi**	**39.73**	**68**	P	**P**		**20 39 38.4**	**-1.3**	
KSH				sP	pP		20 39 44.9	0.0	
KSH				pmax	pmax				
	comp=Z,2.0nm,0.6s								
DBIC	**Dimbokro**	**39.87**	**232**	P	**P**		**20 39 39.6**	**-1.3**	
DBIC				IAmb	IAmb		20 40 12.2		
	comp=Z,8.5nm,1.2s								
DBIC	**Dimbokro**	**39.87**	**232**	P	**P**		**20 39 39.6**	**-1.3**	
DBIC				pmax	pmax				
	comp=Z,8.0nm,1.2s								
DBIC	**Dimbokro**	**39.87**	**232**	P	**P**		**20 39 41.0**	**0.0**	
	comp=Z,3.0nm,0.9s,baz=24,slow=10.0,SNR=3.7								
	comp=Z,3.0nm,0.9s								
KURBB	**Kurchatov Arra**	**40.83**	**51**	P	**P**		**20 39 48.2**	**-0.2**	
	comp=Z,2.9nm,0.4s,baz=278,slow=8.8,SNR=13								
	comp=Z,2.9nm,0.4s								
KURK	**Kurchatov**	**40.88**	**51**	P	**P**		**20 39 48.3**	**-0.6**	
MAKZ	**Makanchi**	**43.20**	**56**	P	**P**		**20 40 08.7**	**+0.7**	
MAKZ				IAmb	IAmb		20 40 09.1		
	comp=Z,3.0nm,0.9s								
MAKZ	**Makanchi**	**43.20**	**56**	P	**P**		**20 40 08.7**	**+0.7**	
MAKZ				pmax	pmax				
	comp=Z,3.0nm,1.0s								
MK31	**Makanchi Array**	**43.42**	**56**	P	**P**		**20 40 09.9**	**+0.2**	
MK31				IAmb	IAmb		20 40 10.8		
	comp=Z,3.9nm,0.7s								
MK31	**Makanchi Array**	**43.42**	**56**	*ce*P	**P**		**20 40 09.9**	**+0.2**	
MKAR	**Makanchi Array**	**43.42**	**56**	P	**P**		**20 40 10.1**	**+0.4**	
	comp=Z,4.4nm,0.6s,baz=279,slow=6.9,SNR=72								
MKAR				LR	LR		21 01 32.4		
	comp=Z,25nm,20.3s,baz=56,slow=41								
	comp=Z,4.4nm,0.6s								
SPITS	**Spitsbergen Ar**	**43.62**	**357**	P	**P**		**20 40 10.6**	**-0.3**	
	comp=Z,3.0nm,0.8s,baz=144,slow=11,SNR=5.9								
	comp=Z,3.0nm,0.8s								
ZAA0	**Zalesovo Array**	**44.76**	**46**	P	**P**		**20 40 19.5**	**-0.8**	
ZAA0				IAmb	IAmb		20 40 20.4		
	comp=Z,1.9nm,0.7s								
ZALV	**Zalesovo Beam**	**44.76**	**46**	P	**P**		**20 40 19.4**	**-1.0**	
ZALV	**Zalesovo Beam**	**44.76**	**46**	*i* P	**P**		**20 40 19.7**	**-0.6**	
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**44.76**	**46**	P	**P**		**20 40 19.8**	**-0.5**	
	comp=Z,1.2nm,0.4s,baz=265,slow=8.4,SNR=8.8								
	comp=Z,1.2nm,0.4s								
DGZ	**Jazzator, Alta**	**46.57**	**52**	*i* P	**P**		**20 40 35.1**	**+0.2**	
DGZ				pmax	pmax				
	comp=Z,5.0nm,1.8s								
WMQ	**Urumqi**	**47.61**	**60**	*e*P	**P**		**20 40 43.0**	**0.0**	
WMQ				LR	LR				
	comp=Z,91nm,24.1s								
PALK	**Pallekele**	**57.17**	**105**	LR	LR		21 08 25.8		
	comp=Z,26nm,19.1s,baz=93,slow=38								
GTA	**Gaotai**	**57.55**	**62**	P	**P**		**20 41 57.5**	**+0.7**	
GTA				pmax	pmax				
	comp=Z,3.0nm,1.0s								
SONM	**Songino Array**	**59.19**	**51**	P	**P**		**20 42 08.2**	**+0.1**	
	comp=Z,0.6nm,0.6s,baz=287,slow=8.0,SNR=8.0								
	comp=Z,0.6nm,0.6s								
SCHQ	**Schefferville**	**63.83**	**320**	P	**P**		**20 42 38.2**	**-0.9**	
	comp=Z,1.5nm,0.3s,baz=76,slow=4.2,SNR=20								
	comp=Z,1.5nm,0.3s								
PZH	**PanZhiHua**	**64.33**	**75**	P	**P**		**20 42 44.1**	**+1.0**	
PZH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
PZH				pmax	pmax				
	comp=Z,100nm,4.5s								
HHC	**Hu-ho-hao-te**	**65.28**	**56**	*e*P	**P**		**20 42 48.9**	**-0.1**	
HHC				pmax	pmax				
	comp=Z,7.0nm,0.7s								
HHC				pmax	pmax				
	comp=Z,140nm,4.9s								
CMAR	**Chiang Mai Arr**	**65.98**	**84**	*ce*P	**P**		**20 42 53.7**	**0.0**	
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
CMAR	**Chiang Mai Arr**	**65.98**	**84**	P	**P**		**20 42 53.4**	**-0.3**	
	comp=Z,0.9nm,0.5s,baz=298,slow=8.5,SNR=9.0								
	comp=Z,0.9nm,0.5s								
CRAI	**Chiangrai**	**66.26**	**81**	P	**P**		**20 42 55.3**	**-0.1**	
USRK	**Ussuriysk Ar.**	**76.61**	**45**	P	**P**		**20 43 57.1**	**-0.5**	
	comp=Z,2.9nm,0.6s,baz=290,slow=4.8,SNR=12								
	comp=Z,2.9nm,0.6s								
KSRS	**Korea Array**	**77.97**	**53**	P	**P**		**20 44 05.2**	**-0.1**	
	comp=Z,1.0nm,0.5s,baz=313,slow=5.0,SNR=4.1								
	comp=Z,1.0nm,0.5s								
ILAR	**Eielson Array**	**80.54**	**357**	P	**P**		**20 44 17.9**	**-1.0**	
	comp=Z,0.3nm,0.9s,baz=342,slow=4.3,SNR=6.3								
	comp=Z,0.3nm,0.9s								
MJAR	**Matsushiro Ar**	**85.06**	**48**	P	**P**		**20 44 42.2**	**-0.7**	
	comp=Z,1.2nm,0.8s,baz=324,slow=4.6,SNR=4.2								
	comp=Z,1.2nm,0.8s								

ZUR ***11*** *20:49:01.2,46˚.18N×7˚.47E,h5km±1km,MLh1.1/6,Error ellipse: s-maj=3486.0km s-min=1152.0km az=188.0*

STR 11 20:49:01.4±0.4,46˚N±3˚×7˚±˚,h10km±5km,MLv2.0/11, 3C-2D,Error ellipse: s-maj=0.0km s-min=0.0km az=108.2,preliminary,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHER	**Hrmence, R**	**0.07**	**304**	⇓Pg	Pg	20 49 02.9	-0.8
SHER				Sg	Sg	20 49 03.9	-1.6
DIX	**Grande Dixence**	**0.08**	**216**	⇑Pg	Pg	20 49 04.1	0.0
DIX				Sg	Sg	20 49 05.7	-0.2
DIX	**Grande Dixence**	**0.08**	**216**	Pg	Pg	20 49 04.0	0.0
DIX				Sg	Sg	20 49 05.6	-0.3
VANNI	**Vissoie, Val d**	**0.10**	**53**	⇓Pg	Pg	20 49 03.7	-0.5
SIOV	**Sion-Valere**	**0.12**	**318**	Pg	Pg	20 49 03.3	-1.0
SIOV				Sg	Sg	20 49 04.5	-1.8
ESION	**College des Cr**	**0.12**	**312**	Sg	Sg	20 49 05.2	-1.2
SAYF2	**Ayent-Fortunoz**	**0.15**	**343**	⇑Pg	Pg	20 49 03.7	-1.0
SIEB	**Ecole de Borzu**	**0.15**	**15**	⇑Pg	Pg	20 49 03.9	-0.9
EMBD	**Embd, Matterta**	**0.26**	**74**	Sg	Sg	20 49 09.9	-0.3
EMBD	**Embd, Matterta**	**0.26**	**74**	Pg	Pg	20 49 06.4	-0.3
AIGLE	**Aigle**	**0.41**	**298**	Sg	Sg	20 49 13.7	-1.3
AIGLE	**Aigle**	**0.41**	**298**	Pg	Pg	20 49 09.0	-0.6
OGSI	**Sixt**	**0.51**	**261**	Pg	Pg	20 49 10.7	-0.6
OGSI				Sg	Sg	20 49 17.8	-0.3
TRAV	**Traversella**	**0.66**	**163**	Pg	Pg	20 49 14.0	-0.2
TRAV	**Traversella**	**0.66**	**163**	Sg	Sg	20 49 23.1	+0.2
RSL	**Roselend**	**0.75**	**233**	Pn	Pn	20 49 17.5	-0.7
GIMEL	**St. Georges /**	**0.93**	**295**	Pn	Pn	20 49 20.2	-0.3
RSP	**Reno Superiore**	**1.01**	**189**	Pg	Pg	20 49 20.7	-0.1
BALST	**Balsthal**	**1.20**	**7**	Pg	Pn	20 49 24.3	0.0
CHMF	**Charmoille**	**1.24**	**333**	Pg	Pg	20 49 25.6	+0.4
BOURR	**Bourrignon**	**1.26**	**352**	Pg	Pg	20 49 25.9	+0.4
BOUC	**Bouclans**	**1.38**	**323**	Pg	Pb	20 49 27.5	+0.1

GEN ***11*** *20:49:14.6,46˚.20N×7˚.47E,h6km±1km,Ml1.7*

ROM ***11*** *20:49:15.4±0.2,46˚.11N±0˚.01×7˚.50E±0˚.01,h10km±1km, ML1.3/8,Error ellipse: s-maj=1.5km s-min=0.8km az=197.0*

LDG ***11*** *20:49:15.2±0.0,46˚.16N×7˚.49E,h6km,Md1.9/2,Ml1.9/14, Error ellipse: s-maj=0.9km s-min=0.7km az=122.0*

STR 11 20:49:15.4±0.3,46˚N±2˚×˚±˚,h5km,MLv2.4/19,4C-10D, Error ellipse: s-maj=0.0km s-min=0.0km az=119.8, preliminary,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHER	**Hrmence, R**	**0.08**	**296**	⇓Pg	Pg	20 49 16.8	-0.5
VANNI	**Vissoie, Val d**	**0.09**	**47**	⇓Pg	Pg	20 49 17.5	+0.1
VANNI	**Vissoie, Val d**	**0.09**	**47**	P	Pg	20 49 17.5	+0.1
VANNI				S	Sg	20 49 19.2	+0.3
DIX	**Grande Dixence**	**0.10**	**223**	⇑Pg	Pg	20 49 18.0	+0.4
DIX				Sg	Sg	20 49 19.6	+0.5
DIX	**Grande Dixence**	**0.10**	**223**	⇑P	Pg	20 49 17.9	+0.4
DIX				S	Sg	20 49 19.6	+0.5
DIX				AML	AML		
	comp=E,1174μm,0.2s						
DIX				AML	AML		
	comp=N,672μm,0.1s						
DIX				AML	AML		
	comp=N,672μm,0.1s						
DIX				AML	AML		
	comp=E,824μm,0.1s						
DIX	**Grande Dixence**	**0.10**	**223**	Pg	Pg	20 49 17.9	+0.4
DIX				Sg	Sg	20 49 19.6	+0.5
DIX	**Grande Dixence**	**0.10**	**223**	P	Pg	20 49 18.0	+0.4
DIX				S	Sg	20 49 19.6	+0.6
SIOO	**Sion-Ophtalmol**	**0.12**	**316**	Pg	Pg	20 49 17.1	-0.7
SIOO				Sg	Sg	20 49 18.5	-1.0
SIOM	**Sion-Mayennets**	**0.13**	**309**	⇓Pg	Pg	20 49 17.2	-0.8
SIOV	**Sion-Valere**	**0.13**	**312**	⇓Pg	Pg	20 49 17.2	-0.9
SIOV				Sg	Sg	20 49 18.4	-1.4
ESION	**College des Cr**	**0.13**	**306**	Sg	Sg	20 49 19.0	-0.9
SIEB	**Ecole de Borzu**	**0.15**	**9**	Pg	Pg	20 49 17.8	-0.6
SAYF2	**Ayent-Fortunoz**	**0.15**	**337**	⇑Pg	Pg	20 49 17.6	-0.9
STSW2	**Zeuzier, Staus**	**0.20**	**347**	⇑Pg	Pg	20 49 18.5	-1.0
SNIB	**St. Niklaus Ba**	**0.21**	**82**	Pg	Pg	20 49 19.9	+0.4
SZEK	**Zermatt, Kirch**	**0.21**	**127**	Sg	Sg	20 49 23.5	+1.0
SGRA	**Graechen Ausbl**	**0.24**	**79**	⇓Pg	Pg	20 49 20.4	+0.3
EMBD	**Embd, Matterta**	**0.24**	**74**	⇓Pg	Pg	20 49 20.2	+0.2
EMBD	**Embd, Matterta**	**0.24**	**74**	Sg	Sg	20 49 23.4	+0.2
EMBD	**Embd, Matterta**	**0.24**	**74**	Pg	Pg	20 49 20.2	+0.1
EMBD	**Embd, Matterta**	**0.24**	**74**	P	Pg	20 49 20.3	+0.2
EMBD				S	Sg	20 49 23.7	+0.4
LKBD2	**Leukerbad 2**	**0.25**	**24**	Sg	Sg	20 49 22.8	-0.8
SENIN	**Lac Senin/Sane**	**0.26**	**327**	Pg	Pg	20 49 19.4	-1.1
SENIN				Sg	Sg	20 49 22.4	-1.5
SENIN	**Lac Senin/Sane**	**0.26**	**327**	P	Pg	20 49 19.5	-0.9
SENIN				S	Sg	20 49 22.4	-1.4
GRYON	**Gryon**	**0.29**	**291**	Sg	Sg	20 49 23.8	-1.1
SVIO	**Visp Obere Sta**	**0.30**	**62**	Pg	Pg	20 49 21.1	-0.1
LAUCH	**Lauchernalp**	**0.33**	**35**	P	Pg	20 49 21.3	-0.5
LAUCH				S	Sg	20 49 25.5	-0.6
MMK	**Mattmark**	**0.34**	**107**	⇓P	Pg	20 49 22.5	+0.5
MMK				S	Sg	20 49 27.4	+0.9
MMK				AML	AML		
	comp=E,44μm,1.5s						
MMK				AML	AML		
	comp=N,53μm,1.0s						
MMK				AML	AML		
	comp=N,53μm,1.0s						
MMK				AML	AML		
	comp=E,44μm,0.5s						
MMK				AML	AML		
	comp=N,39μm,0.1s						
MMK				AML	AML		
	comp=E,31μm,0.1s						
MMK	**Mattmark**	**0.34**	**107**	P	Pg	20 49 22.5	+0.5
MMK				S	Sg	20 49 26.9	+0.4
SALAN	**Lac Salanfe**	**0.37**	**269**	⇓Pg	Pg	20 49 22.0	-0.5
SIMPL	**Simplonpass**	**0.37**	**76**	⇓Pg	Pg	20 49 22.6	0.0
SIMPL				Sg	Sg	20 49 28.2	+0.6
SIMPL	**Simplonpass**	**0.37**	**76**	P	Pg	20 49 22.6	0.0
SIMPL				S	Sg	20 49 28.0	+0.4
AIGLE	**Aigle**	**0.43**	**297**	Pg	Pg	20 49 23.3	-0.4
AIGLE	**Aigle**	**0.43**	**297**	Sg	Sg	20 49 27.5	-1.7
MRGE	**Morge**	**0.49**	**219**	⇓P	Pg	20 49 24.8	0.0
MRGE				S	Sg	20 49 30.9	-0.3
MRGE				AML	AML		
	comp=E,91μm,0.3s						
MRGE				AML	AML		
	comp=N,106μm,0.7s						
MRGE				AML	AML		
	comp=E,91μm,1.7s						
MRGE				AML	AML		
	comp=E,53μm,0.1s						
MRGE				AML	AML		
	comp=N,79μm,0.2s						
MRGE	**Morge**	**0.49**	**219**	P	Pg	20 49 24.8	0.0
MRGE				S	Sg	20 49 31.0	-0.2
FIESA	**Fiescheralp**	**0.51**	**56**	Sg	Sg	20 49 31.8	-0.1
FIESA	**Fiescheralp**	**0.51**	**56**	P	Pg	20 49 25.2	-0.1
FIESA				S	Sg	20 49 31.9	0.0
OGSI	**Sixt**	**0.53**	**261**	Pg	Pg	20 49 25.0	-0.5
OGSI				Sg	Sg	20 49 31.7	-0.6
TRAV	**Traversella**	**0.66**	**165**	P	Pg	20 49 28.2	+0.1
TRAV				S	Sg	20 49 37.0	+0.3
TRAV				AML	AML		
	comp=N,33μm,0.3s						
TRAV				AML	AML		
	comp=E,31μm,0.2s						
TRAV	**Traversella**	**0.66**	**165**	Pg	Pg	20 49 28.2	+0.1
TRAV	**Traversella**	**0.66**	**165**	Sg	Sg	20 49 37.0	+0.4
TRAV	**Traversella**	**0.66**	**165**	P	Pg	20 49 28.2	+0.2
TRAV				S	Sg	20 49 36.6	0.0
RSL	**Roselend**	**0.77**	**233**	Pg	Pg	20 49 29.9	-0.2
LPL	**La Plagne**	**0.83**	**221**	*e*Pg	Pg	20 49 31.0	-0.3
LPL				*e*Sg	Sg	20 49 42.0	-0.1
	comp=E,3.5nm,0.3s						
LPG	**La Plagne**	**0.84**	**219**	*e*Pg	Pg	20 49 31.2	-0.3
LPG				*e*Sg	Sg	20 49 42.3	0.0
	comp=E,3.9nm,0.2s						
GIMEL	**St. Georges /**	**0.94**	**295**	P	Pg	20 49 33.3	-0.1
GIMEL				S	Sb	20 49 46.4	-0.6
GIMEL	**St. Georges /**	**0.94**	**295**	Pg	Pg	20 49 33.5	+0.1
GIMEL	**St. Georges /**	**0.94**	**295**	Sg	Pg	20 49 33.3	-0.1
RSP	**Reno Superiore**	**1.01**	**189**	Pg	Pg	20 49 34.6	-0.3
RSP	**Reno Superiore**	**1.01**	**189**	Sg	Pg	20 49 34.6	-0.2
CABF	**La Chapelle**	**1.08**	**296**	*e*Pg	Pg	20 49 35.2	-1.0
CABF				*e*Sg	Sg	20 49 49.2	-1.0
	comp=E,3.2nm,0.3s						
BALST	**Balsthal**	**1.20**	**6**	Pg	Pg	20 49 37.4	-0.9
CHMF	**Charmoille**	**1.25**	**332**	Pg	Pg	20 49 39.0	-0.3
BOURR	**Bourrignon**	**1.26**	**352**	Pg	Pg	20 49 39.6	+0.1
BHB	**Bricheraso**	**1.32**	**187**	Pg	Pn	20 49 39.8	-0.7
OG35	**Corcelles**	**1.35**	**266**	Pg	Pn	20 49 41.0	+0.1
OGSM	**Saint Maurice**	**1.37**	**247**	Pn	Pn	20 49 41.4	+0.1
OGSM				Sg	Sn	20 50 00.1	+0.4
BOUC	**Bouclans**	**1.39**	**322**	Pn	Pn	20 49 40.6	-0.9
BOUC				Pg	Pb	20 49 41.9	0.0
SULZ	**Cheisacher**	**1.44**	**17**	Pg	Pn	20 49 42.7	-0.1
MBDF	**Montbardon**	**1.51**	**200**	*e*Pg	Pn	20 49 43.6	+0.3
MBDF				*e*Sg	Sn	20 50 03.3	-0.1
	comp=E,1.3nm,0.3s						
ILLF	**Illfurth**	**1.54**	**354**	Pn	Pb	20 49 44.4	0.0
ILLF				Sn	Sb	20 50 04.4	+0.1
ENDD	**Endenburg**	**1.57**	**6**	Pn	Pb	20 49 44.7	-0.3
ENDD	**Endenburg**	**1.57**	**6**	Sn	Sb	20 50 05.2	-0.1
RONF	**Ronchamp**	**1.67**	**340**	Pn	Pn	20 49 44.3	-1.0
RONF				Pg	Pb	20 49 46.3	-0.3
ORIF	**Oris-en-Rattie**	**1.68**	**223**	*e*Pg	Pb	20 49 46.4	-0.4
ORIF				*e*Sg	Sb	20 50 08.2	0.0
	comp=E,1.8nm,0.3s						
MOF	**Molkenrain**	**1.72**	**352**	Pn	Pn	20 49 44.9	-1.2
MOF				Pg	Pb	20 49 47.6	+0.1
HINF	**Hinteralfeld**	**1.73**	**345**	*e*Pg	Pb	20 49 47.0	-0.4
HINF				*e*Sg	Sn	20 50 09.0	+0.4
	comp=E,1.9nm,0.2s						
SLE	**Schleitheim**	**1.75**	**22**	Pg	Pb	20 49 48.1	+0.1
FELD	**Feldberg im Sc**	**1.76**	**11**	Pg	Pb	20 49 48.2	0.0
KIZ	**Kirchzarten**	**1.83**	**9**	Pg	Pb	20 49 49.2	-0.1
KIZ	**Kirchzarten**	**1.83**	**9**	Pn	Pn	20 49 45.8	-1.7
DAVA	**Damuels**	**1.99**	**54**	Pg	Pb	20 49 52.9	+0.7
	comp=E,0.3nm,0.2s						
DAVA				Sg	Sg	20 50 20.1	+0.7
	comp=E,3.3nm,0.3s						
HAU	**Haudompre**	**2.02**	**337**	*e*Pg	Pb	20 49 52.3	-0.3
HAU				*e*Sn	Sn	20 50 12.3	-3.4
HAU				*e*Sg	Sb	20 50 18.2	+0.2
	comp=E,2.3nm,0.2s						
CDF	**Champ du Feu**	**2.27**	**356**	*e*Pg	Pb	20 49 57.0	+0.1
CDF				*e*Sg	Sb	20 50 26.1	+0.8
	comp=E,0.3nm,0.2s						
VIVF	**Saint-Julien-l**	**2.37**	**238**	*e*Pg	Pb	20 49 59.1	+0.5
VIVF				*e*Sg	Sb	20 50 29.6	+1.4
	comp=E,2.0nm,0.3s						
FETA	**Feichten**	**2.39**	**67**	*e*Pg	Pg	20 50 00.3	-0.9
	comp=E,0.5nm,0.4s						
FETA				Sg	Sg	20 50 35.3	+3.2
	comp=E,0.2nm,0.2s						
SMF	**Signal de Mont**	**2.58**	**282**	*e*Pg	Pb	20 50 02.8	+0.6
SMF				*e*Sg	Sg	20 50 36.6	-1.7
	comp=E,0.6nm,0.2s						
LOR	**Lormes**	**2.75**	**295**	*e*Pg	Pb	20 50 05.8	+0.8
	baz=113						
LOR				*e*Sg	Sb	20 50 41.1	+2.2
	comp=E,1.0nm,0.3s						
SSF	**Saint Saulge**	**2.90**	**290**	*e*P	Pn	20 50 03.1	+0.9
SSF				*e*Sg	Sb	20 50 45.1	+1.7
	comp=E,1.4nm,0.4s						
AVF	**Avril sur Loir**	**2.94**	**284**	*e*Pn	Pn	20 50 00.6	-2.1
AVF				*e*Sn	Sn	20 50 34.3	-4.1
AVF				*e*Sg	Sb	20 50 47.0	+2.6
	comp=E,0.5nm,0.3s						

IDC ***11*** *21:06:30.1±0.5,30˚.95S×178˚.21W,h0km,mb4.7/12, mbtmp4.7/13,ML4.3/1,MS3.7/40,Error ellipse: s-maj=20.6km s-min=14.1km az=100.0*

BJI ***11*** *21:06:30.0±0.0,31˚.50S×177˚.10W,h65km,mb4.9/12, Ms7.4/1*

NEIC ***11*** *21:06:35.9±1.4,31˚.00S±0˚.07×178˚.1W±0˚.1,h35km±1km, mb5.1/37,Error ellipse: s-maj=20.2km s-min=11.3km az=96.0*

ISC 11 21:06:35.2±0.4,31˚.17S±0˚.04×178˚.14W±0˚.08,h35km, n233,σ2°.24/239,mb5.1/41,MS3.8/38,7C-1D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.91**	**6**	P	**Pn**	**21 07 04.8**	**-0.4**
GLKZ				S	**Sn**	**21 07 26.3**	**-1.7**
RAO	**Raoul Island**	**1.92**	**6**	Pn	**Pn**	**21 07 03.2**	**-2.2**
RAO				Sn	**Sn**	**21 07 24.3**	**-4.0**
RAO	**Raoul Island**	**1.92**	**6**	Pn	**Pn**	**21 07 02.3**	**-3.1**
	113nm,0.3s,baz=253,slow=22,SNR=2.7						
RAO				Sn	**Sn**	**21 07 25.3**	**-3.0**
	1μm,0.3s,baz=61,slow=22,SNR=16						
RIZ	**Raoul Island**	**1.93**	**5**	P	**Pn**	**21 07 06.7**	**+1.3**
RIZ				S	**Sn**	**21 07 26.9**	**-1.5**
MXZ	**Matakaoa Point**	**7.02**	**204**	Pn	**Pn**	**21 08 16.6**	**+1.1**
MXZ	**Matakaoa Point**	**7.02**	**204**	P	**Pn**	**21 08 16.5**	**+1.1**
MXZ				S	**Sn**	**21 09 31.4**	**-2.8**
WMGZ	**Waiomatatini S**	**7.22**	**202**	P	**Pn**	**21 08 18.1**	**-0.1**
WMGZ				S	**Sn**	**21 09 35.8**	**-3.2**
GRZ	**Great Barrier**	**7.36**	**225**	P	Pn	21 08 27.9	+7.8
HAZ	**Te Kaha**	**7.38**	**206**	P	**Pn**	**21 08 20.6**	**+0.1**
HAZ				S	**Sn**	**21 09 44.9**	**+1.9**
PKGZ	**Pakihiroa**	**7.40**	**204**	P	**Pn**	**21 08 19.8**	**-0.9**
PKGZ				S	**Sn**	**21 09 41.3**	**-2.1**
PUZ	**Puketiti**	**7.50**	**202**	P	**Pn**	**21 08 21.4**	**-0.7**
PUZ				S	**Sn**	**21 09 44.7**	**-1.2**
RUGZ	**Raukumara Rang**	**7.61**	**206**	P	**Pn**	**21 08 23.9**	**+0.2**
RUGZ				S	**Sn**	**21 09 47.9**	**-0.8**
TWGZ	**Tauwhareparae**	**7.69**	**204**	P	**Pn**	**21 08 23.7**	**-1.0**
TWGZ				S	**Sn**	**21 09 49.9**	**-0.7**
WCZ	**Waipu Caves**	**7.87**	**231**	P	Pn	21 08 35.8	+8.6
CNGZ	**Carnagh Statio**	**7.89**	**201**	P	**Pn**	**21 08 26.4**	**-1.0**
CNGZ				S	**Sn**	**21 09 53.6**	**-1.9**
TKGZ	**Te Karaka**	**7.97**	**203**	P	**Pn**	**21 08 27.6**	**-0.9**
TKGZ				S	**Sn**	**21 09 56.6**	**-0.7**
MWZ	**Matawai**	**7.99**	**205**	P	**Pn**	**21 08 28.4**	**-0.4**
MWZ				S	**Sn**	**21 09 56.2**	**-1.7**
OUZ	**Omahuta**	**8.02**	**238**	P	Pn	21 08 35.8	+6.6
URZ	**Urewera**	**8.08**	**208**	Pn	**Pn**	**21 08 29.3**	**-0.7**
	3.8nm,0.3s,baz=216,slow=23,SNR=12						
URZ				Sn	**Sn**	**21 09 55.7**	**-4.5**
	25nm,0.3s,baz=282,slow=23,SNR=13						
URZ				LR	LR	21 11 43.1	
	comp=Z,260nm,20.1s,baz=119,slow=38						
	22nm,0.5s						
URZ	**Urewera**	**8.08**	**208**	P	**Pn**	**21 08 29.4**	**-0.7**
URZ				S	**Sn**	**21 09 59.7**	**-0.5**
MKAZ	**Moumakai**	**8.12**	**221**	P	Pn	21 08 39.3	+8.7
RAGZ	**Rawiri**	**8.17**	**205**	P	**Pn**	**21 08 31.1**	**-0.3**
RAGZ				S	**Sn**	**21 10 02.6**	**+0.1**
RIGZ	**Rimuhau**	**8.24**	**203**	P	**Pn**	**21 08 34.2**	**+1.9**
RIGZ				S	**Sn**	**21 10 01.3**	**-2.7**
KMRZ	**Kaimai**	**8.26**	**215**	P	Pn	21 08 38.6	+6.1
TOZ	**Tahuroa Road**	**8.39**	**217**	Pn	**Pn**	**21 08 36.1**	**+1.8**
PRGZ	**Paritu Road**	**8.40**	**202**	P	**Pn**	**21 08 32.7**	**-1.6**
PRGZ				S	**Sn**	**21 10 03.4**	**-4.6**
MUGZ	**Murupara**	**8.41**	**208**	P	Pn	21 08 26.3	-8.2
MUGZ				S	**Sn**	**21 10 08.3**	**+0.1**
SNGZ	**Shannon Statio**	**8.45**	**205**	P	**Pn**	**21 08 34.4**	**-0.8**
SNGZ				S	**Sn**	**21 10 08.8**	**-0.5**
KNZ	**Kokohu**	**8.55**	**203**	P	**Pn**	**21 08 34.0**	**-2.5**
KNZ				S	**Sn**	**21 10 07.1**	**-4.6**
MHGZ	**Mahia Peninsul**	**8.60**	**201**	P	**Pn**	**21 08 34.8**	**-2.3**
MHGZ				S	**Sn**	**21 10 05.8**	**-7.1**
RAHZ	**Arahi**	**8.66**	**206**	P	**Pn**	**21 08 37.1**	**-1.0**
RAHZ				S	**Sn**	**21 10 13.1**	**-1.5**
MTHZ	**Maungataniwha**	**8.70**	**207**	P	**Pn**	**21 08 37.6**	**-1.0**
MTHZ				S	**Sn**	**21 10 13.9**	**-

ARMA	Armidale	25.95	264	P	P	21 12 04.2	-0.3
EIDS	Eidsvold	27.67	274	P	P	21 12 19.4	-0.5
EIDS				IAmb	IAmb	21 12 23.2	
	comp=Z,21nm,0.8s						
PPT	Papeete	29.22	69	LR	LR	21 21 17.1	
	comp=Z,113nm,21.8s,baz=206,slow=30						
HNR	Honiara	29.72	312	LR	LR	21 23 04.7	
	comp=Z,2µm,19.9s,baz=158,slow=34						
TAU	Tasmania Unive	29.76	237	P	P	21 12 39.8	+1.4
TAU				IAmb	IAmb	21 13 41.7	
	comp=Z,33nm,1.1s						
TOO	Toolangi	30.56	248	P	P	21 12 46.5	+1.0
TOO				IAmb	IAmb	21 13 21.2	
	comp=Z,50nm,1.6s						
CTA	Charters Tower	33.81	280	LR	LR	21 24 49.9	
	comp=Z,314nm,21.2s,baz=98,slow=33						
CTAO	Charters Tower	33.81	280	P	P	21 13 16.1	+1.8
CTAO	Charters Tower	33.81	280	⇑P	P	21 13 16.0	+1.8
CTAO				pP	sP	21 13 28.0	+0.3
STKA	Stephens Creek	34.20	258	P	P	21 13 19.3	+1.8
STKA	Stephens Creek	34.20	258	P	P	21 13 18.5	+1.1
	comp=Z,20nm,0.4s,baz=100,slow=12,SNR=3.2						
STKA				LR	LR	21 25 13.2	
	comp=Z,238nm,21.6s,baz=45,slow=33						
	comp=Z,20nm,0.4s						
BBOO	Buckleboo	38.65	255	P	P	21 13 55.7	+0.2
BBOO				IAmb	IAmb	21 13 56.4	
	comp=Z,46nm,0.7s						
PMG	Port Moresby	38.84	296	LR	LR	21 27 54.0	
	comp=Z,82nm,20.9s,baz=122,slow=33						
COEN	Coen	39.38	287	P	P	21 14 02.9	+1.3
COEN				IAmb	IAmb	21 14 03.9	
	comp=Z,25nm,0.8s						
AS31	Alice Springs	42.96	268	P	P	21 14 31.4	+0.3
AS31				IAmb	IAmb	21 14 32.1	
	comp=Z,31nm,0.5s						
ASAR	Alice Springs	42.96	268	P	P	21 14 31.6	+0.5
ASAR	Alice Springs	42.96	268	P	P	21 14 31.2	+0.2
	comp=Z,96nm,0.7s,baz=105,slow=7.5,SNR=110						3
ASAR				LR	LR	21 32 08.0	
	comp=Z,173nm,18.0s,baz=116,slow=36						
DRV	Dumont d'Urvil	43.39	203	P	P	21 14 34.9	+1.0
WR0	Warramunga Arr	43.84	273	P	P	21 14 38.5	+0.4
WR0				IAmb	IAmb	21 14 39.2	
	comp=Z,86nm,1.0s						
WB2	Warramunga Arr	44.01	273	P	P	21 14 39.8	+0.3
WRAB	Tennant Creek	44.01	273	P	P	21 14 39.8	+0.2
WRA	Warramunga Arr	44.02	273	P	P	21 14 39.0	-0.6
WRA	Warramunga Arr	44.02	273	P	P	21 14 39.6	0.0
	comp=Z,90nm,0.7s,baz=111,slow=7.9,SNR=472						
WB0	Warramunga Arr	44.04	273	P	P	21 14 40.1	+0.3
FORT	Forrest	45.74	256	P	P	21 14 52.7	-0.5
FORT				IAmb	IAmb	21 14 53.5	
	comp=Z,37nm,0.7s						
SBA	Scott Base	47.27	184	P	P	21 15 06.3	+1.8
VNDA	Vanda	47.32	186	P	P	21 15 08.7	+3.7
VNDA				IAmb	IAmb	21 16 36.6	
	comp=Z,29nm,1.6s						
VNDA	Vanda	47.32	186	P	P	21 15 07.3	+2.4
	comp=Z,3.7nm,1.1s,baz=19,slow=12,SNR=1.8						
VNDA				LR	LR	21 31 28.2	
	comp=Z,40nm,21.9s,baz=8.5,slow=32						
	comp=Z,3.7nm,1.1s						
MTN	Manton Dam	49.99	280	P	P	21 15 26.2	-0.1
MTN				IAmb	IAmb	21 16 12.8	
	comp=Z,65nm,1.4s						
CCD	Concordia, Ant	52.18	196	P	P	21 15 43.9	+1.5
FITZ	Fitzroy Crossi	52.25	271	P	P	21 15 43.1	-0.1
FITZ				IAmb	IAmb	21 15 44.4	
	comp=Z,5.7nm,0.6s						
NWAO	Narrogin (SRO)	54.02	250	P	P	21 15 55.0	-1.2
NWAO	Narrogin (SRO)	54.02	250	P	P	21 15 56.7	+0.6
	comp=Z,5.2nm,0.9s,baz=126,slow=14,SNR=1.5						
NWAO				LR	LR	21 35 42.5	
	comp=Z,82nm,20.4s,baz=87,slow=32						
	comp=Z,5.2nm,0.9s						
PSA00	Pilbara Seismi	55.76	264	P	P	21 16 08.6	-0.3
PSA00				IAmb	IAmb	21 16 43.2	
	comp=Z,12nm,1.1s						
MORW	Morawa	56.20	254	P	P	21 16 10.7	-1.2
MORW				IAmb	IAmb	21 17 49.6	
	comp=Z,30nm,1.4s						
GUMO	Guam	56.95	316	LR	LR	21 37 02.9	
	comp=Z,68nm,21.3s,baz=137,slow=32						
QSPA	South Pole Qui	58.94	180	P	P	21 16 33.1	+2.3
QSPA	South Pole Qui	58.94	180	P	P	21 16 33.9	+3.1
	comp=Z,18nm,0.7s,baz=23,slow=3.0,SNR=29						
QSPA				LR	LR	21 40 15.8	
	comp=Z,85nm,18.5s,baz=350,slow=34						
	comp=Z,18nm,0.7s						
RPN	Rapa Nui	59.35	105	LR	LR	21 36 54.5	
	comp=Z,53nm,21.7s,baz=263,slow=31						
DAV	Davao City (W)	65.84	295	LR	LR	21 42 33.9	
	comp=Z,222nm,22.0s,baz=328,slow=33						
JAGI	Jajag, Banyuwa	66.61	274	P	P	21 17 21.4	-1.1
JAGI				IAmb	IAmb	21 17 21.7	
	comp=Z,15nm,1.0s						
BLJI	Banyuglugur	67.45	275	P	P	21 17 30.3	+2.5
	comp=Z,28nm,0.6s						
BELA	Belgrano 2	69.04	172	P	P	21 17 38.5	+1.7
BELA				IAmb	IAmb	21 17 39.5	
	comp=Z,12nm,1.0s						
MAW	Mawson	71.55	201	P	P	21 17 53.3	+1.1
MAW				IAmb	IAmb	21 20 23.1	
	comp=Z,35nm,1.8s						
MAW	Mawson	71.55	201	P	P	21 17 52.9	+0.7
	comp=Z,13nm,0.7s,baz=153,slow=9.0,SNR=1.8						
MAW				LR	LR	21 47 25.1	
	comp=Z,86nm,20.3s,baz=124,slow=34						
	comp=Z,13nm,0.7s						
LEM	Lembang	73.03	272	LR	LR	21 49 47.0	
	comp=Z,113nm,21.0s,baz=179,slow=36						
ELIB	Princess Elisa	76.08	187	dP	P	21 18 19.9	+1.0
	comp=Z,16nm,0.7s						
TROLL	Troll, Antarti	77.11	180	⇑P	P	21 18 26.6	+1.9
	comp=Z,2µm,0.9s						
SNAA	Sanae	77.39	178	P	P	21 18 27.9	+1.6
SNAA				IAmb	IAmb	21 18 33.4	
	comp=Z,23nm,0.8s						
SNAA	Sanae	77.39	178	⇑P	P	21 18 27.8	+1.6
	comp=Z,386nm,0.6s						
SNAA	Sanae	77.39	178	P	P	21 18 27.7	+1.5
	comp=Z,12nm,0.7s,baz=186,slow=7.0,SNR=36						
	comp=Z,12nm,0.7s						
VNA3	Neumayer Olymp	77.55	176	⇑P	P	21 18 28.5	+1.5
	comp=Z,130nm,0.7s						
VNA2	Neumayer--Watz	77.98	177	⇑P	P	21 18 31.3	+1.8
	comp=Z,70nm,0.5s,baz=179,slow=5.4						
VNA1	Neumayer--Stat	78.21	177	⇑P	P	21 18 32.5	+1.8
	comp=Z,50nm,0.6s						
JGF	Kuroka	78.48	324	P	P	21 18 32.8	+0.2
JGF				IAmb	IAmb	21 21 09.9	
	comp=Z,23nm,1.3s						
MJAR	Matsushiro Arr	78.81	325	LR	LR	21 48 45.1	
	comp=Z,25nm,21.2s,baz=153,slow=32						
JNU	Nakatsue	80.05	319	LR	LR	21 48 58.9	
	comp=Z,35nm,21.6s,baz=161,slow=32						
H03S2	Juan Fernandez	80.14	123	T	T	22 47 45.1	
	baz=238,slow=74,SNR=67						
H03S1	Juan Fernandez	80.15	124	T	T	22 47 47.2	
	baz=238,slow=74,SNR=53						
H03S3	Juan Fernandez	80.16	123	T	T	22 47 46.1	
	baz=238,slow=74,SNR=60						
H03N3	Juan Fernandez	80.33	123	T	T	22 47 48.5	
	baz=241,slow=72,SNR=101						
H03N2	Juan Fernandez	80.34	123	T	T	22 47 41.9	
	baz=241,slow=72,SNR=86						
H03N1	Juan Fernandez	80.35	123	T	T	22 47 54.1	
	baz=241,slow=72,SNR=164						
PLCA	Paso Flores	82.07	133	P	P	21 18 54.3	+2.1
PLCA				IAmb	IAmb	21 19 31.0	
	comp=Z,17nm,1.6s						
PLCA	Paso Flores	82.07	133	P	P	21 18 54.3	+2.1
	comp=Z,3.5nm,1.0s,baz=218,slow=9.2,SNR=7.3						
PLCA				LR	LR	21 47 22.0	
	comp=Z,39nm,19.0s,baz=210,slow=30						
	comp=Z,3.5nm,1.0s						
ASAJ	Asahikawa	83.07	333	LR	LR	21 51 26.4	
	comp=Z,45nm,20.4s,baz=135,slow=32						
ATKA	Atka Island	83.09	2	P	P	21 18 56.5	-0.2
SHEM	Shemya Is, Ala	83.82	355	LR	LR	21 51 15.7	
	comp=Z,82nm,19.4s,baz=158,slow=32						
KSRS	Korea Array	84.86	320	LR	LR	21 56 32.8	
	comp=Z,13nm,18.2s,baz=135,slow=36						
LPIG	La Paz	85.04	58	LR	LR	21 48 15.6	
	comp=Z,47nm,21.8s,baz=198,slow=30						
GSI	Gunungsitoli	85.78	274	P	P	21 19 11.2	-0.2
GSI	Gunungsitoli	85.78	274	P	P	21 19 12.4	+1.0
	comp=Z,38nm,0.7s						
PETK	Petropavlovsk-	86.53	346	P	P	21 19 13.5	-0.6
	comp=Z,7.7nm,0.8s,baz=131,slow=6.6,SNR=12						
	comp=Z,7.7nm,0.8s						
NJ2	Nanjing	86.66	311	eP	P	21 19 11.8	-3.4
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PFO	Pinyon Flats O	86.81	47	LR	LR	21 49 24.7	
	comp=Z,34nm,21.7s,baz=226,slow=30						
USRK	Ussuriysk Ar.	87.73	327	P	P	21 19 19.9	-0.3
	comp=Z,3.1nm,0.8s,baz=120,slow=8.5,SNR=2.4						
	comp=Z,3.1nm,0.8s						
YBH	Yreka Blue Hor	88.71	38	LR	LR	21 50 34.7	
	comp=Z,40nm,21.5s,baz=179,slow=30						
NVAR	Mina Array Bea	88.88	43	P	P	21 19 27.7	+1.7
	comp=Z,1.6nm,0.8s,baz=221,slow=8.3,SNR=9.3						
NVAR				LR	LR	21 50 21.9	
	comp=Z,48nm,21.7s,baz=266,slow=30						
	comp=Z,1.6nm,0.8s						
CN2	Changchun	90.68	323	P	P	21 19 33.5	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNX	BinXian	91.07	325	⇑P	P	21 19 34.7	-1.1
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KDAK	Kodiak Island	91.18	13	LR	LR	22 01 01.7	
	comp=Z,41nm,18.1s,baz=203,slow=36						
KLR	Kul'dur	91.64	330	LR	LR	22 02 18.7	
	comp=Z,28nm,18.4s,baz=146,slow=37						
ELK	Elko	92.18	43	LR	LR	21 55 35.6	
	comp=Z,45nm,18.9s,baz=240,slow=32						
LYN	LuoYang	92.39	309	eP	P	21 19 40.5	-1.7
LYN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TXAR	Lajitas Array	92.90	57	LR	LR	21 52 17.6	
	comp=Z,24nm,20.5s,baz=264,slow=30						
CMIG	Matias Romero	93.10	72	LR	LR	21 53 16.7	
	comp=Z,26nm,20.6s,baz=204,slow=30						
NNA	Nana	93.32	106	LR	LR	21 52 30.9	
	comp=Z,52nm,20.3s,baz=206,slow=30						
CMAR	Chiang Mai Arr	93.54	289	P	P	21 19 48.1	+0.2
	comp=Z,0.8nm,0.3s,baz=136,slow=3.9,SNR=7.2						
CMAR				PP	PP	21 23 34.1	+1.1
	comp=Z,0.4nm,0.3s,baz=134,slow=7.7,SNR=5.0						
CMAR				LR	LR	22 03 12.4	
	comp=Z,20nm,20.6s,baz=200,slow=36						
	comp=Z,0.8nm,0.3s						
LVC	Limon Verde	93.67	119	LR	LR	21 53 07.0	
	comp=Z,59nm,21.2s,baz=228,slow=30						
MA2	Magadan	94.00	345	LR	LR	21 57 52.6	
	comp=Z,26nm,20.1s,baz=108,slow=33						
ANMO	Albuquerque	94.15	51	LR	LR	21 54 11.0	
	comp=Z,26nm,21.9s,baz=344,slow=30						
PZH	PanZhiHua	95.56	298	P	P	21 19 53.4	-3.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NEW	Newport	96.06	36	LR	LR	21 54 52.1	
	comp=Z,48nm,21.1s,baz=264,slow=30						
CD2	Chengdu	96.40	302	eP	P	21 19 54.5	-6.2
HHC	Hu-ho-hao-te	96.68	314	eP	P	21 19 54.5	-7.3
SEY	Seymchan	96.70	347	LR	LR	21 59 42.3	
	comp=Z,54nm,19.4s,baz=315,slow=33						
PDAR	Pinedale Array	96.77	44	PKKPbc	PKKPbc	21 36 44.4	-1.2
	comp=Z,0.3nm,0.7s,baz=101,slow=4.9,SNR=4.0						
PDAR				LR	LR	21 58 15.4	
	comp=Z,20nm,18.2s,baz=244,slow=32						
TNCH	TengChong	97.27	295	eP	P	21 19 58.9	-6.1
TNCH				pP	pwP	21 20 20.5	+1.3
TNCH				pmax	pmax		
	comp=Z,11nm,2.5s						
ILAR	Eielson Array	98.70	13	P	P	21 20 09.8	-0.4
	comp=Z,0.3nm,0.6s,baz=214,slow=6.2,SNR=1.8						
	comp=Z,0.3nm,0.6s						
CPUP	Villa Florida	99.60	129	LR	LR	21 57 02.4	
	comp=Z,19nm,19.5s,baz=221,slow=30						
SONM	Songino Array	103.63	318	Pdiff	Pdif	21 20 33.7	+1.0
	comp=Z,0.2nm,0.4s,baz=120,slow=5.2,SNR=2.0						
YKA	Yellowknife Ar	106.19	26	PKiKP	PKiKP	21 24 54.6	-0.4
	comp=Z,0.3nm,0.5s,baz=262,slow=1.8,SNR=8.7						
YKA				PKKPbc	PKKPbc	21 36 17.1	-1.2
	comp=Z,0.9nm,0.7s,baz=44,slow=3.2,SNR=14						
WMQ	Urumqi	113.61	308	ePKP	PKiKP	21 25 00.1	-10
BOSA	Boshof	116.51	303	PKP	PKPdf	21 25 15.9	0.0
	comp=Z,2.6nm,0.7s,baz=141,slow=4.2,SNR=5.5						
MKAR	Makanchi Array	118.17	310	PKP	PKPdf	21 25 17.3	-1.0
	comp=Z,1.0nm,0.5s,baz=226,slow=2.5,SNR=14						
ZALV	Zalesovo Beam	118.53	318	PKP	PKPdf	21 25 17.2	-1.5
	comp=Z,0.4nm,0.5s,baz=87,slow=3.0,SNR=2.6						
NRIK	Noril'sk	120.29	336	PKP	PKPdf	21 25 20.8	-0.8
	comp=Z,2.1nm,0.5s,baz=116,slow=5.3,SNR=2.1						
KSH	Kashi	120.53	300	PKP	PKPdf	21 25 16.8	-6.4
KURBB	Kurchatov Arra	121.53	313	PKP	PKPdf	21 25 23.6	-1.0
	comp=Z,2.7nm,0.6s,baz=109,slow=1.8,SNR=28						
BVAR	Borovoye Array	126.87	315	PKP	PKPdf	21 25 34.1	-0.7
	comp=Z,2.1nm,0.4s,baz=120,slow=1.5,SNR=16						
SCHQ	Schefferville	126.89	42	PKP	PKPdf	21 25 34.6	-0.2
	comp=Z,3.2nm,0.9s,baz=178,slow=1.0,SNR=4.4						
SPITS	Spitsbergen Ar	132.46	356	PKP	PKPdf	21 25 44.6	-0.1
	comp=Z,2.3nm,0.5s,baz=82,slow=3.1,SNR=8.8						
GEYT	Alibeck	133.77	294	PKP	PKPdf	21 25 48.1	-0.3
	comp=Z,1.6nm,0.7s,baz=76,slow=6.3,SNR=5.1						
ARCES	ARCES Array B	139.31	348	PKHKP	PKPpre	21 25 52.1	
	comp=Z,1.3nm,0.5s,baz=56,slow=2.2,SNR=7.8						
ARCES				PKP	PKPdf	21 25 57.8	+0.1
	comp=Z,3.2nm,0.6s,baz=40,slow=2.1,SNR=11						
KBZ	Khabaz	145.44	303	PKPbc	PKPab	21 26 09.5	0.0
	comp=Z,8.3nm,0.9s,baz=126,slow=1.0,SNR=8.3						
FINES	FINESS Array B	145.82	339	PKPbc	PKPdf	21 26 09.2	-0.2
	comp=Z,23nm,0.6s,baz=54,slow=3.4,SNR=118						
MEF	Metsahovi	147.30	339	eP	PKPbc	21 26 13.9	-0.4
RAF	Rauma	147.38	342	eP	PKPbc	21 26 13.7	-0.8
VSU	Vasula	147.48	335	eP	PKPbc	21 26 15.7	-0.2
MTSE	Matsula	148.67	338	eP	PKPbc	21 26 17.6	-0.3
NB2	NORSAR Subarra	149.49	351	PKP	PKPbc	21 26 19.5	-0.6
	comp=Z,3.2nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.49	351	PKPbc	PKPbc	21 26 19.9	-0.2
	comp=Z,5.4nm,0.7s,baz=15,slow=4.2,SNR=14						
HFS	Hagfors	149.97	348	PKPbc	PKPbc	21 26 19.9	-1.3
	comp=Z,9.0nm,0.7s,baz=64,slow=3.4,SNR=15						
IDID	Didziasalis	150.12	331	eP	PKPdf	21 26 18.6	+2.0
IIGN	Ignalina	150.31	332	eP	PKPbc	21 26 21.2	-0.9
VSVD	Vaisvydziai	150.75	334	eP	PKPbc	21 26 23.3	+0.1
PABE	Paberze	151.09	334	eP	PKPbc	21 26 24.2	+0.3
MMAI	Mount Meron Ar	151.59	283	PKPbc	PKPbc	21 26 26.0	0.0
	comp=Z,7.9nm,0.6s,baz=84,slow=7.6,SNR=15						
AKASG	Malin Array Be	151.83	322	PKPbc	PKPbc	21 26 25.0	-0.9
	comp=Z,3.2nm,0.4s,baz=45,slow=3.0,SNR=8.4						
TJOU	Tjoern	152.31	349	iP	PKPbc	21 26 25.8	-0.9
BORU	Boraas	152.49	347	iP	PKPbc	21 26 26.0	-1.1
SUW	Suwalki	152.50	332	eP	PKiKP	21 26 28.5	+1.0
BRTR	Keskin Array B	152.85	297	PKPbc	PKPbc	21 26 28.1	-0.6
	comp=Z,4.7nm,0.5s,baz=142,slow=4.8,SNR=28						
ONAU	Onsala	152.87	348	iP	PKPbc	21 26 27.0	-0.9
BLEU	Blekinge	153.03	343	iP	PKiKP	21 26 29.0	+0.5
DEL	Delary	153.34	345	iP	PKPbc	21 26 28.0	-1.0
BSD	Bornholm Skovb	154.33	343	iP	PKPbc	21 26 30.4	-0.8
DBIC	Dimbokro	154.83	164	PKPbc	PKPbc	21 26 32.8	-0.8
	comp=Z,2.1nm,0.7s,baz=239,slow=5.9,SNR=2.4						
CLL	Collm	158.25	341	ePKPdf	PKPdf	21 26 31.0	+2.8
CLL				epPKPdf	pPKPdf	21 26 39.0	+0.5
CLL				ePKPab	PKPab	21 27 03.0	+0.7
CLL				epPKPab	pPKPab	21 27 13.0	+0.7
MODS	Modra-Piesok	159.20	330	ePKP	PKPdf	21 26 24.6	-4.8
KHC	Kasperske Hory	159.99	337	ePKPAB	PKPab	21 27 09.7	-0.3
RONA	Rosalia, Austr	160.14	330	iPKP	PKPab	21 27 13.5	+2.8
	comp=Z,1.6nm,0.6s						
CONA	Conrad Observa	160.14	331	epPKP	PKPab	21 27 13.5	+2.8
	comp=Z,2.3nm,0.7s						
GERES	GERESS Array B	160.19	336	PKPab	PKPab	21 27 10.0	-1.0
	comp=Z,1.0nm,0.8s,baz=44,slow=4.5,SNR=3.5						
ARSA	Arzberg	160.81	331	iPKP	PKPab	21 27 14.3	+0.7
	comp=Z,0.3nm,0.3s						
LESA	Schwarzleotal	161.77	336	iPKP	PKPab	21 27 20.3	+2.5
	comp=Z,0.4nm,0.3s						
OBKA	Obir	161.81	331	epPKP	PKPab	21 27 19.5	+1.4
	comp=Z,0.9nm,0.6s						
TORD	Torodi Ar. Bea	162.06	179	PKP	PKPdf	21 26 34.5	+0.9
	comp=Z,1.9nm,0.9s,baz=52,slow=1.3,SNR=6.7						
TORD				PKPab	PKPab	21 27 20.4	+0.7
	comp=Z,6.9nm,0.8s,baz=167,slow=3.3,SNR=8.7						
WATA	Walderalm	162.21	338	iPKP	PKPab	21 27 23.1	+3.2
	comp=Z,1.0nm,0.4s						
RETA	Reutte	162.33	340	iPKP	PKPab	21 27 23.3	+3.0
	comp=Z,1.2nm,0.4s						
MOTA	Moosalm	162.35	339	epPKP	PKPab	21 27 20.1	-0.4
	comp=Z,0.6nm,0.4s						
FETA	Feichten	162.76	339	epPKP	PKPab	21 27 22.2	-0.1
	comp=Z,0.8nm,0.5s						
ESDC	Sonseca Array	170.28	28	PKP	PKPdf	21 26 40.2	+0.9
	comp=Z,1.3nm,0.9s,baz=337,slow=3.4,SNR=5.0						
ESDC				PKPab	PKPab	21 27 55.4	-0.2
	comp=Z,0.7nm,0.6s,baz=309,slow=3.4,SNR=5.1						

ISN ***11*** *21:15:04.1±1.3,34°.03N×46°.39E,h9km±6km,ML2.6*
TEH ***11*** *21:15:05.2,34°.00N×46°.37E,h8km±33km,ML2.6*
ISC 11 21:15:05.5±0.9,34°.01N±0°.03×46°.38E±0°.04,h10km,n13,
σ0s54/17,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	Ghaleghazi	0.36	27	Pg	Pg	21 15 13.2	+0.5
ILBA	Ilam Banvizeh	0.41	200	Pg	Pg	21 15 13.4	-0.1
KCHF	Cheshme Sefid,	0.61	64	Pg	Pg	21 15 17.1	-0.3
IDHR	Dehrash	0.69	1	Pg	Pg	21 15 18.7	-0.2
KGS1	Ghasr-e-Shirin	0.82	308	Pg	Pg	21 15 21.1	-0.2
IBDR	Badra	0.97	203	ePg	Pg	21 15 24.0	-0.1
IBDR				eSg	Sb	21 15 37.0	-0.2
IBZA	Bozab	1.31	69	Pg	Pb	21 15 30.7	+0.3
IKFM	Kafar-mosalman	1.32	111	Pg	Pn	21 15 29.7	-0.2
IDOB	Doab	1.52	98	Pg	Pb	21 15 34.4	+0.6
BHD	Baghdad	1.82	247	ePn	Pn	21 15 37.0	+0.2
BHD				eSn	Sb	21 16 02.0	+0.3
BHD				AML	AML	21 16 41.2	
	comp=E,15nm,0.7s						
HSAM	Samen	1.86	83	Pn	Pb	21 15 39.7	0.0
IKRK	Kirkuk	2.18	310	ePn	Pn	21 15 42.0	+0.2
IKRK				eSn	Sb	21 16 11.0	-1.0
RAFI	Al-Rafai	2.29	186	ePn	Pn	21 15 44.0	+0.7
RAFI				eSn	Sb	21 16 14.0	-1.2

TEH ***11*** *21:29:48.7,27°.97N×57°.42E,h55km,ML3.5*
OMAN ***11*** *21:29:49.1±0.9,28°.00N×57°.57E,h8km,mb4.5/8,ml3.6/18,*
Error ellipse: s-maj=9.8km s-min=7.1km az=131.0
DSN ***11*** *21:29:52.0±1.9,27°.64N×58°.04E,h15km,ML3.3/12,Error*
ellipse: s-maj=29.8km s-min=12.2km az=157.0
ISC 11 21:29:52.4±1.3,28°.01N±0°.05×57°.54E±0°.05,h30km,n67,
σ1s44/83,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBAM	BAM	1.38	35	Pg	Pn	21 30 14.5	-1.2
NGRK	Negar Kerman	1.77	336	Pg	Pn	21 30 19.4	-2.0
CHMN	Cheshme madani	1.84	360	Pn	Pn	21 30 21.2	-1.2
TVBK	TV Kerman	2.08	341	Pn	Pn	21 30 25.3	-0.4
JASK	Jask - Hormozg	2.16	172	Pn	Pn	21 30 26.0	-0.4
JASK	Jask - Hormozg	2.16	172	P	Pn	21 30 26.2	-0.1
	SNR=10						
SHME	Shamm	2.32	213	P	Pn	21 30 28.6	0.0
SHME				S	Sn	21 30 58.9	+2.8
SHME	Shamm	2.32	213	P	Pn	21 30 28.3	-0.3
	SNR=12						
SHME				S	Sn	21 30 58.2	+2.1
BANOM	Banah	2.36	208	P	Pn	21 30 30.0	+0.9
BANOM	Banah	2.36	208	P	Pn	21 30 29.8	+0.7
BANOM				S	Sb	21 31 00.7	-2.3
KRM1	Kerman Provinc	2.49	355	Pn	Pn	21 30 31.5	+0.3
KHGB	Koh Gabri	2.53	339	Pn	Pn	21 30 31.9	+0.2
LAR1	LAR	2.83	264	Pn	Pn	21 30 34.0	-1.7
MASF	Masafi	2.91	206	P	Pn	21 30 37.8	+1.1
MASF				S	Sn	21 31 12.7	+2.1
MSFE	Esma-Masafi	2.92	205	P	Pn	21 30 37.4	+0.5
MDH	Madha	2.92	203	P	Pn	21 30 35.2	-1.7
MDH	Madha	2.92	203	P	Pn	21 30 35.5	-1.4
MDH				S	Sn	21 31 10.8	-0.2
UMQ	Umm Al-Quwin	2.99	215	P	Pn	21 30 37.6	-0.2
UMQ				S	Sn	21 31 16.3	+3.6
ZHDN	Zahedan	3.19	64	Pn	Pn	21 30 41.7	+1.1
UOSS	Minazif	3.28	202	P	Pn	21 30 41.1	-0.7
UOSS	Minazif	3.28	202	P	Pn	21 30 43.2	+1.3
UOSS				S	Sn	21 31 21.0	+1.1
HATD	Hatta, Dubai	3.42	202	P	Pn	21 30 43.4	-0.3
HATD	Hatta, Dubai	3.42	202	P	Pn	21 30 43.4	-0.3
HATD				S	Sn	21 31 24.0	+0.8
NAZ

VHRN				IAML		21 40 01.0	
	151nm,0.5s						
SAND	**Sanderson**	**1.58**	**140**	Pg	Pb	21 39 34.4	-0.4
TX31	**Lajitas Ar. Si**	**1.86**	**190**	Pn	Pb	21 39 39.0	-0.7
TXAR	**Lajitas Array**	**1.86**	**190**	Pn	Pb	21 39 39.0	-0.8
MNTX	**Cornudas Mount**	**1.86**	**287**	Pn	Pb	21 39 38.8	-0.9
OZNA	**Ozona**	**1.87**	**97**		Pb	21 39 39.3	-0.6
SGCY	**Sterling City**	**1.99**	**68**		Pn	21 39 40.7	+1.1
SGCY				IAmb_Lg		21 40 11.3	
	comp=Z,88nm,0.8s						
POST	**Post**	**2.42**	**38**		Pn	21 39 46.5	+1.0
SN01	**Snyder 1**	**2.64**	**50**		Pn	21 39 49.3	+0.8
SN05	**Snyder 5**	**2.66**	**50**	Pn	Pn	21 39 49.4	+0.7
SN05				IAmb_Lg		21 40 33.9	
	comp=Z,66nm,0.8s						
MSTX	**Muleshoe**	**2.82**	**9**		Pn	21 39 51.1	+0.1
DRIO	**Del Rio**	**2.89**	**126**	Pn	Pn	21 39 52.7	+0.8
DRIO				IAmb_Lg		21 40 35.8	
	comp=Z,55nm,0.7s						
JCT	**Junction City**	**3.08**	**102**		Pn	21 39 55.5	+1.1
JCT				IAmb_Lg		21 40 45.4	
	comp=Z,42nm,0.8s						
DKNS	**Dickens**	**3.19**	**38**		Pn	21 39 56.9	+0.8
DKNS				IAmb_Lg		21 40 53.8	
	comp=Z,50nm,0.8s						
ABTX	**Abilene, Hawle**	**3.42**	**64**		Pn	21 40 00.1	+0.9
ABTX				IAmb_Lg		21 40 52.8	
	comp=Z,52nm,0.8s						
APMT	**Aspermont**	**3.44**	**51**	Pn	Pn	21 40 00.4	+1.0
APMT				IAmb_Lg		21 41 03.1	
	comp=Z,31nm,0.8s						
BRDY	**Brady**	**3.68**	**87**	Pn	Pn	21 40 04.3	+1.6
BRDY				IAmb_Lg		21 41 10.4	
	comp=Z,28nm,0.8s						
HNDO	**Hondo**	**3.83**	**114**		Pn	21 40 06.2	+1.4
HNDO				IAmb_Lg		21 41 15.9	
	comp=Z,30nm,0.8s						
AMTX	**Amarillo**	**3.94**	**20**		Pn	21 40 10.1	+3.7
AMTX				IAmb_Lg		21 41 18.7	
	comp=Z,28nm,0.7s						
121A	**Cookes Peak, D**	**4.06**	**291**		Pn	21 40 09.7	+1.6
121A				IAML		21 41 22.0	
	comp=E,19nm,0.5s						
121A				IAML		21 41 27.9	
	comp=N,29nm,0.7s						
833A	**Chaparral WMA,**	**4.42**	**129**	IAmb_Lg		21 41 36.3	
	comp=Z,30nm,1.3s						
PLPT	**Palo Pinto**	**4.53**	**68**		Pn	21 40 15.5	+1.1
PLPT				IAmb_Lg		21 41 35.7	
	comp=Z,19nm,0.8s						
ANMO	**Albuquerque**	**4.61**	**326**	IAmb_Lg		21 41 33.7	
	comp=Z,10nm,0.9s						
SMWD	**Samnorwood**	**4.68**	**32**	IAmb_Lg		21 41 42.2	
	comp=Z,28nm,0.9s						
FW03	**Perrin-Whitt E**	**4.81**	**66**		Pn	21 40 18.6	+0.4
WTFS	**Witchita Falls**	**4.83**	**56**		Pn	21 40 19.4	+0.9
435B	**Jarrell**	**4.91**	**93**	IAmb_Lg		21 41 48.0	
	comp=Z,36nm,0.8s						
FW07	**Weatherford**	**4.92**	**71**		Pn	21 40 19.6	-0.1
WHTX	**Lake Whitney,**	**5.04**	**79**	Pn	Pn	21 40 23.9	+2.4
WHTX				IAmb_Lg		21 41 56.2	
	comp=Z,31nm,1.3s						
FW13	**Cleburne**	**5.13**	**75**	Pn	Pn	21 40 23.8	+1.2
FW13				IAmb_Lg		21 42 00.0	
	comp=Z,20nm,0.8s						
319A	**Douglas**	**5.13**	**274**	Pn	Pn	21 40 24.1	+1.2
WMOK	**Wichita Mounta**	**5.20**	**46**	IAML		21 41 53.8	
	comp=Z,16nm,0.6s						
WMOK	**Wichita Mounta**	**5.20**	**46**	Pn	Pn	21 40 24.2	+0.7
735A	**Kenedy**	**5.29**	**115**	IAmb_Lg		21 42 05.9	
	comp=Z,24nm,1.0s						
X34A	**Smith Ranch, M**	**5.72**	**52**	Pn	Pn	21 40 32.5	+1.6
LOOK	**Love County**	**5.87**	**60**	Pn	Pn	21 40 33.3	+0.4
FNO	**Franklin**	**6.40**	**49**	Pn	Pn	21 40 40.1	0.0
FNO				IAmb_Lg		21 42 37.5	
	comp=Z,21nm,0.8s						
X37A	**Clayton**	**7.48**	**61**	IAmb_Lg		21 43 16.6	
	comp=Z,17nm,0.8s						
TUL3	**Leonard**	**7.84**	**51**	IAmb_Lg		21 43 29.8	
	comp=Z,7.9nm,0.9s						
R32A	**Long Quarter,**	**8.15**	**26**	IAmb_Lg		21 43 37.4	
	comp=Z,11nm,1.1s						
U38A	**Gravette**	**9.08**	**52**	IAmb_Lg		21 44 15.5	
	comp=Z,6.7nm,0.9s						
OGNE	**Ogallala**	**9.80**	**6**	IAmb_Lg		21 44 29.9	
	comp=Z,13nm,1.1s						

*IDC **11** 23:11:48.0±1.6,26.04S×70.31W,h0km,mb4.3/4, mbtmp4.1/7,ML3.7/3,MS2.8/3,Error ellipse: s-maj=46.9km s-min=16.3km az=108.0*
*SJA **11** 23:11:49.9±2.0,25.65S×71.10W,h40km±34km,ML4.0, MW3.7*
*GUC **11** 23:11:52.7±0.7,25.67S×70.95W,h55km±9km,ML4.2*
*NEIC **11** 23:11:53.0±1.4,25.67S±0.03×71.02W±0.10,h35km±2km, mb4.1/7,Error ellipse: s-maj=14.7km s-min=4.8km az=269.0*

ISC 11 23:11:52.2±0.9,25.66S±0.03×71.04W±0.06,h46km±10km, n98,σ1.19/108,mb4.3/6,2C-2D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.62**	**140**		**Pn**	**23 12 05.6**	**+0.7**
AC01				Sn	**Sn**	**23 12 13.8**	**-0.1**
AC01	**Pan de Azucar**	**0.62**	**140**	*i* P	**Pn**	**23 12 04.7**	**-0.2**
AC01				*e*S	**Sn**	**23 12 13.9**	**0.0**
AC01				IAML		23 12 14.8	
	comp=Z,12μm,0.2s						
AC01	**Pan de Azucar**	**0.62**	**140**	*e*P	**Pn**	**23 12 05.5**	**+0.6**
AC01				*i* S	**Sn**	**23 12 13.8**	**-0.1**
AC01				IAML		23 12 14.4	
	comp=E,28μm,0.2s						
PB14	**IPOC Station P**	**1.19**	**29**	Pn	**Pn**	**23 12 13.6**	**+0.9**
PB14				Sn	**Sn**	**23 12 28.4**	**+0.6**
PB14	**IPOC Station P**	**1.19**	**29**	*e*P	**Pn**	**23 12 13.7**	**+0.9**
PB14				*i* S	**Sn**	**23 12 28.7**	**+0.8**
GO02	**Mina Guanaco**	**1.40**	**69**	Pn	**Pn**	**23 12 16.3**	**+0.6**
GO02				Sn	**Sn**	**23 12 33.6**	**+0.5**
GO02	**Mina Guanaco**	**1.40**	**69**	*i* P	**Pn**	**23 12 16.0**	**+0.3**
GO02				*e*S	**Sn**	**23 12 34.0**	**+0.8**
GO02				IAML		23 12 36.9	
	comp=Z,4μm,0.2s						
GO02	**Mina Guanaco**	**1.40**	**69**	*e*P	**Pn**	**23 12 16.1**	**+0.4**
GO02				*i* S	**Sn**	**23 12 33.7**	**+0.5**
GO02				IAML		23 12 34.8	
	comp=E,9μm,0.1s						
GO03	**Copiap**	**2.05**	**160**		**Pn**	**23 12 25.4**	**+1.1**
GO03				Sn	**Sn**	**23 12 48.8**	**0.0**
GO03	**Copiap**	**2.05**	**160**	*i* P	**Pn**	**23 12 24.8**	**+0.5**
GO03				*e*S	**Sn**	**23 12 48.3**	**-0.5**
GO03				IAML		23 12 49.7	
	comp=Z,1μm,0.8s						
GO03	**Copiap**	**2.05**	**160**	⇓ *i* P	**Pn**	**23 12 25.4**	**+1.1**
GO03				*i* S	**Sn**	**23 12 48.5**	**-0.3**
GO03				IAML		23 12 50.2	
	comp=E,2μm,0.5s						
AC02	**Maricunga**	**2.08**	**125**	Pn	**Pn**	**23 12 26.4**	**+1.4**
AC02				Sn	**Sn**	**23 12 50.0**	**+0.1**
AC02	**Maricunga**	**2.08**	**125**	*i* P	**Pn**	**23 12 25.7**	**+0.6**
AC02				IAML		23 12 53.4	
	comp=Z,1μm,0.2s						
AC02	**Maricunga**	**2.08**	**125**	⇓ *i* P	**Pn**	**23 12 26.4**	**+1.4**
AC02				*e*S	**Sn**	**23 12 50.2**	**+0.2**
PB10	**IPOC Station P**	**2.19**	**12**		**Pn**	**23 12 26.5**	**+0.3**
PB10	**IPOC Station P**	**2.19**	**12**	*i* P	**Pn**	**23 12 26.8**	**+0.7**
PB10				*e*S	**Sn**	**23 12 50.6**	**-1.4**
PB10				IAML		23 12 53.4	
	comp=Z,194nm,1.1s						
PB10	**IPOC Station P**	**2.19**	**12**	*i* P	**Pn**	**23 12 27.0**	**+0.8**
AC04	**Llanos de Chal**	**2.53**	**181**		**Pn**	**23 12 30.4**	**-0.5**
AC04	**Llanos de Chal**	**2.53**	**181**	*i* P	**Pn**	**23 12 29.9**	**-0.9**
AC04				IAML		23 13 25.7	
	comp=Z,217nm,0.3s						
AC04	**Llanos de Chal**	**2.53**	**181**	*i* P	**Pn**	**23 12 30.5**	**-0.3**
PB05	**IPOC Station P**	**2.90**	**15**		**Pn**	**23 12 36.8**	**+0.7**
PB05	**IPOC Station P**	**2.90**	**15**	*i* P	**Pn**	**23 12 36.3**	**+0.2**
PB05				IAML		23 13 35.3	
	comp=Z,160nm,0.7s						
PB05	**IPOC Station P**	**2.90**	**15**	*e*P	**Pn**	**23 12 36.8**	**+0.7**
AC05	**El Transito**	**3.23**	**168**	Pn	**Pn**	**23 12 42.0**	**+1.4**
AC05	**El Transito**	**3.23**	**168**	*i* P	**Pn**	**23 12 41.3**	**+0.7**
AC05				IAML		23 13 35.5	
	comp=Z,240nm,0.7s						
AC05	**El Transito**	**3.23**	**168**	*e*P	**Pn**	**23 12 41.8**	**+1.2**
AC05				*i* S	**Sn**	**23 13 18.9**	**+1.0**
AC05				IAML		23 13 45.9	
	comp=N,430nm,0.6s						
PB06	**IPOC Station P**	**3.24**	**25**		**Pn**	**23 12 41.7**	**+1.0**
PB06	**IPOC Station P**	**3.24**	**25**	*i* P	**Pn**	**23 12 41.6**	**+0.9**
PB06				IAML		23 13 36.9	
	comp=Z,368nm,0.7s						
PB06	**IPOC Station P**	**3.24**	**25**	⇑ *i* P	**Pn**	**23 12 41.8**	**+1.1**
PB06				*i* S	**Sn**	**23 13 17.5**	**-0.6**
LCO	**Las Campanas**	**3.35**	**175**		**Pn**	**23 12 42.6**	**+0.2**
LCO	**Las Campanas**	**3.35**	**175**	*i* P	**Pn**	**23 12 41.9**	**-0.4**
LCO				IAML		23 13 48.9	
	comp=Z,904nm,0.4s						
LCO	**Las Campanas**	**3.35**	**175**	*i* P	**Pn**	**23 12 42.5**	**+0.2**
PB04	**IPOC Station P**	**3.42**	**14**		**Pn**	**23 12 43.5**	**+0.4**
PB04	**IPOC Station P**	**3.42**	**14**	*i* P	**Pn**	**23 12 43.1**	**0.0**
PB04				IAML		23 13 54.7	
	comp=Z,223nm,0.5s						
PB04	**IPOC Station P**	**3.42**	**14**	*i* P	**Pn**	**23 12 43.5**	**+0.4**
LVC	**Limon Verde**	**3.61**	**33**	Pn	**Pn**	**23 12 47.7**	**+1.6**
LVC	**Limon Verde**	**3.61**	**33**	*i* P	**Pn**	**23 12 47.6**	**+1.6**
LVC				IAML		23 13 47.8	
	comp=Z,349nm,0.6s						
LVC	**Limon Verde**	**3.61**	**33**	Pn	**Pn**	**23 12 47.9**	**+1.9**
	comp=Z,5.6nm,0.3s,baz=202,slow=9.2,SNR=72						
LVC				Pg		23 12 56.1	
	comp=Z,7.7nm,0.3s,baz=209,slow=14,SNR=26						
LVC				Sn	**Sn**	**23 13 27.2**	**-0.4**
	comp=Z,40nm,0.3s,baz=309,slow=24,SNR=15						
LVC				Lg	Lg	23 13 43.9	
	comp=Z,29nm,0.3s,baz=313,slow=14,SNR=13						
	comp=Z,24nm,0.4s						
LVC	**Limon Verde**	**3.61**	**33**	*i* P	**Pn**	**23 12 47.9**	**+1.9**
AF01	**San Pedro de A**	**3.76**	**45**	Pn	**Pn**	**23 12 47.9**	**-0.1**
VCA	**Vinchina**	**3.97**	**141**	*i* P	**Pn**	**23 12 54.3**	**+3.6**
VCA				IAML		23 13 59.1	
	comp=Z,259nm,1.5s						
PB07	**IPOC Station P**	**4.06**	**15**		**Pn**	**23 12 52.4**	**+0.4**
PB07	**IPOC Station P**	**4.06**	**15**	*i* P	**Pn**	**23 12 52.2**	**+0.1**
PB07				IAML		23 14 00.7	
	comp=Z,186nm,0.7s						
PB07	**IPOC Station P**	**4.06**	**15**	*i* P	**Pn**	**23 12 52.6**	**+0.6**
PB09	**IPOC Station P**	**4.19**	**24**		**Pn**	**23 12 54.6**	**+0.8**
PB09	**IPOC Station P**	**4.19**	**24**	*i* P	**Pn**	**23 12 55.2**	**+1.4**
PB09				IAML		23 14 11.1	
	comp=Z,309nm,0.8s						
PB09	**IPOC Station P**	**4.19**	**24**	⇑ *i* P	**Pn**	**23 12 55.5**	**+1.7**
CO05	**La Serena**	**4.24**	**182**	Pn	**Pn**	**23 12 56.4**	**+2.0**
CO01	**Juntas del Tor**	**4.38**	**169**		**Pn**	**23 12 57.8**	**+1.3**
CO01	**Juntas del Tor**	**4.38**	**169**	*i* P	**Pn**	**23 12 57.3**	**+0.9**
CO01				IAML		23 14 21.4	
	comp=Z,73nm,1.1s						
PB02	**IPOC Station P**	**4.45**	**14**		**Pn**	**23 12 57.8**	**+0.5**
PB02	**IPOC Station P**	**4.45**	**14**	*i* P	**Pn**	**23 12 57.2**	**-0.2**
PB02				IAML		23 13 54.4	
	comp=Z,168nm,0.2s						
PB02	**IPOC Station P**	**4.45**	**14**	*i* P	**Pn**	**23 12 57.6**	**+0.2**
AROD	**Rodeo**	**4.70**	**163**	*i* P	**Pn**	**23 13 04.4**	**+3.5**
PB01	**IPOC Station P**	**4.82**	**18**	Pn	**Pn**	**23 13 03.0**	**+0.7**
PB01	**IPOC Station P**	**4.82**	**18**	*i* P	**Pn**	**23 13 02.5**	**+0.2**
PB01				IAML		23 13 59.6	
	comp=Z,89nm,0.2s						
PATCX	**Punta Patache**	**4.89**	**10**	Pn	**Pn**	**23 13 03.1**	**-0.2**
PATCX	**Punta Patache**	**4.89**	**10**	*i* P	**Pn**	**23 13 03.8**	**+0.5**
PATCX				IAML		23 14 46.9	
	comp=Z,73nm,0.8s						
CO06	**Fray Jorge**	**5.02**	**186**	Pn	**Pn**	**23 13 06.1**	**+1.1**
TA01	**Diego Aracena**	**5.14**	**9**	*i* P	**Pn**	**23 13 06.7**	**0.0**
TA01				IAML		23 14 46.8	
	comp=Z,85nm,1.1s						
CO03	**El Pedregal**	**5.17**	**177**	Pn	**Pn**	**23 13 06.7**	**-0.4**
CO03	**El Pedregal**	**5.17**	**177**	*i* P	**Pn**	**23 13 07.0**	**-0.2**
CO03				IAML		23 14 39.1	
	comp=Z,89nm,0.6s						
ACCO	**Cerro Coronel**	**5.21**	**161**	*i* P	**Pn**	**23 13 11.1**	**+3.2**
PB08	**IPOC Station P**	**5.77**	**18**	Pn	**Pn**	**23 13 15.6**	**0.0**
PB11	**IPOC Station P**	**6.01**	**13**	Pn	**Pn**	**23 13 18.9**	**+0.1**
GO01	**Chusmiza**	**6.21**	**16**		**Pn**	**23 13 21.2**	**-0.6**
VA06	**Catapilco**	**6.88**	**182**	Pn	**Pn**	**23 13 30.9**	**+0.4**
PB12	**IPOC Station P**	**7.05**	**6**		**Pn**	**23 13 33.1**	**+0.2**
VA03	**San Esteban**	**7.09**	**177**		**Pn**	**23 13 34.3**	**+0.9**
MT02	**Curacav**	**7.57**	**181**	Pn	**Pn**	**23 13 41.1**	**+1.1**
BO01	**Tunca**	**8.70**	**180**	Pn	**Pn**	**23 13 57.3**	**+1.8**
BO02	**Sierra Bellavi**	**9.10**	**179**	Pn	**Pn**	**23 14 00.8**	**-0.2**
LPAZ	**La Paz**	**9.72**	**17**	Pn	**Pn**	**23 14 11.0**	**+1.0**
H03N1	**Juan Fernandez**	**10.34**	**220**	T	T	23 25 08.7	
	baz=47,slow=72,SNR=36						
H03N2	**Juan Fernandez**	**10.35**	**220**	T	T	23 25 08.9	
	baz=47,slow=72,SNR=29						
H03N3	**Juan Fernandez**	**10.36**	**220**	Pn	**Pn**	**23 14 18.5**	**+0.5**
H03N3				T	T	23 25 08.5	
	baz=47,slow=72,SNR=30						
CPUP	**Villa Florida**	**12.35**	**96**	Pn	Pn	23 14 35.6	-10
	comp=Z,0.1nm,0.3s,baz=277,slow=16,SNR=2.4						
CPUP				LR	LR	23 20 04.9	
	comp=Z,73nm,20.8s,baz=224,slow=43						
	comp=Z,0.9nm,0.8s						
SIV	**San Ignacio**	**13.39**	**46**	Pn	**Pn**	**23 14 55.5**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=230,slow=10,SNR=31						
	comp=Z,3.7nm,0.6s						
TRQA	**Tornquist**	**14.55**	**150**	Pn	**Pn**	**23 15 15.0**	**-0.3**
TRQA				P	**P**	**23 15 21.2**	**+0.4**
NNA	**Nana**	**14.67**	**337**	LR	LR	23 20 12.6	
	comp=Z,26nm,19.7s,baz=190,slow=33						
PLCA	**Paso Flores**	**15.03**	**179**	P	**P**	**23 15 27.9**	**+1.6**
PLCA				IAmb	IAmb	23 15 33.7	
	comp=Z,6.7nm,1.3s						
PLCA	**Paso Flores**	**15.03**	**179**	Pn	**P**	**23 15 26.4**	**+0.1**
	baz=0.4,slow=15,SNR=4.2						
PLCA				LR	LR	23 20 06.2	
	comp=Z,38nm,21.1s,baz=172,slow=34						
PLTB	**Pedras Altas**	**16.45**	**116**	Pn	**Pn**	**23 15 40.2**	**+0.2**
PLTB				IAmb	IAmb	23 15 57.4	
	comp=Z,4.9nm,1.0s						
TRCB	**Terra Rica**	**17.03**	**84**		**Pn**	**23 15 45.7**	**-1.6**
TRCB				IAmb	IAmb	23 16 00.5	
	comp=Z,20nm,0.7s						
SAML	**Samuel**	**18.23**	**26**		**Pn**	**23 16 03.0**	**+1.0**
BDFB	**Brasilia**	**23.71**	**70**	P	**P**	**23 16 59.1**	**-1.2**
BDFB				IAmb	IAmb	23 17 00.2	
	comp=Z,10.0nm,0.8s						
BDFB	**Brasilia**	**23.71**	**70**	P	**P**	**23 16 57.3**	**-2.9**
	comp=Z,9.8nm,0.9s,baz=248,slow=9.9,SNR=14						
	comp=Z,9.8nm,0.9s						
TUMC	**Tumaco**	**28.32**	**344**	P	**P**	**23 17 42.4**	**+0.6**
BOAV	**Boa Vista**	**29.70**	**22**	P	**P**	**23 17 55.4**	**+1.4**
BOAV				IAmb	IAmb	23 17 56.5	
	comp=Z,6.4nm,1.2s						
H06E1	**SOCORRO T-PHAS**	**58.78**	**315**	T	T	00 25 53.2	
	SNR=9.0						
SNAA	**Sanae**	**59.03**	**160**	P	**P**	**23 21 45.2**	**-1.9**
	comp=Z,2.4nm,1.0s,baz=290,slow=15,SNR=1.5						
	comp=Z,2.4nm,1.0s						
QSPA	**South Pole Qui**	**64.54**	**180**	P	**P**	**23 22 25.3**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=176,slow=1.5,SNR=6.9						
	comp=Z,1.8nm,0.5s						
DBIC	**Dimbokro**	**71.80**	**73**	P	**P**	**23 23 10.3**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=234,slow=8.7,SNR=6.0						
	comp=Z,2.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.59**	**71**	P	**P**	**23 23 59.8**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=253,slow=5.5,SNR=20						
H11S2	**WAKE ISLAND Hy**	**126.36**	**275**	T	T	01 50 32.9	
	baz=108,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**126.37**	**275**	T	T	01 50 48.9	
	baz=108,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**126.38**	**275**	T	T	01 50 34.2	
	baz=108,slow=75,SNR=26						
ZALV	**Zalesovo Beam**	**146.54**	**26**	PKPbc	**PKPdf**	**23 31 28.0**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=305,slow=3.7,SNR=2.7						

*BJI **11** 23:14:13.3±0.0,13.70N×146.40E,h10km,mb5.7/98, mB6.0/69,Ms5.9/99,Ms7 5.8/96*
*MOS **11** 23:14:14.0±1.0,13.84N×146.40E,h21km,mb6.2/104, MS5.7/76,Error ellipse: s-maj=6.5km s-min=3.8km az=113.4*
*IPGP **11** 23:14:14.0,13.81N×146.41E,h17km,Mw6.0,Fault plane solution: NP1:ϕs233.00000°,δ77.00000°,λ-53.00000°. NP2:ϕs340.00000°,δ39.00000°,λ-158.00000°.*
*NEIC **11** 23:14:15,13.71N×146.32E,h24km,Moment Tensor Solution. Duration: 4s7 Moment tensor: Scale 10^18^Nm; Mrr-0.67; Mθθ-0.23; Mϕϕ0.90; Mrθ0.65; Mrϕ0.58; Mθϕ0.25; Fault plane solution: M0 1.21000×10^18^ NP1: ϕs233.53000°,δ68.03000°,λ-52.90000°. NP2: ϕs349.85000°,δ42.29000°,λ-146.23000°. Principal axes: T 1.2789, Plg15.0000°, Azm297.0000°; N -0.1294, Plg34.0000°, Azm38.0000°; P -1.1495, Plg52.0000°, Azm187.0000°;*
*NEIC **11** 23:14:15,13.81N×146.43E,h24km*
*NEIC **11** 23:14:15.1±1.5,13.82N±0.07×146.44E±0.06,h10km±1km, mb6.2/722,Ms_20 5.7/954,Mwb6.0/70,Mww6.0/30,Error ellipse: s-maj=11.9km s-min=10.1km az=208.0,Moment Tensor Solution. Moment tensor: Scale 10^18^Nm; Mrr-0.04; Mθθ-0.23; Mϕϕ0.27; Mrθ0.80; Mθϕ0.09; Mrϕ0.67; Fault plane solution: M0 1.08000×10^18^ NP1: ϕs325.87000°,δ14.17000°,λ-174.23000°. NP2: ϕs230.27000°,δ88.59000°,λ-75.90000°. Principal axes: T 1.0905, Plg42.0000°, Azm307.0000°; N -0.0303, Plg14.0000°, Azm50.0000°; P -1.0602, Plg45.0000°, Azm154.0000°;*
*NEIC **11** 23:14:15,13.82N×146.43E,h10km*
*IDC **11** 23:14:16.5±2.6,13.83N×146.40E,h28km±17km,mb5.4/44, mbtmp5.6/45,ML6.0/1,MS5.6/69,Error ellipse: s-maj=12.9km s-min=10.4km az=80.0*
*DJA **11** 23:14:18.9±0.8,14.1N±2.2×14.6E±.1,h36km±6km,M6.0/132, mB6.5/120,mb6.1/132,MLv5.6/1,Mw(mB)6.2/120, MwMwp5.6/73,Mwp5.7/73*
*GCMT **11** 23:14:20.1±0.1,13.66N×146.65E,h18km,MW6.0/170, Moment Tensor Solution. s146,c281; s170,c567; Duration: 2s4 Moment tensor: Scale 10^18^Nm; Mrr-0.47±.01; Mθθ-0.32±.01; Mϕϕ0.79±.01; Mrθ0.65±.02; Mθϕ0.56±.01; Mrϕ0.45±.02; Best double couple: M0 1.16700×10^18^ NP1:ϕs235.00000°,δ75.00000°, λ-54.00000°. NP2:ϕs344.00000°,δ39.00000°, λ-156.00000°. Principal axes: T 1.2890, Plg22.0000°, Azm298.0000°; N -0.2440, Plg35.0000°, Azm44.0000°; P -1.0450, Plg47.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 11 23:14:16.4±0.3,13.80N±0.02×146.43E±0.03,h28km±1km, h28km:pP-P,n2103,σ1968/2151,mb6.1/553,MS5.7/623, 69C-36D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.53**	**262**		**Pn**	**23 14 42.3**	**+0.4**
GUMO	**Guam**	**1.53**	**262**	P	**Pn**	**23 14 42.3**	**+0.4**
GUMO	**Guam**	**1.53**	**262**	Pn	**Pb**	**23 14 43.1**	**-1.0**
	5μm,0.3s,baz=352,slow=19,SNR=1105						
PATS	**Pohnpei**	**13.58**	**119**	Pn	**Pn**	**23 17 25.6**	**-1.6**
JCJ	**Chichijima**	**13.81**	**344**		**Pn**	**23 17 28.1**	**-2.4**
JCJ	**Chichijima**	**13.81**	**344**	Pn	**Pn**	**23 17 27.8**	**-2.6**
	78nm,0.3s,baz=221,slow=18,SNR=16						
JCJ				Sn	**Sn**	**23 19 55.1**	**-7.8**
	16nm,0.3s,baz=295,slow=20,SNR=1.6						
	257nm,0.4s						
MANU	**Manus Island**	**15.77**	**177**	Pn	**Pn**	**23 17 56.0**	**-0.6**
MANU	**Manus Island**	**15.77**	**177**	P	**Pn**	**23 17 57.6**	**+1.0**
GENI	**Genyem**	**17.43**	**201**	P	**P**	**23 18 19.3**	**+0.6**
GENI	**Genyem**	**17.43**	**201**	P	**P**	**23 18 19.7**	**+1.0**
	2μm,1.7s,41μm31μm						
SMPI	**Sarmi**	**17.45**	**207**	P	**Pn**	**23 18 17.9**	**0.0**
	1μm,1.6s,25μm26μm						
JMZ	**Minamidaito 2**	**18.62**	**312**		**P**	**23 18 31.4**	**-0.4**
JMZ				IAmb	IAmb	23 18 39.9	
	comp=Z,2μm,1.1s						
RABL	**Rabaul**	**18.75**	**162**	P	**Pn**	**23 18 34.3**	**+0.4**
RABL	**Rabaul**	**18.75**	**162**	P	**Pn**	**23 18 34.8**	**+0.9**
H11S3	**WAKE ISLAND Hy**	**20.01**	**74**	P	Pn	23 18 48.7	0.0
	baz=258,slow=8.2,SNR=29						
H11S3				T	T	23 40 31.0	
	baz=253,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**20.02**	**74**	P	Pn	23 18 50.0	+1.2
	baz=258,slow=8.2,SNR=24						
H11S1				T	T	23 40 34.2	
	baz=253,slow=76,SNR=3.0						
H11S2	**WAKE ISLAND Hy**	**20.02**	**74**	P	Pn	23 18 50.1	+1.2
	baz=258,slow=8.2,SNR=22						
H11S2				T	T	23 40 32.5	
	baz=253,slow=76,SNR=8.2						
WAKE	**Wake Island**	**20.13**	**72**	P	**P**	**23 18 47.4**	**-1.0**
WAKE				IAmb	IAmb	23 19 01.3	
	comp=Z,1μm,1.3s						
JHJ2	**Mitsune**	**20.15**	**344**	P	**P**	**23 18 48.1**	**-0.4**
JHJ2				IAmb	IAmb	23 18 53.5	
	comp=Z,856nm,1.0s						
JHJ	**Hachijo jima 2**	**20.17**	**344**	P	**P**	**23 18 46.5**	**-2.2**
	comp=Z,195nm,0.5s,baz=105,slow=12,SNR=4.8						
JHJ				S	**S**	**23 22 25.1**	**-8.6**
	comp=Z,79nm,0.4s,baz=171,slow=21,SNR=1.7						
	comp=Z,195nm,0.5s						
SWI	**Sorong**	**20.93**	**227**	P	Pn	23 18 59.8	+0.1
	comp=Z,2μm,1.1s,comp=Z,25μmcomp=Z,21μm						
JAM	**Amami Oshima**	**21.36**	**316**	P	**P**	**23 19

LBMI	**Labuha**	**23.61 234**	P	**P**	**23 19 26.4**	**+1.1**		
	comp=Z,749nm,0.9s,comp=Z,17µm							
JAD	**Aida**	**23.79 334**	P	**P**	**23 19 26.6**	**-0.1**		
MJAR	**Matsushiro Arr**	**23.82 343**	P	**P**	**23 19 23.7**	**-3.3**		
	comp=Z,41nm,0.6s,baz=160,slow=8.5,SNR=39							
MJAR			S	**S**	**23 23 38.9**	**-2.3**		
	comp=Z,3.3nm,0.6s,baz=46,slow=54,SNR=2.3							
MJAR			LR	LR	23 28 24.4			
	comp=Z,13µm,21.1s,baz=160,slow=36							
MAJO	**Matsushiro**	**23.82 343**	P	**P**	**23 19 25.2**	**-1.9**		
MAJO	**Matsushiro**	**23.82 343**	*i* P	**P**	**23 19 25.4**	**-1.7**		
MAJO			pmax	pmax				
	comp=Z,511nm,1.2s							
MAJO			MLR	MLR				
	comp=Z,16µm,18.0s							
MJB9	**Matsu-Tunnel**	**23.82 343**	P	**P**	**23 19 26.0**	**-1.1**		
JNU	**Nakatsue**	**23.89 326**	P	**P**	**23 19 27.5**	**-0.3**		
JNU	**Nakatsue**	**23.89 326**	P	**P**	**23 19 27.8**	**0.0**		
JNU	**Nakatsue**	**23.89 326**	LR	LR	23 27 38.0			
	comp=Z,4µm,21.3s,baz=150,slow=34							
JMM	**Marumori**	**24.49 349**	IAmb	IAmb	23 19 52.6			
	comp=Z,454nm,1.0s							
YOJ	**Yonaguni jima**	**24.50 299**	P	**P**	**23 19 34.5**	**+1.1**		
YOJ			IAMs_20	IAMs_20	23 27 15.6			
	comp=Z,24µm,22.0s							
YOJ	**Yonaguni jima**	**24.50 299**	P	**P**	**23 19 34.5**	**+1.1**		
YOJ			pmax	pmax				
	comp=Z,2µm,1.2s							
YOJ			MLR	MLR				
	comp=Z,24µm,22.0s							
TGY	**Tagaytay City**	**24.74 274**	LR	LR	23 29 35.4			
	comp=Z,16µm,18.6s,baz=98,slow=37							
NLAI	**Namlea**	**25.58 230**	P	**P**	**23 19 45.3**	**+2.0**		
	comp=Z,154nm,1.6s,comp=Z,2µm							
NACB	**Ninganchiao**	**25.61 297**	IAmb	IAmb	23 19 46.7			
	comp=Z,978nm,1.6s							
YULB	**Yu-li**	**25.62 296**	IAMs_20	IAMs_20	23 29 26.4			
	comp=Z,19µm,18.0s							
TWG	**Pinlang**	**25.66 294**	IAMs_20	IAMs_20	23 27 40.1			
	comp=Z,22µm,20.0s							
SANI	**Sanana**	**25.66 234**	P	**P**	**23 19 44.9**	**+0.8**		
SANI	**Sanana**	**25.66 234**	P	**P**	**23 19 42.1**	**-2.0**		
SANI	**Sanana**	**25.66 234**	P	**P**	**23 19 43.5**	**-0.6**		
	comp=Z,313nm,1.0s,comp=Z,6µmcomp=Z,6µm							
JTU	**Tsushima**	**25.76 326**	P	**P**	**23 19 43.4**	**-1.4**		
KMSI	**Cibinong**	**25.82 241**	P	**P**	**23 19 46.8**	**+1.3**		
	comp=Z,5µm,1.1s,comp=Z,59µmcomp=Z,31µm							
YHNB	**Yeheng**	**25.96 298**	P	**P**	**23 19 46.6**	**-0.3**		
YHNB			IAmb	IAmb	23 19 54.2			
	comp=Z,694nm,1.5s							
YHNB			IAMs_20	IAMs_20	23 28 23.4			
	comp=Z,33µm,21.0s							
TATO	**Taipei**	**25.98 299**	P	**P**	**23 19 45.0**	**-1.8**		
TATO	**Taipei**	**25.98 299**	IAMs_20	IAMs_20	23 28 54.5			
	comp=Z,24µm,20.0s							
TATO	**Taipei**	**25.98 299**	P	**P**	**23 19 48.0**	**+1.2**		
TATO			P	**P**	**23 19 48.0**	**+1.2**		
TATO			P	**P**	**23 19 48.0**	**+1.2**		
TATO			S	**S**	**23 24 15.1**	**-0.7**		
TATO			S	**S**	**23 24 15.1**	**-0.7**		
TATO			S	**S**	**23 24 15.1**	**-0.7**		
SSLB	**Suanglung**	**26.04 296**	IAMs_20	IAMs_20	23 28 56.5			
	comp=Z,24µm,20.0s							
TPUB	**Ta-pu**	**26.18 295**	IAmb	IAmb	23 20 08.1			
	comp=Z,1µm,1.4s							
TPUB			IAMs_20	IAMs_20	23 28 09.3			
	comp=Z,24µm,20.0s							
SAUI	**Saumlaki**	**26.34 216**	P	**P**	**23 19 51.2**	**+1.0**		
SAUI	**Saumlaki**	**26.34 216**	P	**P**	**23 19 51.9**	**+1.7**		
SAUI	**Saumlaki**	**26.34 216**	P	**P**	**23 19 51.9**	**+1.7**		
	comp=Z,1µm,1.1s,comp=Z,22µmcomp=Z,16µm							
HNR	**Honiara**	**26.69 149**	P	**P**	**23 19 53.7**	**+0.3**		
HNR			IAmb	IAmb	23 20 33.4			
	comp=Z,482nm,1.1s							
HNR	**Honiara**	**26.69 149**	P	**P**	**23 19 53.7**	**+0.3**		
HNR			pmax	pmax				
	comp=Z,482nm,1.1s							
HNR			MLR	MLR				
	comp=Z,36µm,19.0s							
HNR	**Honiara**	**26.69 149**	LR	LR	23 29 31.5			
	comp=Z,362µm,20.4s,baz=312,slow=34							
JTM	**Tenmabayashi**	**27.30 351**	IAmb	IAmb	23 20 04.4			
	comp=Z,543nm,1.3s							
MRSI	**Marisa**	**27.62 243**	P	**P**	**23 20 01.9**	**+0.1**		
	comp=Z,607nm,1.1s,comp=Z,7µmcomp=Z,5µm							
LUWI	**Luwuk**	**27.70 240**	P	**P**	**23 20 02.4**	**0.0**		
LUWI	**Luwuk**	**27.70 240**	P	**P**	**23 20 00.8**	**-1.6**		
LUWI	**Luwuk**	**27.70 240**	P	**P**	**23 20 02.6**	**+0.2**		
	comp=Z,2µm,1.4s,comp=Z,16µmcomp=Z,7µm							
COEN	**Coen**	**27.76 187**	P	**P**	**23 20 02.8**	**-0.2**		
	baz=28,SNR=68							
COEN	**Coen**	**27.76 187**	P	**P**	**23 20 03.3**	**+0.4**		
COEN	**Coen**	**27.76 187**	P	**P**	**23 20 03.4**	**+0.4**		
TJN	**Taejon**	**28.24 326**	*e*P	**P**	**23 20 06.6**	**-0.5**		
ERM	**Erimo**	**28.26 355**	P	**P**	**23 20 07.6**	**+0.4**		
ERM	**Erimo**	**28.26 355**	P	**P**	**23 20 07.6**	**+0.4**		
ERM			pmax	pmax				
	comp=Z,264nm,1.2s							
ERM			MLR	MLR				
	comp=Z,14µm,19.0s							
JEM	**Erimo**	**28.26 355**	IAMs_20	IAMs_20	23 32 05.4			
	comp=Z,13µm,18.0s							
TOLI2	**Tolitoli**	**28.34 246**	P	**P**	**23 20 08.3**	**+0.1**		
TOLI2			IAmb	IAmb	23 20 26.9			
	comp=Z,677nm,1.8s							
TOLI2	**Tolitoli**	**28.34 246**	P	**P**	**23 20 08.3**	**+0.1**		
QZH	**Quanzhou**	**28.45 297** ⇑	*i* P	**P**	**23 20 07.6**	**-1.4**		
QZH			S	**S**	**23 24 55.7**	**+0.8**		
QZH			pmax	pmax				
	comp=Z,180nm,1.2s							
QZH			pmax	pmax				
	comp=Z,3µm,6.7s							
QZH			LR	LR				
	comp=Z,9µm,18.9s							
QZH			LR	LR				
	comp=Z,11µm,17.2s							
QZH			LR	LR				
	comp=Z,15µm,18.6s							
KNMB	**Chin-men Tao**	**28.48 296**	IAMs_20	IAMs_20	23 32 31.0			
	comp=Z,16µm,19.0s							
KSRS	**Korea Array**	**28.76 328**	P	**P**	**23 20 11.1**	**-0.5**		
	comp=Z,176nm,1.0s,baz=145,slow=9.2,SNR=241							
KSRS			PcP	**PcP**	**23 23 23.3**	**+1.9**		
	comp=Z,36nm,1.1s,baz=149,slow=3.3,SNR=6.4							
	comp=Z,176nm,1.0s							
KSAR	**Wonju Array Be**	**28.77 328**	P	**P**	**23 20 11.9**	**+0.1**		
KSAR	**Wonju Array Be**	**28.77 328**	P	**P**	**23 20 11.9**	**+0.1**		
SSE	**Sheshan**	**28.88 311**	P	**P**	**23 20 12.4**	**-0.5**		
SSE			S	**S**	**23 25 01.0**	**-0.6**		
SSE			pmax	pmax				
	comp=Z,98nm,1.4s							
SSE			pmax	pmax				
	comp=Z,700nm,3.5s							
SSE			LR	LR				
	comp=Z,4µm,20.2s							
SSE			LR	LR				
	comp=Z,4µm,20.4s							
TARA	**Tarawa**	**28.98 113**	P	**P**	**23 20 13.6**	**-0.3**		
TARA	**Tarawa**	**28.98 113**	IAMs_20	IAMs_20	23 29 33.5			
	comp=Z,16µm,18.0s							
INCN	**Inchon**	**29.45 327**	P	**P**	**23 20 17.7**	**-0.2**		
INCN	**Inchon**	**29.45 327**	P	**P**	**23 20 17.7**	**-0.2**		
INCN			pmax	pmax				
	comp=Z,202nm,1.0s							
INCN			MLR	MLR				
	comp=Z,12µm,21.0s							
INCN	**Inchon**	**29.45 327**	P	**P**	**23 20 18.3**	**+0.4**		
INCN			P	**P**	**23 20 18.3**	**+0.4**		
INCN			P	**P**	**23 20 18.3**	**+0.4**		
INCN			S	**S**	**23 25 12.6**	**+2.1**		
INCN			S	**S**	**23 25 12.6**	**+2.1**		
INCN			S	**S**	**23 25 12.6**	**+2.1**		
MPSI	**Mapaga**	**29.48 245**	P	**P**	**23 20 18.6**	**+0.3**		
	comp=Z,218nm,1.5s,comp=Z,2µmcomp=Z,4µm							
KDU	**Kakadu**	**29.73 208**	P	**P**	**23 20 20.1**	**-0.3**		
	baz=30,SNR=36							
KDU	**Kakadu**	**29.73 208**	P	**P**	**23 20 20.0**	**-0.4**		
YUK	**Yuzh-Kuril'sk**	**30.14 359**	*c* *i* P	**P**	**23 20 24.4**	**+0.6**		
YUK			PPP	PPP	23 21 26.2			
YUK			*i* S	**S**	**23 25 18.2**	**-2.8**		
YUK			*e*SSS	SSS	23 27 15.5			
YUK			pmax	pmax				
	comp=Z,486nm,3.0s							
YUK			pmax	pmax				
	comp=N,630nm,1.1s							
YUK			pmax	pmax				
	comp=Z,529nm,1.1s							
YUK			pmax	pmax				
	comp=E,253nm,0.9s							
HJU	**Haeju**	**30.35 326**	P	**P**	**23 20 24.7**	**-1.0**		
HJU			S	**S**	**23 25 24.0**	**-0.5**		
HJU			AmB					
	comp=Z,5µm,4.8s							
HJU			AMS	AMS				
	comp=Z,9µm,12.4s							
JKA	**Kamikawa-asahi**	**30.39 355**	P	**P**	**23 20 26.9**	**+0.8**		
ASAJ	**Asahikawa**	**30.39 355**	P	**P**	**23 20 26.9**	**+0.8**		
ASAJ			pmax	pmax				
	comp=Z,297nm,1.3s							
ASAJ			MLR	MLR				
	comp=Z,10µm,20.0s							
ASAJ	**Asahikawa**	**30.39 355**	LR	LR	23 35 53.4			
	comp=Z,5µm,18.4s,baz=189,slow=43							
BBSI	**Bau Bau**	**30.46 233**	P	**P**	**23 20 27.9**	**+0.9**		
	comp=Z,411nm,0.9s,comp=Z,6µmcomp=Z,3µm							
MTN	**Manton Dam**	**30.50 210**	P	**P**	**23 20 26.8**	**-0.5**		
	baz=30,SNR=20							
MTN	**Manton Dam**	**30.50 210**	P	**P**	**23 20 26.7**	**-0.5**		
MTN			IAmb	IAmb	23 20 45.4			
	comp=Z,307nm,1.1s							
MTN	**Manton Dam**	**30.50 210**	P	**P**	**23 20 27.2**	**-0.1**		
KKM	**Kota Kinabalu**	**30.72 258**	P	**P**	**23 20 29.3**	**-0.1**		
HHU	**Hamhung**	**30.88 331**	P	**P**	**23 20 29.2**	**-1.2**		
HHU			S	**S**	**23 25 32.6**	**0.0**		
HHU			AmB					
	comp=Z,2µm,1.9s							
HHU			AMS	AMS				
	comp=Z,10µm,17.3s							
PYAG	**Pyongyang**	**31.08 328**	P	**P**	**23 20 31.7**	**-0.5**		
PYAG			S	**S**	**23 25 35.6**	**-0.2**		
PYAG			AmB					
	comp=Z,819nm,1.9s							
PYAG			AMS	AMS				
	comp=Z,15µm,18.0s							
NJ2	**Nanjing**	**31.09 310** ⇑	P	**P**	**23 20 32.3**	**0.0**		
NJ2			pP	**pP**	**23 20 35.2**	**-3.8**		
NJ2			sP	**sP**	**23 20 37.8**	**-3.7**		
NJ2			PP	**PnPn**	**23 21 35.5**	**+1.3**		
NJ2			S	**S**	**23 25 36.8**	**+0.7**		
NJ2			sS	**sS**	**23 25 49.7**	**+2.9**		
NJ2			ScP	**ScP**	**23 27 10.0**	**+1.3**		
NJ2			pmax	pmax				
	comp=Z,67nm,1.3s							
NJ2			pmax	pmax				
	comp=Z,1µm,5.4s							
NJ2			LR	LR				
	comp=Z,10µm,18.5s							
NJ2			LR	LR				
	comp=Z,11µm,18.5s							
NJ2			LR	LR				
	comp=Z,18µm,19.9s							
TTSI	**Tana Toraja**	**31.25 240**	P	**P**	**23 20 36.4**	**+2.4**		
	comp=Z,119nm,0.9s,comp=Z,3µm							
MSHR	**Mys Shultsa**	**31.57 338**	*i* P	**P**	**23 20 37.1**	**+0.6**		
MSHR			pmax	pmax				
	comp=Z,114nm,1.0s							
MSHR			MLR	MLR				
	comp=Z,14µm,18.0s							
PSTR	**Posyet**	**31.76 338**	*d* *i* P	**P**	**23 20 38.5**	**+0.3**		
HKPS	**Hong Kong Po S**	**31.79 290**	P	**P**	**23 20 38.1**	**-0.5**		
HKPS			IAmb	IAmb	23 21 34.7			
	comp=Z,617nm,2.0s							
MTSU	**Mount Surprise**	**31.80 184**	P	**P**	**23 20 39.8**	**+1.1**		
	baz=32,SNR=39							
MTSU	**Mount Surprise**	**31.80 184**	P	**P**	**23 20 39.4**	**+0.7**		
SOEI	**Soe**	**32.11 224**	P	**P**	**23 20 41.2**	**-0.5**		
SOEI	**Soe**	**32.11 224**	P	**P**	**23 20 38.6**	**-3.1**		
SOEI	**Soe**	**32.11 224**	P	**P**	**23 20 41.2**	**-0.5**		
	comp=Z,972nm,1.1s,comp=Z,9µmcomp=Z,4µm							
TEY	**Ternei**	**32.24 347**	*e*P	**P**	**23 20 41.3**	**-1.0**		
BKSI	**Bulukumba**	**32.29 236**	P	**P**	**23 20 43.8**	**+0.7**		
	comp=Z,187nm,1.2s,comp=Z,2µmcomp=Z,3µm							
KAPI	**Kappang**	**32.41 237**	P	**P**	**23 20 44.5**	**+0.4**		
KAPI			IAmb	IAmb	23 21 01.2			
	comp=Z,215nm,0.9s							
KAPI	**Kappang**	**32.41 237**	P	**P**	**23 20 44.6**	**+0.4**		
KAPI			pmax	pmax				
	comp=Z,215nm,0.9s							
KAPI			MLR	MLR				
	comp=Z,4µm,19.0s							
SUJ	**Sinuiju**	**32.51 328**	P	**P**	**23 20 44.5**	**-0.3**		
SUJ			S	**S**	**23 25 57.7**	**-0.5**		
SUJ			AmB					
	comp=Z,2µm,1.9s							
SUJ			AMS	AMS				
	comp=Z,15µm,16.8s							
GZH	**Guangzhou**	**32.65 291**	P	**P**	**23 20 44.2**	**-2.0**		
GZH			PP	**PP**	**23 21 57.7**	**-2.6**		
GZH			S	**S**	**23 26 00.0**	**-0.8**		
GZH			pmax	pmax				
	comp=Z,1µm,2.0s							
GZH			LR	LR				
	comp=Z,2µm,11.7s							
GZH			LR	LR				
	comp=Z,3µm,19.3s							
USA0B	**Ussuriysk Arra**	**32.72 341**	*c* *i* P	**P**	**23 20 46.1**	**-0.4**		
USRK	**Ussuriysk Ar.**	**32.72 341**	P	**P**	**23 20 46.1**	**-0.4**		
USRK	**Ussuriysk Ar.**	**32.72 341**	P	**P**	**23 20 46.2**	**-0.3**		
	comp=Z,21nm,0.7s,baz=144,slow=9.1,SNR=37							
USRK			PcP	**PcP**	**23 23 33.2**	**+1.4**		
	comp=Z,12nm,0.9s,baz=202,slow=4.4,SNR=2.5							
USRK			LR	LR	23 33 48.1			
	comp=Z,9µm,18.8s,baz=155,slow=36							
USRK			P3KPbc		23 52 08.2			
	comp=Z,5.0nm,0.8s,baz=318,slow=2.2,SNR=8.3							
	comp=Z,21nm,0.7s							
MMRI	**Maumere**	**32.76 228**	P	**P**	**23 20 47.8**	**+0.6**		
MMRI	**Maumere**	**32.76 228**	P	**P**	**23 20 46.7**	**-0.5**		
	comp=Z,707nm,1.2s,comp=Z,8µmcomp=Z,3µm							
TV1H	**Townsville Har**	**32.85 179**	P	**P**	**23 20 48.6**	**+0.7**		
BKB	**Balikpapan**	**32.87 245**	P	**P**	**23 20 48.4**	**+0.2**		
BKB			IAmb	IAmb	23 21 06.8			
	comp=Z,294nm,1.1s							
BKB	**Balikpapan**	**32.87 245**	P	**P**	**23 20 48.1**	**-0.1**		
BKB	**Balikpapan**	**32.87 245**	P	**P**	**23 20 49.3**	**+1.1**		
	comp=Z,192nm,1.0s,comp=Z,4µmcomp=Z,6µm							
AUAYR	**Ayr State High**	**33.18 178**	P	**P**	**23 20 51.4**	**+0.6**		
YSS	**Yuzh-Sakhalins**	**33.20 355**	P	**P**	**23 20 50.0**	**-0.6**		
YSS			IAmb	IAmb	23 21 53.3			
	comp=Z,413nm,1.8s							
YSS	**Yuzh-Sakhalins**	**33.20 355**	*e*P	**P**	**23 20 48.7**	**-2.0**		
YSS			*e**SP	**pwP**	**23 21 02.5**	**-2.5**		
YSS			*e*		23 21 57.2			
YSS			*e*S	S	23 25 59.2	-9.5		
YSS			*e*SS	**SnSn**	**23 28 13.1**	**+3.6**		
YSS			pmax	pmax				
	comp=Z,70nm,1.4s							
YSS			pmax	pmax				
	comp=Z,1µm,5.8s							
YSS			pmax	pmax				
	comp=Z,2µm,4.7s							
YSS			pmax	pmax				
	comp=E,2µm,6.1s							
YSS			MLR	MLR				
	comp=Z,7µm,18.0s							
EDFI	**Ende, Flores**	**33.24 229**	P	**P**	**23 20 50.2**	**-1.3**		
	comp=Z,281nm,1.3s,comp=Z,4µm							
CTA	**Charters Tower**	**33.67 180**	P	**P**	**23 20 55.8**	**+0.7**		
CTA	**Charters Tower**	**33.67 180**	P	**P**	**23 20 55.3**	**+0.2**		
CTA			pmax	pmax				
	comp=Z,123nm,1.6s							
CTA	**Charters Tower**	**33.67 180**	LR	LR	23 36 25.7			
	comp=Z,5µm,18.4s,baz=1.5,slow=39							
CTAO	**Charters Tower**	**33.67 180**	P	**P**	**23 20 54.8**	**-0.3**		
CTAO			IAmb	IAmb	23 21 13.8			
	comp=Z,496nm,1.8s							
CTAO	**Charters Tower**	**33.67 180**	P	**P**	**23 20 54.8**	**-0.3**		
CTAO			pmax	pmax				
	comp=Z,496nm,1.8s							
CTAO			MLR	MLR				
	comp=Z,6µm,18.0s							
WHN	**Wuhan**	**33.90 305** ⇑	*i* P	**P**	**23 20 57.6**	**+0.6**		
WHN			sP	**pP**	**23 21 02.5**	**-1.3**		
WHN			PP	**PnPn**	**23 22 09.4**	**-0.9**		
WHN			S	**S**	**23 26 19.2**	**-0.8**		
WHN			sS	**pS**	**23 26 28.4**	**+0.7**		
WHN			pmax	pmax				
	comp=Z,1µm,1.3s							
WHN			LR	LR				
	comp=Z,14µm,12.5s							
WHN			LR	LR				
	comp=Z,19µm,17.9s							
WHN			LR	LR				
	comp=Z,34µm,18.1s							
MDJ	**Mudanjiang**	**33.91 338**	P	**P**	**23 20 55.3**	**-1.6**		
MDJ			PP	**PnPn**	**23 22 09.4**	**-0.7**		
MDJ			S	**S**	**23 26 20.5**	**+0.7**		
MDJ			PcS	**PcS**	**23 27 18.2**	**-2.8**		
MDJ			ScP	**ScP**	**23 27 19.9**	**+1.8**		
MDJ			SS	**SnSn**	**23 28 31.5**	**+4.7**		
MDJ			pmax	pmax				
	comp=Z,52nm,2.3s							
MDJ			pmax	pmax				
	comp=Z,1µm,3.9s							
MDJ			LR	LR				
	comp=Z,11µm,18.0s							
MDJ			LR	LR				
	comp=Z,9µm,17.1s							
MDJ			LR	LR				
	comp=Z,19µm,19.8s							
MDJ	**Mudanjiang**	**33.91 338**	IAMs_20	IAMs_20	23 33 50.7			
	comp=Z,15µm,20.0s							
SNY	**Shenyang**	**34.26 329**	P	**P**	**23 20 58.7**	**-1.2**		
SNY			pmax	pmax				
	comp=Z,130nm,1.6s							
SNY			pmax	pmax				
	comp=Z,420nm,3.9s							
SNY			LR	LR				
	comp=Z,9µm,19.8s							
SNY			LR	LR				
	comp=Z,9µm,19.0s							
SNY			LR	LR				
	comp=Z,15µm,25.0s							
CNSH	**ChangSha**	**34.26 300** ⇑	P	**P**	**23 21 01.5**	**+1.3**		
CNSH			S	**S**	**23 26 28.9**	**+3.2**		
CNSH			pmax	pmax				
	comp=Z,300nm,1.2s							
CNSH			LR	LR				
	comp=Z,9µm,17.8s							
CNSH			LR	LR				
	comp=Z,8µm,21.8s							
CNSH			LR	LR				
	comp=Z,14µm,22.0s							
TIA	**Tai'an**	**34.46 316** ⇑	P	**P**	**23 21 01.9**	**0.0**		
TIA			S	**S**	**23 26 27.2**	**-1.4**		
TIA			pmax	pmax				
	comp=Z,42nm,1.6s							
TIA			pmax	pmax				
	comp=Z,990nm,5.7s							
TIA			LR	LR				
	comp=Z,4µm,18.8s							
TIA			LR	LR				
	comp=Z,6µm,20.4s							
TIA			LR	LR				
	comp=Z,10µm,19.6s							
MTKI	**Muara Teweh, K**	**34.51 247**	P	**P**	**23 21 03.2**	**+0.7**		
	comp=Z,178nm,1.6s,comp=Z,4µm							
QIS	**Mount Isa**	**34.79 191**	P	**P**	**23 21 05.1**	**+0.3**		
	baz=35,SNR=276							
QIS	**Mount Isa**	**34.79 191**	P	**P**	**23 21 04.9**	**+0.1**		
CN2	**Changchun**	**34.89 333** ⇑	*i* P	**P**	**23 21 04.7**	**-0.7**		
CN2			pP	pP	23 21 10.5	-1.2		
CN2			sP	sP	23 21 16.1	+1.4		
CN2			PcP	**PcP**	**23 23 37.4**	**-0.5**		
CN2			S	**S**	**23 26 34.1**	**-0.9**		
CN2			pmax	pmax				
	comp=Z,80nm,1.7s							
CN2			pmax	pmax				
	comp=Z,900nm,3.0s							
CN2			LR	LR				
	comp=Z,8µm,19.0s							
CN2			LR	LR				
	comp=Z,12µm,19.0s							
CN2			LR	LR				
	comp=Z,12µm,21.0s							
BASI	**Baing, Sumba**	**35.03 228**	P	**P**	**23 21 05.3**	**-1.7**		
	comp=Z,2µm,1.4s,comp=Z,16µmcomp=Z,2µm							
UGL	**Uglegorsk**	**35.36 355**	*e*P	**P**	**23 21 09.1**	**-0.3**		
UGL			*e*		23 22 27.1			
UGL			*e*S	**S**	**23 26 38.5**	**-3.6**		
UGL			pmax	pmax				
	comp=Z,2µm,4.0s							
UGL			pmax	pmax				
	comp=Z,200nm,1.2s							
UGL			pmax	pmax				
	comp=N,2µm,4.0s							
UGL			pmax	pmax				
	comp=E,720nm,4.0s							
UGL			pmax	pmax				
	comp=Z,2µm,4.0s							
UGL			MLR	MLR				
	comp=E,6µm,18.0s							
WB0	**Warramunga Arr**	**35.40 200**	IAmb	IAmb	23 21 34.6			
	comp=Z,365nm,1.2s							
WB9	**Warramunga Arr**	**35.42 200**	IAMs_20	IAMs_20	23 36 56.9			
	comp=Z,11µm,18.0s							
QIZ	**Qiongzhong**	**35.44 283**	P	**P**	**23 21 10.3**	**-0.2**		
QIZ			PP	**PnPn**	**23 22 29.9**	**+0.3**		
QIZ			S	**S**	**23 26 45.2**	**+1.2**		
QIZ			sS	**pS**	**23 26 51.2**	**-0.7**		
QIZ			pmax	pmax				
	comp=Z,130nm,1.5s							
QIZ			pmax	pmax				
	comp=Z,1µm,7.5s							
QIZ			LR	LR				
	comp=Z,6µm,19.6s							
QIZ			LR	LR				
	comp=Z,10µm,18.6s							
QIZ			LR	LR				
	comp=Z,12µm,17.5s							
QIZ	**Qiongzhong**	**35.44 283**	P	**P**	**23 21 11.1**	**+0.6**		
QIZ	**Qiongzhong**	**35.44 283**	IAMs_20	IAMs_20	23 34 15.6			
	comp=Z,14µm,20.0s							
WB8	**Warramunga Arr**	**35.44 200**	IAMs_20	IAMs_20	23 37 06.5			
	comp=Z,10µm,18.0s							
WR0	**Warramunga Arr**	**35.53 199**	P	**P**	**23 21 10.9**	**-0.2**		
WR0			IAmb	IAmb	23 21 18.2			
	comp=Z,300nm,1.0s							
WR0			IAMs_20	IAMs_20	23 37 18.7			
	comp=Z,11µm,18.0s							
WR9	**Warramunga Arr**	**35.53 200**	IAMs_20	IAMs_20	23 37 01.9			
	comp=Z,10µm,18.0s							
WR8	**Warramunga Arr**	**35.54 200**	IAMs_20	IAMs_20	23 37 02.0			
	comp=Z,10µm,18.0s							
WR7	**Warramunga Arr**	**35.54 200**	IAMs_20	IAMs_20	23 37 10.2			
	comp=Z,11µm,18.0s							
WR6	**Warramunga Arr**	**35.55 200**	IAMs_20	IAMs_20	23 37 10.4			
	comp=Z,11µm,18.0s							
WR5	**Warramunga Arr**	**35.55 200**	IAMs_20	IAMs_20	23 37 10.5			
	comp=Z,11µm,18.0s							
WR4	**Warramunga Arr**	**35.56 200**	IAMs_20	IAMs_20	23 37 10.7			
	comp=Z,11µm,18.0s							
WRAB	**Tennant Creek**	**35.56 200**	P	**P**	**23 21 10.9**	**-0.6**		
WRAB				**P**	**23 21 11.5**	**+0.1**		
WRAB			IAmb	IAmb	23 21 18.6			
	comp=Z,354nm,1.1s							
WRAB	**Tennant Creek**	**35.56 200**	P	**P**	**23 21 10.9**	**-0.6**		
WRAB			pmax	pmax				
	comp=Z,354nm,1.1s							
WR3	**Warramunga Arr**	**35.57 200**	IAMs_20	IAMs_20	23 37 11.8			
	comp=Z,11µm,19.0s							
WB2	**Warramunga Arr**	**35.57 200**	IAmb	IAmb	23 21 18.7			
	comp=Z,408nm,1.1s							
WB2			IAMs_20	IAMs_20	23 37 12.0			
	comp=Z,11µm,19.0s							
WR2	**Warramunga Arr**	**35.57 200**	IAM

BNX BinXian 35.67 337 ⇑P **P** **23 21 11.2 -0.9**
BNX pP **sP** **23 21 22.2 +0.8**
BNX sP **pwP** **23 21 27.2 +1.6**
BNX PP **PP** **23 22 33.4 0.0**
BNX S **S** **23 26 46.9 -0.1**
BNX pmax pmax
comp=Z,71nm,1.3s
BNX pmax pmax
comp=Z,2μm,4.1s
BNX LR LR
comp=Z,5μm,16.3s
BNX LR LR
comp=Z,9μm,18.4s
BNX LR LR
comp=Z,18μm,19.5s
GULI GuiLin 35.75 294 ⇑P **P** **23 21 12.1 -1.0**
GULI PP **PnPn** **23 22 33.2 -0.1**
GULI S **S** **23 26 46.6 -2.0**
GULI pmax pmax
comp=Z,250nm,1.3s
GULI LR LR
comp=Z,7μm,18.4s
GULI LR LR
comp=Z,12μm,18.8s
GULI LR LR
comp=Z,18μm,19.7s
PLAI Plampang 36.25 233 P **P** **23 21 16.5 -1.0**
PLAI Plampang 36.25 233 P **P** **23 21 16.2 -1.3**
comp=Z,235nm,0.9s,comp=Z,3μmcomp=Z,2μm
MIDW Midway 36.55 61 P **P** **23 21 19.5 -0.4**
HNS HongShan 36.73 316 ⇑P **P** **23 21 21.9 +0.6**
HNS PP **PP** **23 22 50.5 +5.3**
HNS PcP **PcP** **23 23 46.1 +2.6**
HNS S **S** **23 27 02.6 -0.8**
HNS ScS **ScS** **23 31 37.2 +1.8**
HNS pmax pmax
comp=Z,480nm,1.8s
HNS LR LR
comp=Z,8μm,19.1s
HNS LR LR
comp=Z,8μm,20.7s
HNS LR LR
comp=Z,18μm,21.1s
TWSI Taliwang, Sumb 36.90 234 P **P** **23 21 23.0 0.0**
comp=Z,416nm,0.8s,comp=Z,3μmcomp=Z,3μm
LYN LuoYang 36.98 310 ⇑*i*P **P** **23 21 24.0 +0.5**
LYN PP **PnPn** **23 22 50.2 +1.9**
LYN PcP **PcP** **23 23 46.0 +1.7**
LYN S **S** **23 27 06.3 -0.9**
LYN sS ScP 23 27 25.7 -3.8
LYN SS **SnSn** **23 29 40.4 -1.1**
LYN ScS **ScS** **23 31 36.4 -0.5**
LYN pmax pmax
comp=Z,520nm,1.5s
LYN pmax pmax
comp=Z,3μm,6.7s
LYN LR LR
comp=Z,9μm,13.7s
LYN LR LR
comp=Z,14μm,19.0s
LYN LR LR
comp=Z,18μm,19.0s
DLV T Lat 37.01 272 P **P** **23 21 23.7 -0.6**
DLV IAmb IAmb 23 21 26.5
comp=Z,603nm,2.0s
TYV Tymovskoe 37.09 356 *e*P **P** **23 21 25.0 +0.8**
TYV *e*S **S** **23 27 09.5 +1.0**
TYV pmax pmax
comp=Z,1μm,2.4s
TYV pmax pmax
comp=Z,224nm,1.0s
TYV smax smax
comp=N,72nm,2.5s
TYV smax smax
comp=E,58nm,2.5s
RK1H Rockhampton Ha 37.17 174 P **P** **23 21 25.1 0.0**
STKI Sintang 37.20 251 P **P** **23 21 26.0 +0.4**
comp=E,369nm,1.4s,comp=E,20μm
BJT Baijiatuau 37.23 320 P **P** **23 21 25.7 +0.2**
BJT IAmb IAmb 23 21 33.5
comp=Z,761nm,1.5s
BJT Baijiatuau 37.23 320 IAMs_20 IAMs_20 23 36 24.9
comp=Z,11μm,20.0s
BJT Baijiatuau 37.23 320 P **P** **23 21 25.7 +0.2**
BJT pmax pmax
comp=Z,761nm,1.5s
BJT MLR MLR
comp=Z,10μm,20.0s
BJI Beijing 37.24 320 P **P** **23 21 25.9 +0.3**
BJI sP **pP** **23 21 31.4 -0.5**
BJI pmax pmax
comp=Z,150nm,1.6s
BJI LR LR
comp=Z,5μm,19.8s
BJI LR LR
comp=Z,3μm,16.5s
BJI LR LR
comp=Z,5μm,19.1s
KLR Kul'dur 37.34 344*c i*P **P** **23 21 25.1 -1.2**
KLR pmax pmax
comp=Z,87nm,1.3s
KLR MLR MLR
comp=Z,11μm,17.0s
KLR Kul'dur 37.34 344 LR LR 23 35 44.8
comp=Z,6μm,19.1s,baz=160,slow=34
SKR Severo-Kuril's 37.62 10 *e*P **P** **23 21 27.1 -1.5**
SKR *e*S **S** **23 27 14.2 -2.3**
SKR *e*SSS SSS 23 31 33.2
SKR pmax pmax
comp=Z,169nm,1.0s
SKR MLR MLR
comp=Z,8μm,17.0s
GD1S Gladstone Soft 37.69 173 P **P** **23 21 30.1 +0.6**
FITZ Fitzroy Crossi 37.75 213 P **P** **23 21 30.1 0.0**
baz=38,SNR=53
ENH Enshi 37.76 302 IAmb IAmb 23 21 33.7
comp=Z,662nm,1.2s
ENH IAMs_20 IAMs_20 23 36 28.9
comp=Z,12μm,19.0s
GRNR Gornyy 37.76 350 ⇑*i*P **P** **23 21 29.0 -0.9**
GRNR *e*S **S** **23 27 21.6 +2.9**
GRNR pmax pmax
comp=E,9.0nm,0.8s
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,50nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,2μm,17.0s
GRNR MLR MLR
comp=Z,5μm,17.0s
GRNR MLR MLR
comp=N,4μm,18.0s
KSM Kuching 37.76 254 IAmb IAmb 23 21 31.8
comp=Z,440nm,1.1s
SRBI Singaraja 37.85 237 P **P** **23 21 32.1 +1.0**
comp=Z,643nm,1.0s,comp=Z,7μmcomp=Z,4μm
DNP Denpasar 38.19 236 P **P** **23 21 35.0 +1.1**
comp=Z,713nm,1.3s
KOUNC Koumac, New Ca 38.38 152 P **P** **23 21 35.9 +0.5**
KOUNC IAmb IAmb 23 21 53.1
comp=Z,356nm,1.0s
KOUNC Koumac, New Ca 38.38 152 P **P** **23 21 36.1 +0.7**
TIY Taiyuan 38.45 315 ⇑P **P** **23 21 37.0 +1.0**
TIY S **S** **23 27 29.6 -0.1**
TIY pmax pmax
comp=Z,200nm,0.6s
TIY LR LR
comp=Z,9μm,18.6s
TIY LR LR
comp=Z,10μm,19.6s
TIY LR LR
comp=Z,16μm,22.1s
JAGI Jajag, Banyuwa 38.94 237 P **P** **23 21 39.3 -0.9**
JAGI IAmb IAmb 23 21 57.6
comp=Z,306nm,0.8s
JAGI Jajag, Banyuwa 38.94 237 P **P** **23 21 40.1 -0.1**
JAGI Jajag, Banyuwa 38.94 237 P **P** **23 21 39.6 -0.6**
comp=Z,413nm,0.8s,comp=Z,4μmcomp=Z,3μm
BLJI Banyuglugur 38.99 239 P **P** **23 21 42.3 +1.6**
comp=Z,779nm,1.2s,comp=Z,12μm
AS01 Alice Springs 39.18 198 P **P** **23 21 42.2 +0.1**
EIDS Eidsvold 39.19 173 P **P** **23 21 42.1 0.0**
baz=39,SNR=10

EIDS Eidsvold 39.19 173 IAMs_20 IAMs_20 23 35 26.8
comp=Z,14μm,22.0s
EIDS Eidsvold 39.19 173 P **P** **23 21 42.5 +0.4**
ASAR Alice Springs 39.20 198 P **P** **23 21 42.0 -0.3**
comp=Z,63nm,0.8s,baz=19,slow=10,SNR=481
ASAR PP **PP** **23 23 14.1 +1.5**
comp=Z,66nm,0.9s,baz=21,slow=11,SNR=6.5
ASAR PcP **PcP** **23 23 51.4 0.0**
comp=Z,41nm,1.1s,baz=19,slow=4.2,SNR=2.1
ASAR ScP **ScP** **23 27 35.9 -2.2**
comp=Z,3.5nm,1.1s,baz=17,slow=6.8,SNR=1.7
ASAR LR LR 23 39 45.6
comp=Z,10μm,18.3s,baz=32,slow=39
ASAR P3KP 23 53 12.7
comp=Z,0.1nm,0.3s,baz=127,slow=1.4,SNR=1.3
comp=Z,63nm,0.8s
ASPA Alice Springs 39.20 198 P **P** **23 21 42.3 0.0**
baz=39
GYA Guiyang 39.24 295 ⇓P **P** **23 21 44.8 +1.9**
GYA S **S** **23 27 42.8 +0.8**
GYA pmax pmax
comp=Z,260nm,1.9s
GYA pmax pmax
comp=Z,2μm,3.9s
GYA LR LR
comp=Z,6μm,18.9s
GYA LR LR
comp=Z,7μm,17.7s
GYA LR LR
comp=Z,12μm,17.6s
FUNA Funafuti 39.37 122 P **P** **23 21 42.9 -0.8**
FUNA IAmb IAmb 23 22 01.9
comp=Z,516nm,1.4s
FUNA Funafuti 39.37 122 IAMs_20 IAMs_20 23 33 50.3
comp=Z,16μm,20.0s
XAN Xi'an 39.47 307 ⇑P **P** **23 21 44.7 +0.2**
XAN pP pwP 23 21 57.6 0.0
XAN PP **PnPn** **23 23 20.2 +1.8**
XAN PcP **PcP** **23 23 57.5 +5.4**
XAN S **S** **23 27 43.4 -1.6**
XAN sS sS 23 28 04.1 +8.1
XAN ScS **ScS** **23 31 50.3 -1.0**
XAN pmax pmax
comp=Z,220nm,2.0s
XAN pmax pmax
comp=Z,2μm,7.5s
XAN LR LR
comp=Z,9μm,18.2s
XAN LR LR
comp=Z,10μm,19.6s
XAN LR LR
comp=Z,13μm,19.9s
GRJI Gresik 39.49 241 P **P** **23 21 46.7 +1.9**
comp=Z,1μm,0.9s,comp=Z,9μmcomp=Z,5μm
NKL Nikolayevsk 39.52 355 *e*P **P** **23 21 42.3 -2.3**
NKL *e*S **S** **23 27 46.0 +0.9**
NKL pmax pmax
comp=E,162nm,0.8s
NKL pmax pmax
comp=N,254nm,1.0s
NKL pmax pmax
comp=Z,441nm,1.0s
NKL smax smax
comp=N,496nm,2.4s
NKL smax smax
comp=E,639nm,2.4s
NKL MLR MLR
comp=E,10μm,24.0s
NKL MLR MLR
comp=N,11μm,15.0s
NKL MLR MLR
comp=Z,17μm,20.0s
HEH HeiHe 39.53 341 *e*P **P** **23 21 43.3 -1.4**
HEH PcP **PcP** **23 23 52.0 +0.1**
HEH ScP **ScP** **23 27 38.0 -0.9**
HEH S **S** **23 27 43.9 -1.5**
HEH pmax pmax
comp=Z,160nm,1.2s
HEH pmax pmax
comp=Z,2μm,3.7s
HEH LR LR
comp=Z,12μm,17.7s
HEH LR LR
comp=Z,10μm,18.2s
HEH LR LR
comp=Z,12μm,21.1s
UBPT Khong Chiam 39.64 277 P **P** **23 21 46.0 -0.1**
XLT XiLinHaoTe 39.67 325 *e*P **P** **23 21 46.6 +0.5**
XLT PcS **PcS** **23 27 42.0 -0.6**
XLT S **S** **23 27 45.6 -2.2**
XLT SS **SS** **23 30 44.4 +0.7**
XLT pmax pmax
comp=Z,240nm,0.8s
XLT pmax pmax
comp=Z,3μm,4.3s
XLT LR LR
comp=Z,10μm,17.9s
XLT LR LR
comp=Z,11μm,20.5s
RMQ Roma 40.10 177 P **P** **23 21 50.4 +0.7**
QLP Quilpie 40.19 183 P **P** **23 21 49.8 -0.7**
baz=40,SNR=80
QLP Quilpie 40.19 183 P **P** **23 21 49.3 -1.2**
PEA0B Petropavlovsk- 40.23 11 P **P** **23 21 50.8 +0.3**
PEA0B Petropavlovsk- 40.23 11 P **P** **23 21 50.8 +0.3**
PEA0B pmax pmax
comp=Z,306nm,1.3s
PEA0B MLR MLR
comp=Z,10μm,22.0s
PETK Petropavlovsk- 40.23 11 P **P** **23 21 50.8 +0.4**
PETK Petropavlovsk- 40.23 11 P **P** **23 21 51.3 +0.8**
comp=Z,13nm,0.7s,baz=181,slow=7.2,SNR=31
PETK PKiKP **PKiKP** **23 31 04.8 +0.5**
comp=Z,6.8nm,0.9s,baz=167,slow=7.4,SNR=3.5
PETK LR LR 23 36 28.9
comp=Z,8μm,21.4s,baz=194,slow=33
comp=Z,13nm,0.7s
PET Petropavlovsk 40.32 11 P **P** **23 21 52.5 +1.3**
PET IAmb IAmb 23 21 58.7
comp=Z,812nm,1.8s
PET Petropavlovsk 40.32 11 *e*P **P** **23 21 54.0 +2.8**
PET *e*S **S** **23 27 58.9 +1.8**
PET *e*SS **SS** **23 30 50.7 -5.6**
PET pmax pmax
comp=Z,271nm,1.8s
PET pmax pmax
comp=Z,2μm,9.3s
PET MLR MLR
comp=Z,4μm,14.0s
PET MLR MLR
comp=Z,4μm,14.0s
NGJI Ngawi 40.59 241 P **P** **23 21 58.0 +4.1**
comp=Z,648nm,1.0s,comp=Z,6μm
HHC Hu-ho-hao-te 40.62 318 *e*P **P** **23 21 54.8 +0.8**
HHC sP pP 23 22 00.6 +0.2
HHC S **S** **23 28 02.3 +0.1**
HHC sS sS 23 28 15.8 +1.9
HHC SS **SS** **23 31 04.6 +1.8**
HHC pmax pmax
comp=Z,310nm,1.6s
HHC pmax pmax
comp=Z,2μm,3.7s
HHC LR LR
comp=Z,4μm,20.6s
HHC LR LR
comp=Z,5μm,20.6s
HHC LR LR
comp=Z,9μm,19.1s
DZM Mont Dzumac 40.69 151 P **P** **23 21 55.2 +0.4**
DZM Mont Dzumac 40.69 151 P **P** **23 21 55.0 +0.2**
DZM Mont Dzumac 40.69 151 *e*P **P** **23 21 52.9 -1.9**
comp=Z,764nm,1.4s
DZM Mont Dzumac 40.69 151 *e*PP **PP** **23 23 24.4 -4.5**
comp=Z,1μm,24.7s
DZM *e*S **S** **23 28 00.3 -3.2**
comp=Z,3μm,30.3s
DZM *e*SS **SS** **23 30 59.6 -5.2**
comp=Z,2μm,25.4s
DZM *e*LR LR 23 32 59.2
comp=Z,21μm,20.8s
DZM Mont Dzumac 40.69 151 LR LR 23 38 04.8
comp=Z,20μm,20.3s,baz=325,slow=35
YATNC Mamie plateau, 40.90 150 P **P** **23 21 57.0 +0.7**
ONTNC Ouen Toro 40.90 151 P **P** **23 21 56.5 +0.2**
ONTNC Ouen Toro 40.90 151 P **P** **23 21 56.4 0.0**
SLVN Son La 41.13 287 P **P** **23 21 58.7 +0.2**

OUENC Ouen Island, N 41.18 151 P **P** **23 21 59.4 +0.8**
SMRI Semarang 41.30 242 P **P** **23 22 01.0 +1.2**
SMRI IAmb IAmb 23 22 18.3
comp=Z,337nm,0.9s
SMRI Semarang 41.30 242 P **P** **23 22 01.5 +1.7**
SMRI Semarang 41.30 242 P **P** **23 22 00.7 +0.9**
comp=Z,417nm,1.0s
BTO Baotou 41.50 317 ⇑*i*P **P** **23 22 03.4 +2.1**
BTO pP **pP** **23 22 07.6 -0.1**
BTO PP **PnPn** **23 23 43.7 +1.4**
BTO S **S** **23 28 22.0 +6.7**
BTO sS **sS** **23 28 28.9 +2.6**
BTO SS **SS** **23 31 23.0 +2.6**
BTO pmax pmax
comp=Z,920nm,1.7s
BTO pmax pmax
comp=Z,7μm,7.5s
BTO LR LR
comp=Z,29μm,21.2s
BTO LR LR
comp=Z,18μm,19.4s
BTO LR LR
comp=Z,21μm,24.6s
HIA Hailar 41.61 334 IAmb IAmb 23 22 18.8
comp=Z,1μm,2.0s
HIA Hailar 41.61 334 IAMs_20 IAMs_20 23 38 37.7
comp=Z,11μm,20.0s
PINNC Pines Island, 41.63 150 P **P** **23 22 03.0 +0.7**
PINNC Pines Island, 41.63 150 P **P** **23 22 03.2 +0.8**
INKA Innaminka 41.66 188 P **P** **23 22 02.3 -0.2**
UGM Wanagama 41.66 241 P **P** **23 22 03.6 +0.7**
UGM Wanagama 41.66 241 P **P** **23 22 03.7 +0.9**
UGM Wanagama 41.66 241 P **P** **23 22 03.7 +0.9**
comp=Z,967nm,1.1s,comp=Z,15μmcomp=Z,4μm
GC1S Gold Coast 1 S 42.27 171 P **P** **23 22 08.7 +1.2**
WRKA Warakurna 42.46 205 P **P** **23 22 09.3 +0.1**
baz=42,SNR=106
WRKA Warakurna 42.46 205 P **P** **23 22 09.4 +0.2**
JOHN Johnston Islan 42.52 80 P **P** **23 22 08.7 -1.1**
KMI Kunming 42.54 292 ⇑P **P** **23 22 11.5 +1.4**
KMI PP **PP** **23 23 48.1 -0.9**
KMI PcP **PcP** **23 24 06.6 +4.1**
KMI ScP **ScP** **23 27 52.2 +0.6**
KMI S **S** **23 28 32.5 +1.2**
KMI ScS **ScS** **23 32 13.3 +2.8**
KMI pmax pmax
comp=Z,82nm,1.3s
KMI pmax pmax
comp=Z,1μm,4.0s
KMI LR LR
comp=Z,6μm,17.6s
KMI LR LR
comp=Z,7μm,21.1s
KMI LR LR
comp=Z,8μm,19.5s
ZEA Zeya 42.63 343 *e*P **P** **23 22 08.8 -1.4**
ZEA *e* 23 24 06.2
ZEA *e*S **S** **23 28 25.8 -5.6**
ZEA pmax pmax
comp=E,100nm,4.0s
ZEA pmax pmax
comp=N,400nm,4.9s
ZEA pmax pmax
comp=Z,400nm,4.4s
ZEA pmax pmax
comp=N,40nm,1.5s
ZEA pmax pmax
comp=Z,60nm,1.1s
ZEA smax smax
comp=N,900nm,14.1s
ZEA MLR MLR
comp=E,1μm,14.0s
ZEA MLR MLR
comp=N,6μm,17.0s
ZEA MLR MLR
comp=Z,5μm,18.0s
OOD Oodnadatta 42.64 194 P **P** **23 22 10.6 +0.1**
CD2 Chengdu 42.69 301 ⇑P **P** **23 22 10.8 -0.3**
CD2 S **S** **23 28 30.0 -3.0**
CD2 SS **SS** **23 31 41.5 -2.5**
CD2 pmax pmax
comp=Z,180nm,1.3s
CD2 pmax pmax
comp=Z,2μm,8.2s
CD2 LR LR
comp=Z,2μm,15.7s
CD2 LR LR
comp=Z,3μm,16.7s
CD2 LR LR
comp=Z,12μm,20.4s
KPJI Karang Pucung 42.74 243 P **P** **23 22 12.3 +0.8**
comp=Z,430nm,1.0s,comp=Z,5μm
JCJI Jatiwangi 42.91 244 P **P** **23 22 14.9 +1.9**
comp=Z,1μm,1.8s,comp=Z,15μm
PPBI Pangkal Pinang 42.98 251 P **P** **23 22 12.6 -1.0**
comp=Z,88nm,1.1s,comp=Z,15μm
AULRC Lightning Ridg 43.00 178 P **P** **23 22 13.0 -0.4**
YSA Yasawairara 43.18 134 P **P** **23 22 15.5 +0.4**
CMJI Cimerak 43.37 243 P **P** **23 22 15.5 -1.2**
comp=Z,394nm,1.4s,comp=Z,4μmcomp=Z,2μm
TPRI Tanjung Pinang 43.39 256 P **P** **23 22 17.7 +0.8**
comp=Z,223nm,1.1s,comp=Z,4μm
PZH PanZhiHua 43.60 294 P **P** **23 22 19.1 +0.5**
PZH pP **pP** **23 22 23.4 -2.3**
PZH PcS **PcS** **23 28 00.5 +1.5**
PZH S **S** **23 28 43.3 -3.4**
PZH SS **SS** **23 31 53.4 -8.8**
PZH ScS **ScS** **23 32 14.5 -2.4**
PZH pmax pmax
comp=Z,150nm,0.8s
PZH pmax pmax
comp=Z,1μm,3.6s
PZH LR LR
comp=Z,3μm,16.2s
PZH LR LR
comp=Z,7μm,18.1s
PZH LR LR
comp=Z,11μm,19.6s
LEM Lembang 43.64 244 LR LR 23 41 03.3
comp=Z,4μm,21.9s,baz=48,slow=37
LEM Lembang 43.64 244 P **P** **23 22 19.5 +0.5**
comp=Z,414nm,1.5s,comp=Z,5μmcomp=Z,3μm
MYKOM Kota Tinggi 43.75 258 P **P** **23 22 19.5 -0.3**
MYKOM IAmb IAmb 23 22 21.8
comp=Z,567nm,1.1s
PSA00 Pilbara Seismi 43.78 217 P **P** **23 22 19.8 -0.1**
PSA00 IAmb IAmb 23 22 39.8
comp=Z,522nm,1.5s
PSA00 Pilbara Seismi 43.78 217 P **P** **23 22 20.0 +0.2**
DSRI Dabo 43.81 255 P **P** **23 22 20.4 +0.1**
comp=Z,444nm,1.1s
BBJI Bungbulang 43.91 244 P **P** **23 22 19.9 -1.2**
LZH Lanzhou 44.08 308 ⇑*i*P **P** **23 22 23.7 +1.3**
LZH pP pP 23 22 29.1 -0.2
LZH PP **PcP** **23 24 12.2 +4.7**
LZH S **S** **23 28 53.4 -0.1**
LZH sS sS 23 29 03.6 -1.0
LZH pmax pmax
comp=Z,730nm,1.4s
LZH pmax pmax
comp=Z,3μm,4.2s
LZH LR LR
comp=Z,8μm,18.6s
LZH LR LR
comp=Z,7μm,19.9s
LZH LR LR
comp=Z,9μm,20.3s
CBJI Citeko 44.12 245 P **P** **23 22 24.2 +1.4**
comp=Z,261nm,0.9s,comp=Z,24μm
ARMA Armidale 44.24 174 P **P** **23 22 24.1 +0.6**
baz=44,SNR=24
ARMA Armidale 44.24 174 P **P** **23 22 24.1 +0.6**
ARMA IAMs_20 IAMs_20 23 38 45.6
comp=Z,14μm,21.0s
ARMA Armidale 44.24 174 P **P** **23 22 24.0 +0.4**
DBJI Dramaga 44.27 245 P **P** **23 22 25.0 +1.0**
comp=Z,432nm,1.2s,comp=Z,18μmcomp=Z,3μm
CNJI Cibinong 44.29 244 P **P** **23 22 23.4 -0.7**
comp=Z,246nm,1.3s,comp=Z,2μm
CRAI Chiangrai 44.39 285 P **P** **23 22 25.9 +0.9**
DGTI Dogotuki 44.47 131 P **P** **23 22 26.1 +0.6**
PMBI Palembang 44.53 251 P **P** **23 22 26.6 +0.6**
SBJI Serang 44.63 246 P **P** **23 22 28.0 +1.2**
comp=Z,652nm,1.3s,comp=Z,7μm
SHEM Shemya Is, Ala 44.65 24 LR LR 23 38 35.0

comp=Z,7μm,21.4s,baz=232,slow=33
SKJI Sukabumi 44.65 245 P **P** **23 22 27.8 +0.8**
comp=Z,317nm,1.4s,comp=Z,4μmcomp=Z,2μm
LCRK Leigh Creek 44.69 190 P **P** **23 22 27.2 +0.2**
AUPHS Peel High Scho 44.84 175 P **P** **23 22 28.9 +0.7**
TAVE Taveuni 44.99 131 P **P** **23 22 30.7 +1.1**
CMSA Cobar Meteorol 45.08 181 P **P** **23 22 29.9 -0.1**
baz=45,SNR=43
CMSA Cobar Meteorol 45.08 181 P **P** **23 22 30.0 -0.1**
MULG Mulgathing 45.41 195 P **P** **23 22 32.6 -0.2**
STKA Stephens Creek 45.65 186 P **P** **23 22 34.1 -0.5**
baz=46,SNR=108
STKA Stephens Creek 45.65 186 P **P** **23 22 34.3 -0.3**
STKA Stephens Creek 45.65 186 P **P** **23 22 33.9 -0.7**
STKA Stephens Creek 45.65 186 P **P** **23 22 34.3 -0.3**
STKA pmax pmax
comp=Z,32nm,0.9s
STKA MLR MLR
comp=Z,2μm,21.0s
STKA Stephens Creek 45.65 186 P **P** **23 22 33.9 -0.7**
comp=Z,81nm,0.8s,baz=350,slow=8.8,SNR=170
STKA LR LR 23 44 35.5
comp=Z,8μm,18.2s,baz=4.2,slow=40
comp=Z,81nm,0.8s
CHTO Chiang Mai 45.75 283 P **P** **23 22 35.7 0.0**
CHTO Chiang Mai 45.75 283 P **P** **23 22 35.7 0.0**
CHTO pmax pmax
comp=Z,64nm,0.9s
CHTO MLR MLR
comp=Z,7μm,20.0s
CHTO Chiang Mai 45.75 283 P **P** **23 22 36.3 +0.6**
CHTO P **P** **23 22 36.3 +0.6**
CHTO S **S** **23 29 17.5 -0.2**
CHTO S **S** **23 29 17.5 -0.2**
CM31 Chiang Mai Arr 45.76 282 P **P** **23 22 36.4 +0.6**
CM31 IAmb IAmb 23 22 38.3
comp=Z,197nm,1.1s
CM31 Chiang Mai Arr 45.76 282 P **P** **23 22 37.1 +1.4**
SNR=70
CM31 P **P** **23 22 37.1 +1.4**
SNR=70
CM31 P **P** **23 22 37.1 +1.4**
SNR=70
CM31 S **S** **23 29 18.8 +0.9**
CM31 S **S** **23 29 18.8 +0.9**
CM31 S **S** **23 29 18.8 +0.9**
CMAR Chiang Mai Arr 45.76 282 P **P** **23 22 35.9 +0.2**
CMAR Chiang Mai Arr 45.76 282 P **P** **23 22 36.2 +0.4**
comp=Z,92nm,0.8s,baz=82,slow=6.1,SNR=295
CMAR PP **PP** **23 24 21.9 -1.3**
comp=Z,34nm,0.9s,baz=79,slow=1.7,SNR=4.8
CMAR LR LR 23 42 54.6
comp=Z,5μm,18.7s,baz=95,slow=38
CMAR PKPPKP **P'P'df** **23 54 08.0 -1.7**
comp=Z,0.9nm,0.3s,baz=265,slow=2.5,SNR=4.9
comp=Z,92nm,0.8s
MA2 Magadan 45.81 3 P **P** **23 22 35.9 +0.3**
MA2 IAmb IAmb 23 22 42.9
comp=Z,300nm,0.9s
MA2 Magadan 45.81 3 P **P** **23 22 35.9 +0.3**
MA2 pmax pmax
comp=Z,301nm,0.9s
MA2 MLR MLR
comp=Z,6μm,19.0s
MA2 Magadan 45.81 3 LR LR 23 42 18.7
comp=Z,3μm,18.6s,baz=208,slow=37
AUDCS Dubbo College 45.81 177 P **P** **23 22 35.7 -0.2**
KASI Kota Agung 45.83 248 P **P** **23 22 35.5 -0.9**
comp=Z,599nm,1.1s,comp=Z,5μm
KULM Kulim 45.86 264 IAmb IAmb 23 22 39.2
comp=Z,434nm,1.2s
LWLI Liwa 46.02 249 P **P** **23 22 36.9 -1.1**
comp=Z,1μm,0.9s,comp=Z,11μm
SRIT Nakonsritamara 46.17 269 P **P** **23 22 39.4 +0.3**
CIT Chita 46.33 332 *e*P **P** **23 22 40.0 +0.1**
CIT *e* 23 24 19.0
CIT *e* 23 24 35.4
CIT *e*S **S** **23 29 22.4 -2.9**
CIT pmax pmax
comp=Z,678nm,3.2s
TNCH TengChong 46.33 291 ⇑P **P** **23 22 41.3 +0.8**
TNCH pP pP 23 22 43.7 -3.9
TNCH sP sP 23 22 45.9 -3.3
TNCH ScP **ScP** **23 28 08.3 +1.2**
TNCH S **S** **23 29 27.2 +0.8**
TNCH ScS **ScS** **23 32 36.8 +2.3**
TNCH SS **SS** **23 32 44.7 -7.5**
TNCH pmax pmax
comp=Z,370nm,1.2s
TNCH pmax pmax
comp=Z,2μm,3.2s
TNCH LR LR
comp=Z,3μm,19.6s
TNCH LR LR
comp=Z,3μm,18.3s
TNCH LR LR
comp=Z,9μm,18.9s
LHI Lord Howe Isla 46.66 165 P **P** **23 22 42.6 +0.1**
baz=47
LHI Lord Howe Isla 46.66 165 P **P** **23 22 41.7 -0.9**
LHI IAmb IAmb 23 23 10.5
comp=Z,215nm,1.4s
NTLH Newcastle Hard 46.70 174 P **P** **23 22 44.0 +1.2**
MNAI Manna 46.76 250 P **P** **23 22 42.6 -1.1**
MNAI Manna 46.76 250 P **P** **23 22 43.0 -0.6**
MNAI Manna 46.76 250 P **P** **23 22 43.1 -0.6**
comp=Z,2μm,1.3s,comp=Z,19μm
LKBA Tubou, Lakemba 46.77 132 P **P** **23 22 45.3 +1.7**
BKNI Bangkinang 46.88 257 IAmb IAmb 23 23 05.0
comp=Z,349nm,1.2s
BKNI Bangkinang 46.88 257 P **P** **23 22 44.9 +0.3**
BKNI Bangkinang 46.88 257 P **P** **23 22 41.8 -2.8**
BKNI S **S** **23 29 27.5 -6.5**
BKNI Bangkinang 46.88 257 P **P** **23 22 44.6 0.0**
comp=Z,213nm,1.1s,comp=Z,3μmcomp=Z,3μm
MGCD Mangrove Creek 46.95 175 P **P** **23 22 45.0 +0.1**
baz=47,SNR=9.2
MGCD Mangrove Creek 46.95 175 P **P** **23 22 45.6 +0.8**
XMI Christmas Isla 47.05 241 P **P** **23 22 46.3 +0.3**
ULN Ulaanbaatar 47.09 324 P **P** **23 22 46.0 0.0**
ULN IAmb IAmb 23 22 54.9
comp=Z,157nm,0.7s
ULN Ulaanbaatar 47.09 324 IAMs_20 IAMs_20 23 42 47.9
comp=Z,10μm,21.0s
ULN Ulaanbaatar 47.09 324*c i*P **P** **23 22 46.7 +0.7**
ULN pmax pmax
comp=Z,165nm,0.7s
ULN MLR MLR
comp=Z,10μm,20.0s
ULN Ulaanbaatar 47.09 324 P **P** **23 22 46.6 +0.6**
ULN P **P** **23 22 46.6 +0.6**
ULN S **S** **23 29 35.5 -1.1**
ULN S **S** **23 29 35.5 -1.1**
XMIS Christmas Isla 47.10 241 P **P** **23 22 46.1 -0.2**
KRJI Kerinci 47.29 254 P **P** **23 22 48.2 +0.3**
comp=Z,1μm,1.9s,comp=Z,20μmcomp=Z,4μm
WHYH Whyalla 47.33 190 P **P** **23 22 48.3 +0.6**
BBOO Buckleboo 47.39 192 P **P** **23 22 48.5 +0.2**
baz=48,SNR=154
BBOO Buckleboo 47.39 192 P **P** **23 22 48.4 +0.2**
SONM Songino Array 47.45 324 IAmb IAmb 23 23 08.4
comp=Z,135nm,0.9s
SONM Songino Array 47.45 324 P **P** **23 22 49.1 +0.3**
comp=Z,99nm,0.6s,baz=137,slow=3.3,SNR=123
SONM PcP **PcP** **23 24 20.3 +1.4**
comp=Z,20nm,0.8s,baz=116,slow=2.9,SNR=1.1
SONM ScP **ScP** **23 28 11.3 +0.1**
comp=Z,4.7nm,1.1s,baz=126,slow=2.5,SNR=1.9
SONM S **S** **23 29 40.6 -1.0**
comp=Z,4.8nm,1.1s,baz=135,slow=2.3,SNR=3.0
SONM LR LR 23 41 58.0
comp=Z,10μm,21.5s,baz=118,slow=35
comp=Z,99nm,0.6s
HTT Hallett 47.51 189 P **P** **23 22 49.6 +0.4**
baz=48,SNR=52
HTT Hallett 47.51 189 P **P** **23 22 49.4 +0.2**
RIV Riverview 47.57 175 P **P** **23 22 49.9 +0.3**
baz=48
FORT Forrest 47.71 202 P **P** **23 22 51.5 +0.7**
baz=48,SNR=151
FORT Forrest 47.71 202 P **P** **23 22 51.4 +0.7**
FORT IAMs_20 IAMs_20 23 43 47.5
comp=Z,10μm,20.0s
FORT Forrest 47.71 202 P **P** **23 22 51.5 +0.7**
PDSI Padang 47.82 256 P **P** **23 22 49.9 -2.1**
comp=Z,156nm,0.6s,comp=Z,3μmcomp=Z,3μm
YNG Young 47.86 178 P **P** **23 22 52.3 +0.4**
baz=48
YNG Young 47.86 178 P **P** **23 22 52.6 +0.7**
KIWB Kanaga Island 47.87 30 P **P** **23 22 52.8 +1.0**
GIRL Giralia 48.03 221 P **P** **23 22 55.0 +1.7**
baz=48,SNR=11
GIRL Giralia 48.03 221 P **P** **23 22 54.6 +1.3**
GIRL Giralia 48.03 221 P **P** **23 22 55.2 +1.9**
ADK Adak 48.12 30 P **P** **23 22 53.8 +0.1**
ADK IAmb IAmb 23 23 02.6
comp=Z,289nm,0.9s
ADK Adak 48.12 30 P **P** **23 22 53.8 +0.1**
ADK pmax pmax
comp=Z,289nm,1.0s
ADK MLR MLR
comp=Z,4μm,22.0s
WOLH Wollongong Har 48.12 175 P **P** **23 22 54.5 +0.6**
GTA Gaotai 48.18 311 P **P** **23 22 55.4 +0.8**
GTA pP pwP 23 23 06.3 -3.0
GTA PcP **PcP** **23 24 25.2 +3.5**
GTA PP **PP** **23 24 52.8 +5.8**
GTA ScP **ScP** **23 28 14.1 -0.4**
GTA S **S** **23 29 51.2 -1.0**
GTA ScS **ScS** **23 32 45.5 -0.6**
GTA pmax pmax
comp=Z,120nm,1.5s
GTA pmax pmax
comp=Z,2μm,4.6s
GTA LR LR
comp=Z,6μm,18.2s
GTA LR LR
comp=Z,7μm,21.4s
GTA LR LR
comp=Z,11μm,22.5s
MEEK Meekatharra 48.44 214 P **P** **23 22 56.5 0.0**
baz=48,SNR=16
MEEK Meekatharra 48.44 214 P **P** **23 22 56.5 0.0**
PPSI Pulau Pagai 48.88 254 P **P** **23 22 59.0 -1.1**
comp=Z,324nm,1.3s,comp=Z,5μm
CAN Canberra 48.91 177 IAMs_20 IAMs_20 23 41 40.0
comp=Z,10μm,20.0s
CAN Canberra 48.91 177 P **P** **23 23 00.6 +0.6**
CAN Canberra 48.91 177 P **P** **23 23 00.8 +0.8**
CAN pmax pmax
comp=Z,104nm,1.3s
CNB Canberra Magne 48.92 177 P **P** **23 23 00.8 +0.7**
KCSI Kotacane, Aceh 49.08 263 P **P** **23 23 01.6 -0.1**
comp=Z,485nm,1.2s,comp=Z,5μm
SEY Seymchan 49.25 4⇑ *i*P **P** **23 23 03.0 +0.8**
SEY pmax pmax
comp=Z,290nm,1.5s
SEY MLR MLR
comp=Z,6μm,19.0s
SEY Seymchan 49.25 4 LR LR 23 44 28.9
comp=Z,4μm,19.9s,baz=184,slow=37
SISI Saibi 49.25 256 P **P** **23 23 01.6 -1.4**
comp=Z,680nm,0.7s,comp=Z,6μm
LHMI Lhok Sumawe 49.46 265 P **P** **23 23 05.7 +1.1**
LHMI IAmb IAmb 23 23 35.9
comp=Z,290nm,0.8s
LHMI Lhok Sumawe 49.46 265 P **P** **23 23 06.1 +1.5**
LHMI Lhok Sumawe 49.46 265 P **P** **23 23 07.0 +2.4**
comp=Z,437nm,1.4s,comp=Z,6μmcomp=Z,6μm
ATKA Atka Island 49.53 31 P **P** **23 23 05.1 +0.6**
ATKA IAmb IAmb 23 23 28.6
comp=Z,251nm,0.8s
YAK Yakutsk 49.64 350 P **P** **23 23 03.6 -1.6**
YAK IAmb IAmb 23 23 16.1
comp=Z,198nm,0.8s
YAK Yakutsk 49.64 350 IAMs_20 IAMs_20 23 44 43.9
comp=Z,7μm,18.0s
YAK Yakutsk 49.64 350*c i*P **P** **23 23 03.9 -1.3**
YAK *e**PP **pP** **23 23 07.7 -4.1**
YAK *e* 23 25 00.0
YAK *e*PPP PPP 23 25 54.4
YAK *e*S **S** **23 30 09.7 -2.1**
YAK *e**SS **sS** **23 30 27.9 +4.8**
YAK *e* 23 32 48.2
YAK *e*SS **SS** **23 33 47.4 +3.3**
YAK pmax pmax
comp=Z,31nm,0.7s
YAK pmax pmax
comp=N,10.0nm,0.8s
YAK pmax pmax
comp=Z,372nm,2.7s
YAK pmax pmax
comp=N,213nm,2.3s
YAK pmax pmax
comp=E,71nm,1.9s
YAK smax smax
comp=N,132nm,2.3s
YAK smax smax
comp=E,228nm,2.3s
YAK MLR MLR
comp=Z,8μm,20.0s
YAK MLR MLR
comp=E,2μm,14.0s
YAK MLR MLR
comp=N,4μm,17.0s
YAK Yakutsk 49.64 350 S **S** **23 30 09.6 -2.1**
comp=N,8.4nm,0.3s,baz=94,slow=16,SNR=1.7
YAK LR LR 23 45 36.2
comp=N,2μm,21.9s,baz=159,slow=38
GSI Gunungsitoli 49.88 260 IAmb IAmb 23 23 27.3
comp=Z,244nm,0.8s
GSI Gunungsitoli 49.88 260 P **P** **23 23 07.2 -0.6**
GSI Gunungsitoli 49.88 260 P **P** **23 23 07.0 -0.8**
comp=Z,324nm,1.2s,comp=Z,4μmcomp=Z,3μm
AUSMG Snowy Mountain 49.99 178 P **P** **23 23 09.2 +0.9**
MLSI Meulaboh, Aceh 50.21 264 P **P** **23 23 10.1 -0.2**
comp=Z,69nm,0.8s
BOD Bodaibo 50.28 338 *e*P **P** **23 23 09.2 -0.9**
BOD pmax pmax
comp=Z,1μm,1.5s
JORH JORHAT 50.30 293 IAMs_20 IAMs_20 23 43 25.2
comp=Z,4μm,20.9s
KOHI KOHIMA 50.36 292 *e*P **P** **23 23 10.3 -1.2**
KOHI IAmb IAmb 23 23 16.0
comp=Z,109nm,0.7s
KOHI IAMs_20 IAMs_20 23 42 15.0
comp=Z,6μm,22.5s
IMP Imphal 50.47 291 *e*P **P** **23 23 11.1 -1.1**
IMP IAmb IAmb 23 23 19.6
comp=Z,57nm,0.8s
IMP IAMs_20 IAMs_20 23 42 39.9
comp=Z,4μm,16.0s
ARPS Mount Arapiles 50.48 185 P **P** **23 23 12.4 +0.6**
baz=51,SNR=31
ARPS Mount Arapiles 50.48 185 P **P** **23 23 13.0 +1.1**
ZAK Zakamensk 50.52 325 *e*P **P** **23 23 12.4 +0.2**
ZAK *e* 23 30 22.1
ZAK pmax pmax
comp=Z,215nm,1.1s
MILA Mila 50.64 177 P **P** **23 23 14.1 +0.9**
baz=51,SNR=14
MILA Mila 50.64 177 P **P** **23 23 14.1 +0.9**
ZIRO ZIRO 50.71 294 *e*P **P** **23 23 14.8 +0.6**
ZIRO IAMs_20 IAMs_20 23 42 57.9
comp=Z,4μm,18.7s
KMBL Kambalda 50.72 207 P **P** **23 23 13.5 -0.2**
baz=51,SNR=22
KMBL Kambalda 50.72 207 P **P** **23 23 13.8 0.0**
SNSI Sinabang, Aceh 50.77 262 P **P** **23 23 15.9 +1.4**
comp=Z,861nm,1.1s,comp=Z,10μm
ITAN ITANAGAR 50.80 294 *e*P **P** **23 23 16.2 +1.6**
ITAN IAMs_20 IAMs_20 23 43 20.5
comp=Z,4μm,18.6s
IRK Irkutsk 50.97 328 *e*P **P** **23 23 15.4 -0.1**
IRK *e*S **S** **23 30 28.8 -1.9**
IRK pmax pmax
comp=Z,513nm,3.2s
TOO Toolangi 51.10 181 P **P** **23 23 17.8 +1.2**
baz=51,SNR=19
TOO Toolangi 51.10 181 P **P** **23 23 16.6 0.0**
TOO IAmb IAmb 23 23 35.3
comp=Z,529nm,1.6s
TOO Toolangi 51.10 181 P **P** **23 23 18.1 +1.5**
TOO Toolangi 51.10 181 P **P** **23 23 16.6 0.0**
TOO pmax pmax
comp=Z,529nm,1.6s
TOO MLR MLR
comp=Z,4μm,18.0s
BRAT Ballarat 51.13 183 P **P** **23 23 18.3 +1.6**
GOMU GeErMu 51.15 305 P **P** **23 23 18.6 +1.0**
GOMU sP pP 23 23 23.2 -0.9
GOMU S **S** **23 30 35.3 +0.9**
GOMU SS **SS** **23 34 10.6 +0.8**
GOMU pmax pmax
comp=Z,95nm,1.9s
GOMU LR LR
comp=Z,2μm,18.9s
GOMU LR LR
comp=Z,3μm,18.4s
GOMU LR LR
comp=Z,5μm,18.2s
SAIH SAIHA 51.30 288 *e*P **P** **23 23 18.5 -0.1**
SAIH IAmb IAmb 23 23 24.1
comp=Z,180nm,0.8s
SAIH IAMs_20 IAMs_20 23 41 43.4
comp=Z,3μm,22.6s
KEKH Kekaha 51.68 73 P **P** **23 23 21.4 +0.1**
KEKH IAmb IAmb 23 24 00.0
comp=Z,714nm,1.8s
MORW Morawa 51.75 214 P **P** **23 23 21.7 +0.1**
baz=52,SNR=8.5
MORW Morawa 51.75 214 IAmb IAmb 23 23 39.5
comp=Z,244nm,0.9s
MORW Morawa 51.75 214 P **P** **23 23 21.7 +0.1**
GEXS Deakin Univers 51.76 182 P **P** **23 23 23.5 +2.1**
AUHPC Hawkesdale P12 51.77 184 P **P** **23 23 23.4 +1.9**
DGPR DIGLIPUR 51.94 276 *e*P **P** **23 23 23.6 +0.3**
DGPR IAmb IAmb 23 23 44.7
comp=Z,113nm,1.2s
DGPR IAMs_20 IAMs_20 23 39 02.9
comp=Z,4μm,24.7s
SHL Shillong 52.36 292 *e*P **P** **23 23 26.2 -0.3**
SHL IAmb IAmb 23 23 29.6
comp=Z,123nm,0.8s
MOY Mondy 52.41 326 *e*P **P** **23 23 26.2 -0.2**
MOY pmax pmax
comp=Z,336nm,3.2s
BRDH Bariadhala 52.54 288 LR LR 23 48 07.7
comp=Z,9μm,18.4s,baz=168,slow=39
GUWA GUWAHATI 52.56 292 *e*P **P** **23 23 27.1 -0.7**
BLDU Ballidu 52.61 213 P **P** **23 23 27.7 -0.2**
baz=53,SNR=56
BLDU Ballidu 52.61 213 P **P** **23 23 27.8 -0.1**
NIKH Nikolski High 52.68 32 P **P** **23 23 29.3 +1.1**
NIKH IAmb IAmb 23 23 41.9
comp=Z,383nm,1.0s
NIKH Nikolski High 52.68 32 P **P** **23 23 29.1 +0.9**
baz=239
KLBR Kellerberrin 52.85 211 P **P** **23 23 29.2 -0.5**
baz=53,SNR=58
KLBR Kellerberrin 52.85 211 P **P** **23 23 29.3 -0.4**
AGT Agartala 52.90 290 *e*P **P** **23 23 32.0 +1.7**
AGT IAmb IAmb 23 23 37.6
comp=Z,265nm,1.1s
LSA Lhasa 53.26 297 P **P** **23 23 34.1 +0.7**
LSA IAmb IAmb 23 23 37.9
comp=Z,192nm,1.0s
LSA Lhasa 53.26 297 P **P** **23 23 34.6 +1.1**
LSA Lhasa 53.26 297 P **P** **23 23 34.1 +0.7**
LSA pmax pmax
comp=Z,193nm,1.0s
LSA MLR MLR
comp=Z,3μm,19.0s
OPA Opana 53.27 73 P **P** **23 23 33.0 -0.1**
OPA IAmb IAmb 23 24 11.0
comp=Z,594nm,1.8s
OPA Opana 53.27 73 P **P** **23 23 33.0 -0.1**
OPA pmax pmax
comp=Z,594nm,1.8s
KIP Kipapa 53.27 73 P **P** **23 23 33.5 +0.4**
KIP Kipapa 53.27 73 P **P** **23 23 33.5 +0.4**
KIP pmax pmax
comp=Z,160nm,1.0s
HON Honolulu 53.28 74 P **P** **23 23 31.6 -1.6**
HON IAmb IAmb 23 23 59.7
comp=Z,176nm,0.9s
HON Honolulu 53.28 74 P **P** **23 23 31.6 -1.6**
HON pmax pmax
comp=Z,176nm,0.9s
MUN Mundaring 53.95 212 P **P** **23 23 37.5 -0.2**
baz=54,SNR=11
MUN Mundaring 53.95 212 P **P** **23 23 37.9 +0.1**
NIUE Niue 53.99 126 P **P** **23 23 39.0 +0.8**
NWAO Narrogin (SRO) 54.19 210 P **P** **23 23 39.3 -0.2**
baz=54,SNR=13
NWAO P **P** **23 23 39.3 -0.2**
baz=54,SNR=13
NWAO Narrogin (SRO) 54.19 210 P **P** **23 23 39.2 -0.2**
NWAO Narrogin (SRO) 54.19 210 P **P** **23 23 39.9 +0.4**
NWAO IAmb IAmb 23 25 02.5
comp=Z,321nm,1.0s
NWAO Narrogin (SRO) 54.19 210 IAMs_20 IAMs_20 23 48 32.1
comp=Z,9μm,20.0s
NWAO Narrogin (SRO) 54.19 210 P **P** **23 23 39.2 -0.3**
NWAO pmax pmax
comp=Z,107nm,1.1s
NWAO MLR MLR
comp=Z,9μm,20.0s
NWAO Narrogin (SRO) 54.19 210 LR LR 23 48 53.6
comp=Z,8μm,18.4s,baz=52,slow=38
NWAO Narrogin (SRO) 54.19 210 P **P** **23 23 40.1 +0.6**
NWAO S **S** **23 31 18.1 +3.1**
P08K Saint George I 54.28 28 P **P** **23 23 40.2 +0.3**
baz=236
SPIA Saint Paul Isl 54.29 27 P **P** **23 23 41.5 +1.6**
baz=235
UNV Unalaska Valle 54.34 32 P **P** **23 23 41.3 +1.0**
baz=241
GLAD Gladstone 54.52 179 P **P** **23 23 42.7 +1.0**
KHLH Kahului Airpor 54.77 74 P **P** **23 23 44.3 +0.3**
AULHS Lilydale High 54.77 179 P **P** **23 23 44.9 +1.4**
AKUT Akutan 54.85 32 P **P** **23 23 44.2 +0.1**
RAO Raoul Island 54.92 142 P **P** **23 23 45.5 +0.6**
RAO Raoul Island 54.92 142 IAMs_20 IAMs_20 23 41 55.5
comp=Z,8μm,22.0s
RAO Raoul Island 54.92 142 P **P** **23 23 45.5 +0.6**
RAO pmax pmax
comp=Z,1μm,1.4s
RAO MLR MLR
comp=Z,8μm,22.0s
RAO Raoul Island 54.92 142 LR LR 23 46 04.7
comp=Z,5μm,18.3s,baz=326,slow=35
HLK Haleakala 54.94 74 P **P** **23 23 45.6 0.0**
HLK IAmb IAmb 23 24 11.3
comp=Z,464nm,1.4s
CORO Coronation Par 54.97 179 P **P** **23 23 46.4 +1.4**
OUZ Omahuta 55.13 153 IAMs_20 IAMs_20 23 49 38.3
comp=Z,7μm,18.0s
OUZ Omahuta 55.13 153 P **P** **23 23 48.3 +2.0**
KHLU Kahalu`u 55.34 76 P **P** **23 23 48.5 +0.2**
GTK Tadong 55.36 294 *e*P **P** **23 23 48.8 +0.4**
GTK IAmb IAmb 23 23 53.0
comp=Z,183nm,0.9s
HPAH Hawaii Prepara 55.49 75 P **P** **23 23 50.0 +0.6**
COCO West Island 55.53 245 P **P** **23 23 49.4 -0.1**
COCO IAmb IAmb 23 24 08.1
comp=Z,183nm,0.9s
COCO West Island 55.53 245 P **P** **23 23 49.4 -0.1**
COCO pmax pmax
comp=Z,183nm,1.0s
AUALB St Joseph's Co 55.57 208 P **P** **23 23 50.5 +1.1**
KHU Kahuku 55.62 76 P **P** **23 23 50.8 +0.3**
KHU IAmb IAmb 23 24 22.6
comp=Z,216nm,1.2s
KHU Kahuku 55.62 76 P **P** **23 23 50.8 +0.3**
KHU pmax pmax
comp=Z,216nm,1.2s
MWH Moku'aweowe 55.62 76 P **P** **23 23 51.4 +0.6**
MWH IAmb IAmb 23 25 01.1
comp=Z,234nm,1.2s
MLOA Mauna Loa Obse 55.64 76 P **P** **23 23 50.5 -0.4**
MLOA IAmb IAmb 23 24 08.3
comp=Z,430nm,1.6s
POHA Pohakuloa 55.67 75 P **P** **23 23 50.7 -0.1**
POHA IAmb IAmb 23 24 17.3
comp=Z,239nm,1.0s
RKGY Rocky Gully 55.68 209 P **P** **23 23 51.0 +0.7**
baz=56,SNR=6.1
RKGY Rocky Gully 55.68 209 P **P** **23 23 51.0 +0.7**
BILL Bilibino 55.72 9 P **P** **23 23 50.6 +0.6**
BILL Bilibino 55.72 9 *i*P **P** **23 23 50.7 +0.6**
BILL pmax pmax
comp=Z,456nm,1.7s
HMH Humu'ula Sheep 55.72 76 P **P** **23 23 51.1 -0.2**
HMH IAmb IAmb 23 23 59.4
comp=Z,585nm,1.7s

MLH **Mauna Loa** **55.82 76** P **P** **23 23 51.5 -0.4**
MLH IAmb IAmb 23 24 18.0
comp=Z,309nm,1.2s
MOO **Moorlands** **55.96 179** P **P** **23 23 53.2 +1.1**
baz=56,SNR=3.9
MOO **Moorlands** **55.96 179** P **P** **23 23 53.2 +1.1**
PUH **Pauahi** **55.99 76** IAmb IAmb 23 24 03.1
comp=Z,200nm,1.0s
STCH **Steam Cracks** **56.07 76** P **P** **23 23 54.2 +0.7**
STCH IAmb IAmb 23 23 58.6
comp=Z,261nm,1.1s
FALS **False Pass** **56.41 32** P **P** **23 23 56.2 +1.0**
baz=244
TAU **Tasmania Unive** **56.43 179** P **P** **23 23 55.9 +0.5**
TAU IAmb IAmb 23 24 13.9
comp=Z,445nm,1.8s
TAU **Tasmania Unive** **56.43 179** P **P** **23 23 55.9 +0.5**
TAU pmax pmax
comp=Z,445nm,1.8s
TAU MLR MLR
comp=Z,10µm,20.0s
XMAS **Kiritimati** **56.66 97** P **P** **23 23 56.2 -1.5**
GAMB **Gambell** **57.74 21** P **P** **23 24 06.1 +1.7**
baz=230,SNR=38
GAMB S **S** **23 32 05.7 +4.2**
baz=230
BOK **Bokaro** **57.81 290** *e*P **P** **23 24 06.4 +0.7**
BOK IAmb IAmb 23 24 23.8
comp=Z,138nm,0.9s
BOK IAMs_20 IAMs_20 23 39 08.2
comp=Z,3µm,21.7s
M11K **Mekoryuk** **57.83 26** P **P** **23 24 06.2 +1.1**
baz=238
M11K S **S** **23 32 07.1 +4.5**
baz=238
WMQ **Urumqi** **58.10 313** *e*P **P** **23 24 08.6 +1.1**
WMQ pP pP 23 24 14.7 +0.5
WMQ PcP **PcP** **23 25 03.1 +4.1**
WMQ PP **PP** **23 26 17.9 +1.6**
WMQ S **S** **23 32 04.9 -2.1**
WMQ ScS **ScS** **23 33 54.8 -0.7**
WMQ SS **SS** **23 36 01.4 +2.9**
WMQ pmax pmax
comp=Z,100nm,1.1s
WMQ pmax pmax
comp=Z,2µm,3.6s
WMQ LR LR
comp=Z,4µm,18.7s
WMQ LR LR
comp=Z,8µm,18.7s
WMQ LR LR
comp=Z,9µm,24.5s
SDPT **Sand Point** **58.15 33** P **P** **23 24 08.6 +1.1**
SDPT **Sand Point** **58.15 33** P **P** **23 24 07.6 +0.2**
baz=246
CNBA **Chernabura Isl** **58.41 33** P **P** **23 24 10.6 +1.3**
CHNA **Chernabura Isl** **58.41 33** P **P** **23 24 10.7 +1.4**
baz=247
HIZ **Hauiti** **58.45 154** P **P** **23 24 10.5 +0.7**
HIZ IAmb IAmb 23 24 43.2
comp=Z,189nm,1.0s
HIZ IAMs_20 IAMs_20 23 45 57.9
comp=Z,5µm,20.0s
TIXI **Tiksi** **58.79 354** P **P** **23 24 10.3 -1.4**
TIXI IAmb IAmb 23 24 16.6
comp=Z,180nm,1.3s
TIXI **Tiksi** **58.79 354** IAMs_20 IAMs_20 23 51 08.1
comp=Z,5µm,18.0s
TIXI **Tiksi** **58.79 354**⇑ *i*P **P** **23 24 10.3 -1.4**
TIXI pmax pmax
comp=Z,92nm,1.0s
TIXI MLR MLR
comp=Z,4µm,17.0s
TIXI **Tiksi** **58.79 354** LR LR 23 51 20.4
comp=Z,2µm,19.2s,baz=176,slow=38
S14K **Fog Glacier** **59.00 32** P **P** **23 24 14.6 +1.0**
baz=246
S14K S **S** **23 32 21.5 +3.2**
baz=246
M13K **Dall Lake** **59.05 26** P **P** **23 24 14.5 +0.8**
M13K IAMs_20 IAMs_20 23 47 42.2
comp=Z,7µm,20.0s
M13K **Dall Lake** **59.05 26** P **P** **23 24 15.9 +2.2**
baz=240,SNR=27
M13K S **S** **23 32 21.9 +3.3**
baz=240
MXZ **Matakaoa Point** **59.22 151** pP **P** **23 24 13.6 -1.5**
URZ **Urewera** **59.23 152** LR LR 23 46 49.4
comp=Z,6µm,21.6s,baz=76,slow=33
K13K **Kusilvak Mount** **59.28 24** S **S** **23 32 25.7 +4.1**
baz=238
O14K **Tigyukauivet M** **59.44 28** P **P** **23 24 17.1 +0.8**
O14K IAmb IAmb 23 24 42.6
comp=Z,252nm,1.4s
O14K **Tigyukauivet M** **59.44 28** P **P** **23 24 17.2 +0.8**
baz=243
O14K S **S** **23 32 25.9 +2.2**
baz=243
RTZ **Ruatahuna** **59.46 152** IAMs_20 IAMs_20 23 47 53.8
comp=Z,4µm,18.0s
QRZ **Quartz Range** **59.48 157** IAmb IAmb 23 24 35.3
comp=Z,293nm,1.2s
QRZ IAMs_20 IAMs_20 23 48 45.4
comp=Z,7µm,18.0s
QRZ **Quartz Range** **59.48 157** P **P** **23 24 17.7 +0.8**
N14K **Kuskokwak Cree** **59.55 27** P **P** **23 24 19.0 +1.9**
baz=242
CHGN **Chignik** **59.59 32** P **P** **23 24 18.2 +0.7**
CHGN IAmb IAmb 23 24 37.9
comp=Z,179nm,0.8s
CHGN **Chignik** **59.59 32** P **P** **23 24 19.1 +1.7**
baz=248
DGZ **Jazzator, Alta** **59.66 320** *c i*P **P** **23 24 19.3 +1.0**
DGZ pmax pmax
comp=Z,215nm,0.9s
DGZ MLR MLR
comp=Z,8µm,18.0s
BKZ **Black Stump Fm** **59.70 153** P **P** **23 24 17.8 -0.7**
L14K **Kuka Creek** **59.80 26** P **P** **23 24 20.0 +1.2**
L14K **Kuka Creek** **59.80 26** P **P** **23 24 20.5 +1.7**
baz=241
L14K S **S** **23 32 31.5 +3.3**
baz=241
M14K **Bethel** **59.82 26** P **P** **23 24 20.7 +1.8**
baz=242,SNR=47
M14K S **S** **23 32 30.3 +1.8**
baz=242
DSZ **Denniston Nort** **60.02 158** IAmb IAmb 23 24 37.8
comp=Z,248nm,1.1s
DSZ IAMs_20 IAMs_20 23 48 40.5
comp=Z,8µm,19.0s
O15K **Ungalikthiuk R** **60.07 29** P **P** **23 24 22.2 +1.4**
baz=245
O15K S **S** **23 32 35.1 +3.3**
baz=245
TNA **Tin City** **60.13 20** P **P** **23 24 22.5 +1.4**
TNA IAmb IAmb 23 24 28.8
comp=Z,196nm,1.2s
TNA **Tin City** **60.13 20** P **P** **23 24 22.4 +1.4**
baz=233
TNA S **S** **23 32 32.9 +0.5**
baz=233
NNZ **Nelson** **60.15 157** P **P** **23 24 21.6 +0.1**
NNZ IAmb IAmb 23 24 22.9
comp=Z,371nm,1.6s
NNZ IAMs_20 IAMs_20 23 49 42.9
comp=Z,7µm,20.0s
J14K **Nanvaranak Lak** **60.15 24** P **P** **23 24 23.1 +1.9**
baz=239
J14K S **S** **23 32 35.7 +3.0**
baz=239
M15K **Kasigluk River** **60.35 27** P **P** **23 24 24.1 +1.5**
baz=243,SNR=21
M15K S **S** **23 32 36.6 +1.2**
baz=243
N15K **Kwethluk River** **60.38 28** P **P** **23 24 24.3 +1.4**
N15K IAMs_20 IAMs_20 23 46 59.1
comp=Z,7µm,21.0s
N15K **Kwethluk River** **60.38 28** P **P** **23 24 24.8 +1.9**
baz=244,SNR=27
N15K S **S** **23 32 38.1 +2.3**
baz=244
ANM **Nome** **60.44 22** P **P** **23 24 24.8 +1.7**
ANM IAmb IAmb 23 24 41.2
comp=Z,187nm,1.0s
ANM **Nome** **60.44 22** P **P** **23 24 24.9 +1.7**
baz=236,SNR=62
ANM S **S** **23 32 38.5 +2.2**
baz=236
ANM **Nome** **60.44 22** P **P** **23 24 24.8 +1.7**
ANM pmax pmax
comp=Z,187nm,1.0s
ANM MLR MLR
comp=Z,5µm,21.0s
THZ **Tophouse** **60.44 157** IAMs_20 IAMs_20 23 49 14.6
comp=Z,7µm,19.0s
L15K **Ungalak Mounta** **60.46 26** P **P** **23 24 24.6 +1.2**
baz=242
L15K S **S** **23 32 38.7 +1.9**
baz=242
R16K **Pilot Point** **60.50 31** P **P** **23 24 24.5 +0.8**
baz=248
F14K **Arctic Creek** **60.62 21** P **P** **23 24 26.1 +1.7**
baz=235
F14K S **S** **23 32 40.7 +2.0**
baz=235
VIS **Vishakhapatnam** **60.62 283** *e*P **P** **23 24 25.9 +0.7**
K15K **Wolf Creek Mou** **60.74 25** P **P** **23 24 26.5 +1.3**
baz=241
K15K S **S** **23 32 43.7 +3.4**
baz=241
SNZO **South Karori** **60.74 156** P **P** **23 24 24.8 -0.7**
SNZO IAmb IAmb 23 24 41.9
comp=Z,261nm,1.1s
INZ **Inchbonnie** **60.75 159** IAmb IAmb 23 24 43.0
comp=Z,188nm,1.0s
INZ IAMs_20 IAMs_20 23 51 42.0
comp=Z,6µm,18.0s
ZSN **Zaisan** **60.79 317**⇑ *i*P **P** **23 24 26.9 +0.9**
comp=Z,166nm,1.4s,baz=317
ZSN *e*S **S** **23 32 41.8 +0.2**
baz=317
ZSN **Zaisan** **60.79 317** *c i*P **P** **23 24 26.8 +0.9**
ZSN *e*S **S** **23 32 41.7 +0.2**
ZSN pmax pmax
comp=Z,166nm,1.4s
BFZ **Birch Farm** **60.85 154** pP **P** **23 24 26.0 -0.2**
BFZ IAMs_20 IAMs_20 23 47 49.4
comp=Z,7µm,19.0s
BFZ **Birch Farm** **60.85 154** P **P** **23 24 25.9 -0.4**
P16K **Nushagak River** **60.87 29** P **P** **23 24 27.6 +1.5**
baz=246
CHIR **Chirikof Islan** **60.88 33** P **P** **23 24 28.1 +1.7**
baz=250
BHW **Baring Head** **60.89 156** P **P** **23 24 26.1 -0.5**
BHW IAMs_20 IAMs_20 23 48 53.7
comp=Z,8µm,20.0s
CMWZ **Cape Campbell** **60.92 156** P **P** **23 24 27.3 +0.5**
FOZ **Fox Glacier** **60.93 161** P **P** **23 24 27.1 +0.4**
FOZ IAmb IAmb 23 24 44.8
comp=Z,182nm,1.1s
O16K **Kokwok River B** **61.05 29** P **P** **23 24 28.6 +1.2**
baz=246
O16K S **S** **23 32 47.1 +2.8**
baz=246
JCZ **Jackson Bay** **61.09 162** P **P** **23 24 28.7 +0.7**
N16K **Nishlik Lake** **61.10 28** P **P** **23 24 29.6 +1.8**
baz=245
N16K S **S** **23 32 48.4 +3.3**
baz=245
G15K **Niukluk** **61.15 22** P **P** **23 24 29.6 +1.6**
baz=238
G15K S **S** **23 32 48.3 +2.8**
baz=238
KHZ **Kahutara** **61.24 157** P **P** **23 24 27.2 -1.7**
M16K **Timber Creek** **61.25 27** P **P** **23 24 30.4 +1.6**
baz=245
M16K S **S** **23 32 48.5 +1.6**
baz=245
F15K **North Star Dit** **61.33 21** P **P** **23 24 30.8 +1.6**
baz=237
F15K S **S** **23 32 49.0 +1.3**
baz=237
L16K **Owhat River** **61.33 26** P **P** **23 24 30.5 +1.2**
L16K IAmb IAmb 23 24 34.2
comp=Z,151nm,1.1s
L16K IAMs_20 IAMs_20 23 48 21.3
comp=Z,7µm,20.0s
L16K **Owhat River** **61.33 26** P **P** **23 24 30.7 +1.4**
baz=244
L16K S **S** **23 32 49.5 +1.7**
baz=244
Q16K **King Salmon** **61.37 30** P **P** **23 24 30.9 +1.3**
baz=248
Q16K S **S** **23 32 49.3 +0.9**
baz=248
OXZ **Oxford** **61.49 159** IAmb IAmb 23 24 30.6
comp=Z,90nm,0.8s
OXZ IAMs_20 IAMs_20 23 51 15.4
comp=Z,6µm,19.0s
RPZ **Rata Peaks** **61.50 160** P **P** **23 24 29.8 -0.9**
RPZ IAmb IAmb 23 24 47.5
comp=Z,256nm,1.1s
RPZ **Rata Peaks** **61.50 160** P **P** **23 24 29.9 -0.7**
RPZ **Rata Peaks** **61.50 160** LR LR 23 49 09.4
comp=Z,11µm,20.4s,baz=324,slow=34
GVZ **Greta Valley S** **61.53 158** P **P** **23 24 30.6 -0.3**
GVZ IAmb IAmb 23 24 47.5
comp=Z,243nm,1.1s
GVZ IAMs_20 IAMs_20 23 48 20.5
comp=Z,7µm,19.0s
O17K **Koliganek Bris** **61.58 29** P **P** **23 24 32.6 +1.6**
baz=247,SNR=36
O17K S **S** **23 32 54.3 +3.2**
baz=247
J16K **Anvik River** **61.59 24** P **P** **23 24 32.6 +1.6**
J16K IAMs_20 IAMs_20 23 47 25.0
comp=Z,5µm,20.0s
J16K **Anvik River** **61.59 24** P **P** **23 24 32.9 +1.9**
baz=242
J16K S **S** **23 32 55.2 +4.2**
baz=242
Q17K **Contact Creek** **61.60 31** P **P** **23 24 33.3 +2.1**
baz=249
H16K **Elim** **61.62 22** P **P** **23 24 32.5 +1.3**
baz=240,SNR=84
H16K S **S** **23 32 54.6 +3.1**
baz=240
P17K **Kvichak River** **61.67 29** P **P** **23 24 32.1 +0.5**
baz=248
P17K S **S** **23 32 52.2 0.0**
baz=248
LBZ **Lake Benmore** **61.81 161** P **P** **23 24 32.1 -0.6**
LBZ IAmb IAmb 23 24 50.0
comp=Z,131nm,0.9s
I17K **Unalakleet** **61.84 24** P **P** **23 24 34.0 +1.4**
I17K **Unalakleet** **61.84 24** P **P** **23 24 34.9 +2.2**
baz=241,SNR=35
I17K S **S** **23 32 57.4 +3.2**
baz=241
N17K **Nushagak Hills** **61.84 28** P **P** **23 24 33.9 +1.2**
N17K IAmb IAmb 23 24 59.0
comp=Z,209nm,0.9s
N17K IAMs_20 IAMs_20 23 47 32.3
comp=Z,6µm,21.0s
N17K **Nushagak Hills** **61.84 28** P **P** **23 24 34.5 +1.8**
baz=247
N17K S **S** **23 32 57.8 +3.5**
baz=247
WKZ **Wanaka** **61.85 162** P **P** **23 24 32.0 -1.0**
WKZ IAmb IAmb 23 25 57.4
comp=Z,274nm,1.8s
SII **Sitkinak Islan** **61.88 33** P **P** **23 24 34.4 +1.2**
SII IAMs_20 IAMs_20 23 54 25.0
comp=Z,5µm,19.0s
SII **Sitkinak Islan** **61.88 33** P **P** **23 24 34.1 +1.0**
baz=251
DCZ **Deep Cove** **61.89 164** P **P** **23 24 33.5 +0.3**
G16K **Koyuk River** **61.97 22** IAmb IAmb 23 25 31.2
comp=Z,321nm,1.8s
G16K **Koyuk River** **61.97 22** P **P** **23 24 34.4 +0.9**
baz=239
G16K S **S** **23 32 59.1 +3.4**
baz=239
MQZ **McQueen's Vall** **62.04 159** IAmb IAmb 23 24 51.0
comp=Z,182nm,1.3s
MQZ IAMs_20 IAMs_20 23 51 30.0
comp=Z,4µm,19.0s
MLZ **Mavora Lakes** **62.08 163** IAmb IAmb 23 24 51.5
comp=Z,116nm,1.0s
MLZ IAMs_20 IAMs_20 23 48 45.8
comp=Z,7µm,21.0s
M17K **Holitna River** **62.08 27** P **P** **23 24 36.0 +1.6**
M17K IAMs_20 IAMs_20 23 47 29.1
comp=Z,7µm,22.0s
M17K **Holitna River** **62.08 27** P **P** **23 24 36.2 +1.8**
baz=246,SNR=30
M17K S **S** **23 33 00.8 +3.4**
baz=246
J17K **VABM Dome** **62.25 24** IAMs_20 IAMs_20 23 48 38.2
comp=Z,5µm,20.0s
J17K **VABM Dome** **62.25 24** P **P** **23 24 36.8 +1.4**
baz=243
J17K S **S** **23 33 02.8 +3.4**
baz=243
K17K **Iditarod** **62.27 25** IAMs_20 IAMs_20 23 48 39.0
comp=Z,5µm,20.0s
K17K **Iditarod** **62.27 25** P **P** **23 24 37.1 +1.5**
baz=244,SNR=114
K17K S **S** **23 33 02.9 +3.2**
baz=244
P18K **Big Mountain,** **62.32 29** P **P** **23 24 36.0 0.0**
baz=249
P18K S **S** **23 33 01.0 +0.5**
baz=249
ZAA0 **Zalesovo Array** **62.34 324** P **P** **23 24 36.0 -0.3**
ZAA0 IAMs_20 IAMs_20 23 52 54.0
comp=Z,6µm,20.0s
ZALV **Zalesovo Beam** **62.34 324** P **P** **23 24 35.8 -0.5**
ZALV **Zalesovo Beam** **62.34 324** *i* P **P** **23 24 36.0 -0.2**
ZALV pmax pmax
comp=Z,102nm,0.6s
ZALV **Zalesovo Beam** **62.34 324** P **P** **23 24 35.0 -1.2**
comp=Z,62nm,0.5s,baz=105,slow=6.7,SNR=114
ZALV S **S** **23 32 56.4 -4.5**
comp=Z,1.2nm,0.9s,baz=311,slow=41,SNR=2.3
ZALV LR LR 23 53 14.4
comp=Z,5µm,18.8s,baz=104,slow=38
ZALV PKPPKP **P'P'df** **23 53 39.8 -5.4**
comp=Z,2.9nm,0.9s,baz=276,slow=5.7,SNR=5.4
comp=Z,62nm,0.5s
MK31 **Makanchi Array** **62.40 316** P **P** **23 24 37.4 +0.5**
MK31 IAmb IAmb 23 24 41.1
comp=Z,365nm,1.5s
MK31 **Makanchi Array** **62.40 316** *i* P **P** **23 24 37.5 +0.7**
MK31 pmax pmax
comp=Z,45nm,0.4s
MKAR **Makanchi Array** **62.40 316** P **P** **23 24 37.3 +0.5**
MKAR **Makanchi Array** **62.40 316** *i* P **P** **23 24 37.5 +0.7**
MKAR pmax pmax
comp=Z,63nm,0.3s
MKAR **Makanchi Array** **62.40 316** P **P** **23 24 37.1 +0.3**
comp=Z,61nm,0.3s,baz=92,slow=8.6,SNR=1449
MKAR S **S** **23 33 01.7 -0.3**
comp=Z,1.4nm,1.0s,baz=297,slow=32,SNR=1.0
MKAR PKPPKP **P'P'df** **23 53 41.5 -4.0**
comp=Z,0.9nm,0.9s,baz=351,slow=0.9,SNR=4.7
MKAR PKP2bc 23 53 48.6
comp=Z,5.3nm,1.0s,baz=277,slow=3.2,SNR=12
MKAR LR LR 23 54 35.2
comp=Z,3µm,18.5s,baz=99,slow=39
comp=Z,61nm,0.3s
PYZ **Puysegur Point** **62.41 164** P **P** **23 24 36.6 -0.1**
N18K **Kilae Creek** **62.49 28** P **P** **23 24 38.6 +1.4**
N18K IAmb IAmb 23 25 03.4
comp=Z,203nm,1.1s
N18K **Kilae Creek** **62.49 28** P **P** **23 24 38.3 +1.2**
baz=248
N18K S **S** **23 33 07.1 +4.5**
baz=248
O18K **Koktuh Hills** **62.50 29** IAmb IAmb 23 24 58.6
comp=Z,238nm,1.1s
O18K **Koktuh Hills** **62.50 29** P **P** **23 24 37.7 +0.5**
baz=249,SNR=21
O18K S **S** **23 33 03.5 +0.8**
baz=249
WHZ **Wether Hill Ro** **62.51 163** IAMs_20 IAMs_20 23 49 10.3
comp=Z,6µm,21.0s
ODZ **Otahua Downs** **62.55 161** P **P** **23 24 37.5 -0.1**
C16K **Lisburne Hills** **62.55 18** P **P** **23 24 38.7 +1.3**
baz=235
C16K S **S** **23 33 04.9 +1.8**
baz=235
OHAK **Old Harbor** **62.56 32** P **P** **23 24 38.5 +0.9**
OHAK **Old Harbor** **62.56 32** P **P** **23 24 39.3 +1.7**
baz=252,SNR=20
OHAK S **S** **23 33 04.8 +1.4**
baz=252
MAKZ **Makanchi** **62.61 316** P **P** **23 24 38.9 +0.7**
MAKZ IAmb IAmb 23 24 43.2
comp=Z,157nm,0.7s
MAKZ **Makanchi** **62.61 316** P **P** **23 24 38.9 +0.7**
MAKZ pmax pmax
comp=Z,157nm,0.7s
MAKZ MLR MLR
comp=Z,4µm,20.0s
G17K **Kiwalik Mounta** **62.63 22** P **P** **23 24 39.7 +1.6**
baz=241
G17K S **S** **23 33 04.9 +0.7**
baz=241
H17K **Granite Mounta** **62.64 23** IAmb IAmb 23 24 55.7
comp=Z,210nm,0.9s
H17K IAMs_20 IAMs_20 23 48 27.7
comp=Z,6µm,21.0s
H17K **Granite Mounta** **62.64 23** P **P** **23 24 39.7 +1.6**
baz=242
H17K S **S** **23 33 07.2 +2.9**
baz=242
LGTI **Lohaghat** **62.74 296** *e*P **P** **23 24 39.8 +0.4**
L18K **Granite Mounta** **62.74 26** IAmb IAmb 23 25 00.0
comp=Z,243nm,1.1s
L18K IAMs_20 IAMs_20 23 48 33.1
comp=Z,8µm,22.0s
L18K **Granite Mounta** **62.74 26** P **P** **23 24 40.2 +1.5**
baz=246
L18K S **S** **23 33 09.2 +3.5**
baz=246
SVW2 **Sparrevohn** **62.79 28** IAmb IAmb 23 24 57.6
comp=Z,123nm,1.0s
SVW2 IAMs_20 IAMs_20 23 49 29.3
comp=Z,5µm,20.0s
M18K **Stony River** **62.83 27** P **P** **23 24 40.0 +0.7**
baz=247
M18K S **S** **23 33 10.2 +3.4**
baz=247
F17K **Baldwin Pennin** **62.89 21** P **P** **23 24 41.1 +1.5**
baz=240
F17K S **S** **23 33 10.7 +3.3**
baz=240
Q19K **Cape Douglas,** **62.93 30** P **P** **23 24 41.5 +1.4**
Q19K **Cape Douglas,** **62.93 30** P **P** **23 24 39.7 -0.4**
baz=251
E17K **Hotham Inlet** **63.02 20** P **P** **23 24 42.4 +1.8**
baz=239,SNR=187
E17K S **S** **23 33 11.5 +2.5**
baz=239
Q19K **Port Alsworth** **63.03 29** P **P** **23 24 42.0 +1.2**
O19K **Port Alsworth** **63.03 29** P **P** **23 24 42.1 +1.3**
baz=250
O19K S **S** **23 33 11.1 +1.8**
baz=250
KDAK **Kodiak Island** **63.09 32** P **P** **23 24 43.1 +1.9**
KDAK **Kodiak Island** **63.09 32** P **P** **23 24 42.4 +1.3**
baz=252
KDAK S **S** **23 33 16.0 +5.8**
baz=252
KDAK **Kodiak Island** **63.09 32** P **P** **23 24 43.1 +1.9**
KDAK pmax pmax
comp=Z,618nm,1.5s
KDAK MLR MLR
comp=Z,4µm,20.0s
KDAK **Kodiak Island** **63.09 32** LR LR 23 48 48.8
comp=Z,2µm,21.1s,baz=269,slow=33
N19K **Bonanza Creek** **63.18 28** P **P** **23 24 43.5 +1.6**
baz=249
N19K S **S** **23 33 14.8 +3.4**
baz=249
RDOG **Red Dog Mine** **63.19 19** IAmb IAmb 23 25 02.0
comp=Z,216nm,0.9s
RDOG **Red Dog Mine** **63.19 19** P **P** **23 24 43.3 +1.7**
baz=237,SNR=30
RDOG S **S** **23 33 13.5 +2.4**
baz=237
J18K **Innoko River** **63.24 25** IAmb IAmb 23 25 07.2
comp=Z,128nm,1.1s
J18K **Innoko River** **63.24 25** P **P** **23 24 43.3 +1.2**
baz=246
J18K S **S** **23 33 13.4 +1.5**
baz=246
RAR **Rarotonga** **63.24 123** LR LR 23 46 28.1
comp=Z,5µm,20.7s,baz=286,slow=30
VJD **Vijayawada** **63.30 282** *e*P **P** **23 24 45.3 +2.0**

TTA	**Tatalina**	**63.31**	**26**	IAmb	IAmb	23 25 04.7	
	comp=Z,104nm,0.9s						
TTA				IAMs_20	IAMs_20	23 49 43.4	
	comp=Z,5µm,20.0s						
TTA	**Tatalina**	**63.31**	**26**	P	**P**	**23 24 44.2 +1.5**	
	baz=247,SNR=67						
TTA				S	**S**	**23 33 14.8 +1.8**	
	baz=247						
H18K	**Honhosa River**	**63.32**	**23**	IAmb	IAmb	23 24 59.7	
	comp=Z,188nm,0.9s						
H18K				IAMs_20	IAMs_20	23 48 59.4	
	comp=Z,6µm,21.0s						
H18K	**Honhosa River**	**63.32**	**23**	P	**P**	**23 24 43.7 +1.1**	
	baz=243						
H18K				S	**S**	**23 33 14.8 +2.0**	
	baz=243						
C17K	**DeLong Mountai**	**63.33**	**19**	P	**P**	**23 24 44.2 +1.5**	
	baz=237						
C17K				S	**S**	**23 33 14.0 +1.1**	
	baz=237						
P19K	**Oil Pt**	**63.37**	**30**	P	**P**	**23 24 44.0 +1.0**	
	baz=251,SNR=13						
P19K				S	**S**	**23 33 12.9 -0.8**	
	baz=251						
SYZ	**Scrubby Hill**	**63.44**	**163**	P	**P**	**23 24 43.9 +0.4**	
Q20K	**Shuyak Island**	**63.44**	**31**	P	**P**	**23 24 44.7 +1.3**	
	baz=252,SNR=6.7						
Q20K				S	**S**	**23 33 13.8 -0.7**	
	baz=252						
SYI	**Shuyak Island**	**63.45**	**31**	P	**P**	**23 24 45.0 +1.5**	
L19K	**White Mountain**	**63.52**	**27**	IAmb	IAmb	23 25 01.7	
	comp=Z,230nm,1.1s						
L19K				IAMs_20	IAMs_20	23 49 08.6	
	comp=Z,7µm,20.0s						
L19K	**White Mountain**	**63.52**	**27**	P	**P**	**23 24 45.7 +1.7**	
	baz=248						
L19K				S	**S**	**23 33 17.0 +1.6**	
	baz=248						
F18K	**Selawik**	**63.53**	**21**	P	**P**	**23 24 45.1 +1.3**	
	baz=241,SNR=66						
F18K				S	**S**	**23 33 17.5 +2.2**	
	baz=241						
G18K	**Tagagawik**	**63.55**	**22**	P	**P**	**23 24 45.3 +1.2**	
	baz=243						
G18K				S	**S**	**23 33 17.2 +1.5**	
	baz=243						
E18K	**Tukpahlearik C**	**63.61**	**20**	IAmb	IAmb	23 25 02.5	
	comp=Z,213nm,0.9s						
E18K				IAMs_20	IAMs_20	23 48 49.8	
	comp=Z,5µm,22.0s						
E18K	**Tukpahlearik C**	**63.61**	**20**	P	**P**	**23 24 45.9 +1.4**	
	baz=240						
E18K				S	**S**	**23 33 17.2 +0.8**	
	baz=240						
M19K	**Big River Lodg**	**63.62**	**27**	P	**P**	**23 24 46.2 +1.6**	
M19K				IAmb	IAmb	23 25 13.0	
	comp=Z,189nm,1.1s						
M19K				IAMs_20	IAMs_20	23 49 01.7	
	comp=Z,7µm,21.0s						
M19K	**Big River Lodg**	**63.62**	**27**	P	**P**	**23 24 46.1 +1.6**	
	baz=249						
M19K				S	**S**	**23 33 18.5 +1.9**	
	baz=249						
GCSA	**Galena City Sc**	**63.71**	**24**	P	**P**	**23 24 46.3 +1.2**	
	baz=245,SNR=30						
GCSA				S	**S**	**23 33 18.3 +0.7**	
	baz=245						
O20K	**Slope Mountain**	**63.80**	**29**	P	**P**	**23 24 46.5 +0.6**	
	baz=251,SNR=8.1						
J19K	**Poorman**	**63.90**	**25**	P	**P**	**23 24 48.0 +1.6**	
	baz=246						
J19K				S	**S**	**23 33 21.7 +1.7**	
	baz=246						
PDGK	**Podgornoye**	**63.91**	**312**	*i* P	**P**	**23 24 47.3 +0.2**	
PDGK				pmax	pmax		
	comp=Z,130nm,0.9s						
SHLS	**Shalkode**	**63.92**	**311⇑**	*i* P	**P**	**23 24 45.6 -1.6**	
	comp=Z,119nm,1.3s,baz=312						
SHLS	**Shalkode**	**63.92**	**311**	*c i* P	**P**	**23 24 45.5 -1.6**	
SHLS				pmax	pmax		
	comp=Z,119nm,1.3s						
C18K	**Utukok River**	**64.04**	**19**	P	**P**	**23 24 48.5 +1.1**	
	baz=239						
C18K				S	**S**	**23 33 21.8 0.0**	
	baz=239						
L20K	**Farewell, AK**	**64.05**	**26**	P	**P**	**23 24 49.0 +1.5**	
	baz=249						
L20K				S	**S**	**23 33 23.6 +1.6**	
	baz=249						
HOM	**Homer**	**64.13**	**30**	P	**P**	**23 24 49.3 +1.3**	
HOM	**Homer**	**64.13**	**30**	P	**P**	**23 24 48.3 +0.3**	
	baz=252						
M20K	**Styx River**	**64.17**	**27**	P	**P**	**23 24 49.4 +1.1**	
M20K				IAMs_20	IAMs_20	23 49 19.9	
	comp=Z,7µm,21.0s						
M20K	**Styx River**	**64.17**	**27**	P	**P**	**23 24 50.0 +1.6**	
	baz=250						
M20K				S	**S**	**23 33 27.1 +3.4**	
	baz=250						
MDRS	**Chennai**	**64.18**	**278**	*e*P	**P**	**23 24 50.6 +1.5**	
MDRS				IAmb	IAmb	23 24 56.6	
	comp=Z,170nm,1.0s						
H19K	**Roundabout Mou**	**64.21**	**23**	IAMs_20	IAMs_20	23 49 25.9	
	comp=Z,5µm,21.0s						
H19K	**Roundabout Mou**	**64.21**	**23**	P	**P**	**23 24 50.0 +1.6**	
	baz=245						
H19K				S	**S**	**23 33 26.9 +3.1**	
	baz=245						
B18K	**Kokolik River**	**64.23**	**18**	P	**P**	**23 24 50.3 +1.8**	
	baz=238,SNR=162						
B18K				S	**S**	**23 33 23.5 -0.5**	
	baz=238						
G19K	**Purcell Mounta**	**64.23**	**22**	IAmb	IAmb	23 25 08.9	
	comp=Z,246nm,1.0s						
G19K				IAMs_20	IAMs_20	23 49 25.0	
	comp=Z,5µm,21.0s						
G19K	**Purcell Mounta**	**64.23**	**22**	P	**P**	**23 24 50.0 +1.4**	
	baz=244,SNR=242						
G19K				S	**S**	**23 33 25.3 +1.1**	
	baz=244						
UZB	**Uzynbulak**	**64.24**	**311⇑**	*i* P	**P**	**23 24 49.7 +0.4**	
	comp=Z,130nm,1.6s,baz=311						
UZB				*e*S	**S**	**23 33 24.8 -0.6**	
	baz=311						
UZB	**Uzynbulak**	**64.24**	**311**	*c i* P	**P**	**23 24 49.6 +0.4**	
UZB				*e*S	**S**	**23 33 24.7 -0.6**	
UZB				pmax	pmax		
	comp=Z,130nm,1.6s						
K20K	**Telida**	**64.29**	**26**	P	**P**	**23 24 50.9 +1.9**	
	baz=248						
K20K				S	**S**	**23 33 27.4 +2.4**	
	baz=248						
CNPM	**China Poot**	**64.29**	**30**	P	**P**	**23 24 49.4 +0.3**	
F19K	**Shaleruckik Mo**	**64.30**	**21**	P	**P**	**23 24 49.7 +0.8**	
	baz=243						
F19K				S	**S**	**23 33 26.2 +1.3**	
	baz=243						
N20K	**Mount Spurr**	**64.35**	**28**	P	**P**	**23 24 50.6 +1.1**	
	baz=251,SNR=7.2						
N20K				S	**S**	**23 33 26.5 +0.5**	
	baz=251						
KPKS	**Kokpek**	**64.51**	**312⇑**	*i* P	**P**	**23 24 51.4 +0.4**	
	baz=312						
KPKS				*e*S	**S**	**23 33 28.4 -0.2**	
	baz=312						
KPKS	**Kokpek**	**64.51**	**312**	*c i* P	**P**	**23 24 51.3 +0.4**	
KPKS				*e*S	**S**	**23 33 28.3 -0.3**	
J20K	**Nowinta River**	**64.56**	**25**	IAMs_20	IAMs_20	23 48 34.8	
	comp=Z,5µm,22.0s						
J20K	**Nowinta River**	**64.56**	**25**	P	**P**	**23 24 52.7 +1.9**	
	baz=248						
J20K				S	**S**	**23 33 31.5 +3.2**	
	baz=248						
BRSE	**Bradley Lake S**	**64.59**	**30**	P	**P**	**23 24 52.1 +1.0**	
	baz=253,SNR=16						
BRSE				S	**S**	**23 33 29.4 +0.5**	
	baz=253						
DDI	**Dehra Dun**	**64.62**	**297**	*e*P	**P**	**23 24 52.4 +0.5**	
DDI				IAmb	IAmb	23 24 55.8	
	comp=Z,332nm,0.9s						
PRZ	**Przheval'sk**	**64.64**	**311**	P	**P**	**23 24 52.7 +0.8**	
PRZ	**Przheval'sk**	**64.64**	**311**	P	**P**	**23 24 52.7 +0.8**	
PRZ				pmax	pmax		
	comp=Z,412nm,1.1s						
ZHN	**Zhinishke**	**64.67**	**311⇑**	*i* P	**P**	**23 24 52.6 +0.5**	
	comp=Z,124nm,1.7s,baz=311						
ZHN	**Zhinishke**	**64.67**	**311**	*c i* P	**P**	**23 24 52.5 +0.5**	
ZHN				pmax	pmax		
	comp=Z,124nm,1.7s						
I20K	**Naaghedeneel**	**64.67**	**24**	IAMs_20	IAMs_20	23 49 20.5	
	comp=Z,5µm,20.0s						
I20K	**Naaghedeneel**	**64.67**	**24**	P	**P**	**23 24 53.5 +2.1**	
	baz=247						
I20K				S	**S**	**23 33 31.7 +2.2**	
	baz=247						
SATY	**Saty**	**64.68**	**311⇑**	*i* P	**P**	**23 24 52.8 +0.7**	
	comp=Z,106nm,1.3s,baz=311						
SATY				*e*S	**S**	**23 33 30.8 0.0**	
	baz=311						
SATY	**Saty**	**64.68**	**311**	*c i* P	**P**	**23 24 52.8 +0.7**	
SATY				*e*S	**S**	**23 33 30.7 0.0**	
SATY				pmax	pmax		
	comp=Z,106nm,1.3s						
CAPN	**Captain Cook N**	**64.70**	**29**	P	**P**	**23 24 52.5 +0.8**	
CAPN				IAmb	IAmb	23 25 33.5	
	comp=Z,177nm,0.8s						
CAPN	**Captain Cook N**	**64.70**	**29**	P	**P**	**23 24 52.4 +0.8**	
	baz=252						
CAPN				S	**S**	**23 33 36.4 +6.3**	
	baz=252						
MALK	**Mahakanadarawa**	**64.72**	**273**	P	**P**	**23 24 51.3 -1.4**	
MALK				S	**S**	**23 33 26.6 -5.2**	
E19K	**Redstone River**	**64.77**	**21**	P	**P**	**23 24 53.4 +1.4**	
	baz=243						
E19K				S	**S**	**23 33 31.5 +0.7**	
	baz=243						
C19K	**Lookout Ridge**	**64.78**	**19**	IAMs_20	IAMs_20	23 52 37.2	
	comp=Z,6µm,19.0s						
C19K	**Lookout Ridge**	**64.78**	**19**	P	**P**	**23 24 53.7 +1.6**	
	baz=240						
C19K				S	**S**	**23 33 32.9 +2.0**	
	baz=240						
PALK	**Pallekele**	**64.79**	**272**	P	**P**	**23 24 54.2 +1.0**	
PALK				IAmb	IAmb	23 25 13.8	
	comp=Z,142nm,1.1s						
PALK	**Pallekele**	**64.79**	**272**	P	**P**	**23 24 54.2 +1.0**	
PALK				pmax	pmax		
	comp=Z,143nm,1.1s						
PALK				MLR	MLR		
	comp=Z,2µm,19.0s						
PALK	**Pallekele**	**64.79**	**272**	LR	LR	23 53 09.5	
	comp=Z,2µm,18.5s,baz=182,slow=36						
PALK	**Pallekele**	**64.79**	**272**	P	**P**	**23 24 54.1 +1.0**	
PALK				P	**P**	**23 24 54.1 +1.0**	
PALK				S	**S**	**23 33 32.1 -0.6**	
PALK				S	**S**	**23 33 32.1 -0.6**	
H20K	**Anotleneega Mo**	**64.79**	**23**	P	**P**	**23 24 53.8 +1.6**	
	baz=246						
H20K				S	**S**	**23 33 34.3 +3.2**	
	baz=246						
TDK	**Taldyqorghan**	**64.85**	**313⇑**	*i* P	**P**	**23 24 54.1 +1.0**	
	baz=313						
TDK				*e*S	**S**	**23 33 33.4 +0.7**	
	baz=313						
TDK				LR	LR	23 51 28.7	
	comp=Z,7µm,19.5s,baz=313						
TDK	**Taldyqorghan**	**64.85**	**313**	*c i* P	**P**	**23 24 54.0 +1.0**	
TDK				*e*S	**S**	**23 33 33.3 +0.7**	
TDK				MLR	MLR		
	comp=Z,7µm,19.0s						
SKT	**Skwentna**	**64.91**	**27**	IAmb	IAmb	23 25 15.5	
	comp=Z,248nm,1.3s						
SKT				IAMs_20	IAMs_20	23 49 42.8	
	comp=Z,6µm,21.0s						
SKT	**Skwentna**	**64.91**	**27**	P	**P**	**23 24 53.7 +0.6**	
	baz=251,SNR=57						
SKT				S	**S**	**23 33 31.9 -0.8**	
	baz=251						
PPLA	**Purkeypile**	**64.92**	**26**	P	**P**	**23 24 54.3 +0.9**	
PPLA	**Purkeypile**	**64.92**	**26**	P	**P**	**23 24 54.7 +1.3**	
	baz=250,SNR=53						
PPLA				S	**S**	**23 33 34.2 +1.1**	
	baz=250						
D19K	**Kuna River**	**64.95**	**20**	P	**P**	**23 24 54.5 +1.3**	
D19K				IAmb	IAmb	23 25 13.5	
	comp=Z,190nm,0.9s						
D19K				IAMs_20	IAMs_20	23 51 10.4	
	comp=Z,6µm,20.0s						
D19K	**Kuna River**	**64.95**	**20**	P	**P**	**23 24 54.7 +1.5**	
	baz=242						
D19K				S	**S**	**23 33 33.5 +0.5**	
	baz=242						
SUA	**Susitna One**	**65.11**	**28**	IAmb	IAmb	23 25 05.4	
	comp=Z,301nm,1.3s						
SUA	**Susitna One**	**65.11**	**28**	P	**P**	**23 24 55.3 +0.8**	
	baz=252,SNR=29						
SUA				S	**S**	**23 33 34.5 -0.8**	
	baz=252						
F20K	**Avaraart Lake**	**65.12**	**21**	IAmb	IAmb	23 25 12.0	
	comp=Z,130nm,0.9s						
F20K	**Avaraart Lake**	**65.12**	**21**	P	**P**	**23 24 55.7 +1.4**	
	baz=245,SNR=161						
F20K				S	**S**	**23 33 36.8 +1.9**	
	baz=245						
CAST	**Castle Rocks**	**65.15**	**26**	IAMs_20	IAMs_20	23 50 40.0	
	comp=Z,6µm,20.0s						
CAST	**Castle Rocks**	**65.15**	**26**	P	**P**	**23 24 56.0 +1.4**	
	baz=250,SNR=213						
CAST				S	**S**	**23 33 37.0 +1.5**	
	baz=250						
HYB	**Hyderabad**	**65.18**	**283**	*e*P	**P**	**23 24 56.5 +0.9**	
HYB				*es*P	**pP**	**23 25 00.9 -1.1**	
HYB				*e*PcP	**PcP**	**23 25 30.2 +2.1**	
HYB				*e*S	**S**	**23 33 40.3 +2.9**	
ARXS	**Arharly**	**65.19**	**312**	*e*P	**P**	**23 24 55.7 +0.3**	
CHUM	**Lake Minchumin**	**65.21**	**25**	P	**P**	**23 24 56.4 +1.5**	
	baz=250,SNR=116						
CHUM				S	**S**	**23 33 37.4 +1.2**	
	baz=250						
FIS	**Fire Island**	**65.25**	**29**		**P**	**23 24 55.8 +0.6**	
O22K	**Cooper Landing**	**65.30**	**29**	P	**P**	**23 24 56.6 +1.1**	
	baz=254,SNR=40						
O22K				S	**S**	**23 33 36.6 -0.7**	
	baz=254						
SEW	**Seward**	**65.32**	**30**	P	**P**	**23 24 56.7 +1.0**	
SEW	**Seward**	**65.32**	**30**	P	**P**	**23 24 56.5 +0.8**	
	baz=254,SNR=11						
SEW				S	**S**	**23 33 39.0 +1.4**	
	baz=254						
SMLA	**Simla**	**65.36**	**298**	*e*P	**P**	**23 24 56.7 +0.1**	
SMLA				IAmb	IAmb	23 25 00.3	
	comp=Z,268nm,1.0s						
KURK	**Kurchatov**	**65.41**	**320**	P	**P**	**23 24 56.5 0.0**	
KURK	**Kurchatov**	**65.41**	**320**	*c i* P	**P**	**23 24 56.5 0.0**	
KURK				pmax	pmax		
	comp=Z,950nm,1.4s						
KURK				MLR	MLR		
	comp=Z,12µm,21.0s						
KURK	**Kurchatov**	**65.41**	**320**	P	**P**	**23 24 56.7 +0.3**	
KURK				P	**P**	**23 24 56.7 +0.3**	
KURK				S	**S**	**23 33 37.7 -1.4**	
KURK				S	**S**	**23 33 37.7 -1.4**	
NDI	**New Delhi**	**65.41**	**295**	*e*P	**P**	**23 24 56.7 -0.2**	
KURBB	**Kurchatov Arra**	**65.45**	**320**	P	**P**	**23 24 56.8 0.0**	
	comp=Z,151nm,0.5s,baz=101,slow=6.9,SNR=905						
KURBB				S	**S**	**23 33 36.9 -2.7**	
	comp=Z,15nm,1.2s,baz=100,slow=11,SNR=8.4						
KURBB				PKPPKP	**P'P'df**	**23 53 34.0 -6.2**	
	comp=Z,2.2nm,1.0s,baz=269,slow=3.5,SNR=7.2						
KURBB				LR	LR	23 53 34.9	
	comp=Z,13µm,21.5s,baz=100,slow=36						
	comp=Z,151nm,0.5s						
RC01	**Rabbit Creek A**	**65.46**	**29**	P	**P**	**23 24 57.5 +0.8**	
	baz=253,SNR=39						
RC01				S	**S**	**23 33 38.1 -1.3**	
	baz=253						
E20K	**Nigu River**	**65.48**	**20**	P	**P**	**23 24 58.3 +1.5**	
	baz=244						
E20K				S	**S**	**23 33 39.2 -0.4**	
	baz=244						
M22K	**Willow**	**65.48**	**28**	P	**P**	**23 24 56.8 +0.1**	
	baz=253,SNR=19						
M22K				S	**S**	**23 33 35.1 -4.4**	
	baz=253						
D20K	**Etivluk River**	**65.54**	**20**	P	**P**	**23 24 58.4 +1.4**	
	baz=243						
D20K				S	**S**	**23 33 40.0 -0.2**	
	baz=243						
SONA	**Sohna**	**65.55**	**295**	*e*P	**P**	**23 24 58.4 +0.5**	
CUT	**Chulitna**	**65.61**	**27**	IAMs_20	IAMs_20	23 50 14.3	
	comp=Z,7µm,22.0s						
CUT	**Chulitna**	**65.61**	**27**	P	**P**	**23 24 57.5 0.0**	
	baz=252,SNR=17						
CUT				S	**S**	**23 33 41.3 +0.2**	
	baz=252						
H21K	**Melozitna Rive**	**65.65**	**23**	IAMs_20	IAMs_20	23 50 11.4	
	comp=Z,6µm,21.0s						
H21K	**Melozitna Rive**	**65.65**	**23**	P	**P**	**23 24 59.5 +1.7**	
	baz=248,SNR=133						
H21K				S	**S**	**23 33 42.0 +0.4**	
	baz=248						
MDOK	**Medeo**	**65.68**	**311**	*i* P	**P**	**23 24 59.6 +0.9**	
	baz=311						
MDOK				*e*S	**S**	**23 33 43.4 +0.3**	
	baz=311						
MDOK				LR	LR	23 51 28.7	
	baz=311						
MDOK	**Medeo**	**65.68**	**311**	*i* P	**P**	**23 24 59.5 +0.9**	
MDOK				*e*S	**S**	**23 33 43.4 +0.3**	
KTH	**Kantishna Hill**	**65.68**	**26**	IAMs_20	IAMs_20	23 50 46.2	
	comp=Z,4µm,20.0s						
G21K	**Allakaket**	**65.71**	**22**	IAmb	IAmb	23 25 18.8	
	comp=Z,147nm,0.9s						
G21K	**Allakaket**	**65.71**	**22**	P	**P**	**23 24 59.7 +1.6**	
	baz=247						
G21K				S	**S**	**23 33 45.1 +2.8**	
	baz=247						
AAA	**Alma-Ata**	**65.78**	**311**	*e*P	**P**	**23 25 00.4 +1.2**	
	baz=311						
AAA	**Alma-Ata**	**65.78**	**311**	*e*P	**P**	**23 25 00.4 +1.2**	
I21K	**Tanana**	**65.80**	**24**	P	**P**	**23 25 00.5 +1.8**	
	baz=250,SNR=130						
I21K				S	**S**	**23 33 43.9 +0.5**	
	baz=250						
BPAW	**Bear Paw Mtn.**	**65.83**	**25**	IAMs_20	IAMs_20	23 51 22.2	
	comp=Z,6µm,21.0s						
BPAW	**Bear Paw Mtn.**	**65.83**	**25**	P	**P**	**23 25 00.5 +1.4**	
	baz=251,SNR=150						
BPAW				S	**S**	**23 33 44.6 +0.6**	
	baz=251						
PMR	**Palmer**	**65.88**	**28**	IAMs_20	IAMs_20	23 49 55.6	
	comp=Z,5µm,21.0s						
PMR	**Palmer**	**65.88**	**28**	P	**P**	**23 25 00.0 +0.7**	
	baz=254,SNR=28						
PMR				S	**S**	**23 33 42.7 -1.8**	
	baz=254						
TRF	**Thorofare Moun**	**65.92**	**26**	IAMs_20	IAMs_20	23 50 55.5	
	comp=Z,6µm,21.0s						
TRF	**Thorofare Moun**	**65.92**	**26**	P	**P**	**23 25 00.1 +0.3**	
	baz=252,SNR=75						
TRF				S	**S**	**23 33 44.2 -1.1**	
	baz=252						
B20K	**Meade River**	**65.96**	**18**	P	**P**	**23 25 01.3 +1.6**	
	baz=242						
B20K				S	**S**	**23 33 45.4 +0.2**	
	baz=242						
F21K	**Alatna River**	**65.99**	**22**	P	**P**	**23 25 01.5 +1.6**	
	baz=247,SNR=63						
F21K				S	**S**	**23 33 47.4 +1.6**	
	baz=247						
BHK	**Bhakra**	**66.00**	**298**	*e*P	**P**	**23 25 01.3 +0.6**	
DHRM	**DHARAMSHALA**	**66.07**	**299**	*e*P	**P**	**23 25 00.8 -0.7**	
DHRM				IAmb	IAmb	23 25 12.6	
	comp=Z,180nm,1.0s						
KUDL	**Kundal**	**66.08**	**295**	*e*P	**P**	**23 25 01.0 -0.2**	
KNK	**Knik Glacier**	**66.14**	**28**	IAMs_20	IAMs_20	23 49 40.5	
	comp=Z,5µm,22.0s						
KNK	**Knik Glacier**	**66.14**	**28**	P	**P**	**23 25 02.2 +1.1**	
	baz=254,SNR=52						
KNK				S	**S**	**23 33 46.6 -1.3**	
	baz=254						
ULHL	**Ulahol**	**66.22**	**310**	P	**P**	**23 25 03.5 +1.3**	
	SNR=10						
AKL	**Akola**	**66.23**	**287**	*e*P	**P**	**23 25 01.1 -1.2**	
KUU	**Kurty**	**66.24**	**312**	*i* P	**P**	**23 25 02.3 +0.2**	
	baz=312						
KUU				LR	LR	23 53 46.3	
	comp=Z,7µm,19.7s,baz=312						
KUU	**Kurty**	**66.24**	**312**	*i* P	**P**	**23 25 02.3 +0.2**	
KUU				MLR	MLR		
	comp=Z,7µm,20.0s						
MLY	**Manley**	**66.24**	**24**	IAMs_20	IAMs_20	23 49 35.8	
	comp=Z,6µm,22.0s						
MLY	**Manley**	**66.24**	**24**	P	**P**	**23 25 03.1 +1.5**	
	baz=251,SNR=177						
MLY				S	**S**	**23 33 49.9 +0.9**	
	baz=251						
H22K	**Ishtalitna Cre**	**66.28**	**23**	P	**P**	**23 25 03.3 +1.4**	
	baz=250						
H22K				S	**S**	**23 33 51.5 +2.1**	
	baz=250						
P23K	**Montague Islan**	**66.29**	**30**	P	**P**	**23 25 03.3 +1.3**	
	baz=256						
P23K				S	**S**	**23 33 51.0 +1.5**	
	baz=256						
E21K	**Killik River**	**66.30**	**20**	IAmb	IAmb	23 25 50.5	
	comp=Z,226nm,1.5s						
E21K	**Killik River**	**66.30**	**20**	P	**P**	**23 25 03.3 +1.3**	
	baz=246						
E21K				S	**S**	**23 33 48.9 -0.6**	
	baz=246						
SML	**Sawmill**	**66.31**	**28**	P	**P**	**23 25 03.3 +1.2**	
SML				IAMs_20	IAMs_20	23 50 18.8	
	comp=Z,5µm,22.0s						
SML	**Sawmill**	**66.31**	**28**	P	**P**	**23 25 03.3 +1.2**	
	baz=254,SNR=78						
SML				S	**S**	**23 33 51.2 +1.3**	
	baz=254						
KSH	**Kashi**	**66.32**	**307**	P	**P**	**23 25 06.0 +3.2**	
KSH				PcP	**PcP**	**23 25 38.5 +5.9**	
KSH				PcS		23 29 39.5	
KSH				S	**S**	**23 33 55.7 +4.7**	
KSH				ScS	**ScS**	**23 34 59.3 +1.4**	
KSH				SS	**SS**	**23 38 14.1 +6.6**	
KSH				pmax	pmax		
	comp=Z,100nm,1.5s						
KSH				pmax	pmax		
	comp=Z,2µm,10.6s						
KSH				LR	LR		
	comp=Z,5µm,19.2s						
KSH				LR	LR		
	comp=Z,5µm,18.6s						
KSH				LR	LR		
	comp=Z,7µm,20.6s						
C21K	**Knifeblade Rid**	**66.33**	**20**	P	**P**	**23 25 03.7 +1.6**	
	baz=245,SNR=126						
C21K				S	**S**	**23 33 48.6 -1.1**	
	baz=245						
NRN	**Naryn**	**66.36**	**309**	IAmb	IAmb	23 25 22.7	
	comp=Z,128nm,1.1s						
SALM	**Salem**	**66.39**	**277**	*e*P	**P**	**23 25 04.8 +1.4**	
NRIK	**Noril'sk**	**66.44**	**341**	P	**P**	**23 25 02.3 -0.5**	
NRIK	**Noril'sk**	**66.44**	**341**	P	**P**	**23 25 02.3 -0.5**	
NRIK				pmax	pmax		
	comp=Z,408nm,1.3s						
NRIK				MLR	MLR		
	comp=Z,8µm,21.0s						
NRIK	**Noril'sk**	**66.44**	**341**	P	**P**	**23 25 01.9 -0.8**	
	comp=Z,49nm,0.5s,baz=112,slow=7.6,SNR=53						
NRIK				LR	LR	23 53 03.4	
	comp=Z,8µm,21.6s,baz=117,slow=35						
NRIK				PKPPKP	**P'P'df**	**23 53 32.6 -5.4**	
	comp=Z,0.7nm,0.3s,baz=213,slow=4.2,SNR=4.9						
	comp=Z,49nm,0.5s						
WAT1	**Susitna Watana**	**66.49**	**27**	P	**P**	**23 25 03.7 +0.4**	
	baz=254						
WAT1				S	**S**	**23 33 51.9 -0.1**	
	baz=254						
RND	**Reindeer**	**66.52**	**26**	IAmb	IAmb	23 25 20.6	
	comp=Z,213nm,1.1s						
RND				IAMs_20	IAMs_20	23 50 53.3	
	comp=Z,6µm,21.0s						
B21K	**Ikpikpuk River**	**66.58**	**19**	IAmb	IAmb	23 25 21.5	
	comp=Z,176nm,0.9s						
B21K				IAMs_20	IAMs_20	23 53 25.9	
	comp=Z,5µm,20.0s						
B21K	**Ikpikpuk River**	**66.58**	**19**	P	**P**	**23 25 05.0 +1.3**	
	baz=245						
B21K				S	**S**	**23 33 54.3 +1.5**	
	baz=245						
M23K	**Glacier View**	**66.58**	**28**	P	**P**	**23 25 04.9 +1.0**	
	baz=255,SNR=32						
M23K				S	**S**	**23 33 53.8 +0.7**	
	baz=255						
MCK	**McKinley**	**66.58**	**26**	P	**P**	**23 25 04.5 +0.7**	
MCK	**McKinley**	**66.58**	**26**	P	**P**	**23 25 03.9 0.0**	
	baz=253,SNR=46						
MCK				S	**S**	**23 33 52.5 -0.6**	
	baz=253						
MCK	**McKinley**	**66.58**	**26**	P	**P**	**23 25 04.6 +0.7**	
MCK				pmax	pmax		

	comp=Z,409nm,1.6s									
G22K	**Bettles**	**66.59**	**22**	P		**P**		**23 25 04.7**	**+0.9**	
	baz=249									
G22K				S		**S**		**23 33 54.8**	**+1.8**	
	baz=249									
Q23K	**Middleton Isla**	**66.67**	**31**	P		**P**		**23 25 05.7**	**+1.3**	
Q23K	**Middleton Isla**	**66.67**	**31**	P		**P**		**23 25 05.7**	**+1.3**	
	baz=257									
MID	**Middleton Isla**	**66.68**	**31**	P		**P**		**23 25 06.0**	**+1.5**	
MID	**Middleton Isla**	**66.68**	**31**	P		**P**		**23 25 06.0**	**+1.5**	
MID				pmax		pmax				
	comp=Z,913nm,1.4s									
TKM2	**Tokmak 2**	**66.73**	**311**	P		**P**		**23 25 06.0**	**+0.6**	
	SNR=142									
TKM2	**Tokmak 2**	**66.73**	**311**	*i* P		**P**		**23 25 05.7**	**+0.3**	
TKM2				pmax		pmax				
	comp=Z,130nm,1.2s									
A21K	**Barrow**	**66.73**	**17**	P		**P**		**23 25 05.8**	**+1.2**	
	baz=242,SNR=18									
A21K				S		**S**		**23 33 55.2**	**+0.7**	
	baz=242									
SCM	**Sheep Creek Mo**	**66.78**	**28**	P		**P**		**23 25 06.2**	**+1.0**	
SCM				IAMs_20	IAMs_20			23 51 05.1		
	comp=Z,4μm,20.0s									
SCM	**Sheep Creek Mo**	**66.78**	**28**	P		**P**		**23 25 06.6**	**+1.4**	
	baz=255,SNR=60									
SCM				S		**S**		**23 33 56.8**	**+1.3**	
	baz=255									
SCM	**Sheep Creek Mo**	**66.78**	**28**	P		**P**		**23 25 06.2**	**+1.0**	
SCM				pmax		pmax				
	comp=Z,775nm,1.2s									
SCM				MLR		MLR				
	comp=Z,4μm,20.0s									
NEA2	**Nenana**	**66.78**	**25**	IAMs_20	IAMs_20			23 51 19.2		
	comp=Z,5μm,20.0s									
NEA2	**Nenana**	**66.78**	**25**	P		**P**		**23 25 05.5**	**+0.4**	
	baz=253,SNR=46									
NEA2				S		**S**		**23 33 55.1**	**-0.3**	
	baz=253									
WAT6	**Susitna Watana**	**66.78**	**27**	P		**P**		**23 25 06.1**	**+0.8**	
	baz=255,SNR=82									
WAT6				S		**S**		**23 33 56.0**	**+0.2**	
	baz=255									
HIN	**Hinchinbrook I**	**66.82**	**30**	P		**P**		**23 25 06.7**	**+1.3**	
HIN				IAMs_20	IAMs_20			23 48 20.3		
	comp=Z,6μm,22.0s									
I23K	**Minto, Yukon-K**	**66.83**	**24**	P		**P**		**23 25 06.8**	**+1.4**	
	baz=252,SNR=140									
I23K				S		**S**		**23 33 57.2**	**+1.3**	
	baz=252									
D22K	**Ayikyak River**	**66.91**	**20**	IAMs_20	IAMs_20			23 52 03.6		
	comp=Z,4μm,20.0s									
D22K	**Ayikyak River**	**66.91**	**20**	P		**P**		**23 25 07.7**	**+1.8**	
	baz=247,SNR=153									
D22K				S		**S**		**23 33 58.1**	**+1.3**	
	baz=247									
DHY	**Denali Highway**	**67.08**	**27**	IAMs_20	IAMs_20			23 51 11.0		
	comp=Z,7μm,21.0s									
DHY	**Denali Highway**	**67.08**	**27**	P		**P**		**23 25 07.8**	**+0.6**	
	baz=255,SNR=58									
DHY				S		**S**		**23 34 00.1**	**+0.8**	
	baz=255									
G23K	**Bananza Creek**	**67.08**	**23**	P		**P**		**23 25 08.7**	**+1.7**	
	baz=251									
G23K				S		**S**		**23 34 01.9**	**+2.9**	
	baz=251									
WRH	**Wood River Hil**	**67.15**	**25**	IAmb		IAmb		23 25 28.1		
	comp=Z,222nm,0.9s									
WRH				IAMs_20	IAMs_20			23 51 40.0		
	comp=Z,5μm,21.0s									
COLD	**Coldfoot**	**67.18**	**22**	P		**P**		**23 25 09.3**	**+1.8**	
	baz=250,SNR=233									
COLD				S		**S**		**23 34 03.4**	**+3.3**	
	baz=250									
KBK	**Karagaybulak**	**67.19**	**311**	P		**P**		**23 25 09.0**	**+0.6**	
	SNR=70									
EYAK	**Cordova Ski Ar**	**67.22**	**30**	P		**P**		**23 25 09.2**	**+1.4**	
	baz=257,SNR=18									
EYAK				S		**S**		**23 34 02.7**	**+2.1**	
	baz=257									
MDM	**Murphy Dome**	**67.23**	**25**	IAmb		IAmb		23 25 28.9		
	comp=Z,189nm,0.9s									
MDM				IAMs_20	IAMs_20			23 52 24.1		
	comp=Z,5μm,20.0s									
CCB	**Clear Creek Bu**	**67.32**	**25**	IAmb		IAmb		23 25 12.2		
	comp=Z,168nm,1.2s									
CCB				IAMs_20	IAMs_20			23 52 38.4		
	comp=Z,4μm,20.0s									
KLU	**Klutina**	**67.34**	**29**	IAmb		IAmb		23 25 29.7		
	comp=Z,200nm,1.0s									
KLU				IAMs_20	IAMs_20			23 50 53.2		
	comp=Z,5μm,21.0s									
KLU	**Klutina**	**67.34**	**29**	P		**P**		**23 25 10.2**	**+1.3**	
	baz=257,SNR=38									
KLU				S		**S**		**23 34 03.6**	**+1.1**	
	baz=257									
KOD	**Kodaikanal**	**67.35**	**275**	*e*P		**P**		**23 25 10.7**	**+0.8**	
CHMS	**Chumysh**	**67.35**	**311**	P		**P**		**23 25 09.5**	**+0.3**	
	SNR=68									
COLA	**College**	**67.36**	**25**	P		**P**		**23 25 09.7**	**+1.0**	
COLA				IAmb		IAmb		23 25 31.1		
	comp=Z,152nm,0.7s									
COLA	**College**	**67.36**	**25**	IAMs_20	IAMs_20			23 50 21.5		
	comp=Z,6μm,22.0s									
COLA	**College**	**67.36**	**25**	P		**P**		**23 25 09.1**	**+0.4**	
	baz=254									
COLA				S		**S**		**23 34 01.9**	**-0.4**	
	baz=254									
COLA	**College**	**67.36**	**25**	P		**P**		**23 25 09.7**	**+1.0**	
COLA				pmax		pmax				
	comp=Z,152nm,0.7s									
COLA				MLR		MLR				
	comp=Z,6μm,22.0s									
M24K	**Tolsona, Glenn**	**67.37**	**28**	P		**P**		**23 25 10.4**	**+1.5**	
M24K	**Tolsona, Glenn**	**67.37**	**28**	P		**P**		**23 25 10.4**	**+1.5**	
	baz=256,SNR=24									
M24K				S		**S**		**23 34 05.1**	**+2.4**	
	baz=256									
FRU1	**Bishkek**	**67.43**	**311**	IAmb		IAmb		23 25 29.6		
	comp=Z,150nm,1.0s									
SGDS	**Sogindy**	**67.46**	**311**	*e*P		**P**		**23 25 10.1**	**+0.2**	
	baz=312									
SGDS	**Sogindy**	**67.46**	**311**	*e*P		**P**		**23 25 09.1**	**-0.8**	
SGDS				pmax		pmax				
	comp=Z,82nm,2.1s									
UCH	**Uchtor**	**67.50**	**310**	P		**P**		**23 25 11.7**	**+1.0**	
	SNR=136									
AAK	**Ala-Archa**	**67.53**	**311**	P		**P**		**23 25 10.8**	**+0.3**	
	SNR=62									
AAK	**Ala-Archa**	**67.53**	**311**	P		**P**		**23 25 10.9**	**+0.5**	
AAK	**Ala-Archa**	**67.53**	**311**	IAMs_20	IAMs_20			23 55 18.8		
	comp=Z,6μm,20.0s									
AAK	**Ala-Archa**	**67.53**	**311**	*i* P		**P**		**23 25 10.5**	**+0.1**	
	SNR=88									
AAK	**Ala-Archa**	**67.53**	**311**	*c i*P		**P**		**23 25 10.8**	**+0.3**	
AAK				pmax		pmax				
	comp=Z,145nm,1.7s									
AAK				MLR		MLR				
	comp=Z,6μm,21.0s									
AAK	**Ala-Archa**	**67.53**	**311**	P		**P**		**23 25 10.6**	**+0.1**	
	comp=Z,76nm,1.2s,baz=122,slow=5.3,SNR=72									
AAK				LR		LR		23 56 03.9		
	comp=Z,6μm,21.3s,baz=86,slow=37									
	comp=Z,76nm,1.2s									
AAK	**Ala-Archa**	**67.53**	**311**	P		**P**		**23 25 11.0**	**+0.6**	
AAK				P		**P**		**23 25 11.0**	**+0.6**	
AAK				S		**S**		**23 34 04.9**	**-0.6**	
AAK				S		**S**		**23 34 04.9**	**-0.6**	
USP	**Ospenovka**	**67.55**	**311**	P		**P**		**23 25 10.8**	**+0.4**	
	SNR=83									
POKR	**Poker Plat Res**	**67.60**	**25**	IAmb		IAmb		23 25 27.1		
	comp=Z,235nm,1.4s									
POKR	**Poker Plat Res**	**67.60**	**25**	P		**P**		**23 25 10.7**	**+0.4**	
	baz=254,SNR=37									
POKR				S		**S**		**23 34 04.3**	**-1.0**	
	baz=254									
HDA	**Harding Lake**	**67.61**	**26**	IAmb		IAmb		23 25 30.6		
	comp=Z,151nm,0.8s									
HDA				IAMs_20	IAMs_20			23 51 55.1		
	comp=Z,4μm,20.0s									
HDA	**Harding Lake**	**67.61**	**26**	P		**P**		**23 25 10.4**	**0.0**	
	baz=255,SNR=104									
HDA				S		**S**		**23 34 03.0**	**-2.4**	
	baz=255									
HDA				S		**S**		**23 34 03.0**	**-2.4**	
	baz=255									
D23K	**Nanushuk River**	**67.61**	**20**	P		**P**		**23 25 12.1**	**+1.8**	
	baz=249									
D23K				S		**S**		**23 34 07.0**	**+1.8**	
	baz=249									
H24K	**Noodor Dome**	**67.63**	**24**	P		**P**		**23 25 11.5**	**+1.0**	
	baz=253									
H24K				S		**S**		**23 34 07.6**	**+1.9**	
	baz=253									
E23K	**Chandalar**	**67.67**	**21**	P		**P**		**23 25 12.2**	**+1.4**	
	baz=251,SNR=489									
E23K				S		**S**		**23 34 07.0**	**+0.8**	
	baz=251									
RAGM	**Ragged Mountai**	**67.70**	**30**	P		**P**		**23 25 12.6**	**+1.6**	
RAGM				IAMs_20	IAMs_20			23 50 12.7		
	comp=Z,4μm,20.0s									
ILAR	**Eielson Array**	**67.73**	**25**	P		**P**		**23 25 09.8**	**-1.3**	
	comp=Z,73nm,0.9s,baz=258,slow=4.5,SNR=174									
ILAR				LR		LR		23 52 50.6		
	comp=Z,4μm,21.2s,baz=248,slow=34									
ILAR				PKPPKP		**P'P'df**		**23 53 31.2**	**-4.7**	
	comp=Z,1.3nm,1.1s,baz=45,slow=2.2,SNR=5.8									
	comp=Z,73nm,0.9s									
KAIM	**Kayak Island**	**67.74**	**31**	P		**P**		**23 25 12.5**	**+1.3**	
	baz=259									
KAIM				S		**S**		**23 34 11.8**	**+4.8**	
	baz=259									
AJM	**Ajmer**	**67.84**	**293**	*e*P		**P**		**23 25 12.7**	**+0.2**	
BMRM	**Bremner River**	**67.85**	**29**	P		**P**		**23 25 13.2**	**+1.2**	
	baz=258,SNR=33									
BMRM				S		**S**		**23 34 10.3**	**+1.8**	
	baz=258									
TOLK	**Toolik Lake Re**	**67.88**	**21**	P		**P**		**23 25 13.6**	**+1.5**	
TOLK	**Toolik Lake Re**	**67.88**	**21**	P		**P**		**23 25 13.5**	**+1.5**	
	baz=250,SNR=124									
TOLK				S		**S**		**23 34 10.1**	**+1.5**	
	baz=250									
PAX	**Paxson**	**67.89**	**27**	P		**P**		**23 25 13.1**	**+0.9**	
	baz=257,SNR=82									
PAX				S		**S**		**23 34 09.2**	**+0.2**	
	baz=257									
HMT	**Hamilton**	**67.89**	**30**	P		**P**		**23 25 13.7**	**+1.4**	
HMT				IAmb		IAmb		23 25 33.2		
	comp=Z,284nm,1.2s									
HMT				IAMs_20	IAMs_20			23 50 28.8		
	comp=Z,4μm,20.0s									
HARP	**HAARP**	**67.90**	**28**	P		**P**		**23 25 13.3**	**+1.1**	
	baz=257,SNR=52									
HARP				S		**S**		**23 34 10.6**	**+1.6**	
	baz=257									
BTLS	**Baital**	**67.94**	**313**	*i* P		**P**		**23 25 13.2**	**+0.3**	
	comp=Z,108nm,1.6s,baz=313									
BTLS	**Baital**	**67.94**	**313**	*i* P		**P**		**23 25 13.1**	**+0.3**	
BTLS				pmax		pmax				
	comp=Z,108nm,1.6s									
C23K	**Itkillik River**	**67.95**	**19**	P		**P**		**23 25 14.1**	**+1.8**	
	baz=249,SNR=222									
C23K				S		**S**		**23 34 10.0**	**+0.8**	
	baz=249									
K24K	**Donnelly Dome**	**67.95**	**26**	P		**P**		**23 25 13.7**	**+1.1**	
	baz=256,SNR=38									
K24K				S		**S**		**23 34 10.1**	**+0.5**	
	baz=256									
N25K	**Chitina, Valde**	**67.99**	**29**	IAmb		IAmb		23 25 39.0		
	comp=Z,319nm,1.4s									
N25K	**Chitina, Valde**	**67.99**	**29**	P		**P**		**23 25 14.6**	**+1.7**	
	baz=258,SNR=39									
N25K				S		**S**		**23 34 10.7**	**+0.6**	
	baz=258									
G24K	**Hadweenzic Riv**	**68.04**	**23**	IAmb		IAmb		23 25 31.1		
	comp=Z,161nm,1.0s									
G24K				IAMs_20	IAMs_20			23 51 44.4		
	comp=Z,6μm,21.0s									
G24K	**Hadweenzic Riv**	**68.04**	**23**	P		**P**		**23 25 14.6**	**+1.6**	
	baz=253,SNR=63									
G24K				S		**S**		**23 34 13.3**	**+2.8**	
	baz=253									
EKS2	**Erkin-Say**	**68.06**	**311**	P		**P**		**23 25 14.4**	**+0.6**	
	SNR=83									
E24K	**Your Creek**	**68.08**	**22**	P		**P**		**23 25 15.1**	**+1.8**	
	baz=252									
E24K				S		**S**		**23 34 13.5**	**+2.5**	
	baz=252									
SUCK	**Suckling Hills**	**68.08**	**30**	P		**P**		**23 25 13.9**	**+0.5**	
F24K	**Squaw Lake**	**68.12**	**22**	IAmb		IAmb		23 25 25.8		
	comp=Z,206nm,1.1s									
F24K				IAMs_20	IAMs_20			23 52 10.4		
	comp=Z,4μm,22.0s									
F24K	**Squaw Lake**	**68.12**	**22**	P		**P**		**23 25 15.1**	**+1.5**	
	baz=252									
F24K				S		**S**		**23 34 13.8**	**+2.3**	
	baz=252									
TRD	**Trivandrum**	**68.17**	**274**	*e*P		**P**		**23 25 15.8**	**+1.0**	
TRD				IAmb		IAmb		23 25 22.1		
	comp=Z,214nm,0.8s									
D24K	**Happy Valley**	**68.31**	**20**	P		**P**		**23 25 16.3**	**+1.7**	
	baz=251									
D24K				S		**S**		**23 34 16.3**	**+2.8**	
	baz=251									
J25K	**Salcha River,**	**68.32**	**26**	IAMs_20	IAMs_20			23 52 28.2		
	comp=Z,5μm,21.0s									
J25K	**Salcha River,**	**68.32**	**26**	P		**P**		**23 25 14.8**	**-0.1**	
	baz=256									
J25K				S		**S**		**23 34 11.9**	**-2.1**	
	baz=256									
BGLC	**Bering Glacier**	**68.33**	**30**	P		**P**		**23 25 15.4**	**+0.6**	
	baz=260									
RIDG	**Independent Ri**	**68.34**	**26**	P		**P**		**23 25 15.9**	**+0.9**	
	baz=257,SNR=93									
RIDG				S		**S**		**23 34 13.8**	**-0.4**	
	baz=257									
VRDI	**Verde Repeater**	**68.45**	**29**	IAmb		IAmb		23 25 46.5		
	comp=Z,202nm,1.2s									
PRP	**Porcupine Dome**	**68.48**	**25**	IAMs_20	IAMs_20			23 51 17.1		
	comp=Z,6μm,22.0s									
PRP	**Porcupine Dome**	**68.48**	**25**	P		**P**		**23 25 15.1**	**-0.8**	
	baz=256,SNR=20									
PRP				S		**S**		**23 34 13.8**	**-2.2**	
	baz=256									
CRQM	**Cirque**	**68.52**	**30**	P		**P**		**23 25 17.9**	**+1.5**	
C24K	**Franklin Bluff**	**68.53**	**20**	P		**P**		**23 25 18.0**	**+2.0**	
	baz=251									
C24K				S		**S**		**23 34 16.8**	**+0.6**	
	baz=251									
CRQE	**Cirque**	**68.54**	**30**	P		**P**		**23 25 17.8**	**+1.4**	
	baz=260									
CRQE				S		**S**		**23 34 18.2**	**+1.3**	
	baz=260									
SNH	**Sunshine Point**	**68.56**	**30**	P		**P**		**23 25 18.1**	**+1.7**	
NIL	**Nilore**	**68.58**	**301**	P		**P**		**23 25 18.1**	**+1.0**	
NIL	**Nilore**	**68.58**	**301**	P		**P**		**23 25 18.1**	**+1.0**	
NIL				pmax		pmax				
	comp=Z,417nm,1.1s									
NIL	**Nilore**	**68.58**	**301**	P		**P**		**23 25 18.0**	**+1.0**	
WAX	**Waxell Ridge**	**68.60**	**30**	P		**P**		**23 25 18.3**	**+1.5**	
MENT	**Mentasta**	**68.67**	**27**	IAmb		IAmb		23 25 33.7		
	comp=Z,118nm,1.0s									
MENT				IAMs_20	IAMs_20			23 52 13.1		
	comp=Z,4μm,22.0s									
TGL	**Tana Glacier**	**68.67**	**30**	IAmb		IAmb		23 25 38.0		
	comp=Z,269nm,1.2s									
TGL				IAMs_20	IAMs_20			23 54 18.0		
	comp=Z,4μm,20.0s									
MCARA	**McCarthy VSAT**	**68.69**	**29**	P		**P**		**23 25 18.1**	**+1.0**	
	baz=260,SNR=39									
MCARA				S		**S**		**23 34 19.5**	**+1.2**	
	baz=260									
SCRK	**Sand Creek**	**68.77**	**26**	IAMs_20	IAMs_20			23 52 33.6		
	comp=Z,7μm,21.0s									
SCRK	**Sand Creek**	**68.77**	**26**	P		**P**		**23 25 18.6**	**+0.9**	
	baz=258,SNR=116									
SCRK				S		**S**		**23 34 18.7**	**-0.7**	
	baz=258									
L26K	**Log Cabin Wild**	**68.85**	**27**	IAmb		IAmb		23 25 36.2		
	comp=Z,235nm,1.1s									
L26K	**Log Cabin Wild**	**68.85**	**27**	P		**P**		**23 25 19.6**	**+1.5**	
	baz=259,SNR=79									
L26K				S		**S**		**23 34 21.9**	**+1.6**	
	baz=259									
MCQ	**Macquarie Isla**	**68.86**	**172**	P		**P**		**23 25 19.1**	**+1.0**	
	baz=69									
MCQ	**Macquarie Isla**	**68.86**	**172**	P		**P**		**23 25 18.1**	**0.0**	
MCQ				IAmb		IAmb		23 25 36.1		
	comp=Z,163nm,1.1s									
MCQ	**Macquarie Isla**	**68.86**	**172**	P		**P**		**23 25 18.1**	**0.0**	
MCQ				pmax		pmax				
	comp=Z,163nm,1.2s									
ISLE	**Juniper Island**	**68.88**	**30**	P		**P**		**23 25 19.1**	**+0.5**	
M26K	**Nabesna, AK**	**68.89**	**28**	IAmb		IAmb		23 25 38.4		
	comp=Z,157nm,1.3s									
M26K	**Nabesna, AK**	**68.89**	**28**	P		**P**		**23 25 19.8**	**+1.4**	
	baz=259									
M26K				S		**S**		**23 34 21.7**	**+0.9**	
	baz=259									
F25K	**Christian Rive**	**68.97**	**22**	P		**P**		**23 25 20.6**	**+1.7**	
	baz=255									
F25K				S		**S**		**23 34 22.6**	**+1.0**	
	baz=255									
MESA	**MESA**	**69.00**	**31**	P		**P**		**23 25 20.5**	**+1.2**	
MESA				IAMs_20	IAMs_20			23 53 55.0		
	comp=Z,4μm,19.0s									
MESA	**MESA**	**69.00**	**31**	P		**P**		**23 25 20.8**	**+1.5**	
	baz=261,SNR=22									
MESA				S		**S**		**23 34 24.6**	**+2.1**	
	baz=261									
J26L	**Joseph Creek**	**69.06**	**26**	IAmb		IAmb		23 25 27.1		
	comp=Z,142nm,0.8s									
J26L	**Joseph Creek**	**69.06**	**26**	P		**P**		**23 25 20.4**	**+0.9**	
	baz=258,SNR=137									
J26L				S		**S**		**23 34 19.6**	**-3.2**	
	baz=258									
BRZS	**Berezniki**	**69.12**	**318**	*i* P		**P**		**23 25 20.0**	**0.0**	
	comp=Z,119nm,1.8s,baz=318									
BRZS	**Berezniki**	**69.12**	**318**	*c i*P		**P**		**23 25 20.0**	**0.0**	
BRZS				pmax		pmax				
	comp=Z,119nm,1.8s									
E25K	**Arctic Village**	**69.14**	**22**	P		**P**		**23 25 21.9**	**+2.0**	
	baz=255,SNR=103									
E25K				S		**S**		**23 34 26.4**	**+2.8**	
	baz=255									
D25K	**Kavik River**	**69.19**	**21**	P		**P**		**23 25 21.7**	**+1.5**	
	baz=253									
D25K				S		**S**		**23 34 24.4**	**+0.3**	
	baz=253									
OTUK	**Ortayu**	**69.25**	**317**	*i* P		**P**		**23 25 21.0**	**0.0**	
OTUK				pmax		pmax				
	comp=Z,220nm,1.3s									
BARN	**Barnard Glacie**	**69.28**	**30**	P		**P**		**23 25 21.8**	**+0.7**	
BARN				IAmb		IAmb		23 25 39.4		
	comp=Z,159nm,1.2s									
BMAR	**Burnt Mountain**	**69.32**	**23**	P		**P**		**23 25 22.3**	**+1.3**	
KAD	**Karad**	**69.33**	**283**	*e*P		**P**		**23 25 22.0**	**0.0**	
M27K	**Edge Creek, AK**	**69.39**	**28**	P		**P**		**23 25 22.5**	**+0.8**	
M27K				IAmb		IAmb		23 25 39.2		
	comp=Z,148nm,1.1s									
M27K				IAMs_20	IAMs_20			23 52 17.5		
	comp=Z,6μm,22.0s									
M27K	**Edge Creek, AK**	**69.39**	**28**	P		**P**		**23 25 23.2**	**+1.5**	
	baz=260									
M27K				S		**S**		**23 34 30.6**	**+3.7**	
	baz=260									
I26K	**Coal Creek Min**	**69.40**	**25**	IAMs_20	IAMs_20			23 54 22.1		
	comp=Z,4μm,19.0s									
I26K	**Coal Creek Min**	**69.40**	**25**	P		**P**		**23 25 21.2**	**-0.3**	
	baz=258									
I26K				S		**S**		**23 34 28.9**	**+2.3**	
	baz=258									
MNGI	**Mangalore**	**69.42**	**279**	*e*P		**P**		**23 25 23.0**	**+0.5**	
CTG	**Chitna Glacier**	**69.42**	**30**	P		**P**		**23 25 23.4**	**+1.6**	
	baz=261,SNR=45									
CTG				S		**S**		**23 34 26.8**	**-0.5**	
	baz=261									
CTGM	**Chitina Glacie**	**69.42**	**30**	P		**P**		**23 25 23.9**	**+1.9**	
CTGM				IAmb		IAmb		23 25 43.0		
	comp=Z,258nm,1.1s									
TABL	**Table Mountain**	**69.44**	**30**	P		**P**		**23 25 23.5**	**+1.4**	
POO	**Poona**	**69.47**	**285**	*e*P		**P**		**23 25 22.5**	**-0.3**	
POO				IAmb		IAmb		23 25 25.2		
	comp=Z,142nm,0.9s									
G26K	**Porcupine Rive**	**69.51**	**23**	P		**P**		**23 25 24.1**	**+1.9**	
	baz=257,SNR=215									
G26K				S		**S**		**23 34 28.7**	**+0.8**	
	baz=257									
L27K	**Beaver Creek,**	**69.54**	**27**	IAmb		IAmb		23 25 39.9		
	comp=Z,138nm,1.0s									
L27K				IAMs_20	IAMs_20			23 52 28.3		
	comp=Z,5μm,21.0s									
L27K	**Beaver Creek,**	**69.54**	**27**	P		**P**		**23 25 23.8**	**+1.4**	
	baz=260									
L27K				S		**S**		**23 34 28.8**	**+0.4**	
	baz=260									
F26K	**Sheenjek River**	**69.55**	**22**	P		**P**		**23 25 24.5**	**+2.0**	
	baz=256									
F26K				S		**S**		**23 34 30.2**	**+1.8**	
	baz=256									
LOGN	**Logan Glacier**	**69.56**	**30**	P		**P**		**23 25 23.8**	**+1.0**	
LOGN				IAmb		IAmb		23 25 40.6		
	comp=Z,245nm,1.0s									
K27K	**Chicken**	**69.60**	**26**	IAmb		IAmb		23 25 40.7		
	comp=Z,215nm,1.1s									
K27K	**Chicken**	**69.60**	**26**	P		**P**		**23 25 24.7**	**+1.9**	
	baz=259									
K27K				S		**S**		**23 34 31.4**	**+2.4**	
	baz=259									
PCA	**Pinnacle**	**69.83**	**31**	P		**P**		**23 25 24.8**	**+0.5**	
PINM	**Pinnacle**	**69.83**	**31**	P		**P**		**23 25 25.8**	**+1.5**	
	baz=262,SNR=17									
PINM				S		**S**		**23 34 29.3**	**-2.7**	
	baz=262									
C26K	**Camden Bay**	**69.85**	**20**	P		**P**		**23 25 26.4**	**+2.3**	
	baz=255									
C26K				S		**S**		**23 34 33.0**	**+1.3**	
	baz=255									
DZA	**Taraz**	**69.86**	**311**	*e*P		**P**		**23 25 25.1**	**+0.3**	
	baz=311									
DZA	**Taraz**	**69.86**	**311**	*e*P		**P**		**23 25 25.1**	**+0.3**	
BVCY	**Beaver Creek**	**69.87**	**28**	P		**P**		**23 25 25.9**	**+1.4**	
	baz=261,SNR=29									
BVCY				S		**S**		**23 34 35.8**	**+3.4**	
	baz=261									
GOA	**Goa**	**69.95**	**282**	*e*P		**P**		**23 25 26.2**	**+0.4**	
YUK3	**Moose Creek**	**69.96**	**29**	P		**P**		**23 25 26.6**	**+1.4**	
	baz=262,SNR=88			

KKAR	**Karatay Array**	**70.46**	**311**		P	**P**	**23 25 28.5**	**0.0**
KKAR	**Karatay Array**	**70.46**	**311**		IAmb	IAmb	23 25 48.2	
	comp=Z,161nm,0.9s							
KKAR	**Karatay Array**	**70.46**	**311**		P	**P**	**23 25 28.5**	**0.0**
O29M	**Mount Kennedy**	**70.69**	**31**		P	**P**	**23 25 30.6**	**+0.9**
O29M					IAmb	IAmb	23 25 51.3	
	comp=Z,286nm,1.1s							
O29M					IAMs_20	IAMs_20	23 54 05.5	
	comp=Z,5µm,22.0s							
O29M	**Mount Kennedy**	**70.69**	**31**		P	**P**	**23 25 31.6**	**+2.0**
	baz=264							
O29M					S	**S**	**23 34 43.4**	**+1.3**
	baz=264							
BVAR	**Borovoye Array**	**70.71**	**322**		P	**P**	**23 25 29.3**	**-0.5**
	comp=Z,114nm,0.4s,baz=99,slow=7.7,SNR=286							
BVAR					S	**S**	**23 34 39.3**	**-3.1**
	comp=Z,20nm,1.2s,baz=74,slow=11,SNR=6.2							
BVAR					LR	LR	23 57 34.4	
	comp=Z,15µm,20.3s,baz=88,slow=37							
	comp=Z,114nm,0.4s							
I28M	**Miner Creek**	**70.75**	**25**		IAmb	IAmb	23 25 49.7	
	comp=Z,180nm,1.0s							
I28M					IAMs_20	IAMs_20	23 55 04.3	
	comp=Z,4µm,20.0s							
I28M	**Miner Creek**	**70.75**	**25**		P	**P**	**23 25 30.9**	**+1.0**
	baz=261							
I28M					S	**S**	**23 34 42.5**	**-0.2**
	baz=261							
YUK4	**Talbot Arm**	**70.77**	**30**		P	**P**	**23 25 32.5**	**+2.3**
	baz=264,SNR=110							
YUK4					S	**S**	**23 34 46.9**	**+3.8**
	baz=264							
BRVK	**Borovoye**	**70.77**	**322**		P	**P**	**23 25 29.9**	**-0.3**
BRVK	**Borovoye**	**70.77**	**322**	*c i*	P	**P**	**23 25 30.3**	**+0.2**
BRVK					pmax	pmax		
	comp=Z,579nm,1.7s							
BRVK					MLR	MLR		
	comp=Z,15µm,20.0s							
BRVK	**Borovoye**	**70.77**	**322**		P	**P**	**23 25 30.5**	**+0.3**
BRVK					S	**S**	**23 34 40.5**	**-2.5**
DAWY	**Dawson**	**70.77**	**27**		IAmb	IAmb	23 25 48.3	
	comp=Z,224nm,1.1s							
DAWY					IAMs_20	IAMs_20	23 53 56.7	
	comp=Z,6µm,21.0s							
DAWY	**Dawson**	**70.77**	**27**		P	**P**	**23 25 31.6**	**+1.6**
	baz=262,SNR=104							
DAWY					S	**S**	**23 34 43.9**	**+1.1**
	baz=262							
YUK6	**Outpost Mounta**	**70.86**	**30**		P	**P**	**23 25 32.5**	**+1.6**
	baz=264,SNR=30							
YUK6					S	**S**	**23 34 45.4**	**+1.0**
	baz=264							
BRLS	**Boroldaу**	**70.96**	**311**	⇑ *i*	P	**P**	**23 25 32.4**	**+0.9**
	baz=311							
BRLS	**Boroldaу**	**70.96**	**311**	*e*	P	**P**	**23 25 32.2**	**+0.7**
BRLS					pmax	pmax		
	comp=Z,165nm,3.0s							
M29M	**Somme Creek**	**70.98**	**28**		IAMs_20	IAMs_20	23 53 06.5	
	comp=Z,4µm,22.0s							
M29M	**Somme Creek**	**70.98**	**28**		P	**P**	**23 25 33.4**	**+2.0**
	baz=263							
M29M					S	**S**	**23 34 48.3**	**+2.9**
	baz=263							
D27M	**Malcolm River**	**71.04**	**21**		P	**P**	**23 25 33.1**	**+1.5**
D27M					IAmb	IAmb	23 25 37.1	
	comp=Z,157nm,1.1s							
D27M	**Malcolm River**	**71.04**	**21**		P	**P**	**23 25 33.4**	**+1.9**
	baz=259							
D27M					S	**S**	**23 34 46.9**	**+1.1**
	baz=259							
P29M	**Windy Craggy**	**71.04**	**31**		P	**P**	**23 25 33.1**	**+1.5**
P29M	**Windy Craggy**	**71.04**	**31**		P	**P**	**23 25 33.2**	**+1.5**
	baz=265							
P29M					S	**S**	**23 34 47.8**	**+1.7**
	baz=265							
F28M	**Old Crow**	**71.13**	**23**		P	**P**	**23 25 33.5**	**+1.4**
F28M					IAmb	IAmb	23 25 50.3	
	comp=Z,253nm,1.1s							
F28M	**Old Crow**	**71.13**	**23**		P	**P**	**23 25 33.7**	**+1.6**
	baz=260,SNR=118							
F28M					S	**S**	**23 34 47.9**	**+1.0**
	baz=260							
CHM	**Chimkent**	**71.15**	**310**	*e*	P	**P**	**23 25 33.4**	**+0.7**
	baz=310							
CHM					LR	LR	23 54 15.6	
	baz=310							
CHM	**Chimkent**	**71.15**	**310**	*e*	P	**P**	**23 25 33.4**	**+0.7**
L29M	**L29M**	**71.21**	**28**		IAMs_20	IAMs_20	23 54 04.5	
	comp=Z,4µm,21.0s							
L29M	**L29M**	**71.21**	**28**		P	**P**	**23 25 34.5**	**+1.8**
	baz=263,SNR=108							
L29M					S	**S**	**23 34 49.3**	**+1.3**
	baz=263							
HYT	**Haines Junctio**	**71.26**	**30**		P	**P**	**23 25 35.0**	**+1.8**
HYT	**Haines Junctio**	**71.26**	**30**		P	**P**	**23 25 35.3**	**+2.2**
	baz=265,SNR=93							
HYT					S	**S**	**23 34 50.5**	**+1.7**
	baz=265							
J29N	**Klondike Camp**	**71.33**	**26**		P	**P**	**23 25 34.8**	**+1.3**
J29N					IAmb	IAmb	23 25 52.0	
	comp=Z,143nm,1.0s							
J29N	**Klondike Camp**	**71.33**	**26**		P	**P**	**23 25 35.2**	**+1.8**
	baz=263,SNR=25							
J29N					S	**S**	**23 34 50.5**	**+1.1**
	baz=263							
E28M	**Babbage River**	**71.43**	**22**		IAMs_20	IAMs_20	23 53 54.0	
	comp=Z,4µm,20.0s							
E28M	**Babbage River**	**71.43**	**22**		P	**P**	**23 25 35.5**	**+1.7**
	baz=260							
E28M					S	**S**	**23 34 50.6**	**+0.4**
	baz=260							
P30M	**Million Dollar**	**71.47**	**31**		P	**P**	**23 25 36.5**	**+2.2**
	baz=265,SNR=75							
P30M					S	**S**	**23 34 52.2**	**+1.1**
	baz=265							
H29M	**Whitestone**	**71.50**	**24**		P	**P**	**23 25 36.1**	**+1.8**
	baz=262							
H29M					S	**S**	**23 34 52.4**	**+1.2**
	baz=262							
N30M	**Aishikik Lake**	**71.52**	**29**		IAmb	IAmb	23 26 00.4	
	comp=Z,167nm,1.1s							
N30M					IAMs_20	IAMs_20	00 02 26.8	
	comp=Z,4µm,20.0s							
N30M	**Aishikik Lake**	**71.52**	**29**		P	**P**	**23 25 36.5**	**+1.8**
	baz=265							
N30M					S	**S**	**23 34 53.8**	**+2.2**
	baz=265							
K29M	**Barlow Dome**	**71.56**	**27**		IAmb	IAmb	23 25 53.5	
	comp=Z,254nm,1.1s							
K29M					IAMs_20	IAMs_20	23 54 53.9	
	comp=Z,6µm,20.0s							
K29M	**Barlow Dome**	**71.56**	**27**		P	**P**	**23 25 36.3**	**+1.4**
	baz=264							
K29M					S	**S**	**23 34 54.5**	**+2.3**
	baz=264							
S31K	**Pelican**	**71.70**	**33**		P	**P**	**23 25 37.3**	**+1.7**
S31K					IAmb	IAmb	23 25 45.1	
	comp=Z,320nm,1.7s							
S31K	**Pelican**	**71.70**	**33**		P	**P**	**23 25 36.8**	**+1.2**
	baz=267,SNR=8.7							
S31K					S	**S**	**23 34 56.2**	**+2.7**
	baz=267							
PLBC	**Pleasant Camp**	**71.72**	**32**		P	**P**	**23 25 36.6**	**+0.9**
	baz=266							
PLBC					S	**S**	**23 34 55.9**	**+2.1**
	baz=266							
SIMJ	**Simiganj**	**71.76**	**306**		P	**P**	**23 25 36.9**	**+0.3**
SIMJ					IAmb	IAmb	23 25 55.9	
	comp=Z,304nm,1.1s							
M30M	**Minto, Yukon**	**71.76**	**28**		P	**P**	**23 25 37.3**	**+1.3**
M30M	**Minto, Yukon**	**71.76**	**28**		P	**P**	**23 25 37.9**	**+1.8**
	baz=265,SNR=86							
M30M					S	**S**	**23 34 55.7**	**+1.4**
	baz=265							
KBU	**Kabul Universi**	**71.94**	**302**		P	**P**	**23 25 35.3**	**-2.5**
KBU					S	**S**	**23 34 52.9**	**-4.8**
O30N	**Mendenhall**	**71.95**	**30**		P	**P**	**23 25 38.1**	**+0.9**
O30N	**Mendenhall**	**71.95**	**30**		P	**P**	**23 25 38.9**	**+1.7**
	baz=266,SNR=30							
O30N					S	**S**	**23 34 59.1**	**+2.5**
	baz=266							
R31K	**City Hall, Gus**	**71.98**	**33**		P	**P**	**23 25 38.8**	**+1.5**
	baz=267							
E29M	**Blow River**	**71.99**	**22**		P	**P**	**23 25 38.5**	**+1.2**
	baz=262							
E29M					S	**S**	**23 34 57.5**	**+0.8**
	baz=262							

KBL	**Kabul**	**72.01**	**302**		P	**P**	**23 25 38.2**	**-0.1**
KBL					IAMs_20	IAMs_20	23 57 34.8	
	comp=Z,5µm,21.0s							
KBL	**Kabul**	**72.01**	**302**		P	**P**	**23 25 38.2**	**-0.1**
KBL					pmax	pmax		
	comp=Z,132nm,1.0s							
KBL					MLR	MLR		
	comp=Z,5µm,21.0s							
KBL	**Kabul**	**72.01**	**302**		P	**P**	**23 25 38.3**	**+0.1**
	SNR=111							
KBL					S	**S**	**23 34 56.7**	**-1.8**
SIT	**Sitka**	**72.14**	**34**		P	**P**	**23 25 39.5**	**+1.2**
SIT	**Sitka**	**72.14**	**34**		P	**P**	**23 25 39.6**	**+1.3**
	baz=268							
SIT	**Sitka**	**72.14**	**34**		P	**P**	**23 25 39.5**	**+1.2**
SIT					pmax	pmax		
	comp=Z,116nm,1.1s							
SIT					MLR	MLR		
	comp=Z,2µm,20.0s							
N31M	**Braeburn, Yuko**	**72.15**	**30**		P	**P**	**23 25 39.6**	**+1.2**
N31M					IAmb	IAmb	23 25 57.2	
	comp=Z,303nm,1.3s							
N31M	**Braeburn, Yuko**	**72.15**	**30**		P	**P**	**23 25 40.0**	**+1.6**
	baz=266,SNR=58							
N31M					S	**S**	**23 35 01.2**	**+2.3**
	baz=266							
J30M	**Hart River**	**72.16**	**26**		IAmb	IAmb	23 25 58.4	
	comp=Z,527nm,1.7s							
J30M	**Hart River**	**72.16**	**26**		P	**P**	**23 25 40.3**	**+1.8**
	baz=264							
J30M					S	**S**	**23 34 59.0**	**0.0**
	baz=264							
EPYK	**Eagle Plains**	**72.18**	**24**			**P**	**23 25 39.5**	**+1.0**
EPYK	**Eagle Plains**	**72.18**	**24**		P	**P**	**23 25 39.2**	**+0.8**
EPYK					IAmb	IAmb	23 25 58.3	
	comp=Z,218nm,1.1s							
EPYK	**Eagle Plains**	**72.18**	**24**		P	**P**	**23 25 39.9**	**+1.4**
	baz=264,SNR=69							
EPYK					S	**S**	**23 34 56.4**	**-2.6**
	baz=264							
I30M	**Mount Dempster**	**72.20**	**26**		P	**P**	**23 25 40.0**	**+1.2**
	baz=264							
I30M					S	**S**	**23 34 58.3**	**-1.1**
	baz=264							
SKAG	**Skagway**	**72.25**	**32**		P	**P**	**23 25 40.6**	**+1.7**
SKAG	**Skagway**	**72.25**	**32**		P	**P**	**23 25 40.6**	**+1.7**
	baz=267,SNR=41							
SKAG					S	**S**	**23 35 02.2**	**+2.3**
	baz=267							
MAYO	**Mayo, Yukon**	**72.26**	**27**		P	**P**	**23 25 40.5**	**+1.5**
MAYO	**Mayo, Yukon**	**72.26**	**27**		P	**P**	**23 25 40.4**	**+1.5**
	baz=265,SNR=46							
MAYO					S	**S**	**23 35 01.4**	**+1.4**
	baz=265							
G30M	**tAoh Zraii Nji**	**72.45**	**24**		P	**P**	**23 25 40.6**	**+0.6**
	baz=264							
G30M					S	**S**	**23 35 00.7**	**-1.4**
	baz=264							
WHY	**Whitehorse**	**72.54**	**30**		P	**P**	**23 25 42.2**	**+1.4**
WHY					IAmb	IAmb	23 26 02.1	
	comp=Z,173nm,1.1s							
WHY					IAMs_20	IAMs_20	23 57 20.5	
	comp=Z,4µm,21.0s							
WHY	**Whitehorse**	**72.54**	**30**		P	**P**	**23 25 42.4**	**+1.6**
	baz=267,SNR=64							
WHY					S	**S**	**23 35 05.2**	**+1.8**
	baz=267							
S32K	**Killisnoo**	**72.56**	**34**		P	**P**	**23 25 42.2**	**+1.4**
S32K	**Killisnoo**	**72.56**	**34**		P	**P**	**23 25 42.4**	**+1.6**
	baz=268,SNR=17							
R32K	**Eaglecrest**	**72.62**	**33**			**P**	**23 25 42.4**	**+1.2**
R32K	**Eaglecrest**	**72.62**	**33**		P	**P**	**23 25 42.8**	**+1.6**
	baz=268,SNR=13							
F30M	**Barrier River**	**72.68**	**23**		P	**P**	**23 25 42.8**	**+1.4**
	baz=264							
F30M					S	**S**	**23 35 04.8**	**+0.1**
	baz=264							
JIS	**Juneau Island**	**72.69**	**33**		P	**P**	**23 25 42.9**	**+1.4**
BHUJ	**Bhuj**	**72.70**	**290**	*e*	P	**P**	**23 25 43.8**	**+1.6**
BHUJ					IAmb	IAmb	23 25 50.5	
	comp=Z,341nm,1.4s							
TBI	**Tubuai**	**72.75**	**120**	*e*	P	**P**	**23 25 44.8**	**+2.3**
	comp=Z,3µm,25.5s							
TBI	**Tubuai**	**72.75**	**120**	*e*	PP	**PP**	**23 28 23.7**	**-1.1**
	comp=Z,859nm,28.0s							
TBI				*e*	S	**S**	**23 35 04.3**	**-2.4**
	comp=Z,10µm,27.2s							
TBI				*e*	SS	**SS**	**23 39 47.4**	**+0.2**
	comp=Z,5µm,24.5s							
TBI				*e*	LR	LR	23 47 36.9	
	comp=Z,37µm,28.5s							
TBI				*e*	LR	LR	23 47 40.9	
	comp=Z,7µm,27.0s							
M31M	**Drury Creek, Y**	**72.85**	**29**		P	**P**	**23 25 43.0**	**+0.5**
M31M					IAmb	IAmb	23 26 11.1	
	comp=Z,197nm,1.4s							
M31M	**Drury Creek, Y**	**72.85**	**29**		P	**P**	**23 25 43.9**	**+1.4**
	baz=267,SNR=51							
M31M					S	**S**	**23 35 08.9**	**+2.1**
	baz=267							
P32M	**Atlin**	**73.08**	**32**		P	**P**	**23 25 45.5**	**+1.6**
	baz=268,SNR=41							
P32M					S	**S**	**23 35 12.0**	**+2.5**
	baz=268							
H31M	**Peel River**	**73.10**	**25**		IAmb	IAmb	23 26 04.5	
	comp=Z,306nm,1.1s							
H31M					IAMs_20	IAMs_20	23 54 00.9	
	comp=Z,4µm,22.0s							
H31M	**Peel River**	**73.10**	**25**		P	**P**	**23 25 45.1**	**+1.2**
	baz=266							
H31M					S	**S**	**23 35 09.4**	**0.0**
	baz=266							
G31M	**Satah River**	**73.21**	**24**		IAMs_20	IAMs_20	23 55 06.8	
	comp=Z,6µm,21.0s							
G31M	**Satah River**	**73.21**	**24**		P	**P**	**23 25 45.6**	**+1.1**
	baz=266							
G31M					S	**S**	**23 35 10.5**	**0.0**
	baz=266							
FARO	**Faro, Yukon**	**73.34**	**29**		P	**P**	**23 25 46.2**	**+0.8**
FARO						**P**	**23 25 46.9**	**+1.5**
FARO	**Faro, Yukon**	**73.34**	**29**		P	**P**	**23 25 46.3**	**+0.8**
	baz=268,SNR=38							
FARO					S	**S**	**23 35 13.1**	**+0.7**
	baz=268							
CRAG	**Craig**	**73.34**	**36**		IAmb	IAmb	23 25 54.1	
	comp=Z,280nm,1.6s							
CRAG	**Craig**	**73.34**	**36**		P	**P**	**23 25 47.1**	**+1.6**
	baz=270							
U33K	**Whale Pass**	**73.34**	**35**		P	**P**	**23 25 46.6**	**+1.2**
U33K	**Whale Pass**	**73.34**	**35**		P	**P**	**23 25 47.5**	**+2.0**
	baz=270,SNR=11							
U33K					S	**SKiKP**	**23 35 14.0**	**-0.9**
	baz=270							
N32M	**Quiet Lake**	**73.44**	**30**		IAmb	IAmb	23 26 03.9	
	comp=Z,348nm,1.2s							
N32M	**Quiet Lake**	**73.44**	**30**		P	**P**	**23 25 47.5**	**+1.5**
	baz=268							
N32M					S	**SKiKP**	**23 35 14.6**	**-0.5**
	baz=268							
T33K	**Petersburg**	**73.44**	**34**		P	**P**	**23 25 46.8**	**+0.8**
	baz=270							
F31M	**Tsiigehtchic**	**73.45**	**23**		P	**P**	**23 25 46.5**	**+0.7**
F31M					IAmb	IAmb	23 26 03.1	
	comp=Z,187nm,1.1s							
F31M	**Tsiigehtchic**	**73.45**	**23**		P	**P**	**23 25 46.3**	**+0.5**
	baz=266,SNR=124							
F31M					S	**SKiKP**	**23 35 14.6**	**-0.1**
	baz=266							
P33M	**Teslin, Yukon**	**73.54**	**31**		P	**P**	**23 25 47.6**	**+0.9**
P33M	**Teslin, Yukon**	**73.54**	**31**		P	**P**	**23 25 47.9**	**+1.2**
	baz=269,SNR=55							
P33M					S	**SKiKP**	**23 35 16.5**	**+1.3**
	baz=269							
INK	**Inuvik**	**73.59**	**22**			**P**	**23 25 47.3**	**+0.6**
INK					IAmb	IAmb	23 26 04.0	
	comp=Z,172nm,0.9s							
INK	**Inuvik**	**73.59**	**22**		P	**P**	**23 25 47.4**	**+0.6**
	baz=266,SNR=179							
INK					S	**S**	**23 35 12.4**	**-2.5**
	baz=266							
INK	**Inuvik**	**73.59**	**22**		P	**P**	**23 25 47.3**	**+0.6**
INK					pmax	pmax		
	comp=Z,172nm,1.0s							
INK	**Inuvik**	**73.59**	**22**		LR	LR	23 56 35.3	
	comp=Z,2µm,21.4s,baz=254,slow=34							
DIB	**Dawson Inlet,**	**73.75**	**38**		P	**P**	**23 25 48.5**	**+0.6**
H02S1	**DAWSON INLET T**	**73.75**	**38**		P	**P**	**23 25 48.5**	**+0.6**

H02S1					T	T	00 46 54.5	
	SNR=2.3							
WRAK	**Wrangell Islan**	**73.78**	**35**		P	**P**	**23 25 49.2**	**+1.2**
WRAK					IAmb	IAmb	23 26 09.6	
	comp=Z,192nm,1.1s							
WRAK	**Wrangell Islan**	**73.78**	**35**		P	**P**	**23 25 48.2**	**+0.3**
	baz=270,SNR=13							
WRAK					S	**S**	**23 35 20.6**	**+3.3**
	baz=270							
KAAM	**Kaadhehdhoo**	**73.80**	**266**		P	**P**	**23 25 49.9**	**+1.0**
KAAM	**Kaadhehdhoo**	**73.80**	**266**		P	**P**	**23 25 51.3**	**+2.3**
	SNR=17							
Q32M	**Nakina River**	**73.81**	**32**		P	**P**	**23 25 50.2**	**+1.8**
Q32M					IAmb	IAmb	23 26 06.9	
	comp=Z,197nm,1.2s							
Q32M	**Nakina River**	**73.81**	**32**		P	**P**	**23 25 50.5**	**+2.0**
	baz=270							
Q32M					S	**S**	**23 35 17.2**	**-0.9**
	baz=270							
Q32M					S	**SKiKP**	**23 35 20.3**	**+4.5**
	baz=270							
V35K	**Ketchikan**	**74.21**	**36**		P	**P**	**23 25 51.7**	**+1.1**
	baz=271,SNR=5.5							
V35K					S	**S**	**23 35 24.4**	**+2.2**
	baz=271							
MMPY	**Sheldon Lake,**	**74.32**	**28**		P	**P**	**23 25 52.9**	**+1.8**
MMPY					IAmb	IAmb	23 26 02.4	
	comp=Z,460nm,1.7s							
MMPY	**Sheldon Lake,**	**74.32**	**28**		P	**P**	**23 25 53.0**	**+1.8**
	baz=270,SNR=63							
MMPY					S	**S**	**23 35 24.6**	**+1.2**
	baz=270							
S34M	**Telegraph Cree**	**74.42**	**33**		IAmb	IAmb	23 26 13.5	
	comp=Z,242nm,1.1s							
S34M	**Telegraph Cree**	**74.42**	**33**		P	**P**	**23 25 53.9**	**+2.2**
	baz=271,SNR=67							
R33M	**Jennings River**	**74.48**	**32**		P	**P**	**23 25 54.1**	**+1.9**
	baz=271							
R33M					S	**S**	**23 35 29.1**	**+3.7**
	baz=271							
T35M	**Bob Quinn**	**74.92**	**34**		P	**P**	**23 25 56.4**	**+1.7**
T35M					IAmb	IAmb	23 26 17.1	
	comp=Z,188nm,1.1s							
T35M	**Bob Quinn**	**74.92**	**34**		P	**P**	**23 25 56.8**	**+2.1**
	baz=272,SNR=38							
T35M					S	**S**	**23 35 33.5**	**+3.2**
	baz=272							
DLBC	**Dease Lake**	**74.99**	**33**		P	**P**	**23 25 56.4**	**+1.3**
DLBC					IAmb	IAmb	23 26 16.9	
	comp=Z,322nm,1.1s							
DLBC					IAMs_20	IAMs_20	23 59 00.7	
	comp=Z,4µm,20.0s							
DLBC	**Dease Lake**	**74.99**	**33**		P	**P**	**23 25 57.2**	**+2.1**
	baz=272,SNR=102							
DLBC					S	**S**	**23 35 33.8**	**+2.8**
	baz=272							
DLBC	**Dease Lake**	**74.99**	**33**		P	**P**	**23 25 56.1**	**+1.0**
	comp=Z,86nm,1.0s,baz=278,slow=5.7,SNR=87							
	comp=Z,86nm,1.0s							
RUBB	**Prince Rupert**	**75.03**	**37**		P	**P**	**23 25 56.1**	**+0.8**
RUBB					IAmb	IAmb	23 26 25.4	
	comp=Z,325nm,1.7s							
U35K	**Hyder**	**75.09**	**35**		P	**P**	**23 25 57.0**	**+1.4**
	baz=273							
GRNB	**Grenville Isla**	**75.23**	**38**		P	**P**	**23 25 57.5**	**+1.0**
WTLY	**Watson Lake, Y**	**75.56**	**31**		P	**P**	**23 25 59.9**	**+1.6**
WTLY					IAmb	IAmb	23 26 17.2	
	comp=Z,358nm,1.1s							
WTLY	**Watson Lake, Y**	**75.56**	**31**		P	**P**	**23 26 00.4**	**+2.1**
	baz=272,SNR=164							
WTLY					S	**S**	**23 35 40.2**	**+3.0**
	baz=272							
TGTN	**Hyland Airport**	**75.75**	**30**		P	**P**	**23 26 01.4**	**+1.9**
	baz=273,SNR=95							
TGTN					S	**S**	**23 35 40.9**	**+1.5**
	baz=273							
TAOE	**Nuku Hiva Isla**	**76.25**	**103**	*e*	P	**P**	**23 26 00.1**	**-3.1**
	comp=Z,494nm,23.8s							
TAOE				*e*	S	S	23 35 58.6	+12
	comp=Z,2µm,30.5s							
TAOE				*e*	SS	**SS**	**23 40 39.5**	**-1.4**
	comp=Z,959nm,23.9s							
TAOE				*e*	LR	LR	23 49 05.6	
	comp=Z,6µm,22.0s							
SVE	**Sverdlovsk**	**76.28**	**326**	*d i*	P	**P**	**23 26 02.8**	**+0.3**
SVE				*e*	S	**S**	**23 35 42.6**	**-2.6**
SVE					pmax	pmax		
	comp=Z,500nm,1.3s							
SVE					MLR	MLR		
	comp=E,5µm,22.0s							
SVE					MLR	MLR		
	comp=Z,6µm,21.0s							
DGAR	**Diego Garcia**	**76.38**	**259**		P	**P**	**23 26 04.8**	**+1.0**
DGAR					IAMs_20	IAMs_20	23 55 45.0	
	comp=Z,4µm,22.0s							
DGAR	**Diego Garcia**	**76.38**	**259**		P	**P**	**23 26 04.8**	**+1.0**
DGAR					pmax	pmax		
	comp=Z,329nm,1.0s							
DGAR					MLR	MLR		
	comp=Z,4µm,22.0s							
DGAR	**Diego Garcia**	**76.38**	**259**		P	**P**	**23 26 07.1**	**+3.4**
BBB	**Bella Bella**	**76.46**	**39**		P	**P**	**23 26 04.1**	**+0.6**
BBB					IAMs_20	IAMs_20	23 56 21.0	
	comp=Z,4µm,19.0s							
BBB	**Bella Bella**	**76.46**	**39**		P	**P**	**23 26 04.3**	**+0.8**
	comp=Z,36nm,0.9s,baz=250,slow=7.9,SNR=6.4							
BBB					LR	LR	23 56 22.1	
	comp=Z,3µm,19.5s,baz=272,slow=33							
	comp=Z,36nm,0.9s							
A36M	**Sachs Harbour**	**76.46**	**19**		IAmb	IAmb	23 26 20.6	
	comp=Z,245nm,0.9s							
A36M	**Sachs Harbour**	**76.46**	**19**		P	**P**	**23 26 04.2**	**+1.0**
	baz=273,SNR=129							
A36M					S	**S**	**23 35 45.3**	**-1.3**
	baz=273							
HOLB	**Holberg**	**76.59**	**41**		P	**P**	**23 26 05.4**	**+1.0**
HOLB					IAmb	IAmb	23 26 14.1	
	comp=Z,372nm,1.5s							
HOLB					IAMs_20	IAMs_20	00 00 10.5	
	comp=Z,3µm,19.0s							
C36M	**Paulatuk**	**77.02**	**21**		P	**P**	**23 26 07.0**	**+0.6**
	baz=274,SNR=126							
C36M					S	**S**	**23 35 50.3**	**-2.6**
	baz=274							
AB31	**Akbulak array**	**77.41**	**318**	*i*	P	**P**	**23 26 08.6**	**-0.4**
AB31					pmax	pmax		
	comp=Z,43nm,0.5s							
ABKAR	**Akbulak array**	**77.41**	**318**		IAmb	IAmb	23 26 27.9	
	comp=Z,170nm,1.0s							
ARU	**Arti**	**77.46**	**325**		P	**P**	**23 26 09.2**	**+0.1**
ARU					IAmb	IAmb	23 26 28.2	
	comp=Z,284nm,1.0s							
ARU	**Arti**	**77.46**	**325**	*c i*	P	**P**	**23 26 09.2**	**+0.1**
ARU					S	**S**	**23 36 00.6**	**+2.5**
ARU					SS	**SS**	**23 40 52.6**	**-4.2**
ARU					SSS	SSS	23 44 11.3	
ARU					pmax	pmax		
	comp=Z,320nm,1.3s							
ARU					MLR	MLR		
	comp=Z,8µm,20.0s							
ARU	**Arti**	**

baz=277
CBB Campbell River 78.42 41 P **P** **23 26 16.4 +1.8**
CBB IAMs_20 IAMs_20 00 00 56.9
comp=Z,4µm,19.0s
OZB Mount Ozzard 78.48 42 P **P** **23 26 15.7 +0.7**
AKTO Aktyubinsk 78.50 319 P **P** **23 26 14.4 -0.6**
comp=Z,17nm,0.5s,baz=88,slow=6.5,SNR=47
AKTO LR LR 00 01 59.2
comp=Z,9µm,20.8s,baz=80,slow=36
comp=Z,17nm,0.5s
C03A Quillayute Air 79.23 43 P **P** **23 26 19.7 +0.6**
C03A IAmb IAmb 23 26 29.5
comp=Z,391nm,1.3s
CLRS Cowichan Lake 79.39 42 P **P** **23 26 21.1 +1.2**
NLWA Neilton Lookou 79.79 44 P **P** **23 26 24.0 +1.8**
NLWA IAmb IAmb 23 26 32.1
comp=Z,502nm,1.6s
PGC Sidney 79.86 42 P **P** **23 26 23.7 +1.2**
WISH Wishkah 79.90 44 P **P** **23 26 24.2 +1.5**
WISH IAmb IAmb 23 26 52.2
comp=Z,279nm,1.1s
RADR Rader Ridge 79.99 45 P **P** **23 26 24.8 +1.5**
RADR IAMs_20 IAMs_20 00 02 05.7
comp=Z,4µm,19.0s
NGCH Negor - Chabah 80.03 294 P **P** **23 26 25.0 +1.1**
SNR=14
NGCH S **S** **23 36 28.0 +1.3**
E03A Lebam 80.13 44 P **P** **23 26 25.6 +1.6**
E03A IAmb IAmb 23 26 29.8
comp=Z,242nm,1.0s
E03A IAMs_20 IAMs_20 00 02 19.4
comp=Z,4µm,19.0s
KEBM Edson Butte 80.20 48 P **P** **23 26 24.7 +0.1**
KEBM IAmb IAmb 23 26 34.2
comp=Z,356nm,1.3s
KEBM IAMs_20 IAMs_20 23 57 39.6
comp=Z,3µm,19.0s
HEBO Mount Hebo 80.22 46 P **P** **23 26 25.9 +1.3**
HEBO IAmb IAmb 23 26 34.2
comp=Z,497nm,1.4s
F03A Seaside 80.24 45 P **P** **23 26 25.6 +1.0**
F03A IAMs_20 IAMs_20 00 01 43.3
comp=Z,4µm,19.0s
GEYT Alibeck 80.35 307 IAmb IAmb 23 26 45.3
comp=Z,236nm,1.1s
GEYT Alibeck 80.35 307 P **P** **23 26 25.6 +0.2**
comp=Z,67nm,1.0s,baz=76,slow=6.3,SNR=66
GEYT PP **PP** **23 29 27.3 -1.0**
comp=Z,17nm,1.1s,baz=357,slow=3.1,SNR=2.5
GEYT LR LR 00 04 15.4
comp=Z,5µm,21.8s,baz=75,slow=37
comp=Z,67nm,1.0s
GYA0B ALIBECK ARRAY 80.35 307 P **P** **23 26 26.2 +0.8**
GYA0B IAMs_20 IAMs_20 00 03 30.4
comp=Z,5µm,22.0s
KBO Bosley Butte 80.39 49 P **P** **23 26 26.4 +0.8**
KBO IAmb IAmb 23 26 35.6
comp=Z,248nm,1.4s
J01E Myrtle Point 80.44 48 P **P** **23 26 27.1 +1.4**
J01E IAmb IAmb 23 26 35.4
comp=Z,198nm,1.1s
GNW Green Mountain 80.45 43 P **P** **23 26 27.5 +1.8**
GNW IAmb IAmb 23 26 35.5
comp=Z,243nm,1.2s
G03D McMinnville, O 80.56 46 P **P** **23 26 27.3 +1.0**
G03D IAMs_20 IAMs_20 00 01 45.0
comp=Z,3µm,19.0s
F04D Rainier, OR 80.59 45 pP **P** **23 26 27.6 +1.1**
F04D IAMs_20 IAMs_20 00 02 03.5
comp=Z,3µm,18.0s
COR Corvallis 80.64 46 P **P** **23 26 28.3 +1.5**
COR IAmb IAmb 23 27 14.3
comp=Z,385nm,1.5s
COR Corvallis 80.64 46 IAMs_20 IAMs_20 00 01 20.1
comp=Z,4µm,19.0s
COR Corvallis 80.64 46 P **P** **23 26 28.3 +1.5**
COR pmax pmax
comp=Z,385nm,1.5s
COR MLR MLR
comp=Z,4µm,19.0s
KSXB Camp Six Broad 80.72 49 P **P** **23 26 29.1 +1.8**
KSXB IAmb IAmb 23 26 37.3
comp=Z,364nm,1.6s
KSXB IAMs_20 IAMs_20 23 57 27.2
comp=Z,3µm,20.0s
K02D Willamette Mer 80.72 48 P **P** **23 26 28.2 +0.8**
K02D IAMs_20 IAMs_20 23 57 46.2
comp=Z,3µm,20.0s
KRPM Rodgers 80.72 50 P **P** **23 26 27.8 +0.4**
KRPM IAmb IAmb 23 26 37.7
comp=Z,257nm,1.1s
KRMB Red Mountain 80.75 50 P **P** **23 26 27.8 +0.2**
I03D Drain, OR 80.77 47 P **P** **23 26 28.2 +0.7**
I03D IAmb IAmb 23 26 37.1
comp=Z,232nm,1.2s
JCC Jacoby Creek, 80.78 50 P **P** **23 26 28.4 +0.8**
KMPM Mount Pierce 80.78 51 P **P** **23 26 28.7 +0.9**
KMPM IAmb IAmb 23 26 37.8
comp=Z,236nm,1.0s
L02F Cave Junction 80.89 49 P **P** **23 26 29.4 +1.2**
L02F IAMs_20 IAMs_20 23 57 43.8
comp=Z,3µm,20.0s
BUCK Buck Mountain 80.94 47 P **P** **23 26 29.9 +1.4**
BUCK IAMs_20 IAMs_20 00 01 00.9
comp=Z,3µm,19.0s
DBO Dodson Butte 80.95 48 P **P** **23 26 29.5 +1.0**
DBO IAMs_20 IAMs_20 23 58 14.3
comp=Z,3µm,19.0s
KHMM Horse Mountain 80.99 50 P **P** **23 26 29.9 +1.0**
KHMM IAmb IAmb 23 26 39.0
comp=Z,265nm,1.3s
F04A Amboy 81.02 45 P **P** **23 26 30.1 +1.3**
F04A IAmb IAmb 23 26 38.7
comp=Z,193nm,1.0s
H04D Lebanon 81.05 46 P **P** **23 26 30.2 +1.2**
H04D IAmb IAmb 23 26 38.7
comp=Z,385nm,1.3s
H04D IAMs_20 IAMs_20 00 01 43.0
comp=Z,3µm,18.0s
D05A Enumclaw 81.08 44 P **P** **23 26 30.7 +1.6**
D05A IAmb IAmb 23 26 39.0
comp=Z,338nm,1.2s
KMRM Mail Ridge 81.13 51 IAmb IAmb 23 26 51.1
comp=Z,35nm,1.4s
HUMO Hull Mountain 81.25 48 IAmb IAmb 23 26 39.9
comp=Z,225nm,1.4s
KCPM Cahto Peak 81.32 51 P **P** **23 26 32.1 +1.4**
H04A Detroit Lake 81.41 46 IAmb IAmb 23 26 39.9
comp=Z,241nm,1.2s
H04A IAMs_20 IAMs_20 00 02 03.4
comp=Z,3µm,19.0s
I04A Tendick Farm, 81.42 47 IAmb IAmb 23 26 40.0
comp=Z,217nm,1.1s
YBH Yreka Blue Hor 81.59 49 IAmb IAmb 23 26 37.8
comp=Z,190nm,1.2s
YBH IAMs_20 IAMs_20 23 57 55.4
comp=Z,3µm,20.0s
HOOD Mount Hood Mea 81.66 45 P **P** **23 26 33.3 +0.9**
HOOD IAmb IAmb 23 26 41.7
comp=Z,188nm,1.1s
HOOD IAMs_20 IAMs_20 00 02 40.0
comp=Z,3µm,19.0s
L04D Klamath Falls 81.80 49 IAmb IAmb 23 26 42.5
comp=Z,267nm,1.1s
HOPS Hopland Field 81.84 52 IAmb IAmb 23 27 00.6
comp=Z,326nm,1.3s
HOPS IAMs_20 IAMs_20 00 09 47.2
comp=Z,3µm,18.0s
G05A Wamic 81.91 45 IAMs_20 IAMs_20 00 02 56.6
comp=Z,3µm,19.0s
LTY Liberty 81.95 43 IAmb IAmb 23 26 54.9
comp=Z,201nm,1.2s
YKAW3 Yellowknife Wh 81.96 28 IAMs_20 IAMs_20 00 01 07.6
comp=Z,4µm,20.0s
KIRV Kirov 81.97 328*ce* P **P** **23 26 34.0 +0.5**
KIRV Kirov 81.97 328 P **P** **23 26 33.8 +0.3**
comp=Z,54nm,0.6s,baz=107,slow=1.4,SNR=28
KIRV S **S** **23 36 42.4 -3.2**
comp=Z,2.6nm,0.7s,baz=78,slow=20,SNR=6.0
KIRV LR LR 00 05 20.2
comp=Z,3µm,18.4s,baz=75,slow=37
comp=Z,54nm,0.6s
YKA Yellowknife Ar 81.97 28 P **P** **23 26 34.0 +0.6**
comp=Z,23nm,1.0s,baz=286,slow=5.2,SNR=92
YKA PKKPbc **PKKPbc** **23 45 02.8 -2.5**
comp=Z,1.1nm,0.7s,baz=106,slow=2.4,SNR=12
YKA LR LR 00 02 11.6
comp=Z,3µm,20.0s,baz=289,slow=35
comp=Z,23nm,1.0s
YKAB2 New Yellowknif 81.99 28 P **P** **23 26 33.5 -0.1**
YKAW1 Yellowknife Wh 82.03 28 IAMs_20 IAMs_20 00 02 09.6
comp=Z,3µm,21.0s
I05D Terrebonne, OR 82.07 46 IAmb IAmb 23 26 43.8
comp=Z,325nm,1.4s
I05D IAMs_20 IAMs_20 00 02 06.9
comp=Z,3µm,19.0s
GDXM Geysers 82.09 52 P **P** **23 26 36.2 +1.5**
GDXM IAmb IAmb 23 26 45.3
comp=Z,392nm,1.4s
MCCM Marconi Confer 82.15 53 P **P** **23 26 35.8 +0.9**
MCCM IAmb IAmb 23 26 43.9
comp=Z,232nm,1.2s
JLN Jalan Bani Buh 82.20 291 P **P** **23 26 35.8 +0.3**
SNR=15
JLN S **S** **23 36 47.3 -2.1**
MXC Moxie City 82.34 44 IAMs_20 IAMs_20 00 03 39.8
comp=Z,3µm,19.0s
J05D Fort Rock, OR 82.36 47 IAMs_20 IAMs_20 23 58 42.6
comp=Z,3µm,20.0s
WBK Wadi Bani Khal 82.51 291 P **P** **23 26 37.8 +0.7**
SNR=33
BRLDA Berland Lookou 82.53 36 IAmb IAmb 23 26 55.3
comp=Z,223nm,1.1s
E07A Sunnyside 82.64 44 P **P** **23 26 38.9 +1.5**
E07A IAmb IAmb 23 26 46.7
comp=Z,252nm,1.5s
WSAR Wadi Sarin 82.69 292 P **P** **23 26 39.2 +1.2**
SNR=48
WSAR S **S** **23 36 52.7 -1.7**
K05A Summer Lake 82.72 48 IAMs_20 IAMs_20 23 58 45.1
comp=Z,3µm,19.0s
F07A Phinny Hill Vi 82.73 45 P **P** **23 26 39.2 +1.4**
F07A IAMs_20 IAMs_20 00 03 33.3
comp=Z,2µm,18.0s
JASK Jask - Hormozg 82.83 295 P **P** **23 26 40.5 +1.8**
SNR=35
JASK S **S** **23 36 54.9 -0.9**
HAWA Hanford 82.89 44 IAmb IAmb 23 26 47.9
comp=Z,234nm,1.6s
ORV Oroville 82.92 51 IAmb IAmb 23 26 47.9
comp=Z,341nm,1.4s
BIDO Bidbid 83.08 292 P **P** **23 26 40.9 +0.9**
SNR=66
BIDO S **S** **23 36 57.8 -0.6**
D08A Wollman Farm, 83.16 43 IAmb IAmb 23 26 49.3
comp=Z,230nm,1.7s
E08A Dider Farm, El 83.19 44 P **P** **23 26 41.2 +1.0**
E08A IAmb IAmb 23 27 10.5
comp=Z,264nm,1.8s
SMDO Samad 83.25 292 P **P** **23 26 41.7 +0.6**
SNR=18
SMDO S **S** **23 36 58.0 -2.3**
JMDO Jabal Madar 83.34 291 P **P** **23 26 41.9 +0.4**
SNR=23
JMDO S **S** **23 36 59.2 -1.9**
I07A Izee 83.42 46 IAmb IAmb 23 27 12.1
comp=Z,180nm,1.6s
I07A IAMs_20 IAMs_20 00 03 08.5
comp=Z,4µm,19.0s
AFDM Forest Hills D 83.45 52 IAmb IAmb 23 26 51.0
comp=Z,152nm,1.2s
SAO San Andreas Ge 83.55 54 P **P** **23 26 43.3 +1.1**
SAO IAmb IAmb 23 27 00.3
comp=Z,186nm,1.2s
SAO IAMs_20 IAMs_20 23 59 26.6
comp=Z,3µm,20.0s
SAO San Andreas Ge 83.55 54 P **P** **23 26 43.3 +1.1**
SAO pmax pmax
comp=Z,186nm,1.3s
SAO MLR MLR
comp=Z,3µm,20.0s
HOPEN Hopen 83.60 348 *e*P **P** **23 26 42.5 +0.8**
HOPEN IVmB_BB 23 26 50.0
comp=Z,4µm,2.6s
HOPEN *e*S **S** **23 37 00.1 -1.6**
MHTO MHTO 83.76 290 P **P** **23 26 43.5 0.0**
SNR=58
MHTO S **S** **23 37 02.2 -3.0**
BBGB Big Mountain B 83.91 54 P **P** **23 26 45.5 +1.2**
RES Resolute Bay 84.00 14 IAmb IAmb 23 27 02.8
comp=Z,112nm,0.8s
RES Resolute Bay 84.00 14 PKKPbc PKKPbc 23 44 58.5 -2.5
comp=Z,2.4nm,1.0s,baz=269,slow=2.9,SNR=3.2
RES LR LR 00 03 48.9
comp=Z,2µm,21.2s,baz=316,slow=35
NEW Newport 84.06 42 IAmb IAmb 23 26 49.7
comp=Z,130nm,1.2s
NEW Newport 84.06 42 IAMs_20 IAMs_20 00 03 36.3
comp=Z,3µm,19.0s
NEW Newport 84.06 42 P **P** **23 26 45.9 +1.2**
baz=284,SNR=40
NEW S **SKSac** **23 37 08.2 +1.9**
baz=284
BSY Bisya 84.08 292 P **P** **23 26 45.9 +0.6**
SNR=46
BSY S **SKSac** **23 37 06.2 -1.0**
SPITS Spitsbergen Ar 84.09 351 P **P** **23 26 43.9 -0.3**
comp=Z,10nm,0.5s,baz=116,slow=5.7,SNR=40
SPITS LR LR 00 07 34.5
comp=Z,1µm,20.8s,baz=6.0,slow=38
comp=Z,10nm,0.5s
MPK Martis Peak 84.09 51 P **P** **23 26 45.4 +0.1**
CMB Columbia Colle 84.10 52 IAmb IAmb 23 26 54.2
comp=Z,205nm,1.2s
CASY Casey 84.17 194 P **P** **23 26 45.7 +1.2**
CASY Casey 84.17 194 IAMs_20 IAMs_20 00 04 47.7
comp=Z,3µm,20.0s
KBS Kingsbay 84.21 352 P **P** **23 26 45.4 +0.6**
KBS Kingsbay 84.21 352 IAMs_20 IAMs_20 00 07 00.4
comp=Z,3µm,18.0s
KBS Kingsbay 84.21 352 *e*P **P** **23 26 45.3 +0.5**
KBS IAmb IAmb 23 26 53.1
comp=Z,90nm,1.2s
KBS *e*S **SKSac** **23 37 06.5 +0.5**
KBS Kingsbay 84.21 352 P **P** **23 26 45.4 +0.6**
KBS pmax pmax
comp=Z,68nm,1.1s
KBS MLR MLR
comp=Z,4µm,18.0s
KBS Kingsbay 84.21 352 *i* P **P** **23 26 45.1 +0.3**
J08A Circle Bar Ran 84.31 47 IAmb IAmb 23 26 55.3
comp=Z,167nm,1.2s
SHME Shamm 84.31 295 *i* P **P** **23 26 47.6 +1.2**
SNR=37
SHME Shamm 84.31 295 P **P** **23 26 47.4 +1.1**
SNR=30
SHME S **SKSac** **23 37 06.7 -1.9**
MDH Madha 84.34 295 *i* P **P** **23 26 46.4 -0.1**
SNR=14
MDH Madha 84.34 295 P **P** **23 26 46.3 -0.2**
SNR=28
MDH S **SKSac** **23 37 04.6 -4.2**
DQM DQM 84.38 289 P **P** **23 26 47.7 +1.0**
SNR=17
DQM S **SKSac** **23 37 08.0 -1.2**
SOHO SOHO 84.38 293 *i* P **P** **23 26 47.4 +0.7**
SNR=44
SOHO SOHO 84.38 293 P **P** **23 26 47.5 +0.8**
SOHO S **SKSac** **23 37 09.3 +0.2**
WVOR Wild Horse Val 84.41 48 IAmb IAmb 23 26 55.8
comp=Z,289nm,1.4s
WVOR IAMs_20 IAMs_20 00 05 59.8
comp=Z,3µm,19.0s
MASF Masafi 84.44 295 P **P** **23 26 47.9 +0.8**
SNR=86
MASF S **SKSac** **23 37 08.0 -1.5**
MSFE Esma-Masafi 84.45 295 *i* P **P** **23 26 47.8 +0.8**
SNR=29
PNTR Pine Nut 84.46 51 P **P** **23 26 48.3 +1.1**
PNTR IAmb IAmb 23 27 05.4
comp=Z,126nm,0.9s
BELG Belogornoye 84.48 323*c* *i* P **P** **23 26 46.4 -0.2**
BELG pmax pmax
comp=Z,86nm,1.3s
BELG MLR MLR
comp=Z,909nm,20.0s
BELG Belogornoye 84.48 323 P **P** **23 26 46.0 -0.6**
comp=Z,79nm,0.8s,baz=67,slow=4.4,SNR=36
BELG LR LR 00 04 39.7
comp=Z,6µm,21.7s,baz=73,slow=36
comp=Z,79nm,0.8s
PAHR Pah Rah Range 84.49 51 P **P** **23 26 47.1 0.0**
PAHR IAmb IAmb 23 26 56.3
comp=Z,134nm,1.2s
UOSS Minazif 84.50 294 P **P** **23 26 47.8 +0.4**
UOSS IAmb IAmb 23 26 57.2
comp=Z,217nm,1.3s
UOSS Minazif 84.50 294 *i* P **P** **23 26 47.7 +0.4**
SNR=48
UOSS Minazif 84.50 294 P **P** **23 26 47.7 +0.4**
UOSS S **SKSac** **23 37 08.1 -1.8**
F10A Beach Ranch, E 84.55 44 IAmb IAmb 23 26 56.3
comp=Z,187nm,1.6s
ARQ Araqi 84.56 293 P **P** **23 26 48.4 +0.8**
SNR=54
ARQ S **SKSac** **23 37 08.0 -2.4**
HATD Hatta, Dubai 84.59 294 *i* P **P** **23 26 48.4 +0.6**
SNR=30
HATD Hatta, Dubai 84.59 294 P **P** **23 26 48.3 +0.6**
SNR=66
HATD S **SKSac** **23 37 07.6 -2.8**
ASHO Ashiyiah 84.68 294 *i* P **P** **23 26 48.5 +0.2**
SNR=37
ASHO Ashiyiah 84.68 294 P **P** **23 26 48.2 0.0**
SNR=53
ASHO S **SKSac** **23 37 07.0 -4.1**
WAKR Walker 84.72 52 P **P** **23 26 49.6 +1.1**
WAKR IAmb IAmb 23 26 58.1
comp=Z,184nm,1.2s
YERR Yerington 84.76 51 P **P** **23 26 48.4 -0.2**
YERR IAmb IAmb 23 26 57.9
comp=Z,278nm,1.4s
BMO Blue Mountains 84.77 45 IAmb IAmb 23 26 57.4
comp=Z,186nm,1.2s
UMQ Umm Al-Quwin 84.85 295 *i* P **P** **23 26 50.6 +1.5**
SNR=7.7
UMQ Umm Al-Quwin 84.85 295 P **P** **23 26 50.5 +1.4**
UMQ S **SKSac** **23 37 13.1 +1.1**
NAZ Nazwa, Dubai 84.97 294 *i* P **P** **23 26 51.0 +1.3**
SNR=31
NAZ Nazwa, Dubai 84.97 294 P **P** **23 26 50.0 +0.3**
SNR=33
NAZ S **SKSac** **23 37 10.0 -2.8**
SMMC Simmler 85.02 55 P **P** **23 26 51.3 +1.5**
baz=283,SNR=17
HSPB Hornsund (broa 85.02 350 *e*P **P** **23 26 52.9 +4.0**
HSPB Hornsund (broa 85.02 350 *e*P **P** **23 26 50.0 +1.1**
EDM Edmonton 85.08 36 IAMs_20 IAMs_20 00 06 13.9
comp=Z,3µm,19.0s
FAQ Al Faqa, Dubai 85.08 294 *i* P **P** **23 26 50.5 +0.3**
SNR=13
FAQ Al Faqa, Dubai 85.08 294 P **P** **23 26 50.7 +0.5**
SNR=26
FAQ S **SKSac** **23 37 09.9 -3.7**
ALNE Al Ain 85.09 293 *i* P **P** **23 26 51.1 +0.8**
SNR=49
ALNE Al Ain 85.09 293 P **P** **23 26 51.4 +1.1**
SNR=98
ALNE S **SKSac** **23 37 10.6 -3.1**
MDPB Devils Postpil 85.20 53 P **P** **23 26 51.7 +0.8**
LVZ Lovozero 85.24 339 P **P** **23 26 50.1 -0.1**
LVZ IAmb IAmb 23 27 10.3
comp=Z,119nm,1.1s
LVZ IAMs_20 IAMs_20 00 07 10.9
comp=Z,4µm,20.0s
LVZ Lovozero 85.24 339 *i* P **P** **23 26 50.4 +0.2**
LVZ pmax pmax
comp=Z,84nm,1.3s
LVZ MLR MLR
comp=Z,3µm,20.0s
PKM Mcpherson Peak 85.26 55 P **P** **23 26 53.2 +2.0**
baz=284,SNR=22
PKM S **SKSac** **23 37 19.2 +4.4**
baz=284
VOG Valley Oaks Go 85.27 54 P **P** **23 26 51.6 +0.7**
baz=284
VOG S **SKSac** **23 37 17.0 +2.7**
baz=284
ASUD Al Ashush, Dub 85.34 294 *i* P **P** **23 26 53.3 +1.7**
SNR=18
ASUD Al Ashush, Dub 85.34 294 P **P** **23 26 52.2 +0.7**
SNR=17
ASUD S **SKSac** **23 37 13.4 -1.8**
MLAC Mammoth, Mammo 85.39 53 P **P** **23 26 53.0 +1.1**
baz=284
MLAC S **S** **23 37 23.8 +2.3**
baz=284
RYN Ryan 85.39 52 IAmb IAmb 23 27 18.8
comp=Z,318nm,1.7s
SBC Santa Barbara 85.44 56 P **P** **23 26 52.8 +1.0**
baz=284
BCW Bitter Crk WRg 85.57 55 IAMs_20 IAMs_20 23 59 49.2
comp=Z,3µm,20.0s
NVAR Mina Array Bea 85.60 52 P **P** **23 26 53.3 +0.5**
comp=Z,27nm,0.7s,baz=262,slow=6.5,SNR=102
NVAR LR LR 00 03 58.5
comp=Z,2µm,18.2s,baz=285,slow=35
comp=Z,27nm,0.7s
PLID Pearl Lake 85.61 45 IAMs_20 IAMs_20 00 05 23.3
comp=Z,3µm,20.0s
KVN Kaiserville 85.61 51 IAmb IAmb 23 27 02.0
comp=Z,223nm,1.4s
VES Vestal, Richgr 85.62 54 P **P** **23 26 53.3 +0.7**
baz=284
AJN Ajban 85.66 294 *i* P **P** **23 26 53.2 +0.1**
SNR=30
AJN Ajban 85.66 294 P **P** **23 26 53.7 +0.6**
SNR=24
AJN S **SKSac** **23 37 13.4 -3.8**
NV11 Mina Array Sit 85.72 52 IAmb IAmb 23 27 20.5
comp=Z,164nm,1.2s
APA Apatity 85.81 339 ǁ *i* P **P** **23 26 51.1 -1.9**
APA *i* 23 30 19.5
APA *i* PPP PPP 23 32 10.0
APA *i* S **SKSac** **23 37 20.0 +3.5**
APA *i* PS **PnS** **23 38 21.0 -2.0**
APA pmax pmax
comp=Z,79nm,1.1s
VADS Vadso 85.90 342 *e*SKSac **SKSac** **23 37 19.5 +2.5**
BMN Battle Mountai 85.92 50 IAMs_20 IAMs_20 00 00 37.1
comp=Z,4µm,20.0s
UMZA Um Al Zommool 85.92 292 P **P** **23 26 54.5 +0.1**
UMZA S **SKSac** **23 37 15.4 -3.5**
ARVC Arvin 85.99 55 P **P** **23 26 55.7 +1.1**
baz=284,SNR=12
ARVC S **S** **23 37 29.5 +2.5**
baz=284
TIN Tinemaha, Big 85.99 53 P **P** **23 26 56.2 +1.5**
baz=284
KLMR Klimovskoe 86.08 332 *e*P **P** **23 26 53.0 -1.4**
KLMR S **SKSac** **23 37 19.1 +0.7**
KLMR pmax pmax
comp=Z,281nm,1.3s
KLMR MLR MLR
comp=Z,6µm,19.0s
DSP Deep Springs 86.12 53 IAmb IAmb 23 27 22.7
comp=Z,202nm,1.5s
DSP IAMs_20 IAMs_20 00 02 59.5
comp=Z,2µm,19.0s
ISA Isabella, Lake 86.14 54 IAMs_20 IAMs_20 00 00 53.3
comp=Z,3µm,18.0s
ISA Isabella, Lake 86.14 54 P **P** **23 26 56.1 +0.6**
baz=284,SNR=21
ISA S **S** **23 37 28.9 +0.3**
baz=284
MFID Camas Ranch 86.16 46 IAmb IAmb 23 27 04.6
comp=Z,265nm,1.2s
OSI Osito Audit: C 86.20 55 P **P** **23 26 56.8 +1.1**
baz=284
CWC Cottonwood Cre 86.26 54 P **P** **23 26 57.0 +0.9**
baz=284
CWC S **S** **23 37 32.6 +2.7**
baz=284
Q09A Carvers 86.36 51 IAmb IAmb 23 27 05.8
comp=Z,317nm,1.5s
SHAO Shalim 86.57 288 *i* P **P** **23 26 58.6 +0.9**
SNR=6.9
SHAO Shalim 86.57 288 P **P** **23 26 58.6 +0.9**
SNR=13
SHAO S **SKSac** **23 37 21.1 -2.0**
DECC Green Verdugo 86.60 56 P **P** **23 26 58.2 +0.6**
baz=284
DECC S **S** **23 37 33.9 +0.8**
baz=284
CCAC Calif City Air 86.63 55 IAmb IAmb 23 27 07.2
comp=Z,169nm,1.1s
CCAC IAMs_20 IAMs_20 00 08 12.2
comp=Z,4µm,18.0s
GRAC Grapevine Rang 86.68 53 IAmb IAmb 23 27 29.6
comp=Z,315nm,1.6s

GRAC IAMs_20 IAMs_20 00 11 16.3
comp=Z,2µm,18.0s
GRAC Grapevine Rang 86.68 53 P **P** **23 26 58.9 +0.9**
GRAC baz=285 S **S** **23 37 34.7 +0.9**
baz=285
EDW2 Edwards Air Fo 86.72 55 P **P** **23 26 59.1 +0.9**
EDW2 baz=284,SNR=77 S **S** **23 37 37.1 +2.9**
baz=284
PASC Pasadena Art C 86.74 56 IAmb IAmb 23 27 07.0
comp=Z,191nm,1.3s
PASC Pasadena Art C 86.74 56 IAMs_20 IAMs_20 00 01 26.2
comp=Z,3µm,20.0s
SCI2 San Clemente I 86.74 57 P **P** **23 26 59.4 +1.1**
SCI2 baz=284 S **S** **23 37 35.5 +1.1**
baz=284
CIS Catalina Islan 86.74 57 P **P** **23 26 58.8 +0.5**
CIS baz=284,SNR=8.9 S **S** **23 37 36.4 +1.9**
baz=284
FMP Fort Macarthur 86.76 56 P **P** **23 26 59.2 +0.9**
FMP baz=284 S **S** **23 37 34.7 +0.1**
baz=284
KEV Kevo 86.79 342 P **P** **23 26 57.1 -0.6**
KEV IAmb IAmb 23 27 08.8
comp=Z,190nm,1.5s
KEV Kevo 86.79 342 P **P** **23 26 57.1 -0.6**
KEV pmax pmax
comp=Z,190nm,1.5s
KEV MLR MLR
comp=Z,5µm,20.0s
LRMC Laurel Mtn Rad 86.81 54 P **P** **23 26 59.6 +0.8**
LRMC baz=285 S **S** **23 37 36.2 +0.9**
baz=285
MPMC Manual Prospec 86.82 54 P **P** **23 26 59.9 +1.0**
MPMC baz=285,SNR=154 S **S** **23 37 37.1 +1.7**
baz=285
MZWR Madinat Zayed 86.83 294 P **P** **23 26 58.8 -0.1**
MZWR S **SKSac** **23 37 20.7 -3.7**
HLID Hailey 87.11 46 P **P** **23 27 01.6 +1.4**
HLID baz=286,SNR=90 S **S** **23 37 40.3 +2.3**
baz=286
MAK Makhachkala 87.12 313 *d* iP **P** **23 26 56.9 -3.0**
MAK *e* 23 30 31.8
MAK *e*PPP PPP 23 32 17.0
MAK *e* 23 37 21.3
MAK *e*SS SS 23 43 24.2 +3.3
MAK *e*SSS SSS 23 46 49.6
MAK pmax pmax
comp=Z,398nm,1.2s
BFSC Mount Baldy Ra 87.14 56 P **P** **23 27 01.1 +0.7**
BFSC baz=285,SNR=14 S **S** **23 37 39.6 +1.1**
baz=285
FURC Furnace Creek, 87.20 53 P **P** **23 27 01.7 +1.2**
FURC baz=285,SNR=27 S **S** **23 37 41.2 +2.6**
baz=285
HAMF Hammerfest 87.24 344 *e*P **P** **23 26 59.8 -0.1**
HAMF IVmB_BB 23 27 05.0
comp=Z,2µm,1.7s
DMTO DMTO 87.27 287 P **P** **23 27 01.5 +0.4**
DMTO SNR=30 S **SKSac** **23 37 23.2 -4.1**
ELK Elko 87.30 49 IAmb IAmb 23 27 10.4
comp=Z,192nm,1.1s
ELK Elko 87.30 49 LR LR 00 01 34.3
comp=Z,2µm,19.5s,baz=281,slow=32
WCT Wildcat Mounta 87.30 53 IAmb IAmb 23 27 19.2
comp=Z,220nm,1.3s
QSM Queen of Sheba 87.33 54 IAmb IAmb 23 27 10.3
QSM comp=Z,211nm,1.3s IAMs_20 IAMs_20 00 10 07.6
comp=Z,3µm,18.0s
ARCES ARCESS Array B 87.35 342 IAmb IAmb 23 27 11.1
comp=Z,277nm,1.5s
ARCES ARCESS Array B 87.35 342 P **P** **23 27 00.2 -0.3**
comp=Z,14nm,0.6s,baz=69,slow=6.7,SNR=83
ARCES PKKP **PKKPbc** **23 44 49.7 -3.3**
comp=Z,1.2nm,0.7s,baz=239,slow=4.0,SNR=8.2
ARCES LR LR 00 10 31.3
comp=Z,4µm,18.8s,baz=72,slow=39
comp=Z,14nm,0.6s
MZR Muzera 87.36 293 P **P** **23 27 02.5 +1.0**
SNR=6.8
GWY Greenwater Val 87.43 54 IAmb IAmb 23 27 10.8
comp=Z,179nm,1.2s
TULEG Thule 87.45 8 *i* P **P** **23 27 02.7 +1.9**
TULEG IAmb IAmb 23 27 19.5
comp=Z,94nm,0.8s
JRN Qarnain Island 87.46 295 P **P** **23 27 02.9 +1.0**
SNR=14
JRN S **SKSac** **23 37 24.0 -4.3**
ELS Elsinore Mount 87.48 56 IAmb IAmb 23 27 10.9
comp=Z,230nm,1.6s
ELS IAMs_20 IAMs_20 00 00 09.8
comp=Z,3µm,20.0s
RRX Edison Barstow 87.51 55 P **P** **23 27 03.4 +1.4**
RRX baz=285 S **S** **23 37 42.7 +0.9**
baz=285
GSC Goldstone, Bar 87.55 54 IAmb IAmb 23 27 11.5
comp=Z,154nm,1.1s
GSC IAMs_20 IAMs_20 00 01 28.6
comp=Z,3µm,19.0s
GSC Goldstone, Bar 87.55 54 P **P** **23 27 03.6 +1.3**
GSC baz=285,SNR=23 S **S** **23 37 43.4 +1.0**
baz=285
TPNV Topopah Spring 87.55 53 IAmb IAmb 23 27 11.7
comp=Z,164nm,1.2s
TPNV Topopah Spring 87.55 53 P **P** **23 27 03.8 +1.4**
TPNV baz=285,SNR=75 S **S** **23 37 44.3 +1.8**
baz=285
GHWR Ruwais 87.67 294 P **P** **23 27 04.3 +1.3**
GHWR S **SKSac** **23 37 26.3 -3.3**
MURC Murrieta 87.68 56 P **P** **23 27 03.5 +0.7**
MURC baz=285,SNR=15 S **S** **23 37 44.0 +0.5**
baz=285
R11B Troy Canyon, C 87.69 51 IAmb IAmb 23 27 12.5
comp=Z,274nm,1.6s
R11B Troy Canyon, C 87.69 51 P **P** **23 27 04.6 +1.5**
R11B baz=286,SNR=115 S **S** **23 37 42.7 -1.1**
baz=286
BBRC Big Bear Solar 87.73 55 P **P** **23 27 03.7 +0.3**
BBRC baz=285 S **S** **23 37 44.7 +0.3**
baz=285
S11A Rachel 87.75 52 IAMs_20 IAMs_20 00 04 25.8
comp=Z,2µm,18.0s
DOK Doka 87.81 289 P **P** **23 27 03.8 +0.1**
DOK SNR=73 S **SKSac** **23 37 27.3 -3.3**
SHOC Shoshone, Teco 87.81 54 P **P** **23 27 04.7 +1.3**
SHOC baz=285 S **S** **23 37 45.5 +0.8**
baz=285
109C Camp Elliot, M 87.93 57 P **P** **23 27 04.9 +0.8**
baz=285,SNR=15
109C S **S** **23 37 45.7 -0.2**
baz=285
RBK Rabkut 88.00 287 P **P** **23 27 04.8 +0.1**
SNR=75
RBK S **SKSac** **23 37 28.1 -3.9**
HEC Hector,Ludlow 88.05 55 P **P** **23 27 05.9 +1.2**
HEC baz=285,SNR=38 S **S** **23 37 47.5 +0.5**
baz=285
Q12A Willow Creek R 88.07 50 IAMs_20 IAMs_20 00 07 60.0
comp=Z,3µm,19.0s
TUQ Turquoise Moun 88.21 54 P **P** **23 27 06.8 +1.3**
TUQ baz=286,SNR=13 S **S** **23 37 51.0 +2.2**
baz=286
PFO Pinyon Flats O 88.27 56 P **P** **23 27 06.7 +0.9**
PFO IAmb IAmb 23 27 32.7
comp=Z,180nm,1.3s
PFO Pinyon Flats O 88.27 56 IAMs_20 IAMs_20 00 05 25.8
comp=Z,4µm,18.0s
PFO Pinyon Flats O 88.27 56 P **P** **23 27 06.8 +1.0**
PFO baz=285,SNR=34 S **S** **23 37 50.4 +1.0**
baz=285
PFO Pinyon Flats O 88.27 56 *i* P **P** **23 27 06.5 +0.7**
PFO pmax pmax
comp=Z,209nm,1.4s
PFO MLR MLR
comp=Z,5µm,18.0s
PFO Pinyon Flats O 88.27 56 LR LR 00 02 41.8
comp=Z,3µm,19.2s,baz=275,slow=33
TPFO Pinon Flats 88.27 56 P **P** **23 27 06.9 +1.0**
TPFO baz=285,SNR=31 S **S** **23 37 49.0 -0.3**
baz=285
WHFO Wadi Hawf 88.31 288 P **P** **23 27 05.5 -0.7**
SNR=49
WHFO S **SKSac** **23 37 29.7 -4.1**
KTK1 Kautokeino 88.31 342 *e*P **P** **23 27 05.1 0.0**
KTK1 *e* IAmb IAmb 23 27 14.3
comp=Z,61nm,1.2s
PMD Palm Desert 88.32 56 IAmb IAmb 23 27 14.8
comp=Z,246nm,1.4s
PMD IAMs_20 IAMs_20 00 05 29.2
comp=Z,3µm,19.0s
VRH Novokhopyorsk 88.34 322 *e*P **P** **23 27 04.3 -1.2**
VRH *e* 23 27 06.0
VRH pmax pmax
comp=Z,100nm,0.8s
VRH MLR MLR
comp=Z,5µm,23.0s
BAR Barrett 88.34 57 IAmb IAmb 23 27 14.8
comp=Z,126nm,1.1s
BAR IAMs_20 IAMs_20 00 05 42.7
comp=Z,4µm,19.0s
PRN Pahroc Range 88.35 52 IAmb IAmb 23 27 42.1
comp=Z,152nm,1.3s
PRN IAMs_20 IAMs_20 00 12 18.6
comp=Z,2µm,18.0s
NEEM North Greenlan 88.36 4 *i* P **P** **23 27 06.8 +1.2**
NEEM IAmb IAmb 23 27 11.0
comp=Z,62nm,0.7s
BOZ Bozeman (W) 88.42 43 IAmb IAmb 23 27 30.9
comp=Z,149nm,1.3s
BOZ Bozeman (W) 88.42 43 P **P** **23 27 07.6 +1.3**
BOZ baz=288,SNR=53 S **S** **23 37 49.1 -1.2**
baz=288
TKX Tecate 88.42 57 IAmb IAmb 23 27 24.2
comp=Z,230nm,1.4s
CBX Cerro Bola 88.44 57 IAmb IAmb 23 27 24.5
comp=Z,222nm,1.3s
MONP2 Monument Peak 88.49 57 P **P** **23 27 08.3 +1.3**
baz=285,SNR=38
MONP2 S **S** **23 37 51.9 +0.3**
baz=285
BELC Belle Mtn. Jos 88.53 55 P **P** **23 27 08.1 +1.0**
baz=286,SNR=37
BELC S **S** **23 37 50.7 -1.1**
baz=286
CCX Cicese 88.56 58 IAmb IAmb 23 27 33.7
comp=Z,125nm,1.1s
CCX IAMs_20 IAMs_20 00 02 14.6
comp=Z,4µm,20.0s
GMRC Granite Mounta 88.59 55 P **P** **23 27 08.8 +1.5**
baz=286,SNR=61
GMRC S **S** **23 37 51.9 -0.5**
baz=286
SLWR Sila 88.70 294 P **P** **23 27 07.3 -0.5**
SLWR S **SKSac** **23 37 32.5 -3.3**
IKP In-Ko-Pah, Jac 88.81 57 P **P** **23 27 09.3 +1.0**
baz=286,SNR=28
IKP S **S** **23 37 54.7 +0.3**
baz=286
RMX La Rumorosa 88.84 57 IAmb IAmb 23 27 35.8
comp=Z,216nm,1.3s
EGMT Eagleton 88.86 41 IAmb IAmb 23 27 38.1
comp=Z,150nm,1.4s
EGMT Eagleton 88.86 41 P **P** **23 27 09.2 +0.9**
baz=289,SNR=42
ABTO Aybut 88.88 287 P **P** **23 27 09.0 +0.1**
SNR=39
ABTO S **SKSac** **23 37 33.7 -3.5**
SHMA Al-Shehemyia 88.89 296 P **P** **23 27 08.2 -0.5**
SNR=20
SHMA S **SKSac** **23 37 34.0 -2.8**
MOS Moscow 88.95 328 *e*P **P** **23 27 06.0 -2.3**
MOS *e* 23 30 37.8
MOS *e* 23 37 33.9
MOS *e*S **S** **23 37 49.7 -4.8**
MOS *e*SSS SSS 23 47 26.0
MOS pmax pmax
comp=Z,215nm,1.4s
MOS MLR MLR
comp=Z,5µm,20.0s
MOS MLR MLR
comp=N,4µm,19.0s
MOS MLR MLR
comp=E,3µm,20.0s
TRNA Turayna 88.95 295 P **P** **23 27 07.9 -1.1**
SNR=21
TRNA S **SKSac** **23 37 34.1 -3.2**
YUH Yuha Desert 88.96 57 IAmb IAmb 23 27 35.9
comp=Z,172nm,1.2s
V12A Nelson 88.97 54 IAmb IAmb 23 27 27.5
comp=Z,193nm,1.2s
V12A IAMs_20 IAMs_20 00 02 29.1
comp=Z,4µm,19.0s
SWSC Sam W. Stewart 88.98 56 P **P** **23 27 10.1 +1.2**
baz=286,SNR=26
SWSC S **S** **23 37 56.8 +1.1**
baz=286
BC3 Big Chuckawall 89.06 56 P **P** **23 27 10.9 +1.4**
baz=286,SNR=65
BC3 S **S** **23 37 57.2 +0.4**
baz=286
ESJX Sierra Juarez 89.11 57 IAmb IAmb 23 27 28.2
comp=Z,192nm,1.3s
TRO Tromso 89.15 344 *e*P **P** **23 27 08.5 -0.5**
TRO *e* IAmb IAmb 23 27 13.8
comp=Z,245nm,1.9s
TRO *e*S **SKSac** **23 37 36.2 -0.4**
SPUT South Promonto 89.16 48 IAmb IAmb 23 27 19.3
comp=Z,174nm,1.2s
IRM Iron Mountain 89.17 55 P **P** **23 27 11.4 +1.5**
baz=286,SNR=72
IRM S **S** **23 37 58.6 +1.0**
baz=286
DUG Dugway, Tooele 89.23 49 IAMs_20 IAMs_20 00 02 42.5
comp=Z,3µm,19.0s
DUG Dugway, Tooele 89.23 49 P **P** **23 27 11.8 +1.5**
baz=287,SNR=95
SAKB Bahrain 89.23 296 S **SKSac** **23 37 35.6 -3.3**
SMRA Abu-Samra 89.29 295 P **P** **23 27 10.1 -0.5**
SNR=33
SMRA S **SKSac** **23 37 35.9 -3.3**
YFT Old Faithful 89.31 44 IAmb IAmb 23 27 37.9
comp=Z,105nm,1.0s
YNM Yellowstone No 89.31 44 IAmb IAmb 23 27 33.6
comp=Z,158nm,0.9s
UABX UABC, Campus M 89.36 57 IAMs_20 IAMs_20 00 06 50.4
comp=Z,2µm,20.0s
VTX Valle De La Tr 89.41 58 IAmb IAmb 23 27 20.4
comp=Z,150nm,1.3s
IMW Indian Meadow 89.42 45 IAmb IAmb 23 27 20.9
comp=Z,225nm,1.6s
NEE2 Needles Airpor 89.42 54 P **P** **23 27 12.8 +1.7**
baz=286
NEE2 S **S** **23 38 00.2 +0.4**
baz=286
FXWY Fox Creek 89.44 45 IAmb IAmb 23 27 19.8
comp=Z,143nm,1.4s
FXWY IAMs_20 IAMs_20 00 07 48.8
comp=Z,3µm,19.0s
LPSR Galich'ya Gora 89.45 324 *e*P **P** **23 27 08.9 -1.9**
LPSR *e* 23 27 11.0
LPSR pmax pmax
comp=Z,290nm,1.3s
H17A Grant Village 89.50 44 IAmb IAmb 23 27 19.5
comp=Z,194nm,1.4s
H17A Grant Village 89.50 44 P **P** **23 27 14.8 +3.2**
baz=289,SNR=78
H17A S **S** **23 38 00.0 -0.8**
baz=289
CPBX Cerro Prieto 89.52 57 IAMs_20 IAMs_20 00 04 11.0
comp=Z,3µm,20.0s
TPAW Teton Pass 89.54 45 IAMs_20 IAMs_20 00 07 41.3
comp=Z,3µm,20.0s
GOF Gofitskoye 89.56 316 *ce*P **P** **23 27 10.6 -0.8**
LKWY Lake 89.57 44 IAmb IAmb 23 27 23.0
comp=Z,142nm,1.1s
MOOW Moose Ponds 89.60 45 IAMs_20 IAMs_20 00 07 54.0
comp=Z,3µm,19.0s
VORR Voronezh 89.64 324 *e*P **P** **23 27 11.0 -0.7**
VORR pmax pmax
comp=Z,311nm,1.4s
AHID Auburn Hatcher 89.67 46 IAmb IAmb 23 27 21.4
comp=Z,235nm,1.3s
VALR Valaam 89.67 334 *i* P **P** **23 27 12.1 +0.5**
VALR pmax pmax
comp=Z,82nm,0.8s
SNOW Snow King Moun 89.68 45 IAMs_20 IAMs_20 00 07 47.3
comp=Z,3µm,20.0s
HWUT Hardware Ranch 89.70 47 IAmb IAmb 23 27 17.6
comp=Z,168nm,1.1s
ZEI Tsey 89.70 314 *e*P **P** **23 27 10.9 -1.5**
ZEI pmax pmax
comp=Z,172nm,1.4s
GLA Glamis 89.73 56 P **P** **23 27 14.2 +1.6**
baz=286
LOHW Long Hollow 89.74 45 IAMs_20 IAMs_20 00 08 08.7
comp=Z,3µm,20.0s
GUVIX Guadalupe Vict 89.74 57 IAMs_20 IAMs_20 00 09 20.8
comp=Z,3µm,19.0s
OBN Obninsk 89.75 327 P **P** **23 27 15.5 +3.4**
OBN IAmb IAmb 23 27 30.3
comp=Z,185nm,1.2s
OBN Obninsk 89.75 327 *de*P **P** **23 27 11.4 -0.7**
OBN *e* 23 30 43.5
OBN *e*S **SKSac** **23 37 45.1 +4.3**
OBN pmax pmax
comp=Z,121nm,1.7s
OBN MLR MLR
comp=Z,6µm,19.0s
OBN Obninsk 89.75 327 P **P** **23 27 11.6 -0.5**
comp=Z,22nm,0.5s,baz=118,slow=8.4,SNR=12
OBN LR LR 00 10 07.5
comp=Z,7µm,19.2s,baz=62,slow=37
comp=Z,22nm,0.5s
BLYC Blythe 89.78 55 IAmb IAmb 23 27 22.1
comp=Z,138nm,1.2s
VSR Storozhevoye 89.83 323 *e*P **P** **23 27 11.0 -1.6**
VSR *e* 23 27 13.4
VSR pmax pmax
comp=Z,290nm,1.4s
VSR MLR MLR
comp=Z,5µm,20.0s
NLU North Lily Min 89.84 49 IAmb IAmb 23 27 22.3
comp=Z,205nm,1.3s
NLU IAMs_20 IAMs_20 00 03 02.7
comp=Z,3µm,20.0s
CTU Camp Tracy 89.85 48 IAMs_20 IAMs_20 00 03 14.9
comp=Z,2µm,19.0s
VORD Divnogorie 89.85 323 *e*P **P** **23 27 11.7 -1.0**
VORD pmax pmax
comp=Z,280nm,0.6s
GNI Garni 89.92 311 P **P** **23 27 14.8 +1.3**
GNI IAmb IAmb 23 27 41.3
comp=Z,321nm,1.6s
GNI Garni 89.92 311 P **P** **23 27 14.8 +1.3**
GNI pmax pmax
comp=Z,321nm,1.6s
GNI MLR MLR
comp=Z,2µm,21.0s
GNI Garni 89.92 311 P **P** **23 27 12.7 -0.8**
comp=Z,5.2nm,0.6s,baz=145,slow=6.5,SNR=7.3
GNI LR LR 00 11 12.0
comp=Z,2µm,20.2s,baz=66,slow=38
comp=Z,5.2nm,0.6s
GNI Garni 89.92 311 P **P** **23 27 13.8 +0.3**
GNI S **SKSac** **23 37 43.4 +0.6**
PDMCI Parker Dam,Lak 89.93 55 P **P** **23 27 15.0 +1.6**
baz=287,SNR=62
PDMCI S **S** **23 38 05.3 +0.7**
baz=287
TRLG Trialeti 89.95 313 P **P** **23 27 13.2 -0.4**
ONI Oni 90.08 314 P **P** **23 27 14.5 +0.5**
KBZ Khabaz 90.09 315 *c* iP **P** **23 27 13.2 -0.7**
KBZ pmax pmax
comp=Z,68nm,1.4s
KBZ Khabaz 90.09 315 P **P** **23 27 13.1 -0.9**
comp=Z,24nm,1.0s,baz=83,slow=3.5,SNR=22
KBZ LR LR 00 11 06.6
comp=Z,2µm,21.8s,baz=69,slow=38
comp=Z,24nm,1.0s
MPU Maple Canyon 90.14 49 IAmb IAmb 23 27 23.8
comp=Z,204nm,1.5s
MPU IAMs_20 IAMs_20 00 03 13.8
comp=Z,3µm,20.0s
RLMT Red Lodge 90.15 43 P **P** **23 27 16.6 +2.1**
baz=290,SNR=61
RLMT S **S** **23 38 08.4 +1.7**
baz=290
KVAR Kislovodsk Arr 90.15 315 P **P** **23 27 14.0 -0.4**
comp=Z,8.0nm,0.9s,baz=101,slow=19,SNR=3.9
KVAR LR LR 00 08 50.7
comp=Z,3µm,21.9s,baz=266,slow=36
comp=Z,8.0nm,0.9s
KIV Kislovodsk 90.16 315 ⇓P **P** **23 27 14.9 +0.4**
KIV Kislovodsk 90.16 315 P **P** **23 27 14.1 -0.3**
KIV IAmb IAmb 23 27 32.7
comp=Z,194nm,1.0s
KIV Kislovodsk 90.16 315 *i* P **P** **23 27 13.8 -0.6**
SNR=13
KIV Kislovodsk 90.16 315 *e*P **P** **23 27 14.8 +0.4**
KIV *e* 23 30 48.0
KIV *e*PPP PPP 23 32 44.0
KIV *e*SS SS 23 44 06.0 +0.8
KIV *e*SSS SSS 23 47 45.4
KIV pmax pmax
comp=Z,92nm,4.1s
KIV pmax pmax
comp=Z,69nm,1.0s
KIV MLR MLR
comp=Z,5µm,20.0s
KIV Kislovodsk 90.16 315 P **P** **23 27 15.2 +0.8**
KIV S **SKSac** **23 37 45.3 +1.4**
KNB Kanab 90.17 52 IAmb IAmb 23 27 24.7
comp=Z,240nm,1.3s
KNB IAMs_20 IAMs_20 00 06 20.7
comp=Z,2µm,18.0s
SFX San Felipe 90.28 58 IAmb IAmb 23 27 42.1
comp=Z,120nm,1.2s
SFX IAMs_20 IAMs_20 00 01 28.0
comp=Z,4µm,20.0s
MTPU Mount Pierson 90.34 51 IAmb IAmb 23 27 24.8
comp=Z,302nm,1.9s
NEUR Neytrino 90.38 315 *i* P **P** **23 27 15.5 -0.1**
NEUR pmax pmax
comp=Z,122nm,1.5s
AKH Akhalkalaki 90.43 313 P **P** **23 27 16.1 +0.3**
113A Mohawk Valley, 90.67 56 IAmb IAmb 23 27 35.1
comp=Z,249nm,1.6s
PUL Pulkovo 90.68 333 *ce*P **P** **23 27 18.0 +1.7**
PUL pmax pmax
comp=Z,162nm,1.3s
TMUT Trail Mountain 90.68 49 IAMs_20 IAMs_20 00 10 04.0
comp=Z,2µm,19.0s
BW06 Boulder Array 90.74 46 IAMs_20 IAMs_20 00 08 42.2
comp=Z,3µm,19.0s
BW06 Boulder Array 90.74 46 P **P** **23 27 17.9 +0.6**
baz=290,SNR=24
BW06 S **S** **23 38 11.6 -0.7**
baz=290
PDAR Pinedale Array 90.74 46 P **P** **23 27 17.6 +0.2**
PDAR Pinedale Array 90.74 46 P **P** **23 27 17.2 -0.1**
comp=Z,7.5nm,0.8s,baz=290,slow=2.1,SNR=36
PDAR LR LR 00 02 34.8
comp=Z,2µm,20.8s,baz=309,slow=32
comp=Z,7.5nm,0.8s
U15A North Rim 90.75 52 P **P** **23 27 19.0 +1.4**
U15A IAmb IAmb 23 27 27.4
comp=Z,252nm,1.4s
KBD Kabd 90.81 300 P **P** **23 27 17.0 -0.6**
KBD S **SKSac** **23 37 45.3 -2.7**
FFC Flin Flon 90.82 33 P **P** **23 27 17.6 +0.5**
FFC Flin Flon 90.82 33 IAMs_20 IAMs_20 00 11 42.4
comp=Z,3µm,18.0s
FFC Flin Flon 90.82 33 P **P** **23 27 17.6 +0.5**
FFC pmax pmax
comp=Z,76nm,1.2s
FFC MLR MLR
comp=Z,3µm,18.0s

Y14A	**Wickenburg**	**90.94**	**55**	IAmb	IAmb	23 27 45.5				
	comp=Z,155nm,1.2s									
P17A	**Butcher Ranch,**	**90.97**	**49**	P	**P**	**23 27 19.3**	**+0.9**			
P17A				IAmb	IAmb	23 27 44.6				
	comp=Z,129nm,1.3s									
ERBR	**Yeremizino-Bor**	**91.03**	**318**	*e*P	**P**	**23 27 19.0**	**+0.7**			
ERBR				*e*		23 37 50.4				
ERBR				pmax	pmax					
	comp=Z,396nm,1.2s									
SRU	**San Rafael Swe**	**91.25**	**49**	IAMs_20	IAMs_20	00 09 53.9				
	comp=Z,2µm,19.0s									
LABN	**Labinsk**	**91.25**	**317**	*e*P	**P**	**23 27 23.5**	**+4.2**			
LABN				*e*		23 37 52.1				
LABN				pmax	pmax					
	comp=Z,114nm,1.4s									
PIX	**Pinacate**	**91.27**	**57**	P	**P**	**23 27 20.2**	**+0.5**			
PIX				IAMs_20	IAMs_20	00 01 29.2				
	comp=Z,3µm,20.0s									
P18A	**Preston Nutter**	**91.28**	**49**	P	**P**	**23 27 20.8**	**+0.8**			
P18A				IAMs_20	IAMs_20	00 04 00.9				
	comp=Z,3µm,20.0s									
STEI	**Steigen**	**91.28**	**343**	*e*P	**P**	**23 27 18.4**	**-0.6**			
STEI				IAmb	IAmb	23 27 24.1				
	comp=Z,99nm,0.9s									
HMU	**Henry Mountain**	**91.46**	**50**	P	**P**	**23 27 21.0**	**+0.2**			
LAO	**LASA Array**	**91.58**	**41**	IAMs_20	IAMs_20	00 10 02.0				
	comp=Z,3µm,20.0s									
LAO	**LASA Array**	**91.58**	**41**	P	**P**	**23 27 22.4**	**+1.5**			
	baz=292,SNR=73									
VNDA	**Vanda**	**91.58**	**177**	IAMs_20	IAMs_20	00 08 19.5				
	comp=Z,2µm,20.0s									
VNDA	**Vanda**	**91.58**	**177**	P	**P**	**23 27 19.9**	**-0.1**			
	comp=Z,24nm,0.9s,baz=317,slow=5.2,SNR=23									
VNDA				LR	LR	00 07 19.0				
	comp=Z,2µm,20.0s,baz=350,slow=35									
	comp=Z,24nm,0.9s									
FINES	**FINESS Array B**	**91.61**	**335**	*i* P	**P**	**23 27 19.5**	**-1.1**			
FINES				pmax	pmax					
	comp=Z,20nm,0.4s									
FINES	**FINESS Array B**	**91.61**	**335**	P	**P**	**23 27 19.1**	**-1.6**			
	comp=Z,20nm,0.4s,baz=65,slow=4.6,SNR=108									
FINES				PP	**PP**	**23 30 57.9**	**-0.6**			
	comp=Z,6.6nm,0.9s,baz=70,slow=16,SNR=2.3									
FINES				PKKP	**PKKPdf**	**23 44 36.1**	**-2.2**			
	comp=Z,0.9nm,0.7s,baz=281,slow=14,SNR=2.7									
FINES				PKKPbc	**PKKPbc**	**23 44 40.2**	**-1.9**			
	comp=Z,1.5nm,0.7s,baz=258,slow=2.6,SNR=4.1									
FINES				LR	LR	00 12 42.9				
	comp=Z,3µm,18.2s,baz=60,slow=38									
	comp=Z,20nm,0.4s									
BATM	**Batumi**	**91.64**	**313**	P	**P**	**23 27 21.3**	**+0.1**			
FAUS	**Fauske**	**91.64**	**343**	*e*P	**P**	**23 27 20.0**	**-0.7**			
FAUS				*e*		23 27 25.4				
FAUS				IAmb	IAmb	23 27 29.5				
	comp=Z,329nm,1.7s									
214A	**Organ Pipe Nat**	**91.68**	**57**	IAmb	IAmb	23 27 49.1				
	comp=Z,181nm,1.4s									
214A				IAMs_20	IAMs_20	00 05 55.1				
	comp=Z,4µm,20.0s									
214A	**Organ Pipe Nat**	**91.68**	**57**	P	**P**	**23 27 22.8**	**+1.1**			
	baz=287,SNR=20									
214A				S	**S**	**23 38 21.4**	**+0.6**			
	baz=287									
WUAZ	**Wupatki**	**91.74**	**53**	IAMs_20	IAMs_20	00 04 29.4				
	comp=Z,3µm,19.0s									
WUAZ	**Wupatki**	**91.74**	**53**	P	**P**	**23 27 24.1**	**+2.1**			
	baz=288,SNR=46									
WUAZ				S	**S**	**23 38 23.4**	**+2.0**			
	baz=288									
BCA	**Borcka**	**91.74**	**313**	⇑P	**P**	**23 27 21.2**	**-0.5**			
MSEY	**Mahe Island**	**92.02**	**266**	P	**P**	**23 27 24.8**	**+1.3**			
MSEY				IAmb	IAmb	23 27 31.7				
	comp=Z,110nm,1.4s									
MSEY	**Mahe Island**	**92.02**	**266**	*i* P	**P**	**23 27 24.7**	**+1.1**			
	SNR=10									
MSEY	**Mahe Island**	**92.02**	**266**	P	**P**	**23 27 24.8**	**+1.3**			
MSEY				pmax	pmax					
	comp=Z,110nm,1.5s									
MSEY				MLR	MLR					
	comp=Z,2µm,19.0s									
MSEY	**Mahe Island**	**92.02**	**266**	P	**P**	**23 27 24.2**	**+0.6**			
X16A	**Lo Mia Camp, P**	**92.03**	**54**	P	**P**	**23 27 25.1**	**+1.6**			
X16A				IAmb	IAmb	23 27 51.2				
	comp=Z,100nm,1.3s									
DGMT	**Dagmar**	**92.16**	**39**	IAMs_20	IAMs_20	00 07 16.1				
	comp=Z,3µm,19.0s									
DGMT	**Dagmar**	**92.16**	**39**	P	**P**	**23 27 23.7**	**+0.2**			
	baz=294									
SBA	**Scott Base**	**92.21**	**176**	P	**P**	**23 27 23.2**	**+0.2**			
SBA				IAmb	IAmb	23 27 42.2				
	comp=Z,124nm,1.2s									
SBA	**Scott Base**	**92.21**	**176**	P	**P**	**23 27 23.2**	**+0.2**			
SBA				pmax	pmax					
	comp=Z,124nm,1.3s									
SOC	**Sochi**	**92.31**	**316**	*e*P	P	23 27 17.6	-6.7			
SOC				*e*		23 31 01.9				
SOC				*e*S	**SKSac**	**23 37 49.3**	**-6.6**			
SOC				*e*SSS	SSS	23 48 12.6				
SOC				MLR	MLR					
	comp=Z,5µm,21.0s									
UPNV	**Upernavik**	**92.35**	**7**	*i* P	**P**	**23 27 24.7**	**+0.9**			
UPNV				IAmb	IAmb	23 27 29.0				
	comp=Z,27nm,0.9s									
GURO	**Guroymak-BITLI**	**92.43**	**311**	IAmb	IAmb	23 27 33.5				
	comp=Z,141nm,1.3s									
O20A	**White River Ci**	**92.56**	**48**	IAmb	IAmb	23 27 34.5				
	comp=Z,95nm,1.1s									
O20A				IAMs_20	IAMs_20	00 08 07.7				
	comp=Z,2µm,19.0s									
O20A	**White River Ci**	**92.56**	**48**	P	**P**	**23 27 26.8**	**+0.9**			
	baz=290,SNR=39									
O20A				S	**S**	**23 38 31.2**	**+2.4**			
	baz=290									
PV21	**Cone Mtn., Par**	**92.57**	**49**	P	**P**	**23 27 27.0**	**+1.1**			
PV21				IAmb	IAmb	23 27 34.9				
	comp=Z,194nm,1.4s									
PV23	**Carpenter Ridg**	**92.58**	**50**	P	**P**	**23 27 26.5**	**+0.5**			
PV23				IAmb	IAmb	23 27 47.2				
	comp=Z,139nm,1.0s									
PV10	**Paradox Valley**	**92.58**	**50**	P	**P**	**23 27 26.5**	**+0.5**			
PV14	**Lion Creek, Pa**	**92.60**	**50**	P	**P**	**23 27 27.3**	**+1.2**			
PV05	**Paradox Valley**	**92.64**	**50**	P	**P**	**23 27 27.3**	**+1.0**			
PV19	**Morning Glory**	**92.65**	**50**	P	**P**	**23 27 26.7**	**+0.4**			
PV20	**West Nyswonger**	**92.65**	**50**	P	**P**	**23 27 27.5**	**+1.3**			
PV20				IAmb	IAmb	23 27 47.3				
	comp=Z,87nm,0.8s									
PV17	**East Wray Mesa**	**92.67**	**50**	P	**P**	**23 27 27.2**	**+0.8**			
PV17				IAmb	IAmb	23 27 35.2				
	comp=Z,176nm,1.3s									
PV04	**Paradox Valley**	**92.68**	**50**	P	**P**	**23 27 27.0**	**+0.6**			
PV04				IAmb	IAmb	23 27 35.9				
	comp=Z,147nm,1.2s									
PV16	**Nyswonger Mesa**	**92.70**	**50**	P	**P**	**23 27 26.9**	**+0.4**			
PV16				IAmb	IAmb	23 27 47.5				
	comp=Z,86nm,0.9s									
PV22	**Blue Mesa, Par**	**92.72**	**49**	P	**P**	**23 27 26.9**	**+0.3**			
PV22				IAmb	IAmb	23 27 35.5				
	comp=Z,111nm,1.3s									
PV18	**Skein Mesa, Pa**	**92.72**	**50**	P	**P**	**23 27 27.2**	**+0.6**			
PV18				IAmb	IAmb	23 27 35.4				
	comp=Z,98nm,1.1s									
MOR8	**Moi Rana**	**92.72**	**342**	*e*P	**P**	**23 27 25.2**	**-0.5**			
MOR8				IAmb	IAmb	23 27 33.6				
	comp=Z,73nm,1.1s									
PV11	**David Mesa, Pa**	**92.73**	**50**	P	**P**	**23 27 28.1**	**+1.4**			
PV11				IAmb	IAmb	23 27 53.8				
	comp=Z,129nm,1.0s									
RWWY	**Rawlins**	**92.75**	**46**	IAmb	IAmb	23 27 35.4				
	comp=Z,138nm,1.4s									
RWWY				IAMs_20	IAMs_20	00 09 39.4				
	comp=Z,3µm,19.0s									
PV03	**Paradox Valley**	**92.77**	**50**	P	**P**	**23 27 27.5**	**+0.7**			
PV03				IAmb	IAmb	23 27 35.5				
	comp=Z,122nm,1.3s									
PV12	**Saucer Basin,**	**92.78**	**50**	P	**P**	**23 27 27.7**	**+0.8**			
PV12				IAmb	IAmb	23 27 35.7				
	comp=Z,155nm,1.1s									
PV07	**Paradox Valley**	**92.85**	**49**	P	**P**	**23 27 27.6**	**+0.4**			
PV02	**Paradox Valley**	**92.86**	**50**	P	**P**	**23 27 28.1**	**+0.8**			
PV02				IAmb	IAmb	23 27 48.2				
	comp=Z,60nm,0.8s									
K22A	**Casper**	**92.87**	**45**	IAMs_20	IAMs_20	00 09 41.6				
	comp=Z,2µm,20.0s									
K22A	**Casper**	**92.87**	**45**	P	**P**	**23 27 28.2**	**+1.1**			
	baz=292,SNR=27									
K22A				S	**S**	**23 38 33.0**	**+1.7**			
	baz=292									
VSU	**Vasula**	**92.94**	**333**	*ce*P	**P**	**23 27 28.4**	**+1.6**			
VSU				pmax	pmax					
	comp=Z,179nm,2.5s									
VSU	**Vasula**	**92.94**	**333**	*e*P	**P**	**23 27 28.1**	**+1.3**			
MEF	**Metsahovi**	**92.98**	**335**	*e*P	**P**	**23 27 28.7**	**+1.7**			
PV15	**Paradox Valley**	**93.01**	**49**	P	**P**	**23 27 28.2**	**+0.2**			
PV15				IAmb	IAmb	23 27 32.6				
	comp=Z,77nm,1.1s									
PV01	**Paradox Valley**	**93.01**	**50**	P	**P**	**23 27 28.4**	**+0.4**			
PV01				IAmb	IAmb	23 27 32.6				
	comp=Z,89nm,1.3s									
W18A	**Petrified Fore**	**93.14**	**53**	P	**P**	**23 27 28.8**	**+0.3**			
W18A				IAmb	IAmb	23 27 38.3				
	comp=Z,120nm,1.2s									
W18A				IAMs_20	IAMs_20	00 08 29.3				
	comp=Z,3µm,18.0s									
W18A	**Petrified Fore**	**93.14**	**53**	P	**P**	**23 27 30.3**	**+1.7**			
	baz=289,SNR=14									
W18A				S	**S**	**23 38 37.0**	**+3.0**			
	baz=289									
X18A	**Snowflake**	**93.16**	**53**	P	**P**	**23 27 29.6**	**+1.0**			
X18A				IAmb	IAmb	23 27 38.4				
	comp=Z,121nm,1.4s									
TUC	**Tucson**	**93.21**	**56**	P	**P**	**23 27 29.4**	**+0.6**			
TUC				IAmb	IAmb	23 27 47.6				
	comp=Z,124nm,1.6s									
TUC	**Tucson**	**93.21**	**56**	IAMs_20	IAMs_20	00 06 46.5				
	comp=Z,3µm,19.0s									
TUC	**Tucson**	**93.21**	**56**	P	**P**	**23 27 30.2**	**+1.4**			
	baz=288									
TUC				S	**S**	**23 38 33.8**	**-0.7**			
	baz=288									
TUC	**Tucson**	**93.21**	**56**	P	**P**	**23 27 29.4**	**+0.6**			
ANN	**Anapa**	**93.37**	**318**	*e*P	**P**	**23 27 28.4**	**-0.7**			
ANN				*e*		23 38 01.8				
ANN				pmax	pmax					
	comp=Z,130nm,1.1s									
ANN				MLR	MLR					
	comp=Z,6µm,21.0s									
MVCO	**Mesa Verde**	**93.38**	**51**	IAmb	IAmb	23 27 56.5				
	comp=Z,99nm,1.3s									
MVCO	**Mesa Verde**	**93.38**	**51**	P	**P**	**23 27 30.9**	**+1.2**			
	baz=290,SNR=29									
MVCO				S	**S**	**23 38 35.9**	**-0.3**			
	baz=290									
SRIG	**Santa Rosalia**	**93.53**	**61**	P	**P**	**23 27 30.6**	**+0.4**			
RAF	**Rauma**	**93.56**	**336**	*e*P	**P**	**23 27 29.6**	**0.0**			
SUMG	**Summit**	**93.77**	**1**	*i* P	**P**	**23 27 31.5**	**+0.6**			
SUMG				IAmb	IAmb	23 27 36.1				
	comp=Z,18nm,0.8s									
SMCO	**Snowmass**	**93.82**	**48**	P	**P**	**23 27 32.5**	**+0.6**			
SMCO				IAmb	IAmb	23 27 37.0				
	comp=Z,115nm,1.1s									
SMCO				IAMs_20	IAMs_20	00 05 55.9				
	comp=Z,3µm,20.0s									
N23A	**Red Feather La**	**93.92**	**46**	IAMs_20	IAMs_20	00 10 27.6				
	comp=Z,3µm,20.0s									
N23A	**Red Feather La**	**93.92**	**46**	P	**P**	**23 27 33.9**	**+1.7**			
	baz=292,SNR=48									
N23A				S	**S**	**23 38 41.0**	**+0.1**			
	baz=292									
RSSD	**Black Hills**	**93.99**	**43**	P	**P**	**23 27 32.9**	**+0.6**			
RSSD	**Black Hills**	**93.99**	**43**	IAMs_20	IAMs_20	00 18 10.9				
	comp=Z,2µm,19.0s									
RSSD	**Black Hills**	**93.99**	**43**	P	**P**	**23 27 32.8**	**+0.5**			
	baz=294									
RSSD				S	**S**	**23 38 41.7**	**+0.4**			
	baz=294									
RSSD	**Black Hills**	**93.99**	**43**	P	**P**	**23 27 32.9**	**+0.6**			
RSSD				pmax	pmax					
	comp=Z,61nm,1.2s									
MTSE	**Matsula**	**94.08**	**334**	*e*P	**P**	**23 27 32.9**	**+0.8**			
RAYN	**Ar Rayn**	**94.30**	**295**	P	**P**	**23 27 33.6**	**-0.3**			
RAYN	**Ar Rayn**	**94.30**	**295**	IAMs_20	IAMs_20	00 14 13.7				
	comp=Z,3µm,20.0s									
RAYN	**Ar Rayn**	**94.30**	**295**	*i* P	**P**	**23 27 33.9**	**0.0**			
	SNR=10									
RAYN	**Ar Rayn**	**94.30**	**295**	P	**P**	**23 27 33.6**	**-0.3**			
RAYN				pmax	pmax					
	comp=Z,59nm,1.3s									
RAYN	**Ar Rayn**	**94.30**	**295**	P	**P**	**23 27 34.1**	**+0.2**			
RAYN				S	**SKSac**	**23 38 07.0**	**-0.8**			
S22A	**4UR Ranch, Cre**	**94.44**	**50**	IAMs_20	IAMs_20	00 10 37.5				
	comp=Z,3µm,20.0s									
S22A	**4UR Ranch, Cre**	**94.44**	**50**	P	**P**	**23 27 35.9**	**+1.3**			
	baz=291,SNR=36									
S22A				S	**S**	**23 38 47.4**	**+1.8**			
	baz=291									
DUN6	**Lazy B Ranch**	**94.49**	**55**	P	**P**	**23 27 36.0**	**+1.3**			
MNK	**Minsk**	**94.49**	**329**	*i* P	**P**	**23 27 35.9**	**+1.8**			
ISCO	**Idaho Springs**	**94.57**	**47**	IAMs_20	IAMs_20	00 11 02.7				
	comp=Z,3µm,20.0s									
ISCO	**Idaho Springs**	**94.57**	**47**	P	**P**	**23 27 36.6**	**+1.4**			
	baz=292,SNR=27									
ISCO				S	**S**	**23 38 47.0**	**+0.4**			
	baz=292									
319A	**Douglas**	**94.72**	**56**	P	**P**	**23 27 36.4**	**+0.6**			
319A				IAmb	IAmb	23 27 54.6				
	comp=Z,99nm,1.4s									
IIGN	**Ignalina**	**94.86**	**330**	*e*P	**P**	**23 27 35.8**	**+0.1**			
ARPR	**Arapgir-MALATY**	**94.93**	**312**	IAMs_20	IAMs_20	00 14 41.0				
	comp=Z,3µm,20.0s									
E28A	**Huff**	**95.10**	**40**	P	**P**	**23 27 38.1**	**+1.0**			
E28A				IAmb	IAmb	23 28 04.9				
	comp=Z,130nm,1.2s									
BRIGG	**Briggsdale**	**95.19**	**46**		**P**	**23 27 37.6**	**-0.1**			
MDND	**Maddock**	**95.20**	**38**	P	**P**	**23 27 37.9**	**+0.3**			
MDND				IAMs_20	IAMs_20	00 08 46.6				
	comp=Z,3µm,21.0s									
MDND	**Maddock**	**95.20**	**38**	P	**P**	**23 27 37.8**	**+0.3**			
	baz=297									
MDND				S	**S**	**23 38 50.7**	**-0.5**			
	baz=297									
Q24A	**Divide**	**95.22**	**48**		**P**	**23 27 39.1**	**+0.9**			
Q24A				IAMs_20	IAMs_20	00 06 53.9				
	comp=Z,2µm,20.0s									
Q24A	**Divide**	**95.22**	**48**	P	**P**	**23 27 39.0**	**+0.9**			
	baz=292,SNR=7.8									
Q24A				S	**S**	**23 38 54.0**	**+1.7**			
	baz=292									
SDCO	**Great Sand Dun**	**95.42**	**49**	P	**P**	**23 27 39.7**	**+0.6**			
SDCO				IAMs_20	IAMs_20	00 11 56.4				
	comp=Z,3µm,19.0s									
SDCO	**Great Sand Dun**	**95.42**	**49**	P	**P**	**23 27 39.6**	**+0.5**			
	baz=292,SNR=23									
SDCO				S	**S**	**23 38 54.5**	**+0.4**			
	baz=292									
SIM	**Simferopol'**	**95.46**	**319**	*e*P	P	23 27 44.0	+5.3			
SIM				*e*		23 31 24.9				
SIM				*e*S	**S**	**23 38 52.0**	**-1.5**			
SIM				pmax	pmax					
	comp=Z,38nm,0.9s									
SIM				pmax	pmax					
	comp=Z,255nm,15.9s									
RER	**Riviere de l'E**	**95.50**	**250**		**P**	**23 27 39.5**	**+0.1**			
RER				IAmb	IAmb	23 27 57.1				
	comp=Z,87nm,1.1s									
121A	**Cookes Peak, D**	**95.53**	**55**	IAmb	IAmb	23 27 59.3				
	comp=Z,116nm,1.3s									
121A				IAMs_20	IAMs_20	00 08 35.9				
	comp=Z,2µm,19.0s									
121A	**Cookes Peak, D**	**95.53**	**55**	P	**P**	**23 27 41.0**	**+1.4**			
	baz=290,SNR=24									
VSVD	**Vaisvydziai**	**95.59**	**332**	*e*P	**P**	**23 27 39.8**	**+0.8**			
Y22D	**IRIS PASSCAL I**	**95.67**	**53**	P	**P**	**23 27 41.7**	**+1.6**			
Y22D	**IRIS PASSCAL I**	**95.67**	**53**	P	**P**	**23 27 41.6**	**+1.5**			
	baz=291									
Y22D				S	**S**	**23 38 54.4**	**-1.8**			
	baz=291									
Y22F	**Passcal Instru**	**95.67**	**53**	P	**P**	**23 27 41.9**	**+1.8**			
	baz=291									
Y22F				S	**S**	**23 38 54.4**	**-1.8**			
	baz=291									
AKASG	**Malin Array Be**	**95.71**	**325**	P	**P**	**23 27 40.0**	**+0.3**			
AKASG	**Malin Array Be**	**95.71**	**325**	P	**P**	**23 27 40.0**	**+0.3**			
AKASG				pmax	pmax					
	comp=Z,31nm,1.3s									
AKASG	**Malin Array Be**	**95.71**	**325**	P	**P**	**23 27 38.4**	**-1.4**			
	comp=Z,3.3nm,0.6s,baz=51,slow=4.4,SNR=17									
AKASG				PP	**PP**	**23 31 30.1**	**-0.8**			
	comp=Z,3.2nm,0.7s,baz=47,slow=8.8,SNR=3.2									
AKASG				PKKPbc	**PKKPdf**	**23 44 28.8**	**-2.1**			
	comp=Z,0.4nm,0.3s,baz=249,slow=3.3,SNR=3.2									
AKASG				LR	LR	00 13 53.1				
	comp=Z,6µm,19.3s,baz=58,slow=37									
	comp=Z,3.3nm,0.6s									
AKBB	**Malin Array Si**	**95.71**	**325**	P	**P**	**23 27 39.7**	**0.0**			
AKBB	**Malin Array Si**	**95.71**	**325**	P	**P**	**23 27 39.7**	**0.0**			
AKBB				pmax	pmax					
	comp=Z,82nm,1.8s									
AKBB				MLR	MLR					
	comp=Z,7µm,20.0s									
ANMO	**Albuquerque**	**95.72**	**52**	P	**P**	**23 27 41.8**	**+1.4**			
ANMO	**Albuquerque**	**95.72**	**52**	IAMs_20	IAMs_20	00 13 38.7				
	comp=Z,3µm,18.0s									
ANMO	**Albuquerque**	**95.72**	**52**	P	**P**	**23 27 41.5**	**+1.1**			
	baz=291									
ANMO				S	**S**	**23 38 57.3**	**+0.6**			
	baz=291									
ANMO	**Albuquerque**	**95.72**	**52**	P	**P**	**23 27 41.8**	**+1.4**			
ANMO				pmax	pmax					
	comp=Z,71nm,1.6s									
ANMO				MLR	MLR					
	comp=Z,3µm,18.0s									
KIEV	**Kiev**	**95.73**	**325**	⇓P	**P**	**23 27 39.9**	**+0.1**			
KIEV	**Kiev**	**95.73**	**325**	P	**P**	**23 27 38.9**	**-0.9**			
KIEV	**Kiev**	**95.73**	**325**	P	**P**	**23 27 37.6**	**-2.2**			
KIEV	**Kiev**	**95.73**	**325**	P	**P**	**23 27 38.9**	**-0.9**			
KIEV				pmax	pmax					
	comp=Z,74nm,1.8s									
KIEV				MLR	MLR					
	comp=Z,6µm,20.0s									
AK05	**Malin Array Si**	**95.77**	**325**		**P**	**23 27 39.0**	**-1.0**			
PABE	**Paberze**	**95.84**	**331**	P	**P**	**23 27 40.6**	**+0.4**			
PABE				IAmb	IAmb	23 31 06.9				
	comp=Z,83nm,1.2s									
PABE				IAMs_20	IAMs_20	00 10 00.5				
	comp=Z,4µm,21.0s									
PABE	**Paberze**	**95.84**	**331**	*e*P	**P**	**23 27 41.6**	**+1.4**			
CRNM	**Carthage**	**95.86**	**53**	P	**P**	**23 27 42.6**	**+1.5**			
BNM	**Barren Site**	**95.88**	**53**	P	**P**	**23 27 43.1**	**+1.9**			
ULM	**Lac du Bonnet**	**96.21**	**35**	IAMs_20	IAMs_20	00 08 56.0				
	comp=Z,3µm,21.0s									
ULM	**Lac du Bonnet**	**96.21**	**35**	*i* P	**P**	**23 27 41.5**	**-0.5**			
ULM	**Lac du Bonnet**	**96.21**	**35**	P	**P**	**23 27 40.8**	**-1.2**			
	comp=Z,15nm,1.0s,baz=299,slow=5.7,SNR=14									
ULM				PKKPbc	**PKKPbc**	**23 44 27.8**	**-2.0**			
	comp=Z,1.3nm,0.6s,baz=202,slow=7.0,SNR=3.9									
ULM				LR	LR	00 14 06.4				
	comp=Z,1µm,18.1s,baz=304,slow=37									
	comp=Z,15nm,1.0s									
ILULI	**Ilulissat**	**96.28**	**6**	P	**P**	**23 27 42.9**	**+1.0**			
ILULI				IAmb	IAmb	23 28 10.2				
	comp=Z,139nm,1.8s									
ILULI	**Ilulissat**	**96.28**	**6**	P	**P**	**23 27 42.9**	**+1.0**			
ILULI				pmax	pmax					
	comp=Z,139nm,1.8s									
T25A	**Trinidad**	**96.45**	**49**	P	**P**	**23 27 44.3**	**+0.6**			
T25A	**Trinidad**	**96.45**	**49**	P	**P**	**23 27 44.8**	**+1.1**			
	baz=293									
T25A				S	**S**	**23 39 00.9**	**-1.9**			
	baz=293									
GAZ	**Gaziantep**	**96.48**	**311**	IAmb	IAmb	23 27 52.1				
	comp=Z,160nm,2.0s									
SLBS	**Sierra La Lagu**	**96.61**	**64**	P	**P**	**23 27 43.5**	**-1.1**			
SLBS				IAmb	IAmb	23 28 12.0				
	comp=Z,94nm,1.9s									
SLBS				IAMs_20	IAMs_20	00 11 44.3				
	comp=Z,2µm,18.0s									
OGNE	**Ogallala**	**96.63**	**45**	P	**P**	**23 27 44.8**	**+0.5**			
OGNE				IAmb	IAmb	23 28 19.2				
	comp=Z,93nm,1.6s									
OGNE				IAMs_20	IAMs_20	00 14 10.1				
	comp=Z,3µm,19.0s									
OGNE	**Ogallala**	**96.63**	**45**	P	**P**	**23 27 44.4**	**+0.2**			
	baz=295									
OGNE				S	**S**	**23 39 01.7**	**-2.3**			
	baz=295									
EPT	**El Paso**	**96.81**	**55**	P	**P**	**23 27 46.5**	**+1.1**			
EPT				IAMs_20	IAMs_20	00 09 03.5				
	comp=Z,2µm,20.0s									
KSCO	**Kaye Shedlock'**	**97.01**	**47**	P	**P**	**23 27 45.5**	**-0.6**			
KSCO				IAMs_20	IAMs_20	00 12 03.2				
	comp=Z,3µm,19.0s									
KSCO	**Kaye Shedlock'**	**97.01**	**47**	P	**P**	**23 27 46.0**	**0.0**			
	baz=294									
SUW	**Suwalki**	**97.07**	**330**	P	**P**	**23 27 45.5**	**-0.3**			
SUW				IAmb	IAmb	23 28 05.0				
	comp=Z,74nm,1.1s									
SUW	**Suwalki**	**97.07**	**330**	P	**P**	**23 27 45.5**	**-0.3**			
SUW				pmax	pmax

comp=Z,104nm,1.6s
F33A IAMs_20 IAMs_20 00 10 25.8
comp=Z,4µm,21.0s
GDL2 Guadalupe Moun 98.35 54 P Pdif 23 27 52.9 +0.6
VHRN Van Horn 98.38 56 P P 23 27 52.1 -0.3
B35A Bob, Littlefor 98.39 36 P P 23 27 51.4 -0.5
B35A IAmb IAmb 23 27 55.8
comp=Z,64nm,1.4s
SFJD Kangerlussuaq 98.46 7 P P 23 27 51.6 -0.1
SFJD Kangerlussuaq 98.46 7 P P 23 27 51.7 -0.1
SFJD pmax pmax
comp=Z,56nm,1.5s
SFJD Kangerlussuaq 98.46 7 LR LR 00 12 36.3
comp=Z,657nm,21.9s,baz=349,slow=36
ANTO Ankara 98.54 315 P Pdif 23 27 53.2 +0.3
ANTO Ankara 98.54 315 IAMs_20 IAMs_20 00 17 01.3
comp=Z,3µm,21.0s
ANTO Ankara 98.54 315 P Pdif 23 27 53.2 +0.3
ANTO pmax pmax
comp=Z,121nm,1.4s
ANTO Ankara 98.54 315 P Pdif 23 27 53.2 +0.3
ANTO S **SKSac 23 38 29.5 +0.1**
BR231 Keskin MP Arra 98.56 315 P Pdif 23 27 53.3 +0.3
BR231 IAmb IAmb 23 28 01.4
comp=Z,58nm,1.1s
CLN7 Carlsbad 7 98.71 54 P Pdif 23 27 54.3 +0.5
CLNB Carlsbad 98.71 54 P Pdif 23 27 55.0 +1.2
MSTX Muleshoe 98.91 52 IAMs_20 IAMs_20 00 13 07.1
comp=Z,3µm,19.0s
MSTX Muleshoe 98.91 52 Pdiff Pdif 23 27 55.0 +0.3
baz=293
MSTX S **S 23 39 24.4 +0.7**
baz=293
ECSD EROS Data Cent 98.97 41 IAmb IAmb 23 28 01.4
comp=Z,72nm,1.6s
LVV L'vov 99.01 326 *e*P Pdif 23 27 57.0 +2.3
LVV *e* 23 31 53.9
LVV *e*S **S 23 39 24.1 +0.4**
LVV MLR MLR
comp=Z,3µm,21.0s
PECS Pecos 99.06 55 P Pdif 23 27 56.3 +0.9
CBKS Cedar Bluff 99.13 46 Pdif 23 27 54.8 -0.7
CBKS IAMs_20 IAMs_20 00 14 16.5
comp=Z,2µm,20.0s
CBKS Cedar Bluff 99.13 46 Pdiff Pdif 23 27 55.4 -0.2
baz=296
CBKS S **S 23 39 26.7 +1.4**
baz=296
CBKS Cedar Bluff 99.13 46 P Pdif 23 27 54.8 -0.7
CBKS pmax pmax
comp=Z,38nm,1.3s
CBKS MLR MLR
comp=Z,2µm,20.0s
HPIG 99.20 59 P Pdif 23 27 56.1 -0.2
HPIG IAMs_20 IAMs_20 00 07 23.5
comp=Z,3µm,20.0s
AMTX Amarillo 99.37 51 IAMs_20 IAMs_20 00 16 04.2
comp=Z,2µm,19.0s
AMTX Amarillo 99.37 51 Pdiff Pdif 23 27 56.0 -0.7
baz=294
MMAI Mount Meron Ar 99.46 307 P Pdif 23 27 55.6 -1.5
comp=Z,5.2nm,0.7s,baz=54,slow=5.7,SNR=9.5
MMAI LR LR 00 17 50.5
comp=Z,2µm,20.9s,baz=359,slow=38
comp=Z,5.2nm,0.7s
BURAR Bucovina Array 99.56 324 ⇓P Pdif 23 27 56.8 -0.5
BURAR Bucovina Array 99.56 324 P Pdif 23 27 56.8 -0.5
ALPN Alpine 99.61 55 Pdif 23 27 58.8 +0.8
PLOR Plostina 99.66 322 ⇑P Pdif 23 27 58.1 +0.4
PLOR Plostina 99.66 322 P Pdif 23 27 58.0 +0.4
BISRR Bisoca 99.78 322 ⇓P Pdif 23 27 58.2 0.0
ODSA Odessa 99.81 53 Pdif Pdif 23 27 59.3 +0.6
ODSA IAmb IAmb 23 28 06.9
comp=Z,87nm,1.6s
F36A Milaca 99.81 38 Pdif Pdif 23 27 57.9 -0.4
KWP Kalwaria Pacla 99.83 327 *e*P Pdif 23 27 58.6 +0.3
N33A J Bar K, Exete 99.84 44 IAMs_20 IAMs_20 00 21 50.0
comp=Z,2µm,18.0s
EYMN Ely 99.87 35 IAMs_20 IAMs_20 00 17 17.9
comp=Z,3µm,19.0s
EYMN Ely 99.87 35 Pdiff Pdif 23 27 58.5 -0.1
baz=303
COVR Voineasa-Covas 99.93 322 ⇓P Pdif 23 27 59.4 +0.5
TXAR Lajitas Array 99.98 56 P Pdif 23 27 58.6 -0.9
comp=Z,2.9nm,1.0s,baz=260,slow=3.4,SNR=8.7
TXAR PP **PP 23 32 03.6 -1.0**
comp=Z,0.6nm,0.9s,baz=119,slow=17,SNR=2.0
TXAR LR LR 00 09 56.0
comp=Z,3µm,19.0s,baz=298,slow=33
comp=Z,2.9nm,1.0s
R32A Long Quarter, 100.03 46 IAMs_20 IAMs_20 00 09 42.1
comp=Z,2µm,20.0s
OZUR 100.04 323 ⇓P Pdif 23 28 00.0 +0.6
BOSR Bodos 100.13 323 ⇓P Pdif 23 27 59.5 -0.2
CSS Mathiatis 100.25 310 IAMs_20 IAMs_20 00 17 40.9
comp=Z,3µm,21.0s
MLR Muntele Rosu 100.27 322 ⇓P Pdif 23 28 01.1 +0.5
MLR Muntele Rosu 100.27 322 P Pdif 23 28 01.0 +0.5
DOPR Dopca 100.35 323 ⇑P Pdif 23 27 59.7 -1.0
KOLS Kolonicke sedl 100.46 326 *e*P Pdif 23 28 03.8 +2.6
KOLS Kolonicke sedl 100.46 326 *e*PDIFF Pdif 23 28 03.8 +2.6
BMR Baia Mare 100.50 325 ⇓P Pdif 23 28 01.7 +0.4
BMR Baia Mare 100.50 325 P Pdif 23 28 01.7 +0.4
ELIS Ellis County 100.55 49 IAMs_20 IAMs_20 00 15 00.3
comp=Z,3µm,21.0s
SPMN Marine on St. 100.58 38 IAMs_20 IAMs_20 00 12 55.8
comp=Z,3µm,20.0s
SPMN Marine on St. 100.58 38 Pdiff Pdif 23 28 01.4 -0.3
baz=302
NOKA Waynoka 100.66 48 IAMs_20 IAMs_20 00 04 29.0
comp=Z,2µm,21.0s
U32A Winter Ranch, 100.72 48 IAMs_20 IAMs_20 00 12 46.7
comp=Z,2µm,18.0s
OK035 E0210 Rd and N 100.79 48 IAMs_20 IAMs_20 00 10 59.4
comp=Z,3µm,20.0s
I37A Lemond, Waseca 100.85 39 IAMs_20 IAMs_20 00 11 37.1
comp=Z,3µm,21.0s
OK038 West end E0370 100.87 48 IAMs_20 IAMs_20 00 12 42.5
comp=Z,3µm,19.0s
CRVS Cervenica-Dubn 100.92 327 *e*PDIFF Pdif 23 28 04.6 +1.4
CJR Cluj-Napoca 100.98 324 ⇑P Pdif 23 28 04.1 +0.5
CJR Cluj-Napoca 100.98 324 P Pdif 23 28 04.0 +0.5
N35A Tabor 100.99 43 IAMs_20 IAMs_20 00 17 31.3
comp=Z,2µm,18.0s
ISP Isparta 101.04 313 IAMs_20 IAMs_20 00 20 47.5
comp=Z,2µm,19.0s
OK032 Salt Plains WL 101.11 48 IAMs_20 IAMs_20 00 11 20.8
comp=Z,3µm,19.0s
ARR Arges 101.11 322 ⇓P Pdif 23 28 04.4 +0.2
KSU1 Kansas State U 101.18 45 IAMs_20 IAMs_20 00 23 15.5
comp=Z,2µm,19.0s
KSU1 Kansas State U 101.18 45 Pdiff Pdif 23 28 04.5 0.0
baz=298
MARR Marisel-Cluj 101.28 324 ⇓P Pdif 23 28 03.7 -1.2
CROK Carrier 101.40 48 IAMs_20 IAMs_20 00 11 18.7
comp=Z,3µm,20.0s
COPA Copaceanca 101.42 321 ⇓P Pdif 23 28 04.9 -0.6
DRGR 101.44 324 ⇑P Pdif 23 28 05.2 -0.5
DRGR 101.44 324 P Pdif 23 28 05.1 -0.5
LOT Lotru 101.58 323 ⇑P Pdif 23 28 06.7 +0.3
WMOK Wichita Mounta 101.60 50 IAMs_20 IAMs_20 00 14 52.0
comp=Z,3µm,19.0s
WMOK Wichita Mounta 101.60 50 Pdiff Pdif 23 28 06.6 0.0
baz=296
BLOK Blackwell 101.84 47 IAMs_20 IAMs_20 00 14 11.1
comp=Z,3µm,22.0s
ABTX Abilene, Hawle 101.85 52 Pdiff Pdif 23 28 07.6 -0.1
baz=295
K38A Parkersburg 101.95 40 IAMs_20 IAMs_20 00 09 39.4
comp=Z,2µm,20.0s
D41A Chassel 102.01 35 IAMs_20 IAMs_20 00 16 38.4
comp=Z,3µm,20.0s
SCIA State Center 102.05 41 Pdiff Pdif 23 28 08.0 -0.4
baz=301
OKC Ostrava-Krasne 102.07 329 AMS AMS 00 17 20.0
comp=Z,5µm,19.3s
G40A Rib Lake 102.10 37 IAMs_20 IAMs_20 00 11 58.0
comp=Z,3µm,20.0s
OK029 Liberty Lake 102.10 48 IAMs_20 IAMs_20 00 13 38.2
comp=Z,3µm,19.0s
GZR Gura Zlata 102.19 323 ⇓P Pdif 23 28 09.4 +0.3
GZR Gura Zlata 102.19 323 P Pdif 23 28 09.3 +0.3
OK051 E0350 and S346 102.22 47 IAMs_20 IAMs_20 00 11 36.4
comp=Z,2µm,20.0s
T35A Sooner Cattle 102.27 47 IAMs_20 IAMs_20 00 18 16.5
comp=Z,3µm,18.0s
PSZ Piszkesteto 102.34 326 P Pdif 23 28 09.0 -0.6
KSP Ksiaz 102.34 330 *e*P Pdif 23 28 08.5 -1.0
OK033 Mehan 102.36 48 IAMs_20 IAMs_20 00 11 28.1
comp=Z,3µm,20.0s
MORC Moravsky Berou 102.41 329 *e*PDIFF Pdif 23 28 09.9 0.0
MORC *e* 23 31 26.2
MORC *e* 23 32 26.7
OK052 Battle Ridge R 102.48 48 IAMs_20 IAMs_20 00 11 31.3
comp=Z,3µm,20.0s
OSTC Ostas 102.57 330 AMS AMS 00 13 30.0
comp=Z,4µm,23.2s
KRLC Kraliky 102.60 329 *e*SKS SKSac 23 38 50.2 +1.5
KRLC AMS AMS 00 14 00.0
comp=Z,4µm,20.7s
N38A Joes South For 102.61 42 IAMs_20 IAMs_20 00 13 06.0
comp=Z,3µm,21.0s
JCT Junction City 102.62 54 IAMs_20 IAMs_20 00 15 48.4
comp=Z,2µm,19.0s
JCT Junction City 102.62 54 Pdiff Pdif 23 28 11.7 +0.6
baz=294
CHVC Chvalec 102.63 330 AMS AMS 00 15 50.0
comp=Z,4µm,22.4s
DPC Dobruska-Polom 102.65 330 AMS AMS 00 13 20.0
comp=Z,5µm,27.2s
HERR Herculane 102.69 323 ⇑P Pdif 23 28 10.4 -0.8
UPC Upice 102.70 330 AMS AMS 00 13 30.0
comp=Z,5µm,21.1s
BZS Buzias 102.74 324 ⇑P Pdif 23 28 11.4 0.0
BZS Buzias 102.74 324 P Pdif 23 28 11.3 0.0
FW03 Perrin-Whitt E 102.87 51 IAMs_20 IAMs_20 00 15 57.9
comp=Z,2µm,19.0s
JAVC Velka Javorina 102.93 328 *e*PDIFF Pdif 23 28 16.2 +4.0
JAVC *e* 23 31 30.8
P38A Dawn 103.01 43 IAMs_20 IAMs_20 00 16 51.7
comp=Z,2µm,19.0s
MDVR Moldovita 103.16 323 ⇓P Pdif 23 28 12.2 -1.1
VRAC Vranov 103.19 329 *e*PDIFF Pdif 23 28 12.3 -1.0
VRAC *e* 23 31 28.8
VRAC *e* 23 32 27.2
L40A Anamosa 103.23 40 IAMs_20 IAMs_20 00 13 04.3
comp=Z,2µm,21.0s
BLKB Belogradchik 103.25 322 ⇑P Pdif 23 28 13.6 -0.1
TUL3 Leonard 103.25 48 IAMs_20 IAMs_20 00 12 15.5
comp=Z,3µm,20.0s
TUL3 Leonard 103.25 48 Pdiff Pdif 23 28 14.1 +0.3
baz=298
FW06 Azle 103.28 51 IAMs_20 IAMs_20 00 18 12.8
comp=Z,3µm,20.0s
ZAIG Zacatecas 103.31 62 IAMs_20 IAMs_20 00 09 25.6
comp=Z,2µm,20.0s
Z35A Perchaven, San 103.36 50 IAMs_20 IAMs_20 00 10 42.6
comp=Z,2µm,20.0s
JFWS Jewell Farm 103.37 39 IAMs_20 IAMs_20 00 13 53.0
comp=Z,3µm,20.0s
JFWS Jewell Farm 103.37 39 Pdiff Pdif 23 28 14.2 -0.1
baz=304
PVCC Panska Ves 103.38 331 AMS AMS 00 16 10.0
comp=Z,5µm,22.1s
MODS Modra-Piesok 103.44 328 *e*P Pdif 23 28 17.5 +3.1
MODS Modra-Piesok 103.44 328 *e*PDIFF Pdif 23 28 17.5 +3.1
MODS *e* 23 31 24.0
BRG Berggiesshubel 103.44 331 P PKiKP 23 32 35.7 +2.6
BRG Amp 23 32 38.2
comp=Z,34nm,1.3s
BRG Berggiesshubel 103.44 331 SP SP 23 41 34.0 -1.6
KRUC Moravsky 103.45 329 *e*PDIFF Pdif 23 28 13.1 -1.3
KRUC *e* 23 31 29.8
KRUC *e* 23 32 27.8
CLL Collm 103.58 332 IAMs_20 IAMs_20 00 22 16.0
comp=Z,3µm,20.0s
CLL Collm 103.58 332 *e*P Pdif 23 28 16.0 +1.1
CLL *e* 23 32 32.0
CLL *e* 23 38 54.0
CLL pmax pmax
comp=Z,36nm,1.3s
CLL MLR MLR
comp=Z,3µm,18.0s
CLL Collm 103.58 332 *e*Pdif Pdif 23 28 16.0 +1.1
CLL *ex* x 23 31 37.0
CLL *e*PP **PP 23 32 32.0 +1.5**
comp=Z,36nm,1.3s
CLL *e*PPP PPP 23 34 42.0
CLL *e*SKSac **SKSac 23 38 54.0 +1.0**
CLL *e*SKKSac **SKKSac 23 39 36.0 +1.2**
CLL *e*PS **PS 23 41 40.0 -1.1**
CLL *ex* x 23 42 13.0
CLL *e*SS **SS 23 47 18.0 +4.6**
CLL AMS AMS 00 17 00.0
comp=Z,3µm,20.0s
CLL AMS AMS 00 22 00.0
comp=Z,3µm,18.0s
CLL R2 01 16 00.0
comp=N,500nm,19.4s
CLL R2 01 16 00.0
comp=E,300nm,37.6s
CLL R2 01 16 00.0
comp=Z,400nm,23.3s
RICC Richard 103.59 331 AMS AMS 00 16 30.0
comp=Z,5µm,20.4s
QSPA South Pole Qui 103.64 180 IAMs_20 IAMs_20 00 14 26.3
comp=Z,3µm,19.0s
QSPA South Pole Qui 103.64 180 Pdiff Pdif 23 28 13.2 -1.7
comp=Z,7.9nm,1.1s,baz=343,slow=2.8,SNR=6.9
PRA Prague 103.75 330 *e*SKS SKSac 23 38 50.0 -3.9
PRA AMS AMS 00 16 20.0
comp=Z,5µm,20.8s
PRU Pruhonice 103.75 330 AMS AMS 00 16 20.0
comp=Z,5µm,22.1s
WHTX Lake Whitney, 103.79 52 Pdiff Pdif 23 28 16.2 -0.1
baz=296
833A Chaparral WMA, 103.82 56 Pdiff Pdif 23 28 16.2 -0.3
baz=294
VOI Vohitsoka 103.82 251 P Pdif 23 28 21.4 +4.6
VOI Vohitsoka 103.82 251 P Pdif 23 28 18.4 +1.7
HSKC Hora Svate Kat 103.86 331 AMS AMS 00 15 50.0
comp=Z,6µm,19.5s
U38A Gravette 104.00 47 IAMs_20 IAMs_20 00 25 21.2
comp=Z,2µm,18.0s
FRGS Fruska Gora 104.04 324 ⇑P Pdif 23 28 16.3 -0.9
MORH Mrgy, Hungar 104.05 326 ⇑P Pdif 23 28 17.0 -0.2
435B Jarrell 104.22 53 IAMs_20 IAMs_20 00 20 08.8
comp=Z,2µm,19.0s
435B Jarrell 104.22 53 Pdiff Pdif 23 28 17.7 -0.6
baz=296
L42A Oliver, Polo 104.23 40 IAMs_20 IAMs_20 00 14 20.8
comp=Z,3µm,21.0s
HHAR Hobbs 104.39 46 IAMs_20 IAMs_20 00 25 40.5
comp=Z,2µm,19.0s
NKC Novy Kostel 104.57 331 AMS AMS 00 16 30.0
comp=Z,4µm,19.0s
VAY Valandovo 104.59 320 *i* P Pdif 23 28 25.4 +5.7
CKRC Cesky Krumlov 104.64 330 *e*SKS SKSac 23 39 00.4 +2.3
CKRC AMS AMS 00 14 10.0
comp=Z,6µm,30.9s
MOX Moxa 104.67 332 *e*L L 00 20 46.0
comp=Z,3µm,19.2s
KHC Kasperske Hory 104.79 330 *e*SKS SKSac 23 38 57.4 -1.4
KHC AMS AMS 00 14 50.0
comp=Z,5µm,22.9s
G45A Suttons Bay 104.84 35 IAMs_20 IAMs_20 00 15 21.4
comp=Z,3µm,19.0s
SKO Skopje 104.92 321 *i* P Pdif 23 28 23.2 +2.0
GERES GERESS Array B 104.93 330 Pdiff Pdif 23 28 18.7 -2.5
comp=Z,0.2nm,0.4s,baz=316,slow=11,SNR=4.2
GERES PKKPbc **PKKPbc 23 44 03.5 -1.6**
comp=Z,1.9nm,0.8s,baz=236,slow=1.4,SNR=6.0
237A Washetta, Mont 105.04 51 IAMs_20 IAMs_20 00 23 51.3
comp=Z,2µm,18.0s
Z38A Mt. Pleasant 105.08 50 IAMs_20 IAMs_20 00 20 04.1
comp=Z,3µm,18.0s
L44A Lake County Fo 105.21 39 IAMs_20 IAMs_20 00 16 15.6
comp=Z,3µm,20.0s
HDIL Hopedale 105.27 41 IAMs_20 IAMs_20 00 18 16.4
comp=Z,3µm,20.0s
MOA Molln 105.31 329 *e*Pdiff Pdif 23 28 24.2 +1.4
comp=Z,8.1nm,1.6s
MOA *e*PKKP **PKKPbc 23 44 01.7 -2.1**
comp=Z,1.4nm,0.6s
MOA *e*PKKP **PKKPab 23 44 18.6 -3.4**
comp=Z,9.0nm,1.3s
HQIL Hanson Quary C 105.47 39 IAMs_20 IAMs_20 00 16 20.4
comp=Z,2µm,20.0s
GRF Grafenberg Arr 105.52 332 *e*PP PP 23 32 45.2 +0.2
GRF *e*PS **PS 23 42 00.2 -1.3**
GRF *e*SS SS 23 48 26.3 +46
GRF *e*L L 00 25 08.8
comp=Z,3µm,19.5s
M44A Midewin, Midew 105.59 39 IAMs_20 IAMs_20 00 18 37.6
comp=Z,2µm,19.0s
MOIG Morelia 105.62 65 IAMs_20 IAMs_20 00 07 14.4
comp=Z,2µm,20.0s
P43A Skaggs, Pawnee 105.63 42 IAMs_20 IAMs_20 00 19 50.9
comp=Z,2µm,20.0s
SOKA Soboth 105.69 328 *e*Pdiff Pdif 23 28 23.9 -0.7
comp=Z,8.8nm,1.3s
SOKA *es*PKiKP **PP 23 32 52.1 +5.6**
comp=Z,30nm,1.6s
SOKA *e*PKKP **PKKPbc 23 44 01.4 -1.2**
comp=Z,3.4nm,1.0s
SOKA *e*PKKP **PKKPab 23 44 18.0 -2.3**
comp=Z,6.1nm,1.1s
SLM Saint Louis 105.71 43 IAMs_20 IAMs_20 00 14 42.1
comp=Z,2µm,21.0s
BIOA Bad Ischl, Aus 105.73 329 *e*Pdiff Pdif 23 28 25.9 +1.2
comp=Z,8.1nm,1.9s
BIOA *e*PKKP **PKKPdf 23 44 16.3 +3.6**
comp=Z,5.2nm,1.1s
OHR Ohrid 105.81 320 *i* P Pdif 23 28 22.0 -3.2
FCAR Ozark Folk Cen 105.86 46 IAMs_20 IAMs_20 00 15 20.4
comp=Z,2µm,20.0s
FVM French Village 105.93 43 IAMs_20 IAMs_20 00 16 06.1
comp=Z,2µm,21.0s
HKT Hockley 105.94 53 IAMs_20 IAMs_20 00 18 23.2
comp=Z,2µm,19.0s
NATX Nacogdoches 106.02 51 IAMs_20 IAMs_20 00 26 27.2
comp=Z,2µm,20.0s
O44A Mansfield 106.02 41 IAMs_20 IAMs_20 00 18 57.2
comp=Z,2µm,20.0s
WHAR Wooly Hollow 106.04 47 IAMs_20 IAMs_20 00 14 32.4
comp=Z,3µm,19.0s
OBKA Obir 106.06 328 *es*PKiKP PP 23 32 52.1 +3.0
OBKA *e*PKKP **PKKPbc 23 43 59.5 -2.0**
comp=Z,2.6nm,0.9s
OBKA *e*PKKP **PKKPab 23 44 17.3 -1.3**
comp=Z,14nm,1.5s
WLAR White Oak Lake 106.25 48 IAMs_20 IAMs_20 00 18 12.0
comp=Z,3µm,19.0s
KBA Koelnbreinsper 106.29 329 *e*Pdiff Pdif 23 28 27.0 -0.4
comp=Z,6.5nm,1.4s
KBA *es*PKiKP **PP 23 32 52.7 +1.6**
comp=Z,34nm,1.5s
KBA *e*PKKP **PKKPbc 23 43 58.8 -2.2**
comp=Z,4.4nm,1.1s
KBA *e*PKKP **PKKPab 23 44 16.9 -0.8**
comp=Z,0.9nm,0.5s
Q44A Meyer Farm, Va 106.36 42 IAMs_20 IAMs_20 00 18 06.4
comp=Z,2µm,20.0s
LESA Schwarzleotal 106.39 329 *e*Pdiff Pdif 23 28 25.5 -2.1
comp=Z,12nm,1.4s
LESA *e*PKKP **PKKPbc 23 43 58.9 -1.6**
comp=Z,2.7nm,0.9s
LESA *e*PKKP **PKKPab 23 44 17.9 +0.7**
comp=Z,7.8nm,1.2s
EKA Eskdalemuir Ar 106.52 342 PP PP 23 32 50.1 -1.9
comp=Z,5.6nm,0.8s,baz=34,slow=5.5,SNR=4.4
EKA PKKPbc **PKKPbc 23 43 57.8 -2.5**
comp=Z,2.2nm,0.7s,baz=231,slow=3.2,SNR=5.0
EKA PKKPab **PKKPab 23 44 14.7 -2.0**
comp=Z,4.3nm,0.9s,baz=140,slow=2.0,SNR=4.0
PBMO Poplar Bluff 106.57 45 IAMs_20 IAMs_20 00 21 16.1
comp=Z,2µm,18.0s
Z41A Richland Creek 106.68 49 IAMs_20 IAMs_20 00 20 01.5
comp=Z,2µm,18.0s
SFIN Lafayette 106.75 40 IAMs_20 IAMs_20 00 19 06.5
comp=Z,3µm,20.0s
CGM3 Cape Girardeau 106.81 44 IAMs_20 IAMs_20 00 19 10.5
comp=Z,2µm,19.0s
SIUC Southern Illin 106.88 43 IAMs_20 IAMs_20 00 19 27.2
comp=Z,2µm,20.0s
ABTA Abfaltersbach 106.94 329 *e*Pdiff Pdif 23 28 27.6 -2.5
comp=Z,6.8nm,1.3s
ABTA *es*PKiKP **PP 23 32 54.1 -1.5**
comp=Z,18nm,1.7s
ABTA *e*PKKP **PKKPbc 23 43 57.4 -1.4**
comp=Z,3.7nm,1.0s
WATA Walderalm 107.00 330 *e*Pdiff Pdif 23 28 30.9 +0.4
comp=Z,2.8nm,0.8s
WATA *es*PKiKP **PP 23 32 55.9 -0.2**
comp=Z,56nm,1.4s
WATA *e*PKKP **PKKPbc 23 43 54.9 -3.9**
comp=Z,8.4nm,1.4s
WATA *i* PKKP **PKKPab 23 44 15.0 +0.4**
comp=Z,4.5nm,1.0s
WTTA Wattenberg 107.02 330 *e*Pdiff Pdif 23 28 31.0 +0.4
comp=Z,3.4nm,0.8s
WTTA *e*PKKP **PKKPbc 23 43 54.7 -4.0**
comp=Z,4.9nm,1.3s
WTTA *e*PKKP **PKKPdf 23 44 12.5 +1.9**
comp=Z,12nm,1.4s
HBAR Harrisburg 107.05 46 IAMs_20 IAMs_20 00 13 57.0
comp=Z,3µm,21.0s
OLIL Olney 107.05 42 IAMs_20 IAMs_20 00 20 41.6
comp=Z,2µm,19.0s
VLDQ Val d'Or 107.06 29 IAMs_20 IAMs_20 00 16 14.3
comp=Z,3µm,21.0s
PARMO Parma 107.09 44 IAMs_20 IAMs_20 00 16 35.9
comp=Z,2µm,20.0s
BTNL Ternell 107.09 335 *d*PP PP 23 32 55.1 -1.4
CCAR Cane Creek 107.10 48 IAMs_20 IAMs_20 00 15 13.6
comp=Z,2µm,20.0s
STU Stuttgart 107.11 332 IAMs_20 IAMs_20 00 19 22.4
comp=Z,3µm,21.0s
I49A Point Hope 107.11 35 IAMs_20 IAMs_20 00 17 29.4
comp=Z,3µm,20.0s
P46A Rosedale 107.12 41 IAMs_20 IAMs_20 00 18 29.3
comp=Z,3µm,19.0s
MEM Membach 107.13 335 *d*PP PP 23 32 55.8 -0.9
MOTA Moosalm 107.22 330 *e*Pdiff Pdif 23 28 32.1 +0.7
comp=Z,2.2nm,0.7s
MOTA *es*PKiKP **PP 23 32 57.4 -0.4**
comp=Z,58nm,1.4s
MOTA *e*PKKP **PKKPab 23 44 14.3 +0.8**
comp=Z,4.5nm,1.0s
SQTA Sankt Quirin 107.26 330 *es*PKiKP PP 23 32 57.9 -0.1
comp=Z,23nm,1.0s
PVMO Portageville 107.26 45 IAMs_20 IAMs_20 00 16 18.4
comp=Z,2µm,21.0s
RETA Reutte 107.29 330 *e*Pdiff Pdif 23 28 32.7 +1.1
comp=Z,9.1nm,2.0s
RETA sPKiKP **PP 23 32 58.6 +0.5**
comp=Z,36nm,1.7s
RETA *e*PKKP **PKKPab 23 44 13.0 -0.2**
comp=Z,8.1nm,1.2s
BHOU Houvegnez 107.32 335 *d*PP PP 23 32 58.5 +0.3
BSTI Sart Tilman 107.33 335 *d*PP PP 23 32 57.2 -1.0
HICK Hickman 107.51 44 IAMs_20 IAMs_20 00 16 57.0
comp=Z,3µm,20.0s
UNM Universidad Na 107.51 64 IAMs_20 IAMs_20 00 19 38.1
comp=Z,2µm,18.0s
BCLA Clavier 107.56 335 *d*PKP PKiKP 23 32 42.7 +2.0
GLAT Glass 107.62 44 IAMs_20 IAMs_20 00 16 48.8
comp=Z,2µm,20.0s
FETA Feichten 107.63 330 *e*Pdiff Pdif 23 28 34.5 +1.3
comp=Z,5.5nm,1.3s
FETA *es*PKiKP **PP 23 33 00.8 +0.1**
comp=Z,53nm,1.3s
FETA *e*PKKP **PKKPbc 23 43 55.4 -1.4**
comp=Z,5.6nm,1.1s
T45A Paducah 107.64 44 IAMs_20 IAMs_20 00 19 34.5
comp=Z,2µm,19.0s
BGES Gesves 107.67 335 *d*PKP PKiKP 23 32 44.4 +3.4
HDBT Hernando Brdge 107.68 46 IAMs_20 IAMs_20 00 11 57.6
comp=Z,3µm,21.0s
USIN University of 107.77 42 IAMs_20 IAMs_20 00 19 10.5
comp=Z,2µm,20.0s
MET Memphis--Engin 107.78 46 IAMs_20 IAMs_20 00 18 26.4
comp=Z,2µm,19.0s
DAVA Damuels 107.85 331 Pdiff Pdif 23 28 36.2 +1.9
comp=Z,10nm,1.4s
DAVA sPKiKP **PP 23 33 01.6 -0.8**
comp=Z,29nm,1.4s
DAVA *e*PKKP **PKKPbc 23 43 55.1 -1.0**
comp=Z,14nm,1.0s
DAVA *e*PKKP **PKKPab 23 44 11.2 +0.4**
comp=Z,8.9nm,0.9s
SCTE Santa Cesarea 107.86 321 IAMs_20 IAMs_20 00 21 57.3
comp=Z,3µm,21.0s
BMRD Maredsous 107.87 335 *d*PP PP 23 33 00.1 -2.0
143A Socs Landing, 107.98 49 IAMs_20 IAMs_20 00 18 01.8
comp=Z,3µm,19.0s
O48B Farmland 108.02 39 IAMs_20 IAMs_20 00 16 30.0
comp=Z,2µm,20.0s
DOU Dourbes 108.10 335 *d*PKP PKiKP 23 32 45.5 +3.7

DOU

P48A	Milroy	108.33	40	IAMs_20	IAMs_20	dPP	PP	23 33 03.9	+0.1
	comp=Z,3µm,20.0s							00 20 23.3	
ECH	Echery	108.44	333	IAMs_20	IAMs_20			00 25 29.5	
	comp=Z,3µm,20.0s								
SGRT	San Giovanni R	108.46	323	IAMs_20	IAMs_20			00 25 03.0	
	comp=Z,2µm,20.0s								
WCI	Wyandotte Cave	108.50	41	IAMs_20	IAMs_20			00 20 13.0	
	comp=Z,2µm,20.0s								
O49A	Covington	108.57	39	IAMs_20	IAMs_20			00 16 46.4	
	comp=Z,3µm,20.0s								
WVT	Waverly	108.68	44	IAMs_20	IAMs_20			00 17 38.9	
	comp=Z,2µm,21.0s								
T47A	Sharon Grove	108.68	43	IAMs_20	IAMs_20			00 17 13.9	
	comp=Z,3µm,22.0s								
P49A	Miami Univ. Ec	108.73	39	IAMs_20	IAMs_20			00 19 22.7	
	comp=Z,3µm,19.0s								
VBMS	Vicksburg	108.87	49	IAMs_20	IAMs_20			00 26 04.4	
	comp=Z,2µm,18.0s								
KMBO	Kilima Mbogo	108.89	274	IAMs_20	IAMs_20			00 17 26.5	
	comp=Z,2µm,20.0s								
GUMA	Gualdo di Mace	108.98	326	IAMs_20	IAMs_20			00 23 18.5	
	comp=Z,4µm,18.0s								
PLAL	Pickwick Lake	109.14	45	IAMs_20	IAMs_20			00 17 50.3	
	comp=Z,2µm,20.0s								
R49A	Shelbyville	109.18	41	IAMs_20	IAMs_20			00 19 32.9	
	comp=Z,2µm,19.0s								
TIP	Timpagrande	109.45	321	IAMs_20	IAMs_20			00 25 57.4	
	comp=Z,3µm,19.0s								
CUC	Castrocucco	109.52	322	IAMs_20	IAMs_20			00 25 37.2	
	comp=Z,2µm,20.0s								
V48A	Smith Brothers	109.58	44	IAMs_20	IAMs_20			00 17 26.6	
	comp=Z,2µm,22.0s								
PAOL	Paolisi	109.60	323	IAMs_20	IAMs_20			00 22 58.3	
	comp=Z,3µm,20.0s								
CLTN	Cedars of Leba	109.70	43	IAMs_20	IAMs_20			00 17 57.0	
	comp=Z,2µm,22.0s								
146A	Union	109.71	48	IAMs_20	IAMs_20			00 15 13.6	
	comp=Z,2µm,20.0s								
R50A	Paris	109.72	40	IAMs_20	IAMs_20			00 21 15.1	
	comp=Z,2µm,19.0s								
P51A	Williamsport	109.78	39	IAMs_20	IAMs_20			00 17 32.3	
	comp=Z,3µm,19.0s								
TRQ	Mont Tremblant	109.79	29	IAMs_20	IAMs_20			00 18 24.0	
	comp=Z,2µm,20.0s								
ERPA	Erie	109.87	35	IAMs_20	IAMs_20			00 17 04.6	
	comp=Z,3µm,20.0s								
Q51A	Peebles	109.88	39	IAMs_20	IAMs_20			00 20 27.2	
	comp=Z,3µm,20.0s								
M53A	WI Miller and	109.93	36	IAMs_20	IAMs_20			00 16 49.2	
	comp=Z,3µm,20.0s								
LDAQ	Lac Daran	109.96	26	IAMs_20	IAMs_20			00 19 25.9	
	comp=Z,3µm,21.0s								
Z47A	Carrollton	110.11	47	IAMs_20	IAMs_20			00 17 43.2	
	comp=Z,3µm,20.0s								
X48A	Hartselle	110.14	45	IAMs_20	IAMs_20			00 18 06.8	
	comp=Z,4µm,20.0s								
T50A	Nancy	110.15	42	IAMs_20	IAMs_20			00 19 07.5	
	comp=Z,2µm,20.0s								
P52A	Corning	110.24	38	IAMs_20	IAMs_20			00 18 51.6	
	comp=Z,3µm,20.0s								
SWET	Sewanee	110.47	44	IAMs_20	IAMs_20			00 19 33.3	
	comp=Z,2µm,21.0s								
CEL	Celeste	110.55	320	IAMs_20	IAMs_20			00 26 46.5	
	comp=Z,2µm,21.0s								
S51A	Beattyville	110.57	41	IAMs_20	IAMs_20			00 21 41.6	
	comp=Z,2µm,20.0s								
Q52A	Bidwell	110.58	39	IAMs_20	IAMs_20			00 18 46.6	
	comp=Z,3µm,19.0s								
LMQ	La Malbaie	110.67	26	IAMs_20	IAMs_20			00 21 05.7	
	comp=Z,3µm,20.0s								
MNTQ	Montreal, Queb	110.77	29	IAMs_20	IAMs_20			00 23 10.6	
	comp=Z,3µm,19.0s								
W50A	Signal Mountai	110.89	44	IAMs_20	IAMs_20			00 18 33.5	
	comp=Z,3µm,20.0s								
LONY	Lake Ozonia	110.95	30	IAMs_20	IAMs_20			00 20 15.7	
	comp=Z,2µm,20.0s								
FPAL	Fort Paine	111.07	44	IAMs_20	IAMs_20			00 18 25.3	
	comp=Z,3µm,22.0s								
V51A	Loudon	111.18	42	IAMs_20	IAMs_20			00 21 54.0	
	comp=Z,2µm,19.0s								
L56A	Greenwood	111.19	34	IAMs_20	IAMs_20			00 19 56.3	
	comp=Z,2µm,20.0s								
TZTN	Tazewell	111.26	41	IAMs_20	IAMs_20			00 29 18.0	
	comp=Z,2µm,18.0s								
CPCT	Cooper Cave	111.28	43	IAMs_20	IAMs_20			00 21 18.5	
	comp=Z,3µm,20.0s								
FRNY	Flat Rock	111.28	29	IAMs_20	IAMs_20			00 21 57.1	
	comp=Z,2µm,20.0s								
X51A	Calhoun	111.57	44	IAMs_20	IAMs_20			00 20 14.3	
	comp=Z,2µm,20.0s								
E62A	Clayton Lake	111.74	26	IAMs_20	IAMs_20			00 20 19.0	
	comp=Z,2µm,20.0s								
W52A	Murphy	111.88	43	IAMs_20	IAMs_20			00 22 06.5	
	comp=Z,2µm,20.0s								
BRAL	Brewton	111.93	48	IAMs_20	IAMs_20			00 24 38.5	
	comp=Z,3µm,19.0s								
VT1	Waterbury	112.05	29	IAMs_20	IAMs_20			00 18 00.8	
	comp=Z,3µm,22.0s								
250A	Grady	112.05	47	IAMs_20	IAMs_20			00 27 35.5	
	comp=Z,2µm,19.0s								
G62A	West of Eustis	112.40	27	IAMs_20	IAMs_20			00 25 20.6	
	comp=Z,2µm,19.0s								
LBNH	Lisbon	112.51	29	IAMs_20	IAMs_20			00 21 32.7	
	comp=Z,2µm,20.0s								
Y52A	Lilburn	112.51	44	IAMs_20	IAMs_20			00 19 27.3	
	comp=Z,3µm,20.0s								
BG3	Lake Jocassee	112.59	42	IAMs_20	IAMs_20			00 16 26.4	
	comp=Z,2µm,20.0s								
H62A	Milan	112.61	28	IAMs_20	IAMs_20			00 24 01.3	
	comp=Z,2µm,20.0s								
F63A	Nahmakanta, Br	112.64	26	IAMs_20	IAMs_20			00 20 14.0	
	comp=Z,2µm,21.0s								
HNH	Hanover	112.74	29	IAMs_20	IAMs_20			00 18 20.9	
	comp=Z,3µm,21.0s								
BLA	Blacksburg	112.81	39	IAMs_20	IAMs_20			00 19 27.8	
	comp=Z,3µm,20.0s								
F64A	Sherman	112.83	26	IAMs_20	IAMs_20			00 21 02.0	
	comp=Z,3µm,21.0s								
J61A	Chester	112.88	30	IAMs_20	IAMs_20			00 26 59.7	
	comp=Z,3µm,19.0s								
PKME	Peaks-Kenny Pk	112.91	27	IAMs_20	IAMs_20			00 31 12.0	
	comp=Z,2µm,18.0s								
ELIB	Princess Elisa	112.99	196	dPKiKP	PKiKP			23 32 53.6	+3.2
I62A	Tamworth	113.06	29	IAMs_20	IAMs_20			00 19 13.3	
	comp=Z,3µm,21.0s								
451A	Vernon	113.17	48	IAMs_20	IAMs_20			00 20 40.3	
	comp=Z,2µm,19.0s								
352A	Blakely	113.28	47	IAMs_20	IAMs_20			00 24 39.0	
	comp=Z,2µm,19.0s								
I63A	Otisfield	113.28	28	IAMs_20	IAMs_20			00 26 18.0	
	comp=Z,3µm,19.0s								
WVL	Waterville	113.30	27	IAMs_20	IAMs_20			00 25 57.3	
	comp=Z,2µm,19.0s								
PAULI	Pauline	113.43	42	IAMs_20	IAMs_20			00 17 22.4	
	comp=Z,2µm,20.0s								
SDMD	Soldier's Deli	113.46	35	IAMs_20	IAMs_20			00 19 27.6	
	comp=Z,2µm,20.0s								
HODGE	Hodges	113.50	43	IAMs_20	IAMs_20			00 23 16.3	
	comp=Z,3µm,19.0s								
KMSC	Kings Mountain	113.54	41	IAMs_20	IAMs_20			00 30 27.3	
	comp=Z,2µm,18.0s								
K62A	Royalston	113.55	30	IAMs_20	IAMs_20			00 19 59.3	
	comp=Z,2µm,21.0s								
DRLN	Deer Lake	113.75	17	IAMs_20	IAMs_20			00 22 22.6	
	comp=Z,3µm,21.0s								
WUPA	West Chester U	113.78	34	IAMs_20	IAMs_20			00 23 35.0	
	comp=Z,2µm,20.0s								
WSPT	Westport, CT	114.11	32	IAMs_20	IAMs_20			00 19 32.2	
	comp=Z,3µm,20.0s								
JSC	Jenkinsville	114.12	42	IAMs_20	IAMs_20			00 17 22.7	
	comp=Z,2µm,20.0s								
EMMW	East Machias	114.14	26	IAMs_20	IAMs_20			00 18 30.5	
	comp=Z,2µm,22.0s								
WES	Weston	114.20	30	IAMs_20	IAMs_20			00 21 19.6	
	comp=Z,2µm,19.0s								
553A	Crawfordville	114.35	47	IAMs_20	IAMs_20			00 20 40.6	
	comp=Z,2µm,19.0s								
W57A	Gilead	114.39	41	IAMs_20	IAMs_20			00 29 34.7	
	comp=Z,2µm,18.0s								
BIRD	Birdtown, Kers	114.41	41	IAMs_20	IAMs_20			00 18 23.3	
	comp=Z,2µm,20.0s								
V58A	Windy Hill, Pi	114.53	40	IAMs_20	IAMs_20			00 23 19.3	
	comp=Z,3µm,20.0s								
M63A	Gales Ferry	114.58	31	IAMs_20	IAMs_20			00 25 07.8	
	comp=Z,3µm,20.0s								
L64A	Middleborough	114.78	30	IAMs_20	IAMs_20			00 21 45.8	
	comp=Z,2µm,20.0s								
Y57A	Sumter	114.85	42	IAMs_20	IAMs_20			00 32 23.0	
	comp=Z,2µm,19.0s								
M65A	Busby, Falmout	115.15	30	IAMs_20	IAMs_20			00 25 31.8	
	comp=Z,2µm,20.0s								
X58A	Rowland	115.18	41	IAMs_20	IAMs_20			00 20 47.8	
	comp=Z,3µm,21.0s								
Y58A	Scranton	115.39	42	IAMs_20	IAMs_20			00 21 31.2	
	comp=Z,2µm,19.0s								
NHSC	New Hope	115.55	43	IAMs_20	IAMs_20			00 23 39.7	
	comp=Z,3µm,20.0s								
Y60A	Bolivia	116.25	41	IAMs_20	IAMs_20			00 24 14.9	
	comp=Z,2µm,20.0s								
TEIG	Tepich	116.47	59	IAMs_20	IAMs_20			00 19 23.5	
	comp=Z,2µm,20.0s								
NVL	N'lazarevskaya	116.72	195	ePKIKP	PKiKP			23 33 11.9	+14
NVL				eSS	SS			23 50 12.9	+3.4
NVL				MLR	MLR				
	comp=Z,3µm,19.0s								
TROLL	Troll, Antarti	117.98	192	⇓PKPdf	PKiKP			23 33 00.4	+0.4
	comp=Z,593nm,0.8s								
UCM	Universidad Co	119.25	334	PKP	PKiKP			23 33 05.3	+1.9
ECAL	Calabor	119.27	337	PKP	PKiKP			23 33 07.6	+4.1
SNAA	Sanae	119.28	191	PKPdf	PKPdf			23 33 02.4	-0.1
SNAA				IAMs_20	IAMs_20			00 28 44.3	
	comp=Z,2µm,19.0s								
SNAA	Sanae	119.28	191	⇓PKPdf	PKPdf			23 33 02.3	-0.1
	comp=Z,213nm,0.7s								
SNAA	Sanae	119.28	191	PKiKP	PKPdf			23 33 02.4	-0.1
SNAA	Sanae	119.28	191	PKP	PKPdf			23 33 01.7	-0.7
	comp=Z,9.6nm,0.8s,baz=210,slow=6.3,SNR=21								
SNAA				PP	PP			23 34 21.3	-1.9
	comp=Z,9.1nm,0.9s,baz=168,slow=8.5,SNR=5.9								
SNAA				PKKPbc	PKKPbc			23 43 17.6	-0.2
	comp=Z,8.2nm,1.1s,baz=314,slow=5.1,SNR=3.8								
061Z	Ochoppi	119.36	49	IAMs_20	IAMs_20			00 23 45.5	
	comp=Z,2µm,21.0s								
PGAV	Gavieira, Arco	119.81	338	ePKP	PKiKP			23 33 10.3	+5.7
PGAV	Gavieira, Arco	119.81	338	eLQ	LQ			00 06 12.1	
PGAV				eLR	LR			00 12 45.1	
	comp=Z,2µm,20.0s								
MVO	Moncorvo	120.05	337	ePKP	PKiKP			23 33 10.9	+5.9
MVO	Moncorvo	120.05	337	eLQ	LQ			00 06 31.3	
MVO				eLR	LR			00 13 19.6	
	comp=Z,2µm,18.0s								
ESDC	Sonseca Array	120.08	334	PKP	PKiKP			23 33 06.1	+1.0
	comp=Z,6.0nm,1.0s,baz=3.9,slow=2.6,SNR=12								
ESDC				PP	PP			23 34 27.8	-1.0
	comp=Z,22nm,1.0s,baz=26,slow=6.9,SNR=14								
ESDC				PKKPbc	PKKPbc			23 43 13.4	-0.8
	comp=Z,2.6nm,0.9s,baz=218,slow=3.9,SNR=9.5								
PAB	San Pablo	120.35	334	IAMs_20	IAMs_20			00 31 42.4	
	comp=Z,2µm,20.0s								
LSZ	Lusaka	120.38	260	PKPdf	PKiKP			23 33 07.4	+1.1
LSZ	Lusaka	120.38	260	PKIKP	PKiKP			23 33 07.4	+1.1
CART	Cartagena	120.43	330	IAMs_20	IAMs_20			00 27 49.8	
	comp=Z,2µm,21.0s								
VNA2	Neumayer--Watz	120.69	190	⇓PKPdf	PKiKP			23 33 05.3	+0.1
	comp=Z,39nm,0.8s,baz=113,slow=0.9								
VNA3	Neumayer Olymp	120.77	189	⇓PKPdf	PKiKP			23 33 05.3	-0.1
	comp=Z,22nm,0.7s								
MTE	Manteigas	120.91	337	ePKP	PKiKP			23 33 12.1	+5.4
MTE	Manteigas	120.91	337	eLR	LR			00 13 45.9	
	comp=Z,2µm,22.0s								
MTE	Manteigas	120.91	337	IAMs_20	IAMs_20			00 26 29.9	
	comp=Z,2µm,20.0s								
SMAI	San Martin Ant	121.54	166	IAMs_20	IAMs_20			00 20 41.9	
	comp=Z,2µm,19.0s								
PCAS	Casmilo, Conde	121.57	338	eLQ	LQ			23 33 13.4	
PMRV	Marv??o	121.69	336	ePKP	PKiKP			23 33 13.7	+5.5
PMRV	Marv??o	121.69	336	eLQ	LQ			00 06 20.5	
PMRV				eLR	LR			00 14 12.9	
	comp=Z,2µm,22.0s								
PESTR	Estremoz	122.25	336	ePKP	PKiKP			23 33 14.4	+5.1
PMTG	Montargil	122.33	337	ePKP	PKiKP			23 33 14.9	+5.5
PBAR	Barrancos	122.63	335	ePKP	PKiKP			23 33 15.6	+5.5
EVO	Evora	122.71	336	ePKP	PKiKP			23 33 16.0	+5.8
PBEJ	Beja	123.09	336	ePKP	PKiKP			23 33 16.0	+5.0
PNCL	Nicolau / Gran	123.28	336	eLQ	LQ			23 33 12.8	
PNCL	Nicolau / Gran	123.28	336	ePKP	PKiKP			23 33 17.3	+6.0
MESJ	Messejana	123.39	336	eLQ	LQ			23 33 13.2	
MESJ	Messejana	123.39	336	ePKP	PKiKP			23 33 18.1	+6.5
MESJ	Messejana	123.39	336	ePKPdf	PKiKP			23 33 12.3	+0.7
MESJ				IAMs_20	IAMs_20			00 28 34.6	
	comp=Z,4µm,20.3s								
MESJ	Messejana	123.39	336	ePKIKP	PKiKP			23 33 12.3	+0.7
PCVE	Castro Verde	123.50	336	eLQ	LQ			23 33 15.1	
PCVE	Castro Verde	123.50	336	ePKP	PKiKP			23 33 19.2	+7.4
PVAQ	Vaqueiros	123.57	335	eLQ	LQ			00 05 35.5	
JTS	Las Juntas de	123.69	68		PKiKP			23 33 13.3	+0.5
JTS	Las Juntas de	123.69	68	IAMs_20	IAMs_20			00 26 46.8	
	comp=Z,1µm,20.0s								
JTS	Las Juntas de	123.69	68	PKIKP	PKiKP			23 33 13.3	+0.5
JTS				MLR	MLR				
	comp=Z,1µm,20.0s								
BOSA	Boshof	123.72	245	PKP	PKiKP			23 33 13.3	+0.7
	comp=Z,5.6nm,0.8s,baz=94,slow=4.3,SNR=4.8								
PBDV	Barranco-do-Ve	123.79	335	eLQ	LQ			23 33 15.9	
PBDV	Barranco-do-Ve	123.79	335	ePKP	PKiKP			23 33 20.2	+7.8
PTEO	Sao Teotonio	123.84	336	ePKP	PKiKP			23 33 20.0	+7.5
JACO	JACO, Garabito	124.20	68	IAMs_20	IAMs_20			00 27 22.5	
	comp=Z,2µm,21.0s								
PFVI	Vila Bisbo	124.24	336	ePKP	PKiKP			23 33 21.1	+7.8
HDC	Heredia	124.56	67	IAMs_20	IAMs_20			00 34 27.9	
	comp=Z,2µm,18.0s								
HDC	Heredia	124.56	67	eP	PKiKP			23 33 15.0	+0.4
LCR2	La Lucha 2	124.76	68	IAMs_20	IAMs_20			00 31 51.3	
	comp=Z,1µm,18.0s								
PMSA	Palmer Station	124.95	165	IAMs_20	IAMs_20			00 23 34.1	
	comp=Z,2µm,22.0s								
PEZE	Perez Zeledon,	125.20	68	IAMs_20	IAMs_20			00 23 11.0	
	comp=Z,1µm,19.0s								
BBSR	BB Station	125.27	32	IAMs_20	IAMs_20			00 27 41.5	
	comp=Z,2µm,21.0s								
TAM	Tamanrasset	127.20	313	PKPdf	PKiKP			23 33 21.1	+1.3
TAM	Tamanrasset	127.20	313	PKIKP	PKiKP			23 33 21.1	+1.3
BCIP	Isla Barro Col	128.73	66	IAMs_20	IAMs_20			00 24 00.2	
	comp=Z,2µm,20.0s								
SDDR	Presa de Saban	130.59	50	IAMs_20	IAMs_20			00 40 17.4	
	comp=Z,2µm,18.0s								
TSUM	Tsumeb	130.80	256	PKPdf	PKiKP			23 33 27.5	+0.5
PMOZ	Porto Moniz, M	131.07	342	A	A			00 38 10.7	
	comp=Z,955nm,20.0s								
APAC	Apartado, Choc	132.17	66	eP	PKiKP			23 33 30.8	+1.1
SJCC	San Jacinto, C	132.47	63	eP	PKiKP			23 33 29.9	-0.5
DBBC	Dabeiba	132.89	67	eP	PKiKP			23 33 31.2	-0.1
ARNL	Arenillas	133.01	82	IAMs_20	IAMs_20			00 21 46.0	
	comp=Z,1µm,19.0s								
UREC	San Jos de Ur	133.17	65	eP	PKPdf			23 33 30.1	-0.5
MCRA	Macar, Loja	133.33	83	PKPdf	PKPdf			23 33 30.9	-0.1
OTAV	Otavalo	133.43	76	PKPdf	PKiKP			23 33 32.9	0.0
OTAV	Otavalo	133.43	76	IAMs_20	IAMs_20			00 24 40.7	
	comp=Z,2µm,20.0s								
OTAV	Otavalo	133.43	76	PKIKP	PKiKP			23 33 32.9	0.0
OTAV	Otavalo	133.43	76	eP	PKiKP			23 33 32.9	0.0
OTAV	Otavalo	133.43	76	eP	PKPdf			23 33 32.2	+0.5
OTAV	Otavalo	133.43	76	eP	PKPdf			23 33 31.4	-0.2
AY03	Cochrane	133.44	144	IAMs_20	IAMs_20			00 25 33.4	
	comp=Z,2µm,18.0s								
CHSH	Refugio Sur-Vo	133.57	79	IAMs_20	IAMs_20			00 28 36.7	
	comp=Z,2µm,18.0s								
PLMC	San Jos del P	133.72	69	eP	PKPdf			23 33 31.4	-0.3
BBAC	Balboa, Cauca	133.94	73	eP	PKPdf			23 33 32.3	0.0
JAMC	Jamundi, Valle	134.03	72	eP	PKPdf			23 33 31.6	-0.9
YOTC	Yotoco, Valle	134.03	70	eP	PKPdf			23 33 32.1	-0.3
GCUF	Volcan Galeras	134.13	75	eP	PKPdf			23 33 33.3	+0.3
LL6C	La Loma 6 Bece	134.19	61	eP	PKiKP			23 33 33.6	-0.2
BONI	La Bonita	134.22	76	eP	PKiKP			23 33 33.6	-0.7
POPC	Popayan, Colom	134.28	72	eP	PKPdf			23 33 32.9	-0.1
H03S2	Juan Fernandez	134.39	124	T	T			02 03 19.9	
	baz=244,slow=74								
H03S1	Juan Fernandez	134.41	124	T	T			02 02 59.2	
	baz=244,slow=74								
H03S3	Juan Fernandez	134.41	124	T	T			02 03 02.4	
	baz=244,slow=74								
GUY2C	Guyana, Caldas	134.42	68	eP	PKPdf			23 33 32.7	-0.9
H03N2	Juan Fernandez	134.49	123	T	T			02 03 09.3	
	baz=241,slow=74								
H03N3	Juan Fernandez	134.49	124	T	T			02 03 12.1	
	baz=241,slow=74								
H03N1	Juan Fernandez	134.50	123	T	T			02 03 11.4	
	baz=241,slow=74								
PTBC	PUERTO BERRIO	134.66	66	eP	PKPdf			23 33 31.7	-1.7
ANIL	Santa Ana	134.69	69	eP	PKiKP			23 33 34.6	-0.6
SJG	San Juan	134.86	46	IAMs_20	IAMs_20			00 36 12.2	
	comp=Z,2µm,19.0s								
OCAC	Ocana	134.88	63	eP	PKPdf			23 33 33.5	-0.5
AY01	Puyuhuapi	134.89	140	IAMs_20	IAMs_20			00 22 23.9	
	comp=Z,2µm,20.0s								
IGPR	InterUniversit	134.99	46	IAMs_20	IAMs_20			00 36 24.6	
	comp=Z,1µm,20.0s								
HUMP	Col San Antoni	135.05	46	IAMs_20	IAMs_20			00 37 04.1	
	comp=Z,1µm,20.0s								
ORTC	Ortega, Tolima	135.07	70	eP	PKPdf			23 33 32.1	-2.1
SPBC	San Pablo de B	135.40	67	eP	PKPdf			23 33 33.9	-1.0
PRAC	Prado	135.47	70	eP	PKPdf			23 33 35.8	-0.8
ATAH	Atahualpa	135.48	86	PKP	PKPdf			23 33 36.1	+0.7
	comp=Z,18nm,1.0s,baz=288,slow=4.6,SNR=7.9								
GARC	Garzon, Huila	135.51	72	eP	PKPdf			23 33 35.2	-0.1
ROSC	El Rosal	135.52	68	PKP	PKiKP			23 33 36.8	-0.2
	comp=Z,6.3nm,0.5s,baz=136,slow=7.3,SNR=6.8								
ROSC	El Rosal	135.52	68	eP	PKPdf			23 33 34.2	-1.3
BARC	Barichara	135.77	65	eP	PKPdf			23 33 34.2	-1.6
LL05	Los Muermos	135.79	136	IAMs_20	IAMs_20			00 26 09.2	
	comp=Z,2µm,19.0s								
TORD	Torodi Ar. Bea	135.99	306	PKP	PKPdf			23 33 34.0	-1.8
	comp=Z,2.4nm,0.6s,baz=17,slow=2.6,SNR=8.1								
LL02	Futaleuf	136.00	139	IAMs_20	IAMs_20			00 22 17.6	
	comp=Z,2µm,21.0s								
LR04	Corral	136.49	134	IAMs_20	IAMs_20			00 27 28.9	
	comp=Z,1µm,20.0s								
SDV	Santo Domingo	136.86	61		PKPpre			23 33 27.2	
SDV				IAMs_20	IAMs_20			00 35 53.1	
	comp=Z,1µm,21.0s								
SDV	Santo Domingo	136.86	61	eP	PKiKP			23 33 39.1	-0.4
SDV	Santo Domingo	136.86	61	eP	PKPdf			23 33 36.6	-1.1
PTLC	Puerto Leguiza	136.88	75	eP	PKPdf			23 33 37.5	-0.1
TAMC	Tame, Arauca	137.06	65	eP	PKPdf			23 33 38.2	+0.3
LR05	Currie	137.31	135	IAMs_20	IAMs_20			00 23 06.6	
	comp=Z,2µm,22.0s								
LR03	Panguipulli	137.34	134	IAMs_20	IAMs_20			00 23 36.6	
	comp=Z,1µm,20.0s								
PTGC	Puerto Gaitan,	137.76	68	eP	PKPdf			23 33 32.1	-7.1
NNA	Nana	137.82	93	PKP	PKPdf			23 33 39.2	0.0
	comp=Z,6.7nm,0.6s,baz=326,slow=4.3,SNR=2.1								
BI05	Punta Hualpn	137.92	130	IAMs_20	IAMs_20			00 25 36.3	
	comp=Z,2µm,20.0s								
GO06	Curarrehue	137.97	135	IAMs_20	IAMs_20			00 22 34.1	
	comp=Z,2µm,22.0s								
PLCA	Paso Flores	138.06	137	PKPdf	PKiKP			23 33 40.3	-0.7
PLCA				IAMs_20	IAMs_20			00 21 45.1	
	comp=Z,2µm,22.0s								
PLCA	Paso Flores	138.06	137	PKIKP	PKiKP			23 33 40.3	-0.7
PLCA	Paso Flores	138.06	137	PKP	PKPdf			23 33 39.9	+0.9
	comp=Z,23nm,1.0s,baz=207,slow=3.8,SNR=25								
PLCA	Paso Flores	138.06	137	eP	PKiKP			23 33 41.2	+0.2
PLCA	Paso Flores	138.06

comp=Z,6.0nm,0.8s
POST Post 3.39 53 Pn 23 15 19.8 +1.1
POST IAmb_Lg 23 16 22.1
comp=Z,9.4nm,0.8s
SN01 Snyder 1 3.72 60 Pn 23 15 23.7 +0.5
SN01 IAmb_Lg 23 16 26.1
comp=Z,12nm,0.8s
SN05 Snyder 5 3.74 60 IAmb_Lg 23 16 25.4
comp=Z,12nm,0.7s
ANMO Albuquerque 4.13 340 IAML 23 16 37.2
comp=Z,5.6nm,0.9s
ANMO IAML 23 16 41.3
comp=Z,4.4nm,0.9s
ANMO Albuquerque 4.13 340 IAmb_Lg 23 16 37.7
comp=Z,4.7nm,0.7s
DKNS Dickens 4.13 50 Pn 23 15 29.7 +0.7
APMT Aspermont 4.51 59 Pn 23 15 34.2 +0.1
AMTX Amarillo 4.59 33 IAmb_Lg 23 16 54.3
comp=Z,11nm,0.8s
ABTX Abilene, Hawle 4.60 69 IAmb_Lg 23 16 51.2
comp=Z,12nm,1.1s
BRDY Brady 4.92 86 IAmb_Lg 23 17 05.4
comp=Z,8.1nm,0.8s
RTBA Rita Blanca 5.61 17 IAmb_Lg 23 17 29.3
comp=Z,8.8nm,1.0s
435B Jarrell 6.15 91 IAmb_Lg 23 17 49.0
comp=Z,8.3nm,0.8s

*CATAC **11** 23:27:55.0±1.1, 7°.93N×82°.98W, h1km±4km, ML3.7*
*UCR **11** 23:27:55.7±0.6, 7°.99N×82°.93W, h7km±8km, MW3.8*
*UPA **11** 23:27:56.1±0.9, 8°.03N×82°.94W, h10km±2km, MD3.3, MW3.4*
ISC 11 23:27:56.0±1.4, **7°.99N**±0°.06×**82°.93W**±0°.03, **h14**km±7km, **n51**, σ1°**19**/59, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIMO3	**Limones**	**0.13**	**31**	*eP*		**Pg**		**23 27 59.7**	**+0.1**
PTPM	**Petroterminale**	**0.22**	**14**	*eP*		**Pg**		**23 28 01.0**	**+0.1**
PIRO	**Carate, Puerto**	**0.57**	**316**	*eP*		**Pg**		**23 28 07.0**	**-0.3**
PIRO	**Carate, Puerto**	**0.57**	**316**	*iP*		**Pg**		**23 28 06.6**	**-0.8**
PIRO				*iS*		**Sg**		**23 28 14.9**	**-0.1**
PIRO				IAML				23 28 18.4	
	comp=Z,3μm,1.0s								
CDITO	**Canoas**	**0.58**	**6**	*eP*		**Pg**		**23 28 07.2**	**-0.3**
CDITO	**Canoas**	**0.58**	**6**	*eP*		**Pg**		**23 28 06.8**	**-0.8**
CDITO	**Canoas**	**0.58**	**6**	*iP*		**Pg**		**23 28 06.7**	**-0.8**
CDITO				IAML				23 28 24.3	
	comp=Z,2μm,1.0s								
PEDE3	**Pedregal, Chir**	**0.64**	**52**	*eP*		**Pg**		**23 28 08.0**	**-0.5**
DVD	**David**	**0.65**	**47**	*eP*		**Pg**		**23 28 08.5**	**-0.3**
DVD				*eS*		**Sg**		**23 28 17.6**	**+0.2**
LOCO3	**Loma Colorada,**	**0.66**	**51**	*eP*		**Pg**		**23 28 08.8**	**-0.2**
JIME	**Puerto Jimenez**	**0.67**	**324**	*eP*		**Pg**		**23 28 09.0**	**-0.1**
EDAD	**Golfito**	**0.70**	**341**	*eP*		**Pg**		**23 28 08.4**	**-1.3**
MLIR3	**Monte Lirio, C**	**0.81**	**8**	*eP*		**Pg**		**23 28 11.5**	**-0.2**
VITO	**San Vito**	**0.83**	**357**	*eP*		**Pg**		**23 28 11.8**	**-0.3**
BCO2	**Palmira**	**0.83**	**29**	*eP*		**Pg**		**23 28 11.3**	**-0.8**
BCO2				*eS*		**Sb**		**23 28 24.3**	**+1.0**
BRU2	**Volcan**	**0.83**	**17**	*eP*		**Pg**		**23 28 11.6**	**-0.7**
BRU2				*eS*		**Sb**		**23 28 24.0**	**+0.5**
BRU2	**Volcan**	**0.83**	**17**	*eP*		**Pg**		**23 28 11.5**	**-0.8**
BRU2	**Volcan**	**0.83**	**17**	*iP*		**Pg**		**23 28 11.3**	**-1.0**
BRU2				IAML				23 28 29.2	
	comp=Z,2μm,1.0s								
BC3P	**Paso Ancho**	**0.88**	**21**	*eP*		**Pg**		**23 28 12.3**	**-0.9**
LNBQ3	**Los Naranjos,**	**0.93**	**31**	*eP*		**Pg**		**23 28 12.9**	**-1.2**
PLAN	**Los Planes de**	**1.00**	**312**	*iP*		**Pg**		**23 28 13.9**	**-1.6**
PLAN				IAML				23 28 31.1	
	comp=Z,5μm,1.0s								
POTG	**Potrero Grande**	**1.07**	**350**	*eP*		**Pg**		**23 28 15.7**	**-1.1**
POTG	**Potrero Grande**	**1.07**	**350**	*iP*		**Pg**		**23 28 15.5**	**-1.3**
POTG				IAML				23 28 35.9	
	comp=Z,3μm,1.0s								
EDPN	**Palmar Norte**	**1.10**	**332**	*eP*		**Pg**		**23 28 15.7**	**-1.5**
NANC3	**Nancito, Chiri**	**1.21**	**78**	*eP*		**Pg**		**23 28 17.4**	**-2.1**
CHGR2	**Aguacate**	**1.22**	**39**	*eP*		**Pg**		**23 28 17.5**	**-2.1**
CHGR2				*eS*		**Sg**		**23 28 34.0**	**-1.6**
DRK0	**Durika**	**1.30**	**346**	*eP*		**Pn**		**23 28 19.1**	**-0.8**
OCHAL	**Ojochal**	**1.31**	**327**	*iP*		**Pn**		**23 28 18.9**	**-1.0**
OCHAL				IAML				23 28 19.6	
	comp=Z,12nm,1.0s								
CNI2	**El Empalme, Bo**	**1.50**	**18**	*eP*		**Pn**		**23 28 21.1**	**-1.3**
CNI2				*eS*		**Sn**		**23 28 40.5**	**-1.2**
GMAL	**Guarumal, Vera**	**1.70**	**97**	*eP*		**Pn**		**23 28 24.8**	**-0.4**
CDM	**Cerro de Muert**	**1.76**	**332**	*iP*		**Pn**		**23 28 26.0**	**-0.5**
CDM				IAML				23 28 27.8	
	comp=Z,530nm,1.0s								
SAFE3	**Santa Fe, Vera**	**1.91**	**74**	*eP*		**Pn**		**23 28 27.8**	**-0.3**
LCR2	**La Lucha 2**	**2.04**	**329**	*eP*		**Pn**		**23 28 30.7**	**+0.6**
LCR2	**La Lucha 2**	**2.04**	**329**	*iP*		**Pn**		**23 28 30.4**	**+0.3**
LCR2				IAML				23 28 32.0	
	comp=Z,560nm,1.0s								
VTCV	**VTCV, Calle Va**	**2.13**	**338**	*iP*		**Pn**		**23 28 32.7**	**+1.3**
VTCV				IAML				23 29 11.5	
	comp=Z,440nm,1.0s								
OCM	**Ochomogo**	**2.15**	**332**	*iP*		**Pn**		**23 28 32.4**	**+0.8**
OCM				IAML				23 28 33.7	
	comp=Z,400nm,1.0s								
CACAO	**El Cacao, Vera**	**2.15**	**107**	*eP*		**Pn**		**23 28 32.7**	**+1.3**
VIRE	**VIRE**	**2.19**	**334**	*iP*		**Pn**		**23 28 33.9**	**+1.6**
VIRE				IAML				23 29 06.6	
	comp=Z,640nm,1.0s								
HDC3	**Heredia 3**	**2.31**	**330**	*iP*		**Pn**		**23 28 35.2**	**+1.4**
HDC3				IAML				23 28 36.3	
	comp=Z,330nm,1.0s								
HDC3				*iS*		**Sn**		**23 29 04.4**	**+2.2**
JACO	**JACO, Garabito**	**2.38**	**314**	*iP*		**Pn**		**23 28 33.6**	**-1.0**
JACO				IAML				23 28 39.1	
	comp=Z,170nm,1.0s								
RIFO	**Rio Frio, Sara**	**2.51**	**337**	*iP*		**Pn**		**23 28 38.2**	**+1.8**
RIFO				IAML				23 29 19.3	
	comp=Z,150nm,1.0s								
AZU	**Azuero**	**2.64**	**94**	*eP*		**Pn**		**23 28 38.4**	**+0.2**
AZU				*eS*		**Sn**		**23 29 10.8**	**+0.9**
LAFE	**Finca La Fe, P**	**2.66**	**313**	*iP*		**Pn**		**23 28 37.7**	**-0.8**
LAFE				IAML				23 29 31.3	
	comp=Z,0.8nm,1.0s								
CPMI	**Catarata Coope**	**2.69**	**328**	*iP*		**Pn**		**23 28 41.6**	**+2.5**
CPMI				IAML				23 29 42.5	
	comp=Z,100nm,1.0s								
SOCE	**Pocosol**	**2.90**	**325**	*iP*		**Pn**		**23 28 44.6**	**+2.8**
SOCE				IAML				23 28 46.2	
	comp=Z,130nm,1.0s								
JTS	**Las Juntas de**	**3.04**	**319**	*eP*		**Pn**		**23 28 43.7**	**+0.1**
INDI	**Punta indio, G**	**3.15**	**306**	*iP*		**Pn**		**23 28 45.3**	**+0.1**
INDI				IAML				23 29 51.3	
	comp=Z,60nm,1.0s								
BCIP	**Isla Barro Col**	**3.28**	**69**	*iP*		**Pn**		**23 28 49.5**	**+2.6**
BCIP				IAML				23 30 39.2	
	comp=Z,100nm,1.0s								
ORTG	**Ortega, Santa**	**3.43**	**314**	*iP*		**Pn**		**23 28 48.5**	**-0.7**
ORTG				IAML				23 28 54.7	
	comp=Z,140nm,1.0s								
SAJU	**San Juanillo,**	**3.44**	**307**	*iP*		**Pn**		**23 28 49.0**	**-0.1**
SAJU				IAML				23 28 50.2	
	comp=Z,50nm,1.0s								
HZTE	**Horizontes, Gu**	**3.77**	**316**	*iP*		**Pn**		**23 28 55.1**	**+1.3**
HZTE				IAML				23 29 11.3	
	comp=Z,120nm,1.0s								

*TRN **11** 23:35:32.5, 10°.24N×62°.11W, h23km, MD4.4, Gulf of Paria.*
*FUNV **11** 23:35:32.8, 10°.29N×62°.10W, h4km, MW4.1*
*IDC **11** 23:35:33.7±1.4, 11°.17N×62°.93W, h0km, mb4.0/9, mbtmp4.1/11, ML3.0/2, Error ellipse: s-maj=47.3km s-min=22.4km az=141.0*
*NEIC **11** 23:35:35.8±1.7, 10°.34N±0°.09×62°.28W±0°.08, h22km±7km, mb4.3/8, Error ellipse: s-maj=15.4km s-min=8.8km az=142.0*
ISC 11 23:35:32.9±1.2, **10°.29N**±0°.04×**62°.28W**±0°.03, **h14**km±8km, **n86**, σ1°**62**/120, **mb4.1**/13, **1D**, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.65**	**52**	*eP*		**Pg**		**23 35 45.9**	**+0.2**
TCE				*eS*		**Sb**		**23 35 55.3**	**+0.2**
TPP	**Pointe-a-Pierr**	**0.81**	**88**	*eP*		**Pg**		**23 35 48.1**	**-0.6**
TRN	**Trinidad (W)**	**0.93**	**68**	*eP*		**Pg**		**23 35 48.9**	**-2.0**
TRN				*eS*		**Sg**		**23 36 02.6**	**-0.4**
CRUV	**Carupano**	**1.02**	**292**	*eP*		**Pn**		**23 35 53.6**	**+0.8**
CRUV				*eS*		**Sn**		**23 36 08.1**	**+1.1**
GRFF	**Grenada Fort F**	**1.82**	**17**	*eP*		**Pn**		**23 36 04.2**	**+0.3**
GRFF				*eS*		**Sn**		**23 36 27.9**	**+1.0**
CUMV	**Cumana_UDO**	**1.89**	**274**	*eP*		**Pb**		**23 36 07.5**	**+0.3**
CUMV				*eS*		**Sg**		**23 36 33.9**	**0.0**
GRGR	**Grenville**	**1.93**	**18**			**Pn**		**23 36 05.8**	**+0.5**
GRGR					Sn	**Sn**		**23 36 30.6**	**+1.2**
GRGR	**Grenville**	**1.93**	**18**	*eP*		**Pn**		**23 36 05.6**	**+0.2**
GRGR				*eS*		**Sn**		**23 36 29.4**	**-0.1**
GRHS	**Sauteurs**	**2.02**	**18**	*eP*		**Pn**		**23 36 07.3**	**+0.7**
GRHS				*eS*		**Sn**		**23 36 32.5**	**+0.8**
PCRV	**Puerto La Cruz**	**2.33**	**267**	*eP*		**Pn**		**23 36 13.2**	**+2.3**
PCRV				*eS*		**Sb**		**23 36 43.0**	**-0.4**
GCMP	**Grenada, Carri**	**2.33**	**21**	*eP*		**Pn**		**23 36 11.8**	**+0.8**
GCMP				*eS*		**Sn**		**23 36 40.1**	**+0.7**
SVOC	**Richmond Hill,**	**3.02**	**20**	*eP*		**Pn**		**23 36 20.8**	**+0.4**
SVOC				*eS*		**Sn**		**23 36 56.8**	**+0.3**
SVT	**Saint Vincent**	**3.03**	**19**	*eP*		**Pn**		**23 36 21.5**	**+0.9**
SVT				*eS*		**Sn**		**23 36 57.5**	**+0.8**
SVB	**Belmont**	**3.12**	**19**	*eP*		**Pn**		**23 36 22.9**	**+1.0**
SVB				*eS*		**Sn**		**23 36 59.0**	**-0.1**
SSV	**Crater Summit**	**3.20**	**19**	*eP*		**Pn**		**23 36 23.8**	**+0.9**
SSV				*eS*		**Sn**		**23 37 00.6**	**-0.3**
SLB	**Belfond**	**3.71**	**19**	*eS*		**Sn**		**23 37 12.0**	**-1.6**
BBGH	**Gun Hill**	**3.89**	**43**		Pn	**Pn**		**23 36 34.7**	**+2.3**
BBGH	**Gun Hill**	**3.89**	**43**	*eP*		**Pn**		**23 36 32.4**	**+0.1**
SLCP	**Castries, St.**	**3.90**	**19**	*eP*		**Pn**		**23 36 33.1**	**+0.6**
SLCP				*eS*		**Sn**		**23 37 18.9**	**+0.7**
SLBI	**Saint Lucia, B**	**3.92**	**19**	*eP*		**Pn**		**23 36 33.6**	**+0.9**
SLBI				*eS*		**Sn**		**23 37 18.9**	**+0.3**
MPOM	**Morne Pois Mar**	**4.35**	**18**		Pn	**Pn**		**23 36 40.1**	**+1.4**
MPOM	**Morne Pois Mar**	**4.35**	**18**	*eP*		**Pn**		**23 36 40.0**	**+1.3**
MPOM				*eS*		**Sn**		**23 37 28.7**	**-0.6**
BIM	**Bigot**	**4.36**	**16**			**Pn**		**23 36 40.0**	**+1.1**
BIM					Sn	**Sn**		**23 37 29.4**	**-0.1**
BIM	**Bigot**	**4.36**	**16**	*eP*		**Pn**		**23 36 40.2**	**+1.3**
BIM				*eS*		**Sn**		**23 37 28.3**	**-1.3**
ZAM	**Aeronautique**	**4.42**	**16**	*eP*		**Pn**		**23 36 41.3**	**+1.6**
LPMF	**Morne Lapointe**	**4.44**	**17**	*eP*		**Pn**		**23 36 41.5**	**+1.5**
MVM	**Montagne Vaucl**	**4.45**	**18**	*eP*		**Pn**		**23 36 41.6**	**+1.6**
FUNV	**FUNVISIS**	**4.46**	**273**	*eP*		**Pn**		**23 36 42.2**	**+1.8**
FUNV				*eS*		**Sn**		**23 37 34.0**	**+1.8**
LUEV	**Luepa**	**4.50**	**170**	*eP*		**Pn**		**23 36 39.5**	**-1.3**
LUEV				*eS*		**Sn**		**23 37 28.9**	**-4.2**
FDF	**Fort de France**	**4.55**	**14**			**Pn**		**23 36 42.6**	**+1.2**
FDF					Sn	**Sn**		**23 37 32.0**	**-2.2**
FDF	**Fort de France**	**4.55**	**14**	*eP*		**Pn**		**23 36 42.6**	**+1.1**
FDF				*eS*		**Sn**		**23 37 34.2**	**0.0**
PML	**Morne Lenard**	**4.59**	**13**	*eP*		**Pn**		**23 36 43.3**	**+1.3**
GBMF	**Grand Be**	**4.61**	**14**	*eP*		**Pn**		**23 36 43.8**	**+1.5**
PCM	**Pelee Case Pet**	**4.61**	**13**	*eP*		**Pn**		**23 36 43.6**	**+1.5**
BAMF	**Morne Balai**	**4.63**	**14**	*eP*		**Pn**		**23 36 44.0**	**+1.4**
SVN	**Savane Anatole**	**4.65**	**13**			**Pn**		**23 36 44.0**	**+1.2**
SVN	**Savane Anatole**	**4.65**	**13**	*eP*		**Pn**		**23 36 44.1**	**+1.2**
SVN				*eS*		**Sn**		**23 37 35.2**	**-1.5**
TACV	**Tcata**	**4.68**	**269**	*eP*		**Pn**		**23 36 45.2**	**+2.0**
TACV				*eS*		**Sn**		**23 37 38.6**	**+1.1**
CACV	**CAICARA DEL OR**	**5.01**	**238**	*eP*		**Pn**		**23 36 43.7**	**-4.1**
CACV				*eS*		Sn		23 37 37.0	-8.5
BENV	**Beln**	**5.25**	**267**	*eP*		**Pn**		**23 36 53.5**	**+2.3**
BENV				*eS*		**Sn**		**23 37 52.3**	**+0.7**
TURV	**Turiamo**	**5.48**	**272**	*eP*		**Pn**		**23 36 55.9**	**+1.7**
TURV				*eS*		**Sn**		**23 37 56.8**	**-0.2**
TBG	**Guadaloupe-3**	**5.56**	**6**	*eP*		**Pn**		**23 36 56.8**	**+1.5**
MAGL	**Barre de l'Ile**	**5.71**	**10**		Pn	**Pn**		**23 36 59.5**	**+2.1**
CBE	**Ff, Capester**	**5.78**	**6**			**Pn**		**23 36 59.9**	**+1.5**
CBE	**Ff, Capester**	**5.78**	**6**	*eP*		**Pn**		**23 37 00.0**	**+1.6**
CBE				*eS*		**Sn**		**23 38 03.9**	**-0.6**
BAUV	**El Baul**	**5.84**	**257**			**Pn**		**23 37 00.1**	**+0.9**
BAUV	**El Baul**	**5.84**	**257**	*eP*		**Pn**		**23 37 00.3**	**+1.1**
BAUV				*eS*		**Sn**		**23 38 05.3**	**-0.7**
BAUV	**El Baul**	**5.84**	**257**	*eP*		**Pn**		**23 37 01.5**	**+2.3**
GDHS	**Morne Mazeau,**	**5.96**	**5**		Pn	**Pn**		**23 37 02.7**	**+1.7**
GDSD	**La Dsirade Is**	**6.10**	**11**		Pn	**Pn**		**23 37 04.0**	**+1.2**
ABD	**La Joyeuse, An**	**6.19**	**7**		Pn	**Pn**		**23 37 05.3**	**+1.3**
ABD	**La Joyeuse, An**	**6.19**	**7**	*eP*		**Pn**		**23 37 04.7**	**+0.7**
MBFL	**Flemmings, Mon**	**6.42**	**1**	*eP*		**Pn**		**23 37 08.7**	**+1.6**
MBFL				*eS*		**Sn**		**23 38 19.2**	**-1.0**
ANBD	**Bethesda, Anti**	**6.73**	**4**	*eP*		**Pn**		**23 37 13.5**	**+2.1**
TEPV	**Terepaima**	**6.82**	**268**	*eP*		**Pn**		**23 37 13.4**	**+0.7**
TEPV				*eS*		**Sn**		**23 38 28.7**	**-1.5**
SANV	**Sanarito**	**7.20**	**264**	*eP*		**Pn**		**23 37 19.0**	**+1.1**
SANV				*eS*		**Sn**		**23 38 37.7**	**-2.0**
SIQV	**Siquisique**	**7.42**	**273**	*eP*		**Pn**		**23 37 21.7**	**+0.8**
SIQV				*eS*		**Sn**		**23 38 42.5**	**-2.5**
CURV	**Curarigua**	**7.57**	**269**	*eP*		**Pn**		**23 37 24.1**	**+1.1**
CURV				*eS*		**Sn**		**23 38 46.1**	**-2.7**
SDV	**Santo Domingo**	**8.36**	**261**		Pn	**Pn**		**23 37 35.1**	**+1.1**
SDV	**Santo Domingo**	**8.36**	**261**		Pn	**Pn**		**23 37 31.5**	**-2.5**
	1.5nm,0.3s,baz=350,slow=3.5,SNR=5.5								
SDV					Sn	**Sn**		**23 39 05.0**	**-3.4**
	1.2nm,0.3s,baz=354,slow=16,SNR=1.3								
	8.0nm,0.3s								
HUMP	**Col San Antoni**	**8.54**	**336**		Pn	**Pn**		**23 37 36.6**	**+0.4**
SJG	**San Juan**	**8.63**	**335**	*eP*		**Pn**		**23 37 39.2**	**+1.7**
SOCV	**Socops**	**8.70**	**257**	*eP*		**Pn**		**23 37 39.1**	**+0.6**
SOCV				*eS*		**Sn**		**23 39 13.3**	**-4.3**
OBIP	**Obispado Ponce**	**8.77**	**332**		Pn	**Pn**		**23 37 39.9**	**+0.4**
GCPR	**Guaynabo City**	**8.78**	**336**		Pn	**Pn**		**23 37 41.2**	**+1.6**
CELP	**Cerrillos**	**8.79**	**332**		Pn	**Pn**		**23 37 41.3**	**+1.7**
AOPR	**Arecibo Observ**	**9.11**	**332**		Pn	**Pn**		**23 37 46.9**	**+2.8**
AOPR	**Arecibo Observ**	**9.11**	**332**	*eP*		**Pn**		**23 37 46.8**	**+2.8**
ROSC	**El Rosal**	**13.11**	**246**		Pn	**Pn**		**23 38 40.5**	**+1.3**
ROSC	**El Rosal**	**13.11**	**246**		Pn	**Pn**		**23 38 37.9**	**-1.4**
	2.4nm,0.3s,baz=351,slow=19,SNR=2.5								
	9.1nm,0.5s								
ETMB	**Extrema**	**20.36**	**191**		P	**P**		**23 40 09.7**	**+0.4**
ATAH	**Atahualpa**	**23.61**	**223**		P	**P**		**23 40 49.3**	**+5.1**
	4.6nm,0.7s,baz=64,slow=7.2,SNR=2.8								
	4.6nm,0.7s								
S39A	**Bolivar**	**39.02**	**319**		P	**P**		**23 42 58.1**	**-1.1**
S39A					IAmb	IAmb		23 43 01.4	
	comp=Z,4.3nm,0.8s								
P40A	**Paris**	**39.36**	**323**		P	**P**		**23 43 01.4**	**-0.6**
BRDY	**Brady**	**39.91**	**307**		P	**P**		**23 43 06.9**	**+0.1**
BRDY					IAmb	IAmb		23 43 08.9	
	comp=Z,5.1nm,0.7s								
POST	**Post**	**42.56**	**308**		P	**P**		**23 43 29.3**	**+0.7**
PDAR	**Pinedale Array**	**52.28**	**317**		P	**P**		23 44 39.2	-5.3
	comp=Z,0.3nm,0.5s,baz=135,slow=9.0,SNR=2.2								
	comp=Z,0.3nm,0.5s								
R11B	**Troy Canyon, C**	**55.11**	**310**		P	P		23 45 10.2	+5.1
R11B					IAmb	IAmb		23 45 12.4	
	comp=Z,7.2nm,1.5s								
HLID	**Hailey**	**55.88**	**316**		P	**P**		**23 45 10.7**	**+0.1**
HLID					IAmb	IAmb		23 45 11.6	
	comp=Z,3.7nm,1.2s								
YKA	**Yellowknife Ar**	**64.12**	**336**		P	**P**		**23 46 02.8**	**-3.8**
	comp=Z,0.3nm,0.6s,baz=112,slow=7.3,SNR=1.9								
	comp=Z,0.3nm,0.6s								
NOA	**NORSAR Array B**	**73.07**	**29**		P	**P**		**23 47 03.7**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=222,slow=6.0,SNR=2.6								
	comp=Z,1.0nm,0.7s								
HFS	**Hagfors**	**74.15**	**30**		P	**P**		**23 47 10.4**	**+1.6**
	comp=Z,6.0nm,1.1s,baz=284,slow=5.8,SNR=2.0								
	comp=Z,6.0nm,1.1s								
SPITS	**Spitsbergen Ar**	**77.66**	**12**		P	**P**		**23 47 27.8**	**-0.9**
	comp=Z,7.3nm,0.9s,baz=268,slow=4.3,SNR=1.5								
	comp=Z,7.3nm,0.9s								
ILAR	**Eielson Array**	**78.46**	**334**		P	**P**		**23 47 30.0**	**-3.3**
	comp=Z,0.5nm,0.8s,baz=106,slow=5.1,SNR=4.1								
	comp=Z,0.5nm,0.8s								
ARCES	**ARCESS Array B**	**79.65**	**21**		P	**P**		**23 47 40.6**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=308,slow=10,SNR=1.9								
	comp=Z,1.3nm,0.7s								
FINES	**FINESS Array B**	**80.25**	**29**		P	**P**		**23 47 42.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=245,slow=4.0,SNR=12								
	comp=Z,0.8nm,0.4s								

IDC 11 23:40:33.7±2.8, **17°.76S**×**178°.08W**, **h0**km, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=249.5km s-min=27.4km az=156.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.97**	**259**			P	P	23 48 51.0	0.0
	0.3nm,0.6s,baz=94,slow=8.0,SNR=6.0								
	0.3nm,0.6s								
ASAR	**Alice Springs**	**45.13**	**254**			P	P	23 48 52.0	-0.3
	1.3nm,0.4s,baz=87,slow=8.0,SNR=20								
	1.3nm,0.4s								
NVAR	**Mina Array Bea**	**79.10**	**44**			P	P	23 52 40.7	+0.2
	0.2nm,0.4s,baz=221,slow=11,SNR=1.5								
	0.2nm,0.4s								
TXAR	**Lajitas Array**	**85.65**	**58**			P	P	23 53 14.7	-0.1
	0.7nm,0.7s,baz=238,slow=5.1,SNR=3.5								
	0.7nm,0.7s								

*SNET **11** 23:44:18.5±0.8, 15°.61N×93°.21W, h64km±27km, ML3.8*
*IDC **11** 23:44:18.1±0.8, 15°.63N×92°.95W, h102km±6km, mb4.0/13, mbtmp4.3/15, Error ellipse: s-maj=22.2km s-min=8.3km az=40.0*
*CATAC **11** 23:44:19.9±1.4, 15°.56N×93°.17W, h80km±12km, ML4.9*
*MEX **11** 23:44:20.0±0.7, 15°.51N×93°.07W, h111km±5km, MD4.8*
*NEIC **11** 23:44:21.7±2.6, 15°.59N±0°.06×92°.94W±0°.06, h118km±3km, mb4.5/175, Md4.8/97(MEX), Error ellipse: s-maj=9.6km s-min=6.2km az=222.0*
*GCG **11** 23:44:27.9±2.7, 15°.52N×92°.52W, h64km±183km, MD4.7*
ISC 11 23:44:19.6±0.4, **15°.53N**±0°.03×**93°.02W**±0°.03, **h113**km±3km, **h114**km:**pP-P**, **n461**, σ2°**32**/512, **mb4.5**/62, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.26**	**312**				**Pn**	**23 44 34.4**	**-1.2**
PCIG							**Sn**	**23 44 45.6**	**-2.0**
PCIG		**0.26**	**312**	*eP*			**Pn**	**23 44 34.4**	**-1.2**
PCIG				*eS*			**Sn**	**23 44 45.6**	**-2.0**
PATR	**El Naranjo**	**0.86**	**118**	*eP*			**Pn**	**23 44 38.7**	**-1.4**
PATR				*iS*			**Sn**	**23 44 53.8**	**-1.6**
PAVE	**Pavencul**	**0.88**	**112**	*eP*			**Pn**	**23 44 39.6**	**-0.7**
PAVE				*eS*			**Sn**	**23 44 54.6**	**-1.1**
THIG		**0.96**	**130**				**Pn**	**23 44 40.2**	**-0.4**
THIG							**Sn**	**23 44 55.3**	**-1.3**
THIG		**0.96**	**130**	*eP*			**Pn**	**23 44 40.2**	**-0.4**
THIG				*eS*			**Sn**	**23 44 55.3**	**-1.3**
CHUJ	**Union Juarez**	**0.98**	**116**	*eP*			**Pn**	**23 44 40.3**	**-1.0**
CHUJ				*eS*			**Sn**	**23 44 56.0**	**-1.5**
CARR	**Arriaga**	**1.11**	**310**	*eP*			**Pn**	**23 44 42.1**	**-0.2**
CARR				*eS*			**Sn**	**23 44 58.8**	**-0.6**
CCIG	**Comitan**	**1.13**	**49**		Pn		**Pn**	**23 44 42.6**	**-0.1**
CCIG					Sn		**Sn**	**23 45 01.0**	**+0.8**
CCIG	**Comitan**	**1.13**	**49**	*eP*			**Pn**	**23 44 42.7**	**-0.1**
CCIG				*eS*			**Sn**	**23 45 00.1**	**0.0**
CCIG	**Comitan**	**1.13**	**49**	*iP*			**Pn**	**23 44 42.7**	**-0.1**
SMCA	**Catarina**	**1.14**	**126**	*iP*			**Pn**	**23 44 41.7**	**-0.8**
SMCA				*iS*			**Sn**	**23 44 58.7**	**-1.2**
SMCA				IAML				23 45 07.7	
	comp=Z,11μm,1.0s								
TGBT	**Tuxtla Gutierr**	**1.24**	**357**				**Pn**	**23 44 43.0**	**-0.7**
TGBT							**Sn**	**23 44 59.2**	**-2.7**
TGBT	**Tuxtla Gutierr**	**1.24**	**357**	*iP*			**Pn**	**23 44 43.0**	**-0.7**
TGBT				*iS*			**Sn**	**23 44 59.2**	**-2.7**
TGIG		**1.24**	**356**				**Pn**	**23 44 43.2**	**-0.6**
TGIG							**Sn**	**23 44 59.8**	**-2.3**
TGIG		**1.24**	**356**	*eP*			**Pn**	**23 44 43.2**

YOIG Yosondua 4.54 287 Pn 23 45 27.3 +0.7
YOIG Sn 23 46 14.3 -4.2
YOIG Yosondua 4.54 287 *eP* Pn 23 45 27.3 +0.7
YOIG *eS* Sn 23 46 14.3 -4.2
TOIG Toxpalan 4.63 304 Pn 23 45 28.4 +0.7
TOIG Sn 23 46 18.6 -2.0
TOIG Toxpalan 4.63 304 *eP* Pn 23 45 28.4 +0.7
TOIG *eS* Sn 23 46 18.6 -2.0
TXIG Tlaxiaco 4.87 291 Pn 23 45 32.4 +1.4
TXIG Sn 23 46 22.1 -4.3
TXIG Tlaxiaco 4.87 291 *eP* Pn 23 45 32.4 +1.4
TXIG *eS* Sn 23 46 22.1 -4.3
PNIG Pinotepa 4.98 281 Pn 23 45 31.5 -0.9
PNIG Sn 23 46 19.8 -9.1
PNIG Pinotepa 4.98 281 *eP* Pn 23 45 31.5 -0.9
PNIG *eS* Sn 23 46 19.8 -9.1
TPIG Tehuac#an 5.05 305 Pn 23 45 34.4 +1.0
TPIG Sn 23 46 23.0 -7.7
TPIG Tehuac#an 5.05 305 *eP* Pn 23 45 34.4 +1.0
TPIG *eS* Sn 23 46 23.0 -7.7
HLIG Huajuapan de L 5.12 297 Pn 23 45 35.6 +1.2
HLIG Huajuapan de L 5.12 297 *eP* Pn 23 45 35.6 +1.2
JAUV Jalcomulco 5.25 317 *eP* Pn 23 45 34.5 -1.5
JAUV *eS* Sn 23 46 29.4 -6.0
LVIG Laguna Verde 5.28 323 *eP* Pn 23 45 35.3 -1.0
LVIG *eS* Sn 23 46 29.4 -6.6
FTIG Fresnillo de T 5.44 296 Pn 23 45 40.3 +1.8
FTIG Fresnillo de T 5.44 296 *eP* Pn 23 45 40.3 +1.8
MGIG Malinaltepec 5.64 288 Pn 23 45 42.7 +1.3
MGIG Sn 23 46 33.7 -11
MGIG Malinaltepec 5.64 288 *eP* Pn 23 45 42.7 +1.3
MGIG *i S* Sn 23 46 33.7 -11
TLIG Tlapa 5.69 292 Pn Pn 23 45 44.6 +2.7
TLIG Tlapa 5.69 292 *eP* Pn 23 45 38.7 -3.2
TLIG *eS* Sn 23 46 41.1 -5.0
TGUH Tegucigalpa,Un 5.75 104 Pn Pn 23 45 44.0 +1.1
CRIG Cruz Grande 5.99 282 Pn 23 45 45.3 -0.7
CRIG Sn 23 46 46.5 -6.8
CRIG Cruz Grande 5.99 282 *eP* Pn 23 45 45.3 -0.7
CRIG *eS* Sn 23 46 46.5 -6.8
MYIG Mrida 6.23 30 *eP* Pn 23 45 51.4 +2.2
MYIG *eS* Sn 23 46 56.7 -2.4
PPM Popocatepetl 6.40 304 *eP* Pn 23 45 55.3 +3.3
PPM *eS* Sn 23 47 02.4 -1.6
PPIG Popocatepetl 6.41 304 Pn 23 45 55.3 +3.3
PPIG Sn 23 47 02.4 -1.6
CRIN San Cristobal 6.44 115 Pn Pn 23 45 53.0 +0.9
TEIG Tepich 6.50 43 Pn Pn 23 45 52.4 -0.3
DAIG Los Arroyos 6.54 284 Pn 23 45 53.6 +0.3
DAIG Sn 23 47 01.1 -5.4
DAIG Los Arroyos 6.54 284 *eP* Pn 23 45 53.6 +0.3
DAIG *eS* Sn 23 47 01.1 -5.4
YAIG Yautepec 6.66 301 Pn 23 45 57.6 +2.5
YAIG Sn 23 47 05.5 -4.1
YAIG Yautepec 6.66 301 *eP* Pn 23 45 57.6 +2.5
YAIG *eS* Sn 23 47 05.5 -4.1
MEIG Mezcala 6.75 292 Pn 23 45 57.4 +1.1
MEIG Sn 23 47 08.0 -3.9
MEIG Mezcala 6.75 292 *eP* Pn 23 45 57.4 +1.1
MEIG *eS* Sn 23 47 08.0 -3.9
PLIG Platanillo 6.82 296 Pn 23 45 59.9 +2.7
PLIG Sn 23 47 08.5 -5.0
PLIG Platanillo 6.82 296 *eP* Pn 23 45 59.9 +2.7
PLIG *eS* Sn 23 47 08.5 -5.0
CNGN Cerro Negro 6.84 115 Pn Pn 23 45 57.7 +0.2
AOVM Tlapan 7.07 303 *i P* Pn 23 46 04.3 +3.4
AOVM *i S* Sn 23 47 12.7 -7.3
CAIG El Cayaco 7.12 283 Pn 23 46 01.1 -0.1
CAIG Sn 23 47 12.2 -8.4
CAIG El Cayaco 7.12 283 *eP* Pn 23 46 01.1 -0.1
CAIG *eS* Sn 23 47 12.2 -8.4
MATN Matagalpa 7.35 110 Pn Pn 23 46 06.2 +1.8
DEIG Demacu 7.43 311 *eP* Pn 23 46 08.9 +3.2
DHIG Demacu 7.43 311 Pn 23 46 08.9 +3.2
ARIG Puente Sto Nin 7.53 292 Pn 23 46 09.2 +2.5
ARIG Sn 23 47 23.4 -7.1
ARIG Puente Sto Nin 7.53 292 *eP* Pn 23 46 09.2 +2.5
ARIG *eS* Sn 23 47 23.4 -7.1
BOAB BOACO BROADBAN 7.77 112 Pn Pn 23 46 11.2 +1.1
ACON Acoyapa 8.41 114 Pn Pn 23 46 19.5 +0.8
MOIG Morelia 8.81 299 Pn Pn 23 46 28.5 +4.2
MOIG Morelia 8.81 299 *eP* Pn 23 46 28.0 +3.6
RPIG Rio Verde 9.13 315 Pn 23 46 30.1 +1.5
RPIG Sn 23 48 12.8 +3.1
RPIG Rio Verde 9.13 315 *eP* Pn 23 46 30.1 +1.5
RPIG *i S* Sn 23 48 12.8 +3.1
JTS Las Juntas de 9.43 123 Pn Pn 23 46 32.4 -0.3
JTS Las Juntas de 9.43 123 P Pn 23 46 32.0 -0.6
comp=Z,19nm,0.3s,baz=297,slow=16,SNR=14
JTS S Sn 23 48 14.9 -2.0
comp=Z,6.1nm,0.4s,baz=279,slow=19,SNR=2.0
GTIG Gomez Farias 9.48 323 Pn 23 46 35.7 +2.6
GTIG Sn 23 48 12.8 -5.1
GTIG Gomez Farias 9.48 323 *eP* Pn 23 46 35.7 +2.6
GTIG *eS* Sn 23 48 12.8 -5.1
MMIG Aquila 10.25 287 Pn 23 46 44.9 +1.2
MMIG Sn 23 47 37.8 +1.0
MMIG Aquila 10.25 287 *eP* Pn 23 46 44.9 +1.2
MMIG *eS* Sn 23 47 37.8 +1.0
HDC Heredia 10.28 121 Pn Pn 23 44.7 -0.1
RIMA Rio Macho 10.61 122 Pn 23 46 49.1 +0.3
COIG Colima 10.81 291 *eP* Pn 23 46 54.1 +2.8
COIG *eS* Sn 23 48 47.1 -3.4
CEGR Campo Tres 11.03 292 *eP* Pn 23 46 57.0 +2.7
CEGR *eS* Sn 23 48 54.2 -1.6
CDAR Ciudad de Arme 11.03 289 *eP* Pn 23 46 53.4 -0.8
LNIG Linares 11.11 328 *eP* Pn 23 46 59.7 +4.5
LNIG *eS* Sn 23 48 48.8 -8.7
ZAIG Zacatecas 11.54 310 Pn Pn 23 47 04.9 +3.7
833A Chaparral WMA, 14.03 336 Pn Pn 23 47 35.0 +1.6
BCIP Isla Barro Col 14.35 115 Pn Pn 23 47 37.2 -0.3
EF01 Eagle Ford 01 14.41 341 Pn Pn 23 47 36.7 -1.6
HNDO Hondo 15.08 339 P P 23 47 49.7 +0.4
061Z Ochoppi 15.29 46 P P 23 47 51.4 -0.2
DRIO Del Rio 15.50 334 P P 23 47 55.7 +1.8
346A Big Creek Wild 16.12 11 Pn Pn 23 47 59.6 0.0
346A IAmb IAmb 23 48 41.2
comp=Z,24nm,0.8s
JCT Junction City 16.13 338 Pn P 23 48 00.5 -0.5
NATX Nacogdoches 16.23 355 Pn 23 48 01.3 +0.3
NATX IAmb IAmb 23 48 38.2
comp=Z,17nm,0.8s
HPIG 16.34 316 P P 23 48 06.2 +2.6
BRDY Brady 16.61 342 Pn 23 48 05.3 -0.4
SAND Sanderson 16.62 331 Pn Pn 23 48 05.8 -0.1
VBMS Vicksburg 16.77 7 Pn 23 48 05.8 -1.9
VBMS IAmb IAmb 23 48 48.1
comp=Z,24nm,0.8s
656A Willston 16.83 33 Pn 23 48 06.0 -2.4
TXAR Lajitas Array 16.88 326 P P 23 48 12.1 +2.7
TXAR Lajitas Array 16.88 326 P P 23 48 10.2 +0.8
comp=Z,1.5nm,0.6s,baz=147,slow=12,SNR=9.7
TX31 Lajitas Ar. Si 16.88 326 P 23 48 11.9 +2.6
OZNA Ozona 17.02 336 P P 23 48 12.4 +1.5
143A Socs Landing, 17.16 5 P Pn 23 48 13.1 +0.7
143A IAmb IAmb 23 48 51.4
comp=Z,40nm,1.1s
FW14 Alvarado 17.22 348 P Pn 23 48 14.3 +1.1
FW14 IAmb IAmb 23 48 51.5
comp=Z,28nm,0.6s
FW13 Cleburne 17.22 347 P Pn 23 48 14.9 +1.7
FW13 IAmb IAmb 23 48 47.9
comp=Z,27nm,1.3s
FW16 Waxahatchie 17.24 349 P Pn 23 48 14.5 +1.1
FW16 IAmb IAmb 23 48 47.9
comp=Z,23nm,0.7s
146A Union 17.41 11 P P 23 48 14.5 -0.5
146A IAmb IAmb 23 48 51.9
comp=Z,18nm,0.7s
352A Blakely 17.51 24 P P 23 48 16.3 +0.1
FW07 Weatherford 17.64 347 P Pn 23 48 19.5 +1.3
FW07 IAmb IAmb 23 48 27.1
comp=Z,14nm,0.5s
Z41A Richland Creek 17.65 1 P Pn 23 48 18.4 +0.1
Z41A IAmb IAmb 23 48 55.9
comp=Z,30nm,1.0s
ALPN Alpine 17.70 328 P Pn 23 48 20.3 +1.2
Z38A Mt. Pleasant 17.74 355 P Pn 23 48 20.3 +0.8
Z38A IAmb IAmb 23 48 51.0
comp=Z,19nm,0.9s
SLBS Sierra La Lagu 17.87 300 P Pn 23 48 22.4 +1.1

SGCY Sterling City 17.90 337 P Pn 23 48 22.7 +1.2
FW03 Perrin-Whitt E 18.02 346 P Pn 23 48 23.6 +0.7
FW03 IAmb IAmb 23 48 59.1
comp=Z,18nm,0.8s
ABTX Abilene, Hawle 18.05 342 P Pn 23 48 23.7 +0.5
MNHN Monahans 18.08 332 P Pn 23 48 23.9 +0.3
Z35A Perchaven, San 18.13 349 P P 23 48 23.2 +0.2
Z35A IAmb IAmb 23 48 31.2
comp=Z,19nm,0.8s
Z47A Carrollton 18.15 13 P P 23 48 22.7 -0.5
Z47A IAmb IAmb 23 49 02.5
comp=Z,22nm,0.7s
456A Hilliard 18.18 32 P P 23 48 22.1 -1.4
LRAL Lakeview Retre 18.26 16 P 23 48 25.0 +0.6
LPIG La Paz 18.35 300 P Pn 23 48 30.1 +3.4
comp=Z,26nm,1.0s,baz=168,slow=1.6,SNR=4.3
DBBC Dabeiba 18.52 115 *eP* P 23 48 27.4 -0.1
Y45A Yeager Farm, C 18.52 9 P Pn 23 48 29.0 +0.2
PECS Pecos 18.62 330 P Pn 23 48 30.8 +0.7
152A Waverly Hall 18.66 22 P P 23 48 29.5 +0.8
152A IAmb IAmb 23 48 32.9
comp=Z,49nm,1.5s
SN01 Snyder 1 18.67 339 P Pn 23 48 30.4 -0.2
SN01 IAmb IAmb 23 49 05.1
comp=Z,16nm,0.7s
SN05 Snyder 5 18.69 339 P Pn 23 48 30.6 -0.2
SN05 IAmb IAmb 23 49 05.2
comp=Z,13nm,0.6s
UREC San Jos de Ur 18.78 112 *eP* P 23 48 27.0 -3.3
WTFS Witchita Falls 18.81 346 P Pn 23 48 32.5 +0.3
WTFS IAmb IAmb 23 49 16.0
comp=Z,21nm,0.6s
APMT Aspermont 18.85 341 P Pn 23 48 32.4 -0.2
APMT IAmb IAmb 23 49 06.5
comp=Z,13nm,0.8s
MIAR Mount Ida 18.94 359 P P 23 48 32.6 +0.8
MIAR IAmb IAmb 23 49 10.1
comp=Z,37nm,1.2s
POST Post 19.07 338 P P 23 48 34.2 +0.8
POST IAmb IAmb 23 49 15.6
comp=Z,11nm,0.6s
X37A Clayton 19.09 354 P Pn 23 48 34.8 -0.7
X37A IAmb IAmb 23 48 41.7
comp=Z,19nm,0.6s
OXF Oxford 19.18 9 P P 23 48 35.3 +0.9
Y49A Blount Mountai 19.20 17 P P 23 48 34.3 -0.3
CBOC Ciudad Bolivar 19.26 118 *eP* P 23 48 35.3 -0.4
DKNS Dickens 19.42 340 P Pn 23 48 40.1 +0.7
DKNS IAmb IAmb 23 49 11.3
comp=Z,13nm,0.8s
X34A Smith Ranch, M 19.48 348 P Pn 23 48 39.5 -0.5
X34A IAmb IAmb 23 49 15.3
comp=Z,15nm,0.8s
PLMC San Jos del P 19.55 121 *eP* P 23 48 37.7 -1.0
X48A Hartselle 19.59 15 P P 23 48 39.4 +0.5
X48A IAmb IAmb 23 49 13.2
comp=Z,23nm,0.9s
GOGA Godfrey 19.79 24 P P 23 48 40.8 -0.2
WMOK Wichita Mounta 19.81 346 P Pn 23 48 43.4 -0.6
W35A Tecumseh 19.84 351 P P 23 48 42.6 +1.0
W35A IAmb IAmb 23 49 17.9
comp=Z,31nm,0.8s
Y52A Lilburn 19.97 22 P P 23 48 43.9 +0.9
Y52A IAmb IAmb 23 48 48.5
comp=Z,19nm,0.8s
YOTC Yotoco, Valle 20.02 123 *eP* P 23 48 44.2 +0.3
FNO Franklin 20.03 349 P P 23 48 44.9 +1.3
FPAL Fort Paine 20.07 18 P P 23 48 44.1 0.0
GUY2C Guyana, Caldas 20.14 119 *eP* P 23 48 45.1 -0.4
OKCSW OKLAHOMA CITY 20.18 349 P P 23 48 45.8 +0.6
JAMC Jamundi, Valle 20.22 126 *eP* P 23 48 46.7 +0.6
FCAR Ozark Folk Cen 20.29 2 P P 23 48 47.2 +0.8
FCAR IAmb IAmb 23 49 14.1
comp=Z,13nm,0.6s
X51A Calhoun 20.33 20 P P 23 48 46.3 -0.5
MSTX Muleshoe 20.36 336 P P 23 48 48.2 +0.9
ADOK Arcadia Dam 20.41 350 P P 23 48 48.0 +0.3
TUL3 Leonard 20.45 354 P Pn 23 48 51.0 -0.3
baz=172
DEOK Depew 20.46 352 P 23 48 48.1 -0.2
DEOK IAmb IAmb 23 49 25.2
comp=Z,28nm,0.9s
LCAR Lake Charles 20.52 4 P P 23 48 49.0 +0.1
LCAR IAmb IAmb 23 49 26.1
comp=Z,16nm,0.9s
GNAR Gosnell 20.53 7 P P 23 48 48.6 -0.3
SMWD Samnorwood 20.54 343 P P 23 48 50.1 +1.0
BBAC Balboa, Cauca 20.55 129 *eP* Pn 23 48 51.5 -1.4
OK029 Liberty Lake 20.57 350 P 23 48 49.8 +0.4
SWET Sewanee 20.61 17 P P 23 48 49.7 -0.2
RLO Rose Lookout 20.63 355 P 23 48 50.9 +0.9
RLO IAmb IAmb 23 48 53.5
comp=Z,12nm,0.5s
POPC Popayan, Colom 20.64 127 *eP* P 23 48 52.3 +1.6
OK052 Battle Ridge R 20.66 351 P 23 48 51.3 +1.0
HHAR Hobbs 20.68 358 P P 23 48 51.7 +1.0
HHAR IAmb IAmb 23 48 53.4
comp=Z,17nm,0.5s
PEBM Pemiscott Bayo 20.69 7 P P 23 48 51.1 +0.4
OK033 Mehan 20.73 351 pP 23 49 18.1 +5.7
AMTX Amarillo 20.78 340 P P 23 48 52.6 +0.8
AMTX IAmb IAmb 23 49 28.7
comp=Z,20nm,0.7s
QUOK Quay 20.82 352 pP 23 49 19.1 +5.6
QUOK IAmb IAmb 23 49 31.6
comp=Z,27nm,0.8s
U38A Gravette 20.86 357 IAmb IAmb 23 48 55.1
comp=Z,15nm,0.6s
OTAV Otavalo 20.93 135 Pn 23 48 56.8 -0.8
OK048 Pawnee Station 21.09 351 IAmb IAmb 23 48 57.8
comp=Z,24nm,0.7s
ROSC El Rosal 21.23 118 P P 23 48 58.0 +0.9
ROSC IAmb IAmb 23 49 01.4
comp=Z,47nm,1.5s
ROSC El Rosal 21.23 118 P P 23 48 57.2 +0.1
comp=Z,9.6nm,0.5s,baz=311,slow=19,SNR=7.7
comp=Z,9.6nm,0.5s
ELIS Ellis County 21.23 346 P P 23 48 59.6 +3.0
PBMO Poplar Bluff 21.29 6 IAmb IAmb 23 49 34.4
comp=Z,19nm,0.8s
PRAC Prado 21.36 121 *eP* P 23 48 57.1 -1.1
U32A Winter Ranch, 21.44 347 pP 23 49 25.9 +5.6
BLOK Blackwell 21.47 351 IAmb IAmb 23 49 00.9
comp=Z,16nm,0.6s
T35A Sooner Cattle 21.52 352 IAmb IAmb 23 49 35.4
comp=Z,21nm,0.8s
MGMO Mountain Grove 21.55 2 IAmb IAmb 23 49 01.9
comp=Z,11nm,0.7s
121A Cookes Peak, D 21.60 324 P pP 23 49 27.2 +5.1
baz=138
Y57A Sumter 21.65 29 IAmb IAmb 23 49 41.5
comp=Z,24nm,0.9s
KAN13 South Haven SW 21.76 350 IAmb IAmb 23 49 03.7
comp=Z,13nm,0.6s
KAN09 Caldwell North 21.90 350 IAmb IAmb 23 49 05.0
comp=Z,18nm,0.5s
KAN05 Bluff City Nor 21.92 350 IAmb IAmb 23 49 05.3
comp=Z,17nm,0.7s
KAN01 Argonia South 21.94 350 IAmb IAmb 23 49 05.5
comp=Z,15nm,0.7s
T47A Sharon Grove 22.01 13 IAmb IAmb 23 49 42.2
comp=Z,17nm,0.8s
KAN06 Argonia West S 22.05 350 IAmb IAmb 23 49 06.6
comp=Z,16nm,0.6s
S39A Bolivar 22.07 359 IAmb IAmb 23 49 06.4
comp=Z,23nm,0.8s
S44A Carbondale 22.33 8 IAmb IAmb 23 49 44.5
comp=Z,26nm,0.8s
SIUC Southern Illin 22.35 8 IAmb IAmb 23 49 44.6
comp=Z,27nm,0.8s
CCM Cathedral Cave 22.49 4 P P 23 49 08.7 -1.0
CCM sP 23 49 40.8 -5.0
CCM IAmb IAmb 23 49 46.0
comp=Z,16nm,0.8s
RTBA Rita Blanca 22.55 339 P P 23 49 11.9 +1.4
RTBA IAmb IAmb 23 49 40.7
comp=Z,13nm,0.6s
ANMO Albuquerque 22.79 330 P P 23 49 15.5 +2.6
ANMO pP pP 23 49 38.4 +3.3
SDV Santo Domingo 22.84 104 P P 23 49 12.6 -1.1
SDV Santo Domingo 22.84 104 P P 23 49 12.1 -1.5
comp=Z,5.3nm,0.4s,baz=283,slow=2.0,SNR=7.0
comp=Z,5.3nm,0.4s
WCI Wyandotte Cave 23.38 13 P P 23 49 17.3 -0.8
WCI IAmb IAmb 23 49 56.1

comp=Z,18nm,0.7s
P40A Paris 23.92 2 IAmb IAmb 23 50 00.1
comp=Z,28nm,0.9s
P38A Dawn 24.01 359 IAmb IAmb 23 49 25.3
comp=Z,9.7nm,0.5s
214A Organ Pipe Nat 24.33 316 P pP 23 49 56.0 +4.7
baz=127,SNR=6.1
MVCO Mesa Verde 25.59 330 IAmb IAmb 23 49 42.3
comp=Z,16nm,0.7s
L40A Anamosa 26.48 3 IAmb IAmb 23 50 24.4
comp=Z,14nm,0.8s
ISCO Idaho Springs 26.57 338 pP 23 50 17.6 +5.3
PDMCI Parker Dam,Lak 26.66 318 P pP 23 50 15.1 +2.3
baz=129,SNR=8.6
SWSC Sam W. Stewart 26.96 314 P pP 23 50 19.2 +3.5
baz=124
IKP In-Ko-Pah, Jac 27.01 313 P pP 23 50 20.8 +4.6
baz=123
BC3 Big Chuckawall 27.13 316 P pP 23 50 20.4 +3.1
baz=126,SNR=16
IRM Iron Mountain 27.23 317 P pP 23 50 20.4 +2.4
baz=127,SNR=7.7
MONP2 Monument Peak 27.36 313 P pP 23 50 23.8 +4.2
baz=123
KNB Kanab 27.69 324 pP 23 50 26.9 +4.4
BELC Belle Mtn. Jos 27.70 316 P pP 23 50 25.3 +2.9
baz=126,SNR=5.9
TPFO Pinon Flats 27.78 315 P pP 23 50 26.8 +3.6
baz=124
PFO Pinyon Flats O 27.79 315 P pP 23 50 26.1 +2.8
baz=124
GMRC Granite Mounta 27.94 317 P pP 23 50 27.0 +2.4
baz=127,SNR=6.9
V12A Nelson 28.02 320 P P 23 50 03.9 +3.7
V12A IAmb IAmb 23 50 30.2
comp=Z,21nm,1.1s
ECSD EROS Data Cent 28.28 354 IAmb IAmb 23 50 30.8
comp=Z,11nm,1.2s
HEC Hector,Ludlow 28.41 317 P pP 23 50 31.7 +3.0
baz=126
TUQ Turquoise Moun 28.51 318 P pP 23 50 30.8 +1.0
baz=128
BFSC Mount Baldy Ra 28.96 315 P pP 23 50 36.9 +3.1
baz=124
GSC Goldstone, Bar 29.00 317 P pP 23 50 35.5 +1.4
baz=126
BSUT Blindstream Ca 29.31 332 pP pP 23 50 42.2 +5.2
EDW2 Edwards Air Fo 29.55 315 P pP 23 50 41.6 +2.6
baz=124
MPMC Manual Prospec 29.90 318 P pP 23 50 43.2 +1.0
baz=126,SNR=6.4
SPR3 Spring Creek 3 29.94 325 pP 23 50 46.6 +3.9
R11B Troy Canyon, C 30.19 323 P pP 23 50 44.9 +0.1
baz=132
ARVC Arvin 30.26 315 P pP 23 50 47.0 +1.8
baz=123
ISA Isabella, Lake 30.32 316 P pP 23 50 47.5 +1.7
baz=125
GRAC Grapevine Rang 30.39 319 P pP 23 50 45.8 -0.7
baz=128
CWC Cottonwood Cre 30.51 318 P pP 23 50 47.3 -0.3
baz=126
HWUT Hardware Ranch 30.53 332 pP pP 23 50 52.4 +4.8
PDAR Pinedale Array 30.62 336 P P 23 50 20.5 -2.8
comp=Z,0.6nm,0.8s,baz=167,slow=8.3,SNR=2.5
PDAR PcP PcP 23 53 19.6 +0.6
comp=Z,0.4nm,0.5s,baz=125,slow=5.2,SNR=4.6
comp=Z,0.6nm,0.8s
VES Vestal, Richgr 30.83 316 P pP 23 50 51.4 +1.2
baz=124
HVU Hansel Valley 31.22 331 P P 23 50 30.6 +2.1
HVU pP pP 23 50 55.1 +1.2
HVU IAmb IAmb 23 50 59.0
comp=Z,6.8nm,0.8s
AHID Auburn Hatcher 31.26 334 P P 23 50 29.0 +0.1
SADO Sadowa 31.42 19 P P 23 50 29.0 -1.0
REDW Red Top Meadow 31.64 335 P P 23 50 33.7 +1.4
REDW pP pP 23 50 59.2 +1.7
ELK Elko 31.68 327 P P 23 50 34.2 +1.6
SNOW Snow King Moun 31.69 335 P P 23 50 34.5 +1.8
SNOW pP pP 23 50 59.5 +1.5
LOHW Long Hollow 31.75 335 P P 23 50 34.2 +1.0
LOHW pP pP 23 51 02.3 +3.8
LOHW IAmb IAmb 23 51 03.6
comp=Z,6.2nm,0.8s
NV11 Mina Array Sit 31.78 321 P P 23 50 35.4 +2.0
NV11 pP pP 23 51 01.2 +2.4
NV11 IAmb IAmb 23 51 04.2
comp=Z,12nm,1.0s
TPAW Teton Pass 31.79 335 P P 23 50 33.6 0.0
TPAW pP 23 51 00.4 +1.5
TPAW IAmb IAmb 23 51 06.4
comp=Z,7.3nm,0.8s
NVAR Mina Array Bea 31.87 321 P P 23 50 37.2 +3.0
NVAR Mina Array Bea 31.87 321 P P 23 50 37.9 +3.6
comp=Z,4.0nm,0.8s,baz=136,slow=8.6,SNR=20
NVAR pP pP 23 51 01.1 +1.4
comp=Z,9.9nm,0.8s,baz=135,slow=9.0,SNR=21
NVAR PcP PcP 23 53 24.6 +2.2
comp=Z,1.5nm,0.7s,baz=129,slow=2.6,SNR=5.6
MOOW Moose Ponds 31.92 335 P P 23 50 35.1 +0.4
MOOW pP pP 23 51 01.9 +2.0
MOOW IAmb IAmb 23 51 05.0
comp=Z,6.2nm,0.9s
FXWY Fox Creek 31.94 335 P P 23 50 36.8 +1.9
IMW Indian Meadow 32.12 335 P P 23 50 38.4 +1.9
IMW IAmb IAmb 23 51 07.6
comp=Z,4.8nm,0.8s
KVN Kaiserville 32.14 322 P P 23 50 38.9 +2.3
KVN pP pP 23 51 03.8 +1.7
KVN IAmb IAmb 23 51 07.1
comp=Z,7.1nm,1.0s
FLWY Flagg Ranch 32.18 336 P P 23 50 38.7 +1.8
FLWY pP pP 23 51 05.4 +3.2
FLWY IAmb IAmb 23 51 07.9
comp=Z,6.1nm,0.8s
BMN Battle Mountai 32.54 324 P P 23 50 41.3 +1.2
BMN pP pP 23 51 07.4 +1.9
BMN IAmb IAmb 23 51 10.1
comp=Z,7.8nm,1.2s
MDND Maddock 32.68 352 P P 23 50 40.2 -0.8
MDND pP pP 23 51 06.0 -0.3
YHL Hebgen Lake 33.01 336 P P 23 50 44.3 0.0
HLID Hailey 33.37 331 P P 23 50 48.8 +1.6
HLID pP 23 51 14.2 +1.6
HLID IAmb IAmb 23 51 18.0
comp=Z,7.7nm,0.9s
WVOR Wild Horse Val 34.68 326 P P 23 51 00.3 +1.8
WVOR IAmb IAmb 23 51 28.9
comp=Z,8.2nm,1.1s
ULM Lac du Bonnet 34.71 357 P P 23 50 57.1 -1.4
ULM IAmb IAmb 23 51 22.5
comp=Z,9.8nm,1.2s
ULM PcP 23 53 29.9 +0.1
ULM Lac du Bonnet 34.71 357 P P 23 50 56.6 -1.9
comp=Z,6.2nm,0.8s,baz=172,slow=6.4,SNR=12
ULM pP pP 23 51 20.9 -3.1
comp=Z,4.0nm,0.8s,baz=182,slow=8.7,SNR=6.1
ULM PcP PcP 23 53 30.0 +0.1
comp=Z,5.0nm,0.8s,baz=212,slow=4.1,SNR=7.0
comp=Z,6.2nm,0.8s
J08A Circle Bar Ran 35.23 327 P P 23 51 05.3 +2.1
PLID Pearl Lake 35.27 331 P P 23 51 04.6 +1.0
PLID pP pP 23 51 29.9 +0.7
PLID IAmb IAmb 23 51 33.7
comp=Z,8.1nm,0.8s
F10A Beach Ranch, E 36.50 331 P P 23 51 15.1 +1.0
ETMB Extrema 36.60 132 P P 23 51 14.9 -0.2
ETMB IAmb IAmb 23 51 16.6
comp=Z,13nm,1.1s
E08A Dider Farm, El 37.74 330 P P 23 51 24.6 +0.2
E08A IAmb IAmb 23 51 56.1
comp=Z,11nm,1.5s
H04A Detroit Lake 38.10 326 P P 23 51 28.7 +1.2
H04A pP pP 23 51 56.5 +3.1
H04A IAmb IAmb 23 51 57.4
comp=Z,6.8nm,0.8s
HOOD Mount Hood Mea 38.23 327 P P 23 51 30.0 +1.2
SAML Samuel 38.28 127 P P 23 51 27.6 -1.6
LON Longmire 39.27 328 P P 23 51 38.8 +1.5
FFC Flin Flon 39.73 352 P P 23 51 40.2 -0.6
FFC pP pP 23 52 05.9 -0.9
LPAZ La Paz 40.04 141 P P 23 51 43.4 -1.2
EDM Edmonton 40.88 341 P P 23 51 50.6 +0.2
EDM IAmb IAmb 23 52 20.0

comp=Z,9.1nm,0.8s
VILB Vilhena 43.08 129 P **P** **23 52 07.8 -0.9**
FCC Fort Churchill 43.17 359 P **P** **23 52 07.7 -1.1**
SCHQ Schefferville 44.15 22 P **P** **23 52 15.9 -0.9**
comp=Z,1.4nm,0.7s,baz=224,slow=6.9,SNR=4.0
comp=Z,1.4nm,0.7s
PTLB Pontes e Lacer 45.47 131 P **P** **23 52 26.6 -1.2**
PTLB IAmb IAmb 23 52 28.2
comp=Z,11nm,0.8s
YKA Yellowknife Ar 49.32 347 P **P** **23 52 56.9 0.0**
comp=Z,1.9nm,0.7s,baz=149,slow=7.4,SNR=32
YKA pP **pP** **23 53 21.7 -2.1**
comp=Z,2.1nm,0.8s,baz=151,slow=7.3,SNR=8.4
YKA PcP **PcP** **23 54 18.4 +0.5**
comp=Z,1.1nm,0.8s,baz=152,slow=3.2,SNR=3.0
comp=Z,1.9nm,0.7s
T35M Bob Quinn 49.99 334 P **P** **23 53 05.7 +3.5**
baz=130
DLBC Dease Lake 50.86 336 P **P** **23 53 12.2 +3.5**
baz=131,SNR=6.8
S34M Telegraph Cree 50.96 335 P **P** **23 53 13.2 +3.8**
baz=130
FRB Frobisher Bay 51.06 14 P **P** **23 53 07.8 -2.2**
comp=Z,1.6nm,0.3s,baz=216,slow=7.6,SNR=7.4
comp=Z,1.6nm,0.3s
AQDB Aquidauana 51.23 133 P **P** **23 53 11.3 -0.6**
AQDB IAmb IAmb 23 53 12.5
comp=Z,11nm,1.1s
WTLY Watson Lake, Y 51.54 338 P **P** **23 53 16.2 +2.4**
baz=134
R33M Jennings River 51.86 336 P **P** **23 53 17.9 +1.7**
R33M pP **pP** **23 53 47.4 +4.1**
R33M IAmb IAmb 23 53 48.6
comp=Z,9.3nm,1.3s
R33M Jennings River 51.86 336 P **P** **23 53 18.9 +2.6**
baz=131
Q32M Nakina River 52.09 335 P **P** **23 53 18.0 -0.1**
Q32M IAmb IAmb 23 53 22.2
comp=Z,9.5nm,0.9s
Q32M Nakina River 52.09 335 P **P** **23 53 21.7 +3.7**
baz=129
VA06 Catapilco 52.15 157 P **P** **23 53 18.5 0.0**
VA06 pP **pP** **23 53 49.7 +4.3**
TGTN Hyland Airport 52.35 340 P **P** **23 53 21.4 +1.6**
baz=135
P33M Teslin, Yukon 53.10 336 P **P** **23 53 28.3 +2.9**
baz=129
SKAG Skagway 53.64 335 P **P** **23 53 33.5 +4.4**
baz=126
N32M Quiet Lake 53.81 337 P **P** **23 53 33.1 +2.7**
baz=130
BDFB Brasilia 54.18 123 P **P** **23 53 32.7 -1.2**
BDFB Brasilia 54.18 123 P **P** **23 53 32.5 -1.4**
comp=Z,13nm,0.8s,baz=294,slow=8.5,SNR=14
comp=Z,13nm,0.8s
CPUP Villa Florida 54.19 140 P **P** **23 53 32.6 -1.0**
comp=Z,4.1nm,0.9s,baz=358,slow=3.9,SNR=4.8
comp=Z,4.1nm,0.9s
WHY Whitehorse 54.19 336 P **P** **23 53 35.5 +2.2**
baz=127
FARO Faro, Yukon 54.60 338 P **P** **23 53 38.0 +1.8**
baz=130
O30N Mendenhall 54.73 336 P **P** **23 53 40.2 +3.1**
baz=126
P29M Windy Craggy 54.74 334 P **P** **23 53 41.0 +3.7**
baz=124
N31M Braeburn, Yuko 55.03 337 P **P** **23 53 41.5 +2.2**
baz=127
N30M Aishikik Lake 55.52 336 P **P** **23 53 45.4 +2.5**
baz=125
M30M Minto, Yukon 56.07 337 P **P** **23 53 48.8 +2.1**
baz=126
M29M Somme Creek 56.62 337 P **P** **23 53 53.3 +2.6**
baz=124
J30M Hart River 57.12 339 P **P** **23 53 55.2 +0.9**
baz=128
I30M Mount Dempster 57.54 340 P **P** **23 53 57.1 -0.1**
baz=128
G31M Satah River 57.98 342 P **P** **23 54 00.8 +0.8**
G31M **pP** **23 54 29.3 +1.6**
F31M Tsiigehtchic 58.17 343 P **P** **23 54 01.0 -0.3**
baz=132
BMRM Bremner River 58.37 333 P **P** **23 54 05.9 +3.0**
baz=117
EPYK Eagle Plains 58.37 341 P **P** **23 54 02.6 -0.2**
baz=128
N25K Chitina, Valde 58.66 334 P **P** **23 54 08.0 +3.0**
baz=118
F30M Barrier River 58.88 342 P **P** **23 54 06.8 +0.6**
baz=130
SPB Sao Paulo 59.14 130 P **P** **23 54 08.1 -0.6**
P23K Montague Islan 59.19 332 P P 23 54 13.5 +5.0
baz=114
I27K Kandik River 59.54 339 P **P** **23 54 12.4 +1.4**
baz=123
SCRK Sand Creek 59.56 337 P **P** **23 54 13.2 +2.1**
baz=120
PAX Paxson 59.66 335 P **P** **23 54 13.4 +1.6**
baz=118
J26L Joseph Creek 59.67 337 P **P** **23 54 13.6 +1.8**
baz=120
PLCA Paso Flores 59.74 160 P **P** **23 54 13.5 +0.9**
comp=Z,2.0nm,1.0s,baz=13,slow=8.0,SNR=2.9
comp=Z,2.0nm,1.0s
RIDG Independent Ri 59.78 336 P **P** **23 54 13.7 +1.1**
baz=118
H27K Steamboat Moun 59.86 339 P **P** **23 54 14.4 +1.4**
baz=123
E29M Blow River 59.98 342 P **P** **23 54 15.1 +1.2**
baz=128
F28M Old Crow 60.11 341 P **P** **23 54 15.6 +0.8**
baz=126,SNR=6.0
K24K Donnelly Dome 60.17 336 P **P** **23 54 17.4 +2.2**
baz=118
J25K Salcha River, 60.40 337 P **P** **23 54 18.3 +1.4**
baz=118
WAT6 Susitna Watana 60.42 334 P **P** **23 54 20.2 +3.1**
baz=115
GHO Glory Hole Cre 60.59 333 P **P** **23 54 19.1 +0.9**
E28M Babbage River 60.60 342 P **P** **23 54 17.8 -0.2**
baz=126
RC01 Rabbit Creek A 60.68 332 P **P** **23 54 20.9 +2.2**
baz=112
WAT1 Susitna Watana 60.87 334 P **P** **23 54 21.5 +1.5**
baz=114
PRP Porcupine Dome 60.89 338 P **P** **23 54 21.4 +1.1**
baz=119
HDA Harding Lake 60.91 336 P **P** **23 54 21.5 +1.3**
baz=117
ILAR Eielson Array 61.05 337 P **P** **23 54 21.5 +0.4**
comp=Z,6.3nm,0.9s,baz=171,slow=4.0,SNR=33
ILAR PcP **sP** **23 55 01.1 -0.5**
comp=Z,1.9nm,0.7s,baz=146,slow=2.1,SNR=7.9
comp=Z,6.3nm,0.9s
SUA Susitna One 61.28 332 P **P** **23 54 25.0 +2.2**
baz=112
D27M Malcolm River 61.39 342 P **P** **23 54 24.1 +0.6**
baz=125
MCK McKinley 61.40 335 P **P** **23 54 24.4 +0.9**
baz=114
POKR Poker Plat Res 61.41 337 P **P** **23 54 24.2 +0.6**
baz=117
CUT Chulitna 61.42 334 P **P** **23 54 25.8 +2.1**
baz=112
O20K Slope Mountain 61.66 331 P **P** **23 54 28.6 +3.2**
baz=109
SKT Skwentna 61.81 333 P **P** **23 54 29.0 +2.6**
baz=111
NEA2 Nenana 61.81 336 P **P** **23 54 27.2 +0.9**
baz=115
TRF Thorofare Moun 61.84 335 P **P** **23 54 28.8 +2.1**
baz=113
N20K Mount Spurr 61.84 332 P **P** **23 54 28.8 +2.2**
baz=110
RSO Redoubt South 61.84 331 P **P** **23 54 25.5 -1.3**
H24K Noodor Dome 61.91 338 P **P** **23 54 28.0 +1.0**
baz=116,SNR=5.4
F25K Christian Rive 61.96 340 P **P** **23 54 28.3 +1.1**
baz=120
G24K Hadweenzic Riv 62.16 339 P **P** **23 54 29.1 +0.5**
baz=117
I23K Minto, Yukon-K 62.16 337 P **P** **23 54 30.2 +1.6**
baz=115
E25K Arctic Village 62.20 340 P **P** **23 54 29.3 +0.4**
baz=120
BPAW Bear Paw Mtn. 62.38 335 P **P** **23 54 31.2 +1.1**
baz=112
CAST Castle Rocks 62.57 334 P **P** **23 54 32.1 +0.7**
CAST IAmb IAmb 23 54 33.1
comp=Z,7.2nm,0.8s
CAST Castle Rocks 62.57 334 P **P** **23 54 32.4 +1.0**
baz=111
MLY Manley 62.65 336 P **P** **23 54 32.9 +1.0**
MLY **pP** **23 55 00.0 +0.1**
MLY Manley 62.65 336 P **P** **23 54 33.4 +1.5**
baz=113,SNR=8.2
N19K Bonanza Creek 62.76 331 P **P** **23 54 34.0 +1.2**
baz=108
CHUM Lake Minchumin 62.84 335 P **P** **23 54 34.7 +1.6**
baz=111
L20K Farewell, AK 63.02 333 P **P** **23 54 35.2 +0.8**
baz=109
D25K Kavik River 63.06 341 P **P** **23 54 35.7 +1.2**
D25K **pP** **23 55 05.1 +2.5**
D25K Kavik River 63.06 341 P **P** **23 54 34.0 -0.6**
baz=120
M19K Big River Lodg 63.06 332 P **P** **23 54 36.6 +1.9**
baz=108
E24K Your Creek 63.14 340 P **P** **23 54 35.4 +0.3**
baz=117
COLD Coldfoot 63.35 339 P **P** **23 54 37.6 +1.1**
baz=115
N18K Kilae Creek 63.38 331 P **P** **23 54 38.2 +1.4**
baz=106
K20K Telida 63.39 334 P **P** **23 54 38.2 +1.4**
baz=109
E23K Chandalar 63.51 339 P **P** **23 54 39.4 +1.8**
baz=116
M18K Stony River 63.59 332 P **P** **23 54 39.2 +1.1**
baz=107
H21K Melozitna Rive 63.69 336 P **P** **23 54 39.7 +1.0**
baz=112
J20K Nowinta River 63.70 335 P **P** **23 54 39.9 +1.1**
baz=110
TOLK Toolik Lake Re 63.75 340 P **P** **23 54 40.8 +1.7**
baz=116
C24K Franklin Bluff 63.97 341 P **P** **23 54 42.0 +1.6**
baz=117
I20K Naaghedeneel 64.04 335 P **P** **23 54 42.4 +1.4**
baz=110
TTA Tatalina 64.09 333 P **P** **23 54 42.5 +1.0**
baz=107
J19K Poorman 64.25 334 P **P** **23 54 43.3 +0.9**
baz=108
G21K Allakaket 64.27 337 P **P** **23 54 43.9 +1.4**
baz=111
F21K Alatna River 64.52 338 P **P** **23 54 45.6 +1.4**
F21K Alatna River 64.52 338 P **P** **23 54 46.4 +2.2**
baz=112
D22K Ayikyak River 64.88 340 P **P** **23 54 47.2 +0.8**
D22K Ayikyak River 64.88 340 P **P** **23 54 47.9 +1.4**
baz=113
K17K Iditarod 65.04 333 P **P** **23 54 49.4 +1.8**
baz=105
H19K Roundabout Mou 65.07 336 P **P** **23 54 48.1 +0.5**
H19K IAmb IAmb 23 54 50.0
comp=Z,8.2nm,0.8s
H19K Roundabout Mou 65.07 336 P **P** **23 54 49.2 +1.5**
baz=108
E21K Killik River 65.15 339 P **P** **23 54 48.5 +0.3**
E21K IAmb IAmb 23 54 50.6
comp=Z,6.3nm,0.7s
E21K Killik River 65.15 339 P **P** **23 54 49.1 +0.9**
baz=112
F20K Avaraart Lake 65.28 337 P **P** **23 54 50.2 +1.2**
F20K Avaraart Lake 65.28 337 P **P** **23 54 51.1 +2.1**
baz=109
G19K Purcell Mounta 65.51 336 P **P** **23 54 52.3 +1.8**
baz=108
C21K Knifeblade Rid 65.69 340 P **P** **23 54 52.8 +1.2**
baz=111
B21K Ikpikpuk River 65.80 340 P **P** **23 54 53.1 +0.8**
baz=111
E20K Nigu River 65.85 339 P **P** **23 54 54.5 +1.7**
baz=109
E19K Redstone River 65.97 338 P **P** **23 54 54.9 +1.4**
baz=108
F19K Shaleruckik Mo 65.98 337 P **P** **23 54 54.8 +1.3**
baz=107
G18K Tagagawik 66.05 336 P **P** **23 54 56.1 +2.1**
baz=106
D20K Etivluk River 66.15 339 P **P** **23 54 56.0 +1.4**
baz=109
J16K Anuk River 66.20 333 P **P** **23 54 57.5 +2.5**
baz=103
L15K Ungalak Mounta 66.26 331 P **P** **23 54 57.4 +2.0**
baz=101
M14K Bethel 66.30 330 P **P** **23 54 58.0 +2.3**
baz=101
K15K Wolf Creek Mou 66.40 332 P **P** **23 54 58.0 +1.7**
baz=102
D19K Kuna River 66.61 339 P **P** **23 54 58.6 +1.0**
baz=108
G17K Kiwalik Mounta 66.74 335 P **P** **23 54 60.0 +1.6**
baz=104
L14K Kuka Creek 66.75 331 P **P** **23 55 00.4 +1.9**
baz=100
B20K Meade River 66.77 340 P **P** **23 54 58.9 +0.5**
B20K **pP** **23 55 26.8 0.0**
B20K Meade River 66.77 340 P **P** **23 54 59.8 +1.4**
baz=109
M13K Dall Lake 66.92 329 P **P** **23 55 02.3 +2.8**
baz=99
H16K Elim 67.20 334 P **P** **23 55 03.7 +2.4**
baz=102,SNR=5.5
J14K Nanvaranak Lak 67.41 332 P **P** **23 55 05.1 +2.5**
baz=100
E17K Hotham Inlet 67.58 337 P **P** **23 55 05.2 +1.5**
baz=103,SNR=11
M11K Mekoryuk 68.31 329 P P 23 55 14.3 +5.9
baz=97
F15K North Star Dit 68.41 335 P **P** **23 55 10.4 +1.5**
baz=100
ANM Nome 68.52 334 P **P** **23 55 11.7 +2.1**
baz=99
F14K Arctic Creek 69.06 335 P **P** **23 55 14.0 +1.1**
baz=98
TNA Tin City 69.73 335 P **P** **23 55 18.6 +1.6**
baz=97
SPITS Spitsbergen Ar 78.79 11 P **P** **23 56 08.2 -1.3**
comp=Z,9.6nm,1.0s,baz=288,slow=4.5,SNR=1.8
SPITS pP **pP** **23 56 33.6 -5.0**
comp=Z,7.3nm,1.0s,baz=269,slow=12,SNR=1.4
comp=Z,9.6nm,1.0s
ESDC Sonseca Array 79.55 52 P **P** **23 56 13.2 -1.2**
comp=Z,0.5nm,0.6s,baz=279,slow=5.5,SNR=5.5
comp=Z,0.5nm,0.6s
TORD Torodi Ar. Bea 90.98 76 P **P** **23 57 08.1 -3.6**
comp=Z,0.3nm,0.7s,baz=329,slow=4.5,SNR=1.8
KURBB Kurchatov Arra 113.72 6 PKiKP **PKiKP** **00 02 45.3 +0.5**
comp=Z,1.5nm,0.2s,baz=349,slow=1.7,SNR=6.1
MKAR Makanchi Array 117.82 4 PKP **PKPdf** **00 02 52.0 -0.9**
comp=Z,0.7nm,0.7s,baz=357,slow=2.3,SNR=7.8
GEYT Alibeck 120.31 26 PKP **PKPdf** **00 02 57.3 -0.7**
comp=Z,1.3nm,0.7s,baz=328,slow=10,SNR=4.9
BOSA Boshof 121.89 114 PKP **PKiKP** **00 03 01.8 +0.3**
comp=Z,5.3nm,0.8s,baz=253,slow=2.0,SNR=8.0
WRA Warramunga Arr 134.79 257 PKP **PKPdf** **00 03 24.2 -1.8**
comp=Z,0.6nm,0.8s,baz=87,slow=2.7,SNR=5.7
ASAR Alice Springs 135.22 252 PKP **PKPdf** **00 03 25.7 -1.0**
comp=Z,0.5nm,0.8s,baz=99,slow=2.9,SNR=2.7
CMAR Chiang Mai Arr 144.23 340 PKP PKPbc 00 03 41.6 +0.1
comp=Z,2.9nm,0.9s,baz=333,slow=4.0,SNR=14

UPA 11 23:46:49.2±0.5, 8°.69N×81°.93W, h0km±20km, MD3.0,
Probable volcanic, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGR2	**Aguacate**	**0.33**	**319**	*eP*		Pg	23 46 56.7	+1.1
BCO2	**Palmira**	**0.60**	**273**	*eP*		Pb	23 47 02.2	-0.5
BCO2				*eS*		Sb	23 47 12.7	+1.0
LIMO3	**Limones**	**1.10**	**238**	*eP*		Pg	23 47 10.6	+0.4

UPA 11 23:56:35.6±0.4, 7°.94N×82°.94W, h16km±1km, MW3.5
CATAC 11 23:56:36.0±0.9, 7°.89N×83°.00W, h5km, ML3.4
ISC 11 23:56:33.3±2.9, 7°.8N±0°.1×82°.87W±0°.05, h10km±10km, n18,
σ1s03/27, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIMO3	**Limones**	**0.29**	**2**	*eP*		**Pg**	**23 56 40.1**	**+1.0**
PTPM	**Petroterminale**	**0.39**	**359**	*eP*		**Pg**	**23 56 41.8**	**+0.8**
PTPM				*eS*		**Sg**	**23 56 46.3**	**+0.2**
PIRO Carate, Puerto 0.74 322 *i* S **Sg** **23 56 56.5 -1.0**
DVD David 0.75 34 *e*P **Pb** **23 56 48.5 0.0**
DVD *e*S **Sg** **23 56 58.2 +0.7**
CDITO Canoas 0.76 0 *i* P **Pg** **23 56 47.8 -0.1**
CDITO IAML 23 56 59.4
comp=Z,820nm,1.0s
BCO2 Palmira 0.96 21 *e*P **Pg** **23 56 51.9 0.0**
BCO2 *e*S **Sg** **23 57 05.1 +0.6**
BRU2 Volcan 0.99 11 *e*P **Pg** **23 56 52.3 -0.1**
BRU2 *e*S **Sg** **23 57 04.6 -0.8**
BC3P Paso Ancho 1.03 15 *e*P **Pg** **23 56 53.2 0.0**
LNBQ3 Los Naranjos, 1.06 24 *e*P **Pg** **23 56 53.4 -0.4**
PLAN Los Planes de 1.17 317 *i* P **Pn** **23 56 54.9 -0.9**
PLAN *i* S **Sb** **23 57 09.2 -1.7**
PLAN IAML 23 57 11.7
comp=Z,4μm,1.0s
CHGR2 Aguacate 1.33 33 *e*P **Pn** **23 56 57.5 -0.5**
CHGR2 *e*S **Sb** **23 57 15.1 -0.5**
CNI2 El Empalme, Bo 1.65 14 *e*P **Pn** **23 57 01.1 -1.3**
CDM Cerro de Muert 1.94 333 *i* P **Pn** **23 57 07.0 +0.2**
CDM *i* S **Sn** **23 57 32.4 +0.9**
CDM IAML 23 57 41.7
comp=Z,120nm,1.0s
LCR2 La Lucha 2 2.22 330 *i* P **Pn** **23 57 11.7 +1.3**
LCR2 *i* S **Sn** **23 57 38.7 +0.6**
LCR2 IAML 23 57 41.2
comp=Z,130nm,1.0s
VTCV VTCV, Calle Va 2.31 339 *i* P **Pb** **23 57 14.6 -0.7**
VTCV *i* S **Sn** **23 57 42.9 +2.5**
VTCV IAML 23 57 49.9
comp=Z,350nm,1.0s
OCM Ochomogo 2.33 333 *i* P **Pn** **23 57 13.6 +1.6**
OCM IAML 23 57 19.4
comp=Z,330nm,1.0s
HAYA Volcan Irazu 2.36 336 *i* P **Pb** **23 57 15.0 -1.2**
HAYA IAML 23 57 49.0
comp=Z,230nm,1.0s
SAJU San Juanillo, 3.59 309 *i* P **Pn** **23 57 29.9 +0.8**
SAJU IAML 23 58 15.7
comp=Z,41nm,1.0s

IDC 12 00:07:23.9±3.2, 55°.63N×149°.72W, h0km, mb3.4/2, mbtmp3.4/5, ML2.9/3, Error ellipse: s-maj=57.4km s-min=35.8km az=169.0
NEIC 12 00:07:28.8±1.3, 56°.1N±0°.1×149°.9W±0°.1, h20km±12km, ML3.7/40, ML3.5(AEIC), Error ellipse: s-maj=18.9km s-min=9.2km az=155.0
AEIC 12 00:07:32.1±1.5, 56°.1N±0°.1×149°.8W±0°.1, h11km±9km, Error ellipse: s-maj=17.5km s-min=9.4km az=152.0
ISC 12 00:07:27.7±1.2, 56°.14N±0°.09×149°.83W±0°.05, h10km, n130, σ0s98/126, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK Old Harbor 2.19 301 **Pn** **00 08 03.9 -0.3**
OHAK Old Harbor 2.19 301 **Sn** **00 08 28.7 -2.7**
OHAK Old Harbor 2.19 301 P **Pn** **00 08 03.7 -0.5**
baz=118
OHAK S **Sn** **00 08 28.7 -2.7**
baz=118
KDAK Kodiak Island 2.23 319 **Pn** **00 08 04.7 -0.1**
KDAK **Sn** **00 08 30.1 -2.2**
KDAK Kodiak Island 2.23 319 S **Sn** **00 08 29.8 -2.5**
baz=136
KDAK Kodiak Island 2.23 319 Pn **Pn** **00 08 04.6 -0.1**
5.4nm,0.3s,baz=142,slow=6.6,SNR=46
KDAK Sn **Sn** **00 08 30.7 -1.6**
5.4nm,0.3s,baz=34,slow=21,SNR=11
20nm,0.2s
SII Sitkinak Islan 2.46 282 Pn **Pn** **00 08 06.8 -1.0**
SII **Sn** **00 08 35.5 -2.4**
SII IAML 00 08 36.4
comp=E,632nm,0.8s
SII IAML 00 08 41.3
comp=N,308nm,0.8s
SII Sitkinak Islan 2.46 282 S **Sn** **00 08 34.9 -3.1**
baz=98
SYI Shuyak Island 2.84 332 **Pn** **00 08 13.2 +0.2**
SYI **Sn** **00 08 46.3 -0.9**
Q20K Shuyak Island 2.84 332 P **Pn** **00 08 13.2 +0.2**
baz=150
Q20K S **Sn** **00 08 46.3 -0.9**
baz=150
Q19K Cape Douglas, 3.47 325 **Pn** **00 08 22.4 +0.6**
Q19K Cape Douglas, 3.47 325 P **Pn** **00 08 22.4 +0.6**
baz=142
CNPM China Poot 3.48 348 **Pn** **00 08 21.5 -0.3**
CNPM **Sn** **00 09 01.5 -1.5**
CNPM China Poot 3.48 348 IAML 00 09 03.8
comp=E,68nm,1.0s
BRSE Bradley Lake S 3.64 353 **Pn** **00 08 23.6 -0.6**
BRSE **Sn** **00 09 05.5 -1.6**
BRSE Bradley Lake S 3.64 353 P **Pn** **00 08 23.6 -0.6**
baz=172
BRSE S **Sn** **00 09 05.5 -1.6**
baz=172
HOM Homer 3.66 345 Pn **Pn** **00 08 23.6 -0.7**
BRLK Bradley Lake 3.68 352 **Pn** **00 08 23.9 -0.7**
BRLK **Sn** **00 09 06.4 -1.6**
BRLK Bradley Lake 3.68 352 IAML 00 09 10.2
comp=E,57nm,1.2s
BRLK IAML 00 09 10.2
comp=N,83nm,1.4s
ANCK Angle Creek 3.71 306 **Pn** **00 08 25.9 +0.8**
KAHC Katmai Hardscr 3.77 314 P **Pn** **00 08 27.1 +1.2**
baz=130
Q23K Middleton Isla 3.79 28 **Pn** **00 08 25.3 -0.7**
Q23K Middleton Isla 3.79 28 IAML 00 09 10.6
comp=E,159nm,1.1s
Q23K IAML 00 09 33.9
comp=N,135nm,1.2s
Q23K Middleton Isla 3.79 28 P **Pn** **00 08 25.3 -0.7**
baz=210
MID Middleton Isla 3.79 28 **Pn** **00 08 25.4 -0.7**
Q17K Contact Creek 3.92 305 P **Pn** **00 08 28.8 +0.7**
baz=120
P19K Oil Pt 3.96 334 **Pn** **00 08 28.9 +0.4**
P19K Oil Pt 3.96 334 IAML 00 09 20.5
comp=E,124nm,1.4s
P19K IAML 00 09 20.9
comp=N,107nm,0.7s
P19K Oil Pt 3.96 334 P **Pn** **00 08 28.9 +0.4**
baz=151
P23K Montague Islan 4.08 17 **Pn** **00 08 29.6 -0.5**
P23K Montague Islan 4.08 17 P **Pn** **00 08 29.6 -0.5**
baz=199
O20K Slope Mountain 4.22 341 **Pn** **00 08 31.7 -0.4**
O20K Slope Mountain 4.22 341 P **Pn** **00 08 31.7 -0.4**
baz=158
IVE Iliamna Volcan 4.24 338 **Pn** **00 08 32.3 -0.1**
O22K Cooper Landing 4.35 1 Pn **Pn** **00 08 33.7 -0.1**
O22K IAML 00 10 12.5
comp=N,134nm,1.0s
P18K Big Mountain, 4.36 321 P **Pn** **00 08 34.0 +0.1**
baz=136
RSO Redoubt South 4.60 342 **Pn** **00 08 37.3 -0.2**
HIN Hinchinbrook I 4.61 21 **Pn** **00 08 37.1 -0.3**
HIN Hinchinbrook I 4.61 21 IAML 00 09 39.4
comp=N,78nm,1.4s
HIN IAML 00 09 41.8
comp=E,74nm,1.1s
P17K Kvichak River 4.69 314 **Pn** **00 08 39.0 +0.6**
P17K Kvichak River 4.69 314 P **Pn** **00 08 39.0 +0.6**
baz=128
O18K Koktuh Hills 4.70 325 **Pn** **00 08 38.5 0.0**
O18K IAML 00 09 34.5
comp=N,41nm,0.8s
O18K IAML 00 09 41.6
comp=E,25nm,0.8s
O18K Koktuh Hills 4.70 325 P **Pn** **00 08 38.6 0.0**
baz=140
KAIM Kayak Island 4.76 35 Pn **Pn** **00 08 38.0 -1.5**
KAIM IAML 00 09 41.0
comp=E,75nm,1.4s
KAIM IAML 00 09 50.2
comp=N,78nm,1.3s
EYAK Cordova Ski Ar 4.91 24 **Pn** **00 08 41.3 -0.2**
EYAK Cordova Ski Ar 4.91 24 P **Pn** **00 08 41.3 -0.2**
baz=207
RAGM Ragged Mountai 5.05 30 **Pn** **00 08 43.2 -0.3**
RAGM Ragged Mountai 5.05 30 IAML 00 09 57.8
comp=E,69nm,1.0s
SUCK Suckling Hills 5.08 37 **Pn** **00 08 43.7 -0.2**

SUCK	**Suckling Hills**	**5.08**	**37**	IAML			00 10 14.2		
	comp=N,63nm,1.3s								
HMT	**Hamilton**	**5.13**	**33**			**Pn**	**00 08 44.4**	**-0.2**	
P16K	**Nushagak River**	**5.26**	**307**			**Pn**	**00 08 47.0**	**+0.7**	
P16K	**Nushagak River**	**5.26**	**307**	P		**Pn**	**00 08 47.0**	**+0.7**	
	baz=120								
N19K	**Bonanza Creek**	**5.28**	**334**			**Pn**	**00 08 46.2**	**-0.5**	
N19K	**Bonanza Creek**	**5.28**	**334**	IAML			00 10 12.7		
	comp=E,18nm,1.0s								
N19K	**Bonanza Creek**	**5.28**	**334**	P		**Pn**	**00 08 46.2**	**-0.5**	
	baz=150								
BERG	**Berg Lake**	**5.35**	**35**			**Pn**	**00 08 47.2**	**-0.4**	
BERG	**Berg Lake**	**5.35**	**35**	IAML			00 10 03.1		
	comp=N,59nm,0.9s								
GRIN	**Grindle Hills**	**5.39**	**37**			**Pn**	**00 08 48.2**	**+0.1**	
N18K	**Kilae Creek**	**5.55**	**328**	P		**Pn**	**00 08 50.2**	**-0.2**	
	baz=142								
BMRM	**Bremner River**	**5.56**	**27**			**Pn**	**00 08 50.2**	**-0.2**	
BMRM	**Bremner River**	**5.56**	**27**	P		**Pn**	**00 08 50.2**	**-0.2**	
	baz=211								
O16K	**Kokwok River B**	**5.61**	**312**			**Pn**	**00 08 51.5**	**+0.5**	
O16K	**Kokwok River B**	**5.61**	**312**	P		**Pn**	**00 08 51.5**	**+0.5**	
	baz=125								
BARK	**Barkley Ridge**	**5.76**	**39**			**Pn**	**00 08 52.9**	**-0.4**	
TGL	**Tana Glacier**	**5.91**	**36**			**Pn**	**00 08 54.9**	**-0.4**	
ISLE	**Juniper Island**	**5.96**	**38**			**Pn**	**00 08 55.9**	**-0.1**	
BAGL	**Bagley Icefiel**	**5.97**	**40**			**Pn**	**00 08 55.8**	**-0.2**	
VRDI	**Verde Repeater**	**6.09**	**30**			**Pn**	**00 08 57.6**	**-0.2**	
N25K	**Chitina, Valde**	**6.11**	**24**	P		**Pn**	**00 08 58.0**	**-0.1**	
	baz=208								
GLB	**Gilahina Butte**	**6.17**	**28**			**Pn**	**00 08 58.8**	**0.0**	
O15K	**Ungalikthiuk R**	**6.17**	**304**			**Pn**	**00 08 59.1**	**+0.4**	
O15K	**Ungalikthiuk R**	**6.17**	**304**	P		**Pn**	**00 08 59.1**	**+0.4**	
	baz=115								
KIAG	**Kiagna River**	**6.18**	**36**			**Pn**	**00 08 58.9**	**-0.3**	
M18K	**Stony River**	**6.20**	**332**			**Pn**	**00 08 58.6**	**-0.6**	
M18K	**Stony River**	**6.20**	**332**	P		**Pn**	**00 08 58.6**	**-0.6**	
	baz=147								
SAMH	**Samovar Hills**	**6.24**	**46**			**Pn**	**00 08 59.7**	**-0.1**	
GRNC	**Granite Creek**	**6.25**	**39**			**Pn**	**00 08 59.8**	**-0.3**	
MCARA	**McCarthy VSAT**	**6.33**	**31**			**Pn**	**00 09 01.2**	**+0.2**	
MCARA	**McCarthy VSAT**	**6.33**	**31**	P		**Pn**	**00 09 01.2**	**+0.2**	
	baz=217								
PTPK	**Patty Peak**	**6.35**	**34**			**Pn**	**00 09 01.5**	**+0.1**	
N16K	**Nishlik Lake**	**6.41**	**316**			**Pn**	**00 09 02.7**	**+0.7**	
N16K	**Nishlik Lake**	**6.41**	**316**	P		**Pn**	**00 09 02.7**	**+0.7**	
	baz=129								
PCA	**Pinnacle**	**6.43**	**48**			**Pn**	**00 09 02.4**	**-0.1**	
PINM	**Pinnacle**	**6.44**	**48**	P		**Pn**	**00 09 02.4**	**-0.1**	
	baz=236								
BARN	**Barnard Glacie**	**6.52**	**37**			**Pn**	**00 09 03.7**	**-0.1**	
CTG	**Chitna Glacier**	**6.56**	**39**	P		**Pn**	**00 09 04.1**	**-0.2**	
	baz=226								
CTGM	**Chitina Glacie**	**6.56**	**39**			**Pn**	**00 09 04.2**	**-0.2**	
L19K	**White Mountain**	**6.58**	**339**			**Pn**	**00 09 03.6**	**-0.9**	
L19K	**White Mountain**	**6.58**	**339**	P		**Pn**	**00 09 03.6**	**-0.9**	
	baz=155								
PNL	**Peninsula**	**6.59**	**53**	P		**Pn**	**00 09 04.5**	**0.0**	
	baz=242								
LOGN	**Logan Glacier**	**6.59**	**41**			**Pn**	**00 09 03.9**	**-0.7**	
M17K	**Holitna River**	**6.59**	**326**			**Pn**	**00 09 05.0**	**+0.5**	
M17K	**Holitna River**	**6.59**	**326**	P		**Pn**	**00 09 05.0**	**+0.5**	
	baz=140								
BCPM	**Bancas Point**	**6.62**	**51**			**Pn**	**00 09 04.9**	**-0.1**	
HARP	**HAARP**	**6.71**	**19**			**Pn**	**00 09 07.4**	**+1.1**	
HARP	**HAARP**	**6.71**	**19**	P		**Pn**	**00 09 07.4**	**+1.1**	
	baz=203								
N15K	**Kwethluk River**	**6.76**	**311**			**Pn**	**00 09 08.1**	**+1.2**	
N15K	**Kwethluk River**	**6.76**	**311**	P		**Pn**	**00 09 08.1**	**+1.2**	
	baz=122								
M16K	**Timber Creek**	**6.83**	**319**			**Pn**	**00 09 08.3**	**+0.4**	
M16K	**Timber Creek**	**6.83**	**319**	P		**Pn**	**00 09 08.3**	**+0.4**	
	baz=132								
O14K	**Tigyukauivet M**	**6.88**	**302**			**Pn**	**00 09 09.1**	**+0.7**	
O14K	**Tigyukauivet M**	**6.88**	**302**	P		**Pn**	**00 09 09.1**	**+0.7**	
	baz=112								
O29M	**Mount Kennedy**	**7.26**	**50**			**Pn**	**00 09 14.1**	**+0.3**	
O29M	**Mount Kennedy**	**7.26**	**50**	P		**Pn**	**00 09 14.1**	**+0.3**	
	baz=240								
M15K	**Kasigluk River**	**7.30**	**313**			**Pn**	**00 09 14.8**	**+0.5**	
M15K	**Kasigluk River**	**7.30**	**313**	P		**Pn**	**00 09 14.8**	**+0.5**	
	baz=124								
YUK2	**White River**	**7.32**	**36**			**Pn**	**00 09 15.7**	**+1.1**	
P29M	**Windy Craggy**	**7.33**	**57**			**Pn**	**00 09 14.1**	**-0.6**	
P29M	**Windy Craggy**	**7.33**	**57**	P		**Pn**	**00 09 14.1**	**-0.6**	
	baz=246								
N14K	**Kuskokwak Cree**	**7.35**	**306**			**Pn**	**00 09 15.7**	**+0.8**	
N14K	**Kuskokwak Cree**	**7.35**	**306**	P		**Pn**	**00 09 15.7**	**+0.8**	
	baz=116								
YUK8	**Steele Glacier**	**7.35**	**41**			**Pn**	**00 09 16.4**	**+1.3**	
YUK8	**Steele Glacier**	**7.35**	**41**	P		**Pn**	**00 09 16.4**	**+1.3**	
	baz=230								
YUK3	**Moose Creek**	**7.44**	**37**	P		**Pn**	**00 09 17.2**	**+0.9**	
	baz=224								
YUK6	**Outpost Mounta**	**7.69**	**47**			**Pn**	**00 09 20.5**	**+0.7**	
YUK6	**Outpost Mounta**	**7.69**	**47**	P		**Pn**	**00 09 20.5**	**+0.7**	
	baz=236								
YUK4	**Talbot Arm**	**7.81**	**43**	P		**Pn**	**00 09 23.6**	**+2.2**	
	baz=232								
ILAR	**Eielson Array**	**8.78**	**8**	Pn		**Pn**	**00 09 36.4**	**+1.9**	
	comp=N,0.1nm,0.3s,baz=188,slow=14,SNR=7.7								
ILAR				Sn		**Sn**	**00 11 09.6**	**-3.8**	
	comp=N,0.2nm,0.3s,baz=196,slow=20,SNR=6.3								
	comp=N,0.8nm,1.0s								
P33M	**Teslin, Yukon**	**9.86**	**59**	P		**Pn**	**00 09 48.7**	**-0.7**	
	baz=253								
INK	**Inuvik**	**14.30**	**25**	Pn		**P**	**00 10 58.8**	**+1.6**	
	baz=201,slow=12,SNR=5.3								
YKA	**Yellowknife Ar**	**18.87**	**56**	P		**P**	**00 11 47.5**	**-0.2**	
	baz=265,slow=11,SNR=8.3								
	comp=N,1.1nm,1.0s								
H11N2	**WAKE ISLAND Hy**	**48.55**	**239**	T		T	01 08 27.0		
	baz=30,slow=76,SNR=4.0								
H11N3	**WAKE ISLAND Hy**	**48.55**	**239**	T		T	01 08 29.5		
	baz=30,slow=76,SNR=4.0								
H11N1	**WAKE ISLAND Hy**	**48.57**	**239**	T		T	01 08 25.6		
	baz=30,slow=76,SNR=3.5								
H11S1	**WAKE ISLAND Hy**	**49.69**	**239**	T		T	01 10 16.7		
	baz=27								
H11S2	**WAKE ISLAND Hy**	**49.70**	**239**	T		T	01 10 24.7		
	baz=27,SNR=4.0								
H11S3	**WAKE ISLAND Hy**	**49.71**	**239**	T		T	01 10 28.1		
	baz=27								
SONM	**Songino Array**	**58.50**	**310**	P		**P**	**00 17 24.5**	**+0.7**	
	comp=N,0.4nm,0.7s,baz=54,slow=7.4,SNR=3.5								
	comp=N,0.4nm,0.7s								
MKAR	**Makanchi Array**	**68.53**	**324**	P		**P**	**00 18 30.7**	**+0.6**	
	comp=N,0.4nm,0.9s,baz=42,slow=4.5,SNR=2.7								
	comp=N,0.4nm,0.9s								

IDC 12 00:15:24.9±1.8, 28°08N×105°20E, h0km, mb3.3/2, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=91.7km s-min=30.4km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.75**	**2**	P	P	00 19 56.6	+0.2
	0.1nm,0.3s,baz=181,slow=11,SNR=4.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**25.91**	**322**	P	P	00 20 58.5	-0.1
	0.5nm,0.8s,baz=132,slow=8.8,SNR=4.9						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**55.44**	**146**	P	P	00 25 01.3	-0.1
	0.3nm,1.0s,baz=337,slow=8.1,SNR=1.5						
	0.3nm,1.0s						

*NEIC **12** 00:15:36.3±1.3, 35°01N±0°01×97°48W±0°02, h5km±1km, Error ellipse: s-maj=3.5km s-min=2.8km az=287.0*

TUL 12 00:15:36.9±1.6, 34°99N±0°01×97°48W±0°02, h5km±4km, ML2.1, mb_Lg2.3/8(NEIC), ML2.2/28(NEIC), Error ellipse: s-maj=2.0km s-min=1.5km az=98.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNO	**Franklin**	**0.27**	**14**	Pg	Pg	00 15 42.4	+0.2
FNO				Sg	Sg	00 15 45.1	-0.7
FNO				IAML		00 15 50.0	
	comp=E,304nm,0.6s						
OKCSW	**OKLAHOMA CITY**	**0.41**	**5**	Pg	Pg	00 15 45.4	+0.5
OKCSW				IAML		00 15 56.1	
	comp=E,143nm,0.1s						
X34A	**Smith Ranch, M**	**0.49**	**217**	Pg	Pg	00 15 46.7	+0.5
X34A				Sg	Sg	00 15 52.8	+0.3
X34A				IAML		00 15 54.7	
	comp=N,143nm,0.5s						
W35A	**Tecumseh**	**0.52**	**72**		Pg	00 15 46.7	-0.3
W35A				IAML		00 16 00.8	
	comp=N,106nm,0.5s						
ADOK	**Arcadia Dam**	**0.66**	**8**	Pg	Pg	00 15 49.8	+0.2
ADOK				Sg	Sb	00 15 59.5	-1.1
OK029	**Liberty Lake**	**0.80**	**2**	Pg	Pg	00 15 52.1	-0.2
OK029				Sg	Sg	00 16 03.4	+0.7
OK029				IAML		00 16 06.3	
	comp=N,74nm,0.3s						
OK029				IAML		00 16 12.5	
	comp=N,60nm,0.3s						
LOOK	**Love County**	**1.03**	**166**	Pg	Pg	00 15 56.3	-0.3
LOOK				Sg	Sb	00 16 10.9	-0.1
LOOK				IAML		00 16 18.3	
	comp=E,49nm,0.2s						
LOOK				IAML		00 16 19.6	
	comp=N,63nm,0.2s						
WMOK	**Wichita Mounta**	**1.10**	**257**	Pg	Pg	00 15 56.0	-2.0
OK033	**Mehan**	**1.14**	**23**	Pg	Pg	00 15 57.4	-1.3
OK033				IAML		00 16 21.3	
	comp=N,84nm,0.1s						
OK052	**Battle Ridge R**	**1.14**	**29**	Pg	Pg	00 15 57.6	-1.2
DEOK	**Depew**	**1.17**	**43**	Pg	Pg	00 15 58.4	-0.9
DEOK				IAML		00 16 20.1	
	comp=N,71nm,0.1s						
QUOK	**Quay**	**1.33**	**28**		Pn	00 16 01.1	-1.2
OK048	**Pawnee Station**	**1.49**	**17**		Pn	00 16 03.7	-0.6
CROK	**Carrier**	**1.56**	**345**		Pn	00 16 05.1	-0.3
OK051	**E0350 and S346**	**1.60**	**19**		Pn	00 16 05.6	-0.2
TUL3	**Leonard**	**1.66**	**56**		Pn	00 16 06.6	-0.1
Z35A	**Perchaven, San**	**1.67**	**173**		Pn	00 16 06.3	-0.6
BLOK	**Blackwell**	**1.78**	**7**	Pn	Pn	00 16 08.2	-0.1
X37A	**Clayton**	**1.78**	**102**		Pn	00 16 08.5	+0.1
OK038	**West end E0370**	**1.80**	**326**		Pb	00 16 09.9	-0.5
GC02	**Grant County #**	**1.88**	**351**	Pn	Pn	00 16 08.6	-0.2
OK032	**Salt Plains WL**	**1.90**	**342**	Pn	Pn	00 16 09.3	-0.7
OK035	**E0210 Rd and N**	**1.98**	**330**	Pn	Pn	00 16 10.5	-0.7
KAN14	**Manchester OK**	**2.00**	**349**	Pn	Pn	00 16 11.4	0.0
FW03	**Perrin-Whitt E**	**2.01**	**194**		Pn	00 16 11.6	0.0
FW06	**Azle**	**2.02**	**182**		Pn	00 16 12.4	+0.8
FW06				IAmb_Lg		00 16 41.4	
	comp=Z,13nm,0.7s						
KAN13	**South Haven SW**	**2.02**	**0**	Pn	Pn	00 16 10.9	-0.7
T35A	**Sooner Cattle**	**2.07**	**22**		Pn	00 16 12.5	+0.1
KAN09	**Caldwell North**	**2.14**	**357**	Pn	Pn	00 16 13.5	+0.2
KAN10	**Anthony SW Sta**	**2.18**	**347**		Pn	00 16 13.6	-0.3
KAN10				IAmb_Lg		00 16 45.9	
	comp=Z,12nm,1.1s						
AMTX	**Amarillo**	**3.45**	**269**	IAmb_Lg		00 17 31.6	
	comp=Z,5.0nm,0.9s						
R40A	**Maddies Statio**	**5.33**	**50**	IAmb_Lg		00 18 34.4	
	comp=Z,6.7nm,1.0s						
S44A	**Carbondale**	**7.16**	**66**	IAmb_Lg		00 19 28.2	
	comp=Z,13nm,1.3s						

*NEIC **12** 00:34:37.1±1.0, 36°821N±0°008×97°601W±0°01, h5km±2km, Error ellipse: s-maj=1.4km s-min=0.4km az=150.0*

TUL 12 00:34:37.2±0.8, 36°82N±0°01×97°61W±0°01, h6km±3km, ML2.5, mb_Lg2.2/9(NEIC), ML2.4/52(NEIC), Error ellipse: s-maj=1.6km s-min=1.1km az=204.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.20**	**280**	Pg	Pg	00 34 41.6	+0.4
GC02				Sg	Sg	00 34 44.6	+0.7
KAN13	**South Haven SW**	**0.22**	**29**	Pg	Pg	00 34 42.3	+0.6
KAN13				Sg	Sg	00 34 45.6	+1.0
KAN13				IAML		00 34 45.8	
	comp=E,736nm,0.3s						
KAN13				IAML		00 34 46.1	
	comp=N,887nm,0.3s						
KAN17	**Caldwell West**	**0.26**	**332**	Pg	Pg	00 34 42.8	+0.6
KAN17				Sg	Sg	00 34 46.3	+0.6
KAN14	**Manchester OK**	**0.31**	**297**	Pg	Pg	00 34 43.8	+0.4
KAN14				Sg	Sg	00 34 48.1	+0.6
KAN09	**Caldwell North**	**0.32**	**359**		Pg	00 34 43.9	+0.5
KAN09				Sg	Sg	00 34 48.6	+0.9
KAN09				IAML		00 34 49.1	
	comp=N,691nm,0.2s						
BLOK	**Blackwell**	**0.33**	**100**		Pg	00 34 43.8	+0.3
BLOK				Sg	Sg	00 34 48.3	+0.5
BLOK				IAML		00 34 52.1	
	comp=N,444nm,0.2s						
KAN01	**Argonia South**	**0.35**	**341**	Pg	Pg	00 34 44.6	+0.4
KAN01				Sg	Sg	00 34 49.7	+0.9
KAN01				IAML		00 34 51.1	
	comp=N,368nm,0.1s						
KAN05	**Bluff City Nor**	**0.36**	**325**	Pg	Pg	00 34 44.7	+0.5
KAN05				Sg	Sg	00 34 49.4	+0.5
KAN05				IAML		00 34 51.4	
	comp=E,688nm,0.2s						
KAN05				IAML		00 34 52.5	
	comp=N,510nm,0.2s						
CROK	**Carrier**	**0.43**	**224**	Pg	Pg	00 34 45.8	+0.3
CROK				Sg	Sg	00 34 51.7	+0.5
KS21	**Milan North St**	**0.47**	**355**	IAML		00 34 53.5	
	comp=N,284nm,0.2s						
KS21	**Milan North St**	**0.47**	**355**	Pg	Pg	00 34 46.7	+0.4
KS21				Sg	Sg	00 34 53.4	+1.0
KAN06	**Argonia West S**	**0.47**	**336**	Pg	Pg	00 34 46.7	+0.4
KAN06				Sg	Sg	00 34 53.4	+0.8
KAN06				IAML		00 34 53.9	
	comp=E,276nm,0.2s						
KAN06				IAML		00 34 56.6	
	comp=N,292nm,0.1s						
OK032	**Salt Plains WL**	**0.48**	**269**	Pg	Pg	00 34 46.7	+0.2
OK032				Sg	Sg	00 34 53.3	+0.6
OK032				IAML		00 34 53.5	
	comp=N,327nm,0.2s						
KAN10	**Anthony SW Sta**	**0.49**	**309**		Pg	00 34 47.1	+0.4
KAN10				Sg	Sg	00 34 53.9	+0.7
KAN10				IAML		00 34 54.1	
	comp=N,361nm,0.1s						
KAN10				IAML		00 34 54.4	
	comp=E,265nm,0.1s						
KAN08	**Anthony NE Sta**	**0.50**	**325**	Pg	Pg	00 34 47.3	+0.5
KAN08				Sg	Sg	00 34 54.2	+0.8
KAN08				IAML		00 34 56.6	
	comp=N,260nm,0.1s						
KAN12	**Harper NE Stat**	**0.57**	**327**		Pg	00 34 48.8	+0.6
KAN12				Sg	Sg	00 34 56.4	+0.7
OK048	**Pawnee Station**	**0.67**	**126**	Pg	Pg	00 34 50.2	+0.1
OK048				Sg	Sg	00 34 59.1	+0.3
OK051	**E0350 and S346**	**0.70**	**116**		Pg	00 34 50.8	+0.1
OK051				Sg	Sg	00 35 00.1	+0.5
OK051				IAML		00 35 05.6	
	comp=N,192nm,0.2s						
OK051				IAML		00 35 06.9	
	comp=N,242nm,0.1s						
T35A	**Sooner Cattle**	**0.89**	**83**	Pg	Pg	00 34 54.3	0.0
OK033	**Mehan**	**0.94**	**145**	Pg	Pg	00 34 55.5	+0.2
OK033				Sg	Sg	00 35 07.6	0.0
OK033				IAML		00 35 07.8	
	comp=N,100nm,0.3s						
OK033				IAML		00 35 09.9	
	comp=N,117nm,0.4s						
OK038	**West end E0370**	**0.97**	**250**		Pg	00 34 55.4	-0.4
OK038				Sg	Sg	00 35 08.8	+0.4
QUOK	**Quay**	**0.97**	**131**	Pg	Pg	00 34 55.6	-0.2
QUOK				Sg	Sg	00 35 08.6	+0.1
QUOK				IAML		00 35 14.5	
	comp=N,129nm,0.3s						
QUOK				IAML		00 35 17.6	
	comp=E,103nm,0.2s						
OK029	**Liberty Lake**	**1.03**	**173**		Pg	00 34 56.6	-0.3
OK029				IAML		00 35 13.4	
	comp=E,96nm,0.2s						
OK052	**Battle Ridge R**	**1.05**	**141**		Pg	00 34 57.2	-0.1
OK052				IAML		00 35 12.3	
	comp=E,118nm,0.2s						
OK052				IAML		00 35 13.9	
	comp=E,124nm,0.2s						
U32A	**Winter Ranch,**	**1.20**	**249**	Pg	Pg	00 34 59.6	-0.6
U32A				IAML		00 35 16.5	
	comp=E,66nm,0.3s						
DEOK	**Depew**	**1.32**	**137**	Sg	Sb	00 35 19.6	-0.1
OKCSW	**OKLAHOMA CITY**	**1.42**	**174**		Pn	00 35 03.5	0.0
CSTR	**Hydro, Custer**	**1.46**	**217**		Pn	00 35 04.0	-0.1
CSTR				Sg	Sg	00 35 24.0	0.0
FNO	**Franklin**	**1.57**	**174**		Pn	00 35 05.2	-0.4
TUL3	**Leonard**	**1.73**	**121**	Pn	Pn	00 35 08.2	+0.5
TUL3					Sb	00 35 31.3	+0.1
TUL3				IAmb_Lg		00 35 34.3	
	comp=Z,12nm,0.8s						
W35A	**Tecumseh**	**1.77**	**160**		Pn	00 35 08.7	+0.4
W35A					Sb	00 35 32.3	0.0
R32A	**Long Quarter,**	**1.82**	**332**		Pb	00 35 10.1	-0.9
RLO	**Rose Lookout**	**2.19**	**107**	Pn	Pn	00 35 15.0	+0.9
X34A	**Smith Ranch, M**	**2.22**	**185**	Pn	Pn	00 35 14.0	-0.6
X34A					Pg	00 35 19.3	-0.5
WMOK	**Wichita Mounta**	**2.28**	**205**	Pn	Pn	00 35 15.7	+0.3
KSU1	**Kansas State U**	**2.41**	**19**		Pn	00 35 17.0	-0.2
KSU1				IAmb_Lg		00 35 58.4	
	comp=Z,8.0nm,1.1s						
CBKS	**Cedar Bluff**	**2.61**	**320**		Pn	00 35 20.2	+0.3
U38A	**Gravette**	**2.62**	**97**	Pn	Pn	00 35 20.7	+0.6
SMWD	**Samnorwood**	**2.73**	**232**	Pn	Pn	00 35 21.6	0.0
LOOK	**Love County**	**2.84**	**173**	Pn	Pn	00 35 22.8	-0.3
X37A	**Clayton**	**2.88**	**140**	Pn	Pn	00 35 24.0	+0.4
X37A				IAmb_Lg		00 36 15.3	
	comp=Z,15nm,1.2s						
HHAR	**Hobbs**	**3.01**	**99**	Pn	Pn	00 35 26.2	+0.9
WTFS	**Witchita Falls**	**3.12**	**193**	Pn	Pn	00 35 26.7	-0.3
Z35A	**Perchaven, San**	**3.49**	**175**	Pn	Pn	00 35 32.2	+0.2
S39A	**Bolivar**	**3.53**	**74**	Pg	Pb	00 35 42.0	+1.9
AMTX	**Amarillo**	**3.83**	**241**	Pg	Pg	00 35 48.4	-2.1
AMTX				IAmb_Lg		00 36 48.3	
	comp=Z,3.4nm,0.7s						
FW06	**Azle**	**3.84**	**179**	Pn	Pn	00 35 33.8	-3.0
P38A	**Dawn**	**4.26**	**48**	IAmb_Lg		00 36 52.4	
	comp=Z,5.1nm,0.7s						

*AFAD **12** 00:42:52.0±0.0, 39°56N×26°02E, h11km±2km, ML2.5*
*ISK **12** 00:42:53.4, 39°62N×26°09E, h7km, ML2.8/20*
*ATH **12** 00:42:53.5, 39°55N×26°01E, h13km±1km, ML2.4/6, Error ellipse: s-maj=2.4km s-min=1.0km az=235.0*
*THE **12** 00:42:53.4, 39°59N×26°06E, h11km±1km, ML2.5/9, Error ellipse: s-maj=1.6km s-min=0.8km az=219.0*

ISC 12 00:42:52.7±0.9, 39°60N±0°02×26°06E±0°02, h13km±6km, n63, σ0.966/93, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.11**	**145**	P	**Pg**	**00 42 55.0**	**-0.9**
GPNR	**Gulpinar-Canak**	**0.15**	**157**	Pg	**Pg**	**00 42 55.9**	**-0.5**
BOZC	**Bozcaada**	**0.25**	**359**	P	**Pg**	**00 42 57.8**	**-0.2**
BOZC				P	**Pb**	**00 42 58.1**	**-0.9**
BOZC				S	**Sg**	**00 43 03.0**	**+1.4**
EZN	**Ezine**	**0.31**	**42**	Pg	**Pb**	**00 42 59.5**	**-0.5**
EZN				Sg	**Sb**	**00 43 04.4**	**-0.6**
EZN	**Ezine**	**0.31**	**42**	P	**Pb**	**00 42 59.6**	**-0.5**
EZN				S	**Sb**	**00 43 04.7**	**-0.3**
	728nm,0.2s						
PRK	**Paraskevi**	**0.39**	**154**	P	**Pg**	**00 43 00.5**	**+0.1**
PRK				S	**Sg**	**00 43 06.0**	**+0.3**
	1μm,0.4s						
PRK	**Paraskevi**	**0.39**	**154**	P	**Pg**	**00 43 00.5**	**+0.1**
PRK				S	**Sb**	**00 43 06.3**	**-0.9**
PRK				AML	AML	00 43 06.3	
	comp=N,2429μm,0.3s						
PRK				AML	AML	00 43 07.7	
	comp=E,2487μm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.41**	**69**	P	**Pb**	**00 43 01.0**	**-0.7**
BAYC				S	**Sb**	**00 43 06.9**	**-0.9**
BAYC				*i* AML	AML	00 43 07.0	
	comp=E,307nm,0.3s						
SIGR	**SIGRI**	**0.41**	**202**	Pg	**Pn**	**00 43 03.3**	**-1.0**
SIGR				Sg	**Sb**	**00 43 09.2**	**+1.3**
SIGR	**SIGRI**	**0.41**	**202**	P	**Pn**	**00 43 03.4**	**-0.9**
SIGR				S	**Sb**	**00 43 07.8**	**-0.1**
	comp=E,658nm,0.3s						
ECEA	**Canakkale, Ece**	**0.46**	**11**	P	**Pb**	**00 43 02.3**	**-0.3**
ECEA				S	**Sb**	**00 43 09.5**	**+0.2**
ECEA				*i* AML	AML	00 43 15.0	
	comp=E,447nm,0.4s						
CNKL	**anakkale-Mer**	**0.54**	**28**	P	**Pb**	**00 43 03.2**	**-0.7**
CNKL				P	**Pg**	**00 43 03.5**	**+0.3**
CNKL				S	**Sb**	**00 43 11.5**	**-0.1**
AYVA	**Ayvalik**	**0.57**	**120**	P	**Pb**	**00 43 03.9**	**-0.6**
GOAD	**anakkale-G¶**	**0.58**	**349**	P	**Pb**	**00 43 04.6**	**-0.1**
GOAD				S	**Sb**	**00 43 12.3**	**-0.5**
GOAD				*i* AML	AML	00 43 18.0	
	comp=E,149nm,0.4s						
COMU	**Canakkale**	**0.60**	**32**	Pg	**Pb**	**00 43 04.9**	**-0.1**
GADA	**Gvkgeada**	**0.61**	**349**	Pg	**Pb**	**00 43 04.8**	**-0.3**
GADA				Sg	**Sb**	**00 43 14.2**	**+0.6**
LESV	**Lesvos island,**	**0.62**	**141**	P	**Pb**	**00 43 05.0**	**-0.4**
LESV				S	**Sb**	**00 43 13.8**	**-0.2**
	comp=E,1μm,0.2s						
LIA	**Limnos Island**	**0.74**	**295**	P	**Pb**	**00 43 07.2**	**-0.1**
LIA				S	**Sb**	**00 43 17.7**	**+0.4**
	comp=E,700nm,0.4s						
LIA	**Limnos Island**	**0.74**	**295**	P	**Pb**	**00 43 07.

ZEYE				*i* AML	AML	00 43 41.0		
	comp=N,72nm,0.2s							
BLCB	**Balcova**	**1.43**	**147**	Pn	**Pg**	**00 43 20.2**	**0.0**	
BLCB	**Balcova**	**1.43**	**147**	P	**Pb**	**00 43 18.9**	**-0.3**	
BLCB				S	**Sb**	**00 43 37.5**	**+0.2**	
THAS	**Thassos island**	**1.44**	**315**	P	**Pn**	**00 43 18.5**	**+0.1**	
THAS				AML	AML	00 43 40.8		
	comp=N,137µm,0.3s							
THAS				AML	AML	00 43 41.3		
	comp=E,96µm,0.4s							
MRMT	**Marmara Adasi**	**1.55**	**49**	Pn	**Pg**	**00 43 21.5**	**-1.0**	
EDC	**Edincik**	**1.58**	**61**	Pn	**Pg**	**00 43 21.9**	**-1.1**	
UKOP	**Uzunkopru-Edir**	**1.59**	**16**	Pn	**Pg**	**00 43 22.2**	**-1.1**	
RDO	**Rodhopi**	**1.60**	**346**	Pn	**Pb**	**00 43 22.2**	**+0.2**	
RDO	**Rodhopi**	**1.60**	**346**	P	**Pn**	**00 43 21.0**	**+0.4**	
RDO	**Rodhopi**	**1.60**	**346**	P	**Pb**	**00 43 21.4**	**-0.7**	
OUR	**Ouranopolis**	**1.76**	**296**	P	**Pn**	**00 43 23.1**	**+0.3**	
KYMI	**Kymi, Euboea I**	**1.80**	**238**	P	**Pn**	**00 43 22.8**	**-0.5**	
SMG	**Samos**	**1.98**	**162**	P	**Pn**	**00 43 25.9**	**+0.1**	
KOKK	**Kokkinochori,**	**1.99**	**308**	P	**Pn**	**00 43 26.1**	**+0.1**	
NVR	**Nevrokopi**	**2.42**	**317**	P	**Pn**	**00 43 33.2**	**+1.2**	
APE	**Apeiranthos**	**2.56**	**189**	P	**Pn**	**00 43 33.1**	**-0.7**	

CATAC ***12*** *00:49:33.6±0.9, 12°.33N×88°.88W, h1km±6km, ML3.7*
NEIC ***12*** *00:49:34.2±2.1, 12°.2N±0°.1×88°.63W±0°.09, h35km±15km, mb4.2/16, Error ellipse: s-maj=21.7km s-min=7.9km az=209.0*
SNET ***12*** *00:49:37.7±1.5, 12°.54N×88°.93W, h22km, ML3.7*
ISC 12 00:49:33.2±1.8**, 12°.27N**±0°.06×**88°.92W**±0°.04**, h23**km±12km**, n87**, σ1°29/99**, mb4.2**/11**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**1.18**	**34**	*e*P		**Pb**		**00 49 55.3**	**+0.3**
TECO	**Alcaldia de Te**	**1.27**	**6**	*e*P		**Pb**		**00 49 56.2**	**-0.3**
TECO				*e*S		**Sn**		**00 50 11.9**	**0.0**
TECO	**Alcaldia de Te**	**1.27**	**6**	*i* P		**Pn**		**00 49 56.0**	**+0.4**
TECO				IAML				00 50 20.1	
	comp=Z,880nm,1.0s								
LALI	**Alcalda de L**	**1.27**	**342**	*i* P		**Pb**		**00 49 56.3**	**-0.3**
LALI				*i* S		**Sb**		**00 50 12.4**	**-0.1**
LALI				IAML				00 50 15.0	
	comp=Z,330nm,1.0s								
TECA	**Tecapa**	**1.28**	**18**	*e*P		**Pb**		**00 49 56.9**	**+0.1**
LCY	**Lacayo**	**1.30**	**28**	*e*P		**Pb**		**00 49 56.9**	**-0.2**
PACA	**Pacayal**	**1.33**	**26**	*e*P		**Pb**		**00 49 57.5**	**0.0**
PACA				*e*P		**Pn**		**00 49 57.9**	**+1.4**
PACA	**Pacayal**	**1.33**	**26**	*i* P		**Pb**		**00 49 57.6**	**0.0**
PACA				*i* S		**Sb**		**00 50 14.8**	**+0.6**
PACA				IAML				00 50 20.0	
	comp=Z,15µm,1.0s								
SJTE	**Alcalda de S**	**1.34**	**356**	*e*P		**Pn**		**00 49 56.9**	**+0.3**
SJTE	**Alcalda de S**	**1.34**	**356**	*i* P		**Pn**		**00 49 56.9**	**+0.3**
SJTE				IAML				00 50 23.2	
	comp=Z,770nm,1.0s								
BLLM	**Bellamira**	**1.34**	**30**	⇓*i* P		**Pb**		**00 49 57.8**	**+0.1**
COEG	**Centro de Oper**	**1.34**	**2**	*e*P		**Pn**		**00 49 57.0**	**+0.3**
COEG	**Centro de Oper**	**1.34**	**2**	*i* P		**Pb**		**00 49 58.1**	**+0.3**
COEG				*i* S		**Sb**		**00 50 14.9**	**+0.3**
COEG				IAML				00 50 23.7	
	comp=Z,750nm,1.0s								
LFRS	**El Faro**	**1.35**	**354**	*e*P		**Pb**		**00 49 57.4**	**-0.6**
UESV	**Universidad de**	**1.36**	**5**	*i* P		**Pb**		**00 49 57.8**	**-0.3**
UESV				*i* S		**Sb**		**00 50 14.9**	**-0.3**
UESV				IAML				00 50 18.7	
	comp=Z,1µm,1.0s								
LOMA	**Loma Larga**	**1.39**	**350**	*e*P		**Pn**		**00 49 57.8**	**+0.4**
LOMA	**Loma Larga**	**1.39**	**350**	*i* P		**Pb**		**00 49 58.2**	**-0.4**
LOMA				*i* S		**Sb**		**00 50 16.4**	**+0.4**
LOMA				IAML				00 50 21.6	
	comp=Z,1µm,1.0s								
PQSS	**Presa 15 de Se**	**1.39**	**14**	*e*P		**Pb**		**00 49 58.4**	**-0.2**
PQSS	**Presa 15 de Se**	**1.39**	**14**	*i* P		**Pb**		**00 49 58.2**	**-0.4**
PQSS				IAML				00 50 18.4	
	comp=Z,820nm,1.0s								
PAVA	**Las Pavas**	**1.44**	**359**	*i* P		**Pn**		**00 49 58.6**	**+0.6**
PAVA				*i* S		**Sn**		**00 50 16.6**	**+0.4**
PAVA				IAML				00 50 20.2	
	comp=Z,2µm,1.0s								
SCLA	**Alcaldia de Sa**	**1.44**	**7**	*e*P		**Pb**		**00 49 59.0**	**-0.4**
SCLA				*e*S		**Sb**		**00 50 17.3**	**0.0**
SCLA	**Alcaldia de Sa**	**1.44**	**7**	*i* P		**Pb**		**00 49 59.0**	**-0.4**
SCLA				*i* S		**Sb**		**00 50 17.0**	**-0.3**
SCLA				IAML				00 50 21.9	
	comp=Z,710nm,1.0s								
SNET	**Serv Nac Est T**	**1.44**	**348**			**Pb**		**00 49 59.3**	**-0.2**
SNET					Sn	**Sb**		**00 50 17.7**	**+0.3**
SNET	**Serv Nac Est T**	**1.44**	**348**	*e*P		**Pb**		**00 49 59.2**	**-0.2**
CNCH	**Conchagua**	**1.46**	**46**	*e*P		**Pb**		**00 49 59.5**	**-0.3**
CNCH	**Conchagua**	**1.46**	**46**	*i* P		**Pb**		**00 49 59.6**	**-0.2**
CNCH				*i* S		**Sb**		**00 50 17.5**	**-0.4**
CNCH				IAML				00 50 25.7	
	comp=Z,2µm,1.0s								
JAYA	**Jayaque - finc**	**1.47**	**339**	*i* P		**Pb**		**00 49 59.3**	**-0.7**
JAYA				*e*S		**Sn**		**00 50 17.0**	**-0.1**
JAYA	**Jayaque - finc**	**1.47**	**339**	*i* P		**Pn**		**00 49 59.1**	**+0.6**
JAYA				IAML				00 50 19.4	
	comp=Z,3µm,1.0s								
UEES	**Universidad Ev**	**1.47**	**348**	*e*P		**Pb**		**00 49 59.8**	**-0.2**
UEES	**Universidad Ev**	**1.47**	**348**	*i* P		**Pb**		**00 49 59.8**	**-0.2**
UEES				IAML				00 50 26.2	
	comp=Z,580nm,1.0s								
PMON	**Piamonte**	**1.48**	**345**	*i* P		**Pn**		**00 49 59.4**	**+0.7**
PMON				IAML				00 50 24.8	
	comp=Z,2µm,1.0s								
BOQS	**Boqueron**	**1.50**	**346**	*e*P		**Pb**		**00 49 59.9**	**-0.6**
CSGN	**Cosiguina Volc**	**1.50**	**62**	*i* P		**Pn**		**00 49 59.4**	**+0.6**
CSGN				IAML				00 50 30.9	
	comp=Z,4µm,1.0s								
PIC2	**El Picacho**	**1.50**	**347**	*e*P		**Pb**		**00 50 00.6**	**-0.1**
AMPH	**Amapala**	**1.59**	**50**	*i* P		**Pb**		**00 50 01.6**	**-0.3**
AMPH				*e*S		**Sb**		**00 50 21.9**	**+0.3**
AMPH	**Amapala**	**1.59**	**50**	*i* P		**Pb**		**00 50 01.4**	**-0.6**
CEVE	**Cerro Verde**	**1.69**	**336**	*e*P		**Pn**		**00 50 02.7**	**+1.0**
CEVE	**Cerro Verde**	**1.69**	**336**	*i* P		**Pb**		**00 50 03.1**	**-0.8**
CEVE				IAML				00 50 27.4	
	comp=Z,2µm,1.0s								
SBLS	**San Blas**	**1.71**	**336**	*e*P		**Pb**		**00 50 03.2**	**-0.9**
SNJE	**San Jose**	**1.73**	**337**	*e*P		**Pb**		**00 50 03.4**	**-0.9**
SNJE				*e*P		**Pn**		**00 50 03.6**	**+1.5**
RTR	**El Retiro**	**1.77**	**336**	*e*P		**Pb**		**00 50 04.0**	**-1.0**
UNIC	**Universidad Ca**	**1.81**	**340**	*i* P		**Pb**		**00 50 04.9**	**-0.8**
UNIC				IAML				00 50 05.7	
	comp=Z,320nm,1.0s								
NUBE	**Las Nubes**	**1.83**	**333**	*e*P		**Pn**		**00 50 04.7**	**+1.3**
NUBE	**Las Nubes**	**1.83**	**333**	*i* P		**Pn**		**00 50 04.6**	**+1.2**
NUBE				IAML				00 50 36.5	
	comp=Z,1µm,1.0s								
CRIN	**San Cristobal**	**1.87**	**77**	Pn		**Pn**		**00 50 03.8**	**-0.2**
CRIN	**San Cristobal**	**1.87**	**77**	*i* P		**Pb**		**00 50 06.6**	**-0.2**
CRIN				IAML				00 50 47.8	
	comp=Z,1µm,1.0s								
LLGN	**La Laguna**	**1.88**	**359**	*i* P		**Pb**		**00 50 05.7**	**-1.3**
LLGN				IAML				00 50 33.9	
	comp=Z,750nm,1.0s								
SLOZ	**Alcaldia de Sa**	**1.94**	**334**	*e*P		**Pb**		**00 50 06.8**	**-1.1**
HERN	**Volcan Telica**	**2.07**	**80**	*i* P		**Pb**		**00 50 08.7**	**-1.4**
HERN				IAML				00 50 46.6	
	comp=Z,540nm,1.0s								
MTO3	**Montecristo**	**2.16**	**349**			**Pn**		**00 50 09.8**	**+1.7**
CNGN	**Cerro Negro**	**2.18**	**84**	Pn		**Pn**		**00 50 04.4**	**-3.7**
COPN	**Copaltepe**	**2.28**	**92**	*i* P		**Pn**		**00 50 10.3**	**+0.9**
COPN				IAML				00 50 55.1	
	comp=Z,400nm,1.0s								
ESQI	**Esquipulas**	**2.31**	**350**			**Pb**		**00 50 12.4**	**-2.0**
MOMN	**Momotombo**	**2.33**	**86**	*i* P		**Pn**		**00 50 11.7**	**+1.5**
MOMN				IAML				00 50 45.2	
	comp=Z,12nm,1.0s								
TGUH	**Tegucigalpa,Un**	**2.39**	**42**			**Pn**		**00 50 12.3**	**+1.2**
COMHN	**El Horno**	**2.54**	**31**	*i* P		**Pn**		**00 50 14.5**	**+1.3**
LIMN	**Finca el Limon**	**2.61**	**72**	*i* P		**Pn**		**00 50 15.7**	**+1.6**
LIMN				IAML				00 50 50.3	
	comp=Z,130nm,1.0s								
YUSH	**Yuscaran**	**2.62**	**50**	*e*P		**Pn**		**00 50 16.4**	**+2.1**
YUSH	**Yuscaran**	**2.62**	**50**	*i* P		**Pn**		**00 50 16.4**	**+2.1**
MATN	**Matagalpa**	**2.99**	**77**	Pn		**Pn**		**00 50 15.7**	**-3.7**
BOAB	**BOACO BROADBAN**	**3.18**	**86**	Pn		Pn		00 50 16.4	-5.5
BOAB	**BOACO BROADBAN**	**3.18**	**86**	*i* P		**Pn**		**00 50 23.3**	**+1.4**
BOAB				IAML				00 51 12.3	
	comp=Z,45nm,1.0s								
HZTE	**Horizontes, Gu**	**3.60**	**115**	*i* P		**Pn**		**00 50 31.5**	**+3.8**
HZTE				IAML				00 51 40.2	
	comp=Z,100nm,1.0s								
SAJU	**San Juanillo,**	**3.83**	**124**	*i* P		**Pn**		**00 50 33.9**	**+3.0**
SAJU				IAML				00 51 37.5	
	comp=Z,71nm,1.0s								
ORTG	**Ortega, Santa**	**3.89**	**119**	*i* P		**Pn**		**00 50 35.7**	**+4.0**
ORTG				IAML				00 52 35.3	
	comp=Z,35nm,1.0s								
JTS	**Las Juntas de**	**4.36**	**116**	Pn		Pn		00 50 43.1	+5.0
	comp=Z,1.4nm,0.3s,baz=285,slow=16,SNR=2.7								
	comp=Z,3.3nm,0.4s								
TEIG	**Tepich**	**7.94**	**4**	Pn		**Pn**		**00 51 26.8**	**-0.4**
BRDY	**Brady**	**21.09**	**335**	P		**P**		**00 54 17.6**	**+1.5**
BRDY				IAmb		IAmb		00 54 18.3	
	comp=Z,7.4nm,0.7s								
GOGA	**Godfrey**	**21.63**	**12**	P		**P**		**00 54 22.2**	**+0.3**
GOGA				IAmb		IAmb		00 54 27.9	
	comp=Z,13nm,1.4s								
WLAR	**White Oak Lake**	**21.66**	**350**	P		**P**		**00 54 20.2**	**-2.0**
OZNA	**Ozona**	**21.72**	**331**	P		**P**		**00 54 21.8**	**-1.2**
TXAR	**Lajitas Array**	**21.83**	**323**	P		**P**		**00 54 25.4**	**+1.2**
TXAR	**Lajitas Array**	**21.83**	**323**	P		**P**		**00 54 27.9**	**+3.7**
	comp=Z,1.7nm,0.7s,baz=147,slow=11,SNR=15								
	comp=Z,1.7nm,0.7s								
TX31	**Lajitas Ar. Si**	**21.83**	**323**	P		**P**		**00 54 26.1**	**+1.9**
MIAR	**Mount Ida**	**22.58**	**350**	P		**P**		**00 54 33.5**	**+1.4**
MIAR				IAmb		IAmb		00 54 36.2	
	comp=Z,6.4nm,0.9s								
X37A	**Clayton**	**22.98**	**346**	P		**P**		**00 54 37.8**	**+1.5**
X37A				IAmb		IAmb		00 54 45.6	
	comp=Z,9.9nm,1.4s								
FCAR	**Ozark Folk Cen**	**23.70**	**354**	P		**P**		**00 54 43.8**	**+0.5**
HHAR	**Hobbs**	**24.33**	**350**	P		**P**		**00 54 50.4**	**+1.0**
CCM	**Cathedral Cave**	**25.76**	**356**	P		**P**		**00 55 03.1**	**+0.8**
CCM				IAmb		IAmb		00 55 04.0	
	comp=Z,7.4nm,0.8s								
SPMN	**Marine on St.**	**33.01**	**355**	P		**P**		**00 56 06.8**	**+0.2**
F36A	**Milaca**	**33.71**	**354**	P		**P**		**00 56 11.7**	**-1.0**
F36A				IAmb		IAmb		00 56 38.4	
	comp=Z,5.3nm,1.4s								
EYMN	**Ely**	**35.63**	**357**	P		**P**		**00 56 28.7**	**-0.6**
ULM	**Lac du Bonnet**	**38.30**	**353**	P		**P**		**00 56 50.8**	**-1.1**
ULM				IAmb		IAmb		00 57 11.1	
	comp=Z,4.3nm,1.2s								
SCHQ	**Schefferville**	**45.87**	**18**	P		**P**		**00 57 51.6**	**-2.1**
FCC	**Fort Churchill**	**46.56**	**356**	P		**P**		**00 57 58.6**	**-0.4**
FCC				IAmb		IAmb		00 57 59.1	
	comp=Z,3.4nm,1.4s								
YKA	**Yellowknife Ar**	**53.42**	**345**	P		**P**		**00 58 51.1**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=140,slow=7.5,SNR=5.8								
	comp=Z,0.3nm,0.8s								
ILAR	**Eielson Array**	**65.61**	**336**	P		P		01 00 01.0	-14
	comp=Z,0.5nm,0.8s,baz=135,slow=3.6,SNR=6.9								
	comp=Z,0.5nm,0.8s								

BJI ***12*** *00:52:30.0±0.0, 5°.72N×133°.96E, h24km, mb4.6/55, mB5.2/30, Ms4.6/30, Ms7 4.4/31*
IDC ***12*** *00:52:31.4±0.6, 6°.06N×133°.69E, h0km, mb4.6/20, mbtmp4.6/21, ML5.6/1, MS4.1/26, Error ellipse: s-maj=26.4km s-min=12.5km az=75.0*
MOS ***12*** *00:52:31.2±0.8, 6°.09N×133°.59E, h10km, mb5.1/39, Error ellipse: s-maj=12.7km s-min=5.6km az=119.3*
NEIC ***12*** *00:52:33.3±1.5, 6°.09N±0°.08×133°.66E±0°.07, h10km±1km, mb5.0/213, Error ellipse: s-maj=14.1km s-min=11.7km az=27.0*
DJA ***12*** *00:52:34.5±0.6, 6°N±4°×13°4E±°, h22km±3km, M5.0/38, mB5.5/19, mb4.9/38, MLv5.1/4, Mw(mB)5.0/18, MwMwp5.2/1, Mwp5.4/1*
GCMT ***12*** *00:52:35.3±0.3, 6°.11N±0°.03×133°.65E±0°.02, h17km, MW5.1/118, Moment Tensor Solution. s29,c30; s118,c176; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr6.20±.33; Mθθ-1.14±.18; Mϕϕ-5.06±.21; Mrθ-0.19±.61; Mθϕ-1.50±.11; Mϕr-0.31±.43; Best double couple: M○5.89500×10^16 NP1:ϕs199.00000°, δ47.00000°, λ91.00000°. NP2:ϕs18.00000°, δ43.00000°, λ89.00000°. Principal axes: T 6.2120, Plg88.0000°, Azm130.0000°; N -0.6330, Plg1.0000°, Azm19.0000°; P -5.5790, Plg2.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 12 00:52:34.5±0.6**, 6°.04N**±0°.04×**133°.65E**±0°.05**, h19**km±2km**, h20**km**; pP-P, n613**, σ1°03/580**, mb5.0**/169**, MS4.3**/39**, 6C-3D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SWI	**Sorong**	**7.26**	**199**	P		**Pn**		**00 54 22.0**	**+2.3**
	80nm,0.8s,0.3nm								
DAV	**Davao City (W)**	**8.09**	**278**			**Pn**		**00 54 30.1**	**-0.9**
DAV						**Sn**		**00 56 01.6**	**-0.4**
DAV	**Davao City (W)**	**8.09**	**278**	Pn		**Pn**		**00 54 30.3**	**-0.7**
	85nm,0.3s,baz=239,slow=0.2,SNR=6.9								
DAV				Sn		**Sn**		**00 56 00.3**	**-1.7**
	55nm,0.3s,baz=297,slow=20,SNR=6.8								
DAV				LR		LR		00 58 48.6	
	comp=Z,1µm,18.0s,baz=140,slow=46								
	33nm,0.6s								
TNTI	**Ternate**	**8.17**	**230**			**Pn**		**00 54 33.1**	**+1.0**
TNTI	**Ternate**	**8.17**	**230**	P		**Pn**		**00 54 34.1**	**+1.9**
	92nm,0.9s,2µm								
SGSI	**Sangihe**	**8.43**	**254**	P		**Pn**		**00 54 37.0**	**+1.3**
	704nm,0.9s,8µm								
FAKI	**Fak Fak**	**9.01**	**189**	P		**Pn**		**00 54 45.8**	**+2.1**
	42nm,0.9s								
LBMI	**Labuha**	**9.04**	**223**	P		**Pn**		**00 54 46.8**	**+2.7**
	164nm,0.9s,3µm								
SMPI	**Sarmi**	**9.44**	**148**	P		**Pn**		**00 54 50.8**	**+1.2**
	65nm,1.0s,7µm								
NLAI	**Namlea**	**11.31**	**216**	P		**Pn**		**00 55 16.8**	**+1.6**
	28nm,1.1s								
LUWI	**Luwuk**	**12.95**	**237**	P		**Pn**		**00 55 38.7**	**+1.1**
	79nm,1.3s								
GUMO	**Guam**	**13.35**	**55**	LR		LR		01 00 16.2	
	comp=Z,690nm,21.5s,baz=236,slow=35								
TOLI2	**Tolitoli**	**13.75**	**250**	Pn		**Pn**		**00 55 47.0**	**-1.6**
TGY	**Tagaytay City**	**14.86**	**304**	LR		LR		01 01 20.8	
	comp=Z,785nm,21.2s,baz=116,slow=36								
MANU	**Manus Island**	**15.88**	**120**	Pn		**Pn**		**00 56 15.9**	**-1.1**
TTSI	**Tana Toraja**	**16.50**	**237**	P		**Pn**		**00 56 26.1**	**+1.0**
	101nm,1.0s,2µm								
TTSI				pP		**pP**		**00 56 31.8**	**-0.1**
	101nm,1.0s,2µm								
KKM	**Kota Kinabalu**	**17.34**	**271**	Pn		**Pn**		**00 56 35.2**	**-0.6**
BKB	**Balikpapan**	**18.24**	**247**			**Pn**		**00 56 46.3**	**-0.4**
BKB				IAmb		IAmb		00 56 51.0	
	comp=Z,61nm,0.4s								
SOEI	**Soe**	**18.27**	**211**			**Pn**		**00 56 44.9**	**-2.4**
SOEI				IAmb		IAmb		00 57 01.4	
	comp=Z,134nm,1.4s								
SOEI	**Soe**	**18.27**	**211**	P		**P**		**00 56 48.3**	**+1.0**
	comp=Z,117nm,1.1s,comp=Z,2µm								
MMRI	**Maumere**	**18.50**	**218**	P		**Pn**		**00 56 51.3**	**+1.4**
MMRI				IAmb		IAmb		00 57 05.3	
	comp=Z,84nm,1.0s								
MMRI	**Maumere**	**18.50**	**218**	P		**Pn**		**00 56 51.7**	**+1.8**
	comp=Z,84nm,1.8s								
EDFI	**Ende, Flores**	**18.93**	**219**	P		**Pn**		**00 56 56.2**	**+1.0**
	comp=Z,66nm,2.7s,comp=Z,2µm								
PMG	**Port Moresby**	**20.41**	**139**	P		**P**		**00 57 08.8**	**-1.8**
PMG	**Port Moresby**	**20.41**	**139**	*i* P		**P**		**00 57 11.7**	**+1.0**
PMG	**Port Moresby**	**20.41**	**139**	LR		LR		01 04 11.7	
	comp=Z,341nm,20.4s,baz=302,slow=34								
TWG	**Pinlang**	**20.63**	**325**	P		**P**		**00 57 12.9**	**-0.1**
TWG				IAmb		IAmb		00 57 40.4	
	comp=Z,173nm,1.5s								
YULB	**Yu-li**	**20.96**	**327**	P		**P**		**00 57 13.2**	**-3.3**
YULB				IAmb		IAmb		00 57 28.5	
	comp=Z,93nm,1.2s								
YOJ	**Yonaguni jima**	**20.97**	**332**	P		**P**		**00 57 13.0**	**-3.6**
YOJ	**Yonaguni jima**	**20.97**	**332**	P		**P**		**00 57 13.0**	**-3.6**
YOJ				pmax		pmax			
	comp=Z,221nm,0.9s								
JOW	**Kunigami**	**21.30**	**347**	LR		LR		01 07 38.8	
	comp=Z,222nm,18.1s,baz=120,slow=43								
NACB	**Ninganchiao**	**21.43**	**329**	P		**P**		**00 57 19.5**	**-2.1**
SSLB	**Suanglung**	**21.46**	**327**	P		**P**		**00 57 20.9**	**-1.0**
SSLB				IAmb		IAmb		00 57 46.3	
	comp=Z,97nm,1.1s								
PLAI	**Plampang**	**21.65**	**227**	P		**P**		**00 57 26.5**	**+2.5**
	comp=Z,55nm,2.1s,comp=Z,1µm								
SBUM	**Sibu**	**21.67**	**261**	P		**P**		**00 57 24.8**	**+0.5**
YHNB	**Yeheng**	**21.95**	**329**	P		**P**		**00 57 25.5**	**-1.8**
COEN	**Coen**	**22.00**	**155**	P		**P**		**00 57 27.4**	**-0.4**
TATO	**Taipei**	**22.14**	**330**	P		**P**		**00 57 27.5**	**-1.8**
TWSI	**Taliwang, Sumb**	**22.25**	**229**	P		**P**		**00 57 30.6**	**+0.1**
	comp=Z,31nm,0.9s,comp=Z,860nm								
KNMB	**Chin-men Tao**	**23.46**	**323**	P		**P**		**00 57 42.2**	**-0.8**
KNMB				IAmb		IAmb		00 58 03.3	
	comp=Z,55nm,1.0s								
KSM	**Kuching**	**23.73**	**260**	P		**P**		**00 57 45.7**	**0.0**
KSM				IAmb		IAmb		00 58 12.3	
	comp=Z,73nm,1.4s								
JAGI	**Jajag, Banyuwa**	**24.21**	**234**	P		**P**		**00 57 49.8**	**-0.4**
JAGI				IAmb		IAmb		00 58 12.6	
	comp=Z,29nm,0.8s								
JAGI	**Jajag, Banyuwa**	**24.21**	**234**	P		**P**		**00 57 49.2**	**-1.0**
	comp=Z,50nm,1.2s								
GMJI	**Gumukmas**	**24.67**	**235**	P		**P**		**00 57 55.7**	**+1.3**
	comp=Z,61nm,1.1s								
HKPS	**Hong Kong Po S**	**24.81**	**313**	P		**P**		**00 57 54.2**	**-1.5**
HKPS				IAmb		IAmb		00 58 07.7	
	comp=Z,34nm,0.8s								
FITZ	**Fitzroy Crossi**	**25.26**	**198**	P		**P**		**00 57 59.1**	**-0.5**
WB0	**Warramunga Arr**	**25.66**	**178**	P		**P**		**00 58 03.2**	**-0.1**
WRAB	**Tennant Creek**	**25.82**	**178**	P		**P**		**00 58 04.4**	**-0.4**
WRAB				IAmb		IAmb		00 58 30.1	
	comp=Z,48nm,1.5s								
WRAB	**Tennant Creek**	**25.82**	**178**	P		**P**		**00 58 04.4**	**-0.4**
WRAB				pmax		pmax			
	comp=Z,48nm,1.5s								
WB2	**Warramunga Arr**	**25.83**	**178**	P		**P**		**00 58 04.5**	**-0.4**
WB2				IAmb		IAmb		00 58 30.1	
	comp=Z,49nm,1.4s								
WRA	**Warramunga Arr**	**25.83**	**179**	P		**P**		**00 58 04.5**	**-0.4**
WRA	**Warramunga Arr**	**25.83**	**179**	P		**P**		**00 58 04.4**	**-0.4**
	comp=Z,11nm,1.0s,baz=359,slow=9.3,SNR=31								
	comp=Z,11nm,1.0s								
NGJI	**Ngawi**	**25.84**	**239**	P		P		00 58 16.5	+11
WR0	**Warramunga Arr**	**25.85**	**178**	P		**P**		**00 58 04.5**	**-0.5**
QIZ	**Qiongzhong**	**26.54**	**301**	P		**P**		**00 58 11.2**	**-0.1**
QIZ				S		**S**		**01 02 46.7**	**+1.7**
QIZ				LR		LR			
	comp=Z,340nm,9.0s								
QIZ				LR		LR			
	comp=Z,480nm,12.4s								
QIZ				LR		LR			
	comp=Z,910nm,16.5s								
UGM	**Wanagama**	**26.92**	**239**	P		**P**		**00 58 13.9**	**-0.9**
SSE	**Sheshan**	**27.53**	**336**	P		**P**		**00 58 20.6**	**+0.5**
SSE				S		**S**		**01 03 02.6**	**+2.3**
SSE				pmax		pmax			
	comp=Z,9.0nm,1.5s								
SSE				pmax		pmax			
	comp=Z,120nm,6.8s								
SSE				LR		LR			
	comp=Z,280nm,11.4s								
SSE				LR		LR			
	comp=Z,340nm,11.3s								
CTA	**Charters Tower**	**28.77**	**155**	P		**P**		**00 58 34.2**	**+2.9**
CTA				pmax		pmax			
	comp=Z,19nm,1.0s								
CTA	**Charters Tower**	**28.77**	**155**	LR		LR		01 09 34.9	
	comp=Z,836nm,21.7s,baz=322,slow=36								
CTAO	**Charters Tower**	**28.77**	**155**	P		**P**		**00 58 31.9**	**+0.6**
CTAO	**Charters Tower**	**28.77**	**155**	P		**P**		**00 58 31.9**	**+0.6**
CTAO				pmax		pmax			
	comp=Z,27nm,1.4s								
LEM	**Lembang**	**28.96**	**244**	LR		LR		01 10 51.4	
	comp=Z,194nm,20.0s,baz=34,slow=38								
NJ2	**Nanjing**	**29.34**	**334**	⇓P		**P**		**00 58 36.9**	**+0.7**
NJ2				pmax		pmax			
	comp=Z,16nm,0.7s								

comp=Z,1.3nm,0.5s
XAN Xi'an 36.06 324 ⇑P **P** **00 59 35.2 +0.1**
XAN pP pP 00 59 39.7 +0.3
XAN sP sP 00 59 42.6 +1.4
XAN pmax pmax
comp=Z,15nm,1.3s
XAN LR LR
comp=Z,930nm,18.9s
XAN LR LR
comp=Z,530nm,19.6s
XAN LR LR
comp=Z,700nm,15.5s
CHTO Chiang Mai 36.11 294 P **P** **00 59 34.6 -1.0**
CHTO Chiang Mai 36.11 294 P **P** **00 59 34.6 -1.0**
CHTO pmax pmax
comp=Z,21nm,1.5s
GSI Gunungsitoli 36.30 264 P **P** **00 59 34.9 -2.3**
GSI Gunungsitoli 36.30 264 P **P** **00 59 35.1 -2.2**
comp=Z,58nm,1.0s
PZH PanZhiHua 36.59 307 P **P** **00 59 40.8 +1.0**
PZH S **S** **01 05 22.5 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,140nm,5.5s
PZH LR LR
comp=Z,310nm,15.4s
PZH LR LR
comp=Z,290nm,17.6s
PZH LR LR
comp=Z,420nm,19.1s
FORT Forrest 37.00 188 P **P** **00 59 41.8 -1.1**
FORT IAmb IAmb 00 59 44.4
comp=Z,37nm,0.8s
BJT Baijiatuau 37.30 338 P **P** **00 59 43.6 -1.9**
BJT Baijiatuau 37.30 338 P **P** **00 59 43.6 -1.9**
BJT pmax pmax
comp=Z,16nm,1.0s
BJI Beijing 37.32 338 P **P** **00 59 45.4 -0.2**
BJI pmax pmax
comp=Z,2.0nm,0.7s
BJI pmax pmax
comp=Z,140nm,4.1s
CD2 Chengdu 37.39 315 P **P** **00 59 47.0 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
USRK Ussuriysk Ar. 38.03 358 P **P** **00 59 51.0 -0.5**
USRK Ussuriysk Ar. 38.03 358 P **P** **00 59 51.1 -0.5**
comp=Z,2.2nm,0.6s,baz=150,slow=6.0,SNR=4.2
comp=Z,2.2nm,0.6s
CN2 Changchun 38.29 350 *e*P P 00 59 44.1 -10
CN2 *e*S S 01 05 37.7 -9.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=N,300nm,12.0s
CN2 LR LR
comp=E,230nm,12.0s
STKA Stephens Creek 38.46 169 P **P** **00 59 54.1 -1.2**
STKA Stephens Creek 38.46 169 P **P** **00 59 54.1 -1.2**
STKA pmax pmax
comp=Z,3.0nm,1.1s
STKA Stephens Creek 38.46 169 P **P** **00 59 54.3 -1.0**
comp=Z,5.0nm,0.7s,baz=339,slow=6.9,SNR=12
STKA LR LR 01 17 19.0
comp=Z,370nm,18.4s,baz=356,slow=39
comp=Z,5.0nm,0.7s
TNCH TengChong 38.57 303 P **P** **00 59 57.7 +1.1**
TNCH pP pP 01 00 00.7 -0.9
TNCH PP **PnPn** **01 01 28.7 +1.6**
TNCH S **S** **01 05 53.2 +1.1**
TNCH pmax pmax
comp=Z,12nm,0.6s
TNCH pmax pmax
comp=Z,140nm,4.1s
TNCH LR LR
comp=Z,230nm,11.7s
TNCH LR LR
comp=Z,180nm,11.2s
TNCH LR LR
comp=Z,310nm,18.0s
MDJ Mudanjiang 38.59 355 P **P** **00 59 57.2 +1.0**
MDJ pP pP 01 00 00.3 -0.3
MDJ PP **PnPn** **01 01 26.1 -0.7**
MDJ PcP **PcP** **01 02 09.8 +1.3**
MDJ S **S** **01 05 54.9 +3.5**
MDJ sS sS 01 06 02.2 +3.2
MDJ pmax pmax
comp=Z,6.0nm,0.7s
MDJ pmax pmax
comp=Z,140nm,3.6s
BBOO Buckleboo 38.70 177 P **P** **00 59 56.0 -1.3**
ASAJ Asahikawa 38.73 10 LR LR 01 17 05.8
comp=Z,120nm,18.1s,baz=308,slow=38
MORW Morawa 38.81 205 P **P** **00 59 58.3 0.0**
HHC Hu-ho-hao-te 39.90 334 *e*P **P** **01 00 08.8 +1.4**
HHC sP pwP 01 00 16.9 -1.6
HHC S **S** **01 06 15.3 +3.8**
HHC sS sS 01 06 28.8 +9.1
HHC SS **SS** **01 09 02.8 -5.5**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,160nm,4.8s
HHC LR LR
comp=Z,280nm,12.7s
HHC LR LR
comp=Z,300nm,12.3s
HHC LR LR
comp=Z,440nm,16.5s
BNX BinXian 39.91 353 ⇑P **P** **01 00 06.7 -0.6**
BNX pmax pmax
comp=Z,7.0nm,0.8s
BNX pmax pmax
comp=Z,280nm,4.6s
BTO Baotou 40.41 332 *e*P **P** **01 00 13.4 +1.8**
BTO pP **sP** **01 00 18.0 +0.2**
BTO sP **pwP** **01 00 20.5 -2.2**
BTO PP **PnPn** **01 01 50.8 +2.2**
BTO S **S** **01 06 22.9 +3.8**
BTO sS **sS** **01 06 30.9 +2.7**
BTO SS **SS** **01 09 16.0 -2.5**
BTO pmax pmax
comp=Z,20nm,0.7s
BTO pmax pmax
comp=Z,490nm,7.5s
BTO LR LR
comp=Z,800nm,21.4s
BTO LR LR
comp=Z,1μm,14.1s
BTO LR LR
comp=Z,970nm,19.2s
LZH Lanzhou 40.51 322 ⇑P **P** **01 00 14.0 +1.4**
LZH sP pwP 01 00 24.3 +0.5
LZH pmax pmax
comp=Z,43nm,1.3s
LZH LR LR
comp=Z,260nm,16.0s
LZH LR LR
comp=Z,470nm,16.3s
LZH LR LR
comp=Z,680nm,19.1s
XLT XiLinHaoTe 40.74 340 *e*P **P** **01 00 15.5 +1.2**
XLT pP sP 01 00 20.4 -0.1
XLT sP pwP 01 00 23.2 -2.2
XLT PP **PnPn** **01 01 55.6 +3.1**
XLT pmax pmax
comp=Z,15nm,1.5s
XLT pmax pmax
comp=Z,190nm,4.9s
XLT LR LR
comp=Z,47nm,14.5s
XLT LR LR
comp=Z,460nm,15.7s
XLT LR LR
comp=Z,320nm,15.7s
NWAO Narrogin (SRO) 41.78 201 P **P** **01 00 22.7 -0.1**
NWAO IAmb IAmb 01 00 34.7
comp=Z,41nm,1.3s
NWAO Narrogin (SRO) 41.78 201 P **P** **01 00 22.7 -0.1**
NWAO pmax pmax
comp=Z,41nm,1.3s
DZM Mont Dzumac 42.57 132 P **P** **01 00 29.4 -0.2**
DZM Mont Dzumac 42.57 132 LR LR 01 16 34.2
comp=Z,310nm,20.1s,baz=259,slow=34
KLR Kul'dur 43.07 358 *i* P **P** **01 00 32.5 -0.6**
KLR pmax pmax
comp=Z,29nm,2.0s
GTA Gaotai 45.08 322 P **P** **01 00 49.8 +0.1**
GTA pP pwP 01 01 00.2 -0.6
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA LR LR
comp=Z,190nm,14.9s
GTA LR LR
comp=Z,240nm,16.0s
GTA LR LR
comp=Z,360nm,14.5s
ULN Ulaanbaatar 47.46 336 P **P** **01 01 08.2 0.0**
ULN Ulaanbaatar 47.46 336 P **P** **01 01 08.2 0.0**
ULN pmax pmax
comp=Z,23nm,1.1s
SONM Songino Array 47.71 335 P **P** **01 01 10.3 +0.2**
SONM IAmb IAmb 01 01 21.7
comp=Z,19nm,1.0s
SONM Songino Array 47.71 335 P **P** **01 01 10.3 +0.2**
SONM pmax pmax
comp=Z,19nm,1.0s
SONM Songino Array 47.71 335 P **P** **01 01 10.4 +0.2**
comp=Z,6.2nm,0.7s,baz=154,slow=8.9,SNR=56
SONM LR LR 01 21 19.5
comp=Z,258nm,20.2s,baz=170,slow=36
comp=Z,6.2nm,0.7s
ZAK Zakamensk 50.98 335 *e*P **P** **01 01 34.3 -0.7**
ZAK pmax pmax
comp=Z,13nm,1.6s
PALK Pallekele 52.59 275 P **P** **01 01 47.5 0.0**
PALK Pallekele 52.59 275 P **P** **01 01 47.6 0.0**
PALK pmax pmax
comp=Z,16nm,1.3s
PALK Pallekele 52.59 275 LR LR 01 25 58.8
comp=Z,156nm,19.8s,baz=218,slow=38
MOY Mondy 52.90 335 *e*P **P** **01 01 49.8 +0.5**
MOY pmax pmax
comp=Z,72nm,2.6s
BOD Bodaibo 53.87 347 *e*P **P** **01 01 56.1 -0.1**
BOD pmax pmax
comp=Z,6.0nm,0.9s
HYB Hyderabad 54.95 287 *e*P **P** **01 02 04.7 -0.1**
HYB *es*P **pP** **01 02 09.3 +0.2**
WMQ Urumqi 55.07 321 *e*P **P** **01 02 06.0 +0.7**
WMQ sP pwP 01 02 15.7 -0.7
WMQ pmax pmax
comp=Z,19nm,0.9s
YAK Yakutsk 55.95 358 *i* P **P** **01 02 11.8 +0.7**
YAK pmax pmax
comp=Z,11nm,0.5s
DGZ Jazzator, Alta 58.24 327 *i* P **P** **01 02 27.2 -0.7**
DGZ pmax pmax
comp=Z,10.0nm,1.2s
SEY Seymchan 58.41 10 *ce*P **P** **01 02 30.3 +1.7**
SEY pmax pmax
comp=Z,12nm,0.9s
SEY Seymchan 58.41 10 P **P** **01 02 29.5 +1.0**
comp=Z,2.5nm,0.5s,baz=224,slow=4.8,SNR=12
comp=Z,2.5nm,0.5s
HIZ Hauiti 58.52 143 P **P** **01 02 29.9 +0.1**
ZSN Zaisan 58.57 323 *e*P **P** **01 02 30.0 -0.1**
baz=323
ZSN Zaisan 58.57 323 *e*P **P** **01 02 29.9 -0.1**
MLZ Mavora Lakes 59.74 152 P **P** **01 02 39.1 +1.0**
URZ Urewera 59.75 141 LR LR 01 27 54.0
comp=Z,70nm,20.1s,baz=100,slow=36
MK31 Makanchi Array 59.83 322 P **P** **01 02 38.4 -0.4**
MK31 Makanchi Array 59.83 322 P **P** **01 02 38.4 -0.4**
MK31 pmax pmax
comp=Z,10.0nm,1.1s
MKAR Makanchi Array 59.83 322 P **P** **01 02 38.5 -0.3**
MKAR Makanchi Array 59.83 322 *i* P **P** **01 02 39.4 +0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 59.83 322 P **P** **01 02 39.0 +0.2**
comp=Z,4.8nm,0.7s,baz=113,slow=8.0,SNR=43
comp=Z,4.8nm,0.7s
RPZ Rata Peaks 59.94 149 P **P** **01 02 40.0 +0.5**
MAKZ Makanchi 60.03 322 P **P** **01 02 39.9 -0.2**
MAKZ IAmb IAmb 01 02 53.1
comp=Z,19nm,1.2s
MAKZ Makanchi 60.03 322 P **P** **01 02 39.9 -0.2**
MAKZ pmax pmax
comp=Z,19nm,1.3s
SHLS Shalkode 60.19 317 *e*P **P** **01 02 39.1 -2.4**
baz=317
SHLS Shalkode 60.19 317 *e*P **P** **01 02 39.1 -2.4**
KPKS Kokpek 60.84 317 *e*P **P** **01 02 45.5 -0.3**
baz=317
KPKS Kokpek 60.84 317 *e*P **P** **01 02 45.5 -0.3**
SATY Saty 60.88 316 *e*P **P** **01 02 46.2 0.0**
baz=316
SATY Saty 60.88 316 *e*P **P** **01 02 46.2 0.0**
KSH Kashi 61.47 312 P **P** **01 02 51.8 +1.5**
KSH sP pwP 01 03 01.5 +0.2
KSH pmax pmax
comp=Z,6.0nm,1.4s
TDK Taldyqorghan 61.58 318 *e*P **P** **01 02 50.2 -0.6**
baz=318
TDK Taldyqorghan 61.58 318 *e*P **P** **01 02 50.2 -0.6**
MDOK Medeo 61.85 316 *e*P **P** **01 02 52.5 -0.3**
baz=316
MDOK Medeo 61.85 316 *e*P **P** **01 02 52.5 -0.3**
ZAA0 Zalesovo Array 61.88 330 P **P** **01 02 51.8 -0.7**
ZALV Zalesovo Beam 61.88 330 P **P** **01 02 51.5 -1.0**
ZALV Zalesovo Beam 61.88 330 *i* P **P** **01 02 52.0 -0.6**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 61.88 330 P **P** **01 02 52.0 -0.6**
comp=Z,3.8nm,0.7s,baz=110,slow=5.9,SNR=23
comp=Z,3.8nm,0.7s
NRN Naryn 62.03 314 P **P** **01 02 53.9 -0.3**
NRN Naryn 62.03 314 P **P** **01 02 53.9 -0.3**
NRN pmax pmax
comp=Z,5.0nm,1.1s
NIL Nilore 62.13 305 P **P** **01 02 54.1 -0.6**
NIL Nilore 62.13 305 P **P** **01 02 54.1 -0.6**
NIL pmax pmax
comp=Z,18nm,0.8s
KUU Kurty 62.58 317 *e*P **P** **01 02 57.2 -0.3**
baz=317
KUU Kurty 62.58 317 *e*P **P** **01 02 57.2 -0.3**
AAK Ala-Archa 63.46 315 P **P** **01 03 03.3 -0.2**
AAK Ala-Archa 63.46 315 *i* P **P** **01 03 04.3 +0.7**
AAK pmax pmax
comp=Z,16nm,3.0s
AAK Ala-Archa 63.46 315 LR LR 01 31 14.5
comp=Z,178nm,20.4s,baz=91,slow=37
KURK Kurchatov 63.70 324 P **P** **01 03 04.5 -0.2**
KURK Kurchatov 63.70 324 P **P** **01 03 04.5 -0.2**
KURK pmax pmax
comp=Z,23nm,1.2s
KURBB Kurchatov Arra 63.72 324 P **P** **01 03 04.7 -0.1**
comp=Z,3.8nm,0.6s,baz=118,slow=5.4,SNR=69
comp=Z,3.8nm,0.6s
ARSB Arslanbob 64.17 313 P **P** **01 03 06.8 -1.5**
ARSB Arslanbob 64.17 313 P **P** **01 03 06.8 -1.5**
ARSB pmax pmax
comp=Z,5.0nm,1.4s
BTLS Baital 64.50 317 *e*P **P** **01 03 09.5 -0.6**
baz=317
BTLS Baital 64.50 317 *e*P **P** **01 03 09.5 -0.6**
TIXI Tiksi 65.60 358 P **P** **01 03 15.8 -0.9**
TIXI Tiksi 65.60 358 *i* P **P** **01 03 16.5 -0.2**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
BILL Bilibino 65.67 13 *i* P **P** **01 03 17.6 +0.3**
BILL pmax pmax
comp=Z,12nm,1.6s
KBL Kabul 65.73 305 P **P** **01 03 17.7 -0.9**
KBL IAmb IAmb 01 03 43.0
comp=Z,18nm,1.4s
KBL Kabul 65.73 305 P **P** **01 03 17.7 -0.9**
KBL pmax pmax
comp=Z,18nm,1.4s
KK31 Karatay Array 66.41 315 P **P** **01 03 22.0 -0.5**
KK31 IAmb IAmb 01 03 47.2
comp=Z,12nm,1.3s
KK31 Karatay Array 66.41 315 P **P** **01 03 22.0 -0.5**
KK31 pmax pmax
comp=Z,12nm,1.3s
KKAR Karatay Array 66.41 315 P **P** **01 03 21.6 -0.9**
KKAR Karatay Array 66.41 315 P **P** **01 03 21.9 -0.6**
KKAR IAmb IAmb 01 03 47.2
comp=Z,12nm,1.3s
KKAR Karatay Array 66.41 315 P **P** **01 03 21.6 -0.9**
KKAR 01 03 21.9
SIMJ Simiganj 66.52 310 P **P** **01 03 22.6 -0.9**
SIMJ IAmb IAmb 01 03 36.0
comp=Z,16nm,1.2s
BRLS Borolday 66.87 314 *e*P **P** **01 03 25.2 -0.3**
baz=314
BRLS Borolday 66.87 314 *e*P **P** **01 03 25.2 -0.3**
BRZS Berezniki 66.96 322 *e*P **P** **01 03 26.1 +0.1**
baz=322
BRZS Berezniki 66.96 322 *e*P **P** **01 03 26.0 +0.1**
SPIA Saint Paul Isl 67.06 29 P **P** **01 03 26.5 +0.2**
baz=244
P08K Saint George I 67.15 30 P **P** **01 03 27.1 +0.1**
baz=244
BVAR Borovoye Array 69.29 325 P **P** **01 03 40.3 -0.2**
comp=Z,6.7nm,0.6s,baz=112,slow=7.9,SNR=66
comp=Z,6.7nm,0.6s
BRVK Borovoye 69.36 325 P **P** **01 03 40.8 -0.1**
BRVK Borovoye 69.36 325 P **P** **01 03 40.8 -0.1**
BRVK pmax pmax
comp=Z,15nm,0.8s
FALS False Pass 69.69 33 P **P** **01 03 42.9 0.0**
baz=251
NRIK Noril'sk 69.97 344 P **P** **01 03 43.4 -0.9**
NRIK IAmb IAmb 01 03 54.9
comp=Z,11nm,1.0s
NRIK Noril'sk 69.97 344 *i* P **P** **01 03 44.3 0.0**
NRIK pmax pmax
comp=Z,13nm,1.0s
NRIK Noril'sk 69.97 344 P **P** **01 03 44.0 -0.4**
comp=Z,3.7nm,0.8s,baz=124,slow=6.2,SNR=8.5
comp=Z,3.7nm,0.8s
RAR Rarotonga 70.65 115 LR LR 01 29 26.8
comp=Z,194nm,21.4s,baz=298,slow=31
HRA Herat 71.28 304 P **P** **01 03 52.4 -0.9**
HRA IAmb IAmb 01 04 05.6
comp=Z,20nm,1.4s
SDPT Sand Point 71.45 33 P **P** **01 03 54.0 +0.4**
baz=253
K13K Kusilvak Mount 71.63 26 P **P** **01 03 55.1 +0.6**
baz=247
M13K Dall Lake 71.65 28 P **P** **01 03 55.2 +0.5**
baz=249
CHNA Chernabura Isl 71.80 34 P **P** **01 03 56.2 +0.5**
baz=254
TNA Tin City 71.83 22 P **P** **01 03 56.7 +1.0**
baz=243
S14K Fog Glacier 72.22 33 P **P** **01 03 58.9 +0.5**
baz=254
O14K Tigyukauivet M 72.24 29 P **P** **01 03 58.5 +0.2**
baz=251
N14K Kuskokwak Cree 72.26 29 P **P** **01 03 58.8 +0.4**
baz=251
L14K Kuka Creek 72.28 27 P **P** **01 03 57.2 -1.3**
L14K IAmb IAmb 01 04 00.6
comp=Z,17nm,1.1s
L14K Kuka Creek 72.28 27 P **P** **01 03 59.0 +0.5**
baz=249
ANM Nome 72.38 23 P **P** **01 03 58.6 -0.4**
ANM IAmb IAmb 01 04 11.1
comp=Z,19nm,1.4s
ANM Nome 72.38 23 P **P** **01 03 59.8 +0.7**
baz=246
ANM Nome 72.38 23 P **P** **01 03 58.6 -0.4**
ANM pmax pmax
comp=Z,19nm,1.4s
F14K Arctic Creek 72.39 22 P **P** **01 04 00.1 +1.0**
baz=245
M14K Bethel 72.41 28 P **P** **01 04 00.0 +0.8**
baz=250
J14K Nanvaranak Lak 72.41 25 P **P** **01 03 59.8 +0.6**
baz=248
CHGN Chignik 72.84 33 P **P** **01 04 02.1 +0.2**
baz=255
O15K Ungalikthiuk R 72.92 30 P **P** **01 04 02.1 -0.2**
baz=253
L15K Ungalak Mounta 72.94 27 P **P** **01 04 02.8 +0.5**
baz=250
M15K Kasigluk River 72.98 28 P **P** **01 04 03.5 +0.9**
baz=251
G15K Niukluk 73.08 23 P **P** **01 04 04.1 +1.0**
baz=247
F15K North Star Dit 73.13 22 P **P** **01 04 03.8 +0.3**
F15K IAmb IAmb 01 04 18.3
comp=Z,16nm,1.2s
F15K North Star Dit 73.13 22 P **P** **01 04 04.0 +0.5**
baz=246
K15K Wolf Creek Mou 73.13 26 P **P** **01 04 04.2 +0.7**
baz=250
R16K Pilot Point 73.61 32 P **P** **01 04 06.6 +0.2**
baz=255
H16K Elim 73.66 24 P **P** **01 04 07.6 +1.0**
baz=249,SNR=7.3
ROCAM Rodrigues Isla 73.69 247 P **P** **01 04 06.9 -0.7**
P16K Nushagak River 73.79 30 P **P** **01 04 08.5 +1.1**
baz=254
N16K Nishlik Lake 73.81 28 P **P** **01 04 08.4 +0.8**
baz=253
L16K Owhat River 73.86 27 P **P** **01 04 08.2 +0.4**
baz=252
J16K Anvik River 73.86 25 P **P** **01 04 08.5 +0.7**
baz=251
G16K Koyuk River 73.89 23 P **P** **01 04 07.8 -0.1**
G16K Koyuk River 73.89 23 P **P** **01 04 09.1 +1.2**
baz=248
M16K Timber Creek 73.89 28 P **P** **01 04 08.7 +0.7**
baz=253
O16K Kokwok River B 73.89 29 P **P** **01 04 08.1 +0.1**
O16K IAmb IAmb 01 04 20.4
comp=Z,20nm,1.0s
O16K Kokwok River B 73.89 29 P **P** **01 04 08.6 +0.6**
baz=254
WSAR Wadi Sarin 73.89 292 LR LR 01 38 55.5
comp=Z,214nm,21.8s,baz=252,slow=38
C16K Lisburne Hills 73.95 20 P **P** **01 04 07.2 -1.0**
C16K IAmb IAmb 01 04 34.8
comp=Z,20nm,1.3s
C16K Lisburne Hills 73.95 20 P **P** **01 04 08.6 +0.4**
baz=245
I17K Unalakleet 74.02 25 P **P** **01 04 09.6 +0.9**
baz=250
CHIR Chirikof Islan 74.24 34 P **P** **01 04 10.2 0.0**
baz=257
Q16K King Salmon 74.37 31 P **P** **01 04 10.6 -0.2**
baz=256
O17K Koliganek Bris 74.43 29 P **P** **01 04 11.8 +0.6**
baz=255
J17K VABM Dome 74.55 26 P **P** **01 04 11.7 -0.1**
J17K IAmb IAmb 01 04 24.9
comp=Z,15nm,0.8s
J17K VABM Dome 74.55 26 P **P** **01 04 12.5 +0.6**
baz=252
N17K Nushagak Hills 74.58 29 P **P** **01 04 12.0 0.0**
N17K Nushagak Hills 74.58 29 P **P** **01 04 13.0 +0.9**
baz=255
G17K Kiwalik Mounta 74.59 23 P **P** **01 04 12.8 +0.8**
baz=250
K17K Iditarod 74.68 26 P **P** **01 04 12.9 +0.3**
K17K Iditarod 74.68 26 P **P** **01 04 13.2 +0.6**
baz=253
F17K Baldwin Pennin 74.69 22 P **P** **01 04 13.2 +0.7**
F17K IAmb IAmb 01 04 35.3
comp=Z,18nm,1.0s
F17K Baldwin Pennin 74.69 22 P **P** **01 04 13.3 +0.7**
baz=249
RDOG Red Dog Mine 74.69 20 P **P** **01 04 12.3 -0.2**
RDOG IAmb IAmb 01 04 36.8
comp=Z,16nm,1.1s
RDOG Red Dog Mine 74.69 20 P **P** **01 04 13.3 +0.7**
baz=247
H17K Granite Mounta 74.69 24 P **P** **01 04 12.5 -0.1**
H17K IAmb IAmb 01 04 25.5
comp=Z,19nm,0.9s
H17K Granite Mounta 74.69 24 P **P** **01 04 13.3 +0.7**
baz=251,SNR=5.9
M17K Holitna River 74.70 28 P **P** **01 04 13.6 +0.8**
baz=254
E17K Hotham Inlet 74.71 22 P **P** **01 04 13.6 +1.0**
baz=248
C17K DeLong Mountai 74.76 20 P **P** **01 04 13.5 +0.5**
baz=247
ABKAR Akbulak array 74.83 319 P **P** **01 04 12.1 -1.6**
ABKAR Akbulak array 74.83 319 P **P** **01 04 12.2 -1.5**
GEYT Alibeck 74.90 308 P **P** **01 04 14.4 -0.1**
GEYT Alibeck 74.90 308 P **P** **01 04 14.4 -0.1**

GEYT pmax pmax
comp=Z,10.0nm,0.9s
GEYT Alibeck 74.90 308 P P 01 04 15.2 +0.8
comp=Z,6.1nm,0.8s,baz=105,slow=3.5,SNR=17
GEYT LR LR 01 39 45.9
comp=Z,383nm,21.8s,baz=264,slow=38
comp=Z,6.1nm,0.8s
GYA0B ALIBECK ARRAY 74.90 308 P P 01 04 13.6 -0.9
SII Sitkinak Islan 75.18 33 P P 01 04 16.1 +0.5
baz=258
N18K Kilae Creek 75.24 29 P P 01 04 16.7 +0.8
baz=256
P18K Big Mountain, 75.25 30 P P 01 04 16.4 +0.4
baz=257
L18K Granite Mounta 75.26 27 P P 01 04 15.0 -1.0
L18K IAmb IAmb 01 04 29.0
comp=Z,17nm,0.9s
L18K Granite Mounta 75.26 27 P P 01 04 16.6 +0.6
baz=255
E18K Tukpahlearik C 75.27 21 P P 01 04 16.9 +0.9
baz=250
F18K Selawik 75.34 22 P P 01 04 17.3 +1.0
baz=251
O18K Koktuh Hills 75.37 30 P P 01 04 17.4 +0.7
baz=257
H18K Honhosa River 75.39 24 P P 01 04 16.0 -0.7
H18K IAmb IAmb 01 04 31.1
comp=Z,20nm,1.1s
H18K Honhosa River 75.39 24 P P 01 04 17.3 +0.6
baz=252
M18K Stony River 75.47 28 P P 01 04 17.7 +0.5
baz=256
SVW2 Sparrevohn 75.49 28 P P 01 04 17.0 -0.3
SVW2 IAmb IAmb 01 04 45.0
comp=Z,16nm,0.8s
G18K Tagagawik 75.50 23 P P 01 04 17.0 -0.3
G18K IAmb IAmb 01 04 31.6
comp=Z,11nm,0.9s
G18K Tagagawik 75.50 23 P P 01 04 17.9 +0.7
baz=252
C18K Utukok River 75.50 20 P P 01 04 17.2 -0.1
C18K Utukok River 75.50 20 P P 01 04 18.1 +0.8
baz=249
B18K Kokolik River 75.56 19 P P 01 04 18.5 +1.0
baz=248
J18K Innoko River 75.59 26 P P 01 04 17.1 -0.7
J18K IAmb IAmb 01 04 29.8
comp=Z,10nm,0.9s
J18K Innoko River 75.59 26 P P 01 04 18.7 +0.8
baz=254
SVE Sverdlovsk 75.70 327 *e* **P P 01 04 18.7 +0.1**
SVE pmax pmax
comp=Z,25nm,1.9s
TTA Tatalina 75.75 26 P P 01 04 18.2 -0.7
TTA IAmb IAmb 01 04 30.9
comp=Z,13nm,1.1s
TTA Tatalina 75.75 26 P P 01 04 19.4 +0.5
baz=255
TTA Tatalina 75.75 26 P P 01 04 18.2 -0.7
TTA pmax pmax
comp=Z,13nm,1.1s
OHAK Old Harbor 75.80 32 P 01 04 17.8 -1.3
OHAK Old Harbor 75.80 32 P P 01 04 19.8 +0.7
baz=259
GCSA Galena City Sc 75.87 24 P P 01 04 20.2 +0.9
baz=254,SNR=7.5
O19K Port Alsworth 75.88 29 P P 01 04 19.8 +0.3
O19K IAmb IAmb 01 04 45.9
comp=Z,21nm,1.3s
O19K Port Alsworth 75.88 29 P P 01 04 20.4 +0.9
baz=257
N19K Bonanza Creek 75.94 29 P P 01 04 19.7 -0.3
N19K Bonanza Creek 75.94 29 P P 01 04 20.7 +0.7
baz=257
L19K White Mountain 76.09 27 IAmb IAmb 01 04 41.2
comp=Z,15nm,1.0s
L19K White Mountain 76.09 27 P P 01 04 21.4 +0.6
baz=256
G19K Purcell Mounta 76.19 23 P P 01 04 21.9 +0.8
baz=253
J19K Poorman 76.20 25 IAmb IAmb 01 04 34.0
comp=Z,14nm,0.9s
J19K Poorman 76.20 25 P P 01 04 22.0 +0.7
baz=255
C19K Lookout Ridge 76.21 20 IAmb IAmb 01 04 36.2
comp=Z,15nm,1.1s
C19K Lookout Ridge 76.21 20 P P 01 04 22.6 +1.3
baz=250
M19K Big River Lodg 76.23 28 P P 01 04 22.6 +1.0
baz=257
H19K Roundabout Mou 76.26 24 P P 01 04 22.3 +0.7
baz=254
KDAK Kodiak Island 76.27 32 P P 01 04 21.1 -0.7
baz=259
D19K Kuna River 76.51 21 IAmb IAmb 01 04 37.4
comp=Z,13nm,0.8s
D19K Kuna River 76.51 21 P P 01 04 23.9 +0.9
baz=252
E19K Redstone River 76.52 22 IAmb IAmb 01 04 37.7
comp=Z,17nm,1.1s
E19K Redstone River 76.52 22 P P 01 04 24.1 +1.1
baz=253
L20K Farewell, AK 76.60 27 P P 01 04 24.2 +0.5
baz=257
K20K Telida 76.71 26 P P 01 04 25.5 +1.2
baz=257
ARU Arti 76.76 327 *d* **P P 01 04 23.7 -0.9**
ARU IAmb IAmb 01 04 34.7
comp=Z,12nm,1.0s
ARU Arti 76.76 327 *d* **P P 01 04 24.0 -0.6**
ARU S S **01 14 11.5 +0.8**
ARU SS SS **01 19 05.5 -1.1**
ARU pmax pmax
comp=Z,4.0nm,0.8s
M20K Styx River 76.81 28 IAmb IAmb 01 04 37.3
comp=Z,18nm,1.1s
M20K Styx River 76.81 28 P P 01 04 26.0 +1.1
baz=258
J20K Nowinta River 76.87 25 IAmb IAmb 01 04 38.0
comp=Z,14nm,0.9s
J20K Nowinta River 76.87 25 P P 01 04 26.6 +1.5
baz=256
I20K Naaghedeneel 76.88 25 P P 01 04 26.4 +1.3
baz=256
H20K Anotleneega Mo 76.89 24 P P 01 04 26.0 +0.8
baz=256
F20K Avaraart Lake 76.96 22 P P 01 04 26.0 +0.5
baz=254
HOM Homer 77.10 30 P P 01 04 26.9 +0.5
baz=260
D20K Etivluk River 77.11 21 P P 01 04 27.1 +0.8
baz=253
E20K Nigu River 77.12 21 P P 01 04 27.5 +0.9
baz=254
B20K Meade River 77.31 19 P P 01 04 28.6 +1.2
baz=252
PPLA Purkeypile 77.45 27 P P 01 04 29.4 +0.8
baz=259
BRSE Bradley Lake S 77.56 30 P P 01 04 30.2 +1.1
baz=261
SKT Skwentna 77.57 28 P P 01 04 30.3 +1.1
baz=259
CHUM Lake Minchumin 77.59 26 P P 01 04 29.9 +0.8
baz=258
CAST Castle Rocks 77.60 26 IAmb IAmb 01 04 40.9
comp=Z,10nm,0.9s
CAST Castle Rocks 77.60 26 P P 01 04 30.0 +0.7
baz=259
G21K Allakaket 77.68 23 IAmb IAmb 01 04 43.6
comp=Z,13nm,1.1s
G21K Allakaket 77.68 23 P P 01 04 30.6 +1.0
baz=257
H21K Melozitna Rive 77.76 24 IAmb IAmb 01 04 42.2
comp=Z,14nm,1.1s
H21K Melozitna Rive 77.76 24 P P 01 04 31.1 +1.0
baz=257
SUA Susitna One 77.85 28 P P 01 04 31.2 +0.4
baz=260
F21K Alatna River 77.85 22 P P 01 04 31.4 +0.8
baz=256
C21K Knifeblade Rid 77.86 20 P P 01 04 31.5 +0.9
baz=255
A21K Barrow 77.88 18 P P 01 04 31.4 +0.9
baz=253
E21K Killik River 77.97 21 P P 01 04 32.4 +1.2
baz=256
I21K Tanana 78.00 25 IAmb IAmb 01 04 48.2
comp=Z,32nm,1.5s
I21K Tanana 78.00 25 P P 01 04 32.9 +1.5
baz=258,SNR=6.2
B21K Ikpikpuk River 78.05 20 IAmb IAmb 01 04 47.5
comp=Z,16nm,1.1s
B21K Ikpikpuk River 78.05 20 P P 01 04 32.3 +0.7
baz=255
KTH Kantishna Hill 78.14 26 IAmb IAmb 01 04 34.7
comp=Z,21nm,1.3s
M22K Willow 78.19 28 P P 01 04 33.1 +0.6
baz=261
BPAW Bear Paw Mtn. 78.21 26 IAmb IAmb 01 04 46.8
comp=Z,30nm,1.5s
BPAW Bear Paw Mtn. 78.21 26 P P 01 04 33.1 +0.5
baz=259
CUT Chulitna 78.23 27 P P 01 04 34.0 +1.3
baz=260
SEW Seward 78.26 30 P P 01 04 33.4 +0.5
baz=262
RC01 Rabbit Creek A 78.27 29 P P 01 04 33.6 +0.6
baz=261
H22K Ishtalitna Cre 78.39 24 P P 01 04 34.4 +0.8
baz=259
TRF Thorofare Moun 78.40 26 P P 01 04 34.4 +0.5
baz=260
MLY Manley 78.49 25 IAmb IAmb 01 04 37.0
comp=Z,16nm,1.2s
MLY Manley 78.49 25 P P 01 04 34.4 +0.3
baz=259,SNR=9.7
D22K Ayikyak River 78.53 21 IAmb IAmb 01 05 02.0
comp=Z,22nm,1.5s
D22K Ayikyak River 78.53 21 P P 01 04 35.3 +1.0
baz=257
G22K Bettles 78.54 23 P P 01 04 35.0 +0.6
baz=258
PMR Palmer 78.63 28 IAmb IAmb 01 04 46.2
comp=Z,13nm,0.9s
PMR Palmer 78.63 28 P P 01 04 35.2 +0.3
baz=262
GHO Glory Hole Cre 78.76 28 IAmb IAmb 01 04 48.7
comp=Z,21nm,1.1s
KNK Knik Glacier 78.93 29 P P 01 04 36.6 0.0
baz=262
RND Reindeer 79.03 27 IAmb IAmb 01 05 02.2
comp=Z,30nm,1.4s
MCK McKinley 79.04 26 P P 01 04 36.9 -0.3
baz=261,SNR=8.8
SML Sawmill 79.04 28 IAmb IAmb 01 04 51.0
comp=Z,24nm,1.0s
SML Sawmill 79.04 28 P P 01 04 37.5 +0.2
baz=262
G23K Bananza Creek 79.08 23 IAmb IAmb 01 04 50.2
comp=Z,15nm,0.9s
G23K Bananza Creek 79.08 23 P P 01 04 38.6 +1.2
baz=260
I23K Mino, Yukon-K 79.08 25 IAmb IAmb 01 04 51.0
comp=Z,24nm,1.2s
I23K Minto, Yukon-K 79.08 25 P P 01 04 38.0 +0.6
baz=261,SNR=11
WAT1 Susitna Watana 79.08 27 P P 01 04 37.7 +0.2
baz=262
COLD Coldfoot 79.10 23 P P 01 04 38.2 +0.7
baz=260
NEA2 Nenana 79.11 25 IAmb IAmb 01 04 39.8
comp=Z,20nm,1.4s
NEA2 Nenana 79.11 25 P P 01 04 38.5 +1.0
baz=261
D23K Nanushuk River 79.26 21 P P 01 04 39.7 +1.5
baz=259
P23K Montague Islan 79.27 30 P P 01 04 39.0 +0.6
baz=263
PPT Papeete 79.30 109 LR LR 01 32 10.6
comp=Z,194nm,21.2s,baz=348,slow=30
M23K Glacier View 79.32 28 P P 01 04 39.1 +0.3
baz=263
WAT6 Susitna Watana 79.42 27 P P 01 04 39.7 +0.3
baz=263
E23K Chandalar 79.47 22 P P 01 04 41.1 +1.5
baz=260
WRH Wood River Hil 79.52 26 IAmb IAmb 01 05 02.7
comp=Z,22nm,1.4s
SCM Sheep Creek Mo 79.52 28 P P 01 04 40.9 +1.0
baz=263
TOLK Toolik Lake Re 79.59 21 IAmb IAmb 01 05 03.0
comp=Z,13nm,0.9s
TOLK Toolik Lake Re 79.59 21 P P 01 04 41.3 +1.2
baz=260
DHY Denali Highway 79.65 27 P P 01 04 41.2 +0.5
baz=263
CCB Clear Creek Bu 79.66 25 IAmb IAmb 01 04 52.8
comp=Z,16nm,1.2s
COLA College 79.67 25 P P 01 04 40.7 +0.1
baz=262
Q23K Middleton Isla 79.74 31 P P 01 04 41.9 +0.9
baz=264
H24K Noodor Dome 79.80 24 IAmb IAmb 01 05 01.0
comp=Z,17nm,1.2s
H24K Noodor Dome 79.80 24 P P 01 04 42.4 +1.1
baz=262
POKR Poker Plat Res 79.88 25 P P 01 04 42.1 +0.4
baz=262
E24K Your Creek 79.89 22 P P 01 04 43.2 +1.4
baz=261
D24K Happy Valley 79.95 21 P P 01 04 43.1 +1.1
baz=260
HDA Harding Lake 80.00 26 P P 01 04 43.2 +0.8
baz=263
F24K Squaw Lake 80.03 22 IAmb IAmb 01 05 03.2
comp=Z,20nm,1.2s
F24K Squaw Lake 80.03 22 P P 01 04 43.3 +0.7
baz=262
ILAR Eielson Array 80.07 25 P P 01 04 42.2 -0.6
comp=Z,1.7nm,0.7s,baz=265,slow=17,SNR=4.5
comp=Z,1.7nm,0.7s
G24K Hadweenzic Riv 80.08 23 P P 01 04 43.7 +1.0
baz=262
C24K Franklin Bluff 80.08 20 P P 01 04 43.8 +1.1
baz=260
M24K Tolsona Glenn 80.09 28 P P 01 04 43.4 +0.4
baz=264
EYAK Cordova Ski Ar 80.14 30 P P 01 04 43.9 +0.7
baz=265
KLU Klutina 80.15 29 P P 01 04 43.1 -0.3
baz=264
K24K Donnelly Dome 80.44 26 P P 01 04 45.7 +0.9
baz=264
PAX Paxson 80.50 27 P P 01 04 45.5 +0.2
baz=265
HARP HAARP 80.59 28 P P 01 04 45.7 +0.1
baz=265
J25K Salcha River, 80.70 26 P P 01 04 46.0 -0.3
baz=264
PRP Porcupine Dome 80.72 25 P P 01 04 46.4 -0.1
baz=264
BMRM Bremner River 80.74 29 P P 01 04 46.8 +0.4
baz=266
N25K Chitina, Valde 80.79 29 P P 01 04 47.3 +0.5
baz=265
D25K Kavik River 80.83 21 IAmb IAmb 01 05 01.4
comp=Z,31nm,1.5s
D25K Kavik River 80.83 21 P P 01 04 47.2 +0.4
baz=263
RIDG Independent Ri 80.85 26 P P 01 04 47.3 +0.3
baz=265
F25K Christian Rive 80.90 23 P P 01 04 47.6 +0.3
baz=264
FYU Fort Yukon 80.95 24 IAmb IAmb 01 05 01.9
comp=Z,17nm,1.1s
E25K Arctic Village 80.98 22 P P 01 04 48.3 +0.6
baz=264
GLB Gilahina Butte 81.15 29 P P 01 04 48.3 -0.4
GLB IAmb IAmb 01 05 11.5
comp=Z,22nm,1.3s
SCRK Sand Creek 81.25 26 P P 01 04 48.8 -0.4
SCRK Sand Creek 81.25 26 P P 01 04 49.6 +0.4
baz=266
MENT Mentasta 81.29 27 P 01 04 49.4 0.0
VRDI Verde Repeater 81.31 29 P P 01 04 50.1 +0.4
C26K Camden Bay 81.41 20 P P 01 04 50.5 +0.7
baz=264
CRQE Cirque 81.46 30 P P 01 04 50.9 +0.5
baz=267
J26L Joseph Creek 81.47 26 P P 01 04 51.0 +0.7
baz=266
L26K Log Cabin Wild 81.47 27 P P 01 04 49.8 -0.5
L26K Log Cabin Wild 81.47 27 P P 01 04 50.8 +0.5
baz=266
F26K Sheenjek River 81.48 22 P P 01 04 51.1 +0.8
baz=265
MCARA McCarthy VSAT 81.53 29 P P 01 04 50.7 +0.1
MCARA IAmb IAmb 01 05 10.9
comp=Z,18nm,1.2s
MCARA McCarthy VSAT 81.53 29 P P 01 04 51.1 +0.5
baz=267
G26K Porcupine Rive 81.56 23 P P 01 04 51.3 +0.7
baz=266
WAX Waxell Ridge 81.57 30 P P 01 04 51.7 +0.8
WAX IAmb IAmb 01 05 14.3
comp=Z,27nm,1.2s
M26K Nabesna, AK 81.59 28 P P 01 04 51.9 +0.9
baz=267
I26K Coal Creek Min 81.70 25 P P 01 04 52.8 +1.3
baz=266
ISLE Juniper Island 81.83 30 P P 01 04 53.0 +0.6
KIRV Kirov 81.87 328 *i* **P P 01 04 51.8 -0.6**
K27K Chicken 82.09 26 P P 01 04 53.5 0.0
K27K IAmb IAmb 01 05 08.1
comp=Z,22nm,1.1s
K27K Chicken 82.09 26 P P 01 04 54.4 +0.9
baz=268,SNR=12
M27K Edge Creek, AK 82.11 28 IAmb IAmb 01 05 08.3
comp=Z,15nm,1.2s
M27K Edge Creek, AK 82.11 28 P P 01 04 55.1 +1.2
baz=268,SNR=5.8
L27K Beaver Creek, 82.16 27 P P 01 04 54.7 +0.7
baz=268
BARN Barnard Glacie 82.17 29 P P 01 04 54.5 +0.2
BCAR Beaver Creek A 82.18 27 P P 01 04 52.9 -1.3
CTG Chitna Glacier 82.33 29 P P 01 04 55.7 +0.6
baz=269
CTGM Chitina Glacie 82.33 29 P P 01 04 53.8 -1.3
I27K Kandik River 82.35 25 P P 01 04 55.7 +0.7
baz=268,SNR=9.1
TABL Table Mountain 82.41 30 P P 01 04 55.3 -0.2
H27K Steamboat Moun 82.42 24 P P 01 04 55.7 +0.4
baz=268
LOGN Logan Glacier 82.49 30 P P 01 04 55.7 -0.2
LOGN IAmb IAmb 01 05 16.4
comp=Z,15nm,0.9s
EGAK Eagle 82.52 26 P P 01 04 55.6 -0.1
EGAK IAmb IAmb 01 05 05.3
comp=Z,13nm,0.9s
EGAK Eagle 82.52 26 P P 01 04 56.6 +0.9
baz=268
BVCY Beaver Creek 82.59 28 P P 01 04 56.9 +0.7
baz=269
D27M Malcolm River 82.75 21 P P 01 04 57.2 +0.3
D27M IAmb IAmb 01 05 25.3
comp=Z,14nm,1.1s
D27M Malcolm River 82.75 21 P P 01 04 57.8 +0.9
baz=268
YUK3 Moose Creek 82.77 29 P P 01 04 57.6 +0.2
baz=269,SNR=6.3
BELG Belogornoye 82.83 322 *i* **P P 01 04 57.3 -0.3**
BELG pmax pmax
comp=Z,12nm,2.6s
BELG Belogornoye 82.83 322 LR LR 01 43 05.1
comp=Z,168nm,20.3s,baz=87,slow=37
PINM Pinnacle 82.85 30 P P 01 04 57.9 +0.3
baz=270
I28M Miner Creek 83.05 25 P P 01 04 59.1 +0.5
I28M IAmb IAmb 01 05 11.0
comp=Z,12nm,0.8s
I28M Miner Creek 83.05 25 P P 01 04 59.6 +0.9
baz=269
YUK8 Steele Glacier 83.10 29 P P 01 05 00.1 +0.9
baz=270
F28M Old Crow 83.11 23 P P 01 04 59.4 +0.6
F28M Old Crow 83.11 23 P P 01 04 59.6 +0.8
baz=269
BCPM Bancas Point 83.16 30 P 01 04 58.1 -1.1
BCPM IAmb IAmb 01 05 01.5
comp=Z,10nm,0.9s
E28M Babbage River 83.25 22 P P 01 04 59.8 +0.3
E28M Babbage River 83.25 22 P P 01 05 00.4 +0.9
baz=269
DAWY Dawson 83.27 26 P P 01 04 59.2 -0.5
DAWY Dawson 83.27 26 P P 01 05 00.9 +1.1
baz=270,SNR=11
PNL Peninsula 83.28 31 P P 01 05 00.4 +0.5
baz=270
YUK4 Talbot Arm 83.64 29 P P 01 05 02.8 +1.0
baz=271
O29M Mount Kennedy 83.69 30 P 01 05 00.7 -1.4
O29M IAmb IAmb 01 05 14.5
comp=Z,11nm,1.2s
O29M Mount Kennedy 83.69 30 P P 01 05 02.7 +0.6
baz=271
H29M Whitestone 83.69 24 P P 01 05 01.7 -0.2
H29M Whitestone 83.69 24 P P 01 05 02.5 +0.6
baz=271
M29M Somme Creek 83.70 28 P P 01 05 02.6 +0.5
M29M Somme Creek 83.70 28 P P 01 05 02.3 +0.2
baz=271
YUK6 Outpost Mounta 83.78 29 P P 01 05 03.2 +0.6
baz=271
J29N Klondike Camp 83.78 26 P P 01 05 02.8 +0.5
J29N IAmb IAmb 01 05 15.1
comp=Z,16nm,1.1s
J29N Klondike Camp 83.78 26 P P 01 05 02.9 +0.5
baz=271
L29M L29M 83.85 27 P P 01 05 01.9 -0.8
L29M L29M 83.85 27 P P 01 05 02.7 0.0
baz=271
E29M Blow River 83.85 22 P P 01 05 02.3 -0.2
E29M IAmb IAmb 01 05 26.0
comp=Z,9.1nm,1.1s
E29M Blow River 83.85 22 P P 01 05 03.1 +0.6
baz=271
K29M Barlow Dome 84.10 26 P P 01 05 03.5 -0.6
K29M Barlow Dome 84.10 26 P P 01 05 05.0 +0.9
baz=272
P29M Windy Craggy 84.13 31 P P 01 05 03.9 -0.3
P29M IAmb IAmb 01 05 20.0
comp=Z,8.0nm,0.9s
P29M Windy Craggy 84.13 31 P P 01 05 04.7 +0.5
baz=272
HYT Haines Junctio 84.20 29 P P 01 04 04.4 -0.3
HYT IAmb IAmb 01 05 17.0
comp=Z,7.8nm,1.0s
HYT Haines Junctio 84.20 29 P P 01 05 04.9 +0.3
baz=272
EPYK Eagle Plains 84.36 24 P 01 05 05.5 +0.3
EPYK Eagle Plains 84.36 24 P P 01 05 04.5 -0.7
EPYK IAmb IAmb 01 05 19.6
comp=Z,43nm,1.4s
EPYK Eagle Plains 84.36 24 P P 01 05 05.8 +0.6
baz=272
M30M Minto, Yukon 84.47 28 P P 01 05 06.4 +0.5
M30M Minto, Yukon 84.47 28 P P 01 05 06.9 +1.0
baz=272,SNR=9.0
P30M Million Dollar 84.50 30 P P 01 05 07.0 +0.9
baz=272
G30M tAoh Zraii Nji 84.53 23 P P 01 05 04.8 -1.3
G30M IAmb IAmb 01 05 17.9
comp=Z,15nm,1.1s
G30M tAoh Zraii Nji 84.53 23 P P 01 05 06.1 0.0
baz=272
I30M Mount Dempster 84.55 25 P P 01 05 06.3 0.0
I30M Mount Dempster 84.55 25 P P 01 05 07.0 +0.7
baz=272
J30M Hart River 84.59 26 P P 01 05 06.8 +0.2
J30M Hart River 84.59 26 P P 01 05 07.4 +0.8
baz=273
F30M Barrier River 84.67 23 P P 01 05 07.2 +0.4
baz=273
MAYO Mayo, Yukon 84.84 27 P P 01 05 08.8 +1.1
MAYO Mayo, Yukon 84.84 27 P P 01 05 08.6 +0.9
baz=273
O30N Mendenhall 84.90 30 P P 01 05 08.8 +0.7
baz=273
VNDA Vanda 84.92 174 P P 01 05 07.8 +0.1
comp=Z,4.3nm,1.0s,baz=328,slow=5.9,SNR=5.5
comp=Z,4.3nm,1.0s
S31K Pelican 84.98 32 P P 01 05 09.8 +1.4
baz=273
N31M Braeburn, Yuko 85.01 29 P P 01 05 09.1 +0.4
N31M Braeburn, Yuko 85.01 29 P P 01 05 09.5 +0.9
baz=273,SNR=7.2
G31M Satah River 85.30 23 P P 01 05 09.0 -0.9
G31M IAmb IAmb 01 05 21.0
comp=Z,14nm,1.1s
G31M Satah River 85.30 23 P P 01 05 10.1 +0.2
baz=274
GNI Garni 85.32 310 P P 01 05 11.3 +0.6

GNI	**Garni**	**85.32**	**310**	P	**P**	**01 05 11.4**	**+0.6**
GNI				pmax	pmax		
	comp=Z,26nm,1.0s						
H31M	**Peel River**	**85.36**	**24**	P	**P**	**01 05 09.7**	**-0.6**
H31M				IAmb	IAmb	01 05 24.3	
	comp=Z,20nm,1.4s						
H31M	**Peel River**	**85.36**	**24**	P	**P**	**01 05 10.7**	**+0.4**
	baz=274						
SKAG	**Skagway**	**85.36**	**31**	P	**P**	**01 05 10.5**	**+0.2**
SKAG	**Skagway**	**85.36**	**31**	P	**P**	**01 05 11.3**	**+1.0**
	baz=274						
F31M	**Tsiigehtchic**	**85.47**	**23**	P	**P**	**01 05 09.9**	**-0.7**
F31M				IAmb	IAmb	01 05 24.2	
	comp=Z,21nm,1.4s						
F31M	**Tsiigehtchic**	**85.47**	**23**	P	**P**	**01 05 10.7**	**0.0**
	baz=275						
WHY	**Whitehorse**	**85.50**	**30**	P	**P**	**01 05 11.8**	**+0.6**
WHY	**Whitehorse**	**85.50**	**30**	P	**P**	**01 05 11.6**	**+0.5**
	baz=274,SNR=12						
M31M	**Drury Creek, Y**	**85.61**	**28**	P	**P**	**01 05 11.2**	**-0.4**
M31M				IAmb	IAmb	01 05 36.0	
	comp=Z,18nm,1.1s						
M31M	**Drury Creek, Y**	**85.61**	**28**	P	**P**	**01 05 12.0**	**+0.4**
	baz=275,SNR=7.5						
ZEI	**Tsey**	**85.76**	**312**	*e*P	**P**	**01 05 12.4**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
R32K	**Eaglecrest**	**85.87**	**32**	P	**P**	**01 05 13.6**	**+0.7**
R32K				IAmb	IAmb	01 05 34.1	
	comp=Z,26nm,1.5s						
R32K	**Eaglecrest**	**85.87**	**32**	P	**P**	**01 05 13.6**	**+0.7**
	baz=275						
S32K	**Killisnoo**	**85.91**	**33**	P	**P**	**01 05 14.0**	**+1.0**
	baz=275						
RAYN	**Ar Rayn**	**85.93**	**293**	P	**P**	**01 05 13.4**	**-0.6**
RAYN				IAmb	IAmb	01 05 38.9	
	comp=Z,18nm,1.2s						
RAYN	**Ar Rayn**	**85.93**	**293**	P	**P**	**01 05 13.4**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,18nm,1.2s						
JIS	**Juneau Island**	**85.94**	**32**	P	**P**	**01 05 12.7**	**-0.5**
FARO	**Faro, Yukon**	**86.10**	**28**	P	**P**	**01 05 14.4**	**+0.3**
FARO				IAmb	IAmb	01 05 26.8	
	comp=E,20nm,1.3s						
FARO	**Faro, Yukon**	**86.10**	**28**	P	**P**	**01 05 14.5**	**+0.5**
	baz=276,SNR=17						
AKH	**Akhalkalaki**	**86.17**	**311**	P	**P**	**01 05 14.6**	**-0.4**
AKH	**Akhalkalaki**	**86.17**	**311**	P	**P**	**01 05 14.6**	**-0.4**
AKH				pmax	pmax		
	comp=Z,24nm,1.0s						
P32M	**Atlin**	**86.17**	**31**	P	**P**	**01 05 13.9**	**-0.5**
P32M				IAmb	IAmb	01 05 27.4	
	comp=Z,16nm,1.1s						
P32M	**Atlin**	**86.17**	**31**	P	**P**	**01 05 15.1**	**+0.6**
	baz=275						
N32M	**Quiet Lake**	**86.33**	**29**	P	**P**	**01 05 15.7**	**+0.4**
N32M	**Quiet Lake**	**86.33**	**29**	P	**P**	**01 05 16.3**	**+1.1**
	baz=276						
KBZ	**Khabaz**	**86.42**	**313**	*i* P	**P**	**01 05 15.4**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,14nm,1.7s						
KBZ	**Khabaz**	**86.42**	**313**	LR	LR	01 46 18.0	
	comp=Z,175nm,20.6s,baz=317,slow=37						
KIV	**Kislovodsk**	**86.55**	**314**	P	**P**	**01 05 16.0**	**-0.7**
KIV				IAmb	IAmb	01 05 28.9	
	comp=Z,12nm,1.1s						
KIV	**Kislovodsk**	**86.55**	**314**	*e*P	**P**	**01 05 15.6**	**-1.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
P33M	**Teslin, Yukon**	**86.56**	**30**	P	**P**	**01 05 15.6**	**-0.8**
P33M	**Teslin, Yukon**	**86.56**	**30**	P	**P**	**01 05 17.2**	**+0.8**
	baz=276						
KLMR	**Klimovskoe**	**86.78**	**331**	*e*P	**P**	**01 05 14.0**	**-3.3**
KLMR				pmax	pmax		
	comp=Z,42nm,2.0s						
U33K	**Whale Pass**	**86.83**	**34**	P	**P**	**01 05 18.3**	**+0.7**
	baz=276						
CRAG	**Craig**	**86.90**	**35**	P	**P**	**01 05 18.3**	**+0.3**
	baz=276						
Q32M	**Nakina River**	**86.97**	**31**	P	**P**	**01 05 19.0**	**+0.4**
	baz=277						
WRAK	**Wrangell Islan**	**87.23**	**34**	P	**P**	**01 05 20.1**	**+0.6**
WRAK	**Wrangell Islan**	**87.23**	**34**	P	**P**	**01 05 20.2**	**+0.6**
	baz=277						
GURO	**Guroymak-BITLI**	**87.55**	**308**	P	**P**	**01 05 21.3**	**-0.4**
GURO				IAmb	IAmb	01 05 33.8	
	comp=Z,6.9nm,1.0s						
R33M	**Jennings River**	**87.58**	**31**	P	**P**	**01 05 21.1**	**-0.3**
R33M				IAmb	IAmb	01 05 33.9	
	comp=Z,18nm,1.4s						
R33M	**Jennings River**	**87.58**	**31**	P	**P**	**01 05 22.1**	**+0.7**
	baz=278						
S34M	**Telegraph Cree**	**87.70**	**32**	P	**P**	**01 05 21.3**	**-0.5**
S34M	**Telegraph Cree**	**87.70**	**32**	P	**P**	**01 05 22.0**	**+0.2**
	baz=278						
A36M	**Sachs Harbour**	**87.72**	**18**	P	**P**	**01 05 20.9**	**-0.8**
A36M				IAmb	IAmb	01 05 43.2	
	comp=Z,7.0nm,0.9s						
A36M	**Sachs Harbour**	**87.72**	**18**	P	**P**	**01 05 21.4**	**-0.2**
	baz=282						
DLBC	**Dease Lake**	**88.20**	**32**	P	**P**	**01 05 22.0**	**-2.3**
DLBC				IAmb	IAmb	01 05 36.6	
	comp=Z,13nm,1.2s						
DLBC	**Dease Lake**	**88.20**	**32**	P	**P**	**01 05 24.6**	**+0.3**
	baz=279						
T35M	**Bob Quinn**	**88.30**	**33**	P	**P**	**01 05 23.6**	**-1.2**
T35M	**Bob Quinn**	**88.30**	**33**	P	**P**	**01 05 24.9**	**+0.1**
	baz=278						
MAW	**Mawson**	**88.35**	**201**	P	**P**	**01 05 25.8**	**+1.2**
MAW	**Mawson**	**88.35**	**201**	P	**P**	**01 05 25.8**	**+1.2**
MAW				pmax	pmax		
	comp=Z,28nm,1.5s						
WTLY	**Watson Lake, Y**	**88.56**	**30**	P	**P**	**01 05 26.6**	**+0.6**
WTLY				IAmb	IAmb	01 05 38.2	
	comp=Z,14nm,1.3s						
WTLY	**Watson Lake, Y**	**88.56**	**30**	P	**P**	**01 05 26.4**	**+0.5**
	baz=280						
TGTN	**Hyland Airport**	**88.58**	**28**	P	**P**	**01 05 26.5**	**+0.5**
	baz=280						
C36M	**Paulatuk**	**88.70**	**20**	P	**P**	**01 05 25.0**	**-1.3**
C36M				IAmb	IAmb	01 05 37.5	
	comp=Z,6.0nm,0.9s						
SOC	**Sochi**	**88.73**	**314**	*e*P	**P**	**01 05 24.1**	**-2.9**
SOC				*e*		01 08 53.6	
SOC				*e*PPP	PPP	01 10 48.7	
SOC				*e*S	**SKSac**	**01 15 52.7**	**-3.0**
SOC				*e*SS	**SS**	**01 22 08.3**	**+3.5**
SOC				*e*SSS	SSS	01 25 44.0	
ARCES	**ARCESS Array B**	**90.63**	**340**	P	**P**	**01 05 34.2**	**-1.2**
	comp=Z,4.8nm,0.7s,baz=72,slow=4.0,SNR=12						
	comp=Z,4.8nm,0.7s						
FINES	**FINESS Array B**	**93.02**	**333**	P	**P**	**01 05 45.1**	**-1.5**
	comp=Z,2.1nm,0.8s,baz=49,slow=6.3,SNR=4.7						
	comp=Z,2.1nm,0.8s						
RES	**Resolute Bay**	**94.25**	**12**	P	**P**	**01 05 51.0**	**-1.0**
RES				IAmb	IAmb	01 06 04.6	
	comp=Z,8.0nm,1.2s						
RES	**Resolute Bay**	**94.25**	**12**	P	**P**	**01 05 51.0**	**-1.0**
RES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AKASG	**Malin Array Be**	**94.41**	**322**	P	**P**	**01 05 55.0**	**+1.8**
AKASG	**Malin Array Be**	**94.41**	**322**	P	**P**	**01 05 55.0**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=78,slow=0.6,SNR=1.4						
	comp=Z,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**94.50**	**26**	*i* P	**P**	**01 05 53.0**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**94.50**	**26**	P	**P**	**01 05 53.5**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=297,slow=5.0,SNR=20						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**95.93**	**180**	P	**P**	**01 06 00.4**	**+0.4**
	comp=Z,3.4nm,1.0s,baz=42,slow=2.9,SNR=5.1						
	comp=Z,3.4nm,1.0s						
YBH	**Yreka Blue Hor**	**96.09**	**47**	LR	LR	01 42 38.3	
	comp=Z,155nm,21.0s,baz=27,slow=31						
NOA	**NORSAR Array B**	**99.69**	**335**	LR	LR	01 53 51.4	
	comp=Z,124nm,20.4s,baz=65,slow=37						
LANS	**Liptovska Anna**	**100.87**	**322**	*e*P	**Pdif**	**01 06 23.5**	**+1.0**
LANS	**Liptovska Anna**	**100.87**	**322**	*e*PDIFF	**Pdif**	**01 06 23.5**	**+1.0**
CLL	**Collm**	**103.70**	**326**	*e*PP	**PKiKP**	**01 10 50.0**	**-3.1**
TORD	**Torodi Ar. Bea**	**128.62**	**292**	PKP	**PKiKP**	**01 11 42.0**	**-0.1**
	comp=Z,1.5nm,1.1s,baz=75,slow=1.6,SNR=5.9						
SDDR	**Presa de Saban**	**145.04**	**44**	*e*P	**PKPdf**	**01 12 11.6**	**-0.1**
MCRA	**Macar, Loja**	**146.49**	**89**	*e*P	**PKPab**	**01 12 17.2**	**+0.5**
APAC	**Apartado, Choc**	**146.82**	**66**	*e*P	**PKPab**	**01 12 17.4**	**-0.4**
PIAT	**Ana Tenorio**	**147.76**	**82**	*e*P	**PKiKP**	**01 12 21.6**	**-0.1**
UREC	**San Jos de Ur**	**147.82**	**65**	*e*P	**PKPbc**	**01 12 19.0**	**-0.4**
AC05	**El Transito**	**147.97**	**138**	PKPab	**PKiKP**	**01 12 20.9**	**-0.5**
CBOC	**Ciudad Bolivar**	**148.11**	**69**	*e*P	**PKPbc**	**01 12 20.0**	**-0.3**
JAMC	**Jamundi, Valle**	**148.35**	**74**	*e*P	**PKiKP**	**01 12 22.0**	**-0.7**
YOTC	**Yotoco, Valle**	**148.43**	**72**	*e*P	**PKPdf**	**01 12 19.1**	**+1.4**
POPC	**Popayan, Colom**	**148.54**	**75**	*e*P	**PKPbc**	**01 12 21.6**	**0.0**
GUY2C	**Guyana, Caldas**	**148.94**	**69**	*e*P	**PKPbc**	**01 12 23.6**	**+0.7**
ORTC	**Ortega, Tolima**	**149.50**	**72**	*e*P	**PKPdf**	**01 12 19.6**	**+0.4**
OCAC	**Ocana**	**149.59**	**62**	*e*P	**PKPbc**	**01 12 22.6**	**-1.5**
PRAC	**Prado**	**149.90**	**72**	*e*P	**PKPdf**	**01 12 21.2**	**+1.3**
SPBC	**San Pablo de B**	**149.98**	**68**	*e*P	**PKPbc**	**01 12 24.7**	**-0.3**
BARC	**Barichara**	**150.42**	**65**	*e*P	**PKPbc**	**01 12 25.9**	**-0.4**
PAMC	**Pamplona, Colo**	**150.54**	**64**	*e*P	**PKPbc**	**01 12 27.1**	**+0.3**
PTLC	**Puerto Leguiza**	**150.94**	**79**	*e*P	**PKiKP**	**01 12 28.4**	**+0.5**
SDV	**Santo Domingo**	**151.61**	**59**	*e*P	**PKPdf**	**01 12 23.5**	**+0.8**
BAUV	**El Baul**	**153.75**	**56**		**PKPbc**	**01 12 33.0**	**-0.5**
CPUP	**Villa Florida**	**157.26**	**154**	PKPab	**PKPab**	**01 13 01.2**	**+0.4**
	comp=Z,9.5nm,1.1s,baz=216,slow=4.7,SNR=6.8						

ISK ***12*** *00:58:52.8,36.26N×35.79E,h18km,ML3.1/16*
GII ***12*** *00:58:54.0±0.5,36.267N±0.003×35.667E±0.001, h6km,Mws2.9,confirmed*
NIC ***12*** *00:58:54.0,36.82N×35.35E,h32km±43km,Ml3.1/6*
AFAD ***12*** *00:58:54.2±0.0,36.37N×35.82E,h23km±1km,MW3.4*

ISC 12 00:58:53.2±1.2,36.34N±0.02×35.76E±0.02,h11km±10km, n111,σ0.93/129,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAHT	**Tahtakopru-Hat**	**0.35**	**84**	Pg	**Pg**	**00 59 00.2**	**+0.1**
TAHT				Sg	**Sb**	**00 59 05.8**	**-1.1**
YURE	**YUREGIR**	**0.49**	**348**	P	**Pb**	**00 59 03.9**	**0.0**
CEYT	**Ceyhan**	**0.67**	**359**	Pg	**Pn**	**00 59 08.4**	**-0.1**
CEYT				Sg	**Sn**	**00 59 19.0**	**0.0**
RHAN	**Hatay/Reyhanl**	**0.69**	**97**	P	**Pb**	**00 59 07.2**	**0.0**
RHAN				S	**Sb**	**00 59 16.5**	**-0.2**
RHAN				*i* AML	AML	00 59 17.0	
	comp=N,2μm,0.3s						
RHAN				*i* AML	AML	00 59 17.0	
	comp=E,1μm,0.4s						
HASA	**Hatay-Hassa-Ha**	**0.72**	**55**	P	**Pg**	**00 59 06.9**	**-0.1**
KARA	**Karaisali**	**1.08**	**329**	Pn	**Pb**	**00 59 14.1**	**+0.3**
KARA				Sn	**Sn**	**00 59 30.4**	**+1.3**
KAMA	**Osmaniye**	**1.12**	**41**	Pn	**Pn**	**00 59 14.9**	**+0.1**
KOZT	**Kozan**	**1.14**	**3**	Pn	**Pn**	**00 59 15.5**	**+0.4**
KOZT				Sn	**Sn**	**00 59 31.9**	**+1.2**
AKO	**Adana**	**1.15**	**348**	P	**Pb**	**00 59 14.8**	**-0.2**
GULE	**Gulek**	**1.23**	**320**	P	**Pn**	**00 59 16.8**	**+0.4**
GULE				S	**Sb**	**00 59 30.8**	**-1.6**
GULE				*i* AML	AML	00 59 41.0	
	comp=N,238nm,0.4s						
KIZK	**Mersin**	**1.31**	**277**	P	**Pn**	**00 59 15.9**	**-1.4**
ANDN	**Andirin**	**1.32**	**21**	P	**Pn**	**00 59 17.6**	**-0.1**
ANDN				S	**Sg**	**00 59 36.1**	**+0.3**
ANDN				*i* AML	AML	00 59 41.0	
	comp=E,222nm,0.4s						
HCB	**Kahramanmara**	**1.36**	**42**	P	**Pb**	**00 59 18.7**	**0.0**
HCB				S	**Sb**	**00 59 35.4**	**-0.7**
HCB				*i* AML	AML	00 59 38.0	
	comp=N,154nm,0.4s						
KHMR	**Kahramanmara**	**1.36**	**42**	P	**Pn**	**00 59 18.1**	**0.0**
KHMR				P	**Pg**	**00 59 20.0**	**+0.7**
KHMR				S	**Sb**	**00 59 35.1**	**-1.0**
GAZ	**Gaziantep**	**1.43**	**54**	Pn	**Pb**	**00 59 19.4**	**-0.5**
GAZ	**Gaziantep**	**1.43**	**54**	P	**Pb**	**00 59 19.4**	**-0.5**
GAZ				S	**Sb**	**00 59 38.1**	**-0.1**
GAZ				AML	AML	00 59 44.4	
	1.0nm,0.4s						
GAZ				AML	AML	00 59 45.9	
	0.9nm,0.4s						
CMRD	**Camardi-Nigde**	**1.45**	**335**	Pn	**Pb**	**00 59 20.4**	**+0.1**
KMRS	**Kahramanmaras**	**1.48**	**38**	Pn	**Pn**	**00 59 19.9**	**+0.1**
SILI	**Silifke-Mersin**	**1.48**	**272**	Pn	**Pn**	**00 59 19.4**	**-0.3**
KAHM	**Kahramanmaras,**	**1.53**	**40**	P	**Pg**	**00 59 22.0**	**-0.6**
KAHM				S	**Sn**	**00 59 39.0**	**-1.5**
KAHM				*i* AML	AML	00 59 47.0	
	comp=N,139nm,0.3s						
SAIM	**ADANA**	**1.65**	**9**	P	**Pb**	**00 59 23.8**	**+0.1**
KARG	**Kargicak-Mersi**	**1.66**	**266**	Pn	**Pn**	**00 59 22.3**	**+0.1**
IKL	**Isikli**	**1.68**	**267**	Pn	**Pn**	**00 59 22.3**	**-0.1**
TISA	**Tisan-Mersin**	**1.69**	**265**	Pn	**Pn**	**00 59 22.4**	**-0.2**
KERG	**Konya-Eregli**	**1.69**	**310**	P	**Pn**	**00 59 24.0**	**+1.3**
NZIP	**Nizip/Gaziante**	**1.69**	**65**	P	**Pn**	**00 59 22.4**	**-0.4**
YESI	**Yesilovacik-Me**	**1.71**	**266**	Pn	**Pn**	**00 59 21.9**	**-1.0**
GZT	**Gaziantep**	**1.77**	**55**	P	**Pg**	**00 59 27.3**	**+0.2**
YAHY	**KAYSERI_Yahyal**	**1.78**	**350**	P	**Pn**	**00 59 24.3**	**+0.4**
YAHY				S	**Sg**	**00 59 49.4**	**-0.9**
YAHY				*i* AML	AML	00 59 51.0	
	comp=N,34nm,0.5s						
YAHY				*i* AML	AML	00 59 51.0	
	comp=E,54nm,0.7s						
AKKU	**Akkuyu-Mersin**	**1.79**	**265**	Pn	**Pn**	**00 59 24.0**	**0.0**
GULN	**MERSIN_Gulnar**	**1.79**	**266**	P	**Pn**	**00 59 24.8**	**+0.8**
BEIL	**Beino**	**1.83**	**169**	*e*P	**Pn**	**00 59 25.0**	**+0.4**
NIDE	**Nigde/Merkez-G**	**1.83**	**335**	P	**Pn**	**00 59 25.7**	**+1.0**
NIDE				S	**Sb**	**00 59 50.1**	**+0.3**
NIDE				*i* AML	AML	00 59 57.0	
	comp=N,90nm,0.4s						
TEVE	**Tevekalti-Mers**	**1.87**	**274**	Pn	**Pn**	**00 59 25.6**	**+0.4**
PARAL	**Paralimni**	**1.94**	**227**	P	**Pn**	**00 59 27.6**	**+1.5**
PARAL				S	**Sb**	**00 59 53.0**	**+0.3**
PARAL				AML	AML	01 00 01.8	
	0.3nm,0.6s						
PARAL				AML	AML	01 00 05.3	
	0.3nm,0.8s						
LFK	**Lefkose**	**2.10**	**240**	Pn	**Pn**	**00 59 28.2**	**-0.1**
AKCA	**Adyaman/G¶l**	**2.12**	**46**	P	**Pb**	**00 59 31.9**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.13**	**14**	Pn	**Pn**	**00 59 29.6**	**+0.8**
YESY	**Yesilyurt**	**2.16**	**312**	Pn	**Pn**	**00 59 30.1**	**+0.9**
MVOU	**Mavrovouni**	**2.18**	**233**	P	**Pn**	**00 59 28.5**	**-0.8**
MVOU				S	**Sn**	**00 59 57.6**	**+1.4**
MVOU				AML	AML	01 00 05.6	
	0.2nm,0.5s						
MVOU				AML	AML	01 00 10.4	
	0.3nm,0.9s						
BSIR	**Belisirma, Guz**	**2.25**	**329**	P	**Pn**	**00 59 32.5**	**+2.0**
ATHAL	**Athalassa**	**2.26**	**239**	P	**Pn**	**00 59 30.2**	**-0.3**
ATHAL				S	**Sn**	**00 59 57.6**	**-0.8**
ATHAL				AML	AML	01 00 11.8	
	0.5nm,0.5s						
ATHAL				AML	AML	01 00 11.9	
	0.5nm,0.7s						
ATAB	**Bozova**	**2.33**	**60**	P	**Pb**	**00 59 35.2**	**+0.1**
GULA	**Gulagac**	**2.34**	**329**	Pn	**Pn**	**00 59 32.7**	**+1.1**
SURC	**SANLIURFA_SURC**	**2.36**	**76**	P	**Pn**	**00 59 31.4**	**-0.4**
CSS	**Mathiatis**	**2.41**	**236**	P	**Pn**	**00 59 31.5**	**-1.1**
CSS				S	**Sn**	**01 00 01.3**	**-0.7**
CSS	**Mathiatis**	**2.41**	**236**	P	**Pn**	**00 59 32.3**	**-0.2**
BHL	**Bhannes**	**2.43**	**182**	*e*P	**Pn**	**00 59 32.6**	**-0.4**
AZEY	**Adyaman-Merk**	**2.47**	**53**	P	**Pn**	**00 59 33.5**	**0.0**
ZAHL	**Zahle**	**2.48**	**178**	*e*P	**Pn**	**00 59 34.2**	**+0.6**
BNN	**Bunyan**	**2.51**	**2**	Pn	**Pn**	**00 59 35.2**	**+1.2**
ASGA	**Asgata**	**2.57**	**234**	P	**Pn**	**00 59 35.1**	**+0.5**
ASGA				S	**Sn**	**01 00 06.1**	**+0.2**
ASGA				AML	AML	01 00 18.4	
	0.2nm,1.0s						
ASGA				AML	AML	01 00 20.0	
	0.1nm,0.6s						
AKCD	**Akcadag**	**2.60**	**41**	P	**Pn**	**00 59 36.8**	**+1.5**
DARE	**Darende-Malaty**	**2.62**	**31**	Pn	**Pn**	**00 59 36.2**	**+0.8**
DQRL	**Deir Qamar**	**2.63**	**183**	*e*P	**Pn**	**00 59 36.1**	**+0.4**
TROD	**Troodos**	**2.73**	**240**	P	**Pn**	**00 59 37.7**	**+0.6**
QRWL	**Qaraoun**	**2.79**	**181**	*e*P	**Pn**	**00 59 38.5**	**+0.7**
ALFC	**Alefka**	**2.83**	**246**	P	**Pn**	**00 59 36.8**	**-1.5**
ALFC				S	**Sn**	**01 00 09.2**	**-3.2**
ALFC				AML	AML	01 00 13.0	
	0.2nm,0.5s						
ALFC				AML	AML	01 00 23.6	
	0.2nm,0.3s						
RCY	**Rachaya**	**2.84**	**179**	*e*P	**Pn**	**00 59 38.7**	**+0.1**
SHBL	**Chebaa**	**2.99**	**180**	*e*P	**Pn**	**00 59 40.9**	**+0.3**
NATA	**Nata**	**3.03**	**240**	P	**Pn**	**00 59 42.2**	**+1.2**
NATI	**Neve Ativ**	**3.07**	**180**	P	**Pn**	**00 59 41.6**	**0.0**
GEM	**Giv'at Ha'Em**	**3.12**	**181**	P	**Pn**	**00 59 43.9**	**+1.5**
GEM	**Giv'at Ha'Em**	**3.12**	**181**	S	**Sn**	**01 00 19.6**	**0.0**
GEM	**Giv'at Ha'Em**	**3.12**	**181**	P	**Pn**	**00 59 42.1**	**-0.3**
HNTI	**Hanita**	**3.29**	**189**	P	**Pn**	**00 59 45.3**	**+0.7**
HNTI	**Hanita**	**3.29**	**189**	P	**Pn**	**00 59 44.5**	**-0.1**
HNTI	**Hanita**	**3.29**	**189**	S	**Sn**	**01 00 23.1**	**-0.5**
MMB1	**Mount Meron ar**	**3.33**	**185**	P	**Pn**	**00 59 45.3**	**0.0**
MMA0B	**Mount Meron ar**	**3.33**	**185**	S	**Sn**	**01 00 24.6**	**-0.2**
MMA0B	**Mount Meron ar**	**3.33**	**185**	P	**Pn**	**00 59 45.3**	**+0.1**
KSHT	**Keshet**	**3.35**	**179**	P	**Pn**	**00 59 45.9**	**+0.4**
KSHT	**Keshet**	**3.35**	**179**	S	**Sn**	**01 00 25.6**	**+0.3**
BLGI	**Bet Lehem HaGe**	**3.63**	**188**	P	**Pn**	**00 59 49.9**	**+0.6**
BLGI	**Bet Lehem HaGe**	**3.63**	**188**	P	**Pn**	**00 59 49.3**	**0.0**
OFRI	**`Ofer**	**3.77**	**190**	P	**Pn**	**00 59 51.6**	**+0.4**
OFRI	**`Ofer**	**3.77**	**190**	P	**Pn**	**00 59 51.2**	**0.0**
OFRI	**`Ofer**	**3.77**	**190**	S	**Sn**	**01 00 34.4**	**-1.2**
MMLI	**Mount Malkishu**	**3.90**	**184**	P	**Pn**	**00 59 54.0**	**+0.9**
MMLI	**Mount Malkishu**	**3.90**	**184**	P	**Pn**	**00 59 53.5**	**+0.4**
QRNJ	**Al-Qirein**	**4.00**	**182**	P	**Pn**	**00 59 56.5**	**+2.2**
HMDT	**Nahal Hemdat**	**4.08**	**183**	P	**Pn**	**00 59 56.7**	**+1.2**
HMDT	**Nahal Hemdat**	**4.08**	**183**	P	**Pn**	**00 59 56.8**	**+1.3**
SLTI	**Sal'it**	**4.13**	**188**	P	**Pn**	**00 59 57.3**	**+1.1**
SLTI	**Sal'it**	**4.13**	**188**	P	**Pn**	**00 59 57.4**	**+1.2**
SLTI	**Sal'it**	**4.13**	**188**	S	**Sn**	**01 00 44.6**	**+0.1**
BALJ	**Balqa**	**4.25**	**181**	P	**Pn**	**01 00 00.3**	**+2.5**
ASF	**Jabal al Asfar**	**4.26**	**167**	P	Pn	01 00 03.2	+5.1
SALP	**Salfit**	**4.29**	**186**	P	**Pn**	**00 59 59.2**	**+0.8**
SALP	**Salfit**	**4.29**	**186**	P	**Pn**	**00 59 59.6**	**+1.3**
UJAP	**Al Uja**	**4.39**	**183**	P	**Pn**	**01 00 01.9**	**+2.3**
DSI	**Dead Sea**	**4.77**	**184**	P	**Pn**	**01 00 05.9**	**+0.9**
DSI	**Dead Sea**	**4.77**	**184**	P	**Pn**	**01 00 04.9**	**-0.1**
AMAZ	**Amatzia**	**4.85**	**189**	P	**Pn**	**01 00 07.7**	**+1.6**
AMAZ	**Amatzia**	**4.85**	**189**	S	**Sn**	**01 01 02.7**	**+0.4**
AMAZ	**Amatzia**	**4.85**	**189**	P	**Pn**	**01 00 05.9**	**-0.2**
YTIR	**Yattir**	**5.00**	**186**	P	**Pn**	**01 00 09.2**	**+1.1**
YTIR	**Yattir**	**5.00**	**186**	P	**Pn**	**01 00 09.2**	**+1.1**
MSBI	**Mazada**	**5.03**	**184**	P	**Pn**	**01 00 10.1**	**+1.6**
MSBI	**Mazada**	**5.03**	**184**	P	**Pn**	**01 00 09.2**	**+0.8**
GHAJ	**Ghor Haditha**	**5.03**	**182**	P	**Pn**	**01 00 10.6**	**+2.1**
KARJ	**KARJ**	**5.21**	**181**	P	Pn	01 01 01.1	-1.0
KZIT	**Kziot**	**5.54**	**192**	P	**Pn**	**01 00 16.4**	**+0.9**
KZIT	**Kziot**	**5.54**	**192**	S	**Sn**	**01 01 19.2**	**0.0**
KZIT	**Kziot**	**5.54**	**192**	P	**Pn**	**01 00 16.1**	**+0.6**
ZFRI	**Zfri**	**5.79**	**185**	P	**Pn**	**01 00 20.0**	**+1.0**
PRNI	**Paran**	**6.01**	**186**	P	**Pn**	**01 00 23.2**	**+1.2**
KRMI	**Paran Flat**	**6.27**	**188**	P	**Pn**	**01 00 26.4**	**+0.8**
KRMI	**Paran Flat**	**6.27**	**188**	P	**Pn**	**01 00 25.9**	**+0.3**
HRFI	**Mount Harif**	**6.32**	**186**	P	**Pn**	**01 00 28.0**	**+1.7**
MBRI	**Mt Berech**	**6.57**	**186**	P	**Pn**	**01 00 31.7**	**+1.9**

CNRM ***12*** *01:01:41.5,35.99N×4.69W,h83km,ML1.3*
MDD ***12*** *01:01:42.4±0.5,36.02N×4.64W,h89km±6km,Mb2.4/16, Error ellipse: s-maj=4.1km s-min=2.8km az=161.0*
SFS ***12*** *01:01:42.2,36.02N×4.61W,h101km,ML2.6/10, MLv2.6/10*
INMG ***12*** *01:01:43.3±1.2,36.11N×4.66W,h90km±2km,ML1.8,Error ellipse: s-maj=3.7km s-min=2.5km az=146.0*

ISC 12 01:01:40.5±1.2,36.01N±0.02×4.64W±0.03,h98km±7km, n62,σ1.29/95,14C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.56**	**349**	Pg	**Pn**	**01 01 57.0**	**+0.3**
EMIJ				Sg	**Sn**	**01 02 08.1**	**-0.6**
EMIJ	**Mijas**	**0.56**	**349**	P	**Pn**	**01 01 56.9**	**+0.3**
EMIJ				S	**Sn**	**01 02 08.0**	**-0.7**
CEU	**Ceuta**	**0.60**	**260**	Sg	**Sn**	**01 02 09.0**	**-0.1**
CEU				Pg	**Pn**	**01 01 57.9**	**+1.1**
SMIR	**Smir Dam**	**0.68**	**

	1.8nm,0.3s								
MORF	**Marmelete**	**3.47**	**293**		*e*S		**Sn**	**01 03 12.0**	**-0.8**
PAB	**San Pablo**	**3.54**	**4**		P		**Pn**	**01 02 34.3**	**+0.9**
PAB					⇑*i*Vmb_V			01 02 34.6	
	66nm,SNR=0.9								
PAB					S		**Sn**	**01 03 11.9**	**-2.5**
PFVI	**Vila Bisbo**	**3.55**	**290**		*e*S		**Sn**	**01 03 13.1**	**-1.4**
ETOB	**Tobarra**	**3.61**	**42**		Pn		**Pn**	**01 02 35.2**	**+0.8**
ETOB	**Tobarra**	**3.61**	**42**		P		**Pn**	**01 02 35.6**	**+1.2**
ETOB					⇑*i*Vmb_V			01 02 35.9	
	146nm,SNR=0.9								
ETOB					S		**Sn**	**01 03 14.3**	**-1.7**
EVO	**Evora**	**3.68**	**314**		*e*P		**Pn**	**01 02 37.1**	**+1.8**
EVO					*e*S		**Sn**	**01 03 16.5**	**-1.2**
EVO					A		A	01 03 19.9	
	1.8nm,0.2s								
PESTR	**Estremoz**	**3.69**	**321**		*e*P		**Pn**	**01 02 37.1**	**+1.6**
PESTR					*e*S		**Sn**	**01 03 16.6**	**-1.4**
PESTR					A		A	01 03 21.2	
	1.4nm,0.8s								
PESTR	**Estremoz**	**3.69**	**321**		Pn		**Pn**	**01 02 36.3**	**+0.8**
PESTR					Sn		**Sn**	**01 03 16.6**	**-1.4**
PESTR	**Estremoz**	**3.69**	**321**		P		**Pn**	**01 02 35.9**	**+0.4**
PNCL	**Nicolau / Gran**	**3.75**	**305**		*e*S		**Sn**	**01 03 17.7**	**-1.6**
PNCL					A		A	01 03 20.4	
	2.0nm,0.8s								
PMRV	**Marv??o**	**4.05**	**328**		*e*P		**Pn**	**01 02 41.8**	**+1.5**
PMRV					*e*S		**Sn**	**01 03 24.9**	**-1.7**
PMTG	**Montargil**	**4.17**	**318**		*e*S		**Sn**	**01 03 28.2**	**-1.4**
PCBR	**Castelo Branco**	**4.43**	**330**		*e*P		**Pn**	**01 02 47.2**	**+1.8**
PCBR					*e*S		**Sn**	**01 03 33.4**	**-2.5**
PCBR					A		A	01 03 34.0	
	1.2nm,0.4s								

SOME ***12*** *01:01:51.5, 42°.22N×77°.13E, h20km*
NNC 12 01:01:51.6±0.9, 42°.27N×77°.13E, h0km, mb2.7, mpv2.7, 1C-1D, Error ellipse: s-maj=6.9km s-min=3.6km az=5.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.78**	**350**	P	Pg	01 02 06.9	+0.4
	2.0nm,0.2s						
TNSS				S	Sg	01 02 17.7	+1.2
	1.6nm,0.1s						
TNSS	**Tian-Shan**	**0.78**	**350**	*e*P	Pg	01 02 06.9	+0.4
	2.0nm,0.2s						
TNSS				*e*S	Sg	01 02 17.7	+1.2
	1.6nm,0.1s						
KOTS	**Kotyrbulak**	**0.96**	**359**	P	Pg	01 02 10.0	0.0
	2.7nm,0.3s						
KOTS				S	Sg	01 02 23.0	+0.6
	3.8nm,0.2s						
KOTS	**Kotyrbulak**	**0.96**	**359**	*e*P	Pg	01 02 10.0	0.0
	1.1nm,0.1s						
KOTS				*e*S	Sg	01 02 23.0	+0.6
	3.8nm,0.2s						
SATY	**Saty**	**1.23**	**50**	P	Pg	01 02 14.5	-0.6
	0.9nm,0.1s						
SATY				S	Sg	01 02 31.1	+0.2
	9.8nm,0.1s						
SATY	**Saty**	**1.23**	**50**	*e*P	Pg	01 02 14.5	-0.6
	0.9nm,0.1s						
SATY				*e*S	Sg	01 02 31.1	+0.2
	9.8nm,0.1s						
TKM2	**Tokmak 2**	**1.31**	**300**	⇓Pn	Pg	01 02 16.2	-0.4
	0.8nm,0.3s						
TKM2				⇑Sn	Sb	01 02 35.0	+0.4
	0.3nm,0.1s						
DGS	**Degeres**	**1.39**	**315**	P	Pg	01 02 17.8	-0.5
	1.2nm,0.1s						
DGS				S	Sg	01 02 35.9	-0.4
	1.9nm,0.2s						
DGS	**Degeres**	**1.39**	**315**	*e*P	Pg	01 02 17.5	-0.8
	1.2nm,0.1s						
DGS				*e*S	Sg	01 02 35.9	-0.4
	1.9nm,0.2s						
KTBS	**Karatobe**	**1.48**	**347**	P	Pn	01 02 19.7	+0.2
	0.9nm,0.1s						
KTBS				S	Sn	01 02 39.6	+0.1
	1.3nm,0.2s						
KTBS	**Karatobe**	**1.48**	**347**	*e*P	Pn	01 02 19.7	+0.2
	0.9nm,0.1s						
KTBS				*e*S	Sn	01 02 39.6	+0.1
	1.3nm,0.2s						
UZB	**Uzynbulak**	**1.64**	**57**	P	Pn	01 02 21.9	0.0
	6.0nm,0.2s						
UZB				S	Sn	01 02 43.2	-0.6
	2.4nm,0.2s						
UZB	**Uzynbulak**	**1.64**	**57**	*e*P	Pn	01 02 21.9	0.0
	6.0nm,0.2s						
UZB				*e*S	Sn	01 02 43.2	-0.6
	2.4nm,0.2s						
KPKS	**Kokpek**	**1.65**	**43**	P	Pn	01 02 21.9	0.0
	1.7nm,0.2s						
KPKS				S	Sn	01 02 43.5	-0.4
	3.2nm,0.2s						
KPKS	**Kokpek**	**1.65**	**43**	*e*P	Pn	01 02 21.9	0.0
	1.6nm,0.1s						
KPKS				*e*S	Sn	01 02 43.5	-0.4
	3.2nm,0.2s						
KUU	**Kurty**	**1.72**	**341**	P	Pb	01 02 23.5	-0.6
	2.0nm,0.2s						
KUU				S	Sb	01 02 46.2	-0.1
	1.9nm,0.3s						
KUU	**Kurty**	**1.72**	**341**	*e*P	Pb	01 02 23.5	-0.6
	2.0nm,0.2s						
KUU				*e*S	Sb	01 02 46.2	-0.1
	1.9nm,0.3s						
KRBS	**Karabastau**	**1.78**	**324**	P	Pb	01 02 24.9	-0.3
	2.4nm,0.4s						
KRBS				S	Sg	01 02 49.2	+0.4
	1.5nm,0.2s						
KRBS	**Karabastau**	**1.78**	**324**	*e*P	Pb	01 02 24.9	-0.3
	2.4nm,0.4s						
KRBS				*e*S	Sg	01 02 48.7	-0.1
	1.5nm,0.2s						
PDGK	**Podgornoye**	**2.03**	**58**	Pg	Pb	01 02 29.0	-0.4
	0.3nm,0.3s						
PDGK				Lg	Lg	01 02 56.2	
	2.4nm,0.3s						
KNOS	**Konyrlen**	**2.56**	**35**	Pg	Pb	01 02 38.8	+0.2
	3.0nm,0.5s						
KNOS				Lg	Lg	01 03 12.4	
	3.0nm,0.3s						

AFAD ***12*** *01:04:10.9±0.0, 39°.57N×26°.07E, h6km±2km, ML2.1*
ISK ***12*** *01:04:11.9, 39°.60N×26°.13E, h6km, ML2.5/15*
ATH ***12*** *01:04:12.0, 39°.54N×26°.00E, h13km±2km, ML2.3/4, Error ellipse: s-maj=2.7km s-min=1.0km az=97.0*
ISC 12 01:04:11.1±1.0, 39°.60N±0°.02×26°.08E±0°.03, h11km±8km, n38, σ0s76/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.11**	**155**	P	**Pg**	**01 04 13.0**	**-1.0**
GPNR	**Gulpinar-Canak**	**0.15**	**164**	Pg	**Pg**	**01 04 14.3**	**-0.3**
BOZC	**Bozcaada**	**0.24**	**355**	P	**Pg**	**01 04 16.6**	**+0.5**
EZN	**Ezine**	**0.29**	**41**	Pg	**Pb**	**01 04 17.9**	**-0.4**
EZN				Sg	**Sb**	**01 04 22.2**	**-1.0**
PRK	**Paraskevi**	**0.39**	**157**	P	**Pg**	**01 04 19.0**	**+0.3**
PRK				S	**Sg**	**01 04 24.5**	**+0.6**
PRK				AML	AML	01 04 24.9	
	comp=E,1899μm,0.3s						
PRK				AML	AML	01 04 25.0	
	comp=N,1979μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.39**	**69**	P	**Pg**	**01 04 18.6**	**-0.2**
BAYC				S	**Sb**	**01 04 24.4**	**-1.6**
BAYC				*i* AML	AML	01 04 25.0	
	comp=N,161nm,0.3s						
SIGR	**SIGRI**	**0.43**	**204**	Pg	**Pb**	**01 04 21.6**	**+1.0**
SIGR				Sg	**Sb**	**01 04 27.6**	**+0.5**
ECEA	**Canakkale, Ece**	**0.45**	**10**	P	**Pg**	**01 04 19.9**	**0.0**
ECEA				S	**Sb**	**01 04 28.2**	**+0.6**
ECEA				*i* AML	AML	01 04 34.0	
	comp=N,142nm,0.3s						
CNKL	**anakkale-Mer**	**0.52**	**27**	P	**Pb**	**01 04 21.3**	**-0.9**
CNKL				P	**Pn**	**01 04 22.5**	**-1.9**
CNKL				S	**Sb**	**01 04 29.7**	**0.0**
AYVA	**Ayvalik**	**0.56**	**122**	P	**Pb**	**01 04 23.6**	**+0.7**
GOAD	**anakkale-G¶**	**0.57**	**347**	P	**Pb**	**01 04 22.9**	**-0.2**
COMU	**Canakkale**	**0.58**	**32**	Pg	**Pb**	**01 04 23.4**	**+0.1**
COMU				Sg	**Sb**	**01 04 31.9**	**+0.3**

GADA	**Gvkgeada**	**0.60**	**347**		Pg		**Pb**	**01 04 23.5**	**-0.1**
EAG3	**Mitilini, Lesv**	**0.64**	**143**		P		**Pb**	**01 04 24.3**	**0.0**
EAG3					S		**Sb**	**01 04 32.8**	**-0.5**
LIA	**Limnos Island**	**0.75**	**293**		P		**Pg**	**01 04 25.8**	**+0.3**
LIA					S		**Sg**	**01 04 36.0**	**+0.6**
LIA					AML		AML	01 04 39.5	
	comp=E,913μm,0.5s								
LIA					AML		AML	01 04 40.0	
	comp=N,707μm,0.5s								
BUHA	**Balikesir, Bur**	**0.78**	**97**		P		**Pn**	**01 04 27.4**	**-0.6**
BUHA					S		**Sb**	**01 04 37.4**	**+0.2**
BUHA					*i* AML		AML	01 04 41.0	
	comp=N,52nm,0.4s								
DKL	**Dikili**	**0.83**	**129**		Pg		**Pb**	**01 04 28.3**	**+0.8**
GELI	**Tayfur-Gelibol**	**0.85**	**21**		Pg		**Pn**	**01 04 28.5**	**-0.5**
CANM	**Can-anakkale**	**0.85**	**61**		Pg		**Pb**	**01 04 27.9**	**0.0**
CANM					Sg		**Sb**	**01 04 39.9**	**+0.5**
IZMD	**zmir-Dikili-**	**0.91**	**133**		P		**Pb**	**01 04 28.6**	**-0.2**
RFT7	**Candarli**	**0.92**	**134**		Pg		**Pb**	**01 04 29.1**	**+0.1**
LPK	**Lapseki**	**0.93**	**34**		Pg		**Pn**	**01 04 29.8**	**-0.3**
SMTH	**Samothraki Isl**	**0.96**	**334**		P		**Pb**	**01 04 30.0**	**+0.2**
SMTH					AML		AML	01 04 46.5	
	comp=N,98μm,0.2s								
SMTH					AML		AML	01 04 46.9	
	comp=E,101μm,0.2s								
ZEDA	**zmir-Bergama**	**1.00**	**129**		P		**Pn**	**01 04 31.4**	**+0.3**
ERIK	**Erikli-Kesan**	**1.12**	**17**		Pn		**Pn**	**01 04 33.1**	**+0.5**
ENEZ	**Enez**	**1.13**	**3**		Pn		**Pn**	**01 04 33.9**	**+1.0**
PSRA	**Psara**	**1.13**	**201**		P		**Pg**	**01 04 31.5**	**-1.4**
CHOS	**Chios island**	**1.22**	**181**		P		**Pg**	**01 04 33.3**	**-1.1**
CHOS					AML		AML	01 04 53.0	
	comp=N,261μm,0.4s								
CHOS					AML		AML	01 04 53.9	
	comp=E,493μm,0.2s								
KRBG	**Karabiga-Canak**	**1.23**	**50**		Pn		**Pn**	**01 04 35.1**	**+1.0**
STEP	**BALIKESIR_Sava**	**1.29**	**100**		P		**Pn**	**01 04 35.8**	**+0.8**
STEP					S		**Sn**	**01 04 52.6**	**+0.3**
STEP					*i* AML		AML	01 04 55.0	
	comp=E,27nm,0.8s								
ALN	**Alexandroupoli**	**1.29**	**359**		P		**Pb**	**01 04 35.9**	**+0.5**
KNL	**Balıkesir**	**1.30**	**59**		P		**Pg**	**01 04 34.4**	**-1.7**
KNL					S		**Sn**	**01 04 53.4**	**+0.9**
KNL					*i* AML		AML	01 04 57.0	
	comp=E,74nm,0.4s								
GONE	**Gonen-Balikesi**	**1.31**	**70**		Pn		**Pb**	**01 04 36.7**	**+0.9**
BLCB	**Balcova**	**1.43**	**148**		Pn		**Pg**	**01 04 38.4**	**-0.1**
THAS	**Thassos island**	**1.45**	**314**		P		**Pn**	**01 04 36.5**	**-0.6**
RDO	**Rodhopi**	**1.59**	**345**		P		**Pb**	**01 04 40.3**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.82**	**238**		P		**Pn**	**01 04 40.9**	**-1.4**
KOKK	**Kokkinochori,**	**2.00**	**308**		P		**Pn**	**01 04 44.7**	**-0.2**

NEIC ***12*** *01:25:32.4±1.5, 55°.95N±0°.07×149°.7W±0°.1, h10km±7km, mb4.1/2, ML4.0/48, ML3.7(AEIC), Error ellipse: s-maj=11.1km s-min=7.8km az=156.0*
IDC ***12*** *01:25:34.2±1.6, 56°.06N×149°.53W, h0km, mb3.5/6, mbtmp3.6/11, ML3.5/5, MS3.7/2, Error ellipse: s-maj=30.8km s-min=20.9km az=10.0*
AEIC ***12*** *01:25:37.3±1.7, 56°.06N±0°.07×149°.72W±0°.09, h6km±7km, Error ellipse: s-maj=11.0km s-min=7.1km az=172.0*
ISC 12 01:25:34.9±4.2, 56°.13N±0°.08×149°.71W±0°.06, h12km±29km, n289, σ1s19/291, mb3.8/6, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.26**	**300**	Pn	**Pn**	**01 26 10.4**	**-1.6**
OHAK				Sn	**Sn**	**01 26 37.1**	**-2.7**
OHAK	**Old Harbor**	**2.26**	**300**	P	**Pn**	**01 26 10.3**	**-1.7**
OHAK	**Old Harbor**	**2.26**	**300**	P	**Pn**	**01 26 10.4**	**-1.6**
	baz=119						
OHAK				S	**Sn**	**01 26 36.2**	**-3.5**
	baz=119						
KDAK	**Kodiak Island**	**2.29**	**318**		**Pn**	**01 26 11.2**	**-1.2**
KDAK				Sn	**Sn**	**01 26 38.3**	**-2.2**
KDAK	**Kodiak Island**	**2.29**	**318**	Pn	**Pn**	**01 26 11.0**	**-1.4**
	13nm,0.3s,baz=135,slow=7.7,SNR=96						
KDAK				Sn	**Sn**	**01 26 36.3**	**-4.1**
	28nm,0.3s,baz=41,slow=19,SNR=6.7						
	29nm,0.3s						
SII	**Sitkinak Islan**	**2.53**	**282**	Pn	**Pn**	**01 26 13.2**	**-2.6**
SII				Sn	**Sn**	**01 26 43.5**	**-2.9**
SII				IAML		01 26 45.3	
	comp=E,544nm,0.8s						
SII				IAML		01 26 52.5	
	comp=N,309nm,0.7s						
SII	**Sitkinak Islan**	**2.53**	**282**	P	**Pn**	**01 26 15.1**	**-0.7**
SII	**Sitkinak Islan**	**2.53**	**282**	S	**Sn**	**01 26 43.4**	**-3.1**
	baz=100						
Q20K	**Shuyak Island**	**2.88**	**331**	P	**Pn**	**01 26 19.4**	**-1.2**
	baz=149						
Q20K				S	**Sn**	**01 26 53.5**	**-1.6**
	baz=149						
SYI	**Shuyak Island**	**2.88**	**331**		**Pn**	**01 26 20.6**	**+0.1**
SYI				Sn	**Sn**	**01 26 54.8**	**-0.2**
CHIR	**Chirikof Islan**	**3.34**	**267**	Pn	**Pn**	**01 26 22.7**	**-4.2**
CHIR				Sn	**Sn**	**01 27 02.0**	**-4.4**
CHIR				IAML		01 27 03.4	
	comp=N,261nm,0.5s						
CHIR				IAML		01 27 03.7	
	comp=E,458nm,0.6s						
CNPM	**China Poot**	**3.50**	**347**		**Pn**	**01 26 28.0**	**-1.2**
CNPM				IAML		01 27 17.3	
	comp=E,136nm,1.2s						
CNPM	**China Poot**	**3.50**	**347**		**Sn**	**01 27 08.7**	**-1.7**
Q19K	**Cape Douglas,**	**3.52**	**325**		**Pn**	**01 26 29.7**	**+0.4**
Q19K				IAML		01 27 19.4	
	comp=N,376nm,0.8s						
Q19K	**Cape Douglas,**	**3.52**	**325**	P	**Pn**	**01 26 29.4**	**0.0**
	baz=142						
KAHG	**Katmai Hook Gl**	**3.53**	**314**		**Pn**	**01 26 29.7**	**+0.1**
BRSE	**Bradley Lake S**	**3.66**	**352**		**Pn**	**01 26 29.7**	**-1.6**
BRSE	**Bradley Lake S**	**3.66**	**352**	P	**Pn**	**01 26 29.7**	**-1.6**
	baz=171						
HOM	**Homer**	**3.68**	**345**	Pn	**Pn**	**01 26 32.2**	**+0.6**
HOM				IAML		01 27 36.7	
	comp=E,304nm,1.1s						
BRLK	**Bradley Lake**	**3.70**	**351**		**Pn**	**01 26 31.3**	**-0.6**
Q23K	**Middleton Isla**	**3.76**	**27**	Pn	**Pn**	**01 26 31.0**	**-1.7**
Q23K				IAML		01 27 16.2	
	comp=E,232nm,1.1s						
Q23K				IAML		01 27 36.2	
	comp=N,194nm,1.4s						
Q23K	**Middleton Isla**	**3.76**	**27**	P	**Pn**	**01 26 31.0**	**-1.7**
	baz=210						
MID	**Middleton Isla**	**3.77**	**27**	Pn	**Pn**	**01 26 31.1**	**-1.6**
MID				IAML		01 27 16.2	
	comp=E,221nm,1.2s						
MID				IAML		01 27 36.1	
	comp=N,176nm,1.5s						
MID	**Middleton Isla**	**3.77**	**27**	P	**Pn**	**01 26 31.0**	**-1.7**
ANCK	**Angle Creek**	**3.77**	**306**		**Pn**	**01 26 32.5**	**-0.4**
KAHC	**Katmai Hardscr**	**3.82**	**314**		**Pn**	**01 26 33.2**	**-0.3**
KAHC	**Katmai Hardscr**	**3.82**	**314**	P	**Pn**	**01 26 33.2**	**-0.3**
	baz=130						
SEW	**Seward**	**3.99**	**2**	Pn	**Pn**	**01 26 34.8**	**-0.9**
P19K	**Oil Pt**	**4.00**	**333**		**Pn**	**01 26 35.6**	**-0.4**
P19K				IAML		01 27 27.6	
	comp=E,226nm,0.9s						
P19K				IAML		01 27 27.9	
	comp=N,199nm,0.5s						
P19K	**Oil Pt**	**4.00**	**333**	P	**Pn**	**01 26 35.9**	**-0.1**
	baz=151						
KELA	**Mount Kelaz**	**4.01**	**308**		**Pn**	**01 26 35.5**	**-0.6**
P23K	**Montague Islan**	**4.07**	**17**		**Pn**	**01 26 35.2**	**-1.6**
P23K	**Montague Islan**	**4.07**	**17**	P	**Pn**	**01 26 35.2**	**-1.6**
	baz=198						
O20K	**Slope Mountain**	**4.25**	**340**		**Pn**	**01 26 38.9**	**-0.6**
O20K	**Slope Mountain**	**4.25**	**340**	P	**Pn**	**01 26 38.9**	**-0.6**
	baz=158						
IVE	**Iliamna Volcan**	**4.27**	**337**		**Pn**	**01 26 38.9**	**-0.9**
O22K	**Cooper Landing**	**4.36**	**360**		**Pn**	**01 26 40.9**	**0.0**
O22K	**Cooper Landing**	**4.36**	**360**	P	**Pn**	**01 26 40.1**	**-0.8**
	baz=180						
SLKM	**Skilak Lake**	**4.40**	**357**		**Pn**	**01 26 39.9**	**-1.6**
P18K	**Big Mountain,**	**4.41**	**320**	Pn	**Pn**	**01 26 40.6**	**-0.9**
P18K	**Big Mountain,**	**4.41**	**320**	P	**Pn**	**01 26 41.1**	**-0.5**
	baz=136						
HIN	**Hinchinbrook I**	**4.60**	**20**		**Pn**	**01 26 43.7**	**-0.5**
HIN				IAML		01 27 42.0	
	comp=E,140nm,1.0s						
HIN				IAML		01 27 44.5	
	comp=N,132nm,0.8s						
RDSO	**Redoubt South**	**4.62**	**341**		**Pn**	**01 26 43.1**	**-1.5**

RSO	**Redoubt South**	**4.63**	**341**				**Pn**	**01 26 45.2**	**+0.4**
RDT	**Redoubt**	**4.68**	**343**				**Pn**	**01 26 44.5**	**-0.8**
CAPN	**Captain Cook N**	**4.71**	**351**		Pn		**Pn**	**01 26 43.9**	**-1.8**
KAIM	**Kayak Island**	**4.73**	**34**				**Pn**	**01 26 45.6**	**-0.4**
KAIM					IAML			01 27 49.1	
	comp=N,162nm,0.7s								
KAIM					IAML			01 27 54.6	
	comp=E,139nm,0.7s								
KAIM	**Kayak Island**	**4.73**	**34**		P		**Pn**	**01 26 44.9**	**-1.1**
	baz=218								
O18K	**Koktuh Hills**	**4.74**	**324**		Pn		**Pn**	**01 26 45.9**	**-0.3**
O18K					IAML			01 27 42.5	
	comp=N,66nm,0.8s								
O18K	**Koktuh Hills**	**4.74**	**324**		P		**Pn**	**01 26 45.7**	**-0.5**
	baz=140								
P17K	**Kvichak River**	**4.74**	**313**				**Pn**	**01 26 45.9**	**-0.2**
P17K	**Kvichak River**	**4.74**	**313**		P		**Pn**	**01 26 45.9**	**-0.2**
	baz=128								
O19K	**Port Alsworth**	**4.75**	**331**		Pn		**Pn**	**01 26 46.0**	**-0.2**
CHGN	**Chignik**	**4.86**	**276**		Pn		**Pn**	**01 26 45.7**	**-2.1**
CHGN					IAML			01 27 23.2	
	comp=N,144nm,0.1s								
CHGN					IAML			01 27 26.3	
	comp=E,149nm,0.3s								
EYAK	**Cordova Ski Ar**	**4.90**	**24**		Pn		**Pn**	**01 26 47.4**	**-0.8**
EYAK	**Cordova Ski Ar**	**4.90**	**24**		P		**Pn**	**01 26 47.5**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.90**	**24**		P		**Pn**	**01 26 47.5**	**-0.7**
	baz=207								
RC01	**Rabbit Creek A**	**4.97**	**360**		Pn		**Pn**	**01 26 49.4**	**+0.1**
RC01					IAML			01 27 51.5	
	comp=N,56nm,0.5s								
RC01					IAML			01 27 55.8	
	comp=E,71nm,0.5s								
RAGM	**Ragged Mountai**	**5.03**	**30**				**Pn**	**01 26 49.3**	**-0.8**
SUCK	**Suckling Hills**	**5.05**	**36**				**Pn**	**01 26 49.8**	**-0.6**
SUCK					IAML			01 27 48.6	
	comp=E,88nm,1.3s								
SUCK					IAML			01 27 57.4	
	comp=N,78nm,1.1s								
HMT	**Hamilton**	**5.11**	**32**				**Pn**	**01 26 50.7**	**-0.4**
N20K	**Mount Spurr**	**5.25**	**347**		P		**Pn**	**01 26 52.5**	**-0.6**
	baz=165								
SPCR	**Spurr Chakacha**	**5.25**	**347**				**Pn**	**01 26 52.5**	**-0.6**
BERG	**Berg Lake**	**5.32**	**34**				**Pn**	**01 26 52.8**	**-1.3**
P16K	**Nushagak River**	**5.32**	**307**				**Pn**	**01 26 53.7**	**-0.4**
P16K	**Nushagak River**	**5.32**	**307**		P		**Pn**	**01 26 53.7**	**-0.4**
	baz=120								
N19K	**Bonanza Creek**	**5.32**	**334**				**Pn**	**01 26 53.8**	**-0.4**
KNK	**Knik Glacier**	**5.34**	**6**		Pn		**Pn**	**01 26 55.1**	**+0.8**
KNK	**Knik Glacier**	**5.34**	**6**		P		**Pn**	**01 26 54.0**	**-0.4**
	baz=188								
O17K	**Koliganek Bris**	**5.37**	**316**				**Pn**	**01 26 54.1**	**-0.6**
O17K	**Koliganek Bris**	**5.37**	**316**		P		**Pn**	**01 26 54.1**	**-0.6**
	baz=130								
SUA	**Susitna One**	**5.38**	**355**				**Pn**	**01 26 55.0**	**0.0**
SNH	**Sunshine Point**	**5.45**	**39**				**Pn**	**01 26 55.6**	**-0.3**
PMR	**Palmer**	**5.49**	**3**				**Pn**	**01 26 57.0**	**+0.7**
PMR	**Palmer**	**5.49**	**3**		P		**Pn**	**01 26 57.3**	**+1.0**
BMRM	**Bremner River**	**5.54**	**27**		P		**Pn**	**01 26 56.1**	**-1.0**
	baz=211								
N18K	**Kilae Creek**	**5.60**	**327**				**Pn**	**01 26 56.4**	**-1.5**
N18K	**Kilae Creek**	**5.60**	**327**		P		**Pn**	**01 26 56.4**	**-1.5**
	baz=142								
WAX	**Waxell Ridge**	**5.64**	**37**				**Pn**	**01 26 57.6**	**-0.9**
O16K	**Kokwok River B**	**5.66**	**311**		Pn		**Pn**	**01 26 58.0**	**-0.7**
O16K	**Kokwok River B**	**5.66**	**311**		P		**Pn**	**01 26 58.2**	**-0.6**
	baz=125								
GHO	**Glory Hole Cre**	**5.67**	**4**		Pn		**Pn**	**01 26 59.2**	**+0.2**
KLU	**Klutina**	**5.72**	**19**				**Pn**	**01 26 59.1**	**-0.6**
KLU	**Klutina**	**5.72**	**19**		P		**Pn**	**01 26 58.9**	**-0.8**
	baz=202								
SML	**Sawmill**	**5.74**	**7**				**Pn**	**01 27 00.4**	**+0.5**
CNBA	**Chernabura Isl**	**5.77**	**261**		Pn		**Pn**	**01 26 56.4**	**-3.9**
MESA	**MESA**	**5.77**	**42**				**Pn**	**01 27 00.5**	**0.0**
MESA	**MESA**	**5.77**	**42**		P		**Pn**	**01 26 59.8**	**-0.7**
	baz=228								
CRQM	**Cirque**	**5.78**	**34**				**Pn**	**01 26 59.5**	**-1.0**
SVW2	**Sparrevohn**	**5.85**	**331**				**Pn**	**01 27 00.9**	**-0.5**
SVW2	**Sparrevohn**	**5.85**	**331**		P		**Pn**	**01 27 00.8**	**-0.5**
SCM	**Sheep Creek Mo**	**5.85**	**11**				**Pn**	**01 27 01.1**	**-0.3**
N17K	**Nushagak Hills**	**5.91**	**321**		Pn		**Pn**	**01 27 00.6**	**-1.5**
ISLE	**Juniper Island**	**5.93**	**38**				**Pn**	**01 27 01.9**	**-0.6**
BAGL	**Bagley Icefiel**	**5.93**	**39**				**Pn**	**01 27 01.5**	**-1.0**
SKT	**Skwentna**	**5.94**	**352**		Pn		**Pn**	**01 27 03.1**	**+0.5**
M20K	**Styx River**	**6.03**	**344**				**Pn**	**01 27 03.7**	**-0.3**
M20K	**Styx River**	**6.03**	**344**		P		**Pn**	**01 27 03.0**	**-1.0**
	baz=162								
VRDI	**Verde Repeater**	**6.06**	**30**				**Pn**	**01 27 03.4**	**-1.1**
N25K	**Chitina, Valde**	**6.10**	**24**				**Pn**	**01 27 04.0**	**-0.8**
N25K	**Chitina, Valde**	**6.10**	**24**		P		**Pn**	**01 27 04.3**	**-0.5**
	baz=208								
SDPT	**Sand Point**	**6.13**	**267**		Pn		**Pn**	**01 27 02.4**	**-2.8**
SDPT	**

YUK2	White River	7.29	35			Pn	01 27 21.3 +0.1
YUK8	Steele Glacier	7.31	41			Pn	01 27 22.4 +0.8
YUK8	Steele Glacier	7.31	41	P		Pn	01 27 22.4 +0.8
	baz=229						
RND	Reindeer	7.31	3	Pn		Pn	01 27 22.1 +0.6
TRF	Thorofare Moun	7.35	358	Pn		Pn	01 27 22.1 +0.1
M15K	Kasigluk River	7.36	313			Pn	01 27 21.8 -0.2
M15K	Kasigluk River	7.36	313	P		Pn	01 27 21.8 -0.2
	baz=124						
N14K	Kuskokwak Cree	7.41	306			Pn	01 27 22.4 -0.2
N14K	Kuskokwak Cree	7.41	306	P		Pn	01 27 22.4 -0.2
	baz=116						
YUK3	Moose Creek	7.41	36			Pn	01 27 22.8 -0.1
YUK3	Moose Creek	7.41	36	P		Pn	01 27 22.8 -0.1
	baz=224						
CAST	Castle Rocks	7.41	352	Pn		Pn	01 27 23.3 +0.6
CAST	Castle Rocks	7.41	352	P		Pn	01 27 23.7 +0.9
	baz=170						
M27K	Edge Creek, AK	7.42	29			Pn	01 27 22.7 -0.3
M27K	Edge Creek, AK	7.42	29	P		Pn	01 27 22.7 -0.3
	baz=216						
KTH	Kantishna Hill	7.47	356	Pn		Pn	01 27 23.4 -0.3
MENT	Mentasta	7.47	22			Pn	01 27 23.9 +0.3
YUK7	Dusty Glacier	7.51	49			Pn	01 27 24.0 -0.3
TTA	Tatalina	7.53	337	Pn		Pn	01 27 24.5 +0.1
TTA	Tatalina	7.53	337	P		Pn	01 27 25.5 +1.0
L16K	Owhat River	7.53	322	Pn		Pn	01 27 23.5 -0.9
L16K	Owhat River	7.53	322	P		Pn	01 27 24.2 -0.2
	baz=134						
K20K	Telida	7.57	345			Pn	01 27 24.5 -0.5
S31K	Pelican	7.58	70	Pn		Pn	01 27 22.5 -2.5
S31K	Pelican	7.58	70	P		Pn	01 27 22.1 -2.9
	baz=261						
L26K	Log Cabin Wild	7.63	22			Pn	01 27 25.5 -0.3
YUK6	Outpost Mounta	7.64	46			Pn	01 27 26.2 0.0
YUK6	Outpost Mounta	7.64	46	P		Pn	01 27 26.2 0.0
	baz=236						
BVCY	Beaver Creek	7.75	32			Pn	01 27 28.1 +0.6
BVCY	Beaver Creek	7.75	32	P		Pn	01 27 28.1 +0.6
	baz=219						
YUK4	Talbot Arm	7.77	43	P		Pn	01 27 29.3 +1.4
	baz=232						
FALS	False Pass	7.89	266	P		Pn	01 27 30.7 +1.4
M14K	Bethel	7.92	311	Pn		Pn	01 27 29.5 -0.1
K17K	Iditarod	7.92	330	Pn		Pn	01 27 28.5 -1.2
K17K	Iditarod	7.92	330	P		Pn	01 27 27.9 -1.8
	baz=143						
HYT	Haines Junctio	7.94	49	Pn		Pn	01 27 30.4 +0.3
YUK5	Granite Creek	7.95	46			Pn	01 27 30.4 +0.1
SIT	Sitka	8.00	77	Pn		Pn	01 27 26.6 -4.1
SIT	Sitka	8.00	77	P		Pn	01 27 27.3 -3.4
RIDG	Independent Ri	8.01	16	Pn		Pn	01 27 31.5 +0.5
L27K	Beaver Creek,	8.01	27			Pn	01 27 31.4 +0.4
L27K	Beaver Creek,	8.01	27	P		Pn	01 27 31.4 +0.4
	baz=213						
BPAW	Bear Paw Mtn.	8.02	356			Pn	01 27 30.8 -0.4
BPAW	Bear Paw Mtn.	8.02	356	P		Pn	01 27 30.5 -0.6
	baz=175						
BCAR	Beaver Creek A	8.03	27	Pn		Pn	01 27 31.3 0.0
BWN	Browne	8.07	1	Pn		Pn	01 27 31.8 0.0
J18K	Innoko River	8.15	337			Pn	01 27 32.8 -0.1
M13K	Dall Lake	8.37	306	Pn		Pn	01 27 34.8 -1.0
SCRK	Sand Creek	8.37	18	Pn		Pn	01 27 36.7 +0.7
SKAG	Skagway	8.37	61	Pn		Pn	01 27 35.6 -0.3
SKAG	Skagway	8.37	61	P		Pn	01 27 35.5 -0.3
WRH	Wood River Hil	8.41	5			Pn	01 27 37.6 +1.3
S32K	Killisnoo	8.41	75	Pn		Pn	01 27 33.6 -2.8
HDA	Harding Lake	8.42	8			Pn	01 27 36.8 +0.3
O30N	Mendenhall	8.51	51			Pn	01 27 36.8 -1.1
L14K	Kuka Creek	8.52	313			Pn	01 27 37.4 -0.6
M29M	Somme Creek	8.54	38			Pn	01 27 38.3 -0.1
JIS	Juneau Island	8.59	69	Pn		Pn	01 27 37.5 -1.4
JIS	Juneau Island	8.59	69	P		Pn	01 27 38.4 -0.5
CCB	Clear Creek Bu	8.60	5	Pn		Pn	01 27 39.9 +0.9
K15K	Wolf Creek Mou	8.65	320	Pn		Pn	01 27 39.6 0.0
IL31		8.78	8			Pn	01 27 41.8 +0.3
ILAR	Eielson Array	8.78	8	Pn		Pn	01 27 42.1 +0.7
ILAR	Eielson Array	8.78	8	Pn		Pn	01 27 41.5 +0.1
	comp=N,0.4nm,0.3s,baz=186,slow=13,SNR=21						
ILAR				Sn		Sn	01 29 15.2 -5.0
	comp=N,0.5nm,0.3s,baz=206,slow=13,SNR=4.5						
ILAR				LR		LR	01 30 57.4
	comp=N,227nm,20.4s,baz=196,slow=37						
	comp=N,1.3nm,0.4s						
COLA	College	8.82	5			Pn	01 27 43.5 +1.5
COLA	College	8.82	5	P		Pn	01 27 43.9 +1.9
MDLL	Murphy Dome	8.89	4	Pn		Pn	01 27 42.8 -0.2
J26L	Joseph Creek	8.93	17			Pn	01 27 43.2 -0.4
J26L	Joseph Creek	8.93	17	P		Pn	01 27 43.7 +0.1
	baz=203						
MLY	Manley	8.94	357	Pn		Pn	01 27 44.1 +0.3
N31M	Braeburn, Yuko	8.99	48	Pn		Pn	01 27 44.3 -0.2
N31M	Braeburn, Yuko	8.99	48	P		Pn	01 27 44.7 +0.2
	baz=239						
WHY	Whitehorse	9.00	54	Pn		Pn	01 27 44.3 -0.4
I23K	Minto, Yukon-K	9.05	1			Pn	01 27 45.4 +0.3
POKR	Poker Plat Res	9.09	6	Pn		Pn	01 27 46.7 +1.0
L29M	L29M	9.12	35	Pn		Pn	01 27 46.2 0.0
I21K	Tanana	9.15	354			Pn	01 27 47.1 +0.6
I21K	Tanana	9.15	354	P		Pn	01 27 47.7 +1.2
	baz=172						
P32M	Atlin	9.20	61	Pn		Pn	01 27 46.2 -1.1
P32M	Atlin	9.20	61	P		Pn	01 27 46.0 -1.3
	baz=254						
M30M	Minto, Yukon	9.22	40			Pn	01 27 47.3 -0.2
M30M	Minto, Yukon	9.22	40	P		Pn	01 27 47.5 -0.1
	baz=231						
U33K	Whale Pass	9.27	83	Pn		Pn	01 27 45.6 -2.6
DAWY	Dawson	9.47	29	Pn		Pn	01 27 51.0 0.0
J14K	Nanvaranak Lak	9.66	319	Pn		Pn	01 27 54.5 +1.0
H21K	Melozitna Rive	9.68	352			Pn	01 27 54.2 +0.4
H21K	Melozitna Rive	9.68	352	P		Pn	01 27 53.7 -0.1
	baz=170						
H24K	Noodor Dome	9.78	4			Pn	01 27 56.3 +1.1
Q32M	Nakina River	9.79	66	Pn		Pn	01 27 54.3 -1.2
P33M	Teslin, Yukon	9.81	58	Pn		Pn	01 27 54.0 -1.6
P33M	Teslin, Yukon	9.81	58	P		Pn	01 27 54.5 -1.1
	baz=252						
M31M	Drury Creek, Y	9.93	46			Pn	01 27 57.6 +0.3
H18K	Honhosa River	9.99	338	Pn		Pn	01 27 59.0 +1.0
IMAR	Indian Mountai	10.07	351	Pn		Pn	01 27 59.8 +0.6
J29N	Klondike Camp	10.09	30	Pn		Pn	01 28 00.2 +0.7
FARO	Faro, Yukon	10.36	47			Pn	01 28 02.5 -0.7
R33M	Jennings River	10.52	64			Pn	01 28 04.4 -1.1
G21K	Allakaket	10.58	352	Pn		Pn	01 28 06.2 +0.2
G23K	Bananza Creek	10.62	359			Pn	01 28 06.1 -0.6
G24K	Hadweenzic Riv	10.66	7	Pn		Pn	01 28 07.8 +0.6
FYU	Fort Yukon	10.69	10	Pn		Pn	01 28 08.2 +0.7
J30M	Hart River	10.73	32	Pn		Pn	01 28 09.0 +0.7
DLBC	Dease Lake	10.89	70	Pn		Pn	01 28 09.3 -1.2
DLBC	Dease Lake	10.89	70	Pn		Pn	01 28 10.5 0.0
	comp=N,0.5nm,0.3s,baz=236,slow=14,SNR=9.1						
	comp=N,1.5nm,0.5s						
I30M	Mount Dempster	11.19	30			Pn	01 28 14.9 +0.3
F20K	Avaraart Lake	11.32	348			Pn	01 28 16.9 +0.8
ANM	Nome	11.44	324	Pn		Pn	01 28 15.9 -2.0
BMAR	Burnt Mountain	11.59	10	Pn		Pn	01 28 19.7 -0.2
E24K	Your Creek	12.00	2	Pn		Pn	01 28 25.4 -0.2
F15K	North Star Dit	12.00	329	Pn		Pn	01 28 26.5 +1.0
E25K	Arctic Village	12.18	7	Pn		Pn	01 28 29.0 +0.9
H31M	Peel River	12.20	31	Pn		Pn	01 28 29.1 +0.8
F28M	Old Crow	12.40	18			Pn	01 28 33.0 +2.1
G30M	tAoh Zraii Nji	12.60	25	Pn		Pn	01 28 35.0 +1.3
G31M	Satah River	13.04	28			Pn	01 28 39.4 -0.2
E29M	Blow River	13.43	19			Pn	01 28 45.6 +0.6
F31M	Tsiigehtchic	13.56	27	Pn		Pn	01 28 45.8 -1.0
C18K	Utukok River	13.60	342	Pn		Pn	01 28 47.5 +0.1
INK	Inuvik	14.28	25	Pn		Pn	01 28 57.0 +0.3
	comp=N,0.1nm,0.3s,baz=211,slow=17,SNR=6.2						
	comp=N,1.9nm,0.8s						
C36M	Paulatuk	17.49	31			Pn	01 29 37.3 -1.0
C36M				IAmb		IAmb	01 29 51.6
	comp=Z,6.9nm,0.8s						
YKA	Yellowknife Ar	18.82	56			P	01 29 53.1 -1.0
YKA	Yellowknife Ar	18.82	56	P		Pn	01 29 54.9 +0.2
	comp=Z,0.1nm,0.3s,baz=264,slow=11,SNR=11						
	comp=Z,1.0nm,0.8s						
A36M	Sachs Harbour	18.91	23			Pn	01 29 55.1 -0.5
A36M				IAmb		IAmb	01 30 09.2
	comp=Z,19nm,0.8s						
PDAR	Pinedale Array	28.87	100	P		P	01 31 33.5 +0.1
	comp=Z,0.1nm,0.3s,baz=311,slow=4.7,SNR=1.5						
	comp=Z,0.1nm,0.3s						

SFJD	Kangerlussuaq	43.35	34	LR		LR	01 51 46.9
	comp=Z,179nm,19.1s,baz=168,slow=36						
H11N2	WAKE ISLAND Hy	48.60	240	T		T	02 26 35.2
	baz=30,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	48.60	240	T		T	02 26 34.8
	baz=30,slow=76,SNR=9.2						
H11N1	WAKE ISLAND Hy	48.62	240	T		T	02 26 40.7
	baz=30,slow=76,SNR=8.7						
H11S1	WAKE ISLAND Hy	49.74	239	T		T	02 28 03.7
	baz=30,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	49.76	239	T		T	02 28 00.6
	baz=30,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	49.76	239	T		T	02 28 06.7
	baz=30,slow=76,SNR=12						
SONM	Songino Array	58.55	310	P		P	01 35 34.0 +2.9
	comp=Z,1.0nm,0.9s,baz=47,slow=7.5,SNR=6.9						
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	62.72	2	P		P	01 35 59.9 +0.8
	comp=Z,1.0nm,0.8s,baz=286,slow=7.1,SNR=1.1						
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	66.32	335	P		P	01 36 24.4 +1.7
	comp=Z,0.6nm,0.8s,baz=1.9,slow=4.3,SNR=2.7						
	comp=Z,0.6nm,0.8s						
KURBB	Kurchatov Arra	66.34	329	P		P	01 36 24.3 +1.4
	comp=Z,0.4nm,0.7s,baz=28,slow=6.6,SNR=3.4						
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	68.58	324	P		P	01 36 39.8 +2.6
	comp=Z,0.3nm,0.7s,baz=39,slow=7.9,SNR=3.7						
	comp=Z,0.3nm,0.7s						

CATAC ***12*** *01:27:18.9±0.3, 11°.32N×86°.71W, h8km±2km, ML4.1*
UCR ***12*** *01:27:19.3±2.4, 11°.33N×86°.69W, h20km±10km, MW4.2*
IDC ***12*** *01:27:20.8±2.2, 11°.72N×86°.22W, h48km±35km, mb3.4/5, mbtmp3.6/6, ML3.6/1, MS3.4/1, Error ellipse: s-maj=82.7km s-min=26.0km az=44.0*
ISC 12 01:27:21.5±0.9, 11°.40N±0°.03×86°.62W±0°.04, h52km±9km, n121, σ1.971/159, mb3.5/6, 3C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSHP	Masachapa	0.44	11	*i* P		Pn	01 27 31.7	-0.5
MSHP					IAML		01 27 31.8	
	comp=Z,2μm,1.0s							
ADRN	Diriamba	0.59	39	*i* P		Pn	01 27 33.7	-0.3
ADRN					IAML		01 27 34.8	
	comp=Z,16μm,1.0s							
ADRN				*i* S		Sn	01 27 42.7	-0.4
NADN	Granada	0.68	59	*i* P		Pn	01 27 35.0	0.0
NADN				*i* S		Sn	01 27 44.9	+0.1
NADN					IAML		01 27 52.0	
	comp=Z,20μm,1.0s							
MASN	Masaya	0.75	38	*i* P		Pn	01 27 35.6	-0.4
MASN					IAML		01 27 56.9	
	comp=Z,1μm,1.0s							
MAS3	Al N del Volca	0.76	35	*i* P		Pn	01 27 35.6	-0.5
MAS3					IAML		01 27 55.9	
	comp=Z,5μm,1.0s							
AMYN	Masaya	0.78	41	*i* P		Pn	01 27 35.7	-0.6
AMYN					IAML		01 27 43.2	
	comp=Z,8μm,1.0s							
COPN	Copaltepe	0.78	2	*i* P		Pn	01 27 35.2	-1.1
COPN					IAML		01 27 50.1	
	comp=Z,8μm,1.0s							
ABCN	Banco Central	0.78	23	*i* P		Pn	01 27 36.3	-0.1
ABCN				*i* S		Sn	01 27 48.1	+0.8
ABCN					IAML		01 27 52.9	
	comp=Z,11μm,1.0s							
UNAN	Cigeo UNAN	0.79	26	*i* P		Pn	01 27 36.4	-0.1
UNAN				*i* S		Sn	01 27 49.6	+2.2
UNAN					IAML		01 27 52.2	
	comp=Z,28μm,1.0s							
USIM	UNAN	0.79	26	*i* P		Pn	01 27 36.5	0.0
USIM				*i* S		Sn	01 27 48.5	+1.0
USIM					IAML		01 27 51.4	
	comp=Z,12μm,1.0s							
ENAN	Enatrel Managu	0.80	26	*i* P		Pn	01 27 36.6	0.0
ENAN				*i* S		Sn	01 27 48.4	+0.8
ENAN					IAML		01 27 52.8	
	comp=Z,13μm,1.0s							
SAPS	Ciudad Sandino	0.80	16	*i* P		Pn	01 27 36.2	-0.4
SAPS				*i* S		Sn	01 27 50.4	+2.8
SAPS					IAML		01 28 01.4	
	comp=Z,8μm,1.0s							
TISN	Laguna Tiscapa	0.82	25	*i* P		Pn	01 27 34.8	-2.1
TISN					IAML		01 27 35.6	
	comp=Z,600nm,1.0s							
ALLN	Telcor Managua	0.83	24	*i* P		Pn	01 27 37.0	0.0
ALLN					IAML		01 27 37.8	
	comp=Z,14μm,1.0s							
ALLN				*i* S		Sn	01 27 49.4	+1.1
APQ2	Apoyeque	0.85	20	*i* P		Pn	01 27 37.2	0.0
APQ2				*i* S		Sn	01 27 52.2	+3.5
APQ2					IAML		01 28 00.5	
	comp=Z,5μm,1.0s							
WILN	Americas 2	0.87	29	*i* P		Pn	01 27 37.6	+0.1
WILN				*i* S		Sn	01 27 51.3	+2.0
WILN					IAML		01 27 54.9	
	comp=Z,3μm,1.0s							
APYN	Apoyeque	0.87	18	*i* P		Pn	01 27 37.9	+0.3
APYN				*i* S		Sn	01 27 52.2	+2.8
APYN					IAML		01 27 56.6	
	comp=Z,4μm,1.0s							
JAPN	Al SSO del Vol	0.94	82	*i* P		Pn	01 27 38.4	0.0
JAPN					IAML		01 27 39.0	
	comp=Z,5μm,1.0s							
JAPN				*i* S		Sn	01 27 53.0	+2.2
TIPN	Tipitapa	0.94	33	*i* P		Pn	01 27 38.0	-0.5
TIPN					IAML		01 27 39.0	
	comp=Z,5μm,1.0s							
TIPN				*i* S		Sn	01 27 53.9	+2.8
MORN	Al O del Volca	0.97	81	*i* P		Pn	01 27 38.2	-0.6
MORN					IAML		01 27 40.4	
	comp=Z,12μm,1.0s							
HUGN	San Franciso L	0.99	26	*i* P		Pn	01 27 39.0	-0.1
HUGN				*i* S		Sn	01 27 55.8	+3.7
HUGN					IAML		01 27 59.9	
	comp=Z,6μm,1.0s							
CONN	Concepcion	0.99	80	*i* P		Pn	01 27 38.5	-0.7
CONN					IAML		01 27 39.3	
	comp=Z,41μm,1.0s							
CONN				*i* S		Sn	01 27 54.7	+2.5
LEVN	Ruinas Leon Vi	1.00	0	*i* P		Pn	01 27 39.0	-0.2
LEVN				*i* S		Sn	01 27 55.1	+2.8
LEVN					IAML		01 27 56.3	
	comp=Z,6μm,1.0s							
MOMN	Momotombo	1.01	5	*i* P		Pn	01 27 39.0	-0.4
MOMN				*i* S		Sn	01 27 55.1	+2.5
MOMN					IAML		01 28 04.0	
	comp=Z,140nm,1.0s							
LCRUZ	La Cruz	1.02	108	*e*P		Pn	01 27 39.0	-0.6
LCRUZ				*e*S		Sn	01 27 55.0	+2.1
MOM2	El Cardon	1.04	7	*i* P		Pn	01 27 39.6	-0.2
MOM2				*i* S		Sn	01 27 56.0	+2.6
MOM2					IAML		01 27 58.3	
	comp=Z,2μm,1.0s							
MACN	El Madrono	1.06	357	*i* P		Pn	01 27 39.9	-0.2
MACN				*i* S		Sn	01 27 56.1	+2.2
MACN					IAML		01 28 02.5	
	comp=Z,3μm,1.0s							
CNGA	Al SSO del Vol	1.09	356	*i* P		Pn	01 27 40.3	-0.3
CNGA					IAML		01 27 41.0	
	comp=Z,4μm,1.0s							
CNGA				*i* S		Sn	01 27 56.6	+1.9
CNGN	Cerro Negro	1.10	356	↓*i* P		Pn	01 27 40.1	-0.5
CNGN	Cerro Negro	1.10	356	*i* P		Pn	01 27 40.2	-0.5
CNGN				*i* S		Sn	01 27 57.0	+2.2
CNGN					IAML		01 28 01.7	
	comp=Z,4μm,1.0s							
ILCN	San Idelfonso	1.17	356	*i* P		Pn	01 27 41.2	-0.4
ILCN				*i* S		Sn	01 27 59.1	+2.5
ILCN					IAML		01 28 09.7	
	comp=Z,1μm,1.0s							
PLRN	Geotermica Pol	1.19	353	*i* P		Pn	01 27 41.5	-0.3
PLRN				*i* S		Sn	01 27 59.2	+2.3
PLRN					IAML		01 28 04.2	
	comp=Z,4μm,1.0s							
TELN	Telica	1.22	350	*i* P		Pn	01 27 41.9	-0.4
TELN				*i* S		Sn	01 28 00.2	+2.5
TELN					IAML		01 28 02.0	
	comp=Z,360nm,1.0s							
HZTE	Horizontes, Gu	1.22	124	*e*P		Pn	01 27 40.1	-2.1
HZTE				*e*S		Sn	01 27 56.5	-1.1
HZTE	Horizontes, Gu	1.22	124	*i* P		Pn	01 27 40.4	-1.8
HZTE				*i* S		Sn	01 27 56.8	-0.8
HZTE					IAML		01 28 12.0	
	comp=Z,3μm,1.0s							
HERN	Volcan Telica	1.22	350	*i* P		Pn	01 27 41.7	-0.6
HERN				*i* S		Sn	01 28 00.3	+2.5
HERN					IAML		01 28 06.4	
	comp=Z,4μm,1.0s							
POLN	Al Sur del Vol	1.26	352	*i* P		Pn	01 27 43.2	+0.4
POLN					IAML		01 27 48.5	
	comp=Z,6.7nm,1.0s							
ELI1	Hacienda Flor	1.29	125	*e*P		Pn	01 27 41.6	-1.6
CHNN	El Viejo	1.31	338	*i* P		Pn	01 27 44.1	+0.6
CHNN					IAML		01 29 00.7	
	comp=Z,6μm,1.0s							
GB1A	Borinquen Arri	1.33	116	*e*P		Pn	01 27 42.3	-1.6
BRAN	Las Pilas	1.34	11	*i* P		Pn	01 27 35.1	-8.8
BRAN					IAML		01 27 36.0	
	comp=Z,10μm,1.0s							
BRAN				*i* S		Sn	01 27 49.2	-11
CRIN	San Cristobal	1.36	342	↓*i* P		Pn	01 27 43.7	-0.5
CRIN				*e*S		Sn	01 28 02.9	+1.7
CRIN	San Cristobal	1.36	342	*i* P		Pn	01 27 43.9	-0.3
CRIN				*i* S		Sn	01 28 03.1	+1.9
CRIN					IAML		01 28 11.3	
	comp=Z,11μm,1.0s							
GPS3	Bodega del ICE	1.39	117	↑*e*P		Pn	01 27 44.8	+0.2
BOAB	BOACO BROADBAN	1.40	42	*i* P		Pn	01 27 44.7	0.0
BOAB					IAML		01 27 48.5	
	comp=Z,830nm,1.0s							
BOAB				*i* S		Sn	01 28 05.2	+3.1
DELF	Filadelfia	1.41	132	*e*P		Pn	01 27 42.3	-2.6
ACON	Acoyapa	1.53	68	↓*i* P		Pn	01 27 45.7	-0.7
ACON				*e*S		Sn	01 28 07.3	+2.1
ACON	Acoyapa	1.53	68	*i* P		Pn	01 27 46.2	-0.2
ACON				*i* S		Sn	01 28 08.3	+3.1
ACON					IAML		01 28 09.7	
	comp=Z,1μm,1.0s							
ORTG	Ortega, Santa	1.54	132	*e*P		Pn	01 27 43.9	-2.8
ORTG	Ortega, Santa	1.54	132	*i* P		Pn	01 27 45.8	-0.8
ORTG				*i* S		Sn	01 28 07.4	+1.8
ORTG					IAML		01 28 13.4	
	comp=Z,1μm,1.0s							
CAMAV	Centro de Prod	1.56	116	*e*P		Pn	01 27 46.0	-1.0
COLC	Colonia	1.57	117	↑*i* P		Pn	01 27 46.0	-1.1
VMAR	Armenia, Volca	1.59	111	*e*P		Pn	01 27 46.2	-1.2
BAGA	Bagaces	1.59	123	*e*P		Pn	01 27 46.6	-0.7
SAJU	San Juanillo,	1.60	146	*i* P		Pn	01 27 46.3	-1.1
SAJU					IAML		01 28 25.8	
	comp=Z,890nm,1.0s							
CUI	Cuipilapa	1.61	117	*e*P		Pn	01 27 46.4	-1.2
JUD3	Juan Diaz 3	1.62	139	*e*P		Pn	01 27 47.2	-0.5
PLVR	Palo Verde	1.63	130	*e*P		Pn	01 27 45.5	-2.5
MATN	Matagalpa	1.67	24	↓*e*P		Pn	01 27 48.5	+0.2
MATN				*e*S		Sn	01 28 11.8	+3.0
MATN	Matagalpa	1.67	24	*i* P		Pn	01 27 48.6	+0.2
MATN				*i* S		Sn	01 28 11.7	+3.0
MATN					IAML		01 28 15.2	
	comp=Z,540nm,1.0s							
LIMN	Finca el Limon	1.67	9	*i* P		Pn	01 27 48.5	0.0
LIMN					IAML		01 27 58.4	
	comp=Z,1μm,1.0s							
NICO	Nicoya	1.71	137	*e*P		Pn	01 27 48.6	-0.2
DUNO	Dulce Nombre,	1.72	140	*i* P		Pn	01 27 48.3	-0.7
DUNO					IAML		01 28 19.0	
	comp=Z,2μm,1.0s							
CNAS	Canas	1.79	122	*e*P		Pn	01 27 49.2	-0.7
VERA	Finca Concepci	1.81	107	↑*i* P		Pn	01 27 49.3	-0.9
VERA				*e*S		Sn	01 28 13.4	+1.5
CSGN	Cosiguina Volc	1.81	330	*i* P		Pn	01 27 49.5	-0.9
CSGN					IAML		01 28 18.7	
	comp=Z,7μm,1.0s							
INDI	Punta indio, G	1.88	144	*e*P		Pn	01 27 51.5	+0.3
INDI	Punta indio, G	1.88	144	*i* P		Pn	01 27 50.2	-1.0
INDI				*i* S		Sn	01 28 19.8	+6.0
INDI					IAML		01 28 25.7	
	comp=Z,900nm,1.0s							
LCHIL	Los Chiles	1.91	101	*e*P		Pn	01 27 50.4	-1.2
NYURE	Nandayure	1.94	136	*e*P		Pn	01 27 52.6	+0.6
JTS	Las Juntas de	1.98	124	P		Pn	01 27 50.7	-1.8
	comp=Z,76nm,0.3s,baz=303,slow=19,SNR=51							
JTS					LR	LR	01 28 15.5	
	comp=Z,129nm,21.1s,baz=72,slow=29							
JTS					S	Sn	01 28 19.7	+3.6
	comp=Z,229nm,0.6s,baz=13,slow=20,SNR=5.6							
JTS	Las Juntas de	1.98	124	*e*P		Pn	01 27 50.8	-1.8
JUNT	Juntas	1.98	124	*e*P		Pn	01 27 52.7	+0.2
ARE1	Arenal 1	2.09	116	*e*P		Pn	01 27 53.2	-0.9
ARE1				*e*S		Sn	01 28 26.8	+7.8
CEDE	Laguna Cedeo	2.09	115	*e*P		Pn	01 27 55.1	+1.0

POTG	**Potrero Grande**	**4.16**	**124**	*eP*	**Pn**	**01 28 22.3**	**-0.3**
CMIG	**Matias Romero**	**9.80**	**306**	P	**Pn**	**01 29 40.0**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=125,slow=12,SNR=7.3 comp=Z,1.6nm,0.5s						
TXAR	**Lajitas Array**	**23.90**	**321**	P	**P**	**01 32 30.9**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=141,slow=9.1,SNR=11 comp=Z,1.1nm,0.5s						
PDAR	**Pinedale Array**	**37.08**	**332**	P	**P**	**01 34 27.1**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=128,slow=9.6,SNR=4.6 comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**39.02**	**319**	P	**P**	**01 34 46.3**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=134,slow=7.8,SNR=2.4						
ULM	**Lac du Bonnet**	**39.48**	**351**	P	**P**	**01 34 44.1**	**-2.7**
	comp=Z,1.2nm,0.4s,baz=162,slow=8.4,SNR=3.6 comp=Z,1.2nm,0.4s						
RPN	**Rapa Nui**	**44.19**	**210**	LR	LR	01 48 11.8	
	comp=Z,49nm,19.6s,baz=255,slow=28						
YKA	**Yellowknife Ar**	**54.83**	**345**	P	**P**	**01 36 43.6**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=141,slow=6.6,SNR=5.2 comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**67.30**	**336**	P	**P**	**01 38 09.2**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=134,slow=4.3,SNR=6.7 comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**139.62**	**247**	PKP	**PKPdf**	**01 46 44.6**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=108,slow=2.1,SNR=3.4						
WRA	**Warramunga Arr**	**139.74**	**253**	PKP	**PKPdf**	**01 46 43.5**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=87,slow=1.7,SNR=6.8						

TAP 12 01:48:20.1,24°.34N×121°.77E,h7km,ML1.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.03**	**255**	*i* P	Pg	01 48 21.7	+0.2
	baz=255						
EHP	**Heping Village**	**0.04**	**227**	*i* P	Pg	01 48 21.9	+0.2
	baz=217						
EHP				*e*S	Sg	01 48 23.0	+0.3
	baz=217						
ENA	**Nanau**	**0.10**	**341**	*i* P	Pg	01 48 22.7	+0.3
	baz=346						
ENA				S	Sg	01 48 24.2	+0.3
	baz=346						
EWUT	**Wuta**	**0.11**	**2**	*i* P	Pg	01 48 22.9	+0.3
	baz=3.0						
ESAO	**Su ao**	**0.24**	**15**	*e*P	Pg	01 48 25.3	+0.3
	baz=15						
ESAO				*e*S	Sg	01 48 28.4	+0.1
	baz=15						
TWC	**Suao**	**0.28**	**14**	*i* P	Pg	01 48 26.1	+0.4
	baz=11						
TWC				S	Sg	01 48 29.8	+0.4
	baz=11						
ETLH	**Xiulin Townshi**	**0.30**	**244**	*e*S	Sg	01 48 30.9	+1.0
	baz=244						
LATG	**Datong**	**0.30**	**311**	P	Pg	01 48 26.9	+0.8
	baz=311						
LATG				*e*S	Sg	01 48 30.4	+0.3
	baz=311						
NDS	**Dongshan**	**0.30**	**350**	*e*P	Pg	01 48 26.8	+0.7
	baz=359						
ENTT	**Nioudou**	**0.35**	**328**	*e*P	Pg	01 48 27.9	+0.8
	baz=328						
NDT	**Datong Townshi**	**0.35**	**318**	*e*S	Sg	01 48 33.0	+1.2
	baz=318						
NNSB	**Datong**	**0.37**	**284**	*i* P	Pg	01 48 28.0	+0.6
	baz=284						
NNSB				*e*S	Sg	01 48 32.7	+0.5
	baz=284						
NNS	**Nan Shan**	**0.38**	**286**	*e*S	Sg	01 48 33.2	+0.6
	baz=285						
FUSB	**Fushanzhiwuyua**	**0.45**	**338**	*e*P	Pb	01 48 29.9	-0.6
	baz=338						
YHNB	**Yeheng**	**0.49**	**312**	*e*P	Pb	01 48 31.1	-0.1
	baz=312						
NWLT	**Wulai**	**0.50**	**331**	*e*P	Pb	01 48 31.1	-0.3
	baz=331						
NWLT				*e*S	Sg	01 48 37.1	+0.7
	baz=331						

TAP 12 01:48:20.1,23°.94N×121°.57E,h10km,ML1.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**37**	*i* S	Sg	01 48 24.5	+0.9
	baz=43						
ETM	**Tongmen**	**0.08**	**292**	*i* P	Pg	01 48 22.9	+0.4
	baz=293						
ETM				*e*S	Sg	01 48 24.1	+0.1
	baz=293						
TWD	**Chiawan**	**0.14**	**9**	*i* P	Pg	01 48 23.9	+0.5
	baz=10.0						
TWD				*e*S	Sg	01 48 26.1	+0.5
	baz=10.0						
SHUL	**Shoufeng**	**0.15**	**183**	*e*P	Pg	01 48 24.2	+0.8
	baz=193						
SHUL				S	Sg	01 48 27.2	+1.5
	baz=193						
LXIB	**Xiulin Townshi**	**0.17**	**300**	*i* P	Pg	01 48 24.4	+0.5
	baz=300						
ESL	**Shilin**	**0.17**	**226**	*i* P	Pg	01 48 24.1	+0.3
	baz=233						
ESL				S	Sg	01 48 26.6	+0.2
	baz=233						
ETL	**Fush Village**	**0.23**	**12**	*e*P	Pg	01 48 25.2	+0.4
	baz=9.0						
ETL				S	Sg	01 48 28.5	+0.4
	baz=9.0						
ETL	**Fush Village**	**0.23**	**12**	*i* P	Pg	01 48 25.2	+0.4
	baz=207						
ETL				S	Sg	01 48 28.5	+0.5
	baz=207						
NACB	**Ninganchiao**	**0.24**	**5**	*e*P	Pg	01 48 25.2	+0.2
	baz=7.0						
NACB				S	Sg	01 48 28.7	+0.4
	baz=7.0						
NACB	**Ninganchiao**	**0.24**	**5**	*e*P	Pg	01 48 25.1	+0.1
	baz=214						
NACB				S	Sg	01 48 28.7	+0.4
	baz=214						
WARBT	**Fenglin Townsh**	**0.28**	**218**	*i* P	Pg	01 48 25.9	+0.2
	baz=225						
WARBT				*i* S	Sg	01 48 29.4	0.0
	baz=225						
ETLH	**Xiulin Townshi**	**0.28**	**343**	*e*P	Pg	01 48 26.4	+0.5
	baz=341						
ETLH	**Xiulin Townshi**	**0.28**	**343**	P	Pg	01 48 26.4	+0.5
	baz=244						
WHF	**Hehuan Shan**	**0.35**	**307**	*e*P	Pg	01 48 27.9	+0.7
	baz=307						
CHGB	**Renai**	**0.38**	**289**	*i* P	Pb	01 48 28.7	-0.5
	baz=289						
CHGB				*e*S	Sb	01 48 34.9	-0.4
	baz=289						
WUSB	**Renai**	**0.42**	**278**	*e*P	Pb	01 48 29.4	-0.3
	baz=279						
WUSB				*e*S	Sb	01 48 36.0	-0.2
	baz=279						
VWDT	**VWDT**	**0.43**	**245**	P	Pb	01 48 29.6	-0.3
	baz=248						
VWDT				S	Sg	01 48 35.2	+0.8
	baz=248						
SSLB	**Suanglung**	**0.58**	**255**	*i* P	Pb	01 48 32.4	-0.1
	baz=267						
SSLB				S	Sg	01 48 39.5	+0.3
	baz=267						

IDC 12 01:53:05.9±13.0,12°.12S×166°.51E,h228km±157km, mb3.0/3,mbtmp3.6/4,Error ellipse: s-maj=115.7km s-min=57.8km az=152.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.90**	**180**	P	Pn	01 55 23.4	-0.2
	2.5nm,0.5s,baz=90,slow=18,SNR=2.0						
DZM				S	S	01 57 15.6	+0.8
	3.8nm,0.9s,baz=131,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**31.84**	**252**	P	P	01 59 09.7	-0.1
	0.3nm,0.6s,baz=85,slow=9.1,SNR=5.4 0.3nm,0.6s						
ASAR	**Alice Springs**	**33.00**	**245**	P	P	01 59 19.9	0.0
	0.5nm,0.7s,baz=68,slow=10,SNR=6.2 0.5nm,0.7s						
MKAR	**Makanchi Array**	**94.81**	**317**	P	P	02 06 01.6	-0.1
	0.3nm,0.7s,baz=96,slow=7.2,SNR=2.3 0.3nm,0.7s						

2018 FEB

IDC ***12*** *02:01:27.9±0.9,11°.73N×60°.43W,h0km,mb4.0/7, mbtmp4.1/9,ML4.5/2,Error ellipse: s-maj=37.3km s-min=17.9km az=63.0*

NEIC ***12*** *02:01:34.1±1.7,11°.56N±0°.07×60°.48W±0°.06,h46km±10km, mb4.5/51,Error ellipse: s-maj=10.4km s-min=9.0km az=171.0*

TRN ***12*** *02:01:35.6,11°.77N×60°.59W,h62km,MD4.3,North of Tobago.*

ISC 12 02:01:32.6±1.2,11°.70N±0°.03×60°.40W±0°.04,h32km±9km, n124,σ1°.79/148,mb4.5/35,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCMP	**Grenada, Carri**	**1.27**	**308**	*e*P	**Pb**	**02 01 55.2**	**-0.7**
GCMP				*e*S	**Sb**	**02 02 11.1**	**-0.8**
GRGR	**Grenville**	**1.30**	**289**	Pn	**Pb**	**02 01 56.2**	**-0.2**
GRGR				Sn	**Sb**	**02 02 12.2**	**-0.5**
GRGR	**Grenville**	**1.30**	**289**	*e*P	**Pb**	**02 01 56.0**	**-0.4**
GRGR				*e*S	**Sb**	**02 02 12.3**	**-0.5**
GRHS	**Sauteurs**	**1.32**	**293**	*e*P	**Pb**	**02 01 55.9**	**-0.9**
GRHS				*e*S	**Sn**	**02 02 12.2**	**+0.9**
GRFF	**Grenada Fort F**	**1.35**	**285**	*e*P	**Pb**	**02 01 56.8**	**-0.6**
GRFF				*e*S	**Sb**	**02 02 13.3**	**-1.1**
TRN	**Trinidad (W)**	**1.44**	**223**	*e*P	**Pb**	**02 01 59.9**	**+1.1**
TRN				*e*S	**Sb**	**02 02 17.2**	**+0.5**
SVOC	**Richmond Hill,**	**1.65**	**331**	*e*P	**Pb**	**02 02 01.4**	**-0.9**
SVOC				*e*S	**Sb**	**02 02 21.4**	**-1.4**
BBGH	**Gun Hill**	**1.65**	**30**	Pn	**Pb**	**02 02 03.2**	**+0.8**
BBGH	**Gun Hill**	**1.65**	**30**	*e*P	**Pb**	**02 02 04.5**	**+2.1**
TCE	**Chacachacare**	**1.66**	**233**	*e*P	**Pb**	**02 02 03.6**	**+1.0**
TCE				*e*S	**Sb**	**02 02 22.6**	**-0.6**
SVT	**Saint Vincent**	**1.67**	**331**	*e*P	**Pb**	**02 02 01.8**	**-1.0**
SVT				*e*S	**Sn**	**02 02 21.2**	**+1.3**
TPP	**Pointe-a-Pierr**	**1.72**	**217**	*e*P	**Pb**	**02 02 03.8**	**+0.3**
SVB	**Belmont**	**1.77**	**332**	*e*P	**Pb**	**02 02 03.0**	**-1.4**
SVB				*e*S	**Sn**	**02 02 23.4**	**+1.1**
SVV	**Soufriere Volc**	**1.79**	**334**	*e*P	**Pb**	**02 02 03.9**	**-1.0**
SLDE	**Delcer**	**2.18**	**343**	*e*P	**Pb**	**02 02 09.3**	**-2.2**
SLB	**Belfond**	**2.20**	**344**	*e*P	**Pb**	**02 02 10.3**	**-1.5**
SLB				*e*S	**Sn**	**02 02 35.1**	**+2.0**
SLCP	**Castries, St.**	**2.36**	**346**	*e*P	**Pb**	**02 02 12.3**	**-2.2**
SLCP				*e*S	**Sn**	**02 02 38.5**	**+1.5**
SLBI	**Saint Lucia, B**	**2.37**	**346**	*e*P	**Pn**	**02 02 11.5**	**+2.3**
SLBI				*e*S	**Sn**	**02 02 38.1**	**+0.9**
MPOM	**Morne Pois Mar**	**2.76**	**351**		**Pn**	**02 02 16.5**	**+1.9**
MPOM	**Morne Pois Mar**	**2.76**	**351**	*e*P	**Pn**	**02 02 16.9**	**+2.3**
MPOM				*e*S	**Sn**	**02 02 47.8**	**+1.0**
BIM	**Bigot**	**2.87**	**347**		**Pn**	**02 02 18.5**	**+2.4**
BIM	**Bigot**	**2.87**	**347**	*e*P	**Pn**	**02 02 18.9**	**+2.7**
BIM				*e*S	**Sn**	**02 02 51.0**	**+1.3**
MVM	**Montagne Vaucl**	**2.88**	**350**	*e*P	**Pn**	**02 02 18.7**	**+2.5**
LPMF	**Morne Lapointe**	**2.91**	**349**	*e*P	**Pn**	**02 02 19.0**	**+2.4**
ZAM	**Aeronautique**	**2.92**	**348**	*e*P	**Pn**	**02 02 19.0**	**+2.2**
FDF	**Fort de France**	**3.10**	**346**	Pn	**Pn**	**02 02 22.2**	**+2.9**
FDF	**Fort de France**	**3.10**	**346**	*e*P	**Pn**	**02 02 22.6**	**+3.3**
FDF				*e*S	**Sn**	**02 02 56.4**	**+1.1**
PML	**Morne Lenard**	**3.15**	**346**	*e*P	**Pn**	**02 02 23.1**	**+3.0**
GBMF	**Grand Be**	**3.16**	**346**	*e*P	**Pn**	**02 02 23.0**	**+2.8**
BAMF	**Morne Balai**	**3.18**	**347**	*e*P	**Pn**	**02 02 23.7**	**+3.3**
PCM	**Pelee Case Pet**	**3.19**	**346**	*e*P	**Pn**	**02 02 23.3**	**+2.8**
SVN	**Savane Anatole**	**3.21**	**347**		**Pn**	**02 02 24.1**	**+3.3**
SVN	**Savane Anatole**	**3.21**	**347**	*e*P	**Pb**	**02 02 24.8**	**-4.1**
SVN				*e*S	**Sn**	**02 02 58.9**	**+0.9**
MAGL	**Barre de l'ile**	**4.31**	**349**	Pn	**Pn**	**02 02 39.3**	**+3.5**
PCRV	**Puerto La Cruz**	**4.43**	**250**	Pn	**Pn**	**02 02 40.1**	**+2.6**
	10.0nm,0.3s,baz=59,slow=3.8,SNR=34						
PCRV				Sn	**Sn**	**02 03 26.9**	**-1.2**
	8.1nm,0.3s,baz=148,slow=24,SNR=7.1						
CBE	**Ff, Capester**	**4.50**	**345**	Pn	**Pn**	**02 02 40.7**	**+2.2**
CBE	**Ff, Capester**	**4.50**	**345**	*e*P	**Pn**	**02 02 42.1**	**+3.6**
CBE				*e*S	**Sn**	**02 03 30.1**	**+0.4**
GDSD	**La Dsirade Is**	**4.63**	**352**	Pn	**Pn**	**02 02 43.1**	**+2.9**
GDHS	**Morne Mazeau,**	**4.73**	**344**	Pn	**Pn**	**02 02 44.5**	**+2.8**
ABD	**La Joyeuse, An**	**4.86**	**348**	*e*P	**Pn**	**02 02 46.7**	**+3.3**
ABD				*e*S	**Sn**	**02 03 37.1**	**-1.5**
MBFL	**Flemmings, Mon**	**5.31**	**341**	*e*P	**Pn**	**02 02 52.5**	**+2.8**
ANBD	**Bethesda, Anti**	**5.47**	**346**	*e*P	**Pn**	**02 02 55.1**	**+3.2**
ANBD				*e*S	**Sn**	**02 03 53.4**	**-0.4**
ANDO	**Antigua, Disas**	**5.55**	**346**	*e*P	**Pn**	**02 02 55.9**	**+2.9**
ANDO				*e*S	**Sn**	**02 03 53.9**	**-1.8**
BAUV	**El Baul**	**8.00**	**251**	Pn	**Pn**	**02 03 25.4**	**-1.2**
BAUV	**El Baul**	**8.00**	**251**	*e*P	**Pn**	**02 03 28.2**	**+1.5**
BAUV				*e*S	**Sn**	**02 04 51.5**	**-4.7**
HUMP	**Col San Antoni**	**8.29**	**321**	Pn	**Pn**	**02 02 32.5**	**+1.9**
IGPR	**InterUniversit**	**8.32**	**319**	Pn	**Pn**	**02 03 32.1**	**+1.1**
SJG	**San Juan**	**8.45**	**320**	Pn	**Pn**	**02 03 31.7**	**-1.1**
	3.7nm,0.3s,baz=131,slow=22,SNR=11 7.6nm,0.4s						
GCPR	**Guaynabo City**	**8.56**	**321**	Pn	**Pn**	**02 03 35.9**	**+1.6**
OBIP	**Obispado Ponce**	**8.70**	**317**	Pn	**Pn**	**02 03 36.4**	**+0.2**
AOPR	**Arecibo Observ**	**9.01**	**318**	Pn	**Pn**	**02 03 41.0**	**+0.5**
BOAV	**Boa Vista**	**9.25**	**181**	Pn	**Pn**	**02 03 44.0**	**+0.2**
MDP	**Montagnes des**	**10.09**	**130**	Pn	**Pn**	**02 03 53.2**	**-2.2**
	6.6nm,0.3s,baz=325,slow=16,SNR=41						
MDP				Sn	**Sn**	**02 05 40.1**	**-7.5**
	82nm,0.3s,baz=50,slow=20,SNR=35 21nm,0.3s						
SDDR	**Presa de Saban**	**12.75**	**306**	Pn	**Pn**	**02 04 33.9**	**+2.2**
SDDR	**Presa de Saban**	**12.75**	**306**	*e*P	**Pn**	**02 04 35.1**	**+3.4**
OCAC	**Ocana**	**13.18**	**256**	*e*P	**P**	**02 04 49.2**	**+1.8**
PTBC	**PUERTO BERRIO,**	**14.79**	**251**	*e*P	**P**	**02 05 04.6**	**-0.6**
SAML	**Samuel**	**20.70**	**188**	*e*P	**P**	**02 06 09.9**	**-0.4**
PIAT	**Ana Tenorio**	**21.77**	**236**	*e*P	**P**	**02 06 24.9**	**+2.7**
ETMB	**Extrema**	**22.15**	**195**	P	**P**	**02 06 22.5**	**-3.2**
MCRA	**Macar, Loja**	**25.16**	**232**	*e*P	**P**	**02 06 56.5**	**+1.3**
152A	**Waverly Hall**	**30.56**	**317**	P	**P**	**02 07 44.2**	**+0.8**
152A				IAmb	IAmb	02 07 44.7	
	comp=Z,5.3nm,0.7s						
LRAL	**Lakeview Retre**	**32.32**	**315**	P	**P**	**02 07 60.0**	**+1.1**
LRAL				IAmb	IAmb	02 08 17.2	
	comp=Z,15nm,1.5s						
S51A	**Beattyville**	**33.15**	**325**	P	**P**	**02 08 06.0**	**0.0**
S51A				IAmb	IAmb	02 08 07.2	
	comp=Z,4.4nm,0.7s						
V48A	**Smith Brothers**	**33.82**	**319**	P	**P**	**02 08 13.0**	**+1.1**
V48A				IAmb	IAmb	02 08 19.6	
	comp=Z,11nm,1.4s						
WVT	**Waverly**	**34.70**	**319**	P	**P**	**02 08 19.6**	**+0.1**
WVT				IAmb	IAmb	02 08 55.3	
	comp=Z,8.8nm,1.4s						
E62A	**Clayton Lake**	**35.65**	**349**	P	**P**	**02 08 28.2**	**+0.7**
SIUC	**Southern Illin**	**36.55**	**320**	P	**P**	**02 08 35.1**	**-0.3**
S44A	**Carbondale**	**36.56**	**320**	P	**P**	**02 08 35.6**	**+0.1**
PBMO	**Poplar Bluff**	**36.77**	**318**	P	**P**	**02 08 36.7**	**-0.6**
LCAR	**Lake Charles**	**36.86**	**316**	P	**P**	**02 08 38.2**	**+0.1**
WHAR	**Wooly Hollow**	**37.23**	**314**	P	**P**	**02 08 40.9**	**-0.2**
WHAR				IAmb	IAmb	02 09 12.2	
	comp=Z,11nm,1.2s						
FCAR	**Ozark Folk Cen**	**37.42**	**315**	P	**P**	**02 08 42.0**	**-0.9**
FCAR				IAmb	IAmb	02 09 05.9	
	comp=Z,6.8nm,1.3s						
CPUP	**Villa Florida**	**37.92**	**176**	P	**P**	**02 08 47.3**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=318,slow=2.7,SNR=3.6 comp=Z,1.4nm,0.7s						
P43A	**Skaggs, Pawnee**	**37.93**	**322**	P	**P**	**02 08 47.9**	**+0.9**
CCM	**Cathedral Cave**	**38.04**	**319**	P	**P**	**02 08 46.9**	**-1.2**
CCM				IAmb	IAmb	02 08 48.3	
	comp=Z,3.2nm,0.6s						
R40A	**Maddies Statio**	**38.84**	**319**	P	**P**	**02 08 53.8**	**-0.9**
R40A				IAmb	IAmb	02 08 54.7	
	comp=Z,4.3nm,0.8s						
S39A	**Bolivar**	**39.20**	**317**	P	**P**	**02 08 56.6**	**-1.1**
S39A				IAmb	IAmb	02 08 58.0	
	comp=Z,4.7nm,0.7s						
P40A	**Paris**	**39.41**	**320**	P	**P**	**02 08 58.9**	**-0.6**
P40A				IAmb	IAmb	02 08 59.6	
	comp=Z,5.4nm,0.7s						
P38A	**Dawn**	**40.40**	**319**	P	**P**	**02 09 06.4**	**-1.3**
P38A				IAmb	IAmb	02 09 08.0	
	comp=Z,6.0nm,0.7s						
N38A	**Joes South For**	**40.88**	**321**	P	**P**	**02 09 11.5**	**-0.2**
N38A				IAmb	IAmb	02 09 12.1	
	comp=Z,6.9nm,0.6s						
SCHQ	**Schefferville**	**43.32**	**355**	P	**P**	**02 09 32.8**	**+1.4**
SCHQ	**Schefferville**	**43.32**	**355**	P	**P**	**02 09 33.1**	**+1.7**
	comp=Z,2.2nm,1.0s,baz=154,slow=8.0,SNR=4.1 comp=Z,2.2nm,1.0s						
ECSD	**EROS Data Cent**	**44.63**	**322**	P	**P**	**02 09 41.6**	**-0.4**
ECSD				IAmb	IAmb	02 09 42.1	
	comp=Z,4.4nm,0.7s						
MNTX	**Cornudas Mount**	**45.90**	**303**	P	**P**	**02 09 51.1**	**-1.2**
K30B	**Basset**	**45.91**	**320**	P	**P**	**02 09 52.0**	**-0.3**
ULM	**Lac du Bonnet**	**48.19**	**330**	P	**P**	**02 10 08.9**	**-1.0**
ULM	**Lac du Bonnet**	**48.19**	**330**	P	**P**	**02 10 09.0**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=142,slow=8.9,SNR=8.8 comp=Z,1.4nm,0.3s						
PD31	**Pinedale Array**	**52.55**	**315**	P	**P**	**02 10 42.7**	**-0.6**
PDAR	**Pinedale Array**	**52.55**	**315**	P	**P**	**02 10 41.4**	**-1.9**
PDAR	**Pinedale Array**	**52.55**	**315**	P	**P**	**02 10 42.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=116,slow=9.5,SNR=17 comp=Z,1.3nm,0.7s						
BW06	**Boulder Array**	**52.55**	**315**	P	**P**	**02 10 42.5**	**-0.8**
PLCA	**Paso Flores**	**53.01**	**190**	P	**P**	**02 10 47.5**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=38,slow=7.3,SNR=4.0 comp=Z,1.1nm,0.9s						
RLMT	**Red Lodge**	**53.24**	**318**	P	**P**	**02 10 47.9**	**-0.4**
RLMT				IAmb	IAmb	02 10 49.5	
	comp=Z,3.4nm,0.9s						
FCC	**Fort Churchill**	**53.36**	**339**	P	**P**	**02 10 48.8**	**+0.1**
FCC				IAmb	IAmb	02 10 49.1	
	comp=Z,4.1nm,0.6s						
REDW	**Red Top Meadow**	**53.65**	**316**	P	**P**	**02 10 49.9**	**-1.5**
YHL	**Hebgen Lake**	**54.40**	**317**	P	**P**	**02 10 57.9**	**+1.0**
BOZ	**Bozeman (W)**	**54.96**	**318**	P	**P**	**02 11 00.6**	**-0.2**
HLID	**Hailey**	**56.17**	**315**	P	**P**	**02 11 08.2**	**-1.3**
PLID	**Pearl Lake**	**57.71**	**316**	P	**P**	**02 11 19.7**	**-0.8**
I07A	**Izee**	**59.85**	**314**	P	**P**	**02 11 34.7**	**-0.6**
I07A				IAmb	IAmb	02 11 51.4	
	comp=Z,4.6nm,1.3s						
TORD	**Torodi Ar. Bea**	**60.52**	**81**	P	**P**	**02 11 40.6**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=290,slow=7.0,SNR=2.3						
YKA	**Yellowknife Ar**	**63.61**	**335**	P	**P**	**02 11 59.4**	**-0.6**
YKA	**Yellowknife Ar**	**63.61**	**335**	P	**P**	**02 11 59.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=108,slow=7.4,SNR=29 comp=Z,1.3nm,0.6s						
DLBC	**Dease Lake**	**69.47**	**328**	P	**P**	**02 12 38.8**	**+1.1**
DLBC				IAmb	IAmb	02 13 01.0	
	comp=Z,6.0nm,1.4s						
Q32M	**Nakina River**	**70.71**	**329**	P	**P**	**02 12 45.7**	**+0.3**
Q32M				IAmb	IAmb	02 12 50.8	
	comp=Z,9.3nm,1.5s						
G31M	**Satah River**	**72.99**	**337**	P	**P**	**02 12 59.4**	**+0.7**
G31M				IAmb	IAmb	02 13 21.7	
	comp=Z,7.1nm,1.4s						
K29M	**Barlow Dome**	**73.89**	**333**	P	**P**	**02 13 05.6**	**+1.3**
L29M	**L29M**	**74.09**	**332**	P	**P**	**02 13 05.6**	**+0.3**
L29M				IAmb	IAmb	02 13 16.7	
	comp=Z,9.1nm,1.5s						
H29M	**Whitestone**	**74.51**	**336**	P	**P**	**02 13 08.3**	**+0.6**
H29M				IAmb	IAmb	02 13 31.8	
	comp=Z,6.1nm,1.3s						
DAWY	**Dawson**	**74.74**	**333**	P	**P**	**02 13 09.5**	**+0.4**
LOGN	**Logan Glacier**	**75.28**	**330**	P	**P**	**02 13 14.1**	**+1.7**
LOGN				IAmb	IAmb	02 13 31.9	
	comp=Z,10nm,1.3s						
CTGM	**Chitina Glacie**	**75.45**	**330**	P	**P**	**02 13 15.2**	**+1.9**
CTGM				IAmb	IAmb	02 13 52.6	
	comp=Z,9.0nm,1.2s						
BCAR	**Beaver Creek A**	**75.74**	**332**	P	**P**	**02 13 16.0**	**+1.1**
M27K	**Edge Creek, AK**	**75.76**	**332**	P	**P**	**02 13 16.5**	**+1.3**
M27K				IAmb	IAmb	02 13 32.3	
	comp=Z,5.8nm,1.4s						
I26K	**Coal Creek Min**	**76.42**	**335**	P	**P**	**02 13 18.5**	**-0.2**
I26K				IAmb	IAmb	02 13 35.2	
	comp=Z,5.2nm,1.4s						
SCRK	**Sand Creek**	**76.75**	**333**	P	**P**	**02 13 21.6**	**+0.9**
KLU	**Klutina**	**77.67**	**331**	P	**P**	**02 13 26.9**	**+1.1**
ILAR	**Eielson Array**	**78.00**	**334**	P	**P**	**02 13 27.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=100,slow=4.8,SNR=9.2 comp=Z,0.4nm,0.5s						
MDM	**Murphy Dome**	**78.57**	**334**	P	**P**	**02 13 31.2**	**+0.4**
MDM				IAmb	IAmb	02 13 37.4	
	comp=Z,7.1nm,1.5s						
CNPM	**China Poot**	**80.44**	**329**	P	**P**	**02 13 42.6**	**+1.6**
IMAR	**Indian Mountai**	**80.77**	**336**	P	**P**	**02 13 43.6**	**+1.0**
N19K	**Bonanza Creek**	**81.87**	**330**	P	**P**	**02 13 49.4**	**+0.7**
SVW2	**Sparrevohn**	**82.35**	**331**	P	**P**	**02 13 51.8**	**+0.8**

IDC 12 02:07:49.8±7.0,6°.63S×157°.45E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=206.5km s-min=32.8km az=111.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.05**	**237**	P	P	02 13 24.6	-0.6
	0.3nm,0.6s,baz=65,slow=9.2,SNR=6.1 0.3nm,0.6s						
ASAR	**Alice Springs**	**28.27**	**231**	P	P	02 13 45.7	+0.6
	0.3nm,0.4s,baz=53,slow=9.3,SNR=4.0 0.3nm,0.4s						
SONM	**Songino Array**	**70.37**	**326**	P	P	02 19 06.3	+0.6
	0.4nm,0.4s,baz=144,slow=5.6,SNR=5.8 0.4nm,0.4s						
MKAR	**Makanchi Array**	**84.75**	**318**	P	P	02 20 25.2	-0.9
	0.4nm,0.7s,baz=92,slow=6.6,SNR=4.7 0.4nm,0.7s						

IDC ***12*** *02:08:02.4±1.2,37°.04N×141°.45E,h0km,mb3.4/5,

s-maj=133.4km s-min=132.0km az=93.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**7.93**	**268**	I	I	03 06 20.0	
	baz=91,slow=328,SNR=1.6						
I41PY	**VILLA FLORIDA**	**10.54**	**166**	I	I	03 22 10.0	
	baz=346,slow=336,SNR=9.5						
I09BR	**BRASILIA INFRA**	**11.73**	**89**	I	I	03 31 20.0	
	baz=267,slow=324,SNR=2.1						

TAP ***12*** *02:26:09.5, 24.02N×121.79E, h4km, ML4.0, C*
ASIES ***12*** *02:26:09.5, 24.02N×121.79E, h4km, ML4.0, Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}6.46; $M_{\theta\theta}$-2.10; $M_{\phi\phi}$-4.37; $M_{r\theta}$-0.89; $M_{\theta\phi}$-2.84; $M_{\phi r}$2.38; Fault plane solution: $M_0$6.86830×10^{21} NP1:ϕ_s18.42000°, δ53.65000°, λ71.00000°. NP2:ϕ_s228.58000°, δ40.40000°, λ113.87000°. Principal axes: T Plg73.2520°, Azm235.3840°; N Plg15.2050°, Azm29.9570°; P Plg6.8570°, Azm121.8300°;*

ISC 12 02:26:10.8±1.0, 23.99N±0.01×121.82E±0.02, h4km±8km, n141, σ1$05/278, 5C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.20**	**265**	⇓*i*P	**Pg**	**02 26 14.2**	**-0.4**
	baz=254						
HWA				S	**Sg**	**02 26 19.0**	**+1.7**
	baz=254						
TWD	**Chiawan**	**0.22**	**293**	⇓*i*P	**Pg**	**02 26 13.9**	**-1.3**
	baz=290						
TWD				S	**Sg**	**02 26 18.6**	**+0.5**
	baz=290						
ETL	**Fush Village**	**0.24**	**312**	P	**Pg**	**02 26 14.5**	**-1.1**
	baz=317						
NACB	**Ninganchiao**	**0.27**	**311**	⇓P	**Pg**	**02 26 14.9**	**-1.2**
	baz=311						
NACB				*e*S	**Sg**	**02 26 18.9**	**-0.8**
	baz=311						
ETM	**Tongmen**	**0.30**	**265**	⇓P	**Pg**	**02 26 15.7**	**-1.0**
	baz=258						
ETM				S	**Sg**	**02 26 20.6**	**0.0**
	baz=258						
SHUL	**Shoufeng**	**0.31**	**229**	P	**Pg**	**02 26 17.6**	**+0.7**
	baz=221						
SHUL				S	**Sg**	**02 26 23.1**	**+2.1**
	baz=221						
EHP	**Heping Village**	**0.32**	**347**	P	**Pg**	**02 26 17.0**	**-0.1**
	baz=352						
EHP				*e*S	**Sg**	**02 26 21.8**	**+0.5**
	baz=352						
EAHA	**Aohua**	**0.34**	**348**	P	**Pg**	**02 26 17.1**	**-0.3**
	baz=351						
EAHA				S	**Sg**	**02 26 22.8**	**+0.9**
	baz=351						
LXIB	**Xiulin Townshi**	**0.37**	**274**	⇓P	**Pg**	**02 26 17.3**	**-0.8**
	baz=270						
LXIB				S	**Sg**	**02 26 23.8**	**+0.8**
	baz=270						
ETLH	**Xiulin Townshi**	**0.37**	**305**	P	**Pg**	**02 26 16.9**	**-1.2**
	baz=303						
ETLH				S	**Sg**	**02 26 22.3**	**-0.7**
	baz=303						
TEGC	**Jichi Village**	**0.38**	**222**	P	**Pg**	**02 26 19.1**	**+0.9**
	baz=215						
TEGC				S	**Sb**	**02 26 27.2**	**+0.8**
	baz=215						
ESL	**Shilin**	**0.40**	**243**	⇑*i*P	**Pg**	**02 26 17.7**	**-0.8**
	baz=248						
ESL				S	**Sg**	**02 26 23.7**	**+0.1**
	baz=248						
ENA	**Nanau**	**0.44**	**351**	*i*P	**Pg**	**02 26 19.0**	**-0.3**
	baz=354						
ENA				S	**Sg**	**02 26 25.6**	**+0.6**
	baz=354						
EWUT	**Wuta**	**0.45**	**355**	P	**Pg**	**02 26 19.4**	**-0.1**
	baz=358						
EWUT				*e*S	**Sg**	**02 26 26.2**	**+0.8**
	baz=358						
EOS4	**EOS4**	**0.47**	**74**	*e*P	**Pn**	**02 26 22.9**	**-1.1**
	baz=84						
EOS4				*e*S	**Sb**	**02 26 33.2**	**+4.5**
	baz=84						
WARBT	**Fenglin Townsh**	**0.48**	**235**	⇑P	**Pg**	**02 26 19.4**	**-0.7**
	baz=230						
WARBT				*e*S	**Sg**	**02 26 27.6**	**+1.2**
	baz=230						
WHF	**Hehuan Shan**	**0.53**	**287**	⇓*i*P	**Pg**	**02 26 19.8**	**-1.3**
	baz=284						
WHF				*i*S	**Sg**	**02 26 27.8**	**-0.1**
	baz=284						
EOS3	**EOS3**	**0.54**	**57**	*e*P	**Pn**	**02 26 24.8**	**-0.3**
	baz=61						
EOS2	**EOS2**	**0.57**	**42**	*e*P	**Pn**	**02 26 25.4**	**-0.1**
	baz=54						
EOS2				*e*S	**Sn**	**02 26 39.8**	**+4.5**
	baz=54						
ESAO	**Su ao**	**0.58**	**2**	P	**Pg**	**02 26 22.3**	**+0.3**
	baz=354						
ESAO				*e*S	**Sb**	**02 26 30.9**	**-1.2**
	baz=354						
FUSS	**Fushou**	**0.58**	**296**	*i*P	**Pg**	**02 26 21.2**	**-0.9**
	baz=294						
FUSS				S	**Sg**	**02 26 30.5**	**+0.9**
	baz=294						
NNSB	**Datong**	**0.59**	**317**	⇓P	**Pg**	**02 26 21.2**	**-0.9**
	baz=317						
NNSB				S	**Sg**	**02 26 30.2**	**+0.4**
	baz=317						
NNSH	**Datong**	**0.59**	**317**	*i*P	**Pg**	**02 26 21.2**	**-1.0**
	baz=316						
NNSH				*e*S	**Sg**	**02 26 29.5**	**-0.3**
	baz=316						
CHGB	**Renai**	**0.59**	**276**	⇓P	**Pg**	**02 26 21.3**	**-1.0**
	baz=274						
CHGB				*e*S	**Sg**	**02 26 30.0**	**0.0**
	baz=274						
LATG	**Datong**	**0.60**	**334**	⇓P	**Pg**	**02 26 21.8**	**-0.6**
	baz=334						
LATG				*e*S	**Sg**	**02 26 31.3**	**+1.0**
	baz=334						
NNS	**Nan Shan**	**0.60**	**318**	*i*P	**Pg**	**02 26 21.6**	**-0.9**
	baz=317						
NNS				S	**Sg**	**02 26 30.9**	**+0.6**
	baz=317						
TWC	**Suao**	**0.61**	**3**	*i*P	**Pb**	**02 26 23.1**	**-1.0**
	baz=355						
TWC				*e*S	**Sb**	**02 26 31.5**	**-1.6**
	baz=355						
HGSD	**Ruisui**	**0.62**	**216**	P	**Pg**	**02 26 23.4**	**+0.7**
	baz=212						
HGSD				*e*S	**Sg**	**02 26 33.1**	**+2.3**
	baz=212						
TWT	**Tachien**	**0.64**	**294**	*i*P	**Pg**	**02 26 22.7**	**-0.5**
	baz=291						
TWT				S	**Sg**	**02 26 33.0**	**+1.4**
	baz=291						
WUSB	**Renai**	**0.64**	**270**	P	**Pg**	**02 26 22.5**	**-0.7**
	baz=277						
WUSB				S	**Sg**	**02 26 32.6**	**+1.1**
	baz=277						
NDS	**Dongshan**	**0.64**	**352**	P	**Pg**	**02 26 23.3**	**+0.1**
	baz=353						
NDS				S	**Sg**	**02 26 32.2**	**+0.6**
	baz=353						
TDCB	**Techi**	**0.66**	**293**	P	**Pg**	**02 26 22.6**	**-0.8**
	baz=291						
TDCB				S	**Sg**	**02 26 32.2**	**+0.2**
	baz=291						
VWDT	**VWDT**	**0.67**	**249**	⇑P	**Pg**	**02 26 23.2**	**-0.4**
	baz=255						
VWDT				S	**Sg**	**02 26 33.2**	**+1.0**
	baz=255						
EHY	**Hungye**	**0.67**	**223**	*i*P	**Pg**	**02 26 23.5**	**-0.2**
	baz=205						
EHY				S	**Sb**	**02 26 34.7**	**+0.1**
	baz=205						
NDT	**Datong Townshi**	**0.67**	**335**	P	**Pg**	**02 26 23.2**	**-0.5**
	baz=336						
NDT				S	**Sb**	**02 26 33.6**	**-1.1**
	baz=336						
ENTT	**Nioudou**	**0.68**	**340**	*i*P	**Pg**	**02 26 23.6**	**-0.4**
	baz=330						
ENTT				S	**Sb**	**02 26 34.7**	**-0.4**
	baz=330						
TWE	**Neicheng**	**0.74**	**349**	*i*P	**Pg**	**02 26 24.8**	**-0.2**
	baz=351						
TWE				S	**Sb**	**02 26 36.1**	**-0.6**
	baz=351						
ECBN	**Changbin**	**0.76**	**207**	P	**Pg**	**02 26 25.6**	**+0.2**
	baz=203						
ECBN				S	**Sb**	**02 26 38.1**	**+1.0**
	baz=203						
YULB	**Yu-li**	**0.77**	**219**	P	**Pg**	**02 26 25.0**	**-0.5**
	baz=215						
YULB				S	**Sg**	**02 26 37.6**	**+2.1**
	baz=215						
ILA	**Ilan**	**0.77**	**355**	*e*P	**Pb**	**02 26 26.0**	**-0.8**
	baz=346						
ILA				*e*S	**Sb**	**02 26 36.6**	**-1.0**
	baz=346						
YHNB	**Yeheng**	**0.79**	**329**	P	**Pg**	**02 26 25.5**	**-0.5**
	baz=329						
YHNB				*e*S	**Sg**	**02 26 36.3**	**+0.2**
	baz=329						
WPL	**Puli Township**	**0.79**	**271**	P	**Pg**	**02 26 25.4**	**-0.6**
	baz=269						
WPL				S	**Sg**	**02 26 37.1**	**+0.9**
	baz=269						
EYUL	**Yuli**	**0.79**	**216**	*i*P	**Pg**	**02 26 26.2**	**+0.2**
	baz=231						
EYUL				*e*S	**Sb**	**02 26 38.9**	**+0.7**
	baz=231						
FUSB	**Fushanzhiwuyua**	**0.79**	**345**	P	**Pg**	**02 26 25.9**	**-0.1**
	baz=345						
FUSB				S	**Sb**	**02 26 37.8**	**-0.5**
	baz=345						
NSK	**Sanguang**	**0.80**	**328**	⇓*i*P	**Pg**	**02 26 25.6**	**-0.6**
	baz=329						
NSK				S	**Sg**	**02 26 37.3**	**+0.7**
	baz=329						
TWF1	**Yuli**	**0.80**	**217**	*i*P	**Pg**	**02 26 25.8**	**-0.4**
	baz=232						
TWF1				*e*S	**Sg**	**02 26 37.7**	**+1.2**
	baz=232						
DPDB	**Guoxing**	**0.82**	**273**	P	**Pg**	**02 26 26.1**	**-0.4**
	baz=270						
DPDB				S	**Sg**	**02 26 37.3**	**+0.2**
	baz=270						
SSLB	**Suanglung**	**0.82**	**256**	⇑P	**Pg**	**02 26 25.6**	**-0.9**
	baz=264						
SSLB				S	**Sg**	**02 26 37.6**	**+0.4**
	baz=264						
NWLT	**Wulai**	**0.83**	**340**	P	**Pg**	**02 26 26.6**	**-0.3**
	baz=340						
NWLT				S	**Sb**	**02 26 39.1**	**-0.3**
	baz=340						
WCS	**Beigang Elemen**	**0.83**	**274**	P	**Pg**	**02 26 26.2**	**-0.6**
	baz=272						
WCS				S	**Sg**	**02 26 38.3**	**+0.7**
	baz=272						
SMLT	**Sun Moon Lake**	**0.85**	**263**	⇑*i*P	**Pg**	**02 26 26.5**	**-0.6**
	baz=271						
SMLT				*i*S	**Sg**	**02 26 38.7**	**+0.5**
	baz=271						
EGS		**0.85**	**7**	*i*P	**Pn**	**02 26 28.8**	**-0.9**
	baz=359						
EGS				*e*S	**Sb**	**02 26 40.0**	**0.0**
	baz=359						
TYC	**Yuchr**	**0.89**	**264**	*i*P	**Pg**	**02 26 26.9**	**-0.9**
	baz=273						
TYC				*i*S	**Sg**	**02 26 39.5**	**+0.2**
	baz=273						
CHKH	**Chenggong**	**0.89**	**206**	P	**Pg**	**02 26 27.5**	**-0.4**
	baz=177						
CHKH				*e*S	**Sg**	**02 26 41.2**	**+1.8**
	baz=177						
NFF	**Wufeng Townshi**	**0.90**	**315**	P	**Pg**	**02 26 27.6**	**-0.6**
	baz=314						
NFF				*e*S	**Sb**	**02 26 41.6**	**+0.2**
	baz=314						
LIOB	**Emei**	**0.98**	**312**	*i*P	**Pg**	**02 26 29.7**	**+0.1**
	baz=311						
LIOB				*e*S	**Sg**	**02 26 42.5**	**+0.1**
	baz=311						
NSTT	**Nanjuang**	**0.98**	**311**	*i*P	**Pg**	**02 26 29.4**	**-0.2**
	baz=310						
NSTT				*i*S	**Sb**	**02 26 44.0**	**+0.4**
	baz=310						
CHKT	**Chengkung**	**0.98**	**205**	*i*P	**Pg**	**02 26 29.5**	**-0.2**
	baz=176						
CHKT				*e*S	**Sg**	**02 26 43.1**	**+0.7**
	baz=176						
NHDH	**Xindian Distri**	**1.00**	**345**	P	**Pg**	**02 26 30.1**	**+0.1**
	baz=345						
NHDH				*e*S	**Sb**	**02 26 44.4**	**+0.1**
	baz=345						
EHD	**Haiduan**	**1.01**	**214**	P	**Pg**	**02 26 29.0**	**-1.2**
	baz=226						
EHD				*e*S	**Sg**	**02 26 43.5**	**+0.1**
	baz=226						
WJS	**Zhushan**	**1.01**	**260**	*i*P	**Pg**	**02 26 30.3**	**0.0**
	baz=266						
WJS				S	**Sg**	**02 26 44.5**	**+1.1**
	baz=266						
TWQ1	**Liyutan**	**1.02**	**290**	*i*P	**Pg**	**02 26 30.7**	**+0.3**
	baz=301						
TWQ1				*i*S	**Sg**	**02 26 44.4**	**+0.8**
	baz=301						
TWB1	**Santiao Chiao**	**1.02**	**9**	*i*P	**Pn**	**02 26 31.5**	**-0.4**
	baz=1.0						
TWB1				S	**Sn**	**02 26 47.3**	**+0.6**
	baz=1.0						
WNT	**Mingjian**	**1.04**	**264**	*i*P	**Pg**	**02 26 30.3**	**-0.6**
	baz=272						
WNT				*i*S	**Sn**	**02 26 47.3**	**0.0**
	baz=272						
ALS	**Alishan**	**1.05**	**243**	*i*P	**Pg**	**02 26 30.4**	**-0.5**
	baz=239						
ALS				S	**Sg**	**02 26 45.2**	**+0.7**
	baz=239						
ECS	**Chishang**	**1.05**	**212**	P	**Pg**	**02 26 31.1**	**+0.1**
	baz=224						
ECS				*e*S	**Sb**	**02 26 46.7**	**+1.0**
	baz=224						
NSY	**Sanyi**	**1.05**	**294**	*i*P	**Pb**	**02 26 31.7**	**+0.1**
	baz=304						
NSY				*i*S	**Sn**	**02 26 47.5**	**0.0**
	baz=304						
TCU	**Taichung**	**1.06**	**279**	P	**Pg**	**02 26 31.7**	**+0.6**
	baz=292						
TCU				S	**Sn**	**02 26 48.7**	**+1.1**
	baz=292						
NWF	**Wu-fen Shan**	**1.07**	**358**	*i*P	**Pb**	**02 26 31.8**	**-0.2**
	baz=349						
NWF				*i*S	**Sn**	**02 26 47.2**	**-0.9**
	baz=349						
WFSB	**Wu-fen Shan**	**1.07**	**358**	P	**Pn**	**02 26 32.2**	**-0.4**
	baz=349						
WFSB				*e*S	**Sb**	**02 26 46.3**	**0.0**
	baz=349						
NMLH	**Miaoli**	**1.08**	**300**	*i*P	**Pn**	**02 26 32.7**	**-0.1**
	baz=299						
NMLH				S	**Sn**	**02 26 48.3**	**+0.1**
	baz=299						
ELDTW	**Lidau**	**1.09**	**223**	*i*P	**Pg**	**02 26 30.0**	**-1.7**
	baz=219						
ELDTW				*e*S	**Sg**	**02 26 44.9**	**-0.9**
	baz=219						
SXI1	**Grass Mountain**	**1.10**	**3**	P	**Pn**	**02 26 32.6**	**-0.4**
	baz=354						
SXI1				*e*S	**Sn**	**02 26 50.5**	**+1.9**
	baz=354						
SBCB	**Hsinchu**	**1.10**	**316**	P	**Pb**	**02 26 32.8**	**+0.3**
	baz=316						
SBCB				*e*S	**Sn**	**02 26 48.1**	**-0.6**
	baz=316						
NJN	**Zhunan**	**1.10**	**309**	*e*P	**Pg**	**02 26 32.4**	**+0.4**
	baz=307						
NJN				*e*S	**Sn**	**02 26 49.6**	**+0.9**
	baz=307						
NTY	**Taoyuan**	**1.11**	**335**	*e*P	**Pb**	**02 26 32.7**	**+0.1**
	baz=323						
NTY				S	**Sb**	**02 26 47.4**	**0.0**
	baz=323						
HSN	**Hsinchu**	**1.12**	**316**	*i*P	**Pn**	**02 26 33.4**	**+0.1**
	baz=318						
HSN				*e*S	**Sn**	**02 26 48.3**	**-0.7**
	baz=318						
CHN5	**Tsauling**	**1.12**	**249**	*i*P	**Pg**	**02 26 31.9**	**-0.4**
	baz=247						
CHN5				*i*S	**Sg**	**02 26 47.7**	**+0.9**
	baz=247						
EDH	**Donghe**	**1.12**	**205**	*i*P	**Pg**	**02 26 29.6**	**-2.8**
	baz=177						
EDH				S	**Sg**	**02 26 46.4**	**-0.6**
	baz=177						
NCUH	**Zhongli**	**1.13**	**329**	*i*P	**Pn**	**02 26 33.1**	**-0.3**
	baz=329						
NCUH				S	**Sn**	**02 26 50.4**	**+1.0**
	baz=329						
WYL	**Yuanlin Townsh**	**1.13**	**269**	*e*P	**Pb**	**02 26 33.5**	**+0.6**
	baz=266						
WYL				*e*S	**Sn**	**02 26 50.8**	**+1.4**
	baz=266						
TNOU	**National Taiwa**	**1.15**	**358**	P	**Pb**	**02 26 32.9**	**-0.4**
	baz=338						
TNOU				*e*S	**Sn**	**02 26 50.0**	**+0.1**
	baz=338						
WCHH	**Zhanghua**	**1.16**	**274**	*i*P	**Pg**	**02 26 33.5**	**+0.5**
	baz=272						
WCHH				S	**Sn**	**02 26 50.3**	**+0.3**
	baz=272						
TWS1	**Kuangyinshan**	**1.16**	**342**	*i*P	**Pn**	**02 26 34.0**	**+0.2**
	baz=342						
TWS1				S	**Sn**	**02 26 51.2**	**+1.0**
	baz=342						
YM01	**YM01**	**1.17**	**349**	P	**Pb**	**02 26 33.4**	**-0.3**
	baz=349						
YM01				*e*S	**Sb**	**02 26 49.3**	**+0.1**
	baz=349						
WGK	**Gukeng**	**1.19**	**255**	*i*P	**Pg**	**02 26 34.1**	**+0.4**
	baz=253						
WGK				*e*S	**Sb**	**02 26 50.8**	**+1.0**
	baz=253						
YM08	**YM08**	**1.21**	**350**	P	**Pg**	**02 26 33.9**	**-0.1**
	baz=337						
YM08				*e*S	**Sn**	**02 26 50.6**	**-0.7**
	baz=337						
NTST	**Danshui**	**1.21**	**344**	P	**Pb**	**02 26 34.3**	**-0.1**
	baz=344						
NTST				*e*S	**Sn**	**02 26 52.2**	**+0.8**
	baz=344						
WDLH	**Douliu**	**1.21**	**256**	*i*P	**Pg**	**02 26 34.6**	**+0.6**
	baz=253						
WDLH				*e*S	**Sb**	**02 26 51.6**	**+1.3**
	baz=253						
ANP	**Anpu**	**1.22**	**347**	*i*P	**Pb**	**02 26 34.3**	**-0.2**
	baz=347						
ANP				*e*S	**Sn**	**02 26 50.9**	**-0.8**
	baz=347						
WCKO	**Fanlu**	**1.24**	**244**	P	**Pg**	**02 26 34.2**	**-0.5**
	baz=241						
WCKO				*e*S	**Sg**	**02 26 51.7**	**+0.9**
	baz=241						
LONT	**Longtian**	**1.25**	**210**	*i*P	**Pg**	**02 26 32.6**	**-2.3**
	baz=221						
LONT				*e*S	**Sg**	**02 26 50.6**	**-0.5**
	baz=221						
STYH	**Taoyuan**	**1.26**	**230**	P	**Pn**	**02 26 34.0**	**-1.2**
	baz=213						
STYH				S	**Sg**	**02 26 52.6**	**+1.2**
	baz=213						
TPUB	**Ta-pu**	**1.29**	**238**	P	**Pn**	**02 26 34.9**	**-0.8**
	baz=234						
TPUB				S	**Sg**	**02 26 53.3**	**+0.9**
	baz=234						
TWY	**Chenhua**	**1.29**	**351**	*i*P	**Pn**	**02 26 35.9**	**+0.3**
	baz=339						
TWY				*e*S	**Sn**	**02 26 53.5**	**+0.1**
	baz=339						
CHN2	**Minshiung**	**1.31**	**250**	*i*P	**Pn**	**02 26 35.7**	**-0.3**
	baz=247						
CHN2				*e*S	**Sn**	**02 26 54.5**	**+0.6**
	baz=247						
WRL	**Guolierlin Hig**	**1.32**	**266**	P	**Pn**	**02 26 34.9**	**-1.2**
	baz=264						
WRL				S	**Sn**	**02 26 54.5**	**+0.4**
	baz=264						
WTP	**Ta-pu**	**1.33**	**236**	*i*P	**Pn**	**02 26 35.1**	**-1.1**
	baz=232						
WTP				S	**Sg**	**02 26 54.5**	**+0.8**
	baz=232						
WTK	**Tuku**	**1.34**	**257**	*i*P	**Pn**	**02 26 36.3**	**0.0**
	baz=255						
WTK				*i*S	**Sn**	**02 26 56.0**	**+1.4**
	baz=255						
LDUT	**Ludao**	**1.35**	**194**	*e*P	**Pn**	**02 26 35.1**	**-1.3**
	baz=172						
LDUT				S	**Sb**	**02 26 51.7**	**-2.7**
	baz=172						
TWGBT	**Beinan**	**1.35**	**210**	P	**Pn**	**02 26 33.8**	**-2.7**
	baz=207						
TWGBT				*e*S	**Sb**	**02 26 53.7**	**-0.7**
	baz=207						
TWG	**Pinlang**	**1.35**	**211**	*i*P	**Pn**	**02 26 33.7**	**-2.9**
	baz=207						
TWG				*e*S	**Sb**	**02 26 53.5**	**-1.0**
	baz=207						
CHY	**Chiayi**	**1.37**	**249**	*e*P	**Pn**	**02 26 37.0**	**+0.3**
	baz=246						
CHY				*e*S	**Sn**	**02 26 56.8**	**+1.5**
	baz=246						
TWK	**Hsinying**	**1.42**	**240**	*i*P	**Pn**	**02 26 37.1**	**-0.4**
	baz=236						
TWK				S	**Sb**	**02 26 56.6**	**+0.3**
	baz=236						
CHN1	**Nanshi**	**1.43**	**236**	*i*P	**Pn**	**02 26 37.0**	**-0.6**
	baz=233						
CHN1				S	**Sg**	**02 26 58.1**	**+1.2**
	baz=233						
SNST	**Tainan City**	**1.44**	**238**	P	**Pn**	**02 26 37.2**	**-0.4**
	baz=234						
SNST				*e*S	**Sb**	**02 26 57.0**	**+0.2**
	baz=234						
SGST	**Jiashian**	**1.45**	**232**	*i*P	**Pn**	**02 26 37.2**	**-0.7**
	baz=213						
SGST				*i*S	**Sn**	**02 26 58.0**	**+0.6**
	baz=213						
WSF	**Szhu**	**1.50**	**257**	*e*P	**Pb**	**02 26 39.7**	**+0.4**
	baz=254						
WSF				S	**Sg**	**02 27 00.6**	**+1.3**
	baz=254						
WSL	**Shuilin Townsh**	**1.53**	**252**	P	**Pb**	**02 26 40.3**	**+0.5**
	baz=250						
WSL				*e*S	**Sg**	**02 27 02.0**	**+1.9**
	baz=250						
ICHU	**Yijhu**	**1.55**	**246**	*i*P	**Pn**	**02 26 38.8**	**-0.4**
	baz=243						
ICHU				S	**Sb**	**02 27 00.7**	**+0.8**
	baz=243						
CHN8	**Yiju**	**1.61**	**247**	P	**Pn**	**02 26 40.7**	**+0.7**
	baz=244						
CHN8				S	**Sb**	**02 27 02.8**	**+1.0**
	baz=244						
SCST	**Cishan**	**1.64**	**228**	*i*P	**Pn**	**02 26 41.3**	**+0.9**
	baz=226						
SCST				*e*S	**Sg**	**02 27 05.3**	**+1.7**
	baz=226						
PCYT	**Pengchaiyu**	**1.64**	**8**	P	**Pn**	**02 26 40.8**	**+0.3**
	baz=6.0						
PCYT				*e*S	**Sg**	**02 27 04.9**	**+1.2**
	baz=6.0						
SHHT	**Tainan City**	**1.66**	**235**	P	**Pb**	**02 26 42.3**	**+0.3**
	baz=231						
SHHT				*e*S	**Sg**	**02 27 05.3**	**+1.1**
	baz=231						
TSMG	**Majia**	**1.68**	**220**	*i*P	**Pn**	**02 26 41.6**	**+0.7**
	baz=217						
TSMG				*i*S	**Sb**	**02 27 04.3**	**+0.6**
	baz=217						
TWM1	**Shoushan**	**1.73**	**228**	P	**Pn**	**02 26 43.1**	**+1.3**
	baz=225						
TWM1				*e*S	**Sg**	**02 27 08.0**	**+1.4**
	baz=225						
MASBT	**Mashibuluo**	**1.76**	**219**	P	**Pn**	**02 26 40.8**	**-1.2**
	baz=215						
MASBT				S	**Sb**	**02 27 06.9**	**+0.9**
	baz=215						
TSCK	**Chigu Township**	**1.80**	**242**	P	**Pn**	**02 26 41.6**	**-1.0**
	baz=239						
TSCK				S	**Sb**	**02 27 08.2**	**+1.0**
	baz=239						
EAST	**Anshuo**	**1.84**	**209**	*i*P	**Pn**	**02 26 40.8**	**-2.4**
	baz=190						
EAST				*e*S	**Sn**	**02 27 07.1**	**+0.2**
	baz=190						
TAWH	**Dawu Township**	**1.86**	**208**	*i*P	**Pn**	**02 26 44.0**	**+0.6**
	baz=205						
TAWH				*e*S	**Sn**	**02 27 06.7**	**-0.6**
	baz=205						
SCZT	**Fangliau**	**1.96**	**215**	*i*P	**Pn**	**02 26 45.1**	**+0.3**
	baz=189						

SCZT			*e*S		**Sn**	**02 27 10.2**	**+0.4**
	baz=189						
LAY	**Lan-yu**	**1.96 187**	*i* P		**Pn**	**02 26 42.4**	**-2.5**
	baz=178						
WSSB	**Gushan**	**1.96 227**	*e*P		**Pn**	**02 26 45.5**	**+0.6**
	baz=225						
WSSB			*e*S		**Sb**	**02 27 12.9**	**+0.8**
	baz=225						
LYUB	**Lan-yu**	**2.00 186**	P		**Pn**	**02 26 41.9**	**-3.4**
	baz=179						
LYUB			*e*S		**Sn**	**02 27 06.5**	**-4.2**
	baz=179						
WDGT	**Dungji**	**2.11 250**	*i* P		**Pn**	**02 26 47.1**	**+0.2**
	baz=249						
WDGT			S		**Sn**	**02 27 15.3**	**+1.8**
	baz=249						
PHUB	**P'eng-hu**	**2.11 257**	P		**Pn**	**02 26 46.5**	**-0.5**
	baz=256						
PHUB			*e*S		**Sn**	**02 27 12.9**	**-0.8**
	baz=256						
PNG	**Penghu**	**2.12 259**	*i* P		**Pn**	**02 26 46.2**	**-0.8**
	baz=257						
PNG			*i* S		**Sn**	**02 27 13.4**	**-0.3**
	baz=257						
TWKBT	**Hengchun**	**2.25 205**	*e*P		**Pn**	**02 26 48.3**	**-0.4**
	baz=184						
TWKBT			*e*S		**Sn**	**02 27 16.6**	**-0.3**
	baz=184						
VCHM	**Qimei**	**2.33 251**	P		**Pn**	**02 26 49.1**	**-0.7**
	baz=249						
VCHM			S		**Sn**	**02 27 20.6**	**+1.6**
	baz=249						
VWUC	**VWUC**	**2.38 295**	P		**Pn**	**02 26 51.4**	**+0.9**
	baz=294						
VWUC			S		**Sn**	**02 27 19.1**	**-1.0**
	baz=294						
PTMZ	**Houxiangcun**	**2.67 294**	P		**Pn**	**02 26 53.5**	**-1.1**
	baz=293						
PTMZ			*e*S		**Sn**	**02 27 26.1**	**-1.3**
	baz=293						
MATB	**Ma-tsu**	**2.74 322**	P		**Pn**	**02 26 56.3**	**+0.7**
	baz=319						
MATB			S		**Sn**	**02 27 30.0**	**+0.9**
	baz=319						
KNM	**Kinmen**	**3.12 278**	*i* P		**Pn**	**02 27 01.3**	**+0.5**
	baz=273						
LYJJ	**Jianjiangzhen**	**3.15 324**	P		**Pn**	**02 27 00.1**	**-1.2**
	baz=321						
LYJJ			*e*S		**Sn**	**02 27 40.4**	**+1.0**
	baz=321						
KNMB	**Chin-men Tao**	**3.17 279**	P		**Pn**	**02 27 00.6**	**-0.9**
	baz=278						
KNMB			*e*S		**Sn**	**02 27 40.2**	**+0.6**
	baz=278						
XPSS	**Dashiqiu**	**3.27 334**	*i* P		**Pn**	**02 27 01.4**	**-1.5**
	baz=328						
XPSS			*e*S		**Sn**	**02 27 44.3**	**+2.0**
	baz=328						
MHZQ	**Yeshan**	**3.29 310**	P		**Pn**	**02 27 02.9**	**-0.2**
	baz=307						
MHZQ			*e*S		**Sn**	**02 27 42.4**	**-0.2**
	baz=307						
AXDP	**Jialang**	**3.62 285**	P		**Pn**	**02 27 06.3**	**-1.4**
	baz=284						
AXDP			*e*S		**Sn**	**02 27 51.5**	**+0.7**
	baz=284						
ZPLA	**Ao Xicun**	**3.72 270**	*e*P		**Pn**	**02 27 08.2**	**-0.9**
	baz=268						
ZPLA			*e*S		**Sn**	**02 27 52.4**	**-1.0**
	baz=268						
DSXP	**Dongshan**	**4.03 267**	*e*P		**Pn**	**02 27 12.9**	**-0.4**
	baz=263						
DSXP			*e*S		**Sn**	**02 28 00.8**	**-0.2**
	baz=263						
SXFK	**Yanhouchang**	**4.47 303**	P		**Pn**	**02 27 17.6**	**-1.9**
	baz=301						
SXFK			*e*S		**Sn**	**02 28 11.9**	**-0.1**
	baz=301						

IDC ***12*** *02:27:15.3±2.9, 8.°11S×119.°71E, h183km±26km, mb3.9/11, mbtmp4.4/12, MS3.4/1, Error ellipse: s-maj=34.0km s-min=11.0km az=66.0*

NEIC ***12*** *02:27:15.1±2.0, 8.°24S±0.°08×119.°63E±0.°08, h181km±7km, mb4.4/23, Error ellipse: s-maj=12.5km s-min=9.6km az=222.0*

DJA ***12*** *02:27:16.2±0.1, 8.°3S±2.°×12.°0E±.°, h171km±3km, M4.6/22, mB5.2/7, mb4.6/22, MLv4.6/18, Mw(mB)4.6/7*

ISC 12 02:27:16.6±0.4, 8.°28S±0.°05×119.°73E±0.°05, h200km, n121, σ1$47/124, mb4.3/22, 1C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**2.00**	**104**	P	**Pn**	**02 27 52.5**	**-2.7**
PLAI	**Plampang**	**2.00**	**254**	P	**Pn**	**02 27 51.3**	**-3.9**
PLAI	**Plampang**	**2.00**	**254**	P	**Pn**	**02 27 51.3**	**-3.9**
BASI	**Baing, Sumba**	**2.10**	**156**	P	**Pn**	**02 27 53.1**	**-3.1**
MMRI	**Maumere**	**2.51**	**98**	Pn	**Pn**	**02 27 57.8**	**-2.8**
MMRI				Sn	**Sn**	**02 28 32.5**	**-2.4**
MMRI	**Maumere**	**2.51**	**98**	P	**Pn**	**02 27 59.4**	**-1.2**
MMRI	**Maumere**	**2.51**	**98**	P	**Pn**	**02 27 58.6**	**-2.0**
TWSI	**Taliwang, Sumb**	**2.85**	**261**	P	**Pn**	**02 28 00.7**	**-3.8**
KAPI	**Kappang**	**3.25**	**0**	Pn	**Pn**	**02 28 07.5**	**-1.7**
BBSI	**Bau Bau**	**3.96**	**46**	P	**Pn**	**02 28 18.2**	**+0.2**
SRBI	**Singaraja**	**4.47**	**272**	P	**Pn**	**02 28 21.7**	**-2.6**
DNP	**Denpasar**	**4.49**	**265**	P	**Pn**	**02 28 24.8**	**+0.3**
SOEI	**Soe**	**4.72**	**108**	Pn	**Pn**	**02 28 27.2**	**-0.4**
SOEI	**Soe**	**4.72**	**108**	P	**Pn**	**02 28 27.2**	**-0.4**
SOEI	**Soe**	**4.72**	**108**	P	**Pn**	**02 28 27.8**	**+0.2**
TTSI	**Tana Toraja** 62nm,1.1s,0.3nm	**5.21**	**1**	P	**Pn**	**02 28 35.5**	**+1.8**
JAGI	**Jajag, Banyuwa**	**5.52**	**268**	Pn	**Pn**	**02 28 33.8**	**-3.9**
JAGI	**Jajag, Banyuwa**	**5.52**	**268**	P	**Pn**	**02 28 35.6**	**-2.1**
JAGI	**Jajag, Banyuwa** 60nm,0.8s,2μm0.7nm	**5.52**	**268**	P	**Pn**	**02 28 35.2**	**-2.5**
BLJI	**Banyuglugur** 98nm,0.7s,0.4nm	**6.10**	**275**	P	**Pn**	**02 28 44.9**	**-0.2**
GMJI	**Gumukmas**	**6.22**	**270**	P	**Pn**	**02 28 45.8**	**-0.9**
BWJI	**Bawean** 537nm,1.6s,2.5nm	**7.42**	**289**	P	**Pn**	**02 29 02.8**	**+0.4**
LUWI	**Luwuk** 43nm,0.8s,6μm0.4nm	**7.81**	**23**	P	**Pn**	**02 29 08.8**	**+1.4**
UGM	**Wanagama**	**9.12**	**272**	Pn	**Pn**	**02 29 21.6**	**-3.0**
UGM	**Wanagama** 70nm,1.5s	**9.12**	**272**	P	**Pn**	**02 29 25.7**	**+1.2**
FITZ	**Fitzroy Crossi** baz=12,SNR=17	**11.32**	**150**	P	**Pn**	**02 29 52.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.32**	**150**	Pn	**Pn**	**02 29 52.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.32**	**150**	P	**Pn**	**02 29 52.3**	**-0.6**
TNTI	**Ternate** 58nm,1.5s	**11.79**	**41**	P	**P**	**02 30 01.2**	**-2.7**
MTN	**Manton Dam** baz=12,SNR=14	**12.09**	**113**	P	**Pn**	**02 30 01.8**	**-1.0**
MTN	**Manton Dam**	**12.09**	**113**	Pn	**Pn**	**02 30 01.9**	**-0.9**
MTN	**Manton Dam**	**12.09**	**113**	P	**Pn**	**02 30 02.4**	**-0.4**
PSA00	**Pilbara Seismi**	**13.21**	**180**	Pn	**Pn**	**02 30 14.7**	**-2.1**
PSA00	**Pilbara Seismi**	**13.21**	**180**	Pn	**Pn**	**02 30 14.1**	**-2.8**
PSA00	**Pilbara Seismi**	**13.21**	**180**	P	**Pn**	**02 30 15.5**	**-1.3**
KDU	**Kakadu** baz=13,SNR=6.5	**13.27**	**110**	P	**Pn**	**02 30 17.6**	**0.0**
KDU	**Kakadu**	**13.27**	**110**	P	**Pn**	**02 30 17.6**	**0.0**
FAKI	**Fak Fak**	**13.55**	**68**	Pn	**Pn**	**02 30 19.7**	**-1.4**
FAKI	**Fak Fak**	**13.55**	**68**	P	**Pn**	**02 30 20.1**	**-1.0**
FAKI	**Fak Fak** 92nm,0.7s	**13.55**	**68**	P	**Pn**	**02 30 21.6**	**+0.5**
GIRL	**Giralia** baz=15,SNR=6.2	**15.22**	**200**	P	**P**	**02 30 41.1**	**-0.9**
GIRL	**Giralia**	**15.22**	**200**		**P**	**02 30 41.9**	**-0.1**
KASI	**Kota Agung** 13nm,0.7s	**15.37**	**279**	P	**P**	**02 30 44.7**	**+1.0**
DAV	**Davao City (W)** comp=Z,138nm,21.1s,baz=18,slow=38	**16.33**	**21**	LR	LR	02 37 29.0	
WB0	**Warramunga Arr**	**18.22**	**130**	P	**P**	**02 31 15.4**	**+0.4**
WB0	comp=Z,8.4nm,0.7s			IAmb	IAmb	02 31 21.7	
MEEK	**Meekatharra** baz=18,SNR=17	**18.29**	**183**	P	**Pn**	**02 31 16.7**	**-1.4**
MEEK	**Meekatharra**	**18.29**	**183**	P	**Pn**	**02 31 17.0**	**-1.0**
WRA	**Warramunga Arr**	**18.29**	**131**	P	**P**	**02 31 15.5**	**-0.2**
WRA	**Warramunga Arr** comp=Z,3.0nm,0.3s,baz=303,slow=12,SNR=158	**18.29**	**131**	P	**P**	**02 31 16.1**	**+0.4**
WRA	comp=Z,6.1nm,0.9s,baz=303,slow=21,SNR=7.7			S	**S**	**02 34 32.5**	**-2.0**
WRAB	**Tennant Creek**	**18.29**	**131**	P	**P**	**02 31 16.3**	**+0.6**
WRAB				IAmb	IAmb	02 31 22.5	
	comp=Z,9.0nm,0.8s						
WB2	**Warramunga Arr**	**18.30**	**131**	P	**P**	**02 31 16.3**	**+0.5**
WB2				IAmb	IAmb	02 31 22.6	
	comp=Z,8.7nm,0.8s						
WR0	**Warramunga Arr**	**18.45**	**131**	P	**P**	**02 31 18.2**	**+0.7**
WR0				IAmb	IAmb	02 31 23.6	
	comp=Z,16nm,0.5s						
WRKA	**Warakurna** baz=19,SNR=190	**18.56**	**155**	P	**Pn**	**02 31 20.2**	**-1.1**
WRKA	**Warakurna**	**18.56**	**155**	P	**Pn**	**02 31 19.8**	**-1.5**
AS31	**Alice Springs**	**20.46**	**140**	P	**P**	**02 31 40.0**	**+1.0**
ASAR	**Alice Springs** comp=Z,6.1nm,0.5s,baz=315,slow=9.1,SNR=53	**20.46**	**140**	P	**P**	**02 31 39.8**	**+0.8**
ASAR				S	**S**	**02 35 16.7**	**-0.2**
	comp=Z,8.2nm,0.7s,baz=321,slow=22,SNR=24						
ASAR				ScP	**ScP**	**02 39 01.1**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=329,slow=2.3,SNR=6.8						
AS01	**Alice Springs** comp=Z,6.1nm,0.5s	**20.49**	**140**	P	**P**	**02 31 40.5**	**+1.2**
MORW	**Morawa** baz=21,SNR=6.0	**20.96**	**189**	P	**P**	**02 31 44.5**	**+0.2**
MORW	**Morawa**	**20.96**	**189**		**P**	**02 31 43.8**	**-0.5**
MORW	comp=Z,11nm,0.9s			IAmb	IAmb	02 32 05.6	
BLDU	**Ballidu** baz=23,SNR=12	**22.40**	**187**	P	**P**	**02 31 57.8**	**-0.7**
QIS	**Mount Isa** baz=23,SNR=49	**22.76**	**125**	P	**P**	**02 32 03.2**	**+1.3**
QIS	**Mount Isa**	**22.76**	**125**	P	**P**	**02 32 03.1**	**+1.1**
KMBL	**Kambalda** baz=23,SNR=8.4	**23.05**	**175**	P	**P**	**02 32 05.3**	**+0.8**
KMBL	**Kambalda**	**23.05**	**175**	P	**P**	**02 32 05.1**	**+0.6**
KLBR	**Kellerberrin** baz=23,SNR=15	**23.26**	**184**	P	**P**	**02 32 07.1**	**+0.7**
KLBR	**Kellerberrin**	**23.26**	**184**	P	**P**	**02 32 07.1**	**+0.7**
COEN	**Coen** baz=24,SNR=173	**23.68**	**106**	P	**P**	**02 32 10.9**	**+0.6**
COEN	**Coen**	**23.68**	**106**	P	**P**	**02 32 11.2**	**+0.8**
COEN	**Coen**	**23.68**	**106**	P	**P**	**02 32 11.6**	**+1.3**
FORT	**Forrest** baz=24,SNR=51	**23.70**	**162**	P	**P**	**02 32 11.4**	**+1.2**
FORT	**Forrest**	**23.70**	**162**	P	**P**	**02 32 11.5**	**+1.2**
FORT	**Forrest**	**23.70**	**162**	P	**P**	**02 32 11.6**	**+1.3**
OOD	**Oodnadatta**	**24.58**	**144**	P	**P**	**02 32 20.3**	**+1.9**
NWAO	**Narrogin (SRO)** baz=25,SNR=4.7	**24.63**	**185**	P	**P**	**02 32 20.1**	**+1.3**
NWAO				P	**P**	**02 32 20.1**	**+1.3**
	baz=25,SNR=4.7						
NWAO	**Narrogin (SRO)**	**24.63**	**185**	P	**P**	**02 32 19.4**	**+0.6**
MTSU	**Mount Surprise** baz=26,SNR=48	**25.83**	**115**	P	**P**	**02 32 31.4**	**+1.5**
MTSU	**Mount Surprise**	**25.83**	**115**	P	**P**	**02 32 31.3**	**+1.5**
BBOO	**Buckleboo** baz=29,SNR=21	**28.72**	**150**	P	**P**	**02 32 56.5**	**+1.2**
BBOO	**Buckleboo**	**28.72**	**150**	P	**P**	**02 32 56.3**	**+1.0**
BBOO	comp=Z,8.8nm,0.6s			IAmb	IAmb	02 32 57.5	
HTT	**Hallett** baz=31,SNR=4.6	**30.67**	**147**	P	**P**	**02 33 14.8**	**+2.2**
STKA	**Stephens Creek** baz=31,SNR=12	**31.06**	**142**	P	**P**	**02 33 17.9**	**+1.9**
STKA	**Stephens Creek**	**31.06**	**142**	P	**P**	**02 33 17.3**	**+1.3**
STKA	**Stephens Creek**	**31.06**	**142**	P	**P**	**02 33 18.1**	**+2.1**
STKA	**Stephens Creek** comp=Z,6.9nm,0.7s,baz=318,slow=9.0,SNR=15	**31.06**	**142**	P	**P**	**02 33 17.9**	**+1.9**
	comp=Z,6.9nm,0.7s						
PZH	**PanZhiHua**	**38.74**	**334**	P	P	02 34 25.2	+3.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
XAN	**Xi'an**	**43.32**	**347**	⇑P	**P**	**02 34 58.7**	**-0.3**
XAN				pmax	pmax		
	comp=Z,16nm,1.8s						
KSRS	**Korea Array** comp=Z,2.9nm,0.7s,baz=194,slow=3.9,SNR=5.8	**46.14**	**9**	PcP	**PcP**	**02 36 54.2**	**+0.6**
HHC	**Hu-ho-hao-te**	**49.46**	**352**	*e*P	P	02 35 50.5	+3.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
GTA	**Gaotai**	**50.92**	**340**	P	**P**	**02 35 58.4**	**+0.7**
GTA				pP	pP	02 36 23.4	-18
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
XLT	**XiLinHaoTe**	**52.04**	**357**	*e*P	**P**	**02 36 05.4**	**-0.4**
XLT				pP	pP	02 36 48.3	-1.1
XLT				sP	sP	02 37 06.7	-4.5
XLT				PcP	**PcP**	**02 37 14.6**	**-0.6**
XLT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,170nm,4.3s						
USRK	**Ussuriysk Ar.**	**53.40**	**11**	P	**P**	**02 36 14.3**	**-1.4**
USRK	**Ussuriysk Ar.** comp=Z,1.9nm,0.8s,baz=190,slow=6.3,SNR=5.2	**53.40**	**11**	P	**P**	**02 36 13.1**	**-2.6**
	comp=Z,1.9nm,0.8s						
MLZ	**Mavora Lakes**	**55.61**	**140**	P	**P**	**02 36 33.3**	**+1.6**
ULN	**Ulaanbaatar**	**57.02**	**350**	P	**P**	**02 36 42.3**	**+0.6**
ULN				IAmb	IAmb	02 36 42.9	
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**57.11**	**349**	P	**P**	**02 36 42.4**	**+0.1**
SONM				IAmb	IAmb	02 36 43.4	
	comp=Z,6.0nm,0.7s						
SONM	**Songino Array** comp=Z,5.1nm,0.6s,baz=166,slow=8.4,SNR=50	**57.11**	**349**	P	**P**	**02 36 42.5**	**+0.3**
	comp=Z,5.1nm,0.6s						
BKZ	**Black Stump Fm**	**59.22**	**131**	P	**P**	**02 36 58.8**	**+1.7**
BKZ				IAmb	IAmb	02 37 05.2	
	comp=Z,8.4nm,1.0s						
KSH	**Kashi**	**62.47**	**323**	P	**P**	**02 37 18.4**	**-0.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK31	**Makanchi Array**	**64.16**	**332**	P	**P**	**02 37 29.0**	**-0.7**
MK31				IAmb	IAmb	02 37 30.5	
	comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**64.16**	**332**	P	**P**	**02 37 28.9**	**-0.9**
MKAR	**Makanchi Array** comp=Z,2.9nm,0.6s,baz=139,slow=7.5,SNR=44	**64.16**	**332**	P	**P**	**02 37 29.5**	**-0.3**
	comp=Z,2.9nm,0.6s						
ZAA0	**Zalesovo Array**	**68.64**	**339**	P	**P**	**02 37 56.1**	**-1.8**
ZAA0				IAmb	IAmb	02 37 59.0	
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam** comp=Z,3.2nm,0.4s,baz=134,slow=5.1,SNR=17	**68.64**	**339**	P	**P**	**02 37 56.9**	**-1.0**
	comp=Z,3.2nm,0.4s						
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.4s,baz=146,slow=5.3,SNR=11	**68.65**	**333**	P	**P**	**02 37 57.5**	**-0.6**
	comp=Z,0.8nm,0.4s						
KURK	**Kurchatov**	**68.68**	**333**	P	**P**	**02 37 57.3**	**-1.0**
KURK				IAmb	IAmb	02 37 58.5	
	comp=Z,2.9nm,0.9s						
PETK	**Petropavlovsk-**	**69.14**	**23**	P	**P**	**02 38 00.9**	**-0.1**
VNDA	**Vanda**	**72.58**	**171**	P	**P**	**02 38 23.3**	**+1.8**
VNDA				IAmb	IAmb	02 38 42.0	
	comp=Z,11nm,1.4s						
VNDA	**Vanda** comp=Z,4.4nm,1.1s,baz=322,slow=3.2,SNR=5.8	**72.58**	**171**	P	**P**	**02 38 23.6**	**+2.1**
	comp=Z,4.4nm,1.1s						
BVAR	**Borovoye Array** comp=Z,1.5nm,0.7s,baz=121,slow=6.2,SNR=9.6	**74.01**	**332**	P	**P**	**02 38 29.2**	**-1.0**
	comp=Z,1.5nm,0.7s						
BRVK	**Borovoye**	**74.08**	**332**	P	**P**	**02 38 30.4**	**-0.2**
SEY	**Seymchan** comp=Z,3.7nm,0.5s,baz=221,slow=4.3,SNR=15	**75.29**	**15**	P	**P**	**02 38 37.5**	**+0.2**
	comp=Z,3.7nm,0.5s						
ABKAR	**Akbulak array**	**77.39**	**325**	P	**P**	**02 38 47.5**	**-2.0**
NRIK	**Noril'sk** comp=Z,2.0nm,0.5s,baz=157,slow=5.5,SNR=3.8	**80.59**	**349**	P	**P**	**02 39 05.8**	**-0.6**
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea** comp=Z,1.2nm,0.5s,baz=55,slow=2.8,SNR=7.6	**119.04**	**280**	PKP	**PKiKP**	**02 45 42.3**	**-0.3**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.5s,baz=0.6,slow=2.1,SNR=4.7	**120.01**	**50**	PKP	**PKiKP**	**02 45 45.5**	**+1.3**
PDAR	**Pinedale Array** comp=Z,0.3nm,0.4s,baz=136,slow=2.3,SNR=5.0	**124.91**	**43**	PKP	**PKiKP**	**02 45 53.6**	**-0.1**
DBIC	**Dimbokro** comp=Z,3.2nm,0.9s,baz=54,slow=1.1,SNR=4.5	**125.07**	**272**	PKP	**PKiKP**	**02 45 54.2**	**-0.3**
PLCA	**Paso Flores** comp=Z,0.8nm,0.7s,baz=277,slow=5.0,SNR=4.1	**130.32**	**170**	PKP	**PKiKP**	**02 46 05.2**	**+0.8**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=356,slow=3.8,SNR=3.5	**134.25**	**57**	PKP	**PKiKP**	**02 46 13.2**	**+0.5**
CPUP	**Villa Florida** comp=Z,2.2nm,0.7s,baz=91,slow=1.9,SNR=6.6	**145.47**	**185**	PKPbc	**PKPab**	**02 46 32.5**	**+0.2**
BDFB	**Brasilia** comp=Z,1.8nm,0.7s,baz=112,slow=5.4,SNR=3.5	**153.31**	**207**	PKPbc	**PKiKP**	**02 46 52.5**	**+0.3**

IDC ***12*** *02:39:00.6±3.0, 48.°62N×152.°25E, h191km±28km, mb3.3/9, mbtmp3.8/11, Error ellipse: s-maj=18.3km s-min=16.9km az=132.0*

ISC 12 02:39:01.3±0.9, 48.°6N±0.°1×152.°3E±0.°2, h200km, n12, σ0$80/12, mb3.5/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 9.8nm,0.8s,baz=213,slow=11,SNR=10	**5.62**	**35**	P	**Pn**	**02 40 22.5**	**-1.0**
SEY	**Seymchan** 0.9nm,0.3s,baz=62,slow=23,SNR=4.1	**14.32**	**0**	P	**P**	**02 42 16.8**	**+0.4**
INK	**Inuvik** 0.6nm,0.3s,baz=286,slow=11,SNR=14 0.6nm,0.3s	**40.35**	**34**	P	**P**	**02 46 20.0**	**+1.1**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=82,slow=5.0,SNR=2.2 0.2nm,0.6s	**45.62**	**295**	P	**P**	**02 47 01.4**	**-0.1**
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=69,slow=8.3,SNR=7.8 0.5nm,0.5s	**45.98**	**302**	P	**P**	**02 47 04.3**	**+0.2**
BVAR	**Borovoye Array** 0.8nm,0.4s,baz=60,slow=8.4,SNR=9.6 0.8nm,0.4s	**49.26**	**308**	P	**P**	**02 47 29.7**	**+0.4**
YKA	**Yellowknife Ar** 0.2nm,0.4s,baz=267,slow=6.5,SNR=4.9 0.2nm,0.4s	**49.74**	**37**	P	**P**	**02 47 32.6**	**-0.2**
FINES	**FINESS Array B** 1.0nm,0.6s,baz=30,slow=6.8,SNR=13 1.0nm,0.6s	**62.10**	**334**	P	**P**	**02 48 59.6**	**-0.8**
WRA	**Warramunga Arr** 1.6nm,0.6s,baz=12,slow=6.1,SNR=6.7 1.6nm,0.6s	**70.14**	**198**	P	**P**	**02 49 51.5**	**-0.4**
ASAR	**Alice Springs** 1.2nm,0.6s,baz=7.8,slow=5.7,SNR=11 1.2nm,0.6s	**73.84**	**198**	P	**P**	**02 50 14.3**	**+0.4**
TXAR	**Lajitas Array** 0.4nm,0.6s,baz=242,slow=2.7,SNR=4.1 0.4nm,0.6s	**77.03**	**60**	P	**P**	**02 50 33.1**	**+0.9**
PLCA	**Paso Flores** 1.5nm,0.9s,baz=276,slow=3.2,SNR=5.6	**148.86**	**92**	PKPbc	**PKiKP**	**02 58 24.8**	**-1.2**

IDC ***12*** *02:39:48.4±2.2, 56.°19N×149.°66W, h0km, mb3.6/3, mbtmp3.6/8, ML3.4/5, MS3.3/5, Error ellipse: s-maj=37.5km s-min=23.4km az=170.0*

NEIC ***12*** *02:39:50.0±1.4, 56.°34N±0.°08×149.°9W±0.°1, h22km±9km, mb4.0/1, ML3.8/62, ML3.6(AEIC), Error ellipse: s-maj=11.7km s-min=7.7km az=162.0*

AEIC ***12*** *02:39:53.4±1.7, 56.°33N±0.°08×149.°9W±0.°1, h12km±7km, Error ellipse: s-maj=11.6km s-min=7.7km az=161.0*

ISC 12 02:39:51.0±1.0, 56.°48N±0.°08×149.°95W±0.°06, h10km, n281, σ1$24/286, mb3.7/5, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**1.94**	**313**		**Pn**	**02 40 22.6**	**-1.4**
KDAK					**Sn**	**02 40 46.0**	**-2.4**
KDAK	**Kodiak Island** 6.3nm,0.3s,baz=135,slow=4.1,SNR=83	**1.94**	**313**	Pn	**Pn**	**02 40 23.4**	**-0.6**
KDAK	39nm,0.3s,baz=30,slow=22,SNR=58 18nm,0.5s			Sn	**Sn**	**02 40 47.1**	**-1.3**
OHAK	**Old Harbor**	**1.98**	**294**	Pn	**Pn**	**02 40 22.5**	**-2.0**
OHAK				Sn	**Sn**	**02 40 45.9**	**-3.5**
OHAK	**Old Harbor** baz=114	**1.98**	**294**	P	**Pn**	**02 40 22.7**	**-1.8**
OHAK	baz=114			S	**Sn**	**02 40 46.5**	**-2.9**
SII	**Sitkinak Islan**	**2.35**	**274**	Pn	**Pn**	**02 40 27.8**	**-1.9**
SII	comp=N,262nm,0.9s			IAML		02 41 09.2	
SYI	**Shuyak Island**	**2.51**	**329**	Pn	**Pn**	**02 40 31.1**	**-0.8**
SYI				Sn	**Sn**	**02 41 02.0**	**-0.5**
Q20K	**Shuyak Island** baz=148	**2.51**	**329**	P	**Pn**	**02 40 31.5**	**-0.3**
Q20K	baz=148			S	**Sn**	**02 41 02.6**	**+0.1**
CNPM	**China Poot**	**3.13**	**348**	Pn	**Pn**	**02 40 39.8**	**-0.6**
CNPM				Sn	**Sn**	**02 41 17.5**	**-0.3**
Q19K	**Cape Douglas,**	**3.16**	**323**	Pn	**Pn**	**02 40 40.7**	**-0.1**
Q19K				Sn	**Sn**	**02 41 17.3**	**-1.1**
Q19K	**Cape Douglas,** baz=141	**3.16**	**323**	P	**Pn**	**02 40 41.2**	**+0.5**
Q19K	baz=141			S	**Sn**	**02 41 17.7**	**-0.8**
CHIR	**Chirikof Islan**	**3.24**	**261**	Pn	**Pn**	**02 40 39.6**	**-2.2**
CHIR	comp=E,222nm,2.7s			IAML		02 41 10.8	
CHIR	comp=N,286nm,2.8s			IAML		02 42 25.1	
CHIR	**Chirikof Islan** baz=79	**3.24**	**261**	P	**Pn**	**02 40 40.1**	**-1.8**
BRSE	**Bradley Lake S**	**3.30**	**353**		**Pn**	**02 40 41.8**	**-0.8**
BRSE					**Sn**	**02 41 21.7**	**-0.2**
BRSE	**Bradley Lake S** baz=172	**3.30**	**353**	P	**Pn**	**02 40 41.8**	**-0.8**
BRSE	baz=172			S	**Sn**	**02 41 21.7**	**-0.2**
HOM	**Homer**	**3.31**	**345**	Pn	**Pn**	**02 40 42.5**	**-0.3**
HOM	comp=N,353nm,0.9s			IAML		02 41 40.4	
HOM	**Homer** baz=164	**3.31**	**345**	P	**Pn**	**02 40 43.3**	**+0.4**
BRLK	**Bradley Lake**	**3.33**	**352**	Pn	**Pn**	**02 40 42.0**	**-1.2**
BRLK				Sn	**Sn**	**02 41 20.9**	**-1.8**
KAHC	**Katmai Hardscr**	**3.49**	**311**		**Pn**	**02 40 45.8**	**+0.4**
KAHC	**Katmai Hardscr** baz=128	**3.49**	**311**	P	**Pn**	**02 40 45.8**	**+0.4**
Q23K	**Middleton Isla**	**3.52**	**31**	Pn	**Pn**	**02 40 43.9**	**-1.8**
Q23K	comp=N,203nm,2.3s			IAML		02 41 40.9	
Q23K	comp=E,294nm,1.5s			IAML		02 41 56.9	
Q23K	**Middleton Isla** baz=213	**3.52**	**31**	P	**Pn**	**02 40 44.5**	**-1.2**
MID	**Middleton Isla**	**3.53**	**32**	Pn	**Pn**	**02 40 43.8**	**-2.0**
MID	comp=E,263nm,2.3s			IAML		02 41 26.6	
MID	comp=N,202nm,1.5s			IAML		02 42 48.8	
P19K	**Oil Pt**	**3.63**	**333**	Pn	**Pn**	**02 40 46.9**	**-0.4**
P19K

comp=N,74nm,0.7s
O18K IAML 02 42 05.5
comp=E,75nm,0.8s
O18K Koktuh Hills 4.38 323 P Pn 02 40 57.7 +0.1
baz=139
P17K Kvichak River 4.41 311 Pn 02 40 58.1 +0.2
P17K Kvichak River 4.41 311 P Pn 02 40 58.1 +0.2
baz=126
KAIM Kayak Island 4.53 38 Pn Pn 02 40 58.0 -1.5
KAIM IAML 02 41 57.9
comp=E,154nm,0.8s
KAIM Kayak Island 4.53 38 P Pn 02 40 58.9 -0.6
baz=221
RC01 Rabbit Creek A 4.63 1 Pn Pn 02 40 59.8 -1.1
RC01 IAML 02 41 58.7
comp=E,59nm,0.5s
RC01 IAML 02 42 10.4
comp=N,44nm,0.6s
RC01 Rabbit Creek A 4.63 1 P Pn 02 41 00.2 -0.7
baz=181
EYAK Cordova Ski Ar 4.64 27 P Pn 02 41 00.2 -0.7
baz=209
CHGN Chignik 4.71 271 Pn Pn 02 40 58.8 -3.2
CHGN IAML 02 43 14.5
comp=N,95nm,0.1s
CHGN IAML 02 43 19.8
comp=E,82nm,0.7s
RAGM Ragged Mountai 4.80 33 Pn Pn 02 41 02.6 -0.7
RAGM IAML 02 42 12.3
comp=E,140nm,0.6s
SUCK Suckling Hills 4.86 40 Pn Pn 02 41 02.8 -1.3
SUCK IAML 02 42 14.4
comp=E,130nm,1.6s
SUCK IAML 02 42 16.0
comp=N,124nm,1.4s
N20K Mount Spurr 4.88 347 P Pn 02 41 03.2 -1.2
baz=165
SPCR Spurr Chakacha 4.88 347 Pn 02 41 03.2 -1.2
HMT Hamilton 4.89 35 Pn Pn 02 41 03.8 -0.7
NICHA Nichawak Mount 4.91 37 Pn 02 41 04.2 -0.6
SPCP Crater Peak Br 4.94 348 Pn 02 41 05.2 0.0
GOAT Goat Mountain 4.94 31 Pn 02 41 04.8 -0.4
SPCG Spurr Capps Gl 4.95 348 Pn 02 41 05.1 -0.3
N19K Bonanza Creek 4.95 333 Pn Pn 02 41 03.8 -1.6
N19K Bonanza Creek 4.95 333 P Pn 02 41 04.7 -0.7
baz=150
KNK Knik Glacier 5.01 8 Pn Pn 02 41 05.1 -1.1
KNK IAML 02 42 11.8
comp=N,39nm,0.6s
KNK IAML 02 42 17.2
comp=E,44nm,0.9s
KNK Knik Glacier 5.01 8 P Pn 02 41 05.5 -0.7
baz=189
P16K Nushagak River 5.01 304 Pn 02 41 06.4 +0.3
P16K Nushagak River 5.01 304 P Pn 02 41 06.4 +0.3
baz=118
SUA Susitna One 5.02 356 Pn Pn 02 41 04.8 -1.6
SUA IAML 02 42 17.4
comp=E,41nm,3.7s
SUA IAML 02 42 23.4
comp=N,36nm,3.1s
SUA Susitna One 5.02 356 P Pn 02 41 05.2 -1.2
baz=175
O17K Koliganek Bris 5.03 314 Pn 02 41 05.7 -0.7
O17K Koliganek Bris 5.03 314 P Pn 02 41 05.7 -0.7
baz=129
SPNN North Nagishla 5.11 345 Pn 02 41 07.2 -0.4
BERG Berg Lake 5.11 37 Pn Pn 02 41 06.2 -1.4
STLK Strandline Lak 5.13 350 Pn 02 41 07.1 -0.7
DIV Divide 5.14 23 Pn Pn 02 41 07.0 -1.0
PMR Palmer 5.15 4 Pn Pn 02 41 07.5 -0.5
PMR IAML 02 42 20.4
comp=E,39nm,0.8s
PMR IAML 02 42 21.0
comp=N,24nm,0.6s
GRIN Grindle Hills 5.17 40 Pn 02 41 07.6 -0.7
N18K Kilae Creek 5.24 326 Pn Pn 02 41 08.2 -1.1
N18K IAML 02 42 29.4
comp=E,40nm,0.7s
N18K IAML 02 42 30.2
comp=N,32nm,0.9s
N18K Kilae Creek 5.24 326 P Pn 02 41 08.9 -0.4
baz=142
SNH Sunshine Point 5.27 42 Pn Pn 02 41 08.6 -1.2
SNH IAML 02 42 19.0
comp=N,87nm,1.6s
SNH IAML 02 42 21.1
comp=E,84nm,1.0s
BMRM Bremner River 5.29 29 Pn Pn 02 41 09.4 -0.6
BMRM Bremner River 5.29 29 P Pn 02 41 09.5 -0.5
baz=213
KHIT Khitrov Hills 5.31 39 Pn 02 41 09.3 -1.0
GHO Glory Hole Cre 5.34 5 Pn Pn 02 41 10.8 +0.1
O16K Kokwok River B 5.34 309 Pn Pn 02 41 10.4 -0.2
O16K Kokwok River B 5.34 309 P Pn 02 41 10.6 0.0
baz=123
SML Sawmill 5.41 8 Pn Pn 02 41 11.5 -0.1
SML Sawmill 5.41 8 P Pn 02 41 11.7 +0.1
baz=189
KLU Klutina 5.44 21 Pn Pn 02 41 11.4 -0.7
KLU Klutina 5.44 21 P Pn 02 41 11.8 -0.3
baz=203
WAX Waxell Ridge 5.45 40 Pn Pn 02 41 10.8 -1.5
M23K Glacier View 5.45 11 Pn Pn 02 41 12.0 -0.2
M23K Glacier View 5.45 11 P Pn 02 41 12.0 -0.2
baz=192
SVW2 Sparrevohn 5.48 330 Pn Pn 02 41 11.4 -1.1
SCM Sheep Creek Mo 5.54 13 Pn Pn 02 41 13.3 -0.2
SCM Sheep Creek Mo 5.54 13 P Pn 02 41 13.9 +0.4
baz=194
BARK Barkley Ridge 5.55 42 Pn 02 41 12.7 -0.9
N17K Nushagak Hills 5.56 320 Pn Pn 02 41 12.8 -0.8
N17K Nushagak Hills 5.56 320 P Pn 02 41 14.2 +0.6
baz=134
CRQM Cirque 5.57 37 Pn Pn 02 41 13.4 -0.7
SKT Skwentna 5.58 352 Pn Pn 02 41 13.0 -1.0
SKT Skwentna 5.58 352 P Pn 02 41 13.4 -0.5
baz=171
MESA MESA 5.61 45 Pn Pn 02 41 13.0 -1.6
MESA MESA 5.61 45 P Pn 02 41 13.9 -0.7
baz=231
M20K Styx River 5.66 345 Pn Pn 02 41 14.1 -1.0
M20K Styx River 5.66 345 P Pn 02 41 14.4 -0.7
baz=162
TGL Tana Glacier 5.67 38 Pn Pn 02 41 14.3 -1.0
ISLE Juniper Island 5.74 41 Pn Pn 02 41 15.1 -1.2
BAGL Bagley Icefiel 5.76 42 Pn 02 41 15.6 -0.8
VRDI Verde Repeater 5.83 33 Pn Pn 02 41 16.8 -0.8
N25K Chitina, Valde 5.83 26 P Pn 02 41 17.4 -0.1
baz=210
M18K Stony River 5.87 331 Pn 02 41 17.1 -0.8
M18K Stony River 5.87 331 P Pn 02 41 17.1 -0.8
baz=147
M19K Big River Lodg 5.90 339 Pn Pn 02 41 17.5 -0.9
GLB Gilahina Butte 5.90 30 Pn Pn 02 41 17.6 -0.8
O15K Ungalikthiuk R 5.93 301 Pn 02 41 19.0 +0.2
O15K Ungalikthiuk R 5.93 301 P Pn 02 41 19.0 +0.2
baz=114
KIAG Kiagna River 5.96 38 Pn 02 41 18.4 -0.9
M24K Tolsona, Glenn 5.97 17 Pn Pn 02 41 19.0 -0.3
M24K Tolsona, Glenn 5.97 17 P Pn 02 41 19.7 +0.4
baz=200
SDPT Sand Point 6.03 264 Pn Pn 02 41 16.4 -3.8
SDPT Sand Point 6.03 264 P Pn 02 41 18.3 -1.8
baz=76
GRNC Granite Creek 6.04 42 Pn 02 41 19.3 -1.2
SAMH Samovar Hills 6.06 49 Pn 02 41 20.1 -0.6
MCARA McCarthy VSAT 6.08 33 Pn Pn 02 41 20.0 -0.9
MCARA McCarthy VSAT 6.08 33 P Pn 02 41 20.5 -0.3
baz=218
TABL Table Mountain 6.09 46 Pn Pn 02 41 19.8 -1.3
PTPK Patty Peak 6.11 36 Pn 02 41 21.1 -0.3
N16K Nishlik Lake 6.12 315 Pn 02 41 21.9 +0.5
N16K Nishlik Lake 6.12 315 P Pn 02 41 21.9 +0.5
baz=128
WAT6 Susitna Watana 6.22 9 Pn 02 41 22.8 -0.1
WAT6 Susitna Watana 6.22 9 P Pn 02 41 22.8 -0.1
baz=191
L19K White Mountain 6.25 338 Pn Pn 02 41 21.5 -1.6
L19K White Mountain 6.25 338 P Pn 02 41 22.7 -0.4
baz=154
PCA Pinnacle 6.26 51 Pn Pn 02 41 22.1 -1.4
PINM Pinnacle 6.27 51 P Pn 02 41 22.5 -0.9
baz=238
M17K Holitna River 6.27 325 Pn Pn 02 41 21.9 -1.6
M17K Holitna River 6.27 325 P Pn 02 41 23.5 +0.1
baz=139
BARN Barnard Glacie 6.30 40 Pn Pn 02 41 23.1 -0.8
L20K Farewell, AK 6.34 343 Pn 02 41 23.8 -0.7
L20K Farewell, AK 6.34 343 P Pn 02 41 23.8 -0.7
baz=160
CTG Chitna Glacier 6.35 41 P Pn 02 41 23.7 -0.9
baz=228
CTGM Chitina Glacie 6.35 41 Pn Pn 02 41 23.3 -1.4
LOGN Logan Glacier 6.38 43 Pn Pn 02 41 23.6 -1.5
WAT7 Susitna Watana 6.40 5 Pn 02 41 25.5 +0.2
WAT1 Susitna Watana 6.41 6 Pn 02 41 25.8 +0.4
WAT1 Susitna Watana 6.41 6 P Pn 02 41 25.8 +0.4
baz=186
HARP HAARP 6.42 20 Pn 02 41 25.8 +0.3
HARP HAARP 6.42 20 P Pn 02 41 25.8 +0.3
baz=204
PNL Peninsula 6.44 56 Pn 02 41 24.6 -1.2
PNL Peninsula 6.44 56 P Pn 02 41 24.6 -1.2
baz=244
BCPM Bancas Point 6.46 53 Pn Pn 02 41 25.0 -1.1
N15K Kwethluk River 6.50 309 Pn 02 41 26.9 +0.4
N15K Kwethluk River 6.50 309 P Pn 02 41 26.9 +0.4
baz=121
M16K Timber Creek 6.54 318 Pn Pn 02 41 27.2 +0.2
M16K Timber Creek 6.54 318 P Pn 02 41 27.7 +0.7
baz=131
O14K Tigyukauivet M 6.65 299 Pn Pn 02 41 28.6 0.0
L18K Granite Mounta 6.71 332 Pn Pn 02 41 28.3 -1.1
L18K Granite Mounta 6.71 332 P Pn 02 41 30.0 +0.6
baz=146
DHY Denali Highway 6.74 10 Pn Pn 02 41 29.9 -0.1
DHY Denali Highway 6.74 10 P Pn 02 41 30.4 +0.4
baz=192
PAX Paxson 6.89 17 Pn Pn 02 41 31.7 -0.3
PAX Paxson 6.89 17 P Pn 02 41 32.6 +0.6
baz=200
M26K Nabesna, AK 6.91 28 Pn Pn 02 41 32.0 -0.3
M26K Nabesna, AK 6.91 28 P Pn 02 41 32.5 +0.2
baz=213
RND Reindeer 6.97 4 Pn Pn 02 41 32.2 -0.9
TRF Thorofare Moun 7.00 359 Pn Pn 02 41 32.6 -1.0
M15K Kasigluk River 7.03 311 Pn 02 41 34.0 +0.2
M15K Kasigluk River 7.03 311 P Pn 02 41 34.0 +0.2
baz=123
CAST Castle Rocks 7.04 352 Pn Pn 02 41 33.2 -0.9
CAST Castle Rocks 7.04 352 P Pn 02 41 33.9 -0.1
baz=170
O29M Mount Kennedy 7.10 53 Pn Pn 02 41 34.1 -0.8
O29M Mount Kennedy 7.10 53 P Pn 02 41 34.2 -0.7
baz=241
KTH Kantishna Hill 7.12 356 Pn Pn 02 41 34.0 -1.1
TTA Tatalina 7.16 337 Pn Pn 02 41 33.9 -1.8
L16K Owhat River 7.18 321 Pn Pn 02 41 35.3 -0.6
L16K Owhat River 7.18 321 P Pn 02 41 36.0 +0.1
baz=133
M27K Edge Creek, AK 7.19 32 Pn Pn 02 41 36.1 0.0
M27K Edge Creek, AK 7.19 32 P Pn 02 41 36.3 +0.2
baz=218
K20K Telida 7.20 345 Pn Pn 02 41 34.2 -2.0
K20K Telida 7.20 345 P Pn 02 41 34.9 -1.4
baz=162
P29M Windy Craggy 7.21 59 Pn Pn 02 41 34.7 -1.6
P29M Windy Craggy 7.21 59 P Pn 02 41 35.1 -1.2
baz=248
MCK McKinley 7.30 4 Pn Pn 02 41 36.9 -0.6
MCK McKinley 7.30 4 P Pn 02 41 37.2 -0.3
baz=184
L26K Log Cabin Wild 7.36 24 Pn Pn 02 41 39.3 +0.9
K17K Iditarod 7.55 329 Pn Pn 02 41 39.5 -1.5
M14K Bethel 7.59 309 Pn Pn 02 41 42.1 +0.6
S31K Pelican 7.59 73 Pn Pn 02 41 37.0 -4.5
S31K Pelican 7.59 73 P Pn 02 41 37.8 -3.7
baz=263
BPAW Bear Paw Mtn. 7.66 357 Pn Pn 02 41 40.5 -2.1
RIDG Independent Ri 7.71 17 Pn Pn 02 41 43.1 -0.1
BCAR Beaver Creek A 7.78 29 Pn Pn 02 41 43.4 -0.7
HYT Haines Junctio 7.81 51 Pn Pn 02 41 44.2 -0.5
J20K Nowinta River 8.00 347 Pn 02 41 46.3 -0.8
J20K Nowinta River 8.00 347 P Pn 02 41 46.3 -0.8
baz=163
M13K Dall Lake 8.06 305 Pn 02 41 47.2 -0.7
M13K Dall Lake 8.06 305 P Pn 02 41 47.4 -0.5
baz=114
WRH Wood River Hil 8.07 6 Pn Pn 02 41 47.5 -0.6
SCRK Sand Creek 8.08 19 Pn Pn 02 41 47.7 -0.6
HDA Harding Lake 8.09 9 Pn Pn 02 41 48.7 +0.3
NEA2 Nenana 8.15 3 Pn Pn 02 41 48.3 -0.9
L14K Kuka Creek 8.19 312 Pn Pn 02 41 48.9 -0.8
CCB Clear Creek Bu 8.26 6 Pn Pn 02 41 50.2 -0.5
K15K Wolf Creek Mou 8.29 319 Pn Pn 02 41 51.0 -0.2
J17K VABM Dome 8.31 330 Pn Pn 02 41 49.6 -1.8
SKAG Skagway 8.32 63 Pn Pn 02 41 50.9 -0.6
O30N Mendenhall 8.41 54 Pn Pn 02 41 50.7 -2.1
IL3I 8.46 9 Pn Pn 02 41 53.3 -1.0
ILAR Eielson Array 8.46 9 Pn Pn 02 41 53.7 +0.3
ILAR Eielson Array 8.46 9 Pn Pn 02 41 53.0 -0.3
comp=E,0.7nm,0.3s,baz=190,slow=14,SNR=35
ILAR Sn **Sn 02 43 26.6 -2.1**
comp=E,0.5nm,0.3s,baz=194,slow=22,SNR=8.3
ILAR LR LR 02 45 13.2
comp=E,116nm,20.2s,baz=162,slow=37
comp=E,1.9nm,0.4s
S32K Killisnoo 8.46 77 Pn Pn 02 41 48.8 -4.6
J25K Salcha River, 8.46 14 Pn Pn 02 41 51.6 -1.9
K27K Chicken 8.52 24 Pn Pn 02 41 52.8 -1.5
R32K Eaglecrest 8.53 71 Pn Pn 02 41 51.3 -3.1
MDM Murphy Dome 8.55 5 Pn Pn 02 41 53.6 -1.1
MLY Manley 8.59 358 Pn Pn 02 41 54.8 -0.5
JIS Juneau Island 8.60 71 Pn Pn 02 41 52.1 -3.2
I23K Minto, Yukon-K 8.70 2 Pn Pn 02 41 56.3 -0.5
I21K Tanana 8.79 354 Pn Pn 02 41 57.1 -0.8
N31M Braeburn, Yuko 8.86 50 Pn Pn 02 41 57.8 -1.2
WHY Whitehorse 8.91 56 Pn Pn 02 41 59.4 -0.4
L29M L29M 8.91 37 Pn Pn 02 41 59.1 -0.6
M30M Minto, Yukon 9.04 42 Pn Pn 02 42 00.9 -0.6
P32M Atlin 9.15 63 Pn Pn 02 42 01.6 -1.4
DAWY Dawson 9.23 30 Pn Pn 02 42 03.8 -0.2
J14K Nanvaranak Lak 9.32 318 Pn Pn 02 42 06.1 +1.0
PRP Porcupine Dome 9.32 11 Pn Pn 02 42 04.5 -0.8
H24K Noodor Dome 9.44 5 Pn Pn 02 42 06.1 -0.8
I26K Coal Creek Min 9.45 18 Pn Pn 02 42 06.1 -0.9
H19K Yonhosa River 9.61 338 Pn Pn 02 42 06.9 -2.3
IMAR Indian Mountai 9.71 351 Pn Pn 02 42 08.2 -2.3
P33M Teslin, Yukon 9.74 60 Pn Pn 02 42 08.6 -2.5
Q32M Nakina River 9.78 68 Pn Pn 02 42 10.2 -1.5
M31M Drury Creek, Y 9.78 48 Pn Pn 02 42 11.0 -0.6
N32M Quiet Lake 9.91 55 Pn Pn 02 42 12.1 -1.2
G21K Allakaket 10.21 352 Pn Pn 02 42 14.6 -2.9
FARO Faro, Yukon 10.23 49 Pn Pn 02 42 17.8 +0.1
G23K Bananza Creek 10.27 360 Pn Pn 02 42 17.1 -1.1
FYU Fort Yukon 10.37 11 Pn Pn 02 42 18.2 -1.3
R33M Jennings River 10.50 66 Pn Pn 02 42 19.3 -2.2
J30M Hart River 10.51 34 Pn Pn 02 42 22.4 +0.8
DLBC Dease Lake 10.90 71 Pn Pn 02 42 23.5 -3.5
DLBC Dease Lake 10.90 71 Pn Pn 02 42 24.2 -2.7
comp=E,0.6nm,0.3s,baz=226,slow=11,SNR=12
DLBC LR LR 02 45 55.1
comp=E,160nm,19.8s,baz=285,slow=34
comp=E,1.3nm,0.4s
F21K Alatna River 10.91 353 Pn Pn 02 42 25.0 -1.9
F20K Avaraart Lake 10.95 348 Pn Pn 02 42 27.7 +0.3
F24K Squaw Lake 11.12 4 Pn Pn 02 42 29.5 -0.4
H29M Whitestone 11.21 25 Pn Pn 02 42 30.9 -0.2
BMAR Burnt Mountain 11.27 11 Pn Pn 02 42 30.5 -1.5
E19K Redstone River 11.53 346 Pn Pn 02 42 34.2 -1.1
E24K Your Creek 11.66 3 Pn Pn 02 42 35.5 -1.7
E25K Arctic Village 11.86 8 Pn Pn 02 42 38.8 -1.2
H31M Peel River 11.97 32 Pn Pn 02 42 42.4 +1.0
G30M tAoh Zrail Nji 12.34 26 Pn Pn 02 42 47.7 +1.1
D22K Ayikyak River 12.51 355 Pn Pn 02 42 48.6 -0.2
G31M Satah River 12.79 29 Pn Pn 02 42 51.9 -0.7
D25K Kavik River 12.99 6 Pn Pn 02 42 54.7 -0.7
B21K Ikpikpuk River 13.36 353 Pn Pn 02 43 00.1 -0.2
BBB Bella Bella 13.42 99 LR LR 02 46 53.9
comp=E,118nm,18.0s,baz=300,slow=32
B20K Meade River 13.95 350 Pn Pn 02 43 06.6 -1.7
INK Inuvik 14.02 26 Pn Pn 02 43 10.4 +1.0
comp=E,0.1nm,0.3s,baz=206,slow=16,SNR=6.1
comp=E,1.7nm,0.8s
A36M Sachs Harbour 18.65 24 P P 02 44 08.6 +0.1
A36M IAmb IAmb 02 44 20.4
comp=Z,9.1nm,0.8s
YKA Yellowknife Ar 18.74 57 P P 02 44 08.3 -1.3
YKA Yellowknife Ar 18.74 57 P P 02 44 09.4 -0.1
baz=266,slow=11,SNR=6.4
YKA LR LR 02 51 09.5
comp=Z,62nm,19.4s,baz=340,slow=36
comp=Z,0.8nm,1.0s
NVAR Mina Array Bea 27.63 117 P P 02 45 39.6 +0.8
comp=Z,0.5nm,0.6s,baz=293,slow=10,SNR=2.7
FRB Frobisher Bay 38.55 45 LR LR 03 04 37.3
comp=Z,74nm,18.0s,baz=218,slow=38
H11N2 WAKE ISLAND Hy 48.66 239 T T 03 40 56.3
baz=30,slow=76,SNR=11
H11N3 WAKE ISLAND Hy 48.67 239 T T 03 40 51.3
baz=30,slow=76,SNR=8.7
H11N1 WAKE ISLAND Hy 48.68 239 T T 03 40 54.6
baz=30,slow=76,SNR=7.1
H11S1 WAKE ISLAND Hy 49.81 239 T T 03 42 58.6
baz=26,SNR=6.0
H11S2 WAKE ISLAND Hy 49.82 238 T T 03 42 51.6
baz=26,slow=74,SNR=6.9
H11S3 WAKE ISLAND Hy 49.83 239 T T 03 42 46.4
baz=26,slow=74,SNR=6.6
SONM Songino Array 58.23 310 P P 02 49 46.4 +1.2
comp=Z,0.5nm,0.7s,baz=59,slow=5.1,SNR=4.8
comp=Z,0.5nm,0.7s
ZALV Zalesovo Beam 61.19 327 P P 02 50 07.2 +1.8
comp=Z,0.7nm,0.7s,baz=32,slow=8.9,SNR=1.7
comp=Z,0.7nm,0.7s
BVAR Borovoye Array 65.95 335 P P 02 50 40.7 +3.9
comp=Z,1.1nm,1.0s,baz=47,slow=2.8,SNR=2.1
MKAR Makanchi Array 68.22 324 P P 02 50 52.7 +1.4
comp=Z,0.2nm,0.5s,baz=43,slow=5.0,SNR=2.7
comp=Z,0.2nm,0.5s

IDC ***12*** *02:40:58.6±1.2,31°.23S×178°.17W,h0km,mb4.5/4, mbtmp4.4/5,ML3.6/1,Error ellipse: s-maj=43.0km s-min=30.0km az=157.0*
NEIC ***12*** *02:41:01.4±1.5,31°.35S±0°.08×178°.4W±0°.2,h10km±1km, mb4.5/13,Error ellipse: s-maj=27.4km s-min=11.7km az=105.0*

ISC 12 02:41:00.9±0.9,31°.36S±0°.08×178°.4W±0°.2,h10km,n41, σ1ᵍ05/36,mb4.5/10,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.14**	**11**	Pn	**Pn**	**02 41 36.8**	**+0.1**
RAO	**Raoul Island**	**2.14**	**11**	Sn	**Sn**	**02 42 03.8**	**+0.6**
	197nm,0.3s,baz=163,slow=20,SNR=2.0						
URZ	**Urewera**	**7.82**	**207**	Pn	**Pn**	**02 42 56.1**	**+1.5**
URZ	0.8nm,0.3s,baz=100,slow=18,SNR=1.2			Sn	**Sn**	**02 44 22.2**	**-1.0**
	2.5nm,0.3s,baz=23,slow=21,SNR=7.7						
	8.2nm,1.0s						
RTZ	**Ruatahuna**	**8.18**	**206**	Pn	**Pn**	**02 43 00.4**	**+0.7**
BKZ	**Black Stump Fm**	**8.84**	**207**	Pn	**Pn**	**02 43 07.4**	**-1.5**
MRZ	**Mangatainoka R**	**10.49**	**206**	Pn	**Pn**	**02 43 31.1**	**-0.2**
KHZ	**Kahutara**	**12.78**	**208**	Pn	**Pn**	**02 44 02.2**	**-0.5**
LTZ	**Lake Taylor**	**13.62**	**211**	Pn	**Pn**	**02 44 16.0**	**+2.0**
CTA	**Charters Tower**	**33.65**	**281**	P	**P**	**02 47 44.4**	**+2.4**
	3.2nm,0.5s,baz=102,slow=11,SNR=2.2						
	3.2nm,0.5s						
CTAO	**Charters Tower**	**33.65**	**281**	P	**P**	**02 47 42.4**	**+0.5**
CTAO				IAmb	IAmb	02 47 45.5	
	comp=Z,3.8nm,0.6s						
STKA	**Stephens Creek**	**33.96**	**258**	P	**P**	**02 47 44.3**	**-0.3**
STKA	**Stephens Creek**	**33.96**	**258**	P	**P**	**02 47 44.7**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=91,slow=12,SNR=3.5						
	comp=Z,0.8nm,0.4s						
BBOO	**Buckleboo**	**38.41**	**255**	P	**P**	**02 48 21.1**	**-1.6**
BBOO				IAmb	IAmb	02 48 46.6	
	comp=Z,14nm,1.2s						
COEN	**Coen**	**39.24**	**287**	P	**P**	**02 48 30.0**	**+0.3**
COEN				IAmb	IAmb	02 48 56.0	
	comp=Z,8.4nm,1.4s						
AS31	**Alice Springs**	**42.74**	**268**	P	**P**	**02 48 58.1**	**-0.5**
AS31				IAmb	IAmb	02 48 59.6	
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**42.74**	**268**	P	**P**	**02 48 58.4**	**-0.2**
ASAR	**Alice Springs**	**42.74**	**268**	P	**P**	**02 48 58.9**	**+0.2**
	comp=Z,3.4nm,0.5s,baz=104,slow=7.5,SNR=67						
	comp=Z,3.4nm,0.5s						
WR0	**Warramunga Arr**	**43.64**	**273**	P	**P**	**02 49 06.1**	**+0.2**
WR0				IAmb	IAmb	02 49 07.3	
	comp=Z,16nm,1.2s						
WB2	**Warramunga Arr**	**43.81**	**273**	P	**P**	**02 49 06.9**	**-0.3**
WRAB	**Tennant Creek**	**43.82**	**273**	P	**P**	**02 49 07.0**	**-0.3**
WRA	**Warramunga Arr**	**43.82**	**273**	P	**P**	**02 49 06.3**	**-1.0**
WRA	**Warramunga Arr**	**43.82**	**273**	P	**P**	**02 49 07.7**	**+0.3**
	comp=Z,10nm,0.5s,baz=112,slow=7.8,SNR=140						
	comp=Z,10nm,0.5s						
WB0	**Warramunga Arr**	**43.85**	**274**	P	**P**	**02 49 07.8**	**+0.2**
WB0				IAmb	IAmb	02 49 08.9	
	comp=Z,12nm,0.7s						
FORT	**Forrest**	**45.50**	**256**	P	**P**	**02 49 20.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.04**	**271**	P	**P**	**02 50 11.1**	**0.0**
BELA	**Belgrano 2**	**68.88**	**172**	P	**P**	**02 52 07.2**	**+1.9**
BELA				IAmb	IAmb	02 52 22.3	
	comp=Z,6.5nm,1.1s						
H03S2	**Juan Fernandez**	**80.20**	**124**	T	T	04 22 18.8	
	baz=240						
H03S1	**Juan Fernandez**	**80.22**	**124**	T	T	04 22 11.3	
	baz=240						
H03S3	**Juan Fernandez**	**80.22**	**124**	T	T	04 22 18.3	
	baz=240,SNR=5.8						
H03N3	**Juan Fernandez**	**80.40**	**123**	T	T	04 22 12.5	
	baz=241,slow=72,SNR=10						
H03N2	**Juan Fernandez**	**80.40**	**123**	T	T	04 22 17.7	
	baz=241,slow=72,SNR=7.3						
H03N1	**Juan Fernandez**	**80.42**	**123**	T	T	04 22 17.4	
	baz=241,slow=72,SNR=19						
KURBB	**Kurchatov Arra**	**121.51**	**313**	PKP	**PKPdf**	**02 59 52.2**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=114,slow=1.6,SNR=4.2						
ARCES	**ARCESS Array B**	**139.46**	**347**	PKP	**PKPdf**	**03 00 28.3**	**+0.7**
	comp=Z,3.5nm,1.0s,baz=42,slow=4.1,SNR=3.9						
FIA1	**FINESS Array S**	**145.93**	**339**	PKPdf	**PKPdf**	**03 00 38.5**	**-0.7**
FINES	**FINESS Array B**	**145.93**	**339**	PKPdf	**PKPdf**	**03 00 38.0**	**-1.3**
FINES	**FINESS Array B**	**145.93**	**339**	PKPbc	**PKPdf**	**03 00 38.5**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=51,slow=3.4,SNR=22						
NOA	**NORSAR Array B**	**149.65**	**351**	PKPbc	**PKPbc**	**03 00 48.6**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=17,slow=4.1,SNR=1.2						
HFS	**Hagfors**	**150.12**	**348**	PKPbc	**PKPbc**	**03 00 49.8**	**-1.4**
	comp=Z,4.7nm,1.0s,baz=166,slow=3.1,SNR=4.1						
MMAI	**Mount Meron Ar**	**151.43**	**282**	PKPbc	**PKPbc**	**03 00 55.3**	**0.0**
	comp=Z,1.0nm,0.5s,baz=75,slow=7.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**161.87**	**180**	PKPab	**PKPab**	**03 01 48.9**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=168,slow=3.0,SNR=3.0						

TAP 12 02:41:28.8,24°.23N×121°.73E,h14km,ML2.9,2C-7D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**5**	P	Pg	02 41 32.3	+0.5
	baz=10.0						
EHP				*i* S	Sg	02 41 35.1	+1.3
	baz=10.0						
EAHA	**Aohua**	**0.10**	**3**	*i* P	Pg	02 41 32.4	+0.4
	baz=2.0						
EAHA				*i* S	Sg	02 41 35.3	+1.2
	baz=2.0						
ETL	**Fush Village**	**0.12**	**236**	↑*i* P	Pb	02 41 32.9	-0.1
	baz=235						
ETL				*i* S	Sb	02 41 35.8	+0.1
	baz=235						
NACB	**Ninganchiao**	**0.14**	**247**	↓*i* P	Pb	02 41 33.0	-0.2
	baz=246						
NACB				*i* S	Sb	02 41 36.1	0.0
	baz=246						
TWD	**Chiawan**	**0.20**	**220**	*i* P	Pg	02 41 33.6	+0.4
	baz=218						
TWD				*i* S	Sb	02 41 37.4	-0.3
	baz=218						
ENA	**Nanau**	**0.20**	**2**	↓*i* P	Pb	02 41 33.8	-0.4
	baz=4.0						
ENA				*i* S	Sb	02 41 37.9	0.0
	baz=4.0						
EWUT	**Wuta**	**0.22**	**11**	*i* P	Pg	02 41 34.1	+0.4
	baz=10.0						
EWUT				*i* S	Sb	02 41 38.3	-0.1
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.23**	**265**	*i* P	Pb	02 41 34.8	0.0
	baz=264						
ETLH				*i* S	Sb	02 41 38.5	-0.3
	baz=264						
ETM	**Tongmen**	**0.34**	**220**	P	Pg	02 41 36.1	+0.3

	baz=220							
ETM				*e*S		Sb	02 41 41.9	-0.1
	baz=220							
ESAO	**Su ao**	**0.36**	**16**	P		Pb	02 41 36.6	-0.3
	baz=16							
ESAO				S		Sg	02 41 41.4	+0.2
	baz=16							
LATG	**Datong**	**0.36**	**328**	⇓*i*P		Pb	02 41 36.9	-0.1
	baz=328							
LATG				*i* S		Sb	02 41 42.4	-0.2
	baz=328							
LXIB	**Xiulin Townshi**	**0.36**	**235**	P		Pg	02 41 36.5	+0.3
	baz=234							
LXIB				S		Sb	02 41 42.0	-0.6
	baz=234							
NNSB	**Datong**	**0.38**	**302**	⇓*i*P		Pb	02 41 37.4	0.0
	baz=301							
NNSB				*i* S		Sb	02 41 43.3	+0.2
	baz=301							
NNS	**Nan Shan**	**0.39**	**303**	⇓*i*P		Pb	02 41 37.6	0.0
	baz=302							
NNS				*i* S		Sb	02 41 43.7	+0.2
	baz=302							
TWC	**Suao**	**0.39**	**15**	*i* P		Pb	02 41 37.2	-0.4
	baz=16							
TWC				*i* S		Sb	02 41 42.9	-0.5
	baz=16							
NDS	**Dongshan**	**0.40**	**358**	*i* P		Pb	02 41 37.7	-0.1
	baz=357							
NDS				*i* S		Sb	02 41 43.7	-0.1
	baz=357							
NDT	**Datong Townshi**	**0.42**	**332**	*i* P		Pb	02 41 38.2	+0.1
	baz=331							
NDT				*i* S		Sb	02 41 44.7	+0.4
	baz=331							
WHF	**Hehuan Shan**	**0.44**	**259**	*i* P		Pb	02 41 38.4	-0.2
	baz=258							
WHF				S		Sb	02 41 44.8	-0.4
	baz=258							
ENTT	**Nioudou**	**0.44**	**340**	⇑*i*P		Pb	02 41 38.4	0.0
	baz=340							
ENTT				*i* S		Sb	02 41 46.1	+1.3
	baz=340							
ENTT	**Nioudou**	**0.44**	**340**	*i* P		Sb	02 41 46.2	+1.4
	baz=335							
SHUL	**Shoufeng**	**0.47**	**200**	P		Pb	02 41 39.2	+0.4
	baz=199							
SHUL				S		Sn	02 41 47.6	-1.5
	baz=199							
EOS2	**EOS2**	**0.49**	**67**	*e*P		Pb	02 41 40.1	+1.0
	baz=67							
ESL	**Shilin**	**0.50**	**214**	P		Pg	02 41 38.9	+0.3
	baz=212							
TWT	**Tachien**	**0.51**	**273**	*i* P		Pb	02 41 40.4	+0.8
	baz=272							
TWT				*i* S		Sb	02 41 47.5	+0.5
	baz=272							
TWT	**Tachien**	**0.51**	**273**	P		Sb	02 41 47.6	+0.6
	baz=275							
TDCB	**Techi**	**0.53**	**273**	P		Pb	02 41 40.2	+0.2
	baz=272							
TDCB				S		Sb	02 41 47.5	+0.1
	baz=272							
TDCB	**Techi**	**0.53**	**273**	P		Sb	02 41 47.5	+0.1
	baz=275							
EOS3	**EOS3**	**0.54**	**84**	*e*P		Pb	02 41 40.5	+0.6
	baz=83							
CHGB	**Renai**	**0.54**	**252**	P		Pb	02 41 40.3	+0.2
	baz=251							
FUSB	**Fushanzhiwuyua**	**0.55**	**346**	P		Pb	02 41 40.2	0.0
	baz=345							
FUSB				S		Sb	02 41 48.2	+0.3
	baz=345							
FUSB	**Fushanzhiwuyua**	**0.55**	**346**	P		Sb	02 41 48.0	0.0
	baz=334							
YHNB	**Yeheng**	**0.55**	**323**	⇓*i*P		Pb	02 41 40.4	+0.2
	baz=323							
YHNB				*i* S		Sb	02 41 48.2	+0.2
	baz=323							
YHNB	**Yeheng**	**0.55**	**323**	*e*P		Sb	02 41 47.8	-0.2
	baz=321							
NSK	**Sanguang**	**0.56**	**322**	⇓*i*P		Pb	02 41 40.6	+0.1
	baz=322							
NSK				*i* S		Sb	02 41 48.8	+0.4
	baz=322							
NWLT	**Wulai**	**0.58**	**339**	P		Pb	02 41 41.2	+0.4
	baz=338							
NWLT				S		Sb	02 41 49.3	+0.2
	baz=338							
WARBT	**Fenglin Townsh**	**0.60**	**212**	*e*P		Pg	02 41 40.3	-0.3
	baz=211							
WARBT				*e*S		Sg	02 41 48.9	+0.3
	baz=211							
WARBT	**Fenglin Townsh**	**0.60**	**212**	*e*P		Sg	02 41 48.8	+0.2
	baz=229							
WUSB	**Renai**	**0.61**	**247**	P		Pb	02 41 41.3	0.0
	baz=247							
WUSB				S		Sb	02 41 50.2	+0.3
	baz=247							
NFF	**Wufeng Townshi**	**0.69**	**306**	P		Pn	02 41 43.7	-0.5
	baz=305							
NFF				*e*S		Sb	02 41 53.1	+1.0
	baz=305							
VWDT	**VWDT**	**0.72**	**229**	*e*P		Pg	02 41 42.7	-0.1
	baz=228							
VWDT				*e*S		Sn	02 41 54.2	-1.1
	baz=228							
WCS	**Beigang Elemen**	**0.77**	**257**	*e*P		Pg	02 41 43.6	-0.2
	baz=257							
LIOB	**Emei**	**0.78**	**302**	P		Pn	02 41 45.8	+0.5
	baz=302							
NSTT	**Nanjuang**	**0.78**	**301**	P		Pn	02 41 45.1	-0.2
	baz=301							
NSTT				S		Sb	02 41 55.7	+1.1
	baz=301							
HGSD	**Ruisui**	**0.79**	**201**	*e*P		Pn	02 41 45.7	+0.2
	baz=201							
EHY	**Hungye**	**0.81**	**208**	*e*P		Pg	02 41 44.2	-0.4
	baz=207							
SMLT	**Sun Moon Lake**	**0.84**	**246**	*e*P		Pb	02 41 45.2	0.0
	baz=245							
SSLB	**Suanglung**	**0.84**	**239**	*e*P		Pb	02 41 45.4	+0.2
	baz=238							
NWF	**Wu-fen Shan**	**0.84**	**3**	P		Pn	02 41 46.5	+0.2
	baz=2.0							
NWF				*e*S		Sn	02 41 58.4	-0.1
	baz=2.0							
WFSB	**Wu-fen Shan**	**0.84**	**3**	*e*P		Pn	02 41 46.9	+0.6
	baz=2.0							
WFSB				*e*S		Sn	02 41 58.2	-0.1
	baz=2.0							
TYC	**Yuchr**	**0.86**	**248**	*e*P		Pb	02 41 45.8	+0.2
	baz=247							
TYC				*e*S		Sb	02 41 58.3	-0.6
	baz=247							
SXI1	**Grass Mountain**	**0.87**	**8**	P		Pn	02 41 46.9	+0.1
	baz=8.0							
SXI1				*e*S		Sn	02 41 58.5	-0.8
	baz=8.0							
YULB	**Yu-li**	**0.92**	**206**	*e*P		Pb	02 41 45.1	-1.6
	baz=205							
YULB				*e*S		Sn	02 42 01.7	+1.3
	baz=205							
TWF1	**Yuli**	**0.96**	**205**	*e*P		Pg	02 41 47.6	+0.2
	baz=204							
CHN5	**Tsauling**	**1.15**	**237**	*e*P		Pg	02 41 51.9	+0.8
	baz=236							
EHD	**Haiduan**	**1.18**	**204**	*e*P		Pn	02 41 50.9	-0.1
	baz=204							
ELDTW	**Lidau**	**1.23**	**213**	*e*P		Pn	02 41 51.0	-0.6
	baz=212							

TAP 12 02:41:36.5,24.21N×121.76E,h17km,ML3.1,2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**350**	*i* P	Pg	02 41 40.1	+0.1
	baz=353						
EHP				S	Sg	02 41 42.9	+0.6
	baz=353						
EAHA	**Aohua**	**0.12**	**351**	*i* P	Pg	02 41 40.2	0.0
	baz=349						
EAHA				*i* S	Sb	02 41 42.9	0.0
	baz=349						
ETL	**Fush Village**	**0.14**	**247**	*i* P	Pb	02 41 40.7	0.0
	baz=248						
ETL				*i* S	Sb	02 41 43.6	+0.2
	baz=248						
NACB	**Ninganchiao**	**0.16**	**256**	⇓*i*P	Pg	02 41 40.8	+0.1
	baz=257						
NACB				*i* S	Sb	02 41 43.8	-0.2
	baz=257						
TWD	**Chiawan**	**0.20**	**229**	P	Pb	02 41 41.7	0.0
	baz=235						
TWD				*i* S	Sb	02 41 45.1	-0.1
	baz=235						
ENA	**Nanau**	**0.21**	**355**	⇓*i*P	Pg	02 41 41.6	+0.1
	baz=354						
ENA				*i* S	Sb	02 41 45.5	-0.2
	baz=354						
EWUT	**Wuta**	**0.23**	**4**	*i* P	Pg	02 41 41.9	+0.1
	baz=1.0						
EWUT				*i* S	Sb	02 41 46.0	-0.2
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.25**	**269**	*i* P	Pg	02 41 42.5	+0.2
	baz=269						
ETLH				*i* S	Sg	02 41 46.4	+0.3
	baz=269						
ETM	**Tongmen**	**0.35**	**225**	*e*P	Pb	02 41 44.5	+0.2
	baz=226						
ETM				S	Sb	02 41 50.7	+1.2
	baz=226						
ESAO	**Su ao**	**0.37**	**12**	P	Pb	02 41 44.5	-0.1
	baz=6.0						
ESAO				*i* S	Sg	02 41 49.6	+0.3
	baz=6.0						
LXIB	**Xiulin Townshi**	**0.37**	**239**	P	Pb	02 41 44.5	-0.2
	baz=241						
LXIB				S	Sb	02 41 50.1	-0.2
	baz=241						
LATG	**Datong**	**0.39**	**326**	P	Pg	02 41 44.7	+0.2
	baz=325						
LATG				S	Sb	02 41 50.4	-0.4
	baz=325						
TWC	**Suao**	**0.40**	**12**	P	Pb	02 41 45.1	-0.1
	baz=6.0						
TWC				*i* S	Sb	02 41 51.1	-0.1
	baz=6.0						
NNSB	**Datong**	**0.41**	**302**	P	Pb	02 41 45.1	-0.2
	baz=301						
NNSB				*i* S	Sg	02 41 50.9	+0.4
	baz=301						
NNS	**Nan Shan**	**0.42**	**303**	*i* P	Pg	02 41 45.2	+0.1
	baz=302						
NNS				*i* S	Sb	02 41 51.5	-0.3
	baz=302						
NDS	**Dongshan**	**0.42**	**355**	P	Pb	02 41 45.4	-0.1
	baz=351						
NDS				*i* S	Sb	02 41 51.6	-0.1
	baz=351						
NDT	**Datong Townshi**	**0.45**	**330**	P	Pb	02 41 46.7	+0.7
	baz=328						
NDT				S	Sb	02 41 52.5	0.0
	baz=328						
WHF	**Hehuan Shan**	**0.46**	**262**	P	Pg	02 41 45.7	-0.2
	baz=263						
WHF				*i* S	Sb	02 41 52.8	-0.3
	baz=263						
ENTT	**Nioudou**	**0.46**	**337**	*i* S	Sb	02 41 52.8	-0.1
	baz=335						
SHUL	**Shoufeng**	**0.46**	**203**	*e*P	Pb	02 41 46.5	+0.3
	baz=197						
SHUL				*e*S	Sn	02 41 55.7	-0.5
	baz=197						
ESL	**Shilin**	**0.50**	**217**	*e*P	Pb	02 41 46.7	-0.1
	baz=224						
ESL				*e*S	Sb	02 41 54.9	+1.0
	baz=224						
TWT	**Tachien**	**0.54**	**274**	*i* S	Sb	02 41 55.5	+0.4
	baz=275						
TDCB	**Techi**	**0.55**	**274**	*i* S	Sb	02 41 55.3	-0.2
	baz=275						
CHGB	**Renai**	**0.56**	**254**	*e*P	Pg	02 41 47.7	+0.1
	baz=250						
CHGB				*e*S	Sb	02 41 55.5	-0.2
	baz=250						
FUSB	**Fushanzhiwuyua**	**0.57**	**344**	*i* S	Sg	02 41 55.6	+0.2
	baz=334						
YHNB	**Yeheng**	**0.57**	**322**	S	Sb	02 41 56.2	+0.1
	baz=321						
NSK	**Sanguang**	**0.59**	**322**	*e*P	Pg	02 41 48.3	+0.1
	baz=320						
NSK				*i* S	Sb	02 41 56.7	+0.1
	baz=320						
NWLT	**Wulai**	**0.61**	**337**	*e*P	Pg	02 41 48.7	+0.1
	baz=340						
NWLT				S	Sb	02 41 57.0	-0.1
	baz=340						
WUSB	**Renai**	**0.63**	**250**	*e*P	Pb	02 41 49.1	0.0
	baz=246						
WUSB				*e*S	Sb	02 41 57.7	0.0
	baz=246						
NFF	**Wufeng Townshi**	**0.72**	**306**	*e*P	Pb	02 41 50.8	+0.1
	baz=305						
NFF				*e*S	Sb	02 42 01.2	+0.9
	baz=305						
VWDT	**VWDT**	**0.73**	**231**	*e*P	Pb	02 41 51.2	+0.4
	baz=239						
VWDT				*e*S	Sb	02 42 01.3	+0.9
	baz=239						

IDC ***12*** *02:48:36.9±0.5,4.43S×143.67E,h105km±3km,mb4.3/20, mbtmp4.6/23,MS3.5/21,Error ellipse: s-maj=18.6km s-min=9.2km az=73.0*

NEIC ***12*** *02:48:37.3±1.5,4.41S±0.07×143.6E±0.1,h110km±7km, mb4.8/124,Error ellipse: s-maj=15.5km s-min=10.2km az=104.0*

DJA ***12*** *02:48:38.2±0.4,4.3S×143.4E,h109km±4km,M4.9/36, mB5.3/8,mb4.9/36,MLv5.1/5,Mw(mB)4.7/8*

GCMT ***12*** *02:48:39.3±0.3,4.43S±0.02×143.42E±0.02,h91km±4km, MW4.9/94,Moment Tensor Solution. s23,c25; s94,c129; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.58±.12; Mθθ-1.88±.12; Mφφ0.30±.12; Mrθ1.71±.06; Mθφ0.35±.12; Mφr-0.65±.07; Best double couple: Mo2.54200×10^16 NP1:φs108.00000°,δ68.00000°,λ98.00000°. NP2: φs266.00000°,δ23.00000°,λ70.00000°. Principal axes: T 2.3900, Plg66.0000°, Azm33.0000°; N 0.3050, Plg8.0000°, Azm285.0000°; P -2.6940, Plg23.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 02:48:37.3±0.4,4.44S±0.04×143.66E±0.05,h109km±3km, h110km;pP-P,n499,σ1s01/463,mb4.8/98,8C-1D,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**3.94**	**298**	P	**Pn**	**02 49 36.8**	**+1.0**
GENI	**Genyem**	**3.94**	**298**	P	**Pn**	**02 49 34.8**	**-1.0**
MANU	**Manus Island**	**4.40**	**57**	Pn	**Pn**	**02 49 41.1**	**-0.9**
MANU	**Manus Island**	**4.40**	**57**	P	**Pn**	**02 49 42.1**	**0.0**
MMPI	**Merauke**	**5.15**	**219**	P	**Pn**	**02 49 52.6**	**+0.4**
	537nm,0.5s,5.0nm						
SMPI	**Sarmi**	**5.51**	**296**	P	**Pn**	**02 49 58.1**	**+1.1**
	151nm,0.6s,0.9nm						
PMG	**Port Moresby**	**6.03**	**145**	Pn	**Pn**	**02 50 03.2**	**-1.0**
PMG	**Port Moresby**	**6.03**	**145**	P	**Pn**	**02 50 04.8**	**+0.7**
PMG	**Port Moresby**	**6.03**	**145**	P	**Pn**	**02 50 04.3**	**+0.2**
	54nm,0.6s,baz=333,slow=6.8,SNR=18						
PMG				S	**Sn**	**02 51 11.3**	**-0.6**
	40nm,0.5s,baz=133,slow=19,SNR=1.3						
PMG				LR	LR	02 52 45.7	
	comp=Z,447nm,19.9s,baz=354,slow=41						
COEN	**Coen**	**9.47**	**183**	Pn	**Pn**	**02 50 50.5**	**-0.2**
COEN	**Coen**	**9.47**	**183**	P	**Pn**	**02 50 52.2**	**+1.5**
MTSU	**Mount Surprise**	**13.62**	**177**	P	**Pn**	**02 51 48.2**	**+2.1**
KDU	**Kakadu**	**13.76**	**233**	P	**Pn**	**02 51 46.7**	**-1.1**
MTN	**Manton Dam**	**14.92**	**235**		**Pn**	**02 52 00.5**	**-2.3**
MTN	**Manton Dam**	**14.92**	**235**	P	**Pn**	**02 52 01.3**	**-1.4**
TV1H	**Townsville Har**	**15.04**	**169**	P	**Pn**	**02 52 05.3**	**+1.1**
CTA	**Charters Tower**	**15.76**	**171**	P	**P**	**02 52 14.1**	**-0.7**
CTA	**Charters Tower**	**15.76**	**171**	P	**Pn**	**02 52 12.9**	**-0.2**
	1.4nm,0.4s,baz=359,slow=12,SNR=3.7						
CTA				LR	LR	02 58 23.9	
	comp=Z,302nm,21.0s,baz=354,slow=37						
CTAO	**Charters Tower**	**15.76**	**171**	Pn	**Pn**	**02 52 12.1**	**-1.0**
QIS	**Mount Isa**	**16.50**	**193**	P	**P**	**02 52 23.1**	**+0.1**
NLAI	**Namlea**	**16.56**	**274**	P	**P**	**02 52 23.8**	**0.0**
	21nm,0.5s						
WB0	**Warramunga Arr**	**17.71**	**210**	P	**P**	**02 52 35.0**	**-1.4**
SANI	**Sanana**	**17.80**	**277**	P	**Pn**	**02 52 39.7**	**+1.5**
SANI	**Sanana**	**17.80**	**277**	P	**Pn**	**02 52 38.4**	**+0.2**
	29nm,1.2s						
WR0	**Warramunga Arr**	**17.80**	**209**	P	**P**	**02 52 36.0**	**-1.4**
WRAB	**Tennant Creek**	**17.87**	**210**	P	**P**	**02 52 36.6**	**-1.6**
WB2	**Warramunga Arr**	**17.88**	**210**	P	**P**	**02 52 37.0**	**-1.2**
WRA	**Warramunga Arr**	**17.88**	**210**	P	**P**	**02 52 36.9**	**-1.4**
WRA	**Warramunga Arr**	**17.88**	**210**	P	**P**	**02 52 37.2**	**-1.1**
	16nm,0.6s,baz=23,slow=12,SNR=79						
SOEI	**Soe**	**19.95**	**254**	P	**P**	**02 53 01.1**	**+0.1**
SOEI	**Soe**	**19.95**	**254**	P	**Pn**	**02 53 03.0**	**-0.7**
SOEI	**Soe**	**19.95**	**254**	P	**P**	**02 53 01.9**	**+0.9**
	148nm,0.8s,2μm						
KMSI	**Cibinong**	**20.28**	**284**	P	**P**	**02 53 05.5**	**+1.0**
	174nm,0.9s						
AS01	**Alice Springs**	**21.28**	**205**	P	**P**	**02 53 14.7**	**-0.5**
AS31	**Alice Springs**	**21.30**	**205**	P	**P**	**02 53 14.6**	**-0.8**
ASAR	**Alice Springs**	**21.30**	**205**	P	**P**	**02 53 14.6**	**-0.9**
ASAR	**Alice Springs**	**21.30**	**205**	P	**P**	**02 53 14.7**	**-0.8**
	13nm,0.8s,baz=34,slow=8.6,SNR=77						
ASAR				LR	LR	03 02 45.8	
	comp=Z,301nm,21.4s,baz=24,slow=40						
	13nm,0.8s						
EIDS	**Eidsvold**	**22.00**	**162**	P	**P**	**02 53 25.5**	**+2.8**
EIDS	**Eidsvold**	**22.00**	**162**	P	**P**	**02 53 26.0**	**+3.3**
QLP	**Quilpie**	**22.02**	**179**	P	**P**	**02 53 22.9**	**0.0**
EDFI	**Ende, Flores**	**22.23**	**258**	P	**P**	**02 53 25.2**	**-0.2**
MRSI	**Marisa**	**22.24**	**282**	P	**P**	**02 53 25.3**	**-0.1**
	32nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.25**	**231**	P	**P**	**02 53 24.2**	**-1.1**
TOLI2	**Tolitoli**	**23.51**	**283**	P	**P**	**02 53 35.9**	**-1.9**
TOLI2	**Tolitoli**	**23.51**	**283**	P	**P**	**02 53 37.3**	**-0.4**
BASI	**Baing, Sumba**	**23.59**	**255**	P	**P**	**02 53 39.1**	**+0.7**
	239nm,1.3s,2μm						
TTSI	**Tana Toraja**	**23.83**	**273**	P	**P**	**02 53 41.7**	**+1.2**
	47nm,1.4s,1μm						
OOD	**Oodnadatta**	**24.43**	**197**	P	**P**	**02 53 46.2**	**+0.4**
WBSI	**Waikabubak, Su**	**24.62**	**257**	P	**P**	**02 53 48.8**	**+1.0**
	0.1nm,0.8s						
AULRC	**Lightning Ridg**	**25.19**	**171**	P	**P**	**02 53 54.1**	**+1.4**
WRKA	**Warakurna**	**25.24**	**214**	P	**P**	**02 53 53.2**	**-0.1**
PLAI	**Plampang**	**26.07**	**259**	P	**P**	**02 54 01.7**	**+0.9**
	22nm,0.9s						
LCRK	**Leigh Creek**	**26.37**	**191**	P	**P**	**02 54 03.7**	**+0.3**
ARMA	**Armidale**	**26.91**	**165**	P	**P**	**02 54 10.8**	**+2.4**
CMSA	**Cobar Meteorol**	**27.02**	**176**	P	**P**	**02 54 10.3**	**+1.1**
MULG	**Mulgathing**	**27.25**	**198**	P	**P**	**02 54 11.4**	**+0.1**
STKA	**Stephens Creek**	**27.36**	**184**	P	**P**	**02 54 12.1**	**-0.2**
STKA	**Stephens Creek**	**27.36**	**184**	P	**P**	**02 54 13.2**	**+1.0**
STKA	**Stephens Creek**	**27.36**	**184**	P	**P**	**02 54 12.7**	**+0.4**
	1.7nm,0.5s,baz=51,slow=4.7,SNR=7.7						
STKA				LR	LR	03 05 44.0	
	comp=Z,252nm,19.9s,baz=15,slow=38						
	1.7nm,0.5s						
AUDCS	**Dubbo College**	**28.04**	**171**	P	**P**	**02 54 19.5**	**+1.3**
DZM	**Mont Dzumac**	**28.19**	**130**	P	**P**	**02 54 20.6**	**+0.8**
	2.7nm,0.6s,baz=240,slow=8.1,SNR=2.7						
	2.7nm,0.6s						
PSA00	**Pilbara Seismi**	**28.70**	**231**	P	**P**	**02 54 23.4**	**-0.9**
PSA00				IAmb	IAmb	02 54 26.1	
	comp=Z,17nm,0.8s						
PSA00	**Pilbara Seismi**	**28.70**	**231**	P	**P**	**02 54 24.7**	**+0.4**
BBOO	**Buckleboo**	**29.10**	**193**	P	**P**	**02 54 27.2**	**-0.5**
BBOO	**Buckleboo**	**29.10**	**193**	P	**P**	**02 54 28.3**	**+0.6**
HTT	**Hallett**	**29.18**	**188**	P	**P**	**02 54 29.6**	**+1.2**
YNG	**Young**	**30.03**	**172**	P	**P**	**02 54 37.8**	**+1.9**
FORT	**Forrest**	**30.04**	**208**	P	**P**	**02 54 34.9**	**-1.1**
FORT	**Forrest**	**30.04**	**208**	P	**P**	**02 54 35.6**	**-0.4**
CAN	**Canberra**	**31.12**	**172**	P	**P**	**02 54 47.2**	**+1.6**
MEEK	**Meekatharra**	**32.56**	**225**	P	**P**	**02 54 58.9**	**+0.6**
BRAT	**Ballarat**	**32.95**	**180**	P	**P**	**02 55 04.1**	**+2.6**
TOO	**Toolangi**	**33.02**	**177**	P	**P**	**02 55 04.0**	**+1.9**
KMBL	**Kambalda**	**33.71**	**215**	P	**P**	**02 55 09.3**	**+1.1**
MORW	**Morawa**	**35.85**	**224**	P	**P**	**02 55 28.0**	**+1.4**
KLBR	**Kellerberrin**	**36.34**	**219**	P	**P**	**02 55 30.7**	**-0.1**
BLDU	**Ballidu**	**36.37**	**221**	P	**P**	**02 55 31.6**	**+0.5**
NWAO	**Narrogin (SRO)**	**37.58**	**218**	P	**P**	**02 55 40.6**	**-0.6**
NWAO	**Narrogin (SRO)**	**37.58**	**218**	P	**P**	**02 55 40.9**	**-0.3**
NWAO				IAmb	IAmb	02 55 43.7	
	comp=Z,195nm,1.4s						
NWAO	**Narrogin (SRO)**	**37.58**	**218**	LR	LR	03 11 25.8	
	comp=Z,133nm,18.2s,baz=100,slow=36						
NWAO	**Narrogin (SRO)**	**37.58**	**218**	P	**P**	**02 55 41.4**	**+0.2**
KASI	**Kota Agung**	**39.02**	**267**	P	**P**	**02 55 51.3**	**-2.3**
	comp=Z,34nm,0.9s						
JNU	**Nakatsue**	**39.27**	**343**	LR	LR	03 09 03.9	
	comp=Z,33nm,21.4s,baz=176,slow=31						
MJAR	**Matsushiro Arr**	**41.09**	**353**	P	**P**	**02 56 08.4**	**-2.0**
	comp=Z,2.2nm,0.2s,baz=184,slow=8.4,SNR=5.7						
MJAR				LR	LR	03 12 02.5	
	comp=Z,60nm,18.7s,baz=164,slow=34						
	comp=Z,2.2nm,0.2s						
SSE	**Sheshan**	**41.34**	**330**	P	**P**	**02 56 13.2**	**+0.8**
KSRS	**Korea Array**	**44.18**	**342**	P	**P**	**02 56 36.0**	**+0.7**
	comp=Z,15nm,0.9s,baz=160,slow=10.0,SNR=27						
KSRS				pP	**pP**	**02 57 00.5**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=163,slow=8.9,SNR=4.3						
KSRS				LR	LR	03 11 12.5	
	comp=Z,30nm,21.4s,baz=155,slow=31						
	comp=Z,15nm,0.9s						
KSAR	**Wonju Array Be**	**44.18**	**342**	P	**P**	**02 56 35.4**	**+0.1**
URZ	**Urewera**	**45.39**	**142**	LR	LR	03 15 18.2	
	comp=Z,35nm,21.4s,baz=294,slow=35						
LYN	**LuoYang**	**48.66**	**325**	⇑P	**P**	**02 57 10.5**	**+0.1**
LYN				pmax	pmax		
	comp=Z,23nm,0.7s						
KMI	**Kunming**	**49.42**	**309**	⇑P	**P**	**02 57 17.6**	**+0.9**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
USRK	**Ussuriysk Ar.**	**49.55**	**349**	P	**P**	**02 57 16.5**	**-0.4**
USRK	**Ussuriysk Ar.**	**49.55**	**349**	P	**P**	**02 57 17.0**	**0.0**
	comp=Z,8.8nm,0.8s,baz=183,slow=7.0,SNR=15						
	comp=Z,8.8nm,0.8s						
CM31	**Chiang Mai Arr**	**49.59**	**299**	P	**P**	**02 57 16.8**	**-1.0**
CM31				IAmb	IAmb	02 57 42.8	
	comp=Z,7.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**49.59**	**299**	P	**P**	**02 57 17.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**49.59**	**299**	P	**P**	**02 57 18.3**	**+0.6**
	comp=Z,5.0nm,0.8s,baz=125,slow=6.2,SNR=16						
CMAR				pP	**pP**	**02 57 42.6**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=117,slow=6.3,SNR=1.8						
CMAR				LR	LR	03 17 48.8	
	comp=Z,6.4nm,21.1s,baz=135,slow=35						
	comp=Z,5.0nm,0.8s						
HNS	**HongShan**	**49.59**	**330**	⇑P	**P**	**02 57 17.6**	**+0.2**
HNS				pmax	pmax		
	comp=Z,28nm,0.8s						
CHTO	**Chiang Mai**	**49.72**	**299**	P	**P**	**02 57 18.2**	**-0.5**
XAN	**Xi'an**	**50.39**	**322**	⇑P	**P**	**02 57 23.6**	**0.0**
XAN				pP	pP	02 57 49.8	+0.2
XAN				sP	sP	02 58 02.7	+0.9
XAN				pmax	pmax		
	comp=Z,13

BTO PP **PP** **03 00 00.8 +4.3**
BTO pmax pmax
comp=Z,29nm,1.3s
BTO pmax pmax
comp=Z,170nm,9.1s
KLR Kul'dur 54.45 350 P **P** **02 57 53.1 -0.2**
comp=Z,5.8nm,0.9s,baz=162,slow=4.4,SNR=16
KLR LR LR 03 18 10.5
comp=Z,28nm,21.3s,baz=160,slow=33
comp=Z,5.8nm,0.9s
LZH Lanzhou 54.88 321 *e*P **P** **02 57 58.0 +1.1**
LZH pP pP 02 58 05.1 -18
LZH pmax pmax
comp=Z,18nm,1.3s
HEH HeiHe 56.26 348 *e*P **P** **02 58 06.3 +0.1**
HEH pmax pmax
comp=Z,11nm,0.9s
HEH pmax pmax
comp=Z,180nm,4.2s
HIA Hailar 57.39 342 P **P** **02 58 14.3 0.0**
PETK Petropavlovsk- 58.55 10 P **P** **02 58 22.7 +0.5**
comp=Z,4.7nm,0.6s,baz=168,slow=6.5,SNR=4.4
PETK pP **pP** **02 58 48.6 -0.2**
comp=Z,9.4nm,0.9s,baz=197,slow=4.0,SNR=4.1
comp=Z,4.7nm,0.6s
GTA Gaotai 59.44 321 P **P** **02 58 29.4 +0.6**
GTA pP pP 02 58 55.6 +0.1
GTA sP sP 02 59 05.9 -1.6
GTA pmax pmax
comp=Z,9.0nm,0.9s
ULN Ulaanbaatar 61.18 333 P **P** **02 58 40.5 0.0**
ULN IAmb IAmb 02 59 08.9
comp=Z,17nm,1.4s
ULN Ulaanbaatar 61.18 333 P **P** **02 58 41.4 +0.8**
ULN pP **pP** **02 59 08.1 +0.8**
SONM Songino Array 61.46 332 P **P** **02 58 42.8 +0.4**
SONM IAmb IAmb 02 59 10.7
comp=Z,21nm,2.0s
SONM Songino Array 61.46 332 P **P** **02 58 43.2 +0.8**
comp=Z,3.0nm,1.0s,baz=160,slow=7.8,SNR=12
SONM pP **pP** **02 59 09.5 +0.2**
comp=Z,1.9nm,0.9s,baz=148,slow=8.9,SNR=4.3
SONM LR LR 03 25 39.4
comp=Z,41nm,19.3s,baz=256,slow=36
SONM PKP2bc 03 28 05.0
comp=Z,1.7nm,1.1s,baz=328,slow=1.5,SNR=9.9
comp=Z,3.0nm,1.0s
YAK Yakutsk 67.15 353 P **P** **02 59 18.8 -0.3**
YAK Yakutsk 67.15 353 LR LR 03 27 26.0
comp=Z,27nm,19.3s,baz=150,slow=35
WMQ Urumqi 69.46 320 *e*P **P** **02 59 34.7 +0.7**
WMQ pmax pmax
comp=Z,20nm,0.9s
UNV Unalaska Valle 71.39 29 P **P** **02 59 46.6 +1.2**
baz=234
CCD Concordia, Ant 71.57 185 P **P** **02 59 47.2 +0.5**
CCD pP **pP** **03 00 15.0 +0.7**
P08K Saint George I 71.74 25 P **P** **02 59 48.0 +0.6**
baz=230
SPIA Saint Paul Isl 71.82 24 P **P** **02 59 48.8 +1.0**
baz=229
VNDA Vanda 73.67 176 P **P** **02 59 57.6 -0.9**
comp=Z,4.6nm,1.1s,baz=337,slow=7.7,SNR=3.6
comp=Z,4.6nm,1.1s
MK31 Makanchi Array 74.19 321 P **P** **03 00 01.7 -0.5**
MKAR Makanchi Array 74.19 321 P **P** **03 00 02.3 +0.1**
comp=Z,6.6nm,0.8s,baz=106,slow=7.4,SNR=41
MKAR pP **pP** **03 00 28.7 -1.1**
comp=Z,4.1nm,0.8s,baz=108,slow=7.0,SNR=5.2
comp=Z,6.6nm,0.8s
MAKZ Makanchi 74.40 321 P **P** **03 00 02.1 -1.2**
SDPT Sand Point 75.14 29 P **P** **03 00 08.2 +0.8**
baz=239
GAMB Gambell 75.74 19 P **P** **03 00 11.9 +1.2**
baz=226
KSH Kashi 75.87 312 P **P** **03 00 13.6 +1.5**
KSH pmax pmax
comp=Z,6.0nm,0.8s
ZALV Zalesovo Beam 75.94 329 P **P** **03 00 10.6 -1.4**
ZALV Zalesovo Beam 75.94 329 P **P** **03 00 11.0 -1.0**
comp=Z,5.9nm,0.7s,baz=108,slow=5.5,SNR=29
ZALV pP **pP** **03 00 38.6 -1.1**
comp=Z,8.0nm,0.9s,baz=106,slow=5.1,SNR=7.9
ZALV LR LR 03 33 31.0
comp=Z,22nm,20.4s,baz=80,slow=36
comp=Z,5.9nm,0.7s
S14K Fog Glacier 76.08 29 P **P** **03 00 13.9 +1.1**
baz=239
NIL Nilore 76.32 306 P **P** **03 00 13.1 -1.6**
NIL IAmb IAmb 03 00 17.5
comp=Z,13nm,0.8s
TIXI Tiksi 76.56 355 P **P** **03 00 13.2 -2.0**
M13K Dall Lake 76.64 24 P **P** **03 00 17.3 +1.5**
baz=235
O14K Tigyukauivet M 76.87 26 P **P** **03 00 17.0 -0.1**
baz=237
M14K Bethel 77.40 24 IAmb IAmb 03 02 02.3
comp=Z,30nm,1.2s
M14K Bethel 77.40 24 P **P** **03 00 20.6 +0.6**
baz=236
L14K Kuka Creek 77.44 23 IAmb IAmb 03 00 22.2
comp=Z,16nm,0.9s
L14K Kuka Creek 77.44 23 P **P** **03 00 20.8 +0.5**
baz=235
O15K Ungalikthiuk R 77.45 26 P **P** **03 00 21.0 +0.6**
baz=238
N15K Kwethluk River 77.86 25 P **P** **03 00 23.4 +0.7**
baz=238
M15K Kasigluk River 77.89 25 P **P** **03 00 23.3 +0.5**
baz=237
J14K Nanvaranak Lak 77.92 22 P **P** **03 00 24.1 +1.3**
baz=234
KURK Kurchatov 77.99 324 P **P** **03 00 22.5 -1.0**
KURBB Kurchatov Arra 78.00 324 P **P** **03 00 23.4 -0.2**
comp=Z,1.7nm,0.6s,baz=112,slow=4.9,SNR=18
KURBB pP **pP** **03 00 50.9 -0.6**
comp=Z,2.9nm,1.0s,baz=110,slow=5.3,SNR=6.6
comp=Z,1.7nm,0.6s
L15K Ungalak Mounta 78.11 23 P **P** **03 00 24.4 +0.4**
baz=236
TNA Tin City 78.15 19 P **P** **03 00 24.9 +0.8**
baz=230
P16K Nushagak River 78.19 27 P **P** **03 00 25.2 +0.8**
baz=240
ANM Nome 78.36 20 P **P** **03 00 26.3 +1.0**
baz=232
O16K Kokwok River B 78.43 26 P **P** **03 00 26.6 +0.8**
baz=240
K15K Wolf Creek Mou 78.43 23 P **P** **03 00 27.1 +1.3**
baz=236
N16K Nishlik Lake 78.58 25 P **P** **03 00 27.9 +1.2**
baz=239
F14K Arctic Creek 78.61 19 P **P** **03 00 28.0 +1.4**
baz=231
M16K Timber Creek 78.78 25 P **P** **03 00 29.0 +1.3**
baz=239
L16K Owhat River 78.93 24 P **P** **03 00 29.6 +1.1**
baz=238
O17K Koliganek Bris 78.96 26 P **P** **03 00 29.5 +0.8**
baz=241
P17K Kvichak River 78.97 27 P **P** **03 00 30.0 +1.3**
baz=242
G15K Niukluk 79.08 20 P **P** **03 00 29.7 +0.5**
baz=234
N17K Nushagak Hills 79.28 26 P **P** **03 00 31.6 +1.1**
baz=241
F15K North Star Dit 79.30 19 P **P** **03 00 31.4 +1.0**
baz=233
J16K Anvik River 79.34 22 P **P** **03 00 31.7 +1.1**
baz=237
H16K Elim 79.49 21 P **P** **03 00 32.3 +0.8**
baz=235,SNR=6.1
OHAK Old Harbor 79.56 30 P **P** **03 00 32.4 +0.4**
baz=245
M17K Holitna River 79.61 25 P **P** **03 00 32.9 +0.7**
baz=240
G16K Koyuk River 79.89 20 P **P** **03 00 34.4 +0.9**
baz=235
N18K Kilae Creek 79.92 26 P **P** **03 00 35.2 +1.3**
baz=242
K17K Iditarod 79.93 23 P **P** **03 00 34.8 +0.9**
baz=239
J17K VABM Dome 79.98 23 IAmb IAmb 03 00 36.3
comp=Z,18nm,0.8s
J17K VABM Dome 79.98 23 P **P** **03 00 35.3 +1.1**
baz=238
KDAK Kodiak Island 80.14 29 P **P** **03 00 36.2 +1.1**
baz=245

L18K Granite Mounta 80.33 24 P **P** **03 00 37.2 +1.2**
baz=241
M18K Stony River 80.33 25 P **P** **03 00 37.0 +0.9**
baz=242
H17K Granite Mounta 80.49 21 P **P** **03 00 38.0 +1.2**
baz=237,SNR=11
G17K Kiwalik Mounta 80.54 20 P **P** **03 00 37.9 +0.8**
baz=237
Q20K Shuyak Island 80.58 28 P **P** **03 00 38.2 +0.7**
baz=245
N19K Bonanza Creek 80.59 26 IAmb IAmb 03 00 39.3
comp=Z,23nm,0.9s
N19K Bonanza Creek 80.59 26 P **P** **03 00 38.4 +0.8**
baz=243
P19K Oil Pt 80.64 27 P **P** **03 00 37.2 -0.6**
baz=244
C16K Lisburne Hills 80.67 17 P **P** **03 00 38.0 +0.3**
baz=232
KKAR Karatay Array 80.83 315 P **P** **03 00 37.9 -1.4**
KKAR Karatay Array 80.83 315 IAmb IAmb 03 00 39.5
comp=Z,2.8nm,0.8s
F17K Baldwin Pennin 80.86 20 P **P** **03 00 39.2 +0.5**
baz=236
SIMJ Simiganj 80.86 310 P **P** **03 00 38.5 -1.1**
J18K Innoko River 80.93 23 P **P** **03 00 39.3 0.0**
baz=241
TTA Tatalina 80.95 24 P **P** **03 00 39.1 -0.3**
TTA Tatalina 80.95 24 P **P** **03 00 39.7 +0.3**
baz=241
E17K Hotham Inlet 81.03 19 P **P** **03 00 40.4 +0.7**
baz=235
L19K White Mountain 81.06 25 IAmb IAmb 03 00 42.3
comp=Z,11nm,0.8s
L19K White Mountain 81.06 25 P **P** **03 00 40.5 +0.4**
baz=242
M19K Big River Lodg 81.13 25 P **P** **03 00 40.6 +0.2**
baz=243
H18K Honhosa River 81.16 21 P **P** **03 00 40.7 +0.3**
baz=239
RDOG Red Dog Mine 81.26 18 P **P** **03 00 41.6 +0.7**
baz=234
C17K DeLong Mountai 81.43 17 P **P** **03 00 42.4 +0.6**
baz=234
G18K Tagagawik 81.45 21 IAmb IAmb 03 00 43.3
comp=Z,11nm,0.8s
G18K Tagagawik 81.45 21 P **P** **03 00 42.4 +0.4**
baz=238,SNR=11
F18K Selawik 81.48 20 P **P** **03 00 42.5 +0.5**
baz=237
GCSA Galena City Sc 81.50 22 P **P** **03 00 42.7 +0.5**
baz=240,SNR=5.7
L20K Farewell, AK 81.61 25 P **P** **03 00 43.3 +0.5**
baz=243
J19K Poorman 81.61 23 IAmb IAmb 03 00 44.7
comp=Z,14nm,0.9s
J19K Poorman 81.61 23 P **P** **03 00 43.4 +0.6**
baz=242
E18K Tukpahlearik C 81.62 19 IAmb IAmb 03 00 44.5
comp=Z,11nm,0.8s
E18K Tukpahlearik C 81.62 19 P **P** **03 00 43.3 +0.5**
baz=236
M20K Styx River 81.66 25 IAmb IAmb 03 00 44.9
comp=Z,16nm,0.8s
M20K Styx River 81.66 25 P **P** **03 00 43.9 +0.7**
baz=244
N20K Mount Spurr 81.76 26 P **P** **03 00 44.0 +0.2**
baz=245
K20K Telida 81.92 24 IAmb IAmb 03 00 46.4
comp=Z,15nm,0.9s
K20K Telida 81.92 24 P **P** **03 00 45.4 +0.9**
baz=243,SNR=7.4
H19K Roundabout Mou 82.05 21 P **P** **03 00 45.1 +0.1**
H19K IAmb IAmb 03 00 46.8
comp=Z,15nm,0.8s
H19K Roundabout Mou 82.05 21 P **P** **03 00 45.9 +0.8**
baz=241
C18K Utukok River 82.12 18 IAmb IAmb 03 01 13.2
comp=Z,29nm,2.0s
C18K Utukok River 82.12 18 P **P** **03 00 45.9 +0.4**
baz=236
G19K Purcell Mounta 82.12 21 IAmb IAmb 03 00 47.3
comp=Z,14nm,0.9s
G19K Purcell Mounta 82.12 21 P **P** **03 00 46.2 +0.7**
baz=240
F19K Shaleruckik Mo 82.24 20 P **P** **03 00 46.3 +0.3**
baz=239
J20K Nowinta River 82.27 23 P **P** **03 00 46.9 +0.6**
baz=243
B18K Kokolik River 82.35 17 P **P** **03 00 47.2 +0.6**
baz=235
SKT Skwentna 82.38 26 P **P** **03 00 46.9 0.0**
baz=246
MAW Mason 82.40 202 LR LR 03 33 50.5
comp=Z,94nm,20.7s,baz=97,slow=33
I20K Naaghedeneel 82.43 22 P **P** **03 00 47.8 +0.7**
baz=242
PPLA Purkeypile 82.49 25 P **P** **03 00 47.8 +0.1**
baz=245
SUA Susitna One 82.51 26 IAmb IAmb 03 00 48.2
comp=Z,8.7nm,0.8s
SUA Susitna One 82.51 26 P **P** **03 00 47.4 -0.3**
baz=246
O22K Cooper Landing 82.58 27 P **P** **03 00 48.1 +0.2**
baz=247
H20K Anotleneega Mo 82.60 22 P **P** **03 00 48.3 +0.3**
baz=242
E19K Redstone River 82.74 19 IAmb IAmb 03 00 50.3
comp=Z,13nm,0.8s
E19K Redstone River 82.74 19 P **P** **03 00 49.4 +0.7**
baz=240
CAST Cast Rocks 82.76 24 P **P** **03 00 48.6 -0.3**
baz=245,SNR=6.9
NRIK Noril'sk 82.80 343 IAmb IAmb 03 01 21.5
comp=Z,13nm,1.1s
NRIK Noril'sk 82.80 343 P **P** **03 00 48.7 -0.2**
comp=Z,4.4nm,0.7s,baz=122,slow=6.2,SNR=7.0
NRIK pP **pP** **03 01 16.1 -0.9**
comp=Z,7.4nm,0.9s,baz=115,slow=6.2,SNR=3.3
comp=Z,4.4nm,0.7s
RC01 Rabbit Creek A 82.81 27 P **P** **03 00 48.8 -0.3**
baz=247
C19K Lookout Ridge 82.86 18 P **P** **03 00 49.6 +0.3**
C19K IAmb IAmb 03 00 50.7
comp=Z,8.9nm,0.8s
C19K Lookout Ridge 82.86 18 P **P** **03 00 49.8 +0.5**
baz=237
CHUM Lake Minchumin 82.86 24 P **P** **03 00 49.4 +0.1**
baz=245,SNR=22
M22K Willow 82.90 26 P **P** **03 00 49.3 -0.2**
baz=247
D19K Kuna River 82.99 18 P **P** **03 00 50.0 0.0**
baz=239
F20K Avaraart Lake 83.05 20 P **P** **03 00 50.5 +0.3**
baz=241
CUT Chulitna 83.10 25 P **P** **03 00 50.2 -0.4**
baz=247
PMR Palmer 83.28 26 P **P** **03 00 51.0 -0.5**
baz=248
KTH Kantishna Hill 83.29 24 IAmb IAmb 03 00 52.0
comp=Z,16nm,1.0s
H21K Melozitna Rive 83.45 22 P **P** **03 00 52.7 +0.4**
baz=244
E20K Nigu River 83.48 19 P **P** **03 00 52.5 0.0**
baz=240
BPAW Bear Paw Mtn. 83.48 24 P **P** **03 00 53.0 +0.4**
baz=246,SNR=5.2
TRF Thorofare Moun 83.50 24 P **P** **03 00 52.5 -0.4**
baz=246
KNK Knik Glacier 83.51 27 P **P** **03 00 52.6 -0.1**
baz=248
I21K Tanana 83.55 23 IAmb IAmb 03 02 59.3
comp=Z,26nm,1.9s
I21K Tanana 83.55 23 P **P** **03 00 52.9 +0.1**
baz=245
BVAR Borovoye Array 83.56 324 P **P** **03 00 53.5 +0.3**
comp=Z,12nm,0.8s,baz=107,slow=6.6,SNR=53
BVAR pP **pP** **03 01 20.9 -0.6**
comp=Z,11nm,0.9s,baz=115,slow=5.6,SNR=7.4
comp=Z,12nm,0.8s
G21K Allakaket 83.57 21 P **P** **03 00 53.5 +0.5**
baz=243
D20K Etivluk River 83.58 19 P **P** **03 00 53.8 +0.9**
baz=240
BRVK Borovoye 83.64 324 P **P** **03 00 52.7 -0.8**
BRVK IAmb IAmb 03 00 54.6
comp=Z,8.9nm,0.9s
SML Sawmill 83.71 26 P **P** **03 00 53.9 +0.1**
baz=248,SNR=7.0

F21K Alatna River 83.90 20 P **P** **03 00 55.0 +0.3**
baz=243
MLY Manley 83.97 23 IAmb IAmb 03 00 56.3
comp=Z,13nm,1.0s
MLY Manley 83.97 23 P **P** **03 00 55.3 +0.2**
baz=246,SNR=13
M23K Glacier View 83.97 26 P **P** **03 00 55.3 +0.2**
baz=249
WAT1 Susitna Watana 83.99 25 P **P** **03 00 55.5 +0.3**
baz=248
B20K Meade River 84.06 17 P **P** **03 00 55.9 +0.6**
baz=239
H22K Ishtalitna Cre 84.08 22 P **P** **03 00 55.8 +0.2**
baz=245
SCM Sheep Creek Mo 84.16 26 P **P** **03 00 56.1 0.0**
baz=249
MCK McKinley 84.17 24 P **P** **03 00 55.5 -0.6**
baz=248,SNR=9.0
WAT6 Susitna Watana 84.25 26 P **P** **03 00 56.4 -0.3**
baz=249,SNR=5.6
C21K Knifeblade Rid 84.37 18 P **P** **03 00 57.1 +0.2**
baz=242
EYAK Cordova Ski Ar 84.44 28 P **P** **03 00 56.9 -0.5**
baz=251
NEA2 Nenana 84.45 24 IAmb IAmb 03 00 57.8
comp=Z,9.5nm,1.0s
NEA2 Nenana 84.45 24 P **P** **03 00 57.2 -0.3**
baz=248
G22K Bettles 84.47 21 P **P** **03 00 57.4 0.0**
baz=245
I23K Minto, Yukon-K 84.55 23 P **P** **03 00 57.9 0.0**
baz=247
DHY Denali Highway 84.58 25 P **P** **03 00 58.2 -0.2**
baz=249,SNR=16
B21K Ikpikpuk River 84.64 18 P **P** **03 00 58.9 +0.6**
baz=242
KLU Klutina 84.68 27 P **P** **03 00 58.8 0.0**
KLU IAmb IAmb 03 01 00.1
comp=Z,17nm,1.0s
KLU Klutina 84.68 27 P **P** **03 00 58.9 +0.2**
baz=251
M24K Tolsona, Glenn 84.77 26 P **P** **03 00 59.7 +0.6**
baz=250
WRH Wood River Hil 84.79 24 IAmb IAmb 03 00 59.3
comp=Z,16nm,1.0s
G23K Bananza Creek 84.92 21 P **P** **03 01 00.2 +0.4**
baz=246
D22K Ayikyak River 84.92 19 P **P** **03 01 00.3 +0.6**
baz=244
CCB Clear Creek Bu 84.97 24 IAmb IAmb 03 00 60.0
comp=Z,13nm,0.8s
COLA College 85.04 23 P **P** **03 01 00.6 +0.2**
baz=249
COLD Coldfoot 85.06 21 P **P** **03 01 00.8 +0.3**
baz=246
BMRM Bremner River 85.11 28 P **P** **03 01 00.6 -0.3**
baz=252
HDA Harding Lake 85.23 24 P **P** **03 01 00.7 -0.7**
baz=250
POKR Poker Plat Res 85.29 23 P **P** **03 01 01.5 -0.2**
baz=249
N25K Chitina, Valde 85.31 27 P **P** **03 01 01.9 0.0**
baz=252
HARP HAARP 85.31 26 P **P** **03 01 02.0 +0.2**
baz=251
PAX Paxson 85.36 26 P **P** **03 01 02.4 +0.2**
baz=251
H24K Noodor Dome 85.38 23 P **P** **03 01 02.7 +0.6**
baz=248
IL31 85.39 24 IAmb IAmb 03 01 01.6
comp=Z,9.7nm,0.8s
ILAR Eielson Array 85.39 24 P **P** **03 00 60.0 -2.2**
ILAR Eielson Array 85.39 24 P **P** **03 01 00.7 -1.4**
comp=Z,7.4nm,0.7s,baz=259,slow=4.9,SNR=71
ILAR pP **pP** **03 01 28.8 -1.7**
comp=Z,3.7nm,0.8s,baz=258,slow=5.0,SNR=5.7
ILAR LR LR 03 38 22.9
comp=Z,17nm,18.4s,baz=218,slow=35
comp=Z,7.4nm,0.7s
K24K Donnelly Dome 85.51 25 P **P** **03 01 03.5 +0.7**
baz=251
QSPA South Pole Qui 85.52 180 P **P** **03 01 01.6 -1.3**
QSPA IAmb IAmb 03 01 44.9
comp=Z,19nm,1.2s
QSPA South Pole Qui 85.52 180 P **P** **03 01 03.6 +0.7**
comp=Z,6.3nm,0.8s,baz=316,slow=1.2,SNR=8.1
QSPA LR LR 03 39 16.7
comp=Z,146nm,18.5s,baz=1.0,slow=36
comp=Z,6.3nm,0.8s
E23K Chandalar 85.60 20 P **P** **03 01 03.9 +0.7**
baz=247
D23K Nanushuk River 85.61 19 P **P** **03 01 04.1 +0.9**
baz=246
GLB Gilahina Butte 85.62 27 IAmb IAmb 03 01 04.6
comp=Z,13nm,0.8s
CRQE Cirque 85.75 28 P **P** **03 01 04.2 0.0**
baz=253
TOLK Toolik Lake Re 85.84 20 P **P** **03 01 05.1 +0.7**
baz=247
G24K Hadweenzic Riv 85.85 22 P **P** **03 01 05.1 +0.7**
baz=249
TGL Tana Glacier 85.88 28 IAmb IAmb 03 01 06.2
comp=Z,18nm,1.0s
RIDG Independent Ri 85.88 25 IAmb IAmb 03 01 05.6
comp=Z,16nm,1.0s
RIDG Independent Ri 85.88 25 P **P** **03 01 04.7 +0.1**
baz=251,SNR=7.2
J25K Salcha River, 85.95 24 P **P** **03 01 04.8 -0.2**
baz=251
MCARA McCarthy VSAT 85.97 28 P **P** **03 01 05.4 +0.3**
baz=253
E24K Your Creek 86.00 20 P **P** **03 01 05.4 +0.2**
baz=248
F24K Squaw Lake 86.00 21 IAmb IAmb 03 01 07.1
comp=Z,6.9nm,0.8s
F24K Squaw Lake 86.00 21 P **P** **03 01 05.9 +0.8**
baz=248
MENT Mentasta 86.11 26 IAmb IAmb 03 01 07.0
comp=Z,11nm,0.7s
M26K Nabesna, AK 86.27 27 P **P** **03 01 07.2 +0.6**
baz=253
D24K Happy Valley 86.30 19 P **P** **03 01 06.9 +0.4**
D24K IAmb IAmb 03 01 10.6
comp=Z,10nm,0.8s
D24K Happy Valley 86.30 19 P **P** **03 01 07.7 +1.2**
baz=247
L26K Log Cabin Wild 86.30 26 IAmb IAmb 03 01 08.0
comp=Z,8.5nm,0.8s
L26K Log Cabin Wild 86.30 26 P **P** **03 01 07.1 +0.4**
baz=253,SNR=5.9
SCRK Sand Creek 86.32 25 P **P** **03 01 06.2 -0.7**
SCRK Sand Creek 86.32 25 P **P** **03 01 07.0 +0.1**
baz=252
C24K Franklin Bluff 86.55 19 P **P** **03 01 08.4 +0.7**
baz=248
CTG Chitna Glacier 86.64 28 P **P** **03 01 09.1 +0.6**
baz=255,SNR=11
FYU Fort Yukon 86.64 22 IAmb IAmb 03 01 09.5
comp=Z,9.5nm,0.9s
J26L Joseph Creek 86.65 24 P **P** **03 01 08.7 +0.2**
baz=253
LOGN Logan Glacier 86.76 28 IAmb IAmb 03 01 10.6
comp=Z,14nm,0.8s
M27K Edge Creek, AK 86.76 27 P **P** **03 01 09.3 +0.2**
M27K Edge Creek, AK 86.76 27 P **P** **03 01 09.9 +0.8**
baz=254,SNR=13
F25K Christian Rive 86.83 21 P **P** **03 01 10.0 +0.8**
baz=250
PINM Pinnacle 86.93 29 P **P** **03 01 10.3 +0.4**
baz=256
L27K Beaver Creek, 86.98 26 P **P** **03 01 10.7 +0.7**
baz=254
E25K Arctic Village 87.03 21 P **P** **03 01 10.9 +0.7**
baz=250
I26K Coal Creek Min 87.06 24 P **P** **03 01 10.7 +0.4**
baz=253
K27K Chicken 87.14 25 P **P** **03 01 11.0 +0.2**
baz=254
BMAR Burnt Mountain 87.16 22 P **P** **03 01 11.1 +0.3**
D25K Kavik River 87.17 20 P **P** **03 01 11.4 +0.6**
baz=250,SNR=12
BVCY Beaver Creek 87.23 27 P **P** **03 01 12.1 +0.8**
baz=255
PNL Peninsula 87.25 30 P **P** **03 01 11.8 +0.4**
baz=256
YUK3 Moose Creek 87.25 27 P **P** **03 01 12.2 +0.6**
baz=256,SNR=11
G26K Porcupine Rive 87.31 22 P **P** **03 01 12.2 +0.7**

baz=252
F26K **Sheenjek River** 87.41 21 P P 03 01 12.9 +0.9
baz=252
YUK8 **Steele Glacier** 87.46 28 P P 03 01 13.2 +0.5
baz=256,SNR=5.4
EGAK **Eagle** 87.72 24 P P 03 01 14.5 +1.0
baz=255
I27K **Kandik River** 87.76 24 P P 03 01 14.4 +0.6
baz=254
O29M **Mount Kennedy** 87.80 29 IAmb IAmb 03 01 16.0
comp=Z,14nm,0.9s
O29M **Mount Kennedy** 87.80 29 P P 03 01 15.1 +1.0
baz=257
C26K **Camden Bay** 87.85 19 P P 03 01 15.1 +1.1
baz=251
H27K **Steamboat Moun** 87.97 23 P P 03 01 15.7 +1.0
baz=254
YUK4 **Talbot Arm** 87.99 28 P P 03 01 16.4 +1.3
baz=257,SNR=12
YUK6 **Outpost Mounta** 88.04 29 P P 03 01 16.0 +0.6
baz=257
P29M **Windy Craggy** 88.06 30 P P 03 01 16.0 +0.7
baz=258
DAWY **Dawson** 88.29 25 IAmb IAmb 03 01 18.6
comp=Z,18nm,1.2s
DAWY **Dawson** 88.29 25 P P 03 01 16.9 +0.6
baz=256,SNR=13
M29M **Somme Creek** 88.32 27 P P 03 01 17.1 +0.6
M29M IAmb IAmb 03 01 18.3
comp=Z,12nm,0.9s
M29M **Somme Creek** 88.32 27 P P 03 01 17.2 +0.6
baz=257,SNR=13
I28M **Miner Creek** 88.39 24 P P 03 01 17.4 +0.6
baz=256
HYT **Haines Junctio** 88.42 29 P P 03 01 17.8 +0.7
baz=258,SNR=8.8
P30M **Million Dollar** 88.55 29 P P 03 01 18.3 +0.7
baz=259
L29M **L29M** 88.62 26 P P 03 01 18.8 +0.9
baz=258
SIT **Sitka** 88.82 33 P P 03 01 19.5 +0.8
baz=260
J29N **Klondike Camp** 88.88 25 IAmb IAmb 03 01 21.2
comp=Z,9.7nm,1.1s
J29N **Klondike Camp** 88.88 25 P P 03 01 19.8 +0.8
baz=257
F28M **Old Crow** 88.95 22 P P 03 01 20.3 +1.0
baz=256
D27M **Malcolm River** 88.98 20 P P 03 01 20.4 +1.0
baz=255
K29M **Barlow Dome** 89.04 26 P P 03 01 20.8 +0.9
baz=258
O30N **Mendenhall** 89.09 29 IAmb IAmb 03 01 21.6
comp=Z,21nm,1.6s
O30N **Mendenhall** 89.09 29 P P 03 01 21.0 +0.9
baz=259
M30M **Minto, Yukon** 89.11 27 IAmb IAmb 03 01 21.7
comp=Z,8.8nm,1.2s
M30M **Minto, Yukon** 89.11 27 P P 03 01 21.1 +0.9
baz=259,SNR=5.7
H29M **Whitestone** 89.20 23 P P 03 01 21.4 +0.9
baz=257
ABKAR **Akbulak array** 89.23 319 P P 03 01 19.0 -1.9
ABKAR IAmb IAmb 03 02 29.4
comp=Z,10nm,1.7s
SKAG **Skagway** 89.23 30 IAmb IAmb 03 01 22.5
comp=Z,6.5nm,0.9s
SKAG **Skagway** 89.23 30 P P 03 01 21.5 +0.8
baz=260
S32K **Killisnoo** 89.29 32 P P 03 01 21.5 +0.5
baz=261
E28M **Babbage River** 89.32 21 P P 03 01 21.6 +0.6
baz=256
N31M **Braeburn, Yuko** 89.37 28 P P 03 01 22.2 +0.8
baz=260
WHY **Whitehorse** 89.66 29 P P 03 01 23.8 +0.9
baz=260
J30M **Hart River** 89.70 25 IAmb IAmb 03 01 24.7
comp=Z,10.0nm,0.9s
J30M **Hart River** 89.70 25 P P 03 01 23.8 +0.8
baz=259
MAYO **Mayo, Yukon** 89.71 26 P P 03 01 24.2 +1.3
baz=260
CRAG **Craig** 89.78 34 P P 03 01 24.4 +1.1
baz=262
I30M **Mount Dempster** 89.80 25 P P 03 01 22.8 -0.7
I30M IAmb IAmb 03 01 24.7
comp=Z,7.7nm,0.9s
I30M **Mount Dempster** 89.80 25 P P 03 01 23.7 +0.2
baz=259,SNR=9.0
U33K **Whale Pass** 89.88 34 P P 03 01 24.6 +0.8
baz=262
EPYK **Eagle Plains** 89.89 23 IAmb IAmb 03 01 24.9
comp=Z,10nm,1.0s
EPYK **Eagle Plains** 89.89 23 P P 03 01 23.9 +0.2
baz=259,SNR=6.7
P32M **Atlin** 90.07 30 P P 03 01 25.2 +0.5
baz=261
M31M **Drury Creek, Y** 90.14 28 P P 03 01 25.3 +0.3
baz=261
G30M **tAoh Zraii Nji** 90.20 23 IAmb IAmb 03 01 27.0
comp=Z,7.9nm,1.2s
G30M **tAoh Zraii Nji** 90.20 23 P P 03 01 25.8 +0.6
baz=259
WRAK **Wrangell Islan** 90.34 34 P P 03 01 26.6 +0.7
baz=263
F30M **Barrier River** 90.48 22 P P 03 01 27.2 +0.8
baz=260
P33M **Teslin, Yukon** 90.60 30 P P 03 01 27.4 +0.2
baz=262
N32M **Quiet Lake** 90.60 29 IAmb IAmb 03 01 28.5
comp=Z,7.7nm,0.9s
N32M **Quiet Lake** 90.60 29 P P 03 01 27.7 +0.5
baz=262
FARO **Faro, Yukon** 90.63 28 P P 03 01 27.3 0.0
FARO IAmb IAmb 03 01 28.3
comp=Z,6.3nm,0.9s
FARO **Faro, Yukon** 90.63 28 P P 03 01 27.9 +0.7
baz=262
Q32M **Nakina River** 90.71 31 P P 03 01 28.4 +0.5
baz=263
H31M **Peel River** 90.74 24 P P 03 01 27.8 +0.1
baz=261
G31M **Satah River** 90.94 23 IAmb IAmb 03 01 29.3
comp=Z,6.3nm,0.8s
G31M **Satah River** 90.94 23 P P 03 01 28.8 +0.2
baz=261
S34M **Telegraph Cree** 91.18 32 IAmb IAmb 03 01 32.6
comp=Z,4.9nm,1.0s
S34M **Telegraph Cree** 91.18 32 P P 03 01 30.4 +0.5
baz=264
F31M **Tsiigehtchic** 91.23 23 IAmb IAmb 03 01 30.9
comp=Z,7.0nm,1.2s
F31M **Tsiigehtchic** 91.23 23 P P 03 01 29.9 +0.1
baz=262
R33M **Jennings River** 91.43 31 IAmb IAmb 03 01 32.8
comp=Z,8.0nm,1.1s
R33M **Jennings River** 91.43 31 P P 03 01 32.3 +1.1
baz=264
INK **Inuvik** 91.44 22 LR LR 03 35 22.2
comp=Z,22nm,21.5s,baz=186,slow=31
T35M **Bob Quinn** 91.56 33 P P 03 01 32.6 +0.9
baz=264
U35K **Hyder** 91.58 34 P P 03 01 32.5 +0.9
baz=264
DLBC **Dease Lake** 91.82 32 P P 03 01 33.5 +0.6
baz=265
BBB **Bella Bella** 92.39 38 LR LR 03 39 32.8
comp=Z,21nm,19.0s,baz=344,slow=33
WTLY **Watson Lake, Y** 92.59 30 P P 03 01 36.5 +0.1
WTLY **Watson Lake, Y** 92.59 30 P P 03 01 36.9 +0.5
baz=266
TGTN **Hyland Airport** 92.95 29 P P 03 01 38.5 +0.5
baz=266
A36M **Sachs Harbour** 94.53 18 P P 03 01 45.1 +0.1
baz=270
YBH **Yreka Blue Hor** 95.64 49 LR LR 03 42 35.8
comp=Z,26nm,18.2s,baz=313,slow=34
PINE **Pine Mountain** 96.95 47 P P 03 01 57.2 +0.3
WVOR **Wild Horse Val** 98.67 48 P Pdif 03 02 04.7 +0.2
WVOR IAmb IAmb 03 02 06.1
comp=Z,3.3nm,0.9s
J08A **Circle Bar Ran** 98.75 47 P Pdif 03 02 05.1 +0.2
J08A IAmb IAmb 03 02 06.5
comp=Z,3.5nm,0.9s
NVAR **Mina Array Bea** 99.04 52 P **Pdif** 03 02 07.2 +0.8
comp=Z,0.7nm,0.7s,baz=248,slow=5.3,SNR=4.1
NVAR LR LR 03 42 37.9

comp=Z,30nm,18.1s,baz=292,slow=33
comp=Z,0.7nm,0.7s
YKA **Yellowknife Ar** 99.34 27 P **Pdif** 03 02 06.5 -0.3
comp=Z,0.8nm,0.8s,baz=282,slow=4.6,SNR=9.6
YKA pP **pP** 03 02 33.9 -1.7
comp=Z,0.6nm,0.9s,baz=279,slow=4.5,SNR=3.0
YKA PP **PP** 03 06 08.9 -2.3
comp=Z,0.3nm,0.8s,baz=272,slow=7.3,SNR=5.4
comp=Z,0.8nm,0.8s
BFSC **Mount Baldy Ra** 99.66 56 P **Pdif** 03 02 09.2 +0.1
baz=271
BC3 **Big Chuckawall** 101.51 57 P **Pdif** 03 02 17.6 +0.2
baz=272
HLID **Hailey** 101.69 47 P **Pdif** 03 02 18.8 +0.7
baz=275
DGMT **Dagmar** 107.91 40 P **PKiKP** 03 06 52.4 +0.2
baz=284
121A **Cookes Peak, D** 108.01 57 P **PKiKP** 03 06 53.3 +0.2
baz=276
S22A **4UR Ranch, Cre** 108.11 52 P **PKiKP** 03 06 53.2 0.0
baz=279
ISCO **Idaho Springs** 108.72 50 P **PKiKP** 03 06 54.3 0.0
baz=280
ANMO **Albuquerque** 108.81 55 P **PKiKP** 03 06 54.6 +0.1
baz=278
RSSD **Black Hills** 109.02 45 P **PKiKP** 03 06 54.2 -0.4
baz=283
SDCO **Great Sand Dun** 109.15 52 P **PKiKP** 03 06 55.2 0.0
baz=280
T25A **Trinidad** 110.11 52 P **PKiKP** 03 06 56.9 0.0
baz=280
MNTX **Cornudas Mount** 110.14 58 P **PKiKP** 03 06 57.2 +0.4
baz=278
MDND **Maddock** 111.04 40 P **PKiKP** 03 06 58.6 +0.6
baz=288
KSCO **Kaye Shedlock'** 111.14 50 P **PKiKP** 03 06 58.5 -0.2
baz=282
OGNE **Ogallala** 111.17 48 P **PKiKP** 03 06 58.9 +0.3
baz=283
MSTX **Muleshoe** 111.97 55 P **PKiKP** 03 07 00.6 +0.2
baz=280
CBKS **Cedar Bluff** 113.38 50 P **PKiKP** 03 07 03.3 +0.4
baz=284
ABTX **Abilene, Hawle** 114.79 56 P **PKiKP** 03 07 05.8 +0.1
baz=281
JCT **Junction City** 115.05 58 P **PKPdf** 03 07 06.8 +0.6
baz=280
WMOK **Wichita Mounta** 115.06 54 P **PKPdf** 03 07 06.6 +0.5
baz=283
KSU1 **Kansas State U** 115.67 49 P **PKiKP** 03 07 07.5 +0.4
baz=286
833A **Chaparral WMA,** 115.77 61 P **PKiKP** 03 07 08.1 +0.5
baz=279
TUL3 **Leonard** 117.15 52 P **PKiKP** 03 07 10.5 +0.4
baz=285
SCIA **State Center** 117.25 45 P **PKiKP** 03 07 10.3 +0.2
baz=290
GERES **GERESS Array B** 118.73 325 PKP **PKPdf** 03 07 12.9 0.0
comp=Z,0.4nm,0.4s,baz=354,slow=8.0,SNR=4.2
JFWS **Jewell Farm** 118.93 43 P **PKiKP** 03 07 13.4 +0.1
baz=293
MIAR **Mint Ida** 119.27 53 P **PKPdf** 03 07 14.1 -0.1
baz=286
CCM **Cathedral Cave** 119.99 48 P **PKPdf** 03 07 15.4 -0.1
baz=290
ABTA **Abfaltersbach** 120.46 323 *e*PKP **PKPdf** 03 07 15.8 -0.5
comp=Z,12nm,2.5s
HDIL **Hopedale** 120.50 45 P **PKPdf** 03 07 16.4 0.0
baz=293
WTTA **Wattenberg** 120.72 324 *e*PKP **PKPdf** 03 07 16.8 -0.1
comp=Z,1.1nm,0.2s
L44A **Lake County Fo** 120.81 43 P **PKPdf** 03 07 16.7 -0.2
baz=295
MOTA **Moosalm** 120.99 324 *e*PKP **PKPdf** 03 07 17.1 -0.3
comp=Z,1.4nm,0.6s
FETA **Feichten** 121.38 324 *e*PKiKP **PKiKP** 03 07 18.4 +0.2
comp=Z,1.2nm,0.7s
GLMI **Grayling** 121.75 39 P **PKiKP** 03 07 18.9 0.0
baz=299
DAVOX **Davos/Dischmat** 122.00 324 PKP **PKPdf** 03 07 19.0 -0.3
comp=Z,2.2nm,0.8s,baz=26,slow=13,SNR=3.8
VBMS **Vicksburg** 122.38 54 P **PKPdf** 03 07 20.0 -0.2
baz=287
OXF **Oxford** 122.56 52 P **PKPdf** 03 07 20.2 -0.3
baz=289
EKA **Eskdalemuir Ar** 122.68 338 PKP **PKPdf** 03 07 19.6 -0.5
comp=Z,0.9nm,0.5s,baz=36,slow=3.0,SNR=5.8
WVT **Waverly** 123.22 49 P **PKPdf** 03 07 21.2 -0.5
baz=291
O48B **Farmland** 123.50 44 P **PKPdf** 03 07 22.0 -0.2
baz=296
WCI **Wyandotte Cave** 123.55 46 P **PKPdf** 03 07 22.1 -0.2
baz=294
AAM **Ann Arbor** 123.58 41 P **PKPdf** 03 07 22.1 -0.1
baz=298
SCHQ **Schefferville** 124.04 21 PKP **PKPdf** 03 07 22.5 -0.3
comp=Z,7.0nm,1.1s,baz=223,slow=1.8,SNR=5.6
P49A **Miami Univ. Ec** 124.12 44 P **PKPdf** 03 07 23.2 -0.2
baz=296
LRAL **Lakeview Retre** 124.94 52 P **PKPdf** 03 07 24.8 -0.4
baz=290
ACSO **Alum Creek Sta** 125.00 43 P **PKPdf** 03 07 24.8 -0.2
baz=298
PLCA **Paso Flores** 125.21 148 PKP **PKiKP** 03 07 27.1 +1.1
comp=Z,5.3nm,0.9s,baz=206,slow=1.5,SNR=11
PLCA pPKP **pPKPdf** 03 07 54.0 -1.4
comp=Z,1.4nm,0.8s,baz=200,slow=2.6,SNR=2.1
BRAL **Brunton** 125.51 55 P **PKPdf** 03 07 25.9 -0.4
baz=289
P52A **Corning** 125.86 43 P **PKPdf** 03 07 26.6 -0.1
baz=298
M53A **WI Miller and** 125.94 40 P **PKPdf** 03 07 26.9 +0.1
baz=301
O53A **New Philadelph** 126.18 42 P **PKPdf** 03 07 27.5 +0.2
baz=300
TZTN **Tazewell** 126.23 47 P **PKPdf** 03 07 27.6 +0.1
baz=295
GOGA **Godfrey** 127.56 51 P **PKPdf** 03 07 30.1 -0.1
baz=293
SSPA **Standing Stone** 128.16 40 P **PKPdf** 03 07 31.3 +0.3
baz=303
BLA **Blacksburg** 128.18 45 P **PKPdf** 03 07 31.2 -0.1
baz=298
TIGA **Tifton** 128.20 53 P **PKPdf** 03 07 31.4 -0.1
baz=292
BINY **Binghamton** 128.46 37 P **PKPdf** 03 07 31.8 +0.1
baz=306
KMSC **Kings Mountain** 128.46 48 P **PKPdf** 03 07 32.1 +0.2
baz=296
LBNH **Lisbon** 129.52 33 P **PKPdf** 03 07 34.0 +0.4
baz=311
CBN **Corbin Frederi** 129.79 42 P **PKPdf** 03 07 34.4 +0.2
baz=302
PKME **Peaks-Kenny Pk** 130.19 30 P **PKPdf** 03 07 35.2 +0.5
baz=315
L61B **Northampton** 130.25 35 P **PKPdf** 03 07 35.3 +0.3
baz=309
PAL **Palisades** 130.42 37 P **PKPdf** 03 07 35.5 +0.2
baz=307
GARC **Garzon, Huila** 140.86 92 *e*P **PKPdf** 03 07 51.0 -4.9
CMAN1 **Manizales, Cal** 140.95 87 *e*P **PKPdf** 03 07 49.1 -6.9
GUY2C **Guyana, Caldas** 141.11 87 *e*P **PKPdf** 03 07 53.0 -3.6
ORTC **Ortega, Tolima** 141.20 89 *e*P **PKPdf** 03 07 52.2 -4.0
TORD **Torodi Ar. Bea** 141.47 285 PKhKP PKPpre 03 07 50.8
comp=Z,1.4nm,0.6s,baz=68,slow=4.2,SNR=7.8
SPBC **San Pablo de B** 142.40 87 *e*P **PKPdf** 03 07 54.2 -4.2
OCAC **Ocana** 143.07 82 *e*P PKPbc 03 07 57.0 +0.2
CPUP **Villa Florida** 143.27 147 PKP **PKPdf** 03 08 01.1 +1.6
comp=Z,8.4nm,1.0s,baz=202,slow=6.2,SNR=8.2
PAMC **Pamplona, Colo** 143.73 84 *e*P PKPbc 03 07 59.2 +0.2
PTGC **Puerto Gaitan,** 144.31 89 *e*P **PKPab** 03 07 58.7 -1.2
TAMC **Tame, Arauca** 144.66 85 *e*P **PKPdf** 03 08 02.1 -0.2
SDV **Santo Domingo** 145.67 81 *e*P **PKPdf** 03 08 04.5 +0.2
SJG **San Juan** 147.84 63 *e*P **PKPbc** 03 08 09.5 -1.0
KIC **Kosan Boka** 148.48 275 ↑↑*i*PKP1 **PKPbc** 03 08 12.7 +0.3
comp=Z,37nm,0.8s
DBIC **Dimbokro** 148.59 275 PKPbc **PKPbc** 03 08 13.0 +0.4
comp=Z,23nm,0.8s,baz=65,slow=3.4,SNR=40
DBIC pPKPbc **pPKPdf** 03 08 40.0 +1.3
comp=Z,13nm,1.0s,baz=70,slow=6.9,SNR=3.8
TIC **Toumodi** 148.75 275 ↑↑*i*PKP1 **PKPbc** 03 08 13.4 +0.3
comp=Z,46nm,0.9s
LIC **Lamto** 148.77 275 ↑↑*e*PKP1 **PKPbc** 03 08 13.4 +0.3
comp=Z,99nm,0.8s
BDFB **Brasilia** 156.94 150 PKP **PKPdf** 03 08 21.8 +0.7
comp=Z,4.4nm,0.9s,baz=160,slow=3.3,SNR=7.1

TAP 12 02:49:17.4, 23.91N×121.50E, h7km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.06**	**356**	*i* P			Pg	02 49 19.2	+0.1
	baz=355								
ETM				S			Sg	02 49 21.1	+0.8
	baz=355								
ESL	**Shilin**	**0.11**	**212**	*i* P			Pg	02 49 20.9	+1.0
	baz=207								
HWA	**Hwalien**	**0.12**	**56**	P			Pg	02 49 20.8	+0.8
	baz=58								
HWA				S			Sg	02 49 23.7	+1.9
	baz=58								
LXIB	**Xiulin Townshi**	**0.14**	**325**	P			Pg	02 49 20.7	+0.4
	baz=325								
LXIB				S			Sg	02 49 24.4	+2.0
	baz=325								
SHUL	**Shoufeng**	**0.14**	**154**	*e*P			Pg	02 49 21.0	+0.8
	baz=153								
TWD	**Chiawan**	**0.19**	**28**	P			Pg	02 49 22.3	+1.0
	baz=29								
TWD				S			Sg	02 49 26.2	+2.3
	baz=29								
TWD	**Chiawan**	**0.19**	**28**	P			Sg	02 49 26.2	+2.3
	baz=335								
WARBT	**Fenglin Townsh**	**0.22**	**208**	P			Pg	02 49 22.1	+0.3
	baz=208								
NACB	**Ninganchiao**	**0.28**	**19**	P			Pb	02 49 24.1	-0.5
	baz=18								
NACB				S			Sb	02 49 28.7	-0.8
	baz=18								
WHF	**Hehuan Shan**	**0.32**	**318**	*i* P			Pg	02 49 24.0	+0.2
	baz=318								
WHF				*i* S			Sb	02 49 29.8	-1.3
	baz=318								
CHGB	**Renai**	**0.33**	**297**	*e*P			Pg	02 49 24.6	+0.6
	baz=296								
CHGB				*e*S			Sb	02 49 31.0	-0.3
	baz=296								
WUSB	**Renai**	**0.36**	**283**	P			Pb	02 49 25.3	-0.8
	baz=283								
WUSB				S			Sb	02 49 32.0	+0.1
	baz=283								
VWDT	**VWDT**	**0.36**	**245**	P			Pb	02 49 25.5	-0.5
	baz=244								
VWDT				S			Sb	02 49 32.4	+0.5
	baz=244								
SSLB	**Suanglung**	**0.51**	**256**	*e*S			Sg	02 49 34.7	+0.7
	baz=256								

TAP 12 02:49:22.2, 23.94N×121.67E, h8km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**299**	P			Pg	02 49 24.5	+0.4
	baz=301								
HWA				*i* S			Sg	02 49 26.4	+0.9
	baz=301								
TWD	**Chiawan**	**0.15**	**334**	*i* S			Sg	02 49 28.7	+1.1
	baz=335								
ETM	**Tongmen**	**0.16**	**278**	P			Pg	02 49 26.1	+0.4
	baz=277								
ETM				S			Sg	02 49 29.0	+1.0
	baz=277								
SHUL	**Shoufeng**	**0.18**	**212**	P			Pg	02 49 26.9	+0.9
	baz=212								
SHUL				*e*S			Sg	02 49 30.9	+2.3
	baz=212								
ETL	**Fush Village**	**0.22**	**349**	*e*P			Pg	02 49 27.0	+0.3
	baz=336								
ETL				S			Sg	02 49 30.6	+0.9
	baz=336								
NACB	**Ninganchiao**	**0.24**	**343**	*e*P			Pg	02 49 26.5	-0.5
	baz=340								
NACB				*e*S			Sg	02 49 30.9	+0.6
	baz=340								
LXIB	**Xiulin Townshi**	**0.25**	**288**	*e*P			Pg	02 49 27.5	+0.3
	baz=278								
LXIB				*e*S			Sg	02 49 32.0	+1.4
	baz=278								
ESL	**Shilin**	**0.25**	**239**	*e*P			Pg	02 49 27.8	+0.5
	baz=243								
ESL				*e*S			Sg	02 49 31.2	+0.6
	baz=243								
TEGC	**Jichi Village**	**0.26**	**207**	*e*S			Sb	02 49 34.0	+0.2
	baz=204								
ETLH	**Xiulin Townshi**	**0.31**	**327**	S			Sg	02 49 33.8	+1.2
	baz=325								
WARBT	**Fenglin Townsh**	**0.34**	**229**	S			Sg	02 49 34.2	+0.7
	baz=236								
WHF	**Hehuan Shan**	**0.42**	**299**	S			Sg	02 49 37.4	+1.3
	baz=298								
VWDT	**VWDT**	**0.52**	**249**	*e*S			Sb	02 49 41.5	+0.3
	baz=256								
SSLB	**Suanglung**	**0.67**	**257**	*e*S			Sb	02 49 45.0	-0.6
	baz=265								

NEIC ***12*** *03:04:29.6±1.8, 56.21N±0.08×149.9W±0.1, h22km±9km, mb3.8/1, ML3.7/56, ML3.4(AEIC), Error ellipse: s-maj=11.6km s-min=7.9km az=165.0*
AEIC ***12*** *03:04:33.6±1.5, 56.33N±0.08×149.93W±0.10, h2km±7km, Error ellipse: s-maj=11.8km s-min=7.6km az=163.0*

ISC 12 03:04:29.6±1.6, 56.3N±0.1×149.95W±0.07, h10km, n233, σ1.9 01/243, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.05**	**298**		Pn		**Pn**	**03 05 03.9**	**-0.2**
OHAK					Sn		**Sn**	**03 05 26.4**	**-3.4**
OHAK	**Old Harbor**	**2.05**	**298**		P		**Pn**	**03 05 04.0**	**-0.2**
	baz=114								
OHAK					S		**Sn**	**03 05 27.2**	**-2.5**
	baz=114								
KDAK	**Kodiak Island**	**2.06**	**317**				**Pn**	**03 05 04.3**	**+0.1**
KDAK					Sn		**Sn**	**03 05 26.6**	**-3.4**
KDAK					IAML			03 05 29.6	
	229nm,0.4s								
SII	**Sitkinak Islan**	**2.37**	**278**		Pn		**Pn**	**03 05 07.4**	**-1.0**
SII					IAML			03 05 47.5	
	comp=N,156nm,1.4s								
SII					IAML			03 05 53.2	
	comp=E,165nm,0.8s								
SYI	**Shuyak Island**	**2.66**	**331**		Pn		**Pn**	**03 05 11.6**	**-0.8**
SYI					Sn		**Sn**	**03 05 42.9**	**-1.8**
Q20K	**Shuyak Island**	**2.66**	**331**		P		**Pn**	**03 05 12.7**	**+0.3**
	baz=149								
Q20K					S		**Sn**	**03 05 43.6**	**-1.1**
	baz=149								
CHIR	**Chirikof Islan**	**3.22**	**264**		Pn		**Pn**	**03 05 20.1**	**-0.1**
CHIR					IAML			03 05 45.5	
	comp=N,153nm,1.2s								
CHIR					IAML			03 05 54.5	
	comp=E,167nm,1.5s								
CHIR	**Chirikof Islan**	**3.22**	**264**		P		**Pn**	**03 05 21.3**	**+1.2**
	baz=78								
Q19K	**Cape Douglas,**	**3.29**	**324**		Pn		**Pn**	**03 05 21.8**	**+0.5**
Q19K					Sn		**Sn**	**03 06 00.5**	**0.0**
Q19K					IAML			03 06 20.0	
	comp=N,252nm,0.9s								
Q19K	**Cape Douglas,**	**3.29**	**324**		P		**Pn**	**03 05 22.5**	**+1.3**
	baz=141								
Q19K					S		**Sn**	**03 06 00.7**	**+0.2**
	baz=141								
CNPM	**China Poot**	**3.30**	**349**				**Pn**	**03 05 21.2**	**-0.1**
CNPM					Sn		**Sn**	**03 05 59.5**	**-1.1**
BRSE	**Bradley Lake S**	**3.47**	**353**				**Pn**	**03 05 22.9**	**-0.7**
BRSE							**Sn**	**03 06 02.6**	**-2.1**
BRSE	**Bradley Lake S**	**3.47**	**353**		P		**Pn**	**03 05 22.9**	**-0.7**
	baz=172								
BRSE					S		**Sn**	**03 06 02.6**	**-2.1**
	baz=172								
HOM	**Homer**	**3.48**	**346**		Pn		**Pn**	**03 05 23.1**	**-0.6**
HOM					IAML			03 06 36.5	
	comp=N,270nm,1.3s								
BRLK	**Bradley Lake**	**3.50**	**352**		Pn		**Pn**	**03 05 23.6**	**-0.5**
Q23K	**Middleton Isla**	**3.67**	**30**		Pn		**Pn**	**03 05 25.2**	**-1.1**
MID	**Middleton Isla**	**3.67**	**30**		Pn		**Pn**	**03 05 26.0**	**-0.4**
MID					IAML			03 06 39.8	
	comp=N,213nm,1.4s								
P19K	**Oil Pt**	**3.78**	**334**		Pn		**Pn**	**03 05 28.4**	**+0.5**
P19K					IAML			03 06 19.5	
	comp=E,123nm,0.6s								
P19K					IAML			03 06 21.9	
	comp=N,122nm,0.5s								
P19K	**Oil Pt**	**3.78**	**334**		P		**Pn**	**03 05 28.6**	**+0.7**

	baz=151							
SEW	Seward	3.82	4	Pn		Pn	03 06 27.0	-1.3
SEW	Seward	3.82	4	P		Pn	03 05 27.3	-1.0
	baz=184							
P23K	Montague Islan	3.94	19			Pn	03 05 29.2	-0.8
P23K	Montague Islan	3.94	19	P		Pn	03 05 29.2	-0.8
	baz=201							
O20K	Slope Mountain	4.04	341			Pn	03 05 31.6	+0.1
O20K	Slope Mountain	4.04	341	P		Pn	03 05 31.5	+0.1
	baz=158							
IVE	Iliamna Volcan	4.06	338			Pn	03 05 31.6	-0.2
P18K	Big Mountain,	4.19	320	Pn		Pn	03 05 33.6	+0.1
P18K				IAML			03 06 23.1	
	comp=E,31nm,0.8s							
P18K	Big Mountain,	4.19	320	P		Pn	03 05 34.0	+0.5
	baz=135							
O22K	Cooper Landing	4.19	2			Pn	03 05 32.5	-1.0
O22K				IAML			03 06 30.4	
	comp=E,133nm,0.8s							
O22K				IAML			03 06 30.7	
	comp=N,137nm,0.8s							
O22K	Cooper Landing	4.19	2	P		Pn	03 05 32.4	-1.0
	baz=182							
SLKM	Skilak Lake	4.21	358			Pn	03 05 32.8	-1.1
RSO	Redoubt South	4.42	342			Pn	03 05 36.8	0.0
RDT	Redoubt	4.47	344			Pn	03 05 36.4	-1.0
HIN	Hinchinbrook I	4.48	22	Pn		Pn	03 05 36.7	-0.9
HIN				IAML			03 06 31.4	
	comp=N,106nm,1.0s							
HIN				IAML			03 06 33.6	
	comp=E,78nm,1.4s							
CAPN	Captain Cook N	4.52	352	Pn		Pn	03 05 38.2	+0.3
CAPN	Captain Cook N	4.52	352	P		Pn	03 05 38.6	+0.6
	baz=171							
O18K	Koktuh Hills	4.52	324	Pn		Pn	03 05 38.5	+0.4
O18K				IAML			03 06 32.9	
	comp=N,35nm,1.1s							
O18K				IAML			03 06 33.0	
	comp=E,36nm,1.1s							
O18K	Koktuh Hills	4.52	324	P		Pn	03 05 38.3	+0.2
	baz=139							
P17K	Kvichak River	4.52	312			Pn	03 05 39.3	+1.3
P17K	Kvichak River	4.52	312	P		Pn	03 05 39.3	+1.3
	baz=127							
O19K	Port Alsworth	4.53	331			Pn	03 05 37.9	-0.2
O19K	Port Alsworth	4.53	331	P		Pn	03 05 38.1	0.0
	baz=147							
NCT	North Crescent	4.54	341			Pn	03 05 37.9	-0.5
KAIM	Kayak Island	4.66	37	Pn		Pn	03 05 39.3	-0.7
KAIM				IAML			03 06 38.9	
	comp=N,98nm,0.9s							
KAIM				IAML			03 06 51.1	
	comp=E,81nm,1.4s							
KAIM	Kayak Island	4.66	37	P		Pn	03 05 39.7	-0.3
	baz=221							
CHGN	Chignik	4.71	273	Pn		Pn	03 05 41.0	+0.3
EYAK	Cordova Ski Ar	4.79	26	Pn		Pn	03 05 41.1	-0.6
EYAK	Cordova Ski Ar	4.79	26	P		Pn	03 05 41.5	-0.1
	baz=209							
RC01	Rabbit Creek A	4.80	1	Pn		Pn	03 05 41.0	-0.8
RC01				IAML			03 06 39.6	
	comp=E,39nm,0.6s							
RC01				IAML			03 06 42.4	
	comp=N,22nm,0.7s							
RC01	Rabbit Creek A	4.80	1	P		Pn	03 05 41.2	-0.6
	baz=181							
RAGM	Ragged Mountai	4.94	32			Pn	03 05 43.6	-0.3
RAGM				IAML			03 06 55.4	
	comp=E,76nm,0.9s							
SUCK	Suckling Hills	4.99	38	Pn		Pn	03 05 44.0	-0.4
SUCK				IAML			03 06 48.9	
	comp=N,64nm,1.4s							
SUCK				IAML			03 06 54.1	
	comp=E,77nm,1.5s							
HMT	Hamilton	5.03	34	Pn		Pn	03 05 45.0	-0.1
N20K	Mount Spurr	5.05	347	P		Pn	03 05 44.4	-0.9
	baz=165							
SPCR	Spurr Chakacha	5.05	347			Pn	03 05 44.4	-0.9
NICHA	Nichawak Mount	5.05	36			Pn	03 05 45.3	+0.1
GOAT	Goat Mountain	5.09	30			Pn	03 05 46.0	+0.2
N19K	Bonanza Creek	5.10	334	Pn		Pn	03 05 45.2	-0.9
N19K	Bonanza Creek	5.10	334	P		Pn	03 05 45.8	-0.3
	baz=150							
SPCG	Spurr Capps Gl	5.11	349			Pn	03 05 45.8	-0.4
KNK	Knik Glacier	5.18	8	Pn		Pn	03 05 46.2	-0.9
KNK				IAML			03 06 48.2	
	comp=N,17nm,1.0s							
KNK				IAML			03 06 52.9	
	comp=E,22nm,1.1s							
KNK	Knik Glacier	5.18	8	P		Pn	03 05 46.7	-0.4
	baz=189							
SUA	Susitna One	5.19	356	Pn		Pn	03 05 46.0	-1.3
SUA	Susitna One	5.19	356	P		Pn	03 05 46.2	-1.1
	baz=175							
BERG	Berg Lake	5.25	36	Pn		Pn	03 05 47.5	-0.6
BERG				IAML			03 06 48.8	
	comp=N,56nm,0.4s							
BERG				IAML			03 07 07.3	
	comp=E,62nm,0.8s							
SPNN	North Nagishla	5.27	345			Pn	03 05 48.2	-0.3
STLK	Strandline Lak	5.30	350			Pn	03 05 48.5	-0.3
GRIN	Grindle Hills	5.30	39			Pn	03 05 48.8	+0.1
DIV	Divide	5.30	22	Pn		Pn	03 05 48.6	-0.3
PMR	Palmer	5.32	4	Pn		Pn	03 05 48.6	-0.3
PMR	Palmer	5.32	4	P		Pn	03 05 49.1	+0.2
	baz=185							
N18K	Kilae Creek	5.38	327	Pn		Pn	03 05 49.6	-0.2
N18K	Kilae Creek	5.38	327	P		Pn	03 05 50.0	+0.2
	baz=142							
SNH	Sunshine Point	5.40	41	Pn		Pn	03 05 50.0	-0.1
KHIT	Khitrov Hills	5.44	38			Pn	03 05 50.5	-0.2
BMRM	Bremner River	5.44	29	Pn		Pn	03 05 50.1	-0.6
BMRM	Bremner River	5.44	29	P		Pn	03 05 50.7	0.0
	baz=213							
O16K	Kokwok River B	5.45	311	Pn		Pn	03 05 51.6	+0.9
GHO	Glory Hole Cre	5.51	5	Pn		Pn	03 05 51.3	-0.3
SML	Sawmill	5.58	8	Pn		Pn	03 05 52.5	-0.1
SML	Sawmill	5.58	8	P		Pn	03 05 52.6	+0.1
	baz=189							
KLU	Klutina	5.60	20	Pn		Pn	03 05 52.5	-0.4
KLU	Klutina	5.60	20	P		Pn	03 05 52.9	0.0
	baz=204							
M23K	Glacier View	5.62	11			Pn	03 05 53.3	+0.2
M23K	Glacier View	5.62	11	P		Pn	03 05 53.3	+0.2
	baz=193							
SVW2	Sparrevohn	5.63	331	Pn		Pn	03 05 52.1	-1.1
CNBA	Chernabura Isl	5.67	259	Pn		Pn	03 05 52.0	-1.8
BARK	Barkley Ridge	5.68	41			Pn	03 05 54.5	+0.5
SCM	Sheep Creek Mo	5.70	13	Pn		Pn	03 05 54.4	+0.1
SCM	Sheep Creek Mo	5.70	13	P		Pn	03 05 54.9	+0.5
	baz=195							
CRQM	Cirque	5.71	36	Pn		Pn	03 05 54.6	+0.1
MESA	MESA	5.73	44	Pn		Pn	03 05 54.3	-0.6
MESA	MESA	5.73	44	P		Pn	03 05 54.7	-0.1
	baz=231							
SKT	Skwentna	5.75	353	Pn		Pn	03 05 53.6	-1.2
SKT	Skwentna	5.75	353	P		Pn	03 05 54.6	-0.3
	baz=171							
TGL	Tana Glacier	5.81	37	Pn		Pn	03 05 55.3	-0.6
M20K	Styx River	5.83	345	Pn		Pn	03 05 55.0	-1.0
M20K	Styx River	5.83	345	P		Pn	03 05 55.6	-0.5
	baz=162							
BAGL	Bagley Icefiel	5.88	41			Pn	03 05 56.6	-0.1
VRDI	Verde Repeater	5.98	32	Pn		Pn	03 05 57.5	-0.7
N25K	Chitina, Valde	5.99	25	P		Pn	03 05 58.4	+0.2
	baz=210							
SDPT	Sand Point	6.01	265	Pn		Pn	03 05 58.5	+0.1
O15K	Ungalikthiuk R	6.02	303			Pn	03 05 59.9	+1.3
O15K	Ungalikthiuk R	6.02	303	P		Pn	03 05 59.9	+1.3
	baz=114							
M18K	Stony River	6.02	332			Pn	03 05 58.3	-0.4
M18K	Stony River	6.02	332	P		Pn	03 05 58.3	-0.4
	baz=147							
GLB	Gilahina Butte	6.05	29	Pn		Pn	03 05 58.6	-0.4
M19K	Big River Lodg	6.06	340	Pn		Pn	03 05 58.4	-0.8
M19K	Big River Lodg	6.06	340	P		Pn	03 05 59.2	0.0
	baz=156							
KIAG	Kiagna River	6.09	37			Pn	03 05 59.3	-0.4
M24K	Tolsona, Glenn	6.13	17	Pn		Pn	03 06 00.5	+0.3
SAMH	Samovar Hills	6.17	48			Pn	03 06 01.5	+0.7
TABL	Table Mountain	6.21	45	Pn		Pn	03 06 00.8	-0.6
MCARA	McCarthy VSAT	6.23	32	Pn		Pn	03 06 01.6	+0.1
MCARA	McCarthy VSAT	6.23	32	P		Pn	03 06 01.7	+0.3
	baz=218							
N16K	Nishlik Lake	6.24	316			Pn	03 06 02.9	+1.3
	baz=128							
PTPK	Patty Peak	6.25	35			Pn	03 06 02.1	+0.2
PINM	Pinnacle	6.38	49	P		Pn	03 06 03.6	+0.1
	baz=238							
WAT6	Susitna Watana	6.39	9			Pn	03 06 04.2	+0.4
WAT6	Susitna Watana	6.39	9	P		Pn	03 06 04.2	+0.4
	baz=191							
L19K	White Mountain	6.41	339	Pn		Pn	03 06 03.1	-0.8
L19K	White Mountain	6.41	339	P		Pn	03 06 03.2	-0.7
	baz=155							
M17K	Holitna River	6.41	326	Pn		Pn	03 06 04.4	+0.4
M17K	Holitna River	6.41	326	P		Pn	03 06 04.5	+0.5
	baz=139							
BARN	Barnard Glacie	6.43	39	Pn		Pn	03 06 04.3	-0.1
CTG	Chitna Glacier	6.48	40	P		Pn	03 06 05.6	+0.6
	baz=228							
CTGM	Chitina Glacie	6.48	40	Pn		Pn	03 06 04.4	-0.7
LOGN	Logan Glacier	6.51	42	Pn		Pn	03 06 05.1	-0.4
PNL	Peninsula	6.54	55			Pn	03 06 05.7	-0.1
PNL	Peninsula	6.54	55	P		Pn	03 06 05.7	-0.1
	baz=244							
BCPM	Bancas Point	6.57	52	Pn		Pn	03 06 04.6	-1.5
WAT7	Susitna Watana	6.57	4			Pn	03 06 06.6	+0.4
HARP	HAARP	6.58	20			Pn	03 06 07.4	+1.1
HARP	HAARP	6.58	20	P		Pn	03 06 07.4	+1.1
	baz=204							
N15K	Kwethluk River	6.61	310	Pn		Pn	03 06 08.8	+2.2
M16K	Timber Creek	6.66	319	Pn		Pn	03 06 07.9	+0.5
M16K	Timber Creek	6.66	319	P		Pn	03 06 08.2	+0.8
	baz=131							
L18K	Granite Mounta	6.86	333	Pn		Pn	03 06 09.8	-0.3
DHY	Denali Highway	6.91	10	Pn		Pn	03 06 09.9	-1.0
DHY	Denali Highway	6.91	10	P		Pn	03 06 11.6	+0.6
	baz=192							
M26K	Nabesna, AK	7.07	27	Pn		Pn	03 06 13.3	+0.3
RND	Reindeer	7.14	4	Pn		Pn	03 06 13.1	-0.9
TRF	Thorofare Moun	7.17	359	Pn		Pn	03 06 14.1	-0.4
TRF	Thorofare Moun	7.17	359	P		Pn	03 06 14.4	-0.1
	baz=178							
O29M	Mount Kennedy	7.20	52	Pn		Pn	03 06 14.8	-0.2
CAST	Castle Rocks	7.21	352	Pn		Pn	03 06 14.5	-0.5
CAST	Castle Rocks	7.21	352	P		Pn	03 06 15.0	0.0
	baz=170							
YUK2	White River	7.22	37			Pn	03 06 15.9	+0.7
YUK8	Steele Glacier	7.27	42			Pn	03 06 17.0	+1.1
YUK8	Steele Glacier	7.27	42	P		Pn	03 06 17.0	+1.1
	baz=231							
KTH	Kantishna Hill	7.29	357	Pn		Pn	03 06 15.4	-0.6
P29M	Windy Craggy	7.30	58	Pn		Pn	03 06 15.8	-0.4
P29M	Windy Craggy	7.30	58	P		Pn	03 06 16.0	-0.2
	baz=248							
L16K	Owhat River	7.31	322	Pn		Pn	03 06 15.9	-0.4
L16K	Owhat River	7.31	322	P		Pn	03 06 16.7	+0.4
	baz=133							
TTA	Tatalina	7.32	338	Pn		Pn	03 06 14.8	-1.6
M27K	Edge Creek, AK	7.33	31	Pn		Pn	03 06 16.9	+0.2
M27K	Edge Creek, AK	7.33	31	P		Pn	03 06 17.6	+0.9
	baz=218							
MCK	McKinley	7.47	3	Pn		Pn	03 06 18.1	-0.3
MCK	McKinley	7.47	3	P		Pn	03 06 19.1	+0.7
	baz=184							
YUK7	Dusty Glacier	7.50	51			Pn	03 06 19.4	+0.3
L26K	Log Cabin Wild	7.52	24	Pn		Pn	03 06 20.9	+1.7
YUK6	Outpost Mounta	7.62	48			Pn	03 06 21.4	+0.7
YUK6	Outpost Mounta	7.62	48	P		Pn	03 06 21.4	+0.7
	baz=238							
S31K	Pelican	7.65	72	Pn		Pn	03 06 18.8	-2.1
K17K	Iditarod	7.70	330	Pn		Pn	03 06 21.3	-0.3
M14K	Bethel	7.70	310	Pn		Pn	03 06 23.8	+2.2
YUK4	Talbot Arm	7.73	45	P		Pn	03 06 24.3	+2.0
	baz=234							
BPAW	Bear Paw Mtn.	7.83	357	Pn		Pn	03 06 21.6	-1.9
BPAW	Bear Paw Mtn.	7.83	357	P		Pn	03 06 22.6	-0.9
	baz=176							
RIDG	Independent Ri	7.88	17	Pn		Pn	03 06 24.9	+0.8
L27K	Beaver Creek,	7.92	28			Pn	03 06 25.4	+0.7
L27K	Beaver Creek,	7.92	28	P		Pn	03 06 25.4	+0.7
	baz=215							
HYT	Haines Junctio	7.92	50	Pn		Pn	03 06 24.5	-0.3
YUK5	Granite Creek	7.93	47			Pn	03 06 24.9	+1.2
BCAR	Bear Creek A	7.93	28	Pn		Pn	03 06 25.3	+0.4
L15K	Ungalak Mounta	8.02	317			Pn	03 06 26.6	+0.6
L15K	Ungalak Mounta	8.02	317	P		Pn	03 06 26.6	+0.6
	baz=127							
SIT	Sitka	8.09	79	Pn		Pn	03 06 23.3	-3.6
M13K	Dall Lake	8.15	306	Pn		Pn	03 06 29.0	+1.1
J19K	Poorman	8.21	342	Pn		Pn	03 06 27.8	-0.9
WRH	Wood River Hil	8.24	6	Pn		Pn	03 06 29.2	+0.1
SCRK	Sand Creek	8.24	19	Pn		Pn	03 06 27.6	-1.6
HDA	Harding Lake	8.26	9	Pn		Pn	03 06 28.7	-0.6
L14K	Kuka Creek	8.31	313	Pn		Pn	03 06 31.6	+1.7
SKAG	Skagway	8.40	62	Pn		Pn	03 06 31.2	-0.1
K15K	Wolf Creek Mou	8.43	320	Pn		Pn	03 06 32.0	+0.4
CCB	Clear Creek Bu	8.43	6	Pn		Pn	03 06 29.7	-1.9
J17K	VABM Dome	8.46	331	Pn		Pn	03 06 30.1	-1.9
M29M	Somme Creek	8.49	39	Pn		Pn	03 06 32.3	-0.3
M29M	Somme Creek	8.49	39	P		Pn	03 06 33.1	+0.6
	baz=229							
S32K	Killisnoo	8.50	76	Pn		Pn	03 06 29.5	-3.0
O30N	Mendenhall	8.51	53	Pn		Pn	03 06 34.4	+1.6
R32K	Eaglecrest	8.59	70	Pn		Pn	03 06 32.1	-1.7
IL31		8.62	9	Pn		Pn	03 06 35.9	+1.6
ILAR	Eielson Array	8.62	9	Pn		Pn	03 06 35.1	+0.8
JIS	Juneau Island	8.66	70	Pn		Pn	03 06 33.2	-1.5
K27K	Chicken	8.68	24	Pn		Pn	03 06 35.1	+0.1
MDM	Murphy Dome	8.72	5	Pn		Pn	03 06 35.3	-0.3
MLY	Manley	8.76	358	Pn		Pn	03 06 35.2	-1.0
I23K	Minto, Yukon-K	8.88	2	Pn		Pn	03 06 36.9	-0.8
I21K	Tanana	8.96	354	Pn		Pn	03 06 38.5	-0.3
N31M	Braeburn, Yuko	8.97	49	Pn		Pn	03 06 39.2	+0.1
WHY	Whitehorse	9.01	55	Pn		Pn	03 06 38.7	-1.0
L29M	L29M	9.05	36	Pn		Pn	03 06 39.5	-0.7
M30M	Minto, Yukon	9.17	41	Pn		Pn	03 06 41.6	-0.2
P32M	Atlin	9.23	62	Pn		Pn	03 06 42.1	-0.6
P32M	Atlin	9.23	62	P		Pn	03 06 42.7	0.0
	baz=256							
DAWY	Dawson	9.38	30	Pn		Pn	03 06 44.1	-0.5
U33K	Whale Pass	9.38	84	Pn		Pn	03 06 40.6	-4.1
H21K	Melozitna Rive	9.48	353	Pn		Pn	03 06 44.6	-1.4
EGAK	Eagle	9.53	23	Pn		Pn	03 06 46.0	-0.5
I26K	Coal Creek Min	9.61	17	Pn		Pn	03 06 47.7	-0.1
H24K	Noodor Dome	9.61	5	Pn		Pn	03 06 50.0	+2.1
H18K	Honhosa River	9.77	339	Pn		Pn	03 06 49.6	-0.4
P33M	Teslin, Yukon	9.83	59	Pn		Pn	03 06 49.9	-1.0
Q32M	Nakina River	9.84	67	Pn		Pn	03 06 50.8	-0.3
IMAR	Indian Mountai	9.88	351	Pn		Pn	03 06 51.0	-0.5
M31M	Drury Creek, Y	9.90	47	Pn		Pn	03 06 51.4	-0.4
G23K	Bananza Creek	10.44	360	Pn		Pn	03 06 58.5	-0.7
R33M	Jennings River	10.57	65	Pn		Pn	03 07 00.1	-0.9
J30M	Hart River	10.65	33	Pn		Pn	03 07 03.2	+1.0
F21K	Alatna River	11.08	353	Pn		Pn	03 07 05.9	-2.0
F24K	Squaw Lake	11.29	4	Pn		Pn	03 07 10.0	-0.8
BMAR	Burnt Mountain	11.44	10	Pn		Pn	03 07 13.0	+0.2
E19K	Redstone River	11.69	346	Pn		Pn	03 07 17.9	+1.6
E24K	Your Creek	11.83	3	Pn		Pn	03 07 16.5	-1.7
E25K	Arctic Village	12.03	8	Pn		Pn	03 07 21.9	+1.1
G31M	Satah River	12.94	28	Pn		Pn	03 07 33.7	+0.5
B21K	Ikpikpuk River	13.52	353	Pn		Pn	03 07 41.0	-0.2
C16K	Lisburne Hills	13.91	336	P		P	03 07 57.2	+2.5
A36M	Sachs Harbour	18.80	24	P		Pn	03 08 50.0	+0.8
A36M				IAmb		IAmb	03 09 02.6	
	comp=Z,5.0nm,0.8s							

IDC **12** *03:08:28.8±1.5,46°.64N×1°.03W, h0km, mb3.8/3, mbtmp3.9/8, ML4.4/5, Error ellipse: s-maj=30.7km s-min=20.6km az=113.0*

NEIC **12** *03:08:29.2±1.6,46°.71N±0°.07×0°.83W±0°.08, h5km±1km, mb4.1/4, Error ellipse: s-maj=11.3km s-min=9.5km az=192.0*

MED_RC **12** *03:08:30.0±1.2,46°.62N×0°.66W, h20km, MW4.0/6, Moment Tensor Solution.Mantle waves: s6,c7; Duration: 1s1 Moment tensor: Scale 10^15Nm; Mrr0.12±.38; Mθθ0.71±.56; Mϕϕ-0.83±.39; Mrθ-0.38±.32; Mϕθ-0.85±.41; Mϕr-0.62±.33; Best double couple: M0 1.31000×10^15 NP1:ϕs70.00000°,δ79.00000°,λ-157.00000°. NP2: ϕs336.00000°,δ68.00000°,λ-12.00000°. Principal axes: T 1.1000, Plg8.0000°, Azm202.0000°; N 0.4200, Plg65.0000°, Azm95.0000°; P -1.5200, Plg24.0000°, Azm295.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

BGS **12** *03:08:30.7±1.3,46°.65N×0°.56W, h5km, ML4.4, ML4.4*

STR **12** *03:08:31.4±0.3,47°N±2°×°±°, h2km, MLv4.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=53.0, preliminary*

LDG **12** *03:08:31.3±0.1,46°.64N×0°.61W, h2km, Md4.0/9, Ml4.4/72, Error ellipse: s-maj=1.3km s-min=1.0km az=50.0*

INMG **12** *03:08:32.1±1.9,46°.63N×0°.60W, h2km, ML3.3, Error ellipse: s-maj=8.5km s-min=3.6km az=144.0*

BGR **12** *03:08:34.7±0.4,46°.70N×0°.43W, h10km, ML4.7, Error ellipse: s-maj=21.1km s-min=11.1km az=163.0*

IGIL **12** *03:08:34.0,46°.62N×0°.66W, h2km*

ISC 12 03:08:30.5±0.7, 46°.63N±0°.02×0°.63W±0°.02, h19km±2km, n283, σ2§22/438, mb4.0/7, 20D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFF	Saint Martin d	0.33	95	ePn	Pg	03 08 37.4	-0.2
MFF				eSg	Sg	03 08 41.8	-0.6
	11μm,0.1s						
MFF	Saint Martin d	0.33	95	Pg	Pg	03 08 37.4	-0.2
MFF				Sg	Sg	03 08 41.6	-0.8
CHIF	Chize	0.52	163	eP	Pg	03 08 40.8	-0.1
CHIF	Chize	0.52	163	Pg	Pg	03 08 40.8	-0.1
CHIF				Sg	Sb	03 08 48.0	-0.1
LRVF	chteau la Riv	1.70	172	Pn	Pb	03 09 00.9	-0.2
LRVF				Sn	Sg	03 09 23.9	-1.3
GRR	Gorron	1.77	355	ePn	Pb	03 09 01.4	-0.8
GRR	Gorron	1.77	355	ePg	Pg	03 09 03.6	-0.8
GRR				eSg	Sg	03 09 27.0	-0.4
	1μm,0.2s						
LFF	La Frestale	1.94	150	ePn	Pn	03 09 03.4	+1.0
LFF	La Frestale	1.94	150	ePg	Pg	03 09 06.8	-1.0
LFF				eSn	Sn	03 09 26.5	+0.2
	318nm,0.2s						
LFF				eSg	Sg	03 09 32.4	-0.6
	4μm,0.5s						
TCF	Toulx Ste Croi	1.99	99	ePn	Pn	03 09 04.2	+1.1
TCF	Toulx Ste Croi	1.99	99	ePg	Pg	03 09 07.8	-0.9
TCF				eSg	Sb	03 09 32.2	+1.7
	808nm,0.2s						
LDF	La Druitiere	1.99	10	ePn	Pn	03 09 04.6	+1.4
LDF	La Druitiere	1.99	10	ePg	Pg	03 09 07.8	-1.0
LDF				eSg	Sg	03 09 33.6	-1.1
	1μm,0.3s						
RJF	Les Rejaudoux	2.00	131	ePn	Pn	03 09 04.2	+1.0
RJF	Les Rejaudoux	2.00	131	eP	Pb	03 09 06.9	+0.7
RJF				eSg	Sb	03 09 32.3	+1.6
	1μm,0.2s						
SGMF	Saint Gilles	2.09	322	ePn	Pn	03 09 05.5	+1.0
SGMF	Saint Gilles	2.09	322	ePg	Pg	03 09 09.4	-1.2
SGMF				eSn	Sn	03 09 29.9	0.0
	166nm,0.3s						
SGMF				eSg	Sg	03 09 36.3	-1.4
	829nm,0.3s						
LOUF	Saint-Loup	2.10	348	Pn	Pn	03 09 06.1	+1.6
LOUF				Pg	Pg	03 09 09.9	-0.8
LOUF				Sn	Sb	03 09 34.3	+0.8
FLN	La Foliniere	2.14	3	ePn	Pn	03 09 06.6	+1.5
	baz=183						
FLN	La Foliniere	2.14	3	ePg	Pg	03 09 10.1	-1.4
FLN	La Foliniere	2.14	3	ePg	Pg	03 09 10.3	-1.2
	baz=183						
FLN				eSg	Sg	03 09 38.6	-0.6
	3μm,0.3s						
QUIF	Quistinic	2.16	308	ePn	Pn	03 09 06.7	+1.3
QUIF	Quistinic	2.16	308	ePg	Pg	03 09 10.6	-1.3
QUIF				eSg	Sg	03 09 39.2	-0.6
	1μm,0.4s						
HYF	Humbligny	2.33	73	eP	Pb	03 09 10.6	-1.2
HYF	Humbligny	2.33	73	ePg	Pg	03 09 13.7	-1.4
HYF				eSg	Sg	03 09 43.7	-1.6
VERF	Verneugheol	2.33	111	Pn	Pn	03 09 09.4	+1.5
VERF				Pg	Pg	03 09 14.2	-1.0
BGF	Bois d'Agland	2.40	90	ePn	Pn	03 09 10.2	+1.5
BGF	Bois d'Agland	2.40	90	ePg	Pg	03 09 15.3	-1.1
BGF				eSg	Sg	03 09 45.1	-2.4
	4μm,0.4s						
CLF	Chambon-Foret	2.41	54	Pn	Pn	03 09 09.6	+0.7
CLF				Sn	Sn	03 09 39.5	+1.7
CLF	Chambon-Foret	2.41	54	Pn	Pn	03 09 10.5	+1.7
ROSF	Rostrenen	2.48	315	ePn	Pn	03 09 11.1	+1.3
ROSF	Rostrenen	2.48	315	ePg	Pg	03 09 17.3	-0.7
ROSF				eSn	Sn	03 09 39.1	-0.5
	227nm,0.3s						
ROSF				eSg	Sg	03 09 49.2	-0.9
	860nm,0.3s						
ROSF	Rostrenen	2.48	315	eP	Pn	03 09 11.1	+1.3
ROSF	Rostrenen	2.48	315	Pn	Pn	03 09 11.6	+1.8
CAF	Calviac	2.54	131	ePn	Pn	03 09 11.8	+1.1
CAF	Calviac	2.54	131	ePg	Pg	03 09 17.7	-1.5
CAF				eSn	Sn	03 09 40.0	-1.1
	252nm,0.2s						
CAF			

SSB Saint Sauveur 3.85 109 Pn Pn 03 09 30.5 +1.8
SSB Saint Sauveur 3.85 109 Pn Pn 03 09 30.6 +1.8
MTLF Montolieu 3.86 147 *ePn* **Pn 03 09 29.8 +1.0**
MTLF Montolieu 3.86 147 *ePg* **Pg 03 09 42.5 -1.8**
MTLF *eSn* **Sn 03 10 13.0 -0.6**
comp=N,110nm,0.3s
MTLF *eSg* **Sg 03 10 31.8 -2.5**
comp=N,242nm,0.2s
MTLF Montolieu 3.86 147 Pn Pn 03 09 30.3 +1.5
LASF Ste Croix 4.06 127 *ePn* **Pn 03 09 32.8 +1.2**
LASF Ste Croix 4.06 127 *ePg* **Pg 03 09 46.6 -1.6**
LASF *eSn* **Sn 03 10 18.2 -0.5**
comp=N,104nm,0.3s
LASF *eSg* **Sg 03 10 38.2 -2.6**
comp=N,586nm,0.4s
VIVF Saint-Julien-I 4.11 114 *ePn* **Pn 03 09 34.0 +1.7**
VIVF Saint-Julien-I 4.11 114 *ePg* **Pg 03 09 46.8 -2.4**
VIVF *eSg* **Sg 03 10 40.2 -2.2**
comp=N,354nm,0.3s
SFTF Sexfontaines 4.16 66 *ePn* **Pn 03 09 34.0 +1.1**
SFTF Sexfontaines 4.16 66 *ePg* **Pg 03 09 48.9 -1.1**
SFTF *eSn* **Sn 03 10 19.7 -1.2**
comp=N,182nm,0.3s
SFTF *eSg* **Sg 03 10 41.4 -2.4**
comp=N,423nm,0.4s
MEZF Maizieres J'vi 4.28 62 *ePn* **Pn 03 09 36.3 +1.8**
MEZF Maizieres J'vi 4.28 62 *ePg* **Pg 03 09 49.2 -3.1**
MEZF *eSg* **Sg 03 10 44.1 -3.5**
comp=N,776nm,0.4s
HMNX Herstmonceux 4.29 8 *eP* **Pn 03 09 36.0 +1.4**
HMNX IAML 03 10 54.8
comp=N,1µm,0.4s
HMNX IAML 03 11 01.4
comp=E,1µm,0.5s
SAVF Savonnieres en 4.37 61 *ePn* **Pn 03 09 37.5 +1.8**
SAVF Savonnieres en 4.37 61 *ePg* **Pg 03 09 52.2 -1.8**
SAVF *eSn* **Sn 03 10 24.4 -1.7**
comp=E,103nm,0.3s
SAVF *eSg* **Sg 03 10 46.3 -4.2**
comp=E,219nm,0.3s
DYA Yadsworthy 4.40 331 *eP* **Pn 03 09 36.8 +0.7**
DYA IAML 03 10 54.4
comp=E,305nm,0.6s
DYA IAML 03 11 00.1
comp=N,208nm,0.4s
CABF La Chapelle 4.62 88 *ePn* **Pn 03 09 40.3 +0.9**
CABF La Chapelle 4.62 88 *ePg* **Pg 03 09 55.3 -3.7**
CABF *eSn* **Sn 03 10 31.9 -0.7**
comp=N,26nm,0.2s
CABF *eSg* **Sg 03 10 56.4 -2.5**
comp=N,236nm,0.4s
ELSH Elham, Standar 4.67 14 *eP* **Pn 03 09 41.1 +1.2**
ELSH IAML 03 11 08.5
comp=E,176nm,0.7s
ELSH IAML 03 11 12.2
comp=N,204nm,0.5s
CCA1 Carnmenellis 4.70 321 *eP* **Pn 03 09 41.5 +1.2**
CCA1 IAML 03 11 04.6
comp=E,170nm,0.6s
CCA1 IAML 03 11 05.5
comp=N,126nm,0.4s
BAIF Baives 4.71 41 *ePn* **Pn 03 09 41.6 +1.2**
BAIF Baives 4.71 41 *ePg* **Pg 03 09 58.2 -2.3**
BAIF *eSn* **Sn 03 10 31.7 -2.8**
comp=N,48nm,0.2s
BAIF *eSg* **Sg 03 10 59.0 -2.5**
comp=N,339nm,0.5s
PAGF Fort de Pagny 4.71 64 *ePn* **Pn 03 09 41.4 +0.9**
PAGF Fort de Pagny 4.71 64 *ePg* **Pg 03 09 57.0 -3.6**
PAGF *eSg* **Sg 03 10 59.1 -2.4**
comp=N,436nm,0.4s
ORIF Oris-en-Rattie 4.86 108 *ePn* **Pn 03 09 44.6 +1.9**
ORIF *eSn* **Sn 03 10 35.4 -3.1**
comp=N,53nm,0.4s
ORIF *eSg* **Sg 03 11 03.4 -3.1**
comp=N,118nm,0.4s
EJON La Jonquera 4.88 148 P **Pn 03 09 44.1 +1.3**
EJON S **Sn 03 10 37.6 -1.2**
DOU Dourbes 4.91 43 *dP* **Pn 03 09 44.8 +1.6**
DOU *dS* **Sn 03 10 38.3 -1.3**
HAU Haudompre 4.94 71 *ePn* **Pn 03 09 43.7 +0.1**
HAU Haudompre 4.94 71 *ePg* **Pg 03 10 02.1 -2.9**
HAU *eSn* **Sn 03 10 36.8 -3.4**
comp=N,145nm,0.4s
HAU *eSg* **Sg 03 11 04.2 -4.7**
comp=N,361nm,0.3s
SWN1 Swindon 4.95 351 *eP* **Pn 03 09 45.5 +1.7**
GIVF Givet 5.03 44 *ePn* **Pn 03 09 46.6 +1.8**
GIVF Givet 5.03 44 *ePg* **Pg 03 10 04.2 -2.4**
comp=N,5.6nm,0.1s
GIVF *eSn* **Sn 03 10 40.6 -1.7**
comp=N,62nm,0.3s
GIVF *eSg* **Sg 03 11 09.1 -2.5**
comp=N,242nm,0.5s
HTL Hartland 5.06 331 *eP* **Pn 03 09 47.5 +2.3**
SMRF Simiane la Rot 5.12 119 *ePn* **Pn 03 09 47.8 +1.7**
SMRF Simiane la Rot 5.12 119 *ePg* **Pg 03 10 06.5 -1.9**
SMRF *eSn* **Sn 03 10 43.1 -1.5**
comp=N,49nm,0.5s
SMRF *eSg* **Sg 03 11 12.4 -2.2**
comp=N,192nm,0.5s
BMRD Maredsous 5.13 42 *dP* **Pn 03 09 48.0 +1.7**
BMRD *dS* **Sn 03 10 43.7 -1.3**
HINF Hinteralfeld 5.23 74 *ePn* **Pn 03 09 47.6 -0.1**
HINF Hinteralfeld 5.23 74 *ePg* **Pg 03 10 07.7 -2.9**
HINF *eSn* **Sn 03 10 45.4 -2.1**
comp=N,105nm,0.4s
HINF *eSg* **Sg 03 11 13.0 -5.3**
comp=N,406nm,0.4s
LPL La Plagne 5.24 100 *ePn* **Pn 03 09 50.2 +2.2**
LPL La Plagne 5.24 100 *ePg* **Pg 03 10 09.1 -1.7**
LPL *eSn* **Sn 03 10 46.1 -1.9**
comp=N,53nm,0.5s
LPL *eSg* **Sg 03 11 16.8 -1.8**
comp=N,126nm,0.5s
STRD Stroud 5.25 349 *eP* **Pn 03 09 48.7 +0.9**
STRD IAML 03 11 21.2
comp=E,397nm,0.6s
STRD IAML 03 11 27.7
comp=N,425nm,0.7s
LPG La Plagne 5.26 100 *ePn* **Pn 03 09 50.5 +2.2**
LPG La Plagne 5.26 100 *ePg* **Pg 03 10 08.1 -3.0**
LPG *eSg* **Sg 03 11 16.6 -2.6**
comp=N,250nm,0.6s
RCHB Rochefort 5.26 46 *dP* **Pn 03 09 49.8 +1.8**
RCHB *dS* **Sn 03 10 46.7 -1.3**
BGES Gesves 5.34 43 *dP* **Pn 03 09 50.9 +1.7**
BGES *dS* **Sn 03 10 48.9 -1.2**
BNI Bardonecchia 5.34 105 Pn **Pn 03 09 51.8 +2.5**
MONM Monmouth 5.41 345 *eP* **Pn 03 09 50.8 +0.8**
WLF Walferdange 5.46 54 Pn **Pn 03 09 52.1 +1.4**
WLF Walferdange 5.46 54 *dP* **Pn 03 09 52.8 +2.1**
WLF Walferdange 5.46 54 P **Pn 03 09 52.6 +1.8**
WLF Walferdange 5.46 54 *ePn* **Pn 03 09 53.0 +2.3**
WLF *ePg* **Pg 03 10 14.1 -0.7**
WLF *eSn* **Sn 03 10 51.0 -2.0**
WLF *eSg* **Sg 03 11 24.2 -1.3**
BCLA Clavier 5.47 44 *dP* **Pn 03 09 52.7 +1.8**
BCLA *dS* **Sn 03 10 51.9 -1.3**
SENIN Lac Senin/Sane 5.48 90 Pn 03 09 52.9 +1.6
ECH Echery 5.51 70 Pn 03 09 51.8 +0.2
ECH Echery 5.51 70 *ePn* **Pn 03 09 51.4 -0.2**
ECH *ePg* **Pg 03 10 15.0 -1.0**
ECH *eSg* **Sg 03 11 22.8 -4.5**
MBDF Montbardon 5.52 107 *ePn* **Pn 03 09 54.0 +2.2**
MBDF Montbardon 5.52 107 *ePg* **Pg 03 10 13.8 -2.3**
MBDF *eSn* **Sn 03 10 52.9 -1.9**
comp=N,32nm,0.5s
MBDF *eSg* **Sg 03 11 24.4 -3.2**
comp=N,94nm,0.5s
ELMS Elmsett, Ipswi 5.57 10 *eP* **Pn 03 09 53.3 +1.1**
ELMS IAML 03 11 33.5
comp=E,364nm,0.4s
ELMS IAML 03 11 35.6
comp=N,254nm,0.6s
MCH1 Michaelchurch 5.59 345 *eP* **Pn 03 09 53.8 +1.3**
MCH1 IAML 03 11 33.6
comp=N,170nm,0.6s
MCH1 IAML 03 11 35.2
comp=E,115nm,0.5s
CDF Champ du Feu 5.64 69 *ePn* **Pn 03 09 53.6 +0.2**
CDF Champ du Feu 5.64 69 *ePg* **Pg 03 10 15.6 -2.8**
CDF *eSg* **Sg 03 11 27.8 -3.6**
comp=E,316nm,0.4s

BSTI Sart Tilman 5.70 44 *dP* **Pn 03 09 55.8 +1.7**
BALST Balsthal 5.74 80 *ePn* **Pn 03 09 56.0 +1.4**
BALST *eSg* **Sg 03 11 32.0 -2.5**
BHOU Houvegnez 5.77 47 *dP* **Pn 03 09 56.8 +1.7**
BHOU *dS* **Sn 03 10 58.6 -2.1**
RIVT Riveris 5.82 55 *ePn* **Pn 03 09 57.3 +1.5**
RIVT *eSn* **Sn 03 10 58.9 -3.1**
BEBN Eben Emael 5.90 43 *dP* **Pn 03 09 58.4 +1.7**
BEBN *dS* **Sn 03 11 05.8 +2.1**
MEM Membach 5.93 45 *dP* **Pn 03 09 58.7 +1.5**
MEM *dS* **Sn 03 11 04.4 -0.2**
RSBS Rosebush, Pemb 5.97 335 *eP* **Pn 03 09 59.2 +1.5**
BTNL Ternell 5.98 46 *dP* **Pn 03 09 59.3 +1.4**
BTNL *dS* **Sn 03 11 04.8 -1.0**
SULZ Cheisacher 6.04 78 *ePn* **Pn 03 10 00.1 +1.4**
SULZ *ePg* **Pg 03 10 24.1 -1.8**
SULZ *eSg* **Sg 03 11 40.8 -3.2**
LMR La Mourre 6.04 121 *ePn* **Pn 03 09 59.8 +1.1**
LMR La Mourre 6.04 121 *ePg* **Pg 03 10 23.3 -2.7**
LMR *eSn* **Sn 03 11 04.1 -3.2**
comp=E,18nm,0.4s
LMR *eSg* **Sg 03 11 41.2 -2.9**
comp=E,40nm,0.4s
HLM1 Long Mynd 6.07 347 *eP* **Pn 03 09 59.8 +0.6**
HLM1 IAML 03 11 50.0
comp=N,100nm,0.6s
HLM1 IAML 03 11 53.1
comp=E,126nm,0.6s
BERGE Lenzkirch (DE) 6.12 75 *ePn* **Pn 03 10 00.1 +0.2**
BERGE *ePg* **Pg 03 10 25.8 -1.8**
BERGE *eSn* **Sn 03 11 04.6 -4.8**
BERGE *eSg* **Sg 03 11 43.3 -3.5**
CWF Charnwood Fore 6.13 356 *eP* **Pn 03 09 60.0 0.0**
METMA Mettma DE 6.15 77 *ePn* **Pn 03 10 00.7 +0.4**
METMA *eSn* **Sn 03 11 06.9 -3.2**
METMA *eSg* **Sg 03 11 44.2 -3.5**
BFO Black Forest 6.30 71 Pn **Pn 03 10 02.5 +0.1**
BFO Black Forest 6.30 71 *ePn* **Pn 03 10 02.4 0.0**
BFO *ePg* **Pg 03 10 28.4 -2.6**
BFO *eSg* **Sg 03 11 49.1 -3.5**
SLE Schleitheim 6.32 76 *ePn* **Pn 03 10 03.3 +0.8**
SLE *ePg* **Pg 03 10 29.5 -1.8**
SLE *eSg* **Sg 03 11 49.2 -3.8**
SBF Sospel 6.33 113 *ePn* **Pn 03 10 03.7 +0.9**
SBF Sospel 6.33 113 *ePg* **Pg 03 10 28.0 -3.5**
SBF *eSn* **Sn 03 11 13.0 -1.5**
comp=E,53nm,0.5s
SBF *eSg* **Sg 03 11 47.9 -5.5**
comp=E,192nm,0.9s
ABH Alteburg 6.35 56 *ePn* **Pn 03 10 03.9 +0.8**
ABH *ePg* **Pg 03 10 31.5 -0.5**
ABH *eSn* **Sn 03 11 10.8 -4.2**
ABH *eSg* **Sg 03 11 53.3 -0.8**
ECAL Calabor 6.42 225 P **Pn 03 10 04.5 +0.4**
ECAL S **Sn 03 11 14.3 -2.5**
AHRW Bad Neuenahr-A 6.43 50 *ePn* **Pn 03 10 05.3 +1.2**
KTD Kalmit 6.43 62 *ePn* **Pn 03 10 04.7 +0.5**
PBRG Braganca 6.52 225 *eP* **Pn 03 10 06.2 +0.7**
PBRG *eS* **Sn 03 11 16.5 -2.9**
PBRG A A 03 11 20.9
comp=E,20nm,0.4s
STNC Stoke 6.55 352 *eP* **Pn 03 10 06.5 +0.8**
WILA Wila 6.56 80 *ePn* **Pn 03 10 07.8 +1.8**
EMING Emmingen-Lipti 6.57 75 *ePn* **Pn 03 10 07.1 +1.1**
EMING *eSg* **Sg 03 11 57.0 -4.0**
WALHA Wallhausen, DE 6.74 77 *ePn* **Pn 03 10 09.9 +1.5**
WALHA *ePg* **Pg 03 10 38.8 -0.6**
WALHA *eSg* **Sg 03 12 03.8 -2.7**
PLONS Plons/SG 6.88 83 *ePn* **Pn 03 10 12.4 +2.1**
TUE Stuetta 6.88 88 Pn **Pn 03 10 13.4 +3.0**
STU Stuttgart 6.96 69 Pn **Pn 03 10 12.4 +0.9**
TNS Taunus Mts 7.02 56 *ePn* **Pn 03 10 13.5 +1.2**
TNS *eSg* **Sg 03 10 42.3 -2.5**
BUG Bochum--Univer 7.08 44 *ePn* **Pn 03 10 13.6 +0.7**
MVO Moncorvo 7.16 223 *eP* **Pn 03 10 15.0 +0.8**
MVO *eS* **Sn 03 11 31.8 -3.2**
MVO A A 03 11 37.3
comp=E,30nm,0.4s
PGAV Gavieira, Arco 7.20 232 *eP* **Pn 03 10 15.7 +1.0**
PGAV *eS* **Sn 03 11 32.7 -3.3**
PGAV A A 03 11 37.1
comp=E,28nm,0.4s
DAVA Damuels 7.22 81 *i* Pn **Pn 03 10 17.3 +2.2**
comp=E,5.3nm,0.2s,SNR=15
DAVA *i* Sn **Sn 03 11 36.2 -0.5**
comp=E,8.3nm,0.3s
DAVOX Davos/Dischmat 7.22 85 Pn **Pn 03 10 18.3 +3.1**
comp=E,6.9nm,0.3s,baz=226,slow=6.5,SNR=53
DAVOX Lg Lg 03 12 24.1
comp=E,5.8nm,0.3s,baz=166,slow=23,SNR=4.4
comp=E,14nm,0.3s
PCAB Cabril 7.25 230 *eP* **Pn 03 10 16.2 +0.9**
PCAB *eS* **Sn 03 11 33.4 -3.7**
PCAB A A 03 11 34.8
comp=E,16nm,0.2s
ETOS Mallorca 7.30 159 P **Pn 03 10 16.8 +0.7**
ETOS S **Sn 03 11 34.7 -3.8**
MILB Miltenberg 7.36 61 *ePn* **Pn 03 10 17.4 +0.6**
ESBB Sonseca Array 7.37 201 Pn **Pn 03 10 17.0 0.0**
ESDC Sonseca Array 7.37 201 Pn **Pn 03 10 16.8 -0.2**
ESDC Sonseca Array 7.37 201 Pn **Pn 03 10 17.2 +0.1**
comp=E,0.9nm,0.3s,baz=24,slow=13,SNR=32
ESDC Sn **Sn 03 11 36.9 -3.3**
comp=E,2.3nm,0.3s,baz=24,slow=23,SNR=10.0
comp=E,1.4nm,0.3s
UBR Ueberruh 7.39 78 *ePn* **Pn 03 10 19.5 +2.1**
UBR *ePg* **Pg 03 10 52.7 +0.9**
UBR *eSg* **Sg 03 12 26.7 -0.9**
PVRL Vila Real 7.40 226 *eP* **Pn 03 10 18.5 +1.0**
PVRL *eS* **Sn 03 11 38.9 -2.1**
PVRL A A 03 11 55.6
comp=E,12nm,0.5s
MSSA Maissana 7.50 104 Pn **Pn 03 10 20.6 +1.8**
FUORN Ofenpass-Fuorn 7.50 86 Pn 03 10 22.2 +3.2
OBER Oberstdorf 7.50 80 *ePn* **Pn 03 10 21.1 +2.2**
KASTN Kahler Asten 7.51 49 *ePn* **Pn 03 10 19.9 +0.9**
KASTN *eSg* **Sb 03 12 28.1 +19**
PAB San Pablo 7.59 202 Pn **Pn 03 10 20.6 +0.5**
DSB Dublin 7.59 333 Pn **Pn 03 10 20.8 +0.8**
EIBI Ibiza 7.74 169 P **Pn 03 10 22.5 +0.5**
EIBI S **Sn 03 11 46.0 -3.1**
FETA Feichten 7.80 83 *i* Pn **Pn 03 10 25.8 +2.8**
comp=E,4.2nm,0.3s,SNR=17
FETA *eSn* **Sn 03 11 51.8 +1.0**
comp=E,3.2nm,0.4s
SALO Salr 7.81 93 Pn **Pn 03 10 25.8 +2.7**
RETA Reutte 7.83 80 *i* Pn **Pn 03 10 25.4 +2.1**
comp=E,5.6nm,0.4s,SNR=13
RETA *i* Sn **Sn 03 11 53.8 +2.4**
comp=E,5.5nm,0.5s
PTO Porto 7.96 229 *eP* **Pn 03 10 27.2 +2.2**
PTO *eS* **Sn 03 11 51.0 -3.5**
PTO A A 03 12 06.3
comp=E,11nm,1.1s
PGF Pioggiola 7.99 117 *ePn* **Pn 03 10 26.0 +0.4**
PGF *eSn* **Sn 03 11 50.8 -4.7**
comp=E,3.3nm,0.3s
MTE Manteigas 8.00 221 *eP* **Pn 03 10 26.4 +0.6**
MTE *eS* **Sn 03 11 52.4 -3.3**
MTE A A 03 12 22.3
comp=E,12nm,0.5s
MTE Manteigas 8.00 221 Pn **Pn 03 10 25.9 +0.1**
ETOB Tobarra 8.01 185 P **Pn 03 10 27.9 +2.0**
ETOB S **Sn 03 11 53.9 -2.1**
MOTA Moosalm 8.05 81 *i* Pn **Pn 03 10 29.0 +2.4**
comp=E,2.5nm,0.2s,SNR=18
MOTA *i* Sn **Sn 03 11 56.9 -0.2**
comp=E,12nm,0.6s
SQTA Sankt Quirin 8.12 82 *i* Pn **Pn 03 10 30.0 +2.6**
comp=E,5.2nm,0.2s,SNR=37
SQTA *eSn* **Sn 03 11 58.7 -0.1**
comp=E,12nm,0.5s
FUR Furstenfeldbru 8.22 75 *ePn* **Pn 03 10 30.7 +2.0**
FUR *eSg* **Sb 03 12 49.9 +20**
WATA Walderalm 8.38 81 *i* Pn **Pn 03 10 34.1 +3.1**
comp=E,4.4nm,0.2s,SNR=7.1
WATA *i* Sn **Sn 03 12 05.0 0.0**
comp=E,9.4nm,0.5s
WTTA Wattenberg 8.41 81 *i* Pn **Pn 03 10 34.7 +3.1**
comp=E,9.8nm,0.2s,SNR=46
WTTA *i* Sn **Sn 03 12 07.4 +1.4**
comp=E,9.4nm,0.5s
PCBR Castelo Branco 8.43 219 *eP* **Pn 03 10 31.8 +0.3**

PCBR *eS* **Sn 03 12 02.4 -3.7**
PCBR A A 03 12 23.0
comp=E,6.5nm,0.4s
ZCCA Zocca 8.46 101 Pn **Pn 03 10 35.5 +3.4**
GRF Grafenberg Arr 8.49 65 *eSg* Sb 03 12 58.7 +21
CTI Castel Tesino 8.52 89 Pn **Pn 03 10 36.4 +3.5**
COI Coimbra 8.56 224 *eP* **Pn 03 10 33.8 +0.5**
COI *eS* **Sn 03 12 05.0 -4.3**
COI Coimbra 8.56 224 Pn **Pn 03 10 33.1 -0.2**
TEOL Teolo 8.66 94 Pn **Pn 03 10 36.6 +2.0**
PCAS Casmilo, Conde 8.72 224 *eP* **Pn 03 10 36.6 +1.0**
PCAS *eS* **Sn 03 12 09.4 -4.0**
PCAS A A 03 12 13.5
comp=E,6.0nm,0.3s
PMRV Marv??o 8.73 217 *eP* **Pn 03 10 36.6 +0.8**
PMRV *eS* **Sn 03 12 10.0 -3.7**
ESK Eskdalemuir 8.85 350 Pn **Pn 03 10 35.8 -1.5**
EKA Eskdalemuir Ar 8.86 351 Pn **Pn 03 10 36.5 -0.9**
baz=160,slow=15
EKA Sn **Sn 03 12 09.2 -7.4**
baz=168,slow=25
comp=E,1.5nm,0.3s
EKB Eskdalemuir 8.86 350 Pn **Pn 03 10 36.5 -0.9**
EADA Adamuz 8.95 200 P **Pn 03 10 39.7 +1.0**
EADA S **Sn 03 12 13.6 -5.4**
OSSC Osservatorio P 8.96 106 Pn **Pn 03 10 40.9 +2.1**
ABTA Abfaltersbach 9.03 84 *i* Pn **Pn 03 10 44.1 +4.2**
comp=E,3.2nm,0.3s,SNR=9.6
ABTA *i* Sn **Sn 03 12 21.0 -0.1**
comp=E,4.2nm,0.4s
CASP Castiglione de 9.04 111 Pn **Pn 03 10 42.1 +2.3**
MOX Moxa 9.04 59 *ePn* **Pn 03 10 41.8 +1.8**
MOX *eSg* Sn 03 13 20.0 +59
LESA Schwarzleotal 9.12 80 *ePn* **Pn 03 10 44.3 +3.1**
comp=E,3.2nm,0.2s
LESA *i* Sn **Sn 03 12 20.9 -2.4**
comp=E,4.2nm,0.5s
EBAD Badajoz 9.16 213 P **Pn 03 10 41.7 +0.1**
EBAD S **Sn 03 12 18.0 -6.2**
STAL STALIGIAL 9.22 87 Pn 03 10 45.6 +3.2
ECAB El Cabril 9.25 204 P **Pn 03 10 43.3 +0.4**
ECAB S **Sn 03 12 21.1 -5.3**
PESTR Estremoz 9.29 216 *eP* **Pn 03 10 43.8 +0.4**
PESTR *eS* **Sn 03 12 23.2 -4.2**
PESTR Estremoz 9.29 216 Pn **Pn 03 10 43.3 -0.1**
PESTR Estremoz 9.29 216 P **Pn 03 10 43.5 +0.1**
PESTR S **Sn 03 12 20.5 -6.9**
CLUD Cludinico 9.31 86 Pn **Pn 03 10 46.2 +2.6**
PMTG Montargil 9.39 219 *eP* **Pn 03 10 45.4 +0.7**
PMTG *eS* **Sn 03 12 24.8 -4.9**
NKC Novy Kostel 9.41 63 *eSN* Sn 03 13 26.2 +56
KBA Koelnbreinsper 9.59 82 *ePn* **Pn 03 10 50.5 +2.9**
comp=E,5.3nm,0.5s,SNR=13
KBA *i* Sn **Sn 03 12 35.2 +0.5**
comp=E,4.3nm,0.6s
EQTA Presa de Quent 9.65 194 P **Pn 03 10 50.5 +2.1**
EQTA S **Sn 03 12 32.8 -3.4**
PBAR Barrancos 9.69 212 *eP* **Pn 03 10 49.6 +0.8**
PBAR *eS* **Sn 03 12 32.6 -4.4**
PBAR Barrancos 9.69 212 P **Pn 03 10 49.2 +0.5**
PBAR S **Sn 03 12 30.2 -6.8**
EVO Evora 9.75 217 *eP* **Pn 03 10 50.2 +0.5**
EVO *eS* **Sn 03 12 35.8 -2.8**
BIOA Bad Ischl, Aus 9.78 79 *ePn* **Pn 03 10 52.9 +2.9**
comp=E,2.7nm,0.2s,SNR=8.1
BIOA *i* Sn **Sn 03 12 42.4 +3.2**
comp=E,11nm,0.5s
PRED Cave del Predi 9.78 86 Pn 03 10 50.9 +0.8
MYKA Terra Mystica 9.82 85 *i* Pn **Pn 03 10 55.3 +4.7**
comp=E,1.4nm,0.3s
MYKA *i* Sn **Sn 03 12 41.4 +1.1**
comp=E,1.0nm,0.5s
EGOR Sierra Gorda, 9.86 196 P **Pn 03 10 53.2 +1.9**
KHC Kasperske Hory 9.87 70 Pn **Pn 03 10 52.5 +1.2**
KHC Kasperske Hory 9.87 70 *ePN* **Pn 03 10 52.1 +0.8**
KHC *eSN* Sn 03 13 41.1 +60
SABO M.te Sabotino 9.87 89 Pn **Pn 03 10 53.0 +1.7**
GEC2 GERESS Array S 9.90 72 Pn **Pn 03 10 53.3 +1.5**
GERES GERESS Array B 9.90 72 Pn **Pn 03 10 53.5 +1.6**
comp=E,3.3nm,0.3s,baz=268,slow=13,SNR=42
GERES Sn **Sn 03 12 42.0 -0.5**
comp=E,1.3nm,0.3s,baz=287,slow=31,SNR=4.3
GERES Lg Lg 03 14 08.3
comp=E,1.1nm,0.3s,baz=267,slow=27,SNR=4.5
comp=E,6.8nm,0.4s
PMAFR Mafra 9.96 223 *eP* **Pn 03 10 55.1 +2.6**
MOA Molln 10.20 78 *i* Pn **Pn 03 10 58.4 +2.5**
comp=E,0.7nm,0.2s,SNR=5.5
MOA *i* Sn **Sn 03 12 48.7 -1.0**
comp=E,4.6nm,0.6s
ZVC Zvikov 10.31 69 *ePN* **Pn 03 10 59.4 +2.0**
PNCL Nicolau / Gran 10.32 217 *eP* **Pn 03 10 58.0 +0.5**
PNCL Nicolau / Gran 10.32 217 P **Pn 03 10 57.5 +0.1**
PNCL S **Sn 03 12 47.2 -5.4**
MESJ Messejana 10.43 215 *eP* **Pn 03 11 00.7 +1.8**
MESJ *eS* **Sn 03 13 01.6 +6.4**
MESJ Messejana 10.43 215 Pn **Pn 03 10 59.0 0.0**
MESJ Messejana 10.43 215 *eP* **Pn 03 10 59.1 +0.2**
OBKA Obir 10.45 85 *i* Pn **Pn 03 11 02.0 +2.7**
comp=E,0.7nm,0.4s,SNR=4.0
OBKA *i* Sn **Sn 03 13 01.3 +5.4**
comp=E,1.3nm,0.6s
NRCA Norcia 10.48 106 Pn **Pn 03 11 02.9 +3.1**
PCVE Castro Verde 10.54 214 *eP* **Pn 03 11 01.4 +1.0**
PVAQ Vaqueiros 10.62 212 *eP* **Pn 03 11 03.1 +1.6**
PVAQ *eS* **Sn 03 12 53.7 -6.1**
PVAQ Vaqueiros 10.62 212 Pn **Pn 03 11 01.3 -0.3**
PBDV Barranco-do-Ve 10.84 213 *eP* **Pn 03 11 05.1 +0.5**
PBDV *eS* **Sn 03 13 01.7 -3.6**
ARSA Arzberg 11.06 81 *i* Pn **Pn 03 11 10.4 +2.8**
comp=E,0.4nm,0.3s
ARSA *i* Sn **Sn 03 13 11.3 +0.5**
comp=E,2.3nm,0.8s
MORF Marmelete 11.06 215 *eP* **Pn 03 11 07.9 +0.2**
MORF Marmelete 11.06 215 Pn **Pn 03 11 07.5 -0.2**
MORF Marmelete 11.06 215 *eP* **Pn 03 11 07.5 -0.2**
CONA Conrad Observa 11.28 77 *i* Pn **Pn 03 11 12.4 +1.7**
comp=E,0.4nm,0.3s
CONA *i* Sn **Sn 03 13 17.0 +0.9**
comp=E,3.8nm,0.5s
SMIR Smir Dam 11.51 200 P **Pn 03 11 13.6 -0.1**
SMIR Smir Dam 11.51 200 S 03 11 38.3
GOG Mont Gurugu 11.54 190 P **Pn 03 11 15.3 +1.7**
GOG Mont Gurugu 11.54 190 S 03 11 41.3
RONA Rosalia, Austr 11.57 79 *i* Pn **Pn 03 11 17.2 +2.6**
comp=E,0.7nm,0.2s
RONA *i* Sn **Sn 03 13 20.3 -3.0**
comp=E,1.0nm,0.3s
KRUC Moravsky 11.69 72 *ePN* **Pn 03 11 18.4 +2.2**
VRAC Vranov 11.85 71 *ePN* **Pn 03 11 20.9 +2.6**
MODS Modra-Piesok 12.23 75 *ePN* **Pn 03 11 26.7 +3.1**
JBK JBK 12.37 188 P **Pn 03 11 27.9 +2.2**
JBK JBK 12.37 188 S 03 12 06.0
MORC Moravsky Berou 12.52 69 *ePN* **Pn 03 11 29.2 +1.7**
PSZ Piszkesteto 13.99 77 Pn **Pn 03 11 49.3 +1.7**
NAO01 NORSAR Array S 15.75 21 Pn **Pn 03 12 10.3 -0.7**
NAO01 IAmb IAmb 03 12 27.1
comp=Z,16nm,1.1s
MLR Muntele Rosu 18.45 84 P **Pn 03 12 50.4 +5.3**
comp=Z,0.1nm,0.3s,baz=284,slow=12,SNR=3.0
comp=Z,2.6nm,0.9s
KIEV Kiev 20.05 67 P Pn 03 13 04.7 +0.6
FINES FINESS Array B 21.36 36 P **P 03 13 17.7 +1.4**
comp=Z,1.4nm,0.6s,baz=244,slow=8.3,SNR=8.1
comp=Z,1.4nm,0.6s
FIA1 FINESS Array S 21.36 36 P **P 03 13 17.3 +0.9**
FIA1 IAmb IAmb 03 13 40.1
comp=Z,11nm,1.1s
ARCES ARCESS Array B 26.37 20 P **P 03 14 06.5 +1.4**
ARCES ARCESS Array B 26.37 20 P **P 03 14 07.2 +2.1**
comp=Z,2.3nm,0.6s,baz=213,slow=8.0,SNR=21
comp=Z,2.3nm,0.6s
SUMG Summit 31.25 339 P **P 03 14 48.4 -0.5**
TORD Torodi Ar. Bea 33.43 176 P **P 03 15 08.6 +0.6**
comp=Z,0.4nm,0.8s,baz=358,slow=9.5,SNR=1.7
ZALV Zalesovo Beam 51.91 48 P **P 03 17 41.9 +4.4**
comp=Z,0.3nm,0.3s,baz=297,slow=11,SNR=1.5
comp=Z,0.3nm,0.3s
BTO Baotou 73.45 48 *eP* **P 03 20 03.0 +1.4**
BTO pP **pP 03 20 07.8 0.0**
BTO sP **sP 03 20 10.1 +0.1**
BTO PP **PP 03 22 47.6 +2.8**
BTO pmax pmax
comp=Z,12nm,0.6s

BTO					pmax	pmax		
	comp=Z,270nm,3.9s							
XLT	**XiLinHaoTe**	**73.93**	**42**	*eP*	**P**		**03 20 02.9**	**-1.4**
XLT				PcP	**PcP**		**03 20 19.7**	**+0.1**
XLT				pmax	pmax			
	comp=Z,4.0nm,0.6s							
XLT				pmax	pmax			
	comp=Z,120nm,4.7s							
CN2	**Changchun**	**78.11**	**37**	*eP*	**P**		**03 20 28.8**	**+0.8**
CN2				LR	LR			
	comp=N,490nm,15.0s							
CN2				LR	LR			
	comp=E,490nm,15.0s							

*IDC **12** 03:22:45.1±3.9, 43.56N×127.52W, h0km, mb2.8/2, mbtmp3.0/4, ML3.2/2, Error ellipse: s-maj=75.5km s-min=23.3km az=41.0*
*NEIC **12** 03:22:49.6±2.2, 43.53N±0.05×127.13W±0.03, h10km±2km, ML3.0/72, Error ellipse: s-maj=9.0km s-min=4.4km az=167.0*

ISC 12 03:22:46.0±1.8, **43.44N**±0.08×**127.5W**±0.1, **h15**km, **n62, σ1.9 40/58, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KEBM	**Edson Butte**	**2.41**	**103**	Pn		**Pn**	**03 23 23.7**	**-1.2**
KEBM				Sg		**Sn**	**03 23 55.0**	**+0.8**
KEBM				IAML			03 23 57.1	
	comp=N,85nm,0.9s							
KEBM				IAML			03 24 00.9	
	comp=E,80nm,2.1s							
J01E	**Myrtle Point**	**2.64**	**95**	Pn		**Pn**	**03 23 27.3**	**-0.8**
J01E				IAML			03 24 04.8	
	comp=N,58nm,0.8s							
J01E				IAML			03 24 06.4	
	comp=E,82nm,0.3s							
KBO	**Bosley Butte**	**2.73**	**116**	Pn		**Pn**	**03 23 30.2**	**+0.9**
KBO				IAML			03 24 10.7	
	comp=N,69nm,2.3s							
KBO				IAML			03 24 56.6	
	comp=E,106nm,2.5s							
K02D	**Willamette Mer**	**2.93**	**103**			**Sn**	**03 24 08.3**	**+1.2**
I03D	**Drain, OR**	**3.05**	**84**			**Pn**	**03 23 33.8**	**+0.1**
KSXB	**Camp Six Broad**	**3.14**	**120**	Pn		**Pn**	**03 23 34.8**	**-0.3**
DBO	**Dodson Butte**	**3.15**	**94**			**Pn**	**03 23 34.3**	**-0.8**
L02F	**Cave Junction**	**3.20**	**113**	Pn		**Pn**	**03 23 35.8**	**0.0**
HEBO	**Mount Hebo**	**3.24**	**56**	Pn		**Pn**	**03 23 36.1**	**-0.2**
HEBO				IAML			03 24 07.1	
	comp=N,61nm,1.8s							
COR	**Corvallis**	**3.26**	**68**			**Pn**	**03 23 35.9**	**-0.6**
COR				IAML			03 24 37.0	
	comp=N,35nm,2.2s							
BUCK	**Buck Mountain**	**3.38**	**76**			**Pn**	**03 23 38.3**	**+0.1**
BUCK				IAML			03 24 07.7	
	comp=N,36nm,3.1s							
BUCK				IAML			03 24 18.6	
	comp=E,38nm,2.7s							
HUMO	**Hull Mountain**	**3.46**	**102**	Pn		**Pn**	**03 23 40.3**	**+1.0**
G03D	**McMinnville, O**	**3.54**	**59**			**Pn**	**03 23 39.8**	**-0.5**
G03D				IAML			03 24 26.7	
	comp=E,71nm,0.4s							
H04D	**Lebanon**	**3.62**	**71**			**Pn**	**03 23 41.5**	**-0.1**
H04D				IAML			03 24 20.9	
	comp=N,31nm,2.8s							
H04D				IAML			03 24 40.1	
	comp=E,36nm,2.8s							
I04A	**Tendick Farm,**	**3.73**	**83**			**Pn**	**03 23 43.8**	**+0.6**
F03A	**Seaside**	**3.77**	**47**			**Pn**	**03 23 43.7**	**+0.1**
YBH	**Yreka Blue Hor**	**3.95**	**114**	Pn		**Pn**	**03 23 47.9**	**+1.8**
YBH	**Yreka Blue Hor**	**3.95**	**114**	Pn		**Pn**	**03 23 48.8**	**+2.7**
	comp=E,0.3nm,0.3s,baz=293,slow=14,SNR=3.1							
YBH				Sn		**Sn**	**03 24 26.4**	**-5.8**
	comp=E,0.2nm,0.3s,baz=127,slow=15,SNR=2.6							
	comp=E,1.3nm,0.4s							
RADR	**Rader Ridge**	**3.99**	**40**	Pn		**Pn**	**03 23 46.6**	**0.0**
RADR				IAML			03 25 32.8	
	comp=E,35nm,3.0s							
RADR				IAML			03 25 59.5	
	comp=N,37nm,1.8s							
L04D	**Klamath Falls**	**4.04**	**106**	Pn		**Pn**	**03 23 49.1**	**+1.8**
L04D				IAML			03 24 59.0	
	comp=E,29nm,3.8s							
L04D				IAML			03 25 14.5	
	comp=N,18nm,4.6s							
H04A	**Detroit Lake**	**4.05**	**70**			**Pn**	**03 23 48.4**	**+0.9**
H04A				IAML			03 24 45.8	
	comp=N,19nm,0.4s							
F04D	**Rainier, OR**	**4.16**	**49**			**Pn**	**03 23 49.1**	**+0.1**
E03A	**Lebam**	**4.19**	**41**	Pn		**Pn**	**03 23 49.5**	**+0.2**
F04A	**Amboy**	**4.41**	**54**			**Pn**	**03 23 53.2**	**+0.8**
WISH	**Wishkah**	**4.53**	**35**	Pn		**Pn**	**03 23 54.3**	**+0.3**
WISH				IAML			03 24 53.4	
	comp=E,32nm,4.1s							
I05D	**Terrebonne, OR**	**4.56**	**77**	Pn		**Pn**	**03 23 55.1**	**+0.5**
I05D				IAML			03 25 20.7	
	comp=E,19nm,4.0s							
I05D				IAML			03 25 40.6	
	comp=N,21nm,4.7s							
J05D	**Fort Rock, OR**	**4.59**	**90**			**Pn**	**03 23 55.3**	**+0.2**
J05D				IAML			03 25 35.3	
	comp=E,16nm,3.6s							
J05D				IAML			03 26 40.3	
	comp=N,14nm,4.1s							
HOOD	**Mount Hood Mea**	**4.61**	**64**			**Pn**	**03 23 57.2**	**+1.9**
HOOD				IAML			03 24 28.8	
	comp=E,27nm,0.7s							
HOOD				IAML			03 24 56.7	
	comp=N,18nm,0.5s							
NLWA	**Neilton Lookou**	**4.71**	**32**	Pn		**Pn**	**03 23 56.7**	**+0.1**
PINE	**Pine Mountain**	**4.80**	**84**	Pn		**Pn**	**03 23 58.5**	**+0.6**
PINE				IAML			03 24 35.8	
	comp=E,14nm,4.2s							
PINE				IAML			03 26 43.2	
	comp=N,13nm,3.9s							
G05A	**Wamic**	**4.81**	**66**			**Pn**	**03 23 58.5**	**+0.6**
G05A				IAML			03 25 03.3	
	comp=N,25nm,4.9s							
K05A	**Summer Lake**	**4.92**	**96**	Pn		**Pn**	**03 24 00.8**	**+1.3**
K05A				IAML			03 24 37.8	
	comp=N,17nm,4.0s							
K05A				IAML			03 25 03.1	
	comp=E,15nm,4.2s							
C03A	**Quillayute Air**	**4.96**	**24**	Pn		**Pn**	**03 23 59.2**	**-0.7**
LON	**Longmire**	**5.23**	**49**			**Pn**	**03 24 04.6**	**+0.9**
LON				IAML			03 25 08.1	
	comp=E,9.9nm,0.5s							
LON				IAML			03 25 08.8	
	comp=N,10nm,0.5s							
G06A	**Carlson Farm,**	**5.26**	**68**			**Pn**	**03 24 04.3**	**+0.2**
GNW	**Green Mountain**	**5.28**	**37**	Pn		**Pn**	**03 24 04.2**	**-0.1**
I07A	**Izee**	**5.85**	**81**	Pn		**Pn**	**03 24 13.7**	**+1.4**
CLRS	**Cowichan Lake**	**5.87**	**23**	Pn		**Pn**	**03 24 11.9**	**-0.6**
PGC	**Sidney**	**5.93**	**27**	Pn		**Pn**	**03 24 13.6**	**+0.4**
F07A	**Phinny Hill Vi**	**5.95**	**63**	Pn		**Pn**	**03 24 13.6**	**+0.1**
MXC	**Moxie City**	**6.01**	**56**	Pn		**Pn**	**03 24 14.8**	**+0.4**
LTY	**Liberty**	**6.16**	**49**	Pn		**Pn**	**03 24 17.2**	**+0.7**
HAWA	**Hanford**	**6.40**	**60**	Pn		**Pn**	**03 24 20.9**	**+1.2**
G08A	**Pilot Rock**	**6.42**	**70**	Pn		**Pn**	**03 24 20.8**	**+0.8**
J08A	**Circle Bar Ran**	**6.60**	**88**	Pn		**Pn**	**03 24 23.0**	**+0.4**
WVOR	**Wild Horse Val**	**6.61**	**96**	Pn		**Pn**	**03 24 19.5**	**-3.1**
E08A	**Dider Farm, El**	**6.74**	**60**	Pn		**Pn**	**03 24 25.0**	**+0.7**
D08A	**Wollman Farm,**	**7.07**	**56**	Pn		**Pn**	**03 24 27.0**	**-1.9**
HOLB	**Holberg**	**7.21**	**357**	Pn		**Pn**	**03 24 31.7**	**+0.9**
BMO	**Blue Mountains**	**7.49**	**76**	Pn		**Pn**	**03 24 34.7**	**-0.1**
C09A	**Chrisman Ranch**	**7.81**	**53**	Pn		**Pn**	**03 24 39.1**	**0.0**
PLID	**Pearl Lake**	**8.44**	**75**	Pn		**Pn**	**03 24 48.0**	**+0.1**
NEW	**Newport**	**8.72**	**53**	Pn		**Pn**	**03 24 51.5**	**0.0**
PDAR	**Pinedale Array**	**13.16**	**87**	Pn		**Pn**	**03 25 57.2**	**+4.8**
	baz=281,slow=14,SNR=4.6							
	comp=N,0.7nm,0.9s							
YKA	**Yellowknife Ar**	**20.53**	**17**	P		**P**	**03 27 24.5**	**+1.0**
	comp=N,0.3nm,0.8s,baz=211,slow=11,SNR=4.4							
	comp=N,0.3nm,0.8s							
ILAR	**Eielson Array**	**23.99**	**340**	P		**P**	**03 27 59.5**	**-0.2**
	comp=N,0.3nm,0.8s,baz=153,slow=8.3,SNR=4.6							
	comp=N,0.3nm,0.8s							
H11N3	**WAKE ISLAND Hy 59.09 268**			T		T	04 36 35.6	
	baz=50,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hy 59.09 268**			T		T	04 36 37.1	
	baz=50,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy 59.10 268**			T		T	04 36 37.9	
	baz=50,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy 60.01 268**			T		T	04 37 49.1	
	baz=50,slow=75,SNR=35							
H11S2	**WAKE ISLAND Hy 60.02 268**			T		T	04 37 49.8	
	baz=50,slow=75,SNR=30							
H11S3	**WAKE ISLAND Hy 60.03 268**			T		T	04 37 50.4	
	baz=50,slow=75,SNR=32							

*ASIES **12** 03:28:46.7, 24.22N×121.76E, h17km, ML3.6, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.44; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$0.14; $M_{r\theta}$0.56; $M_{\theta\phi}$-0.65; $M_{\phi r}$1.41; Fault plane solution: $M_0$1.73489×10^{21} NP1:ϕ_s24.58000°, δ81.77000°, λ66.10000°. NP2:ϕ_s276.67000°, δ25.20000°, λ160.34000°. Principal axes: T Plg47.8250°, Azm269.3270°; N Plg23.6380°, Azm28.2160°; P Plg32.5830°, Azm134.4600°;*

TAP 12 03:28:46.7, 24.22N×121.76E, h17km, ML3.6, 4C-21D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
EHP	**Heping Village**	**0.10**	**352**	⇓ *eP*		Pg	03 28 50.3	+0.1
	baz=354							
EHP				*eS*		Sg	03 28 52.9	+0.4
	baz=354							
EAHA	**Aohua**	**0.11**	**352**	⇓ *iP*		Pb	03 28 50.5	0.0
	baz=350							
EAHA				S		Sb	03 28 53.2	+0.2
	baz=350							
ETL	**Fush Village**	**0.13**	**245**	⇓ *iP*		Pb	03 28 50.8	0.0
	baz=247							
ETL				S		Sb	03 28 53.9	+0.3
	baz=247							
NACB	**Ninganchiao**	**0.15**	**254**	⇓ *iP*		Pg	03 28 51.0	+0.1
	baz=256							
NACB				S		Sb	03 28 54.2	+0.2
	baz=256							
TWD	**Chiawan**	**0.20**	**227**	⇓ *iP*		Pg	03 28 51.6	+0.1
	baz=234							
TWD				S		Sb	03 28 55.4	0.0
	baz=234							
ENA	**Nanau**	**0.21**	**356**	⇓ *iP*		Pg	03 28 51.8	+0.1
	baz=355							
ENA				*eS*		Sb	03 28 55.5	-0.3
	baz=355							
EWUT	**Wuta**	**0.23**	**5**	⇓ *iP*		Pg	03 28 52.1	+0.1
	baz=1.0							
EWUT				S		Sb	03 28 55.9	-0.3
	baz=1.0							
ETLH	**Xiulin Townshi**	**0.25**	**268**	⇓ *iP*		Pg	03 28 52.6	+0.2
	baz=268							
ETLH				S		Sb	03 28 56.8	-0.2
	baz=268							
HWA	**Hwalien**	**0.28**	**210**	*eP*		Pb	03 28 53.7	+0.5
	baz=215							
ETM	**Tongmen**	**0.35**	**224**	*eP*		Pg	03 28 54.2	+0.2
	baz=226							
ETM				*eS*		Sg	03 28 59.1	+0.2
	baz=226							
ESAO	**Su ao**	**0.37**	**13**	⇓ *eP*		Pg	03 28 54.5	+0.2
	baz=6.0							
ESAO				*eS*		Sg	03 28 59.7	+0.2
	baz=6.0							
LXIB	**Xiulin Townshi**	**0.37**	**238**	⇓ *iP*		Pg	03 28 54.4	0.0
	baz=240							
LXIB				S		Sb	03 29 00.1	-0.3
	baz=240							
LATG	**Datong**	**0.38**	**327**	⇓ *iP*		Pb	03 28 55.0	-0.1
	baz=325							
LATG				S		Sb	03 29 00.5	-0.2
	baz=325							
NNSB	**Datong**	**0.40**	**302**	⇓ *iP*		Pb	03 28 55.4	-0.1
	baz=302							
NNSB				S		Sg	03 29 00.9	+0.4
	baz=302							
TWC	**Suao**	**0.40**	**12**	⇓ *iP*		Pg	03 28 55.1	+0.2
	baz=7.0							
TWC				*eS*		Sb	03 29 01.0	-0.3
	baz=7.0							
NNS	**Nan Shan**	**0.41**	**303**	⇓ *iP*		Pb	03 28 55.6	-0.1
	baz=302							
NNS				*eS*		Sb	03 29 01.4	-0.3
	baz=302							
NDS	**Dongshan**	**0.42**	**355**	⇓ *iP*		Pb	03 28 55.6	-0.1
	baz=352							
NDS				*eS*		Sb	03 29 01.9	+0.2
	baz=352							
NDT	**Datong Townshi**	**0.44**	**330**	⇓ P		Pb	03 28 56.1	0.0
	baz=328							
NDT				S		Sb	03 29 02.7	+0.2
	baz=328							
WHF	**Hehuan Shan**	**0.45**	**261**	⇓ *iP*		Pb	03 28 56.3	-0.2
	baz=262							
WHF				S		Sb	03 29 02.8	-0.4
	baz=262							
ENTT	**Nioudou**	**0.46**	**338**	⇓ *iP*		Pb	03 28 56.3	-0.1
	baz=335							
ENTT				*eS*		Sb	03 29 02.9	0.0
	baz=335							
SHUL	**Shoufeng**	**0.46**	**203**	*eP*		Pb	03 28 56.7	+0.3
	baz=196							
SHUL				*eS*		Sb	03 29 04.0	+1.0
	baz=196							
EOS2	**EOS2**	**0.48**	**65**	⇑ *eP*		Pn	03 28 57.8	-0.9
	baz=50							
ESL	**Shilin**	**0.50**	**216**	⇑ *eP*		Pg	03 28 56.1	-0.6
	baz=223							
TWE	**Neicheng**	**0.51**	**351**	⇓ P		Pb	03 28 57.3	+0.1
	baz=349							
TWE				*eS*		Sb	03 29 04.5	+0.1
	baz=349							
EOS3	**EOS3**	**0.52**	**82**	*eP*		Pn	03 28 58.9	-0.3
	baz=80							
EOS4	**EOS4**	**0.52**	**100**	*eP*		Pb	03 28 58.1	+0.9
	baz=101							
TWT	**Tachien**	**0.53**	**274**	*eP*		Pb	03 28 58.1	+0.5
	baz=275							
TWT				*i* S		Sb	03 29 05.6	+0.4
	baz=275							
TEGC	**Jichi Village**	**0.54**	**201**	*eP*		Pg	03 28 57.4	-0.1
	baz=195							
TDCB	**Techi**	**0.55**	**274**	*eP*		Pb	03 28 58.3	+0.4
	baz=275							
TDCB				*eS*		Sb	03 29 05.4	-0.2
	baz=275							
CHGB	**Renai**	**0.55**	**254**	*eP*		Pb	03 28 58.3	+0.2
	baz=250							
CHGB				*eS*		Sg	03 29 05.3	0.0
	baz=250							
FUSB	**Fushanzhiwuyua**	**0.56**	**344**	*eP*		Pb	03 28 58.1	0.0
	baz=334							
FUSB				*eS*		Sb	03 29 05.9	-0.1
	baz=334							
YHNB	**Yeheng**	**0.57**	**323**	⇓ *iP*		Pb	03 28 58.5	+0.2
	baz=321							
YHNB				*eS*		Sb	03 29 06.1	-0.1
	baz=321							
NSK	**Sanguang**	**0.58**	**322**	⇓ *iP*		Pb	03 28 58.6	+0.1
	baz=321							
NSK				*eS*		Sb	03 29 06.7	+0.1
	baz=321							
WARBT	**Fenglin Townsh**	**0.60**	**214**	*eP*		Pg	03 28 57.1	-1.5
	baz=219							
WARBT				*eS*		Sg	03 29 05.5	-1.1
	baz=219							
NWLT	**Wulai**	**0.60**	**338**	*eP*		Pb	03 28 59.0	+0.1
	baz=340							
NWLT				*eS*		Sg	03 29 06.9	+0.1
	baz=340							
WUSB	**Renai**	**0.62**	**249**	⇑ *iP*		Pb	03 28 59.5	+0.2
	baz=246							
WUSB				*eS*		Sb	03 29 07.9	+0.1
	baz=246							
EGS		**0.65**	**14**	*eP*		Pb	03 29 00.2	+0.7
	baz=18							
NFF	**Wufeng Townshi**	**0.71**	**306**	*eP*		Pb	03 29 01.3	+0.5
	baz=305							
NFF				S		Sb	03 29 10.8	+0.5
	baz=305							
VWDT	**VWDT**	**0.73**	**231**	*i* P		Pb	03 29 00.5	-0.4
	baz=239							
VWDT				*eS*		Sb	03 29 11.4	+0.8
	baz=239							
NHDH	**Xindian Distri**	**0.77**	**344**	*eP*		Pn	03 29 03.0	+0.2
	baz=341							
NHDH				S		Sg	03 29 12.6	+0.6
	baz=341							
HGSD	**Ruisui**	**0.78**	**203**	*eP*		Pg	03 29 02.2	+0.2
	baz=194							
HGSD				*eS*		Sn	03 29 15.4	+1.1
	baz=194							
WCS	**Beigang Elemen**	**0.79**	**259**	*eP*		Pg	03 29 02.3	+0.2
	baz=260							
WCS				*eS*		Sg	03 29 12.7	+0.2
	baz=260							
LIOB	**Emei**	**0.80**	**303**	*eP*		Pn	03 29 03.0	-0.2
	baz=302							
LIOB				*eS*		Sn	03 29 13.9	-0.8
	baz=302							
NSTT	**Nanjuang**	**0.80**	**301**	P		Pg	03 29 02.7	+0.3
	baz=301							
NSTT				*eS*		Sg	03 29 13.3	+0.3
	baz=301							
EHY	**Hungye**	**0.81**	**209**	*eP*		Pb	03 29 00.2	-2.2
	baz=221							
TWB1	**Santiao Chiao**	**0.82**	**15**	*eP*		Pg	03 29 02.9	+0.2
	baz=12							
TWB1				*eS*		Sg	03 29 13.5	+0.1
	baz=12							
SSLB	**Suanglung**	**0.85**	**240**	⇑ P		Pb	03 29 02.7	-0.3
	baz=249							
SSLB				*eS*		Sb	03 29 13.3	-0.9
	baz=249							
SMLT	**Sun Moon Lake**	**0.85**	**247**	*eP*		Pb	03 29 03.1	+0.1
	baz=242							
SMLT				S		Sg	03 29 14.5	-0.1
	baz=242							
NWF	**Wu-fen Shan**	**0.85**	**2**	*eP*		Pn	03 29 04.0	0.0
	baz=351							
NWF				*eS*		Sg	03 29 15.1	+0.5
	baz=351							
WFSB	**Wu-fen Shan**	**0.85**	**2**	*eP*		Pn	03 29 03.9	-0.1
	baz=351							
WFSB				*eS*		Sg	03 29 14.9	+0.4
	baz=351							
TYC	**Yuchr**	**0.88**	**249**	*eP*		Pb	03 29 03.5	0.0
	baz=244							
TYC				*eS*		Sb	03 29 14.9	0.0
	baz=244							
SXI1	**Grass Mountain**	**0.88**	**7**	*eP*		Pn	03 29 04.3	-0.1
	baz=3.0							
SXI1				*eS*		Sg	03 29 15.6	+0.1
	baz=3.0							
SBCB	**Hsinchu**	**0.91**	**309**	*eP*		Pn	03 29 05.0	+0.3
	baz=308							
SBCB				*eS*		Sn	03 29 17.4	0.0
	baz=308							
TWQ1	**Liyutan**	**0.91**	**279**	*eP*		Pn	03 29 05.5	+0.8
	baz=279							
TWQ1				*eS*		Sg	03 29 16.5	+0.2
	baz=279							
NCUH	**Zhongli**	**0.91**	**325**	*eP*		Pn	03 29 05.3	+0.5
	baz=323							
NCUH				*eS*		Sn	03 29 19.0	+1.5
	baz=323							
YULB	**Yu-li**	**0.92**	**207**	*eP*		Pb	03 29 02.0	-2.2
	baz=219							
YULB				*eS*		Sb	03 29 16.2	0.0
	baz=219							
HSN	**Hsinchu**	**0.92**	**309**	*eP*		Pn	03 29 06.5	+1.6
	baz=305							
HSN				*eS*		Sn	03 29 18.3	+0.5
	baz=305							
NSY	**Sanyi**	**0.93**	**283**	*eP*		Pn	03 29 06.3	+1.3
	baz=283							
NSY				*eS*		Sn	03 29 18.5	+0.5
	baz=283							
TNOU	**National Taiwa**	**0.93**	**1**	*eP*		Pb	03 29 04.2	-0.2
	baz=342							
TWS1	**Kuangyinshan**	**0.93**	**341**	*eP*		Pn	03 29 05.7	+0.7
	baz=338							
TWS1				*eS*		Sn	03 29 18.4	+0.3
	baz=338							
NMLH	**Miaoli**	**0.94**	**290**	*eP*		Pn	03 29 06.2	+1.1
	baz=290							
NMLH				*eS*		Sn	03 29 19.5	+1.3
	baz=290							
YM01	**YM01**	**0.94**	**350**	*eP*		Pg	03 29 05.1	+0.1
	baz=331							
YM01				*eS*		Sn	03 29 18.2	-0.2
	baz=331							
EYUL	**Yuli**	**0.95**	**205**	*eP*		Pb	03 29 04.5	-0.3
	baz=220							
TWF1	**Yuli**	**0.96**	**206**	*eP*		Pb	03 29 03.6	-1.2
	baz=219							
YM08	**YM08**	**0.98**	**351**	*eP*		Pg	03 29 05.6	-0.1
	baz=333							
YM08				*eS*		Sb	03 29 18.1	+0.1
	baz=333							
NTST	**Danshui**	**0.98**	**344**	*eP*		Pg	03 29 06.0	+0.2
	baz=340							
NTST				*eS*		Sn	03 29 20.3	+1.0
	baz=340							
ANP	**Anpu**	**0.99**	**348**	*eP*		Pg	03 29 06.2	+0.3
	baz=346							
WJS	**Zhushan**	**1.02**	**248**	*eP*		Pg	03 29 07.2	+0.8
	baz=246							
WJS				*eS*		Sn	03 29 20.9	+0.7
	baz=246							
WNT	**Mingjian**	**1.04**	**251**	*eP*		Pg	03 29 07.5	+0.7
	baz=250							
WNT				*eS*		Sn	03 29 22.6	+2.0
	baz=250							
TWY	**Chenhua**	**1.06**	**352**	*eP*		Pg	03 29 08.9	+1.6
	baz=349							
CHKH	**Chenggong**	**1.07**	**198**	*eP*		Pb	03 29 06.0	-0.8
	baz=187							
WCHH	**Zhanghua**	**1.10**	**263**	*eP*		Pg	03 29 08.6	+0.6
	baz=264							
ALS	**Alishan**	**1.12**	**231**	*eP*		Pn	03 29 08.0	+0.1
	baz=232							
CHN5	**Tsauling**	**1.16**	**238**	*eP*		Pg	03 29 09.1	-0.1
	baz=225							
CHN5				*eS*		Sg	03 29 25.9	+1.5
	baz=225							
CHKT	**Chengkung**	**1.17**	**198**	*eP*		Pn	03 29 07.0	-1.2
	baz=187							
EHD	**Haiduan**	**1.18**	**205**	*eP*		Pb	03 29 08.8	+0.2
	baz=206							
WGK	**Gukeng**	**1.21**	**244**	*eP*		Pg	03 29 10.5	+0.3
	baz=247							
WGK				*eS*		Sg	03 29 28.0	+2.0
	baz=247							
ELDTW	**Lidau**	**1.23**	**214**	*eP*		Pn	03 29 08.4	-0.8
	baz=201							
ELDTW				*eS*		Sn	03 29 25.8	+0.4
	baz=201							
WDLH	**Douliu**	**1.23**	**245**	*eP*		Pg	03 29 10.9	+0.4
	baz=247							
WDLH				*eS*		Sg	03 29 28.5	+1.9
	baz=247							
WRL	**Guolierlin Hig**	**1.30**	**256**	*eP*		Pb	03 29 11.0	+0.3
	baz=259							
WRL				*eS*		Sg	03 29 30.4	+1.7
	baz=259							
EDH	**Donghe**	**1.30**	**199**	*eP*		Pn	03 29 08.1	-2.1
	baz=184							
WCKO	**Fanlu**	**1.31**	**234**	*eP*		Pg	03 29 11.6	-0.3
	baz=236							
WCKO				*eS*		Sg	03 29 30.5	+1.5
	baz=236							
WTK	**Tuku**	**1.36**	**247**	*eP*		Pg	03 29 12.3	-0.6
	baz=236							
WTK				S		Sg	03 29 31.5	+0.9
	baz=236							
STYH	**Taoyuan**	**1.38**	**221**	*eP*		Pb	03 29 11.6	-0.4
	baz=222							
TPUB	**Ta-pu**	**1.38**	**229**	*eP*		Pb	03 29 12.5	+0.4
	baz=230							
WTP	**Ta-pu**	**1.42

ECL	**Taimali** baz=192	**1.77**	**205**	*e*P		Pn	03 29 16.5	-0.1
ECL	baz=192			*e*S		Sn	03 29 37.6	-1.2
TSMG	**Majia** baz=199	**1.82**	**214**	*e*P		Pb	03 29 18.8	-0.7
TSCK	**Chigu Township** baz=237	**1.86**	**236**	*e*P		Pn	03 29 18.0	+0.2
MASBT	**Mashibuluo** baz=213	**1.90**	**213**	*e*P		Pb	03 29 20.2	-0.7
MASBT	baz=213			*i* S		Sb	03 29 45.3	+0.9
EAST	**Anshuo** baz=193	**2.01**	**205**	*e*P		Pb	03 29 21.6	-1.2
PNG	**Penghu** baz=255	**2.12**	**253**	*e*P		Pn	03 29 22.1	+0.8
PHUB	**P'eng-hu** baz=255	**2.12**	**251**	*e*P		Pn	03 29 22.6	+1.3
PHUB	baz=255			*e*S		Sb	03 29 50.2	-0.4
VWUC	**VWUC** baz=279	**2.24**	**291**	*e*P		Pn	03 29 22.9	-0.1
MATB	**Ma-tsu** baz=316	**2.53**	**320**	*e*P		Pn	03 29 27.1	+0.1
PTMZ	**Houxiangcun** baz=290	**2.54**	**289**	*e*P		Pn	03 29 27.1	0.0
LYJJ	**Jianjiangzhen** baz=318	**2.94**	**323**	*e*P		Pn	03 29 32.3	-0.4
XPSS	**Dashiqiu** baz=328	**3.05**	**333**	*e*P		Pn	03 29 33.3	-0.9
KNMB	**Chin-men Tao** baz=276	**3.08**	**275**	*e*P		Pn	03 29 34.3	-0.3
AXDP	**Jialang** baz=282	**3.51**	**282**	*e*P		Pn	03 29 41.0	+0.5

NEIC ***12*** *03:34:19.9±1.2, 5.3°S±0.1°×154.3°E±0.1°, h184km±9km, mb4.3/21, Error ellipse: s-maj=20.6km s-min=16.7km az=198.0*

IDC ***12*** *03:34:34.5±12.0, 5.92°S×154.44°E, h329km±143km, mb3.3/6, mbtmp4.1/8, Error ellipse: s-maj=52.6km s-min=23.3km az=168.0*

ISC 12 03:34:21.5±0.9, 5.47°S±0.10×154.3°E±0.1, h200km, n35, σ1§08/34, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.43**	**301**		**Pn**	**03 35 01.8**	**-3.0**
COEN	**Coen**	**13.79**	**231**		**P**	**03 37 31.1**	**0.0**
CTA	**Charters Tower** 8.6nm,0.7s,baz=30,slow=12,SNR=14	**16.48**	**207**	P	**Pn**	**03 38 03.5**	**+1.7**
CTAO	**Charters Tower**	**16.48**	**207**	P	**Pn**	**03 38 02.0**	**+0.3**
CTAO				IAmb	IAmb	03 38 04.0	
	comp=Z,9.5nm,0.8s						
KOUNC	**Koumac, New Ca**	**17.89**	**148**	P	**P**	**03 38 15.8**	**-0.4**
KOUNC				IAmb	IAmb	03 38 29.3	
	comp=Z,14nm,0.8s						
DZM	**Mont Dzumac**	**20.29**	**146**	P	**P**	**03 38 41.3**	**-0.9**
DZM				IAmb	IAmb	03 38 44.4	
	comp=Z,12nm,0.9s						
DZM	**Mont Dzumac** comp=Z,10nm,0.5s,baz=272,slow=7.2,SNR=27	**20.29**	**146**	P	**P**	**03 38 41.8**	**-0.5**
OUENC	**Ouen Island, N**	**20.79**	**145**	P	**P**	**03 38 46.9**	**-0.5**
OUENC				IAmb	IAmb	03 38 48.9	
	comp=Z,8.1nm,0.7s						
MTN	**Manton Dam**	**23.95**	**251**	P	**P**	**03 39 18.0**	**+0.2**
MTN				IAmb	IAmb	03 39 28.3	
	comp=Z,8.1nm,0.7s						
WR0	**Warramunga Arr**	**23.98**	**231**	P	**P**	**03 39 18.8**	**+0.8**
WR0				IAmb	IAmb	03 39 19.7	
	comp=Z,13nm,1.1s						
WB0	**Warramunga Arr**	**23.99**	**232**	P	**P**	**03 39 19.1**	**+1.1**
WRAB	**Tennant Creek**	**24.11**	**232**	P	**P**	**03 39 20.2**	**+1.0**
WB2	**Warramunga Arr**	**24.12**	**232**	P	**P**	**03 39 19.8**	**+0.5**
WRA	**Warramunga Arr**	**24.13**	**232**	P	**P**	**03 39 19.1**	**-0.2**
WRA	**Warramunga Arr** comp=Z,11nm,0.6s,baz=56,slow=9.9,SNR=116 comp=Z,11nm,0.6s	**24.13**	**232**	P	**P**	**03 39 20.4**	**+1.1**
ARMA	**Armidale**	**24.94**	**185**	P	**P**	**03 39 24.9**	**-1.8**
ARMA				IAmb	IAmb	03 39 32.1	
	comp=Z,5.8nm,0.9s						
AS31	**Alice Springs**	**26.67**	**225**	P	**P**	**03 39 42.1**	**-0.2**
ASAR	**Alice Springs**	**26.67**	**225**	P	**P**	**03 39 42.1**	**-0.2**
ASAR	**Alice Springs** comp=Z,1.5nm,0.4s,baz=56,slow=9.0,SNR=33 comp=Z,1.5nm,0.4s	**26.67**	**225**	P	**P**	**03 39 42.5**	**+0.3**
KNRA	**Kununurra**	**27.00**	**246**	P	**P**	**03 39 44.1**	**-1.0**
STKA	**Stephens Creek** comp=Z,0.8nm,0.5s,baz=356,slow=14,SNR=2.8 comp=Z,0.8nm,0.5s	**28.82**	**203**	P	**P**	**03 40 00.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.63**	**243**	P	**P**	**03 40 17.6**	**+0.3**
BBOO	**Buckleboo**	**32.06**	**210**	P	**P**	**03 40 29.2**	**-0.5**
BBOO				IAmb	IAmb	03 40 36.6	
	comp=Z,5.5nm,1.1s						
FORT	**Forrest**	**35.21**	**221**	P	**P**	**03 40 56.4**	**-0.4**
PSA00	**Pilbara Seismi**	**36.95**	**241**	P	**P**	**03 41 11.7**	**-0.1**
BKZ	**Black Stump Fm**	**39.12**	**152**	P	**P**	**03 41 29.5**	**-0.1**
BKZ				IAmb	IAmb	03 41 38.0	
	comp=Z,9.9nm,1.1s						
BSWZ	**Blackbirch Sta**	**40.12**	**157**	P	**P**	**03 41 37.9**	**+0.1**
LTZ	**Lake Taylor**	**40.45**	**159**	P	**P**	**03 41 40.9**	**+0.3**
RPZ	**Rata Peaks**	**40.87**	**161**	P	**P**	**03 41 44.7**	**+0.8**
RPZ				IAmb	IAmb	03 42 10.5	
	comp=Z,13nm,1.2s						
MORW	**Morawa**	**43.07**	**232**	P	**P**	**03 42 01.9**	**-0.1**
MORW				IAmb	IAmb	03 42 03.7	
	comp=Z,6.6nm,1.0s						
USRK	**Ussuriysk Ar.**	**53.35**	**340**	P	**P**	**03 43 18.9**	**-1.3**
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.2s,baz=117,slow=4.9,SNR=4.5 comp=Z,0.9nm,0.2s	**59.47**	**295**	P	**P**	**03 44 06.7**	**+2.7**
XLT	**XiLinHaoTe**	**59.98**	**329**	*e*P	**P**	**03 44 08.2**	**+1.2**
XLT				pP	pwP	03 44 58.4	+1.4
XLT				sP	sP	03 45 12.5	-0.3
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,170nm,4.5s						
SONM	**Songino Array** comp=Z,0.1nm,0.3s,baz=147,slow=4.4,SNR=1.9 comp=Z,0.1nm,0.3s	**67.66**	**327**	P	P	03 44 59.8	+2.6
MKAR	**Makanchi Array** comp=Z,0.2nm,0.4s,baz=90,slow=9.7,SNR=4.9 comp=Z,0.2nm,0.4s	**81.78**	**319**	P	**P**	**03 46 19.6**	**+1.5**

IDC ***12*** *03:43:59.6±3.5, 19.22°N×146.17°E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=146.9km s-min=22.1km az=82.0*

NEIC ***12*** *03:44:04.6±1.1, 19.19°N±0.09°×146.3°E±0.2, h35km±2km, mb4.4/13, Error ellipse: s-maj=34.7km s-min=14.5km az=91.0*

ISC 12 03:44:04.2±0.9, 19°23N±0.09°×146°3E±0.3, h35km, n26, σ0§93/26, mb4.2/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMM	**Marumori**	**19.18**	**347**	P	**P**	**03 48 24.8**	**0.0**
KSAR	**Wonju Array Be**	**24.26**	**322**	P	**P**	**03 49 18.2**	**+0.1**
USA0B	**Ussuriysk Arra**	**27.63**	**337**	P	**P**	**03 49 47.5**	**-0.9**
USA0B				IAmb	IAmb	03 49 58.1	
	comp=Z,18nm,1.3s						
USRK	**Ussuriysk Ar.**	**27.63**	**337**	P	**P**	**03 49 46.9**	**-1.5**
COEN	**Coen**	**33.12**	**186**	P	**P**	**03 50 37.9**	**+0.7**
COEN				IAmb	IAmb	03 51 00.8	
	comp=Z,3.3nm,1.1s						
WB0	**Warramunga Arr**	**40.48**	**197**	P	**P**	**03 51 39.0**	**-0.8**
WB0				IAmb	IAmb	03 51 40.5	
	comp=Z,5.4nm,1.1s						
WR0	**Warramunga Arr**	**40.62**	**197**	P	**P**	**03 51 40.4**	**-0.5**
WR0				IAmb	IAmb	03 52 01.0	
	comp=Z,6.6nm,1.2s						
WRAB	**Tennant Creek**	**40.65**	**197**	P	**P**	**03 51 41.0**	**-0.1**
WRAB				IAmb	IAmb	03 51 42.0	
	comp=Z,4.1nm,0.8s						
WB2	**Warramunga Arr**	**40.66**	**197**	P	**P**	**03 51 41.2**	**0.0**
WB2				IAmb	IAmb	03 51 42.1	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**40.66**	**197**	P	**P**	**03 51 40.5**	**-0.8**
WRA	**Warramunga Arr** comp=Z,1.9nm,0.5s,baz=13,slow=8.9,SNR=22 comp=Z,1.9nm,0.5s	**40.66**	**197**	P	**P**	**03 51 41.3**	**0.0**
FITZ	**Fitzroy Crossi**	**42.29**	**210**	P	**P**	**03 51 53.5**	**-1.1**
GSTR	**Great Sitkin T**	**44.00**	**33**	P	**P**	**03 52 08.7**	**+0.6**
AS31	**Alice Springs**	**44.32**	**196**	P	**P**	**03 52 09.4**	**-1.6**
ASAR	**Alice Springs**	**44.32**	**196**	P	**P**	**03 52 10.4**	**-0.6**
ASAR	**Alice Springs** comp=Z,0.5nm,0.4s,baz=15,slow=7.4,SNR=12 comp=Z,0.5nm,0.4s	**44.32**	**196**	P	**P**	**03 52 11.0**	**0.0**
PSA00	**Pilbara Seismi**	**48.12**	**214**	P	**P**	**03 52 42.4**	**+1.5**
PSA00				IAmb	IAmb	03 52 46.3	
	comp=Z,7.7nm,1.1s						
BBOO	**Buckleboo**	**52.67**	**191**	P	**P**	**03 53 14.2**	**-0.9**
FORT	**Forrest**	**52.73**	**200**	P	**P**	**03 53 14.2**	**-1.3**
ZALV	**Zalesovo Beam**	**57.95**	**322**	P	**P**	**03 53 53.4**	**+0.4**
MKAR	**Makanchi Array**	**58.52**	**314**	P	**P**	**03 53 58.7**	**+1.6**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.6s,baz=90,slow=9.1,SNR=4.3 comp=Z,0.2nm,0.6s	**58.52**	**314**	P	**P**	**03 53 58.2**	**+1.1**
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.3s,baz=94,slow=7.5,SNR=5.3 comp=Z,0.3nm,0.3s	**61.32**	**318**	P	**P**	**03 54 17.0**	**+0.8**
BVAR	**Borovoye Array** comp=Z,0.6nm,0.4s,baz=96,slow=7.2,SNR=4.9 comp=Z,0.6nm,0.4s	**66.44**	**320**	P	**P**	**03 54 50.0**	**+0.1**
ABKAR	**Akbulak array**	**73.35**	**317**	P	**P**	**03 55 32.2**	**-0.2**
FINES	**FINESS Array B** comp=Z,2.0nm,0.9s,baz=57,slow=5.1,SNR=3.7 comp=Z,2.0nm,0.9s	**86.65**	**335**	P	**P**	**03 56 43.0**	**-0.9**

IDC 12 03:49:45.2±3.0, 54.08N×86.59E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=25.1km s-min=15.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=82,slow=338,SNR=2.2	**1.05**	**264**	I	I	03 56 50.0	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=84,slow=17,SNR=6.9	**1.05**	**264**	Pg	Pg	03 50 04.6	-0.8
ZALV				Lg	Lg	03 50 20.1	
	0.8nm,0.3s,baz=83,slow=29,SNR=6.9						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=13,SNR=4.8 0.3nm,0.3s	**6.03**	**238**	Pn	Pn	03 51 16.8	+1.1
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=26,slow=14,SNR=5.2 0.1nm,0.3s	**7.79**	**202**	Pn	Pn	03 51 40.6	+0.8

NEIC ***12*** *03:52:47.8±1.3, 18.8°N±0.1°×145.4°E±0.2, h530km±10km, mb4.0/110, Error ellipse: s-maj=23.0km s-min=17.2km az=101.0*

IDC ***12*** *03:52:49.0±1.5, 18.77°N×145.44°E, h555km±18km, mb3.4/20, mbtmp4.3/22, Error ellipse: s-maj=16.6km s-min=11.6km az=84.0*

ISC 12 03:52:48.5±0.5, 18.73N±0.07×145.3E±0.1, h550km, n145, σ0§90/148, mb3.9/77, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.13**	**185**	P	**P**	**03 54 17.5**	**-2.1**
GUMO	**Guam** 46nm,0.3s,baz=4.7,slow=3.6,SNR=7.8	**5.13**	**185**	P	**P**	**03 54 19.7**	**+0.2**
GUMO				S	**S**	**03 55 28.6**	**-5.1**
	30nm,0.3s,baz=343,slow=19,SNR=2.3						
INU	**Inuyama**	**18.12**	**338**	P	**P**	**03 56 27.0**	**-0.3**
JGF	**Kuroka**	**18.23**	**339**	P	**P**	**03 56 28.0**	**-0.3**
JWT	**Wachi**	**18.69**	**334**	P	**P**	**03 56 32.5**	**0.0**
MJAR	**Matsushiro Arr** 2.7nm,0.6s,baz=168,slow=9.1,SNR=9.5	**18.82**	**342**	P	**P**	**03 56 33.5**	**-0.3**
MAJO	**Matsushiro**	**18.82**	**342**	P	**P**	**03 56 32.8**	**-1.0**
MJB9	**Matsu-Tunnel**	**18.82**	**342**	P	**P**	**03 56 33.9**	**+0.1**
KSRS	**Korea Array** 1.4nm,0.5s,baz=142,slow=9.3,SNR=4.7 1.4nm,0.5s	**24.09**	**324**	P	**P**	**03 57 20.9**	**-0.2**
USRK	**Ussuriysk Ar.**	**27.75**	**339**	P	**P**	**03 57 52.2**	**-1.0**
USRK	**Ussuriysk Ar.** 2.0nm,0.6s,baz=164,slow=8.4,SNR=5.1 2.0nm,0.6s	**27.75**	**339**	P	**P**	**03 57 54.3**	**+1.1**
COEN	**Coen**	**32.55**	**184**	P	**P**	**03 58 39.3**	**+4.4**
COEN				IAmb	IAmb	03 58 40.3	
	comp=Z,7.0nm,1.3s						
SBUM	**Sibu**	**36.22**	**247**	P	**P**	**03 59 06.8**	**+1.1**
WB0	**Warramunga Arr**	**39.73**	**196**	P	**P**	**03 59 34.5**	**+0.4**
WB0				IAmb	IAmb	03 59 48.7	
	comp=Z,4.0nm,1.1s						
WR0	**Warramunga Arr**	**39.87**	**196**	P	**P**	**03 59 34.7**	**-0.5**
WR0				IAmb	IAmb	04 00 03.0	
	comp=Z,4.6nm,1.2s						
WB2	**Warramunga Arr**	**39.91**	**196**	P	**P**	**03 59 35.8**	**+0.3**
WB2				IAmb	IAmb	03 59 42.1	
	comp=Z,7.8nm,1.5s						
WRA	**Warramunga Arr**	**39.91**	**196**	P	**P**	**03 59 35.1**	**-0.4**
WRA	**Warramunga Arr** comp=Z,0.9nm,0.6s,baz=17,slow=8.4,SNR=13	**39.91**	**196**	P	**P**	**03 59 36.1**	**+0.6**
WRA				ScP	**ScP**	**04 04 23.0**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=18,slow=4.5,SNR=2.6 comp=Z,0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**41.39**	**209**	P	**P**	**03 59 47.7**	**+0.4**
SONM	**Songino Array**	**42.90**	**322**	P	**P**	**03 59 59.3**	**+0.3**
SONM	**Songino Array** comp=Z,0.8nm,0.5s,baz=140,slow=6.6,SNR=8.3	**42.90**	**322**	P	**P**	**03 59 59.7**	**+0.8**
SONM				PcP	**pwP**	**04 01 37.6**	**-2.5**
	comp=Z,0.7nm,0.7s,baz=131,slow=2.4,SNR=4.1 comp=Z,0.8nm,0.5s						
ASAR	**Alice Springs** comp=Z,0.4nm,0.6s,baz=19,slow=7.6,SNR=7.8 comp=Z,0.4nm,0.6s	**43.58**	**195**	P	**P**	**04 00 05.0**	**+0.6**
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.3s,baz=64,slow=8.1,SNR=6.4 comp=Z,1.4nm,0.3s	**43.86**	**277**	P	**P**	**04 00 08.3**	**+1.6**
L14K	**Kuka Creek**	**55.88**	**27**	P	**P**	**04 01 34.6**	**+0.5**
L14K				IAmb	IAmb	04 01 42.5	
	comp=Z,6.5nm,1.1s						
M14K	**Bethel**	**55.95**	**28**	P	**P**	**04 01 34.5**	**0.0**
J14K	**Nanvaranak Lak**	**56.14**	**26**	P	**P**	**04 01 35.6**	**-0.2**
J14K				IAmb	IAmb	04 01 59.5	
	comp=Z,8.5nm,1.3s						
ANM	**Nome**	**56.31**	**23**	P	**P**	**04 01 37.5**	**+0.5**
ANM				IAmb	IAmb	04 02 13.5	
	comp=Z,9.2nm,1.5s						
N15K	**Kwethluk River**	**56.57**	**29**	P	**P**	**04 01 38.8**	**-0.1**
K15K	**Wolf Creek Mou**	**56.78**	**27**	P	**P**	**04 01 40.5**	**+0.2**
K15K				IAmb	IAmb	04 01 48.5	
	comp=Z,11nm,1.3s						
F15K	**North Star Dit**	**57.15**	**22**	P	**P**	**04 01 43.1**	**+0.3**
L16K	**Owhat River**	**57.44**	**28**	P	**P**	**04 01 44.5**	**-0.2**
L16K				IAmb	IAmb	04 02 21.3	
	comp=Z,12nm,1.4s						
J16K	**Anvik River**	**57.59**	**26**	P	**P**	**04 01 46.0**	**+0.2**
J16K				IAmb	IAmb	04 01 47.7	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**57.77**	**323**	P	**P**	**04 01 46.4**	**-0.8**
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.4s,baz=100,slow=6.3,SNR=7.7 comp=Z,1.4nm,0.4s	**57.77**	**323**	P	**P**	**04 01 47.1**	**-0.1**
MK31	**Makanchi Array**	**58.19**	**314**	P	**P**	**04 01 49.6**	**-0.6**
MKAR	**Makanchi Array**	**58.19**	**314**	P	**P**	**04 01 50.1**	**0.0**
MKAR	**Makanchi Array** comp=Z,1.6nm,0.4s,baz=90,slow=8.1,SNR=45 comp=Z,1.6nm,0.4s	**58.19**	**314**	P	**P**	**04 01 51.1**	**+1.0**
C16K	**Lisburne Hills**	**58.26**	**19**	P	**P**	**04 01 50.3**	**+0.1**
C16K				IAmb	IAmb	04 01 52.0	
	comp=Z,8.7nm,1.4s						
J17K	**VABM Dome**	**58.26**	**26**	P	**P**	**04 01 51.3**	**+0.9**
J17K				IAmb	IAmb	04 01 52.4	
	comp=Z,4.8nm,0.9s						
K17K	**Iditarod**	**58.33**	**27**	P	**P**	**04 01 51.6**	**+0.8**
MAKZ	**Makanchi**	**58.40**	**314**	P	**P**	**04 01 52.0**	**+0.4**
MAKZ				IAmb	IAmb	04 01 52.7	
	comp=Z,3.5nm,0.5s						
H17K	**Granite Mounta**	**58.56**	**24**	P	**P**	**04 01 52.8**	**+0.4**
H17K				IAmb	IAmb	04 01 54.0	
	comp=Z,3.3nm,0.7s						
F17K	**Baldwin Pennin**	**58.72**	**22**	P	**P**	**04 01 54.1**	**+0.7**
F17K				IAmb	IAmb	04 01 54.9	
	comp=Z,5.6nm,0.7s						
L18K	**Granite Mounta**	**58.85**	**28**	P	**P**	**04 01 55.4**	**+1.1**
L18K				IAmb	IAmb	04 02 12.2	
	comp=Z,11nm,1.4s						
H18K	**Honhosa River**	**59.25**	**24**	P	**P**	**04 01 57.1**	**+0.1**
H18K				IAmb	IAmb	04 01 58.0	
	comp=Z,6.6nm,0.9s						
TTA	**Tatalina**	**59.39**	**27**	P	**P**	**04 01 57.0**	**-1.0**
E18K	**Tukpahlearik C**	**59.40**	**21**	P	**P**	**04 01 58.0**	**+0.1**
E18K				IAmb	IAmb	04 01 59.7	
	comp=Z,4.1nm,0.7s						
G18K	**Tagagawik**	**59.44**	**23**	P	**P**	**04 01 58.0**	**-0.2**
C18K	**Utukok River**	**59.77**	**20**	P	**P**	**04 02 00.4**	**0.0**
J19K	**Poorman**	**59.92**	**26**	P	**P**	**04 02 01.7**	**+0.3**
J19K				IAmb	IAmb	04 02 02.7	
	comp=Z,4.4nm,0.9s						
G19K	**Purcell Mounta**	**60.12**	**23**	P	**P**	**04 02 03.0**	**+0.3**
G19K				IAmb	IAmb	04 02 04.2	
	comp=Z,4.7nm,0.7s						
H19K	**Roundabout Mou**	**60.13**	**24**	P	**P**	**04 02 03.5**	**+0.7**
H19K				IAmb	IAmb	04 02 04.5	
	comp=Z,5.4nm,0.9s						
K20K	**Telida**	**60.36**	**27**	P	**P**	**04 02 05.1**	**+0.7**
K20K				IAmb	IAmb	04 02 22.2	
	comp=Z,13nm,1.4s						
C19K	**Lookout Ridge**	**60.50**	**20**	P	**P**	**04 02 06.0**	**+0.8**
C19K				IAmb	IAmb	04 02 07.3	
	comp=Z,4.4nm,0.8s						
E19K	**Redstone River**	**60.59**	**22**	P	**P**	**04 02 06.5**	**+0.7**
E19K				IAmb	IAmb	04 02 07.5	
	comp=Z,4.1nm,0.8s						
J20K	**Nowinta River**	**60.59**	**26**	P	**P**	**04 02 06.4**	**+0.6**
J20K				IAmb	IAmb	04 02 07.8	
	comp=Z,3.7nm,0.8s						
D19K	**Kuna River**	**60.71**	**21**	P	**P**	**04 02 06.3**	**-0.3**
F20K	**Avaraart Lake**	**60.97**	**23**	P	**P**	**04 02 08.4**	**+0.1**
KURK	**Kurchatov**	**61.01**	**318**	P	**P**	**04 02 08.4**	**-0.4**
KURBB	**Kurchatov Arra** comp=Z,15nm,0.6s,baz=95,slow=7.3,SNR=155 comp=Z,15nm,0.6s	**61.06**	**318**	P	**P**	**04 02 09.4**	**+0.2**
IMAR	**Indian Mountai**	**61.34**	**24**	P	**P**	**04 02 11.0**	**+0.2**
H21K	**Melozitna Rive**	**61.60**	**25**	P	**P**	**04 02 12.6**	**+0.1**
B20K	**Meade River**	**61.66**	**19**	P	**P**	**04 02 13.3**	**+0.6**
MLY	**Manley**	**62.25**	**26**	P	**P**	**04 02 17.2**	**+0.5**
MLY				IAmb	IAmb	04 02 17.9	
	comp=Z,4.3nm,0.8s						
B21K	**Ikpikpuk River**	**62.32**	**20**	P	**P**	**04 02 17.6**	**+0.6**
B21K				IAmb	IAmb	04 02 18.6	
	comp=Z,3.0nm,0.8s						
BOOM	**Boomskoye usch**	**62.51**	**309**	P	**P**	**04 02 18.7**	**-0.3**
BOOM				IAmb	IAmb	04 02 31.6	
	comp=Z,8.4nm,1.1s						
D22K	**Ayikyak River**	**62.70**	**21**	P	**P**	**04 02 20.5**	**+0.9**
G23K	**Bananza Creek**	**62.99**	**24**	P	**P**	**04 02 21.4**	**-0.1**
G23K				IAmb	IAmb	04 02 56.4	
	comp=Z,6.2nm,1.4s						
MDM	**Murphy Dome**	**63.26**	**26**	P	**P**	**04 02 24.0**	**+0.8**
MDM				IAmb	IAmb	04 02 24.6	
	comp=Z,3.5nm,0.8s						
H24K	**Noodor Dome**	**63.61**	**25**	P	**P**	**04 02 25.5**	**0.0**
TOLK	**Toolik Lake Re**	**63.70**	**22**	P	**P**	**04 02 26.1**	**+0.1**
TOLK				IAmb	IAmb	04 02 27.9	
	comp=Z,4.0nm,0.8s						
IL31		**63.78**	**26**	P	**P**	**04 02 25.4**	**-1.1**
ILAR	**Eielson Array**	**63.78**	**26**	P	**P**	**04 02 24.8**	**-1.7**
ILAR	**Eielson Array** comp=Z,2.1nm,0.8s,baz=249,slow=5.8,SNR=23 comp=Z,2.1nm,0.8s	**63.78**	**26**	P	**P**	**04 02 25.5**	**-1.0**
E24K	**Your Creek**	**63.93**	**22**	P	**P**	**04 02 27.7**	**+0.2**
E24K				IAmb	IAmb	04 02 29.3	
	comp=Z,2.5nm,0.6s						
G24K	**Hadweenzic Riv**	**63.97**	**24**	P	**P**	**04 02 28.1**	**+0.4**
G24K				IAmb	IAmb	04 02 29.4	
	comp=Z,3.3nm,0.8s						
F24K	**Squaw Lake**	**64.01**	**23**	P	**P**	**04 02 27.4**	**-0.6**
D24K	**Happy Valley**	**64.10**	**21**	P	**P**	**04 02 29.1**	**+0.7**
VRDI	**Verde Repeater**	**64.73**	**30**	P	**P**	**04 02 32.1**	**-0.8**
FYU	**Fort Yukon**	**64.81**	**24**	P	**P**	**04 02 32.6**	**-0.4**
SCRK	**Sand Creek**	**64.87**	**27**	P	**P**	**04 02 33.0**	**-0.6**
SCRK				IAmb	IAmb	04 02 34.3	
	comp=Z,3.6nm,1.1s						
D25K	**Kavik River**	**64.99**	**21**	P	**P**	**04 02 34.3**	**+0.2**
E25K	**Arctic Village**	**65.01**	**23**	P	**P**	**04 02 35.1**	**+0.9**
E25K				IAmb	IAmb	04 02 36.5	
	comp=Z,4.1nm,1.1s						
J26L	**Joseph Creek**	**65.14**	**27**	P	**P**	**04 02 34.6**	**-0.6**
J26L				IAmb	IAmb	04 03 03.4	
	comp=Z,4.8nm,1.2s						
BMAR	**Burnt Mountain**	**65.23**	**24**	P	**P**	**04 02 36.9**	**+1.2**
GRNC	**Granite Creek**	**65.50**	**31**	P	**P**	**04 02 38.2**	**+0.4**
M27K	**Edge Creek, AK**	**65.61**	**29**	P	**P**	**04 02 38.5**	**+0.2**
M27K				IAmb	IAmb	04 03 16.3	
	comp=Z,6.0nm,1.3s						
L27K	**Beaver Creek,**	**65.71**	**29**	P	**P**	**04 02 38.7**	**-0.1**
BCAR	**Beaver Creek A**	**65.73**	**29**	P	**P**	**04 02 38.8**	**-0.1**
BVAR	**Borovoye Array** comp=Z,6.5nm,0.6s,baz=97,slow=7.6,SNR=32 comp=Z,6.5nm,0.6s	**66.22**	**320**	P	**P**	**04 02 42.6**	**+0.5**
BRVK	**Borovoye**	**66.29**	**320**	P	**P**	**04 02 42.4**	**-0.1**
KK31	**Karatay Array**	**66.47**	**310**	P	**P**	**04 02 43.8**	**-0.1**
KKAR	**Karatay Array**	**66.47**	**310**	P	**P**	**04 02 44.2**	**+0.4**
I28M	**Miner Creek**	**66.79**	**26**	P	**P**	**04 02 45.4**	**-0.1**
D27M	**Malcolm River**	**66.86**	**22**	P	**P**	**04 02 46.9**	**+1.1**
D27M				IAmb	IAmb	04 02 47.9	
	comp=Z,3.4nm,0.7s						
DAWY	**Dawson**	**66.89**	**28**	P	**P**	**04 02 46.8**	**+0.7**
DAWY				IAmb	IAmb	04 03 13.2	
	comp=Z,5.6nm,1.5s						
F28M	**Old Crow**	**67.05**	**24**	P	**P**	**04 02 47.2**	**+0.2**
F28M				IAmb	IAmb	04 02 49.2	
	comp=Z,4.4nm,1.0s						
M29M	**Somme Creek**	**67.20**	**29**	P	**P**	**04 02 48.7**	**+0.7**
M29M				IAmb	IAmb	04 02 50.0	
	comp=Z,3.2nm,0.8s						
E28M	**Babbage River**	**67.29**	**23**	P	**P**	**04 02 49.2**	**+0.8**
L29M	**L29M**	**67.39**	**29**	P	**P**	**04 02 50.1**	**+1.0**
L29M				IAmb	IAmb	04 02 51.2	
	comp=Z,4.2nm,0.8s						
H29M	**Whitestone**	**67.50**	**25**	P	**P**	**04 02 50.1**	**+0.4**
HYT	**Haines Junctio**	**67.59**	**31**	P	**P**	**04 02 51.2**	**+0.7**
HYT				IAmb	IAmb	04 02 52.6	
	comp

K05A					IAmb	IAmb	04 04 25.7	
	comp=Z,6.8nm,1.2s							
KEV	**Kevo**	**81.80**	**342**	P	**P**	**04 04 08.9**	**-0.8**	
BMO	**Blue Mountains**	**82.08**	**45**	P	**P**	**04 04 12.3**	**+0.5**	
BMO					IAmb	IAmb	04 04 13.1	
	comp=Z,4.1nm,1.3s							
ARCES	**ARCESS Array B**	**82.36**	**342**	P	**P**	**04 04 11.9**	**-0.7**	
ARCES	**ARCESS Array B**	**82.36**	**342**	P	**P**	**04 04 12.4**	**-0.3**	
	comp=Z,2.9nm,0.6s,baz=81,slow=7.9,SNR=15							
	comp=Z,2.9nm,0.6s							
PLID	**Pearl Lake**	**82.88**	**45**	P	**P**	**04 04 15.4**	**-0.7**	
KVN	**Kaiserville**	**83.36**	**51**	P	**P**	**04 04 17.7**	**-0.8**	
NVAR	**Mina Array Bea**	**83.40**	**52**	P	**P**	**04 04 19.4**	**+0.5**	
NVAR	**Mina Array Bea**	**83.40**	**52**	P	**P**	**04 04 19.7**	**+0.9**	
	comp=Z,1.7nm,0.7s,baz=264,slow=6.7,SNR=9.7							
	comp=Z,1.7nm,0.7s							
MFID	**Camas Ranch**	**83.55**	**46**	P	**P**	**04 04 19.6**	**+0.3**	
HLID	**Hailey**	**84.47**	**46**	P	**P**	**04 04 24.1**	**+0.1**	
ELK	**Elko**	**84.87**	**49**	P	**P**	**04 04 26.1**	**+0.1**	
FINES	**FINESS Array B**	**86.71**	**335**	P	**P**	**04 04 32.5**	**-1.5**	
	comp=Z,1.9nm,0.5s,baz=60,slow=4.1,SNR=21							
	comp=Z,1.9nm,0.5s							
FFC	**Flin Flon**	**87.26**	**32**	P	**P**	**04 04 36.5**	**-0.3**	
FFC					IAmb	IAmb	04 04 37.8	
	comp=Z,2.4nm,0.9s							
PDAR	**Pinedale Array**	**88.06**	**45**	P	**P**	**04 04 40.4**	**-0.7**	
	comp=Z,0.3nm,0.7s,baz=264,slow=1.5,SNR=3.9							
	comp=Z,0.3nm,0.7s							
SRU	**San Rafael Swe**	**88.84**	**49**	P	**P**	**04 04 45.2**	**+0.5**	
HFS	**Hagfors**	**92.22**	**338**	P	**P**	**04 04 57.8**	**-1.8**	
	comp=Z,1.0nm,0.6s,baz=98,slow=6.1,SNR=4.2							
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**132.16**	**309**	PKP	**PKiKP**	**04 11 01.2**	**-0.9**	
	comp=Z,0.2nm,0.6s,baz=48,slow=1.1,SNR=1.8							

TAP ***12*** *03:54:56.9, 24˚.22N×121˚.76E, h17km, ML3.7, B*
ASIES ***12*** *03:54:56.9, 24˚.22N×121˚.76E, h17km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr-0.19; Mθθ-0.40; Mϕϕ0.59; Mrθ0.29; Mθϕ-0.55; Mϕr1.30; Fault plane solution: M₀1.53757×10²¹ NP1: ϕs193.67000°, δ85.36000°, λ-62.34000°. NP2: ϕs292.45000°, δ28.02000°, λ-170.08000°. Principal axes: T Plg34.5410°, Azm260.1860°; N Plg27.5650°, Azm11.2440°; P Plg42.9570°, Azm130.3260°;*
JMA ***12*** *03:54:57.1±0.2, 24˚.2N±0˚.7×12˚2E±˚, h14km±2km, TAIWAN REGION*

ISC 12 03:54:56.9±0.8, 24˚21N±0˚.01×121˚77E±0˚.02, h17km±5km, n108, σ0°56/177, 6C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
EHP	**Heping Village**	**0.10**	**345**	P	**Pg**	**03 55 00.5**	**0.0**
	baz=353						
EHP				*e*S	**Sg**	**03 55 03.3**	**+0.6**
	baz=353						
EAHA	**Aohua**	**0.12**	**347**	⇓*i*P	**Pb**	**03 55 00.6**	**-0.2**
	baz=349						
EAHA				S	**Sb**	**03 55 03.3**	**-0.1**
	baz=349						
ETL	**Fush Village**	**0.14**	**248**	*e*P	**Pb**	**03 55 01.0**	**-0.2**
	baz=246						
ETL				S	**Sb**	**03 55 04.0**	**-0.1**
	baz=246						
NACB	**Ninganchiao**	**0.16**	**256**	P	**Pg**	**03 55 01.1**	**-0.1**
NACB	**Ninganchiao**	**0.16**	**256**	⇓*i*P	**Pg**	**03 55 01.1**	**-0.1**
	baz=255						
NACB				S	**Sg**	**03 55 04.2**	**+0.1**
	baz=255						
TWD	**Chiawan**	**0.21**	**230**	*e*P	**Pg**	**03 55 01.9**	**0.0**
	baz=234						
TWD				S	**Sg**	**03 55 05.3**	**+0.2**
	baz=234						
ENA	**Nanau**	**0.21**	**353**	⇓*i*P	**Pg**	**03 55 02.0**	**0.0**
	baz=355						
ENA				*e*S	**Sb**	**03 55 05.7**	**-0.5**
	baz=355						
EWUT	**Wuta**	**0.23**	**2**	⇓*i*P	**Pg**	**03 55 02.3**	**+0.1**
	baz=1.0						
EWUT				*e*S	**Sb**	**03 55 06.1**	**-0.5**
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.26**	**269**	⇓*e*P	**Pg**	**03 55 02.7**	**-0.1**
	baz=267						
ETLH				*e*S	**Sg**	**03 55 06.8**	**0.0**
	baz=267						
HWA	**Hwalien**	**0.28**	**213**	*e*P	**Pb**	**03 55 03.5**	**0.0**
	baz=219						
HWA				*e*S	**Sb**	**03 55 08.5**	**+0.5**
	baz=219						
ETM	**Tongmen**	**0.35**	**226**	*e*P	**Pg**	**03 55 04.4**	**+0.1**
	baz=226						
ETM				*e*S	**Sb**	**03 55 09.7**	**-0.5**
	baz=226						
ESAO	**Su ao**	**0.37**	**11**	*e*P	**Pg**	**03 55 04.6**	**+0.1**
	baz=6.0						
ESAO				*e*S	**Sb**	**03 55 10.0**	**-0.6**
	baz=6.0						
LXIB	**Xiulin Townshi**	**0.38**	**240**	⇑*i*P	**Pg**	**03 55 04.5**	**-0.3**
	baz=240						
LXIB				*e*S	**Sg**	**03 55 10.2**	**+0.1**
	baz=240						
LATG	**Datong**	**0.39**	**325**	⇓*i*P	**Pb**	**03 55 05.1**	**-0.4**
	baz=324						
LATG				*e*S	**Sg**	**03 55 10.2**	**-0.3**
	baz=324						
TWC	**Suao**	**0.40**	**10**	⇓*i*P	**Pb**	**03 55 05.3**	**-0.3**
	baz=6.0						
TWC				*e*S	**Sb**	**03 55 11.0**	**-0.5**
	baz=6.0						
NNSB	**Datong**	**0.41**	**301**	⇑P	**Pb**	**03 55 05.5**	**-0.4**
	baz=301						
NNSB				S	**Sg**	**03 55 11.2**	**0.0**
	baz=301						
NDS	**Dongshan**	**0.42**	**353**	⇓*e*P	**Pb**	**03 55 05.8**	**-0.2**
	baz=352						
NDS				*e*S	**Sb**	**03 55 11.7**	**-0.4**
	baz=352						
NNS	**Nan Shan**	**0.43**	**302**	⇑P	**Pb**	**03 55 05.7**	**-0.5**
	baz=302						
NNS				*i*S	**Sb**	**03 55 11.6**	**-0.8**
	baz=302						
NDT	**Datong Townshi**	**0.45**	**329**	⇓*i*P	**Pb**	**03 55 06.3**	**-0.2**
	baz=327						
NDT				*e*S	**Sb**	**03 55 12.7**	**-0.3**
	baz=327						
ENTT	**Nioudou**	**0.46**	**336**	⇓*i*P	**Pb**	**03 55 06.4**	**-0.3**
	baz=335						
ENTT				*e*S	**Sb**	**03 55 13.0**	**-0.3**
	baz=335						
SHUL	**Shoufeng**	**0.46**	**204**	*e*P	**Pb**	**03 55 07.1**	**+0.4**
	baz=197						
SHUL				*e*S	**Sn**	**03 55 15.0**	**-1.7**
	baz=197						
WHF	**Hehuan Shan**	**0.47**	**262**	⇑*e*P	**Pg**	**03 55 06.5**	**0.0**
	baz=262						
WHF				*e*S	**Sg**	**03 55 12.7**	**-0.2**
	baz=262						
EOS2	**EOS2**	**0.47**	**64**	*e*P	**Pn**	**03 55 08.1**	**-0.7**
	baz=47						
ESL	**Shilin**	**0.50**	**218**	P	**Pg**	**03 55 06.9**	**-0.1**
	baz=224						
ESL				*e*S	**Sb**	**03 55 14.7**	**+0.2**
	baz=224						
EOS3	**EOS3**	**0.51**	**82**	*e*P	**Pn**	**03 55 09.1**	**-0.2**
	baz=80						
EOS4	**EOS4**	**0.51**	**100**	*e*P	**Pn**	**03 55 08.7**	**-0.5**
	baz=102						
TWE	**Neicheng**	**0.51**	**350**	*e*P	**Pb**	**03 55 07.3**	**-0.2**
	baz=348						
TWE				*e*S	**Sb**	**03 55 14.5**	**-0.2**
	baz=348						
TWT	**Tachien**	**0.54**	**274**	*i*P	**Pb**	**03 55 08.2**	**+0.1**
	baz=275						
TWT				*e*S	**Sb**	**03 55 15.6**	**-0.1**
	baz=275						
TEGC	**Jichi Village**	**0.54**	**203**	*e*P	**Pb**	**03 55 08.7**	**+0.6**
	baz=196						
TEGC				*e*S	**Sn**	**03 55 17.8**	**-1.0**
	baz=196						
ILA	**Ilan**	**0.55**	**358**	*e*P	**Pb**	**03 55 08.4**	**+0.2**
	baz=351						
ILA				*e*S	**Sb**	**03 55 16.2**	**+0.4**
	baz=351						
TDCB	**Techi**	**0.56**	**274**	⇑*i*P	**Pb**	**03 55 08.3**	**-0.1**
	baz=275						
TDCB				S	**Sg**	**03 55 15.4**	**-0.2**
	baz=275						
CHGB	**Renai**	**0.56**	**254**	⇑*i*P	**Pb**	**03 55 08.3**	**-0.2**
	baz=249						
CHGB				*e*S	**Sg**	**03 55 15.6**	**-0.2**
	baz=249						
FUSB	**Fushanzhiwuyua**	**0.57**	**343**	*i*P	**Pb**	**03 55 08.2**	**-0.3**
	baz=334						
FUSB				*e*S	**Sg**	**03 55 15.5**	**-0.3**
	baz=334						
YHNB	**Yeheng**	**0.58**	**322**	P	**Pb**	**03 55 08.6**	**-0.1**
YHNB	**Yeheng**	**0.58**	**322**	*e*P	**Pb**	**03 55 08.6**	**-0.1**
	baz=321						
YHNB				*e*S	**Sb**	**03 55 16.4**	**-0.3**
	baz=321						
NSK	**Sanguang**	**0.59**	**321**	*i*P	**Pb**	**03 55 08.7**	**-0.2**
	baz=320						
NSK				*e*S	**Sb**	**03 55 16.7**	**-0.4**
	baz=320						
WARBT	**Fenglin Townsh**	**0.60**	**215**	*e*P	**Pg**	**03 55 08.5**	**-0.4**
	baz=219						
WARBT				*e*S	**Sb**	**03 55 17.4**	**0.0**
	baz=219						
NWLT	**Wulai**	**0.61**	**337**	*e*P	**Pb**	**03 55 09.1**	**-0.1**
	baz=340						
NWLT				*i*S	**Sb**	**03 55 17.3**	**-0.3**
	baz=340						
WUSB	**Renai**	**0.64**	**250**	*i*P	**Pb**	**03 55 09.7**	**0.0**
	baz=250						
WUSB				*i*S	**Sb**	**03 55 18.0**	**-0.4**
	baz=250						
EGS		**0.65**	**13**	*e*P	**Pb**	**03 55 09.8**	**0.0**
	baz=18						
NFF	**Wufeng Townshi**	**0.72**	**305**	*i*P	**Pb**	**03 55 11.4**	**+0.2**
	baz=304						
NFF				S	**Sb**	**03 55 20.9**	**-0.1**
	baz=304						
VWDT	**VWDT**	**0.73**	**232**	*e*P	**Pb**	**03 55 11.2**	**-0.1**
	baz=239						
VWDT				*e*S	**Sg**	**03 55 21.4**	**+0.3**
	baz=239						
NHDH	**Xindian Distri**	**0.78**	**343**	*e*P	**Pg**	**03 55 12.4**	**+0.2**
	baz=341						
NHDH				*i*S	**Sg**	**03 55 22.7**	**+0.2**
	baz=341						
HGSD	**Ruisui**	**0.79**	**204**	*e*P	**Pg**	**03 55 12.7**	**+0.4**
	baz=192						
WCS	**Beigang Elemen**	**0.80**	**259**	*e*P	**Pg**	**03 55 12.6**	**0.0**
	baz=260						
WCS				*e*S	**Sg**	**03 55 22.9**	**-0.2**
	baz=260						
TATO	**Taipei**	**0.80**	**341**	P	**Pn**	**03 55 13.5**	**0.0**
LIOB	**Emei**	**0.81**	**302**	*e*P	**Pn**	**03 55 13.1**	**-0.6**
	baz=302						
LIOB				*e*S	**Sn**	**03 55 24.1**	**-1.3**
	baz=302						
NSTT	**Nanjuang**	**0.81**	**301**	*i*P	**Pn**	**03 55 13.0**	**-0.7**
	baz=300						
NSTT				*e*S	**Sg**	**03 55 23.7**	**+0.1**
	baz=300						
EHY	**Hungye**	**0.81**	**210**	*e*P	**Pb**	**03 55 12.4**	**-0.3**
	baz=221						
TWB1	**Santiao Chiao**	**0.82**	**14**	*e*P	**Pg**	**03 55 13.0**	**+0.2**
	baz=12						
TWB1				*e*S	**Sg**	**03 55 23.7**	**0.0**
	baz=12						
NWF	**Wu-fen Shan**	**0.85**	**1**	*e*P	**Pn**	**03 55 14.0**	**-0.4**
	baz=351						
NWF				*e*S	**Sg**	**03 55 24.8**	**-0.1**
	baz=351						
WFSB	**Wu-fen Shan**	**0.85**	**1**	*e*P	**Pn**	**03 55 14.1**	**-0.1**
	baz=349						
TAP	**Taipei**	**0.86**	**344**	*e*P	**Pg**	**03 55 13.7**	**+0.1**
	baz=342						
TAP				*e*S	**Sn**	**03 55 25.7**	**-0.8**
	baz=342						
SSLB	**Suanglung**	**0.86**	**241**	P	**Pb**	**03 55 13.2**	**-0.2**
SSLB	**Suanglung**	**0.86**	**241**	*e*P	**Pb**	**03 55 12.9**	**-0.5**
	baz=249						
SSLB				S	**Sg**	**03 55 24.7**	**-0.2**
	baz=249						
SMLT	**Sun Moon Lake**	**0.86**	**248**	*e*P	**Pb**	**03 55 13.4**	**-0.1**
	baz=241						
SMLT				*e*S	**Sg**	**03 55 24.8**	**-0.3**
	baz=241						
SXI1	**Grass Mountain**	**0.88**	**6**	*e*P	**Pg**	**03 55 14.2**	**+0.1**
	baz=355						
TYC	**Yuchr**	**0.89**	**250**	P	**Pg**	**03 55 14.0**	**-0.2**
	baz=244						
TYC				*e*S	**Sb**	**03 55 25.2**	**-0.3**
	baz=244						
SBCB	**Hsinchu**	**0.92**	**309**	*e*P	**Pn**	**03 55 15.6**	**+0.5**
	baz=308						
SBCB				*e*S	**Sn**	**03 55 29.1**	**+1.1**
	baz=308						
NCUH	**Zhongli**	**0.92**	**325**	*e*P	**Pn**	**03 55 15.1**	**-0.1**
	baz=322						
NCUH				*e*S	**Sn**	**03 55 29.1**	**+1.0**
	baz=322						
YULB	**Yu-li**	**0.93**	**208**	P	**Pb**	**03 55 14.1**	**-0.5**
YULB	**Yu-li**	**0.93**	**208**	*e*P	**Pb**	**03 55 13.6**	**-1.0**
	baz=219						
YULB				*e*S	**Sb**	**03 55 26.5**	**-0.1**
	baz=219						
TNOU	**National Taiwa**	**0.93**	**0**	*e*P	**Pn**	**03 55 15.8**	**+0.5**
	baz=349						
HSN	**Hsinchu**	**0.94**	**309**	*e*P	**Pn**	**03 55 15.8**	**+0.4**
	baz=304						
HSN				*e*S	**Sn**	**03 55 28.1**	**-0.2**
	baz=304						
TWS1	**Kuangyinshan**	**0.94**	**340**	*e*P	**Pn**	**03 55 16.1**	**+0.7**
	baz=344						
TWS1				*e*S	**Sn**	**03 55 28.7**	**+0.2**
	baz=344						
NSY	**Sanyi**	**0.94**	**283**	*i*P	**Pn**	**03 55 16.4**	**+0.9**
	baz=283						
NSY				*e*S	**Sn**	**03 55 28.4**	**-0.2**
	baz=283						
YM01	**YM01**	**0.95**	**349**	*e*P	**Pn**	**03 55 15.6**	**+0.1**
	baz=346						
YM01				*e*S	**Sn**	**03 55 28.4**	**-0.4**
	baz=346						
NMLH	**Miaoli**	**0.95**	**290**	*e*P	**Pn**	**03 55 16.6**	**+1.0**
	baz=289						
EYUL	**Yuli**	**0.96**	**206**	*e*P	**Pn**	**03 55 16.2**	**+0.6**
	baz=220						
TWF1	**Yuli**	**0.96**	**207**	*e*P	**Pb**	**03 55 14.9**	**-0.2**
	baz=223						
TWF1				*e*S	**Sn**	**03 55 29.3**	**+0.3**
	baz=223						
YM08	**YM08**	**0.98**	**350**	*e*P	**Pg**	**03 55 15.9**	**-0.1**
	baz=347						
YM08				*e*S	**Sg**	**03 55 28.7**	**-0.3**
	baz=347						
NTST	**Danshui**	**0.99**	**343**	*e*P	**Pg**	**03 55 16.6**	**+0.5**
	baz=346						
NTST				S	**Sn**	**03 55 30.8**	**+1.0**
	baz=346						
ANP	**Anpu**	**0.99**	**347**	*e*P	**Pg**	**03 55 16.4**	**+0.1**
	baz=355						
WJS	**Zhushan**	**1.03**	**248**	P	**Pg**	**03 55 17.5**	**+0.7**
	baz=247						
WJS				*i*S	**Sn**	**03 55 32.2**	**+1.5**
	baz=247						
WNT	**Mingjian**	**1.05**	**252**	*e*P	**Pg**	**03 55 17.7**	**+0.5**
	baz=250						
WNT				*e*S	**Sn**	**03 55 34.4**	**+3.3**
	baz=250						
TWY	**Chenhua**	**1.07**	**352**	*e*P	**Pb**	**03 55 16.9**	**-0.1**
	baz=335						
CHKH	**Chenggong**	**1.07**	**199**	*e*P	**Pn**	**03 55 17.2**	**0.0**
	baz=187						
JYNG	**Yonagunijimaku**	**1.10**	**77**	*e*P	**Pb**	**03 55 17.5**	**0.0**
WCHH	**Zhanghua**	**1.11**	**263**	*e*P	**Pg**	**03 55 19.0**	**+0.5**
	baz=263						
ALS	**Alishan**	**1.13**	**232**	*e*P	**Pg**	**03 55 18.4**	**-0.3**
	baz=232						
YOJ	**Yonaguni jima**	**1.16**	**77**	P	**Pg**	**03 55 20.6**	**+1.3**
YOJ	**Yonaguni jima**	**1.16**	**77**	*e*P	**Pb**	**03 55 18.8**	**+0.3**
CHKT	**Chengkung**	**1.17**	**199**	*e*P	**Pb**	**03 55 18.7**	**0.0**
	baz=187						
CHN5	**Tsauling**	**1.17**	**239**	*e*P	**Pg**	**03 55 19.6**	**0.0**
	baz=240						
CHN5				*e*S	**Sg**	**03 55 35.7**	**+0.7**
	baz=240						
EHD	**Haiduan**	**1.18**	**206**	*e*P	**Pb**	**03 55 18.9**	**0.0**
	baz=207						
ECS	**Chishang**	**1.22**	**204**	*e*P	**Pb**	**03 55 19.9**	**+0.2**
	baz=205						
ELDTW	**Lidau**	**1.23**	**214**	*e*P	**Pn**	**03 55 18.6**	**-0.9**
	baz=201						
ELDTW				*e*S	**Sn**	**03 55 36.0**	**+0.1**
	baz=201						
WDLH	**Douliu**	**1.24**	**245**	*e*P	**Pg**	**03 55 21.1**	**+0.2**
	baz=246						
EDH	**Donghe**	**1.31**	**199**	*e*P	**Pn**	**03 55 18.2**	**-2.3**
	baz=184						
WRL	**Guolierlin Hig**	**1.31**	**257**	*e*P	**Pg**	**03 55 21.5**	**-0.7**
	baz=258						
WRL				*e*S	**Sg**	**03 55 39.8**	**+0.5**
	baz=258						
WCKO	**Fanlu**	**1.32**	**234**	*e*P	**Pg**	**03 55 22.0**	**-0.3**
	baz=236						
WCKO				*e*S	**Sg**	**03 55 40.4**	**+0.9**
	baz=236						
WTK	**Tuku**	**1.37**	**248**	*e*P	**Pb**	**03 55 22.5**	**+0.4**
	baz=236						
WTK				*e*S	**Sg**	**03 55 41.5**	**+0.4**
	baz=236						
CHN4	**Tsaushan**	**1.38**	**232**	*e*P	**Pg**	**03 55 22.9**	**-0.6**
	baz=233						
CHN4				*e*S	**Sg**	**03 55 41.4**	**-0.1**
	baz=233						
STYH	**Taoyuan**	**1.38**	**221**	*e*P	**Pb**	**03 55 22.1**	**-0.2**
	baz=223						
STYH				*e*S	**Sg**	**03 55 40.9**	**-0.6**
	baz=223						
TPUB	**Ta-pu**	**1.38**	**229**	P	**Pb**	**03 55 22.9**	**+0.5**
TPUB	**Ta-pu**	**1.38**	**229**	*e*P	**Pb**	**03 55 22.6**	**+0.1**
	baz=230						
WTP	**Ta-pu**	**1.43**	**228**	*e*P	**Pb**	**03 55 23.4**	**+0.2**
	baz=228						
TWK	**Hsinying**	**1.51**	**231**	*e*P	**Pb**	**03 55 24.2**	**-0.3**
	baz=232						
TWGBT	**Beinan**	**1.53**	**205**	P	**Pb**	**03 55 25.5**	**+0.7**
CHN1	**Nanshi**	**1.53**	**228**	*e*P	**Pb**	**03 55 25.3**	**+0.4**
	baz=230						
CHN1				*e*S	**Sg**	**03 55 46.3**	**0.0**
	baz=230						
SGST	**Jiashian**	**1.57**	**224**	*e*P	**Pb**	**03 55 25.9**	**+0.4**
	baz=226						
SGST				*e*S	**Sb**	**03 55 46.1**	**+1.1**
	baz=226						
ICHU	**Yijhu**	**1.61**	**238**	*e*P	**Pb**	**03 55 26.6**	**+0.4**
	baz=224						
ICHU				*e*S	**Sg**	**03 55 48.5**	**-0.3**
	baz=224						
CHN3	**Shinhua**	**1.71**	**229**	*e*P	**Pb**	**03 55 27.5**	**-0.5**
	baz=229						
TSMG	**Majia**	**1.82**	**215**	*e*P	**Pb**	**03 55 28.8**	**-1.1**
	baz=226						
HATJ	**Hateruma jima**	**1.87**	**94**	*e*S	**Sn**	**03 55 52.4**	**+1.0**
MASBT	**Mashibuluo**	**1.91**	**213**	*e*P	**Pb**	**03 55 31.2**	**-0.1**
	baz=213						
MASBT				*e*S	**Sb**	**03 55 55.3**	**+0.5**
	baz=213						
SCZT	**Fangliau**	**2.12**	**210**	*e*P	**Pb**	**03 55 34.5**	**-0.4**
	baz=193						
JIJ	**Ishigaki jima**	**2.17**	**86**	*e*S	**Sb**	**03 56 01.5**	**-1.0**

WEL 12 04:10:46.4±0.6, 34˚S±9˚×18˚0W±1˚4, h335km±6km, M4.3/25, mB4.9/19, ML4.7/17, MLv4.7/25, Mw(mB)4.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=121.7, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MXZ	**Matakaoa Point**	**3.78**	**202**	P	Pn	04 11 50.6	-1.5
MXZ				S	S	04 12 43.1	-1.8
WMGZ	**Waiomatatini S**	**3.98**	**199**	P	Pn	04 11 53.4	-0.8
WMGZ				S	S	04 12 52.0	+3.1
PKGZ	**Pakihiroa**	**4.15**	**203**	P	Pn	04 11 54.6	-1.4
PKGZ				S	S	04 12 52.0	-0.1
PUZ	**Puketiti**	**4.26**	**200**	P	Pn	04 11 55.8	-1.4
PUZ				S	S	04 12 54.7	+0.4
CNGZ	**Carnagh Statio**	**4.66**	**199**	P	Pn	04 12 00.4	-1.1
TKGZ	**Te Karaka**	**4.73**	**202**	P	Pn	04 12 00.4	-1.8
TKGZ				S	S	04 13 06.9	+3.6
MWZ	**Matawai**	**4.74**	**205**	P	Pn	04 12 01.0	-1.3
MWZ				S	S	04 13 03.6	-0.1
URZ	**Urewera**	**4.83**	**209**	P	Pn	04 12 02.2	-1.1
URZ				S	S	04 13 06.6	+1.2
RAGZ	**Rawiri**	**4.92**	**205**	P	Pn	04 12 03.3	-1.1
RAGZ				S	S	04 13 10.4	+3.0
RIGZ	**Rimuhau**	**5.00**	**201**	P	Pn	04 12 06.9	+1.7
RIGZ				S	S	04 13 07.3	-1.6
TARZ	**Mount Tarawera**	**5.07**	**214**	P	Pn	04 12 07.5	+1.4
MUGZ	**Murupara**	**5.16**	**210**	P	Pn	04 12 07.9	+0.9
MUGZ				S	S	04 13 12.9	+0.9
PRGZ	**Paritu Road**	**5.16**	**200**	P	Pn	04 12 08.5	+1.5
PRGZ				S	S	04 13 14.1	+1.9
RTZ	**Ruatahuna**	**5.19**	**208**	P	Pn	04 12 07.7	+0.3
SNGZ	**Shannon Statio**	**5.20**	**204**	P	Pn	04 12 08.6	+1.1
SNGZ				S	S	04 13 13.0	-0.1
KNZ	**Kokohu**	**5.32**	**201**	P	Pn	04 12 07.8	-0.9
KNZ				S	S	04 13 13.1	-2.1
MHGZ	**Mahia Peninsul**	**5.37**	**198**	P	Pn	04 12 11.0	+1.6
MHGZ				S	S	04 13 15.4	-1.1
ALRZ	**Allen Road**	**5.41**	**213**	P	Pn	04 12 11.1	+1.3
MRHZ	**Matea Rd**	**5.60**	**211**	P	Pn	04 12 12.8	+0.7
TSZ	**Takapari Road**	**6.83**	**208**	P	Pn	04 12 25.8	-0.6
TSZ				S	S	04 13 45.7	-1.7
WAZ	**Wanganui**	**7.00**	**214**	P	Pn	04 12 29.2	+0.9
WAZ				S	S	04 13 54.3	+3.3
POWZ	**Post Office Ro**	**7.19**	**207**	P	Pn	04 12 31.1	+0.5
POWZ				S	S	04 13 57.8	+2.5
BFZ	**Birch Farm**	**7.28**	**204**	P	Pn	04 12 32.2	+0.6
BFZ				S	S	04 13 57.4	+0.3
TIWZ	**Tintock**	**7.49**	**205**	P	Pn	04 12 34.8	+0.7
TIWZ				S	S	04 14 04.3	+2.6
MRZ	**Mangatainoka R**	**7.50**	**207**	P	Pn	04 12 34.1	-0.1
MRZ				S	S	04 14 02.3	+0.4
TMWZ	**Te Maipa**	**7.78**	**204**	P	Pn	04 12 38.6	+1.0
TMWZ				S	S	04 14 09.5	+1.5
OGWZ	**Otaki Gorge**	**7.79**	**209**	P	Pn	04 12 36.5	-1.2
OGWZ				S	S	04 14 09.6	+1.3
KIW	**Kapiti Island**	**7.94**	**210**	P	Pn	04 12 38.3	-1.1
KIW				S	S	04 14 10.8	-0.6
MTW	**Mount Morrison**	**7.96**	**206**	P	Pn	04 12 39.6	-0.1
MTW				S	S	04 14 13.3	+1.3
TRWZ	**Traveller**	**8.11**	**204**	P	Pn	04 12 42.1	+0.7
TRWZ				S	S	04 14 17.7	+2.5
PAWZ	**Paruwai Farm**	**8.18**	**205**	P	Pn	04 12 42.5	+0.1
PAWZ				S	S	04 14 17.2	+0.2
DUWZ	**D'Urville Isla**	**8.32**	**214**	P	Pn	04 12 43.3	-0.8
DUWZ				S	S	04 14 22.8	+2.8
WEL	**Wellington**	**8.35**	**209**	P	Pn	04 12 44.2	-0.2
PLWZ	**Palliser**	**8.41**	**206**	P	Pn	04 12 44.6	-0.5
PLWZ				S	S	04 14 22.0	+0.1
BHW	**Baring Head**	**8.41**	**208**	P	Pn	04 12 44.7	-0.4
BHW				S	S	04 14 23.0	+1.1
TCW	**Tory Channel**	**8.49**	**211**	P	Pn	04

ARCZ	**Arundel**	**12.05 212**	P	P	04 13 29.5	+0.4
FOZ	**Fox Glacier**	**12.38 217**	P	Pn	04 13 32.7	-0.1
TMZ	**Timaru**	**12.47 212**	P	Pn	04 13 35.3	+1.5

IDC ***12*** *04:15:09.4±2.5,38°.65N×142°.59E,h0km,mb3.6/3, mbtmp3.5/4,ML2.2/1,MS2.7/1,Error ellipse: s-maj=50.0km s-min=33.6km az=83.0*
JMA ***12*** *04:15:20.4±0.1,38°.4N±0°.3×141°.6E±0°.5,h53km,MV3.3/38, KINKAZAN REGION*
ISC 12 04:15:19.7±1.2,38°.35N±0°.04×141°.71E±0°.08,h52km±7km, n24,σ0°74/30,mb3.7/3,12D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.20**	**259**	*i* P		**Pn**		**04 15 28.8**	**+0.5**
JIKH				eS		**Sn**		**04 15 34.6**	**+0.2**
JIO	**Ouri**	**0.31**	**290**	*i* P		**Pn**		**04 15 29.4**	**+0.3**
JIO				S		**Sn**		**04 15 35.6**	**-0.2**
JKMT	**Kesennumamotoy**	**0.50**	**338**	↓*i* P		**Pn**		**04 15 31.4**	**+0.3**
JKMT				↓S		**Sn**		**04 15 39.0**	**-0.2**
JMK	**Ichinoseki**	**0.71**	**327**	↓*i* P		**Pn**		**04 15 34.1**	**+0.3**
JMK				↓S		**Sn**		**04 15 43.7**	**-0.3**
OFUJ	**Ofunato**	**0.73**	**357**	↓*i* P		**Pn**		**04 15 34.2**	**+0.3**
OFUJ				↓S		**Sn**		**04 15 44.1**	**-0.2**
JOU	**Okura**	**0.83**	**271**	↓*i* P		**Pn**		**04 15 35.1**	**-0.1**
JOU				↓S		**Sn**		**04 15 46.1**	**-0.4**
JMM	**Marumori**	**0.87**	**237**	*i* P		**Pn**		**04 15 35.5**	**-0.2**
JMM				S		**Sn**		**04 15 46.6**	**-0.9**
JOM	**Ohasama**	**1.17**	**344**	*i* P		**Pn**		**04 15 40.1**	**+0.4**
JOM				eS		**Sn**		**04 15 54.8**	**+0.1**
JFK	**Kawauchi**	**1.19**	**214**	*i* P		**Pn**		**04 15 40.1**	**+0.1**
JFK				S		**Sn**		**04 15 54.8**	**-0.3**
JYK	**Kaneyama**	**1.20**	**299**	↓*i* P		**Pn**		**04 15 40.2**	**0.0**
JYK				↓eS		**Sn**		**04 15 55.1**	**-0.4**
JYS	**Shirataka**	**1.30**	**265**	P		**Pn**		**04 15 41.8**	**+0.2**
JYS				S		**Sn**		**04 15 57.8**	**-0.2**
JRG	**Rokugo**	**1.34**	**321**	↓P		**Pn**		**04 15 42.6**	**+0.5**
JRG				↓S		**Sn**		**04 15 59.9**	**+1.0**
JOTO	**OTAMA OYAMA**	**1.35**	**235**	P		**Pn**		**04 15 42.5**	**+0.3**
JOTO				eS		**Sn**		**04 15 58.6**	**-0.4**
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=36,slow=14,SNR=5.6	**3.32**	**238**	Pn		**Pn**		**04 16 12.3**	**+3.1**
MJAR	0.2nm,0.3s,baz=311,slow=31,SNR=4.1 1.1nm,0.3s			Sn		Sn		04 17 02.7	+15
KLR	**Kul'dur** comp=Z,35nm,19.1s,baz=288,slow=38	**13.03**	**330**	LR		LR		04 23 32.7	
H11N2	**WAKE ISLAND Hy 28.64** baz=316,slow=76,SNR=12	**123**		T		T		04 51 25.0	
H11N1	**WAKE ISLAND Hy 28.65** baz=316,slow=76,SNR=19	**123**		T		T		04 51 28.1	
H11N3	**WAKE ISLAND Hy 28.66** baz=316,slow=76,SNR=18	**123**		T		T		04 51 27.2	
H11S1	**WAKE ISLAND Hy 29.40** baz=318,slow=76,SNR=2.9	**125**		T		T		04 52 23.0	
H11S3	**WAKE ISLAND Hy 29.40** baz=318,slow=76,SNR=10	**125**		T		T		04 52 23.5	
H11S2	**WAKE ISLAND Hy 29.41** baz=318,slow=76,SNR=9.0	**125**		T		T		04 52 24.5	
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=86,slow=9.2,SNR=4.3 0.5nm,0.8s	**43.63**	**301**	P		**P**		**04 23 19.0**	**+0.1**
KURBB	**Kurchatov Arra** 1.4nm,0.7s,baz=81,slow=8.0,SNR=11 1.4nm,0.7s	**45.39**	**307**	P		**P**		**04 23 32.1**	**-0.7**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=4.9,slow=7.0,SNR=1.7 0.3nm,0.5s	**58.40**	**188**	P		**P**		**04 25 09.4**	**-0.4**

IDC 12 04:15:32.0±2.0,6°.93S×129°.39E,h0km,mb3.5/1, mbtmp3.8/3,ML4.0/2,MS4.5/1,Error ellipse: s-maj=108.4km s-min=31.6km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=339,slow=14,SNR=38	**13.80**	**160**	Pn		Pn		04 18 48.3	-0.8
WRA	0.5nm,0.3s,baz=333,slow=22,SNR=5.8 1.1nm,0.3s			Sn		Sn		04 21 10.7	-12
ASAR	**Alice Springs** 0.5nm,0.3s,baz=340,slow=8.9,SNR=8.0	**17.20**	**166**	P		Pn		04 19 34.5	+0.7
ASAR	0.4nm,0.8s,baz=331,slow=15,SNR=2.9 0.7nm,0.4s			S		Sn		04 22 34.2	-12
RAO	**Raoul Island** comp=Z,427nm,19.9s,baz=114,slow=35	**54.26**	**121**	LR		LR		04 47 11.3	
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=120,slow=7.9,SNR=6.8 0.2nm,0.4s	**67.84**	**327**	P		P		04 26 32.1	0.0

GCG ***12*** *04:28:14.5±0.9,15°.32N×93°.21W,h20km,MD4.1*
MEX ***12*** *04:28:17.7±1.0,14°.93N×93°.13W,h68km±15km,MD4.1*
ISC 12 04:28:17.2±1.3,14°.98N±0°.05×93°.15W±0°.04,h61km±17km, n27,σ2°35/45,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		**0.73**	**355**	*i* P		**Pn**		**04 28 32.1**	**+0.3**
PCIG				eS		**Sn**		**04 28 43.0**	**+0.5**
THIG		**0.86**	**95**	*i* P		**Pn**		**04 28 33.0**	**-0.4**
THIG				eS		**Sn**		**04 28 43.9**	**-1.6**
PATR	**El Naranjo**	**0.90**	**81**	*e*P		**Pn**		**04 28 33.0**	**-1.2**
PATR				*i* S		**Sn**		**04 28 46.0**	**-0.7**
PAVE	**Pavencul**	**0.97**	**77**	*e*P		**Pn**		**04 28 34.4**	**-0.6**
PAVE				*i* S		**Sn**		**04 28 47.5**	**-0.8**
CHUJ	**Union Juarez**	**1.02**	**83**	*i* P		**Pn**		**04 28 34.6**	**-1.1**
CHUJ				*i* S		**Sn**		**04 28 47.9**	**-1.5**
CARR	**Arriaga**	**1.46**	**330**	*i* P		**Pn**		**04 28 42.5**	**+1.1**
CARR				*i* S		**Sn**		**04 29 01.2**	**+1.7**
STG3	**Santiaguito 3,**	**1.55**	**100**	*e*P		**Pn**		**04 28 42.9**	**+0.1**
STG3				eS		**Sn**		**04 29 06.1**	**+4.0**
CCIG	**Comitan**	**1.63**	**37**	*e*P		**Pn**		**04 28 45.5**	**+1.7**
CCIG				eS		**Sn**		**04 29 09.1**	**+5.3**
SULM	**Suchitepequez,**	**1.68**	**113**	*e*P		**Pn**		**04 28 45.4**	**+1.1**
TGBT	**Tuxtla Gutierr**	**1.79**	**2**	*i* P		Pn		04 28 52.5	+6.7
TGBT				*i* S		**Sn**		**04 29 08.1**	**+0.6**
TGIG		**1.79**	**1**	*i* P		**Pn**		**04 28 46.4**	**+0.5**
TGIG				eS		**Sn**		**04 29 05.4**	**-2.2**
NILT	**Santiago Nilte**	**2.12**	**318**	*i* P		**Pn**		**04 28 51.0**	**+0.8**
NILT				*i* S		**Sn**		**04 29 16.4**	**+1.0**
FUG	**Fuego 3**	**2.30**	**103**	*e*P		**Pn**		**04 28 54.4**	**+1.6**
PCG	**Pacaya**	**2.53**	**103**	*e*P		**Pn**		**04 28 56.9**	**+0.7**
CMIG	**Matias Romero**	**2.68**	**322**	*e*P		**Pn**		**04 28 58.6**	**+0.7**
CMIG				*i* S		**Sn**		**04 29 30.0**	**+0.7**
HUIG	**Huatulco**	**2.96**	**286**	*e*P		**Pn**		**04 29 01.5**	**-0.2**
HUIG				*i* S		**Sn**		**04 29 32.9**	**-3.1**
NEUV	**Arroyo Zacate**	**3.72**	**317**	*e*P		**Pn**		**04 29 13.2**	**+1.0**
NEUV				*i* S		**Sn**		**04 29 59.5**	**+4.7**
PEIG	**Puerto Escondi**	**3.98**	**285**	*e*P		**Pn**		**04 29 16.4**	**+0.6**
PMUV	**Sontecomapan**	**4.02**	**332**	*e*P		Pn		04 29 22.3	+6.0
PMUV				eS		**Sn**		**04 29 58.8**	**-3.4**
VHO	**Vista Hermosa**	**4.02**	**302**	*e*P		**Pn**		**04 29 17.0**	**+0.5**
SCIG	**Sabancuy**	**4.39**	**25**	*e*P		**Pn**		**04 29 21.2**	**-0.1**
SCIG				*i* S		**Sn**		**04 30 04.8**	**-6.4**
YOIG	**Yosondua**	**4.62**	**294**	*e*P		**Pn**		**04 29 27.3**	**+2.6**
TOIG	**Toxpalan**	**4.87**	**310**	*e*P		**Pn**		**04 29 29.9**	**+2.0**
TOIG				eS		**Sn**		**04 30 23.1**	**+0.1**
PNIG	**Pinotepa**	**4.99**	**287**	*e*P		**Pn**		**04 29 30.8**	**+1.2**
PNIG				eS		**Sn**		**04 30 22.2**	**-3.9**
HLIG	**Huajuapan de L**	**5.29**	**303**	*e*P		Pn		04 29 39.6	+5.8
HLIG				eS		**Sn**		**04 30 34.4**	**+0.8**
JAUV	**Jalcomulco**	**5.59**	**322**	*e*P		**Pn**		**04 29 37.1**	**-0.6**
JAUV				*i* S		**Sn**		**04 30 37.4**	**-3.3**
FTIG	**Fresnillo de T**	**5.59**	**302**	*e*P		**Pn**		**04 29 40.5**	**+2.6**
FTIG				eS		**Sn**		**04 30 36.4**	**-4.6**

JMA ***12*** *04:39:19.4±0.2,24°.4N±0°.7×122°.2E±0°.3,h68km±2km, MV2.0/13,TAIWAN REGION*
TAP ***12*** *04:39:20.0,24°.48N×122°.15E,h70km,ML3.1,D*
ISC 12 04:39:19.5±1.2,24°.49N±0°.02×122°.25E±0°.02,h70km±5km, n98,σ1°12/193,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2** baz=214	**0.07**	**193**	P		**Pn**		**04 39 29.9**	**+0.5**
EOS2				eS		**Sn**		**04 39 38.2**	**+1.5**
EOS3	**EOS3** baz=165	**0.21**	**163**	*i* P		**Pn**		**04 39 30.4**	**+0.5**
EOS3				S		**Sn**		**04 39 38.2**	**+0.7**
EOS4	**EOS4** baz=164	**0.37**	**170**	*e*P		**Pn**		**04 39 30.5**	**-0.2**
EOS4				eS		**Sn**		**04 39 38.7**	**-0.2**
ESAO	**Su ao** baz=289	**0.38**	**283**	P		**Pn**		**04 39 31.4**	**+0.2**
ESAO				S		**Sn**		**04 39 39.6**	**-0.1**
TWC	**Suao** baz=301	**0.38**	**288**	P		**Pn**		**04 39 31.1**	**-0.1**
TWC				S		**Sn**		**04 39 39.2**	**-0.6**
EWUT	**Wuta** baz=261	**0.43**	**264**	P		**Pn**		**04 39 31.5**	**-0.1**
EWUT				eS		**Sn**		**04 39 40.3**	**-0.2**
EGS	baz=340	**0.46**	**321**	*i* P		**Pn**		**04 39 32.2**	**+0.3**
EGS				eS		**Sn**		**04 39 41.4**	**+0.5**
ENA	**Nanau** baz=262	**0.47**	**263**	*e*P		**Pn**		**04 39 31.6**	**-0.3**
ENA				S		**Sn**		**04 39 40.8**	**-0.3**
EAHA	**Aohua** baz=249	**0.49**	**251**	P		**Pn**		**04 39 32.1**	**0.0**
EAHA				*i* S		**Sn**		**04 39 41.8**	**+0.3**
NDS	**Dongshan** baz=295	**0.51**	**287**	*e*P		**Pn**		**04 39 32.0**	**-0.3**
NDS				S		**Sn**		**04 39 41.5**	**-0.2**
ILA	**Ilan** baz=311	**0.53**	**301**	*e*S		**Sn**		**04 39 42.5**	**+0.4**
TWB1	**Santiao Chiao** baz=340	**0.57**	**335**	*e*P		**Pn**		**04 39 33.5**	**+0.6**
TWB1				eS		**Sn**		**04 39 41.7**	**-1.1**
JYNG	**Yonagunijimaku**	**0.64**	**93**	P		**Pn**		**04 39 33.6**	**0.0**
JYNG				eS		**Sn**		**04 39 43.7**	**-0.3**
ENTT	**Nioudou** baz=292	**0.64**	**284**	*e*P		**Pn**		**04 39 33.7**	**0.0**
ENTT				S		**Sn**		**04 39 44.8**	**+0.6**
ETL	**Fush Village** baz=237	**0.66**	**240**	P		**Pn**		**04 39 33.6**	**-0.3**
ETL				S		**Sn**		**04 39 44.2**	**-0.4**
FUSB	**Fushanzhiwuyua** baz=303	**0.66**	**294**	*i* P		**Pn**		**04 39 34.6**	**+0.6**
FUSB				S		**Sn**		**04 39 45.1**	**+0.4**
LATG	**Datong** baz=269	**0.66**	**274**	P		**Pn**		**04 39 34.3**	**+0.3**
LATG				S		**Sn**		**04 39 44.5**	**-0.2**
NACB	**Ninganchiao** baz=239	**0.68**	**242**	P		**Pn**		**04 39 33.6**	**-0.4**
NACB				S		**Sn**		**04 39 44.2**	**-0.6**
NDT	**Datong Townshi** baz=275	**0.68**	**280**	P		**Pn**		**04 39 34.8**	**+0.6**
NDT				S		**Sn**		**04 39 45.5**	**+0.5**
SXI1	**Grass Mountain** baz=337	**0.69**	**331**	*e*P		**Pn**		**04 39 34.5**	**+0.2**
SXI1				eS		**Sn**		**04 39 45.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.69**	**92**	P		**Pn**		**04 39 34.3**	**0.0**
YOJ				eS		**Sn**		**04 39 44.8**	**-0.3**
NWF	**Wu-fen Shan** baz=330	**0.72**	**324**	*e*S		**Sn**		**04 39 45.7**	**-0.1**
WFSB	**Wu-fen Shan** baz=330	**0.72**	**324**	*e*P		**Pn**		**04 39 35.0**	**+0.4**
WFSB				eS		**Sn**		**04 39 46.0**	**+0.3**
TWD	**Chiawan** baz=227	**0.72**	**236**	P		**Pn**		**04 39 34.0**	**-0.6**
TWD				S		**Sn**		**04 39 44.8**	**-0.9**
NWLT	**Wulai** baz=297	**0.74**	**293**	*e*P		**Pn**		**04 39 35.7**	**+0.9**
NWLT				eS		**Sn**		**04 39 46.6**	**+0.5**
ETLH	**Xiulin Townshi** baz=246	**0.76**	**248**	P		**Pn**		**04 39 34.7**	**-0.3**
ETLH				eS		**Sn**		**04 39 45.8**	**-0.8**
TWA	**Mucha** baz=323	**0.78**	**309**	*e*P		**Pn**		**04 39 35.6**	**+0.3**
TWA				eS		**Sn**		**04 39 46.7**	**-0.2**
TNOU	**National Taiwa** baz=332	**0.79**	**327**	*e*P		**Pn**		**04 39 33.6**	**-1.8**
TNOU				eS		**Sn**		**04 39 47.5**	**+0.4**
NNSB	**Datong** baz=260	**0.79**	**266**	*e*P		**Pn**		**04 39 35.8**	**+0.3**
NNSB				eS		**Sn**		**04 39 46.2**	**-1.2**
NNS	**Nan Shan** baz=261	**0.80**	**267**	*e*P		**Pn**		**04 39 35.9**	**+0.3**
NNS				eS		**Sn**		**04 39 47.4**	**-0.2**
NHDH	**Xindian Distri** baz=320	**0.81**	**306**	*e*P		**Pn**		**04 39 36.0**	**+0.3**
NHDH				eS		**Sn**		**04 39 47.4**	**-0.2**
YHNB	**Yeheng** baz=278	**0.82**	**283**	P		**Pn**		**04 39 36.6**	**+0.8**
YHNB				*i* S		**Sn**		**04 39 48.3**	**+0.5**
NSK	**Sanguang** baz=278	**0.83**	**283**	*e*P		**Pn**		**04 39 36.7**	**+0.7**
NSK				S		**Sn**		**04 39 48.4**	**+0.2**
ETM	**Tongmen** baz=241	**0.86**	**233**	P		**Pn**		**04 39 35.7**	**-0.6**
ETM				*i* S		**Sn**		**04 39 47.9**	**-0.8**
LXIB	**Xiulin Townshi** baz=236	**0.89**	**239**	*i* P		**Pn**		**04 39 36.5**	**-0.3**
LXIB				eS		**Sn**		**04 39 48.6**	**-1.1**
YM01	**YM01** baz=321	**0.90**	**317**	*e*P		**Pn**		**04 39 37.1**	**+0.3**
YM01				eS		**Sn**		**04 39 49.5**	**-0.1**
YM08	**YM08** baz=324	**0.92**	**319**	*e*P		**Pn**		**04 39 37.5**	**+0.5**
YM08				*i* S		**Sn**		**04 39 49.0**	**-1.0**
SHUL	**Shoufeng** baz=209	**0.94**	**222**	P		**Pn**		**04 39 36.9**	**-0.3**
SHUL				S		**Sn**		**04 39 49.8**	**-0.5**
WHF	**Hehuan Shan** baz=248	**0.96**	**249**	P		**Pn**		**04 39 37.8**	**0.0**
WHF				S		**Sn**		**04 39 50.7**	**-0.8**
TWS1	**Kuangyinshan** baz=320	**0.97**	**309**	*i* P		**Pn**		**04 39 37.7**	**+0.2**
TWS1				eS		**Sn**		**04 39 51.1**	**+0.1**
TWY	**Chenhua** baz=328	**0.98**	**323**	P		**Pn**		**04 39 38.2**	**+0.5**
TWY				eS		**Sn**		**04 39 51.3**	**+0.1**
NTST	**Danshui** baz=324	**0.99**	**313**	*e*P		**Pn**		**04 39 38.6**	**+0.8**
NTST				S		**Sn**		**04 39 51.1**	**-0.4**
TWT	**Tachien** baz=256	**1.01**	**257**	P		**Pn**		**04 39 39.1**	**+0.9**
TWT				S		**Sn**		**04 39 52.3**	**+0.2**
TDCB	**Techi** baz=256	**1.02**	**257**	*e*P		**Pn**		**04 39 39.0**	**+0.7**
TDCB				eS		**Sn**		**04 39 52.2**	**-0.2**
NFF	**Wufeng Townshi** baz=287	**1.04**	**278**	*e*P		**Pn**		**04 39 39.5**	**+1.0**
NFF				eS		**Sn**		**04 39 53.3**	**+0.6**
CHGB	**Renai** baz=239	**1.07**	**247**	P		**Pn**		**04 39 39.4**	**+0.3**
CHGB				*e*S		**Sn**		**04 39 53.2**	**-0.4**
WARBT	**Fenglin Townsh** baz=231	**1.10**	**226**	P		**Pn**		**04 39 38.3**	**-0.9**
WARBT				S		**Sn**		**04 39 52.1**	**-1.9**
LIOB	**Emei** baz=279	**1.14**	**278**	*e*P		**Pn**		**04 39 40.7**	**+1.0**
LIOB				eS		**Sn**		**04 39 55.8**	**+1.0**
NSTT	**Nanjuang** baz=278	**1.15**	**277**	*e*P		**Pn**		**04 39 40.4**	**+0.6**
NSTT				eS		**Sn**		**04 39 55.8**	**+0.8**
WUSB	**Renai** baz=238	**1.15**	**245**	*e*P		**Pn**		**04 39 40.3**	**+0.4**
WUSB				eS		**Sn**		**04 39 54.8**	**-0.4**
HGSD	**Ruisui** baz=207	**1.25**	**217**	*e*P		**Pn**		**04 39 42.2**	**+1.1**
HGSD				S		**Sn**		**04 39 56.7**	**-0.6**
VWDT	**VWDT** baz=228	**1.25**	**234**	*i* P		**Pn**		**04 39 41.4**	**+0.3**
VWDT				eS		**Sn**		**04 39 56.8**	**-0.6**
EHY	**Hungye** baz=209	**1.29**	**221**	*e*P		**Pn**		**04 39 40.9**	**-0.9**
EHY				S		**Sn**		**04 39 56.6**	**-1.8**
WCS	**Beigang Elemen** baz=250	**1.29**	**251**	*e*P		**Pn**		**04 39 42.3**	**+0.6**
WCS				eS		**Sn**		**04 39 57.3**	**-1.1**
SMLT	**Sun Moon Lake** baz=237	**1.37**	**244**	*e*P		**Pn**		**04 39 44.9**	**+2.1**
SMLT				eS		**Sn**		**04 40 02.7**	**+2.3**
SSLB	**Suanglung** baz=235	**1.37**	**240**	*e*P		**Pn**		**04 39 44.8**	**+2.0**
SSLB				eS		**Sn**		**04 40 00.4**	**+0.1**
ECBN	**Changbin** baz=201	**1.38**	**212**	*e*P		**Pn**		**04 39 44.0**	**+1.3**
ECBN				S		**Sn**		**04 39 59.1**	**-1.2**
YULB	**Yu-li** baz=225	**1.40**	**219**	*e*P		**Pn**		**04 39 42.8**	**-0.3**
YULB				eS		**Sn**		**04 39 58.4**	**-2.4**
TYC	**Yuchr** baz=239	**1.40**	**246**	*e*P		**Pn**		**04 39 44.9**	**+1.9**
TYC				S		**Sn**		**04 40 00.9**	**+0.1**
EYUL	**Yuli** baz=224	**1.42**	**217**	*e*P		**Pn**		**04 39 44.4**	**+1.0**
EYUL				eS		**Sn**		**04 40 01.0**	**-0.3**
TWF1	**Yuli** baz=224	**1.43**	**218**	*i* P		**Pn**		**04 39 42.8**	**-0.7**
TWF1				eS		**Sn**		**04 39 59.6**	**-2.0**
CHKH	**Chenggong** baz=199	**1.51**	**211**	*e*P		**Pn**		**04 39 45.2**	**+0.7**
CHKH				eS		**Sn**		**04 40 01.5**	**-2.0**
WJS	**Zhushan** baz=257	**1.54**	**245**	*e*P		**Pn**		**04 39 46.7**	**+1.7**
WJS				eS		**Sn**		**04 40 06.8**	**+2.6**
WNT	**Mingjian** baz=259	**1.55**	**247**	*e*P		**Pn**		**04 39 45.5**	**+0.4**
WNT				eS		**Sn**		**04 40 07.0**	**+2.5**
JKRS	**Kuro-shima**	**1.62**	**98**	P		**Pn**		**04 39 46.5**	**+0.5**
JKRS				eS		**Sn**		**04 40 06.7**	**+0.5**
ALS	**Alishan** baz=225	**1.64**	**234**	*e*P		**Pn**		**04 39 48.4**	**+1.9**
ALS				eS		**Sn**		**04 40 09.4**	**+2.3**
EHD	**Haiduan** baz=220	**1.64**	**216**	*e*P		**Pn**		**04 39 45.2**	**-1.1**
EHD				eS		**Sn**		**04 40 04.0**	**-2.6**
CHN5	**Tsauling** baz=229	**1.69**	**239**	P		**Pn**		**04 39 47.9**	**+0.9**
CHN5				eS		**Sn**		**04 40 09.8**	**+2.0**
ELDTW	**Lidau** baz=213	**1.72**	**221**	*i* P		**Pn**		**04 39 46.8**	**-0.6**
ELDTW				S		**Sn**		**04 40 07.2**	**-1.4**
JIJ	**Ishigaki jima**	**1.73**	**94**	P		**Pn**		**04 39 47.4**	**0.0**
JIJ				S		**Sn**		**04 40 08.2**	**-0.5**
EDH	**Donghe** baz=201	**1.74**	**210**	P		**Pn**		**04 39 46.6**	**-1.0**
EDH				eS		**Sn**		**04 40 05.3**	**-3.6**
WDLH	**Douliu** baz=256	**1.75**	**243**	*e*P		**Pn**		**04 39 49.9**	**+2.1**
WDLH				eS		**Sn**		**04 40 11.9**	**+2.6**
WRL	**Guolierlin Hig** baz=263	**1.81**	**252**	*e*P		**Pn**		**04 39 49.1**	**+0.6**
WRL				eS		**Sn**		**04 40 10.4**	**-0.1**
WCKO	**Fanlu** baz=235	**1.83**	**236**	P		**Pn**		**04 39 49.7**	**+0.8**
WCKO				eS		**Sn**		**04 40 14.0**	**+2.8**
JISG	**Ishigakijimahi**	**1.88**	**87**	*e*P		**Pn**		**04 39 49.6**	**+0.2**
JISG				eS		**Sn**		**04 40 12.0**	**-0.3**
WTK	**Tuku** baz=258	**1.88**	**245**	P		**Pn**		**04 39 50.4**	**+0.9**
WTK				eS		**Sn**		**04 40 13.9**	**+1.6**
LONT	**Longtian** baz=211	**1.88**	**213**	*e*P		**Pn**		**04 39 50.1**	**+0.6**
LONT				eS		**Sn**		**04 40 11.0**	**-1.3**
STYH	**Taoyuan** baz=225	**1.88**	**226**	*i* P		**Pn**		**04 39 50.1**	**+0.6**
STYH				S		**Sn**		**04 40 12.7**	**+0.3**
CHN4	**Tsaushan** baz=233	**1.89**	**234**	*e*P		**Pn**		**04 39 51.2**	**+1.5**
CHN4				eS		**Sn**		**04 40 15.3**	**+2.7**
TPUB	**Ta-pu** baz=224	**1.90**	**232**	*e*P		**Pn**		**04 39 51.9**	**+2.2**
TPUB				*i* S		**Sn**		**04 40 13.1**	**+0.4**
TWGBT	**Beinan** baz=211	**1.98**	**213**	*e*P		**Pn**		**04 39 51.8**	**+1.0**
TWGBT				eS		**Sn**		**04 40 13.2**	**-1.5**
TWK	**Hsinying** baz=233	**2.02**	**233**	P		**Pn**		**04 39 52.3**	**+0.8**
TWK				eS		**Sn**		**04 40 17.2**	**+1.5**
CHN1	**Nanshi** baz=230	**2.04**	**231**	P		**Pn**		**04 39 52.6**	**+0.9**
CHN1				eS		**Sn**		**04 40 18.1**	**+1.9**
SGST	**Jiashian** baz=227	**2.07**	**228**	*i* P		**Pn**		**04 39 53.2**	**+1.1**
SGST				*i* S		**Sn**		**04 40 17.9**	**+0.9**
ICHU	**Yijhu** baz=228	**2.12**	**238**	*i* P		**Pn**		**04 39 53.4**	**+0.6**
ICHU				eS		**Sn**		**04 40 19.4**	**+1.2**
JTJ	**Tarama**	**2.24**	**86**	S		**Sn**		**04 40 22.8**	**+1.8**
TSMG	**Majia** baz=219	**2.31**	**220**	*i* P		**Pn**		**04 39 56.2**	**+1.0**
TSMG				eS		**Sn**		**04 40 25.0**	**+2.3**
MASBT	**Mashibuluo** baz=218	**2.39**	**219**	*e*P		**Pn**		**04 39 57.4**	**+1.0**
MASBT				*i* S		**Sn**		**04 40 25.7**	**+1.1**
VWUC	**VWUC** baz=281	**2.59**	**282**	*i* P		**Pn**		**04 39 59.0**	**-0.1**
VWUC				eS		**Sn**		**04 40 27.2**	**-2.4**

PHUB	**P'eng-hu** baz=261	**2.63**	**249**	*e*P	**Pn**	04 39 60.0	+0.3
PHUB	baz=261			*e*S	**Sn**	04 40 29.6	-1.0
MATB	**Ma-tsu** baz=309	**2.66**	**309**	*e*P	**Pn**	04 40 00.3	+0.2
MATB	baz=309			*e*S	**Sn**	04 40 30.5	-0.8
VCHM	**Qimei** baz=246	**2.88**	**244**	*e*P	**Pn**	04 40 03.7	+0.7
VCHM	baz=246			*e*S	**Sn**	04 40 36.0	-0.6
PTMZ	**Houxiangcun** baz=281	**2.90**	**282**	*e*P	**Pn**	04 40 03.8	+0.5
PTMZ	baz=281			*e*S	**Sn**	04 40 36.0	-1.0
LYJJ	**Jianjiangzhen** baz=304	**3.04**	**313**	*e*P	**Pn**	04 40 05.7	+0.4
LYJJ	baz=304			*e*S	**Sn**	04 40 39.6	-1.0
XPSS	**Dashiqiu** baz=323	**3.06**	**323**	*e*P	**Pn**	04 40 05.9	+0.4
XPSS	baz=323			*e*S	**Sn**	04 40 40.0	-0.9
MHZQ	**Yeshan** baz=299	**3.33**	**300**	P	**Pn**	04 40 09.2	+0.1
MHZQ	baz=299			*e*S	**Sn**	04 40 45.8	-1.6
KNMB	**Chin-men Tao** baz=272	**3.52**	**270**	P	**Pn**	04 40 11.3	-0.4
KNMB	baz=272			*e*S	**Sn**	04 40 48.6	-3.5
AXDP	**Jialang** baz=277	**3.91**	**277**	*i* P	**Pn**	04 40 17.1	0.0
AXDP	baz=277			*e*S	**Sn**	04 40 59.0	-2.8

ASIES ***12*** *04:45:26.0,24˚.22N×121˚.77E,h17km,ML3.9,Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}3.84; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$1.00; $M_{r\theta}$2.25; $M_{\theta\phi}$-2.55; $M_{r\phi}$6.19; Fault plane solution: $M_0$7.63950×10^{21} NP1:ϕ_s24.30000°, δ79.37000°,λ70.44000°. NP2:ϕ_s266.87000°,δ22.16000°, λ150.72000°. Principal axes: T Plg51.7500°, Azm271.8340°; N Plg19.2080°, Azm28.0620°; P Plg31.6300°, Azm130.4540°;*

JMA ***12*** *04:45:25.9±0.1,24˚.1N±0˚.5×121˚.7E±0˚.9,h19km±1km, MV3.3/12,TAIWAN REGION*

TAP ***12*** *04:45:26.0,24˚.22N×121˚.77E,h17km,ML3.9,B*

ISC 12 04:45:26.1±0.8,24˚21N±0˚.01×121˚.78E±0˚.02,h17km±5km, n141,σ0ᵗ67/233,9C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=347	**0.10**	**342**	*i* P		**Pg**		04 45 29.7	0.0
EHP	baz=347			*i* S		**Sg**		04 45 32.5	+0.5
EAHA	**Aohua** baz=345	**0.12**	**344**	⇓*i*P		**Pb**		04 45 29.8	-0.2
EAHA	baz=345			*i* S		**Sb**		04 45 32.5	-0.1
ETL	**Fush Village** baz=248	**0.15**	**250**	*i* P		**Pb**		04 45 30.2	-0.2
ETL	baz=248			S		**Sb**		04 45 33.1	-0.3
NACB	**Ninganchiao**	**0.17**	**257**	P		**Pg**		04 45 30.4	-0.1
NACB	**Ninganchiao** baz=256	**0.17**	**257**	⇓*i*P		**Pg**		04 45 30.4	-0.1
NACB	baz=256			*i* S		**Sb**		04 45 33.5	-0.5
TWD	**Chiawan** baz=235	**0.21**	**232**	⇑*i*P		**Pg**		04 45 31.0	0.0
TWD	baz=235			S		**Sb**		04 45 34.8	-0.3
ENA	**Nanau** baz=352	**0.22**	**352**	⇓P		**Pg**		04 45 31.2	0.0
ENA	baz=352			*e*S		**Sb**		04 45 35.0	-0.4
EWUT	**Wuta** baz=359	**0.23**	**1**	⇓*e*P		**Pb**		04 45 31.5	-0.4
EWUT	baz=359			*i* S		**Sb**		04 45 35.2	-0.6
ETLH	**Xiulin Townshi** baz=268	**0.27**	**269**	*e*P		**Pg**		04 45 32.0	-0.1
ETLH	baz=268			*i* S		**Sg**		04 45 36.0	-0.1
HWA	**Hwalien** baz=221	**0.28**	**214**	*e*P		**Pb**		04 45 33.2	+0.5
HWA	baz=221			*e*S		**Sb**		04 45 38.7	+1.5
ETM	**Tongmen** baz=227	**0.36**	**227**	*e*P		**Pg**		04 45 33.6	+0.1
ETM	baz=227			*e*S		**Sb**		04 45 39.8	+0.4
ESAO	**Su ao** baz=4.0	**0.37**	**10**	⇓*e*P		**Pg**		04 45 33.8	0.0
ESAO	baz=4.0			*e*S		**Sb**		04 45 39.4	-0.3
LXIB	**Xiulin Townshi** baz=241	**0.38**	**240**	⇑*i*P		**Pg**		04 45 33.8	-0.3
LXIB	baz=241			S		**Sg**		04 45 39.5	+0.1
LATG	**Datong** baz=323	**0.40**	**325**	⇓*i*P		**Pb**		04 45 34.3	-0.5
LATG	baz=323			*e*S		**Sg**		04 45 39.7	-0.1
TWC	**Suao** baz=5.0	**0.40**	**10**	⇓*i*P		**Pb**		04 45 34.5	-0.3
TWC	baz=5.0			*e*S		**Sg**		04 45 40.0	+0.1
NNSB	**Datong** baz=300	**0.42**	**301**	⇑*i*P		**Pg**		04 45 34.6	-0.1
NNSB	baz=300			*e*S		**Sb**		04 45 40.5	-0.8
NDS	**Dongshan** baz=350	**0.42**	**353**	*i* P		**Pb**		04 45 34.9	-0.3
NDS	baz=350			*e*S		**Sb**		04 45 40.8	-0.6
NNS	**Nan Shan** baz=301	**0.43**	**302**	*i* P		**Pb**		04 45 35.0	-0.5
NNS	baz=301			*i* S		**Sb**		04 45 41.1	-0.6
NDT	**Datong Townshi** baz=326	**0.46**	**328**	⇓*i*P		**Pb**		04 45 35.5	-0.3
NDT	baz=326			*i* S		**Sb**		04 45 42.1	-0.2
SHUL	**Shoufeng** baz=198	**0.47**	**205**	*e*P		**Pb**		04 45 36.3	+0.4
SHUL	baz=198			*e*S		**Sb**		04 45 43.5	+1.0
ENTT	**Nioudou** baz=334	**0.47**	**336**	⇓*i*P		**Pb**		04 45 35.5	-0.4
ENTT	baz=334			*e*S		**Sb**		04 45 42.4	-0.3
WHF	**Hehuan Shan** baz=262	**0.47**	**262**	⇑P		**Pg**		04 45 35.7	-0.1
WHF	baz=262			*e*S		**Sg**		04 45 42.3	+0.1
EOS4	**EOS4** baz=102	**0.50**	**100**	*e*P		**Pn**		04 45 37.7	-0.5
ESL	**Shilin** baz=222	**0.51**	**218**	*e*P		**Pb**		04 45 36.3	-0.3
ESL	baz=222			*e*S		**Sb**		04 45 43.5	-0.2
TWE	**Neicheng** baz=347	**0.52**	**349**	⇓P		**Pb**		04 45 36.5	-0.3
TWE	baz=347			*i* S		**Sb**		04 45 44.2	+0.2
TEGC	**Jichi Village** baz=197	**0.54**	**203**	*e*P		**Pb**		04 45 37.5	+0.3
TEGC	baz=197			*e*S		**Sb**		04 45 45.9	+1.1
TWT	**Tachien** baz=274	**0.55**	**274**	*e*P		**Pb**		04 45 37.5	+0.1
TWT	baz=274			S		**Sb**		04 45 45.0	-0.1
ILA	**Ilan** baz=350	**0.55**	**357**	*e*P		**Pb**		04 45 37.1	-0.3
ILA	baz=350			*e*S		**Sb**		04 45 45.7	+0.6
TDCB	**Techi** baz=274	**0.56**	**274**	*i* P		**Pb**		04 45 37.5	-0.2
TDCB	baz=274			S		**Sg**		04 45 44.5	-0.5
CHGB	**Renai** baz=250	**0.57**	**255**	⇑*i*P		**Pb**		04 45 37.6	-0.2
CHGB	baz=250			S		**Sg**		04 45 44.9	-0.3
FUSB	**Fushanzhiwuyua** baz=333	**0.57**	**343**	⇓*i*P		**Pg**		04 45 37.4	-0.1
FUSB	baz=333			*e*S		**Sb**		04 45 45.1	-0.6
YHNB	**Yeheng**	**0.58**	**321**	P		**Pb**		04 45 38.0	0.0
YHNB	**Yeheng** baz=320	**0.58**	**321**	⇓*i*P		**Pb**		04 45 37.7	-0.2
YHNB	baz=320			*e*S		**Sg**		04 45 45.0	-0.6
NSK	**Sanguang** baz=320	**0.60**	**321**	⇓*i*P		**Pb**		04 45 38.0	-0.2
NSK	baz=320			*e*S		**Sb**		04 45 46.2	-0.3
WARBT	**Fenglin Townsh** baz=219	**0.61**	**216**	⇑P		**Pg**		04 45 37.5	-0.6
WARBT	baz=219			*e*S		**Sb**		04 45 46.5	-0.1
NWLT	**Wulai** baz=339	**0.62**	**336**	⇓P		**Pb**		04 45 38.4	-0.1
NWLT	baz=339			*e*S		**Sb**		04 45 46.6	-0.3
WUSB	**Renai** baz=250	**0.64**	**250**	⇑*i*P		**Pb**		04 45 38.8	-0.1
WUSB	baz=250			*e*S		**Sb**		04 45 47.5	-0.1
EGS	baz=16	**0.65**	**13**	*e*P		**Pb**		04 45 39.5	+0.5
EGS	baz=16			*e*S		**Sg**		04 45 47.2	-0.2
NFF	**Wufeng Townshi** baz=304	**0.73**	**305**	*e*P		**Pg**		04 45 40.4	0.0
NFF	baz=304			S		**Sb**		04 45 50.5	+0.3
VWDT	**VWDT** baz=239	**0.74**	**232**	⇑*i*P		**Pb**		04 45 40.4	-0.2
VWDT	baz=239			*e*S		**Sb**		04 45 50.1	-0.2
NHDH	**Xindian Distri** baz=341	**0.78**	**343**	P		**Pg**		04 45 41.6	+0.2
NHDH	baz=341			*e*S		**Sg**		04 45 51.7	0.0
HGSD	**Ruisui** baz=195	**0.79**	**204**	*e*P		**Pg**		04 45 41.8	+0.3
HGSD	baz=195			*e*S		**Sn**		04 45 54.8	+1.0
TWA	**Mucha** baz=345	**0.79**	**347**	*e*P		**Pn**		04 45 41.8	-0.7
TWA	baz=345			*e*S		**Sg**		04 45 52.4	+0.5
WCS	**Beigang Elemen** baz=260	**0.80**	**259**	*e*P		**Pg**		04 45 42.0	+0.2
WCS	baz=260			*e*S		**Sb**		04 45 52.0	-0.3
TATO	**Taipei**	**0.81**	**341**	P		**Pn**		04 45 42.8	+0.1
EHY	**Hungye** baz=222	**0.82**	**211**	*e*P		**Pb**		04 45 40.6	-1.2
EHY	baz=222			*e*S		**Sn**		04 45 54.3	-0.3
LIOB	**Emei** baz=301	**0.82**	**302**	*e*P		**Pn**		04 45 42.4	-0.5
LIOB	baz=301			*e*S		**Sn**		04 45 53.4	-1.2
TWB1	**Santiao Chiao** baz=11	**0.82**	**14**	*e*P		**Pg**		04 45 42.1	+0.1
TWB1	baz=11			*e*S		**Sg**		04 45 52.8	-0.1
NSTT	**Nanjuang** baz=300	**0.82**	**301**	*i* P		**Pn**		04 45 42.4	-0.5
NSTT	baz=300			*e*S		**Sn**		04 45 53.5	-1.2
NWF	**Wu-fen Shan** baz=350	**0.86**	**0**	*e*P		**Pn**		04 45 43.2	-0.3
NWF	baz=350			*e*S		**Sg**		04 45 54.3	+0.2
WFSB	**Wu-fen Shan** baz=350	**0.86**	**0**	*e*P		**Pn**		04 45 43.5	0.0
WFSB	baz=350			*e*S		**Sg**		04 45 54.5	+0.4
SSLB	**Suanglung**	**0.86**	**241**	P		**Pg**		04 45 42.6	-0.3
SSLB	**Suanglung** baz=249	**0.86**	**241**	*e*P		**Pb**		04 45 42.3	-0.4
SSLB	baz=249			*e*S		**Sg**		04 45 54.0	-0.3
SMLT	**Sun Moon Lake** baz=249	**0.86**	**248**	*i* P		**Pb**		04 45 42.6	-0.2
SMLT	baz=249			*e*S		**Sg**		04 45 54.8	+0.4
SXI1	**Grass Mountain** baz=3.0	**0.88**	**6**	*e*P		**Pn**		04 45 43.7	-0.2
SXI1	baz=3.0			*e*S		**Sg**		04 45 55.4	+0.4
TYC	**Yuchr** baz=244	**0.89**	**250**	⇑*i*P		**Pb**		04 45 42.9	-0.3
TYC	baz=244			*e*S		**Sb**		04 45 54.7	-0.2
SBCB	**Hsinchu** baz=307	**0.92**	**309**	*e*P		**Pn**		04 45 44.7	+0.3
SBCB	baz=307			*e*S		**Sn**		04 45 57.9	+0.6
TWQ1	**Liyutan** baz=279	**0.93**	**279**	⇓P		**Pn**		04 45 44.7	+0.4
TWQ1	baz=279			*e*S		**Sg**		04 45 56.0	-0.2
YULB	**Yu-li**	**0.93**	**208**	P		**Pb**		04 45 43.5	-0.2
YULB	**Yu-li** baz=219	**0.93**	**208**	*e*P		**Pb**		04 45 42.3	-1.4
YULB	baz=219			*e*S		**Sb**		04 45 56.0	+0.2
NCUH	**Zhongli** baz=322	**0.93**	**325**	P		**Pn**		04 45 44.9	+0.5
NCUH	baz=322			S		**Sn**		04 45 58.0	+0.7
TNOU	**National Taiwa** baz=6.0	**0.94**	**360**	*e*P		**Pn**		04 45 44.5	0.0
ECBN	**Changbin** baz=200	**0.94**	**199**	*e*P		**Pb**		04 45 43.7	-0.2
ECBN	baz=200			*e*S		**Sg**		04 45 56.5	-0.2
HSN	**Hsinchu** baz=304	**0.94**	**309**	*e*P		**Pn**		04 45 45.1	+0.5
HSN	baz=304			*e*S		**Sn**		04 45 57.8	+0.1
TWS1	**Kuangyinshan** baz=337	**0.94**	**340**	*e*P		**Pn**		04 45 45.1	+0.5
TWS1	baz=337			*e*S		**Sn**		04 45 57.7	0.0
NSY	**Sanyi** baz=283	**0.95**	**283**	*i* P		**Pn**		04 45 45.1	+0.4
NSY	baz=283			*e*S		**Sn**		04 45 58.2	+0.3
YM01	**YM01** baz=347	**0.95**	**349**	*e*P		**Pn**		04 45 44.7	-0.1
NMLH	**Miaoli** baz=290	**0.95**	**290**	*e*P		**Pn**		04 45 45.8	+1.0
NMLH	baz=290			*e*S		**Sn**		04 45 57.8	-0.2
EYUL	**Yuli** baz=220	**0.96**	**206**	*e*P		**Pb**		04 45 44.2	0.0
TWF1	**Yuli** baz=208	**0.96**	**207**	*e*P		**Pb**		04 45 43.0	-1.3
TWF1	baz=208			*e*S		**Sg**		04 45 57.6	+0.3
YM08	**YM08** baz=333	**0.99**	**350**	*e*P		**Pn**		04 45 44.9	-0.4
YM08	baz=333			*e*S		**Sg**		04 45 58.2	0.0
NTST	**Danshui** baz=346	**0.99**	**343**	*e*P		**Pg**		04 45 45.6	+0.2
NTST	baz=346			*e*S		**Sn**		04 45 59.7	+0.7
ANP	**Anpu** baz=354	**1.00**	**347**	*e*P		**Pg**		04 45 45.5	0.0
WJS	**Zhushan** baz=247	**1.03**	**248**	*e*P		**Pg**		04 45 46.5	+0.4
WJS	baz=247			*e*S		**Sn**		04 46 01.2	+1.2
WNT	**Mingjian** baz=250	**1.05**	**252**	*e*P		**Pg**		04 45 47.0	+0.5
WNT	baz=250			*e*S		**Sn**		04 46 01.7	+1.3
TWY	**Chenhua** baz=335	**1.07**	**351**	*e*P		**Pg**		04 45 47.2	+0.3
CHKH	**Chenggong** baz=201	**1.07**	**199**	*e*P		**Pg**		04 45 46.8	-0.1
CHKH	baz=201			*e*S		**Sg**		04 46 01.2	+0.2
JYNG	**Yonagunijimaku**	**1.09**	**77**	P		**Pg**		04 45 47.1	-0.2
WCHH	**Zhanghua** baz=263	**1.12**	**264**	*e*P		**Pg**		04 45 48.2	+0.4
ALS	**Alishan** baz=220	**1.13**	**232**	*e*P		**Pn**		04 45 47.4	-0.1
ALS	baz=220			*e*S		**Sg**		04 46 03.6	+0.8
YOJ	**Yonaguni jima**	**1.15**	**77**	P		**Pg**		04 45 48.1	-0.3
YOJ	**Yonaguni jima**	**1.15**	**77**	P		**Pb**		04 45 47.7	+0.1
YOJ				S		**Sg**		04 46 03.6	+0.1
CHKT	**Chengkung** baz=187	**1.17**	**199**	*e*P		**Pn**		04 45 46.7	-1.0
CHN5	**Tsauling** baz=240	**1.18**	**239**	P		**Pg**		04 45 48.7	-0.2
CHN5	baz=240			*e*S		**Sg**		04 46 05.0	+0.7
EHD	**Haiduan** baz=208	**1.18**	**206**	*e*P		**Pn**		04 45 47.6	-0.3
EHD	baz=208			*e*S		**Sb**		04 46 01.4	-1.7
ECS	**Chishang** baz=205	**1.22**	**205**	*e*P		**Pn**		04 45 48.3	-0.2
WGK	**Gukeng** baz=245	**1.23**	**245**	*e*P		**Pg**		04 45 49.6	-0.2
ELDTW	**Lidau** baz=202	**1.23**	**215**	*e*P		**Pn**		04 45 48.1	-0.6
WDLH	**Douliu** baz=247	**1.25**	**246**	*e*P		**Pg**		04 45 49.8	-0.4
WDLH	baz=247			*e*S		**Sg**		04 46 09.0	+2.5
EDH	**Donghe** baz=185	**1.31**	**199**	*e*P		**Pn**		04 45 47.1	-2.5
WRL	**Guolierlin Hig** baz=258	**1.31**	**257**	*e*P		**Pb**		04 45 50.6	+0.2
WRL	baz=258			*e*S		**Sg**		04 46 09.2	+0.5
WCKO	**Fanlu** baz=236	**1.32**	**235**	*e*P		**Pg**		04 45 51.0	-0.6
WCKO	baz=236			*e*S		**Sg**		04 46 09.7	+0.9
CHN2	**Minshiung** baz=227	**1.37**	**241**	*e*P		**Pg**		04 45 52.7	+0.2
WTK	**Tuku** baz=235	**1.37**	**248**	*e*P		**Pb**		04 45 51.6	+0.2
WTK	baz=235			*e*S		**Sg**		04 46 11.7	+1.2
CHN4	**Tsaushan** baz=233	**1.38**	**232**	*e*P		**Pg**		04 45 52.1	-0.6
CHN4	baz=233			*e*S		**Sg**		04 46 12.6	+1.9
STYH	**Taoyuan** baz=223	**1.38**	**222**	*e*P		**Pb**		04 45 51.1	-0.4
STYH	baz=223			*e*S		**Sg**		04 46 10.4	-0.4
TPUB	**Ta-pu**	**1.39**	**229**	P		**Pb**		04 45 51.9	+0.3
TPUB	**Ta-pu** baz=231	**1.39**	**229**	*e*P		**Pb**		04 45 51.8	+0.1
TPUB	baz=231			*e*S		**Sg**		04 46 10.8	-0.2
LONT	**Longtian** baz=205	**1.43**	**205**	*e*P		**Pn**		04 45 50.0	-1.3
WTP	**Ta-pu** baz=228	**1.43**	**228**	*e*P		**Pg**		04 45 53.0	-0.8
PCYT	**Pengchaiyu** baz=8.0	**1.44**	**11**	*e*P		**Pb**		04 45 51.9	-0.5
TWK	**Hsinying** baz=232	**1.51**	**232**	*e*P		**Pb**		04 45 53.8	+0.1
TWK	baz=232			*e*S		**Sg**		04 46 15.1	+0.2
TWG	**Pinlang** baz=191	**1.53**	**205**	*e*P		**Pn**		04 45 51.5	-1.2
TWGBT	**Beinan**	**1.53**	**205**	P		**Pb**		04 45 53.7	-0.3
TWGBT	**Beinan** baz=191	**1.53**	**205**	*e*P		**Pn**		04 45 49.7	-2.9
SNST	**Tainan City** baz=231	**1.53**	**230**	*e*P		**Pb**		04 45 54.6	+0.5
SNST	baz=231			*e*S		**Sg**		04 46 15.5	-0.1
WSF	**Szhu** baz=259	**1.53**	**248**	*e*P		**Pb**		04 45 54.1	+0.1
WSF	baz=259			*e*S		**Sg**		04 46 15.5	0.0
CHN1	**Nanshi** baz=230	**1.53**	**228**	*e*P		**Pb**		04 45 54.3	+0.2
CHN1	baz=230			*i* S		**Sg**		04 46 15.6	0.0
SGST	**Jiashian** baz=226	**1.57**	**224**	*e*P		**Pb**		04 45 54.3	-0.4
SGST	baz=226			S		**Sg**		04 46 16.0	-0.8
ICHU	**Yijhu** baz=223	**1.61**	**239**	*e*P		**Pb**		04 45 55.6	+0.2
ICHU	baz=223			*e*S		**Sg**		04 46 18.0	-0.1
CHN3	**Shinhua** baz=228	**1.72**	**229**	*e*P		**Pb**		04 45 58.0	+0.7
SHHT	**Tainan City** baz=227	**1.77**	**228**	*e*P		**Pb**		04 45 58.6	+0.5
SCST	**Cishan** baz=222	**1.77**	**222**	*e*P		**Pb**		04 45 57.6	-0.5
SCST	baz=222			*e*S		**Sg**		04 46 22.0	-1.1
ECL	**Taimali** baz=192	**1.77**	**205**	*e*P		**Pn**		04 45 55.6	-0.5
TSMG	**Majia** baz=199	**1.82**	**215**	*e*P		**Pb**		04 45 58.2	-0.8
HATJ	**Hateruma jima**	**1.86**	**94**	P		**Pn**		04 45 57.7	+0.5
TSCK	**Chigu Township** baz=237	**1.88**	**236**	*e*P		**Pb**		04 45 58.8	-1.1
TSCK	baz=237			*e*S		**Sb**		04 46 23.4	+0.3
MASBT	**Mashibuluo** baz=213	**1.91**	**214**	*e*P		**Pn**		04 45 58.4	+0.6
MASBT	baz=213			*e*S		**Sb**		04 46 24.2	+0.1
EAST	**Anshuo** baz=193	**2.01**	**205**	*e*P		**Pn**		04 46 00.0	+0.7
TAWH	**Dawu Township** baz=192	**2.03**	**204**	*e*P		**Pn**		04 46 00.7	+1.0
JKRS	**Kuro-shima**	**2.04**	**89**	P		**Pn**		04 46 00.8	+1.1
JKRS				*e*S		**Sn**		04 46 25.7	+0.9
WSSB	**Gushan** baz=220	**2.09**	**222**	*e*P		**Pb**		04 46 03.9	+0.3
SCZT	**Fangliau** baz=209	**2.12**	**210**	*e*P		**Pb**		04 46 02.5	-1.5
SCZT	baz=209			*e*S		**Sb**		04 46 29.5	-0.6
PNG	**Penghu** baz=254	**2.13**	**253**	*e*P		**Pn**		04 46 01.1	+0.2
PHUB	**P'eng-hu** baz=254	**2.13**	**251**	*e*P		**Pn**		04 46 01.4	+0.4
PHUB	baz=254			*e*S		**Sn**		04 46 27.7	+0.6
WDGT	**Dungji** baz=247	**2.16**	**244**	*e*P		**Pn**		04 46 02.3	+1.0
WDGT	baz=247			S		**Sb**		04 46 30.9	-0.3
JIJ	**Ishigaki jima**	**2.17**	**85**	P		**Pn**		04 46 01.7	+0.3
JIJ				*e*S		**Sn**		04 46 27.8	-0.1
LYUB	**Lan-yu** baz=186	**2.21**	**185**	*e*P		**Pn**		04 45 59.1	-2.9
VWUC	**VWUC** baz=279	**2.26**	**291**	*e*P		**Pn**		04 46 02.0	-0.6
JISG	**Ishigakijimahi**	**2.34**	**80**	P		**Pn**		04 46 04.8	+1.0
JISG				S		**Sn**		04 46 33.1	+0.9
VCHM	**Qimei** baz=231	**2.37**	**246**	*e*P		**Pn**		04 46 05.1	+0.8
TWKBT	**Hengchun** baz=189	**2.43**	**202**	*e*P		**Pn**		04 46 06.8	+1.7
MATB	**Ma-tsu** baz=315	**2.55**	**320**	*e*P		**Pn**		04 46 05.8	-0.8
PTMZ	**Houxiangcun** baz=289	**2.55**	**289**	*e*P		**Pn**		04 46 06.4	-0.4
LYJJ	**Jianjiangzhen** baz=317	**2.96**	**322**	*e*P		**Pn**		04 46 11.7	-0.6
KNM	**Kinmen** baz=275	**3.06**	**275**	*e*P		**Pn**		04 46 15.1	+1.4
XPSS	**Dashiqiu** baz=327	**3.06**	**332**	*e*P		**Pn**		04 46 13.3	-0.5
KNMB	**Chin-men Tao** baz=276	**3.10**	**275**	*e*P		**Pn**		04 46 13.9	-0.4
AXDP	**Jialang** baz=282	**3.53**	**282**	*e*P		**Pn**		04 46 20.1	-0.1
ZPLA	**Ao Xicun** baz=268	**3.69**	**266**	*e*P		**Pn**		04 46 22.6	+0.2
DSXP	**Dongshan** baz=265	**4.01**	**264**	*e*P		**Pn**		04 46 26.7	-0.1

IDC ***12*** *04:59:24.5±3.1,4˚.35S×131˚.19E,h0km,mb4.0/2, mbtmp4.1/3,ML4.4/1,MS3.5/4,Error ellipse: s-maj=152.8km s-min=31.4km az=68.0*

DJA ***12*** *04:59:30.1±0.9,4˚.5S×131˚.1E±˚,h14km±8km,M4.4/10, mb4.5/7,mB5.7/2,MLv4.3/10,Mw(mB)5.2/2*

ISC 12 04:59:28.6±0.9,**4˚.4S**±0˚.1×**130˚.98E**±0˚.08,**h10**km,**n15, σ2°33/11,MS3.9/3,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.07**	**265**	Pg	**Pb**	**04 59 50.5**	**+1.2**
FAKI	**Fak Fak**	**1.96**	**40**	Pn	**Pn**	**05 00 04.2**	**+2.3**
KMPI	**Kaimana, Papua**	**2.82**	**75**	P	**Pn**	**05 00 16.4**	**+2.7**
SWI	**Sorong**	**3.55**	**5**	P	**Pn**	**05 00 25.0**	**+1.3**
NLAI	**Namlea**	**4.04**	**287**	P	**Pn**	**05 00 34.1**	**+3.5**
SANI	**Sanana**	**5.51**	**295**	P	**Pn**	**05 00 49.9**	**-0.8**
	23nm,1.1s,812nm0.1nm						
GENI	**Genyem**	**9.35**	**79**	P	**Pn**	**05 01 44.5**	**+1.0**
	40nm,0.7s						
EDFI	**Ende, Flores**	**10.18**	**245**	P	**Pn**	**05 01 56.4**	**+1.5**
	9.8nm,1.1s						
WRA	**Warramunga Arr**	**15.77**	**168**	Pn	Pn	05 03 03.2	-7.7
	0.4nm,0.3s,baz=332,slow=14,SNR=18						
WRA				Sn	Sn	05 05 47.0	-19
	1.1nm,0.3s,baz=349,slow=23,SNR=8.0						
PMG	**Port Moresby**	**16.80**	**108**	LR	LR	05 11 07.2	
	comp=Z,37nm,19.8s,baz=145,slow=42						
ASAR	**Alice Springs**	**19.34**	**172**	P	**P**	**05 03 52.1**	**-2.2**
	1.2nm,0.3s,baz=350,slow=10.0,SNR=107						
ASAR				S	Sn	05 07 13.9	-18
	0.9nm,0.7s,baz=346,slow=21,SNR=7.0 7.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.91**	**307**	P	**P**	**05 06 53.1**	**-1.6**
	1.1nm,0.3s,baz=129,slow=7.1,SNR=4.3 1.1nm,0.3s						
MKAR	**Makanchi Array**	**66.64**	**326**	P	**P**	**05 10 17.4**	**-2.1**
	0.4nm,0.4s,baz=116,slow=7.9,SNR=8.9						
MKAR				LR	LR	05 40 51.9	
	comp=Z,86nm,21.7s,baz=18,slow=37 0.4nm,0.4s						
AAK	**Ala-Archa**	**69.23**	**319**	LR	LR	05 43 40.3	
	comp=Z,35nm,19.9s,baz=14,slow=38						
PPT	**Papeete**	**78.63**	**107**	LR	LR	05 41 25.8	
	comp=Z,68nm,21.5s,baz=356,slow=32						

IDC ***12*** *05:15:57.2±4.0,1˚.28S×102˚.40E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=228.0km s-min=29.7km az=54.0*

DJA ***12*** *05:16:04.8±0.4,2˚.5S×4˚×10˚1E±˚,h74km±5km,M4.0/11, mb4.0/1,mB5.4/1,MLv3.9/11,Mw(mB)4.8/1*

ISC 12 05:16:03.2±1.1,**2˚.36S**±0˚.07×**101˚.18E**±0˚.07,**h50**km,**n13, σ2°96/12,mb3.6/4,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.39**	**46**	P	**Pn**	**05 16 17.8**	**+4.5**
PPSI	**Pulau Pagai**	**1.24**	**251**	P	**Pn**	**05 16 27.7**	**+3.6**
PDSI	**Padang**	**1.61**	**333**	P	**Pn**	**05 16 31.9**	**+2.6**
SISI	**Saibi**	**2.33**	**296**	P	**Pn**	**05 16 41.6**	**+2.5**
MNAI	**Manna**	**2.66**	**138**	P	**Pn**	**05 16 46.3**	**+2.7**
BKNI	**Bangkinang**	**2.67**	**357**	P	**Pn**	**05 16 45.5**	**+1.7**
PBSI	**Pulau Batu**	**3.70**	**308**	P	**Pn**	**05 16 59.5**	**+1.7**
KASI	**Kota Agung**	**4.56**	**134**	P	**Pn**	**05 17 11.5**	**+1.8**
GSI	**Gunungsitoli**	**5.12**	**315**	P	**Pn**	**05 17 17.6**	**+0.1**
WRA	**Warramunga Arr**	**36.79**	**121**	P	**P**	**05 23 03.9**	**-2.6**
	0.6nm,0.7s,baz=299,slow=10,SNR=5.9 0.6nm,0.7s						
ASAR	**Alice Springs**	**38.09**	**127**	P	**P**	**05 23 14.4**	**-3.1**
	0.5nm,0.5s,baz=300,slow=7.8,SNR=7.2 0.5nm,0.5s						
STKA	**Stephens Creek**	**48.03**	**132**	P	**P**	**05 24 37.1**	**-0.5**
	0.7nm,0.3s,baz=315,slow=8.6,SNR=1.8 0.7nm,0.3s						
MKAR	**Makanchi Array**	**51.70**	**344**	P	P	05 25 01.0	-4.3
	0.1nm,0.3s,baz=163,slow=8.2,SNR=1.4 0.1nm,0.3s						

CATAC ***12*** *05:29:04.6±0.3,12˚.06N×88˚.97W,h10km,ML4.4*

SNET ***12*** *05:29:04.5±1.3,12˚.07N×89˚.01W,h7km,ML4.5*

NEIC ***12*** *05:29:04.8±1.8,12˚.19N±0˚.05×88˚.90W±0˚.03,h10km±1km, mb4.5/134,Error ellipse: s-maj=8.6km s-min=3.4km az=153.0*

IDC ***12*** *05:29:08.2±3.5,12˚.11N×88˚.95W,h38km±28km,mb3.8/7, mbtmp4.0/10,ML3.5/3,MS3.5/3,Error ellipse: s-maj=47.3km s-min=18.1km az=36.0*

GCG ***12*** *05:29:08.1±1.1,12˚.10N×89˚.56W,h0km±384km,MD4.3*

ISC 12 05:29:08.3±0.9,**12˚.09N**±0˚.04×**88˚.99W**±0˚.04,**h45**km±9km, **n273,σ1°25/310,mb4.4/69,MS3.5/3,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**1.37**	**32**	*eP*	**Pn**	**05 29 30.1**	**-0.9**
JUCU				*eS*	**Sn**	**05 29 49.8**	**+1.8**
LALI	**Alcalda de L**	**1.43**	**347**	*i* P	**Pn**	**05 29 30.5**	**-1.3**
LALI				IAML		05 29 52.0	
	comp=Z,860nm,1.0s						
TECO	**Alcaldia de Te**	**1.46**	**8**	*i* P	**Pn**	**05 29 31.3**	**-0.9**
TECO				IAML		05 29 56.1	
	comp=Z,2µm,1.0s						
TECA	**Tecapa**	**1.48**	**19**	*eP*	**Pn**	**05 29 31.7**	**-1.0**
LCY	**Lacayo**	**1.49**	**27**	*eP*	**Pn**	**05 29 32.3**	**-0.5**
RANC	**El Ranchito**	**1.50**	**27**	*eP*	**Pn**	**05 29 32.4**	**-0.6**
VSM	**San Miguel**	**1.50**	**28**	*eP*	**Pn**	**05 29 32.8**	**-0.3**
SJTE	**Alcalda de S**	**1.52**	**359**	*i* P	**Pn**	**05 29 32.1**	**-1.0**
SJTE				*i* S	**Sn**	**05 29 52.4**	**+0.7**
SJTE				IAML		05 29 54.3	
	comp=Z,3µm,1.0s						
PACA	**Pacayal**	**1.52**	**25**	*eP*	**Pn**	**05 29 32.9**	**-0.2**
PACA				*eS*	**Sn**	**05 29 53.4**	**+1.6**
PACA	**Pacayal**	**1.52**	**25**	*i* P	**Pn**	**05 29 32.7**	**-0.5**
PACA				IAML		05 29 57.0	
	comp=Z,27µm,1.0s						
PANCS	**Alcalda de**	**1.53**	**353**	*i* P	**Pn**	**05 29 32.2**	**-1.0**
PANCS				IAML		05 29 56.7	
	comp=Z,6µm,1.0s						
COEG	**Centro de Oper**	**1.53**	**4**	*eP*	**Pn**	**05 29 32.0**	**-1.2**
COEG	**Centro de Oper**	**1.53**	**4**	*i* P	**Pn**	**05 29 32.3**	**-0.9**
COEG				IAML		05 29 58.5	
	comp=Z,2µm,1.0s						
LFRS	**El Faro**	**1.53**	**357**	*eP*	**Pn**	**05 29 32.1**	**-1.2**
BLLM	**Bellamira**	**1.53**	**29**	*eP*	**Pn**	**05 29 32.9**	**-0.4**
UESV	**Universidad de**	**1.55**	**7**	*i* P	**Pn**	**05 29 32.9**	**-0.6**
UESV				*i* S	**Sn**	**05 29 53.3**	**+0.8**
UESV				IAML		05 29 58.4	
	comp=Z,3µm,1.0s						
LOMA	**Loma Larga**	**1.56**	**354**	*i* P	**Pn**	**05 29 32.9**	**-0.8**
LOMA				*i* S	**Sn**	**05 29 53.7**	**+0.9**
LOMA				IAML		05 29 57.6	
	comp=Z,4µm,1.0s						
PQSS	**Presa 15 de Se**	**1.58**	**15**	*eP*	**Pn**	**05 29 33.5**	**-0.4**
PQSS	**Presa 15 de Se**	**1.58**	**15**	*i* P	**Pn**	**05 29 33.6**	**-0.3**
PQSS				IAML		05 29 57.0	
	comp=Z,5µm,1.0s						
CNRM	**Centro Naciona**	**1.59**	**30**	*eP*	**Pn**	**05 29 33.6**	**-0.5**
CNRM				*eS*	**Sn**	**05 29 56.1**	**+2.6**
CNRM	**Centro Naciona**	**1.59**	**30**	*i* P	**Pn**	**05 29 33.6**	**-0.5**
CNRM				IAML		05 29 58.4	
	comp=Z,22µm,1.0s						
ITCA	**Escuela Especi**	**1.60**	**350**	*i* P	**Pn**	**05 29 33.1**	**-1.2**
ITCA				IAML		05 29 58.0	
	comp=Z,10µm,1.0s						
SNET	**Serv Nac Est T**	**1.61**	**352**		**Pn**	**05 29 33.0**	**-1.4**
SNET	**Serv Nac Est T**	**1.61**	**352**	*eP*	**Pn**	**05 29 33.3**	**-1.0**
SNET	**Serv Nac Est T**	**1.61**	**352**	*i* P	**Pn**	**05 29 33.4**	**-0.9**
SNET				*i* S	**Sn**	**05 29 54.1**	**+0.2**
SNET				IAML		05 29 58.4	
	comp=Z,10µm,1.0s						
UTEC	**Universidad Te**	**1.62**	**353**	*i* P	**Pn**	**05 29 31.6**	**-2.8**
UTEC				*i* S	**Sn**	**05 29 54.2**	**+0.1**
UTEC				IAML		05 29 58.3	
	comp=Z,2µm,1.0s						
PAVA	**Las Pavas**	**1.62**	**2**	*eP*	**Pn**	**05 29 33.6**	**-0.9**
PAVA	**Las Pavas**	**1.62**	**2**	*i* P	**Pn**	**05 29 33.6**	**-0.9**
PAVA				*i* S	**Sn**	**05 29 54.9**	**+0.7**
PAVA				IAML		05 30 00.1	
	comp=Z,6µm,1.0s						
JAYA	**Jayaque - finc**	**1.62**	**344**	*eP*	**Pn**	**05 29 33.4**	**-1.1**
JAYA				*eS*	**Sn**	**05 29 54.5**	**+0.1**
JAYA	**Jayaque - finc**	**1.62**	**344**	*i* P	**Pn**	**05 29 33.5**	**-1.1**
JAYA				IAML		05 29 56.4	
	comp=Z,24µm,1.0s						
LCND	**La Caada**	**1.62**	**41**	*eP*	**Pn**	**05 29 33.2**	**-1.2**
LCND				*eS*	**Sn**	**05 29 55.6**	**+1.4**
LCND	**La Caada**	**1.62**	**41**	*i* P	**Pn**	**05 29 33.6**	**-0.8**
LCND				IAML		05 30 01.8	
	comp=Z,2µm,1.0s						
SEMO	**Seminario San**	**1.62**	**352**	*i* P	**Pn**	**05 29 34.0**	**-0.5**
SEMO				*i* S	**Sn**	**05 29 54.5**	**+0.2**
SEMO				IAML		05 30 00.0	
	comp=Z,12µm,1.0s						
SCLA	**Alcaldia de Sa**	**1.62**	**9**	*eS*	**Sn**	**05 29 56.2**	**+1.9**
SCLA	**Alcaldia de Sa**	**1.62**	**9**	*i* P	**Pn**	**05 29 34.1**	**-0.4**
SCLA				*i* S	**Sn**	**05 29 55.9**	**+1.6**
SCLA				IAML		05 30 03.5	
	comp=Z,2µm,1.0s						
IGN	**Direccin Gen**	**1.63**	**354**	*i* P	**Pn**	**05 29 31.5**	**-3.1**
IGN				*i* S	**Sn**	**05 29 55.0**	**+0.7**
IGN				IAML		05 29 57.2	
	comp=Z,16µm,1.0s						
UDBS	**Universidad Do**	**1.63**	**354**	*i* P	**Pn**	**05 29 33.8**	**-0.8**
UDBS				*i* S	**Sn**	**05 29 54.6**	**+0.3**
UDBS				IAML		05 29 58.5	
	comp=Z,4µm,1.0s						
CNCH	**Conchagua**	**1.63**	**44**	*eP*	**Pn**	**05 29 33.6**	**-1.1**
CNCH	**Conchagua**	**1.63**	**44**	*i* P	**Pn**	**05 29 34.1**	**-0.6**
CNCH				IAML		05 30 07.3	
	comp=Z,6µm,1.0s						
UEES	**Universidad Ev**	**1.64**	**352**	*i* P	**Pn**	**05 29 34.2**	**-0.5**
UEES				*i* S	**Sn**	**05 29 55.5**	**+0.8**
UEES				IAML		05 29 58.1	
	comp=Z,3µm,1.0s						
PMON	**Piamonte**	**1.65**	**349**	*i* P	**Pn**	**05 29 34.1**	**-0.8**
PMON				IAML		05 30 04.6	
	comp=Z,8µm,1.0s						
CSGN	**Cosiguina Volc**	**1.65**	**58**	*i* P	**Pn**	**05 29 33.5**	**-1.5**
CSGN				IAML		05 29 58.5	
	comp=Z,13µm,1.0s						
LFU	**La Fuente**	**1.66**	**356**	*eP*	**Pn**	**05 29 34.2**	**-0.7**
BOQS	**Boqueron**	**1.66**	**350**	*eP*	**Pn**	**05 29 34.4**	**-0.8**
PIC2	**El Picacho**	**1.67**	**351**	*eP*	**Pn**	**05 29 34.3**	**-1.0**
CEDA	**San Andres**	**1.75**	**347**	*i* P	**Pn**	**05 29 35.8**	**-0.4**
CEDA				*i* S	**Sn**	**05 29 58.0**	**+0.6**
CEDA				IAML		05 30 01.2	
	comp=Z,12µm,1.0s						
QUEZ	**Alcaldia de Qu**	**1.76**	**351**	*i* P	**Pn**	**05 29 35.8**	**-0.6**
QUEZ				*i* S	**Sn**	**05 29 58.6**	**+1.0**
QUEZ				IAML		05 30 01.2	
	comp=Z,10µm,1.0s						
AMPH	**Amapala**	**1.76**	**47**	*eP*	**Pn**	**05 29 35.9**	**-0.5**
AMPH				*eS*	**Sn**	**05 29 59.6**	**+2.0**
AMPH	**Amapala**	**1.76**	**47**	*i* P	**Pn**	**05 29 36.1**	**-0.3**
CEVE	**Cerro Verde**	**1.84**	**340**	*eP*	**Pn**	**05 29 36.6**	**-1.0**
CEVE				*eS*	**Sn**	**05 30 01.4**	**+1.6**
CEVE	**Cerro Verde**	**1.84**	**340**	*i* P	**Pn**	**05 29 37.0**	**-0.6**
CEVE				IAML		05 30 04.9	
	comp=Z,6µm,1.0s						
SNJE	**San Jose**	**1.87**	**341**	*eP*	**Pn**	**05 29 37.2**	**-0.8**
CHNN	**El Viejo**	**1.90**	**73**	*i* P	**Pn**	**05 29 41.4**	**+3.2**
CHNN				*i* S	**Sn**	**05 30 00.9**	**-0.1**
CHNN				IAML		05 30 24.1	
	comp=Z,7µm,1.0s						
RTR	**El Retiro**	**1.91**	**341**	*eP*	**Pn**	**05 29 37.9**	**-0.6**
UNIC	**Universidad Ca**	**1.96**	**344**	*i* P	**Pn**	**05 29 38.7**	**-0.4**
UNIC				IAML		05 30 06.4	
	comp=Z,940nm,1.0s						
NUBE	**Las Nubes**	**1.96**	**337**	*eP*	**Pn**	**05 29 38.2**	**-1.0**
NUBE				*eS*	**Sn**	**05 30 02.4**	**-0.3**
NUBE	**Las Nubes**	**1.96**	**337**	*i* P	**Pn**	**05 29 37.9**	**-1.3**
NUBE				IAML		05 30 03.5	
	comp=Z,3µm,1.0s						
CRIN	**San Cristobal**	**1.99**	**72**		**Pn**	**05 29 38.3**	**-1.2**
CRIN	**San Cristobal**	**1.99**	**72**	*i* P	**Pn**	**05 29 38.5**	**-1.1**
CRIN				*i* S	**Sn**	**05 30 05.7**	**+2.3**
CRIN				IAML		05 30 07.7	
	comp=Z,5µm,1.0s						
LOAL	**Lomas de Alarc**	**2.05**	**338**	*i* P	**Pn**	**05 29 38.5**	**-1.9**
LOAL				IAML		05 30 09.7	
	comp=Z,4µm,1.0s						
LLGN	**La Laguna**	**2.06**	**1**	*i* P	**Pn**	**05 29 40.4**	**-0.2**
LLGN				*i* S	**Sn**	**05 30 06.9**	**+1.7**
LLGN				IAML		05 30 08.2	
	comp=Z,2µm,1.0s						
SLOZ	**Alcaldia de Sa**	**2.08**	**338**	*eP*	**Pn**	**05 29 40.3**	**-0.4**
SLOZ				*eS*	**Sn**	**05 30 06.4**	**+1.0**
TEL3	**Telica 3**	**2.15**	**77**	*i* P	**Pn**	**05 29 40.2**	**-1.5**
TEL3				IAML		05 30 23.3	
	comp=Z,2µm,1.0s						
TELN	**Telica**	**2.17**	**76**	*i* P	**Pn**	**05 29 40.1**	**-2.0**
TELN				IAML		05 30 12.0	
	comp=Z,150nm,1.0s						
HERN	**Volcan Telica**	**2.17**	**76**	*i* P	**Pn**	**05 29 39.7**	**-2.4**
HERN				IAML		05 30 10.0	
	comp=Z,2µm,1.0s						
PACN	**Al O del Volca**	**2.19**	**79**	*i* P	**Pn**	**05 29 40.7**	**-1.5**
PACN				IAML		05 30 19.1	
	comp=Z,2µm,1.0s						
ROCN	**Rota Cerro Neg**	**2.24**	**79**	*i* P	**Pn**	**05 29 40.4**	**-2.5**
ROCN				IAML		05 30 15.7	
	comp=Z,820nm,1.0s						
CNGA	**Al SSO del Vol**	**2.27**	**80**	*i* P	**Pn**	**05 29 42.0**	**-1.4**
CNGA				IAML		05 30 18.0	
	comp=Z,2µm,1.0s						
CNGN	**Cerro Negro**	**2.28**	**79**		**Pn**	**05 29 41.1**	**-2.4**
CNGN	**Cerro Negro**	**2.28**	**79**	*i* P	**Pn**	**05 29 41.6**	**-1.9**
CNGN				*i* S	**Sn**	**05 30 11.7**	**+1.3**
CNGN				IAML		05 30 19.8	
	comp=Z,2µm,1.0s						
ILCN	**San Idelfonso**	**2.29**	**77**	*i* P	**Pn**	**05 29 41.8**	**-1.8**
ILCN				*i* S	**Sn**	**05 30 11.7**	**+1.1**
ILCN				IAML		05 30 15.7	
	comp=Z,500nm,1.0s						
MACN	**El Madrono**	**2.29**	**80**	*i* P	**Pn**	**05 29 42.2**	**-1.5**
MACN				IAML		05 30 21.2	
	comp=Z,1µm,1.0s						
MTO3	**Montecristo**	**2.33**	**351**	Pn	**Pn**	**05 29 44.1**	**-0.2**
LEVN	**Ruinas Leon Vi**	**2.34**	**82**	*i* P	**Pn**	**05 29 44.4**	**+0.1**
LEVN				IAML		05 30 21.8	
	comp=Z,2µm,1.0s						
COPN	**Copaltepe**	**2.35**	**88**	*i* P	**Pn**	**05 29 42.9**	**-1.5**
COPN				IAML		05 30 16.8	
	comp=Z,2µm,1.0s						
MSHP	**Masachapa**	**2.42**	**96**	*i* P	**Pn**	**05 29 44.6**	**-0.7**
MSHP				IAML		05 30 25.0	
	comp=Z,400nm,1.0s						
MOMN	**Momotombo**	**2.42**	**82**	*i* P	**Pn**	**05 29 43.4**	**-2.0**
MOMN				IAML		05 30 20.0	
	comp=Z,49nm,1.0s						
MOM2	**El Cardon**	**2.48**	**82**	*i* P	**Pn**	**05 29 44.6**	**-1.5**
MOM2				IAML		05 30 21.7	
	comp=Z,810nm,1.0s						
ESQI	**Esquipulas**	**2.48**	**352**	Pn	**Pn**	**05 29 46.6**	**+0.3**
SAPS	**Ciudad Sandino**	**2.53**	**88**	*i* P	**Pn**	**05 29 45.6**	**-1.3**
SAPS				IAML		05 30 23.9	
	comp=Z,2µm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.58**	**40**		**Pn**	**05 29 47.5**	**-0.1**
APQ2	**Apoyeque**	**2.61**	**87**	*i* P	**Pn**	**05 29 47.0**	**-1.0**
APQ2				*i* S	**Sn**	**05 30 18.6**	**+0.1**
APQ2				IAML		05 30 23.8	
	comp=Z,1µm,1.0s						
BRAN	**Las Pilas**	**2.66**	**76**	*i* P	**Pn**	**05 29 45.6**	**-3.0**
BRAN				*i* S	**Sn**	**05 30 16.9**	**-2.7**
BRAN				IAML		05 30 19.2	
	comp=Z,950nm,1.0s						
UNAN	**Cigeo UNAN**	**2.66**	**89**	*i* P	**Pn**	**05 29 47.3**	**-1.4**
UNAN				*i* S	**Sn**	**05 30 19.7**	**-0.1**
UNAN				IAML		05 30 29.4	
	comp=Z,6µm,1.0s						
TISN	**Laguna Tiscapa**	**2.66**	**89**	*i* P	**Pn**	**05 29 47.2**	**-1.5**
TISN				IAML		05 29 47.7	
	comp=Z,76nm,1.0s						
COMHN	**El Horno**	**2.73**	**31**	*i* P	**Pn**	**05 29 49.5**	**-0.3**
LIMN	**Finca el Limon**	**2.74**	**69**	*i* P	**Pn**	**05 29 48.1**	**-1.8**
LIMN				IAML		05 30 31.2	
	comp=Z,490nm,1.0s						
WILN	**Americas 2**	**2.74**	**88**	*i* P	**Pn**	**05 29 48.4**	**-1.4**
WILN				IAML		05 29 48.9	
	comp=Z,600nm,1.0s						
MAS3	**Al N del Volca**	**2.75**	**91**	*i* P	**Pn**	**05 29 48.6**	**-1.4**
MAS3				IAML		05 29 50.5	
	comp=Z,2µm,1.0s						
YUSH	**Yuscaran**	**2.80**	**48**	*eS*	**Sn**	**05 30 25.5**	**+2.3**
YUSH	**Yuscaran**	**2.80**	**48**	*i* P	**Pn**	**05 29 50.5**	**-0.2**
NBG	**Las Nubes**	**2.81**	**332**	*eP*	**Pn**	**05 29 52.1**	**+1.1**
NBG				*eS*	**Sn**	**05 30 26.6**	**+2.7**
NADN	**Granada**	**2.92**	**96**	*i* P	**Pn**	**05 29 50.2**	**-2.0**
NADN				IAML		05 30 23.9	
	comp=Z,2µm,1.0s						
NADN				*i* S	**Sn**	**05 30 24.0**	**-2.0**
FUG	**Fuego 3**	**2.96**	**323**	*eP*	**Pn**	**05 29 51.9**	**-1.0**
MATN	**Matagalpa**	**3.11**	**74**		**Pn**	**05 29 52.9**	**-2.0**
MATN	**Matagalpa**	**3.11**	**74**	*i* P	**Pn**	**05 29 53.1**	**-1.8**
MATN				*i* S	**Sn**	**05 30 31.3**	**+0.4**
MATN				IAML		05 30 33.9	
	comp=Z,150nm,1.0s						
RCPN	**Sur Rio San Ju**	**3.17**	**63**	*i* P	**Pn**	**05 29 54.6**	**-1.2**
RCPN				*i* S	**Sn**	**05 30 34.0**	**+1.6**
RCPN				IAML		05 30 35.0	
	comp=Z,2.4nm,1.0s						
BOAB	**BOACO BROADBAN**	**3.27**	**83**	Pn	**Pn**	**05 29 55.2**	**-1.8**
JAPN	**Al SSO del Vol**	**3.29**	**99**	*i* P	**Pn**	**05 29 56.5**	**-0.9**
JAPN				IAML		05 30 41.0	
	comp=Z,500nm,1.0s						
SULM	**Suchitepequez,**	**3.34**	**312**	*eP*	**Pn**	**05 29 58.4**	**+0.4**
RTAL	**Retalhuleu**	**3.58**	**313**	Pn	**Pn**	**05 29 59.5**	**-1.8**
HZTE	**Horizontes, Gu**	**3.60**	**112**		**Pn**	**05 30 01.2**	**-0.4**
STG3	**Santiaguito 3,**	**3.62**	**316**	*eP*	**Pn**	**05 30 01.8**	**-0.3**
STG3				*eS*	**Sn**	**05 30 42.2**	**-1.4**
ACON	**Acoyapa**	**3.74**	**91**	Pn	**Pn**	**05 30 01.6**	**-1.9**
ACON	**Acoyapa**	**3.74**	**91**	*i* P	**Pn**	**05 30 01.2**	**-2.3**
ACON				IAML		05 30 12.3	
	comp=Z,200nm,1.0s						
ORTG	**Ortega, Santa**	**3.87**	**116**	Pn	**Pn**	**05 30 04.3**	**-1.1**
DUNO	**Dulce Nombre,**	**3.97**	**120**		**Pn**	**05 30 05.4**	**-1.4**
HUEH	**Huehuetenango**	**4.03**	**323**	Pn	**Pn**	**05 30 07.8**	**+0.1**
JTS	**Las Juntas de**	**4.35**	**114**	Pn	**Pn**	**05 30 11.2**	**-0.7**
	comp=Z,5.0nm,0.3s,baz=97,slow=24,SNR=40						
JTS				Sn	**Sn**	**05 30 59.7**	**-1.7**
	comp=Z,9.1nm,0.3s,baz=294,slow=18,SNR=2.1 comp=Z,18nm,0.3s						
ARE1	**Arenal 1**	**4.49**	**111**	Pn	**Pn**	**05 30 13.8**	**-0.1**
ESPN	**Las Esperanzas**	**4.59**	**88**		**Pn**	**05 30 14.7**	**-0.5**
COVE	**Coope Vega, Sa**	**4.70**	**106**	Pn	**Pn**	**05 30 15.7**	**-1.0**
PETF	**Flores**	**4.88**	**350**	Pn	**Pn**	**05 30 15.3**	**-3.8**
JACO	**JACO, Garabito**	**4.89**	**119**	Pn	**Pn**	**05 30 19.8**	**+0.5**
CCIG	**Comitan**	**5.17**	**324**		**Pn**	**05 30 20.6**	**-2.7**
HDC	**Heredia**	**5.22**	**113**	Pn	**Pn**	**05 30 22.2**	**-1.8**
LCR2	**La Lucha 2**	**5.42**	**115**	Pn	**Pn**	**05 30 26.7**	**-0.1**
PEZE	**Perez Zeledon,**	**5.87**	**117**		**Pn**	**05 30 33.5**	**+0.6**
DRK0	**Durika**	**6.31**	**116**		**Pn**	**05 30 39.0**	**+0.1**
CDITO	**Canoas**	**6.96**	**120**		**Pn**	**05 30 46.6**	**-1.2**
CMIG	**Matias Romero**	**7.57**	**312**	Pn	**Pn**	**05 30 55.0**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=149,slow=12,SNR=45						
CMIG				Sn	**Sn**	**05 32 18.5**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=110,slow=6.7,SNR=3.6 comp=Z,3.3nm,0.3s						
TEIG	**Tepich**	**8.12**	**5**	Pn	**Pn**	**05 31 02.0**	**-1.6**
BCIP	**Isla Barro Col**	**9.45**	**107**	Pn	**Pn**	**05 31 19.9**	**-2.1**
TLIG	**Tlapa**	**10.74**	**302**	Pn	**Pn**	**05 31 40.9**	**+1.3**
PAYG	**Puerto Ayora**	**12.74**	**186**	Pn	**Pn**	**05 32 08.8**	**+1.8**
POPC	**Popayan, Colom**	**15.46**	**127**	*eP*	**P**	**05 32 48.9**	**+1.5**
TULM	**Tulcn-Chalpat**	**15.85**	**135**	Pn	**Pn**	**05 32 49.2**	**+0.3**
SPBC	**San Pablo de B**	**16.06**	**112**	*eP*	**P**	**05 32 55.5**	**+1.5**
ROSC	**El Rosal**	**16.19**	**115**	P	**Pn**	**05 32 53.8**	**+0.6**
SALI	**Salinas**	**16.26**	**150**	Pn	**Pn**	**05 32 54.0**	**+0.3**
SLOR	**San Lorenzo -**	**16.45**	**140**		**Pn**	**05 32 57.2**	**+0.6**
ZAIG	**Zacatecas**	**16.74**	**311**		**Pn**	**05 32 59.6**	**-0.4**
COHC	**Cochancay**	**17.40**	**146**	P	**P**	**05 33 08.0**	**-0.8**
656A	**Willston**	**18.22**	**18**	Pn	**P**	**05 33 14.5**	**-3.1**
656A				IAmb	IAmb	05 33 16.4	
	comp=Z,65nm,1.2s						
SDV	**Santo Domingo**	**18.33**	**98**		**Pn**	**05 33 19.2**	**-0.3**
SDV	**Santo Domingo**	**18.33**	**98**	Pn	**Pn**	**05 33 21.1**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=312,slow=5.2,SNR=5.1 comp=Z,2.5nm,0.7s						
MCRA	**Macar, Loja**	**18.66**	**151**	P	**P**	**05 33 20.1**	**-2.6**
833A	**Chaparral WMA,**	**18.85**	**330**	P	**P**	**05 33 24.0**	**-0.7**
441A	**DeRidder**	**18.97**	**349**	P	**P**	**05 33 23.7**	**-2.2**
441A				IAmb	IAmb	05 33 36.9	
	comp=Z,45nm,1.3s						
352A	**Blakely**	**19.66**	**10**	P	**Pn**	**05 33 35.0**	**-0.2**
HNDO	**Hondo**	**19.82**	**333**	P	**P**	**

W50A IAmb IAmb 05 34 22.9
comp=Z,7.1nm,0.7s
WHAR Wooly Hollow 23.29 353 P P 05 34 11.9 -0.2
WHAR IAmb IAmb 05 34 17.1
comp=Z,11nm,0.8s
SN01 Snyder 1 23.38 334 P P 05 34 13.0 -0.1
SN01 IAmb IAmb 05 34 13.5
comp=Z,8.2nm,0.7s
BG3 Lake Jocassee 23.46 13 P P 05 34 14.1 +0.3
BG3 IAmb IAmb 05 34 16.7
comp=Z,9.6nm,0.6s
APMT Aspermont 23.46 336 P P 05 34 12.6 -1.3
APMT IAmb IAmb 05 34 16.0
comp=Z,13nm,1.0s
V48A Smith Brothers 23.63 4 P P 05 34 14.7 -0.7
BIRD Birdtown, Kers 23.76 18 P P 05 34 16.5 0.0
BIRD IAmb IAmb 05 34 20.2
comp=Z,12nm,0.7s
X34A Smith Ranch, M 23.81 342 P P 05 34 17.1 0.0
POST Post 23.82 333 P P 05 34 16.0 -1.3
POST IAmb IAmb 05 34 17.5
comp=Z,16nm,1.3s
FCAR Ozark Folk Cen 23.87 354 P P 05 34 17.3 -0.3
LCAR Lake Charles 23.96 356 P P 05 34 17.9 -0.4
LCAR IAmb IAmb 05 34 21.3
comp=Z,11nm,0.6s
WVT Waverly 23.96 2 P P 05 34 18.3 -0.1
KMSC Kings Mountain 23.98 16 P P 05 34 18.2 -0.5
KMSC IAmb IAmb 05 34 21.8
comp=Z,7.6nm,0.7s
CLTN Cedars of Leba 24.02 5 P P 05 34 17.7 -1.3
CLTN IAmb IAmb 05 34 22.0
comp=Z,7.7nm,0.6s
X58A Rowland 24.03 20 P P 05 34 18.9 -0.1
W35A Tecumseh 24.05 344 P 05 34 19.3 0.0
W35A IAmb IAmb 05 34 20.5
comp=Z,18nm,1.1s
DKNS Dickens 24.09 335 P P 05 34 19.1 -0.6
DKNS IAmb IAmb 05 34 21.3
comp=Z,7.6nm,0.7s
V53A Saluda 24.14 12 P P 05 34 21.0 +0.9
V53A IAmb IAmb 05 34 25.5
comp=Z,12nm,0.8s
WMOK Wichita Mounta 24.24 340 P P 05 34 20.0 -1.1
FNO Franklin 24.30 343 P P 05 34 21.6 0.0
OKCSW OKLAHOMA CITY 24.44 343 P P 05 34 22.2 -0.7
U49A Red Boiling Sp 24.49 6 P P 05 34 22.4 -0.9
U49A IAmb IAmb 05 34 24.7
comp=Z,16nm,1.4s
HHAR Hobbs 24.50 350 P P 05 34 22.9 -0.6
TUL3 Leonard 24.50 347 P P 05 34 22.8 -0.7
TUL3 IAmb IAmb 05 34 42.2
comp=Z,12nm,1.3s
RLO Rose Lookout 24.58 348 P P 05 34 23.1 -1.0
RLO IAmb IAmb 05 34 25.1
comp=Z,6.2nm,0.7s
PBMO Poplar Bluff 24.62 357 P P 05 34 23.3 -1.2
PBMO IAmb IAmb 05 34 27.1
comp=Z,11nm,0.8s
MNTX Cornudas Mount 24.68 325 P P 05 34 24.4 -0.7
U38A Gravette 24.73 350 P P 05 34 23.9 -1.6
OK029 Liberty Lake 24.82 343 P P 05 34 24.9 -1.4
OK052 Battle Ridge R 24.83 345 P 05 34 25.5 -0.8
T47A Sharon Grove 24.85 4 P P 05 34 25.7 -0.9
OK033 Mehan 24.91 345 P 05 34 24.8 -2.3
OK033 IAmb IAmb 05 34 26.8
comp=Z,14nm,1.0s
QUOK Quay 24.97 345 P 05 34 26.8 -0.8
CSTR Hydro, Custer 25.04 341 P 05 34 27.1 -1.2
SMWD Samnorwood 25.09 338 P P 05 34 28.8 +0.1
CGM3 Cape Girardeau 25.11 359 P P 05 34 28.0 -0.9
MGMO Mountain Grove 25.13 354 P P 05 34 29.0 -0.2
MSTX Muleshoe 25.15 332 P P 05 34 27.5 -2.0
V58A Windy Hill, Pi 25.24 19 P P 05 34 29.5 -0.5
OK048 Pawnee Station 25.26 345 P 05 34 29.3 -1.0
OK048 IAmb IAmb 05 34 32.3
comp=Z,15nm,1.0s
OK051 E0350 and S346 25.32 345 P P 05 34 29.7 -1.1
OK051 IAmb IAmb 05 34 33.7
comp=Z,15nm,1.0s
S44A Carbondale 25.50 360 P P 05 34 30.2 -2.3
S44A IAmb IAmb 05 34 45.7
comp=Z,18nm,1.4s
SIUC Southern Illin 25.52 360 P P 05 34 31.4 -1.2
SIUC IAmb IAmb 05 34 37.1
comp=Z,11nm,0.8s
BLOK Blackwell 25.66 345 P P 05 34 32.9 -1.0
BLOK IAmb IAmb 05 34 33.6
comp=Z,9.8nm,0.7s
ELIS Ellis County 25.66 340 P P 05 34 33.3 -0.7
S39A Bolivar 25.79 352 P P 05 34 34.4 -0.7
S39A IAmb IAmb 05 34 40.0
comp=Z,10nm,0.7s
USIN University of 25.80 2 P P 05 34 34.6 -0.5
USIN IAmb IAmb 05 34 37.4
comp=Z,10nm,0.8s
FVM French Village 25.82 357 P P 05 34 33.8 -1.6
FVM IAmb IAmb 05 34 46.4
comp=Z,13nm,1.4s
OK038 West end E0370 25.83 342 P P 05 34 34.2 -1.2
OK038 IAmb IAmb 05 34 35.4
comp=Z,11nm,0.7s
CCM Cathedral Cave 25.94 356 P P 05 34 35.7 -0.7
KAN13 South Haven SW 25.96 344 P P 05 34 35.1 -1.5
KAN13 IAmb IAmb 05 34 36.2
comp=Z,10.0nm,0.6s
OK032 Salt Plains WL 25.97 343 P P 05 34 35.9 -0.8
OK032 IAmb IAmb 05 34 36.3
comp=Z,8.4nm,0.6s
KAN17 Caldwell West 26.07 344 P P 05 34 37.2 -0.4
KAN17 IAmb IAmb 05 34 37.7
comp=Z,12nm,1.0s
KAN09 Caldwell North 26.12 344 P P 05 34 37.1 -1.0
KAN09 IAmb IAmb 05 34 37.7
comp=Z,10nm,0.7s
WCI Wyandotte Cave 26.14 5 P P 05 34 36.9 -1.4
KAN05 Bluff City Nor 26.16 344 P P 05 34 37.6 -0.8
KAN01 Argonia South 26.17 344 P 05 34 37.8 -0.7
R40A Maddies Statio 26.26 354 P P 05 34 38.5 -0.8
R40A IAmb IAmb 05 34 44.3
comp=Z,5.4nm,0.8s
KAN08 Anthony NE Sta 26.30 344 P P 05 34 38.7 -1.0
T57A Hurt 26.30 18 P P 05 34 38.7 -1.0
T57A IAmb IAmb 05 34 43.0
comp=Z,9.5nm,0.7s
KAN12 Harper NE Stat 26.37 344 P P 05 34 39.8 -0.6
Q51A Peebles 27.29 10 P P 05 34 46.6 -2.0
Q51A IAmb IAmb 05 34 51.2
comp=Z,8.7nm,0.7s
P40A Paris 27.47 355 P P 05 34 49.1 -1.1
P40A IAmb IAmb 05 34 52.0
comp=Z,6.8nm,0.7s
MCWV Mont Chateau 28.63 15 P P 05 35 00.8 +0.3
MCWV IAmb IAmb 05 35 09.7
comp=Z,11nm,0.9s
SAML Samuel 33.09 128 P P 05 35 39.8 -0.4
SAML IAmb IAmb 05 35 48.6
comp=Z,3.3nm,0.8s
SPMN Marine on St. 33.18 355 P P 05 35 39.4 -1.2
MVU Marysvale 33.46 326 P P 05 35 41.7 -1.7
SADO Sadowa 33.65 13 LR LR 05 48 31.3
comp=Z,59nm,19.7s,baz=110,slow=35
PDAR Pinedale Array 35.40 333 P P 05 36 00.1 0.0
comp=Z,0.3nm,0.8s,baz=122,slow=8.6,SNR=2.7
comp=Z,0.3nm,0.8s
SNOW Snow King Moun 36.48 333 P P 05 36 09.2 -0.2
SNOW IAmb IAmb 05 36 14.8
comp=Z,7.2nm,1.2s
AGMN Agassiz Nation 36.55 352 P P 05 36 07.8 -1.8
NVAR Mina Array Bea 37.00 320 P P 05 36 15.8 +1.9
comp=Z,1.7nm,0.8s,baz=147,slow=8.1,SNR=8.8
NVAR PcP **PcP 05 38 35.0 +0.8**
comp=Z,1.2nm,0.9s,baz=131,slow=4.1,SNR=4.6
comp=Z,1.7nm,0.8s
ULM Lac du Bonnet 38.47 353 P P 05 36 27.4 +1.6
comp=Z,1.4nm,0.4s,baz=187,slow=6.7,SNR=6.2
comp=Z,1.4nm,0.4s
EDM Edmonton 45.41 340 P P 05 37 21.7 -0.8
EDM IAmb IAmb 05 37 22.5
comp=Z,6.3nm,0.8s
SCHQ Schefferville 46.07 18 P P 05 37 27.8 +0.2
comp=Z,5.1nm,0.8s,baz=244,slow=16,SNR=5.2
SCHQ PcP **PcP 05 39 04.4 +1.1**
comp=Z,3.3nm,0.6s,baz=253,slow=4.6,SNR=7.0
comp=Z,5.1nm,0.8s

FRB Frobisher Bay 53.56 11 LR LR 06 00 21.8
comp=Z,38nm,19.3s,baz=146,slow=35
YKA Yellowknife Ar 53.57 346 P P 05 38 23.8 -0.6
comp=Z,2.6nm,0.9s,baz=141,slow=7.5,SNR=29
YKA PcP **PcP 05 39 31.5 +0.9**
comp=Z,0.3nm,0.9s,baz=145,slow=4.0,SNR=5.1
comp=Z,2.6nm,0.9s
INK Inuvik 63.10 343 LR LR 06 13 17.6
comp=Z,47nm,18.3s,baz=5.0,slow=42
F28M Old Crow 64.62 341 P P 05 39 41.3 +0.4
F28M IAmb IAmb 05 39 42.2
comp=Z,4.4nm,1.1s
ILAR Eielson Array 65.75 337 P P 05 39 48.8 +0.5
ILAR Eielson Array 65.75 337 P P 05 39 48.0 -0.2
comp=Z,2.7nm,1.0s,baz=130,slow=4.9,SNR=15
comp=Z,2.7nm,1.0s
BMAR Burnt Mountain 66.09 340 P P 05 39 51.3 +0.8
MLY Manley 67.36 336 P P 05 39 59.5 +0.8
MLY IAmb IAmb 05 40 00.2
comp=Z,4.1nm,1.0s
D25K Kavik River 67.56 341 P P 05 40 00.5 +0.7
D25K IAmb IAmb 05 40 01.3
comp=Z,3.6nm,1.1s
F15K North Star Dit 73.16 335 P P 05 40 35.6 +1.6
F15K IAmb IAmb 05 40 36.8
comp=Z,5.4nm,0.9s
BILL Bilibino 84.31 339 P P 05 41 36.6 +1.5
TORD Torodi Ar. Bea 87.96 77 P P 05 41 54.2 0.0
comp=Z,0.5nm,0.7s,baz=300,slow=6.5,SNR=3.2
WRA Warramunga Arr 137.72 254 PKP PKPdf 05 48 29.1 +0.6
comp=Z,0.3nm,0.6s,baz=94,slow=2.7,SNR=1.3
ASAR Alice Springs 137.74 248 PKP PKPdf 05 48 29.1 +0.6
comp=Z,0.4nm,0.8s,baz=95,slow=3.2,SNR=2.1
CMAR Chiang Mai Arr 148.66 345 PKPbc PKPbc 05 48 51.1 -0.4
comp=Z,1.0nm,0.3s,baz=344,slow=3.6,SNR=9.2

*CATAC **12** 05:31:07.4±0.3, 8°.80N×82°.93W, h6km±2km, ML4.0*
*UCR **12** 05:31:07.8±0.9, 8°.84N×82°.86W, h18km±1km, MW4.3*
*UPA **12** 05:31:07.9±1.4, 8°.84N×82°.82W, h16km±2km, MW3.9*
ISC 12 05:31:07.8±0.9,**8°.83N**±0°.02×**82°.88W**±0°.02,**h23**km±4km,
n141,σ1§**00**/231,**43C-20D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLIR3	**Monte Lirio, C**	**0.06**	**122**	**⇑***iP*		**Pb**		**05 31 11.5**	**-0.6**
MLIR3				*eS*		**Sb**		**05 31 15.1**	**+0.2**
VITO	**San Vito**	**0.09**	**265**	**⇑***iP*		**Pb**		**05 31 11.8**	**-0.4**
VITO				*eS*		**Sb**		**05 31 15.8**	**+0.5**
BRU2	**Volcan**	**0.19**	**100**	**⇑***iP*		**Pb**		**05 31 12.4**	**-0.8**
BRU2				*eS*		**Sb**		**05 31 16.4**	**-0.5**
BRU2	**Volcan**	**0.19**	**100**	**⇑***eP*		**Pb**		**05 31 12.4**	**-0.8**
BRU2				*eS*		**Sb**		**05 31 16.5**	**-0.5**
BRU2	**Volcan**	**0.19**	**100**	*iP*		**Pb**		**05 31 12.6**	**-0.7**
BRU2				*iS*		**Sb**		**05 31 16.7**	**-0.3**
BRU2				IAML				05 31 17.8	
	comp=Z,47μm,1.0s								
CDITO	**Canoas**	**0.25**	**179**	**⇓***iP*		**Pb**		**05 31 13.6**	**-0.4**
CDITO				*eS*		**Sb**		**05 31 18.2**	**0.0**
CDITO	**Canoas**	**0.25**	**179**	*eP*		**Pb**		**05 31 13.6**	**-0.4**
CDITO				*eS*		**Sb**		**05 31 19.1**	**+0.9**
BC3P	**Paso Ancho**	**0.27**	**92**	**⇑***iP*		**Pb**		**05 31 13.4**	**-1.0**
BC3P				*eS*		**Sb**		**05 31 17.1**	**-1.7**
POTG	**Potrero Grande**	**0.33**	**313**	**⇑***iP*		**Pb**		**05 31 14.3**	**-0.9**
POTG				*eS*		**Sb**		**05 31 19.3**	**-0.8**
POTG	**Potrero Grande**	**0.33**	**313**	*iP*		**Pb**		**05 31 14.2**	**-0.9**
POTG				IAML				05 31 20.9	
	comp=Z,21μm,1.0s								
EDAD	**Golfito**	**0.33**	**239**	**⇓***iP*		**Pb**		**05 31 14.4**	**-0.9**
EDAD				*eS*		**Sb**		**05 31 20.0**	**-0.3**
FITO	**Golfito**	**0.34**	**234**	**⇓***iP*		**Pb**		**05 31 14.4**	**-0.9**
FITO				*eS*		**Sb**		**05 31 20.0**	**-0.4**
BCO2	**Palmira**	**0.36**	**107**	**⇑***iP*		**Pb**		**05 31 15.2**	**-0.6**
BCO2				*eS*		**Sb**		**05 31 21.2**	**-0.1**
LNBQ3	**Los Naranjos,**	**0.43**	**95**	**⇑***iP*		**Pb**		**05 31 15.7**	**-1.2**
LNBQ3				*eS*		**Sb**		**05 31 22.1**	**-1.1**
PTJ1	**Puerto Jimnez**	**0.51**	**235**	**⇓***iP*		**Pb**		**05 31 17.5**	**-0.7**
PTJ1				*eS*		**Sb**		**05 31 26.1**	**+1.0**
EDBA	**Buenos Aires**	**0.52**	**310**	**⇑***eP*		**Pb**		**05 31 18.3**	**0.0**
EDBA				*eS*		**Sn**		**05 31 26.9**	**-1.1**
JIME	**Puerto Jimenez**	**0.53**	**237**	**⇓***iP*		**Pb**		**05 31 17.7**	**-0.7**
JIME				*eS*		**Sb**		**05 31 26.3**	**+0.6**
DRK0	**Durika**	**0.56**	**320**	**⇑***iP*		**Pb**		**05 31 17.9**	**-1.3**
DRK0				*eS*		**Sb**		**05 31 25.7**	**-1.2**
BURE	**Buenos Aires**	**0.57**	**307**	**⇑***iP*		**Pb**		**05 31 18.7**	**-0.5**
BURE				*eS*		**Sb**		**05 31 27.3**	**+0.4**
DVD	**David**	**0.57**	**133**	**⇑***iP*		**Pb**		**05 31 18.5**	**-0.7**
DVD				*eS*		**Sb**		**05 31 27.2**	**+0.2**
EDPN	**Palmar Norte**	**0.59**	**283**	*eP*		**Pb**		**05 31 18.6**	**-0.9**
EDPN				*eS*		**Sb**		**05 31 28.1**	**+0.7**
LOCO3	**Loma Colorada,**	**0.62**	**132**	**⇑***iP*		**Pb**		**05 31 19.4**	**-0.6**
LOCO3				*eS*		**Sb**		**05 31 28.4**	**+0.2**
PIRO	**Carate, Puerto**	**0.62**	**227**	**⇓***iP*		**Pb**		**05 31 19.1**	**-0.9**
PIRO	**Carate, Puerto**	**0.62**	**227**	*iP*		**Pb**		**05 31 19.3**	**-0.7**
PIRO				IAML				05 31 20.7	
	comp=Z,6μm,1.0s								
PTPM	**Petroterminale**	**0.62**	**180**	**⇓***iP*		**Pb**		**05 31 19.8**	**-0.2**
PTPM				*eS*		**Sn**		**05 31 29.8**	**-0.6**
PEDE3	**Pedregal, Chir**	**0.63**	**134**	**⇑***iP*		**Pb**		**05 31 19.7**	**-0.5**
PEDE3				*eS*		**Sb**		**05 31 28.5**	**-0.1**
CNI2	**El Empalme, Bo**	**0.72**	**34**	**⇓***iP*		**Pb**		**05 31 19.9**	**-1.7**
CNI2				*eS*		**Sb**		**05 31 29.7**	**-1.4**
LIMO3	**Limones**	**0.72**	**179**	**⇓***iP*		**Pb**		**05 31 21.5**	**-0.2**
LIMO3				*eS*		**Sb**		**05 31 28.5**	**-2.7**
CHGR2	**Aguacate**	**0.73**	**81**	**⇑***iP*		**Pb**		**05 31 20.7**	**-1.3**
CHGR2				*eS*		**Sb**		**05 31 30.1**	**-1.5**
OCHAL	**Ojochal**	**0.80**	**290**	*iP*		**Pb**		**05 31 21.9**	**-1.2**
OCHAL				IAML				05 31 27.7	
	comp=Z,59nm,1.0s								
OCHAL				*iS*		**Sb**		**05 31 33.6**	**0.0**
RGM0	**Gandoca**	**0.80**	**19**	**⇓***eP*		**Pb**		**05 31 23.3**	**+0.1**
RGM0				*eS*		**Sn**		**05 31 36.7**	**+1.6**
RGM0	**Gandoca**	**0.80**	**19**	*iP*		**Pn**		**05 31 23.5**	**-0.3**
RGM0				*iS*		**Sn**		**05 31 37.2**	**+2.2**
RGM0				IAML				05 31 38.9	
	comp=Z,3μm,1.0s								
PLAN	**Los Planes de**	**0.81**	**259**	*iP*		**Pb**		**05 31 22.3**	**-0.9**
PLAN				*iS*		**Sb**		**05 31 33.3**	**-0.4**
PLAN				IAML				05 31 37.3	
	comp=Z,16μm,1.0s								
PEZE	**Perez Zeledon,**	**0.96**	**305**	**⇑***iP*		**Pb**		**05 31 24.8**	**-1.1**
PEZE				*eS*		**Sb**		**05 31 38.0**	**-0.3**
PEZE	**Perez Zeledon,**	**0.96**	**305**	*iP*		**Pb**		**05 31 24.8**	**-1.1**
PEZE				*iS*		**Sb**		**05 31 38.1**	**-0.2**
PEZE				IAML				05 31 38.7	
	comp=Z,11μm,1.0s								
ZELE	**Perez Zeledon**	**0.98**	**304**	*eP*		**Pb**		**05 31 25.5**	**-0.7**
ZELE				*eS*		**Sn**		**05 31 39.1**	**-0.4**
CDM	**Cerro de Muert**	**1.13**	**310**	**⇑***iP*		**Pn**		**05 31 27.5**	**-1.2**
CDM				*eS*		**Sb**		**05 31 43.0**	**-0.6**
CDM	**Cerro de Muert**	**1.13**	**310**	*iP*		**Pn**		**05 31 27.5**	**-1.2**
CDM				IAML				05 31 27.9	
	comp=Z,2μm,1.0s								
CDM				*iS*		**Sb**		**05 31 42.9**	**-0.6**
NANC3	**Nancito, Chiri**	**1.27**	**117**	*eP*		**Pn**		**05 31 29.4**	**-0.9**
NANC3				*eS*		**Sn**		**05 31 46.0**	**-0.7**
TAAN	**Batan**	**1.33**	**340**	*iP*		**Pn**		**05 31 31.3**	**+0.2**
TAAN				*eS*		**Sb**		**05 31 50.2**	**+1.4**
TURIB	**Turrialba**	**1.34**	**323**	**⇑***eP*		**Pn**		**05 31 30.9**	**-0.3**
TURIB				*eS*		**Sb**		**05 31 48.8**	**-0.2**
VINA	**Juan Vinas**	**1.36**	**321**	**⇑***eP*		**Pn**		**05 31 31.6**	**0.0**
VINA				*eS*		**Sb**		**05 31 50.5**	**+0.7**
LLNJ	**Naranjito**	**1.37**	**298**	*eP*		**Pn**		**05 31 30.6**	**-0.9**
RVSTA	**Santa Teresita**	**1.37**	**326**	**⇑***eP*		**Pn**		**05 31 32.0**	**+0.3**
RVSTA				*eS*		**Sb**		**05 31 50.9**	**+0.9**
VERB	**Verbena**	**1.37**	**324**	**⇓***iP*		**Pn**		**05 31 31.8**	**+0.1**
VERB				*eS*		**Sb**		**05 31 50.8**	**+0.7**
REPA	**Paraso**	**1.39**	**316**	*eP*		**Pb**		**05 31 32.7**	**-0.6**
REPA				**⇑***iP*		**Pb**		**05 31 32.8**	**-0.6**
RAZU	**San Marcos de**	**1.40**	**306**	**⇓***iP*		**Pb**		**05 31 33.0**	**-0.4**
RAZU				**⇓***iP*		**Pb**		**05 31 33.0**	**-0.4**
IRES	**Siquirres**	**1.41**	**334**	**⇑***iP*		**Pn**		**05 31 32.4**	**+0.4**
IRES				**⇑***iP*		**Pn**		**05 31 32.5**	**+0.4**
LCOCO	**El Coco**	**1.42**	**332**	**⇑***iP*		**Pn**		**05 31 32.5**	**+0.3**
LCOCO				*eS*		**Sb**		**05 31 52.3**	**+1.0**
PCAYA	**Pacayas**	**1.42**	**320**	**⇑***eP*		**Pn**		**05 31 32.6**	**+0.1**
PCAYA				*eS*		**Sb**		**05 31 51.9**	**+0.3**
VTCV	**VTCV, Calle Va**	**1.42**	**324**	*iP*		**Pn**		**05 31 32.7**	**+0.2**
VTCV				*iS*		**Sb**		**05 31 52.8**	**+1.2**
VTCV				IAML				05 31 54.0	
	comp=Z,8μm,1.0s								

LCR2 La Lucha 2 1.44 309⇑*iP* **Pn 05 31 32.1 -0.5**
LCR2 *eS* **Sn 05 31 51.0 +0.1**
LCR2 La Lucha 2 1.44 309 *iP* **Pn 05 31 32.2 -0.5**
LCR2 *iS* **Sn 05 31 50.7 -0.3**
LCR2 IAML 05 31 53.7
comp=Z,1μm,1.0s
CVTV Tajo 1.45 324⇑*iP* **Pn 05 31 33.2 +0.2**
CVTV *eS* **Sb 05 31 53.4 +0.9**
CVTV *eS* **Sb 05 31 53.5 +0.9**
RAFA San Farael, Vo 1.45 321⇑*iP* **Pn 05 31 33.0 0.0**
RAFA ⇑*eP* **Pb 05 31 33.1 -1.3**
RAFA *eS* **Sb 05 31 52.5 0.0**
RVLA Villa Bonita 1.45 331⇑*eP* **Pn 05 31 33.2 +0.5**
RVLA *eS* **Sb 05 31 53.5 +1.2**
TAGO Cartago 1.46 315⇑*iP* **Pn 05 31 33.1 +0.1**
TAGO *eS* **Sb 05 31 52.5 -0.1**
VTR0 Volcan Turrial 1.47 324⇑*eP* **Pn 05 31 33.6 +0.3**
VTR0 *eS* **Sb 05 31 53.9 +0.7**
CVTR Volcan Turrial 1.47 324⇑*iP* **Pn 05 31 33.5 +0.1**
CVTR *eS* **Sb 05 31 53.5 +0.4**
VTLO VTLO 1.47 325⇑*iP* **Pn 05 31 33.6 +0.3**
VTUC Crater, Volcan 1.48 324 *iP* **Pn 05 31 33.6 +0.2**
VTUC *iS* **Sb 05 31 54.2 +0.9**
VTUC IAML 05 31 56.8
comp=Z,3μm,1.0s
VTUN Crater Central 1.48 324 *iP* **Pn 05 31 33.8 +0.4**
VTUN *iS* **Sb 05 31 54.0 +0.7**
VTUN IAML 05 31 56.5
comp=Z,4μm,1.0s
VTRT Volcan Turrial 1.48 322⇑*iP* **Pn 05 31 33.6 +0.3**
VTRT Volcan Turrial 1.48 322 *iP* **Pn 05 31 33.8 +0.5**
VTRT IAML 05 31 34.1
comp=Z,9μm,1.0s
VTRT *iS* **Sb 05 31 53.6 +0.3**
ICR3 Volcano Irazu 1.48 321⇑*iP* **Pn 05 31 33.5 0.0**
ICR3 *eS* **Sb 05 31 53.5 0.0**
OCM Ochomogo 1.51 315⇑*iP* **Pn 05 31 33.4 -0.2**
OCM Ochomogo 1.51 315 *iP* **Pn 05 31 33.4 -0.2**
OCM *iS* **Sb 05 31 53.8 -0.2**
OCM IAML 05 31 54.7
comp=Z,3μm,1.0s
VIRE VIRE 1.52 318 *iP* **Pn 05 31 34.0 +0.1**
VIRE *iS* **Sb 05 31 54.7 +0.3**
VIRE IAML 05 31 57.4
comp=Z,6μm,1.0s
TRIO Tres Rios 1.54 314 *eP* **Pn 05 31 34.4 +0.4**
AMPA Desamparados 1.58 312⇓*iP* **Pn 05 31 34.5 0.0**
AMPA *eS* **Sb 05 31 55.3 -0.8**
CORON Coronado 1.59 316 *eP* **Pb 05 31 36.4 -0.3**
CORON *eS* **Sb 05 31 58.0 +1.6**
ACOS Acosta 1.59 307 *eP* **Pn 05 31 34.8 0.0**
ACOS *eS* **Sb 05 31 55.5 -0.9**
SJS3 Mercedes San J 1.60 314 *eP* **Pn 05 31 35.4 +0.5**
SJS Escuela Geolog 1.60 314 *eP* **Pn 05 31 35.2 +0.3**
LUJA Lujan 1.61 313⇑*iP* **Pb 05 31 36.2 -0.8**
LUPE Guadalupe 1.61 314 *eP* **Pn 05 31 35.4 +0.4**
CENT San Jose 1.61 313 *eP* **Pn 05 31 35.5 +0.4**
CENT *eS* **Sb 05 31 56.3 -0.7**
MEXI Barrio Mexico 1.63 313⇓*iP* **Pn 05 31 35.6 +0.4**
MEXI *eS* **Sb 05 31 57.0 -0.4**
TIBA Tibas 1.63 314 *eP* **Pn 05 31 35.9 +0.6**
DOMI Santo Domingo 1.66 314 *eP* **Pn 05 31 36.2 +0.6**
DOMI *eS* **Sb 05 31 58.3 0.0**
HDC3 Heredia 3 1.69 314 *eP* **Pn 05 31 36.5 +0.4**
HDC3 *eS* **Sb 05 31 58.8 -0.4**
HDC3 Heredia 3 1.69 314 *iP* **Pn 05 31 36.2 +0.1**
HDC3 *iS* **Sb 05 31 59.2 +0.1**
HDC3 IAML 05 32 02.4
comp=Z,2μm,1.0s
SANTA Santa Ana 1.69 311 *eP* **Pn 05 31 35.9 -0.2**
BELE Belen 1.72 312⇓*iP* **Pb 05 31 37.9 -1.1**
BELE *eS* **Sb 05 31 58.0 0.0**
RIFO Rio Frio, Sara 1.80 325⇑*eP* **Pn 05 31 38.3 +0.7**
RIFO Rio Frio, Sara 1.80 325 *iP* **Pn 05 31 38.7 +1.2**
RIFO *iS* **Sb 05 32 03.3 +0.9**
RIFO IAML 05 32 04.6
comp=Z,2μm,1.0s
MESA3 La Mesa, Verag 1.81 112⇑*iP* **Pn 05 31 37.7 +0.1**
MESA3 *eS* **Sn 05 32 00.5 +0.7**
SAFE3 Santa Fe, Vera 1.81 100 *eP* **Pn 05 31 38.2 +0.7**
SAFE3 *eS* **Sn 05 32 00.8 +1.0**
GREC Grecia 1.88 311 *eP* **Pn 05 31 39.8 +1.1**
TRB2 Turrubares 1.89 305 *eP* **Pn 05 31 38.6 -0.1**
VPS6 Volcano Poas 1.90 316 *eP* **Pb 05 31 42.2 +0.1**
SARCI Sarchi 1.92 311 *eP* **Pn 05 31 40.3 +1.1**
TRT1 Tortuguero 1.94 335⇓*eP* **Pn 05 31 39.7 +0.3**
GMAL Guarumal, Vera 1.94 123⇓*iP* **Pn 05 31 38.7 -0.8**
GMAL *eS* **Sn 05 32 02.2 -0.3**
GMAL Guarumal, Vera 1.94 123 *eP* **Pn 05 31 38.6 -0.8**
GMAL Guarumal, Vera 1.94 123⇑*eP* **Pn 05 31 38.4 -1.1**
GMAL *eP* **Pn 05 31 38.4 -1.1**
JACO JACO, Garabito 1.94 295 *eP* **Pn 05 31 39.5 +0.1**
JACO JACO, Garabito 1.94 295 *iP* **Pn 05 31 40.0 +0.5**
JACO *iS* **Sn 05 32 04.7 +1.5**
JACO IAML 05 32 12.0
comp=Z,420nm,1.0s
NARAN Naranjo de Ala 1.94 311 *eP* **Pn 05 31 39.9 +0.3**
SARA Sarapiqu 1.97 325 *eP* **Pn 05 31 40.7 +0.9**
SRA1 San Ramn 2.02 308 *eP* **Pn 05 31 41.4 +0.8**
STIA3 Santiago, Vera 2.02 111 *eP* **Pn 05 31 41.2 +0.7**
STIA3 *eS* **Sb 05 32 08.6 0.0**
CPMI Catarata Coope 2.07 314 *eP* **Pn 05 31 42.8 +1.4**
CPMI Catarata Coope 2.07 314 *iP* **Pn 05 31 42.7 +1.3**
CPMI IAML 05 32 22.5
comp=Z,450nm,1.0s
CALO3 Calobre, Verag 2.08 104⇓*iP* **Pn 05 31 42.4 +1.1**
CALO3 *eS* **Sb 05 32 09.2 -1.0**
ARZA Esparza 2.11 303 *eP* **Pb 05 31 43.8 -1.7**
ITAL Pital 2.12 320⇑*iP* **Pb 05 31 43.8 -1.7**
MARI3 Mariato, Verag 2.21 122 *eP* **Pn 05 31 43.2 +0.2**
LAFE Finca La Fe, P 2.23 296 *iP* **Pn 05 31 45.0 +1.6**
LAFE IAML 05 33 00.8
comp=Z,6.2nm,1.0s
CRIS3 El Cristo, Coc 2.31 104 *eP* **Pn 05 31 46.2 +1.7**
CRIS3 *eS* **Sb 05 32 17.5 +0.6**
SOCE Pocosol 2.31 312 *eP* **Pn 05 31 45.4 +0.9**
SOCE Pocosol 2.31 312 *iP* **Pn 05 31 46.1 +1.6**
SOCE IAML 05 31 50.6
comp=Z,240nm,1.0s
CBL1 Cabuya 2.31 289 *eP* **Pn 05 31 44.9 +0.3**
COVE Coope Vega, Sa 2.41 322 *eP* **Pn 05 31 48.0 +2.2**
COVE *eS* **Sb 05 32 19.7 -0.1**
COVE Coope Vega, Sa 2.41 322 *iP* **Pb 05 31 48.3 -2.2**
COVE *iS* **Sb 05 32 18.7 -1.0**
COVE IAML 05 32 23.3
comp=Z,870nm,1.0s
ARE1 Arenal 1 2.44 312 *eP* **Pn 05 31 47.3 +1.1**
CEDE Laguna Cedeo 2.44 313 *eP* **Pn 05 31 48.2 +1.8**
CACAO El Cacao, Vera 2.48 126⇓*eP* **Pn 05 31 48.0 +1.1**
CACAO *eS* **Sb 05 32 21.4 -0.5**
CACAO El Cacao, Vera 2.48 126 *eP* **Pn 05 31 48.5 +1.6**
JTS Las Juntas de 2.51 306 *eP* **Pn 05 31 48.3 +1.0**
JTS *eS* **Pb** 05 31 57.9 +5.7
JTS Las Juntas de 2.51 306 *eP* **Pn 05 31 48.5 +1.2**
JTS Las Juntas de 2.51 306 *eP* **Pn 05 31 48.7 +1.4**
JUNT Juntas 2.51 305 *eP* **Pn 05 31 48.5 +1.2**
PNME Penonome 2.55 97 *eP* **Pn 05 31 49.7 +2.0**
PNME *eS* **Sb 05 32 22.2 -1.5**
PNME Penonome 2.55 97 *eP* **Pn 05 31 49.7 +2.0**
PNME *eS* **Sb 05 32 24.1 +0.3**
PNME *i* 05 32 28.9
comp=Z,198nm,0.4s
CHIT3 Chitre 2.58 109⇑*eP* **Pn 05 31 50.4 +2.2**
CHIT3 *eS* **Sb 05 32 24.4 -0.4**
AZU Azuero 2.77 112

BCIP	**Isla Barro Col**	**3.02**	**83**	*i* P	**Pn**	**05 31 55.5**	**+1.2**
BCIP				IAML		05 32 46.1	
	comp=Z,180nm,1.0s						
ACHO3	**Achotines, Los**	**3.02**	**117**	*e*P	**Pn**	**05 31 56.0**	**+1.7**
ACHO3				*e*S	**Pb**	**05 32 02.3**	**+1.3**
GPS3	**Bodega del ICE**	**3.11**	**308**	*e*P	**Pb**	**05 32 02.3**	**-0.2**
UPA	**Univ. de Panam**	**3.31**	**87**	*e*P	**Pn**	**05 31 59.6**	**+1.4**

DJA 12 05:33:01.6±0.4,10°S±6°×10°7E±°,h10km,M3.9/7,mb4.0/2, mB5.2/2,MLv3.8/7,Mw(mB)4.6/2,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**2.52**	**31**	P	Pn	05 33 41.8	-0.8
CNJI	**Cibinong**	**2.62**	**0**	P	Pn	05 33 44.2	+0.1
KPJI	**Karang Pucung**	**3.16**	**35**	P	Pn	05 33 52.3	+0.9
UGM	**Wanagama**	**3.92**	**59**	P	Pn	05 34 00.9	-1.1
GMJI	**Gumukmas**	**6.46**	**76**	P	Pn	05 34 36.8	-0.1
	15nm,1.1s						
JAGI	**Jajag, Banyuwa**	**7.10**	**79**	P	Pn	05 34 45.9	+0.3
TWSI	**Taliwang, Sumb**	**9.71**	**84**	P	Pn	05 35 21.8	+0.3

IDC 12 05:50:29.1±7.4,35°57S×106°07W,h0km,mb3.8/2, mbtmp3.8/2,MS3.5/2,Error ellipse: s-maj=594.6km s-min=59.6km az=101.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**35.35**	**56**	LR	LR	06 07 11.5	
	comp=Z,43nm,18.3s,baz=254,slow=28						
MDP	**Montagnes des**	**64.36**	**63**	LR	LR	06 27 06.2	
	comp=Z,51nm,18.2s,baz=242,slow=34						
NVAR	**Mina Array Bea**	**74.50**	**350**	P	P	06 02 09.6	+0.1
	0.9nm,0.8s,baz=178,slow=9.6,SNR=4.7						
	0.9nm,0.8s						
PDAR	**Pinedale Array**	**78.03**	**357**	P	P	06 02 29.5	0.0
	0.8nm,1.0s,baz=152,slow=6.7,SNR=4.6						
	0.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**152.07**	**239**	PKPbc	PKPbc	06 10 26.7	-0.2
	1.7nm,0.3s,baz=132,slow=1.3,SNR=4.8						

*IDC **12** 05:50:41.4±2.7,54°40N×86°86E,h0km,mbtmp3.2/2, ML2.9/2,Error ellipse: s-maj=22.6km s-min=16.3km az=54.0*

*NNC **12** 05:50:41.6±2.4,54°36N×86°85E,h0km,mb3.1,mpv2.9, Error ellipse: s-maj=24.0km s-min=13.1km az=175.0, Suspected Mining explosion.*

ISC 12 05:50:42.6±4.1,54°4N±0°2×86°8E±0°2,h0km,n8,σ0°94/13, 6C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**251**	I	I	05 58 40.0	
	0.1nm,0.9s,baz=69,slow=325,SNR=2.9						
ZAA0	**Zalesovo Array**	**1.21**	**251**	⇓P	**Pg**	**05 51 04.3**	**-1.5**
	0.5nm,0.4s						
ZAA0				⇑S	**Sb**	**05 51 23.0**	**+0.5**
	1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**1.21**	**251**	Pg	**Pg**	**05 51 04.5**	**-1.3**
	3.0nm,0.3s,baz=67,slow=17,SNR=27						
ZALV				Lg	Lg	05 51 22.3	
	2.7nm,0.3s,baz=68,slow=20,SNR=8.9						
KURK	**Kurchatov**	**6.16**	**237**	⇓Pn	**Pn**	**05 52 16.0**	**+1.2**
	2.2nm,1.0s						
KURK				⇑Sn	**Sn**	**05 53 26.8**	**+1.0**
	1.2nm,0.5s						
KURK				⇑Lg	Lg	05 53 59.5	
	5.4nm,1.1s						
KURBB	**Kurchatov Arra**	**6.26**	**237**	⇓Pn	**Pn**	**05 52 16.9**	**+0.7**
	1.1nm,0.3s						
KURBB				⇓Sn	**Sn**	**05 53 29.0**	**+0.6**
	6.4nm,0.6s						
KURBB				⇑Lg	Lg	05 54 01.4	
	6.8nm,0.7s						
KURBB	**Kurchatov Arra**	**6.26**	**237**	Pn	**Pn**	**05 52 17.1**	**+0.9**
	0.2nm,0.3s,baz=54,slow=13,SNR=22						
KURBB				Sn	**Sn**	**05 53 28.1**	**-0.2**
	0.1nm,0.3s,baz=58,slow=24,SNR=2.6						
KURBB				Lg	Lg	05 54 03.8	
	0.1nm,0.3s,baz=56,slow=35,SNR=4.9						
	1.4nm,0.4s						
MK31	**Makanchi Array**	**8.09**	**202**	Pn	**Pn**	**05 52 41.9**	**+0.6**
	0.4nm,0.5s,baz=26,slow=12,SNR=12						
MK31				⇑Sn	**Sn**	**05 54 13.3**	**-0.2**
	0.6nm,0.5s,baz=25,slow=26,SNR=4.5						
MK31				⇑Lg	Lg	05 54 55.6	
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**8.09**	**202**	Pn	**Pn**	**05 52 41.8**	**+0.4**
	0.2nm,0.3s,baz=25,slow=13,SNR=12						
MKAR				Sn	**Sn**	**05 54 13.3**	**-0.1**
	0.1nm,0.3s,baz=25,slow=26,SNR=5.5						
MKAR				Lg	Lg	05 54 58.2	
	0.1nm,0.3s,baz=19,slow=32,SNR=2.6						
	0.4nm,0.3s						

*TIR **12** 05:58:17.7,39°55N×20°64E,h1km±2km,Ml4.0*

*NEIC **12** 05:58:18.7±1.9,39°58N±0°04×20°55E±0°05,h10km±1km, mb4.3/21,Mwr3.8/12,Error ellipse: s-maj=7.5km s-min=5.8km az=214.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr4.04; Mθθ-0.14; Mφφ-3.90; Mrφ2.84; Mrθ 1.29; Mθφ-2.99; Fault plane solution: M₀5.87000×10¹⁴ NP1:φs144.97000°,δ67.88000°, λ75.61000°. NP2:φs359.23000°,δ26.19000°,λ121.43000°. Principal axes: T 5.9586, Plg64.0000°, Azm31.0000°; N -0.1872, Plg13.0000°, Azm150.0000°; P -5.7714, Plg22.0000°, Azm246.0000°;*

*PDG **12** 05:58:18.6±0.2,39°61N×20°46E,h12km±1km,ML3.6/11 Error ellipse: s-maj=0.8km s-min=0.6km az=90.0*

*NEIC **12** 05:58:18.8,39°55N×20°55E,h10km*

*THE **12** 05:58:19.7,39°57N×20°55E,h3km±1km,ML3.7/20,Error ellipse: s-maj=1.4km s-min=0.6km az=279.0*

*ATH **12** 05:58:19.5,39°60N×20°48E,h8km±1km,ML3.7/20, Manual Solution by N.Liadopoulou This location: 2020/05/30 04:38:16 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*IDC **12** 05:58:23.8±1.8,39°69N×20°51E,h54km±18km,mb3.6/14, mbtmp3.9/21,ML3.6/7,MS3.6/4,Error ellipse: s-maj=16.8km s-min=11.5km az=146.0*

*NAO **12** 05:58:28.3,39°96N×18°12E,h33km,mb3.1*

ISC 12 05:58:19.4±0.7,39°57N±0°01×20°51E±0°02,h17km±4km, n303,σ1s57/389,mb4.0/25,35C-21D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.14**	**254**	P	**Pg**	**05 58 23.3**	**-0.1**
	baz=265						
IGT				S	**Sg**	**05 58 27.1**	**+0.9**
	baz=265						
IGT	**Igoumenitsa**	**0.14**	**254**	P	**Pg**	**05 58 23.4**	**-0.1**
IGT				S	**Sg**	**05 58 25.8**	**-0.4**
	39µm,0.1s						
IGT	**Igoumenitsa**	**0.14**	**254**	P	**Pg**	**05 58 22.8**	**-0.6**
IGT				S	**Sg**	**05 58 24.7**	**-1.5**
JAN	**Janina**	**0.28**	**72**	P	**Pb**	**05 58 25.7**	**-0.2**
JAN				S	**Sg**	**05 58 28.9**	**-0.8**
	49µm,0.3s						
JAN	**Janina**	**0.28**	**72**	P	**Pb**	**05 58 25.4**	**-0.5**
JAN				S	**Sb**	**05 58 29.3**	**-1.0**
SRN	**Sarande**	**0.50**	**308**	P	**Pb**	**05 58 29.6**	**0.0**
	baz=304						
SRN				S	**Sn**	**05 58 39.6**	**-0.2**
	baz=304						
SRN				AMP			
	comp=E,13nm,0.3s,baz=304						
SRN	**Sarande**	**0.50**	**308**	P	**Pb**	**05 58 29.4**	**-0.2**
SRN				S	**Sb**	**05 58 37.7**	**+1.1**
	comp=E,4µm,0.5s						
KEK	**Kerkira**	**0.57**	**285**	Pg	**Pg**	**05 58 28.2**	**-2.4**
KEK				Sg	**Sb**	**05 58 38.8**	**+0.3**
KEK	**Kerkira**	**0.57**	**285**	P	**Pg**	**05 58 28.1**	**-2.5**
KEK				S	**Sg**	**05 58 35.3**	**-2.9**
KEK	**Kerkira**	**0.57**	**285**	P	**Pg**	**05 58 29.5**	**-1.2**
KEK				S	**Sg**	**05 58 36.7**	**-1.6**
LSK	**Leskovik**	**0.58**	**7**	P	**Pg**	**05 58 30.6**	**-0.4**
	baz=357						
LSK				S	**Sb**	**05 58 39.9**	**+0.8**
	baz=357						
LSK				AMP			
	comp=N,57nm,0.8s,baz=357						
LSK	**Leskovik**	**0.58**	**7**	P	**Pg**	**05 58 30.3**	**-0.7**
LSK				S	**Sb**	**05 58 39.9**	**+0.8**
	comp=N,15µm,0.7s						
TSLK	**Tsoukalades, L**	**0.75**	**171**	P	**Pg**	**05 58 33.3**	**-0.8**
TSLK	**Tsoukalades, L**	**0.75**	**171**	P	**Pg**	**05 58 33.6**	**-0.5**
TSLK				S	**Sb**	**05 58 45.1**	**+1.2**
KPRO	**Kipourio**	**0.76**	**60**	P	**Pg**	**05 58 32.9**	**-1.4**
KPRO				S	**Sg**	**05 58 43.3**	**-1.1**
	comp=N,5µm,0.5s						
KPRO	**Kipourio**	**0.76**	**60**	P	**Pg**	**05 58 33.4**	**-0.9**
KPRO				S	**Sb**	**05 58 44.9**	**+0.7**
LKD2	**Lefkada island**	**0.79**	**172**	P	**Pg**	**05 58 33.8**	**-1.0**
LKD2				S	**Sn**	**05 58 47.2**	**+0.1**
	comp=N,5µm,0.3s						
LKD2	**Lefkada island**	**0.79**	**172**	P	**Pg**	**05 58 34.2**	**-0.6**
LKD2				S	**Sb**	**05 58 46.5**	**+1.5**
PENT	**Pentalofos**	**0.79**	**38**	P	**Pg**	**05 58 33.5**	**-1.3**
PENT	**Pentalofos**	**0.79**	**38**	P	**Pg**	**05 58 33.7**	**-1.1**
PENT				S	**Sb**	**05 58 44.9**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.87**	**170**	P	**Pg**	**05 58 35.2**	**-1.1**
DRAG	**Dragano-Lefkad**	**0.89**	**177**	P	**Pg**	**05 58 35.1**	**-1.5**
DRAG				S	**Sn**	**05 58 50.0**	**+0.5**
NEST	**Nestorio**	**0.94**	**26**	P	**Pg**	**05 58 36.8**	**-0.8**
NEST	**Nestorio**	**0.94**	**26**	P	**Pg**	**05 58 36.7**	**-0.9**
NEST				S	**Sb**	**05 58 49.8**	**+0.4**
EVGI	**Lefkada island**	**0.96**	**173**	P	**Pg**	**05 58 36.4**	**-1.5**
EVGI				S	**Sn**	**05 58 52.4**	**+1.3**
	comp=N,7µm,0.3s						
EVGI	**Lefkada island**	**0.96**	**173**	P	**Pg**	**05 58 36.9**	**-1.1**
EVGI				S	**Sb**	**05 58 51.2**	**+1.5**
KBN	**Korca**	**1.07**	**11**	Pg	**Pg**	**05 58 39.0**	**-1.2**
KBN	**Korca**	**1.07**	**11**	P	**Pg**	**05 58 39.1**	**-1.1**
	baz=5.0						
KBN				S	**Sn**	**05 58 55.1**	**+0.9**
	baz=5.0						
KBN				AMP			
	comp=E,9.4nm,0.8s,baz=5.0						
KBN	**Korca**	**1.07**	**11**	P	**Pg**	**05 58 38.8**	**-1.4**
KBN				S	**Sn**	**05 58 54.8**	**+0.6**
	comp=E,3µm,0.7s						
FSK	**Fiskardo**	**1.11**	**178**	P	**Pg**	**05 58 39.4**	**-1.5**
FSK				S	**Sn**	**05 58 56.7**	**+1.8**
	comp=E,8µm,0.3s						
VSK1	**VASILIKIADES**	**1.16**	**178**	P	**Pg**	**05 58 40.9**	**-0.9**
THL	**Klokotos Trika**	**1.16**	**90**	P	**Pg**	**05 58 40.0**	**-1.8**
THL	**Klokotos Trika**	**1.16**	**90**	P	**Pg**	**05 58 41.0**	**-0.8**
THL				S	**Sn**	**05 58 57.2**	**+1.0**
VLO	**Vlora**	**1.19**	**319**	P	**Pn**	**05 58 43.3**	**+2.2**
VLO	**Vlora**	**1.19**	**319**	P	**Pn**	**05 58 43.8**	**+2.7**
	baz=317						
VLO				S	**Sn**	**05 59 01.9**	**+5.1**
	baz=317						
VLO				AMP			
	comp=N,15nm,0.3s,baz=317						
VLO	**Vlora**	**1.19**	**319**	P	**Pn**	**05 58 43.6**	**+2.5**
VLO	**Vlora**	**1.19**	**319**	P	**Pn**	**05 58 43.8**	**+2.7**
VLO				S	**Sn**	**05 59 03.0**	**+6.2**
EVR	**Evrytania**	**1.20**	**123**	P	**Pn**	**05 58 42.5**	**+1.1**
EVR				S	**Sn**	**05 58 59.9**	**+2.6**
	comp=N,2µm,0.6s						
EVR	**Evrytania**	**1.20**	**123**	P	**Pn**	**05 58 42.4**	**+0.9**
EVR				S	**Sn**	**05 59 00.0**	**+2.6**
PVO	**Paravola**	**1.24**	**140**	P	**Pg**	**05 58 43.1**	**-0.2**
PVO				S	**Sn**	**05 59 00.2**	**+2.1**
KEF4	**Livadi, Kephal**	**1.31**	**183**	P	**Pn**	**05 58 43.7**	**+0.9**
DMLN	**Damoulianata-K**	**1.33**	**185**	P	**Pn**	**05 58 43.7**	**+0.5**
TYRN	**Tyrnavos**	**1.34**	**83**	P	**Pn**	**05 58 43.0**	**-0.2**
TYRN				S	**Sn**	**05 59 02.6**	**+2.0**
	comp=N,3µm,0.8s						
TYRN	**Tyrnavos**	**1.34**	**83**	P	**Pn**	**05 58 43.8**	**+0.7**
TYRN				S	**Sn**	**05 59 02.5**	**+1.9**
KEF3	**Kipouria, Keph**	**1.37**	**185**	P	**Pn**	**05 58 43.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.38**	**113**	P	**Pn**	**05 58 44.4**	**+0.6**
FNA	**Florina**	**1.38**	**28**	Pn	**Pn**	**05 58 44.0**	**+0.1**
FNA	**Florina**	**1.38**	**28**	P	**Pn**	**05 58 44.3**	**+0.3**
	baz=24						
FNA				S	**Sg**	**05 59 05.1**	**+1.0**
	baz=24						
FNA	**Florina**	**1.38**	**28**	P	**Pn**	**05 58 44.2**	**+0.3**
FNA				S	**Sg**	**05 59 05.1**	**+1.0**
	comp=N,4µm,0.5s						
FNA	**Florina**	**1.38**	**28**	P	**Pn**	**05 58 44.1**	**+0.3**
FNA				S	**Sg**	**05 59 04.7**	**+0.7**
VLS	**Valsamata**	**1.39**	**177**	P	**Pn**	**05 58 44.5**	**+0.5**
VLS	**Valsamata**	**1.39**	**177**	P	**Pn**	**05 58 44.6**	**+0.6**
VLS				S	**Sg**	**05 59 05.1**	**+0.7**
PSDA	**Pessada-Kefalo**	**1.46**	**178**	P	**Pn**	**05 58 45.4**	**+0.6**
PSDA				S	**Sg**	**05 59 06.8**	**+0.4**
PSDA	**Pessada-Kefalo**	**1.46**	**178**	P	**Pn**	**05 58 45.7**	**+0.9**
PSDA				S	**Sg**	**05 59 06.5**	**+0.1**
LRSO	**Larissa Observ**	**1.46**	**85**	P	**Pn**	**05 58 45.4**	**+0.5**
LRSO				S	**Sg**	**05 59 06.2**	**-0.2**
ANX	**Ano Chora**	**1.47**	**131**	P	**Pb**	**05 58 46.1**	**-0.2**
ANX				S	**Sg**	**05 59 06.5**	**-0.3**
	comp=N,3µm,0.5s						
AGG	**Agios Georgios**	**1.52**	**111**		**Pb**	**05 58 46.7**	**-0.2**
AGG	**Agios Georgios**	**1.52**	**111**	P	**Pb**	**05 58 46.8**	**-0.2**
AGG	**Agios Georgios**	**1.52**	**111**	P	**Pb**	**05 58 46.7**	**-0.2**
AGG				S	**Sg**	**05 59 07.5**	**-0.8**
OHR	**Ohrid**	**1.55**	**8**	⇓*i*Pn	**Pg**	**05 58 49.0**	**-0.3**
OHR				*i* Sn	**Sg**	**05 59 12.2**	**+2.7**
EFP	**Efpalio**	**1.58**	**136**	P	**Pb**	**05 58 48.3**	**+0.3**
EFP				S	**Sb**	**05 59 08.2**	**+0.5**
	comp=N,2µm,0.6s						
LIT	**Litokhoron**	**1.61**	**70**	Pn	**Pn**	**05 58 45.9**	**-1.1**
SCTE	**Santa Cesarea**	**1.65**	**288**		**Pn**	**05 58 48.2**	**+0.8**
SCTE	**Santa Cesarea**	**1.65**	**288**	P	**Pn**	**05 58 48.6**	**+1.1**
SCTE				S	**Sb**	**05 59 10.3**	**+0.6**
SCTE				AML	AML		
	comp=N,548µm,0.4s						
SCTE				AML	AML		
	comp=E,806µm,0.4s						
SCTE	**Santa Cesarea**	**1.65**	**288**	P	**Pn**	**05 58 48.5**	**+1.0**
SCTE				S	**Sn**	**05 59 08.9**	**+0.6**
TIR	**Tirane**	**1.84**	**345**	⇓P	**Pb**	**05 58 52.6**	**+0.1**
TIR	**Tirane**	**1.84**	**345**		**Pn**	**05 58 49.9**	**-0.2**
TIR	**Tirane**	**1.84**	**345**	P	**Pb**	**05 58 52.4**	**-0.1**
	baz=342						
TIR				S	**Sg**	**05 59 20.6**	**+1.9**
	baz=342						
TIR				AMP			
	comp=E,1.2nm,0.5s,baz=342						
TIR	**Tirane**	**1.84**	**345**	P	**Pb**	**05 58 52.2**	**-0.3**
AXAR	**Agios Charalam**	**1.85**	**115**	P	**Pn**	**05 58 51.5**	**+1.2**
DRO	**Drossia**	**1.87**	**149**	P	**Pn**	**05 58 52.1**	**+1.6**
LTHK	**Lithakia**	**1.88**	**172**	P	**Pn**	**05 58 52.3**	**+1.7**
KLV	**Kalavryta, Ach**	**1.99**	**139**	P	**Pb**	**05 58 54.2**	**-0.9**
GRG	**Griva**	**2.00**	**46**	P	**Pn**	**05 58 53.9**	**+1.5**
GRG	**Griva**	**2.00**	**46**	P	**Pn**	**05 58 53.3**	**+0.9**
GRG				S	**Sb**	**05 59 19.4**	**-0.6**
XOR	**Xorichti**	**2.09**	**95**	P	**Pn**	**05 58 55.3**	**+1.8**
XOR	**Xorichti**	**2.09**	**95**	P	**Pn**	**05 58 55.4**	**+1.8**
XOR				S	**Sb**	**05 59 21.6**	**-0.7**
PHP	**Peshkopia**	**2.11**	**359**	P	**Pb**	**05 58 56.6**	**-0.6**
	baz=356						
PHP				S	**Sg**	**05 59 26.1**	**-1.2**
	baz=356						
PHP				AMP			
	comp=N,2.8nm,0.9s,baz=356						
PHP	**Peshkopia**	**2.11**	**359**	P	**Pb**	**05 58 56.5**	**-0.6**
NEO	**Neokhori**	**2.12**	**96**	P	**Pn**	**05 58 55.6**	**+1.6**
THE	**Thessaloniki**	**2.16**	**60**	P	**Pn**	**05 58 55.8**	**+1.3**
HORT	**Hortiatis**	**2.24**	**62**	P	**Pn**	**05 58 56.6**	**+1.0**
HORT	**Hortiatis**	**2.24**	**62**	P	**Pn**	**05 58 56.9**	**+1.2**
VAY	**Valandovo**	**2.35**	**41**	*i* Pn	**Pn**	**05 58 59.5**	**+2.3**
VAY				*i* Sn	**Sn**	**05 59 28.2**	**+2.6**
KNT	**Kendrikon**	**2.42**	**48**	P	**Pn**	**05 58 59.2**	**+1.1**
KNT	**Kendrikon**	**2.42**	**48**	P	**Pn**	**05 58 59.2**	**+1.1**
PAIG	**Paliouri**	**2.47**	**81**	P	**Pn**	**05 58 59.8**	**+1.0**
SKO	**Skopje**	**2.50**	**16**	⇓*i*Pn	**Pn**	**05 59 01.8**	**+2.6**
SKO				*i* Sn	**Sb**	**05 59 35.2**	**+1.0**
SOH	**Sokhos**	**2.51**	**59**	P	**Pn**	**05 59 01.4**	**+2.0**
SOH	**Sokhos**	**2.51**	**59**	P	**Pn**	**05 59 01.2**	**+1.9**
PUK	**Puka**	**2.51**	**349**	Pn	**Pn**	**05 59 00.4**	**+0.9**
PUK	**Puka**	**2.51**	**349**	P	**Pn**	**05 59 02.2**	**+2.8**
	baz=348						
PUK				S	**Sg**	**05 59 39.4**	**-0.8**
	baz=348						
PUK				AMP			
	comp=E,1.8nm,0.6s,baz=348						
ULC	**Ulcinj**	**2.58**	**339**	⇓*i*Pn	**Pn**	**05 59 00.7**	**+0.4**
ULC				*i* Sn	**Sn**	**05 59 33.3**	**+2.1**
OUR	**Ouranopolis**	**2.78**	**73**	P	**Pn**	**05 59 03.8**	**+0.8**
OUR	**Ouranopolis**	**2.78**	**73**	P	**Pn**	**05 59 04.3**	**+1.4**
DRME	**Dracevica, Mon**	**2.80**	**339**	⇑*i*Pn	**Pn**	**05 59 03.8**	**+0.5**
DRME				*i* Sn	**Sn**	**05 59 38.0**	**+1.4**
DRME	**Dracevica, Mon**	**2.80**	**339**	⇑*i*Pn	**Pn**	**05 59 04.3**	**+1.0**
BCI	**Bajram Curri**	**2.81**	**353**	P	**Pn**	**05 59 06.3**	**+2.8**
	baz=352						
BCI				S	**Sg**	**05 59 47.3**	**-2.4**
	baz=352						
BCI				AMP			
	comp=N,2.6nm,1.0s,baz=352						
SRS	**Serrai**	**2.82**	**56**	P	**Pn**	**05 59 05.1**	**+1.5**
SRS	**Serrai**	**2.82**	**56**	P	**Pn**	**05 59 04.9**	**+1.4**
PEHC	**Pehcevo**	**2.86**	**39**	*i* Pn	**Pn**	**05 59 06.5**	**+2.3**
PEHC				*i* Sn	**Sb**	**05 59 43.1**	**-1.5**
PIPA	**Pietrapaola**	**2.86**	**269**	⇓P	**Pn**	**05 59 05.2**	**+1.1**
PIPA				S	**Sn**	**05 59 39.7**	**+1.5**
PIPA				AML	AML		
	comp=E,992µm,0.3s						
PIPA				AML	AML		
	comp=E,966µm,0.3s						
PIPA				AML	AML		
	comp=N,754µm,0.4s						
PIPA				AML	AML		
	comp=N,660µm,0.4s						
TIP	**Timpagrande**	**2.93**	**264**	⇑P	**Pn**	**05 59 06.3**	**+1.1**
TIP				⇓S	**Sn**	**05 59 41.4**	**+1.3**
TIP	**Timpagrande**	**2.93**	**264**	Pn	**Pn**	**05 59 06.1**	**+0.9**
TIP	**Timpagrande**	**2.93**	**264**	⇓P	**Pn**	**05 59 06.0**	**+0.9**
TIP				S	**Sn**	**05 59 41.3**	**+1.3**
TIP				AML	AML		
	comp=E,144µm,1.3s						
TIP				AML	AML		
	comp=N,186µm,0.9s						
TIP				AML	AML		
	comp=E,176µm,1.4s						
TIP				AML	AML		
	comp=N,200µm,0.8s						
TIP				AML	AML		
	comp=E,176µm,0.6s						
TIP				AML	AML		
	comp=E,144µm,0.7s						
KOKK	**Kokkinochori,**	**2.95**	**64**	P	**Pn**	**05 59 06.7**	**+1.3**
KOKK	**Kokkinochori,**	**2.95**	**64**	P	**Pn**	**05 59 06.7**	**+1.3**
BUM	**Brajici-Budva**	**2.99**	**336**	⇓*i*Pn	**Pn**	**05 59 06.4**	**+0.4**
BUM				*i* Sn	**Sn**	**05 59 42.2**	**+0.8**
PVY	**Plav**	**3.05**	**352**	⇓*i*Pn	**Pn**	**05 59 07.1**	**+0.2**
PVY				*i* Sn	**Sn**	**05 59 44.5**	**+1.5**
MATE	**Matera**	**3.11**	**291**	⇑P	**Pn**	**05 59 09.3**	**+1.7**
MATE	**Matera**	**3.11**	**291**	P	**Pn**	**05 59 08.7**	**+1.1**
MATE				AML	AML		
	comp=E,701µm,0.3s						
MATE				AML	AML		
	comp=N,615µm,1.6s						
MATE				AML	AML		
	comp=N,615µm,0.4s						
CEME	**Cevo**	**3.21**	**338**	⇑*i*Pn	**Pn**	**05 59 09.5**	**+0.5**
CEME				*i* Sn	**Sn**	**05 59 48.0**	**+1.2**
SALB	**San Lorenzo Be**	**3.23**	**277**	⇑P	**Pn**	**05 59 10.2**	**+1.0**
SALB				S	**Sn**	**05 59 47.5**	**+0.2**
SALB				AML	AML		
	comp=N,372µm,1.0s						
SALB				AML	AML		
	comp=E,408µm,0.3s						
SPS2	**Spezzano della**	**3.24**	**266**	⇑P	**Pn**	**05 59 11.4**	**+1.9**
SPS2				AML	AML		
	comp=E,112µm,0.4s						
SPS2				AML	AML		
	comp=N,143µm,0.3s						
SPS2				AML	AML		
	comp=E,112µm,1.6s						
HCY	**Herceg Novi**	**3.25**	**333**	⇑*i*Pn	**Pn**	**05 59 09.5**	**0.0**
HCY				*i* Sn	**Sn**	**05 59 49.3**	**+1.5**
HCY	**Herceg Novi**	**3.25**	**333**	⇑*i*Pn	**Pn**	**05 59 09.5**	**0.0**
GRI	**Girifalco**	**3.26**	**258**	P	**Pn**	**05 59 10.7**	**+0.9**
GRI				S	**Sn**	**05 59 50.4**	**+2.3**
GRI				AML	AML		
	comp=E,343µm,0.8s						
GRI				AML	AML		
	comp=N,416µm,1.6s						
GRI				AML	AML		
	comp=N,416µm,0.4s						
GRI				AML	AML		
	comp=E,343µm,1.2s						
AMUR	**Altamura**	**3.27**	**295**	P	**Pn**	**05 59 10.8**	**+1.0**
AMUR				AML	AML		
	comp=E,520µm,0.8s						
AMUR				AML	AML		
	comp=N,500µm,0.4s						
AMUR				AML	AML		
	comp=N,500µm,1.6s						
AMUR				AML	AML		
	comp=E,520µm,1.2s						
MIGL	**Miglionico**	**3.29**	**290**	P	**Pn**	**05 59 11.3**	**+1.3**
MIGL				AML	AML		
	comp=E,1185µm,0.8s						
MIGL				AML	AML		
	comp=N,1390µm,0.7s						
IVA	**Berane**	**3.33**	**352**	⇑*i*Pn	**Pn**	**05 59 12.9**	**+2.2**
IVA				*i* Sn	**Sn**	**05 59 50.9**	**+1.0**
CAR1	**CAROLEI**	**3.34**	**266**	⇓P	**Pn**	**05 59 13.6**	**+2.8**
CAR1				S	**Sn**	**05 59 51.8**	**+1.7**
CAR1				AML	AML		
	comp=N,420µm,1.1s						
CAR1				AML	AML		
	comp=E,600µm,0.9s						
CAR1				AML	AML		
	comp=N,359µm,0.4s						
CAR1				AML	AML		
	comp=E,609µm,0.9s						
KOME	**Kolasin**	**3.36**	**347**	⇓*i*Pn	**Pn**	**05 59 11.5**	**+0.4**
KOME				*i* Sn	**Sn**	**05 59 51.8**	**+1.2**
PLAC	**Placanica**	**3.36**	**252**	P	**Pn**	**05 59 11.7**	**+0.6**
PLAC				S	**Sn**	**05 59 52.0**	**+1.4**
PLAC				AML	AML		
	comp=E,648µm,0.7s						
PLAC				AML	AML		
	comp=N,670µm,0.7s						
PLAC				AML	AML		
	comp=E,549µm,1.1s						
PLAC				AML	AML		
	comp=N,670µm,1.3s						
PLAC				AML	AML		
	comp=E,648µm,1.3s

SIRI AML AML
comp=E,370µm,0.4s
SIRI AML AML
comp=E,374µm,0.4s
CUC Castrocucco 3.64 278 Pn **Pn 05 59 16.6 +1.7**
CUC Castrocucco 3.64 278 P **Pn 05 59 17.2 +2.3**
CUC AML AML
comp=E,268µm,0.8s
CUC AML AML
comp=E,324µm,0.8s
CUC AML AML
comp=N,232µm,0.5s
CUC AML AML
comp=N,221µm,0.5s
CUC AML AML
comp=E,324µm,1.2s
CUC AML AML
comp=E,268µm,1.2s
CUC Castrocucco 3.64 278 P **Pn 05 59 15.6 +0.7**
BRY Bratogost 3.64 337⇑*i*Pn **Pn 05 59 15.3 +0.3**
BRY *i* Sn **Sn 05 59 58.2 +0.5**
BRY Bratogost 3.64 337 *e*Pn **Pn 05 59 15.0 0.0**
MCEL Monticello 3.70 283 ⇓P **Pn 05 59 17.5 +1.8**
MCEL AML AML
comp=E,362µm,0.9s
MCEL AML AML
comp=N,324µm,0.5s
MCEL AML AML
comp=N,336µm,0.5s
MCEL AML AML
comp=N,324µm,1.5s
MCEL AML AML
comp=N,336µm,1.5s
MCEL AML AML
comp=E,364µm,0.9s
ACER Acerenza 3.70 291 ⇑P **Pn 05 59 18.0 +2.3**
ACER AML AML
comp=N,433µm,1.2s
ACER AML AML
comp=N,432µm,0.6s
ACER AML AML
comp=E,709µm,0.4s
ACER AML AML
comp=E,656µm,0.4s
SJES Sjenica 3.71 354⇑*i*Pn **Pn 05 59 17.6 +1.7**
MTSN Montesano sull 3.72 282 P **Pn 05 59 18.5 +2.4**
MTSN AML AML
comp=N,310µm,0.6s
MTSN AML AML
comp=N,310µm,1.4s
MTSN AML AML
comp=E,314µm,0.4s
JOPP Joppolo 3.73 256 ⇓P **Pn 05 59 16.9 +0.8**
JOPP S **Sn 06 00 00.6 +1.1**
JOPP AML AML
comp=E,447µm,1.0s
JOPP AML AML
comp=N,516µm,0.8s
JOPP AML AML
comp=E,447µm,1.0s
PALZ Palazzo San Ge 3.74 293 ⇓P **Pn 05 59 18.4 +2.2**
PALZ AML AML
comp=N,410µm,0.9s
PALZ AML AML
comp=E,452µm,0.7s
SOI Samo 3.79 248 P **Pn 05 59 17.2 +0.3**
SOI AML AML
comp=N,230µm,0.8s
SOI AML AML
comp=N,230µm,1.2s
SOI AML AML
comp=E,192µm,0.4s
UPM Unac-Piva 3.82 342⇓*i*Pn **Pn 05 59 17.8 +0.2**
UPM *i* Sn **Sn 06 00 03.0 +0.8**
UPM Unac-Piva 3.82 342 *e*Pn **Pn 05 59 19.1 +1.5**
CEL Celeste 3.83 251 Pn **Pn 05 59 17.9 +0.3**
CEL Celeste 3.83 251 ⇓P **Pn 05 59 18.0 +0.4**
CEL S **Sn 06 00 03.2 +1.1**
CEL AML AML
comp=E,448µm,0.3s
CEL AML AML
comp=N,364µm,0.9s
CEL AML AML
comp=E,558µm,0.3s
CEL AML AML
comp=N,456µm,0.9s
CEL AML AML
comp=N,456µm,1.1s
CEL AML AML
comp=N,364µm,1.1s
CEL AML AML
comp=E,448µm,1.7s
CEL AML AML
comp=E,558µm,1.7s
SLCN Sala Consilina 3.83 284 P **Pn 05 59 20.0 +2.4**
SLCN AML AML
comp=E,816µm,0.7s
SLCN AML AML
comp=N,467µm,0.8s
SLCN AML AML
comp=N,486µm,0.8s
SLCN AML AML
comp=E,852µm,0.7s
PLE Pljevlja 3.85 348⇓*i*Pn **Pn 05 59 18.3 +0.5**
PLE *i* Sn **Sn 06 00 03.6 +0.9**
MGR Morigerati 3.86 280 P **Pn 05 59 19.8 +2.0**
MGR AML AML
comp=E,242µm,0.7s
MGR AML AML
comp=N,302µm,0.3s
MGR AML AML
comp=E,242µm,1.3s
STON Ston 3.92 328 *e*Pn **Pn 05 59 18.7 0.0**
STON Sn **Sn 06 00 02.7 -1.5**
STON Ston 3.92 328⇑*i*Pn **Pn 05 59 18.3 -0.4**
MRLC Muro Lucano 4.03 289 P **Pn 05 59 21.9 +1.7**
MRLC AML AML
comp=N,154µm,0.3s
MRLC AML AML
comp=E,140µm,1.2s
MRLC AML AML
comp=N,154µm,1.7s
CMPR Campora 4.07 282 P **Pn 05 59 22.7 +1.9**
CMPR AML AML
comp=E,188µm,0.7s
CMPR AML AML
comp=N,212µm,0.6s
CDRU Civita di Ruta 4.10 285 P **Pn 05 59 23.1 +1.9**
CDRU AML AML
comp=N,132µm,1.0s
CDRU AML AML
comp=E,255µm,0.2s
CDRU AML AML
comp=N,132µm,1.0s
MSRU Castanea 4.11 253 P **Pn 05 59 21.5 +0.1**
MSRU AML AML
comp=E,548µm,0.5s
MSRU AML AML
comp=N,492µm,0.9s
MSRU AML AML
comp=N,492µm,1.1s
RUDO Rudo 4.13 348 *e*Pn **Pn 05 59 20.7 -0.9**
NEVS Nevesinje 4.14 335 *e*Pn **Pn 05 59 23.2 +1.4**
RDO Rodhopi 4.15 66 Pn **Pn 05 59 22.6 +0.8**
BOVS Bovan 4.16 12 ⇑P **Pn 05 59 25.1 +3.1**
LSTV Lastovo 4.20 321 *e*Pn **Pn 05 59 22.2 -0.4**
SGRT San Giovanni R 4.23 303 Pn **Pn 05 59 24.1 +1.0**
SGRT San Giovanni R 4.23 303 P **Pn 05 59 23.9 +0.9**
SGRT AML AML
comp=E,316µm,0.4s
SGRT AML AML
comp=N,340µm,1.0s
SGRT AML AML
comp=N,340µm,1.0s
SNAL S. Angelo Dei 4.28 290 P **Pn 05 59 25.7 +2.1**
SNAL AML AML
comp=E,202µm,0.6s
SNAL AML AML
comp=N,210µm,1.6s
SNAL AML AML
comp=E,199µm,0.8s
SNAL AML AML
comp=N,214µm,1.6s
SNAL AML AML
comp=N,214µm,0.4s
SNAL AML AML
comp=N,210µm,0.4s
BLKB Belogradchik 4.36 21⇑P **Pn 05 59 26.9 +2.1**
BBLS Lazići 4.37 349 *e*Pn **Pn 05 59 27.4 +2.4**
AIO Antillo 4.42 250⇑P **Pn 05 59 26.4 +0.7**
AIO AML AML
comp=E,300µm,0.4s
AIO AML AML
comp=N,288µm,0.3s
ALN Alexandroupoli 4.44 71 Pn **Pn 05 59 27.2 +1.4**
MOCO Biccari - m.te 4.46 295⇓P **Pn 05 59 28.7 +2.5**
MOCO AML AML
comp=N,97µm,0.4s
MOCO AML AML
comp=E,172µm,0.6s
MAKA Makarska 4.55 326 *e*Pn **Pn 05 59 27.5 +0.2**
MELA Melanico ??? S 4.62 299⇑P **Pn 05 59 29.6 +1.4**
MELA AML AML
comp=E,356µm,1.2s
MELA AML AML
comp=N,614µm,0.7s
HAPS Han Pijesak,Bl 4.66 346 *e*Pn **Pn 05 59 29.8 +0.8**
RICI Ricice 4.67 328 *e*Pn **Pn 05 59 29.0 0.0**
APE Apeiranthos 4.67 121⇑P **Pn 05 59 31.6 +2.5**
PLVB Pleven 4.91 38⇑P **Pn 05 59 35.7 +3.4**
TEKS Tekeris 5.03 352 *e*Pn **Pn 05 59 33.1 -0.8**
VAE Valguarnera 5.22 248 P **Pn 05 59 40.3 +3.7**
comp=N,3.3nm,0.3s,baz=249,slow=23,SNR=7.0
VAE S **Sn 06 00 40.5 +4.1**
comp=N,16nm,0.3s,baz=191,slow=20,SNR=4.0
comp=N,5.6nm,0.3s
MDVR Moldovita 5.28 9⇓P **Pn 05 59 39.5 +2.1**
RAFF Raffo Rosso 5.37 246 Pn **Pn 05 59 38.1 -0.5**
KIJV Kijevo 5.39 327 *e*Pn **Pn 05 59 39.5 +0.6**
ZIRJ Zirje 5.47 320 *e*Pn **Pn 05 59 39.7 -0.3**
MGRS Mrkonjic Grad 5.47 333 *e*Pn **Pn 05 59 41.5 +1.4**
HERR Herculane 5.49 14⇑P **Pn 05 59 42.1 +1.8**
INTR Introdacqua 5.57 298 Pn **Pn 05 59 43.8 +2.3**
MORI Morici 5.60 322 *e*Pn **Pn 05 59 42.0 +0.3**
FRGS Fruska Gora 5.61 355⇑P **Pn 05 59 42.9 +1.0**
FRGS Fruska Gora 5.61 355 *e*Pn **Pn 05 59 42.4 +0.5**
A050A Klekovaca 5.73 330 *e*Pn **Pn 05 59 44.5 +0.8**
BLY Banja Luka 5.73 336⇑*i*Pn **Pn 05 59 43.9 +0.3**
DUGI Dugi Otok 6.01 319 *e*Pn **Pn 05 59 47.4 0.0**
WDD Wied Dalam 6.03 234 Pn **Pn 05 59 46.8 -0.9**
CLTB Caltabellotta 6.05 253 Pn **Pn 05 59 47.9 -0.2**
GZR Gura Zlata 6.05 15⇓P **Pn 05 59 49.7 +1.6**
A051A Mrakovica 6.06 335⇑*i*Pn **Pn 05 59 48.2 +0.1**
UDBI Udbina 6.08 326 *e*Pn **Pn 05 59 49.6 +1.2**
BZS Buzias 6.10 7⇑P **Pn 05 59 51.9 +3.3**
CAMP Campotosto 6.13 301 Pn 05 59 51.0 +1.8
VIRC Vir 6.23 321 *e*Pn **Pn 05 59 50.9 +0.5**
GUMA Gualdo di Mace 6.43 305 Pn **Pn 05 59 55.0 +1.8**
NRCA Norcia 6.46 303 Pn 05 59 55.4 +1.7
NVLJ Novalja 6.52 322 *e*Pn **Pn 05 59 54.4 +0.1**
ARR Arges 6.54 26⇑P **Pn 05 59 58.1 +3.2**
FDMO Fiordimonte 6.57 304 Pn **Pn 05 59 56.5 +1.4**
KARP Karpathos 6.64 125 Pn **Pn 05 59 54.8 -1.2**
VOIR 6.75 28⇑P **Pn 06 00 01.1 +3.4**
MORH Mrgy, Hungar 6.78 349⇑P **Pn 05 59 58.8 +0.9**
MURB Monte Urbino 7.04 304 Pn 06 00 02.9 +1.2
BOJS Bojanci 7.08 329 *e*Pn **Pn 06 00 02.2 0.0**
ISR Istrita 7.12 37⇑P **Pn 06 00 06.0 +3.3**
MLR Muntele Rosu 7.15 32⇑P **Pn 06 00 07.0 +3.9**
MLR Muntele Rosu 7.15 32 Pn **Pn 06 00 03.8 +0.7**
MLR Muntele Rosu 7.15 32 P **Pn 06 00 06.2 +3.0**
comp=N,0.9nm,0.3s,baz=232,slow=9.3,SNR=15
MLR LR LR 06 03 36.4
comp=N,377nm,19.0s,baz=238,slow=44
comp=N,12nm,0.8s
CRES Cresnjev 7.27 331 *e*Pn **Pn 06 00 04.4 -0.4**
DOPR Dopca 7.33 28⇑P **Pn 06 00 08.6 +3.1**
KNDS Knezji Dol 7.47 325 *i* Pn **Pn 06 00 07.5 -0.1**
COVR Voineasa-Covas 7.54 32⇑P **Pn 06 00 11.2 +2.8**
CEY Cerknica 7.62 326 *e*Pn **Pn 06 00 09.3 -0.2**
SKDS Skadanscina 7.66 323 *i* Pn **Pn 06 00 09.6 -0.5**
PLOR Plostina 7.73 34⇑P **Pn 06 00 15.0 +3.9**
VRI Vrincioaia 7.78 34⇑P **Pn 06 00 15.7 +4.1**
MOZS Mozjanca 8.06 328 *i* Pn **Pn 06 00 15.2 -0.3**
SOKA Soboth 8.15 332 *e*Pn **Pn 06 00 16.8 -0.1**
comp=N,1.4nm,0.3s
SOKA *i* Sn **Sn 06 01 43.8 -4.8**
comp=N,1.0nm,0.3s
SABO M.te Sabotino 8.17 324 Pn Pn 06 00 17.0 -0.1
OBKA Obir 8.19 330 *e*Pn **Pn 06 00 17.6 +0.2**
comp=N,5.5nm,0.6s
OBKA *e*Sn **Sn 06 01 48.5 -1.0**
comp=N,5.6nm,0.5s
OBKA Obir 8.19 330 *e*Pn **Pn 06 00 16.5 -0.9**
PSZ Piszkesteto 8.36 357 Pn **Pn 06 00 20.5 +0.8**
ARSA Arzberg 8.49 336 *e*Pn **Pn 06 00 21.6 +0.2**
comp=N,1.6nm,0.3s
ARSA *e*Sn **Sn 06 02 00.2 +3.5**
comp=N,1.1nm,0.4s
PRED Cave del Predi 8.54 326 Pn 06 00 22.8 +0.6
MYKA Terra Mystica 8.66 327 *i* Pn **Pn 06 00 24.6 +0.8**
comp=N,1.4nm,0.3s
MYKA *i* Sn **Sn 06 02 06.1 +5.1**
comp=N,2.6nm,0.5s
RONA Rosia, Austr 8.68 341 *i* Pn **Pn 06 00 24.8 +0.7**
comp=N,0.9nm,0.3s
RONA *i* Sn **Sn 06 02 06.5 +5.0**
comp=N,1.3nm,0.4s
TEOL Teolo 8.72 314 Pn Pn 06 00 24.5 -0.1
BURAR Bucovina Array 8.73 21 Pn Pn 06 00 24.4 -0.5
BUR08 Bucovina Ar. S 8.76 21 Pn Pn 06 00 24.7 -0.5
STAL STALIGIAL 8.80 322 Pn Pn 06 00 25.4 -0.2
CLUD Cludinico 8.86 323 Pn Pn 06 00 26.1 -0.4
CONA Conrad Observa 9.00 340 *e*Pn **Pn 06 00 31.9 +3.3**
comp=N,1.6nm,0.3s
MODS Modra-Piesok 9.10 346 *e*PN Pn 06 00 37.6 +7.8
CTI Castel Tesino 9.18 318 Pn Pn 06 00 30.8 -0.2
ABTA Abfaltersbach 9.25 323 *i* Pn **Pn 06 00 32.4 +0.5**
comp=N,2.4nm,0.4s
ABTA *e*Sn **Sn 06 02 11.5 -4.0**
comp=N,6.7nm,0.7s
CRVS Cervenica-Dubn 9.35 4 *e*PN Pn 06 00 39.2 +5.9
MOA Molln 9.43 333 *e*Pn **Pn 06 00 36.1 +1.8**
comp=N,1.7nm,0.3s
BIOA Bad Ischl, Aus 9.52 331 *e*Pn **Pn 06 00 35.9 +0.3**
comp=N,3.4nm,0.4s
SALO Salr 9.52 313 Pn Pn 06 00 35.9 +0.3
KEST Kesra 9.64 250 P **Pn 06 00 40.3 +2.9**
comp=N,0.6nm,0.3s,baz=50,slow=7.7,SNR=5.5
comp=N,6.3nm,0.8s
LESA Schwarzleotal 9.69 327 *i* Pn **Pn 06 00 38.3 +0.4**
comp=N,0.9nm,0.2s
LESA *i* Sn **Sn 06 02 23.0 -3.3**
comp=N,2.2nm,0.4s
WTTA Wattenberg 10.03 323 *e*Pn **Pn 06 00 44.1 +1.4**
comp=N,1.0nm,0.2s
WTTA *i* Sn **Sn 06 02 32.1 -2.9**
comp=N,9.8nm,0.8s
WATA Walderalm 10.11 323 *i* Pn **Pn 06 00 45.1 +1.3**
comp=N,0.4nm,0.1s
WATA *e*Sn **Sn 06 02 35.6 -1.2**
comp=N,2.4nm,0.3s
BRTR Keskin Array B 10.13 85 P **Pn 06 00 47.4 +3.3**
comp=N,0.1nm,0.3s,baz=283,slow=13,SNR=2.3
comp=N,0.6nm,0.4s
SQTA Sankt Quirin 10.20 322 *i* Pn **Pn 06 00 45.1 0.0**
comp=N,1.7nm,0.2s
SQTA *e*Sn **Sn 06 02 36.0 -3.0**
comp=N,3.6nm,0.3s
FETA Feichten 10.30 319 *i* Pn **Pn 06 00 45.0 -1.4**
comp=N,0.7nm,0.5s
FETA *i* Sn **Sn 06 02 39.4 -2.1**
comp=N,1.3nm,0.6s
MOTA Moosalm 10.34 322 *i* Pn **Pn 06 00 46.9 -0.1**
comp=N,2.3nm,0.4s
MOTA *i* Sn **Sn 06 02 40.1 -2.3**
comp=N,6.0nm,0.8s
GERES GERESS Array B 10.47 334 Pn **Pn 06 00 49.3 +0.6**
GERES GERESS Array B 10.47 334 P **Pn 06 00 50.0 +1.3**
comp=N,0.3nm,0.3s,baz=154,slow=18,SNR=2.7
GERES S **Sn 06 02 42.4 -3.2**
comp=N,0.9nm,0.5s,baz=151,slow=25,SNR=2.5
comp=N,0.5nm,0.3s
RETA Reutte 10.61 321 *e*Pn **Pn 06 00 51.0 +0.5**
comp=N,1.1nm,0.5s
TUE Stuetta 10.69 314 Pn Pn 06 00 52.2 +0.5
KHC Kasperske Hory 10.76 335 Pn Pn 06 00 53.4 +0.8
SENIN Lac Senin/Sane 11.81 309 Pn Pn 06 01 06.9 -0.2
NACGM Naroch 15.91 13 *e*P **Pn 06 02 04.4 +2.2**
comp=Z,8.0nm,0.9s,baz=198
KBZ Khabaz 17.23 69 P **P 06 02 20.6 +0.1**
comp=Z,0.1nm,0.3s,baz=266,slow=4.6,SNR=3.6
comp=Z,3.5nm,1.0s
ESDC Sonseca Array 18.84 278 P **Pn 06 02 40.9 +1.9**
comp=Z,0.1nm,0.3s,baz=80,slow=10,SNR=6.1
comp=Z,1.7nm,0.9s
OBN Obninsk 18.90 29 LR LR 06 10 09.2
comp=Z,198nm,18.1s,baz=216,slow=38
HFS Hagfors 21.02 350 P **P 06 03 00.9 -1.0**
comp=Z,3.5nm,0.7s,baz=166,slow=9.2,SNR=11
comp=Z,3.5nm,0.7s
NAO01 NORSAR Array S 22.12 347 P **P 06 03 13.6 -0.1**
FINES FINESS Array B 22.17 7 P **P 06 03 12.6 -1.5**
comp=Z,2.3nm,0.7s,baz=186,slow=7.8,SNR=12
comp=Z,2.3nm,0.7s
NC405 NORSAR Array S 22.25 349 P **P 06 03 14.8 -0.2**
NC405 IAmb IAmb 06 03 26.6
comp=Z,6.0nm,0.9s
NB2 NORSAR Subarra 22.25 348 P **P 06 03 14.2 -0.9**
comp=Z,0.8nm,0.7s,baz=165,slow=11
NOA NORSAR Array B 22.25 348 P **P 06 03 15.2 0.0**
comp=Z,1.9nm,0.8s,baz=148,slow=9.8,SNR=5.7
comp=Z,1.9nm,0.8s
EKA Eskdalemuir Ar 22.30 323 P **P 06 03 15.7 0.0**
comp=Z,2.3nm,0.6s,baz=122,slow=11,SNR=14
comp=Z,2.3nm,0.6s
ESK Eskdalemuir 22.31 323 P **P 06 03 16.0 +0.2**
ESK IAmb IAmb 06 03 18.1
comp=Z,22nm,1.2s
EKB Eskdalemuir 22.32 323 P **P 06 03 15.9 +0.1**
NC303 NORSAR Array S 22.41 348 P **P 06 03 16.3 -0.4**
NC204 NORSAR Array S 22.55 348 P **P 06 03 17.8 -0.5**
NC204 IAmb IAmb 06 03 42.4
comp=Z,6.9nm,0.9s
BELG Belogornoye 22.63 47 LR LR 06 13 15.5
comp=Z,89nm,19.4s,baz=138,slow=40
GEYT Alibeck 29.24 81 P **P 06 04 20.2 -0.1**
GEYT IAmb IAmb 06 04 21.8
comp=Z,4.3nm,0.9s
GYA0B ALIBECK ARRAY 29.24 81 P **P 06 04 21.1 +0.8**
GYA0B IAmb IAmb 06 04 21.8
comp=Z,5.4nm,0.8s
ABKAR Akbulak array 29.49 58 P **P 06 04 21.6 -0.7**
ARCES ARCESS Array B 30.14 3 P **P 06 04 26.2 -1.7**
comp=Z,1.1nm,0.6s,baz=193,slow=11,SNR=6.8
comp=Z,1.1nm,0.6s
TOA0 Torodi Ar. Sit 31.12 217 P **P 06 04 36.4 -0.6**
TOA0 IAmb IAmb 06 04 43.2
comp=Z,5.1nm,1.0s
TORD Torodi Ar. Bea 31.12 217 P **P 06 04 37.8 +0.8**
comp=Z,3.5nm,0.7s,baz=34,slow=11,SNR=12
HRA Herat 33.52 86 P **P 06 04 58.5 +0.3**
HRA IAmb IAmb 06 04 58.6
comp=Z,3.8nm,0.7s
PCALD Caldeiras da R 35.65 282 *e*S S 06 10 38.7 -13
BRVK Borovoye 36.18 51 P **P 06 05 20.4 -0.2**
BRVK IAmb IAmb 06 05 20.7
comp=Z,2.7nm,1.1s
BVAR Borovoye Array 36.24 51 P **P 06 05 21.0 -0.2**
comp=Z,0.7nm,0.7s,baz=234,slow=5.0,SNR=3.6
comp=Z,0.7nm,0.7s
KK31 Karatay Array 37.26 68 P **P 06 05 29.1 -0.9**
KKAR Karatay Array 37.26 68 P **P 06 05 29.8 -0.3**
KKAR Karatay Array 37.26 68 P **P 06 05 29.1 -1.0**
KKAR IAmb IAmb 06 05 38.0
comp=Z,1.6nm,0.6s
SIMJ Simiganj 37.28 75 P **P 06 05 29.8 -0.6**
SPA0 Spitsbergen Ar 38.76 359 P **P 06 05 43.2 +1.0**
MBAR Mbarara 41.06 164 P **P 06 06 02.8 +0.6**
MBAR IAmb IAmb 06 06 12.0
comp=Z,7.8nm,0.7s
KURBB Kurchatov Arra 41.42 55 P **P 06 06 03.6 -1.0**
comp=Z,0.9nm,0.7s,baz=285,slow=9.5,SNR=6.6
comp=Z,0.9nm,0.7s
MK31 Makanchi Array 44.59 60 P **P 06 06 29.5 -0.9**
MK31 IAmb IAmb 06 06 29.8
comp=Z,3.1nm,0.5s
MKAR Makanchi Array 44.59 60 P **P 06 06 29.4 -1.0**
comp=Z,3.9nm,0.4s,baz=281,slow=7.4,SNR=108
MKAR PcP **PcP 06 08 12.5 -0.6**
comp=Z,0.4nm,0.6s,baz=276,slow=3.4,SNR=2.7
comp=Z,3.9nm,0.4s
NRIK Noril'sk 45.56 27 P **P 06 06 38.8 +1.1**
NRIK IAmb IAmb 06 06 39.4
comp=Z,4.0nm,0.8s
NRIK Noril'sk 45.56 27 P **P 06 06 38.4 +0.7**
comp=Z,2.1nm,0.3s,baz=247,slow=2.5,SNR=4.1
comp=Z,2.1nm,0.3s
SCHQ Schefferville 57.44 317 P **P 06 08 06.3 -0.5**
comp=Z,1.2nm,0.8s,baz=56,slow=3.6,SNR=1.3
comp=Z,1.2nm,0.8s
SONM Songino Array 59.59 51 P **P 06 08 21.1 -1.0**
comp=Z,0.7nm,0.9s,baz=264,slow=8.8,SNR=4.9
comp=Z,0.7nm,0.9s
INK Inuvik 70.69 350 P **P 06 09 32.5 -1.1**
comp=Z,1.0nm,1.0s,baz=4.9,slow=12,SNR=3.6
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 72.08 340 P **P 06 09 41.8 -0.3**
comp=Z,0.2nm,0.5s,baz=41,slow=11,SNR=5.6
comp=Z,0.2nm,0.5s
ULM Lac du Bonnet 74.58 323 P **P 06 09 57.1 +0.1**
comp=Z,1.4nm,0.6s,baz=30,slow=17,SNR=3.9
comp=Z,1.4nm,0.6s
PETK Petropavlovsk- 80.54 25 LR LR 06 50 15.4
comp=Z,46nm,18.8s,baz=109,slow=39
WRA Warramunga Arr 120.59 91 PKP **PKPdf 06 17 09.1 -1.3**
comp=Z,0.3nm,0.8s,baz=333,slow=1.8,SNR=0.9
ASAR Alice Springs 122.32 95 PKP **PKPdf 06 17 12.6 -1.1**
comp=Z,0.5nm,0.6s,baz=325,slow=1.3,SNR=6.7

IDC 12 06:05:48.3±2.6, 54°18N×86°34E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=19.8km s-min=11.8km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**256**	I	I		06 12 20.0	
	baz=73,slow=338,SNR=3.0							
ZALV	**Zalesovo Beam**	**0.93**	**256**	Pg	Pg		06 06 04.5	-1.5
	1.8nm,0.3s,baz=73,slow=17,SNR=22							
ZALV				Lg	Lg		06 06 19.8	
	4.1nm,0.3s,baz=78,slow=31,SNR=14							
KURBB	**Kurchatov Arra**	**5.96**	**236**	Pn	Pn		06 07 18.8	+1.1
	0.1nm,0.3s,baz=53,slow=14,SNR=8.0							
KURBB				Lg	Lg		06 08 57.0	
	baz=52,slow=33,SNR=1.8							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**7.84**	**201**	Pn	Pn		06 07 44.6	+1.1
	0.2nm,0.3s,baz=21,slow=13,SNR=5.9							
MKAR				Sn	Sn		06 09 06.7	-6.2
	baz=24,slow=26,SNR=1.8							
MKAR				Lg	Lg		06 09 55.0	
	baz=19,slow=34,SNR=3.4							
	0.2nm,0.3s							

IDC 12 06:29:07.3±3.5, 55°50N×86°12E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=26.7km s-min=25.9km az=35.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**206**	I	I		06 41 10.0	
	0.1nm,0.8s,baz=22,slow=336,SNR=4.2							
ZALV	**Zalesovo Beam**	**1.72**	**206**	Pg	Pn		06 29 37.1	-1.3
	4.1nm,0.3s,baz=28,slow=15,SNR=29							
ZALV				Lg	Lg		06 30 02.5	
	4.1nm,0.3s,baz=25,slow=28,SNR=11							
KURBB	**Kurchatov Arra**	**6.69**	**226**	Pn	Pn		06 30 47.1	+0.5
	0.1nm,0.3s,baz=45,slow=13,SNR=3.0							
KURBB				Lg	Lg		06 32 40.7	
	baz=43,slow=30,SNR=1.3							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**9.04**	**197**	Pn	Pn		06 31 18.9	0.0
	0.1nm,0.3s,baz=21,slow=13,SNR=5.0							
MKAR				Lg	Lg		06 33 52.1	
	baz=21,slow=30,SNR=2.2							
	0.3nm,0.6s							

IDC 12 06:35:16.7±3.2, 54°62N×86°38E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=24.5km s-min=15.2km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.13**	**234**	I	I		06 42 50.0	

baz=53,slow=326,SNR=2.0
ZALV Zalesovo Beam 1.13 234 Pg Pg 06 35 37.6 -0.8
1.6nm,0.3s,baz=54,slow=17,SNR=10
ZALV Lg Lg 06 35 54.0
3.1nm,0.3s,baz=52,slow=27,SNR=15
KURBB Kurchatov Arra 6.23 233 Pn Pn 06 36 50.4 +0.5
0.1nm,0.3s,baz=51,slow=14,SNR=5.4
KURBB Lg Lg 06 38 34.6
baz=54,slow=33
0.6nm,0.4s
MKAR Makanchi Array 8.25 200 Pn Pn 06 37 18.6 +1.0
0.1nm,0.3s,baz=18,slow=12,SNR=5.1
MKAR Sn Sn 06 38 51.1 -0.3
0.1nm,0.3s,baz=22,slow=28,SNR=3.9
MKAR Lg Lg 06 39 36.5
baz=24,slow=30,SNR=2.8
0.2nm,0.3s

IDC 12 06:45:58.2±4.7, 5°72'S×150°75'E, h0km, mb3.6/3, mbtmp3.7/3, Error ellipse: s-maj=134.4km s-min=33.7km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.32**	**227**	P	P	06 50 47.1	+0.2
	0.8nm,0.3s,baz=51,slow=10,SNR=17						
	0.8nm,0.3s						
ASAR	**Alice Springs**	**24.12**	**221**	P	P	06 51 15.2	-0.8
	1.5nm,0.3s,baz=53,slow=8.1,SNR=26						
	1.5nm,0.3s						
SONM	**Songino Array**	**66.03**	**329**	P	P	06 56 47.7	+0.7
	0.1nm,0.5s,baz=124,slow=9.2,SNR=1.6						
	0.1nm,0.5s						

IDC 12 06:59:53.1±2.6, 53°67'N×87°05'E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=24.8km s-min=13.2km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**283**	I	I	07 08 20.0	
	0.1nm,0.7s,baz=101,slow=337,SNR=17						
ZALV	**Zalesovo Beam**	**1.35**	**283**	Pg	Pg	07 00 16.9	-2.1
	1.2nm,0.3s,baz=104,slow=17,SNR=18						
ZALV				Lg	Lg	07 00 36.5	
	1.6nm,0.3s,baz=104,slow=29,SNR=10						
KURBB	**Kurchatov Arra**	**6.07**	**243**	Pn	Pn	07 01 25.8	+1.8
	0.1nm,0.3s,baz=60,slow=14,SNR=2.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.53**	**206**	Pn	Pn	07 01 45.2	+1.1
	0.2nm,0.3s,baz=28,slow=14,SNR=11						
MKAR				Sn	Sn	07 03 10.1	0.0
	0.1nm,0.3s,baz=21,slow=30,SNR=7.2						
MKAR				Lg	Lg	07 03 52.5	
	baz=24,slow=29,SNR=3.4						
	0.2nm,0.3s						

IDC 12 07:04:31.8±2.9, 53°59N×87°67E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=25.3km s-min=15.4km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**283**	I	I	07 15 10.0	
	0.1nm,1.0s,baz=99,slow=328,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.73**	**283**	Pn	Pn	07 05 02.9	-0.2
	1.0nm,0.3s,baz=102,slow=16,SNR=11						
ZALV				Lg	Lg	07 05 26.5	
	1.2nm,0.3s,baz=98,slow=30,SNR=8.9						
KURBB	**Kurchatov Arra**	**6.37**	**246**	Pn	Pn	07 06 07.8	+1.0
	baz=62,slow=14,SNR=2.0						
KURBB				Lg	Lg	07 07 52.7	
	baz=60,slow=31,SNR=3.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	Pn	07 06 25.5	+1.4
	0.1nm,0.3s,baz=23,slow=11,SNR=4.7						
MKAR				Sn	Sn	07 07 50.8	-0.5
	baz=30,slow=24						
MKAR				Lg	Lg	07 08 30.7	
	baz=31,slow=28,SNR=6.5						
	0.3nm,0.5s						

NNC 12 07:10:23.7±1.1, 50°08N×78°44E, h0km, mb3.7, mpv3.3, 16C-7D, Error ellipse: s-maj=10.3km s-min=5.6km az=88.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.50**	**6**	⇑P	Pg	07 10 32.8	-0.5
KUR07				⇓S	Sb	07 10 41.7	-1.7
KUR06	**Kurchatov Arra**	**0.52**	**6**	⇑P	Pg	07 10 33.2	-0.6
KUR06				⇑S	Sg	07 10 42.0	+1.5
KUR14	**Kurchatov Arra**	**0.54**	**11**	⇑P	Pg	07 10 33.2	-0.9
KUR14				⇑S	Sg	07 10 41.9	+0.8
KUR15	**Kurchatov Arra**	**0.54**	**8**	⇑P	Pg	07 10 33.3	-0.8
KUR15				⇑S	Sg	07 10 42.2	+1.0
KURBB	**Kurchatov Arra**	**0.54**	**6**	⇑P	Pg	07 10 33.5	-0.6
	19nm,0.3s						
KURBB				⇓S	Sg	07 10 42.5	+1.4
	50nm,0.6s						
KUR16	**Kurchatov Arra**	**0.55**	**4**	⇓P	Pg	07 10 33.7	-0.5
KUR16				⇓S	Sb	07 10 43.0	-1.5
KUR17	**Kurchatov Arra**	**0.55**	**2**	⇑P	Pg	07 10 34.0	-0.2
KUR17				⇑S	Sb	07 10 43.6	-1.1
KUR05	**Kurchatov Arra**	**0.56**	**6**	⇑P	Pg	07 10 33.4	-1.1
KUR05				⇑S	Sg	07 10 42.7	+0.8
KUR04	**Kurchatov Arra**	**0.58**	**7**	⇑P	Pg	07 10 34.0	-0.9
KUR04				⇑S	Sg	07 10 43.6	+1.2
KURK	**Kurchatov**	**0.64**	**10**	⇑P	Pg	07 10 34.8	-1.3
	8.9nm,0.5s						
KURK				⇓S	Sg	07 10 45.4	+1.0
	8.7nm,0.4s						
SEM	**Semipalatinsk**	**1.21**	**74**	P	Pn	07 10 50.4	+2.4
	13nm,0.1s						
SEM				S	Sb	07 11 03.4	-0.4
	30nm,0.2s						
BRZS	**Berezniki**	**3.71**	**271**	Pg	Pg	07 11 34.8	0.0
	3.2nm,0.4s						
BRZS				Lg	Lg	07 12 20.2	
	5.9nm,0.5s						
MAKZ	**Makanchi**	**4.04**	**143**	⇑Lg	Lg	07 12 22.0	
	5.1nm,0.5s						
MK31	**Makanchi Array**	**4.17**	**141**	Pg	Pb	07 11 35.0	-3.0
	0.4nm,0.2s,baz=333,slow=15,SNR=13						
MK31				⇓Lg	Lg	07 12 27.4	
	5.9nm,0.5s,baz=325,slow=26,SNR=16						
OTUK	**Ortayu**	**4.41**	**248**	Pg	Pg	07 11 51.6	+3.6
	1.3nm,0.1s						
OTUK				Lg	Lg	07 12 48.0	
	2.3nm,0.2s						
OTUK	**Ortayu**	**4.41**	**248**	⇓Lg	Lg	07 12 45.9	
	3.8nm,0.6s						
KAPS	**Kapalarasan**	**4.84**	**172**	Pg	Pg	07 11 54.0	-2.4
	2.7nm,0.2s						
KAPS				Lg	Lg	07 12 51.6	
	8.5nm,0.4s						
ZSN	**Zaisan**	**5.00**	**119**	Pg	Pb	07 11 55.6	+3.6
	2.9nm,0.2s						
ZSN				Lg	Lg	07 12 55.1	
	3.0nm,0.6s						
KNOS	**Konyrlen**	**5.75**	**175**	Pg	Pb	07 12 08.8	+3.9
	1.3nm,0.3s						
KNOS				Lg	Lg	07 13 17.0	
	2.7nm,0.5s						
DJR	**Jarkent**	**5.83**	**170**	Pg	Pb	07 12 10.0	+3.8
	1.6nm,0.4s						
DJR				Lg	Lg	07 13 19.1	
	1.6nm,0.5s						
ARXS	**Arharly**	**5.89**	**184**	Pg	Pb	07 12 11.6	+4.4
	1.4nm,0.2s						
ARXS				Lg	Lg	07 13 21.6	
	4.5nm,0.5s						
KTBS	**Karatobe**	**6.49**	**191**	Pg	Pg	07 12 24.9	-3.0
	0.7nm,0.4s						
KTBS				Lg	Lg	07 13 44.8	
	3.3nm,0.4s						
PDGK	**Podgornoye**	**6.79**	**173**	Pg	Pg	07 12 30.0	-3.8
	0.7nm,0.8s						
PDGK				Lg	Lg	07 13 53.6	
	2.2nm,1.0s						

IDC 12 07:15:40.4±1.3, 49°79N×81°50E, h0km, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=18.0km s-min=9.4km az=53.0.
SOME 12 07:15:43.0, 49°42N×80°87E, h15km
NNC 12 07:15:43.6±1.2, 49°42N×81°17E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=22.7km s-min=6.5km az=56.0, Suspected Mining explosion.
ISC 12 07:15:41.7±0.9, 49°36N±0°06×81°14E±0°07, h0km, n13, σ0s47/17, 3C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEM	**Semipalatinsk**	**1.19**	**332**	P	Pn	07 16 06.3	+0.4
	16nm,0.1s						
SEM				S	Sb	07 16 21.6	+0.2
	17nm,0.1s						
SEM	**Semipalatinsk**	**1.19**	**332**	*e*P	Pb	07 16 05.4	0.0
	16nm,0.1s						
SEM				*e*S	Sg	07 16 19.8	-0.3
	17nm,0.1s						
KURBB	**Kurchatov Arra**	**2.10**	**308**	⇑Pn	Pn	07 16 18.0	-0.1
	9.4nm,0.8s						
KURBB				⇓Sn	Sg	07 16 48.9	-0.3
	11nm,0.3s						
KURBB	**Kurchatov Arra**	**2.10**	**308**	Pg	Pn	07 16 18.3	+0.2
	0.2nm,0.3s,baz=112,slow=18,SNR=23						
KURBB				Lg	Lg	07 16 45.4	
	0.6nm,0.3s,baz=115,slow=29,SNR=11						
KURK	**Kurchatov**	**2.11**	**311**	⇑Pn	Pn	07 16 17.7	-0.6
	7.6nm,0.7s						
KURK				⇓Sn	Sb	07 16 47.6	-0.1
	5.1nm,0.3s						
MAKZ	**Makanchi**	**2.62**	**167**	⇓Pg	Pg	07 16 31.7	-0.2
	0.5nm,0.3s						
MAKZ				⇓Lg	Lg	07 17 10.2	
	0.3nm,0.2s						
MK31	**Makanchi Array**	**2.68**	**163**	Pg	Pb	07 16 31.4	+0.7
	0.1nm,0.2s,baz=355,slow=13,SNR=16						
MK31				⇑Lg	Lg	07 17 09.9	
	0.4nm,0.2s,baz=359,slow=26,SNR=11						
MKAR	**Makanchi Array**	**2.68**	**163**	Pn	Pb	07 16 31.3	+0.6
	0.4nm,0.3s,baz=353,slow=14,SNR=8.9						
MKAR				Sn	Sg	07 17 06.9	-1.0
	0.3nm,0.3s,baz=351,slow=24,SNR=5.5						
	0.5nm,0.3s						
ZSN	**Zaisan**	**3.14**	**126**	Pg	Pb	07 16 38.7	+0.3
	1.3nm,0.2s						
ZSN				Lg	Lg	07 17 17.0	
	12nm,0.8s						
ZSN	**Zaisan**	**3.14**	**126**	*e*P	Pb	07 16 38.7	+0.3
	1.3nm,0.2s						
ZSN				*e*S	Sb	07 17 17.0	-0.1
	12nm,0.5s						
ZALV	**Zalesovo Beam**	**5.13**	**25**	Pn	Pn	07 16 52.4	-7.4
	0.1nm,0.3s,baz=210,slow=13,SNR=2.4						
ZALV				Lg	Lg	07 18 07.0	
	0.4nm,0.3s,baz=202,slow=23,SNR=9.5						
	0.4nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.13**	**25**	I	I	07 42 45.0	
	0.1nm,1.0s,baz=205,slow=326,SNR=4.9						
OTUK	**Ortayu**	**5.92**	**262**	Pg	Pg	07 17 35.3	+0.2
	0.6nm,0.5s						
OTUK				Lg	Lg	07 18 53.9	
	1.8nm,0.8s						

IDC 12 07:25:04.4±77.0, 21°51S×171°77W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1487.0km s-min=213.3km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.65**	**246**	P	P	07 33 02.9	0.0
	0.9nm,0.5s,baz=97,slow=12,SNR=3.5						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**49.95**	**257**	P	P	07 34 00.5	-0.1
	1.2nm,0.7s,baz=95,slow=8.0,SNR=18						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**50.22**	**262**	P	P	07 34 02.4	-0.2
	0.9nm,0.6s,baz=101,slow=7.7,SNR=19						
	0.9nm,0.6s						

IDC 12 07:26:27.6±2.5, 56°18N×149°32W, h0km, mb3.3/2, mbtmp3.4/7, ML3.3/5, MS2.8/4, Error ellipse: s-maj=38.6km s-min=25.6km az=176.0
NEIC 12 07:26:28.3±1.7, 56°22N±0°08×149°5W±0°1, h22km±10km, ML3.6/52, ML3.5(AEIC), Error ellipse: s-maj=12.8km s-min=8.1km az=163.0
AEIC 12 07:26:31.4±1.9, 56°33N±0°08×149°6W±0°1, h1km±7km, Error ellipse: s-maj=11.8km s-min=7.8km az=159.0
ISC 12 07:26:28.1±1.2, 56°33N±0°08×149°49W±0°06, h10km, n229, σ1s12/233, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.23**	**312**	Pn	Pn	07 27 04.3	-0.8
KDAK				Sn	Sn	07 27 30.8	-1.9
KDAK	**Kodiak Island**	**2.23**	**312**	Pn	Pn	07 27 05.0	0.0
	1.9nm,0.3s,baz=133,slow=8.4,SNR=65						
KDAK				Sn	Sn	07 27 29.7	-3.0
	9.6nm,0.3s,baz=52,slow=22,SNR=8.3						
KDAK				LR	LR	07 28 04.8	
	comp=Z,91nm,18.5s,baz=121,slow=40						
	14nm,0.7s						
OHAK	**Old Harbor**	**2.27**	**295**	Pn	Pn	07 27 04.4	-1.2
OHAK				Sn	Sn	07 27 31.3	-2.3
OHAK	**Old Harbor**	**2.27**	**295**	P	Pn	07 27 04.7	-1.0
OHAK	**Old Harbor**	**2.27**	**295**	P	Pn	07 27 04.6	-1.0
	baz=112						
OHAK				S	Sn	07 27 30.5	-3.2
	baz=112						
SII	**Sitkinak Islan**	**2.62**	**277**	Pn	Pn	07 27 07.8	-2.6
SII				Sn	Sn	07 27 39.7	-2.4
SII				IAML		07 27 40.9	
	comp=E,207nm,1.1s						
SII				IAML		07 27 45.4	
	comp=N,258nm,0.8s						
SII	**Sitkinak Islan**	**2.62**	**277**	P	Pn	07 27 09.5	-0.8
	baz=93						
SII				S	Sn	07 27 39.4	-2.8
	baz=93						
Q20K	**Shuyak Island**	**2.77**	**327**	P	Pn	07 27 12.4	-0.1
	baz=145						
Q20K				S	Sn	07 27 44.7	-1.3
	baz=145						
SYI	**Shuyak Island**	**2.77**	**327**	Pn	Pn	07 27 11.5	-1.0
SYI				Sn	Sn	07 27 45.7	-0.3
CNPM	**China Poot**	**3.34**	**345**		Pn	07 27 19.9	-0.4
CNPM					Sn	07 27 58.6	-1.4
Q19K	**Cape Douglas,**	**3.43**	**321**	Pn	Pn	07 27 22.9	+1.3
Q19K				IAML		07 28 12.3	
	comp=N,249nm,0.8s						
Q19K	**Cape Douglas,**	**3.43**	**321**	P	Pn	07 27 22.0	+0.4
	baz=138						
BRSE	**Bradley Lake S**	**3.49**	**350**		Pn	07 27 21.8	-0.5
BRSE					Sn	07 28 02.1	-1.6
BRSE	**Bradley Lake S**	**3.49**	**350**	P	Pn	07 27 21.8	-0.5
	baz=169						
BRSE				S	Sn	07 28 02.1	-1.6
	baz=169						
KAHG	**Katmai Hook Gl**	**3.49**	**311**		Pn	07 27 21.9	-0.5
BRLK	**Bradley Lake**	**3.53**	**348**	Pn	Pn	07 27 22.2	-0.7
BRLK				IAML		07 28 12.2	
	comp=N,64nm,0.9s						
HOM	**Homer**	**3.53**	**342**	Pn	Pn	07 27 22.6	-0.3
Q23K	**Middleton Isla**	**3.53**	**27**	Pn	Pn	07 27 22.0	-0.9
Q23K				IAML		07 27 59.5	
	comp=E,174nm,1.5s						
Q23K				IAML		07 28 36.9	
	comp=N,124nm,1.4s						
Q23K	**Middleton Isla**	**3.53**	**27**	P	Pn	07 27 21.9	-1.1
	baz=210						
MID	**Middleton Isla**	**3.54**	**27**	Pn	Pn	07 27 21.8	-1.1
MID				IAML		07 28 12.8	
	comp=E,168nm,1.3s						
MID				IAML		07 28 56.2	
	comp=N,112nm,1.4s						
P23K	**Montague Islan**	**3.84**	**16**		Pn	07 27 26.6	-0.6
P23K	**Montague Islan**	**3.84**	**16**	P	Pn	07 27 26.6	-0.6
	baz=198						
P19K	**Oil Pt**	**3.88**	**331**	Pn	Pn	07 27 27.7	-0.1
P19K				IAML		07 28 20.1	
	comp=E,140nm,1.3s						
P19K				IAML		07 28 26.8	
	comp=N,123nm,1.0s						

P19K	**Oil Pt**	**3.88**	**331**	P	Pn	07 27 28.0	+0.2
	baz=148						
CNTC	**Contact Creek**	**3.98**	**302**		Pn	07 27 29.3	+0.2
Q17K	**Contact Creek**	**3.98**	**302**	P	Pn	07 27 29.3	+0.2
	baz=117						
O20K	**Slope Mountain**	**4.11**	**338**		Pn	07 27 30.9	-0.1
O20K	**Slope Mountain**	**4.11**	**338**	P	Pn	07 27 30.9	-0.1
	baz=156						
O22K	**Cooper Landing**	**4.17**	**358**		Pn	07 27 30.8	-0.8
SLKM	**Skilak Lake**	**4.21**	**355**		Pn	07 27 31.8	-0.5
P18K	**Big Mountain,**	**4.34**	**317**	Pn	Pn	07 27 33.5	-0.6
P18K	**Big Mountain,**	**4.34**	**317**	P	Pn	07 27 34.0	-0.1
	baz=133						
HIN	**Hinchinbrook I**	**4.37**	**20**	Pn	Pn	07 27 34.2	-0.3
HIN				IAML		07 28 29.9	
	comp=N,115nm,0.9s						
HIN				IAML		07 28 30.9	
	comp=E,91nm,1.5s						
RED	**Redoubt Volcan**	**4.45**	**339**		Pn	07 27 34.5	-1.1
RSO	**Redoubt South**	**4.49**	**339**		Pn	07 27 36.0	-0.2
KAIM	**Kayak Island**	**4.50**	**35**	Pn	Pn	07 27 36.6	+0.4
KAIM	**Kayak Island**	**4.50**	**35**	P	Pn	07 27 36.8	+0.6
	baz=219						
RDT	**Redoubt**	**4.53**	**341**		Pn	07 27 35.6	-1.0
CAPN	**Captain Cook N**	**4.54**	**350**	Pn	Pn	07 27 37.7	+1.0
O19K	**Port Alsworth**	**4.64**	**329**	Pn	Pn	07 27 36.5	-1.7
O19K				IAML		07 28 44.1	
	comp=N,112nm,0.5s						
O19K	**Port Alsworth**	**4.64**	**329**	P	Pn	07 27 38.3	+0.1
	baz=145						
O18K	**Koktuh Hills**	**4.66**	**322**		Pn	07 27 37.0	-1.4
O18K				IAML		07 28 45.7	
	comp=N,34nm,0.8s						
O18K				IAML		07 28 59.2	
	comp=E,29nm,1.3s						
EYAK	**Cordova Ski Ar**	**4.67**	**23**		Pn	07 27 37.6	-0.9
EYAK	**Cordova Ski Ar**	**4.67**	**23**	P	Pn	07 27 38.6	+0.1
	comp=E,29nm,0.5s						
EYAK	**Cordova Ski Ar**	**4.67**	**23**	P	Pn	07 27 38.4	-0.1
	baz=207						
P17K	**Kvichak River**	**4.70**	**311**		Pn	07 27 39.4	+0.5
P17K	**Kvichak River**	**4.70**	**311**	P	Pn	07 27 39.4	+0.5
	baz=125						
RC01	**Rabbit Creek A**	**4.78**	**359**		Pn	07 27 40.0	-0.1
RC01				IAML		07 28 38.1	
	comp=E,34nm,0.4s						
RC01				IAML		07 28 43.5	
	comp=N,33nm,0.9s						
RAGM	**Ragged Mountai**	**4.80**	**30**	Pn	Pn	07 27 39.2	-1.2
GOAT	**Goat Mountain**	**4.94**	**28**		Pn	07 27 42.5	+0.1
N20K	**Mount Spurr**	**5.09**	**345**	P	Pn	07 27 43.2	-1.2
	baz=163						
SPCR	**Spurr Chakacha**	**5.09**	**345**		Pn	07 27 43.2	-1.2
BERG	**Berg Lake**	**5.09**	**34**		Pn	07 27 42.8	-1.6
BERG				IAML		07 28 48.1	
	comp=N,74nm,0.8s						
KNK	**Knik Glacier**	**5.13**	**6**	Pn	Pn	07 27 46.1	+1.2
KNK				IAML		07 28 49.0	
	comp=N,26nm,0.8s						
KNK				IAML		07 28 50.5	
	comp=E,28nm,0.5s						
KNK	**Knik Glacier**	**5.13**	**6**	P	Pn	07 27 44.6	-0.2
	baz=187						
SPCG	**Spurr Capps Gl**	**5.15**	**346**		Pn	07 27 45.0	-0.3
SUA	**Susitna One**	**5.19**	**353**	Pn	Pn	07 27 45.0	-0.8
SUA				IAML		07 28 56.6	
	comp=E,18nm,1.0s						
SUA				IAML		07 29 11.2	
	comp=N,18nm,1.4s						
N19K	**Bonanza Creek**	**5.20**	**332**	Pn	Pn	07 27 46.4	+0.4
N19K	**Bonanza Creek**	**5.20**	**332**	P	Pn	07 27 45.2	-0.7
	baz=148						
SNH	**Sunshine Point**	**5.22**	**40**		Pn	07 27 44.4	-1.7
SNH				IAML		07 28 58.7	
	comp=E,64nm,1.2s						
SNH				IAML		07 29 22.4	
	comp=N,55nm,1.4s						
KHIT	**Khitrov Hills**	**5.27**	**36**		Pn	07 27 46.8	-0.1
PMR	**Palmer**	**5.29**	**2**	Pn	Pn	07 27 46.4	-0.5
PMR				IAML		07 28 51.6	
	comp=E,18nm,0.7s						
PMR				IAML		07 29 04.2	
	comp=N,20nm,1.0s						
PMR	**Palmer**	**5.29**	**2**	P	Pn	07 27 48.3	+1.3
PMR	**Palmer**	**5.29**	**2**	P	Pn	07 27 46.8	-0.1
	baz=183						
BMRM	**Bremner River**	**5.31**	**27**		Pn	07 27 45.6	-1.7
BMRM	**Bremner River**	**5.31**	**27**	P	Pn	07 27 47.2	-0.1
	baz=211						
STLK	**Strandline Lak**	**5.33**	**348**		Pn	07 27 47.2	-0.4
WAX	**Waxell Ridge**	**5.41**	**37**		Pn	07 27 47.5	-1.3
M22K	**Willow**	**5.45**	**357**	Pn	Pn	07 27 49.0	-0.2
GHO	**Glory Hole Cre**	**5.47**	**3**		Pn	07 27 49.8	+0.2
KLU	**Klutina**	**5.50**	**18**		Pn	07 27 49.4	-0.7
KLU	**Klutina**	**5.50**	**18**	P	Pn	07 27 49.9	-0.1
	baz=202						
BARK	**Barkley Ridge**	**5.50**	**39**		Pn	07 27 50.2	+0.2
N18K	**Kilae Creek**	**5.50**	**325**	Pn	Pn	07 27 51.0	+1.0
N18K	**Kilae Creek**	**5.50**	**325**	P	Pn	07 27 49.2	-0.8
	baz=140						
SML	**Sawmill**	**5.53**	**6**		Pn	07 27 50.7	+0.3
SML	**Sawmill**	**5.53**	**6**	P	Pn	07 27 50.4	0.0
	baz=187						
MESA	**MESA**	**5.54**	**43**	Pn	Pn	07 27 49.6	-1.2
CRQM	**Cirque**	**5.55**	**34**		Pn	07 27 50.7	0.0
M23K	**Glacier View**	**5.56**	**9**		Pn	07 27 51.2	+0.4
M23K	**Glacier View**	**5.56**	**9**	P	Pn	07 27 51.2	+0.4
	baz=191						
CRQE	**Cirque**	**5.56**	**34**	P	Pn	07 27 50.5	-0.4
	baz=220						
O16K	**Kokwok River B**	**5.63**	**309**	Pn	Pn	07 27 51.6	-0.1
O16K	**Kokwok River B**	**5.63**	**309**	P	Pn	07 27 51.8	+0.1
	baz=122						
SCM	**Sheep Creek Mo**	**5.63**	**11**	Pn	Pn	07 27 52.2	+0.4
SCM	**Sheep Creek Mo**	**5.63**	**11**	P	Pn	07 27 52.4	+0.5
	baz=193						
TGL	**Tana Glacier**	**5.64**	**35**	Pn	Pn	07 27 52.0	0.0
ISLE	**Juniper Island**	**5.70**	**38**		Pn	07 27 53.0	+0.2
BAGL	**Bagley Icefiel**	**5.70**	**40**		Pn	07 27 53.2	+0.5
SVW2	**Sparrevohn**	**5.74**	**329**	Pn	Pn	07 27 53.9	+0.6
SKT	**Skwentna**	**5.77**	**350**	Pn	Pn	07 27 54.3	+0.6
VRDI	**Verde Repeater**	**5.83**	**30**	Pn	Pn	07 27 53.0	-1.7
N25K	**Chitina, Valde**	**5.87**	**24**		Pn	07 27 55.0	+0.1
N25K	**Chitina, Valde**	**5.87**	**24**	P	Pn	07 27 55.2	+0.1
	baz=208						
M20K	**Styx River**	**5.88**	**343**	Pn	Pn	07 27 54.8	-0.4
M20K	**Styx River**	**5.88**	**343**	P	Pn	07 27 54.7	-0.6
	baz=160						
GLB	**Gilahina Butte**	**5.91**	**27**		Pn	07 27 55.5	-0.2
KIAG	**Kiagna River**	**5.92**	**36**		Pn	07 27 55.9	0.0
GRNC	**Granite Creek**	**5.99**	**39**	Pn	Pn	07 27 56.8	-0.1
TABL	**Table Mountain**	**6.02**	**43**	Pn	Pn	07 27 57.1	-0.2
M24K	**Tolsona, Glenn**	**6.04**	**15**	Pn	Pn	07 27 58.4	+0.9
M24K	**Tolsona, Glenn**	**6.04**	**15**	P	Pn	07 27 58.5	+1.1
	baz=188						
MCARA	**McCarthy VSAT**	**6.08**	**31**	Pn	Pn	07 27 58.2	+0.3
MCARA	**McCarthy VSAT**	**6.08**	**31**	P	Pn	07 27 58.7	+0.8
	baz=217						
PTPK	**Patty Peak**	**6.09**	**34**		Pn	07 27 59.0	+0.8
CUT	**Chulitna**	**6.11**	**357**	Pn	Pn	07 27 58.7	+0.5
M18K	**St

HARP	HAARP	6.48	18			Pn		07 28 04.2	+0.8
HARP	HAARP	6.48	18	P		Pn		07 28 04.2	+0.8
	baz=202								
L19K	White Mountain	6.48	337			Pn		07 28 03.1	-0.4
L19K	White Mountain	6.48	337	P		Pn		07 28 02.4	-1.1
	baz=153								
WAT7	Susitna Watana	6.54	3			Pn		07 28 04.6	+0.3
M17K	Holitna River	6.54	324	Pn		Pn		07 28 04.5	+0.2
M17K	Holitna River	6.54	324	P		Pn		07 28 04.1	-0.1
	baz=138								
N15K	Kwethluk River	6.79	309			Pn		07 28 08.7	+1.0
N15K	Kwethluk River	6.79	309	P		Pn		07 28 08.7	+1.0
	baz=120								
M16K	Timber Creek	6.82	318			Pn		07 28 08.0	-0.1
M16K	Timber Creek	6.82	318	P		Pn		07 28 09.2	+1.2
	baz=130								
DHY	Denali Highway	6.85	8			Pn		07 28 09.3	+0.7
M26K	Nabesna, AK	6.93	26	Pn		Pn		07 28 10.1	+0.5
M26K	Nabesna, AK	6.93	26	P		Pn		07 28 11.8	+2.1
	baz=212								
O14K	Tigyukauivet M	6.94	300	Pn		Pn		07 28 11.2	+1.4
L18K	Granite Mounta	6.96	331	Pn		Pn		07 28 09.0	-1.0
O29M	Mount Kennedy	6.99	51	Pn		Pn		07 28 10.8	+0.2
O29M	Mount Kennedy	6.99	51	P		Pn		07 28 10.7	+0.2
	baz=240								
YUK2	White River	7.06	36			Pn		07 28 12.8	+1.4
P29M	Windy Craggy	7.07	57			Pn		07 28 10.7	-0.9
P29M	Windy Craggy	7.07	57	P		Pn		07 28 11.0	-0.6
	baz=247								
RND	Reindeer	7.11	2			Pn		07 28 13.1	+1.0
TRF	Thorofare Moun	7.16	357	Pn		Pn		07 28 13.7	+0.8
M27K	Edge Creek, AK	7.19	30	Pn		Pn		07 28 14.5	+1.3
M27K	Edge Creek, AK	7.19	30	P		Pn		07 28 14.3	+1.1
	baz=216								
CAST	Castle Rocks	7.23	351	Pn		Pn		07 28 15.7	+2.0
MENT	Mentasta	7.25	21	Pn		Pn		07 28 16.0	+2.1
KTH	Kantishna Hill	7.29	355	Pn		Pn		07 28 16.2	+1.7
YUK7	Dusty Glacier	7.29	50			Pn		07 28 15.1	+0.4
S31K	Pelican	7.40	72	Pn		Pn		07 28 13.4	-2.6
TTA	Tatalina	7.40	336	Pn		Pn		07 28 15.4	-0.6
TTA	Tatalina	7.40	336	P		Pn		07 28 17.4	+1.4
K20K	Telida	7.42	344	Pn		Pn		07 28 16.2	0.0
YUK6	Outpost Mounta	7.42	47			Pn		07 28 17.4	+0.8
YUK6	Outpost Mounta	7.42	47	P		Pn		07 28 17.4	+0.8
	baz=236								
L16K	Owhat River	7.46	320	Pn		Pn		07 28 17.2	+0.5
L16K	Owhat River	7.46	320	P		Pn		07 28 17.2	+0.5
	baz=132								
P30M	Million Dollar	7.63	55			Pn		07 28 18.9	-0.3
P30M	Million Dollar	7.63	55	P		Pn		07 28 20.1	+0.9
	baz=246								
HYT	Haines Junctio	7.71	49	Pn		Pn		07 28 19.7	-0.7
RIDG	Independent Ri	7.79	15	Pn		Pn		07 28 22.9	+1.5
BCAR	Beaver Creek A	7.80	27	Pn		Pn		07 28 22.3	+0.8
K17K	Iditarod	7.81	329	Pn		Pn		07 28 21.0	-0.7
K17K	Iditarod	7.81	329	P		Pn		07 28 21.0	-0.7
	baz=141								
BPAW	Bear Paw Mtn.	7.83	355	Pn		Pn		07 28 21.9	-0.1
SIT	Sitka	7.84	79	Pn		Pn		07 28 18.2	-3.8
SIT	Sitka	7.84	79	P		Pn		07 28 18.3	-3.6
BWN	Browne	7.87	0	Pn		Pn		07 28 22.6	+0.1
J18K	Innoko River	8.02	336	Pn		Pn		07 28 23.9	-0.7
SKAG	Skagway	8.17	62	Pn		Pn		07 28 25.4	-1.1
SKAG	Skagway	8.17	62	P		Pn		07 28 26.3	-0.2
WRH	Wood River Hil	8.20	4	Pn		Pn		07 28 26.7	-0.2
HDA	Harding Lake	8.21	8			Pn		07 28 28.7	+1.6
J20K	Nowinta River	8.21	346	Pn		Pn		07 28 29.0	+2.0
S32K	Killisnoo	8.25	76	Pn		Pn		07 28 25.5	-2.1
O30N	Mendenhall	8.30	52	Pn		Pn		07 28 27.0	-1.3
M29M	Somme Creek	8.31	38			Pn		07 28 28.6	-0.1
M13K	Dall Lake	8.35	305	Pn		Pn		07 28 29.8	+0.8
CCB	Clear Creek Bu	8.39	5			Pn		07 28 29.4	-0.1
JIS	Juneau Island	8.41	70			Pn		07 28 28.6	-1.3
JIS	Juneau Island	8.41	70	P		Pn		07 28 28.7	-1.1
L14K	Kuka Creek	8.48	312	Pn		Pn		07 28 30.8	0.0
J25K	Salcha River,	8.56	12	Pn		Pn		07 28 30.7	-1.2
K27K	Chicken	8.56	22	Pn		Pn		07 28 31.8	0.0
J17K	VABM Dome	8.57	330	Pn		Pn		07 28 33.2	+1.3
IL31		8.57	8	Pn		Pn		07 28 31.9	-0.1
ILAR	Eielson Array	8.57	8	Pn		Pn		07 28 32.5	+0.5
ILAR	Eielson Array	8.57	8	Pn		Pn		07 28 32.6	+0.6
	comp=N,0.3nm,0.3s,baz=188,slow=13,SNR=14								
ILAR					Sn	Sn		07 30 03.7	-4.9
	comp=N,0.2nm,0.3s,baz=197,slow=12,SNR=1.2								
ILAR					LR	LR		07 32 10.6	
	comp=N,57nm,20.8s,baz=144,slow=39								
	comp=N,0.8nm,0.3s								
K15K	Wolf Creek Mou	8.57	319	Pn		Pn		07 28 31.7	-0.4
COLA	College	8.61	5	P		Pn		07 28 34.7	+2.1
MDM	Murphy Dome	8.68	4	Pn		Pn		07 28 33.4	-0.2
J26L	Joseph Creek	8.70	17			Pn		07 28 34.4	+0.5
N31M	Braeburn, Yuko	8.77	48	Pn		Pn		07 28 34.8	0.0
WHY	Whitehorse	8.79	54			Pn		07 28 34.5	-0.7
I23K	Minto, Yukon-K	8.85	0			Pn		07 28 36.3	+0.4
L29M	L29M	8.89	35	Pn		Pn		07 28 37.2	+0.8
I21K	Tanana	8.97	353			Pn		07 28 38.5	+1.1
I21K	Tanana	8.97	353	P		Pn		07 28 37.2	-0.2
	baz=171								
P32M	Atlin	9.00	62			Pn		07 28 37.3	-0.6
CRAG	Craig	9.24	89	P		Pn		07 28 38.2	-3.0
H21K	Melozitna Rive	9.50	352			Pn		07 28 45.2	+0.5
H21K	Melozitna Rive	9.50	352	P		Pn		07 28 45.0	+0.2
	baz=169								
Q32M	Nakina River	9.60	67	Pn		Pn		07 28 47.0	+0.7
P33M	Teslin, Yukon	9.60	59			Pn		07 28 45.5	-0.7
K29M	Barlow Dome	9.61	33			Pn		07 28 48.3	+2.0
M31M	Drury Creek, Y	9.70	46	Pn		Pn		07 28 47.1	-0.4
N32M	Quiet Lake	9.79	54	Pn		Pn		07 28 48.0	-0.8
IMAR	Indian Mountai	9.90	350	Pn		Pn		07 28 50.9	+0.6
R33M	Jennings River	10.33	65			Pn		07 28 55.5	-0.7
G23K	Bananza Creek	10.42	359	Pn		Pn		07 28 57.0	-0.4
G24K	Hadweenzic Riv	10.45	4	Pn		Pn		07 28 58.3	+0.5
FYU	Fort Yukon	10.47	9	Pn		Pn		07 28 57.8	-0.2
DLBC	Dease Lake	10.71	71	Pn		Pn		07 29 00.8	-0.6
	comp=N,0.4nm,0.3s,baz=265,slow=9.8,SNR=11								
	comp=N,1.1nm,0.4s								
INK	Inuvik	14.05	25	Pn		Pn		07 29 49.5	+2.7
	comp=N,0.1nm,0.3s,baz=107,slow=4.0,SNR=2.3								
	comp=N,1.0nm,1.0s								
YKA	Yellowknife Ar	18.61	56	P		Pn		07 30 46.7	+1.2
	comp=N,0.1nm,0.3s,baz=265,slow=11,SNR=13								
	comp=N,1.9nm,1.0s								
PETK	Petropavlovsk-	30.05	286	LR		LR		07 45 39.2	
	comp=N,38nm,18.6s,baz=84,slow=38								
H11N2	WAKE ISLAND Hy	48.80	240	T		T		08 27 51.0	
	baz=30,slow=76,SNR=6.6								
H11N3	WAKE ISLAND Hy	48.81	240	T		T		08 27 50.7	
	baz=30,slow=76,SNR=8.4								
H11N1	WAKE ISLAND Hy	48.82	240	T		T		08 27 50.7	
	baz=30,slow=76,SNR=5.8								
H11S1	WAKE ISLAND Hy	49.95	239	T		T		08 29 16.0	
	baz=30,slow=76,SNR=6.7								
H11S2	WAKE ISLAND Hy	49.96	239	T		T		08 29 14.9	
	baz=30,slow=76,SNR=5.8								
H11S3	WAKE ISLAND Hy	49.97	239	T		T		08 29 15.2	
	baz=30,slow=76,SNR=6.2								
KSRS	Korea Array	55.94	288	LR		LR		07 59 34.4	
	comp=N,11nm,18.2s,baz=320,slow=35								
KURBB	Kurchatov Arra	66.24	329	P		P		07 37 18.0	+2.2
	comp=N,0.1nm,0.3s,baz=33,slow=6.3,SNR=2.2								
	comp=N,0.1nm,0.3s								
MKAR	Makanchi Array	68.49	325	P		P		07 37 32.9	+2.8
	comp=N,0.1nm,0.4s,baz=45,slow=8.2,SNR=2.0								
	comp=N,0.1nm,0.4s								

TAP 12 07:26:45.3, 24.00N × 121.74E, h22km, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.15	302	*e*S	Sb	07 26 53.0	-1.8
	baz=305						
ETL	Fush Village	0.19	327	*i* P	Pb	07 26 50.6	-0.4
	baz=327						
ETL				*i* S	Sb	07 26 53.5	-1.5
	baz=327						
NACB	Ninganchiao	0.22	323	*i* P	Pb	07 26 51.0	-0.1
	baz=324						
NACB				*i* S	Sb	07 26 54.4	-0.8
	baz=324						
ETM	Tongmen	0.23	261	*e*S	Sb	07 26 55.1	-0.2
	baz=262						
ETLH	Xiulin Townshi	0.31	312	*i* P	Pb	07 26 53.0	+0.7
	baz=312						
ETLH				S	Sb	07 26 57.9	+0.8
	baz=312						
EAHA	Aohua	0.33	1	P	Pb	07 26 52.2	-0.2
EAHA				*e*S	Sb	07 26 57.9	+0.5
ENA	Nanau	0.43	1	*i* P	Pb	07 26 53.8	-0.3
	baz=1.0						
ENA				*e*S	Sb	07 27 00.1	0.0
	baz=1.0						
EWUT	Wuta	0.45	5	*e*P	Pb	07 26 54.2	-0.2
	baz=5.0						
EWUT				*e*S	Sb	07 27 01.0	+0.4
	baz=5.0						
WHF	Hehuan Shan	0.45	289	*i* P	Pb	07 26 55.2	+0.4
	baz=281						
WHF				S	Sb	07 27 02.1	+0.8
	baz=281						
CHGB	Renai	0.52	277	*i* P	Pb	07 26 56.2	+0.3
	baz=268						
CHGB				*e*S	Sb	07 27 03.9	+0.9
	baz=268						
LATG	Datong	0.57	340	P	Pb	07 26 56.8	+0.2
	baz=330						
LATG				S	Sb	07 27 05.2	+0.8
	baz=330						
NDT	Datong Townshi	0.63	341	*e*P	Pn	07 26 59.0	0.0
	baz=334						
NDT				*i* S	Sn	07 27 07.4	-1.0
	baz=334						
ENTT	Nioudou	0.66	346	*i* P	Pn	07 26 59.0	-0.3
	baz=346						
ENTT				*i* S	Sb	07 27 07.5	+0.7
	baz=346						
SSLB	Suanglung	0.75	254	*e*P	Pb	07 26 59.6	0.0
	baz=261						
SSLB				*e*S	Sb	07 27 09.6	+0.2
	baz=261						
NWLT	Wulai	0.80	345	*i* P	Pn	07 27 01.9	+0.6
	baz=335						
NWLT				S	Sn	07 27 12.1	-0.5
	baz=335						

TAP 12 07:26:47.3, 23.94N × 121.58E, h11km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	Tongmen	0.08	289	*i* P	Pg	07 26 50.3	+0.4
	baz=290						
ETM				*i* S	Sg	07 26 51.9	+0.2
	baz=290						
ETM	Tongmen	0.08	289	*i* P	Pg	07 26 50.3	+0.4
	baz=262						
TWD	Chiawan	0.14	8	*i* P	Pg	07 26 50.7	0.0
	baz=9.0						
TWD				S	Sg	07 26 53.7	+0.6
	baz=9.0						
TWD	Chiawan	0.14	8	*i* P	Pg	07 26 50.7	0.0
	baz=305						
SHUL	Shoufeng	0.15	184	*i* P	Pb	07 26 51.9	-0.3
	baz=212						
SHUL				S	Sg	07 26 55.4	+2.1
	baz=212						
SHUL	Shoufeng	0.15	184	*i* P	Pb	07 26 51.6	-0.6
	baz=194						
SHUL				S	Sg	07 26 55.6	+2.3
	baz=194						
LXIB	Xiulin Townshi	0.17	299	*i* P	Pg	07 26 51.8	+0.6
	baz=293						
LXIB				S	Sg	07 26 55.0	+1.0
	baz=293						
ESL	Shilin	0.18	226	*i* P	Pg	07 26 51.6	+0.3
	baz=233						
ESL				*i* S	Sg	07 26 53.9	-0.2
	baz=233						
WARBT	Fenglin Townsh	0.28	218	*i* P	Pg	07 26 53.2	+0.1
	baz=225						
WARBT				S	Sg	07 26 56.9	-0.1
	baz=225						
VWDT	VWDT	0.44	245	P	Pb	07 26 56.9	-0.2
	baz=247						
VWDT				*e*S	Sg	07 27 01.9	+0.1
	baz=247						

IDC **12** *07:40:57.5±0.8, 36.74N×71.80E, h0km, mb4.0/14, mbtmp4.0/21, ML3.6/7, MS3.2/7, Error ellipse: s-maj=16.1km s-min=13.3km az=40.0*
MOS **12** *07:40:59.3±1.9, 36.92N×71.58E, h13km, mb4.3/9, Error ellipse: s-maj=8.2km s-min=4.0km az=83.0*
BJI **12** *07:41:00.2±0.0, 36.84N×71.82E, h10km, mb4.3/28, mB4.5/9, ML3.7/4, Ms3.9/1, Ms7 3.6/1*
NNC **12** *07:41:03.6±3.9, 36.78N×71.72E, h109km±60km, mb3.7, mpv4.1, Error ellipse: s-maj=31.1km s-min=28.2km az=9.0*
NEIC **12** *07:41:04.9±2.3, 36.97N±0.07×71.53E±0.07, h38km±4km, mb4.4/23, Error ellipse: s-maj=10.7km s-min=7.9km az=176.0*
ISC 12 07:41:04.9±0.5, 36.90N±0.06×71.64E±0.04, h50km, n139, σ2s01/154, mb4.2/39, MS3.4/5, 10C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMJ	Simiganj	2.73	311	Pn	Pn	07 41 46.9	+0.5
KBL	Kabul	3.16	223	Pn	Pn	07 41 55.2	+2.8
KBL	Kabul	3.16	223	PN	Pn	07 41 55.2	+2.8
BTK	Batken	3.22	349	Pn	Pn	07 41 54.6	+1.5
BTK	Batken	3.22	349	PN	Pn	07 41 54.6	+1.5
OHH	Osh	3.73	13	PN	Pn	07 42 01.4	+1.3
KSH	Kashi	4.30	51	Pg	Pn	07 42 04.0	-3.9
KSH				smax	smax		
	comp=N,240nm,0.6s						
KSH				smax	smax		
	comp=E,220nm,0.7s						
ARSB	Arslanbob	4.54	13		Pn	07 42 10.9	-0.4
ARSB	Arslanbob	4.54	13	PN	Pn	07 42 10.9	-0.4
TRKS	Terek-Say	4.64	355	PN	Pn	07 42 11.9	-0.8
ARK	Arkit	4.90	3	PN	Pn	07 42 15.3	-0.9
ARLS	Aral	5.38	22	PN	Pn	07 42 23.1	+0.4
NRN	Naryn	5.66	35	Pn	Pn	07 42 25.7	-1.0
NRN	Naryn	5.66	35	PN	Pn	07 42 25.7	-1.0
UCH	Uchtor	5.77	22	P	Pn	07 42 28.4	+0.1
	SNR=23						
EKS2	Erkin-Say	5.99	15	P	Pn	07 42 31.6	+0.5
	SNR=17						
AAK	Ala-Archa	6.14	20	P	Pn	07 42 33.4	+0.3
	SNR=20						
AAK	Ala-Archa	6.14	20		Pn	07 42 33.0	-0.2
AAK	Ala-Archa	6.14	20	Pn	Pn	07 42 33.5	+0.3
	3.7nm,0.3s,baz=194,slow=6.6,SNR=28						
AAK				Sn	Sn	07 43 47.5	+5.3
	1.1nm,0.3s,baz=354,slow=18,SNR=2.2						
AAK				LR	LR	07 44 45.4	
	comp=Z,37nm,18.8s,baz=212,slow=36						
	12nm,0.3s						
KK31	Karatay Array	6.26	352	⇓P	Pn	07 42 34.3	-0.4
	5.6nm,0.5s,baz=176,slow=12,SNR=120						
KK31				⇑S	Sn	07 43 47.8	+2.8
	15nm,0.7s,baz=173,slow=12,SNR=9.5						
KK31	Karatay Array	6.26	352		Pn	07 42 34.2	-0.5
KK31	Karatay Array	6.26	352	*e*PN	Pn	07 42 34.3	-0.4
KK31				S	Sn	07 43 47.7	+2.8
KKAR	Karatay Array	6.26	352		Pn	07 42 34.0	-0.7
KKAR	Karatay Array	6.26	352	PN	Pn	07 42 34.0	-0.7
BOOM	Boomskoye usch	6.50	29		Pn	07 42 38.1	0.0
BOOM	Boomskoye usch	6.50	29	PN	Pn	07 42 38.1	0.0
CHMS	Chumysh	6.55	20	P	Pn	07 42 38.8	+0.2
	SNR=12						
CHMS	Chumysh	6.55	20	⇑P	Pn	07 42 38.9	+0.2
	16nm,0.6s						
CHMS				⇓S	Sn	07 43 54.7	+2.8
	11nm,0.8s						
CHMS	Chumysh	6.55	20	PN	Pn	07 42 38.9	+0.2
CHMS				S	Sn	07 43 54.7	+2.8
USP	Ospenovka	6.73	18	P	Pn	07 42 40.8	-0.4
	SNR=12						
TKM2	Tokmak 2	6.74	26	P	Pn	07 42 41.6	+0.1
	SNR=19						
TKM2	Tokmak 2	6.74	26	⇓P	Pn	07 42 41.2	-0.3
	8.3nm,0.6s						
TKM2				⇑S	Sn	07 43 55.9	-1.0
	16nm,1.1s						
TKM2	Tokmak 2	6.74	26	PN	Pn	07 42 41.2	-0.3
TKM2				S	Sn	07 43 55.9	-1.0
TARG	Taragay, Kyrgy	6.79	43		Pn	07 42 41.7	-0.6
TARG	Taragay, Kyrgy	6.79	43	PN	Pn	07 42 41.7	-0.6
MDOK	Medeo	7.51	32	⇑P	Pn	07 42 52.4	+0.5
	5.3nm,0.7s						
MDOK	Medeo	7.51	32	P	Pn	07 42 52.4	+0.5
PRZ	Przheval'sk	7.63	41	Pn	Pn	07 42 53.5	-0.2
PRZ	Przheval'sk	7.63	41	P	Pn	07 42 53.5	-0.2
GEYT	Alibeck	10.81	280	Pn	Pn	07 43 34.6	-2.4
GEYT	Alibeck	10.81	280	P	Pn	07 43 35.0	-2.0
GEYT	Alibeck	10.81	280	Pn	Pn	07 43 35.0	-2.0
	1.2nm,0.3s,baz=116,slow=10,SNR=8.7						
GEYT				Sn	Sn	07 45 33.1	-3.5
	0.6nm,0.3s,baz=134,slow=12,SNR=3.3						
	2.9nm,0.4s						
GYA0	ALIBECK ARRAY	10.81	280	P	Pn	07 43 33.2	-3.8
GYA0B	ALIBECK ARRAY	10.81	280	Pn	Pn	07 43 34.8	-2.3
OTUK	Ortayu	11.35	2	⇑P	Pn	07 43 42.0	-2.4
	5.3nm,0.8s						
OTUK	Ortayu	11.35	2	P	Pn	07 43 42.0	-2.4
MAKZ	Makanchi	12.54	35	Pn	Pn	07 43 59.3	-1.2
MAKZ	Makanchi	12.54	35	P	Pn	07 43 59.3	-1.2
MK31	Makanchi Array	12.67	35	P	Pn	07 44 01.5	-0.8
	2.0nm,0.6s,baz=221,slow=12,SNR=13						
MK31	Makanchi Array	12.67	35	Pn	Pn	07 44 01.5	-0.8
MK31	Makanchi Array	12.67	35	*de*P	Pn	07 44 01.8	-0.5
MKAR	Makanchi Array	12.67	35	Pn	Pn	07 44 01.5	-0.8
MKAR	Makanchi Array	12.67	35	P	Pn	07 44 01.5	-0.8
MKAR	Makanchi Array	12.67	35	Pn	Pn	07 44 01.3	-1.1
	0.2nm,0.3s,baz=223,slow=14,SNR=13						
MKAR				LR	LR	07 49 14.8	
	comp=Z,134nm,19.9s,baz=240,slow=39						
	1.8nm,0.9s						
WMQ	Urumqi	14.05	56	*e*P	Pn	07 44 22.3	+1.1
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
KURBB	Kurchatov Arra	14.59	18	⇓P	Pn	07 44 23.8	-4.4
	13nm,0.8s						
KURBB	Kurchatov Arra	14.59	18	P	Pn	07 44 23.8	-4.4
KURBB	Kurchatov Arra	14.59	18	Pn	Pn	07 44 23.9	-4.3
	baz=211,slow=12,SNR=17						
	1.9nm,1.0s						
KURK	Kurchatov	14.69	18	*de*P	Pn	07 44 26.1	-3.5
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
AB31	Akbulak array	15.00	329	P	Pn	07 44 29.6	-4.1
	comp=Z,1.5nm,0.5s,baz=139,slow=12,SNR=43						
AB31	Akbulak array	15.00	329	P	Pn	07 44 29.5	-4.1
ABKAR	Akbulak array	15.00	329	Pn	Pn	07 44 30.7	-2.9
BVA0	Borovoye Array	16.15	357	*i* P	Pn	07 44 45.7	-2.7
BVAR	Borovoye Array	16.15	357	Pn	Pn	07 44 45.3	-3.1
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=12						
BVAR				LR	LR	07 51 17.6	
	comp=Z,117nm,19.3s,baz=197,slow=38						
	comp=Z,3.2nm,0.5s						
BRVK	Borovoye	16.19	357	Pn	Pn	07 44 46.9	-1.9
BRVK	Borovoye	16.19	357	P	Pn	07 44 46.9	-1.9
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
AKTO	Aktyubinsk	16.71	328	⇓P	P	07 44 55.5	-1.6
	comp=Z,10.0nm,1.1s						
AKTO	Aktyubinsk	16.71	328	Pn	Pn	07 44 53.8	-1.6
	comp=Z,1.0nm,0.3s,baz=126,slow=11,SNR=13						
AKTO				Sn	Sn	07 47 53.6	-6.2
	comp=Z,0.1nm,0.3s,baz=315,slow=16,SNR=2.5						
	comp=Z,1.4nm,0.3s						
DGZ	Jazzator, Alta	17.16	37	⇑*e*P	Pn	07 44 58.7	-2.4
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	Lhasa	17.80	108		P	07 45 11.0	+1.2
LSA	Lhasa	17.80	108	P	P	07 45 11.0	+1.2
LSA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZAA0	Zalesovo Array	19.34	24	P	P	07 45 24.1	-1.9
ZALV	Zalesovo Beam	19.34	24	P	P	07 45 24.0	-2.0
ZALV	Zalesovo Beam	19.34	24	P	P	07 45 24.2	-1.8
	comp=Z,1.1nm,0.3s,baz=215,slow=10.0,SNR=22						
ZALV				LR	LR	07 53 14.3	
	comp=Z,94nm,18.8s,baz=292,slow=38						
	comp=Z,3.0nm,0.4s						
ARU	Arti	21.43	340	*c i*P	P	07 45 47.2	-1.4
ARU						07 46 06.3	
ARU				S	Sn	07 49 47.4	-6.2
ARU				SS	SnSn	07 50 10.2	+0.9
ARU				pmax	pmax		
	comp=Z,11nm,2.1s						
ARU	Arti	21.43	340	P	P	07 45 48.7	+0.1
	comp=Z,3.6nm,0.2s,baz=155,slow=8.6,SNR=6.2						
	comp=Z,3.6nm,0.2s						
GTA	Gaotai	22.26	75	P	P	07 45 56.8	-1.0
GTA				pP	pP	07 46 05.5	-5.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KBZ	Khabaz	22.89	296	⇓*i*P	P	07 46 06.2	+2.0
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KBZ	Khabaz	22.89	296	P	P	07 46 06.1	+2.0
	comp=Z,2.2nm,0.9s,baz=123,slow=18,SNR=2.8						
	comp=Z,2.2nm,0.9s						
BELG	Belogornoye	22.91	320	⇓*e*P	P	07 46 04.8	+0.5
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIV	Kislovodsk	23.07	297	*e*P	P	07 46 03.9	-2.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIRV	Kirov	26.11	333	LR	LR	07 58 57.7	
	comp=Z,110nm,18.9s,baz=292,slow=41						
ANN	Anapa	26.90	298	*e*P	P	07 46 40.3	-0.8
ANN				*e**PP	pP	07 46 43.7	-11
ANN				*e*S	S	07 51 19.0	+4.7
PZH	PanZhiHua	27.52	103	P	P	07 46 49.2	+2.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH	

	comp=Z,11nm,0.6s,baz=102							
MNK				*i* PP	**PnPn**	07 49 02.8	**-2.4**	
MNK				*i* PPP	PPP	07 49 15.0		
MNK				*i* S	**S**	**07 53 17.6**	**+3.3**	
MNK				*i* SS	**SnSn**	**07 55 31.1**	**+1.5**	
MNK				*i* SSS	SSS	07 55 47.1		
MNK				*i* LQ	LQ	07 59 18.4		
MNK				*i* LR	LR	08 01 07.6		
MNK				*i* LRM	MLR	08 02 30.2		
	comp=Z,61nm,10.3s							
MNK	**Minsk**	**34.59**	**315**	*i* P	**P**	**07 47 47.1**	**-1.6**	
MNK				*i*		07 49 02.8		
MNK				*i*		07 50 21.0		
MNK				*i* S	**S**	**07 53 17.5**	**+3.3**	
MNK				*i* SS	**SnSn**	**07 55 31.0**	**+1.5**	
MNK				*i*		07 58 09.5		
MNK				pmax	pmax			
	comp=E,11nm,0.9s							
MNK				pmax	pmax			
	comp=Z,11nm,0.6s							
MNK				MLR	MLR			
	comp=Z,61nm,10.0s							
FINES	**FINES Array B**	**37.45**	**326**	*e*P	**P**	**07 48 15.1**	**+2.0**	
FINES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
FINES	**FINES Array B**	**37.45**	**326**	P	**P**	**07 48 14.5**	**+1.4**	
	comp=Z,0.6nm,0.4s,baz=120,slow=11,SNR=7.9							
	comp=Z,0.6nm,0.4s							
NJ2	**Nanjing**	**38.91**	**83**	*e*P	**P**	**07 48 26.2**	**+0.5**	
NJ2				pP	pP	07 48 30.1	-10	
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.6s							
ARCES	**ARCESS Array B**	**40.98**	**337**	P	**P**	**07 48 43.3**	**+0.9**	
ARCES				lAmb	lAmb	07 49 02.0		
	comp=Z,14nm,1.3s							
ARCES	**ARCESS Array B**	**40.98**	**337**	*e*P	**P**	**07 48 43.6**	**+1.1**	
ARCES				pmax	pmax			
	comp=Z,3.0nm,0.9s							
ARCES	**ARCESS Array B**	**40.98**	**337**	P	**P**	**07 48 42.9**	**+0.4**	
	comp=Z,2.9nm,0.8s,baz=110,slow=5.9,SNR=10							
	comp=Z,2.9nm,0.8s							
HFS	**Hagfors**	**43.08**	**322**	P	**P**	**07 49 00.4**	**+0.8**	
	comp=Z,4.0nm,0.5s,baz=98,slow=11,SNR=25							
	comp=Z,4.0nm,0.5s							
NC602	**NORSAR Array S**	**44.20**	**322**	P	**P**	**07 49 09.3**	**+0.6**	
NC602				lAmb	lAmb	07 49 14.7		
	comp=Z,17nm,1.4s							
NC303	**NORSAR Array S**	**44.32**	**323**	P	**P**	**07 49 10.4**	**+0.8**	
NB201	**NORSAR Array S**	**44.34**	**323**	P	**P**	**07 49 10.9**	**+1.0**	
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**07 49 10.7**	**+0.6**	
	comp=Z,3.4nm,0.6s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**07 49 10.3**	**+0.1**	
	comp=Z,2.0nm,0.8s,baz=108,slow=7.2,SNR=8.7							
	comp=Z,2.0nm,0.8s							
NBO00	**NORSAR Array S**	**44.59**	**323**	P	**P**	**07 49 12.7**	**+0.8**	
NC204	**NORSAR Array S**	**44.61**	**323**	P	**P**	**07 49 12.8**	**+0.8**	
TIXI	**Tiksi**	**45.21**	**22**	*i* P	**P**	**07 49 17.9**	**+1.3**	
TIXI				pmax	pmax			
	comp=Z,8.0nm,1.5s							
EKA	**Eskdalemuir Ar**	**52.36**	**316**	P	**P**	**07 50 11.2**	**-0.4**	
	comp=Z,0.9nm,0.6s,baz=72,slow=6.1,SNR=4.6							
	comp=Z,0.9nm,0.6s							
ESDC	**Sonseca Array**	**57.73**	**298**	P	**P**	**07 50 51.0**	**+0.4**	
	comp=Z,0.7nm,0.8s,baz=50,slow=7.8,SNR=4.2							
	comp=Z,0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**66.24**	**269**	P	**P**	**07 51 46.7**	**-1.3**	
	comp=Z,3.3nm,0.3s,baz=55,slow=5.5,SNR=2.2							
SFJD	**Kangerlussuaq**	**67.58**	**339**	P	**P**	**07 51 57.3**	**+1.6**	
SFJD	**Kangerlussuaq**	**67.58**	**339**	P	**P**	**07 51 57.3**	**+1.6**	
SFJD				pmax	pmax			
	comp=Z,12nm,1.0s							
C18K	**Utukok River**	**67.73**	**18**	P	**P**	**07 51 57.0**	**+0.2**	
C18K				lAmb	lAmb	07 52 03.9		
	comp=Z,5.7nm,1.5s							
B21K	**Ikpikpuk River**	**68.55**	**16**	P	**P**	**07 52 03.3**	**+1.5**	
B21K				lAmb	lAmb	07 52 10.0		
	comp=Z,3.9nm,1.4s							
D19K	**Kuna River**	**68.61**	**18**	P	**P**	**07 52 02.6**	**+0.3**	
D19K				lAmb	lAmb	07 52 07.7		
	comp=Z,3.9nm,1.2s							
TOLK	**Toolik Lake Re**	**70.41**	**15**	P	**P**	**07 52 13.6**	**+0.2**	
TOLK				lAmb	lAmb	07 52 15.1		
	comp=Z,2.8nm,1.1s							
J14K	**Nanvaranak Lak**	**71.33**	**24**	P	**P**	**07 52 19.0**	**+0.1**	
J14K				lAmb	lAmb	07 52 47.9		
	comp=Z,11nm,1.4s							
IMAR	**Indian Mountai**	**71.64**	**18**	P	**P**	**07 52 20.6**	**-0.2**	
BMAR	**Burnt Mountain**	**72.44**	**14**	P	**P**	**07 52 27.1**	**+1.5**	
CMLA	**Cha da Macela**	**73.42**	**305**	*e*S	**SKiKP**	**08 02 07.7**	**+9.4**	
CMLA				A	A	08 02 09.5		
	comp=Z,20nm,0.3s							
INK	**Inuvik**	**73.43**	**9**	P	**P**	**07 52 32.3**	**+0.9**	
INK	**Inuvik**	**73.43**	**9**	P	**P**	**07 52 32.3**	**+0.9**	
INK				pmax	pmax			
	comp=Z,2.0nm,1.1s							
F31M	**Tsiigehtchic**	**74.21**	**10**	P	**P**	**07 52 37.3**	**+1.4**	
F31M				lAmb	lAmb	07 52 40.1		
	comp=Z,4.6nm,1.5s							
H29M	**Whitestone**	**74.64**	**12**	P	**P**	**07 52 40.0**	**+1.5**	
H29M				lAmb	lAmb	07 52 47.2		
	comp=Z,4.3nm,1.3s							
J26L	**Joseph Creek**	**75.21**	**15**	P	**P**	**07 52 43.0**	**+1.1**	
H31M	**Peel River**	**75.66**	**11**	P	**P**	**07 52 45.5**	**+1.1**	
H31M				lAmb	lAmb	07 52 59.1		
	comp=Z,9.5nm,1.4s							
YKA	**Yellowknife Ar**	**80.83**	**3**	P	**P**	**07 53 13.7**	**+0.7**	
	comp=Z,0.3nm,0.8s,baz=349,slow=5.6,SNR=4.3							
	comp=Z,0.3nm,0.8s							
WB0	**Warramunga Arr**	**81.68**	**122**	P	**P**	**07 53 17.4**	**-0.7**	
WB0				lAmb	lAmb	07 53 28.5		
	comp=Z,5.0nm,1.2s							
WRA	**Warramunga Arr**	**81.76**	**122**	P	**P**	**07 53 16.9**	**-1.7**	
	comp=Z,1.2nm,0.6s,baz=321,slow=4.9,SNR=15							
	comp=Z,1.2nm,0.6s							
WB2	**Warramunga Arr**	**81.77**	**122**	P	**P**	**07 53 17.3**	**-1.2**	
WB2				lAmb	lAmb	07 53 18.5		
	comp=Z,3.1nm,0.8s							
ASAR	**Alice Springs**	**84.06**	**125**	P	**P**	**07 53 29.1**	**-1.3**	
	comp=Z,0.6nm,0.6s,baz=312,slow=5.1,SNR=16							
	comp=Z,0.6nm,0.6s							

IDC 12 07:52:05.2±2.8, 54°42N×86°06E, h0km, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=21.3km s-min=13.2km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.87**	**237**	I	I	07 58 00.0	
	baz=58,slow=326,SNR=0.8						
ZALV	**Zalesovo Beam**	**0.87**	**237**	Pg	Pg	07 52 20.0	-1.8
	0.8nm,0.3s,baz=58,slow=17,SNR=7.4						
ZALV				Lg	Lg	07 52 34.8	
	2.1nm,0.3s,baz=54,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**5.97**	**233**	Pn	Pn	07 53 35.4	+0.8
	baz=48,slow=14,SNR=1.5						
	1.3nm,0.3s						
MKAR	**Makanchi Array**	**8.01**	**199**	Pn	Pn	07 54 03.9	+1.2
	0.2nm,0.3s,baz=23,slow=12,SNR=10						
	0.2nm,0.3s						

*ATH **12** 07:54:01.4, 36°.91N×21°.61E, h6km±2km, ML3.1/6, Error ellipse: s-maj=6.5km s-min=1.3km az=43.0*
*THE **12** 07:54:01.1, 36°.86N×21°.59E, h0km±3km, ML3.1/4, Error ellipse: s-maj=3.7km s-min=0.8km az=211.0*
*IDC **12** 07:54:05.8±27.0, 36°.26N×21°.57E, h98km±99km, mb3.6/5, mbtmp3.8/6, ML3.1/1, Error ellipse: s-maj=360.7km s-min=42.1km az=26.0*

ISC 12 07:54:00.1±1.2, 36°83N±0°.05×21°.57E±0°.05, h10km±7km, n36, σ0s93/43, mb3.8/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.15**	**66**	P	**Pg**	**07 54 03.6**	**+0.1**
PYL				S	**Sg**	**07 54 05.4**	**-0.5**
PYL	**PYLOS**	**0.15**	**66**	P	**Pg**	**07 54 03.6**	**+0.1**
PYL				S	**Sg**	**07 54 05.5**	**-0.4**
PYL				AML	AML	07 54 06.3	
	comp=N,62904μm,0.3s						
PYL				AML	AML	07 54 06.5	
	comp=E,95813μm,0.4s						
KRI1	**kERI**	**1.02**	**324**	P	**Pg**	**07 54 20.4**	**+0.6**
KRI1				S	**Sn**	**07 54 34.7**	**-0.1**
	comp=E,2μm,0.4s						
LTHK	**Lithakia**	**1.05**	**326**	P	**Pb**	**07 54 20.2**	**-0.2**
LTHK				S	**Sn**	**07 54 35.3**	**-0.2**
LTHK	**Lithakia**	**1.05**	**326**	P	**Pb**	**07 54 20.1**	**-0.3**
LTHK				S	**Sb**	**07 54 34.0**	**-0.2**
LTHK				AML	AML	07 54 45.0	
	comp=E,2143μm,0.4s						
LTHK				AML	AML	07 54 45.1	
	comp=N,2954μm,0.4s						
VLI	**Veliai**	**1.10**	**96**	P	**Pn**	**07 54 21.5**	**0.0**
VLI				S	**Sg**	**07 54 37.7**	**+2.1**
	comp=N,680nm,0.5s						
VLI	**Veliai**	**1.10**	**96**	P	**Pb**	**07 54 20.8**	**-0.4**
VLI				AML	AML	07 54 44.5	
	comp=N,1460μm,0.4s						
VLI				AML	AML	07 54 44.9	
	comp=E,1304μm,0.5s						
DRO	**Drossia**	**1.12**	**6**	P	**Pb**	**07 54 21.4**	**-0.2**
DRO				S	**Sg**	**07 54 38.4**	**+2.1**
	comp=E,2μm,0.4s						
DRO	**Drossia**	**1.12**	**6**	P	**Pb**	**07 54 20.7**	**-0.8**
DRO				AML	AML	07 54 45.9	
	comp=E,3217μm,0.4s						
DRO				AML	AML	07 54 49.1	
	comp=N,3461μm,0.4s						
MNVA	**Monemvasia**	**1.19**	**97**	P	**Pg**	**07 54 23.9**	**+1.0**
KLV	**Kalavryta, Ach**	**1.29**	**21**	P	**Pn**	**07 54 24.1**	**-0.1**
KLV				S	**Sg**	**07 54 42.6**	**+0.8**
	comp=N,490nm,0.6s						
KLV	**Kalavryta, Ach**	**1.29**	**21**	P	**Pn**	**07 54 23.9**	**-0.4**
KLV				AML	AML	07 54 48.4	
	comp=E,1007μm,0.7s						
KLV				AML	AML	07 54 51.1	
	comp=N,954μm,0.6s						
KRND	**KRANIDI**	**1.38**	**66**	P	**Pb**	**07 54 26.2**	**+0.3**
THAL	**Thalero**	**1.48**	**36**	P	**Pb**	**07 54 28.1**	**+0.4**
ALIK	**Aliki, Aigiali**	**1.49**	**17**	P	**Pg**	**07 54 28.8**	**+0.1**
PSDA	**Pessada-Kefalo**	**1.50**	**329**	P	**Pn**	**07 54 27.3**	**+0.3**
VLS	**Valsamata**	**1.55**	**330**	P	**Pn**	**07 54 27.7**	**0.0**
VLS				AML	AML	07 54 58.4	
	comp=N,413μm,0.5s						
VLS				AML	AML	07 55 09.3	
	comp=E,562μm,0.7s						
TRIZ	**Trizonia**	**1.58**	**14**	P	**Pb**	**07 54 29.9**	**+0.5**
EFP	**Efpalio**	**1.61**	**9**	P	**Pb**	**07 54 30.3**	**+0.4**
ANKY	**Antikythira Is**	**1.70**	**124**	P	**Pb**	**07 54 31.2**	**-0.2**
ANKY	**Antikythira Is**	**1.70**	**124**	P	**Pb**	**07 54 31.2**	**-0.2**
ANX	**Ano Chora**	**1.78**	**9**	P	**Pb**	**07 54 32.3**	**-0.5**
PVO	**Paravola**	**1.78**	**359**	P	**Pb**	**07 54 32.4**	**-0.4**
FSK	**Fiskardo**	**1.81**	**334**	P	**Pn**	**07 54 32.0**	**+0.8**
VILL	**Villia**	**1.92**	**46**	P	**Pn**	**07 54 33.6**	**+0.8**
VLY	**Voula,Athens**	**2.04**	**59**	P	**Pn**	**07 54 35.6**	**+1.1**
RODP	**Rodopos**	**2.18**	**125**	P	**Pb**	**07 54 38.2**	**-1.4**
DION	**Dionisos Attik**	**2.25**	**56**	P	**Pb**	**07 54 39.3**	**-1.6**
AGG	**Agios Georgios**	**2.27**	**15**	P	**Pb**	**07 54 39.7**	**-1.4**
IMMV	**Iera Moni Meta**	**2.38**	**124**	P	**Pn**	**07 54 40.5**	**+1.4**
BRTR	**Keskin Array B**	**9.92**	**69**	P	Pn	07 56 28.5	+5.7
	comp=E,0.2nm,0.3s,baz=251,slow=15,SNR=2.5						
	comp=E,0.5nm,0.5s						
HFS	**Hagfors**	**23.86**	**350**	P	**P**	**07 59 14.9**	**+1.6**
	comp=E,5.2nm,1.0s,baz=148,slow=12,SNR=4.1						
	comp=E,5.2nm,1.0s						
BVAR	**Borovoye Array**	**37.36**	**49**	P	**P**	**08 01 11.8**	**-0.9**
	comp=E,1.0nm,0.6s,baz=266,slow=6.0,SNR=7.6						
	comp=E,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**42.37**	**52**	P	**P**	**08 01 52.9**	**-1.3**
	comp=E,0.8nm,0.6s,baz=278,slow=9.1,SNR=8.5						
	comp=E,0.8nm,0.6s						
MKAR	**Makanchi Array**	**45.31**	**57**	P	**P**	**08 02 16.1**	**-1.8**
	comp=E,0.5nm,0.5s,baz=280,slow=6.8,SNR=7.8						
	comp=E,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**45.98**	**47**	P	**P**	**08 02 22.0**	**-1.1**
	comp=E,0.9nm,0.3s,baz=260,slow=9.9,SNR=3.7						
	comp=E,0.9nm,0.3s						

IDC 12 07:59:06.7±2.4, 53°68N×87°11E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=22.9km s-min=14.5km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**282**	I	I	08 07 20.0	
	0.1nm,0.7s,baz=102,slow=340,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.38**	**282**	Pg	Pg	07 59 31.4	-1.8
	1.4nm,0.3s,baz=100,slow=17,SNR=16						
ZALV				Lg	Lg	07 59 50.5	
	3.5nm,0.3s,baz=102,slow=29,SNR=13						
KURBB	**Kurchatov Arra**	**6.10**	**243**	Pn	Pn	08 00 39.1	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=3.9						
KURBB				Lg	Lg	08 02 21.4	
	baz=60,slow=35,SNR=3.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.55**	**206**	Pn	Pn	08 00 59.1	+1.2
	0.2nm,0.3s,baz=27,slow=14,SNR=14						
MKAR				Lg	Lg	08 03 08.5	
	0.1nm,0.3s,baz=26,slow=30,SNR=4.3						
	0.3nm,0.3s						

*HEL **12** 08:00:04.2±0.1, 63°.98N×28°.13E, h0km, ML1.3, Suspected explosion*
*IDC **12** 08:00:05.1±2.1, 63°.93N×28°.20E, h0km, mbtmp2.5/2, ML1.3/2, Error ellipse: s-maj=49.2km s-min=11.1km az=96.0*

ISC 12 08:00:03.4±0.8, 63°98N±0°.02×28°14E±0°.03, h0km, n24, σ0s59/40, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.61**	**194**	PG	**Pg**	**08 00 15.3**	**+0.4**
NIF				SG	**Sg**	**08 00 23.0**	**+0.3**
RMF	**Romuvaara**	**0.82**	**72**	PG	**Pg**	**08 00 19.5**	**+0.4**
RMF				SG	**Sg**	**08 00 29.5**	**-0.2**
RMF				MSG		08 00 29.9	
	comp=Z,2.1nm,0.2s						
OUL	**Oulu**	**1.48**	**320**	PN	**Pn**	**08 00 31.3**	**+0.1**
OUL				SN	**Sg**	**08 00 50.5**	**-0.3**
OUF	**Merijarvi**	**1.55**	**286**	PG	**Pn**	**08 00 31.5**	**-0.6**
OUF				MSG		08 00 50.3	
	comp=Z,2.3nm,0.2s						
OUF				SN	**Sn**	**08 00 52.8**	**0.0**
SUF	**Sumiainen**	**1.55**	**216**	PG	**Pb**	**08 00 32.6**	**-0.3**
SUF				MSG		08 00 50.6	
	comp=Z,1.2nm,0.2s						
SUF				SN	**Sg**	**08 00 53.7**	**+0.7**
OBF4	**Vikkela, Lumij**	**1.57**	**304**	PG	**Pn**	**08 00 32.5**	**+0.1**
OBF4				MSG		08 00 50.9	
	comp=Z,1.8nm,0.2s						
OBF4				SN	**Sg**	**08 00 53.8**	**+0.2**
JOF	**Joensuu**	**1.78**	**125**	PG	**Pb**	**08 00 36.2**	**-0.6**
	baz=307						
JOF				SN	**Sb**	**08 00 59.3**	**-0.2**
OBF0	**Syolatti, Pyha**	**1.79**	**289**	PG	**Pb**	**08 00 36.3**	**-0.6**
OBF0				MSG		08 00 57.1	
	comp=Z,2.0nm,0.2s						
OBF0				SN	**Sg**	**08 01 00.6**	**0.0**
MSF	**Maaselka**	**1.98**	**11**	PG	**Pb**	**08 00 40.2**	**-0.1**
MSF				SG	**Sb**	**08 01 05.4**	**-0.1**
KAF	**Kangasniemi**	**2.05**	**205**	PG	**Pb**	**08 00 41.0**	**-0.4**
KAF				MSG		08 01 05.1	
	comp=Z,3.4nm,0.2s						
KAF				SG	**Sg**	**08 01 08.3**	**-0.8**
OBF8	**Ulkokalla**	**2.09**	**282**	PG	**Pb**	**08 00 41.7**	**-0.4**
OBF8				MSG		08 01 05.9	
	comp=Z,1.1nm,0.2s						
OBF8				SG	**Sg**	**08 01 10.2**	**-0.2**
RANF	**Ranua**	**2.13**	**345**	PG	**Pb**	**08 00 42.3**	**-0.4**
	baz=168						
RANF				SG	**Sb**	**08 01 09.5**	**-0.2**
KU6	**Riekki**	**2.19**	**19**	PG	**Pb**	**08 00 43.3**	**-0.5**
	baz=199						
KU6				MSG		08 01 09.0	
	comp=Z,0.9nm,0.2s						
KU6				SG	**Sb**	**08 01 11.2**	**-0.2**
KEF	**Keuruu**	**2.35**	**221**	PG	**Pb**	**08 00 46.1**	**-0.4**
KEF				MSG		08 01 13.7	
	comp=Z,3.6nm,0.2s						
KEF				SG	**Sb**	**08 01 16.6**	**+0.7**
OLKF	**Oulanka, Finla**	**2.42**	**12**	PG	**Pb**	**08 00 47.3**	**-0.3**
OLKF				MSG		08 01 15.5	
	comp=Z,1.3nm,0.2s						
OLKF				SG	**Sb**	**08 01 17.3**	**-0.6**
RUF	**Ruokolahti**	**2.59**	**171**	MSG		08 01 20.6	
	comp=Z,1.3nm,0.2s						
RUF				SG	**Sb**	**08 01 23.6**	**+0.8**
VAF	**Ylistaro**	**2.63**	**252**	MSG		08 01 21.4	
	comp=Z,1.1nm,0.2s						
VAF				SG	**Sb**	**08 01 24.0**	**+0.1**
FIA0	**FINESS Array S**	**2.71**	**201**	MSG		08 01 24.3	
	comp=Z,0.7nm,0.2s						
FIA0				SG	**Sb**	**08 01 26.3**	**-0.2**
FINES	**FINESS Array B**	**2.71**	**201**	Pn	**Pb**	**08 00 50.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=20,slow=14,SNR=4.7						
FINES				Sn	**Sb**	**08 01 25.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=21,slow=24,SNR=6.4						
	comp=Z,0.8nm,0.5s						
RNF	**Rovaniemi**	**2.79**	**342**	SB	**Sb**	**08 01 28.3**	**-0.5**
UMAU	**Umeaa**	**3.30**	**272**	PN	**Pn**	**08 00 57.5**	**+1.4**
	baz=86						
VJF	**Virojoki**	**3.46**	**185**	SG	**Sb**	**08 01 47.6**	**-0.3**
ARCES	**ARCESS Array B**	**5.68**	**351**	Pn	**Pn**	**08 01 30.2**	**+1.3**
	baz=171,slow=12,SNR=1.3						
ARCES				Sn	**Sn**	**08 02 34.3**	**-0.4**
	baz=168,slow=23,SNR=0.9						
	comp=Z,1.3nm,0.9s						
I37NO	**I37NO**	**6.38**	**328**	I	I	08 39 00.3	
	baz=142,slow=311,SNR=2.4						

IDC 12 08:07:40.7±3.4, 54°43N×86°67E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=27.5km s-min=17.7km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.19**	**247**	I	I	08 15 40.0	
	baz=65,slow=328,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.19**	**247**	Pg	Pg	08 08 02.3	-1.2
	0.5nm,0.3s,baz=66,slow=16,SNR=4.6						
ZALV				Lg	Lg	08 08 20.0	
	0.5nm,0.3s,baz=68,slow=29,SNR=2.9						
KURBB	**Kurchatov Arra**	**6.26**	**236**	Pn	Pn	08 09 14.7	+0.5
	0.1nm,0.3s,baz=54,slow=14,SNR=5.9						
KURBB				Sn	Sn	08 10 25.5	-0.8
	baz=48,slow=22,SNR=1.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.13**	**202**	Pn	Pn	08 09 41.4	+1.4
	0.1nm,0.3s,baz=24,slow=14,SNR=4.8						
	0.1nm,0.3s						

*NORS **12** 08:08:19.9, 43°.41N×43°.59E, h18km, MPVA3.8*
*TIF **12** 08:08:20.1, 43°.53N×43°.75E, h1km±1km*
*MOS **12** 08:08:21.1, 43°.43N×43°.59E, h18km, MPVA3.7*

ISC 12 08:08:21.0±0.9, 43°45N±0°.02×43°63E±0°.02, h18km±3km, n39, σ0s75/78, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NCK	**Nalchik**	**0.05**	**333**	*e*Pg	**Pg**	**08 08 24.1**	**-0.2**
NCK				*i* Sg	**Sg**	**08 08 27.1**	**+0.5**
LSNR	**Lesken**	**0.22**	**140**	*e*Pg	**Pb**	**08 08 26.4**	**0.0**
LSNR				*e*Sg	**Sg**	**08 08 31.2**	**+1.3**
STDR	**Stavd-Durt**	**0.33**	**104**	*e*Pg	**Pg**	**08 08 27.8**	**-0.2**
STDR				*e*Sg	**Sb**	**08 08 33.7**	**+0.5**
KBTC	**Kuba-Taba**	**0.40**	**337**	*e*Pg	**Pg**	**08 08 29.1**	**-0.2**
KBTC				*e*Sg	**Sb**	**08 08 35.9**	**+0.3**
KORR	**Kora**	**0.48**	**138**	*e*Pg	**Pg**	**08 08 30.8**	**+0.1**
KORR				*e*Sg	**Sb**	**08 08 38.6**	**+0.8**
ARNR	**Ardon**	**0.55**	**119**	*e*Pg	**Pn**	**08 08 33.6**	**-0.3**
ARNR				*e*Sg	**Sn**	**08 08 42.2**	**-0.4**
DIGR	**Digorskoe uzhe**	**0.55**	**184**	*i* Pg	**Pb**	**08 08 31.8**	**-0.3**
DIGR				*e*Sg	**Sb**	**08 08 39.4**	**-0.3**
PRTR	**Priterechnaya**	**0.56**	**57**	*e*Pg	**Pg**	**08 08 32.5**	**+0.3**
PRTR				*e*Sg	**Sn**	**08 08 42.9**	**-0.1**
KBZ	**Khabaz**	**0.60**	**298**	*e*Pg	**Pg**	**08 08 33.1**	**+0.2**
KBZ				*e*Sg	**Sg**	**08 08 41.4**	**+0.5**
BTKR	**Batakoyurt**	**0.67**	**96**	*e*Pg	**Pg**	**08 08 35.0**	**+0.8**
BTKR				*e*Sg	**Sn**	**08 08 46.9**	**+1.2**
ZEI	**Tsey**	**0.69**	**163**	*e*Pg	**Pb**	**08 08 34.6**	**0.0**
ZEI				*e*Sg	**Sb**	**08 08 43.2**	**+0.5**
NEUR	**Neytrino**	**0.70**	**255**	*e*Pg	**Pg**	**08 08 35.0**	**+0.2**
NEUR				*e*Sg	**Sg**	**08 08 44.5**	**+0.4**
PYA1	**Pyatigorsk**	**0.73**	**328**	*e*Pg	**Pb**	**08 08 34.3**	**-0.8**
PYA1				*e*Sg	**Sb**	**08 08 43.9**	**-0.8**
SHA1	**Shidzhatmaz**	**0.76**	**293**	*e*Pg	**Pb**	**08 08 35.6**	**-0.3**
SHA1				*e*Sg	**Sg**	**08 08 46.6**	**+0.4**
LACR	**Lac**	**0.79**	**142**	*e*Pg	**Pb**	**08 08 36.1**	**-0.1**
LACR				*e*Sg	**Sb**	**08 08 46.5**	**-0.1**
BEYR	**Belyy Ugol+**	**0.81**	**314**	*e*Pg	**Pb**	**08 08 36.2**	**-0.5**
BEYR				*e*Sg	**Sb**	**08 08 47.1**	**-0.2**
TRKR	**Terskaya**	**0.85**	**71**	*e*Pg	**Pg**	**08 08 37.8**	**+0.3**
TRKR				*e*Sg	**Sn**	**08 08 51.1**	**+1.2**
KIV	**Kislovodsk**	**0.85**	**307**	*e*Pg	**Pg**	**08 08 37.6**	**0.0**
KIV				*e*Sg	**Sg**	**08 08 49.4**	**+0.5**
ONI	**Oni**	**0.87**	**189**	P	**Pg**	**08 08 38.1**	**+0.2**
ONI				S	**Sn**	**08 08 50.6**	**+0.1**
ONI	**Oni**	**0.87**	**189**	*i* Pg	**Pg**	**08 08 38.7**	**+0.2**
ONI				*e*Sg	**Sn**	**08 08 50.7**	**+0.1**
KMGR	**Komgaron**	**0.98**	**113**	*e*Pg	**Pb**	**08 08 39.1**	**-0.4**
KMGR				*e*Sg	**Sn**	**08 08 54.7**	**+1.3**
MTEO	**Meteo**	**1.01**	**139**	P	**Pb**	**08 08 39.7**	**-0.6**
MTEO				S	**Sb**	**08 08 52.5**	**-1.0**
GUDG	**Gudauri**	**1.16**	**147**	P	**Pn**	**08 08 42.4**	**-0.2**
GUDG				S	**Sb**	**08 08 57.1**	**-0.4**
GUDG	**Gudauri**	**1.16**	**147**	*e*Pg	**Pn**	**

mbtmp3.2/4,ML2.3/1,Error ellipse: s-maj=68.7km s-min=23.6km az=154.0,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**3.09**	**251**	Pn	Pn	08 23 07.5	-0.7
	1.7nm,0.3s,baz=72,slow=30,SNR=16						
PETK				Sn	Sn	08 23 48.0	+2.2
	1.1nm,0.3s,baz=106,slow=21,SNR=2.1 3.5nm,0.4s						
ILAR	**Eielson Array**	**26.99**	**47**	P	P	08 28 00.3	-1.0
	0.2nm,0.5s,baz=262,slow=7.9,SNR=5.6 0.2nm,0.5s						
YKA	**Yellowknife Ar**	**41.35**	**44**	P	P	08 30 04.7	-0.7
	0.2nm,0.7s,baz=300,slow=8.3,SNR=3.2 0.2nm,0.7s						
TXAR	**Lajitas Array**	**68.86**	**69**	P	P	08 33 26.0	+1.3
	0.2nm,0.4s,baz=304,slow=3.7,SNR=5.4 0.2nm,0.4s						

IDC 12 08:27:55.1±2.2, 54°.48N×83°.59E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=17.4km s-min=11.0km az=159.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**126**	I	I	08 33 10.0	
	baz=306,slow=336,SNR=8.2						
ZALV	**Zalesovo Beam**	**0.90**	**126**	Pg	Pg	08 28 11.4	-1.0
	1.5nm,0.3s,baz=302,slow=17,SNR=22						
ZALV				Lg	Lg	08 28 25.8	
	2.5nm,0.3s,baz=308,slow=30,SNR=19						
KURBB	**Kurchatov Arra**	**4.95**	**221**	Pn	Pn	08 29 10.6	0.0
	0.1nm,0.3s,baz=48,slow=17,SNR=2.1 0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.74**	**187**	Pn	Pn	08 29 49.9	+0.8
	baz=11,slow=11,SNR=1.8 0.1nm,0.4s						

UCR 12 08:31:15.9±0.6, 8°.03N×82°.92W, h3km±4km, MW4.1
UPA 12 08:31:20.3±1.1, 8°.27N×82°.78W, h10km±4km, MW3.7
ISC 12 08:31:17.0±1.2, 8°.12N±0°.05×82°.90W±0°.04, h17km±6km, n59, σ1§08/68, 12C-9D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.09**	**10**	⇓*iP*	**Pg**	**08 31 21.0**	**+0.5**
PTPM				*eS*	**Sg**	**08 31 22.6**	**-0.3**
CDITO	**Canoas**	**0.46**	**3**	⇓*iP*	**Pb**	**08 31 26.8**	**+0.2**
CDITO				*eS*	**Sg**	**08 31 31.6**	**-0.9**
CDITO	**Canoas**	**0.46**	**3**	⇓*iP*	**Pg**	**08 31 26.4**	**+0.1**
PIRO	**Carate, Puerto**	**0.52**	**303**	⇑*iP*	**Pg**	**08 31 27.1**	**-0.4**
FITO	**Golfito**	**0.57**	**333**	*eP*	**Pg**	**08 31 28.1**	**-0.2**
EDAD	**Golfito**	**0.60**	**333**	*eP*	**Pg**	**08 31 28.4**	**-0.5**
JIME	**Puerto Jimenez**	**0.60**	**315**	⇑*iP*	**Pg**	**08 31 29.1**	**+0.2**
MLIR3	**Monte Lirio, C**	**0.68**	**6**	⇓*eP*	**Pb**	**08 31 31.3**	**+0.9**
BCO2	**Palmira**	**0.70**	**31**	⇓*iP*	**Pb**	**08 31 31.4**	**+0.6**
BCO2				*eS*	**Sg**	**08 31 38.9**	**-1.3**
VITO	**San Vito**	**0.70**	**354**	*eP*	**Pb**	**08 31 31.6**	**+0.7**
BRU2	**Volcan**	**0.70**	**17**	⇓*iP*	**Pb**	**08 31 31.5**	**+0.6**
BRU2				*eS*	**Sb**	**08 31 40.3**	**-0.1**
BRU2	**Volcan**	**0.70**	**17**	⇓*iP*	**Pb**	**08 31 31.2**	**+0.3**
BC3P	**Paso Ancho**	**0.75**	**22**	*eP*	**Pb**	**08 31 32.2**	**+0.5**
BC3P				*eS*	**Sb**	**08 31 42.3**	**+0.6**
LNBQ3	**Los Naranjos,**	**0.81**	**34**	⇓*iP*	**Pg**	**08 31 32.7**	**-0.1**
LNBQ3				*eS*	**Sg**	**08 31 42.3**	**-1.3**
POTG	**Potrero Grande**	**0.96**	**347**	⇑*eP*	**Pb**	**08 31 35.5**	**+0.3**
EDPN	**Palmar Norte**	**1.01**	**327**	⇑*eP*	**Pb**	**08 31 35.7**	**-0.3**
CHGR2	**Aguacate**	**1.10**	**42**	⇑*iP*	**Pb**	**08 31 37.4**	**-0.2**
CHGR2				*eS*	**Sb**	**08 31 50.0**	**-1.7**
EDBA	**Buenos Aires**	**1.11**	**340**	*eP*	**Pb**	**08 31 38.0**	**+0.3**
BURE	**Buenos Aires**	**1.14**	**337**	*eP*	**Pb**	**08 31 38.4**	**+0.1**
DRK0	**Durika**	**1.19**	**343**	⇑*iP*	**Pb**	**08 31 39.3**	**+0.1**
CNI2	**El Empalme, Bo**	**1.37**	**18**	⇓*iP*	**Pb**	**08 31 42.1**	**+0.1**
CNI2				*eS*	**Sb**	**08 31 57.5**	**-1.8**
PEZE	**Perez Zeledon,**	**1.48**	**329**	⇑*iP*	**Pn**	**08 31 43.6**	**+0.8**
ZELE	**Perez Zeledon**	**1.49**	**327**	*eP*	**Pn**	**08 31 44.0**	**+1.0**
CDM	**Cerro de Muert**	**1.67**	**329**	*eP*	**Pn**	**08 31 46.3**	**+0.6**
GMAL	**Guarumal, Vera**	**1.68**	**102**	*eP*	**Pn**	**08 31 45.3**	**-0.3**
LLNJ	**Naranjito**	**1.80**	**319**	*eP*	**Pn**	**08 31 48.2**	**+0.9**
SVQ2	**Quepos**	**1.81**	**316**	*eP*	**Pn**	**08 31 48.1**	**+0.8**
RAZU	**San Marcos de**	**1.90**	**324**	*eP*	**Pn**	**08 31 50.5**	**+1.8**
RIMA	**Rio Macho**	**1.90**	**330**	*eP*	**Pn**	**08 31 50.2**	**+1.4**
LCR2	**La Lucha 2**	**1.95**	**326**	⇑*iP*	**Pn**	**08 31 50.5**	**+1.0**
REPA	**Paraso**	**1.96**	**331**	*eP*	**Pb**	**08 31 51.8**	**-0.4**
VERB	**Verbena**	**1.98**	**337**	*eP*	**Pn**	**08 31 51.7**	**+1.8**
RVSTA	**Santa Teresita**	**1.99**	**338**	*eP*	**Pb**	**08 31 52.0**	**-0.9**
PCAYA	**Pacayas**	**2.01**	**333**	*eP*	**Pn**	**08 31 51.9**	**+1.6**
TAGO	**Cartago**	**2.02**	**330**	*eP*	**Pb**	**08 31 52.6**	**-0.6**
RAFA	**San Farael, Vo**	**2.04**	**334**	*eP*	**Pb**	**08 31 53.1**	**-0.7**
CVTV	**Tajo**	**2.06**	**336**	*eP*	**Pn**	**08 31 52.8**	**+1.7**
OCM	**Ochomogo**	**2.06**	**329**	⇑*iP*	**Pn**	**08 31 52.7**	**+1.7**
IRES	**Siquirres**	**2.06**	**343**	*eP*	**Pb**	**08 31 53.2**	**-0.6**
LCOCO	**El Coco**	**2.06**	**342**	*eP*	**Pb**	**08 31 53.6**	**-0.4**
ICR3	**Volcano Irazu**	**2.07**	**334**	*eP*	**Pn**	**08 31 53.3**	**+2.0**
TRIO	**Tres Rios**	**2.08**	**329**	*eP*	**Pb**	**08 31 53.8**	**-0.7**
VTLO	**VTLO**	**2.08**	**337**	*eP*	**Pn**	**08 31 52.7**	**+1.3**
ACOS	**Acosta**	**2.09**	**323**	*eP*	**Pn**	**08 31 52.8**	**+1.5**
RVLA	**Villa Bonita**	**2.10**	**341**	*eP*	**Pb**	**08 31 54.7**	**+0.2**
AMPA	**Desamparados**	**2.11**	**327**	*eP*	**Pb**	**08 31 53.6**	**+2.0**
LUJA	**Lujan**	**2.11**	**327**	*eP*	**Pb**	**08 31 55.0**	**-0.4**
SJS3	**Mercedes San J**	**2.14**	**328**	⇑*eP*	**Pn**	**08 31 54.2**	**+2.1**
SJS	**Escuela Geolog**	**2.14**	**328**	⇑*eP*	**Pn**	**08 31 54.0**	**+2.0**
CORON	**Coronado**	**2.15**	**329**	*eP*	**Pb**	**08 31 55.4**	**-0.1**
LUPE	**Guadalupe**	**2.15**	**328**	*eP*	**Pn**	**08 31 53.9**	**+1.7**
MEXI	**Barrio Mexico**	**2.16**	**327**	*eP*	**Pb**	**08 31 55.2**	**-0.6**
DOMI	**Santo Domingo**	**2.20**	**328**	*eP*	**Pn**	**08 31 55.0**	**+2.2**
SANTA	**Santa Ana**	**2.21**	**325**	*eP*	**Pn**	**08 31 54.4**	**+1.4**
HDC3	**Heredia 3**	**2.23**	**327**	⇑*iP*	**Pn**	**08 31 55.2**	**+2.0**
BELE	**Belen**	**2.25**	**325**	*eP*	**Pb**	**08 31 56.6**	**-0.5**
JACO	**JACO, Garabito**	**2.33**	**312**	*eP*	**Pn**	**08 31 54.3**	**-0.1**
TRB2	**Turrubares**	**2.36**	**319**	*eP*	**Pn**	**08 31 55.8**	**+0.9**
AZU	**Azuero**	**2.62**	**97**	*eP*	**Pb**	**08 32 03.8**	**+0.5**
AZU				*eS*	**Sb**	**08 32 35.4**	**+0.2**

KRNET 12 08:40:07.5±0.1, 39°.93N×70°.61E, h23km, mb2.9
SOME 12 08:40:07.4, 40°.07N×70°.63E, h0km
NNC 12 08:40:08.3±10.0, 39°.87N×70°.52E, h224km±126km, mb2.1, mpv3.3, Error ellipse: s-maj=153.2km s-min=31.7km az=5.0
ISU 12 08:40:09.5, 40°.06N×70°.46E, h30km
ISC 12 08:40:09.0±1.1, 40°.01N±0°.04×70°.60E±0°.03, h9km±8km, n31, σ1§80/62, 24C-11D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.17**	**73**	⇑*iP*	**Pg**	**08 40 12.6**	**-0.2**
	baz=51						
BTK				⇑*iS*	**Sg**	**08 40 16.2**	**+0.8**
	baz=51						
MINT	**Mingtut**	**0.54**	**32**	P	**Pb**	**08 40 21.3**	**+0.6**
MINT				S	**Sb**	**08 40 29.8**	**+1.2**
CHMI	**Chimion**	**0.75**	**70**	P	**Pn**	**08 40 26.0**	**+0.1**
CHMI				S	**Sn**	**08 40 38.2**	**+0.7**
FRG	**Fergana**	**0.98**	**68**	P	**Pn**	**08 40 29.8**	**+0.8**
FRG				S	**Sn**	**08 40 45.6**	**+2.6**
DRK	**Karamyk**	**1.06**	**119**	⇑*eP*	**Pg**	**08 40 26.8**	**-2.7**
	baz=15						
DRK				⇑*eS*	**Sg**	**08 40 40.9**	**-2.5**
	baz=15						
KSNS	**Kasansay**	**1.35**	**31**	P	**Pg**	**08 40 35.1**	**+0.2**
KSNS				S	**Sg**	**08 40 55.1**	**+2.7**
TSTA	**Tashata**	**1.54**	**68**	P	**Pg**	**08 40 39.6**	**+0.9**
TSTA				S	**Sg**	**08 41 02.3**	**+3.6**
TRKS	**Terek-Say**	**1.57**	**15**	⇑*iP*	**Pn**	**08 40 36.4**	**-0.9**
	baz=15						
TRKS				⇑*iS*	**Sb**	**08 40 58.0**	**-0.5**
	baz=15						
CHRV	**Charvak**	**1.70**	**343**	P	**Pn**	**08 40 39.6**	**+0.6**
CHRV				S	**Sb**	**08 41 02.4**	**+0.3**
OHH	**Osh**	**1.75**	**72**	⇓*iP*	**Pn**	**08 40 39.0**	**-0.6**
	baz=70						
OHH				⇓*iS*	**Sn**	**08 41 02.1**	**0.0**
	baz=70						
BXML	**Bakhmal**	**2.00**	**262**	P	**Pb**	**08 40 46.4**	**+0.7**
BXML				S	**Sg**	**08 41 15.6**	**+2.2**
ARK	**Arkit**	**2.06**	**30**	⇑*iP*	**Pn**	**08 40 44.5**	**+0.5**
	baz=28						
ARK				⇑*iS*	**Sb**	**08 41 11.2**	**-1.4**
	baz=28						
IUG	**luzhnay**	**2.18**	**349**	*eP*	**Pb**	**08 40 48.2**	**-0.5**
	121nm,0.2s						
IUG				*eS*	**Sg**	**08 41 17.7**	**-1.4**
	672nm,0.3s						
SFK	**Sufi-Kurgan**	**2.23**	**89**	⇑*iP*	**Pn**	**08 40 45.5**	**-0.9**
	baz=87						
SFK				⇑*iS*	**Sn**	**08 41 13.4**	**-0.8**
	baz=87						
ARSB	**Arslanbob**	**2.24**	**53**	⇑*iP*	**Pn**	**08 40 46.5**	**+0.1**
	baz=52						
ARSB				⇑*iS*	**Sn**	**08 41 14.7**	**+0.4**
	baz=52						
MNAS	**Manas**	**2.86**	**29**	⇓*iP*	**Pn**	**08 40 55.7**	**+0.7**
	baz=29						
MNAS				⇓*iS*	**Sn**	**08 41 30.6**	**+1.0**
	baz=29						
BRLS	**Borolday**	**3.07**	**350**	*eP*	**Pn**	**08 41 00.0**	**+2.2**
	2.2nm,0.1s						
BRLS				*eS*	**Sb**	**08 41 38.4**	**-3.0**
	21nm,0.2s						
KK31	**Karatay Array**	**3.09**	**359**	⇓*P*	**Pb**	**08 41 01.2**	**-3.0**
	1.8nm,0.3s,baz=184,slow=17,SNR=12						
KK31				S	**Sg**	**08 41 45.2**	**-3.2**
	7.4nm,0.3s,baz=181,slow=30,SNR=21						
KKAR	**Karatay Array**	**3.09**	**359**	⇑*iP*	**Pn**	**08 40 58.9**	**+0.9**
	baz=59						
KKAR				⇑*iS*	**Sn**	**08 41 36.3**	**+1.1**
	baz=59						
ARLS	**Aral**	**3.37**	**56**	⇑*iP*	**Pn**	**08 41 02.1**	**+0.1**
	baz=54						
ARLS				⇑*iS*	**Sn**	**08 41 42.0**	**-0.3**
	baz=54						
MRKS	**Merke**	**3.37**	**35**	*eP*	**Pb**	**08 41 09.8**	**+0.8**
	1.5nm,0.1s						
MRKS				*eS*	**Sg**	**08 41 54.6**	**-2.7**
	20nm,0.2s						
EKS2	**Erkin-Say**	**3.57**	**41**	⇑*eP*	**Pn**	**08 41 05.0**	**+0.3**
	baz=40						
EKS2				⇑*iS*	**Sn**	**08 41 47.4**	**+0.3**
	baz=40						
UCH	**Uchtor**	**3.69**	**52**	⇑*iP*	**Pn**	**08 41 06.8**	**+0.1**
	baz=51						
UCH				⇑*iS*	**Sn**	**08 41 50.3**	**-0.3**
	baz=51						
AAK	**Ala-Archa**	**3.94**	**47**	⇓*iP*	**Pn**	**08 41 10.1**	**+0.3**
	baz=46						
AAK				⇓*iS*	**Sn**	**08 41 55.9**	**-0.3**
	baz=46						
KBK	**Karagaybulak**	**4.21**	**50**	⇑*iP*	**Pn**	**08 41 13.9**	**+0.4**
	baz=49						
KBK				⇑*iS*	**Sn**	**08 42 02.2**	**-0.7**
	baz=49						
BOOM	**Boomskoye usch**	**4.73**	**57**	⇓*iP*	**Pn**	**08 41 20.8**	**+0.2**
	baz=56						
BOOM				⇓*iS*	**Sn**	**08 42 14.5**	**-1.2**
	baz=56						
TKM2	**Tokmak 2**	**4.75**	**51**	⇑*P*	**Pn**	**08 41 23.4**	**+2.5**
	4.1nm,0.5s						
TKM2				⇑*S*	**Sn**	**08 42 19.1**	**+2.8**
	2.0nm,0.6s						
TKM2	**Tokmak 2**	**4.75**	**51**	⇓*iP*	**Pn**	**08 41 21.4**	**+0.4**
	baz=50						
TKM2				⇓*iS*	**Sn**	**08 42 15.4**	**-0.9**
	baz=50						
KST	**Kastek**	**5.04**	**51**	*eP*	**Pb**	**08 41 40.8**	**+3.4**
KST				*eS*	**Sg**	**08 42 48.1**	**-2.7**
DGS	**Degeres**	**5.05**	**49**	*eP*	**Pb**	**08 41 40.7**	**+3.1**
	1.3nm,0.2s						
DGS				*eS*	**Sg**	**08 42 47.8**	**-3.2**
	5.4nm,0.3s						
KRBS	**Karabastau**	**5.29**	**44**	*eP*	**Pb**	**08 41 44.6**	**+3.0**
	0.5nm,0.2s						
KRBS				*eS*	**Sg**	**08 42 54.4**	**-4.3**
	3.0nm,0.2s						

IDC 12 08:49:38.9±1.1, 62°.86N×25°.08W, h0km, mb3.5/4, mbtmp3.6/5, ML3.7/1, MS3.5/11, Error ellipse: s-maj=33.9km s-min=21.8km az=35.0
ISC 12 08:49:40.3±1.0, 62°.9N±0°.1×25°.0W±0°.1, h10km, n17, σ1§06/7, mb3.6/5, MS3.6/8, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**2.48**	**40**	Pn	**Pn**	**08 50 20.0**	**-0.6**
	17nm,0.3s,baz=247,slow=6.7,SNR=72						
BORG				Sn	**Sg**	**08 50 59.9**	**0.0**
	3.1nm,0.3s,baz=54,slow=18,SNR=1.4 147nm,0.7s						
SFJD	**Kangerlussuaq**	**11.55**	**302**	LR	LR	08 56 15.2	
	comp=Z,151nm,20.4s,baz=155,slow=34						
NOA	**NORSAR Array B**	**16.99**	**80**	LR	LR	09 00 30.0	
	comp=Z,62nm,19.2s,baz=255,slow=38						
HFS	**Hagfors**	**18.48**	**81**	LR	LR	09 00 49.8	
	comp=Z,117nm,19.7s,baz=267,slow=36						
GERES	**GERESS Array B**	**25.39**	**105**	LR	LR	09 05 17.2	
	comp=Z,120nm,19.3s,baz=310,slow=37						
VRAC	**Vranov**	**26.33**	**102**	LR	LR	09 06 47.5	
	comp=Z,56nm,19.3s,baz=330,slow=39						
ESDC	**Sonseca Array**	**26.47**	**142**	P	**P**	**08 55 17.6**	**+0.3**
	1.0nm,0.7s,baz=338,slow=9.7,SNR=5.6 1.0nm,0.7s						
YKA	**Yellowknife Ar**	**37.92**	**311**	P	**P**	**08 56 57.1**	**-0.1**
	0.4nm,0.8s,baz=44,slow=8.7,SNR=6.8 0.4nm,0.8s						
BRTR	**Keskin Array B**	**41.44**	**96**	P	**P**	**08 57 28.4**	**+1.4**
	0.6nm,0.4s,baz=351,slow=6.4,SNR=5.2 0.6nm,0.4s						
KBZ	**Khabaz**	**42.51**	**84**	LR	LR	09 17 25.2	
	comp=Z,79nm,19.6s,baz=318,slow=39						
BBB	**Bella Bella**	**50.46**	**309**	LR	LR	09 20 41.7	
	comp=Z,49nm,18.3s,baz=334,slow=37						
PDAR	**Pinedale Array**	**50.69**	**289**	P	**P**	**08 58 40.2**	**+0.4**
	0.3nm,0.8s,baz=50,slow=6.0,SNR=2.0 0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**53.16**	**147**	P	**P**	**08 58 56.9**	**-1.3**
	3.2nm,0.3s,baz=355,slow=9.2,SNR=2.3						
ELK	**Elko**	**54.79**	**292**	LR	LR	09 22 16.0	
	comp=Z,100nm,18.4s,baz=16,slow=36						
ANMO	**Albuquerque**	**55.74**	**281**	LR	LR	09 22 19.7	
	comp=Z,27nm,18.6s,baz=154,slow=35						
NVAR	**Mina Array Bea**	**58.02**	**292**	LR	LR	09 26 40.7	
	comp=Z,52nm,18.3s,baz=89,slow=38						
LPIG	**La Paz**	**66.71**	**277**	LR	LR	09 28 29.0	
	comp=Z,36nm,19.5s,baz=18,slow=35						

IDC 12 08:53:11.9±14.0, 18°.77N×145°.68E, h280km±146km, mb3.2/10, mbtmp3.8/10, Error ellipse: s-maj=35.9km s-min=21.1km az=70.0
NEIC 12 08:53:12.9±0.9, 18°.7N±0°.1×145°.6E±0°.3, h279km±11km, mb3.9/31, Error ellipse: s-maj=37.1km s-min=17.8km az=106.0
ISC 12 08:53:13.7±0.8, 18°.6N±0°.1×145°.5E±0°.2, h300km, n47, σ1§05/47, mb3.8/27, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.01**	**188**	Pn	**Pn**	**08 54 29.6**	**-1.8**
WB0	**Warramunga Arr**	**39.66**	**197**	P	**P**	**09 00 18.9**	**+1.6**
WB0				IAmb	IAmb	09 00 33.8	
	comp=Z,9.2nm,1.5s						
WRAB	**Tennant Creek**	**39.83**	**197**	P	**P**	**09 00 19.9**	**+1.2**
WRAB				IAmb	IAmb	09 00 31.8	
	comp=Z,10.0nm,1.4s						
WB2	**Warramunga Arr**	**39.83**	**197**	P	**P**	**09 00 20.3**	**+1.5**
WB2				IAmb	IAmb	09 00 48.0	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**09 00 20.1**	**+1.2**
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**09 00 20.3**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=14,slow=8.1,SNR=15 comp=Z,0.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.37**	**209**	P	**P**	**09 00 32.9**	**+1.7**
SONM	**Songino Array**	**43.14**	**322**	P	**P**	**09 00 44.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=134,slow=8.3,SNR=1.6 comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**09 00 49.9**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=15,slow=6.1,SNR=1.7 comp=Z,0.2nm,0.5s						
J16K	**Anvik River**	**57.62**	**26**	P	**P**	**09 02 31.3**	**-1.3**
MK31	**Makanchi Array**	**58.43**	**314**	P	**P**	**09 02 39.3**	**+0.7**
MKAR	**Makanchi Array**	**58.43**	**314**	P	**P**	**09 02 39.0**	**+0.5**
MKAR	**Makanchi Array**	**58.43**	**314**	P	**P**	**09 02 38.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=89,slow=8.2,SNR=6.6 comp=Z,0.4nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H18K	**Honhosa River**	**59.29**	**24**	P	**P**	**09 02 44.3**	**+0.3**
H18K				IAmb	IAmb	09 03 09.7	
	comp=Z,7.8nm,1.5s						
TTA	**Tatalina**	**59.41**	**27**	P	**P**	**09 02 45.2**	**+0.2**
G19K	**Purcell Mounta**	**60.17**	**23**	P	**P**	**09 02 50.2**	**+0.2**
G19K				IAmb	IAmb	09 03 13.1	
	comp=Z,4.0nm,1.5s						
H19K	**Roundabout Mou**	**60.17**	**24**	P	**P**	**09 02 51.7**	**+1.8**
H19K				IAmb	IAmb	09 03 16.8	
	comp=Z,2.8nm,1.1s						
E19K	**Redstone River**	**60.64**	**22**	P	**P**	**09 02 50.8**	**-2.3**
E19K				IAmb	IAmb	09 03 08.6	
	comp=Z,4.2nm,1.4s						
SKT	**Skwentna**	**61.11**	**29**	P	**P**	**09 02 56.2**	**-0.2**
CAST	**Castle Rocks**	**61.26**	**27**	P	**P**	**09 02 57.9**	**+0.5**
CAST				IAmb	IAmb	09 03 02.6	
	comp=Z,5.3nm,1.4s						
KURBB	**Kurchatov Arra**	**61.30**	**318**	P	**P**	**09 02 57.6**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=92,slow=7.4,SNR=11 comp=Z,0.6nm,0.5s						
B20K	**Meade River**	**61.72**	**19**	P	**P**	**09 03 01.2**	**+1.0**
B20K				IAmb	IAmb	09 03 11.9	
	comp=Z,3.0nm,1.2s						
GHO	**Glory Hole Cre**	**62.26**	**29**	P	**P**	**09 03 04.0**	**0.0**
D22K	**Ayikyak River**	**62.75**	**21**	P	**P**	**09 03 08.2**	**+1.0**
E22K	**Anaktuvuk Pass**	**62.80**	**22**	P	**P**	**09 03 08.2**	**+0.7**
I23K	**Minto, Yukon-K**	**62.87**	**26**	P	**P**	**09 03 08.5**	**+0.6**
I23K				IAmb	IAmb	09 03 36.2	
	comp=Z,3.5nm,1.3s						
B22K	**Teshekpuk Lake**	**63.03**	**19**	P	**P**	**09 03 09.3**	**+0.5**
B22K				IAmb	IAmb	09 03 10.0	
	comp=Z,5.1nm,1.3s						
TOLK	**Toolik Lake Re**	**63.75**	**22**	P	**P**	**09 03 14.4**	**+0.8**
ILAR	**Eielson Array**	**63.81**	**26**	P	**P**	**09 03 12.0**	**-2.1**
	comp=Z,0.4nm,0.8s,baz=258,slow=6.0,SNR=4.4 comp=Z,0.4nm,0.8s						
E24K	**Your Creek**	**63.98**	**22**	P	**P**	**09 03 16.0**	**+0.8**
J26L	**Joseph Creek**	**65.17**	**27**	P	**P**	**09 03 23.0**	**+0.1**
J26L				IAmb	IAmb	09 03 23.9	
	comp=Z,2.9nm,1.2s						
ISLE	**Juniper Island**	**65.21**	**31**	P	**P**	**09 03 23.3**	**0.0**
BMAR	**Burnt Mountain**	**65.28**	**24**	P	**P**	**09 03 24.9**	**+1.3**
BCAR	**Beaver Creek A**	**65.75**	**28**	P	**P**	**09 03 27.0**	**+0.4**
BVAR	**Borovoye Array**	**66.47**	**320**	P	**P**	**09 03 31.1**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=93,slow=7.5,SNR=9.4 comp=Z,1.5nm,0.5s						
L29M	**L29M**	**67.41**	**29**	P	**P**	**09 03 38.6**	**+1.5**
L29M				IAmb	IAmb	09 04 03.6	
	comp=Z,4.5nm,1.5s						
H29M	**Whitestone**	**67.54**	**25**	P	**P**	**09 03 38.3**	**+0.6**
H29M				IAmb	IAmb	09 04 02.3	
	comp=Z,4.2nm,1.4s						
G30M	**tAoh Zrail Nji**	**68.45**	**24**	P	**P**	**09 03 44.0**	**+0.6**
G30M				IAmb	IAmb	09 03 48.1	
	comp=Z,2.6nm,1.2s						
G31M	**Satah River**	**69.21**	**25**	P	**P**	**09 03 47.5**	**-0.5**
G31M				IAmb	IAmb	09 03 48.7	
	comp=Z,2.4nm,0.9s						
F31M	**Tsiigehtchic**	**69.43**	**24**	P	**P**	**09 03 48.7**	**-0.6**
INK	**Inuvik**	**69.53**	**23**	P	**P**	**09 03 49.9**	**0.0**
INK				IAmb	IAmb	09 03 54.1	
	comp=Z,4.0nm,1.4s						
C36M	**Paulatuk**	**72.91**	**22**	P	**P**	**09 04 10.4**	**+0.4**
ABKAR	**Akbulak array**	**73.32**	**317**	P	**P**	**09 04 12.9**	**+0.1**
YKA	**Yellowknife Ar**	**78.15**	**28**	P	**P**	**09 04 40.3**	**+0.6**
	comp=Z,2.0nm,0.4s,baz=288,slow=5.9,SNR=3.3 comp=Z,2.0nm,0.4s						
ARCES	**ARCESS Array B**	**82.55**	**342**	P	**P**	**09 05 02.8**	**-0.2**
	comp=Z,4.7nm,1.1s,baz=55,slow=7.8,SNR=1.6 comp=Z,4.7nm,1.1s						
FINES	**FINESS Array B**	**86.92**	**335**	P	**P**	**09 05 23.6**	**-1.2**
FINES	**FINESS Array B**	**86.92**	**335**	P	**P**	**09 05 23.4**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=67,slow=4.4,SNR=4.9 comp=Z,0.8nm,0.4s						

KRSC 12 08:56:05.3±2.4, 55°.64N×160°.43E, h291km±24km, Ml4.1
IDC 12 08:56:08.2±2.3, 55°.93N×159°.45E, h259km±25km, mb3.3/6, mbtmp3.8/7, Error ellipse: s-maj=33.9km s-min=22.0km az=34.0
ISC 12 08:56:06.2±0.9, 55°.66N±0°.07×160°.5E±0°.1, h300km, n36, σ1§83/40, mb3.5/6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**0.19**	**300**	*eP*	**Pn**	**08 56 42.8**	**-1.6**
BZP	**Bezymyannyi-Pe**	**0.25**	**1**	*eP*	**Pn**	**08 56 43.0**	**-1.5**
BZMR	**Bezymyannaya**	**0.28**	**355**	*eP*	**Pn**	**08 56 43.1**	**-1.3**
BZGR	**Bezymyannyi-Gr**	**0.30**	**18**	*eP*	**Pn**	**08 56 43.5**	**-1.0**
BZWR	**Bezymyannyi-

ML3.5/38, Error ellipse: s-maj=16.8km s-min=10.1km az=165.0
*IDC **12** 09:17:07.6±3.4, 56°.32N×148°.39W, h0km, mb3.4/1, mbtmp3.2/3, ML2.5/2, Error ellipse: s-maj=53.8km s-min=39.0km az=132.0*
ISC 12 09:17:04.9±2.0, **56°.4N**±0°.1×**148°.77W**±0°.06, **h10km, n87, σ1s24/91, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.53**	**306**	Pn	**Pn**	**09 17 45.5**	**-0.4**
OHAK	**Old Harbor**	**2.63**	**291**	Pn	**Pn**	**09 17 45.7**	**-1.7**
OHAK	comp=E,73nm,1.1s			IAML		09 18 43.6	
SYI	**Shuyak Island**	**2.99**	**321**	Pn	**Pn**	**09 17 52.6**	**+0.2**
SYI	comp=N,51nm,0.4s			IAML		09 18 28.8	
Q20K	**Shuyak Island** baz=136	**2.99**	**321**	P	**Pn**	**09 17 52.9**	**+0.6**
Q20K	baz=136			S	**Sn**	**09 18 26.7**	**-1.4**
SII	**Sitkinak Islan**	**3.01**	**276**	Pn	**Pn**	**09 17 51.1**	**-1.5**
SII	comp=N,128nm,1.5s			IAML		09 18 27.9	
SII	comp=E,138nm,1.3s			IAML		09 18 53.2	
CNPM	**China Poot**	**3.44**	**339**	Pn	**Pn**	**09 17 58.9**	**+0.3**
CNPM	comp=E,34nm,1.3s			IAML		09 18 50.4	
BRSE	**Bradley Lake S** baz=162	**3.56**	**344**	P	**Pn**	**09 18 00.0**	**-0.1**
BRSE	baz=162			S	**Sn**	**09 18 39.5**	**-2.7**
BRLK	**Bradley Lake**	**3.60**	**343**	Pn	**Pn**	**09 18 00.8**	**0.0**
HOM	**Homer**	**3.65**	**336**	Pn	**Pn**	**09 18 01.8**	**+0.4**
Q19K	**Cape Douglas,**	**3.68**	**317**	Pn	**Pn**	**09 18 03.1**	**+1.3**
Q19K	**Cape Douglas,** baz=132	**3.68**	**317**	P	**Pn**	**09 18 03.2**	**+1.4**
P23K	**Montague Islan** baz=192	**3.73**	**11**	P	**Pn**	**09 18 02.4**	**-0.1**
P23K	baz=192			S	**Sn**	**09 18 43.4**	**-3.0**
SEW	**Seward** baz=174	**3.78**	**355**	P	**Pn**	**09 18 03.0**	**-0.1**
SEW	baz=174			S	**Sn**	**09 18 44.8**	**-2.8**
CHIR	**Chirikof Islan**	**3.88**	**265**	Pn	**Pn**	**09 18 02.0**	**-2.5**
CHIR	comp=E,113nm,1.5s			IAML		09 20 15.2	
P19K	**Oil Pt**	**4.07**	**326**	Pn	**Pn**	**09 18 08.6**	**+1.3**
P19K	comp=N,85nm,1.4s			IAML		09 18 55.8	
P19K	**Oil Pt** baz=142	**4.07**	**326**	P	**Pn**	**09 18 08.8**	**+1.6**
O22K	**Cooper Landing**	**4.17**	**354**	Pn	**Pn**	**09 18 09.7**	**+1.2**
O22K	comp=E,87nm,1.4s			IAML		09 19 06.3	
O22K	comp=N,84nm,0.8s			IAML		09 19 24.9	
HIN	**Hinchinbrook I**	**4.23**	**15**	Pn	**Pn**	**09 18 09.4**	**0.0**
HIN	comp=N,61nm,1.4s			IAML		09 20 02.1	
HIN	comp=E,65nm,1.4s			IAML		09 20 05.8	
O20K	**Slope Mountain** baz=149	**4.26**	**333**	P	**Pn**	**09 18 10.4**	**+0.6**
KAIM	**Kayak Island**	**4.26**	**31**	Pn	**Pn**	**09 18 10.5**	**+0.7**
KAIM	comp=N,82nm,1.4s			IAML		09 19 49.9	
KAIM	**Kayak Island** baz=215	**4.26**	**31**	P	**Pn**	**09 18 10.1**	**+0.3**
P18K	**Big Mountain,**	**4.60**	**314**	Pn	**Pn**	**09 18 14.3**	**-0.2**
P18K	**Big Mountain,** baz=128	**4.60**	**314**	P	**Pn**	**09 18 14.8**	**+0.3**
RSO	**Redoubt South**	**4.62**	**335**	Pn	**Pn**	**09 18 15.2**	**+0.2**
RSO					**Sn**	**09 19 08.0**	**-0.7**
RC01	**Rabbit Creek A**	**4.78**	**354**	Pn	**Pn**	**09 18 19.0**	**+2.1**
RC01	comp=E,21nm,1.4s			IAML		09 19 15.2	
RC01	comp=N,17nm,1.3s			IAML		09 19 24.3	
O19K	**Port Alsworth**	**4.84**	**325**	Pn	**Pn**	**09 18 18.6**	**+0.9**
O19K	comp=N,39nm,0.4s			IAML		09 19 15.4	
BERG	**Berg Lake**	**4.85**	**31**	Pn	**Pn**	**09 18 17.3**	**-0.6**
BERG	comp=N,40nm,1.4s			IAML		09 19 19.0	
BERG	comp=E,46nm,1.1s			IAML		09 19 32.2	
O18K	**Koktuh Hills** baz=132	**4.89**	**318**	P	**Pn**	**09 18 18.9**	**+0.3**
SNH	**Sunshine Point**	**4.95**	**37**	Pn	**Pn**	**09 18 18.5**	**-0.8**
SNH	comp=E,42nm,1.4s			IAML		09 19 15.8	
WAX	**Waxell Ridge**	**5.15**	**35**	Pn	**Pn**	**09 18 22.4**	**+0.3**
WAX	comp=E,29nm,1.4s			IAML		09 19 25.1	
WAX	comp=N,39nm,1.4s			IAML		09 19 29.2	
N20K	**Mount Spurr** baz=158	**5.18**	**341**	P	**Pn**	**09 18 22.6**	**+0.2**
SUA	**Susitna One**	**5.23**	**350**	Pn	**Pn**	**09 18 26.3**	**+3.2**
PMR	**Palmer**	**5.26**	**358**	Pn	**Pn**	**09 18 23.4**	**0.0**
MESA	**MESA**	**5.26**	**40**	Pn	**Pn**	**09 18 24.7**	**+1.0**
MESA	**MESA** baz=227	**5.26**	**40**	P	**Pn**	**09 18 24.4**	**+0.7**
CRQM	**Cirque**	**5.31**	**31**	Pn	**Pn**	**09 18 24.2**	**-0.2**
KLU	**Klutina**	**5.36**	**15**		**Pn**	**09 18 25.6**	**+0.6**
N19K	**Bonanza Creek**	**5.38**	**329**	Pn	**Pn**	**09 18 25.6**	**+0.4**
N19K	**Bonanza Creek** baz=143	**5.38**	**329**	P	**Pn**	**09 18 24.8**	**-0.4**
TGL	**Tana Glacier**	**5.40**	**33**	Pn	**Pn**	**09 18 26.2**	**+0.7**
ISLE	**Juniper Island**	**5.43**	**36**	Pn	**Pn**	**09 18 26.8**	**+0.8**
GHO	**Glory Hole Cre**	**5.44**	**359**		**Pn**	**09 18 27.5**	**+1.5**
SML	**Sawmill**	**5.47**	**2**	Pn	**Pn**	**09 18 27.7**	**+1.2**
SML	**Sawmill** baz=182	**5.47**	**2**	P	**Pn**	**09 18 27.5**	**+1.0**
SCM	**Sheep Creek Mo**	**5.55**	**7**	Pn	**Pn**	**09 18 29.1**	**+1.6**
VRDI	**Verde Repeater**	**5.62**	**27**	Pn	**Pn**	**09 18 30.1**	**+1.5**
N25K	**Chitina, Valde**	**5.69**	**21**		**Pn**	**09 18 30.5**	**+1.0**
N25K	**Chitina, Valde** baz=204	**5.69**	**21**	P	**Pn**	**09 18 30.3**	**+0.7**
GLB	**Gilahina Butte**	**5.71**	**25**		**Pn**	**09 18 30.2**	**+0.4**
TABL	**Table Mountain**	**5.73**	**41**	Pn	**Pn**	**09 18 30.8**	**+0.6**
SKT	**Skwentna**	**5.82**	**347**	Pn	**Pn**	**09 18 33.5**	**+2.2**
MCARA	**McCarthy VSAT**	**5.86**	**28**	Pn	**Pn**	**09 18 32.2**	**+0.5**
MCARA	**McCarthy VSAT** baz=213	**5.86**	**28**	P	**Pn**	**09 18 32.4**	**+0.7**
PINM	**Pinnacle** baz=234	**5.86**	**47**	P	**Pn**	**09 18 32.1**	**+0.3**
O16K	**Kokwok River B** baz=118	**5.93**	**307**	P	**Pn**	**09 18 33.5**	**+0.9**
M20K	**Styx River**	**5.98**	**340**	Pn	**Pn**	**09 18 34.0**	**+0.5**
M20K	**Styx River** baz=156	**5.98**	**340**	P	**Pn**	**09 18 33.8**	**+0.3**
PNL	**Peninsula** baz=241	**5.99**	**52**	P	**Pn**	**09 18 33.9**	**+0.3**
BARN	**Barnard Glacie**	**6.00**	**35**		**Pn**	**09 18 34.5**	**+0.7**
CTGM	**Chitina Glacie**	**6.04**	**37**	Pn	**Pn**	**09 18 34.5**	**+0.2**
LOGN	**Logan Glacier**	**6.05**	**39**	Pn	**Pn**	**09 18 35.4**	**+0.9**
M19K	**Big River Lodg**	**6.27**	**335**	Pn	**Pn**	**09 18 37.5**	**+0.1**
M18K	**Stony River** baz=141	**6.31**	**328**	P	**Pn**	**09 18 37.8**	**-0.1**
HARP	**HAARP** baz=199	**6.34**	**15**	P	**Pn**	**09 18 39.8**	**+1.5**
L19K	**White Mountain**	**6.62**	**334**	Pn	**Pn**	**09 18 42.2**	**0.0**
L19K	**White Mountain** baz=149	**6.62**	**334**	P	**Pn**	**09 18 41.5**	**-0.7**
O29M	**Mount Kennedy**	**6.67**	**49**		**Pn**	**09 18 44.1**	**+1.1**
O29M	**Mount Kennedy** baz=238	**6.67**	**49**	P	**Pn**	**09 18 43.6**	**+0.6**
N16K	**Nishlik Lake** baz=123	**6.68**	**312**	P	**Pn**	**09 18 44.0**	**+1.0**
P29M	**Windy Craggy**	**6.72**	**56**		**Pn**	**09 18 44.3**	**+0.7**
DHY	**Denali Highway**	**6.78**	**5**	Pn	**Pn**	**09 18 46.4**	**+1.9**
MENT	**Mentasta**	**7.08**	**19**	Pn	**Pn**	**09 18 50.9**	**+2.3**
YUK6	**Outpost Mounta** baz=235	**7.11**	**45**	P	**Pn**	**09 18 50.5**	**+1.4**
YUK4	**Talbot Arm** baz=231	**7.25**	**42**	P	**Pn**	**09 18 53.6**	**+2.6**
CAST	**Castle Rocks**	**7.28**	**348**	Pn	**Pn**	**09 18 52.2**	**+0.9**
TTA	**Tatalina**	**7.54**	**334**	Pn	**Pn**	**09 18 54.8**	**-0.1**
SKAG	**Skagway**	**7.81**	**61**	Pn	**Pn**	**09 18 59.6**	**+1.2**
BPAW	**Bear Paw Mtn.**	**7.85**	**353**	Pn	**Pn**	**09 18 59.6**	**+0.6**
M29M	**Somme Creek**	**8.05**	**36**	P	**Pn**	**09 19 02.9**	**+1.0**
	baz=226						
WHY	**Whitehorse**	**8.45**	**54**	Pn	**Pn**	**09 19 08.7**	**+1.3**
ILAR	**Eielson Array** comp=N,0.1nm,0.3s,baz=191,slow=14,SNR=2.3	**8.50**	**5**	Pn	**Pn**	**09 19 10.7**	**+2.8**
ILAR	comp=N,0.1nm,0.3s,baz=182,slow=20,SNR=2.4			Sn	Sn	09 20 39.4	-4.3
DAWY	**Dawson** comp=N,0.3nm,0.6s	**9.03**	**27**	Pn	**Pn**	**09 19 17.2**	**+2.1**
J16K	**Anvik River**	**9.14**	**324**	Pn	**Pn**	**09 19 16.3**	**-0.4**
P33M	**Teslin, Yukon**	**9.24**	**59**	Pn	**Pn**	**09 19 18.9**	**+0.6**
IMAR	**Indian Mountai**	**9.95**	**348**	Pn	**Pn**	**09 19 29.3**	**+1.5**
YKA	**Yellowknife Ar** baz=262,slow=11,SNR=4.2 comp=N,0.8nm,1.1s	**18.26**	**56**	P	**Pn**	**09 21 19.7**	**+1.6**
SONM	**Songino Array** comp=N,0.4nm,0.7s,baz=35,slow=5.3,SNR=2.2 comp=N,0.4nm,0.7s	**58.81**	**310**	P	P	09 27 08.3	+5.1

*IDC **12** 09:20:13.5±3.1, 53°.60N×87°.74E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=28.5km s-min=15.7km az=66.0, Southwestern Siberia*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.3nm,0.9s,baz=97,slow=334,SNR=10	**1.77**	**283**	I	I	09 32 00.0	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=102,slow=14,SNR=12	**1.77**	**283**	Pn	Pn	09 20 45.8	+0.5
ZALV	2.2nm,0.3s,baz=103,slow=31,SNR=7.5			Lg	Lg	09 21 08.7	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=62,slow=14,SNR=4.2 1.0nm,0.4s	**6.41**	**246**	Pn	Pn	09 21 49.9	+0.9
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=30,slow=13,SNR=5.8	**7.65**	**209**	Pn	Pn	09 22 07.2	+1.1
MKAR	0.1nm,0.3s,baz=30,slow=24,SNR=5.8			Sn	Sn	09 23 33.4	-0.1
MKAR	0.1nm,0.3s,baz=30,slow=32,SNR=7.6 0.2nm,0.4s			Lg	Lg	09 24 13.9	

*NNC **12** 09:32:20.5±0.8, 51°.74N×75°.47E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.5km s-min=4.3km az=7.0, Suspected Mining explosion.*
*SOME **12** 09:32:21.2, 51°.72N×75°.38E, h5km*
*IDC **12** 09:32:24.2±1.0, 51°.72N×75°.58E, h0km, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=28.6km s-min=7.6km az=31.0*
ISC 12 09:32:16.6±0.9, **52°.34N**±0°.06×**75°.84E**±0°.04, **h0km, n18, σ1s87/20, 7C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov** 4.2nm,0.6s	**2.38**	**132**	⇑Pg	**Pb**	**09 33 00.9**	**+0.7**
KURK	23nm,0.7s			⇓Lg	Lg	09 33 29.5	
KURBB	**Kurchatov Arra** 4.0nm,0.5s	**2.41**	**135**	⇑Pg	**Pg**	**09 33 02.1**	**-0.6**
KURBB	34nm,0.5s			⇑Lg	Lg	09 33 31.4	
KURBB	**Kurchatov Arra** 0.6nm,0.3s,baz=304,slow=18,SNR=17	**2.41**	**135**	Pg	**Pg**	**09 33 02.9**	**+0.2**
KURBB	1.1nm,0.3s,baz=299,slow=32,SNR=12			Lg	Lg	09 33 31.2	
BRZS	**Berezniki** 11nm,0.7s	**3.09**	**221**	Pg	**Pn**	**09 33 06.0**	**-0.6**
BRZS	17nm,0.4s			Lg	Lg	09 33 39.0	
BRZS	**Berezniki** 11nm,0.3s	**3.09**	**221**	*e*P	**Pn**	**09 33 06.0**	**-0.6**
BRZS	17nm,0.4s			*e*S	**Sn**	**09 33 38.6**	**-5.5**
SEM	**Semipalatinsk** 6.3nm,0.1s	**3.38**	**123**	Pg	**Pn**	**09 33 10.8**	**+0.1**
SEM	16nm,0.1s			Lg	Lg	09 33 46.4	
BVA0	**Borovoye Array** 2.6nm,0.6s,baz=108,slow=14,SNR=24	**3.39**	**284**	⇑Pg	**Pg**	**09 33 22.0**	**+0.6**
BVA0	12nm,0.6s,baz=115,slow=26,SNR=12			⇑Lg	Lg	09 34 05.5	
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=112,slow=14,SNR=11	**3.39**	**284**	Pn	**Pb**	**09 33 18.5**	**+1.1**
BVAR	0.2nm,0.3s,baz=110,slow=20,SNR=5.2 3.1nm,0.7s			Sn	**Sb**	**09 34 00.2**	**+1.1**
OTUK	**Ortayu** 0.7nm,0.4s	**4.67**	**210**	Pg	Pb	09 33 34.9	-4.5
OTUK	3.2nm,0.7s			Lg	Lg	09 34 28.2	
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=253,slow=15,SNR=4.3	**5.64**	**70**	Pn	**Pb**	**09 33 55.8**	**0.0**
ZALV	0.1nm,0.3s,baz=250,slow=24,SNR=2.8 0.9nm,0.4s			Sn	**Sb**	**09 35 01.3**	**-2.6**
I46RU	**ZALESOVO INFRA** baz=250,slow=336,SNR=10	**5.64**	**70**	I	I	10 06 50.0	
MK31	**Makanchi Array** 0.4nm,0.5s,baz=318,slow=17,SNR=5.8	**6.96**	**140**	⇑Sn	**Sn**	**09 35 17.5**	**-2.0**
MK31	3.5nm,0.6s,baz=318,slow=27,SNR=5.0			⇑Lg	Lg	09 35 51.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=323,slow=13,SNR=4.3	**6.96**	**140**	Pn	**Pn**	**09 34 01.8**	**+2.0**
MKAR	0.3nm,0.3s,baz=320,slow=21,SNR=8.1			Sn	**Sn**	**09 35 19.0**	**-0.6**
MKAR	0.6nm,0.3s,baz=322,slow=27,SNR=7.3 0.4nm,0.6s			Lg	Lg	09 35 50.9	
BTLS	**Baital** 1.7nm,0.5s	**7.40**	**190**	Pg	**Pb**	**09 34 26.6**	**+0.8**
BTLS	5.0nm,0.7s			Lg	Lg	09 35 56.4	
BTLS	**Baital** 1.7nm,0.5s	**7.40**	**190**	*e*P	**Pb**	**09 34 26.6**	**+0.8**
BTLS	5.0nm,0.7s			*e*S	**Sb**	**09 35 56.4**	**+1.9**
ARXS	**Arharly** 0.9nm,0.3s	**8.24**	**170**	Pg	**Pb**	**09 34 41.6**	**+1.4**
ARXS	6.0nm,0.8s			Lg	Lg	09 36 22.3	
KNOS	**Konyrlen** 1.9nm,0.9s	**8.29**	**163**	Pg	**Pb**	**09 34 42.6**	**+1.5**
KNOS	3.5nm,0.7s			Lg	Lg	09 36 24.9	
KST	**Kastek** 0.8nm,0.2s	**9.30**	**179**	Pg	Pn	09 34 59.3	+27
KST	5.6nm,0.6s			Lg	Lg	09 36 52.1	

IDC 12 09:48:05.3±2.7, **53°.73N**×**86°.86E, h0km, mbtmp3.1/2, ML2.4/2, Error ellipse: s-maj=25.9km s-min=14.6km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.2nm,0.8s,baz=99,slow=341,SNR=20	**1.23**	**281**	I	I	09 56 30.0	
ZALV	**Zalesovo Beam** 0.8nm,0.3s,baz=101,slow=15,SNR=8.7	**1.23**	**281**	Pg	Pg	09 48 27.8	-1.0
ZALV	1.5nm,0.3s,baz=103,slow=30,SNR=7.9			Lg	Lg	09 48 45.3	
KURBB	**Kurchatov Arra** baz=60,slow=14,SNR=1.3 1.3nm,0.2s	**5.99**	**242**	Pn	Pn	09 49 36.3	+1.1
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=12,SNR=8.2 0.2nm,0.3s	**7.54**	**205**	Pn	Pn	09 49 57.6	+1.2

*IDC **12** 09:49:13.9±1.6, 9°.43S×106°.72E, h0km, mb3.6/4, mbtmp3.7/5, ML3.7/1, MS3.0/1, Error ellipse: s-maj=45.2km s-min=23.7km az=59.0*
*DJA **12** 09:49:16.2±0.3, 9°.5±4°×10°7E±°, h10km, M4.2/12, mb4.6/6, MLv4.0/12*
ISC 12 09:49:17.6±1.2, **9°.3S**±0°.1×**106°.80E**±0°.10, **h22km, n18, σ0s71/19, mb3.7/4, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**2.01**	**9**	Pn	**Pn**	**09 49 49.5**	**-0.7**
CMJI	**Cimerak**	**2.22**	**47**	Pn	**Pn**	**09 49 52.1**	**-1.0**
SKJI	**Sukabumi**	**2.30**	**354**	Pn	**Pn**	**09 49 53.9**	**-0.3**
LEM	**Lembang** 13nm,0.3s,baz=20,slow=13,SNR=14	**2.59**	**18**	Pn	**Pn**	**09 49 59.6**	**+1.2**
LEM	24nm,0.3s,baz=334,slow=22,SNR=7.2			Sn	**Sb**	**09 50 34.1**	**-0.8**
LEM	comp=Z,232nm,18.5s,baz=320,slow=54 104nm,0.7s			LR	LR	09 51 40.9	
KPJI	**Karang Pucung**	**2.87**	**47**	P	**Pn**	**09 50 03.0**	**+0.9**
UGM	**Wanagama**	**3.93**	**70**	P	**Pn**	**09 50 15.8**	**-0.9**
KASI	**Kota Agung**	**4.40**	**328**	P	**Pn**	**09 50 23.3**	**+0.2**
PWJI	**Pagerwojo** 56nm,0.8s,0.2nm	**5.11**	**76**	P	**Pn**	**09 50 32.2**	**-0.6**
GMJI	**Gumukmas** 36nm,1.1s	**6.64**	**82**	P	**Pn**	**09 50 54.7**	**+0.8**
JAGI	**Jajag, Banyuwa** 48nm,0.6s,0.3nm	**7.31**	**84**	P	**Pn**	**09 51 03.7**	**+0.6**
TWSI	**Taliwang, Sumb** 16nm,0.8s	**9.97**	**88**	P	**Pn**	**09 51 39.9**	**+0.2**
PLAI	**Plampang** 22nm,0.9s	**10.85**	**88**	P	**Pn**	**09 51 51.6**	**-0.1**
KCSI	**Kotacane, Aceh** 12nm,1.2s	**15.60**	**324**	P	**Pn**	**09 52 55.5**	**-0.8**
SNSI	**Sinabang, Aceh**	**15.63**	**318**	P	**Pn**	**09 52 57.3**	**+0.6**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=289,slow=10,SNR=1.7 0.2nm,0.4s	**28.62**	**115**	P	**P**	**09 55 12.3**	**-0.4**
ASAR	**Alice Springs** 0.1nm,0.5s,baz=300,slow=7.4,SNR=1.6 0.1nm,0.5s	**29.57**	**122**	P	**P**	**09 55 21.1**	**0.0**
MKAR	**Makanchi Array** 1.3nm,0.6s,baz=143,slow=7.8,SNR=13 1.3nm,0.6s	**59.98**	**341**	P	**P**	**09 59 22.9**	**+0.5**
BVAR	**Borovoye Array** 1.1nm,0.6s,baz=141,slow=9.4,SNR=5.1 1.1nm,0.6s	**69.40**	**337**	P	**P**	**10 00 24.0**	**+0.3**

*IDC **12** 09:51:29.6±1.3, 31°.52N×50°.28E, h0km, mb3.9/10, mbtmp3.9/13, ML4.0/3, MS2.8/2, Error ellipse: s-maj=28.9km s-min=19.7km az=4.0*
*TEH **12** 09:51:30.8, 31°.58N×50°.36E, h8km±31km, ML3.8*
*OMAN **12** 09:51:35.2±0.1, 31°.32N×50°.55E, h10km, mb4.1/28, ms2.8/1, Error ellipse: s-maj=3.2km s-min=1.9km az=10.0*
*DSN **12** 09:51:37.7±1.8, 31°.36N×50°.59E, h41km, ML3.4/9, Error ellipse: s-maj=26.2km s-min=16.0km az=28.0*
ISC 12 09:51:30.9±0.5, **31°.57N**±0°.03×**50°.38E**±0°.03, **h10km, n102, σ1s89/125, mb3.7/11, 13C-3D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNGN	**Zangian**	**0.68**	**37**	Pg	**Pg**	**09 51 44.3**	**+0.2**
JHBN	**Jahan bin**	**0.70**	**20**	Pg	**Pg**	**09 51 44.8**	**+0.2**
IBRJ	**Brojen**	**0.82**	**66**	Pg	**Pb**	**09 51 47.6**	**+0.1**
ABEH	**Behbahan**	**0.97**	**186**	Pg	**Pb**	**09 51 49.9**	**0.0**
KLNJ	**Kolanjah**	**1.18**	**118**	Pg	**Pg**	**09 51 54.0**	**+0.3**
IPIR	**Pirpir**	**1.19**	**21**	Pg	**Pn**	**09 51 53.9**	**-0.1**
AHWZ	**Ahwaz**	**1.50**	**261**	Pg	**Pg**	**09 52 00.0**	**+0.2**
IGAR	**Gharneh**	**1.64**	**59**	Pg	**Pg**	**09 52 02.4**	**-0.1**
IRAM	**Ramesheh**	**1.73**	**82**	Pg	**Pg**	**09 52 04.2**	**+0.2**
IKLH	**Kolahrood**	**2.02**	**30**	Pn	**Pb**	**09 52 08.5**	**+0.7**
IZEF	**Zefreh**	**2.12**	**51**	Pn	**Pb**	**09 52 10.2**	**+0.6**
SHI	**Shiraz**	**2.66**	**136**	Pn	**Pb**	**09 52 17.1**	**-1.7**
KRSH	**Karshahi**	**2.81**	**31**	Pn	**Pb**	**09 52 19.0**	**-2.3**
AHBU	**AHRAM**	**2.81**	**163**	Pn	**Pn**	**09 52 18.6**	**+2.6**
IKFM	**Kafar-mosalman**	**2.89**	**313**	Pn	**Pb**	**09 52 19.8**	**-2.8**
HSAM	**Samen**	**3.03**	**331**	Pn	**Pn**	**09 52 21.5**	**+2.3**
ISFB	**Sefidab**	**3.18**	**29**	Pn	**Pn**	**09 52 23.8**	**+2.6**
ANAR	**Anarak**	**3.26**	**59**	Pn	**Pn**	**09 52 25.4**	**+3.1**
DSBU	**Dashti - Bushe**	**3.29**	**166**	Pn	**Pn**	**09 52 25.5**	**+2.9**
IQOM	**Qom**	**3.31**	**10**	Pn	**Pn**	**09 52 25.5**	**+2.4**
KBD	**Kabd**	**3.33**	**225**	P	**Pn**	**09 52 25.8**	**+2.7**
KBD				S	**Sn**	**09 53 06.2**	**+3.5**
HAGD	**Aghdareh**	**3.40**	**343**	Pn	**Pn**	**09 52 26.6**	**+2.3**
IVRN	**Varamin**	**3.60**	**18**	Pn	**Pn**	**09 52 29.8**	**+3.0**
KCHF	**Cheshme Sefid,**	**3.89**	**315**	Pn	**Pn**	**09 52 32.6**	**+1.6**
IHSB	**Hasanabad**	**3.93**	**11**	Pn	**Pn**	**09 52 34.5**	**+3.1**
ILBA	**Ilam Banvizeh**	**4.07**	**301**	Pn	**Pn**	**09 52 34.8**	**+1.4**
IMHD	**Mahdasht**	**4.11**	**3**	Pn	**Pn**	**09 52 36.9**	**+3.0**
IGHG	**Ghaleghazi**	**4.22**	**312**	Pn	**Pn**	**09 52 37.6**	**+2.0**
IDHR	**Dehrash**	**4.58**	**314**	Pn	**Pn**	**09 52 41.6**	**+1.2**
KLST	**Kelardasht - M**	**4.97**	**6**	Pn	**Pn**	**09 52 48.7**	**+2.9**
TPRV	**Parvadeh(Tabas**	**5.54**	**73**	Pn	**Pn**	**09 52 57.3**	**+3.8**
SHMA	**Al-Shehemyia** SNR=11	**5.72**	**175**	P	**Pn**	**09 52 58.7**	**+2.8**
SHMA				S	**Sn**	**09 54 02.4**	**+0.8**
TKDS	**Koohdasht(Taba**	**6.04**	**69**	Pn	**Pn**	**09 53 03.5**	**+3.0**
TRNA	**Turayna** SNR=15	**6.85**	**174**	P	**Pn**	**09 53 13.8**	**+2.3**
TRNA	SNR=12			S	**Sn**	**09 54 30.6**	**+1.1**
JRN	**Qarnain Island**	**6.96**	**161**	P	**Pn**	**09 53 14.8**	**+1.9**
JRN				S	**Sn**	**09 54 32.0**	**-0.1**
SHME	**Shamm**	**7.47**	**136**	P	**Pn**	**09 53 21.5**	**+1.5**
SHME	**Shamm**	**7.47**	**136**	P	**Pn**	**09 53 22.1**	**+2.1**
SHME				S	**Sn**	**09 54 45.2**	**+0.4**
SLWR	**Sila**	**7.56**	**171**	P	**Pn**	**09 53 23.4**	**+2.1**
SLWR				S	**Sn**	**09 54 47.1**	**0.0**
BANOM	**Banah**	**7.66**	**136**	P	**Pn**	**09 53 22.4**	**-0.2**
BANOM	**Banah**	**7.66**	**136**	P	**Pn**	**09 53 24.3**	**+1.6**
BANOM				S	**Sn**	**09 54 47.9**	**-1.6**
MASF	**Masafi** SNR=14	**8.00**	**139**	P	**Pn**	**09 53 28.4**	**+1.0**
MASF				S	**Sn**	**09 54 55.4**	**-2.6**
MSFE	**Esma-Masafi**	**8.01**	**139**	P	**Pn**	**09 53 28.2**	**+0.8**
MSFE				S	**Sn**	**09 54 55.2**	**-3.0**
MDH	**Madha**	**8.14**	**139**	P	**Pn**	**09 53 29.5**	**+0.3**
MDH	**Madha** SNR=23	**8.14**	**139**	P	**Pn**	**09 53 29.5**	**+0.3**
MDH				S	**Sn**	**09 54 59.6**	**-1.6**
UOSS	**Minazif**	**8.36**	**141**	P	**Pn**	**09 53 32.5**	**+0.2**
UOSS	**Minazif**	**8.36**	**141**	P	**Pn**	**09 53 32.6**	**+0.3**
UOSS				S	**Sn**	**09 55 02.6**	**-4.2**
HATD	**Hatta, Dubai**	**8.42**	**142**	P	**Pn**	**09 53 35.3**	**+2.2**
HATD	**Hatta, Dubai** SNR=6.7	**8.42**	**142**	P	**Pn**	**09 53 35.5**	**+2.5**
ASHO	**Ashiyiah**	**8.50**	**142**	P	**Pn**	**09 53 34.7**	**+0.5**
ASHO	**Ashiyiah** SNR=13	**8.50**	**142**	P	**Pn**	**09 53 34.9**	**+0.8**
ASHO				S	**Sn**	**09 55 08.4**	**-1.8**
ALNE	**Al Ain**	**8.87**	**146**	P	**Pn**	**09 53 38.6**	**-0.6**
ALNE	**Al Ain**	**8.87**	**146**	P	**Pn**	**09 53 40.2**	**+0.9**
MZR	**Muzera**	**8.97**	**161**	P	**Pn**	**09 53 44.3**	**+3.7**
MZR	SNR=8.6			S	**Sn**	**09 55 20.7**	**-1.0**
RAYN	**Ar Rayn**	**9.11**	**210**	P	**Pn**	**09 53 42.2**	**-0.4**
SOHO	**SOHO**	**9.19**	**142**	P	**Pn**	**09 53 43.1**	**-0.6**
SOHO	**SOHO**	**9.19**	**142**	P	**Pn**	**09 53 45.1**	**+1.5**
SOHO				S	**Sn**	**09 55 24.4**	**-2.8**
UMZA	**Um Al Zommool**	**9.80**	**153**	P	**Pn**	**09 53 52.2**	**+0.3**
UMZA				S	**Sn**	**09 55 38.6**	**-3.4**
ARQ	**Araqi** SNR=5.6	**9.85**	**145**	P	**Pn**	**09 53 55.4**	**+2.7**
ARQ				S	**Sn**	**09 55 42.6**	**-0.8**
BIDO	**Bidbid**	**10.56**	**138**	P	**Pn**	**09 54 03.4**	**+1.

ABTO	**Aybut**	**14.40**	**169**	P	**Pn**	**09 54 54.5**	**-0.6**
DMTO	**DMTO**	**14.40**	**162**	P	**Pn**	**09 54 54.0**	**-1.0**
	SNR=7.5						
DMTO				P	**Pn**	**09 54 54.0**	**-1.0**
	SNR=7.5						
BRTR	**Keskin Array B**	**15.84**	**306**	Pn	**P**	**09 55 16.9**	**-1.0**
	0.2nm,0.3s,baz=130,slow=11,SNR=6.9						
BRTR				LR	LR	10 02 19.2	
	comp=Z,62nm,20.7s,baz=322,slow=41						
	1.5nm,0.8s						
TPGR	**Topolog**	**21.68**	**314**	⇑P	**P**	**09 56 20.0**	**-1.7**
CFR	**Carcaliu**	**22.01**	**314**	⇑P	**P**	**09 56 23.9**	**-1.4**
MLR	**Muntele Rosu**	**23.51**	**313**	⇑P	**P**	**09 56 40.2**	**-1.0**
COVR	**Voineasa-Covas**	**23.52**	**314**	⇓P	**P**	**09 56 40.1**	**-1.1**
SORM	**Soroca**	**23.53**	**321**	⇑P	**P**	**09 56 38.9**	**-2.2**
TESR	**Tescani**	**23.59**	**316**	⇓P	**P**	**09 56 39.8**	**-2.0**
VOIR		**24.05**	**312**	⇑P	**P**	**09 56 45.2**	**-1.1**
DOPR	**Dopca**	**24.08**	**314**	⇑P	**P**	**09 56 45.8**	**-0.7**
ARR	**Arges**	**24.28**	**312**	⇑P	**P**	**09 56 48.5**	**0.0**
AKASG	**Malin Array Be**	**24.73**	**327**	P	**P**	**09 56 52.2**	**-0.1**
	0.5nm,0.4s,baz=138,slow=8.6,SNR=2.7						
	0.5nm,0.4s						
BURAR	**Bucovina Array**	**24.99**	**317**	⇑P	**P**	**09 56 52.7**	**-2.2**
GZR	**Gura Zlata**	**25.49**	**311**	⇑P	**P**	**09 56 59.4**	**0.0**
BOVS	**Bovan**	**25.58**	**306**	⇑P	**P**	**09 57 00.6**	**+0.5**
MARR	**Marisel-Cluj**	**25.80**	**314**	⇑P	**P**	**09 57 00.7**	**-1.6**
BVAR	**Borovoye Array**	**25.88**	**28**	P	**P**	**09 57 04.3**	**+1.5**
	1.6nm,0.9s,baz=210,slow=5.9,SNR=6.4						
	1.6nm,0.9s						
MDVR	**Moldovita**	**25.96**	**309**	⇑P	**P**	**09 57 04.0**	**+0.4**
BZS	**Buzias**	**26.32**	**310**	⇓P	**P**	**09 57 06.6**	**-0.3**
SIRR	**Siria**	**26.55**	**312**	⇑P	**P**	**09 57 08.3**	**-0.6**
MKAR	**Makanchi Array**	**28.79**	**49**	P	**P**	**09 57 30.8**	**+1.8**
	0.3nm,0.5s,baz=249,slow=9.3,SNR=4.1						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**33.24**	**38**	P	**P**	**09 58 08.9**	**+0.9**
	0.7nm,0.3s,baz=258,slow=6.9,SNR=2.1						
	0.7nm,0.3s						
FINES	**FINESS Array B**	**33.83**	**339**	P	**P**	**09 58 13.3**	**+0.2**
	1.7nm,0.4s,baz=138,slow=9.9,SNR=17						
	1.7nm,0.4s						
HFS	**Hagfors**	**37.47**	**331**	P	**P**	**09 58 44.7**	**+0.3**
	3.1nm,0.5s,baz=128,slow=9.6,SNR=14						
	3.1nm,0.5s						
NB2	**NORSAR Subarra**	**38.99**	**331**	P	**P**	**09 58 54.7**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=121,slow=8.6						
NOA	**NORSAR Array B**	**38.99**	**331**	P	**P**	**09 58 56.4**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=123,slow=8.5,SNR=3.8						
	comp=Z,0.8nm,0.7s						
ARCES	**ARCESS Array B**	**40.53**	**347**	P	**P**	**09 59 10.8**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=167,slow=8.3,SNR=1.3						
	comp=Z,0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**48.19**	**259**	P	**P**	**10 00 11.8**	**0.0**
	comp=Z,8.3nm,0.4s,baz=52,slow=9.1,SNR=5.4						
KSRS	**Korea Array**	**62.48**	**61**	P	**P**	**10 01 55.0**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=285,slow=7.0,SNR=4.3						
	comp=Z,0.9nm,0.4s						
YKA	**Yellowknife Ar**	**85.49**	**353**	P	**P**	**10 04 08.9**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=7.4,slow=5.7,SNR=6.4						
	comp=Z,0.4nm,0.8s						

IDC 12 09:55:04.5±2.4, 54°27N×86°04E, h0km, mbtmp3.0/2, ML2.9/2, Error ellipse: s-maj=18.4km s-min=10.4km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.79**	**246**	I	I	10 00 50.0	
	baz=66,slow=337,SNR=2.0						
ZALV	**Zalesovo Beam**	**0.79**	**246**	Pg	Pg	09 55 18.0	-1.6
	1.8nm,0.3s,baz=63,slow=17,SNR=15						
ZALV				Lg	Lg	09 55 30.7	
	8.8nm,0.3s,baz=68,slow=30,SNR=22						
KURBB	**Kurchatov Arra**	**5.86**	**235**	Pn	Pn	09 56 34.5	+1.9
	0.2nm,0.3s,baz=51,slow=13,SNR=5.7						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	09 57 00.3	+0.3
	0.3nm,0.3s,baz=18,slow=12,SNR=15						
MKAR				Sn	Sn	09 58 31.2	+1.6
	0.1nm,0.3s,baz=18,slow=25,SNR=3.9						
	0.3nm,0.3s						

*IDC **12** 09:56:45.1±0.7, 2°09S×100°59E, h0km, mb4.4/20, mbtmp4.4/20, MS3.5/9, Error ellipse: s-maj=34.9km s-min=13.7km az=52.0*

*DJA **12** 09:56:53.6±0.2, 2°S±3°×10°1E±°, h60km±3km, M4.7/23, mB5.4/6, mb4.5/23, MLv4.7/19, Mw(mB)4.9/6*

*NEIC **12** 09:56:54.5±1.1, 2°09S±0.08×100°63E±0.09, h68km±8km, mb4.6/38, Error ellipse: s-maj=14.6km s-min=9.2km az=53.0*

ISC 12 09:56:53.5±0.9, 2°16S±0.06×100°61E±0.05, h65km±8km, n124, σ1§11/119, mb4.6/47, 2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.85**	**225**	P	**Pn**	**09 57 10.9**	**+1.1**
KRJI	**Kerinci**	**0.85**	**85**	Pg	**Pn**	**09 57 09.9**	**-0.1**
PDSI	**Padang**	**1.25**	**353**	P	**Pn**	**09 57 13.3**	**-1.7**
SISI	**Saibi**	**1.73**	**299**	P	**Pn**	**09 57 20.6**	**-0.8**
BKNI	**Bangkinang**	**2.51**	**10**	Pn	**Pn**	**09 57 31.4**	**-0.5**
BKNI	**Bangkinang**	**2.51**	**10**	P	**Pn**	**09 57 33.4**	**+1.4**
BKNI	**Bangkinang**	**2.51**	**10**	Pn	**Pn**	**09 57 31.5**	**-0.5**
PBSI	**Pulau Batu**	**3.13**	**312**	P	**Pn**	**09 57 40.3**	**-0.2**
MNAI	**Manna**	**3.21**	**133**	Pn	**Pn**	**09 57 43.1**	**+1.6**
MNAI	**Manna**	**3.21**	**133**	P	**Pn**	**09 57 43.7**	**+2.2**
MNAI	**Manna**	**3.21**	**133**	Pn	**Pn**	**09 57 42.6**	**+1.1**
DSRI	**Dabo**	**4.30**	**67**	P	**Pn**	**09 57 56.1**	**-0.4**
GSI	**Gunungsitoli**	**4.59**	**319**	Pn	**Pn**	**09 57 59.4**	**-0.9**
GSI	**Gunungsitoli**	**4.59**	**319**	P	**Pn**	**09 57 59.6**	**-0.8**
GSI	**Gunungsitoli**	**4.59**	**319**	P	**Pn**	**09 57 59.5**	**-0.9**
TPRI	**Tanjung Pinang**	**4.97**	**52**	P	**Pn**	**09 58 05.0**	**-0.6**
MYKOM	**Kota Tinggi**	**5.09**	**40**	Pn	**Pn**	**09 58 06.9**	**-0.3**
RPSI	**Rantau Prapat**	**5.11**	**341**	Pn	**Pn**	**09 58 07.5**	**-0.1**
KASI	**Kota Agung**	**5.12**	**131**	P	**Pn**	**09 58 08.2**	**+0.5**
	47nm,0.6s,752nm0.5nm						
SNSI	**Sinabang, Aceh**	**6.24**	**317**	P	**Pn**	**09 58 23.3**	**+0.3**
	75nm,1.2s,0.4nm						
KCSI	**Kotacane, Aceh**	**6.32**	**333**	P	**Pn**	**09 58 24.5**	**+0.4**
	30nm,0.8s,0.3nm						
IPM	**Ipoh**	**6.61**	**4**	Pn	**Pn**	**09 58 28.2**	**+0.1**
IPM	**Ipoh**	**6.61**	**4**	P	**Pn**	**09 58 30.5**	**+2.4**
KULM	**Kulim**	**7.40**	**0**	Pn	**Pn**	**09 58 39.3**	**+0.4**
MLSI	**Meulaboh, Aceh**	**7.64**	**327**	P	**Pn**	**09 58 42.3**	**0.0**
	35nm,0.6s,0.3nm						
CNJI	**Cibinong**	**8.27**	**128**	P	**Pn**	**09 58 49.9**	**-0.9**
	26nm,1.2s						
LEM	**Lembang**	**8.38**	**124**	LR	LR	10 02 26.9	
	comp=Z,127nm,18.9s,baz=201,slow=40						
BBJI	**Bungbulang**	**8.77**	**127**	P	**Pn**	**09 58 58.2**	**+0.4**
SRIT	**Nakonsritamara**	**10.73**	**355**	Pn	**Pn**	**09 59 23.4**	**-1.1**
UGM	**Wanagama**	**11.41**	**120**	P	**Pn**	**09 59 34.9**	**+1.1**
	141nm,1.4s						
GMJI	**Gumukmas**	**14.15**	**116**	P	**Pn**	**10 00 11.4**	**+0.6**
	21nm,1.4s						
TWSI	**Taliwang, Sumb**	**17.46**	**113**	P	**Pn**	**10 00 53.4**	**+0.5**
	17nm,0.9s						
UBPT	**Khong Chiam**	**17.98**	**15**	P	**P**	**10 00 58.3**	**-0.6**
PLAI	**Plampang**	**18.32**	**112**	P	**Pn**	**10 01 03.8**	**+0.5**
PLAI	**Plampang**	**18.32**	**112**	P	**P**	**10 01 01.9**	**-0.8**
	19nm,0.9s						
MPSI	**Mapaga**	**19.44**	**83**	P	**P**	**10 01 15.3**	**+0.3**
	14nm,1.2s						
BKSI	**Bulukumba**	**19.72**	**100**	P	**P**	**10 01 18.8**	**+0.8**
BKSI				pP	**pP**	**10 01 31.2**	**-0.6**
TOLI2	**Tolitoli**	**20.43**	**81**	P	**P**	**10 01 25.7**	**-0.1**
TOLI2				IAmb	IAmb	10 01 27.4	
	comp=Z,30nm,0.9s						
TOLI2	**Tolitoli**	**20.43**	**81**	P	**P**	**10 01 26.6**	**+0.9**
CM31	**Chiang Mai Arr**	**20.55**	**355**	P	**P**	**10 01 26.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.55**	**355**	P	**P**	**10 01 26.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.55**	**355**	P	**P**	**10 01 25.4**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=188,slow=9.9,SNR=12						
CMAR				LR	LR	10 09 33.2	
	comp=Z,46nm,18.5s,baz=180,slow=38						
	comp=Z,1.8nm,0.6s						
SLVN	**Son La**	**23.57**	**8**	P	**P**	**10 01 57.2**	**-1.3**
DAV	**Davao City (W)**	**26.55**	**70**	LR	LR	10 12 20.9	
	comp=Z,50nm,20.3s,baz=306,slow=35						
PZH	**PanZhiHua**	**28.52**	**2**	P	**P**	**10 02 45.5**	**+2.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
GYA	**Guiyang**	**29.05**	**11**	*e*P	**P**	**10 02 51.9**	**+4.0**
GYA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,140nm,5.5s						
NWAO	**Narrogin (SRO)**	**34.36**	**155**	LR	LR	10 15 43.8	
	comp=Z,51nm,21.0s,baz=38,slow=33						
XAN	**Xi'an**	**36.85**	**12**	⇓P	**P**	**10 03 54.0**	**-1.7**
XAN				pmax	pmax		
	comp=Z,23nm,0.7s						
WB0	**Warramunga Arr**	**37.36**	**120**	P	**P**	**10 03 59.3**	**-1.0**
WB0				IAmb	IAmb	10 04 37.4	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**37.39**	**121**	P	**P**	**10 04 00.2**	**-0.3**
WRA	**Warramunga Arr**	**37.39**	**121**	P	**P**	**10 04 00.2**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=308,slow=8.9,SNR=20						
	comp=Z,2.6nm,0.7s						
WB2	**Warramunga Arr**	**37.40**	**121**	P	**P**	**10 04 00.1**	**-0.5**
WB2				IAmb	IAmb	10 04 01.5	
	comp=Z,4.1nm,0.6s						
NJ2	**Nanjing**	**38.17**	**25**	*e*P	**P**	**10 04 09.6**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LYN	**LuoYang**	**38.18**	**16**	*e*P	**P**	**10 04 06.7**	**-0.2**
LYN				pmax	pmax		
	comp=Z,45nm,0.8s						
AS31	**Alice Springs**	**38.67**	**126**	P	**P**	**10 04 11.3**	**0.0**
AS31				IAmb	IAmb	10 04 12.4	
	comp=Z,3.3nm,0.7s						
ASAR	**Alice Springs**	**38.67**	**126**	P	**P**	**10 04 11.7**	**+0.4**
ASAR	**Alice Springs**	**38.67**	**126**	P	**P**	**10 04 11.8**	**+0.6**
	comp=Z,8.8nm,0.7s,baz=301,slow=7.8,SNR=140						
ASAR				PcP	**PcP**	**10 06 23.4**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=301,slow=2.3,SNR=7.9						
ASAR				S	**S**	**10 10 01.6**	**-1.9**
	comp=Z,1.3nm,1.0s,baz=297,slow=16,SNR=6.5						
	comp=Z,8.8nm,0.7s						
COEN	**Coen**	**43.66**	**108**	P	**P**	**10 04 51.2**	**-1.0**
HHC	**Hu-ho-hao-te**	**43.96**	**12**	*e*P	**P**	**10 04 58.1**	**+3.7**
HHC				pP	sP	10 05 14.3	-3.9
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
BBOO	**Buckleboo**	**45.11**	**136**	P	**P**	**10 05 02.9**	**-0.7**
BBOO				IAmb	IAmb	10 05 03.6	
	comp=Z,16nm,1.5s						
WMQ	**Urumqi**	**47.22**	**347**	*e*P	**P**	**10 05 21.2**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
XLT	**XiLinHaoTe**	**47.91**	**15**	*e*P	**P**	**10 05 25.3**	**-0.1**
XLT				pP	pP	10 05 36.8	-5.1
XLT				sP	sP	10 05 45.4	-3.9
XLT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,210nm,4.2s						
CTAO	**Charters Tower**	**47.98**	**115**	P	**P**	**10 05 24.9**	**-1.4**
CTAO				IAmb	IAmb	10 05 30.1	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**48.59**	**132**	P	**P**	**10 05 31.7**	**+0.9**
STKA	**Stephens Creek**	**48.59**	**132**	P	**P**	**10 05 31.4**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=310,slow=9.2,SNR=7.8						
STKA				LR	LR	10 27 27.9	
	comp=Z,23nm,21.5s,baz=195,slow=38						
	comp=Z,2.1nm,0.6s						
NRN	**Naryn**	**48.82**	**335**	P	**P**	**10 05 32.8**	**0.0**
NRN				IAmb	IAmb	10 05 34.2	
	comp=Z,6.5nm,1.0s						
BOOM	**Boomskoye usch**	**49.72**	**336**	P	**P**	**10 05 40.1**	**+0.6**
BOOM				IAmb	IAmb	10 05 58.5	
	comp=Z,4.5nm,0.8s						
SIMJ	**Simiganj**	**49.98**	**328**	P	**P**	**10 05 40.9**	**-0.5**
SIMJ				IAmb	IAmb	10 06 02.8	
	comp=Z,9.9nm,1.1s						
ARSB	**Arslanbob**	**50.04**	**333**	P	**P**	**10 05 42.5**	**+0.6**
ARSB				IAmb	IAmb	10 05 43.5	
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**50.05**	**5**	P	**P**	**10 05 41.3**	**-0.5**
SONM	**Songino Array**	**50.05**	**5**	P	**P**	**10 05 41.5**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=188,slow=9.4,SNR=18						
SONM				PcP	**PcP**	**10 07 00.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=178,slow=4.0,SNR=3.7						
	comp=Z,2.0nm,0.5s						
BTK	**Batken**	**50.09**	**330**	P	**P**	**10 05 42.4**	**+0.2**
BTK				IAmb	IAmb	10 06 14.9	
	comp=Z,4.5nm,0.7s						
ULN	**Ulaanbaatar**	**50.14**	**6**	P	**P**	**10 05 42.2**	**-0.3**
ULN				IAmb	IAmb	10 05 44.4	
	comp=Z,3.5nm,0.8s						
CN2	**Changchun**	**50.89**	**23**	*e*P	**P**	**10 05 46.8**	**-1.2**
CN2				*e*pP	pP	10 06 02.5	-2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	**Makanchi Array**	**51.35**	**344**	P	**P**	**10 05 51.5**	**0.0**
MKAR	**Makanchi Array**	**51.35**	**344**	P	**P**	**10 05 51.5**	**0.0**
	comp=Z,14nm,0.6s,baz=149,slow=8.1,SNR=180						
	comp=Z,14nm,0.6s						
MAKZ	**Makanchi**	**51.45**	**344**	P	**P**	**10 05 52.0**	**-0.2**
MAKZ				IAmb	IAmb	10 05 52.6	
	comp=Z,6.3nm,0.8s						
KK31	**Karatay Array**	**52.57**	**332**	P	**P**	**10 06 00.8**	**+0.2**
KKAR	**Karatay Array**	**52.57**	**332**	P	**P**	**10 06 00.4**	**-0.3**
MDJ	**Mudanjiang**	**53.27**	**26**	P	**P**	**10 06 06.6**	**+0.9**
MDJ				pP	pP	10 06 23.7	+1.3
MDJ				sP	sP	10 06 31.4	+1.6
MDJ				PcP	**PcP**	**10 07 13.9**	**+1.2**
MDJ				S	**S**	**10 13 36.7**	**+4.4**
MDJ				ScS	**ScS**	**10 15 47.4**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.3s						
BNX	**BinXian**	**53.27**	**23**	⇓P	**P**	**10 06 04.8**	**-0.9**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,350nm,4.3s						
USA0B	**Ussuriysk Arra**	**54.01**	**28**	P	**P**	**10 06 10.2**	**-0.9**
USRK	**Ussuriysk Ar.**	**54.01**	**28**	P	**P**	**10 06 10.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**54.01**	**28**	P	**P**	**10 06 10.6**	**-0.5**
	comp=Z,8.4nm,0.7s,baz=217,slow=5.8,SNR=16						
	comp=Z,8.4nm,0.7s						
KURBB	**Kurchatov Arra**	**55.88**	**343**	P	**P**	**10 06 24.2**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=159,slow=7.0,SNR=16						
KURBB				PcP	**PcP**	**10 07 22.2**	**-0.3**
	comp=Z,0.8nm,0.2s,baz=162,slow=2.7,SNR=5.8						
	comp=Z,4.6nm,0.7s						
KURK	**Kurchatov**	**55.93**	**343**	P	**P**	**10 06 24.1**	**-0.7**
KURK				IAmb	IAmb	10 06 25.4	
	comp=Z,10nm,0.9s						
GEYT	**Alibeck**	**55.96**	**320**	P	**P**	**10 06 26.1**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=138,slow=12,SNR=5.9						
	comp=Z,3.3nm,0.7s						
ZAA0	**Zalesovo Array**	**57.44**	**349**	P	**P**	**10 06 34.6**	**-0.8**
ZALV	**Zalesovo Beam**	**57.44**	**349**	P	**P**	**10 06 35.0**	**-0.4**
ZALV	**Zalesovo Beam**	**57.44**	**349**	P	**P**	**10 06 35.3**	**-0.1**
	comp=Z,7.4nm,0.3s,baz=170,slow=5.5,SNR=77						
	comp=Z,7.4nm,0.3s						
HNR	**Honiara**	**59.41**	**100**	LR	LR	10 34 53.1	
	comp=Z,350nm,18.3s,baz=0.5,slow=38						
BVAR	**Borovoye Array**	**60.54**	**340**	P	**P**	**10 06 56.2**	**-0.8**
	comp=Z,3.1nm,0.4s,baz=145,slow=9.4,SNR=28						
	comp=Z,3.1nm,0.4s						
BRVK	**Borovoye**	**60.61**	**340**	P	**P**	**10 06 56.5**	**-0.9**
BRVK				IAmb	IAmb	10 06 57.2	
	comp=Z,3.5nm,0.9s						
H04N2	**CROZET ISLANDS**	**61.03**	**217**	T	T	11 12 27.3	
	baz=59,slow=75,SNR=296						
H04N1	**CROZET ISLANDS**	**61.04**	**217**	T	T	11 12 30.2	
	baz=59,slow=75,SNR=248						
H04N3	**CROZET ISLANDS**	**61.05**	**217**	T	T	11 12 30.2	
	baz=59,slow=75,SNR=238						
H04S1	**CROZET ISLANDS**	**61.31**	**216**	T	T	11 12 46.0	
	baz=58						
H04S3	**CROZET ISLANDS**	**61.33**	**216**	T	T	11 12 50.0	
	baz=58,SNR=3.9						
H04S2	**CROZET ISLANDS**	**61.33**	**216**	T	T	11 12 54.4	
	baz=58						
ABKAR	**Akbulak array**	**62.07**	**331**	P	**P**	**10 07 07.2**	**-0.3**
ABKAR	**Akbulak array**	**62.07**	**331**	P	**P**	**10 07 06.9**	**-0.5**
AKTO	**Aktyubinsk**	**63.79**	**331**	P	**P**	**10 07 17.9**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=161,slow=2.9,SNR=11						
	comp=Z,1.2nm,0.3s						
KBZ	**Khabaz**	**68.83**	**319**	P	**P**	**10 07 51.5**	**+0.3**
	comp=Z,3.9nm,0.8s,baz=157,slow=7.5,SNR=6.9						
	comp=Z,3.9nm,0.8s						
NRIK	**Noril'sk**	**71.91**	**355**	P	**P**	**10 08 07.6**	**-1.9**
	comp=Z,3.7nm,0.4s,baz=186,slow=5.6,SNR=4.4						
NRIK				LR	LR	10 41 26.9	
	comp=Z,72nm,18.8s,baz=305,slow=37						
	comp=Z,3.7nm,0.4s						
BRTR	**Keskin Array B**	**73.88**	**312**	P	**P**	**10 08 21.4**	**-0.6**
BRTR	**Keskin Array B**	**73.88**	**312**	P	**P**	**10 08 22.0**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=139,slow=6.7,SNR=7.1						
	comp=Z,1.6nm,0.6s						
LBTB	**Lobatse**	**75.51**	**245**	LR	LR	10 36 57.9	
	comp=Z,52nm,19.0s,baz=174,slow=32						
KARP	**Karpathos**	**77.85**	**307**	P	**P**	**10 08 43.1**	**-1.4**
URZ	**Urewera**	**78.07**	**129**	LR	LR	10 44 49.8	
	comp=Z,27nm,18.9s,baz=301,slow=37						
AKASG	**Malin Array Be**	**79.98**	**322**	P	**P**	**10 08 55.3**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=90,slow=4.3,SNR=2.6						
	comp=Z,0.5nm,0.5s						
BUR08	**Bucovina Ar. S**	**81.80**	**319**	P	**P**	**10 09 06.7**	**+0.9**
BUR08				IAmb	IAmb	10 09 48.8	
	comp=Z,9.1nm,1.4s						
FINES	**FINESS Array B**	**84.53**	**332**	P	**P**	**10 09 19.4**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=107,slow=6.6,SNR=6.9						
	comp=Z,4.3nm,0.9s						
ARCES	**ARCESS Array B**	**86.83**	**340**	P	**P**	**10 09 30.4**	**-0.2**
ARCES	**ARCESS Array B**	**86.83**	**340**	P	**P**	**10 09 31.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=102,slow=5.6,SNR=22						
	comp=Z,0.6nm,0.3s						
SPITS	**Spitsbergen Ar**	**90.91**	**348**	P	**P**	**10 09 49.0**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=96,slow=10,SNR=12						
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**91.58**	**331**	P	**P**	**10 09 53.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=91,slow=4.5,SNR=2.7						
	comp=Z,0.7nm,0.7s						
G16K	**Koyuk River**	**94.89**	**25**	P	**P**	**10 10 08.2**	**-0.1**
G16K				IAmb	IAmb	10 10 09.3	
	comp=Z,4.9nm,0.9s						
C18K	**Utukok River**	**94.99**	**21**	P	**P**	**10 10 08.1**	**-0.6**
C18K				IAmb	IAmb	10 10 09.2	
	comp=Z,2.4nm,0.7s						
J16K	**Anvik River**	**95.88**	**27**	P	**P**	**10 10 13.3**	**+0.4**
H19K	**Roundabout Mou**	**97.31**	**24**	P	**P**	**10 10 19.4**	**+0.1**
IMAR	**Indian Mountai**	**98.30**	**23**	P	**P**	**10 10 23.7**	**0.0**
TOLK	**Toolik Lake Re**	**99.14**	**20**	P	**Pdif**	**10 10 27.7**	**+0.2**
TXAR	**Lajitas Array**	**144.45**	**38**	PKP	PKPbc	10 16 22.9	+0.9
	comp=Z,3.9nm,0.8s,baz=314,slow=0.7,SNR=30						
CPUP	**Villa Florida**	**144.55**	**216**	PKP	**PKPdf**	**10 16 24.0**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=201,slow=3.1,SNR=5.2						

NEIC 12 10:09:47.8±1.2, 28°85N±0°04×98°03W±0°03, h5km±2km, mb_Lg2.5/24, Error ellipse: s-maj=6.6km s-min=4.6km az=179.0, Southern Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
735A	**Kenedy**	**0.19**	**88**	Pg	Pg	10 09 51.1	-0.5
735A				Sg	Sg	10 09 54.0	-0.2
EF01	**Eagle Ford 01**	**0.42**	**312**	Pg	Pg	10 09 55.9	0.0
EF01				Sg	Sg	10 10 02.8	+1.4
HNDO	**Hondo**	**1.29**	**302**		Pn	10 10 11.2	-1.4
HNDO					Sg	10 10 28.3	-1.0
KVTX	**Kingsville**	**1.30**	**175**	Pg	Pn	10 10 10.5	-2.2
833A	**Chaparral WMA,**	**1.31**	**247**		Pn	10 10 11.6	-1.3
HBVL	**Hebbronville**	**1.87**	**198**	Pn	Pn	10 10 19.9	-0.6
435B	**Jarrell**	**1.96**	**11**		Pn	10 10 20.2	-1.7
435B				IAmb_Lg		10 10 53.8	
	comp=Z,22nm,0.8s						
HKT	**Hockley**	**2.21**	**60**	Pn	Pn	10 10 23.1	-1.9
JCT	**Junction City**	**2.24**	**317**	Pn	Pn	10 10 25.5	-0.2
JCT				IAmb_Lg		10 11 01.2	
	comp=Z,26nm,0.8s						
DRIO	**Del Rio**	**2.34**	**285**	Pn	Pn	10 10 26.6	-0.4
BRDY	**Brady**	**2.57**	**341**	Pn	Pn	10 10 29.0	-1.2
OZNA	**Ozona**	**3.40**	**308**	Pn	Pn	10 10 40.5	-1.1
OZNA				IAmb_Lg		10 11 37.9	
	comp=Z,13nm,1.0s						
PLPT	**Palo Pinto**	**3.96**	**356**	Pn	Pn	10 10 48.1	-1.1
PLPT				IAmb_Lg		10 12 02.4	
	comp=Z,12nm,1.2s						
**

baz=217
SSLB Suanglung 0.56 260 *i* P Pg 10 14 10.8 -0.3
baz=261
SSLB *i* S Sg 10 14 18.5 -0.2
baz=261
TWF1 Yuli 0.58 204 *i* P Pg 10 14 11.1 -0.4
baz=212
TWF1 *e*S Sb 10 14 19.8 +0.1
baz=212
WCS Beigang Elemen 0.61 286 *i* P Pg 10 14 12.0 -0.1
baz=286
WCS *e*S Sb 10 14 20.6 0.0
baz=286
TYC Yuchr 0.64 272 P Pg 10 14 11.5 -1.1
baz=279
TYC *i* S Sg 10 14 21.0 -0.2
baz=279
WHP Taichung City 0.68 305 P Pn 10 14 14.6 -0.2
baz=300
WHP *e*S Sb 10 14 23.4 +0.8
baz=300
NFF Wufeng Townshi 0.84 332 P Pg 10 14 16.6 +0.2
baz=330
NFF *e*S Sg 10 14 27.5 -0.1
baz=330
LIOB Emei 0.90 327 *i* P Pn 10 14 18.0 +0.1
baz=315
LIOB *e*S Sg 10 14 29.5 0.0
baz=315

TAP 12 10:14:02.6, 24°21N×121°76E, h16km, ML2.1, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.12**	**353**	*i* P	Pg	10 14 06.3	0.0
	baz=351						
EAHA				S	Sb	10 14 09.4	+0.2
	baz=351						
ETL	**Fush Village**	**0.13**	**249**	*i* P	Pb	10 14 06.6	-0.1
	baz=10.0						
ETL				*i* S	Sb	10 14 09.6	+0.1
	baz=10.0						
ETL	**Fush Village**	**0.13**	**249**	*i* P	Pg	10 14 06.5	+0.1
	baz=250						
ETL				*i* S	Sb	10 14 09.5	+0.1
	baz=250						
NACB	**Ninganchiao**	**0.15**	**258**	*i* P	Pg	10 14 06.8	+0.2
	baz=6.0						
NACB				*i* S	Sb	10 14 09.9	-0.1
	baz=6.0						
NACB	**Ninganchiao**	**0.15**	**258**	*i* P	Pg	10 14 06.4	-0.2
	baz=259						
NACB				*i* S	Sb	10 14 09.8	-0.2
	baz=259						
ENA	**Nanau**	**0.22**	**356**	⇓*i* P	Pg	10 14 07.8	+0.1
	baz=355						
ENA				*i* S	Sg	10 14 11.5	+0.4
	baz=355						
EWUT	**Wuta**	**0.24**	**5**	*i* P	Pg	10 14 08.1	+0.2
	baz=2.0						
EWUT				S	Sb	10 14 12.2	-0.4
	baz=2.0						
ETLH	**Xiulin Townshi**	**0.25**	**270**	*e*P	Pb	10 14 08.5	-0.3
	baz=270						
ETLH				*i* S	Sb	10 14 12.6	-0.4
	baz=270						
ETLH	**Xiulin Townshi**	**0.25**	**270**	S	Sg	10 14 12.2	+0.2
	baz=345						
LATG	**Datong**	**0.39**	**327**	*i* P	Pg	10 14 10.8	+0.2
	baz=326						
LATG				*i* S	Sg	10 14 16.5	+0.5
	baz=326						
TWC	**Suao**	**0.41**	**12**	*i* P	Pg	10 14 11.1	+0.2
	baz=7.0						
TWC				*i* S	Sg	10 14 17.0	+0.4
	baz=7.0						
NNS	**Nan Shan**	**0.42**	**304**	*i* P	Pg	10 14 11.3	+0.2
	baz=343						
NNS				*i* S	Sb	10 14 17.9	0.0
	baz=343						
NNS	**Nan Shan**	**0.42**	**304**	*i* P	Pb	10 14 11.6	-0.2
	baz=303						
NNS				*i* S	Sb	10 14 17.7	-0.2
	baz=303						
NDS	**Dongshan**	**0.43**	**355**	*i* P	Pb	10 14 11.7	-0.1
	baz=352						
NDS				*i* S	Sb	10 14 17.8	-0.1
	baz=352						
NDT	**Datong Townshi**	**0.45**	**331**	*i* P	Pb	10 14 12.2	0.0
	baz=329						
NDT				*i* S	Sb	10 14 18.6	-0.1
	baz=329						
ENTT	**Nioudou**	**0.47**	**338**	*i* P	Pb	10 14 12.3	-0.1
	baz=336						
ENTT				*i* S	Sb	10 14 19.0	-0.1
	baz=336						
TWE	**Neicheng**	**0.52**	**351**	*i* P	Pb	10 14 13.3	0.0
	baz=349						
TWE				S	Sg	10 14 19.6	-0.4
	baz=349						
FUSB	**Fushanzhiwuyua**	**0.57**	**344**	*i* P	Pg	10 14 14.0	+0.1
	baz=342						
FUSB				*i* S	Sb	10 14 22.5	+0.3
	baz=342						
YHNB	**Yeheng**	**0.58**	**323**	*i* P	Pb	10 14 14.5	+0.1
	baz=322						
YHNB				*i* S	Sb	10 14 22.4	0.0
	baz=322						
NSK	**Sanguang**	**0.59**	**322**	*i* P	Pb	10 14 14.5	-0.1
	baz=321						
NSK				*i* S	Sb	10 14 22.6	-0.2
	baz=321						
NWLT	**Wulai**	**0.61**	**338**	P	Pb	10 14 15.4	+0.4
	baz=341						
NWLT				*i* S	Sg	10 14 23.1	+0.2
	baz=341						

*JMA **12** 10:28:19.6±0.1, 37°.0N±0°.2×141°.3E±0°.5, h31km, MV3.1/39, E OFF FUKUSHIMA PREF*
*IDC **12** 10:28:20.0±2.3, 37°.42N×141°.15E, h0km, mb3.4/3, mbtmp3.2/4, ML1.6/1, Error ellipse: s-maj=41.8km s-min=36.0km az=76.0*
ISC 12 10:28:19.4±1.7, 37°12N±0°.04×141°25E±0°.07, h2km±11km, n19, σ1s14/23, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.36**	**267**	*i* P	**Pb**	**10 28 28.7**	**+0.1**
ONAJ				S	**Sb**	**10 28 35.3**	**+0.5**
JFK	**Kawauchi**	**0.39**	**309**	*i* P	**Pb**	**10 28 29.7**	**+0.6**
JFK				S	**Sb**	**10 28 36.9**	**+1.3**
JFFD	**Fukushimafurud**	**0.56**	**267**	*i* P	**Pb**	**10 28 31.5**	**-0.3**
JFFD				*e*S	**Sb**	**10 28 40.0**	**-0.3**
JHO	**Hitachi**	**0.75**	**228**	P	**Pg**	**10 28 33.2**	**-0.4**
JHO				S	**Sg**	**10 28 43.0**	**-0.3**
JMM	**Marumori**	**0.83**	**334**	*i* P	**Pb**	**10 28 36.5**	**-0.1**
JMM				S	**Sb**	**10 28 48.9**	**+0.7**
JOTO	**OTAMA OYAMA**	**0.86**	**301**	*i* P	**Pn**	**10 28 37.5**	**-0.9**
JOTO				S	**Sn**	**10 28 50.3**	**-1.3**
JFY	**Yanaizu**	**1.27**	**284**	P	**Pg**	**10 28 43.7**	**0.0**
JFY				S	**Sn**	**10 29 01.5**	**-0.2**
JOU	**Okura**	**1.33**	**340**	P	**Pg**	**10 28 44.9**	**+0.1**
JOU				S	**Sg**	**10 29 03.5**	**+1.3**
JIO	**Ouri**	**1.34**	**3**	P	**Pn**	**10 28 43.5**	**-1.5**
JIO				S	**Sb**	**10 29 01.3**	**-1.4**
MJAR	**Matsushiro Arr**	**2.51**	**258**	Pn	**Pn**	**10 29 01.0**	**-0.2**
	0.1nm,0.3s,baz=87,slow=15,SNR=7.2						
MJAR				Sn	**Sb**	**10 29 35.7**	**-0.8**
	0.4nm,0.3s,baz=346,slow=25,SNR=5.8 1.0nm,0.4s						
H11N2	**WAKE ISLAND Hy 28.30**	**121**		T	T	11 03 38.6	
	baz=313,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy 28.31**	**121**		T	T	11 03 37.1	
	baz=313,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy 28.32**	**121**		T	T	11 03 40.8	
	baz=313,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy 29.01**	**123**		T	T	11 04 33.0	
	baz=316,slow=76,SNR=6.2						
H11S3	**WAKE ISLAND Hy 29.01**	**123**		T	T	11 04 32.2	
	baz=316,slow=76,SNR=6.1						
H11S2	**WAKE ISLAND Hy 29.03**	**123**		T	T	11 04 33.8	
	baz=316,slow=76,SNR=5.4						
MKAR	**Makanchi Array**	**43.97**	**302**	P	**P**	**10 36 26.3**	**-1.6**
	0.4nm,0.7s,baz=86,slow=8.8,SNR=4.0 0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**45.85**	**308**	P	**P**	**10 36 42.1**	**-0.6**
	0.3nm,0.5s,baz=83,slow=8.2,SNR=4.0 0.3nm,0.5s						
WRA	**Warramunga Arr**	**57.13**	**188**	P	**P**	**10 38 10.5**	**+3.0**
	0.2nm,0.5s,baz=3.6,slow=7.0,SNR=1.3 0.2nm,0.5s						

*MOS **12** 10:31:36.6±0.9, 39°.29N×116°.77E, h18km, mb4.6/16, Error ellipse: s-maj=10.4km s-min=6.7km az=130.6*
*IDC **12** 10:31:36.0±0.7, 39°.31N×116°.74E, h0km, mb4.0/17, mbtmp4.0/19, ML4.5/2, MS3.5/23, Error ellipse: s-maj=21.0km s-min=15.1km az=41.0*
*BJI **12** 10:31:37.3±0.0, 39°.37N×116°.67E, h20km, mb4.1/30, mB4.8/12, ML4.7/24, Ms4.2/23, Ms7 4.0/25*
*NEIC **12** 10:31:38.2±2.4, 39°.37N±0°.06×116°.65E±0°.05, h10km±1km, mb4.6/28, Error ellipse: s-maj=10.8km s-min=5.4km az=22.0*
*KEA **12** 10:31:49.4, 39°.14N×117°.62E, h1km, ML4.3/4*
ISC 12 10:31:38.1±0.3, 39°38N±0°.03×116°68E±0°.03, h10km, n141, σ2s04/155, mb4.4/46, MS3.7/16, 2C-11D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJT	**Baijiatuao**	**0.75**	**328**		**Pg**	**10 31 52.5**	**-0.1**
BJT	**Baijiatuao**	**0.75**	**328**	P	**Pg**	**10 31 52.5**	**-0.1**
BJI	**Beijing**	**0.77**	**330**	Pg	**Pg**	**10 31 52.3**	**-0.6**
BJI				Sg	**Sg**	**10 32 02.0**	**-0.9**
BJI				smax	smax		
	comp=N,34μm,0.5s						
BJI				smax	smax		
	comp=E,26μm,0.4s						
HNS	**HongShan**	**2.51**	**219**	⇓Pn	**Pn**	**10 32 17.7**	**-1.2**
HNS				Pg	**Pg**	**10 32 24.5**	**-1.7**
HNS				Sg	**Sb**	**10 32 55.6**	**+1.4**
HNS				smax	smax		
	comp=N,7μm,0.9s						
HNS				smax	smax		
	comp=E,9μm,0.7s						
TIA	**Tai'an**	**3.18**	**173**	Pn	**Pn**	**10 32 27.2**	**-1.0**
TIA				Pg	**Pb**	**10 32 35.0**	**+0.3**
TIA				Sg	**Sb**	**10 33 16.6**	**+3.1**
TIA				smax	smax		
	comp=N,880nm,0.5s						
TIA				smax	smax		
	comp=E,1μm,0.9s						
TIY	**Taiyuan**	**3.72**	**245**	Pn	**Pn**	**10 32 36.0**	**+0.4**
TIY				Pg	**Pb**	**10 32 46.3**	**+2.4**
TIY				Sg	**Sb**	**10 33 30.7**	**+1.6**
TIY				smax	smax		
	comp=N,2μm,0.7s						
TIY				smax	smax		
	comp=E,2μm,0.6s						
DL2	**Dalian**	**3.88**	**95**	Pn	**Pn**	**10 32 38.2**	**+0.5**
DL2				Pg	**Pg**	**10 32 50.2**	**-2.1**
DL2				Sn	**Sn**	**10 33 26.7**	**+3.4**
DL2				Sg	**Sg**	**10 33 42.1**	**-0.4**
DL2				smax	smax		
	comp=N,1μm,0.8s						
DL2				smax	smax		
	comp=E,810nm,0.7s						
DL2				LR	LR		
	comp=N,1μm,8.7s						
DL2				LR	LR		
	comp=E,1μm,11.4s						
DL2				LR	LR		
	comp=Z,960nm,12.9s						
HHC	**Hu-ho-hao-te**	**4.19**	**292**	*e*Pn	**Pn**	**10 32 42.3**	**+0.2**
HHC				Pg	**Pb**	**10 32 53.3**	**+1.4**
HHC				Sg	**Sg**	**10 33 48.1**	**-4.4**
HHC				smax	smax		
	comp=N,2μm,0.6s						
HHC				smax	smax		
	comp=E,750nm,0.5s						
XLT	**XiLinHaoTe**	**4.54**	**355**	*e*Pn	**Pn**	**10 32 45.8**	**-1.1**
XLT				Pg	**Pb**	**10 33 00.8**	**+2.9**
XLT				Sg	**Sg**	**10 33 59.0**	**-4.8**
XLT				smax	smax		
	comp=E,1μm,0.8s						
BTO	**Baotou**	**5.26**	**286**	*e*Pn	**Pn**	**10 32 59.4**	**+2.6**
BTO				Pg	**Pg**	**10 33 15.2**	**-3.6**
BTO				Sg	**Sg**	**10 34 23.5**	**-3.4**
BTO				smax	smax		
	comp=N,5μm,0.8s						
BTO				smax	smax		
	comp=E,3μm,0.8s						
LYN	**LuoYang**	**5.88**	**216**	*e*Pn	**Pn**	**10 33 04.3**	**-0.9**
LYN				Pg	**Pb**	**10 33 24.3**	**+3.6**
LYN				Sg	**Sb**	**10 34 37.1**	**+6.0**
LYN				smax	smax		
	comp=N,1μm,1.1s						
LYN				smax	smax		
	comp=E,1μm,0.8s						
LYN				LR	LR		
	comp=Z,990nm,10.3s						
SUJ	**Sinuiju**	**6.07**	**81**	Pn	**Pn**	**10 33 11.5**	**+3.7**
SUJ				Pg	**Pg**	**10 33 31.8**	**-2.5**
SUJ				Sg	**Sg**	**10 34 50.0**	**-2.7**
SUJ				AML	AML		
	comp=N,689nm,0.7s						
SUJ				AML	AML		
	comp=E,452nm,0.8s						
SUJ				AML	AML		
	comp=Z,335nm,0.8s						
PYAG	**Pyongyang**	**7.06**	**90**	Pn	**Pn**	**10 33 23.1**	**+1.7**
PYAG				Sg	**Sg**	**10 35 21.1**	**-3.5**
PYAG				AML	AML		
	comp=N,305nm,0.6s						
PYAG				AML	AML		
	comp=E,178nm,1.1s						
PYAG				AML	AML		
	comp=Z,174nm,0.6s						
PYS	**Pyongsong**	**7.12**	**88**	Pn	**Pn**	**10 33 23.6**	**+1.4**
PYS				Sg	**Sg**	**10 35 22.4**	**-4.0**
PYS				AML	AML		
	comp=N,772nm,0.8s						
PYS				AML	AML		
	comp=E,628nm,1.3s						
PYS				AML	AML		
	comp=Z,318nm,0.9s						
HJU	**Haeju**	**7.20**	**98**	Pn	**Pn**	**10 33 24.3**	**+1.0**
HJU				Pg	**Pg**	**10 33 52.2**	**-3.6**
HJU				Sg	**Sg**	**10 35 24.4**	**-4.6**
HJU				AML	AML		
	comp=N,232nm,0.6s						
HJU				AML	AML		
	comp=E,154nm,0.8s						
HJU				AML	AML		
	comp=Z,121nm,0.7s						
NJ2	**Nanjing**	**7.52**	**166**	*e*Pg	Pb	10 33 55.0	+6.4
NJ2				Sg	Sb	10 35 28.7	+10
NJ2				smax	smax		
	comp=Z,160nm,1.0s						
NJ2				smax	smax		
	comp=Z,200nm,0.8s						
XAN	**Xi'an**	**8.20**	**232**	⇑P	**Pn**	**10 33 37.0**	**-0.1**
XAN				sP	sPn	10 33 44.7	+3.8
XAN				pmax	pmax		
	comp=Z,8.0nm,2.2s						
XAN				LR	LR		
	comp=Z,2μm,12.4s						
XAN				LR	LR		
	comp=Z,2μm,15.1s						
XAN				LR	LR		
	comp=Z,3μm,14.8s						
XAN	**Xi'an**	**8.20**	**232**	Pn	**Pn**	**10 33 36.6**	**-0.5**
XAN	**Xi'an**	**8.20**	**232**	P	**Pn**	**10 33 36.6**	**-0.5**
KS19	**Wonju Array Si**	**8.98**	**99**	Pn	**Pn**	**10 33 47.2**	**-0.5**
KSAR	**Wonju Array Be**	**9.01**	**99**	Pn	**Pn**	**10 33 48.1**	**0.0**
KSAR	**Wonju Array Be**	**9.01**	**99**	P	**Pn**	**10 33 48.1**	**0.0**
KSRS	**Korea Array**	**9.03**	**99**	Pn	**Pn**	**10 33 48.7**	**+0.2**
	comp=Z,5.0nm,0.3s,baz=287,slow=14,SNR=26						
KSRS				Sn	**Sn**	**10 35 26.5**	**-3.7**
	comp=Z,0.7nm,0.3s,baz=283,slow=22,SNR=3.4						
KSRS				Lg	Lg	10 36 17.8	
	comp=Z,1.9nm,0.3s,baz=277,slow=24,SNR=4.4						
KSRS				LR	LR	10 37 46.9	
	comp=Z,207nm,21.4s,baz=285,slow=41 comp=Z,6.6nm,0.4s						
SSE	**Sheshan**	**9.05**	**155**	P	**Pn**	**10 33 52.8**	**+4.1**
SSE				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SSE				pmax	pmax		
	comp=Z,100nm,4.8s						
SSE				LR	LR		
	comp=Z,240nm,12.6s						
SSE				LR	LR		
	comp=Z,310nm,12.6s						
HIA	**Hailar**	**10.12**	**11**		**Pn**	**10 34 02.5**	**-0.9**
HIA	**Hailar**	**10.12**	**11**	P	**Pn**	**10 34 02.5**	**-0.9**
BNX	**BinXian**	**10.14**	**48**	⇓P	Pn	10 34 09.8	+6.1
ENH	**Enshi**	**10.83**	**215**	Pn	**Pn**	**10 34 11.0**	**-2.2**
ULN	**Ulaanbaatar**	**10.97**	**324**	Pn	**Pn**	**10 34 14.4**	**-0.9**
ULN	**Ulaanbaatar**	**10.97**	**324**	*d* iP	**Pn**	**10 34 17.4**	**+2.2**
SONM	**Songino Array**	**11.26**	**322**	Pn	**Pn**	**10 34 18.7**	**-0.4**
SONM	**Songino Array**	**11.26**	**322**	*e*P	**Pn**	**10 34 19.8**	**+0.7**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SONM	**Songino Array**	**11.26**	**322**	Pn	**Pn**	**10 34 17.6**	**-1.5**
	comp=Z,3.9nm,0.3s,baz=144,slow=14,SNR=43						
SONM				Sn	**Sn**	**10 36 19.9**	**-5.1**
	comp=Z,1.0nm,0.3s,baz=145,slow=16,SNR=3.8						
SONM				Lg	Lg	10 37 31.0	
	comp=Z,6.0nm,0.3s,baz=130,slow=27,SNR=10.0						
SONM				LR	LR	10 39 19.9	
	comp=Z,155nm,19.7s,baz=140,slow=41 comp=Z,8.7nm,0.4s						
USA0B	**Ussuriysk Arra**	**12.40**	**62**	Pn	**Pn**	**10 34 35.7**	**+1.2**
USA0B	**Ussuriysk Arra**	**12.40**	**62**	P	**Pn**	**10 34 35.7**	**+1.2**
USRK	**Ussuriysk Ar.**	**12.40**	**62**	Pn	**Pn**	**10 34 34.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**12.40**	**62**	P	**Pn**	**10 34 34.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**12.40**	**62**	Pn	**Pn**	**10 34 37.5**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=265,slow=12,SNR=2.5						
USRK				Lg	Lg	10 38 08.7	
	comp=Z,0.8nm,0.3s,baz=251,slow=33,SNR=6.7						
USRK				LR	LR	10 40 03.3	
	comp=Z,84nm,19.9s,baz=256,slow=41						
JNU	**Nakatsue**	**13.04**	**114**	Lg	Lg	10 38 34.0	
	comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=3.9						
JNU				LR	LR	10 40 37.2	
	comp=Z,181nm,18.5s,baz=300,slow=42						
GTA	**Gaotai**	**13.05**	**275**	P	**Pn**	**10 34 43.7**	**+0.1**
GTA				pP	P	10 34 51.4	-2.6
GTA				sP		10 34 55.7	
GTA				S	**Sn**	**10 37 11.0**	**+2.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=Z,460nm,9.8s						
GTA				LR	LR		
	comp=Z,350nm,10.9s						
GTA				LR	LR		
	comp=Z,500nm,12.4s						
ZAK	**Zakamensk**	**14.51**	**324**	*e*P	**Pn**	**10 35 05.7**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	**Kul'dur**	**14.58**	**43**	⇓*e*P	**P**	**10 35 12.0**	**+1.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KLR	**Kul'dur**	**14.58**	**43**	Pn	**P**	**10 35 09.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=4.6						
KLR				Lg	Lg	10 39 16.4	
	comp=Z,0.4nm,0.3s,baz=194,slow=17,SNR=3.2						
KLR				LR	LR	10 40 35.3	
	comp=Z,123nm,21.1s,baz=234,slow=37						
GYA	**Guiyang**	**15.37**	**216**	⇓*i*P	**P**	**10 35 18.5**	**-1.4**
GYA				pmax	pmax		
	comp=Z,11nm,0.6s						
GYA				pmax	pmax		
	comp=Z,250nm,5.8s						
GYA				LR	LR		
	comp=Z,350nm,13.6s						
ZEA	**Zeya**	**16.07**	**23**	*e*P	**P**	**10 35 28.3**	**+1.0**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=N,200nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,8.0s						
MOY	**Mondy**	**16.44**	**323**	*e*P	**P**	**10 35 31.0**	**-0.6**
MOY				pmax	pmax		
	comp=Z,17nm,1.7s						
MAJO	**Matsushiro**	**17.21**	**93**	⇑*i*P	P	10 35 48.1	+8.0
MAJO				pmax	pmax		
	comp=Z,74nm,2.6s						
MJAR	**Matsushiro Arr**	**17.21**	**93**	P	**P**	**10 35 44.0**	**+3.9**
	comp=Z,20nm,1.0s,baz=288,slow=10.0,SNR=10						
MJAR				LR	LR	10 42 49.5	
	comp=Z,48nm,18.5s,baz=328,slow=39						
MJA0	**Matsu Arr-Jizo**	**17.24**	**93**	*e*P	**P**	**10 35 47.5**	**+7.0**
GOMU	**GeErMu**	**17.57**	**266**	P	**Pn**	**10 35 42.9**	**-0.4**
GOMU				pP	pP	10 35 46.1	-1.2
GOMU				sP	sP	10 35 49.7	+1.1
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOMU				LR	LR		
	comp=Z,220nm,12.8s						
GOMU				LR	LR		
	comp=Z,230nm,12.9s						
GOMU				LR	LR		
	comp=Z,490nm,13.0s						
PZH	**PanZhiHua**	**17.91**	**229**	P	**Pn**	**10 35 45.4**	**-2.0**
PZH				S	**Sn**	**10 39 05.1**	**-2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,4.5s						
PZH				LR	LR		
	comp=Z,380nm,11.4s						
PZH				LR	LR		
	comp=Z,300nm,11.0s						
PZH				LR	LR		
	comp=Z,430nm,13.9s						
BOD	**Bodaibo**	**18.54**	**355**	*e*P	Pn	10 36 02.5	+7.8
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JMM	**Marumori**	**18.89**	**87**	P	**P**	**10 35 58.8**	**+0.2**
JMM				IAmb	IAmb	10 36 06.5	
	comp=Z,64nm,1.4s						
ASAJ	**Asahikawa**	**19.87**	**68**	P	**Pn**	**10 36 12.5**	**+1.6**
	comp=Z,9.1nm,0.9s,baz=255,slow=20,SNR=2.3						
ASAJ				LR	LR	10 43 44.1	
	comp=Z,114nm,18.8s,baz=158,slow=37						
ERM	**Erimo**	**20.22**	**74**	P	**P**	**10 36 12.6**	**-0.5**
ERM	**Erimo**	**20.22**	**74**	P	**P**	**10 36 12.6**	**-0.5**
ERM				pmax	pmax		
	comp=Z,100nm,1.2s						
YSS	**Yuzh-Sakhalins**	**20.41**	**60**	*e*P	Pn	10 36 22.8	+5.6
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
TYV	**Tymovskoe**	**21.51**	**49**	*e*P	P	10 36 35.1	+8.2
TYV				pmax	pmax		
	comp=Z,28nm,1.3s						
TYV				pmax	pmax		
	comp=Z,2μm,4.2s						
WMQ	**Urumqi**	**22.07**	**291**	*e*P	**P**	**10 36 35.2**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
DGZ	**Jazzator, Alta**	**23.12**	**306**	⇓*e*P	**P**	**10 36 44.6**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.6s						
YAK	**Yakutsk**	**24.04**	**15**	*e*P	**P**	**10 36 58.4**	**+5.5**
YAK				*e**PP	sP	10 37 09.5	+12
YAK				*e*		10 37 29.9	
YAK				*e*S	**S**	**10 41 13.6**	**+3.8**
YAK				*e*SS	**SnSn**	**10 41 56.0**	**+5.9**
YAK				*e*		10 48 02.0	
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,243nm,5.9s						
YAK				pmax	pmax		
	comp=N,200nm,4.8s						
YAK				pmax	pmax		
	comp=E,226nm,5.3s						
YAK				smax	smax		
	comp=E,182nm,3.7s						
YAK				smax	smax		
	comp=N,89nm,3.9s						

YAK	**Yakutsk**	**24.04**	**15**	LR	LR	10 45 52.8	
	comp=N,37nm,20.5s,baz=218,slow=36						
CMAR	**Chiang Mai Arr**	**25.90**	**221**	P	**P**	**10 37 10.5**	**+0.3**
	comp=N,0.6nm,0.3s,baz=37,slow=9.1,SNR=1.9						
CMAR				LR	LR	10 48 58.3	
	comp=N,114nm,18.1s,baz=225,slow=40						
	comp=N,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**26.00**	**315**	P	**P**	**10 37 10.2**	**-0.6**
ZALV	**Zalesovo Beam**	**26.00**	**315**	*e*P	**P**	**10 37 11.0**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**26.00**	**315**	P	**P**	**10 37 10.8**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=108,slow=11,SNR=7.1						
ZALV				LR	LR	10 47 52.1	
	comp=Z,118nm,20.0s,baz=96,slow=37						
	comp=Z,1.6nm,0.6s						
MK31	**Makanchi Array**	**26.03**	**298**	P	**P**	**10 37 11.6**	**+0.3**
MK31	**Makanchi Array**	**26.03**	**298**	P	**P**	**10 37 11.6**	**+0.3**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**26.03**	**298**	P	**P**	**10 37 12.0**	**+0.7**
MKAR	**Makanchi Array**	**26.03**	**298**	P	**P**	**10 37 11.8**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=93,slow=11,SNR=33						
MKAR				PcP	**PcP**	**10 40 38.7**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=89,slow=1.8,SNR=6.3						
MKAR				LR	LR	10 47 00.4	
	comp=Z,51nm,20.4s,baz=101,slow=35						
	comp=Z,4.1nm,0.7s						
MAKZ	**Makanchi**	**26.24**	**298**	P	**P**	**10 37 13.6**	**+0.4**
MAKZ	**Makanchi**	**26.24**	**298**	P	**P**	**10 37 13.6**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**28.87**	**306**	P	**P**	**10 37 36.0**	**-0.6**
KURK	**Kurchatov**	**28.87**	**306**	*e*P	**P**	**10 37 36.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURBB	**Kurchatov Arra**	**28.91**	**306**	P	**P**	**10 37 37.7**	**+0.7**
	comp=Z,3.4nm,1.0s,baz=98,slow=9.6,SNR=11						
KURBB				PcP	**PcP**	**10 40 44.8**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=101,slow=2.4,SNR=5.4						
	comp=Z,3.4nm,1.0s						
PETK	**Petropavlovsk-**	**31.05**	**50**	LR	LR	10 52 04.9	
	comp=Z,127nm,18.9s,baz=130,slow=40						
AAK	**Ala-Archa**	**31.76**	**290**	LR	LR	10 50 21.7	
	comp=Z,123nm,18.4s,baz=70,slow=35						
TIXI	**Tiksi**	**32.93**	**7**	*e*P	P	10 38 18.5	+6.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARK	**Arkit**	**33.76**	**289**	P	**P**	**10 38 21.3**	**+1.4**
ARK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BVAR	**Borovoye Array**	**34.20**	**309**	P	**P**	**10 38 24.2**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=98,slow=9.1,SNR=22						
BVAR				PcP	**PcP**	**10 40 59.2**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=88,slow=3.5,SNR=2.9						
	comp=Z,5.4nm,0.8s						
BRVK	**Borovoye**	**34.27**	**309**	*de*P	**P**	**10 38 24.5**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
TRKS	**Terek-Say**	**34.41**	**289**	P	**P**	**10 38 25.8**	**+0.1**
TRKS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	**Karatay Array**	**34.58**	**291**	P	**P**	**10 38 27.5**	**+0.6**
GUMO	**Guam**	**35.73**	**128**	LR	LR	10 53 59.9	
	comp=Z,25nm,19.8s,baz=61,slow=38						
SIMJ	**Simiganj**	**36.70**	**284**	P	**P**	**10 38 44.8**	**-0.6**
SIMJ				IAmb	IAmb	10 38 46.6	
	comp=Z,8.9nm,0.9s						
KBL	**Kabul**	**38.02**	**278**	P	**P**	**10 38 57.6**	**+0.9**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ABKAR	**Akbulak array**	**40.90**	**303**	P	**P**	**10 39 20.9**	**+0.7**
ARU	**Arti**	**41.16**	**314**	*di*P	**P**	**10 39 22.8**	**+0.5**
ARU				S	**S**	**10 45 33.7**	**-1.6**
ARU				SS	**SS**	**10 48 33.5**	**-4.3**
ARU				pmax	pmax		
	comp=Z,22nm,3.0s						
AKTO	**Aktyubinsk**	**41.96**	**305**	LR	LR	10 57 48.1	
	comp=Z,190nm,18.7s,baz=272,slow=37						
GEYT	**Alibeck**	**45.05**	**288**	P	**P**	**10 39 54.7**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=58,slow=3.7,SNR=5.9						
	comp=Z,2.1nm,0.6s						
PALK	**Pallekele**	**45.44**	**235**	LR	LR	11 01 53.2	
	comp=Z,49nm,18.7s,baz=171,slow=40						
KIRV	**Kirov**	**45.96**	**318**	LR	LR	11 00 35.5	
	comp=Z,104nm,19.9s,baz=72,slow=38						
BELG	**Belogornoye**	**48.00**	**310**	*e*P	**P**	**10 40 15.7**	**-1.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
J17K	**VABM Dome**	**53.19**	**34**	P	**P**	**10 40 56.1**	**+0.2**
J17K				IAmb	IAmb	10 41 05.0	
	comp=Z,8.7nm,1.0s						
KBZ	**Khabaz**	**53.69**	**300**	LR	LR	11 04 00.4	
	comp=Z,88nm,18.3s,baz=74,slow=36						
SPITS	**Spitsbergen Ar**	**53.86**	**345**	P	**P**	**10 41 00.1**	**-0.7**
	comp=Z,5.3nm,0.7s,baz=42,slow=14,SNR=4.1						
	comp=Z,5.3nm,0.7s						
ARCES	**ARCESS Array B**	**54.13**	**334**	P	**P**	**10 41 02.3**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=354,slow=10.0,SNR=1.7						
	comp=Z,3.2nm,1.0s						
IMAR	**Indian Mountai**	**54.63**	**30**	P	**P**	**10 41 05.5**	**-0.9**
TTA	**Tatalina**	**54.65**	**34**	P	**P**	**10 41 05.2**	**-1.6**
TTA	**Tatalina**	**54.65**	**34**	P	**P**	**10 41 05.2**	**-1.6**
TTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
E22K	**Anaktuvuk Pass**	**54.67**	**27**	P	**P**	**10 41 06.9**	**+0.1**
E22K				IAmb	IAmb	10 41 14.2	
	comp=Z,8.6nm,1.5s						
TOLK	**Toolik Lake Re**	**55.29**	**26**	P	**P**	**10 41 12.5**	**+1.2**
I21K	**Tanana**	**55.58**	**31**	P	**P**	**10 41 14.6**	**+1.2**
I21K				IAmb	IAmb	10 41 22.2	
	comp=Z,5.4nm,0.9s						
MLY	**Manley**	**56.13**	**31**	P	**P**	**10 41 18.6**	**+1.3**
MLY				IAmb	IAmb	10 41 38.2	
	comp=Z,6.6nm,1.4s						
CAST	**Castle Rocks**	**56.16**	**33**	P	**P**	**10 41 18.4**	**+0.8**
CAST				IAmb	IAmb	10 41 26.3	
	comp=Z,7.3nm,0.7s						
BPAW	**Bear Paw Mtn.**	**56.37**	**32**	P	**P**	**10 41 21.1**	**+2.0**
BPAW				IAmb	IAmb	10 41 27.5	
	comp=Z,4.2nm,0.8s						
KTH	**Kantishna Hill**	**56.60**	**32**	P	**P**	**10 41 22.6**	**+1.9**
FINES	**FINESS Array B**	**56.62**	**325**	P	**P**	**10 41 20.5**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=94,slow=2.7,SNR=4.5						
	comp=Z,1.3nm,0.7s						
I23K	**Minto, Yukon-K**	**56.63**	**30**	P	**P**	**10 41 23.7**	**+2.9**
I23K				IAmb	IAmb	10 41 30.8	
	comp=Z,5.3nm,1.0s						
BWN	**Browne**	**56.96**	**31**	P	**P**	**10 41 25.5**	**+2.3**
CCB	**Clear Creek Bu**	**57.44**	**31**	P	**P**	**10 41 25.6**	**-0.9**
SUA	**Susitna One**	**57.48**	**35**	P	**P**	**10 41 26.1**	**-1.9**
BMAR	**Burnt Mountain**	**57.49**	**27**	P	**P**	**10 41 28.1**	**+1.2**
IL31		**57.74**	**30**	P	**P**	**10 41 29.9**	**+1.2**
IL31				IAmb	IAmb	10 41 39.8	
	comp=Z,5.5nm,1.0s						
ILAR	**Eielson Array**	**57.74**	**30**	P	**P**	**10 41 29.6**	**+0.8**
ILAR	**Eielson Array**	**57.74**	**30**	P	**P**	**10 41 29.6**	**+0.8**
ILAR	**Eielson Array**	**57.74**	**30**	P	**P**	**10 41 28.1**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=288,slow=10,SNR=4.8						
	comp=Z,0.4nm,0.9s						
DHY	**Denali Highway**	**58.26**	**32**	P	**P**	**10 41 33.0**	**+0.4**
SML	**Sawmill**	**58.39**	**34**	P	**P**	**10 41 33.2**	**-0.2**
SML				IAmb	IAmb	10 41 41.6	
	comp=Z,7.4nm,0.7s						
J26L	**Joseph Creek**	**59.15**	**30**	P	**P**	**10 41 37.9**	**-0.7**
J26L				IAmb	IAmb	10 41 46.5	
	comp=Z,5.1nm,0.9s						
M24K	**Tolsona, Glenn**	**59.18**	**33**	P	**P**	**10 41 39.1**	**+0.3**
SCRK	**Sand Creek**	**59.23**	**30**	P	**P**	**10 41 38.7**	**-0.5**
SCRK				IAmb	IAmb	10 41 46.8	
	comp=Z,4.1nm,0.7s						
BCAR	**Beaver Creek A**	**60.53**	**31**	P	**P**	**10 41 47.9**	**-0.3**
WRA	**Warramunga Arr**	**61.28**	**161**	P	**P**	**10 41 51.5**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=346,slow=7.4,SNR=4.6						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**61.66**	**300**	P	**P**	**10 41 56.4**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=82,slow=2.7,SNR=4.4						
	comp=Z,1.5nm,0.8s						
HFS	**Hagfors**	**62.62**	**327**	P	**P**	**10 42 01.5**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=98,slow=7.7,SNR=1.9						
	comp=Z,2.1nm,0.8s						
NB2	**NORSAR Subarra**	**63.16**	**328**	P	P	10 42 12.5	+6.6
	comp=Z,1.5nm,0.7s,baz=57,slow=6.9						
NOA	**NORSAR Array B**	**63.16**	**328**	P	**P**	**10 42 05.0**	**-0.9**
NOA	**NORSAR Array B**	**63.16**	**328**	P	**P**	**10 42 05.0**	**-0.9**
	comp=Z,1.5nm,1.0s,baz=34,slow=5.3,SNR=2.2						
NOA				LR	LR	11 11 59.7	
	comp=Z,81nm,20.2s,baz=255,slow=38						
	comp=Z,1.5nm,1.0s						
KWP	**Kalwaria Pacla**	**63.57**	**314**	P	**P**	**10 42 08.7**	**0.0**
KWP				pmax	pmax		
	comp=Z,15nm,1.2s						
MLR	**Muntele Rosu**	**63.76**	**308**	P	**P**	**10 42 10.3**	**+0.1**
MLR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ASAR	**Alice Springs**	**64.75**	**163**	P	**P**	**10 42 15.3**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=343,slow=6.1,SNR=5.5						
	comp=Z,0.2nm,0.5s						
GERES	**GERESS Array B**	**68.94**	**316**	LR	LR	11 16 40.8	
	comp=Z,162nm,19.8s,baz=320,slow=39						
YKA	**Yellowknife Ar**	**70.45**	**23**	*e*P	**P**	**10 42 55.6**	**+3.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**70.45**	**23**	P	**P**	**10 42 52.8**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=322,slow=5.8,SNR=13						
	comp=Z,0.6nm,0.7s						
DAVOX	**Davos/Dischmat**	**72.24**	**316**	LR	LR	11 16 15.5	
	comp=Z,163nm,21.3s,baz=283,slow=37						
FCC	**Fort Churchill**	**78.92**	**16**	P	**P**	**10 43 40.8**	**-0.5**
FCC				IAmb	IAmb	10 43 48.2	
	comp=Z,4.3nm,0.6s						
FCC	**Fort Churchill**	**78.92**	**16**	P	**P**	**10 43 40.8**	**-0.5**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ELK	**Elko**	**87.27**	**37**	LR	LR	11 27 19.5	
	comp=Z,31nm,18.2s,baz=356,slow=38						
NVAR	**Mina Array Bea**	**87.60**	**40**	P	**P**	**10 44 28.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=307,slow=3.2,SNR=3.7						
	comp=Z,0.4nm,0.7s						
URZ	**Urewera**	**95.08**	**137**	LR	LR	11 25 05.7	
	comp=Z,47nm,20.7s,baz=302,slow=34						

IDC ***12*** *10:31:39.7±3.2, 7°.74S×117°.30E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=255.4km s-min=27.9km az=51.0*
DJA ***12*** *10:32:03.9±0.3, 8°.3S±7°×11°.8E±°, h170km±4km, M4.1/11, mb4.5/5, MLv3.9/11*

ISC 12 10:32:01.5±1.0, 8°.2S±0°.1×117°.95E±0°.08, h200km, n16, σ2s26/18, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PLAI	**Plampang**	**0.67**	**195**	P		**Pn**	**10 32 29.0**	**-0.4**
PLAI				S		**Sn**	**10 32 47.9**	**-3.2**
TWSI	**Taliwang, Sumb**	**1.20**	**242**	P		**Pn**	**10 32 32.9**	**+0.2**
TWSI				S		**Sn**	**10 32 54.8**	**-2.1**
SRBI	**Singaraja**	**2.72**	**272**	P		**Pn**	**10 32 47.9**	**+0.1**
DNP	**Denpasar**	**2.76**	**259**	P		**Pn**	**10 32 48.8**	**+0.5**
BASI	**Baing, Sumba**	**3.29**	**128**	P		**Pn**	**10 32 55.2**	**+0.6**
BKSI	**Bukukumba**	**3.56**	**37**	P		**Pn**	**10 32 59.7**	**+1.8**
EDFI	**Ende, Flores**	**3.74**	**99**	P		**Pn**	**10 33 01.5**	**+1.3**
JAGI	**Jajag, Banyuwa**	**3.77**	**265**	P		**Pn**	**10 33 01.5**	**+1.0**
GMJI	**Gumukmas**	**4.46**	**268**	P		**Pn**	**10 33 11.2**	**+2.1**
SOEI	**Soe**	**6.43**	**105**	P		**Pn**	**10 33 35.5**	**+1.0**
	47nm,0.9s,0.2nm							
UGM	**Wanagama**	**7.36**	**272**	P		**Pn**	**10 33 50.3**	**+3.7**
	146nm,1.6s,0.9nm							
KPJI	**Karang Pucung**	**8.98**	**275**	P		**Pn**	**10 34 11.2**	**+3.6**
	16nm,1.4s							
CMJI	**Cimerak**	**9.42**	**272**	P		**Pn**	**10 34 13.9**	**+0.6**
WRA	**Warramunga Arr**	**19.71**	**128**	P		**Pn**	**10 36 19.4**	**-0.5**
	1.0nm,0.4s,baz=301,slow=12,SNR=19							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**21.70**	**137**	P		**P**	**10 36 40.5**	**+3.6**
	1.0nm,0.5s,baz=314,slow=8.9,SNR=31							
	1.0nm,0.5s							
MKAR	**Makanchi Array**	**63.26**	**333**	P		**P**	**10 42 05.8**	**-3.0**
	0.1nm,0.5s,baz=131,slow=5.9,SNR=1.4							
	0.1nm,0.5s							

IDC 12 10:39:19.8±33.0, 48°.92S×98°.33E, h0km, mb3.6/3, mbtmp3.5/3, Error ellipse: s-maj=1091.0km s-min=60.9km az=1.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ASAR	**Alice Springs**	**37.63**	**61**	P		P	10 46 36.2	-0.2
	0.6nm,1.0s,baz=212,slow=8.5,SNR=5.8							
	0.6nm,1.0s							
WRA	**Warramunga Arr**	**40.82**	**58**	P		P	10 47 03.0	0.0
	0.5nm,0.8s,baz=220,slow=9.0,SNR=4.6							
	0.5nm,0.8s							
MKAR	**Makanchi Array**	**96.35**	**349**	P		P	10 52 49.5	-0.2
	0.1nm,0.4s,baz=156,slow=6.3,SNR=1.5							
	0.1nm,0.4s							

HEL ***12*** *10:42:57.3±0.2, 67°.56N×34°.37E, h0km, ML2.5, Explosion*
KOLA ***12*** *10:42:59.3, 67°.68N×34°.19E, h0km, ML2.7, Error ellipse: s-maj=9.8km s-min=3.9km az=140.0, Khibiny, mines Koashva, Nyurkpakh*
IDC ***12*** *10:43:00.7±1.7, 67°.71N×33°.84E, h0km, mbtmp3.6/4, ML2.8/4, Error ellipse: s-maj=19.7km s-min=9.4km az=83.0*

ISC 12 10:42:58.0±0.9, 67°.68N±0°.04×34°.22E±0°.04, h0km, n35, σ1s57/65, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LVZ	**Lovozero**	**0.28**	**36**	P		**Pg**	**10 43 04.1**	**+0.8**
LVZ				S		**Sg**	**10 43 07.8**	**+1.0**
LVZ	**Lovozero**	**0.28**	**36**	PG		**Pg**	**10 43 03.8**	**+0.5**
LVZ				SG		**Sg**	**10 43 08.3**	**+1.4**
APA	**Apatity**	**0.33**	**252**	P		**Pg**	**10 43 05.0**	**+0.7**
APA				S		**Sg**	**10 43 09.7**	**+1.2**
APA0	**Apatity Array**	**0.47**	**262**	P		**Pg**	**10 43 07.2**	**+0.1**
APA0				S		**Sg**	**10 43 13.6**	**+0.4**
TERR	**Teriberka**	**1.57**	**12**	P		**Pn**	**10 43 27.1**	**0.0**
TERR				S		**Sn**	**10 43 47.3**	**-0.7**
VRF	**Varrio**	**1.76**	**275**	PG		**Pn**	**10 43 29.8**	**+0.2**
VRF				MSG			10 43 52.0	
	comp=Z,79nm,0.2s							
VRF				SG		**Sn**	**10 43 52.5**	**-0.3**
PRVG	**Vayda Guba**	**2.21**	**341**	P		**Pb**	**10 43 39.7**	**+1.0**
PRVG				S		**Sn**	**10 44 04.5**	**+0.6**
OLKF	**Oulanka, Finla**	**2.33**	**237**	PG		**Pn**	**10 43 38.8**	**+1.3**
OLKF				MSG			10 44 06.0	
	comp=Z,16nm,0.2s							
OLKF				SG		**Sb**	**10 44 10.8**	**+0.7**
RAJF	**Raja-Jooseppi**	**2.36**	**293**	PN		**Pn**	**10 43 38.5**	**+0.6**
RAJF				SN		**Sn**	**10 44 08.8**	**+1.2**
KU6	**Riekki**	**2.38**	**228**	PG		**Pn**	**10 43 39.6**	**+1.4**
	baz=44							
KU6				MSG			10 44 06.8	
	comp=Z,15nm,0.2s							
KU6				SG		**Sb**	**10 44 11.7**	**+0.1**
MSF	**Maaselka**	**2.71**	**232**	PG		**Pn**	**10 43 44.8**	**+2.1**
	baz=51							
MSF				SG		**Sb**	**10 44 21.0**	**0.0**
SGF	**Sodankyl**	**2.96**	**269**	PN		**Pn**	**10 43 46.7**	**+0.5**
SGF				SB		**Sb**	**10 44 28.3**	**+0.1**
VADS	**Vadso**	**3.02**	**327**	P		**Pn**	**10 43 47.6**	**+0.6**
VADS				S		**Sn**	**10 44 23.8**	**0.0**
KMNF	**Kaamanen**	**3.05**	**302**	PN		**Pn**	**10 43 48.2**	**+0.8**
KMNF				SB		**Sb**	**10 44 31.6**	**+0.8**
KEV	**Kevo**	**3.36**	**312**	PN		**Pn**	**10 43 52.3**	**+0.7**
	baz=123							
KEV				SN		**Sn**	**10 44 32.8**	**+0.7**
RANF	**Ranua**	**3.38**	**244**	PN		**Pn**	**10 43 52.6**	**+0.7**
	baz=55							
RANF				SG		**Sb**	**10 44 40.5**	**+0.3**
RNF	**Rovaniemi**	**3.38**	**255**	PN		**Pn**	**10 43 52.4**	**+0.5**
	baz=69							
RNF				SN		**Sn**	**10 44 33.2**	**+0.7**
ARA0	**ARCESS Array S**	**3.70**	**304**	*e*P		**Pn**	**10 43 57.1**	**+0.8**
ARA0	**ARCESS Array S**	**3.70**	**304**	PN		**Pn**	**10 43 56.8**	**+0.5**
	baz=119							
ARA0				SN		**Sn**	**10 44 40.6**	**+0.1**
ARCES	**ARCESS Array B**	**3.70**	**304**	P		**Pn**	**10 43 56.9**	**+0.6**
ARCES				S		**Sn**	**10 44 39.2**	**-1.3**
ARCES	**ARCESS Array B**	**3.70**	**304**	Pn		**Pn**	**10 43 57.1**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=118,slow=14,SNR=289							
ARCES				Pg		**Pb**	**10 44 04.6**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=115,slow=17,SNR=8.7							
ARCES				Sn		**Sn**	**10 44 39.5**	**-1.0**
	comp=Z,2.0nm,0.3s,baz=116,slow=26,SNR=6.2							
ARCES				Lg	Lg		10 44 50.4	
	comp=Z,4.3nm,0.3s,baz=114,slow=35,SNR=9.1							
	comp=Z,3.9nm,0.3s							
KLF	**Kolari**	**3.98**	**268**	PN		**Pn**	**10 44 00.3**	**+0.2**
KLF				SG		**Sb**	**10 45 01.1**	**+3.7**
HEF	**Hetta**	**4.04**	**285**	*e*P		**Pn**	**10 44 01.0**	**+0.1**
HEF	**Hetta**	**4.04**	**285**	PN		**Pn**	**10 44 00.9**	**0.0**
	baz=99							
HEF				SN		**Sn**	**10 44 49.6**	**+0.8**
TOF	**Tornio**	**4.22**	**252**	PN		**Pn**	**10 44 04.1**	**+0.7**
TOF				SN		**Sn**	**10 44 52.4**	**-0.9**
OUL	**Oulu**	**4.24**	**236**	PG		**Pb**	**10 44 14.6**	**+1.3**
KTK1	**Kautokeino**	**4.29**	**293**	PN		**Pn**	**10 44 05.2**	**+0.8**
KTK1				SN		**Sn**	**10 44 55.0**	**+0.1**
PAJU	**Pajala**	**4.35**	**267**	PN		**Pn**	**10 44 05.0**	**-0.2**
PAJU				SN		**Sn**	**10 44 56.0**	**-0.5**
LANU	**Lannavaara**	**4.64**	**280**	PN		**Pn**	**10 44 08.6**	**-0.7**
LANU				SN		**Sn**	**10 45 03.1**	**-0.6**
KALU	**Kalix**	**4.67**	**252**	PN		**Pn**	**10 44 10.9**	**+1.3**
KALU				SN		**Sn**	**10 45 04.1**	**-0.4**
I37NO	**I37NO**	**5.94**	**291**	I		I	11 17 10.0	
	baz=98,slow=317,SNR=1.5							
FINES	**FINESS Array B**	**7.17**	**213**	Pn		**Pn**	**10 44 43.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=28,slow=14,SNR=6.8							
FINES				Sn		**Sn**	**10 46 01.4**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=28,slow=19,SNR=1.4							
FINES				Lg	Lg		10 46 38.8	
	comp=Z,0.9nm,0.3s,baz=39,slow=27,SNR=6.3							
	comp=Z,0.6nm,0.4s							
FAUS	**Fauske**	**7.26**	**276**	P		**Pn**	**10 44 44.1**	**-0.9**
FAUS				S		**Sn**	**10 46 02.9**	**-5.2**
SPITS	**Spitsbergen Ar**	**11.69**	**342**	Pn		**Pn**	**10 45 43.2**	**-2.5**
	baz=149,slow=15							
SPITS				Sn		**Sn**	**10 47 50.1**	**-6.6**
	baz=143,slow=29							
	comp=Z,0.7nm,0.4s							
HFS	**Hagfors**	**11.72**	**240**	Pn		**Pn**	**10 45 43.6**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=2.0							
	comp=Z,6.0nm,1.1s							

NEIC ***12*** *11:05:59.9±1.1, 21°.65S±0°.09×66°.7W±0°.1, h242km±15km, mb4.2/2, Error ellipse: s-maj=17.0km s-min=9.2km az=130.0*
SJA ***12*** *11:05:59.0±0.7, 21°.59S×66°.64W, h236km±5km, ML3.8, MW3.7*
SCB ***12*** *11:06:00.1±1.3, 21°.67S×66°.70W, h220km±7km, ML3.9/5, MW3.9, Error ellipse: s-maj=4.2km s-min=3.0km az=0.0*

ISC 12 11:05:59.7±0.9, 21°.64S±0°.05×66°.70W±0°.05, h228km±8km, n66, σ1s05/85, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MOCB	**Mochara**	**1.06**	**69**	Pg		**Pn**	**11 06 33.8**	**+0.4**
MOCB				Sg		**S**	**11 06 58.1**	**-1.4**
MOCB				IAML			11 07 03.3	
	230nm,0.2s							
YJA	**Yavi**	**1.23**	**116**	*e*P		**Pn**	**11 06 35.1**	**+0.7**
YJA				*e*S		**S**	**11 07 01.5**	**+0.1**
YJA				IAML			11 07 02.9	
	comp=Z,88nm,0.7s							
AOVT	**TarijaAcel**	**1.86**	**87**	Pg		**Pn**	**11 06 39.6**	**+0.3**
LVC	**Limon Verde**	**2.26**	**244**	Pn		**Pn**	**11 06 44.5**	**+1.2**
LVC	**Limon Verde**	**2.26**	**244**	*e*P		**Pn**	**11 06 44.6**	**+1.2**
LVC				IAML			11 07 21.2	
	comp=Z,30nm,0.4s							
LVC	**Limon Verde**	**2.26**	**244**	Pg		**Pn**	**11 06 44.2**	**+0.8**
PB09	**IPOC Station P**	**2.37**	**266**	*e*P		**Pn**	**11 06 45.4**	**+1.2**
PB09				*e*S		**S**	**11 07 21.1**	**+2.2**
PB09				IAML			11 07 22.6	
	comp=Z,122nm,0.4s							
PB09	**IPOC Station P**	**2.37**	**266**	Pg		**Pn**	**11 06 44.9**	**+0.7**
PB01	**IPOC Station P**	**2.66**	**282**	Pn		**Pn**	**11 06 48.1**	**+0.9**
PB01	**IPOC Station P**	**2.66**	**282**	*e*P		**Pn**	**11 06 48.0**	**+0.7**
PB01				*e*S		**S**	**11 07 24.9**	**+0.5**
PB01				IAML			11 07 25.6	
	comp=Z,180nm,0.2s							
PB01	**IPOC Station P**	**2.66**	**282**	Pg		**Pn**	**11 06 48.4**	**+1.1**
PB01				Sg		**S**	**11 07 24.4**	**0.0**
PB01				IAML			11 07 26.4	
	comp=Z,308nm,0.2s							
PB06	**IPOC Station P**	**2.86**	**248**	*e*P		**Pn**	**11 06 50.8**	**+1.3**
PB06				*e*S		**S**	**11 07 29.2**	**+0.7**
PB06				IAML			11 07 31.8	
	comp=Z,152nm,0.4s							
PB06	**IPOC Station P**	**2.86**	**248**	Pg		**Pn**	**11 06 50.3**	**+0.8**
PB07	**IPOC Station P**	**2.96**	**268**			**Pn**	**11 06 51.3**	**+0.6**
PB07	**IPOC Station P**	**2.96**	**268**	*e*P		**Pn**	**11 06 51.6**	**+1.0**
PB07				*e*S		**S**	**11 07 29.2**	**-1.2**
PB07				IAML			11 07 31.0	
	comp=Z,528nm,0.4s							
PB07	**IPOC Station P**	**2.96**	**268**	Pg		**Pn**	**11 06 51.4**	**+0.8**
PB02	**IPOC Station P**	**2.99**	**275**	*e*P		**Pn**	**11 06 51.6**	**+0.7**
PB02				*e*S		**S**	**11 07 30.2**	**-0.7**
PB02				IAML			11 07 31.1	
	comp=Z,713nm,0.3s							
PB02	**IPOC Station P**	**2.99**	**275**	Pg		**Pn**	**11 06 51.6**	**+0.7**
PB15	**IPOC Station P**	**3.00**	**238**	*e*P		**Pn**	**11 06 52.

GO02	**Mina Guanaco**	**4.40**	**216**	*eP*		**Pn**	**11 07 08.7**	**+1.0**
GO02				*eS*		**S**	**11 08 00.4**	**-1.0**
GO02	**Mina Guanaco**	**4.40**	**216**	Pg		**Pn**	**11 07 08.3**	**+0.6**
PB12	**IPOC Station P**	**4.54**	**311**	*eP*		**Pn**	**11 07 08.9**	**-0.4**
PB12				IAML			11 08 05.2	
	comp=Z,71nm,0.4s							
SOEJ	**Jacaque**	**4.84**	**343**	Pg		**Pn**	**11 07 15.4**	**+1.9**
BBOE	**La Paz, Chanca**	**4.95**	**346**	Pg		**Pn**	**11 07 16.4**	**+1.6**
BBOD	**La Paz, Gloria**	**5.28**	**340**	Pg		**Pn**	**11 07 20.6**	**+1.6**
LPAZ	**La Paz**	**5.49**	**346**	Pn		**Pn**	**11 07 23.1**	**+1.4**
LPAZ	**La Paz**	**5.49**	**346**	Pg		**Pn**	**11 07 23.0**	**+1.4**
AC02	**Maricunga**	**5.63**	**203**	Pn		**Pn**	**11 07 23.6**	**+0.4**
LCO	**Las Campanas**	**8.19**	**205**			**Pn**	**11 07 54.2**	**-1.4**
MURT	**Porto Murtinho**	**8.46**	**92**	Pg		**Pn**	**11 07 57.9**	**-1.0**
CO01	**Juntas del Tor**	**8.85**	**199**			**Pn**	**11 08 05.0**	**+1.0**
PTLB	**Pontes e Lacer**	**9.45**	**51**	Pn		**Pn**	**11 08 10.8**	**-0.9**
CO02	**Combarbal**	**10.28**	**201**	Pn		**Pn**	**11 08 20.9**	**-1.3**
ETMB	**Extrema**	**11.76**	**2**	Pn		**Pn**	**11 08 40.3**	**-0.7**
TRQA	**Tornquist**	**16.87**	**167**	P		**P**	**11 09 39.1**	**-2.2**
TRQA				IAmb		IAmb	11 10 04.0	
	comp=Z,18nm,1.4s							
GO06	**Curarrehue**	**18.35**	**192**	P		**P**	**11 09 56.6**	**-0.9**
GO06				IAmb		IAmb	11 10 06.3	
	comp=Z,6.3nm,1.1s							
QSPA	**South Pole Qui**	**68.56**	**180**	P		**P**	**11 16 39.7**	**+2.0**

*KRNET **12** 11:18:35.8±0.1, 40.°21N×78.°00E, mb3.1*
*NNC **12** 11:18:35.4±2.5, 40.°25N×78.°22E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=16.9km s-min=12.7km az=165.0*
*SOME **12** 11:18:36.0, 40.°32N×78.°10E, h0km*
ISC 12 11:18:39.1±1.7, 40.°33N±0.°07×78.°04E±0.°04, h10km, n51, σ1§70/81, 19C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.90**	**306**	⇑*iP*		**Pn**	**11 19 12.1**	**+0.2**
NRN	baz=9.0			⇑*iS*		**Sb**	**11 19 39.2**	**+1.3**
KDJ	**Kajisay**	**1.92**	**341**	⇑*iP*		**Pb**	**11 19 13.2**	**-1.0**
KDJ	baz=43			⇑*iS*		**Sg**	**11 19 40.6**	**-0.1**
ULHL	**Ulahol**	**2.35**	**325**	P		**Pb**	**11 19 21.0**	**-0.6**
ULHL	SNR=20							
ULHL	**Ulahol**	**2.35**	**325**	⇑*iP*		**Pn**	**11 19 19.0**	**+1.1**
ULHL	baz=28			⇑*iS*		**Sb**	**11 19 50.8**	**+0.1**
BOOM	**Boomskoye usch**	**2.68**	**325**	⇑*iP*		**Pn**	**11 19 23.6**	**+1.2**
BOOM	baz=27			⇑*iS*		**Sb**	**11 19 58.7**	**-1.5**
SATY	**Saty**	**2.75**	**6**	Pg		**Pb**	**11 19 28.9**	**+0.5**
SATY	22nm,0.6s			Lg		Lg	11 20 07.2	
SATY	**Saty**	**2.75**	**6**	*eP*		**Pb**	**11 19 28.9**	**+0.5**
SATY	13nm,0.3s			*eS*		**Sg**	**11 20 07.2**	**-0.1**
TNSS	**Tian-Shan**	**2.83**	**344**	Pg		**Pb**	**11 19 30.1**	**+0.2**
TNSS	19nm,0.4s			Lg		Lg	11 20 09.7	
TNSS	**Tian-Shan**	**2.83**	**344**	*eP*		**Pb**	**11 19 30.1**	**+0.2**
TNSS	17nm,0.2s			*eS*		**Sg**	**11 20 09.3**	**-0.8**
UZB	**Uzynbulak**	**2.92**	**14**	Pg		**Pb**	**11 19 29.5**	**-1.7**
UZB	6.7nm,0.4s			Lg		Lg	11 20 08.4	
UZB	**Uzynbulak**	**2.92**	**14**	*eP*		**Pb**	**11 19 31.0**	**-0.3**
UZB	4.5nm,0.1s			*eS*		**Sg**	**11 20 10.8**	**-2.0**
MDOK	**Medeo**	**2.93**	**346**	Pg		**Pb**	**11 19 31.7**	**+0.2**
MDOK	15nm,0.5s			Pg		**Pb**	**11 19 31.8**	**+0.2**
MDOK	13nm,0.6s			Lg		Lg	11 20 11.9	
MDOK	36nm,0.5s			Lg		Lg	11 20 13.2	
MDOK	**Medeo**	**2.93**	**346**	*eP*		**Pb**	**11 19 31.7**	**+0.2**
MDOK	15nm,0.2s			*eS*		**Sg**	**11 20 11.9**	**-1.3**
KOTS	**Kotyrbulak**	**2.99**	**347**	*eP*		**Pb**	**11 19 33.4**	**+0.9**
KOTS	10nm,0.2s			*eS*		**Sg**	**11 20 14.7**	**-0.3**
KNDC	**Almaty**	**3.00**	**345**	⇑Pg		**Pg**	**11 19 34.5**	**-2.1**
KNDC	11nm,0.3s			⇑Lg		Lg	11 20 16.2	
SHLS	**Shalkode**	**3.02**	**20**	Pg		**Pb**	**11 19 33.1**	**0.0**
SHLS	23nm,0.3s			Lg		Lg	11 20 14.8	
SHLS	**Shalkode**	**3.02**	**20**	*eP*		**Pb**	**11 19 33.4**	**+0.3**
SHLS	23nm,0.3s			*eS*		**Sg**	**11 20 14.8**	**-1.5**
MTBS	**Maitube**	**3.05**	**337**	Pg		**Pb**	**11 19 33.9**	**+0.4**
MTBS	14nm,0.4s			Lg		Lg	11 20 15.7	
MTBS	**Maitube**	**3.05**	**337**	*eP*		**Pb**	**11 19 33.9**	**+0.4**
MTBS	14nm,0.2s			*eS*		**Sg**	**11 20 15.7**	**-1.3**
KST	**Kastek**	**3.13**	**331**	*eP*		**Pb**	**11 19 35.8**	**+0.9**
KST	24nm,0.4s			*eS*		**Sg**	**11 20 18.8**	**-0.7**
KURS	**Kuram**	**3.16**	**2**	Pg		**Pb**	**11 19 36.1**	**+0.7**
KURS	5.8nm,0.5s			Lg		Lg	11 20 19.5	
KURS	**Kuram**	**3.16**	**2**	*eP*		**Pb**	**11 19 36.1**	**+0.7**
KURS	5.8nm,0.5s			*eS*		**Sg**	**11 20 19.5**	**-1.2**
TKM2	**Tokmak 2**	**3.17**	**326**	P		**Pb**	**11 19 36.6**	**+0.9**
	SNR=9.5							
TKM2	**Tokmak 2**	**3.17**	**326**	⇑Pg		**Pb**	**11 19 32.2**	**-3.5**
TKM2	9.1nm,0.4s			⇑Lg		Lg	11 20 19.9	
TKM2	**Tokmak 2**	**3.17**	**326**	⇓*iP*		**Pn**	**11 19 30.7**	**+1.4**
TKM2	baz=27			⇓*iS*		**Sn**	**11 20 10.6**	**+3.3**
KPKS	**Kokpek**	**3.18**	**9**	*eP*		**Pb**	**11 19 36.0**	**+0.3**
KPKS	11nm,0.1s			*eS*		**Sg**	**11 20 19.3**	**-1.8**
PDGK	**Podgornoye**	**3.19**	**19**	Pg		**Pb**	**11 19 33.1**	**-2.9**
PDGK	3.5nm,0.5s			Lg		Lg	11 20 14.3	
PDGK	**Podgornoye**	**3.19**	**19**	⇑Pg		**Pn**	**11 19 31.4**	**+1.9**
PDGK	4.2nm,0.4s			⇓Lg		Lg	11 20 14.9	
ARLS	**Aral**	**3.20**	**300**	⇓*eP*		**Pn**	**11 19 30.1**	**+0.5**
ARLS	baz=2.0			⇓*eS*		**Sn**	**11 20 09.5**	**+1.7**
UCH	**Uchtor**	**3.26**	**307**	P		**Pb**	**11 19 37.1**	**-0.3**
	SNR=9.2							
UCH	**Uchtor**	**3.26**	**307**	⇑*iP*		**Pn**	**11 19 31.7**	**+0.9**
UCH	baz=9.0			⇑*iS*		**Sn**	**11 20 12.2**	**+2.3**
KBK	**Karagaybulak**	**3.29**	**316**	P		**Pb**	**11 19 38.0**	**+0.4**
	SNR=10							
KBK	**Karagaybulak**	**3.29**	**316**	⇓*iP*		**Pn**	**11 19 31.8**	**+1.0**
KBK	baz=18			⇓*iS*		**Sn**	**11 20 13.0**	**+3.0**
DGS	**Degeres**	**3.37**	**331**	*eP*		**Pb**	**11 19 39.6**	**+0.6**
DGS	32nm,0.3s			*eS*		**Sg**	**11 20 25.4**	**-2.0**
	24nm,0.3s							
SFK	**Sufi-Kurgan**	**3.49**	**266**	⇑*iP*		**Pn**	**11 19 33.4**	**-0.2**
SFK	baz=68			⇑*iS*		**Sn**	**11 20 15.3**	**+0.3**
AAK	**Ala-Archa**	**3.52**	**312**	P		**Pb**	**11 19 43.4**	**+1.7**
	SNR=8.5							
AAK	**Ala-Archa**	**3.52**	**312**	⇓*iP*		**Pn**	**11 19 35.2**	**+1.2**
AAK	baz=14			⇓*iS*		**Sn**	**11 20 18.3**	**+2.4**
KTBS	**Karatobe**	**3.53**	**344**	*eP*		**Pb**	**11 19 42.4**	**+0.7**
KTBS	5.5nm,0.1s			*eS*		**Sg**	**11 20 30.1**	**-2.4**
CHKK	**Chushkaly**	**3.61**	**348**	*eP*		**Pb**	**11 19 44.3**	**+1.3**
CHKK	80nm,0.3s 6.4nm,0.2s			*eS*		**Sg**	**11 20 33.5**	**-1.5**
KUU	**Kurty**	**3.78**	**341**	Pg		**Pb**	**11 19 46.4**	**+0.4**
KUU	25nm,0.2s 5.6nm,0.4s			Lg		Lg	11 20 37.1	
KUU	**Kurty**	**3.78**	**341**	*eP*		**Pb**	**11 19 46.4**	**+0.4**
KUU	29nm,0.5s 5.4nm,0.2s			*eS*		**Sg**	**11 20 37.1**	**-3.5**
KRBS	**Karabastau**	**3.80**	**333**	*eP*		**Pb**	**11 19 46.7**	**+0.4**
KRBS	29nm,0.5s 12nm,0.3s			*eS*		**Sg**	**11 20 37.6**	**-3.5**
ARXS	**Arharly**	**3.89**	**358**	*eP*		**Pb**	**11 19 49.0**	**+1.2**
ARXS	33nm,0.3s 6.1nm,0.2s			*eS*		**Sg**	**11 20 41.7**	**-2.3**
USP	**Ospenovka**	**3.95**	**319**	P		**Pb**	**11 19 49.5**	**+0.6**
MRKS	26nm,0.3s SNR=31 4.9nm,0.4s			Lg		Lg	11 20 54.6	
MRKS	**Merke**	**4.34**	**305**	*eP*		**Pb**	**11 19 56.6**	**+1.0**
MRKS	5.3nm,0.3s 7.1nm,0.5s			*eS*		**Sg**	**11 20 54.6**	**-4.0**
EKS2	**Erkin-Say**	**3.96**	**308**	P		**Pb**	**11 19 51.1**	**+2.0**
	SNR=7.8							
DJR	**Jarkent**	**4.21**	**17**	*eP*		**Pb**	**11 19 54.4**	**+1.1**
DJR	1.9nm,0.1s 12nm,0.2s			*eS*		**Sg**	**11 20 50.8**	**-3.4**
KAPS	**Kapalarasan**	**5.05**	**11**	*eP*		**Pb**	**11 20 10.4**	**+2.8**
KAPS	1.3nm,0.1s 6.9nm,0.4s			*eS*		**Sg**	**11 21 18.4**	**-2.8**
BTLS	**Baital**	**5.55**	**329**	*eP*		**Pb**	**11 20 19.1**	**+3.0**
BTLS	4.9nm,0.6s 5.9nm,0.4s			*eS*		**Sg**	**11 21 33.1**	**-4.2**
KK31	**Karatay Array**	**6.28**	**299**	⇑Pg		Pb	11 20 33.0	+4.6
	0.4nm,0.5s,baz=103,slow=16,SNR=4.9							
KK31				⇑Lg		Lg	11 21 56.3	
	1.0nm,0.5s,baz=123,slow=26,SNR=4.3							

*SJA **12** 11:19:12.4±0.6, 31.°16S×71.°90W, h13km±4km, ML3.6, MW3.5*
*GUC **12** 11:19:13.5±0.7, 31.°24S×71.°87W, h37km±2km, ML3.7*
ISC 12 11:19:09.7±1.6, 31.°22S±0.°02×71.°98W±0.°06, h3km±11km, n49, σ1§37/82, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.61**	**29**	*eP*		**Pn**	**11 19 25.4**	**0.0**
CO06				*iS*		**Sn**	**11 19 33.6**	**-2.2**
CO06				IAML			11 19 35.8	
	comp=E,4μm,0.2s							
CO02	**Combarbal**	**0.84**	**90**	*eP*		**Pb**	**11 19 27.8**	**+0.7**
CO02				*eS*		**Sb**	**11 19 39.0**	**+0.2**
CO02				IAML			11 19 39.4	
	comp=Z,4μm,0.4s							
CO02	**Combarbal**	**0.84**	**90**	*eP*		**Pn**	**11 19 28.1**	**-0.5**
CO02				*iS*		**Sb**	**11 19 38.2**	**-0.6**
CO03	**El Pedregal**	**1.17**	**72**	*eP*		**Pn**	**11 19 33.0**	**-0.1**
CO03				*eS*		**Sb**	**11 19 48.0**	**-0.2**
CO03				IAML			11 19 48.8	
	comp=Z,905nm,0.1s							
CO03	**El Pedregal**	**1.17**	**72**	*eP*		**Pn**	**11 19 33.0**	**-0.1**
CO03				*iS*		**Sb**	**11 19 47.3**	**-0.9**
CO03				IAML			11 19 48.3	
	comp=E,4μm,0.2s							
CO05	**La Serena**	**1.44**	**26**	*eP*		**Pg**	**11 19 38.1**	**+0.8**
CO05				*iS*		**Sg**	**11 19 56.4**	**+0.4**
GO04	**Tololo Observa**	**1.45**	**45**	*eP*		**Pg**	**11 19 38.2**	**+0.6**
GO04				*eS*		**Sg**	**11 19 57.6**	**+1.2**
GO04	**Tololo Observa**	**1.45**	**45**	*eP*		**Pg**	**11 19 38.3**	**+0.7**
GO04				*iS*		**Sn**	**11 19 56.2**	**-0.6**
VA06	**Catapilco**	**1.46**	**157**	*eP*		**Pb**	**11 19 37.6**	**0.0**
VA06				*iS*		**Sn**	**11 19 55.7**	**-1.1**
VA06				IAML			11 19 58.0	
	comp=N,2μm,0.2s							
ROCH	**El Roble**	**1.94**	**155**	*eP*		**Pn**	**11 19 44.5**	**+0.7**
ROCH				*iS*		**Sn**	**11 20 07.6**	**-1.2**
ROCH				IAML			11 20 15.5	
	comp=N,738nm,0.3s							
ROC1	**El Roble**	**1.94**	**155**	*eP*		**Pn**	**11 19 44.6**	**+0.8**
ROC1				*eS*		**Sn**	**11 20 08.2**	**-0.6**
VA03	**San Esteban**	**1.96**	**142**	*eP*		**Pb**	**11 19 45.4**	**-0.8**
VA03				IAML			11 20 14.5	
	comp=Z,469nm,0.4s							
VA03	**San Esteban**	**1.96**	**142**	*eP*		**Pn**	**11 19 45.2**	**+1.1**
VA03				*iS*		**Sn**	**11 20 09.5**	**+0.2**
VA03				IAML			11 20 14.5	
	comp=N,1μm,0.4s							
CO01	**Juntas del Tor**	**2.04**	**53**	*eP*		**Pb**	**11 19 46.7**	**-0.9**
CO01				*iS*		**Sn**	**11 20 11.6**	**+0.3**
CO01				IAML			11 20 14.0	
	comp=N,583nm,0.6s							
MT02	**Curacav**	**2.16**	**161**	*iS*		**Sn**	**11 20 14.2**	**+0.3**
PEL	**Peldehue**	**2.21**	**151**	*eP*		**Pn**	**11 19 48.9**	**+1.4**
PEL				*eS*		**Sg**	**11 20 20.2**	**-0.7**
PEL	**Peldehue**	**2.21**	**151**	*eP*		**Pn**	**11 19 48.7**	**+1.2**
PEL				*iS*		**Sn**	**11 20 15.2**	**-0.2**
PEL				IAML			11 20 20.6	
	comp=E,506nm,0.3s							
RTLS	**Leoncito**	**2.36**	**105**	*eP*		**Pb**	**11 19 53.2**	**+0.1**
RTLS				*eS*		**Sg**	**11 20 25.2**	**-0.5**
RTLS				IAML			11 20 25.4	
	comp=Z,1μm,0.9s							
MT10	**Hacienda Santa**	**2.39**	**150**	*eP*		**Pn**	**11 19 51.0**	**+1.1**
MT10				*iS*		**Sn**	**11 20 19.7**	**-0.1**
AROD	**Rodeo**	**2.40**	**65**	*eP*		**Pb**	**11 19 53.6**	**-0.1**
MT05	**Renca**	**2.41**	**155**	*eP*		**Pn**	**11 19 51.4**	**+1.2**
MT05				*iS*		**Sn**	**11 20 20.6**	**+0.4**
MT05				IAML			11 20 32.4	
	comp=E,1μm,0.2s							
AUSP	**Uspallata**	**2.43**	**115**	*eP*		**Pb**	**11 19 54.1**	**-0.1**
AUSP				*eS*		**Sb**	**11 20 25.2**	**+0.5**
MT14	**Cerro Cal¡n**	**2.50**	**151**	*eP*		**Pn**	**11 19 52.8**	**+1.5**
MT14				*iS*		**Sn**	**11 20 22.2**	**-0.2**
FCH	**Farellones**	**2.55**	**146**	*eP*		**Pn**	**11 19 53.7**	**+1.5**
FCH				*iS*		**Sn**	**11 20 24.4**	**+0.4**
ACCO	**Cerro Coronel**	**2.58**	**77**	*eP*		**Pb**	**11 19 56.2**	**-0.7**
ACCO				*eS*		**Sg**	**11 20 33.0**	**+0.3**
ACCO				IAML			11 20 33.1	
	comp=Z,296nm,0.6s							
MT03	**Universidad Ad**	**2.59**	**152**	*eP*		**Pn**	**11 19 54.0**	**+1.3**
MT03				*iS*		**Sn**	**11 20 24.5**	**-0.2**
MT03				IAML			11 20 35.2	
	comp=E,1μm,0.3s							
ACDV	**Cuesta del Vie**	**2.67**	**68**	*eP*		**Pb**	**11 19 57.8**	**-0.6**
ACDV				*eS*		**Sb**	**11 20 33.4**	**+1.7**
ACDV				IAML			11 20 37.4	
	comp=Z,125nm,0.4s							
MT04	**Ro Olivares**	**2.68**	**145**	*eP*		**Pn**	**11 19 55.7**	**+1.6**
MT04				*iS*		**Sn**	**11 20 27.1**	**-0.1**
MT04				*iS*		**Sb**	**11 20 27.6**	**-4.4**
MT04				IAML			11 20 38.9	
	comp=E,535nm,0.1s							
MT15	**Las Vizcachas**	**2.68**	**153**	*eP*		**Pn**	**11 19 55.5**	**+1.6**
MT15				*iS*		**Sn**	**11 20 27.0**	**0.0**
MT09	**Talagante**	**2.69**	**162**	*eP*		**Pn**	**11 19 55.5**	**+1.4**
MT09				*iS*		**Sn**	**11 20 26.6**	**-0.6**
MT09				IAML			11 20 42.1	
	comp=N,311nm,0.4s							
MT01	**Popeta**	**2.71**	**167**	*eP*		**Pn**	**11 19 55.0**	**+0.7**
MT12	**Pirque**	**2.79**	**155**	*iS*		**Sn**	**11 20 29.3**	**-0.3**
AC05	**El Transito**	**2.79**	**32**	*eP*		**Pn**	**11 19 57.2**	**+1.7**
AC05				*iS*		**Sn**	**11 20 31.2**	**+1.4**
MT13	**San Alfonso**	**2.90**	**151**	*eP*		**Pn**	**11 19 58.4**	**+1.4**
MT13				*iS*		**Sn**	**11 20 32.6**	**+0.1**
MT13				IAML			11 20 43.5	
	comp=E,302nm,0.4s							
BO04	**La Punta**	**3.00**	**158**	*eP*		**Pn**	**11 19 59.6**	**+1.4**
BO04				*iS*		**Sn**	**11 20 34.4**	**-0.4**
RTLL	**Cerro Villicun**	**3.00**	**93**	*eP*		**Pb**	**11 20 02.4**	**-1.5**
RTLL				IAML			11 20 51.0	
	comp=Z,209nm,0.9s							
ASAL	**Salagasta**	**3.00**	**118**	*eP*		**Pb**	**11 20 03.4**	**-0.6**
ASAL				IAML			11 20 52.3	
	comp=Z,67nm,1.1s							
LMEL	**Las Melosas**	**3.02**	**151**	*eP*		**Pn**	**11 20 00.4**	**+1.7**
LMEL				*iS*		**Sn**	**11 20 35.5**	**0.0**
LMEL				IAML			11 20 48.1	
	comp=N,230nm,0.3s							
ARCO	**CERRO ARCO**	**3.05**	**123**	*eP*		**Pb**	**11 20 05.3**	**+0.5**
ARCO				IAML			11 20 50.2	
	comp=Z,66nm,0.5s							
AAGR	**Agrelo**	**3.26**	**126**	*eP*		**Pb**	**11 20 06.6**	**-1.7**
AAGR				IAML			11 21 05.7	
	comp=Z,70nm,0.8s							
AGUA	**GUANDACOL**	**3.47**	**61**	*eP*		**Pb**	**11 20 09.4**	**-2.5**
AGUA				IAML			11 21 03.7	
	comp=Z,101nm,0.3s							
BO02	**Sierra Bellavi**	**3.71**	**165**	*eP*		**Pn**	**11 20 09.0**	**+1.0**
BO02				*iS*		**Sn**	**11 20 52.4**	**+0.2**
AVFE	**Valle Fertil**	**3.92**	**83**	*eP*		**Pn**	**11 20 13.6**	**+2.6**
AVFE				IAML			11 21 15.9	
	comp=Z,150nm,0.7s							
VCA	**Vinchina**	**4.10**	**54**	*eP*		**Pb**	**11 20 19.0**	**-3.7**
VCA				IAML			11 21 28.0	
	comp=Z,99nm,0.5s							
ACHE	**Chepes**	**4.55**	**91**	*eP*		**Pn**	**11 20 22.4**	**+2.7**
ACLC	**CERRO LA CRUZ**	**4.70**	**69**	*eP*		**Pn**	**11 20 24.4**	**+2.7**
ACLC				*eS*		**Sg**	**11 21 36.4**	**-4.3**
ACLC				IAML			11 21 42.1	
	comp=Z,61nm,0.4s							
AC02	**Maricunga**	**5.03**	**30**	*eP*		**Pn**	**11 20 27.9**	**+1.4**
AC02				IAML			11 21 52.5	
	comp=Z,40nm,1.4s							
CYA	**Choya**	**6.04**	**64**	*eP*		**Pn**	**11 20 42.0**	**+2.0**
CYA				IAML			11 22 21.7	
	comp=Z,17nm,1.0s							
FSA	**Cafayete**	**7.32**	**48**	*eP*		Pb	11 21 09.6	-8.0

IDC 12 11:23:37.5±9.8, 5.°98S×150.°04E, h45km±65km, mb2.9/3, mbtmp3.2/4, ML1.5/1, Error ellipse: s-maj=177.4km s-min=51.3km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.44**	**220**	P		Pn	11 24 42.6	+0.2
	1.6nm,0.3s,baz=22,slow=6.7,SNR=5.7							
PMG				S		Sn	11 25 19.2	-14
	4.4nm,0.5s,baz=127,slow=20,SNR=1.5							
	4.3nm,0.3s							
WRA	**Warramunga Arr**	**20.63**	**226**	P		P	11 28 12.4	-1.0
	0.2nm,0.5s,baz=52,slow=11,SNR=1.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**23.46**	**220**	P		P	11 28 43.6	+0.4
	0.3nm,0.5s,baz=54,slow=9.1,SNR=9.7							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**79.42**	**320**	P		P	11 35 39.1	0.0
	0.4nm,0.8s,baz=115,slow=6.8,SNR=3.5							
	0.4nm,0.8s							

*JMA **12** 11:28:14.7±0.1, 24.°2N±0.°2×121.°7E±0.°3, h11km, MV3.2/14, TAIWAN REGION*
*TAP **12** 11:28:14.1, 24.°22N×121.°73E, h11km, ML3.7, B*
*ASIES **12** 11:28:14.1, 24.°22N×121.°73E, h11km, ML3.7, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.64; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$-0.21; $M_{r\theta}$0.73; $M_{\theta\phi}$-0.67; $M_{\phi r}$-0.40; Fault plane solution: M_o1.78905×10^{21} NP1:φ83.40000°, δ56.94000°, λ113.75000°. NP2:φ224.51000°, δ39.91000°, λ58.25000°. Principal axes: T Plg68.1510°, Azm43.3470°; N Plg19.7310°, Azm249.9020°; P Plg9.0100°, Azm156.6420°;*
ISC 12 11:28:14.1±0.8, 24.°21N±0.°01×121.°74E±0.°02, h12km±4km, n124, σ0§50/212, 14C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**2**	*eP*		**Pg**	**11 28 17.0**	**0.0**
EHP	baz=10.0			S		**Sg**	**11 28 19.0**	**0.0**
ETL	**Fush Village**	**0.12**	**244**	⇑*iP*		**Pg**	**11 28 17.4**	**+0.2**
ETL	baz=240			*eS*		**Sg**	**11 28 19.4**	**0.0**
EAHA	**Aohua**	**0.12**	**1**	⇓*iP*		**Pg**	**11 28 17.2**	**0.0**
EAHA	baz=4.0			S		**Sg**	**11 28 19.5**	**+0.1**
NACB	**Ninganchiao**	**0.14**	**254**	P		**Pg**	**11 28 17.5**	**+0.1**
NACB	**Ninganchiao**	**0.14**	**254**	⇑*iP*		**Pg**	**11 28 17.5**	**+0.1**
NACB	baz=244			S		**Sg**	**11 28 19.8**	**0.0**
TWD	**Chiawan**	**0.18**	**225**	⇑*iP*		**Pg**	**11 28 18.3**	**+0.1**
TWD	baz=221			S		**Sg**	**11 28 21.2**	**+0.2**
ENA	**Nanau**	**0.22**	**1**	⇓*iP*		**Pg**	**11 28 18.8**	**0.0**
ENA	baz=4.0			S		**Sg**	**11 28 21.9**	**-0.1**
ETLH	**Xiulin Townshi**	**0.23**	**269**	⇑*iP*		**Pg**	**11 28 19.2**	**+0.1**
ETLH	baz=268			*eS*		**Sg**	**11 28 21.9**	**-0.6**
EWUT	**Wuta**	**0.24**	**9**	⇓*iP*		**Pg**	**11 28 19.2**	**+0.1**
EWUT	baz=10.0			S		**Sg**	**11 28 22.6**	**+0.1**
HWA	**Hwalien**	**0.26**	**207**	*eP*		**Pb**	**11 28 20.3**	**-0.5**
	baz=215							
ETM	**Tongmen**	**0.33**	**223**	⇑*iP*		**Pg**	**11 28 20.8**	**-0.1**
ETM	baz=222			*eS*		**Sg**	**11 28 25.7**	**+0.4**
LXIB	**Xiulin Townshi**	**0.35**	**238**	⇑*iP*		**Pg**	**11 28 21.2**	**-0.1**
LXIB	baz=237			*eS*		**Sg**	**11 28 26.3**	**+0.3**
ESAO	**Su ao**	**0.38**	**15**	⇓*iP*		**Pg**	**11 28 21.6**	**0.0**
ESAO	baz=16			*eS*		**Sg**	**11 28 26.8**	**0.0**
LATG	**Datong**	**0.38**	**329**	⇓*iP*		**Pg**	**11 28 21.9**	**+0.2**
LATG	baz=329			*eS*		**Sg**	**11 28 27.1**	**+0.3**
NNSB	**Datong**	**0.39**	**304**	⇓*iP*		**Pg**	**11 28 22.2**	**+0.2**
NNSB	baz=303			S		**Sg**	**11 28 27.2**	**0.0**
NNS	**Nan Shan**	**0.40**	**305**	⇓*iP*		**Pg**	**11 28 22.4**	**+0.2**
NNS	baz=304			*iS*		**Sg**	**11 28 27.7**	**+0.1**
TWC	**Suao**	**0.41**	**14**	⇓*iP*		**Pg**	**11 28 22.3**	**+0.1**
TWC	baz=9.0			*eS*		**Sg**	**11 28 27.9**	**+0.2**
NDS	**Dongshan**	**0.42**	**357**	⇓*iP*		**Pg**	**11 28 22.7**	**+0.2**
NDS	baz=358			*iS*		**Sg**	**11 28 28.5**	**+0.4**
WHF	**Hehuan Shan**	**0.44**	**261**	⇑*eP*		**Pg**	**11 28 23.0**	**+0.2**
WHF	baz=261			*eS*		**Sg**	**11 28 28.8**	**0.0**
NDT	**Datong Townshi**	**0.44**	**332**	⇓*iP*		**Pb**	**11 28 23.3**	**-0.6**
NDT	baz=332			*eS*		**Sg**	**11 28 29.2**	**+0.4**
SHUL	**Shoufeng**	**0.45**	**201**	*eP*		**Pb**	**11 28 24.1**	**0.0**

	baz=207										
SHUL					*e*S		**Sb**	**11 28 30.5**	**-0.2**		
	baz=207										
ENTT	**Nioudou**	**0.46**	**340**	⇓	*i*P		**Pg**	**11 28 23.5**	**+0.3**		
	baz=341										
ENTT					S		**Sg**	**11 28 29.6**	**+0.4**		
	baz=341										
ESL	**Shilin**	**0.48**	**215**	⇑	*i*P		**Pg**	**11 28 23.5**	**-0.1**		
	baz=223										
ESL					*e*S		**Sg**	**11 28 29.4**	**-0.7**		
	baz=223										
TWE	**Neicheng**	**0.51**	**353**	⇓	*i*P		**Pg**	**11 28 24.4**	**+0.2**		
	baz=355										
TWE					*e*S		**Sg**	**11 28 31.2**	**+0.2**		
	baz=355										
TWT	**Tachien**	**0.51**	**275**		*e*P		**Pb**	**11 28 25.1**	**-0.2**		
	baz=274										
TWT					*e*S		**Sg**	**11 28 31.5**	**+0.4**		
	baz=274										
TDCB	**Techi**	**0.53**	**275**		*e*P		**Pb**	**11 28 25.0**	**-0.5**		
	baz=274										
TDCB					*e*S		**Sg**	**11 28 31.3**	**-0.4**		
	baz=274										
TEGC	**Jichi Village**	**0.53**	**200**		*e*P		**Pb**	**11 28 25.8**	**+0.3**		
	baz=190										
TEGC					*e*S		**Sb**	**11 28 34.0**	**+0.9**		
	baz=190										
CHGB	**Renai**	**0.54**	**254**	⇑	*i*P		**Pb**	**11 28 25.1**	**-0.6**		
	baz=246										
CHGB					*e*S		**Sg**	**11 28 31.8**	**-0.1**		
	baz=246										
ILA	**Ilan**	**0.55**	**1**		*e*P		**Pb**	**11 28 25.4**	**-0.4**		
	baz=352										
FUSB	**Fushanzhiwuyua**	**0.56**	**346**	⇓	*i*P		**Pg**	**11 28 25.4**	**+0.2**		
	baz=346										
FUSB					*e*S		**Sg**	**11 28 32.5**	**-0.2**		
	baz=346										
YHNB	**Yeheng**	**0.56**	**324**		P		**Pb**	**11 28 25.7**	**-0.4**		
YHNB	**Yeheng**	**0.56**	**324**	⇓	*i*P		**Pb**	**11 28 25.6**	**-0.4**		
	baz=324										
YHNB					*i* S		**Sg**	**11 28 33.1**	**+0.4**		
	baz=324										
NSK	**Sanguang**	**0.58**	**323**	⇓	*i*P		**Pb**	**11 28 25.8**	**-0.5**		
	baz=323										
NSK					*e*S		**Sg**	**11 28 32.6**	**-0.5**		
	baz=323										
WARBT	**Fenglin Townsh**	**0.59**	**213**	⇑	*i*P		**Pg**	**11 28 25.3**	**-0.3**		
	baz=221										
WARBT					*e*S		**Sb**	**11 28 35.0**	**+0.3**		
	baz=221										
NWLT	**Wulai**	**0.60**	**339**	⇓	P		**Pb**	**11 28 26.2**	**-0.4**		
	baz=339										
NWLT					*e*S		**Sg**	**11 28 34.0**	**+0.1**		
	baz=339										
WUSB	**Renai**	**0.61**	**249**	⇑	*i*P		**Pb**	**11 28 26.3**	**-0.5**		
	baz=241										
WUSB					*e*S		**Sg**	**11 28 33.6**	**-0.4**		
	baz=241										
EGS		**0.66**	**16**		*e*P		**Pb**	**11 28 27.3**	**-0.2**		
	baz=24										
NFF	**Wufeng Townshi**	**0.70**	**307**		*e*P		**Pb**	**11 28 28.2**	**-0.2**		
	baz=306										
NFF					*e*S		**Sg**	**11 28 37.0**	**-0.1**		
	baz=306										
VWDT	**VWDT**	**0.71**	**230**	⇑	*i*P		**Pg**	**11 28 28.0**	**+0.1**		
	baz=230										
VWDT					*e*S		**Sg**	**11 28 37.0**	**-0.3**		
	baz=230										
WCS	**Beigang Elemen**	**0.77**	**259**		*e*P		**Pb**	**11 28 29.2**	**-0.2**		
	baz=259										
WCS					*e*S		**Sb**	**11 28 39.5**	**-0.5**		
	baz=259										
HGSD	**Ruisui**	**0.77**	**202**		*e*P		**Pb**	**11 28 29.8**	**+0.3**		
	baz=192										
NHDH	**Xindian Distri**	**0.77**	**346**		*e*P		**Pb**	**11 28 29.4**	**-0.1**		
	baz=345										
NHDH					*e*S		**Sb**	**11 28 40.1**	**+0.1**		
	baz=345										
TWA	**Mucha**	**0.78**	**350**		*e*P		**Pb**	**11 28 29.8**	**+0.1**		
	baz=350										
TWA					*e*S		**Sb**	**11 28 40.5**	**+0.2**		
	baz=350										
LIOB	**Emei**	**0.79**	**304**		*e*P		**Pb**	**11 28 30.1**	**+0.3**		
	baz=303										
LIOB					*e*S		**Sb**	**11 28 40.2**	**-0.2**		
	baz=303										
NSTT	**Nanjuang**	**0.79**	**302**		P		**Pb**	**11 28 30.1**	**+0.2**		
	baz=302										
NSTT					*e*S		**Sb**	**11 28 40.6**	**0.0**		
	baz=302										
TATO	**Taipei**	**0.80**	**343**		P		**Pb**	**11 28 29.9**	**0.0**		
EHY	**Hungye**	**0.80**	**209**		*e*P		**Pg**	**11 28 29.3**	**-0.3**		
	baz=216										
EHY					*e*S		**Sb**	**11 28 41.8**	**+1.1**		
	baz=216										
TWB1	**Santiao Chiao**	**0.83**	**16**		*e*P		**Pg**	**11 28 30.1**	**-0.1**		
	baz=9.0										
TWB1					S		**Sg**	**11 28 40.8**	**-0.2**		
	baz=9.0										
SSLB	**Suanglung**	**0.83**	**240**		P		**Pg**	**11 28 30.2**	**-0.1**		
SSLB	**Suanglung**	**0.83**	**240**	⇑	*i*P		**Pg**	**11 28 30.1**	**-0.1**		
	baz=240										
SSLB					*e*S		**Sg**	**11 28 40.2**	**-0.9**		
	baz=240										
SMLT	**Sun Moon Lake**	**0.83**	**247**	⇑	*i*P		**Pb**	**11 28 30.4**	**-0.2**		
	baz=238										
SMLT					*e*S		**Sg**	**11 28 41.1**	**-0.1**		
	baz=238										
NWF	**Wu-fen Shan**	**0.86**	**3**		*e*P		**Pb**	**11 28 31.2**	**+0.1**		
	baz=354										
NWF					*e*S		**Sb**	**11 28 42.5**	**0.0**		
	baz=354										
WFSB	**Wu-fen Shan**	**0.86**	**3**	⇓	*i*P		**Pb**	**11 28 31.0**	**0.0**		
	baz=355										
WFSB					*e*S		**Sg**	**11 28 42.0**	**0.0**		
	baz=355										
SXI1	**Grass Mountain**	**0.89**	**8**	⇓	*i*P		**Pb**	**11 28 31.4**	**-0.2**		
	baz=355										
TWQ1	**Liyutan**	**0.89**	**279**		*e*P		**Pn**	**11 28 32.4**	**-0.2**		
	baz=279										
TWQ1					*e*S		**Sb**	**11 28 44.0**	**+0.6**		
	baz=279										
SBCB	**Hsinchu**	**0.90**	**310**		*e*P		**Pg**	**11 28 31.4**	**-0.1**		
	baz=310										
SBCB					*e*S		**Sb**	**11 28 44.0**	**+0.4**		
	baz=310										
NCUH	**Zhongli**	**0.91**	**326**		*e*P		**Pn**	**11 28 32.7**	**-0.1**		
	baz=326										
NCUH					*e*S		**Sn**	**11 28 45.3**	**-0.5**		
	baz=326										
YULB	**Yu-li**	**0.91**	**206**		P		**Pg**	**11 28 31.5**	**-0.2**		
YULB	**Yu-li**	**0.91**	**206**		*e*P		**Pg**	**11 28 31.0**	**-0.7**		
	baz=217										
YULB					*e*S		**Sn**	**11 28 45.0**	**-0.9**		
	baz=217										
HSN	**Hsinchu**	**0.91**	**310**		*e*P		**Pb**	**11 28 31.9**	**-0.1**		
	baz=302										
HSN					*e*S		**Sb**	**11 28 44.3**	**+0.2**		
	baz=302										
NSY	**Sanyi**	**0.91**	**283**		*e*P		**Pn**	**11 28 33.1**	**+0.2**		
	baz=283										
NMLH	**Miaoli**	**0.92**	**291**		*e*P		**Pg**	**11 28 31.8**	**-0.1**		
	baz=290										
NMLH					*e*S		**Sn**	**11 28 45.4**	**-0.8**		
	baz=290										
ECBN	**Changbin**	**0.93**	**196**		*e*P		**Pg**	**11 28 31.9**	**-0.1**		
	baz=189										
ECBN					*e*S		**Sn**	**11 28 46.0**	**-0.3**		
	baz=189										
TWS1	**Kuangyinshan**	**0.93**	**342**		*e*P		**Pb**	**11 28 32.3**	**0.0**		
	baz=350										
TWS1					*e*S		**Sn**	**11 28 45.6**	**-0.8**		
	baz=350										
TNOU	**National Taiwa**	**0.94**	**2**		*e*P		**Pg**	**11 28 31.9**	**-0.3**		
	baz=2.0										
TNOU					*e*S		**Sg**	**11 28 44.2**	**-0.2**		
	baz=2.0										
EYUL	**Yuli**	**0.94**	**204**		*e*P		**Pg**	**11 28 32.2**	**-0.1**		
	baz=216										
EYUL					*e*S		**Sb**	**11 28 45.4**	**+0.6**		
	baz=216										
YM01	**YM01**	**0.94**	**351**		*e*P		**Pb**	**11 28 32.7**	**+0.2**		
	baz=350										
YM01					*e*S		**Sn**	**11 28 46.0**	**-0.8**		
	baz=350										
TWF1	**Yuli**	**0.94**	**205**		*e*P		**Pg**	**11 28 31.3**	**-1.1**		
	baz=216										
TWF1					*e*S		**Sn**	**11 28 46.1**	**-0.6**		
	baz=216										
TCU	**Taichung**	**0.97**	**267**		*e*P		**Pn**	**11 28 34.2**	**+0.5**		
	baz=267										
YM08	**YM08**	**0.98**	**352**		*e*P		**Pb**	**11 28 33.1**	**-0.1**		
	baz=352										
YM08					*e*S		**Sn**	**11 28 47.0**	**-0.7**		
	baz=352										
NTST	**Danshui**	**0.98**	**345**		*e*P		**Pn**	**11 28 34.0**	**+0.1**		
	baz=344										
ANP	**Anpu**	**0.99**	**349**		*e*P		**Pb**	**11 28 33.5**	**+0.2**		
	baz=349										
ANP					*e*S		**Sb**	**11 28 46.4**	**0.0**		
	baz=349										
WJS	**Zhushan**	**1.00**	**247**		*e*P		**Pn**	**11 28 34.4**	**+0.4**		
	baz=243										
WJS					*e*S		**Sb**	**11 28 47.2**	**+0.6**		
	baz=243										
WNT	**Mingjian**	**1.02**	**251**		*e*P		**Pn**	**11 28 35.2**	**+0.9**		
	baz=246										
WNT					*e*S		**Sn**	**11 28 49.1**	**+0.6**		
	baz=246										
CHKH	**Chenggong**	**1.06**	**197**		*e*P		**Pb**	**11 28 34.3**	**-0.2**		
	baz=190										
CHKH					*e*S		**Sn**	**11 28 49.9**	**+0.3**		
	baz=190										
TWY	**Chenhua**	**1.07**	**353**		*e*P		**Pg**	**11 28 34.7**	**0.0**		
	baz=353										
TWY					*e*S		**Sn**	**11 28 49.3**	**-0.5**		
	baz=353										
ALS	**Alishan**	**1.10**	**231**		*e*P		**Pn**	**11 28 35.7**	**-0.1**		
	baz=231										
ALS					*e*S		**Sn**	**11 28 50.5**	**-0.5**		
	baz=231										
JYNG	**Yonaguni jima**	**1.13**	**77**		P		**Pg**	**11 28 36.1**	**+0.2**		
CHN5	**Tsauling**	**1.15**	**238**		*e*P		**Pg**	**11 28 36.6**	**+0.4**		
	baz=239										
CHN5					*i* S		**Sn**	**11 28 53.5**	**+1.7**		
	baz=239										
CHKT	**Chengkung**	**1.16**	**197**		*e*P		**Pb**	**11 28 35.5**	**-0.6**		
	baz=215										
CHKT					*e*S		**Sg**	**11 28 51.6**	**+0.1**		
	baz=215										
EHD	**Haiduan**	**1.16**	**205**		*e*P		**Pb**	**11 28 34.8**	**-1.5**		
	baz=218										
EHD					*e*S		**Sn**	**11 28 53.1**	**+0.9**		
	baz=218										
YOJ	**Yonaguni jima**	**1.19**	**78**		P		**Pg**	**11 28 37.1**	**+0.1**		
YOJ	**Yonaguni jima**	**1.19**	**78**		*e*P		**Pb**	**11 28 36.7**	**+0.1**		
	baz=66										
YOJ	**Yonaguni jima**	**1.19**	**78**		P		**Pg**	**11 28 37.2**	**+0.1**		
YOJ					S		**Sn**	**11 28 54.4**	**+1.6**		
ELDTW	**Lidau**	**1.21**	**213**		*e*P		**Pn**	**11 28 35.6**	**-1.4**		
	baz=227										
ELDTW					*e*S		**Sb**	**11 28 52.8**	**0.0**		
	baz=227										
WDLH	**Douliu**	**1.21**	**245**		*e*P		**Pg**	**11 28 37.8**	**+0.3**		
	baz=246										
WRL	**Guolierlin Hig**	**1.28**	**256**		*e*P		**Pg**	**11 28 39.0**	**+0.2**		
	baz=257										
WRL					*e*S		**Sg**	**11 28 55.9**	**+0.4**		
	baz=257										
WCKO	**Fanlu**	**1.29**	**234**		*e*P		**Pg**	**11 28 39.8**	**+0.9**		
	baz=235										
WCKO					*e*S		**Sg**	**11 28 56.7**	**+0.9**		
	baz=235										
WTK	**Tuku**	**1.34**	**247**		*e*P		**Pg**	**11 28 40.2**	**+0.3**		
	baz=236										
WTK					*e*S		**Sg**	**11 28 59.4**	**+2.1**		
	baz=236										
CHN4	**Tsaushan**	**1.35**	**231**		*e*P		**Pg**	**11 28 40.5**	**+0.4**		
	baz=233										
CHN4					*e*S		**Sg**	**11 28 57.7**	**0.0**		
	baz=233										
STYH	**Taoyuan**	**1.36**	**221**		*e*P		**Pb**	**11 28 39.6**	**0.0**		
	baz=222										
STYH					*e*S		**Sg**	**11 28 57.6**	**-0.3**		
	baz=222										
TPUB	**Ta-pu**	**1.36**	**228**		P		**Pg**	**11 28 40.6**	**+0.3**		
TPUB	**Ta-pu**	**1.36**	**228**		*e*P		**Pg**	**11 28 40.4**	**+0.1**		
	baz=218										
TPUB					*e*S		**Sg**	**11 28 58.0**	**0.0**		
	baz=218										
WTP	**Ta-pu**	**1.41**	**227**		*e*P		**Pg**	**11 28 41.4**	**+0.1**		
	baz=229										
WTP					*e*S		**Sg**	**11 28 59.5**	**-0.1**		
	baz=229										
LONT	**Longtian**	**1.41**	**203**		*e*P		**Pn**	**11 28 39.5**	**-0.2**		
	baz=206										
PCYT	**Pengchaiyu**	**1.45**	**12**		*e*P		**Pb**	**11 28 41.1**	**+0.1**		
	baz=11										
PCYT					*e*S		**Sg**	**11 29 00.5**	**-0.2**		
	baz=11										
TWK	**Hsinying**	**1.48**	**231**		*e*P		**Pg**	**11 28 42.6**	**0.0**		
	baz=232										
WSF	**Szhu**	**1.50**	**248**		*e*P		**Pg**	**11 28 42.6**	**-0.4**		
	baz=260										
WSF					*e*S		**Sg**	**11 29 03.2**	**+0.8**		
	baz=260										
SNST	**Tainan City**	**1.50**	**229**		*e*P		**Pg**	**11 28 42.9**	**-0.1**		
	baz=232										
SNST					*e*S		**Sg**	**11 29 02.5**	**-0.1**		
	baz=232										
CHN1	**Nanshi**	**1.51**	**228**		*e*P		**Pg**	**11 28 42.7**	**-0.4**		
	baz=219										
CHN1					*e*S		**Sg**	**11 29 02.7**	**0.0**		
	baz=219										
TWG	**Pinlang**	**1.51**	**204**		*e*P		**Pn**	**11 28 40.9**	**-0.2**		
	baz=190										
TWGBT	**Beinan**	**1.51**	**204**		P		**Pn**	**11 28 41.2**	**+0.1**		
TWGBT	**Beinan**	**1.51**	**204**		*e*P		**Pn**	**11 28 41.1**	**0.0**		
	baz=190										
ICHU	**Yihu**	**1.58**	**238**		*e*P		**Pg**	**11 28 43.9**	**-0.6**		
	baz=225										
ICHU					*e*S		**Sg**	**11 29 06.4**	**+1.4**		
	baz=225										
SCST	**Cishan**	**1.74**	**221**		*e*P		**Pb**	**11 28 46.6**	**+0.5**		
	baz=224										
TSMG	**Majia**	**1.80**	**214**		*e*P		**Pb**	**11 28 46.6**	**-0.5**		
	baz=207										
IRIF	**Iriomote-Funau**	**1.82**	**86**		*e*P		**Pb**	**11 28 47.0**	**-0.4**		
IRIF					S		**Sb**	**11 29 10.5**	**+0.2**		
TSCK	**Chigu Township**	**1.85**	**235**		*e*P		**Pb**	**11 28 47.9**	**0.0**		
	baz=223										
MASBT	**Mashibuluo**	**1.89**	**213**		*e*P		**Pn**	**11 28 46.8**	**+0.6**		
	baz=218										
MASBT					*e*S		**Sg**	**11 29 13.9**	**-0.9**		
	baz=218										
HATJ	**Hateruma jima**	**1.90**	**94**		*e*P		**Pb**	**11 28 47.9**	**-0.8**		
HATJ					S		**Sb**	**11 29 12.1**	**-0.2**		
EAST	**Anshuo**	**1.99**	**204**		*e*P		**Pn**	**11 28 48.8**	**+1.0**		
	baz=194										
JKRS	**Kuro-shima**	**2.07**	**89**		*e*P		**Pb**	**11 28 50.5**	**-1.2**		
JKRS					S		**Sb**	**11 29 17.1**	**-0.5**		
SCZT	**Fangliau**	**2.10**	**210**		*e*P		**Pb**	**11 28 51.1**	**-1.0**		
	baz=196										
PHUB	**P'eng-hu**	**2.10**	**251**		*e*P		**Pn**	**11 28 49.9**	**+0.7**		
	baz=253										
PHUB					S		**Sb**	**11 29 17.1**	**-1.2**		
	baz=253										
JIJ	**Ishigaki jima**	**2.20**	**86**		P		**Pn**	**11 28 51.0**	**+0.4**		
JIJ					S		**Sn**	**11 29 18.3**	**+0.5**		
VWUC	**VWUC**	**2.22**	**291**		*e*P		**Pn**	**11 28 50.5**	**-0.3**		
	baz=278										
VCHM	**Qimei**	**2.34**	**245**		*e*P		**Pn**	**11 28 52.4**	**0.0**		
	baz=232										
JISG	**Ishigakijimahi**	**2.38**	**80**		P		**Pn**	**11 28 53.3**	**+0.4**		
JISG					*e*S		**Sn**	**11 29 23.2**	**+1.2**		
PTMZ	**Houxiangcun**	**2.52**	**290**		*e*P		**Pn**	**11 28 54.9**	**-0.1**		
	baz=289										
MATB	**Ma-tsu**	**2.52**	**320**		*e*P		**Pn**	**11 28 55.3**	**+0.3**		
	baz=319										
LYJJ	**Jianjiangzhen**	**2.94**	**323**		*e*P		**Pn**	**11 28 60.0**	**-0.7**		
	baz=323										
KNMB	**Chin-men Tao**	**3.06**	**275**		*e*P		**Pn**	**11 29 02.4**	**-0.1**		
	baz=275										
MHZQ	**Yeshan**	**3.09**	**308**		*e*P		**Pn**	**11 29 02.5**	**-0.3**		
	baz=308										
AXDP	**Jialang**	**3.50**	**282**		*e*P		**Pn**	**11 29 08.3**	**-0.1**		
	baz=281										

UPP ***12*** *11:35:49.6±2.8, 62°.77N×27°.85E, h0km, ML1.8*
BER ***12*** *11:35:51.4±1.1, 62°.92N×28°.30E, h0km, ML1.8, ML2.0(HEL), Suspected explosion*
HEL ***12*** *11:35:51.9±0.1, 63°.13N×27°.71E, h0km, ML2.0, Suspected explosion*

IDC ***12*** *11:35:51.2±1.5, 63°.03N×28°.01E, h0km, mbtmp3.2/3, ML2.0/3, Error ellipse: s-maj=19.5km s-min=7.1km az=105.0*

ISC 12 11:35:51.3±0.8, 63°.10N±0°.02×27°.64E±0°.03, h0km, n47, σ18°79/74, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NIF	**Nilsia**	**0.30**	**15**	PG		**Pg**	**11 35 56.9**	**-0.1**
	baz=188							
NIF				SG		**Sg**	**11 36 00.9**	**0.0**
SUF	**Sumiainen**	**0.78**	**241**	PB		**Pg**	**11 36 07.1**	**+0.8**
	baz=55							
SUF				MSG			11 36 17.6	
	comp=Z,9.2nm,0.2s							
SUF				SB		**Sb**	**11 36 19.2**	**+0.3**
KAF	**Kangasniemi**	**1.17**	**213**	PG		**Pb**	**11 36 13.9**	**-0.4**
KAF				MSG			11 36 28.5	
	comp=Z,14nm,0.2s							
KAF				SB		**Sn**	**11 36 30.5**	**-1.0**
RMF	**Romuvaara**	**1.52**	**41**	PG		**Pn**	**11 36 18.8**	**-0.9**
	baz=223							
RMF				MSG			11 36 36.2	
	comp=Z,16nm,0.2s							
KEF	**Keuruu**	**1.59**	**235**	PN		**Pg**	**11 36 21.7**	**0.0**
KEF				MSG			11 36 40.6	
	comp=Z,12nm,0.2s							
KEF				SN		**Sg**	**11 36 43.4**	**+1.2**
JOF	**Joensuu**	**1.68**	**95**	PG		**Pn**	**11 36 21.6**	**-0.4**
JOF				SG		**Sn**	**11 36 43.0**	**-1.2**
RUF	**Ruokolahti**	**1.79**	**159**	PG		**Pb**	**11 36 24.0**	**-0.9**
	baz=346							
RUF				MSG			11 36 45.8	
	comp=Z,15nm,0.2s							
RUF				SN		**Sg**	**11 36 49.2**	**+0.5**
OUF	**Merijarvi**	**1.81**	**316**	PG		**Pn**	**11 36 24.5**	**+0.8**
OUF				MSG			11 36 46.1	
	comp=Z,18nm,0.2s							
OUF				SG		**Sb**	**11 36 50.0**	**+1.4**
FIA0	**FINESS Array S**	**1.82**	**204**	PG		**Pb**	**11 36 25.3**	**-0.1**
FIA0				MSG			11 36 47.1	
	comp=Z,9.6nm,0.2s							
FIA0				SG		**Sg**	**11 36 49.7**	**+0.1**
FINES	**FINESS Array B**	**1.82**	**204**	Pn		**Pb**	**11 36 25.2**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=24,slow=18,SNR=22							
FINES				Lg		Lg	11 36 49.0	
	comp=Z,1.4nm,0.3s,baz=25,slow=28,SNR=16							
OBF4	**Vikkela, Lumij**	**2.05**	**328**	PG		**Pn**	**11 36 28.9**	**+1.9**
OBF4				MSG			11 36 52.5	
	comp=Z,10nm,0.2s							
OBF0	**Syolatti, Pyha**	**2.06**	**314**	PG		**Pn**	**11 36 28.8**	**+1.7**
OBF0				MSG			11 36 53.1	
	comp=Z,13nm,0.2s							
OUL	**Oulu**	**2.13**	**340**	PG		**Pn**	**11 36 29.8**	**+1.7**
OUL				SG		**Sb**	**11 36 58.5**	**+0.8**
OBF8	**Ulkokalla**	**2.24**	**305**	PG		**Pn**	**11 36 31.8**	**+2.2**
	baz=121							
OBF8				MSG			11 36 58.5	
	comp=Z,9.8nm,0.2s							
VAF	**Ylistaro**	**2.26**	**271**	PG		**Pb**	**11 36 32.8**	**-0.1**
	baz=85							
VAF				MSG			11 36 59.8	
	comp=Z,12nm,0.2s							
VAF				SG		**Sb**	**11 37 03.4**	**+1.9**
VJF	**Virojoki**	**2.57**	**181**	PB		**Pb**	**11 36 36.4**	**-1.8**
VJF				MSG			11 37 08.6	
	comp=Z,10nm,0.2s							
VJF				SG		**Sb**	**11 37 09.9**	**-0.4**
PVF	**Pernaja**	**2.70**	**199**	PG		**Pb**	**11 36 39.6**	**-0.8**
	baz=21							
PVF				MSG			11 37 12.5	
	comp=Z,4.9nm,0.2s							
PVF				SG		**Sb**	**11 37 14.9**	**+0.9**
KPF	**Kankaanpaa**	**2.88**	**246**	PB		**Pb**	**11 36 41.7**	**-1.8**
KPF				SG		**Sb**	**11 37 21.6**	**+2.3**
MSF	**Maaselka**	**2.89**	**11**	PB		**Pn**	**11 36 40.1**	**+1.6**
MSF				SB		**Sn**	**11 37 15.6**	**+1.8**
RANF	**Ranua**	**2.95**	**353**	PB		**Pn**	**11 36 41.2**	**+1.9**
	baz=173							
RANF				SB		**Sn**	**11 37 19.4**	**+4.0**
KU6	**Riekki**	**3.09**	**17**	PB		**Pn**	**11 36 42.6**	**+1.3**
KU6				MSG			11 37 21.8	
	comp=Z,4.4nm,0.2s							
KU6				SB		**Sn**	**11 37 22.4**	**+3.5**
BURU	**Burvik**	**3.15**	**301**	P		**Pn**	**11 36 43.8**	**+1.7**
BURU				S		**Sb**	**11 37 25.1**	**-1.8**
BURU	**Burvik**	**3.15**	**301**	PB		**Pn**	**11 36 44.7**	**+2.6**
BURU				SG		**Sg**	**11 37 31.3**	**-1.0**
UMAU	**Umeaa**	**3.22**	**287**	P		**Pn**	**11 36 44.2**	**+1.2**
UMAU				S		**Sn**	**11 37 24.9**	**+2.9**
UMAU	**Umeaa**	**3.22**	**287**	PN		**Pn**	**11 36 44.3**	**+1.2**
TOF	**Tornio**	**3.31**	**336**	PB		**Pn**	**11 36 47.3**	**+3.0**
	baz=148							
OLKF	**Oulanka, Finla**	**3.32**	**12**	PB		**Pn**	**11 36 46.3**	**+1.8**
OLKF				SB		**Sb**	**11 37 29.2**	**-2.7**
KALU	**Kalix**	**3.33**	**328**	P		**Pn**	**11 36 47.4**	**+2.8**
KALU	**Kalix**	**3.33**	**328**	PB		**Pb**	**11 36 49.3**	**-1.9**
ODEU	**Stanfors**	**3.35**	**296**	P		**Pn**	**11 36 45.9**	**+1.2**
RAF	**Rauma**	**3.46**	**236**	SN		**Sn**	**11 37 26.5**	**-1.5**
SJUU	**Sjulsmark**	**3.57**	**315**	P		**Pn**	**11 36 50.2**	**+2.4**
RNF	**Rovaniemi**	**3.59**	**350**	PB		**Pn**	**11 36 52.0**	**+3.9**
HUSU	**Husum**	**3.82**	**277**	SB		**Sb**	**11 37 43.1**	**-3.2**
SVAU	**Svanoeiden**

IDC **12** *11:48:01.5±0.9, 22.85S×68.59W, h89km±17km, mb4.2/3, mbtmp4.3/5, Error ellipse: s-maj=48.0km s-min=22.1km az=133.0*
GUC **12** *11:48:02.3±0.8, 22.85S×68.82W, h108km±4km, ML4.0*
NEIC **12** *11:48:02.1±1.7, 22.89S±0.06×68.86W±0.07, h103km±4km, mb4.1/9, Error ellipse: s-maj=9.6km s-min=8.7km az=106.0*

ISC 12 11:48:01.5±0.6, 22.86S±0.03×68.85W±0.04, h107km±5km, n69, σ1.9 30/93, mb4.2/4, 5C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.25**	**347**	Pn	**Pn**	**11 48 17.5**	**+0.3**
LVC	**Limon Verde**	**0.25**	**347**	*e*P	**Pn**	**11 48 17.7**	**+0.5**
LVC				*e*S	**Sn**	**11 48 29.2**	**+0.3**
LVC				IAML		11 48 30.0	
	comp=Z,2μm,0.2s						
LVC	**Limon Verde**	**0.25**	**347**	P	**Pn**	**11 48 17.3**	**+0.1**
	comp=Z,764nm,0.4s,baz=181,slow=4.1,SNR=3891						
LVC				S	**Sn**	**11 48 28.2**	**-0.7**
	comp=Z,1μm,0.3s,baz=279,slow=19,SNR=22						
LVC				LR	LR	11 48 37.2	
	comp=Z,126nm,21.9s,baz=343,slow=94						
LVC	**Limon Verde**	**0.25**	**347**	*e*P	**Pn**	**11 48 16.7**	**-0.5**
LVC				*i* S	**Sn**	**11 48 28.4**	**-0.6**
AF01	**San Pedro de A**	**0.62**	**99**	Pn	**Pn**	**11 48 19.6**	**+0.3**
AF01	**San Pedro de A**	**0.62**	**99**	⇓*i*P	**Pn**	**11 48 19.5**	**+0.2**
AF01				*i* S	**Sn**	**11 48 32.7**	**+0.1**
AF01				IAML		11 48 33.4	
	comp=E,11μm,0.3s						
PB15	**IPOC Station P**	**0.67**	**239**		**Pn**	**11 48 19.8**	**+0.2**
PB15	**IPOC Station P**	**0.67**	**239**	*e*P	**Pn**	**11 48 20.3**	**+0.8**
PB15				*e*S	**Sn**	**11 48 34.9**	**+1.8**
PB15				IAML		11 48 35.7	
	comp=Z,22μm,0.3s						
PB15	**IPOC Station P**	**0.67**	**239**	⇑*i*P	**Pn**	**11 48 20.4**	**+0.8**
PB15				*i* S	**Sn**	**11 48 34.4**	**+1.3**
PB06	**IPOC Station P**	**0.69**	**283**	*e*P	**Pn**	**11 48 20.2**	**+0.6**
PB06				*e*S	**Sn**	**11 48 34.6**	**+1.4**
PB06				IAML		11 48 35.2	
	comp=Z,3μm,0.3s						
PB06	**IPOC Station P**	**0.69**	**283**	⇑*i*P	**Pn**	**11 48 20.4**	**+0.8**
PB06				*i* S	**Sn**	**11 48 33.8**	**+0.5**
PB06				IAML		11 48 35.0	
	comp=N,9μm,0.3s						
PB09	**IPOC Station P**	**1.12**	**341**	*e*P	**Pn**	**11 48 25.4**	**+1.5**
PB09				*e*S	**Sn**	**11 48 42.8**	**+1.9**
PB09				IAML		11 48 44.2	
	comp=Z,2μm,0.3s						
PB09	**IPOC Station P**	**1.12**	**341**	⇓*i*P	**Pn**	**11 48 25.4**	**+1.5**
PB09				*i* S	**Sn**	**11 48 42.8**	**+1.9**
PB09				IAML		11 48 44.1	
	comp=N,3μm,0.4s						
PB05	**IPOC Station P**	**1.25**	**270**	*e*P	**Pn**	**11 48 26.2**	**+0.9**
PB05				IAML		11 48 49.8	
	comp=Z,658nm,0.8s						
PB05	**IPOC Station P**	**1.25**	**270**	⇑*i*P	**Pn**	**11 48 26.2**	**+0.9**
PB05				*i* S	**Sn**	**11 48 44.2**	**+0.8**
PB04	**IPOC Station P**	**1.31**	**293**	*e*P	**Pn**	**11 48 27.0**	**+1.0**
PB04				*e*S	**Sn**	**11 48 46.5**	**+1.8**
PB04				IAML		11 48 50.9	
	comp=Z,2μm,0.4s						
PB04	**IPOC Station P**	**1.31**	**293**	⇑*i*P	**Pn**	**11 48 27.1**	**+1.0**
PB04				*i* S	**Sn**	**11 48 45.9**	**+1.2**
PB04				IAML		11 48 51.1	
	comp=N,3μm,0.4s						
PB07	**IPOC Station P**	**1.48**	**319**	*e*P	**Pn**	**11 48 29.1**	**+1.0**
PB07				*e*S	**Sn**	**11 48 49.5**	**+1.2**
PB07				IAML		11 48 51.1	
	comp=Z,2μm,0.3s						
PB07	**IPOC Station P**	**1.48**	**319**	⇓*i*P	**Pn**	**11 48 29.3**	**+1.2**
PB07				*i* S	**Sn**	**11 48 49.2**	**+0.9**
PB07				IAML		11 48 50.8	
	comp=N,3μm,0.2s						
PB10	**IPOC Station P**	**1.70**	**247**	*e*P	**Pn**	**11 48 30.9**	**+0.3**
PB10				IAML		11 48 57.9	
	comp=Z,244nm,0.3s						
PB10	**IPOC Station P**	**1.70**	**247**	⇑*i*P	**Pn**	**11 48 31.1**	**+0.6**
PB10				*i* S	**Sn**	**11 48 52.9**	**+0.1**
PB02	**IPOC Station P**	**1.81**	**327**	*e*P	**Pn**	**11 48 32.9**	**+0.8**
PB02				*e*S	**Sn**	**11 48 56.9**	**+1.5**
PB02				IAML		11 48 58.5	
	comp=Z,3μm,0.3s						
PB02	**IPOC Station P**	**1.81**	**327**	⇓*i*P	**Pn**	**11 48 33.1**	**+1.0**
PB02				*i* S	**Sn**	**11 48 55.9**	**+0.5**
PB01	**IPOC Station P**	**1.90**	**342**	*e*P	**Pn**	**11 48 34.0**	**+0.8**
PB01				*e*S	**Sn**	**11 48 58.0**	**+0.6**
PB01				IAML		11 48 59.6	
	comp=Z,869nm,0.5s						
PB01	**IPOC Station P**	**1.90**	**342**	⇓*i*P	**Pn**	**11 48 33.9**	**+0.8**
PB01				*i* S	**Sn**	**11 48 58.3**	**+0.9**
PB01				IAML		11 48 59.6	
	comp=E,1μm,0.3s						
PB14	**IPOC Station P**	**2.26**	**219**	*e*P	**Pn**	**11 48 38.1**	**+0.1**
PB14				IAML		11 49 10.2	
	comp=Z,515nm,0.3s						
PB14	**IPOC Station P**	**2.26**	**219**	*e*P	**Pn**	**11 48 38.0**	**-0.1**
PB14				*i* S	**Sn**	**11 49 05.1**	**-0.9**
PB14				IAML		11 49 12.5	
	comp=E,340nm,0.7s						
PATCX	**Punta Patache**	**2.36**	**329**		**Pn**	**11 48 39.4**	**+0.3**
PATCX	**Punta Patache**	**2.36**	**329**	*e*P	**Pn**	**11 48 39.5**	**+0.3**
PATCX				*e*S	**Sn**	**11 49 05.1**	**-2.9**
PATCX				IAML		11 49 29.6	
	comp=Z,293nm,0.5s						
PATCX	**Punta Patache**	**2.36**	**329**	*e*P	**Pn**	**11 48 39.3**	**+0.2**
GO02	**Mina Guanaco**	**2.39**	**196**	Pn	**Pn**	**11 48 40.4**	**+0.7**
GO02	**Mina Guanaco**	**2.39**	**196**	*e*P	**Pn**	**11 48 40.1**	**+0.5**
GO02	**Mina Guanaco**	**2.39**	**196**	*e*P	**Pn**	**11 48 40.2**	**+0.5**
TA01	**Diego Aracena**	**2.60**	**331**		**Pn**	**11 48 42.0**	**-0.1**
TA01	**Diego Aracena**	**2.60**	**331**	*e*P	**Pn**	**11 48 42.1**	**+0.1**
TA01				IAML		11 49 21.1	
	comp=Z,245nm,0.4s						
TA01	**Diego Aracena**	**2.60**	**331**	*e*P	**Pn**	**11 48 42.0**	**-0.1**
HMBC	**Humberstone**	**2.74**	**339**	*e*P	**Pn**	**11 48 44.2**	**0.0**
HMBC				IAML		11 49 45.6	
	comp=Z,389nm,0.4s						
TA02	**Huaiquique**	**2.84**	**335**		**Pn**	**11 48 45.0**	**-0.3**
YJA	**Yavi**	**3.16**	**78**	*e*P	**Pn**	**11 48 52.5**	**+2.6**
YJA				IAML		11 49 35.6	
	comp=Z,2.8nm,0.4s						
PB11	**IPOC Station P**	**3.17**	**346**	*e*P	**Pn**	**11 48 49.8**	**-0.1**
PB11				IAML		11 49 54.1	
	comp=Z,168nm,0.4s						
GO01	**Chusmiza**	**3.19**	**354**		**Pn**	**11 48 51.1**	**+0.7**
GO01	**Chusmiza**	**3.19**	**354**	*e*P	**Pn**	**11 48 51.5**	**+1.1**
GO01				*e*S	**Sn**	**11 49 22.1**	**-5.9**
AC02	**Maricunga**	**3.97**	**184**	Pn	**Pn**	**11 49 01.2**	**+0.5**
AC02	**Maricunga**	**3.97**	**184**	*e*P	**Pn**	**11 49 01.3**	**+0.5**
AC02				IAML		11 50 16.2	
	comp=Z,108nm,0.4s						
AC02	**Maricunga**	**3.97**	**184**	*e*P	**Pn**	**11 49 01.3**	**+0.5**
PB12	**IPOC Station P**	**4.45**	**342**	*e*P	**Pn**	**11 49 05.8**	**-1.1**
PB12				IAML		11 50 28.9	
	comp=Z,53nm,0.5s						
PB16	**IPOC Station P**	**4.54**	**352**	*e*P	**Pn**	**11 49 09.6**	**+1.0**
PB16				IAML		11 50 43.4	
	comp=Z,34nm,0.5s						
GO03	**Copiap**	**4.88**	**195**	Pn	**Pn**	**11 49 11.6**	**-1.1**
GO03	**Copiap**	**4.88**	**195**	*e*P	**Pn**	**11 49 11.5**	**-1.1**
GO03				*e*S	**Sn**	**11 50 05.8**	**-2.2**
AHML	**Horco Molle**	**5.05**	**141**	*e*P	**Pn**	**11 49 16.4**	**+1.4**
AHML				IAML		11 50 34.4	
	comp=Z,7.3nm,3.4s						
LCO	**Las Campanas**	**6.35**	**195**	Pn	**Pn**	**11 49 29.5**	**-3.3**
CO01	**Juntas del Tor**	**7.18**	**189**	Pn	**Pn**	**11 49 41.8**	**-2.2**
SIV	**San Ignacio**	**10.02**	**48**	P	**Pn**	**11 50 19.2**	**-3.3**
	comp=Z,4.6nm,0.5s,baz=242,slow=11,SNR=24						
SIV				S	Sn	11 52 01.5	-12
	comp=Z,2.6nm,0.3s,baz=312,slow=20,SNR=6.9						
MT02	**Curacav**	**10.56**	**191**	Pn	**Pn**	**11 50 30.0**	**+0.3**
ITAB	**Concordia**	**15.76**	**109**	P	**Pn**	**11 51 37.6**	**+0.2**
TRQA	**Tornquist**	**16.25**	**160**	P	**P**	**11 51 44.8**	**+0.3**
TRQA				IAmb	IAmb	11 51 60.0	
	comp=Z,14nm,1.2s						
PLCA	**Paso Flores**	**17.88**	**184**	P	**P**	**11 52 02.9**	**+0.5**
PLCA	**Paso Flores**	**17.88**	**184**	P	**Pn**	**11 52 03.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=7.6,slow=8.5,SNR=6.2						
LL01	**San Ignacio de**	**19.69**	**188**	P	**P**	**11 52 22.7**	**+0.6**
BDFB	**Brasilia**	**20.93**	**74**	P	**P**	**11 52 34.5**	**-1.3**
BDFB				IAmb	IAmb	11 52 37.4	
	comp=Z,4.8nm,0.7s						
BDFB	**Brasilia**	**20.93**	**74**	P	**P**	**11 52 34.8**	**-1.0**
	comp=Z,4.0nm,0.6s,baz=254,slow=13,SNR=5.5						
	comp=Z,4.0nm,0.6s						
BOAV	**Boa Vista**	**26.38**	**19**	P	**P**	**11 53 29.2**	**+1.3**
BOAV				IAmb	IAmb	11 54 11.1	
	comp=Z,7.3nm,1.2s						
MTO3	**Montecristo**	**42.13**	**330**	P	**P**	**11 55 43.3**	**-0.3**
QSPA	**South Pole Qui**	**67.34**	**180**	P	**P**	**11 58 46.5**	**+1.7**
QSPA				IAmb	IAmb	11 58 51.3	
	comp=Z,4.3nm,1.4s						
QSPA	**South Pole Qui**	**67.34**	**180**	P	**P**	**11 58 47.0**	**+2.2**
	comp=Z,2.0nm,0.5s,baz=298,slow=1.0,SNR=43						
	comp=Z,2.0nm,0.5s						
TOA0	**Torodi Ar. Sit**	**77.76**	**70**	P	**P**	**11 59 47.3**	**+0.1**
TOA0				IAmb	IAmb	11 59 48.3	
	comp=Z,3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.76**	**70**	P	**P**	**11 59 47.7**	**+0.5**
	comp=Z,5.8nm,0.3s,baz=259,slow=4.7,SNR=1.9						
	comp=Z,5.8nm,0.3s						
WRA	**Warramunga Arr**	**131.81**	**210**	PKP	**PKiKP**	**12 07 04.1**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=156,slow=1.4,SNR=1.0						
MKAR	**Makanchi Array**	**146.69**	**37**	PKPbc	**PKPab**	**12 07 32.5**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=292,slow=1.1,SNR=2.9						

IDC **12** *12:22:39.7±5.4, 33.22S×179.76E, h110km±45km, mb3.9/4, mbtmp4.2/5, MS3.1/1, Error ellipse: s-maj=43.5km s-min=25.5km az=37.0*
WEL **12** *12:22:41.8±0.7, 34.5S±5.5×18.0W±1.1, h119km±32km, M4.2/25, mB4.7/12, ML4.8/6, MLv4.5/25, Mw(mB)4.0/12, Error ellipse: s-maj=0.0km s-min=0.0km az=110.8, confirmed*

ISC 12 12:22:40.6±1.0, 33.70S±0.07×179.6W±0.1, h150km, n84, σ2.8 08/106, mb4.0/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.23**	**204**	P	**Pn**	**12 23 45.7**	**+2.0**
MXZ				S	**Sn**	**12 24 34.7**	**+1.8**
WMGZ	**Waiomatatini S**	**4.43**	**201**	P	**Pn**	**12 23 48.6**	**+2.2**
WMGZ				S	**Sn**	**12 24 39.9**	**+2.2**
HAZ	**Te Kaha**	**4.59**	**207**	P	**Pn**	**12 23 50.8**	**+2.4**
HAZ				S	**Sn**	**12 24 44.7**	**+3.3**
PKGZ	**Pakihiroa**	**4.60**	**204**	P	**Pn**	**12 23 50.0**	**+1.3**
PKGZ				S	**Sn**	**12 24 42.1**	**+0.3**
GLKZ	**Green Lake**	**4.64**	**18**	P	**Pn**	**12 23 46.6**	**-2.7**
GLKZ				S	**Sn**	**12 24 39.3**	**-3.4**
PUZ	**Puketiti**	**4.71**	**201**	P	**Pn**	**12 23 51.0**	**+0.9**
PUZ				S	**Sn**	**12 24 44.6**	**+0.3**
RUGZ	**Raukumara Rang**	**4.81**	**207**	P	**Pn**	**12 23 53.8**	**+2.3**
RUGZ				S	**Sn**	**12 24 47.6**	**+0.7**
GRZ	**Great Barrier**	**4.81**	**237**	P	**Pn**	**12 23 55.4**	**+4.0**
TWGZ	**Tauwhareparae**	**4.89**	**203**	P	**Pn**	**12 23 54.0**	**+1.4**
TWGZ				S	**Sn**	**12 24 50.2**	**+1.5**
CNGZ	**Carnagh Statio**	**5.10**	**200**	P	Pn	12 24 00.3	+5.0
TKGZ	**Te Karaka**	**5.17**	**203**	P	**Pn**	**12 23 58.6**	**+2.4**
TKGZ				S	**Sn**	**12 24 56.8**	**+1.5**
MWZ	**Matawai**	**5.19**	**206**	P	**Pn**	**12 23 57.6**	**+1.1**
MWZ				S	**Sn**	**12 24 56.1**	**+0.3**
URZ	**Urewera**	**5.29**	**210**	P	**Pn**	**12 23 58.8**	**+1.1**
	34nm,0.5s,baz=349,slow=5.1,SNR=20						
URZ				S	**Sn**	**12 24 54.8**	**-3.3**
	17nm,0.3s,baz=25,slow=17,SNR=2.1						
URZ	**Urewera**	**5.29**	**210**	P	**Pn**	**12 23 58.8**	**+1.1**
URZ				S	**Sn**	**12 24 57.2**	**-0.9**
RIGZ	**Rimuhau**	**5.44**	**203**	P	**Pn**	**12 24 01.6**	**+1.7**
RIGZ				S	**Sn**	**12 25 01.0**	**-0.8**
MKAZ	**Moumakai**	**5.49**	**230**	P	**Pn**	**12 24 01.2**	**+0.9**
KARZ	**Kaharoa**	**5.49**	**217**	P	**Pn**	**12 24 03.6**	**+3.1**
OMRZ	**Omania**	**5.50**	**216**	P	**Pn**	**12 24 03.8**	**+3.3**
PRGZ	**Paritu Road**	**5.61**	**201**	P	**Pn**	**12 24 04.1**	**+2.1**
PRGZ				S	**Sn**	**12 25 05.5**	**-0.2**
MUGZ	**Murupara**	**5.62**	**211**	P	**Pn**	**12 24 04.7**	**+2.6**
MUGZ				S	**Sn**	**12 25 06.3**	**+0.4**
SNGZ	**Shannon Statio**	**5.66**	**205**	P	**Pn**	**12 24 03.5**	**+0.8**
SNGZ				S	**Sn**	**12 25 05.3**	**-1.5**
TOZ	**Tahuroa Road**	**5.68**	**224**	P	**Pn**	**12 24 04.9**	**+1.9**
KNZ	**Kokohu**	**5.76**	**202**	P	**Pn**	**12 24 04.6**	**+0.6**
KNZ				S	**Sn**	**12 25 02.8**	**-6.5**
PRRZ	**Plateau Road**	**5.80**	**213**	P	**Pn**	**12 24 06.8**	**+2.2**
MHGZ	**Mahia Peninsul**	**5.81**	**200**	P	**Pn**	**12 24 07.0**	**+2.3**
MHGZ				S	**Sn**	**12 25 06.4**	**-4.2**
OUZ	**Omahuta**	**5.85**	**253**	P	**Pn**	**12 24 05.7**	**-1.5**
RAHZ	**Arahi**	**5.87**	**206**	P	**Pn**	**12 24 06.8**	**+1.3**
RAHZ				S	**Sn**	**12 25 09.5**	**-2.4**
ALRZ	**Allen Road**	**5.87**	**213**	P	**Pn**	**12 24 07.7**	**+2.1**
MTHZ	**Maungataniwha**	**5.91**	**208**	P	**Pn**	**12 24 06.1**	**+0.1**
MTHZ				S	**Sn**	**12 25 10.4**	**-2.4**
WPRZ	**Whakapapatarin**	**5.92**	**214**	P	**Pn**	**12 24 09.1**	**+2.8**
WHHZ	**Waihua**	**5.96**	**205**	P	**Pn**	**12 24 06.9**	**+0.3**
WHHZ				S	**Sn**	**12 25 14.6**	**+0.6**
TLZ	**Tolley Road**	**6.09**	**219**	P	**Pn**	**12 24 12.2**	**+3.7**
NMHZ	**Naumai**	**6.13**	**207**	P	**Pn**	**12 24 09.7**	**+0.7**
NMHZ				S	**Sn**	**12 25 18.0**	**-0.3**
ARHZ	**Aropaoanui**	**6.21**	**206**	P	**Pn**	**12 24 10.1**	**+0.1**
ARHZ				S	**Sn**	**12 25 21.0**	**+1.1**
BKZ	**Black Stump Fm**	**6.31**	**209**	P	**Pn**	**12 24 12.5**	**+1.0**
BKZ				S	**Sn**	**12 25 21.3**	**-1.3**
RITZ	**Rihia Road**	**6.43**	**214**	P	**Pn**	**12 24 15.0**	**+2.0**
MCHZ	**McNeill Hill**	**6.47**	**207**	P	**Pn**	**12 24 12.6**	**-1.0**
MCHZ				S	**Sn**	**12 25 25.4**	**-1.0**
CKHZ	**Cape Kidnapper**	**6.53**	**203**	P	**Pn**	**12 24 15.7**	**+1.4**
KWHZ	**Kaweka Forest**	**6.56**	**208**	P	**Pn**	**12 24 15.0**	**+0.2**
HIZ	**Hauiti**	**6.59**	**222**	P	**Pn**	**12 24 18.5**	**+3.4**
NTVZ	**North Tongariro**	**6.61**	**214**	P	**Pn**	**12 24 16.7**	**+1.2**
TMVZ	**Te Maari**	**6.62**	**214**	P	**Pn**	**12 24 16.9**	**+1.4**
ETVZ	**East Tongariro**	**6.63**	**214**	P	**Pn**	**12 24 17.0**	**+1.3**
WTVZ	**West Tongariro**	**6.67**	**214**	P	**Pn**	**12 24 17.7**	**+1.5**
NNVZ	**North Ngauruho**	**6.67**	**214**	P	**Pn**	**12 24 17.9**	**+1.7**
OTVZ	**Oturere**	**6.67**	**214**	P	**Pn**	**12 24 17.7**	**+1.4**
SNVZ	**South Ngauruho**	**6.70**	**214**	P	**Pn**	**12 24 17.4**	**+0.7**
NGZ	**Ngauruhoe**	**6.71**	**214**	P	**Pn**	**12 24 18.1**	**+1.3**
KAHZ	**Kahuranaki**	**6.72**	**204**	P	**Pn**	**12 24 16.6**	**-0.2**
COVZ	**Chateau Observ**	**6.76**	**214**	P	**Pn**	**12 24 18.8**	**+1.3**
BHHZ	**Black Hill Sta**	**6.76**	**210**	P	**Pn**	**12 24 17.7**	**+0.2**
KRHZ	**Kereru**	**6.77**	**208**	P	**Pn**	**12 24 16.8**	**-0.8**
MOVZ	**Moawhango**	**6.83**	**212**	P	**Pn**	**12 24 18.4**	**0.0**
WNVZ	**Wahianoa**	**6.83**	**213**	P	**Pn**	**12 24 19.3**	**+0.5**
PXZ	**Pawaui**	**6.94**	**203**	P	**Pn**	**12 24 18.7**	**-1.0**
PNHZ	**Pukenui**	**7.07**	**207**	P	**Pn**	**12 24 20.7**	**-0.8**
VRZ	**Vera Road**	**7.09**	**219**	P	**Pn**	**12 24 25.1**	**+3.4**
WPHZ	**Waipukurau**	**7.11**	**206**	P	**Pn**	**12 24 22.2**	**+0.1**
PRHZ	**Porangahau**	**7.22**	**204**	P	**Pn**	**12 24 22.0**	**-1.5**
TSZ	**Takapari Road**	**7.29**	**208**	P	**Pn**	**12 24 24.1**	**-0.4**
DVHZ	**Dannevirke**	**7.42**	**206**	P	**Pn**	**12 24 25.0**	**-1.2**
ANWZ	**Angora Road**	**7.45**	**204**	P	**Pn**	**12 24 25.6**	**-0.9**
PRWZ	**Pori Road**	**7.71**	**206**	P	**Pn**	**12 24 29.7**	**-0.3**
BFZ	**Birch Farm**	**7.73**	**204**	P	**Pn**	**12 24 28.8**	**-1.5**
TIWZ	**Tintock**	**7.94**	**206**	P	**Pn**	**12 24 32.9**	**-0.3**
MRZ	**Mangatainoka R**	**7.96**	**208**	P	**Pn**	**12 24 31.3**	**-2.0**
HOWZ	**Holdsworth Sta**	**8.18**	**207**	P	**Pn**	**12 24 34.4**	**-2.0**
TMWZ	**Te Maipa**	**8.23**	**205**	P	**Pn**	**12 24 34.7**	**-2.3**
OGWZ	**Otaki Gorge**	**8.25**	**209**	P	**Pn**	**12 24 34.8**	**-2.4**
KIW	**Kapiti Island**	**8.39**	**210**	P	**Pn**	**12 24 36.6**	**-2.6**
MTW	**Mount Morrison**	**8.41**	**206**	P	**Pn**	**12 24 37.2**	**-2.2**
CAW	**Cannon Point**	**8.54**	**208**	P	**Pn**	**12 24 37.7**	**-3.3**
OUWZ	**D'Urville Isla**	**8.79**	**214**	P	**Pn**	**12 24 41.9**	**-2.5**
PLWZ	**Palliser**	**8.86**	**206**	P	**Pn**	**12 24 42.6**	**-2.8**
BHW	**Baring Head**	**8.87**	**208**	P	**Pn**	**12 24 42.5**	**-3.0**
TCW	**Tory Channel**	**8.95**	**211**	P	**Pn**	**12 24 43.7**	**-2.9**
TUWZ	**Tuamarina**	**9.28**	**212**	P	**Pn**	**12 24 47.4**	**-3.5**
NNZ	**Nelson**	**9.37**	**215**	P	**Pn**	**12 24 48.7**	**-3.4**
DZM	**Mont Dzumac**	**16.92**	**310**	LR	LR	12 31 11.1	
	comp=Z,65nm,20.5s,baz=344,slow=32						
ASAR	**Alice Springs**	**41.73**	**271**	P	**P**	**12 30 13.6**	**-1.5**
	2.9nm,0.7s,baz=110,slow=8.0,SNR=39						
	2.9nm,0.7s						
WRA	**Warramunga Arr**	**43.02**	**277**	P	**P**	**12 30 23.1**	**-2.3**
	1.8nm,0.6s,baz=117,slow=7.4,SNR=18						
	1.8nm,0.6s						
QSPA	**South Pole Qui**	**56.42**	**180**	P	P	12 32 12.8	+6.5
	5.4nm,1.0s,baz=22,slow=1.9,SNR=12						
	5.4nm,1.0s						
NVAR	**Mina Array Bea**	**91.55**	**44**	P	**P**	**12 35 34.6**	**+4.2**
	0.7nm,0.7s,baz=221,slow=6.8,SNR=4.8						
	0.7nm,0.7s						
ARCES	**ARCESS Array B**	**141.49**	**346**	PKP	**PKPdf**	**12 41 54.7**	**+1.9**
	1.7nm,0.8s,baz=35,slow=3.3,SNR=1.7						

IDC 12 12:23:08.2±5.8, 12.44S×167.69E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=290.3km

s-min=34.6km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.84**	**253**	P	P	12 29 43.5	-0.4
	0.4nm,0.8s,baz=85,slow=9.1,SNR=2.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**33.92**	**246**	P	P	12 29 53.5	+0.2
	0.1nm,0.4s,baz=68,slow=10,SNR=8.4						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**84.23**	**18**	P	P	12 35 41.2	0.0
	0.3nm,0.6s,baz=230,slow=5.8,SNR=5.5						
	0.3nm,0.6s						

JMA **12** *12:42:59.8±0.2, 23.1N±0.9×123.5E±0.6, h56km, MV3.0/16, NEAR ISHIGAKIJIMA ISLAND*
IDC **12** *12:42:59.6±1.7, 22.83N×122.26E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=180.2km s-min=19.2km az=65.0*

ISC 12 12:43:04.1±2.4, 23.3N±0.1×123.55E±0.06, h44km±25km, n16, σ1.3 1/26, mb3.4/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.78**	**17**	P	**Pn**	**12 43 17.6**	**-1.0**
HATJ				S	**Sn**	**12 43 30.6**	**+1.3**
JKRS	**Kuro-shima**	**1.01**	**24**	P	**Pn**	**12 43 21.4**	**-0.5**
JKRS				S	**Sn**	**12 43 36.6**	**+1.7**
JIJ	**Ishigaki jima**	**1.18**	**27**	P	**Pn**	**12 43 22.9**	**-1.2**
JIJ				S	**Sn**	**12 43 39.7**	**+0.7**
YOJ	**Yonaguni jima**	**1.25**	**337**	P	**Pn**	**12 43 24.3**	**-0.7**
YOJ				S	**Sn**	**12 43 41.6**	**+0.9**
JYNG	**Yonagunijimaku**	**1.27**	**334**	P	**Pn**	**12 43 24.4**	**-0.9**
JYNG				S	**Sn**	**12 43 42.5**	**+1.4**
JISG	**Ishigakijimahi**	**1.45**	**28**	P	**Pn**	**12 43 26.8**	**-1.0**
JISG				S	**Sn**	**12 43 46.4**	**+0.8**
JTJ	**Tarama**	**1.69**	**38**	P	**Pn**	**12 43 30.1**	**-1.0**
JTJ				S	**Sn**	**12 43 52.7**	**+1.1**
JIRB	**Irabujima**	**2.12**	**44**	P	**Pn**	**12 43 35.7**	**-1.2**
JIRB				S	**Sn**	**12 44 02.8**	**+0.8**
JMJ2	**Miyako jima3**	**2.16**	**48**	P	**Pn**	**12 43 36.4**	**-1.2**
JMJ2				S	**Sn**	**12 44 03.7**	**+0.6**
JIKM	**Ikemajima**	**2.23**	**44**	P	**Pn**	**12 43 37.3**	**-1.3**
JIKM				S	**Sn**	**12 44 05.6**	**+0.8**
SONM	**Songino Array**	**28.04**	**335**	P	**P**	**12 48 51.8**	**+0.5**
	0.8nm,0.7s,baz=149,slow=8.6,SNR=6.0						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**40.48**	**316**	P	**P**	**12 50 36.4**	**-2.1**
	0.4nm,0.9s,baz=103,slow=10,SNR=2.5						
	0.4nm,0.9s						
ZALV	**Zalesovo Beam**	**42.16**	**327**	P	**P**	**12 50 51.5**	**-0.7**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=1.3						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.26**	**165**	P	**P**	**12 51 07.9**	**-1.5**
	0.7nm,1.0s,baz=328,slow=11,SNR=2.8						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**47.77**	**167**	P	**P**	**12 51 36.9**	**-0.2**
	0.2nm,0.6s,baz=351,slow=8.4,SNR=6.5						
	0.2nm,0.6s						
STKA	**Stephens Creek**	**57.53**	**162**	P	**P**	**12 52 51.9**	**+2.8**
	2.9nm,0.8s,baz=333,slow=6.8,SNR=6.7						
	2.9nm,0.8s						

TAP 12 12:43:40.4, 24.00N×121.58E, h4km, ML2.3, 3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

WCS	**Beigang Elemen**	**0.61**	**276**	*eP*	Pb	12 43 53.5	-0.2
	baz=275							
SMLT	**Sun Moon Lake**	**0.63**	**260**	*i* P	Pb	12 43 53.7	-0.3
	baz=259							
SMLT				*eS*	Sb	12 44 03.2	-0.1
	baz=259							
ENTT	**Nioudou**	**0.64**	**359**	*i* P	Pb	12 43 53.6	-0.5
	baz=359							
ENTT				*i* S	Sb	12 44 02.7	-0.7
	baz=359							
EYUL	**Yuli**	**0.69**	**200**	*eP*	Pb	12 43 54.6	-0.3
	baz=207							
YHNB	**Yeheng**	**0.69**	**344**	*eP*	Pb	12 43 54.8	-0.3
	baz=355							
NSK	**Sanguang**	**0.71**	**343**	*eP*	Pb	12 43 55.0	-0.3
	baz=343							
NSK				*eS*	Sb	12 44 04.5	-0.9
	baz=343							
TWE	**Neicheng**	**0.72**	**6**	*eP*	Pb	12 43 55.2	-0.4
	baz=21							
TWE				*eS*	Sb	12 44 05.9	+0.1
	baz=21							
FUSB	**Fushanzhiwuyua**	**0.76**	**1**	*eP*	Pb	12 43 55.6	-0.6
	baz=3.0							
NFF	**Wufeng Townshi**	**0.76**	**326**	*eP*	Pg	12 43 55.5	+0.5
	baz=327							
NWLT	**Wulai**	**0.78**	**355**	*eP*	Pb	12 43 56.1	-0.4
	baz=355							
NWLT				S	Sb	12 44 07.4	-0.1
	baz=355							
NSTT	**Nanjuang**	**0.82**	**320**	*eP*	Pb	12 43 57.9	+0.6
	baz=321							

TAP 12 12:43:56.1,23°.99N×121°.59E,h6km,ML1.6,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.02**	**135**	*i* P	Pg	12 43 57.7	+0.5
	baz=122						
HWA				S	Sg	12 43 58.9	+0.9
	baz=122						
TWD	**Chiawan**	**0.09**	**2**	*eP*	Pg	12 43 58.8	+0.6
	baz=6.0						
TWD				*eS*	Sg	12 44 00.4	+0.9
	baz=6.0						
ETM	**Tongmen**	**0.09**	**256**	*i* P	Pg	12 43 58.7	+0.5
	baz=258						
ETM				S	Sg	12 44 00.3	+0.6
	baz=258						

*IDC **12** 12:54:40.2±7.0,20°.31S×179°.04W,h622km±72km,mb2.9/5, mbtmp3.8/5,Error ellipse: s-maj=131.5km s-min=29.1km az=149.0*

ISC 12 12:54:42.0±2.5,20°.3S±0°.9×179°.1W±0°.5,h645km,n8, σ0s98/9,mb3.4/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.56**	**257**	P	**P**	**13 01 51.9**	**+0.1**
	1.3nm,0.5s,baz=92,slow=8.1,SNR=57						
ASAR				PcP	**PcP**	**13 03 24.8**	**+0.4**
	0.4nm,0.6s,baz=102,slow=3.8,SNR=7.8 1.3nm,0.5s						
WRA	**Warramunga Arr**	**43.60**	**262**	P	**P**	**13 01 52.0**	**-0.2**
	0.5nm,0.3s,baz=97,slow=7.6,SNR=33 0.5nm,0.3s						
NVAR	**Mina Array Bea**	**81.58**	**44**	P	**P**	**13 05 55.7**	**+0.9**
	0.3nm,0.6s,baz=226,slow=7.3,SNR=2.7 0.3nm,0.6s						
ILAR	**Eielson Array**	**88.33**	**13**	P	**P**	**13 06 26.2**	**-0.1**
	0.4nm,0.7s,baz=220,slow=6.0,SNR=5.0 0.4nm,0.7s						
PDAR	**Pinedale Array**	**89.52**	**44**	P	**P**	**13 06 32.1**	**-0.6**
	0.6nm,0.9s,baz=183,slow=3.0,SNR=3.9 0.6nm,0.9s						
BVAR	**Borovoye Array**	**118.24**	**320**	PKP	**PKiKP**	**13 12 17.8**	**+0.3**
	0.6nm,0.4s,baz=96,slow=1.1,SNR=4.1						
AKASG	**Malin Array Be**	**142.31**	**330**	PKP	**PKPdf**	**13 13 00.8**	**-1.8**
	0.9nm,0.4s,baz=44,slow=4.0,SNR=6.5						
BRTR	**Keskin Array B**	**145.92**	**312**	PKPbc	**PKPbc**	**13 13 12.5**	**+1.0**
	0.6nm,0.7s,baz=75,slow=3.2,SNR=2.0						

*GUC **12** 12:55:01.8±0.7,28°.71S×71°.43W,h41km±2km,ML3.5*
*SJA **12** 12:55:01.2±0.6,28°.71S×71°.45W,h24km±3km,ML3.4, MW3.7*

ISC 12 12:55:00.2±1.2,28°.71S±0°.03×71°.55W±0°.06,h10km,n31, σ1s55/44,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.66**	**40**	*eP*	**Pg**	**12 55 13.3**	**+0.4**
AC04				IAML		12 55 24.5	
	comp=Z,1μm,0.1s						
AC04	**Llanos de Chal**	**0.66**	**40**	*eP*	**Pb**	**12 55 13.8**	**+0.1**
AC04				*eS*	**Sg**	**12 55 21.7**	**+0.2**
AC04				IAML		12 55 24.7	
	comp=E,7μm,0.1s						
LCO	**Las Campanas**	**0.80**	**112**	*eP*	**Pb**	**12 55 16.0**	**-0.4**
LCO				*eS*	**Sb**	**12 55 26.3**	**-1.1**
LCO				IAML		12 55 26.6	
	comp=Z,2μm,0.2s						
LCO	**Las Campanas**	**0.80**	**112**	*eP*	**Pg**	**12 55 15.4**	**-0.3**
LCO				*eS*	**Sg**	**12 55 22.7**	**-3.5**
AC05	**El Transito**	**1.13**	**97**	*eP*	**Pg**	**12 55 21.5**	**-0.3**
AC05	**El Transito**	**1.13**	**97**	*eP*	**Pg**	**12 55 21.4**	**-0.5**
AC05				*eS*	**Sg**	**12 55 35.0**	**-1.5**
AC05				IAML		12 55 38.6	
	comp=N,1μm,0.4s						
CO05	**La Serena**	**1.23**	**167**	*eP*	**Pg**	**12 55 23.8**	**-0.1**
CO05				*eS*	**Sb**	**12 55 39.3**	**-0.3**
CO05				IAML		12 55 41.6	
	comp=N,1μm,0.3s						
GO04	**Tololo Observa**	**1.60**	**156**	*eP*	**Pb**	**12 55 29.9**	**-0.1**
GO04				*eS*	**Sg**	**12 55 50.9**	**-0.7**
GO04	**Tololo Observa**	**1.60**	**156**	*eP*	**Pb**	**12 55 29.5**	**-0.4**
GO04				*eS*	**Sb**	**12 55 50.4**	**+0.1**
GO04				IAML		12 55 54.7	
	comp=E,2μm,0.4s						
GO03	**Copiap**	**1.61**	**46**	*eP*	**Pn**	**12 55 29.2**	**+0.5**
GO03	**Copiap**	**1.61**	**46**	*eP*	**Pn**	**12 55 28.7**	**0.0**
GO03				*i* S	**Sn**	**12 55 49.3**	**-0.3**
GO03				IAML		12 55 51.5	
	comp=N,993nm,0.2s						
CO01	**Juntas del Tor**	**1.79**	**135**	*eP*	**Pb**	**12 55 33.0**	**-0.3**
CO01				*eS*	Sn	12 55 42.0	-12
CO01				IAML		12 55 58.8	
	comp=Z,240nm,0.6s						
CO01	**Juntas del Tor**	**1.79**	**135**	*eP*	**Pb**	**12 55 32.8**	**-0.4**
CO01				*i* S	**Sb**	**12 55 55.3**	**-0.6**
CO01				IAML		12 55 57.0	
	comp=N,406nm,0.3s						
CO06	**Fray Jorge**	**1.96**	**182**	*eP*	**Pn**	**12 55 33.8**	**+0.3**
CO06				*i* S	**Sb**	**12 56 01.3**	**+0.9**
CO06				IAML		12 56 07.3	
	comp=E,251nm,0.3s						
CO03	**El Pedregal**	**2.25**	**161**	*eP*	**Pn**	**12 55 39.1**	**+1.5**
CO03				IAML		12 56 14.0	
	comp=Z,212nm,0.3s						
AROD	**Rodeo**	**2.32**	**129**	*eP*	**Pb**	**12 55 42.0**	**-0.3**
CO02	**Combarbal**	**2.53**	**169**	*eP*	**Pn**	**12 55 42.4**	**+1.0**
CO02				IAML		12 56 24.7	
	comp=Z,404nm,0.3s						
ACDV	**Cuesta del Vie**	**2.57**	**125**	*eP*	**Pb**	**12 55 45.5**	**-1.0**
ACDV				IAML		12 56 30.7	
	comp=Z,83nm,0.4s						
AC01	**Pan de Azucar**	**2.69**	**19**	*eP*	**Pn**	**12 55 42.5**	**-1.0**
AC01				IAML		12 56 32.3	
	comp=Z,96nm,0.3s						
AGUA	**GUANDACOL**	**2.79**	**107**	*eP*	**Pb**	**12 55 49.1**	**-1.1**
AGUA				IAML		12 56 34.1	
	comp=Z,176nm,0.4s						
AC02	**Maricunga**	**2.84**	**49**	*eP*	**Pn**	**12 55 47.6**	**+1.4**
AC02				*eS*	**Sb**	**12 56 27.1**	**+0.6**
AC02				IAML		12 56 27.9	
	comp=Z,132nm,0.3s						
AC02	**Maricunga**	**2.84**	**49**	*eP*	**Pn**	**12 55 47.3**	**+1.2**
AC02				*i* S	**Sn**	**12 56 22.4**	**+1.7**
AC02				IAML		12 56 28.4	
	comp=E,317nm,0.2s						
ACCO	**Cerro Coronel**	**2.86**	**131**	*eP*	**Pb**	**12 55 49.6**	**-1.9**
ACCO				IAML		12 56 34.4	
	comp=Z,107nm,0.3s						
VCA	**Vinchina**	**2.94**	**91**	*eP*	**Pb**	**12 55 51.5**	**-1.2**
VCA				IAML		12 56 35.5	
	comp=Z,132nm,1.1s						
DOCA	**Reserva Natura**	**3.09**	**137**	*eP*	**Pb**	**12 55 53.4**	**-2.2**
RTLS	**Leoncito**	**3.64**	**148**	*eP*	**Pb**	**12 56 01.3**	**-3.5**
RTLS				IAML		12 57 00.3	
	comp=Z,311nm,0.9s						
GO02	**Mina Guanaco**	**3.94**	**27**	*eP*	**Pn**	**12 56 00.9**	**-0.1**
ACLC	**CERRO LA CRUZ**	**4.09**	**101**	*eP*	**Pn**	**12 56 05.7**	**+2.7**
ACLC				IAML		12 57 08.8	
	comp=Z,53nm,0.4s						
ASAL	**Salagasta**	**4.52**	**150**	*eP*	**Pn**	**12 56 12.8**	**+4.0**
ASAL				*eS*	**Sb**	**12 57 15.9**	**+1.7**
ASAL				IAML		12 57 28.1	
	comp=Z,42nm,1.1s						
ACHE	**Chepes**	**4.89**	**121**	*eP*	**Pn**	**12 56 16.4**	**+2.4**
CYA	**Choya**	**5.06**	**88**	*eP*	**Pn**	**12 56 19.6**	**+3.4**
CYA				IAML		12 57 39.5	
	comp=Z,16nm,0.6s						

TAP 12 13:14:48.1,24°.21N×121°.76E,h15km,ML1.5,1D,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**348**	*eP*	Pg	13 14 51.0	-0.4
	baz=350						
ETL	**Fush Village**	**0.14**	**247**	P	Pg	13 14 52.1	+0.1
	baz=249						
ETL				S	Sb	13 14 55.0	-0.3
	baz=249						
NACB	**Ninganchiao**	**0.16**	**256**	⇓*i*P	Pg	13 14 52.2	0.0
	baz=257						
NACB				*i* S	Sg	13 14 55.2	+0.4
	baz=257						
TWD	**Chiawan**	**0.20**	**229**	*i* P	Pg	13 14 53.0	+0.2
	baz=236						
TWD				*i* S	Sg	13 14 56.3	+0.3
	baz=236						
TWD	**Chiawan**	**0.20**	**229**	*i* P	Sg	13 14 56.3	+0.4
	baz=8.0						
ENA	**Nanau**	**0.21**	**355**	*i* P	Pg	13 14 52.8	-0.2
	baz=354						
ENA				*i* S	Sg	13 14 56.7	+0.4
	baz=354						
EWUT	**Wuta**	**0.23**	**3**	P	Pg	13 14 53.5	+0.2
	baz=1.0						
EWUT				S	Sb	13 14 57.5	-0.5
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.26**	**269**	P	Pg	13 14 54.0	+0.2
	baz=269						
ETLH				S	Sg	13 14 57.7	+0.1
	baz=269						
LATG	**Datong**	**0.39**	**326**	P	Pb	13 14 57.2	+0.5
	baz=325						
LATG				S	Sg	13 15 01.7	+0.3
	baz=325						
NNSB	**Datong**	**0.41**	**302**	P	Pg	13 14 56.7	+0.3
	baz=301						
NNSB				S	Sg	13 15 02.4	+0.3
	baz=301						
NNS	**Nan Shan**	**0.42**	**303**	*eS*	Sg	13 15 02.8	+0.4
	baz=302						
NDT	**Datong Townshi**	**0.45**	**330**	P	Pb	13 14 58.1	+0.4
	baz=328						
NDT				S	Sb	13 15 04.3	0.0
	baz=328						
WHF	**Hehuan Shan**	**0.46**	**262**	*eS*	Sg	13 15 04.1	+0.3
	baz=262						
WHF	**Hehuan Shan**	**0.46**	**262**	*eS*	Sg	13 15 04.1	+0.3
	baz=298						
ENTT	**Nioudou**	**0.46**	**337**	P	Pb	13 14 58.7	+0.7
	baz=336						
ENTT				*i* S	Sb	13 15 04.4	-0.2
	baz=336						
FUSB	**Fushanzhiwuyua**	**0.57**	**344**	*eS*	Sb	13 15 07.5	-0.2
	baz=334						
YHNB	**Yeheng**	**0.58**	**322**	*eS*	Sb	13 15 07.8	-0.2
	baz=321						
NSK	**Sanguang**	**0.59**	**321**	*eS*	Sg	13 15 08.0	+0.3
	baz=321						
OWD	**Renai**	**0.59**	**244**	*eP*	Pg	13 14 59.3	-0.6
	baz=246						
OWD				*eS*	Sg	13 15 07.5	-0.3
	baz=246						
NWLT	**Wulai**	**0.61**	**337**	*eS*	Sg	13 15 08.4	+0.2
	baz=336						
WUSB	**Renai**	**0.63**	**250**	*eS*	Sg	13 15 09.0	+0.1
	baz=246						

TAP 12 13:14:52.8,23°.98N×121°.59E,h10km±1km,ML1.5,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.02**	**112**	*i* P	Pg	13 14 55.1	+0.5
	baz=108						
HWA				*i* S	Sg	13 14 56.8	+0.9
	baz=108						
ETM	**Tongmen**	**0.09**	**259**	*i* P	Pg	13 14 56.1	+0.8
	baz=259						
ETM				S	Sg	13 14 57.8	+0.6
	baz=259						
TWD	**Chiawan**	**0.10**	**4**	S	Sg	13 14 57.9	+0.6
	baz=8.0						
LXIB	**Xiulin Townshi**	**0.17**	**283**	P	Pb	13 14 57.5	-0.5
	baz=283						
LXIB				S	Sg	13 15 00.9	+1.8
	baz=283						
ETL	**Fush Village**	**0.18**	**10**	P	Pb	13 14 57.7	-0.5
	baz=10.0						
ETL				S	Sg	13 15 00.1	+0.7
	baz=10.0						
NACB	**Ninganchiao**	**0.19**	**2**	*eP*	Pb	13 14 57.7	-0.7
	baz=1.0						
SHUL	**Shoufeng**	**0.20**	**187**	*eP*	Pg	13 14 57.5	+0.5
	baz=187						
ESL	**Shilin**	**0.22**	**220**	P	Pb	13 14 58.2	-0.7
	baz=218						
ESL				S	Sg	13 15 01.7	+1.2
	baz=218						
WARBT	**Fenglin Townsh**	**0.32**	**215**	P	Pb	13 15 00.3	-0.4
	baz=215						
WHF	**Hehuan Shan**	**0.34**	**299**	*eP*	Pg	13 15 00.3	+0.6
	baz=298						

*WEL **12** 13:24:44.9±0.3,41°.S±2°×17°.5E±°,h5km,M3.4/29, ML3.7/29,MLv3.4/29,Error ellipse: s-maj=0.0km s-min=0.0km az=178.0,confirmed*
*NOU **12** 13:24:45.1,40°.90S×174°.88E,h9km,MLv3.6/10,Cook Strait, New Zealand*

ISC 12 13:24:44.9±0.9,40°.88S±0°.02×174°.84E±0°.02,h9km±7km, n125,σ0s78/130,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.06**	**73**	P	**Pg**	**13 24 46.7**	**-0.1**
KIW				S	**Sg**	**13 24 48.2**	**0.0**
OGWZ	**Otaki Gorge**	**0.26**	**77**	P	**Pg**	**13 24 50.1**	**-0.1**
OGWZ				S	**Sg**	**13 24 54.0**	**+0.4**
CAW	**Cannon Point**	**0.29**	**143**	P	**Pg**	**13 24 51.1**	**+0.4**
WEL	**Wellington**	**0.41**	**187**	P	**Pg**	**13 24 53.2**	**+0.3**
SNZO	**South Karori**	**0.44**	**193**	P	**Pg**	**13 24 53.7**	**+0.2**
HOWZ	**Holdsworth Sta**	**0.52**	**92**	P	**Pg**	**13 24 55.1**	**+0.2**
BHW	**Baring Head**	**0.53**	**177**	P	**Pg**	**13 24 55.4**	**+0.2**
TCW	**Tory Channel**	**0.54**	**232**	P	**Pg**	**13 24 54.7**	**-0.7**
MTW	**Mount Morrison**	**0.58**	**119**	P	**Pb**	**13 24 56.7**	**-0.5**
MRZ	**Mangatainoka R**	**0.60**	**69**	P	**Pg**	**13 24 56.3**	**-0.2**
PAWZ	**Paruwai Farm**	**0.67**	**139**	P	**Pb**	**13 24 58.7**	**-0.2**
DUWZ	**D'Urville Isla**	**0.70**	**276**	P	**Pg**	**13 24 57.5**	**-0.9**
PLWZ	**Palliser**	**0.76**	**156**	P	**Pb**	**13 25 00.5**	**+0.1**
OHWZ	**Ohakea**	**0.77**	**29**	P	**Pg**	**13 24 58.9**	**-0.7**
TIWZ	**Tintock**	**0.80**	**83**	P	**Pb**	**13 25 00.7**	**-0.4**
TRWZ	**Traveller**	**0.83**	**129**	P	**Pb**	**13 25 02.0**	**+0.5**
TMWZ	**Te Maipa**	**0.83**	**106**	P	**Pb**	**13 25 01.6**	**0.0**
POWZ	**Post Office Ro**	**0.86**	**56**	P	**Pg**	**13 25 00.8**	**-0.6**
TUWZ	**Tuamarina**	**0.87**	**230**	P	**Pg**	**13 25 00.3**	**-1.4**
PRWZ	**Pori Road**	**0.92**	**70**	P	**Pg**	**13 25 02.6**	**-0.1**
CMWZ	**Cape Campbell**	**0.99**	**208**	P	**Pn**	**13 25 05.5**	**+0.5**
CPWZ	**Castlepoint**	**1.04**	**92**	P	**Pn**	**13 25 06.5**	**+0.8**
BFZ	**Birch Farm**	**1.09**	**80**	P	**Pb**	**13 25 06.1**	**+0.1**
BFZ	**Birch Farm**	**1.09**	**80**	P	**Pb**	**13 25 05.9**	**0.0**
BSWZ	**Blackbirch Sta**	**1.10**	**221**	P	**Pg**	**13 25 05.5**	**-0.7**
WAZ	**Wanganui**	**1.13**	**6**	P	**Pg**	**13 25 05.5**	**-1.1**
NNZ	**Nelson**	**1.15**	**252**	P	**Pg**	**13 25 05.6**	**-1.4**
DVHZ	**Dannevirke**	**1.17**	**61**	P	**Pg**	**13 25 06.7**	**-0.7**
TSZ	**Takapari Road**	**1.19**	**47**	P	**Pg**	**13 25 06.4**	**-1.2**
ANWZ	**Angora Road**	**1.32**	**72**	P	**Pn**	**13 25 09.1**	**-0.4**
PNHZ	**Pukenui**	**1.42**	**48**	P	**Pn**	**13 25 10.4**	**-0.6**
TKNZ	**Takaka Hill**	**1.43**	**263**	P	**Pn**	**13 25 10.6**	**-0.5**
LREZ	**Lake Rotokare**	**1.45**	**347**	P	**Pn**	**13 25 11.8**	**+0.4**
WPHZ	**Waipukurau**	**1.47**	**57**	P	**Pn**	**13 25 11.3**	**-0.3**
PRHZ	**Porangahau**	**1.50**	**67**	P	**Pn**	**13 25 11.5**	**-0.6**
MTVZ	**Mangateitei**	**1.57**	**18**	P	**Pn**	**13 25 12.5**	**-0.6**
PREZ	**Palmer Road**	**1.62**	**341**	P	**Pn**	**13 25 14.3**	**+0.6**
MOVZ	**Moawhango**	**1.63**	**26**	P	**Pn**	**13 25 13.0**	**-0.9**
PKVZ	**Pokaka**	**1.63**	**14**	P	**Pn**	**13 25 13.7**	**-0.3**
NMEZ	**Namu Road**	**1.64**	**333**	P	**Pn**	**13 25 14.9**	**+1.0**
NMEZ				S	**Sn**	**13 25 36.0**	**+0.9**
MRNZ	**Matariki Terra**	**1.65**	**251**	P	**Pn**	**13 25 14.5**	**+0.3**
WNVZ	**Wahianoa**	**1.66**	**21**	P	**Pn**	**13 25 13.9**	**-0.4**
TRVZ	**Turoa**	**1.67**	**19**	P	**Pn**	**13 25 14.9**	**+0.3**
BHHZ	**Black Hill Sta**	**1.68**	**35**	P	**Pn**	**13 25 14.1**	**-0.4**
WHVZ	**Whangaehu Hut**	**1.69**	**20**	P	**Pn**	**13 25 15.0**	**0.0**
THZ	**Tophouse**	**1.70**	**238**	P	**Pn**	**13 25 15.2**	**+0.3**
KHEZ	**Kahui Hut**	**1.70**	**338**	P	**Pn**	**13 25 15.8**	**+0.9**
KHEZ	**Kahui Hut**	**1.70**	**338**	P	**Pn**	**13 25 15.8**	**+0.9**
KHEZ				S	**Sb**	**13 25 38.8**	**+0.8**
MAVZ	**Matarangi**	**1.70**	**19**	P	**Pn**	**13 25 15.2**	**+0.1**
KRHZ	**Kereru**	**1.70**	**44**	P	**Pn**	**13 25 14.8**	**-0.1**
NEZ	**North Egmont**	**1.70**	**340**	P	**Pn**	**13 25 15.6**	**+0.7**
NEZ				S	**Sn**	**13 25 37.7**	**+0.8**
FWVZ	**Far West T-bar**	**1.71**	**19**	P	**Pn**	**13 25 15.2**	**0.0**
TUVZ	**Tukino**	**1.73**	**22**	P	**Pn**	**13 25 15.3**	**0.0**
QRZ	**Quartz Range**	**1.75**	**271**	P	**Pn**	**13 25 15.9**	**+0.4**
QRZ	**Quartz Range**	**1.75**	**271**	P	**Pn**	**13 25 15.6**	**+0.1**
VRZ	**Vera Road**	**1.75**	**358**	P	**Pn**	**13 25 15.5**	**0.0**
DREZ	**Durham Road**	**1.76**	**344**	P	**Pn**	**13 25 16.2**	**+0.6**
COVZ	**Chateau Observ**	**1.76**	**18**	P	**Pn**	**13 25 16.0**	**+0.2**
PXZ	**Pawanui**	**1.76**	**62**	P	**Pn**	**13 25 14.9**	**-0.8**
NBEZ	**Newall Road No**	**1.77**	**335**	P	**Pn**	**13 25 16.9**	**+1.1**
NGZ	**Ngauruhoe**	**1.80**	**19**	P	**Pn**	**13 25 16.5**	**+0.2**
SNVZ	**South Ngauruho**	**1.80**	**20**	P	**Pn**	**13 25 16.5**	**+0.2**
PKE	**Pukeiti**	**1.80**	**339**	P	**Pn**	**13 25 17.2**	**+0.9**
KHZ	**Kahutara**	**1.82**	**212**	P	**Pn**	**13 25 16.3**	**-0.1**
KHZ	**Kahutara**	**1.82**	**212**	P	**Pn**	**13 25 16.2**	**-0.1**
OTVZ	**Oturere**	**1.83**	**21**	P	**Pn**	**13 25 16.9**	**+0.2**
MHEZ	**Mangahewa**	**1.84**	**348**	P	**Pn**	**13 25 17.9**	**+1.2**
NNVZ	**North Ngauruho**	**1.84**	**19**	P	**Pn**	**13 25 17.5**	**+0.6**
WTVZ	**West Tongariro**	**1.85**	**18**	P	**Pn**	**13 25 17.4**	**+0.4**
TWVZ	**Taurewa**	**1.86**	**15**	P	**Pn**	**13 25 17.0**	**-0.2**
ETVZ	**East Tongariro**	**1.86**	**21**	P	**Pn**	**13 25 17.5**	**+0.3**
TMVZ	**Te Maari**	**1.88**	**21**	P	**Pn**	**13 25 17.8**	**+0.3**
KRVZ	**Karewarewa**	**1.89**	**19**	P	**Pn**	**13 25 17.8**	**+0.4**
NTVZ	**North Tongarir**	**1.89**	**20**	P	**Pn**	**13 25 18.0**	**+0.4**
KWHZ	**Kaweka Forest**	**1.90**	**40**	P	**Pn**	**13 25 17.3**	**-0.2**
KAHZ	**Kahuranaki**	**1.90**	**56**	P	**Pn**	**13 25 17.2**	**-0.3**
KATZ	**Kakaramea**	**2.01**	**19**	P	**Pn**	**13 25 20.3**	**+1.1**
MCHZ	**McNeill Hill**	**2.02**	**45**	P	**Pn**	**13 25 19.3**	**+0.1**
RITZ	**Rihia Road**	**2.06**	**23**	P	**Pn**	**13 25 21.0**	**+1.3**
BKZ	**Black Stump Fm**	**2.13**	**37**	P	**Pn**	**13 25 20.6**	**-0.2**
BKZ	**Black Stump Fm**	**2.13**	**37**	P	**Pn**	**13 25 20.5**	**-0.3**
RATZ	**Rangitukua**	**2.13**	**20**	P	**Pb**	**13 25 22.8**	**-1.0**
WATZ	**Wairara**	**2.27**	**18**	P	**Pb**	**13 25 25.1**	**-1.1**
ARHZ	**Aropaoanui**	**2.31**	**46**	P	**Pn**	**13 25 22.9**	**-0.3**
NMHZ	**Naumai**	**2.34**	**41**	P	**Pn**	**13 25 23.5**	**-0.1**
HIZ	**Hauiti**	**2.36**	**0**	P	**Pn**	**13 25 24.2**	**+0.3**
HIZ	**Hauiti**	**2.36**	**0**	P	**Pn**	**13 25 24.2**	**+0.3**
MRHZ	**Matea Rd**	**2.38**	**31**	P	**Pn**	**13 25 23.7**	**-0.5**
DSZ	**Denniston Nort**	**2.44**	**248**	P	**Pn**	**13 25 25.8**	**+0.8**
GVZ	**Greta Valley S**	**2.48**	**212**	P	**Pn**	**13 25 25.6**	**-0.6**
KUTZ	**Kaahu Road**	**2.50**	**18**	P	**Pb**	**13 25 29.8**	**-0.3**
MTHZ	**Maungataniwha**	**2.54**	**38**	P	**Pn**	**13 25 26.3**	**-0.2**
WHHZ	**Waihua**	**2.58**	**46**	P	**Pn**	**13 25 26.2**	**-0.7**
ALRZ	**Allen Road**	**2.59**	**27**	P	**Pn**	**13 25 26.7**	**-0.4**
RAHZ	**Arahi**	**2.62**	**42**	P	**Pn**	**13 25 27.8**	**+0.4**
PRRZ	**Plateau Road**	**2.66**	**27**	P	**Pn**	**13 25 27.7**	**-0.4**
LTZ	**Lake Taylor**	**2.70**	**224**	P	**Pn**	**13 25 28.2**	**-0.4**
HSRZ	**Hossack Road**	**2.79**	**23**	P	**Pb**	**13 25 35.0**	**+0.1**
SNGZ	**Shannon Statio**	**2.85**	**43**	P	**Pn**	**13 25 29.4**	**-1.2**
RRRZ	**Republican Roa**	**2.85**	**28**	P	**Pb**	**13 25 35.3**	**-0.6**
HLRZ	**Highlands Stat**	**2.87**	**25**	P	**Pb**	**13 25 36.3**	**-0.1**
INZ	**Inchbonnie**	**3.13**	**233**	P	**Pn**	**13 25 34.3**	**-0.3**
URZ	**Urewera**	**3.15**	**35**	P	**Pn**	**13 25 33.7**	**-1.0**
URZ	**Urewera**	**3.15**	**35**	P	**Pn**	**13 25 33.2**	**-1.6**
TOZ	**Tahuroa Road**	**3.19**	**10**	P	**Pn**	**13 25 36.1**	**+0.9**
MQZ	**McQueen's Vall**	**3.26**	**209**	P	**Pn**	**13 25 34.1**	**-2.1**
MWZ	**Matawai**	**3.28**	**40**	P	**Pn**	**13 25 35.0**	**-1.6**
AKCZ	**Akaroa Harbour**	**3.31**	**205**	P	**Pn**	**13 25 35.8**	**-1.2**
MHCZ	**Mount Hutt**	**3.59**	**221**	P	**Pn**	**13 25 40.1**	**-0.8**
TWGZ	**Tauwhareparae**	**3.63**	**43**	P	**Pn**	**13 25 40.2**	**-1.2**
WVZ	**Waitaha Valley**	**3.76**	**233**	P	**Pn**	**13 25 44.1**	**+1.0**
MKAZ	**Moumakai**	**3.78**	**4**	P	**Pn**	**13 25 44.5**	**+1.2**
WACZ	**Wakanui South**	**3.78**	**215**	P	**Pn**	**13 25 42.9**	**-0.5**
AWAZ	**Awhitu Peninsu**	**3.81**	**358**	P	**Pn**	**13 25 45.4**	**+1.6**
ETAZ	**East Tamaki Re**	**3.92**	**1**	P	**Pn**	**13 25 46.9**	**+1.6**
WTAZ	**Waiatarua**	**3.94**	**357**	P	**Pn**	**13 25 48.1**	**+2.4**
RPZ	**R

TWD				S	Sg	13 59 33.9	-0.4
	baz=3.0						
LXIB	**Xiulin Townshi**	**0.22**	**309**	⇓*i*P	**Pg**	**13 59 31.0**	**-0.8**
	baz=313						
LXIB				S	**Sg**	**13 59 33.9**	**-1.2**
	baz=313						
WARBT	**Fenglin Townsh**	**0.26**	**231**	⇓*i*P	**Pg**	**13 59 31.6**	**-0.8**
	baz=231						
WARBT				*e*S	**Sg**	**13 59 34.7**	**-1.2**
	baz=231						
ETL	**Fush Village**	**0.28**	**4**	P	**Pg**	**13 59 32.4**	**-0.4**
	baz=8.0						
ETL				*e*S	**Sg**	**13 59 36.2**	**-0.5**
	baz=8.0						
NACB	**Ninganchiao**	**0.29**	**359**	P	**Pg**	**13 59 32.6**	**-0.5**
NACB	**Ninganchiao**	**0.29**	**359**	⇓*i*P	**Pg**	**13 59 32.5**	**-0.5**
	baz=4.0						
NACB				*e*S	**Sg**	**13 59 35.6**	**-1.4**
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.34**	**341**	⇓*i*P	**Pg**	**13 59 33.4**	**-0.6**
	baz=345						
ETLH				*e*S	**Sg**	**13 59 38.3**	**-0.3**
	baz=345						
WHF	**Hehuan Shan**	**0.41**	**311**	P	**Pg**	**13 59 34.7**	**-0.6**
	baz=313						
WHF				*e*S	**Sg**	**13 59 40.0**	**-0.8**
	baz=313						
HGSD	**Ruisui**	**0.42**	**203**	*e*P	**Pb**	**13 59 36.0**	**-0.6**
	baz=207						
CHGB	**Renai**	**0.43**	**295**	⇓*i*P	**Pg**	**13 59 35.3**	**-0.3**
	baz=296						
CHGB				S	**Sg**	**13 59 40.9**	**-0.6**
	baz=296						
VWDT	**VWDT**	**0.44**	**254**	*e*P	**Pg**	**13 59 35.6**	**-0.2**
	baz=259						
VWDT				*e*S	**Sg**	**13 59 40.9**	**-0.7**
	baz=259						
EHY	**Hungye**	**0.45**	**215**	P	**Pg**	**13 59 35.5**	**-0.5**
	baz=218						
EHY				*e*S	**Sg**	**13 59 41.5**	**-0.5**
	baz=218						
WUSB	**Renai**	**0.46**	**284**	⇓*i*P	**Pg**	**13 59 35.9**	**-0.2**
	baz=285						
WUSB				*i* S	**Sg**	**13 59 41.9**	**-0.3**
	baz=285						
EAHA	**Aohua**	**0.47**	**16**	*e*P	**Pg**	**13 59 35.6**	**-0.7**
	baz=10.0						
TWT	**Tachien**	**0.54**	**314**	*e*P	**Pg**	**13 59 37.7**	**0.0**
	baz=303						
TWT				*i* S	**Sg**	**13 59 44.1**	**-0.7**
	baz=303						
TDCB	**Techi**	**0.55**	**313**	*e*P	**Pg**	**13 59 37.7**	**-0.2**
	baz=306						
TDCB				*e*S	**Sg**	**13 59 44.5**	**-0.7**
	baz=306						
YULB	**Yu-li**	**0.56**	**210**	P	**Pg**	**13 59 38.0**	**0.0**
YULB	**Yu-li**	**0.56**	**210**	P	**Pg**	**13 59 37.5**	**-0.5**
	baz=218						
YULB				*e*S	**Sg**	**13 59 45.7**	**+0.3**
	baz=218						
ENA	**Nanau**	**0.56**	**13**	*e*P	**Pg**	**13 59 37.7**	**-0.3**
	baz=6.0						
NNSB	**Datong**	**0.58**	**340**	*i* P	**Pg**	**13 59 38.1**	**-0.4**
	baz=340						
NNSB				S	**Sg**	**13 59 45.5**	**-0.7**
	baz=340						
EWUT	**Wuta**	**0.59**	**16**	*e*P	**Pg**	**13 59 38.0**	**-0.5**
	baz=7.0						
EWUT				*e*S	**Sb**	**13 59 48.3**	**+0.6**
	baz=7.0						
EYUL	**Yuli**	**0.59**	**206**	*e*P	**Pb**	**13 59 39.3**	**-0.1**
	baz=217						
EYUL				*e*S	**Sb**	**13 59 48.1**	**+0.3**
	baz=217						
TWF1	**Yuli**	**0.59**	**208**	*e*P	**Pg**	**13 59 38.1**	**-0.6**
	baz=216						
TWF1				*e*S	**Sb**	**13 59 47.6**	**-0.4**
	baz=216						
NNS	**Nan Shan**	**0.60**	**339**	*e*P	**Pg**	**13 59 38.2**	**-0.5**
	baz=340						
NNS				*e*S	**Sg**	**13 59 45.9**	**-0.8**
	baz=340						
SSLB	**Suanglung**	**0.60**	**261**	P	**Pg**	**13 59 38.6**	**-0.2**
SSLB	**Suanglung**	**0.60**	**261**	P	**Pg**	**13 59 38.4**	**-0.4**
	baz=269						
SSLB				S	**Sg**	**13 59 46.2**	**-0.5**
	baz=269						
SMLT	**Sun Moon Lake**	**0.64**	**270**	P	**Pg**	**13 59 39.5**	**-0.1**
	baz=270						
SMLT				*i* S	**Sg**	**13 59 47.9**	**-0.2**
	baz=270						
LATG	**Datong**	**0.66**	**354**	*e*P	**Pg**	**13 59 39.6**	**-0.3**
	baz=346						
LATG				*e*S	**Sg**	**13 59 49.1**	**+0.6**
	baz=346						
WCS	**Beigang Elemen**	**0.66**	**286**	*i* P	**Pg**	**13 59 39.6**	**-0.3**
	baz=286						
WCS				*e*S	**Sg**	**13 59 47.6**	**-0.8**
	baz=286						
TYC	**Yuchr**	**0.68**	**272**	P	**Pg**	**13 59 39.8**	**-0.5**
	baz=282						
TYC				*i* S	**Sg**	**13 59 48.7**	**-0.6**
	baz=282						
EOS4	**EOS4**	**0.70**	**70**	*e*P	**Pb**	**13 59 41.1**	**0.0**
	baz=80						
CHKH	**Chenggong**	**0.71**	**196**	*e*P	**Pb**	**13 59 41.6**	**+0.1**
	baz=184						
NDT	**Datong Townshi**	**0.72**	**353**	*e*P	**Pg**	**13 59 40.9**	**-0.2**
	baz=348						
NDT				*e*S	**Sg**	**13 59 49.9**	**-0.7**
	baz=348						
ENTT	**Nioudou**	**0.76**	**357**	*e*P	**Pg**	**13 59 41.8**	**0.0**
	baz=358						
ENTT				*e*S	**Sg**	**13 59 51.9**	**+0.2**
	baz=358						
NDS	**Dongshan**	**0.76**	**8**	P	**Pg**	**13 59 41.5**	**-0.2**
	baz=8.0						
NDS				S	**Sg**	**13 59 52.0**	**+0.4**
	baz=8.0						
TWC	**Suao**	**0.76**	**17**	*e*P	**Pb**	**13 59 42.0**	**-0.4**
	baz=10.0						
TWC				*e*S	**Sb**	**13 59 52.9**	**+0.2**
	baz=10.0						
WJS	**Zhushan**	**0.80**	**266**	*e*P	**Pb**	**13 59 43.6**	**+0.5**
	baz=260						
EHD	**Haiduan**	**0.81**	**207**	*e*P	**Pb**	**13 59 42.9**	**-0.4**
	baz=217						
YHNB	**Yeheng**	**0.81**	**345**	P	**Pg**	**13 59 43.0**	**+0.1**
YHNB	**Yeheng**	**0.81**	**345**	*i* P	**Pg**	**13 59 43.0**	**+0.1**
	baz=345						
YHNB				S	**Sg**	**13 59 52.7**	**-0.8**
	baz=345						
ALS	**Alishan**	**0.82**	**244**	*e*P	**Pg**	**13 59 42.8**	**-0.2**
	baz=252						
NSK	**Sanguang**	**0.82**	**344**	*e*P	**Pg**	**13 59 43.1**	**+0.1**
	baz=345						
NSK				*i* S	**Sg**	**13 59 53.0**	**-0.9**
	baz=345						
TWE	**Neicheng**	**0.84**	**4**	*e*P	**Pg**	**13 59 43.4**	**+0.1**
	baz=5.0						
TWE				*e*S	**Sg**	**13 59 54.6**	**+0.3**
	baz=5.0						
WNT	**Mingjian**	**0.84**	**270**	*e*P	**Pg**	**13 59 43.4**	**0.0**
	baz=270						
NFF	**Wufeng Townshi**	**0.87**	**330**	*e*P	**Pg**	**13 59 43.8**	**-0.1**
	baz=330						
NFF				*e*S	**Sg**	**13 59 54.3**	**-1.0**
	baz=330						
ELDTW	**Lidau**	**0.87**	**218**	*e*P	**Pg**	**13 59 42.6**	**-1.4**
	baz=217						
FUSB	**Fushanzhiwuyua**	**0.88**	**359**	P	**Pg**	**13 59 43.7**	**-0.3**
	baz=358						
FUSB				*e*S	**Sb**	**13 59 56.1**	**-0.1**
	baz=358						
TWQ1	**Liyutan**	**0.89**	**302**	*e*P	**Pb**	**13 59 45.2**	**+0.6**
	baz=302						
TWQ1				*e*S	**Sb**	**13 59 56.8**	**+0.3**
	baz=302						
CHN5	**Tsauling**	**0.89**	**252**	P	**Pn**	**13 59 45.3**	**-0.4**
	baz=241						
CHN5				*e*S	**Sn**	**13 59 58.1**	**-0.6**
	baz=241						
NWLT	**Wulai**	**0.90**	**354**	*e*P	**Pg**	**13 59 43.8**	**-0.7**
	baz=353						
NWLT				*e*S	**Sg**	**13 59 55.4**	**-0.8**
	baz=353						
NSTT	**Nanjuang**	**0.93**	**324**	*e*P	**Pg**	**13 59 44.9**	**-0.1**
	baz=324						
NSTT				*e*S	**Sg**	**13 59 56.1**	**-1.0**
	baz=324						
LIOB	**Emei**	**0.93**	**325**	*e*P	**Pb**	**13 59 45.6**	**+0.3**
	baz=325						
LIOB				S	**Sb**	**13 59 57.7**	**-0.1**
	baz=325						
EDH	**Donghe**	**0.94**	**197**	*e*P	**Pg**	**13 59 43.8**	**-1.5**
	baz=187						
WGK	**Gukeng**	**0.97**	**259**	*e*P	**Pb**	**13 59 46.3**	**+0.4**
	baz=259						
NMLH	**Miaoli**	**0.99**	**312**	*e*P	**Pn**	**13 59 47.2**	**+0.2**
	baz=312						
WDLH	**Douliu**	**0.99**	**259**	*e*P	**Pb**	**13 59 46.2**	**-0.1**
	baz=260						
WCKO	**Fanlu**	**1.01**	**245**	*e*P	**Pn**	**13 59 47.2**	**-0.1**
	baz=245						
STYH	**Taoyuan**	**1.04**	**227**	*e*P	**Pb**	**13 59 47.3**	**+0.2**
	baz=229						
STYH				*e*S	**Sn**	**14 00 02.0**	**-0.1**
	baz=229						
TPUB	**Ta-pu**	**1.06**	**237**	P	**Pn**	**13 59 47.9**	**-0.1**
TPUB	**Ta-pu**	**1.06**	**237**	*i* P	**Pn**	**13 59 48.2**	**+0.2**
	baz=239						
TPUB				*e*S	**Sb**	**14 00 01.9**	**+0.4**
	baz=239						
CHN4	**Tsaushan**	**1.06**	**241**	*e*P	**Pn**	**13 59 48.0**	**0.0**
	baz=235						
CHN4				*e*S	**Sn**	**14 00 04.4**	**+1.5**
	baz=235						
WTP	**Ta-pu**	**1.10**	**235**	*e*P	**Pb**	**13 59 48.4**	**+0.1**
	baz=237						
WTP				*e*S	**Sb**	**14 00 03.1**	**+0.4**
	baz=237						
WRL	**Guolierlin Hig**	**1.12**	**271**	*e*P	**Pn**	**13 59 49.3**	**+0.5**
	baz=273						
WRL				*i* S	**Sb**	**14 00 04.0**	**+0.8**
	baz=273						
WTK	**Tuku**	**1.13**	**261**	*e*P	**Pb**	**13 59 48.8**	**+0.2**
	baz=262						
WTK				*e*S	**Sn**	**14 00 05.0**	**+0.6**
	baz=262						
TWG	**Pinlang**	**1.16**	**205**	*e*P	**Pg**	**13 59 48.7**	**-0.7**
	baz=212						
TWGBT	**Beinan**	**1.16**	**205**	P	**Pn**	**13 59 49.6**	**+0.3**
TWGBT	**Beinan**	**1.16**	**205**	*e*P	**Pg**	**13 59 47.2**	**-2.2**
	baz=212						
TWK	**Hsinying**	**1.19**	**239**	*e*P	**Pb**	**13 59 49.8**	**0.0**
	baz=242						
TWK				*e*S	**Sn**	**14 00 06.6**	**+0.6**
	baz=242						
NWF	**Wu-fen Shan**	**1.20**	**8**	*e*P	**Pn**	**13 59 50.7**	**+0.8**
	baz=6.0						
CHN1	**Nanshi**	**1.21**	**235**	*e*P	**Pg**	**13 59 49.5**	**-0.8**
	baz=237						
CHN1				*e*S	**Sn**	**14 00 07.5**	**+1.2**
	baz=237						
SNST	**Tainan City**	**1.21**	**237**	*e*P	**Pn**	**13 59 50.7**	**+0.8**
	baz=240						
SNST				*e*S	**Sn**	**14 00 07.8**	**+1.5**
	baz=240						
SGST	**Jiashian**	**1.23**	**230**	*e*P	**Pn**	**13 59 50.5**	**+0.3**
	baz=232						
SGST				*i* S	**Sn**	**14 00 08.4**	**+1.5**
	baz=232						
SXI1	**Grass Mountain**	**1.23**	**12**	*e*P	**Pg**	**13 59 49.5**	**-1.3**
	baz=1.0						
SXI1				*e*S	**Sg**	**14 00 06.7**	**-0.2**
	baz=1.0						
YM01	**YM01**	**1.26**	**359**	*e*P	**Pg**	**13 59 51.9**	**+0.6**
	baz=358						
ANP	**Anpu**	**1.30**	**357**	*e*P	**Pn**	**13 59 51.2**	**-0.2**
	baz=356						
JYNG	**Yonagunijimaku**	**1.35**	**65**	P	**Pn**	**13 59 51.5**	**-0.4**
JYNG				S	**Sb**	**14 00 09.4**	**-0.4**

NEIC ***12*** *14:24:49.9±1.1,* ***29°01N****±0.04×****97°92W****±0.04,* ***h5****km±2km, mb_Lg3.1/62,* ***ML2.8/6****, Error ellipse: s-maj=8.7km s-min=3.2km az=42.0, Central Texas*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
735A	**Kenedy**	**0.18**	**148**	Pg	Pg	14 24 54.7	+1.2
735A				Sg	Sg	14 24 57.0	+1.1
735A				IAML		14 24 59.2	
	comp=E,2μm,0.8s						
735A				IAML		14 24 59.2	
	comp=N,2μm,0.8s						
EF01	**Eagle Ford 01**	**0.42**	**287**		Pb	14 24 59.1	-0.7
EF01				IAML		14 25 08.5	
	comp=N,2μm,0.5s						
HNDO	**Hondo**	**1.30**	**294**		Pn	14 25 14.2	-0.6
HNDO					Sg	14 25 31.2	-0.5
HNDO				IAML		14 25 43.9	
	comp=N,148nm,1.0s						
833A	**Chaparral WMA,**	**1.47**	**243**	Pg	Pb	14 25 17.4	-0.3
435B	**Jarrell**	**1.79**	**9**	Pn	Pb	14 25 23.4	+0.2
435B				IAmb_Lg		14 25 49.7	
	comp=Z,110nm,0.8s						
JCT	**Junction City**	**2.20**	**312**		Pn	14 25 28.2	+1.1
DRIO	**Del Rio**	**2.40**	**281**		Pn	14 25 29.9	0.0
BRDY	**Brady**	**2.46**	**338**		Pn	14 25 31.5	+0.8
BRDY				IAmb_Lg		14 26 12.6	
	comp=Z,74nm,0.7s						
WHTX	**Lake Whitney,**	**3.00**	**8**	Pn	Pn	14 25 40.4	+2.2
WHTX				IAmb_Lg		14 26 29.6	
	comp=Z,47nm,1.1s						
FW13	**Cleburne**	**3.36**	**7**	IAmb_Lg		14 26 40.1	
	comp=Z,43nm,1.0s						
OZNA	**Ozona**	**3.38**	**305**	Pn	Pn	14 25 44.6	+1.3
OZNA				IAmb_Lg		14 26 41.5	
	comp=Z,45nm,0.8s						
FW14	**Alvarado**	**3.44**	**10**	IAmb_Lg		14 26 46.3	
	comp=Z,66nm,0.8s						
FW16	**Waxahatchie**	**3.57**	**14**	IAmb_Lg		14 26 53.1	
	comp=Z,75nm,1.0s						
FW07	**Weatherford**	**3.69**	**2**	IAmb_Lg		14 26 51.5	
	comp=Z,29nm,0.7s						
PLPT	**Palo Pinto**	**3.81**	**355**	IAmb_Lg		14 26 54.0	
	comp=Z,43nm,1.0s						
ABTX	**Abilene, Hawle**	**3.90**	**338**		Pn	14 25 52.0	+1.5
FW06	**Azle**	**3.96**	**4**	IAmb_Lg		14 27 04.9	
	comp=Z,47nm,0.8s						
FW03	**Perrin-Whitt E**	**4.02**	**358**		Pn	14 25 53.7	+1.5
FW03				IAmb_Lg		14 27 02.8	
	comp=Z,33nm,0.8s						
Z35A	**Perchaven, San**	**4.35**	**7**	Pn	Pn	14 25 58.2	+1.6
SN01	**Snyder 1**	**4.61**	**327**		Pn	14 26 00.6	+0.3
SN01				IAmb_Lg		14 27 28.6	
	comp=Z,40nm,0.8s						
SN05	**Snyder 5**	**4.62**	**327**	IAmb_Lg		14 27 27.7	
	comp=Z,56nm,0.9s						
APMT	**Aspermont**	**4.70**	**337**	Pn	Pn	14 26 02.0	+0.5
MNHN	**Monahans**	**4.79**	**300**	IAmb_Lg		14 27 25.1	
	comp=Z,46nm,0.9s						
Z38A	**Mt. Pleasant**	**4.93**	**30**	Pn	Pn	14 26 05.9	+1.3
LOOK	**Love County**	**5.01**	**7**	Pn	Pn	14 26 07.6	+1.9
TXAR	**Lajitas Array**	**5.04**	**275**	Pn	Pn	14 26 06.1	-0.1
POST	**Post**	**5.08**	**324**		Pn	14 26 08.2	+1.4
ALPN	**Alpine**	**5.16**	**287**	IAmb_Lg		14 27 40.3	
	comp=Z,26nm,0.8s						
DKNS	**Dickens**	**5.31**	**332**		Pn	14 26 11.8	+1.9
X34A	**Smith Ranch, M**	**5.58**	**1**	Pn	Pn	14 26 15.2	+1.6
X34A				IAmb_Lg		14 27 57.8	
	comp=Z,28nm,0.8s						
PECS	**Pecos**	**5.66**	**296**	IAmb_Lg		14 28 00.3	
	comp=Z,30nm,1.1s						
WMOK	**Wichita Mounta**	**5.76**	**353**		Pn	14 26 17.3	+1.2
WMOK				IAmb_Lg		14 28 05.1	
	comp=Z,26nm,0.7s						
X37A	**Clayton**	**5.97**	**21**		Pn	14 26 20.9	+1.9
X37A				IAmb_Lg		14 28 01.7	
	comp=Z,19nm,0.9s						
W35A	**Tecumseh**	**6.19**	**8**	IAmb_Lg		14 28 22.4	
	comp=Z,33nm,1.2s						
FNO	**Franklin**	**6.25**	**4**	IAmb_Lg		14 28 23.1	
	comp=Z,31nm,0.8s						
MSTX	**Muleshoe**	**6.45**	**321**	IAmb_Lg		14 28 17.0	
	comp=Z,21nm,0.9s						
MIAR	**Mount Ida**	**6.64**	**33**	Pn	Pn	14 26 31.1	+2.9
OK029	**Liberty Lake**	**6.78**	**3**	IAmb_Lg		14 28 38.3	
	comp=Z,17nm,0.7s						
MNTX	**Cornudas Mount**	**6.99**	**294**	IAmb_Lg		14 28 39.9	
	comp=Z,14nm,0.9s						
TUL3	**Leonard**	**7.11**	**14**	IAmb_Lg		14 28 40.7	
	comp=Z,21nm,1.0s						
OK038	**West end E0370**	**7.48**	**355**	IAmb_Lg		14 29 05.1	
	comp=Z,21nm,0.9s						

NEIC ***12*** *14:27:02.3±1.3, 4°7S±0°1×154°4E±0°1, h187km±8km, mb4.5/23, Error ellipse: s-maj=17.8km s-min=14.7km az=76.0*

IDC ***12*** *14:27:07.5±2.8, 4°74S×154°09E, h227km±23km, mb3.7/14, mbtmp4.2/16, Error ellipse: s-maj=29.3km s-min=12.0km az=102.0*

ISC 12 14:27:03.6±0.7, **4°62S**±0°06×**154°3E**±0°1, **h200**km, **n58**, σ1**s58**/60, **mb4.2**/28, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.15**	**281**		Pn	**14 27 42.3**	**-1.4**
RABL	**Rabaul**	**2.15**	**281**	P	Pn	**14 27 42.6**	**-1.1**
KAVG	**Kavieng**	**4.01**	**300**	P	Pn	**14 28 04.6**	**-1.0**
MANU	**Manus Island**	**7.36**	**290**	Pn	Pn	**14 28 45.6**	**-3.0**
PMG	**Port Moresby**	**8.51**	**236**		Pn	**14 29 02.6**	**-1.0**
PMG	**Port Moresby**	**8.51**	**236**	P	Pn	**14 29 07.2**	**+3.6**
PMG	**Port Moresby**	**8.51**	**236**	P	Pn	**14 29 07.1**	**+3.5**
PMG	**Port Moresby**	**8.51**	**236**	P	Pn	**14 29 06.2**	**+2.6**
	102nm,0.6s,baz=55,slow=6.2,SNR=54						
PMG				S	Sn	**14 30 40.6**	**+1.3**
	48nm,0.9s,baz=265,slow=12,SNR=6.7						
COEN	**Coen**	**14.34**	**229**		P	**14 30 18.7**	**-0.6**
COEN	**Coen**	**14.34**	**229**	P	P	**14 30 19.3**	**-0.1**
MTSU	**Mount Surprise**	**16.59**	**215**	P	Pn	**14 30 46.9**	**+1.8**
CTA	**Charters Tower**	**17.24**	**206**	P	Pn	**14 30 50.8**	**-2.0**
	2.5nm,0.8s,baz=31,slow=12,SNR=1.8						
CTAO	**Charters Tower**	**17.24**	**206**	P	P	**14 30 49.9**	**-1.4**
CTAO				IAmb	IAmb	14 31 01.4	
	comp=Z,15nm,1.4s						
GUMO	**Guam**	**20.36**	**333**	P	P	**14 31 24.4**	**-0.6**
ONTNC	**Ouen Toro**	**21.17**	**147**	P	P	**14 31 29.1**	**-4.5**
QIS	**Mount Isa**	**21.32**	**221**	P	P	**14 31 36.5**	**+1.4**
FAKI	**Fak Fak**	**22.04**	**274**	P	P	**14 31 40.1**	**-2.4**
KDU	**Kakadu**	**22.98**	**248**	P	P	**14 31 51.2**	**+0.2**
WR0	**Warramunga Arr**	**24.53**	**230**	P	P	**14 32 03.9**	**-1.2**
WR0				IAmb	IAmb	14 32 07.1	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**24.53**	**230**	P	P	**14 32 04.0**	**-1.0**
WB0				IAmb	IAmb	14 32 06.6	
	comp=Z,15nm,0.6s						
WRAB	**Tennant Creek**	**24.66**	**230**	P	P	**14 32 05.1**	**-1.1**
WRAB				IAmb	IAmb	14 32 07.9	
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**24.66**	**230**	P	P	**14 32 05.2**	**-1.1**
WB2				IAmb	IAmb	14 32 08.0	
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**24.67**	**230**	P	P	**14 32 05.4**	**-0.9**
	comp=Z,14nm,0.6s,baz=55,slow=10,SNR=55						
	comp=Z,14nm,0.6s						
AS31	**Alice Springs**	**27.28**	**224**	P	P	**14 32 28.3**	**-1.5**
AS31				IAmb	IAmb	14 32 29.2	
	comp=Z,1.7nm,0.3s						
ASAR	**Alice Springs**	**27.28**	**224**	P	P	**14 32 28.3**	**-1.5**
ASAR	**Alice Springs**	**27.28**	**224**	P	P	**14 32 28.8**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=56,slow=9.1,SNR=48						
ASAR				ScP	**ScP**	**14 39 05.2**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=49,slow=3.3,SNR=5.9						
	comp=Z,1.8nm,0.3s						
STKA	**Stephens Creek**	**29.61**	**202**	P	P	**14 32 50.5**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=30,slow=12,SNR=5.9						
	comp=Z,0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**31.03**	**242**	P	P	**14 32 59.9**	**-3.0**
FITZ				IAmb	IAmb	14 33 01.5	
	comp=Z,2.8nm,0.7s						
BBOO	**Buckleboo**	**32.80**	**209**	P	P	**14 33 17.6**	**-0.6**
BBOO				IAmb	IAmb	14 33 44.7	
	comp=Z,21nm,1.5s						
FORT	**Forrest**	**35.86**	**220**	P	P	**14 33 43.4**	**-1.1**
FORT				IAmb	IAmb	14 33 43.8	
	comp=Z,8.2nm,0.8s						
PSA00	**Pilbara Seismi**	**37.38**	**240**	P	P	**14 33 55.7**	**-1.9**
TPUB	**Ta-pu**	**42.99**	**312**	P	P	**14 34 43.0**	**-0.6**
JNU	**Nakatsue**	**43.60**	**331**	P	P	**14 34 48.7**	**+0.4**
MAJO	**Matsushiro**	**43.62**	**341**	P	P	**14 34 48.6**	**+0.3**
MAJO				IAmb	IAmb	14 35 18.9	
	comp=Z,32nm,1.4s						
KSRS	**Korea Array**	**48.52**	**332**	P	P	**14 35 27.6**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=148,slow=8.0,SNR=8.6						
	comp=Z,1.8nm,0.6s						
MYKOM	**Kota Tinggi**	**50.78**	**276**	P	P	**14 35 45.0**	**+1.0**
MYKOM				IAmb	IAmb	14 36 09.6	
	comp=Z,19nm,1.1s						
USA0B	**Ussuriysk Arra**	**52.57**	**340**	P	P	**14 35 57.9**	**+1.3**
USA0B				IAmb	IAmb	14 36 31.1	
	comp=Z,19nm,1.5s						
USRK	**Ussuriysk Ar.**	**52.57**	**340**	P	P	**14 35 58.0**	**+1.3**
USRK	**Ussuriysk Ar.**	**52.57**	**340**	P	P	**14 35 58.2**	**+1.5**
	comp=Z,1.2nm,0.3s,baz=141,slow=5.1,SNR=9.8						
	comp=Z,1.2nm,0.3s						
PETK	**Petropavlovsk-**	**57.59**	**2**	P	P	**14 36 35.0**	**+2.6**
	comp=Z,3.4nm,0.7s,baz=154,slow=6.2,SNR=12						
	comp=Z,3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**59.14**	**295**	P	P	**14 36 44.8**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=120,slow=5.3,SNR=9.4						
	comp=Z,1.8nm,0.7s						
XLT	**XiLinHaoTe**	**59.27**	**329**	*e*P	P	**14 36 45.0**	**+0.7**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XLT				pmax	pmax		
	comp=Z,150nm,5.2s						
LZH	**Lanzhou**	**62.14**	**315**	*e*P	P	**14 37 05.1**	**+1.2**
LZH				pP	PcP	14 37 16.8	-25
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
GTA	**Gaotai**	**66.53**	**317**	*e*P	P	**14 37 33.5**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**66.97**	**327**	P	P	**14 37 35.9**	**+1.0**
SONM	**Songino Array**	**66.97**	**327**	P	P	**14 37 36.3**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=147,slow=5.7,SNR=15						
	comp=Z,1.7nm,0.5s						
N15K	**Kwethluk River**	**73.79**	**22**	P	P	**14 38 14.4**	**-1.4**
MK31	**Makanchi Array**	**81.16**	**319**	P	P	**14 38 57.6**	**+0.6**
MKAR	**Makanchi Array**	**81.16**	**319**	P	P	**14 38 57.5**	**+0.5**
MKAR	**Makanchi Array**	**81.16**	**319**	P	P	**14 38 57.7**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=98,slow=7.8,SNR=15						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**81.45**	**22**	P	P	**14 39 00.1**	**+2.0**
	comp=Z,0.8nm,0.9s,baz=252,slow=4.9,SNR=4.2						
	comp=Z,0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**81.83**	**326**	P	P	**14 39 00.7**	**+0.5**
ZALV	**Zalesovo Beam**	**81.83**	**326**	P	P	**14 39 00.0**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=106,slow=6.1,SNR=6.4						
	comp=Z,0.8nm,0.3s

KULM	**Kulim**	**35.71**	**68**	P		**P**		**14 52 42.6**	**-0.9**
MBAR	**Mbarara**	**37.63**	**280**	LR		LR		15 06 40.7	
	comp=Z,53nm,20.0s,baz=83,slow=34								
LSZ	**Lusaka**	**39.11**	**257**	P		**P**		**14 53 11.9**	**-0.7**
LSZ				IAmb		IAmb		14 53 15.8	
	comp=Z,10nm,1.1s								
LSZ	**Lusaka**	**39.11**	**257**	LR		LR		15 06 17.1	
	comp=Z,107nm,20.9s,baz=85,slow=32								
LEM	**Lembang**	**39.63**	**90**	LR		LR		15 06 37.4	
	comp=Z,49nm,18.1s,baz=210,slow=32								
CMAR	**Chiang Mai Arr**	**40.99**	**49**	P		**P**		**14 53 29.6**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=242,slow=9.2,SNR=13								
CMAR				LR		LR		15 09 17.1	
	comp=Z,19nm,18.2s,baz=265,slow=34								
	comp=Z,1.4nm,0.7s								
H01W3	**Cape Leeuwin H**	**49.82**	**129**	T		T		15 48 13.4	
	baz=290,slow=75,SNR=14								
H01W2	**Cape Leeuwin H**	**49.83**	**129**	T		T		15 48 13.4	
	baz=290,slow=75,SNR=16								
H01W1	**Cape Leeuwin H**	**49.84**	**129**	T		T		15 48 15.2	
	baz=290,slow=75,SNR=16								
AAK	**Ala-Archa**	**51.46**	**6**	LR		LR		15 14 12.4	
	comp=Z,103nm,20.6s,baz=234,slow=33								
GTA	**Gaotai**	**56.39**	**30**	P		**P**		**14 55 27.8**	**+1.6**
GTA				sP		pwP		14 55 41.5	+9.0
GTA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
MAKZ	**Makanchi**	**56.70**	**12**	P		**P**		**14 55 27.4**	**-0.8**
MAKZ				IAmb		IAmb		14 55 29.1	
	comp=Z,3.2nm,1.1s								
MK31	**Makanchi Array**	**56.76**	**12**	P		**P**		**14 55 27.1**	**-1.5**
MKAR	**Makanchi Array**	**56.76**	**12**	P		**P**		**14 55 27.4**	**-1.2**
MKAR	**Makanchi Array**	**56.76**	**12**	P		**P**		**14 55 28.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=201,slow=8.1,SNR=14								
	comp=Z,0.9nm,0.6s								
ABKAR	**Akbulak array**	**58.09**	**354**	P		**P**		**14 55 37.7**	**-0.2**
MAW	**Mawson**	**58.93**	**182**	LR		LR		15 16 13.8	
	comp=Z,70nm,19.2s,baz=270,slow=31								
DAV	**Davao City (W)**	**59.82**	**7**	LR		LR		15 21 04.8	
	comp=Z,31nm,19.4s,baz=154,slow=35								
KURBB	**Kurchatov Array**	**59.82**	**8**	P		**P**		**14 55 50.4**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=204,slow=7.2,SNR=7.9								
	comp=Z,1.5nm,0.9s								
BVAR	**Borovoye Array**	**61.52**	**2**	P		**P**		**14 56 00.6**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=148,slow=11,SNR=10								
	comp=Z,1.3nm,0.7s								
ZALV	**Zalesovo Beam**	**64.06**	**11**	P		**P**		**14 56 17.6**	**-0.7**
ZALV	**Zalesovo Beam**	**64.06**	**11**	P		**P**		**14 56 18.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=213,slow=7.1,SNR=4.8								
	comp=Z,1.0nm,0.7s								
ASAR	**Alice Springs**	**64.85**	**112**	P		**P**		**14 56 24.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=274,slow=6.2,SNR=19								
ASAR				LR		LR		15 20 04.8	
	comp=Z,22nm,21.4s,baz=292,slow=32								
	comp=Z,0.6nm,0.5s								
WRA	**Warramunga Arr**	**65.22**	**108**	P		**P**		**14 56 26.7**	**0.0**
	comp=Z,1.5nm,1.0s,baz=277,slow=5.9,SNR=8.7								
	comp=Z,1.5nm,1.0s								
SONM	**Songino Array**	**65.88**	**28**	P		**P**		**14 56 31.1**	**+0.6**
SONM				IAmb		IAmb		14 56 37.2	
	comp=Z,1.8nm,0.8s								
SONM	**Songino Array**	**65.88**	**28**	P		**P**		**14 56 32.3**	**+1.8**
	comp=Z,1.9nm,0.8s,baz=221,slow=6.3,SNR=5.8								
SONM				LR		LR		15 23 29.8	
	comp=Z,59nm,18.1s,baz=193,slow=34								
	comp=Z,1.9nm,0.8s								
DBIC	**Dimbokro**	**73.87**	**280**	LR		LR		15 27 57.6	
	comp=Z,39nm,20.4s,baz=104,slow=34								
CTA	**Charters Tower**	**76.41**	**109**	LR		LR		15 27 22.3	
	comp=Z,47nm,21.8s,baz=262,slow=33								
GUMO	**Guam**	**79.76**	**74**	LR		LR		15 30 55.0	
	comp=Z,9.8nm,21.3s,baz=77,slow=34								
DZM	**Mont Dzumac**	**94.82**	**113**	LR		LR		15 40 08.1	
	comp=Z,20nm,20.0s,baz=233,slow=34								
NVAR	**Mina Array Bea**	**149.91**	**9**	PKPbc		**PKiKP**		**15 05 37.5**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=20,slow=3.0,SNR=7.1								

*CATAC **12** 14:58:38.1±0.5, 14.°17N×91.°97W, h29km±4km, MB5.9, mb4.1, ML4.4*
*SNET **12** 14:58:40.6±1.1, 13.°98N×91.°84W, h35km±999km, ML3.7*
*GCG **12** 14:58:42.0±0.3, 14.°45N×91.°71W, h50km±51km, MD4.1*
ISC 12 14:58:36.9±2.0, **14.°10N**±0.°07×**92.°00W**±0.°08, **h24**km±15km, **n31**, σ**1**s**05**/51, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.46**	**64**	*eP*		**Pn**	**14 58 50.3**	**+2.2**
RTAL	**Retalhuleu**	**0.51**	**35**	*i* P		**Pb**	**14 58 48.6**	**+1.3**
RTAL				*i* S		**Sn**	**14 58 57.7**	**+0.9**
STG3	**Santiaguito 3,**	**0.73**	**34**	*eP*		**Pb**	**14 58 51.7**	**+0.6**
SMCA	**Catarina**	**0.75**	**354**	*i* P		**Pb**	**14 58 51.0**	**-0.4**
SMCA				*i* S		**Sb**	**14 59 00.5**	**-0.7**
SMCA				IAML			14 59 01.2	
	comp=Z,3μm,1.0s							
SMSP	**San Marcos**	**0.89**	**14**	*i* P		**Pb**	**14 58 52.9**	**-1.0**
SMSP				*i* S		**Sb**	**14 59 04.8**	**-0.7**
SMSP				IAML			14 59 08.2	
	comp=Z,10μm,1.0s							
FUG	**Fuego 3**	**1.17**	**73**	*eP*		**Pn**	**14 58 58.1**	**+0.1**
HUEH	**Huehuetenango**	**1.30**	**22**	*i* P		**Pn**	**14 58 59.4**	**-0.4**
HUEH				*i* S		**Sb**	**14 59 16.2**	**-1.0**
PCG	**Pacaya**	**1.38**	**78**	*eP*		**Pn**	**14 59 01.5**	**+0.6**
GUMI	**Mixco**	**1.44**	**68**	*i* P		**Pn**	**14 59 02.0**	**+0.2**
GUMI				*i* S		**Sb**	**14 59 20.3**	**-0.9**
GUMI				IAML			14 59 24.6	
	comp=Z,6μm,1.0s							
GCG4	**OSOP**	**1.50**	**71**	*i* P		**Pn**	**14 59 02.2**	**-0.3**
GCG4				*i* S		**Sb**	**14 59 21.4**	**-1.4**
GCG4				IAML			14 59 23.7	
	comp=Z,4μm,1.0s							
NBG	**Las Nubes**	**1.67**	**73**	*eP*		**Pb**	**14 59 06.7**	**-0.5**
GUNB	**GUNB**	**1.67**	**73**	*i* P		**Pn**	**14 59 05.5**	**+0.5**
GUNB				*i* S		**Sb**	**14 59 27.3**	**-0.7**
GUNB				IAML			14 59 29.3	
	comp=Z,980nm,1.0s							
AVCB	**Coban**	**2.05**	**48**	*i* P		**Pn**	**14 59 10.9**	**+0.8**
AVCB				*i* S		**Sb**	**14 59 39.8**	**+1.0**
AVCB				IAML			15 00 54.3	
	comp=Z,9μm,1.0s							
LOAL	**Lomas de Alarc**	**2.15**	**93**	*i* P		**Pn**	**14 59 10.5**	**-0.9**
LOAL				IAML			14 59 35.5	
	comp=Z,3μm,1.0s							
LOAL				*i* S		**Sn**	**14 59 37.0**	**-0.5**
NUBE	**Las Nubes**	**2.16**	**95**	*eP*		**Pn**	**14 59 11.9**	**+0.2**
NUBE				*eS*		**Sn**	**14 59 35.7**	**-2.0**
NUBE				IAML			14 59 42.4	
	comp=Z,269nm,0.3s							
NUBE	**Las Nubes**	**2.16**	**95**	*i* P		**Pn**	**14 59 12.0**	**+0.4**
NUBE				*i* S		**Sn**	**14 59 37.2**	**-0.6**
NUBE				IAML			14 59 41.8	
	comp=Z,620nm,1.0s							
CEVE	**Cerro Verde**	**2.32**	**97**	*eP*		**Pn**	**14 59 14.9**	**+1.1**
CEVE				*eS*		**Sn**	**14 59 42.7**	**+0.9**
CEVE	**Cerro Verde**	**2.32**	**97**	*i* P		**Pn**	**14 59 14.8**	**+0.9**
CEVE				*i* S		**Sn**	**14 59 42.1**	**+0.3**
CEVE				IAML			14 59 47.8	
	comp=Z,2μm,1.0s							
SNJE	**San Jose**	**2.33**	**95**	*eP*		**Pn**	**14 59 15.0**	**+0.9**
UNIC	**Universidad Ca**	**2.38**	**93**	*i* S		**Sn**	**14 59 42.9**	**-0.1**
JAYA	**Jayaque - finc**	**2.51**	**100**	*eP*		**Pn**	**14 59 16.6**	**+0.1**
JAYA				*eS*		**Sn**	**14 59 45.2**	**-1.3**
JAYA				IAML			14 59 47.6	
	comp=Z,769nm,0.2s							
JAYA	**Jayaque - finc**	**2.51**	**100**	*i* P		**Pn**	**14 59 16.6**	**+0.1**
JAYA				*i* S		**Sn**	**14 59 44.8**	**-1.7**
JAYA				IAML			14 59 47.5	
	comp=Z,2μm,1.0s							
PMON	**Piamonte**	**2.63**	**98**	*i* P		**Pn**	**14 59 19.0**	**+0.9**
PMON				*i* S		**Sn**	**14 59 49.4**	**0.0**
PMON				IAML			15 00 00.5	
	comp=Z,1μm,1.0s							
QUEZ	**Alcaldia de Qu**	**2.66**	**95**	*i* P		**Pn**	**14 59 18.7**	**+0.3**
QUEZ				*i* S		**Sn**	**14 59 49.8**	**-0.1**
QUEZ				IAML			15 00 29.9	
	comp=Z,2μm,1.0s							
LALI	**Alcalda de L**	**2.67**	**103**	*eP*		**Pn**	**14 59 19.1**	**+0.6**
LALI				*eS*		**Sn**	**14 59 48.1**	**-2.0**
LALI	**Alcalda de L**	**2.67**	**103**	*i* P		**Pn**	**14 59 19.0**	**+0.5**
LALI				*i* S		**Sn**	**14 59 48.7**	**-1.4**
LALI				IAML			14 59 59.1	
	comp=Z,190nm,1.0s							
SNET	**Serv Nac Est T**	**2.72**	**98**	*i* P		**Pn**	**14 59 20.1**	**+0.9**
SNET				*i* S		**Sn**	**14 59 51.5**	**+0.1**
SNET				IAML			14 59 59.7	

	comp=Z,1μm,1.0s								
PETF	**Flores**	**3.47**	**36**	*i* P		**Pn**		**14 59 29.8**	**+0.3**
PETF				IAML				15 01 11.8	
	comp=Z,670nm,1.0s								
SAJU	**San Juanillo,**	**7.34**	**122**	*i* P		**Pn**		**15 00 22.8**	**+0.1**
SAJU				IAmb		IAmb		15 00 29.6	
	comp=Z,15nm,0.7s								
SAJU				IAML				15 02 26.3	
	comp=Z,38nm,1.0s								
ORTG	**Ortega, Santa**	**7.39**	**119**	*i* P		**Pn**		**15 00 25.6**	**+2.1**
ORTG				IAmb		IAmb		15 00 33.4	
	comp=Z,11nm,0.8s								
ORTG				IVmB_BB				15 01 18.1	
	comp=Z,9μm,1.0s								
ORTG				IAML				15 01 28.5	
	comp=Z,130nm,1.0s								
CDM	**Cerro de Muert**	**9.24**	**118**	*i* P		**Pn**		**15 00 52.1**	**+2.9**
CDM				IAmb		IAmb		15 01 05.3	
	comp=Z,17nm,1.3s								

IDC 12 15:04:04.3±7.5, **7.°26S×129.°49E, h299**km±88km, **mb2.6**/1, **mbtmp3.3**/3, **Error ellipse: s-maj=109.8km s-min=33.6km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.46**	**160**	P		P	15 07 04.5	0.0
	0.7nm,0.7s,baz=337,slow=12,SNR=6.0							
WRA				S		S	15 09 24.7	-8.6
	0.2nm,0.3s,baz=337,slow=24,SNR=9.5							
ASAR	**Alice Springs**	**16.86**	**166**	P		P	15 07 41.7	-0.1
	0.5nm,0.6s,baz=344,slow=10.0,SNR=9.6							
ASAR				S		S	15 10 43.3	+0.9
	0.1nm,0.4s,baz=349,slow=38,SNR=5.5							
MKAR	**Makanchi Array**	**68.17**	**327**	P		P	15 14 32.8	0.0
	0.1nm,0.4s,baz=129,slow=6.5,SNR=1.8							
	0.1nm,0.4s							

*GCG **12** 15:05:59.3±0.7, 13.°56N×90.°71W, h22km±10km, MD3.4*
*SNET **12** 15:05:59.6±1.4, 13.°46N×90.°43W, h26km±245km, ML2.8*
ISC 12 15:05:56.8±3.0, **13.°4N**±0.°1×**90.°58W**±0.°08, **h25**km±16km, **n9**, σ**0**s**91**/18, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NUBE	**Las Nubes**	**0.92**	**58**	*eP*		**Pb**	**15 06 13.9**	**-0.2**
NUBE				*eS*		**Sb**	**15 06 25.3**	**-0.7**
NUBE				IAML			15 06 27.6	
	comp=Z,256nm,0.2s							
PCG	**Pacaya**	**0.97**	**358**	*i* P		**Pb**	**15 06 15.4**	**+0.3**
PCG				*i* S		**Sn**	**15 06 27.7**	**-0.5**
SLOZ	**Alcaldia de Sa**	**0.98**	**52**	*eP*		**Pb**	**15 06 16.1**	**+0.9**
SLOZ				*eS*		**Sb**	**15 06 27.6**	**-0.2**
CEVE	**Cerro Verde**	**1.01**	**66**	*eP*		**Pn**	**15 06 15.7**	**0.0**
CEVE				*eS*		**Sb**	**15 06 28.6**	**-0.3**
SNJE	**San Jose**	**1.05**	**64**	*eP*		**Pn**	**15 06 16.1**	**+0.1**
SNJE				*eS*		**Sb**	**15 06 29.6**	**-0.3**
SNJE				IAML			15 06 31.1	
	comp=Z,115nm,0.1s							
FUG	**Fuego 3**	**1.06**	**346**	*i* P		**Pn**	**15 06 16.3**	**+0.1**
FUG				*i* S		**Sb**	**15 06 27.6**	**-2.5**
JAYA	**Jayaque - finc**	**1.12**	**78**	*eP*		**Pn**	**15 06 17.1**	**0.0**
JAYA				*eS*		**Sn**	**15 06 31.6**	**-0.2**
JAYA				IAML			15 06 32.7	
	comp=Z,945nm,0.2s							
NBG	**Las Nubes**	**1.19**	**11**	*i* P		**Pb**	**15 06 19.2**	**+0.4**
NBG				*i* S		**Sb**	**15 06 35.6**	**+1.7**
STG3	**Santiaguito 3,**	**1.61**	**323**	*i* P		**Pn**	**15 06 24.3**	**+0.5**
STG3				*i* S		**Sn**	**15 06 43.7**	**-0.1**

*TEH **12** 15:17:12.7, 33.°77N×45.°57E, h8km±128km, ML2.5*
*ISN **12** 15:17:13.4±1.3, 33.°69N×45.°54E, h21km±22km, ML2.5*
ISC 12 15:17:12.9±1.2, **33.°76N**±0.°05×**45.°57E**±0.°05, **h10**km, **n7**, σ**0**s**61**/9, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.55**	**104**	Pg		**Pg**	**15 17 23.6**	**0.0**
IBDR	**Badra**	**0.71**	**155**	*e*Pg		**Pg**	**15 17 26.0**	**-0.7**
	baz=330							
IBDR				*e*Sg		**Sg**	**15 17 36.0**	**0.0**
IGHG	**Ghaleghazi**	**1.00**	**55**	Pg		**Pb**	**15 17 32.1**	**-0.4**
BHD	**Baghdad**	**1.11**	**244**	*e*Pn		**Pb**	**15 17 34.0**	**-0.2**
BHD				*e*Sn		**Sn**	**15 17 51.0**	**+1.1**
BHD				AML		AML	15 17 58.9	
	comp=E,317nm,0.3s							
IDHR	**Dehrash**	**1.15**	**35**	Pg		**Pg**	**15 17 34.8**	**-0.3**
KCHF	**Cheshme Sefid,**	**1.32**	**67**	Pg		**Pg**	**15 17 38.1**	**-0.2**
IKFM	**Kafar-mosalman**	**1.91**	**96**	Pn		**Pb**	**15 17 48.2**	**+0.4**

*IDC **12** 15:19:43.6±2.7, 6.°74S×128.°46E, h0km, mb3.6/1, mbtmp3.6/3, ML3.6/2, MS3.8/2, Error ellipse: s-maj=286.1km s-min=31.3km az=66.0*
*NEIC **12** 15:19:53.1±0.5, 6.°59S±0.°10×128.°8E±0.°1, h105km±19km, mb4.4/5, Error ellipse: s-maj=20.5km s-min=11.8km az=63.0.*
ISC 12 15:19:54.7±1.3, **7.°1S**×**128.°9E**±0.°2, **h100**km, **n17**, σ**2**s**82**/15, **mb4.6**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.56**	**111**	Pn		**Pn**	**15 20 35.5**	**+0.9**
FAKI	**Fak Fak**	**5.30**	**39**	Pn		Pn	15 21 05.8	-5.8
MTN	**Manton Dam**	**6.15**	**159**	Pn		**Pn**	**15 21 27.9**	**+4.8**
WB0	**Warramunga Arr**	**13.71**	**158**	Pn		**Pn**	**15 23 04.3**	**-0.7**
WRA	**Warramunga Arr**	**13.85**	**158**	Pn		**Pn**	**15 23 06.0**	**-0.8**
	0.3nm,0.3s,baz=332,slow=14,SNR=18							
WRA				Sn		Sn	15 25 31.0	-8.3
	0.7nm,0.3s,baz=335,slow=22,SNR=9.9							
	0.7nm,0.6s							
WB2	**Warramunga Arr**	**13.85**	**158**	Pn		**Pn**	**15 23 06.0**	**-0.9**
WR0	**Warramunga Arr**	**13.94**	**157**	Pn		**Pn**	**15 23 06.9**	**-1.0**
COEN	**Coen**	**15.62**	**117**	Pn		**Pn**	**15 23 24.6**	**-4.8**
COEN				IAmb		IAmb	15 23 44.4	
	comp=Z,4.7nm,1.2s							
AS31	**Alice Springs**	**17.19**	**164**	P		**Pn**	**15 23 51.0**	**+2.2**
ASAR	**Alice Springs**	**17.19**	**164**	P		**Pn**	**15 23 51.6**	**+2.8**
ASAR	**Alice Springs**	**17.19**	**164**	P		**Pn**	**15 23 51.8**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=347,slow=11,SNR=50							
ASAR				S		**Sn**	**15 26 56.0**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=347,slow=25,SNR=5.9							
	comp=Z,1.3nm,0.6s							
TGY	**Tagaytay City**	**22.46**	**339**	LR		LR	15 34 27.8	
	comp=Z,446nm,21.2s,baz=117,slow=40							
FORT	**Forrest**	**23.60**	**182**	P		**P**	**15 24 58.3**	**+1.6**
FORT				IAmb		IAmb	15 25 23.1	
	comp=Z,36nm,1.4s							
CAN	**Canberra**	**33.64**	**150**	P		**P**	**15 26 27.0**	**+1.1**
CAN				IAmb		IAmb	15 26 35.4	
	comp=Z,25nm,1.4s							
CASY	**Casey**	**60.47**	**188**	P		**P**	**15 29 53.8**	**+0.1**
MKAR	**Makanchi Array**	**67.68**	**327**	P		**P**	**15 30 39.6**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=143,slow=5.9,SNR=5.4							
	comp=Z,0.2nm,0.3s							
WSAR	**Wadi Sarin**	**74.91**	**296**	LR		LR	16 06 41.8	
	comp=Z,42nm,19.9s,baz=206,slow=38							

*NEIC **12** 15:38:16.9±2.1, 5.°97S±0.°08×102.°61E±0.°07, h10km±1km, mb4.3/25, Error ellipse: s-maj=15.6km s-min=7.9km az=220.0*
*DJA **12** 15:38:19.3±0.3, 6.°5S×4.°×10.°3E±.°, h44km±11km, M4.6/16, mb4.6/9, mB5.2/4, MLv4.6/16, Mw(mB)4.6/4*
*IDC **12** 15:38:22.7±4.2, 5.°75S×102.°75E, h49km±39km, mb3.9/15, mbtmp4.2/16, ML4.6/1, MS3.4/5, Error ellipse: s-maj=33.2km s-min=12.9km az=55.0*
ISC 12 15:38:18.9±0.5, **5.°84S**±0.°06×**102.°70E**±0.°05, **h21**km, **n93**, σ**1**s**01**/84, **mb4.3**/27, **MS3.4**/4, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MNAI	**Manna**	**1.49**	**10**			**Pb**	**15 38 45.2**	**-0.7**
MNAI	**Manna**	**1.49**	**10**	P		**Pb**	**15 38 46.2**	**+0.3**
MNAI	**Manna**	**1.49**	**10**	Pn		**Pb**	**15 38 45.2**	**-0.7**
LWLI	**Liwa**	**1.58**	**59**	Pn		**Pn**	**15 38 45.9**	**+0.2**
LWLI				S		**Sb**	**15 39 07.9**	**+0.9**
KASI	**Kota Agung**	**1.81**	**80**	Pn		**Pn**	**15 38 48.8**	**0.0**
KASI				S		**Sb**	**15 39 13.3**	**-0.3**
SBJI	**Serang**	**3.42**	**95**	P		**Pn**	**15 39 11.4**	**+0.4**

PMBI	**Palembang**	**3.55**	**36**	Pn		**Pn**		**15 39 13.9**	**+1.1**
KRJI	**Kerinci**	**3.93**	**342**	P		**Pn**		**15 39 18.5**	**+0.5**
SKJI	**Sukabumi**	**4.00**	**107**	P		**Pn**		**15 39 19.1**	**+0.1**
PPSI	**Pulau Pagai**	**4.07**	**319**	P		**Pn**		**15 39 20.0**	**+0.1**
DBJI	**Dramaga**	**4.08**	**100**	P		**Pn**		**15 39 19.8**	**-0.4**
CNJI	**Cibinong**	**4.63**	**109**	P		**Pn**		**15 39 27.3**	**-0.4**
LEM	**Lembang**	**4.98**	**102**	P		**Pn**		**15 39 36.6**	**+4.0**
	21nm,0.3s,baz=295,slow=17,SNR=14								
LEM				S		**Sn**		**15 40 30.1**	**+0.4**
	41nm,0.6s,baz=229,slow=20,SNR=1.4								
LEM				LR		LR		15 41 59.6	
	comp=Z,272nm,19.2s,baz=279,slow=44								
	62nm,0.4s								
BBJI	**Bungbulang**	**5.17**	**108**	P		**Pn**		**15 39 35.2**	**+0.1**
PDSI	**Padang**	**5.38**	**335**	P		**Pn**		**15 39 38.5**	**+0.5**
XMI	**Christmas Isla**	**5.45**	**147**	P		**Pn**		**15 39 36.3**	**-2.6**
XMIS	**Christmas Isla**	**5.46**	**148**	Pn		Pn		15 39 34.6	-4.5
XMIS	**Christmas Isla**	**5.46**	**148**	P		Pn		15 39 34.9	-4.1
SISI	**Saibi**	**5.75**	**321**	P		**Pn**		**15 39 43.4**	**+0.3**
	52nm,0.6s,2μm0.4nm								
CMJI	**Cimerak**	**6.02**	**109**	P		**Pn**		**15 39 46.9**	**+0.1**
	89nm,0.5s,0.5nm								
KPJI	**Karang Pucung**	**6.36**	**104**	P		**Pn**		**15 39 53.2**	**+1.8**
	26nm,0.5s,0.2nm								
PBSI	**Pulau Batu**	**7.25**	**322**	P		**Pn**		**15 40 03.6**	**0.0**
	40nm,0.7s,0.3nm								
UGM	**Wanagama**	**8.03**	**105**	Pn		**Pn**		**15 40 14.8**	**+0.4**
UGM	**Wanagama**	**8.03**	**105**	P		**Pn**		**15 40 15.6**	**+1.2**
UGM	**Wanagama**	**8.03**	**105**	P		**Pn**		**15 40 15.1**	**+0.7**
	108nm,1.0s								
COCO	**West Island**	**8.56**	**222**	Pn		**Pn**		**15 40 23.6**	**+1.9**
GSI	**Gunungsitoli**	**8.75**	**324**	Pn		**Pn**		**15 40 23.6**	**-0.8**
GSI	**Gunungsitoli**	**8.75**	**324**	P		**Pn**		**15 40 23.8**	**-0.5**
GSI	**Gunungsitoli**	**8.75**	**324**	P		**Pn**		**15 40 23.5**	**-0.8**
	19nm,0.9s,3μm								
SNSI	**Sinabang, Aceh**	**10.38**	**322**	P		**Pn**		**15 40 47.1**	**+0.5**
	24nm,1.0s								
KSM	**Kuching**	**10.51**	**46**	P		**Pn**		**15 40 51.8**	**+3.4**
GMJI	**Gumukmas**	**10.93**	**103**	P		**Pn**		**15 40 54.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**11.66**	**104**			**Pn**		**15 41 03.2**	**-0.9**
KKM	**Kota Kinabalu**	**17.93**	**49**	Pn		**Pn**		**15 42 26.3**	**-0.9**
MYLDM	**Lahad Datu**	**19.20**	**56**	P		**P**		**15 42 42.0**	**+0.5**
MYLDM				IAmb		IAmb		15 42 56.0	
	comp=Z,22nm,0.9s								
TOLI2	**Tolitoli**	**19.33**	**70**	P		**Pn**		**15 42 43.7**	**-0.4**
TOLI2				IAmb		IAmb		15 42 56.9	
	comp=Z,14nm,0.6s								
SOEI	**Soe**	**21.71**	**102**	P		**P**		**15 43 06.7**	**-2.3**
CMAR	**Chiang Mai Arr**	**24.43**	**351**	P		**P**		**15 43 34.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**24.43**	**351**	P		**P**		**15 43 35.8**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=181,slow=9.1,SNR=30								
CMAR				LR		LR		15 52 50.6	
	comp=Z,25nm,20.2s,baz=220,slow=36								
	comp=Z,2.2nm,0.6s								
CHTO	**Chiang Mai**	**24.78**	**351**	P		**P**		**15 43 38.5**	**-1.0**
CHTO				IAmb		IAmb		15 43 39.9	
	comp=Z,2.5nm,0.7s								
FITZ	**Fitzroy Crossi**	**25.49**	**121**	P		**P**		**15 43 46.5**	**+0.6**
CRAI	**Chiangrai**	**26.01**	**355**	P		**P**		**15 43 50.1**	**-0.4**
CRAI				IAmb		IAmb		15 44 02.2	
	comp=Z,4.9nm,1.3s								
DAV	**Davao City (W)**	**26.18**	**61**	P		**P**		**15 43 50.4**	**-1.8**
	comp=Z,140nm,0.4s,baz=248,slow=5.4,SNR=2.5								
MTN	**Manton Dam**	**28.88**	**106**	P		**P**		**15 44 15.8**	**-0.7**
H01W3	**Cape Leeuwin H**	**30.77**	**161**	T		T		16 16 52.9	
	baz=338,slow=76,SNR=17								
H01W2	**Cape Leeuwin H**	**30.78**	**161**	T		T		16 16 49.7	
	baz=338,slow=76,SNR=23								
H01W1	**Cape Leeuwin H**	**30.78**	**161**	T		T		16 16 52.3	
	baz=338,slow=76,SNR=22								
WB0	**Warramunga Arr**	**33.77**	**117**	P		**P**		**15 44 59.4**	**-0.2**
WB0				IAmb		IAmb		15 45 15.4	
	comp=

ZALV				LR	LR	16 19 53.8	
	comp=Z,47nm,19.0s,baz=344,slow=41						
	comp=Z,2.2nm,0.4s						
BVAR	**Borovoye Array**	**64.70**	**339**	P	**P**	**15 48 54.6**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=145,slow=8.8,SNR=30						
	comp=Z,3.1nm,0.5s						
BRVK	**Borovoye**	**64.77**	**339**	P	**P**	**15 48 54.8**	**-0.9**
ABKAR	**Akbulak array**	**66.28**	**331**	P	**P**	**15 49 05.1**	**-0.5**
BRTR	**Keskin Array B**	**77.89**	**313**	P	**P**	**15 50 15.6**	**0.0**
	comp=Z,1.6nm,0.7s,baz=134,slow=8.4,SNR=7.3						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**84.14**	**180**	P	**P**	**15 50 48.7**	**+0.4**
	comp=Z,2.5nm,1.1s,baz=48,slow=21,SNR=6.2						
	comp=Z,2.5nm,1.1s						
AKASG	**Malin Array Be**	**84.15**	**322**	P	**P**	**15 50 49.0**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=78,slow=5.8,SNR=2.5						
	comp=Z,0.7nm,0.6s						
KOLS	**Kolonicke sedl**	**88.11**	**319**	*e*P	**P**	**15 51 10.0**	**+2.0**
TXAR	**Lajitas Array**	**145.85**	**44**	PKPbc	**PKPab**	**15 57 58.1**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=285,slow=1.2,SNR=13						

*IDC **12** 15:43:53.0±2.2,24.°34N×141.°64E,h121km±25km,mb3.0/5, mbtmp3.5/6,Error ellipse: s-maj=46.3km s-min=19.0km az=87.0*

*JMA **12** 15:43:58.0±0.1,25.°N±1.°×14.°1E±.°,h146km,MV4.5/17, IOTO ISLANDS REGION*

ISC 12 15:43:55.6±1.2,24.°40N±0.°10×141.°6E±0.°2,h148km,n13, σ1892/16,mb3.4/5,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**2.28**	**13**	P	**Pn**	**15 44 36.1**	**+2.2**
JHH2				*e*S	**Sn**	**15 45 05.8**	**+2.3**
CBIJ	**Chichi jima**	**2.73**	**11**	*e*P	**Pn**	**15 44 41.9**	**+2.4**
CBIJ				*e*S	**Sn**	**15 45 14.8**	**+1.3**
JCJ	**Chichijima**	**2.73**	**11**	P	**Pn**	**15 44 37.9**	**-1.6**
	80nm,0.4s,baz=102,slow=23,SNR=17						
JCJ				S	**Sn**	**15 45 10.2**	**-3.2**
	91nm,0.3s,baz=277,slow=22,SNR=8.3						
BSO3	**Boso 3**	**10.41**	**355**	*e*P	**Pn**	**15 46 19.3**	**-1.4**
JNY	**Yasuok**	**11.39**	**344**	*e*P	**Pn**	**15 46 34.0**	**0.0**
JYT	**Yasato**	**11.85**	**354**	*e*P	**Pn**	**15 46 39.3**	**-0.6**
JAG	**Ashikaga**	**12.13**	**352**	*e*P	**Pn**	**15 46 41.0**	**-2.4**
JHO	**Hitachi**	**12.20**	**356**	*e*P	**Pn**	**15 46 41.8**	**-2.7**
WRA	**Warramunga Arr**	**44.64**	**190**	P	**P**	**15 51 53.1**	**-0.4**
	0.4nm,0.4s,baz=8.1,slow=8.6,SNR=14						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**48.36**	**189**	P	**P**	**15 52 21.7**	**-0.8**
	0.2nm,0.6s,baz=23,slow=11,SNR=6.0						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**51.82**	**311**	P	**P**	**15 52 49.2**	**+0.8**
	0.2nm,0.4s,baz=82,slow=9.4,SNR=5.5						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**59.69**	**319**	P	**P**	**15 53 44.7**	**+0.5**
	0.3nm,0.5s,baz=96,slow=9.3,SNR=2.5						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**60.32**	**28**	P	**P**	**15 53 48.9**	**+0.5**
	0.4nm,0.9s,baz=265,slow=7.9,SNR=2.6						
	0.4nm,0.9s						

IDC 12 15:45:04.9±8.2,26.°03S×28.°96E,h0km,mbtmp2.8/1, ML2.3/1,Error ellipse: s-maj=81.7km s-min=56.8km az=141.0,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**4.18**	**231**	Pn	Pn	15 46 10.1	-0.1
	0.1nm,0.3s,baz=59,slow=12,SNR=1.9						
BOSA				Pg	Pb	15 46 21.1	+1.6
	0.8nm,0.3s,baz=55,slow=16,SNR=12						
BOSA				Lg	Lg	15 47 18.4	
	0.8nm,0.3s,baz=317,slow=21,SNR=3.8						
	1.8nm,0.7s						
I47ZA	**BOSHOF INFRASO**	**4.20**	**231**	I	I	16 10 00.0	
	0.1nm,0.7s,baz=51,slow=311,SNR=2.9						
I35NA	**TSUMEB INFRASO**	**12.52**	**301**	I	I	17 02 25.0	
	baz=126,slow=315,SNR=4.4						

GUC 12 16:02:08.6±0.6,24.°19S×67.°55W,h216km±11km,ML3.6, 2C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO02	**Mima Guanaco**	**2.09**	**242**	↓*i*P	Pn	16 02 49.5	-0.1
GO02				*i*S	S	16 03 21.3	0.0
GO02				IAML		16 03 22.2	
	comp=N,410nm,0.3s						
PB06	**IPOC Station P**	**2.38**	**308**	↑*i*P	Pn	16 02 52.5	+0.1
PB06				*i*S	S	16 03 25.6	-0.7
PB06				IAML		16 03 27.7	
	comp=E,185nm,0.1s						
PB14	**IPOC Station P**	**2.64**	**260**	*e*P	Pn	16 02 55.9	+0.5
PB14				*i*S	S	16 03 31.1	-0.6
PB14				IAML		16 03 33.7	
	comp=E,56nm,0.2s						
PB05	**IPOC Station P**	**2.78**	**298**	*e*P	Pn	16 02 57.0	+0.3
PB05				*i*S	S	16 03 33.2	-0.9
PB05				IAML		16 03 36.8	
	comp=E,91nm,0.2s						
PB10	**IPOC Station P**	**2.83**	**283**	*e*P	Pn	16 02 58.3	+1.1
PB10				*i*S	S	16 03 34.5	-0.5
PB10				IAML		16 03 42.1	
	comp=N,68nm,0.3s						
PB09	**IPOC Station P**	**2.85**	**326**	↓*i*P	Pn	16 02 57.9	+0.3
PB09				*i*S	S	16 03 35.3	-0.4
PB09				IAML		16 03 36.2	
	comp=E,65nm,0.5s						
AC02	**Maricunga**	**3.00**	**208**	*e*P	Pn	16 02 58.8	-0.7
PB04	**IPOC Station P**	**3.02**	**307**	*e*P	Pn	16 02 59.9	+0.3
PB04				*i*S	S	16 03 38.3	-0.9
PB04				IAML		16 03 41.2	
	comp=N,119nm,0.3s						
PB07	**IPOC Station P**	**3.27**	**318**	↑*i*P	Pn	16 03 02.2	-0.2
PB07				*i*S	S	16 03 42.6	-1.7
PB02	**IPOC Station P**	**3.59**	**322**	*e*P	Pn	16 03 05.6	-0.6
PB02				*i*S	S	16 03 49.6	-1.5
PB01	**IPOC Station P**	**3.61**	**330**	*e*P	Pn	16 03 05.5	-0.9
PB01				*e*S	S	16 03 48.9	-2.7
PATCX	**Punta Patache**	**4.13**	**324**	*e*P	Pn	16 03 12.5	-0.2
PATCX				*e*S	S	16 04 00.3	-2.7
GO03	**Copiap**	**4.16**	**215**	*e*P	Pn	16 03 11.6	-1.4
GO03				*e*S	S	16 04 01.4	-2.2
PB08	**IPOC Station P**	**4.30**	**339**	*e*P	Pn	16 03 14.9	-0.2
PB08				*e*S	S	16 04 05.2	-2.0

IDC 12 16:09:53.1±8.0,4.°72S×145.°71E,h118km±80km,mb2.8/2, mbtmp3.2/4,ML3.2/1,Error ellipse: s-maj=68.7km s-min=32.7km az=140.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.88**	**163**	P	Pn	16 11 05.8	+1.4
	7.5nm,0.9s,baz=320,slow=3.9,SNR=3.9						
PMG				S	Sn	16 11 59.2	-0.7
	4.7nm,0.3s,baz=162,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**18.75**	**215**	P	P	16 14 03.3	+0.3
	0.1nm,0.3s,baz=34,slow=11,SNR=5.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**22.01**	**210**	P	P	16 14 38.4	+0.3
	0.2nm,0.7s,baz=38,slow=7.7,SNR=9.3						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**84.82**	**23**	P	P	16 22 13.9	-0.2
	0.3nm,0.7s,baz=257,slow=4.9,SNR=5.1						
	0.3nm,0.7s						

*NEIC **12** 16:14:27.8±1.3,56.°07N±0.°08×149.°8W±0.°1,h10km±2km, ML3.6/40,ML3.4(AEIC),Error ellipse: s-maj=13.3km s-min=9.5km az=169.0*

*AEIC **12** 16:14:32.4±1.2,56.°10N±0.°09×149.°8W±0.°1,h6km±7km, Error ellipse: s-maj=13.0km s-min=8.0km az=161.0*

ISC 12 16:14:27.8±1.8,56.°12N±0.°10×149.°85W±0.°06,h10km, n208,σ0.°94/214,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.19**	**302**	Pn	**Pn**	**16 15 04.7**	**+0.4**
OHAK	**Old Harbor**	**2.19**	**302**		**Sn**	**16 15 29.3**	**-2.1**
OHAK	**Old Harbor**	**2.19**	**302**	P	**Pn**	**16 15 04.6**	**+0.4**
	baz=119						
OHAK				S	**Sn**	**16 15 29.3**	**-2.1**
	baz=119						
KDAK	**Kodiak Island**	**2.24**	**319**	Pn	**Pn**	**16 15 05.3**	**+0.5**
KDAK	**Kodiak Island**	**2.24**	**319**		**Sn**	**16 15 31.1**	**-1.4**
SII	**Sitkinak Islan**	**2.45**	**282**	Pn	**Pn**	**16 15 07.6**	**-0.2**
SII				IAML		16 15 37.2	
	comp=E,270nm,0.7s						
SII				IAML		16 15 48.1	
	comp=N,223nm,1.4s						
SII	**Sitkinak Islan**	**2.45**	**282**		**Sn**	**16 15 35.8**	**-2.0**
SII	**Sitkinak Islan**	**2.45**	**282**	P	**Pn**	**16 15 07.5**	**-0.3**
	baz=99						
SII				S	**Sn**	**16 15 35.8**	**-2.0**
	baz=99						
Q20K	**Shuyak Island**	**2.85**	**332**	P	**Pn**	**16 15 14.0**	**+0.7**
	baz=150						
Q20K				S	**Sn**	**16 15 47.1**	**-0.6**
	baz=150						
SYI	**Shuyak Island**	**2.85**	**332**	Pn	**Pn**	**16 15 14.0**	**+0.7**
SYI	**Shuyak Island**	**2.85**	**332**		**Sn**	**16 15 47.1**	**-0.5**
Q19K	**Cape Douglas,**	**3.48**	**326**		**Pn**	**16 15 23.2**	**+1.2**
Q19K				IAML		16 16 10.9	
	comp=N,222nm,0.8s						
Q19K				IAML		16 16 16.6	
	comp=E,231nm,1.2s						
Q19K	**Cape Douglas,**	**3.48**	**326**	P	**Pn**	**16 15 23.4**	**+1.4**
	baz=142						
CNPM	**China Poot**	**3.50**	**348**	Pn	**Pn**	**16 15 22.4**	**+0.3**
CNPM				IAML		16 16 03.9	
	comp=E,59nm,0.8s						
CNPM				IAML		16 16 05.0	
	comp=N,66nm,0.6s						
CNPM	**China Poot**	**3.50**	**348**		**Sn**	**16 16 02.9**	**-0.7**
KCE	**Katmai Mt Cerb**	**3.60**	**309**		**Pn**	**16 15 25.3**	**+1.7**
ACHA	**Angle Creek He**	**3.65**	**307**		**Pn**	**16 15 25.6**	**+1.4**
BRSE	**Bradley Lake S**	**3.67**	**353**		**Pn**	**16 15 24.6**	**+0.1**
BRSE					**Sn**	**16 16 06.6**	**-1.1**
BRSE	**Bradley Lake S**	**3.67**	**353**	P	**Pn**	**16 15 24.6**	**+0.1**
	baz=172						
BRSE				S	**Sn**	**16 16 06.6**	**-1.1**
	baz=172						
BRLK	**Bradley Lake**	**3.70**	**352**	Pn	**Pn**	**16 15 24.9**	**-0.1**
BRLK				IAML		16 16 11.4	
	comp=N,50nm,0.6s						
BRLK				IAML		16 16 15.6	
	comp=E,54nm,1.1s						
BRLK	**Bradley Lake**	**3.70**	**352**		**Sn**	**16 16 07.0**	**-1.6**
ANCK	**Angle Creek**	**3.71**	**307**		**Pn**	**16 15 26.8**	**+1.6**
KVTA	**Katmai Vly 10**	**3.73**	**310**		**Pn**	**16 15 27.1**	**+1.8**
Q23K	**Middleton Isla**	**3.81**	**28**	Pn	**Pn**	**16 15 26.3**	**-0.1**
MID	**Middleton Isla**	**3.82**	**28**	Pn	**Pn**	**16 15 26.3**	**-0.2**
PLK3	**Peulik 3**	**3.85**	**297**		**Pn**	**16 15 28.5**	**+1.5**
CNTC	**Contact Creek**	**3.92**	**306**		**Pn**	**16 15 29.5**	**+1.4**
CNTC					**Sn**	**16 16 14.2**	**0.0**
Q17K	**Contact Creek**	**3.92**	**306**	P	**Pn**	**16 15 29.5**	**+1.4**
	baz=121						
Q17K				S	**Sn**	**16 16 14.2**	**0.0**
	baz=121						
KELA	**Mount Kelaz**	**3.95**	**309**		**Pn**	**16 15 30.0**	**+1.5**
P19K	**Oil Pt**	**3.98**	**334**	Pn	**Pn**	**16 15 29.8**	**+1.0**
P19K				IAML		16 16 21.2	
	comp=N,118nm,0.6s						
P19K				IAML		16 16 21.9	
	comp=E,130nm,0.5s						
P19K	**Oil Pt**	**3.98**	**334**	P	**Pn**	**16 15 30.1**	**+1.3**
	baz=151						
P23K	**Montague Islan**	**4.10**	**17**		**Pn**	**16 15 30.4**	**0.0**
P23K	**Montague Islan**	**4.10**	**17**	P	**Pn**	**16 15 30.4**	**0.0**
	baz=199						
O20K	**Slope Mountain**	**4.24**	**341**		**Pn**	**16 15 32.9**	**+0.5**
O20K	**Slope Mountain**	**4.24**	**341**	P	**Pn**	**16 15 32.9**	**+0.5**
	baz=158						
IVE	**Iliamna Volcan**	**4.26**	**338**		**Pn**	**16 15 32.8**	**+0.1**
P18K	**Big Mountain,**	**4.37**	**321**	Pn	**Pn**	**16 15 34.8**	**+0.7**
P18K	**Big Mountain,**	**4.37**	**321**	P	**Pn**	**16 15 34.8**	**+0.7**
	baz=136						
O22K	**Cooper Landing**	**4.38**	**1**	Pn	**Pn**	**16 15 34.6**	**+0.4**
O22K	**Cooper Landing**	**4.38**	**1**	P	**Pn**	**16 15 34.5**	**+0.3**
	baz=180						
SLKM	**Skilak Lake**	**4.41**	**358**		**Pn**	**16 15 34.3**	**-0.3**
Q16K	**King Salmon**	**4.49**	**308**		**Pn**	**16 15 37.1**	**+1.4**
Q16K	**King Salmon**	**4.49**	**308**	P	**Pn**	**16 15 37.1**	**+1.4**
	baz=122						
RSO	**Redoubt South**	**4.62**	**342**	Pn	**Pn**	**16 15 38.3**	**+0.6**
HIN	**Hinchinbrook I**	**4.64**	**21**		**Pn**	**16 15 38.1**	**+0.2**
HIN	**Hinchinbrook I**	**4.64**	**21**	IAML		16 17 29.2	
	comp=N,78nm,1.4s						
HIN				IAML		16 18 18.8	
	comp=E,83nm,1.4s						
P17K	**Kvichak River**	**4.69**	**314**		**Pn**	**16 15 40.0**	**+1.5**
P17K	**Kvichak River**	**4.69**	**314**	P	**Pn**	**16 15 40.0**	**+1.5**
	baz=128						
O18K	**Koktuh Hills**	**4.71**	**325**		**Pn**	**16 15 39.4**	**+0.6**
O18K				IAML		16 16 35.8	
	comp=N,34nm,0.8s						
O18K				IAML		16 16 48.3	
	comp=E,20nm,0.8s						
O18K	**Koktuh Hills**	**4.71**	**325**	P	**Pn**	**16 15 39.3**	**+0.6**
	baz=140						
CAPN	**Captain Cook N**	**4.71**	**352**	Pn	**Pn**	**16 15 39.9**	**+1.0**
O19K	**Port Alsworth**	**4.72**	**332**	Pn	**Pn**	**16 15 39.2**	**+0.2**
O19K				IAML		16 16 42.1	
	comp=N,78nm,0.4s						
O19K	**Port Alsworth**	**4.72**	**332**	P	**Pn**	**16 15 40.3**	**+1.3**
	baz=148						
CHGN	**Chignik**	**4.78**	**276**	Pn	**Pn**	**16 15 41.6**	**+1.9**
CHGN				IAML		16 16 38.9	
	comp=N,46nm,1.4s						
CHGN				IAML		16 18 05.6	
	comp=E,47nm,1.1s						
KAIM	**Kayak Island**	**4.79**	**35**	Pn	**Pn**	**16 15 40.2**	**+0.4**
KAIM				IAML		16 18 06.7	
	comp=N,64nm,1.5s						
KAIM	**Kayak Island**	**4.79**	**35**	P	**Pn**	**16 15 40.3**	**+0.4**
	baz=219						
EYAK	**Cordova Ski Ar**	**4.94**	**24**		**Pn**	**16 15 42.2**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.94**	**24**	P	**Pn**	**16 15 42.2**	**+0.3**
	baz=207						
RC01	**Rabbit Creek A**	**4.99**	**1**	Pn	**Pn**	**16 15 42.7**	**+0.1**
RC01				IAML		16 16 41.8	
	comp=N,28nm,0.4s						
RC01				IAML		16 16 42.5	
	comp=E,38nm,0.5s						
GOAT	**Goat Mountain**	**5.23**	**29**		**Pn**	**16 15 46.2**	**+0.2**
N20K	**Mount Spurr**	**5.25**	**347**	P	**Pn**	**16 15 46.6**	**+0.4**
	baz=165						
SPCR	**Spurr Chakacha**	**5.25**	**347**		**Pn**	**16 15 46.6**	**+0.4**
P16K	**Nushagak River**	**5.26**	**307**		**Pn**	**16 15 47.8**	**+1.4**
P16K	**Nushagak River**	**5.26**	**307**	P	**Pn**	**16 15 47.8**	**+1.4**
	baz=120						
N19K	**Bonanza Creek**	**5.30**	**335**	Pn	**Pn**	**16 15 47.2**	**+0.2**
N19K	**Bonanza Creek**	**5.30**	**335**	P	**Pn**	**16 15 47.1**	**+0.2**
	baz=150						
O17K	**Koliganek Bris**	**5.32**	**317**		**Pn**	**16 15 48.1**	**+0.9**
O17K	**Koliganek Bris**	**5.32**	**317**	P	**Pn**	**16 15 48.1**	**+0.9**
	baz=130						
KNK	**Knik Glacier**	**5.36**	**7**	Pn	**Pn**	**16 15 47.9**	**+0.2**
KNK	**Knik Glacier**	**5.36**	**7**	P	**Pn**	**16 15 47.9**	**+0.2**
	baz=188						
SUA	**Susitna One**	**5.38**	**355**	Pn	**Pn**	**16 15 48.1**	**-0.1**
SUA	**Susitna One**	**5.38**	**355**	P	**Pn**	**16 15 48.4**	**+0.3**
	baz=174						
GRIN	**Grindle Hills**	**5.42**	**37**		**Pn**	**16 15 49.0**	**+0.5**
STLK	**Strandline Lak**	**5.50**	**350**		**Pn**	**16 15 50.1**	**+0.5**
PMR	**Palmer**	**5.50**	**4**	Pn	**Pn**	**16 15 50.8**	**+1.1**
SNH	**Sunshine Point**	**5.51**	**39**		**Pn**	**16 15 49.9**	**0.0**
N18K	**Kilae Creek**	**5.57**	**328**	Pn	**Pn**	**16 15 51.0**	**+0.4**
N18K	**Kilae Creek**	**5.57**	**328**	P	**Pn**	**16 15 50.7**	**+0.2**
	baz=142						
BMRM	**Bremner River**	**5.59**	**27**		**Pn**	**16 15 51.2**	**+0.3**
BMRM	**Bremner River**	**5.59**	**27**	P	**Pn**	**16 15 51.2**	**+0.3**
	baz=211						
O16K	**Kokwok River B**	**5.61**	**312**	Pn	**Pn**	**16 15 52.4**	**+1.3**
O16K	**Kokwok River B**	**5.61**	**312**	P	**Pn**	**16 15 52.5**	**+1.3**
	baz=125						
GHO	**Glory Hole Cre**	**5.69**	**4**	Pn	**Pn**	**16 15 52.8**	**+0.4**
WAX	**Waxell Ridge**	**5.70**	**37**		**Pn**	**16 15 52.4**	**0.0**
SML	**Sawmill**	**5.76**	**7**	Pn	**Pn**	**16 15 53.8**	**+0.6**
SML	**Sawmill**	**5.76**	**7**	P	**Pn**	**16 15 53.9**	**+0.6**
	baz=188						
KLU	**Klutina**	**5.76**	**19**		**Pn**	**16 15 53.8**	**+0.4**
KLU	**Klutina**	**5.76**	**19**	P	**Pn**	**16 15 54.0**	**+0.7**
	baz=202						
SVW2	**Sparrevohn**	**5.82**	**331**	Pn	**Pn**	**16 15 54.2**	**+0.1**
CRQM	**Cirque**	**5.84**	**34**		**Pn**	**16 15 54.9**	**+0.5**
MESA	**MESA**	**5.84**	**43**		**Pn**	**16 15 54.5**	**0.0**
MESA	**MESA**	**5.84**	**43**	P	**Pn**	**16 15 54.5**	**0.0**
	baz=229						
CRQE	**Cirque**	**5.85**	**35**	P	**Pn**	**16 15 54.7**	**+0.1**
	baz=220						
N17K	**Nushagak Hills**	**5.87**	**322**	Pn	**Pn**	**16 15 55.6**	**+0.9**
N17K	**Nushagak Hills**	**5.87**	**322**	P	**Pn**	**16 15 55.4**	**+0.7**
	baz=136						
SCM	**Sheep Creek Mo**	**5.88**	**12**	Pn	**Pn**	**16 15 55.6**	**+0.6**
TGL	**Tana Glacier**	**5.94**	**36**		**Pn**	**16 15 55.7**	**0.0**
SKT	**Skwentna**	**5.95**	**352**	Pn	**Pn**	**16 15 56.0**	**+0.3**
VRDI	**Verde Repeater**	**6.12**	**30**	Pn	**Pn**	**16 15 58.4**	**+0.2**
N25K	**Chitina, Valde**	**6.14**	**24**		**Pn**	**16 15 59.0**	**+0.5**
N25K	**Chitina, Valde**	**6.14**	**24**	P	**Pn**	**16 15 59.1**	**+0.6**
	baz=208						
O15K	**Ungalikthiuk R**	**6.17**	**304**		**Pn**	**16 16 00.1**	**+1.3**
O15K	**Ungalikthiuk R**	**6.17**	**304**	P	**Pn**	**16 16 00.1**	**+1.3**
	baz=116						
GLB	**Gilahina Butte**	**6.20**	**28**	Pn	**Pn**	**16 15 59.5**	**+0.3**
KIAG	**Kiagna River**	**6.21**	**36**		**Pn**	**16 15 59.6**	**0.0**
M18K	**Stony River**	**6.22**	**333**		**Pn**	**16 15 59.5**	**0.0**
M18K	**Stony River**	**6.22**	**333**	P	**Pn**	**16 15 59.4**	**0.0**
	baz=147						
SAMH	**Samovar Hills**	**6.27**	**46**		**Pn**	**16 16 01.1**	**+0.8**
GRNC	**Granite Creek**	**6.28**	**39**		**Pn**	**16 16 00.7**	**+0.1**
M24K	**Tolsona, Glenn**	**6.30**	**16**	Pn	**Pn**	**16 16 01.3**	**+0.6**
M24K	**Tolsona, Glenn**	**6.30**	**16**	P	**Pn**	**16 16 01.7**	**+1.0**
	baz=199						
TABL	**Table Mountain**	**6.32**	**43**		**Pn**	**16 16 01.2**	**+0.2**
MCARA	**McCarthy VSAT**	**6.36**	**31**		**Pn**	**16 16 02.0**	**+0.5**
MCARA	**McCarthy VSAT**	**6.36**	**31**	P	**Pn**	**16 16 01.9**	**+0.5**
	baz=216						
PTPK	**Patty Peak**	**6.38**	**34**		**Pn**	**16 16 02.5**	**+0.6**
N16K	**Nishlik Lake**	**6.41**	**317**		**Pn**	**16 16 03.6**	**+1.5**
N16K	**Nishlik Lake**	**6.41**	**317**	P	**Pn**	**16 16 03.6**	**+1.5**
	baz=129						
PCA	**Pinnacle**	**6.46**	**48**		**Pn**	**16 16 03.3**	**+0.4**
PINM	**Pinnacle**	**6.46**	**48**	P	**Pn**	**16 16 03.3**	**+0.4**
	baz=236						
BARN	**Barnard Glacie**	**6.55**	**37**		**Pn**	**16 16 04.5**	**+0.4**
WAT6	**Susitna Watana**	**6.57**	**9**		**Pn**	**16 16 05.0**	**+0.4**
WAT6	**Susitna Watana**	**6.57**	**9**	P	**Pn**	**16 16 05.0**	**+0.4**
	baz=190						
CTG	**Chitna Glacier**	**6.59**	**39**	P	**Pn**	**16 16 05.0**	**+0.2**
	baz=226						
CTGM	**Chitina Glacie**	**6.59**	**39**	Pn	**Pn**	**16 16 04.8**	**+0.1**
L19K	**White Mountain**	**6.60**	**339**	Pn	**Pn**	**16 16 04.6**	**-0.2**
L19K	**White Mountain**	**6.60**	**339**	P	**Pn**	**16 16 04.5**	**-0.2**
	baz=155						
M17K	**Holitna River**	**6.60**	**326**		**Pn**	**16 16 05.4**	**+0.6**
M17K	**Holitna River**	**6.60**	**326**	P	**Pn**	**16 16 06.0**	**+1.3**
	baz=140						
PNL	**Peninsula**	**6.61**	**53**		**Pn**	**16 16 05.1**	**+0.2**
PNL	**Peninsula**	**6.61**	**53**	P	**Pn**	**16 16 05.1**	**+0.2**
	baz=242						
LOGN	**Logan Glacier**	**6.62**	**41**		**Pn**	**16 16 05.1**	**0.0**
BCPM	**Bancas Point**	**6.65**	**50**		**Pn**	**16 16 05.7**	**+0.3**
HARP	**HAARP**	**6.74**	**19**		**Pn**	**16 16 08.1**	**+1.4**
HARP	**HAARP**	**6.74**	**19**	P	**Pn**	**16 16 08.1**	**+1.4**
	baz=202						
N15K	**Kwethluk River**	**6.77**	**311**	Pn	**Pn**	**16 16 09.1**	**+2.0**
N15K	**Kwethluk River**	**6.77**	**311**	P	**Pn**	**16 16 09.1**	**+2.0**
	baz=122						
M16K	**Timber Creek**	**6.84**	**320**	Pn	**Pn**	**16 16 09.3**	**+1.3**
M16K	**Timber Creek**	**6.84**	**320**	P	**Pn**	**16 16 09.2**	**+1.2**
	baz=132						
O14K	**Tigyukauivet M**	**6.88**	**302**	Pn	**Pn**	**16 16 10.1**	**+1.6**
L18K	**Granite Mounta**	**7.05**	**333**		**Pn**	**16 16 12.1**	**+1.2**
L18K	**Granite Mounta**	**7.05**	**333**	P	**Pn**	**16 16 12.1**	**+1.2**
	baz=147						
DHY	**Denali Highway**	**7.09**	**9**	Pn	**Pn**	**16 16 12.1**	**+0.5**
DHY	**Denali Highway**	**7.09**	**9**	P	**Pn**	**16 16 12.8**	**+1.2**
	baz=191						
M26K	**Nabesna, AK**	**7.21**	**26**	Pn	**Pn**	**16 16 13.5**	**+0.3**
PAX	**Paxson**	**7.22**	**16**		**Pn**	**16 16 14.3**	**+0.9**
PAX	**Paxson**	**7.22**	**16**	P	**Pn**	**16 16 14.3**	**+0.9**
	baz=200						
O29M	**Mount Kennedy**	**7.28**	**50**		**Pn**	**16 16 15.0**	**+0.8**
M15K	**Kasigluk River**	**7.31**	**313**		**Pn**	**16 16 16.1**	**+1.7**
M15K	**Kasigluk River**	**7.31**	**313**	P	**Pn**	**16 16 16.1**	**+1.7**
	baz=124						
RND	**Reindeer**	**7.33**	**4**	Pn	**Pn**	**16 16 15.8**	**+1.0**
YUK2	**White River**	**7.35**	**36**		**Pn**	**16 16 16.1**	**+1.1**
N14K	**Kuskokwak Cree**	**7.35**	**306**		**Pn**	**16 16 16.3**	**+1.3**
N14K	**Kuskokwak Cree**	**7.35**	**306**	P	**Pn**	**16 16 16.3**	**+1.3**
	baz=116						
P29M	**Windy Craggy**	**7.36**	**56**		**Pn**	**16 16 14.9**	**-0.2**
P29M	**Windy Craggy**	**7.36**	**56**	P	**Pn**	**16 16 14.9**	**-0.2**
	baz=246						
TRF	**Thorofare Moun**	**7.36**	**358**	Pn	**Pn**	**16 16 15.6**	**+0.3**
TRF	**Thorofare Moun**	**7.36**	**358**	P	**Pn

s-min=2.1km az=125.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.07**	**60**		Pn	16 16 55.4	-0.4
HPO	**Honuapo**	**0.14**	**217**		Pn	16 16 55.5	-4.5
KHU	**Kahuku**	**0.15**	**288**		Pn	16 16 55.7	-4.3
KHU					Sn	16 16 60.0	-10
KHU	**Kahuku** comp=E,4μm,0.2s	**0.15**	**288**	IAML		16 17 00.3	
KHU	comp=N,2μm,0.1s			IAML		16 17 00.5	
HLP	**Hilina Pali**	**0.18**	**58**		Pn	16 16 56.0	-3.1
HLP					Sn	16 17 00.7	-7.0
HLP	**Hilina Pali** comp=N,703nm,0.2s	**0.18**	**58**	IAML		16 17 00.8	
HLP				IAML		16 17 02.1	
SDHHI	**Sand Hill**	**0.25**	**41**		Pn	16 16 56.4	-1.7
SDHHI	**Sand Hill** comp=E,3μm,0.3s	**0.25**	**41**	IAML		16 17 01.8	
SDHHI	comp=N,3μm,0.3s			IAML		16 17 01.8	
WRMHI	**West Rim**	**0.26**	**37**		Pn	16 16 56.4	-1.6
WRMHI					Sn	16 17 01.8	-3.4
WRMHI	**West Rim** comp=E,2μm,0.5s	**0.26**	**37**	IAML		16 17 02.0	
WRMHI	comp=N,1μm,0.5s			IAML		16 17 05.2	
RIM	**Rim**	**0.27**	**43**		Pn	16 16 56.5	-1.5
RIM	**Rim** comp=N,952nm,0.5s	**0.27**	**43**	IAML		16 17 08.3	
RIM	comp=E,770nm,0.9s			IAML		16 17 10.7	
KKO	**Keanakako`i**	**0.27**	**44**		Pn	16 16 56.6	-1.4
KKO					Sn	16 17 01.4	-3.6
KKO	**Keanakako`i** comp=E,851nm,1.0s	**0.27**	**44**	IAML		16 17 01.4	
KKO	comp=N,1μm,1.4s			IAML		16 17 02.9	
UWE	**Uwekahuna**	**0.27**	**37**		Pn	16 16 56.6	-1.4
UWE					Sn	16 17 01.8	-3.2
UWE	**Uwekahuna** comp=E,1μm,0.7s	**0.27**	**37**	IAML		16 17 03.7	
UWE	comp=N,1μm,0.4s			IAML		16 17 05.8	
OBL	**Observatory Le**	**0.28**	**38**		Pn	16 16 56.5	-1.5
OBL					Sn	16 17 02.2	-2.8
OBL	**Observatory Le** comp=E,2μm,0.6s	**0.28**	**38**	IAML		16 17 02.7	
OBL	comp=N,2μm,0.5s			IAML		16 17 02.7	
UWB	**Uwekahuna B**	**0.28**	**38**		Pn	16 16 56.5	-1.5
UWB					Sn	16 17 01.4	-3.5
UWB	**Uwekahuna B** comp=N,354nm,0.7s	**0.28**	**38**	IAML		16 17 02.3	
UWB	comp=E,232nm,1.2s			IAML		16 17 04.6	
BYL	**Byron's Ledge**	**0.29**	**43**		Pn	16 16 56.6	-1.4
BYL					Sn	16 17 01.9	-3.0
BYL	**Byron's Ledge** comp=E,659nm,0.9s	**0.29**	**43**	IAML		16 17 02.0	
BYL	comp=N,636nm,0.8s			IAML		16 17 03.8	
PUH	**Pauahi**	**0.29**	**54**		Pn	16 16 56.7	-1.3
PUH					Sn	16 17 01.8	-3.1
PUH	**Pauahi** comp=E,394nm,0.2s	**0.29**	**54**	IAML		16 17 01.9	
PUH	comp=N,449nm,0.2s			IAML		16 17 02.3	
SBLHI	**Steaming Bluff**	**0.29**	**40**		Pn	16 16 56.6	-1.4
SBLHI	**Steaming Bluff** comp=N,702nm,0.2s	**0.29**	**40**	IAML		16 17 01.9	
SBLHI	comp=E,1μm,0.2s			IAML		16 17 02.0	
HATHI	**Halema'uma'u T**	**0.29**	**41**		Pn	16 16 56.7	-1.3
HATHI	**Halema'uma'u T** comp=N,750nm,0.6s	**0.29**	**41**	IAML		16 17 02.3	
HATHI	comp=E,740nm,1.0s			IAML		16 17 09.9	
MLH	**Mauna Loa**	**0.30**	**14**		Pn	16 16 57.1	-1.1
MLH					Sn	16 17 02.7	-2.4
MLH	**Mauna Loa** comp=E,1μm,0.2s	**0.30**	**14**	IAML		16 17 02.8	
MLH	comp=N,1μm,0.2s			IAML		16 17 03.0	
MWH	**Moku'aweowe**	**0.31**	**336**		Pn	16 16 57.1	-1.5
MWH	**Moku'aweowe** comp=N,286nm,0.3s	**0.31**	**336**	IAML		16 17 03.1	
MWH	comp=E,243nm,0.3s			IAML		16 17 03.3	
RSD	**Rainshed**	**0.32**	**34**		Pn	16 16 56.9	-1.2
RSD	**Rainshed** comp=E,461nm,0.5s	**0.32**	**34**	IAML		16 17 02.9	
RSD	comp=N,491nm,0.2s			IAML		16 17 05.4	
KNHH	**Kane Nui o Ham**	**0.33**	**58**		Pn	16 16 57.1	-1.0
MLOA	**Mauna Loa Obse**	**0.35**	**343**		Pn	16 16 57.5	-1.2
MLOA	**Mauna Loa Obse** comp=N,463nm,0.2s	**0.35**	**343**	IAML		16 17 03.5	
MLOA	comp=E,308nm,0.1s			IAML		16 17 06.3	
STCH	**Steam Cracks**	**0.37**	**60**		Pn	16 16 57.5	-1.0
STCH					Sn	16 17 03.2	-2.0
STCH	**Steam Cracks** comp=N,569nm,0.1s	**0.37**	**60**	IAML		16 17 03.6	
STCH	comp=E,767nm,0.1s			IAML		16 17 03.6	
ALEP	**Alea Permanent**	**0.38**	**334**		Pn	16 16 57.6	-1.3
ALEP					Sn	16 17 03.6	-2.3
NPOC	**North of Pu'u**	**0.39**	**60**		Pn	16 16 57.7	-1.0
NPOC					Sn	16 17 03.4	-2.1
NPOC	**North of Pu'u** comp=E,658nm,0.5s	**0.39**	**60**	IAML		16 17 03.9	
NPOC	comp=N,762nm,0.2s			IAML		16 17 03.9	
JCUZ	**Jacuzzi**	**0.39**	**62**		Pn	16 16 57.8	-0.9
JCUZ	**Jacuzzi** comp=E,504nm,0.5s	**0.39**	**62**	IAML		16 17 03.9	
JCUZ	comp=N,369nm,0.3s			IAML		16 17 03.9	
HMH	**Humu'ula Sheep**	**0.40**	**358**		Pn	16 16 58.4	-0.7
HMH					Sn	16 17 04.9	-1.2
HMH	**Humu'ula Sheep** comp=N,804nm,0.3s	**0.40**	**358**	IAML		16 17 05.1	
HMH	comp=E,722nm,0.1s			IAML		16 17 05.4	
JOKA	**Jonika Flow**	**0.49**	**62**		Pn	16 16 58.9	-1.4
CPH	**Captain Cook**	**0.51**	**304**		Pn	16 16 58.9	-1.7
POHA	**Pohakuloa**	**0.56**	**353**		Pn	16 16 59.8	-1.7
POHA				IAML		16 17 09.2	
POHA	comp=E,416nm,0.1s			IAML		16 17 10.6	
KHLU	**Kahalu`u**	**0.56**	**314**		Pn	16 16 59.7	-1.8
KHLU	**Kahalu`u** comp=N,571nm,0.1s	**0.56**	**314**	IAML		16 17 07.0	
KHLU	comp=E,471nm,0.3s			IAML		16 17 07.1	
HUH	**Hualalai**	**0.59**	**324**		Pn	16 17 00.6	-1.5
HUH	**Hualalai** comp=E,453nm,0.1s	**0.59**	**324**	IAML		16 17 11.1	
HUH	comp=N,627nm,0.2s			IAML		16 17 13.8	
HPAH	**Hawaii Prepara**	**0.85**	**345**		Pn	16 17 03.5	-1.9
HPAH	**Hawaii Prepara** comp=N,381nm,0.1s	**0.85**	**345**	IAML		16 17 13.9	
MHA	**Mahukona**	**1.06**	**337**	Pn	Pn	16 17 06.5	-1.7

IDC ***12*** *16:41:24.3±1.9, 5°.44S×147°.69E, h0km, mb4.3/3, mbtmp4.3/5, ML4.2/1, MS2.6/2, Error ellipse: s-maj=59.5km s-min=35.2km az=101.0*
NEIC ***12*** *16:41:28.3±0.1, 5°.7S±0°.2×148°.2E±0°.2, h27km±9km, mb4.0/8, Error ellipse: s-maj=34.7km s-min=21.7km az=136.0*
ISC 12 16:41:27.0±1.1, 5°.8S±0°.1×148°.0E±0°.1, h10km, n30, σ1°48/31, mb4.2/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BULU	**Kimbe**	**2.32**	**85**	P	**Pg**	**16 42 12.6**	**+1.1**
PMG	**Port Moresby**	**3.73**	**193**		**Pn**	**16 42 26.1**	**+1.4**
PMG	**Port Moresby**	**3.73**	**193**	P	**Pn**	**16 42 26.4**	**+1.8**
PMG	**Port Moresby**	**3.73**	**193**	P	**Pn**	**16 42 26.5**	**+1.8**
PMG	**Port Moresby** comp=E,8μm,0.3s	**3.73**	**193**	Pn	**Pn**	**16 42 26.4**	**+1.8**
PMG	63nm,0.5s,baz=46,slow=5.9,SNR=53			Sn	**Sn**	**16 43 05.9**	**-2.7**
PMG	10nm,0.3s,baz=2.8,slow=19,SNR=5.2			LR	LR	16 43 47.4	
RABL	comp=Z,55nm,19.0s,baz=30,slow=36 **Rabaul**	**4.43**	**70**	P	**Pb**	**16 42 44.7**	**-0.3**
COEN	**Coen**	**9.44**	**210**	Pn	**Pn**	**16 43 43.8**	**+0.6**
CTA	**Charters Tower** comp=Z,38nm,21.6s,baz=262,slow=33	**14.35**	**187**	LR	LR	16 49 30.2	
QIS	**Mount Isa**	**16.82**	**208**	P	**Pn**	**16 45 23.5**	**+0.6**
WB0	**Warramunga Arr**	**19.22**	**222**	P	**P**	**16 45 51.3**	**-0.1**
WB0	comp=Z,7.1nm,0.8s			IAmb	IAmb	16 45 54.3	
WR0	**Warramunga Arr**	**19.25**	**222**	P	**P**	**16 45 51.7**	**-0.2**
WRAB	**Tennant Creek**	**19.36**	**222**	P	**P**	**16 45 52.5**	**-0.5**
WRAB	comp=Z,3.7nm,0.6s			IAmb	IAmb	16 45 54.0	
WB2	**Warramunga Arr**	**19.37**	**222**	P	**P**	**16 45 52.9**	**-0.2**
WB2	comp=Z,4.4nm,0.6s			IAmb	IAmb	16 45 54.1	
WRA	**Warramunga Arr** comp=Z,0.8nm,0.3s,baz=44,slow=11,SNR=28	**19.38**	**222**	P	**P**	**16 45 53.0**	**-0.2**
WRA	comp=Z,0.4nm,0.6s,baz=42,slow=2.4,SNR=4.8			PcP	**PcP**	**16 50 16.9**	**+1.7**
QLP	**Quilpie**	**21.03**	**189**	P	**P**	**16 46 12.5**	**+1.4**
KOUNC	**Koumac, New Ca**	**21.60**	**134**	P	**P**	**16 46 14.5**	**-2.8**
AS31	**Alice Springs**	**22.39**	**216**		**P**	**16 46 25.5**	**-0.3**
ASAR	**Alice Springs**	**22.39**	**216**		**P**	**16 46 25.5**	**-0.3**
ASAR	**Alice Springs** comp=Z,2.9nm,0.4s,baz=49,slow=9.4,SNR=243	**22.39**	**216**	P	**P**	**16 46 26.0**	**+0.2**
INKA	**Innaminka**	**22.93**	**197**	P	**P**	**16 46 32.6**	**+1.2**
OOD	**Oodnadatta**	**24.85**	**207**	P	**P**	**16 46 50.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**25.04**	**239**	P	**P**	**16 46 51.8**	**+0.1**
FITZ	comp=Z,4.0nm,0.7s			IAmb	IAmb	16 46 53.8	
FITZ	**Fitzroy Crossi**	**25.04**	**239**	P	**P**	**16 46 53.4**	**+1.7**
LCRK	**Leigh Creek**	**26.24**	**199**	P	**P**	**16 47 03.3**	**+0.9**
STKA	**Stephens Creek**	**26.68**	**192**	P	**P**	**16 47 08.0**	**+1.7**
STKA	**Stephens Creek** comp=Z,3.6nm,0.6s,baz=0.6,slow=11,SNR=10	**26.68**	**192**	P	**P**	**16 47 05.9**	**-0.4**
WRKA	comp=Z,3.6nm,0.6s **Warakurna**	**26.92**	**222**	P	**P**	**16 47 09.5**	**+0.8**
QSPA	**South Pole Qui**	**84.22**	**180**	P	**P**	**16 53 57.6**	**-1.0**
QSPA	**South Pole Qui** comp=Z,1.7nm,0.6s,baz=265,slow=1.0,SNR=14	**84.22**	**180**	P	**P**	**16 53 59.0**	**+0.3**
TORD	comp=Z,1.7nm,0.6s **Torodi Ar. Bea** comp=Z,9.0nm,0.3s,baz=97,slow=4.2,SNR=5.0	**145.99**	**285**	PKPbc	**PKPdf**	**17 01 03.4**	**-4.1**

IDC ***12*** *16:49:32.2±12.0, 30°.35N×56°.81E, h0km, mb3.3/2, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=195.1km s-min=84.8km az=47.0*
TEH ***12*** *16:49:36.4, 30°.76N×57°.05E, h9km±26km, ML3.5*
ISC 12 16:49:37.5±0.9, 30°.72N±0°.04×57°.03E±0°.04, h11km, n25, σ1°11/27, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.30**	**136**	Pg	**Pg**	**16 49 43.4**	**-0.2**
ZRDN	**Zarand Kerman**	**0.49**	**300**	Pg	**Pg**	**16 49 46.5**	**-0.8**
KHGB	**Koh Gabri**	**0.59**	**235**	Pg	**Pb**	**16 49 48.8**	**-1.1**
KHGB				Sg	**Sb**	**16 49 57.4**	**-1.0**
TVBK	**TV Kerman**	**0.77**	**198**	Pg	**Pg**	**16 49 53.0**	**0.0**
CHMN	**Cheshme madani**	**0.96**	**153**	Pg	**Pg**	**16 49 55.4**	**-0.7**
NGRK	**Negar Kerman**	**1.10**	**194**	Pg	**Pn**	**16 49 59.1**	**-0.1**
NGRK				Sg	**Sn**	**16 50 15.4**	**+0.7**
IBAF	**Bafgh**	**1.53**	**305**	Pg	**Pn**	**16 50 05.4**	**+0.5**
KBAM	**BAM**	**2.00**	**142**	Pn	**Pn**	**16 50 13.2**	**+1.8**
BSRN	**Basiran**	**2.18**	**55**	Pn	**Pn**	**16 50 14.1**	**+0.2**
IMEH	**Mehriz**	**2.18**	**288**	Pn	**Pn**	**16 50 15.5**	**+1.5**
TPRV	**Parvadeh(Tabas**	**2.32**	**353**	Pn	**Pn**	**16 50 16.2**	**+0.4**
IKOO	**Kooshah**	**2.39**	**44**	Pn	**Pn**	**16 50 17.1**	**+0.2**
ITEG	**Tejag**	**2.62**	**33**	Pn	**Pn**	**16 50 20.2**	**+0.3**
NHDN	**Nehbandan**	**2.68**	**75**	Pn	**Pn**	**16 50 21.3**	**+0.7**
ICHK	**Chekchek**	**2.71**	**305**	Pn	**Pn**	**16 50 22.8**	**+1.6**
TKDS	**Koohdasht(Taba**	**2.89**	**1**	Pn	**Pn**	**16 50 24.2**	**+0.6**
ZHDN	**Zahedan**	**3.53**	**111**	Pn	**Pn**	**16 50 33.8**	**+1.4**
ANAR	**Anarak**	**3.74**	**312**	Pn	**Pn**	**16 50 36.7**	**+1.4**
SHRT	**Shahrakht**	**4.02**	**43**	Pn	**Pn**	**16 50 39.7**	**+0.6**
IZEF	**Zefreh**	**4.55**	**300**	Pn	**Pn**	**16 50 48.3**	**+1.7**
ISFB	**Sefidab**	**5.43**	**313**	Pn	**Pn**	**16 51 00.4**	**+1.9**
SBZV	**Sabzevar**	**5.68**	**5**	Pn	**Pn**	**16 51 03.3**	**+1.3**
GEYT	**Alibeck** 0.4nm,0.3s,baz=188,slow=16,SNR=5.8 1.6nm,0.6s	**7.25**	**7**	Pn	**Pn**	**16 51 24.9**	**+1.5**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=233,slow=7.8,SNR=4.7 0.1nm,0.5s	**25.25**	**43**	P	**P**	**16 55 04.2**	**+0.7**
ZALV	**Zalesovo Beam** 0.3nm,0.5s,baz=247,slow=7.4,SNR=1.8 0.3nm,0.5s	**30.65**	**33**	P	**P**	**16 55 50.8**	**-0.9**

IDC ***12*** *16:54:50.7±59.0, 22°.37S×178°.53W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=1073.0km s-min=146.9km az=85.0*
NEIC ***12*** *16:55:30.6±0.7, 22°.6S±0°.2×178°.6W±0°.4, h397km±19km, mb4.0/16, Error ellipse: s-maj=54.3km s-min=25.6km az=105.0*
ISC 12 16:55:27.8±2.8, 22°.6S±0°.2×178°.5W±0°.4, h377km, n20, σ1°07/20, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**34.33**	**236**	P	**P**	**17 01 40.8**	**+0.2**
TOO	comp=Z,17nm,1.4s			IAmb	IAmb	17 01 42.0	
MCQ	**Macquarie Isla**	**36.05**	**202**	P	**P**	**17 01 55.7**	**+0.9**
STKA	**Stephens Creek**	**36.52**	**247**	P	**P**	**17 01 58.8**	**-0.3**
STKA	**Stephens Creek** comp=Z,2.0nm,0.4s,baz=88,slow=11,SNR=9.8 comp=Z,2.0nm,0.4s	**36.52**	**247**	P	**P**	**17 01 58.8**	**-0.3**
COEN	**Coen**	**37.35**	**277**	P	**P**	**17 02 08.9**	**+2.7**
COEN	comp=Z,8.4nm,1.4s			IAmb	IAmb	17 02 28.0	
BBOO	**Buckleboo**	**41.25**	**246**	P	**P**	**17 02 36.4**	**-1.5**
BBOO	comp=Z,20nm,1.4s			IAmb	IAmb	17 02 37.0	
AS31	**Alice Springs**	**43.66**	**259**	P	**P**	**17 02 55.8**	**-1.4**
ASAR	**Alice Springs**	**43.66**	**259**	P	**P**	**17 02 55.8**	**-1.4**
ASAR	**Alice Springs** comp=Z,2.4nm,0.8s,baz=93,slow=7.7,SNR=24 comp=Z,2.4nm,0.8s	**43.66**	**259**	P	**P**	**17 02 56.8**	**-0.4**
WR0	**Warramunga Arr**	**43.74**	**264**	P	**P**	**17 02 57.2**	**-0.6**
WR0	comp=Z,8.0nm,1.2s			IAmb	IAmb	17 02 59.3	
WB0	**Warramunga Arr**	**43.92**	**265**	P	**P**	**17 02 58.5**	**-0.8**
WB0	comp=Z,4.8nm,0.7s			IAmb	IAmb	17 02 59.4	
WB2	**Warramunga Arr**	**43.92**	**264**	P	**P**	**17 02 58.7**	**-0.6**
WRAB	**Tennant Creek**	**43.92**	**264**	P	**P**	**17 02 58.6**	**-0.7**
WRAB	comp=Z,6.0nm,0.9s			IAmb	IAmb	17 02 59.4	
WRA	**Warramunga Arr**	**43.93**	**264**	P	**P**	**17 02 58.6**	**-0.7**
WRA	**Warramunga Arr** comp=Z,4.0nm,0.6s,baz=103,slow=8.4,SNR=128 comp=Z,4.0nm,0.6s	**43.93**	**264**	P	**P**	**17 02 59.0**	**-0.3**
FORT	**Forrest**	**48.09**	**248**	P	**P**	**17 03 29.9**	**-1.3**
FORT	comp=Z,13nm,0.8s			IAmb	IAmb	17 03 31.7	
PSA00	**Pilbara Seismi**	**56.80**	**258**	P	**P**	**17 04 34.0**	**-0.6**
PSA00	comp=Z,6.3nm,1.3s			IAmb	IAmb	17 05 03.4	
MORW	**Morawa**	**58.65**	**249**	P	**P**	**17 04 46.9**	**-0.3**
BKB	**Balikpapan**	**66.19**	**279**	P	**P**	**17 05 36.7**	**-0.1**
MAJO	**Matsushiro**	**71.69**	**324**	P	**P**	**17 06 09.5**	**-0.3**

SJA ***12*** *17:08:44.2±0.6, 25°.92S×70°.21W, h100km±8km, ML3.7, MW3.8*
GUC ***12*** *17:08:46.1±0.4, 26°.06S×70°.32W, h55km±7km, ML3.8*
ISC 12 17:08:44.7±1.4, 25°.98S±0°.03×70°.56W±0°.06, h31km±15km, n29, σ1°43/38, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.19**	**47**	*e*P	**Pn**	**17 09 05.3**	**-0.2**
GO02				*e*S	**Sb**	**17 09 20.8**	**-1.4**
GO02	**Mina Guanaco**	**1.19**	**47**	*e*P	**Pn**	**17 09 05.3**	**-0.2**
GO02				*i* S	**Sn**	**17 09 19.5**	**-1.4**
GO02	comp=E,8μm,0.3s			IAML		17 09 19.9	
PB14	**IPOC Station P**	**1.35**	**6**	*e*P	**Pb**	**17 09 09.3**	**-0.4**
PB14				*e*S	**Sb**	**17 09 28.1**	**+1.4**
PB14	comp=E,1μm,0.6s			IAML		17 09 29.9	
PB14	**IPOC Station P**	**1.35**	**6**	*e*P	**Pb**	**17 09 09.2**	**-0.4**
PB14				*e*S	**Sb**	**17 09 27.5**	**+0.8**
AC02	**Maricunga**	**1.54**	**124**	*e*P	**Pn**	**17 09 10.1**	**-0.4**
AC02				*e*S	**Sn**	**17 09 28.7**	**-1.0**
AC02	comp=E,1μm,0.2s			IAML		17 09 28.8	
AC02	**Maricunga**	**1.54**	**124**	*i*P	**Pn**	**17 09 10.2**	**-0.4**
AC02				*e*S	**Sn**	**17 09 28.1**	**-1.7**
AC02	comp=N,4μm,0.2s			IAML		17 09 28.5	
GO03	**Copiap**	**1.64**	**170**	*e*P	**Pn**	**17 09 08.1**	**-3.4**
GO03	**Copiap**	**1.64**	**170**	*e*P	**Pn**	**17 09 07.9**	**-3.5**
GO03				*e*S	**Sn**	**17 09 32.4**	**+0.9**
AC04	**Llanos de Chal**	**2.27**	**192**	*e*P	**Pn**	**17 09 20.6**	**+0.6**
AC04	comp=Z,140nm,0.2s			IAML		17 09 58.1	
AC04	**Llanos de Chal**	**2.27**	**192**	*e*P	**Pn**	**17 09 20.4**	**+0.3**
AC04				*e*S	**Sn**	**17 09 46.5**	**-0.4**
AC04	comp=E,466nm,0.4s			IAML		17 10 01.3	
PB10	**IPOC Station P**	**2.45**	**0**	*e*P	**Pn**	**17 09 22.9**	**+0.3**
PB10	comp=Z,235nm,0.5s			IAML		17 10 09.5	
PB10	**IPOC Station P**	**2.45**	**0**	*e*P	**Pn**	**17 09 22.8**	**+0.2**
PB10				*e*S	**Sn**	**17 09 52.1**	**+0.5**
PB10	comp=N,364nm,0.5s			IAML		17 10 09.9	
LCO	**Las Campanas**	**3.02**	**182**	*e*P	**Pn**	**17 09 31.5**	**+0.8**
LCO	comp=Z,1μm,0.8s			IAML		17 10 21.9	
LCO	**Las Campanas**	**3.02**	**182**	*e*P	**Pn**	**17 09 30.8**	**+0.1**
PB05	**IPOC Station P**	**3.13**	**6**	*e*P	**Pn**	**17 09 31.7**	**-0.3**
PB05	comp=Z,168nm,0.5s			IAML		17 10 26.0	
PB06	**IPOC Station P**	**3.38**	**16**	*e*P	**Pn**	**17 09 35.3**	**-0.2**
PB06	comp=Z,214nm,0.2s			IAML		17 10 28.5	
VCA	**Vinchina**	**3.45**	**143**	*e*P	**Pn**	**17 09 38.7**	**+2.2**
VCA	comp=Z,130nm,0.5s			IAML		17 10 29.3	
PB04	**IPOC Station P**	**3.65**	**6**	*e*P	**Pn**	**17 09 38.4**	**-0.8**
PB04	comp=Z,230nm,0.5s			IAML		17 10 43.4	
LVC	**Limon Verde**	**3.67**	**25**	*e*P	**Pn**	**17 09 40.4**	**+0.7**
LVC	comp=Z,195nm,0.7s			IAML		17 10 40.7	
AGUA	**GUANDACOL**	**3.95**	**153**	*e*P	**Pn**	**17 09 45.6**	**+2.3**
AGUA	comp=Z,108nm,0.7s			IAML		17 10 39.6	
CO01	**Juntas del Tor**	**4.01**	**174**	*e*P	**Pn**	**17 09 45.6**	**+1.4**
CO01	comp=Z,47nm,0.3s			IAML		17 10 55.3	
GO04	**Tololo Observa**	**4.18**	**183**	*e*P	**Pn**	**17 09 46.7**	**0.0**
AROD	**Rodeo**	**4.28**	**167**	*e*P	**Pn**	**17 09 50.4**	**+2.3**
PB09	**IPOC Station P**	**4.33**	**16**	*e*P	**Pn**	**17 09 49.4**	**+0.7**
PB09	comp=Z,161nm,0.9s			IAML		17 11 03.9	
ACLC	**CERRO LA CRUZ**	**4.69**	**138**	*e*P	**Pn**	**17 09 54.0**	**+0.4**
ACLC	comp=Z,34nm,0.5s			IAML		17 10 53.0	
AHML	**Horco Molle**	**4.75**	**101**	*e*P	**Pn**	**17 09 56.5**	**+2.2**
CO06	**Fray Jorge**	**4.78**	**191**	*e*P	**Pn**	**17 09 53.1**	**-1.4**
ACCO	**Cerro Coronel**	**4.78**	**164**	*e*P	**Pn**	**17 09 57.2**	**+2.4**
ACCO	comp=Z,34nm,0.6s			IAML		17 11 13.6	
CYA	**Choya**	**4.89**	**121**	*e*P	**Pn**	**17 09 57.0**	**+0.8**

IDC ***12*** *17:52:19.3±1.4, 8°.29S×110°.99E, h0km, mb3.2/3, mbtmp3.3/4, ML3.5/1, MS2.8/1, Error ellipse: s-maj=88.6km s-min=24.0km az=39.0*
DJA ***12*** *17:52:21.2±1.2, 9°.S±4°×11°.0E±°, h11km±10km, M4.1/12, mb4.2/3, MLv4.0/12*
ISC 12 17:52:20.2±1.1, 9°.1S±0°.1×110°.33E±0°.07, h10km, n22, σ1°83/24, mb3.2/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.21**	**9**	P	**Pn**	**17 52 43.0**	**-0.4**
UGM	**Wanagama**	**1.21**	**9**	P	**Pn**	**17 52 42.9**	**-0.4**
SMRI	**Semarang**	**2.06**	**3**	P	**Pn**	**17 52 57.0**	**+2.1**
KPJI	**Karang Pucung**	**2.25**	**322**	P	**Pn**	**17 52 58.2**	**+0.7**
CMJI	**Cimerak**	**2.28**	**305**	P	**Pn**	**17 52 58.4**	**+0.4**
BBJI	**Bungbulang**	**3.12**	**302**	P	**Pn**	**17 53 10.9**	**+1.3**
GMJI	**Gumukmas**	**3.19**	**75**	P	**Pn**	**17 53 11.2**	**+0.6**
BLJI	**Banyuglugur**	**3.51**	**67**	P	**Pn**	**17 53 14.2**	**-0.7**
LEM	**Lembang** 4.1nm,0.3s,baz=143,slow=7.3,SNR=6.4	**3.52**	**310**	Pn	**Pn**	**17 53 18.6**	**+3.5**
LEM	3.4nm,0.3s,baz=322,slow=16,SNR=3.6			Sn	**Sn**	**17 53 58.7**	**+1.8**
LEM	comp=Z,136nm,19.3s,baz=176,slow=42 23nm,0.5s			LR	LR	17 54 52.6	
LEM	**Lembang**	**3.52**	**310**	P	**Pn**	**17 53 16.0**	**+0.8**
CNJI	**Cibinong**	**3.64**	**299**	P	**Pn**	**17 53 17.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.83**	**81**	P	**Pn**	**17 53 21.8**	**+2.4**
JAGI	**Jajag, Banyuwa**	**3.83**	**81**	P	**Pn**	**17 53 19.9**	**+0.5**
XMI	**Christmas Isla**	**4.76**	**253**	P	**Pn**	**17 53 34.8**	**+2.7**
XMIS	**Christmas Isla**	**4.80**	**253**	P	**Pn**	**17 53 34.5**	**+1.8**
SRBI	**Singaraja**	**4.94**	**78**	P	**Pn**	**17 53 37.4**	**+2.8**
TWSI	**Taliwang, Sumb** 14nm,1.1s,0.1nm	**6.49**	**87**	P	**Pn**	**17 53 57.5**	**+1.6**
PLAI	**Plampang**	**7.37**	**88**	P	**Pn**	**17 54 10.5**	**+2.6**
PLAI	**Plampang** 12nm,1.5s,0.1nm	**7.37**	**88**	P	**Pn**	**17 54 08.9**	**+1.0**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=290,slow=12,SNR=2.3 0.3nm,0.6s	**25.58**	**118**	P	**P**	**17 57 49.8**	**+0.1**
ASAR	**Alice Springs** 0.2nm,0.6s,baz=297,slow=8.2,SNR=4.3	**26.79**	**126**	P	**P**	**17 58 00.5**	**-0.3**
ASAR	0.3nm,0.5s,baz=301,slow=2.0,SNR=6.4 0.2nm,0.6s			PcP	**PcP**	**18 01 23.8**	**0.0**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=157,slow=7.3,SNR=4.9 0.2nm,0.6s	**61.02**	**338**	P	**P**	**18 02 30.6**	**-3.4**

TAP 12 18:06:40.8, 23°.99N×121°.59E, h5km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=129	**0.02**	**137**	*i* P	Pg	18 06 42.2	+0.5
HWA	baz=129			*i* S	Sg	18 06 43.6	+1.1
TWD	**Chiawan** baz=10.0	**0.09**	**5**	*i* P	Pg	18 06 43.3	+0.6
TWD	baz=10.0			S	Sg	18 06 45.6	+1.6
ETM	**Tongmen** baz=250	**0.09**	**252**	*i* P	Pg	18 06 43.2	+0.5
ETM	baz=250			*i* S	Sg	18 06 44.9	+0.8
ETL	**Fush Village** baz=77	**0.17**	**11**	P	Pg	18 06 44.7	+0.6
ETL	baz=77			S	Sg	18 06 47.6	+1.2
ETL	**

baz=198
TWD Chiawan 0.14 107 *i* P Pg 18 06 44.6 +1.3
baz=106
TWD *i* S Sg 18 06 46.9 +1.5
baz=106
NACB Ninganchiao 0.14 69⇑ *i* P Pg 18 06 44.5 +1.1
baz=68
NACB *i* S Sg 18 06 46.8 +1.3
baz=68
ETM Tongmen 0.16 166 S Sg 18 06 46.9 +1.0
baz=165
WHF Hehuan Shan 0.17 278⇑ *i* P Pg 18 06 45.0 +1.0
baz=277
WHF *i* S Sg 18 06 47.4 +0.7
baz=277
CHGB Renai 0.26 256⇑ *i* P Pb 18 06 46.9 -0.4
baz=256
CHGB S Sg 18 06 50.3 +1.3
baz=256
ESL Shilin 0.31 183 P Pb 18 06 47.4 -0.6
baz=181
NNSB Datong 0.31 349 P Pb 18 06 47.7 -0.5
baz=348
NNSB *i* S Sb 18 06 52.3 -1.1
baz=348
NNS Nan Shan 0.32 348 P Pb 18 06 48.6 +0.3
baz=348
NNS *i* S Sb 18 06 52.6 -1.2
baz=348
WUSB Renai 0.33 247⇑ *i* P Pb 18 06 48.2 -0.2
baz=246
WUSB *i* S Sb 18 06 52.7 -1.2
baz=246
SHUL Shoufeng 0.35 163 *e* P Pb 18 06 48.1 -0.6
baz=162
WARBT Fenglin Townsh 0.41 188 P Pb 18 06 49.2 -0.5
baz=188
LATG Datong 0.42 10 *e* P Pb 18 06 49.6 -0.3
baz=9.0
LATG S Sb 18 06 55.5 -1.0
baz=9.0
VWDT VWDT 0.46 218 *e* P Pb 18 06 50.5 -0.2
baz=217
NDT Datong Townshi 0.48 7 *e* P Pb 18 06 50.6 -0.3
baz=6.0
WCS Beigang Elemen 0.49 263 *e* P Pb 18 06 51.4 +0.3
baz=262
YHNB Yeheng 0.55 353 *e* P Pb 18 06 52.1 -0.1
baz=352
SMLT Sun Moon Lake 0.56 245 *e* P Pb 18 06 52.2 0.0
baz=244
SMLT *e* S Sb 18 07 01.4 +1.0
baz=244
NSK Sanguang 0.56 351 *e* P Pb 18 06 52.0 -0.3
baz=352
SSLB Suanglung 0.56 234 *i* P Pb 18 06 52.4 +0.1
baz=233
SSLB S Sb 18 06 59.6 -1.0
baz=233
TAW Tawu 1.83 196 *e* P Pn 18 07 11.3 -0.6
baz=195
TAW S Sn 18 07 34.0 -1.2
baz=195

TAP 12 18:06:48.6, 24.49N×121.80E, h8km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.05**	**207**	P	Pg	18 06 50.5	+0.2
	baz=207						
EWUT				*i* S	Sg	18 06 51.7	+0.2
	baz=207						
ENA	**Nanau**	**0.08**	**223**	P	Pg	18 06 51.1	+0.4
	baz=218						
ENA				*i* S	Sg	18 06 52.4	+0.1
	baz=218						
ESAO	**Su ao**	**0.09**	**23**	P	Pg	18 06 51.1	+0.2
	baz=23						
ESAO				*e* S	Sg	18 06 52.6	+0.1
	baz=23						
TWC	**Suao**	**0.13**	**19**	*i* P	Pg	18 06 51.8	+0.4
	baz=23						
TWC				*i* S	Sg	18 06 53.9	+0.5
	baz=23						
NDS	**Dongshan**	**0.16**	**331**	*e* P	Pg	18 06 52.2	+0.2
	baz=25						
NDS	**Dongshan**	**0.16**	**331**	*e* P	Pg	18 06 52.5	+0.4
	baz=337						
NDS				*e* S	Sg	18 06 55.1	+0.6
	baz=337						
LATG	**Datong**	**0.26**	**280**	*e* P	Pb	18 06 54.7	-0.9
	baz=280						
TWE	**Neicheng**	**0.26**	**332**	*e* P	Pg	18 06 54.7	+0.8
	baz=334						
ENTT	**Nioudou**	**0.26**	**305**	*e* P	Pg	18 06 54.4	+0.5
	baz=305						
NDT	**Datong Townshi**	**0.29**	**293**	*e* P	Pg	18 06 54.9	+0.5
	baz=293						

FUNV 12 18:17:54.0, 12.42N×68.83W, h36km, MW3.7, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIQV	**Siquisique**	**2.01**	**209**	*e* P	Pn	18 18 24.2	-1.2
SIQV				*e* S	Sn	18 18 47.3	-2.0
TURV	**Turiamo**	**2.19**	**154**	*e* P	Pn	18 18 26.4	-1.4
TURV				*e* S	Sn	18 18 51.0	-2.6
CURV	**Curarigua**	**2.64**	**205**	*e* P	Pn	18 18 34.1	0.0
CURV				*e* S	Sn	18 19 02.4	-2.6
BENV	**Beln**	**2.73**	**154**	*e* P	Pn	18 18 34.7	-0.6
BENV				*e* S	Sn	18 19 04.5	-2.5
FUNV	**FUNVISIS**	**2.77**	**134**	*e* P	Pn	18 18 35.1	-0.8
FUNV				*e* S	Sn	18 19 04.7	-3.6
TACV	**Tcata**	**2.88**	**142**	*e* P	Pn	18 18 36.1	-1.2
TACV				*e* S	Sn	18 19 08.1	-2.7
BAUV	**El Baul**	**3.54**	**167**	*e* P	Pn	18 18 45.4	-1.1
BAUV				*e* S	Sn	18 19 23.9	-3.3
MERV	**Las Mercedes**	**4.01**	**142**	*e* P	Pn	18 18 52.3	-0.7
CACV	**CAICARA DEL OR**	**5.33**	**155**	*e* P	Pn	18 19 13.9	+2.9
CACV				*e* S	Sn	18 20 12.9	+1.7

IDC 12 18:23:04.9±4.6, 11.88N×125.77E, h0km, mb3.2/3, mbtmp3.2/3, MS2.6/1, Error ellipse: s-maj=362.7km s-min=30.4km az=65.0, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**26.68**	**287**	LR	LR	18 40 00.1	
	comp=Z,11nm,18.3s,baz=210,slow=38						
WRA	**Warramunga Arr**	**32.72**	**165**	P	P	18 29 38.6	-0.9
	0.3nm,0.7s,baz=344,slow=9.9,SNR=2.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**36.21**	**167**	P	P	18 30 10.2	+0.5
	0.3nm,0.9s,baz=353,slow=7.4,SNR=6.4						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**50.46**	**322**	P	P	18 32 04.4	-0.1
	0.1nm,0.5s,baz=112,slow=8.8,SNR=1.9						
	0.1nm,0.5s						

*SJA **12** 18:30:06.0±0.5, 32.15S×71.79W, h28km±3km, ML3.3, MW3.7*
*GUC **12** 18:30:07.2±0.8, 32.03S×71.60W, h40km±3km, ML3.3*
ISC 12 18:30:03.4±1.2, 32.09S±0.02×71.90W±0.06, h17km, n37, σ1§70/64, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.69**	**132**	*e* P	**Pn**	**18 30 18.9**	**+0.4**
VA06				*e* S	**Sn**	**18 30 27.6**	**-1.2**
VA06				IAML		18 30 30.9	
	comp=N,2μm,0.4s						
VA01	**Torpederas**	**0.95**	**167**	*e*	**Pn**	**18 30 24.8**	**+2.7**
VA01				*e* P	**Pn**	**18 30 24.8**	**+2.7**
ROCH	**El Roble**	**1.16**	**140**⇑	*e* P	**Pn**	**18 30 26.4**	**+1.3**
ROCH				*e* P	**Pg**	**18 30 26.3**	**+0.4**
ROCH				*e* S	**Sn**	**18 30 41.6**	**+1.0**
ROCH				*e* S	**Sn**	**18 30 41.7**	**+1.0**
ROCH				IAML		18 30 45.2	
	comp=N,985nm,0.2s						
ROC1	**El Roble**	**1.16**	**140**	*e* P	**Pg**	**18 30 26.6**	**+0.7**
CO02	**Combarbal**	**1.17**	**41**	*e* P	**Pn**	**18 30 24.6**	**-0.6**
CO02				*e* S	**Sb**	**18 30 37.9**	**-2.4**
CO02				IAML		18 30 41.6	
	comp=E,2μm,0.4s						
VA03	**San Esteban**	**1.33**	**121**	*e* P	**Pb**	**18 30 27.9**	**0.0**
VA03				*e* S	**Sb**	**18 30 43.1**	**-1.6**
VA03				*e*		18 30 43.1	
VA03				IAML		18 30 46.3	
	comp=N,2μm,0.4s						
MT02	**Curacav**	**1.33**	**151**	*e* P	**Pg**	**18 30 29.4**	**+0.3**
MT02				*e* S	**Sg**	**18 30 46.4**	**-0.2**
CO06	**Fray Jorge**	**1.43**	**9**	*e* P	**Pn**	**18 30 29.4**	**+0.8**
CO06				*i* S	**Sn**	**18 30 46.0**	**-1.1**
PEL	**Peldehue**	**1.47**	**136**	*e* P	**Pg**	**18 30 31.2**	**-0.6**
PEL				*e* S	**Sg**	**18 30 50.0**	**-0.9**
PEL	**Peldehue**	**1.47**	**136**	*e* P	**Pb**	**18 30 30.4**	**0.0**
PEL				*e* S	**Sg**	**18 30 48.6**	**-2.3**
PEL				IAML		18 30 51.5	
	comp=E,909nm,0.3s						
CO03	**El Pedregal**	**1.62**	**40**	*e* P	**Pn**	**18 30 31.7**	**+0.3**
CO03				*e* S	**Sn**	**18 30 50.5**	**-1.4**
CO03				IAML		18 30 53.5	
	comp=E,578nm,0.5s						
MT05	**Renca**	**1.63**	**143**	*e* P	**Pg**	**18 30 34.4**	**-0.4**
MT05				*i* S	**Sg**	**18 30 53.7**	**-2.2**
MT05				IAML		18 30 57.6	
	comp=E,1μm,0.2s						
MT10	**Hacienda Santa**	**1.65**	**136**	*e* P	**Pg**	**18 30 34.1**	**-1.1**
MT10				*i* S	**Sb**	**18 30 53.5**	**-0.6**
MT14	**Cerro Cal¡n**	**1.74**	**139**	*e* P	**Pb**	**18 30 34.9**	**-0.1**
MT14				*i* S	**Sg**	**18 30 56.3**	**-3.2**
MT14				IAML		18 30 59.1	
	comp=E,1μm,0.4s						
MT03	**Universidad Ad**	**1.82**	**140**	*e* P	**Pb**	**18 30 36.8**	**+0.3**
MT03				*i* S	**Sb**	**18 30 58.7**	**-0.4**
FCH	**Farellones**	**1.83**	**133**	*e* P	**Pb**	**18 30 36.8**	**0.0**
FCH				*e* S	**Sb**	**18 30 58.8**	**-0.8**
FCH				IAML		18 31 00.9	
	comp=N,471nm,0.3s						
MT09	**Talagante**	**1.85**	**156**⇑	*i* P	**Pg**	**18 30 38.0**	**-1.0**
MT09				*i* S	**Sg**	**18 31 00.8**	**-2.2**
MT09				IAML		18 31 05.8	
	comp=N,353nm,0.4s						
MT01	**Popeta**	**1.85**	**163**⇑	*e* P	**Pb**	**18 30 37.4**	**+0.5**
MT01				*i* S	**Sg**	**18 31 01.9**	**-1.2**
MT01				IAML		18 31 06.6	
	comp=E,236nm,0.2s						
MT04	**Ro Olivares**	**1.98**	**132**	*e* P	**Pb**	**18 30 38.9**	**-0.4**
MT04				*i* S	**Sb**	**18 31 02.9**	**-0.9**
MT04				IAML		18 31 05.2	
	comp=E,336nm,0.3s						
GO04	**Tololo Observa**	**2.13**	**27**	*e* P	**Pn**	**18 30 40.9**	**+2.3**
GO04				*i* S	**Sn**	**18 31 06.3**	**+1.5**
AUSP	**Uspallata**	**2.14**	**94**	*e* P	**Pb**	**18 30 41.6**	**-0.3**
AUSP				*e* S	**Sb**	**18 31 06.9**	**-1.4**
BO04	**La Punta**	**2.18**	**150**	*e* P	**Pb**	**18 30 42.4**	**-0.1**
BO04				*i* S	**Sb**	**18 31 08.3**	**-1.0**
BO04				IAML		18 31 17.9	
	comp=E,272nm,0.3s						
RTLS	**Leoncito**	**2.23**	**83**	*e* P	**Pb**	**18 30 43.0**	**-0.6**
RTLS				*e* S	**Sb**	**18 31 10.6**	**-0.5**
RTLS				IAML		18 31 11.6	
	comp=Z,367nm,0.3s						
LMEL	**Las Melosas**	**2.26**	**141**	*e* P	**Pb**	**18 30 43.2**	**-0.7**
LMEL				*i* S	**Sb**	**18 31 09.5**	**-2.2**
LMEL				IAML		18 31 17.8	
BO01	**Tunca**	**2.39**	**164**	*e* P	**Pb**	**18 30 44.8**	**-1.3**
ARCO	**CERRO ARCO**	**2.62**	**107**	*e* P	**Pb**	**18 30 50.8**	**+0.7**
ARCO				IAML		18 31 29.5	
	comp=Z,117nm,0.5s						
ASAL	**Salagasta**	**2.65**	**102**	*e* P	**Pb**	**18 30 50.8**	**+0.4**
AAGR	**Agrelo**	**2.78**	**112**	*e* P	**Pb**	**18 30 52.8**	**+0.1**
AAGR				IAML		18 31 37.2	
	comp=Z,97nm,0.8s						
AROD	**Rodeo**	**2.83**	**48**	*e* P	**Pb**	**18 30 52.6**	**-1.2**
AROD				*e* S	**Sb**	**18 31 28.2**	**-0.1**
ACCO	**Cerro Coronel**	**2.85**	**59**	*e* P	**Pb**	**18 30 52.4**	**-1.7**
ACCO				IAML		18 31 36.8	
	comp=Z,70nm,0.7s						
RTLL	**Cerro Villicun**	**3.02**	**76**	*e* P	**Pb**	**18 30 56.0**	**-0.8**
RTLL				IAML		18 31 41.1	
	comp=Z,56nm,0.6s						
AGUA	**GUANDACOL**	**3.92**	**49**	*e* P	**Pn**	**18 31 07.4**	**+4.4**
AGUA				IAML		18 32 17.3	
	comp=Z,44nm,0.6s						
AVFE	**Valle Fertil**	**4.06**	**71**	*e* P	**Pn**	**18 31 08.4**	**+3.5**
AVFE				IAML		18 32 16.6	
	comp=Z,24nm,0.8s						
ACHE	**Chepes**	**4.56**	**80**	*e* P	**Pn**	**18 31 16.6**	**+4.7**
VCA	**Vinchina**	**4.62**	**45**	*e* P	Pn	18 31 18.9	+6.2
VCA				*e* S	**Sb**	**18 32 19.6**	**-0.1**
VCA				IAML		18 32 20.0	
	comp=Z,75nm,0.5s						
ACLC	**CERRO LA CRUZ**	**5.02**	**59**	*e* P	**Pn**	**18 31 21.2**	**+3.0**
ACLC				*e* S	**Sb**	**18 32 33.6**	**+2.4**
ACLC				IAML		18 32 39.3	
	comp=Z,68nm,0.2s						
CYA	**Choya**	**6.41**	**57**	*e* P	**Pn**	**18 31 41.4**	**+4.3**
CYA				IAML		18 33 31.2	
	comp=Z,6.2nm,0.9s						

*NIED **12** 18:36:33.5, 37.14N×141.35E, h49km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}2.03; $M_{\theta\theta}$-4.08; $M_{\phi\phi}$2.04; $M_{r\theta}$-3.61; $M_{\theta\phi}$1.55; $M_{\phi r}$-1.98; Fault plane solution: M_o5.63000×10¹⁴ NP1: ϕ_s248.00000°, δ77.00000°, λ55.00000°. NP2: ϕ_s141.00000°, δ37.00000°, λ158.00000°.*
*JMA **12** 18:36:33.5±0.2, 37.1N±0.4×141.4E±0.9, h49km±1km, MD4.1/40, MV4.0/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*IDC **12** 18:36:33.3±2.6, 37.05N×141.48E, h40km±24km, mb3.5/9, mbtmp3.8/12, ML3.9/2, MS2.6/1, Error ellipse: s-maj=18.7km s-min=13.0km az=80.0*
*NEIC **12** 18:36:33.8±2.1, 37.18N±0.06×141.5E±0.1, h40km±10km, mb4.3/13, Error ellipse: s-maj=12.3km s-min=8.0km az=82.0*
ISC 12 18:36:32.7±1.3, 37.12N±0.04×141.46E±0.06, h33km±6km, n68, σ1§17/67, mb4.1/16, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.53**	**297**	*i* P	**Pb**	**18 36 43.8**	**+0.1**
JFK				S	**Sb**	**18 36 50.9**	**-0.4**
ONAJ	**Iwakimizuishiy**	**0.53**	**268**	*i* P	**Pb**	**18 36 44.0**	**+0.2**
ONAJ				S	**Sb**	**18 36 51.2**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.53**	**268**	A	A	18 36 44.0	
	comp=E,78nm,0.3s,comp=N,40nm,0.3s						
JFFD	**Fukushimafurud**	**0.72**	**268**	*i* P	**Pn**	**18 36 46.3**	**-0.3**
JFFD				S	**Sb**	**18 36 55.2**	**-1.4**
JMST	**Minamisoumatoc**	**0.75**	**323**	⇓*i* P	**Pn**	**18 36 46.8**	**-0.3**
JMST				⇓S	**Sn**	**18 36 56.4**	**-0.9**
JMST	**Minamisoumatoc**	**0.75**	**323**	A	A	18 36 46.8	
	comp=E,5.0nm,0.3s,comp=N,10.0nm,0.2s						
JHO	**Hitachi**	**0.88**	**235**	*i* P	**Pn**	**18 36 48.2**	**-0.6**
JHO				S	**Sn**	**18 36 59.0**	**-1.4**
JMM	**Marumori**	**0.91**	**324**		**Pn**	**18 36 49.2**	**-0.1**
JMM				Sn	**Sn**	**18 36 59.0**	**-2.2**
JMM	**Marumori**	**0.91**	**324**	P	**Pn**	**18 36 49.1**	**-0.1**
JMM	**Marumori**	**0.91**	**324**	⇓*i* P	**Pn**	**18 36 49.1**	**-0.1**
JMM				⇓S	**Sn**	**18 37 00.5**	**-0.8**
JOTO	**OTAMA OYAMA**	**1.00**	**296**	*i* P	**Pn**	**18 36 50.9**	**+0.5**
JOTO				S	**Sn**	**18 37 03.1**	**-0.3**
JOTO	**OTAMA OYAMA**	**1.00**	**296**	A	A	18 36 50.9	
	comp=E,14nm,1.1s,comp=N,16nm,0.4s						
JIO	**Ouri**	**1.33**	**356**	⇓*i* P	**Pn**	**18 36 55.2**	**+0.2**
JIO				⇓S	**Sn**	**18 37 10.7**	**-0.9**
JOU	**Okura**	**1.39**	**333**	*e* P	**Pn**	**18 36 56.0**	**+0.2**
JFY	**Yanaizu**	**1.43**	**282**	*i* P	**Pn**	**18 36 56.6**	**+0.2**
JYS	**Shirataka**	**1.56**	**315**	P	**Pn**	**18 36 59.0**	**+0.9**
JYS				*e* S	**Sn**	**18 37 17.8**	**+0.6**
MJAR	**Matsushiro Arr**	**2.67**	**258**	P	**Pn**	**18 37 14.2**	**+0.7**
	comp=N,6.0nm,0.5s,baz=99,slow=24,SNR=38						
MJAR				S	**Sn**	**18 37 44.9**	**+0.2**
	comp=N,21nm,0.6s,baz=188,slow=21,SNR=4.2						
MAJO	**Matsushiro**	**2.68**	**258**		**Pn**	**18 37 14.5**	**+1.0**
MAJO	**Matsushiro**	**2.68**	**258**	P	**Pn**	**18 37 14.9**	**+1.4**
MJB9	**Matsu-Tunnel**	**2.68**	**259**		**Pn**	**18 37 15.4**	**+1.9**
JGF	**Kuroka**	**3.65**	**247**		**Pn**	**18 37 27.8**	**+1.0**
JGF	**Kuroka**	**3.65**	**247**	P	**Pn**	**18 37 29.0**	**+2.1**
JTM	**Tenmabayashi**	**3.67**	**355**		**Pn**	**18 37 29.1**	**+1.9**
JTM	**Tenmabayashi**	**3.67**	**355**	P	**Pn**	**18 37 28.8**	**+1.7**
INU	**Inuyama**	**4.01**	**245**	Pn	**Pn**	**18 37 33.3**	**+1.6**
INU	**Inuyama**	**4.01**	**245**	P	**Pn**	**18 37 34.5**	**+2.7**
JHJ2	**Mitsune**	**4.22**	**199**	Pn	**Pn**	**18 37 35.3**	**+0.5**
JHJ2	**Mitsune**	**4.22**	**199**	P	**Pn**	**18 37 37.3**	**+2.5**
JHJ	**Hachijo jima 2**	**4.23**	**199**	P	**Pn**	**18 37 35.6**	**+0.8**
	comp=N,20nm,0.3s,baz=322,slow=23,SNR=11						
JHJ				S	**Sn**	**18 38 21.8**	**-1.2**
	comp=N,95nm,0.3s,baz=71,slow=23,SNR=9.1						
	comp=N,48nm,0.3s						
ERM	**Erimo**	**5.06**	**14**	Pn	**Pn**	**18 37 44.3**	**-1.9**
ERM	**Erimo**	**5.06**	**14**	P	**Pn**	**18 37 46.8**	**+0.6**
ASAJ	**Asahikawa**	**7.04**	**7**	P	**Pn**	**18 38 13.1**	**-0.3**
	comp=N,1.9nm,0.3s,baz=216,slow=16,SNR=9.7						
	comp=N,3.8nm,0.3s						
JKA	**Kamikawa-asahi**	**7.04**	**7**	Pn	**Pn**	**18 38 12.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**10.08**	**317**	P	**Pn**	**18 38 59.5**	**+4.4**
	comp=N,2.0nm,0.6s,baz=107,slow=12,SNR=4.4						
KSRS	**Korea Array**	**10.79**	**276**	LR	LR	18 43 11.6	
	comp=N,28nm,18.2s,baz=120,slow=37						
SONM	**Songino Array**	**27.77**	**304**	P	**P**	**18 42 18.6**	**+0.1**
	comp=N,0.7nm,0.6s,baz=107,slow=9.6,SNR=4.8						
	comp=N,0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.16**	**121**	T	T	19 12 03.8	
	baz=314,slow=75,SNR=144						
H11N1	**WAKE ISLAND Hy**	**28.17**	**121**	T	T	19 12 08.2	
	baz=314,slow=75,SNR=109						
H11N3	**WAKE ISLAND Hy**	**28.18**	**121**	T	T	19 12 15.9	
	baz=314,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hy**	**28.88**	**123**	T	T	19 13 00.5	
	baz=315,slow=75,SNR=63						
H11S3	**WAKE ISLAND Hy**	**28.88**	**123**	T	T	19 13 04.1	
	baz=315,slow=75,SNR=36						
H11S2	**WAKE ISLAND Hy**	**28.89**	**123**	T	T	19 12 57.6	
	baz=315,slow=75,SNR=40						
FAKI	**Fak Fak**	**40.75**	**194**	P	**P**	**18 44 09.7**	**-1.0**
ZALV	**Zalesovo Beam**	**41.88**	**312**	P	**P**	**18 44 19.8**	**+0.2**
	comp=N,0.5nm,0.6s,baz=93,slow=9.1,SNR=2.6						
	comp=N,0.5nm,0.6s						
C16K	**Lisburne Hills**	**42.60**	**26**	P	**P**	**18 44 25.6**	**+0.3**
C16K				IAmb	IAmb	18 44 50.3	
	comp=Z,7.4nm,1.5s						
MK31	**Makanchi Array**	**44.10**	**302**	P	**P**	**18 44 37.9**	**+0.2**
MKAR	**Makanchi Array**	**44.10**	**302**	P	**P**	**18 44 37.9**	**+0.2**
MKAR	**Makanchi Array**	**44.10**	**302**	P	**P**	**18 44 38.1**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=90,slow=9.6,SNR=6.6						
	comp=Z,0.4nm,0.6s						
C18K	**Utukok River**	**44.18**	**26**	P	**P**	**18 44 38.2**	**+0.2**
C18K				IAmb	IAmb	18 44 40.1	
	comp=Z,3.5nm,0.9s						
C19K	**Lookout Ridge**	**44.86**	**26**	P	**P**	**18 44 44.2**	**+0.8**
D19K	**Kuna River**	**45.24**	**27**	P	**P**	**18 44 46.5**	**0.0**
D19K				IAmb	IAmb	18 45 04.9	
	comp=Z,5.8nm,1.4s						
B20K	**Meade River**	**45.89**	**25**	P	**P**	**18 44 51.7**	**+0.2**
B20K				IAmb	IAmb	18 45 21.9	
	comp=Z,6.0nm,1.4s						
KURK	**Kurchatov**	**45.91**	**308**	P	**P**	**18 44 50.7**	**-1.2**
KURK				IAmb	IAmb	18 45 04.3	
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**45.98**	**308**	P	**P**	**18 44 52.0**	**-0.4**
	comp=Z,2.3nm,0.2s,baz=82,slow=8.1,SNR=5.1						
	comp=Z,2.3nm,0.2s						
B21K	**Ikpikpuk River**	**46.69**	**26**	P	**P**	**18 44 59.0**	**+1.2**
B21K				IAmb	IAmb	18 45 10.2	
	comp=Z,8.3nm,1.4s						
B22K	**Teshekpuk Lake**	**47.21**	**25**	P	**P**	**18 45 02.7**	**+0.9**
D22K	**Ayikyak River**	**47.27**	**27**	P	**P**	**18 45 03.2**	**+0.8**
D22K				IAmb	IAmb	18 45 31.8	
	comp=Z,6.4nm,1.4s						
ILAR	**Eielson Array**	**49.40**	**32**	P	**P**	**18 45 19.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=262,slow=5.3,SNR=7.3						
	comp=Z,0.6nm,0.7s						
BMAR	**Burnt Mountain**	**50.23**	**29**	P	**P**	**18 45 24.8**	**-0.4**
BVAR	**Borovoye Array**	**50.54**	**312**	P	**P**	**18 45 28.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=78,slow=7.8,SNR=1.9						
	comp=Z,0.4nm,0.6s						
WB0	**Warramunga Arr**	**56.98**	**188**	P	**P**	**18 46 14.6**	**-0.4**
WRA	**Warramunga Arr**	**57.16**	**188**	P	**P**	**18 46 15.7**	**-0.6**
WRA	**Warramunga Arr**	**57.16**	**188**	P	**P**	**18 46 14.9**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=5.4,slow=7.4,SNR=6.1						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**60.88**	**188**	P	**P**	**18 46 41.3**	**-0.8**
	comp=Z,0.4nm,1.0s,baz=13,slow=15,SNR=4.7						
	comp=Z,0.4nm,1.0s						
ARCES	**ARCESS Array B**	**63.93**	**339**	P	**P**	**18 47 02.3**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=19,slow=7.7,SNR=3.7						
	comp=Z,1.1nm,0.7s						
H03N2	**Juan Fernandez**	**146.99**	**96**	T	T	21 41 06.7	
	baz=291						
H03N3	**Juan Fernandez**	**147.00**	**96**	T	T	21 41 10.1	
	baz=291,slow=74,SNR=5.2						
H03N1	**Juan Fernandez**	**147.01**	**96**	T	T	21 41 06.4	
	baz=291,slow=74,SNR=5.4						

*NEIC **12** 18:55:33.8±1.9, 43.44N±0.04×105.4W±0.1, h0km±1km, ML2.7/46, Error ellipse: s-maj=15.8km s-min=4.8km az=68.0*
*IDC **12** 18:55:36.3±2.4, 43.45N×105.43W, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=54.2km s-min=10.2km az=154.0*
ISC 12 18:55:34.2±1.2, 43.44N±0.05×105.37W±0.06, h0km, n33, σ1§15/32, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K22A	**Casper**	**1.16**	**227**		**Pb**	**18 55 57.5**	**+0.2**
K22A				IAML		18 56 22.7	
	comp=N,117nm,0.3s						
RSSD	**Black Hills**	**1.18**	**54**	Pg	**Pn**	**18 55 58.0**	**-0.2**
PHWY	**Pilot Hill**	**2.14**	**182**	Pn	**Pn**	**18 56 11.6**	**+0.1**
RWWY	**Rawlins**	**2.22**	**219**	Pn	**Pg**	**18 56 18.7**	**+1.9**
RWWY				IAML		18 56 52.2	
	comp=N,58nm,0.9s						
N23A	**Red Feather La**	**2.58**	**190**		**Pg**	**18 56 23.7**	**0.0**
N23A				IAML		18 57 04.4	
	comp=E,26nm,1.0s						
N23A				IAML		18 57 04.6	
	comp=N,28nm,0.8s						
BW06	**Boulder Array**	**3.14**	**259**	Pn	**Pn**	**18 56 25.5**	**+0.3**
BW06				IAML		18 57 18.8	
	comp=N,24nm,0.3s						
PD31	**Pinedale Array**	**3.14**	**259**	Pn	**Pn**	**18 56 26.8**	**+1.6**
PDAR	**Pinedale Array**	**3.14**	**259**	Pn	**Pn**	**18 56 25.4**	**+0.2**
PDAR	**Pinedale Array**	**3.14**	**259**	Pn	**Pb**	**18 56 30.1**	**-1.1**
	comp=N,1.4nm,0.3s,baz=77,slow=16,SNR=33						
PDAR				Lg	Lg	18 57 12.7	
	comp=N,6.9nm,0.3s,baz=75,slow=32,SNR=15						
	comp=N,1.4nm,0.4s						
RLMT	**Red Lodge**	**3.27**	**302**	Pn	**Pn**	**18 56 28.3**	**+1.4**
RLMT				IAML		18 57 27.6	
	comp=N,28nm,0.3s						
RLMT				IAML		18 57 28.2	
	comp=N,25nm,0.6s						
LAO	**LASA Array**	**3.30**	**350**	Pn	**Pn**	**18 56 26.2**	**-1.1**
ISCO	**Idaho Springs**	**3.64**	**183**		**Pn**	**18 56 33.8**	**+1.6**
YMP	**Mirror Lake Pl**	**

IMW				IAML		18 58 11.9	
	comp=N,7.9nm,1.3s						
FXWY	**Fox Creek**	**4.12 275**		**Pn**	**18 56 38.5**	**-0.2**	
FXWY				IAML	18 57 59.3		
	comp=N,6.4nm,4.2s						
YHH	**Holmes Hill**	**4.17 291**	Pn	**Pn**	**18 56 39.2**	**-0.2**	
RDMU	**Red Mountain**	**4.25 229**		**Pn**	**18 56 39.9**	**-0.5**	
RDMU				IAML	18 57 45.5		
	comp=N,7.8nm,4.0s						
RDMU				IAML	18 58 02.4		
	comp=E,11nm,1.1s						
AHID	**Auburn Hatcher**	**4.25 263**		**Pn**	**18 56 38.2**	**-2.3**	
AHID				IAML	18 58 05.4		
	comp=E,13nm,0.9s						
AHID				IAML	18 58 09.4		
	comp=E,10nm,1.0s						
YHL	**Hebgen Lake**	**4.42 291**		**Pn**	**18 56 43.2**	**+0.4**	
YHL				IAML	18 58 07.7		
	comp=E,10nm,2.7s						
HWUT	**Hardware Ranch**	**4.94 250**		**Pn**	**18 56 49.2**	**-0.6**	
SDCO	**Great Sand Dun**	**5.69 181**	Pn	**Pn**	**18 56 58.6**	**-1.6**	
PV10	**Paradox Valley**	**5.77 210**	Pn	**Pn**	**18 57 01.9**	**+0.5**	
SRU	**San Rafael Swe**	**5.81 224**	Pn	**Pn**	**18 57 03.1**	**+1.2**	
I10CA	**LAC DU BONNET**	**9.31 40**	I	I	19 58 20.0		
	baz=219,slow=317,SNR=1.7						
ULM	**Lac du Bonnet**	**9.41 40**	Pn	**Pn**	**18 57 51.0**	**0.0**	
	comp=E,0.2nm,0.3s,baz=237,slow=16,SNR=1.8						
ULM			Lg	Lg	19 00 27.7		
	comp=E,0.1nm,0.3s,baz=152,slow=22,SNR=1.9						
	comp=E,0.7nm,0.3s						

IDC 12 19:00:42.6±21.0, 6°03S×129°79E, h188km±238km, mb2.8/1, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=158.7km s-min=96.5km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.52 163**		P	Pn	19 03 59.5	0.0
	0.1nm,0.3s,baz=345,slow=12,SNR=4.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.97 168**		P	P	19 04 39.1	0.0
	0.1nm,0.3s,baz=351,slow=12,SNR=7.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**67.31 327**		P	P	19 11 17.3	0.0
	0.3nm,0.9s,baz=123,slow=5.3,SNR=2.2						
	0.3nm,0.9s						

KRSC 12 19:07:13.7±1.3, 55°28N×166°51E, h33km±5km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.32 256**		*e*P	Pn	19 07 22.1	+0.1
BKI				*e*S	Sn	19 07 27.9	+0.8
SMKR	**Semkarok**	**3.12 297**		*e*P	Pn	19 08 02.7	+2.1
BDR	**Baidarnaya**	**3.25 296**		*e*P	Pn	19 08 05.3	+2.9
ZLN	**Zelenaya**	**3.32 285**		*e*P	Pb	19 08 08.2	-3.6
BZGR	**Bezymyannyi-Gr**	**3.36 284**		*e*P	Pn	19 08 07.8	+3.8
BZGR				*e*S	Sn	19 08 47.2	+4.5
TUMD	**Tumrok D**	**3.50 271**		*e*P	Pn	19 08 10.0	+4.2
KMNR	**Kamenistaya**	**3.60 280**		*e*P	Pb	19 08 12.1	-4.5
KPT	**Kopyto**	**3.63 283**		*e*P	Pn	19 08 12.2	+4.6
TUMR	**Tumrok**	**3.64 273**		*e*P	Pn	19 08 12.4	+4.6
SMAR	**Somma**	**4.95 249**		*e*P	Pn	19 08 29.9	+4.0
AVH	**Avacha**	**4.98 249**		*e*P	Pn	19 08 31.2	+5.0
KRX	**Arik**	**4.99 251**		*e*P	Pn	19 08 30.7	+4.3
KOK	**Koryaka**	**5.03 250**		*e*P	Pn	19 08 31.3	+4.5
DALK	**Dalny**	**5.09 247**		*e*P	Pn	19 08 31.6	+4.1
GNL	**Ganaly**	**5.24 256**		*e*P	Pn	19 08 35.2	+5.4
KRMR	**Karymshinskiy**	**5.51 247**		*e*P	Pn	19 08 38.5	+5.1
KRMR				*e*S	Sn	19 09 40.4	+4.8

*IDC **12** 19:15:36.8±1.3, 5°.10S×100°.74E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=65.0km s-min=17.2km az=54.0*
*NEIC **12** 19:15:40.3±2.0, 4°.7S±0°.2×101°.09E±0°.10, h10km±2km, mb4.3/9, Error ellipse: s-maj=27.2km s-min=13.2km az=203.0*
*DJA **12** 19:15:41.5±0.6, 5°.5S±6°×10°.1E±°, h49km±34km, M4.2/9, mb4.3/2, MLv4.1/9*

ISC 12 19:15:40.8±0.8, 4°.9S±0°.1×101°.03E±0°.08, h22km, n37, σ1s00/35, mb4.1/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**1.98**	**76**	Pn	**Pn**	**19 16 13.8**	**+0.7**
MNAI	**Manna**	**1.98**	**76**	P	**Pn**	**19 16 13.7**	**+0.7**
MNAI				S	**Sn**	**19 16 36.1**	**-1.1**
PPSI	**Pulau Pagai**	**2.31**	**334**	P	**Pn**	**19 16 17.3**	**-0.2**
PPSI				S	**Sn**	**19 16 44.0**	**-1.3**
LWLI	**Liwa**	**3.02**	**93**	P	**Pn**	**19 16 27.8**	**+0.4**
KASI	**Kota Agung**	**3.52**	**101**	P	**Pn**	**19 16 33.9**	**-0.2**
KASI				S	**Sn**	**19 17 11.5**	**-3.6**
PDSI	**Padang**	**3.96**	**352**	P	**Pn**	**19 16 39.8**	**-0.4**
SISI	**Saibi**	**4.00**	**331**	P	**Pn**	**19 16 40.5**	**-0.3**
PBSI	**Pulau Batu**	**5.50**	**330**	P	**Pn**	**19 17 01.0**	**-0.4**
	32nm,0.9s,0.2nm						
GSI	**Gunungsitoli**	**7.02**	**330**	Pn	**Pn**	**19 17 22.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**23.25**	**355**	P	**P**	**19 20 48.0**	**+1.1**
	0.2nm,0.4s,baz=191,slow=2.9,SNR=4.2						
	0.2nm,0.4s						
H01W3	**Cape Leeuwin H**	**32.25**	**160**	T	T	19 56 19.3	
	baz=337,slow=76,SNR=6.2						
H01W2	**Cape Leeuwin H**	**32.27**	**160**	T	T	19 56 24.0	
	baz=337,slow=76,SNR=7.5						
H01W1	**Cape Leeuwin H**	**32.27**	**160**	T	T	19 56 26.2	
	baz=337,slow=76,SNR=4.7						
WRA	**Warramunga Arr**	**35.72**	**118**	P	**P**	**19 22 38.2**	**+0.1**
	0.6nm,0.8s,baz=305,slow=8.6,SNR=5.1						
	0.6nm,0.8s						
WRAB	**Tennant Creek**	**35.72**	**118**	P	**P**	**19 22 38.4**	**+0.2**
WRAB				IAmb	IAmb	19 22 52.7	
	comp=Z,5.7nm,1.2s						
WB2	**Warramunga Arr**	**35.73**	**118**		**P**	**19 22 37.5**	**-0.7**
WB2				IAmb	IAmb	19 22 59.1	
	comp=Z,7.0nm,1.2s						
WR0	**Warramunga Arr**	**35.90**	**118**	P	**P**	**19 22 39.8**	**+0.1**
WR0				IAmb	IAmb	19 22 47.6	
	comp=Z,6.1nm,1.3s						
ASAR	**Alice Springs**	**36.79**	**124**	P	**P**	**19 22 46.9**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=298,slow=7.7,SNR=11						
ASAR				PcP	**PcP**	**19 25 09.4**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=289,slow=2.3,SNR=5.1						
	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**36.79**	**124**	P	**P**	**19 22 47.2**	**-0.1**
STKA	**Stephens Creek**	**46.52**	**130**	P	**P**	**19 24 07.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=310,slow=9.0,SNR=6.1						
	comp=Z,1.5nm,0.6s						
SONM	**Songino Array**	**52.67**	**5**	P	**P**	**19 24 54.9**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=190,slow=9.7,SNR=3.8						
	comp=Z,0.7nm,0.6s						
MK31	**Makanchi Array**	**54.03**	**344**	P	**P**	**19 25 03.7**	**+0.3**
MKAR	**Makanchi Array**	**54.03**	**344**	P	**P**	**19 25 03.7**	**+0.3**
MKAR	**Makanchi Array**	**54.03**	**344**	P	**P**	**19 25 04.2**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=153,slow=9.3,SNR=18						
	comp=Z,0.8nm,0.5s						
H04N2	**CROZET ISLANDS**	**59.16**	**218**	T	T	20 29 49.7	
	baz=61,slow=75,SNR=187						
H04N1	**CROZET ISLANDS**	**59.17**	**218**	T	T	20 29 47.1	
	baz=61,slow=75,SNR=210						
H04N3	**CROZET ISLANDS**	**59.17**	**218**	T	T	20 29 48.8	
	baz=61,slow=75,SNR=224						
ZALV	**Zalesovo Beam**	**60.14**	**349**	P	**P**	**19 25 46.9**	**+0.4**
ZALV	**Zalesovo Beam**	**60.14**	**349**	P	**P**	**19 25 46.8**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=200,slow=3.9,SNR=5.4						
	comp=Z,0.9nm,0.6s						
ABKAR	**Akbulak array**	**64.62**	**332**	P	**P**	**19 26 15.0**	**-1.6**
ABKAR				IAmb	IAmb	19 26 16.6	
	comp=Z,2.6nm,1.1s						
BR131	**Keskin Array S**	**76.00**	**313**	P	**P**	**19 27 25.9**	**-0.8**
BRTR	**Keskin Array B**	**76.00**	**313**	P	**P**	**19 27 25.3**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=98,slow=7.4,SNR=2.4						
	comp=Z,0.5nm,0.6s						
TIXI	**Tiksi**	**78.50**	**9**		**P**	**19 27 39.0**	**-0.8**
BURAR	**Bucovina Array**	**84.07**	**319**	P	**P**	**19 28 11.1**	**+1.1**
BURAR				IAmb	IAmb	19 28 51.6	
	comp=Z,1.7nm,1.2s						
FINES	**FINESS Array B**	**87.10**	**332**	P	**P**	**19 28 25.0**	**+0.4**
	comp=Z,3.7nm,1.0s,baz=139,slow=10,SNR=4.3						
	comp=Z,3.7nm,1.0s						
TXAR	**Lajitas Array**	**146.25**	**41**		**PKPdf**	**19 35 20.7**	**+1.3**
TXAR	**Lajitas Array**	**146.25**	**41**	PKPbc	**PKPbc**	**19 35 21.4**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=294,slow=1.1,SNR=11						

WEL 12 19:24:11.6±1.8, 39°S±4°×177°6E±°, h8km±10km, M1.0/6, ML1.1/8, MLv1.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=98.4, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.02**	**284**	P	Pg	19 24 13.6	+0.3
KATZ				S	Sg	19 24 14.8	+0.3
RITZ	**Rihia Road**	**0.11**	**89**	P	Pg	19 24 15.0	+0.8
RITZ	**Rihia Road**	**0.11**	**89**	P	Pg	19 24 14.9	+0.8
RATZ	**Rangitukua**	**0.12**	**19**	P	Pg	19 24 15.1	+0.7
RATZ	**Rangitukua**	**0.12**	**19**	P	Pg	19 24 15.1	+0.7
NTVZ	**North Tongarir**	**0.12**	**196**	P	Pg	19 24 15.2	+0.7
NTVZ	**North Tongarir**	**0.12**	**196**	P	Pg	19 24 15.2	+0.7
KRVZ	**Karewarewa**	**0.13**	**209**	P	Pg	19 24 15.3	+0.7
KRVZ	**Karewarewa**	**0.13**	**209**	P	Pg	19 24 15.3	+0.7
TMVZ	**Te Maari**	**0.14**	**186**	P	Pg	19 24 15.5	+0.9
TMVZ	**Te Maari**	**0.14**	**186**	P	Pg	19 24 15.5	+0.8
TMVZ				S	Sg	19 24 18.0	+1.2
ETVZ	**East Tongariro**	**0.16**	**183**	P	Pg	19 24 15.9	+0.9
ETVZ				S	Sg	19 24 18.7	+1.4
ETVZ	**East Tongariro**	**0.16**	**183**	P	Pg	19 24 15.9	+0.9
ETVZ				S	Sg	19 24 18.7	+1.3
WTVZ	**West Tongariro**	**0.17**	**217**	P	Pg	19 24 16.0	+0.7
WTVZ	**West Tongariro**	**0.17**	**217**	P	Pg	19 24 15.9	+0.7
NNVZ	**North Ngauruho**	**0.17**	**208**	P	Pg	19 24 16.1	+0.8
NNVZ	**North Ngauruho**	**0.17**	**208**	P	Pg	19 24 16.1	+0.8
SNVZ	**South Ngauruho**	**0.21**	**197**	P	Pg	19 24 17.0	+1.0
SNVZ	**South Ngauruho**	**0.21**	**197**	P	Pg	19 24 17.0	+0.9
NGZ	**Ngauruhoe**	**0.22**	**205**	P	Pg	19 24 16.8	+0.8
NGZ	**Ngauruhoe**	**0.22**	**205**	P	Pg	19 24 16.8	+0.7
TWVZ	**Taurewa**	**0.24**	**248**	P	Pg	19 24 17.1	+0.7

HEL 12 19:28:24.7±0.2, 67°65N×33°73E, h0km, ML1.6, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**54**	PG	Pg	19 28 33.0	+0.1
LVZ				SG	Sg	19 28 38.5	+0.1
VRF	**Varrio**	**1.58**	**275**	PG	Pn	19 28 53.8	-0.1
	baz=90						
VRF				MSG		19 29 11.9	
	comp=Z,3.7nm,0.2s						
VRF				SG	Sn	19 29 14.2	-0.7
OLKF	**Oulanka, Finla**	**2.17**	**234**	PG	Pb	19 29 04.2	-0.5
OLKF				MSG		19 29 29.0	
	comp=Z,3.0nm,0.2s						
OLKF				SG	Sg	19 29 33.7	-0.4
RAJF	**Raja-Jooseppi**	**2.20**	**295**	PB	Pn	19 29 03.7	+1.3
RAJF				SB	Sn	19 29 31.2	+1.0
KU6	**Riekki**	**2.23**	**225**	PG	Pb	19 29 05.1	-0.7
	baz=45						
KU6				MSG		19 29 30.8	
	comp=Z,1.9nm,0.2s						
KU6				SG	Sb	19 29 34.7	+0.8
MSF	**Maaselka**	**2.55**	**229**	PG	Pb	19 29 10.0	-1.3
MSF				SG	Sb	19 29 41.8	-1.4
SGF	**Sodankyl**	**2.77**	**269**	PG	Pb	19 29 14.2	-0.8
SGF				SB	Sn	19 29 45.9	+1.4
KMNF	**Kaamanen**	**2.91**	**304**	PN	Pn	19 29 12.6	+0.4
KMNF				SN	Sn	19 29 44.5	-3.3
VADS	**Vadso**	**2.94**	**329**	*e*P	Pn	19 29 12.6	0.0
RNF	**Rovaniemi**	**3.19**	**254**	PN	Pn	19 29 16.7	+0.6
RNF				SN	Sn	19 29 56.2	+1.5
RANF	**Ranua**	**3.20**	**242**	PB	Pb	19 29 20.7	-1.6
	baz=52						
RANF				SN	Sn	19 29 52.2	-2.7
KEV	**Kevo**	**3.24**	**314**	*e*P	Pn	19 29 17.4	+0.8
KEV	**Kevo**	**3.24**	**314**	PN	Pn	19 29 17.3	+0.7
	baz=126						
ARA0	**ARCESS Array S**	**3.56**	**306**	SN	Sn	19 30 01.8	-2.0
KLF	**Kolari**	**3.79**	**268**	SN	Sn	19 30 05.4	-4.0
HEF	**Hetta**	**3.86**	**286**	SN	Sn	19 30 06.8	-4.4
OUL	**Oulu**	**4.07**	**234**	SN	Sn	19 30 12.0	-4.4

KOLA 12 19:28:56.9, 67°67N×33°77E, h0km, ML2.0, Error ellipse: s-maj=4.4km s-min=1.9km az=150.0, Khibiny, mines Kirovsk, Yukspor, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.17**	**235**	P	Pg	19 28 59.8	-0.3
APA				S	Sg	19 29 02.3	-0.1
APA0	**Apatity Array**	**0.30**	**259**	P	Pg	19 29 02.2	-0.5
APA0				S	Sg	19 29 06.4	-0.2
LVZ	**Lovozero**	**0.41**	**55**	P	Pg	19 29 04.5	-0.1
LVZ				S	Sg	19 29 10.3	+0.3
TERR	**Teriberka**	**1.62**	**17**	P	Pn	19 29 26.1	-0.5
TERR				S	Sn	19 29 45.4	-2.8
PRVG	**Vayda Guba**	**2.17**	**345**	P	Pn	19 29 32.5	-1.6
VADS	**Vadso**	**2.94**	**329**	P	Pn	19 29 44.7	0.0
VADS				S	Sn	19 30 19.5	-1.1
ARCES	**ARCESS Array B**	**3.56**	**306**	P	Pn	19 29 52.9	-0.5
ARCES				S	Sn	19 30 34.3	-1.8
FAUS	**Fauske**	**7.08**	**276**	S	Sn	19 31 58.4	-4.4

*IDC **12** 19:51:53.9±7.3, 34°.46N×24°.18E, h0km, mb3.7/2, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=351.6km s-min=118.1km az=145.0*
*AFAD **12** 19:52:08.4±0.0, 35°.98N×25°.32E, h10km±2km, ML2.8*
*ATH **12** 19:52:14.2, 35°.11N×26°.86E, h9km±1km, ML3.0/10, Manual Solution by F.Xalaris This location: 2020/05/22 06:27:27 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **12** 19:52:14.0, 35°.07N×26°.88E, h0km±1km, ML3.1/5, Error ellipse: s-maj=4.2km s-min=0.9km az=152.0*

ISC 12 19:52:12.9±1.5, 35°03N±0°.07×26°88E±0°.04, h9km±9km, n45, σ0s90/60, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.55**	**279**	P	**Pg**	**19 52 24.6**	**+1.1**
ZKR				S	**Sb**	**19 52 33.7**	**+1.1**
	2μm,0.3s						
ZKR	**Zakros**	**0.55**	**279**	P	**Pg**	**19 52 24.6**	**+1.1**
ZKR				S	**Sg**	**19 52 31.5**	**+0.8**
KRPA	**Karpathos**	**0.55**	**29**	P	**Pg**	**19 52 23.8**	**+0.2**
KARP	**Karpathos**	**0.57**	**24**	P	**Pg**	**19 52 24.0**	**+0.1**
KARP				S	**Sb**	**19 52 33.5**	**+0.2**
	4μm,0.4s						
KARP	**Karpathos**	**0.57**	**24**	P	**Pg**	**19 52 24.0**	**+0.1**
KARP				S	**Sg**	**19 52 30.8**	**-0.7**
FRMA	**Ierapetra Chan**	**0.94**	**270**	P	**Pg**	**19 52 29.9**	**-1.0**
FRMA				S	**Sg**	**19 52 44.2**	**+1.1**
	398nm,0.4s						
FRMA	**Ierapetra Chan**	**0.94**	**270**	P	**Pg**	**19 52 29.9**	**-1.0**
FRMA				S	**Sg**	**19 52 41.3**	**-1.8**
RGE1	**Gennadi, Rhode**	**1.32**	**40**	P	**Pb**	**19 52 38.0**	**+0.3**
KSTL	**Kastelli Herak**	**1.50**	**281**	P	**Pn**	**19 52 38.4**	**-1.6**
ARG	**Arkhangelos**	**1.56**	**40**	P	**Pb**	**19 52 42.1**	**+0.1**
ARG				S	**Sg**	**19 53 02.1**	**-1.1**
	408nm,0.6s						
ARG	**Arkhangelos**	**1.56**	**40**	P	**Pb**	**19 52 42.1**	**+0.1**
ARG				S	**Sn**	**19 53 01.1**	**0.0**
ASTA	**Astypalaia**	**1.57**	**344**	P	**Pb**	**19 52 41.5**	**-0.6**
IDI	**Anoyia**	**1.65**	**280**	P	**Pg**	**19 52 45.0**	**+0.5**
IDI				S	**Sn**	**19 53 03.6**	**+0.3**
YAZI	**Mula-Dat§a-**	**1.72**	**16**	P	**Pn**	**19 52 42.9**	**0.0**
YAZI				S	**Sg**	**19 53 08.5**	**+0.4**
YAZI				*i* AML	AML	19 53 10.0	
	comp=N,69nm,0.7s						
YAZI				*i* AML	AML	19 53 12.0	
	comp=E,54nm,0.4s						
SANT	**Santorini**	**1.77**	**320**	P	**Pn**	**19 52 44.0**	**+0.3**
SANT				S	**Sg**	**19 53 08.1**	**-1.7**
	330nm,0.3s						
SANT	**Santorini**	**1.77**	**320**	P	**Pn**	**19 52 44.2**	**+0.5**
THR8	**Santorini-Mono**	**1.79**	**321**	P	**Pn**	**19 52 43.9**	**+0.1**
THR8	**Santorini-Mono**	**1.79**	**321**	P	**Pn**	**19 52 44.5**	**+0.6**
THR6	**Thira Island,**	**1.79**	**318**	P	**Pn**	**19 52 44.3**	**+0.4**
THR6	**Thira Island,**	**1.79**	**318**	P	**Pn**	**19 52 44.4**	**+0.5**
DAT	**Datca**	**1.79**	**18**	P	**Pn**	**19 52 43.9**	**-0.1**
DAT	**Datca**	**1.79**	**18**	P	**Pn**	**19 52 44.5**	**+0.4**
DAT				S	**Sg**	**19 53 11.5**	**+1.0**
DAT				*i* AML	AML	19 53 14.0	
	comp=N,97nm,0.7s						
DAT				*i* AML	AML	19 53 14.0	
	comp=E,108nm,0.6s						
SNT5	**Nea Kammeni, S**	**1.83**	**319**	P	**Pn**	**19 52 45.0**	**+0.5**
THR3	**Thira Island,**	**1.83**	**319**	P	**Pn**	**19 52 44.9**	**+0.5**
THR3	**Thira Island,**	**1.83**	**319**	P	**Pn**	**19 52 44.9**	**+0.5**
THT2	**Imerovigli**	**1.84**	**320**	P	**Pn**	**19 52 45.0**	**+0.4**
CMBO	**Columbo, Santo**	**1.87**	**321**	P	**Pn**	**19 52 45.3**	**+0.3**
CMBO	**Columbo, Santo**	**1.87**	**321**	P	**Pn**	**19 52 45.7**	**+0.7**
AMGA	**Amorgos Island**	**1.97**	**336**	P	**Pn**	**19 52 46.9**	**+0.5**
BODT	**Bodrum**	**2.06**	**10**	P	**Pn**	**19 52 48.7**	**+1.0**
TURN	**Turunc**	**2.07**	**32**	P	**Pn**	**19 52 49.1**	**+1.4**
TURN				S	**Sg**	**19 53 19.5**	**+0.2**
TURN				*i* AML	AML	19 53 27.0	
	comp=E,68nm,0.8s						
TURN				*i* AML	AML	19 53 33.0	
	comp=N,54nm,0.5s						
BDRM	**Kayabasi**	**2.09**	**13**	P	**Pn**	**19 52 48.8**	**+0.8**
APE	**Apeiranthos**	**2.31**	**332**	P	**Pn**	**19 52 51.1**	**0.0**
APE	**Apeiranthos**	**2.31**	**332**	P	**Pn**	**19 52 51.1**	**0.0**
YER	**Yerkesik**	**2.39**	**28**	P	**Pn**	**19 52 52.8**	**+0.5**
FETY	**Fethiye**	**2.41**	**48**	P	**Pn**	**19 52 53.4**	**+1.0**
IMMV	**Iera Moni Meta**	**2.41**	**281**	P	**Pn**	**19 52 54.4**	**+2.0**
MULA	**Mugla, Merkez-**	**2.51**	**27**	P	**Pn**	**19 52 55.5**	**+1.5**
MULA				S	**Sg**	**19 53 32.4**	**-1.2**
MULA				*i* AML	AML	19 53 35.0	
	comp=N,23nm,0.6s						
MULA				*i* AML	AML	19 53 41.0	
	comp=E,59nm,0.6s						
SMG	**Samos**	**2.68**	**359**	P	**Pn**	**19 52 56.2**	**0.0**
DNZT	**Denizli-Tavas-**	**2.84**	**37**	P	**Pn**	**19 52 59.1**	**+0.7**
DNZT				S	**Sg**	**19 53 42.2**	**-2.0**
TAVA	**DENIZLI_Tavas**	**2.94**	**33**	P	**Pn**	**19 53 00.1**	**+0.3**
TAVA				*i* AML	AML	19 53 46.0	
	comp=N,35nm,0.6s						
TAVA				*i* AML	AML	19 53 51.0	
	comp=E,36nm,0.6s						
ESEN	**Aydn-Nazilli**	**3.01**	**23**	P	**Pn**	**19 53 01.4**	**+0.7**
ESEN				S	**Sn**	**19 53 38.2**	**+1.4**
BRTR	**Keskin Array B**	**7.14**	**47**	Pn	Pb	19 54 10.0	-7.0
	0.1nm,0.3s,baz=227,slow=14,SNR=3.2						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**42.67**	**57**	P	**P**	**20 00 09.5**	**-0.3**
	0.3nm,0.4s,baz=276,slow=7.4,SNR=9.4						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**44.08**	**46**	P	**P**	**20 00 19.1**	**-1.8**
	0.7nm,0.4s,baz=270,slow=7.4,SNR=4.6						
	0.7nm,0.4s						

*TAP **12** 20:01:58.4, 23°.93N×121°.57E, h10km, ML2.9, C*
*JMA **12** 20:01:58.4±0.2, 23°.9N±0°.4×12°.2E±°, h3km, TAIWAN REGION*

ISC 12 20:01:58.8±0.8, 23°92N±0°.01×121°59E±0°.02, h11km±4km, n88, σ0s55/136, 16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.05**	**15**	⇓*i*P	**Pg**	**20 02 01.0**	**0.0**
	baz=41						
HWA				S	**Sg**	**20 02 03.2**	**+0.6**
	baz=41						
ETM	**Tongmen**	**0.10**	**295**	P	**Pg**	**20 02 01.0**	**-0.5**
	baz=298						
ETM				S	**Sg**	**20 02 02.6**	**-0.9**
	baz=298						
SHUL	**Shoufeng**	**0.14**	**190**	⇓*i*P	**Pg**	**20 02 02.3**	**+0.3**
	baz=191						
SHUL				S	**Sg**	**20 02 05.3**	**+0.9**
	baz=191						
TWD	**Chiawan**	**0.15**	**2**	P	**Pg**	**20 02 02.2**	**-0.1**
	baz=11						
TWD				S	**Sg**	**20 02 04.4**	**-0.4**
	baz=11						
ESL	**Shilin**	**0.18**	**233**	⇓*i*P	**Pg**	**20 02 02.2**	**-0.5**
	baz=233						
ESL				*i* S	**Sg**	**20 02 04.5**	**-0.9**
	baz=233						
LXIB	**Xiulin Townshi**	**0.19**	**301**	⇓*i*P	**Pg**	**20 02 02.6**	**-0.3**
	baz=296						
LXIB				S	**Sg**	**20 02 05.5**	**-0.4**
	baz=296						
TEGC	**Jichi Village**	**0.22**	**192**	P	**Pg**	**20 02 03.9**	**+0.5**
	baz=193						
TEGC				S	**Sg**	**20 02 08.7**	**+2.2**
	baz=193						
ETL	**Fush Village**	**0.24**	**8**	⇓*i*P	**Pg**	**20 02 03.6**	**-0.2**
	baz=10.0						
ETL				S	**Sg**	**20 02 06.8**	**-0.3**
	baz=10.0						
NACB	**Ninganchiao**	**0.25**	**1**	P	**Pg**	**20 02 03.8**	**-0.2**
NACB	**Ninganchiao**	**0.25**	**1**	⇓*i*P	**Pg**	**20 02 03.7**	**-0.2**
	baz=8.0						
NACB				S	**Sg**	**20 02 07.1**	**-0.3**
	baz=8.0						
WARBT	**Fenglin Townsh**	**0.28**	**222**	⇓*i*P	**Pg**	**20 02 04.0**	**-0.5**
	baz=227						
WARBT				S	**Sg**	**20 02 07.3**	**-1.0**
	baz=227						
ETLH	**Xiulin Townshi**	**0.30**	**341**	⇓*i*P	**Pg**	**20 02 04.7**	**-0.2**
	baz=343						
ETLH				*i* S	**Sg**	**20 02 08.7**	**-0.3**
	baz=343						
WHF	**Hehuan Shan**	**0.37**	**307**	⇓*i*P	**Pg**	**20 02 06.0**	**-0

	baz=213							
TWF1	**Yuli**	**0.63**	**205**	*e*P		**Pg**	**20 02 10.5**	**-0.5**
	baz=215							
TWF1				S		**Sb**	**20 02 20.1**	**-0.5**
	baz=215							
SMLT	**Sun Moon Lake**	**0.63**	**266**	⇓ *i*P		**Pb**	**20 02 11.3**	**-0.7**
	baz=276							
SMLT				S		**Sg**	**20 02 19.8**	**+0.3**
	baz=276							
WCS	**Beigang Elemen**	**0.63**	**282**	P		**Pb**	**20 02 11.6**	**-0.3**
	baz=283							
WCS				*e*S		**Sg**	**20 02 19.9**	**+0.4**
	baz=283							
TYC	**Yuchr**	**0.67**	**268**	⇓ *i*P		**Pg**	**20 02 11.8**	**0.0**
	baz=278							
TYC				S		**Sg**	**20 02 20.2**	**-0.4**
	baz=278							
NDT	**Datong Townshi**	**0.68**	**354**	P		**Pg**	**20 02 12.0**	**0.0**
	baz=347							
ESAO	**Su ao**	**0.69**	**20**	*e*P		**Pg**	**20 02 11.8**	**-0.4**
	baz=12							
ENTT	**Nioudou**	**0.71**	**358**	P		**Pg**	**20 02 12.7**	**+0.1**
	baz=358							
ENTT				*e*S		**Sg**	**20 02 22.4**	**+0.4**
	baz=358							
NDS	**Dongshan**	**0.72**	**9**	*e*P		**Pg**	**20 02 12.6**	**-0.1**
	baz=9.0							
NDS				*e*S		**Sg**	**20 02 22.4**	**+0.4**
	baz=9.0							
TWC	**Suao**	**0.72**	**19**	*e*P		**Pg**	**20 02 12.7**	**-0.1**
	baz=11							
TWC				*e*S		**Sg**	**20 02 22.4**	**+0.1**
	baz=11							
CHKH	**Chenggong**	**0.75**	**194**	*e*P		**Pb**	**20 02 13.8**	**-0.1**
	baz=185							
CHKH				*e*S		**Sn**	**20 02 25.8**	**-0.9**
	baz=185							
YHNB	**Yeheng**	**0.77**	**345**	P		**Pb**	**20 02 14.1**	**-0.1**
YHNB	**Yeheng**	**0.77**	**345**	P		**Pb**	**20 02 14.0**	**-0.3**
	baz=356							
NSK	**Sanguang**	**0.78**	**344**	*e*P		**Pb**	**20 02 14.0**	**-0.4**
	baz=344							
NSK				*e*S		**Sg**	**20 02 23.9**	**-0.2**
	baz=344							
WJS	**Zhushan**	**0.80**	**263**	*e*P		**Pb**	**20 02 14.3**	**-0.3**
	baz=258							
TWE	**Neicheng**	**0.80**	**5**	P		**Pb**	**20 02 14.3**	**-0.4**
	baz=13							
TWE				*e*S		**Sb**	**20 02 25.4**	**0.0**
	baz=13							
NFF	**Wufeng Townshi**	**0.83**	**329**	P		**Pb**	**20 02 15.0**	**-0.2**
	baz=328							
NFF				*e*S		**Sg**	**20 02 25.2**	**-0.4**
	baz=328							
ALS	**Alishan**	**0.83**	**240**	*e*P		**Pb**	**20 02 15.0**	**-0.4**
	baz=242							
ALS				*e*S		**Sb**	**20 02 26.2**	**-0.5**
	baz=242							
WNT	**Mingjian**	**0.83**	**267**	*e*P		**Pn**	**20 02 16.1**	**-0.3**
	baz=268							
WNT				*e*S		**Sn**	**20 02 28.6**	**-0.1**
	baz=268							
FUSB	**Fushanzhiwuyua**	**0.83**	**360**	*e*P		**Pb**	**20 02 15.0**	**-0.3**
	baz=359							
CHKT	**Chengkung**	**0.85**	**194**	*e*P		**Pg**	**20 02 14.2**	**-1.0**
	baz=196							
CHKT				*e*S		**Sn**	**20 02 29.4**	**+0.3**
	baz=196							
EHD	**Haiduan**	**0.85**	**205**	*e*P		**Pg**	**20 02 14.4**	**-0.8**
	baz=206							
NWLT	**Wulai**	**0.85**	**355**	*e*P		**Pg**	**20 02 15.2**	**-0.1**
	baz=343							
TWQ1	**Liyutan**	**0.86**	**300**	*e*P		**Pn**	**20 02 16.5**	**-0.3**
	baz=300							
NSTT	**Nanjuang**	**0.89**	**323**	*e*P		**Pb**	**20 02 16.5**	**+0.3**
	baz=323							
NSTT				*e*S		**Sb**	**20 02 27.9**	**-0.1**
	baz=323							
LIOB	**Emei**	**0.89**	**324**	P		**Pb**	**20 02 16.7**	**+0.4**
	baz=323							
CHN5	**Tsauling**	**0.90**	**249**	*e*P		**Pb**	**20 02 16.9**	**+0.5**
	baz=239							
CHN5				*e*S		**Sn**	**20 02 30.4**	**-0.1**
	baz=239							
ELDTW	**Lidau**	**0.90**	**216**	*e*P		**Pg**	**20 02 15.7**	**-0.5**
	baz=209							
ELDTW				*e*S		**Sb**	**20 02 29.2**	**+0.6**
	baz=209							
NMLH	**Miaoli**	**0.95**	**310**	*e*P		**Pn**	**20 02 18.1**	**0.0**
	baz=310							
WGK	**Gukeng**	**0.97**	**256**	*e*P		**Pn**	**20 02 18.6**	**+0.3**
	baz=256							
WCKO	**Fanlu**	**1.02**	**242**	*e*P		**Pn**	**20 02 19.3**	**+0.2**
	baz=244							
TATO	**Taipei**	**1.05**	**355**	P		**Pn**	**20 02 19.8**	**+0.3**
TWA	**Mucha**	**1.05**	**360**	*e*P		**Pb**	**20 02 19.2**	**+0.2**
	baz=358							
STYH	**Taoyuan**	**1.06**	**225**	*e*P		**Pb**	**20 02 18.9**	**-0.2**
	baz=228							
STYH				*e*S		**Sb**	**20 02 33.8**	**+0.8**
	baz=228							
STYT	**Tauyuan**	**1.08**	**225**	*e*P		**Pb**	**20 02 19.6**	**+0.1**
	baz=228							
STYT				*e*S		**Sn**	**20 02 35.9**	**+1.1**
	baz=228							
CHN4	**Tsaushan**	**1.08**	**238**	*e*P		**Pn**	**20 02 20.2**	**+0.4**
	baz=240							
TPUB	**Ta-pu**	**1.08**	**235**	P		**Pn**	**20 02 19.9**	**0.0**
TPUB	**Ta-pu**	**1.08**	**235**	*e*P		**Pn**	**20 02 20.2**	**+0.3**
	baz=238							
TPUB				*e*S		**Sn**	**20 02 35.5**	**+0.7**
	baz=238							
CHN2	**Minshiung**	**1.09**	**249**	*e*P		**Pb**	**20 02 19.9**	**+0.2**
	baz=251							
WRL	**Guolierlin Hig**	**1.11**	**269**	*e*P		**Pn**	**20 02 20.9**	**+0.6**
	baz=271							
WTP	**Ta-pu**	**1.12**	**233**	*e*P		**Pn**	**20 02 20.7**	**+0.2**
	baz=236							
WTP				*e*S		**Sn**	**20 02 36.8**	**+0.9**
	baz=236							
WTK	**Tuku**	**1.12**	**258**	*e*P		**Pn**	**20 02 21.1**	**+0.7**
	baz=260							
SXI1	**Grass Mountain**	**1.19**	**13**	*e*P		**Pn**	**20 02 21.9**	**+0.4**
	baz=354							
TWG	**Pinlang**	**1.20**	**204**	*e*P		**Pg**	**20 02 20.4**	**-1.5**
	baz=191							
TWGBT	**Beinan**	**1.20**	**203**	P		**Pg**	**20 02 21.0**	**-0.8**
TWGBT	**Beinan**	**1.20**	**203**	*e*P		**Pg**	**20 02 20.2**	**-1.7**
	baz=191							
TWK	**Hsinying**	**1.20**	**237**	*e*P		**Pn**	**20 02 22.1**	**+0.5**
	baz=233							
TWK				*e*S		**Sn**	**20 02 39.6**	**+1.6**
	baz=233							
CHN1	**Nanshi**	**1.22**	**233**	*e*P		**Pn**	**20 02 22.3**	**+0.5**
	baz=236							
CHN1				*e*S		**Sn**	**20 02 39.6**	**+1.3**
	baz=236							
SNST	**Tainan City**	**1.22**	**235**	*e*P		**Pn**	**20 02 22.5**	**+0.6**
	baz=237							
SGST	**Jiashian**	**1.25**	**228**	*e*P		**Pn**	**20 02 22.6**	**+0.4**
	baz=231							
SGST				*e*S		**Sn**	**20 02 39.6**	**+0.6**
	baz=231							
WSF	**Szhu**	**1.28**	**257**	*e*P		**Pg**	**20 02 23.2**	**-0.3**
	baz=259							
ICHU	**Yijhu**	**1.33**	**245**	*e*P		**Pg**	**20 02 24.3**	**+0.1**
	baz=247							
ECL	**Taimali**	**1.45**	**204**	*e*P		**Pb**	**20 02 25.4**	**-0.3**
	baz=190							
MASBT	**Mashibuluo**	**1.57**	**214**	*e*P		**Pn**	**20 02 27.1**	**+0.4**
	baz=205							
TSCK	**Chigu Township**	**1.58**	**241**	*e*P		**Pb**	**20 02 27.6**	**-0.5**
	baz=244							
EAST	**Anshuo**	**1.68**	**204**	*e*P		**Pb**	**20 02 29.9**	**+0.2**
	baz=193							
JISG	**Ishigakijimahi**	**2.57**	**75**	P		**Pn**	**20 02 40.1**	**-0.3**
JISG				S		**Sn**	**20 03 11.7**	**0.0**

*IDC **12** 20:05:13.8±0.7, 38.67N×144.64E, h0km, mb3.9/14, mbtmp4.0/20, ML4.5/4, MS3.3/14, Error ellipse: s-maj=18.0km s-min=14.1km az=124.0*
*MOS **12** 20:05:13.8±1.1, 38.78N×144.70E, h13km, mb4.5/17, Error ellipse: s-maj=9.0km s-min=5.4km az=98.7*
*NEIC **12** 20:05:15.5±1.9, 38.73N±0.05×144.6E±0.1, h10km±1km, mb4.5/55, Error ellipse: s-maj=16.1km s-min=5.3km*

az=116.0
*NIED **12** 20:05:19.6, 38.80N×144.36E, h47km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr=0.42; Mθθ=1.10; Mφφ=1.52; Mrθ=2.25; Mθφ=0.06; Mφr=1.37; Fault plane solution: M0=2.93000×10^15 NP1: φs=310.00000°, δ=87.00000°, λ=117.00000°. NP2: φs=213.00000°, δ=27.00000°, λ=8.00000°.*
*JMA **12** 20:05:19.6±0.2, 38.8N±0.9×14.4E±, h47km, MD4.5/36, MV5.1/36, FAR E OFF NORTH HONSHU*
ISC 12 20:05:16.3±0.8, 38.76N±0.04×144.65E±0.05, h17km±4km, n191, σ2933/209, mb4.3/63, MS3.3/11, 6C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
				Op		ISC		
MIYJ	**Miyakonagasawa**	**2.35**	**291**	P		**Pn**	**20 05 53.6**	**-0.5**
MIYJ				S		**Sn**	**20 06 18.7**	**-3.8**
OFUJ	**Ofunato**	**2.35**	**279**	P		**Pn**	**20 05 53.7**	**-0.4**
OFUJ				S		**Sn**	**20 06 18.9**	**-3.7**
JTH	**Tanohata**	**2.46**	**299**	*i* P		**Pn**	**20 05 55.1**	**-0.5**
JKMT	**Kesennumamotoy**	**2.48**	**272**	*i* P		**Pn**	**20 05 55.6**	**-0.3**
JKMT				S		**Sn**	**20 06 21.9**	**-4.0**
JMK	**Ichinoseki**	**2.69**	**275**	*i* P		**Pn**	**20 05 58.7**	**0.0**
JMK				S		**Sn**	**20 06 27.9**	**-3.0**
JOM	**Ohasama**	**2.71**	**286**	*i* P		**Pn**	**20 05 58.9**	**-0.1**
JOM				S		**Sn**	**20 06 28.3**	**-3.2**
JOM	**Ohasama**	**2.71**	**286**	A		A	20 05 58.9	
	comp=E,5.0nm,0.3s,comp=N,3.0nm,0.3s							
JANG	**Nango**	**2.91**	**305**	*i* P		**Pn**	**20 06 00.7**	**-1.1**
JMST	**Minamisoumatoc**	**3.14**	**252**	A		A	20 06 05.2	
	comp=E,3.0nm,0.3s,comp=N,4.0nm,0.4s							
JOU	**Okura**	**3.15**	**264**	A		A	20 06 05.1	
	comp=E,6.0nm,0.5s,comp=N,4.0nm,3.8s							
JMM	**Marumori**	**3.16**	**255**			**Pn**	**20 06 04.7**	**-0.6**
JMM				Sn		**Sn**	**20 06 37.4**	**-5.3**
JMM	**Marumori**	**3.16**	**255**	P		**Pn**	**20 06 05.0**	**-0.3**
JYK	**Kaneyama**	**3.35**	**274**	*i* P		**Pn**	**20 06 08.3**	**+0.3**
JYK				*e*S		**Sn**	**20 06 44.4**	**-3.0**
JTM	**Tenmabayashi**	**3.42**	**307**	Pn		**Pn**	**20 06 08.7**	**-0.1**
JTM	**Tenmabayashi**	**3.42**	**307**	P		**Pn**	**20 06 08.9**	**0.0**
ERM	**Erimo**	**3.45**	**341**	Pn		**Pn**	**20 06 08.3**	**-0.8**
ERM				Sn		**Sn**	**20 06 43.8**	**-5.8**
ERM	**Erimo**	**3.45**	**341**	P		**Pn**	**20 06 09.1**	**-0.1**
ERM	**Erimo**	**3.45**	**341**	P		**Pn**	**20 06 08.3**	**-0.8**
ERM							20 06 43.8	
JEM	**Erimo**	**3.45**	**341**	P		**Pn**	**20 06 08.9**	**-0.3**
ONAJ	**Iwakimizuishiy**	**3.47**	**243**	A		A	20 06 10.1	
	comp=E,7.0nm,0.3s,comp=N,5.0nm,0.3s							
JOTO	**OTAMA OYAMA**	**3.61**	**252**	P		**Pn**	**20 06 11.7**	**+0.3**
JOTO				S		**Sn**	**20 06 50.5**	**-3.2**
JNBK	**Urakawa-nobuka**	**3.80**	**338**	*i* P		**Pn**	**20 06 13.6**	**-0.4**
JNBK				S		**Sn**	**20 06 55.4**	**-3.0**
JOT	**Ohata**	**3.81**	**315**	P		**Pn**	**20 06 14.0**	**-0.1**
JOT				S		**Sn**	**20 06 54.3**	**-4.2**
JCH	**Churui**	**3.97**	**346**	*i* P		**Pn**	**20 06 15.4**	**-1.0**
JCH				S		**Sn**	**20 06 57.6**	**-5.0**
NEM2	**Nemuro 2**	**4.67**	**10**	P		**Pn**	**20 06 24.1**	**-1.9**
NEM2				*e*S		**Sn**	**20 07 12.4**	**-7.4**
NMR	**Nemuro--Hokkai**	**4.68**	**10**	⇓ *i*P		**Pn**	**20 06 24.1**	**-2.0**
NMR				*i* S		**Sn**	**20 07 12.8**	**-7.1**
BSO1	**Boso 1**	**5.05**	**217**	P		**Pn**	**20 06 30.0**	**-0.7**
BSO1				S		**Sn**	**20 07 23.8**	**-4.6**
JOSM	**Okushiri--Mats**	**5.16**	**312**	P		**Pn**	**20 06 33.3**	**+0.6**
JOSM				S		**Sn**	**20 07 26.6**	**-5.2**
JTKR	**Abashiri--Toko**	**5.24**	**354**	*i* P		**Pn**	**20 06 33.0**	**-0.7**
JTKR				S		**Sn**	**20 07 28.6**	**-5.1**
JRY	**Ryogami san**	**5.33**	**241**	P		**Pn**	**20 06 34.9**	**-0.3**
JRY				S		**Sn**	**20 07 31.6**	**-4.7**
YUK	**Yuzh-Kuril'sk**	**5.35**	**9**	*d* iP		**Pn**	**20 06 33.5**	**-1.8**
YUK				*i* S		**Sn**	**20 07 28.8**	**-7.7**
YUK				pmax		pmax		
	comp=N,248nm,0.2s							
YUK				pmax		pmax		
	comp=E,159nm,0.2s							
YUK				pmax		pmax		
	comp=Z,1μm,0.2s							
YUK				smax		smax		
	comp=E,3μm,0.2s							
YUK				smax		smax		
	comp=N,3μm,0.4s							
RUSJ	**Misakicho**	**5.36**	**5**	⇑ *i*P		**Pn**	**20 06 34.2**	**-1.2**
RUSJ				*i* S		**Sn**	**20 07 31.7**	**-5.0**
JHR	**Hokuryu**	**5.45**	**337**	*i* P		**Pn**	**20 06 38.1**	**+1.5**
JHR				S		**Sn**	**20 07 36.6**	**-2.2**
MJA0	**Matsu Arr-Jizo**	**5.54**	**248**	*e*P		**Pn**	**20 06 39.2**	**+1.2**
MJA0				pmax		pmax		
	comp=Z,2.0nm,0.3s							
JKA	**Kamikawa-asahi**	**5.57**	**345**	Pn		**Pn**	**20 06 37.9**	**-0.4**
ASAJ	**Asahikawa**	**5.57**	**345**	Pn		**Pn**	**20 06 38.3**	**-0.1**
	comp=Z,31nm,0.3s,baz=203,slow=10,SNR=43							
ASAJ				Sn		**Sn**	**20 07 39.2**	**-2.8**
	comp=Z,9.9nm,0.3s,baz=310,slow=23,SNR=5.0							
ASAJ				LR		LR	20 09 42.1	
	comp=Z,317nm,18.6s,baz=182,slow=47							
	comp=Z,65nm,0.3s							
MJAR	**Matsushiro Arr**	**5.57**	**249**	Pn		**Pn**	**20 06 39.2**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=60,slow=11,SNR=88							
MJAR				Sn		**Sn**	**20 07 43.6**	**+1.6**
	comp=Z,3.1nm,0.3s,baz=336,slow=24,SNR=6.5							
MJAR				LR		LR	20 09 01.9	
	comp=Z,475nm,20.7s,baz=68,slow=41							
	comp=Z,16nm,0.5s							
MAJO	**Matsushiro**	**5.57**	**249**	Pn		**Pn**	**20 06 38.6**	**+0.2**
MAJO	**Matsushiro**	**5.57**	**249**	P		**Pn**	**20 06 39.8**	**+1.4**
MAJO	**Matsushiro**	**5.57**	**249**	*c* iP		**Pn**	**20 06 39.6**	**+1.2**
MJB9	**Matsu-Tunnel**	**5.57**	**249**	Pn		**Pn**	**20 06 39.1**	**+0.7**
JOD2	**Odawara 2**	**5.66**	**234**	P		**Pn**	**20 06 39.3**	**-0.3**
JOD2				S		**Sn**	**20 07 38.0**	**-6.1**
JSG	**Sagara**	**6.60**	**234**	Pn		**Pn**	**20 06 49.3**	**-3.3**
JGF	**Kuroka**	**6.62**	**244**			**Pn**	**20 06 53.5**	**+0.6**
JGF	**Kuroka**	**6.62**	**244**	P		**Pn**	**20 06 54.2**	**+1.3**
JHJ2	**Mitsune**	**6.87**	**216**	Pn		**Pn**	**20 06 55.0**	**-1.1**
JHJ2				Sn		**Sn**	**20 08 06.4**	**-7.5**
JHJ2	**Mitsune**	**6.87**	**216**	P		**Pn**	**20 06 54.7**	**-1.5**
JHJ	**Hachijo jima 2**	**6.87**	**217**	Pn		**Pn**	**20 06 55.4**	**-0.9**
	comp=Z,73nm,0.3s,baz=288,slow=16,SNR=23							
JHJ				Sn		**Sn**	**20 08 06.0**	**-8.1**
	comp=Z,128nm,0.3s,baz=226,slow=23,SNR=13							
	comp=Z,129nm,0.3s							
KUR	**Kuril'sk**	**6.90**	**19**	P		**Pn**	**20 06 56.6**	**+0.1**
KUR				*e*S		**Sn**	**20 08 06.6**	**-8.0**
KUR				pmax		pmax		
	comp=E,90nm,0.8s							
KUR				pmax		pmax		
	comp=Z,146nm,0.8s							
KUR				pmax		pmax		
	comp=N,97nm,0.7s							
KUR				smax		smax		
	comp=N,699nm,0.4s							
KUR				smax		smax		
	comp=E,520nm,0.4s							
INU	**Inuyama**	**6.99**	**243**	Pn		**Pn**	**20 06 57.0**	**-0.9**
INU	**Inuyama**	**6.99**	**243**	P		**Pn**	**20 06 59.6**	**+1.7**
YSS	**Yuzh-Sakhalins**	**8.31**	**351**	Pn		**Pn**	**20 07 15.1**	**-0.8**
YSS	**Yuzh-Sakhalins**	**8.31**	**351**	P		**Pn**	**20 07 16.2**	**+0.3**
YSS	**Yuzh-Sakhalins**	**8.31**	**351**	*e*P		**Pn**	**20 07 14.7**	**-1.2**
YSS				*e*S		**Sn**	**20 08 42.3**	**-7.0**
YSS				pmax		pmax		
	comp=Z,30nm,0.4s							
YSS				MLR		MLR		
	comp=Z,500nm,15.0s							
TEY	**Ternei**	**8.68**	**319**	*e*P		**Pn**	**20 07 21.5**	**+0.5**
JMN	**Monobe**	**10.04**	**243**	Pn		**Pn**	**20 07 39.1**	**-0.7**
JMN	**Monobe**	**10.04**	**243**	P		**Pn**	**20 07 39.7**	**-0.1**
USA0B	**Ussuriysk Arra**	**10.94**	**304**			**Pn**	**20 07 50.2**	**-1.7**
USA0B	**Ussuriysk Arra**	**10.94**	**304**	*de*P		**Pn**	**20 07 53.8**	**+1.8**
USRK	**Ussuriysk Ar.**	**10.94**	**304**	Pn		**Pn**	**20 07 50.2**	**-1.7**
USRK	**Ussuriysk Ar.**	**10.94**	**304**	Pn		**Pn**	**20 07 53.7**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=108,slow=13,SNR=22							
	comp=Z,7.1nm,0.5s							
JCJ	**Chichijima**	**11.81**	**191**	Pn		**Pn**	**20 07 60.0**	**-4.1**
JCJ	**Chichijima**	**11.81**	**191**	P		**Pn**	**20 08 01.0**	**-3.0**
JCJ	**Chichijima**	**11.81**	**191**	Pn		Pn	20 07 55.6	-8.4
	comp=Z,25nm,0.3s,baz=259,slow=19,SNR=2.0							
JCJ				Sn		Sn	20 09 59.8	-16
	comp=Z,32nm,0.3s,baz=294,slow=18,SNR=4.6							
JCJ				LR		LR	20 12 37.8	
	comp=Z,32nm,19.1s,baz=156,slow=38							
TYV	**Tymovskoe**	**12.18**	**354**	*e*P		**Pn**	**20 08 09.0**	**+0.1**
TYV				pmax		pmax		
	comp=Z,5.0nm,0.7s							
TYV				pmax		pmax		
	comp=Z,200nm,4.0s							
JNU	**Nakatsue**	**12.49**	**247**	LR		LR	20 13 31.1	
	comp=Z,287nm,18.3s,baz=52,slow=40							
MDJ	**Mudanjiang**	**12.68**	**302**	P		**Pn**	**20 08 14.9**	**-0.9**
MDJ				pP		P	20 08 17.4	-10
MDJ				PP		**PnPn**	**20 08 22.8**	**-0.7**
MDJ				S		**Sn**	**20 10 37.9**	**+1.4**
MDJ				sS			20 10 42.1	
MDJ				SS		**SnSn**	**20 10 49.3**	**+0.8**
MDJ				PcP		**PcP**	**20 13 51.0**	**-1.5**
MDJ				pmax		pmax		
	comp=Z,22nm,2.3s							
MDJ				pmax		pmax		
	comp=Z,290nm,4.7s							
MDJ				LR		LR		
	comp=N,340nm,17.9s							
MDJ				LR		LR		
	comp=E,190nm,16.1s							
MDJ				LR		LR		
	comp=Z,140nm,14.8s							
MDJ	**Mudanjiang**	**12.68**	**302**			**Pn**	**20 08 12.7**	**-3.0**
KSRS	**Korea Array**	**13.24**	**270**	Pn		**Pn**	**20 08 26.9**	**+3.4**
	comp=Z,0.6nm,0.3s,baz=78,slow=14,SNR=7.9							
KSRS				LR		LR	20 13 06.8	
	comp=Z,122nm,19.6s,baz=85,slow=36							
KS19	**Wonju Array Si**	**13.28**	**270**	Pn		**Pn**	**20 08 23.9**	**-0.1**
KLR	**Kul'dur**	**13.97**	**323**	⇓ *e*P		**Pn**	**20 08 33.2**	**-0.2**
KLR	**Kul'dur**	**13.97**	**323**	Pn		**Pn**	**20 08 32.9**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=125,slow=14,SNR=8.2							
PETK	**Petropavlovsk-**	**16.94**	**28**	P		**Pn**	**20 09 11.3**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=189,slow=15,SNR=1.0							
PETK				LR		LR	20 15 26.3	
	comp=Z,80nm,21.1s,baz=204,slow=36							
ZEA	**Zeya**	**19.14**	**327**	*e*P		**Pn**	**20 09 39.3**	**0.0**
ZEA				pmax		pmax		
	comp=N,10.0nm,1.1s							
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
MA2	**Magadan**	**21.20**	**9**	P		**P**	**20 10 02.5**	**+1.8**
	comp=Z,6.8nm,0.7s,baz=169,slow=16,SNR=3.8							
MA2				LR		LR	20 17 08.3	
	comp=Z,54nm,20.4s,baz=132,slow=34							
	comp=Z,6.8nm,0.7s							
XLT	**XiLinHaoTe**	**22.00**	**293**	*e*P		**P**	**20 10 06.8**	**-2.9**
XLT				pP		pP	20 10 09.9	-2.8
XLT				sP		sP	20 10 13.1	-1.0
XLT				PP		**PnPn**	**20 10 30.9**	**-0.5**
XLT				pmax		pmax		
	comp=Z,3.0nm,1.3s							
XLT				pmax		pmax		
	comp=Z,130nm,4.7s							
BJI	**Beijing**	**22.01**	**282**	P		**P**	**20 10 10.4**	**+0.8**
BJI				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BJI				pmax		pmax		
	comp=Z,51nm,4.3s							
NJ2	**Nanjing**	**22.02**	**260**	*e*P		**P**	**20 10 08.6**	**-1.3**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.8s							
SHEM	**Shemya Is, Ala**	**24.64**	**46**	LR		LR	20 19 43.4	
	comp=Z,57nm,18.8s,baz=150,slow=35							
SEY	**Seymchan**	**24.66**	**8**	⇑ *i*P		**P**	**20 10 37.5**	**+1.7**
SEY				pmax		pmax		
	comp=Z,12nm,0.9s							
YAK	**Yakutsk**	**25.05**	**343**	P		**P**	**20 10 39.9**	**+0.6**
YAK	**Yakutsk**	**25.05**	**343**	*e*P		**P**	**20 10 40.4**	**+1.1**
YAK				*e*			20 11 13.7	
YAK				*e*			20 14 17.2	
YAK				*e*S		**S**	**20 15 02.7**	**+0.1**
YAK				*e**SS		**sS**	**20 15 08.8**	**+0.8**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.9s							
YAK				pmax		pmax		
	comp=N,2.0nm,1.0s							
YAK				pmax		pmax		
	comp=Z,194nm,6.3s							
YAK				smax		smax		
	comp=N,83nm,3.3s							
YAK	**Yakutsk**	**25.05**	**343**	LR		LR	20 22 47.0	
	comp=N,70nm,18.1s,baz=102,slow=42							
HHC	**Hu-ho-hao-te**	**25.42**	**285**	*e*P		**P**	**20 10 42.2**	**-0.9**
HHC				S		**S**	**20 15 06.9**	**-2.4**
HHC				sS		sS	20 15 18.8	+4.3
HHC				pmax		pmax		
	comp=Z,6.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,140nm,5.1s							
HHC				LR		LR		
	comp=N,84nm,10.4s							
HHC				LR		LR		
	comp=E,160nm,10.8s							
HHC				LR		LR		
	comp=Z,180nm,13.1s							
LYN	**LuoYang**	**26.08**	**271**	*e*P		**P**	**20 10 55.6**	**+6.6**
LYN				pmax		pmax		
	comp=Z,20nm,0.7s							
LYN				AMB		AMB		
	comp=Z,370nm,4.1s							
WHN	**Wuhan**	**26.15**	**261**	P		**P**	**20 10 52.4**	**+2.8**
BTO	**Baotou**	**26.62**	**285**	*e*P		**P**	**20 10 55.0**	**+1.1**
BTO				pP		**sP**	**20 10 59.4**	**+0.8**
BTO				sP		**pwP**	**20 11 02.1**	**-3.2**
BTO				PP		**PnPn**	**20 11 39.0**	**+4.5**
BTO				pmax		pmax		
	comp=Z,8.0nm,1.1s							
BTO				pmax		pmax		
	comp=Z,220nm,7.5s							
BOD	**Bodaibo**	**27.54**	**324**	*e*P		P	20 11 09.5	+7.6
BOD				pmax		pmax		
	comp=Z,5.0nm,1.1s							
ULN	**Ulaanbaatar**	**28.59**	**301**	P		**P**	**20 11 11.6**	**0.0**
ULN	**Ulaanbaatar**	**28.59**	**301**	P		**P**	**20 11 11.6**	**0.0**
ULN				pmax		pmax		
	comp=Z,2.0nm,0.6s							
XAN	**X

comp=Z,7.4nm,0.8s
F17K Baldwin Pennin 40.96 30 P P 20 12 58.9 +1.3
F17K IAmb IAmb 20 13 00.5
comp=Z,5.2nm,0.7s
DGZ Jazzator, Alta 41.49 305⇑ *e*P P 20 13 04.1 +1.6
DGZ pmax pmax
comp=Z,5.0nm,0.7s
C18K Utukok River 41.59 27 IAmb IAmb 20 13 19.5
comp=Z,8.1nm,0.8s
H18K Honhosa River 41.83 32 P P 20 13 05.9 +1.0
H18K IAmb IAmb 20 13 21.1
comp=Z,5.6nm,0.8s
G18K Tagagawik 41.86 31 P P 20 13 06.3 +1.2
CRAI Chiangrai 42.27 257 P P 20 13 09.3 +0.3
WMQ Urumqi 42.37 296 *e*P P 20 13 12.3 +2.7
F19K Shaleruckik Mo 42.40 30 P P 20 13 10.0 +0.6
F19K IAmb IAmb 20 13 29.3
comp=Z,8.8nm,1.4s
G19K Purcell Mounta 42.53 31 P P 20 13 11.6 +1.1
ZALV Zalesovo Beam 42.68 311 P P 20 13 12.1 +0.2
comp=Z,0.6nm,0.5s,baz=82,slow=10,SNR=2.6
comp=Z,0.6nm,0.5s
NRIK Noril'sk 42.81 334⇑ *e*P P 20 13 16.5 +3.8
F20K Avaraart Lake 43.23 30 P P 20 13 16.9 +0.7
IMAR Indian Mountai 43.86 31 P P 20 13 22.4 +1.2
B21K Ikpikpuk River 44.12 26 P P 20 13 25.2 +1.9
B21K IAmb IAmb 20 13 41.4
comp=Z,7.8nm,1.0s
H21K Melozitna Rive 44.21 32 P P 20 13 24.6 +0.5
H21K IAmb IAmb 20 13 40.5
comp=Z,4.4nm,0.8s
CMAR Chiang Mai Arr 44.40 256 P P 20 13 25.4 -0.8
CMAR Chiang Mai Arr 44.40 256 P P 20 13 25.4 -0.8
CMAR Chiang Mai Arr 44.40 256 P P 20 13 24.1 -2.2
comp=Z,0.7nm,0.7s,baz=42,slow=7.3,SNR=2.1
CMAR LR LR 20 33 21.6
comp=Z,24nm,19.3s,baz=30,slow=38
comp=Z,0.7nm,0.7s
SKT Skwentna 44.56 37 P P 20 13 29.1 +2.1
B22K Teshekpuk Lake 44.67 25 IAmb IAmb 20 13 45.4
comp=Z,7.3nm,1.1s
D22K Ayikyak River 44.67 27 P P 20 13 29.1 +1.4
D22K IAmb IAmb 20 13 44.1
comp=Z,3.5nm,0.7s
MK31 Makanchi Array 45.39 301 P P 20 13 33.5 -0.3
MK31 Makanchi Array 45.39 301 P P 20 13 33.5 -0.3
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 45.39 301 P P 20 13 33.1 -0.8
MKAR Makanchi Array 45.39 301 P P 20 13 33.2 -0.6
comp=Z,0.4nm,0.7s,baz=81,slow=9.1,SNR=4.6
comp=Z,0.4nm,0.7s
MAKZ Makanchi 45.60 301 P P 20 13 35.9 +0.4
MAKZ Makanchi 45.60 301 P P 20 13 35.9 +0.4
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
NEA2 Nenana 45.72 33 P P 20 13 36.0 -0.1
NEA2 IAmb IAmb 20 14 03.3
comp=Z,7.6nm,1.1s
TOLK Toolik Lake Re 45.76 28 P P 20 13 37.8 +1.4
TOLK IAmb IAmb 20 14 06.2
comp=Z,3.7nm,0.9s
POKR Poker Plat Res 46.42 33 P P 20 13 41.6 -0.1
DHY Denali Highway 46.48 36 P P 20 13 41.6 -0.7
DHY IAmb IAmb 20 14 14.0
comp=Z,9.7nm,1.2s
IL31 46.66 33 P P 20 13 42.8 -0.6
ILAR Eielson Array 46.66 33 P P 20 13 44.2 +0.8
comp=Z,1.1nm,0.7s,baz=260,slow=6.9,SNR=12
comp=Z,1.1nm,0.7s
IL03 Eielson Array 46.67 33 P P 20 13 43.5 -0.1
KURK Kurchatov 46.91 307 P P 20 13 44.0 -1.5
KURK Kurchatov 46.91 307 P P 20 13 44.1 -1.5
KURK pmax pmax
comp=Z,9.0nm,0.7s
KURBB Kurchatov Arra 46.98 307 P P 20 13 46.8 +0.6
comp=Z,1.3nm,0.6s,baz=81,slow=8.0,SNR=7.9
comp=Z,1.3nm,0.6s
L26K Log Cabin Wild 48.31 36 P P 20 13 57.5 +1.1
BCAR Beaver Creek A 49.02 35 P P 20 14 00.5 -1.3
F28M Old Crow 49.38 29 P P 20 14 04.8 +0.2
F28M IAmb IAmb 20 14 24.9
comp=Z,3.2nm,1.0s
E29M Blow River 50.05 28 P P 20 14 09.4 -0.2
E29M IAmb IAmb 20 14 20.1
comp=Z,6.9nm,1.2s
G30M tAoh Zraii Nji 50.86 30 P P 20 14 13.0 -2.7
G30M IAmb IAmb 20 14 51.3
comp=Z,4.6nm,1.1s
I30M Mount Dempster 51.06 32 P 20 14 17.0 -0.4
I30M IAmb IAmb 20 14 34.0
comp=Z,5.2nm,0.8s
BVAR Borovoye Array 51.32 312 P P 20 14 20.8 +1.4
comp=Z,0.7nm,0.6s,baz=90,slow=7.4,SNR=4.8
comp=Z,0.7nm,0.6s
BRVK Borovoye 51.37 312 P P 20 14 18.6 -1.2
BRVK Borovoye 51.37 312 P P 20 14 18.6 -1.2
BRVK pmax pmax
comp=Z,3.0nm,0.9s
HYT Haines Junctio 51.38 38 P P 20 14 19.2 -0.6
HYT IAmb IAmb 20 14 47.4
comp=Z,9.5nm,1.0s
COEN Coen 52.46 182 P P 20 14 28.9 +0.8
COEN IAmb IAmb 20 14 49.2
comp=Z,6.1nm,1.2s
ARU Arti 56.77 318 P P 20 15 00.3 +1.3
ARU IAmb IAmb 20 15 14.3
comp=Z,5.5nm,1.0s
ARU Arti 56.77 318 *c i*P P 20 15 04.8 +5.7
ARU 20 15 59.4
ARU 20 17 01.2
ARU S S 20 23 03.8 +13
ARU pmax pmax
comp=Z,16nm,3.4s
ARU Arti 56.77 318 P P 20 15 04.8 +5.7
comp=Z,1.9nm,0.6s,baz=104,slow=5.4,SNR=3.7
GSI Gunungsitoli 56.88 241 P P 20 15 00.9 +0.5
ABKAR Akbulak array 56.78 310 P 20 15 14.4 +1.1
WR0 Warramunga Arr 59.01 191 P P 20 15 14.1 -1.0
WR0 Warramunga Arr 59.17 191 P P 20 15 15.2 -1.0
WR0 IAmb IAmb 20 15 16.0
comp=Z,4.3nm,0.8s
WRAB Tennant Creek 59.18 191 P P 20 15 15.2 -1.1
WRAB Tennant Creek 59.18 191 P P 20 15 15.2 -1.1
WRAB pmax pmax
comp=Z,6.0nm,0.9s
WB2 Warramunga Arr 59.19 191 P P 20 15 15.3 -1.0
WRA Warramunga Arr 59.19 191 P P 20 15 15.4 -0.9
WRA Warramunga Arr 59.19 191 *e*P P 20 15 15.5 -0.9
WRA pmax pmax
comp=Z,5.0nm,0.8s
WRA Warramunga Arr 59.19 191 P P 20 15 15.7 -0.7
comp=Z,4.9nm,0.8s,baz=12,slow=7.3,SNR=28
comp=Z,4.9nm,0.8s
AKTO Aktyubinsk 59.42 312 P P 20 15 22.5 +4.7
comp=Z,1.8nm,0.6s,baz=72,slow=7.3,SNR=6.2
YKA Yellowknife Ar 61.02 31 *e*P P 20 15 28.3 -0.2
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 61.02 31 P P 20 15 29.2 +0.7
comp=Z,0.5nm,0.7s,baz=293,slow=6.1,SNR=8.1
comp=Z,0.5nm,0.7s
KEV Kevo 62.73 340 P P 20 15 41.1 +1.3
KEV Kevo 62.73 340 P P 20 15 41.1 +1.3
KEV pmax pmax
comp=Z,39nm,1.4s
AS31 Alice Springs 62.91 191 P P 20 15 42.0 +0.4
ASAR Alice Springs 62.91 191 P P 20 15 41.3 -0.3
comp=Z,2.1nm,0.8s,baz=10,slow=6.9,SNR=19
comp=Z,2.1nm,0.8s
BELG Belogornoye 64.27 318 P P 20 15 56.1 +5.8
comp=Z,3.9nm,0.8s,baz=49,slow=19,SNR=2.1
YBH Yreka Blue Hor 67.26 54 LR LR 20 38 03.8
comp=Z,20nm,21.1s,baz=21,slow=29
FINES FINESS Array B 68.46 333 P P 20 16 17.9 +0.9
comp=Z,2.8nm,1.0s,baz=70,slow=8.0,SNR=5.3
comp=Z,2.8nm,1.0s
KIV Kislovodsk 71.69 312 *e*P P 20 16 37.4 +0.1
KIV pmax pmax
comp=Z,9.0nm,1.1s
NVAR Mina Array Bea 71.90 55 P P 20 16 39.6 +0.7
NVAR Mina Array Bea 71.90 55 P P 20 16 40.2 +1.4
comp=Z,0.7nm,0.6s,baz=280,slow=6.9,SNR=6.5
comp=Z,0.7nm,0.6s
NOA NORSAR Array B 73.56 338 LR LR 20 56 08.9
comp=Z,60nm,18.0s,baz=300,slow=42

R11B Troy Canyon, C 73.68 54 P P 20 16 48.8 -0.5
PDAR Pinedale Array 74.62 47 P P 20 16 54.8 0.0
PDAR Pinedale Array 74.62 47 P P 20 16 55.5 +0.6
comp=Z,0.4nm,0.5s,baz=302,slow=1.4,SNR=5.3
comp=Z,0.4nm,0.5s
LANS Liptovska Anna 79.95 327 *e*P P 20 17 24.4 +0.1
LANS Liptovska Anna 79.95 327 *e*P P 20 17 24.4 +0.1
CLL Collm 80.84 332 *e*P P 20 17 29.0 0.0
CLL Collm 80.84 332 *e*P P 20 17 29.0 0.0
CLL AMS AMS 23 54 00.0
comp=Z,300nm,18.9s
TXAR Lajitas Array 87.04 54 P P 20 18 01.9 +0.7
comp=Z,0.4nm,0.5s,baz=308,slow=3.2,SNR=7.0
comp=Z,0.4nm,0.5s
ESDC Sonseca Array 96.81 336 LR LR 21 10 39.1
comp=Z,38nm,18.0s,baz=7.5,slow=40

*LDG **12** 20:32:13.2±0.5, 47.00N×8.99E, h4km, Ml2.1/10, Error ellipse: s-maj=8.4km s-min=3.9km az=88.0*
*VIE **12** 20:32:16.1±0.2, 46.88N×8.79E, h3km, ml1.7/4, Error ellipse: s-maj=1.7km s-min=1.3km az=160.0*
*STR **12** 20:32:26.2±0.4, 48°N×3°×±°, h7km, MLv1.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=159.8, preliminary*
ZUR 12 20:32:11.3, 46.91N×8.78E, h4km±3km, MLh0.6/10, 3C-2D, Error ellipse: s-maj=5758.2km s-min=843.4km az=267.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTS	**Altdorf, Kanto**	**0.10**	**253**	Pg	Pg	20 32 13.8	+0.4
SALTS	**Altdorf, Kanto**	**0.10**	**253**	⇑Pg	Pg	20 32 18.2	+4.8
MUO	**Muotathal**	**0.11**	**299**	Pg	Pg	20 32 13.8	+0.2
MUO				Sg	Sg	20 32 15.8	+0.6
MUO	**Muotathal**	**0.11**	**299**	Sg	Sg	20 32 20.3	+5.0
SLTM2	**Linthal, Matt**	**0.15**	**86**	⇓Pg	Pg	20 32 14.5	+0.2
SLTM2				Sg	Sg	20 32 16.8	+0.5
SLTM2	**Linthal, Matt**	**0.15**	**86**	⇓Pg	Pg	20 32 19.0	+4.7
SLTM2				Sg	Sg	20 32 21.3	+5.0
LLS	**Linth-Limmern**	**0.17**	**113**	Sg	Sg	20 32 17.4	+0.5
LLS	**Linth-Limmern**	**0.17**	**113**	Sg	Sg	20 32 21.9	+4.9
SGLK	**Glarus, Kanton**	**0.24**	**56**	⇑Pg	Pg	20 32 20.8	+4.9
PANIX	**Pigniu (Panix)**	**0.24**	**111**	⇑Pg	Pg	20 32 16.2	+0.1
PANIX				Sg	Sg	20 32 19.7	+0.4
PANIX	**Pigniu (Panix)**	**0.24**	**111**	Sg	Sg	20 32 24.2	+4.9
BNALP	**Bannalp**	**0.25**	**260**	Pg	Pg	20 32 16.5	+0.4
BNALP	**Bannalp**	**0.25**	**260**	Pg	Pg	20 32 21.0	+4.9
PLONS	**Plons/SG**	**0.43**	**71**	Sg	Sb	20 32 30.3	+1.9
ZUR	**Degenried**	**0.48**	**343**	Sg	Sb	20 32 33.5	+3.8
ZUR	**Degenried**	**0.48**	**343**	Pg	Pn	20 32 32.9	+7.9
HAMIK	**Hmikon, Dlik**	**0.48**	**314**	Sg	Sb	20 32 33.6	+3.7
WILA	**Wila**	**0.51**	**10**	Sg	Sn	20 32 34.5	-0.2
SULZ	**Cheisacher**	**0.77**	**324**	Sg	Sg	20 32 31.6	-4.3
SULZ	**Cheisacher**	**0.77**	**324**	Pg	Pn	20 32 28.8	-0.1
DAVA	**Damuels**	**0.84**	**63**	*e*Pg	Pn	20 32 32.9	+2.8
	0.5nm,0.1s						
DAVA				*e*Sg	Sn	20 32 44.5	+1.6
	5.6nm,0.4s						
BALST	**Balsthal**	**0.85**	**300**	Pg	Pn	20 32 34.8	+4.7
BALST	**Balsthal**	**0.85**	**300**	Sg	Sn	20 32 42.4	-0.8
SLE	**Schleitheim**	**0.87**	**347**	Pg	Pn	20 32 29.8	-0.7
SLE	**Schleitheim**	**0.87**	**347**	Sg	Sg	20 32 33.7	-5.8
ENDD	**Endenburg**	**1.07**	**319**	Pg	Pn	20 32 32.8	-0.3
ENDD	**Endenburg**	**1.07**	**319**	Sg	Sg	20 32 37.3	-8.4
BOURR	**Bourrignon**	**1.16**	**295**	Pg	Pn	20 32 40.2	+5.7
BOURR	**Bourrignon**	**1.16**	**295**	Sg	Sn	20 32 50.4	-0.4
GUT	**Gutenstein**	**1.18**	**11**	Sg	Sb	20 32 50.5	+0.5
GUT	**Gutenstein**	**1.18**	**11**	Pg	Pn	20 32 39.5	+4.9
KIZ	**Kirchzarten**	**1.20**	**331**	Sg	Sg	20 32 39.2	-11
KIZ	**Kirchzarten**	**1.20**	**331**	Pg	Pg	20 32 33.6	-0.6
ILLF	**Illfurth**	**1.29**	**307**	Pg	Pb	20 32 39.0	+2.8
ILLF				Sg	Sg	20 32 48.2	-4.6
FETA	**Feichten**	**1.34**	**85**	*e*Pg	Pb	20 32 42.1	+5.1
	1.6nm,0.5s						
FETA				*e*Sg	Sn	20 33 00.8	+5.5
	1.7nm,0.2s						
VOGT	**Vogtsburg - To**	**1.39**	**328**	Pg	Pn	20 32 37.3	-0.2
MOF	**Molkenrain**	**1.46**	**311**	Pg	Pg	20 32 40.7	+1.4
MOF				Sg	Sb	20 32 51.7	-6.3
WALT	**Westhalten**	**1.47**	**316**	Pg	Pg	20 32 40.0	+0.6
WALT				Sg	Sb	20 32 50.0	-8.1
HINF	**Hinteralfeld**	**1.59**	**305**	*e*Pn	Pb	20 32 41.1	-0.2
HINF	**Hinteralfeld**	**1.59**	**305**	*e*Pg	Pg	20 32 44.2	+2.4
HINF				*e*Sn	Sg	20 33 02.8	+0.4
HINF				*e*Sg	Sb	20 33 07.1	+5.3
	6.0nm,0.3s						
MOTA	**Moosalm**	**1.64**	**74**	*i* Pg	Pg	20 32 47.0	+4.1
	0.3nm,0.1s						
MOTA				Sg	Sg	20 33 11.3	+7.1
	1.0nm,0.1s						
RONF	**Ronchamp**	**1.66**	**300**	Pg	Pg	20 32 46.9	+3.9
RONF				Sg	Sn	20 33 01.2	-1.7
SQTA	**Sankt Quirin**	**1.69**	**79**	*e*Pg	Pg	20 32 48.5	+4.9
	1.5nm,0.2s						
SQTA				Sg	Sg	20 33 11.9	+6.4
	4.0nm,0.4s						
CDF	**Champ du Feu**	**1.81**	**326**	*e*Pg	Pg	20 32 47.1	+1.1
CDF				*e*Sg	Sg	20 33 11.4	+1.9
	3.5nm,0.3s						
CABF	**La Chapelle**	**1.88**	**262**	*e*Sg	Sg	20 33 18.0	+6.5
	2.3nm,0.3s						
HAU	**Haudompre**	**1.98**	**304**	*e*Sg	Sg	20 33 16.4	+1.5
	2.6nm,0.2s						
LPL	**La Plagne**	**1.99**	**226**	*e*Pg	Pg	20 32 54.1	+4.6
LPL				*e*Sg	Sg	20 33 22.9	+7.6
	1.6nm,0.4s						
LPG	**La Plagne**	**2.00**	**226**	*e*Pg	Pg	20 32 54.6	+5.0
LPG				*e*Sg	Sg	20 33 22.9	+7.5
	1.1nm,0.4s						
MBDF	**Montbardon**	**2.60**	**213**	*e*Pn	Pn	20 32 55.1	+0.9
MBDF	**Montbardon**	**2.60**	**213**	*e*Pg	Pg	20 33 04.2	+3.1
MBDF				*e*Sg	Sg	20 33 39.9	+5.2
	0.7nm,0.2s						
ORIF	**Oris-en-Rattie**	**2.84**	**226**	*e*Pg	Pg	20 33 08.8	+3.1
LOR	**Lormes**	**3.38**	**278**	*e*Sg	Sg	20 34 03.8	+3.9
	0.6nm,0.2s						

*NEIC **12** 20:55:11.4±2.3, 55.95N×0.04×149.98W±0.10, h10km±2km, ML4.0/46, ML3.8(AEIC), Error ellipse: s-maj=9.3km s-min=6.0km az=81.0*
*IDC **12** 20:55:12.7±3.1, 55.92N×149.99W, h0km, mb3.8/1, mbtmp3.6/3, ML3.6/2, MS3.4/4, Error ellipse: s-maj=51.6km s-min=36.1km az=138.0*
*AEIC **12** 20:55:17.2±1.8, 55.99N±0.09×150.0W±0.1, h10km±7km, Error ellipse: s-maj=12.9km s-min=9.2km az=164.0*
ISC 12 20:55:12.5±1.1, 56.06N±0.07×150.04W±0.06, h10km, n222, σ1s22/220, MS4.0/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.14**	**304**	Pn	**Pn**	**20 55 47.9**	**-0.2**
OHAK	**Old Harbor**	**2.14**	**304**		**Sn**	**20 56 12.9**	**-1.8**
OHAK	**Old Harbor**	**2.14**	**304**	IAML		20 56 14.3	
	comp=N,117nm,0.2s						
OHAK				IAML		20 56 21.4	
	comp=E,142nm,0.5s						
OHAK	**Old Harbor**	**2.14**	**304**	P	**Pn**	**20 55 48.4**	**+0.2**
OHAK	**Old Harbor**	**2.14**	**304**	P	**Pn**	**20 55 48.3**	**+0.2**
	baz=123						
OHAK				S	**Sn**	**20 56 12.9**	**-1.8**
	baz=123						
KDAK	**Kodiak Island**	**2.22**	**322**	Pn	**Pn**	**20 55 49.8**	**+0.5**
KDAK	**Kodiak Island**	**2.22**	**322**		**Sn**	**20 56 15.3**	**-1.4**
KDAK	**Kodiak Island**	**2.22**	**322**	LR	LR	20 56 18.3	
	comp=E,200nm,19.9s,baz=299,slow=28						
SII	**Sitkinak Islan**	**2.36**	**284**	Pn	**Pn**	**20 55 51.1**	**-0.2**
SII					**Sn**	**20 56 18.8**	**-1.5**
SII				IAML		20 56 19.6	
	comp=E,1μm,0.6s						
SII				IAML		20 56 22.1	
	comp=N,595nm,0.7s						
SII	**Sitkinak Islan**	**2.36**	**284**	P	**Pn**	**20 55 51.4**	**+0.1**
	baz=102						
SII				S	**Sn**	**20 56 18.7**	**-1.5**
	baz=102						
Q20K	**Shuyak Island**	**2.85**	**334**	P	**Pn**	**20 55 58.8**	**+0.8**
	baz=153						
Q20K				S	**Sn**	**20 56 32.2**	**-0.1**
	baz=153						
SYI	**Shuyak Island**	**2.85**	**334**		**Pn**	**20 55 58.5**	**+0.5**
SYI				IAML		20 56 34.3	
	comp=E,310nm,0.3s						
SYI	**Shuyak Island**	**2.85**	**334**		**Sn**	**20 56 32.2**	**-0.1**
R18K	**Karluk**	**2.86**	**304**		**Pn**	**20 55 58.9**	**+0.9**
R18K	**Karluk**	**2.86**	**304**	P	**Pn**	**20 55 58.9**	**+0.9**
	baz=121						
CHIR	**Chirikof Islan**	**3.15**	**268**		**Pn**	**20 56 01.7**	**-0.3**
CHIR	**Chirikof Islan**	**3.15**	**268**		**Sn**	**20 56 36.3**	**-3.4**
CHIR	**Chirikof Islan**	**3.15**	**268**	IAML		20 56 37.4	
	comp=N,431nm,0.4s						
CHIR				IAML		20 56 37.6	
	comp=E,613nm,0.6s						
CHIR	**Chirikof Islan**	**3.15**	**268**	P	**Pn**	**20 56 01.8**	**-0.3**
	baz=85						
CHIR				S	**Sn**	**20 56 36.3**	**-3.4**
	baz=85						
KAHG	**Katmai Hook Gl**	**3.45**	**317**		**Pn**	**20 56 08.3**	**+2.0**
Q19K	**Cape Douglas,**	**3.47**	**327**		**Pn**	**20 56 08.0**	**+1.5**
Q19K	**Cape Douglas,**	**3.47**	**327**	P	**Pn**	**20 56 08.3**	**+1.8**
	baz=145						
CNPM	**China Poot**	**3.53**	**350**		**Pn**	**20 56 07.4**	**0.0**
CNPM	**China Poot**	**3.53**	**350**		**Sn**	**20 56 48.2**	**-0.9**
CNPM	**China Poot**	**3.53**	**350**	IAML		20 56 50.1	
	comp=E,212nm,0.4s						
CNPM				IAML		20 56 52.6	
	comp=N,192nm,0.4s						
KCE	**Katmai Mt Cerb**	**3.55**	**310**		**Pn**	**20 56 09.7**	**+2.1**
ACHA	**Angle Creek He**	**3.60**	**309**		**Pn**	**20 56 09.8**	**+1.6**
ANCK	**Angle Creek**	**3.66**	**308**		**Pn**	**20 56 10.9**	**+1.8**
HOM	**Homer**	**3.71**	**347**		**Sn**	**20 56 53.0**	**-0.4**
HOM	**Homer**	**3.71**	**347**	Pn	**Pn**	**20 56 09.4**	**-0.3**
HOM	**Homer**	**3.71**	**347**	IAML		20 56 56.2	
	comp=E,341nm,0.4s						
HOM				IAML		20 57 00.9	
	comp=N,357nm,0.7s						
HOM	**Homer**	**3.71**	**347**	S	**Sn**	**20 56 53.0**	**-0.4**
	baz=166						
BRSE	**Bradley Lake S**	**3.71**	**354**		**Pn**	**20 56 09.8**	**0.0**
BRSE					**Sn**	**20 56 51.5**	**-2.0**
BRSE	**Bradley Lake S**	**3.71**	**354**	P	**Pn**	**20 56 09.8**	**0.0**
	baz=174						
BRSE				S	**Sn**	**20 56 51.5**	**-2.0**
	baz=174						
KAHC	**Katmai Hardscr**	**3.74**	**316**		**Pn**	**20 56 12.1**	**+1.8**
KAHC	**Katmai Hardscr**	**3.74**	**316**	P	**Pn**	**20 56 12.1**	**+1.8**
	baz=132						
BRLK	**Bradley Lake**	**3.74**	**353**	Pn	**Pn**	**20 56 10.0**	**-0.2**
BRLK	**Bradley Lake**	**3.74**	**353**		**Sn**	**20 56 52.7**	**-1.5**
BRLK	**Bradley Lake**	**3.74**	**353**	IAML		20 56 55.0	
	comp=E,151nm,0.6s						
BRLK				IAML		20 56 55.1	
	comp=N,160nm,0.8s						
AUCH	**Augustine Cone**	**3.78**	**333**		**Pn**	**20 56 12.4**	**+1.7**
PLK3	**Peulik 3**	**3.79**	**298**		**Pn**	**20 56 12.3**	**+1.5**
AUL	**Augustine Lava**	**3.79**	**333**		**Pn**	**20 56 12.7**	**+1.8**
Q17K	**Contact Creek**	**3.87**	**307**	P	**Pn**	**20 56 13.6**	**+1.4**
	baz=123						
Q23K	**Middleton Isla**	**3.91**	**29**	Pn	**Pn**	**20 56 12.6**	**0.0**
Q23K				IAML		20 58 29.0	
	comp=N,227nm,1.1s						
Q23K				IAML		20 58 39.1	
	comp=E,269nm,1.5s						
Q23K	**Middleton Isla**	**3.91**	**29**	P	**Pn**	**20 56 12.5**	**0.0**
	baz=211						
MID	**Middleton Isla**	**3.91**	**29**	Pn	**Pn**	**20 56 12.3**	**-0.2**
MID				IAML		20 58 04.8	
	comp=N,206nm,1.5s						
MID				IAML		20 58 39.0	
	comp=E,254nm,1.4s						
MID	**Middleton Isla**	**3.91**	**29**	P	**Pn**	**20 56 12.7**	**+0.2**
P19K	**Oil Pt**	**3.98**	**336**		**Pn**	**20 56 14.4**	**+0.8**
P19K	**Oil Pt**	**3.98**	**336**	P	**Pn**	**20 56 14.7**	**+1.2**
	baz=154						
SEW	**Seward**	**4.06**	**4**	P	**Pn**	**20 56 14.5**	**-0.1**
	baz=184						
P23K	**Montague Islan**	**4.19**	**18**	P	**Pn**	**20 56 16.6**	**+0.3**
	baz=200						
O20K	**Slope Mountain**	**4.26**	**342**	P	**Pn**	**20 56 18.2**	**+0.9**
	baz=160						
P18K	**Big Mountain,**	**4.34**	**322**	Pn	**Pn**	**20 56 18.9**	**+0.4**
P18K	**Big Mountain,**	**4.34**	**322**	P	**Pn**	**20 56 19.3**	**+0.8**
	baz=138						
R16K	**Pilot Point**	**4.41**	**293**		**Pn**	**20 56 20.9**	**+1.6**
R16K	**Pilot Point**	**4.41**	**293**	IAML		20 57 35.4	
	comp=N,291nm,1.4s						
R16K	**Pilot Point**	**4.41**	**293**	P	**Pn**	**20 56 20.9**	**+1.6**
	baz=108						
O22K	**Cooper Landing**	**4.43**	**2**	Pn	**Pn**	**20 56 19.8**	**+0.2**
O22K	**Cooper Landing**	**4.43**	**2**	P	**Pn**	**20 56 20.1**	**+0.5**
	baz=182						
Q16K	**King Salmon**	**4.44**	**309**		**Pn**	**20 56 20.7**	**+1.0**
Q16K	**King Salmon**	**4.44**	**309**	P	**Pn**	**20 56 20.7**	**+1.0**
	baz=124						
SLKM	**Skilak Lake**	**4.46**	**359**		**Pn**	**20 56 19.8**	**-0.3**
RED	**Redoubt Volcan**	**4.60**	**343**		**Pn**	**20 56 21.7**	**-0.4**
RSO	**Redoubt South**	**4.64**	**343**		**Pn**	**20 56 22.1**	**-0.6**
P17K	**Kvichak River**	**4.66**	**315**		**Pn**	**20 56 24.1**	**+1.4**
P17K	**Kvichak River**	**4.66**	**315**	P	**Pn**	**20 56 24.1**	**+1.4**
	baz=130						
RDWB	**Redoubt West**	**4.68**	**343**		**Pn**	**20 56 22.6**	**-0.5**
CHGN	**Chignik**	**4.69**	**276**		**Pn**	**20 56 23.4**	**+0.3**
CHGN				IAML		20 57 18.7	
	comp=N,116nm,0.5s						
CHGN				IAML		20 57 20.6	
	comp=E,92nm,0.6s						
O18K	**Koktuh Hills**	**4.69**	**326**	Pn	**Pn**	**20 56 23.6**	**+0.3**
O18K				IAML		20 57 19.7	
	comp=N,87nm,0.7s						
O18K	**Koktuh Hills**	**4.69**	**326**	P	**Pn**	**20 56 24.0**	**+0.7**
	baz=142						
RDT	**Redoubt**	**4.69**	**346**		**Pn**	**20 56 22.9**	**-0.5**
O19K	**Port Alsworth**	**4.72**	**333**		**Pn**	**20 56 23.5**	**-0.1**
O19K	**Port Alsworth**	**4.72**	**333**	P	**Pn**	**20 56 24.2**	**+0.6**
	baz=150						
HIN	**Hinchinbrook I**	**4.73**	**22**	Pn	**Pn**	**20 56 24.1**	**+0.3**
HIN				IAML		20 57 19.3	
	comp=N,149nm,1.5s						
HIN				IAML		20 58 39.5	
	comp=E,165nm,1.4s						
KAIM	**Kayak Island**	**4.89**	**35**	Pn	**Pn**	**20 56 26.6**	**+0.6**
KAIM				IAML		20 57 51.6	
	comp=N,102nm,1.4s						
KAIM				IAML		20 58 12.9	
	comp=E,176nm,1.4s						
EYAK	**Cordova Ski Ar**	**5.03**	**25**	P	**Pn**	**20 56 28.5**	**+0.6**
	baz=208						
RC01	**Rabbit Creek A**	**5.04**	**2**	Pn	**Pn**	**20 56 27.9**	**-0.2**
RC01				IAML		20 57 25.5	
	comp=E,99nm,0.4s						
RC01				IAML		20 57 31.0	
	comp=N,82nm,0.3s						
RC01	**Rabbit Creek A**	**5.04**	**2**	P	**Pn**	**20 56 28.0**	**-0.1**
	baz=182						
P16K	**Nushagak River**	**5.21**	**308**	P	**Pn**	**20 56 32.0**	**+1.6**
	baz=122						
N20K	**Mount Spurr**	**5.28**	**348**	P	**Pn**	**20 56 31.0**	**-0.3**
	baz=167						
SPCR	**Spurr Chakacha**	**5.28**	**348**		**Pn**	**20 56 31.0**	**-0.4**
O17K	**Koliganek Bris**	**5.29**	**318**	P	**Pn**	**20 56 32.6**	**+1.2**
	baz=132						
N19K	**Bonanza Creek**	**5.30**	**336**		**Pn**	**20 56 31.4**	**-0.4**
N19K	**Bonanza Creek**	**5.30**	**336**	P	**Pn**	**20 56 32.0**	**+0.3**
	baz=152						
S14K	**Fog Glacier**	**5.32**	**276**	P	**Pn**	**20 56 33.2**	**+1.2**
	baz=89						
VNFG	**Fog Glacier, M**	**5.32**	**276**		**Pn**	**20 56 33.2**	**+1.3**

SVW2	Sparrevohn	5.82	332			Pn	20 56 39.2 +0.4
SVW2	Sparrevohn	5.82	332	P		Pn	20 56 39.5 +0.8
SML	Sawmill	5.83	8	Pn		Pn	20 56 39.0 +0.2
SML	Sawmill	5.83	8	P		Pn	20 56 39.6 +0.7
	baz=189						
KLU	Klutina	5.85	20			Pn	20 56 39.9 +0.6
KLU	Klutina	5.85	20	P		Pn	20 56 40.0 +0.8
	baz=203						
N17K	Nushagak Hills	5.85	323	Pn		Pn	20 56 39.9 +0.7
N17K	Nushagak Hills	5.85	323	P		Pn	20 56 39.9 +0.7
	baz=137						
SDPT	Sand Point	5.95	267			Pn	20 56 40.5 +0.1
SDPT	Sand Point	5.95	267	P		Pn	20 56 41.0 +0.6
SDPT	Sand Point	5.95	267	P		Pn	20 56 40.6 +0.1
	baz=80						
SCM	Sheep Creek Mo	5.95	12			Pn	20 56 40.8 +0.2
SCM	Sheep Creek Mo	5.95	12	P		Pn	20 56 41.3 +0.7
	baz=194						
SKT	Skwentna	5.98	353	Pn		Pn	20 56 40.7 -0.3
M20K	Styx River	6.05	346	Pn		Pn	20 56 41.4 -0.6
M20K	Styx River	6.05	346	P		Pn	20 56 41.8 -0.2
	baz=163						
VRDI	Verde Repeater	6.21	31	Pn		Pn	20 56 44.2 -0.1
N25K	Chitina, Valde	6.23	25	Pn		Pn	20 56 45.2 +0.7
N25K	Chitina, Valde	6.23	25	P		Pn	20 56 45.7 +1.2
	baz=209						
GLB	Gilahina Butte	6.29	28			Pn	20 56 45.7 +0.5
M24K	Tolsona, Glenn	6.38	17	Pn		Pn	20 56 47.7 +1.2
M24K	Tolsona, Glenn	6.38	17	P		Pn	20 56 47.5 +1.1
	baz=200						
PCA	Pinnacle	6.57	48	Pn		Pn	20 56 50.3 +1.2
L19K	White Mountain	6.62	340	Pn		Pn	20 56 49.7 0.0
CTG	Chitna Glacier	6.70	39	P		Pn	20 56 51.8 +0.9
	baz=226						
PNL	Peninsula	6.73	53			Pn	20 56 51.9 +0.7
PNL	Peninsula	6.73	53	P		Pn	20 56 51.9 +0.7
	baz=242						
N15K	Kwethluk River	6.73	312	Pn		Pn	20 56 53.1 +1.9
BCPM	Bancas Point	6.76	51	Pn		Pn	20 56 52.5 +0.8
M16K	Timber Creek	6.82	320	P		Pn	20 56 53.9 +1.5
	baz=133						
O14K	Tigyukauivet M	6.82	303	Pn		Pn	20 56 53.7 +1.4
WAT7	Susitna Watana	6.82	5			Pn	20 56 53.7 +1.2
HARP	HAARP	6.83	19			Pn	20 56 54.2 +1.6
HARP	HAARP	6.83	19	P		Pn	20 56 54.2 +1.6
	baz=203						
WAT1	Susitna Watana	6.83	6			Pn	20 56 53.5 +0.9
WAT1	Susitna Watana	6.83	6	P		Pn	20 56 53.5 +0.9
	baz=187						
PPLA	Purkeypile	6.94	352	Pn		Pn	20 56 54.5 +0.3
DHY	Denali Highway	7.16	10	Pn		Pn	20 56 58.3 +1.0
DHY	Denali Highway	7.16	10	P		Pn	20 56 58.7 +1.4
	baz=192						
M15K	Kasigluk River	7.27	314			Pn	20 57 00.0 +1.4
M15K	Kasigluk River	7.27	314	P		Pn	20 57 00.0 +1.4
	baz=125						
N14K	Kuskokwak Cree	7.30	307			Pn	20 57 00.6 +1.6
N14K	Kuskokwak Cree	7.30	307	P		Pn	20 57 00.6 +1.6
	baz=117						
PAX	Paxson	7.30	17			Pn	20 56 59.9 +0.7
PAX	Paxson	7.30	17	P		Pn	20 56 59.9 +0.7
	baz=200						
M26K	Nabesna, AK	7.31	27			Pn	20 56 59.9 +0.7
RND	Reindeer	7.39	4			Pn	20 57 01.2 +0.9
O29M	Mount Kennedy	7.40	50	Pn		Pn	20 57 01.1 +0.6
TRF	Thorofare Moun	7.41	359	Pn		Pn	20 57 03.4 +2.7
P29M	Windy Craggy	7.47	56	Pn		Pn	20 57 01.2 -0.2
L16K	Owhat River	7.47	323	P		Pn	20 57 02.8 +1.4
	baz=135						
TTA	Tatalina	7.53	339	Pn		Pn	20 57 02.1 -0.1
TTA	Tatalina	7.53	339	P		Pn	20 57 03.4 +1.2
KTH	Kantishna Hill	7.53	357	Pn		Pn	20 57 04.4 +2.2
MENT	Mentasta	7.60	22			Pn	20 57 03.7 +0.5
MENT	Mentasta	7.60	22	P		Pn	20 57 05.3 +2.1
FALS	False Pass	7.70	267			Pn	20 57 04.1 -0.4
FALS	False Pass	7.70	267	P		Pn	20 57 05.0 +0.5
	baz=76						
MCK	McKinley	7.71	4	Pn		Pn	20 57 07.6 +2.9
L26K	Log Cabin Wild	7.76	23			Pn	20 57 07.3 +2.0
S31K	Pelican	7.77	70			Pn	20 57 03.4 -2.1
S31K	Pelican	7.77	70	P		Pn	20 57 04.7 -0.8
	baz=261						
M14K	Bethel	7.82	312			Pn	20 57 08.1 +2.0
YUK6	Outpost Mounta	7.83	47			Pn	20 57 07.8 +1.4
YUK6	Outpost Mounta	7.83	47	P		Pn	20 57 07.8 +1.4
	baz=236						
ISLZ	Isanotski Laza	7.90	266			Pn	20 57 07.4 0.0
BPAW	Bear Paw Mtn.	8.08	357			Pn	20 57 09.8 +0.1
BPAW	Bear Paw Mtn.	8.08	357	P		Pn	20 57 10.2 +0.5
	baz=176						
RIDG	Independent Ri	8.13	17	Pn		Pn	20 57 10.7 +0.2
RIDG	Independent Ri	8.13	17	P		Pn	20 57 11.4 +1.0
	baz=201						
J18K	Innoko River	8.15	338	Pn		Pn	20 57 09.9 -0.8
M13K	Dall Lake	8.26	307	Pn		Pn	20 57 14.0 +1.9
J20K	Nowinta River	8.39	348	Pn		Pn	20 57 13.9 -0.1
J19K	Poorman	8.43	343	Pn		Pn	20 57 13.6 -0.9
L14K	Kuka Creek	8.44	314	Pn		Pn	20 57 16.3 +1.7
WRH	Wood River Hil	8.49	6	Pn		Pn	20 57 14.1 -1.2
HDA	Harding Lake	8.51	9	Pn		Pn	20 57 18.2 +2.6
K15K	Wolf Creek Mou	8.58	321			Pn	20 57 18.1 +1.5
K15K	Wolf Creek Mou	8.58	321	P		Pn	20 57 18.3 +1.7
	baz=132						
BESE	Bessie Mountai	8.59	67	Pn		Pn	20 57 10.4 -6.4
S32K	Killisnoo	8.61	74			Pn	20 57 15.3 -1.6
J17K	VABM Dome	8.65	332	Pn		Pn	20 57 18.0 +0.6
CCB	Clear Creek Bu	8.68	6	Pn		Pn	20 57 18.6 +0.7
IL31		8.87	9			Pn	20 57 22.0 +1.5
ILAR	Eielson Array	8.87	9	Pn		Pn	20 57 20.9 +0.3
ILAR	Eielson Array	8.87	9	Pn		Pn	20 57 21.6 +1.0
	comp=N,0.8nm,0.3s,baz=187,slow=14,SNR=33						
ILAR				Sn		Sn	20 58 56.3 -4.2
	comp=N,0.9nm,0.3s,baz=222,slow=15,SNR=9.3						
	comp=N,1.3nm,0.4s						
IL03	Eielson Array	8.88	9	Pn		Pn	20 57 22.0 +1.4
J25K	Salcha River,	8.88	13	Pn		Pn	20 57 19.8 -1.0
COLA	College	8.90	6	P		Pn	20 57 22.7 +1.7
MDM	Murphy Dome	8.97	5	Pn		Pn	20 57 20.3 -1.6
J16K	Anvik River	8.99	328			Pn	20 57 21.9 -0.3
MLY	Manley	9.00	358	Pn		Pn	20 57 21.6 -0.8
I23K	Minto, Yukon-K	9.12	2	Pn		Pn	20 57 22.8 -1.2
I21K	Tanana	9.20	355			Pn	20 57 24.6 -0.4
I21K	Tanana	9.20	355	P		Pn	20 57 26.4 +1.4
	baz=173						
P32M	Atlin	9.39	61			Pn	20 57 27.7 0.0
P32M	Atlin	9.39	61	P		Pn	20 57 28.4 +0.6
	baz=255						
U33K	Whale Pass	9.46	83	Pn		Pn	20 57 25.0 -3.5
J14K	Nanvaranak Lak	9.60	320	Pn		Pn	20 57 31.9 +1.5
H21K	Melozitna Rive	9.72	353			Pn	20 57 31.0 -1.2
UNV	Unalaska Valle	9.73	264	Pn		Pn	20 57 31.0 -1.3
H24K	Noodor Dome	9.86	5	Pn		Pn	20 57 34.4 +0.3
Q32M	Nakina River	9.99	66	Pn		Pn	20 57 35.3 -0.7
P33M	Teslin, Yukon	10.00	58	P		Pn	20 57 36.6 +0.6
	baz=253						
H17K	Granite Mounta	10.13	335			Pn	20 57 37.2 -0.6
I28M	Miner Creek	10.61	23			Pn	20 57 47.3 +2.8
J30M	Hart River	10.88	33	Pn		Pn	20 57 48.5 +0.3
I30M	Mount Dempster	11.34	30	Pn		Pn	20 57 57.0 +2.6
F20K	Avaraart Lake	11.35	349	Pn		Pn	20 57 55.2 +0.9
ANM	Nome	11.39	325			Pn	20 57 55.1 +0.2
E18K	Tukpahlearik C	12.42	341	Pn		Pn	20 58 09.0 -0.1
TOLK	Toolik Lake Re	12.63	1	Pn		Pn	20 58 11.7 -0.2
D22K	Ayikyak River	12.92	356	Pn		Pn	20 58 15.9 0.0
E29M	Blow River	13.56	19	Pn		Pn	20 58 26.3 +1.7
B20K	Meade River	14.35	350	Pn		Pn	20 58 35.0 -0.3
B22K	Teshekpuk Lake	14.41	355	Pn		Pn	20 58 34.6 -1.5
YKA	Yellowknife Ar	19.01	56	P		Pn	20 59 36.2 +1.5
	comp=N,0.2nm,0.3s,baz=265,slow=9.9,SNR=16						
	comp=N,0.7nm,0.6s						
YBH	Yreka Blue Hor	22.78	117	LR		LR	21 07 16.0
	comp=N,37nm,18.8s,baz=14,slow=32						
SONM	Songino Array	58.46	310	P		P	21 05 10.6 +2.3
	comp=N,0.8nm,0.7s,baz=46,slow=6.2,SNR=3.6						
SONM				LR		LR	21 30 55.2
	comp=N,129nm,18.2s,baz=145,slow=37						
	comp=N,0.8nm,0.7s						
AAK	Ala-Archa	74.71	328	LR		LR	21 43 07.9
	comp=N,73nm,18.6s,baz=283,slow=38						

WEL 12 21:11:47.1±0.8, 34°S±10″×17°9W±2″, 1, h12km, M3.9/11, mB4.5/6, ML4.2/18, MLv4.0/11, Mw(mB)3.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.2, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.12	214	P	Pn	21 12 50.7	+0.9
MXZ				S	Sn	21 13 39.4	+1.5
WMGZ	Waiomatatini S	4.28	211	P	Pn	21 12 53.3	+1.2
WMGZ				S	Sn	21 13 42.2	+0.2
PKGZ	Pakihiroa	4.49	213	P	Pn	21 12 55.1	+0.1
PKGZ				S	Sn	21 13 47.8	+0.7
HAZ	Te Kaha	4.52	217	P	Pn	21 12 56.2	+0.8
HAZ				S	Sn	21 13 51.4	+3.6
PUZ	Puketiti	4.56	210	P	Pn	21 12 56.0	+0.1
RUGZ	Raukumara Rang	4.74	216	P	Pn	21 12 58.0	-0.4
RUGZ				S	Sn	21 13 53.1	-0.2
TWGZ	Tauwhareparae	4.77	212	P	Pn	21 12 57.9	-0.9
TWGZ				S	Sn	21 13 57.4	+3.3
CNGZ	Carnagh Statio	4.94	208	P	Pn	21 13 01.5	+0.5
GLKZ	Green Lake	4.94	9	S	Sn	21 13 58.9	+0.7
TKGZ	Te Karaka	5.04	211	P	Pn	21 13 05.1	+2.6
TKGZ				S	Sn	21 13 59.9	-0.8
MWZ	Matawai	5.10	214	P	Pn	21 13 02.8	-0.6
MWZ				S	Sn	21 14 03.2	+1.0
URZ	Urewera	5.25	218	P	Pn	21 13 04.5	-0.7
URZ				S	Sn	21 14 04.2	-1.5
RIGZ	Rimuhau	5.31	210	P	Pn	21 13 04.9	-1.2
RIGZ				S	Sn	21 14 07.1	-0.1
PRGZ	Paritu Road	5.44	208	P	Pn	21 13 07.8	-0.2
PRGZ				S	Sn	21 14 09.6	-1.0
SNGZ	Shannon Statio	5.55	213	P	Pn	21 13 09.4	-0.1
SNGZ				S	Sn	21 14 14.1	+0.9
RAHZ	Arahi	5.78	214	P	Pn	21 13 13.5	+0.9
RAHZ				S	Sn	21 14 21.8	+3.0
MTHZ	Maungataniwha	5.84	215	P	Pn	21 13 14.5	+1.1
MTHZ				S	Sn	21 14 21.0	+0.6
MRHZ	Matea Rd	6.04	218	P	Pn	21 13 15.1	-1.1
BKZ	Black Stump Fm	6.25	216	P	Pn	21 13 18.5	-0.7
KWHZ	Kaweka Forest	6.49	215	P	Pn	21 13 20.9	-1.5
KAHZ	Kahuranaki	6.59	210	P	Pn	21 13 22.5	-1.3
NTVZ	North Tongarir	6.62	220	P	Pn	21 13 24.5	+0.2
ETVZ	East Tongariro	6.63	220	P	Pn	21 13 24.3	-0.1

WEL 12 21:15:40.9±1.0, 39°S±6′×17°6E±°, h5km±5km, M0.7/6, ML1.1/5, MLv0.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=106.5, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	Kakaramea	0.01	21	P	Pg	21 15 42.0	0.0
NTVZ	North Tongarir	0.11	185	P	Pg	21 15 43.9	+0.6
KRVZ	Karewarewa	0.11	199	P	Pg	21 15 43.8	+0.5
TMVZ	Te Maari	0.13	175	P	Pg	21 15 44.0	+0.5
TMVZ				S	Sg	21 15 46.2	+0.8
ETVZ	East Tongariro	0.15	173	P	Pg	21 15 44.4	+0.5
WTVZ	West Tongariro	0.15	211	P	Pg	21 15 44.5	+0.5
WTVZ				S	Sg	21 15 47.1	+1.2
NNVZ	North Ngauruho	0.15	202	P	Pg	21 15 44.5	+0.5
SNVZ	South Ngauruho	0.20	191	P	Pg	21 15 45.6	+0.7
TWVZ	Taurewa	0.21	247	P	Pg	21 15 45.4	+0.3

*NOU **12** 21:15:53.5, 40.18S×176.66E, h53km, MLv4.1/11, North Island, New Zealand*
*WEL **12** 21:15:54.2±0.4, 40°S±2′×17°7E±°, h9km±3km, M4.2/23, ML4.5/22, MLv4.2/23, Error ellipse: s-maj=0.0km s-min=0.0km az=100.1, confirmed*
*WEL **12** 21:15:54.1, 40.06S×176.54E, h20km, ML4.2, Mw3.8, Moment Tensor Solution. s3 Moment tensor: Mrr10.35; Mθθ25.51; Mϕϕ-35.86; Mrθ45.44; Mrϕ-40.60; Mθϕ-37.88; Fault plane solution: NP1:φs118.00000°, δ50.00000°, λ15.00000°. NP2:φs18.00000°, δ79.00000°, λ139.00000°. Principal axes: T 88.7000, Plg36.0000°, Azm330.0000°; N -27.9700, Plg48.0000°, Azm185.0000°; P -60.7400, Plg19.0000°, Azm74.0000°; NORTH ISLAND*
*IDC **12** 21:16:02.4±2.0, 39.29S×176.36E, h83km±16km, mb3.9/3, mbtmp4.2/4 Error ellipse: s-maj=49.2km s-min=22.7km az=143.0*

ISC 12 21:15:53.1±0.8, 40°15S±0′02×176°60E±0′03, h20km±4km, n154, σ0s98/158, mb4.0/3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRHZ	Porangahau	0.12	167	S	Sg	21 16 00.8	+3.6
WPHZ	Waipukurau	0.14	304	P	Pg	21 15 57.0	-0.5
WPHZ				S	Sg	21 16 00.4	-0.2
PGFS	Porangahau Fir	0.16	176	S	Sg	21 16 04.6	+3.7
WPWS	Waipawa Distri	0.20	357	S	Sb	21 16 00.5	-1.2
WBFS	Weber Fire Sta	0.34	221	P	Pb	21 16 00.7	+0.3
WBFS				S	Sn	21 16 07.7	-1.5
DVHZ	Dannevirke	0.36	245	S	Sn	21 16 08.3	-1.6
PNHZ	Pukenui	0.38	307	P	Pg	21 16 00.4	-0.8
TSZ	Takapari Road	0.50	280	P	Pg	21 16 02.9	-0.3
KRHZ	Kereru	0.53	341	P	Pb	21 16 02.8	-0.9
KRHZ				S	Sb	21 16 09.9	-1.1
BFZ	Birch Farm	0.60	206	P	Pn	21 16 07.5	+1.0
BFZ	Birch Farm	0.60	206	P	Pn	21 16 07.1	+0.5
CKHZ	Cape Kidnapper	0.61	37	P	Pn	21 16 06.1	-0.5
NSPS	Napier St Paul	0.70	21	S	Sn	21 16 18.7	+0.7
MCHZ	McNeill Hill	0.70	6	P	Pg	21 16 07.0	+0.3
KWHZ	Kaweka Forest	0.73	349	P	Pb	21 16 06.6	-0.6
BHHZ	Black Hill Sta	0.77	328	P	Pb	21 16 07.1	-0.8
CPWZ	Castlepoint	0.82	201	P	Pn	21 16 10.9	+1.3
ARHZ	Aropaoanui	0.93	19	P	Pg	21 16 11.3	+0.7
BKZ	Black Stump Fm	0.98	355	P	Pb	21 16 11.2	-0.3
BKZ	Black Stump Fm	0.98	355	P	Pb	21 16 11.2	-0.3
MOVZ	Moawhango	0.98	318	P	Pb	21 16 11.0	-0.5
OHWZ	Ohakea	0.98	266	P	Pg	21 16 12.7	+1.2
NMHZ	Naumai	1.06	9	P	Pn	21 16 13.0	+0.1
WNVZ	Wahianoa	1.12	316	P	Pn	21 16 13.8	0.0
TUVZ	Tukino	1.14	320	P	Pb	21 16 14.2	0.0
MTVZ	Mangateitei	1.15	311	P	Pb	21 16 14.5	+0.1
WHVZ	Whangaehu Hut	1.16	318	P	Pn	21 16 14.5	+0.1
TRVZ	Turoa	1.17	316	P	Pn	21 16 14.7	+0.2
WHHZ	Waihua	1.17	25	P	Pb	21 16 14.8	+0.1
MAVZ	Matarangi	1.19	317	P	Pn	21 16 14.9	0.0
FWVZ	Far West T-bar	1.20	317	P	Pn	21 16 15.1	+0.1
SNVZ	South Ngauruho	1.21	322	P	Pb	21 16 15.3	-0.1
OTVZ	Oturere	1.22	323	P	Pb	21 16 15.4	-0.1
ETVZ	East Tongariro	1.22	326	P	Pb	21 16 15.4	-0.1
NGZ	Ngauruhoe	1.24	321	P	Pb	21 16 15.8	-0.1
TMVZ	Te Maari	1.24	326	P	Pb	21 16 15.7	-0.2
COVZ	Chateau Observ	1.25	319	P	Pb	21 16 15.9	-0.1
NTVZ	North Tongarir	1.26	325	P	Pb	21 16 16.1	-0.2
NNVZ	North Ngauruho	1.27	323	P	Pb	21 16 16.3	-0.1
OGWZ	Otaki Gorge	1.28	238	P	Pb	21 16 16.3	-0.2
KRVZ	Karewarewa	1.28	325	P	Pb	21 16 16.5	-0.2
RAHZ	Arahi	1.28	17	P	Pn	21 16 15.8	-0.1
PKVZ	Pokaka	1.29	311	P	Pb	21 16 16.8	+0.1
WTVZ	West Tongariro	1.29	323	P	Pb	21 16 16.6	-0.1
RITZ	Rihia Road	1.30	334	P	Pb	21 16 17.1	+0.3
WAZ	Wanganui	1.30	287	P	Pg	21 16 17.8	+1.7
MTHZ	Maungataniwha	1.30	8	P	Pn	21 16 15.8	-0.4
HATZ	Hinemaiaia	1.31	342	P	Pb	21 16 17.2	+0.1
MTW	Mount Morrison	1.31	219	P	Pn	21 16 16.3	0.0
MRHZ	Matea Rd	1.32	354	P	Pn	21 16 16.6	+0.2
KATZ	Kakaramea	1.36	329	P	Pb	21 16 17.5	0.0
KNZ	Kokohu	1.40	37	P	Pn	21 16 16.3	-1.1
TWVZ	Taurewa	1.40	320	P	Pn	21 16 17.9	+0.4
MHGZ	Mahia Peninsul	1.42	46	P	Pn	21 16 16.7	-1.0
RATZ	Rangitukua	1.43	333	P	Pb	21 16 19.3	+0.3
TRWZ	Traveller	1.43	209	P	Pn	21 16 17.9	-0.1
KIW	Kapiti Island	1.47	240	P	Pn	21 16 19.0	+0.4
SNGZ	Shannon Statio	1.48	23	P	Pn	21 16 18.1	-0.5
CAW	Cannon Point	1.51	230	P	Pn	21 16 19.2	+0.1
PAWZ	Paruwai Farm	1.52	215	P	Pn	21 16 19.0	-0.2
RTZ	Ruatahuna	1.56	11	P	Pn	21 16 19.5	-0.2
WHTZ	Whakaora	1.56	341	P	Pg	21 16 22.7	+2.9
ARAZ	Aratiatia Land	1.56	346	P	Pg	21 16 22.7	+3.0
POIZ	Poihipi	1.57	344	P	Pb	21 16 22.2	+0.6
PRGZ	Paritu Road	1.57	40	P	Pn	21 16 18.9	-1.0
ALRZ	Allen Road	1.59	353	P	Pn	21 16 20.0	-0.2
PRRZ	Plateau Road	1.65	354	P	Pn	21 16 20.8	-0.1
WPRZ	Whakapapatarin	1.66	348	P	Pn	21 16 20.8	-0.2
MURZ	Murupara	1.67	5	P	Pn	21 16 20.8	-0.4
RIGZ	Rimuhau	1.70	32	P	Pn	21 16 20.8	-0.8
VRZ	Vera Road	1.75	305	P	Pb	21 16 23.6	-0.9
PLWZ	Palliser	1.75	215	P	Pn	21 16 21.6	-0.7
KUTZ	Kaahu Road	1.76	340	P	Pn	21 16 22.7	+0.3
RAGZ	Rawiri	1.77	21	P	Pn	21 16 22.0	-0.6
HRRZ	Handcock Road	1.77	352	P	Pn	21 16 22.9	+0.3
WEL	Wellington	1.80	230	P	Pn	21 16 22.8	-0.2
RRRZ	Republican Roa	1.80	358	P	Pn	21 16 22.7	-0.3
BHW	Baring Head	1.82	226	P	Pn	21 16 22.7	-0.5
LREZ	Lake Rotokare	1.82	291	P	Pb	21 16 26.3	+0.5
GRRZ	Galatos Road	1.83	348	P	Pn	21 16 23.6	+0.1
SNZO	South Karori	1.85	230	P	Pn	21 16 23.4	-0.3
HLRZ	Highlands Stat	1.90	354	P	Pn	21 16 25.3	+0.9
TARZ	Mount Tarawera	1.91	358	P	Pn	21 16 24.4	-0.2
URZ	Urewera	1.92	12	P	Pn	21 16 23.7	-1.0
URZ	Urewera	1.92	12	P	Pn	21 16 23.6	-1.0
	68nm,0.3s,baz=308,slow=5.8,SNR=92						
URZ				S	Sn	21 16 48.3	0.0
	91nm,0.3s,baz=107,slow=18,SNR=7.8						
URZ	Urewera	1.92	12	P	Pn	21 16 23.8	-1.0
MWZ	Matawai	1.95	22	P	Pn	21 16 24.0	-1.0
TKGZ	Te Karaka	1.96	30	P	Pn	21 16 24.1	-1.1
UTU	Utuhina	1.99	351	P	Pn	21 16 25.1	-0.5
TLZ	Tolley Road	1.99	335	P	Pn	21 16 26.3	+0.6
OMRZ	Omania	2.04	355	P	Pn	21 16 26.0	-0.4
PREZ	Palmer Road	2.04	292	P	Pb	21 16 29.5	-0.1
MHEZ	Mangahewa	2.06	301	P	Pb	21 16 29.4	-0.3
TCW	Tory Channel	2.06	238	P	Pn	21 16 26.3	-0.3
CNGZ	Carnagh Statio	2.08	37	P	Pn	21 16 25.6	-1.2
DREZ	Durham Road	2.08	297	P	Pb	21 16 29.5	-0.7
HIZ	Hauiti	2.12	320	P	Pb	21 16 27.8	+0.4
HIZ	Hauiti	2.12	320	P	Pn	21 16 28.0	+0.7
NEZ	North Egmont	2.12	294	P	Pb	21 16 30.4	-0.4
DUWZ	D'Urville Isla	2.14	251	P	Pn	21 16 27.7	0.0
KHEZ	Kahui Hut	2.17	292	P	Pb	21 16 31.4	-0.2
NMEZ	Namu Road	2.22	288	P	Pb	21 16 32.0	-0.5
PKE	Pukeiti	2.23	294	P	Pb	21 16 31.8	-0.9
TWGZ	Tauwhareparae	2.24	29	P	Pn	21 16 28.2	-0.9
NBEZ	Newall Road No	2.28	292	P	Pb	21 16 32.7	-0.8
WHRZ	Whale Island	2.30	7	P	Pn	21 16 29.3	-0.7
RUGZ	Raukumara Rang	2.33	21	P	Pn	21 16 29.4	-1.0
KMRZ	Kaimai	2.35	347	P	Pb	21 16 36.1	+1.3
TUWZ	Tuamarina	2.39	237	P	Pn	21 16 30.2	-0.9
CMWZ	Carpe Campbell	2.42	228	P	Pn	21 16 31.2	-0.2
PUZ	Puketiti	2.44	32	P	Pn	21 16 29.9	-1.9
PKGZ	Pakihiroa	2.53	28	P	Pn	21 16 32.2	-0.9
TOZ	Tahuroa Road	2.56	340	P	Pn	21 16 33.3	-0.1
HAZ	Te Kaha	2.56	22	P	Pn	21 16 32.0	-1.4
BSWZ	Blackbirch Sta	2.59	232	P	Pn	21 16 33.0	-0.8
NNZ	Nelson	2.67	245	P	Pn	21 16 34.8	-0.2
WMGZ	Waiomatatini S	2.72	32	P	Pn	21 16 34.5	-1.2
MXZ	Matakaoa Point	2.90	28	P	Pn	21 16 37.7	-0.4
MXZ	Matakaoa Point	2.90	28	P	Pn	21 16 37.7	-0.4
TKNZ	Takaka Hill	2.91	251	P	Pn	21 16 38.7	+0.5
MRNZ	Matariki Terra	3.17	246	P	Pn	21 16 41.7	-0.2
QRZ	Quartz Range	3.18	256	P	Pn	21 16 41.3	-0.6
QRZ	Quartz Range	3.18	256	P	Pn	21 16 41.3	-0.6
THZ	Tophouse	3.23	239	P	Pn	21 16 41.6	-1.1
KHZ	Kahutara	3.23	224	P	Pn	21 16 40.8	-1.9
KHZ	Kahutara	3.23	224	P	Pn	21 16 40.8	-1.9
MKAZ	Moumakai	3.24	339	P	Pn	21 16 43.1	+0.4
AWAZ	Awhitu Peninsu	3.44	333	P	Pn	21 16 46.4	+0.9
MBAZ	Motutapu North	3.62	338	P	Pn	21 16 48.7	+0.6
GVZ	Greta Valley S	3.89	222	P	Pn	21 16 50.6	-1.1
DSZ	Denniston Nort	3.97	245	P	Pn	21 16 52.0	-0.8
GRZ	Great Barrier	3.99	347	P	Pn	21 16 53.2	+0.1
LTZ	Lake Taylor	4.18	230	P	Pn	21 16 53.7	-2.1
MQZ	McQueen's Vall	4.62	218	P	Pn	21 16 59.6	-2.1
AKCZ	Akaroa Harbour	4.63	215	P	Pn	21 17

VA03					IAML			22 05 49.3
	comp=Z,352nm,0.6s							
VA03	**San Esteban**	**2.50**	**165**	*eP*		**Pn**	**22 05 09.2**	**+0.3**
VA03				*i* S		**Sn**	**22 05 38.9**	**+0.6**
VA03					IAML		22 05 45.3	
	comp=E,1μm,0.2s							
AGUA	**GUANDACOL**	**2.58**	**72**	*eP*		**Pn**	**22 05 11.2**	**+1.2**
AGUA				*eS*		**Sn**	**22 05 46.4**	**+6.2**
AGUA					IAML		22 05 50.0	
	comp=Z,402nm,0.5s							
RTLL	**Cerro Villicun**	**2.62**	**113**	*eP*		**Pn**	**22 05 10.9**	**+0.4**
RTLL					IAML		22 06 02.6	
	comp=Z,167nm,0.5s							
ROCH	**El Roble**	**2.64**	**175**	*eP*		**Pn**	**22 05 10.8**	**-0.2**
ROCH				*i* S		**Sn**	**22 05 42.6**	**+0.8**
ROCH					IAML		22 05 50.1	
	comp=N,850nm,0.3s							
ROC1	**El Roble**	**2.64**	**175**	*eP*		**Pn**	**22 05 10.8**	**-0.2**
VA01	**Torpederas**	**2.69**	**186**	*eP*		**Pn**	**22 05 10.5**	**-1.0**
VA01	**Torpederas**	**2.69**	**186**	*eP*		**Pn**	**22 05 10.5**	**-1.0**
VA01				*eS*		**Sn**	**22 05 42.4**	**-0.4**
VA01					IAML		22 05 52.4	
	comp=E,404nm,0.3s							
RTCV	**Cerro Valdivia**	**2.81**	**123**	*eP*		**Pn**	**22 05 14.3**	**+1.1**
PEL	**Peldehue**	**2.85**	**170**	*eP*		**Pn**	**22 05 13.9**	**+0.3**
PEL	**Peldehue**	**2.85**	**170**	*eP*		**Pn**	**22 05 13.8**	**+0.2**
PEL				*eS*		**Sn**	**22 05 46.9**	**+0.2**
PEL					IAML		22 05 56.5	
	comp=E,439nm,0.3s							
GO03	**Copiap**	**2.89**	**19**	*eP*		**Pn**	**22 05 13.8**	**-0.5**
GO03	**Copiap**	**2.89**	**19**	*eP*		**Pn**	**22 05 13.3**	**-0.9**
GO03				*i* S		**Sn**	**22 05 49.4**	**+1.7**
GO03					IAML		22 06 06.2	
	comp=E,396nm,0.5s							
MT02	**Curacav**	**2.92**	**177**	*eP*		**Pn**	**22 05 13.9**	**-0.6**
MT02					IAML		22 06 01.9	
	comp=Z,188nm,0.4s							
MT02	**Curacav**	**2.92**	**177**	*eP*		**Pn**	**22 05 13.9**	**-0.6**
MT02				*eS*		**Sn**	**22 05 48.8**	**+0.4**
MT02					IAML		22 05 56.1	
	comp=N,271nm,0.4s							
MT10	**Hacienda Santa**	**3.00**	**168**	*eP*		**Pn**	**22 05 16.1**	**+0.3**
MT10				*i* S		**Sn**	**22 05 50.6**	**0.0**
MT10					IAML		22 06 01.2	
	comp=E,1μm,0.4s							
ASAL	**Salagasta**	**3.08**	**138**	*eP*		**Pn**	**22 05 18.1**	**+1.2**
MT05	**Renca**	**3.08**	**171**	*eP*		**Pn**	**22 05 17.5**	**+0.6**
MT05					IAML		22 06 08.3	
	comp=Z,282nm,0.6s							
MT05	**Renca**	**3.08**	**171**	*eP*		**Pn**	**22 05 17.1**	**+0.2**
MT05				*i* S		**Sn**	**22 05 52.6**	**+0.1**
MT05					IAML		22 06 06.5	
	comp=E,757nm,0.4s							
FCH	**Farellones**	**3.10**	**164**	*eP*		**Pn**	**22 05 18.5**	**+1.0**
FCH				*i* S		**Sn**	**22 05 53.1**	**-0.3**
FCH					IAML		22 06 05.9	
	comp=E,284nm,0.3s							
MT14	**Cerro Cal¡n**	**3.12**	**168**	*eP*		**Pn**	**22 05 17.9**	**+0.6**
MT14				*i* S		**Sn**	**22 05 54.2**	**+0.8**
MT14					IAML		22 06 02.4	
	comp=N,693nm,0.5s							
VCA	**Vinchina**	**3.13**	**60**	*eP*		**Pn**	**22 05 18.8**	**+1.1**
VCA					IAML		22 06 10.6	
	comp=Z,328nm,0.3s							
MT16	**CCHEN**	**3.15**	**168**	*eP*		**Pn**	**22 05 18.5**	**+0.7**
MT16				*eS*		**Sn**	**22 05 54.6**	**+0.4**
MT16					IAML		22 06 12.8	
	comp=E,286nm,0.6s							
ARCO	**CERRO ARCO**	**3.21**	**142**	*eP*		**Pn**	**22 05 22.0**	**+3.2**
ARCO					IAML		22 06 12.3	
	comp=Z,116nm,0.4s							
MT04	**Ro Olivares**	**3.22**	**162**	*eP*		**Pn**	**22 05 20.9**	**+2.0**
MT04				*i* S		**Sn**	**22 05 56.6**	**+0.5**
MT04					IAML		22 06 10.0	
	comp=E,314nm,0.3s							
MT03	**Universidad Ad**	**3.22**	**168**	*eP*		**Pn**	**22 05 19.5**	**+0.7**
MT03					IAML		22 06 14.5	
	comp=Z,278nm,0.5s							
MT03	**Universidad Ad**	**3.22**	**168**	*eP*		**Pn**	**22 05 19.3**	**+0.5**
MT03				*i* S		**Sn**	**22 05 55.9**	**0.0**
MT03					IAML		22 06 09.4	
	comp=E,674nm,0.3s							
VA05	**Santo Domingo**	**3.32**	**185**	*eP*		**Pn**	**22 05 18.0**	**-2.1**
VA05				*i* S		**Sn**	**22 05 56.5**	**-1.9**
MT15	**Las Vizcachas**	**3.32**	**168**	*eP*		**Pn**	**22 05 20.7**	**+0.5**
MT15				*i* S		**Sn**	**22 05 59.0**	**+0.5**
AVFE	**Valle Fertil**	**3.33**	**97**	*eP*		**Pn**	**22 05 19.7**	**-0.7**
MT09	**Talagante**	**3.44**	**176**	*eP*		**Pn**	**22 05 21.6**	**-0.3**
MT09				*i* S		**Sn**	**22 05 59.8**	**-1.6**
MT09					IAML		22 06 10.2	
	comp=E,436nm,0.4s							
MT12	**Pirque**	**3.45**	**170**	*eP*		**Pn**	**22 05 21.1**	**-0.8**
MT12				*i* S		**Sn**	**22 06 02.1**	**+0.6**
AAGR	**Agrelo**	**3.46**	**143**	*eP*		**Pn**	**22 05 24.0**	**+1.9**
AAGR					IAML		22 06 36.9	
	comp=Z,73nm,0.7s							
MT13	**San Alfonso**	**3.50**	**166**	*eP*		**Pn**	**22 05 23.6**	**+0.8**
MT13				*i* S		**Sn**	**22 06 03.0**	**-0.1**
MT13					IAML		22 06 14.2	
	comp=E,342nm,0.3s							
MT01	**Popeta**	**3.52**	**179**	*eP*		**Pn**	**22 05 22.4**	**-0.4**
MT01					IAML		22 06 24.0	
	comp=Z,127nm,0.6s							
MT01	**Popeta**	**3.52**	**179**	*eP*		**Pn**	**22 05 22.0**	**-0.8**
MT01				*i* S		**Sn**	**22 06 02.2**	**-1.0**
MT01					IAML		22 06 15.1	
	comp=E,355nm,0.4s							
LMEL	**Las Melosas**	**3.62**	**165**	*eP*		**Pn**	**22 05 25.4**	**+1.0**
LMEL				*eS*		**Sn**	**22 06 06.7**	**+0.7**
ACLC	**CERRO LA CRUZ**	**3.88**	**78**	*eP*		**Pn**	**22 05 27.2**	**-0.7**
ACLC					IAML		22 06 40.6	
	comp=Z,67nm,0.4s							
AC02	**Maricunga**	**3.98**	**29**	*eP*		**Pn**	**22 05 29.1**	**-0.4**
AC02					IAML		22 06 34.4	
	comp=Z,96nm,0.9s							
BO01	**Tunca**	**4.05**	**177**	*eP*		**Pn**	**22 05 29.4**	**-0.7**
BO01					IAML		22 06 45.2	
	comp=Z,48nm,0.7s							
BO02	**Sierra Bellavi**	**4.47**	**175**	*eP*		**Pn**	**22 05 36.0**	**+0.1**
BO02					IAML		22 06 53.7	
	comp=Z,86nm,0.2s							
RFA	**San Rafael**	**5.03**	**152**	*eP*		**Pn**	**22 05 43.7**	**+0.1**

SFS ***12*** *22:06:36.6, 36°.65N×9°.73W, h43km, ML2.3/13, ML2.7/11, MLv2.1/13*
IGIL ***12*** *22:06:37.1, 36°.67N×9°.70W, h24km, ML1.9*
MDD ***12*** *22:06:38.2±1.0, 36°.78N×9°.51W, h15km±3km, mb_Lg2.5/7, Error ellipse: s-maj=7.8km s-min=6.7km az=155.0*
INMG ***12*** *22:06:38.2±1.3, 36°.73N×9°.63W, h22km±4km, ML1.8, Error ellipse: s-maj=5.7km s-min=4.2km az=53.0*
CNRM ***12*** *22:06:39.6, 36°.46N×9°.23W, h66km, ML2.4*

ISC 12 22:06:35.2±5.8, 36°.58N±0°.04×9°.70W±0°.07, h36km±6km, n54, σ1°86/89, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.89**	**52**	*i* P			**Pn**	**22 06 51.9**	**+0.7**
PFVI					*eS*		**Sn**	**22 07 02.5**	**-0.4**
PFVI					A		A	22 07 03.4	
	17nm,0.3s								
PFVI	**Vila Bisbo**	**0.89**	**52**		Sg		**Sn**	**22 07 02.8**	**-0.1**
PFVI					Pg		**Pn**	**22 06 51.9**	**+0.7**
MORF	**Marmelete**	**1.11**	**49**	*eP*			**Pn**	**22 06 54.9**	**+0.7**
MORF				*eS*			**Sn**	**22 07 08.0**	**-0.2**
MORF					A		A	22 07 08.8	
	27nm,0.1s								
MORF	**Marmelete**	**1.11**	**49**	*eP*			**Pn**	**22 06 54.9**	**+0.7**
MORF				*eS*			**Sn**	**22 07 07.9**	**-0.4**
MORF					IAML			22 07 10.2	
	comp=E,30nm,0.1s								
PTEO	**Sao Teotonio**	**1.24**	**39**	*eP*			**Pn**	**22 06 56.4**	**+0.4**
PTEO				*eS*			**Sn**	**22 07 10.8**	**-0.6**
PTEO					A		A	22 07 14.1	
	comp=E,6.9nm,0.5s								
PBDV	**Barranco-do-Ve**	**1.56**	**64**	*eP*			**Pn**	**22 07 01.6**	**+1.1**
PBDV				*eS*			**Sn**	**22 07 18.8**	**-0.7**
PBDV					A		A	22 07 23.3	
	comp=E,5.2nm,1.3s								
PBDV	**Barranco-do-Ve**	**1.56**	**64**		Sn		**Sn**	**22 07 19.2**	**-0.3**
PBDV					Pn		**Pn**	**22 07 01.6**	**+1.1**
PCVE	**Castro Verde**	**1.69**	**51**	*eP*			**Pn**	**22 07 03.2**	**+1.0**
PCVE				*eS*			**Sn**	**22 07 22.4**	**-0.2**
PCVE					A		A	22 07 24.0	
	comp=E,5.8nm,0.3s								
PCVE	**Castro Verde**	**1.69**	**51**		Sn		**Sn**	**22 07 22.1**	**-0.5**
PCVE					Pn		**Pn**	**22 07 03.2**	**+1.0**
MESJ	**Messejana**	**1.72**	**43**	*eP*			**Pn**	**22 07 03.2**	**+0.5**
MESJ				*eS*			**Sn**	**22 07 22.7**	**-0.7**
MESJ					A		A	22 07 25.9	
	comp=E,5.5nm,0.7s								
MESJ	**Messejana**	**1.72**	**43**	*eP*			**Pn**	**22 07 03.2**	**+0.5**
MESJ				*eS*			**Sn**	**22 07 22.4**	**-1.0**
MESJ					IAML			22 07 24.3	
	comp=N,7.9nm,0.2s								
PVAQ	**Vaqueiros**	**1.79**	**62**	*eP*			**Pn**	**22 07 04.5**	**+1.0**
PVAQ				*eS*			**Sn**	**22 07 24.3**	**-0.6**
PVAQ	**Vaqueiros**	**1.79**	**62**	Pn			**Pn**	**22 07 04.5**	**+1.0**
PVAQ				Sn			**Sn**	**22 07 24.4**	**-0.6**
PVAQ	**Vaqueiros**	**1.79**	**62**	P			**Pn**	**22 07 05.7**	**+2.2**
PVAQ	**Vaqueiros**	**1.79**	**62**	S			**Sn**	**22 07 25.9**	**+0.9**
PNCL	**Nicolau / Gran**	**1.79**	**31**	*eP*			**Pn**	**22 07 04.0**	**+0.5**
PNCL				*eS*			**Sn**	**22 07 23.8**	**-1.2**
PNCL					A		A	22 07 26.6	
	comp=N,2.6nm,0.2s								
PNCL	**Nicolau / Gran**	**1.79**	**31**	Pn			**Pn**	**22 07 04.1**	**+0.6**
PNCL				Sn			**Sn**	**22 07 23.3**	**-1.8**
EGRO	**El Granado**	**2.01**	**61**	Pn			**Pn**	**22 07 08.0**	**+1.4**
EGRO				Sn			**Sn**	**22 07 29.7**	**-0.8**
EGRO				*i*	Vmb_Lg			22 07 32.5	
PBEJ	**Beja**	**2.05**	**45**	*eS*			**Sn**	**22 07 30.1**	**-1.4**
PBEJ					A		A	22 07 32.2	
	comp=N,3.5nm,0.2s								
EVO	**Evora**	**2.36**	**34**	*eP*			**Pn**	**22 07 11.5**	**0.0**
EVO				*eS*			**Sn**	**22 07 37.4**	**-1.8**
EVO					A		A	22 07 38.9	
	comp=N,3.9nm,0.2s								
EVO	**Evora**	**2.36**	**34**	Pn			**Pn**	**22 07 11.4**	**0.0**
EVO				Sn			**Sn**	**22 07 37.4**	**-1.8**
PMAFR	**Mafra**	**2.39**	**8**	*eP*			**Pn**	**22 07 12.0**	**+0.1**
PMAFR				*eS*			**Sn**	**22 07 37.5**	**-2.5**
PMAFR					A		A	22 07 38.3	
	comp=N,7.5nm,0.8s								
PMAFR	**Mafra**	**2.39**	**8**	Sn			**Sn**	**22 07 37.4**	**-2.5**
PMAFR				Pn			**Pn**	**22 07 11.8**	**-0.1**
PBAR	**Barrancos**	**2.65**	**52**	*eP*			**Pn**	**22 07 16.7**	**+1.3**
PBAR				*eS*			**Sn**	**22 07 44.9**	**-1.3**
PBAR					A		A	22 07 48.3	
	comp=N,1.9nm,0.4s								
PBAR	**Barrancos**	**2.65**	**52**	Sn			**Sn**	**22 07 44.8**	**-1.5**
PBAR				Pn			**Pn**	**22 07 15.9**	**+0.5**
EMIN	**Mina Concepcio**	**2.69**	**63**	Pn			**Pn**	**22 07 17.0**	**+1.0**
EMIN				Sn			**Sn**	**22 07 46.2**	**-1.1**
EMIN	**Mina Concepcio**	**2.69**	**63**	Pn			**Pn**	**22 07 16.0**	**+0.1**
EMIN				Sn			**Sn**	**22 07 45.3**	**-1.9**
EMIN				*i*	Vmb_Lg			22 07 51.5	
PMTG	**Montargil**	**2.74**	**25**	*eP*			**Pn**	**22 07 17.1**	**+0.4**
PMTG				*eS*			**Sn**	**22 07 46.4**	**-2.2**
PMTG					A		A	22 07 48.6	
	comp=N,1.3nm,0.2s								
PESTR	**Estremoz**	**2.83**	**36**	*eS*			**Sn**	**22 07 48.4**	**-2.3**
PESTR					A		A	22 07 50.1	
	comp=N,1.4nm,0.7s								
PESTR	**Estremoz**	**2.83**	**36**	Sn			**Sn**	**22 07 48.2**	**-2.5**
PESTR				Pn			**Pn**	**22 07 17.9**	**0.0**
PESTR	**Estremoz**	**2.83**	**36**	P			Pn	22 07 22.2	+4.3
PESTR	**Estremoz**	**2.83**	**36**	S			**Sn**	**22 07 49.4**	**-1.3**
PSBE	**So Bento**	**3.01**	**13**	*eS*			**Sn**	**22 07 53.1**	**-2.2**
EBAD	**Badajoz**	**3.04**	**44**	Pn			**Pn**	**22 07 20.5**	**-0.2**
EBAD				Sn			**Sn**	**22 07 53.0**	**-2.9**
EBAD	**Badajoz**	**3.04**	**44**	Pn			**Pn**	**22 07 20.6**	**-0.2**
EBAD				Sn			**Sn**	**22 07 52.7**	**-3.2**
EBAD				*i*	Vmb_Lg			22 07 59.2	
ESPR	**Espera**	**3.10**	**84**	Pn			**Pn**	**22 07 23.7**	**+2.1**
ESPR				Sn			**Sn**	**22 07 56.2**	**-1.2**
PMRV	**Marv??o**	**3.38**	**32**	*eP*			**Pn**	**22 07 25.7**	**+0.3**
PMRV				*eS*			**Sn**	**22 08 01.0**	**-3.2**
PMRV					A		A	22 08 03.1	
	comp=N,1.7nm,0.3s								
ECAB	**El Cabril**	**3.72**	**65**	Pn			**Pn**	**22 07 30.8**	**+0.6**
ECAB				Sn			**Sn**	**22 08 10.2**	**-2.5**
ECAB				*i*	Vmb_Lg			22 08 12.9	
AVE	**Averroes**	**3.77**	**150**	Sn			**Sn**	**22 08 13.3**	**-0.7**
AVE				Pn			**Pn**	**22 07 32.4**	**+1.5**
ZHG	**ZHG**	**4.01**	**140**	P			Pn	**22 07 35.3**	**+1.1**
ZHG	**ZHG**	**4.01**	**140**	S			**Sn**	**22 08 14.0**	**-5.9**
EADA	**Adamuz**	**4.38**	**67**	Pn			**Pn**	**22 07 39.8**	**+0.7**
EADA				Sn			**Sn**	**22 08 26.6**	**-2.3**
EADA				*i*	Vmb_Lg			22 08 30.1	
EPLA	**Plasencia**	**4.49**	**38**	Pn			**Pn**	**22 07 41.5**	**+0.8**
EPLA				Sn			**Sn**	**22 08 28.5**	**-3.3**
EPLA				*i*	Vmb_Lg			22 08 29.5	
LCRM	**LCR**	**4.91**	**125**	P			**Pn**	**22 07 47.2**	**+0.6**
LCRM	**LCR**	**4.91**	**125**	S			**Sn**	**22 08 38.1**	**-4.0**
PAB	**San Pablo**	**5.16**	**53**	Pn			**Pn**	**22 07 50.4**	**+0.5**
PAB				Sn			**Sn**	**22 08 44.3**	**-3.9**
PAB				*i*	Vmb_Lg			22 08 45.6	
AKLM	**AKL**	**5.19**	**112**	P			**Pn**	**22 07 48.7**	**-1.6**
AKLM	**AKL**	**5.19**	**112**	S			**Sn**	**22 08 42.0**	**-7.0**
PSIM	**Granatula de C**	**5.21**	**63**	Pn			**Pn**	**22 07 51.7**	**+1.0**
PSIM				Sn			**Sn**	**22 08 45.5**	**-4.1**
MD31	**MD31**	**5.50**	**131**	P			**Pn**	**22 07 55.4**	**+0.7**
OUAI	**Oukaimeden**	**5.57**	**164**	P			**Pn**	**22 07 58.5**	**+2.9**
MDT	**Midelt**	**5.63**	**130**	P			**Pn**	**22 07 57.3**	**+0.9**
TTIG	**Tnine Tigouga,**	**6.11**	**170**	P			**Pn**	**22 08 04.8**	**+1.7**
OUZM	**OUZ**	**6.16**	**156**	P			**Pn**	**22 08 05.0**	**+1.2**

JMA ***12*** *22:25:21.7±0.1, 38°.5N±0°.2×141°.7E±0°.5, h53km, MV3.6/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
IDC ***12*** *22:25:22.7±9.9, 38°.59N×141°.78E, h69km±62km, mb3.3/5, mbtmp3.6/7, ML2.6/2, Error ellipse: s-maj=126.6km s-min=26.1km az=73.0*

ISC 12 22:25:21.0±1.3, 38°.51N±0°.05×141°.80E±0°.09, h52km±7km, n26, σ0°63/32, mb3.5/5, 13D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**233**	*i* P			**Pn**	**22 25 31.1**	**+0.6**
JIKH					S		**Sn**	**22 25 37.6**	**+0.2**
JIO	**Ouri**	**0.36**	**261**	⇓*i* P			**Pn**	**22 25 31.1**	**+0.3**
JIO				⇓S			**Sn**	**22 25 37.7**	**-0.3**
JKMT	**Kesennumamotoy**	**0.39**	**320**	⇓*i* P			**Pn**	**22 25 31.5**	**+0.4**
JKMT				⇓S			**Sn**	**22 25 38.2**	**-0.2**
OFUJ	**Ofunato**	**0.58**	**350**	*i* P			**Pn**	**22 25 33.6**	**+0.4**
OFUJ					S		**Sn**	**22 25 41.9**	**-0.2**
JMK	**Ichinoseki**	**0.63**	**314**	⇓*i* P			**Pn**	**22 25 34.2**	**+0.3**
JMK				⇓S			**Sn**	**22 25 42.9**	**-0.4**
JOU	**Okura**	**0.90**	**261**	⇓*i* P			**Pn**	**22 25 37.3**	**-0.1**
JOU				⇓S			**Sn**	**22 25 49.1**	**-0.4**
JMM	**Marumori**	**1.02**	**231**	⇓*i* P			**Pn**	**22 25 38.8**	**-0.2**
JMM				⇓S			**Sn**	**22 25 51.7**	**-0.6**
JOM	**Ohasama**	**1.04**	**338**	⇓*i* P			**Pn**	**22 25 39.5**	**+0.2**
JOM				⇓S			**Sn**	**22 25 52.6**	**-0.2**
JYK	**Kaneyama**	**1.20**	**290**	⇓*i* P			**Pn**	**22 25 41.4**	**0.0**
JRG	**Rokugo**	**1.27**	**315**	P			**Pn**	**22 25 42.4**	**0.0**
JRG				*eS*			**Sn**	**22 25 58.2**	**0.0**
JFK	**Kawauchi**	**1.36**	**213**	P			**Pn**	**22 25 43.8**	**+0.2**
JFK				S			**Sn**	**22 26 00.1**	**-0.4**
JYS	**Shirataka**	**1.39**	**259**	P			**Pn**	**22 25 44.2**	**+0.1**
JYS				*eS*			**Sn**	**22 26 01.4**	**+0.1**
JOTO	**OTAMA OYAMA**	**1.50**	**231**	P			**Pn**	**22 25 46.2**	**+0.7**
JOTO				*eS*			**Sn**	**22 26 04.2**	**+0.3**
MJAR	**Matsushiro Arr**	**3.46**	**237**	P			**Pn**	**22 26 14.4**	**+2.0**
	0.2nm,0.3s,baz=36,slow=13,SNR=15 2.8nm,0.7s								
USRK	**Ussuriysk Ar.**	**9.31**	**311**	P			**Pn**	**22 27 33.2**	**+0.9**
	0.2nm,0.3s,baz=121,slow=14,SNR=3.6 1.4nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**28.68**	**124**	T			T	23 01 29.8	
	baz=316,slow=76,SNR=38								
H11N1	**WAKE ISLAND Hy**	**28.69**	**124**	T			T	23 01 33.3	
	baz=316,slow=76,SNR=80								
H11N3	**WAKE ISLAND Hy**	**28.70**	**124**	T			T	23 01 34.0	
	baz=316,slow=76,SNR=47								
H11S1	**WAKE ISLAND Hy**	**29.44**	**126**	T			T	23 02 25.7	
	baz=318,slow=76,SNR=44								
H11S3	**WAKE ISLAND Hy**	**29.44**	**126**	T			T	23 02 26.7	
	baz=318,slow=76,SNR=65								
H11S2	**WAKE ISLAND Hy**	**29.45**	**126**	T			T	23 02 28.8	
	baz=318,slow=76,SNR=36								
ZALV	**Zalesovo Beam**	**41.16**	**311**	P			**P**	**22 32 58.2**	**-1.7**
	0.2nm,0.3s,baz=86,slow=8.8,SNR=2.1 0.3nm,0.3s								
MKAR	**Makanchi Array**	**43.61**	**301**	P			**P**	**22 33 20.2**	**+0.2**
	0.8nm,0.9s,baz=86,slow=9.4,SNR=6.7 0.8nm,0.9s								
KURBB	**Kurchatov Arra**	**45.35**	**307**	P			**P**	**22 33 33.3**	**-0.5**
	1.3nm,0.5s,baz=80,slow=8.2,SNR=10 1.3nm,0.5s								
BVAR	**Borovoye Array**	**49.81**	**311**	P			**P**	**22 34 07.8**	**-0.6**
	0.3nm,0.5s,baz=66,slow=8.1,SNR=2.8 0.3nm,0.5s								
WRA	**Warramunga Arr**	**58.56**	**188**	P			**P**	**22 35 12.3**	**0.0**
	0.3nm,0.7s,baz=5.6,slow=7.1,SNR=2.1 0.3nm,0.7s								

IDC ***12*** *22:42:34.9±6.2, 3°.16S×132°.40E, h0km, mb3.2/2, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=400.9km s-min=31.3km az=74.0*
DJA ***12*** *22:42:42.3±1.1, 3°.5±6°×13°1E±°, h18km±12km, M3.2/5, MLv3.2/5*

ISC 12 22:42:41.2±1.0, 3°.84S±0°.09×131°.5E±0°.1, h29km, n5, σ2°45/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.18**	**39**	P			**Pn**	**22 43 02.3**	**+0.4**
FAKI				S			**Sn**	**22 43 17.5**	**+0.5**
BNDI	**Bandanaira**	**1.73**	**247**	P			**Pb**	**22 43 13.1**	**+0.8**
WRA	**Warramunga Arr**	**16.24**	**170**	Pn			**P**	**22 46 29.6**	**-0.7**
	0.1nm,0.3s,baz=354,slow=13,SNR=4.2								
WRA					Sn		**Sn**	**22 49 24.1**	**-2.8**
	0.1nm,0.3s,baz=347,slow=25,SNR=2.0 0.2nm,0.5s								
ASAR	**Alice Springs**	**19.85**	**173**	P			**Pn**	**22 47 15.0**	**+3.2**
	0.5nm,0.4s,baz=352,slow=9.7,SNR=9.8 0.5nm,0.4s								
MKAR	**Makanchi Array**	**66.45**	**325**	P			**P**	**22 53 26.0**	**-2.0**
	0.3nm,0.7s,baz=118,slow=7.7,SNR=3.0 0.3nm,0.7s								

JMA ***12*** *22:45:33.8±0.1, 24°.7N±0°.8×122°.5E±0°.3, h7km±2km, MV2.5/12, NW OFF ISHIGAKIJIMA IS*
TAP ***12*** *22:45:33.0, 24°.81N×122°.48E, h17km, ML2.7, D*

ISC 12 22:45:33.5±1.0, 24°.78N±0°.03×122°.46E±0°.02, h13km±9km, n45, σ0°40/68, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.42**	**210**	*i* P			**Pb**	**22 45 42.8**	**+0.1**
	baz=211								
EOS2					S		**Sb**	**22 45 49.8**	**+0.9**
	baz=211								
EGS		**0.49**	**278**		P		**Pg**	**22 45 43.3**	**+0.2**
	baz=264								
TWB1	**Santiao Chiao**	**0.49**	**298**	*i* P			**Pg**	**22 45 43.2**	**+0.1**
	baz=293								
TWB1				*i* S			**Sg**	**22 45 49.4**	**-0.2**
	baz=293								
EOS3	**EOS3**	**0.51**	**195**	*eP*			**Pb**	**22 45 44.3**	**+0.1**
	baz=203								
JYNG	**Yonagunijimaku**	**0.55**	**127**	P			**Pg**	**22 45 44.2**	**0.0**
JYNG				S			**Sg**	**22 45 51.5**	**0.0**
TWC	**Suao**	**0.58**	**253**	*i* P			**Pg**	**22 45 44.9**	**-0.1**
	baz=257								
TWC				*i* S			**Sb**	**22 45 55.2**	**+1.5**
	baz=257								
YOJ	**Yonaguni jima**	**0.59**	**122**	*i* P			**Pg**	**22 45 44.9**	**0.0**
	baz=116								
YOJ				*i* S			**Sg**	**22 45 52.8**	**-0.1**
	baz=116								
YOJ	**Yonaguni jima**	**0.59**	**122**	P			**Pg**	**22 45 45.0**	**0.0**
YOJ				S			**Sg**	**22 45 52.7**	**-0.1**
ESAO	**Su ao**	**0.60**	**250**	*eP*			**Pb**	**22 45 45.8**	**0.0**
	baz=248								
SXI1	**Grass Mountain**	**0.62**	**300**	*i* P			**Pb**	**22 45 46.0**	**-0.2**
	baz=297								
SXI1				*i* S			**Sb**	**22 45 54.7**	**-0.2**
	baz=297								
EOS4	**EOS4**	**0.67**	**191**	*eP*			**Pb**	**22 45 47.4**	**+0.5**
	baz=182								
NWF	**Wu-fen Shan**	**0.68**	**295**	*eS*			**Sb**	**22 45 56.7**	**-0.1**
	baz=292								
WFSB	**Wu-fen Shan**	**0.68**	**295**	*eS*			**Sb**	**22 45 56.8**	**+0.2**
	baz=292								
NDS	**Dongshan**	**0.70**	**258**	*eP*			**Pb**	**22 45 47.7**	**+0.2**
	ba

baz=219
HATJ Hateruma jima 1.42 120 *e*P **Pb 22 45 59.6 -0.2**
HATJ S **Sg 22 46 18.6 -0.7**
WUSB Renai 1.46 238 *e*P **Pg 22 46 01.1 -0.4**
baz=219
JKRS Kuro-shima 1.51 111 *e*P **Pb 22 46 01.6 +0.3**
JKRS S **Sn 22 46 19.7 -0.1**
JIJ Ishigaki jima 1.58 105 S **Sn 22 46 21.8 +0.2**

IDC ***12*** *23:01:11.9±0.6,28˚13N×128˚11E,h0km,mb4.0/18, mbtmp4.0/20,ML3.0/2,MS4.0/39,Error ellipse: s-maj=23.5km s-min=12.4km az=73.0*
JMA ***12*** *23:01:12.9±0.3,28˚1N±0˚5×128˚1E±0˚7,h15km±3km, MD4.5/18,MW4.7/18,NW OFF OKINAWAJIMA IS*
JMA Felt I J1 at NW OFF OKINAWAJIMA IS .
NIED ***12*** *23:01:12.9,28˚12N×128˚07E,h15km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.89; Mθθ4.22; Mφφ-2.34; Mrθ-2.31; Mθφ5.74; Mφr0.38; Fault plane solution: M₀7.05000×10¹⁵ NP1: φs103.00000°,δ84.00000°,λ-22.00000°. NP2: φs195.00000°,δ68.00000°,λ-173.00000°.*
GCMT ***12*** *23:01:13.9±0.4,28˚06N±0˚02×128˚15E±0˚03,h15km±2km, MW4.7/74,Moment Tensor Solution. s7,c7; s74,c95; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.40±.09; Mθθ0.97±.08; Mφφ-0.56±.06; Mrθ0.13±.14; Mθφ0.96±.06; Mφr0.12±.12; Best double couple: M₀1.23600×10¹⁶ NP1:φs19.00000°,δ89.00000°,λ173.00000°. NP2: φs110.00000°,δ83.00000°,λ1.00000°. Principal axes: T 1.4410, Plg5.0000°, Azm334.0000°; N -0.4110, Plg83.0000°, Azm195.0000°; P -1.0300, Plg4.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***12*** *23:01:14.0±0.9,28˚15N×128˚05E,h24km,mb4.5/27 Error ellipse: s-maj=11.9km s-min=6.8km az=113.5*
BJI ***12*** *23:01:17.5±0.0,28˚01N×127˚89E,h37km,mb4.3/59, mB4.8/32,ML4.2/1,Ms4.5/61,Ms7 4.2/57*
NEIC ***12*** *23:01:17.9±2.0,28˚06N±0˚05×128˚08E±0˚07,h40km±9km, mb4.5/36,Error ellipse: s-maj=9.1km s-min=7.6km az=114.0*
ISC 12 23:01:16.6±0.6,28˚04N±0˚03×128˚15E±0˚04,h31km±3km, n183,σ1$84/177,mb4.4/48,MS4.1/48,9C-8D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.75**	**109**	P		**Pb**	**23 01 28.7**	**-2.5**
JTK				S		**Sb**	**23 01 39.6**	**-1.6**
JTK	**Tokunoshima**	**0.75**	**109**	A		A	23 01 28.7	
	comp=E,17nm,3.4s,comp=N,33nm,1.1s							
JOKE	**Okinoerabujima**	**0.77**	**151**	*e*P		**Pn**	**23 01 29.3**	**-1.9**
JOKE				*e*S		**Sb**	**23 01 41.6**	**0.0**
JOKE	**Okinoerabujima**	**0.77**	**151**	A		A	23 01 29.3	
	comp=E,22nm,1.1s,comp=N,16nm,1.3s							
JAMN	**Amaminishikomi**	**0.93**	**77**	P		**Pn**	**23 01 31.3**	**-2.2**
JAMN				S		**Sn**	**23 01 44.3**	**-1.3**
JAMN	**Amaminishikomi**	**0.93**	**77**	A		A	23 01 31.3	
	comp=E,9.0nm,1.4s,comp=N,18nm,2.7s							
JIH	**Iheya**	**1.01**	**189**	P		**Pn**	**23 01 32.8**	**-1.8**
JIH				S		**Sn**	**23 01 47.2**	**-0.5**
JIH	**Iheya**	**1.01**	**189**	A		A	23 01 32.8	
	comp=E,54nm,2.3s,comp=N,36nm,0.6s							
JYRO	**Yoronjima**	**1.04**	**165**	P		**Pn**	**23 01 33.8**	**-1.2**
JYRO				S		**Sn**	**23 01 48.0**	**-0.4**
JYRO	**Yoronjima**	**1.04**	**165**	A		A	23 01 33.8	
	comp=E,31nm,1.7s,comp=N,11nm,2.6s							
JOW	**Kunigami**	**1.20**	**175**	P		**Pn**	**23 01 36.1**	**-1.2**
JOW				S		**Sn**	**23 01 53.4**	**+0.9**
JOW	**Kunigami**	**1.20**	**175**	A		A	23 01 36.1	
	comp=E,24nm,1.9s,comp=N,18nm,2.3s							
JOW	**Kunigami**	**1.20**	**175**	Pn		**Pn**	**23 01 36.4**	**-0.9**
	comp=N,296nm,0.3s,baz=349,slow=14,SNR=142							
JOW				Sn		**Sn**	**23 01 52.6**	**+0.1**
	comp=N,362nm,0.3s,baz=170,slow=18,SNR=14							
JAM	**Amami Oshima**	**1.34**	**73**	P		**Pn**	**23 01 37.7**	**-1.4**
JAM	**Amami Oshima**	**1.34**	**73**	A		A	23 01 37.7	
	comp=E,8.0nm,2.6s,comp=N,15nm,2.7s							
JTAJ	**Takarajima**	**1.45**	**39**	P		**Pn**	**23 01 38.5**	**-2.1**
JNTH	**Nagotoyohara**	**1.52**	**184**	*e*P		**Pn**	**23 01 41.2**	**-0.3**
JNTH				*e*S		**Sn**	**23 02 00.8**	**+0.6**
JNTH	**Nagotoyohara**	**1.52**	**184**	A		A	23 01 41.2	
	comp=E,13nm,1.8s,comp=N,9.0nm,2.2s							
JZK	**Kikaishima**	**1.63**	**80**	P		**Pn**	**23 01 43.7**	**+0.5**
JZK	**Kikaishima**	**1.63**	**80**	A		A	23 01 43.7	
	comp=E,57nm,2.0s,comp=N,56nm,1.9s							
JAGN	**Aguni-jima**	**1.65**	**210**	P		**Pn**	**23 01 42.4**	**-1.1**
JNN	**Nakanoshima**	**2.35**	**40**	*e*P		**Pn**	**23 01 53.0**	**-0.1**
JMZ	**Minamidaito 2**	**3.52**	**128**	Pn		**Pn**	**23 02 11.4**	**+2.3**
JNU	**Nakatsue**	**5.59**	**24**	Pn		**Pn**	**23 02 38.8**	**+1.2**
JNU	**Nakatsue**	**5.59**	**24**	Pn		**Pn**	**23 02 39.1**	**+1.5**
	comp=N,2.6nm,0.3s,baz=180,slow=10,SNR=20							
JNU				Sn		Sb	23 03 49.6	-10
	baz=216,slow=10							
SSE	**Sheshan**	**6.79**	**298**	P		**Pn**	**23 02 51.7**	**-2.3**
SSE				S		**Sn**	**23 04 11.2**	**+0.9**
SSE				LR		LR		
	comp=N,810nm,10.4s							
SSE				LR		LR		
	comp=N,470nm,10.3s							
YHNB	**Yeheng**	**6.94**	**243**	Pn		**Pn**	**23 02 56.3**	**+0.1**
NACB	**Ninganchiao**	**7.04**	**238**			**Pn**	**23 02 58.4**	**+0.9**
JMN	**Monobe**	**7.51**	**40**			**Pn**	**23 03 05.0**	**+1.0**
SSLB	**Suanglung**	**7.74**	**238**			**Pn**	**23 03 07.3**	**+0.2**
TPUB	**Ta-pu**	**8.26**	**237**			**Pn**	**23 03 14.8**	**+0.5**
NJ2	**Nanjing**	**9.00**	**299**	*e*P		**Pn**	**23 03 23.6**	**-0.7**
NJ2				pmax		pmax		
	comp=N,9.0nm,0.6s							
NJ2				LR		LR		
	comp=N,2μm,15.2s							
NJ2				LR		LR		
	comp=N,1μm,16.6s							
NJ2				LR		LR		
	comp=N,1μm,13.3s							
KSRS	**Korea Array**	**9.39**	**359**	Pn		**Pn**	**23 03 28.0**	**-1.7**
	comp=N,0.2nm,0.3s,baz=183,slow=14,SNR=5.4							
KSRS				LR		LR	23 07 08.9	
	comp=N,613nm,19.0s,baz=175,slow=38							
	comp=N,2.0nm,0.6s							
KNMB	**Chin-men Tao**	**9.46**	**250**	Pn		**Pn**	**23 03 31.4**	**+0.7**
MJAR	**Matsushiro Arr**	**12.01**	**43**	Pn		**Pn**	**23 04 05.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=241,slow=14,SNR=2.3							
MJAR				LR		LR	23 09 23.4	
	comp=N,238nm,18.6s,baz=224,slow=41							
	comp=N,0.7nm,0.4s							
HKPS	**Hong Kong Po S**	**13.92**	**249**	Pn		**Pn**	**23 04 30.3**	**-1.4**
GZH	**Guangzhou**	**14.24**	**253**	P		Pn	23 04 28.8	-7.3
GZH				sP		**P**	**23 04 40.2**	**-2.8**
GZH				S		Sn	23 07 00.9	-12
GZH				LR		LR		
	comp=N,780nm,9.6s							
GZH				LR		LR		
	comp=N,590nm,10.2s							
SNY	**Shenyang**	**14.26**	**346**	⇑P		**Pn**	**23 04 38.3**	**+2.1**
SNY				pmax		pmax		
	comp=N,15nm,2.1s							
SNY				pmax		pmax		
	comp=N,420nm,3.9s							
SNY				LR		LR		
	comp=N,1μm,11.5s							
SNY				LR		LR		
	comp=N,1μm,10.2s							
SNY				LR		LR		
	comp=N,1μm,14.9s							
HNS	**HongShan**	**14.66**	**313**	⇑P		**Pn**	**23 04 41.9**	**+0.2**
HNS				S		**Sn**	**23 07 23.3**	**+0.3**
HNS				pmax		pmax		
	comp=N,11nm,1.6s							
HNS				LR		LR		
	comp=N,1μm,14.2s							
HNS				LR		LR		
	comp=N,450nm,13.6s							
HNS				LR		LR		
	comp=N,720nm,15.5s							
LYN	**LuoYang**	**14.89**	**300**	*e*P		**Pn**	**23 04 43.8**	**-1.1**
LYN				pP		P	23 04 51.2	+1.0
LYN				S		**Sn**	**23 07 29.3**	**+0.5**
LYN				sS		S	23 07 38.6	-7.5
LYN				SS		**SnSn**	**23 07 44.7**	**+3.2**
LYN				pmax		pmax		
	comp=N,10.0nm,1.0s							
LYN				pmax		pmax		
	comp=N,240nm,5.2s							
LYN				LR		LR		
	comp=N,1μm,10.7s							
LYN				LR		LR		
	comp=N,940nm,12.7s							
LYN				LR		LR		
	comp=N,1μm,15.5s							
BJT	**Baijiatuau**	**15.52**	**323**	P		**P**	**23 04 57.4**	**+0.2**
BJT				IAmb		IAmb	23 04 59.4	
	comp=Z,28nm,0.8s							
BJT	**Baijiatuau**	**15.52**	**323**	P		**P**	**23 04 57.4**	**+0.2**
BJT				pmax		pmax		
	comp=Z,28nm,0.8s							
BJI	**Beijing**	**15.54**	**324**	P		**P**	**23 04 58.0**	**+0.7**
BJI				sP		**sP**	**23 05 07.1**	**-2.2**
BJI				pmax		pmax		
	comp=Z,19nm,0.8s							
BJI				LR		LR		
	comp=Z,340nm,14.8s							
BJI				LR		LR		
	comp=Z,160nm,15.4s							
BJI				LR		LR		
	comp=Z,330nm,15.8s							
CN2	**Changchun**	**15.88**	**353**	*e*P		**P**	**23 05 02.9**	**+1.7**
CN2				*e*PP		**sP**	**23 05 16.0**	**+2.9**
CN2				*e*S		**Sn**	**23 07 56.9**	**+4.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.3s							
CN2				LR		LR		
	comp=Z,450nm,10.0s							
CN2				LR		LR		
	comp=Z,790nm,10.0s							
CN2				LR		LR		
	comp=Z,840nm,11.0s							
GULI	**GuiLin**	**16.13**	**264**	⇑P		**P**	**23 05 03.7**	**-0.4**
GULI				S		**Sn**	**23 07 59.5**	**+0.4**
GULI				pmax		pmax		
	comp=Z,10.0nm,1.2s							
GULI				LR		LR		
	comp=Z,1μm,16.8s							
GULI				LR		LR		
	comp=Z,390nm,16.5s							
GULI				LR		LR		
	comp=Z,630nm,12.9s							
USA0B	**Ussuriysk Arra**	**16.42**	**10**			**Pn**	**23 05 01.2**	**-3.5**
USA0B	**Ussuriysk Arra**	**16.42**	**10**	P		**Pn**	**23 05 01.2**	**-3.5**
USA0B				pmax		pmax		
	comp=Z,13nm,0.9s							
USRK	**Ussuriysk Ar.**	**16.42**	**10**	Pn		**Pn**	**23 05 04.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**16.42**	**10**	P		**Pn**	**23 05 04.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**16.42**	**10**	Pn		**P**	**23 05 09.8**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=12							
ENH	**Enshi**	**16.46**	**282**	P		**P**	**23 05 07.5**	**-0.2**
MDJ	**Mudanjiang**	**16.59**	**4**	P		**P**	**23 05 08.3**	**-0.7**
MDJ				pP		pP	23 05 16.0	-1.0
MDJ				sP		sP	23 05 21.6	+0.7
MDJ				S		**Sn**	**23 08 12.3**	**+2.4**
MDJ				sS		sS	23 08 25.3	-8.1
MDJ				SS		**SnSn**	**23 08 27.5**	**+4.1**
MDJ				PcS		**PcS**	**23 13 32.4**	**+0.6**
MDJ				ScS		**ScS**	**23 17 07.4**	**-0.2**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.6s							
MDJ				pmax		pmax		
	comp=Z,200nm,3.7s							
MDJ				LR		LR		
	comp=Z,650nm,16.5s							
MDJ				LR		LR		
	comp=Z,880nm,12.7s							
MDJ				LR		LR		
	comp=Z,880nm,16.8s							
XAN	**Xi'an**	**17.52**	**295**	⇑P		**P**	**23 05 18.6**	**-0.9**
XAN				pP		sP	23 05 28.3	-3.1
XAN				sP		pP	23 05 33.8	+6.2
XAN				pmax		pmax		
	comp=Z,9.0nm,1.5s							
XAN				LR		LR		
	comp=Z,3μm,15.5s							
XAN				LR		LR		
	comp=Z,1μm,16.8s							
XAN				LR		LR		
	comp=Z,1μm,15.5s							
BNX	**BinXian**	**17.68**	**358**	⇓P		**P**	**23 05 22.6**	**+1.5**
BNX				pmax		pmax		
	comp=Z,15nm,1.0s							
BNX				pmax		pmax		
	comp=Z,210nm,4.6s							
XLT	**XiLinHaoTe**	**18.57**	**332**	*e*P		**Pn**	**23 05 31.8**	**+0.4**
XLT				pP		pP	23 05 38.5	-0.5
XLT				sP		sP	23 05 43.7	+0.8
XLT				PP		**PnPn**	**23 05 47.6**	**+4.1**
XLT				S		**Sn**	**23 08 54.1**	**-3.9**
XLT				sS		S	23 09 05.5	+4.5
XLT				pmax		pmax		
	comp=Z,17nm,0.9s							
XLT				pmax		pmax		
	comp=Z,180nm,3.7s							
XLT				LR		LR		
	comp=Z,540nm,14.5s							
XLT				LR		LR		
	comp=Z,640nm,17.0s							
HHC	**Hu-ho-hao-te**	**18.68**	**317**	*e*P		**Pn**	**23 05 33.6**	**+0.8**
HHC				sP		sP	23 05 46.8	+2.5
HHC				*e*S		**Sn**	**23 08 56.9**	**-3.9**
HHC				sS		sS	23 09 09.1	-7.3
HHC				SS		**SnSn**	**23 09 17.5**	**+2.6**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,130nm,4.6s							
HHC				LR		LR		
	comp=Z,510nm,12.9s							
HHC				LR		LR		
	comp=Z,720nm,11.8s							
HHC				LR		LR		
	comp=Z,780nm,12.2s							
QIZ	**Qiongzhong**	**19.01**	**246**	P		**Pn**	**23 05 36.7**	**-0.1**
QIZ				LR		LR		
	comp=Z,460nm,9.8s							
QIZ				LR		LR		
	comp=Z,670nm,9.8s							
QIZ				LR		LR		
	comp=Z,590nm,10.6s							
GYA	**Guiyang**	**19.17**	**270**	⇓P		**Pn**	**23 05 39.0**	**+0.2**
GYA				pP		sP	23 05 47.9	-1.9
GYA				sP		pP	23 05 52.7	+6.8
GYA				S		**Sn**	**23 09 07.7**	**-5.1**
GYA				sS		sS	23 09 22.7	-3.7
GYA				pmax		pmax		
	comp=Z,12nm,2.2s							
GYA				pmax		pmax		
	comp=Z,190nm,4.3s							
GYA				LR		LR		
	comp=Z,1μm,11.8s							
GYA				LR		LR		
	comp=Z,560nm,13.5s							
GYA				LR		LR		
	comp=Z,800nm,13.4s							
BTO	**Baotou**	**19.48**	**315**	*e*P		**Pn**	**23 05 43.9**	**+1.5**
BTO				pP		**sP**	**23 05 52.3**	**-0.8**
BTO				sP		pP	23 05 56.8	+7.7
BTO				PP		**PnPn**	**23 06 02.3**	**+6.3**
BTO				sS		**sS**	**23 09 30.8**	**-1.8**
BTO				pmax		pmax		
	comp=Z,27nm,1.3s							
BTO				pmax		pmax		
	comp=Z,510nm,4.1s							
BTO				LR		LR		
	comp=Z,1μm,11.2s							
BTO				LR		LR		
	comp=Z,990nm,15.7s							
BTO				LR		LR		
	comp=Z,1μm,15.8s							
GUMO	**Guam**	**21.19**	**129**	LR		LR	23 12 49.5	
	comp=Z,335nm,20.1s,baz=339,slow=33							
KLR	**Kul'dur**	**21.34**	**6**	*e*P		**P**	**23 06 05.5**	**+4.5**
KLR				pmax		pmax		
	comp=Z,22nm,2.5s							
KLR	**Kul'dur**	**21.34**	**6**	P		**P**	**23 06 00.6**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=185,slow=11,SNR=5.3							
KLR				LR		LR	23 13 52.5	
	comp=Z,105nm,20.9s,baz=180,slow=36							
	comp=Z,1.7nm,0.7s							
LZH	**Lanzhou**	**22.07**	**297**	⇑*i*P		**P**	**23 06 13.8**	**+4.7**
LZH				pP		sP	23 06 23.8	+2.6
LZH				SS		**SnSn**	**23 10 43.9**	**+5.8**
LZH				pmax		pmax		
	comp=Z,15nm,1.1s							
LZH				LR		LR		
	comp=Z,1μm,12.5s							
LZH				LR		LR		
	comp=Z,790nm,12.4s							
LZH				LR		LR		
	comp=Z,650nm,15.1s							
KMI	**Kunming**	**22.90**	**269**	⇑P		**P**	**23 06 22.6**	**+4.5**
KMI				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KMI				LR		LR		
	comp=N,720nm,12.5s							
KMI				LR		LR		
	comp=E,340nm,13.8s							
KMI				LR		LR		
	comp=Z,350nm,10.4s							
PZH	**PanZhiHua**	**23.51**	**272**	P		**P**	**23 06 25.9**	**+1.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,50nm,3.9s							
PZH				LR		LR		
	comp=Z,800nm,18.2s							
PZH				LR		LR		
	comp=Z,280nm,17.0s							
PZH				LR		LR		
	comp=Z,310nm,12.9s							
MYLDM	**Lahad Datu**	**24.51**	**204**	P		**P**	**23 06 34.4**	**+1.1**
ZEA	**Zeya**	**25.69**	**359**	*e*P		P	23 06 29.0	-15
ZEA				*e*			23 11 16.4	
ZEA				MLR		MLR		
	comp=N,300nm,11.0s							
ZEA				MLR		MLR		
	comp=Z,300nm,12.0s							
ULN	**Ulaanbaatar**	**25.71**	**326**	P		**P**	**23 06 43.5**	**-0.6**
ULN				IAmb		IAmb	23 06 54.5	
	comp=Z,20nm,1.2s							
ULN	**Ulaanbaatar**	**25.71**	**326**	P		**P**	**23 06 43.5**	**-0.6**
ULN				pmax		pmax		
	comp=Z,20nm,1.2s							
SONM	**Songino Array**	**26.02**	**325**	P		**P**	**23 06 45.8**	**-1.1**
SONM				IAmb		IAmb	23 06 49.0	
	comp=Z,11nm,0.9s							
SONM	**Songino Array**	**26.02**	**325**	P		**P**	**23 06 45.8**	**-1.1**
SONM				pmax		pmax		
	comp=Z,11nm,0.9s							
SONM	**Songino Array**	**26.02**	**325**	P		**P**	**23 06 46.1**	**-0.8**
	comp=Z,7.3nm,0.8s,baz=140,slow=8.6,SNR=41							
SONM				LR		LR	23 17 56.7	
	comp=Z,238nm,19.1s,baz=163,slow=39							
	comp=Z,7.3nm,0.8s							
GTA	**Gaotai**	**26.05**	**303**	P		**P**	**23 06 46.0**	**-1.3**
GTA				pP		pP	23 06 54.4	-1.7
GTA				sP		sP	23 06 58.4	-1.4
GTA				S		**S**	**23 11 11.8**	**-4.7**
GTA				sS		sS	23 11 28.2	-2.8
GTA				pmax		pmax		
	comp=Z,6.0nm,1.2s							
GTA				LR		LR		
	comp=Z,750nm,16.4s							
GTA				LR		LR		
	comp=Z,370nm,15.3s							
GTA				LR		LR		
	comp=Z,500nm,14.5s							
TNCH	**TengChong**	**26.65**	**270**	P		**P**	**23 06 52.6**	**-0.3**
TNCH				pP		pP	23 07 01.1	-0.6
TNCH				S		**S**	**23 11 22.8**	**-3.4**
TNCH				pmax		pmax		
	comp=Z,7.0nm,0.4s							
TNCH				pmax		pmax		
	comp=Z,110nm,4.6s							
TNCH				LR		LR		
	comp=Z,560nm,12.3s							
TNCH				LR		LR		
	comp=Z,500nm,10.7s							
TNCH				LR		LR		
	comp=Z,570nm,13.7s							
CMAR	**Chiang Mai Arr**	**28.42**	**257**	LR		LR	23 19 43.6	
	comp=Z,208nm,18.1s,baz=65,slow=39							
GOMU	**GeErMu**	**29.28**	**295**	P		**P**	**23 07 16.3**	**-0.2**
GOMU				pP		pP	23 07 25.7	+0.4
GOMU				sP		sP	23 07 29.8	+0.7
GOMU				pmax		pmax		
	comp=Z,3.0nm,0.7s							
GOMU				LR		LR		
	comp=Z,360nm,10.6s							
GOMU				LR		LR		
	comp=Z,280nm,10.6s							
GOMU				LR		LR		
	comp=Z,200nm,11.8s							
MOY	**Mondy**	**31.17**	**327**	*e*P		**P**	**23 07 32.3**	**-0.4**
SHL	**Shillong**	**32.39**	**274**	P		**P**	**23 07 43.4**	**-0.4**
SHL				IAmb		IAmb	23 07 48.5	
	comp=Z,4.1nm,0.9s							
SHL	**Shillong**	**32.39**	**274**	P		**P**	**23 07 43.4**	**-0.4**
SHL				pmax		pmax		
	comp=Z,4.0nm,0.9s							
PETK	**Petropavlovsk-**	**33.21**	**33**	P		**P**	**23 07 51.8**	**+1.3**
PETK	**Petropavlovsk-**	**33.21**	**33**	P		**P**	**23 07 51.8**	**+1.3**
PETK	**Petropavlovsk-**	**33.21**	**33**	LR		LR	23 21 11.2	
	comp=Z,24nm,19.4s,baz=220,slow=36							
YAK	**Yakutsk**	**34.01**	**1**	LR		LR	23 21 53.0	
	comp=Z,225nm,18.1s,baz=110,slow=37							
WMQ	**Urumqi**	**35.96**	**307**	*e*P		**P**	**23 08 15.0**	**+0.6**
WMQ				pP		sP	23 08 26.5	-0.6
WMQ				LR		LR		
	comp=Z,780nm,13.5s							
WMQ				LR		LR		
	comp=Z,280nm,16.5s							
DGZ	**Jazzator, Alta**	**37.76**	**316**	⇓*e*P		**P**	**23 08 29.3**	**-0.5**
DGZ				pmax		pmax		
	comp=Z,8.0nm,2.1s							
MK31	**Makanchi Array**	**40.30**	**310**	P		**P**	**23 08 48.9**	**-2.0**
MK31	**Makanchi Array**	**40.30**	**310**	P		**P**	**23 08 48.9**	**-2.0**
MK31				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MKAR	**Makanchi Array**	**40.30**	**310**	P		**P**	**23 08 49.6**	**-1.3**
MKAR	**Makanchi Array**	**40.30**	**310**	*ce*P		**P**	**23 08 50.0**	**-0.9**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**40.30**	**310**	P		**P**	**23 08 49.8**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=100,slow=10,SNR=20							
MKAR				LR		LR	23 26 03.2	
	comp=Z,111nm,20.2s,baz=102,slow=37							
	comp=Z,2.2nm,0.7s							
MAKZ	**Makanchi**	**40.51**	**310**	P		**P**	**23 08 49.9**	**-2.8**
MAKZ				IAmb		IAmb	23 08 57.5	
	comp=Z,11nm,1.4s							
MAKZ	**Makanchi**	**40.51**	**310**	P		**P**	**23 08 49.9**	**-2.8**
MAKZ				pmax		pmax		
	comp=Z,11nm,1.4s							
ZAA0	**Zalesovo Array**	**40.78**	**322**	P		**P**	**23 08 51.6**	**-3.1**
ZALV	**Zalesovo Beam**	**40.78**	**322**	P		**P**	**23 08 52.3**	**-2.5**
ZALV	**Zalesovo Beam**	**40.78**	**322**	*i*P		**P**	**23 08 53.9**	**-0.8**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.5s							
ZALV	**Zalesovo Beam**	**40.78**	**322**	P		**P**	**23 08 53.5**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=109,slow=9.1,SNR=11							
ZALV				LR		LR	23 27 20.1	
	comp=Z,133nm,18.9s,baz=103,slow=38							
	comp=Z,1.4nm,0.5s							
PMG	**Port Moresby**	**41.52**	**151**	LR		LR	23 24 06.8	
	comp=Z,158nm,21.4s,baz=301,slow=33							
TARG	**Taragay, Kyrgy**	**42.92**	**302**	P		**P**	**23 09 11.5**	**-1.4**
TARG	**Taragay, Kyrgy**	**42.92**	**302**	P		**P**	**23 09 11.5**	**-1.4**
TARG				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KURK	**Kurchatov**	**43.48**	**315**	P		**P**	**23 09 15.8**	**-1.0**
KURK				IAmb		IAmb	23 09 25.5	
	comp=Z,7.5nm,1.1s							
KURK	**Kurchatov**	**43.48**	**315**	⇓*i*P		**P**	**23 09 16.4**	**-0.4**
KURK				pmax		pmax		
	comp=Z,17nm,2.5s							
KURBB	**Kurchatov Arra**	**43.51**	**315**	P		**P**	**23 09 15.8**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=103,slow=8.8,SNR=16							
KURBB				LR		LR	23 29 02.2	
	comp=Z,255nm,18.7s,baz=153,slow=38							
	comp=Z,2.2nm,0.5s							
TIXI	**Tiksi**	**43.66**	**0**	LR		LR	23 27 23.3	
	comp=Z,322nm,18.9s,baz=196,slow=36							
NRN	**Naryn**	**44.27**	**302**	P		**P**	**23 09 23.8**	**+0.1**
NRN	**Naryn**	**44.27**	**302**	P		**P**	**23 09 23.8**	**+0.1**
NRN				pmax	

comp=Z,4.0nm,0.8s
KSH Kashi 44.31 299 P P 23 09 26.5 +2.7
KSH pmax pmax
comp=Z,3.0nm,1.4s
KSH LR LR
comp=Z,550nm,16.1s
KSH LR LR
comp=Z,460nm,13.7s
KSH LR LR
comp=Z,270nm,13.1s
AAK Ala-Archa 45.40 303 P P 23 09 31.1 -1.4
AAK Ala-Archa 45.40 303 *eP* P 23 09 32.1 -0.4
BILL Bilibino 45.99 19 *eP* P 23 09 38.1 +1.6
BILL pmax pmax
comp=Z,10.0nm,2.4s
NRIK Noril'sk 47.52 342 P P 23 09 48.9 +0.4
NRIK IAmb IAmb 23 09 57.2
comp=Z,4.7nm,1.0s
NRIK Noril'sk 47.52 342 *iP* P 23 09 48.8 +0.4
NRIK pmax pmax
comp=Z,9.0nm,1.5s
NRIK Noril'sk 47.52 342 P P 23 09 47.5 -1.0
comp=Z,0.7nm,0.3s,baz=129,slow=7.3,SNR=4.0
comp=Z,0.7nm,0.3s
WRAB Tennant Creek 48.06 172 P P 23 09 53.5 +0.3
WRAB IAmb IAmb 23 10 15.7
comp=Z,7.0nm,1.1s
WRAB Tennant Creek 48.06 172 P P 23 09 53.5 +0.3
WRAB pmax pmax
comp=Z,7.0nm,1.1s
WRA Warramunga Arr 48.07 172 P P 23 09 54.1 +0.8
WRA Warramunga Arr 48.07 172 *i* P P 23 09 55.5 +2.2
WRA pmax pmax
comp=Z,3.0nm,0.7s
WRA Warramunga Arr 48.07 172 P P 23 09 53.6 +0.3
comp=Z,3.2nm,0.7s,baz=353,slow=8.2,SNR=8.3
comp=Z,3.2nm,0.7s
WB2 Warramunga Arr 48.07 172 P P 23 09 52.3 -1.0
WR0 Warramunga Arr 48.11 172 P P 23 09 54.1 +0.6
BTK Batken 48.25 300 P P 23 09 53.9 -0.8
BTK IAmb IAmb 23 10 00.9
comp=Z,3.8nm,1.1s
BTK Batken 48.25 300 P P 23 09 53.9 -0.8
BTK pmax pmax
comp=Z,4.0nm,1.2s
KK31 Karatay Array 48.33 304 P P 23 09 54.3 -0.9
KK31 IAmb IAmb 23 10 02.1
comp=Z,4.0nm,1.1s
KK31 Karatay Array 48.33 304 P P 23 09 54.3 -0.9
KK31 pmax pmax
comp=Z,4.0nm,1.1s
KKAR Karatay Array 48.33 304 P P 23 09 53.5 -1.7
KKAR Karatay Array 48.33 304 P P 23 09 54.8 -0.3
KKAR IAmb IAmb 23 10 02.1
comp=Z,4.0nm,1.1s
KKAR Karatay Array 48.33 304 P P 23 09 53.5 -1.7
BVAR Borovoye Array 48.90 317 P P 23 09 58.4 -1.0
comp=Z,3.4nm,0.9s,baz=77,slow=7.6,SNR=16
BVAR LR LR 23 32 26.0
comp=Z,574nm,18.4s,baz=101,slow=38
comp=Z,3.4nm,0.9s
BRVK Borovoye 48.96 317 P P 23 09 58.4 -1.5
BRVK Borovoye 48.96 317 *deP* P 23 09 59.7 -0.2
BRVK pmax pmax
comp=Z,8.0nm,0.9s
PALK Pallekele 49.32 255 LR LR 23 34 05.7
comp=Z,64nm,18.0s,baz=156,slow=40
SIMJ Simiganj 49.77 298 P P 23 10 05.7 -0.7
KBL Kabul 50.32 293 P P 23 10 09.7 -1.0
KBL IAmb IAmb 23 10 18.0
comp=Z,5.8nm,0.8s
KBL Kabul 50.32 293 P P 23 10 09.7 -1.0
KBL pmax pmax
comp=Z,6.0nm,0.8s
ASAR Alice Springs 51.70 173 P P 23 10 22.2 +1.4
ASAR Alice Springs 51.70 173 P P 23 10 22.8 +1.9
comp=Z,2.4nm,0.9s,baz=2.9,slow=14,SNR=10
ASAR LR LR 23 31 28.8
comp=Z,31nm,21.9s,baz=18,slow=35
comp=Z,2.4nm,0.9s
SVE Sverdlovsk 54.80 322 *eP* P 23 10 43.8 +0.5
SVE pmax pmax
comp=Z,9.0nm,1.3s
ABKAR Akbulak array 55.37 312 P P 23 10 46.4 -1.2
ABKAR Akbulak array 55.37 312 P P 23 10 46.7 -0.9
ABKAR IAmb IAmb 23 10 58.0
comp=Z,4.3nm,0.9s
ARU Arti 55.94 321 P P 23 10 52.2 +0.7
ARU IAmb IAmb 23 11 00.4
comp=Z,5.1nm,1.0s
ARU Arti 55.94 321 *d iP* P 23 10 50.7 -0.8
ARU S S **23 18 36.9 -0.3**
ARU SS SS **23 22 18.8 -4.1**
ARU pmax pmax
comp=Z,23nm,3.7s
ARU Arti 55.94 321 LR LR 23 37 32.6
comp=Z,183nm,19.5s,baz=81,slow=39
GEYT Alibeck 58.34 299 P P 23 11 08.8 -0.1
GEYT IAmb IAmb 23 11 16.6
comp=Z,3.1nm,0.9s
GEYT Alibeck 58.34 299 P P 23 11 08.8 -0.1
GEYT pmax pmax
comp=Z,3.0nm,0.9s
GEYT Alibeck 58.34 299 P P 23 11 09.4 +0.6
comp=Z,1.9nm,0.8s,baz=57,slow=5.3,SNR=1.9
comp=Z,1.9nm,0.8s
GYA0 ALIBECK ARRAY 58.34 299 P P 23 11 09.0 +0.1
GYA0 pmax pmax
comp=Z,3.0nm,0.8s
GYA0B ALIBECK ARRAY 58.34 299 P P 23 11 09.1 +0.2
GYA0B IAmb IAmb 23 11 16.6
comp=Z,3.1nm,0.8s
H19K Roundabout Mou 58.81 28 P P 23 11 12.1 +0.6
H19K IAmb IAmb 23 11 30.6
comp=Z,5.4nm,1.1s
J19K Poorman 59.17 30 P P 23 11 13.3 -0.8
KIRV Kirov 60.74 324 LR LR 23 41 08.3
comp=Z,265nm,19.2s,baz=89,slow=40
STKA Stephens Creek 60.94 167 P P 23 11 28.1 +1.5
comp=Z,2.2nm,0.5s,baz=352,slow=7.1,SNR=6.3
comp=Z,2.2nm,0.5s
NEA2 Nenana 61.98 29 P P 23 11 33.6 +0.2
DZM Mont Dzumac 62.04 139 LR LR 23 34 45.7
comp=Z,101nm,21.9s,baz=322,slow=32
MDM Murphy Dome 62.30 29 P P 23 11 35.6 +0.1
MDM IAmb IAmb 23 11 45.9
comp=Z,5.3nm,0.9s
BELG Belogornoye 62.70 317 LR LR 23 40 39.4
comp=Z,337nm,18.1s,baz=134,slow=38
ILAR Eielson Array 62.89 29 P P 23 11 39.1 -0.2
comp=Z,0.3nm,0.6s,baz=263,slow=3.6,SNR=2.6
comp=Z,0.3nm,0.6s
EGAK Eagle 65.30 28 P P 23 11 54.2 -0.9
INK Inuvik 67.27 24 LR LR 23 43 06.2
comp=Z,81nm,18.6s,baz=358,slow=37
KBZ Khabaz 67.97 309 P P 23 12 13.6 +1.1
comp=Z,1.4nm,0.8s,baz=37,slow=10,SNR=2.9
KBZ LR LR 23 44 26.7
comp=Z,72nm,18.1s,baz=38,slow=38
comp=Z,1.4nm,0.8s
KIV Kislovodsk 68.05 309 *eP* P 23 12 12.0 -1.2
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,99nm,17.0s
ARCES ARCESS Array B 68.31 338 LR LR 23 46 43.6
comp=Z,136nm,18.4s,baz=5.0,slow=40
FINES FINESS Array B 71.27 330 LR LR 23 47 24.3
comp=Z,308nm,21.9s,baz=49,slow=39
RES Resolute Bay 73.80 11 LR LR 23 47 43.6
comp=Z,49nm,18.2s,baz=354,slow=38
AKASG Malin Array Be 74.12 319 P P 23 12 50.1 +0.3
comp=Z,0.4nm,0.5s,baz=64,slow=2.2,SNR=1.5
AKASG LR LR 23 47 59.0
comp=Z,269nm,18.8s,baz=46,slow=38
comp=Z,0.4nm,0.5s
BRTR Keskin Array B 75.88 308 P P 23 12 58.5 -1.8
comp=Z,0.4nm,0.7s,baz=79,slow=7.5,SNR=1.9
BRTR LR LR 23 49 26.1
comp=Z,101nm,18.3s,baz=274,slow=38
comp=Z,0.4nm,0.7s
YKA Yellowknife Ar 76.92 25 *i* P P 23 13 05.5 -0.1
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 76.92 25 P P 23 13 05.0 -0.6
comp=Z,1.1nm,0.9s,baz=300,slow=5.5,SNR=9.2
comp=Z,1.1nm,0.9s

HFS Hagfors 77.20 332 LR LR 23 48 42.7
comp=Z,243nm,18.0s,baz=20,slow=37
MMAI Mount Meron Ar 77.41 301 LR LR 23 52 43.4
comp=Z,44nm,18.2s,baz=127,slow=40
NOA NORSAR Array B 77.67 334 LR LR 23 50 36.7
comp=Z,135nm,19.6s,baz=280,slow=38
MLR Muntele Rosu 78.41 315 LR LR 23 51 19.4
comp=Z,223nm,18.6s,baz=14,slow=38
VRAC Vranov 81.90 322 LR LR 23 55 10.4
comp=Z,201nm,18.1s,baz=16,slow=40
BRG Berggiesshubel 82.41 324 *eP* P 23 13 20.8 -15
BRG Amp 23 13 22.9
comp=Z,2.4nm,0.9s
GERES GERESS Array B 83.72 323 LR LR 23 53 20.7
comp=Z,113nm,18.2s,baz=60,slow=37
NEW Newport 84.21 38 LR LR 23 52 27.4
comp=Z,31nm,18.0s,baz=332,slow=36
SFJD Kangerlussuaq 85.26 360 LR LR 23 51 24.3
comp=Z,56nm,20.8s,baz=6.0,slow=35
DAVOX Davos/Dischmat 87.03 323 LR LR 23 57 01.6
comp=Z,236nm,19.9s,baz=66,slow=38
FRB Frobisher Bay 87.58 7 LR LR 23 53 24.8
comp=Z,83nm,21.5s,baz=354,slow=36
PDAR Pinedale Array 91.80 39 P P 23 14 21.2 -0.6
comp=Z,0.3nm,0.7s,baz=318,slow=1.2,SNR=3.5
comp=Z,0.3nm,0.7s
ULM Lac du Bonnet 92.84 27 P P 23 14 24.6 -1.5
comp=Z,1.1nm,0.6s,baz=311,slow=5.8,SNR=3.4
comp=Z,1.1nm,0.6s
PFO Pinyon Flats O 93.36 49 LR LR 23 48 46.2
comp=Z,31nm,21.4s,baz=236,slow=31
SCHQ Schefferville 96.47 9 LR LR 00 01 54.8
comp=Z,54nm,18.0s,baz=304,slow=38
ESDC Sonseca Array 99.22 325 LR LR 00 07 21.3
comp=Z,157nm,18.3s,baz=50,slow=40
ELIB Princess Elisa 120.98 201 *d*PKPdf PKiKP 23 20 08.2 +2.9

*IDC **12** 23:21:48.8±1.4,5˚.48S×153˚.56E,h0km,mb3.7/8, mbtmp3.7/8,Error ellipse: s-maj=54.8km s-min=25.0km az=96.0*
ISC 12 23:21:55.4±1.6,**5˚.5S**±0˚.2×**153˚.5E**±0˚.4,**h43**km,**n11,** σ0s**87**/10,**mb3.8/8,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.47**	**231**	P	**P**	**23 27 00.9**	**-0.5**
	0.3nm,0.6s,baz=56,slow=10,SNR=2.0						
WRA				PcP	**PcP**	**23 30 46.4**	**-0.3**
	0.5nm,1.1s,baz=59,slow=2.7,SNR=4.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**26.07**	**224**	P	**P**	**23 27 25.6**	**+0.5**
	1.2nm,1.0s,baz=61,slow=8.9,SNR=9.1						
ASAR				PcP	**PcP**	**23 30 52.3**	**0.0**
	0.2nm,0.3s,baz=46,slow=4.0,SNR=5.1						
	1.2nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**27.21**	**28**	T	T	23 55 55.5	
	baz=208,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**27.21**	**28**	T	T	23 55 51.5	
	baz=208,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**27.23**	**28**	T	T	23 55 48.6	
	baz=208,slow=76,SNR=12						
SONM	**Songino Array**	**67.28**	**328**	P	**P**	**23 32 46.6**	**+0.7**
	0.2nm,0.5s,baz=138,slow=5.5,SNR=2.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**81.29**	**319**	P	**P**	**23 34 08.1**	**+0.7**
	0.6nm,0.6s,baz=98,slow=7.2,SNR=13						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**82.11**	**326**	P	**P**	**23 34 10.8**	**-0.6**
	0.4nm,0.4s,baz=94,slow=6.6,SNR=2.7						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**84.44**	**180**	P	**P**	**23 34 23.6**	**+0.2**
	1.2nm,0.8s,baz=92,slow=1.4,SNR=5.9						
	1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**84.77**	**322**	P	**P**	**23 34 25.1**	**-0.1**
	0.2nm,0.3s,baz=125,slow=3.7,SNR=4.6						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**90.21**	**323**	P	**P**	**23 34 49.5**	**-1.8**
	0.7nm,0.8s,baz=104,slow=4.6,SNR=5.1						
	0.7nm,0.8s						

*IDC **12** 23:26:32.2±2.1,56˚.52N×149˚.13W,h0km,mb3.6/5, mbtmp3.4/8,ML2.6/3,Error ellipse: s-maj=40.2km s-min=26.7km az=166.0*
*AEIC **12** 23:26:35.8±1.4,56˚.5N±0˚.1×148˚.6W±0˚.1,h12km±9km, Error ellipse: s-maj=18.3km s-min=8.7km az=161.0*
*NEIC **12** 23:26:39.5±2.9,57˚.12N±0˚.05×148˚.89W±0˚.09, h24km±11km,ML3.1/64,ML3.0(AEIC),Error ellipse: s-maj=7.5km s-min=6.3km az=224.0*
ISC 12 23:26:35.3±1.2,**56˚.94N**±0˚.07×**148˚.85W**±0˚.05,**h10**km,**n58,** σ1s**47**/58,**mb3.8/5,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.19**	**294**		**Sn**	**23 27 39.6**	**+0.6**
KDAK	**Kodiak Island**	**2.19**	**294**		**Pn**	**23 27 13.1**	**+1.3**
KDAK	**Kodiak Island**	**2.19**	**294**	IAML		23 27 42.4	
	27nm,1.4s						
KDAK				IAML		23 27 50.5	
	21nm,1.3s						
OHAK	**Old Harbor**	**2.44**	**279**		**Pn**	**23 27 14.4**	**-0.8**
OHAK					**Sn**	**23 27 43.2**	**-1.8**
SYI	**Shuyak Island**	**2.53**	**313**		**Sb**	**23 27 50.4**	**-1.6**
Q23K	**Middleton Isla**	**2.83**	**27**		**Pn**	**23 27 19.9**	**-0.6**
MID	**Middleton Isla**	**2.83**	**27**		**Pn**	**23 27 20.1**	**-0.5**
CNPM	**China Poot**	**2.89**	**335**		**Sb**	**23 28 00.1**	**-2.2**
CNPM	**China Poot**	**2.89**	**335**		**Pn**	**23 27 22.7**	**+1.4**
BRSE	**Bradley Lake S**	**2.98**	**341**		**Pn**	**23 27 23.9**	**+1.3**
BRSE					**Sb**	**23 28 01.8**	**-3.3**
BRLK	**Bradley Lake**	**3.03**	**340**		**Pn**	**23 27 24.8**	**+1.4**
BRLK					**Sb**	**23 28 02.4**	**-4.0**
P23K	**Montague Islan**	**3.16**	**13**		**Pn**	**23 27 25.4**	**+0.3**
P23K					**Sn**	**23 28 04.3**	**+1.5**
SEW	**Seward**	**3.19**	**355**		**Pn**	**23 27 25.5**	**0.0**
Q19K	**Cape Douglas,**	**3.25**	**310**	Pn	**Pn**	**23 27 27.4**	**+1.1**
Q19K				IAML		23 28 47.3	
	comp=N,118nm,1.4s						
KAHG	**Katmai Hook Gl**	**3.43**	**299**		**Pn**	**23 27 29.1**	**+0.2**
P19K	**Oil Pt**	**3.57**	**321**		**Pn**	**23 27 30.5**	**-0.3**
P19K				IAML		23 28 58.8	
	comp=N,42nm,1.4s						
P19K				IAML		23 29 30.9	
	comp=E,38nm,1.1s						
SLKM	**Skilak Lake**	**3.65**	**349**		**Pn**	**23 27 32.8**	**+0.9**
SLKM					**Sn**	**23 28 17.9**	**+2.9**
HIN	**Hinchinbrook I**	**3.68**	**18**		**Pn**	**23 27 32.6**	**+0.3**
HIN				Sn	**Sn**	**23 28 12.4**	**-3.3**
O20K	**Slope Mountain**	**3.72**	**329**		**Pn**	**23 27 33.3**	**+0.4**
KAIM	**Kayak Island**	**3.80**	**36**		**Pn**	**23 27 33.6**	**-0.2**
O18K	**Koktuh Hills**	**4.44**	**314**	Pn	**Pn**	**23 27 44.3**	**+1.5**
O18K				IAML		23 28 51.1	
	comp=N,9.7nm,1.4s						
KNK	**Knik Glacier**	**4.50**	**2**	Pn	**Pn**	**23 27 45.3**	**+1.9**
KNK				IAML		23 28 52.4	
	comp=E,14nm,1.4s						
KNK				IAML		23 29 47.2	
	comp=N,15nm,1.4s						
SNH	**Sunshine Point**	**4.53**	**42**	Pn	**Pn**	**23 27 42.8**	**-1.1**
SUA	**Susitna One**	**4.64**	**349**	Pn	**Pn**	**23 27 45.8**	**+0.3**
SUA				IAML		23 29 32.0	
	comp=N,8.1nm,1.4s						
WAX	**Waxell Ridge**	**4.71**	**39**	Pn	**Pn**	**23 27 45.2**	**-1.3**
WAX				IAML		23 29 56.6	
	comp=E,18nm,1.4s						
KLU	**Klutina**	**4.81**	**17**	Pn	**Pn**	**23 27 48.5**	**+0.6**
KLU				IAML		23 28 55.3	
	comp=E,15nm,1.4s						
KLU				IAML		23 28 60.0	
	comp=N,16nm,1.3s						
CRQM	**Cirque**	**4.84**	**35**	Pn	**Pn**	**23 27 47.7**	**-0.7**
CRQM				IAML		23 28 53.5	
	comp=N,24nm,1.4s						
CRQM				IAML		23 28 54.5	
	comp=E,32nm,1.5s						
GHO	**Glory Hole Cre**	**4.85**	**360**	Pn	**Pn**	**23 27 50.1**	**+1.8**
GHO				IAML		23 29 02.0	
	comp=E,17nm,1.0s						
GHO				IAML		23 29 07.3	
	comp=N,17nm,1.3s						
N19K	**Bonanza Creek**	**4.86**	**325**	Pn	**Pn**	**23 27 50.5**	**+1.9**
SML	**Sawmill**	**4.89**	**3**	Pn	**Pn**	**23 27 50.3**	**+1.4**
SML				IAML		23 28 55.1	
	comp=E,17nm,1.3s						
SML				IAML		23 28 59.2	

	comp=N,15nm,1.3s						
TGL	**Tana Glacier**	**4.94**	**37**	Pn	**Pn**	**23 27 49.2**	**-0.4**
TGL				IAML		23 28 54.1	
	comp=E,21nm,1.4s						
TGL				IAML		23 29 43.5	
	comp=N,17nm,1.4s						
SCM	**Sheep Creek Mo**	**4.97**	**8**	Pn	**Pn**	**23 27 51.5**	**+1.4**
SCM				IAML		23 28 59.3	
	comp=E,20nm,1.3s						
SCM				IAML		23 29 07.4	
	comp=N,18nm,1.1s						
ISLE	**Juniper Island**	**5.00**	**40**	Pn	**Pn**	**23 27 49.8**	**-0.6**
ISLE				IAML		23 29 00.2	
	comp=E,27nm,1.4s						
VRDI	**Verde Repeater**	**5.12**	**31**	Pn	**Pn**	**23 27 51.7**	**-0.5**
VRDI				IAML		23 29 12.6	
	comp=N,10nm,1.4s						
VRDI				IAML		23 29 41.8	
	comp=E,7.8nm,1.5s						
N25K	**Chitina, Valde**	**5.17**	**23**	Pn	**Pn**	**23 27 53.2**	**+0.6**
N25K				IAML		23 28 56.4	
	comp=N,14nm,1.0s						
GLB	**Gilahina Butte**	**5.21**	**28**	Pn	**Pn**	**23 27 53.3**	**0.0**
GLB				IAML		23 29 02.2	
	comp=E,13nm,0.8s						
GLB				IAML		23 31 09.4	
	comp=N,7.2nm,1.4s						
N18K	**Kilae Creek**	**5.24**	**319**	Pn	**Pn**	**23 27 54.6**	**+1.0**
SKT	**Skwentna**	**5.24**	**346**	Pn	**Pn**	**23 27 55.6**	**+1.9**
SKT				IAML		23 28 59.7	
	comp=E,5.8nm,1.1s						
SKT				IAML		23 29 01.3	
	comp=N,6.7nm,1.4s						
TABL	**Table Mountain**	**5.34**	**46**	Pn	**Pn**	**23 27 54.0**	**-1.2**
TABL				IAML		23 28 59.3	
	comp=N,19nm,0.9s						
M24K	**Tolsona, Glenn**	**5.36**	**14**	Pn	**Pn**	**23 27 56.1**	**+0.7**
M24K				IAML		23 29 10.6	
	comp=N,21nm,1.5s						
MCARA	**McCarthy VSAT**	**5.37**	**31**	Pn	**Pn**	**23 27 56.0**	**+0.6**
MCARA				IAML		23 29 13.2	
	comp=E,19nm,0.9s						
MCARA				IAML		23 29 19.3	
	comp=N,22nm,0.9s						
M20K	**Styx River**	**5.42**	**338**	Pn	**Pn**	**23 27 56.1**	**-0.1**
BARN	**Barnard Glacie**	**5.56**	**39**	Pn	**Pn**	**23 27 58.2**	**0.0**
O16K	**Kokwok River B**	**5.56**	**302**	Pn	**Pn**	**23 27 59.5**	**+1.5**
ILAR	**Eielson Array**	**7.92**	**6**	Pn	**Pn**	**23 28 32.7**	**+2.3**
	baz=194,slow=13,SNR=2.1						
ILAR				Sn	**Sn**	**23 30 00.1**	**+0.1**
	comp=N,0.1nm,0.3s,baz=188,slow=25,SNR=4.3						
	comp=N,0.1nm,0.3s						
DLBC	**Dease Lake**	**10.19**	**74**	Pn	**Pn**	**23 29 04.4**	**+2.9**
	baz=264,slow=9.2,SNR=3.2						
	comp=N,1.5nm,0.6s						
YKA	**Yellowknife Ar**	**17.98**	**58**	P	**Pn**	**23 30 46.5**	**+1.4**
	baz=267,slow=11,SNR=5.2						
	comp=N,0.4nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**49.42**	**240**	T	T	00 28 35.4	
	baz=30,slow=76,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**49.42**	**240**	T	T	00 28 35.5	
	baz=30,slow=76,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**49.44**	**240**	T	T	00 28 36.6	
	baz=30,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**50.56**	**239**	T	T	00 30 04.0	
	baz=30,slow=76,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**50.58**	**239**	T	T	00 30 04.7	
	baz=30,slow=76,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**50.58**	**239**	T	T	00 30 06.9	
	baz=30,slow=76,SNR=6.9						
SONM	**Songino Array**	**58.40**	**310**	P	**P**	**23 36 32.1**	**+1.4**
	comp=N,0.8nm,1.1s,baz=57,slow=5.5,SNR=3.9						
	comp=N,0.8nm,1.1s						
ZALV	**Zalesovo Beam**	**61.14**	**327**	P	**P**	**23 36 49.7**	**+0.4**
	comp=N,0.3nm,0.4s,baz=23,slow=7.8,SNR=2.3						
	comp=N,0.3nm,0.4s						
BVAR	**Borovoye Array**	**65.79**	**335**	P	**P**	**23 37 19.6**	**-0.5**
	comp=N,0.6nm,0.7s,baz=28,slow=3.4,SNR=4.2						
	comp=N,0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**65.90**	**329**	P	**P**	**23 37 20.0**	**-0.8**
	comp=N,0.2nm,0.2s,baz=28,slow=6.7,SNR=2.4						
	comp=N,0.2nm,0.2s						
MKAR	**Makanchi Array**	**68.20**	**325**	P	**P**	**23 37 35.0**	**-0.5**
	comp=N,0.3nm,0.8s,baz=46,slow=5.2,SNR=2.7						
	comp=N,0.3nm,0.8s						

*IDC **12** 23:47:15.2±1.4,55˚.53N×149˚.99W,h0km,mb3.5/5, mbtmp3.5/10,ML3.4/5,MS3.3/3,Error ellipse: s-maj=31.7km s-min=19.7km az=32.0*
*NEIC **12** 23:47:17.7±1.5,55˚.88N±0˚.06×150˚.2W±0˚.1,h7km±5km, mb4.2/1,ML3.9/42,ML3.6(AEIC),Error ellipse: s-maj=10.4km s-min=7.2km az=145.0*
*AEIC **12** 23:47:23.2±2.0,55˚.97N±0˚.09×150˚.09W±0˚.07,h11km±7km, Error ellipse: s-maj=13.2km s-min=5.6km az=170.0*
ISC 12 23:47:17.6±0.8,**55˚.93N**±0˚.07×**150˚.16W**±0˚.05,**h10**km, **n244,** σ1s**25**/248,**mb3.5**/5,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.16**	**308**		**Pn**	**23 47 53.7**	**+0.1**
OHAK	**Old Harbor**	**2.16**	**308**		**Sn**	**23 48 18.3**	**-2.2**
OHAK	**Old Harbor**	**2.16**	**308**	P	**Pn**	**23 47 53.5**	**-0.2**
OHAK	**Old Harbor**	**2.16**	**308**	P	**Pn**	**23 47 53.5**	**-0.2**
	baz=124						
OHAK				S	**Sn**	**23 48 18.3**	**-2.2**
	baz=124						
KDAK	**Kodiak Island**	**2.29**	**325**	Pn	**Pn**	**23 47 55.8**	**+0.4**
KDAK				Sn	**Sn**	**23 48 22.3**	**-1.2**
KDAK	**Kodiak Island**	**2.29**	**325**	Pn	**Pn**	**23 47 55.8**	**+0.4**
	16nm,0.3s,baz=171,slow=5.8,SNR=116						
KDAK				Sn	**Sn**	**23 48 20.3**	**-3.3**
	11nm,0.3s,baz=226,slow=8.3,SNR=3.8						
KDAK				LR	LR	23 49 06.0	
	comp=Z,270nm,19.8s,baz=192,slow=42						
	52nm,0.3s						
SII	**Sitkinak Islan**	**2.33**	**287**		**Pn**	**23 47 55.0**	**-1.0**
SII				IAML		23 48 30.7	
	comp=E,462nm,0.6s						
SII				IAML		23 48 38.5	
	comp=N,513nm,0.8s						
SII	**Sitkinak Islan**	**2.33**	**287**	P	**Pn**	**23 47 55.8**	**-0.3**
SII	**Sitkinak Islan**	**2.33**	**287**	P	**Pn**	**23 47 55.6**	**-0.4**
	baz=102						
R18K	**Karluk**	**2.88**	**307**		**Pn**	**23 48 04.3**	**+0.8**
R18K					**Sn**	**23 48 36.6**	**-1.6**
R18K	**Karluk**	**2.88**	**307**	IAML		23 48 40.2	
	comp=N,191nm,0.4s						
R18K				IAML		23 48 41.1	
	comp=E,203nm,0.5s						
R18K	**Karluk**	**2.88**	**307**	P	**Pn**	**23 48 04.3**	**+0.8**
	baz=122						
R18K				S	**Sn**	**23 48 36.6**	**-1.6**
	baz=122						
Q20K	**Shuyak Island**	**2.95**	**337**	P	**Pn**	**23 48 04.9**	**+0.4**
	baz=153						
Q20K				S	**Sn**	**23 48 38.1**	**-1.8**
	baz=153						
SYI	**Shuyak Island**	**2.95**	**337**		**Pn**	**23 48 05.1**	**+0.6**
SYI	**Shuyak Island**	**2.95**	**337**		**Sn**	**23 48 38.1**	**-1.8**
CHIR	**Chirikof Islan**	**3.08**	**270**	Pn	**Pn**	**23 48 06.6**	**+0.3**
CHIR				IAML		23 48 47.2	
	comp=E,209nm,1.3s						
CHIR				IAML		23 48 51.4	
	comp=N,219nm,1.3s						
CHIR	**Chirikof Islan**	**3.08**	**270**		**Sn**	**23 48 39.4**	**-3.8**
KAHG	**Katmai Hook Gl**	**3.51**	**319**		**Pn**	**23 48 13.8**	**+1.6**
Q19K	**Cape Douglas,**	**3.55**	**329**	Pn	**Pn**	**23 48 14.2**	**+1.4**
Q19K	**Cape Douglas,**	**3.55**	**329**	P	**Pn**	**23 48 14.0**	**+1.2**
	baz=145						
KCE	**Katmai Mt Cerb**	**3.59**	**312**		**Pn**	**23 48 15.1**	**+1.7**
ACHA	**Angle Creek He**	**3.63**	**311**		**Pn**	**23 48 14.8**	**+0.8**
CNPM	**China Poot**	**3.65**	**351**	Pn	**Pn**	**23 48 14.1**	**-0.1**
CNPM				IAML		23 48 57.8	
	comp=E,181nm,0.6s						
CNPM				IAML		23 48 58.3	
	comp=N,102nm,0.5s						
CNPM	**China Poot**	**3.65**	**351**		**Sn**	**23 48 54.6**	**-2.7**
ANCK	**Angle Creek**	**3.70**	**310**		**Pn**	**23 48 16.2**	**+1.4**
KVTA	**Katmai Vly 10**	**3.73**	**313**		**Pn**	**23 48 16.8**	**+1.6**
KAHC	**Katmai Hardscr**	**3.79**	**318**		**Pn**	**23 48 17.7**	**+1.5**
KAHC	**Katmai Hardscr**	**3.79**	**318**	P	**Pn**	**23 48 17.7**	**+1.5**
	baz=133						
HOM	**Homer**	**3.82**	**349**		**Sn**	**23 49 00.4**	**-1.0**
BRSE	**Bradley Lake S**	**3.84**	**356**		**Pn**	**23 48 16.0**	**-0.7**
BRSE					**Sn**	**23 48 57.9**	**-4.0**

BRSE	**Bradley Lake S**	**3.84**	**356**	P		**Pn**	**23 48 16.0**	**-0.7**
	baz=174							
BRSE				S		**Sn**	**23 48 57.9**	**-4.0**
	baz=174							
BRLK	**Bradley Lake**	**3.87**	**355**	Pn		**Pn**	**23 48 16.4**	**-0.7**
CNTC	**Contact Creek**	**3.90**	**309**			**Pn**	**23 48 18.5**	**+0.8**
CNTC						**Sn**	**23 49 02.0**	**-1.6**
Q17K	**Contact Creek**	**3.90**	**309**	P		**Pn**	**23 48 18.5**	**+0.8**
	baz=123							
Q17K				S		**Sn**	**23 49 02.0**	**-1.6**
	baz=123							
KELA	**Mount Kelaz**	**3.95**	**312**			**Pn**	**23 48 19.3**	**+1.1**
Q23K	**Middleton Isla**	**4.06**	**29**	Pn		**Pn**	**23 48 19.7**	**-0.1**
Q23K				IAML			23 49 43.9	
	comp=E,209nm,1.2s							
Q23K				IAML			23 49 51.7	
	comp=N,253nm,1.2s							
MID	**Middleton Isla**	**4.06**	**29**	Pn		**Pn**	**23 48 18.9**	**-0.9**
MID				IAML			23 49 09.2	
	comp=N,272nm,1.5s							
MID				IAML			23 49 43.9	
	comp=E,240nm,1.3s							
MID	**Middleton Isla**	**4.06**	**29**	P		**Pn**	**23 48 19.9**	**+0.1**
P19K	**Oil Pt**	**4.08**	**338**			**Pn**	**23 48 21.1**	**+1.0**
P19K	**Oil Pt**	**4.08**	**338**	P		**Pn**	**23 48 20.7**	**+0.6**
	baz=154							
P23K	**Montague Islan**	**4.34**	**19**			**Pn**	**23 48 23.2**	**-0.3**
P23K	**Montague Islan**	**4.34**	**19**	P		**Pn**	**23 48 23.2**	**-0.3**
	baz=200							
O20K	**Slope Mountain**	**4.37**	**344**			**Pn**	**23 48 24.2**	**+0.2**
O20K	**Slope Mountain**	**4.37**	**344**	P		**Pn**	**23 48 24.2**	**+0.2**
	baz=160							
P18K	**Big Mountain,**	**4.41**	**324**	Pn		**Pn**	**23 48 25.4**	**+0.7**
P18K	**Big Mountain,**	**4.41**	**324**	P		**Pn**	**23 48 25.0**	**+0.3**
	baz=139							
O22K	**Cooper Landing**	**4.57**	**3**			**Pn**	**23 48 28.3**	**+1.6**
CHGN	**Chignik**	**4.64**	**278**	Pn		**Pn**	**23 48 28.0**	**+0.4**
CHGN				IAML			23 49 29.5	
	comp=E,94nm,1.1s							
CHGN				IAML			23 49 31.6	
	comp=N,111nm,0.6s							
P17K	**Kvichak River**	**4.71**	**317**	P		**Pn**	**23 48 30.1**	**+1.5**
	baz=130							
RSO	**Redoubt South**	**4.75**	**344**			**Pn**	**23 48 29.6**	**+0.2**
O18K	**Koktuh Hills**	**4.77**	**328**	Pn		**Pn**	**23 48 30.2**	**+0.7**
O18K				IAML			23 49 25.7	
	comp=N,67nm,0.8s							
O18K				IAML			23 49 27.2	
	comp=E,41nm,0.7s							
O18K	**Koktuh Hills**	**4.77**	**328**	P		**Pn**	**23 48 30.1**	**+0.6**
	baz=142							
RDWB	**Redoubt West**	**4.79**	**344**			**Pn**	**23 48 29.5**	**-0.3**
O19K	**Port Alsworth**	**4.81**	**334**			**Pn**	**23 48 30.4**	**+0.3**
O19K	**Port Alsworth**	**4.81**	**334**	P		**Pn**	**23 48 30.6**	**+0.5**
	baz=150							
DFR	**Drift River**	**4.86**	**345**			**Pn**	**23 48 30.7**	**-0.2**
HIN	**Hinchinbrook I**	**4.88**	**22**	Pn		**Pn**	**23 48 31.4**	**+0.4**
HIN				IAML			23 49 34.5	
	comp=N,84nm,0.9s							
HIN				IAML			23 50 39.8	
	comp=E,104nm,1.4s							
CAPN	**Captain Cook N**	**4.88**	**354**			**Pn**	**23 48 32.2**	**+1.2**
KAIM	**Kayak Island**	**5.04**	**35**	Pn		**Pn**	**23 48 33.5**	**+0.3**
KAIM				IAML			23 49 38.0	
	comp=E,110nm,1.2s							
KAIM				IAML			23 49 51.8	
	comp=N,142nm,1.4s							
KAIM	**Kayak Island**	**5.04**	**35**	P		**Pn**	**23 48 33.6**	**+0.3**
	baz=220							
RC01	**Rabbit Creek A**	**5.18**	**2**	Pn		**Pn**	**23 48 35.9**	**+0.8**
RC01				IAML			23 49 38.4	
	comp=E,60nm,0.6s							
RC01				IAML			23 49 39.1	
	comp=N,38nm,0.4s							
EYAK	**Cordova Ski Ar**	**5.18**	**25**	P		**Pn**	**23 48 35.5**	**+0.4**
EYAK	**Cordova Ski Ar**	**5.18**	**25**	P		**Pn**	**23 48 35.6**	**+0.4**
	baz=208							
P16K	**Nushagak River**	**5.25**	**310**			**Pn**	**23 48 37.2**	**+1.2**
P16K	**Nushagak River**	**5.25**	**310**	P		**Pn**	**23 48 37.3**	**+1.2**
	baz=122							
O17K	**Koliganek Bris**	**5.34**	**319**			**Pn**	**23 48 38.1**	**+0.7**
O17K	**Koliganek Bris**	**5.34**	**319**	P		**Pn**	**23 48 38.1**	**+0.7**
	baz=132							
N19K	**Bonanza Creek**	**5.40**	**337**			**Pn**	**23 48 38.3**	**0.0**
N19K	**Bonanza Creek**	**5.40**	**337**	P		**Pn**	**23 48 38.3**	**0.0**
	baz=152							
SPCP	**Crater Peak Br**	**5.46**	**350**			**Pn**	**23 48 38.9**	**-0.2**
GOAT	**Goat Mountain**	**5.47**	**29**			**Pn**	**23 48 39.7**	**+0.4**
SUA	**Susitna One**	**5.56**	**357**	Pn		**Pn**	**23 48 40.3**	**-0.2**
SUA	**Susitna One**	**5.56**	**357**	P		**Pn**	**23 48 39.5**	**-0.9**
	baz=176							
O16K	**Kokwok River B**	**5.62**	**314**			**Pn**	**23 48 41.8**	**+0.7**
O16K	**Kokwok River B**	**5.62**	**314**	P		**Pn**	**23 48 41.8**	**+0.7**
	baz=127							
N18K	**Kilae Creek**	**5.64**	**330**			**Pn**	**23 48 41.5**	**0.0**
N18K	**Kilae Creek**	**5.64**	**330**	P		**Pn**	**23 48 41.5**	**0.0**
	baz=144							
DIV	**Divide**	**5.70**	**22**			**Pn**	**23 48 41.9**	**-0.4**
PMR	**Palmer**	**5.71**	**5**	Pn		**Pn**	**23 48 44.4**	**+2.1**
BMRM	**Bremner River**	**5.83**	**28**			**Pn**	**23 48 44.4**	**+0.3**
BMRM	**Bremner River**	**5.83**	**28**	P		**Pn**	**23 48 44.4**	**+0.3**
	baz=212							
SDPT	**Sand Point**	**5.87**	**269**	Pn		**Pn**	**23 48 45.4**	**+0.8**
GHO	**Glory Hole Cre**	**5.90**	**6**			**Pn**	**23 48 45.7**	**+0.7**
SVW2	**Sparrevohn**	**5.91**	**334**	Pn		**Pn**	**23 48 45.7**	**+0.5**
SVW2	**Sparrevohn**	**5.91**	**334**	P		**Pn**	**23 48 45.7**	**+0.5**
N17K	**Nushagak Hills**	**5.92**	**324**			**Pn**	**23 48 45.5**	**+0.3**
N17K	**Nushagak Hills**	**5.92**	**324**	P		**Pn**	**23 48 45.5**	**+0.3**
	baz=137							
WAX	**Waxell Ridge**	**5.96**	**37**			**Pn**	**23 48 45.6**	**-0.2**
SML	**Sawmill**	**5.97**	**8**	Pn		**Pn**	**23 48 47.1**	**+1.1**
KLU	**Klutina**	**6.00**	**20**			**Pn**	**23 48 47.3**	**+0.9**
KLU	**Klutina**	**6.00**	**20**	P		**Pn**	**23 48 46.7**	**+0.3**
	baz=203							
SCM	**Sheep Creek Mo**	**6.10**	**13**	Pn		**Pn**	**23 48 48.9**	**+1.1**
SKT	**Skwentna**	**6.11**	**354**			**Sn**	**23 49 57.6**	**-0.3**
SKT	**Skwentna**	**6.11**	**354**			**Pn**	**23 48 48.1**	**+0.2**
SKT	**Skwentna**	**6.11**	**354**	P		**Pn**	**23 48 48.1**	**+0.2**
	baz=172							
O15K	**Ungalikthiuk R**	**6.14**	**306**			**Pn**	**23 48 49.2**	**+1.0**
O15K	**Ungalikthiuk R**	**6.14**	**306**	P		**Pn**	**23 48 49.2**	**+1.0**
	baz=117							
TGL	**Tana Glacier**	**6.19**	**36**			**Pn**	**23 48 49.5**	**+0.5**
M18K	**Stony River**	**6.31**	**334**			**Pn**	**23 48 50.5**	**-0.1**
M18K	**Stony River**	**6.31**	**334**	P		**Pn**	**23 48 50.5**	**-0.1**
	baz=149							
VRDI	**Verde Repeater**	**6.37**	**31**	Pn		**Pn**	**23 48 51.9**	**+0.3**
N25K	**Chitina, Valde**	**6.38**	**25**			**Pn**	**23 48 52.7**	**+1.0**
N25K	**Chitina, Valde**	**6.38**	**25**	P		**Pn**	**23 48 52.2**	**+0.5**
	baz=209							
N16K	**Nishlik Lake**	**6.44**	**319**			**Pn**	**23 48 53.6**	**+1.2**
N16K	**Nishlik Lake**	**6.44**	**319**	P		**Pn**	**23 48 53.7**	**+1.2**
	baz=131							
GLB	**Gilahina Butte**	**6.44**	**28**	Pn		**Pn**	**23 48 53.3**	**+0.8**
KIAG	**Kiagna River**	**6.47**	**36**			**Pn**	**23 48 52.9**	**-0.1**
CUT	**Chulitna**	**6.50**	**360**			**Pn**	**23 48 52.1**	**-1.1**
SAMH	**Samovar Hills**	**6.52**	**46**			**Pn**	**23 48 54.6**	**+1.0**
M24K	**Tolsona, Glenn**	**6.53**	**17**			**Pn**	**23 48 55.4**	**+1.8**
GRNC	**Granite Creek**	**6.54**	**39**	Pn		**Pn**	**23 48 54.3**	**+0.3**
TABL	**Table Mountain**	**6.57**	**43**			**Pn**	**23 48 54.6**	**+0.2**
MCARA	**McCarthy VSAT**	**6.61**	**31**			**Pn**	**23 48 55.1**	**+0.3**
MCARA	**McCarthy VSAT**	**6.61**	**31**	P		**Pn**	**23 48 55.1**	**+0.3**
	baz=217							
PTPK	**Patty Peak**	**6.63**	**34**			**Pn**	**23 48 55.2**	**0.0**
M17K	**Holitna River**	**6.67**	**328**			**Pn**	**23 48 56.0**	**+0.5**
M17K	**Holitna River**	**6.67**	**328**	P		**Pn**	**23 48 56.0**	**+0.5**
	baz=142							
PCA	**Pinnacle**	**6.72**	**47**			**Pn**	**23 48 56.6**	**+0.3**
PINM	**Pinnacle**	**6.72**	**47**	P		**Pn**	**23 48 56.6**	**+0.3**
	baz=236							
L19K	**White Mountain**	**6.72**	**341**			**Pn**	**23 48 55.7**	**-0.6**
L19K	**White Mountain**	**6.72**	**341**	P		**Pn**	**23 48 55.7**	**-0.6**
	baz=156							
N15K	**Kwethluk River**	**6.77**	**313**			**Pn**	**23 48 58.3**	**+1.3**
N15K	**Kwethluk River**	**6.77**	**313**	P		**Pn**	**23 48 58.3**	**+1.3**
	baz=124							
BARN	**Barnard Glacie**	**6.80**	**37**			**Pn**	**23 48 57.6**	**0.0**
O14K	**Tigyukauivet M**	**6.83**	**304**			**Pn**	**23 48 59.1**	**+1.3**
O14K	**Tigyukauivet M**	**6.83**	**304**	P		**Pn**	**23 48 59.1**	**+1.3**
	baz=114							
CTG	**Chitna Glacier**	**6.85**	**39**	P		**Pn**	**23 48 58.2**	**+0.1**
	baz=226							
CTGM	**Chitina Glacie**	**6.85**	**39**	Pn		**Pn**	**23 48 58.6**	**+0.5**
PNL	**Peninsula**	**6.86**	**52**			**Pn**	**23 48 58.6**	**+0.4**

PNL	**Peninsula**	**6.86**	**52**	P		**Pn**	**23 48 58.9**	**+0.7**
PNL	**Peninsula**	**6.86**	**52**	P		**Pn**	**23 48 58.6**	**+0.4**
	baz=242							
LOGN	**Logan Glacier**	**6.87**	**41**			**Pn**	**23 48 59.0**	**+0.5**
M16K	**Timber Creek**	**6.88**	**322**			**Pn**	**23 48 59.6**	**+1.2**
M16K	**Timber Creek**	**6.88**	**322**	P		**Pn**	**23 48 59.6**	**+1.2**
	baz=133							
BCPM	**Bancas Point**	**6.90**	**50**			**Pn**	**23 48 59.6**	**+0.9**
L18K	**Granite Mounta**	**7.15**	**335**			**Pn**	**23 49 02.8**	**+0.7**
L18K	**Granite Mounta**	**7.15**	**335**	P		**Pn**	**23 49 02.8**	**+0.7**
	baz=148							
DHY	**Denali Highway**	**7.31**	**10**	Pn		**Pn**	**23 49 05.5**	**+1.1**
M15K	**Kasigluk River**	**7.32**	**315**			**Pn**	**23 49 05.3**	**+0.9**
M15K	**Kasigluk River**	**7.32**	**315**	P		**Pn**	**23 49 05.3**	**+0.9**
	baz=126							
N14K	**Kuskokwak Cree**	**7.33**	**308**			**Pn**	**23 49 05.7**	**+1.2**
N14K	**Kuskokwak Cree**	**7.33**	**308**	P		**Pn**	**23 49 05.7**	**+1.2**
	baz=118							
M26K	**Nabesna, AK**	**7.46**	**27**			**Pn**	**23 49 07.1**	**+0.6**
L17K	**Donlin**	**7.50**	**329**			**Pn**	**23 49 08.3**	**+1.3**
L17K	**Donlin**	**7.50**	**329**	P		**Pn**	**23 49 08.3**	**+1.3**
	baz=142							
RND	**Reindeer**	**7.53**	**4**	Pn		**Pn**	**23 49 08.8**	**+1.3**
O29M	**Mount Kennedy**	**7.54**	**50**			**Pn**	**23 49 08.8**	**+1.3**
O29M	**Mount Kennedy**	**7.54**	**50**	P		**Pn**	**23 49 08.2**	**+0.6**
	baz=240							
L16K	**Owhat River**	**7.54**	**324**			**Pn**	**23 49 08.5**	**+0.9**
L16K	**Owhat River**	**7.54**	**324**	P		**Pn**	**23 49 08.4**	**+0.9**
	baz=136							
TRF	**Thorofare Moun**	**7.55**	**360**	Pn		**Pn**	**23 49 09.7**	**+1.9**
CAST	**Castle Rocks**	**7.58**	**353**	Pn		**Pn**	**23 49 09.9**	**+1.8**
P29M	**Windy Craggy**	**7.60**	**56**			**Pn**	**23 49 08.2**	**-0.2**
P29M	**Windy Craggy**	**7.60**	**56**	P		**Pn**	**23 49 08.2**	**-0.2**
	baz=246							
TTA	**Tatalina**	**7.63**	**339**	Pn		**Pn**	**23 49 08.8**	**0.0**
TTA	**Tatalina**	**7.63**	**339**	P		**Pn**	**23 49 09.9**	**+1.1**
KTH	**Kantishna Hill**	**7.66**	**357**	Pn		**Pn**	**23 49 10.9**	**+1.7**
YUK3	**Moose Creek**	**7.72**	**37**			**Pn**	**23 49 10.8**	**+0.7**
YUK3	**Moose Creek**	**7.72**	**37**	P		**Pn**	**23 49 10.8**	**+0.7**
	baz=225							
M27K	**Edge Creek, AK**	**7.72**	**30**			**Pn**	**23 49 11.1**	**+1.0**
M27K	**Edge Creek, AK**	**7.72**	**30**	P		**Pn**	**23 49 11.1**	**+1.0**
	baz=217							
MENT	**Mentasta**	**7.76**	**22**			**Pn**	**23 49 12.2**	**+1.7**
M14K	**Bethel**	**7.86**	**313**			**Pn**	**23 49 12.9**	**+1.1**
M14K	**Bethel**	**7.86**	**313**	P		**Pn**	**23 49 13.3**	**+1.4**
	baz=122							
S31K	**Pelican**	**7.88**	**69**	Pn		**Pn**	**23 49 11.8**	**-0.4**
L26K	**Log Cabin Wild**	**7.91**	**23**			**Pn**	**23 49 14.6**	**+2.0**
YUK6	**Outpost Mounta**	**7.97**	**46**			**Pn**	**23 49 14.5**	**+0.9**
YUK6	**Outpost Mounta**	**7.97**	**46**	P		**Pn**	**23 49 14.5**	**+0.9**
	baz=236							
K17K	**Iditarod**	**7.97**	**332**	Pn		**Pn**	**23 49 14.3**	**+0.9**
K17K	**Iditarod**	**7.97**	**332**	P		**Pn**	**23 49 13.9**	**+0.5**
	baz=144							
YUK4	**Talbot Arm**	**8.09**	**43**	P		**Pn**	**23 49 17.6**	**+2.4**
	baz=233							
BPAW	**Bear Paw Mtn.**	**8.21**	**357**	Pn		**Pn**	**23 49 17.9**	**+1.2**
BPAW	**Bear Paw Mtn.**	**8.21**	**357**	P		**Pn**	**23 49 16.5**	**-0.2**
	baz=176							
L15K	**Ungalak Mounta**	**8.23**	**319**			**Pn**	**23 49 18.0**	**+1.1**
L15K	**Ungalak Mounta**	**8.23**	**319**	P		**Pn**	**23 49 18.0**	**+1.1**
	baz=129							
HYT	**Haines Junctio**	**8.26**	**48**	Pn		**Pn**	**23 49 18.7**	**+1.2**
RIDG	**Independent Ri**	**8.28**	**17**			**Pn**	**23 49 19.8**	**+2.1**
M13K	**Dall Lake**	**8.29**	**308**			**Pn**	**23 49 18.8**	**+1.1**
M13K	**Dall Lake**	**8.29**	**308**	P		**Pn**	**23 49 18.8**	**+1.1**
	baz=116							
L27K	**Beaver Creek,**	**8.31**	**27**			**Pn**	**23 49 18.4**	**+0.3**
L27K	**Beaver Creek,**	**8.31**	**27**	P		**Pn**	**23 49 18.4**	**+0.3**
	baz=214							
BCAR	**Beaver Creek A**	**8.32**	**27**			**Pn**	**23 49 19.7**	**+1.4**
L14K	**Kuka Creek**	**8.48**	**315**			**Pn**	**23 49 21.3**	**+1.0**
L14K	**Kuka Creek**	**8.48**	**315**	P		**Pn**	**23 49 21.4**	**+1.0**
	baz=124							
J20K	**Nowinta River**	**8.51**	**348**			**Pn**	**23 49 21.6**	**+0.8**
J20K	**Nowinta River**	**8.51**	**348**	P		**Pn**	**23 49 21.6**	**+0.8**
	baz=164							
WRH	**Wood River Hil**	**8.63**	**6**	Pn		**Pn**	**23 49 23.3**	**+0.9**
SCRK	**Sand Creek**	**8.64**	**18**	Pn		**Pn**	**23 49 23.8**	**+1.1**
K15K	**Wolf Creek Mou**	**8.65**	**322**			**Pn**	**23 49 24.1**	**+1.4**
K15K	**Wolf Creek Mou**	**8.65**	**322**	P		**Pn**	**23 49 24.1**	**+1.4**
	baz=132							
HDA	**Harding Lake**	**8.66**	**9**	Pn		**Pn**	**23 49 23.7**	**+0.9**
S32K	**Killisnoo**	**8.71**	**73**	Pn		**Pn**	**23 49 23.0**	**-0.5**
N30M	**Aishikik Lake**	**8.77**	**45**			**Pn**	**23 49 24.9**	**+0.5**
N30M	**Aishikik Lake**	**8.77**	**45**	P		**Pn**	**23 49 24.9**	**+0.5**
	baz=236							
CCB	**Clear Creek Bu**	**8.82**	**7**	Pn		**Pn**	**23 49 26.9**	**+1.8**
O30N	**Mendenhall**	**8.84**	**51**	Pn		**Pn**	**23 49 26.5**	**+1.2**
M29M	**Somme Creek**	**8.86**	**38**			**Pn**	**23 49 26.5**	**+0.8**
M29M	**Somme Creek**	**8.86**	**38**	P		**Pn**	**23 49 26.5**	**+0.8**
	baz=228							
JIS	**Juneau Island**	**8.90**	**68**	Pn		**Pn**	**23 49 27.2**	**+1.1**
IL31		**9.02**	**9**			**Pn**	**23 49 29.6**	**+1.9**
ILAR	**Eielson Array**	**9.02**	**9**	Pn		**Pn**	**23 49 29.2**	**+1.5**
ILAR	**Eielson Array**	**9.02**	**9**	Pn		**Pn**	**23 49 28.9**	**+1.1**
	comp=N,0.2nm,0.3s,baz=193,slow=13,SNR=8.0							
ILAR				Sn		**Sn**	**23 51 05.2**	**-4.0**
	comp=N,0.4nm,0.3s,baz=199,slow=16,SNR=5.6 comp=N,1.4nm,0.8s							
MDM	**Murphy Dome**	**9.11**	**5**	Pn		**Pn**	**23 49 29.9**	**+0.9**
MLY	**Manley**	**9.14**	**358**	Pn		**Pn**	**23 49 31.1**	**+1.6**
AKUT	**Akutan**	**9.15**	**265**	Pn		**Pn**	**23 49 29.4**	**0.0**
J26L	**Joseph Creek**	**9.20**	**18**			**Pn**	**23 49 30.8**	**+0.5**
J26L	**Joseph Creek**	**9.20**	**18**	P		**Pn**	**23 49 30.8**	**+0.5**
	baz=204							
I23K	**Minto, Yukon-K**	**9.26**	**2**	Pn		**Pn**	**23 49 31.3**	**+0.3**
POKR	**Poker Plat Res**	**9.32**	**7**	Pn		**Pn**	**23 49 33.2**	**+1.4**
WHY	**Whitehorse**	**9.33**	**53**			**Pn**	**23 49 33.2**	**+1.1**
L29M	**L29M**	**9.43**	**35**			**Pn**	**23 49 34.6**	**+1.2**
L29M	**L29M**	**9.43**	**35**	P		**Pn**	**23 49 34.4**	**+0.9**
	baz=226							
P32M	**Atlin**	**9.52**	**61**	Pn		**Pn**	**23 49 34.9**	**+0.3**
P32M	**Atlin**	**9.52**	**61**	P		**Pn**	**23 49 34.4**	**-0.2**
	baz=255							
M30M	**Minto, Yukon**	**9.54**	**40**	Pn		**Pn**	**23 49 36.1**	**+1.2**
U33K	**Whale Pass**	**9.54**	**82**			**Pn**	**23 49 33.9**	**-1.0**
DAWY	**Dawson**	**9.77**	**29**	Pn		**Pn**	**23 49 39.1**	**+1.1**
PRP	**Porcupine Dome**	**9.88**	**11**	Pn		**Pn**	**23 49 41.2**	**+1.5**
P33M	**Teslin, Yukon**	**10.13**	**58**			**Pn**	**23 49 43.3**	**+0.3**
IMAR	**Indian Mountai**	**10.24**	**352**	Pn		**Pn**	**23 49 45.1**	**+0.7**
M31M	**Drury Creek, Y**	**10.25**	**46**			**Pn**	**23 49 46.1**	**+1.5**
J30M	**Hart River**	**11.03**	**33**			**Pn**	**23 49 57.3**	**+1.8**
DLBC	**Dease Lake**	**11.20**	**69**	Pn		**Pn**	**23 49 57.8**	**+0.1**
DLBC	**Dease Lake**	**11.20**	**69**	Pn		**Pn**	**23 49 58.4**	**+0.7**
	comp=N,0.2nm,0.3s,baz=294,slow=21,SNR=1.7							
DLBC				Sn		**Sn**	**23 52 07.1**	**+4.3**
	comp=N,0.1nm,0.3s,baz=189,slow=20,SNR=1.6 comp=N,0.6nm,0.4s							
RDOG	**Reg Dome**	**13.52**	**339**			**Pn**	**23 50 26.8**	**-2.3**
D25K	**Kavik River**	**13.55**	**6**	Pn		**Pn**	**23 50 30.9**	**+1.2**
E29M	**Blow River**	**13.71**	**19**	Pn		**P**	**23 50 38.6**	**-1.9**
C23K	**Itkillik River**	**13.96**	**359**	Pn		**Pn**	**23 50 37.7**	**+2.4**
INK	**Inuvik**	**14.57**	**25**	Pn		**Pn**	**23 50 45.6**	**+2.1**
	comp=N,0.1nm,0.3s,baz=218,slow=12,SNR=6.8							
INK				LR		LR	23 56 17.0	
	comp=N,74nm,19.2s,baz=357,slow=36 comp=N,2.9nm,1.1s							
YKA	**Yellowknife Ar**	**19.15**	**55**	P		**P**	**23 51 40.3**	**-0.3**
YKA	**Yellowknife Ar**	**19.15**	**55**	P		**Pn**	**23 51 42.2**	**+0.7**
	comp=N,0.1nm,0.3s,baz=263,slow=11,SNR=11 comp=N,1.3nm,0.9s							
A36M	**Sachs Harbour**	**19.20**	**23**			**Pn**	**23 51 44.4**	**+2.3**
A36M				IAmb		IAmb	23 51 53.2	
	comp=Z,14nm,0.9s							
NVAR	**Mina Array Bea**	**27.49**	**116**	P		**P**	**23 52 58.9**	**-5.2**
	comp=Z,0.8nm,0.4s,baz=332,slow=8.5,SNR=4.1 comp=Z,0.8nm,0.4s							
TXAR	**Lajitas Array**	**42.16**	**109**	P		**P**	**23 55 09.1**	**-1.2**
	comp=Z,0.1nm,0.6s,baz=343,slow=5.8,SNR=1.7 comp=Z,0.1nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**48.28**	**239**	T		T	00 48 00.8	
	baz=30,slow=76,SNR=24							
H11N3	**WAKE ISLAND Hy**	**48.28**	**239**	T		T	00 48 00.2	
	baz=30,slow=76,SNR=22							
H11N1	**WAKE ISLAND Hy**	**48.30**	**239**	T		T	00 48 03.3	
	baz=30,slow=76,SNR=19							
H11S1	**WAKE ISLAND Hy**	**49.42**	**239**	T		T	00 49 21.0	
	baz=30,slow=76,SNR=19							
H11S2	**WAKE ISLAND Hy**	**49.43**	**239**	T		T	00 49 21.7	
	baz=30,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**49.44**	**239**	T		T	00 49 22.7	
	baz=30,slow=76,SNR=15							
SONM	**Songino Array**	**58.49**	**310**	P		**P**	**23 57 16.4**	**+2.7**
	comp=Z,0.2nm,0.6s,baz=49,slow=6.6,SNR=2.6 comp=Z,0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**61.59**	**327**	P		**P**	**23 57 36.1**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=39,slow=9.3,SNR=1.8 comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**68.60**	**324**	P		**P**	**23 58 21.7**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=20,slow=5.8,SNR=5.9 comp=Z,0.2nm,0.5s							
BELG	**Belogornoye**	**71.05**	**349**	LR		LR	00 31 58.7	
	comp=Z,49nm,18.1s,baz=134,slow=38							

IDC ***13*** *00:03:44.5±4.8, 23°.03N×121°.11E, h0km, mb3.4/4, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=102.3km s-min=55.0km az=5.0*

JMA ***13*** *00:03:51.3±0.1, 23°.9N±0°.3×12°2E±°, h3km, MV2.9/12, TAIWAN REGION*

ASIES ***13*** *00:03:51.4, 23°.93N×121°.58E, h9km, ML3.6, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr9.75; Mθθ-2.67; Mφφ-7.09; Mrθ7.16; Mrφ-5.05; Mθφ3.85; Fault plane solution: M0 12.95680×10²⁰ NP1: φs50.30000°, δ64.81000°, λ105.65000°. NP2: φs196.95000°, δ29.38000°, λ60.16000°. Principal axes: T Plg66.5020°, Azm348.8880°; N Plg14.1290°, Azm223.5080°; P Plg18.3760°, Azm128.7120°;*

TAP ***13*** *00:03:51.4, 23°.93N×121°.58E, h9km, ML3.6, C*

ISC 13 00:03:51.6±0.7, 23°.94N±0°.01×121°.59E±0°.02, h10km±4km, n130, σ0.975/205, mb3.3/4, 1C-30D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**21**	**⇓***i*P	**Pg**	**00 03 53.8**	**+0.2**
HWA	baz=35			*e*S	**Sg**	**00 03 55.3**	**+0.3**
ETM	**Tongmen**	**0.09**	**289**	**⇓***i*P	**Pg**	**00 03 54.0**	**-0.1**
ETM	baz=292			*e*S	**Sg**	**00 03 55.6**	**-0.3**
TWD	**Chiawan**	**0.14**	**3**	**⇓**P	**Pg**	**00 03 55.0**	**+0.1**
TWD	baz=7.0			S	**Sg**	**00 03 57.4**	**+0.3**
SHUL	**Shoufeng**	**0.15**	**189**	**⇓***i*P	**Pg**	**00 03 55.4**	**+0.4**
SHUL	baz=196			*e*S	**Sg**	**00 03 58.2**	**+1.0**
LXIB	**Xiulin Townshi**	**0.18**	**298**	**⇓***i*P	**Pg**	**00 03 55.6**	**0.0**
LXIB	baz=293			*e*S	**Sg**	**00 03 58.2**	**-0.1**
ESL	**Shilin**	**0.19**	**229**	**⇓***i*P	**Pg**	**00 03 55.4**	**-0.2**
ESL	baz=235			*e*S	**Sg**	**00 03 57.8**	**-0.5**
ETL	**Fush Village**	**0.23**	**8**	*e*P	**Pg**	**00 03 56.4**	**+0.1**
ETL	baz=7.0			*e*S	**Sg**	**00 03 59.7**	**+0.2**
TEGC	**Jichi Village**	**0.23**	**191**	*e*P	**Pg**	**00 03 57.3**	**+1.0**
	baz=192						
NACB	**Ninganchiao**	**0.24**	**2**	P	**Pg**	**00 03 56.5**	**0.0**
NACB	**Ninganchiao**	**0.24**	**2**	**⇓***i*P	**Pg**	**00 03 56.5**	**0.0**
NACB	baz=11			S	**Sg**	**00 03 59.7**	**-0

EOS4	**EOS4**	**0.69**	**74**	*e*P	**Pb**	**00 04 06.1**	**+0.5**
	baz=91						
EOS4				*i* S	**Sn**	**00 04 17.0**	**-0.8**
	baz=91						
ENTT	**Nioudou**	**0.70**	**358**	⇓P	**Pb**	**00 04 05.5**	**-0.5**
	baz=357						
ENTT				*e*S	**Sg**	**00 04 14.9**	**+0.5**
	baz=357						
NDS	**Dongshan**	**0.70**	**10**	P	**Pg**	**00 04 05.4**	**+0.1**
	baz=8.0						
NDS				*e*S	**Sg**	**00 04 14.6**	**+0.1**
	baz=8.0						
TWC	**Suao**	**0.71**	**20**	*i* P	**Pg**	**00 04 05.5**	**+0.1**
	baz=10.0						
TWC				*i* S	**Sg**	**00 04 15.3**	**+0.6**
	baz=10.0						
YHNB	**Yeheng**	**0.76**	**345**	P	**Pb**	**00 04 06.9**	**0.0**
YHNB	**Yeheng**	**0.76**	**345**	⇓*i*P	**Pb**	**00 04 06.7**	**-0.2**
	baz=344						
YHNB				*i* S	**Sg**	**00 04 16.5**	**+0.4**
	baz=344						
CHKH	**Chenggong**	**0.76**	**193**	*e*P	**Pb**	**00 04 07.4**	**+0.4**
	baz=186						
CHKH				*e*S	**Sn**	**00 04 18.9**	**-1.0**
	baz=186						
EOS2	**EOS2**	**0.76**	**51**	*e*P	**Pn**	**00 04 09.0**	**+0.7**
	baz=57						
NSK	**Sanguang**	**0.77**	**344**	⇓*i*P	**Pb**	**00 04 06.9**	**-0.2**
	baz=343						
NSK				*i* S	**Sg**	**00 04 16.9**	**+0.4**
	baz=343						
TWE	**Neicheng**	**0.79**	**5**	⇓P	**Pb**	**00 04 07.1**	**-0.3**
	baz=4.0						
TWE				*e*S	**Sb**	**00 04 18.1**	**0.0**
	baz=4.0						
WJS	**Zhushan**	**0.80**	**262**	*i* P	**Pn**	**00 04 08.8**	**-0.1**
	baz=270						
WJS				*e*S	**Sb**	**00 04 19.4**	**+1.0**
	baz=270						
NFF	**Wufeng Townshi**	**0.81**	**328**	*e*P	**Pb**	**00 04 08.0**	**+0.1**
	baz=327						
NFF				*e*S	**Sb**	**00 04 19.0**	**0.0**
	baz=327						
FUSB	**Fushanzhiwuyua**	**0.82**	**0**	⇓P	**Pb**	**00 04 07.7**	**-0.3**
	baz=358						
FUSB				*e*S	**Sg**	**00 04 18.4**	**+0.2**
	baz=358						
WNT	**Mingjian**	**0.83**	**266**	*e*P	**Pn**	**00 04 08.8**	**-0.5**
	baz=274						
WNT				*e*S	**Sn**	**00 04 20.7**	**-0.9**
	baz=274						
ALS	**Alishan**	**0.83**	**240**	P	**Pb**	**00 04 08.2**	**-0.1**
	baz=242						
ALS				*e*S	**Sn**	**00 04 20.9**	**-1.3**
	baz=242						
NWLT	**Wulai**	**0.84**	**355**	⇓*e*P	**Pb**	**00 04 08.2**	**-0.2**
	baz=353						
NWLT				*e*S	**Sg**	**00 04 19.0**	**+0.2**
	baz=353						
TWQ1	**Liyutan**	**0.85**	**299**	*e*P	**Pn**	**00 04 09.1**	**-0.6**
	baz=299						
TWQ1				*e*S	**Sb**	**00 04 19.5**	**-0.5**
	baz=299						
EHD	**Haiduan**	**0.86**	**204**	*e*P	**Pb**	**00 04 08.4**	**-0.2**
	baz=209						
NSTT	**Nanjuang**	**0.88**	**322**	⇓P	**Pb**	**00 04 09.3**	**+0.4**
	baz=322						
NSTT				*e*S	**Sb**	**00 04 20.3**	**-0.3**
	baz=322						
LIOB	**Emei**	**0.88**	**324**	*e*P	**Pn**	**00 04 09.6**	**-0.5**
	baz=323						
LIOB				*e*S	**Sg**	**00 04 20.0**	**0.0**
	baz=323						
NSY	**Sanyi**	**0.89**	**303**	*e*P	**Pn**	**00 04 10.5**	**+0.2**
	baz=303						
NSY				*e*S	**Sn**	**00 04 22.8**	**-0.5**
	baz=303						
CHN5	**Tsauling**	**0.90**	**248**	⇑*i*P	**Pn**	**00 04 10.1**	**-0.2**
	baz=240						
CHN5				*e*S	**Sn**	**00 04 22.8**	**-0.7**
	baz=240						
ELDTW	**Lidau**	**0.91**	**215**	*e*P	**Pg**	**00 04 08.9**	**-0.3**
	baz=219						
NMLH	**Miaoli**	**0.94**	**310**	*e*P	**Pn**	**00 04 11.5**	**+0.6**
	baz=309						
WCHH	**Zhanghua**	**0.95**	**279**	*e*P	**Pn**	**00 04 12.1**	**+1.0**
	baz=281						
EGS		**0.96**	**19**	*e*P	**Pb**	**00 04 10.6**	**+0.3**
	baz=23						
EGS				*e*S	**Sg**	**00 04 21.9**	**-0.7**
	baz=23						
WDLH	**Douliu**	**0.99**	**256**	*e*P	**Pn**	**00 04 12.1**	**+0.5**
	baz=259						
WDLH				*i* S	**Sn**	**00 04 27.5**	**+1.8**
	baz=259						
SBCB	**Hsinchu**	**1.01**	**327**	*e*P	**Pn**	**00 04 13.1**	**+1.1**
	baz=335						
SBCB				*e*S	**Sn**	**00 04 28.0**	**+1.8**
	baz=335						
NHDH	**Xindian Distri**	**1.02**	**357**	*e*P	**Pb**	**00 04 11.5**	**+0.1**
	baz=354						
NHDH				*e*S	**Sb**	**00 04 24.8**	**-0.2**
	baz=354						
WCKO	**Fanlu**	**1.03**	**241**	*e*P	**Pn**	**00 04 12.8**	**+0.7**
	baz=240						
WCKO				*e*S	**Sb**	**00 04 25.4**	**+0.3**
	baz=240						
HSN	**Hsinchu**	**1.03**	**327**	*e*P	**Pn**	**00 04 13.3**	**+1.2**
	baz=337						
HSN				*e*S	**Sn**	**00 04 27.7**	**+1.1**
	baz=337						
TATO	**Taipei**	**1.04**	**355**	P	**Pn**	**00 04 12.5**	**+0.2**
TWA	**Mucha**	**1.04**	**360**	*e*P	**Pn**	**00 04 12.6**	**+0.3**
	baz=348						
TWA				*e*S	**Sn**	**00 04 27.2**	**+0.3**
	baz=348						
STYH	**Taoyuan**	**1.06**	**225**	*e*P	**Pn**	**00 04 12.7**	**+0.1**
	baz=233						
STYH				*e*S	**Sb**	**00 04 26.4**	**+0.3**
	baz=233						
TPUB	**Ta-pu**	**1.08**	**234**	P	**Pn**	**00 04 13.3**	**+0.4**
TPUB	**Ta-pu**	**1.08**	**234**	*e*P	**Pn**	**00 04 13.1**	**+0.2**
	baz=238						
TPUB				*e*S	**Sb**	**00 04 26.8**	**+0.2**
	baz=238						
NCUH	**Zhongli**	**1.09**	**340**	*e*P	**Pn**	**00 04 14.3**	**+1.4**
	baz=348						
NCUH				*e*S	**Sn**	**00 04 29.3**	**+1.2**
	baz=348						
LONT	**Longtian**	**1.11**	**202**	*e*P	**Pn**	**00 04 13.3**	**+0.2**
	baz=207						
WRL	**Guolierlin Hig**	**1.11**	**268**	P	**Pn**	**00 04 13.3**	**+0.1**
	baz=271						
WRL				*e*S	**Sb**	**00 04 27.7**	**+0.4**
	baz=271						
WTK	**Tuku**	**1.12**	**258**	*e*P	**Pn**	**00 04 14.9**	**+1.5**
	baz=261						
WTK				*i* S	**Sn**	**00 04 30.1**	**+1.2**
	baz=261						
WTP	**Ta-pu**	**1.13**	**233**	P	**Pn**	**00 04 14.2**	**+0.7**
	baz=237						
WTP				*e*S	**Sn**	**00 04 29.4**	**+0.4**
	baz=237						
TWB1	**Santiao Chiao**	**1.13**	**19**	*e*P	**Pn**	**00 04 13.4**	**-0.1**
	baz=8.0						
TWB1				S	**Sg**	**00 04 28.0**	**0.0**
	baz=8.0						
NWF	**Wu-fen Shan**	**1.14**	**9**	P	**Pn**	**00 04 14.0**	**+0.2**
	baz=5.0						
NWF				*i* S	**Sb**	**00 04 28.9**	**+0.4**
	baz=5.0						
WFSB	**Wu-fen Shan**	**1.14**	**9**	*e*P	**Pn**	**00 04 13.9**	**+0.2**
	baz=5.0						
WFSB				*e*S	**Sg**	**00 04 28.3**	**-0.2**
	baz=5.0						
TWS1	**Kuangyinshan**	**1.17**	**352**	*e*P	**Pn**	**00 04 15.5**	**+1.5**
	baz=349						
SXI1	**Grass Mountain**	**1.18**	**13**	*e*P	**Pn**	**00 04 14.8**	**+0.5**
	baz=351						
SXI1				*e*S	**Sn**	**00 04 30.2**	**-0.3**
	baz=351						
TWG	**Pinlang**	**1.21**	**203**	*e*P	**Pb**	**00 04 14.0**	**-0.5**
	baz=208						
TWGBT	**Beinan**	**1.21**	**203**	P	**Pg**	**00 04 17.0**	**+2.2**
TWGBT	**Beinan**	**1.21**	**203**	*e*P	**Pb**	**00 04 13.8**	**-0.8**
	baz=208						
YM01	**YM01**	**1.21**	**359**	*e*P	**Pg**	**00 04 14.9**	**+0.1**
	baz=355						
TWK	**Hsinying**	**1.21**	**237**	*e*P	**Pn**	**00 04 15.8**	**+1.1**
	baz=230						
TWK				*e*S	**Sn**	**00 04 32.6**	**+1.5**
	baz=230						
TNOU	**National Taiwa**	**1.22**	**8**	*e*P	**Pb**	**00 04 14.8**	**0.0**
	baz=4.0						
TNOU				*e*S	**Sn**	**00 04 31.3**	**0.0**
	baz=4.0						
CHN1	**Nanshi**	**1.23**	**233**	*e*P	**Pg**	**00 04 16.3**	**+1.1**
	baz=237						
CHN1				*e*S	**Sn**	**00 04 32.0**	**+0.6**
	baz=237						
NTST	**Danshui**	**1.23**	**354**	*e*P	**Pg**	**00 04 16.3**	**+1.1**
	baz=359						
NTST				*e*S	**Sn**	**00 04 32.6**	**+1.1**
	baz=359						
ANP	**Anpu**	**1.25**	**357**	*e*P	**Pg**	**00 04 15.7**	**+0.1**
	baz=354						
YM08	**YM08**	**1.25**	**0**	*e*P	**Pg**	**00 04 15.9**	**+0.4**
	baz=356						
SGST	**Jiashian**	**1.25**	**228**	*e*P	**Pg**	**00 04 16.1**	**+0.4**
	baz=220						
ICHU	**Yijhu**	**1.33**	**245**	*e*P	**Pg**	**00 04 18.3**	**+1.2**
	baz=250						
ICHU				*e*S	**Sg**	**00 04 35.2**	**+0.8**
	baz=250						
TWY	**Chenhua**	**1.33**	**0**	*e*P	**Pg**	**00 04 17.4**	**+0.1**
	baz=357						
JYNG	**Yonagunijimaku**	**1.34**	**67**	S	**Sg**	**00 04 35.4**	**+0.5**
YOJ	**Yonaguni jima**	**1.40**	**68**	P	**Pg**	**00 04 20.2**	**+1.7**
YOJ	**Yonaguni jima**	**1.40**	**68**	*e*P	**Pg**	**00 04 18.4**	**-0.1**
	baz=65						
YOJ	**Yonaguni jima**	**1.40**	**68**	*e*P	**Pn**	**00 04 17.1**	**-0.1**
SCST	**Cishan**	**1.45**	**224**	*e*P	**Pg**	**00 04 20.3**	**+0.9**
	baz=231						
SCST				*e*S	**Sg**	**00 04 41.2**	**+3.0**
	baz=231						
TSMG	**Majia**	**1.50**	**215**	*e*P	**Pg**	**00 04 20.1**	**-0.3**
	baz=214						
MASBT	**Mashibuluo**	**1.58**	**214**	*e*P	**Pb**	**00 04 20.9**	**-0.1**
	baz=208						
TSCK	**Chigu Township**	**1.58**	**241**	*e*P	**Pb**	**00 04 21.1**	**+0.1**
	baz=246						
SCZT	**Fangliau**	**1.79**	**210**	*e*P	**Pg**	**00 04 25.6**	**-0.4**
	baz=215						
WDGT	**Dungji**	**1.89**	**250**	*e*P	**Pn**	**00 04 24.6**	**+0.7**
	baz=254						
PHUB	**P'eng-hu**	**1.89**	**258**	*e*P	**Pn**	**00 04 23.9**	**-0.1**
	baz=262						
PHUB				*e*S	**Sg**	**00 04 51.0**	**-1.5**
	baz=262						
PNG	**Penghu**	**1.90**	**259**	*e*P	**Pn**	**00 04 24.9**	**+0.9**
	baz=263						
PNG				*e*S	**Sb**	**00 04 51.0**	**+0.9**
	baz=263						
VWUC	**VWUC**	**2.21**	**299**	*e*P	**Pn**	**00 04 27.8**	**-0.6**
	baz=298						
JKRS	**Kuro-shima**	**2.23**	**82**	S	**Sn**	**00 04 55.1**	**-1.2**
JIJ	**Ishigaki jima**	**2.37**	**79**	*e*P	**Pn**	**00 04 29.8**	**-0.8**
JIJ				S	**Sn**	**00 04 57.9**	**-1.9**
PTMZ	**Houxiangcun**	**2.50**	**297**	*e*P	**Pn**	**00 04 33.4**	**+1.0**
	baz=296						
MATB	**Ma-tsu**	**2.66**	**326**	*e*P	**Pn**	**00 04 34.7**	**+0.1**
	baz=323						
MATB				*e*S	**Sn**	**00 05 08.4**	**+1.5**
	baz=323						
KNM	**Kinmen**	**2.92**	**280**	*e*P	**Pn**	**00 04 40.3**	**+2.1**
	baz=282						
JTJ	**Tarama**	**2.93**	**75**	S	**Sn**	**00 05 15.4**	**+1.9**
KNMB	**Chin-men Tao**	**2.97**	**281**	*e*P	**Pn**	**00 04 39.0**	**+0.3**
	baz=284						
LYJJ	**Jianjiangzhen**	**3.08**	**328**	*e*P	**Pn**	**00 04 40.7**	**+0.3**
	baz=313						
MHZQ	**Yeshan**	**3.17**	**313**	*e*P	**Pn**	**00 04 41.3**	**-0.2**
	baz=312						
XPSS	**Dashiqiu**	**3.24**	**337**	*e*P	**Pn**	**00 04 42.3**	**-0.2**
	baz=333						
AXDP	**Jialang**	**3.43**	**287**	*e*P	**Pn**	**00 04 45.2**	**+0.1**
	baz=288						
ZPLA	**Ao Xicun**	**3.51**	**271**	*e*P	**Pn**	**00 04 46.8**	**+0.6**
	baz=274						
SXFK	**Yanhouchang**	**4.33**	**305**	*e*P	**Pn**	**00 04 57.3**	**-0.3**
	baz=304						
KSRS	**Korea Array**	**14.53**	**20**	Pn	**P**	**00 07 25.7**	**+1.8**
	0.2nm,0.3s,baz=201,slow=12,SNR=5.9						
	1.9nm,0.8s						
SONM	**Songino Array**	**26.74**	**337**	P	**P**	**00 09 31.6**	**+0.2**
	0.2nm,0.4s,baz=157,slow=7.8,SNR=2.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**00 11 14.9**	**-1.4**
	0.2nm,0.5s,baz=95,slow=10,SNR=2.8						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**40.65**	**327**	P	**P**	**00 11 29.0**	**-2.8**
	0.5nm,0.5s,baz=111,slow=7.9,SNR=2.8						
	0.5nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**42.26**	**88**	T	T	00 56 48.3	
	baz=284,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hy**	**42.27**	**88**	T	T	00 56 49.0	
	baz=284,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**42.27**	**88**	T	T	00 56 49.6	
	baz=284,slow=74,SNR=5.7						
YKA	**Yellowknife Ar**	**83.05**	**23**	P	**P**	**00 16 16.7**	**-0.4**
	0.3nm,0.7s,baz=314,slow=5.1,SNR=5.3						
	0.3nm,0.7s						

*DJA **13** 00:04:15.4±0.7,3˚N±8˚×12˚4E±˚, h319km±9km, M4.0/9, mb3.9/6, mB5.3/2, MLv4.2/9, Mw(mB)4.8/2*
*IDC **13** 00:04:16.3±3.9,2.50N×122.99E, h358km±43km, mb3.1/6, mbtmp3.8/6, Error ellipse: s-maj=43.5km s-min=12.5km az=61.0*
*NEIC **13** 00:04:19.3±0.8,2.6N±0.1×123.5E±0.2, h392km±11km, mb4.0/14, Error ellipse: s-maj=24.5km s-min=17.4km az=56.0*

ISC 13 00:04:14.6±0.7,**2.95N**±0.08×**124.37E**±0.08,**h350**km,**n32,** σ1ᵎ**76**/34,**mb3.8**/14,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**3.45**	**225**	P		P	**Pn**	**00 05 18.3**	**+0.1**
MRSI				S		S	**S**	**00 06 08.2**	**-1.2**
TNTI	**Ternate**	**3.69**	**126**	P		P	**Pn**	**00 05 19.4**	**-1.1**
TNTI				S		S	**S**	**00 06 10.9**	**-2.7**
TOLI2	**Tolitoli**	**4.02**	**243**	Pn		Pn	**Pn**	**00 05 23.3**	**-0.6**
LUWI	**Luwuk**	**4.27**	**202**	Pn		Pn	**Pn**	**00 05 27.7**	**+1.2**
LUWI	**Luwuk**	**4.27**	**202**	P		P	**Pn**	**00 05 26.7**	**+0.2**
LBMI	**Labuha**	**4.74**	**139**	P		P	**Pn**	**00 05 31.0**	**-0.4**
LBMI				S		S	**S**	**00 06 30.3**	**-3.2**
MPSI	**Mapaga**	**5.17**	**240**	P		P	**Pn**	**00 05 36.4**	**+0.3**
	7.4nm,0.9s,0.0nm								
SANI	**Sanana**	**5.22**	**162**	P		P	**Pn**	**00 05 35.1**	**-1.6**
	91nm,0.7s,5μm0.6nm								
NLAI	**Namlea**	**6.72**	**156**	P		P	**Pn**	**00 05 54.8**	**+1.0**
	10nm,0.6s,0.4nm								
FAKI	**Fak Fak**	**9.79**	**126**	P		P	**Pn**	**00 06 31.0**	**+0.8**
TGY	**Tagaytay City**	**11.59**	**343**	P		P	**P**	**00 06 54.6**	**+2.8**
	95nm,0.3s,baz=190,slow=6.1,SNR=1.1								
MTN	**Manton Dam**	**17.06**	**157**	P		P	**P**	**00 07 54.9**	**+3.2**
FITZ	**Fitzroy Crossi**	**20.95**	**177**	P		P	**P**	**00 08 32.7**	**+1.3**
FITZ				IAmb		IAmb	IAmb	00 09 11.3	
	comp=Z,3.1nm,1.4s								
WB0	**Warramunga Arr**	**24.62**	**157**	P		P	**P**	**00 09 06.2**	**+1.5**
WB0				IAmb		IAmb	IAmb	00 09 06.8	
	comp=Z,4.9nm,0.5s								
WRAB	**Tennant Creek**	**24.76**	**157**	P		P	**P**	**00 09 07.9**	**+2.0**
WRA	**Warramunga Arr**	**24.76**	**157**	P		P	**P**	**00 09 06.9**	**+1.0**
WRA	**Warramunga Arr**	**24.76**	**157**	P		P	**P**	**00 09 07.5**	**+1.5**
	comp=Z,2.2nm,0.3s,baz=334,slow=10,SNR=67								
WRA				PcP		PcP	**PcP**	**00 12 32.9**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=334,slow=1.9,SNR=3.9								
	comp=Z,2.2nm,0.3s								
PSA00	**Pilbara Seismi**	**24.77**	**190**	P		P	**P**	**00 09 02.6**	**-3.3**
PSA00				IAmb		IAmb	IAmb	00 09 34.3	
	comp=Z,16nm,1.3s								
WB2	**Warramunga Arr**	**24.77**	**157**	P		P	**P**	**00 09 07.6**	**+1.6**
WB2				IAmb		IAmb	IAmb	00 09 08.2	
	comp=Z,4.7nm,0.5s								
WR0	**Warramunga Arr**	**24.86**	**157**	P		P	**P**	**00 09 08.6**	**+1.8**
WR0				IAmb		IAmb	IAmb	00 09 26.5	
	comp=Z,5.0nm,1.1s								
ASAR	**Alice Springs**	**28.03**	**161**	P		P	**P**	**00 09 37.1**	**+2.1**
	comp=Z,0.8nm,0.5s,baz=343,slow=7.4,SNR=10								
ASAR				PcP		PcP	**PcP**	**00 12 39.7**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=354,slow=3.7,SNR=2.4								
	comp=Z,0.8nm,0.5s								
BBOO	**Buckleboo**	**37.24**	**164**	P		P	**P**	**00 10 55.9**	**+1.9**
BBOO				IAmb		IAmb	IAmb	00 11 14.2	
	comp=Z,22nm,1.4s								
HNR	**Honiara**	**37.52**	**110**	P		P	P	00 11 05.3	+8.7
HNR	**Honiara**	**37.52**	**110**	P		P	P	00 11 08.1	+11
	comp=Z,3μm,0.5s,baz=150,slow=8.7,SNR=5.2								
STKA	**Stephens Creek**	**38.30**	**156**	P		P	**P**	**00 11 05.2**	**+2.3**
SONM	**Songino Array**	**47.33**	**344**	P		P	**P**	**00 12 14.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=152,slow=8.8,SNR=1.7								
	comp=Z,0.4nm,0.7s								
MK31	**Makanchi Array**	**56.88**	**327**	P		P	**P**	**00 13 23.2**	**-0.8**
MKAR	**Makanchi Array**	**56.88**	**327**	P		P	**P**	**00 13 22.6**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=119,slow=7.6,SNR=16								
	comp=Z,0.6nm,0.6s								
MAKZ	**Makanchi**	**57.06**	**327**	P		P	**P**	**00 13 24.1**	**-1.3**
MAKZ				IAmb		IAmb	IAmb	00 13 38.7	
	comp=Z,2.1nm,1.2s								
KURBB	**Kurchatov Arra**	**61.15**	**329**	P		P	**P**	**00 13 51.3**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=132,slow=6.1,SNR=4.5								
	comp=Z,0.5nm,0.5s								
MSEY	**Mahe Island**	**69.25**	**264**	P		P	P	00 14 39.0	-6.4
MSEY				IAmb		IAmb	IAmb	00 14 56.6	
	comp=Z,11nm,1.4s								
BRTR	**Keskin Array B**	**88.70**	**310**	P		P	**P**	**00 16 28.1**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=107,slow=5.0,SNR=1.8								
	comp=Z,0.3nm,0.7s								

*IDC **13** 00:09:39.4±4.6, 13˚.95S×166˚.95E, h285km±47km, mb3.4/9, mbtmp4.0/10, Error ellipse: s-maj=33.7km s-min=27.7km az=1.0*

ISC 13 00:09:40.8±1.1,**14˚.00S**±0˚.10×**166˚.9E**±0˚.2,**h300**km,**n10,** σ1ᵎ**08**/11,**mb3.8**/8,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.04**	**183**	P		P	**Pn**	**00 11 34.0**	**-1.0**
	7.8nm,0.3s,baz=128,slow=20,SNR=3.2								
DZM				S		S	**S**	**00 13 08.7**	**+1.2**
	3.9nm,0.7s,baz=67,slow=21,SNR=1.3								
CTA	**Charters Tower**	**20.66**	**250**	P		P	**P**	**00 13 57.2**	**-1.3**
	4.0nm,0.9s,baz=79,slow=10,SNR=2.7								
	4.0nm,0.9s								
WRA	**Warramunga Arr**	**31.68**	**255**	P		P	**P**	**00 15 36.2**	**-1.0**
	0.9nm,0.8s,baz=86,slow=8.4,SNR=4.5								
	0.9nm,0.8s								
ASAR	**Alice Springs**	**32.62**	**248**	P		P	**P**	**00 15 46.5**	**+1.1**
	2.1nm,0.7s,baz=73,slow=9.6,SNR=30								
	2.1nm,0.7s								
CMAR	**Chiang Mai Arr**	**74.34**	**294**	P		P	**P**	**00 20 47.8**	**+1.4**
	1.3nm,0.7s,baz=122,slow=4.7,SNR=5.8								
	1.3nm,0.7s								
QSPA	**South Pole Qui**	**76.02**	**180**	P		P	**P**	**00 20 55.2**	**0.0**
	1.6nm,1.0s,baz=292,slow=2.0,SNR=3.1								
	1.6nm,1.0s								
SONM	**Songino Array**	**81.71**	**324**	P		P	**P**	**00 21 25.7**	**-0.5**
	0.2nm,0.3s,baz=139,slow=6.3,SNR=6.3								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**85.94**	**18**	P		P	**P**	**00 21 46.8**	**-0.2**
	0.3nm,0.8s,baz=236,slow=5.3,SNR=4.1								
	0.3nm,0.8s								
MKAR	**Makanchi Array**	**96.44**	**316**	P		P	**P**	**00 22 37.0**	**+0.9**
	0.6nm,0.9s,baz=101,slow=6.3,SNR=4.5								
	0.6nm,0.9s								
ZALV	**Zalesovo Beam**	**96.61**	**324**	P		P	**P**	**00 22 36.4**	**-0.2**
	0.4nm,0.4s,baz=123,slow=5.3,SNR=2.4								
	0.4nm,0.4s								

*UPA **13** 00:15:52.4±0.8, 7˚.87N×82˚.88W, h7km±6km, MW3.5*
*CATAC **13** 00:15:54.9±0.6, 7˚.97N×82˚.98W, h6km, ML3.4*

ISC 13 00:15:52.9±2.2,**7˚.90N**±0˚.10×**82˚.89W**±0˚.04,**h15**km±8km, **n30,** σ0ᵎ**86**/49,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LIMO3	**Limones**	**0.21**	**7**	*e*P		**Pg**		**00 15 58.1**	**+0.4**
PTPM	**Petroterminale**	**0.31**	**2**	*e*P		**Pg**		**00 15 59.6**	**+0.2**
PTPM				*e*S		**Sg**		**00 16 03.6**	**-0.2**
CDITO	**Canoas**	**0.67**	**1**	*e*P		**Pg**		**00 16 06.0**	**-0.2**
CDITO	**Canoas**	**0.67**	**1**	*i* P		**Pg**		**00 16 05.9**	**-0.2**
CDITO				*i* S		**Sb**		**00 16 16.5**	**+1.0**
CDITO				IAML				00 16 22.4	
	comp=Z,1μm,1.0s								
DVD	**David**	**0.69**	**39**	*e*P		**Pg**		**00 16 05.8**	**-0.6**
DVD				*e*S		**Sg**		**00 16 10.6**	**+0.4**
BCO2	**Palmira**	**0.89**	**24**	*e*P		**Pg**		**00 16 10.4**	**+0.2**
BCO2				*e*S		**Sn**		**00 16 24.6**	**+0.8**
MLIR3	**Monte Lirio, C**	**0.89**	**4**	*e*P		**Pb**		**00 16 10.6**	**+0.4**
BRU2	**Volcan**	**0.91**	**12**	*e*P		**Pg**		**00 16 10.0**	**-0.7**
BRU2				*e*S		**Sn**		**00 16 24.6**	**+0.3**
BRU2	**Volcan**	**0.91**	**12**	*i* P		**Pg**		**00 16 10.0**	**-0.7**
BRU2				*i* S		**Sg**		**00 16 21.9**	**-0.8**
BRU2				IAML				00 16 29.5	
	comp=Z,820nm,1.0s								
BC3P	**Paso Ancho**	**0.95**	**17**	*e*P		**Pg**		**00 16 10.9**	**-0.5**
LNBQ3	**Los Naranjos,**	**0.99**	**27**	*e*P		**Pg**		**00 16 11.5**	**-0.7**
PLAN	**Los Planes de**	**1.10**	**315**	*i* P		**Pb**		**00 16 13.2**	**-0.4**
PLAN				*i* S		**Sb**		**00 16 26.5**	**-1.2**
PLAN				IAML				00 16 30.3	
	comp=Z,3μm,1.0s								
POTG	**Potrero Grande**	**1.17**	**349**	*i* S		**Sb**		**00 16 29.6**	**-0.3**
CHGR2	**Aguacate**	**1.27**	**35**	*e*P		**Pn**		**00 16 15.7**	**-0.4**
CHGR2				*e*S		**Sb**		**00 16 32.9**	**+0.2**
OCHAL	**Ojochal**	**1.41**	**328**	*i* P		**Pg**		**00 16 19.6**	**-0.4**
OCHAL				IAML				00 16 20.7	
	comp=Z,8.8nm,1.0s								
OCHAL				*i* S		**Sn**		**00 16 36.0**	**-0.3**
CNI2	**El Empalme, Bo**	**1.57**	**15**	*e*P		**Pn**		**00 16 19.4**	**-0.8**
CNI2				*e*S		**Sn**	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.95**	**4**	*eP*	**Pn**	**00 23 15.1**	**-0.2**
JHJ2	**Mitsune**	**1.08**	**237**	P	**Pn**	**00 23 18.0**	**+0.5**
JHJ2				*eS*	**Sn**	**00 23 32.6**	**+1.2**
JHJ	**Hachijo jima 2**	**1.10**	**238**	Pn	**Pn**	**00 23 17.5**	**-0.2**
	192nm,0.3s,baz=333,slow=16,SNR=44						
JHJ				Sn	**Sn**	**00 23 30.2**	**-1.6**
	338nm,0.3s,baz=144,slow=22,SNR=24						
JMKN	**Mikurajimanish**	**1.10**	**280**	P	**Pn**	**00 23 18.0**	**+0.2**
JMKN				S	**Sn**	**00 23 32.5**	**+0.5**
JHCJ	**Hachijojimakas**	**1.11**	**236**	*eP*	**Pn**	**00 23 18.4**	**+0.4**
JHCJ				S	**Sn**	**00 23 32.7**	**+0.4**
BSO3	**Boso 3**	**1.14**	**344**	P	**Pn**	**00 23 18.2**	**+0.1**
JMYK	**Miyake Tsubota**	**1.17**	**288**	P	**Pn**	**00 23 18.9**	**+0.1**
BSO4	**Boso 4**	**1.36**	**340**	P	**Pn**	**00 23 21.8**	**+0.5**
JKO	**Kozu shima**	**1.54**	**289**	P	**Pn**	**00 23 24.0**	**+0.3**
JTHY	**Toshimahigashi**	**1.56**	**302**	P	**Pn**	**00 23 24.2**	**+0.2**
JIM2	**Oshima 3**	**1.58**	**310**	P	**Pn**	**00 23 24.2**	**-0.1**
KTJ3	**Kamata3**	**1.94**	**310**	P	**Pn**	**00 23 28.8**	**-0.5**
KTJ3				*eS*	**Sn**	**00 23 51.1**	**-1.4**
JIZS	**Izushimoda**	**1.95**	**302**	P	**Pn**	**00 23 29.9**	**+0.5**
JOD2	**Odawara 2**	**2.15**	**317**	P	**Pn**	**00 23 32.1**	**-0.1**
JOD2				*eS*	**Sn**	**00 23 57.1**	**-0.6**
JFNN	**Fujinakano**	**2.35**	**310**	P	**Pn**	**00 23 36.0**	**+1.2**
MJAR	**Matsushiro Arr**	**3.58**	**323**	Pn	**Pn**	**00 23 53.1**	**+1.3**
	1.8nm,0.3s,baz=184,slow=17,SNR=50						
MJAR				Sn	**Sn**	**00 24 34.6**	**+1.7**
	0.3nm,0.3s,baz=204,slow=30,SNR=4.0 14nm,0.4s						
SONM	**Songino Array**	**29.42**	**309**	P	**P**	**00 28 56.1**	**-1.2**
	0.2nm,0.6s,baz=108,slow=8.3,SNR=2.0 0.2nm,0.6s						
MKAR	**Makanchi Array**	**45.59**	**305**	P	**P**	**00 31 12.8**	**-0.8**
	0.4nm,0.5s,baz=80,slow=9.5,SNR=8.3 0.4nm,0.5s						
KURBB	**Kurchatov Arr**	**47.77**	**310**	P	**P**	**00 31 30.6**	**+0.1**
	0.4nm,0.4s,baz=86,slow=7.4,SNR=5.9 0.4nm,0.4s						
BVAR	**Borovoye Array**	**52.54**	**314**	P	**P**	**00 32 07.2**	**+0.7**
	0.2nm,0.3s,baz=93,slow=11,SNR=2.3 0.2nm,0.3s						
WRA	**Warramunga Arr**	**53.71**	**188**	P	**P**	**00 32 15.2**	**-0.2**
	1.5nm,0.5s,baz=2.3,slow=7.6,SNR=30 1.5nm,0.5s						
ASAR	**Alice Springs**	**57.44**	**188**	P	**P**	**00 32 42.1**	**-0.1**
	0.5nm,0.5s,baz=7.2,slow=8.0,SNR=8.6						
ASAR				PcP	**PcP**	**00 33 36.8**	**+1.3**
	0.3nm,0.6s,baz=350,slow=4.7,SNR=2.3 0.5nm,0.5s						

*IDC **13** 00:45:42.0±8.6,29.°30N×51.°33E,h0km,mb3.8/6, mbtmp3.8/6,Error ellipse: s-maj=171.2km s-min=38.8km az=6.0*
*TEH **13** 00:45:46.9,29.°62N×51.°50E,h18km±12km,ML3.5*
*DSN **13** 00:45:51.2±1.2,29.°01N×51.°52E,h10km,ML3.6/9,Error ellipse: s-maj=14.3km s-min=8.2km az=6.0*
*OMAN **13** 00:45:51.6±1.0,29.°22N×51.°85E,h10km,mb3.9/15, ml4.0/2,ms2.5/1,Error ellipse: s-maj=7.9km s-min=5.7km az=166.0*

ISC 13 00:45:46.2±0.7,29.°54N±0.°05×51.°64E±0.°05,h10km,n70, σ1s77/93,mb3.7/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.73**	**204**	Pg	**Pg**	**00 46 01.5**	**+1.2**
SHI	**Shiraz**	**0.77**	**82**	Pg	**Pn**	**00 46 04.1**	**+0.8**
DSBU	**Dashti - Bushe**	**1.22**	**196**	Pg	**Pg**	**00 46 11.0**	**+1.5**
DSBU				Sg	**Sn**	**00 46 29.0**	**+3.1**
KLNJ	**Kolanjah**	**1.47**	**359**	Pg	**Pn**	**00 46 13.1**	**0.0**
ABEH	**Behbahan**	**1.60**	**312**	Pg	**Pn**	**00 46 13.8**	**-0.8**
QIR1	**Qir**	**1.62**	**130**	Pg	**Pb**	**00 46 17.7**	**+1.4**
JHRM	**Jahrom**	**1.99**	**121**	Pn	**Pb**	**00 46 23.4**	**+0.9**
IRAM	**Ramesheh**	**2.35**	**16**	Pn	**Pn**	**00 46 27.0**	**+1.8**
IBRJ	**Brojen**	**2.39**	**352**	Pn	**Pn**	**00 46 26.3**	**+0.7**
ZNGN	**Zangian**	**2.66**	**346**	Pn	**Pn**	**00 46 29.9**	**+0.5**
IGAR	**Gharneh**	**2.88**	**7**	Pn	**Pn**	**00 46 33.3**	**+0.9**
IPIR	**Pirpir**	**3.20**	**349**	Pn	**Pn**	**00 46 37.0**	**+0.2**
IZEF	**Zefreh**	**3.40**	**10**	Pn	**Pn**	**00 46 40.9**	**+1.4**
SHMA	**Al-Shehemyia**	**3.71**	**189**	P	**Pn**	**00 46 45.2**	**+1.6**
	SNR=15						
SHMA				S	**Sn**	**00 47 28.3**	**+0.9**
IKLH	**Kolahrood**	**3.77**	**359**	Pn	**Pn**	**00 46 45.2**	**+0.5**
IBAF	**Bafgh**	**3.96**	**58**	Pn	**Pn**	**00 46 49.4**	**+2.2**
ANAR	**Anarak**	**4.06**	**26**	Pn	**Pn**	**00 46 49.8**	**+1.4**
QAMS	**Qamsar**	**4.19**	**357**	Pn	**Pn**	**00 46 51.0**	**+0.6**
KHGB	**Koh Gabri**	**4.28**	**78**	Pn	**Pn**	**00 46 54.7**	**+3.1**
NGRK	**Negar Kerman**	**4.44**	**87**	Pn	**Pn**	**00 46 57.5**	**+3.6**
KRSH	**Karshahi**	**4.44**	**5**	Pn	**Pn**	**00 46 55.0**	**+1.2**
ZRDN	**Zarand Kerman**	**4.47**	**70**	Pn	**Pn**	**00 46 57.3**	**+3.0**
TRNA	**Turayna**	**4.80**	**185**	P	**Pn**	**00 46 59.9**	**+1.4**
	SNR=20						
TRNA				S	**Sn**	**00 47 55.0**	**+0.8**
SMRA	**Abu-Samra**	**4.83**	**189**	P	**Pn**	**00 47 00.4**	**+1.5**
SMRA				S	**Sn**	**00 47 55.7**	**+0.9**
ISFB	**Sefidab**	**4.83**	**6**	Pn	**Pn**	**00 47 00.1**	**+1.1**
KRM1	**Kerman Provinc**	**4.98**	**77**	Pn	**Pn**	**00 47 03.7**	**+2.5**
SLWR	**Sila**	**5.45**	**179**	P	**Pn**	**00 47 09.0**	**+1.6**
SLWR				S	**Sn**	**00 48 09.2**	**-0.9**
TPRV	**Parvadeh(Tabas**	**5.55**	**50**	Pn	**Pn**	**00 47 11.4**	**+2.5**
GHWR	**Ruwais**	**5.66**	**168**	P	**Pn**	**00 47 12.1**	**+1.7**
GHWR				S	**Sn**	**00 48 13.5**	**-2.0**
MASF	**Masafi**	**5.78**	**135**	P	**Pn**	**00 47 13.7**	**+1.7**
MASF				S	**Sn**	**00 48 16.1**	**-2.3**
AJN	**Ajban**	**5.78**	**148**	P	**Pn**	**00 47 14.1**	**+2.0**
AJN				S	**Sn**	**00 48 17.3**	**-1.2**
MSFE	**Esma-Masafi**	**5.78**	**135**	P	**Pn**	**00 47 12.7**	**+0.6**
ASUD	**Al Ashush, Dub**	**5.89**	**145**	P	**Pn**	**00 47 14.1**	**+0.5**
ASUD	**Al Ashush, Dub**	**5.89**	**145**	P	**Pn**	**00 47 15.5**	**+1.9**
ASUD				S	**Sn**	**00 48 20.4**	**-0.9**
MDH	**Madha**	**5.91**	**134**	P	**Pn**	**00 47 14.6**	**+0.8**
MDH	**Madha**	**5.91**	**134**	P	**Pn**	**00 47 15.3**	**+1.5**
MDH				S	**Sn**	**00 48 19.4**	**-2.4**
KBAM	**BAM**	**5.96**	**92**	Pn	**Pn**	**00 47 18.0**	**+3.4**
MZWR	**Madinat Zayed**	**6.09**	**160**	P	**Pn**	**00 47 18.3**	**+2.0**
MZWR				S	**Sn**	**00 48 24.0**	**-2.1**
UOSS	**Minazif**	**6.12**	**137**	P	**Pn**	**00 47 18.1**	**+1.4**
UOSS				S	**Sn**	**00 48 24.3**	**-2.5**
HATD	**Hatta, Dubai**	**6.17**	**138**	P	**Pn**	**00 47 17.1**	**-0.3**
HATD	**Hatta, Dubai**	**6.17**	**138**	P	**Pn**	**00 47 19.4**	**+2.0**
HATD				S	**Sn**	**00 48 25.3**	**-2.6**
ILBA	**Ilam Banvizeh**	**6.17**	**313**	Pn	**Pn**	**00 47 17.0**	**-0.4**
ASHO	**Ashiyiah**	**6.24**	**140**	P	**Pn**	**00 47 19.7**	**+1.3**
ASHO	**Ashiyiah**	**6.24**	**140**	P	**Pn**	**00 47 20.2**	**+1.9**
	SNR=10						
ASHO				S	**Sn**	**00 48 26.9**	**-2.8**
ALNE	**Al Ain**	**6.58**	**145**	P	**Pn**	**00 47 24.5**	**+1.4**
ALNE	**Al Ain**	**6.58**	**145**	P	**Pn**	**00 47 24.8**	**+1.8**
	SNR=6.1						
ALNE				S	**Sn**	**00 48 36.2**	**-1.9**
JASK	**Jask - Hormozg**	**6.62**	**122**	P	**Pn**	**00 47 24.8**	**+1.2**
JASK				S	**Sn**	**00 48 38.6**	**-0.5**
SOHO	**SOHO**	**6.93**	**140**	P	**Pn**	**00 47 29.0**	**+1.1**
SOHO	**SOHO**	**6.93**	**140**	P	**Pn**	**00 47 28.8**	**+1.0**
SOHO				S	**Sn**	**00 48 44.4**	**-2.4**
UMZA	**Um Al Zommool**	**7.50**	**154**	P	**Pn**	**00 47 36.4**	**+0.8**
UMZA				S	**Sn**	**00 48 56.7**	**-4.0**
ARQ	**Araqi**	**7.57**	**144**	P	**Pn**	**00 47 37.8**	**+1.2**
ARQ				S	**Sn**	**00 48 59.1**	**-3.4**
RAYN	**Ar Rayn**	**8.12**	**224**	P	**Pn**	**00 47 42.7**	**-1.6**
BSY	**Bisya**	**8.41**	**142**	P	**Pn**	**00 47 48.6**	**+0.5**
BSY				S	**Sn**	**00 49 19.8**	**-3.4**
SMDO	**Samad**	**8.64**	**137**	P	**Pn**	**00 47 52.4**	**+0.9**
SMDO				S	**Sn**	**00 49 25.5**	**-3.6**
JMDO	**Jabal Madar**	**9.21**	**139**	P	**Pn**	**00 47 59.9**	**+0.8**
NGCH	**Negor - Chabah**	**9.41**	**114**	P	**Pn**	**00 48 02.8**	**+1.0**
NGCH				S	**Sn**	**00 49 44.1**	**-3.6**
WBK	**Wadi Bani Khal**	**9.54**	**135**	P	**Pn**	**00 48 03.6**	**0.0**
JLN	**Jalan Bani Buh**	**10.15**	**135**	P	**Pn**	**00 48 13.2**	**+1.2**
MHTO	**MHTO**	**10.26**	**145**	P	**Pn**	**00 48 13.9**	**+0.4**
	SNR=12						
DQM	**DQM**	**10.96**	**149**	P	**Pn**	**00 48 23.0**	**-0.2**
DOK	**Doka**	**11.11**	**168**	P	**Pn**	**00 48 24.4**	**-0.7**
DOK				P	**Pn**	**00 48 24.4**	**-0.7**
WHFO	**Wadi Hawf**	**11.73**	**170**	P	**Pn**	**00 48 32.0**	**-1.7**
SHAO	**Shalim**	**12.03**	**161**	P	**Pn**	**00 48 36.2**	**-1.5**
DMTO	**DMTO**	**12.15**	**165**	P	**Pn**	**00 48 38.2**	**-1.2**
BVAR	**Borovoye Array**	**27.21**	**25**	P	**P**	**00 51 30.5**	**+0.5**
	0.8nm,0.4s,baz=207,slow=10,SNR=11 0.8nm,0.4s						
KURBB	**Kurchatov Arr**	**29.17**	**36**	P	**P**	**00 51 48.0**	**+0.5**
	0.3nm,0.3s,baz=236,slow=8.8,SNR=5.7 0.3nm,0.3s						
MKAR	**Makanchi Array**	**29.37**	**46**	P	**P**	**00 51 49.8**	**+0.4**
	0.3nm,0.5s,baz=245,slow=8.5,SNR=8.5 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**34.23**	**35**	P	**P**	**00 52 32.0**	**+0.1**
	1.1nm,0.4s,baz=244,slow=7.7,SNR=9.3 1.1nm,0.4s						
HFS	**Hagfors**	**39.77**	**331**	P	**P**	**00 53 16.8**	**-2.1**
	2.5nm,0.8s,baz=126,slow=9.1,SNR=8.9 2.5nm,0.8s						
SONM	**Songino Array**	**45.47**	**51**	P	**P**	**00 54 05.9**	**+0.3**
	0.3nm,0.6s,baz=264,slow=8.5,SNR=3.5 0.3nm,0.6s						

*NEIC **13** 00:50:03.7±0.4,36.°357N±0.°009×97.°686W±0.°009, h5km±4km,Error ellipse: s-maj=1.5km s-min=0.9km az=147.0*

TUL 13 00:50:03.7±0.4,36.°359N±0.°008×97.°68W±0.°01,h5km±4km, ML2.8,mb_Lg2.6/65(NEIC),ML2.9/64(NEIC),Error ellipse: s-maj=1.4km s-min=1.1km az=55.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.28**	**301**	Pg	Pg	**00 50 09.7**	**+0.4**
CROK				IAML		00 50 18.1	
	comp=E,2µm,0.3s						
GC02	**Grant County #**	**0.51**	**344**	Pg	Pg	00 50 13.8	+0.2
GC02				Sg	Sg	00 50 21.0	+0.7
BLOK	**Blackwell**	**0.55**	**43**	Pg	Pg	00 50 14.7	+0.4
BLOK				Sg	Sg	00 50 22.3	+0.8
OK029	**Liberty Lake**	**0.59**	**162**	Pg	Pg	00 50 15.2	+0.2
OK029				Sg	Sg	00 50 23.4	+0.6
OK029				IAML		00 50 25.7	
	comp=E,574nm,0.6s						
OK048	**Pawnee Station**	**0.60**	**84**	Pg	Pg	00 50 15.4	+0.2
OK048				Sg	Sg	00 50 23.7	+0.7
OK032	**Salt Plains WL**	**0.61**	**316**	Pg	Pg	00 50 15.7	+0.1
OK032				Sg	Sg	00 50 24.1	+0.6
KAN14	**Manchester OK**	**0.64**	**339**	Pg	Pg	00 50 16.1	+0.1
KAN14				Sg	Sg	00 50 24.9	+0.7
KAN14				IAML		00 50 26.9	
	comp=N,712nm,0.1s						
KAN13	**South Haven SW**	**0.67**	**14**	Pg	Pg	00 50 16.9	+0.2
KAN13				Sg	Sg	00 50 26.5	+1.1
KAN13				IAML		00 50 31.3	
	comp=E,606nm,0.2s						
KAN13				IAML		00 50 39.4	
	comp=N,670nm,0.3s						
OK033	**Mehan**	**0.68**	**117**	Pg	Pg	00 50 17.0	+0.2
KAN17	**Caldwell West**	**0.69**	**354**	Pg	Pg	00 50 17.0	+0.1
KAN17				IAML		00 50 33.5	
	comp=N,586nm,0.3s						
OK051	**E0350 and S346**	**0.70**	**78**		Pg	00 50 17.3	+0.2
OK051				IAML		00 50 30.3	
	comp=N,621nm,0.1s						
OK051				IAML		00 50 36.7	
	comp=N,566nm,0.2s						
ADOK	**Arcadia Dam**	**0.75**	**160**		Pg	00 50 18.2	+0.1
KAN05	**Bluff City Nor**	**0.76**	**349**		Pg	00 50 18.4	0.0
KAN05				IAML		00 50 34.4	
	comp=N,655nm,0.2s						
KAN09	**Caldwell North**	**0.78**	**4**		Pg	00 50 18.8	+0.2
KAN01	**Argonia South**	**0.80**	**356**	Pg	Pg	00 50 19.1	+0.1
KAN01				IAML		00 50 30.1	
	comp=E,377nm,0.3s						
KAN01				IAML		00 50 36.3	
	comp=N,421nm,0.1s						
OK052	**Battle Ridge R**	**0.80**	**117**	Pg	Pg	00 50 19.1	+0.1
OK052				IAML		00 50 32.2	
	comp=N,486nm,0.3s						
QUOK	**Quay**	**0.81**	**103**	Pg	Pg	00 50 19.3	+0.1
QUOK				IAML		00 50 38.4	
	comp=N,375nm,0.2s						
KAN10	**Anthony SW Sta**	**0.83**	**337**	Pg	Pg	00 50 19.8	+0.1
KAN10				IAML		00 50 32.8	
	comp=E,531nm,0.1s						
KAN10				IAML		00 50 33.2	
	comp=N,531nm,0.2s						
OK038	**West end E0370**	**0.86**	**278**	Pg	Pg	00 50 20.1	-0.2
KAN08	**Anthony NE Sta**	**0.90**	**345**	Pg	Pg	00 50 20.9	-0.1
KAN08				IAML		00 50 33.6	
	comp=N,391nm,0.1s						
KAN08				IAML		00 50 34.6	
	comp=E,364nm,0.1s						
KAN06	**Argonia West S**	**0.90**	**351**		Pg	00 50 21.1	+0.2
KAN06				IAML		00 50 35.1	
	comp=E,462nm,0.1s						
KAN06				IAML		00 50 35.8	
	comp=N,453nm,0.1s						
OK035	**E0210 Rd and N**	**0.90**	**293**	Pg	Pg	00 50 20.7	-0.2
OK035				IAML		00 50 37.3	
	comp=N,468nm,0.3s						
OK035				IAML		00 50 39.1	
	comp=N,439nm,0.2s						
KS21	**Milan North St**	**0.93**	**1**	IAML		00 50 34.3	
	comp=N,520nm,0.3s						
KS21	**Milan North St**	**0.93**	**1**	Pg	Pg	00 50 21.4	-0.1
KAN12	**Harper NE Stat**	**0.97**	**345**	Pg	Pg	00 50 22.4	0.0
OKCSW	**OKLAHOMA CITY**	**0.97**	**168**	Pg	Pg	00 50 22.2	-0.2
OKCSW				IAML		00 50 37.3	
	comp=E,401nm,0.3s						
U32A	**Winter Ranch,**	**1.06**	**271**	Pg	Pg	00 50 23.6	-0.5
CSTR	**Hydro, Custer**	**1.08**	**229**	Pg	Pg	00 50 24.5	0.0
DEOK	**Depew**	**1.09**	**118**	Pg	Pg	00 50 24.3	-0.3
DEOK				IAML		00 50 41.4	
	comp=N,308nm,0.3s						
DEOK				IAML		00 50 41.4	
	comp=E,271nm,0.2s						
T35A	**Sooner Cattle**	**1.09**	**59**		Pg	00 50 24.4	-0.3
T35A				IAML		00 50 44.1	
	comp=N,355nm,0.3s						
FNO	**Franklin**	**1.12**	**168**	Pg	Pg	00 50 24.7	-0.6
FNO				IAML		00 50 45.0	
	comp=E,261nm,0.3s						
FNO				IAML		00 50 45.7	
	comp=N,231nm,0.2s						
W35A	**Tecumseh**	**1.37**	**151**		Pn	00 50 29.0	-0.5
ELIS	**Ellis County**	**1.43**	**259**		Pn	00 50 30.5	+0.1
TUL3	**Leonard**	**1.59**	**106**		Pn	00 50 32.6	+0.1
X34A	**Smith Ranch, M**	**1.76**	**184**		Pn	00 50 35.4	+0.6
X34A				IAmb_Lg		00 51 02.5	
	comp=Z,66nm,1.1s						
WMOK	**Wichita Mounta**	**1.85**	**209**	Pn	Pn	00 50 36.6	+0.5
RLO	**Rose Lookout**	**2.16**	**94**		Pn	00 50 41.2	+0.9
R32A	**Long Quarter,**	**2.22**	**339**		Pn	00 50 41.1	-0.1
LOOK	**Love County**	**2.40**	**170**		Pn	00 50 44.3	+0.7
LOOK				IAmb_Lg		00 51 21.7	
	comp=Z,19nm,0.7s						
SMWD	**Samnorwood**	**2.43**	**240**	Pn	Pn	00 50 42.9	-1.3
X37A	**Clayton**	**2.58**	**132**		Pn	00 50 47.4	+1.2
X37A				IAmb_Lg		00 51 29.9	
	comp=Z,27nm,0.8s						
U38A	**Gravette**	**2.66**	**87**		Pn	00 50 46.7	-0.6
WTFS	**Witchita Falls**	**2.67**	**194**	Pn	Pn	00 50 47.8	+0.5
KSU1	**Kansas State U**	**2.87**	**17**	Pg	Pg	00 50 57.2	-1.4
CBKS	**Cedar Bluff**	**2.94**	**327**		Pb	00 50 57.8	+1.1
HHAR	**Hobbs**	**3.02**	**90**	Pn	Pn	00 50 52.9	+0.7
Z35A	**Perchaven, San**	**3.04**	**173**	Pn	Pn	00 50 52.4	-0.1
FW03	**Perrin-Whitt E**	**3.33**	**186**	Pg	Pb	00 51 02.5	-0.6
FW03				IAmb_Lg		00 51 52.1	
	comp=Z,13nm,1.1s						
FW06	**Azle**	**3.38**	**178**		Pn	00 50 57.9	+0.7
PLPT	**Palo Pinto**	**3.58**	**189**	Pg	Pb	00 51 07.8	+0.3
APMT	**Aspermont**	**3.63**	**214**		Pn	00 51 00.4	-0.2
APMT				IAmb_Lg		00 51 58.2	
	comp=Z,15nm,1.3s						
FW07	**Weatherford**	**3.65**	**181**	IAmb_Lg		00 52 05.7	
	comp=Z,11nm,0.8s						
S39A	**Bolivar**	**3.73**	**68**		Pb	00 51 11.6	+1.5
S39A				IAmb_Lg		00 52 03.4	
	comp=Z,24nm,0.8s						
DKNS	**Dickens**	**3.78**	**226**	Pg	Pg	00 51 15.6	-0.5
Z38A	**Mt. Pleasant**	**3.81**	**144**	Pg	Pg	00 51 14.6	-2.0
MIAR	**Mount Ida**	**3.81**	**117**	Pn	Pn	00 51 03.2	+0.2
MIAR				IAmb_Lg		00 52 07.9	
	comp=Z,12nm,0.8s						
TREL	**Terrell**	**3.85**	**160**	IAmb_Lg		00 52 13.8	
	comp=Z,27nm,0.9s						
ABTX	**Abilene, Hawle**	**4.06**	**204**		Pn	00 51 07.0	+0.4
ABTX				IAmb_Lg		00 52 23.8	
	comp=Z,10nm,0.9s						
RTBA	**Rita Blanca**	**4.08**	**273**		Pn	00 51 07.3	+0.4
RTBA				IAmb_Lg		00 52 17.4	
	comp=Z,9.0nm,0.7s						
WHTX	**Lake Whitney,**	**4.36**	**177**		Pb	00 51 23.6	+2.8
SN05	**Snyder 5**	**4.36**	**218**	IAmb_Lg		00 52 22.6	
	comp=Z,9.3nm,0.8s						
X40A	**Basin Creek Fa**	**4.38**	**114**		Pn	00 51 10.3	-0.5
X40A				IAmb_Lg		00 52 28.5	
	comp=Z,12nm,0.9s						
SN01	**Snyder 1**	**4.38**	**218**	IAmb_Lg		00 52 30.8	
	comp=Z,13nm,0.9s						
MGMO	**Mountain Grove**	**4.42**	**78**	Pn	Pn	00 51 10.9	-0.5
MGMO				IAmb_Lg		00 52 23.0	
	comp=Z,10nm,0.8s						
WHAR	**Wooly Hollow**	**4.51**	**102**		Pn	00 51 11.8	-0.9
FCAR	**Ozark Folk Cen**	**4.52**	**94**		Pn	00 51 14.4	+1.5
FCAR				IAmb_Lg		00 52 28.8	
	comp=Z,13nm,0.9s						
POST	**Post**	**4.55**	**225**	Pn	Pn	00 51 13.6	+0.4
POST				IAmb_Lg		00 52 35.6	
	comp=Z,8.6nm,0.8s						
WLAR	**White Oak Lake**	**4.60**	**124**	Pg	Pg	00 51 30.8	-1.1
WLAR				IAmb_Lg		00 52 34.1	
	comp=Z,12nm,0.9s						
237A	**Washetta, Mont**	**4.62**	**160**	Pn	Pn	00 51 14.3	+0.2
P38A	**Dawn**	**4.62**	**44**	IAmb_Lg		00 52 41.2	
	comp=Z,11nm,0.8s						
N35A	**Tabor**	**4.77**	**19**	IAmb_Lg		00 52 36.2	
	comp=Z,14nm,0.8s						
NATX	**Nacogdoches**	**5.23**	**150**	IAmb_Lg		00 52 48.9	
	comp=Z,14nm,0.9s						
SGCY	**Sterling City**	**5.27**	**214**	IAmb_Lg		00 53 00.1	
	comp=Z,20nm,1.2s						
T25A	**Trinidad**	**5.46**	**280**	IAmb_Lg		00 52 58.9	
	comp=Z,9.6nm,0.9s						
P40A	**Paris**	**5.46**	**53**	IAmb_Lg		00 52 57.4	
	comp=Z,19nm,0.8s						
PBMO	**Poplar Bluff**	**5.85**	**84**	IAmb_Lg		00 53 22.9	
	comp=Z,6.9nm,0.8s						
JCT	**Junction City**	**6.13**	**197**	IAmb_Lg		00 53 23.7	
	comp=Z,14nm,1.0s						
Q24A	**Divide**	**6.47**	**296**	IAmb_Lg		00 53 31.9	
	comp=Z,6.4nm,0.8s						
K30B	**Basset**	**6.48**	**347**	IAmb_Lg		00 53 34.5	
	comp=Z,14nm,0.8s						
CGM3	**Cape Girardeau**	**6.50**	**79**	IAmb_Lg		00 53 42.4	
	comp=Z,7.3nm,0.8s						
S44A	**Carbondale**	**6.87**	**76**	IAmb_Lg		00 53 55.2	
	comp=Z,12nm,0.8s						
DRIO	**Del Rio**	**7.34**	**200**	IAmb_Lg		00 54 09.9	
	comp=Z,5.3nm,0.8s						
SAND	**Sanderson**	**7.39**	**211**	IAmb_Lg		00 54 07.3	
	comp=Z,7.8nm,1.1s						
VHRN	**Van Horn**	**8.24**	**230**	IAmb_Lg		00 54 35.5	
	comp=Z,6.3nm,1.2s						

*IDC **13** 00:50:50.3±0.8,9.°12S×126.°10E,h0km,mb4.2/13, mbtmp4.2/13,MS3.8/6,Error ellipse: s-maj=33.7km s-min=17.9km az=63.0*
*NEIC **13** 00:50:55.0±1.9,9.°29S±0.°06×126.°45E±0.°05,h35km±2km, mb4.6/25,Error ellipse: s-maj=10.9km s-min=8.0km az=204.0*

ISC 13 00:50:54.5±0.4,9.°38S±0.°05×126.°46E±0.°06,h35km,n83, σ1s67/79,mb4.6/31,MS3.5/4,4D,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.20**	**260**		**Pn**	**00 51 30.3**	**+1.6**
SOEI				Sn	**Sn**	**00 51 58.6**	**+3.9**
SOEI	**Soe**	**2.20**	**260**	P	**Pn**	**00 51 30.2**	**+1.5**
MMRI	**Maumere**	**4.24**	**280**	Pn	**Pn**	**00 51 56.0**	**-0.7**
MTN	**Manton Dam**	**5.73**	**127**	Pn	**Pn**	**00 52 19.5**	**+2.3**
MTN				Sn	**Sn**	**00 53 24.0**	**+2.2**
MTN	**Manton Dam**	**5.73**	**127**	P	**Pn**	**00 52 21.5**	**+4.3**
KDU	**Kakadu**	**6.75**	**120**	P	**Pn**	**00 52 33.7**	**+2.5**
KAPI	**Kappang**	**7.95**	**303**	Pn	**Pn**	**00 52 46.7**	**-0.9**
FAKI	**Fak Fak**	**8.62**	**42**		**Pn**	**00 52 58.0**	**+1.1**
FITZ	**Fitzroy Crossi**	**8.70**	**185**	Pn	**Pn**	**00 52 57.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**8.70**	**185**	P	**Pn**	**00 52 59.6**	**+1.6**
LUWI	**Luwuk**	**9.06**	**336**	Pn	**Pn**	**00 53 02.9**	**0.0**
TNTI	**Ternate**	**10.12**	**5**	Pn	**Pn**	**00 53 19.0**	**+1.5**
TNTI	**Ternate**	**10.12**	**5**	P	Pn	00 53 22.8	+5.3
TOLI2	**Tolitoli**	**11.86**	**331**	Pn	**Pn**	**00 53 40.9**	**-0.4**
TOLI2	**Tolitoli**	**11.86**	**331**	P	Pn	00 53 46.2	+4.9
WB0	**Warramunga Arr**	**12.86**	**144**	Pn	**Pn**	**00 53 53.8**

comp=Z,7.0nm,0.7s
KSRS Korea Array 46.61 2 P **P 00 59 18.2 -1.0**
comp=Z,0.7nm,0.4s,baz=180,slow=8.9,SNR=1.9
comp=Z,0.7nm,0.4s
HNS HongShan 47.82 347 ⇓P **P 00 59 27.1 -1.6**
HNS pmax pmax
comp=Z,10.0nm,1.0s
LZH Lanzhou 49.99 336 *e*P **P 00 59 45.9 +0.2**
LZH pP pP 00 59 54.3 -1.3
LZH pmax pmax
comp=Z,12nm,1.0s
HHC Hu-ho-hao-te 51.84 346 *e*P **P 01 00 00.6 +1.2**
HHC pP pP 01 00 10.0 +0.8
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,110nm,5.7s
USRK Ussuriysk Ar. 53.56 5 P **P 01 00 10.7 -1.2**
comp=Z,1.2nm,0.5s,baz=213,slow=8.0,SNR=4.5
comp=Z,1.2nm,0.5s
ULN Ulaanbaatar 59.54 345 P **P 01 00 53.8 -0.7**
SONM Songino Array 59.68 344 P **P 01 00 54.7 -0.8**
SONM IAmb IAmb 01 01 01.4
comp=Z,4.4nm,0.9s
SONM Songino Array 59.68 344 P **P 01 00 54.5 -1.0**
comp=Z,2.0nm,0.7s,baz=161,slow=8.3,SNR=13
comp=Z,2.0nm,0.7s
PETK Petropavlovsk- 67.70 20 P **P 01 01 48.5 +0.4**
comp=Z,3.5nm,0.7s,baz=212,slow=2.9,SNR=7.2
comp=Z,3.5nm,0.7s
MK31 Makanchi Array 68.37 329 P **P 01 01 51.5 -1.1**
MKAR Makanchi Array 68.37 329 P **P 01 01 52.2 -0.3**
MKAR Makanchi Array 68.37 329 P **P 01 01 51.3 -1.2**
comp=Z,1.0nm,0.5s,baz=126,slow=7.7,SNR=29
comp=Z,1.0nm,0.5s
MAKZ Makanchi 68.54 329 P **P 01 01 53.9 +0.3**
ZAA0 Zalesovo Array 72.22 336 P **P 01 02 14.4 -1.5**
ZAA0 IAmb IAmb 01 02 16.5
comp=Z,3.3nm,0.7s
ZALV Zalesovo Beam 72.22 336 P **P 01 02 14.2 -1.7**
ZALV Zalesovo Beam 72.22 336 P **P 01 02 13.8 -2.1**
comp=Z,3.0nm,0.6s,baz=133,slow=4.9,SNR=18
comp=Z,3.0nm,0.6s
KURBB Kurchatov Arra 72.76 330 P **P 01 02 17.5 -1.7**
comp=Z,0.8nm,0.5s,baz=137,slow=5.2,SNR=11
comp=Z,0.8nm,0.5s
KURK Kurchatov 72.78 330 P **P 01 02 19.0 -0.3**
KURK IAmb IAmb 01 02 25.2
comp=Z,3.1nm,0.8s
KKAR Karatay Array 72.88 321 P **P 01 02 18.4 -1.7**
BVAR Borovoye Array 78.25 329 P **P 01 02 49.6 -1.1**
comp=Z,2.2nm,0.8s,baz=126,slow=7.5,SNR=6.8
comp=Z,2.2nm,0.8s
QSPA South Pole Qui 80.61 180 P **P 01 03 06.5 +3.0**
comp=Z,3.4nm,0.9s,baz=296,slow=2.7,SNR=6.1
comp=Z,3.4nm,0.9s
TIXI Tiksi 80.87 1 P **P 01 03 03.6 -0.8**
TIXI IAmb IAmb 01 03 10.6
comp=Z,9.5nm,1.1s
NRIK Noril'sk 83.04 347 P **P 01 03 16.0 +0.1**
comp=Z,1.1nm,0.6s,baz=126,slow=8.2,SNR=4.7
comp=Z,1.1nm,0.6s
C19K Lookout Ridge 93.05 20 P **P 01 04 04.9 +0.6**
C19K IAmb IAmb 01 04 46.8
comp=Z,5.6nm,1.4s
G19K Purcell Mounta 93.09 23 P **P 01 04 04.5 0.0**
H19K Roundabout Mou 93.17 24 P **P 01 04 05.3 +0.6**
H19K IAmb IAmb 01 04 29.3
comp=Z,4.6nm,1.4s
D19K Kuna River 93.38 21 P **P 01 04 05.7 -0.1**
D19K IAmb IAmb 01 04 43.0
comp=Z,4.6nm,1.4s
B20K Meade River 94.14 20 P **P 01 04 09.2 +0.1**
B20K IAmb IAmb 01 04 40.7
comp=Z,2.1nm,1.1s
B21K Ikpikpuk River 94.89 20 P **P 01 04 13.0 +0.4**
B22K Teshekpuk Lake 95.45 20 P **P 01 04 15.3 +0.2**
TORD Torodi Ar. Bea 125.79 279 PKP **PKiKP 01 09 55.2 +1.2**
comp=Z,6.5nm,0.3s,baz=62,slow=2.5,SNR=3.4
TXAR Lajitas Array 129.15 60 PKP **PKiKP 01 10 02.0 +1.5**
comp=Z,0.1nm,0.5s,baz=274,slow=4.4,SNR=1.7
CPUP Villa Florida 144.31 174 PKP **PKPdf 01 10 28.7 +1.0**
comp=Z,1.4nm,0.7s,baz=297,slow=9.1,SNR=1.5

IDC ***13*** *01:11:40.7±0.4, 13.84N×146.38E, h0km, mb5.1/39, mbtmp5.1/39, MS5.4/72, Error ellipse: s-maj=14.4km s-min=10.8km az=88.0*

MOS ***13*** *01:11:41.6±1.0, 13.87N×146.25E, h16km, mb5.5/68, MS5.5/35, Error ellipse: s-maj=9.5km s-min=4.3km az=116.3*

BJI ***13*** *01:11:41.2±0.0, 13.94N×146.62E, h21km, mb5.2/92, mB5.7/80, Ms5.7/97, Ms7 5.6/89*

NEIC ***13*** *01:11:43.4±1.7, 13.84N±0.04×146.34E±0.03, h11km±1km, mb5.6/292, Ms_20 5.7/741, Mwb5.6/72, Mww5.7/36, Error ellipse: s-maj=8.7km s-min=4.1km az=33.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.68; Mθθ0.31; Mϕϕ-2.99; Mrθ0.30; Mθϕ-1.39; Mϕr1.39; Fault plane solution: M₀3.47000×10¹⁷ NP1: ϕs205.97000°, δ33.02000°, λ98.85000°. NP2: ϕs15.45000°, δ57.42000°, λ84.29000°. Principal axes: T 3.0028, Plg77.0000°, Azm267.0000°; N 0.8018, Plg5.0000°, Azm19.0000°; P -3.8046, Plg12.0000°, Azm110.0000°;*

NEIC ***13*** *01:11:44.9, 13.67N×146.06E, h18km, Moment Tensor Solution. Duration: 3s7 Moment tensor: Scale 10¹⁷Nm; Mrr3.25; Mθθ0.14; Mϕϕ-3.39; Mrθ-2.67; Mθϕ-1.76; Mϕr0.26; Fault plane solution: M₀4.58000×10¹⁷ NP1: ϕs231.71000°, δ59.46000°, λ127.34000°. NP2: ϕs355.38000°, δ46.78000°, λ44.21000°. Principal axes: T 4.9380, Plg58.0000°, Azm195.0000°; N -0.7153, Plg31.0000°, Azm31.0000°; P -4.2227, Plg7.0000°, Azm296.0000°;*

NEIC ***13*** *01:11:44.9, 13.87N×146.26E, h18km*

NEIC ***13*** *01:11:45, 13.87N×146.26E, h13km*

GCMT ***13*** *01:11:46.4±0.1, 13.68N±0.01×146.64E±0.01, h12km, MW5.7/162, Moment Tensor Solution. s141,c266; s162,c357; Duration: 1s7 Moment tensor: Scale 10¹⁷ Nm; Mrr3.20±.04; Mθθ0.06±.03; Mϕϕ-3.26±.03; Mrθ-0.15±.08; Mθϕ-1.54±.03; Mϕr1.91±.09; Best double couple: M₀4.04000×10¹⁷ NP1:ϕs8.00000°, δ60.00000°, λ74.00000°. NP2:ϕs217.00000°, δ34.00000°, λ115.00000°. Principal axes: T 3.8100, Plg71.0000°, Azm242.0000°; N 0.4600, Plg14.0000°, Azm16.0000°; P -4.2700, Plg13.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***13*** *01:11:47.2±1.0, 14°N±3'×14°6E±', h35km±8km, M5.6/66, mB6.1/48, mb5.5/66, MLv4.9/1, Mw(mB)5.7/48, MwMwp5.6/31, Mwp5.7/31*

ISC 13 01:11:44.4±0.4, 13.87N±0.03×146.34E±0.04, h24km±2km, h23km:pP-P, n1418, σ1ᵍ68/1164, mb5.5/298, MS5.6/494, 64C-26D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.45**	**259**	Pn	**Pb**	**01 12 10.5**	**-0.3**
GUMO				Sn	**Sb**	**01 12 28.4**	**-0.5**
GUMO	**Guam**	**1.45**	**259**	P	**Pb**	**01 12 10.9**	**+0.1**
GUMO	**Guam**	**1.45**	**259**	⇑P	**Pb**	**01 12 10.2**	**-0.6**
GUMO	**Guam**	**1.45**	**259**	Pn	**Pb**	**01 12 10.3**	**-0.6**
	2µm,0.3s,baz=87,slow=12,SNR=203						
GUMO				Sn	**Sb**	**01 12 31.7**	**+2.8**
	1µm,0.3s,baz=52,slow=3.0,SNR=3.9						
JCJ	**Chichijima**	**13.72**	**344**	Sn	**Sn**	**01 17 22.8**	**-6.5**
	2.3nm,0.3s,baz=101,slow=23,SNR=1.5						
JCJ				LR	LR	01 19 25.5	
	comp=Z,10µm,20.4s,baz=166,slow=34						
MANU	**Manus Island**	**15.84**	**176**	Pn	**Pn**	**01 15 26.6**	**+0.5**
MANU	**Manus Island**	**15.84**	**176**	P	**Pn**	**01 15 27.7**	**+1.6**
GENI	**Genyem**	**17.46**	**201**	P	**P**	**01 15 48.3**	**+0.7**
GENI	**Genyem**	**17.46**	**201**	P	**Pn**	**01 15 46.9**	**+0.3**
	179nm,1.6s,9µm11µm						
SMPI	**Sarmi**	**17.48**	**206**	P	**P**	**01 15 47.7**	**-0.1**
	127nm,1.6s,13µm						
BULU	**Kimbe**	**19.68**	**168**	P	**P**	**01 16 11.9**	**-0.1**
TABU	**Tabubil**	**19.68**	**195**	P	**Pn**	**01 16 13.7**	**+0.1**
JHJ	**Hachijo jima 2**	**20.07**	**344**	P	**P**	**01 16 16.9**	**+0.8**
	117nm,0.6s,baz=124,slow=7.3,SNR=1.9						
JHJ				S	**S**	**01 19 56.4**	**-4.3**
	145nm,0.7s,baz=41,slow=21,SNR=1.8						
JHJ				LR	LR	01 23 07.2	
	comp=Z,10µm,18.0s,baz=256,slow=34						
	117nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**20.51**	**71**	T	T	01 37 29.6	
	baz=256,slow=75,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**20.52**	**71**	T	T	01 37 35.6	
	baz=256,slow=75,SNR=2.7						
H11N3	**WAKE ISLAND Hy**	**20.53**	**71**	T	T	01 37 25.0	
	baz=256,slow=75,SNR=3.4						
SWI	**Sorong**	**20.91**	**227**	P	Pn	01 16 27.5	-0.6
	171nm,1.0s,13µm25µm						
JOW	**Kunigami**	**21.25**	**310**	P	**P**	**01 16 29.6**	**+0.6**
JOW				IAmb	IAmb	01 16 34.2	
	comp=Z,327nm,1.0s						
JOW	**Kunigami**	**21.25**	**310**	P	**P**	**01 16 31.7**	**+2.7**
JOW	**Kunigami**	**21.25**	**310**	⇓P	**P**	**01 16 32.0**	**+3.0**
JOW	**Kunigami**	**21.25**	**310**	P	**P**	**01 16 30.8**	**+1.8**
	comp=Z,167nm,0.8s,baz=147,slow=8.2,SNR=16						
JOW				LR	LR	01 24 40.6	
	comp=Z,13µm,19.4s,baz=140,slow=37						
	comp=Z,167nm,0.8s						
DAV	**Davao City (W)**	**21.49**	**254**	P	**P**	**01 16 27.0**	**-4.7**
DAV	**Davao City (W)**	**21.49**	**254**	LR	LR	01 24 54.7	
	comp=Z,6µm,20.2s,baz=89,slow=37						
DAV	**Davao City (W)**	**21.49**	**254**	P	**P**	**01 16 31.1**	**-0.6**
FAKI	**Fak Fak**	**21.76**	**221**	P	**P**	**01 16 35.4**	**+0.8**
FAKI				IAmb	IAmb	01 16 46.5	
	comp=Z,209nm,1.0s						
FAKI	**Fak Fak**	**21.76**	**221**	P	**P**	**01 16 36.4**	**+1.8**
FAKI	**Fak Fak**	**21.76**	**221**	⇑P	**P**	**01 16 35.7**	**+1.1**
FAKI	**Fak Fak**	**21.76**	**221**	P	**P**	**01 16 36.1**	**+1.5**
	comp=Z,202nm,1.1s,comp=Z,8µmcomp=Z,16µm						
JSG	**Sagara**	**21.99**	**342**	IAMs_20	IAMs_20	01 25 32.3	
	comp=Z,21µm,18.0s						
JMN	**Monobe**	**22.78**	**332**	P	**P**	**01 16 45.3**	**0.0**
JMN				IAmb	IAmb	01 16 48.4	
	comp=Z,226nm,1.2s						
JMN	**Monobe**	**22.78**	**332**	P	**P**	**01 16 46.0**	**+0.6**
JMN	**Monobe**	**22.78**	**332**	⇑P	**P**	**01 16 46.6**	**+1.3**
TNTI	**Ternate**	**22.84**	**237**	P	**P**	**01 16 44.3**	**-1.9**
TNTI	**Ternate**	**22.84**	**237**	P	**P**	**01 16 47.1**	**+0.9**
TNTI	**Ternate**	**22.84**	**237**	P	**P**	**01 16 46.4**	**+0.2**
	comp=Z,141nm,1.1s,comp=Z,4µmcomp=Z,6µm						
JGF	**Kuroka**	**23.10**	**341**	P	**P**	**01 16 48.4**	**-0.2**
JGF	**Kuroka**	**23.10**	**341**	P	**P**	**01 16 49.9**	**+1.2**
JGF	**Kuroka**	**23.10**	**341**	⇑P	**P**	**01 16 49.4**	**+0.7**
PMG	**Port Moresby**	**23.14**	**178**	P	**P**	**01 16 47.9**	**-1.3**
PMG				IAmb	IAmb	01 17 05.9	
	comp=Z,169nm,0.9s						
PMG	**Port Moresby**	**23.14**	**178**	P	**P**	**01 16 48.8**	**-0.3**
PMG	**Port Moresby**	**23.14**	**178**	P	**P**	**01 16 48.9**	**-0.2**
PMG	**Port Moresby**	**23.14**	**178**	⇑P	**P**	**01 16 49.3**	**+0.1**
PMG	**Port Moresby**	**23.14**	**178**	P	**P**	**01 16 47.9**	**-1.3**
PMG				pmax	pmax		
	comp=Z,169nm,0.9s						
LBMI	**Labuha**	**23.58**	**234**	P	**P**	**01 16 53.2**	**-0.4**
	comp=Z,201nm,1.1s,comp=Z,6µm						
MJAR	**Matsushiro Arr**	**23.72**	**344**	P	**P**	**01 16 53.6**	**-1.2**
	comp=Z,20nm,1.0s,baz=165,slow=9.1,SNR=21						
MJAR				LR	LR	01 25 29.5	
	comp=Z,13µm,18.4s,baz=154,slow=35						
	comp=Z,20nm,1.0s						
MAJO	**Matsushiro**	**23.72**	**344**	P	**P**	**01 16 54.8**	**0.0**
MAJO	**Matsushiro**	**23.72**	**344**	P	**P**	**01 16 54.8**	**0.0**
MAJO	**Matsushiro**	**23.72**	**344**	⇑P	**P**	**01 16 52.8**	**-2.0**
MAJO	**Matsushiro**	**23.72**	**344**	P	**P**	**01 16 54.8**	**0.0**
MAJO				pmax	pmax		
	comp=Z,37nm,0.8s						
MAJO				MLR	MLR		
	comp=Z,12µm,19.0s						
MJB9	**Matsu-Tunnel**	**23.73**	**344**	P	**P**	**01 16 54.9**	**0.0**
JNU	**Nakatsue**	**23.78**	**326**	P	**P**	**01 16 55.9**	**+0.5**
JNU	**Nakatsue**	**23.78**	**326**	P	**P**	**01 16 56.2**	**+0.8**
JNU	**Nakatsue**	**23.78**	**326**	P	**P**	**01 16 55.0**	**-0.5**
	comp=Z,88nm,0.9s,baz=135,slow=2.7,SNR=21						
	comp=Z,88nm,0.9s						
JMM	**Marumori**	**24.40**	**349**	P	**P**	**01 17 01.3**	**+0.2**
JMM				IAmb	IAmb	01 17 13.9	
	comp=Z,134nm,1.2s						
JMM	**Marumori**	**24.40**	**349**	P	**P**	**01 17 01.4**	**+0.3**
TGY	**Tagaytay City**	**24.65**	**274**	LR	LR	01 26 52.9	
	comp=Z,4µm,18.8s,baz=117,slow=37						
NACB	**Ninganchiao**	**25.50**	**297**	P	**P**	**01 17 12.2**	**+1.1**
NACB	**Ninganchiao**	**25.50**	**297**	P	**P**	**01 17 12.6**	**+1.5**
YULB	**Yu-li**	**25.51**	**295**	P	**P**	**01 17 12.8**	**+1.4**
YULB				IAmb	IAmb	01 17 15.7	
	comp=Z,232nm,1.4s						
YULB	**Yu-li**	**25.51**	**295**	P	**P**	**01 17 12.2**	**+0.9**
TWGBT	**Beinan**	**25.54**	**294**	P	**P**	**01 17 13.4**	**+1.8**
TWG	**Pinlang**	**25.55**	**294**	P	**P**	**01 17 12.5**	**+0.9**
TWG				IAmb	IAmb	01 17 15.5	
	comp=Z,192nm,1.4s						
NLAI	**Namlea**	**25.55**	**230**	P	**P**	**01 17 11.7**	**0.0**
	comp=Z,30nm,1.7s,comp=Z,5µm						
SANI	**Sanana**	**25.64**	**233**	P	**P**	**01 17 10.8**	**-1.7**
SANI	**Sanana**	**25.64**	**233**	P	**P**	**01 17 09.7**	**-2.8**
SANI	**Sanana**	**25.64**	**233**	⇑P	**P**	**01 17 10.7**	**-1.8**
SANI	**Sanana**	**25.64**	**233**	P	**P**	**01 17 10.5**	**-2.0**
	comp=Z,50nm,1.3s,comp=Z,4µmcomp=Z,7µm						
KMSI	**Cibinong**	**25.77**	**241**	P	**P**	**01 17 14.6**	**+0.9**
	comp=Z,1µm,0.9s,comp=Z,15µmcomp=Z,12µm						
YHNB	**Yeheng**	**25.85**	**298**	IAMs_20	IAMs_20	01 27 16.3	
	comp=Z,20µm,20.0s						
TATO	**Taipei**	**25.86**	**299**	IAMs_20	IAMs_20	01 27 06.3	
	comp=Z,15µm,20.0s						
SSLB	**Suanglung**	**25.93**	**296**	P	**P**	**01 17 15.9**	**+0.8**
SSLB	**Suanglung**	**25.93**	**296**	P	**P**	**01 17 16.3**	**+1.2**
TPUB	**Ta-pu**	**26.07**	**295**	P	**P**	**01 17 16.1**	**-0.3**
TPUB	**Ta-pu**	**26.07**	**295**	P	**P**	**01 17 18.5**	**+2.1**
HNR	**Honiara**	**26.80**	**149**	LR	LR	01 28 15.2	
	comp=Z,70µm,18.8s,baz=325,slow=37						
LUWI	**Luwuk**	**27.65**	**239**	P	**P**	**01 17 30.5**	**-0.2**
LUWI	**Luwuk**	**27.65**	**239**	P	**P**	**01 17 28.2**	**-2.5**
LUWI				S	**S**	**01 22 14.6**	**+3.1**
COEN	**Coen**	**27.82**	**187**	P	**P**	**01 17 32.4**	**+0.3**
COEN	**Coen**	**27.82**	**187**	P	**P**	**01 17 32.0**	**-0.1**
COEN	**Coen**	**27.82**	**187**	⇓P	**P**	**01 17 32.0**	**-0.1**
TJN	**Taejon**	**28.13**	**326**	P	**P**	**01 17 33.5**	**-1.2**
TJN	**Taejon**	**28.13**	**326**	P	**P**	**01 17 34.9**	**+0.2**
TJN	**Taejon**	**28.13**	**326**	P	**P**	**01 17 33.5**	**-1.2**
TJN				pmax	pmax		
	comp=Z,330nm,1.2s						
ERM	**Erimo**	**28.18**	**355**	IAMs_20	IAMs_20	01 29 10.7	
	comp=Z,15µm,20.0s						
JEM	**Erimo**	**28.18**	**355**	IAMs_20	IAMs_20	01 29 13.2	
	comp=Z,13µm,20.0s						
TOLI2	**Tolitoli**	**28.28**	**246**	P	**P**	**01 17 35.7**	**-0.6**
TOLI2	**Tolitoli**	**28.28**	**246**	P	**P**	**01 17 36.3**	**0.0**
QZH	**Quanzhou**	**28.33**	**297**	⇑*i*P	**P**	**01 17 37.9**	**+1.2**
QZH				S	**S**	**01 22 23.4**	**+1.3**
QZH				pmax	pmax		
	comp=Z,3µm,10.4s						
QZH				LR	LR		
	comp=Z,5µm,17.5s						
QZH				LR	LR		
	comp=Z,7µm,18.6s						
QZH				LR	LR		
	comp=Z,9µm,17.2s						
KSRS	**Korea Array**	**28.65**	**328**	P	**P**	**01 17 39.8**	**+0.4**
	comp=Z,27nm,0.8s,baz=146,slow=9.4,SNR=61						
KSRS				PcP	**PcP**	**01 20 51.5**	**+1.6**
	comp=Z,4.7nm,1.1s,baz=158,slow=2.4,SNR=5.5						
KSRS				LR	LR	01 28 46.5	
	comp=Z,12µm,18.1s,baz=140,slow=36						
	comp=Z,27nm,0.8s						
KSAR	**Wonju Array Be**	**28.66**	**328**	P	**P**	**01 17 38.7**	**-0.7**
KSAR	**Wonju Array Be**	**28.66**	**328**	P	**P**	**01 17 38.7**	**-0.7**
KS19	**Wonju Array Si**	**28.71**	**328**	P	**P**	**01 17 39.4**	**-0.6**
MYLDM	**Lahad Datu**	**28.75**	**255**	P	**P**	**01 17 38.7**	**-1.8**
MYLDM				IAmb	IAmb	01 17 44.9	
	comp=Z,204nm,1.4s						
SSE	**Sheshan**	**28.77**	**311**	P	**P**	**01 17 39.1**	**-1.4**
SSE				S	**S**	**01 22 30.8**	**+2.0**
SSE				pmax	pmax		
	comp=Z,19nm,1.4s						
SSE				pmax	pmax		
	comp=Z,940nm,7.7s						
SSE				LR	LR		
	comp=Z,2µm,20.0s						
SSE				LR	LR		
	comp=Z,4µm,19.2s						
INCN	**Inchon**	**29.34**	**327**	P	**P**	**01 17 45.8**	**+0.3**
INCN	**Inchon**	**29.34**	**327**	P	**P**	**01 17 46.9**	**+1.4**
MPSI	**Mapaga**	**29.42**	**245**	P	**P**	**01 17 45.6**	**-0.9**
	comp=Z,67nm,0.9s,comp=Z,2µmcomp=Z,5µm						
KDU	**Kakadu**	**29.75**	**208**	P	**P**	**01 17 48.3**	**-1.0**
KDU	**Kakadu**	**29.75**	**208**	⇑P	**P**	**01 17 47.9**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**30.07**	**359**	P	P	01 17 44.1	-7.7
YUK				*e*		01 18 50.8	
YUK				*e*S	**S**	**01 22 44.9**	**-3.9**
YUK				*e*SS	**SnSn**	**01 24 20.6**	**-1.6**
YUK				*e*SSS	SSS	01 24 40.0	
YUK				pmax	pmax		
	comp=Z,204nm,1.0s						
YUK				pmax	pmax		
	comp=Z,439nm,3.6s						
YUK				MLR	MLR		
	comp=Z,5µm,16.0s						
YUK				MLR	MLR		
	comp=N,3µm,15.0s						
YUK				MLR	MLR		
	comp=E,3µm,13.0s						
HJU	**Haeju**	**30.24**	**327**	P	**P**	**01 17 49.4**	**-4.0**
HJU				AmB			
	comp=Z,2µm,3.8s						
HJU				AMS	AMS		
	comp=Z,8µm,15.1s						
JKA	**Kamikawa-asahi**	**30.31**	**355**	P	**P**	**01 17 54.9**	**+0.9**
ASAJ	**Asahikawa**	**30.31**	**355**	P	**P**	**01 17 54.9**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,47nm,1.1s						
ASAJ				MLR	MLR		
	comp=Z,9µm,21.0s						
ASAJ	**Asahikawa**	**30.31**	**355**	P	**P**	**01 17 55.2**	**+1.2**
	comp=Z,8.9nm,0.4s,baz=154,slow=10,SNR=4.7						
ASAJ				LR	LR	01 33 00.3	
	comp=Z,4µm,18.5s,baz=170,slow=42						
	comp=Z,8.9nm,0.4s						
MTN	**Manton Dam**	**30.52**	**210**	P	**P**	**01 17 56.4**	**+0.3**
MTN	**Manton Dam**	**30.52**	**210**	P	**P**	**01 17 55.5**	**-0.6**
MTN	**Manton Dam**	**30.52**	**210**	⇓P	**P**	**01 17 55.5**	**-0.6**
HHU	**Hamhung**	**30.77**	**331**	P	**P**	**01 17 59.9**	**+1.9**
HHU				S	**S**	**01 23 01.8**	**+1.8**
HHU				AmB			
	comp=Z,533nm,2.7s						
HHU				AMS	AMS		
	comp=Z,5µm,14.5s						
NJ2	**Nanjing**	**30.97**	**310**	⇑P	P	01 17 53.5	-6.4
NJ2				pP	pP	01 18 00.7	-5.0
NJ2				PP	**PnPn**	**01 19 03.4**	**+2.2**
NJ2				S	**S**	**01 22 58.2**	**-5.1**
NJ2				sS	sS	01 23 16.0	+3.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,1µm,9.5s						
NJ2				LR	LR		
	comp=N,6µm,14.7s						
NJ2				LR	LR		
	comp=E,6µm,20.2s						
NJ2				LR	LR		
	comp=Z,11µm,17.7s						
PYAG	**Pyongyang**	**30.97**	**328**	P	**P**	**01 17 57.6**	**-2.3**
PYAG				S	**S**	**01 22 56.1**	**-7.0**
PYAG				AmB			
	comp=Z,1µm,3.8s						
PYAG				AMS	AMS		
	comp=Z,9µm,14.4s						
TTSI	**Tana Toraja**	**31.21**	**239**	P	**P**	**01 18 02.9**	**+0.6**
	comp=Z,35nm,0.8s,comp=Z,2µmcomp=Z,4µm						
MSHR	**Mys Shultsa**	**31.47**	**338**	⇓*e*P	**P**	**01 18 05.8**	**+1.6**
MSHR				pmax	pmax		
	comp=Z,103nm,2.5s						
PSTR	**Posyet**	**31.66**	**338**	⇓*i*P	**P**	**01 18 08.4**	**+2.5**
MTSU	**Mount Surprise**	**31.86**	**184**	P	**P**	**01 18 07.6**	**-0.3**
SOEI	**Soe**	**32.10**	**224**	P	**P**	**01 18 10.7**	**+0.5**
SOEI	**Soe**	**32.10**	**224**	P	**P**	**01 18 07.9**	**-2.3**
SOEI				S	**S**	**01 23 18.9**	**-2.7**
SOEI	**Soe**	**32.10**	**224**	P	**P**	**01 18 11.5**	**+1.3**
	comp=Z,135nm,1.1s,comp=Z,2µm						
TEY	**Ternei**	**32.15**	**347**	*e*P	**P**	**01 18 08.8**	**-1.3**
KAPI	**Kappang**	**32.37**	**236**	P	**P**	**01 18 13.0**	**+0.5**
KAPI	**Kappang**	**32.37**	**236**	P	**P**	**01 18 13.0**	**+0.5**
KAPI				pmax	pmax		
	comp=Z,28nm,0.7s						
SUJ	**Sinuiju**	**32.40**	**328**	P	**P**	**01 18 09.4**	**-3.1**
SUJ				S	**S**	**01 23 17.0**	**-8.6**
SUJ				AmB			
	comp=Z,1µm,3.8s						
SUJ				AMS	AMS		
	comp=Z,10µm,18.1s						
GZH	**Guangzhou**	**32.54**	**291**	P	**P**	**01 18 12.6**	**-1.3**
GZH				PP	**PP**	**01 19 25.8**	**-1.8**
GZH				S	**S**	**01 23 28.1**	**0.0**
GZH				pmax	pmax		
	comp=Z,270nm,1.8s						
GZH				LR	LR		
	comp=Z,2µm,16.6s						
GZH				LR	LR		
	comp=Z,2µm,16.4s						
USA0B	**Ussuriysk Arra**	**32.62**	**341**	P	**P**	**01 18 15.1**	**+0.8**
USA0B	**Ussuriysk Arra**	**32.62**	**341**	P	**P**	**01 18 15.1**	**+0.8**
USA0B				pmax	pmax		
	comp=Z,23nm,1.2s						
USA0B				MLR	MLR		
	comp=Z,8µm,18.0s						
USRK	**Ussuriysk Ar.**	**32.62**	**341**	P	**P**	**01 18 15.5**	**+1.2**
USRK	**Ussuriysk Ar.**	**32.62**	**341**	P	**P**	**01 18 15.5**	**+1.2**
USRK	**Ussuriysk Ar.**	**32.62**	**341**	P	**P**	**01 18 15.2**	**+0.9**
	comp=Z,6.0nm,0.8s,baz=145,slow=7.1,SNR=6.9						
USRK				LR	LR	01 30 44.4	
	comp=Z,7µm,18.4s,baz=155,slow=35						
	comp=Z,6.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**33.12**	**356**	*e*P	**P**	**01 18 19.3**	**+0.7**
YSS				*e*		01 19 33.2	
YSS				*e*PPP	PPP	01 19 47.0	
YSS				*e*S	**S**	**01 23 37.0**	**+0.5**
YSS				*e*SSS	SSS	01 25 41.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,700nm,4.4s						
YSS				smax	smax		
	comp=N,400nm,6.6s						
YSS				MLR	MLR		
	comp=Z,7µm,16.0s						
YSS				MLR	MLR		
	comp=N,4µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
DL2	**Dalian**	**33.13**	**323**	P	P	01 18 10.9	-8.0
DL2				S	S	01 23 23.8	-13
DL2				pmax	pmax		
	comp=Z,150nm,1.5s						
DL2				pmax	pmax		
	comp=Z,1µm,9.1s						
DL2				LR	LR		
	comp=N,6µm,17.2s						
DL2				LR	LR		
	comp=E,4µm,18.7s						
DL2				LR	LR		
	comp=Z,8µm,18.8s						
EDFI	**Ende, Flores**	**33.22**	**229**	P	**P**	**01 18 18.3**	**-1.7**
	comp=Z,38nm,0.8s,comp=Z,1µm						
CTA	**Charters Tower

MDJ ScS **ScS** **01 28 49.5 +1.1**
MDJ pmax pmax
comp=Z,22nm,1.8s
MDJ pmax pmax
comp=Z,1µm,7.6s
MDJ LR LR
comp=Z,7µm,19.9s
MDJ LR LR
comp=Z,11µm,14.1s
MDJ LR LR
comp=Z,14µm,17.7s
MDJ Mudanjiang 33.80 338 IAMs_20 IAMs_20 01 31 31.4
comp=Z,11µm,19.0s
MDJ Mudanjiang 33.80 338 P **P** **01 18 26.4 +1.7**
CNSH ChangSha 34.15 300 ⇑P **P** **01 18 29.6 +1.8**
CNSH S **S** **01 23 57.4 +4.5**
CNSH pmax pmax
comp=Z,33nm,1.5s
CNSH LR LR
comp=Z,6µm,17.0s
CNSH LR LR
comp=Z,5µm,18.6s
SNY Shenyang 34.15 329 ⇓P **P** **01 18 28.8 +1.2**
SNY pmax pmax
comp=Z,33nm,1.4s
SNY pmax pmax
comp=Z,530nm,3.9s
SNY LR LR
comp=Z,1µm,19.4s
SNY LR LR
comp=Z,2µm,15.5s
SNY LR LR
comp=Z,4µm,17.8s
TIA Tai'an 34.34 316 *e*P **P** **01 18 30.3 +0.8**
TIA S **S** **01 23 58.4 +2.6**
TIA pmax pmax
comp=Z,16nm,1.3s
TIA pmax pmax
comp=Z,820nm,9.3s
TIA LR LR
comp=Z,3µm,16.7s
TIA LR LR
comp=Z,4µm,15.7s
TIA LR LR
comp=Z,6µm,16.7s
CN2 Changchun 34.79 333 *e*P **P** **01 18 32.4 -0.8**
CN2 *es*P sP 01 18 41.2 -0.1
CN2 *eS* **S** **01 24 00.7 -1.7**
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 LR LR
comp=Z,3µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,3µm,19.0s
QIS Mount Isa 34.85 191 P **P** **01 18 33.2 -0.7**
UGL Uglegorsk 35.28 355 *e*P **P** **01 18 38.4 +1.0**
UGL *e* 01 20 01.2
UGL *eS* **S** **01 24 09.0 -0.9**
UGL pmax pmax
comp=Z,2µm,11.0s
UGL pmax pmax
comp=Z,2µm,11.0s
UGL smax smax
comp=E,2µm,12.0s
UGL MLR MLR
comp=N,8µm,17.0s
UGL MLR MLR
comp=E,7µm,18.0s
UGL MLR MLR
comp=Z,6µm,18.0s
QIZ Qiongzhong 35.33 283 P **P** **01 18 39.0 +0.8**
QIZ PP **PP** **01 19 59.6 +1.0**
QIZ PcP **PcP** **01 21 08.5 +0.1**
QIZ S **S** **01 24 14.6 +3.2**
QIZ pmax pmax
comp=Z,1µm,9.0s
QIZ LR LR
comp=Z,3µm,21.1s
QIZ LR LR
comp=Z,9µm,19.0s
QIZ LR LR
comp=Z,12µm,19.3s
QIZ Qiongzhong 35.33 283 IAMs_20 IAMs_20 01 32 07.3
comp=Z,12µm,20.0s
WB0 Warramunga Arr 35.43 200 P **P** **01 18 37.9 -1.1**
WR0 Warramunga Arr 35.56 199 P **P** **01 18 39.1 -1.0**
SBUM Sibu 35.56 254 P **P** **01 18 41.1 +0.9**
SBUM Sibu 35.56 254 ⇑P **P** **01 18 40.7 +0.5**
BNX BinXian 35.57 337 ⇓P **P** **01 18 39.8 -0.1**
BNX pP **pwP** **01 18 51.1 -0.4**
BNX sP sP 01 18 56.2 +8.1
BNX S **S** **01 24 13.8 -0.6**
BNX pmax pmax
comp=Z,32nm,1.9s
BNX pmax pmax
comp=Z,1µm,9.2s
BNX LR LR
comp=Z,6µm,16.5s
BNX LR LR
comp=Z,7µm,16.6s
BNX LR LR
comp=Z,10µm,18.6s
WRAB Tennant Creek 35.60 200 P **P** **01 18 39.3 -1.1**
WRAB IAmb IAmb 01 19 05.5
comp=Z,196nm,1.7s
WRAB Tennant Creek 35.60 200 P **P** **01 18 39.3 -1.1**
WRAB pmax pmax
comp=Z,196nm,1.7s
WRAB MLR MLR
comp=Z,5µm,19.0s
WB2 Warramunga Arr 35.61 200 P **P** **01 18 39.7 -0.8**
WB2 IAmb IAmb 01 19 05.7
comp=Z,203nm,1.8s
WRA Warramunga Arr 35.61 200 P **P** **01 18 39.9 -0.7**
WRA Warramunga Arr 35.61 200 P **P** **01 18 39.9 -0.7**
WRA MLR MLR
comp=Z,500nm,18.0s
WRA Warramunga Arr 35.61 200 P **P** **01 18 39.5 -1.1**
comp=Z,22nm,0.8s,baz=19,slow=9.3,SNR=34
WRA PcP **PcP** **01 21 09.8 +0.7**
comp=Z,6.6nm,1.0s,baz=19,slow=3.2,SNR=4.1
WRA ScP **ScP** **01 24 54.0 +0.1**
comp=Z,4.4nm,1.0s,baz=19,slow=3.9,SNR=6.5
comp=Z,22nm,0.8s
GULI GuiLin 35.63 294 ⇓P **P** **01 18 40.5 -0.3**
GULI S **S** **01 24 16.2 +0.3**
GULI pmax pmax
comp=Z,50nm,1.4s
GULI LR LR
comp=Z,6µm,16.3s
GULI LR LR
comp=Z,7µm,19.9s
GULI LR LR
comp=Z,12µm,19.0s
PLAI Plampang 36.22 233 P **P** **01 18 46.6 +0.8**
PLAI Plampang 36.22 233 P **P** **01 18 47.2 +1.4**
comp=Z,49nm,0.8s,comp=Z,1µmcomp=Z,5µm
HNS HongShan 36.62 316 ⇑P **P** **01 18 49.6 +0.6**
HNS PP **PP** **01 20 13.1 +0.6**
HNS S **S** **01 24 33.6 +2.9**
HNS pmax pmax
comp=Z,97nm,1.4s
HNS pmax pmax
comp=Z,2µm,9.2s
HNS LR LR
comp=Z,4µm,15.3s
HNS LR LR
comp=Z,7µm,16.1s
HNS LR LR
comp=Z,10µm,18.6s
LYN LuoYang 36.86 310 ⇑*i*P **P** **01 18 51.8 +0.7**
LYN pP pP 01 18 55.6 -1.1
LYN sP sP 01 18 58.9 -0.3
LYN PP **PnPn** **01 20 19.2 +3.8**
LYN S **S** **01 24 37.0 +2.5**
LYN sS sS 01 24 43.8 -0.4
LYN SS **SnSn** **01 27 05.1 -2.2**
LYN pmax pmax
comp=Z,120nm,1.2s
LYN pmax pmax
comp=Z,2µm,9.4s
LYN LR LR
comp=Z,8µm,14.4s
LYN LR LR
comp=Z,4µm,15.6s
LYN LR LR
comp=Z,8µm,16.9s
TWSI Taliwang, Sumb 36.87 234 P **P** **01 18 50.2 -1.1**
comp=Z,69nm,0.8s,comp=Z,1µmcomp=Z,4µm
TYV Tymovskoe 37.02 356 *e*P **P** **01 18 51.6 -0.6**
TYV *eS* **S** **01 24 38.7 +2.4**
TYV pmax pmax
comp=Z,800nm,5.0s
TYV pmax pmax
comp=Z,31nm,1.4s
TYV smax smax
comp=N,400nm,4.6s
TYV smax smax
comp=E,1µm,4.6s
BJT Baijiatuao 37.12 320 IAMs_20 IAMs_20 01 35 10.8
comp=Z,9µm,19.0s
BJT Baijiatuao 37.12 320 P **P** **01 18 54.0 +0.8**
BJI Beijing 37.13 320 P **P** **01 18 53.5 +0.2**
BJI PP **PP** **01 20 18.4 +0.3**
BJI S **S** **01 24 40.2 +1.9**
BJI pmax pmax
comp=Z,33nm,1.5s
BJI pmax pmax
comp=Z,710nm,9.4s
BJI LR LR
comp=Z,4µm,19.2s
BJI LR LR
comp=Z,2µm,17.6s
BJI LR LR
comp=Z,5µm,18.6s
STKI Sintang 37.14 251 P **P** **01 18 54.0 +0.3**
comp=Z,133nm,1.0s,comp=Z,15µm
KLR Kul'dur 37.25 344 ⇓*i*P **P** **01 18 53.9 -0.3**
KLR pmax pmax
comp=Z,25nm,1.1s
KLR Kul'dur 37.25 344 P **P** **01 18 53.5 -0.6**
comp=Z,10.0nm,0.9s,baz=123,slow=9.1,SNR=24
KLR PcP **PcP** **01 21 15.1 +1.6**
comp=Z,7.3nm,0.9s,baz=182,slow=4.3,SNR=3.7
KLR LR LR 01 33 37.7
comp=Z,7µm,18.4s,baz=160,slow=35
comp=Z,10.0nm,0.9s
RK1H Rockhampton Ha 37.25 174 P **P** **01 18 54.8 +0.4**
SKR Severo-Kuril's 37.57 10 *e*P **P** 01 18 51.4 -5.4
SKR *eS* **S** **01 24 52.2 +7.5**
SKR pmax pmax
comp=Z,500nm,4.0s
SKR MLR MLR
comp=Z,5µm,20.0s
ENH Enshi 37.64 302 P **P** **01 18 59.2 +1.3**
GRNR Gornyy 37.67 350 ⇓*i*P **P** **01 19 00.2 +2.4**
GRNR pmax pmax
comp=Z,8.0nm,0.9s
GRNR MLR MLR
comp=N,2µm,18.0s
GRNR MLR MLR
comp=Z,4µm,17.0s
KSM Kuching 37.70 254 P **P** **01 18 57.9 -0.5**
KSM IAmb IAmb 01 19 00.5
comp=Z,155nm,1.2s
KSM Kuching 37.70 254 P **P** **01 18 58.6 +0.2**
FITZ Fitzroy Crossi 37.76 213 P **P** **01 18 58.6 -0.2**
FITZ Fitzroy Crossi 37.76 213 P **P** **01 18 58.6 -0.2**
FITZ Fitzroy Crossi 37.76 213 ⇑P **P** **01 18 58.4 -0.4**
SRBI Singaraja 37.82 237 P **P** **01 19 01.3 +1.9**
comp=Z,138nm,1.7s,comp=Z,4µmcomp=Z,7µm
TIY Taiyuan 38.34 315 ⇓P **P** **01 19 05.4 +1.7**
TIY PP **PnPn** **01 20 36.5 +3.2**
TIY S **S** **01 25 00.3 +3.3**
TIY SS **SnSn** **01 27 39.0 -4.0**
TIY pmax pmax
comp=Z,64nm,1.1s
TIY pmax pmax
comp=Z,2µm,9.2s
TIY LR LR
comp=Z,4µm,19.2s
TIY LR LR
comp=Z,8µm,17.9s
TIY LR LR
comp=Z,11µm,17.9s
KOUNC Koumac, New Ca 38.49 152 P **P** **01 19 04.6 -0.4**
KOUNC Koumac, New Ca 38.49 152 P **P** **01 19 04.2 -0.7**
JAGI Jajag, Banyuwa 38.90 237 P **P** **01 19 07.3 -1.2**
JAGI IAmb IAmb 01 19 24.7
comp=Z,158nm,1.5s
JAGI Jajag, Banyuwa 38.90 237 P **P** **01 19 07.7 -0.8**
JAGI Jajag, Banyuwa 38.90 237 ⇑P **P** **01 19 06.4 -2.1**
BLJI Banyuglugur 38.95 238 P **P** **01 19 10.4 +1.4**
comp=Z,174nm,0.9s,comp=Z,5µm
GYA Guiyang 39.13 295 ⇑*i*P **P** **01 19 12.4 +1.8**
GYA pP pP 01 19 15.9 -0.2
GYA sP sP 01 19 17.8 -0.3
GYA PP **PnPn** **01 20 46.2 +3.1**
GYA S **S** **01 25 13.1 +3.7**
GYA SS **SS** **01 27 57.3 -5.1**
GYA pmax pmax
comp=Z,44nm,1.2s
GYA pmax pmax
comp=Z,2µm,10.1s
GYA LR LR
comp=Z,4µm,17.5s
GYA LR LR
comp=Z,6µm,18.4s
GYA LR LR
comp=Z,8µm,19.4s
AS01 Alice Springs 39.22 198 P **P** **01 19 10.5 -0.6**
AS31 Alice Springs 39.24 198 P **P** **01 19 10.3 -1.0**
ASAR Alice Springs 39.24 198 P **P** **01 19 10.6 -0.7**
ASAR Alice Springs 39.24 198 P **P** **01 19 10.2 -1.1**
comp=Z,5.2nm,0.6s,baz=17,slow=7.5,SNR=49
ASAR PcP **PcP** **01 21 21.9 +1.7**
comp=Z,11nm,1.1s,baz=5.7,slow=2.8,SNR=3.2
ASAR LR LR 01 37 07.0
comp=Z,4µm,18.8s,baz=24,slow=39
comp=Z,5.2nm,0.6s
EIDS Eidsvold 39.27 173 P **P** **01 19 12.0 +0.6**
EIDS Eidsvold 39.27 173 P **P** **01 19 12.1 +0.6**
XAN Xi'an 39.35 307 ⇑P **P** **01 19 12.6 +0.4**
XAN pP pP 01 19 17.1 -0.7
XAN sP sP 01 19 19.7 0.0
XAN PP **PnPn** **01 20 47.6 +2.1**
XAN PcP **PcP** **01 21 22.8 +2.3**
XAN S **S** **01 25 14.6 +2.3**
XAN sS sS 01 25 24.1 +2.0
XAN SS **SS** **01 27 58.9 -7.6**
XAN pmax pmax
comp=Z,40nm,2.1s
XAN pmax pmax
comp=Z,2µm,10.9s
XAN LR LR
comp=Z,3µm,18.2s
XAN LR LR
comp=Z,9µm,17.2s
XAN LR LR
comp=Z,13µm,17.5s
GMJI Gumukmas 39.37 238 P **P** **01 19 13.0 +0.6**
comp=Z,84nm,1.2s
HEH HeiHe 39.43 341 *e*P **P** **01 19 12.4 -0.1**
HEH pP **pP** **01 19 16.1 -2.2**
HEH PcP **PcP** **01 21 20.4 +0.1**
HEH S **S** **01 25 10.8 -2.1**
HEH ScS **ScS** **01 29 19.1 -0.4**
HEH pmax pmax
comp=Z,32nm,1.8s
HEH pmax pmax
comp=Z,1µm,7.1s
HEH LR LR
comp=Z,3µm,16.7s
HEH LR LR
comp=Z,7µm,16.1s
HEH LR LR
comp=Z,9µm,16.4s
XLT XiLinHaoTe 39.55 325 *e*P **P** **01 19 14.2 +0.4**
XLT PcS **PcS** **01 25 11.8 +0.9**
XLT S **S** **01 25 15.1 -0.1**
XLT SS **SS** **01 28 04.4 -5.9**
XLT pmax pmax
comp=Z,53nm,1.1s
XLT pmax pmax
comp=Z,2µm,6.0s
XLT LR LR
comp=Z,500nm,16.9s
XLT LR LR
comp=Z,4µm,17.0s
XLT LR LR
comp=Z,5µm,17.1s
PEA0B Petropavlovsk- 40.17 11 IAMs_20 IAMs_20 01 37 11.6
comp=Z,8µm,20.0s
PETK Petropavlovsk- 40.17 11 P **P** **01 19 20.4 +1.7**
comp=Z,11nm,0.9s,baz=183,slow=9.8,SNR=7.2
PETK LR LR 01 36 22.4
comp=Z,5µm,19.9s,baz=200,slow=37
comp=Z,11nm,0.9s
QLP Quilpie 40.26 183 P **P** **01 19 18.4 -1.3**
PET Petropavlovsk 40.27 11 *e*P **P** **01 19 17.3 -2.1**
PET *eS* **S** **01 25 26.0 +0.6**
PET *eSS* **SS** **01 28 23.9 -0.3**
PET pmax pmax
comp=Z,800nm,11.3s
PET MLR MLR
comp=Z,5µm,21.0s
PET MLR MLR
comp=Z,5µm,16.0s
HHC Hu-ho-hao-te 40.50 318 ⇑P **P** **01 19 22.8 +1.1**
HHC S **S** **01 25 30.1 +0.6**
HHC pmax pmax
comp=Z,60nm,1.4s
HHC pmax pmax
comp=Z,2µm,7.4s
HHC LR LR
comp=Z,3µm,17.7s
HHC LR LR
comp=Z,5µm,18.1s
HHC LR LR
comp=Z,8µm,17.3s
NGJI Ngawi 40.54 241 P **P** **01 19 23.3 +1.1**
comp=Z,116nm,0.9s,comp=Z,4µm
DZM Mont Dzumac 40.80 151 P **P** **01 19 23.7 -0.6**
DZM Mont Dzumac 40.80 151 P **P** **01 19 23.5 -0.8**
DZM Mont Dzumac 40.80 151 ⇑P **P** **01 19 23.6 -0.8**
DZM Mont Dzumac 40.80 151 LR LR 01 36 14.4
comp=Z,4µm,18.2s,baz=328,slow=36
YATNC Mamie plateau, 41.00 150 P **P** **01 19 25.9 0.0**
SLVN Son La 41.02 287 P **P** **01 19 26.7 +0.4**
SLVN IAMs_20 IAMs_20 01 36 10.1
comp=Z,10µm,20.0s
BTO Baotou 41.39 317 *e*P **P** **01 19 31.5 +2.5**
BTO pP **sP** **01 19 36.0 -1.2**
BTO sP **pwP** **01 19 38.2 -2.8**
BTO PP **PnPn** **01 21 11.3 +1.8**
BTO S **S** **01 25 48.0 +5.3**
BTO sS **sS** **01 25 56.6 +4.4**
BTO SS **SS** **01 28 48.1 +1.1**
BTO pmax pmax
comp=Z,180nm,1.3s
BTO pmax pmax
comp=Z,4µm,9.4s
BTO LR LR
comp=Z,9µm,17.4s
BTO LR LR
comp=Z,10µm,16.1s
BTO LR LR
comp=Z,12µm,19.1s
HIA Hailar 41.51 334 IAMs_20 IAMs_20 01 36 07.3
comp=Z,8µm,18.0s
HIA Hailar 41.51 334 P **P** **01 19 30.6 +0.8**
HIA Hailar 41.51 334 *c*P **P** **01 19 30.0 +0.2**
HIA pmax pmax
comp=Z,79nm,1.4s
UGM Wanagama 41.62 241 P **P** **01 19 31.2 +0.1**
NONG Nongkai 41.67 282 P **P** **01 19 32.9 +1.4**
INKA Innaminka 41.72 187 P **P** **01 19 30.2 -1.4**
KMI Kunming 42.42 292 ⇑P **P** **01 19 39.4 +1.5**
KMI PcP **PcP** **01 21 34.2 +3.3**
KMI S **S** **01 25 56.0 -2.6**
KMI SS **SS** **01 29 08.8 +0.6**
KMI pmax pmax
comp=Z,20nm,1.7s
KMI pmax pmax
comp=Z,2µm,9.6s
KMI LR LR
comp=Z,4µm,19.3s
KMI LR LR
comp=Z,3µm,17.0s
KMI LR LR
comp=Z,6µm,20.2s
WRKA Warakurna 42.49 205 P **P** **01 19 37.3 -0.7**
WRKA Warakurna 42.49 205 ⇑P **P** **01 19 37.0 -1.1**
ZEA Zeya 42.54 343 *e*P **P** **01 19 37.3 -0.8**
ZEA *e* 01 21 32.2
ZEA *e* 01 29 37.9
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA pmax pmax
comp=E,200nm,9.3s
ZEA pmax pmax
comp=Z,400nm,11.9s
ZEA MLR MLR
comp=E,2µm,13.0s
ZEA MLR MLR
comp=N,5µm,15.0s
ZEA MLR MLR
comp=Z,5µm,17.0s
CD2 Chengdu 42.57 301 P **P** **01 19 39.8 +1.0**
CD2 sP sP 01 19 46.2 -0.2
CD2 PP **PP** **01 21 17.5 -0.2**
CD2 S **S** **01 26 03.4 +3.1**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,1µm,7.4s
CD2 LR LR
comp=Z,7µm,19.6s
CD2 LR LR
comp=Z,5µm,21.6s
CD2 LR LR
comp=Z,7µm,22.6s
OOD Oodnadatta 42.68 194 P **P** **01 19 38.6 -0.9**
KPJI Karang Pucung 42.69 243 P **P** **01 19 41.8 +2.0**
comp=Z,62nm,0.7s,comp=Z,3µm
AULRC Lightning Ridg 43.08 178 P **P** **01 19 42.8 +0.1**
PZH PanZhiHua 43.49 294 ⇓P **P** **01 19 47.8 +1.4**
PZH S **S** **01 26 15.2 +1.1**
PZH pmax pmax
comp=Z,30nm,0.8s
PZH pmax pmax
comp=Z,1µm,7.2s
PZH LR LR
comp=Z,3µm,18.4s
PZH LR LR
comp=Z,5µm,19.2s
PZH LR LR
comp=Z,6µm,20.0s
MBWA Marble Bar 43.53 217 P **P** **01 19 46.2 -0.3**
MBWA Marble Bar 43.53 217 ⇓P **P** **01 19 46.5 0.0**
MBWA Marble Bar 43.53 217 P **P** **01 19 46.4 0.0**
MBWA P **P** **01 19 46.4 0.0**
MBWA S **S** **01 26 09.9 -4.3**
MBWA S **S** **01 26 09.9 -4.3**
LEM Lembang 43.59 244 LR LR 01 39 05.4
comp=Z,1µm,19.4s,baz=46,slow=38
NAYO Nakonayok 43.61 276 P **P** **01 19 48.8 +1.5**
MYKOM Kota Tinggi 43.68 258 P **P** **01 19 47.5 -0.4**
DSRI Dabo 43.74 254 P **P** **01 19 48.8 +0.4**
comp=Z,187nm,1.0s,comp=Z,5µmcomp=Z,4µm
PSA00 Pilbara Seismi 43.78 217 P **P** **01 19 48.7 +0.2**
PSA00 Pilbara Seismi 43.78 217 P **P** **01 19 48.3 -0.2**
PSA00 IAmb IAmb 01 19 53.7
comp=Z,94nm,1.9s
PSA00 IAMs_20 IAMs_20 01 40 41.0
comp=Z,2µm,18.0s
PSA00 Pilbara Seismi 43.78 217 P **P** **01 19 48.7 +0.2**
BBJI Bungbulang 43.86 243 P **P** **01 19 47.7 -1.7**
LZH Lanzhou 43.97 308 ⇑P **P** **01 19 51.6 +1.5**
LZH sP pwP 01 20 03.3 +1.1
LZH ScP **ScP** **01 25 28.8 +2.5**
LZH S **S** **01 26 22.2 +1.3**
LZH pmax pmax
comp=Z,84nm,1.3s
LZH pmax pmax
comp=Z,2µm,6.0s
LZH LR LR
comp=Z,5µm,17.0s
LZH LR LR
comp=Z,3µm,16.3s
LZH LR LR
comp=Z,5µm,16.7s

CRAI	Chiangrai	44.29	285	P		P		01 19 52.8	+0.1
ARMA	Armidale	44.33	173	P		P		01 19 54.0	+1.2
ARMA	Armidale	44.33	173	P		P		01 19 52.7	-0.2
SHEM	Shemya Is, Ala	44.62	24	LR		LR		01 36 31.3	
	comp=Z,6µm,21.5s,baz=228,slow=33								
LCRK	Leigh Creek	44.75	190	P		P		01 19 55.2	-0.9
CMSA	Cobar Meteorol	45.15	181	P		P		01 19 58.7	-0.6
MULG	Mulgathing	45.46	195	P		P		01 20 01.0	-0.8
IPM	Ipoh	45.62	263	P		P		01 20 03.2	-0.2
IPM	Ipoh	45.62	263	P		P		01 20 04.3	+0.9
CHTO	Chiang Mai	45.64	283	P		P		01 20 03.5	0.0
CHTO	Chiang Mai	45.64	283	P		P		01 20 04.4	+0.9
CHTO	Chiang Mai	45.64	283	⇑P		P		01 20 04.0	+0.4
CHTO	Chiang Mai	45.64	283	P		P		01 20 03.5	0.0
CHTO				pmax		pmax			
	comp=Z,19nm,1.0s								
CHTO				MLR		MLR			
	comp=Z,4µm,20.0s								
CHTO	Chiang Mai	45.64	283	P		P		01 20 04.6	+1.0
CHTO				P		P		01 20 04.6	+1.0
CHTO				P		P		01 20 04.6	+1.0
CMAR	Chiang Mai Arr	45.65	282	P		P		01 20 04.8	+1.3
CMAR	Chiang Mai Arr	45.65	282	*ceP*		P		01 20 04.9	+1.3
CMAR				pmax		pmax			
	comp=Z,31nm,0.8s								
CMAR	Chiang Mai Arr	45.65	282	P		P		01 20 04.2	+0.7
	comp=Z,28nm,0.8s,baz=83,slow=6.0,SNR=100								
CMAR				PcP		PcP		01 21 44.1	+2.4
	comp=Z,4.7nm,0.8s,baz=78,slow=2.5,SNR=1.7								
CMAR				LR		LR		01 39 07.4	
	comp=Z,4µm,19.9s,baz=90,slow=36								
	comp=Z,28nm,0.8s								
CM31	Chiang Mai Arr	45.65	282	P		P		01 20 04.3	+0.7
CM31				IAmb		IAmb		01 20 06.4	
	comp=Z,50nm,0.9s								
STKA	Stephens Creek	45.71	186	P		P		01 20 03.6	-0.1
STKA	Stephens Creek	45.71	186	P		P		01 20 02.6	-1.1
STKA	Stephens Creek	45.71	186	P		P		01 20 03.6	-0.1
STKA				pmax		pmax			
	comp=Z,34nm,2.0s								
STKA	Stephens Creek	45.71	186	P		P		01 20 02.4	-1.3
	comp=Z,11nm,0.7s,baz=4.0,slow=10,SNR=20								
STKA				LR		LR		01 39 55.7	
	comp=Z,4µm,19.3s,baz=1.2,slow=37								
	comp=Z,11nm,0.7s								
SRDT	SRDT	45.73	277	P		P		01 20 05.6	+1.4
KASI	Kota Agung	45.78	248	P		P		01 20 04.0	-0.6
	comp=Z,90nm,1.1s,comp=Z,2µm								
KULM	Kulim	45.78	264	P		P		01 20 04.2	-0.5
KULM				IAmb		IAmb		01 20 07.8	
	comp=Z,69nm,1.1s								
KULM	Kulim	45.78	264	⇑P		P		01 20 05.4	+0.8
AUDCS	Dubbo College	45.89	177	P		P		01 20 04.5	-0.6
SURA	Surathani	45.95	269	P		P		01 20 07.9	+1.9
LWLI	Liwa	45.96	249	P		P		01 20 07.2	+1.0
	comp=Z,285nm,0.9s,comp=Z,14µmcomp=Z,4µm								
SRIT	Nakonsritamara	46.08	269	P		P		01 20 09.1	+2.1
TNCH	TengChong	46.22	291	P		P		01 20 09.1	+0.9
TNCH				pP		pP		01 20 12.0	-2.0
TNCH				PcP		PcP		01 21 44.5	+0.7
TNCH				ScP		ScP		01 25 36.8	+0.9
TNCH				S		S		01 26 56.0	+2.1
TNCH				ScS		ScS		01 30 02.2	-0.8
TNCH				pmax		pmax			
	comp=Z,56nm,1.2s								
TNCH				pmax		pmax			
	comp=Z,1µm,9.7s								
TNCH				LR		LR			
	comp=Z,1µm,16.8s								
TNCH				LR		LR			
	comp=Z,2µm,17.1s								
TNCH				LR		LR			
	comp=Z,4µm,19.4s								
CIT	Chita	46.23	332	*eP*		P		01 20 07.8	+0.1
CIT				*e*				01 20 17.2	
CIT				*e*				01 21 45.2	
CIT				*e*				01 22 02.2	
CIT				pmax		pmax			
	comp=Z,180nm,2.6s								
MNAI	Manna	46.70	250	P		P		01 20 10.7	-1.2
MNAI	Manna	46.70	250	P		P		01 20 11.0	-0.8
MNAI	Manna	46.70	250	⇑P		P		01 20 10.5	-1.4
MNAI	Manna	46.70	250	P		P		01 20 25.9	+14
BKNI	Bangkinang	46.80	257	P		P		01 20 10.7	-2.0
BKNI				S		S		01 27 05.4	+3.4
ULN	Ulaanbaatar	46.98	324	P		P		01 20 13.0	-0.8
ULN	Ulaanbaatar	46.98	324	IAMs_20		IAMs_20		01 40 17.7	
	comp=Z,5µm,19.0s								
ULN	Ulaanbaatar	46.98	324	⇑P		P		01 20 14.4	+0.6
ULN	Ulaanbaatar	46.98	324	P		P		01 20 13.0	-0.8
ULN				pmax		pmax			
	comp=Z,34nm,1.0s								
ULN				MLR		MLR			
	comp=Z,5µm,19.0s								
ULN	Ulaanbaatar	46.98	324	P		P		01 20 15.0	+1.2
ULN				P		P		01 20 15.0	+1.2
ULN				P		P		01 20 15.0	+1.2
ULN				S		S		01 27 02.4	-1.6
ULN				S		S		01 27 02.4	-1.6
ULN				S		S		01 27 02.4	-1.6
XMI	Christmas Isla	47.01	241	P		P		01 20 14.9	+0.6
KRJI	Kerinci	47.22	254	P		P		01 20 17.4	+1.3
	comp=Z,249nm,1.2s,comp=Z,24µmcomp=Z,4µm								
SONM	Songino Array	47.34	324	P		P		01 20 16.8	+0.2
SONM				IAmb		IAmb		01 20 21.9	
	comp=Z,56nm,1.2s								
SONM	Songino Array	47.34	324	P		P		01 20 16.8	+0.2
SONM				pmax		pmax			
	comp=Z,56nm,1.2s								
SONM	Songino Array	47.34	324	P		P		01 20 17.7	+1.2
	comp=Z,22nm,0.8s,baz=138,slow=8.1,SNR=84								
SONM				PcP		PcP		01 21 48.6	+1.4
	comp=Z,4.9nm,0.7s,baz=152,slow=2.9,SNR=1.1								
SONM				LR		LR		01 40 52.3	
	comp=Z,6µm,18.8s,baz=118,slow=37								
	comp=Z,22nm,0.8s								
WHYH	Whyalla	47.38	190	P		P		01 20 16.3	-0.5
BBOO	Buckleboo	47.45	192	P		P		01 20 16.5	-0.8
BBOO	Buckleboo	47.45	192	P		P		01 20 16.6	-0.8
HTT	Hallett	47.56	188	P		P		01 20 17.4	-0.9
HTT	Hallett	47.56	188	⇑P		P		01 20 17.4	-0.9
FORT	Forrest	47.75	201	P		P		01 20 19.5	-0.2
FORT				IAmb		IAmb		01 20 20.8	
	comp=Z,60nm,0.8s								
FORT	Forrest	47.75	201	P		P		01 20 19.6	-0.2
FORT	Forrest	47.75	201	⇑P		P		01 20 19.4	-0.2
PDSI	Padang	47.75	256	P		P		01 20 18.8	-1.3
	comp=Z,80nm,0.7s,comp=Z,3µm								
GTA	Gaotai	48.06	311	P		P		01 20 23.3	+1.0
GTA				PcP		PcP		01 21 52.7	+2.7
GTA				PP		PP		01 22 15.4	+0.8
GTA				S		S		01 27 18.8	-0.8
GTA				ScS		ScS		01 30 14.6	+0.1
GTA				pmax		pmax			
	comp=Z,35nm,1.5s								
GTA				pmax		pmax			
	comp=Z,1µm,5.8s								
GTA				LR		LR			
	comp=Z,2µm,16.4s								
GTA				LR		LR			
	comp=Z,5µm,17.8s								
GTA				LR		LR			
	comp=Z,5µm,16.4s								
PSI	Prapat	48.09	261	P		P		01 20 23.7	+0.9
PSI	Prapat	48.09	261	P		P		01 20 21.9	-0.9
PSI				pmax		pmax			
	comp=Z,40nm,0.8s								
PSI				MLR		MLR			
	comp=Z,800nm,20.0s								
RPSI	Rantau Prapat	48.12	261	P		P		01 20 21.9	-1.0
RPSI				IAmb		IAmb		01 20 24.9	
	comp=Z,40nm,0.8s								
MND	Mandalay	48.29	287	P		P		01 20 25.3	+1.2
MEEK	Meekatharra	48.45	214	P		P		01 20 26.7	+1.4
KCSI	Kotacane, Aceh	49.00	263	P		P		01 20 30.0	+0.2
	comp=Z,97nm,1.1s,comp=Z,2µm								
SISI	Saibi	49.18	256	P		P		01 20 29.8	-1.3
	comp=Z,303nm,0.8s,comp=Z,3µm								
SEY	Seymchan	49.18	4	⇑*iP*		P		01 20 30.4	0.0
SEY				pmax		pmax			
	comp=Z,89nm,1.7s								
SEY	Seymchan	49.18	4	P		P		01 20 31.0	+0.6
	comp=Z,25nm,1.0s,baz=180,slow=6.7,SNR=25								
	comp=Z,25nm,1.0s								
YAK	Yakutsk	49.55	350	IAMs_20		IAMs_20		01 41 35.9	
	comp=Z,8µm,18.0s								
YAK	Yakutsk	49.55	350	*eP*		P		01 20 32.4	-0.8
YAK				*e*				01 21 55.0	
YAK				*e*				01 22 30.3	
YAK				*eS*		S		01 27 37.9	-1.7
YAK				*e**SS		sS		01 28 00.5	+11
YAK				*e*				01 30 16.8	
YAK				pmax		pmax			
	comp=Z,27nm,0.9s								
YAK				pmax		pmax			
	comp=N,12nm,0.9s								
YAK				pmax		pmax			
	comp=E,2.0nm,0.8s								
YAK				pmax		pmax			
	comp=Z,144nm,3.1s								
YAK				pmax		pmax			
	comp=N,141nm,3.0s								
YAK				pmax		pmax			
	comp=E,127nm,2.9s								
YAK				smax		smax			
	comp=N,125nm,3.2s								
YAK				smax		smax			
	comp=E,88nm,3.3s								
YAK				MLR		MLR			
	comp=Z,8µm,17.0s								
YAK				MLR		MLR			
	comp=N,5µm,17.0s								
YAK	Yakutsk	49.55	350	P		P		01 20 32.7	-0.5
	comp=N,14nm,0.4s,baz=180,slow=8.0,SNR=8.1								
YAK				LR		LR		01 47 05.6	
	comp=N,1µm,19.1s,baz=162,slow=43								
	comp=N,14nm,0.4s								
GSI	Gunungsitoli	49.80	260	P		P		01 20 34.4	-1.4
GSI	Gunungsitoli	49.80	260	P		P		01 20 35.4	-0.5
GSI	Gunungsitoli	49.80	260	⇑P		P		01 20 34.9	-1.0
GSI	Gunungsitoli	49.80	260	P		P		01 20 35.7	-0.2
	comp=N,132nm,1.1s,comp=N,5µm								
MOKO	MOKOCHONG	49.92	293	⇑*eP*		P		01 20 34.9	-1.9
BOD	Bodaibo	50.18	338	*eP*		P		01 20 37.5	-0.5
BOD				pmax		pmax			
	comp=Z,54nm,1.7s								
KOHI	KOHIMA	50.25	292	*eP*		P		01 20 38.6	-0.7
KOHI				IAmb		IAmb		01 20 42.6	
	comp=Z,24nm,0.8s								
IMP	Imphal	50.35	291	*eP*		P		01 20 39.1	-0.9
IMP				IAmb		IAmb		01 20 43.3	
	comp=Z,17nm,0.9s								
ZAK	Zakamensk	50.41	325	*eP*		P		01 20 39.2	-0.9
ZAK				*e*				01 27 47.2	
ZAK				pmax		pmax			
	comp=Z,27nm,1.5s								
ARPS	Mount Arapiles	50.54	185	P		P		01 20 41.2	+0.2
ZIRO	ZIRO	50.60	294	*eP*		P		01 20 43.1	+1.1
ZIRO				IAmb		IAmb		01 20 45.7	
	comp=Z,67nm,0.7s								
ITAN	ITANAGAR	50.69	294	*eP*		P		01 20 43.5	+1.0
SNSI	Sinabang, Aceh	50.69	262	P		P		01 20 44.2	+1.6
	comp=Z,315nm,0.8s,comp=Z,3µmcomp=Z,4µm								
IRK	Irkutsk	50.86	328	*eP*		P		01 20 43.8	+0.5
IRK				*eS*		S		01 27 58.4	+0.2
IRK				pmax		pmax			
	comp=Z,136nm,2.4s								
GOMU	GeErMu	51.03	305	P		P		01 20 46.7	+1.4
GOMU				sP		sP		01 20 52.8	-0.2
GOMU				pmax		pmax			
	comp=Z,24nm,1.8s								
GOMU				LR		LR			
	comp=Z,2µm,18.5s								
GOMU				LR		LR			
	comp=Z,3µm,18.3s								
GOMU				LR		LR			
	comp=Z,3µm,18.0s								
TOO	Toolangi	51.17	181	P		P		01 20 45.6	-0.2
TOO	Toolangi	51.17	181	P		P		01 20 46.2	+0.4
TOO	Toolangi	51.17	181	⇓P		P		01 20 48.9	+3.1
TOO	Toolangi	51.17	181	P		P		01 20 45.6	-0.2
TOO				pmax		pmax			
	comp=Z,26nm,1.1s								
SAIH	SAIHA	51.19	288	*eP*		P		01 20 46.8	+0.4
SAIH				IAmb		IAmb		01 20 55.5	
	comp=Z,63nm,0.8s								
BRAT	Ballarat	51.19	182	P		P		01 20 46.3	+0.4
MORW	Morawa	51.76	214	P		P		01 20 49.6	-0.7
MORW				IAmb		IAmb		01 20 59.0	
	comp=Z,98nm,1.4s								
MORW	Morawa	51.76	214	P		P		01 20 50.0	-0.3
MORW	Morawa	51.76	214	⇑P		P		01 20 49.4	-0.9
DGPR	DIGLIPUR	51.84	276	⇑*eP*		P		01 20 51.6	+0.4
DGPR				IAmb		IAmb		01 20 55.3	
	comp=Z,20nm,0.9s								
SHL	Shillong	52.25	292	P		P		01 20 53.6	-0.8
SHL				IAmb		IAmb		01 20 56.3	
	comp=Z,77nm,1.2s								
SHL	Shillong	52.25	292	P		P		01 20 53.6	-0.8
SHL				pmax		pmax			
	comp=Z,77nm,1.2s								
SHL	Shillong	52.25	292	*eP*		P		01 20 54.5	+0.1
SHL				IAmb		IAmb		01 20 58.1	
	comp=Z,29nm,0.8s								
SHL	Shillong	52.25	292	P		P		01 20 53.8	-0.6
	SNR=18								
MOY	Mondy	52.30	326	*eP*		P		01 20 55.0	+0.8
MOY				pmax		pmax			
	comp=Z,112nm,3.9s								
BRDH	Bariadhala	52.43	288	LR		LR		01 44 03.0	
	comp=Z,4µm,19.6s,baz=18,slow=37								
GUWA	GUWAHATI	52.45	292	*eP*		P		01 20 55.7	+0.2
BLDU	Ballidu	52.62	212	P		P		01 20 56.4	-0.3
NIKH	Nikolski High	52.67	32	P		P		01 20 56.9	+0.2
	baz=239								
KLBR	Kellerberrin	52.87	211	P		P		01 20 58.3	-0.2
LSA	Lhasa	53.14	297	P		P		01 21 02.5	+1.2
LSA	Lhasa	53.14	297	P		P		01 21 03.5	+2.3
NWAO	Narrogin (SRO)	54.21	210	IAMs_20		IAMs_20		01 45 41.2	
	comp=Z,5µm,18.0s								
NWAO	Narrogin (SRO)	54.21	210	LR		LR		01 46 03.4	
	comp=Z,4µm,18.7s,baz=41,slow=38								
P08K	Saint George I	54.26	28	P		P		01 21 09.0	+0.7
	baz=236								
SPIA	Saint Paul Isl	54.27	27	P		P		01 21 09.8	+1.4
	baz=235								
UNV	Unalaska Valle	54.32	32	P		P		01 21 10.9	+2.0
UNV	Unalaska Valle	54.32	32	P		P		01 21 10.9	+2.0
	baz=241								
AKUT	Akutan	54.84	32	IAMs_20		IAMs_20		01 41 20.5	
	comp=Z,6µm,20.0s								
RAO	Raoul Island	55.04	141	LR		LR		01 43 27.9	
	comp=Z,4µm,18.3s,baz=344,slow=35								
GTK	Tadong	55.25	294	*eP*		P		01 21 17.1	+0.9
GTK				IAmb		IAmb		01 21 20.5	
	comp=Z,44nm,0.7s								
BILL	Bilibino	55.66	9	P		P		01 21 18.5	+0.2
BILL	Bilibino	55.66	9	*i*P		P		01 21 18.5	+0.2
BILL				pmax		pmax			
	comp=Z,142nm,1.3s								
FALS	False Pass	56.40	32	P		P		01 21 25.9	+2.1
	baz=244								
XMAS	Kiritimati	56.76	97	IAMs_20		IAMs_20		01 46 59.9	
	comp=Z,6µm,19.0s								
EVN	Everest	56.85	294	⇑P		P		01 21 28.7	+0.4
BOK	Bokaro	57.70	289	*eP*		P		01 21 34.1	+0.5
BOK				IAmb		IAmb		01 21 36.2	
	comp=Z,80nm,1.2s								
GAMB	Gambell	57.71	21	P		P		01 21 35.4	+2.5
	baz=230								
M11K	Mekoryuk	57.80	26	P		P		01 21 35.9	+2.3
	baz=238								
WMQ	Urumqi	57.98	313	*eP*		P		01 21 36.0	+0.6
WMQ				S		S		01 29 36.6	+2.1
WMQ				ScS		ScS		01 31 24.8	+1.0
WMQ				pmax		pmax			
	comp=Z,53nm,1.5s								
WMQ				pmax		pmax			
	comp=Z,2µm,6.5s								
WMQ				LR		LR			
	comp=Z,3µm,18.9s								
WMQ				LR		LR			
	comp=Z,4µm,17.5s								
WMQ				LR		LR			
	comp=Z,4µm,20.3s								
SDPT	Sand Point	58.13	33	P		P		01 21 38.4	+2.3
	baz=246								
CHNA	Chernabura Isl	58.40	33	P		P		01 21 40.0	+2.0
	baz=247								
TIXI	Tiksi	58.71	354	P		P		01 21 38.3	-1.5
TIXI	Tiksi	58.71	354	IAMs_20		IAMs_20		01 49 28.6	
	comp=Z,4µm,18.0s								
TIXI	Tiksi	58.71	354	⇑P		P		01 21 38.5	-1.2
TIXI	Tiksi	58.71	354	⇓*i*P		P		01 21 38.6	-1.2
TIXI				pmax		pmax			
	comp=Z,24nm,1.3s								
TIXI	Tiksi	58.71	354	P		P		01 21 38.9	-0.9
	comp=Z,15nm,0.9s,baz=168,slow=4.4,SNR=30								
TIXI				LR		LR		01 49 59.2	
	comp=Z,2µm,18.8s,baz=176,slow=39								
	comp=Z,15nm,0.9s								
S14K	Fog Glacier	58.99	32	P		P		01 21 43.8	+1.7
	baz=246								
M13K	Dall Lake	59.03	26	IAMs_20		IAMs_20		01 44 12.2	
	comp=Z,5µm,20.0s								
M13K	Dall Lake	59.03	26	P		P		01 21 44.2	+2.0
	baz=240								
URZ	Urewera	59.33	152	LR		LR		01 44 40.5	
	comp=Z,2µm,21.7s,baz=76,slow=33								
O14K	Tigyukauivet M	59.41	28	P		P		01 21 46.5	+1.6
	baz=243								
N14K	Kuskokwak Cree	59.53	27	P		P		01 21 47.3	+1.6
	baz=242								
DGZ	Jazzator, Alta	59.55	320	*i*P		P		01 21 46.7	+0.5
DGZ				pmax		pmax			
	comp=Z,47nm,1.1s								
RTZ	Ruatahuna	59.57	152	P		P		01 21 45.3	-1.0
RTZ				IAmb		IAmb		01 22 08.9	
	comp=Z,76nm,1.2s								
CHGN	Chignik	59.58	32	IAMs_20		IAMs_20		01 52 02.7	
	comp=Z,4µm,19.0s								
CHGN	Chignik	59.58	32	P		P		01 21 47.9	+1.8
	baz=248								
L14K	Kuka Creek	59.77	26	IAMs_20		IAMs_20		01 44 14.1	
	comp=Z,4µm,21.0s								
L14K	Kuka Creek	59.77	26	P		P		01 21 49.3	+2.0
	baz=241								
M14K	Bethel	59.80	26	P		P		01 21 48.4	+0.9
M14K				IAMs_20		IAMs_20		01 44 36.1	
	comp=Z,6µm,20.0s								
M14K	Bethel	59.80	26	P		P		01 21 49.5	+2.0
	baz=242,SNR=6.3								
BKZ	Black Stump Fm	59.80	153	P		P		01 21 46.5	-1.4
O15K	Ungalikthiuk R	60.05	29	P		P		01 21 50.9	+1.6
	baz=245,SNR=7.6								
TNA	Tin City	60.09	20	P		P		01 21 50.9	+1.5
	baz=235,SNR=10								
J14K	Nanvaranak Lak	60.12	24	IAMs_20		IAMs_20		01 44 13.6	
	comp=Z,5µm,21.0s								
J14K	Nanvaranak Lak	60.12	24	P		P		01 21 51.6	+1.9
	baz=239								
DSZ	Denniston Nort	60.12	158	IAMs_20		IAMs_20		01 48 30.7	
	comp=Z,3µm,18.0s								
M15K	Kasigluk River	60.32	27	P		P		01 21 52.8	+1.7
	baz=243								
N15K	Kwethluk River	60.35	28	IAMs_20		IAMs_20		01 44 43.0	
	comp=Z,4µm,22.0s								
N15K	Kwethluk River	60.35	28	P		P		01 21 53.4	+2.0
	baz=244								
ANM	Nome	60.40	22	IAmb		IAmb		01 22 04.7	
	comp=Z,118nm,1.6s								
ANM	Nome	60.40	22	P		P		01 21 53.6	+2.0
	baz=236,SNR=21								
L15K	Ungalak Mounta	60.44	26	P		P		01 21 53.9	+2.1
	baz=242								
R16K	Pilot Point	60.49	31	P		P		01 21 53.4	+1.2
	baz=248								
F14K	Arctic Creek	60.58	21	P		P		01 21 54.4	+1.5
	baz=235,SNR=32								
ZSN	Zaisan	60.68	317	*eP*		P		01 21 54.7	+0.8
	comp=Z,60nm,1.8s,baz=317								
ZSN				*eS*		S		01 30 11.8	+2.6
	baz=317								
ZSN	Zaisan	60.68	317	*eP*		P		01 21 54.6	+0.8
ZSN				*eS*		S		01 30 11.7	+2.6
ZSN				pmax		pmax			
	comp=Z,60nm,1.8s								
K15K	Wolf Creek Mou	60.71	25	IAMs_20		IAMs_20		01 44 53.2	
	comp=Z,5µm,21.0s								
K15K	Wolf Creek Mou	60.71	25	P		P		01 21 55.8	+2.0
	baz=241								
SNZO	South Karori	60.85	156	IAMs_20		IAMs_20		01 48 08.9	
	comp=Z,5µm,19.0s								
P16K	Nushagak River	60.85	29	P		P		01 21 56.8	+2.1
	baz=247								
INZ	Inchbonnie	60.85	159	IAMs_20		IAMs_20		01 50 51.1	
	comp=Z,4µm,19.0s								
CHIR	Chirikof Islan	60.87	33	P		P		01 21 56.1	+1.2
	baz=250								
BFZ	Birch Farm	60.95	154	IAMs_20		IAMs_20		01 49 54.7	
	comp=Z,3µm,18.0s								
O16K	Kokwok River B	61.03	29	IAmb		IAmb		01 22 20.9	
	comp=Z,41nm,0.9s								
O16K	Kokwok River B	61.03	29	P		P		01 21 57.7	+1.8
	baz=246								
N16K	Nishlik Lake	61.08	28	P		P		01 21 58.0	+1.6
	baz=245								
G15K	Niukluk	61.12	22	P		P		01 21 58.5	+2.0
	baz=238								
LTZ	Lake Taylor	61.20	158	IAMs_20		IAMs_20		01 49 16.1	
	comp=Z,4µm,18.0s								
M16K	Timber Creek	61.23	27	IAMs_20		IAMs_20		01 45 31.0	
	comp=Z,6µm,20.0s								
M16K	Timber Creek	61.23	27	P		P		01 21 59.4	+2.1
	baz=245								
F15K	North Star Dit	61.29	21	IAMs_20		IAMs_20		01 48 40.3	
	comp=Z,4µm,20.0s								
F15K	North Star Dit	61.29	21	P		P		01 21 59.0	+1.4
	baz=237,SNR=24								
L16K	Owhat River	61.30	26	IAmb		IAmb		01 22 09.4	
	comp=Z,92nm,1.8s								
L16K				IAMs_20		IAMs_20		01 46 15.0	
	comp=Z,5µm,20.0s								
L16K	Owhat River	61.30	26	P		P		01 21 59.4	+1.6
	baz=244								
Q16K	King Salmon	61.35	30	P		P		01 22 00.2	+2.1
	baz=248								
J16K	Anvik River	61.56	24	IAmb		IAmb		01 22 21.2	
	comp=Z,37nm,0.9s								
J16K				IAMs_20		IAMs_20		01 45 31.2	
	comp=Z,5µm,21.0s								
J16K	Anvik River	61.56	24	P		P		01 22 01.5	+2.0
	baz=242,SNR=15								
O17K	Koliganek Bris	61.56	29	P		P		01 22 01.4	+1.9
	baz=247,SNR=9.8								
Q17K	Contact Creek	61.58	31	P		P		01 22 01.1	+1.2
	baz=249								
H16K	Elim	61

K17K **Iditarod** 62.24 25 P P 01 22 05.9 +1.8
baz=244
MK31 **Makanchi Array** 62.28 316 IAmb IAmb 01 22 09.5
comp=Z,24nm,0.8s
MK31 **Makanchi Array** 62.28 316 P P 01 22 05.1 +0.4
MKAR **Makanchi Array** 62.28 316 P P 01 22 05.0 +0.3
comp=Z,28nm,0.8s,baz=90,slow=8.6,SNR=175
MKAR LR LR 01 51 16.2
comp=Z,2µm,19.1s,baz=106,slow=38
MKAR PKP2bc **P'P'bc** 01 51 18.7 -3.5
comp=Z,0.5nm,0.8s,baz=327,slow=2.0,SNR=5.2
comp=Z,28nm,0.8s
P18K **Big Mountain,** 62.30 29 P P 01 22 06.4 +1.7
baz=249
N18K **Kilae Creek** 62.47 28 P P 01 22 07.1 +1.5
baz=248
O18K **Koktuh Hills** 62.48 29 IAmb IAmb 01 22 13.4
comp=Z,64nm,1.2s
O18K **Koktuh Hills** 62.48 29 P P 01 22 07.1 +1.3
baz=249
MAKZ **Makanchi** 62.50 316 P P 01 22 06.6 +0.5
MAKZ IAmb IAmb 01 22 10.9
comp=Z,37nm,0.8s
MAKZ **Makanchi** 62.50 316 P P 01 22 06.6 +0.5
MAKZ pmax pmax
comp=Z,37nm,0.9s
MAKZ MLR MLR
comp=Z,3µm,19.0s
C16K **Lisburne Hills** 62.52 18 IAmb IAmb 01 22 10.7
comp=Z,60nm,1.0s
C16K **Lisburne Hills** 62.52 18 P P 01 22 07.2 +1.4
baz=235
OHAK **Old Harbor** 62.55 32 IAMs_20 IAMs_20 01 47 17.2
comp=Z,6µm,20.0s
OHAK **Old Harbor** 62.55 32 P P 01 22 07.2 +1.0
baz=252
G17K **Kiwalik Mounta** 62.60 22 P P 01 22 07.9 +1.4
baz=241
H17K **Granite Mounta** 62.60 23 IAMs_20 IAMs_20 01 46 33.8
comp=Z,4µm,20.0s
H17K **Granite Mounta** 62.60 23 P P 01 22 08.2 +1.7
baz=242
L18K **Granite Mounta** 62.71 26 IAMs_20 IAMs_20 01 46 38.3
comp=Z,5µm,20.0s
L18K **Granite Mounta** 62.71 26 P P 01 22 08.7 +1.4
baz=246,SNR=7.9
SVW2 **Sparrevohn** 62.76 28 IAMs_20 IAMs_20 01 45 34.3
comp=Z,4µm,22.0s
SVW2 **Sparrevohn** 62.76 28 P P 01 22 10.2 +2.6
M18K **Stony River** 62.80 27 P P 01 22 09.0 +1.2
baz=248,SNR=5.1
F17K **Baldwin Pennin** 62.86 21 P P 01 22 09.3 +1.2
baz=240
Q19K **Cape Douglas,** 62.91 30 P P 01 22 10.0 +1.3
baz=251
E17K **Hotham Inlet** 62.99 20 P P 01 22 10.4 +1.4
baz=239
O19K **Port Alsworth** 63.02 29 P P 01 22 10.6 +1.3
baz=250
KDAK **Kodiak Island** 63.08 32 IAMs_20 IAMs_20 01 48 14.3
comp=Z,6µm,20.0s
KDAK **Kodiak Island** 63.08 32 P P 01 22 10.7 +1.0
baz=252
KDAK **Kodiak Island** 63.08 32 ⇓P P 01 22 13.2 +3.4
KDAK ⇑P **sP** 01 22 17.0 -0.7
KDAK **Kodiak Island** 63.08 32 LR LR 01 48 05.8
comp=Z,5µm,20.0s,baz=267,slow=35
RDOG **Red Dog Mine** 63.15 19 IAmb IAmb 01 22 15.4
comp=Z,50nm,1.0s
RDOG IAMs_20 IAMs_20 01 52 46.3
comp=Z,3µm,19.0s
RDOG **Red Dog Mine** 63.15 19 P P 01 22 11.5 +1.4
baz=237,SNR=8.6
N19K **Bonanza Creek** 63.16 28 P P 01 22 11.4 +1.0
baz=249,SNR=6.5
J18K **Innoko River** 63.21 25 IAMs_20 IAMs_20 01 46 53.3
comp=Z,4µm,20.0s
J18K **Innoko River** 63.21 25 P P 01 22 11.7 +1.2
baz=246,SNR=6.7
TTA **Tatalina** 63.28 26 IAmb IAmb 01 22 23.8
comp=Z,53nm,1.4s
TTA IAMs_20 IAMs_20 01 46 23.3
comp=Z,5µm,21.0s
TTA **Tatalina** 63.28 26 P P 01 22 13.0 +1.8
TTA **Tatalina** 63.28 26 P P 01 22 12.2 +1.1
baz=247,SNR=8.7
H18K **Honhosa River** 63.29 23 IAMs_20 IAMs_20 01 46 43.6
comp=Z,4µm,21.0s
H18K **Honhosa River** 63.29 23 P P 01 22 11.9 +0.9
baz=243
C17K **DeLong Mountai** 63.29 19 P P 01 22 12.3 +1.2
baz=237,SNR=32
P19K **Oil Pt** 63.35 30 IAMs_20 IAMs_20 01 47 17.9
comp=Z,4µm,20.0s
P19K **Oil Pt** 63.35 30 P P 01 22 12.2 +0.6
baz=251
RAR **Rarotonga** 63.36 123 LR LR 01 45 54.8
comp=Z,2µm,18.4s,baz=284,slow=32
Q20K **Shuyak Island** 63.43 31 P P 01 22 12.8 +0.7
baz=252
L19K **White Mountain** 63.49 27 IAmb IAmb 01 22 25.4
comp=Z,57nm,1.4s
L19K IAMs_20 IAMs_20 01 46 41.2
comp=Z,4µm,21.0s
L19K **White Mountain** 63.49 27 P P 01 22 13.8 +1.3
baz=248
F18K **Selawik** 63.49 21 P P 01 22 13.3 +1.0
baz=241,SNR=11
G18K **Tagagawik** 63.52 22 P P 01 22 13.5 +0.9
baz=243
E18K **Tukpahlearik C** 63.57 20 P P 01 22 14.0 +1.2
baz=240,SNR=53
M19K **Big River Lodg** 63.59 27 IAMs_20 IAMs_20 01 47 05.9
comp=Z,5µm,19.0s
M19K **Big River Lodg** 63.59 27 P P 01 22 14.0 +0.9
baz=249
GCSA **Galena City Sc** 63.68 24 P P 01 22 14.5 +0.9
baz=245
O20K **Slope Mountain** 63.78 29 P P 01 22 15.6 +1.1
baz=251
PDGK **Podgornoye** 63.80 312 P P 01 22 14.5 -0.5
SHLS **Shalkode** 63.80 311 *e*P P 01 22 13.5 -1.6
comp=Z,37nm,1.5s,baz=311
SHLS **Shalkode** 63.80 311 *e*P P 01 22 13.4 -1.6
SHLS pmax pmax
comp=Z,37nm,1.5s
J19K **Poorman** 63.87 25 IAMs_20 IAMs_20 01 47 13.7
comp=Z,4µm,20.0s
J19K **Poorman** 63.87 25 P P 01 22 15.7 +0.8
baz=246
C18K **Utukok River** 64.00 19 P P 01 22 16.3 +0.5
baz=239,SNR=30
L20K **Farewell, AK** 64.02 27 P P 01 22 17.2 +1.2
baz=249,SNR=6.8
HOM **Homer** 64.12 30 IAMs_20 IAMs_20 01 47 51.4
comp=Z,4µm,20.0s
HOM **Homer** 64.12 30 P P 01 22 17.7 +1.2
baz=252
UZB **Uzynbulak** 64.12 311 *e*P P 01 22 17.6 +0.4
comp=Z,23nm,1.3s,baz=311
UZB *e*S S 01 30 55.3 +2.3
baz=311
UZB **Uzynbulak** 64.12 311 *e*P P 01 22 17.5 +0.4
UZB *e*S S 01 30 55.2 +2.3
UZB pmax pmax
comp=Z,23nm,1.3s
M20K **Styx River** 64.14 27 IAMs_20 IAMs_20 01 47 01.4
comp=Z,5µm,21.0s
M20K **Styx River** 64.14 27 P P 01 22 17.9 +1.0
baz=250
H19K **Roundabout Mou** 64.17 23 IAMs_20 IAMs_20 01 47 23.2
comp=Z,4µm,21.0s
H19K **Roundabout Mou** 64.17 23 P P 01 22 18.0 +1.1
baz=245
B18K **Kokolik River** 64.19 18 P P 01 22 18.0 +1.1
baz=238
G19K **Purcell Mounta** 64.20 22 IAmb IAmb 01 22 24.6
comp=Z,39nm,0.8s
G19K IAMs_20 IAMs_20 01 47 33.7
comp=Z,3µm,21.0s
G19K **Purcell Mounta** 64.20 22 P P 01 22 18.2 +1.2
baz=244,SNR=55
F19K **Shaleruckik Mo** 64.26 21 P P 01 22 18.2 +0.8
baz=243
K20K **Telida** 64.26 26 IAMs_20 IAMs_20 01 48 07.8
comp=Z,4µm,20.0s
K20K **Telida** 64.26 26 P P 01 22 18.7 +1.1
baz=248
CNPM **China Poot** 64.27 30 IAMs_20 IAMs_20 01 47 57.7
comp=Z,5µm,20.0s
N20K **Mount Spurr** 64.33 28 P P 01 22 18.3 +0.2
baz=251
KPKS **Kokpek** 64.40 312⇑ *i*P P 01 22 18.6 -0.3
comp=Z,24nm,1.3s,baz=312
KPKS *e*S S 01 30 59.1 +2.9
baz=312
KPKS **Kokpek** 64.40 312 *c i*P P 01 22 18.5 -0.3
KPKS *e*S S 01 30 59.1 +2.9
KPKS pmax pmax
comp=Z,24nm,1.3s
DDI **Dehra Dun** 64.51 297⇑ *e*P P 01 22 21.0 +1.2
BRLK **Bradley Lake** 64.51 30 P P 01 22 18.7 -0.5
PRZ **Przheval'sk** 64.52 311 IAmb IAmb 01 22 25.6
comp=Z,65nm,1.0s
J20K **Nowinta River** 64.54 25 IAMs_20 IAMs_20 01 46 52.0
comp=Z,5µm,22.0s
J20K **Nowinta River** 64.54 25 P P 01 22 20.1 +0.8
baz=248,SNR=35
ZHN **Zhinishke** 64.55 311⇑ *i*P P 01 22 20.7 +0.7
comp=Z,29nm,1.6s,baz=311
ZHN **Zhinishke** 64.55 311 *c i*P P 01 22 20.6 +0.7
ZHN pmax pmax
comp=Z,29nm,1.6s
SATY **Saty** 64.56 311⇑ *i*P P 01 22 20.4 +0.4
comp=Z,45nm,1.7s,baz=311
SATY **Saty** 64.56 311 *c i*P P 01 22 20.4 +0.4
SATY pmax pmax
comp=Z,45nm,1.7s
BRSE **Bradley Lake S** 64.58 30 P P 01 22 20.9 +1.3
baz=253
MALK **Mahakanadarawa** 64.62 273 P P 01 22 20.7 0.0
MALK S S 01 31 03.2 +3.5
I20K **Naaghedeneel** 64.64 24 IAMs_20 IAMs_20 01 48 09.1
comp=Z,5µm,21.0s
I20K **Naaghedeneel** 64.64 24 P P 01 22 20.9 +1.0
baz=247,SNR=17
CAPN **Captain Cook N** 64.69 29 IAMs_20 IAMs_20 01 53 41.6
comp=Z,5µm,19.0s
CAPN **Captain Cook N** 64.69 29 P P 01 22 21.5 +1.2
baz=252
PALK **Pallekele** 64.69 272 LR LR 01 50 00.6
comp=Z,1µm,19.9s,baz=180,slow=36
E19K **Redstone River** 64.73 21 P P 01 22 21.6 +1.1
baz=243
C19K **Lookout Ridge** 64.74 19 IAMs_20 IAMs_20 01 51 32.6
comp=Z,3µm,20.0s
C19K **Lookout Ridge** 64.74 19 P P 01 22 21.8 +1.2
baz=240
H20K **Anotleneega Mo** 64.76 23 P P 01 22 22.1 +1.4
baz=247
A19K **Wainwright** 64.85 17 P P 01 22 22.7 +1.5
baz=238
SKT **Skwentna** 64.89 27 IAmb IAmb 01 23 02.5
comp=Z,33nm,1.0s
SKT IAMs_20 IAMs_20 01 47 57.9
comp=Z,4µm,20.0s
SKT **Skwentna** 64.89 27 P P 01 22 22.8 +1.2
baz=251,SNR=7.4
PPLA **Purkeypile** 64.90 26 P P 01 22 22.7 +0.8
baz=250
D19K **Kuna River** 64.91 20 IAMs_20 IAMs_20 01 51 09.3
comp=Z,4µm,20.0s
D19K **Kuna River** 64.91 20 P P 01 22 22.2 +0.5
baz=242
HYB **Hyderabad** 65.07 283 *e*P P 01 22 24.1 +0.5
HYB *es*P **pP** 01 22 29.2 -0.1
HYB *e*PcP **PcP** 01 22 57.0 +0.6
HYB *e*PP **PP** 01 24 47.1 +0.2
HYB *e*S **S** 01 31 07.4 +2.2
ARXS **Arharly** 65.08 312 P P 01 22 22.9 -0.4
F20K **Avaraart Lake** 65.08 21 IAmb IAmb 01 22 32.1
comp=Z,91nm,1.6s
F20K **Avaraart Lake** 65.08 21 P P 01 22 24.3 +1.5
baz=245,SNR=34
SUA **Susitna One** 65.08 28 IAmb IAmb 01 22 34.9
comp=Z,56nm,1.2s
SUA **Susitna One** 65.08 28 P P 01 22 24.4 +1.4
baz=252
CAST **Castle Rocks** 65.12 26 IAMs_20 IAMs_20 01 48 12.9
comp=Z,4µm,21.0s
CAST **Castle Rocks** 65.12 26 P P 01 22 24.1 +1.0
baz=250,SNR=31
CHUM **Lake Minchumin** 65.18 25 P P 01 22 24.9 +1.4
baz=250,SNR=7.5
SMLA **Simla** 65.25 298⇑ *e*P P 01 22 25.2 +0.7
SMLA IAmb IAmb 01 22 35.2
comp=Z,34nm,0.9s
O22K **Cooper Landing** 65.28 29 IAMs_20 IAMs_20 01 48 37.2
comp=Z,3µm,19.0s
O22K **Cooper Landing** 65.28 29 P P 01 22 24.8 +0.6
baz=254
KURK **Kurchatov** 65.29 320 P P 01 22 24.5 +0.1
KURK **Kurchatov** 65.29 320 P P 01 22 24.5 +0.1
KURK pmax pmax
comp=Z,115nm,1.1s
KURK **Kurchatov** 65.29 320 P P 01 22 25.1 +0.7
KURK P P 01 22 25.1 +0.7
KURK P P 01 22 25.1 +0.7
KURK S S 01 31 05.0 -1.7
KURK S S 01 31 05.0 -1.7
KURK S S 01 31 05.0 -1.7
SEW **Seward** 65.30 30 P P 01 22 25.0 +0.7
baz=254
KURBB **Kurchatov Arra** 65.34 320 P P 01 22 24.5 -0.2
KURBB **Kurchatov Arra** 65.34 320 P P 01 22 24.8 +0.1
comp=Z,68nm,0.9s,baz=99,slow=6.8,SNR=300
KURBB PKPPKP **P'P'df** 01 51 07.9 -1.3
comp=Z,0.9nm,0.2s,baz=285,slow=3.7,SNR=4.5
KURBB LR LR 01 52 28.2
comp=Z,8µm,18.5s,baz=98,slow=37
comp=Z,68nm,0.9s
E20K **Nigu River** 65.44 20 P P 01 22 26.2 +1.0
baz=244
RC01 **Rabbit Creek A** 65.44 29 IAmb IAmb 01 22 35.1
comp=Z,52nm,1.0s
RC01 IAMs_20 IAMs_20 01 47 46.5
comp=Z,4µm,22.0s
RC01 **Rabbit Creek A** 65.44 29 P P 01 22 27.0 +1.7
baz=254,SNR=6.2
M22K **Willow** 65.46 28 P P 01 22 26.4 +1.1
baz=253
D20K **Etivluk River** 65.50 20 P P 01 22 26.7 +1.2
baz=244
MDOK **Medeo** 65.56 311 *i* P P 01 22 27.2 +0.7
baz=311
MDOK *e*S S 01 31 12.9 +2.1
baz=311
MDOK LR LR 01 51 48.2
comp=Z,2µm,16.0s,baz=311
MDOK **Medeo** 65.56 311 *i* P P 01 22 27.2 +0.7
MDOK *e*S S 01 31 12.8 +2.1
MDOK MLR MLR
comp=Z,2µm,16.0s
CUT **Chulitna** 65.58 27 IAMs_20 IAMs_20 01 48 30.3
comp=Z,4µm,21.0s
CUT **Chulitna** 65.58 27 P P 01 22 27.2 +1.1
baz=252
H21K **Melozitna Rive** 65.62 23 IAMs_20 IAMs_20 01 48 18.5
comp=Z,5µm,21.0s
H21K **Melozitna Rive** 65.62 23 P P 01 22 27.8 +1.5
baz=249,SNR=26
CHKK **Chushkaly** 65.65 312 *e*P P 01 22 27.1 +0.2
baz=312
CHKK **Chushkaly** 65.65 312 *e*P P 01 22 27.1 +0.2
AAA **Alma-Ata** 65.66 311 *e*P P 01 22 28.0 +0.8
baz=311
AAA **Alma-Ata** 65.66 311 *e*P P 01 22 27.9 +0.8
G21K **Alakaket** 65.67 22 P P 01 22 27.9 +1.3
baz=248
I21K **Tanana** 65.77 24 IAMs_20 IAMs_20 01 47 50.5
comp=Z,5µm,21.0s
I21K **Tanana** 65.77 24 P P 01 22 28.6 +1.4
baz=250
BPAW **Bear Paw Mtn.** 65.81 25 IAMs_20 IAMs_20 01 47 08.0
comp=Z,5µm,21.0s
BPAW **Bear Paw Mtn.** 65.81 25 P P 01 22 28.5 +1.0
baz=251,SNR=16
PMR **Palmer** 65.86 28 IAmb IAmb 01 22 39.7
comp=Z,54nm,1.1s
PMR **Palmer** 65.86 28 P P 01 22 29.9 +2.0
PMR **Palmer** 65.86 28 P P 01 22 29.7 +1.8
baz=254
TRF **Thorofare Moun** 65.90 26 IAMs_20 IAMs_20 01 48 38.4
comp=Z,4µm,20.0s
TRF **Thorofare Moun** 65.90 26 P P 01 22 30.0 +1.7
baz=252,SNR=6.2
B20K **Meade River** 65.92 18 P P 01 22 29.4 +1.3
baz=242
F21K **Alatna River** 65.95 22 P P 01 22 29.7 +1.3
baz=247,SNR=11
ULHL **Ulahol** 66.11 310 P P 01 22 32.6 +2.4
SNR=6.4
KNK **Knik Glacier** 66.12 29 IAMs_20 IAMs_20 01 49 11.6
comp=Z,4µm,19.0s
KNK **Knik Glacier** 66.12 29 P P 01 22 30.8 +1.1
baz=254
KUU **Kurty** 66.12 312⇑ *i*P P 01 22 29.9 -0.2
baz=312
KUU *e*S S 01 31 19.6 +2.3
baz=312
KUU LR LR 01 50 38.5
comp=Z,4µm,17.1s,baz=312
KUU **Kurty** 66.12 312 *c i*P P 01 22 29.8 -0.2
KUU *e*S S 01 31 19.6 +2.3
KUU MLR MLR
comp=Z,4µm,17.0s
KSH **Kashi** 66.21 307 P P 01 22 34.0 +3.3
KSH pP sP 01 22 39.7 +1.1
KSH sP pwP 01 22 47.0 +3.0
KSH PcP **PcP** 01 23 03.2 +2.4
KSH S S 01 31 18.1 -0.6
KSH pmax pmax
comp=Z,21nm,1.0s
KSH pmax pmax
comp=Z,1µm,6.6s
KSH LR LR
comp=Z,3µm,17.5s
KSH LR LR
comp=Z,3µm,17.5s
KSH LR LR
comp=Z,3µm,16.1s
MLY **Manley** 66.21 24 IAmb IAmb 01 22 35.3
comp=Z,44nm,0.9s
MLY IAMs_20 IAMs_20 01 48 36.6
comp=Z,4µm,21.0s
MLY **Manley** 66.21 24 P P 01 22 31.2 +1.1
baz=251,SNR=35
H22K **Ishtalitna Cre** 66.25 23 P P 01 22 31.3 +0.9
baz=250
E21K **Killik River** 66.27 20 P P 01 22 32.0 +1.5
baz=246
P23K **Montague Islan** 66.27 30 P P 01 22 31.6 +1.0
baz=256
SML **Sawmill** 66.29 28 IAMs_20 IAMs_20 01 49 41.9
comp=Z,3µm,20.0s
SML **Sawmill** 66.29 28 P P 01 22 31.4 +0.6
baz=254,SNR=6.7
C21K **Knifeblade Rid** 66.29 20 P P 01 22 32.1 +1.6
baz=245
NRIK **Noril'sk** 66.34 341 IAmb IAmb 01 22 32.4
comp=Z,74nm,1.4s
NRIK IAMs_20 IAMs_20 01 53 14.3
comp=Z,4µm,18.0s
NRIK **Noril'sk** 66.34 341 *c i*P P 01 22 29.9 -0.9
NRIK pmax pmax
comp=Z,58nm,1.3s
NRIK **Noril'sk** 66.34 341 P P 01 22 30.8 0.0
comp=Z,24nm,0.9s,baz=109,slow=8.1,SNR=31
NRIK LR LR 01 53 34.3
comp=Z,4µm,18.1s,baz=116,slow=38
comp=Z,24nm,0.9s
BWN **Browne** 66.47 25 IAMs_20 IAMs_20 01 48 46.2
comp=Z,3µm,20.0s
WAT1 **Susitna Watana** 66.47 27 P P 01 22 32.2 +0.3
baz=254
RND **Reindeer** 66.50 26 IAmb IAmb 01 22 40.0
comp=Z,74nm,1.4s
RND IAMs_20 IAMs_20 01 48 58.3
comp=Z,4µm,20.0s
B21K **Ikpikpuk River** 66.54 19 IAMs_20 IAMs_20 01 52 24.0
comp=Z,4µm,19.0s
B21K **Ikpikpuk River** 66.54 19 P P 01 22 32.7 +0.6
baz=245,SNR=32
MCK **McKinley** 66.56 26 P P 01 22 32.6 +0.3
baz=253,SNR=6.9
G22K **Bettles** 66.56 22 P P 01 22 32.8 +0.5
baz=249
M23K **Glacier View** 66.56 28 P P 01 22 32.9 +0.4
baz=255
TKM2 **Tokmak 2** 66.61 311 P P 01 22 34.6 +1.2
SNR=28
TKM2 **Tokmak 2** 66.61 311 P P 01 22 33.1 -0.3
Q23K **Middleton Isla** 66.66 31 P P 01 22 33.4 +0.4
baz=257
A21K **Barrow** 66.69 17 P P 01 22 34.2 +1.2
baz=242,SNR=8.0
NEA2 **Nenana** 66.76 25 IAMs_20 IAMs_20 01 48 21.0
comp=Z,4µm,21.0s
NEA2 **Nenana** 66.76 25 P P 01 22 35.3 +1.7
baz=253
SCM **Sheep Creek Mo** 66.76 28 IAMs_20 IAMs_20 01 49 32.2
comp=Z,4µm,20.0s
SCM **Sheep Creek Mo** 66.76 28 P P 01 22 34.3 +0.6
baz=255
WAT6 **Susitna Watana** 66.76 27 P P 01 22 35.3 +1.4
baz=255,SNR=12
HIN **Hinchinbrook I** 66.80 30 IAMs_20 IAMs_20 01 49 35.5
comp=Z,6µm,20.0s
I23K **Minto, Yukon-K** 66.81 24 IAMs_20 IAMs_20 01 48 55.3
comp=Z,5µm,20.0s
I23K **Minto, Yukon-K** 66.81 24 P P 01 22 35.2 +1.4
baz=252,SNR=30
D22K **Ayikyak River** 66.87 20 IAMs_20 IAMs_20 01 57 06.9
comp=Z,3µm,18.0s
D22K **Ayikyak River** 66.87 20 P P 01 22 36.2 +1.9
baz=247
G23K **Bananza Creek** 67.04 23 IAMs_20 IAMs_20 01 49 44.8
comp=Z,4µm,21.0s
G23K **Bananza Creek** 67.04 23 P P 01 22 36.9 +1.4
baz=251
DHY **Denali Highway** 67.05 27 IAmb IAmb 01 22 45.2
comp=Z,35nm,1.0s
DHY IAMs_20 IAMs_20 01 48 43.0
comp=Z,5µm,21.0s
DHY **Denali Highway** 67.05 27 P P 01 22 36.5 +0.7
baz=255,SNR=8.7
KBK **Karagaybulak** 67.08 311 P P 01 22 36.9 +0.6
SNR=19
WRH **Wood River Hil** 67.13 25 IAMs_20 IAMs_20 01 49 03.8
comp=Z,3µm,20.0s
COLD **Coldfoot** 67.15 22 P P 01 22 37.6 +1.5
baz=250,SNR=46
EYAK **Cordova Ski Ar** 67.20 30 P P 01 22 37.7 +1.3
baz=257
MDM **Murphy Dome** 67.21 25 IAmb IAmb 01 22 42.1
comp=Z,34nm,1.0s
MDM IAMs_20 IAMs_20 01 48 44.9
comp=Z,5µm,21.0s
B22K **Teshekpuk Lake** 67.22 19 P P 01 22 37.3 +0.9
baz=246
CHMS **Chumysh** 67.24 311 P P 01 22 37.5 +0.4
SNR=14
CCB **Clear Creek Bu** 67.29 25 IAmb IAmb 01 22 48.4
comp=Z,93nm,1.5s
CCB IAMs_20 IAMs_20 01 49 19.2
comp=Z,4µm,21.0s
KLU **Klutina** 67.33 29 IAMs_20 IAMs_20 01 49 42.3
comp=Z,5µm,21.0s
KLU **Klutina** 67.33 29 P P 01 22 38.1 +0.7
baz=257
COLA **College** 67.34 25 IAMs_20 IAMs_20 01 48 48.3
comp=Z,5µm,20.0s
COLA **College** 67.34 25 P P 01 22 38.6 +1.4
COLA **College** 67.34 25 P P 01 22 38.6 +1.4
baz=254
SGDS **Sogindy** 67.34 311 *e*P P 01 22 38.8 +1.0
baz=312
SGDS **Sogindy** 67.34 311 *e*P P 01 22 38.8 +1.0
M24K **Tolsona, Glenn** 67.35 28 IAMs_20 IAMs_20 01 49 59.0
comp=Z,4µm,20.0s
M24K **Tolsona, Glenn** 67.35 28 P P 01 22 38.6 +1.1
baz=256
UCH **Uchtor** 67.39 310 P P 01 22 39.6 +1.0
SNR=32
AAK **Ala-Archa** 67.41 311 P P 01 22 39.0 +0.5
SNR=11
AAK **Ala-Archa** 67.41 311 P P 01 22 37.8 -0.6
AAK **Ala-Archa** 67.41 311 *i* P P 01 22 38.9 +0.5
SNR=14
AAK **Ala-Archa** 67.41 311 *c i*P P 01 22 38.6 +0.2
AAK pmax pmax
comp=Z,20nm,1.3s
AAK **Ala-Archa** 67.41 311 LR LR 01 55 14.7

comp=Z,5µm,18.4s,baz=88,slow=39
AAK Ala-Archa 67.41 311 P **P** **01 22 39.4 +1.0**
AAK P **P** **01 22 39.4 +1.0**
AAK S **S** **01 31 29.8 -3.4**
AAK S **S** **01 31 29.8 -3.4**
USP Ospenovka 67.43 311 P **P** **01 22 39.2 +0.8**
SNR=15
POKR Poker Plat Res 67.58 25 IAMs_20 IAMs_20 01 49 07.7
comp=Z,5µm,21.0s
POKR Poker Plat Res 67.58 25 P **P** **01 22 39.2 +0.4**
baz=254
D23K Nanushuk River 67.58 20 P **P** **01 22 39.9 +1.2**
baz=249
HDA Harding Lake 67.59 26 P **P** **01 22 39.8 +1.0**
baz=255,SNR=9.4
H24K Noodor Dome 67.60 24 IAMs_20 IAMs_20 01 49 40.6
comp=Z,4µm,20.0s
H24K Noodor Dome 67.60 24 P **P** **01 22 40.2 +1.2**
baz=253
E23K Chandalar 67.64 21 P **P** **01 22 40.6 +1.4**
baz=251
RAGM Ragged Mountai 67.69 30 IAMs_20 IAMs_20 01 49 32.9
comp=Z,5µm,20.0s
ILAR Eielson Array 67.71 25 P **P** **01 22 38.9 -0.7**
comp=Z,23nm,1.0s,baz=250,slow=6.1,SNR=72
ILAR LR LR 01 49 42.8
comp=Z,3µm,21.5s,baz=249,slow=34
comp=Z,23nm,1.0s
KAIM Kayak Island 67.72 31 P **P** **01 22 41.2 +1.4**
baz=259
BTLS Baital 67.83 313⇑*i* P **P** **01 22 41.1 +0.3**
comp=Z,32nm,1.7s,baz=313
BTLS Baital 67.83 313*c i* P **P** **01 22 41.0 +0.3**
BTLS pmax pmax
comp=Z,32nm,1.7s
BMRM Bremner River 67.83 29 P **P** **01 22 41.0 +0.5**
baz=258
TOLK Toolik Lake Re 67.85 21 IAMs_20 IAMs_20 01 56 26.6
comp=Z,3µm,18.0s
TOLK Toolik Lake Re 67.85 21 P **P** **01 22 41.9 +1.4**
baz=250,SNR=27
PAX Paxson 67.87 27 P **P** **01 22 41.8 +1.0**
baz=257,SNR=10
HARP HAARP 67.88 28 P **P** **01 22 41.9 +1.1**
baz=257
K24K Donnelly Dome 67.93 26 P **P** **01 22 42.2 +1.1**
baz=256,SNR=9.3
EKS2 Erkin-Say 67.94 311 P **P** **01 22 43.0 +1.2**
SNR=10
N25K Chitina, Valde 67.97 29 IAmb IAmb 01 22 51.6
comp=Z,82nm,1.4s
N25K IAMs_20 IAMs_20 01 50 11.4
comp=Z,5µm,20.0s
N25K Chitina, Valde 67.97 29 P **P** **01 22 42.3 +0.9**
baz=258
G24K Hadweenzic Riv 68.00 23 IAMs_20 IAMs_20 01 49 41.3
comp=Z,5µm,20.0s
G24K Hadweenzic Riv 68.00 23 P **P** **01 22 42.5 +1.0**
baz=253
E24K Your Creek 68.04 22 IAMs_20 IAMs_20 01 53 27.5
comp=Z,4µm,20.0s
E24K Your Creek 68.04 22 P **P** **01 22 42.7 +1.0**
baz=252
TRD Trivandrum 68.08 274*e* P **P** **01 22 43.7 +0.9**
F24K Squaw Lake 68.09 22 IAmb IAmb 01 22 52.5
comp=Z,63nm,1.2s
F24K Squaw Lake 68.09 22 P **P** **01 22 42.8 +0.7**
baz=253,SNR=31
BERG Berg Lake 68.16 30 IAMs_20 IAMs_20 01 50 07.1
comp=Z,4µm,20.0s
D24K Happy Valley 68.27 20 IAMs_20 IAMs_20 01 58 13.1
comp=Z,3µm,18.0s
D24K Happy Valley 68.27 20 P **P** **01 22 44.7 +1.6**
baz=251
J25K Salcha River, 68.30 26 IAMs_20 IAMs_20 01 49 39.8
comp=Z,3µm,20.0s
J25K Salcha River, 68.30 26 P **P** **01 22 43.5 +0.1**
baz=256
GLB Gilahina Butte 68.31 29 IAMs_20 IAMs_20 01 52 30.3
comp=Z,3µm,20.0s
BGLC Bering Glacier 68.32 30 P **P** **01 22 44.1 +0.7**
baz=260
RIDG Independent Ri 68.32 27 P **P** **01 22 44.1 +0.5**
baz=257,SNR=18
VRDI Verde Repeater 68.44 29 P **P** **01 22 45.6 +1.1**
VRDI IAmb IAmb 01 23 02.5
comp=Z,41nm,1.0s
VRDI IAMs_20 IAMs_20 01 52 32.7
comp=Z,4µm,20.0s
PRP Porcupine Dome 68.45 25 IAMs_20 IAMs_20 01 49 22.9
comp=Z,5µm,21.0s
PRP Porcupine Dome 68.45 25 P **P** **01 22 45.4 +0.9**
baz=256
C24K Franklin Bluff 68.50 20 P **P** **01 22 45.4 +1.0**
baz=251
CRQM Cirque 68.50 30 IAMs_20 IAMs_20 01 50 11.0
comp=Z,4µm,20.0s
CRQE Cirque 68.52 30 P **P** **01 22 45.5 +0.6**
baz=260
SNH Sunshine Point 68.55 30 IAMs_20 IAMs_20 01 50 32.3
comp=Z,5µm,19.0s
WAX Waxell Ridge 68.59 30 IAMs_20 IAMs_20 01 58 15.2
comp=Z,4µm,18.0s
MENT Mentasta 68.64 27 IAMs_20 IAMs_20 01 49 57.1
comp=Z,3µm,22.0s
MENT Mentasta 68.64 27 P **P** **01 22 48.0 +2.4**
TGL Tana Glacier 68.65 30 IAMs_20 IAMs_20 01 50 58.4
comp=Z,4µm,20.0s
MCARA McCarthy VSAT 68.67 29 IAmb IAmb 01 23 05.5
comp=Z,65nm,1.0s
MCARA IAMs_20 IAMs_20 01 52 11.8
comp=Z,3µm,20.0s
MCARA McCarthy VSAT 68.67 29 P **P** **01 22 44.9 -0.9**
baz=260
SCRK Sand Creek 68.74 26 P **P** **01 22 47.6 +1.4**
SCRK IAMs_20 IAMs_20 01 50 18.6
comp=Z,6µm,21.0s
SCRK Sand Creek 68.74 26 P **P** **01 22 46.8 +0.5**
baz=258,SNR=21
L26K Log Cabin Wild 68.83 27 IAMs_20 IAMs_20 01 50 36.0
comp=Z,4µm,21.0s
L26K Log Cabin Wild 68.83 27 P **P** **01 22 47.3 +0.6**
baz=259,SNR=6.4
FYU Fort Yukon 68.83 24 IAMs_20 IAMs_20 01 50 28.8
comp=Z,3µm,20.0s
ISLE Juniper Island 68.86 30 IAMs_20 IAMs_20 01 50 20.6
comp=Z,3µm,20.0s
M26K Nabesna, AK 68.87 28 P **P** **01 22 47.7 +0.7**
baz=259
F25K Christian Rive 68.94 22 P **P** **01 22 49.1 +1.8**
baz=255,SNR=37
MESA MESA 68.98 31 IAMs_20 IAMs_20 01 50 35.3
comp=Z,5µm,20.0s
MESA MESA 68.98 31 P **P** **01 22 48.6 +0.7**
baz=261
BRZS Berezniki 69.00 318*i* P **P** **01 22 48.2 +0.2**
comp=Z,31nm,1.7s,baz=318
BRZS *e*S **S** **01 31 53.9 +2.3**
baz=318
BRZS Berezniki 69.00 318*i* P **P** **01 22 48.2 +0.2**
BRZS *e*S **S** **01 31 53.8 +2.3**
BRZS pmax pmax
comp=Z,31nm,1.7s
J26L Joseph Creek 69.03 26 IAMs_20 IAMs_20 01 57 03.3
comp=Z,3µm,19.0s
J26L Joseph Creek 69.03 26 P **P** **01 22 48.7 +0.7**
baz=258
E25K Arctic Village 69.11 22 P **P** **01 22 50.1 +1.7**
baz=255,SNR=33
OTUK Ortayu 69.14 317 P **P** **01 22 48.4 -0.5**
D25K Kavik River 69.15 21 P **P** **01 22 49.5 +0.8**
baz=253
GRNC Granite Creek 69.17 30 IAMs_20 IAMs_20 01 48 40.1
comp=Z,3µm,22.0s
BARN Barnard Glacie 69.26 30 IAMs_20 IAMs_20 01 49 41.6
comp=Z,3µm,21.0s
POO Poona 69.36 285*e* P **P** **01 22 50.7 -0.1**
POO IAmb IAmb 01 22 52.1
comp=Z,43nm,0.7s
I26K Coal Creek Min 69.37 25 IAMs_20 IAMs_20 01 50 22.7
comp=Z,3µm,20.0s
I26K Coal Creek Min 69.37 25 P **P** **01 22 49.9 -0.1**
baz=258
M27K Edge Creek, AK 69.37 28 IAMs_20 IAMs_20 01 50 24.8
comp=Z,5µm,21.0s
M27K Edge Creek, AK 69.37 28 P **P** **01 22 50.8 +0.6**
baz=260
CTG Chitna Glacier 69.40 30 P **P** **01 22 50.5 +0.1**
baz=261
CTGM Chitina Glacie 69.41 30 IAMs_20 IAMs_20 01 49 34.3
comp=Z,3µm,21.0s
TABL Table Mountain 69.42 30 IAMs_20 IAMs_20 01 52 25.3
comp=Z,4µm,20.0s
G26K Porcupine Rive 69.48 23 P **P** **01 22 51.6 +1.0**
baz=257
L27K Beaver Creek, 69.52 28 IAMs_20 IAMs_20 01 50 43.5
comp=Z,3µm,21.0s
L27K Beaver Creek, 69.52 28 P **P** **01 22 52.0 +1.0**
baz=260
F26K Sheenjek River 69.52 22 P **P** **01 22 52.7 +1.7**
baz=256,SNR=43
K27K Chicken 69.58 26 IAMs_20 IAMs_20 01 51 04.4
comp=Z,5µm,20.0s
K27K Chicken 69.58 26 P **P** **01 22 52.2 +0.9**
baz=259
C26K Camden Bay 69.81 20 P **P** **01 22 53.9 +1.3**
baz=255
PINM Pinnacle 69.81 31 P **P** **01 22 53.1 +0.1**
baz=262
BVCY Beaver Creek 69.85 28 P **P** **01 22 53.9 +0.8**
baz=261,SNR=6.8
YUK3 Moose Creek 69.94 29 P **P** **01 22 54.4 +0.6**
baz=262,SNR=9.4
I27K Kandik River 70.06 25 P **P** **01 22 55.2 +0.8**
baz=259,SNR=8.1
BCPM Bancas Point 70.10 31 IAMs_20 IAMs_20 01 52 40.9
comp=Z,4µm,19.0s
EGAK Eagle 70.10 26 P **P** **01 22 55.7 +1.1**
baz=260,SNR=13
PNL Peninsula 70.19 31 P **P** **01 22 55.9 +0.7**
baz=263
YUK8 Steele Glacier 70.20 30 P **P** **01 22 56.1 +0.6**
baz=262
H27K Steamboat Moun 70.21 24 P **P** **01 22 56.6 +1.3**
baz=259,SNR=58
KK31 Karatay Array 70.34 311*i* P **P** **01 22 56.7 +0.2**
PPT Papeete 70.52 114 LR LR 01 49 47.5
comp=Z,3µm,18.8s,baz=268,slow=32
BVA0 Borovoye Array 70.59 322*i* P **P** **01 22 57.4 -0.4**
BVAR Borovoye Array 70.59 322 P **P** **01 22 57.7 0.0**
comp=Z,48nm,0.7s,baz=100,slow=7.0,SNR=226
BVAR LR LR 01 56 17.3
comp=Z,8µm,18.5s,baz=87,slow=38
comp=Z,48nm,0.7s
BRVK Borovoye 70.66 322 P **P** **01 22 58.3 +0.2**
BRVK IAmb IAmb 01 23 05.2
comp=Z,42nm,0.8s
BRVK Borovoye 70.66 322 P **P** **01 22 58.3 +0.2**
BRVK pmax pmax
comp=Z,42nm,0.8s
BRVK Borovoye 70.66 322 P **P** **01 22 58.8 +0.7**
BRVK P **P** **01 22 58.8 +0.7**
BRVK S **S** **01 32 08.1 -2.7**
BRVK S **S** **01 32 08.1 -2.7**
O29M Mount Kennedy 70.67 31 IAMs_20 IAMs_20 01 51 50.4
comp=Z,5µm,21.0s
O29M Mount Kennedy 70.67 31 P **P** **01 22 59.1 +0.8**
baz=264
I28M Miner Creek 70.72 25 IAMs_20 IAMs_20 01 52 27.6
comp=Z,4µm,20.0s
I28M Miner Creek 70.72 25 P **P** **01 22 59.3 +0.9**
baz=261,SNR=13
YUK4 Talbot Arm 70.75 30 P **P** **01 23 00.1 +1.3**
baz=264,SNR=9.5
DAWY Dawson 70.75 27 IAmb IAmb 01 23 08.6
comp=Z,120nm,1.6s
DAWY IAMs_20 IAMs_20 01 50 25.7
comp=Z,4µm,22.0s
DAWY Dawson 70.75 27 P **P** **01 22 59.8 +1.2**
baz=262,SNR=20
BRLS Boroldav 70.84 311⇑*i* P **P** **01 22 60.0 +0.4**
comp=Z,19nm,1.5s,baz=311
BRLS Boroldav 70.84 311*c i* P **P** **01 22 59.9 +0.4**
BRLS pmax pmax
comp=Z,19nm,1.5s
YUK6 Outpost Mounta 70.84 30 P **P** **01 23 00.5 +1.1**
baz=264
M29M Somme Creek 70.96 28 IAMs_20 IAMs_20 01 52 07.0
comp=Z,4µm,20.0s
M29M Somme Creek 70.96 28 P **P** **01 23 01.1 +1.1**
baz=263
D27M Malcolm River 71.00 21 IAMs_20 IAMs_20 01 53 34.6
comp=Z,3µm,21.0s
D27M Malcolm River 71.00 21 P **P** **01 23 01.2 +1.2**
baz=259
P29M Windy Craggy 71.02 31 IAMs_20 IAMs_20 01 51 53.8
comp=Z,3µm,21.0s
P29M Windy Craggy 71.02 31 P **P** **01 23 01.0 +0.7**
baz=265
CHM Chimkent 71.03 310*e* P **P** **01 23 00.8 +0.1**
baz=310
CHM LR LR 01 53 55.4
comp=Z,827nm,18.0s,baz=310
CHM Chimkent 71.03 310*e* P **P** **01 23 00.7 +0.1**
CHM MLR MLR
comp=Z,827nm,18.0s
F28M Old Crow 71.10 23 P **P** **01 23 01.5 +0.9**
baz=260
L29M L29M 71.19 28 P **P** **01 23 02.3 +1.1**
baz=263
HYT Haines Junctio 71.25 30 IAmb IAmb 01 23 13.1
comp=Z,55nm,1.1s
HYT Haines Junctio 71.25 30 P **P** **01 23 02.9 +1.2**
baz=265,SNR=15
J29N Klondike Camp 71.31 26 IAmb IAmb 01 23 15.2
comp=Z,85nm,1.5s
J29N IAMs_20 IAMs_20 01 54 15.5
comp=Z,4µm,20.0s
J29N Klondike Camp 71.31 26 P **P** **01 23 02.8 +0.9**
baz=263,SNR=7.7
E28M Babbage River 71.39 22 IAmb IAmb 01 23 13.0
comp=Z,83nm,1.4s
E28M IAMs_20 IAMs_20 01 58 39.1
comp=Z,4µm,19.0s
E28M Babbage River 71.39 22 P **P** **01 23 03.6 +1.3**
baz=260,SNR=26
P30M Million Dollar 71.46 31 P **P** **01 23 03.9 +1.0**
baz=265
H29M Whitestone 71.47 24 P **P** **01 23 04.0 +1.1**
baz=264,SNR=12
N30M Aishikik Lake 71.50 30 P **P** **01 23 04.3 +1.1**
baz=265
K29M Barlow Dome 71.54 27 IAmb IAmb 01 23 16.6
comp=Z,72nm,1.2s
K29M IAMs_20 IAMs_20 01 51 22.3
comp=Z,5µm,22.0s
K29M Barlow Dome 71.54 27 P **P** **01 23 04.2 +0.8**
baz=264,SNR=29
S31K Pelican 71.69 33 P **P** **01 23 05.0 +0.8**
baz=267
M30M Minto, Yukon 71.74 28 IAmb IAmb 01 23 15.0
comp=Z,59nm,1.4s
M30M IAMs_20 IAMs_20 01 52 41.1
comp=Z,4µm,20.0s
M30M Minto, Yukon 71.74 28 P **P** **01 23 05.8 +1.2**
baz=265,SNR=9.4
KBU Kabul Universi 71.82 302 P **P** **01 23 05.2 -0.6**
KBU S **S** **01 32 27.2 +1.8**
O30N Mendenhall 71.93 30 IAMs_20 IAMs_20 01 53 23.3
comp=Z,5µm,20.0s
O30N Mendenhall 71.93 30 P **P** **01 23 06.7 +0.9**
baz=266
E29M Blow River 71.96 22 P **P** **01 23 07.0 +1.3**
baz=262
N31M Braeburn, Yuko 72.13 30 IAmb IAmb 01 23 18.1
comp=Z,54nm,1.1s
N31M IAMs_20 IAMs_20 01 55 04.5
comp=Z,4µm,20.0s
N31M Braeburn, Yuko 72.13 30 P **P** **01 23 07.4 +0.5**
baz=266
J30M Hart River 72.13 26 IAMs_20 IAMs_20 01 52 04.6
comp=Z,4µm,21.0s
J30M Hart River 72.13 26 P **P** **01 23 08.1 +1.1**
baz=264
SIT Sitka 72.14 34 P **P** **01 23 08.0 +1.1**
baz=268
EPYK Eagle Plains 72.16 24 P **P** **01 23 07.9 +0.9**
baz=264,SNR=17
I30M Mount Dempster 72.18 26 IAMs_20 IAMs_20 01 53 26.3
comp=Z,4µm,20.0s
I30M Mount Dempster 72.18 26 P **P** **01 23 08.1 +0.9**
baz=264,SNR=14
SKAG Skagway 72.24 32 P **P** **01 23 08.6 +1.1**
baz=267
MAYO Mayo, Yukon 72.24 27 IAMs_20 IAMs_20 01 54 15.1
comp=Z,3µm,20.0s
MAYO Mayo, Yukon 72.24 27 P **P** **01 23 08.4 +0.9**
baz=265,SNR=5.6
G30M tAoh Zraii Nji 72.42 24 IAMs_20 IAMs_20 01 52 08.6
comp=Z,4µm,21.0s
G30M tAoh Zraii Nji 72.42 24 P **P** **01 23 09.6 +1.0**
baz=264,SNR=18
WHY Whitehorse 72.52 30 IAMs_20 IAMs_20 01 52 57.8
comp=Z,5µm,21.0s
WHY Whitehorse 72.52 30 P **P** **01 23 10.7 +1.4**
baz=267
S32K Killisnoo 72.56 34 IAMs_20 IAMs_20 01 55 58.0
comp=Z,3µm,19.0s
S32K Killisnoo 72.56 34 P **P** **01 23 09.9 +0.5**
baz=268
R32K Eaglecrest 72.61 33 P **P** **01 23 10.4 +0.6**
baz=268
F30M Barrier River 72.65 23 P **P** **01 23 11.0 +1.1**
baz=264
JIS Juneau Island 72.68 33 P **P** **01 23 12.1 +1.9**
JIS Juneau Island 72.68 33 P **P** **01 23 11.5 +1.3**
M31M Drury Creek, Y 72.83 29 IAMs_20 IAMs_20 01 52 42.9
comp=Z,4µm,20.0s
M31M Drury Creek, Y 72.83 29 P **P** **01 23 11.6 +0.5**
baz=267,SNR=9.9
P32M Atlin 73.06 32 P **P** **01 23 13.0 +0.5**
baz=268
H31M Peel River 73.07 25 IAmb IAmb 01 23 57.6
comp=Z,46nm,1.1s
H31M IAMs_20 IAMs_20 01 52 18.3
comp=Z,4µm,22.0s
H31M Peel River 73.07 25 P **P** **01 23 13.1 +0.7**
baz=266,SNR=22
G31M Satah River 73.18 24 IAMs_20 IAMs_20 01 53 14.1
comp=Z,5µm,21.0s
G31M Satah River 73.18 24 P **P** **01 23 13.6 +0.7**
baz=266
FARO Faro, Yukon 73.32 29 IAMs_20 IAMs_20 01 52 47.9
comp=Z,4µm,22.0s
FARO Faro, Yukon 73.32 29 P **P** **01 23 15.3 +1.3**
baz=268
U33K Whale Pass 73.34 35 IAMs_20 IAMs_20 01 50 41.8
comp=Z,4µm,20.0s
U33K Whale Pass 73.34 35 P **P** **01 23 15.3 +1.2**
baz=270
CRAG Craig 73.34 36 IAMs_20 IAMs_20 01 52 17.8
comp=Z,4µm,20.0s
CRAG Craig 73.34 36 P **P** **01 23 15.3 +1.2**
baz=270
N32M Quiet Lake 73.42 30 IAMs_20 IAMs_20 01 54 41.0
comp=Z,4µm,19.0s
N32M Quiet Lake 73.42 30 P **P** **01 23 15.8 +1.2**
baz=268
F31M Tsiigehtchic 73.42 23 IAMs_20 IAMs_20 01 52 51.1
comp=Z,4µm,21.0s
F31M Tsiigehtchic 73.42 23 P **P** **01 23 14.9 +0.5**
baz=266,SNR=20
P33M Teslin, Yukon 73.53 31 IAmb IAmb 01 23 25.5
comp=Z,66nm,1.5s
P33M Teslin, Yukon 73.53 31 P **P** **01 23 16.1 +0.8**
baz=269,SNR=7.1
INK Inuvik 73.56 22 IAmb IAmb 01 23 24.5
comp=Z,122nm,1.8s
INK Inuvik 73.56 22 P **P** **01 23 15.7 +0.5**
baz=266,SNR=26
INK Inuvik 73.56 22 LR LR 01 54 12.4
comp=Z,2µm,21.4s,baz=202,slow=35
KAAM Kaadhehdhoo 73.71 266 P **P** **01 23 16.9 -0.2**
WRAK Wrangell Islan 73.77 35 IAMs_20 IAMs_20 01 51 15.1
comp=Z,3µm,19.0s
WRAK Wrangell Islan 73.77 35 P **P** **01 23 16.8 +0.2**
baz=271
Q32M Nakina River 73.80 32 IAMs_20 IAMs_20 01 55 34.7
comp=Z,3µm,19.0s
Q32M Nakina River 73.80 32 P **P** **01 23 16.9 -0.2**
baz=270
V35K Ketchikan 74.20 36 IAMs_20 IAMs_20 01 54 52.7
comp=Z,4µm,19.0s
V35K Ketchikan 74.20 36 P **P** **01 23 19.8 +0.6**
baz=272
S34M Telegraph Cree 74.41 33 IAmb IAmb 01 23 28.5
comp=Z,43nm,1.1s
S34M IAMs_20 IAMs_20 01 59 15.9
comp=Z,2µm,19.0s
S34M Telegraph Cree 74.41 33 P **P** **01 23 21.6 +1.2**
baz=271,SNR=5.5
R33M Jennings River 74.46 32 IAMs_20 IAMs_20 02 02 42.3
comp=Z,3µm,19.0s
R33M Jennings River 74.46 32 P **P** **01 23 21.5 +0.6**
baz=271,SNR=7.4
T35M Bob Quinn 74.91 34 IAmb IAmb 01 23 33.9
comp=Z,62nm,1.4s
T35M IAMs_20 IAMs_20 01 51 44.3
comp=Z,3µm,20.0s
T35M Bob Quinn 74.91 34 P **P** **01 23 24.1 +0.8**
baz=272,SNR=7.8
DLBC Dease Lake 74.98 33 IAmb IAmb 01 23 30.4
comp=Z,61nm,1.1s
DLBC Dease Lake 74.98 33 P **P** **01 23 25.1 +1.3**
baz=272,SNR=9.6
U35K Hyder 75.08 35 IAMs_20 IAMs_20 01 53 29.9
comp=Z,4µm,19.0s
U35K Hyder 75.08 35 P **P** **01 23 25.5 +1.2**
baz=273
WTLY Watson Lake, Y 75.54 31 P **P** **01 23 28.0 +1.1**
baz=273,SNR=6.3
TGTN Hyland Airport 75.73 30 P **P** **01 23 28.5 +0.5**
baz=273,SNR=10
SVE Sverdlovsk 76.17 326*de* P **P** **01 23 31.2 +0.7**
SVE *e*S **S** **01 33 15.9 +2.8**
SVE pmax pmax
comp=Z,63nm,1.5s
SVE MLR MLR
comp=Z,4µm,18.0s
DGAR Diego Garcia 76.30 259 P **P** **01 23 32.2 +0.2**
DGAR Diego Garcia 76.30 259 P **P** **01 23 32.2 +0.2**
DGAR pmax pmax
comp=Z,341nm,1.9s
DGAR MLR MLR
comp=Z,2µm,20.0s
DGAR Diego Garcia 76.30 259 P **P** **01 23 34.1 +2.0**
DGAR P **P** **01 23 34.1 +2.0**
A36M Sachs Harbour 76.42 19 IAmb IAmb 01 23 56.8
comp=Z,37nm,0.9s
A36M Sachs Harbour 76.42 19 P **P** **01 23 32.1 +0.4**
baz=273
BBB Bella Bella 76.46 39 IAMs_20 IAMs_20 01 51 56.7
comp=Z,4µm,21.0s
BBB Bella Bella 76.46 39 LR LR 01 52 08.0
comp=Z,4µm,20.7s,baz=264,slow=32
HOLB Holberg 76.59 41 IAMs_20 IAMs_20 01 54 23.3
comp=Z,3µm,20.0s
C36M Paulatuk 76.99 21 IAmb IAmb 01 23 39.2
comp=Z,40nm,0.9s
C36M Paulatuk 76.99 21 P **P** **01 23 35.4 +0.5**
baz=274
AB31 Akbulak array 77.29 318*i* P **P** **01 23 36.3 -0.7**
ARU Arti 77.35 325 P **P** **01 23 37.0 -0.2**
ARU Arti 77.35 325*d i* P **P** **01 23 37.7 +0.5**
ARU 01 26 30.2
ARU S **S** **01 33 31.3 +5.3**
ARU SS **SS** **01 38 28.9 +4.7**
ARU pmax pmax
comp=Z,75nm,1.7s
ARU MLR MLR
comp=Z,7µm,19.0s
ARU Arti 77.35 325 LR LR 02 00 35.0
comp=Z,6µm,18.8s,baz=80,slow=38
WRGLY Wrigley 77.83 28 IAmb IAmb 01 23 49.7
comp=Z,64nm,1.2s
WRGLY Wrigley 77.83 28 P **P** **01 23 40.1 +0.3**
baz=276,SNR=7.3
KOTAN Kotaneelee Air 77.91 31 P **P** **01 23 41.1 +0.8**
baz=277
FLDN Fort Liard 78.18 31 IAMs_20 IAMs_20 01 55 48.4
comp=Z,3µm,21.0s
FLDN Fort Liard 78.18 31 P **P** **01 23 42.7 +1.0**
baz=277
AKTO Aktyubinsk 78.39 319 P **P** **01 23 42.3 -0.8**
AKTO Aktyubinsk 78.39 319 LR LR 02 00 52.8
comp=Z,6µm,19.3s,baz=72,slow=38
CBB Campbell River 78.42 41 P **P** **01 23 43.8 +0.5**
C03A Quillayute Air 79.24 43 IAMs_20 IAMs_20 02 00 46.6
comp=Z,3µm,19.0s
WISH Wishkah 79.91 44 P **P** **01 23 51.9 +0.4**
WISH IAMs_20 IAMs_20 02 00 24.2
comp=Z,3µm,20.0s
RADR Rader Ridge 80.00 45 IAmb IAmb 01 24 03.3

	comp=Z,126nm,1.3s									
RADR					IAMs_20	IAMs_20	01 55 59.8			
	comp=Z,3µm,20.0s									
E03A	**Lebam**	**80.14**	**44**		IAmb	IAmb	01 24 00.6			
	comp=Z,92nm,1.2s									
E03A					IAMs_20	IAMs_20	01 56 14.5			
	comp=Z,3µm,20.0s									
KEBM	**Edson Butte**	**80.22**	**48**		IAMs_20	IAMs_20	01 56 14.9			
	comp=Z,4µm,20.0s									
GEYT	**Alibeck**	**80.23**	**307**		P	**P**	**01 23 54.2**	**+0.7**		
	comp=Z,21nm,0.8s,baz=57,slow=5.5,SNR=22									
GEYT					LR	LR	02 04 16.2			
	comp=Z,2µm,18.4s,baz=80,slow=39									
	comp=Z,21nm,0.8s									
HEBO	**Mount Hebo**	**80.24**	**46**		IAMs_20	IAMs_20	01 57 09.1			
	comp=Z,3µm,19.0s									
KBO	**Bosley Butte**	**80.41**	**49**		IAMs_20	IAMs_20	01 56 32.0			
	comp=Z,3µm,20.0s									
J01E	**Myrtle Point**	**80.46**	**48**		IAMs_20	IAMs_20	01 56 22.3			
	comp=Z,3µm,19.0s									
GNW	**Green Mountain**	**80.47**	**43**		IAmb	IAmb	01 24 05.6			
	comp=Z,77nm,1.2s									
GNW					IAMs_20	IAMs_20	02 04 26.9			
	comp=Z,2µm,18.0s									
G03D	**McMinnville, O**	**80.58**	**46**		IAMs_20	IAMs_20	01 58 07.1			
	comp=Z,3µm,19.0s									
F04D	**Rainier, OR**	**80.60**	**45**		IAMs_20	IAMs_20	01 56 45.6			
	comp=Z,4µm,19.0s									
KSXB	**Camp Six Broad**	**80.74**	**49**		IAMs_20	IAMs_20	01 52 51.6			
	comp=Z,3µm,20.0s									
K02D	**Willamette Mer**	**80.74**	**48**		IAmb	IAmb	01 24 02.2			
	comp=Z,90nm,1.7s									
KRPM	**Rodgers**	**80.75**	**50**		IAMs_20	IAMs_20	01 58 03.0			
	comp=Z,4µm,18.0s									
KRMB	**Red Mountain**	**80.77**	**50**		IAMs_20	IAMs_20	01 57 55.5			
	comp=Z,4µm,19.0s									
I03D	**Drain, OR**	**80.79**	**47**		IAMs_20	IAMs_20	01 53 15.8			
	comp=Z,4µm,20.0s									
JCC	**Jacoby Creek,**	**80.80**	**50**		IAMs_20	IAMs_20	01 56 51.5			
	comp=Z,3µm,20.0s									
KMPM	**Mount Pierce**	**80.81**	**51**		IAmb	IAmb	01 24 04.7			
	comp=Z,86nm,1.0s									
BUCK	**Buck Mountain**	**80.95**	**47**		IAmb	IAmb	01 24 02.0			
	comp=Z,117nm,1.4s									
DBO	**Dodson Butte**	**80.97**	**48**		IAMs_20	IAMs_20	01 57 54.6			
	comp=Z,4µm,19.0s									
KHMM	**Horse Mountain**	**81.02**	**50**		P	**P**	**01 23 58.4**	**+0.6**		
KHMM					IAmb	IAmb	01 24 06.0			
	comp=Z,63nm,1.1s									
H04D	**Lebanon**	**81.07**	**46**		P	**P**	**01 23 58.5**	**+0.8**		
H04D					IAMs_20	IAMs_20	01 57 36.2			
	comp=Z,4µm,19.0s									
D05A	**Enumclaw**	**81.09**	**44**		IAMs_20	IAMs_20	02 04 48.5			
	comp=Z,2µm,18.0s									
KMRM	**Mail Ridge**	**81.15**	**51**		P	**P**	**01 23 59.4**	**+1.0**		
KMRM					IAmb	IAmb	01 24 05.0			
	comp=Z,123nm,1.4s									
HUMO	**Hull Mountain**	**81.27**	**48**		IAmb	IAmb	01 24 09.1			
	comp=Z,72nm,1.5s									
HUMO					IAMs_20	IAMs_20	01 56 58.6			
	comp=Z,4µm,20.0s									
KCPM	**Cahto Peak**	**81.35**	**51**		IAMs_20	IAMs_20	01 52 38.0			
	comp=Z,3µm,21.0s									
H04A	**Detroit Lake**	**81.43**	**46**		IAmb	IAmb	01 24 09.9			
	comp=Z,48nm,1.1s									
H04A					IAMs_20	IAMs_20	01 58 15.6			
	comp=Z,3µm,19.0s									
I04A	**Tendick Farm,**	**81.44**	**47**		IAMs_20	IAMs_20	01 53 47.0			
	comp=Z,3µm,21.0s									
YBH	**Yreka Blue Hor**	**81.61**	**49**		IAmb	IAmb	01 24 10.9			
	comp=Z,76nm,1.4s									
YBH					IAMs_20	IAMs_20	01 53 30.8			
	comp=Z,3µm,20.0s									
YBH	**Yreka Blue Hor**	**81.61**	**49**		LR	LR	01 54 03.2			
	comp=Z,3µm,20.9s,baz=284,slow=31									
HOOD	**Mount Hood Mea**	**81.68**	**45**		IAMs_20	IAMs_20	01 56 34.2			
	comp=Z,3µm,19.0s									
L04D	**Klamath Falls**	**81.81**	**49**		IAMs_20	IAMs_20	01 57 17.1			
	comp=Z,3µm,20.0s									
KIRV	**Kirov**	**81.86**	**328**	⇓	*e*P	**P**	**01 24 02.2**	**+0.6**		
KIRV	**Kirov**	**81.86**	**328**		LR	LR	02 03 00.4			
	comp=Z,5µm,18.4s,baz=69,slow=38									
HOPS	**Hopland Field**	**81.87**	**52**		IAMs_20	IAMs_20	01 53 11.8			
	comp=Z,3µm,21.0s									
G05A	**Wamic**	**81.92**	**45**		IAmb	IAmb	01 24 22.1			
	comp=Z,59nm,1.0s									
G05A					IAMs_20	IAMs_20	01 56 31.7			
	comp=Z,3µm,19.0s									
YKAW3	**Yellowknife Wh**	**81.93**	**28**		IAMs_20	IAMs_20	02 00 05.4			
	comp=Z,3µm,20.0s									
YKA	**Yellowknife Ar**	**81.95**	**28**	*c*	*e*P	**P**	**01 24 02.2**	**+0.2**		
YKA					pmax	pmax				
	comp=Z,9.0nm,0.9s									
YKA	**Yellowknife Ar**	**81.95**	**28**		P	**P**	**01 24 02.2**	**+0.2**		
	comp=Z,8.3nm,0.9s,baz=286,slow=5.5,SNR=41									
YKA					PKKPbc	**PKKPbc**	**01 42 30.5**	**-3.6**		
	comp=Z,0.4nm,0.8s,baz=109,slow=2.4,SNR=5.2									
YKA					LR	LR	02 00 09.0			
	comp=Z,1µm,20.6s,baz=288,slow=36									
	comp=Z,8.3nm,0.9s									
YKAW1	**Yellowknife Wh**	**82.01**	**28**		IAMs_20	IAMs_20	02 02 07.4			
	comp=Z,2µm,19.0s									
I05D	**Terrebonne, OR**	**82.09**	**46**		IAmb	IAmb	01 24 13.9			
	comp=Z,117nm,1.7s									
JLN	**Jalan Bani Buh**	**82.09**	**291**		P	**P**	**01 24 04.6**	**+1.0**		
JLN					P	**P**	**01 24 04.6**	**+1.0**		
K04D	**Chiloquin, OR**	**82.14**	**48**		IAMs_20	IAMs_20	01 57 36.5			
	comp=Z,2µm,20.0s									
J05D	**Fort Rock, OR**	**82.38**	**47**		IAmb	IAmb	01 24 11.6			
	comp=Z,45nm,0.8s									
J05D					IAMs_20	IAMs_20	01 57 38.8			
	comp=Z,3µm,19.0s									
G06A	**Carlson Farm,**	**82.40**	**45**		IAmb	IAmb	01 24 31.8			
	comp=Z,65nm,1.6s									
G06A					IAMs_20	IAMs_20	01 56 37.2			
	comp=Z,2µm,20.0s									
WBK	**Wadi Bani Khal**	**82.40**	**291**		P	**P**	**01 24 07.4**	**+2.1**		
WBK					P	**P**	**01 24 07.4**	**+2.1**		
PINE	**Pine Mountain**	**82.48**	**47**		IAMs_20	IAMs_20	01 57 43.6			
	comp=Z,4µm,20.0s									
WSAR	**Wadi Sarin**	**82.58**	**292**		LR	LR	02 03 24.9			
	comp=Z,1µm,19.8s,baz=88,slow=38									
JASK	**Jask - Hormozg**	**82.72**	**295**		P	**P**	**01 24 08.6**	**+1.7**		
JASK					S	**S**	**01 34 21.8**	**-1.9**		
K05A	**Summer Lake**	**82.74**	**48**		IAMs_20	IAMs_20	01 54 29.4			
	comp=Z,3µm,21.0s									
F07A	**Phinny Hill Vi**	**82.74**	**45**		IAMs_20	IAMs_20	01 58 14.3			
	comp=Z,3µm,18.0s									
HAWA	**Hanford**	**82.91**	**44**		IAmb	IAmb	01 24 18.0			
	comp=Z,68nm,1.6s									
HAWA					IAMs_20	IAMs_20	01 59 16.6			
	comp=Z,2µm,18.0s									
ORV	**Oroville**	**82.95**	**51**		IAmb	IAmb	01 24 13.4			
	comp=Z,61nm,1.4s									
BIDO	**Bidbid**	**82.97**	**292**		P	**P**	**01 24 10.4**	**+2.2**		
	SNR=9.7									
SMDO	**Samad**	**83.14**	**292**		P	**P**	**01 24 11.4**	**+2.2**		
	SNR=6.1									
SMDO					P	**P**	**01 24 11.4**	**+2.2**		
	SNR=6.1									
D08A	**Wollman Farm,**	**83.17**	**43**		IAMs_20	IAMs_20	02 07 55.5			
	comp=Z,2µm,18.0s									
E08A	**Dider Farm, El**	**83.20**	**44**		IAmb	IAmb	01 24 18.7			
	comp=Z,77nm,1.6s									
JMDO	**Jabal Madar**	**83.23**	**291**		P	**P**	**01 24 11.6**	**+2.1**		
	SNR=6.5									
JMDO					P	**P**	**01 24 11.6**	**+2.1**		
	SNR=6.5									
C09A	**Chrisman Ranch**	**83.43**	**43**		IAmb	IAmb	01 24 20.4			
	comp=Z,59nm,1.6s									
I07A	**Izee**	**83.43**	**46**		IAmb	IAmb	01 24 20.1			
	comp=Z,52nm,1.5s									
I07A					IAMs_20	IAMs_20	01 59 01.7			
	comp=Z,4µm,19.0s									
AFDM	**Forest Hills D**	**83.48**	**52**		IAmb	IAmb	01 24 20.9			
	comp=Z,72nm,1.5s									
G08A	**Pilot Rock**	**83.54**	**45**		IAmb	IAmb	01 24 18.1			
	comp=Z,56nm,1.6s									
SAO	**San Andreas Ge**	**83.58**	**54**		IAMs_20	IAMs_20	01 57 32.1			
	comp=Z,2µm,19.0s									
MHTO	**MHTO**	**83.65**	**290**		P	**P**	**01 24 13.7**	**+2.0**		
	SNR=21									
MHTO					P	**P**	**01 24 13.7**	**+2.0**		
	SNR=21									
MHTO					S	**S**	**01 34 25.6**	**-7.7**		
MHTO					S	**S**	**01 34 25.6**	**-7.7**		
E09A	**Wood Farm, Sta**	**83.81**	**44**		IAMs_20	IAMs_20	01 59 10.5			
	comp=Z,3µm,19.0s									
BBGB	**Big Mountain B**	**83.94**	**54**		P	**P**	**01 24 14.3**	**+1.2**		
RES	**Resolute Bay**	**83.95**	**14**		LR	LR	02 06 06.4			
	comp=Z,541nm,18.9s,baz=320,slow=39									
BSY	**Bisya**	**83.97**	**292**		P	**P**	**01 24 15.4**	**+2.1**		
	SNR=13									
BSY					P	**P**	**01 24 15.4**	**+2.1**		
	SNR=13									
SPA0	**Spitsbergen Ar**	**84.00**	**351**		*e*P	**P**	**01 24 13.7**	**+1.2**		
SPA0					IAmb	IAmb	01 24 14.8			
	comp=Z,165nm,1.9s									
SPITS	**Spitsbergen Ar**	**84.00**	**351**		P	**P**	**01 24 13.3**	**+0.8**		
	comp=Z,26nm,1.1s,baz=87,slow=6.3,SNR=10									
SPITS					LR	LR	02 09 43.0			
	comp=Z,875nm,18.3s,baz=7.0,slow=41									
	comp=Z,26nm,1.1s									
NEW	**Newport**	**84.07**	**42**		IAMs_20	IAMs_20	02 03 14.2			
	comp=Z,2µm,19.0s									
NEW	**Newport**	**84.07**	**42**		IAmb	IAmb	01 24 33.5			
	comp=Z,30nm,1.1s									
NEW	**Newport**	**84.07**	**42**		P	**P**	**01 24 14.2**	**+0.8**		
	baz=284,SNR=19									
NEW	**Newport**	**84.07**	**42**		LR	LR	01 58 26.8			
	comp=Z,1µm,19.3s,baz=296,slow=33									
KBS	**Kingsbay**	**84.13**	**352**		IAMs_20	IAMs_20	02 04 24.6			
	comp=Z,2µm,18.0s									
KBS	**Kingsbay**	**84.13**	**352**		*e*P	**P**	**01 24 14.2**	**+1.2**		
KBS					IAmb	IAmb	01 24 15.5			
	comp=Z,52nm,1.3s									
KBS	**Kingsbay**	**84.13**	**352**		*i* P	**P**	**01 24 10.9**	**-2.1**		
CMB	**Columbia Colle**	**84.13**	**52**		IAmb	IAmb	01 24 21.2			
	comp=Z,47nm,1.2s									
CMB					IAMs_20	IAMs_20	02 07 00.4			
	comp=Z,2µm,18.0s									
SHME	**Shamm**	**84.20**	**295**		*i* P	**P**	**01 24 15.4**	**+1.0**		
	SNR=13									
SHME	**Shamm**	**84.20**	**295**		P	**P**	**01 24 15.7**	**+1.3**		
	SNR=7.8									
SHME					S	**SKSac**	**01 34 34.1**	**-3.0**		
PMPB	**Monarch Peak**	**84.21**	**54**		P	**P**	**01 24 16.1**	**+1.7**		
MDH	**Madha**	**84.22**	**295**		*i* P	**P**	**01 24 13.9**	**-0.7**		
	SNR=11									
MDH	**Madha**	**84.22**	**295**		P	**P**	**01 24 14.9**	**+0.3**		
	SNR=6.0									
MDH					S	**SKSac**	**01 34 32.8**	**-4.4**		
SOHO	**SOHO**	**84.27**	**293**		*i* P	**P**	**01 24 15.2**	**+0.4**		
	SNR=9.8									
SOHO	**SOHO**	**84.27**	**293**		P	**P**	**01 24 15.3**	**+0.5**		
SOHO					P	**P**	**01 24 15.3**	**+0.5**		
DQM	**DQM**	**84.27**	**289**		P	**P**	**01 24 15.8**	**+0.9**		
	SNR=7.7									
DQM					P	**P**	**01 24 15.8**	**+0.9**		
	SNR=7.7									
DQM					S	**SKSac**	**01 34 33.5**	**-4.1**		
DQM					S	**SKSac**	**01 34 33.5**	**-4.1**		
J08A	**Circle Bar Ran**	**84.33**	**47**		IAMs_20	IAMs_20	01 59 21.4			
	comp=Z,3µm,19.0s									
MASF	**Masafi**	**84.33**	**295**		P	**P**	**01 24 16.3**	**+1.1**		
	SNR=18									
MASF					S	**SKSac**	**01 34 36.3**	**-1.7**		
MSFE	**Esma-Masafi**	**84.33**	**295**		*i* P	**P**	**01 24 15.8**	**+0.6**		
	SNR=12									
BELG	**Belogornoye**	**84.37**	**323**	⇓	*e*P	**P**	**01 24 15.7**	**+1.0**		
BELG					pmax	pmax				
	comp=Z,18nm,1.5s									
BELG	**Belogornoye**	**84.37**	**323**		LR	LR	02 03 45.5			
	comp=Z,2µm,19.5s,baz=75,slow=37									
UOSS	**Minazif**	**84.38**	**294**		P	**P**	**01 24 14.9**	**-0.5**		
UOSS	**Minazif**	**84.38**	**294**		*i* P	**P**	**01 24 14.9**	**-0.5**		
	SNR=13									
UOSS	**Minazif**	**84.38**	**294**		P	**P**	**01 24 15.9**	**+0.5**		
UOSS					P	**P**	**01 24 15.9**	**+0.5**		
UOSS					S	**SKSac**	**01 34 35.0**	**-3.3**		
UOSS					S	**SKSac**	**01 34 35.0**	**-3.3**		
WVOR	**Wild Horse Val**	**84.42**	**48**		IAMs_20	IAMs_20	02 02 57.1			
	comp=Z,3µm,19.0s									
ARQ	**Araqi**	**84.45**	**293**		P	**P**	**01 24 16.6**	**+0.8**		
	SNR=30									
ARQ					S	**SKSac**	**01 34 35.8**	**-3.0**		
HATD	**Hatta, Dubai**	**84.47**	**294**		*i* P	**P**	**01 24 16.5**	**+0.6**		
	SNR=21									
HATD	**Hatta, Dubai**	**84.47**	**294**		P	**P**	**01 24 17.1**	**+1.2**		
	SNR=15									
HATD					S	**SKSac**	**01 34 38.9**	**0.0**		
PNTR	**Pine Nut**	**84.49**	**51**		IAmb	IAmb	01 24 21.3			
	comp=Z,36nm,0.8s									
PAHR	**Pah Rah Range**	**84.51**	**51**		IAMs_20	IAMs_20	01 59 30.6			
	comp=Z,3µm,20.0s									
ASHO	**Ashiyiah**	**84.57**	**294**		*i* P	**P**	**01 24 17.2**	**+0.8**		
	SNR=11									
ASHO	**Ashiyiah**	**84.57**	**294**		P	**P**	**01 24 17.2**	**+0.8**		
	SNR=16									
UMQ	**Umm Al-Quwin**	**84.74**	**295**		P	**P**	**01 24 19.3**	**+2.1**		
WAKR	**Walker**	**84.75**	**52**		IAMs_20	IAMs_20	02 05 42.0			
	comp=Z,2µm,18.0s									
BMO	**Blue Mountains**	**84.78**	**45**		IAmb	IAmb	01 24 27.4			
	comp=Z,81nm,1.5s									
BMO					IAMs_20	IAMs_20	01 55 37.3			
	comp=Z,2µm,21.0s									
NAZ	**Nazwa, Dubai**	**84.86**	**294**		P	**P**	**01 24 18.0**	**+0.2**		
	SNR=8.8									
NAZ					P	**P**	**01 24 18.0**	**+0.2**		
	SNR=8.8									
NAZ					S	**SKSac**	**01 34 38.7**	**-2.6**		
NAZ					S	**SKSac**	**01 34 38.7**	**-2.6**		
FAQ	**Al Faqa, Dubai**	**84.97**	**294**		*i* P	**P**	**01 24 18.5**	**+0.2**		
	SNR=22									
FAQ	**Al Faqa, Dubai**	**84.97**	**294**		P	**P**	**01 24 18.7**	**+0.3**		
	SNR=12									
FAQ					S	**SKSac**	**01 34 39.0**	**-3.0**		
ALNE	**Al Ain**	**84.98**	**293**		*i* P	**P**	**01 24 18.9**	**+0.5**		
	SNR=23									
ALNE	**Al Ain**	**84.98**	**293**		P	**P**	**01 24 19.5**	**+1.0**		
	SNR=37									
ALNE					S	**SKSac**	**01 34 36.1**	**-6.1**		
SMMC	**Simmler**	**85.05**	**55**		P	**P**	**01 24 19.0**	**+0.4**		
	baz=283									
LVZ	**Lovozero**	**85.14**	**339**		IAMs_20	IAMs_20	02 04 49.2			
	comp=Z,3µm,18.0s									
LVZ	**Lovozero**	**85.14**	**339**	⇓	*e*P	**P**	**01 24 21.3**	**+2.9**		
LVZ					pmax	pmax				
	comp=Z,39nm,1.3s									
ASUD	**Al Ashush, Dub**	**85.23**	**294**		*i* P	**P**	**01 24 20.1**	**+0.4**		
	SNR=8.4									
ASUD	**Al Ashush, Dub**	**85.23**	**294**		P	**P**	**01 24 20.6**	**+1.0**		
	SNR=7.9									
PKM	**Mcpherson Peak**	**85.30**	**55**		P	**P**	**01 24 20.2**	**+0.2**		
	baz=284,SNR=12									
VOG	**Valley Oaks Go**	**85.30**	**54**		P	**P**	**01 24 20.7**	**+0.9**		
	baz=284									
MLAC	**Mammoth, Mammo**	**85.42**	**53**		P	**P**	**01 24 21.3**	**+0.6**		
	baz=284									
SBC	**Santa Barbara**	**85.48**	**56**		P	**P**	**01 24 22.1**	**+1.3**		
	baz=284									
LHV	**Little Huntoon**	**85.52**	**52**		IAMs_20	IAMs_20	02 00 38.5			
	comp=Z,2µm,19.0s									
AJN	**Ajban**	**85.55**	**294**		*i* P	**P**	**01 24 21.2**	**0.0**		
	SNR=16									
AJN	**Ajban**	**85.55**	**294**		P	**P**	**01 24 21.7**	**+0.4**		
	SNR=12									
AJN					S	**SKSac**	**01 34 42.6**	**-3.0**		
PLID	**Pearl Lake**	**85.62**	**45**		IAmb	IAmb	01 24 30.4			
	comp=Z,48nm,1.5s									
NVAR	**Mina Array Bea**	**85.63**	**52**		P	**P**	**01 24 22.9**	**+1.2**		
	comp=Z,18nm,0.7s,baz=273,slow=5.2,SNR=34									
NVAR					LR	LR	01 55 36.9			
	comp=Z,1µm,21.6s,baz=286,slow=31									
	comp=Z,18nm,0.7s									
KVN	**Kaiserville**	**85.63**	**51**		IAmb	IAmb	01 24 31.3			
	comp=Z,80nm,1.6s									
APA	**Apatity**	**85.71**	**339**	⇓	*e*P	**P**	**01 24 19.6**	**-1.6**		
APA					*i* S	**SKSac**	**01 34 48.0**	**+2.9**		
APA					*i* PS	**PnS**	**01 35 47.0**	**-3.3**		
APA					pmax	pmax				
	comp=Z,18nm,1.0s									
UMZA	**Um Al Zommool**	**85.81**	**292**		P	**P**	**01 24 23.0**	**+0.4**		
UMZA					P	**P**	**01 24 23.0**	**+0.4**		
UMZA					S	**SKSac**	**01 34 39.2**	**-8.2**		
UMZA					S	**SKSac**	**01 34 39.2**	**-8.2**		
BMN	**Battle Mountai**	**85.94**	**50**		IAmb	IAmb	01 24 30.6			
	comp=Z,57nm,1.5s									
KLMR	**Klimovskoe**	**85.98**	**332**		*e*P	**P**	**01 24 20.1**	**-2.5**		
KLMR					S	**SKSac**	**01 34 45.0**	**-1.9**		
KLMR					pmax	pmax				
	comp=Z,83nm,1.6s									
ARVC	**Arvin**	**86.02**	**55**		P	**P**	**01 24 24.5**	**+1.1**		
	baz=284									
DSP	**Deep Springs**	**86.15**	**53**		IAmb	IAmb	01 24 35.8			
	comp=Z,121nm,2.0s									
ISA	**Isabella, Lake**	**86.17**	**54**		P	**P**	**01 24 25.6**	**+1.3**		
	baz=284,SNR=7.0									
MFID	**Camas Ranch**	**86.18**	**46**		IAmb	IAmb	01 24 34.7			
	comp=Z,64nm,1.2s									
OSI	**Osito Audit: C**	**86.23**	**55**		P	**P**	**01 24 26.1**	**+1.6**		
	baz=284									
CWC	**Cottonwood Cre**	**86.29**	**54**		P	**P**	**01 24 26.1**	**+1.1**		
	baz=284									
SHAO	**Shalim**	**86.46**	**288**		P	**P**	**01 24 26.1**	**+0.2**		
SHAO	**Shalim**	**86.46**	**288**		P	**P**	**01 24 26.7**	**+0.8**		
SHAO					S	**SKSac**	**01 34 47.1**	**-4.5**		
DECC	**Green Verdugo**	**86.63**	**56**		P	**P**	**01 24 27.5**	**+1.0**		
	baz=284									
GRAC	**Grapevine Rang**	**86.71**	**53**		P	**P**	**01 24 28.8**	**+1.9**		
	baz=285									
MZWR	**Madinat Zayed**	**86.72**	**294**		P	**P**	**01 24 27.7**	**+0.7**		
MZWR					P	**P**	**01 24 27.7**	**+0.7**		
MZWR					S	**SKSac**	**01 34 48.7**	**-4.2**		
MZWR					S	**SKSac**	**01 34 48.7**	**-4.2**		
EDW2	**Edwards Air Fo**	**86.75**	**55**		P	**P**	**01 24 28.6**	**+1.6**		
	baz=284,SNR=6.0									
PASC	**Pasadena Art C**	**86.77**	**56**		IAMs_20	IAMs_20	02 01 52.7			
	comp=Z,2µm,19.0s									
SCI2	**San Clemente I**	**86.78**	**57**		P	**P**	**01 24 28.3**	**+1.2**		
	baz=284									
CIS	**Catalina Islan**	**86.78**	**57**		P	**P**	**01 24 28.8**	**+1.6**		
	baz=284									
FMP	**Fort Macarthur**	**86.80**	**56**		P	**P**	**01 24 28.8**	**+1.5**		
	baz=284									
LRMC	**Laurel Mtn Rad**	**86.84**	**54**		P	**P**	**01 24 28.8**	**+1.1**		
	baz=285,SNR=14									
MPMC	**Manual Prospec**	**86.85**	**54**		P	**P**	**01 24 28.9**	**+1.2**		
	baz=285,SNR=39									
MAK	**Makhachkala**	**87.00**	**313**		*e*P	**P**	**01 24 24.4**	**-3.6**		
MAK					*e*		01 27 46.3			
MAK					*e*		01 34 48.1			
MAK					*e*SS	SS	01 40 48.0	-0.2		
MAK					*e*SSS	SSS	01 44 19.6			
MAK					pmax	pmax				
	comp=Z,203nm,1.0s									
HLID	**Hailey**	**87.13**	**46**		IAmb	IAmb	01 24 39.4			
	comp=Z,46nm,1.2s									
HLID					IAMs_20	IAMs_20	02 01 29.5			
	comp=Z,3µm,19.0s									
HLID	**Hailey**	**87.13**	**46**		P	**P**	**01 24 30.1**	**+1.2**		
	baz=286,SNR=31									
DMTO	**DMTO**	**87.16**	**287**		P	**P**	**01 24 29.6**	**+0.3**		
	SNR=5.9									
DMTO					S	**SKSac**	**01 34 53.2**	**-2.7**		
BFSC	**Mount Baldy Ra**	**87.18**	**56**		P	**P**	**01 24 30.2**	**+0.9**		
	baz=285									
LKRN	**Lenkeran, Azer**	**87.22**	**309**		P	**P**	**01 24 29.2**	**0.0**		
FURC	**Furnace Creek,**	**87.23**	**53**		P	**P**	**01 24 30.9**	**+1.6**		
	baz=285,SNR=8.5									
ARA0	**ARCESS Array S**	**87.25**	**342**		*e*P	**P**	**01 24 29.3**	**+0.5**		
ARA0					IAmb	IAmb	01 24 30.8			
	comp=Z,89nm,1.4s									
ARCES	**ARCESS Array B**	**87.25**	**342**		P	**P**	**01 24 29.7**	**+0.9**		
ARCES	**ARCESS Array B**	**87.25**	**342**		P	**P**	**01 24 29.7**	**+0.9**		
ARCES					pmax	pmax				
	comp=Z,132nm,1.8s									
ARCES	**ARCESS Array B**	**87.25**	**342**		P	**P**	**01 24 28.5**	**-0.3**		
	comp=Z,9.6nm,0.7s,baz=57,slow=5.2,SNR=24									
ARCES					LR	LR	02 08 11.7			
	comp=Z,4µm,18.6s,baz=65,slow=39									
	comp=Z,9.6nm,0.7s									
ELK	**Elko**	**87.32**	**49**		IAmb	IAmb	01 24 37.4			
	comp=Z,40nm,1.1s									
ELK					IAMs_20	IAMs_20	02 01 23.8			
	comp=Z,3µm,19.0s									
ELK	**Elko**	**87.32**	**49**		LR	LR

baz=286,SNR=16
JETT Jettan, Norway 88.69 343 *e*P P **01 24 36.3 +0.6**
JETT IAmb IAmb 01 24 37.1
comp=Z,25nm,1.0s
ABTO Aybut 88.77 287 P P **01 24 37.5 +0.5**
ABTO P P **01 24 37.5 +0.5**
SHMA Al-Shehemyia 88.78 296 P P **01 24 39.9 +3.0**
SHMA S **SKSac 01 35 04.5 -0.9**
HVU Hansel Valley 88.80 47 IAMs_20 IAMs_20 01 58 35.9
comp=Z,3µm,20.0s
MOS Moscow 88.84 328 *e*P P **01 24 34.2 -2.3**
MOS *e* 01 28 03.6
MOS *e* 01 35 00.8
MOS *e*PS **PnS 01 36 21.3 -6.8**
MOS pmax pmax
comp=Z,33nm,1.3s
MOS MLR MLR
comp=Z,5µm,19.0s
MOS MLR MLR
comp=E,3µm,18.0s
MOS MLR MLR
comp=N,2µm,19.0s
TRNA Turayna 88.84 295 P P **01 24 39.9 +2.7**
TRNA S **SKSac 01 35 03.7 -2.1**
IKP In-Ko-Pah, Jac 88.84 57 P P **01 24 38.0 +0.8**
baz=286
EGMT Eagleton 88.86 41 P P **01 24 38.0 +1.1**
baz=289,SNR=9.1
BGU Big Grassy Mou 88.87 48 IAmb IAmb 01 24 47.8
comp=Z,43nm,1.6s
BGU IAMs_20 IAMs_20 02 01 46.9
comp=Z,3µm,18.0s
V12A Nelson 89.00 54 IAmb IAmb 01 24 45.5
comp=Z,42nm,1.1s
SWSC Sam W. Stewart 89.01 56 P P **01 24 38.6 +0.8**
baz=286
TRO Tromso 89.05 344 *e*P P **01 24 36.5 -0.7**
BC3 Big Chuckawall 89.10 56 P P **01 24 39.6 +1.2**
baz=286,SNR=6.3
SAKB Bahrain 89.12 296 P P **01 24 41.3 +2.9**
SAKB S **SKSac 01 35 05.3 -2.1**
SPUT South Promonto 89.18 48 IAMs_20 IAMs_20 01 58 37.9
comp=Z,3µm,20.0s
SMRA Abu-Samra 89.18 295 P P **01 24 41.6 +2.8**
SMRA S **SKSac 01 35 05.0 -2.8**
IRM Iron Mountain 89.21 55 P P **01 24 40.2 +1.4**
baz=286
DUG Dugway, Tooele 89.25 49 IAMs_20 IAMs_20 02 02 52.9
comp=Z,2µm,18.0s
DUG Dugway, Tooele 89.25 49 P P **01 24 39.9 +0.9**
baz=288,SNR=35
YNM Yellowstone No 89.32 44 IAMs_20 IAMs_20 02 06 54.4
comp=Z,2µm,18.0s
LPSR Galich'ya Gora 89.34 324 *e*P P **01 24 37.4 -1.5**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,2µm,17.0s
YNR Norris Junctio 89.34 44 IAMs_20 IAMs_20 02 06 46.9
comp=Z,2µm,18.0s
IMW Indian Meadow 89.43 45 IAMs_20 IAMs_20 02 02 03.2
comp=Z,2µm,20.0s
GOF Gofitskoye 89.44 316 *ce*P P **01 24 36.2 -3.4**
FXWY Fox Creek 89.45 45 IAMs_20 IAMs_20 02 03 23.9
comp=Z,2µm,18.0s
NEE2 Needles Airpor 89.45 54 P P **01 24 41.1 +1.2**
baz=286
H17A Grant Village 89.52 44 IAMs_20 IAMs_20 02 05 00.5
comp=Z,3µm,19.0s
H17A Grant Village 89.52 44 P P **01 24 41.7 +1.4**
baz=289,SNR=17
VORR Voronezh 89.53 323 *e*P P **01 24 39.4 -0.4**
VORR pmax pmax
comp=Z,19nm,0.4s
FLWY Flagg Ranch 89.53 45 IAmb IAmb 01 24 51.5
comp=Z,43nm,1.1s
FLWY IAMs_20 IAMs_20 01 58 35.0
comp=Z,3µm,21.0s
NAX Nakhchivan 89.55 310 P P **01 24 40.2 -0.2**
TPAW Teton Pass 89.55 45 IAMs_20 IAMs_20 02 03 26.4
comp=Z,2µm,19.0s
LKWY Lake 89.58 44 IAMs_20 IAMs_20 02 03 23.2
comp=Z,3µm,20.0s
ZEI Tsey 89.58 314 *e*P P **01 24 38.0 -2.6**
ZEI pmax pmax
comp=Z,11nm,0.8s
MOOW Moose Ponds 89.61 45 IAmb IAmb 01 24 48.4
comp=Z,61nm,1.9s
MOOW IAMs_20 IAMs_20 02 01 58.1
comp=Z,2µm,20.0s
OBN Obninsk 89.64 327 *ce*P P **01 24 40.1 -0.2**
OBN *j**PP **pP 01 24 44.2 -2.0**
OBN *e**SP **sP 01 24 47.4 -1.0**
OBN *e* 01 28 13.8
OBN *i*S **SKSac 01 35 06.7 -2.6**
OBN *i* 01 35 30.9
OBN pmax pmax
comp=Z,45nm,1.7s
OBN MLR MLR
comp=Z,5µm,19.0s
OBN Obninsk 89.64 327 LR LR 02 07 26.5
comp=Z,4µm,18.3s,baz=60,slow=37
AHID Auburn Hatcher 89.68 46 IAMs_20 IAMs_20 02 02 09.0
comp=Z,3µm,19.0s
SNOW Snow King Moun 89.70 45 IAMs_20 IAMs_20 02 10 46.4
comp=Z,2µm,18.0s
HWUT Hardware Ranch 89.72 47 IAmb IAmb 01 25 01.4
comp=Z,30nm,0.9s
HWUT IAMs_20 IAMs_20 02 02 26.1
comp=Z,3µm,19.0s
VSR Storozhevoye 89.72 323 *e*P P **01 24 38.3 -2.5**
VSR pmax pmax
comp=Z,50nm,1.5s
VSR MLR MLR
comp=Z,5µm,17.0s
LOHW Long Hollow 89.75 45 IAmb IAmb 01 25 03.8
comp=Z,45nm,1.7s
LOHW IAMs_20 IAMs_20 02 02 21.8
comp=Z,2µm,19.0s
GLA Glamis 89.77 56 P P **01 24 43.2 +1.7**
baz=286
GNI Garni 89.81 311 P P **01 24 42.0 +0.3**
GNI IAmb IAmb 01 25 11.0
comp=Z,85nm,1.6s
GNI Garni 89.81 311 IAMs_20 IAMs_20 02 10 47.3
comp=Z,2µm,19.0s
GNI Garni 89.81 311 P P **01 24 42.0 +0.3**
GNI pmax pmax
comp=Z,85nm,1.7s
GNI Garni 89.81 311 LR LR 02 09 23.8
comp=Z,2µm,19.4s,baz=61,slow=38
GNI Garni 89.81 311 P P **01 24 41.2 -0.5**
GNI P P **01 24 41.2 -0.5**
GNI S **SKSac 01 35 12.8 +1.5**
GNI S **SKSac 01 35 12.8 +1.5**
SZCU Shurtz Canyon 89.82 51 IAmb IAmb 01 24 52.8
comp=Z,95nm,1.9s
SZCU IAMs_20 IAMs_20 02 11 50.3
comp=Z,2µm,18.0s
NLU North Lily Min 89.86 49 IAmb IAmb 01 25 06.0
comp=Z,25nm,1.0s
NLU IAMs_20 IAMs_20 02 03 13.1
comp=Z,2µm,19.0s
CTU Camp Tracy 89.87 48 IAmb IAmb 01 24 52.2
comp=Z,52nm,1.4s
CTU IAMs_20 IAMs_20 01 59 00.2
comp=Z,2µm,21.0s
ONI Oni 89.96 314 IAmb IAmb 01 24 45.2
comp=Z,98nm,1.8s
PDMCI Parker Dam,Lak 89.96 55 P P **01 24 44.2 +1.9**
baz=287,SNR=15
KBZ Khabaz 89.97 315⇑ *e*P P **01 24 41.1 -1.0**
KBZ pmax pmax
comp=Z,18nm,1.1s
KBZ Khabaz 89.97 315 P P **01 24 41.9 -0.2**
comp=Z,6.8nm,0.9s,baz=79,slow=2.1,SNR=9.8
KBZ LR LR 02 08 24.4
comp=Z,2µm,19.8s,baz=77,slow=38
comp=Z,6.8nm,0.9s
TCUT Toone Canyon 89.98 48 IAMs_20 IAMs_20 01 59 14.2
comp=Z,3µm,20.0s
TCRU Three Creeks R 90.00 50 IAMs_20 IAMs_20 01 58 52.8
comp=Z,3µm,20.0s
KIV Kislovodsk 90.05 315 P P **01 24 43.3 +0.7**
KIV IAmb IAmb 01 25 02.4
comp=Z,27nm,1.0s
KIV Kislovodsk 90.05 315 P P **01 24 42.4 -0.2**
KIV Kislovodsk 90.05 315 *e*P P **01 24 41.8 -0.8**
KIV *e* 01 28 14.4
KIV *e*SS SS 01 41 30.0 -2.6
KIV *e*SSS SSS 01 45 11.4
KIV pmax pmax
comp=Z,21nm,1.1s
KIV pmax pmax
comp=Z,123nm,4.0s
KIV MLR MLR
comp=Z,1µm,20.0s
KIV Kislovodsk 90.05 315 P P **01 24 43.3 +0.7**
KIV P P **01 24 43.3 +0.7**
KIV S **SKSac 01 35 13.7 +1.3**
KIV S **SKSac 01 35 13.7 +1.3**
RLMT Red Lodge 90.16 43 P P **01 24 45.2 +1.9**
baz=290,SNR=24
MPU Maple Canyon 90.17 49 IAMs_20 IAMs_20 02 03 33.1
comp=Z,3µm,19.0s
KNB Kanab 90.20 52 IAmb IAmb 01 24 52.4
comp=Z,59nm,1.2s
AKH Akhalkalaki 90.31 313 P P **01 24 44.1 +0.1**
MTPU Mount Pierson 90.37 51 IAmb IAmb 01 24 55.0
comp=Z,50nm,1.7s
PKCU Pink Cliffs 90.45 51 IAMs_20 IAMs_20 02 11 12.1
comp=Z,2µm,18.0s
PUL Pulkovo 90.58 333‖ *e*P P **01 24 44.9 +0.3**
PUL pmax pmax
comp=Z,43nm,1.1s
BSUT Blindstream Ca 90.63 48 IAMs_20 IAMs_20 01 59 25.4
comp=Z,2µm,20.0s
113A Mohawk Valley, 90.71 56 IAmb IAmb 01 24 57.2
comp=Z,66nm,1.7s
BW06 Boulder Array 90.75 46 IAmb IAmb 01 24 55.1
comp=Z,44nm,1.8s
BW06 IAMs_20 IAMs_20 02 02 55.3
comp=Z,2µm,19.0s
BW06 Boulder Array 90.75 46 P P **01 24 47.6 +1.4**
baz=290
PDAR Pinedale Array 90.75 46 P P **01 24 46.3 +0.2**
comp=Z,1.9nm,0.7s,baz=92,slow=4.5,SNR=3.6
PDAR LR LR 02 03 52.6
comp=Z,2µm,18.5s,baz=306,slow=34
comp=Z,1.9nm,0.7s
U15A North Rim 90.78 52 IAmb IAmb 01 24 54.3
comp=Z,28nm,1.1s
FFC Flin Flon 90.81 33 P P **01 24 46.8 +1.0**
FFC IAmb IAmb 01 24 55.0
comp=Z,30nm,1.4s
FFC Flin Flon 90.81 33 IAMs_20 IAMs_20 02 10 58.6
comp=Z,2µm,18.0s
FFC Flin Flon 90.81 33 P P **01 24 46.8 +1.0**
FFC pmax pmax
comp=Z,30nm,1.4s
ERBR Yeremizino-Bor 90.91 318 *e*P P **01 24 47.0 +0.5**
ERBR *e*S **SKSac 01 35 18.7 +1.6**
ERBR pmax pmax
comp=Z,109nm,1.5s
Y14A Wickenburg 90.97 55 IAmb IAmb 01 24 52.9
comp=Z,58nm,1.5s
P17A Butcher Ranch, 90.99 49 IAMs_20 IAMs_20 02 04 09.0
comp=Z,2µm,19.0s
LABN Labinsk 91.14 317 *e*P P **01 24 47.1 -0.4**
LABN pmax pmax
comp=Z,48nm,1.7s
STEI Steigen 91.19 343 *e*P P **01 24 45.5 -1.7**
STEI IAmb IAmb 01 24 49.2
comp=Z,71nm,1.1s
SRU San Rafael Swe 91.27 49 IAMs_20 IAMs_20 02 03 59.3
comp=Z,2µm,19.0s
RDMU Red Mountain 91.48 48 IAMs_20 IAMs_20 02 00 13.8
comp=Z,3µm,20.0s
HMU Henry Mountain 91.48 50 IAMs_20 IAMs_20 02 03 05.2
comp=Z,2µm,20.0s
FINES FINESS Array B 91.50 335 *i*P P **01 24 46.9 -1.9**
FINES pmax pmax
comp=Z,10.0nm,0.7s
FINES FINESS Array B 91.50 335 P P **01 24 47.6 -1.2**
comp=Z,9.6nm,0.7s,baz=71,slow=3.9,SNR=55
FINES LR LR 02 09 00.7
comp=Z,2µm,18.9s,baz=56,slow=38
comp=Z,9.6nm,0.7s
LAO LASA Array 91.58 41 P P **01 24 50.6 +0.9**
baz=292,SNR=29
VNDA Vanda 91.66 177 P P **01 24 48.1 -0.9**
comp=Z,5.0nm,1.0s,baz=309,slow=6.5,SNR=3.8
VNDA LR LR 02 06 49.0
comp=Z,401nm,18.0s,baz=348,slow=36
comp=Z,5.0nm,1.0s
214A Organ Pipe Nat 91.72 57 IAmb IAmb 01 25 00.4
comp=Z,48nm,1.4s
214A Organ Pipe Nat 91.72 57 P P **01 24 51.5 +1.0**
baz=287
WUAZ Wupatki 91.77 53 P P **01 24 51.4 +0.5**
baz=288
X16A Lo Mia Camp, P 92.06 54 IAmb IAmb 01 25 02.7
comp=Z,38nm,1.7s
DGMT Dagmar 92.16 39 IAMs_20 IAMs_20 02 03 29.0
comp=Z,2µm,20.0s
DGMT Dagmar 92.16 39 P P **01 24 52.2 -0.1**
baz=294
SOC Sochi 92.19 316 *e*P P **01 24 48.8 -3.6**
SOC *e* 01 28 28.7
SOC *e*S **SKSac 01 35 20.5 -3.9**
SOC *e*SS **SS 01 42 00.5 -2.8**
UPNV Upernavik 92.29 7 *i*P P **01 24 52.4 +0.1**
UPNV IAmb IAmb 01 24 54.4
comp=Z,143nm,2.1s
O20A White River Ci 92.58 48 IAmb IAmb 01 25 14.4
comp=Z,20nm,1.0s
O20A IAMs_20 IAMs_20 02 04 29.0
comp=Z,3µm,20.0s
O20A White River Ci 92.58 48 P P **01 24 54.7 0.0**
baz=290,SNR=8.8
FCC Fort Churchill 92.67 27 IAmb IAmb 01 25 03.0
comp=Z,29nm,1.6s
K22A Casper 92.89 45 IAMs_20 IAMs_20 02 04 24.7
comp=Z,2µm,19.0s
K22A Casper 92.89 45 P P **01 24 56.5 +0.6**
baz=292
W18A Petrified Fore 93.17 53 P P **01 24 57.8 +0.5**
baz=289,SNR=6.5
TUC Tucson 93.24 56 IAMs_20 IAMs_20 02 13 00.0
comp=Z,2µm,18.0s
TUC Tucson 93.24 56 P P **01 24 58.2 +0.6**
baz=288
ANN Anapa 93.25 318 *e*P P **01 24 54.0 -3.3**
ANN *e*S **SKSac 01 35 27.9 -2.4**
ANN pmax pmax
comp=Z,154nm,1.8s
MVCO Mesa Verde 93.41 51 IAmb IAmb 01 25 06.7
comp=Z,22nm,1.1s
MVCO IAMs_20 IAMs_20 02 04 25.3
comp=Z,2µm,19.0s
MVCO Mesa Verde 93.41 51 P P **01 24 59.4 +0.9**
baz=290,SNR=9.7
JMIC Jan Mayen 93.62 352 LR LR 02 10 05.0
comp=Z,412nm,19.1s,baz=26,slow=37
SUMG Summit 93.69 1 *i*P P **01 24 59.0 -0.3**
SUMG IAmb IAmb 01 25 21.9
comp=Z,6.0nm,0.9s
SMCO Snowmass 93.84 48 IAmb IAmb 01 25 20.8
comp=Z,36nm,1.1s
SMCO IAMs_20 IAMs_20 02 01 52.3
comp=Z,3µm,20.0s
N23A Red Feather La 93.94 46 IAMs_20 IAMs_20 02 05 16.8
comp=Z,3µm,19.0s
N23A Red Feather La 93.94 46 P P **01 25 01.5 +0.6**
baz=292,SNR=14
RSSD Black Hills 94.00 43 P P **01 25 01.5 +0.4**
RSSD IAmb IAmb 01 25 10.8
comp=Z,29nm,1.4s
RSSD Black Hills 94.00 43 IAMs_20 IAMs_20 02 07 41.9
comp=Z,2µm,19.0s
RSSD Black Hills 94.00 43 P P **01 25 01.8 +0.7**
baz=294
RSSD Black Hills 94.00 43 P P **01 25 01.5 +0.4**
RSSD pmax pmax
comp=Z,29nm,1.5s
RSSD MLR MLR
comp=Z,2µm,19.0s
PHWY Pilot Hill 94.13 46 IAMs_20 IAMs_20 02 04 45.7
comp=Z,2µm,19.0s
RAYN Ar Rayn 94.19 295 P P **01 25 01.8 -0.3**
RAYN IAmb IAmb 01 25 03.5
comp=Z,36nm,1.8s
RAYN Ar Rayn 94.19 295 P P **01 25 01.8 -0.3**
RAYN pmax pmax
comp=Z,36nm,1.8s
RAYN Ar Rayn 94.19 295 P P **01 25 02.3 +0.1**
MNK Minsk 94.38 329 *i*P P **01 24 55.3 -7.0**
MNK *i* 01 28 45.4
MNK *i*S **SKSac 01 35 30.3 -5.7**
MNK *i*SS **SS 01 42 32.6 -1.3**
MNK *i*SSS SSS 01 46 10.9
MNK pmax pmax
comp=E,8.0nm,1.4s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,8.0nm,0.8s
MNK MLR MLR
comp=N,2µm,22.0s
MNK MLR MLR
comp=Z,4µm,18.0s
MNK MLR MLR
comp=E,1µm,19.0s
S22A 4UR Ranch, Cre 94.46 50 IAMs_20 IAMs_20 02 01 39.9
comp=Z,3µm,20.0s
S22A 4UR Ranch, Cre 94.46 50 P P **01 25 03.8 +0.4**
baz=291,SNR=9.9
ISCO Idaho Springs 94.59 47 IAMs_20 IAMs_20 02 06 05.1
comp=Z,2µm,20.0s
ISCO Idaho Springs 94.59 47 P P **01 25 04.3 +0.3**
baz=292
319A Douglas 94.76 56 IAmb IAmb 01 25 13.4
comp=Z,42nm,1.7s
ARPR Arapgir-MALATY 94.82 312 IAmb IAmb 01 25 14.2
comp=Z,17nm,1.0s
E28A Huff 95.11 40 IAMs_20 IAMs_20 02 04 52.9
comp=Z,2µm,20.0s
MDND Maddock 95.20 38 P P **01 25 06.7 +0.5**
baz=297
BRIGG Briggsdale 95.20 46 IAMs_20 IAMs_20 02 06 51.2
comp=Z,2µm,19.0s
Q24A Divide 95.23 48 IAMs_20 IAMs_20 02 05 58.2
comp=Z,2µm,20.0s
Q24A Divide 95.23 48 P P **01 25 06.8 -0.2**
baz=292
SIM Simferopol' 95.34 319 P P 01 25 13.7 +6.8
SIM 01 35 43.0
SIM S **S 01 36 27.0 +5.4**
SIM pmax pmax
comp=Z,18nm,0.9s
SDCO Great Sand Dun 95.44 49 IAMs_20 IAMs_20 02 06 46.8
comp=Z,2µm,19.0s
SDCO Great Sand Dun 95.44 49 P P **01 25 08.2 +0.3**
baz=292
121A Cookes Peak, D 95.56 55 IAmb IAmb 01 25 18.8
comp=Z,47nm,1.6s
121A Cookes Peak, D 95.56 55 P P **01 25 08.8 +0.4**
baz=290
AKASG Malin Array Be 95.60 325 *ce*P P **01 25 07.8 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 95.60 325 P P **01 25 06.6 -1.3**
comp=Z,0.8nm,0.5s,baz=67,slow=2.5,SNR=4.9
AKASG LR LR 02 10 18.1
comp=Z,2µm,20.4s,baz=58,slow=37
comp=Z,0.8nm,0.5s
AKBB Malin Array Si 95.60 325‖ *e*P P **01 25 09.3 +1.4**
AKBB pmax pmax
comp=Z,13nm,1.6s
Y22D IRIS PASSCAL I 95.70 53 IAMs_20 IAMs_20 02 06 41.0
comp=Z,2µm,19.0s
ANMO Albuquerque 95.75 52 P P **01 25 09.3 +0.1**
ANMO Albuquerque 95.75 52 P P **01 25 09.7 +0.5**
baz=291
ANMO Albuquerque 95.75 52 P P **01 25 09.4 +0.1**
ANMO pmax pmax
comp=Z,19nm,1.5s
ANMO Albuquerque 95.75 52 LR LR 02 08 58.1
comp=Z,1µm,18.0s,baz=30,slow=36
ULM Lac du Bonnet 96.20 35 P P **01 25 10.1 -0.6**
comp=Z,5.2nm,1.0s,baz=307,slow=7.1,SNR=8.4
ULM LR LR 02 09 35.1
comp=Z,3µm,18.3s,baz=302,slow=36
comp=Z,5.2nm,1.0s
LPIG La Paz 96.22 63 LR LR 02 04 23.0
comp=Z,2µm,18.6s,baz=286,slow=33
T25A Trinidad 96.47 49 IAMs_20 IAMs_20 02 02 47.1
comp=Z,3µm,21.0s
T25A Trinidad 96.47 49 P P **01 25 13.1 +0.5**
baz=293
OGNE Ogallala 96.64 45 IAMs_20 IAMs_20 02 07 14.3
comp=Z,2µm,19.0s
OGNE Ogallala 96.64 45 P P **01 25 13.8 +0.7**
baz=295
SLBS Sierra La Lagu 96.66 64 IAMs_20 IAMs_20 02 07 45.3
comp=Z,2µm,18.0s
EPT El Paso 96.85 55 IAMs_20 IAMs_20 02 08 23.5
comp=Z,2µm,18.0s
HFS Hagfors 97.07 338 P P **01 25 13.8 -0.6**
comp=Z,3.4nm,0.9s,baz=79,slow=3.2,SNR=9.1
HFS LR LR 02 13 36.7
comp=Z,2µm,18.1s,baz=44,slow=38
comp=Z,3.4nm,0.9s
NB2 NORSAR Subarra 97.29 340 P P **01 25 14.6 -0.8**
comp=Z,17nm,1.2s,baz=44,slow=4.6
NB2 NORSAR Subarra 97.29 340 P P **01 25 14.6 -0.8**
baz=44,slow=4.6
NOA NORSAR Array B 97.29 340 P P **01 25 15.3 -0.1**
comp=Z,2.3nm,0.7s,baz=47,slow=4.7,SNR=4.5
NOA LR LR 02 12 13.4
comp=Z,2µm,19.7s,baz=65,slow=37
comp=Z,2.3nm,0.7s
KIS Kishinev 97.67 322 *e*P P **01 25 15.0 -2.4**
KIS *e*L L 02 07 14.0
KIS LRM MLR 02 12 42.0
comp=Z,1µm,19.0s
KIS Kishinev 97.67 322 *e*P P **01 25 15.0 -2.4**
KIS MLR MLR
comp=N,600nm,17.5s
MNTX Cornudas Mount 97.77 55 IAMs_20 IAMs_20 02 11 14.9
comp=Z,2µm,18.0s
MNTX Cornudas Mount 97.77 55 P Pdif 01 25 18.9 +0.6
baz=292
BR131 Keskin Array S 97.90 314 IAmb IAmb 01 25 19.6
comp=Z,16nm,1.3s
BR131 Keskin Array S 97.90 314‖ *e*P P **01 25 17.6 -1.2**
BRTR Keskin Array B 97.90 314 *ce*P P **01 25 18.2 -0.6**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
BRTR Keskin Array B 97.90 314 P P **01 25 17.7 -1.2**
comp=Z,4.3nm,1.0s,baz=92,slow=3.0,SNR=13
comp=Z,4.3nm,1.0s
FRB Frobisher Bay 98.10 15 LR LR 02 13 04.1
comp=Z,1µm,19.9s,baz=325,slow=38
B35A Bob, Littlefor 98.38 36 IAmb IAmb 01 25 26.9
comp=Z,13nm,1.1s
SFJD Kangerlussuaq 98.40 7 LR LR 02 12 23.1
comp=Z,794nm,19.9s,baz=348,slow=37
ANTO Ankara 98.42 314 IAMs_20 IAMs_20 02 14 20.5
comp=Z,2µm,20.0s
ASF Jabal al Asfar 98.50 306 LR LR 02 15 31.1
comp=Z,601nm,19.8s,baz=245,slow=39
LVV L'vov 98.90 326 *e*P P **01 25 20.2 -2.7**
LVV *e* 01 29 29.5
LVV *e* 01 35 58.1
LVV *e*S **S 01 36 45.3 -6.6**
LVV MLR MLR
comp=Z,2µm,19.0s
MSTX Muleshoe 98.94 52 P Pdif 01 25 24.3 +0.7
baz=293
BGNE Belgrade 99.07 43 P **Pdif 01 25 24.7 +0.8**
baz=297
CBKS Cedar Bluff 99.15 46 IAMs_20 IAMs_20 02 07 54.8
comp=Z,2µm,19.0s
CBKS Cedar Bluff 99.15 46 P **Pdif 01 25 25.3 +1.0**
baz=296
MMAI Mount Meron Ar 99.34 307 P **Pdif 01 25 25.1 -0.3**
comp=Z,9.7nm,0.8s,baz=103,slow=6.3,SNR=7.5
MMAI LR LR 02 16 31.1
comp=Z,1µm,19.2s,baz=1.5,slow=39
comp=Z,9.7nm,0.8s
AMTX Amarillo 99.40 51 IAMs_20 IAMs_20 02 15 09.7
comp=Z,2µm,18.0s
AMTX Amarillo 99.40 51 P **Pdif 01 25 26.4 +0.9**
baz=294
EYMN Ely 99.86 35 P **Pdif 01 25 28.1 +0.9**
baz=303
TXAR Lajitas Array 100.01 56 P **Pdif 01 25 28.7 +0.3**
comp=Z,0.6nm,0.7s,baz=305,slow=4.4,SNR=6.0
comp=Z,0.6nm,0.7s
CSS Mathiatis 100.13 310 IAMs_20 IAMs_20 02 17 01.8

comp=Z,2µm,20.0s
MLR Muntele Rosu 100.16 322 IAMs_20 IAMs_20 02 14 13.7
comp=Z,3µm,19.0s
SPMN Marine on St. 100.58 38 P **Pdif 01 25 31.9 +1.4**
baz=302
OK035 E0210 Rd and N 100.81 48 IAMs_20 IAMs_20 02 10 02.8
comp=Z,2µm,19.0s
OK038 West end E0370 100.89 48 IAMs_20 IAMs_20 02 05 50.9
comp=Z,2µm,20.0s
ISP Isparta 100.92 313 IAMs_20 IAMs_20 02 18 26.7
comp=Z,2µm,20.0s
OK032 Salt Plains WL 101.12 48 IAMs_20 IAMs_20 02 10 23.1
comp=Z,3µm,19.0s
KSU1 Kansas State U 101.19 45 IAMs_20 IAMs_20 02 10 42.7
comp=Z,2µm,19.0s
KSU1 Kansas State U 101.19 45 P **Pdif 01 25 33.8 +0.4**
baz=298
WMOK Wichita Mounta 101.62 50 IAMs_20 IAMs_20 02 19 44.5
comp=Z,2µm,18.0s
WMOK Wichita Mounta 101.62 50 P **Pdif 01 25 36.7 +1.4**
baz=296
ABTX Abilene, Hawle 101.88 52 P **Pdif 01 25 37.4 +0.9**
baz=295
OKC Ostrava-Krasne 101.96 329 AMS AMS 02 14 40.0
comp=Z,5µm,18.9s
SCIA State Center 102.06 41 IAMs_20 IAMs_20 02 10 01.1
comp=Z,2µm,20.0s
SCIA State Center 102.06 41 P **Pdif 01 25 38.1 +1.0**
baz=301
OK048 Pawnee Station 102.21 47 IAMs_20 IAMs_20 02 10 54.8
comp=Z,3µm,19.0s
MORC Moravsky Berou 102.31 329 *e*PP **PP 01 29 51.7 +1.9**
OK033 Mehan 102.38 48 IAMs_20 IAMs_20 02 17 21.5
comp=Z,2µm,18.0s
OSTC Ostas 102.46 330 AMS AMS 02 15 00.0
comp=Z,2µm,17.5s
KRLC Kraliky 102.49 329 AMS AMS 02 16 20.0
comp=Z,4µm,18.3s
OK052 Battle Ridge R 102.50 48 IAMs_20 IAMs_20 02 17 35.7
comp=Z,2µm,18.0s
CHVC Chvalec 102.52 330 AMS AMS 02 18 30.0
comp=Z,3µm,18.6s
DPC Dobruska-Polom 102.54 330 *e*PP **PKiKP 01 29 57.6 -2.7**
DPC AMS AMS 02 15 00.0
comp=Z,3µm,20.0s
UPC Upice 102.59 330 AMS AMS 02 15 10.0
comp=Z,2µm,18.8s
JCT Junction City 102.65 54 IAMs_20 IAMs_20 02 17 00.1
comp=Z,2µm,18.0s
VRAC Vranov 103.08 329 *e*PP **PKiKP 01 29 56.8 -4.5**
TUL3 Leonard 103.27 48 IAMs_20 IAMs_20 02 11 48.9
comp=Z,3µm,19.0s
TUL3 Leonard 103.27 48 P **Pdif 01 25 42.9 +0.3**
baz=298
E43A Lone Tree Farm 103.28 35 IAMs_20 IAMs_20 02 14 53.2
comp=Z,3µm,19.0s
MODS Modra-Piesok 103.33 328 *e*PP **PKiKP 01 30 00.9 -0.8**
BRG Berggiesshubel 103.33 331 *e*PKP **PP 01 29 56.0 -1.4**
BRG Amp 01 30 03.3
comp=Z,9.3nm,1.2s
KRUC Moravsky 103.34 329 *e*PP **PKiKP 01 29 58.7 -3.0**
JFWS Jewell Farm 103.38 39 IAMs_20 IAMs_20 02 09 56.9
comp=Z,3µm,20.0s
JFWS Jewell Farm 103.38 39 P **Pdif 01 25 43.8 +0.9**
baz=304
CLL Collm 103.47 332 *e*P **Pdif 01 25 44.0 +0.8**
CLL *e* 01 36 25.0
CLL *e*S **Sdif 01 37 32.0 +2.0**
CLL MLR MLR
comp=Z,3µm,18.5s
TREC Trest 103.64 329 AMS AMS 02 16 50.0
comp=Z,4µm,16.0s
PRU Pruhonice 103.64 330 AMS AMS 02 16 30.0
comp=Z,2µm,18.8s
QSPA South Pole Qui 103.71 180 IAMs_20 IAMs_20 02 13 16.0
comp=Z,2µm,20.0s
HSKC Hora Svate Kat 103.75 331 AMS AMS 02 17 10.0
comp=Z,4µm,19.5s
435B Jarrell 104.25 53 IAMs_20 IAMs_20 02 18 48.4
comp=Z,1µm,18.0s
CONA Conrad Observa 104.34 328 *e*pPKiKP **PKiKP 01 30 09.7 +6.0**
comp=Z,9.6nm,1.4s
NKC Novy Kostel 104.47 331 AMS AMS 02 17 50.0
comp=Z,5µm,21.2s
CKRC Cesky Krumlov 104.54 330 *e*PP **PKiKP 01 30 06.2 +2.3**
CKRC *ex* x 01 39 13.8
CKRC AMS AMS 02 19 20.0
comp=Z,2µm,14.8s
KHC Kasperske Hory 104.69 330 *e*PP **PKiKP 01 30 04.2 0.0**
KHC *e*SP SP 01 39 17.0 -0.9
KHC AMS AMS 02 16 30.0
comp=Z,3µm,18.9s
HDIL Hopedale 105.28 41 IAMs_20 IAMs_20 02 09 57.3
comp=Z,2µm,20.0s
CCM Cathedral Cave 105.36 44 IAMs_20 IAMs_20 02 12 36.8
comp=Z,1µm,20.0s
KVTX Kingsville 105.39 56 IAMs_20 IAMs_20 02 15 44.8
comp=Z,2µm,19.0s
MIAR Mount Ida 105.51 48 IAMs_20 IAMs_20 02 09 06.3
comp=Z,2µm,20.0s
HKT Hockley 105.97 53 IAMs_20 IAMs_20 02 17 45.8
comp=Z,2µm,19.0s
NATX Nacogdoches 106.04 51 IAMs_20 IAMs_20 02 18 38.7
comp=Z,2µm,18.0s
TIR Tirane 106.14 321 IAMs_20 IAMs_20 02 18 53.1
comp=Z,2µm,18.0s
LESA Schwarzleotal 106.29 329 *e*PP **PP 01 30 19.7 +0.2**
comp=Z,12nm,1.6s
SABO M.te Sabotino 106.79 328 IAMs_20 IAMs_20 02 18 55.1
comp=Z,3µm,19.0s
WATA Walderalm 106.89 330 *e*PP **PP 01 30 25.6 +1.6**
comp=Z,10.0nm,1.1s
WTTA Wattenberg 106.91 330 *e*PKiKP **PKiKP 01 30 12.5 +3.9**
comp=Z,16nm,1.5s
MOTA Moosalm 107.11 330 *e*PP **PP 01 30 26.6 +0.9**
comp=Z,9.3nm,1.5s
SQTA Sankt Quirin 107.15 330 *e*PP **PP 01 30 28.1 +2.2**
comp=Z,22nm,1.7s
FETA Feichten 107.52 330 *e*PP **PP 01 30 29.4 +0.7**
comp=Z,12nm,1.6s
UNM Universidad Na 107.56 64 IAMs_20 IAMs_20 02 08 40.1
comp=Z,1µm,20.0s
FUORN Ofenpass-Fuorn 108.03 330 IAMs_20 IAMs_20 02 20 19.5
comp=Z,2µm,20.0s
SGRT San Giovanni R 108.35 323 IAMs_20 IAMs_20 02 19 33.3
comp=Z,2µm,19.0s
WCI Wyandotte Cave 108.51 41 IAMs_20 IAMs_20 02 16 43.0
comp=Z,2µm,20.0s
WVT Waverly 108.69 44 IAMs_20 IAMs_20 02 14 48.1
comp=Z,2µm,20.0s
GUMA Gualdo di Mace 108.87 325 IAMs_20 IAMs_20 02 20 16.9
comp=Z,3µm,19.0s
FDMO Fiordimonte 109.02 326 IAMs_20 IAMs_20 02 19 32.9
comp=Z,2µm,20.0s
PLAL Pickwick Lake 109.16 45 IAMs_20 IAMs_20 02 14 23.6
comp=Z,2µm,19.0s
INTR Introdacqua 109.24 324 IAMs_20 IAMs_20 02 19 14.8
comp=Z,1µm,20.0s
TIP Timpagrande 109.33 321 IAMs_20 IAMs_20 02 21 25.7
comp=Z,2µm,19.0s
CUC Castrocucco 109.41 322 IAMs_20 IAMs_20 02 26 16.6
comp=Z,2µm,19.0s
TRQ Mont Tremblant 109.77 29 IAMs_20 IAMs_20 02 15 58.5
comp=Z,2µm,20.0s
LDAQ Lac Daran 109.93 26 IAMs_20 IAMs_20 02 16 17.2
comp=Z,3µm,20.0s
WBO Williamsburg 110.32 30 IAMs_20 IAMs_20 02 15 15.0
comp=Z,2µm,22.0s
CASP Castiglione de 110.39 327 IAMs_20 IAMs_20 02 20 53.1
comp=Z,2µm,19.0s
CEL Celeste 110.43 320 IAMs_20 IAMs_20 02 22 24.8
comp=Z,2µm,20.0s
Q52A Bidwell 110.58 39 IAMs_20 IAMs_20 02 14 16.9
comp=Z,3µm,20.0s
LMQ La Malbaie 110.64 26 IAMs_20 IAMs_20 02 16 49.0
comp=Z,2µm,20.0s
LONY Lake Ozonia 110.94 30 IAMs_20 IAMs_20 02 15 33.3
comp=Z,2µm,20.0s
TZTN Tazewell 111.27 41 IAMs_20 IAMs_20 02 13 05.0
comp=Z,2µm,20.0s
NCB Newcomb 111.59 30 IAMs_20 IAMs_20 02 15 22.5
comp=Z,2µm,20.0s
J59A Piesco 111.82 31 IAMs_20 IAMs_20 02 15 40.8
comp=Z,2µm,21.0s
G62A West of Eustis 112.37 27 IAMs_20 IAMs_20 02 22 07.0
comp=Z,2µm,19.0s
LBNH Lisbon 112.49 29 IAMs_20 IAMs_20 02 14 58.2
comp=Z,2µm,20.0s

H62A Milan 112.59 28 IAMs_20 IAMs_20 02 15 32.8
comp=Z,3µm,21.0s
F63A Nahmakanta, Br 112.62 26 IAMs_20 IAMs_20 02 18 10.3
comp=Z,2µm,21.0s
F64A Sherman 112.81 26 IAMs_20 IAMs_20 02 18 35.3
comp=Z,2µm,20.0s
J61A Chester 112.86 30 IAMs_20 IAMs_20 02 14 26.3
comp=Z,2µm,21.0s
PKME Peaks-Kenny Pk 112.88 27 IAMs_20 IAMs_20 02 23 28.4
comp=Z,2µm,19.0s
ELIB Princess Elisa 113.03 197 *d*PKiKP **PKiKP 01 30 18.8 -0.4**
I63A Otisfield 113.26 28 IAMs_20 IAMs_20 02 19 49.5
comp=Z,2µm,20.0s
WVL Waterville 113.27 27 IAMs_20 IAMs_20 02 24 01.7
comp=Z,2µm,18.0s
SDMD Soldier's Deli 113.46 35 IAMs_20 IAMs_20 02 18 22.6
comp=Z,2µm,20.0s
L61B Northampton 113.47 31 IAMs_20 IAMs_20 02 18 59.5
comp=Z,2µm,19.0s
VSL Villasalto 113.47 325 IAMs_20 IAMs_20 02 24 46.8
comp=Z,2µm,19.0s
G65A Princeton 113.67 26 IAMs_20 IAMs_20 02 18 10.1
comp=Z,2µm,21.0s
QUA2 Belchertown 113.76 30 IAMs_20 IAMs_20 02 22 09.1
comp=Z,2µm,18.0s
HRV Adam Dziewonsk 113.98 30 IAMs_20 IAMs_20 02 22 52.7
comp=Z,2µm,19.0s
WSPT Westport, CT 114.09 32 IAMs_20 IAMs_20 02 16 31.0
comp=Z,2µm,21.0s
EMMW East Machias 114.11 26 IAMs_20 IAMs_20 02 19 04.8
comp=Z,2µm,20.0s
N62A Caumsett State 114.20 32 IAMs_20 IAMs_20 02 16 13.8
comp=Z,2µm,21.0s
LMN Caledonia Moun 114.24 23 IAMs_20 IAMs_20 02 20 28.0
comp=Z,2µm,20.0s
L64A Middleborough 114.76 30 IAMs_20 IAMs_20 02 15 32.4
comp=Z,2µm,20.0s
NHSC New Hope 115.56 42 IAMs_20 IAMs_20 02 22 23.9
comp=Z,2µm,19.0s
DWPF Disney Wildern 117.71 48 IAMs_20 IAMs_20 02 20 58.3
comp=Z,2µm,20.0s
ESDC Sonseca Array 119.98 334 PKP **PKiKP 01 30 34.3 +0.7**
comp=Z,0.9nm,0.8s,baz=346,slow=1.7,SNR=5.2
LSZ Lusaka 120.30 260 PKPdf **PKPdf 01 30 34.3 -0.5**
LSZ Lusaka 120.30 260 PKIKP **PKPdf 01 30 34.3 -0.5**
BOAB BCO BROADBAND 122.21 65 IAMs_20 IAMs_20 02 19 47.3
comp=Z,2µm,20.0s
PAYG Puerto Ayora 122.48 82 IAMs_20 IAMs_20 02 29 14.3
comp=Z,1µm,18.0s
EMAL Malaga-Limoner 122.59 332 PKP **PKiKP 01 30 39.4 +0.7**
ESPR Espera 123.14 333 PKP **PKiKP 01 30 40.6 +0.7**
BOSA Boshof 123.66 245 PKP **PKPdf 01 30 40.9 -0.1**
comp=Z,2.1nm,0.8s,baz=109,slow=18,SNR=3.2
PFVI Vila Bisbo 124.14 336 IAMs_20 IAMs_20 02 32 32.1
comp=Z,2µm,18.0s
BBSR BB Station 125.26 32 IAMs_20 IAMs_20 02 22 54.6
comp=Z,1µm,20.0s
TAM Tamanrasset 127.08 313 PKPdf **PKPdf 01 30 47.3 -0.4**
TAM Tamanrasset 127.08 313 PKIKP **PKPdf 01 30 47.3 -0.4**
BCIP Isla Barro Col 128.78 66 IAMs_20 IAMs_20 02 23 29.6
comp=Z,1µm,19.0s
SDDR Presa de Saban 130.61 50 IAMs_20 IAMs_20 02 25 41.3
comp=Z,2µm,20.0s
OTAV Otavalo 133.50 76 IAMs_20 IAMs_20 02 18 07.0
comp=Z,1µm,21.0s
PLMC San Jos del P 133.78 69 *e*P **PKiKP 01 31 01.5 -0.4**
BBAC Balboa, Cauca 134.01 73 *e*P **PKPdf 01 31 01.6 +0.5**
POPC Popayan, Colom 134.34 72 *e*P **PKPdf 01 30 55.2 -6.6**
GUY2C Guyana, Caldas 134.48 68 *e*P **PKPdf 01 30 57.2 -5.2**
SJG San Juan 134.87 46 IAMs_20 IAMs_20 02 29 43.9
comp=Z,2µm,21.0s
OCAC Ocana 134.93 63 *e*P **PKPdf 01 31 03.5 +0.7**
SPBC San Pablo de B 135.45 67 *e*P **PKiKP 01 31 04.8 -0.4**
BARC Barichara 135.82 65 *e*P PKPpre 01 30 55.1
TOA0 Torodi Ar. Sit 135.87 306 PKPdf **PKPdf 01 31 03.9 -0.4**
TORD Torodi Ar. Bea 135.87 306 PKP **PKPdf 01 31 03.8 -0.5**
comp=Z,2.3nm,0.3s,baz=42,slow=4.5,SNR=1.9
PAMC Pamplona, Colo 135.89 64 *e*P **PKPdf 01 31 05.7 +0.7**
SMRT St. Maarten 137.02 43 IAMs_20 IAMs_20 02 34 04.3
comp=Z,2µm,22.0s
PLCA Paso Flores 138.17 137 PKP **PKPdf 01 31 07.7 -0.3**
comp=Z,4.4nm,1.0s,baz=224,slow=6.0,SNR=5.3
BAUV El Baul 139.04 58 PKPdf **PKPdf 01 31 09.5 -0.7**
PEL Peldehue 141.28 126 IAMs_20 IAMs_20 02 22 44.1
comp=Z,1µm,20.0s
LCO Las Campanas 142.56 120 IAMs_20 IAMs_20 02 26 31.6
comp=Z,1µm,20.0s
DBIC Dimbokro 144.87 304 PKPdf PKPbc 01 31 20.0 +0.3
DBIC IAMs_20 IAMs_20 02 44 47.4
comp=Z,958nm,21.0s
DBIC Dimbokro 144.87 304 PKIKP PKPbc 01 31 20.0 +0.3
DBIC Dimbokro 144.87 304 PKP **PKPdf 01 31 20.3 -0.3**
comp=Z,142nm,0.8s,baz=47,slow=3.4,SNR=146
KIC Kosan Boka 144.96 303 *e*PKP1 **PKPdf 01 31 20.5 -0.3**
comp=Z,231nm,0.8s
TIC Toumodi 145.02 304 *e*PKP1 **PKPdf 01 31 20.6 -0.3**
comp=Z,136nm,0.8s
TRQA Tornquist 145.20 139 PKPdf 01 31 20.5 0.0
TRQA IAMs_20 IAMs_20 02 36 00.6
comp=Z,1µm,18.0s
TRQA Tornquist 145.20 139 PKIKP **PKPdf 01 31 20.5 0.0**
TRQA MLR MLR
comp=Z,1µm,18.0s
LIC Lamto 145.27 303 *e*PKP1 **PKPdf 01 31 21.5 +0.2**
comp=Z,398nm,0.8s
LVC Limon Verde 145.49 110 PKPdf **PKPdf 01 31 21.1 -0.8**
LVC Limon Verde 145.49 110 PKIKP **PKPdf 01 31 21.1 -0.8**
LPAZ La Paz 146.66 99 PKPdf **PKPdf 01 31 24.0 -0.3**
LPAZ La Paz 146.66 99 PKP2 **PKPdf 01 31 24.0 -0.3**
SAML Samuel 150.67 84 PKPdf **PKPdf 01 31 30.0 -0.1**
SAML Samuel 150.67 84 PKIKP **PKPdf 01 31 30.0 -0.1**
SAML Samuel 150.67 84 *e*P **PKPdf 01 31 27.1 -3.0**
MACA Manacapuru-AM 151.28 71 PKPdf **PKPdf 01 31 30.5 -0.6**
CPUP Villa Florida 154.61 123 PKP **PKPdf 01 31 35.5 -0.1**
comp=Z,0.8nm,0.4s,baz=212,slow=2.8,SNR=1.5
CPUP PKPab **PKPab 01 31 59.7 +0.9**
comp=Z,3.5nm,0.9s,baz=256,slow=8.0,SNR=3.8
BDFB Brasilia 166.01 99 PKIKP **PKPdf 01 31 48.0 -0.6**
BDFB Brasilia 166.01 99 PKP **PKPdf 01 31 48.0 -0.6**
comp=Z,5.0nm,1.1s,baz=180,slow=3.0,SNR=2.6
BDFB PKPab **PKPab 01 32 50.1 +1.2**
baz=203,slow=8.8,SNR=3.8

IDC ***13*** *01:18:43.9±0.7, 13°.82N×146°.46E, h0km, mb4.3/21, mbtmp4.3/21, Error ellipse: s-maj=17.7km s-min=15.2km az=101.0*
NEIC ***13*** *01:18:44.9±1.9, 13°.73N±0°.07×146°.55E±0°.10, h10km±1km, mb4.9/79, Error ellipse: s-maj=18.4km s-min=8.3km az=120.0*
BJI ***13*** *01:18:49.2±0.0, 13°.70N×146°.34E, h42km, mb4.7/14, mB5.0/3, Ms5.2/3, Ms7 5.3/4*
ISC 13 01:18:45.1±0.5, 13°.80N±0°.08×146°.47E±0°.08, h10km, n120,
σ1s34/124, mb4.9/69, 3C, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.57**	**262**				**Pb**	**01 19 13.7**	**-0.5**
GUMO	**Guam**	**1.57**	**262**	Pn		Pn	**Pb**	**01 19 13.9**	**-0.3**
GUMO	234nm,0.3s,baz=72,slow=16,SNR=42			Sn			**Sn**	**01 19 32.9**	**-0.4**
JOW	304nm,0.3s,baz=157,slow=9.5,SNR=9.8 **Kunigami**	**21.39**	**310**	P			**P**	**01 23 34.4**	**+1.3**
	26nm,0.7s,baz=127,slow=10,SNR=2.6 26nm,0.7s								
JNU	**Nakatsue**	**23.91**	**326**	P			**P**	**01 24 00.6**	**+1.3**
	11nm,0.7s,baz=54,slow=12,SNR=6.8 11nm,0.7s								
COEN	**Coen**	**27.77**	**187**	P			**P**	**01 24 34.0**	**-0.4**
KSRS	**Korea Array**	**28.77**	**328**	P			**P**	**01 24 43.3**	**+0.2**
	3.0nm,0.4s,baz=147,slow=9.4,SNR=9.7 3.0nm,0.4s								
NJ2	**Nanjing**	**31.11**	**310**	*e*P			**P**	**01 25 04.2**	**+0.4**
NJ2				pP			**pwP**	**01 25 14.4**	**+1.1**
NJ2	comp=Z,7.0nm,0.5s			pmax			pmax		
MDJ	**Mudanjiang**	**33.91**	**338**	P			**P**	**01 25 30.2**	**+1.9**
CN2	**Changchun**	**34.90**	**333**	*e*P			**P**	**01 25 38.5**	**+1.6**
CN2				*es*P			pwP	01 25 56.0	+10
WB0	**Warramunga Arr**	**35.41**	**200**	P			**P**	**01 25 40.3**	**-1.2**
WB0	comp=Z,30nm,1.6s			IAmb			IAmb	01 25 48.6	
WB2	**Warramunga Arr**	**35.59**	**200**	P			**P**	**01 25 42.5**	**-0.5**
WB2	comp=Z,17nm,1.2s			IAmb			IAmb	01 25 56.6	

WRA Warramunga Arr 35.59 200 P **P 01 25 43.7 +0.6**
WRA Warramunga Arr 35.59 200 P **P 01 25 42.3 -0.7**
comp=Z,4.7nm,0.9s,baz=20,slow=9.4,SNR=6.9
WRA PcP **PcP 01 28 12.6 +0.6**
comp=Z,0.9nm,0.6s,baz=19,slow=3.2,SNR=3.3
comp=Z,4.7nm,0.9s
LYN LuoYang 37.00 310 *e*P **P 01 25 55.3 +0.3**
LYN sP pwP 01 26 10.6 +4.9
LYN PP **PnPn 01 27 20.7 +1.2**
LYN sS sS 01 31 54.5 +12
LYN pmax pmax
comp=Z,15nm,0.9s
ASAR Alice Springs 39.22 198 P **P 01 26 13.2 -0.5**
comp=Z,1.5nm,0.8s,baz=24,slow=10.0,SNR=3.9
ASAR PcP **PcP 01 28 24.5 +1.5**
comp=Z,1.2nm,1.1s,baz=26,slow=4.5,SNR=1.6
comp=Z,1.5nm,0.8s
GYA Guiyang 39.27 295 *e*P P 01 26 19.3 +4.9
GYA pmax pmax
comp=Z,7.0nm,0.6s
XLT XiLinHaoTe 39.68 325 *e*P P 01 26 23.0 +5.5
XLT SS SS 01 35 11.6 -4.8
XLT pmax pmax
comp=Z,5.0nm,0.5s
HHC Hu-ho-hao-te 40.63 318 *e*P **P 01 26 26.0 +0.5**
HHC pP pwP 01 26 36.9 +1.9
HHC S **S 01 32 32.1 -3.4**
HHC sS sS 01 32 52.3 +15
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC LR LR
comp=Z,2µm,17.6s
HHC LR LR
comp=Z,4µm,16.2s
PZH PanZhiHua 43.63 294 P **P 01 26 50.3 0.0**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,130nm,6.1s
STKA Stephens Creek 45.66 186 P **P 01 27 07.8 +1.7**
comp=Z,2.7nm,0.7s,baz=54,slow=9.3,SNR=3.8
comp=Z,2.7nm,0.7s
CMAR Chiang Mai Arr 45.79 282 P **P 01 27 08.1 +0.7**
comp=Z,1.6nm,0.3s,baz=79,slow=6.5,SNR=7.3
comp=Z,1.6nm,0.3s
BBOO Buckleboo 47.41 192 P **P 01 27 21.6 +1.8**
BBOO IAmb IAmb 01 27 26.4
comp=Z,14nm,1.0s
SONM Songino Array 47.46 324 P **P 01 27 21.1 +0.8**
comp=Z,3.0nm,0.8s,baz=137,slow=7.0,SNR=11
comp=Z,3.0nm,0.8s
BILL Bilibino 55.70 9 P **P 01 28 21.3 -0.1**
BILL IAmb IAmb 01 28 48.7
comp=Z,17nm,1.3s
WMQ Urumqi 58.12 313 *e*P **P 01 28 40.0 +0.9**
WMQ pP pwP 01 28 54.4 +4.7
WMQ pmax pmax
comp=Z,12nm,1.3s
TIXI Tiksi 58.79 354 P **P 01 28 45.3 +2.1**
comp=Z,1.2nm,0.3s,baz=140,slow=4.9,SNR=1.5
comp=Z,1.2nm,0.3s
ZAA0 Zalesovo Array 62.36 324 P **P 01 29 06.4 -1.5**
ZAA0 IAmb IAmb 01 30 41.7
comp=Z,12nm,1.4s
ZALV Zalesovo Beam 62.36 324 P **P 01 29 07.0 -0.8**
ZALV Zalesovo Beam 62.36 324 P **P 01 29 07.4 -0.5**
comp=Z,1.6nm,0.5s,baz=104,slow=7.9,SNR=6.9
comp=Z,1.6nm,0.5s
MK31 Makanchi Array 62.42 316 P **P 01 29 08.7 +0.3**
MKAR Makanchi Array 62.42 316 P **P 01 29 08.6 +0.1**
MKAR Makanchi Array 62.42 316 P **P 01 29 08.8 +0.3**
comp=Z,2.4nm,0.5s,baz=92,slow=8.0,SNR=40
comp=Z,2.4nm,0.5s
C16K Lisburne Hills 62.54 18 P **P 01 29 08.5 -0.2**
C16K IAmb IAmb 01 29 16.4
comp=Z,8.7nm,1.1s
MAKZ Makanchi 62.63 316 P **P 01 29 10.3 +0.5**
MAKZ IAmb IAmb 01 29 14.3
comp=Z,6.4nm,0.9s
F17K Baldwin Pennin 62.87 21 P **P 01 29 12.5 +1.5**
F17K IAmb IAmb 01 29 26.1
comp=Z,7.6nm,0.9s
H18K Honhosa River 63.30 23 P **P 01 29 14.8 +0.9**
H18K IAmb IAmb 01 29 36.6
comp=Z,8.2nm,0.9s
G18K Tagagawik 63.53 22 P **P 01 29 15.8 +0.4**
G18K IAmb IAmb 01 29 23.9
comp=Z,15nm,1.5s
E18K Tukpahlearik C 63.59 20 P **P 01 29 16.0 +0.2**
C18K Utukok River 64.02 19 P **P 01 29 18.9 +0.2**
H19K Roundabout Mou 64.19 23 P **P 01 29 19.5 -0.3**
G19K Purcell Mounta 64.22 22 P **P 01 29 20.7 +0.8**
G19K IAmb IAmb 01 29 28.0
comp=Z,6.8nm,0.9s
J20K Nowinta River 64.54 25 P **P 01 29 22.2 +0.1**
E19K Redstone River 64.75 21 P **P 01 29 24.9 +1.5**
C19K Lookout Ridge 64.76 19 P **P 01 29 25.0 +1.5**
D19K Kuna River 64.93 20 P **P 01 29 25.3 +0.7**
D19K IAmb IAmb 01 29 33.6
comp=Z,11nm,1.2s
F20K Avaraart Lake 65.10 21 P **P 01 29 26.7 +1.0**
CAST Castle Rocks 65.13 26 P **P 01 29 25.6 -0.4**
KURK Kurchatov 65.42 320 P **P 01 29 27.7 -0.3**
KURBB Kurchatov Arra 65.47 320 P **P 01 29 28.3 -0.1**
comp=Z,10nm,0.9s,baz=100,slow=7.0,SNR=23
comp=Z,10nm,0.9s
B20K Meade River 65.94 18 P **P 01 29 32.2 +1.2**
MLY Manley 66.22 24 P **P 01 29 32.6 -0.4**
KSH Kashi 66.35 307 P **P 01 29 38.8 +4.4**
NRIK Noril'sk 66.44 341 P **P 01 29 33.5 -0.8**
comp=Z,2.4nm,0.4s,baz=97,slow=9.1,SNR=4.8
comp=Z,2.4nm,0.4s
B21K Ikpikpuk River 66.56 19 P **P 01 29 36.0 +0.9**
B21K IAmb IAmb 01 29 44.6
comp=Z,8.5nm,1.1s
D22K Ayikyak River 66.89 20 P **P 01 29 38.2 +1.0**
D22K IAmb IAmb 01 29 48.6
comp=Z,18nm,1.4s
B22K Teshekpuk Lake 67.24 19 P **P 01 29 39.2 -0.1**
B22K IAmb IAmb 01 29 47.1
comp=Z,6.6nm,0.8s
H24K Noodor Dome 67.61 24 P **P 01 29 41.5 -0.3**
H24K IAmb IAmb 01 29 50.0
comp=Z,18nm,1.4s
IL31 67.71 25 P **P 01 29 42.0 -0.4**
IL31 IAmb IAmb 01 29 48.9
comp=Z,9.8nm,1.2s
ILAR Eielson Array 67.71 25 P **P 01 29 42.5 0.0**
comp=Z,1.1nm,0.4s,baz=250,slow=5.7,SNR=14
comp=Z,1.1nm,0.4s
TOLK Toolik Lake Re 67.86 21 P **P 01 29 43.2 -0.2**
TOLK IAmb IAmb 01 29 45.8
comp=Z,16nm,1.4s
E24K Your Creek 68.06 22 P **P 01 29 45.5 +0.8**
E24K IAmb IAmb 01 29 53.0
comp=Z,22nm,1.7s
F24K Squaw Lake 68.10 22 P **P 01 29 44.5 -0.4**
F24K IAmb IAmb 01 29 54.2
comp=Z,16nm,1.5s
D24K Happy Valley 68.29 20 P **P 01 29 45.2 -0.8**
J26L Joseph Creek 69.04 26 P **P 01 29 50.5 -0.4**
E25K Arctic Village 69.12 22 P **P 01 29 50.8 -0.5**
D25K Kavik River 69.17 21 P **P 01 29 51.7 +0.1**
D25K IAmb IAmb 01 30 06.4
comp=Z,8.4nm,1.0s
KK31 Karatay Array 70.48 311 P **P 01 29 59.2 -1.0**
KKAR Karatay Array 70.48 311 P **P 01 29 58.9 -1.2**
KKAR Karatay Array 70.48 311 P **P 01 29 59.6 -0.5**
BVAR Borovoye Array 70.72 322 P **P 01 30 01.3 -0.1**
comp=Z,5.7nm,0.6s,baz=96,slow=6.9,SNR=13
comp=Z,5.7nm,0.6s
BRVK Borovoye 70.79 322 P **P 01 30 00.6 -1.1**
BRVK IAmb IAmb 01 30 06.3
comp=Z,8.2nm,1.0s
F28M Old Crow 71.11 23 P **P 01 30 03.1 -0.4**
F28M IAmb IAmb 01 30 48.7
comp=Z,30nm,1.9s
E28M Babbage River 71.41 22 P **P 01 30 04.9 -0.4**
SIMJ Simiganj 71.78 306 P **P 01 30 06.5 -1.7**
G30M tAoh Zrail Nji 72.43 24 P **P 01 30 11.3 -0.1**
G30M IAmb IAmb 01 30 16.7
comp=Z,24nm,1.5s
H31M Peel River 73.08 25 P **P 01 30 13.9 -1.4**
G31M Satah River 73.19 24 P **P 01 30 14.7 -1.2**
G31M IAmb IAmb 01 30 23.0
comp=Z,27nm,1.6s

C36M	**Paulatuk**	**77.00**	**21**	P	**P**	**01 30 36.6**	**-1.2**
C36M				IAmb	IAmb	01 30 46.1	
	comp=Z,16nm,1.4s						
ABKAR	**Akbulak array**	**77.42**	**318**	P	**P**	**01 30 39.5**	**-1.1**
GEYT	**Alibeck**	**80.37**	**307**	P	**P**	**01 30 57.8**	**+0.7**
	comp=Z,2.3nm,1.0s,baz=77,slow=6.5,SNR=3.1						
	comp=Z,2.3nm,1.0s						
GNW	**Green Mountain**	**80.43**	**43**	P	**P**	**01 30 57.6**	**+0.5**
YKA	**Yellowknife Ar**	**81.95**	**28**	P	**P**	**01 31 06.1**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=267,slow=5.4,SNR=7.4						
	comp=Z,0.8nm,0.7s						
J05D	**Fort Rock, OR**	**82.33**	**47**	P	**P**	**01 31 06.9**	**-0.6**
J05D				IAmb	IAmb	01 31 25.8	
	comp=Z,24nm,1.6s						
PINE	**Pine Mountain**	**82.43**	**47**	P	**P**	**01 31 07.3**	**-0.8**
K05A	**Summer Lake**	**82.69**	**48**	P	**P**	**01 31 07.7**	**-1.8**
ORV	**Oroville**	**82.89**	**51**	P	**P**	**01 31 07.7**	**-2.6**
G08A	**Pilot Rock**	**83.50**	**45**	P	**P**	**01 31 11.6**	**-1.9**
G08A				IAmb	IAmb	01 31 40.5	
	comp=Z,13nm,1.7s						
YERR	**Yerington**	**84.73**	**51**	P	**P**	**01 31 18.3**	**-1.7**
YERR				IAmb	IAmb	01 31 28.2	
	comp=Z,12nm,1.3s						
BMO	**Blue Mountains**	**84.74**	**45**	P	**P**	**01 31 19.2**	**-0.7**
NVAR	**Mina Array Bea**	**85.57**	**52**	P	**P**	**01 31 21.5**	**-2.8**
NVAR	**Mina Array Bea**	**85.57**	**52**	P	**P**	**01 31 25.4**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=269,slow=5.4,SNR=6.5						
	comp=Z,1.0nm,0.6s						
TPH	**Tonopah**	**86.48**	**52**	P	**P**	**01 31 27.1**	**-1.7**
HLID	**Hailey**	**87.08**	**46**	P	**P**	**01 31 31.3**	**-0.2**
ELK	**Elko**	**87.27**	**49**	P	**P**	**01 31 31.7**	**-0.9**
ELK				IAmb	IAmb	01 31 40.8	
	comp=Z,8.6nm,1.1s						
WCT	**Wildcat Mounta**	**87.27**	**53**	P	**P**	**01 31 30.2**	**-2.3**
WCT				IAmb	IAmb	01 31 40.6	
	comp=Z,9.9nm,1.2s						
ARCES	**ARCESS Array B**	**87.35**	**342**	P	**P**	**01 31 31.7**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=58,slow=7.3,SNR=5.6						
	comp=Z,1.5nm,0.8s						
GWY	**Greenwater Val**	**87.40**	**54**	P	**P**	**01 31 32.3**	**-0.9**
R11B	**Troy Canyon, C**	**87.66**	**51**	P	**P**	**01 31 33.0**	**-1.4**
R11B				IAmb	IAmb	01 32 30.9	
	comp=Z,11nm,1.8s						
Q12A	**Willow Creek R**	**88.04**	**50**	P	**P**	**01 31 33.6**	**-2.6**
BOZ	**Bozeman (W)**	**88.39**	**43**	P	**P**	**01 31 37.2**	**-0.6**
BOZ				IAmb	IAmb	01 32 30.0	
	comp=Z,9.2nm,1.4s						
SPR3	**Spring Creek 3**	**88.42**	**50**	P	**P**	**01 31 36.4**	**-1.8**
SPR3				IAmb	IAmb	01 31 46.7	
	comp=Z,9.8nm,1.2s						
YHL	**Hebgen Lake**	**88.92**	**44**	P	**P**	**01 31 38.9**	**-1.6**
YHL				IAmb	IAmb	01 31 49.8	
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	**89.20**	**49**	P	**P**	**01 31 40.9**	**-0.8**
DUG				IAmb	IAmb	01 31 50.4	
	comp=Z,12nm,1.2s						
IMW	**Indian Meadow**	**89.39**	**45**	P	**P**	**01 31 40.9**	**-1.7**
FLWY	**Flagg Ranch**	**89.49**	**45**	P	**P**	**01 31 41.2**	**-1.9**
TPAW	**Teton Pass**	**89.51**	**45**	P	**P**	**01 31 42.7**	**-0.5**
TPAW				IAmb	IAmb	01 31 51.4	
	comp=Z,13nm,1.6s						
YMP	**Mirror Lake Pl**	**89.65**	**44**	P	**P**	**01 31 41.4**	**-2.5**
YMP				IAmb	IAmb	01 31 53.2	
	comp=Z,11nm,1.1s						
NLU	**North Lily Min**	**89.81**	**49**	P	**P**	**01 31 43.2**	**-1.4**
LCMT	**Little Creek M**	**89.82**	**52**	P	**P**	**01 31 42.8**	**-1.8**
KNB	**Kanab**	**90.14**	**52**	P	**P**	**01 31 43.2**	**-2.9**
KNB				IAmb	IAmb	01 31 55.0	
	comp=Z,10nm,1.2s						
PDAR	**Pinedale Array**	**90.71**	**46**	P	**P**	**01 31 48.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=282,slow=4.5,SNR=1.5						
	comp=Z,0.3nm,0.7s						
U15A	**North Rim**	**90.72**	**52**	P	**P**	**01 31 46.8**	**-2.3**
RDMU	**Red Mountain**	**91.43**	**48**	P	**P**	**01 31 50.5**	**-1.7**
RDMU				IAmb	IAmb	01 32 00.1	
	comp=Z,7.2nm,1.2s						
LAO	**LASA Array**	**91.55**	**41**	P	**P**	**01 31 50.7**	**-1.6**
FINES	**FINESS Array B**	**91.62**	**336**	P	**P**	**01 31 51.0**	**-1.2**
	comp=Z,1.4nm,0.4s,baz=78,slow=4.1,SNR=9.8						
	comp=Z,1.4nm,0.4s						
SMCO	**Snowmass**	**93.79**	**48**	P	**P**	**01 32 01.5**	**-1.8**
SMCO				IAmb	IAmb	01 32 11.0	
	comp=Z,13nm,1.6s						
DBIC	**Dimbokro**	**145.01**	**304**	PKP	**PKPdf**	**01 38 23.8**	**0.0**
	comp=Z,18nm,0.8s,baz=50,slow=3.7,SNR=16						
KIC	**Kosan Boka**	**145.10**	**303**↑	*eP*	**PKPab**	**01 38 23.2**	**-0.2**
	comp=Z,19nm,0.9s						
TIC	**Toumodi**	**145.16**	**304**↑	*eP*	**PKPbc**	**01 38 18.8**	**-4.8**
	comp=Z,18nm,0.8s						
LIC	**Lamto**	**145.41**	**303**↑	*eP*	**PKPab**	**01 38 24.2**	**-0.3**
	comp=Z,27nm,0.9s						

TAP ***13*** *01:27:38.7,24.04N×121.64E,h8km,ML3.3,C*
JMA ***13*** *01:27:38.3±0.3,24.0N±0.3×121.6E±1.0,h0km±2km, MV2.9/11,TAIWAN REGION*
ISC 13 01:27:38.8±0.8,24.03N±0.01×121.66E±0.02,h8km±5km, n100,σ0.66/151,2C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.07**	**227**	*eP*	**Pg**	**01 27 41.0**	**+0.2**
HWA	baz=195			S	**Sg**	**01 27 43.1**	**+0.9**
TWD	**Chiawan**	**0.08**	**313**	⇓*iP*	**Pg**	**01 27 40.6**	**-0.3**
TWD	baz=324			*i* S	**Sg**	**01 27 42.0**	**-0.5**
ETL	**Fush Village**	**0.14**	**345**	⇓P	**Pg**	**01 27 41.6**	**-0.2**
ETL	baz=356			S	**Sg**	**01 27 43.8**	**-0.1**
NACB	**Ninganchiao**	**0.16**	**338**	P	**Pg**	**01 27 41.9**	**-0.3**
NACB	**Ninganchiao**	**0.16**	**338**	⇓*iP*	**Pg**	**01 27 41.9**	**-0.3**
NACB	baz=353			S	**Sg**	**01 27 44.1**	**-0.4**
ETM	**Tongmen**	**0.17**	**249**	⇓*eP*	**Pg**	**01 27 42.1**	**-0.2**
ETM	baz=238			*eS*	**Sg**	**01 27 44.4**	**-0.3**
LXIB	**Xiulin Townshi**	**0.23**	**269**	⇓*iP*	**Pg**	**01 27 43.1**	**-0.3**
LXIB	baz=252			S	**Sg**	**01 27 46.2**	**-0.4**
ETLH	**Xiulin Townshi**	**0.24**	**318**	⇓*iP*	**Pg**	**01 27 43.5**	**-0.2**
ETLH	baz=319			S	**Sg**	**01 27 47.0**	**-0.1**
SHUL	**Shoufeng**	**0.25**	**201**	⇓P	**Pg**	**01 27 45.0**	**+1.2**
SHUL	baz=193			*eS*	**Sg**	**01 27 50.1**	**+2.8**
ESL	**Shilin**	**0.30**	**225**	*eP*	**Pg**	**01 27 44.3**	**-0.3**
ESL	baz=227			*eS*	**Sg**	**01 27 48.3**	**-0.3**
EAHA	**Aohua**	**0.31**	**13**	*eP*	**Pg**	**01 27 44.8**	**-0.1**
EAHA	baz=28			*eS*	**Sg**	**01 27 49.0**	**-0.1**
TEGC	**Jichi Village**	**0.33**	**199**	*eP*	**Pb**	**01 27 46.6**	**-0.3**
TEGC	baz=192			*eS*	**Sb**	**01 27 53.5**	**+1.0**
WHF	**Hehuan Shan**	**0.38**	**288**	*eP*	**Pg**	**01 27 46.2**	**-0.2**
WHF	baz=286			*eS*	**Sg**	**01 27 51.4**	**-0.1**
WARBT	**Fenglin Townsh**	**0.40**	**219**	P	**Pg**	**01 27 46.2**	**-0.3**
ENA	**Nanau**	**0.41**	**10**	⇓*iP*	**Pg**	**01 27 46.6**	**-0.2**
ENA	baz=16			S	**Sg**	**01 27 52.0**	**-0.2**
EGFH	**Guangfu**	**0.41**	**211**	*eP*	**Pb**	**01 27 47.2**	**-1.2**
EWUT	**Wuta**	**0.43**	**14**	*eP*	**Pg**	**01 27 47.1**	**-0.1**
EWUT	baz=19			*eS*	**Sg**	**01 27 52.3**	**-0.6**
CHGB	**Renai**	**0.45**	**275**↑	*iP*	**Pg**	**01 27 47.7**	**+0.1**
CHGB	baz=262			*eS*	**Sg**	**01 27 53.6**	**+0.1**
	baz=262						

OWD	**Renai**	**0.45**	**261**	⇓P	**Pg**	**01 27 47.6**	**0.0**
OWD	baz=267			*eS*	**Sg**	**01 27 54.0**	**+0.5**
NNSB	**Datong**	**0.47**	**328**	⇓P	**Pg**	**01 27 48.0**	**0.0**
NNSB	baz=329			*i* S	**Sg**	**01 27 54.3**	**0.0**
NNS	**Nan Shan**	**0.49**	**328**	⇓P	**Pg**	**01 27 48.2**	**-0.1**
NNS	baz=330			*eS*	**Sg**	**01 27 54.4**	**-0.4**
TWT	**Tachien**	**0.50**	**297**	*eP*	**Pg**	**01 27 49.1**	**+0.6**
TWT	baz=295			*eS*	**Sg**	**01 27 55.7**	**+0.6**
WUSB	**Renai**	**0.50**	**266**↑	*eP*	**Pg**	**01 27 48.6**	**+0.1**
WUSB	baz=263			*eS*	**Sg**	**01 27 55.0**	**0.0**
TDCB	**Techi**	**0.51**	**296**	*eP*	**Pg**	**01 27 49.1**	**+0.3**
TDCB	baz=295			*eS*	**Sg**	**01 27 55.5**	**-0.1**
LATG	**Datong**	**0.52**	**346**	⇓P	**Pg**	**01 27 48.8**	**-0.1**
LATG	baz=349			*eS*	**Sg**	**01 27 55.8**	**-0.1**
VWDT	**VWDT**	**0.55**	**240**	*eP*	**Pb**	**01 27 49.5**	**-1.1**
VWDT	baz=229			*eS*	**Sg**	**01 27 56.5**	**-0.1**
HGSD	**Ruisui**	**0.57**	**202**	*eP*	**Pb**	**01 27 51.0**	**0.0**
HGSD	baz=214			*eS*	**Sb**	**01 27 59.8**	**+0.5**
NDT	**Datong Townshi**	**0.59**	**347**	*eP*	**Pg**	**01 27 50.4**	**+0.2**
NDT	baz=349			*eS*	**Sg**	**01 27 58.3**	**+0.3**
EHY	**Hungye**	**0.60**	**211**	*eP*	**Pg**	**01 27 50.2**	**-0.2**
TWC	**Suao**	**0.61**	**16**	*eP*	**Pg**	**01 27 50.5**	**0.0**
TWC	baz=20			*eS*	**Sg**	**01 27 59.3**	**+0.9**
ENTT	**Nioudou**	**0.62**	**352**	⇓*iP*	**Pg**	**01 27 50.9**	**+0.1**
ENTT	baz=355			*eS*	**Sg**	**01 27 59.0**	**+0.2**
WCS	**Beigang Elemen**	**0.69**	**273**	*eP*	**Pg**	**01 27 52.0**	**0.0**
SSLB	**Suanglung**	**0.69**	**250**	P	**Pb**	**01 27 52.2**	**-0.9**
SSLB	**Suanglung**	**0.69**	**250**	⇓P	**Pb**	**01 27 52.1**	**-0.9**
SSLB	baz=258			*eS*	**Sg**	**01 28 00.3**	**-0.8**
YHNB	**Yeheng**	**0.69**	**338**	P	**Pg**	**01 27 52.6**	**+0.4**
YHNB	**Yeheng**	**0.69**	**338**	*eP*	**Pg**	**01 27 52.4**	**+0.2**
YHNB	baz=340			*eS*	**Sg**	**01 28 01.1**	**-0.1**
TWE	**Neicheng**	**0.69**	**0**	P	**Pg**	**01 27 52.3**	**+0.2**
TWE	baz=4.0			*eS*	**Sg**	**01 28 01.3**	**+0.1**
WHP	**Taichung City**	**0.70**	**291**	*eP*	**Pb**	**01 27 53.2**	**-0.1**
WHP	baz=290			*eS*	**Sb**	**01 28 02.5**	**-0.6**
NSK	**Sanguang**	**0.70**	**337**	⇓P	**Pg**	**01 27 52.6**	**+0.2**
NSK	baz=330			S	**Sg**	**01 28 01.6**	**0.0**
SMLT	**Sun Moon Lake**	**0.71**	**259**	*iP*	**Pb**	**01 27 52.8**	**-0.6**
SMLT	baz=256			*eS*	**Sg**	**01 28 01.9**	**+0.1**
YULB	**Yu-li**	**0.71**	**208**	P	**Pb**	**01 27 52.7**	**-0.7**
YULB	**Yu-li**	**0.71**	**208**	*eP*	**Pg**	**01 27 52.1**	**-0.4**
ECBN	**Changbin**	**0.73**	**195**	*eP*	**Pb**	**01 27 53.4**	**-0.3**
ECBN	baz=182			*eS*	**Sn**	**01 28 05.7**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.73**	**355**	*eP*	**Pg**	**01 27 53.1**	**+0.1**
FUSB	baz=357			*eS*	**Sg**	**01 28 03.1**	**+0.6**
EYUL	**Yuli**	**0.74**	**205**	*eP*	**Pb**	**01 27 53.9**	**-0.1**
TWF1	**Yuli**	**0.75**	**207**	*eP*	**Pg**	**01 27 52.7**	**-0.5**
NWLT	**Wulai**	**0.76**	**349**	*eP*	**Pg**	**01 27 53.7**	**+0.2**
NWLT	baz=351			S	**Sg**	**01 28 03.6**	**+0.1**
NFF	**Wufeng Townshi**	**0.78**	**321**	*eP*	**Pg**	**01 27 54.1**	**+0.3**
WHYT	**Xinyi Township**	**0.81**	**246**	*eP*	**Pb**	**01 27 55.1**	**0.0**
NSTT	**Nanang**	**0.85**	**315**	*eP*	**Pb**	**01 27 55.8**	**0.0**
NSTT	baz=315			*eS*	**Sg**	**01 28 06.3**	**+0.1**
EGS	baz=28	**0.85**	**17**	*eP*	**Pg**	**01 27 55.5**	**+0.3**
LIOB	**Emei**	**0.85**	**317**	*eP*	**Pb**	**01 27 56.0**	**+0.2**
CHKH	**Chenggong**	**0.86**	**196**	*iP*	**Pb**	**01 27 55.7**	**-0.3**
CHKH	baz=183			*eS*	**Sn**	**01 28 09.7**	**-0.3**
TWQ1	**Liyutan**	**0.87**	**292**	*eP*	**Pn**	**01 27 57.4**	**0.0**
WJS	**Zhushan**	**0.88**	**257**	*eP*	**Pn**	**01 27 57.1**	**-0.2**
WNT	**Mingjian**	**0.91**	**261**	*eP*	**Pn**	**01 27 57.4**	**-0.3**
WNT	baz=258			*eS*	**Sn**	**01 28 10.9**	**-0.1**
NSY	**Sanyi**	**0.91**	**296**	*eP*	**Pn**	**01 27 57.8**	**-0.1**
ALS	**Alishan**	**0.94**	**237**	*eP*	**Pb**	**01 27 57.0**	**-0.4**
ALS	baz=234			*eS*	**Sn**	**01 28 10.8**	**-1.4**
NHDH	**Xindian Distri**	**0.94**	**352**	*eP*	**Pg**	**01 27 57.0**	**+0.1**
NMLH	**Miaoli**	**0.94**	**303**	*eP*	**Pn**	**01 27 58.8**	**+0.4**
TATO	**Taipei**	**0.96**	**351**	P	**Pb**	**01 27 58.0**	**+0.4**
CHKT	**Chengkung**	**0.96**	**196**	*eP*	**Pb**	**01 27 57.2**	**-0.5**
CHKT	baz=184			*eS*	**Sn**	**01 28 12.2**	**-0.2**
EHD	**Haiduan**	**0.97**	**206**	*eP*	**Pb**	**01 27 56.9**	**-0.9**
CHN5	**Tsauling**	**1.00**	**245**	*eP*	**Pn**	**01 27 58.8**	**-0.3**
CHN5	baz=231			*i* S	**Sn**	**01 28 13.5**	**+0.1**
WCHH	**Zhanghua**	**1.01**	**273**	*eP*	**Pn**	**01 28 00.4**	**+1.2**
ELDTW	**Lidau**	**1.02**	**215**	*eP*	**Pg**	**01 27 57.3**	**-1.2**
TWB1	**Santiao Chiao**	**1.02**	**17**	*eP*	**Pg**	**01 27 58.0**	**-0.4**
NCUH	**Zhongli**	**1.03**	**335**	*eP*	**Pg**	**01 27 58.9**	**+0.2**
NCUH	baz=347			*eS*	**Sb**	**01 28 13.7**	**+1.1**
NWF	**Wu-fen Shan**	**1.05**	**6**	*eP*	**Pn**	**01 28 00.2**	**+0.4**
NWF	baz=8.0			*eS*	**Sg**	**01 28 11.1**	**-1.5**
WFSB	**Wu-fen Shan**	**1.05**	**6**	*eP*	**Pn**	**01 28 00.4**	**+0.7**
WFSB	baz=8.0			*eS*	**Sg**	**01 28 11.0**	**-1.5**
WDLH	**Douliu**	**1.08**	**252**	*eP*	**Pn**	**01 28 00.2**	**0.0**
SXI1	**Grass Mountain**	**1.08**	**10**	*eP*	**Pg**	**01 27 59.7**	**+0.1**
TWS1	**Kuangyinshan**	**1.09**	**348**	*eP*	**Pn**	**01 28 01.1**	**+0.7**
YM01	**YM01**	**1.12**	**356**	*eP*	**Pb**	**01 28 00.6**	**+0.2**
	baz=7.0						

WCKO	**Fanlu**	**1.13**	**239**	*eP*	**Pn**	**01 28 01.8**	**+0.9**
	baz=238						
NTST	**Danshui**	**1.15**	**350**	*eP*	**Pn**	**01 28 02.0**	**+0.9**
	baz=351						
YM08	**YM08**	**1.16**	**357**	*eP*	**Pn**	**01 28 01.5**	**+0.2**
	baz=8.0						
STYH	**Taoyuan**	**1.18**	**224**	*eP*	**Pn**	**01 28 01.2**	**-0.3**
	baz=226						
STYH				*eS*	**Sn**	**01 28 16.8**	**-0.8**
	baz=226						
WRL	**Guolierlin Hig**	**1.18**	**264**	*eP*	**Pn**	**01 28 02.0**	**+0.5**
	baz=254						
TPUB	**Ta-pu**	**1.19**	**233**	P	**Pn**	**01 28 02.5**	**+0.8**
TPUB	**Ta-pu**	**1.19**	**233**	*eP*	**Pb**	**01 28 01.0**	**-0.5**
	baz=231						
TPUB				*eS*	**Sn**	**01 28 18.2**	**+0.2**
	baz=231						
WTP	**Ta-pu**	**1.23**	**231**	*eP*	**Pg**	**01 28 02.9**	**+0.4**
	baz=238						
TWY	**Chenhua**	**1.25**	**357**	*eP*	**Pn**	**01 28 02.0**	**-0.5**
	baz=344						
JYNG	**Yonagunijimaku**	**1.25**	**70**	S	**Sn**	**01 28 20.3**	**+0.9**
YOJ	**Yonaguni jima**	**1.31**	**70**	*eP*	**Pn**	**01 28 03.0**	**-0.3**
	baz=69						
YOJ	**Yonaguni jima**	**1.31**	**70**	*eP*	**Pb**	**01 28 03.5**	**-0.1**
YOJ				S	**Sn**	**01 28 21.5**	**+0.6**
TWK	**Hsinying**	**1.31**	**235**	*eP*	**Pg**	**01 28 04.2**	**+0.2**
	baz=221						
TWK				*eS*	**Sn**	**01 28 23.4**	**+2.2**
	baz=221						
TWGBT	**Beinan**	**1.31**	**204**	P	**Pg**	**01 28 04.4**	**+0.4**
CHN1	**Nanshi**	**1.33**	**231**	*eP*	**Pg**	**01 28 04.6**	**+0.2**
	baz=229						
CHN1				*i* S	**Sn**	**01 28 23.8**	**+2.2**
	baz=229						
SGST	**Jiashian**	**1.36**	**227**	*eP*	**Pg**	**01 28 04.2**	**-0.8**
	baz=227						
SLGT	**Liugui**	**1.39**	**222**	*eP*	**Pg**	**01 28 04.5**	**-0.9**
	baz=221						
SLGT				*eS*	**Sg**	**01 28 24.7**	**+1.3**
	baz=221						
ICHU	**Yijhu**	**1.43**	**243**	*eP*	**Pg**	**01 28 06.9**	**+0.7**
	baz=244						
ECL	**Taimali**	**1.56**	**205**	*eP*	**Pn**	**01 28 05.8**	**-1.0**
	baz=187						
TSMG	**Majia**	**1.61**	**216**	*eP*	**Pb**	**01 28 08.3**	**-0.5**
	baz=206						
MASBT	**Mashibuluo**	**1.69**	**214**	*eP*	**Pn**	**01 28 08.0**	**-0.7**
	baz=204						
WDGT	**Dungji**	**1.99**	**248**	*eP*	**Pn**	**01 28 13.4**	**+0.7**
	baz=249						
VWUC	**VWUC**	**2.23**	**296**	*eP*	**Pn**	**01 28 15.0**	**-1.1**
	baz=295						
JIJ	**Ishigaki jima**	**2.29**	**81**	*eS*	**Sn**	**01 28 44.7**	**-0.6**
JISG	**Ishigakijimahi**	**2.48**	**76**	*eS*	**Sn**	**01 28 48.9**	**-1.0**
PTMZ	**Houxiangcun**	**2.52**	**294**	*eP*	**Pn**	**01 28 18.6**	**-1.5**
	baz=293						

IDC 13 01:28:34.5±1.2,21.30S×178.21W,h0km,mb4.2/6, mbtmp4.2/6,Error ellipse: s-maj=37.8km s-min=29.6km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.27**	**245**	P	P	01 35 47.6	-0.7
	0.7nm,0.4s,baz=95,slow=11,SNR=2.8						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**44.15**	**258**	P	P	01 36 45.5	+0.1
	3.7nm,0.8s,baz=92,slow=8.3,SNR=28						
	3.7nm,0.8s						
WRA	**Warramunga Arr**	**44.31**	**263**	P	P	01 36 46.2	-0.3
	3.1nm,0.8s,baz=95,slow=7.8,SNR=58						
	3.1nm,0.8s						
QSPA	**South Pole Qui**	**68.78**	**180**	P	P	01 39 40.5	+0.2
	2.8nm,0.5s,baz=27,slow=4.3,SNR=6.8						
	2.8nm,0.5s						
PETK	**Petropavlovsk-**	**76.99**	**345**	P	P	01 40 29.7	+0.8
	2.5nm,0.7s,baz=120,slow=8.5,SNR=4.2						
	2.5nm,0.7s						
TXAR	**Lajitas Array**	**87.64**	**57**	P	P	01 41 24.5	-0.8
	0.4nm,0.8s,baz=232,slow=4.4,SNR=2.6						
	0.4nm,0.8s						

JMA ***13*** *01:45:49.2±0.4,31°N±2°×13°8E±°,h38km,MV3.7/17, NEAR TORISHIMA IS*
IDC ***13*** *01:46:19.1±8.8,31.68N×137.20E,h168km±128km, mb2.9/3,mbtmp3.5/4,ML3.2/1,Error ellipse: s-maj=145.7km s-min=26.0km az=62.0*
ISC 13 01:45:53.1±2.9,31.4N±0.2×138.5E±0.4,h10km,n8, σ1.9 39/8,mb3.4/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO2	**TONANKAI O.B.S**	**2.66**	**332**	*eS*	**Sn**	**01 47 08.9**	**+1.0**
TTO1	**TONANKAI O.B.S**	**2.67**	**327**	*eP*	**Pn**	**01 46 34.0**	**-1.9**
TTO1				*eS*	**Sn**	**01 47 08.2**	**+0.1**
TTO4	**TONANKAI O.B.S**	**2.74**	**343**	*eP*	**Pn**	**01 46 35.8**	**-1.2**
TTO4				*eS*	**Sn**	**01 47 11.0**	**+1.0**
JIE	**Ise**	**3.36**	**334**	*eP*	**Pn**	**01 46 44.4**	**-1.3**
JTNC	**Tanabenakahech**	**3.45**	**316**	*eP*	Pn	01 46 43.7	-3.2
SONM	**Songino Array**	**29.43**	**313**	P	**P**	**01 51 57.8**	**+0.9**
	0.3nm,0.6s,baz=120,slow=7.4,SNR=2.2						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**45.31**	**307**	P	**P**	**01 54 11.5**	**+0.4**
	0.3nm,0.7s,baz=98,slow=7.5,SNR=3.7						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**51.19**	**185**	P	P	01 55 06.7	+10
	0.4nm,0.7s,baz=3.1,slow=7.8,SNR=5.2						
	0.4nm,0.7s						

ISK ***13*** *01:54:50.8,38.94N×23.38E,h10km,ML3.3/28*
IDC ***13*** *01:54:51.6±1.3,39.02N×23.11E,h0km,mb3.5/9, mbtmp3.6/11,ML3.3/2,MS3.4/1,Error ellipse: s-maj=26.9km s-min=17.9km az=149.0*
ATH ***13*** *01:54:51.9,38.95N×23.38E,h9km±1km,ML3.5/22,Error ellipse: s-maj=1.0km s-min=0.5km az=170.0*
THE ***13*** *01:54:51.9,38.95N×23.39E,h8km,ML3.6/20,Error ellipse: s-maj=0.7km s-min=0.3km az=90.0*
ISC 13 01:54:51.9±1.0,38.95N±0.01×23.39E±0.02,h9km±7km, n155,σ0.88/207,mb3.5/10,11C-12D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEO	**Neokhori**	**0.38**	**341**	P	**Pg**	**01 54 59.7**	**+0.3**
NEO				S	**Sg**	**01 55 05.0**	**+0.6**
	15μm,0.2s						
NEO	**Neokhori**	**0.38**	**341**	P	**Pg**	**01 54 59.6**	**+0.3**
NEO				S	**Sg**	**01 55 04.2**	**-0.2**
NEO				AML	AML	01 55 06.3	
	comp=E,38823μm,0.2s						
NEO				AML	AML	01 55 06.5	
	comp=N,21999μm,0.4s						
ALNA	**Alonissos**	**0.42**	**62**	P	**Pg**	**01 55 00.3**	**+0.1**
ALNA				S	**Sg**	**01 55 06.0**	**+0.3**
ALNA				AML	AML	01 55 09.3	
	comp=E,7218μm,0.6s						
ALNA				AML	AML	01 55 10.3	
	comp=N,9152μm,0.9s						
XOR	**Xorichti**	**0.44**	**340**	P	**Pg**	**01 55 00.6**	**0.0**
XOR				S	**Sg**	**01 55 07.2**	**+0.8**
	comp=N,5μm,0.2s						
XOR	**Xorichti**	**0.44**	**340**	P	**Pg**	**01 55 00.6**	**0.0**
XOR				S	**Sg**	**01 55 06.5**	**0.0**
XOR				AML	AML	01 55 07.9	
	comp=E,6005μm,0.4s						
XOR				AML	AML	01 55 08.2	
	comp=N,12659μm,0.3s						
AXAR	**Agios Charalam**	**0.60**	**253**	P	**Pg**	**01 55 03.0**	**-0.4**
AXAR				S	**Sb**	**01 55 12.5**	**-0.5**
	comp=N,8μm,0.3s						
AXAR	**Agios Charalam**	**0.60**	**253**	P	**Pg**	**01 55 03.1**	**-0.4**
AXAR				S	**Sg**	**01 55 11.5**	**+0.3**
AXAR				AML	AML	01 55 15.9	
	comp=E,15955μm,0.4s						
AXAR				AML	AML	01 55 16.0	
	comp=N,14983μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.64**	**119**	P	**Pg**	**01 55 03.7**	**-0.5**
KYMI				S	**Sg**	**01 55 13.0**	**+0.4**
	comp=N,2μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.64**	**119**	P	**Pg**	**01 55 03.9**	**-0.4**
KYMI				S	**Sg**	**01 55 12.5**	**-0.2**
KYMI				AML	AML	01 55 16.1	

KYMI AML AML 01 55 16.1
comp=N,4362µm,0.5s
comp=E,2877µm,0.3s
VIL2 Platees 0.74 187 P **Pg** **01 55 06.1 0.0**
VIL2 S **Sb** **01 55 17.7 +0.6**
VIL2 AML AML 01 55 21.6
comp=N,17584µm,0.8s
VIL2 AML AML 01 55 22.3
comp=E,26839µm,0.7s
VILL Villia 0.79 184 P **Pg** **01 55 06.1 -0.9**
VILL S **Sg** **01 55 17.8 +0.6**
comp=E,12µm,0.6s
AGG Agios Georgios 0.83 275 Pg **Pg** **01 55 07.0 -0.9**
AGG Sg **Sg** **01 55 18.9 +0.3**
AGG Agios Georgios 0.83 275 P **Pg** **01 55 06.9 -0.9**
AGG S **Sb** **01 55 19.4 -0.3**
comp=E,3µm,0.3s
AGG Agios Georgios 0.83 275 P **Pg** **01 55 07.1 -0.7**
DLFA Delphi 0.84 236 P **Pg** **01 55 07.3 -0.8**
DLFA S **Sg** **01 55 18.8 -0.2**
DLFA AML AML 01 55 22.1
comp=N,11470µm,0.6s
DLFA AML AML 01 55 22.7
comp=E,14941µm,0.4s
SKY Skiros Island 0.91 94 P **Pg** **01 55 09.1 -0.3**
SKY S **Sb** **01 55 22.3 +0.3**
comp=E,3µm,0.3s
SKY Skiros Island 0.91 94 P **Pg** **01 55 09.2 -0.2**
SKY S **Sb** **01 55 21.8 -0.2**
SKY AML AML 01 55 24.5
comp=E,6863µm,0.3s
SKY AML AML 01 55 25.0
comp=N,5884µm,0.3s
DION Dionisos Attik 0.97 154 P **Pg** **01 55 10.6 +0.1**
DION S **Sb** **01 55 24.2 +0.5**
comp=N,7µm,0.3s
DION Dionisos Attik 0.97 154 P **Pg** **01 55 10.5 0.0**
DION S **Sb** **01 55 23.8 +0.1**
DION AML AML 01 55 27.8
comp=N,7186µm,0.5s
DION AML AML 01 55 28.6
comp=E,12000µm,0.6s
PTL Penteli 0.97 157 P **Pb** **01 55 10.8 -0.1**
PTL S **Sb** **01 55 24.2 +0.4**
comp=E,5µm,0.7s
PTL Penteli 0.97 157 P **Pg** **01 55 10.5 -0.1**
PTL S **Sb** **01 55 23.7 -0.1**
PTL AML AML 01 55 26.1
comp=E,9048µm,0.8s
PTL AML AML 01 55 26.2
comp=N,9650µm,0.7s
LTK Loutraki 0.98 200 P **Pg** **01 55 09.9 -0.8**
LTK S **Sb** **01 55 24.1 +0.1**
LTK AML AML 01 55 26.7
comp=E,8175µm,0.5s
LTK AML AML 01 55 27.6
comp=N,10926µm,0.4s
MAKR Makrakomi, Fth 0.98 274 P **Pg** **01 55 09.9 -0.8**
MAKR S **Sb** **01 55 24.5 +0.4**
comp=N,5µm,0.4s
MAKR Makrakomi, Fth 0.98 274 P **Pg** **01 55 09.9 -0.8**
MAKR S **Sg** **01 55 23.7 +0.2**
MAKR AML AML 01 55 30.4
comp=E,6872µm,0.4s
MAKR AML AML 01 55 32.0
comp=N,9233µm,0.6s
PAIG Paliouri 1.00 13 Pg **Pg** **01 55 10.9 -0.3**
PAIG Sg **Sb** **01 55 25.4 +0.7**
PAIG Paliouri 1.00 13 P **Pg** **01 55 10.8 -0.4**
ATH Athens Observa 1.01 165 P **Pg** **01 55 11.0 -0.2**
ATH S **Sb** **01 55 25.4 +0.6**
comp=N,4µm,0.6s
ATH Athens Observa 1.01 165 P **Pg** **01 55 10.8 -0.4**
ATH S **Sb** **01 55 24.8 0.0**
ATH AML AML 01 55 26.4
comp=E,10170µm,0.5s
ATH AML AML 01 55 32.0
comp=N,6452µm,0.7s
LOUT Loutraki 1.01 199 P **Pg** **01 55 10.3 -1.0**
LOUT S **Sn** **01 55 26.0 -0.5**
comp=N,5µm,0.5s
ATHU Athens Univers 1.03 162 P **Pg** **01 55 10.7 -0.9**
ATHU S **Sb** **01 55 25.5 +0.1**
comp=N,2µm,0.7s
ATHU Athens Univers 1.03 162 P **Pg** **01 55 10.9 -0.7**
ATHU S **Sg** **01 55 24.8 -0.2**
ATHU AML AML 01 55 26.6
comp=E,3086µm,0.7s
ATHU AML AML 01 55 27.0
comp=N,3487µm,0.7s
LRSO Larissa Observ 1.06 313 P **Pg** **01 55 12.0 -0.2**
LRSO S **Sb** **01 55 26.9 +0.7**
comp=N,4µm,0.6s
LRSO Larissa Observ 1.06 313 P **Pg** **01 55 11.9 -0.3**
LRSO S **Sb** **01 55 26.4 +0.1**
LRSO AML AML 01 55 30.4
comp=E,9231µm,0.7s
LRSO AML AML 01 55 30.9
comp=N,5888µm,0.6s
THAL Thalero 1.07 212 P **Pg** **01 55 11.7 -0.8**
THAL S **Sn** **01 55 27.9 -0.1**
comp=N,6µm,0.4s
THAL Thalero 1.07 212 P **Pg** **01 55 11.7 -0.8**
VLY Voula,Athens 1.14 164 P **Pb** **01 55 13.2 -0.5**
VLY Voula,Athens 1.14 164 P **Pb** **01 55 13.3 -0.5**
VLY S **Sg** **01 55 28.3 -0.3**
VLY AML AML 01 55 32.7
comp=N,6828µm,0.7s
VLY AML AML 01 55 33.0
comp=E,9075µm,0.6s
TYRN Tyrnavos 1.18 311 P **Pb** **01 55 14.0 -0.3**
TYRN S **Sn** **01 55 30.9 +0.3**
comp=E,2µm,0.6s
TYRN Tyrnavos 1.18 311 P **Pb** **01 55 13.8 -0.5**
TYRN S **Sb** **01 55 29.5 -0.1**
ANX Ano Chora 1.20 253 P **Pb** **01 55 13.6 -1.2**
ANX S **Sn** **01 55 31.4 +0.1**
comp=E,2µm,0.5s
ANX Ano Chora 1.20 253 P **Pb** **01 55 14.1 -0.7**
ALIK Aliki, Aigiali 1.21 236 P **Pb** **01 55 14.4 -0.5**
ALIK S **Sn** **01 55 31.6 +0.1**
THL Klokotos Trika 1.23 300 P **Pn** **01 55 14.3 -0.9**
THL S **Sn** **01 55 32.5 +0.6**
comp=E,1µm,0.4s
THL Klokotos Trika 1.23 300 P **Pn** **01 55 14.5 -0.7**
THL S **Sb** **01 55 30.9 -0.3**
THL AML AML 01 55 34.7
comp=N,2427µm,0.4s
THL AML AML 01 55 36.3
comp=E,2619µm,0.4s
EFP Efpalio 1.27 246 P **Pn** **01 55 14.9 -0.9**
EFP S **Sn** **01 55 33.7 +0.8**
EFP Efpalio 1.27 246 P **Pn** **01 55 14.7 -1.0**
GUR Goura 1.30 219 P **Pn** **01 55 15.7 -0.6**
GUR S **Sn** **01 55 34.0 +0.2**
comp=E,3µm,0.5s
GUR Goura 1.30 219 P **Pn** **01 55 15.7 -0.6**
GUR S **Sb** **01 55 32.2 -1.2**
GUR AML AML 01 55 36.8
comp=E,5061µm,0.6s
GUR AML AML 01 55 41.5
comp=N,6405µm,0.5s
KLV Kalavryta, Ach 1.32 227 P **Pn** **01 55 15.9 -0.7**
KLV S **Sg** **01 55 34.7 +0.2**
comp=N,1µm,0.8s
KLV Kalavryta, Ach 1.32 227 P **Pn** **01 55 15.8 -0.7**
KLV S **Sb** **01 55 33.3 -0.7**
KLV AML AML 01 55 38.5
comp=N,3159µm,0.7s
KLV AML AML 01 55 39.4
comp=E,1748µm,0.9s
EFSA Agios Efstrati 1.38 64 P **Pn** **01 55 16.5 -0.7**
OUR Ouranopolis 1.46 18 Pn **Pn** **01 55 17.6 -0.8**
OUR Ouranopolis 1.46 18 P **Pn** **01 55 17.5 -0.8**
OUR Ouranopolis 1.46 18 P **Pn** **01 55 17.4 -1.0**
OUR S **Sn** **01 55 36.3 -1.2**
OUR AML AML 01 55 41.7
comp=E,1268µm,0.8s
OUR AML AML 01 55 43.0
comp=N,1307µm,0.6s
PVO Paravola 1.49 258 P **Pn** **01 55 19.2 +0.4**
KRND KRANIDI 1.57 187 P **Pn** **01 55 19.2 -0.7**
KRND S **Sn** **01 55 40.6 +0.2**
KRND KRANIDI 1.57 187 P **Pn** **01 55 19.7 -0.3**

DRO Drossia 1.65 233 P **Pn** **01 55 20.8 -0.2**
DRO S **Sn** **01 55 42.5 +0.2**
HORT Hortiatis 1.66 352 Pn **Pn** **01 55 20.9 -0.4**
HORT Hortiatis 1.66 352 P **Pn** **01 55 20.6 -0.6**
HORT S **Sn** **01 55 42.1 -0.7**
HORT Hortiatis 1.66 352 P **Pn** **01 55 20.6 -0.6**
HORT S **Sn** **01 55 41.2 -1.5**
HORT AML AML 01 55 43.1
comp=E,1394µm,0.6s
HORT AML AML 01 55 47.8
comp=N,609µm,0.7s
LIA Limnos Island 1.68 55 P **Pn** **01 55 20.5 -1.0**
LIA Limnos Island 1.68 55 P **Pn** **01 55 20.5 -1.0**
LIA S **Sn** **01 55 41.7 -1.4**
THE Thessaloniki 1.71 349 P **Pn** **01 55 20.9 -0.9**
THE Thessaloniki 1.71 349 P **Pn** **01 55 20.8 -1.1**
KTI Kastanea 1.75 326 P **Pn** **01 55 22.4 0.0**
RLS Riolos of Patr 1.75 240 P **Pn** **01 55 22.8 +0.5**
KPRO Kipourio 1.86 303 P **Pn** **01 55 24.3 +0.3**
KPRO Kipourio 1.86 303 P **Pn** **01 55 23.8 -0.2**
SOH Sokhos 1.87 359 P **Pn** **01 55 23.7 -0.4**
SOH Sokhos 1.87 359 P **Pn** **01 55 23.6 -0.5**
SOH S **Sn** **01 55 46.2 -1.7**
SOH AML AML 01 55 53.0
comp=E,809µm,0.8s
SOH AML AML 01 55 56.4
comp=N,510µm,0.5s
KOKK Kokkinochori, 1.93 14 P **Pn** **01 55 23.8 -1.0**
SIGR SIGRI 1.94 81 Pn **Pn** **01 55 24.9 0.0**
THAS Thassos island 1.95 31 P **Pn** **01 55 23.4 -1.7**
THAS Thassos island 1.95 31 P **Pn** **01 55 23.5 -1.5**
GRG Griva 2.14 340 Pn **Pn** **01 55 27.2 -0.6**
GRG Griva 2.14 340 P **Pn** **01 55 27.2 -0.6**
CHOS Chios island 2.16 104 Pn **Pn** **01 55 28.0 -0.1**
CHOS Chios island 2.16 104 P **Pn** **01 55 27.9 -0.2**
SRS Serrai 2.17 4 P **Pn** **01 55 27.9 -0.3**
SRS Serrai 2.17 4 P **Pn** **01 55 27.7 -0.5**
KNT Kendrikon 2.24 351 Pn **Pn** **01 55 29.4 +0.2**
KNT Kendrikon 2.24 351 P **Pn** **01 55 29.3 +0.1**
SMTH Samothraki Isl 2.25 47 P **Pn** **01 55 28.2 -1.0**
VLI Velai 2.25 189 P **Pn** **01 55 29.0 -0.3**
PRK Paraskevi 2.26 82 P **Pn** **01 55 28.4 -1.0**
GADA Gavgeada 2.30 57 Pn **Pn** **01 55 29.5 -0.5**
FNA Florina 2.40 320 Pn **Pn** **01 55 31.1 -0.3**
FNA Florina 2.40 320 P **Pn** **01 55 31.7 +0.3**
EZN Ezine 2.44 68 Pn **Pn** **01 55 32.1 +0.3**
VAY Valandovo 2.45 345 *i* Pn **Pn** **01 55 32.4 +0.4**
APE Apeiranthos 2.53 137 ⇑P **Pn** **01 55 33.2 +0.1**
APE Apeiranthos 2.53 137 Pn **Pn** **01 55 32.6 -0.5**
URLA Izmir 2.58 102 Pn **Pn** **01 55 33.7 -0.1**
MMB Musomishta 2.61 6 P **Pn** **01 55 34.0 -0.3**
COMU Canakkale 2.65 63 Pn **Pn** **01 55 35.4 +0.6**
RDO Rodhopi 2.75 36 Pn **Pn** **01 55 36.4 +0.3**
RFT7 Candarli 2.75 89 Pn **Pn** **01 55 36.4 +0.2**
ENEZ Enez 2.78 49 Pn **Pn** **01 55 36.9 +0.4**
GELI Tayfur-Gelibol 2.79 58 Pn **Pn** **01 55 37.0 +0.4**
ALN Alexandroupoli 2.82 46 Pn **Pn** **01 55 37.5 +0.4**
PEHC Pehcevo 2.85 353 *i* Pn **Pn** **01 55 39.9 +2.3**
KEK Kerkira 2.89 286 Pn **Pn** **01 55 38.1 +0.1**
STIP Stip 2.89 342 Pn **Pn** **01 55 38.2 +0.1**
KKB Krupnik 2.90 356 P **Pn** **01 55 38.2 0.0**
RZN Rozhen 2.93 20 P **Pn** **01 55 38.5 -0.3**
OHR Ohrid 2.94 318 *i* Pn **Pn** **01 55 40.9 +2.1**
ERIK Erikli-Kesan 2.96 53 Pn **Pn** **01 55 39.6 +0.6**
LPK Lapseki 2.97 60 Pn **Pn** **01 55 39.7 +0.6**
SANT Santorini 3.05 147 ⇓P **Pn** **01 55 39.2 -1.1**
SANT Santorini 3.05 147 Pn **Pn** **01 55 40.9 +0.6**
KDZ Kurdzhali 3.07 29 Pn **Pn** **01 55 39.9 -0.6**
KDZ Kurdzhali 3.07 29 P **Pn** **01 55 39.5 -1.0**
UKOP Uzunkopru-Edir 3.31 48 Pn **Pn** **01 55 44.2 +0.4**
PLD Plovdiv 3.36 18 Pn **Pn** **01 55 44.0 -0.5**
PLD Plovdiv 3.36 18 P **Pn** **01 55 44.4 -0.1**
RODP Rodopos 3.39 175 Pn **Pn** **01 55 44.9 -0.1**
IMMV Iera Moni Meta 3.51 172 Pn **Pn** **01 55 47.1 +0.5**
PLNA Plana 3.52 0 P **Pn** **01 55 47.6 +0.7**
VTS Vitosha 3.67 358 P **Pn** **01 55 49.3 +0.4**
TRAN Tran 3.92 352 P **Pn** **01 55 52.8 +0.5**
ELND Elena 4.40 25 ⇓P **Pn** **01 55 58.5 -0.3**
MPEP Malo Peshtene 4.41 3 P **Pn** **01 56 00.4 +1.4**
BLKB Belogradchik 4.70 354 ⇑P **Pn** **01 56 03.1 +0.1**
BOVS Bovan 4.85 345 ⇓P **Pn** **01 56 04.8 -0.2**
VLAD Vladila 5.10 8 ⇑P **Pn** **01 56 08.7 +0.3**
TIP Timpagrande 5.16 275 ⇑P **Pn** **01 56 09.8 +0.4**
MDVR Moldovita 5.96 348 ⇑P **Pn** **01 56 20.0 -0.3**
HERR Herculane 5.97 353 ⇓P **Pn** **01 56 19.7 -0.7**
ARR Arges 6.48 8 ⇑P **Pn** **01 56 27.2 -0.2**
VOIR 6.60 10 ⇓P **Pn** **01 56 29.3 +0.2**
BZS Buzias 6.79 349 ⇓P **Pn** **01 56 31.6 0.0**
MLR Muntele Rosu 6.81 15 ⇑P **Pn** **01 56 32.7 +0.7**
MLR Muntele Rosu 6.81 15 Pn **Pn** **01 56 32.3 +0.3**
comp=N,0.4nm,0.3s,baz=180,slow=14,SNR=12
MLR Sn **Sn** **01 57 42.6 -7.0**
baz=269,slow=3.9
comp=N,2.8nm,0.7s
DOPR Dopca 7.17 11 ⇓P **Pn** **01 56 37.2 +0.3**
COVR Voineasa-Covas 7.20 16 ⇑P **Pn** **01 56 38.1 +0.8**
VAE Valguarnera 7.22 261 Pn **Pn** **01 56 37.0 -0.5**
comp=N,1.1nm,0.3s,baz=166,slow=15,SNR=2.3
VAE LR LR 01 59 31.9
comp=N,344nm,21.3s,baz=57,slow=40
comp=N,16nm,1.1s
PLOR Plostina 7.31 18 ⇓P **Pn** **01 56 39.1 +0.4**
BOSR Bodos 7.32 13 ⇑P **Pn** **01 56 39.8 +0.9**
VRI Vrincioaia 7.34 19 ⇑P **Pn** **01 56 40.4 +1.2**
OZUR 7.36 13 ⇓P **Pn** **01 56 40.4 +1.0**
TURR Turia 7.36 14 ⇓P **Pn** **01 56 40.4 +0.9**
VARL Varlezi 7.69 24 ⇓P **Pn** **01 56 45.3 +1.4**
MARR Marisel-Cluj 7.73 359 ⇓P **Pn** **01 56 45.0 +0.4**
TESR Tescani 7.93 17 ⇑P **Pn** **01 56 48.0 +0.7**
ESDC Sonseca Array 21.15 281 P **P** **01 59 37.2 0.0**
comp=N,0.6nm,0.6s,baz=78,slow=11,SNR=8.9
comp=N,0.6nm,0.6s
HFS Hagfors 22.07 347 P **P** **01 59 46.3 -0.5**
comp=N,2.0nm,0.7s,baz=171,slow=9.9,SNR=1.7
comp=N,2.0nm,0.7s
FINES FINESS Array B 22.58 3 P **P** **01 59 54.0 +1.8**
comp=N,3.3nm,0.8s,baz=193,slow=10.0,SNR=4.4
comp=N,3.3nm,0.8s
NOA NORSAR Array B 23.38 345 P **P** **02 00 00.3 -0.2**
comp=N,0.3nm,0.4s,baz=148,slow=9.0,SNR=1.8
comp=N,0.3nm,0.4s
EKA Eskdalemuir Ar 24.16 321 P **P** **02 00 07.7 -0.5**
comp=N,1.7nm,0.6s,baz=108,slow=9.0,SNR=4.8
comp=N,1.7nm,0.6s
TORD Torodi Ar. Bea 32.08 223 P **P** **02 01 18.3 -0.9**
comp=N,2.7nm,0.3s,baz=31,slow=10,SNR=0.7
KURBB Kurchatov Arra 39.96 54 P **P** **02 02 29.6 +3.2**
comp=N,0.4nm,0.7s,baz=280,slow=8.3,SNR=5.2
comp=N,0.4nm,0.7s
MKAR Makanchi Array 42.98 60 P **P** **02 02 54.1 +2.9**
comp=N,0.5nm,0.7s,baz=289,slow=6.1,SNR=7.8
comp=N,0.5nm,0.7s
ZALV Zalesovo Beam 43.50 49 P **P** **02 02 56.8 +1.5**
comp=N,1.6nm,0.7s,baz=280,slow=8.9,SNR=8.0
comp=N,1.6nm,0.7s
YKA Yellowknife Ar 73.41 341 P **P** **02 06 23.6 -0.3**
comp=N,0.2nm,0.6s,baz=36,slow=5.4,SNR=2.7
comp=N,0.2nm,0.6s

IDC ***13*** *01:55:52.8±2.4, 26˚.29N× 125˚.45E, h131km±22km, mb3.6/15, mbtmp4.0/16, Error ellipse: s-maj=25.6km s-min=15.5km az=56.0*
JMA ***13*** *01:55:53.6±0.2, 26˚.6N±2˚× 12˚.6E±˚, h130km, MV3.6/28, NW OFF MIYAKOJIMA ISLAND*
ISC 13 01:55:53.0±0.8, 26˚.34N±0˚.09×125˚.52E±0˚.07, h134km±9km, n38, σ1s04/61, mb3.9/15, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.14**	**90**	*i*	P	**Pn**		**01 56 18.4**	**+0.9**
JKE					S	**Sn**		**01 56 36.3**	**+0.1**
JIKM	**Ikemajima**	**1.43**	**190**		P	**Pn**		**01 56 21.2**	**+0.6**
JIKM					S	**Sn**		**01 56 40.5**	**-1.1**
JIRB	**Irabujima**	**1.53**	**192**	*e*	S	**Sn**		**01 56 43.4**	**-0.3**
JAGN	**Aguni-jima**	**1.57**	**80**		P	**Pn**		**01 56 22.8**	**+0.7**
JAGN					S	**Sn**		**01 56 44.2**	**-0.1**
JOGS	**Gusukube**	**1.57**	**184**		P	**Pn**		**01 56 22.9**	**+0.7**
JOGS					S	**Sn**		**01 56 44.1**	**-0.4**
JMJ2	**Miyako jima3**	**1.60**	**186**		P	**Pn**		**01 56 23.2**	**+0.7**
JMJ2					S	**Sn**		**01 56 44.7**	**-0.3**
JTJ	**Tarama**	**1.84**	**204**		P	**Pn**		**01 56 25.7**	**+0.3**
JTJ					S	**Sn**		**01 56 48.8**	**-1.3**
JJT3	**Tamagusuku3**	**2.04**	**95**		P	**Pn**		**01 56 28.8**	**+1.1**
JJT3					S	**Sn**		**01 56 54.6**	**+0.3**
JISG	**Ishigakijimahi**	**2.06**	**212**		P	**Pn**		**01 56 28.1**	**+0.2**
JISG					S	**Sn**		**01 56 52.9**	**-1.7**
JNTH	**Nagotoyohara**	**2.25**	**85**		P	**Pn**		**01 56 30.9**	**+0.6**
JNTH					S	**Sn**		**01 56 56.8**	**-2.1**
JIH	**Iheya**	**2.30**	**72**		P	**Pn**		**01 56 31.9**	**+1.1**
JIH					S	**Sn**		**01 56 59.4**	**-0.5**
JIJ	**Ishigaki jima**	**2.32**	**213**		P	**Pn**		**01 56 30.9**	**-0.3**
JIJ					S	**Sn**		**01 56 57.6**	**-2.9**
JKRS	**Kuro-shima**	**2.50**	**214**		P	**Pn**		**01 56 33.2**	**-0.2**
JKRS					S	**Sn**		**01 57 02.3**	**-2.0**
JOW	**Kunigami**	**2.52**	**78**		P	**Pn**		**01 56 33.9**	**+0.3**
JOW					S	**Sn**		**01 57 02.6**	**-2.2**
JOW	**Kunigami**	**2.52**	**78**		P	**Pn**		**01 56 34.0**	**+0.4**
	35nm,0.3s,baz=139,slow=20,SNR=21								
JOW					S	**Sn**		**01 57 02.2**	**-2.6**
	930nm,0.4s,baz=127,slow=25,SNR=104								
JYRO	**Yoronjima**	**2.71**	**75**		P	**Pn**		**01 56 36.3**	**+0.3**
JYRO					S	**Sn**		**01 57 07.0**	**-2.3**
HATJ	**Hateruma jima**	**2.75**	**215**	*e*	P	**Pn**		**01 56 36.4**	**-0.1**
HATJ					S	**Sn**		**01 57 08.5**	**-1.6**
YOJ	**Yonaguni jima**	**2.94**	**231**	*e*	P	**Pn**		**01 56 40.2**	**+1.2**
JYNG	**Yonagunijimaku**	**2.99**	**232**		P	**Pn**		**01 56 41.0**	**+1.3**
JTK	**Tokunoshima**	**3.38**	**64**		P	**Pn**		**01 56 44.8**	**0.0**
JTK					S	**Sn**		**01 57 22.8**	**-2.0**
JAMN	**Amaminishikomi**	**3.77**	**59**		P	**Pn**		**01 56 49.5**	**-0.3**
JAMN					S	**Sn**		**01 57 32.2**	**-1.6**
JAM	**Amami Oshima**	**4.18**	**59**		P	**Pn**		**01 56 54.9**	**-0.4**
SONM	**Songino Array**	**26.20**	**330**		P	**P**		**02 01 16.1**	**+0.8**
	2.6nm,0.4s,baz=141,slow=9.2,SNR=21								
	2.6nm,0.4s								
MKAR	**Makanchi Array**	**39.66**	**312**		P	**P**		**02 03 11.9**	**+0.1**
	1.8nm,0.5s,baz=98,slow=10,SNR=62								
MKAR					PcP	**PcP**		**02 05 15.8**	**-0.2**
	0.9nm,0.6s,baz=81,slow=3.7,SNR=11								
	1.8nm,0.5s								
ZALV	**Zalesovo Beam**	**40.71**	**324**		P	**P**		**02 03 20.1**	**-0.1**
	3.5nm,0.4s,baz=111,slow=8.7,SNR=15								
ZALV					PcP	**PcP**		**02 05 18.6**	**-0.6**
	0.6nm,0.4s,baz=101,slow=4.6,SNR=3.2								
	3.5nm,0.4s								
KURBB	**Kurchatov Arra**	**43.11**	**317**		P	**P**		**02 03 39.6**	**-0.2**
	1.3nm,0.6s,baz=108,slow=9.1,SNR=12								
KURBB					PcP	**PcP**		**02 05 26.8**	**-0.4**
	0.6nm,0.5s,baz=114,slow=3.7,SNR=3.8								
	1.3nm,0.6s								
WRA	**Warramunga Arr**	**46.79**	**169**		P	**P**		**02 04 08.8**	**-0.4**
	0.3nm,0.8s,baz=350,slow=9.6,SNR=5.0								
	0.3nm,0.8s								
NRIK	**Noril'sk**	**48.42**	**343**		P	**P**		**02 04 21.5**	**+0.2**
	1.0nm,0.3s,baz=108,slow=9.6,SNR=1.5								
NRIK					PcP	**PcP**		**02 05 46.2**	**+0.8**
	1.5nm,0.4s,baz=63,slow=2.3,SNR=4.0								
	1.0nm,0.3s								
BVAR	**Borovoye Array**	**48.58**	**319**		P	**P**		**02 04 22.9**	**+0.1**
	1.1nm,0.5s,baz=99,slow=9.8,SNR=5.1								
BVAR					PcP	**PcP**		**02 05 46.9**	**+0.5**
	1.0nm,0.4s,baz=116,slow=3.4,SNR=6.0								
	1.1nm,0.5s								
ASAR	**Alice Springs**	**50.37**	**170**		P	**P**		**02 04 36.6**	**0.0**
	0.2nm,0.3s,baz=342,slow=8.0,SNR=1.6								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**65.49**	**28**		P	**P**		**02 06 22.1**	**+0.5**
	0.1nm,0.5s,baz=272,slow=5.9,SNR=6.1								
	0.1nm,0.5s								
ARCES	**ARCESS Array B**	**69.01**	**338**		P	**P**		**02 06 43.4**	**-0.2**
	2.2nm,0.9s,baz=67,slow=6.0,SNR=9.7								
	2.2nm,0.9s								
FINES	**FINESS Array B**	**71.57**	**330**		P	**P**		**02 06 59.3**	**0.0**
	1.2nm,0.5s,baz=66,slow=6.4,SNR=12								
	1.2nm,0.5s								
BRTR	**Keskin Array B**	**75.04**	**307**		P	**P**		**02 07 20.1**	**-0.2**
	0.4nm,0.5s,baz=121,slow=3.9,SNR=3.5								
	0.4nm,0.5s								
HFS	**Hagfors**	**77.58**	**332**		P	**P**		**02 07 33.8**	**-0.3**
	1.2nm,0.4s,baz=92,slow=4.9,SNR=12								
	1.2nm,0.4s								
NB2	**NORSAR Subarra**	**78.13**	**333**		P	**P**		**02 07 36.7**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=53,slow=5.6								
NOA	**NORSAR Array B**	**78.13**	**333**		P	**P**		**02 07 36.7**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=55,slow=7.0,SNR=5.2								
	comp=Z,1.6nm,0.7s								
YKA	**Yellowknife Ar**	**79.44**	**24**		P	**P**		**02 07 45.0**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=300,slow=5.6,SNR=27								
	comp=Z,1.5nm,0.6s								

IDC ***13*** *02:03:00.8±0.4, 13˚.86N× 146˚.40E, h0km, mb5.1/46, mbtmp5.0/46, MS5.4/65, Error ellipse: s-maj=14.0km s-min=10.9km az=88.0*
BJI ***13*** *02:03:00.9±0.0, 13˚.99N× 146˚.67E, h13km, mb5.2/88, mB5.8/74, Ms5.7/97, Ms7 5.6/92*
MOS ***13*** *02:03:01.2±0.8, 13˚.84N× 146˚.33E, h13km, mb5.8/72, MS5.6/44, Error ellipse: s-maj=7.5km s-min=4.1km az=115.9*
NEIC ***13*** *02:03:03.5±1.6, 13˚.80N±0˚.08× 146˚.34E±0˚.09, h10km±1km, mb5.9/545, Ms_20 5.7/743, Mwb5.7/24, Mww5.6/20, Error ellipse: s-maj=15.4km s-min=12.1km az=62.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.10; $M_{\theta\theta}$-1.31; $M_{\phi\phi}$-2.79; $M_{r\theta}$-0.05; $M_{\theta\phi}$-1.31; $M_{\phi r}$-1.17; Fault plane solution: $M_0$4.03000×10^{17} NP1: ϕ_s203.44000°, δ52.99000°, λ82.25000°. NP2:ϕ_s36.17000°, δ37.70000°, λ100.14000°. Principal axes: T 4.2981, Plg80.0000°, Azm80.0000°; N -0.6037, Plg6.0000°, Azm208.0000°; P -3.6945, Plg8.0000°, Azm299.0000°;*
NEIC ***13*** *02:03:04.9, 13˚.82N× 146˚.30E, h22km*
NEIC ***13*** *02:03:04.9, 14˚.02N× 147˚.02E, h22km, Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.90; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-2.77; $M_{r\theta}$-1.47; $M_{\theta\phi}$-1.47; $M_{\phi r}$-0.55; Fault plane solution: $M_0$3.56000×10^{17} NP1: ϕ_s223.37000°, δ57.95000°, λ113.36000°. NP2:ϕ_s4.22000°, δ38.91000°, λ57.65000°. Principal axes: T 3.4974, Plg68.0000°, Azm181.0000°; N 0.1278, Plg20.0000°, Azm30.0000°; P -3.6252, Plg10.0000°, Azm297.0000°;*
NEIC ***13*** *02:03:05, 13˚.87N× 146˚.34E, h10km*
DJA ***13*** *02:03:05.6±0.2, 14˚N±3˚× 14˚6E±˚, h10km, M5.8/86, mB6.2/57, mb5.5/86, MLv5.1/1, Mw(mB)5.9/57, MwMwp5.7/16, Mwp5.8/16*
GCMT ***13*** *02:03:06.5±0.1, 13˚.68N±0˚.01× 146˚.72E±0˚.01, h12km, MW5.6/163, Moment Tensor Solution. s135,c240; s163,c336; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.49±.04; $M_{\theta\theta}$-0.01±.03; $M_{r\theta}$-0.15±.08; $M_{\theta\phi}$-1.24±.02; $M_{\phi r}$1.47±.09; Best double couple: $M_0$3.13400×10^{17} NP1:ϕ_s8.00000°, δ60.00000°, λ73.00000°. NP2:ϕ_s219.00000°, δ35.00000°, λ117.00000°. Principal axes: T 2.9740, Plg70.0000°, Azm240.0000°; N 0.3220, Plg15.0000°, Azm17.0000°; P -3.2930, Plg13.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 02:03:04.2±0.3, 13˚.87N±0˚.03×146˚.36E±0˚.03, h16km±1km, h16km:pP-P, n1752, σ1s81/1395, mb5.9/440, MS5.7/500, 89C-60D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.48**	**259**		Pn	**Pg**		**02 03 31.2**	**-1.4**
GUMO	**Guam**	**1.48**	**259**		P	**Pg**		**02 03 31.8**	**-0.8**
GUMO	**Guam**	**1.48**	**259**	⇑P		**Pg**		**02 03 31.5**	**-1.1**
GUMO	**Guam**	**1.48**	**259**		Pn	**Pb**		**02 03 30.8**	**-0.5**
	818nm,0.3s,baz=108,slow=5.0,SNR=159								
JCJ	**Chichijima**	**13.73**	**344**		LR	LR		02 10 46.4	
	comp=Z,8µm,20.1s,baz=166,slow=34								
MANU	**Manus Island**	**15.84**	**176**			**Pn**		**02 06 46.2**	**-0.5**
MANU	**Manus Island**	**15.84**	**176**		P	**Pn**		**02 06 46.9**	**+0.2**
GENI	**Genyem**	**17.47**	**201**		P	**P**		**02 07 10.9**	**+2.4**
GENI	**Genyem**	**17.47**	**201**		P	**P**		**02 07 12.7**	**+4.2**
	473nm,1.8s,13µm10µm								
SMPI	**Sarmi**	**17.49**	**206**		P	**P**		**02 07 12.9**	**+4.2**
	217nm,1.5s,9µm11µm								
JMZ	**Minamidaito 2**	**18.52**	**312**			**Pn**		**02 07 21.1**	**+0.8**
JMZ	**Minamidaito 2**	**18.52**	**312**		P	**Pn**		**02

baz=267
JHJ Hachijo jima 2 20.08 344 LR LR 02 14 55.4
comp=Z,12µm,18.1s,baz=164,slow=36
WAKE Wake Island 20.18 72 P Pn 02 07 40.8 +0.7
H11N1 WAKE ISLAND Hy 20.49 71 T T 02 28 53.1
baz=256,slow=75,SNR=3.3
H11N2 WAKE ISLAND Hy 20.50 71 T T 02 28 52.6
baz=256,slow=75,SNR=3.2
H11N3 WAKE ISLAND Hy 20.51 71 T T 02 28 56.7
baz=256,slow=75,SNR=4.1
SWI Sorong 20.93 227 P Pn 02 07 48.8 -0.2
532nm,1.8s,17µm24µm
JOW Kunigami 21.27 310 P **P** **02 07 50.8 +0.9**
JOW IAmb IAmb 02 07 58.5
comp=Z,630nm,1.4s
JOW Kunigami 21.27 310 P **P** **02 07 52.7 +2.7**
JOW Kunigami 21.27 310 ⇓P **P** **02 07 52.5 +2.5**
JOW Kunigami 21.27 310 P **P** **02 07 49.8 -0.2**
comp=Z,124nm,0.8s,baz=151,slow=9.0,SNR=11
JOW S **S** **02 11 46.3 +0.4**
comp=Z,15nm,0.6s,baz=155,slow=29,SNR=1.8
JOW LR LR 02 16 19.6
comp=Z,17µm,18.8s,baz=130,slow=38
comp=Z,124nm,0.8s
DAV Davao City (W) 21.51 254 P **P** **02 07 51.6 -1.1**
comp=Z,194nm,0.3s,baz=66,slow=8.0,SNR=1.4
DAV S **S** **02 11 53.9 +3.0**
comp=Z,320nm,0.4s,baz=61,slow=1.9,SNR=2.0
DAV LR LR 02 17 39.1
comp=Z,6µm,18.3s,baz=98,slow=41
comp=Z,194nm,0.3s
DAV Davao City (W) 21.51 254 P **P** **02 07 54.2 +1.5**
FAKI Fak Fak 21.77 221 P **P** **02 07 55.9 +0.4**
FAKI Fak Fak 21.77 221 P **P** **02 07 58.2 +2.7**
FAKI Fak Fak 21.77 221 ⇑P **P** **02 07 56.7 +1.2**
FAKI Fak Fak 21.77 221 P **P** **02 07 58.1 +2.6**
comp=Z,410nm,2.0s,comp=Z,11µmcomp=Z,15µm
JMN Monobe 22.79 332 P **P** **02 08 07.5 +1.3**
JMN Monobe 22.79 332 P **P** **02 08 08.0 +1.7**
JMN Monobe 22.79 332 ⇓P **P** **02 08 07.3 +1.0**
TNTI Ternate 22.86 237 P **P** **02 08 05.8 -1.4**
TNTI Ternate 22.86 237 P **P** **02 08 10.4 +3.3**
TNTI Ternate 22.86 237 P **P** **02 08 05.9 -1.2**
comp=Z,146nm,1.4s,comp=Z,4µmcomp=Z,4µm
JGF Kuroka 23.11 341 P **P** **02 08 07.3 -2.2**
JGF Kuroka 23.11 341 P **P** **02 08 09.4 -0.1**
JGF Kuroka 23.11 341 ⇓P **P** **02 08 13.2 +3.6**
PMG Port Moresby 23.14 178 P **P** **02 08 08.1 -1.8**
PMG Port Moresby 23.14 178 P **P** **02 08 09.9 0.0**
PMG Port Moresby 23.14 178 P **P** **02 08 09.8 -0.1**
PMG Port Moresby 23.14 178 ⇑P **P** **02 08 09.1 -0.8**
PMG Port Moresby 23.14 178 P **P** **02 08 08.1 -1.8**
PMG pmax pmax
comp=Z,311nm,1.1s
PMG MLR MLR
comp=Z,7µm,18.0s
LBMI Labuha 23.60 234 P **P** **02 08 14.6 0.0**
comp=Z,350nm,2.3s,comp=Z,8µm
MJAR Matsushiro Arr 23.73 344 P **P** **02 08 13.9 -1.8**
comp=Z,18nm,0.8s,baz=169,slow=9.4,SNR=13
MJAR S **S** **02 12 29.0 -1.3**
comp=Z,1.2nm,0.3s,baz=219,slow=40,SNR=1.6
MJAR LR LR 02 16 50.7
comp=Z,12µm,18.8s,baz=160,slow=35
comp=Z,18nm,0.8s
MAJO Matsushiro 23.73 344 P **P** **02 08 14.6 -1.1**
MAJO Matsushiro 23.73 344 P **P** **02 08 16.1 +0.4**
MAJO Matsushiro 23.73 344 ⇑P **P** **02 08 16.4 +0.7**
MAJO Matsushiro 23.73 344 P **P** **02 08 14.6 -1.1**
MAJO pmax pmax
comp=Z,278nm,1.7s
MAJO MLR MLR
comp=Z,12µm,19.0s
MJB9 Matsu-Tunnel 23.73 344 P **P** **02 08 14.7 -1.0**
JNU Nakatsue 23.79 326 P **P** **02 08 16.2 -0.2**
JNU Nakatsue 23.79 326 P **P** **02 08 16.5 +0.1**
JNU Nakatsue 23.79 326 ⇑P **P** **02 08 16.5 +0.1**
YOJ Yonaguni jima 24.40 299 P **P** **02 08 22.3 +0.2**
YOJ IAmb IAmb 02 08 30.3
comp=Z,361nm,1.3s
YOJ Yonaguni jima 24.40 299 P **P** **02 08 22.9 +0.8**
YOJ Yonaguni jima 24.40 299 P **P** **02 08 22.3 +0.2**
YOJ pmax pmax
comp=Z,361nm,1.3s
YOJ MLR MLR
comp=Z,12µm,19.0s
JMM Marumori 24.41 349 P **P** **02 08 20.6 -1.3**
JMM IAmb IAmb 02 08 29.1
comp=Z,492nm,1.8s
JMM Marumori 24.41 349 P **P** **02 08 22.4 +0.5**
JMM Marumori 24.41 349 ⇓P **P** **02 08 22.4 +0.5**
TGY Tagaytay City 24.67 274 P **P** **02 08 23.7 -0.9**
comp=Z,106nm,0.4s,baz=19,slow=23,SNR=1.2
comp=Z,106nm,0.4s
NACB Ninganchiao 25.52 297 P **P** **02 08 34.7 +2.5**
YULB Yu-li 25.53 295 P **P** **02 08 32.3 -0.1**
YULB IAmb IAmb 02 09 05.7
comp=Z,355nm,1.6s
YULB Yu-li 25.53 295 P **P** **02 08 33.3 +1.0**
TWGBT Beinan 25.56 294 P **P** **02 08 33.1 +0.5**
TWG Pinlang 25.57 294 P **P** **02 08 32.1 -0.5**
NLAI Namlea 25.57 230 P **P** **02 08 31.4 -1.3**
comp=Z,22nm,1.6s
SANI Sanana 25.65 233 P **P** **02 08 35.8 +2.3**
SANI Sanana 25.65 233 P **P** **02 08 30.6 -2.9**
comp=Z,90nm,2.4s,comp=Z,4µmcomp=Z,7µm
KMSI Cibinong 25.79 241 P **P** **02 08 36.6 +1.9**
comp=Z,3µm,1.3s,comp=Z,27µmcomp=Z,11µm
YHNB Yeheng 25.87 298 IAMs_20 IAMs_20 02 20 10.6
comp=Z,19µm,18.0s
SSLB Suanglung 25.95 296 P **P** **02 08 35.7 -0.5**
SSLB IAmb IAmb 02 08 46.4
comp=Z,300nm,1.3s
SSLB Suanglung 25.95 296 P **P** **02 08 39.2 +3.0**
TPUB Ta-pu 26.09 295 P **P** **02 08 36.1 -1.3**
TPUB Ta-pu 26.09 295 P **P** **02 08 40.2 +2.8**
HNR Honiara 26.79 149 LR LR 02 19 34.4
comp=Z,75µm,18.2s,baz=322,slow=37
JTM Tenmabayashi 27.21 351 P **P** **02 08 49.9 +2.6**
LUWI Luwuk 27.67 239 P **P** **02 08 50.5 -1.2**
LUWI Luwuk 27.67 239 P **P** **02 08 51.9 +0.2**
LUWI Luwuk 27.67 239 P **P** **02 08 50.8 -0.9**
comp=Z,727nm,1.4s,comp=Z,12µmcomp=Z,8µm
COEN Coen 27.83 187 P **P** **02 08 52.5 -0.6**
COEN Coen 27.83 187 P **P** **02 08 53.6 +0.6**
COEN Coen 27.83 187 ⇑P **P** **02 08 53.0 0.0**
TJN Taejon 28.14 326 P **P** **02 08 55.3 -0.4**
TJN IAmb IAmb 02 09 48.7
comp=Z,325nm,1.1s
TJN Taejon 28.14 326 P **P** **02 08 56.9 +1.2**
TJN Taejon 28.14 326 P **P** **02 08 55.3 -0.4**
TJN pmax pmax
comp=Z,325nm,1.1s
TJN MLR MLR
comp=Z,30µm,18.0s
ERM Erimo 28.18 355 IAMs_20 IAMs_20 02 20 30.8
comp=Z,12µm,18.0s
JEM Erimo 28.18 355 IAMs_20 IAMs_20 02 20 23.3
comp=Z,12µm,19.0s
TOLI2 Tolitoli 28.30 246 P **P** **02 08 56.8 -0.6**
TOLI2 Tolitoli 28.30 246 P **P** **02 08 57.8 +0.5**
QZH Quanzhou 28.35 297 ⇑*iP* **P** **02 09 00.6 +2.9**
QZH S **S** **02 13 45.2 +1.3**
QZH pmax pmax
comp=Z,70nm,1.8s
QZH LR LR
comp=Z,5µm,15.1s
QZH LR LR
comp=Z,9µm,18.9s
QZH LR LR
comp=Z,12µm,17.5s
KSRS Korea Array 28.66 328 P **P** **02 08 59.7 -0.6**
comp=Z,28nm,0.8s,baz=145,slow=9.5,SNR=48
KSRS PcP **PcP** **02 12 11.1 +0.2**
comp=Z,2.2nm,0.8s,baz=132,slow=1.8,SNR=2.4
KSRS S **S** **02 13 46.6 -1.9**
comp=Z,0.6nm,0.4s,baz=115,slow=37,SNR=1.3
KSRS LR LR 02 19 32.3
comp=Z,6µm,18.5s,baz=140,slow=34
comp=Z,28nm,0.8s
KSAR Wonju Array Be 28.67 328 P **P** **02 08 59.9 -0.5**
KSAR Wonju Array Be 28.67 328 P **P** **02 08 59.9 -0.5**
KS19 Wonju Array Si 28.73 328 P **P** **02 08 59.8 -1.1**
MYLDM Lahad Datu 28.77 255 P **P** **02 09 01.8 +0.3**
SSE Sheshan 28.78 311 P **P** **02 09 02.5 +1.0**
SSE S **S** **02 13 52.1 +1.5**
SSE pmax pmax
comp=Z,23nm,1.6s
SSE pmax pmax
comp=Z,1µm,9.4s
SSE LR LR
comp=Z,2µm,17.1s
SSE LR LR
comp=Z,3µm,17.6s
INCN Inchon 29.35 327 P **P** **02 09 11.0 +4.5**
INCN Inchon 29.35 327 P **P** **02 09 05.9 -0.6**
INCN P **P** **02 09 05.9 -0.6**
MPSI Mapaga 29.44 245 P **P** **02 09 07.1 -0.4**
comp=Z,72nm,1.3s,comp=Z,2µm
KDU Kakadu 29.76 208 P **P** **02 09 11.7 +1.5**
KDU Kakadu 29.76 208 ⇓P **P** **02 09 09.0 -1.2**
YUK Yuzh-Kuril'sk 30.07 359 ⇑*eP* **P** **02 09 12.1 -0.5**
HJU Haeju 30.25 326 P **P** **02 09 12.0 -2.4**
HJU S **S** **02 14 11.8 -1.7**
HJU AmB
comp=Z,719nm,2.7s
HJU AMS AMS
comp=Z,7µm,12.5s
ASAJ Asahikawa 30.32 355 P **P** **02 09 13.9 -1.0**
ASAJ pmax pmax
comp=Z,155nm,1.4s
ASAJ MLR MLR
comp=Z,6µm,20.0s
ASAJ Asahikawa 30.32 355 P **P** **02 09 14.9 +0.1**
comp=Z,21nm,1.0s,baz=182,slow=25,SNR=2.1
ASAJ LR LR 02 23 14.4
comp=Z,4µm,19.2s,baz=173,slow=40
comp=Z,21nm,1.0s
JKA Kamikawa-asahi 30.32 355 P **P** **02 09 13.9 -0.9**
MTN Manton Dam 30.53 210 P **P** **02 09 16.4 -0.6**
MTN Manton Dam 30.53 210 P **P** **02 09 18.8 +1.8**
MTN Manton Dam 30.53 210 ⇓P **P** **02 09 18.9 +1.8**
KKM Kota Kinabalu 30.66 258 P **P** **02 09 18.0 -0.4**
KKM IAmb IAmb 02 09 27.7
comp=Z,238nm,1.7s
HHU Hamhung 30.78 331 P **P** **02 09 21.0 +2.0**
HHU S **S** **02 14 27.8 +6.1**
HHU AmB
comp=Z,350nm,1.7s
PYAG Pyongyang 30.98 328 P **P** **02 09 19.8 -1.0**
PYAG S **S** **02 14 25.6 +0.8**
PYAG AmB
comp=Z,371nm,2.2s
PYAG AMS AMS
comp=Z,9µm,17.1s
NJ2 Nanjing 30.98 310 ⇑P **P** **02 09 19.6 -1.3**
NJ2 pP **sP** **02 09 23.0 -2.4**
NJ2 sP **pwP** **02 09 28.2 -3.3**
NJ2 PP **PnPn** **02 10 23.8 +1.8**
NJ2 S **S** **02 14 24.3 -0.8**
NJ2 sS sS 02 14 36.6 +5.5
NJ2 pmax pmax
comp=Z,18nm,0.8s
NJ2 pmax pmax
comp=Z,2µm,8.7s
NJ2 LR LR
comp=Z,5µm,17.1s
NJ2 LR LR
comp=Z,7µm,16.3s
NJ2 LR LR
comp=Z,10µm,16.5s
TTSI Tana Toraja 31.23 239 P P 02 09 30.9 +7.6
MSHR Mys Shultsa 31.48 338 ⇓*eP* **P** **02 09 25.5 +0.3**
MSHR pmax pmax
comp=Z,56nm,1.1s
MTSU Mount Surprise 31.86 184 P **P** **02 09 29.0 +0.2**
SOEI Soe 32.12 224 P **P** **02 09 30.8 -0.4**
SOEI IAmb IAmb 02 10 03.3
comp=Z,197nm,1.1s
SOEI Soe 32.12 224 P **P** **02 09 33.5 +2.3**
SOEI Soe 32.12 224 P **P** **02 09 31.4 +0.2**
comp=Z,132nm,1.0s,comp=Z,3µm
KAPI Kappang 32.39 236 P **P** **02 09 31.7 -1.8**
KAPI Kappang 32.39 236 P **P** **02 09 31.7 -1.8**
KAPI pmax pmax
comp=Z,163nm,1.8s
SUJ Sinuiju 32.41 328 P **P** **02 09 31.9 -1.5**
SUJ S **S** **02 14 47.3 0.0**
SUJ AmB
comp=Z,1µm,2.9s
SUJ AMS AMS
comp=Z,13µm,16.6s
GZH Guangzhou 32.56 291 P **P** **02 09 35.2 +0.3**
GZH PP **PP** **02 10 47.6 -1.0**
GZH S **S** **02 14 50.2 +0.2**
GZH SS **SnSn** **02 16 44.3 0.0**
GZH LR LR
comp=Z,2µm,11.1s
GZH LR LR
comp=Z,2µm,14.5s
USA0B Ussuriysk Arra 32.63 341 ⇓*eP* **P** **02 09 34.9 -0.3**
USRK Ussuriysk Ar. 32.63 341 P **P** **02 09 34.2 -1.1**
USRK Ussuriysk Ar. 32.63 341 P **P** **02 09 35.0 -0.2**
comp=Z,5.9nm,0.9s,baz=134,slow=36,SNR=5.2
USRK S **S** **02 14 48.7 -1.8**
comp=Z,1.2nm,0.7s,baz=140,slow=45,SNR=1.0
USRK LR LR 02 22 58.1
comp=Z,6µm,18.9s,baz=154,slow=37
comp=Z,5.9nm,0.9s
TV1H Townsville Har 32.92 179 P **P** **02 09 38.9 +0.9**
YSS Yuzh-Sakhalins 33.12 355 ⇓*eP* **P** **02 09 39.6 +0.1**
YSS *eS* **S** **02 14 58.8 +0.7**
YSS pmax pmax
comp=Z,32nm,1.3s
YSS MLR MLR
comp=Z,7µm,15.0s
DL2 Dalian 33.15 323 P **P** **02 09 40.2 +0.4**
DL2 S **S** **02 14 58.6 -0.1**
DL2 pmax pmax
comp=Z,170nm,1.4s
DL2 pmax pmax
comp=Z,2µm,3.7s
DL2 LR LR
comp=Z,6µm,19.2s
DL2 LR LR
comp=Z,5µm,19.6s
DL2 LR LR
comp=Z,9µm,19.2s
EDFI Ende, Flores 33.23 229 P **P** **02 09 40.2 -0.8**
comp=Z,80nm,2.0s,comp=Z,2µm
CTA Charters Tower 33.74 180 LR LR 02 24 07.7
comp=Z,4µm,18.6s,baz=1.5,slow=38
CTAO Charters Tower 33.74 180 P **P** **02 09 44.9 -0.3**
CTAO Charters Tower 33.74 180 P **P** **02 09 45.0 -0.3**
CTAO Charters Tower 33.74 180 ⇑P **P** **02 09 45.6 +0.4**
CTAO Charters Tower 33.74 180 P **P** **02 09 44.9 -0.3**
CTAO pmax pmax
comp=Z,65nm,1.4s
CTAO MLR MLR
comp=Z,5µm,18.0s
WHN Wuhan 33.80 305 ⇑P **P** **02 09 46.6 +0.9**
WHN sP **pwP** **02 09 52.3 -3.9**
WHN S **S** **02 15 11.6 +2.5**
WHN pmax pmax
comp=Z,2µm,2.7s
WHN LR LR
comp=Z,10µm,14.2s
WHN LR LR
comp=Z,11µm,12.6s
WHN LR LR
comp=Z,19µm,15.7s
MDJ Mudanjiang 33.81 338 P **P** **02 09 44.4 -1.2**
MDJ pP pP 02 09 46.5 -2.8
MDJ PP **PnPn** **02 10 58.8 +0.7**
MDJ S **S** **02 15 14.5 +5.6**
MDJ sS sS 02 15 18.4 +3.8
MDJ PcS **PcS** **02 16 05.1 -5.2**
MDJ pmax pmax
comp=Z,14nm,1.3s
MDJ pmax pmax
comp=Z,1µm,9.3s
MDJ LR LR
comp=Z,6µm,19.2s
MDJ LR LR
comp=Z,11µm,16.3s
MDJ LR LR
comp=Z,16µm,19.2s
MDJ Mudanjiang 33.81 338 P **P** **02 09 44.9 -0.7**
MDJ IAMs_20 IAMs_20 02 23 01.6
comp=Z,12µm,18.0s
MDJ Mudanjiang 33.81 338 P **P** **02 09 50.1 +4.5**
KNRA Kununurra 34.13 211 IAMs_20 IAMs_20 02 18 15.0
comp=Z,17µm,19.0s
SNY Shenyang 34.16 329 ⇓P **P** **02 09 48.6 0.0**
SNY S **S** **02 15 22.9 +8.6**
SNY pmax pmax
comp=Z,18nm,1.2s
SNY pmax pmax
comp=Z,530nm,4.0s
SNY LR LR
comp=Z,3µm,14.2s
SNY LR LR
comp=Z,2µm,18.6s
SNY LR LR
comp=Z,4µm,16.9s
CNSH ChangSha 34.16 300 ⇑P **P** **02 09 49.8 +0.9**
CNSH S **S** **02 15 18.8 +4.0**
CNSH pmax pmax
comp=Z,41nm,2.1s
CNSH LR LR
comp=Z,7µm,15.6s
CNSH LR LR
comp=Z,3µm,17.8s
CNSH LR LR
comp=Z,5µm,19.1s
TIA Tai'an 34.36 316 ⇑P **P** **02 09 50.6 +0.1**
TIA PP **PP** **02 11 10.2 +1.8**
TIA S **S** **02 15 20.1 +2.5**
TIA pmax pmax
comp=Z,1µm,10.3s
TIA LR LR
comp=Z,3µm,18.6s
TIA LR LR
comp=Z,5µm,19.1s
TIA LR LR
comp=Z,8µm,19.1s
CN2 Changchun 34.80 333 *eP* **P** **02 09 53.4 -0.7**
CN2 *es*P pwP 02 10 02.2 -0.8
CN2 *eS* **S** **02 15 22.2 -1.9**
CN2 *es*S sS 02 15 32.0 +2.3
CN2 pmax pmax
comp=Z,20nm,1.6s
CN2 LR LR
comp=Z,4µm,15.0s
CN2 LR LR
comp=Z,2µm,15.0s
CN2 LR LR
comp=Z,4µm,17.0s
QIS Mount Isa 34.85 191 P **P** **02 09 54.8 0.0**
BASI Baing, Sumba 35.03 228 P **P** **02 09 59.9 +3.5**
comp=Z,304nm,1.2s,comp=Z,4µm
UGL Uglegorsk 35.28 355 *eP* **P** **02 10 01.1 +2.9**
UGL *eS* **S** **02 15 25.5 -6.0**
UGL *e* 02 20 12.0
UGL pmax pmax
comp=Z,80nm,0.8s
UGL pmax pmax
comp=Z,960nm,5.5s
UGL smax smax
comp=E,2µm,8.0s
UGL smax smax
comp=N,2µm,12.0s
UGL MLR MLR
comp=E,3µm,10.0s
UGL MLR MLR
comp=N,5µm,17.0s
UGL MLR MLR
comp=Z,5µm,15.0s
QIZ Qiongzhong 35.35 283 P **P** **02 10 00.8 +1.6**
QIZ PP **PP** **02 11 19.2 -0.4**
QIZ S **S** **02 15 35.1 +1.8**
QIZ ScS **ScS** **02 20 19.6 +0.2**
QIZ pmax pmax
comp=Z,2µm,5.7s
QIZ LR LR
comp=Z,3µm,19.8s
QIZ LR LR
comp=Z,8µm,19.7s
QIZ LR LR
comp=Z,12µm,18.9s
QIZ Qiongzhong 35.35 283 IAMs_20 IAMs_20 02 23 38.4
comp=Z,13µm,19.0s
WB0 Warramunga Arr 35.44 200 P **P** **02 09 58.3 -1.6**
WR0 Warramunga Arr 35.57 199 P **P** **02 09 59.5 -1.5**
BNX BinXian 35.58 337 ⇓P **P** **02 10 00.3 -0.5**
BNX pP **pwP** **02 10 09.2 -0.4**
BNX sP sP 02 10 12.2 +6.9
BNX S **S** **02 15 34.2 -1.9**
BNX pmax pmax
comp=Z,36nm,2.0s
BNX pmax pmax
comp=Z,1µm,5.8s
BNX LR LR
comp=Z,4µm,16.2s
BNX LR LR
comp=Z,6µm,14.2s
BNX LR LR
comp=Z,10µm,18.5s
SBUM Sibu 35.59 254 P **P** **02 09 59.9 -1.4**
SBUM IAmb IAmb 02 10 09.7
comp=Z,241nm,1.5s
SBUM Sibu 35.59 254 ⇑P **P** **02 10 01.7 +0.4**
WRAB Tennant Creek 35.61 200 P **P** **02 09 59.8 -1.5**
WRAB Tennant Creek 35.61 200 P **P** **02 09 59.8 -1.5**
WRAB pmax pmax
comp=Z,134nm,1.1s
WRAB MLR MLR
comp=Z,400nm,20.0s
WB2 Warramunga Arr 35.62 200 P **P** **02 10 00.3 -1.1**
WB2 IAmb IAmb 02 10 05.9
comp=Z,144nm,1.1s
WRA Warramunga Arr 35.62 200 P **P** **02 10 00.5 -1.0**
WRA Warramunga Arr 35.62 200 P **P** **02 10 00.5 -1.0**
WRA pmax pmax
comp=Z,9.0nm,1.2s
WRA MLR MLR
comp=Z,700nm,20.0s
WRA Warramunga Arr 35.62 200 P **P** **02 10 00.1 -1.4**
comp=Z,32nm,0.9s,baz=20,slow=9.1,SNR=39
WRA PcP **PcP** **02 12 30.4 +0.3**
comp=Z,28nm,1.1s,baz=18,slow=2.8,SNR=7.0
WRA S **S** **02 15 35.5 -1.7**
comp=Z,0.6nm,0.8s,baz=32,slow=3.4,SNR=1.7
WRA ScP **ScP** **02 16 14.7 -1.0**
comp=Z,1.7nm,1.0s,baz=25,slow=4.4,SNR=8.9
WRA LR LR 02 26 12.0
comp=Z,5µm,18.3s,baz=16,slow=39
comp=Z,32nm,0.9s
GULI GuiLin 35.65 294 P **P** **02 10 00.5 -1.3**
GULI S **S** **02 15 37.8 0.0**
GULI pmax pmax
comp=Z,40nm,2.8s
GULI LR LR
comp=Z,4µm,17.3s
GULI LR LR
comp=Z,6µm,18.4s
GULI LR LR
comp=Z,10µm,18.4s
PLAI Plampang 36.24 233 P **P** **02 10 09.8 +3.0**
HNS HongShan 36.63 316 ⇑P **P** **02 10 10.3 +0.3**
HNS PP **PP** **02 11 35.3 +1.8**
HNS S **S** **02 15 54.6 +2.1**
HNS pmax pmax
comp=Z,85nm,1.2s
HNS pmax pmax
comp=Z,1µm,4.5s
HNS LR LR
comp=Z,7µm,17.6s
HNS LR LR
comp=Z,9µm,16.9s
HNS LR LR
comp=Z,13µm,18.6s
LYN LuoYang 36.88 310 ⇑*iP* **P** **02 10 12.8 +0.7**
LYN pP sP 02 10 16.5 -0.2
LYN sP pwP 02 10 19.2 -3.5
LYN PP **PnPn** **02 11 41.5 +5.2**
LYN S **S** **02 15 58.2 +1.9**
LYN SS **SnSn** **02 18 28.9 +0.1**
LYN pmax pmax
comp=Z,100nm,1.2s
LYN pmax pmax
comp=Z,2µm,4.3s
LYN LR LR
comp=Z,6µm,18.5s
LYN LR LR
comp=Z,8µm,18.0s

LYN LR LR
comp=Z,14µm,17.4s
TWSI Taliwang, Sumb 36.88 234 P **P** **02 10 13.0 +0.7**
comp=Z,42nm,1.0s,comp=Z,2µm
DLV T Lat 36.94 271 P **P** **02 10 14.8 +1.7**
TYV Tymovskoe 37.02 356 *e*P **P** **02 10 13.0 0.0**
TYV *e*S **S** **02 16 01.0 +3.1**
TYV pmax pmax
comp=Z,800nm,4.0s
TYV pmax pmax
comp=Z,52nm,0.9s
TYV smax smax
comp=E,18nm,1.1s
TYV smax smax
comp=N,700nm,5.0s
TYV smax smax
comp=E,1µm,5.0s
TYV MLR MLR
comp=N,7µm,15.0s
TYV MLR MLR
comp=Z,7µm,15.0s
BJT Baijiatuau 37.13 320 P **P** **02 10 13.9 -0.3**
BJT Baijiatuau 37.13 320 IAms_20 IAms_20 02 26 32.1
comp=Z,10µm,18.0s
BJT Baijiatuau 37.13 320 P **P** **02 10 14.6 +0.4**
BJT Baijiatuau 37.13 320 P **P** **02 10 13.9 -0.3**
BJT pmax pmax
comp=Z,194nm,1.4s
BJT MLR MLR
comp=Z,10µm,18.0s
BJI Beijing 37.14 320 P **P** **02 10 14.4 +0.2**
BJI pP **sP** **02 10 19.0 +0.2**
BJI PP **PnPn** **02 11 41.2 +1.8**
BJI S **S** **02 16 01.0 +0.9**
BJI pmax pmax
comp=Z,18nm,1.4s
BJI pmax pmax
comp=Z,560nm,6.0s
BJI LR LR
comp=Z,5µm,17.9s
BJI LR LR
comp=Z,2µm,15.8s
BJI LR LR
comp=Z,6µm,17.3s
STKI Sintang 37.16 251 P **P** **02 10 17.2 +2.5**
comp=Z,170nm,1.9s
RK1H Rockhampton Ha 37.25 174 P **P** **02 10 17.4 +2.1**
KLR Kul'dur 37.25 344*ce*P **P** **02 10 13.1 -2.0**
KLR pmax pmax
comp=Z,39nm,1.3s
KLR Kul'dur 37.25 344 P **P** **02 10 13.4 -1.7**
comp=Z,6.0nm,0.7s,baz=142,slow=8.1,SNR=15
KLR PcP **PcP** **02 12 34.8 +0.2**
comp=Z,22nm,1.1s,baz=101,slow=4.3,SNR=3.3
KLR LR LR 02 25 07.8
comp=Z,7µm,18.0s,baz=161,slow=36
comp=Z,6.0nm,0.7s
ENH Enshi 37.66 302 P **P** **02 10 17.7 -1.2**
ENH IAms_20 IAms_20 02 27 35.8
comp=Z,8µm,18.0s
ENH Enshi 37.66 302 P **P** **02 10 22.1 +3.2**
GRNR Gornyy 37.68 350⇓*i*P **P** **02 10 18.3 -0.4**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,2µm,17.0s
GRNR MLR MLR
comp=N,2µm,16.0s
GRNR MLR MLR
comp=Z,3µm,17.0s
KSM Kuching 37.72 254 P **P** **02 10 18.2 -1.3**
KSM Kuching 37.72 254 P **P** **02 10 20.4 +0.9**
FITZ Fitzroy Crossi 37.77 213 P **P** **02 10 18.7 -1.1**
FITZ Fitzroy Crossi 37.77 213 P **P** **02 10 19.5 -0.3**
FITZ Fitzroy Crossi 37.77 213 ⇓P **P** **02 10 22.2 +2.4**
SRBI Singaraja 37.84 237 P P 02 10 26.0 +5.6
comp=Z,190nm,1.4s,comp=Z,5µmcomp=Z,6µm
TIY Taiyuan 38.35 314 P **P** **02 10 25.6 +0.9**
TIY PP **PnPn** **02 11 57.2 +3.0**
TIY S **S** **02 16 16.9 -1.9**
TIY pmax pmax
comp=Z,42nm,1.3s
TIY pmax pmax
comp=Z,2µm,5.9s
TIY LR LR
comp=Z,5µm,18.6s
TIY LR LR
comp=Z,9µm,17.2s
TIY LR LR
comp=Z,13µm,18.5s
KOUNC Koumac, New Ca 38.48 152 P **P** **02 10 23.5 -2.2**
KOUNC Koumac, New Ca 38.48 152 P **P** **02 10 24.9 -0.8**
comp=Z,92nm,1.5s
KOUNC Koumac, New Ca 38.48 152 ⇓P **P** **02 10 23.8 -1.9**
JAGI Jajag, Banyuwa 38.92 237 P **P** **02 10 27.5 -2.1**
JAGI Jajag, Banyuwa 38.92 237 P **P** **02 10 32.4 +2.9**
JAGI Jajag, Banyuwa 38.92 237 P **P** **02 10 29.1 -0.4**
comp=Z,84nm,1.4s,comp=Z,2µm
BLJI Banyuglugur 38.97 239 P **P** **02 10 32.0 +2.0**
comp=Z,146nm,1.4s,comp=Z,6µm
GYA Guiyang 39.15 295⇓*i*P **P** **02 10 33.7 +2.1**
GYA pP sP 02 10 36.9 +0.7
GYA sP pwP 02 10 38.6 -3.4
GYA PP **PnPn** **02 12 04.0 0.0**
GYA S **S** **02 16 36.0 +4.8**
GYA sS sS 02 16 41.7 +4.4
GYA pmax pmax
comp=Z,39nm,1.3s
GYA pmax pmax
comp=Z,1µm,3.7s
GYA LR LR
comp=Z,4µm,19.0s
GYA LR LR
comp=Z,7µm,17.7s
GYA LR LR
comp=Z,12µm,18.0s
AS01 Alice Springs 39.23 198 P **P** **02 10 33.5 +1.5**
AS31 Alice Springs 39.24 198 P **P** **02 10 30.7 -1.5**
ASAR Alice Springs 39.24 198 P **P** **02 10 31.1 -1.1**
ASAR Alice Springs 39.24 198 P **P** **02 10 30.7 -1.5**
comp=Z,13nm,1.0s,baz=20,slow=6.9,SNR=43
ASAR PP **PnPn** **02 12 04.2 -0.8**
comp=Z,13nm,0.9s,baz=16,slow=11,SNR=4.8
ASAR PcP **PcP** **02 12 41.6 +0.5**
comp=Z,15nm,1.1s,baz=22,slow=3.0,SNR=2.5
ASAR ScP **ScP** **02 16 28.1 -1.2**
comp=Z,0.3nm,0.3s,baz=12,slow=4.7,SNR=2.9
ASAR LR LR 02 28 26.9
comp=Z,5µm,18.6s,baz=22,slow=39
comp=Z,13nm,1.0s
EIDS Eidsvold 39.27 173 P **P** **02 10 30.9 -1.4**
EIDS Eidsvold 39.27 173 P **P** **02 10 33.1 +0.8**
EIDS Eidsvold 39.27 173 ⇓P **P** **02 10 33.0 +0.8**
XAN Xi'an 39.37 307 ⇑P **P** **02 10 33.3 +0.1**
XAN pP sP 02 10 38.2 +0.4
XAN sP pwP 02 10 41.5 -2.2
XAN PP **PnPn** **02 12 07.6 +1.2**
XAN PcP **PcP** **02 12 46.0 +4.5**
XAN S **S** **02 16 34.8 +0.6**
XAN sS sS 02 16 45.3 +5.2
XAN SS **SS** **02 19 18.7 -9.5**
XAN ScS **ScS** **02 20 42.0 +0.3**
XAN pmax pmax
comp=Z,42nm,2.2s
XAN pmax pmax
comp=Z,3µm,10.0s
XAN LR LR
comp=Z,8µm,14.8s
XAN LR LR
comp=Z,7µm,17.5s
XAN LR LR
comp=Z,11µm,17.2s
HEH HeiHe 39.44 341 *e*P **P** **02 10 31.8 -1.6**
HEH pP **pP** **02 10 35.6 -1.1**
HEH PcP **PcP** **02 12 44.9 +3.6**
HEH S **S** **02 16 31.1 -3.5**
HEH ScP **ScP** **02 16 32.6 +3.1**
HEH ScS **ScS** **02 20 40.6 -0.7**
HEH pmax pmax
comp=Z,42nm,0.8s
HEH pmax pmax
comp=Z,1µm,6.1s
HEH LR LR
comp=Z,4µm,16.7s
HEH LR LR
comp=Z,8µm,15.6s
HEH LR LR
comp=Z,9µm,16.3s
NKL Nikolayevsk 39.44 355 *e*P **P** **02 10 30.7 -2.7**
NKL *e*S **S** **02 16 32.1 -2.5**
NKL smax smax
comp=E,1µm,5.2s
NKL smax smax
comp=N,355nm,5.6s
NKL MLR MLR
comp=E,20µm,18.0s
NKL MLR MLR
comp=N,16µm,17.0s
NKL MLR MLR
comp=Z,18µm,19.0s
XLT XiLinHaoTe 39.57 325 *e*P **P** **02 10 34.7 -0.1**
XLT sP pwP 02 10 41.7 -2.0
XLT S **S** **02 16 39.8 +2.9**
XLT SS **SS** **02 19 24.5 -7.4**
XLT pmax pmax
comp=Z,65nm,1.5s
XLT pmax pmax
comp=Z,860nm,3.5s
XLT LR LR
comp=Z,410nm,17.1s
XLT LR LR
comp=Z,4µm,16.7s
XLT LR LR
comp=Z,4µm,18.3s
PETK Petropavlovsk- 40.17 11 P **P** **02 10 40.0 +0.5**
PETK Petropavlovsk- 40.17 11 P **P** **02 10 40.0 +0.5**
comp=Z,21nm,1.2s,baz=178,slow=9.4,SNR=9.1
PETK ScP **ScP** **02 16 33.0 +0.7**
comp=Z,1.3nm,0.3s,baz=216,slow=7.1,SNR=3.1
PETK LR LR 02 27 41.9
comp=Z,5µm,19.8s,baz=201,slow=37
comp=Z,21nm,1.2s
QLP Quilpie 40.26 183 P **P** **02 10 40.2 -0.3**
PET Petropavlovsk 40.27 11 *e*P **P** **02 10 40.0 -0.3**
PET *e* 02 12 40.5
PET *e*S **S** **02 16 47.5 +0.6**
PET *e*SS **SS** **02 19 43.6 -1.8**
PET pmax pmax
comp=Z,151nm,1.1s
PET pmax pmax
comp=Z,800nm,14.7s
PET MLR MLR
comp=Z,5µm,19.0s
PET MLR MLR
comp=Z,5µm,17.0s
HHC Hu-ho-hao-te 40.52 318⇑*i*P **P** **02 10 43.4 +0.7**
HHC pP pwP 02 10 52.1 +0.4
HHC S **S** **02 16 48.8 -2.5**
HHC sS sS 02 16 59.6 +2.4
HHC SS **SS** **02 19 42.2 -8.8**
HHC pmax pmax
comp=Z,51nm,1.3s
HHC pmax pmax
comp=Z,800nm,4.0s
HHC LR LR
comp=Z,4µm,15.2s
HHC LR LR
comp=Z,5µm,15.7s
HHC LR LR
comp=Z,7µm,18.5s
DZM Mont Dzumac 40.79 151 P **P** **02 10 43.8 -1.3**
DZM Mont Dzumac 40.79 151 P **P** **02 10 44.3 -0.8**
DZM Mont Dzumac 40.79 151⇑P **P** **02 10 43.9 -1.2**
DZM Mont Dzumac 40.79 151 LR LR 02 27 24.9
comp=Z,4µm,18.3s,baz=324,slow=36
SLVN Son La 41.04 287 P **P** **02 10 46.7 -0.6**
SLVN IAms_20 IAms_20 02 27 22.2
comp=Z,9µm,20.0s
OUENC Ouen Island, N 41.27 151 P **P** **02 10 48.2 -0.8**
OUENC Ouen Island, N 41.27 151 P **P** **02 10 50.0 +1.0**
comp=Z,70nm,1.9s
BTO Baotou 41.40 317⇑*i*P **P** **02 10 51.9 +1.9**
BTO pP **pwP** **02 10 56.5 -2.6**
BTO sP **sP** **02 10 59.2 +4.6**
BTO PP **PnPn** **02 12 31.4 +1.0**
BTO S **S** **02 17 08.8 +4.3**
BTO sS sS 02 17 16.9 +6.5
BTO SS **SS** **02 20 09.5 +0.8**
BTO pmax pmax
comp=Z,110nm,1.4s
BTO pmax pmax
comp=Z,4µm,8.7s
BTO LR LR
comp=Z,11µm,17.8s
BTO LR LR
comp=Z,9µm,17.2s
BTO LR LR
comp=Z,14µm,17.8s
HIA Hailar 41.52 334 P **P** **02 10 49.8 -0.9**
HIA Hailar 41.52 334 IAms_20 IAms_20 02 27 37.5
comp=Z,7µm,18.0s
HIA Hailar 41.52 334 P **P** **02 10 51.0 +0.3**
HIA Hailar 41.52 334 P **P** **02 10 49.8 -0.9**
HIA pmax pmax
comp=Z,157nm,1.5s
HIA MLR MLR
comp=Z,7µm,18.0s
UGM Wanagama 41.63 241 P **P** **02 10 52.3 +0.1**
UGM IAmb IAmb 02 11 36.3
comp=Z,517nm,1.4s
UGM Wanagama 41.63 241 P **P** **02 10 54.8 +2.7**
UGM Wanagama 41.63 241 P **P** **02 10 52.2 +0.1**
comp=Z,267nm,1.9s,comp=Z,5µm
NONG Nongkai 41.69 282 P **P** **02 10 55.1 +2.6**
INKA Innaminka 41.72 187 P **P** **02 10 51.9 -0.6**
KMI Kunming 42.44 292 ⇑P **P** **02 10 59.8 +0.9**
KMI S **S** **02 17 15.6 -4.9**
KMI pmax pmax
comp=Z,24nm,2.1s
KMI pmax pmax
comp=Z,1µm,8.6s
KMI LR LR
comp=Z,3µm,17.7s
KMI LR LR
comp=Z,4µm,19.9s
KMI LR LR
comp=Z,5µm,20.3s
WRKA Warakurna 42.49 205 P **P** **02 10 58.3 -0.7**
WRKA Warakurna 42.49 205 ⇑P **P** **02 10 57.9 -1.1**
ZEA Zeya 42.54 343 *e*P **P** **02 10 57.9 -1.1**
ZEA *e* 02 12 56.4
ZEA *e* 02 17 30.0
ZEA *e* 02 21 07.1
ZEA pmax pmax
comp=Z,20nm,1.4s
ZEA MLR MLR
comp=E,2µm,15.0s
ZEA MLR MLR
comp=N,5µm,16.0s
ZEA MLR MLR
comp=Z,5µm,16.0s
CD2 Chengdu 42.59 301 P **P** **02 10 59.8 0.0**
CD2 S **S** **02 17 16.4 -5.8**
CD2 SS **SS** **02 20 33.7 +1.4**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 LR LR
comp=Z,7µm,17.6s
CD2 LR LR
comp=Z,6µm,18.6s
CD2 LR LR
comp=Z,6µm,20.1s
OOD Oodnadatta 42.69 194 P **P** **02 10 59.4 -1.0**
KPJI Karang Pucung 42.71 243 P **P** **02 11 03.9 +3.1**
comp=Z,96nm,1.2s,comp=Z,3µm
PPBI Pangkal Pinang 42.94 251 P P 02 11 11.4 +8.7
PZH PanZhiHua 43.51 294 P **P** **02 11 08.0 +0.6**
PZH pP **sP** **02 11 11.7 -0.4**
PZH S **S** **02 17 38.1 +2.1**
PZH pmax pmax
comp=Z,30nm,1.5s
PZH pmax pmax
comp=Z,1µm,6.4s
PZH LR LR
comp=Z,3µm,18.4s
PZH LR LR
comp=Z,4µm,18.6s
PZH LR LR
comp=Z,5µm,17.5s
MBWA Marble Bar 43.54 217 P **P** **02 11 06.3 -1.1**
MBWA Marble Bar 43.54 217 P **P** **02 11 07.7 +0.3**
MBWA Marble Bar 43.54 217 ⇓P **P** **02 11 09.0 +1.6**
MBWA Marble Bar 43.54 217 P **P** **02 11 10.6 +3.2**
MBWA P **P** **02 11 10.6 +3.2**
MBWA S **S** **02 17 34.7 -1.4**
MBWA S **S** **02 17 34.7 -1.4**
LEM Lembang 43.61 244 LR LR 02 32 32.0
comp=Z,1µm,18.2s,baz=40,slow=41
NAYO Nakonayok 43.63 276 P **P** **02 11 10.0 +1.6**
MYKOM Kota Tinggi 43.70 258 P **P** **02 11 08.3 -0.6**
MYKOM IAmb IAmb 02 11 16.8
comp=Z,406nm,1.3s
DSRI Dabo 43.76 254 P **P** **02 11 10.3 +0.9**
comp=Z,164nm,1.5s
PSA00 Pilbara Seismi 43.79 217 P **P** **02 11 08.2 -1.3**
PSA00 Pilbara Seismi 43.79 217 P **P** **02 11 08.5 -1.0**
PSA00 IAmb IAmb 02 11 19.0
comp=Z,166nm,1.8s
PSA00 Pilbara Seismi 43.79 217 P **P** **02 11 09.2 -0.3**
BBJI Bungbulang 43.88 243 P **P** **02 11 13.3 +2.9**
LZH Lanzhou 43.98 308 ⇑P **P** **02 11 12.4 +1.3**
LZH pP sP 02 11 17.0 +1.3
LZH S **S** **02 17 45.9 +3.2**
LZH SS SS 02 20 48.6 -11
LZH pmax pmax
comp=Z,150nm,1.5s
LZH pmax pmax
comp=Z,2µm,4.6s
LZH LR LR
comp=Z,4µm,17.7s
LZH LR LR
comp=Z,4µm,15.3s
LZH LR LR
comp=Z,5µm,18.5s
DBJI Dramaga 44.24 245 P P 02 11 19.2 +5.9
comp=Z,84nm,0.5s
CNJI Cibinong 44.26 244 P P 02 11 19.3 +5.9
comp=Z,31nm,1.8s,comp=Z,1µm
CRAI Chiangrai 44.31 285 P **P** **02 11 13.8 0.0**
ARMA Armidale 44.32 173 P **P** **02 11 13.7 0.0**
ARMA Armidale 44.32 173 P **P** **02 11 13.7 0.0**
ARMA Armidale 44.32 173 ⇓P **P** **02 11 14.6 +0.8**
DGTI Dogotuki 44.57 131 P **P** **02 11 14.8 -1.0**
SHEM Shemya Is, Ala 44.61 24 LR LR 02 27 51.3
comp=Z,7µm,21.5s,baz=258,slow=33
LCRK Leigh Creek 44.75 190 P **P** **02 11 17.2 +0.2**
AUPHS Peel High Scho 44.92 174 P **P** **02 11 18.4 0.0**
CMSA Cobar Meteorol 45.15 181 P **P** **02 11 19.5 -0.7**
MULG Mulgathing 45.47 195 P **P** **02 11 21.5 -1.2**
IPM Ipoh 45.64 263 P **P** **02 11 24.1 -0.4**
IPM Ipoh 45.64 263 P **P** **02 11 25.9 +1.4**
CHTO Chiang Mai 45.66 283 P **P** **02 11 24.0 -0.6**
CHTO Chiang Mai 45.66 283 P **P** **02 11 25.4 +0.8**
CHTO Chiang Mai 45.66 283 P **P** **02 11 24.0 -0.6**
CHTO pmax pmax
comp=Z,38nm,1.2s
CHTO MLR MLR
comp=Z,4µm,19.0s
CHTO Chiang Mai 45.66 283 P **P** **02 11 25.3 +0.8**
CHTO P **P** **02 11 25.3 +0.8**
CM31 Chiang Mai Arr 45.67 282 P **P** **02 11 24.4 -0.3**
CMAR Chiang Mai Arr 45.67 282 P **P** **02 11 24.5 -0.1**
CMAR Chiang Mai Arr 45.67 282 *i*P **P** **02 11 25.7 +1.1**
CMAR pmax pmax
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 45.67 282 P **P** **02 11 25.1 +0.5**
comp=Z,17nm,0.8s,baz=84,slow=5.8,SNR=53
CMAR LR LR 02 32 27.6
comp=Z,3µm,18.5s,baz=90,slow=39
comp=Z,17nm,0.8s
STKA Stephens Creek 45.71 186 P **P** **02 11 23.6 -1.0**
STKA Stephens Creek 45.71 186 P **P** **02 11 23.8 -0.8**
STKA Stephens Creek 45.71 186 P **P** **02 11 23.7 -1.0**
STKA pmax pmax
comp=Z,25nm,1.5s
STKA Stephens Creek 45.71 186 P **P** **02 11 23.4 -1.2**
comp=Z,26nm,0.8s,baz=346,slow=8.8,SNR=19
STKA S **S** **02 18 00.1 -7.3**
comp=Z,1.0nm,0.6s,baz=250,slow=22,SNR=1.3
STKA LR LR 02 31 26.1
comp=Z,5µm,19.2s,baz=0.2,slow=37
comp=Z,26nm,0.8s
MA2 Magadan 45.74 3 P **P** **02 11 24.1 -0.5**
MA2 IAmb IAmb 02 11 30.7
comp=Z,160nm,0.8s
MA2 Magadan 45.74 3 P **P** **02 11 24.1 -0.5**
MA2 pmax pmax
comp=Z,160nm,0.8s
MA2 MLR MLR
comp=Z,4µm,18.0s
SRDT SRDT 45.75 277 P **P** **02 11 27.4 +2.1**
KASI Kota Agung 45.80 248 P **P** **02 11 29.8 +4.2**
comp=Z,108nm,1.6s,comp=Z,3µmcomp=Z,12µm
KULM Kulim 45.80 264 P **P** **02 11 24.9 -0.8**
KULM Kulim 45.80 264 ⇑P **P** **02 11 26.6 +0.9**
AUDCS Dubbo College 45.89 177 P **P** **02 11 25.7 -0.3**
SURA Surathani 45.97 269 P **P** **02 11 29.7 +2.7**
LWLI Liwa 45.98 249 P **P** **02 11 28.6 +1.4**
comp=Z,206nm,0.6s
SRIT Nakonsritamara 46.10 269 P **P** **02 11 30.9 +2.8**
CIT Chita 46.23 332 *e*P **P** **02 11 28.6 0.0**
CIT *e* 02 13 11.6
CIT pmax pmax
comp=Z,249nm,2.8s
TNCH TengChong 46.24 291 P **P** **02 11 29.9 +0.6**
TNCH pP sP 02 11 33.0 -1.0
TNCH sP pwP 02 11 35.0 -4.6
TNCH S **S** **02 18 09.8 -6.0**
TNCH pmax pmax
comp=Z,100nm,1.5s
TNCH pmax pmax
comp=Z,710nm,4.0s
TNCH LR LR
comp=Z,1µm,15.0s
TNCH LR LR
comp=Z,1µm,19.6s
TNCH LR LR
comp=Z,4µm,17.6s
MNAI Manna 46.72 250 P **P** **02 11 31.7 -1.2**
MNAI Manna 46.72 250 P **P** **02 11 36.5 +3.6**
MNAI Manna 46.72 250 P P 02 11 37.7 +4.8
comp=Z,538nm,1.9s,comp=Z,8µm
BKNI Bangkinang 46.82 257 P **P** **02 11 37.2 +3.5**
BKNI Bangkinang 46.82 257 P P 02 11 39.7 +6.0
comp=Z,106nm,1.2s,comp=Z,2µm
ULN Ulaanbaatar 46.99 324 P **P** **02 11 34.9 +0.1**
ULN IAmb IAmb 02 12 14.6
comp=Z,124nm,1.1s
ULN Ulaanbaatar 46.99 324 ⇑P **P** **02 11 35.3 +0.6**
ULN Ulaanbaatar 46.99 324 P **P** **02 11 34.9 +0.1**
ULN pmax pmax
comp=Z,124nm,1.2s
ULN MLR MLR
comp=Z,5µm,18.0s
ULN Ulaanbaatar 46.99 324 P **P** **02 11 35.7 +1.0**
ULN S **S** **02 18 24.2 -1.5**
SONM Songino Array 47.35 324 P **P** **02 11 38.0 +0.4**
SONM IAmb IAmb 02 12 27.9
comp=Z,150nm,1.5s
SONM Songino Array 47.35 324 P **P** **02 11 38.0 +0.4**
SONM pmax pmax
comp=Z,151nm,1.5s
SONM Songino Array 47.35 324 P **P** **02 11 37.9 +0.4**
comp=Z,28nm,1.0s,baz=138,slow=9.0,SNR=38
SONM PP **PP** **02 13 29.3 +0.6**
comp=Z,4.9nm,1.0s,baz=117,slow=5.4,SNR=0.5
SONM ScP **ScP** **02 17 00.9 -0.9**
comp=Z,1.5nm,1.0s,baz=220,slow=1.5,SNR=2.0
SONM S **S** **02 18 25.3 -5.5**
comp=Z,0.1nm,0.3s,baz=187,slow=34,SNR=1.0
SONM LR LR 02 32 12.7
comp=Z,4µm,18.3s,baz=110,slow=37
comp=Z,28nm,1.0s
WHYH Whyalla 47.39 190 P **P** **02 11 38.6 +0.9**
BBOO Buckleboo 47.45 192 P **P** **02 11 37.5 -0.8**
BBOO IAmb IAmb 02 11 42.5
comp=Z,143nm,1.2s
BBOO Buckleboo 47.45 192 P **P** **02 11 38.7 +0.4**
HTT Hallett 47.57 188 P **P** **02 11 39.8 +0.6**
HTT Hallett 47.57 188 ⇑P **P** **02 11 39.0 -0.2**
FORT Forrest 47.75 201 P **P** **02 11 39.6 -1.0**
FORT IAmb IAmb 02 11 45.8
comp=Z,164nm,1.0s
FORT Forrest 47.75 201 P **P** **02 11 42.9 +2.3**
FORT Forrest 47.75 201 ⇓P **P** **02 11 40.1 -0.5**

PDSI	**Padang**	**47.77**	**256**	P	**P**	**02 11 39.9**	**-1.3**		
	comp=Z,54nm,0.8s,comp=Z,5µm								
YNG	**Young**	**47.94**	**178**	P	**P**	**02 11 43.4**	**+1.4**		
GIRL	**Giralia**	**48.03**	**221**	P	**P**	**02 11 45.7**	**+2.7**		
GTA	**Gaotai**	**48.08**	**311**	⇑P	**P**	**02 11 44.0**	**+0.7**		
GTA				PcP	**PcP**	**02 13 13.8**	**+2.8**		
GTA				S	**S**	**02 18 41.2**	**-0.3**		
GTA				ScS	**ScS**	**02 21 37.6**	**+1.2**		
GTA				pmax	pmax				
	comp=Z,32nm,2.2s								
GTA				pmax	pmax				
	comp=Z,1µm,5.8s								
GTA				LR	LR				
	comp=Z,2µm,16.4s								
GTA				LR	LR				
	comp=Z,5µm,17.4s								
GTA				LR	LR				
	comp=Z,6µm,17.4s								
ADK	**Adak**	**48.09**	**30**	P	**P**	**02 11 47.0**	**+4.0**		
PSI	**Prapat**	**48.11**	**261**	P	**P**	**02 11 44.3**	**+0.4**		
PSI	**Prapat**	**48.11**	**261**	P	**P**	**02 11 42.4**	**-1.5**		
PSI				pmax	pmax				
	comp=Z,44nm,1.0s								
RPSI	**Rantau Prapat**	**48.14**	**261**	P	**P**	**02 11 42.4**	**-1.5**		
MND	**Mandalay**	**48.31**	**287**	P	**P**	**02 11 45.8**	**+0.6**		
MEEK	**Meekatharra**	**48.46**	**214**	P	**P**	**02 11 48.1**	**+1.9**		
CAN	**Canberra**	**48.98**	**177**	P	**P**	**02 11 48.5**	**-1.6**		
CAN	**Canberra**	**48.98**	**177**	P	**P**	**02 11 52.4**	**+2.3**		
CAN	**Canberra**	**48.98**	**177**	P	**P**	**02 11 48.5**	**-1.6**		
CAN				pmax	pmax				
	comp=Z,65nm,1.3s								
CAN				MLR	MLR				
	comp=Z,4µm,18.0s								
CNB	**Canberra Magne**	**49.00**	**177**	P	**P**	**02 11 52.1**	**+1.9**		
KCSI	**Kotacane, Aceh**	**49.02**	**263**	P	**P**	**02 11 51.0**	**+0.2**		
	comp=Z,304nm,1.3s,comp=Z,4µm								
SEY	**Seymchan**	**49.18**	**4**	⇑*i*P	**P**	**02 11 51.4**	**+0.2**		
SEY				pmax	pmax				
	comp=Z,25nm,1.0s								
SEY	**Seymchan**	**49.18**	**4**	P	**P**	**02 11 51.0**	**-0.3**		
	comp=Z,30nm,1.0s,baz=180,slow=7.4,SNR=21								
SEY				S	**S**	**02 18 54.9**	**-1.1**		
	comp=Z,0.7nm,0.3s,baz=19,slow=23,SNR=1.3								
	comp=Z,30nm,1.0s								
SISI	**Saibi**	**49.20**	**256**	P	**P**	**02 11 51.1**	**-1.1**		
	comp=Z,235nm,1.2s,comp=Z,3µm								
LHMI	**Lhok Sumawe**	**49.39**	**265**	P	**P**	**02 11 57.4**	**+3.8**		
LHMI	**Lhok Sumawe**	**49.39**	**265**	P	P	02 12 02.9	+9.3		
YAK	**Yakutsk**	**49.56**	**350**	P	**P**	**02 11 51.6**	**-2.5**		
YAK	**Yakutsk**	**49.56**	**350**	IAMs_20	IAMs_20	02 33 05.2			
	comp=Z,9µm,18.0s								
YAK	**Yakutsk**	**49.56**	**350**	*e*P	**P**	**02 11 52.8**	**-1.3**		
YAK				*e*		02 13 49.6			
YAK				*e*S	**S**	**02 19 01.4**	**+0.1**		
YAK				*e*		02 21 38.1			
YAK				*e*SS	**SS**	**02 22 35.0**	**+1.7**		
YAK				pmax	pmax				
	comp=Z,51nm,0.8s								
YAK				pmax	pmax				
	comp=N,17nm,1.1s								
YAK				pmax	pmax				
	comp=E,6.0nm,0.9s								
YAK				pmax	pmax				
	comp=Z,226nm,3.0s								
YAK				pmax	pmax				
	comp=N,105nm,2.3s								
YAK				pmax	pmax				
	comp=E,59nm,1.8s								
YAK				smax	smax				
	comp=N,231nm,3.3s								
YAK				smax	smax				
	comp=E,128nm,2.8s								
YAK				MLR	MLR				
	comp=Z,8µm,16.0s								
YAK				MLR	MLR				
	comp=N,6µm,18.0s								
YAK	**Yakutsk**	**49.56**	**350**	P	**P**	**02 11 52.6**	**-1.5**		
	comp=N,37nm,0.7s,baz=164,slow=0.2,SNR=2.9								
YAK				S	**S**	**02 19 02.3**	**+1.1**		
	comp=N,8.0nm,0.3s,baz=82,slow=1.5,SNR=1.2								
YAK				LR	LR	02 32 49.2			
	comp=N,3µm,21.9s,baz=162,slow=36								
	comp=N,37nm,0.7s								
GSI	**Gunungsitoli**	**49.82**	**260**	P	**P**	**02 11 55.5**	**-1.4**		
GSI				IAmb	IAmb	02 12 02.6			
	comp=Z,162nm,1.1s								
GSI	**Gunungsitoli**	**49.82**	**260**	P	**P**	**02 11 58.3**	**+1.4**		
GSI	**Gunungsitoli**	**49.82**	**260**	⇓P	**P**	**02 11 56.8**	**-0.1**		
GSI	**Gunungsitoli**	**49.82**	**260**	P	**P**	**02 11 58.3**	**+1.4**		
	comp=Z,138nm,1.2s,comp=Z,3µm								
MOKO	**MOKOCHONG**	**49.94**	**293**	*e*P	**P**	**02 11 57.1**	**-0.7**		
AUSMG	**Snowy Mountain**	**50.06**	**178**	P	**P**	**02 12 00.4**	**+2.0**		
BOD	**Bodaibo**	**50.19**	**338**	*e*P	**P**	**02 11 58.1**	**-0.9**		
BOD				pmax	pmax				
	comp=Z,104nm,1.7s								
JORH	**JORHAT**	**50.21**	**293**	*e*P	**P**	**02 12 01.8**	**+2.1**		
KOHI	**KOHIMA**	**50.27**	**292**	*e*P	**P**	**02 11 59.5**	**-0.9**		
KOHI				IAmb	IAmb	02 12 08.5			
	comp=Z,110nm,1.5s								
IMP	**Imphal**	**50.38**	**291**	*e*P	**P**	**02 11 58.9**	**-2.2**		
ZAK	**Zakamensk**	**50.42**	**325**	*e*P	**P**	**02 12 01.0**	**0.0**		
ZAK				*e*		02 19 06.8			
ZAK				pmax	pmax				
	comp=Z,84nm,1.2s								
ARPS	**Mount Arapiles**	**50.55**	**185**	P	**P**	**02 12 03.9**	**+2.0**		
ZIRO	**ZIRO**	**50.62**	**294**	*e*P	**P**	**02 12 01.8**	**-1.2**		
ITAN	**ITANAGAR**	**50.71**	**294**	⇑*e*P	**P**	**02 12 02.6**	**-0.9**		
SNSI	**Sinabang, Aceh**	**50.71**	**262**	P	**P**	**02 12 05.9**	**+2.3**		
	comp=Z,478nm,1.4s,comp=Z,7µm								
MILA	**Mila**	**50.72**	**177**	P	**P**	**02 12 05.3**	**+2.0**		
KMBL	**Kambalda**	**50.75**	**207**	P	**P**	**02 12 04.9**	**+1.3**		
IRK	**Irkutsk**	**50.87**	**328**	*e*P	**P**	**02 12 04.0**	**-0.3**		
IRK				*e*S	**S**	**02 19 19.6**	**-0.4**		
IRK				pmax	pmax				
	comp=Z,199nm,2.4s								
GOMU	**GeErMu**	**51.05**	**305**	P	**P**	**02 12 07.3**	**+0.9**		
GOMU				pP	pwP	02 12 14.5	-2.3		
GOMU				sP	sP	02 12 17.4	+6.3		
GOMU				S	**S**	**02 19 29.3**	**+5.6**		
GOMU				pmax	pmax				
	comp=Z,44nm,2.1s								
GOMU				LR	LR				
	comp=Z,2µm,17.7s								
GOMU				LR	LR				
	comp=Z,2µm,17.6s								
GOMU				LR	LR				
	comp=Z,3µm,17.8s								
TOO	**Toolangi**	**51.17**	**181**	P	**P**	**02 12 05.5**	**-1.2**		
TOO	**Toolangi**	**51.17**	**181**	P	**P**	**02 12 08.1**	**+1.4**		
TOO	**Toolangi**	**51.17**	**181**	⇓P	**P**	**02 12 07.8**	**+1.2**		
TOO	**Toolangi**	**51.17**	**181**	P	**P**	**02 12 05.5**	**-1.2**		
TOO				pmax	pmax				
	comp=Z,111nm,1.3s								
BRAT	**Ballarat**	**51.20**	**182**	P	**P**	**02 12 09.5**	**+2.7**		
SAIH	**SAIHA**	**51.21**	**288**	*e*P	**P**	**02 12 07.1**	**-0.3**		
SAIH				IAmb	IAmb	02 12 16.4			
	comp=Z,153nm,1.3s								
AZL	**Aizawl**	**51.49**	**289**	*e*P	**P**	**02 12 09.9**	**+0.4**		
AZL				IAmb	IAmb	02 12 18.8			
	comp=Z,98nm,1.4s								
MORW	**Morawa**	**51.77**	**214**	P	**P**	**02 12 09.5**	**-1.8**		
MORW	**Morawa**	**51.77**	**214**	P	**P**	**02 12 13.4**	**+2.1**		
MORW	**Morawa**	**51.77**	**214**	⇓P	**P**	**02 12 10.6**	**-0.7**		
GEXS	**Deakin Univers**	**51.83**	**182**	P	**P**	**02 12 14.7**	**+3.2**		
DQPR	**DIGLIPUR**	**51.86**	**276**	*e*P	**P**	**02 12 08.7**	**-3.5**		
SHL	**Shillong**	**52.27**	**292**	P	**P**	**02 12 14.2**	**-1.2**		
SHL	**Shillong**	**52.27**	**292**	P	**P**	**02 12 14.2**	**-1.2**		
SHL				pmax	pmax				
	comp=Z,99nm,1.2s								
SHL				MLR	MLR				
	comp=Z,4µm,19.0s								
SHL	**Shillong**	**52.27**	**292**	*e*P	**P**	**02 12 15.0**	**-0.4**		
SHL				IAmb	IAmb	02 12 24.3			
	comp=Z,101nm,1.4s								
SHL	**Shillong**	**52.27**	**292**	P	**P**	**02 12 16.3**	**+0.9**		
	SNR=22								
MOY	**Mondy**	**52.31**	**326**	*e*P	**P**	**02 12 15.3**	**+0.1**		
MOY				pmax	pmax				
	comp=Z,164nm,2.6s								
GUWA	**GUWAHATI**	**52.47**	**292**	*e*P	**P**	**02 12 16.8**	**+0.1**		
GUWA				IAmb	IAmb	02 12 25.4			
	comp=Z,99nm,1.2s								
BLDU	**Ballidu**	**52.63**	**212**	P	**P**	**02 12 19.7**	**+2.0**		
NIKH	**Nikolski High**	**52.66**	**32**	P	**P**	**02 12 18.1**	**+0.5**		
	baz=239								
AGT	**Agartala**	**52.81**	**290**	⇑*e*P	**P**	**02 12 21.1**	**+1.9**		
LSA	**Lhasa**	**53.16**	**297**	P	**P**	**02 12 21.9**	**-0.3**		
LSA	**Lhasa**	**53.16**	**297**	P	**P**	**02 12 22.3**	**0.0**		
LSA	**Lhasa**	**53.16**	**297**	P	**P**	**02 12 22.0**	**-0.3**		
LSA				pmax	pmax				
	comp=Z,72nm,1.0s								
LSA				MLR	MLR				
	comp=Z,3µm,18.0s								
LSA	**Lhasa**	**53.16**	**297**	P	**P**	**02 12 24.1**	**+1.8**		
OPA	**Opana**	**53.31**	**73**	P	**P**	**02 12 23.3**	**+0.4**		
OPA				IAmb	IAmb	02 12 26.3			
	comp=Z,142nm,1.2s								
OPA	**Opana**	**53.31**	**73**	P	**P**	**02 12 23.3**	**+0.4**		
OPA				pmax	pmax				
	comp=Z,142nm,1.2s								
KIP	**Kipaga**	**53.32**	**74**	P	**P**	**02 12 24.7**	**+1.7**		
KIP				IAmb	IAmb	02 12 26.1			
	comp=Z,120nm,1.1s								
KIP	**Kipaga**	**53.32**	**74**	P	**P**	**02 12 23.7**	**+0.7**		
KIP	**Kipaga**	**53.32**	**74**	P	**P**	**02 12 23.5**	**+0.5**		
KIP	**Kipaga**	**53.32**	**74**	P	**P**	**02 12 24.7**	**+1.7**		
KIP				pmax	pmax				
	comp=Z,120nm,1.1s								
MUN	**Mundaring**	**53.97**	**212**	P	**P**	**02 12 30.2**	**+2.7**		
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 28.2**	**-1.1**		
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 28.0**	**-1.3**		
NWAO				IAmb	IAmb	02 12 37.2			
	comp=Z,428nm,1.6s								
NWAO	**Narrogin (SRO)**	**54.22**	**210**	IAMs_20	IAMs_20	02 37 02.2			
	comp=Z,7µm,19.0s								
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 31.9**	**+2.6**		
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 31.7**	**+2.4**		
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 28.2**	**-1.1**		
NWAO				pmax	pmax				
	comp=Z,119nm,1.6s								
NWAO				MLR	MLR				
	comp=Z,7µm,19.0s								
NWAO	**Narrogin (SRO)**	**54.22**	**210**	LR	LR	02 37 24.1			
	comp=Z,6µm,18.8s,baz=43,slow=38								
NWAO	**Narrogin (SRO)**	**54.22**	**210**	P	**P**	**02 12 31.7**	**+2.4**		
P08K	**Saint George I**	**54.25**	**28**	P	**P**	**02 12 30.1**	**+0.9**		
	baz=236								
SPIA	**Saint Paul Isl**	**54.26**	**27**	P	**P**	**02 12 29.8**	**+0.5**		
	baz=235								
UNV	**Unalaska Valle**	**54.31**	**32**	P	**P**	**02 12 33.0**	**+3.3**		
UNV	**Unalaska Valle**	**54.31**	**32**	P	**P**	**02 12 30.8**	**+1.1**		
	baz=241								
GLAD	**Gladstone**	**54.60**	**178**	P	**P**	**02 12 34.6**	**+2.8**		
AKUT	**Akutan**	**54.83**	**32**	P	**P**	**02 12 34.8**	**+1.3**		
AKUT				IAmb	IAmb	02 12 38.8			
	comp=Z,218nm,1.1s								
AKUT	**Akutan**	**54.83**	**32**	P	**P**	**02 12 37.1**	**+3.6**		
AULHS	**Lilydale High**	**54.84**	**179**	P	**P**	**02 12 35.8**	**+2.1**		
RAO	**Raoul Island**	**55.02**	**141**	LR	LR	02 34 37.9			
	comp=Z,3µm,18.1s,baz=355,slow=34								
CORO	**Coronation Par**	**55.05**	**179**	P	**P**	**02 12 36.4**	**+1.3**		
GTK	**Tadong**	**55.27**	**294**	*e*P	**P**	**02 12 40.6**	**+3.3**		
MHA	**Mahukona**	**55.34**	**75**	P	**P**	**02 12 37.6**	**-0.1**		
MHA	**Mahukona**	**55.34**	**75**	P	**P**	**02 12 37.6**	**-0.1**		
BILL	**Bilibino**	**55.65**	**9**	P	**P**	**02 12 39.2**	**0.0**		
BILL				IAmb	IAmb	02 12 45.0			
	comp=Z,172nm,1.1s								
BILL	**Bilibino**	**55.65**	**9**	*i*P	**P**	**02 12 38.8**	**-0.4**		
BILL				pmax	pmax				
	comp=Z,313nm,1.7s								
KHU	**Kahuku**	**55.67**	**76**	P	**P**	**02 12 40.2**	**-0.2**		
KHU	**Kahuku**	**55.67**	**76**	P	**P**	**02 12 40.2**	**-0.2**		
KHU				pmax	pmax				
	comp=Z,372nm,1.5s								
HMH	**Humu'ula Sheep**	**55.77**	**76**	P	**P**	**02 12 41.5**	**+0.3**		
FALS	**False Pass**	**56.38**	**32**	P	**P**	**02 12 47.9**	**+3.3**		
FALS	**False Pass**	**56.38**	**32**	P	**P**	**02 12 45.8**	**+1.2**		
	baz=244								
TAU	**Tasmania Unive**	**56.51**	**179**	P	**P**	**02 12 45.0**	**-0.5**		
TAU	**Tasmania Unive**	**56.51**	**179**	P	**P**	**02 12 45.0**	**-0.5**		
TAU				pmax	pmax				
	comp=Z,94nm,1.3s								
XMAS	**Kiritimati**	**56.74**	**97**	IAMs_20	IAMs_20	02 37 34.6			
	comp=Z,6µm,19.0s								
XMAS	**Kiritimati**	**56.74**	**97**	P	**P**	**02 12 50.0**	**+2.2**		
EVN	**Everest**	**56.87**	**294**	⇑P	**P**	**02 12 49.5**	**+0.2**		
GAMB	**Gambell**	**57.70**	**21**	P	**P**	**02 12 56.1**	**+2.4**		
	baz=230,SNR=5.3								
BOK	**Bokaro**	**57.72**	**289**	*e*P	**P**	**02 12 55.2**	**+0.6**		
BOK				IAmb	IAmb	02 13 01.1			
	comp=Z,100nm,1.3s								
M11K	**Mekoryuk**	**57.79**	**26**	P	**P**	**02 12 56.5**	**+2.0**		
	baz=238								
WMQ	**Urumqi**	**58.00**	**313**	*e*P	**P**	**02 12 57.2**	**+0.8**		
WMQ				PcP	**PcP**	**02 13 48.2**	**-0.1**		
WMQ				S	**S**	**02 20 58.4**	**+2.0**		
WMQ				ScS	**ScS**	**02 22 46.0**	**+0.3**		
WMQ				pmax	pmax				
	comp=Z,84nm,1.3s								
WMQ				pmax	pmax				
	comp=Z,2µm,7.5s								
WMQ				LR	LR				
	comp=Z,2µm,19.7s								
WMQ				LR	LR				
	comp=Z,5µm,19.7s								
WMQ				LR	LR				
	comp=Z,4µm,21.3s								
SDPT	**Sand Point**	**58.12**	**33**	P	**P**	**02 13 00.3**	**+3.4**		
SDPT	**Sand Point**	**58.12**	**33**	P	**P**	**02 12 57.9**	**+1.0**		
	baz=246								
TOZ	**Tahuroa Road**	**58.17**	**153**	P	**P**	**02 12 57.4**	**0.0**		
CNBA	**Chernabura Isl**	**58.38**	**33**	IAMs_20	IAMs_20	02 35 45.0			
	comp=Z,5µm,20.0s								
CHNA	**Chernabura Isl**	**58.39**	**33**	P	**P**	**02 13 00.1**	**+1.3**		
	baz=247								
HIZ	**Hauiti**	**58.54**	**154**	P	**P**	**02 12 59.3**	**-0.7**		
HIZ				IAmb	IAmb	02 13 06.8			
	comp=Z,190nm,1.4s								
TIXI	**Tiksi**	**58.71**	**354**	P	**P**	**02 12 60.0**	**-0.8**		
TIXI	**Tiksi**	**58.71**	**354**	IAMs_20	IAMs_20	02 40 19.6			
	comp=Z,4µm,18.0s								
TIXI	**Tiksi**	**58.71**	**354**	⇑P	**P**	**02 12 59.3**	**-1.4**		
TIXI	**Tiksi**	**58.71**	**354**	⇓*i*P	**P**	**02 12 59.2**	**-1.5**		
TIXI				pmax	pmax				
	comp=Z,31nm,1.1s								
TIXI	**Tiksi**	**58.71**	**354**	LR	LR	02 41 10.0			
	comp=Z,2µm,18.9s,baz=176,slow=39								
S14K	**Fog Glacier**	**58.98**	**32**	P	**P**	**02 13 04.0**	**+1.1**		
	baz=246								
M13K	**Dall Lake**	**59.02**	**26**	P	**P**	**02 13 04.8**	**+1.7**		
M13K				IAMs_20	IAMs_20	02 35 22.8			
	comp=Z,6µm,21.0s								
M13K	**Dall Lake**	**59.02**	**26**	P	**P**	**02 13 05.8**	**+2.7**		
	baz=240								
URZ	**Urewera**	**59.32**	**152**	LR	LR	02 36 01.2			
	comp=Z,2µm,21.7s,baz=66,slow=33								
O14K	**Tigyukauivet M**	**59.41**	**28**	P	**P**	**02 13 05.8**	**0.0**		
O14K				IAmb	IAmb	02 13 40.6			
	comp=Z,105nm,1.1s								
O14K	**Tigyukauivet M**	**59.41**	**28**	P	**P**	**02 13 08.0**	**+2.3**		
	baz=243								
N14K	**Kuskokwak Cree**	**59.52**	**27**	P	**P**	**02 13 08.8**	**+2.3**		
	baz=242								
RTZ	**Ruatahuna**	**59.56**	**152**	P	**P**	**02 13 04.2**	**-2.9**		
DGZ	**Jazzator, Alta**	**59.56**	**320**	*o i*P	**P**	**02 13 07.8**	**+0.6**		
DGZ				pmax	pmax				
	comp=Z,74nm,1.3s								
CHGN	**Chignik**	**59.57**	**32**	P	**P**	**02 13 09.2**	**+2.3**		
	baz=248								
QRZ	**Quartz Range**	**59.58**	**157**	P	**P**	**02 13 06.5**	**-0.7**		
L14K	**Kuka Creek**	**59.76**	**26**	P	**P**	**02 13 09.1**	**+0.9**		
L14K				IAMs_20	IAMs_20	02 36 05.4			
	comp=Z,4µm,21.0s								
L14K	**Kuka Creek**	**59.76**	**26**	P	**P**	**02 13 10.7**	**+2.5**		
	baz=241								
M14K	**Bethel**	**59.79**	**26**	P	**P**	**02 13 09.4**	**+1.1**		
M14K				IAMs_20	IAMs_20	02 36 48.7			
	comp=Z,5µm,20.0s								
M14K	**Bethel**	**59.79**	**26**	P	**P**	**02 13 11.1**	**+2.8**		
	baz=242,SNR=18								
BKZ	**Black Stump Fm**	**59.79**	**153**	P	**P**	**02 13 06.4**	**-2.4**		
BKZ	**Black Stump Fm**	**59.79**	**153**	P	**P**	**02 13 07.1**	**-1.6**		
TKNZ	**Takaka Hill**	**59.92**	**157**	P	**P**	**02 13 07.6**	**-1.9**		
O15K	**Ungalikthiuk R**	**60.04**	**29**	P	**P**	**02 13 12.3**	**+2.1**		
	baz=245,SNR=13								
TNA	**Tin City**	**60.08**	**20**	P	**P**	**02 13 12.6**	**+2.3**		
	baz=233,SNR=22								
TNA	**Tin City**	**60.08**	**20**	⇑P	**P**	**02 13 13.9**	**+3.6**		
J14K	**Nanvaranak Lak**	**60.11**	**24**	P	**P**	**02 13 12.0**	**+1.5**		
J14K				IAmb	IAmb	02 13 16.2			
	comp=Z,212nm,1.5s								
J14K				IAMs_20	IAMs_20	02 35 45.0			
	comp=Z,5µm,21.0s								
J14K	**Nanvaranak Lak**	**60.11**	**24**	P	**P**	**02 13 13.5**	**+3.0**		
	baz=239								
DSZ	**Denniston Nort**	**60.11**	**158**	P	**P**	**02 13 09.6**	**-1.3**		
DSZ				IAmb	IAmb	02 13 14.2			
	comp=Z,143nm,1.4s								
DSZ				IAMs_20	IAMs_20	02 39 41.5			
	comp=Z,4µm,19.0s								
MRNZ	**Matariki Terra**	**60.16**	**157**	P	**P**	**02 13 09.8**	**-1.3**		
NNZ	**Nelson**	**60.24**	**157**	P	**P**	**02 13 10.8**	**-0.9**		
NNZ				IAmb	IAmb	02 13 18.8			
	comp=Z,223nm,1.9s								
M15K	**Kasigluk River**	**60.31**	**27**	P	**P**	**02 13 14.5**	**+2.5**		
	baz=243								
N15K	**Kwethluk River**	**60.34**	**28**	P	**P**	**02 13 13.3**	**+1.1**		
N15K				IAMs_20	IAMs_20	02 36 02.3			
	comp=Z,5µm,22.0s								
N15K	**Kwethluk River**	**60.34**	**28**	P	**P**	**02 13 14.7**	**+2.5**		
	baz=244								
ANM	**Nome**	**60.39**	**22**	P	**P**	**02 13 12.9**	**+0.4**		
ANM				IAmb	IAmb	02 13 17.9			
	comp=Z,242nm,1.6s								
ANM	**Nome**	**60.39**	**22**	P	**P**	**02 13 15.5**	**+3.0**		
	baz=236,SNR=30								
ANM	**Nome**	**60.39**	**22**	P	**P**	**02 13 12.9**	**+0.4**		
ANM				pmax	pmax				
	comp=Z,242nm,1.6s								
L15K	**Ungalak Mounta**	**60.43**	**26**	P	**P**	**02 13 14.8**	**+2.1**		
	baz=242								
R16K	**Pilot Point**	**60.47**	**31**	P	**P**	**02 13 15.1**	**+1.9**		
	baz=248								
THZ	**Tophouse**	**60.53**	**157**	P	**P**	**02 13 12.9**	**-0.9**		
VIS	**Vishakhapatnam**	**60.53**	**283**	⇑*e*P	**P**	**02 13 14.3**	**+0.1**		
VIS				IAmb	IAmb	02 13 22.0			
	comp=Z,62nm,0.9s								
F14K	**Arctic Creek**	**60.57**	**21**	P	**P**	**02 13 15.9**	**+2.3**		
	baz=235								
TCW	**Tory Channel**	**60.58**	**156**	P	**P**	**02 13 12.8**	**-1.2**		
TUWZ	**Tuamarina**	**60.64**	**156**	P	**P**	**02 13 14.0**	**-0.4**		
MRZ	**Mangatainoka R**	**60.65**	**155**	P	**P**	**02 13 13.3**	**-1.2**		
MRZ				IAmb	IAmb	02 13 19.2			
	comp=Z,118nm,1.3s								
ZSN	**Zaisan**	**60.69**	**317**	*e*P	**P**	**02 13 14.7**	**-0.2**		
	comp=Z,111nm,2.5s,baz=317								
ZSN				*e*S	**S**	**02 21 32.1**	**+1.1**		
	baz=317								
ZSN	**Zaisan**	**60.69**	**317**	*e*P	**P**	**02 13 14.7**	**-0.2**		
ZSN				*e*S	**S**	**02 21 32.1**	**+1.1**		
ZSN				pmax	pmax				
	comp=Z,111nm,2.5s								
K15K	**Wolf Creek Mou**	**60.70**	**25**	P	**P**	**02 13 16.1**	**+1.4**		
K15K				IAmb	IAmb	02 13 20.1			
	comp=Z,211nm,1.5s								
K15K				IAMs_20	IAMs_20	02 36 45.6			
	comp=Z,5µm,21.0s								
K15K	**Wolf Creek Mou**	**60.70**	**25**	P	**P**	**02 13 16.7**	**+2.1**		
	baz=241								
SNZO	**South Karori**	**60.84**	**156**	IAMs_20	IAMs_20	02 39 36.9			
	comp=Z,5µm,18.0s								
P16K	**Nushagak River**	**60.84**	**29**	P	**P**	**02 13 17.1**	**+1.5**		
	baz=246								
INZ	**Inchbonnie**	**60.85**	**159**	IAMs_20	IAMs_20	02 41 36.8			
	comp=Z,5µm,18.0s								
CHIR	**Chirikof Islan**	**60.86**	**33**	P	**P**	**02 13 17.7**	**+1.9**		
	baz=250								
BFZ	**Birch Farm**	**60.94**	**154**	P	**P**	**02 13 16.6**	**+0.1**		
BFZ				IAmb	IAmb	02 13 42.6			
	comp=Z,170nm,1.5s								
BFZ				IAMs_20	IAMs_20	02 41 30.7			
	comp=Z,5µm,18.0s								
O16K	**Kokwok River B**	**61.02**	**29**	P	**P**	**02 13 17.9**	**+1.1**		
O16K				IAmb	IAmb	02 13 21.9			
	comp=Z,231nm,1.5s								
O16K	**Kokwok River B**	**61.02**	**29**	P	**P**	**02 13 19.1**	**+2.3**		
	baz=246								
N16K	**Nishlik Lake**	**61.07**	**28**	P	**P**	**02 13 20.0**	**+2.8**		
	baz=245								
G15K	**Niukluk**	**61.11**	**22**	P	**P**	**02 13 19.8**	**+2.5**		
	baz=238								
JCZ	**Jackson Bay**	**61.19**	**162**	P	**P**	**02 13 20.7**	**+2.5**		
LTZ	**Lake Taylor**	**61.19**	**158**	P	**P**	**02 13 17.9**	**-0.3**		
LTZ				IAmb	IAmb	02 13 22.2			
	comp=Z,113nm,1.4s								
LTZ				IAMs_20	IAMs_20	02 40 42.9			
	comp=Z,5µm,18.0s								
M16K	**Timber Creek**	**61.22**	**27**	P	**P**	**02 13 18.6**	**+0.5**		
M16K				IAmb	IAmb	02 14 12.4			
	comp=Z,152nm,1.4s								
M16K

M17K IAMs_20 IAMs_20 02 37 17.4
comp=Z,138nm,1.1s
comp=Z,5µm,21.0s
M17K Holitna River 62.05 27 P P 02 13 25.4 +1.7
baz=246
MQZ McQueen's Vall 62.13 159 P P 02 13 23.4 -1.0
MQZ IAmb IAmb 02 13 29.6
comp=Z,110nm,1.4s
MLZ Mavora Lakes 62.16 163 P P 02 13 23.3 -1.4
MLZ IAmb IAmb 02 14 47.5
comp=Z,245nm,1.9s
J17K VABM Dome 62.21 24 P P 02 13 25.4 +0.6
J17K IAMs_20 IAMs_20 02 37 32.7
comp=Z,5µm,20.0s
J17K VABM Dome 62.21 24 P P 02 13 26.6 +1.8
baz=243,SNR=34
K17K Iditarod 62.23 25 P P 02 13 26.0 +1.1
K17K IAMs_20 IAMs_20 02 37 32.6
comp=Z,4µm,20.0s
K17K Iditarod 62.23 25 P P 02 13 26.9 +1.9
baz=244
ZAA0 Zalesovo Array 62.24 324 P P 02 13 24.4 -0.8
ZAA0 IAmb IAmb 02 14 04.0
comp=Z,92nm,1.2s
ZAA0 IAMs_20 IAMs_20 02 40 46.5
comp=Z,4µm,20.0s
ZALV Zalesovo Beam 62.24 324 P P 02 13 24.7 -0.5
comp=Z,13nm,0.7s,baz=100,slow=7.2,SNR=28
ZALV S S 02 21 43.6 -6.8
comp=Z,0.4nm,0.4s,baz=247,slow=34,SNR=1.3
ZALV LR LR 02 40 58.2
comp=Z,4µm,19.8s,baz=104,slow=37
comp=Z,13nm,0.7s
P18K Big Mountain, 62.29 29 P P 02 13 26.8 +1.4
P18K Big Mountain, 62.29 29 P P 02 13 26.4 +1.0
baz=249
MK31 Makanchi Array 62.30 316 P P 02 13 25.9 +0.1
MK31 Makanchi Array 62.30 316 P P 02 13 25.9 +0.1
MK31 pmax pmax
comp=Z,50nm,1.2s
MKAR Makanchi Array 62.30 316 *i* P P 02 13 25.7 -0.1
MKAR pmax pmax
comp=Z,15nm,0.7s
MKAR Makanchi Array 62.30 316 P P 02 13 25.8 +0.1
comp=Z,14nm,0.7s,baz=93,slow=8.0,SNR=100
MKAR S S 02 21 46.0 -5.5
comp=Z,0.2nm,0.6s,baz=353,slow=40,SNR=1.1
MKAR LR LR 02 42 54.5
comp=Z,3µm,18.2s,baz=104,slow=38
comp=Z,14nm,0.7s
N18K Kilae Creek 62.46 28 P P 02 13 27.0 +0.5
N18K IAmb IAmb 02 14 02.6
comp=Z,119nm,1.1s
N18K Kilae Creek 62.46 28 P P 02 13 27.6 +1.0
baz=248
O18K Koktuh Hills 62.47 29 P P 02 13 26.7 +0.1
O18K IAmb IAmb 02 14 12.1
comp=Z,98nm,1.2s
O18K Koktuh Hills 62.47 29 P P 02 13 28.7 +2.1
baz=249,SNR=7.8
C16K Lisburne Hills 62.51 18 P P 02 13 27.1 +0.4
C16K Lisburne Hills 62.51 18 P P 02 13 28.8 +2.2
baz=235
MAKZ Makanchi 62.51 316 P P 02 13 27.3 +0.1
MAKZ IAMs_20 IAMs_20 02 42 40.7
comp=Z,4µm,19.0s
MAKZ Makanchi 62.51 316 ⇑P P 02 13 26.4 -0.8
MAKZ Makanchi 62.51 316 P P 02 13 27.3 +0.1
MAKZ pmax pmax
comp=Z,48nm,1.0s
MAKZ MLR MLR
comp=Z,4µm,19.0s
OHAK Old Harbor 62.54 32 P P 02 13 27.1 +0.1
OHAK Old Harbor 62.54 32 P P 02 13 30.6 +3.6
OHAK Old Harbor 62.54 32 P P 02 13 28.0 +1.0
baz=252,SNR=6.7
G17K Kiwalik Mounta 62.59 22 P P 02 13 28.6 +1.3
baz=241
H17K Granite Mounta 62.60 23 P P 02 13 27.3 -0.1
H17K IAmb IAmb 02 13 32.9
comp=Z,191nm,1.6s
H17K IAMs_20 IAMs_20 02 37 54.2
comp=Z,5µm,20.0s
H17K Granite Mounta 62.60 23 P P 02 13 29.0 +1.6
baz=242,SNR=21
L18K Granite Mounta 62.70 26 P P 02 13 28.4 +0.3
L18K IAMs_20 IAMs_20 02 37 25.6
comp=Z,6µm,20.0s
L18K Granite Mounta 62.70 26 P P 02 13 29.6 +1.5
baz=246
SVW2 Sparrevohn 62.75 28 P P 02 13 29.6 +1.1
SVW2 IAmb IAmb 02 14 04.5
comp=Z,96nm,1.2s
SVW2 Sparrevohn 62.75 28 P P 02 13 32.0 +3.5
M18K Stony River 62.80 27 P P 02 13 30.2 +1.5
baz=247,SNR=16
F17K Baldwin Pennin 62.85 21 P P 02 13 29.5 +0.6
F17K IAmb IAmb 02 14 14.4
comp=Z,189nm,1.4s
F17K Baldwin Pennin 62.85 21 P P 02 13 30.5 +1.5
baz=240,SNR=41
Q19K Cape Douglas, 62.90 30 IAMs_20 IAMs_20 02 38 32.1
comp=Z,6µm,20.0s
Q19K Cape Douglas, 62.90 30 P P 02 13 30.9 +1.3
baz=251
E17K Hotham Inlet 62.98 20 P P 02 13 31.6 +1.7
baz=239
O19K Port Alsworth 63.01 29 P P 02 13 32.0 +1.9
O19K IAmb IAmb 02 14 05.5
comp=Z,99nm,1.1s
O19K Port Alsworth 63.01 29 P P 02 13 30.8 +0.7
baz=250,SNR=6.6
KDAK Kodiak Island 63.07 32 P P 02 13 30.9 +0.3
KDAK Kodiak Island 63.07 32 P P 02 13 31.9 +1.3
baz=252
KDAK Kodiak Island 63.07 32 ⇓P P 02 13 34.9 +4.3
KDAK Kodiak Island 63.07 32 P P 02 13 30.9 +0.3
KDAK pmax pmax
comp=Z,272nm,1.5s
KDAK Kodiak Island 63.07 32 LR LR 02 39 15.4
comp=Z,6µm,20.2s,baz=268,slow=34
RDOG Red Dog Mine 63.14 19 P P 02 13 31.7 +0.8
RDOG IAmb IAmb 02 13 36.2
comp=Z,127nm,1.3s
RDOG Red Dog Mine 63.14 19 P P 02 13 32.1 +1.2
baz=237,SNR=8.7
N19K Bonanza Creek 63.15 28 P P 02 13 31.9 +0.7
N19K Bonanza Creek 63.15 28 P P 02 13 32.0 +0.7
baz=249
J18K Innoko River 63.20 25 P P 02 13 31.3 -0.1
J18K IAmb IAmb 02 13 36.6
comp=Z,148nm,1.7s
J18K IAMs_20 IAMs_20 02 38 14.7
comp=Z,4µm,19.0s
J18K Innoko River 63.20 25 P P 02 13 32.6 +1.1
baz=246
TTA Tatalina 63.27 26 P P 02 13 31.4 -0.6
TTA IAmb IAmb 02 13 37.1
comp=Z,148nm,1.5s
TTA Tatalina 63.27 26 P P 02 13 34.8 +2.8
TTA Tatalina 63.27 26 P P 02 13 33.4 +1.4
baz=246,SNR=24
TTA Tatalina 63.27 26 ⇓P P 02 13 34.1 +2.1
TTA Tatalina 63.27 26 P P 02 13 31.4 -0.6
TTA pmax pmax
comp=Z,148nm,1.5s
H18K Honhosa River 63.28 23 P P 02 13 32.8 +0.9
H18K IAmb IAmb 02 13 36.8
comp=Z,198nm,1.5s
H18K IAMs_20 IAMs_20 02 38 36.9
comp=Z,5µm,20.0s
H18K Honhosa River 63.28 23 P P 02 13 33.1 +1.2
baz=243
C17K DeLong Mountai 63.29 19 P P 02 13 33.8 +1.9
baz=237
P19K Oil Pt 63.34 30 P P 02 13 31.9 -0.5
P19K IAMs_20 IAMs_20 02 39 57.7
comp=Z,4µm,20.0s
P19K Oil Pt 63.34 30 P P 02 13 32.8 +0.4
baz=251
RAR Rarotonga 63.34 123 LR LR 02 37 23.1
comp=Z,2µm,18.7s,baz=296,slow=33
Q20K Shuyak Island 63.42 31 P P 02 13 33.9 +1.0
baz=252
SYI Shuyak Island 63.42 31 P P 02 13 33.3 +0.4
L19K White Mountain 63.48 27 P P 02 13 33.5 +0.1

L19K IAmb IAmb 02 14 09.8
comp=Z,109nm,1.1s
L19K IAMs_20 IAMs_20 02 38 01.4
comp=Z,5µm,21.0s
L19K White Mountain 63.48 27 P P 02 13 34.6 +1.2
baz=248
F18K Selawik 63.48 21 P P 02 13 34.3 +1.2
baz=241,SNR=16
G18K Tagagawik 63.51 22 P P 02 13 34.9 +1.4
G18K IAmb IAmb 02 14 18.4
comp=Z,194nm,1.4s
G18K Tagagawik 63.51 22 P P 02 13 34.7 +1.2
baz=243,SNR=41
E18K Tukpahlearik C 63.56 20 P P 02 13 34.2 +0.5
E18K IAmb IAmb 02 14 30.1
comp=Z,105nm,1.1s
E18K Tukpahlearik C 63.56 20 P P 02 13 34.7 +1.0
baz=240
M19K Big River Lodg 63.58 27 P P 02 13 34.9 +0.9
M19K IAMs_20 IAMs_20 02 38 15.1
comp=Z,5µm,21.0s
M19K Big River Lodg 63.58 27 P P 02 13 34.7 +0.7
baz=249
GCSA Galena City Sc 63.67 24 P P 02 13 35.7 +1.3
baz=245,SNR=5.5
O20K Slope Mountain 63.77 29 P P 02 13 35.1 -0.2
baz=251,SNR=6.8
PDGK Pegormoye 63.81 312 P P 02 13 35.2 -0.8
SHLS Shalkode 63.82 311 *e*P P 02 13 33.6 -2.4
comp=Z,85nm,2.0s,baz=312
SHLS Shalkode 63.82 311 *e*P P 02 13 33.6 -2.4
SHLS pmax pmax
comp=Z,85nm,2.0s
RSO Redoubt South 63.83 29 P P 02 13 36.0 +0.1
J19K Poorman 63.86 25 P P 02 13 35.7 -0.1
J19K IAMs_20 IAMs_20 02 38 34.1
comp=Z,5µm,21.0s
J19K Poorman 63.86 25 P P 02 13 36.9 +1.2
baz=246
C18K Utukok River 64.00 19 P P 02 13 36.3 -0.4
C18K IAmb IAmb 02 14 21.5
comp=Z,140nm,1.5s
C18K Utukok River 64.00 19 P P 02 13 37.2 +0.5
baz=239
L20K Farewell, AK 64.02 27 P P 02 13 37.4 +0.5
baz=249
MDRS Chennai 64.10 278⇑ *e*P P 02 13 36.7 -1.5
HOM Homer 64.11 30 IAMs_20 IAMs_20 02 38 48.9
comp=Z,4µm,21.0s
HOM Homer 64.11 30 P P 02 13 37.5 +0.1
baz=252
M20K Styx River 64.13 27 IAmb IAmb 02 14 24.6
comp=Z,152nm,1.2s
M20K IAMs_20 IAMs_20 02 38 22.0
comp=Z,5µm,21.0s
M20K Styx River 64.13 27 P P 02 13 38.7 +1.0
baz=250
UZB Uzynbulak 64.14 311 *e*P P 02 13 37.3 -0.9
comp=Z,76nm,1.8s,baz=311
UZB Uzynbulak 64.14 311 *e*P P 02 13 37.3 -0.9
UZB pmax pmax
comp=Z,76nm,1.8s
H19K Roundabout Mou 64.17 23 IAMs_20 IAMs_20 02 38 10.1
comp=Z,4µm,21.0s
H19K Roundabout Mou 64.17 23 P P 02 13 38.4 +0.7
baz=245
B18K Kokolik River 64.19 18 P P 02 13 39.2 +1.4
baz=238
G19K Purcell Mounta 64.19 22 IAmb IAmb 02 14 23.0
comp=Z,165nm,1.4s
G19K IAMs_20 IAMs_20 02 38 54.4
comp=Z,4µm,20.0s
G19K Purcell Mounta 64.19 22 P P 02 13 38.8 +0.9
baz=244
K20K Telida 64.25 26 IAMs_20 IAMs_20 02 38 25.1
comp=Z,5µm,21.0s
K20K Telida 64.25 26 P P 02 13 39.1 +0.7
baz=248,SNR=30
F19K Shaleruckik Mo 64.25 21 IAmb IAmb 02 14 24.1
comp=Z,119nm,1.6s
F19K Shaleruckik Mo 64.25 21 P P 02 13 38.3 0.0
baz=243
CNPM China Poot 64.26 30 IAMs_20 IAMs_20 02 39 17.2
comp=Z,5µm,20.0s
N20K Mount Spurr 64.32 28 P P 02 13 39.2 +0.2
baz=251
KPKS Kokpek 64.41 312 *e*P P 02 13 39.0 -1.0
comp=Z,69nm,2.2s,baz=312
KPKS Kokpek 64.41 312 *e*P P 02 13 38.9 -1.0
KPKS pmax pmax
comp=Z,69nm,2.2s
BRLK Bradley Lake 64.50 30 IAmb IAmb 02 14 16.5
comp=Z,110nm,1.0s
DDI Dehra Dun 64.53 297 *e*P P 02 13 39.7 -1.1
J20K Nowinta River 64.53 25 IAMs_20 IAMs_20 02 38 55.4
comp=Z,5µm,21.0s
J20K Nowinta River 64.53 25 P P 02 13 40.9 +0.8
baz=248
BRSE Bradley Lake S 64.57 30 P P 02 13 40.5 0.0
baz=253,SNR=7.9
ZHN Zhinishke 64.57 311 *e*P P 02 13 40.2 -0.7
baz=311
ZHN Zhinishke 64.57 311 *e*P P 02 13 40.2 -0.7
SATY Saty 64.58 311 *i* P P 02 13 40.5 -0.6
comp=Z,130nm,2.3s,baz=311
SATY Saty 64.58 311 *i* P P 02 13 40.4 -0.6
SATY pmax pmax
comp=Z,130nm,2.3s
I20K Naaghedeneel 64.63 24 IAMs_20 IAMs_20 02 39 29.5
comp=Z,6µm,21.0s
I20K Naaghedeneel 64.63 24 P P 02 13 41.6 +0.9
baz=247
MALK Mahakanadarawa 64.65 273 ⇑P P 02 13 42.6 +0.8
CAPN Captain Cook N 64.67 29 IAMs_20 IAMs_20 02 45 09.0
comp=Z,4µm,18.0s
CAPN Captain Cook N 64.67 29 P P 02 13 41.6 +0.5
baz=252
PALK Pallekele 64.72 272 LR LR 02 41 40.6
comp=Z,2µm,19.3s,baz=173,slow=36
E19K Redstone River 64.72 21 IAmb IAmb 02 13 46.7
comp=Z,214nm,1.7s
E19K Redstone River 64.72 21 P P 02 13 41.9 +0.5
baz=243
C19K Lookout Ridge 64.73 19 IAMs_20 IAMs_20 02 45 56.9
comp=Z,4µm,18.0s
C19K Lookout Ridge 64.73 19 P P 02 13 42.7 +1.3
baz=240
H20K Anotleneega Mo 64.75 23 P P 02 13 42.4 +0.8
baz=246
A19K Wainwright 64.85 17 P P 02 13 43.5 +1.4
baz=238
SKT Skwentna 64.88 27 IAmb IAmb 02 14 26.2
comp=Z,107nm,1.3s
SKT IAMs_20 IAMs_20 02 39 08.4
comp=Z,4µm,21.0s
SKT Skwentna 64.88 27 P P 02 13 43.0 +0.5
baz=251,SNR=16
PPLA Purkeypile 64.89 26 P P 02 13 43.3 +0.5
baz=250,SNR=15
D19K Kuna River 64.91 20 IAmb IAmb 02 14 27.8
comp=Z,192nm,1.5s
D19K Kuna River 64.91 20 P P 02 13 42.7 +0.2
baz=242
F20K Avaraart Lake 65.08 21 P P 02 13 44.7 +1.1
baz=245,SNR=35
SUA Susitna One 65.08 28 IAmb IAmb 02 13 49.1
comp=Z,162nm,1.6s
SUA Susitna One 65.08 28 P P 02 13 44.4 +0.5
baz=252,SNR=9.7
ARXS Arharly 65.09 312 *e*P P 02 13 43.9 -0.4
HYB Hyderabad 65.09 283 *e*P P 02 13 44.6 -0.1
HYB *es*P **sP** 02 13 48.8 -0.8
HYB *e*PcP **PcP** 02 14 16.8 -0.7
HYB *e*S S 02 22 27.6 +0.4
CAST Castle Rocks 65.11 26 IAMs_20 IAMs_20 02 39 32.5
comp=Z,5µm,20.0s
CAST Castle Rocks 65.11 26 P P 02 13 44.7 +0.7
baz=250,SNR=46
CHUM Lake Minchumin 65.17 25 P P 02 13 44.7 +0.4
baz=250,SNR=19
O22K Cooper Landing 65.27 29 P P 02 13 46.0 +1.0
baz=254,SNR=9.5
SMLA Simla 65.27 298 *e*P P 02 13 46.3 +0.8
SMLA IAmb IAmb 02 13 52.7
comp=Z,248nm,1.5s
SEW Seward 65.29 30 P P 02 13 45.8 +0.7
baz=254,SNR=8.8

KURK Kurchatov 65.31 320 P P 02 13 45.3 -0.1
KURK Kurchatov 65.31 320 ⇑P P 02 13 45.2 -0.2
KURK Kurchatov 65.31 320 P P 02 13 45.3 -0.2
KURK pmax pmax
comp=Z,170nm,1.0s
KURK MLR MLR
comp=Z,7µm,20.0s
KURK Kurchatov 65.31 320 P P 02 13 45.7 +0.3
KURBB Kurchatov Arra 65.35 320 P P 02 13 45.6 -0.1
comp=Z,52nm,0.8s,baz=99,slow=6.6,SNR=151
KURBB S S 02 22 26.8 -2.3
comp=Z,0.2nm,0.3s,baz=80,slow=11,SNR=3.1
KURBB LR LR 02 44 07.4
comp=Z,8µm,18.8s,baz=100,slow=38
comp=Z,52nm,0.8s
RC01 Rabbit Creek A 65.43 29 P P 02 13 46.5 +0.4
baz=253,SNR=16
E20K Nigu River 65.44 20 P P 02 13 47.1 +1.0
baz=244
M22K Willow 65.45 28 P P 02 13 46.6 +0.5
baz=253,SNR=6.1
D20K Etivluk River 65.50 20 P P 02 13 47.5 +1.1
baz=243
CUT Chulitna 65.58 27 IAMs_20 IAMs_20 02 39 17.8
comp=Z,4µm,21.0s
CUT Chulitna 65.58 27 P P 02 13 48.2 +1.3
baz=252,SNR=5.6
MDOK Medeo 65.58 311 *e*P P 02 13 47.3 -0.3
baz=311
MDOK *e*S S 02 22 33.6 +0.9
baz=311
MDOK *i* LR LR 02 43 17.1
comp=Z,2µm,16.5s,baz=311
MDOK Medeo 65.58 311 *e*P P 02 13 47.2 -0.3
MDOK *e*S S 02 22 33.5 +0.9
MDOK MLR MLR
comp=Z,2µm,17.0s
H21K Melozitna Rive 65.61 23 IAmb IAmb 02 13 52.6
comp=Z,176nm,1.5s
H21K IAMs_20 IAMs_20 02 39 38.9
comp=Z,6µm,21.0s
H21K Melozitna Rive 65.61 23 P P 02 13 48.0 +0.8
baz=248,SNR=44
TNSS Tian-Shan 65.64 311 *e*P P 02 13 47.7 -0.6
baz=311
TNSS Tian-Shan 65.64 311 *e*P P 02 13 47.7 -0.6
G21K Allakaket 65.67 22 IAmb IAmb 02 13 52.8
comp=Z,135nm,1.6s
G21K IAMs_20 IAMs_20 02 40 22.3
comp=Z,3µm,20.0s
G21K Allakaket 65.67 22 P P 02 13 48.3 +0.8
baz=247
CHKK Chushkaly 65.67 312 *e*P P 02 13 47.1 -0.9
baz=312
CHKK Chushkaly 65.67 312 *e*P P 02 13 47.1 -0.9
AAA Alma-Ata 65.68 311 *e*P P 02 13 48.0 -0.1
baz=311
AAA Alma-Ata 65.68 311 *e*P P 02 13 48.0 -0.1
I21K Tanana 65.76 24 IAMs_20 IAMs_20 02 39 20.3
comp=Z,5µm,21.0s
I21K Tanana 65.76 24 P P 02 13 49.5 +1.4
baz=250
BPAW Bear Paw Mtn. 65.80 25 IAMs_20 IAMs_20 02 39 21.6
comp=Z,5µm,20.0s
BPAW Bear Paw Mtn. 65.80 25 P P 02 13 50.1 +1.6
baz=251,SNR=29
PMR Palmer 65.85 28 IAmb IAmb 02 14 43.6
comp=Z,88nm,1.1s
PMR Palmer 65.85 28 P P 02 13 50.5 +1.8
PMR Palmer 65.85 28 P P 02 13 49.3 +0.5
baz=254,SNR=14
TRF Thorofare Moun 65.89 26 IAmb IAmb 02 14 35.1
comp=Z,158nm,1.3s
TRF IAMs_20 IAMs_20 02 39 57.9
comp=Z,4µm,20.0s
TRF Thorofare Moun 65.89 26 P P 02 13 49.5 +0.3
baz=252,SNR=22
B20K Meade River 65.91 18 IAmb IAmb 02 13 54.3
comp=Z,180nm,1.4s
B20K Meade River 65.91 18 P P 02 13 49.8 +0.8
baz=242
F21K Alatna River 65.95 22 P P 02 13 50.0 +0.6
baz=247
GHO Glory Hole Cre 66.00 28 IAmb IAmb 02 14 28.6
comp=Z,133nm,1.2s
KNK Knik Glacier 66.11 29 IAMs_20 IAMs_20 02 40 31.1
comp=Z,4µm,20.0s
KNK Knik Glacier 66.11 29 P P 02 13 50.2 -0.3
baz=254,SNR=11
ULHL Ulahol 66.12 310 P P 02 13 56.9 +5.8
SNR=5.3
KUU Kurty 66.14 312 *e*P P 02 13 50.2 -0.8
baz=312
KUU *e*S S 02 22 39.2 0.0
baz=312
KUU LR LR 02 43 22.0
comp=Z,5µm,16.0s,baz=312
KUU Kurty 66.14 312 *e*P P 02 13 50.2 -0.8
KUU *e*S S 02 22 39.1 0.0
KUU MLR MLR
comp=Z,5µm,16.0s
MLY Manley 66.20 24 IAmb IAmb 02 14 36.0
comp=Z,132nm,1.3s
MLY IAMs_20 IAMs_20 02 39 57.2
comp=Z,4µm,20.0s
MLY Manley 66.20 24 P P 02 13 51.4 +0.3
baz=251,SNR=42
KSH Kashi 66.22 307 P P 02 13 55.2 +3.4
KSH pP pwP 02 13 59.3 -2.8
KSH sP sP 02 14 05.2 +8.6
KSH S S 02 22 42.4 +1.8
KSH pmax pmax
comp=Z,42nm,1.8s
KSH LR LR
comp=Z,2µm,18.2s
KSH LR LR
comp=Z,3µm,17.5s
KSH LR LR
comp=Z,4µm,17.5s
H22K Ishtalitna Cre 66.25 23 P P 02 13 51.3 0.0
baz=250
E21K Killik River 66.26 20 P P 02 13 51.8 +0.5
baz=246
P23K Montague Islan 66.26 30 P P 02 13 52.0 +0.6
baz=256
SML Sawmill 66.28 28 IAMs_20 IAMs_20 02 41 11.4
comp=Z,4µm,21.0s
SML Sawmill 66.28 28 P P 02 13 51.1 -0.5
baz=254,SNR=18
C21K Knifeblade Rid 66.28 20 P P 02 13 51.1 -0.4
baz=245
NRIK Noril'sk 66.34 341 IAmb IAmb 02 14 29.4
comp=Z,138nm,1.2s
NRIK IAMs_20 IAMs_20 02 44 54.6
comp=Z,4µm,18.0s
NRIK Noril'sk 66.34 341 *c i*P P 02 13 50.6 -1.2
NRIK pmax pmax
comp=Z,81nm,1.1s
NRIK Noril'sk 66.34 341 P P 02 13 50.9 -0.9
comp=Z,18nm,1.0s,baz=110,slow=7.6,SNR=25
NRIK S S 02 22 36.9 -3.8
comp=Z,0.9nm,0.3s,baz=323,slow=22,SNR=1.5
NRIK LR LR 02 44 55.6
comp=Z,3µm,18.6s,baz=116,slow=38
comp=Z,18nm,1.0s
BWN Browne 66.46 25 IAMs_20 IAMs_20 02 40 05.8
comp=Z,4µm,21.0s
WAT1 Susitna Watana 66.46 27 P P 02 13 53.0 +0.3
baz=254
RND Reindeer 66.49 26 IAmb IAmb 02 14 27.4
comp=Z,138nm,1.2s
RND IAMs_20 IAMs_20 02 39 33.8
comp=Z,4µm,21.0s
B21K Ikpikpuk River 66.53 19 IAmb IAmb 02 14 40.4
comp=Z,249nm,1.9s
B21K Ikpikpuk River 66.53 19 P P 02 13 54.1 +1.1
baz=245
MCK McKinley 66.55 26 P P 02 13 53.4 +0.1
baz=253,SNR=22
M23K Glacier View 66.55 28 P P 02 13 53.5 +0.2
baz=255,SNR=7.7
G22K Bettles 66.56 22 P P 02 13 53.1 -0.1
baz=249
TKM2 Tokmak 2 66.63 311 P P 02 13 54.9 +0.5
SNR=15
TKM2 Tokmak 2 66.63 311 P P 02 13 53.6 -0.8
Q23K Middleton Isla 66.65 31 P P 02 13 53.0 -0.8
baz=257

A21K	**Barrow**	**66.68**	**17**	P	**P**		**02 13 54.0**	**+0.1**
	baz=242,SNR=22								
SCM	**Sheep Creek Mo**	**66.75**	**28**	IAMs_20	IAMs_20		02 40 50.7		
	comp=Z,4μm,20.0s								
SCM	**Sheep Creek Mo**	**66.75**	**28**	P	**P**		**02 13 53.8**	**-0.8**	
	baz=255,SNR=18								
NEA2	**Nenana**	**66.75**	**25**	IAmb	IAmb		02 13 58.0		
	comp=Z,140nm,1.9s								
NEA2				IAMs_20	IAMs_20		02 40 33.6		
	comp=Z,4μm,20.0s								
NEA2	**Nenana**	**66.75**	**25**	P	**P**		**02 13 53.9**	**-0.6**	
	baz=252,SNR=7.2								
WAT6	**Susitna Watana**	**66.75**	**27**	P	**P**		**02 13 54.3**	**-0.5**	
	baz=255,SNR=24								
HIN	**Hinchinbrook I**	**66.79**	**30**	IAMs_20	IAMs_20		02 40 54.9		
	comp=Z,6μm,21.0s								
I23K	**Minto, Yukon-K**	**66.80**	**24**	IAMs_20	IAMs_20		02 40 14.9		
	comp=Z,6μm,20.0s								
I23K	**Minto, Yukon-K**	**66.80**	**24**	P	**P**		**02 13 54.2**	**-0.5**	
	baz=252,SNR=46								
D22K	**Ayikyak River**	**66.87**	**20**	IAmb	IAmb		02 14 00.8		
	comp=Z,114nm,1.2s								
D22K				IAMs_20	IAMs_20		02 48 46.4		
	comp=Z,3μm,18.0s								
D22K	**Ayikyak River**	**66.87**	**20**	P	**P**		**02 13 54.9**	**-0.2**	
	baz=247								
G23K	**Bananza Creek**	**67.03**	**23**	IAmb	IAmb		02 14 01.8		
	comp=Z,191nm,1.5s								
G23K				IAMs_20	IAMs_20		02 41 05.1		
	comp=Z,4μm,20.0s								
G23K	**Bananza Creek**	**67.03**	**23**	P	**P**		**02 13 56.9**	**+0.6**	
	baz=251								
DHY	**Denali Highway**	**67.04**	**27**	IAmb	IAmb		02 14 32.5		
	comp=Z,110nm,1.2s								
DHY				IAMs_20	IAMs_20		02 40 04.5		
	comp=Z,5μm,21.0s								
DHY	**Denali Highway**	**67.04**	**27**	P	**P**		**02 13 55.8**	**-0.8**	
	baz=255,SNR=19								
KBK	**Karagaybulak**	**67.09**	**311**	P	**P**		**02 13 57.5**	**+0.1**	
	SNR=10.0								
WRH	**Wood River Hil**	**67.12**	**25**	IAmb	IAmb		02 14 00.7		
	comp=Z,193nm,1.6s								
WRH				IAMs_20	IAMs_20		02 40 23.4		
	comp=Z,4μm,21.0s								
COLD	**Coldfoot**	**67.14**	**22**	P	**P**		**02 13 57.0**	**+0.1**	
	baz=250,SNR=50								
EYAK	**Cordova Ski Ar**	**67.19**	**30**	P	**P**		**02 13 56.4**	**-0.9**	
	baz=257								
MDM	**Murphy Dome**	**67.20**	**25**	IAMs_20	IAMs_20		02 40 15.5		
	comp=Z,5μm,21.0s								
B22K	**Teshekpuk Lake**	**67.21**	**19**	IAmb	IAmb		02 14 02.3		
	comp=Z,161nm,1.4s								
B22K	**Teshekpuk Lake**	**67.21**	**19**	P	**P**		**02 13 57.3**	**+0.1**	
	baz=246								
CHMS	**Chumysh**	**67.25**	**311**	P	P		02 14 04.8	+6.6	
	SNR=6.5								
CCB	**Clear Creek Bu**	**67.28**	**25**	IAmb	IAmb		02 14 01.7		
	comp=Z,211nm,1.6s								
CCB				IAMs_20	IAMs_20		02 40 38.8		
	comp=Z,4μm,20.0s								
KLU	**Klutina**	**67.31**	**29**	IAmb	IAmb		02 14 22.8		
	comp=Z,115nm,1.3s								
KLU				IAMs_20	IAMs_20		02 41 12.8		
	comp=Z,5μm,21.0s								
KLU	**Klutina**	**67.31**	**29**	P	**P**		**02 13 57.8**	**-0.4**	
	baz=257,SNR=8.3								
COLA	**College**	**67.33**	**25**	P	**P**		**02 13 58.6**	**+0.5**	
COLA				IAmb	IAmb		02 14 42.7		
	comp=Z,228nm,1.8s								
COLA	**College**	**67.33**	**25**	IAMs_20	IAMs_20		02 40 50.9		
	comp=Z,5μm,20.0s								
COLA	**College**	**67.33**	**25**	P	**P**		**02 13 59.9**	**+1.8**	
COLA	**College**	**67.33**	**25**	P	**P**		**02 13 57.8**	**-0.4**	
	baz=254								
COLA	**College**	**67.33**	**25**	⇑P	**P**		**02 13 59.2**	**+1.1**	
COLA	**College**	**67.33**	**25**	P	**P**		**02 13 58.6**	**+0.5**	
COLA				pmax	pmax				
	comp=Z,228nm,1.8s								
M24K	**Tolsona, Glenn**	**67.34**	**28**	IAMs_20	IAMs_20		02 40 48.4		
	comp=Z,4μm,20.0s								
M24K	**Tolsona, Glenn**	**67.34**	**28**	P	**P**		**02 13 58.9**	**+0.5**	
	baz=256,SNR=7.4								
SGDS	**Sogindy**	**67.36**	**311**	*e*P	**P**		**02 13 58.5**	**-0.3**	
	baz=312								
SGDS	**Sogindy**	**67.36**	**311**	*e*P	**P**		**02 13 58.5**	**-0.3**	
UCH	**Uchtor**	**67.40**	**310**	P	**P**		**02 14 00.3**	**+0.7**	
	SNR=13								
AAK	**Ala-Archa**	**67.43**	**311**	P	**P**		**02 13 59.0**	**-0.4**	
AAK	**Ala-Archa**	**67.43**	**311**	P	**P**		**02 13 58.8**	**-0.7**	
AAK	**Ala-Archa**	**67.43**	**311**	⇑P	**P**		**02 14 00.3**	**+0.9**	
AAK	**Ala-Archa**	**67.43**	**311**	P	**P**		**02 13 59.0**	**-0.4**	
AAK				pmax	pmax				
	comp=Z,24nm,1.0s								
AAK				MLR	MLR				
	comp=Z,5μm,19.0s								
AAK	**Ala-Archa**	**67.43**	**311**	S	**S**		**02 22 55.4**	**+0.4**	
	comp=Z,0.3nm,0.3s,baz=118,slow=23,SNR=0.9								
AAK	**Ala-Archa**	**67.43**	**311**	P	**P**		**02 13 59.6**	**+0.2**	
AAK				P	**P**		**02 13 59.6**	**+0.2**	
USP	**Ospenovka**	**67.44**	**311**	P	**P**		**02 14 00.9**	**+1.5**	
	SNR=8.4								
POKR	**Poker Plat Res**	**67.57**	**25**	IAMs_20	IAMs_20		02 41 10.3		
	comp=Z,5μm,21.0s								
POKR	**Poker Plat Res**	**67.57**	**25**	P	**P**		**02 13 59.3**	**-0.4**	
	baz=254,SNR=10								
D23K	**Nanushuk River**	**67.57**	**20**	P	**P**		**02 13 59.9**	**+0.3**	
	baz=249								
HDA	**Harding Lake**	**67.58**	**26**	IAmb	IAmb		02 14 03.4		
	comp=Z,197nm,1.7s								
HDA	**Harding Lake**	**67.58**	**26**	P	**P**		**02 14 00.1**	**+0.3**	
	baz=255,SNR=13								
H24K	**Noodor Dome**	**67.59**	**24**	IAMs_20	IAMs_20		02 41 01.3		
	comp=Z,5μm,20.0s								
H24K	**Noodor Dome**	**67.59**	**24**	P	**P**		**02 14 00.6**	**+0.7**	
	baz=253								
E23K	**Chandalar**	**67.63**	**21**	P	**P**		**02 14 00.8**	**+0.7**	
	baz=251								
RAGM	**Ragged Mountai**	**67.67**	**30**	IAMs_20	IAMs_20		02 41 25.3		
	comp=Z,5μm,20.0s								
IL31		**67.70**	**25**	IAmb	IAmb		02 14 03.9		
	comp=Z,183nm,1.4s								
ILAR	**Eielson Array**	**67.70**	**25**	P	**P**		**02 13 59.4**	**-1.1**	
	comp=Z,21nm,1.0s,baz=254,slow=5.6,SNR=74								
ILAR				LR	LR		02 41 13.6		
	comp=Z,3μm,21.4s,baz=249,slow=34								
	comp=Z,21nm,1.0s								
KAIM	**Kayak Island**	**67.71**	**31**	P	**P**		**02 14 00.3**	**-0.4**	
	baz=259								
BMRM	**Bremner River**	**67.83**	**29**	P	**P**		**02 14 01.6**	**+0.1**	
	baz=258,SNR=7.8								
TOLK	**Toolik Lake Re**	**67.84**	**21**	IAmb	IAmb		02 14 06.9		
	comp=Z,16nm,1.4s								
TOLK	**Toolik Lake Re**	**67.84**	**21**	P	**P**		**02 14 01.6**	**+0.2**	
	baz=250,SNR=63								
BTLS	**Baital**	**67.84**	**313**	*e*P	**P**		**02 14 01.6**	**-0.2**	
	comp=Z,65nm,2.0s,baz=313								
BTLS	**Baital**	**67.84**	**313**	*e*P	**P**		**02 14 01.6**	**-0.2**	
BTLS				pmax	pmax				
	comp=Z,65nm,2.0s								
PAX	**Paxson**	**67.86**	**27**	P	**P**		**02 14 01.8**	**+0.1**	
	baz=257,SNR=22								
HMT	**Hamilton**	**67.87**	**30**	IAMs_20	IAMs_20		02 41 08.2		
	comp=Z,6μm,21.0s								
HARP	**HAARP**	**67.87**	**28**	P	**P**		**02 14 01.9**	**+0.2**	
	baz=257,SNR=11								
K24K	**Donnelly Dome**	**67.92**	**26**	P	**P**		**02 14 02.0**	**+0.1**	
	baz=256,SNR=17								
EKS2	**Erkin-Say**	**67.96**	**311**	P	P		02 14 09.6	+6.9	
	SNR=6.7								
N25K	**Chitina, Valde**	**67.96**	**29**	IAmb	IAmb		02 14 06.8		
	comp=Z,215nm,1.6s								
N25K				IAMs_20	IAMs_20		02 41 30.8		
	comp=Z,5μm,21.0s								
N25K	**Chitina, Valde**	**67.96**	**29**	P	**P**		**02 14 02.8**	**+0.5**	
	baz=258,SNR=12								
G24K	**Hadweenzic Riv**	**68.00**	**23**	IAmb	IAmb		02 14 07.8		
	comp=Z,125nm,1.4s								
G24K				IAMs_20	IAMs_20		02 41 01.0		
	comp=Z,6μm,20.0s								
G24K	**Hadweenzic Riv**	**68.00**	**23**	P	**P**		**02 14 02.9**	**+0.6**	
	baz=253								
E24K	**Your Creek**	**68.04**	**22**	IAmb	IAmb		02 14 08.1		
	comp=Z,150nm,1.6s								
E24K	**Your Creek**	**68.04**	**22**	P	**P**		**02 14 03.0**	**+0.4**	
	baz=252								
F24K	**Squaw Lake**	**68.08**	**22**	P	**P**		**02 14 03.5**	**+0.5**	
	baz=252								
TRD	**Trivandrum**	**68.10**	**274**	⇑*e*P	**P**		**02 14 02.5**	**-1.4**	
TRD				IAmb	IAmb		02 14 12.1		
	comp=Z,117nm,1.0s								
BERG	**Berg Lake**	**68.15**	**30**	IAMs_20	IAMs_20		02 40 55.0		
	comp=Z,5μm,20.0s								
D24K	**Happy Valley**	**68.26**	**20**	IAMs_20	IAMs_20		02 49 42.3		
	comp=Z,3μm,18.0s								
D24K	**Happy Valley**	**68.26**	**20**	P	**P**		**02 14 04.8**	**+0.9**	
	baz=251								
J25K	**Salcha River,**	**68.29**	**26**	IAmb	IAmb		02 14 08.1		
	comp=Z,145nm,1.6s								
J25K				IAMs_20	IAMs_20		02 40 59.8		
	comp=Z,4μm,20.0s								
J25K	**Salcha River,**	**68.29**	**26**	P	**P**		**02 14 04.5**	**+0.2**	
	baz=256,SNR=24								
BGLC	**Bering Glacier**	**68.31**	**30**	P	**P**		**02 14 04.9**	**+0.6**	
	baz=260								
RIDG	**Independent Ri**	**68.31**	**27**	P	**P**		**02 14 05.0**	**+0.6**	
	baz=257,SNR=43								
VRDI	**Verde Repeater**	**68.42**	**29**	P	**P**		**02 14 05.9**	**+0.5**	
VRDI				IAmb	IAmb		02 14 10.1		
	comp=Z,147nm,1.4s								
VRDI				IAMs_20	IAMs_20		02 43 42.1		
	comp=Z,4μm,20.0s								
PRP	**Porcupine Dome**	**68.45**	**25**	IAMs_20	IAMs_20		02 41 36.5		
	comp=Z,5μm,20.0s								
PRP	**Porcupine Dome**	**68.45**	**25**	P	**P**		**02 14 05.9**	**+0.5**	
	baz=256,SNR=11								
C24K	**Franklin Bluff**	**68.49**	**20**	P	**P**		**02 14 06.2**	**+0.9**	
	baz=251								
CRQM	**Cirque**	**68.49**	**30**	IAmb	IAmb		02 14 30.2		
	comp=Z,150nm,1.2s								
CRQM				IAMs_20	IAMs_20		02 41 10.5		
	comp=Z,4μm,20.0s								
CRQE	**Cirque**	**68.51**	**30**	P	**P**		**02 14 06.6**	**+0.7**	
	baz=260,SNR=9.9								
WAX	**Waxell Ridge**	**68.58**	**30**	IAMs_20	IAMs_20		02 49 34.9		
	comp=Z,4μm,19.0s								
MENT	**Mentasta**	**68.63**	**27**	P	**P**		**02 14 09.6**	**+3.1**	
TGL	**Tana Glacier**	**68.64**	**30**	IAMs_20	IAMs_20		02 42 16.8		
	comp=Z,4μm,20.0s								
MCARA	**McCarthy VSAT**	**68.66**	**29**	IAmb	IAmb		02 14 51.1		
	comp=Z,115nm,1.2s								
MCARA				IAMs_20	IAMs_20		02 43 30.3		
	comp=Z,4μm,19.0s								
MCARA	**McCarthy VSAT**	**68.66**	**29**	P	**P**		**02 14 06.6**	**0.0**	
	baz=260,SNR=6.9								
SCRK	**Sand Creek**	**68.73**	**26**	IAmb	IAmb		02 14 11.7		
	comp=Z,204nm,1.5s								
SCRK				IAMs_20	IAMs_20		02 41 39.1		
	comp=Z,6μm,21.0s								
SCRK	**Sand Creek**	**68.73**	**26**	P	**P**		**02 14 07.5**	**+0.3**	
	baz=258,SNR=35								
L26K	**Log Cabin Wild**	**68.82**	**27**	IAMs_20	IAMs_20		02 41 45.5		
	comp=Z,4μm,21.0s								
FYU	**Fort Yukon**	**68.82**	**24**	IAMs_20	IAMs_20		02 41 59.4		
	comp=Z,4μm,20.0s								
ISLE	**Juniper Island**	**68.85**	**30**	IAMs_20	IAMs_20		02 41 30.8		
	comp=Z,3μm,20.0s								
M26K	**Nabesna, AK**	**68.86**	**28**	IAMs_20	IAMs_20		02 41 30.3		
	comp=Z,3μm,21.0s								
M26K	**Nabesna, AK**	**68.86**	**28**	P	**P**		**02 14 08.4**	**+0.5**	
	baz=259								
F25K	**Christian River**	**68.93**	**22**	P	**P**		**02 14 08.4**	**+0.1**	
	baz=255,SNR=57								
MESA	**MESA**	**68.97**	**31**	IAMs_20	IAMs_20		02 44 18.7		
	comp=Z,5μm,20.0s								
MESA	**MESA**	**68.97**	**31**	P	**P**		**02 14 08.0**	**-0.8**	
	baz=261								
BRZS	**Berezniki**	**69.02**	**318**	*e*P	**P**		**02 14 08.6**	**-0.5**	
	comp=Z,62nm,2.3s,baz=318								
BRZS	**Berezniki**	**69.02**	**318**	*e*P	**P**		**02 14 08.5**	**-0.5**	
BRZS				pmax	pmax				
	comp=Z,63nm,2.3s								
J26L	**Joseph Creek**	**69.02**	**26**	IAmb	IAmb		02 14 13.5		
	comp=Z,92nm,1.1s								
J26L	**Joseph Creek**	**69.02**	**26**	P	**P**		**02 14 10.0**	**+1.1**	
	baz=258								
E25K	**Arctic Village**	**69.10**	**22**	IAmb	IAmb		02 14 15.0		
	comp=Z,168nm,1.5s								
E25K	**Arctic Village**	**69.10**	**22**	P	**P**		**02 14 09.8**	**+0.6**	
	baz=254,SNR=39								
D25K	**Kavik River**	**69.15**	**21**	IAmb	IAmb		02 15 05.1		
	comp=Z,127nm,1.2s								
D25K	**Kavik River**	**69.15**	**21**	P	**P**		**02 14 10.1**	**+0.6**	
	baz=253								
OTUK	**Ortayu**	**69.15**	**317**	P	**P**		**02 14 09.0**	**-1.0**	
GRNC	**Granite Creek**	**69.16**	**30**	IAmb	IAmb		02 14 15.0		
	comp=Z,159nm,1.4s								
GRNC				IAMs_20	IAMs_20		02 43 27.3		
	comp=Z,3μm,20.0s								
BARN	**Barnard Glacie**	**69.25**	**30**	P	**P**		**02 14 11.1**	**+0.5**	
BARN				IAmb	IAmb		02 14 39.9		
	comp=Z,124nm,1.4s								
BARN				IAMs_20	IAMs_20		02 43 27.8		
	comp=Z,3μm,20.0s								
M27K	**Edge Creek, AK**	**69.36**	**28**	IAmb	IAmb		02 14 16.2		
	comp=Z,120nm,1.4s								
M27K				IAMs_20	IAMs_20		02 41 32.9		
	comp=Z,5μm,22.0s								
M27K	**Edge Creek, AK**	**69.36**	**28**	P	**P**		**02 14 10.6**	**-0.5**	
	baz=260								
I26K	**Coal Creek Min**	**69.36**	**25**	IAMs_20	IAMs_20		02 41 43.4		
	comp=Z,4μm,20.0s								
I26K	**Coal Creek Min**	**69.36**	**25**	P	**P**		**02 14 09.9**	**-1.0**	
	baz=258								
POO	**Poona**	**69.38**	**285**	*e*P	**P**		**02 14 12.9**	**+1.0**	
POO				IAmb	IAmb		02 14 17.8		
	comp=Z,54nm,0.8s								
CTG	**Chitna Glacier**	**69.39**	**30**	P	**P**		**02 14 10.9**	**-0.4**	
	baz=261,SNR=13								
CTGM	**Chitina Glacie**	**69.39**	**30**	IAmb	IAmb		02 14 40.5		
	comp=Z,146nm,1.3s								
TABL	**Table Mountain**	**69.41**	**30**	IAmb	IAmb		02 14 27.8		
	comp=Z,90nm,0.9s								
TABL				IAMs_20	IAMs_20		02 43 03.6		
	comp=Z,4μm,20.0s								
G26K	**Porcupine Rive**	**69.47**	**23**	P	**P**		**02 14 11.7**	**+0.2**	
	baz=257								
L27K	**Beaver Creek,**	**69.50**	**28**	IAmb	IAmb		02 14 16.9		
	comp=Z,111nm,1.5s								
L27K				IAMs_20	IAMs_20		02 41 52.0		
	comp=Z,3μm,21.0s								
L27K	**Beaver Creek,**	**69.50**	**28**	P	**P**		**02 14 12.0**	**+0.2**	
	baz=260								
F26K	**Sheenjek River**	**69.51**	**22**	P	**P**		**02 14 12.0**	**+0.2**	
	baz=256								
LOGN	**Logan Glacier**	**69.53**	**30**	P	**P**		**02 14 12.0**	**-0.3**	
LOGN				IAmb	IAmb		02 14 36.8		
	comp=Z,94nm,1.0s								
K27K	**Chicken**	**69.57**	**26**	IAmb	IAmb		02 14 47.6		
	comp=Z,131nm,1.2s								
K27K				IAMs_20	IAMs_20		02 42 24.1		
	comp=Z,5μm,20.0s								
K27K	**Chicken**	**69.57**	**26**	P	**P**		**02 14 12.4**	**+0.3**	
	baz=259								
PINM	**Pinnacle**	**69.80**	**31**	P	**P**		**02 14 13.5**	**-0.3**	
	baz=262								
C26K	**Camden Bay**	**69.80**	**20**	P	**P**		**02 14 14.5**	**+1.0**	
	baz=254								
BVCY	**Beaver Creek**	**69.84**	**28**	P	**P**		**02 14 14.4**	**+0.5**	
	baz=261,SNR=13								
GOA	**Goa**	**69.86**	**282**	*e*P	**P**		**02 14 14.2**	**-0.6**	
YUK3	**Moose Creek**	**69.93**	**29**	P	**P**		**02 14 15.4**	**+0.6**	
	baz=262,SNR=19								
I27K	**Kandik River**	**70.05**	**25**	P	**P**		**02 14 15.3**	**0.0**	
	baz=259								
BCPM	**Bancas Point**	**70.09**	**31**	IAMs_20	IAMs_20		02 43 09.3		
	comp=Z,4μm,20.0s								
EGAK	**Eagle**	**70.09**	**26**	IAmb	IAmb		02 15 00.1		
	comp=Z,120nm,1.2s								
EGAK	**Eagle**	**70.09**	**26**	P	**P**		**02 14 15.7**	**+0.3**	
	baz=260,SNR=18								
EGAK	**Eagle**	**70.09**	**26**	⇑P	**P**		**02 14 17.1**	**+1.7**	
PNL	**Peninsula**	**70.18**	**31**	P	**P**		**02 14 16.7**	**+0.6**	
	baz=263								
YUK8	**Steele Glacier**	**70.19**	**30**	P	**P**		**02 14 17.3**	**+0.9**	
	baz=262,SNR=13								
H27K	**Steamboat Moun**	**70.20**	**24**	P	**P**		**02 14 17.1**	**+1.0**	
	baz=259								
KK31	**Karatay Array**	**70.36**	**311**	IAmb	IAmb		02 15 07.7		
	comp=Z,102nm,1.4s								
KK31	**Karatay Array**	**70.36**	**311**	*i* P	**P**		**02 14 16.6**	**-0.9**	
KKAR	**Karatay Array**	**70.36**	**311**	IAmb	IAmb		02 15 07.7		
	comp=Z,102nm,1.4s								
KKAR	**Karatay Array**	**70.36**	**311**	⇑P	**P**		**02 14 17.4**	**-0.1**	
PPT	**Papeete**	**70.50**	**114**	LR	LR		02 39 10.6		
	comp=Z,3μm,21.0s,baz=337,slow=31								
BVA0	**Borovoye Array**	**70.61**	**322**	*i* P	**P**		**02 14 17.8**	**-1.0**	
BVAR	**Borovoye Array**	**70.61**	**322**	P	**P**		**02 14 18.6**	**-0.1**	
	comp=Z,38nm,0.7s,baz=98,slow=7.4,SNR=85								
BVAR				S	**S**		**02 23 28.8**	**-3.2**	
	comp=Z,0.2nm,0.3s,baz=234,slow=40,SNR=2.2								
BVAR				LR	LR		02 47 38.0		
	comp=Z,8μm,18.1s,baz=89,slow=38								
	comp=Z,38nm,0.7s								
O29M	**Mount Kennedy**	**70.66**	**31**	IAmb	IAmb		02 14 24.9		
	comp=Z,163nm,1.4s								
O29M				IAMs_20	IAMs_20		02 43 09.3		
	comp=Z,5μm,21.0s								
O29M	**Mount Kennedy**	**70.66**	**31**	P	**P**		**02 14 19.4**	**+0.3**	
	baz=264								
BRVK	**Borovoye**	**70.67**	**322**	P	**P**		**02 14 18.9**	**-0.2**	
BRVK				IAmb	IAmb		02 15 08.7		
	comp=Z,107nm,1.2s								
BRVK	**Borovoye**	**70.67**	**322**	⇑P	**P**		**02 14 19.0**	**-0.2**	
BRVK	**Borovoye**	**70.67**	**322**	P	**P**		**02 14 18.9**	**-0.2**	
BRVK				pmax	pmax				
	comp=Z,107nm,1.2s								
BRVK				MLR	MLR				
	comp=Z,7μm,19.0s								
BRVK	**Borovoye**	**70.67**	**322**	P	**P**		**02 14 19.1**	**-0.1**	
I28M	**Miner Creek**	**70.72**	**25**	IAmb	IAmb		02 15 06.1		
	comp=Z,215nm,1.9s								
I28M				IAMs_20	IAMs_20		02 43 46.9		
	comp=Z,4μm,20.0s								
I28M	**Miner Creek**	**70.72**	**25**	P	**P**		**02 14 19.5**	**+0.1**	
	baz=261,SNR=22								
YUK4	**Talbot Arm**	**70.74**	**30**	P	**P**		**02 14 20.3**	**+0.6**	
	baz=264,SNR=17								
DAWY	**Dawson**	**70.74**	**27**	IAmb	IAmb		02 14 55.4		
	comp=Z,114nm,1.2s								
DAWY	**Dawson**	**70.74**	**27**	P	**P**		**02 14 19.6**	**+0.2**	
	baz=262,SNR=29								
YUK6	**Outpost Mounta**	**70.83**	**30**	P	**P**		**02 14 20.3**	**0.0**	
	baz=264,SNR=7.1								
BRLS	**Borolday**	**70.86**	**311**	*e*P	**P**		**02 14 21.2**	**+0.6**	
	baz=311								
BRLS	**Borolday**	**70.86**	**311**	*e*P	**P**		**02 14 21.1**	**+0.6**	
M29M	**Somme Creek**	**70.95**	**28**	IAmb	IAmb		02 14 26.4		
	comp=Z,101nm,1.3s								
M29M				IAMs_20	IAMs_20		02 43 26.2		
	comp=Z,5μm,21.0s								
M29M	**Somme Creek**	**70.95**	**28**	P	**P**		**02 14 21.0**	**+0.2**	
	baz=263								
D27M	**Malcolm River**	**71.00**	**21**	IAmb	IAmb		02 14 26.6		
	comp=Z,136nm,1.6s								
D27M				IAMs_20	IAMs_20		02 43 49.6		
	comp=Z,4μm,21.0s								
D27M	**Malcolm River**	**71.00**	**21**	P	**P**		**02 14 21.6**	**+0.7**	
	baz=259								
P29M	**Windy Craggy**	**71.01**	**31**	P	**P**		**02 14 22.1**	**+0.9**	
	baz=265								
CHM	**Chimkent**	**71.05**	**310**	*e*P	**P**		**02 14 20.5**	**-1.2**	
	baz=310								
CHM				LR	LR		02 45 37.5		
	comp=Z,861nm,18.5s,baz=310								
CHM	**Chimkent**	**71.05**	**310**	*e*P	**P**		**02 14 20.4**	**-1.2**	
CHM				MLR	MLR				
	comp=Z,861nm,19.0s								
F28M	**Old Crow**	**71.09**	**23**	IAmb	IAmb		02 14 26.8		
	comp=Z,125nm,1.4s								
F28M	**Old Crow**	**71.09**	**23**	P	**P**		**02 14 22.0**	**+0.5**	
	baz=260,SNR=45								
L29M	**L29M**	**71.18**	**28**	IAmb	IAmb		02 14 27.8		
	comp=Z,147nm,1.4s								
L29M	**L29M**	**71.18**	**28**	P	**P**		**02 14 23.3**	**+1.2**	
	baz=263								
HYT	**Haines Junctio**	**71.24**	**30**	IAmb	IAmb		02 14 28.2		
	comp=Z,206nm,1.4s								
HYT	**Haines Junctio**	**71.24**	**30**	P	**P**		**02 14 22.7**	**+0.1**	
	baz=265,SNR=18								
J29N	**Klondike Camp**	**71.30**	**26**	IAMs_20	IAMs_20		02 46 16.0		
	comp=Z,4μm,20.0s								
J29N	**Klondike Camp**	**71.30**	**26**	P	**P**		**02 14 23.4**	**+0.5**	
	baz=263								
E28M	**Babbage River**	**71.39**	**22**	IAmb	IAmb		02 14 29.0		
	comp=Z,178nm,1.6s								
E28M				IAMs_20	IAMs_20		02 49 48.9		
	comp=Z,3μm,19.0s								
E28M	**Babbage River**	**71.39**	**22**	P	**P**		**02 14 23.9**	**+0.7**	
	baz=260								
P30M	**Million Dollar**	**71.44**	**31**	P	**P**		**02 14 24.2**	**+0.4**	
	baz=265								
H29M	**Whitestone**	**71.47**	**24**	IAmb	IAmb		02 14 38.1		
	comp=Z,222nm,1.8s								
H29M	**Whitestone**	**71.47**	**24**	P	**P**		**02 14 23.7**	**-0.1**	
	baz=262								
K29M	**Barlow Dome**	**71.53

M31M Drury Creek, Y 72.82 29 IAMs_20 IAMs_20 02 43 53.4
comp=Z,4µm,21.0s
M31M Drury Creek, Y 72.82 29 P **P** **02 14 32.6 +0.6**
baz=267,SNR=19
P32M Atlin 73.05 32 P **P** **02 14 34.1 +0.7**
baz=268,SNR=11
H31M Peel River 73.06 25 IAmb IAmb 02 15 34.5
comp=Z,194nm,1.4s
H31M IAMs_20 IAMs_20 02 43 38.9
comp=Z,5µm,22.0s
H31M Peel River 73.06 25 P **P** **02 14 33.9 +0.6**
baz=266
G31M Satah River 73.17 24 P **P** **02 14 34.7 +0.9**
baz=266
FARO Faro, Yukon 73.31 29 P **P** **02 14 34.4 -0.5**
baz=268,SNR=22
U33K Whale Pass 73.33 35 IAMs_20 IAMs_20 02 41 51.1
comp=Z,4µm,21.0s
U33K Whale Pass 73.33 35 P **P** **02 14 34.9 0.0**
baz=270
CRAG Craig 73.33 36 P **P** **02 14 35.5 +0.5**
baz=270
N32M Quiet Lake 73.41 30 IAmb IAmb 02 14 40.7
comp=Z,198nm,1.4s
N32M IAMs_20 IAMs_20 02 45 49.9
comp=Z,4µm,20.0s
N32M Quiet Lake 73.41 30 P **P** **02 14 36.4 +0.9**
baz=268
F31M Tsiigehtchic 73.41 23 IAMs_20 IAMs_20 02 44 21.7
comp=Z,4µm,21.0s
F31M Tsiigehtchic 73.41 23 P **P** **02 14 35.7 +0.4**
baz=266,SNR=23
T33K Petersburg 73.42 34 P **P** **02 14 35.9 +0.4**
baz=270
P33M Teslin, Yukon 73.52 31 P **P** **02 14 36.7 +0.5**
baz=269,SNR=13
INK Inuvik 73.55 22 IAmb IAmb 02 14 40.5
comp=Z,141nm,1.4s
INK Inuvik 73.55 22 P **P** **02 14 37.0 +0.9**
baz=266,SNR=50
INK Inuvik 73.55 22 ⇓P **P** **02 14 36.0 -0.1**
INK Inuvik 73.55 22 LR LR 02 45 32.3
comp=Z,2µm,21.2s,baz=194,slow=35
KAAM Kaadhehdhoo 73.73 266 P P 02 14 43.8 +5.6
WRAK Wrangell Islan 73.76 35 IAMs_20 IAMs_20 02 42 15.2
comp=Z,3µm,19.0s
WRAK Wrangell Islan 73.76 35 P **P** **02 14 37.5 0.0**
baz=270,SNR=7.2
Q32M Nakina River 73.79 32 IAMs_20 IAMs_20 02 46 34.1
comp=Z,3µm,20.0s
Q32M Nakina River 73.79 32 P **P** **02 14 38.0 +0.1**
baz=270,SNR=8.2
V35K Ketchikan 74.19 36 IAmb IAmb 02 14 50.6
comp=Z,168nm,1.8s
V35K IAMs_20 IAMs_20 02 52 16.9
comp=Z,4µm,18.0s
V35K Ketchikan 74.19 36 P **P** **02 14 40.3 +0.3**
baz=271
S34M Telegraph Cree 74.39 33 P **P** **02 14 41.9 +0.7**
baz=271,SNR=15
R33M Jennings River 74.45 32 P **P** **02 14 41.4 -0.4**
baz=271
T35M Bob Quinn 74.90 34 IAMs_20 IAMs_20 02 42 53.6
comp=Z,3µm,21.0s
T35M Bob Quinn 74.90 34 P **P** **02 14 44.3 +0.1**
baz=272,SNR=11
DLBC Dease Lake 74.97 33 IAmb IAmb 02 14 50.2
comp=Z,212nm,1.4s
DLBC Dease Lake 74.97 33 P **P** **02 14 44.7 0.0**
baz=272,SNR=48
DLBC Dease Lake 74.97 33 LR LR 02 43 54.9
comp=Z,2µm,19.6s,baz=293,slow=33
U35K Hyder 75.07 35 IAMs_20 IAMs_20 02 48 59.2
comp=Z,4µm,19.0s
U35K Hyder 75.07 35 P **P** **02 14 44.7 -0.4**
baz=273
WTLY Watson Lake, Y 75.53 31 P **P** **02 14 48.1 +0.3**
baz=272,SNR=36
TGTN Hyland Airport 75.72 30 P **P** **02 14 49.1 +0.1**
baz=273,SNR=25
SVE Sverdlovsk 76.18 326 *d* *i*P **P** **02 14 51.7 +0.2**
SVE *e*S **S** **02 24 38.5 +3.5**
SVE pmax pmax
comp=Z,130nm,1.6s
SVE MLR MLR
comp=Z,4µm,19.0s
DGAR Diego Garcia 76.32 259 P **P** **02 14 52.0 -1.1**
DGAR Diego Garcia 76.32 259 P **P** **02 14 52.0 -1.1**
DGAR pmax pmax
comp=Z,395nm,1.5s
DGAR MLR MLR
comp=Z,2µm,19.0s
A36M Sachs Harbour 76.42 19 P **P** **02 14 53.5 +1.0**
baz=273,SNR=58
BBB Bella Bella 76.45 39 IAmb IAmb 02 14 57.1
comp=Z,161nm,1.6s
BBB Bella Bella 76.45 39 ⇑P **P** **02 14 55.9 +2.8**
BBB Bella Bella 76.45 39 LR LR 02 43 27.3
comp=Z,4µm,20.8s,baz=262,slow=32
C36M Paulatuk 76.98 21 IAmb IAmb 02 15 00.0
comp=Z,178nm,1.5s
C36M Paulatuk 76.98 21 P **P** **02 14 55.6 -0.2**
baz=274,SNR=57
AB31 Akbulak array 77.31 318 P **P** **02 14 57.2 -0.8**
ABKAR Akbulak array 77.31 318 ⇑P **P** **02 14 57.5 -0.5**
ARU Arti 77.36 325 P **P** **02 14 57.2 -1.0**
ARU Arti 77.36 325 ⇑P **P** **02 14 57.8 -0.4**
ARU Arti 77.36 325 *c* *i*P **P** **02 14 57.5 -0.7**
ARU 02 17 49.8
ARU PPP PPP 02 19 36.4
ARU S **S** **02 24 50.0 +2.1**
ARU pmax pmax
comp=Z,90nm,2.3s
ARU MLR MLR
comp=Z,7µm,18.0s
ARU Arti 77.36 325 P **P** **02 14 56.9 -1.3**
comp=Z,13nm,0.6s,baz=97,slow=1.3,SNR=7.9
ARU S **S** **02 24 40.9 -7.0**
comp=Z,0.8nm,0.3s,baz=100,slow=21,SNR=1.3
comp=Z,13nm,0.6s
WRGLY Wrigley 77.82 28 IAmb IAmb 02 15 48.6
comp=Z,144nm,1.4s
WRGLY Wrigley 77.82 28 P **P** **02 15 01.3 +0.6**
baz=276,SNR=22
KOTAN Kotaneelee Air 77.89 31 P **P** **02 15 01.5 +0.3**
baz=276
FLDN Fort Liard 78.17 31 P **P** **02 15 03.5 +0.9**
baz=277
AKTO Aktyubinsk 78.40 319 P **P** **02 15 02.7 -1.4**
comp=Z,4.3nm,0.6s,baz=84,slow=6.5,SNR=17
AKTO LR LR 02 52 31.9
comp=Z,5µm,18.3s,baz=78,slow=38
comp=Z,4.3nm,0.6s
CBB Campbell River 78.41 41 P **P** **02 15 05.2 +1.0**
CBB IAmb IAmb 02 15 09.5
comp=Z,148nm,1.3s
CLRS Cowichan Lake 79.38 42 IAmb IAmb 02 15 14.8
comp=Z,184nm,1.5s
NLWA Neilton Lookou 79.78 44 IAmb IAmb 02 15 17.4
comp=Z,243nm,1.4s
NLWA Neilton Lookou 79.78 44 ⇑P **P** **02 15 13.2 +1.4**
PGC Sidney 79.85 42 IAmb IAmb 02 15 17.2
comp=Z,181nm,1.4s
WISH Wishkah 79.89 44 P **P** **02 15 12.7 +0.4**
NGCH Negor - Chabah 79.94 294 P **P** **02 15 14.0 +1.0**
SNR=5.8
E03A Lebam 80.13 44 IAmb IAmb 02 15 18.8
comp=Z,253nm,1.3s
GEYT Alibeck 80.25 307 P **P** **02 15 14.3 -0.3**
comp=Z,11nm,0.7s,baz=82,slow=3.1,SNR=16
GEYT PP **PP** **02 18 16.9 0.0**
comp=Z,0.6nm,0.3s,baz=57,slow=10,SNR=1.0
GEYT S **S** **02 25 17.9 -1.6**
comp=Z,0.9nm,0.5s,baz=196,slow=42,SNR=1.3
GEYT LR LR 02 55 55.5
comp=Z,2µm,18.4s,baz=84,slow=40
comp=Z,11nm,0.7s
GYA0B ALIBECK ARRAY 80.25 307 IAMs_20 IAMs_20 02 55 44.3
comp=Z,3µm,19.0s
J01E Myrtle Point 80.45 48 IAmb IAmb 02 15 20.6
comp=Z,180nm,1.3s
GNW Green Mountain 80.45 43 IAmb IAmb 02 15 20.7
comp=Z,264nm,1.4s
G03D McMinnville, O 80.56 46 IAmb IAmb 02 15 21.2
comp=Z,222nm,1.4s
COR Corvallis 80.64 46 P **P** **02 15 14.9 -1.5**
COR IAmb IAmb 02 15 22.1
comp=Z,309nm,1.6s
COR Corvallis 80.64 46 IAMs_20 IAMs_20 02 44 33.4
comp=Z,4µm,20.0s
COR Corvallis 80.64 46 ⇓P **P** **02 15 20.3 +3.9**
COR Corvallis 80.64 46 P **P** **02 15 14.9 -1.5**
COR pmax pmax
comp=Z,309nm,1.6s
KSXB Camp Six Broad 80.72 49 IAmb IAmb 02 15 22.4
comp=Z,222nm,1.5s
I03D Drain, OR 80.77 47 IAmb IAmb 02 15 22.3
comp=Z,192nm,1.4s
JCC Jacoby Creek, 80.79 50 IAMs_20 IAMs_20 02 47 51.5
comp=Z,3µm,19.0s
KMPM Mount Pierce 80.79 51 P **P** **02 15 17.7 +0.2**
KMPM IAmb IAmb 02 15 23.0
comp=Z,175nm,1.2s
DBO Dodson Butte 80.95 48 pP 02 15 22.1 +0.6
KHMM Horse Mountain 81.00 50 P **P** **02 15 18.2 -0.4**
KHMM IAmb IAmb 02 15 24.2
comp=Z,183nm,1.2s
F04A Amboy 81.02 45 IAmb IAmb 02 15 23.2
comp=Z,226nm,1.3s
KMRM Mail Ridge 81.14 51 IAmb IAmb 02 15 24.9
comp=Z,254nm,1.4s
HUMO Hull Mountain 81.25 48 IAmb IAmb 02 15 25.1
comp=Z,161nm,1.4s
HUMO IAMs_20 IAMs_20 02 48 07.6
comp=Z,3µm,20.0s
HUMO Hull Mountain 81.25 48 ⇓P **P** **02 15 21.3 +1.5**
H04A Detroit Lake 81.41 46 IAmb IAmb 02 15 25.1
comp=Z,194nm,1.3s
I04A Tendick Farm, 81.42 47 IAmb IAmb 02 15 25.3
comp=Z,154nm,1.4s
YBH Yreka Blue Hor 81.60 49 IAmb IAmb 02 15 26.9
comp=Z,154nm,1.3s
YBH IAMs_20 IAMs_20 02 44 39.8
comp=Z,3µm,20.0s
YBH Yreka Blue Hor 81.60 49 LR LR 02 45 22.7
comp=Z,3µm,20.7s,baz=282,slow=31
HOPS Hopland Field 81.85 52 **pP** **02 15 26.8 +0.5**
HOPS IAMs_20 IAMs_20 02 44 10.7
comp=Z,2µm,21.0s
KIRV Kirov 81.87 328 *c* *i*P **P** **02 15 22.2 -0.4**
KIRV Kirov 81.87 328 P **P** **02 15 21.8 -0.9**
comp=Z,13nm,0.6s,baz=265,slow=2.6,SNR=2.7
KIRV S **S** **02 25 29.4 -6.0**
comp=Z,3.1nm,0.5s,baz=58,slow=23,SNR=0.9
KIRV LR LR 02 54 12.6
comp=Z,4µm,18.3s,baz=70,slow=38
comp=Z,13nm,0.6s
G05A Wamic 81.91 45 IAmb IAmb 02 15 42.7
comp=Z,205nm,1.3s
YKAW3 Yellowknife Wh 81.92 28 IAMs_20 IAMs_20 02 57 13.7
comp=Z,2µm,19.0s
YKA Yellowknife Ar 81.94 28 *i* P **P** **02 15 22.7 -0.3**
YKA pmax pmax
comp=Z,24nm,1.1s
YKA Yellowknife Ar 81.94 28 P **P** **02 15 21.7 -1.3**
comp=Z,3.5nm,0.6s,baz=286,slow=5.4,SNR=53
YKA PKKPbc **PKKPbc** **02 33 53.2 -1.9**
comp=Z,0.3nm,0.8s,baz=109,slow=2.6,SNR=5.6
YKA LR LR 02 49 23.8
comp=Z,2µm,21.9s,baz=291,slow=34
comp=Z,3.5nm,0.6s
LTY Liberty 81.95 43 IAmb IAmb 02 15 28.0
comp=Z,189nm,1.5s
YKAW1 Yellowknife Wh 82.00 28 IAMs_20 IAMs_20 02 57 34.8
comp=Z,2µm,19.0s
I05D Terrebonne, OR 82.07 46 IAmb IAmb 02 15 29.1
comp=Z,231nm,1.5s
JLN Jalan Bani Buh 82.11 291 P **P** **02 15 24.4 -0.3**
SNR=20
MCCM Marconi Confer 82.16 53 IAMs_20 IAMs_20 02 44 58.1
comp=Z,2µm,19.0s
MXC Moxie City 82.34 44 IAmb IAmb 02 15 30.4
comp=Z,145nm,1.5s
G06A Canyon Farm, 82.38 45 IAmb IAmb 02 15 29.6
comp=Z,165nm,1.6s
WBK Wadi Bani Khal 82.42 291 P **P** **02 15 26.4 +0.1**
SNR=20
BRLDA Berland Lookou 82.51 36 IAmb IAmb 02 15 31.1
comp=Z,152nm,1.2s
WSAR Wadi Sarin 82.60 292 P **P** **02 15 27.0 -0.2**
comp=Z,7.8nm,0.8s,baz=156,slow=5.5,SNR=8.6
WSAR S **S** **02 25 47.4 +3.0**
comp=Z,6.8nm,1.2s,baz=287,slow=18,SNR=1.8
comp=Z,7.8nm,0.8s
E07A Sunnyside 82.64 44 IAmb IAmb 02 15 31.9
comp=Z,220nm,1.5s
F07A Phinny Hill Vi 82.73 45 IAmb IAmb 02 15 32.4
comp=Z,151nm,1.5s
JASK Jask - Hormozg 82.74 295 P **P** **02 15 29.5 +1.6**
HAWA Hanford 82.89 44 IAmb IAmb 02 15 33.1
comp=Z,135nm,1.4s
HAWA Hanford 82.89 44 ⇑P **P** **02 15 29.0 +0.7**
BIDO Bidbid 82.99 292 P **P** **02 15 29.8 +0.6**
SNR=29
D08A Wollman Farm, 83.16 43 IAmb IAmb 02 15 33.6
comp=Z,152nm,1.5s
SMDO Samad 83.16 292 P **P** **02 15 30.5 +0.3**
SNR=16
E08A Dider Farm, El 83.19 44 IAmb IAmb 02 15 34.7
comp=Z,130nm,1.4s
JMDO Jabal Madar 83.25 291 P **P** **02 15 31.2 +0.6**
SNR=11
C09A Chrisman Ranch 83.42 43 IAmb IAmb 02 15 34.8
comp=Z,108nm,1.4s
HOPEN Hopen 83.52 348 *e*P **P** **02 15 32.2 +1.3**
HOPEN IAmb IAmb 02 15 35.4
comp=Z,159nm,1.3s
G08A Pilot Rock 83.53 45 IAmb IAmb 02 15 36.4
comp=Z,112nm,1.4s
SAO San Andreas Ge 83.56 54 **pP** **02 15 35.7 +0.4**
SAO IAMs_20 IAMs_20 02 49 20.2
comp=Z,3µm,18.0s
MHTO MHTO 83.67 290 P **P** **02 15 32.9 +0.1**
SNR=34
E09A Wood Farm, Sta 83.80 44 IAmb IAmb 02 15 36.9
comp=Z,133nm,1.4s
RES Resolute Bay 83.94 14 IAmb IAmb 02 16 19.4
comp=Z,204nm,2.0s
RES Resolute Bay 83.94 14 ⇑P **P** **02 15 34.2 +1.1**
RES Resolute Bay 83.94 14 LR LR 02 52 04.8
comp=Z,643nm,21.2s,baz=326,slow=35
BSY Bisya 83.99 292 P **P** **02 15 34.6 +0.2**
SNR=26
SPA0 Spitsbergen Ar 84.01 351 *e*P **P** **02 15 33.9 +0.5**
SPA0 IAmb IAmb 02 15 39.0
comp=Z,140nm,1.4s
SPITS Spitsbergen Ar 84.01 351 P **P** **02 15 33.5 +0.1**
comp=Z,11nm,0.7s,baz=93,slow=4.2,SNR=12
SPITS LR LR 02 54 14.0
comp=Z,1µm,21.8s,baz=6.5,slow=37
comp=Z,11nm,0.7s
NEW Newport 84.06 42 IAMs_20 IAMs_20 02 57 32.0
comp=Z,3µm,18.0s
NEW Newport 84.06 42 IAmb IAmb 02 15 38.9
comp=Z,129nm,1.4s
NEW Newport 84.06 42 P **P** **02 15 34.9 +0.5**
baz=284,SNR=39
NEW Newport 84.06 42 ⇑P **P** **02 15 34.8 +0.5**
NEW Newport 84.06 42 LR LR 02 53 43.6
comp=Z,1µm,18.0s,baz=296,slow=36
KBS Kingsbay 84.13 352 P **P** **02 15 34.8 +0.8**
KBS Kingsbay 84.13 352 IAMs_20 IAMs_20 02 55 54.9
comp=Z,3µm,18.0s
KBS Kingsbay 84.13 352 *e*P **P** **02 15 35.2 +1.2**
KBS IAmb IAmb 02 15 39.7
comp=Z,54nm,1.1s
KBS Kingsbay 84.13 352 P **P** **02 15 34.8 +0.8**
KBS pmax pmax
comp=Z,54nm,1.1s
KBS MLR MLR
comp=Z,3µm,18.0s
KBS Kingsbay 84.13 352 *i* P **P** **02 15 30.6 -3.5**
CASY Casey 84.22 194 P **P** **02 15 33.7 -0.7**
SHME Shamm 84.22 295 *i* P **P** **02 15 36.0 +0.5**
SNR=22
SHME Shamm 84.22 295 P **P** **02 15 35.7 +0.2**
SNR=16
MDH Madha 84.24 295 *i* P **P** **02 15 36.6 +1.0**
SNR=25
MDH Madha 84.24 295 P **P** **02 15 35.4 -0.3**
SNR=13
SOHO SOHO 84.29 293 *i* P **P** **02 15 36.0 +0.1**
SNR=17
SOHO SOHO 84.29 293 P **P** **02 15 35.9 +0.1**
DQM DQM 84.29 289 P **P** **02 15 36.6 +0.7**
SNR=17
J08A Circle Bar Ran 84.31 47 IAmb IAmb 02 15 40.6
comp=Z,163nm,1.4s
MASF Masafi 84.35 295 P **P** **02 15 36.8 +0.5**
SNR=25
MSFE Esma-Masafi 84.35 295 *i* P **P** **02 15 36.7 +0.4**
SNR=32
BELG Belogornoye 84.38 323 *c* *i*P **P** **02 15 35.1 -0.7**
BELG pmax pmax
comp=Z,25nm,1.5s
BELG Belogornoye 84.38 323 P **P** **02 15 35.9 +0.1**
comp=Z,44nm,1.0s,baz=257,slow=5.7,SNR=7.1
BELG S **SKSac** **02 25 53.3 -5.7**
comp=Z,7.3nm,0.7s,baz=101,slow=23,SNR=2.2
BELG LR LR 02 56 30.1
comp=Z,2µm,18.1s,baz=75,slow=38
comp=Z,44nm,1.0s
UOSS Minazif 84.40 294 P **P** **02 15 35.4 -1.1**
UOSS IAmb IAmb 02 15 42.9
comp=Z,93nm,1.3s
UOSS Minazif 84.40 294 *i* P **P** **02 15 36.5 0.0**
SNR=18
UOSS Minazif 84.40 294 P **P** **02 15 36.5 0.0**
WVOR Wild Horse Val 84.41 48 IAMs_20 IAMs_20 02 54 15.7
comp=Z,3µm,19.0s
WVOR Wild Horse Val 84.41 48 ⇑P **P** **02 15 36.3 0.0**
ARQ Araqi 84.47 293 P **P** **02 15 37.3 +0.4**
SNR=58
PNTR Pine Nut 84.47 51 IAmb IAmb 02 15 41.9
comp=Z,150nm,1.2s
HATD Hatta, Dubai 84.49 294 *i* P **P** **02 15 37.4 +0.5**
SNR=35
HATD Hatta, Dubai 84.49 294 P **P** **02 15 37.2 +0.2**
SNR=32
PAHR Pah Rah Range 84.49 51 IAmb IAmb 02 15 41.5
comp=Z,130nm,1.3s
F10A Beach Ranch, E 84.55 44 IAmb IAmb 02 15 40.6
comp=Z,112nm,1.6s
ASHO Ashiyiah 84.59 294 *i* P **P** **02 15 37.7 +0.2**
SNR=25
ASHO Ashiyiah 84.59 294 P **P** **02 15 37.7 +0.2**
SNR=30
WAKR Walker 84.73 52 IAmb IAmb 02 15 43.3
comp=Z,155nm,1.4s
UMQ Umm Al-Quwin 84.75 295 P **P** **02 15 39.5 +1.3**
UMQ Umm Al-Quwin 84.75 295 P **P** **02 15 39.2 +1.0**
BMO Blue Mountains 84.77 45 IAmb IAmb 02 15 42.6
comp=Z,166nm,1.4s
BMO IAMs_20 IAMs_20 02 46 47.0
comp=Z,2µm,21.0s
BMO Blue Mountains 84.77 45 ⇑P **P** **02 15 37.8 -0.3**
NAZ Nazwa, Dubai 84.87 294 *i* P **P** **02 15 40.0 +1.2**
SNR=24
NAZ Nazwa, Dubai 84.87 294 P **P** **02 15 39.3 +0.4**
SNR=19
HSPB Hornsund (broa 84.94 350 *e*P **P** **02 15 41.1 +3.0**
HSPB Hornsund (broa 84.94 350 *e*P **P** **02 15 39.4 +1.3**
FAQ Al Faqa, Dubai 84.99 294 *i* P **P** **02 15 39.5 +0.1**
SNR=29
FAQ Al Faqa, Dubai 84.99 294 P **P** **02 15 39.4 -0.1**
SNR=17
ALNE Al Ain 85.00 293 *i* P **P** **02 15 39.9 +0.3**
SNR=26
ALNE Al Ain 85.00 293 P **P** **02 15 39.8 +0.3**
SNR=66
SMMC Simmler 85.03 55 P **P** **02 15 39.4 -0.1**
baz=283,SNR=8.9
LVZ Lovozero 85.15 339 P **P** **02 15 38.4 -1.0**
LVZ Lovozero 85.15 339 ⇑*i*P **P** **02 15 39.9 +0.5**
LVZ pmax pmax
comp=Z,81nm,1.2s
ASUD Al Ashush, Dub 85.25 294 *i* P **P** **02 15 41.2 +0.5**
SNR=20
ASUD Al Ashush, Dub 85.25 294 P **P** **02 15 41.4 +0.7**
SNR=19
PKM Mcpherson Peak 85.28 55 P **P** **02 15 40.4 -0.5**
baz=284,SNR=23
VOG Valley Oaks Go 85.28 54 P **P** **02 15 41.2 +0.5**
baz=284
MLAC Mammoth, Mammo 85.40 53 P **P** **02 15 41.4 -0.1**
baz=284,SNR=8.3
RYN Ryan 85.40 52 IAmb IAmb 02 15 46.3
comp=Z,137nm,1.4s
SBC Santa Barbara 85.46 56 P **P** **02 15 41.7 +0.1**
baz=284
LHV Little Huntoon 85.50 52 IAmb IAmb 02 15 47.1
comp=Z,123nm,1.3s
AJN Ajban 85.57 294 *i* P **P** **02 15 42.5 +0.2**
SNR=29
AJN Ajban 85.57 294 P **P** **02 15 42.1 -0.2**
SNR=28
PLID Pearl Lake 85.60 45 IAmb IAmb 02 15 46.4
comp=Z,99nm,1.5s
NVAR Mina Array Bea 85.61 52 P **P** **02 15 42.7 +0.1**
comp=Z,38nm,1.0s,baz=264,slow=5.2,SNR=33
NVAR S **SKSac** **02 26 06.7 -1.2**
comp=Z,0.1nm,0.3s,baz=227,slow=26,SNR=2.3
NVAR LR LR 02 46 56.6
comp=Z,1µm,21.6s,baz=286,slow=31
comp=Z,38nm,1.0s
KVN Kaiserville 85.62 51 IAmb IAmb 02 15 47.3
comp=Z,136nm,1.4s
VES Vestal, Richgr 85.63 54 P **P** **02 15 41.3 -1.1**
SNR=284,SNR=28
APA Apatity 85.72 339 ⇓*i*P **P** **02 15 39.9 -2.3**
APA *i* PPP PPP 02 20 57.6
APA *i* S **SKSac** **02 26 07.0 +0.1**
APA *i* PS **PnS** **02 27 07.0 -4.1**
APA *i* SS **SS** **02 31 52.0 +2.3**
APA pmax pmax
comp=Z,53nm,1.0s
NV11 Mina Array Sit 85.73 52 IAmb IAmb 02 15 47.9
comp=Z,90nm,1.2s
UMZA Um Al Zommool 85.83 292 P **P** **02 15 43.4 -0.2**
BMN Battle Mountai 85.93 50 IAmb IAmb 02 15 48.9
comp=Z,91nm,1.3s
KLMR Klimovskoe 85.99 332 *e*P **P** **02 15 40.2 -3.4**
KLMR pmax pmax
comp=Z,127nm,1.3s
ARVC Arvin 86.00 55 P **P** **02 15 43.3 -1.0**
baz=284,SNR=6.6
TIN Tinemaha, Big 86.01 53 P **P** **02 15 43.3 -1.1**
baz=284
DSP Deep Springs 86.13 53 IAmb IAmb 02 15 50.1
comp=Z,145nm,1.4s
ISA Isabella, Lake 86.16 54 P **P** **02 15 44.1 -1.1**
baz=284,SNR=18
MFID Camas Ranch 86.16 46 IAMs_20 IAMs_20 02 52 17.0
comp=Z,3µm,19.0s
OSI Osito Audit: C 86.21 55 P **P** **02 15 44.7 -0.7**
baz=284
CWC Cottonwood Cre 86.27 54 P **P** **02 15 45.2 -0.6**
baz=284
SHAO Shalim 86.48 288 *i* P **P** **02 15 47.1 +0.2**
SNR=7.5
SHAO Shalim 86.48 288 P **P** **02 15 46.7 -0.3**
SNR=5.8
DECC Green Verdugo 86.61 56 P **P** **02 15 46.9 -0.5**
baz=284
GRAC Grapevine Rang 86.69 53 IAmb IAmb 02 15 56.2
comp=Z,162nm,1.5s
GRAC Grapevine Rang 86.69 53 P **P** **02 15 47.8 +0.1**
baz=285,SNR=14
EDW2 Edwards Air Fo 86.73 55 P **P** **02 15 47.8 -0.2**
baz=284,SNR=23
MZWR Madinat Zayed 86.73 294 P **P** **02 15 47.6 -0.5**
PASC Pasadena Art C 86.75 56 IAMs_20 IAMs_20 02 47 44.9
comp=Z,2µm,20.0s
PASC Pasadena Art C 86.75 56 IAmb IAmb 02 15 52.2
comp=Z,152nm,1.4s
SCI2 San Clemente I 86.76 57 P **P** **02 15 46.7 -1.4**
baz=284
CIS Catalina Islan 86.76 57 P **P** **02 15 47.0 -1.1**
baz=284
FMP Fort Macarthur 86.78 56 P **P** **02 15 47.1 -1.0**
baz=284
LRMC Laurel Mtn Rad 86.83 54 P **P** **02 15 47.7 -0.8**
baz=285,SNR=30
MPMC Manual Prospec 86.83 54 P **P** **02 15 47.9 -0.7**
baz=285,SNR=82
MAK Makhachkala 87.02 313 *e*P **P** **02 15 48.3 -0.8**
MAK *e* 02 19 11.2
MAK *e* 02 26 13.4
MAK *e*SS SS 02 32 07.3 -2.7
MAK pmax pmax
comp=Z,348nm,1.5s
HLID Hailey 87.11 46 IAMs_20 IAMs_20 02 48 41.1

comp=Z,2µm,20.0s
HLID Hailey 87.11 46 P P 02 15 48.0 -1.8
baz=286
BFSC Mount Baldy Ra 87.16 56 P P 02 15 48.2 -1.9
baz=285,SNR=8.2
DMTO DMTO 87.18 287 P P 02 15 50.4 0.0
SNR=14
FURC Furnace Creek, 87.22 53 P P 02 15 50.2 0.0
baz=285,SNR=21
LKRN Lenkeran, Azer 87.24 309 P P 02 15 53.5 +3.2
ARA0 ARCESS Array S 87.26 342 *e*P P 02 15 50.2 +0.5
ARA0 IAmb IAmb 02 15 55.0
comp=Z,124nm,1.2s
ARCES ARCESS Array B 87.26 342 IAmb IAmb 02 15 55.3
comp=Z,102nm,1.2s
ARCES ARCESS Array B 87.26 342 P P 02 15 48.7 -1.1
comp=Z,16nm,0.9s,baz=71,slow=6.4,SNR=25
comp=Z,16nm,0.9s
ELK Elko 87.30 49 IAms_20 IAms_20 02 52 14.4
comp=Z,3µm,19.0s
ELK Elko 87.30 49 ⇑P P 02 15 50.4 -0.4
ELK Elko 87.30 49 LR LR 02 52 53.2
comp=Z,2µm,18.5s,baz=285,slow=34
QSM Queen of Sheba 87.34 54 IAmb IAmb 02 15 55.5
comp=Z,116nm,1.3s
JRN Qarnain Island 87.37 295 P P 02 15 50.6 -0.5
TULEG Thule 87.39 8 IAmb IAmb 02 17 22.6
comp=Z,58nm,0.9s
GWY Greenwater Val 87.44 53 IAmb IAmb 02 15 56.0
comp=Z,133nm,1.3s
RRX Edison Barstow 87.52 55 P P 02 15 51.8 +0.1
baz=285
GSC Goldstone, Bar 87.56 54 IAmb IAmb 02 15 56.7
comp=Z,124nm,1.3s
GSC Goldstone, Bar 87.56 54 P P 02 15 51.1 -0.9
baz=285,SNR=32
TPNV Topopah Spring 87.57 53 IAMs_20 IAMs_20 02 51 59.6
comp=Z,2µm,19.0s
TPNV Topopah Spring 87.57 53 P P 02 15 51.3 -0.8
baz=285,SNR=65
TPNV Topopah Spring 87.57 53 ⇑P P 02 15 52.6 +0.5
GHWR Ruwais 87.58 294 P P 02 15 51.8 -0.4
MURC Murrieta 87.70 56 P P 02 15 51.7 -0.9
baz=285,SNR=13
R11B Troy Canyon, C 87.70 51 IAMs_20 IAMs_20 02 59 49.5
comp=Z,2µm,18.0s
R11B Troy Canyon, C 87.70 51 P P 02 15 51.2 -1.6
baz=286,SNR=124
DOK Doka 87.72 288 P P 02 15 52.3 -0.7
SNR=37
SEKA Sheki 87.73 312 P P 02 15 52.7 0.0
BBRC Big Bear Solar 87.74 55 P P 02 15 52.2 -0.9
baz=285
SHOC Shoshone, Teco 87.82 54 P P 02 15 52.2 -1.0
baz=285,SNR=24
RBK Rabkut 87.92 287 P P 02 15 53.6 -0.3
SNR=26
MNGR Mingechevir, A 87.93 311 P P 02 15 53.2 -0.3
109C Camp Elliot, M 87.95 57 IAMs_20 IAMs_20 02 50 51.7
comp=Z,3µm,19.0s
109C Camp Elliot, M 87.95 57 P P 02 15 52.6 -1.2
baz=285,SNR=8.8
ZKTA Zakatala 88.02 312 P P 02 15 57.7 +3.7
HEC Hector,Ludlow 88.06 55 P P 02 15 53.7 -0.8
baz=285,SNR=8.6
WHFO Wadi Hawf 88.22 288 P P 02 15 54.6 -0.8
SNR=14
KTK1 Kautokeino 88.22 342 *e*P P 02 15 55.5 +1.2
KTK1 IAmb IAmb 02 15 58.6
comp=Z,31nm,1.1s
TUQ Turquoise Moun 88.22 54 P P 02 15 54.2 -1.0
baz=286,SNR=42
VRH Novokhopyorsk 88.24 322 *e*P P 02 15 53.8 -0.9
VRH pmax pmax
comp=Z,40nm,1.4s
VRH MLR MLR
comp=Z,3µm,19.0s
PFO Pinyon Flats O 88.28 56 P P 02 15 54.5 -1.1
PFO IAmb IAmb 02 15 59.9
comp=Z,136nm,1.4s
PFO Pinyon Flats O 88.28 56 P P 02 15 54.7 -0.8
baz=285,SNR=16
PFO Pinyon Flats O 88.28 56 P P 02 15 54.5 -1.1
PFO pmax pmax
comp=Z,136nm,1.5s
PFO Pinyon Flats O 88.28 56 LR LR 02 51 28.1
comp=Z,2µm,19.3s,baz=274,slow=33
TPFO Pinon Flats 88.29 56 P P 02 15 54.8 -0.8
baz=285,SNR=17
NEEM North Greenlan 88.30 4 *i* P P 02 15 54.2 -0.8
NEEM IAmb IAmb 02 15 58.3
comp=Z,250nm,2.0s
BAR Barrett 88.36 57 IAmb IAmb 02 16 00.1
comp=Z,126nm,1.3s
BOZ Bozeman (W) 88.41 43 IAmb IAmb 02 16 00.7
comp=Z,104nm,1.4s
BOZ IAMs_20 IAMs_20 02 54 01.3
comp=Z,2µm,19.0s
BOZ Bozeman (W) 88.41 43 P P 02 15 54.9 -1.0
baz=288,SNR=64
BOZ Bozeman (W) 88.41 43 ⇑P P 02 15 56.5 +0.6
TKX Tecate 88.44 57 IAmb IAmb 02 16 00.3
comp=Z,100nm,1.1s
MONP2 Monument Peak 88.51 57 P P 02 15 54.9 -1.9
baz=285,SNR=26
GANJ Ganja 88.52 311 P P 02 15 57.0 +0.6
SHPR Sheep Range 88.53 53 IAmb IAmb 02 16 01.9
comp=Z,82nm,1.4s
BELC Belle Mtn. Jos 88.55 55 P P 02 15 55.6 -1.2
baz=286,SNR=18
SLWR Sila 88.60 294 P P 02 15 56.0 -1.1
GMRC Granite Mounta 88.61 55 P P 02 15 56.2 -0.8
baz=286,SNR=45
JETT Jettan, Norway 88.70 343 *e*P P 02 15 56.8 +0.2
JETT IAmb IAmb 02 16 00.2
comp=Z,175nm,1.8s
ABTO Aybut 88.79 287 P P 02 15 57.8 -0.4
SNR=28
SHMA Al-Shehemyia 88.79 296 P P 02 15 58.9 +1.0
EGMT Eagleton 88.85 41 IAmb IAmb 02 16 02.4
comp=Z,124nm,1.4s
EGMT Eagleton 88.85 41 P P 02 15 58.1 +0.2
baz=289,SNR=19
EGMT Eagleton 88.85 41 ⇑P P 02 15 59.5 +1.6
MOS Moscow 88.85 328 *e*P P 02 15 53.0 -4.5
MOS *e* 02 26 21.8
MOS *e*S S 02 26 38.9 -5.6
MOS pmax pmax
comp=Z,70nm,1.4s
MOS MLR MLR
comp=Z,4µm,19.0s
MOS MLR MLR
comp=N,2µm,18.0s
MOS MLR MLR
comp=E,3µm,18.0s
TRNA Turayna 88.86 295 P P 02 16 00.2 +1.9
YUH Yuha Desert 88.98 57 IAmb IAmb 02 16 03.1
comp=Z,133nm,1.4s
SWSC Sam W. Stewart 89.00 56 P P 02 15 58.1 -0.7
baz=286
TRO Tromso 89.06 344 *e*P P 02 15 58.1 -0.2
BC3 Big Chuckawall 89.08 56 P P 02 15 58.8 -0.5
baz=286,SNR=18
ESJX Sierra Juarez 89.13 57 IAmb IAmb 02 16 04.4
comp=Z,129nm,1.3s
IRM Iron Mountain 89.19 55 P P 02 15 59.2 -0.5
baz=286,SNR=31
SMRA Abu-Samra 89.20 295 P P 02 16 01.0 +1.1
DUG Dugway, Tooele 89.23 49 IAmb IAmb 02 16 04.7
comp=Z,126nm,1.2s
DUG Dugway, Tooele 89.23 49 P P 02 15 59.9 0.0
baz=287,SNR=80
DUG Dugway, Tooele 89.23 49 ⇑P P 02 16 00.5 +0.6
YFT Old Faithful 89.31 44 IAmb IAmb 02 16 07.1
comp=Z,163nm,1.4s
LPSR Galich'ya Gora 89.35 324 *e*P P 02 15 57.5 -2.5
LPSR pmax pmax
comp=Z,80nm,1.1s
LPSR MLR MLR
comp=Z,3µm,20.0s
IMW Indian Meadow 89.42 45 IAmb IAmb 02 16 06.2
comp=Z,96nm,1.4s
IMW IAMs_20 IAMs_20 02 49 50.3
comp=Z,2µm,20.0s
VTX Valle De La Tr 89.43 58 IAmb IAmb 02 16 05.5
comp=Z,97nm,1.3s
NEE2 Needles Airpor 89.44 54 P P 02 16 00.7 -0.1
baz=286,SNR=6.5
FXWY Fox Creek 89.44 45 IAmb IAmb 02 16 06.1
comp=Z,106nm,1.4s
FXWY IAMs_20 IAMs_20 03 01 49.0
comp=Z,2µm,18.0s
GOF Gofitskoye 89.46 316 *ce*P P 02 15 59.8 -0.9
H17A Grant Village 89.50 44 P P 02 16 01.5 +0.3
baz=289,SNR=46
FLWY Flagg Ranch 89.52 45 IAmb IAmb 02 16 06.8
comp=Z,149nm,1.3s
FLWY IAMs_20 IAMs_20 02 50 05.1
comp=Z,2µm,21.0s
TPAW Teton Pass 89.54 45 IAmb IAmb 02 16 05.6
comp=Z,105nm,1.4s
TPAW IAMs_20 IAMs_20 03 01 50.5
comp=Z,2µm,18.0s
VORR Voronezh 89.54 323 *e*P P 02 16 00.6 -0.3
VORR pmax pmax
comp=Z,44nm,0.4s
LKWY Lake 89.57 44 IAmb IAmb 02 16 08.3
comp=Z,125nm,1.4s
LKWY IAMs_20 IAMs_20 02 54 32.9
comp=Z,3µm,19.0s
LKWY Lake 89.57 44 ⇓P P 02 16 04.5 +3.0
NAX Nakhchivan 89.57 310 P P 02 16 04.3 +2.9
VALR Valaam 89.57 334 ⇓*e*P P 02 16 02.9 +2.1
VALR pmax pmax
comp=Z,120nm,1.5s
MOOW Moose Ponds 89.60 45 IAmb IAmb 02 16 06.7
comp=Z,87nm,1.5s
MOOW IAMs_20 IAMs_20 02 53 28.2
comp=Z,2µm,19.0s
ZEI Tsey 89.60 314 *e*P P 02 15 59.7 -1.9
ZEI pmax pmax
comp=Z,42nm,1.4s
OBN Obninsk 89.65 327 P P 02 16 00.9 -0.4
OBN Obninsk 89.65 327 *d*/P P 02 16 00.3 -1.0
OBN */*PP **sP** 02 16 04.2 -1.4
OBN */*SP **PcP** 02 16 05.6 +3.0
OBN */* 02 19 33.0
OBN *e*PPP PPP 02 21 28.8
OBN */*S **SKSac** 02 26 30.1 -1.1
OBN *e* 02 26 55.9
OBN */*PS **PS** 02 28 04.0 +5.0
OBN pmax pmax
comp=Z,70nm,1.3s
OBN MLR MLR
comp=Z,5µm,17.0s
OBN Obninsk 89.65 327 LR LR 02 58 38.7
comp=Z,4µm,18.7s,baz=55,slow=37
AHID Auburn Hatcher 89.66 46 IAmb IAmb 02 16 06.8
comp=Z,168nm,1.4s
AHID IAMs_20 IAMs_20 02 53 36.7
comp=Z,2µm,19.0s
AHID Auburn Hatcher 89.66 46 ⇓P P 02 16 03.4 +1.4
SNOW Snow King Moun 89.68 45 IAmb IAmb 02 16 07.4
comp=Z,177nm,2.0s
SNOW IAMs_20 IAMs_20 03 02 05.5
comp=Z,2µm,18.0s
HWUT Hardware Ranch 89.70 47 IAmb IAmb 02 16 06.7
comp=Z,143nm,1.4s
HWUT IAMs_20 IAMs_20 02 50 34.7
comp=Z,3µm,20.0s
VSR Storozhevoye 89.73 323 *e*P P 02 15 59.8 -2.0
VSR pmax pmax
comp=Z,70nm,1.6s
VSR MLR MLR
comp=Z,6µm,17.0s
LOHW Long Hollow 89.74 45 IAMs_20 IAMs_20 02 53 40.9
comp=Z,2µm,19.0s
GLA Glamis 89.75 56 P P 02 16 02.0 -0.4
baz=286
VORD Divnogorie 89.75 323 *e*P P 02 15 59.8 -2.1
VORD pmax pmax
comp=Z,50nm,1.2s
VORD MLR MLR
comp=Z,410nm,7.0s
BLYC Blythe 89.80 55 IAmb IAmb 02 16 07.3
comp=Z,100nm,1.4s
SZCU Shurtz Canyon 89.80 51 IAmb IAmb 02 16 07.9
comp=Z,140nm,1.5s
GNI Garni 89.82 311 P P 02 16 01.6 -1.1
GNI IAmb IAmb 02 16 16.8
comp=Z,124nm,1.6s
GNI Garni 89.82 311 IAMs_20 IAMs_20 03 02 27.6
comp=Z,2µm,19.0s
GNI Garni 89.82 311 P P 02 16 01.8 -0.9
GNI Garni 89.82 311 ⇓P P 02 16 06.2 +3.5
GNI Garni 89.82 311 P P 02 16 01.6 -1.1
GNI pmax pmax
comp=Z,124nm,1.7s
GNI Garni 89.82 311 P P 02 16 02.0 -0.7
comp=Z,1.1nm,0.4s,baz=23,slow=6.5,SNR=5.1
GNI LR LR 03 02 20.8
comp=Z,1µm,18.1s,baz=62,slow=40
comp=Z,1.1nm,0.4s
GNI Garni 89.82 311 P P 02 16 02.3 -0.4
NLU North Lily Min 89.85 49 IAmb IAmb 02 16 07.6
comp=Z,123nm,1.4s
TRLG Trialeti 89.85 313 P P 02 16 02.1 -0.7
CTU Camp Tracy 89.85 48 IAmb IAmb 02 16 07.5
comp=Z,96nm,1.3s
LCMT Little Creek M 89.86 52 IAmb IAmb 02 16 08.2
comp=Z,139nm,1.5s
W13A Hualapai Mount 89.92 54 IAmb IAmb 02 16 08.3
comp=Z,78nm,1.3s
PDMCI Parker Dam,Lak 89.95 55 P P 02 16 02.5 -0.7
baz=287,SNR=36
TCUT Toone Canyon 89.97 48 IAmb IAmb 02 16 07.2
comp=Z,122nm,1.5s
ONI Oni 89.98 314 IAmb IAmb 02 16 11.6
comp=Z,153nm,1.8s
ONI Oni 89.98 314 P P 02 16 02.9 -0.3
KBZ Khabaz 89.99 315 *c*/P P 02 16 01.7 -1.4
KBZ pmax pmax
comp=Z,35nm,1.1s
KBZ Khabaz 89.99 315 P P 02 16 01.8 -1.3
comp=Z,7.6nm,1.0s,baz=79,slow=3.4,SNR=12
KBZ S SKSac 02 26 30.8 -2.8
comp=Z,0.9nm,0.9s,baz=86,slow=12,SNR=1.2
comp=Z,7.6nm,1.0s
KVAR Kislovodsk Arr 90.05 315 P P 02 16 02.4 -1.2
comp=Z,3.1nm,0.8s,baz=234,slow=23,SNR=2.0
KVAR S SKSac 02 26 31.2 -3.1
comp=Z,2.2nm,0.8s,baz=245,slow=8.9,SNR=1.5
KVAR LR LR 02 58 32.7
comp=Z,1µm,20.1s,baz=260,slow=37
comp=Z,3.1nm,0.8s
KIV Kislovodsk 90.06 315 P P 02 16 02.3 -1.4
KIV IAMs_20 IAMs_20 03 04 13.6
comp=Z,3µm,18.0s
KIV Kislovodsk 90.06 315 *e*P P 02 16 02.2 -1.4
KIV *e* 02 19 35.4
KIV *e*SS SS 02 32 55.5 +1.1
KIV *e*SSS SSS 02 36 32.3
KIV pmax pmax
comp=Z,25nm,1.1s
KIV pmax pmax
comp=Z,134nm,3.9s
KIV MLR MLR
comp=Z,3µm,20.0s
KIV Kislovodsk 90.06 315 P P 02 16 02.6 -1.1
RLMT Red Lodge 90.14 43 IAmb IAmb 02 16 08.9
comp=Z,171nm,1.6s
RLMT Red Lodge 90.14 43 P P 02 16 03.9 -0.2
baz=290,SNR=40
RLMT Red Lodge 90.14 43 ⇑P P 02 16 05.3 +1.2
MPU Maple Canyon 90.15 49 IAmb IAmb 02 16 09.0
comp=Z,118nm,1.4s
NEUR Neytrino 90.28 315 *e*P P 02 16 04.9 +0.1
NEUR pmax pmax
comp=Z,34nm,1.5s
MTPU Mount Pierson 90.35 51 IAmb IAmb 02 16 10.1
comp=Z,114nm,1.7s
PUL Pulkovo 90.59 333 ⇑*e*P P 02 16 05.4 -0.2
PUL pmax pmax
comp=Z,80nm,1.2s
BSUT Blindstream Ca 90.62 48 IAmb IAmb 02 16 42.1
comp=Z,75nm,1.5s
TMUT Trail Mountain 90.69 49 IAmb IAmb 02 16 11.0
comp=Z,105nm,1.6s
113A Mohawk Valley, 90.69 56 IAmb IAmb 02 16 11.3
comp=Z,115nm,1.4s
113A IAMs_20 IAMs_20 03 00 08.3
comp=Z,2µm,18.0s
BW06 Boulder Array 90.74 46 IAMs_20 IAMs_20 02 55 28.0
comp=Z,2µm,19.0s
BW06 Boulder Array 90.74 46 P P 02 16 06.0 -1.0
baz=290,SNR=6.9
PDAR Pinedale Array 90.74 46 P P 02 16 05.8 -1.2
comp=Z,3.2nm,0.9s,baz=248,slow=1.8,SNR=24
PDAR PP PP 02 19 40.1 -2.0
comp=Z,1.5nm,1.1s,baz=302,slow=10,SNR=2.4
PDAR S SKSac 02 26 35.3 -3.4
comp=Z,0.1nm,0.3s,baz=156,slow=22,SNR=1.6
PDAR PKKPbc PKKPbc 02 33 34.0 +0.1
comp=Z,0.4nm,0.7s,baz=130,slow=8.4,SNR=4.2
PDAR LR LR 02 55 11.3
comp=Z,2µm,18.4s,baz=312,slow=34
comp=Z,3.2nm,0.9s
U15A North Rim 90.76 52 IAmb IAmb 02 16 12.6
comp=Z,128nm,1.3s
FFC Flin Flon 90.80 33 P P 02 16 06.3 -0.4
FFC IAmb IAmb 02 16 10.9
comp=Z,74nm,1.4s
FFC Flin Flon 90.80 33 P P 02 16 06.3 -0.4
FFC pmax pmax
comp=Z,73nm,1.4s
KARS Kars 90.88 312 ⇑P P 02 16 09.6 +2.0
KARS Kars 90.88 312 P P 02 16 09.6 +2.0
ERBR Yeremizino-Bor 90.93 318 *e*P P 02 16 07.5 0.0
ERBR *e*S SKSac 02 26 39.3 +0.3
ERBR pmax pmax
comp=Z,157nm,1.4s
Y14A Wickenburg 90.95 55 IAmb IAmb 02 16 12.8
comp=Z,95nm,1.2s
P17A Butcher Ranch, 90.97 49 IAmb IAmb 02 16 13.0
comp=Z,140nm,1.5s
P17A IAMs_20 IAMs_20 02 55 47.3
comp=Z,2µm,18.0s
STEI Steigen 91.19 343 *e*P P 02 16 07.3 -0.9
STEI IAmb IAmb 02 16 12.0
comp=Z,40nm,0.9s
SRU San Rafael Swe 91.25 49 IAmb IAmb 02 16 13.8
comp=Z,76nm,1.3s
HMU Henry Mountain 91.47 50 IAmb IAmb 02 16 14.9
comp=Z,64nm,1.3s
FINES FINESS Array B 91.51 335 *i* P P 02 16 08.3 -1.6
FINES pmax pmax
comp=Z,10.0nm,0.5s
FINES FINESS Array B 91.51 335 P P 02 16 08.4 -1.4
comp=Z,9.8nm,0.5s,baz=65,slow=4.8,SNR=66
FINES LR LR 03 00 21.4
comp=Z,2µm,19.0s,baz=59,slow=38
comp=Z,9.8nm,0.5s
FAUS Fauske 91.56 343 *e*P P 02 16 09.5 -0.5
FAUS IAmb IAmb 02 16 15.4
comp=Z,146nm,1.8s
LAO LASA Array 91.57 41 P P 02 16 09.8 -0.7
baz=292,SNR=47
LAO LASA Array 91.57 41 ⇑P P 02 16 11.2 +0.6
VNDA Vanda 91.66 177 P P 02 16 07.9 -2.1
comp=Z,6.2nm,1.2s,baz=76,slow=8.9,SNR=2.7
VNDA LR LR 02 58 44.0
comp=Z,505nm,18.0s,baz=354,slow=36
comp=Z,6.2nm,1.2s
214A Organ Pipe Nat 91.70 57 IAmb IAmb 02 16 16.5
comp=Z,115nm,1.4s
214A Organ Pipe Nat 91.70 57 P P 02 16 11.2 -0.2
baz=287,SNR=8.6
WUAZ Wupatki 91.75 53 P P 02 16 12.2 +0.4
baz=288,SNR=10.0
X16A Lo Mia Camp, P 92.04 54 IAmb IAmb 02 16 18.6
comp=Z,60nm,1.4s
DGMT Dagmar 92.14 39 IAMs_20 IAMs_20 02 55 45.7
comp=Z,2µm,20.0s
DGMT Dagmar 92.14 39 IAmb IAmb 02 16 16.3
comp=Z,78nm,1.6s
DGMT Dagmar 92.14 39 P P 02 16 13.7 +0.6
baz=294,SNR=5.7
SOC Sochi 92.21 316 *e*P P 02 16 10.7 -2.8
SOC *e* 02 19 50.6
SOC *e*PPP PPP 02 21 52.2
SOC *e*S SKSac 02 26 43.5 -2.9
UPNV Upernavik 92.28 7 *i* P P 02 16 15.6 +2.4
UPNV IAmb IAmb 02 16 17.1
comp=Z,100nm,1.7s
GURO Guroymak-BITLI 92.33 311 IAmb IAmb 02 16 20.4
comp=Z,67nm,1.4s
O20A White River Ci 92.57 48 IAmb IAmb 02 16 19.8
comp=Z,59nm,1.2s
O20A White River Ci 92.57 48 P P 02 16 15.9 +0.4
baz=290,SNR=17
FCC Fort Churchill 92.66 27 IAMs_20 IAMs_20 02 58 01.5
comp=Z,3µm,21.0s
RWWY Rawlins 92.75 46 IAmb IAmb 02 16 20.7
comp=Z,79nm,1.3s
RWWY IAMs_20 IAMs_20 02 55 28.6
comp=Z,3µm,19.0s
VSU Vasula 92.85 333 ⇓P P 02 16 19.6 +3.5
VSU Vasula 92.85 333 ⇓*i*/P P 02 16 17.8 +1.7
VSU pmax pmax
comp=Z,57nm,1.2s
K22A Casper 92.87 45 P P 02 16 16.9 +0.1
baz=292,SNR=27
W18A Petrified Fore 93.15 53 P P 02 16 18.6 +0.3
baz=289,SNR=13
X18A Snowflake 93.17 53 IAmb IAmb 02 16 23.6
comp=Z,109nm,1.5s
TUC Tucson 93.23 56 P P 02 16 18.0 -0.6
TUC IAmb IAmb 02 16 23.8
comp=Z,88nm,1.6s
TUC Tucson 93.23 56 IAMs_20 IAMs_20 02 51 13.2
comp=Z,2µm,20.0s
TUC Tucson 93.23 56 P P 02 16 18.2 -0.3
baz=288
TUC Tucson 93.23 56 ⇓P P 02 16 19.9 +1.4
TUC Tucson 93.23 56 P P 02 16 18.0 -0.6
TUC pmax pmax
comp=Z,88nm,1.6s
ANN Anapa 93.27 318 *e*P P 02 16 16.8 -1.5
ANN *e*S SKSac 02 26 51.6 -0.6
ANN pmax pmax
comp=Z,61nm,1.0s
MVCO Mesa Verde 93.39 51 IAmb IAmb 02 16 24.1
comp=Z,76nm,1.4s
MVCO IAMs_20 IAMs_20 02 55 33.8
comp=Z,2µm,19.0s
MVCO Mesa Verde 93.39 51 P P 02 16 19.3 -0.1
baz=290,SNR=23
MVCO Mesa Verde 93.39 51 ⇓P P 02 16 20.5 +1.1
SUMG Summit 93.69 1 IAmb IAmb 02 17 04.3
comp=Z,86nm,1.8s
SUMG Summit 93.69 1 ⇓P P 02 16 22.1 +1.8
SUMG Summit 93.69 1 *i* P P 02 16 21.0 +0.8
SUMG IAmb IAmb 02 16 55.2
comp=Z,8.1nm,1.0s
SMCO Snowmass 93.82 48 IAmb IAmb 02 16 26.1
comp=Z,59nm,1.2s
SMCO IAMs_20 IAMs_20 02 52 51.3
comp=Z,3µm,20.0s
N23A Red Feather La 93.93 46 P P 02 16 21.6 -0.3
baz=292,SNR=38
RSSD Black Hills 93.98 43 P P 02 16 20.7 -1.2
RSSD IAmb IAmb 02 16 26.0
comp=Z,95nm,1.5s
RSSD Black Hills 93.98 43 IAMs_20 IAMs_20 02 58 42.0
comp=Z,2µm,19.0s
RSSD Black Hills 93.98 43 P P 02 16 21.8 -0.1
baz=293
RSSD Black Hills 93.98 43 P P 02 16 20.7 -1.2
RSSD pmax pmax
comp=Z,95nm,1.5s
RSSD MLR MLR
comp=Z,2µm,19.0s
PHWY Pilot Hill 94.11 46 IAmb IAmb 02 16 27.3
comp=Z,73nm,1.4s
PHWY IAMs_20 IAMs_20 02 53 49.5
comp=Z,2µm,19.0s
RAYN Ar Rayn 94.21 295 P P 02 16 21.3 -1.9
RAYN Ar Rayn 94.21 295 ⇓P P 02 16 22.6 -0.5
RAYN Ar Rayn 94.21 295 P P 02 16 21.3 -1.9
RAYN pmax pmax
comp=Z,19nm,1.2s
MNK Minsk 94.39 329 *i* P P 02 16 18.7 -4.6
MNK *i* 02 20 05.6
MNK */*S **SKSac** 02 26 53.4 -4.5
MNK */*SS **SS** 02 33 52.6 -3.1
MNK */*SSS SSS 02 37 33.6
MNK pmax pmax
comp=N,13nm,1.0s
MNK pmax pmax
comp=E,11nm,1.2s
MNK pmax pmax

	comp=Z,7.0nm,1.2s									
MNK						MLR	MLR			
	comp=N,2µm,18.0s									
MNK						MLR	MLR			
	comp=Z,3µm,14.0s									
MNK						MLR	MLR			
	comp=E,1µm,19.0s									
S22A	**4UR Ranch, Cre**	**94.44**	**50**		IAmb	IAmb	02 16 29.0			
	comp=Z,74nm,1.5s									
S22A	**4UR Ranch, Cre**	**94.44**	**50**		P	**P**	**02 16 24.7**	**+0.4**		
	baz=291,SNR=29									
ISCO	**Idaho Springs**	**94.57**	**47**		IAMs_20	IAMs_20	02 57 04.6			
	comp=Z,2µm,20.0s									
ISCO	**Idaho Springs**	**94.57**	**47**		P	**P**	**02 16 24.3**	**-0.5**		
	baz=292,SNR=11									
ARPR	**Arapgir-MALATY**	**94.83**	**312**		IAmb	IAmb	02 16 32.0			
	comp=Z,58nm,1.3s									
ARPR					IAMs_20	IAMs_20	03 05 59.1			
	comp=Z,2µm,19.0s									
MDND	**Maddock**	**95.19**	**38**		P	**P**	**02 16 27.1**	**0.0**		
	baz=297									
Q24A	**Divide**	**95.22**	**48**		P	**P**	**02 16 28.4**	**+0.5**		
	baz=292,SNR=8.3									
SDCO	**Great Sand Dun**	**95.42**	**49**		P	**P**	**02 16 28.4**	**-0.4**		
	baz=292,SNR=13									
121A	**Cooks Peak, D**	**95.55**	**55**		P	**P**	**02 16 29.2**	**-0.1**		
	baz=290,SNR=26									
AKASG	**Malin Array Be**	**95.61**	**325**	*i*	P	**P**	**02 16 28.5**	**-0.5**		
AKASG	**Malin Array Be**	**95.61**	**325**		P	**P**	**02 16 27.2**	**-1.8**		
	comp=Z,0.3nm,0.4s,baz=53,slow=2.8,SNR=8.6									
AKASG					LR	LR	03 01 49.8			
	comp=Z,2µm,20.6s,baz=58,slow=37									
	comp=Z,0.3nm,0.4s									
AKBB	**Malin Array Si**	**95.61**	**325**		IAMs_20	IAMs_20	03 04 45.0			
	comp=Z,3µm,19.0s									
AKBB	**Malin Array Si**	**95.61**	**325**	⇓	*e*P	**P**	**02 16 29.5**	**+0.5**		
AKBB					pmax	pmax				
	comp=Z,29nm,1.9s									
KIEV	**Kiev**	**95.63**	**325**		P	**P**	**02 16 27.4**	**-1.6**		
KIEV	**Kiev**	**95.63**	**325**		P	**P**	**02 16 27.4**	**-1.6**		
KIEV					pmax	pmax				
	comp=Z,44nm,1.8s									
Y22D	**IRIS PASSCAL I**	**95.69**	**53**		IAMs_20	IAMs_20	02 57 13.1			
	comp=Z,2µm,18.0s									
Y22D	**IRIS PASSCAL I**	**95.69**	**53**		P	**P**	**02 16 30.3**	**+0.5**		
	baz=291									
Y22F	**Passcal Instru**	**95.69**	**53**		P	**P**	**02 16 30.7**	**+0.8**		
	baz=291									
ANMO	**Albuquerque**	**95.73**	**52**		P	**P**	**02 16 29.2**	**-0.9**		
ANMO					IAmb	IAmb	02 16 35.0			
	comp=Z,49nm,1.6s									
ANMO	**Albuquerque**	**95.73**	**52**		IAMs_20	IAMs_20	03 07 29.2			
	comp=Z,2µm,18.0s									
ANMO	**Albuquerque**	**95.73**	**52**		P	**P**	**02 16 30.5**	**+0.4**		
	baz=291									
ANMO	**Albuquerque**	**95.73**	**52**		P	**P**	**02 16 29.2**	**-0.9**		
ANMO					pmax	pmax				
	comp=Z,49nm,1.6s									
ANMO	**Albuquerque**	**95.73**	**52**		LR	LR	02 59 30.7			
	comp=Z,1µm,18.0s,baz=28,slow=35									
PABE	**Paberze**	**95.75**	**331**		IAMs_20	IAMs_20	03 03 22.2			
	comp=Z,3µm,19.0s									
ULM	**Lac du Bonnet**	**96.19**	**35**		IAmb	IAmb	02 16 35.2			
	comp=Z,46nm,1.4s									
ULM	**Lac du Bonnet**	**96.19**	**35**		P	**P**	**02 16 29.1**	**-2.5**		
	comp=Z,6.9nm,1.1s,baz=309,slow=9.3,SNR=4.0									
ULM					S	**SKSac**	**02 27 09.1**	**+1.4**		
	comp=Z,0.8nm,0.7s,baz=25,slow=14,SNR=1.5									
ULM					LR	LR	03 01 21.1			
	comp=Z,3µm,18.1s,baz=300,slow=36									
	comp=Z,6.9nm,1.1s									
LPIG	**La Paz**	**96.20**	**63**		LR	LR	02 54 54.5			
	comp=Z,2µm,19.0s,baz=286,slow=32									
GAZ	**Gaziantep**	**96.38**	**311**		IAMs_20	IAMs_20	03 05 45.2			
	comp=Z,3µm,19.0s									
T25A	**Trinidad**	**96.45**	**49**		P	**P**	**02 16 34.3**	**+0.9**		
	baz=293									
OGNE	**Ogallala**	**96.63**	**45**		IAMs_20	IAMs_20	02 54 32.9			
	comp=Z,2µm,20.0s									
OGNE	**Ogallala**	**96.63**	**45**		P	**P**	**02 16 33.8**	**-0.1**		
	baz=295									
SLBS	**Sierra La Lagu**	**96.64**	**64**		P	**P**	**02 16 33.3**	**-1.0**		
EPT	**El Paso**	**96.83**	**55**		IAMs_20	IAMs_20	02 56 15.0			
	comp=Z,2µm,20.0s									
KSCO	**Kaye Shedlock'**	**97.01**	**47**		IAmb	IAmb	02 16 40.0			
	comp=Z,38nm,1.2s									
KSCO	**Kaye Shedlock'**	**97.01**	**47**		P	**P**	**02 16 35.5**	**-0.2**		
	baz=294									
HFS	**Hagfors**	**97.08**	**338**		P	**P**	**02 16 33.2**	**-2.2**		
	comp=Z,3.5nm,0.9s,baz=82,slow=3.1,SNR=6.9									
HFS					LR	LR	03 04 57.5			
	comp=Z,2µm,18.1s,baz=42,slow=38									
	comp=Z,3.5nm,0.9s									
SUSD	**Miller**	**97.14**	**41**		P	**P**	**02 16 35.7**	**-0.4**		
	baz=297									
NB2	**NORSAR Subarra**	**97.30**	**340**		P	**P**	**02 16 35.7**	**-0.7**		
	comp=Z,36nm,1.4s,baz=46,slow=4.6									
NB2	**NORSAR Subarra**	**97.30**	**340**		P	**P**	**02 16 35.7**	**-0.7**		
	baz=46,slow=4.6									
NOA	**NORSAR Array B**	**97.30**	**340**		P	**P**	**02 16 34.8**	**-1.7**		
	comp=Z,4.1nm,0.9s,baz=53,slow=4.4,SNR=5.8									
NOA					LR	LR	03 03 43.6			
	comp=Z,2µm,19.6s,baz=65,slow=37									
	comp=Z,4.1nm,0.9s									
K30B	**Basset**	**97.51**	**43**		IAmb	IAmb	02 16 41.2			
	comp=Z,44nm,1.4s									
MNTX	**Cornudas Mount**	**97.75**	**55**		IAMs_20	IAMs_20	02 57 15.3			
	comp=Z,2µm,19.0s									
MNTX	**Cornudas Mount**	**97.75**	**55**		P	**P**	**02 16 39.1**	**0.0**		
	baz=291,SNR=8.3									
BRTR	**Keskin Array B**	**97.91**	**314**	*i*	P	**P**	**02 16 39.2**	**-0.6**		
BRTR					pmax	pmax				
	comp=Z,21nm,1.2s									
BRTR	**Keskin Array B**	**97.91**	**314**		P	**P**	**02 16 38.1**	**-1.7**		
	comp=Z,3.4nm,1.0s,baz=116,slow=2.9,SNR=12									
BRTR					LR	LR	03 05 35.5			
	comp=Z,913nm,18.0s,baz=59,slow=38									
	comp=Z,3.4nm,1.0s									
RTBA	**Rita Blanca**	**97.97**	**50**		IAmb	IAmb	02 16 44.6			
	comp=Z,56nm,1.8s									
FRB	**Frobisher Bay**	**98.10**	**15**		LR	LR	03 03 02.3			
	comp=Z,1µm,20.3s,baz=327,slow=37									
F33A	**5 Mile Ranch,**	**98.14**	**39**		IAmb	IAmb	02 16 44.1			
	comp=Z,38nm,1.4s									
B35A	**Bob, Littlefor**	**98.37**	**36**		IAmb	IAmb	02 16 50.7			
	comp=Z,64nm,1.8s									
VHRN	**Van Horn**	**98.40**	**56**		IAmb	IAmb	02 16 46.9			
	comp=Z,41nm,1.4s									
ANTO	**Ankara**	**98.44**	**315**	⇓	P	Pdif	02 16 46.1	+4.0		
ANTO	**Ankara**	**98.44**	**315**		P	**P**	**02 16 40.5**	**-1.6**		
ANTO	**Ankara**	**98.44**	**315**		P	**P**	**02 16 40.5**	**-1.6**		
ANTO					pmax	pmax				
	comp=Z,23nm,1.2s									
ASF	**Jabal al Asfar**	**98.52**	**306**		P	**P**	**02 16 41.1**	**-1.5**		
	comp=Z,3.7nm,0.9s,baz=135,slow=1.6,SNR=5.3									
	comp=Z,3.7nm,0.9s									
MSTX	**Muleshoe**	**98.92**	**52**		IAMs_20	IAMs_20	03 10 01.9			
	comp=Z,2µm,18.0s									
MSTX	**Muleshoe**	**98.92**	**52**		P	Pdif	02 16 45.2	+0.7		
	baz=293									
ECSD	**EROS Data Cent**	**98.96**	**41**		IAmb	IAmb	02 16 47.5			
	comp=Z,35nm,1.4s									
TPGR	**Topolog**	**98.99**	**320**	⇓	P	**Pdif**	**02 16 47.8**	**+3.5**		
CFR	**Carcaliu**	**99.00**	**321**	⇑	P	**Pdif**	**02 16 43.4**	**-1.0**		
CFR	**Carcaliu**	**99.00**	**321**	⇑	P	**Pdif**	**02 16 43.4**	**-1.0**		
BGNE	**Belgrade**	**99.06**	**43**		IAMs_20	IAMs_20	03 06 28.8			
	comp=Z,2µm,19.0s									
CBKS	**Cedar Bluff**	**99.13**	**46**		IAMs_20	IAMs_20	03 04 28.3			
	comp=Z,2µm,19.0s									
CBKS	**Cedar Bluff**	**99.13**	**46**		P	**Pdif**	**02 16 45.9**	**+0.7**		
	baz=296									
TESR	**Tescani**	**99.22**	**323**	⇑	P	**Pdif**	**02 16 48.7**	**+3.4**		
HPIG		**99.22**	**59**		IAMs_20	IAMs_20	02 58 57.6			
	comp=Z,2µm,19.0s									
PANC	**Panciu**	**99.25**	**322**	⇓	P	**Pdif**	**02 16 49.9**	**+4.4**		
MMAI	**Mount Meron Ar**	**99.36**	**307**		P	**Pdif**	**02 16 45.2**	**-1.1**		
	comp=Z,6.5nm,0.8s,baz=321,slow=39,SNR=4.0									
MMAI					S	**SKSac**	**02 27 24.8**	**0.0**		
	comp=Z,5.3nm,0.9s,baz=284,slow=41,SNR=2.4									
	comp=Z,6.5nm,0.8s									
AMTX	**Amarillo**	**99.38**	**51**		IAMs_20	IAMs_20	03 06 29.2			
	comp=Z,2µm,18.0s									
AMTX	**Amarillo**	**99.38**	**51**		P	**Pdif**	**02 16 47.4**	**+0.9**		
	baz=294									
BURAR	**Bucovina Array**	**99.46**	**324**	⇑	P	**Pdif**	**02 16 50.5**	**+4.0**		
BURAR	**Bucovina Array**	**99.46**	**324**	⇑	P	**Pdif**	**02 16 50.5**	**+4.0**		
VRI	**Vrincioaia**	**99.50**	**322**	⇑	P	**Pdif**	**02 16 51.0**	**+4.3**		
VRI	**Vrincioaia**	**99.50**	**322**	⇑	P	**Pdif**	**02 16 51.0**	**+4.3**		
BALJ	**Balqa**	**99.54**	**306**		IAMs_20	IAMs_20	03 11 05.4			
	comp=Z,1µm,19.0s									
PLOR	**Plostina**	**99.56**	**322**	⇑	P	**Pdif**	**02 16 50.5**	**+3.6**		
PLOR	**Plostina**	**99.56**	**322**	⇑	P	**Pdif**	**02 16 50.5**	**+3.6**		
F36A	**Milaca**	**99.80**	**38**		IAMs_20	IAMs_20	02 56 37.8			
	comp=Z,3µm,21.0s									
TURR	**Turia**	**99.83**	**322**	⇓	P	**Pdif**	**02 16 52.3**	**+4.2**		
N33A	**J Bar K, Exete**	**99.84**	**44**		IAMs_20	IAMs_20	02 59 23.5			
	comp=Z,2µm,19.0s									
EYMN	**Ely**	**99.85**	**35**		P	**Pdif**	**02 16 49.2**	**+1.1**		
	baz=303									
OZUR		**99.94**	**323**	⇓	P	**Pdif**	**02 16 53.0**	**+4.4**		
TXAR	**Lajitas Array**	**100.00**	**56**		P	**Pdif**	**02 16 47.9**	**-1.4**		
	comp=Z,0.4nm,0.9s,baz=113,slow=19,SNR=4.7									
TXAR					PP	**PP**	**02 20 54.8**	**+0.5**		
	comp=Z,0.9nm,0.8s,baz=254,slow=7.3,SNR=5.1									
TXAR					PKiKP	**PKiKP**	**02 21 16.6**	**-0.7**		
	comp=Z,1.1nm,1.0s,baz=270,slow=0.9,SNR=2.7									
TXAR					LR	LR	02 57 53.4			
	comp=Z,2µm,19.3s,baz=301,slow=33									
	comp=Z,0.4nm,0.9s									
CSS	**Mathiatis**	**100.15**	**310**		IAMs_20	IAMs_20	03 08 23.2			
	comp=Z,2µm,20.0s									
MLR	**Muntele Rosu**	**100.17**	**322**	⇓	P	**Pdif**	**02 16 53.2**	**+3.4**		
MLR	**Muntele Rosu**	**100.17**	**322**		IAMs_20	IAMs_20	03 05 35.7			
	comp=Z,2µm,18.0s									
MLR	**Muntele Rosu**	**100.17**	**322**	⇓	P	**Pdif**	**02 16 53.2**	**+3.4**		
DOPR	**Dopca**	**100.25**	**323**	⇑	P	**Pdif**	**02 16 53.6**	**+3.6**		
SPMN	**Marine on St.**	**100.56**	**38**		P	**Pdif**	**02 16 51.6**	**+0.3**		
	baz=302									
U32A	**Winter Ranch,**	**100.72**	**48**		IAMs_20	IAMs_20	02 57 27.4			
	comp=Z,3µm,20.0s									
VOIR		**100.73**	**322**	⇓	P	**Pdif**	**02 17 00.5**	**+8.3**		
VOIR		**100.73**	**322**	⇓	P	**Pdif**	**02 17 00.5**	**+8.3**		
OK035	**E0210 Rd and N**	**100.79**	**48**		IAMs_20	IAMs_20	03 01 24.1			
	comp=Z,2µm,19.0s									
CRVS	**Cervenica-Dubn**	**100.82**	**327**	*e*	P	**Pdif**	**02 16 55.7**	**+3.3**		
CRVS	**Cervenica-Dubn**	**100.82**	**327**	*e*	PDIFF	**Pdif**	**02 16 55.7**	**+3.3**		
I37A	**Lemond, Waseca**	**100.83**	**39**		IAMs_20	IAMs_20	03 00 18.4			
	comp=Z,3µm,20.0s									
OK038	**West end E0370**	**100.87**	**48**		IAMs_20	IAMs_20	02 57 21.2			
	comp=Z,3µm,21.0s									
ISP	**Isparta**	**100.94**	**313**		IAMs_20	IAMs_20	03 12 01.8			
	comp=Z,2µm,20.0s									
ARR	**Arges**	**101.02**	**322**	⇓	P	**Pdif**	**02 16 57.7**	**+4.3**		
OK032	**Salt Plains WL**	**101.11**	**48**		IAMs_20	IAMs_20	03 05 04.4			
	comp=Z,3µm,19.0s									
MARR	**Marisel-Cluj**	**101.18**	**324**	⇑	P	**Pdif**	**02 16 57.8**	**+3.6**		
KSU1	**Kansas State U**	**101.18**	**45**		IAMs_20	IAMs_20	02 57 28.3			
	comp=Z,2µm,20.0s									
KSU1	**Kansas State U**	**101.18**	**45**		P	**Pdif**	**02 16 55.1**	**+0.9**		
	baz=298									
HUMR	**Humele**	**101.26**	**321**	⇓	P	**Pdif**	**02 16 57.9**	**+3.5**		
DRGR		**101.34**	**324**	⇑	P	**Pdif**	**02 16 56.4**	**+1.5**		
DRGR		**101.34**	**324**	⇑	P	**Pdif**	**02 16 56.4**	**+1.5**		
CROK	**Carrier**	**101.41**	**48**		IAMs_20	IAMs_20	03 01 41.3			
	comp=Z,2µm,20.0s									
ELND	**Elena**	**101.55**	**320**	⇑	P	**Pdif**	**02 16 57.2**	**+1.4**		
WMOK	**Wichita Mounta**	**101.60**	**50**		IAMs_20	IAMs_20	03 10 55.0			
	comp=Z,2µm,18.0s									
WMOK	**Wichita Mounta**	**101.60**	**50**		P	**Pdif**	**02 16 57.1**	**+0.8**		
	baz=296									
LANS	**Liptovska Anna**	**101.72**	**328**	*e*	PP	**PKiKP**	**02 21 13.5**	**-6.3**		
BLOK	**Blackwell**	**101.84**	**47**		IAMs_20	IAMs_20	03 02 13.8			
	comp=Z,3µm,22.0s									
ABTX	**Abilene, Hawle**	**101.86**	**52**		P	**Pdif**	**02 16 58.8**	**+1.3**		
	baz=295									
VLAD	**Vladila**	**101.89**	**321**	⇓	P	**Pdif**	**02 17 02.0**	**+4.7**		
K38A	**Parkersburg**	**101.94**	**40**		IAMs_20	IAMs_20	03 00 24.7			
	comp=Z,2µm,20.0s									
OKC	**Ostrava-Krasne**	**101.97**	**329**		AMS	AMS	03 06 20.0			
	comp=Z,4µm,19.5s									
SCIA	**State Center**	**102.04**	**41**		IAMs_20	IAMs_20	03 07 52.8			
	comp=Z,2µm,18.0s									
OK048	**Pawnee Station**	**102.19**	**47**		IAMs_20	IAMs_20	03 06 16.1			
	comp=Z,2µm,20.0s									
OK051	**E0350 and S346**	**102.23**	**47**		IAMs_20	IAMs_20	03 01 59.1			
	comp=Z,2µm,20.0s									
SURR	**Surduc**	**102.27**	**324**	⇓	P	**Pdif**	**02 17 02.7**	**+3.8**		
T35A	**Sooner Cattle**	**102.27**	**47**		IAMs_20	IAMs_20	03 01 32.1			
	comp=Z,3µm,19.0s									
OK033	**Man**	**102.37**	**48**		IAMs_20	IAMs_20	03 06 04.8			
	comp=Z,2µm,19.0s									
OSTC	**Ostas**	**102.47**	**330**		AMS	AMS	03 10 00.0			
	comp=Z,3µm,17.3s									
OK052	**Battle Ridge R**	**102.49**	**48**		IAMs_20	IAMs_20	03 06 07.0			
	comp=Z,2µm,18.0s									
ALN	**Alexandroupoli**	**102.49**	**318**		IAMs_20	IAMs_20	03 09 43.4			
	comp=Z,2µm,19.0s									
KRLC	**Kraliky**	**102.50**	**329**		AMS	AMS	03 07 40.0			
	comp=Z,4µm,16.5s									
CHVC	**Chvalec**	**102.53**	**330**		AMS	AMS	03 10 10.0			
	comp=Z,3µm,16.9s									
DPC	**Dobruska-Polom**	**102.55**	**330**		AMS	AMS	03 06 40.0			
	comp=Z,2µm,19.0s									
UPC	**Upice**	**102.60**	**330**		AMS	AMS	03 10 20.0			
	comp=Z,3µm,17.7s									
N38A	**Joes South For**	**102.60**	**42**		IAMs_20	IAMs_20	03 03 38.5			
	comp=Z,2µm,20.0s									
JCT	**Junction City**	**102.63**	**54**		IAMs_20	IAMs_20	03 08 00.5			
	comp=Z,1µm,18.0s									
JCT	**Junction City**	**102.63**	**54**		P	**Pdif**	**02 17 01.6**	**+0.7**		
	baz=294									
DEOK	**Depew**	**102.78**	**48**		IAMs_20	IAMs_20	02 57 15.6			
	comp=Z,3µm,21.0s									
MDVR	**Moldovita**	**103.06**	**323**	⇓	P	**Pdif**	**02 17 05.1**	**+2.5**		
LOOK	**Love County**	**103.12**	**50**		IAMs_20	IAMs_20	03 09 34.9			
	comp=Z,2µm,18.0s									
BLKB	**Belogradchik**	**103.14**	**322**	⇑	P	**Pdif**	**02 17 03.3**	**+0.4**		
L40A	**Anamosa**	**103.22**	**40**		IAMs_20	IAMs_20	03 01 33.7			
	comp=Z,2µm,20.0s									
FW07	**Weatherford**	**103.24**	**51**		IAMs_20	IAMs_20	03 03 20.2			
	comp=Z,2µm,20.0s									
TUL3	**Leonard**	**103.25**	**48**		IAMs_20	IAMs_20	03 02 58.2			
	comp=Z,2µm,19.0s									
E43A	**Lone Tree Farm**	**103.27**	**35**		IAMs_20	IAMs_20	03 06 02.3			
	comp=Z,2µm,19.0s									
FW06	**Azle**	**103.29**	**51**		IAMs_20	IAMs_20	03 02 48.6			
	comp=Z,2µm,20.0s									
ZAIG	**Zacatecas**	**103.34**	**62**		IAMs_20	IAMs_20	02 57 28.8			
	comp=Z,2µm,19.0s									
MODS	**Modra-Piesok**	**103.34**	**328**	*e*	P	**Pdif**	**02 17 08.7**	**+5.0**		
MODS				*e*			02 21 25.3			
MODS	**Modra-Piesok**	**103.34**	**328**	*e*	PDIFF	**Pdif**	**02 17 08.7**	**+5.0**		
MODS				*e*	PP	**PKiKP**	**02 21 25.3**	**+2.5**		
BRG	**Berggiesshubel**	**103.34**	**331**		P	**PP**	**02 21 19.3**	**+1.0**		
BRG					Amp		02 21 25.0			
	comp=Z,26nm,1.6s									
Z35A	**Perchaven, San**	**103.36**	**50**		IAMs_20	IAMs_20	03 04 13.4			
	comp=Z,2µm,19.0s									
CLL	**Collm**	**103.48**	**332**	*e*	P	**Pdif**	**02 17 05.0**	**+0.8**		
CLL					pmax	pmax				
	comp=Z,32nm,2.0s									
CLL					MLR	MLR				
	comp=Z,4µm,18.2s									
CLL	**Collm**	**103.48**	**332**	*e*	Pdif	**Pdif**	**02 17 05.0**	**+0.8**		
	comp=Z,32nm,2.0s									
CLL				*e*	PP	**PP**	**02 21 21.0**	**+1.6**		
	comp=Z,31nm,1.5s									
CLL				*ex*		x	02 21 41.0			
CLL					AMS	AMS	03 09 00.0			
	comp=N,2µm,18.0s									
CLL					AMS	AMS	03 09 00.0			
	comp=E,2µm,19.1s									
CLL					AMS	AMS	03 09 00.0			
	comp=Z,4µm,18.2s									
GOPC	**GO Pecny, Ondr**	**103.58**	**330**		AMS	AMS	03 08 00.0			
	comp=Z,2µm,18.6s									
PRA	**Prague**	**103.65**	**330**		AMS	AMS	03 11 00.0			
	comp=Z,2µm,15.7s									
TREC	**Trest**	**103.65**	**329**		AMS	AMS	03 08 40.0			
	comp=Z,3µm,18.0s									
PRU	**Pruhonice**	**103.65**	**330**		AMS	AMS	03 11 00.0			
	comp=Z,2µm,20.8s									
HSKC	**Hora Svate Kat**	**103.76**	**331**		AMS	AMS	03 08 40.0			
	comp=Z,4µm,19.4s									
FRGS	**Fruska Gora**	**103.94**	**324**	⇓	P	**Pdif**	**02 17 09.0**	**+2.6**		
U38A	**Gravette**	**104.00**	**46**		IAMs_20	IAMs_20	03 02 53.8			
	comp=Z,3µm,19.0s									
N41A	**Harden Midland**	**104.19**	**41**		IAMs_20	IAMs_20	03 06 30.3			
	comp=Z,2µm,19.0s									
ZVC	**Zvikov**	**104.19**	**330**	*e*	PP	**PKiKP**	**02 21 22.3**	**-2.0**		
L42A	**Oliver, Polo**	**104.22**	**40**		IAMs_20	IAMs_20	03 01 04.1			
	comp=Z,3µm,20.0s									
435B	**Jarrell**	**104.23**	**53**		IAMs_20	IAMs_20	03 14 24.7			
	comp=Z,2µm,18.0s									
RONA	**Rosalia, Austr**	**104.28**	**328**	*e*	PKiKP	**PKiKP**	**02 21 22.1**	**-2.5**		
	comp=Z,14nm,1.4s									
CONA	**Conrad Observa**	**104.35**	**328**	*e*	pPKiKP	**PKiKP**	**02 21 32.3**	**+7.6**		
	comp=Z,20nm,1.4s									
HHAR	**Hobbs**	**104.39**	**46**		IAMs_20	IAMs_20	03 03 05.1			
	comp=Z,3µm,19.0s									
NKC	**Novy Kostel**	**104.48**	**331**		AMS	AMS	03 09 10.0			
	comp=Z,5µm,20.1s									
R40A	**Maddies Statio**	**104.53**	**44**		IAMs_20	IAMs_20	03 07 04.6			
	comp=Z,2µm,19.0s									
CKRC	**Cesky Krumlov**	**104.55**	**330**		AMS	AMS	03 09 00.0			
	comp=Z,2µm,20.7s									
KHC	**Kasperske Hory**	**104.69**	**330**		IAMs_20	IAMs_20	03 08 22.8			
	comp=Z,3µm,19.0s									
KHC	**Kasperske Hory**	**104.69**	**330**	*e*	PP	**PP**	**02 21 29.8**	**+1.3**		
KHC					AMS	AMS	03 07 50.0			
	comp=Z,3µm,17.8s									
GERES	**GERESS Array B**	**104.83**	**330**		PP	**PP**	**02 21 29.6**	**0.0**		
	comp=Z,0.5nm,0.6s,baz=6.3,slow=9.9,SNR=2.1									
ARSA	**Arzberg**	**104.97**	**328**	*e*	PP	**PP**	**02 21 31.3**	**+0.7**		
	comp=Z,13nm,1.6s									
MGMO	**Mountain Grove**	**105.11**	**45**		IAMs_20	IAMs_20	03 03 09.2			
	comp=Z,2µm,20.0s									
MOA	**Molln**	**105.22**	**329**	*e*	PP	**PP**	**02 21 35.4**	**+3.0**		
	comp=Z,16nm,2.3s									
HDIL	**Hopedale**	**105.26**	**41**		IAMs_20	IAMs_20	03 01 17.0			
	comp=Z,2µm,20.0s									
KVTX	**Kingsville**	**105.37**	**56**		IAMs_20	IAMs_20	03 00 40.2			
	comp=Z,2µm,20.0s									
GRF	**Grafenberg Arr**	**105.42**	**332**	*e*	PP	**PP**	**02 21 33.2**	**-0.7**		
GRF				*e*	L	L	03 10 18.5			
	comp=Z,4µm,19.3s									
MIAR	**Mount Ida**	**105.50**	**48**		IAMs_20	IAMs_20	03 00 14.9			
	comp=Z,3µm,20.0s									
M44A	**Midewin, Midew**	**105.58**	**39**		IAMs_20	IAMs_20	03 02 45.9			
	comp=Z,3µm,20.0s									
SOKA	**Soboth**	**105.59**	**328**	*e*	PP	**PP**	**02 21 34.5**	**-0.9**		
	comp=Z,17nm,1.5s									
P43A	**Skaggs, Pawnee**	**105.62**	**42**		IAMs_20	IAMs_20	03 07 06.3			
	comp=Z,2µm,19.0s									
SLM	**Saint Louis**	**105.70**	**43**		IAMs_20	IAMs_20	03 06 22.6			
	comp=Z,2µm,20.0s									
PUK	**Puka**	**105.73**	**322**		IAMs_20	IAMs_20	03 14 32.8			
	comp=Z,2µm,20.0s									
FCAR	**Ozark Folk Cen**	**105.86**	**46**		IAMs_20	IAMs_20	03 00 12.

comp=Z,2µm,20.0s
CASP Castiglione de 110.40 327 IAMs_20 IAMs_20 03 14 41.1
comp=Z,2µm,18.0s
CEL Celeste 110.44 320 IAMs_20 IAMs_20 03 13 45.8
comp=Z,2µm,19.0s
SWET Sewanee 110.47 44 IAMs_20 IAMs_20 03 09 08.8
comp=Z,2µm,19.0s
S51A Beattyville 110.56 40 IAMs_20 IAMs_20 03 04 52.0
comp=Z,2µm,20.0s
LMQ La Malbaie 110.63 26 IAMs_20 IAMs_20 03 08 19.4
comp=Z,3µm,20.0s
W50A Signal Mountai 110.89 43 IAMs_20 IAMs_20 03 09 40.0
comp=Z,2µm,19.0s
Y49A Blount Mountai 110.91 45 IAMs_20 IAMs_20 03 03 36.6
comp=Z,2µm,20.0s
LONY Lake Ozonia 110.93 30 IAMs_20 IAMs_20 03 06 11.9
comp=Z,2µm,20.0s
FPAL Fort Paine 111.07 44 IAMs_20 IAMs_20 03 07 39.8
comp=Z,2µm,20.0s
V51A Loudon 111.17 42 IAMs_20 IAMs_20 03 08 42.4
comp=Z,2µm,20.0s
TZTN Tazewell 111.25 41 IAMs_20 IAMs_20 03 04 24.6
comp=Z,2µm,20.0s
D62A Allapoint, All 111.53 25 IAMs_20 IAMs_20 03 06 38.1
comp=Z,3µm,21.0s
X51A Calhoun 111.56 44 IAMs_20 IAMs_20 03 08 23.8
comp=Z,2µm,20.0s
NCB Newcomb 111.58 30 IAMs_20 IAMs_20 03 09 00.7
comp=Z,3µm,20.0s
V52A Sevierville 111.64 42 IAMs_20 IAMs_20 03 17 27.8
comp=Z,2µm,19.0s
J59A Piesco 111.81 31 IAMs_20 IAMs_20 03 08 38.0
comp=Z,2µm,20.0s
W52A Murphy 111.87 43 IAMs_20 IAMs_20 03 09 46.9
comp=Z,2µm,20.0s
BRAL Brewton 111.94 48 IAMs_20 IAMs_20 03 04 28.4
comp=Z,3µm,20.0s
G62A West of Eustis 112.36 27 IAMs_20 IAMs_20 03 12 57.3
comp=Z,2µm,20.0s
U54A Nelsons Funny 112.37 40 IAMs_20 IAMs_20 03 05 59.8
comp=Z,3µm,20.0s
Y52A Lilburn 112.51 44 IAMs_20 IAMs_20 03 08 52.8
comp=Z,2µm,20.0s
H62A Milan 112.58 28 IAMs_20 IAMs_20 03 08 37.1
comp=Z,3µm,20.0s
F63A Nahmakanta, Br 112.61 26 IAMs_20 IAMs_20 03 08 46.6
comp=Z,2µm,21.0s
TRY Troy 112.76 31 IAMs_20 IAMs_20 03 09 18.2
comp=Z,3µm,20.0s
F64A Sherman 112.80 26 IAMs_20 IAMs_20 03 09 45.6
comp=Z,3µm,20.0s
J61A Chester 112.85 30 IAMs_20 IAMs_20 03 08 00.5
comp=Z,2µm,20.0s
ELIB Princess Elisa 113.04 197 *d*PKiKP **PKiKP** 02 21 38.7 -1.5
GOGA Godfrey 113.17 44 IAMs_20 IAMs_20 03 09 11.8
comp=Z,2µm,20.0s
I63A Otisfield 113.25 28 IAMs_20 IAMs_20 03 10 58.7
comp=Z,2µm,19.0s
352A Blakely 113.28 47 IAMs_20 IAMs_20 03 09 07.6
comp=Z,2µm,20.0s
SDMD Soldier's Deli 113.44 35 IAMs_20 IAMs_20 03 09 32.7
comp=Z,2µm,19.0s
L61B Northampton 113.46 31 IAMs_20 IAMs_20 03 14 22.7
comp=Z,2µm,19.0s
VSL Villasalto 113.49 325 IAMs_20 IAMs_20 03 14 21.9
comp=Z,2µm,19.0s
HODGE Hodges 113.49 43 IAMs_20 IAMs_20 03 10 42.7
comp=Z,2µm,20.0s
KMSC Kings Mountain 113.53 41 IAMs_20 IAMs_20 03 06 16.7
comp=Z,2µm,20.0s
QUA2 Belchertown 113.75 30 IAMs_20 IAMs_20 03 07 47.3
comp=Z,2µm,20.0s
WUPA West Chester U 113.77 34 IAMs_20 IAMs_20 03 10 58.1
comp=Z,2µm,19.0s
154A Montrose 113.89 45 IAMs_20 IAMs_20 03 21 03.5
comp=Z,2µm,19.0s
HRV Adam Dziewonsk 113.97 30 IAMs_20 IAMs_20 03 14 10.0
comp=Z,2µm,19.0s
GGN Saint George 114.03 25 IAMs_20 IAMs_20 03 10 14.1
comp=Z,2µm,20.0s
WSPT Westport, CT 114.08 32 IAMs_20 IAMs_20 03 08 02.2
comp=Z,2µm,20.0s
EMMW East Machias 114.10 26 IAMs_20 IAMs_20 03 10 25.2
comp=Z,2µm,20.0s
JSC Jenkinsville 114.11 42 IAMs_20 IAMs_20 03 10 17.1
comp=Z,2µm,21.0s
LMN Caledonia Moun 114.23 23 IAMs_20 IAMs_20 03 09 31.4
comp=Z,2µm,20.0s
BIRD Birdtown, Kers 114.40 41 IAMs_20 IAMs_20 03 06 52.7
comp=Z,2µm,20.0s
255A Hazlehurst 114.72 45 IAMs_20 IAMs_20 03 08 41.6
comp=Z,2µm,20.0s
Y57A Sumter 114.84 42 IAMs_20 IAMs_20 03 15 42.4
comp=Z,2µm,18.0s
M65A Busby, Falmout 115.13 30 IAMs_20 IAMs_20 03 09 00.6
comp=Z,2µm,20.0s
Y58A Scranton 115.38 41 IAMs_20 IAMs_20 03 15 57.6
comp=Z,2µm,19.0s
257A Skidaway Islan 115.68 44 IAMs_20 IAMs_20 03 13 20.8
comp=Z,2µm,20.0s
HAL Halifax 115.72 23 IAMs_20 IAMs_20 03 12 14.7
comp=Z,2µm,20.0s
BELA Belgrano 2 115.98 180 IAMs_20 IAMs_20 03 12 26.3
comp=Z,2µm,19.0s
KEST Kesra 116.08 322 IAMs_20 IAMs_20 03 20 34.7
comp=Z,2µm,20.0s
656A Willston 116.18 47 IAMs_20 IAMs_20 03 11 20.4
comp=Z,2µm,20.0s
DWPF Disney Wildern 117.69 48 IAMs_20 IAMs_20 03 07 14.6
comp=Z,2µm,20.0s
060A Indiantown 119.09 48 IAMs_20 IAMs_20 03 08 59.6
comp=Z,2µm,20.0s
SNAA Sanae 119.33 191 PP **PP** 02 23 14.0 +0.8
comp=Z,12nm,1.1s,baz=146,slow=7.0,SNR=3.7
ES19 SONSECA Array 119.94 334 IAMs_20 IAMs_20 03 19 10.8
comp=Z,2µm,19.0s
ES02 SONSECA Array 119.97 334 IAMs_20 IAMs_20 03 19 17.7
comp=Z,2µm,21.0s
ES06 SONSECA Array 119.98 334 IAMs_20 IAMs_20 03 19 17.9
comp=Z,2µm,20.0s
ESDC Sonseca Array 119.98 334 PP **PP** 02 23 17.4 -0.3
comp=Z,7.7nm,1.1s,baz=29,slow=7.8,SNR=7.9
ES14 SONSECA Array 120.02 334 IAMs_20 IAMs_20 03 19 17.9
comp=Z,2µm,22.0s
LSZ Lusaka 120.32 260 PKPdf **PKPdf** 02 21 53.0 -2.8
LSZ Lusaka 120.32 260 PKiKP **PKPdf** 02 21 53.0 -2.8
CART Cartagena 120.33 330 IAMs_20 IAMs_20 03 24 53.6
comp=Z,2µm,20.0s
BOSA Boshof 123.68 245 PKiKP **PKPdf** 02 21 59.0 -3.0
BOSA Boshof 123.68 245 PKP **PKPdf** 02 21 59.0 -3.0
comp=Z,6.0nm,1.1s,baz=359,slow=15,SNR=4.4
HDC Heredia 124.59 67 *e*P **PKiKP** 02 22 08.6 +4.1
BCIP Isla Barro Col 128.76 66 IAMs_20 IAMs_20 03 14 40.9
comp=Z,1µm,19.0s
SJCC San Jacinto, C 132.50 62 *e*P **PKPdf** 02 22 19.2 +0.1
URCC San Jos de Ur 133.20 65 *e*P **PKiKP** 02 22 21.6 0.0
MCRA Macar, Loja 133.39 83 PKPdf **PKPdf** 02 22 19.8 -1.0
OTAV Otavalo 133.47 76 IAMs_20 IAMs_20 03 09 47.6
comp=Z,1µm,21.0s
OTAV Otavalo 133.47 76 *e*P **PKiKP** 02 22 23.9 +1.2
CBOC Ciudad Bolivar 133.60 68 *e*P **PKPdf** 02 22 22.3 +0.9
PLMC San Jos del P 133.76 69 *e*P **PKPdf** 02 22 22.5 +1.0
BBAC Balboa, Cauca 133.99 73 *e*P **PKPdf** 02 22 23.1 +0.9
JAMC Jamundi, Valle 134.07 72 *e*P **PKiKP** 02 22 23.8 +0.2
YOTC Yotoco, Valle 134.07 70 *e*P **PKPdf** 02 22 22.5 +0.4
POPC Popayan, Colom 134.32 72 *e*P **PKPdf** 02 22 23.5 +0.7
UUPR Utuado, UPR, P 134.36 47 IAMs_20 IAMs_20 03 30 51.0
comp=Z,1µm,19.0s
GUY2C Guyana, Caldas 134.46 68 *e*P **PKPdf** 02 22 23.2 -0.1
PTBC PUERTO BERRIO 134.70 66 *e*P **PKPdf** 02 22 23.7 +0.5
SJG San Juan 134.86 46 IAMs_20 IAMs_20 03 21 03.2
comp=Z,2µm,21.0s
OCAC Ocana 134.91 63 *e*P **PKiKP** 02 22 25.1 -0.2
ORTC Ortega, Tolima 135.11 70 *e*P **PKiKP** 02 22 25.5 0.0
GARC Garzon, Huila 135.55 72 *e*P **PKPdf** 02 22 24.9 -0.2
ROSC El Rosal 135.56 68 PKP **PKPdf** 02 22 25.0 -0.3
comp=Z,4.0nm,0.5s,baz=334,slow=22,SNR=1.7
BARC Barichara 135.80 65 *e*P PKPdf 02 22 16.1 -9.5
PAMC Pamplona, Colo 135.88 64 *e*P **PKPdf** 02 22 26.5 +0.5
TORD Torodi Ar. Bea 135.89 306 PKP **PKPdf** 02 22 26.2 +0.8
comp=Z,3.7nm,0.3s,baz=13,slow=4.1,SNR=3.6
TORD PP **PP** 02 25 03.9 +0.5
comp=Z,4.8nm,0.3s,baz=29,slow=7.1,SNR=2.7
SDV Santo Domingo 136.88 60 *e*P **PKiKP** 02 22 29.9 +0.6
SDV Santo Domingo 136.88 60 *e*P **PKPdf** 02 22 27.9 +0.4
PLCA Paso Flores 138.16 137 PKP **PKPdf** 02 22 29.1 +0.1
comp=Z,12nm,1.1s,baz=188,slow=2.8,SNR=8.7
PLCA PP **PP** 02 25 16.6 -0.8
comp=Z,2.8nm,1.1s,baz=298,slow=7.1,SNR=2.2
PLCA Paso Flores 138.16 137 *e*P **PKiKP** 02 22 32.4 +1.4
BAUV El Baul 139.02 58 PKPdf **PKPdf** 02 22 28.7 -2.5
MT01 Popeta 140.56 127 **PKPdf** 02 22 33.4 -0.1
PEL Peldehue 141.26 126 IAMs_20 IAMs_20 03 14 36.0
comp=Z,1µm,20.0s
LCO Las Campanas 142.54 120 **PKPdf** 02 22 35.3 -2.2
LCO Las Campanas 142.54 120 PKiKP **PKPdf** 02 22 35.3 -2.2
TBTG Tabatinga, AM 142.97 78 02 22 33.3
PB12 IPOC Station P 144.50 103 PKPdf **PKPab** 02 22 38.8 -0.5
DBIC Dimbokro 144.89 304 PKPdf **PKPab** 02 22 39.2 -1.4
DBIC Dimbokro 144.89 304 PKP **PKPab** 02 22 40.9 +0.2
comp=Z,91nm,0.8s,baz=46,slow=3.7,SNR=72
KIC Kosan Boka 144.97 303 *e*PKP1 **PKPab** 02 22 41.0 0.0
comp=Z,122nm,0.8s
TIC Toumodi 145.04 304 *e*PKP1 **PKPbc** 02 22 41.4 +0.1
comp=Z,88nm,0.9s
TRQA Tornquist 145.19 139 **PKPbc** 02 22 39.7 -1.4
TRQA IAMs_20 IAMs_20 03 25 44.7
comp=Z,1µm,18.0s
TRQA Tornquist 145.19 139 PKiKP **PKPbc** 02 22 39.7 -1.4
TRQA MLR MLR
comp=Z,1µm,18.0s
LIC Lamto 145.28 303 *e*PKP1 **PKPbc** 02 22 41.9 -0.1
comp=Z,248nm,0.8s
LVC Limon Verde 145.47 110 PKPdf **PKPbc** 02 22 41.4 -1.5
LVC Limon Verde 145.47 110 PKiKP **PKPbc** 02 22 41.4 -1.5
LVC Limon Verde 145.47 110 *e*P **PKiKP** 02 22 47.1 +0.2
TEFE Tefe 147.72 74 *e*P **PKiKP** 02 22 51.5 +0.2
ETMB Extrema 147.88 86 *e*P **PKPbc** 02 22 49.0 -0.7
BOAV Boa Vista 148.83 61 *e*P **PKPbc** 02 22 51.0 -1.2
SAML Samuel 150.65 84 PKPdf **PKPdf** 02 22 48.6 -2.5
SAML Samuel 150.65 84 PKiKP **PKPdf** 02 22 48.6 -2.5
SAML Samuel 150.65 84 *e*P **PKPdf** 02 22 53.1 +2.0
SAML Samuel 150.65 84 *e*P **PKPdf** 02 22 49.7 -1.4
MACA Manacapuru-AM 151.26 71 *e*P **PKPbc** 02 22 55.6 -2.5
TICA Tres Isletas 152.04 121 *e*P **PKPdf** 02 22 55.2 +2.3
TBOT Tacuaremb 152.95 135 *e*P **PKPdf** 02 22 56.8 +2.7
ITQB Itaqui 153.57 130 *e*P **PKPdf** 02 22 58.5 +3.4
ESFA Espinillo Form 154.15 119 *e*P **PKPbc** 02 23 01.0 -3.2
VILB Vilhena 154.15 91 *e*P **PKPdf** 02 22 59.7 +3.4
PLTB Pedras Altas 154.47 138 *e*P **PKPdf** 02 22 59.7 +3.4
BBRB Robore, Bolivi 154.49 103 *e*P **PKPdf** 02 22 58.2 +1.6
CPUP Villa Florida 154.59 123 PKP **PKPdf** 02 22 57.0 +0.4
comp=Z,6.9nm,1.2s,baz=222,slow=6.7,SNR=3.4
CPUP PKPbc **pPKPbc** 02 23 06.3 -2.2
comp=Z,9.8nm,1.1s,baz=235,slow=3.0,SNR=6.0
CPUP PKPab **PKPab** 02 23 18.5 -1.1
comp=Z,8.2nm,1.1s,baz=284,slow=5.0,SNR=4.4
PTLB Pontes e Lacer 155.29 97 *e*P **PKPdf** 02 23 01.4 +3.6
MURT Porto Murtinho 155.92 112 *e*P **PKPdf** 02 23 01.0 +2.4
ITTB Itaituba 156.25 69 *e*P **PKPdf** 02 23 02.6 +3.4
MALB Monte Alegre 156.37 61 *e*P **PKPdf** 02 23 02.6 +3.3
ANTJ Antonio Joao (157.26 114 *e*P **PKPdf** 02 23 03.9 +3.5
MCPB Macapa, AP 157.36 55 *e*P **PKPdf** 02 23 03.9 +3.2
PDRB Porto dos Gac 157.37 87 *e*P **PKPdf** 02 23 04.7 +4.1
NPGB Novo Progresso 157.61 75 *e*P **PKPdf** 02 23 03.9 +2.9
AQDB Aquidauana 157.94 110 *e*P **PKPdf** 02 23 04.7 +3.6
CLDB Colider 158.16 85 *e*P **PKPdf** 02 23 04.3 +2.7
SALV Santo Antonio 158.59 98 *e*P **PKPdf** 02 23 05.1 +3.1
SNDB Serra Nova Dou 162.69 86 *e*P **PKPdf** 02 23 10.9 +4.3
BB19B Bebedouro 164.10 119 *e*P **PKPdf** 02 23 11.3 +3.5
IPMB Ipameri, GO 165.40 108 *e*P **PKPdf** 02 23 10.5 +1.5
SMTB Santa Maria do 165.45 71 *e*P **PKPdf** 02 23 11.3 +2.2
BDFB Brasilia 165.99 99 PKP **PKPdf** 02 23 10.1 +0.5
comp=Z,14nm,1.2s,baz=344,slow=2.7,SNR=6.4
BDFB PKPab **PKPab** 02 24 09.4 -0.4
comp=Z,9.2nm,1.0s,baz=167,slow=0.6,SNR=4.6
PMNB Patos De Minas 166.86 112 *e*P **PKPdf** 02 23 14.2 +4.0
SDBA SAO DESIDERIO 168.94 84 *e*P **PKPdf** 02 23 15.4 +3.8
JANB Januaria 169.60 98 *e*P **PKPdf** 02 23 13.4 +1.3

UCR ***13*** *02:25:18.8±0.4, 7.°93N×83.°13W, h8km±4km, MW3.6*
CATAC ***13*** *02:25:18.9±5.0, 7.°98N×83.°14W, h4km±3km, ML3.4*
UPA ***13*** *02:25:19.0±0.9, 7.°97N×83.°06W, h10km±5km, MW3.5*

ISC 13 02:25:19.4±2.0, 8.°05N±0.°10×83.°10W±0.°03, h14km±10km, n35, σ0.°86/48, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.27**	**55**	*e*P		**Pb**		**02 25 26.6**	**+0.5**
PTPM				*e*S		**Sb**		**02 25 32.8**	**+2.4**
PIRO	**Carate, Puerto**	**0.42**	**327**	*e*P		**Pb**		**02 25 28.9**	**+0.2**
CDITO	**Canoas**	**0.57**	**23**	*e*P		**Pb**		**02 25 31.7**	**+0.6**
CDITO	**Canoas**	**0.57**	**23**	*e*P		**Pn**		**02 25 31.9**	**-1.1**
CDITO	**Canoas**	**0.57**	**23**	*i* P		**Pb**		**02 25 31.5**	**+0.4**
CDITO				*i* S		**Sn**		**02 25 41.5**	**-0.7**
CDITO				IAML				02 25 44.9	
comp=Z,2µm,1.0s									
EDAD	**Golfito**	**0.60**	**354**	*e*P		**Pb**		**02 25 31.7**	**0.0**
DVD	**David**	**0.75**	**59**	*e*P		**Pg**		**02 25 33.9**	**-0.1**
DVD				*e*S		**Sn**		**02 25 45.2**	**-1.5**
PLAN	**Los Planes de**	**0.84**	**317**	*i* P		**Pb**		**02 25 35.2**	**-0.6**
PLAN				*i* S		**Sn**		**02 25 48.1**	**-0.9**
PLAN				IAML				02 25 52.6	
comp=Z,3µm,1.0s									
BRU2	**Volcan**	**0.84**	**29**	*e*P		**Pn**		**02 25 36.4**	**-0.6**
BRU2				*e*S		**Sn**		**02 25 50.0**	**+0.7**
BRU2	**Volcan**	**0.84**	**29**	*e*P		**Pn**		**02 25 36.5**	**-0.6**
BRU2	**Volcan**	**0.84**	**29**	*i* P		**Pn**		**02 25 36.4**	**-0.6**
BRU2				*i* S		**Sn**		**02 25 49.7**	**+0.4**
BRU2				IAML				02 25 53.1	
comp=Z,1µm,1.0s									
BCO2	**Palmira**	**0.87**	**40**	*e*P		**Pg**		**02 25 36.5**	**+0.1**
BCO2				*e*S		**Sn**		**02 25 50.4**	**+0.4**
BC3P	**Paso Ancho**	**0.90**	**32**	*e*P		**Pg**		**02 25 37.2**	**+0.3**
EDPN	**Palmar Norte**	**0.97**	**339**	*e*P		**Pg**		**02 25 38.3**	**+0.1**
LNBQ3	**Los Naranjos,**	**0.99**	**41**	*e*P		**Pb**		**02 25 38.0**	**-0.3**
POTG	**Potrero Grande**	**1.00**	**359**	*e*P		**Pn**		**02 25 39.0**	**-0.1**
POTG	**Potrero Grande**	**1.00**	**359**	*i* P		**Pn**		**02 25 38.8**	**-0.2**
POTG				*i* S		**Sn**		**02 25 54.3**	**+1.4**
POTG				IAML				02 25 58.5	
comp=Z,2µm,1.0s									
OCHAL	**Ojochal**	**1.17**	**333**	*i* P		**Pb**		**02 25 41.0**	**-0.4**
OCHAL				IAML				02 25 41.6	
comp=Z,6.4nm,1.0s									
OCHAL				*i* S		**Sb**		**02 25 55.6**	**-0.9**
DRK0	**Durika**	**1.22**	**353**	*e*P		**Pn**		**02 25 42.2**	**+0.1**
CHGR2	**Aguacate**	**1.29**	**47**	*e*P		**Pn**		**02 25 42.0**	**-1.0**
CHGR2				*e*S		**Sn**		**02 25 59.8**	**-0.4**
CNI2	**El Empalme, Bo**	**1.50**	**24**	*e*P		**Pn**		**02 25 45.1**	**-0.8**
CNI2				*e*S		**Sb**		**02 26 05.3**	**-0.7**
CDM	**Cerro de Muert**	**1.63**	**336**	*e*P		**Pn**		**02 25 48.6**	**+0.5**
CDM	**Cerro de Muert**	**1.63**	**336**	*i* P		**Pn**		**02 25 48.4**	**+0.3**
CDM				*i* S		**Sg**		**02 26 11.8**	**-0.3**
CDM				IAML				02 26 15.5	
comp=Z,140nm,1.0s									
LCR2	**La Lucha 2**	**1.91**	**332**	*e*P		**Pn**		**02 25 52.4**	**+0.8**
LCR2	**La Lucha 2**	**1.91**	**332**	*i* P		**Pn**		**02 25 52.0**	**+0.4**
LCR2				IAML				02 26 00.1	
comp=Z,81nm,1.0s									
VTCV	**VTCV, Calle Va**	**2.02**	**342**	*i* P		**Pb**		**02 25 54.6**	**-1.4**
VTCV				IAML				02 26 24.9	
comp=Z,310nm,1.0s									
HAYA	**Volcan Irazu**	**2.05**	**339**	*i* P		**Pn**		**02 25 54.4**	**+0.5**
HAYA				IAML				02 26 35.6	
comp=Z,200nm,1.0s									
JACO	**JACO, Garabito**	**2.22**	**316**	*e*P		**Pn**		**02 25 55.0**	**-0.8**
JACO	**JACO, Garabito**	**2.22**	**316**	*i* P		**Pn**		**02 25 55.0**	**-0.8**
JACO				IAML				02 25 55.3	
comp=Z,59nm,1.0s									
JACO				*i* S		**Sg**		**02 26 31.2**	**+0.2**
JTS	**Las Juntas de**	**2.88**	**321**	*e*P		**Pn**		**02 26 06.3**	**+1.5**
JTS	**Las Juntas de**	**2.88**	**321**	*e*P		**Pn**		**02 26 06.4**	**+1.5**
JUD3	**Juan Diaz 3**	**3.20**	**311**	*e*P		**Pn**		**02 26 09.8**	**+0.5**
SAJU	**San Juanillo,**	**3.27**	**308**	*i* P		**Pn**		**02 26 10.0**	**-0.2**
SAJU				IAML				02 28 29.9	
comp=Z,41nm,1.0s									
ORTG	**Ortega, Santa**	**3.27**	**315**	*i* P		**Pn**		**02 26 10.7**	**+0.4**
ORTG				IAML				02 27 00.4	
comp=Z,44nm,1.0s									
HZTE	**Horizontes, Gu**	**3.62**	**317**	*i* P		**Pn**		**02 26 17.0**	**+2.0**
HZTE				IAML				02 27 50.6	
comp=Z,130nm,1.0s									

TAP 13 02:28:30.6, 24.°24N×121.°68E, h2km±1km, ML0.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.09**	**215**	*e*P			Pg	02 28 33.3	+0.8
baz=214									
ETL				*e*S			Sg	02 28 35.2	+1.5
baz=214									
ETL	**Fush Village**	**0.09**	**215**	*e*P			Sg	02 28 35.1	+1.5
baz=248									
NACB	**Ninganchiao**	**0.10**	**232**	*e*P			Pg	02 28 33.5	+0.9
baz=232									
NACB				*e*S			Sg	02 28 35.5	+1.7
baz=232									
NACB	**Ninganchiao**	**0.10**	**232**	*e*P			Sg	02 28 35.6	+1.7
baz=255									
EAHA	**Aohua**	**0.11**	**30**	*e*P			Pg	02 28 33.9	+1.2
baz=29									
EAHA				*e*S			Sg	02 28 35.8	+1.6
baz=29									
EAHA	**Aohua**	**0.11**	**30**	P			Sg	02 28 35.9	+1.7
baz=339									
ETLH	**Xiulin Townshi**	**0.18**	**261**	*e*P			Pg	02 28 35.4	+1.2
baz=261									
ETLH				*e*S			Sg	02 28 38.8	+2.2
baz=261									
ETLH	**Xiulin Townshi**	**0.18**	**261**	*e*P			Sg	02 28 38.7	+2.1
baz=267									

TAP 13 02:28:32.0, 24.°22N×121.°79E, h11km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.12**	**339**	*e*S			Sg	02 28 38.5	+1.5
baz=339									
ETL	**Fush Village**	**0.16**	**248**	*e*S			Sg	02 28 39.5	+1.4
baz=248									
NACB	**Ninganchiao**	**0.18**	**256**	S			Sg	02 28 40.1	+1.5
baz=255									
ENA	**Nanau**	**0.21**	**349**	*e*P			Pb	02 28 37.3	-0.7
baz=351									
ENA				S			Sg	02 28 41.1	+1.6
baz=351									
EWUT	**Wuta**	**0.23**	**358**	P			Pb	02 28 37.5	-0.7
baz=358									
EWUT				S			Sg	02 28 41.4	+1.5
baz=358									
ETLH	**Xiulin Townshi**	**0.28**	**268**	*e*S			Sb	02 28 43.1	-0.7
baz=267									
ETM	**Tongmen**	**0.37**	**227**	*e*P			Pb	02 28 40.2	-0.3
baz=226									
LATG	**Datong**	**0.39**	**323**	*e*P			Pb	02 28 40.7	-0.5
baz=323									
LATG				*e*S			Sb	02 28 47.1	-0.1
baz=323									
NNSB	**Datong**	**0.42**	**300**	*e*S			Sb	02 28 48.0	0.0
baz=299									
NDT	**Datong Townshi**	**0.46**	**327**	*e*S			Sb	02 28 49.5	+0.6
baz=327									
ENTT	**Nioudou**	**0.47**	**335**	*e*P			Pb	02 28 42.1	-0.2
baz=335									
ENTT				*e*S			Sb	02 28 48.8	-0.4
baz=335									
WHF	**Hehuan Shan**	**0.48**	**261**	*e*S			Sb	02 28 49.7	-0.3
baz=260									

IDC ***13*** *02:31:06.2±0.4, 13.°79N×146.°49E, h0km, mb5.1/47, mbtmp5.1/47, MS4.8/11, Error ellipse: s-maj=13.3km s-min=9.8km az=94.0*
MOS ***13*** *02:31:06.8±0.9, 13.°80N×146.°32E, h12km, mb5.5/70, MS5.1/8, Error ellipse: s-maj=8.4km s-min=4.2km az=116.1*
BJI ***13*** *02:31:06.6±0.0, 13.°90N×146.°74E, h19km, mb5.1/76, mB5.8/12, Ms5.2/28, Ms7 5.1/28*
DJA ***13*** *02:31:07.6±2.7, 14.°N±7.°×14.°7E±.°, h24km±19km, M5.6/12, mB6.2/6, mb5.6/12, MLv5.3/1, Mw(mB)5.8/6*
NEIC ***13*** *02:31:09.0±1.4, 13.°74N±0.°09×146.°38E±0.°10, h10km±1km, mb5.5/435, Mww5.3/18, Error ellipse: s-maj=16.9km s-min=13.5km az=52.0*
NEIC ***13*** *02:31:09.6, 13.°36N×146.°13E, h22km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.91; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-1.16; $M_{r\theta}$-0.30; $M_{\theta\phi}$-0.63; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.23000×10^{17} NP1: ϕ_s219.31000°, δ55.30000°, λ115.18000°. NP2: ϕ_s359.75000°, δ41.93000°, λ58.43000°. Principal axes: T 1.0259, Plg68.0000°, Azm184.0000°; N 0.4066, Plg20.0000°, Azm24.0000°; P -1.4326, Plg7.0000°, Azm292.0000°;*
NEIC ***13*** *02:31:09.6, 13.°76N×146.°34E, h22km*
GCMT ***13*** *02:31:12.0±0.2, 13.°61N±0.°01×146.°58E±0.°01, h17km, MW5.3/138, Moment Tensor Solution. s71,c101; s138,c245; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.86±.04; $M_{\theta\theta}$0.24±.02; $M_{\phi\phi}$-1.11±.03; $M_{r\theta}$0.09±.07; $M_{\theta\phi}$-0.53±.02; $M_{\phi r}$0.23±.06; Best double couple: $M_0$1.10600×10^{17} NP1:ϕ_s20.00000°, δ52.00000°, λ92.00000°. NP2:ϕ_s198.00000°, δ38.00000°, λ88.00000°. Principal axes: T 0.8920, Plg83.0000°, Azm300.0000°; N 0.4260, Plg1.0000°, Azm199.0000°; P -1.3210, Plg7.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 02:31:09.3±0.6, 13.°75N±0.°04×146.°42E±0.°05, h17km±3km, n1021, σ1.°19/903, mb5.5/333, MS4.9/28, 38C-17D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.51**	**264**				**Pb**	**02 31 36.6**	**-0.3**
GUMO	**Guam**	**1.51**	**264**	P			**Pg**	**02 31 37.3**	**-1.1**
GUMO	**Guam**	**1.51**	**264**	P			**Pb**	**02 31 36.6**	**-0.3**
GUMO	**Guam**	**1.51**	**264**	Pn			**Pg**	**02 31 37.2**	**-1.2**
1µm,0.3s,baz=129,slow=7.2,SNR=315									
MANU	**Manus Island**	**15.72**	**176**	P			**Pn**	**02 34 51.9**	**+1.8**
MANU				IAmb			IAmb	02 34 56.5	
comp=Z,540nm,1.4s									
MANU	**Manus Island**	**15.72**	**176**	P			**Pn**	**02 34 50.7**	**+0.6**
GENI	**Genyem**	**17.38**	**201**	P			**P**	**02 35 12.2**	**-0.2**
GENI	**Genyem**	**17.38**	**201**	P			**P**	**02 35 14.4**	**+2.0**
comp=Z,404nm,1.5s,comp=Z,8µm									
SMPI	**Sarmi**	**17.40**	**207**	P			**P**	**02 35 14.2**	**+1.5**
comp=Z,242nm,1.4s									
H11S3	**WAKE ISLAND Hy**	**20.03**	**74**	T			T	02 57 26.4	
baz=263									
H11S1	**WAKE ISLAND Hy**	**20.05**	**74**	T			T	02 57 31.2	
baz=263									
H11S2	**WAKE ISLAND Hy**	**20.05**	**74**	T			T	02 57 30.7	
baz=263									
JHJ	**Hachijo jima 2**	**20.21**	**344**	LR			LR	02 43 07.9	
comp=Z,5µm,18.1s,baz=175,slow=36									
H11N1	**WAKE ISLAND Hy**	**20.48**

PMG pmax pmax
comp=Z,196nm,1.1s
PMG Port Moresby 23.02 178 LR LR 02 46 27.6
comp=Z,1µm,18.0s,baz=292,slow=40
JGF Kuroka 23.24 341 P **P** **02 36 13.5 -2.3**
JGF Kuroka 23.24 341 P **P** **02 36 16.7 +0.9**
MJAR Matsushiro Arr 23.86 343 P **P** **02 36 19.0 -2.9**
MJAR Matsushiro Arr 23.86 343 P **P** **02 36 19.0 -2.9**
comp=Z,16nm,0.9s,baz=165,slow=9.4,SNR=18
MJAR S **S** **02 40 35.4 -1.8**
comp=Z,1.3nm,0.4s,baz=89,slow=32,SNR=2.8
MJAR LR LR 02 44 46.7
comp=Z,2µm,19.4s,baz=154,slow=34
comp=Z,16nm,0.9s
MAJO Matsushiro 23.86 343 P **P** **02 36 19.1 -2.8**
MAJO Matsushiro 23.86 343 P **P** **02 36 19.1 -2.8**
MAJO pmax pmax
comp=Z,118nm,1.5s
MJB9 Matsu-Tunnel 23.86 343 P **P** **02 36 20.1 -1.8**
JNU Nakatsue 23.92 326 P **P** **02 36 21.4 -1.1**
JNU Nakatsue 23.92 326 P **P** **02 36 23.3 +0.8**
JNU Nakatsue 23.92 326 P **P** **02 36 21.7 -0.8**
comp=Z,163nm,1.1s,baz=116,slow=4.1,SNR=21
comp=Z,163nm,1.1s
YOJ Yonaguni jima 24.51 299 P **P** **02 36 27.9 -0.1**
YOJ Yonaguni jima 24.51 299 P **P** **02 36 29.7 +1.7**
YOJ Yonaguni jima 24.51 299 P **P** **02 36 27.9 -0.1**
YOJ pmax pmax
comp=Z,290nm,1.0s
JMM Marumori 24.54 349 P **P** **02 36 26.4 -1.6**
JMM IAmb IAmb 02 36 40.0
comp=Z,80nm,0.8s
JMM Marumori 24.54 349 P **P** **02 36 30.2 +2.2**
NACB Ninganchiao 25.62 298 P **P** **02 36 36.5 -1.6**
NACB IAmb IAmb 02 36 52.7
comp=Z,139nm,1.3s
NACB Ninganchiao 25.62 298 P **P** **02 36 38.1 +0.1**
SANI Sanana 25.62 234 P **P** **02 36 38.1 -0.1**
YULB Yu-li 25.63 296 P **P** **02 36 36.8 -1.4**
YULB IAmb IAmb 02 36 41.3
comp=Z,82nm,0.8s
YULB Yu-li 25.63 296 P **P** **02 36 40.2 +2.0**
TWGBT Beinan 25.66 294 P **P** **02 36 39.5 +1.1**
TWG Pinlang 25.66 294 P **P** **02 36 37.3 -1.2**
TWG IAmb IAmb 02 36 55.1
comp=Z,173nm,1.3s
SSLB Suanglung 26.05 296 P **P** **02 36 42.3 +0.3**
SSLB Suanglung 26.05 296 P **P** **02 36 43.7 +1.7**
TPUB Ta-pu 26.19 295 P **P** **02 36 41.5 -1.8**
TPUB Ta-pu 26.19 295 P **P** **02 36 43.8 +0.5**
MRSI Marisa 27.59 243 P **P** **02 36 57.2 +1.3**
comp=Z,247nm,0.9s,comp=Z,3µm
LUWI Luwuk 27.66 240 P **P** **02 36 57.2 +0.7**
COEN Coen 27.71 187 P **P** **02 36 55.7 -1.3**
COEN Coen 27.71 187 P **P** **02 36 57.3 +0.3**
TJN Taejon 28.27 326 P **P** **02 37 00.6 -1.2**
TJN Taejon 28.27 326 P **P** **02 37 03.7 +1.9**
TJN Taejon 28.27 326 P **P** **02 37 00.6 -1.2**
TJN pmax pmax
comp=Z,338nm,1.2s
TOLI2 Tolitoli 28.30 246 P **P** **02 37 01.7 -0.6**
TOLI2 Tolitoli 28.30 246 P **P** **02 37 03.3 +1.0**
QZH Quanzhou 28.45 297 *e*P **P** **02 37 04.0 +0.5**
KSRS Korea Array 28.79 328 P **P** **02 37 06.2 -0.2**
comp=Z,48nm,1.0s,baz=146,slow=9.7,SNR=82
KSRS PcP **PcP** **02 40 16.4 +0.3**
comp=Z,9.0nm,1.1s,baz=136,slow=3.5,SNR=4.7
KSRS LR LR 02 48 11.8
comp=Z,3µm,18.3s,baz=135,slow=36
comp=Z,48nm,1.0s
MYLDM Lahad Datu 28.79 255 P **P** **02 37 06.3 -0.3**
KSAR Wonju Array Be 28.80 328 P **P** **02 37 05.5 -1.0**
KSAR Wonju Array Be 28.80 328 P **P** **02 37 05.5 -1.0**
KS19 Wonju Array Si 28.86 328 P **P** **02 37 05.3 -1.7**
KS19 IAmb IAmb 02 37 19.9
comp=Z,86nm,1.1s
KDU Kakadu 29.68 208 P **P** **02 37 14.5 +0.1**
ASAJ Asahikawa 30.44 355 P **P** **02 37 20.9 -0.1**
comp=Z,20nm,1.0s,baz=184,slow=18,SNR=4.2
comp=Z,20nm,1.0s
MTN Manton Dam 30.45 210 P **P** **02 37 20.9 -0.5**
MTN IAmb IAmb 02 37 22.5
comp=Z,113nm,1.1s
MTN Manton Dam 30.45 210 P **P** **02 37 21.4 +0.1**
KKM Kota Kinabalu 30.69 259 P **P** **02 37 24.9 +1.3**
NJ2 Nanjing 31.10 310 *e*P P **02 37 22.3 -4.6**
NJ2 pP pP 02 37 26.8 -3.2
NJ2 sP pwP 02 37 35.0 -4.1
NJ2 pmax pmax
comp=Z,15nm,0.5s
NJ2 pmax pmax
comp=Z,1µm,7.8s
MSHR Mys Shultsa 31.61 338⇓ *e*P **P** **02 37 31.7 +0.4**
MSHR pmax pmax
comp=Z,59nm,1.3s
MTSU Mount Surprise 31.75 184 P **P** **02 37 33.8 +1.1**
PSTR Posyet 31.80 338⇑ *i*P **P** **02 37 33.2 +0.3**
SOEI Soe 32.07 224 P **P** **02 37 34.4 -1.3**
SOEI Soe 32.07 224 P **P** **02 37 35.4 -0.3**
KAPI Kappang 32.37 237 P **P** **02 37 38.2 0.0**
KAPI IAmb IAmb 02 37 40.2
comp=Z,74nm,1.0s
KAPI Kappang 32.37 237 P **P** **02 37 38.3 0.0**
KAPI pmax pmax
comp=Z,73nm,1.0s
USA0B Ussuriysk Arra 32.76 341 P **P** **02 37 41.2 -0.2**
USA0B Ussuriysk Arra 32.76 341 P **P** **02 37 41.2 -0.2**
USA0B pmax pmax
comp=Z,50nm,1.5s
USRK Ussuriysk Ar. 32.76 341 P **P** **02 37 40.3 -1.0**
comp=Z,5.3nm,0.7s,baz=157,slow=8.1,SNR=8.7
USRK PcP **PcP** **02 40 27.6 +1.1**
comp=Z,1.1nm,0.7s,baz=158,slow=4.2,SNR=4.2
USRK LR LR 02 49 08.2
comp=Z,2µm,20.4s,baz=157,slow=33
comp=Z,5.3nm,0.7s
TV1H Townsville Har 32.80 179 P **P** **02 37 42.5 +0.6**
YSS Yuzh-Sakhalins 33.24 355⇓ *e*P **P** **02 37 44.4 -1.1**
YSS *e*S **S** **02 43 03.1 -1.7**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,3µm,15.0s
DL2 Dalian 33.28 323 P **P** **02 37 46.0 +0.1**
DL2 pmax pmax
comp=Z,160nm,1.2s
CTA Charters Tower 33.62 180 P **P** **02 37 49.7 +0.6**
CTA Charters Tower 33.62 180 P **P** **02 37 49.1 0.0**
comp=Z,4.7nm,0.5s,baz=358,slow=11,SNR=9.0
comp=Z,4.7nm,0.5s
CTAO Charters Tower 33.62 180 P **P** **02 37 48.9 -0.2**
CTAO Charters Tower 33.62 180 P **P** **02 37 49.8 +0.6**
CTAO Charters Tower 33.62 180 P **P** **02 37 48.9 -0.2**
CTAO pmax pmax
comp=Z,66nm,1.5s
WHN Wuhan 33.92 305⇑ P **P** **02 37 51.8 +0.2**
WHN sP **pwP** **02 38 04.5 +0.8**
WHN pmax pmax
comp=Z,130nm,1.1s
MDJ Mudanjiang 33.94 338 P **P** **02 37 52.5 +0.8**
MDJ pP sP 02 37 55.6 -0.6
MDJ PcP **PcP** **02 40 30.1 +0.3**
MDJ S **S** **02 43 18.8 +3.0**
MDJ sS sS 02 43 24.3 +2.8
MDJ PcS **PcS** **02 44 16.2 +0.5**
MDJ pmax pmax
comp=Z,15nm,1.5s
MDJ pmax pmax
comp=Z,3µm,10.9s
MDJ LR LR
comp=Z,3µm,16.1s
MDJ LR LR
comp=Z,3µm,14.8s
MDJ LR LR
comp=Z,4µm,20.0s
MDJ Mudanjiang 33.94 338 P **P** **02 37 50.7 -0.9**
MDJ Mudanjiang 33.94 338 P **P** **02 37 52.4 +0.8**
CNSH ChangSha 34.27 300⇑ P **P** **02 37 55.9 +1.2**
CNSH pmax pmax
comp=Z,34nm,1.5s
SNY Shenyang 34.29 329⇓ P **P** **02 37 54.3 -0.4**
SNY pmax pmax
comp=Z,30nm,1.2s
QIS Mount Isa 34.74 191 P **P** **02 37 58.5 -0.3**

CN2 Changchun 34.93 333 *e*P **P** **02 37 59.6 -0.6**
CN2 *e*sP pwP 02 38 08.4 -3.9
CN2 *e*S **S** **02 43 28.4 -2.6**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 LR LR
comp=Z,890nm,16.0s
CN2 LR LR
comp=Z,710nm,16.0s
CN2 LR LR
comp=Z,1µm,18.0s
WB0 Warramunga Arr 35.34 200 P **P** **02 38 03.9 -0.1**
WR0 Warramunga Arr 35.48 199 P **P** **02 38 04.5 -0.7**
WRAB Tennant Creek 35.51 200 P **P** **02 38 04.8 -0.7**
WRAB Tennant Creek 35.51 200 P **P** **02 38 04.8 -0.7**
WRAB pmax pmax
comp=Z,147nm,1.1s
WB2 Warramunga Arr 35.52 200 P **P** **02 38 05.2 -0.4**
WRA Warramunga Arr 35.53 200 P **P** **02 38 04.9 -0.7**
WRA Warramunga Arr 35.53 200 P **P** **02 38 04.9 -0.7**
WRA pmax pmax
comp=Z,11nm,1.3s
WRA Warramunga Arr 35.53 200 P **P** **02 38 05.5 -0.1**
comp=Z,82nm,1.0s,baz=21,slow=9.3,SNR=142
WRA PcP **PcP** **02 40 35.6 +0.8**
comp=Z,19nm,1.1s,baz=15,slow=3.5,SNR=5.1
WRA S **S** **02 43 34.6 -6.1**
comp=Z,0.8nm,0.8s,baz=15,slow=14,SNR=2.0
WRA ScP **ScP** **02 44 19.9 -0.3**
comp=Z,4.5nm,1.1s,baz=27,slow=3.8,SNR=4.7
comp=Z,82nm,1.0s
SBUM Sibu 35.61 255 P **P** **02 38 06.0 -0.5**
SBUM IAmb IAmb 02 38 08.8
comp=Z,117nm,1.3s
BNX BinXian 35.71 337⇑ P **P** **02 38 05.3 -1.6**
BNX pmax pmax
comp=Z,17nm,1.5s
GULI GuiLin 35.75 294 P **P** **02 38 06.8 -0.8**
HNS HongShan 36.76 316⇑ P **P** **02 38 16.1 +0.1**
HNS pmax pmax
comp=Z,100nm,1.3s
LYN LuoYang 37.00 310⇑ *i*P **P** **02 38 18.4 +0.3**
LYN pP sP 02 38 23.4 +0.8
LYN S **S** **02 44 03.6 +0.6**
LYN sS sS 02 44 15.6 +7.1
LYN pmax pmax
comp=Z,120nm,1.2s
LYN LR LR
comp=Z,3µm,15.2s
LYN LR LR
comp=Z,2µm,10.8s
LYN LR LR
comp=Z,3µm,15.9s
TYV Tymovskoe 37.14 356 *e*P **P** **02 38 19.4 +0.4**
TYV pmax pmax
comp=Z,128nm,1.0s
BJT Baijiatuau 37.26 320 P **P** **02 38 19.5 -0.7**
BJT Baijiatuau 37.26 320 P **P** **02 38 20.8 +0.6**
BJT Baijiatuau 37.26 320 P **P** **02 38 19.5 -0.7**
BJT pmax pmax
comp=Z,51nm,0.9s
BJI Beijing 37.27 320 P **P** **02 38 20.3 0.0**
BJI PcP **PcP** **02 40 41.2 +1.5**
BJI S **S** **02 44 06.8 -0.1**
BJI pmax pmax
comp=Z,29nm,1.2s
BJI LR LR
comp=Z,1µm,15.4s
BJI LR LR
comp=Z,530nm,18.2s
BJI LR LR
comp=Z,2µm,17.0s
KLR Kul'dur 37.38 344*d i*P **P** **02 38 19.6 -1.5**
KLR pmax pmax
comp=Z,21nm,1.3s
KLR Kul'dur 37.38 344 LR LR 02 53 03.2
comp=Z,2µm,18.2s,baz=165,slow=35
FITZ Fitzroy Crossi 37.70 213 P **P** **02 38 23.7 -0.5**
FITZ Fitzroy Crossi 37.70 213 P **P** **02 38 25.0 +0.9**
KSM Kuching 37.74 254 P **P** **02 38 24.1 -0.5**
KSM Kuching 37.74 254 P **P** **02 38 25.1 +0.5**
ENH Enshi 37.77 302 P **P** **02 38 24.6 -0.2**
ENH IAmb IAmb 02 38 39.7
comp=Z,168nm,1.3s
ENH Enshi 37.77 302 P **P** **02 38 25.6 +0.8**
GRNR Gornyy 37.80 350⇓ *i*P **P** **02 38 23.9 -0.8**
GRNR pmax pmax
comp=Z,6.0nm,1.0s
GRNR MLR MLR
comp=E,770nm,14.0s
GRNR MLR MLR
comp=Z,1µm,15.0s
KOUNC Koumac, New Ca 38.35 152 P **P** **02 38 29.0 -0.5**
KOUNC Koumac, New Ca 38.35 152 P **P** **02 38 30.9 +1.4**
JAGI Jajag, Banyuwa 38.90 237 P **P** **02 38 33.5 -0.8**
JAGI Jajag, Banyuwa 38.90 237 P **P** **02 38 35.0 +0.7**
AS01 Alice Springs 39.13 198 P **P** **02 38 36.6 +0.4**
AS31 Alice Springs 39.15 198 P **P** **02 38 34.8 -1.5**
EIDS Eidsvold 39.15 173 P **P** **02 38 36.8 +0.6**
ASAR Alice Springs 39.15 198 P **P** **02 38 36.2 -0.1**
ASAR Alice Springs 39.15 198 P **P** **02 38 36.4 0.0**
comp=Z,27nm,1.0s,baz=22,slow=7.2,SNR=94
ASAR PP **PnPn** **02 40 08.2 -0.7**
comp=Z,17nm,1.0s,baz=21,slow=11,SNR=5.9
ASAR PcP **PcP** **02 40 45.4 -0.4**
comp=Z,12nm,1.0s,baz=15,slow=4.4,SNR=3.1
ASAR ScP **ScP** **02 44 32.9 -0.8**
comp=Z,0.5nm,0.3s,baz=39,slow=6.0,SNR=2.4
comp=Z,27nm,1.0s
GYA Guiyang 39.25 295⇓ *i*P **P** **02 38 39.2 +1.8**
GYA pP sP 02 38 41.4 -0.5
GYA sP pwP 02 38 43.7 -5.8
GYA S **S** **02 44 41.5 +3.9**
GYA pmax pmax
comp=Z,53nm,1.1s
GYA pmax pmax
comp=Z,2µm,11.9s
GYA LR LR
comp=Z,1µm,16.6s
GYA LR LR
comp=Z,1µm,20.5s
GYA LR LR
comp=Z,2µm,18.7s
XAN Xi'an 39.48 307⇑ P **P** **02 38 39.0 -0.1**
XAN pP sP 02 38 43.0 -0.7
XAN sP pwP 02 38 46.7 -4.6
XAN PcP **PcP** **02 40 48.4 +1.6**
XAN pmax pmax
comp=Z,31nm,1.4s
XAN LR LR
comp=Z,2µm,15.8s
XAN LR LR
comp=Z,2µm,15.5s
XAN LR LR
comp=Z,3µm,17.2s
HEH HeiHe 39.57 341 *e*P **P** **02 38 38.1 -1.4**
HEH pmax pmax
comp=Z,28nm,1.0s
XLT XiLinHaoTe 39.70 325 *e*P **P** **02 38 41.0 +0.2**
XLT pP sP 02 38 45.7 +0.4
XLT sP pwP 02 38 48.3 -4.6
XLT pmax pmax
comp=Z,1µm,11.7s
QLP Quilpie 40.15 183 P **P** **02 38 45.2 +0.7**
PETK Petropavlovsk- 40.28 11 P **P** **02 38 47.5 +2.1**
comp=Z,8.1nm,0.8s,baz=145,slow=5.4,SNR=4.3
HHC Hu-ho-hao-te 40.64 318⇑ *i*P **P** **02 38 49.3 +0.6**
HHC sP pwP 02 39 02.2 +1.4
HHC pmax pmax
comp=Z,57nm,1.1s
HHC LR LR
comp=Z,340nm,17.2s
HHC LR LR
comp=Z,1µm,16.2s
HHC LR LR
comp=Z,2µm,15.5s
DZM Mont Dzumac 40.66 151 P **P** **02 38 48.7 -0.2**
DZM Mont Dzumac 40.66 151 P **P** **02 38 49.4 +0.5**
DZM Mont Dzumac 40.66 151 *e*P P 02 38 45.0 -3.9
comp=Z,125nm,1.3s
SLVN Son La 41.13 287 P **P** **02 38 51.0 -1.9**
BTO Baotou 41.53 317 *e*P **P** **02 38 57.8 +1.8**
BTO pP **pwP** **02 39 02.4 -5.7**
BTO sP **sP** **02 39 05.1 +4.6**
BTO PP **PnPn** **02 40 37.6 +0.8**

BTO pmax pmax
comp=Z,180nm,1.4s
INKA Innaminka 41.61 188 P **P** **02 38 57.4 +0.9**
UGM Wanagama 41.62 241 P **P** **02 38 56.4 -0.6**
UGM Wanagama 41.62 241 P **P** **02 38 57.7 +0.7**
HIA Hailar 41.65 334 P **P** **02 38 56.2 -0.5**
HIA Hailar 41.65 334 P **P** **02 38 57.1 +0.3**
HIA Hailar 41.65 334*c i*P **P** **02 38 56.4 -0.4**
HIA pmax pmax
comp=Z,52nm,1.1s
NONG Nongkai 41.77 282 P **P** **02 38 59.7 +1.6**
WRKA Warakurna 42.41 205 P **P** **02 39 03.8 +0.6**
KMI Kunming 42.54 292⇑ P **P** **02 39 05.7 +1.1**
KMI pmax pmax
comp=Z,17nm,1.0s
OOD Oodnadatta 42.59 194 P **P** **02 39 04.8 +0.3**
ZEA Zeya 42.67 343 *e*P **P** **02 39 03.7 -1.3**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,500nm,16.0s
ZEA MLR MLR
comp=Z,1µm,16.0s
ZEA MLR MLR
comp=N,1µm,14.0s
CD2 Chengdu 42.70 301 P **P** **02 39 05.4 -0.2**
CD2 pmax pmax
comp=N,30nm,0.6s
MBWA Marble Bar 43.48 218 P **P** **02 39 11.9 0.0**
MBWA IAmb IAmb 02 39 13.7
comp=Z,177nm,1.9s
MBWA Marble Bar 43.48 218 P **P** **02 39 12.7 +0.8**
PZH PanZhiHua 43.61 294⇑ P **P** **02 39 13.7 +0.5**
PZH pmax pmax
comp=Z,30nm,1.0s
NAYO Nakonayok 43.70 276 P **P** **02 39 15.0 +1.2**
MYKOM Kota Tinggi 43.73 258 P **P** **02 39 13.4 -0.7**
PSA00 Pilbara Seismi 43.73 217 P **P** **02 39 13.4 -0.5**
PSA00 IAmb IAmb 02 39 15.9
comp=Z,140nm,1.4s
PSA00 Pilbara Seismi 43.73 217 P **P** **02 39 14.0 0.0**
PSA00 IAmb IAmb 02 39 15.8
comp=Z,88nm,1.4s
PSA00 Pilbara Seismi 43.73 217 P **P** **02 39 14.9 +1.0**
LZH Lanzhou 44.10 308⇑ *i*P **P** **02 39 18.5 +1.5**
LZH sP pwP 02 39 31.2 +2.1
LZH pmax pmax
comp=Z,100nm,1.2s
ARMA Armidale 44.20 174 P **P** **02 39 18.4 +0.7**
CRAI Chiangrai 44.39 285 P **P** **02 39 19.1 -0.3**
LCRK Leigh Creek 44.64 190 P **P** **02 39 21.2 +0.1**
CMSA Cobar Meteorol 45.03 181 P **P** **02 39 24.1 -0.1**
MULG Mulgathing 45.37 195 P **P** **02 39 26.6 -0.2**
STKA Stephens Creek 45.60 186 P **P** **02 39 28.2 -0.5**
STKA Stephens Creek 45.60 186 P **P** **02 39 28.1 -0.6**
STKA Stephens Creek 45.60 186 P **P** **02 39 28.2 -0.5**
STKA pmax pmax
comp=Z,7.0nm,1.1s
STKA Stephens Creek 45.60 186 P **P** **02 39 28.2 -0.5**
comp=Z,18nm,1.0s,baz=358,slow=8.8,SNR=32
comp=Z,18nm,1.0s
IPM Ipoh 45.68 263 P **P** **02 39 28.6 -1.1**
IPM Ipoh 45.68 263 P **P** **02 39 30.5 +0.8**
CHTO Chiang Mai 45.74 283 P **P** **02 39 30.0 -0.1**
CHTO Chiang Mai 45.74 283 P **P** **02 39 30.5 +0.4**
CHTO Chiang Mai 45.74 283 P **P** **02 39 30.0 -0.1**
CHTO pmax pmax
comp=Z,25nm,1.2s
CHTO Chiang Mai 45.74 283 P **P** **02 39 30.9 +0.7**
CM31 Chiang Mai Arr 45.75 282 P **P** **02 39 30.2 0.0**
CM31 IAmb IAmb 02 39 32.5
comp=Z,63nm,1.0s
CMAR Chiang Mai Arr 45.75 282 P **P** **02 39 29.7 -0.5**
CMAR Chiang Mai Arr 45.75 282*ce*P **P** **02 39 31.2 +1.0**
CMAR pmax pmax
comp=Z,33nm,0.9s
CMAR Chiang Mai Arr 45.75 282 P **P** **02 39 31.3 +1.0**
comp=Z,30nm,0.9s,baz=82,slow=6.0,SNR=106
comp=Z,30nm,0.9s
AUDCS Dubbo College 45.77 177 P **P** **02 39 30.5 +0.5**
SRDT SRDT 45.82 277 P **P** **02 39 32.1 +1.3**
KULM Kulim 45.84 264 P **P** **02 39 30.1 -0.8**
MA2 Magadan 45.86 3 P **P** **02 39 30.2 -0.2**
MA2 IAmb IAmb 02 39 31.6
comp=Z,67nm,1.0s
MA2 Magadan 45.86 3 P **P** **02 39 30.3 -0.2**
MA2 pmax pmax
comp=Z,67nm,1.0s
SURA Surathani 46.02 270 P **P** **02 39 33.8 +1.4**
SRIT Nakonsritamara 46.16 269 P **P** **02 39 32.6 -0.8**
SRIT IAmb IAmb 02 39 36.3
comp=Z,57nm,1.3s
SRIT Nakonsritamara 46.16 269 P **P** **02 39 35.4 +2.0**
TNCH TengChong 46.34 292 P **P** **02 39 35.6 +0.6**
TNCH pP sP 02 39 38.6 -1.0
TNCH pmax pmax
comp=Z,64nm,1.1s
CIT Chita 46.37 332 *e*P **P** **02 39 34.4 -0.2**
CIT *e* 02 41 23.4
CIT *e* 02 42 07.6
CIT pmax pmax
comp=Z,95nm,2.2s
MNAI Manna 46.73 250 P **P** **02 39 37.4 -0.5**
MNAI Manna 46.73 250 P **P** **02 39 38.5 +0.6**
XMI Christmas Isla 47.02 241 P **P** **02 39 40.3 +0.1**
XMIS Christmas Isla 47.06 241 P **P** **02 39 39.9 -0.6**
XMIS Christmas Isla 47.06 241 P **P** **02 39 40.9 +0.4**
ULN Ulaanbaatar 47.12 324 P **P** **02 39 40.8 0.0**
ULN IAmb IAmb 02 39 57.8
comp=Z,39nm,0.9s
ULN Ulaanbaatar 47.12 324⇑ *i*P **P** **02 39 41.0 +0.3**
ULN pmax pmax
comp=Z,42nm,0.9s
ULN Ulaanbaatar 47.12 324 P **P** **02 39 41.7 +1.0**
WHYH Whyalla 47.28 190 P **P** **02 39 42.3 +0.5**
BBOO Buckleboo 47.34 192 P **P** **02 39 41.6 -0.7**
BBOO Buckleboo 47.34 192 P **P** **02 39 42.6 +0.2**
HTT Hallett 47.46 189 P **P** **02 39 43.7 +0.4**
SONM Songino Array 47.48 324 P **P** **02 39 43.1 -0.3**
SONM Songino Array 47.48 324 P **P** **02 39 43.7 +0.3**
comp=Z,28nm,0.9s,baz=142,slow=5.8,SNR=46
comp=Z,28nm,0.9s
FORT Forrest 47.66 202 P **P** **02 39 44.1 -0.8**
FORT Forrest 47.66 202 P **P** **02 39 45.5 +0.6**
GIRL Giralia 47.98 221 P **P** **02 39 48.3 +0.8**
GIRL Giralia 47.98 221 P **P** **02 39 48.6 +1.1**
PSI Prapat 48.14 261 P **P** **02 39 49.9 +0.8**
PSI Prapat 48.14 261 P **P** **02 39 48.5 -0.6**
PSI pmax pmax
comp=Z,44nm,0.9s
RPSI Rantau Prapat 48.17 261 P **P** **02 39 48.5 -0.7**
RPSI IAmb IAmb 02 39 50.5
comp=Z,44nm,0.9s
GTA Gaotai 48.20 311 P **P** **02 39 49.8 +0.6**
GTA sP pwP 02 40 02.7 +1.4
GTA PcP **PcP** **02 41 18.2 +1.8**
GTA pmax pmax
comp=Z,28nm,1.3s
GTA LR LR
comp=Z,660nm,15.3s
GTA LR LR
comp=Z,2µm,16.4s
GTA LR LR
comp=Z,2µm,15.3s
MEEK Meekatharra 48.39 214 P **P** **02 39 51.2 +0.5**
MND Mandalay 48.40 287 P **P** **02 39 52.1 +1.3**
SEY Seymchan 49.30 4⇑ *i*P **P** **02 39 57.1 0.0**
SEY pmax pmax
comp=Z,76nm,1.7s
SEY Seymchan 49.30 4 P **P** **02 39 57.0 -0.1**
comp=Z,25nm,1.1s,baz=179,slow=7.1,SNR=25
comp=Z,25nm,1.1s
YAK Yakutsk 49.69 350 *e*P **P** **02 39 59.0 -1.0**
YAK *e*S **S** **02 47 07.8 -0.1**
YAK pmax pmax
comp=Z,38nm,1.0s
YAK pmax pmax
comp=N,7.0nm,0.8s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK smax smax
comp=E,90nm,2.7s

YAK Yakutsk 49.69 350 P **P** **02 39 58.5 -1.5**
comp=E,18nm,0.3s,baz=356,slow=1.7,SNR=7.5
comp=E,18nm,0.3s
GSI Gunungsitoli 49.85 260 P **P** **02 40 01.0 -1.1**
GSI Gunungsitoli 49.85 260 P **P** **02 40 02.7 +0.6**
BOD Bodaibo 50.32 338 *eP* **P** **02 40 03.9 -1.0**
BOD pmax pmax
comp=Z,49nm,1.7s
ARPS Mount Arapiles 50.43 185 P **P** **02 40 07.5 +1.5**
ZAK Zakamensk 50.55 325 *eP* **P** **02 40 06.3 -0.7**
ZAK pmax pmax
comp=Z,27nm,1.0s
KMBL Kambalda 50.67 207 P **P** **02 40 07.6 -0.3**
IRK Irkutsk 51.01 328 *eP* **P** **02 40 09.8 -0.4**
IRK *eS* **S** **02 47 26.0 -0.6**
IRK pmax pmax
comp=Z,66nm,1.6s
TOO Toolangi 51.05 181 P **P** **02 40 10.9 +0.2**
TOO lAmb lAmb 02 40 13.4
comp=Z,60nm,1.1s
TOO Toolangi 51.05 181 P **P** **02 40 11.7 +1.0**
TOO Toolangi 51.05 181 P **P** **02 40 10.9 +0.2**
TOO pmax pmax
comp=Z,60nm,1.2s
BRAT Ballarat 51.08 183 P **P** **02 40 12.5 +1.7**
GOMU GeErMu 51.17 306 P **P** **02 40 13.8 +1.6**
GOMU pP sP 02 40 18.4 +1.6
GOMU sP pwP 02 40 21.6 -2.7
GOMU PcP **PcP** **02 41 29.4 +1.8**
GOMU pmax pmax
comp=Z,17nm,1.3s
MORW Morawa 51.70 214 P **P** **02 40 15.3 -0.4**
MORW Morawa 51.70 214 P **P** **02 40 16.3 +0.6**
SHL Shillong 52.37 292 P **P** **02 40 19.9 -1.2**
SHL lAmb lAmb 02 40 24.0
comp=Z,98nm,1.2s
SHL Shillong 52.37 292 P **P** **02 40 19.9 -1.2**
SHL pmax pmax
comp=Z,98nm,1.2s
SHL Shillong 52.37 292 P **P** **02 40 20.2 -0.8**
SNR=23
MOY Mondy 52.44 326 *eP* **P** **02 40 21.2 +0.1**
MOY pmax pmax
comp=Z,65nm,2.4s
BLDU Ballidu 52.56 213 P **P** **02 40 22.6 +0.5**
KLBR Kellerberrin 52.81 211 P **P** **02 40 24.4 +0.5**
LSA Lhasa 53.26 297 P **P** **02 40 27.6 -0.4**
LSA lAmb lAmb 02 40 32.8
comp=Z,65nm,1.1s
LSA Lhasa 53.26 297 P **P** **02 40 29.8 +1.9**
LSA Lhasa 53.26 297 P **P** **02 40 27.6 -0.4**
LSA pmax pmax
comp=Z,65nm,1.1s
LSA Lhasa 53.26 297 P **P** **02 40 29.5 +1.6**
MUN Mundaring 53.90 212 P **P** **02 40 32.6 +0.7**
NWAO Narrogin (SRO) 54.15 210 P **P** **02 40 34.3 +0.6**
NWAO Narrogin (SRO) 54.15 210 P **P** **02 40 34.1 +0.4**
NWAO Narrogin (SRO) 54.15 210 P **P** **02 40 32.6 -1.0**
comp=Z,31nm,1.1s,baz=17,slow=9.0,SNR=5.8
comp=Z,31nm,1.1s
P08K Saint George I 54.33 28 P **P** **02 40 37.2 +2.5**
baz=236
SPIA Saint Paul Isl 54.34 27 P **P** **02 40 37.5 +2.7**
baz=235
UNV Unalaska Valle 54.38 32 P **P** **02 40 37.2 +2.1**
baz=241
GLAD Gladstone 54.47 179 P **P** **02 40 37.6 +1.7**
AULHS Lilydale High 54.73 179 P **P** **02 40 38.9 +1.2**
BILL Bilibino 55.76 9 P **P** **02 40 45.0 +0.1**
BILL Bilibino 55.76 9 *i* P **P** **02 40 44.9 0.0**
BILL pmax pmax
comp=Z,129nm,1.7s
FALS False Pass 56.45 32 P **P** **02 40 51.5 +1.5**
baz=244
GAMB Gambell 57.79 21 P **P** **02 41 00.7 +1.4**
baz=230
M11K Mekoryuk 57.88 26 P **P** **02 41 01.9 +1.9**
baz=238
WMQ Urumqi 58.12 313 *eP* **P** **02 41 02.8 +0.6**
WMQ pP sP 02 41 08.3 +1.5
WMQ sP pwP 02 41 14.5 +0.2
WMQ S **S** **02 49 05.3 +2.5**
WMQ pmax pmax
comp=Z,64nm,1.3s
WMQ LR LR
comp=Z,850nm,17.3s
WMQ LR LR
comp=Z,860nm,23.9s
SDPT Sand Point 58.20 33 P **P** **02 41 03.9 +1.6**
baz=246
TIXI Tiksi 58.84 354 P **P** **02 41 05.0 -1.5**
TIXI Tiksi 58.84 354 P **P** **02 41 05.0 -1.5**
TIXI pmax pmax
comp=Z,20nm,0.9s
TIXI Tiksi 58.84 354 P **P** **02 41 04.6 -1.9**
comp=Z,14nm,0.9s,baz=164,slow=6.3,SNR=22
comp=Z,14nm,0.9s
M13K Dall Lake 59.10 26 P **P** **02 41 10.2 +1.7**
baz=240
RTZ Ruatahuna 59.42 152 P **P** **02 41 10.2 -0.9**
QRZ Quartz Range 59.45 157 P **P** **02 41 10.7 -0.4**
O14K Tigyukauivet M 59.48 28 P **P** **02 41 12.5 +1.3**
baz=243
N14K Kuskokwak Cree 59.60 27 P **P** **02 41 13.3 +1.3**
baz=242
BKZ Black Stump Fm 59.66 153 P **P** **02 41 12.1 -0.7**
BKZ Black Stump Fm 59.66 153 P **P** **02 41 13.1 +0.3**
DGZ Jazzator, Alta 59.69 320 *c i* P **P** **02 41 13.7 +0.7**
DGZ pmax pmax
comp=Z,58nm,1.0s
TKNZ Takaka Hill 59.79 157 P **P** **02 41 13.0 -0.6**
L14K Kuka Creek 59.84 26 P **P** **02 41 14.2 +0.5**
L14K Kuka Creek 59.84 26 P **P** **02 41 15.5 +1.8**
baz=241
M14K Bethel 59.87 26 P **P** **02 41 14.3 +0.5**
M14K Bethel 59.87 26 P **P** **02 41 15.6 +1.8**
baz=242
DSZ Denniston Nort 59.98 158 P **P** **02 41 14.1 -0.8**
MRNZ Matariki Terra 60.03 157 P **P** **02 41 14.9 -0.3**
O15K Ungalikthiuk R 60.12 29 P **P** **02 41 16.5 +0.9**
baz=245
TNA Tin City 60.18 20 P **P** **02 41 17.1 +1.2**
baz=233,SNR=8.1
J14K Nanvaranak Lak 60.20 24 P **P** **02 41 17.4 +1.3**
J14K lAmb lAmb 02 41 33.7
comp=Z,33nm,0.9s
J14K Nanvaranak Lak 60.20 24 P **P** **02 41 16.8 +0.8**
baz=239
M15K Kasigluk River 60.40 27 P **P** **02 41 18.7 +1.2**
baz=243
N15K Kwethluk River 60.42 28 P **P** **02 41 19.0 +1.3**
N15K lAmb lAmb 02 41 47.9
comp=Z,41nm,0.9s
N15K Kwethluk River 60.42 28 P **P** **02 41 18.8 +1.1**
baz=244
ANM Nome 60.48 22 P **P** **02 41 19.1 +1.0**
ANM lAmb lAmb 02 41 25.6
comp=Z,70nm,1.4s
ANM Nome 60.48 22 P **P** **02 41 19.6 +1.5**
baz=236,SNR=16
ANM Nome 60.48 22 P **P** **02 41 19.1 +1.0**
ANM pmax pmax
comp=Z,70nm,1.4s
L15K Ungalak Mounta 60.51 26 P **P** **02 41 19.8 +1.5**
baz=242
MRZ Mangatainoka R 60.51 155 P **P** **02 41 18.8 +0.2**
MRZ lAmb lAmb 02 41 20.8
comp=Z,47nm,1.3s
F14K Arctic Creek 60.67 21 P **P** **02 41 20.8 +1.6**
baz=235
INZ Inchbonnie 60.72 159 P **P** **02 41 19.8 0.0**
INZ lAmb lAmb 02 41 24.3
comp=Z,52nm,1.2s
K15K Wolf Creek Mou 60.79 25 P **P** **02 41 21.4 +1.3**
K15K lAmb lAmb 02 41 28.7
comp=Z,53nm,1.2s
K15K Wolf Creek Mou 60.79 25 P **P** **02 41 21.9 +1.8**
baz=241
ZSN Zaisan 60.81 317 *eP* **P** **02 41 20.5 -0.1**
comp=Z,35nm,1.7s,baz=317
ZSN Zaisan 60.81 317 *eP* **P** **02 41 20.5 -0.1**
ZSN pmax pmax
comp=Z,35nm,1.7s
P16K Nushagak River 60.92 29 P **P** **02 41 22.7 +1.7**
baz=246

CHIR Chirikof Islan 60.93 33 P **P** **02 41 22.1 +0.9**
baz=250
JCZ Jackson Bay 61.05 162 P **P** **02 41 23.3 +1.1**
O16K Kokwok River B 61.09 29 P **P** **02 41 23.3 +1.0**
O16K lAmb lAmb 02 41 30.6
comp=Z,39nm,1.1s
O16K Kokwok River B 61.09 29 P **P** **02 41 23.7 +1.5**
baz=246
N16K Nishlik Lake 61.15 28 P **P** **02 41 24.1 +1.4**
baz=245
G15K Niukluk 61.20 22 P **P** **02 41 24.0 +1.1**
baz=238,SNR=9.8
M16K Timber Creek 61.30 27 P **P** **02 41 23.9 +0.2**
M16K lAmb lAmb 02 42 25.9
comp=Z,33nm,1.0s
M16K Timber Creek 61.30 27 P **P** **02 41 25.0 +1.3**
baz=245
F15K North Star Dit 61.38 21 P **P** **02 41 24.6 +0.5**
F15K lAmb lAmb 02 41 31.5
comp=Z,66nm,1.4s
F15K North Star Dit 61.38 21 P **P** **02 41 25.4 +1.3**
baz=237
L16K Owhat River 61.38 26 P **P** **02 41 25.1 +0.9**
L16K lAmb lAmb 02 42 02.6
comp=Z,82nm,1.9s
L16K Owhat River 61.38 26 P **P** **02 41 25.1 +0.9**
baz=244
RPZ Rata Peaks 61.46 160 P **P** **02 41 25.2 +0.4**
O17K Koliganek Bris 61.63 29 P **P** **02 41 27.3 +1.4**
baz=247
J16K Anvik River 61.63 24 P **P** **02 41 26.5 +0.6**
J16K lAmb lAmb 02 41 43.7
comp=Z,34nm,0.8s
J16K Anvik River 61.63 24 P **P** **02 41 27.4 +1.5**
baz=242
Q17K Contact Creek 61.64 31 P **P** **02 41 26.6 +0.4**
baz=249
H16K Elim 61.67 22 P **P** **02 41 27.1 +1.0**
baz=240,SNR=8.6
I17K Unalakleet 61.88 24 P **P** **02 41 28.6 +1.1**
I17K Unalakleet 61.88 24 P **P** **02 41 28.8 +1.3**
baz=242
N17K Nushagak Hills 61.89 28 P **P** **02 41 29.4 +1.8**
N17K lAmb lAmb 02 41 52.4
comp=Z,24nm,0.8s
N17K Nushagak Hills 61.89 28 P **P** **02 41 28.4 +0.8**
baz=247
SII Sitkinak Islan 61.93 33 P **P** **02 41 28.2 +0.2**
baz=251
MQZ McQueen's Vall 62.00 159 P **P** **02 41 28.0 -0.5**
MQZ lAmb lAmb 02 41 33.6
comp=Z,51nm,1.2s
G16K Koyuk River 62.02 22 P **P** **02 41 29.7 +1.3**
G16K Koyuk River 62.02 22 P **P** **02 41 29.5 +1.1**
baz=239
L17K Donlin 62.06 26 P **P** **02 41 29.3 +0.6**
baz=245
M17K Holitna River 62.13 27 P **P** **02 41 29.7 +0.5**
M17K lAmb lAmb 02 42 13.8
comp=Z,33nm,0.8s
M17K Holitna River 62.13 27 P **P** **02 41 30.0 +0.8**
baz=246
J17K VABM Dome 62.30 24 P **P** **02 41 31.6 +1.3**
J17K lAmb lAmb 02 41 39.1
comp=Z,46nm,1.1s
J17K VABM Dome 62.30 24 P **P** **02 41 31.5 +1.2**
baz=243,SNR=10
K17K Iditarod 62.31 25 P **P** **02 41 31.6 +1.1**
baz=244
P18K Big Mountain, 62.37 29 P **P** **02 41 32.3 +1.3**
baz=249
ZAA0 Zalesovo Array 62.37 324 P **P** **02 41 30.3 -0.6**
ZAA0 lAmb lAmb 02 41 37.4
comp=Z,27nm,0.9s
ZALV Zalesovo Beam 62.37 324 P **P** **02 41 30.3 -0.6**
ZALV Zalesovo Beam 62.37 324 P **P** **02 41 30.4 -0.5**
comp=Z,12nm,0.6s,baz=104,slow=5.8,SNR=34
comp=Z,12nm,0.6s
MK31 Makanchi Array 62.42 316 P **P** **02 41 31.8 +0.3**
MK31 lAmb lAmb 02 41 47.7
comp=Z,38nm,1.1s
MK31 Makanchi Array 62.42 316 P **P** **02 41 31.8 +0.3**
MK31 pmax pmax
comp=Z,38nm,1.1s
MKAR Makanchi Array 62.42 316 P **P** **02 41 32.0 +0.5**
MKAR Makanchi Array 62.42 316 P **P** **02 41 31.9 +0.3**
comp=Z,16nm,0.5s,baz=91,slow=8.6,SNR=207
comp=Z,16nm,0.5s
N18K Kilae Creek 62.54 28 P **P** **02 41 33.3 +1.3**
baz=248
O18K Koktuh Hills 62.55 29 P **P** **02 41 32.9 +0.8**
baz=249
C16K Lisburne Hills 62.60 18 lAmb lAmb 02 41 39.2
comp=Z,50nm,1.1s
C16K Lisburne Hills 62.60 18 P **P** **02 41 33.4 +1.2**
baz=235
OHAK Old Harbor 62.61 32 P **P** **02 41 33.3 +0.8**
baz=252
MAKZ Makanchi 62.64 316 P **P** **02 41 33.5 +0.5**
MAKZ Makanchi 62.64 316 P **P** **02 41 33.5 +0.5**
MAKZ pmax pmax
comp=Z,60nm,1.1s
G17K Kiwalik Mounta 62.69 22 P **P** **02 41 33.6 +0.7**
baz=241
H17K Granite Mounta 62.69 23 lAmb lAmb 02 41 50.7
comp=Z,29nm,0.8s
H17K Granite Mounta 62.69 23 P **P** **02 41 33.3 +0.4**
baz=242
L18K Granite Mounta 62.79 26 lAmb lAmb 02 41 50.2
comp=Z,62nm,1.5s
L18K Granite Mounta 62.79 26 P **P** **02 41 34.4 +0.8**
baz=246
M18K Stony River 62.88 27 P **P** **02 41 34.6 +0.4**
baz=247
F17K Baldwin Pennin 62.94 21 P **P** **02 41 35.4 +0.9**
baz=240
Q19K Cape Douglas, 62.98 30 P **P** **02 41 36.0 +1.0**
baz=251
E17K Hotham Inlet 63.07 20 P **P** **02 41 36.5 +1.1**
baz=239
O19K Port Alsworth 63.08 29 P **P** **02 41 37.0 +1.4**
baz=250
KDAK Kodiak Island 63.14 32 P **P** **02 41 36.8 +0.8**
baz=252
KDAK Kodiak Island 63.14 32 P **P** **02 41 34.7 -1.3**
comp=Z,20nm,1.1s,baz=285,slow=2.4,SNR=6.4
comp=Z,20nm,1.1s
N19K Bonanza Creek 63.23 28 lAmb lAmb 02 42 39.4
comp=Z,43nm,1.1s
N19K Bonanza Creek 63.23 28 P **P** **02 41 37.3 +0.6**
baz=249
RDOG Red Dog Mine 63.24 19 lAmb lAmb 02 41 44.5
comp=Z,43nm,1.0s
RDOG Red Dog Mine 63.24 19 P **P** **02 41 36.7 +0.2**
baz=237
J18K Innoko River 63.28 25 P **P** **02 41 37.5 +0.6**
baz=246
TTA Tatalina 63.36 26 P **P** **02 41 38.6 +1.1**
TTA Tatalina 63.36 26 P **P** **02 41 39.5 +2.0**
TTA Tatalina 63.36 26 P **P** **02 41 38.2 +0.7**
baz=247,SNR=7.0
TTA Tatalina 63.36 26 P **P** **02 41 38.6 +1.1**
TTA pmax pmax
comp=Z,27nm,1.1s
H18K Honhosa River 63.37 23 lAmb lAmb 02 41 54.3
comp=Z,39nm,0.8s
H18K Honhosa River 63.37 23 P **P** **02 41 38.1 +0.6**
baz=243
C17K DeLong Mountai 63.38 19 P **P** **02 41 38.2 +0.7**
baz=237
P19K Oil Pt 63.41 30 P **P** **02 41 38.1 +0.2**
baz=251
Q20K Shuyak Island 63.49 31 P **P** **02 41 38.6 +0.3**
baz=252
L19K White Mountain 63.56 27 P **P** **02 41 39.1 +0.3**
baz=248
F18K Selawik 63.58 21 P **P** **02 41 38.9 +0.2**
baz=241,SNR=9.1
G18K Tagagawik 63.60 22 lAmb lAmb 02 41 56.3
comp=Z,25nm,0.8s
G18K Tagagawik 63.60 22 P **P** **02 41 39.6 +0.7**
baz=243
E18K Tukpahlearik C 63.66 20 lAmb lAmb 02 42 02.5
comp=Z,45nm,1.0s
E18K Tukpahlearik C 63.66 20 P **P** **02 41 40.4 +1.1**
baz=240,SNR=34
M19K Big River Lodg 63.66 27 lAmb lAmb 02 41 44.7
comp=Z,42nm,1.4s
M19K Big River Lodg 63.66 27 P **P** **02 41 40.4 +0.9**
baz=249
GCSA Galena City Sc 63.76 24 P **P** **02 41 41.0 +1.1**
baz=245
O20K Slope Mountain 63.84 29 P **P** **02 41 41.5 +0.7**
baz=251
SHLS Shalkode 63.94 311 *eP* **P** **02 41 39.5 -2.3**
comp=Z,19nm,1.0s,baz=312
SHLS Shalkode 63.94 311 *eP* **P** **02 41 39.5 -2.3**
SHLS pmax pmax
comp=Z,19nm,1.0s
J19K Poorman 63.95 25 lAmb lAmb 02 41 49.6
comp=Z,42nm,1.1s
J19K Poorman 63.95 25 P **P** **02 41 42.2 +0.9**
baz=246
C18K Utukok River 64.09 19 P **P** **02 41 42.9 +0.6**
baz=239
L20K Farewell, AK 64.10 26 P **P** **02 41 42.9 +0.6**
baz=249
M20K Styx River 64.22 27 lAmb lAmb 02 42 32.6
comp=Z,33nm,1.0s
M20K Styx River 64.22 27 P **P** **02 41 44.0 +0.8**
baz=250
H19K Roundabout Mou 64.25 23 lAmb lAmb 02 41 47.3
comp=Z,47nm,1.1s
H19K Roundabout Mou 64.25 23 P **P** **02 41 44.5 +1.2**
baz=245
UZB Uzynbulak 64.26 311 *eP* **P** **02 41 43.5 -0.4**
comp=Z,30nm,1.7s,baz=311
UZB Uzynbulak 64.26 311 *eP* **P** **02 41 43.5 -0.4**
UZB pmax pmax
comp=Z,30nm,1.7s
B18K Kokolik River 64.28 18 P **P** **02 41 44.9 +1.6**
baz=238
G19K Purcell Mounta 64.28 22 lAmb lAmb 02 42 19.4
comp=Z,37nm,0.9s
G19K Purcell Mounta 64.28 22 P **P** **02 41 44.6 +1.2**
baz=244
K20K Telida 64.34 26 P **P** **02 41 44.6 +0.7**
baz=248
F19K Shaleruckik Mo 64.35 21 lAmb lAmb 02 42 03.1
comp=Z,76nm,1.9s
F19K Shaleruckik Mo 64.35 21 P **P** **02 41 44.8 +1.0**
baz=243
N20K Mount Spurr 64.40 28 P **P** **02 41 45.4 +1.0**
baz=251
KPKS Kokpek 64.53 312 *eP* **P** **02 41 45.4 -0.3**
baz=312
KPKS Kokpek 64.53 312 *eP* **P** **02 41 45.3 -0.3**
J20K Nowinta River 64.61 25 P **P** **02 41 46.6 +1.0**
baz=248
BRSE Bradley Lake S 64.64 30 P **P** **02 41 46.0 +0.1**
baz=253
ZHN Zhinishke 64.69 311 *eP* **P** **02 41 46.5 -0.2**
comp=Z,20nm,1.2s,baz=311
SATY Saty 64.70 311 *eP* **P** **02 41 46.2 -0.6**
comp=Z,25nm,1.3s,baz=311
SATY Saty 64.70 311 *eP* **P** **02 41 46.1 -0.6**
SATY pmax pmax
comp=Z,25nm,1.3s
I20K Naaghedeneel 64.72 24 P **P** **02 41 47.4 +1.2**
baz=247
PALK Pallekele 64.77 272 P **P** **02 41 47.1 -0.5**
PALK Pallekele 64.77 272 P **P** **02 41 47.1 -0.5**
PALK pmax pmax
comp=Z,82nm,0.9s
PALK Pallekele 64.77 272 P **P** **02 41 47.5 -0.1**
comp=Z,14nm,0.8s,baz=161,slow=6.4,SNR=5.8
PALK LR LR 03 09 04.7
comp=Z,415nm,20.2s,baz=153,slow=35
comp=Z,14nm,0.8s
E19K Redstone River 64.82 21 lAmb lAmb 02 42 22.7
comp=Z,32nm,0.9s
E19K Redstone River 64.82 21 P **P** **02 41 47.6 +0.7**
baz=243
C19K Lookout Ridge 64.83 19 P **P** **02 41 47.9 +0.9**
baz=240
H20K Anotleneega Mo 64.84 23 P **P** **02 41 48.0 +0.9**
baz=246
A19K Wainwright 64.94 17 P **P** **02 41 49.0 +1.4**
baz=238
SKT Skwentna 64.96 27 P **P** **02 41 49.4 +1.4**
SKT lAmb lAmb 02 42 07.7
comp=Z,51nm,1.4s
SKT Skwentna 64.96 27 P **P** **02 41 48.4 +0.4**
baz=251
PPLA Purkeypile 64.97 26 P **P** **02 41 48.8 +0.7**
baz=250
D19K Kuna River 65.00 20 lAmb lAmb 02 41 55.4
comp=Z,38nm,1.0s
D19K Kuna River 65.00 20 P **P** **02 41 49.9 +1.7**
baz=242
SUA Susitna One 65.16 28 P **P** **02 41 50.6 +1.2**
baz=252
F20K Avaraart Lake 65.17 21 lAmb lAmb 02 42 06.5
comp=Z,21nm,0.8s
F20K Avaraart Lake 65.17 21 P **P** **02 41 50.1 +1.0**
baz=245
HYB Hyderabad 65.17 283 *eP* **P** **02 41 50.4 +0.2**
HYB *ePcP* **PcP** **02 42 22.6 -0.1**
HYB Hyderabad 65.17 283 *ePcP* **PcP** **02 42 22.9 +0.2**
HYB Hyderabad 65.17 283 *eP* **P** **02 41 50.3 +0.2**
CAST Castle Rocks 65.20 26 P **P** **02 41 50.7 +1.2**
baz=250,SNR=18
ARXS Arharly 65.22 312 *eP* **P** **02 41 49.1 -0.9**
CHUM Lake Minchumin 65.26 25 P **P** **02 41 51.1 +1.3**
baz=250,SNR=14
SEW Seward 65.37 30 P **P** **02 41 51.7 +1.2**
baz=254
KURK Kurchatov 65.43 320 P **P** **02 41 51.2 0.0**
KURK Kurchatov 65.43 320 P **P** **02 41 51.2 0.0**
KURK pmax pmax
comp=Z,149nm,1.2s
KURK Kurchatov 65.43 320 P **P** **02 41 51.4 +0.3**
KURBB Kurchatov Arra 65.48 320 P **P** **02 41 51.3 -0.2**
comp=Z,69nm,0.9s,baz=100,slow=6.6,SNR=232
comp=Z,69nm,0.9s
RC01 Rabbit Creek A 65.51 29 lAmb lAmb 02 42 07.4
comp=Z,33nm,0.8s
RC01 Rabbit Creek A 65.51 29 P **P** **02 41 52.3 +0.8**
baz=253
M22K Willow 65.53 28 P **P** **02 41 53.0 +1.4**
baz=253
E20K Nigu River 65.53 20 P **P** **02 41 51.5 -0.1**
baz=244
D20K Etivluk River 65.59 20 P **P** **02 41 53.1 +1.2**
baz=244
CUT Chulitna 65.66 27 P **P** **02 41 52.9 +0.5**
baz=252
H21K Melozitna Rive 65.70 23 lAmb lAmb 02 42 00.3
comp=Z,35nm,1.1s
H21K Melozitna Rive 65.70 23 P **P** **02 41 53.1 +0.4**
baz=248
MDOK Medeo 65.70 311 *eP* **P** **02 41 53.2 -0.1**
baz=311
MDOK Medeo 65.70 311 P **P** **02 41 53.9 +0.6**
G21K Allakaket 65.76 22 lAmb lAmb 02 42 00.6
comp=Z,50nm,1.5s
G21K Allakaket 65.76 22 P **P** **02 41 53.7 +0.7**
baz=248
TNSS Tian-Shan 65.77 311 *eP* **P** **02 41 54.1 +0.1**
baz=311
TNSS Tian-Shan 65.77 311 *eP* **P** **02 41 54.1 +0.1**
CHKK Chushkaly 65.79 312 *eP* **P** **02 41 53.0 -0.7**
baz=312
CHKK Chushkaly 65.79 312 *eP* **P** **02 41 53.0 -0.7**
AAA Alma-Ata 65.80 311 *eP* **P** **02 41 54.3 +0.4**
baz=311
AAA Alma-Ata 65.80 311 *eP* **P** **02 41 54.2 +0.4**
I21K Tanana 65.85 24 lAmb lAmb 02 42 35.6
comp=Z,39nm,1.1s
I21K Tanana 65.85 24 P **P** **02 41 53.7 +0.1**
baz=250,SNR=14
BPAW Bear Paw Mtn. 65.88 25 P **P** **02 41 54.3 +0.3**
baz=251,SNR=11
PMR Palmer 65.93 28 lAmb lAmb 02 42 23.1
comp=Z,30nm,0.8s
PMR Palmer 65.93 28 P **P** **02 41 55.1 +0.9**
PMR Palmer 65.93 28 P **P** **02 41 55.0 +0.9**
baz=254
TRF Thorofare Moun 65.97 26 P **P** **02 41 55.4 +0.7**
baz=252,SNR=8.9
B20K Meade River 66.01 18 P **P** **02 41 55.3 +0.7**
baz=242
F21K Alatna River 66.04 22 P **P** **02 41 56.0 +1.1**
baz=247

KNK	Knik Glacier baz=254	66.19	28	P		P		02 41 56.7	+0.7
ULHL	Ulahol SNR=6.3	66.24	310	P		P		02 41 57.5	+0.7
KUU	Kurty baz=312	66.26	312	*i* P		P		02 41 56.3	-0.4
KUU	Kurty	66.26	312	*i* P		P		02 41 56.3	-0.4
MLY	Manley comp=Z,43nm,1.0s	66.29	24	IAmb		IAmb		02 42 17.0	
MLY	Manley baz=251,SNR=39	66.29	24	P		P		02 41 57.3	+0.8
H22K	Ishtalitna Cre baz=250,SNR=13	66.33	23	P		P		02 41 57.4	+0.6
KSH	Kashi	66.34	307	P		P		02 42 00.9	+3.4
KSH				sP		pwP		02 42 12.5	+3.0
KSH				PcP		PcP		02 42 27.2	-0.1
E21K	Killik River baz=246	66.35	20	P		P		02 41 57.6	+0.8
SML	Sawmill baz=254	66.36	28	P		P		02 41 57.5	+0.5
C21K	Knifeblade Rid baz=245,SNR=16	66.38	20	P		P		02 41 57.8	+0.8
NRN	Naryn comp=Z,40nm,1.1s	66.38	309	IAmb		IAmb		02 42 13.1	
NRIK	Noril'sk comp=Z,49nm,1.2s	66.48	341	IAmb		IAmb		02 41 58.0	
NRIK	Noril'sk	66.48	341	*ce*P		P		02 41 56.2	-1.4
NRIK				pmax		pmax			
	comp=Z,47nm,1.1s								
NRIK	Noril'sk	66.48	341	P		P		02 41 55.9	-1.6
	comp=Z,26nm,1.0s,baz=108,slow=7.4,SNR=29 comp=Z,26nm,1.0s								
WAT1	Susitna Watana baz=254	66.54	27	P		P		02 41 58.3	+0.2
B21K	Ikpikpuk River comp=Z,42nm,1.1s	66.63	19	IAmb		IAmb		02 42 05.8	
B21K	Ikpikpuk River baz=245	66.63	19	P		P		02 41 58.6	+0.1
M23K	Glacier View baz=255	66.63	28	P		P		02 41 59.5	+0.7
MCK	McKinley baz=253	66.63	26	P		P		02 41 59.4	+0.7
G22K	Bettles baz=249,SNR=16	66.64	22	P		P		02 41 59.0	+0.3
TKM2	Tokmak 2 SNR=26	66.75	311	P		P		02 42 00.4	+0.3
TKM2	Tokmak 2	66.75	311	P		P		02 41 59.5	-0.6
A21K	Barrow baz=242	66.78	17	P		P		02 42 00.3	+0.9
SCM	Sheep Creek Mo baz=255	66.83	28	P		P		02 42 00.6	+0.5
NEA2	Nenana baz=253	66.83	25	P		P		02 42 00.5	+0.5
WAT6	Susitna Watana baz=255,SNR=8.1	66.83	27	P		P		02 42 00.4	+0.2
I23K	Minto, Yukon-K baz=252,SNR=16	66.88	24	P		P		02 42 00.9	+0.6
D22K	Ayikyak River comp=Z,40nm,0.9s	66.96	20	IAmb		IAmb		02 42 21.7	
D22K	Ayikyak River baz=247	66.96	20	P		P		02 42 00.9	+0.2
DHY	Denali Highway comp=Z,48nm,1.3s	67.12	27	IAmb		IAmb		02 42 37.4	
DHY	Denali Highway baz=255	67.12	27	P		P		02 42 02.0	0.0
G23K	Bananza Creek comp=Z,64nm,1.4s	67.12	23	IAmb		IAmb		02 42 09.6	
G23K	Bananza Creek baz=251,SNR=24	67.12	23	P		P		02 42 02.4	+0.6
KBK	Karagaybulak SNR=11	67.22	311	P		P		02 42 03.9	+0.9
COLD	Coldfoot baz=250,SNR=34	67.23	22	P		P		02 42 02.8	+0.4
MDM	Murphy Dome comp=Z,27nm,0.8s	67.28	25	IAmb		IAmb		02 42 20.9	
B22K	Teshekpuk Lake comp=Z,42nm,0.9s	67.30	19	IAmb		IAmb		02 42 23.1	
B22K	Teshekpuk Lake baz=246	67.30	19	P		P		02 42 03.2	+0.4
CHMS	Chumysh SNR=10.0	67.37	311	P		P		02 42 04.1	+0.3
KLU	Klutina	67.39	29	P		P		02 42 04.2	+0.5
KLU				IAmb		IAmb		02 42 44.8	
	comp=Z,41nm,1.0s								
KLU	Klutina baz=257	67.39	29	P		P		02 42 04.0	+0.4
COLA	College	67.41	25	P		P		02 42 03.5	-0.1
COLA				IAmb		IAmb		02 42 13.1	
	comp=Z,28nm,0.7s								
COLA	College	67.41	25	P		P		02 42 05.4	+1.8
COLA	College baz=254	67.41	25	P		P		02 42 03.7	+0.2
COLA	College	67.41	25	P		P		02 42 03.5	-0.1
COLA				pmax		pmax			
	comp=Z,28nm,0.7s								
M24K	Tolsona, Glenn baz=256	67.42	28	P		P		02 42 04.2	+0.4
UCH	Uchtor SNR=26	67.52	310	P		P		02 42 06.3	+1.0
AAK	Ala-Archa SNR=8.9	67.55	311	P		P		02 42 05.5	+0.4
AAK	Ala-Archa	67.55	311	P		P		02 42 05.0	-0.1
AAK				IAmb		IAmb		02 42 33.1	
	comp=Z,30nm,1.1s								
AAK	Ala-Archa SNR=12	67.55	311	*i* P		P		02 42 05.6	+0.4
AAK	Ala-Archa	67.55	311	*ce*P		P		02 42 05.3	+0.2
AAK				pmax		pmax			
	comp=Z,30nm,1.7s								
AAK	Ala-Archa	67.55	311	P		P		02 42 05.5	+0.4
USP	Ospenovka SNR=11	67.57	311	P		P		02 42 05.7	+0.6
POKR	Poker Plat Res comp=Z,77nm,1.6s	67.65	25	IAmb		IAmb		02 42 12.1	
POKR	Poker Plat Res baz=254	67.65	25	P		P		02 42 05.1	0.0
HDA	Harding Lake comp=Z,25nm,0.8s	67.66	26	IAmb		IAmb		02 42 27.5	
HDA	Harding Lake baz=255	67.66	26	P		P		02 42 05.4	+0.2
D23K	Nanushuk River baz=249	67.66	20	P		P		02 42 05.9	+0.8
H24K	Noodoo Dome baz=253,SNR=16	67.68	24	P		P		02 42 05.8	+0.4
E23K	Chandalar baz=251,SNR=79	67.72	21	P		P		02 42 06.3	+0.6
IL31		67.78	25	IAmb		IAmb		02 42 12.5	
	comp=Z,46nm,1.1s								
ILAR	Eielson Array	67.78	25	P		P		02 42 05.0	-1.0
ILAR	Eielson Array comp=Z,9.1nm,0.7s,baz=251,slow=5.4,SNR=53 comp=Z,9.1nm,0.7s	67.78	25	P		P		02 42 05.0	-1.0
BMRM	Bremner River baz=258	67.90	29	P		P		02 42 07.2	+0.4
TOLK	Toolik Lake Re comp=Z,31nm,0.9s	67.93	21	IAmb		IAmb		02 42 24.3	
TOLK	Toolik Lake Re baz=250,SNR=13	67.93	21	P		P		02 42 07.4	+0.5
PAX	Paxson baz=257,SNR=9.2	67.94	27	P		P		02 42 08.0	+0.9
HARP	HAARP baz=257	67.95	28	P		P		02 42 07.7	+0.6
BTLS	Baital baz=313	67.96	313	*e*P		P		02 42 07.3	-0.2
BTLS	Baital	67.96	313	*e*P		P		02 42 05.9	-1.6
BTLS				pmax		pmax			
	comp=Z,19nm,1.5s								
K24K	Donnelly Dome baz=256	68.00	26	P		P		02 42 07.9	+0.5
N25K	Chitina, Valde	68.04	29	P		P		02 42 08.9	+1.2
N25K				IAmb		IAmb		02 42 56.4	
	comp=Z,43nm,1.2s								
N25K	Chitina, Valde baz=258	68.04	29	P		P		02 42 08.5	+0.7
EKS2	Erkin-Say SNR=11	68.08	311	P		P		02 42 09.3	+0.8
G24K	Hadweenzic Riv comp=Z,39nm,1.0s	68.08	23	IAmb		IAmb		02 42 28.0	
G24K	Hadweenzic Riv baz=253	68.08	23	P		P		02 42 08.9	+1.0
F24K	Squaw Lake comp=Z,62nm,1.3s	68.17	22	IAmb		IAmb		02 42 17.1	
F24K	Squaw Lake baz=253	68.17	22	P		P		02 42 09.6	+1.1
D24K	Happy Valley baz=251	68.36	20	P		P		02 42 10.6	+1.1
J25K	Salcha River, comp=Z,29nm,1.1s	68.37	26	IAmb		IAmb		02 42 16.6	
J25K	Salcha River, baz=256	68.37	26	P		P		02 42 10.3	+0.6
RIDG	Independent Ri baz=257,SNR=14	68.39	26	P		P		02 42 10.6	+0.7
PRP	Porcupine Dome baz=256	68.53	25	P		P		02 42 11.3	+0.5
C24K	Franklin Bluff baz=251	68.58	20	P		P		02 42 11.8	+0.9
CRQE	Cirque baz=260	68.59	30	P		P		02 42 11.9	+0.7
MENT	Mentasta	68.72	27	IAmb		IAmb		02 42 57.3	
	comp=Z,29nm,0.9s								
MENT	Mentasta	68.72	27	P		P		02 42 14.2	+2.3
MCARA	McCarthy VSAT baz=260	68.73	29	P		P		02 42 12.7	+0.7
SCRK	Sand Creek	68.82	26	P		P		02 42 13.5	+0.9
SCRK				IAmb		IAmb		02 42 55.4	
	comp=Z,36nm,1.0s								
SCRK	Sand Creek baz=258,SNR=13	68.82	26	P		P		02 42 12.7	+0.1
L26K	Log Cabin Wild comp=Z,59nm,1.2s	68.90	27	IAmb		IAmb		02 42 23.1	
L26K	Log Cabin Wild baz=259	68.90	27	P		P		02 42 13.3	+0.2
M26K	Nabesna, AK comp=Z,49nm,1.6s	68.94	28	IAmb		IAmb		02 42 21.6	
M26K	Nabesna, AK baz=259	68.94	28	P		P		02 42 14.0	+0.6
F25K	Christian Rive baz=255	69.02	22	P		P		02 42 14.5	+0.7
MESA	MESA baz=261	69.05	31	P		P		02 42 14.9	+0.7
J26L	Joseph Creek baz=258	69.11	26	P		P		02 42 15.3	+0.9
BRZS	Berezniki	69.14	318	*e*P		P		02 42 14.3	-0.5
	comp=Z,16nm,1.4s,baz=318								
BRZS	Berezniki	69.14	318	*e*P		P		02 42 14.2	-0.5
BRZS				pmax		pmax			
	comp=Z,16nm,1.4s								
E25K	Arctic Village comp=Z,33nm,1.1s	69.19	22	IAmb		IAmb		02 42 56.9	
E25K	Arctic Village baz=255,SNR=23	69.19	22	P		P		02 42 15.3	+0.6
D25K	Kavik River baz=253	69.24	20	P		P		02 42 15.7	+0.7
OTUK	Ortayu	69.28	317	P		P		02 42 15.2	-0.5
M27K	Edge Creek, AK comp=Z,71nm,1.6s	69.44	28	IAmb		IAmb		02 42 37.2	
M27K	Edge Creek, AK baz=260	69.44	28	P		P		02 42 16.7	+0.2
I26K	Coal Creek Min baz=258	69.45	25	P		P		02 42 16.9	+0.5
CTG	Chitna Glacier baz=261	69.47	30	P		P		02 42 16.8	0.0
CTGM	Chitina Glacie comp=Z,47nm,0.9s	69.47	30	IAmb		IAmb		02 42 33.7	
G26K	Porcupine Rive baz=257,SNR=25	69.56	23	P		P		02 42 17.8	+0.8
L27K	Beaver Creek, comp=Z,58nm,1.6s	69.59	27	IAmb		IAmb		02 42 22.1	
L27K	Beaver Creek, baz=260	69.59	27	P		P		02 42 17.6	+0.3
F26K	Sheenjek River baz=256	69.60	22	P		P		02 42 18.3	+1.0
K27K	Chicken comp=Z,29nm,0.9s	69.65	26	IAmb		IAmb		02 42 38.0	
K27K	Chicken baz=259	69.65	26	P		P		02 42 18.6	+1.0
PINM	Pinnacle baz=262	69.88	31	P		P		02 42 19.2	0.0
C26K	Camden Bay baz=255	69.90	20	P		P		02 42 19.2	+0.2
BVCY	Beaver Creek baz=261	69.92	28	P		P		02 42 19.6	+0.2
YUK3	Moose Creek baz=262	70.01	29	P		P		02 42 20.6	+0.4
I27K	Kandik River baz=259	70.14	25	P		P		02 42 20.7	0.0
EGAK	Eagle comp=Z,45nm,1.1s	70.18	26	IAmb		IAmb		02 43 05.1	
EGAK	Eagle baz=260,SNR=8.4	70.18	26	P		P		02 42 21.8	+1.0
YUK8	Steele Glacier baz=262	70.27	30	P		P		02 42 22.2	+0.3
H27K	Steamboat Moun baz=259	70.29	24	P		P		02 42 22.7	+1.2
BTK	Batken comp=Z,41nm,1.2s	70.31	308	IAmb		IAmb		02 42 51.4	
PPT2	Papeete2 comp=Z,2μm,25.2s	70.41	114	*e*LR		LR		03 03 38.5	
PPT2				*e*LR		LR		03 03 46.7	
	comp=Z,1μm,26.5s								
KK31	Karatay Array comp=Z,40nm,0.9s	70.48	311	IAmb		IAmb		02 42 38.1	
KK31	Karatay Array	70.48	311	*i* P		P		02 42 23.1	-0.1
KKAR	Karatay Array comp=Z,40nm,0.9s	70.48	311	IAmb		IAmb		02 42 38.1	
O29M	Mount Kennedy baz=264	70.73	31	P		P		02 42 25.4	+0.9
BVA0	Borovoye Array	70.73	322	*i* P		P		02 42 24.1	-0.4
BVAR	Borovoye Array comp=Z,59nm,0.8s,baz=100,slow=7.4,SNR=191 comp=Z,59nm,0.8s	70.73	322	P		P		02 42 24.3	-0.2
BRVK	Borovoye	70.80	322	P		P		02 42 25.4	+0.5
BRVK	Borovoye	70.80	322	*c i* P		P		02 42 24.4	-0.5
BRVK				pmax		pmax			
	comp=Z,70nm,1.0s								
BRVK	Borovoye	70.80	322	P		P		02 42 25.3	+0.4
I28M	Miner Creek baz=261	70.80	25	P		P		02 42 25.8	+1.1
YUK4	Talbot Arm baz=264	70.81	30	P		P		02 42 26.1	+1.0
DAWY	Dawson baz=262	70.82	27	P		P		02 42 25.8	+0.9
YUK6	Outpost Mounta baz=264	70.91	30	P		P		02 42 26.7	+1.0
BRLS	Borolday	70.98	311	*e*P		P		02 42 26.3	0.0
	baz=311								
BRLS	Borolday	70.98	311	*e*P		P		02 42 26.2	0.0
M29M	Somme Creek comp=Z,28nm,0.8s	71.03	28	IAmb		IAmb		02 42 46.9	
M29M	Somme Creek baz=263	71.03	28	P		P		02 42 27.9	+1.7
D27M	Malcolm River baz=259	71.09	21	P		P		02 42 27.2	+0.8
P29M	Windy Craggy baz=265	71.09	31	P		P		02 42 27.7	+1.1
CHM	Chimkent baz=310	71.17	310	*e*P		P		02 42 27.4	+0.1
CHM	Chimkent	71.17	310	*e*P		P		02 42 27.4	+0.1
F28M	Old Crow comp=Z,31nm,0.9s	71.18	23	IAmb		IAmb		02 42 47.1	
F28M	Old Crow baz=260,SNR=17	71.18	23	P		P		02 42 28.5	+1.5
L29M	L29M comp=Z,50nm,0.9s	71.26	28	IAmb		IAmb		02 42 38.9	
L29M	L29M baz=263,SNR=9.9	71.26	28	P		P		02 42 28.5	+1.0
HYT	Haines Junctio comp=Z,49nm,0.9s	71.31	30	IAmb		IAmb		02 42 45.4	
HYT	Haines Junctio baz=265	71.31	30	P		P		02 42 28.7	+0.7
J29N	Klondike Camp comp=Z,31nm,0.9s	71.38	26	IAmb		IAmb		02 42 48.8	
J29N	Klondike Camp baz=263	71.38	26	P		P		02 42 29.3	+1.1
E28M	Babbage River comp=Z,33nm,1.0s	71.48	22	IAmb		IAmb		02 42 49.2	
E28M	Babbage River baz=260	71.48	22	P		P		02 42 30.0	+1.3
P30M	Million Dollar baz=265	71.52	31	P		P		02 42 30.6	+1.4
H29M	Whitestone comp=Z,35nm,0.9s	71.55	24	IAmb		IAmb		02 42 46.0	
H29M	Whitestone baz=262	71.55	24	P		P		02 42 30.3	+1.1
K29M	Barlow Dome comp=Z,44nm,0.9s	71.61	27	IAmb		IAmb		02 42 50.2	
K29M	Barlow Dome baz=264	71.61	27	P		P		02 42 29.7	0.0
SIMJ	Simiganj	71.77	306	P		P		02 42 31.3	+0.1
M30M	Minto, Yukon baz=265	71.81	28	P		P		02 42 31.5	+0.6
O30N	Mendenhall baz=266	72.00	30	P		P		02 42 32.2	+0.2
E29M	Blow River baz=262	72.04	22	P		P		02 42 34.1	+2.1
N31M	Braeburn, Yuko	72.20	30	IAmb		IAmb		02 42 50.0	
	comp=Z,36nm,1.0s								
N31M	Braeburn, Yuko baz=266	72.20	30	P		P		02 42 34.3	+1.1
J30M	Hart River comp=Z,81nm,1.6s	72.21	26	IAmb		IAmb		02 42 42.6	
J30M	Hart River baz=264,SNR=24	72.21	26	P		P		02 42 34.2	+0.9
EPYK	Eagle Plains comp=Z,58nm,1.2s	72.23	24	IAmb		IAmb		02 43 10.7	
EPYK	Eagle Plains baz=264,SNR=11	72.23	24	P		P		02 42 34.0	+0.7
I30M	Mount Dempster baz=264	72.25	26	P		P		02 42 34.4	+0.8
SKAG	Skagway baz=267	72.30	32	P		P		02 42 34.6	+0.9
MAYO	Mayo, Yukon baz=265	72.31	27	P		P		02 42 34.7	+0.9
G30M	tAoh Zraii Nji comp=Z,32nm,0.9s	72.50	24	IAmb		IAmb		02 43 12.6	
G30M	tAoh Zraii Nji baz=264	72.50	24	P		P		02 42 35.6	+0.7
WHY	Whitehorse comp=Z,34nm,1.0s	72.59	30	IAmb		IAmb		02 42 52.4	
WHY	Whitehorse baz=267,SNR=7.5	72.59	30	P		P		02 42 35.5	-0.1
F30M	Barrier River baz=264	72.73	23	P		P		02 42 36.5	+0.3
TBI	Tubuai	72.74	120	*e*LR		LR		03 04 18.4	
	comp=Z,6μm,32.8s								
TBI				*e*LR		LR		03 04 23.1	
	comp=Z,1μm,32.8s								
M31M	Drury Creek, Y comp=Z,50nm,1.4s	72.90	29	IAmb		IAmb		02 42 58.2	
M31M	Drury Creek, Y baz=267	72.90	29	P		P		02 42 37.5	+0.1
P32M	Atlin comp=Z,52nm,1.2s	73.13	32	IAmb		IAmb		02 42 55.4	
P32M	Atlin baz=268	73.13	32	P		P		02 42 39.5	+0.7
H31M	Peel River comp=Z,76nm,1.3s	73.15	25	IAmb		IAmb		02 42 58.7	
H31M	Peel River baz=266	73.15	25	P		P		02 42 39.4	+0.6
G31M	Satah River comp=Z,62nm,1.1s	73.26	24	IAmb		IAmb		02 42 58.9	
G31M	Satah River baz=266	73.26	24	P		P		02 42 40.3	+1.0
FARO	Faro, Yukon baz=268	73.39	29	P		P		02 42 41.4	+1.1
N32M	Quiet Lake comp=Z,45nm,1.1s	73.48	30	IAmb		IAmb		02 42 57.9	
N32M	Quiet Lake baz=268	73.48	30	P		P		02 42 41.5	+0.6
F31M	Tsiigehtchic baz=266,SNR=9.6	73.50	23	P		P		02 42 41.3	+0.6
P33M	Teslin, Yukon baz=269	73.59	31	P		P		02 42 41.8	+0.2
INK	Inuvik baz=266,SNR=16	73.64	22	P		P		02 42 42.1	+0.6
INK	Inuvik comp=Z,13nm,0.9s,baz=254,slow=7.9,SNR=27 comp=Z,13nm,0.9s	73.64	22	P		P		02 42 41.5	0.0
WRAK	Wrangell Islan baz=270	73.82	35	P		P		02 42 43.3	+0.4
Q32M	Nakina River baz=270	73.86	32	P		P		02 42 43.5	+0.2
S34M	Telegraph Cree baz=271	74.47	33	P		P		02 42 47.1	+0.5
R33M	Jennings River comp=Z,40nm,1.0s	74.53	32	IAmb		IAmb		02 43 04.6	
R33M	Jennings River baz=271	74.53	32	P		P		02 42 47.8	+0.7
T35M	Bob Quinn baz=272	74.97	34	P		P		02 42 50.5	+0.9
DLBC	Dease Lake comp=Z,47nm,1.0s	75.04	33	IAmb		IAmb		02 43 07.6	
DLBC	Dease Lake baz=272,SNR=10.0	75.04	33	P		P		02 42 50.9	+0.9
DLBC	Dease Lake comp=Z,14nm,0.9s,baz=288,slow=6.8,SNR=12 comp=Z,14nm,0.9s	75.04	33	P		P		02 42 50.8	+0.8
WTLY	Watson Lake, Y comp=Z,65nm,1.0s	75.60	31	IAmb		IAmb		02 43 10.0	
WTLY	Watson Lake, Y baz=272,SNR=7.4	75.60	31	P		P		02 42 54.2	+1.1
TGTN	Hyland Airport baz=273	75.80	30	P		P		02 42 55.3	+1.0
SVE	Sverdlovsk	76.31	326	*e*P		P		02 42 57.6	+0.4
SVE				pmax		pmax			
	comp=Z,76nm,1.1s								
DGAR	Diego Garcia	76.35	259	P		P		02 42 57.8	-0.4
DGAR	Diego Garcia	76.35	259	*c i* P		P		02 42 59.4	+1.2
DGAR				pmax		pmax			
	comp=Z,350nm,2.5s								
BBB	Bella Bella comp=Z,8.7nm,0.9s,baz=196,slow=0.7,SNR=4.1 comp=Z,8.7nm,0.9s	76.51	39	P		P		02 42 57.2	-1.2
A36M	Sachs Harbour comp=Z,39nm,1.0s	76.51	19	IAmb		IAmb		02 43 05.6	
A36M	Sachs Harbour baz=273,SNR=14	76.51	19	P		P		02 42 58.8	+0.7
C36M	Paulatuk baz=274,SNR=18	77.07	21	P		P		02 43 01.3	0.0
AB31	Akbulak array	77.43	318	*i* P		P		02 43 03.2	-0.5
ABKAR	Akbulak array comp=Z,35nm,1.0s	77.43	318	IAmb		IAmb		02 43 17.5	
ARU	Arti	77.49	325	P		P		02 43 03.6	-0.2
ARU				IAmb		IAmb		02 43 17.3	
	comp=Z,67nm,1.2s								
ARU	Arti	77.49	325	*c i* P		P		02 43 03.6	-0.2
ARU				PPP		PPP		02 47 40.6	
ARU				S		S		02 52 56.9	+2.8
ARU				SS		SS		02 57 53.8	+1.1
ARU				pmax		pmax			
	comp=Z,43nm,1.1s								
ARU				MLR		MLR			
	comp=Z,1μm,18.0s								
ARU	Arti	77.49	325	P		P		02 43 03.6	-0.2
	comp=Z,17nm,0.7s,baz=121,slow=2.8,SNR=30 comp=Z,17nm,0.7s								
HRA	Herat comp=Z,40nm,1.0s	77.62	303	IAmb		IAmb		02 43 20.5	
WRGLY	Wrigley comp=Z,32nm,0.9s	77.90	28	IAmb		IAmb		02 43 32.6	
WRGLY	Wrigley baz=276,SNR=6.3	77.90	28	P		P		02 43 06.9	+0.9
AKTO	Aktyubinsk comp=Z,4.6nm,0.7s,baz=96,slow=5.9,SNR=13 comp=Z,4.6nm,0.7s	78.53	319	P		P		02 43 09.1	-0.7
CLRS	Cowichan Lake comp=Z,74nm,1.6s	79.44	42	IAmb		IAmb		02 43 19.9	
NLWA	Neilton Lookou comp=Z,102nm,1.7s	79.83	44	IAmb		IAmb		02 43 22.4	
E03A	Lebam comp=Z,58nm,1.1s	80.17	44	IAmb		IAmb		02 43 39.5	
F03A	Seaside comp=Z,63nm,1.1s	80.28	45	IAmb		IAmb		02 43 49.9	
GEYT	Alibeck comp=Z,71nm,1.2s	80.36	307	IAmb		IAmb		02 43 36.1	
GEYT	Alibeck comp=Z,11nm,0.9s,baz=153,slow=0.3,SNR=20 comp=Z,11nm,0.9s	80.36	307	P		P		02 43 20.4	+0.4
I03D	Drain, OR comp=Z,97nm,1.6s	80.81	47	IAmb		IAmb		02 43 27.5	
BUCK	Buck Mountain comp=Z,69nm,1.2s	80.98	47	IAmb		IAmb		02 43 38.0	
KHMM	Horse Mountain	81.03	50			P		02 43 24.8	+1.1
F04A	Amboy comp=Z,36nm,0.8s	81.06	45	IAmb		IAmb		02 43 41.2	
H04D	Lebanon	81.10	46			P		02 43 24.6	+0.8
D05A	Enumclaw	81.13	44			P		02 43 24.8	+0.9
HUMO	Hull Mountain	81.29	48	P		P		02 43 25.7	+0.8
H04A	Detroit Lake	81.45	46	P		P		02 43 26.5	+0.7
H04A				IAmb		IAmb		02 43 30.2	
	comp=Z,108nm,1.8s								
YBH	Yreka Blue Hor comp=Z,60nm,1.6s	81.63	49	IAmb		IAmb		02 43 31.9	
HOOD	Mount Hood Mea comp=Z,33nm,0.9s	81.71	45	IAmb		IAmb		02 43 47.6	
G05A	Wamic comp=Z,36nm,1.0s	81.95	45	IAmb		IAmb		02 44 02.8	
KIRV	Kirov	82.00	328	*c i* P		P		02 43 27.9	-0.3
KIRV	Kirov comp=Z,17nm,0.5s,baz=247,slow=2.3,SNR=16	82.00	328	P		P		02 43 28.9	+0.6
KIRV				LR		LR		03 21 27.7	
	comp=Z,868nm,19.6s,baz=67,slow=37 comp=Z,17nm,0.5s								
YKA	Yellowknife Ar	82.02	28	P		P		02 43 28.4	0.0

comp=Z,4.9nm,0.9s,baz=288,slow=5.7,SNR=34
comp=Z,4.9nm,0.9s
K04D Chiloquin, OR 82.16 48 IAmb IAmb 02 44 05.5
comp=Z,46nm,0.8s
JLN Jalan Bani Buh 82.21 291 P **P** **02 43 30.9 +0.8**
SNR=11
J05D Fort Rock, OR 82.40 47 P **P** **02 43 31.3 +0.3**
J05D IAmb IAmb 02 43 58.0
comp=Z,28nm,0.8s
PINE Pine Mountain 82.51 47 IAmb IAmb 02 43 46.5
comp=Z,42nm,0.9s
WBK Wadi Bani Khal 82.51 291 P **P** **02 43 33.0 +1.3**
SNR=7.9
BRLDA Berland Lookou 82.58 36 IAmb IAmb 02 43 49.1
comp=Z,48nm,1.0s
E07A Sunnyside 82.69 44 IAmb IAmb 02 43 37.0
comp=Z,93nm,1.9s
ORV Oroville 82.97 51 P **P** **02 43 34.7 +0.9**
ORV IAmb IAmb 02 43 38.2
comp=Z,68nm,1.6s
ORV Oroville 82.97 51 P **P** **02 43 34.7 +0.9**
ORV pmax pmax
comp=Z,68nm,1.6s
BIDO Bidbid 83.09 292 P **P** **02 43 37.0 +2.3**
SNR=27
SMDO Samad 83.25 292 P **P** **02 43 37.4 +1.7**
SNR=9.7
JMDO Jabal Madar 83.35 291 P **P** **02 43 38.0 +1.9**
SNR=8.7
AFDM Forest Hills D 83.49 52 IAmb IAmb 02 43 41.2
comp=Z,61nm,1.5s
MHTO MHTO 83.76 290 P **P** **02 43 39.0 +0.8**
SNR=25
BSY Bisya 84.08 292 P **P** **02 43 41.1 +1.2**
SNR=16
BSY P **P** **02 43 41.1 +1.2**
SNR=16
NEW Newport 84.11 42 P **P** **02 43 39.7 +0.2**
baz=284,SNR=13
SPA0 Spitsbergen Ar 84.14 351 *e*P **P** **02 43 40.1 +1.1**
SPITS Spitsbergen Ar 84.14 351 P **P** **02 43 38.9 -0.2**
comp=Z,27nm,1.0s,baz=115,slow=7.5,SNR=10
comp=Z,27nm,1.0s
CMB Columbia Colle 84.14 52 IAmb IAmb 02 43 44.5
comp=Z,72nm,1.6s
KBS Kingsbay 84.25 352 *e*P **P** **02 43 39.9 +0.3**
KBS IAmb IAmb 02 43 42.1
comp=Z,19nm,1.0s
SHME Shamm 84.32 295 *i* P **P** **02 43 42.0 +1.0**
SNR=8.1
SHME Shamm 84.32 295 P **P** **02 43 43.2 +2.2**
SNR=6.4
MDH Madha 84.34 295 *i* P **P** **02 43 41.1 0.0**
SNR=6.8
MDH Madha 84.34 295 P **P** **02 43 41.4 +0.3**
DQM DQM 84.38 289 P **P** **02 43 42.5 +1.2**
SNR=8.0
SOHO SOHO 84.39 293 *i* P **P** **02 43 41.5 +0.2**
SNR=11
SOHO SOHO 84.39 293 P **P** **02 43 42.5 +1.2**
WVOR Wild Horse Val 84.45 48 IAmb IAmb 02 43 46.1
comp=Z,69nm,1.6s
MASF Masafi 84.45 295 P **P** **02 43 43.4 +1.7**
SNR=19
MSFE Esma-Masafi 84.45 295 *i* P **P** **02 43 42.7 +1.0**
SNR=21
UOSS Minazif 84.50 294 P **P** **02 43 41.9 0.0**
UOSS Minazif 84.50 294 *i* P **P** **02 43 42.3 +0.4**
SNR=8.3
UOSS Minazif 84.50 294 P **P** **02 43 43.1 +1.2**
PNTR Pine Nut 84.50 51 IAmb IAmb 02 43 46.2
comp=Z,25nm,1.0s
BELG Belogornoye 84.51 323 *c i*P **P** **02 43 40.8 -0.5**
BELG pmax pmax
comp=Z,22nm,1.1s
PAHR Pah Rah Range 84.53 51 IAmb IAmb 02 43 46.6
comp=Z,48nm,1.6s
ARQ Araqi 84.57 293 P **P** **02 43 43.5 +1.2**
SNR=23
HATD Hatta, Dubai 84.59 294 *i* P **P** **02 43 44.0 +1.6**
SNR=9.5
HATD Hatta, Dubai 84.59 294 P **P** **02 43 43.8 +1.5**
SNR=13
ASHO Ashiyiah 84.69 294 *i* P **P** **02 43 44.2 +1.3**
SNR=17
ASHO Ashiyiah 84.69 294 P **P** **02 43 44.0 +1.1**
SNR=14
WAKR Walker 84.76 52 IAmb IAmb 02 43 50.6
comp=Z,44nm,1.6s
YERR Yerington 84.80 51 IAmb IAmb 02 43 48.2
comp=Z,65nm,1.6s
BMO Blue Mountains 84.81 45 IAmb IAmb 02 43 47.0
comp=Z,29nm,1.2s
NAZ Nazwa, Dubai 84.97 294 *i* P **P** **02 43 44.7 +0.4**
SNR=10
NAZ Nazwa, Dubai 84.97 294 P **P** **02 43 45.4 +1.1**
SNR=8.3
SMMC Simmler 85.06 55 P **P** **02 43 45.3 +0.7**
baz=283
FAQ Al Faqa, Dubai 85.09 294 *i* P **P** **02 43 45.1 +0.3**
SNR=8.5
FAQ Al Faqa, Dubai 85.09 294 P **P** **02 43 46.0 +1.2**
SNR=6.3
ALNE Al Ain 85.10 293 *i* P **P** **02 43 45.8 +0.9**
SNR=18
ALNE Al Ain 85.10 293 P **P** **02 43 46.3 +1.3**
SNR=32
EDM Edmonton 85.13 36 IAmb IAmb 02 44 17.1
comp=Z,46nm,1.2s
LVZ Lovozero 85.28 339 P **P** **02 43 43.7 -1.3**
LVZ Lovozero 85.28 339 P **P** **02 43 43.7 -1.3**
LVZ pmax pmax
comp=Z,151nm,2.0s
PKM Mcpherson Peak 85.30 55 P **P** **02 43 46.0 +0.1**
baz=283
ASUD Al Ashush, Dub 85.35 294 *i* P **P** **02 43 47.1 +0.9**
SNR=8.4
ASUD Al Ashush, Dub 85.35 294 P **P** **02 43 47.9 +1.7**
SNR=7.8
RYN Ryan 85.43 52 IAmb IAmb 02 43 51.5
comp=Z,60nm,1.7s
LHV Little Huntoon 85.53 52 IAmb IAmb 02 44 07.4
comp=Z,46nm,1.4s
NVAR Mina Array Bea 85.64 52 P **P** **02 43 48.0 +0.4**
comp=Z,7.4nm,0.8s,baz=262,slow=6.2,SNR=16
comp=Z,7.4nm,0.8s
KVN Kaiserville 85.65 51 IAmb IAmb 02 43 52.5
comp=Z,53nm,1.7s
VES Vestal, Richgr 85.66 54 P **P** **02 43 47.8 +0.3**
baz=284,SNR=6.7
AJN Ajban 85.67 294 *i* P **P** **02 43 47.7 0.0**
SNR=9.4
AJN Ajban 85.67 294 P **P** **02 43 49.6 +1.9**
SNR=9.5
APA Apatity 85.85 339 ⇓ *i*P **P** **02 43 44.9 -2.9**
APA pmax pmax
comp=Z,20nm,1.0s
UMZA Um Al Zommool 85.93 292 P **P** **02 43 50.8 +1.7**
UMZA P **P** **02 43 50.8 +1.7**
VADS Vadso 85.94 342 *e*P **P** **02 43 48.2 0.0**
VADS IAmb IAmb 02 43 49.1
comp=Z,74nm,1.3s
ARVC Arvin 86.03 55 P **P** **02 43 49.5 +0.2**
baz=284
KLMR Klimovskoe 86.12 332 *e*P **P** **02 43 45.4 -3.8**
KLMR pmax pmax
comp=Z,59nm,1.2s
DSP Deep Springs 86.16 53 IAmb IAmb 02 43 55.2
comp=Z,60nm,1.7s
ISA Isabella, Lake 86.18 54 P **P** **02 43 50.9 +0.7**
baz=284
MFID Camas Ranch 86.21 46 IAmb IAmb 02 43 54.2
comp=Z,45nm,1.2s
CWC Cottonwood Cre 86.30 54 P **P** **02 43 51.7 +0.8**
baz=284
SHAO Shalim 86.57 288 P **P** **02 43 53.2 +0.9**
SHAO P **P** **02 43 53.2 +0.9**
GRAC Grapevine Rang 86.72 53 P **P** **02 43 53.0 +0.2**
baz=285
EDW2 Edwards Air Fo 86.75 55 P **P** **02 43 53.4 +0.4**
baz=284,SNR=5.7
FMP Fort Macarthur 86.80 56 P **P** **02 43 53.7 +0.5**
baz=284
KEV Kevo 86.83 342 P **P** **02 43 52.5 0.0**
KEV IAmb IAmb 02 43 53.0
comp=Z,44nm,1.2s
KEV Kevo 86.83 342 P **P** **02 43 52.5 0.0**
KEV pmax pmax
comp=Z,44nm,1.2s
MZWR Madinat Zayed 86.83 294 P **P** **02 43 54.7 +1.2**
LRMC Laurel Mtn Rad 86.85 54 P **P** **02 43 53.9 +0.3**
baz=285,SNR=8.0
MPMC Manual Prospec 86.86 54 P **P** **02 43 53.7 0.0**
baz=285,SNR=23
MAK Makhachkala 87.14 313 *e*P P 02 43 48.5 -6.1
MAK *e* 02 54 12.4
HLID Hailey 87.16 46 P **P** **02 43 54.7 -0.2**
baz=286,SNR=20
BFSC Mount Baldy Ra 87.18 56 P **P** **02 43 55.1 -0.1**
baz=285
FURC Furnace Creek, 87.24 53 P **P** **02 43 55.4 +0.2**
baz=285
DMTO DMTO 87.27 287 P **P** **02 43 56.7 +1.0**
SNR=7.8
HAMF Hammerfest 87.28 344 *e*P **P** **02 43 54.1 -0.6**
HAMF IAmb IAmb 02 43 55.3
comp=Z,39nm,1.1s
ELK Elko 87.34 49 IAmb IAmb 02 44 00.7
comp=Z,61nm,1.5s
WCT Wildcat Mounta 87.34 53 IAmb IAmb 02 44 00.6
comp=Z,44nm,1.4s
LKRN Lenkeran, Azer 87.36 309 P **P** **02 43 55.6 -0.2**
MZR Muzera 87.37 293 P **P** **02 43 58.0 +1.9**
MZR P **P** **02 43 58.0 +1.9**
QSM Queen of Sheba 87.37 54 IAmb IAmb 02 44 00.6
comp=Z,46nm,1.5s
ARA0 ARCESS Array S 87.39 342 *e*P **P** **02 43 55.3 -0.1**
ARA0 IAmb IAmb 02 43 56.2
comp=Z,88nm,1.4s
ARCES ARCESS Array B 87.39 342 P **P** **02 43 54.6 -0.7**
comp=Z,16nm,0.8s,baz=66,slow=6.2,SNR=25
comp=Z,16nm,0.8s
GWY Greenwater Val 87.47 54 IAmb IAmb 02 44 16.8
comp=Z,28nm,1.2s
JRN Qarnain Island 87.47 295 P **P** **02 43 57.4 +0.9**
JRN P **P** **02 43 57.4 +0.9**
ELS Elsinore Mount 87.52 56 IAmb IAmb 02 44 00.4
comp=Z,59nm,1.7s
GSC Goldstone, Bar 87.59 54 IAmb IAmb 02 44 12.2
comp=Z,52nm,1.5s
GSC Goldstone, Bar 87.59 54 P **P** **02 43 57.5 +0.4**
baz=285,SNR=8.5
TPNV Topopah Spring 87.59 53 IAmb IAmb 02 44 01.1
comp=Z,44nm,1.4s
TPNV Topopah Spring 87.59 53 P **P** **02 43 57.0 -0.2**
baz=285,SNR=18
GHWR Ruwais 87.68 294 P **P** **02 43 59.9 +2.3**
MURC Murrieta 87.72 56 P **P** **02 43 57.9 +0.2**
baz=285
R11B Troy Canyon, C 87.73 51 IAmb IAmb 02 44 02.9
comp=Z,40nm,1.4s
R11B Troy Canyon, C 87.73 51 P **P** **02 43 58.1 +0.3**
baz=286,SNR=26
S11A Rachel 87.80 52 IAmb IAmb 02 44 56.5
comp=Z,37nm,1.0s
DOK Doka 87.81 289 P **P** **02 43 58.3 -0.1**
SNR=20
SEKA Sheki 87.85 312 P **P** **02 43 57.9 -0.3**
SHOC Shoshone, Teco 87.85 54 P **P** **02 43 58.8 +0.6**
baz=285
109C Camp Elliot, M 87.97 57 IAmb IAmb 02 44 13.8
comp=Z,23nm,1.0s
109C Camp Elliot, M 87.97 57 P **P** **02 43 59.3 +0.5**
baz=285
RBK Rabkut 88.00 287 P **P** **02 44 00.2 +0.9**
RBK SNR=19 P **P** **02 44 00.2 +0.9**
SNR=19
MNGR Mingechevir, A 88.05 311 P **P** **02 43 58.9 -0.1**
HEC Hector,Ludlow 88.09 55 P **P** **02 43 59.9 +0.5**
baz=285,SNR=5.2
ZKTA Zakatala 88.14 312 P **P** **02 43 59.3 -0.2**
TUQ Turquoise Moun 88.25 54 P **P** **02 44 00.6 +0.3**
baz=286
PFO Pinyon Flats O 88.31 56 P **P** **02 44 00.8 +0.2**
PFO Pinyon Flats O 88.31 56 P **P** **02 44 01.4 +0.8**
baz=285
PFO Pinyon Flats O 88.31 56 P **P** **02 44 00.8 +0.2**
PFO pmax pmax
comp=Z,15nm,1.1s
WHFO Wadi Hawf 88.31 288 P **P** **02 44 00.7 0.0**
SNR=12
KTK1 Kautokeino 88.35 342 *e*P **P** **02 43 58.0 -2.0**
KTK1 IAmb IAmb 02 44 00.4
comp=Z,36nm,1.3s
PMD Palm Desert 88.36 56 IAmb IAmb 02 44 05.2
comp=Z,35nm,1.4s
VRH Novokhopyorsk 88.37 322 *e*P **P** **02 43 58.7 -1.6**
VRH pmax pmax
comp=Z,22nm,0.8s
BAR Barrett 88.38 57 IAmb IAmb 02 44 05.2
comp=Z,55nm,1.4s
PRN Pahroc Range 88.39 52 IAmb IAmb 02 44 06.0
comp=Z,35nm,1.5s
BOZ Bozeman (W) 88.46 43 IAmb IAmb 02 44 18.7
comp=Z,35nm,1.4s
BOZ Bozeman (W) 88.46 43 P **P** **02 44 01.9 +0.8**
baz=288,SNR=18
TKX Tecate 88.46 57 IAmb IAmb 02 44 33.0
comp=Z,48nm,1.5s
MONP2 Monument Peak 88.53 57 P **P** **02 44 02.2 +0.4**
baz=285
BELC Belle Mtn. Jos 88.57 55 P **P** **02 44 02.4 +0.5**
baz=286
GMRC Granite Mounta 88.63 55 P **P** **02 44 02.4 +0.3**
baz=286,SNR=10
GANJ Ganja 88.64 311 P **P** **02 44 01.3 -0.6**
JETT Jettan, Norway 88.83 343 *e*P **P** **02 44 01.3 -0.9**
JETT IAmb IAmb 02 44 03.0
comp=Z,76nm,1.4s
IKP In-Ko-Pah, Jac 88.84 57 P **P** **02 44 03.3 +0.2**
baz=286
ABTO Aybut 88.88 287 P **P** **02 44 04.0 +0.5**
SNR=17
EGMT Eagleton 88.91 41 P **P** **02 44 03.2 +0.1**
baz=289
MOS Moscow 88.98 328 *e*P **P** **02 44 00.5 -2.6**
MOS *e* 02 47 30.8
MOS *e* 02 54 28.3
MOS pmax pmax
comp=Z,30nm,1.4s
MOS MLR MLR
comp=E,800nm,18.0s
MOS MLR MLR
comp=Z,1μm,18.0s
YUH Yuha Desert 89.00 57 IAmb IAmb 02 44 18.7
comp=Z,47nm,1.4s
V12A Nelson 89.01 54 IAmb IAmb 02 44 08.9
comp=Z,58nm,1.4s
BC3 Big Chuckawall 89.10 56 P **P** **02 44 04.4 +0.1**
baz=286
ESJX Sierra Juarez 89.15 57 IAmb IAmb 02 44 09.4
comp=Z,35nm,1.4s
IRM Iron Mountain 89.21 55 P **P** **02 44 05.4 +0.7**
baz=286
DUG Dugway, Tooele 89.27 49 P **P** **02 44 05.2 +0.2**
baz=287,SNR=24
YFT Old Faithful 89.36 44 IAmb IAmb 02 44 23.9
comp=Z,41nm,1.2s
IMW Indian Meadow 89.46 45 IAmb IAmb 02 44 11.1
comp=Z,52nm,1.6s
NEE2 Needles Airpor 89.46 54 P **P** **02 44 06.1 +0.2**
baz=286
LPSR Galich'ya Gora 89.48 324 *e*P **P** **02 44 02.6 -2.9**
LPSR pmax pmax
comp=Z,40nm,1.3s
H17A Grant Village 89.55 44 IAmb IAmb 02 44 13.0
comp=Z,38nm,1.2s
H17A Grant Village 89.55 44 P **P** **02 44 06.7 +0.3**
baz=289,SNR=17
FLWY Flagg Ranch 89.57 45 IAmb IAmb 02 44 21.1
comp=Z,44nm,1.2s
GOF Gofitskoye 89.58 316 *c e*P **P** **02 44 05.4 -0.8**
TPAW Teton Pass 89.58 45 IAmb IAmb 02 44 46.2
comp=Z,63nm,1.9s
VORR Voronezh 89.67 323 *e*P **P** **02 44 04.8 -1.6**
VORR pmax pmax
comp=Z,51nm,0.4s
NAX Nakhchivan 89.69 310 P **P** **02 44 06.6 -0.3**
AHID Auburn Hatcher 89.71 46 IAmb IAmb 02 44 11.8
comp=Z,62nm,1.4s
ZEI Tsey 89.72 314 *e*P P 02 44 01.3 -5.9
ZEI pmax pmax
comp=Z,19nm,1.3s
HWUT Hardware Ranch 89.74 47 IAmb IAmb 02 44 11.7
comp=Z,36nm,1.3s
GLA Glamis 89.77 56 P **P** **02 44 07.5 +0.1**
baz=286
OBN Obninsk 89.78 327 *c i*P **P** **02 44 05.3 -1.5**
OBN *i* 02 44 06.3
OBN *PP **sP** **02 44 10.0 -1.7**
OBN PS **PnS** **02 56 04.0 -0.9**
OBN SS SS 03 00 54.0 -0.3
OBN pmax pmax
comp=Z,40nm,1.7s
OBN MLR MLR
comp=Z,1μm,18.0s
VSR Storozhevoye 89.86 323 *e*P **P** **02 44 04.1 -3.2**
VSR pmax pmax
comp=Z,40nm,1.8s
VORD Divnogorie 89.88 323 *e*P **P** **02 44 04.5 -2.9**
VORD pmax pmax
comp=Z,20nm,0.4s
NLU North Lily Min 89.88 49 IAmb IAmb 02 44 12.0
comp=Z,32nm,1.3s
CTU Camp Tracy 89.89 48 IAmb IAmb 02 44 28.1
comp=Z,24nm,1.0s
GNI Garni 89.94 311 P **P** **02 44 07.9 -0.3**
GNI IAmb IAmb 02 44 41.5
comp=Z,66nm,1.7s
GNI Garni 89.94 311 P **P** **02 44 07.9 -0.3**
GNI pmax pmax
comp=Z,67nm,1.7s
PDMCI Parker Dam,Lak 89.97 55 P **P** **02 44 09.1 +0.9**
baz=287,SNR=13
ONI Oni 90.10 314 IAmb IAmb 02 44 23.1
comp=Z,32nm,1.1s
KBZ Khabaz 90.11 315 *c e*P **P** **02 44 07.6 -1.0**
KBZ pmax pmax
comp=Z,28nm,1.3s
KBZ Khabaz 90.11 315 P **P** **02 44 07.9 -0.7**
comp=Z,12nm,1.0s,baz=86,slow=4.1,SNR=11
comp=Z,12nm,1.0s
KIV Kislovodsk 90.18 315 ⇓ P **P** **02 44 08.5 -0.6**
KIV Kislovodsk 90.18 315 P **P** **02 44 08.5 -0.6**
KIV IAmb IAmb 02 44 23.5
comp=Z,38nm,1.1s
KIV Kislovodsk 90.18 315 *i* P **P** **02 44 07.8 -1.4**
SNR=7.4
KIV Kislovodsk 90.18 315 *e*P **P** **02 44 07.7 -1.4**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV Kislovodsk 90.18 315 P **P** **02 44 09.9 +0.7**
KIV P **P** **02 44 09.9 +0.7**
MPU Maple Canyon 90.19 49 IAmb IAmb 02 44 14.1
comp=Z,36nm,1.5s
RLMT Red Lodge 90.19 43 IAmb IAmb 02 44 14.0
comp=Z,59nm,1.6s
RLMT Red Lodge 90.19 43 P **P** **02 44 09.7 +0.3**
baz=290,SNR=13
NEUR Neytrino 90.40 315 *i* P **P** **02 44 10.0 -0.3**
NEUR pmax pmax
comp=Z,17nm,1.5s
113A Mohawk Valley, 90.71 56 IAmb IAmb 02 44 16.5
comp=Z,38nm,1.6s
BW06 Boulder Array 90.78 46 P **P** **02 44 12.9 +0.7**
baz=290
PDAR Pinedale Array 90.78 46 P **P** **02 44 12.6 +0.4**
comp=Z,1.5nm,0.8s,baz=338,slow=1.6,SNR=10.0
comp=Z,1.5nm,0.8s
FFC Flin Flon 90.87 33 P **P** **02 44 12.5 +0.5**
FFC IAmb IAmb 02 44 28.8
comp=Z,22nm,1.1s
FFC Flin Flon 90.87 33 P **P** **02 44 12.5 +0.5**
FFC pmax pmax
comp=Z,22nm,1.2s
Y14A Wickenburg 90.98 55 IAmb IAmb 02 44 34.2
comp=Z,20nm,1.1s
P17A Butcher Ranch, 91.01 49 IAmb IAmb 02 44 18.0
comp=Z,32nm,1.4s
ERBR Yeremizino-Bor 91.05 318 *e*P **P** **02 44 12.5 -0.5**
ERBR *e*PPP PPP 02 49 44.0
ERBR *e*S **SKSac** **02 54 44.6 0.0**
ERBR pmax pmax
comp=Z,85nm,1.3s
ERBR MLR MLR
comp=Z,1μm,16.0s
LABN Labinsk 91.27 317 *e*P **P** **02 44 18.1 +4.0**
LABN *e*PPP PPP 02 49 45.8
LABN *e* 02 55 07.0
LABN pmax pmax
comp=Z,34nm,1.1s
STEI Steigen 91.32 343 *e*P **P** **02 44 13.4 -0.4**
VNDA Vanda 91.53 177 P **P** **02 44 14.2 -0.2**
comp=Z,7.6nm,1.1s,baz=346,slow=4.7,SNR=3.9
comp=Z,7.6nm,1.1s
LAO LASA Array 91.62 41 P **P** **02 44 15.9 +0.2**
baz=292,SNR=14
FINES FINESS Array B 91.65 335 P **P** **02 44 14.1 -1.3**
comp=Z,16nm,0.8s,baz=70,slow=4.0,SNR=48
comp=Z,16nm,0.8s
214A Organ Pipe Nat 91.72 57 IAmb IAmb 02 44 37.8
comp=Z,20nm,1.1s
214A Organ Pipe Nat 91.72 57 P **P** **02 44 16.6 +0.1**
baz=287
WUAZ Wupatki 91.78 53 P **P** **02 44 17.0 +0.2**
baz=288
MSEY Mahe Island 92.00 266 P **P** **02 44 17.4 -0.7**
MSEY IAmb IAmb 02 44 47.2
comp=Z,36nm,1.5s
MSEY Mahe Island 92.00 266 P **P** **02 44 17.9 -0.2**
MSEY Mahe Island 92.00 266 P **P** **02 44 17.4 -0.7**
MSEY pmax pmax
comp=Z,36nm,1.5s
DGMT Dagmar 92.20 39 P **P** **02 44 18.5 +0.2**
baz=294
SOC Sochi 92.33 316 *e*P P 02 44 12.1 -6.9
SOC *e*PPP PPP 02 49 55.4
SOC *e*S **SKSac** **02 54 44.1 -7.8**
SOC *e*SS **SS** **03 01 29.6 -2.2**
SOC *e*SSS SSS 03 05 03.1
GURO Guroymak-BITLI 92.45 311 IAmb IAmb 02 44 21.4
comp=Z,33nm,1.2s
O20A White River Ci 92.61 48 P **P** **02 44 20.8 +0.1**
baz=290
MOR8 Moi Rana 92.77 342 *e*P **P** **02 44 19.2 -1.4**
RWWY Rawlins 92.79 46 IAmb IAmb 02 44 37.1
comp=Z,14nm,0.8s
K22A Casper 92.92 45 P **P** **02 44 22.7 +0.7**
baz=292
VSU Vasula 92.98 333 *c e*P **P** **02 44 19.9 -1.7**
VSU pmax pmax
comp=Z,54nm,1.1s
W18A Petrified Fore 93.18 53 IAmb IAmb 02 44 44.8
comp=Z,20nm,1.1s
W18A Petrified Fore 93.18 53 P **P** **02 44 23.2 -0.1**
baz=289
X18A Snowflake 93.20 53 IAmb IAmb 02 44 28.8
comp=Z,36nm,1.6s
TUC Tucson 93.25 56 P **P** **02 44 24.3 +0.7**
TUC IAmb IAmb 02 44 28.9
comp=Z,31nm,1.6s
TUC Tucson 93.25 56 P **P** **02 44 23.5 -0.1**
baz=288
TUC Tucson 93.25 56 P **P** **02 44 24.3 +0.7**
TUC pmax pmax
comp=Z,31nm,1.6s
ANN Anapa 93.39 318 *e*P **P** **02 44 21.7 -2.1**
ANN *e* 02 48 05.6
ANN *e*S **SKSac** **02 54 55.9 -1.8**
ANN pmax pmax
comp=Z,97nm,1.1s
MVCO Mesa Verde 93.42 51 IAmb IAmb 02 44 29.1
comp=Z,22nm,1.4s
MVCO Mesa Verde 93.42 51 P **P** **02 44 24.3 -0.1**
baz=290,SNR=7.7
SMCO Snowmass 93.86 48 IAmb IAmb 02 44 31.0
comp=Z,22nm,1.1s
N23A Red Feather La 93.97 46 IAmb IAmb 02 44 48.2
comp=Z,30nm,1.1s
N23A Red Feather La 93.97 46 P **P** **02 44 26.3 -0.7**
baz=292,SNR=11
RSSD Black Hills 94.03 43 P **P** **02 44 27.2 +0.1**
RSSD Black Hills 94.03 43 P **P** **02 44 26.5 -0.6**
baz=293
RSSD Black Hills 94.03 43 P **P** **02 44 27.2 +0.1**
RSSD pmax pmax
comp=Z,17nm,1.2s
RAYN Ar Rayn 94.31 295 P **P** **02 44 28.1 -0.5**
RAYN Ar Rayn 94.31 295 *i* P **P** **02 44 28.3 -0.3**

	SNR=11							
RAYN	**Ar Rayn**	**94.31**	**295**	P		**P**	**02 44 28.1**	**-0.5**
RAYN	comp=Z,18nm,1.2s			pmax		pmax		
RAYN	**Ar Rayn**	**94.31**	**295**	P		**P**	**02 44 28.5**	**-0.1**
S22A	**4UR Ranch, Cre**	**94.48**	**50**	P		**P**	**02 44 29.8**	**+0.4**
	baz=291							
ISCO	**Idaho Springs**	**94.61**	**47**	P		**P**	**02 44 29.4**	**-0.6**
	baz=292							
NACGM	**Naroch**	**94.86**	**330**	*e*P		**P**	**02 44 29.6**	**-0.7**
	comp=Z,12nm,0.9s,baz=58							
ARPR	**Arapgir-MALATY**	**94.95**	**312**	IAmb		IAmb	02 44 33.1	
	comp=Z,32nm,1.2s							
E28A	**Huff**	**95.15**	**40**	IAmb		IAmb	02 44 47.5	
	comp=Z,22nm,1.0s							
Q24A	**Divide**	**95.26**	**48**	P		**P**	**02 44 31.9**	**-1.1**
	baz=292							
SDCO	**Great Sand Dun**	**95.46**	**49**	P		**P**	**02 44 32.9**	**-1.0**
	baz=292							
121A	**Cookes Peak, D**	**95.57**	**55**	IAmb		IAmb	02 44 40.0	
	comp=Z,37nm,1.6s							
121A	**Cookes Peak, D**	**95.57**	**55**	P		**P**	**02 44 34.4**	**0.0**
	baz=290,SNR=5.4							
AKASG	**Malin Array Be**	**95.75**	**325**	*ce*P		**P**	**02 44 33.4**	**-1.1**
AKASG	comp=Z,1.0nm,0.5s			pmax		pmax		
AKASG	**Malin Array Be**	**95.75**	**325**	P		**P**	**02 44 32.4**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=56,slow=3.5,SNR=5.4							
	comp=Z,0.5nm,0.5s							
ANMO	**Albuquerque**	**95.76**	**52**	P		**P**	**02 44 35.1**	**-0.1**
ANMO	**Albuquerque**	**95.76**	**52**	P		**P**	**02 44 34.8**	**-0.4**
	baz=291							
ANMO	**Albuquerque**	**95.76**	**52**	⇓*i*P		**P**	**02 44 36.4**	**+1.2**
ANMO	comp=Z,12nm,1.8s			pmax		pmax		
LPIG	**La Paz**	**96.20**	**63**	LR		LR	03 23 49.1	
	comp=Z,260nm,18.3s,baz=294,slow=33							
ULM	**Lac du Bonnet**	**96.26**	**35**	P		**P**	**02 44 36.5**	**-0.3**
	comp=Z,3.4nm,1.0s,baz=313,slow=6.9,SNR=5.9							
	comp=Z,3.4nm,1.0s							
HFS	**Hagfors**	**97.21**	**338**	P		**P**	**02 44 40.6**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=76,slow=6.3,SNR=6.0							
	comp=Z,1.5nm,0.5s							
NB2	**NORSAR Subarra**	**97.43**	**340**	P		**P**	**02 44 40.6**	**-1.4**
	comp=Z,9.0nm,1.2s,baz=46,slow=5.1							
NB2	**NORSAR Subarra**	**97.43**	**340**	P		**P**	**02 44 40.6**	**-1.4**
	baz=46,slow=5.1							
NOA	**NORSAR Array B**	**97.43**	**340**	P		**P**	**02 44 39.9**	**-2.0**
	comp=Z,2.7nm,0.9s,baz=45,slow=5.6,SNR=4.0							
	comp=Z,2.7nm,0.9s							
MNTX	**Cornudas Mount**	**97.77**	**55**	P		**P**	**02 44 43.9**	**-0.2**
	baz=291							
BR131	**Keskin Array S**	**98.04**	**314**	IAmb		IAmb	02 44 58.3	
	comp=Z,14nm,1.1s							
BR131	**Keskin Array S**	**98.04**	**314**	*de*P		**P**	**02 44 44.5**	**-0.9**
BRTR	**Keskin Array B**	**98.04**	**314**	*ce*P		**P**	**02 44 44.4**	**-0.9**
BRTR	comp=Z,9.0nm,1.1s			pmax		pmax		
BRTR	**Keskin Array B**	**98.04**	**314**	P		**P**	**02 44 43.8**	**-1.6**
	comp=Z,8.8nm,1.1s,baz=98,slow=2.5,SNR=22							
	comp=Z,8.8nm,1.1s							
VHRN	**Van Horn**	**98.42**	**56**	IAmb		IAmb	02 44 51.4	
	comp=Z,12nm,1.4s							
TPGR	**Topolog**	**99.11**	**321**	⇓P		**Pdif**	**02 44 49.1**	**-0.7**
TESR	**Tescani**	**99.34**	**323**	⇑P		**Pdif**	**02 44 49.6**	**-1.2**
MMAI	**Mount Meron Ar**	**99.48**	**307**	P		**Pdif**	**02 44 51.8**	**0.0**
	comp=Z,12nm,0.9s,baz=64,slow=6.6,SNR=5.0							
	comp=Z,12nm,0.9s							
BUR08	**Bucovina Ar. S**	**99.59**	**324**	IAmb		IAmb	02 48 44.9	
	comp=Z,27nm,1.9s							
BURAR	**Bucovina Array**	**99.59**	**324**	⇑P		**Pdif**	**02 44 51.4**	**-0.7**
VRI	**Vrincioaia**	**99.63**	**322**	⇑P		**Pdif**	**02 44 52.1**	**-0.1**
VRI	**Vrincioaia**	**99.63**	**322**	P		**Pdif**	**02 44 52.0**	**-0.1**
PLOR	**Plostina**	**99.69**	**322**	⇑P		**Pdif**	**02 44 51.6**	**-0.8**
PLOR	**Plostina**	**99.69**	**322**	P		**Pdif**	**02 44 51.6**	**-0.8**
EYMN	**Ely**	**99.92**	**35**	P		**Pdif**	**02 44 53.2**	**-0.2**
	baz=303							
TURR	**Turia**	**99.96**	**322**	⇓P		**Pdif**	**02 44 53.9**	**+0.3**
TXAR	**Lajitas Array**	**100.02**	**56**	P		**Pdif**	**02 44 53.9**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=267,slow=5.0,SNR=5.6							
TXAR				PP		**PP**	**02 48 58.9**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=273,slow=5.2,SNR=3.4							
	comp=Z,0.9nm,0.9s							
OZUR		**100.07**	**323**	⇓P		**Pdif**	**02 44 53.8**	**-0.3**
DOPR	**Dopca**	**100.38**	**323**	⇓P		**Pdif**	**02 44 55.4**	**-0.1**
CRVS	**Cervenica-Dubn**	**100.95**	**327**	*e*P		**Pdif**	**02 45 04.8**	**+6.9**
CRVS	**Cervenica-Dubn**	**100.95**	**327**	*e*PDIFF		**Pdif**	**02 45 04.8**	**+6.9**
ARR	**Arges**	**101.14**	**322**	⇑P		**Pdif**	**02 44 58.4**	**-0.5**
DRGR		**101.47**	**324**	⇑P		**Pdif**	**02 45 00.1**	**-0.3**
DRGR		**101.47**	**324**	P		**Pdif**	**02 45 00.1**	**-0.3**
BLKB	**Belogradchik**	**103.27**	**322**	⇓P		**Pdif**	**02 45 07.8**	**-0.7**
MODS	**Modra-Piesok**	**103.47**	**328**	*e*P		**Pdif**	**02 45 16.4**	**+7.2**
MODS				*e*			02 49 24.6	
MODS	**Modra-Piesok**	**103.47**	**328**	*e*PDIFF		**Pdif**	**02 45 16.4**	**+7.2**
MODS	**Modra-Piesok**	**103.47**	**328**	*e*PP		**PKiKP**	**02 49 24.6**	**-3.3**
BRG	**Berggiesshubel**	**103.47**	**331**	*e*PKP		**PP**	**02 49 24.3**	**0.0**
BRG	comp=Z,4.4nm,1.0s			Amp			02 49 26.9	
CLL	**Collm**	**103.61**	**332**	*e*P		**Pdif**	**02 45 09.0**	**-0.7**
CLL				MLR		MLR		
	comp=Z,900nn,18.4s							
CLL	**Collm**	**103.61**	**332**	*e*Pdif		**Pdif**	**02 45 09.0**	**-0.7**
CLL				*e*PP		**PP**	**02 49 26.0**	**+0.7**
CLL				AMS		AMS	03 38 00.0	
	comp=Z,900nn,18.4s							
ELIB	**Princess Elisa**	**112.94**	**196**	*d*PKiKP		**PKiKP**	**02 49 47.0**	**+2.0**
ELIB				*d*PP		**PP**	**02 50 37.3**	**+3.7**
ESDC	**Sonseca Array**	**120.12**	**334**	PKP		**PKPdf**	**02 49 59.1**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=112,slow=1.4,SNR=1.7							
ESDC				PP		**PP**	**02 51 23.4**	**-0.2**
	comp=Z,5.1nm,1.1s,baz=24,slow=7.3,SNR=8.6							
LSZ	**Lusaka**	**120.36**	**260**	PKPdf		**PKPdf**	**02 50 00.0**	**-0.8**
LSZ	**Lusaka**	**120.36**	**260**	PKIKP		**PKPdf**	**02 50 00.0**	**-0.8**
BOSA	**Boshof**	**123.68**	**245**	PKP		**PKPdf**	**02 50 05.7**	**-1.2**
	comp=Z,5.7nm,1.1s,baz=146,slow=7.3,SNR=3.1							
TAM	**Tamanrasset**	**127.22**	**313**	PKPdf		**PKPdf**	**02 50 13.4**	**-0.5**
TAM	**Tamanrasset**	**127.22**	**313**	PKIKP		**PKPdf**	**02 50 13.4**	**-0.5**
TOA0	**Torodi Ar. Sit**	**136.00**	**306**			**PKPdf**	**02 50 30.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**136.00**	**306**	PKP		**PKPdf**	**02 50 29.7**	**-0.8**
	comp=Z,11nm,0.5s,baz=14,slow=4.4,SNR=4.4							
LL01	**San Ignacio de**	**136.01**	**138**			**PKPdf**	**02 50 30.0**	**+0.3**
SDV	**Santo Domingo**	**136.90**	**61**	PKPdf		**PKPdf**	**02 50 31.5**	**-0.9**
PLCA	**Paso Flores**	**138.03**	**137**	PKPdf		**PKPdf**	**02 50 34.6**	**+1.0**
PLCA	**Paso Flores**	**138.03**	**137**	PKIKP		**PKPdf**	**02 50 34.7**	**+1.0**
PLCA	**Paso Flores**	**138.03**	**137**	PKP		**PKPdf**	**02 50 33.2**	**-0.4**
	comp=Z,10nm,1.1s,baz=211,slow=4.4,SNR=10							
BAUV	**El Baul**	**139.04**	**59**	PKPdf		**PKPdf**	**02 50 36.2**	**+0.1**
DBIC	**Dimbokro**	**145.00**	**304**	PKPbc		**PKPab**	**02 50 46.5**	**+0.4**
	comp=Z,163nm,0.9s,baz=49,slow=3.8,SNR=111							
TRQA	**Tornquist**	**145.06**	**139**	PKPbc		**PKPbc**	**02 50 45.1**	**-0.5**
TRQA	**Tornquist**	**145.06**	**139**	PKIKP		**PKPbc**	**02 50 45.1**	**-0.5**
KIC	**Kosan Boka**	**145.09**	**303**	⇑*e*PKP1		**PKPbc**	**02 50 46.7**	**+0.4**
	comp=Z,306nm,1.0s							
TIC	**Toumodi**	**145.15**	**304**	⇑*e*PKP1		**PKPbc**	**02 50 46.9**	**+0.3**
	comp=Z,206nm,1.0s							
LVC	**Limon Verde**	**145.37**	**110**			**PKPbc**	**02 50 46.8**	**-0.7**
LVC	**Limon Verde**	**145.37**	**110**	PKIKP		**PKPbc**	**02 50 46.8**	**-0.7**
LIC	**Lamto**	**145.40**	**303**	⇑*e*PKP1		**PKPbc**	**02 50 47.6**	**+0.3**
	comp=Z,423nm,0.9s							
BOAV	**Boa Vista**	**148.84**	**61**	PKPdf		**PKPdf**	**02 50 52.1**	**-1.1**
SAML	**Samuel**	**150.60**	**84**	PKPdf		**PKPdf**	**02 50 55.5**	**-0.5**
SAML	**Samuel**	**150.60**	**84**	PKIKP		**PKPdf**	**02 50 55.5**	**-0.5**
PLTB	**Pedras Altas**	**154.34**	**138**			**PKPdf**	**02 51 01.9**	**+0.9**
CPUP	**Villa Florida**	**154.48**	**123**	PKP		**PKPdf**	**02 51 01.9**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=233,slow=10,SNR=1.9							
CPUP				PKPbc		**PKPbc**	**02 51 08.6**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=248,slow=5.9,SNR=3.8							
CPUP				PKPab		**PKPab**	**02 51 22.7**	**-1.4**
	comp=Z,5.0nm,0.9s,baz=228,slow=5.3,SNR=5.2							
PTLB	**Pontes e Lacer**	**155.22**	**97**	PKPab		**PKPab**	**02 51 27.2**	**-0.3**
BDFB	**Brasilia**	**165.91**	**99**	PKP		**PKPdf**	**02 51 14.9**	**+0.4**
	comp=Z,4.4nm,1.1s,baz=338,slow=5.4,SNR=4.1							

IDC ***13*** *02:32:23.9±1.2, 13°.74N×146°.59E, h0km, mb4.8/14, mbtmp4.8/14, MS4.9/3, Error ellipse: s-maj=29.1km s-min=26.0km az=149.0*
NEIC ***13*** *02:32:27.9±1.9, 14°.06N±0°.05×146°.30E±0°.05, h10km±1km, mb5.2/54, Error ellipse: s-maj=11.1km s-min=4.4km az=135.0*
ISC 13 02:32:26.7±0.8, 13°.9N±0°.1×146°.37E±0°.08, h10km, n80, σ0s86/77, mb5.2/41, MS5.0/3, 1C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC	
GUMO	**Guam**	**1.50**	**257**	Pn	**Pb**	**02 32 55.1**	**+0.5**	
GUMO				Sn	**Sn**	**02 33 12.6**	**-0.7**	
GUMO	**Guam**	**1.50**	**257**	Pn	**Pb**	**02 32 55.2**	**+0.6**	
	baz=273,slow=23							
JOW	**Kunigami**	**21.24**	**310**	P	**P**	**02 37 15.7**	**+2.6**	
	64nm,0.8s,baz=193,slow=3.2,SNR=1.7							
	64nm,0.8s							
JNU	**Nakatsue**	**23.75**	**326**	P	**P**	**02 37 39.8**	**+0.5**	
JNU				IAmb	IAmb	02 37 47.0		
	comp=Z,119nm,1.4s							
YULB	**Yu-li**	**25.52**	**295**	P	**P**	**02 37 54.9**	**-0.7**	
YULB				IAmb	IAmb	02 38 00.5		
	comp=Z,45nm,1.0s							
SSLB	**Suanglung**	**25.94**	**296**	P	**P**	**02 38 00.1**	**+0.7**	
SSLB				IAmb	IAmb	02 38 05.3		
	comp=Z,47nm,0.9s							
KSRS	**Korea Array**	**28.62**	**328**	P	**P**	**02 38 23.9**	**+0.5**	
	comp=Z,8.9nm,0.6s,baz=146,slow=9.4,SNR=5.3							
	comp=Z,8.9nm,0.6s							
KSAR	**Wonju Array Be**	**28.63**	**328**	P	**P**	**02 38 23.9**	**+0.4**	
KS19	**Wonju Array Si**	**28.68**	**328**	P	**P**	**02 38 23.1**	**-0.8**	
KS19				IAmb	IAmb	02 38 30.8		
	comp=Z,98nm,1.6s							
WRA	**Warramunga Arr**	**35.68**	**200**	P	P	02 39 22.4	-3.0	
	comp=Z,13nm,0.8s,baz=22,slow=9.5,SNR=1.6							
	comp=Z,13nm,0.8s							
PETK	**Petropavlovsk-**	**40.11**	**11**	LR	LR	02 56 58.1		
	comp=Z,μm,19.4s,baz=196,slow=37							
SONM	**Songino Array**	**47.31**	**324**	P	**P**	**02 41 02.6**	**+1.9**	
	comp=Z,4.5nm,0.7s,baz=144,slow=7.6,SNR=0.8							
	comp=Z,4.5nm,0.7s							
RPSI	**Rantau Prapat**	**48.16**	**261**	P	**P**	**02 41 07.5**	**-0.1**	
SEY	**Seymchan**	**49.12**	**4**	LR	LR	03 00 54.2		
	comp=Z,842nm,20.9s,baz=187,slow=35							
ATKA	**Atka Island**	**49.45**	**31**	P	**P**	**02 41 16.3**	**-0.6**	
GSI	**Gununguitoli**	**49.84**	**260**	P	**P**	**02 41 19.5**	**-1.1**	
LSA	**Lhasa**	**53.15**	**297**	P	**P**	**02 41 44.6**	**-1.0**	
NIUE	**Niue**	**54.11**	**126**	P	**P**	**02 41 53.6**	**+1.4**	
BILL	**Bilibino**	**55.60**	**9**	P	**P**	**02 42 02.9**	**+0.6**	
BILL				IAmb	IAmb	02 42 03.0		
	comp=Z,48nm,1.5s							
J14K	**Nanvaranak Lak**	**60.05**	**24**	P	**P**	**02 42 32.9**	**-0.7**	
J14K				IAmb	IAmb	02 42 40.0		
	comp=Z,26nm,1.2s							
ZAA0	**Zalesovo Array**	**62.21**	**324**	P	**P**	**02 42 48.4**	**0.0**	
ZAA0				IAmb	IAmb	02 42 55.3		
	comp=Z,22nm,1.2s							
ZALV	**Zalesovo Beam**	**62.21**	**324**	P	**P**	**02 42 48.1**	**-0.3**	
	comp=Z,3.9nm,0.6s,baz=110,slow=7.6,SNR=0.9							
	comp=Z,3.9nm,0.6s							
MK31	**Makanchi Array**	**62.27**	**316**	P	**P**	**02 42 49.2**	**+0.2**	
MKAR	**Makanchi Array**	**62.27**	**316**	P	**P**	**02 42 49.4**	**+0.4**	
	comp=Z,11nm,0.7s,baz=91,slow=7.3,SNR=1.7							
	comp=Z,11nm,0.7s							
MAKZ	**Makanchi**	**62.48**	**316**	P	**P**	**02 42 51.0**	**+0.5**	
MAKZ				IAmb	IAmb	02 42 55.9		
	comp=Z,23nm,1.1s							
C18K	**Utukok River**	**63.94**	**19**	P	**P**	**02 42 59.6**	**-0.1**	
C18K				IAmb	IAmb	02 43 09.0		
	comp=Z,19nm,1.2s							
G19K	**Purcell Mounta**	**64.14**	**22**	P	**P**	**02 43 01.8**	**+0.8**	
C19K	**Lookout Ridge**	**64.67**	**19**	P	**P**	**02 43 03.2**	**-1.3**	
C19K				IAmb	IAmb	02 43 08.9		
	comp=Z,20nm,1.1s							
D19K	**Kuna River**	**64.85**	**20**	P	**P**	**02 43 04.3**	**-1.4**	
D19K				IAmb	IAmb	02 43 09.4		
	comp=Z,14nm,0.9s							
KURK	**Kurchatov**	**65.27**	**320**	P	**P**	**02 43 08.6**	**-0.1**	
KURK				IAmb	IAmb	02 43 14.2		
	comp=Z,24nm,0.9s							
KURBB	**Kurchatov Arra**	**65.31**	**320**	P	**P**	**02 43 09.2**	**+0.2**	
	comp=Z,15nm,0.7s,baz=101,slow=7.0,SNR=1.1							
	comp=Z,15nm,0.7s							
TRF	**Thorofare Moun**	**65.83**	**26**	P	**P**	**02 43 12.0**	**-0.3**	
TRF				IAmb	IAmb	02 43 20.8		
	comp=Z,22nm,1.0s							
B20K	**Meade River**	**65.86**	**18**	P	**P**	**02 43 12.2**	**+0.1**	
B20K				IAmb	IAmb	02 43 21.2		
	comp=Z,18nm,0.9s							
NRIK	**Noril'sk**	**66.30**	**341**	P	**P**	**02 43 14.3**	**-0.6**	
NRIK				IAmb	IAmb	02 43 15.8		
	comp=Z,39nm,1.4s							
NRIK	**Noril'sk**	**66.30**	**341**	P	**P**	**02 43 14.9**	**-0.1**	
	comp=Z,6.7nm,0.6s,baz=83,slow=9.3,SNR=1.1							
	comp=Z,6.7nm,0.6s							
D22K	**Ayikyak River**	**66.81**	**20**	P	**P**	**02 43 19.4**	**+1.0**	
D22K				IAmb	IAmb	02 43 20.1		
	comp=Z,12nm,0.8s							
B22K	**Teshekpuk Lake**	**67.15**	**19**	P	**P**	**02 43 19.4**	**-0.9**	
B22K				IAmb	IAmb	02 43 24.6		
	comp=Z,23nm,1.0s							
COLA	**College**	**67.27**	**25**	P	**P**	**02 43 21.7**	**+0.5**	
IL31		**67.64**	**25**	P	**P**	**02 43 22.5**	**-1.0**	
IL31				IAmb	IAmb	02 43 22.8		
	comp=Z,17nm,1.0s							
ILAR	**Eielson Array**	**67.64**	**25**	P	**P**	**02 43 23.8**	**+0.2**	
ILAR	**Eielson Array**	**67.64**	**25**	P	**P**	**02 43 22.5**	**-1.1**	
	comp=Z,11nm,1.1s,baz=252,slow=5.8,SNR=1.1							
	comp=Z,11nm,1.1s							
KAIM	**Kayak Island**	**67.66**	**31**	P	**P**	**02 43 25.0**	**+1.2**	
N25K	**Chitina, Valde**	**67.90**	**29**	P	**P**	**02 43 24.8**	**-0.6**	
D24K	**Happy Valley**	**68.21**	**20**	P	**P**	**02 43 28.1**	**+1.0**	
ARSB	**Arslanbob**	**68.51**	**309**	P	**P**	**02 43 30.3**	**+0.6**	
D25K	**Kavik River**	**69.09**	**21**	P	**P**	**02 43 32.3**	**-0.4**	
D25K				IAmb	IAmb	02 43 40.2		
	comp=Z,14nm,0.9s							
GRNC	**Granite Creek**	**69.10**	**30**	P	**P**	**02 43 33.5**	**+0.4**	
M27K	**Edge Creek, AK**	**69.31**	**28**	P	**P**	**02 43 33.5**	**-0.7**	
M27K				IAmb	IAmb	02 43 33.8		
	comp=Z,23nm,1.2s							
TABL	**Table Mountain**	**69.36**	**30**	P	**P**	**02 43 35.0**	**+0.3**	
TABL				IAmb	IAmb	02 43 41.2		
	comp=Z,25nm,0.8s							
YKU2	**Yakutat**	**69.97**	**31**	P	**P**	**02 43 38.1**	**0.0**	
KKAR	**Karatay Array**	**70.33**	**311**	P	**P**	**02 43 40.7**	**-0.2**	
KKAR	**Karatay Array**	**70.33**	**311**	P	**P**	**02 43 41.0**	**+0.2**	
KKAR				IAmb	IAmb	02 43 44.1		
	comp=Z,8.7nm,1.0s							
BRVK	**Borovoye**	**70.64**	**322**	P	**P**	**02 43 40.9**	**-1.5**	
DAWY	**Dawson**	**70.68**	**27**	P	**P**	**02 43 39.8**	**-2.8**	
L29M	**L29M**	**71.12**	**28**	P	**P**	**02 43 46.7**	**+1.5**	
L29M				IAmb	IAmb	02 43 51.1		
	comp=Z,41nm,1.2s							
J30M	**Hart River**	**72.07**	**26**	P	**P**	**02 43 51.6**	**+0.6**	
J30M				IAmb	IAmb	02 43 56.5		
	comp=Z,24nm,1.2s							
WHY	**Whitehorse**	**72.45**	**30**	P	**P**	**02 43 54.1**	**+0.7**	
P32M	**Atlin**	**73.00**	**32**	P	**P**	**02 43 55.6**	**-0.9**	
INK	**Inuvik**	**73.50**	**22**	P	**P**	**02 43 59.4**	**+0.2**	
DLBC	**Dease Lake**	**74.91**	**33**	P	**P**	**02 44 08.4**	**+0.6**	
DLBC				IAmb	IAmb	02 44 14.2		
	comp=Z,27nm,1.1s							
A36M	**Sachs Harbour**	**76.36**	**19**	P	**P**	**02 44 14.6**	**-1.1**	
A36M				IAmb	IAmb	02 44 14.7		
	comp=Z,16nm,0.9s							
C36M	**Paulatuk**	**76.92**	**21**	P	**P**	**02 44 18.8**	**-0.2**	
C36M				IAmb	IAmb	02 44 19.7		
	comp=Z,36nn,1.4s							
ABKAR	**Akbulak array**	**77.27**	**318**	P	**P**	**02 44 21.0**	**-0.3**	
ABKAR	**Akbulak array**	**77.27**	**318**	P	**P**	**02 44 21.4**	**0.0**	
PGC	**Sidney**	**79.80**	**42**	P	**P**	**02 44 36.0**	**+0.7**	
YBH	**Yreka Blue Hor**	**81.55**	**49**	P	**P**	**02 44 45.5**	**+0.5**	
YKA	**Yellowknife Ar**	**81.89**	**28**	P	**P**	**02 44 45.9**	**-0.2**	
	comp=Z,3.0nm,0.9s,baz=235,slow=6.1,SNR=1.3							
	comp=Z,3.0nm,0.9s							
SPA2	**Spitsbergen Ar**	**83.95**	**351**	P	**P**	**02 44 56.8**	**+0.1**	
SPITS	**Spitsbergen Ar**	**83.95**	**351**	P	**P**	**02 44 57.6**	**+0.9**	
	comp=Z,26nm,1.2s,baz=46,slow=5.2,SNR=1.7							
	comp=Z,26nm,1.2s							
SPA3	**Spitsbergen Ar**	**83.96**	**351**	P	**P**	**02 44 56.1**	**-0.6**	
UOSS	**Minazif**	**84.39**	**294**	P	**P**	**02 45 00.0**	**+0.1**	
UOSS				IAmb	IAmb	02 45 04.2		
	comp=Z,27nn,1.6s							
EDM	**Edmonton**	**85.01**	**36**	P	**P**	**02 45 01.8**	**-0.7**	
EDM				IAmb	IAmb	02 45 07.1		
	comp=Z,18nm,1.1s							
NVAR	**Mina Array Bea**	**85.57**	**52**	P	**P**	**02 45 05.4**	**-0.4**	
	comp=Z,3.1nm,0.7s,baz=289,slow=5.1,SNR=1.4							
	comp=Z,3.1nm,0.7s							
ARCES	**ARCESS Array B**	**87.21**	**342**	P	**P**	**02 45 12.0**	**-1.0**	
	comp=Z,3.9nm,0.6s,baz=69,slow=6.9,SNR=6.0							
	comp=Z,3.9nm,0.6s							
FINES	**FINESS Array B**	**91.47**	**335**	P	**P**	**02 45 31.9**	**-1.3**	
	comp=Z,4.1nm,0.7s,baz=63,slow=5.7,SNR=1.3							
	comp=Z,4.1nm,0.7s							
NOA	**NORSAR Array B**	**97.25**	**340**	LR	LR	03 31 49.3		
	comp=Z,555nm,19.7s,baz=40,slow=37							
DBIC	**Dimbokro**	**144.87**	**304**	PKPbc	**PKPab**	**02 52 04.5**	**+0.4**	
	comp=Z,31nm,0.7s,baz=46,slow=3.2,SNR=5.6							
KIC	**Kosan Boka**	**144.95**	**303**	⇑*e*P	**PKPab**	**02 52 04.3**	**-0.2**	
	comp=Z,65nm,0.8s							
TIC	**Toumodi**	**145.01**	**304**	⇓*i*P	**PKPab**	**02 52 04.9**	**+0.2**	
	comp=Z,68nm,1.0s							
LIC	**Lamto**	**145.26**	**303**	⇓*e*P	**PKPbc**	**02 52 05.9**	**+0.4**	
	comp=Z,95nm,0.9s							

DJA ***13*** *02:34:26.4±1.1, 3°.N±10°×12°.6E±°, h177km±10km, M4.9/12, mb4.7/6, mB5.7/5, MLv4.9/12, Mw(mB)5.2/5*
IDC ***13*** *02:34:39.5±9.8, 2°.79N×125°.50E, h271km±103km, mb3.8/12, mbtmp4.4/12, Error ellipse: s-maj=62.4km s-min=22.2km az=61.0*
ISC 13 02:34:27.3±0.7, 2°.85N±0°.07×125°.73E±0°.10, h150km, n20, σ1s93/21, mb4.3/13, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC	
SGSI	**Sangihe**	**0.85**	**347**	P	**Pn**	**02 34 53.9**	**+3.0**	
SGSI				S	**Sn**	**02 35 12.2**	**+3.3**	
TNTI	**Ternate**	**2.64**	**142**	P	**Pn**	**02 35 12.6**	**+2.5**	
LBMI	**Labuha**	**3.89**	**153**	P	**Pn**	**02 35 28.6**	**+2.4**	
MRSI	**Marisa**	**4.46**	**238**	P	**Pn**	**02 35 35.4**	**+1.8**	
LUWI	**Luwuk**	**4.87**	**217**	P	**Pn**	**02 35 42.1**	**+3.1**	
	67nm,1.3s,3.4nm							
SANI	**Sanana**	**4.88**	**177**	P	**Pn**	**02 35 38.8**	**-0.3**	
	224nm,0.8s,9μm1.4nm							
NLAI	**Namlea**	**6.20**	**167**	P	**Pn**	**02 35 57.8**	**+1.1**	
	42nm,0.4s,1.3nm							
WRA	**Warramunga Arr**	**24.18**	**160**	P	**P**	**02 39 32.0**	**+2.1**	
	14nm,0.6s,baz=342,slow=10,SNR=25							
	14nm,0.6s							
SONM	**Songino Array**	**47.82**	**342**	P	**P**	**02 42 50.9**	**+1.1**	
	3.0nm,0.9s,baz=165,slow=7.0,SNR=1.4							
	3.0nm,0.9s							
MKAR	**Makanchi Array**	**57.71**	**326**	P	**P**	**02 44 01.6**	**-0.6**	
	6.2nm,0.5s,baz=120,slow=7.3,SNR=12							
	6.2nm,0.5s							
ZALV	**Zalesovo Beam**	**60.92**	**334**	P	**P**	**02 44 22.7**	**-1.4**	
	1.5nm,0.8s,baz=118,slow=5.7,SNR=0.8							
	1.5nm,0.8s							
KURBB	**Kurchatov Arra**	**61.94**	**328**	P	**P**	**02 44 30.1**	**-1.0**	
	2.7nm,0.5s,baz=119,slow=7.8,SNR=6.2							
	2.7nm,0.5s							
BVAR	**Borovoye Array**	**67.51**	**327**	P	**P**	**02 45 06.5**	**-0.6**	
	3.4nm,0.7s,baz=99,slow=8.9,SNR=0.7							
	3.4nm,0.7s							
TIXI	**Tiksi**	**68.73**	**1**	P	**P**	**02 45 13.7**	**-0.7**	
	1.6nm,0.3s,baz=340,slow=2.5,SNR=2.0							
	1.6nm,0.3s							
NRIK	**Noril'sk**	**71.

COPN					IAML		02 38 24.1	
	comp=Z,500nm,1.0s							
MOMN	**Momotombo**	**1.72**	**95**	*i* P	**Pn**	**02 37 52.5**	**-0.4**	
MOMN					IAML	02 38 18.3		
	comp=Z,21nm,1.0s							
MOM2	**El Cardon**	**1.78**	**94**	*i* P	**Pn**	**02 37 54.2**	**+0.7**	
MOM2				*i* S	**Sn**	**02 38 13.8**	**-1.2**	
MOM2					IAML	02 38 25.6		
	comp=Z,210nm,1.0s							
SAPS	**Ciudad Sandino**	**1.89**	**102**	*i* P	**Pn**	**02 37 55.7**	**+0.6**	
SAPS				*i* S	**Sn**	**02 38 17.4**	**-0.5**	
SAPS					IAML	02 38 24.9		
	comp=Z,1μm,1.0s							
LIMN	**Finca el Limon**	**1.94**	**75**	*i* P	**Pn**	**02 37 56.0**	**+0.1**	
LIMN				*i* S	**Sn**	**02 38 19.4**	**+0.1**	
LIMN					IAML	02 38 27.4		
	comp=Z,200nm,1.0s							
NUBE	**Las Nubes**	**1.96**	**313**	*e*P	**Pn**	**02 37 56.2**	**+0.1**	
NUBE	**Las Nubes**	**1.96**	**313**	*i* P	**Pn**	**02 37 56.1**	**0.0**	
NUBE				*i* S	**Sn**	**02 38 19.8**	**+0.2**	
NUBE					IAML	02 38 21.4		
	comp=Z,610nm,1.0s							
MTO3	**Montecristo**	**2.09**	**330**	*i* P	**Pn**	**02 37 58.1**	**+0.1**	
MTO3					IAML	02 38 00.2		
	comp=Z,95nm,1.0s							
HUEN		**2.09**	**96**	*i* P	**Pn**	**02 37 57.6**	**-0.2**	
HUEN					IAML	02 38 48.4		
	comp=Z,120nm,1.0s							
NANN	**Nandasmo**	**2.22**	**106**	*i* P	**Pn**	**02 38 02.1**	**+2.5**	
NANN				*i* S	**Sn**	**02 38 26.2**	**+0.3**	
NANN					IAML	02 38 32.9		
	comp=Z,4μm,1.0s							
BOAB	**BOACO BROADBAN**	**2.57**	**93**	*i* P	**Pn**	**02 38 04.3**	**-0.1**	
BOAB					IAML	02 38 26.1		
	comp=Z,59nm,1.0s							
HZTE	**Horizontes, Gu**	**3.23**	**125**	*i* P	**Pn**	**02 38 15.0**	**+1.5**	
HZTE					IAML	02 40 10.6		
	comp=Z,100nm,1.0s							

BGR ***13*** *02:39:40.6, 10˚.18N×93˚.52E, h59km±4km, mb5.1, Ms5.6*
NDI ***13*** *02:39:49.4, 12˚.29N×93˚.00E, h32km, mb6.3, ML5.6, mb5.6(NEIC)*
BJI ***13*** *02:39:49.7±0.0, 12˚.18N×93˚.09E, h70km, mb5.2/74, mB5.6/21, Ms4.9/29, Ms7 4.7/30*
MOS ***13*** *02:39:50.5±0.8, 12˚.30N×93˚.13E, h70km, mb5.5/95, MS5.0/5, Error ellipse: s-maj=6.2km s-min=3.3km az=115.3*
IDC ***13*** *02:39:51.4±1.0, 12˚.23N×93˚.13E, h66km±7km, mb4.9/37, mbtmp5.2/39, MS4.5/13, Error ellipse: s-maj=12.0km s-min=8.6km az=54.0*
GCMT ***13*** *02:39:51.9±0.2, 12˚.34N±0˚.01×93˚.15E±0˚.01, h74km±2km, MW5.2/112, Moment Tensor Solution. s51,c67; s112,c189; Duration: 1ᵴ0 Moment tensor: Scale 10¹⁶ Nm; Mrr 3.71±.28; Mθθ -6.89±.19; Mφφ 3.18±.22; Mrθ -3.21±.16; Mθφ 2.12±.18; Mφr -3.48±.15; Best double couple: Mo 7.91100×10¹⁶ NP1: ϕs 246.00000°, δ 70.00000°, λ 46.00000°. NP2: ϕs 136.00000°, δ 47.00000°, λ 152.00000°. Principal axes: T 7.9120, Plg46.0000°, Azm111.0000°; N -0.0010, Plg41.0000°, Azm265.0000°; P -7.9100, Plg14.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***13*** *02:39:51.9±1.7, 12˚.35N±0˚.07×93˚.16E±0˚.07, h58km±4km, mb5.6/288, Mww5.2/12 Error ellipse: s-maj=10.5km s-min=9.9km az=75.0*
NEIC ***13*** *02:39:53.5, 12˚.25N×92˚.41E, h60km, Moment Tensor Solution. Duration: 1ᵴ9 Moment tensor: Scale 10¹⁶Nm; Mrr 2.23; Mθθ -6.14; Mφφ 3.90; Mrθ -3.27; Mθφ 1.05; Mφr -2.63; Fault plane solution: Mo 6.87000×10¹⁶ NP1: ϕs 238.20000°, δ 77.29000°, λ 43.88000°. NP2: ϕs 136.26000°, δ 47.46000°, λ 162.63000°. Principal axes: T 6.4767, Plg39.0000°, Azm107.0000°; N 0.7885, Plg45.0000°, Azm251.0000°; P -7.2652, Plg19.0000°, Azm1.0000°;*
NEIC ***13*** *02:39:53.5, 12˚.35N×93˚.13E, h60km*
DJA ***13*** *02:39:54.9±0.4, 12˚.N±2˚×9˚.3E±˚, h90km±3km, M5.6/61, mB5.9/24, mb5.5/61, MLv6.0/5, Mw(mB)5.5/24*
ISC 13 02:39:52.1±0.3, 12˚.33N±0˚.03×93˚.09E±0˚.03, h70km±1km, h71km:pP-P, n1275, σ1ᵴ19/1309, mb5.4/340, 44C-40D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.85**	**349**		*e*P	**Pn**	**02 40 08.3**	**-0.6**
DGPR					*e*S	**Sn**	**02 40 17.7**	**-3.5**
DGPR					IAML		02 40 23.1	
	comp=E,55μm,0.3s							
DGPR					IAML		02 40 24.0	
	comp=E,65μm,0.6s							
SRDT	**SRDT**	**6.20**	**70**	P		**Pn**	**02 41 23.4**	**+2.3**
SURA	**Surathani**	**7.15**	**115**	P		**Pn**	**02 41 35.6**	**+1.5**
SRIT	**Nakonsritamara**	**7.40**	**119**	Pn		**Pn**	**02 41 39.5**	**+2.0**
SRIT	**Nakonsritamara**	**7.40**	**119**	P		**Pn**	**02 41 39.7**	**+2.2**
LHMI	**Lhok Sumawe**	**8.02**	**151**	Pn		**Pn**	**02 41 47.4**	**+1.4**
LHMI	**Lhok Sumawe**	**8.02**	**151**	P		**Pn**	**02 41 49.5**	**+3.5**
	comp=E,359nm,0.7s,comp=E,4μmcomp=E,1.3nm							
NAYO	**Nakonayok**	**8.25**	**75**	P		**Pn**	**02 41 51.1**	**+2.0**
CM31	**Chiang Mai Arr**	**8.30**	**42**			**Pn**	**02 41 50.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**8.30**	**42**	Pn		**Pn**	**02 41 50.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**8.30**	**42**	P		**Pn**	**02 41 50.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**8.30**	**42**	P		**Pn**	**02 41 51.0**	**+1.1**
	comp=E,120nm,0.8s,baz=236,slow=15,SNR=157							
CMAR				S		**Sn**	**02 43 18.5**	**-3.6**
	comp=E,43nm,0.6s,baz=232,slow=18,SNR=4.4							
CMAR				LR		LR	02 45 37.4	
	comp=E,855nm,20.3s,baz=215,slow=41							
CMAR				ScP		**ScP**	**02 51 43.6**	**+0.2**
	comp=E,1.3nm,0.3s,baz=249,slow=2.5,SNR=5.6							
CHTO	**Chiang Mai**	**8.56**	**40**	Pn		**Pn**	**02 41 54.1**	**+0.7**
CHTO	**Chiang Mai**	**8.56**	**40**	P		**Pn**	**02 41 54.1**	**+0.7**
MLSI	**Meulaboh, Aceh**	**8.66**	**157**	P		**Pn**	**02 41 53.7**	**-1.0**
	comp=E,215nm,0.8s,comp=E,4μm							
KCSI	**Kotacane, Aceh**	**9.90**	**152**	P		**Pn**	**02 42 11.4**	**-0.4**
	comp=E,173nm,1.3s,comp=E,3μm							
MND	**Mandalay**	**10.05**	**16**	Pn		**Pn**	**02 42 11.2**	**-2.5**
SAIH	**SAIHA**	**10.10**	**359**	*e*P		**Pn**	**02 42 12.8**	**-1.7**
SAIH					IAmb	IAmb	02 42 16.1	
	comp=Z,3μm,0.5s							
SAIH				*e*S		**Sn**	**02 43 57.5**	**-8.7**
SAIH					IAML		02 44 09.4	
	comp=N,3μm,0.6s							
KULM	**Kulim**	**10.23**	**132**	Pn		**Pn**	**02 42 17.8**	**+1.5**
SNSI	**Sinabang, Aceh**	**10.37**	**162**	P		**Pn**	**02 42 19.4**	**+1.3**
	comp=N,147nm,1.0s							
BRDH	**Bariadhala**	**10.38**	**353**	P		**Pn**	**02 42 17.6**	**-0.5**
	comp=N,507nm,0.4s,baz=90,slow=5.0,SNR=36							
BRDH				S		**Sn**	**02 44 06.1**	**-6.7**
	comp=N,1μm,0.5s,baz=90,slow=22,SNR=11							
BRDH				LR		LR	02 46 41.4	
	comp=N,4μm,19.8s,baz=74,slow=39							
CRAI	**Chiangrai**	**10.51**	**41**	Pn		**Pn**	**02 42 20.7**	**+0.7**
VIS	**Vishakhapatnam**	**10.84**	**301**	*e*P		**Pn**	**02 42 22.4**	**-2.1**
VIS				*e*S		Sn	02 44 10.4	-14
VIS					IAML		02 44 15.5	
	comp=N,17μm,0.2s							
IPM	**Ipoh**	**11.06**	**134**			**Pn**	**02 42 26.9**	**-0.8**
IPM	**Ipoh**	**11.06**	**134**	P		**Pn**	**02 42 28.3**	**+0.7**
PSI	**Prapat**	**11.09**	**148**	P		**Pn**	**02 42 30.2**	**+2.1**
PSI	**Prapat**	**11.09**	**148**	P		**Pn**	**02 42 28.4**	**+0.3**
RPSI	**Rantau Prapat**	**11.18**	**148**			**Pn**	**02 42 28.4**	**-0.8**
NONG	**Nongkai**	**11.25**	**58**	P		**Pn**	**02 42 32.6**	**+2.5**
AZL	**Aizawl**	**11.35**	**358**	*e*P		**Pn**	**02 42 29.2**	**-2.3**
AZL					IAmb	IAmb	02 42 31.8	
	comp=Z,1μm,0.8s							
AZL				*e*S		Sn	02 44 23.7	-13
AZL					IAML		02 44 40.5	
	comp=N,2μm,0.8s							
AGT	**Agartala**	**11.62**	**352**	*e*P		**Pn**	**02 42 34.5**	**-0.6**
AGT					IAmb	IAmb	02 42 36.9	
	comp=Z,1μm,0.9s							
AGT				*e*S		Sn	02 44 33.0	-10
AGT					IAML		02 44 42.4	
	comp=N,4μm,0.8s							
AGT					IAML		02 44 42.6	
	comp=E,4μm,0.9s							
UBPT	**Khong Chiam**	**12.38**	**75**			**Pn**	**02 42 47.0**	**+1.6**
UBPT	**Khong Chiam**	**12.38**	**75**	P		**Pn**	**02 42 48.6**	**+3.1**
IMP	**Imphal**	**12.46**	**4**	*e*P		**Pn**	**02 42 43.9**	**-2.7**
IMP					IAmb	IAmb	02 42 49.4	
	comp=Z,1μm,0.5s							
IMP				*e*S		Sn	02 44 49.1	-15
IMP					IAML		02 45 07.0	
	comp=E,363nm,0.7s							
MDRS	**Chennai**	**12.55**	**275**	*e*P		**Pn**	**02 42 45.6**	**-2.3**
MDRS				*e*S		Sn	02 44 51.4	-15
PALK	**Pallekele**	**13.20**	**249**			**Pn**	**02 42 57.0**	**+0.3**
PALK	**Pallekele**	**13.20**	**249**	P		**Pn**	**02 42 57.0**	**+0.3**
PALK	**Pallekele**	**13.20**	**249**	P		**Pn**	**02 42 55.6**	**-1.1**
	comp=E,22nm,1.0s,baz=310,slow=5.9,SNR=3.6							
PALK				S		Sn	02 45 07.6	-14
	comp=E,51nm,0.3s,baz=95,slow=19,SNR=11							
SHL	**Shillong**	**13.21**	**355**			Pn	02 42 51.8	-5.1
SHL	**Shillong**	**13.21**	**355**	P		Pn	02 42 51.8	-5.1
SHL	**Shillong**	**13.21**	**355**	*e*P		**Pn**	**02 42 52.4**	**-4.6**
SHL				*e*S		Sn	02 45 09.6	-13
BOK	**Bokaro**	**13.29**	**330**	*e*P		**Pn**	**02 42 53.9**	**-3.9**
KOHI	**KOHIMA**	**13.35**	**4**	*e*P		**Pn**	**02 42 56.4**	**-2.3**
KOHI					IAmb	IAmb	02 43 00.0	
	comp=Z,4μm,0.7s							
KOHI				*e*S		Sn	02 45 13.4	-12
TNCH	**TengChong**	**13.63**	**21**	⇓P		**Pn**	**02 43 02.6**	**+0.1**
TNCH				pP		P	02 43 13.0	+4.0
TNCH				sP			02 43 25.3	
TNCH				S		**Sn**	**02 45 33.4**	**+1.0**
TNCH				SS		**S**	**02 45 51.1**	**-0.2**
TNCH				pmax		pmax		
	comp=Z,840nm,4.0s							
TNCH				LR		LR		
	comp=Z,950nm,12.3s							
TNCH				LR		LR		
	comp=Z,1μm,12.4s							
TNCH				LR		LR		
	comp=Z,2μm,15.9s							
SLVN	**Son La**	**13.68**	**48**			**Pn**	**02 43 03.8**	**+0.7**
GUWA	**GUWAHATI**	**13.85**	**355**	*e*P		Pn	02 42 59.9	-5.3
GUWA					IAmb	IAmb	02 43 03.9	
	comp=Z,708nm,0.8s							
GUWA				*e*S		Sn	02 45 24.3	-13
MOKO	**MOKOCHONG**	**13.98**	**5**	*e*P		**Pn**	**02 43 04.9**	**-2.1**
JORH	**JORHAT**	**14.38**	**4**	*e*P		**Pn**	**02 43 10.4**	**-1.7**
JORH					IAmb	IAmb	02 43 17.6	
	comp=Z,937nm,0.8s							
ITAN	**ITANAGAR**	**14.75**	**2**	*e*P		**Pn**	**02 43 13.9**	**-3.0**
ITAN					IAmb	IAmb	02 43 22.9	
	comp=Z,1μm,0.8s							
ITAN				*e*S		Sn	02 45 46.2	-13
MYKOM	**Kota Tinggi**	**14.95**	**134**	P		**P**	**02 43 22.2**	**-1.3**
PDSI	**Padang**	**15.06**	**150**	P		**Pn**	**02 43 21.8**	**+0.8**
	comp=Z,43nm,0.9s,comp=Z,6μm							
DLV	**T Lat**	**15.06**	**90**	P		**Pn**	**02 43 22.2**	**+1.0**
DLV	**T Lat**	**15.06**	**90**	P		**P**	**02 43 25.0**	**0.0**
ZIRO	**ZIRO**	**15.13**	**3**	*e*P		**Pn**	**02 43 17.9**	**-4.1**
ZIRO					IAmb	IAmb	02 43 22.1	
	comp=Z,1μm,0.5s							
ZIRO				*e*S		Sn	02 45 55.5	-13
DIBR	**DIBRUGARH**	**15.15**	**6**	*e*P		**Pn**	**02 43 21.7**	**-0.4**
DIBR					IAmb	IAmb	02 43 23.1	
	comp=Z,1μm,0.5s							
DIBR				*e*S		Sn	02 45 57.7	-11
PASG	**PASIGHAT**	**15.28**	**356**	*e*P		**P**	**02 43 27.3**	**+0.2**
PASG					IAmb	IAmb	02 43 31.5	
	comp=Z,1μm,1.0s							
GTK	**Tadong**	**15.49**	**345**	*e*P		**Pn**	**02 43 27.3**	**+0.7**
GTK					IAmb	IAmb	02 43 33.0	
	comp=Z,825nm,0.8s							
KMI	**Kunming**	**15.65**	**34**	⇓P		**P**	**02 43 30.7**	**-0.8**
KMI					pmax	pmax		
	comp=Z,72nm,1.1s							
KMI					LR	LR		
	comp=Z,1μm,15.6s							
KMI					LR	LR		
	comp=Z,1μm,17.8s							
KMI					LR	LR		
	comp=Z,2μm,20.8s							
TPRI	**Tanjung Pinang**	**16.04**	**134**	P		**P**	**02 43 35.7**	**+0.1**
PZH	**PanZhiHua**	**16.28**	**29**	P		**Pn**	**02 43 37.4**	**+0.9**
PZH					pmax	pmax		
	comp=Z,30nm,0.9s							
DSRI	**Dabo**	**17.09**	**137**	P		**P**	**02 43 47.7**	**+0.4**
	comp=Z,469nm,1.5s,comp=Z,6μm							
LSA	**Lhasa**	**17.38**	**354**		IAmb	IAmb	02 43 56.8	
	comp=Z,250nm,0.6s							
QIZ	**Qiongzhong**	**17.44**	**65**	P		**P**	**02 43 52.3**	**+1.2**
QIZ				pP		**pP**	**02 44 05.1**	**0.0**
QIZ				S		**Sn**	**02 47 04.9**	**+0.3**
QIZ					pmax	pmax		
	comp=Z,53nm,1.7s							
QIZ					LR	LR		
	comp=Z,1μm,17.3s							
QIZ					LR	LR		
	comp=Z,2μm,18.3s							
QIZ					LR	LR		
	comp=Z,3μm,18.5s							
GYA	**Guiyang**	**18.98**	**40**	⇓*i*P		**Pn**	**02 44 09.6**	**0.0**
GYA				S		**S**	**02 47 40.3**	**+0.1**
GYA					pmax	pmax		
	comp=Z,32nm,0.8s							
GYA					pmax	pmax		
	comp=Z,1μm,12.8s							
GYA					LR	LR		
	comp=Z,2μm,17.6s							
GYA					LR	LR		
	comp=Z,1μm,16.9s							
GYA					LR	LR		
	comp=Z,2μm,20.2s							
MNAI	**Manna**	**19.27**	**149**	P		**P**	**02 44 09.4**	**-1.8**
MNAI					IAmb	IAmb	02 44 11.6	
	comp=Z,205nm,0.4s							
MNAI	**Manna**	**19.27**	**149**	P		**P**	**02 44 10.6**	**-0.6**
	comp=Z,222nm,0.5s,comp=Z,4μm							
PPBI	**Pangkal Pinang**	**19.37**	**137**	P		**P**	**02 44 12.8**	**+0.4**
	comp=Z,507nm,1.2s,comp=Z,13μm							
KSM	**Kuching**	**20.19**	**121**	P		**P**	**02 44 21.5**	**+0.3**
KSM					IAmb	IAmb	02 44 26.3	
	comp=Z,271nm,1.2s							
LWLI	**Liwa**	**20.40**	**147**	P		Pn	02 44 27.0	+0.7
	comp=Z,154nm,0.6s,comp=Z,12μm							
GULI	**GuiLin**	**20.79**	**49**	P		**P**	**02 44 26.0**	**-1.6**
CD2	**Chengdu**	**20.95**	**26**	⇓P		**P**	**02 44 29.7**	**+0.3**
CD2					pmax	pmax		
	comp=Z,210nm,0.6s							
KASI	**Kota Agung**	**21.05**	**147**	P		**P**	**02 44 28.3**	**-2.2**
	comp=Z,59nm,0.5s							
SBUM	**Sibu**	**21.34**	**116**	P		**P**	**02 44 34.1**	**+0.4**
STKI	**Sintang**	**21.94**	**122**	P		**P**	**02 44 40.5**	**+0.4**
ENH	**Enshi**	**23.44**	**38**	P		**P**	**02 44 54.7**	**-0.7**
ENH					IAmb	IAmb	02 45 14.6	
	comp=Z,166nm,0.8s							
ENH	**Enshi**	**23.44**	**38**	P		**P**	**02 44 55.6**	**+0.2**
KKM	**Kota Kinabalu**	**23.66**	**103**	P		**P**	**02 44 57.5**	**0.0**
KKM	**Kota Kinabalu**	**23.66**	**103**	P		**P**	**02 44 59.2**	**+1.7**
GOMU	**GeErMu**	**23.81**	**3**	P		**P**	**02 45 00.0**	**+1.0**
GOMU					pmax	pmax		
	comp=Z,160nm,0.8s							
LEM	**Lembang**	**23.89**	**142**	LR		LR	02 53 32.8	
	comp=Z,1μm,21.9s,baz=310,slow=34							
COCO	**West Island**	**24.65**	**171**	P		**P**	**02 45 06.1**	**-0.2**
COCO	**West Island**	**24.65**	**171**	P		**P**	**02 45 06.1**	**-0.2**
COCO					pmax	pmax		
	comp=Z,123nm,1.0s							
LZH	**Lanzhou**	**25.56**	**21**	⇓P		**P**	**02 45 15.7**	**+1.0**
LZH				pP		pP	02 45 32.6	+1.6
LZH				ScP		**ScP**	**02 52 19.4**	**+1.6**
LZH				pmax		pmax		
	comp=Z,170nm,1.1s							
SMRI	**Semarang**	**25.85**	**137**	P		**P**	**02 45 17.9**	**+0.6**
SMRI	**Semarang**	**25.85**	**137**	P		**P**	**02 45 19.0**	**+1.7**
XAN	**Xi'an**	**25.98**	**31**	⇑P		**P**	**02 45 17.9**	**-0.5**
XAN				pP		pP	02 45 34.7	+0.3
XAN				sP		sP	02 45 40.0	-2.4
XAN				PcP		**PcP**	**02 48 46.2**	**+1.0**
XAN				S		**S**	**02 49 42.4**	**-1.6**
XAN				SS		**SnSn**	**02 50 53.1**	**+5.1**
XAN				pmax		pmax		
	comp=Z,44nm,0.9s							
XAN				LR		LR		
	comp=Z,2μm,19.2s							
XAN				LR		LR		
	comp=Z,2μm,14.4s							
XAN				LR		LR		
	comp=Z,2μm,16.5s							
MYLDM	**Lahad Datu**	**26.08**	**104**	P		**P**	**02 45 19.9**	**+0.4**
MYLDM					IAmb	IAmb	02 45 45.7	
	comp=Z,380nm,1.5s							
WHN	**Wuhan**	**26.75**	**44**	P		**P**	**02 45 26.0**	**+0.8**
WHN				pP		**pwP**	**02 45 43.1**	**-0.9**
WHN				sP		**sP**	**02 45 50.5**	**+1.3**
WHN				PcP		**PcP**	**02 48 47.4**	**+0.4**
WHN				S		**S**	**02 49 58.3**	**+2.3**
WHN				ScP		**ScP**	**02 52 20.9**	**-0.2**
WHN				pmax		pmax		
	comp=Z,130nm,1.4s							
NGJI	**Ngawi**	**26.77**	**136**	P		P	**02 45 31.7**	**+6.1**
GTA	**Gaotai**	**27.62**	**11**	P		**P**	**02 45 34.4**	**+1.3**
GTA				pP		pP	02 45 51.5	+1.8
GTA				PcP		**PcP**	**02 48 50.7**	**+1.6**
GTA				S		**S**	**02 50 11.1**	**+1.2**
GTA				ScP		**ScP**	**02 52 25.2**	**+1.4**
GTA				PcS		**PcS**	**02 52 31.7**	**+0.6**
GTA				ScS		**ScS**	**02 56 15.2**	**-0.6**
GTA				pmax		pmax		
	comp=Z,57nm,1.2s							
LYN	**LuoYang**	**28.27**	**35**	⇓*i*P		**P**	**02 45 39.9**	**+1.1**
LYN				pP		pwP	02 45 56.6	-0.7
LYN				sP		sP	02 46 04.1	+1.0
LYN				sS		sS	02 50 48.9	+0.2
LYN				pmax		pmax		
	comp=Z,79nm,0.6s							
LYN				LR		LR		
	comp=Z,1μm,13.0s							
LYN				LR		LR		
	comp=Z,1μm,13.0s							
LYN				LR		LR		
	comp=Z,2μm,18.5s							
BLJI	**Banyuglugur**	**28.52**	**133**	P		**P**	**02 45 41.1**	**-0.1**
	comp=Z,294nm,1.0s,comp=Z,3μm							
MPSI	**Mapaga**	**29.14**	**112**	P		**P**	**02 45 47.3**	**+0.5**
JAGI	**Jajag, Banyuwa**	**29.42**	**134**	P		**P**	**02 45 49.7**	**+0.5**
JAGI	**Jajag, Banyuwa**	**29.42**	**134**	P		**P**	**02 45 47.9**	**-1.3**
	comp=Z,117nm,0.8s							
SRBI	**Singaraja**	**29.92**	**132**	P		**P**	**02 45 53.6**	**0.0**
	comp=Z,699nm,0.9s,comp=Z,6μm							
TTSI	**Tana Toraja**	**30.64**	**118**	P		**P**	**02 46 02.3**	**+2.3**
NJ2	**Nanjing**	**30.75**	**46**	*e*P		**P**	**02 46 01.9**	**+1.1**
NJ2				pP		**pwP**	**02 46 19.6**	**-0.2**
NJ2				pmax		pmax		
	comp=Z,27nm,0.8s							
NJ2				pmax		pmax		
	comp=Z,620nm,5.6s							
MRSI	**Marisa**	**30.95**	**110**	P		**P**	**02 46 03.7**	**+1.0**
	comp=Z,62nm,1.0s							
KSH	**Kashi**	**31.03**	**334**	P		**P**	**02 46 02.9**	**-0.4**
KSH				pP		pP	02 46 19.1	-1.1
WUS	**Wushi**	**31.22**	**340**	P		**P**	**02 46 06.0**	**+0.9**
WUS				ScP		**ScP**	**02 52 36.2**	**+0.9**
TWSI	**Taliwang, Sumb**	**31.58**	**130**	P		**P**	**02 46 07.0**	**-1.3**
	comp=Z,66nm,0.8s,comp=Z,1μm							
HNS	**HongShan**	**31.59**	**34**	⇑P		**P**	**02 46 09.3**	**+1.2**
HNS					pmax	pmax		
	comp=Z,86nm,0.8s							
KAPI	**Kappang**	**31.61**	**121**	P		**P**	**02 46 08.6**	**0.0**
KAPI						**PcP**	**02 48 59.8**	**+0.2**
KAPI	**Kappang**	**31.61**	**121**	P		**P**	**02 46 08.6**	**0.0**
KAPI							02 48 59.8	
KAPI					pmax	pmax		
	comp=Z,134nm,1.9s							
WMQ	**Urumqi**	**31.72**	**353**	*e*P		**P**	**02 46 10.7**	**+1.4**
WMQ				PcP		**PcP**	**02 49 02.0**	**+2.5**
WMQ				S		**S**	**02 51 12.1**	**-1.9**
WMQ				ScP		**ScP**	**02 52 38.3**	**+1.5**
WMQ				SS		**SnSn**	**02 53 10.9**	**+3.5**
WMQ				pmax		pmax		
	comp=Z,30nm,1.1s							
WMQ				LR		LR		
	comp=Z,860nm,17.5s							
WMQ				LR		LR		
	comp=Z,810nm,24.0s							
BTO	**Baotou**	**31.86**	**25**	⇓*i*P		**P**	**02 46 11.4**	**+0.8**
BTO				pP		**pP**	**02 46 29.3**	**+2.1**
BTO				sP		**sP**	**02 46 38.4**	**+3.0**
BTO				PP		**PnPn**	**02 47 20.2**	**+2.5**
BTO				pmax		pmax		
	comp=Z,71nm,0.7s							
BTO				pmax		pmax		
	comp=Z,990nm,9.4s							
TIA	**Tai'an**	**32.15**	**38**	⇓P		**P**	**02 46 13.8**	**+0.7**
TIA					pmax	pmax		
	comp=Z,12nm,1.1s							
TARG	**Taragay, Kyrgy**	**32.19**	**338**	P		**P**	**02 46 15.8**	**+2.0**
TARG					IAmb	IAmb	02 46 16.6	
	comp=Z,65nm,0.8s							
TARG	**Taragay, Kyrgy**	**32.19**	**338**	P		**P**	**02 46 15.8**	**+2.0**
TARG					pmax	pmax		
	comp=Z,65nm,0.8s							
PLAI	**Plampang**	**32.31**	**129**	P		**P**	**02 46 15.1**	**+0.4**
PLAI	**Plampang**	**32.31**	**129**	P		**P**	**02 46 13.0**	**-1.7**
	comp=Z,54nm,0.7s							
LUWI	**Luwuk**	**32.33**	**112**	P		**P**	**02 46 14.9**	**0.0**
LUWI					IAmb	IAmb	02 46 16.0	
	comp=Z,110nm,0.9s							
LUWI	**Luwuk**	**32.33**	**112**	P		**P**	**02 46 16.0**	**+1.1**
LUWI	**Luwuk**	**32.33**	**112**	P		**P**	**02 46 15.2**	**+0.3**
	comp=Z,162nm,0.9s							
NRN	**Naryn**	**32.62**	**336**	P		**P**	**02 46 18.5**	**+1.0**
NRN	**Naryn**	**32.62**	**336**	P		**P**	**02 46 18.5**	**+1.0**
NRN					pmax	pmax		
	comp=Z,45nm,1.0s							
PRZ	**Przheval'sk**	**32.64**	**340**	P		**P**	**02 46 19.5**	**+2.0**
PRZ					IAmb	IAmb	02 46 20.9	
	comp=Z,118nm,0.8s							
PRZ	**Przheval'sk**	**32.64**	**340**	P		**P**	**02 46 19.5**	**+2.0**
PRZ					pmax	pmax		
	comp=Z,118nm,0.8s							
HHC	**Hu-ho-hao-te**	**32.71**	**26**	*e*P		**P**	**02 46 18.6**	**+0.5**
HHC				pP		pP	02 46 36.3	+1.6
HHC				S		**S**	**02 51 30.2**	**+0.6**
HHC				pmax		pmax		
	comp=Z,17nm,0.9s							
HHC				pmax		pmax		
	com

BTK Batken 33.89 329 P **P** 02 46 30.2 +1.9
BTK IAmb IAmb 02 46 32.8
comp=Z,122nm,1.0s
BTK Batken 33.89 329 P **P** 02 46 30.2 +1.9
BTK pmax pmax
comp=Z,122nm,1.0s
UCH Uchtor 33.89 335 P **P** 02 46 30.1 +1.4
SNR=17
TKM2 Tokmak 2 34.04 337 P **P** 02 46 30.9 +1.2
SNR=33
TKM2 Tokmak 2 34.04 337 P **P** 02 46 30.2 +0.5
KBK Karagaybulak 34.07 336 P **P** 02 46 31.9 +1.9
SNR=37
AAK Ala-Archa 34.24 335 P **P** 02 46 33.3 +1.9
SNR=30
AAK Ala-Archa 34.24 335 P **P** 02 46 33.0 +1.6
AAK IAmb IAmb 02 46 34.3
comp=Z,78nm,1.0s
AAK Ala-Archa 34.24 335 P **P** 02 46 33.0 +1.6
AAK pmax pmax
comp=Z,78nm,1.0s
AAK Ala-Archa 34.24 335 LR LR 03 02 20.3
comp=Z,1µm,19.0s,baz=120,slow=39
AAK Ala-Archa 34.24 335 P **P** 02 46 33.1 +1.7
AAK pP **pP** 02 46 49.1 +0.7
BJT Baijiatuau 34.27 32 P **P** 02 46 33.4 +1.8
BJT Baijiatuau 34.27 32 P **P** 02 46 33.9 +2.4
BJT Baijiatuau 34.27 32 P **P** 02 46 33.4 +1.8
BJT pmax pmax
comp=Z,32nm,1.0s
BJT Baijiatuau 34.27 32 P **P** 02 46 33.3 +1.8
BJT pP **pP** 02 46 49.5 +1.2
BJT PcP **PcP** 02 49 07.2 +0.6
BJI Beijing 34.30 32 P **P** 02 46 33.5 +1.8
BJI pP **pP** 02 46 49.1 +0.6
BJI PcP **PcP** 02 49 07.6 +1.0
BJI pmax pmax
comp=Z,12nm,1.2s
CHKK Chushkaly 34.34 339 *e*P **P** 02 46 32.5 +0.5
baz=339
CHKK Chushkaly 34.34 339 *e*P **P** 02 46 32.5 +0.5
ARXS Arharly 34.37 340 *i* P **P** 02 46 33.3 +0.9
CHMS Chumysh 34.44 336 P **P** 02 46 34.2 +1.2
SNR=26
EKS2 Erkin-Say 34.56 335 P **P** 02 46 36.1 +2.0
SNR=52
KUU Kurty 34.60 338 *e*P **P** 02 46 34.4 0.0
baz=338
KUU Kurty 34.60 338 *e*P **P** 02 46 34.3 0.0
USP Ospenovka 34.76 336 P **P** 02 46 37.1 +1.3
SNR=62
SGDS Sogindy 34.87 336 *e*P **P** 02 46 37.4 +0.6
baz=336
SGDS Sogindy 34.87 336 *e*P **P** 02 46 37.3 +0.6
EDFI Ende, Flores 35.31 125 P **P** 02 46 38.0 -2.9
comp=Z,53nm,0.6s
MK31 Makanchi Array 35.54 347*d* iP **P** 02 46 42.7 +0.3
MKAR Makanchi Array 35.54 347 P **P** 02 46 43.2 +0.9
MKAR Makanchi Array 35.54 347 P **P** 02 46 43.0 +0.7
comp=Z,48nm,0.7s,baz=167,slow=8.4,SNR=99
MKAR PcP **PcP** 02 49 10.7 +0.5
comp=Z,8.3nm,0.8s,baz=140,slow=2.1,SNR=2.8
MKAR ScP **ScP** 02 52 50.4 +0.3
comp=Z,8.4nm,0.9s,baz=130,slow=4.9,SNR=9.2
comp=Z,48nm,0.7s
MAKZ Makanchi 35.62 347 P **P** 02 46 43.8 +0.7
MAKZ IAmb IAmb 02 46 44.5
comp=Z,44nm,0.8s
MAKZ Makanchi 35.62 347 P **P** 02 46 43.8 +0.7
MAKZ pmax pmax
comp=Z,44nm,0.8s
MAKZ Makanchi 35.62 347 P **P** 02 46 43.6 +0.6
MAKZ pP **pP** 02 46 60.0 -0.2
MAKZ PcP **PcP** 02 49 10.4 0.0
MAKZ ScP **ScP** 02 52 50.4 0.0
SANI Sanana 35.66 111 P **P** 02 46 43.5 -0.3
SANI Sanana 35.66 111 P **P** 02 46 43.3 -0.5
comp=Z,26nm,0.9s
ZSN Zaisan 35.68 350 *e*P **P** 02 46 44.5 +0.9
baz=350
ZSN Zaisan 35.68 350 *e*P **P** 02 46 44.4 +0.9
JOW Kunigami 36.01 61 P **P** 02 46 47.6 +1.0
comp=Z,11nm,0.6s,baz=266,slow=18,SNR=1.7
JOW ScP **ScP** 02 52 51.9 -0.3
comp=Z,16nm,0.5s,baz=136,slow=5.1,SNR=4.3
JOW LR LR 03 01 51.2
comp=Z,844nm,18.1s,baz=280,slow=37
comp=Z,11nm,0.6s
CHM Chimkent 36.19 330 *e*P **P** 02 46 49.0 +1.0
baz=330
CHM Chimkent 36.19 330 *e*P **P** 02 46 49.0 +1.0
KK31 Karatay Array 36.35 332 P **P** 02 46 50.2 +0.8
KK31 Karatay Array 36.35 332 P **P** 02 46 50.2 +0.8
KK31 pmax pmax
comp=Z,49nm,1.1s
KKAR Karatay Array 36.35 332 P **P** 02 46 50.4 +1.0
KKAR Karatay Array 36.35 332 P **P** 02 46 49.8 +0.4
KKAR IAmb IAmb 02 46 51.6
comp=Z,49nm,1.1s
KKAR Karatay Array 36.35 332 P **P** 02 46 49.8 +0.4
KKAR pmax pmax
comp=Z,49nm,1.1s
BTLS Baital 36.43 337 *e*P **P** 02 46 50.5 +0.5
baz=337
BTLS Baital 36.43 337 *i* P **P** 02 46 50.8 +0.8
BTLS pmax pmax
comp=Z,16nm,0.7s
BRLS Boroldaу 36.62 331 *e*P **P** 02 46 50.9 -0.8
baz=330
BRLS Boroldaу 36.62 331 *e*P **P** 02 46 50.8 -0.8
DL2 Dalian 36.62 39 P **P** 02 46 53.1 +1.4
DL2 pP **pwP** 02 47 09.5 -0.9
DL2 pmax pmax
comp=Z,66nm,0.9s
SONM Songino Array 37.10 15 P **P** 02 46 56.7 +0.9
SONM Songino Array 37.10 15 P **P** 02 46 56.7 +0.9
SONM pmax pmax
comp=Z,52nm,1.0s
SONM Songino Array 37.10 15 P **P** 02 46 56.2 +0.4
comp=Z,12nm,0.6s,baz=197,slow=8.0,SNR=29
SONM PcP **PcP** 02 49 16.0 +1.1
comp=Z,13nm,0.8s,baz=214,slow=2.4,SNR=7.1
SONM S **S** 02 52 36.3 -0.7
comp=Z,1.4nm,1.0s,baz=191,slow=32,SNR=2.0
SONM ScP **ScP** 02 52 56.3 +0.3
comp=Z,5.8nm,0.9s,baz=184,slow=3.3,SNR=8.2
SONM ScS **ScS** 02 57 02.5 -1.1
comp=Z,0.2nm,0.4s,baz=286,slow=8.0,SNR=1.5
comp=Z,12nm,0.6s
XLT XiLinHaoTe 37.16 28 *e*P **P** 02 46 57.6 +1.3
XLT pP pP 02 47 15.0 +1.8
XLT PP **PnPn** 02 48 25.6 +2.2
XLT PcP **PcP** 02 49 16.0 +0.8
XLT ScP **ScP** 02 52 56.7 +0.5
XLT pmax pmax
comp=Z,13nm,0.7s
XLT pmax pmax
comp=Z,1µm,11.5s
NLAI Namlea 37.17 112 P **P** 02 46 56.6 0.0
comp=Z,29nm,0.6s,comp=Z,7µm
ULN Ulaanbaatar 37.30 16 P **P** 02 46 58.1 +0.6
ULN Ulaanbaatar 37.30 16 P **P** 02 46 58.1 +0.6
ULN pmax pmax
comp=Z,27nm,0.9s
DGZ Jazzator, Alta 37.55 354⇓ *i*P **P** 02 47 00.6 +1.0
DGZ pmax pmax
comp=Z,25nm,0.8s
SOEI Soe 37.96 124 P **P** 02 47 04.1 +0.6
SOEI Soe 37.96 124 P **P** 02 47 03.6 +0.1
comp=Z,77nm,1.0s
ZAK Zakamensk 38.85 10 *e*P **P** 02 47 11.5 +1.0
ZAK pmax pmax
comp=Z,22nm,1.1s
TJN Taejon 39.01 46 P **P** 02 47 12.6 +0.8
TJN Taejon 39.01 46 P **P** 02 47 13.0 +1.1
TJN Taejon 39.01 46 P **P** 02 47 12.6 +0.8
TJN pmax pmax
comp=Z,525nm,1.2s
MOY Mondy 39.75 8 *e*P P 02 47 28.9 +11
MOY pmax pmax
comp=Z,44nm,1.9s
OTUK Ortayu 39.76 338 P **P** 02 47 18.3 +0.3
KSAR Wonju Array Be 39.90 45 P **P** 02 47 19.3 +0.1
KSAR Wonju Array Be 39.90 45 P **P** 02 47 19.3 +0.1
KS19 Wonju Array Si 39.91 45 P **P** 02 47 19.6 +0.3
KS19 IAmb IAmb 02 47 46.2
comp=Z,173nm,1.8s
KSRS Korea Array 39.93 45 P **P** 02 47 19.2 -0.3
comp=Z,19nm,0.6s,baz=240,slow=8.3,SNR=51
KSRS PcP **PcP** 02 49 24.1 +0.3
comp=Z,6.0nm,0.7s,baz=254,slow=4.1,SNR=7.0
KSRS ScP **ScP** 02 53 06.2 -0.6
comp=Z,9.3nm,0.9s,baz=246,slow=3.7,SNR=15
KSRS LR LR 03 04 34.8
comp=Z,315nm,18.1s,baz=240,slow=37
comp=Z,19nm,0.6s
KURBB Kurchatov Arra 40.00 346 P **P** 02 47 20.4 +0.6
comp=Z,48nm,0.8s,baz=164,slow=7.8,SNR=89
KURBB PcP **PcP** 02 49 24.2 +0.4
comp=Z,6.7nm,0.8s,baz=164,slow=3.0,SNR=5.1
KURBB ScP **ScP** 02 53 07.3 +0.5
comp=Z,20nm,0.9s,baz=157,slow=3.1,SNR=25
comp=Z,48nm,0.8s
KURK Kurchatov 40.06 346 P **P** 02 47 21.1 +0.8
KURK IAmb IAmb 02 47 22.1
comp=Z,63nm,0.9s
KURK Kurchatov 40.06 346*d* iP **P** 02 47 20.7 +0.3
KURK pmax pmax
comp=Z,72nm,1.0s
KURK Kurchatov 40.06 346 P **P** 02 47 21.0 +0.6
KURK pP **pP** 02 47 37.3 -0.4
KURK ScP **ScP** 02 53 07.5 +0.5
SWI Sorong 40.09 106 P **P** 02 47 21.3 +0.2
comp=Z,26nm,0.9s
GEYT Alibeck 40.26 315 P **P** 02 47 24.3 +2.0
GEYT IAmb IAmb 02 47 40.7
comp=Z,98nm,0.8s
GEYT Alibeck 40.26 315 P **P** 02 47 24.3 +2.0
GEYT pmax pmax
comp=Z,98nm,0.9s
GEYT Alibeck 40.26 315 P **P** 02 47 24.3 +2.0
comp=Z,56nm,0.8s,baz=134,slow=10,SNR=44
GEYT PcP **PcP** 02 49 25.4 +0.5
comp=Z,13nm,0.8s,baz=172,slow=4.5,SNR=2.7
GEYT S **S** 02 53 26.6 +2.0
comp=Z,2.6nm,0.3s,baz=116,slow=13,SNR=4.3
comp=Z,56nm,0.8s
GYA0B ALIBECK ARRAY 40.26 315 P **P** 02 47 24.4 +2.0
GYA0B IAmb IAmb 02 47 40.7
comp=Z,89nm,0.8s
GIRL Giralia 40.47 149 P **P** 02 47 23.0 -1.1
GIRL Giralia 40.47 149 P **P** 02 47 23.7 -0.4
IRK Irkutsk 40.81 11 *e*P **P** 02 47 27.8 +1.2
IRK pmax pmax
comp=Z,59nm,1.5s
BRZS Berezniki 41.12 340 *e*P **P** 02 47 29.6 +0.5
baz=340
BRZS Berezniki 41.12 340 *i* P **P** 02 47 30.1 +0.9
BRZS pmax pmax
comp=Z,24nm,0.9s
FAKI Fak Fak 41.75 109 P **P** 02 47 36.4 +1.6
FAKI Fak Fak 41.75 109 P **P** 02 47 34.0 -0.8
comp=Z,71nm,1.5s
CN2 Changchun 41.92 35 *e*P **P** 02 47 35.8 0.0
CN2 *e*pP pP 02 47 53.8 +0.8
CN2 PcP **PcP** 02 49 30.2 0.0
CN2 *e*S **S** 02 53 48.9 -0.1
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 LR LR
comp=Z,560nm,13.0s
CN2 LR LR
comp=Z,430nm,13.0s
CN2 LR LR
comp=Z,540nm,14.0s
ZAA0 Zalesovo Array 42.03 353 P **P** 02 47 37.2 +0.7
ZALV Zalesovo Beam 42.03 353 P **P** 02 47 37.2 +0.8
ZALV Zalesovo Beam 42.03 353 P **P** 02 47 36.9 +0.4
comp=Z,53nm,0.7s,baz=176,slow=8.6,SNR=114
ZALV PcP **PcP** 02 49 29.1 -1.2
comp=Z,14nm,1.0s,baz=180,slow=4.3,SNR=1.6
ZALV ScP **ScP** 02 53 14.1 -0.6
comp=Z,5.7nm,0.8s,baz=180,slow=4.2,SNR=6.7
ZALV S **S** 02 53 51.4 +1.1
comp=Z,2.1nm,0.9s,baz=160,slow=4.7,SNR=2.1
ZALV ScS **ScS** 02 57 26.1 -5.9
comp=Z,0.3nm,0.4s,baz=294,slow=29,SNR=1.1
comp=Z,53nm,0.7s
MBWA Marble Bar 42.34 142 P **P** 02 47 38.0 -1.4
MBWA IAmb IAmb 02 47 38.8
comp=Z,105nm,1.1s
MBWA Marble Bar 42.34 142 P **P** 02 47 37.9 -1.6
MBWA Marble Bar 42.34 142 P **P** 02 47 37.6 -1.9
PSA00 Pilbara Seismi 42.73 142 P **P** 02 47 41.1 -1.5
PSA00 IAmb IAmb 02 47 41.7
comp=Z,83nm,0.8s
PSA00 Pilbara Seismi 42.73 142 P **P** 02 47 40.6 -1.9
PSA00 IAmb IAmb 02 47 41.8
comp=Z,46nm,0.8s
PSA00 Pilbara Seismi 42.73 142 P **P** 02 47 41.0 -1.5
HIA Hailar 42.91 26 P **P** 02 47 44.5 +0.8
HIA Hailar 42.91 26 P **P** 02 47 46.0 +2.3
HIA Hailar 42.91 26 P **P** 02 47 44.6 +0.8
HIA pmax pmax
comp=Z,15nm,0.8s
ROCAM Rodrigues Isla 43.28 223 P **P** 02 47 48.5 +1.4
ROCAM IAmb IAmb 02 47 51.4
comp=Z,162nm,1.2s
ROCAM Rodrigues Isla 43.28 223 P **P** 02 47 50.1 +3.1
ROCAM sP **sP** 02 48 14.3 +1.8
FITZ Fitzroy Crossi 44.12 133 P **P** 02 47 52.6 -1.2
BNX BinXian 44.21 34 ⇑P **P** 02 47 53.7 -0.6
BNX pP **pP** 02 48 11.8 +0.2
BNX PcP **PcP** 02 49 37.2 -0.6
BNX S **S** 02 54 22.2 -0.3
BNX pmax pmax
comp=Z,56nm,1.1s
BNX pmax pmax
comp=Z,320nm,4.9s
BVA0 Borovoye Array 44.46 341 *i* P **P** 02 47 56.1 -0.1
BVAR Borovoye Array 44.46 341 P **P** 02 47 56.4 +0.2
comp=Z,42nm,0.8s,baz=137,slow=7.7,SNR=48
BVAR ScP **ScP** 02 53 24.5 -0.2
comp=Z,5.1nm,0.9s,baz=160,slow=4.7,SNR=4.9
BVAR S **S** 02 54 26.2 +0.2
comp=Z,2.3nm,0.8s,baz=162,slow=15,SNR=3.7
comp=Z,42nm,0.8s
BRVK Borovoye 44.53 341 P **P** 02 47 57.2 +0.6
BRVK Borovoye 44.53 341*de*P **P** 02 47 56.9 +0.3
BRVK pmax pmax
comp=Z,53nm,0.8s
BRVK Borovoye 44.53 341 P **P** 02 47 56.8 +0.1
BRVK pP **pP** 02 48 13.4 -0.8
MSHR Mys Shultsa 44.66 40⇑ *e*P **P** 02 47 58.7 +0.9
MSHR pmax pmax
comp=Z,11nm,0.7s
MDJ Mudanjiang 44.80 37 P **P** 02 48 00.2 +1.2
MDJ pP pP 02 48 17.2 +0.8
MDJ PP **PP** 02 49 42.4 -2.4
MDJ S **S** 02 54 31.2 +0.1
MDJ pmax pmax
comp=Z,11nm,0.9s
MDJ pmax pmax
comp=Z,870nm,10.0s
MDJ LR LR
comp=Z,980nm,13.1s
MDJ LR LR
comp=Z,1µm,16.1s
MDJ LR LR
comp=Z,2µm,14.3s
MTN Manton Dam 45.27 122 P **P** 02 48 01.3 -1.8
AB31 Akbulak array 45.86 330 *i* P **P** 02 48 08.0 +0.7
ABKAR Akbulak array 45.86 330 P **P** 02 48 08.3 +1.1
ABKAR Akbulak array 45.86 330 P **P** 02 48 08.4 +1.1
USA0B Ussuriysk Arra 46.02 39 P **P** 02 48 08.9 +0.3
USA0B Ussuriysk Arra 46.02 39 P **P** 02 48 08.9 +0.3
USA0B pmax pmax
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 46.02 39 P **P** 02 48 09.0 +0.4
comp=Z,16nm,0.8s,baz=246,slow=7.5,SNR=24
USRK PcP **PcP** 02 49 42.0 -2.1
comp=Z,6.6nm,0.6s,baz=254,slow=3.4,SNR=7.6
USRK ScP **ScP** 02 53 29.9 -1.3
comp=Z,3.7nm,0.8s,baz=243,slow=5.4,SNR=7.1
USRK ScS **ScS** 02 57 52.5 -5.1
comp=Z,0.5nm,0.6s,baz=44,slow=55,SNR=1.9
comp=Z,16nm,0.8s
RAYN Ar Rayn 46.43 291 P **P** 02 48 13.5 +1.2
RAYN IAmb IAmb 02 48 30.2
comp=Z,93nm,1.4s
RAYN Ar Rayn 46.43 292 P **P** 02 48 13.5 +1.2
RAYN pmax pmax
comp=Z,93nm,1.4s
MORW Morawa 46.75 152 P **P** 02 48 13.7 -0.8
MJB9 Matsu-Tunnel 47.06 51 P **P** 02 48 16.5 -0.5
MJB9 IAmb IAmb 02 48 57.9
comp=Z,118nm,1.9s
MAJO Matsushiro 47.07 51 P **P** 02 48 16.7 -0.3
MAJO IAmb IAmb 02 48 56.9
comp=Z,125nm,1.9s
MAJO Matsushiro 47.07 51*c* *i*P **P** 02 48 18.1 +1.1
MAJO pmax pmax
comp=Z,67nm,2.0s
MAJO Matsushiro 47.07 51 P **P** 02 48 17.9 +1.0
MAJO PcP **PcP** 02 49 47.8 -0.2
MAJO ScP **ScP** 02 53 35.8 -0.1
MJAR Matsushiro Arr 47.07 51 P **P** 02 48 18.2 +1.2
comp=Z,10nm,0.8s,baz=254,slow=6.6,SNR=14
MJAR PcP **PcP** 02 49 47.8 -0.3
comp=Z,9.8nm,0.5s,baz=225,slow=2.1,SNR=14
MJAR ScP **ScP** 02 53 35.5 -0.3
comp=Z,19nm,1.0s,baz=250,slow=2.8,SNR=20
MJAR LR LR 03 08 51.9
comp=Z,457nm,18.3s,baz=218,slow=37
comp=Z,10nm,0.8s
HEH HeiHe 47.09 30 *e*P **P** 02 48 17.1 +0.2
HEH PcP **PcP** 02 49 47.4 -0.4
HEH ScP **ScP** 02 53 34.5 -1.1
HEH pmax pmax
comp=Z,21nm,0.9s
AKTO Aktyubinsk 47.58 330 P **P** 02 48 20.9 +0.2
AKTO Aktyubinsk 47.58 330 PcP **PcP** 02 49 48.9 -0.7
comp=Z,8.3nm,0.6s,baz=112,slow=5.4,SNR=2.1
AKTO ScP **ScP** 02 53 37.5 -0.2
comp=Z,4.2nm,1.0s,baz=103,slow=2.3,SNR=3.2
AKTO S **S** 02 55 11.8 +1.1
comp=Z,1.9nm,0.5s,baz=280,slow=18,SNR=8.3
BOD Bodaibo 48.10 15 *e*P **P** 02 48 25.2 +0.6
BOD pmax pmax
comp=Z,61nm,1.3s
BLDU Ballidu 48.37 152 P **P** 02 48 26.1 -0.9
KLR Kul'dur 48.66 33⇓ *i*P **P** 02 48 30.0 +0.9
KLR pmax pmax
comp=Z,15nm,1.1s
MUN Mundaring 49.31 154 P **P** 02 48 33.5 -0.7
ZEA Zeya 49.38 26 *e*P **P** 02 48 35.4 +1.0
ZEA *e* 02 48 52.6
ZEA pmax pmax
comp=Z,10.0nm,0.8s
JMM Marumori 49.44 50 P **P** 02 48 35.8 +0.6
RER Riviere de l'E 49.53 228 P **P** 02 48 38.3 +2.1
KLBR Kellerberrin 49.67 152 P **P** 02 48 35.9 -1.0
MAK Makhachkala 49.75 317 *e*P P 02 48 32.6 -4.8
MAK *e*PP pP 02 48 51.5 -3.7
MAK *e*SP sP 02 48 59.5 -3.8
MAK *e*S **S** 02 55 32.8 -8.6
MAK pmax pmax
comp=Z,327nm,1.7s
NWAO Narrogin (SRO) 50.57 154 P **P** 02 48 42.8 -1.0
NWAO Narrogin (SRO) 50.57 154 P **P** 02 48 42.7 -1.0
NWAO Narrogin (SRO) 50.57 154 P **P** 02 48 42.8 -1.0
NWAO pmax pmax
comp=Z,249nm,0.8s
NWAO Narrogin (SRO) 50.57 154 P **P** 02 48 42.5 -1.2
comp=Z,241nm,0.8s,baz=312,slow=6.9,SNR=91
comp=Z,241nm,0.8s
NWAO Narrogin (SRO) 50.57 154 P **P** 02 48 42.6 -1.1
WRKA Warakuna 50.58 137 P **P** 02 48 42.6 -1.4
JTM Tenmabayashi 50.59 47 P **P** 02 48 44.2 +0.3
JTM Tenmabayashi 50.59 47 P **P** 02 48 44.9 +1.0
GNI Garni 50.65 312 P **P** 02 48 45.5 +1.0
GNI Garni 50.65 312*d* iP **P** 02 48 46.4 +1.9
GNI pmax pmax
comp=Z,64nm,1.3s
GNI Garni 50.65 312 P **P** 02 48 46.7 +2.2
GNI pP **pP** 02 49 03.1 +0.7
SVE Sverdlovsk 50.91 338*ce*P **P** 02 48 46.7 +0.8
SVE pmax pmax
comp=Z,76nm,1.0s
ARU Arti 51.41 336 P **P** 02 48 49.6 -0.1
ARU IAmb IAmb 02 49 12.5
comp=Z,61nm,1.4s
ARU Arti 51.41 336*d* iP **P** 02 48 49.8 +0.1
ARU pmax pmax
comp=Z,51nm,1.7s
ARU Arti 51.41 336 P **P** 02 48 50.2 +0.5
KMBL Kambalda 51.49 148 P **P** 02 48 49.9 -0.8
WB0 Warramunga Arr 51.68 128 P **P** 02 48 51.1 -1.2
WRA Warramunga Arr 51.74 128 P **P** 02 48 50.7 -2.0
WRA Warramunga Arr 51.74 128 P **P** 02 48 50.7 -2.0
WRA Warramunga Arr 51.74 128 P **P** 02 48 51.1 -1.6
comp=Z,75nm,0.8s,baz=300,slow=10.0,SNR=61
WRA PcP **PcP** 02 50 05.0 -0.3
comp=Z,31nm,0.6s,baz=318,slow=3.2,SNR=19
WRA ScP **ScP** 02 53 54.2 -1.9
comp=Z,5.1nm,0.8s,baz=314,slow=4.0,SNR=8.8
WRA S **S** 02 56 05.3 -4.3
comp=Z,2.5nm,1.0s,baz=300,slow=15,SNR=7.7
comp=Z,75nm,0.8s
WRAB Tennant Creek 51.74 128 P **P** 02 48 51.7 -1.1
WRAB Tennant Creek 51.74 128 P **P** 02 48 51.7 -1.1
WRAB pmax pmax
comp=Z,80nm,0.7s
WB2 Warramunga Arr 51.75 128 P **P** 02 48 51.6 -1.2
RKGY Rocky Gully 51.90 155 P **P** 02 48 52.7 -1.0
WR0 Warramunga Arr 51.90 128 P **P** 02 48 52.8 -1.2
WR0 IAmb IAmb 02 48 53.6
comp=Z,89nm,1.0s
AKH Akhalkalaki 51.95 313 P **P** 02 48 55.0 +0.7
AKH Akhalkalaki 51.95 313 P **P** 02 48 55.0 +0.7
AKH pmax pmax
comp=Z,222nm,1.0s
KARS Kars 52.00 312 P **P** 02 48 55.1 +0.5
KARS Kars 52.00 312 P **P** 02 48 55.2 +0.5
KARS pmax pmax
comp=Z,351nm,1.3s
GRNR Gornyy 52.02 34⇓ *i*P **P** 02 48 55.9 +1.5
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=N,310nm,15.0s
GRNR MLR MLR
comp=Z,530nm,14.0s
ZEI Tsey 52.13 315 *e*P **P** 02 48 56.4 +0.8
ZEI pmax pmax
comp=Z,34nm,1.0s
GURO Guroymak-BITLI 52.17 309 P **P** 02 48 56.3 +0.4
ASAJ Asahikawa 52.82 43 P **P** 02 49 01.5 +1.1
ASAJ pmax pmax
comp=Z,44nm,0.9s
JKA Kamikawa-asahi 52.83 43 P **P** 02 49 01.5 +1.1
JKA IAmb IAmb 02 49 03.1
comp=Z,44nm,0.9s
NEUR Neytrino 53.12 315 *e*P **P** 02 49 05.4 +2.5
NEUR pmax pmax
comp=Z,38nm,1.3s
KBZ Khabaz 53.15 316⇓ *e*P **P** 02 49 03.7 +0.9
KBZ pmax pmax
comp=Z,26nm,1.1s
KBZ Khabaz 53.15 316 P **P** 02 49 03.8 +0.9
comp=Z,6.8nm,1.0s,baz=102,slow=4.1,SNR=4.6
comp=Z,6.8nm,1.0s
KIV Kislovodsk 53.37 316 ⇑P **P** 02 49 06.3 +1.7
KIV Kislovodsk 53.37 316 P **P** 02 49 05.9 +1.3
KIV Kislovodsk 53.37 316 *e*P **P** 02 49 05.8 +1.2
KIV pmax pmax
comp=Z,32nm,1.0s
KIV Kislovodsk 53.37 316 P **P** 02 49 05.8 +1.2
KIV pP **pP** 02 49 22.3 -0.4
KIV sP **sP** 02 49 30.1 -0.5
FURI Furi 53.52 272 P **P** 02 49 07.2 +0.8
ASAR Alice Springs 53.60 132 P **P** 02 49 05.2 -1.3
comp=Z,46nm,0.6s,baz=309,slow=6.6,SNR=400
ASAR PcP **PcP** 02 50 12.1 -0.2
comp=Z,25nm,0.8s,baz=315,slow=3.6,SNR=15
ASAR ScP **ScP** 02 54 02.9 -1.2
comp=Z,4.8nm,0.8s,baz=305,slow=4.3,SNR=7.3
ASAR S **S** 02 56 30.8 -4.2
comp=Z,2.9nm,0.9s,baz=302,slow=14,SNR=11
ASAR LR LR 03 16 44.5
comp=Z,148nm,18.9s,baz=333,slow=41
comp=Z,46nm,0.6s
AS31 Alice Springs 53.60 132 P **P** 02 49 05.2 -1.2
AS01 Alice Springs 53.63 132 P **P** 02 49 05.8 -0.9
YSS Yuzh-Sakhalins 53.99 40 P **P** 02 49 10.2 +1.2
YSS IAmb IAmb 02 49 10.7

comp=Z,71nm,0.8s
YSS Yuzh-Sakhalins 53.99 40 P **P** **02 49 09.7 +0.8**
YSS Yuzh-Sakhalins 53.99 40⇓*i*P **P** **02 49 09.3 +0.4**
YSS *e*S **S** **02 56 38.8 -0.8**
YSS pmax pmax
comp=Z,88nm,0.8s
YSS MLR MLR
comp=Z,1μm,10.0s
YSS Yuzh-Sakhalins 53.99 40 P **P** **02 49 09.9 +1.0**
BELG Belogornoye 54.01 327*ce*P **P** **02 49 08.4 -0.5**
BELG pmax pmax
comp=Z,7.0nm,0.8s
UGL Uglegorsk 54.43 38 *e*P **P** **02 49 13.7 +1.6**
UGL *e*S **S** **02 56 47.1 +1.7**
UGL pmax pmax
comp=Z,90nm,0.9s
FORT Forrest 54.47 143 P **P** **02 49 12.1 -0.5**
FORT Forrest 54.47 143 P **P** **02 49 12.2 -0.4**
ABPO Ambohimpanom 54.89 236 P **P** **02 49 17.1 +1.0**
ABPO IAmb IAmb 02 49 18.6
comp=Z,54nm,0.9s
ABPO Ambohimpanom 54.89 236 P **P** **02 49 17.1 +1.0**
ABPO pmax pmax
comp=Z,54nm,1.0s
ABPO Ambohimpanom 54.89 236⇑P **P** **02 49 17.4 +1.3**
TYV Tymovskoe 55.54 36 *e*P **P** **02 49 21.7 +1.6**
TYV pmax pmax
comp=Z,149nm,1.2s
TYV pmax pmax
comp=Z,3μm,6.1s
COEN Coen 56.09 116 P **P** **02 49 23.2 -1.3**
COEN IAmb IAmb 02 50 23.0
comp=Z,46nm,0.8s
COEN Coen 56.09 116 P **P** **02 49 24.8 +0.2**
YAK Yakutsk 56.15 20 *e*P **P** **02 49 24.2 0.0**
YAK *e**PP **pP** **02 49 41.9 -0.3**
YAK *e* 02 50 21.4
YAK *e*S **S** **02 57 07.0 -0.9**
YAK *e* 02 59 00.2
YAK pmax pmax
comp=Z,53nm,0.9s
YAK pmax pmax
comp=N,16nm,0.9s
YAK pmax pmax
comp=E,11nm,0.9s
YAK smax smax
comp=E,171nm,2.3s
YAK Yakutsk 56.15 20 ScP **ScP** **02 54 14.3 -0.2**
comp=E,12nm,0.4s,baz=290,slow=2.8,SNR=4.6
YAK S **S** **02 57 05.0 -2.9**
comp=E,16nm,0.5s,baz=115,slow=24,SNR=11
QIS Mount Isa 56.21 125 P **P** **02 49 24.5 -0.9**
KIRV Kirov 56.56 334*d*/*i*P **P** **02 49 27.4 +0.2**
KIBK Kibwezi 56.58 259 P **P** **02 49 28.4 +0.2**
VRH Novokhopyorsk 56.72 324 *e*P **P** **02 49 27.7 -0.7**
VRH pmax pmax
comp=Z,40nm,0.6s
VOI Vohitsoka 56.75 233 P **P** **02 49 30.2 +0.9**
VOI IAmb IAmb 02 49 31.1
comp=Z,45nm,0.9s
KMBO Kilima Mbogo 57.01 261 P **P** **02 49 32.7 +1.2**
KMBO pP **pP** **02 49 49.5 -0.2**
NRIK Noril'sk 57.07 358 P **P** **02 49 31.3 +0.7**
NRIK IAmb IAmb 02 49 50.5
comp=E,84nm,1.8s
NRIK Noril'sk 57.07 358⇓*i*P **P** **02 49 31.0 +0.4**
NRIK pmax pmax
comp=Z,10.0nm,0.8s
NRIK Noril'sk 57.07 358 P **P** **02 49 30.9 +0.2**
comp=Z,6.6nm,0.7s,baz=150,slow=5.3,SNR=7.0
NRIK ScP **ScP** **02 54 19.0 +0.6**
comp=Z,11nm,0.9s,baz=150,slow=5.2,SNR=4.6
NRIK S **S** **02 57 20.3 +0.4**
comp=Z,0.8nm,0.3s,baz=87,slow=3.3,SNR=1.4
comp=Z,6.6nm,0.7s
OOD Oodnadatta 57.40 135 P **P** **02 49 32.5 -1.1**
LODK Lodwar 57.76 266 P **P** **02 49 36.6 +0.1**
MULG Mulgathing 57.87 138 P **P** **02 49 35.9 -1.0**
PMG Port Moresby 57.90 109 P **P** **02 49 36.0 -1.4**
PMG IAmb IAmb 02 50 30.6
comp=Z,35nm,0.8s
PMG Port Moresby 57.90 109 P **P** **02 49 38.2 +0.8**
PMG Port Moresby 57.90 109 P **P** **02 49 37.9 +0.5**
PMG Port Moresby 57.90 109*c*/*i*P **P** **02 49 37.0 -0.4**
PMG pmax pmax
comp=Z,78nm,1.8s
PMG Port Moresby 57.90 109 P **P** **02 49 37.0 -0.4**
PMG PcP **PcP** **02 50 29.3 +0.2**
VORD Divnogorie 58.04 323 *e*P **P** **02 49 36.9 -0.8**
VORD pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 58.20 323 *e*P **P** **02 49 37.5 -1.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 58.35 324 *e*P **P** **02 49 38.0 -1.9**
VORR pmax pmax
comp=Z,50nm,0.4s
BR131 Keskin Array S 58.79 309 P **P** **02 49 43.1 -0.4**
BR131 IAmb IAmb 02 50 00.3
comp=Z,38nm,1.1s
BR131 Keskin Array S 58.79 309 P **P** **02 49 43.1 -0.4**
BR131 pmax pmax
comp=Z,38nm,1.1s
BRTR Keskin Array B 58.79 309 P **P** **02 49 43.5 +0.1**
BRTR Keskin Array B 58.79 309*ce*P **P** **02 49 46.4 +3.0**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 58.79 309 P **P** **02 49 43.0 -0.4**
comp=Z,6.6nm,0.9s,baz=131,slow=6.6,SNR=14
BRTR PcP **PcP** **02 50 31.5 -0.9**
comp=Z,7.8nm,0.8s,baz=116,slow=5.8,SNR=2.2
comp=Z,6.6nm,0.9s
LPSR Galich'ya Gora 58.86 325 *e*P **P** **02 49 42.8 -0.6**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
MTSU Mount Surprise 58.92 120 P **P** **02 49 43.7 -0.7**
LCRK Leigh Creek 60.76 135 P **P** **02 49 56.2 -0.6**
MOS Moscow 60.77 328 *e*P **P** **02 49 55.8 -0.7**
MOS *e* 02 50 12.7
MOS *e*S **S** **02 58 08.9 +0.7**
MOS pmax pmax
comp=Z,45nm,1.4s
BBOO Buckleboo 60.81 139 P **P** **02 49 56.1 -1.1**
BBOO Buckleboo 60.81 139 P **P** **02 49 56.2 -0.9**
INKA Innaminka 60.98 131 P **P** **02 49 58.5 +0.2**
OBN Obninsk 61.09 327⇑*e*P **P** **02 50 00.7 +2.0**
OBN *e* 02 50 21.9
OBN *i* 02 50 26.0
OBN *e* 02 50 41.4
OBN *i*S **S** **02 58 10.7 -1.6**
OBN *i* 02 58 47.5
OBN pmax pmax
comp=Z,32nm,1.7s
ELL Elmali 61.28 305 P **P** **02 50 00.9 +0.4**
ELL Elmali 61.28 305 P **P** **02 50 00.9 +0.4**
ELL pmax pmax
comp=Z,298nm,1.1s
CTA Charters Tower 61.43 121 P **P** **02 50 00.6 -1.0**
comp=Z,20nm,1.0s,baz=299,slow=7.0,SNR=21
CTA PcP **PcP** **02 50 43.3 +0.2**
comp=Z,32nm,0.7s,baz=286,slow=3.9,SNR=18
comp=Z,20nm,1.0s
CTAO Charters Tower 61.43 121 P **P** **02 50 01.2 -0.4**
CTAO IAmb IAmb 02 50 44.2
comp=Z,37nm,0.8s
CTAO Charters Tower 61.43 121 P **P** **02 50 01.2 -0.4**
CTAO Charters Tower 61.43 121 P **P** **02 50 01.2 -0.4**
CTAO pmax pmax
comp=Z,37nm,0.8s
CTAO Charters Tower 61.43 121 P **P** **02 50 00.8 -0.8**
CTAO PcP **PcP** **02 50 43.1 -0.1**
TV1H Townsville Har 61.52 120 P **P** **02 50 02.3 +0.2**
WHYH Whyalla 61.93 138 P **P** **02 50 04.4 -0.3**
KLMR Klimovskoe 62.02 334 *e*P **P** **02 50 03.6 -1.2**
KLMR pmax pmax
comp=Z,55nm,1.7s
PURM Purcari 62.77 316⇑P **P** **02 50 11.1 +1.0**
QLP Quilpie 62.97 128 P **P** **02 50 11.8 +0.1**
HTT Hallett 63.06 138 P **P** **02 50 11.9 -0.4**
TIXI Tiksi 63.10 12 P **P** **02 50 12.2 +0.3**
TIXI Tiksi 63.10 12*ce*P **P** **02 50 12.1 +0.3**
TIXI pmax pmax
comp=Z,73nm,1.3s
TIXI Tiksi 63.10 12 S **S** **02 58 34.2 -2.9**

comp=Z,1.6nm,0.5s,baz=18,slow=18,SNR=28
MBAR Mbarara 63.18 263 P **P** **02 50 14.4 +0.8**
MBAR Mbarara 63.18 263*ce*P **P** **02 50 16.0 +2.4**
MBAR pmax pmax
comp=Z,20nm,1.7s
MBAR Mbarara 63.18 263 P **P** **02 50 15.4 +1.8**
MBAR pP **pP** **02 50 32.4 +0.3**
TLCR 63.26 314⇑P **P** **02 50 14.3 +1.0**
TLCR 63.26 314 P **P** **02 50 14.3 +1.0**
MA2 Magadan 63.35 29 P **P** **02 50 13.7 0.0**
MA2 IAmb IAmb 02 50 15.3
comp=E,68nm,0.8s
MA2 Magadan 63.35 29 P **P** **02 50 13.7 0.0**
MA2 pmax pmax
comp=E,68nm,0.8s
MA2 Magadan 63.35 29 P **P** **02 50 14.1 +0.4**
MA2 pP **pP** **02 50 32.4 +0.3**
MA2 sP **sP** **02 50 39.0 -0.9**
MA2 PcP **PcP** **02 50 50.6 +0.4**
TIRR Tirgusor 63.42 314⇑P **P** **02 50 15.2 +0.7**
TIRR Tirgusor 63.42 314 P **P** **02 50 15.5 +1.1**
TIRR Tirgusor 63.42 314 P **P** **02 50 15.5 +1.1**
TIRR pmax pmax
comp=Z,112nm,1.1s
TPGR Topolog 63.48 314⇓P **P** **02 50 15.8 +0.9**
MILM Milestii Mici 63.56 316⇓*i*P **P** **02 50 15.6 +0.3**
comp=Z,30nm,0.6s
MILM *e*pP **pP** **02 50 31.0 -2.8**
MILM *e*S **S** **02 58 43.0 -0.7**
comp=Z,20nm,2.0s
MILM Milestii Mici 63.56 316*d*/*i*P **P** **02 50 15.6 +0.3**
MILM *e**PP **pP** **02 50 31.0 -2.8**
MILM *e*S **S** **02 58 43.0 -0.7**
MILM pmax pmax
comp=Z,30nm,0.6s
MILM smax smax
comp=N,20nm,2.0s
BLCB Balcova 63.70 307 P pP 02 50 32.3 -2.7
CFR Carcaliu 63.73 314⇑P **P** **02 50 16.8 +0.3**
CFR Carcaliu 63.73 314 P **P** **02 50 16.7 +0.3**
HARR Harsova 63.80 314⇑P **P** **02 50 17.7 +0.7**
HARR Harsova 63.80 314 P **P** **02 50 17.6 +0.7**
ICOR Ion Corvin 63.80 313⇑P **P** **02 50 18.5 +1.5**
LEOM Leova 63.87 316⇑P **P** **02 50 18.2 +0.8**
LEOM Leova 63.87 316 P **P** **02 50 18.1 +0.8**
STKA Stephens Creek 63.94 135 P **P** **02 50 17.6 -0.5**
STKA Stephens Creek 63.94 135 P **P** **02 50 17.3 -0.7**
STKA Stephens Creek 63.94 135 P **P** **02 50 17.6 -0.5**
STKA pmax pmax
comp=Z,6.0nm,0.9s
STKA Stephens Creek 63.94 135 P **P** **02 50 16.8 -1.3**
comp=Z,13nm,0.5s,baz=313,slow=5.7,SNR=35
STKA LR LR 03 21 10.1
comp=Z,122nm,18.6s,baz=310,slow=39
comp=Z,13nm,0.5s
AKASG Malin Array Be 64.06 321 P **P** **02 50 18.6 +0.1**
AKASG Malin Array Be 64.06 321 P **P** **02 50 18.6 +0.1**
AKASG pmax pmax
comp=Z,18nm,1.1s
AKASG Malin Array Be 64.06 321 P **P** **02 50 18.6 +0.1**
comp=Z,3.5nm,0.7s,baz=88,slow=5.2,SNR=15
AKASG S **S** **02 58 46.7 -3.0**
comp=Z,0.2nm,0.4s,baz=98,slow=0.1,SNR=1.5
comp=Z,3.5nm,0.7s
AKBB Malin Array Si 64.06 321 P **P** **02 50 19.1 +0.6**
AKBB Malin Array Si 64.06 321 P **P** **02 50 19.1 +0.6**
AKBB pmax pmax
comp=Z,22nm,1.0s
KIEV Kiev 64.06 321⇓P **P** **02 50 18.1 -0.4**
KIEV Kiev 64.06 321 P **P** **02 50 18.8 +0.2**
KIEV Kiev 64.06 321 P **P** **02 50 18.8 +0.2**
KIEV pmax pmax
comp=Z,20nm,1.0s
KIEV Kiev 64.06 321 P **P** **02 50 18.6 +0.1**
SORM Soroca 64.09 318⇑P **P** **02 50 18.9 +0.1**
SORM Soroca 64.09 318 P **P** **02 50 18.9 +0.1**
TUDR 64.12 315⇓P **P** **02 50 20.8 +1.8**
CHOS Chios island 64.48 307 P pP 02 50 38.3 -1.9
PGOR Pogoanele 64.49 314⇑P **P** **02 50 24.1 +2.6**
PANC Panciu 64.52 315⇑P **P** **02 50 22.6 +0.9**
ENEZ Enez 64.61 309 P pP 02 50 37.9 -2.9
RAZG Razgrad 64.66 312⇓P **P** **02 50 23.8 +1.2**
SIGR SIGRI 64.70 308 P pP 02 50 41.2 -0.3
ALN Alexandroupoli 64.70 309 P **P** **02 50 23.7 +0.8**
ALN Alexandroupoli 64.70 309 P pP 02 50 39.3 -2.2
ALN Alexandroupoli 64.70 309 P **P** **02 50 23.7 +0.8**
ALN pmax pmax
comp=Z,39nm,1.1s
VRI Vrincioaia 64.81 315⇑P **P** **02 50 25.4 +1.7**
VRI Vrincioaia 64.81 315 P **P** **02 50 25.3 +1.7**
SANT Santorini 64.82 304⇑P **P** **02 50 26.1 +2.2**
PLOR Plostina 64.86 315⇑P **P** **02 50 25.8 +1.8**
PLOR Plostina 64.86 315 P **P** **02 50 25.8 +1.8**
TESR Tescani 64.96 316⇑P **P** **02 50 25.9 +1.3**
PETK Petropavlovsk- 65.04 37 P **P** **02 50 23.7 -1.3**
comp=Z,16nm,1.0s,baz=263,slow=3.7,SNR=10.0
comp=Z,16nm,1.0s
RDO Rodhopi 65.11 310 P pP 02 50 40.9 -3.2
COVR Voineasa-Covas 65.17 315⇓P **P** **02 50 27.2 +1.3**
LIA Limnos Island 65.27 308 P pP 02 50 43.2 -2.0
MLR Muntele Rosu 65.30 314⇑P **P** **02 50 28.6 +1.7**
MLR Muntele Rosu 65.30 314 P **P** **02 50 28.1 +1.2**
MLR IAmb IAmb 02 50 45.7
comp=Z,55nm,0.9s
MLR Muntele Rosu 65.30 314 P **P** **02 50 28.1 +1.2**
MLR pmax pmax
comp=Z,55nm,0.9s
TURR Turia 65.33 315⇑P **P** **02 50 27.7 +0.7**
SEY Seymchan 65.35 26*ce*P **P** **02 50 27.2 +0.5**
SEY pmax pmax
comp=Z,21nm,0.8s
SEY Seymchan 65.35 26 S **S** **02 59 02.9 -2.3**
comp=Z,1.2nm,0.6s,baz=129,slow=23,SNR=1.2
BOSR Bodos 65.58 315⇓P **P** **02 50 29.2 +0.6**
MNK Minsk 65.71 324 *i* LRM MLR 03 22 01.6
comp=Z,739nm,14.1s
MNK Minsk 65.71 324 *i* P **P** **02 50 28.9 -0.3**
MNK *i* 02 52 52.2
MNK *i* PPP PPP 02 54 29.2
MNK *i* S **S** **02 59 15.7 +5.9**
MNK *i* SS **SS** **03 03 31.5 +6.5**
MNK pmax pmax
comp=N,14nm,0.9s
MNK pmax pmax
comp=E,16nm,0.9s
MNK pmax pmax
comp=Z,58nm,0.9s
MNK MLR MLR
comp=E,268nm,16.0s
MNK MLR MLR
comp=N,651nm,18.0s
MNK MLR MLR
comp=Z,739nm,14.0s
MNK Minsk 65.71 324 *i* P **P** **02 50 28.9 -0.3**
comp=E,16nm,0.9s
MNK Minsk 65.71 324 *i* P **P** **02 50 28.9 -0.3**
comp=N,14nm,0.9s
MNK Minsk 65.71 324 *i* P **P** **02 50 28.9 -0.3**
comp=Z,58nm,0.9s,baz=103
MNK Minsk 65.71 324 *i* PP PP 02 52 52.2 -2.2
MNK Minsk 65.71 324 *i* PPP PPP 02 54 29.2
MNK Minsk 65.71 324 *i* S **S** **02 59 15.7 +5.9**
MNK Minsk 65.71 324 *i* SS SS 03 03 31.5 +6.5
MNK Minsk 65.71 324 *i* SSS SSS 03 06 38.9
MNK Minsk 65.71 324 *i* LQ LQ 03 14 34.8
MNK Minsk 65.71 324 *i* LR LR 03 19 23.4
MNK Minsk 65.71 324 *i* LRM MLR 03 21 09.5
comp=E,268nm,16.1s
MNK Minsk 65.71 324 *i* LRM MLR 03 21 23.6
comp=N,651nm,18.1s
DOPR Dopca 65.75 315⇑P **P** **02 50 29.8 +0.1**
VOIR 65.92 314⇑P **P** **02 50 32.0 +1.1**
VOIR 65.92 314 P **P** **02 50 31.9 +1.1**
PLVB Pleven 66.00 312⇓P **P** **02 50 32.0 +0.7**
BURAR Bucovina Array 66.09 317⇓P **P** **02 50 33.1 +1.1**
BURAR Bucovina Array 66.09 317 P **P** **02 50 32.9 +1.0**
BUR08 Bucovina Ar. S 66.11 317 P **P** **02 50 33.0 +0.9**
DION Dionisos Attik 66.12 306 P pP 02 50 46.5 -4.3
ARR Arges 66.20 314⇓P **P** **02 50 32.0 -0.7**
KOKK Kokkinochori, 66.24 309 P pP 02 50 47.9 -3.6
NVR Nevrokopi 66.38 310 P pP 02 50 51.1 -1.4
NACGM Naroch 66.42 325 *e*P **P** **02 50 34.4 +0.6**
comp=N,616nm,0.8s

PAIG Paliouri 66.43 308 P pP 02 50 47.6 -5.1
RK1H Rockhampton Ha 66.43 122 P **P** **02 50 34.0 -0.3**
IDID Didziasalis 66.53 325 *e*P **P** **02 50 31.6 -2.9**
SRS Serrai 66.57 310 P pP 02 50 49.5 -4.1
CMSA Cobar Meteorol 66.65 132 P **P** **02 50 35.3 -0.3**
IIGN Ignalina 66.83 325 *e*P **P** **02 50 35.8 -0.5**
IZAR Zarasai 66.90 326 *e*P **P** **02 50 37.7 +0.9**
ISAL Salakas 66.93 325 *e*P **P** **02 50 37.9 +0.9**
ARPS Mount Arapiles 66.99 139 P **P** **02 50 37.5 -0.1**
CJR Cluj-Napoca 67.07 316⇑P **P** **02 50 39.2 +1.1**
CJR Cluj-Napoca 67.07 316 P **P** **02 50 39.2 +1.1**
KNT Kendrikon 67.10 310 P pP 02 50 54.3 -2.7
PEHC Pehcevo 67.13 310 *i* P **P** **02 50 39.0 +0.3**
LVV L'vov 67.17 319 *e*P **P** **02 50 38.9 +0.2**
BMR Baia Mare 67.25 317⇑P **P** **02 50 40.0 +0.8**
BMR Baia Mare 67.25 317 P **P** **02 50 39.9 +0.8**
VSU Vasula 67.26 329*ce*P **P** **02 50 40.8 +1.8**
VSU pmax pmax
comp=Z,56nm,2.5s
VSU Vasula 67.26 329 *e*P **P** **02 50 40.0 +1.1**
APA Apatity 67.34 339⇓*i*P **P** **02 50 37.5 -1.8**
APA pmax pmax
comp=Z,14nm,0.8s
VAY Valandovo 67.35 310 *i* P **P** **02 50 39.5 -0.5**
MARR Marisel-Cluj 67.40 316⇑P **P** **02 50 41.2 +0.9**
BLKB Belogradchik 67.43 312⇓P **P** **02 50 40.4 0.0**
GRG Griva 67.46 309 P pP 02 50 56.5 -2.8
STIP Stip 67.66 310 *i* P **P** **02 50 40.1 -1.8**
DRGR 67.69 316⇑P **P** **02 50 42.6 +0.5**
DRGR 67.69 316 P **P** **02 50 42.6 +0.5**
HERR Herculane 67.72 314⇑P **P** **02 50 42.4 +0.3**
SURR Surduc 68.00 314⇓P **P** **02 50 44.6 +0.7**
KWP Kalwaria Pacla 68.00 319 *e*P **P** **02 50 44.8 +0.9**
KWP Kalwaria Pacla 68.00 319 P **P** **02 50 44.8 +0.9**
KWP IAmb IAmb 02 51 02.2
comp=Z,66nm,1.0s
KWP Kalwaria Pacla 68.00 319 P **P** **02 50 44.8 +0.9**
KWP pmax pmax
comp=Z,66nm,1.0s
PABE Paberze 68.12 325 P **P** **02 50 45.0 +0.6**
PABE IAmb IAmb 02 51 04.4
comp=Z,113nm,1.2s
PABE Paberze 68.12 325 *e*P **P** **02 50 45.1 +0.6**
KOLS Kolonicke sedl 68.20 318 *e*P **P** **02 50 46.0 +0.8**
KOLS pmax pmax
comp=Z,11nm,0.8s
KOLS Kolonicke sedl 68.20 318 *e*P **P** **02 50 46.0 +0.8**
VSVD Vaisvydziai 68.23 326 *e*P **P** **02 50 45.4 +0.2**
FIA1 FINESS Array S 68.31 332 P **P** **02 50 45.5 -0.1**
FIA1 IAmb IAmb 02 51 09.2
comp=Z,66nm,1.0s
FINES FINESS Array B 68.31 332 P **P** **02 50 46.0 +0.4**
FINES FINESS Array B 68.31 332 P **P** **02 50 45.8 +0.2**
comp=Z,12nm,0.6s,baz=99,slow=6.0,SNR=40
comp=Z,12nm,0.6s
SUW Suwalki 68.32 323 *e*P **P** **02 50 46.0 +0.3**
SUW Suwalki 68.32 323 P **P** **02 50 46.1 +0.4**
SUW IAmb IAmb 02 51 03.3
comp=Z,98nm,0.9s
SUW Suwalki 68.32 323 P **P** **02 50 46.1 +0.4**
SUW pmax pmax
comp=Z,98nm,0.9s
SUW Suwalki 68.32 323 *e*P **P** **02 50 46.0 +0.3**
SIRR Siria 68.36 315⇑P **P** **02 50 46.8 +0.5**
OHR Ohrid 68.68 309 *i* P **P** **02 50 49.4 +1.4**
CRVS Cervenica-Dubn 68.73 318 *e*P **P** **02 50 49.5 +1.0**
CRVS *e* 02 51 05.6
CRVS pmax pmax
comp=Z,49nm,1.0s
CRVS Cervenica-Dubn 68.73 318 *e*P **P** **02 50 49.5 +1.0**
CRVS *e* 02 51 05.6
BRAT Ballarat 68.80 139 P **P** **02 50 49.2 +0.3**
MEF Metsahovi 68.83 330 *e*P **P** **02 50 49.3 +0.5**
STHS Stebnicka Huta 68.93 318 *e*P **P** **02 50 49.4 -0.3**
STHS *e* 02 51 06.2
STHS pmax pmax
comp=Z,11nm,1.0s
STHS Stebnicka Huta 68.93 318 *e*P **P** **02 50 49.4 -0.3**
STHS *e* 02 51 06.2
AUDCS Dubbo College 69.15 132 P **P** **02 50 51.1 -0.2**
CRZF Crozet Islands 69.20 209 P **P** **02 50 52.0 +0.7**
CRZF IAmb IAmb 02 50 52.2
comp=Z,81nm,0.7s
CRZF Crozet Islands 69.20 209 P **P** **02 50 51.6 +0.3**
KECS Kecovo 69.34 317 *e*P **P** **02 50 53.1 +0.9**
KECS *e* 02 51 08.9
KECS Kecovo 69.34 317 *e*P **P** **02 50 53.1 +0.9**
KECS *e* 02 51 08.9
PBUR Paburge 69.34 325 *e*P **P** **02 50 52.3 +0.3**
BEL Belsk 69.47 321 *e*P **P** **02 50 53.8 +0.9**
NIE Niedzica 69.54 318 *e*P **P** **02 50 55.0 +1.5**
FRGS Fruska Gora 69.58 314⇑P **P** **02 50 53.4 -0.4**
PSZ Piszkesteto 69.69 317⇑P **P** **02 50 55.0 +0.5**
PSZ Piszkesteto 69.69 317 P **P** **02 50 55.5 +1.0**
PSZ IAmb IAmb 02 51 12.7
comp=Z,90nm,1.7s
PSZ Piszkesteto 69.69 317 P **P** **02 50 55.5 +1.0**
PSZ pmax pmax
comp=Z,90nm,1.7s
TOO Toolangi 69.83 138 P **P** **02 50 56.1 +0.7**
TOO IAmb IAmb 02 50 56.8
comp=Z,62nm,0.8s
TOO Toolangi 69.83 138 P **P** **02 50 55.3 -0.1**
TOO Toolangi 69.83 138 P **P** **02 50 56.1 +0.7**
TOO pmax pmax
comp=Z,62nm,0.9s
LSZ Lusaka 69.85 249 P **P** **02 50 56.9 +0.9**
LSZ pP **pP** **02 51 14.6 -0.2**
HNR Honiara 69.86 105 LR LR 03 23 55.7
comp=Z,2μm,18.2s,baz=319,slow=38
OJC Ojcow 69.93 319 *e*P **P** **02 50 56.6 +0.7**
OJC Ojcow 69.93 319 P **P** **02 50 56.6 +0.7**
OJC Ojcow 69.93 319 P **P** **02 50 56.6 +0.7**
OJC pmax pmax
comp=Z,32nm,0.8s
YNG Young 70.03 134 P **P** **02 50 56.1 -0.6**
MOPA Mopani 70.05 239 *i* P **P** **02 50 58.9 +1.9**
MOPA Mopani 70.05 239 *e*P **P** **02 50 57.4 +0.4**
LANS Liptovska Anna 70.06 318 *e*P **P** **02 50 58.0 +1.3**
LANS *e* 02 51 13.3
LANS pmax pmax
comp=Z,4.0nm,0.9s
LANS Liptovska Anna 70.06 318 *e*P **P** **02 50 58.0 +1.3**
LANS *e* 02 51 13.3
RAF Rauma 70.26 331 *e*P **P** **02 50 57.5 -0.1**
ARMA Armidale 70.51 129 P **P** **02 51 00.2 +0.4**
ARMA Armidale 70.51 129 P **P** **02 51 00.0 +0.2**
ARCES ARCESS Array B 70.75 340 P **P** **02 51 01.2 +0.7**
ARCES IAmb IAmb 02 51 37.2
comp=Z,103nm,1.8s
ARCES ARCESS Array B 70.75 340 P **P** **02 51 01.2 +0.7**
ARCES pmax pmax
comp=Z,103nm,1.8s
ARCES ARCESS Array B 70.75 340 P **P** **02 51 01.1 +0.6**
comp=Z,7.3nm,0.9s,baz=102,slow=7.0,SNR=12
comp=Z,7.3nm,0.9s
SRO Srobarova 70.75 316 *e*P **P** **02 51 01.7 +0.9**
SRO *e* 02 51 18.1
SRO pmax pmax
comp=Z,20nm,0.9s
SRO Srobarova 70.75 316 *e*P **P** **02 51 01.7 +0.9**
SRO *e* 02 51 18.1
OKC Ostrava-Krasne 70.97 319 *e*P **P** **02 51 03.0 +0.8**
OKC Ostrava-Krasne 70.97 319 *e*P **P** **02 51 03.0 +0.8**
CAN Canberra 70.99 134 P **P** **02 51 02.5 -0.1**
CAN Canberra 70.99 134 P **P** **02 51 02.4 -0.1**
CAN Canberra 70.99 134 P **P** **02 51 02.5 -0.1**
CAN pmax pmax
comp=Z,28nm,0.8s
CAN Canberra 70.99 134 P **P** **02 51 02.2 -0.3**
CAN PcP **PcP** **02 51 22.6 0.0**
MAUC Maruska 71.15 318 *e*P **P** **02 51 03.9 +0.6**
BLWY Bulawayo 71.16 244 *i* P **P** **02 51 05.4 +1.4**
BLWY Bulawayo 71.16 244 *e*P **P** **02 51 03.1 -0.9**
JAVC Velka Javorina 71.23 318 *e*P **P** **02 51 04.8 +1.0**
CNB Canberra Magne 71.24 134 P **P** **02 51 04.1 0.0**
MORC Moravsky Berou 71.36 319⇑P **P** **02 51 05.2 +0.6**
MORC Moravsky Berou 71.36 319 P **P** **02 51 05.4 +0.8**
MORC Moravsky Berou 71.36 319 *e*P **P** **02 51 05.1 +0.5**
MORC Moravsky Berou 71.36 319 P **P** **02 51 05.4 +0.8**
MORC pmax pmax
comp=Z,25nm,0.9s

MODS Modra-Piesok 71.47 317 *eP* **P** **02 51 06.4 +1.2**
MODS *e* 02 51 21.9
MODS pmax pmax
comp=Z,37nm,1.1s
MODS Modra-Piesok 71.47 317 *eP* **P** **02 51 06.3 +1.1**
MODS *e* 02 51 21.9
ZST Bratislava 71.58 317 *eP* **P** **02 51 06.6 +0.7**
ZST *e* 02 51 22.0
ZST Bratislava 71.58 317 *eP* **P** **02 51 06.6 +0.7**
ZST *e* 02 51 22.0
GKP Gorka Klasztor 71.75 322 *eP* **P** **02 51 07.3 +0.5**
TIP Timpagrande 71.76 307 P **P** **02 51 07.1 -0.2**
KRLC Kraliky 71.86 319 *eP* **P** **02 51 08.2 +0.6**
KRLC Kraliky 71.86 319 *eP* **P** **02 51 08.2 +0.6**
VRAC Vranov 71.95 318 *eP* **P** **02 51 08.4 +0.3**
KRUC Moravsky 72.07 318 *eP* **P** **02 51 08.8 0.0**
RONA Rosalia, Austr 72.10 316 *i* P **P** **02 51 09.3 +0.1**
comp=Z,10nm,1.0s
DPC Dobruska-Polom 72.17 319 *eP* **P** **02 51 10.6 +1.2**
DPC Dobruska-Polom 72.17 319 *eP* **P** **02 51 10.6 +1.2**
KSP Ksiaz 72.20 320 *eP* **P** **02 51 10.7 +1.1**
OSTC Ostas 72.24 319 *eP* **P** **02 51 10.5 +0.7**
OSTC Ostas 72.24 319 *eP* **P** **02 51 10.5 +0.7**
CHVC Chvalec 72.35 319 *eP* **P** **02 51 11.4 +0.9**
CHVC Chvalec 72.35 319 *eP* **P** **02 51 11.4 +0.9**
BILL Bilibino 72.36 22 P **P** **02 51 10.6 +0.4**
BILL Bilibino 72.36 22 P **P** **02 51 10.6 +0.4**
UPC Upice 72.37 319 *eP* **P** **02 51 11.5 +0.9**
UPC Upice 72.37 319 *eP* **P** **02 51 11.5 +0.9**
CONA Conrad Observa 72.40 317 *eP* **P** **02 51 10.1 -0.8**
comp=Z,7.0nm,0.8s
CEL Celeste 72.46 306 P **P** **02 51 12.5 +1.1**
ARSA Arzberg 72.62 316 *eP* **P** **02 51 12.9 +0.8**
comp=Z,8.0nm,1.0s
TREC Trest 72.68 318 *eP* **P** **02 51 12.8 +0.3**
TREC AMS AMS 03 36 30.0
comp=Z,1μm,20.8s
TREC Trest 72.68 318 *eP* **P** **02 51 12.8 +0.3**
TREC MLR MLR
comp=Z,1μm,20.8s
SOKA Soboth 72.95 315 *i* P **P** **02 51 14.7 +0.5**
comp=Z,21nm,1.1s,SNR=6.7
AULHS Lilydale High 73.00 140 P **P** **02 51 14.9 +0.5**
GOPC GO Pecny, Ondr 73.14 319 *eP* **P** **02 51 15.9 +0.7**
GOPC GO Pecny, Ondr 73.14 319 *eP* **P** **02 51 15.9 +0.7**
OBKA Obir 73.29 315 *eP* **P** **02 51 16.9 +0.7**
comp=Z,20nm,0.9s,SNR=5.5
PVCC Panska Ves 73.29 319 *eP* **P** **02 51 16.9 +0.9**
PVCC Panska Ves 73.29 319 *eP* **P** **02 51 16.9 +0.9**
PRU Pruhonice 73.30 319 *eP* **P** **02 51 16.7 +0.6**
PRU Pruhonice 73.30 319 *eP* **P** **02 51 16.7 +0.6**
GLAD Gladstone 73.35 140 P **P** **02 51 16.8 +0.4**
PRA Prague 73.37 319 *eP* **P** **02 51 17.6 +1.1**
PRA Prague 73.37 319 *eP* **P** **02 51 17.6 +1.1**
CKRC Cesky Krumlov 73.44 317 *eP* **P** **02 51 17.5 +0.5**
CKRC Cesky Krumlov 73.44 317 *eP* **P** **02 51 17.5 +0.5**
MOA Molln 73.47 316 *i* P **P** **02 51 17.3 +0.1**
comp=Z,11nm,0.9s
ZVC Zvikov 73.52 318 *eP* **P** **02 51 18.1 +0.7**
RICC Richard 73.59 319 *eP* **P** **02 51 18.5 +0.7**
BRG Berggiesshubel 73.69 320 *i* P **P** **02 51 19.3 +0.9**
BRG Amp 02 51 20.5
comp=Z,21nm,0.8s
BRG pP **PcP** **02 51 34.5 +0.6**
BRG Amp 02 51 37.8
comp=Z,18nm,0.9s
BRG Berggiesshubel 73.69 320 *i* P **P** **02 51 19.3 +0.9**
BRG 02 51 34.4
BRG pmax pmax
comp=Z,21nm,0.9s
BRG Berggiesshubel 73.69 320 *eP* **P** **02 51 19.0 +0.6**
comp=Z,21nm,0.8s,baz=90,slow=5.6
BRG *ep*P **PcP** **02 51 34.4 +0.6**
comp=Z,744μm,34.1s
RUE Ruedersdorf 73.81 321 *eP* **P** **02 51 19.7 +0.7**
GEC2 GERESS Array S 73.85 317 P **P** **02 51 20.2 +0.7**
GEC2 GERESS Array S 73.85 317 *eP* **P** **02 51 20.3 +0.7**
comp=Z,29nm,0.8s,baz=90,slow=5.6
GERES GERESS Array B 73.85 317 P **P** **02 51 20.1 +0.7**
GERES GERESS Array B 73.85 317 P **P** **02 51 20.1 +0.7**
GERES GERESS Array B 73.85 317 P **P** **02 51 19.8 +0.4**
comp=Z,22nm,0.8s,baz=79,slow=6.9,SNR=64
comp=Z,22nm,0.8s
DEL Delary 73.86 325 *i* P **P** **02 51 19.0 -0.2**
BIOA Bad Ischl, Aus 73.90 316 *i* P **P** **02 51 19.4 -0.3**
comp=Z,9.4nm,1.0s
MYKA Terra Mystica 73.91 315 *i* PcP **PcP** **02 51 29.3 -5.6**
comp=Z,9.7nm,0.9s
KHC Kasperske Hory 73.93 318 P **P** **02 51 20.6 +0.7**
KHC Kasperske Hory 73.93 318 *eP* **P** **02 51 20.2 +0.4**
KHC *ex* x 02 51 33.0
KHC Kasperske Hory 73.93 318 *ceP* **P** **02 51 20.5 +0.7**
KHC pmax pmax
comp=Z,27nm,1.0s
PRED Cave del Predi 73.97 315 P **P** **02 51 20.6 +0.4**
TAU Tasmania Unive 74.00 142 P **P** **02 51 19.9 -0.3**
TAU Tasmania Unive 74.00 142 P **P** **02 51 19.9 -0.3**
TAU pmax pmax
comp=Z,47nm,0.9s
HSKC Hora Svate Kat 74.02 319 *eP* **P** **02 51 20.8 +0.5**
HSKC *ex* x 02 51 36.0
KBA Koelnbreinsper 74.11 316 *i* P **P** **02 51 22.7 +1.6**
comp=Z,18nm,1.3s
HFS Hagfors 74.11 329 P **P** **02 51 20.6 0.0**
comp=Z,14nm,0.7s,baz=112,slow=6.6,SNR=36
comp=Z,14nm,0.7s
CLL Collm 74.29 320 P **P** **02 51 21.7 -0.1**
CLL Collm 74.29 320 *eP* **P** **02 51 22.0 +0.2**
CLL *i* *PP **pP** **02 51 39.4 -1.3**
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 74.29 320 *eP* **P** **02 51 22.0 +0.2**
comp=Z,17nm,1.0s
CLL *i* PcP **PcP** **02 51 36.6 +0.3**
CLL *i* pP **pP** **02 51 39.4 -1.3**
comp=Z,33nm,1.3s
CLL *i* sP **sP** **02 51 47.2 -1.2**
CLL Collm 74.29 320 *eP* **P** **02 51 21.7 -0.1**
comp=Z,14nm,0.9s,baz=90,slow=5.6
WET Wettzell 74.39 318 *eP* **P** **02 51 22.8 +0.3**
comp=Z,13nm,0.8s,baz=90,slow=5.6
CLUD Cludinico 74.44 315 P **P** **02 51 22.8 -0.1**
LESA Schwarzleotal 74.56 316 *i* P **P** **02 51 22.8 -0.8**
comp=Z,9.6nm,0.7s
STAL STALIGIAL 74.56 315 P **P** **02 51 23.2 -0.4**
STAL IAmb IAmb 02 51 41.4
comp=Z,68nm,1.2s
TANN Tannenbergstha 74.64 319 *eP* **P** **02 51 24.7 +0.7**
comp=Z,18nm,1.2s,baz=90,slow=5.6
TANN *ep*P **pP** **02 51 42.2 -0.7**
ABTA Abfaltersbach 74.69 315 *eP* **P** **02 51 23.8 -0.5**
comp=Z,7.1nm,0.9s
ROTZ Rotzenmuhle 74.81 318 *eP* **P** **02 51 25.4 +0.4**
comp=Z,4.3nm,1.0s,baz=90,slow=5.6
PLN Plauen 74.83 319 *eP* **P** **02 51 25.5 +0.5**
comp=Z,12nm,0.9s,baz=90,slow=5.6
SHEM Shemya Is, Ala 74.85 38 P **P** **02 51 24.8 -0.2**
comp=Z,88nm,0.5s,baz=9.2,slow=2.3,SNR=6.3
comp=Z,88nm,0.5s
MANZ Manzenberg 74.87 319 *eP* **P** **02 51 26.2 +0.8**
comp=Z,3.0nm,0.9s,baz=90,slow=5.6
NEUB Neuenburg 75.06 320 *ep*P pP 02 51 44.0 -1.2
NC405 NORSAR Array S 75.13 330 P **P** **02 51 26.7 +0.2**
NC405 IAmb IAmb 02 51 28.6
comp=Z,168nm,2.0s
MOX Moxa 75.17 319 *eP* **P** **02 51 27.2 +0.2**
comp=Z,13nm,0.8s,baz=90,slow=5.6
MOX *e*L L 03 10 04.5
comp=Z,3μm,18.2s
NC602 NORSAR Array S 75.20 330 P **P** **02 51 26.9 0.0**
NC602 IAmb IAmb 02 51 42.5
comp=Z,138nm,1.9s
WTTA Wattenberg 75.27 316 *i* P **P** **02 51 27.4 -0.5**
comp=Z,14nm,0.6s,SNR=9.3
SPITS Spitsbergen Ar 75.29 348 P **P** **02 51 27.1 -0.1**
comp=Z,1.9nm,0.4s,baz=116,slow=9.4,SNR=20
comp=Z,1.9nm,0.4s
WATA Walderalm 75.31 316 *eP* **P** **02 51 27.1 -0.9**
comp=Z,6.9nm,0.7s,SNR=5.1
CTI Castel Tesino 75.31 315 P **P** **02 51 28.2 +0.2**
CTI IAmb IAmb 02 51 46.3
comp=Z,82nm,1.3s
CTI Castel Tesino 75.31 315 P **P** **02 51 28.2 +0.2**
CTI pmax pmax
comp=Z,82nm,1.3s
NB2 NORSAR Subarra 75.37 330 P **P** **02 51 27.4 -0.5**
comp=Z,3.3nm,0.6s,baz=89,slow=5.9
NOA NORSAR Array B 75.37 330 P **P** **02 51 27.7 -0.3**
comp=Z,11nm,1.0s,baz=90,slow=5.7,SNR=9.9
comp=Z,11nm,1.0s
GRA1 Grafenberg Arr 75.45 318 P **P** **02 51 29.8 +1.1**
GRF Grafenberg Arr 75.45 318 P **P** **02 51 29.8 +1.1**
GRF pmax pmax
comp=Z,72nm,1.7s
GRF Grafenberg Arr 75.45 318 *eL* L 03 09 54.4
comp=Z,3μm,18.3s
LBTB Lobatse 75.51 240 P **P** **02 51 30.6 +1.2**
LBTB IAmb IAmb 02 51 30.9
comp=Z,41nm,0.7s
LBTB Lobatse 75.51 240 *i* P **P** **02 51 31.4 +1.9**
LBTB Lobatse 75.51 240 P **P** **02 51 30.7 +1.2**
LBTB pmax pmax
comp=Z,41nm,0.7s
LBTB Lobatse 75.51 240 *eP* **P** **02 51 29.8 +0.3**
SQTA Sankt Quirin 75.56 316 *i* P **P** **02 51 28.8 -0.6**
comp=Z,12nm,0.6s,SNR=9.8
MOTA Moosalm 75.63 316 *i* P **P** **02 51 29.3 -0.6**
comp=Z,15nm,0.8s,SNR=11
RETA Reutte 75.85 316 *i* P **P** **02 51 30.6 -0.5**
comp=Z,34nm,1.3s,SNR=13
ZCCA Zocca 75.88 313 P **P** **02 51 32.7 +1.5**
ZCCA IAmb IAmb 02 51 51.5
comp=Z,99nm,1.2s
BSEG Bad Segeberg 75.89 323 *eP* **P** **02 51 31.8 +0.9**
comp=Z,39nm,1.0s,baz=90,slow=5.6
FETA Feichten 75.90 316 *i* P **P** **02 51 31.0 -0.4**
comp=Z,16nm,0.9s,SNR=12
CLZ Clausthal 75.92 321 *eP* **P** **02 51 31.9 +0.6**
comp=Z,27nm,0.8s,baz=90,slow=5.6
NRDL Niedersach Rie 76.06 321 *eP* **P** **02 51 33.0 +1.2**
comp=Z,26nm,1.1s,baz=90,slow=5.6
SALO Salr 76.12 314 P **P** **02 51 32.8 +0.3**
GTTG Gottingen 76.18 320 *eP* **P** **02 51 33.1 +0.4**
comp=Z,29nm,0.8s,baz=90,slow=5.6
FUORN Ofenpass-Fuorn 76.24 315 P **P** **02 51 33.6 +0.1**
UBR Ueberruh 76.28 316 *eP* **P** **02 51 33.0 -0.4**
comp=Z,15nm,0.9s,baz=90,slow=5.6
DAVA Damuels 76.46 316 *i* P **P** **02 51 34.7 +0.1**
comp=Z,38nm,1.1s,SNR=10
MUD Monsted U'grnd 76.47 325 *i* P **P** **02 51 33.0 -1.2**
MUD IAmb IAmb 02 51 35.4
comp=Z,19nm,0.7s
TUE Stuetta 76.88 315 P **P** **02 51 37.5 +0.5**
BOSA Boshof 77.11 237 P **P** **02 51 37.9 -0.6**
BOSA IAmb IAmb 02 51 40.0
comp=Z,52nm,0.8s
BOSA Boshof 77.11 237 *i* P **P** **02 51 39.9 +1.4**
BOSA Boshof 77.11 237 P **P** **02 51 37.9 -0.6**
BOSA pmax pmax
comp=Z,52nm,0.9s
BOSA Boshof 77.11 237 P **P** **02 51 39.0 +0.5**
comp=Z,40nm,0.8s,baz=81,slow=5.2,SNR=54
BOSA PKKPbc **PKKPbc** **03 10 45.5 -0.7**
comp=Z,1.4nm,0.6s,baz=180,slow=2.0,SNR=4.2
comp=Z,40nm,0.8s
BOSA Boshof 77.11 237 *eP* **P** **02 51 37.4 -1.1**
KASTN Kahler Asten 77.17 320 *eP* **P** **02 51 38.7 +0.4**
comp=Z,10nm,1.0s,baz=90,slow=5.6
BFO Black Forest 77.43 317 *eP* **P** **02 51 39.7 -0.2**
comp=Z,23nm,1.3s,baz=90,slow=5.6
KEST Kesra 77.88 304 P **P** **02 51 43.1 +0.5**
KEST IAmb IAmb 02 52 01.6
comp=Z,56nm,1.1s
KEST Kesra 77.88 304 P **P** **02 51 42.6 0.0**
comp=Z,17nm,1.0s,baz=308,slow=3.2,SNR=7.7
comp=Z,17nm,1.0s
CDF Champ du Feu 78.12 317 *eP* **P** **02 51 43.0 -0.8**
CDF pmax pmax
comp=Z,14nm,1.0s
SENIN Lac Senin/Sane 78.30 315 P **P** **02 51 45.5 +0.5**
BTNL Ternell 78.67 320 *dP* **P** **02 51 47.5 +0.9**
WLF Walferdange 78.74 319 *dP* **P** **02 51 47.8 +0.7**
LPL La Plagne 78.78 314 *eP* **P** **02 51 47.5 -0.1**
LPL pmax pmax
comp=Z,49nm,0.8s
BNI Bardonecchia 78.87 314 P **P** **02 51 48.5 +0.5**
BNI Bardonecchia 78.87 314 P **P** **02 51 48.5 +0.5**
BNI pmax pmax
comp=Z,43nm,1.1s
RCHB Rochefort 79.28 319 *dP* **P** **02 51 49.7 -0.3**
BMRD Maredsous 79.56 319 *dP* **P** **02 51 51.7 +0.2**
DZM Mont Dzumac 79.61 115 P **P** **02 51 52.2 -0.2**
DZM Mont Dzumac 79.61 115 P **P** **02 51 53.3 +0.9**
DZM Mont Dzumac 79.61 115 *eLR* LR 03 16 39.8
comp=Z,465nm,33.9s
DZM Mont Dzumac 79.61 115 LR LR 03 31 51.4
comp=Z,277nm,18.0s,baz=268,slow=39
YATNC Mamie plateau, 80.00 115 P **P** **02 51 56.8 +2.4**
comp=Z,65nm,1.5s
SSB Saint Sauveur 80.34 314 P **P** **02 51 55.0 -0.9**
SSB Saint Sauveur 80.34 314 P **P** **02 51 55.0 -0.9**
SSB pmax pmax
comp=Z,17nm,0.8s
SMF Signal de Mont 80.64 316 *eP* **P** **02 51 56.6 -0.8**
SMF pmax pmax
comp=Z,21nm,0.8s
TSUM Tsumeb 80.69 248 P **P** **02 51 58.1 -0.1**
TSUM Tsumeb 80.69 248 LR LR 03 24 47.9
comp=Z,522nm,18.9s,baz=48,slow=33
GAMB Gambell 81.33 27 P **P** **02 52 00.8 +0.2**
baz=280
SUR Sutherland 82.03 234 P **P** **02 52 05.9 +0.6**
SUR IAmb IAmb 02 52 07.6
comp=Z,43nm,0.8s
WIN Windhoek 82.09 245 P **P** **02 52 06.4 +0.7**
WIN IAmb IAmb 02 52 08.2
comp=Z,38nm,0.8s
WIN Windhoek 82.09 245 P **P** **02 52 06.4 +0.7**
WIN pmax pmax
comp=Z,38nm,0.8s
CAF Calviac 82.13 314 *eP* **P** **02 52 05.2 -0.2**
CAF pmax pmax
comp=Z,20nm,1.0s
TNA Tin City 82.56 24 P **P** **02 52 07.6 +0.5**
baz=283,SNR=16
C16K Lisburne Hills 82.88 22 P **P** **02 52 09.5 +0.9**
C16K IAmb IAmb 02 52 10.7
comp=Z,56nm,1.1s
C16K Lisburne Hills 82.88 22 P **P** **02 52 09.5 +0.9**
baz=285
LFF La Frestale 83.05 314 *eP* **P** **02 52 10.1 0.0**
LFF pmax pmax
comp=Z,262nm,2.3s
TAM Tamanrasset 83.11 292 P **P** **02 52 11.8 +0.8**
TAM Tamanrasset 83.11 292 P **P** **02 52 11.8 +0.8**
TAM pmax pmax
comp=Z,30nm,1.1s
F14K Arctic Creek 83.23 24 P **P** **02 52 11.6 +1.0**
baz=285
SPIA Saint Paul Isl 83.32 33 P **P** **02 52 12.4 +1.2**
baz=282
MFF Saint Martin d 83.36 316 *eP* **P** **02 52 11.1 -0.5**
MFF pmax pmax
comp=Z,39nm,1.0s
EKA Eskdalemuir Ar 83.49 325 P **P** **02 52 12.5 +0.4**
comp=Z,14nm,0.7s,baz=90,slow=5.4,SNR=32
EKA PKKPbc **PKKPbc** **03 10 30.6 -1.5**
comp=Z,0.8nm,0.5s,baz=204,slow=1.8,SNR=3.9
comp=Z,14nm,0.7s
C17K DeLong Mountai 83.59 21 P **P** **02 52 13.3 +0.9**
baz=287
A19K Wainwright 83.76 19 P **P** **02 52 15.0 +1.8**
baz=289
B18K Kokolik River 83.79 20 P **P** **02 52 15.1 +1.7**
baz=288
RDOG Red Dog Mine 83.81 22 P **P** **02 52 13.9 +0.4**
RDOG IAmb IAmb 02 52 15.4
comp=Z,86nm,1.5s
RDOG Red Dog Mine 83.81 22 P **P** **02 52 13.9 +0.4**
baz=288
P08K Saint George I 83.82 33 P **P** **02 52 14.6 +0.8**
baz=283
F15K North Star Dit 83.84 24 P **P** **02 52 13.9 +0.2**
F15K North Star Dit 83.84 24 P **P** **02 52 14.3 +0.6**
baz=286
ANM Nome 83.86 25 P **P** **02 52 13.9 +0.1**
ANM Nome 83.86 25 P **P** **02 52 14.6 +0.8**
baz=286,SNR=17
ANM Nome 83.86 25 P **P** **02 52 13.9 +0.1**
ANM pmax pmax
comp=Z,38nm,1.1s
D17K Noatak River 83.86 22 P **P** **02 52 15.1 +1.3**
baz=287
C18K Utukok River 84.23 21 P **P** **02 52 17.0 +1.3**
C18K IAmb IAmb 02 52 17.7
comp=Z,60nm,1.0s
C18K Utukok River 84.23 21 P **P** **02 52 16.8 +1.1**
baz=289,SNR=52
G15K Niukluk 84.28 25 P **P** **02 52 16.6 +0.7**
baz=287
E17K Hotham Inlet 84.51 22 P **P** **02 52 18.2 +1.1**
baz=289
M11K Mekoryuk 84.61 29 P **P** **02 52 18.3 +0.7**
baz=285
C19K Lookout Ridge 84.62 20 P **P** **02 52 19.2 +1.5**
C19K IAmb IAmb 02 52 39.4
comp=Z,47nm,1.0s
C19K Lookout Ridge 84.62 20 P **P** **02 52 19.1 +1.4**
baz=290
A21K Barrow 84.74 18 P **P** **02 52 19.1 +1.0**
baz=293,SNR=22
G16K Koyuk River 84.84 24 P **P** **02 52 19.9 +1.1**
G16K IAmb IAmb 02 52 21.3
comp=Z,52nm,1.0s
G16K Koyuk River 84.84 24 P **P** **02 52 19.7 +0.9**
baz=288
E18K Tukpahlearik C 84.85 22 P **P** **02 52 18.7 -0.1**
E18K IAmb IAmb 02 52 21.6
comp=Z,61nm,0.9s
E18K Tukpahlearik C 84.85 22 P **P** **02 52 19.9 +1.1**
baz=290
F17K Baldwin Pennin 84.93 23 P **P** **02 52 19.5 +0.3**
F17K IAmb IAmb 02 52 21.3
comp=Z,49nm,0.8s
F17K Baldwin Pennin 84.93 23 P **P** **02 52 20.3 +1.1**
baz=289
NIKH Nikolski High 85.05 37 P **P** **02 52 20.6 +0.5**
baz=284
B20K Meade River 85.08 19 P **P** **02 52 20.9 +1.0**
B20K IAmb IAmb 02 52 22.2
comp=Z,49nm,0.9s
B20K Meade River 85.08 19 P **P** **02 52 21.1 +1.2**
baz=293
H16K Elim 85.13 25 P **P** **02 52 20.9 +0.7**
baz=288
J14K Nanvaranak Lak 85.15 27 P **P** **02 52 21.2 +0.8**
J14K IAmb IAmb 02 52 22.1
comp=Z,40nm,1.1s
J14K Nanvaranak Lak 85.15 27 P **P** **02 52 21.1 +0.7**
baz=287,SNR=9.8
D19K Kuna River 85.34 21 P **P** **02 52 22.5 +1.1**
D19K IAmb IAmb 02 52 23.4
comp=Z,83nm,1.1s
D19K Kuna River 85.34 21 P **P** **02 52 22.4 +1.1**
baz=292
G17K Kiwalik Mounta 85.48 24 P **P** **02 52 22.7 +0.7**
baz=290
F18K Selawik 85.48 22 P **P** **02 52 22.9 +1.0**
baz=291
D20K Etivluk River 85.77 20 P **P** **02 52 24.6 +1.2**
baz=293
M13K Dall Lake 85.95 29 P **P** **02 52 25.3 +1.0**
baz=288
H17K Granite Mounta 85.97 24 P **P** **02 52 25.0 +0.6**
H17K IAmb IAmb 02 52 26.4
comp=Z,68nm,1.2s
H17K Granite Mounta 85.97 24 P **P** **02 52 25.4 +1.0**
baz=290
L14K Kuka Creek 85.98 28 P **P** **02 52 25.5 +1.0**
L14K IAmb IAmb 02 52 26.2
comp=Z,28nm,0.8s
L14K Kuka Creek 85.98 28 P **P** **02 52 25.2 +0.8**
baz=288
I17K Unalakleet 86.01 25 P **P** **02 52 25.6 +1.0**
baz=290
E19K Redstone River 86.05 21 P **P** **02 52 25.9 +1.1**
E19K Redstone River 86.05 21 P **P** **02 52 25.8 +1.1**
baz=293
B21K Ikpikpuk River 86.05 19 P **P** **02 52 26.1 +1.4**
B21K Ikpikpuk River 86.05 19 P **P** **02 52 25.9 +1.2**
baz=295
F19K Shaleruckik Mo 86.09 22 P **P** **02 52 25.4 +0.5**
F19K IAmb IAmb 02 52 26.6
comp=Z,36nm,0.9s
F19K Shaleruckik Mo 86.09 22 P **P** **02 52 25.7 +0.7**
baz=292
E20K Nigu River 86.09 20 P **P** **02 52 26.0 +1.0**
baz=294
B22K Teshekpuk Lake 86.11 18 P **P** **02 52 25.9 +1.0**
B22K IAmb IAmb 02 52 26.8
comp=Z,45nm,0.9s
B22K Teshekpuk Lake 86.11 18 P **P** **02 52 25.8 +0.8**
baz=296
G18K Tagagawik 86.11 23 P **P** **02 52 25.3 +0.2**
G18K Tagagawik 86.11 23 P **P** **02 52 25.6 +0.5**
baz=292
K15K Wolf Creek Mou 86.19 27 P **P** **02 52 25.8 +0.2**
K15K Wolf Creek Mou 86.19 27 P **P** **02 52 26.7 +1.2**
baz=289,SNR=9.2
C21K Knifeblade Rid 86.19 19 P **P** **02 52 26.8 +1.3**
baz=295
J16K Anvik River 86.26 26 P **P** **02 52 26.5 +0.7**
J16K Anvik River 86.26 26 P **P** **02 52 26.9 +1.1**
baz=290
L15K Ungalak Mounta 86.41 27 P **P** **02 52 27.3 +0.6**
baz=289
M14K Bethel 86.50 28 P **P** **02 52 27.8 +0.8**
M14K IAmb IAmb 02 52 28.6
comp=Z,40nm,0.8s
M14K Bethel 86.50 28 P **P** **02 52 27.8 +0.8**
baz=289,SNR=7.6
H18K Honhosa River 86.50 24 P **P** **02 52 27.5 +0.5**
H18K IAmb IAmb 02 52 28.4
comp=Z,21nm,0.7s
H18K Honhosa River 86.50 24 P **P** **02 52 27.9 +0.8**
baz=292
G19K Purcell Mounta 86.61 23 P **P** **02 52 28.7 +1.1**
G19K IAmb IAmb 02 52 29.6
comp=Z,50nm,0.8s
G19K Purcell Mounta 86.61 23 P **P** **02 52 28.6 +1.1**
baz=293
F20K Avaraart Lake 86.75 21 P **P** **02 52 29.3 +1.1**
F20K IAmb IAmb 02 52 30.1
comp=Z,52nm,0.8s
F20K Avaraart Lake 86.75 21 P **P** **02 52 29.2 +1.1**
baz=294
E21K Killik River 86.76 20 P **P** **02 52 29.3 +1.0**
E21K IAmb IAmb 02 52 30.1
comp=Z,51nm,0.8s
E21K Killik River 86.76 20 P **P** **02 52 29.2 +0.9**
baz=296
J17K VABM Dome 86.86 25 P **P** **02 52 29.8 +1.0**
J17K IAmb IAmb 02 52 30.9
comp=Z,68nm,1.1s
J17K VABM Dome 86.86 25 P **P** **02 52 29.9 +1.1**
baz=291,SNR=29
N14K Kuskokwak Cree 86.90 29 P **P** **02 52 29.7 +0.7**
baz=289,SNR=6.1
D22K Ayikyak River 86.99 19 P **P** **02 52 30.4 +1.0**
D22K IAmb IAmb 02 52 31.6
comp=Z,62nm,1.0s
D22K Ayikyak River 86.99 19 P **P** **02 52 30.5 +1.1**
baz=297
H19K Roundabout Mou 87.10 23 P **P** **02 52 31.1 +1.2**
H19K IAmb IAmb 02 52 32.3
comp=Z,44nm,0.9s
H19K Roundabout Mou 87.10 23 P **P** **02 52 31.3 +1.4**
baz=294
M15K Kasigluk River 87.11 28 P **P** **02 52 30.6 +0.6**
baz=290,SNR=11
GCSA Galena City Sc 87.24 24 P **P** **02 52 31.8 +1.2**
baz=293,SNR=5.5
L16K Owhat River 87.30 27 P **P** **02 52 31.3 +0.3**
L16K Owhat River 87.30 27 P **P** **02 52 31.7 +0.8**
baz=291,SNR=7.1
O14K Tigyukauivet M 87.33 30 P **P** **02 52 31.5 +0.4**
baz=290
K17K Iditarod 87.44 26 P **P** **02 52 33.0 +1.4**
K17K Iditarod 87.44 26 P **P** **02 52 32.9 +1.2**
baz=292
F21K Alatna River 87.47 21 P **P** **02 52 32.7 +0.9**
F21K IAmb IAmb 02 52 34.0
comp=Z,37nm,0.9s
F21K Alatna River 87.47 21 P **P** **02 52 32.5 +0.8**
baz=296
N15K Kwethluk River 87.57 29 P **P** **02 52 33.3 +1.0**
N15K Kwethluk River 87.57 29 P **P** **02 52 33.2 +0.9**

baz=291,SNR=17
ESDC Sonseca Array 87.57 310 P **P** **02 52 33.0 +0.1**
comp=Z,12nm,0.8s,baz=62,slow=4.4,SNR=51
ESDC PKKPbc **PKKPbc** **03 10 21.4 -0.6**
comp=Z,0.8nm,0.6s,baz=296,slow=2.7,SNR=10
comp=Z,12nm,0.8s
D23K Nanushuk River 87.59 19 P **P** **02 52 33.5 +1.2**
baz=299
FALS False Pass 87.63 34 P **P** **02 52 33.0 +0.4**
baz=288
L17K Donlin 87.66 26 P **P** **02 52 33.8 +1.1**
baz=292
H20K Anotleneega Mo 87.71 23 P **P** **02 52 34.0 +1.1**
baz=295,SNR=36
G21K Allakaket 87.77 22 IAmb IAmb 02 52 34.9
comp=Z,76nm,1.1s
G21K Allakaket 87.77 22 P **P** **02 52 34.0 +0.8**
baz=296
M16K Timber Creek 87.78 28 P **P** **02 52 34.1 +0.8**
baz=292,SNR=8.8
J18K Innoko River 87.82 25 IAmb IAmb 02 52 35.4
comp=Z,34nm,1.1s
J18K Innoko River 87.82 25 P **P** **02 52 34.4 +1.0**
baz=293,SNR=18
DCZ Deep Cove 87.82 137 IAmb IAmb 02 52 34.1
comp=Z,49nm,0.9s
C24K Franklin Bluff 87.83 18 P **P** **02 52 34.1 +0.7**
baz=300
O15K Ungalikthiuk R 88.05 30 P **P** **02 52 35.0 +0.4**
baz=291
J19K Poorman 88.05 24 IAmb IAmb 02 52 37.4
comp=Z,36nm,0.9s
J19K Poorman 88.05 24 P **P** **02 52 35.9 +1.4**
baz=294,SNR=24
NEEM North Greenlan 88.06 353 *i* P **P** **02 52 32.9 -1.8**
NEEM IAmb IAmb 02 53 03.5
comp=Z,12nm,0.8s
N16K Nishlik Lake 88.07 28 P **P** **02 52 35.9 +1.2**
baz=292
D24K Happy Valley 88.08 18 IAmb IAmb 02 52 36.5
comp=Z,31nm,0.8s
D24K Happy Valley 88.08 18 P **P** **02 52 35.5 +1.0**
baz=300,SNR=20
TOLK Toolik Lake Re 88.11 19 IAmb IAmb 02 52 36.8
comp=Z,44nm,0.9s
TOLK Toolik Lake Re 88.11 19 P **P** **02 52 35.7 +1.0**
baz=300,SNR=31
I20K Naaghedeneel 88.16 23 P **P** **02 52 36.6 +1.6**
baz=295,SNR=16
G22K Bettles 88.29 21 P **P** **02 52 36.3 +0.7**
baz=298,SNR=20
M17K Holitna River 88.32 27 IAmb IAmb 02 52 38.3
comp=Z,24nm,0.8s
M17K Holitna River 88.32 27 P **P** **02 52 37.2 +1.4**
baz=293
TTA Tatalina 88.32 25 P **P** **02 52 36.6 +0.7**
TTA Tatalina 88.32 25 P **P** **02 52 37.1 +1.2**
TTA Tatalina 88.32 25 P **P** **02 52 36.9 +1.0**
baz=294,SNR=9.2
TTA Tatalina 88.32 25 P **P** **02 52 36.6 +0.7**
TTA pmax pmax
comp=Z,18nm,1.0s
L18K Granite Mounta 88.33 26 P **P** **02 52 37.1 +1.2**
baz=294,SNR=6.4
E23K Chandalar 88.38 20 P **P** **02 52 37.3 +1.2**
baz=300
H21K Melozitna Rive 88.41 22 P **P** **02 52 37.6 +1.4**
baz=297
JCZ Jackson Bay 88.46 136 P **P** **02 52 36.4 -0.5**
WHZ Wether Hill Ro 88.49 138 IAmb IAmb 02 52 38.5
comp=Z,36nm,1.0s
J20K Nowinta River 88.56 24 IAmb IAmb 02 52 39.5
comp=Z,45nm,1.1s
J20K Nowinta River 88.56 24 P **P** **02 52 38.4 +1.5**
baz=296
TOA0 Torodi Ar. Sit 88.58 283 P **P** **02 52 38.4 +0.4**
TORD Torodi Ar. Bea 88.58 283 P **P** **02 52 37.7 -0.3**
comp=Z,7.1nm,0.3s,baz=79,slow=5.8,SNR=3.1
TORD PKKPbc **PKKPbc** **03 10 17.9 -0.8**
comp=Z,3.9nm,0.3s,baz=307,slow=2.3,SNR=2.0
comp=Z,7.1nm,0.3s
COLD Coldfoot 88.60 20 P **P** **02 52 37.9 +0.9**
baz=299,SNR=12
O16K Kokwok River B 88.72 29 P **P** **02 52 38.4 +0.7**
baz=292
D25K Kavik River 88.74 18 P **P** **02 52 38.6 +0.9**
baz=303,SNR=91
N17K Nushagak Hills 88.78 28 P **P** **02 52 39.0 +1.1**
N17K IAmb IAmb 02 52 40.3
comp=Z,38nm,0.9s
N17K Nushagak Hills 88.78 28 P **P** **02 52 39.3 +1.3**
baz=293,SNR=12
H22K Ishtalitna Cre 88.83 22 P **P** **02 52 39.6 +1.4**
baz=298
C26K Camden Bay 88.84 17 P **P** **02 52 39.6 +1.5**
baz=304
G23K Bananza Creek 88.91 21 IAmb IAmb 02 52 40.8
comp=Z,41nm,1.2s
G23K Bananza Creek 88.91 21 P **P** **02 52 39.7 +1.1**
baz=299,SNR=22
I21K Tanana 88.94 23 IAmb IAmb 02 52 41.2
comp=Z,53nm,1.0s
I21K Tanana 88.94 23 P **P** **02 52 40.1 +1.4**
baz=298,SNR=35
K20K Telida 88.94 25 P **P** **02 52 40.3 +1.6**
baz=296
P16K Nushagak River 88.98 29 P **P** **02 52 40.3 +1.3**
baz=292
M18K Stony River 89.00 27 P **P** **02 52 40.2 +1.2**
baz=294
SDPT Sand Point 89.06 33 P **P** **02 52 40.6 +1.1**
baz=290
PBRG Braganca 89.07 313 *e*P **P** **02 52 40.6 +0.7**
comp=Z,44nm,2.0s
O17K Koliganek Bris 89.11 28 P **P** **02 52 40.4 +0.9**
baz=293,SNR=12
L19K White Mountain 89.12 26 IAmb IAmb 02 52 42.1
comp=Z,32nm,0.9s
L19K White Mountain 89.12 26 P **P** **02 52 41.1 +1.5**
baz=295
S14K Fog Glacier 89.22 32 P **P** **02 52 41.4 +1.1**
baz=291
F24K Squaw Lake 89.22 20 P **P** **02 52 41.2 +1.1**
baz=301
N18K Kilae Creek 89.30 27 P **P** **02 52 41.5 +1.0**
baz=294
L20K Farewell, AK 89.41 25 P **P** **02 52 42.4 +1.4**
baz=296,SNR=24
CHUM Lake Minchumin 89.41 24 P **P** **02 52 42.5 +1.6**
baz=297,SNR=14
M19K Big River Lodg 89.44 26 P **P** **02 52 42.5 +1.4**
baz=296
MVO Moncorvo 89.45 312 *e*P **P** **02 52 42.3 +0.6**
comp=Z,31nm,1.6s
MVO Moncorvo 89.45 312 *e*LR LR 03 17 16.3
comp=Z,2µm,18.0s
MLY Manley 89.47 22 IAmb IAmb 02 52 43.2
comp=Z,29nm,0.8s
MLY Manley 89.47 22 P **P** **02 52 42.2 +1.0**
baz=299,SNR=21
LBZ Lake Benmore 89.51 136 IAmb IAmb 02 52 42.0
comp=Z,31nm,0.9s
SUMG Summit 89.59 347 P **P** **02 52 42.7 +0.6**
SUMG IAmb IAmb 02 53 16.0
comp=Z,27nm,1.1s
SUMG Summit 89.59 347 P **P** **02 52 42.7 +0.6**
SUMG pmax pmax
comp=Z,27nm,1.1s
SUMG Summit 89.59 347 *i* P **P** **02 52 41.1 -1.0**
SUMG IAmb IAmb 02 53 15.9
comp=Z,10nm,0.8s
E25K Arctic Village 89.64 19 P **P** **02 52 43.0 +1.0**
baz=303,SNR=16
P17K Kvichak River 89.65 29 P **P** **02 52 43.0 +0.9**
baz=294
CAST Castle Rocks 89.72 24 P **P** **02 52 43.7 +1.3**
baz=298,SNR=76
R16K Pilot Point 89.75 31 P **P** **02 52 43.5 +1.0**
baz=293
Q16K King Salmon 89.76 29 P **P** **02 52 43.1 +0.5**
baz=294
G24K Hadweenzic Riv 89.79 20 IAmb IAmb 02 52 44.9
comp=Z,35nm,1.2s
G24K Hadweenzic Riv 89.79 20 P **P** **02 52 43.8 +1.1**
baz=302
CHGN Chignik 89.81 32 P **P** **02 52 44.1 +1.2**
baz=292
BPAW Bear Paw Mtn. 89.83 23 P **P** **02 52 44.0 +1.1**
baz=298,SNR=27
N19K Bonanza Creek 89.87 27 P **P** **02 52 44.5 +1.3**
baz=295,SNR=23
INZ Inchbonnie 89.89 134 IAmb IAmb 02 52 44.1
comp=Z,52nm,1.0s
RPZ Rata Peaks 89.91 135 P **P** **02 52 43.5 -0.1**
F25K Christian Rive 89.91 19 P **P** **02 52 45.0 +1.7**
baz=303
PPLA Purkeypile 89.92 25 P **P** **02 52 44.4 +0.9**
baz=297,SNR=8.9
PVRL Vila Real 89.92 312 *e*P **P** **02 52 43.5 -0.4**
comp=Z,50nm,2.0s
I23K Minto, Yukon-K 89.92 22 IAmb IAmb 02 52 46.4
comp=Z,26nm,0.8s
I23K Minto, Yukon-K 89.92 22 P **P** **02 52 44.2 +0.9**
baz=300,SNR=18
O18K Koktuh Hills 89.95 28 P **P** **02 52 44.4 +0.8**
baz=295,SNR=6.8
M20K Styx River 89.99 26 IAmb IAmb 02 52 46.1
comp=Z,55nm,1.2s
M20K Styx River 89.99 26 P **P** **02 52 45.0 +1.3**
baz=297
MTE Manteigas 90.04 311 *e*P **P** **02 52 45.6 +1.1**
comp=Z,57nm,1.5s
MTE Manteigas 90.04 311 *e*LR LR 03 19 35.5
comp=Z,1µm,18.0s
MTE Manteigas 90.04 311 IAmb IAmb 02 52 46.3
comp=Z,26nm,0.8s
H24K Noodor Dome 90.10 21 IAmb IAmb 02 52 46.3
comp=Z,22nm,0.9s
H24K Noodor Dome 90.10 21 P **P** **02 52 45.4 +1.2**
baz=301
PGAV Gavieira, Arco 90.12 313 *e*LR LR 03 17 01.2
comp=Z,1µm,18.0s
P18K Big Mountain, 90.14 28 P **P** **02 52 44.8 +0.3**
baz=295
PCBR Castelo Branco 90.15 311 *e*P **P** **02 52 45.7 +0.8**
comp=Z,32nm,1.5s
PCBR *e*pP **pP** **02 53 03.7 -0.6**
PMRV Marv??o 90.20 310 *e*P **P** **02 52 45.4 +0.3**
comp=Z,17nm,1.7s
PMRV Marv??o 90.20 310 *e*LR LR 03 14 06.3
comp=Z,1µm,20.0s
O19K Port Alsworth 90.21 27 P **P** **02 52 45.3 +0.7**
baz=296,SNR=12
PBAR Barrancos 90.28 309 *e*P **P** **02 52 46.5 +1.0**
comp=Z,79nm,1.0s
PBAR *e*pP **pP** **02 53 04.7 -0.2**
Q17K Contact Creek 90.30 30 P **P** **02 52 45.4 +0.1**
baz=294
NEA2 Nenana 90.31 22 IAmb IAmb 02 52 47.3
comp=Z,25nm,0.8s
NEA2 Nenana 90.31 22 P **P** **02 52 45.7 +0.5**
baz=300,SNR=13
F26K Sheenjek River 90.33 19 P **P** **02 52 46.6 +1.4**
baz=305,SNR=52
D27M Malcolm River 90.36 17 P **P** **02 52 46.4 +1.1**
baz=308
TRF Thorofare Moun 90.41 24 IAmb IAmb 02 53 07.0
comp=Z,29nm,1.1s
TRF Thorofare Moun 90.41 24 P **P** **02 52 46.3 +0.5**
baz=299,SNR=7.3
PESTR Estremoz 90.50 310 *e*P **P** **02 52 47.1 +0.5**
comp=Z,40nm,1.7s
PTO Porto 90.60 312 *e*P **P** **02 52 47.9 +1.0**
comp=Z,50nm,1.3s
FYU Fort Yukon 90.61 20 IAmb IAmb 02 52 49.0
comp=Z,40nm,1.0s
SKT Skwentna 90.61 25 P **P** **02 52 46.9 +0.3**
baz=298,SNR=52
COLA College 90.61 22 P **P** **02 52 46.5 0.0**
COLA College 90.61 22 P **P** **02 52 47.4 +0.9**
baz=301
POKR Poker Plat Res 90.64 22 P **P** **02 52 47.1 +0.5**
baz=302,SNR=8.6
THZ Tophouse 90.66 133 IAmb IAmb 02 52 48.0
comp=Z,25nm,0.7s
N20K Mount Spurr 90.69 26 P **P** **02 52 47.6 +0.6**
baz=297
COI Coimbra 90.73 311 *e*P P 02 52 57.3 +10
comp=Z,41nm,1.7s
WRH Wood River Hil 90.74 22 IAmb IAmb 02 52 49.6
comp=Z,29nm,1.2s
MCK McKinley 90.80 23 P **P** **02 52 47.8 +0.4**
baz=300,SNR=20
PCAS Casmilo, Conde 90.84 311 *e*P **P** **02 52 48.8 +0.7**
comp=Z,43nm,2.0s
G26K Porcupine Rive 90.87 19 P **P** **02 52 49.0 +1.4**
baz=305
EVO Evora 90.91 310 *e*P **P** **02 52 49.3 +0.8**
comp=Z,17nm,1.2s
EVO *e*pP **pP** **02 53 07.8 -0.1**
PMTG Montargil 90.92 310 *e*P **P** **02 52 49.0 +0.5**
comp=Z,22nm,1.0s
CUT Chulitna 90.93 25 P **P** **02 52 49.1 +1.2**
baz=299
P19K Oil Pt 90.94 28 P **P** **02 52 47.9 -0.3**
baz=296
PBEJ Beja 90.94 309 *e*P **P** **02 52 49.6 +1.0**
comp=Z,20nm,1.3s
RND Reindeer 90.99 23 IAmb IAmb 02 52 49.5
comp=Z,32nm,1.2s
IL31 91.02 22 IAmb IAmb 02 52 49.8
comp=Z,40nm,1.4s
ILAR Eielson Array 91.02 22 P **P** **02 52 47.7 -0.7**
comp=Z,8.7nm,0.7s,baz=291,slow=4.7,SNR=128
ILAR PP **PP** **02 56 27.3 +2.3**
comp=Z,0.8nm,0.8s,baz=305,slow=6.6,SNR=2.8
ILAR PKKPbc **PKKPdf** **03 10 11.6 +1.8**
comp=Z,1.6nm,0.6s,baz=142,slow=1.7,SNR=24
comp=Z,8.7nm,0.7s
O20K Slope Mountain 91.02 27 P **P** **02 52 48.3 -0.3**
baz=297
Q19K Cape Douglas, 91.07 28 P **P** **02 52 49.0 +0.2**
baz=296
PRP Porcupine Dome 91.10 21 P **P** **02 52 49.9 +1.0**
baz=303,SNR=41
E28M Babbage River 91.16 17 IAmb IAmb 02 52 51.1
comp=Z,34nm,1.1s
E28M Babbage River 91.16 17 P **P** **02 52 50.0 +1.0**
baz=309
PCVE Castro Verde 91.19 309 *e*P **P** **02 52 50.6 +0.8**
comp=Z,19nm,1.1s
SUA Susitna One 91.19 26 P **P** **02 52 49.4 0.0**
baz=299,SNR=37
HDA Harding Lake 91.19 22 IAmb IAmb 02 52 49.4
comp=Z,18nm,0.7s
HDA Harding Lake 91.19 22 P **P** **02 52 48.6 -0.6**
baz=295,SNR=10
PBDV Barranco-do-Ve 91.21 308 *e*P **P** **02 52 51.1 +1.2**
comp=Z,50nm,1.1s
PBDV *e*pP **pP** **02 53 09.5 +0.1**
PSBE So Bento 91.22 311 *e*P **P** **02 52 50.9 +1.0**
comp=Z,101nm,1.5s
MESJ Messejana 91.27 309 *e*P **P** **02 52 51.1 +1.0**
comp=Z,31nm,1.8s
MESJ *e*pP **pP** **02 53 09.5 -0.1**
MESJ Messejana 91.27 309 *e*P **P** **02 52 50.8 +0.7**
MESJ IAmb IAmb 02 52 52.1
comp=Z,16nm,0.9s
MESJ *e*pP **pP** **02 53 09.3 -0.2**
MESJ Messejana 91.27 309 *e*P **P** **02 52 50.8 +0.7**
MESJ *e**PP **pP** **02 53 09.4 -0.1**
M22K Willow 91.31 25 P **P** **02 52 50.0 +0.2**
baz=299,SNR=28
CAPN Captain Cook N 91.35 26 P **P** **02 52 51.1 +1.2**
baz=298
WAT1 Susitna Watana 91.41 24 P **P** **02 52 50.2 -0.1**
baz=301
PNCL Nicolau / Gran 91.42 309 *e*P **P** **02 52 52.0 +1.2**
comp=Z,24nm,1.9s
TOZ Tahuroa Road 91.55 128 IAmb IAmb 02 52 53.7
comp=Z,54nm,1.6s
J25K Salcha River, 91.65 22 IAmb IAmb 02 52 52.1
comp=Z,17nm,0.8s
J25K Salcha River, 91.65 22 P **P** **02 52 51.2 -0.2**
baz=304
F28M Old Crow 91.69 18 IAmb IAmb 02 52 53.3
comp=Z,26nm,1.0s
F28M Old Crow 91.69 18 P **P** **02 52 52.2 +0.8**
baz=309,SNR=24
PTEO Sao Teotonio 91.73 309 *e*P **P** **02 52 53.4 +1.1**
comp=Z,40nm,1.9s
DHY Denali Highway 91.74 23 IAmb IAmb 02 53 12.7
comp=Z,42nm,1.8s
DHY Denali Highway 91.74 23 P **P** **02 52 52.1 +0.1**
baz=302,SNR=5.5
PMAFR Mafra 91.74 310 *e*P **P** **02 52 53.6 +1.3**
comp=Z,113nm,1.6s
MORF Marmelete 91.75 309 *e*P **P** **02 52 53.7 +1.3**
comp=Z,32nm,2.3s
MORF Marmelete 91.75 309 *e*P **P** **02 52 53.1 +0.7**
MORF IAmb IAmb 02 52 54.0
comp=Z,17nm,1.0s
MORF Marmelete 91.75 309 *e*P **P** **02 52 53.1 +0.7**
E29M Blow River 91.76 17 IAmb IAmb 02 52 54.5
comp=Z,49nm,1.2s
E29M Blow River 91.76 17 P **P** **02 52 52.3 +0.6**
baz=311,SNR=26
RC01 Rabbit Creek A 91.80 26 P **P** **02 52 52.6 +0.6**
baz=300,SNR=33
Q20K Shuyak Island 91.80 28 P **P** **02 52 52.8 +0.7**
baz=297
PMR Palmer 91.80 25 P **P** **02 52 52.4 +0.4**
PMR Palmer 91.80 25 P **P** **02 52 52.5 +0.5**
baz=300,SNR=10
SII Sitkinak Islan 91.85 31 P **P** **02 52 52.6 +0.2**
baz=296
WAT6 Susitna Watana 91.86 24 P **P** **02 52 53.0 +0.5**
baz=301,SNR=13
PFVI Vila Bisbo 91.93 309 *e*P **P** **02 52 54.4 +1.2**
comp=Z,59nm,1.5s
K24K Donnelly Dome 91.95 22 P **P** **02 52 53.0 +0.2**
baz=303,SNR=12
OHAK Old Harbor 92.00 30 P **P** **02 52 52.9 -0.1**
baz=296
SML Sawmill 92.02 25 P **P** **02 52 53.4 +0.2**
baz=301,SNR=7.6
BRSE Bradley Lake S 92.02 27 P **P** **02 52 53.3 +0.1**
baz=299,SNR=8.1
H27K Steamboat Moun 92.03 19 P **P** **02 52 53.7 +0.6**
baz=307
I26K Coal Creek Min 92.03 20 IAmb IAmb 02 52 55.0
comp=Z,48nm,1.3s
I26K Coal Creek Min 92.03 20 P **P** **02 52 54.1 +1.0**
baz=306
KDAK Kodiak Island 92.09 29 P **P** **02 52 53.9 +0.5**
baz=297
KDAK Kodiak Island 92.09 29 P **P** **02 52 53.3 -0.1**
comp=Z,24nm,0.9s,baz=300,slow=7.7,SNR=3.6
comp=Z,24nm,0.9s
O22K Cooper Landing 92.10 26 P **P** **02 52 53.8 +0.3**
baz=300
A36M Sachs Harbour 92.11 11 P **P** **02 52 53.8 +0.5**
baz=323,SNR=26
KNK Knik Glacier 92.17 25 P **P** **02 52 54.4 +0.6**
baz=301,SNR=7.2
M23K Glacier View 92.27 25 P **P** **02 52 54.6 +0.3**
baz=301,SNR=5.4
ICESG Greenland Ices 92.29 345 *i* P **P** **02 52 53.8 -0.9**
ICESG IAML 02 53 28.0
comp=Z,10nm,1.0s
ICESG IAmb IAmb 02 53 28.0
comp=Z,10nm,1.0s
MRZ Mangatainoka R 92.33 131 IAmb IAmb 02 52 55.1
comp=Z,38nm,1.0s
RIDG Independent Ri 92.33 22 IAmb IAmb 02 52 55.7
comp=Z,25nm,0.8s
RIDG Independent Ri 92.33 22 P **P** **02 52 54.9 +0.3**
baz=304,SNR=11
J26L Joseph Creek 92.36 21 IAmb IAmb 02 52 56.4
comp=Z,35nm,0.9s
J26L Joseph Creek 92.36 21 P **P** **02 52 55.3 +0.6**
baz=305,SNR=35
I27K Kandik River 92.38 20 P **P** **02 52 55.8 +1.0**
baz=307
SEW Seward 92.41 26 P **P** **02 52 55.1 +0.2**
baz=300,SNR=6.8
SCM Sheep Creek Mo 92.41 24 P **P** **02 52 55.6 +0.6**
baz=302
SCRK Sand Creek 92.51 22 P **P** **02 52 56.2 +0.7**
baz=305,SNR=28
PAX Paxson 92.53 23 P **P** **02 52 56.1 +0.6**
baz=303,SNR=7.2
UPNV Upernavik 92.72 351 *e*P **P** **02 52 56.7 +0.6**
UPNV IAmb IAmb 02 53 24.9
comp=Z,12nm,0.8s
M24K Tolsona, Glenn 92.73 24 P **P** **02 52 56.7 +0.3**
baz=303
F30M Barrier River 92.88 17 P **P** **02 52 57.6 +0.7**
baz=312
URZ Urewera 92.91 128 LR LR 03 37 36.9
comp=Z,136nm,19.2s,baz=309,slow=37
HARP HAARP 92.97 23 P **P** **02 52 58.0 +0.6**
baz=304,SNR=6.8
INK Inuvik 93.01 16 IAmb IAmb 02 52 59.8
comp=Z,35nm,1.2s
INK Inuvik 93.01 16 P **P** **02 52 58.1 +0.6**
baz=315,SNR=19
INK Inuvik 93.01 16 P **P** **02 52 57.5 0.0**
comp=Z,28nm,1.1s,baz=305,slow=3.3,SNR=32
comp=Z,28nm,1.1s
RES Resolute Bay 93.01 2 P **P** **02 52 58.3 +0.9**
comp=Z,5.2nm,0.8s,baz=336,slow=3.9,SNR=15
comp=Z,5.2nm,0.8s
I28M Miner Creek 93.02 20 IAmb IAmb 02 52 59.5
comp=Z,31nm,0.9s
I28M Miner Creek 93.02 20 P **P** **02 52 58.2 +0.4**
baz=309
EGAK Eagle 93.03 20 IAmb IAmb 02 53 21.5
comp=Z,20nm,1.1s
EGAK Eagle 93.03 20 P **P** **02 52 58.3 +0.6**
baz=307,SNR=5.8
H29M Whitestone 93.03 19 IAmb IAmb 02 52 59.3
comp=Z,33nm,1.0s
H29M Whitestone 93.03 19 P **P** **02 52 58.2 +0.5**
baz=310
KLU Klutina 93.16 24 IAmb IAmb 02 53 01.1
comp=Z,32nm,0.9s
KLU Klutina 93.16 24 P **P** **02 52 58.9 +0.5**
baz=303,SNR=7.8
K27K Chicken 93.17 21 IAmb IAmb 02 53 00.9
comp=Z,39nm,1.1s
K27K Chicken 93.17 21 P **P** **02 52 59.6 +1.3**
baz=307
G30M tAoh Zraii Nji 93.18 17 P **P** **02 52 58.6 +0.2**
baz=312
MENT Mentasta 93.21 23 P **P** **02 52 59.5 +0.9**
L26K Log Cabin Wild 93.30 22 P **P** **02 52 59.5 +0.6**
baz=305,SNR=17
P23K Montague Islan 93.35 26 P **P** **02 52 59.2 -0.1**
baz=302
EPYK Eagle Plains 93.44 18 IAmb IAmb 02 53 01.4
comp=Z,37nm,1.1s
EPYK Eagle Plains 93.44 18 P **P** **02 52 59.8 +0.2**
baz=312,SNR=16
F31M Tsiigehtchic 93.56 16 IAmb IAmb 02 53 02.2
comp=Z,37nm,1.2s
F31M Tsiigehtchic 93.56 16 P **P** **02 53 00.4 +0.3**
baz=314,SNR=17
N25K Chitina, Valde 93.63 24 P **P** **02 53 01.7 +1.1**
baz=304,SNR=7.6
EYAK Cordova Ski Ar 93.75 25 P **P** **02 53 02.1 +1.0**
baz=303
G31M Satah River 93.78 17 IAmb IAmb 02 53 02.3
comp=Z,37nm,1.1s
G31M Satah River 93.78 17 P **P** **02 53 01.1 +0.1**
baz=314
M26K Nabesna, AK 93.79 23 IAmb IAmb 02 53 04.3
comp=Z,36nm,0.9s
M26K Nabesna, AK 93.79 23 P **P** **02 53 02.1 +0.8**
baz=306,SNR=16
L27K Beaver Creek, 93.83 22 IAmb IAmb 02 53 04.0
comp=Z,25nm,1.1s
L27K Beaver Creek, 93.83 22 P **P** **02 53 02.6 +1.2**
baz=307
UMMG Uummannaq 93.84 349 *i* P **P** **02 53 02.7 +1.4**
UMMG IAmb IAmb 02 53 48.6
comp=Z,15nm,0.7s
BMRM Bremner River 93.98 24 P **P** **02 53 03.0 +0.8**
baz=304,SNR=8.9
GLB Gilahina Butte 94.03 24 IAmb IAmb 02 53 04.5
comp=Z,33nm,1.3s
DAWY Dawson 94.08 20 IAmb IAmb 02 53 04.3
comp=Z,25nm,0.9s
DAWY Dawson 94.08 20 P **P** **02 53 03.3 +0.7**
baz=309,SNR=29
Q23K Middleton Isla 94.10 26 P **P** **02 53 03.2 +0.5**
baz=302
J29N Klondike Camp 94.22 20 IAmb IAmb 02 53 05.5
comp=Z,25nm,0.8s
J29N Klondike Camp 94.22 20 P **P** **02 53 04.3 +1.0**
baz=310,SNR=11
M27K Edge Creek, AK 94.24 23 IAmb IAmb 02 53 06.3
comp=Z,34nm,1.1s
M27K Edge Creek, AK 94.24 23 P **P** **02 53 04.5 +1.0**

	baz=307,SNR=12							
I30M	**Mount Dempster**	**94.31**	**19**	IAmb	IAmb	02 53 05.2		
	comp=Z,28nm,0.8s							
I30M	**Mount Dempster**	**94.31**	**19**	P	**P**	**02 53 03.8**	**+0.1**	
	baz=312,SNR=28							
MCARA	**McCarthy VSAT**	**94.38**	**24**	P	**P**	**02 53 05.2**	**+1.3**	
	baz=306,SNR=9.1							
C36M	**Paulatuk**	**94.47**	**12**	IAmb	IAmb	02 53 23.4		
	comp=Z,26nm,0.8s							
C36M	**Paulatuk**	**94.47**	**12**	P	**P**	**02 53 04.2**	**0.0**	
	baz=324,SNR=15							
H31M	**Peel River**	**94.53**	**18**	P	**P**	**02 53 05.0**	**+0.3**	
	baz=314							
BVCY	**Beaver Creek**	**94.58**	**22**	P	**P**	**02 53 05.9**	**+1.0**	
	baz=308,SNR=5.9							
CRQE	**Cirque**	**94.72**	**24**	P	**P**	**02 53 06.3**	**+0.7**	
	baz=306							
J30M	**Hart River**	**94.76**	**19**	P	**P**	**02 53 06.5**	**+0.7**	
	baz=312							
K29M	**Barlow Dome**	**94.85**	**20**	IAmb	IAmb	02 53 08.2		
	comp=Z,21nm,1.0s							
K29M	**Barlow Dome**	**94.85**	**20**	P	**P**	**02 53 07.2**	**+0.9**	
	baz=311							
L29M	**L29M**	**95.12**	**21**	IAmb	IAmb	02 53 09.8		
	comp=Z,30nm,0.9s							
L29M	**L29M**	**95.12**	**21**	P	**P**	**02 53 08.4**	**+1.0**	
	baz=310,SNR=13							
YUK3	**Moose Creek**	**95.12**	**23**	P	**P**	**02 53 08.3**	**+0.7**	
	baz=308							
CTG	**Chitna Glacier**	**95.28**	**23**	P	**P**	**02 53 09.1**	**+0.8**	
	baz=307,SNR=5.1							
CTGM	**Chitina Glacie**	**95.28**	**23**	IAmb	IAmb	02 53 10.7		
	comp=Z,21nm,0.9s							
M29M	**Somme Creek**	**95.43**	**21**	IAmb	IAmb	02 53 11.3		
	comp=Z,20nm,1.0s							
M29M	**Somme Creek**	**95.43**	**21**	P	**P**	**02 53 10.0**	**+1.1**	
	baz=310							
ELIB	**Princess Elisa**	**95.52**	**197**	*d*P	**P**	**02 53 10.1**	**+1.1**	
	comp=Z,9.2nm,0.8s							
MAYO	**Mayo, Yukon**	**95.56**	**20**	P	**P**	**02 53 10.8**	**+1.4**	
	baz=312							
YUK8	**Steele Glacier**	**95.69**	**23**	P	**P**	**02 53 11.1**	**+0.8**	
	baz=308							
M30M	**Minto, Yukon**	**95.94**	**21**	IAmb	IAmb	02 53 13.2		
	comp=Z,13nm,0.8s							
M30M	**Minto, Yukon**	**95.94**	**21**	P	**P**	**02 53 12.1**	**+0.9**	
	baz=311,SNR=12							
YUK4	**Talbot Arm**	**96.07**	**22**	P	**P**	**02 53 12.6**	**+0.6**	
	baz=310							
PINM	**Pinnacle**	**96.24**	**24**	P	**P**	**02 53 13.3**	**+0.8**	
	baz=308							
YUK6	**Outpost Mounta**	**96.43**	**23**	P	**P**	**02 53 14.1**	**+0.4**	
	baz=310							
HYT	**Haines Junctio**	**96.83**	**22**	P	**P**	**02 53 15.6**	**+0.2**	
	baz=310							
M31M	**Drury Creek, Y**	**97.02**	**20**	IAmb	IAmb	02 53 17.7		
	comp=Z,16nm,1.1s							
M31M	**Drury Creek, Y**	**97.02**	**20**	P	Pdif	02 53 16.4	+0.3	
	baz=314,SNR=6.5							
N31M	**Braeburn, Yuko**	**97.02**	**21**	P	Pdif	02 53 16.4	+0.3	
	baz=312,SNR=9.7							
FARO	**Faro, Yukon**	**97.35**	**20**	P	Pdif	02 53 17.7	+0.2	
	baz=314							
O30N	**Mendenhall**	**97.39**	**22**	P	Pdif	02 53 18.4	+0.6	
	baz=312,SNR=8.7							
VNDA	**Vanda**	**97.48**	**168**	P	**P**	**02 53 17.6**	**0.0**	
	comp=Z,2.6nm,0.5s,baz=308,slow=7.9,SNR=7.5							
	comp=Z,2.6nm,0.5s							
P30M	**Million Dollar**	**97.50**	**23**	P	Pdif	02 53 18.8	+0.5	
	baz=311							
P29M	**Windy Craggy**	**97.52**	**23**	P	Pdif	02 53 18.8	+0.5	
	baz=310							
WHY	**Whitehorse**	**97.90**	**22**	IAmb	IAmb	02 53 21.7		
	comp=Z,26nm,1.5s							
WHY	**Whitehorse**	**97.90**	**22**	P	Pdif	02 53 20.6	+0.5	
	baz=313							
N32M	**Quiet Lake**	**98.20**	**21**	IAmb	IAmb	02 53 23.7		
	comp=Z,38nm,1.2s							
N32M	**Quiet Lake**	**98.20**	**21**	P	Pdif	02 53 21.8	+0.5	
	baz=315							
SKAG	**Skagway**	**98.55**	**23**	P	Pdif	02 53 23.8	+1.0	
	baz=312							
P33M	**Teslin, Yukon**	**98.95**	**21**	P	Pdif	02 53 25.7	+0.9	
	baz=315							
P32M	**Atlin**	**99.06**	**22**	P	**Pdif**	**02 53 25.9**	**+0.6**	
	baz=314							
TGTN	**Hyland Airport**	**99.51**	**19**	P	**Pdif**	**02 53 28.1**	**+0.8**	
	baz=319							
WRGLY	**Wrigley**	**99.57**	**16**	P	**Pdif**	**02 53 28.2**	**+0.9**	
	baz=324							
PMOZ	**Porto Moniz, M**	**99.83**	**307**	*e*LR	LR	03 23 32.6		
	comp=Z,866nm,20.0s							
R33M	**Jennings River**	**100.19**	**21**	P	**Pdif**	**02 53 30.9**	**+0.5**	
	baz=316							
WTLY	**Watson Lake, Y**	**100.41**	**20**	P	**Pdif**	**02 53 32.2**	**+0.9**	
	baz=318							
DLBC	**Dease Lake**	**101.23**	**22**	P	**Pdif**	**02 53 35.9**	**+1.0**	
	baz=317							
CRAG	**Craig**	**102.16**	**25**	P	**Pdif**	**02 53 39.6**	**+0.6**	
	baz=314							
QSPA	**South Pole Qui**	**102.21**	**180**	P	**Pdif**	**02 53 40.4**	**+1.3**	
	comp=Z,4.1nm,1.0s,baz=300,slow=3.3,SNR=5.4							
QSPA				PKiKP	**PKiKP**	**02 58 00.4**	**-0.3**	
	comp=Z,3.5nm,0.8s,baz=283,slow=1.7,SNR=2.6							
QSPA				PKKPbc	**PKKPbc**	**03 09 42.0**	**-3.0**	
	comp=Z,1.4nm,0.4s,baz=123,slow=1.9,SNR=5.7							
YKA	**Yellowknife Ar**	**102.34**	**13**	P	**Pdif**	**02 53 40.1**	**+0.4**	
	comp=Z,1.2nm,0.9s,baz=324,slow=3.9,SNR=14							
YKA				PP	**PP**	**02 57 50.6**	**-1.4**	
	comp=Z,1.3nm,1.0s,baz=329,slow=7.8,SNR=4.5							
YKA				PKKPbc	**PKKPbc**	**03 09 40.4**	**-3.1**	
	comp=Z,1.9nm,0.9s,baz=152,slow=2.5,SNR=16							
V35K	**Ketchikan**	**102.87**	**24**	P	**Pdif**	**02 53 42.8**	**+0.6**	
	baz=315							
SCHQ	**Schefferville**	**110.97**	**348**	PKKPbc	PKKPbc	03 09 13.1	-3.6	
	comp=Z,4.9nm,0.7s,baz=252,slow=1.8,SNR=10							
SCHQ				PKKPab	**PKKPab**	**03 09 23.7**	**-3.6**	
	comp=Z,1.9nm,0.5s,baz=241,slow=4.8,SNR=8.2							
NEW	**Newport**	**113.98**	**22**	P	**PKiKP**	**02 58 23.8**	**+0.5**	
	baz=328							
J05D	**Fort Rock, OR**	**116.38**	**27**	PKPdf	**PKiKP**	**02 58 28.4**	**+0.2**	
EGMT	**Eagleton**	**116.57**	**17**	P	**PKiKP**	**02 58 28.8**	**+0.4**	
	baz=335							
ULM	**Lac du Bonnet**	**117.19**	**6**	PKP	**PKPdf**	**02 58 28.2**	**-1.2**	
	comp=Z,7.5nm,0.7s,baz=346,slow=2.8,SNR=15							
ULM				PKKPbc	**PKKPbc**	**03 08 52.5**	**-3.0**	
	comp=Z,9.8nm,0.6s,baz=170,slow=3.3,SNR=26							
ULM				PKKPab	**PKKPab**	**03 08 56.0**	**-3.7**	
	comp=Z,10nm,0.7s,baz=194,slow=3.8,SNR=15							
DGMT	**Dagmar**	**117.55**	**13**	P	**PKiKP**	**02 58 31.1**	**+0.9**	
	baz=341							
BOZ	**Bozeman (W)**	**118.17**	**19**	P	**PKiKP**	**02 58 32.4**	**+0.7**	
	baz=332							
LAO	**LASA Array**	**118.75**	**15**	P	**PKiKP**	**02 58 33.9**	**+1.3**	
	baz=338							
HLID	**Hailey**	**118.97**	**23**	P	**PKiKP**	**02 58 33.9**	**+0.6**	
	baz=329							
MDND	**Maddock**	**119.03**	**10**	P	**PKiKP**	**02 58 33.5**	**+0.4**	
	baz=346							
RLMT	**Red Lodge**	**119.34**	**18**	P	**PKiKP**	**02 58 34.7**	**+0.7**	
	baz=335							
PPT2	**Papeete2**	**119.45**	**103**	*e*LR	LR	03 35 12.5		
	comp=Z,187nm,23.5s							
H17A	**Grant Village**	**119.58**	**19**	P	**PKiKP**	**02 58 35.6**	**+1.1**	
	baz=333							
TBI	**Tubuai**	**119.84**	**110**	*e*LR	LR	03 35 09.1		
	comp=Z,923nm,30.8s							
EYMN	**Ely**	**119.85**	**4**	P	**PKiKP**	**02 58 35.1**	**+0.4**	
	baz=355,SNR=7.9							
BW06	**Boulder Array**	**121.37**	**19**	P	**PKPdf**	**02 58 38.0**	**+0.1**	
	baz=334,SNR=16							
PDAR	**Pinedale Array**	**121.37**	**19**	PKP	**PKPdf**	**02 58 37.8**	**-0.2**	
	comp=Z,6.5nm,0.8s,baz=53,slow=1.2,SNR=60							
PDAR				SKP	**SKPdf**	**03 02 07.4**	**0.0**	
	comp=Z,2.1nm,1.0s,baz=0.0,slow=1.5,SNR=4.4							
PDAR				PKKPbc	**PKKPbc**	**03 08 37.5**	**-2.8**	
	comp=Z,2.7nm,0.5s,baz=144,slow=5.6,SNR=45							
NVAR	**Mina Array Bea**	**121.59**	**29**	PKP	**PKiKP**	**02 58 39.5**	**+0.9**	
	comp=Z,11nm,0.6s,baz=310,slow=1.9,SNR=81							
NVAR				SKP	**SKPdf**	**03 02 07.6**	**-0.3**	
	comp=Z,2.9nm,0.9s,baz=338,slow=0.9,SNR=5.4							
RSSD	**Black Hills**	**121.69**	**14**	PKPdf	**PKPdf**	**02 58 38.4**	**-0.1**	
RSSD	**Black Hills**	**121.69**	**14**	P	**PKiKP**	**02 58 38.7**	**0.0**	
	baz=340							
RSSD	**Black Hills**	**121.69**	**14**	PKiKP	**PKPdf**	**02 58 38.4**	**-0.1**	
LBNH	**Lisbon**	**122.07**	**347**	P	**PKiKP**	**02 58 39.2**	**+0.1**	
	baz=17							
LONY	**Lake Ozonia**	**122.22**	**350**	P	**PKiKP**	**02 58 39.4**	**0.0**	
	baz=14							
K22A	**Casper**	**122.40**	**17**	P	**PKPdf**	**02 58 39.9**	**0.0**	
	baz=337,SNR=5.5							
SUSD	**Miller**	**122.44**	**10**	P	**PKiKP**	**02 58 40.2**	**+0.3**	
	baz=346							
SPMN	**Marine on St.**	**122.47**	**5**	P	**PKiKP**	**02 58 40.3**	**+0.4**	
	baz=353							
DUG	**Dugway, Tooele**	**122.47**	**23**	P	**PKiKP**	**02 58 40.5**	**+0.3**	
	baz=330,SNR=15							
R11B	**Troy Canyon, C**	**122.89**	**27**	P	**PKiKP**	**02 58 41.5**	**+0.4**	
	baz=326,SNR=35							
GLMI	**Grayling**	**123.08**	**358**	P	**PKiKP**	**02 58 41.2**	**+0.1**	
	baz=2.6							
GRAC	**Grapevine Rang**	**123.18**	**29**	P	**PKiKP**	**02 58 41.8**	**+0.2**	
	baz=324							
SMMC	**Simmler**	**123.19**	**32**	P	**PKiKP**	**02 58 42.0**	**+0.3**	
	baz=320							
VES	**Vestal, Richgr**	**123.25**	**31**	P	**PKiKP**	**02 58 41.7**	**0.0**	
	baz=322							
CWC	**Cottonwood Cre**	**123.28**	**30**	P	**PKiKP**	**02 58 41.9**	**0.0**	
	baz=323							
PKM	**Mcpherson Peak**	**123.62**	**32**	P	**PKiKP**	**02 58 42.7**	**0.0**	
	baz=320							
HRV	**Adam Dziewonsk**	**123.64**	**346**	P	**PKiKP**	**02 58 42.5**	**+0.3**	
	baz=18							
ISA	**Isabella, Lake**	**123.70**	**31**	P	**PKiKP**	**02 58 42.8**	**+0.1**	
	baz=322							
TPNV	**Topopah Spring**	**123.74**	**28**	P	**PKiKP**	**02 58 43.0**	**+0.2**	
	baz=325,SNR=8.2							
FURC	**Furnace Creek,**	**123.84**	**29**	P	**PKiKP**	**02 58 43.7**	**+0.9**	
	baz=324							
MPMC	**Manual Prospec**	**123.87**	**30**	P	**PKiKP**	**02 58 43.7**	**+0.6**	
	baz=323,SNR=24							
ARVC	**Arvin**	**123.94**	**31**	P	**PKiKP**	**02 58 43.4**	**+0.4**	
	baz=322							
L61B	**Northampton**	**123.94**	**347**	P	**PKiKP**	**02 58 43.3**	**+0.5**	
	baz=17							
SBC	**Santa Barbara**	**124.01**	**33**	P	**PKiKP**	**02 58 43.8**	**+0.6**	
	baz=320							
O20A	**White River Ci**	**124.17**	**20**	P	**PKiKP**	**02 58 43.9**	**+0.3**	
	baz=335,SNR=21							
N23A	**Red Feather La**	**124.19**	**17**	P	**PKiKP**	**02 58 43.9**	**+0.1**	
	baz=337							
LRMC	**Laurel Mtn Rad**	**124.24**	**30**	P	**PKiKP**	**02 58 43.9**	**+0.1**	
	baz=323							
EDW2	**Edwards Air Fo**	**124.56**	**31**	P	**PKiKP**	**02 58 45.0**	**+0.7**	
	baz=322,SNR=8.0							
SHOC	**Shoshone, Teco**	**124.58**	**29**	P	**PKiKP**	**02 58 44.7**	**+0.4**	
	baz=324							
GSC	**Goldstone, Bar**	**124.81**	**30**	P	**PKiKP**	**02 58 45.3**	**+0.3**	
	baz=324,SNR=10							
BINY	**Binghamton**	**124.82**	**350**	P	**PKiKP**	**02 58 44.7**	**+0.1**	
	baz=13							
JFWS	**Jewell Farm**	**124.94**	**3**	P	**PKiKP**	**02 58 45.3**	**+0.5**	
	baz=356							
TUQ	**Turquoise Moun**	**125.12**	**29**	P	**PKiKP**	**02 58 46.0**	**+0.4**	
	baz=325							
OGNE	**Ogallala**	**125.17**	**14**	P	**PKiKP**	**02 58 45.5**	**0.0**	
	baz=342							
BFSC	**Mount Baldy Ra**	**125.23**	**31**	P	**PKiKP**	**02 58 46.0**	**+0.1**	
	baz=322							
ISCO	**Idaho Springs**	**125.29**	**18**	P	**PKiKP**	**02 58 46.1**	**0.0**	
	baz=323							
FMP	**Fort Macarthur**	**125.32**	**32**	P	**PKiKP**	**02 58 46.2**	**+0.4**	
	baz=322							
HEC	**Hector,Ludlow**	**125.42**	**30**	P	**PKiKP**	**02 58 47.0**	**+0.9**	
	baz=324,SNR=9.1							
ERPA	**Erie**	**125.45**	**354**	P	**PKiKP**	**02 58 45.7**	**-0.2**	
	baz=8.2,SNR=5.3							
BGNE	**Belgrade**	**125.53**	**10**	P	**PKiKP**	**02 58 46.0**	**-0.1**	
	baz=346,SNR=6.7							
BBRC	**Big Bear Solar**	**125.58**	**31**	P	**PKiKP**	**02 58 47.1**	**+0.4**	
	baz=323							
PAL	**Palisades**	**125.58**	**348**	P	**PKiKP**	**02 58 46.0**	**-0.1**	
	baz=16							
ODNJ	**Ogdensburg**	**125.65**	**349**		**PKiKP**	**02 58 46.3**	**+0.1**	
SCIA	**State Center**	**125.72**	**6**	P	**PKiKP**	**02 58 46.7**	**+0.3**	
	baz=352							
L44A	**Lake County Fo**	**125.75**	**1**	P	**PKiKP**	**02 58 46.4**	**0.0**	
	baz=359							
SCI2	**San Clemente I**	**125.76**	**33**	P	**PKiKP**	**02 58 46.8**	**+0.1**	
	baz=321							
GMRC	**Granite Mounta**	**125.78**	**29**	P	**PKiKP**	**02 58 47.6**	**+0.7**	
	baz=325,SNR=15							
MURC	**Murrieta**	**125.97**	**31**	P	**PKiKP**	**02 58 48.1**	**+0.9**	
	baz=323,SNR=6.8							
M53A	**WI Miller and**	**126.19**	**354**	P	**PKPdf**	**02 58 46.9**	**0.0**	
	baz=7.5							
Q24A	**Divide**	**126.20**	**18**	P	**PKPdf**	**02 58 47.5**	**0.0**	
	baz=338							
BELC	**Belle Mtn. Jos**	**126.25**	**30**	P	**PKiKP**	**02 58 48.2**	**+0.3**	
	baz=324,SNR=7.4							
NEE2	**Needles Airpor**	**126.28**	**28**	P	**PKiKP**	**02 58 48.3**	**+0.6**	
	baz=326							
PFO	**Pinyon Flats O**	**126.33**	**31**	P	**PKiKP**	**02 58 48.8**	**+0.8**	
	baz=323,SNR=5.9							
TPFO	**Pinon Flats**	**126.34**	**31**	P	**PKiKP**	**02 58 48.9**	**+0.8**	
	baz=323,SNR=6.2							
IRM	**Iron Mountain**	**126.53**	**29**	P	**PKiKP**	**02 58 49.2**	**+0.9**	
	baz=325,SNR=5.5							
109C	**Camp Elliot, M**	**126.58**	**32**	P	**PKiKP**	**02 58 49.1**	**+0.8**	
	baz=322							
SSPA	**Standing Stone**	**126.64**	**351**	P	**PKiKP**	**02 58 48.8**	**+0.5**	
	baz=11							
MVCO	**Mesa Verde**	**126.70**	**21**	P	**PKiKP**	**02 58 49.1**	**+0.2**	
	baz=333,SNR=8.8							
S22A	**4UR Ranch, Cre**	**126.79**	**20**	P	**PKiKP**	**02 58 49.1**	**+0.1**	
	baz=336,SNR=6.1							
BC3	**Big Chuckawall**	**126.80**	**30**	P	**PKiKP**	**02 58 49.4**	**+0.5**	
	baz=324							
KSCO	**Kaye Shedlock'**	**126.86**	**15**	P	**PKiKP**	**02 58 49.1**	**+0.2**	
	baz=341							
PDMCI	**Parker Dam,Lak**	**126.89**	**28**	P	**PKiKP**	**02 58 49.7**	**+0.8**	
	baz=326,SNR=15							
MONP2	**Monument Peak**	**126.93**	**31**	P	**PKiKP**	**02 58 50.1**	**+0.8**	
	baz=323,SNR=5.4							
WUAZ	**Wupatki**	**127.08**	**25**	P	**PKiKP**	**02 58 50.1**	**+0.6**	
	baz=330							
SWSC	**Sam W. Stewart**	**127.20**	**31**	P	**PKiKP**	**02 58 50.7**	**+1.1**	
	baz=324,SNR=5.0							
SDCO	**Great Sand Dun**	**127.22**	**19**	P	**PKiKP**	**02 58 49.9**	**0.0**	
	baz=337,SNR=8.3							
IKP	**In-Ko-Pah, Jac**	**127.28**	**31**	P	**PKiKP**	**02 58 50.5**	**+0.6**	
	baz=323							
HDIL	**Hopedale**	**127.33**	**2**	P	**PKiKP**	**02 58 49.6**	**0.0**	
	baz=357							
O53A	**New Philadelph**	**127.42**	**355**	P	**PKPdf**	**02 58 49.6**	**+0.2**	
	baz=6.9							
SFIN	**Lafayette**	**127.56**	**0**	P	**PKiKP**	**02 58 49.9**	**-0.2**	
	baz=360,SNR=6.3							
ACSO	**Alum Creek Sta**	**127.58**	**356**	PKPdf	**PKPdf**	**02 58 49.5**	**-0.1**	
ACSO	**Alum Creek Sta**	**127.58**	**356**	P	**PKPdf**	**02 58 49.8**	**+0.1**	
	baz=4.8,SNR=5.6							
O48B	**Farmland**	**127.65**	**358**	P	**PKPdf**	**02 58 49.9**	**+0.1**	
	baz=2.1,SNR=11							
CBKS	**Cedar Bluff**	**127.73**	**13**	P	**PKPdf**	**02 58 50.3**	**+0.3**	
	baz=344							
MCWV	**Mont Chateau**	**127.86**	**353**	P	**PKiKP**	**02 58 50.8**	**+0.1**	
	baz=8.7							
KSU1	**Kansas State U**	**128.04**	**10**	P	**PKiKP**	**02 58 51.2**	**+0.1**	
	baz=348							
W18A	**Petrified Fore**	**128.09**	**24**	P	**PKiKP**	**02 58 52.1**	**+0.5**	
	baz=331,SNR=7.7							
P52A	**Corning**	**128.11**	**355**	P	**PKPdf**	**02 58 50.9**	**+0.2**	
	baz=5.9							
T25A	**Trinidad**	**128.11**	**18**	P	**PKiKP**	**02 58 51.6**	**0.0**	
	baz=338							
P49A	**Miami Univ. Ec**	**128.36**	**358**	P	**PKiKP**	**02 58 51.9**	**+0.1**	
	baz=2.7							
CBN	**Corbin Frederi**	**128.94**	**350**	P	**PKiKP**	**02 58 53.2**	**+0.3**	
	baz=12							
214A	**Organ Pipe Nat**	**129.45**	**29**	P	**PKiKP**	**02 58 54.2**	**0.0**	
	baz=326							
ANMO	**Albuquerque**	**129.46**	**21**	PKPdf	**PKiKP**	**02 58 54.9**	**+0.6**	
ANMO	**Albuquerque**	**129.46**	**21**	P	**PKiKP**	**02 58 54.4**	**+0.1**	
	baz=335							
ANMO	**Albuquerque**	**129.46**	**21**	PKIKP	**PKiKP**	**02 58 54.9**	**+0.6**	
WCI	**Wyandotte Cave**	**129.70**	**359**	PKPdf	**PKPdf**	**02 58 53.3**	**-0.4**	
WCI	**Wyandotte Cave**	**129.70**	**359**	P	**PKiKP**	**02 58 54.5**	**0.0**	
	baz=0.7							
WCI	**Wyandotte Cave**	**129.70**	**359**	PKIKP	**PKPdf**	**02 58 53.3**	**-0.4**	
CCM	**Cathedral Cave**	**129.71**	**4**	PKPdf	**PKPdf**	**02 58 53.4**	**-0.4**	
CCM	**Cathedral Cave**	**129.71**	**4**	P	**PKiKP**	**02 58 54.5**	**0.0**	
	baz=354							
CCM	**Cathedral Cave**	**129.71**	**4**	PKIKP	**PKPdf**	**02 58 53.4**	**-0.4**	
TUC	**Tucson**	**130.07**	**27**		**PKiKP**	**02 58 55.6**	**+0.1**	
TUC	**Tucson**	**130.07**	**27**	P	**PKiKP**	**02 58 56.2**	**+0.7**	
	baz=329							
TUC	**Tucson**	**130.07**	**27**	PKIKP	**PKiKP**	**02 58 55.6**	**+0.1**	
BLA	**Blacksburg**	**130.34**	**353**	P	**PKiKP**	**02 58 55.9**	**+0.1**	
	baz=8.2							
AMTX	**Amarillo**	**131.00**	**16**	P	**PKiKP**	**02 58 57.3**	**0.0**	
	baz=341							
121A	**Cookes Peak, D**	**131.12**	**24**	P	**PKiKP**	**02 58 57.3**	**-0.4**	
	baz=333							
TZTN	**Tazewell**	**131.28**	**356**	P	**PKiKP**	**02 58 57.6**	**-0.1**	
	baz=4.3							
TUL3	**Leonard**	**131.29**	**10**	P	**PKiKP**	**02 58 57.6**	**-0.1**	
	baz=348							
MSTX	**Muleshoe**	**131.54**	**18**	P	**PKiKP**	**02 58 58.2**	**-0.3**	
	baz=339							
WVT	**Waverly**	**131.79**	**1**		**PKPdf**	**02 58 57.3**	**-0.4**	
WVT	**Waverly**	**131.79**	**1**	P	**PKiKP**	**02 58 58.5**	**-0.2**	
	baz=359							
WVT	**Waverly**	**131.79**	**1**	PKIKP	**PKPdf**	**02 58 57.3**	**-0.4**	
WMOK	**Wichita Mounta**	**131.85**	**13**	P	**PKiKP**	**02 58 58.6**	**-0.4**	
	baz=344							
CNNC	**Cliffs of the**	**131.92**	**350**	P	**PKiKP**	**02 58 58.7**	**-0.3**	
	baz=12							
KMSC	**Kings Mountain**	**132.49**	**354**	P	**PKiKP**	**02 58 59.9**	**-0.3**	
	baz=7.3							
MNTX	**Cornudas Mount**	**132.77**	**22**	P	**PKiKP**	**02 59 00.3**	**-0.5**	
	baz=335,SNR=10							
MIAR	**Mount Ida**	**132.95**	**8**	P	**PKPdf**	**02 59 00.4**	**+0.5**	
	baz=351,SNR=7.3							
OXF	**Oxford**	**133.35**	**3**	P	**PKiKP**	**02 59 01.6**	**-0.3**	
	baz=357							
ABTX	**Abilene, Hawle**	**133.67**	**15**	P	**PKiKP**	**02 59 02.5**	**-0.2**	
	baz=343							
NHSC	**New Hope**	**134.36**	**352**	P	**PKiKP**	**02 59 03.6**	**-0.4**	
	baz=9.1							
GOGA	**Godfrey**	**134.39**	**356**	P	**PKiKP**	**02 59 03.7**	**-0.4**	
	baz=4.6							
TXAR	**Lajitas Array**	**135.53**	**21**	PKhKP	PKPpre	02 58 51.3		
	comp=Z,0.7nm,0.7s,baz=95,slow=1.0,SNR=5.5							
TXAR				PKP	**PKPdf**	**02 59 05.7**	**+0.6**	
	comp=Z,3.1nm,0.8s,baz=197,slow=2.1,SNR=13							
TXAR				SKPbc	**SKPbc**	**03 02 31.2**	**+0.9**	
	comp=Z,8.4nm,0.8s,baz=287,slow=1.5,SNR=21							
NATX	**Nacogdoches**	**135.53**	**9**	P	**PKiKP**	**02 59 06.4**	**-0.1**	
	baz=349							
VBMS	**Vicksburg**	**135.57**	**4**	P	**PKiKP**	**02 59 06.8**	**+0.3**	
	baz=355							
JCT	**Junction City**	**135.66**	**16**	P	**PKiKP**	**02 59 06.9**	**0.0**	
	baz=342							
435B	**Jarrell**	**135.92**	**13**	P	**PKiKP**	**02 59 07.3**	**+0.1**	
	baz=345							
TIGA	**Tifton**	**136.36**	**356**	P	**PKiKP**	**02 59 08.1**	**0.0**	
	baz=4.6							
BRAL	**Brewton**	**136.75**	**0**	P	**PKiKP**	**02 59 09.2**	**+0.3**	
	baz=360							
833A	**Chaparral WMA,**	**137.81**	**16**	P	**PKiKP**	**02 59 11.8**	**+0.6**	
	baz=342							
BDFB	**Brasilia**	**142.15**	**260**	PKhKP	PKPpre	02 59 11.6		
	comp=Z,6.2nm,0.8s,baz=117,slow=4.7,SNR=5.9							
BDFB				PKP	**PKPdf**	**02 59 17.8**	**+0.3**	
	comp=Z,8.4nm,0.7s,baz=140,slow=5.4,SNR=9.0							
CELP	**Cerrillos**	**143.73**	**326**		PKPbc	02 59 17.6	-0.1	
PLTB	**Pedras Altas**	**143.79**	**232**	PKPdf	PKPab	02 59 17.2	+0.4	
ITAB	**Concordia**	**144.22**	**240**	PKPdf	PKPbc	02 59 19.5	+0.5	
SDDR	**Presa de Saban**	**145.28**	**333**		**PKPdf**	**02 59 23.0**	**+0.2**	
AY01	**Puyuhuapi**	**145.76**	**198**		**PKPbc**	**02 59 23.2**	**-0.1**	
TRQA	**Tornquist**	**146.08**	**217**	PKPdf	**PKPbc**	**02 59 24.4**	**-0.2**	
TRQA	**Tornquist**	**146.08**	**217**	PKP2	**PKPbc**	**02 59 24.4**	**-0.2**	
ITQB	**Itaqui**	**147.03**	**234**	PKPdf	**PKPdf**	**02 59 26.0**	**+0.6**	
TEIG	**Tepich**	**147.62**	**2**		**PKPdf**	**02 59 27.3**	**+0.6**	
LL06	**Lincomilla**	**148.06**	**199**	PKPdf	**PKPdf**	**02 59 28.0**	**+1.3**	
PLCA	**Paso Flores**	**148.27**	**204**	PKPdf	**PKPdf**	**02 59 28.4**	**+1.1**	
PLCA	**Paso Flores**	**148.27**	**204**

	baz=8.0								
ECS	**Chishang**	**1.27**	**355**	*e*P		**Pn**	**02 42 53.0**	**-0.8**
	baz=340								
SCST	**Cishan**	**1.31**	**324**	*e*P		**Pb**	**02 42 56.1**	**+0.4**
	baz=336								
EHD	**Haiduan**	**1.32**	**355**	*e*P		**Pn**	**02 42 53.2**	**-1.4**
	baz=340								
EHD				*e*S		**Sn**	**02 43 10.3**	**-1.1**
	baz=340								
SLGT	**Liugui**	**1.33**	**331**	*e*P		**Pb**	**02 42 55.3**	**-0.7**
	baz=343								
SLGT				*e*S		**Sb**	**02 43 14.8**	**+2.2**
	baz=343								
CHKH	**Chenggong**	**1.36**	**2**	*e*P		**Pn**	**02 42 54.7**	**-0.4**
	baz=11								
CHKH				*e*S		**Sn**	**02 43 12.8**	**+0.4**
	baz=11								
ELDTW	**Lidau**	**1.39**	**348**	*e*P		**Pn**	**02 42 55.3**	**-0.3**
	baz=347								
SGST	**Jiashian**	**1.43**	**331**	*e*P		**Pb**	**02 42 57.3**	**-0.5**
	baz=343								
SGST				*e*S		**Sb**	**02 43 17.6**	**+2.0**
	baz=343								
STYH	**Taoyuan**	**1.44**	**339**	*e*P		**Pn**	**02 42 56.2**	**+0.1**
	baz=350								
STYH				*e*S		**Sb**	**02 43 17.1**	**+1.4**
	baz=350								
TWF1	**Yuli**	**1.52**	**359**	*e*P		**Pn**	**02 42 56.6**	**-0.7**
	baz=346								
CHN1	**Nanshi**	**1.55**	**331**	*e*P		**Pb**	**02 42 59.8**	**+0.1**
	baz=331								
CHN1				*e*S		**Sb**	**02 43 21.1**	**+2.2**
	baz=331								
YULB	**Yu-li**	**1.56**	**359**	*e*P		**Pn**	**02 42 57.2**	**-0.7**
	baz=347								
WTP	**Ta-pu**	**1.57**	**335**	*e*P		**Pb**	**02 42 59.7**	**-0.4**
	baz=345								
WTP				*e*S		**Sb**	**02 43 21.2**	**+1.7**
	baz=345								
TPUB	**Ta-pu**	**1.61**	**336**	*e*P		**Pb**	**02 42 59.7**	**-1.1**
	baz=346								
TPUB				*e*S		**Sb**	**02 43 21.4**	**+0.7**
	baz=346								
TWK	**Hsinying**	**1.64**	**332**	*e*P		**Pb**	**02 43 00.4**	**-0.8**
	baz=332								
TWK				*e*S		**Sb**	**02 43 23.0**	**+1.5**
	baz=332								
HGSD	**Ruisui**	**1.66**	**3**	*e*P		**Pn**	**02 43 00.1**	**+0.8**
	baz=10.0								
HGSD				*e*S		**Sb**	**02 43 21.7**	**-0.5**
	baz=10.0								
WCKO	**Fanlu**	**1.75**	**337**	*e*P		**Pb**	**02 43 02.1**	**-1.0**
	baz=337								
WCKO				*e*S		**Sb**	**02 43 25.4**	**+0.8**
	baz=337								
ALS	**Alishan**	**1.75**	**344**	*e*P		**Pn**	**02 43 01.6**	**+0.9**
	baz=343								
ALS				*e*S		**Sb**	**02 43 25.8**	**+0.8**
	baz=343								
CHN5	**Tsauling**	**1.87**	**341**	*e*P		**Pb**	**02 43 04.0**	**-1.2**
	baz=341								
CHN5				*e*S		**Sb**	**02 43 29.3**	**+1.1**
	baz=341								
WARBT	**Fenglin Townsh**	**1.89**	**1**	*e*P		**Pn**	**02 43 02.3**	**0.0**
	baz=350								
WARBT				*e*S		**Sn**	**02 43 26.0**	**+0.7**
	baz=350								
WHYT	**Xinyi Township**	**1.92**	**347**	*e*P		**Pb**	**02 43 04.3**	**-1.7**
	baz=346								
WHYT				*e*S		**Sb**	**02 43 29.9**	**+0.3**
	baz=346								
VWDT	**VWDT**	**1.93**	**355**	*e*P		**Pn**	**02 43 03.0**	**+0.1**
	baz=3.0								
SHUL	**Shoufeng**	**1.97**	**6**	*e*P		**Pn**	**02 43 04.2**	**+0.8**
	baz=15								
SHUL				*e*S		**Sn**	**02 43 29.4**	**+2.1**
	baz=15								
ESL	**Shilin**	**1.98**	**3**	*e*P		**Pn**	**02 43 04.1**	**+0.4**
	baz=1.0								
ESL				*e*S		**Sn**	**02 43 27.3**	**-0.3**
	baz=1.0								
SSLB	**Suanglung**	**1.99**	**350**	*e*P		**Pn**	**02 43 04.6**	**+0.9**
	baz=349								
SSLB				*e*S		**Sb**	**02 43 30.6**	**-1.0**
	baz=349								
SMLT	**Sun Moon Lake**	**2.09**	**349**	*e*P		**Pb**	**02 43 07.3**	**-1.7**
	baz=348								
SMLT				*e*S		**Sb**	**02 43 34.7**	**+0.1**
	baz=348								
WDGT	**Dungji**	**2.11**	**313**	*e*P		**Pn**	**02 43 05.4**	**+0.1**
	baz=314								
WDGT				*e*S		**Sn**	**02 43 30.8**	**0.0**
	baz=314								
TYC	**Yuchr**	**2.12**	**348**	*e*P		**Pb**	**02 43 07.7**	**-1.8**
	baz=348								
TYC				*e*S		**Sb**	**02 43 35.0**	**-0.3**
	baz=348								
WUSB	**Renai**	**2.17**	**355**	*e*P		**Pn**	**02 43 06.9**	**+0.6**
	baz=3.0								
WUSB				*e*S		**Sn**	**02 43 34.0**	**+1.6**
	baz=3.0								
LXIB	**Xiulin Townshi**	**2.19**	**2**	*e*P		**Pn**	**02 43 06.2**	**-0.4**
LXIB				*e*S		**Sn**	**02 43 32.8**	**-0.2**
CHGB	**Renai**	**2.23**	**356**	*e*P		**Pn**	**02 43 08.1**	**+0.8**
	baz=6.0								
CHGB				*e*S		**Sn**	**02 43 35.0**	**+0.9**
	baz=6.0								
WCS	**Beigang Elemen**	**2.26**	**350**	*e*P		**Pn**	**02 43 08.4**	**+1.0**
	baz=349								
WCS				*e*S		**Sb**	**02 43 38.3**	**-1.0**
	baz=349								
WHF	**Hehuan Shan**	**2.31**	**358**	*e*P		**Pn**	**02 43 09.2**	**+0.6**
	baz=357								
WHF				*e*S		**Sn**	**02 43 35.9**	**-0.5**
	baz=357								
PHUB	**P'eng-hu**	**2.34**	**316**	*e*P		**Pn**	**02 43 08.2**	**-0.4**
	baz=317								
PHUB				*e*S		**Sn**	**02 43 36.8**	**+0.3**
	baz=317								
ETLH	**Xiulin Townshi**	**2.38**	**3**	*e*P		**Pn**	**02 43 10.5**	**+1.4**
	baz=2.0								
EOS4	**EOS4**	**2.46**	**21**	*e*P		**Pn**	**02 43 11.6**	**+1.8**
	baz=19								
EOS4				*e*S		**Sn**	**02 43 40.2**	**+1.3**
	baz=19								
WHP	**Taichung City**	**2.47**	**352**	*e*P		**Pb**	**02 43 13.4**	**-2.1**
	baz=351								
WHP				*e*S		**Sb**	**02 43 44.9**	**-0.6**
	baz=351								
EOS3	**EOS3**	**2.61**	**20**	*e*P		**Pn**	**02 43 13.4**	**+1.3**
	baz=16								
EOS3				*e*S		**Sn**	**02 43 44.6**	**+1.6**
	baz=16								
LATG	**Datong**	**2.71**	**4**	*e*P		**Pn**	**02 43 15.3**	**+1.7**
	baz=2.0								
LATG				*e*S		**Sn**	**02 43 48.2**	**+2.6**
	baz=2.0								
NFF	**Wufeng Townshi**	**2.80**	**356**	*e*P		**Pn**	**02 43 17.1**	**+2.2**
	baz=342								
NFF				*e*S		**Sb**	**02 43 52.8**	**-2.3**
	baz=342								
ENTT	**Nioudou**	**2.81**	**4**	*e*P		**Pn**	**02 43 16.2**	**+1.2**
	baz=3.0								
YHNB	**Yeheng**	**2.83**	**1**	*e*P		**Pn**	**02 43 16.7**	**+1.3**
	baz=11								
YHNB				*e*S		**Sn**	**02 43 48.3**	**-0.4**
	baz=11								
NSK	**Sanguang**	**2.84**	**0**	*e*P		**Pn**	**02 43 17.3**	**+1.8**
	baz=11								
NSK				*e*S		**Sn**	**02 43 50.3**	**+1.4**
	baz=11								
FUSB	**Fushanzhiwuyua**	**2.93**	**4**	*e*P		**Pn**	**02 43 19.3**	**+2.6**
	baz=3.0								
FUSB				*e*S		**Sn**	**02 43 52.9**	**+1.7**
	baz=3.0								
NWLT	**Wulai**	**2.94**	**3**	*e*P		**Pn**	**02 43 18.5**	**+1.6**
	baz=2.0								
NWLT				*e*S		**Sn**	**02 43 52.3**	**+0.9**
	baz=2.0								
JYNG	**Yonagunijimaku**	**3.01**	**29**	*e*S		**Sn**	**02 43 53.8**	**+0.9**
YOJ	**Yonaguni jima**	**3.04**	**30**	P		**Pn**	**02 43 18.4**	**+0.2**
HATJ	**Hateruma jima**	**3.18**	**45**	P		**Pn**	**02 43 20.7**	**+0.6**
HATJ				*e*S		**Sn**	**02 43 57.2**	**0.0**
JKRS	**Kuro-shima**	**3.44**	**45**	P		**Pn**	**02 43 24.3**	**+0.7**
JKRS				S		**Sn**	**02 44 03.8**	**+0.2**
JIJ	**Ishigaki jima**	**3.62**	**45**	P		**Pn**	**02 43 26.4**	**+0.4**
JIJ				*e*S		**Sn**	**02 44 06.7**	**-1.2**
KNM	**Kinmen**	**3.72**	**315**	*e*P		**Pn**	**02 43 27.9**	**+0.4**
	baz=315								
KNMB	**Chin-men Tao**	**3.78**	**315**	*e*P		**Pn**	**02 43 28.4**	**+0.1**
	baz=316								
KNMB				*e*S		**Sn**	**02 44 10.0**	**-1.9**
	baz=316								
JISG	**Ishigakijimahi**	**3.88**	**44**	*e*P		**Pn**	**02 43 30.4**	**+0.8**
JISG				S		**Sn**	**02 44 13.8**	**-0.6**
JTJ	**Tarama**	**4.18**	**47**	P		**Pn**	**02 43 34.5**	**+0.8**
JTJ				S		**Sn**	**02 44 22.3**	**+0.6**
AXDP	**Jialang**	**4.35**	**315**	*e*P		**Pn**	**02 43 36.5**	**+0.3**
	baz=317								
AXDP				*e*S		**Sn**	**02 44 26.6**	**+0.5**
	baz=317								
MHZQ	**Yeshan**	**4.75**	**334**	*e*P		**Pn**	**02 43 41.3**	**-0.4**
	baz=335								
MHZQ				*e*S		**Sn**	**02 44 35.2**	**-0.7**
	baz=335								

*IDC **13** 02:50:26.7±0.7, 13°.80N×146°.53E, h0km, mb4.0/18, mbtmp4.0/18, Error ellipse: s-maj=19.3km s-min=16.2km az=120.0*
*NEIC **13** 02:50:29.3±1.2, 13°.7N±0°.1×146°.5E±0°.1, h10km±2km, mb4.6/47, Error ellipse: s-maj=18.9km s-min=15.5km az=213.0*

ISC 13 02:50:28.5±0.6, 13°.8N±0°.1×146°.43E±0°.08, h10km, n73, σ0s72/76, mb4.5/43, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.53**	**264**			**Pb**	**02 50 57.2**	**+0.3**
GUMO	**Guam**	**1.53**	**264**	Pn		**Pb**	**02 50 57.2**	**+0.3**
	120nm,0.3s,baz=115,slow=7.0,SNR=6.1							
GUMO				Sn		**Sg**	**02 51 17.4**	**-0.3**
	140nm,0.3s,baz=220,slow=21,SNR=7.0							
JSD	**Sado**	**25.25**	**345**	P		**P**	**02 55 54.9**	**+0.1**
KSRS	**Korea Array**	**28.79**	**328**	P		**P**	**02 56 26.9**	**+0.2**
	2.0nm,0.7s,baz=143,slow=9.1,SNR=4.0							
	2.0nm,0.7s							
WRA	**Warramunga Arr**	**35.54**	**200**	P		**P**	**02 57 26.0**	**-0.1**
	1.7nm,1.0s,baz=21,slow=9.7,SNR=4.1							
WRA				PcP		**PcP**	**02 59 55.9**	**+0.6**
	0.6nm,0.8s,baz=20,slow=3.6,SNR=2.4							
	1.7nm,1.0s							
ASAR	**Alice Springs**	**39.16**	**198**	P		**P**	**02 57 56.6**	**-0.2**
	1.1nm,0.9s,baz=358,slow=11,SNR=3.3							
ASAR				PcP		**PcP**	**03 00 06.6**	**+0.3**
	0.5nm,0.8s,baz=357,slow=4.6,SNR=1.9							
	1.1nm,0.9s							
STKA	**Stephens Creek**	**45.61**	**186**	P		**P**	**02 58 49.3**	**+0.2**
	1.7nm,0.8s,baz=359,slow=10,SNR=3.9							
	1.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**45.76**	**282**	P		**P**	**02 58 50.7**	**0.0**
	2.1nm,0.3s,baz=80,slow=6.8,SNR=4.5							
	2.1nm,0.3s							
SONM	**Songino Array**	**47.48**	**324**	P		**P**	**02 59 04.4**	**+0.6**
	0.3nm,0.3s,baz=134,slow=9.7,SNR=5.3							
	0.3nm,0.3s							
ANM	**Nome**	**60.47**	**22**	P		**P**	**03 00 39.2**	**+0.9**
ANM				IAmb		IAmb	03 00 52.9	
	comp=Z,5.3nm,1.2s							
F15K	**North Star Dit**	**61.36**	**21**	P		**P**	**03 00 44.0**	**-0.3**
ZALV	**Zalesovo Beam**	**62.37**	**324**	P		**P**	**03 00 52.1**	**+0.7**
ZALV	**Zalesovo Beam**	**62.37**	**324**	P		**P**	**03 00 52.0**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=105,slow=5.2,SNR=4.0							
	comp=Z,1.0nm,0.6s							
MK31	**Makanchi Array**	**62.42**	**316**	P		**P**	**03 00 52.1**	**+0.2**
MKAR	**Makanchi Array**	**62.42**	**316**	P		**P**	**03 00 52.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=88,slow=8.7,SNR=12							
	comp=Z,0.6nm,0.4s							
C16K	**Lisburne Hills**	**62.59**	**18**	P		**P**	**03 00 52.8**	**+0.2**
C16K				IAmb		IAmb	03 00 53.8	
	comp=Z,3.7nm,0.9s							
F17K	**Baldwin Pennin**	**62.93**	**21**	P		**P**	**03 00 55.4**	**+0.6**
H18K	**Honhosa River**	**63.35**	**23**	P		**P**	**03 00 57.9**	**+0.2**
H18K				IAmb		IAmb	03 01 12.3	
	comp=Z,4.5nm,1.1s							
E18K	**Tukpahlearik C**	**63.64**	**20**	P		**P**	**03 00 60.0**	**+0.4**
E18K				IAmb		IAmb	03 01 14.1	
	comp=Z,3.4nm,0.9s							
C18K	**Utukok River**	**64.08**	**19**	P		**P**	**03 01 02.7**	**+0.2**
C18K				IAmb		IAmb	03 01 16.3	
	comp=Z,5.8nm,1.2s							
G19K	**Purcell Mounta**	**64.27**	**22**	P		**P**	**03 01 04.7**	**+0.9**
G19K				IAmb		IAmb	03 01 18.2	
	comp=Z,4.4nm,1.0s							
J20K	**Nowinta River**	**64.60**	**25**	P		**P**	**03 01 06.6**	**+0.7**
E19K	**Redstone River**	**64.80**	**21**	P		**P**	**03 01 08.2**	**+1.0**
E19K				IAmb		IAmb	03 01 22.4	
	comp=Z,3.5nm,0.8s							
C19K	**Lookout Ridge**	**64.81**	**19**	P		**P**	**03 01 08.1**	**+0.8**
C19K				IAmb		IAmb	03 01 09.1	
	comp=Z,4.1nm,0.8s							
D19K	**Kuna River**	**64.98**	**20**	P		**P**	**03 01 08.7**	**+0.3**
D19K				IAmb		IAmb	03 01 09.7	
	comp=Z,3.4nm,0.8s							
F20K	**Avaraart Lake**	**65.15**	**21**	P		**P**	**03 01 10.0**	**+0.6**
IMAR	**Indian Mountai**	**65.44**	**23**	P		**P**	**03 01 11.4**	**0.0**
KURBB	**Kurchatov Arra**	**65.48**	**320**	P		**P**	**03 01 11.2**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=101,slow=6.9,SNR=4.4							
	comp=Z,1.3nm,0.4s							
H21K	**Melozitna Rive**	**65.68**	**23**	P		**P**	**03 01 12.8**	**-0.2**
H21K				IAmb		IAmb	03 01 25.1	
	comp=Z,5.9nm,1.4s							
B20K	**Meade River**	**66.00**	**18**	P		**P**	**03 01 15.7**	**+0.8**
B20K				IAmb		IAmb	03 01 30.9	
	comp=Z,2.9nm,0.8s							
F21K	**Alatna River**	**66.02**	**22**	P		**P**	**03 01 15.4**	**+0.2**
B21K	**Ikpikpuk River**	**66.62**	**19**	P		**P**	**03 01 18.9**	**+0.1**
B21K				IAmb		IAmb	03 01 25.4	
	comp=Z,6.3nm,1.2s							
I23K	**Minto, Yukon-K**	**66.87**	**24**	P		**P**	**03 01 21.6**	**+1.1**
I23K				IAmb		IAmb	03 01 21.7	
	comp=Z,4.0nm,1.1s							
D22K	**Ayikyak River**	**66.94**	**20**	P		**P**	**03 01 21.8**	**+0.8**
D22K				IAmb		IAmb	03 01 23.3	
	comp=Z,6.8nm,1.4s							
G23K	**Bananza Creek**	**67.11**	**23**	P		**P**	**03 01 21.9**	**-0.2**
WRH	**Wood River Hil**	**67.19**	**25**	P		**P**	**03 01 22.5**	**-0.1**
WRH				IAmb		IAmb	03 01 36.3	
	comp=Z,5.6nm,1.0s							
B22K	**Teshekpuk Lake**	**67.29**	**19**	P		**P**	**03 01 23.2**	**+0.1**
B22K				IAmb		IAmb	03 01 24.3	
	comp=Z,4.2nm,0.8s							
ILAR	**Eielson Array**	**67.77**	**25**	P		**P**	**03 01 24.8**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=251,slow=5.8,SNR=11							
	comp=Z,0.9nm,0.8s							
TOLK	**Toolik Lake Re**	**67.92**	**21**	P		**P**	**03 01 28.0**	**+0.8**
TOLK				IAmb		IAmb	03 01 42.0	
	comp=Z,4.5nm,1.1s							
F24K	**Squaw Lake**	**68.16**	**22**	P		**P**	**03 01 29.2**	**+0.5**
F24K				IAmb		IAmb	03 01 48.2	
	comp=Z,6.2nm,1.5s							
D24K	**Happy Valley**	**68.34**	**20**	P		**P**	**03 01 30.9**	**+1.1**
J25K	**Salcha River,**	**68.36**	**26**	P		**P**	**03 01 29.1**	**-1.0**
J26L	**Joseph Creek**	**69.09**	**26**	P		**P**	**03 01 34.5**	**-0.2**
D25K	**Kavik River**	**69.22**	**20**	P		**P**	**03 01 36.3**	**+0.9**
D25K				IAmb		IAmb	03 01 51.2	
	comp=Z,4.1nm,0.9s							
BMAR	**Burnt Mountain**	**69.36**	**23**	P		**P**	**03 01 36.9**	**+0.7**
TABL	**Table Mountain**	**69.47**	**30**	P		**P**	**03 01 37.4**	**+0.2**
L27K	**Beaver Creek,**	**69.57**	**27**	P		**P**	**03 01 37.5**	**-0.1**
L27K				IAmb		IAmb	03 01 45.8	
	comp=Z,7.1nm,1.3s							
BCAR	**Beaver Creek A**	**69.59**	**27**	P		**P**	**03 01 37.9**	**+0.2**
BVAR	**Borovoye Array**	**70.73**	**322**	P		**P**	**03 01 45.0**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=100,slow=8.4,SNR=9.0							
	comp=Z,2.7nm,0.7s							
BRVK	**Borovoye**	**70.80**	**322**	P		**P**	**03 01 44.2**	**-1.0**
BRVK				IAmb		IAmb	03 01 58.8	
	comp=Z,6.6nm,1.4s							
DAWY	**Dawson**	**70.81**	**27**	P		**P**	**03 01 46.0**	**+0.9**
M29M	**Somme Creek**	**71.01**	**28**	P		**P**	**03 01 47.5**	**+1.0**
M29M				IAmb		IAmb	03 01 52.8	
	comp=Z,5.9nm,1.1s							
F28M	**Old Crow**	**71.17**	**23**	P		**P**	**03 01 48.0**	**+0.7**
L29M		**71.24**	**28**	P		**P**	**03 01 49.1**	**+1.3**
L29M				IAmb		IAmb	03 01 50.0	
	comp=Z,3.2nm,0.8s							
HYT	**Haines Junctio**	**71.30**	**30**	P		**P**	**03 01 48.2**	**-0.1**
H29M	**Whitestone**	**71.54**	**24**	P		**P**	**03 01 50.6**	**+1.1**
K29M	**Barlow Dome**	**71.60**	**27**	P		**P**	**03 01 51.2**	**+1.2**
J30M	**Hart River**	**72.19**	**26**	P		**P**	**03 01 54.8**	**+1.1**
G31M	**Satah River**	**73.24**	**24**	P		**P**	**03 02 00.1**	**+0.5**
INK	**Inuvik**	**73.63**	**22**	P		**P**	**03 02 02.0**	**+0.1**
	comp=Z,1.6nm,1.0s,baz=233,slow=6.9,SNR=3.6							
	comp=Z,1.6nm,1.0s							
C36M	**Palautuk**	**77.06**	**21**	P		**P**	**03 02 21.6**	**0.0**
C36M				IAmb		IAmb	03 02 26.2	
	comp=Z,5.0nm,1.1s							
ABKAR	**Akbulak array**	**77.43**	**318**	P		**P**	**03 02 23.8**	**-0.3**
HUMO	**Hull Mountain**	**81.27**	**48**	P		**P**	**03 02 45.4**	**+0.1**
HUMO				IAmb		IAmb	03 02 51.9	
	comp=Z,7.8nm,1.2s							
YKA	**Yellowknife Ar**	**82.01**	**28**	P		**P**	**03 02 47.4**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=285,slow=5.5,SNR=5.8							
	comp=Z,0.3nm,0.6s							
J05D	**Fort Rock, OR**	**82.38**	**47**	P		**P**	**03 02 52.3**	**+1.0**
PINE	**Pine Mountain**	**82.49**	**47**	P		**P**	**03 02 52.9**	**+1.0**
K05A	**Summer Lake**	**82.74**	**48**	P		**P**	**03 02 54.3**	**+1.1**
RES	**Resolute Bay**	**84.03**	**14**	P		**P**	**03 02 59.6**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=125,slow=11,SNR=1.8							
	comp=Z,0.8nm,0.8s							
NVAR	**Mina Array Bea**	**85.63**	**52**	P		**P**	**03 03 08.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=273,slow=4.7,SNR=6.2							
	comp=Z,1.2nm,0.6s							
ARCES	**ARCESS Array B**	**87.38**	**342**	P		**P**	**03 03 14.3**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=82,slow=6.5,SNR=1.6							
	comp=Z,1.8nm,0.8s							
PDAR	**Pinedale Array**	**90.77**	**46**	P		**P**	**03 03 31.1**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=258,slow=4.4,SNR=1.2							
	comp=Z,0.1nm,0.4s							
FINES	**FINESS Array B**	**91.64**	**335**	P		**P**	**03 03 34.3**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=67,slow=6.4,SNR=5.9							
	comp=Z,1.1nm,0.5s							
DBIC	**Dimbokro**	**145.01**	**304**	PKPbc		**PKPab**	**03 10 06.8**	**+0.3**
	comp=Z,5.3nm,1.2s,baz=89,slow=4.9,SNR=1.8							

*IDC **13** 02:50:46.3±1.1, 36°.13N×69°.84E, h0km, mb3.9/11, mbtmp4.0/17, ML3.8/6, MS4.4/1, Error ellipse: s-maj=20.0km s-min=16.6km az=170.0*
*NNC **13** 02:50:55.3±3.8, 36°.57N×69°.48E, h90km±108km, mb3.6, mpv4.0, Error ellipse: s-maj=38.9km s-min=17.5km az=153.0*

ISC 13 02:50:49.7±0.9, 36°.43N±0°.08×69°.60E±0°.07, h10km, n34, σ2s11/41, mb3.8/11, 8C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.71**	**6**	⇑P		**Pn**	**02 52 30.7**	**+2.5**
	2.4nm,0.3s,baz=194,slow=13,SNR=45							
KK31				⇑S		**Sn**	**02 53 44.3**	**-0.3**
	30nm,0.6s,baz=190,slow=25,SNR=7.2							
UCH	**Uchtor**	**6.93**	**32**	P		**Pn**	**02 52 34.1**	**+2.4**
	SNR=10							
EKS2	**Erkin-Say**	**7.01**	**26**	P		**Pn**	**02 52 35.9**	**+3.3**
	SNR=20							
AAK	**Ala-Archa**	**7.26**	**30**	P		**Pn**	**02 52 38.9**	**+2.9**
	SNR=9.1							
AAK	**Ala-Archa**	**7.26**	**30**	Pn		**Pn**	**02 52 38.5**	**+2.5**
	4.4nm,0.3s,baz=176,slow=5.2,SNR=46							
AAK				Sn		**Sn**	**02 53 59.1**	**+0.5**
	baz=146,slow=21							
AAK				Lg		Lg	02 54 36.8	
	0.6nm,0.3s,baz=189,slow=17,SNR=1.0							
	8.7nm,0.3s							
KBK	**Karagaybulak**	**7.47**	**32**	P		**Pn**	**02 52 40.9**	**+2.0**
	SNR=8.2							
CHMS	**Chumysh**	**7.67**	**30**	P		**Pn**	**02 52 44.1**	**+2.7**
	SNR=6.8							
CHMS	**Chumysh**	**7.67**	**30**	⇑P		**Pn**	**02 52 43.2**	**+1.8**
	9.0nm,0.5s							
CHMS				⇑S		**Sn**	**02 54 09.5**	**+1.1**
	15nm,0.8s							
ULHL	**Ulahol**	**7.76**	**40**	P		**Pn**	**02 52 45.1**	**+2.2**
	SNR=6.9							
USP	**Ospenovka**	**7.80**	**27**	P		**Pn**	**02 52 46.0**	**+2.7**
	SNR=16							
TKM2	**Tokmak 2**	**7.96**	**34**	P		**Pn**	**02 52 48.0**	**+2.4**
	SNR=8.4							
TKM2	**Tokmak 2**	**7.96**	**34**	⇓P		**Pn**	**02 52 45.2**	**-0.5**
	2.6nm,0.4s							
TKM2				⇑S		**Sn**	**02 54 13.8**	**-2.1**
	8.8nm,0.8s							
GEYT	**Alibeck**	**9.29**	**283**	Pn		**Pn**	**02 53 04.9**	**+1.3**
	2.2nm,0.3s,baz=113,slow=12,SNR=15							
GEYT				Sn		**Sn**	**02 54 46.8**	**-1.3**
	3.4nm,0.3s,baz=105,slow=23,SNR=2.8							
GEYT				Lg		Lg	02 55 48.7	
	baz=116,slow=44							
	7.5nm,0.5s							
GYA0B	**ALIBECK ARRAY**	**9.29**	**283**	⇓P		**Pn**	**02 53 05.3**	**+1.7**
GYA0B				⇑S		**Sn**	**02 54 46.8**	**-1.3**
MKAR	**Makanchi Array**	**14.03**	**39**	Pn		**Pn**	**02 54 08.1**	**-0.4**
	0.2nm,0.3s,baz=225,slow=17,SNR=7.7							
	2.0nm,0.7s							
AB31	**Akbulak array**	**14.63**	**334**	⇑P		**Pn**	**02 54 15.2**	**-1.4**
	1.9nm,0.4s,baz=159,slow=13,SNR=65							
AB31				⇓S		**Sn**	**02 56 55.2**	**-3.5**
	3.4nm,0.7s,baz=155,slow=24,SNR=5.5							
KURBB	**Kurchatov Arra**	**15.58**	**22**	Pn		**Pn**	**02 54 26.4**	**-2.9**
	0.1nm,0.3s,baz=210,slow=12,SNR=2.6							
	0.7nm,0.4s							
AKTO	**Aktyubinsk**	**16.30**	**333**	⇑P		**Pn**	**02 54 38.0**	**-0.6**

comp=E,3µm,0.2s
PERV Siirt/Pervari- 0.40 225 P **Pb** **03 16 48.4 -1.0**
PERV S **Sb** **03 16 56.0 +0.3**
PERV *i* AML AML 03 16 58.0
comp=N,316nm,0.4s
TVAN Van 0.49 53 P **Pg** **03 16 49.3 -0.5**
TVAN S **Sg** **03 16 57.1 +0.7**
VANB Van 0.53 47 Pg **Pg** **03 16 49.5 -0.9**
VANB Sg **Sg** **03 16 57.6 +0.2**
ADCV BITLIS_Adilcev 0.59 346 P **Pb** **03 16 52.2 -0.4**
ADCV *i* AML AML 03 17 01.0
comp=N,282nm,0.3s
ADCV *i* AML AML 03 17 01.0
comp=E,234nm,0.2s
ADCV S **Sb** **03 17 01.4 +0.3**
BLIS Bitlis-Merkez 0.64 287 P **Pb** **03 16 52.7 -0.8**
BLIS S **Sb** **03 17 01.7 -0.9**
BLIS *i* AML AML 03 17 04.0
comp=N,180nm,0.3s
GURO Guroymak-BITLI 0.75 295 Pg **Pb** **03 16 54.7 -0.7**
GURO Sg **Sb** **03 17 04.8 -0.9**
VMUR Van-Muradiye 0.92 35 P **Pg** **03 16 57.5 -0.4**
VMUR S **Sb** **03 17 10.8 +0.3**
HAKT HAKKARI 0.93 136 P **Pg** **03 16 57.4 -0.6**
HAKT S **Sn** **03 17 11.8 -1.0**
MLAZ Malazgirt-MUS 0.95 343 Pg **Pg** **03 16 58.2 -0.2**
MLAZ Sg **Sn** **03 17 12.3 -0.9**
OZAP Van, Ozalp-Mer 0.96 63 P **Pg** **03 16 57.6 -1.0**
OZAP S **Sn** **03 17 16.7 +3.2**
CUKT Cukurca 1.13 150 Pn **Pg** **03 17 01.3 -0.6**
DORK Agr/Tutak/Do 1.16 355 P **Pg** **03 17 01.8 -0.6**
DORK S **Sg** **03 17 16.9 -0.5**
MUSM Mu-Merkez 1.20 295 P **Pn** **03 17 02.7 -0.3**
MUSM S **Sb** **03 17 18.4 0.0**
BTMN Batman 1.33 256 P **Pg** **03 17 06.3 +0.5**
BTMN *i* AML AML 03 17 26.0
comp=N,98nm,0.7s
BTMN *i* AML AML 03 17 33.0
comp=E,71nm,0.6s
AGRB Hanur-Agry 1.34 3 Pn **Pb** **03 17 05.4 0.0**
SVAN Silvan-Diyarba 1.34 267 Pn **Pg** **03 17 05.6 -0.3**
SVAN Silvan-Diyarba 1.34 267 P **Pg** **03 17 06.1 +0.2**
SVAN S **Sg** **03 17 24.8 +1.4**
MIDY Mardin/Midyat- 1.45 236 P **Pg** **03 17 08.0 +0.1**
MIDY S **Sg** **03 17 28.2 +1.4**
VRTB Varto-Mus 1.46 310 Pn **Pg** **03 17 07.4 -0.8**
VRTB Varto-Mus 1.46 310 P **Pg** **03 17 07.3 -0.8**
KOTA Agri, Merkez-K 1.58 9 P **Pg** **03 17 10.2 -0.3**
KOTA S **Sn** **03 17 29.3 +0.4**
EATA Eleskirt 1.66 349 P **Pg** **03 17 11.5 -0.4**
EATA S **Sg** **03 17 34.3 +0.8**
BNGB Bingl 1.90 294 Pn **Pn** **03 17 13.3 +0.7**
MARD Mardin 1.92 242 P **Pb** **03 17 14.3 -0.9**
KOPR Koprukoy-ERZUR 1.94 335 Pn **Pb** **03 17 14.3 -1.2**
HOMI Horasan 1.97 337 P **Pg** **03 17 17.2 -0.7**
HOMI S **Sg** **03 17 45.7 +2.3**
HANI Diyarbakir_Han 1.98 276 P **Pb** **03 17 16.0 -0.2**
HANI S **Sg** **03 17 42.2 -1.5**
MAZI Mazidag 2.09 249 Pn **Pn** **03 17 15.9 +0.6**
DIYA Diyarbakir 2.22 263 P **Pn** **03 17 17.8 +0.9**

*IDC **13** 03:23:36.2±1.9, 11°.21S×164°.56E, h0km, mb3.7/5, mbtmp3.6/5, ML6.0/1, Error ellipse: s-maj=49.7km s-min=30.9km az=151.0*
ISC 13 03:23:40.7±1.3, **11°.2S**±0°.2×**164°.6E**±0°.1, **h29**km, **n7, σ1s12/8, mb3.8/5, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.86**	**290**	Pn	**Pn**	**03 24 50.3**	**-1.6**
	564nm,0.3s,baz=147,slow=5.0,SNR=4.1						
HNR				Sn	**Sn**	**03 25 48.7**	**+1.5**
	346nm,0.3s,baz=308,slow=15,SNR=3.8						
CTA	**Charters Tower**	**19.73**	**241**	P	**Pn**	**03 28 10.8**	**+0.8**
	7.1nm,0.8s,baz=69,slow=11,SNR=10						
WRA	**Warramunga Arr**	**30.36**	**250**	P	**P**	**03 29 50.4**	**0.0**
	1.5nm,1.0s,baz=82,slow=8.7,SNR=2.3						
	1.5nm,1.0s						
ASAR	**Alice Springs**	**31.71**	**243**	P	**P**	**03 30 02.0**	**-0.3**
	0.2nm,0.4s,baz=66,slow=10,SNR=1.9						
	0.2nm,0.4s						
SONM	**Songino Array**	**78.07**	**324**	P	**P**	**03 35 37.2**	**+0.2**
	0.3nm,0.7s,baz=134,slow=6.2,SNR=1.9						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**83.98**	**19**	P	**P**	**03 36 08.7**	**+0.7**
	0.6nm,0.8s,baz=237,slow=6.3,SNR=6.7						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**92.81**	**317**	P	**P**	**03 36 50.2**	**-0.5**
	0.3nm,0.6s,baz=102,slow=5.6,SNR=3.8						
	0.3nm,0.6s						

*NEIC **13** 03:34:36.5±1.4, 36°.03N±0°.02×97°.90W±0°.05, h5km±5km, Error ellipse: s-maj=6.6km s-min=1.6km az=64.0*
*TUL **13** 03:34:37±1.7, 36°.04N±0°.01×97°.90W±0°.02, h5km±5km, ML3.2, mb_Lg3.1/106(NEIC), ML3.3/62(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=67.0*
*IDC **13** 03:34:42.0±2.4, 35°.93N×98°.23W, h0km, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=34.9km s-min=14.3km az=106.0*
ISC 13 03:34:37.6±1.0, **36°.04N**±0°.02×**97°.90W**±0°.02, **h8**km±11km, **n105, σ0s86/87, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.43**	**124**	Pg	**Pg**	**03 34 45.7**	**-0.4**
OK029				Sg	**Sg**	**03 34 51.9**	**+0.2**
OK029				IAML		03 34 52.2	
	3µm,0.4s						
ADOK	**Arcadia Dam**	**0.58**	**132**		**Pg**	**03 34 48.0**	**-0.7**
ADOK				Sg	**Sg**	**03 34 56.4**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	**Pg**	**03 34 51.0**	**-0.8**
OKCSW				Sg	**Sg**	**03 35 01.1**	**-0.2**
OKCSW				IAML		03 35 01.7	
	comp=N,1µm,0.3s						
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	**Pg**	**03 34 51.4**	**-0.7**
CSTR				Sg	**Sg**	**03 35 01.9**	**0.0**
OK033	**Mehan**	**0.78**	**89**	Pg	**Pg**	**03 34 52.0**	**-0.6**
OK033				Sg	**Sg**	**03 35 02.7**	**0.0**
OK033				IAML		03 35 03.1	
	comp=N,1µm,0.3s						
OK033				IAML		03 35 04.5	
	comp=N,883nm,0.2s						
OK032	**Salt Plains WL**	**0.80**	**342**	Pg	**Pg**	**03 34 52.3**	**-0.8**
OK032				Sg	**Sg**	**03 35 03.6**	**+0.1**
OK032				IAML		03 35 12.9	
	comp=N,880nm,0.2s						
OK032				IAML		03 35 13.1	
	comp=N,1µm,0.2s						
GC02	**Grant County #**	**0.81**	**2**	Pg	**Pg**	**03 34 52.5**	**-0.8**
GC02				Sg	**Sg**	**03 35 03.7**	**-0.1**
OK038	**West end E0370**	**0.81**	**303**	Pg	**Pg**	**03 34 52.5**	**-0.7**
OK048	**Pawnee Station**	**0.86**	**64**	Pg	**Pg**	**03 34 53.4**	**-0.7**
FNO	**Franklin**	**0.88**	**152**	Pg	**Pg**	**03 34 53.6**	**-0.9**
OK052	**Battle Ridge R**	**0.89**	**93**	Pg	**Pg**	**03 34 54.0**	**-0.7**
OK052				IAML		03 35 08.2	
	comp=N,882nm,0.3s						
OK052				IAML		03 35 11.8	
	comp=N,657nm,0.2s						
BLOK	**Blackwell**	**0.91**	**37**	Pg	**Pg**	**03 34 54.4**	**-0.7**
KAN14	**Manchester OK**	**0.92**	**357**	Pg	**Pg**	**03 34 54.3**	**-0.9**
KAN14				IAML		03 35 10.0	
	comp=E,877nm,0.1s						
KAN14				IAML		03 35 16.9	
	comp=N,682nm,0.3s						
OK035	**E0210 Rd and N**	**0.94**	**316**	Pg	**Pg**	**03 34 54.7**	**-0.9**
OK035				IAML		03 35 15.7	
	comp=N,1µm,0.3s						
OK035				IAML		03 35 18.6	
	comp=N,888nm,0.2s						
U32A	**Winter Ranch,**	**0.95**	**291**	Pg	**Pg**	**03 34 55.1**	**-0.9**
U32A				IAML		03 35 13.6	
	comp=E,689nm,0.4s						
QUOK	**Quay**	**0.97**	**82**	Pg	**Pg**	**03 34 55.5**	**-0.8**
QUOK				IAML		03 35 10.7	
	comp=E,880nm,0.2s						
QUOK				IAML		03 35 13.2	
	comp=N,869nm,0.2s						
OK051	**E0350 and S346**	**0.98**	**61**		**Pg**	**03 34 55.5**	**-0.8**
OK051				IAML		03 35 14.5	
	comp=N,1µm,0.2s						
OK051				IAML		03 35 15.1	
	comp=N,975nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**	Pg	**Pg**	**03 34 56.1**	**-0.9**
KAN05	**Bluff City Nor**	**1.07**	**1**		**Pg**	**03 34 57.2**	**-1.0**
KAN05				IAML		03 35 13.9	
	comp=E,1µm,0.2s						
KAN05				IAML		03 35 14.2	
	comp=N,1µm,0.2s						
KAN10	**Anthony SW Sta**	**1.09**	**352**		**Pg**	**03 34 57.5**	**-1.1**
KAN10				IAML		03 35 22.1	
	comp=E,459nm,0.2s						
KAN01	**Argonia South**	**1.12**	**6**		**Pg**	**03 34 57.9**	**-1.2**
KAN01				IAML		03 35 13.7	
	comp=E,1µm,0.3s						
KAN01				IAML		03 35 17.8	
	comp=N,544nm,0.2s						
KAN09	**Caldwell North**	**1.12**	**12**		**Pg**	**03 34 58.0**	**-1.1**
DEOK	**Depew**	**1.15**	**99**		**Pg**	**03 34 58.3**	**-1.5**
DEOK				IAML		03 35 14.5	
	comp=N,814nm,0.5s						
DEOK				IAML		03 35 16.4	
	comp=E,644nm,0.1s						
KAN08	**Anthony NE Sta**	**1.19**	**357**		**Pg**	**03 34 58.9**	**-1.5**
KAN06	**Argonia West S**	**1.21**	**1**		**Pb**	**03 34 59.5**	**-1.3**
KAN06				IAML		03 35 16.4	
	comp=E,920nm,0.3s						
KAN06				IAML		03 35 20.4	
	comp=N,434nm,0.1s						
W35A	**Tecumseh**	**1.22**	**136**		**Pb**	**03 34 59.5**	**-1.4**
W35A				IAML		03 35 20.2	
	comp=N,666nm,0.2s						
ELIS	**Ellis County**	**1.23**	**272**	Pg	**Pb**	**03 35 00.2**	**-1.0**
ELIS				IAML		03 35 22.0	
	comp=E,790nm,0.3s						
KAN12	**Harper NE Stat**	**1.26**	**356**		**Pn**	**03 35 00.6**	**-1.0**
KAN12				IAML		03 35 29.6	
	comp=N,892nm,0.4s						
KAN12				IAML		03 35 30.3	
	comp=E,902nm,0.3s						
KS21	**Milan North St**	**1.26**	**9**		**Pn**	**03 35 00.7**	**-0.9**
T35A	**Sooner Cattle**	**1.42**	**52**		**Pn**	**03 35 03.3**	**-0.5**
X34A	**Smith Ranch, M**	**1.44**	**178**		**Pn**	**03 35 03.9**	**-0.1**
WMOK	**Wichita Mounta**	**1.49**	**209**		**Pn**	**03 35 03.6**	**-1.1**
WMOK				IAmb_Lg		03 35 25.7	
	comp=E,85nm,0.8s						
TUL3	**Leonard**	**1.71**	**94**	Pg	**Pn**	**03 35 07.6**	**-0.2**
TUL3				IAmb_Lg		03 35 36.1	
	comp=Z,138nm,0.9s						
LOOK	**Love County**	**2.13**	**164**		**Pn**	**03 35 13.6**	**+0.1**
SMWD	**Samnorwood**	**2.13**	**245**	Pn	**Pn**	**03 35 13.4**	**-0.1**
SMWD				IAmb_Lg		03 35 47.5	
	comp=Z,82nm,0.8s						
WTFS	**Witchita Falls**	**2.31**	**192**		**Pn**	**03 35 16.1**	**0.0**
RLO	**Rose Lookout**	**2.33**	**86**		**Pn**	**03 35 16.1**	**-0.2**
R32A	**Long Quarter,**	**2.47**	**345**		**Pn**	**03 35 18.2**	**0.0**
X37A	**Clayton**	**2.52**	**124**		**Pn**	**03 35 19.2**	**+0.2**
X37A				IAmb_Lg		03 36 00.2	
	comp=E,60nm,0.8s						
Z35A	**Perchaven, San**	**2.75**	**169**		**Pn**	**03 35 21.9**	**-0.2**
U38A	**Gravette**	**2.87**	**81**		**Pn**	**03 35 23.4**	**-0.3**
FW03	**Perrin-Whitt E**	**3.00**	**183**		**Pn**	**03 35 25.6**	**+0.1**
FW06	**Azle**	**3.07**	**175**		**Pn**	**03 35 26.6**	**+0.1**
CBKS	**Cedar Bluff**	**3.13**	**333**	Pn	**Pn**	**03 35 27.2**	**-0.2**
HHAR	**Hobbs**	**3.21**	**85**		**Pn**	**03 35 28.0**	**-0.5**
KSU1	**Kansas State U**	**3.22**	**18**		**Pn**	**03 35 27.4**	**-1.2**
KSU1				IAmb_Lg		03 36 27.0	
	comp=Z,37nm,0.8s						
PLPT	**Palo Pinto**	**3.24**	**186**		**Pn**	**03 35 28.9**	**+0.1**
APMT	**Aspermont**	**3.27**	**215**		**Pn**	**03 35 29.3**	**0.0**
AMTX	**Amarillo**	**3.30**	**251**		**Pn**	**03 35 29.0**	**-0.6**
FW07	**Weatherford**	**3.33**	**178**	Pn	**Pn**	**03 35 29.2**	**-0.8**
TREL	**Terrell**	**3.62**	**155**	Pn	**Pn**	**03 35 34.2**	**+0.1**
FW16	**Waxahatchie**	**3.64**	**167**	IAmb_Lg		03 36 33.7	
	comp=Z,32nm,0.7s						
Z38A	**Mt. Pleasant**	**3.67**	**138**	Pn	**Pn**	**03 35 34.3**	**-0.4**
Z38A				IAmb_Lg		03 36 36.9	
	comp=Z,49nm,0.9s						
FW13	**Cleburne**	**3.70**	**174**	Pn	**Pn**	**03 35 34.7**	**-0.4**
ABTX	**Abilene, Hawle**	**3.70**	**203**	Pn	**Pn**	**03 35 35.6**	**+0.4**
ABTX				IAmb_Lg		03 36 36.2	
	comp=Z,61nm,1.1s						
MIAR	**Mount Ida**	**3.84**	**112**		**Pn**	**03 35 37.1**	**+0.1**
RTBA	**Rita Blanca**	**3.93**	**277**		**Pn**	**03 35 38.7**	**+0.2**
RTBA				IAmb_Lg		03 36 47.1	
	comp=Z,30nm,0.7s						
S39A	**Bolivar**	**4.02**	**64**		**Pn**	**03 35 39.2**	**-0.4**
S39A				IAmb_Lg		03 36 50.7	
	comp=Z,28nm,0.9s						
WHTX	**Lake Whitney,**	**4.05**	**175**	Pn	**Pn**	**03 35 40.1**	**+0.1**
POST	**Post**	**4.20**	**226**	Pn	**Pn**	**03 35 41.7**	**-0.4**
POST				IAmb_Lg		03 36 58.8	
	comp=Z,38nm,0.8s						
237A	**Washetta, Mont**	**4.38**	**156**	Pn	**Pn**	**03 35 44.0**	**-0.5**
X40A	**Basin Creek Fa**	**4.42**	**109**	Pn	**Pn**	**03 35 45.0**	**-0.1**
X40A				IAmb_Lg		03 37 03.0	
	comp=Z,50nm,0.9s						
MSTX	**Muleshoe**	**4.50**	**244**	Pn	**Pn**	**03 35 45.8**	**-0.5**
WLAR	**White Oak Lake**	**4.58**	**119**	Pn	**Pn**	**03 35 46.2**	**-1.0**
WLAR				IAmb_Lg		03 37 07.9	
	comp=Z,30nm,0.8s						
WHAR	**Wooly Hollow**	**4.63**	**98**	Pn	**Pn**	**03 35 47.7**	**-0.2**
WHAR				IAmb_Lg		03 37 09.3	
	comp=Z,36nm,0.9s						
MGMO	**Mountain Grove**	**4.66**	**75**		**Pn**	**03 35 48.3**	**-0.1**
MGMO				IAmb_Lg		03 37 14.6	
	comp=Z,26nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.69**	**90**	Pn	**Pn**	**03 35 48.5**	**-0.2**
FCAR				IAmb_Lg		03 37 02.5	
	comp=Z,25nm,0.9s						
N33A	**J Bar K, Exete**	**4.71**	**4**	IAmb_Lg		03 37 08.7	
	comp=Z,38nm,0.8s						
UALR	**University of**	**4.71**	**104**	Pn	**Pn**	**03 35 49.0**	**0.0**
UALR				IAmb_Lg		03 37 17.6	
	comp=Z,40nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.79**	**310**	Pn	**Pn**	**03 35 49.5**	**-0.7**
KSCO				IAmb_Lg		03 37 21.8	
	comp=Z,41nm,0.8s						
BRDY	**Brady**	**4.83**	**191**		**Pn**	**03 35 51.0**	**+0.3**
BRDY				IAmb_Lg		03 37 19.3	
	comp=Z,25nm,0.8s						
P38A	**Dawn**	**4.97**	**43**	Pn	**Pn**	**03 35 52.5**	**-0.1**
P38A				IAmb_Lg		03 37 20.8	
	comp=Z,35nm,0.8s						
R40A	**Maddies Statio**	**5.03**	**62**		**Pn**	**03 35 52.7**	**-0.6**
R40A				IAmb_Lg		03 37 17.2	
	comp=Z,36nm,1.2s						
Z41A	**Richland Creek**	**5.03**	**122**	IAmb_Lg		03 37 28.1	
	comp=Z,40nm,0.9s						
435B	**Jarrell**	**5.25**	**177**	IAmb_Lg		03 37 34.3	
	comp=Z,36nm,0.8s						
T25A	**Trinidad**	**5.35**	**284**	IAmb_Lg		03 37 30.0	
	comp=Z,45nm,0.8s						
BGNE	**Belgrade**	**5.37**	**358**	IAmb_Lg		03 37 26.5	
	comp=Z,23nm,0.8s						
CCM	**Cathedral Cave**	**5.69**	**67**	Pn	**Pn**	**03 36 03.1**	**+0.6**
JCT	**Junction City**	**5.77**	**197**	Pn	**Pn**	**03 36 02.4**	**-1.2**
OZNA	**Ozona**	**5.77**	**209**	Pn	**Pn**	**03 36 02.7**	**-1.0**
OZNA				IAmb_Lg		03 37 41.9	
	comp=Z,37nm,0.9s						
P40A	**Paris**	**5.80**	**51**	Pn	**Pn**	**03 36 03.5**	**-0.5**
OGNE	**Ogallala**	**5.87**	**328**	Pn	**Pn**	**03 36 05.3**	**+0.2**
OGNE				IAmb_Lg		03 37 54.6	
	comp=Z,25nm,0.8s						
Q24A	**Divide**	**6.46**	**299**	IAmb_Lg		03 38 05.8	
	comp=Z,24nm,0.9s						
HNDO	**Hondo**	**6.60**	**191**	IAmb_Lg		03 38 11.4	
	comp=Z,29nm,0.8s						
SLM	**Saint Louis**	**6.63**	**65**	IAmb_Lg		03 38 14.7	
	comp=Z,20nm,0.7s						
CGM3	**Cape Girardeau**	**6.74**	**77**	IAmb_Lg		03 38 09.6	
	comp=Z,16nm,0.8s						
K30B	**Basset**	**6.76**	**349**	IAmb_Lg		03 38 15.7	
	comp=Z,26nm,0.8s						
BRIGG	**Briggsdale**	**6.79**	**314**	IAmb_Lg		03 38 18.5	
	comp=Z,20nm,0.9s						
DRIO	**Del Rio**	**6.98**	**200**	IAmb_Lg		03 38 23.7	
	comp=Z,18nm,0.9s						
SAND	**Sanderson**	**7.03**	**212**	IAmb_Lg		03 38 23.9	
	comp=Z,28nm,0.8s						
SIUC	**Southern Illin**	**7.16**	**74**	IAmb_Lg		03 38 31.4	
	comp=Z,20nm,0.7s						
ALPN	**Alpine**	**7.42**	**222**	IAmb_Lg		03 38 41.8	
	comp=Z,14nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.62**	**65**	IAmb_Lg		03 38 48.3	
	comp=Z,22nm,0.9s						
833A	**Chaparral WMA,**	**7.80**	**190**	IAmb_Lg		03 38 57.7	
	comp=Z,13nm,0.7s						
VHRN	**Van Horn**	**7.91**	**231**	IAmb_Lg		03 38 58.6	
	comp=Z,12nm,1.1s						
PHWY	**Pilot Hill**	**7.91**	**314**	IAmb_Lg		03 39 01.4	
	comp=Z,13nm,0.8s						
L40A	**Anamosa**	**7.95**	**39**	IAmb_Lg		03 38 55.4	
	comp=Z,26nm,0.9s						
TXAR	**Lajitas Array**	**8.27**	**218**	Pn	**Pn**	**03 36 37.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=41,slow=11,SNR=2.1						
TXAR				Pg	**Pb**	**03 37 04.2**	**+3.1**
	comp=Z,0.7nm,0.3s,baz=32,slow=14,SNR=4.8						
TXAR				Sn	**Sn**	**03 38 08.7**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=35,slow=15,SNR=1.4						
TXAR				Lg	Lg	03 38 51.9	
	comp=Z,0.7nm,0.3s,baz=24,slow=24,SNR=1.8						
	comp=Z,0.2nm,0.3s						
O44A	**Mansfield**	**8.49**	**58**	IAmb_Lg		03 39 12.5	
	comp=Z,16nm,0.7s						
M44A	**Midewin, Midew**	**9.37**	**52**	IAmb_Lg		03 39 48.4	
	comp=Z,11nm,0.7s						
I40A	**Norwalk**	**9.62**	**33**	IAmb_Lg		03 40 01.4	
	comp=Z,12nm,1.0s						
F33A	**5 Mile Ranch,**	**9.87**	**7**	IAmb_Lg		03 39 55.1	
	comp=Z,14nm,1.2s						
SPMN	**Marine on St.**	**9.96**	**21**	IAmb_Lg		03 40 18.7	
	comp=Z,15nm,1.1s						
PDAR	**Pinedale Array**	**11.24**	**310**	Pg	Pg	03 38 05.0	
	comp=Z,0.1nm,0.3s,baz=118,slow=22,SNR=6.2						
PDAR				Lg	Lg	03 40 26.6	
	comp=Z,0.1nm,0.3s,baz=115,slow=37,SNR=1.9						
ULM	**Lac du Bonnet**	**14.28**	**5**	Pn	**Pn**	**03 38 02.1**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=174,slow=10,SNR=1.6						
ULM				Lg	Lg	03 42 03.1	
	baz=138,slow=14						
	comp=Z,0.3nm,0.3s						

*IDC **13** 03:41:57.6±0.9, 13°.89N×146°.61E, h0km, mb3.8/12, mbtmp3.8/12, Error ellipse: s-maj=23.9km s-min=19.2km az=132.0*
ISC 13 03:41:59.0±0.8, **13°.9N**±0°.1×**146°.57E**±0°.10, **h10**km, **n14, σ1s00/16, mb3.8/12, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.68**	**261**	Pn	**Pb**	**03 42 30.0**	**0.0**
	51nm,0.3s,baz=136,slow=7.4,SNR=10						
GUMO				Sn	**Sb**	**03 42 51.5**	**+0.3**
	84nm,0.3s,baz=27,slow=23,SNR=9.6						
KSRS	**Korea Array**	**28.77**	**328**	P	**P**	**03 47 58.3**	**+1.2**
	0.5nm,0.4s,baz=136,slow=7.7,SNR=2.0						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**35.69**	**200**	P	**P**	**03 48 56.2**	**-1.5**
	0.4nm,0.7s,baz=21,slow=9.0,SNR=2.5						
WRA				PcP	**PcP**	**03 51 28.0**	**+1.8**
	0.4nm,0.7s,baz=16,slow=3.1,SNR=2.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**39.30**	**199**	P	**P**	**03 49 28.9**	**+0.4**
	0.3nm,0.3s,baz=14,slow=8.5,SNR=1.5						
	0.3nm,0.3s						
SONM	**Songino Array**	**47.47**	**324**	P	**P**	**03 50 32.5**	**-1.8**
	0.2nm,0.5s,baz=139,slow=10,SNR=2.0						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**62.37**	**324**	P	**P**	**03 52 21.6**	**-0.2**
	0.3nm,0.4s,baz=80,slow=3.5,SNR=1.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**62.44**	**316**	P	**P**	**03 52 23.2**	**+0.7**
	0.2nm,0.4s,baz=92,slow=8.6,SNR=6.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**65.49**	**320**	P	**P**	**03 52 41.8**	**-0.6**
	0.5nm,0.5s,baz=98,slow=7.1,SNR=3.6						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**67.61**	**25**	P	**P**	**03 52 55.6**	**-0.1**
	0.7nm,0.6s,baz=259,slow=6.3,SNR=8.9						
	0.7nm,0.6s						
BVAR	**Borovoye Array**	**70.74**	**322**	P	**P**	**03 53 15.2**	**-0.2**
	0.9nm,0.5s,baz=100,slow=8.4,SNR=5.1						
	0.9nm,0.5s						
YKA	**Yellowknife Ar**	**81.85**	**28**	P	**P**	**03 54 19.1**	**+0.8**
	0.3nm,0.7s,baz=286,slow=5.6,SNR=4.3						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**85.45**	**52**	P	**P**	**03 54 37.1**	**-0.5**
	0.8nm,0.6s,baz=269,slow=5.5,SNR=6.8						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**91.60**	**336**	P	**P**	**03 55 05.9**	**-0.2**
	2.4nm,0.8s,baz=41,slow=4.4,SNR=4.3						
	2.4nm,0.8s						
DBIC	**Dimbokro**	**145.06**	**304**	PKPbc	**PKPdf**	**04 01 38.4**	**+0.6**
	2.5nm,0.6s,baz=14,slow=2.7,SNR=6.6						

*IDC **13** 03:45:34.5±8.3, 18°.84S×175°.59W, h176km±75km, mb3.8/8, mbtmp4.3/8, Error ellipse: s-maj=28.6km s-min=23.6km az=47.0*
*NEIC **13** 03:45:36.9±0.7, 18°.9S±0°.2×175°.5W±0°.1, h193km±9km, mb4.4/21, Error ellipse: s-maj=22.2km s-min=17.1km az=186.0*
ISC 13 03:45:36.8±0.6, **18°.9S**±0°.1×**175°.53W**±0°.07, **h200**km, **n33, σ1s09/36, mb4.2/16, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.30**	**93**		**Pn**	**03 46 54.8**	**-0.3**
NIUE				Sn	**Sn**	**03 47 55.4**	**-1.5**
URZ	**Urewera**	**20.35**	**197**	P	**P**	**03 49 57.4**	**-0.5**
	21nm,0.5s,baz=100,slow=3.0,SNR=21						
URZ				S	S	03 53 23.8	-11
	6.7nm,0.8s,baz=106,slow=12,SNR=1.7						
	21nm,0.5s						
RTZ	**Ruatahuna**	**20.72**	**197**	P	**P**	**03 50 01.9**	**-0.1**
RTZ				IAmb	IAmb	03 50 03.5	
	comp=Z,11nm,0.5s						
BFZ	**Birch Farm**	**22.85**	**196**	P	**P**	**03 50 22.5**	**-0.3**
MRZ	**Mangatainoka R**	**23.02**	**198**	P	**P**	**03 50 24.0**	**-0.2**
QRZ	**Quartz Range**	**24.16**	**203**	P	**P**	**03 50 35.9**	**+1.3**
ARMA	**Armidale**	**31.88**	**243**	P	**P**	**03 51 45.6**	**+2.1**
ARMA				IAmb	IAmb	03 51 51.9	
	comp=Z,20nm,1.4s						
CTAO	**Charters Tower**	**36.00**	**262**	P	**P**	**03 52 19.1**	**+0.1**
CTAO				IAmb	IAmb	03 52 20.2	

comp=Z,1.7nm,0.8s
TXAR Lajitas Array 84.22 57 P **P** **03 57 47.0 +0.7**
comp=Z,0.6nm,0.9s,baz=209,slow=10.0,SNR=3.5
comp=Z,0.6nm,0.9s
ILAR Eielson Array 86.24 12 P **P** **03 57 55.2 -0.1**
comp=Z,0.2nm,0.5s,baz=206,slow=5.3,SNR=9.4
comp=Z,0.2nm,0.5s
M30M Minto, Yukon 86.73 17 P **P** **03 57 58.9 +1.0**
M30M IAmb IAmb 03 58 41.1
comp=Z,8.4nm,1.4s
BRTR Keskin Array B 147.39 316 PKPbc **PKPbc** **04 04 57.0 -0.4**
comp=Z,0.6nm,0.5s,baz=134,slow=5.1,SNR=5.0
MMAI Mount Meron Ar 148.96 303 PKPbc **PKPbc** **04 05 01.7 +0.1**
comp=Z,3.0nm,0.7s,baz=53,slow=5.6,SNR=2.2
GERES GERESS Array B 149.19 348 PKPbc **PKPbc** **04 05 00.6 -1.0**
comp=Z,0.3nm,0.3s,baz=7.6,slow=11,SNR=1.9

*IDC **13** 03:55:18.7±4.7, 25°.10S×179°.64E, h509km±46km, mb3.3/4, mbtmp4.4/7, Error ellipse: s-maj=40.7km s-min=19.8km az=57.0*
*NEIC **13** 03:55:21.9±1.4, 25°.3S±0°.1×179°.6E±0°.2, h537km±8km, mb4.5/19, Error ellipse: s-maj=23.5km s-min=18.2km az=47.0*
ISC 13 03:55:22.5±0.6, 25°.28S±0°.07×179°.5E±0°.1, h550km, n55, σ1$60/61, mb4.2/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.60**	**150**	P	**P**	**03 56 48.3**	**-0.6**
GLKZ				S	**S**	**03 58 00.1**	**+0.5**
WCZ	**Waipu Caves**	**11.51**	**201**	P	**P**	**03 57 57.5**	**+1.7**
MXZ	**Matakaoa Point**	**12.29**	**184**	P	**P**	**03 58 02.9**	**-0.9**
DZM	**Mont Dzumac**	**12.36**	**282**	P	**P**	**03 58 04.9**	**0.0**
DZM	**Mont Dzumac**	**12.36**	**282**	P	**P**	**03 58 04.1**	**-0.9**
	14nm,0.9s,baz=87,slow=16,SNR=5.8						
HAZ	**Te Kaha**	**12.52**	**186**	P	**P**	**03 58 04.9**	**-1.4**
HAZ				S	**S**	**04 00 24.2**	**+3.1**
PKGZ	**Pakihiroa**	**12.63**	**185**	P	**P**	**03 58 10.3**	**+2.8**
RUGZ	**Raukumara Rang**	**12.74**	**186**	P	**P**	**03 58 06.5**	**-2.2**
RUGZ				S	**S**	**04 00 28.4**	**+2.9**
TOZ	**Tahuroa Road**	**12.87**	**194**	P	**P**	**03 58 10.4**	**+0.6**
KMRZ	**Kaimai**	**12.88**	**193**	P	**P**	**03 58 10.7**	**+0.6**
URZ	**Urewera**	**13.10**	**188**	P	**P**	**03 58 08.9**	**-3.3**
	26nm,0.5s,baz=132,slow=1.9,SNR=20						
URZ				S	**S**	**04 00 29.0**	**-2.9**
	4.3nm,0.4s,baz=288,slow=15,SNR=1.6						
URZ	**Urewera**	**13.10**	**188**	P	**P**	**03 58 09.1**	**-3.1**
URZ				S	**S**	**04 00 28.9**	**-3.0**
MWZ	**Matawai**	**13.12**	**187**	P	**P**	**03 58 10.9**	**-1.7**
MWZ				S	**S**	**04 00 31.0**	**-1.4**
RTZ	**Ruatahuna**	**13.46**	**188**	P	**P**	**03 58 13.9**	**-2.2**
RIGZ	**Rimuhau**	**13.47**	**186**	P	**P**	**03 58 15.8**	**-0.3**
KNZ	**Kokohu**	**13.79**	**186**	P	**P**	**03 58 17.7**	**-1.6**
KNZ				S	**S**	**04 00 50.0**	**+5.1**
BKZ	**Black Stump Fm**	**14.07**	**190**	P	**P**	**03 58 22.4**	**0.0**
KWHZ	**Kaweka Forest**	**14.34**	**190**	P	**P**	**03 58 24.1**	**-1.0**
KWHZ				S	**S**	**04 00 52.9**	**-2.6**
KAHZ	**Kahuranaki**	**14.64**	**188**	P	**P**	**03 58 28.5**	**+0.4**
KAHZ				S	**S**	**04 00 59.8**	**-1.3**
BFZ	**Birch Farm**	**15.60**	**189**	P	**P**	**03 58 35.5**	**-2.4**
BFZ				IAmb	IAmb	03 58 42.0	
	comp=Z,62nm,1.4s						
TCW	**Tory Channel**	**16.47**	**194**	P	**P**	**03 58 45.6**	**-0.7**
QRZ	**Quartz Range**	**16.55**	**199**	P	**P**	**03 58 46.3**	**-0.7**
TKNZ	**Takaka Hill**	**16.62**	**197**	P	**P**	**03 58 47.0**	**-0.7**
THZ	**Tophouse**	**17.32**	**197**	P	**P**	**03 58 53.7**	**-0.3**
THZ				IAmb	IAmb	03 59 29.5	
	comp=Z,33nm,1.4s						
DSZ	**Denniston Nort**	**17.61**	**199**	P	**P**	**03 58 56.8**	**+0.1**
LTZ	**Lake Taylor**	**18.44**	**197**	P	**P**	**03 59 04.3**	**0.0**
LTZ				IAmb	IAmb	03 59 06.0	
	comp=Z,15nm,0.6s						
RPZ	**Rata Peaks**	**19.64**	**198**	P	**P**	**03 59 15.0**	**-0.2**
	comp=Z,7.2nm,0.5s,baz=119,slow=4.2,SNR=10						
CTAO	**Charters Tower**	**31.03**	**273**	P	**P**	**04 00 56.5**	**+0.5**
CTAO				IAmb	IAmb	04 00 57.4	
	comp=Z,7.5nm,0.6s						
COEN	**Coen**	**35.89**	**281**	P	**P**	**04 01 37.6**	**+0.7**
COEN				IAmb	IAmb	04 02 17.8	
	comp=Z,14nm,1.4s						
ASAR	**Alice Springs**	**41.36**	**262**	P	**P**	**04 02 21.4**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=89,slow=7.8,SNR=6.2						
	comp=Z,0.5nm,0.3s						
WR0	**Warramunga Arr**	**41.67**	**268**	P	**P**	**04 02 23.3**	**-0.3**
WR0				IAmb	IAmb	04 02 55.7	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**41.84**	**268**	P	**P**	**04 02 24.7**	**-0.3**
WB2				IAmb	IAmb	04 02 51.3	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**41.85**	**268**	P	**P**	**04 02 24.8**	**-0.3**
WRA	**Warramunga Arr**	**41.86**	**268**	P	**P**	**04 02 24.8**	**-0.3**
WRA	**Warramunga Arr**	**41.86**	**268**	P	**P**	**04 02 24.9**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=99,slow=6.9,SNR=39						
	comp=Z,2.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.26**	**267**	P	**P**	**04 03 29.3**	**+0.5**
QSPA	**South Pole Qui**	**64.81**	**180**	P	**P**	**04 05 09.0**	**+1.8**
QSPA				IAmb	IAmb	04 05 11.5	
	comp=Z,9.6nm,1.4s						
QSPA	**South Pole Qui**	**64.81**	**180**	P	**P**	**04 05 08.8**	**+1.7**
	comp=Z,1.7nm,0.5s,baz=304,slow=0.8,SNR=8.3						
	comp=Z,1.7nm,0.5s						
MJAR	**Matsushiro Arr**	**72.76**	**326**	P	**P**	**04 05 55.1**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=174,slow=5.1,SNR=3.1						
	comp=Z,1.8nm,0.7s						
BELA	**Belgrano 2**	**75.13**	**173**	P	**P**	**04 06 08.3**	**+0.2**
PMSA	**Palmer Station**	**77.84**	**157**	P	**P**	**04 06 22.9**	**-0.2**
SML	**Sawmill**	**90.56**	**15**	P	**P**	**04 07 27.5**	**+1.7**
SML				IAmb	IAmb	04 07 34.4	
	comp=Z,18nm,1.3s						
BSUT	**Blindstream Ca**	**92.08**	**46**	P	**P**	**04 07 34.8**	**+1.1**
BSUT				IAmb	IAmb	04 07 36.5	
	comp=Z,3.7nm,1.3s						
HDA	**Harding Lake**	**93.15**	**14**	P	**P**	**04 07 37.9**	**+0.4**
HDA				IAmb	IAmb	04 08 12.7	
	comp=Z,9.9nm,1.4s						
EF01	**Eagle Ford 01**	**95.59**	**61**	P	**P**	**04 07 48.7**	**-0.8**
MKAR	**Makanchi Array**	**112.73**	**312**	PKiKP	**PKiKP**	**04 12 56.2**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=93,slow=2.9,SNR=2.3						
BVAR	**Borovoye Array**	**121.15**	**318**	PKP	**PKPdf**	**04 13 12.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=20,slow=2.0,SNR=2.9						
FINES	**FINESS Array B**	**139.59**	**341**	PKhKP	PKPpre	04 13 39.6	
	comp=Z,0.9nm,0.7s,baz=349,slow=6.0,SNR=4.0						
FINES				PKP	**PKiKP**	**04 13 48.6**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=319,slow=5.5,SNR=3.8						
NB2	**NORSAR Subarra**	**143.36**	**350**	PKP	PKPbc	04 13 52.1	-0.5
	comp=Z,0.4nm,0.5s,baz=12,slow=2.9						
NOA	**NORSAR Array B**	**143.36**	**350**	PKP	PKPbc	04 13 52.4	-0.2
	comp=Z,0.4nm,0.5s,baz=40,slow=1.2,SNR=6.2						
HFS	**Hagfors**	**143.79**	**348**	PKP	PKPab	04 13 53.5	-0.4
	comp=Z,3.6nm,0.4s,baz=53,slow=3.9,SNR=43						
AKASG	**Malin Array Be**	**145.85**	**326**	PKPbc	**PKPbc**	**04 13 59.8**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=47,slow=4.1,SNR=2.2						
MMAI	**Mount Meron Ar**	**147.81**	**292**	PKPbc	**PKPbc**	**04 14 05.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=112,slow=1.6,SNR=2.1						
BRTR	**Keskin Array B**	**148.00**	**305**	PKPbc	**PKPbc**	**04 14 06.8**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=166,slow=4.0,SNR=1.4						
EKA	**Eskdalemuir Ar**	**149.91**	**3**	PKPbc	**PKPbc**	**04 14 10.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=4.8,slow=4.7,SNR=5.9						

*IDC **13** 03:55:52.9±1.6, 0°.57N×126°.14E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=169.6km s-min=21.2km az=65.0*
*DJA **13** 03:55:56.4±0.4, 0°.N±4°×12°.6E±°, h10km, M3.4/5, MLv3.4/5*
ISC 13 03:55:58.7±1.2, 0°.50N±0°.09×126°.20E±0°.10, h44km, n7, σ0$79/9, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**77**	P	**Pn**	**03 56 18.4**	**-0.7**
TNTI				S	**Sn**	**03 56 35.0**	**+0.8**
LBMI	**Labuha**	**1.73**	**131**	P	**Pn**	**03 56 25.8**	**-0.5**
LBMI				S	**Sn**	**03 56 47.2**	**0.0**
SANI	**Sanana**	**2.54**	**185**	P	**Pn**	**03 56 37.1**	**-0.4**
WRA	**Warramunga Arr**	**21.83**	**159**	P	**P**	**04 00 47.1**	**-0.4**
	1.2nm,0.4s,baz=337,slow=11,SNR=20						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**25.16**	**163**	P	**P**	**04 01 21.5**	**+1.4**
	1.1nm,0.7s,baz=347,slow=10,SNR=8.3						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**59.91**	**327**	P	**P**	**04 06 00.5**	**+0.2**
	0.3nm,0.3s,baz=120,slow=7.6,SNR=9.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**64.17**	**328**	P	**P**	**04 06 28.4**	**-0.3**
	0.5nm,0.6s,baz=135,slow=6.5,SNR=5.7						
	0.5nm,0.6s						

IDC 13 04:12:50.5±1.2, 28°.20N×105°.08E, h0km, mb3.7/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=86.3km s-min=21.1km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**19.63**	**3**	P	P	04 17 20.3	-0.4
	0.1nm,0.3s,baz=178,slow=11,SNR=1.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**25.75**	**322**	P	P	04 18 22.7	-0.2
	1.0nm,0.7s,baz=127,slow=9.8,SNR=12						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**30.08**	**325**	P	P	04 19 01.8	+0.3
	0.7nm,0.7s,baz=132,slow=9.6,SNR=9.0						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**55.60**	**146**	P	P	04 22 28.0	-0.2
	1.1nm,0.8s,baz=331,slow=7.9,SNR=2.9						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**58.58**	**149**	P	P	04 22 49.2	0.0
	0.6nm,0.6s,baz=311,slow=5.6,SNR=5.5						
	0.6nm,0.6s						

IDC 13 04:13:01.3±2.3, 8°.33S×127°.69E, h0km, mb3.3/1, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=271.9km s-min=33.8km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.22**	**152**	Pn	Pn	04 16 09.1	-1.4
	0.4nm,0.3s,baz=328,slow=14,SNR=24						
WRA				Sn	Sn	04 18 29.1	-9.2
	0.5nm,0.3s,baz=328,slow=23,SNR=6.2						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**16.38**	**159**	Pn	P	04 16 54.4	-1.4
	0.2nm,0.3s,baz=337,slow=8.7,SNR=4.7						
ASAR				Sn	Sn	04 19 50.5	-4.8
	0.3nm,0.3s,baz=352,slow=26,SNR=3.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**68.10**	**328**	P	P	04 24 03.0	0.0
	0.3nm,0.9s,baz=131,slow=5.9,SNR=2.0						
	0.3nm,0.9s						

*TIR **13** 04:24:41.5, 39°.74N×20°.76E, h12km±1km, Md3.0*
*ATH **13** 04:24:42.7, 39°.85N×20°.61E, h14km±1km, ML2.3/10, Error ellipse: s-maj=2.2km s-min=1.3km az=309.0*
*THE **13** 04:24:43.0, 39°.82N×20°.61E, h18km±1km, ML2.3/5, Error ellipse: s-maj=1.4km s-min=0.9km az=218.0*
ISC 13 04:24:43.0±1.0, 39°.80N±0°.02×20°.64E±0°.02, h16km±8km, n65, σ1$07/85, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.21**	**131**	P	**Pb**	**04 24 49.2**	**+0.6**
JAN				S	**Sb**	**04 24 53.3**	**+0.9**
	2µm,0.1s						
JAN	**Janina**	**0.21**	**131**	P	**Pb**	**04 24 49.2**	**+0.6**
JAN				S	**Sb**	**04 24 53.0**	**+0.6**
JAN				AML	AML	04 24 54.5	
	comp=N,4587µm,0.1s						
JAN				AML	AML	04 24 54.5	
	comp=E,4436µm,0.1s						
LSK	**Leskovik**	**0.35**	**355**	P	**Pg**	**04 24 49.7**	**-0.7**
	baz=344						
LSK				S	**Sb**	**04 24 57.0**	**+0.6**
	baz=344						
LSK	**Leskovik**	**0.35**	**355**	P	**Pg**	**04 24 49.6**	**-0.7**
IGT	**Igoumenitsa**	**0.35**	**222**	P	**Pg**	**04 24 49.5**	**-0.8**
	baz=238						
IGT				S	**Sb**	**04 24 56.1**	**-0.2**
	baz=238						
IGT	**Igoumenitsa**	**0.35**	**222**	P	**Pg**	**04 24 49.4**	**-0.9**
IGT				S	**Sb**	**04 24 56.1**	**-0.2**
	comp=E,470nm,0.2s						
IGT	**Igoumenitsa**	**0.35**	**222**	P	**Pg**	**04 24 49.7**	**-0.6**
IGT				S	**Sb**	**04 24 55.8**	**-0.5**
IGT				AML	AML	04 24 57.2	
	comp=E,1036µm,0.2s						
IGT				AML	AML	04 25 00.9	
	comp=N,950µm,0.4s						
SRN	**Sarande**	**0.50**	**280**	P	**Pg**	**04 24 52.2**	**-0.7**
	baz=284						
SRN				S	**Sb**	**04 25 00.8**	**+0.3**
	baz=284						
SRN	**Sarande**	**0.50**	**280**	P	**Pg**	**04 24 52.2**	**-0.7**
SRN				S	**Sb**	**04 25 00.7**	**+0.2**
	comp=N,420nm,0.3s						
KASA	**Kassiopi**	**0.55**	**265**	P	**Pg**	**04 24 53.0**	**-0.8**
KASA				AML	AML	04 25 03.7	
	comp=E,994µm,0.3s						
KASA				AML	AML	04 25 04.6	
	comp=N,878µm,0.4s						
PENT	**Pentalofos**	**0.55**	**44**	P	**Pg**	**04 24 52.8**	**-1.2**
PENT				S	**Sb**	**04 25 02.4**	**+0.2**
PENT	**Pentalofos**	**0.55**	**44**	P	**Pg**	**04 24 52.8**	**-1.2**
KPRO	**Kipouria**	**0.58**	**74**	P	**Pg**	**04 24 53.2**	**-1.3**
KPRO				AML	AML	04 25 03.4	
	comp=N,1019µm,0.4s						
KPRO				AML	AML	04 25 04.5	
	comp=E,1014µm,0.3s						
NEST	**Nestorio**	**0.69**	**27**	P	**Pg**	**04 24 55.8**	**-0.8**
NEST	**Nestorio**	**0.69**	**27**	P	**Pg**	**04 24 55.6**	**-1.0**
KBN	**Korca**	**0.83**	**8**	P	**Pb**	**04 24 59.0**	**-0.2**
	baz=1.0						
KBN				S	**Sn**	**04 25 12.2**	**-0.1**
	baz=1.0						
KBN	**Korca**	**0.83**	**8**	P	**Pg**	**04 24 58.1**	**-1.1**
KBN				S	**Sb**	**04 25 09.9**	**-0.3**
TSLK	**Tsoukalades, L**	**0.97**	**179**	P	**Pb**	**04 25 00.1**	**-1.4**
TSLK	**Tsoukalades, L**	**0.97**	**179**	P	**Pb**	**04 25 00.2**	**-1.2**
LKD2	**Lefkada island**	**1.01**	**179**	P	**Pb**	**04 25 01.4**	**-0.7**
LKD2	**Lefkada island**	**1.01**	**179**	P	**Pb**	**04 25 01.9**	**-0.2**
NYDR	**Nydri-Lefkada**	**1.08**	**178**	P	**Pb**	**04 25 03.1**	**-0.2**
THL	**Klokotos Trika**	**1.09**	**102**	P	**Pb**	**04 25 02.3**	**-1.1**
THL				S	**Sb**	**04 25 18.1**	**+0.7**
	comp=E,58nm,0.4s						
THL	**Klokotos Trika**	**1.09**	**102**	P	**Pb**	**04 25 02.5**	**-1.0**
THL				AML	AML	04 25 19.3	
	comp=E,110µm,0.3s						
THL				AML	AML	04 25 24.8	
	comp=N,121µm,0.3s						
VLO	**Vlora**	**1.10**	**308**	P	**Pg**	**04 25 05.6**	**+1.3**
	baz=308						
VLO				S	**Sn**	**04 25 22.8**	**+4.0**
	baz=308						
DRAG	**Dragano-Lefkad**	**1.11**	**183**	P	**Pb**	**04 25 03.0**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.11**	**183**	P	**Pb**	**04 25 03.0**	**-0.9**
FNA	**Florina**	**1.14**	**30**	P	**Pb**	**04 25 03.9**	**-0.4**
	baz=24						
FNA				S	**Sn**	**04 25 20.8**	**+1.1**
	baz=24						
FNA	**Florina**	**1.14**	**30**	P	**Pb**	**04 25 03.6**	**-0.8**
FNA	**Florina**	**1.14**	**30**	P	**Pb**	**04 25 03.5**	**-0.8**
FNA				AML	AML	04 25 24.2	
	comp=E,398µm,0.3s						
FNA				AML	AML	04 25 26.1	
	comp=N,307µm,0.3s						
EVGI	**Lefkada island**	**1.17**	**179**	P	**Pn**	**04 25 04.5**	**-0.3**
EVGI	**Lefkada island**	**1.17**	**179**	P	**Pn**	**04 25 04.5**	**-0.3**
TYRN	**Tyrnavos**	**1.23**	**93**	P	**Pn**	**04 25 04.3**	**-1.3**
TYRN				S	**Sn**	**04 25 22.8**	**+0.9**
	comp=N,112nm,0.5s						
TYRN	**Tyrnavos**	**1.23**	**93**	P	**Pn**	**04 25 04.3**	**-1.3**
EVR	**Evrytania**	**1.26**	**134**	P	**Pn**	**04 25 06.0**	**-0.1**
EVR	**Evrytania**	**1.26**	**134**	P	**Pn**	**04 25 06.0**	**-0.1**
EVR				AML	AML	04 25 30.9	
	comp=N,124µm,0.5s						
EVR				AML	AML	04 25 33.8	
	comp=E,147µm,0.5s						
OHR	**Ohrid**	**1.32**	**5**	*i* Pg	**Pg**	**04 25 08.9**	**+0.5**
OHR				*i* Sg	**Sg**	**04 25 29.0**	**+3.4**
FSK	**Fiskardo**	**1.34**	**183**	P	**Pn**	**04 25 07.1**	**0.0**
FSK	**Fiskardo**	**1.34**	**183**	P	**Pn**	**04 25 07.1**	**0.0**
PVO	**Paravola**	**1.36**	**149**	P	**Pn**	**04 25 07.2**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.40**	**124**	P	**Pn**	**04 25 07.8**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.40**	**124**	P	**Pn**	**04 25 07.8**	**-0.1**
MAKR				AML	AML	04 25 36.0	
	comp=E,354µm,0.5s						
MAKR				AML	AML	04 25 36.2	
	comp=N,280µm,0.3s						
AGG	**Agios Georgios**	**1.52**	**120**	P	**Pn**	**04 25 09.8**	**+0.1**
AGG	**Agios Georgios**	**1.52**	**120**	P	**Pn**	**04 25 09.7**	**+0.1**
AGG				AML	AML	04 25 33.6	
	comp=E,149µm,0.4s						
AGG				AML	AML	04 25 34.5	
	comp=N,128µm,0.3s						
KEF4	**Livadi, Kephal**	**1.55**	**186**	P	**Pn**	**04 25 09.9**	**0.0**
ANX	**Ano Chora**	**1.56**	**140**	P	**Pn**	**04 25 10.7**	**+0.5**
DMLN	**Damoulianata-K**	**1.57**	**188**	P	**Pn**	**04 25 10.2**	**-0.1**
KEF3	**Kipouria, Keph**	**1.61**	**188**	P	**Pn**	**04 25 11.0**	**+0.2**
VLS	**Valsamata**	**1.62**	**181**	P	**Pn**	**04 25 11.7**	**+0.7**
VLS				AML	AML	04 25 34.7	
	comp=N,152µm,0.4s						
VLS				AML	AML	04 25 37.6	
	comp=E,187µm,0.4s						
TIR	**Tirane**	**1.66**	**339**	P	**Pb**	**04 25 13.1**	**-0.1**
	baz=338						
TIR				S	**Sg**	**04 25 37.9**	**+1.5**
	baz=338						
PSDA	**Pessada-Kefalo**	**1.68**	**181**	P	**Pn**	**04 25 12.1**	**+0.3**
GRG	**Griva**	**1.78**	**49**	P	**Pn**	**04 25 12.8**	**-0.3**
PHP	**Peshkopia**	**1.89**	**356**	P	**Pb**	**04 25 16.9**	**-0.3**
	baz=353						
PHP				S	**Sg**	**04 25 45.2**	**+1.3**
	baz=353						
DRO	**Drossia**	**2.02**	**155**	P	**Pn**	**04 25 17.2**	**+0.7**
STIP	**Stip**	**2.23**	**31**	*i* Pn	**Pg**	**04 25 24.1**	**-1.7**
GUR	**Goura**	**2.29**	**144**	P	**Pn**	**04 25 20.7**	**+0.5**
PEHC	**Pehcevo**	**2.62**	**40**	*i* Pn	**Pn**	**04 25 26.9**	**+2.1**
STON	**Ston**	**3.79**	**325**	*e*Pn	**Pn**	**04 25 39.4**	**-1.3**
STON					Sn	**04 26 22.9**	**-2.0**
LSTV	**Lastovo**	**4.10**	**318**	*e*Pn	**Pn**	**04 25 43.6**	**-1.4**
MAKA	**Makarska**	**4.42**	**323**	*e*Pn	**Pn**	**04 25 48.2**	**-1.2**
RICI	**Ricice**	**4.53**	**326**	*e*Pn	**Pn**	**04 25 49.7**	**-1.3**
RICI					Sn	**04 26 41.1**	**-2.3**
KIJV	**Kijevo**	**5.26**	**324**	*e*Pn	**Pn**	**04 26 00.5**	**-0.5**
ZIRJ	**Zirje**	**5.37**	**318**	*e*Pn	**Pn**	**04 26 01.3**	**-1.2**
MORI	**Morici**	**5.49**	**319**	*e*Pn	**Pn**	**04 26 03.2**	**-0.9**
VIRC	**Vir**	**6.12**	**319**	*e*Pn	**Pn**	**04 26 12.1**	**-0.7**

IDC 13 04:27:21.9±2.7, 22°.11S×178°.60W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=76.8km s-min=36.7km az=35.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.62**	**258**	P	P	04 35 28.2	-0.3
	0.9nm,0.8s,baz=97,slow=7.7,SNR=8.6						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**43.84**	**264**	P	P	04 35 30.2	0.0
	1.0nm,0.6s,baz=93,slow=8.3,SNR=43						
	1.0nm,0.6s						
QSPA	**South Pole Qui**	**67.97**	**180**	P	P	04 38 22.5	-0.2
	2.6nm,0.6s,baz=56,slow=3.6,SNR=20						
	2.6nm,0.6s						
HFS	**Hagfors**	**141.03**	**350**	PKhKP	PKPpre	04 46 48.7	
	4.8nm,1.1s,baz=49,slow=4.4,SNR=5.6						
BRTR	**Keskin Array B**	**147.47**	**310**	PKPbc	PKPbc	04 47 08.2	-0.2
	0.5nm,0.4s,baz=66,slow=4.3,SNR=2.1						

IDC 13 04:36:36.8±4.4, 2°.94S×140°.10E, h0km, mb3.4/2, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=165.1km s-min=31.0km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.81**	**198**	P	Pn	04 40 46.2	-0.1
	0.3nm,0.3s,baz=17,slow=12,SNR=11						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**21.46**	**196**	P	P	04 41 26.4	-0.6
	1.0nm,0.7s,baz=25,slow=9.4,SNR=10						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**70.82**	**322**	P	P	04 47 55.8	+0.4
	0.3nm,0.6s,baz=119,slow=7.2,SNR=3.9						
	0.3nm,0.6s						

*NEIC **13** 04:38:45.9±0.3, 36°.29N±0°.01×97°.519W±0°.007, h6km±4km, Error ellipse: s-maj=1.7km s-min=0.6km az=197.0*
TUL 13 04:38:46.1±0.4, 36°.291N±0°.010×97°.51W±0°.01, h8km±8km, ML2.6, mb_Lg2.4/15(NEIC), ML2.7/48(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=52.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.43**	**300**	Pg	Pg	04 38 54.6	0.0
CROK				Sg	Sg	04 39 00.7	+0.4
CROK				IAML		04 39 00.9	
	comp=E,679nm,0.3s						
OK048	**Pawnee Station**	**0.48**	**75**		Pg	04 38 55.5	+0.2
OK048				Sg	Sg	04 39 01.8	+0.2
OK029	**Liberty Lake**	**0.49**	**174**	Pg	Pg	04 38 55.7	0.0
OK029				Sg	Sg	04 39 02.5	+0.3
BLOK	**Blackwell**	**0.53**	**27**	Pg	Pg	04 38 56.5	+0.2
BLOK				IAML		04 39 12.9	
	comp=E,516nm,0.2s						
BLOK				IAML		04 39 13.4	
	comp=N,555nm,0.2s						
OK033	**Mehan**	**0.53**	**118**		Pg	04 38 56.4	+0.1
OK033				Sg	Sg	04 39 03.5	+0.2
OK051	**E0350 and S346**	**0.59**	**68**		Pg	04 38 57.5	+0.1
OK051				IAML		04 39 06.6	
	comp=N,461nm,0.2s						
OK051				IAML		04 39 08.1	
	comp=N,509nm,0.2s						
**

comp=Z,7.2nm,0.8s
MIAR Mount Ida 3.66 117 Pn Pn 04 39 44.3 +1.3
AMTX Amarillo 3.67 249 IAmb_Lg 04 40 47.2
comp=Z,9.1nm,0.9s
DKNS Dickens 3.83 228 Pn Pn 04 39 45.6 +0.1
RTBA Rita Blanca 4.22 274 Pn Pn 04 39 51.5 +0.7
X40A Basin Creek Fa 4.22 114 IAmb_Lg 04 41 03.6
comp=Z,9.0nm,0.8s
P38A Dawn 4.58 42 IAmb_Lg 04 41 16.9
comp=Z,9.7nm,0.8s
POST Post 4.60 227 IAmb_Lg 04 41 12.0
comp=Z,7.3nm,0.7s
CCM Cathedral Cave 5.31 69 IAmb_Lg 04 41 39.3
comp=Z,6.0nm,0.7s
N38A Joes South For 5.61 35 IAmb_Lg 04 41 54.6
comp=Z,8.7nm,0.8s
Q24A Divide 6.62 296 IAmb_Lg 04 42 19.8
comp=Z,3.6nm,0.8s

CATAC ***13*** *04:54:10.0±1.2, 8°.31N×83°.01W, h17km±10km, ML2.5*
UPA ***13*** *04:54:12.7±0.8, 9°.29N×82°.55W, h8km±18km, MW2.8*
ISC 13 04:54:11.6±2.1, 9°.28N±0°.06×82°.45W±0°.08, h14km±14km, n12, σ0.83/16, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHGR2	**Aguacate**	**0.46**	**138**	*eP*		**Pn**		**04 54 23.5**	**-0.2**
CHGR2				*eS*		**Sn**		**04 54 31.6**	**-0.1**
BC3P	**Paso Ancho**	**0.49**	**199**	*eP*		**Pn**		**04 54 23.5**	**-0.8**
BRU2	**Volcan**	**0.54**	**206**	*eP*		**Pb**		**04 54 23.0**	**+0.2**
BRU2				*eS*		**Sb**		**04 54 31.4**	**+0.9**
BRU2	**Volcan**	**0.54**	**206**	*i* P		**Pb**		**04 54 23.0**	**+0.2**
BRU2				IAML				04 54 23.1	
	comp=Z,290nm,1.0s								
BRU2				*i* S		**Sb**		**04 54 31.0**	**+0.5**
BCO2	**Palmira**	**0.56**	**188**	*eP*		**Pn**		**04 54 24.5**	**-0.8**
BCO2				*eS*		**Sn**		**04 54 33.9**	**-0.5**
POTG	**Potrero Grande**	**0.69**	**251**	*i* P		**Pg**		**04 54 24.1**	**-1.1**
POTG				IAML				04 54 37.0	
	comp=Z,240nm,1.0s								
DVD	**David**	**0.84**	**180**	*eP*		**Pn**		**04 54 29.7**	**+0.8**
OCHAL	**Ojochal**	**1.19**	**261**	*i* P		Pn		04 54 27.2	-6.6
OCHAL				IAML				04 55 28.2	
	comp=Z,1.8nm,1.0s								
CDM	**Cerro de Muert**	**1.32**	**282**	*i* P		**Pn**		**04 54 35.3**	**-0.7**
CDM				IAML				04 55 05.1	
	comp=Z,52nm,1.0s								
PLAN	**Los Planes de**	**1.35**	**244**	*i* P		Pn		04 54 25.9	-10
PLAN				IAML				04 54 41.5	
	comp=Z,180nm,1.0s								
RIMA	**Rio Macho**	**1.47**	**289**	*i* P		**Pb**		**04 54 39.0**	**+0.2**
RIMA				IAML				04 54 44.0	
	comp=Z,33nm,1.0s								
RIMA				*i* S		**Sg**		**04 55 00.9**	**+1.8**
LCR2	**La Lucha 2**	**1.60**	**287**	*i* P		**Pn**		**04 54 39.3**	**-0.3**
LCR2				*i* S		**Sb**		**04 55 01.5**	**+0.4**
LCR2				IAML				04 55 05.6	
	comp=Z,47nm,1.0s								

IDC ***13*** *04:59:07.9±0.6, 27°.78N×140°.12E, h473km±18km, mb3.3/8, mbtmp4.1/8, Error ellipse: s-maj=53.7km s-min=13.8km az=75.0*
ISC 13 04:59:08.1±0.9, 27°.8N±0°.2×140°.2E±0°.2, h478km, n9, σ0.51/10, mb3.7/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.93**	**110**	P		**P**	**P**	**05 00 11.0**	**+0.2**
	103nm,0.3s,baz=356,slow=14,SNR=10								
JCJ				S		**S**	**S**	**05 01 01.1**	**-0.5**
	128nm,0.3s,baz=284,slow=23,SNR=9.8								
WRA	**Warramunga Arr**	**47.77**	**187**	P		**P**	**P**	**05 07 01.1**	**0.0**
	0.9nm,0.3s,baz=3.8,slow=7.6,SNR=18								
	0.9nm,0.3s								
ZALV	**Zalesovo Beam**	**47.79**	**319**	P		**P**	**P**	**05 06 59.8**	**-0.9**
	1.0nm,0.5s,baz=110,slow=7.2,SNR=1.4								
	1.0nm,0.5s								
MKAR	**Makanchi Array**	**48.65**	**309**	P		**P**	**P**	**05 07 07.4**	**0.0**
	0.3nm,0.4s,baz=90,slow=10,SNR=8.0								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**51.27**	**314**	P		**P**	**P**	**05 07 26.5**	**-0.1**
	2.6nm,0.5s,baz=92,slow=8.1,SNR=18								
	2.6nm,0.5s								
ASAR	**Alice Springs**	**51.50**	**187**	P		**P**	**P**	**05 07 28.6**	**+0.1**
	0.4nm,0.4s,baz=3.0,slow=7.3,SNR=5.9								
	0.4nm,0.4s								
BVAR	**Borovoye Array**	**56.32**	**317**	P		**P**	**P**	**05 08 02.6**	**+0.2**
	3.6nm,0.4s,baz=87,slow=6.8,SNR=20								
	3.6nm,0.4s								
ARCES	**ARCESS Array B**	**72.30**	**340**	P		**P**	**P**	**05 09 44.6**	**+0.7**
	2.6nm,1.0s,baz=74,slow=9.5,SNR=4.3								
	2.6nm,1.0s								
FINES	**FINESS Array B**	**76.53**	**333**	P		**P**	**P**	**05 10 07.8**	**-0.1**
	1.0nm,0.3s,baz=73,slow=4.9,SNR=17								
	1.0nm,0.3s								

IDC 13 05:05:47.6±2.7, 54°.17N×86°.43E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=22.2km s-min=13.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**258**	I		I	I	05 11 12.3	
	baz=79,slow=337,SNR=5.3								
ZALV	**Zalesovo Beam**	**0.97**	**258**	Pg		Pg	Pg	05 06 04.8	-1.5
	0.7nm,0.3s,baz=77,slow=17,SNR=16								
ZALV				Lg		Lg	Lg	05 06 20.7	
	1.1nm,0.3s,baz=74,slow=28,SNR=7.4								
KURBB	**Kurchatov Arra**	**6.00**	**237**	Pn		Pn	Pn	05 07 18.4	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=7.2								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**7.84**	**201**	Pn		Pn	Pn	05 07 44.0	+1.2
	0.1nm,0.3s,baz=21,slow=12,SNR=8.0								
	0.2nm,0.3s								

IDC 13 05:20:21.7±7.0, 22°.84S×177°.34W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=279.4km s-min=64.1km az=147.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.63**	**259**	P		P	P	05 28 35.9	-0.4
	0.4nm,0.4s,baz=90,slow=8.5,SNR=8.0								
	0.4nm,0.4s								
WRA	**Warramunga Arr**	**44.93**	**264**	P		P	P	05 28 38.6	-0.1
	1.2nm,0.6s,baz=102,slow=7.2,SNR=10								
	1.2nm,0.6s								
AKASG	**Malin Array Be**	**145.34**	**330**	PKPbc		PKPbc	PKPbc	05 40 00.7	-0.5
	1.0nm,0.6s,baz=27,slow=0.2,SNR=1.9								

IDC 13 05:25:16.7±3.1, 54°.69N×86°.64E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=27.3km s-min=17.3km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**236**	I		I	I	05 32 50.0	
	baz=56,slow=337,SNR=4.6								
ZALV	**Zalesovo Beam**	**1.30**	**236**	Pg		Pg	Pg	05 25 39.6	-1.9
	1.1nm,0.3s,baz=54,slow=16,SNR=7.3								
ZALV				Lg		Lg	Lg	05 25 58.5	
	2.8nm,0.3s,baz=54,slow=28,SNR=16								
ZALV				Rg		Rg	Rg	05 26 03.5	
	3.4nm,0.5s,baz=52,slow=28,SNR=6.3								
KURBB	**Kurchatov Arra**	**6.40**	**234**	Pn		Pn	Pn	05 26 52.9	+0.8
	0.1nm,0.3s,baz=52,slow=14,SNR=9.6								
KURBB				Lg		Lg	Lg	05 28 41.0	
	baz=43,slow=38,SNR=1.6								
	1.0nm,0.4s								
MKAR	**Makanchi Array**	**8.37**	**201**	Pn		Pn	Pn	05 27 20.3	+1.1
	0.1nm,0.3s,baz=25,slow=12,SNR=7.1								
	0.1nm,0.3s								

BJI ***13*** *05:34:59.8±0.0, 1°.70N×127°.20E, h130km, mb4.7/53, mB5.0/21*
IDC ***13*** *05:34:59.0±1.8, 1°.70N×127°.28E, h123km±15km, mb4.3/17, mbtmp4.7/17, MS3.2/5, Error ellipse: s-maj=30.4km s-min=9.0km az=70.0*
DJA ***13*** *05:34:59.1±1.0, 2°.N±3°×12°.7E±°, h27km±10km, M4.9/14, mb5.0/9, mB5.5/6, MLv4.8/14, Mw(mB)4.9/6*

NEIC ***13*** *05:34:59.5±1.1, 1°.72N±0°.07×127°.24E±0°.06, h120km±7km, mb4.9/33, Error ellipse: s-maj=10.9km s-min=7.0km az=148.0*
ISC 13 05:34:59.5±0.3, 1°.72N±0°.04×127°.21E±0°.06, h120km, n190, σ1.17/202, mb4.7/48, 3C-5D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.95**	**171**				**Pn**	**05 35 21.5**	**+0.5**
TNTI	**Ternate**	**0.95**	**171**	P			**Pn**	**05 35 21.8**	**+0.8**
TNTI	**Ternate**	**0.95**	**171**	P			**Pn**	**05 35 21.4**	**+0.4**
LBMI	**Labuha**	**2.36**	**173**	P			**Pn**	**05 35 38.1**	**+0.6**
LBMI						S	**Sn**	**05 36 07.9**	**+1.3**
SGSI	**Sangihe**	**2.58**	**319**	P			**Pn**	**05 35 38.9**	**-1.4**
SGSI						S	**Sn**	**05 36 08.9**	**-2.8**
KMSI	**Cibinong**	**3.42**	**251**	P			**Pn**	**05 35 50.4**	**-0.9**
KMSI						S	**Sn**	**05 36 31.6**	**+0.1**
SANI	**Sanana**	**3.94**	**198**	P			**Pn**	**05 35 57.3**	**-0.9**
SANI	**Sanana**	**3.94**	**198**	P			**Pn**	**05 35 57.2**	**-0.9**
SWI	**Sorong**	**4.79**	**122**	P			**Pn**	**05 36 10.6**	**+1.0**
NLAI	**Namlea**	**4.92**	**181**	P			**Pn**	**05 36 11.4**	**0.0**
LUWI	**Luwuk**	**5.22**	**238**	Pn			**Pn**	**05 36 16.8**	**+1.5**
LUWI	**Luwuk**	**5.22**	**238**	P			**Pn**	**05 36 17.4**	**+2.0**
LUWI	**Luwuk**	**5.22**	**238**	P			**Pn**	**05 36 17.2**	**+1.8**
	114nm,0.5s,4µm3.2nm								
MRSI	**Marisa**	**5.41**	**257**	P			**Pn**	**05 36 18.4**	**+0.4**
	144nm,0.5s,2µm0.7nm								
DAV	**Davao City (W)**	**5.56**	**343**	S			**Sn**	**05 37 23.5**	**+0.6**
	453nm,0.5s,baz=20,slow=22,SNR=4.3								
DAV						LR	LR	05 38 42.5	
	comp=Z,112nm,20.0s,baz=172,slow=40								
TOLI2	**Tolitoli**	**6.46**	**265**	Pn			**Pn**	**05 36 31.8**	**-0.3**
TOLI2	**Tolitoli**	**6.46**	**265**	P			**Pn**	**05 36 32.1**	**0.0**
FAKI	**Fak Fak**	**6.82**	**132**	Pn			**Pn**	**05 36 37.7**	**+0.6**
FAKI	**Fak Fak**	**6.82**	**132**	P			**Pn**	**05 36 39.0**	**+1.9**
FAKI	**Fak Fak**	**6.82**	**132**	P			**Pn**	**05 36 38.8**	**+1.7**
	52nm,0.7s,0.2nm								
MPSI	**Mapaga**	**7.44**	**259**	P			**Pn**	**05 36 46.8**	**+1.4**
	19nm,0.8s,0.1nm								
MYLDM	**Lahad Datu**	**9.35**	**292**	Pn			**Pn**	**05 37 11.1**	**-0.1**
BKSI	**Bulukumba**	**9.95**	**225**	P			**Pn**	**05 37 21.1**	**+1.7**
KAPI	**Kappang**	**10.01**	**228**	Pn			**Pn**	**05 37 21.0**	**+0.9**
PLAI	**Plampang**	**14.08**	**222**	P			**Pn**	**05 38 15.3**	**+1.6**
PLAI	**Plampang**	**14.08**	**222**	P			**P**	**05 38 18.1**	**+0.5**
	110nm,0.9s								
TWSI	**Taliwang, Sumb**	**14.62**	**225**	P			**P**	**05 38 23.6**	**-0.1**
	78nm,1.0s								
MTN	**Manton Dam**	**14.98**	**165**	P			**Pn**	**05 38 23.2**	**-1.9**
	baz=15,SNR=11								
MTN	**Manton Dam**	**14.98**	**165**	Pn			**Pn**	**05 38 23.3**	**-1.9**
MTN	**Manton Dam**	**14.98**	**165**	P			**Pn**	**05 38 23.5**	**-1.6**
SBUM	**Sibu**	**15.00**	**273**	Pn			**Pn**	**05 38 26.0**	**+0.6**
KDU	**Kakadu**	**15.23**	**160**	P			**Pn**	**05 38 26.0**	**-2.3**
	baz=15,SNR=4.5								
KDU	**Kakadu**	**15.23**	**160**	P			**Pn**	**05 38 27.9**	**-0.4**
KSM	**Kuching**	**16.90**	**269**	P			**P**	**05 38 50.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**19.75**	**184**	P			**P**	**05 39 19.0**	**-1.1**
	baz=20,SNR=28								
FITZ	**Fitzroy Crossi**	**19.75**	**184**					**05 39 19.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.75**	**184**	P			**P**	**05 39 19.6**	**-0.5**
GUMO	**Guam**	**21.08**	**55**	LR		LR	LR	05 47 54.1	
	comp=Z,26nm,18.4s,baz=76,slow=37								
COEN	**Coen**	**22.20**	**135**	P			**P**	**05 39 45.9**	**-0.4**
	baz=22,SNR=23								
COEN	**Coen**	**22.20**	**135**	P			**P**	**05 39 45.2**	**-1.1**
COEN	**Coen**	**22.20**	**135**	P			**P**	**05 39 45.6**	**-0.7**
TPUB	**Ta-pu**	**22.39**	**344**	P			**P**	**05 39 47.9**	**-0.2**
WB0	**Warramunga Arr**	**22.48**	**162**	P			**P**	**05 39 47.7**	**-1.4**
WRAB	**Tennant Creek**	**22.63**	**162**	P			**P**	**05 39 49.3**	**-1.2**
WRA	**Warramunga Arr**	**22.63**	**162**	P			**P**	**05 39 48.1**	**-2.5**
WRA	**Warramunga Arr**	**22.63**	**162**	P			**P**	**05 39 48.8**	**-1.8**
	29nm,0.4s,baz=340,slow=11,SNR=214								
WRA					PcP		**PcP**	**05 43 38.4**	**-1.0**
	1.1nm,0.4s,baz=336,slow=2.3,SNR=1.0								
WRA					S		**S**	**05 43 47.9**	**-1.8**
	1.1nm,0.6s,baz=331,slow=20,SNR=2.5								
WRA					ScP		**ScP**	**05 47 04.1**	**-2.1**
	1.3nm,0.7s,baz=337,slow=3.4,SNR=4.7								
	29nm,0.4s								
WB2	**Warramunga Arr**	**22.64**	**162**	P			**P**	**05 39 49.1**	**-1.4**
	baz=23								
WB2	**Warramunga Arr**	**22.64**	**162**	P			**P**	**05 39 49.4**	**-1.2**
WR0	**Warramunga Arr**	**22.71**	**162**	P			**P**	**05 39 50.1**	**-1.2**
PMG	**Port Moresby**	**22.74**	**119**	LR		LR	LR	05 49 58.3	
	comp=Z,62nm,19.7s,baz=225,slow=40								
SSLB	**Suanglung**	**22.76**	**345**	P			**P**	**05 39 51.2**	**-0.6**
SSLB	**Suanglung**	**22.76**	**345**	P			**P**	**05 39 51.5**	**-0.3**
YOJ	**Yonaguni jima**	**22.97**	**350**	P			**P**	**05 39 53.9**	**+0.1**
YHNB	**Yeheng**	**23.51**	**347**	P			**P**	**05 39 58.2**	**-0.6**
MBWA	**Marble Bar**	**23.88**	**197**	P			**P**	**05 40 01.4**	**-0.8**
MBWA	**Marble Bar**	**23.88**	**197**	P			**P**	**05 40 01.6**	**-0.5**
QIZ	**Qiongzhong**	**24.20**	**316**	P			**P**	**05 40 04.2**	**-0.8**
PSA00	**Pilbara Seismi**	**24.24**	**197**	P			**P**	**05 40 05.0**	**-0.4**
PSA00					IAmb		IAmb	05 40 06.1	
	comp=Z,65nm,1.1s								
PSA00	**Pilbara Seismi**	**24.24**	**197**	P			**P**	**05 40 05.2**	**-0.2**
QZH	**Quanzhou**	**24.55**	**341**	⇑*i*	P		**P**	**05 40 08.9**	**+0.8**
QIS	**Mount Isa**	**25.25**	**152**	P			**P**	**05 40 14.2**	**-0.4**
	baz=25,SNR=69								
QIS	**Mount Isa**	**25.25**	**152**	P			**P**	**05 40 14.4**	**-0.2**
MTSU	**Mount Surprise**	**25.94**	**140**	P			**P**	**05 40 22.2**	**+1.3**
	baz=26,SNR=19								
MTSU	**Mount Surprise**	**25.94**	**140**	P			**P**	**05 40 22.2**	**+1.3**
AS31	**Alice Springs**	**26.06**	**166**	P			**P**	**05 40 20.9**	**-1.0**
ASAR	**Alice Springs**	**26.06**	**166**	P			**P**	**05 40 20.6**	**-1.2**
ASAR	**Alice Springs**	**26.06**	**166**	P			**P**	**05 40 20.9**	**-1.0**
	comp=Z,7.5nm,0.5s,baz=349,slow=7.7,SNR=64								
ASAR					PcP		**PcP**	**05 43 45.8**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=352,slow=2.4,SNR=2.4								
ASAR					S		**S**	**05 44 48.8**	**+4.4**
	comp=Z,0.3nm,0.6s,baz=348,slow=22,SNR=1.4								
ASAR					ScP		**ScP**	**05 47 13.7**	**-2.0**
	comp=Z,1.2nm,0.8s,baz=360,slow=2.1,SNR=6.9								
	comp=Z,7.5nm,0.5s								
ASPA	**Alice Springs**	**26.06**	**166**	P			**P**	**05 40 21.3**	**-0.5**
	baz=26								
AS01	**Alice Springs**	**26.07**	**166**	P			**P**	**05 40 21.1**	**-0.9**
WRKA	**Warakurna**	**26.61**	**178**	P			**P**	**05 40 26.0**	**-0.9**
	baz=27,SNR=17								
WRKA	**Warakurna**	**26.61**	**178**	P			**P**	**05 40 26.2**	**-0.7**
GIRL	**Giralia**	**27.32**	**207**	P			**P**	**05 40 31.3**	**-1.9**
	baz=27,SNR=8.2								
GIRL	**Giralia**	**27.32**	**207**	P			**P**	**05 40 33.8**	**+0.7**
GIRL	**Giralia**	**27.32**	**207**	P			**P**	**05 40 32.9**	**-0.3**
PSI	**Prapat**	**28.29**	**273**	P			**P**	**05 40 41.9**	**-0.1**
TV1H	**Townsville Har**	**28.37**	**138**	P			**P**	**05 40 43.7**	**+1.2**
CTA	**Charters Tower**	**28.61**	**140**	P			**P**	**05 40 45.2**	**+0.6**
	comp=Z,5.8nm,0.7s,baz=322,slow=12,SNR=2.3								
CTA					ScP		**ScP**	**05 47 23.2**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=353,slow=7.5,SNR=3.6								
	comp=Z,5.8nm,0.7s								
NONG	**Nongkai**	**28.67**	**306**	P			**P**	**05 40 45.5**	**+0.3**
MEEK	**Meekatharra**	**29.39**	**196**	P			**P**	**05 40 50.7**	**-0.8**
	baz=29,SNR=26								
MEEK	**Meekatharra**	**29.39**	**196**	P			**P**	**05 40 50.9**	**-0.6**
WHN	**Wuhan**	**31.16**	**338**	⇓*i*	P		P	05 41 13.3	+6.3
NJ2	**Nanjing**	**31.19**	**346**	*eP*			**P**	**05 41 08.3**	**+1.0**
NJ2					pP		**pwP**	**05 41 38.5**	**+2.4**
NJ2					sP		**sP**	**05 41 52.3**	**+6.0**
NJ2					pmax		pmax		
	comp=Z,63nm,0.6s								
INKA	**Innaminka**	**32.05**	**157**	P			**P**	**05 41 14.7**	**-0.2**
FORT	**Forrest**	**32.33**	**179**	P			**P**	**05 41 16.2**	**-1.1**
	baz=32,SNR=25								
FORT	**Forrest**	**32.33**	**179**	P			**P**	**05 41 16.1**	**-1.1**
FORT	**Forrest**	**32.33**	**179**	P			**P**	**05 41 16.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**32.33**	**303**	P			**P**	**05 41 17.1**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=118,slow=6.8,SNR=9.6								
CMAR					ScP		**ScP**	**05 47 35.8**	**0.0**
	comp=Z,1.2nm,0.3s,baz=149,slow=1.9,SNR=7.0								
	comp=Z,1.2nm,0.3s								
MORW	**Morawa**	**32.43**	**198**	P			**P**	**05 41 17.6**	**-0.6**
	baz=32,SNR=6.4								
MORW	**Morawa**	**32.43**	**198**	P			**P**	**05 41 17.4**	**-0.8**
MORW					IAmb		IAmb	05 41 19.0	
	comp=Z,13nm,0.7s								
QLP	**Quilpie**	**32.58**	**151**	P			**P**	**05 41 19.5**	**-0.1**
ENH	**Enshi**	**33.01**	**331**	P			**P**	**05 41 23.6**	**+0.3**
KMI	**Kunming**	**33.15**	**317**	⇑P			**P**	**05 41 25.9**	**+1.1**
KMI					pmax		pmax		
	comp=Z,10.0nm,1.1s								
KMBL	**Kambalda**	**33.29**	**188**	P			**P**	**05 41 25.0**	**-0.7**
	baz=33,SNR=16								
LCRK	**Leigh Creek**	**33.66**	**163**	P			**P**	**05 41 28.4**	**-0.5**
BLDU	**Ballidu**	**33.67**	**196**	P			**P**	**05 41 28.3**	**-0.8**
	baz=34,SNR=18								
RK1H	**Rockhampton Ha**	**33.71**	**139**	P			**P**	**05 41 29.5**	**+0.1**
KLBR	**Kellerberrin**	**34.32**	**194**	P			**P**	**05 41 34.1**	**-0.5**
	baz=34,SNR=29								
KLBR	**Kellerberrin**	**34.32**	**194**	P			**P**	**05 41 34.1**	**-0.5**
PZH	**PanZhiHua**	**34.73**	**317**	P			**P**	**05 41 41.3**	**+2.9**
PZH					pmax		pmax		
	comp=Z,5.0nm,0.7s								
PZH					pmax		pmax		
	comp=Z,100nm,5.3s								
MUN	**Mundaring**	**35.10**	**196**	P			**P**	**05 41 40.9**	**-0.4**
	baz=35,SNR=8.7								
BBOO	**Buckleboo**	**35.34**	**167**	P			**P**	**05 41 42.4**	**-1.0**
	baz=35,SNR=26								
BBOO	**Buckleboo**	**35.34**	**167**	P			**P**	**05 41 42.5**	**-1.0**
BBOO					IAmb		IAmb	05 41 43.3	
	comp=Z,12nm,0.5s								
LYN	**LuoYang**	**35.45**	**339**	⇓P			**P**	**05 41 44.8**	**+0.5**
LYN					pmax		pmax		
	comp=Z,52nm,0.8s								
LYN					pmax		pmax		
	comp=Z,310nm,4.9s								
EIDS	**Eidsvold**	**35.49**	**141**	P			**P**	**05 41 44.4**	**-0.3**
	baz=36,SNR=6.4								
EIDS	**Eidsvold**	**35.49**	**141**	P			**P**	**05 41 43.9**	**-0.8**
EIDS					IAmb		IAmb	05 41 45.4	
	comp=Z,16nm,1.1s								
EIDS	**Eidsvold**	**35.49**	**141**	P			**P**	**05 41 44.2**	**-0.5**
KSRS	**Korea Array**	**35.57**	**1**	P			**P**	**05 41 44.6**	**-0.6**
	comp=Z,4.6nm,0.6s,baz=180,slow=10,SNR=15								
	comp=Z,4.6nm,0.6s								
NWAO	**Narrogin (SRO)**	**35.72**	**194**	P			**P**	**05 41 46.1**	**-0.5**
	baz=36,SNR=10								
NWAO					P		**P**	**05 41 46.1**	**-0.5**
	baz=36,SNR=10								
NWAO	**Narrogin (SRO)**	**35.72**	**194**	P			**P**	**05 41 46.0**	**-0.7**
STKA	**Stephens Creek**	**36.09**	**159**	P			**P**	**05 41 49.2**	**-0.5**
	baz=36,SNR=36								
STKA	**Stephens Creek**	**36.09**	**159**	P			**P**	**05 41 49.1**	**-0.7**
STKA					IAmb		IAmb	05 41 50.7	
	comp=Z,6.7nm,0.7s								
STKA	**Stephens Creek**	**36.09**	**159**	P			**P**	**05 41 49.3**	**-0.5**
STKA	**Stephens Creek**	**36.09**	**159**	P			**P**	**05 41 49.2**	**-0.5**
	comp=Z,27nm,0.6s,baz=332,slow=9.0,SNR=68								
	comp=Z,27nm,0.6s								
XAN	**Xi'an**	**36.42**	**334**	⇓P			**P**	**05 41 52.3**	**-0.3**
XAN					pmax		pmax		
	comp=Z,40nm,0.9s								
XAN	**Xi'an**	**36.42**	**334**	P			**P**	**05 41 52.4**	**-0.3**
CD2	**Chengdu**	**36.55**	**325**	P			**P**	**05 41 55.0**	**+1.2**
HTT	**Hallett**	**36.66**	**163**	P			**P**	**05 41 55.0**	**+0.3**
	baz=37,SNR=4.0								
HNS	**HongShan**	**37.33**	**343**	⇓P			**P**	**05 42 00.3**	**+0.1**
HNS					pmax		pmax		
	comp=Z,12nm,0.9s								
RKGY	**Rocky Gully**	**37.39**	**194**	P			**P**	**05 42 01.4**	**+0.6**
	baz=37,SNR=9.1								
CMSA	**Cobar Meteorol**	**37.44**	**154**	P			**P**	**05 42 01.1**	**-0.2**
	baz=38,SNR=14								
CMSA	**Cobar Meteorol**	**37.44**	**154**	P			**P**	**05 42 01.0**	**-0.2**
TIY	**Taiyuan**	**38.31**	**341**	P			**P**	**05 42 09.3**	**+0.7**
TIY					pmax		pmax		
	comp=Z,22nm,0.5s								
AUDCS	**Dubbo College**	**39.39**	**151**	P			**P**	**05 42 17.5**	**-0.1**
BJT	**Baijiatuau**	**39.42**	**347**	P			**P**	**05 42 17.6**	**-0.1**
BJI	**Beijing**	**39.44**	**347**	P			**P**	**05 42 17.6**	**-0.3**
BJI					pP		**pP**	**05 42 45.5**	**+1.4**
BJI					pmax		pmax		
	comp=Z,6.0nm,0.7s								
ARMA	**Armidale**	**39.54**	**146**	P			**P**	**05 42 19.6**	**+0.6**
	baz=40,SNR=15								
ARMA	**Armidale**	**39.54**	**146**	P			**P**	**05 42 18.8**	**-0.2**
ARMA	**Armidale**	**39.54**	**146**	P			**P**	**05 42 19.5**	**+0.6**
LZH	**Lanzhou**	**40.48**	**330**	⇑P			**P**	**05 42 28.0**	**+1.3**
LZH					sP		sP	05 43 08.3	+1.9
LZH					pmax		pmax		
	comp=Z,42nm,1.2s								
ARPS	**Mount Arapiles**	**40.64**	**162**	P

comp=Z,25nm,0.8s,baz=127,slow=6.3,SNR=74
comp=Z,25nm,0.8s

KURK	**Kurchatov**	**63.69**	**328**	P	**P**	**05 45 17.8**	**-0.3**
KURK	**Kurchatov**	**63.69**	**328**	P	**P**	**05 45 17.8**	**-0.3**
SIMJ	**Simiganj**	**64.48**	**312**	P	**P**	**05 45 23.4**	**-0.3**
KKAR	**Karatay Array**	**65.03**	**318**	P	**P**	**05 45 26.6**	**-0.4**
CASY	**Casey**	**68.89**	**187**	P	**P**	**05 45 50.9**	**0.0**
CASY				pP	**pP**	**05 46 21.5**	**+1.5**
BVAR	**Borovoye Array**	**69.26**	**327**	P	**P**	**05 45 52.9**	**-0.7**

comp=Z,5.2nm,0.7s,baz=130,slow=8.0,SNR=21
comp=Z,5.2nm,0.7s

BRVK	**Borovoye**	**69.33**	**327**	P	**P**	**05 45 53.3**	**-0.6**
BRVK				IAmb	IAmb	05 45 54.2	

comp=Z,9.5nm,1.0s

BRVK	**Borovoye**	**69.33**	**327**	P	**P**	**05 45 53.4**	**-0.6**
TIXI	**Tiksi**	**69.84**	**1**	P	**P**	**05 45 56.0**	**-0.7**
NRIK	**Noril'sk**	**72.49**	**346**	P	**P**	**05 46 12.1**	**-0.6**
NRIK				IAmb	IAmb	05 46 12.8	

comp=Z,6.9nm,0.7s

NRIK	**Noril'sk**	**72.49**	**346**	P	**P**	**05 46 12.1**	**-0.6**

comp=Z,5.8nm,0.6s,baz=127,slow=6.4,SNR=13
comp=Z,5.8nm,0.6s

GEYT	**Alibeck**	**72.53**	**309**	P	**P**	**05 46 14.0**	**+0.4**

comp=Z,2.1nm,0.5s,baz=213,slow=7.9,SNR=4.7
comp=Z,2.1nm,0.5s

ABKAR	**Akbulak array**	**74.00**	**321**	P	**P**	**05 46 21.1**	**-0.9**
ABKAR	**Akbulak array**	**74.00**	**321**	P	**P**	**05 46 21.5**	**-0.5**
ABKAR				IAmb	IAmb	05 46 21.7	

comp=Z,2.8nm,0.8s

VNDA	**Vanda**	**81.38**	**173**	P	**P**	**05 47 01.7**	**-0.7**

comp=Z,1.6nm,0.4s,baz=316,slow=6.4,SNR=10
comp=Z,1.6nm,0.4s

KIRV	**Kirov**	**82.18**	**329**	LR	LR	06 26 39.6	

comp=Z,18nm,20.5s,baz=321,slow=38

G19K	**Purcell Mounta**	**82.67**	**23**	P	**P**	**05 47 10.2**	**+0.9**
H19K	**Roundabout Mou**	**82.80**	**24**	P	**P**	**05 47 11.2**	**+1.2**
H19K				IAmb	IAmb	05 47 57.5	

comp=Z,21nm,1.8s

PPT	**Papeete**	**84.04**	**108**	LR	LR	06 24 24.0	

comp=Z,24nm,18.1s,baz=188,slow=35

ILAR	**Eielson Array**	**86.70**	**25**	P	**P**	**05 47 27.4**	**-2.2**

comp=Z,0.1nm,0.5s,baz=272,slow=4.6,SNR=1.4

QSPA	**South Pole Qui**	**91.64**	**180**	P	**P**	**05 47 51.3**	**-1.6**

comp=Z,1.1nm,0.5s,baz=166,slow=2.0,SNR=11

QSPA				LR	LR	06 27 18.6	

comp=Z,204nm,21.5s,baz=300,slow=34
comp=Z,1.1nm,0.5s

ARCES	**ARCESS Array B**	**92.49**	**340**	P	**P**	**05 47 54.7**	**-2.0**

comp=Z,2.8nm,0.8s,baz=99,slow=6.8,SNR=4.9
comp=Z,2.8nm,0.8s

FINES	**FINESS Array B**	**93.82**	**332**	P	**P**	**05 48 01.4**	**-1.5**

comp=Z,1.8nm,0.8s,baz=76,slow=8.0,SNR=5.5
comp=Z,1.8nm,0.8s

PLCA	**Paso Flores**	**137.96**	**160**	PKP	**PKPdf**	**05 54 10.4**	**-0.1**

comp=Z,1.0nm,0.6s,baz=72,slow=3.9,SNR=4.6

TAP 13 05:36:12.4,24.08N×121.63E,h13km,ML2.3,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TWD	**Chiawan**	**0.03**	**274**	P		Pg	05 36 14.7	+0.1

baz=281

TWD				S		Sg	05 36 16.2	-0.1

baz=281

ETL	**Fush Village**	**0.08**	**356**	*e*P		Pg	05 36 14.7	-0.4

baz=355

ETL				*e*S		Sg	05 36 16.4	-0.7

baz=355

NACB	**Ninganchiao**	**0.10**	**342**	*e*P		Pg	05 36 15.2	-0.1

baz=342

NACB				*e*S		Sg	05 36 17.0	-0.5

baz=342

ETLH	**Xiulin Townshi**	**0.19**	**314**	*e*P		Pb	05 36 17.7	-0.1

baz=314

ETLH				*e*S		Sg	05 36 20.4	+0.8

baz=314

EAHA	**Aohua**	**0.27**	**22**	*e*P		Pb	05 36 19.7	+0.6

baz=21

EAHA				*e*S		Sg	05 36 22.4	+0.6

baz=21

EAHA	**Aohua**	**0.27**	**22**	P		Sg	05 36 22.4	+0.6

baz=16

TAP 13 05:36:17.4,24.12N×121.66E,h13km,ML2.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ETL	**Fush Village**	**0.06**	**319**	*e*P		Pg	05 36 20.1	0.0

baz=318

ETL				*e*S		Sg	05 36 21.8	-0.1

baz=318

TWD	**Chiawan**	**0.07**	**239**	P		Pg	05 36 20.2	0.0

baz=240

TWD				S		Sg	05 36 21.9	-0.2

baz=240

NACB	**Ninganchiao**	**0.08**	**312**	P		Pg	05 36 20.5	+0.2

baz=312

NACB				S		Sg	05 36 22.3	0.0

baz=312

ETLH	**Xiulin Townshi**	**0.19**	**298**	P		Pb	05 36 22.4	-0.4

baz=299

ETLH				S		Sb	05 36 25.8	-0.6

baz=299

ETM	**Tongmen**	**0.22**	**226**	*e*P		Pg	05 36 22.7	+0.5

baz=234

ETM				*e*S		Sg	05 36 25.8	+0.3

baz=234

EAHA	**Aohua**	**0.22**	**18**	S		Sg	05 36 25.7	+0.1

baz=16

LXIB	**Xiulin Townshi**	**0.25**	**247**	*e*P		Pg	05 36 23.0	+0.2

baz=250

LXIB				*e*S		Sg	05 36 27.2	+0.8

baz=250

ENA	**Nanau**	**0.32**	**13**	P		Pg	05 36 24.4	+0.4

baz=8.0

ENA				S		Sg	05 36 28.7	+0.3

baz=8.0

SHUL	**Shoufeng**	**0.34**	**196**	*e*P		Pb	05 36 25.2	-0.1

baz=193

SHUL				*e*S		Sb	05 36 32.6	+2.0

baz=193

EWUT	**Wuta**	**0.34**	**18**	*e*P		Pg	05 36 24.2	-0.2

baz=12

EWUT				*e*S		Sg	05 36 29.2	0.0

baz=12

WHF	**Hehuan Shan**	**0.36**	**274**	*e*S		Sg	05 36 30.5	+0.4

baz=276

ESL	**Shilin**	**0.37**	**215**	*e*P		Pg	05 36 25.0	+0.1

baz=223

ESL				*e*S		Sg	05 36 30.2	+0.3

baz=223

NNSB	**Datong**	**0.40**	**321**	P		Pb	05 36 26.6	+0.1

baz=320

NNSB				*e*S		Sb	05 36 32.4	-0.2

baz=320

NNS	**Nan Shan**	**0.42**	**321**	*e*P		Pb	05 36 26.9	+0.1

baz=321

NNS				*e*S		Sb	05 36 32.8	-0.3

baz=321

LATG	**Datong**	**0.43**	**343**	*e*S		Sb	05 36 34.0	+0.5

baz=342

CHGB	**Renai**	**0.45**	**263**	*e*S		Sb	05 36 33.7	-0.3

baz=265

TWT	**Tachien**	**0.47**	**287**	*e*S		Sb	05 36 35.5	+1.0

baz=293

TDCB	**Techi**	**0.48**	**286**	*e*P		Pb	05 36 27.5	-0.3

baz=287

TDCB				*e*S		Sb	05 36 35.2	+0.3

baz=287

NDT	**Datong Townshi**	**0.50**	**344**	*e*P		Pg	05 36 27.6	+0.2

baz=343

NDT				*e*S		Sb	05 36 35.6	+0.3

baz=343

WUSB	**Renai**	**0.51**	**256**	*e*P		Pb	05 36 28.0	-0.4

baz=258

WUSB				*e*S		Sb	05 36 35.8	-0.1

baz=258

NDS	**Dongshan**	**0.52**	**5**	*e*P		Pb	05 36 28.5	+0.1

baz=3.0

NDS				*e*S		Sb	05 36 35.5	-0.2

baz=3.0

ENTT	**Nioudou**	**0.53**	**350**	*e*P		Pg	05 36 28.1	+0.2

baz=342

ENTT				*e*S		Sb	05 36 35.8	-0.3

baz=342

VWDT	**VWDT**	**0.60**	**233**	*e*S		Sb	05 36 38.0	-0.1

baz=242

TWE	**Neicheng**	**0.60**	**0**	*e*S		Sg	05 36 37.6	+0.4

*TAP **13** 05:37:32.9,24.10N×121.69E,h10km,ML3.0,C*
*JMA **13** 05:37:33.0±0.2,24.1N±0.4×121.7E±0.7,h3km±2km,*
TAIWAN REGION
ISC 13 05:37:33.2±0.8,24.10N±0.02×121.71E±0.02,h10km±5km,
n71,σ0.46/118,10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ETL	**Fush Village**	**0.10**	**309**	⇓*i*P		Pg	**05 37 35.7**	**-0.1**

baz=310

ETL				S		Sg	05 37 37.2	-0.4

baz=310

TWD	**Chiawan**	**0.10**	**261**	⇓*i*P		Pg	05 37 35.6	-0.1

baz=259

TWD				S		Sg	05 37 37.3	-0.3

baz=259

NACB	**Ninganchiao**	**0.13**	**307**	⇓*i*P		Pg	05 37 36.0	-0.2

baz=308

NACB				S		Sg	05 37 37.8	-0.5

baz=308

HWA	**Hwalien**	**0.15**	**218**	*e*P		Pg	05 37 37.0	+0.5

baz=220

HWA				*e*S		Sg	05 37 39.9	+1.1

baz=220

EHP	**Heping Village**	**0.21**	**8**	*e*P		Pg	05 37 37.6	-0.1

baz=5.0

EHP				*e*S		Sg	05 37 41.2	+0.5

baz=5.0

EAHA	**Aohua**	**0.23**	**7**	*e*P		Pg	05 37 37.9	-0.1

baz=7.0

EAHA				*i* S		Sg	05 37 41.4	+0.2

baz=7.0

ETLH	**Xiulin Townshi**	**0.23**	**298**	*e*P		Pg	05 37 37.9	-0.2

baz=298

ETLH				*e*S		Sg	05 37 41.7	+0.4

baz=298

ETM	**Tongmen**	**0.24**	**237**	*i* P		Pg	05 37 38.1	+0.1

baz=236

ETM				S		Sg	05 37 41.2	0.0

baz=236

LXIB	**Xiulin Townshi**	**0.28**	**255**	⇓*i*P		Pg	05 37 38.8	-0.1

baz=246

LXIB				S		Sg	05 37 42.9	+0.2

baz=246

ENA	**Nanau**	**0.33**	**5**	⇓*i*P		Pg	05 37 39.8	0.0

baz=6.0

ENA				*i* S		Sg	05 37 44.2	-0.1

baz=6.0

SHUL	**Shoufeng**	**0.34**	**203**	*e*P		Pb	05 37 41.4	+0.1

baz=208

EWUT	**Wuta**	**0.35**	**11**	⇓*e*P		Pg	05 37 40.2	0.0

baz=10.0

EWUT				*e*S		Sg	05 37 45.1	+0.2

baz=10.0

ESL	**Shilin**	**0.38**	**222**	*i* P		Pg	05 37 40.7	+0.1

baz=228

ESL				*e*S		Sg	05 37 45.4	-0.2

baz=228

WHF	**Hehuan Shan**	**0.41**	**277**	*i* P		Pg	05 37 41.2	-0.1

baz=277

WHF				*e*S		Sg	05 37 46.4	-0.4

baz=277

TEGC	**Jichi Village**	**0.41**	**202**	*e*P		Pb	05 37 42.2	-0.4

baz=188

NNSB	**Datong**	**0.44**	**318**	*i* P		Pg	05 37 42.1	+0.2

baz=318

NNSB				*i* S		Sg	05 37 48.0	+0.2

baz=318

NNS	**Nan Shan**	**0.46**	**318**	⇓*i*P		Pg	05 37 42.3	+0.1

baz=318

NNS				*i* S		Sg	05 37 48.1	-0.2

baz=318

LATG	**Datong**	**0.47**	**339**	⇓*i*P		Pg	05 37 42.4	0.0

baz=338

LATG				*e*S		Sg	05 37 48.2	-0.4

baz=338

WARBT	**Fenglin Townsh**	**0.48**	**218**	*e*P		Pg	05 37 42.4	-0.1

baz=226

CHGB	**Renai**	**0.49**	**266**	⇓P		Pg	05 37 43.0	+0.2

baz=258

CHGB				*e*S		Sg	05 37 49.5	+0.2

baz=258

ESAO	**Su ao**	**0.49**	**15**	*e*P		Pg	05 37 42.8	-0.1

baz=13

ESAO				S		Sg	05 37 49.2	-0.1

baz=13

TWT	**Tachien**	**0.51**	**288**	*e*P		Pb	05 37 43.7	-0.7

baz=287

TWT				*e*S		Sb	05 37 50.6	-1.4

baz=287

TDCB	**Techi**	**0.53**	**287**	*e*P		Pb	05 37 43.9	-0.7

baz=287

TDCB				*e*S		Sg	05 37 50.7	+0.3

baz=287

TWC	**Suao**	**0.53**	**14**	*e*P		Pg	05 37 43.7	+0.2

baz=5.0

TWC				S		Sg	05 37 50.8	+0.4

baz=5.0

NDT	**Datong Townshi**	**0.53**	**341**	⇓*i*P		Pg	05 37 43.9	+0.3

baz=339

NDT				*i* S		Sg	05 37 50.9	+0.3

baz=339

NDS	**Dongshan**	**0.54**	**1**	*i* P		Pg	05 37 43.9	+0.3

baz=358

NDS				S		Sg	05 37 51.1	+0.4

baz=358

WUSB	**Renai**	**0.55**	**259**	*e*P		Pg	05 37 44.1	+0.2

baz=259

WUSB				*e*S		Sg	05 37 51.2	0.0

baz=259

ENTT	**Nioudou**	**0.56**	**347**	*e*P		Pg	05 37 44.2	+0.1

baz=345

ENTT				*e*S		Sg	05 37 51.6	+0.2

baz=345

EOS4	**EOS4**	**0.56**	**87**	*e*P		Pn	05 37 47.2	+0.3

baz=88

VWDT	**VWDT**	**0.62**	**237**	*e*P		Pg	05 37 45.4	+0.1

baz=237

VWDT				*e*S		Sb	05 37 53.9	-1.1

baz=237

TWE	**Neicheng**	**0.62**	**357**	*i* P		Pg	05 37 45.6	+0.3

baz=357

TWE				*i* S		Sg	05 37 53.9	+0.4

baz=357

YHNB	**Yeheng**	**0.65**	**332**	*i* P		Pb	05 37 46.2	-0.5

baz=331

YHNB				*e*S		Sg	05 37 53.7	-0.6

baz=331

HGSD	**Ruisui**	**0.66**	**203**	*e*P		Pb	05 37 46.9	+0.2

baz=218

NSK	**Sanguang**	**0.66**	**331**	*e*P		Pg	05 37 46.2	+0.2

baz=331

NSK				S		Sg	05 37 54.6	-0.1

baz=331

FUSB	**Fushanzhiwuyua**	**0.67**	**351**	*i* P		Pb	05 37 46.5	-0.5

baz=349

FUSB				*e*S		Sg	05 37 55.3	+0.3

baz=349

EHY	**Hungye**	**0.69**	**211**	P		Pg	05 37 46.5	+0.1

baz=222

EHY				*e*S		Sb	05 37 56.3	-0.5

baz=222

NWLT	**Wulai**	**0.70**	**345**	*i* P		Pg	05 37 47.0	+0.2

baz=331

NWLT				S		Sg	05 37 56.2	+0.2

baz=331

WCS	**Beigang Elemen**	**0.73**	**267**	*e*P		Pb	05 37 47.8	-0.3

baz=268

SSLB	**Suanglung**	**0.76**	**246**	*e*P		Pg	05 37 47.6	-0.1

baz=256

SSLB				*e*S		Sg	05 37 57.2	-0.4

baz=256

NFF	**Wufeng Townshi**	**0.76**	**315**	*e*P		Pb	05 37 48.4	-0.2

baz=314

NFF				*e*S		Sb	05 37 58.4	-0.6

baz=314

SMLT	**Sun Moon Lake**	**0.77**	**254**	*e*P		Pb	05 37 48.4	-0.4

baz=255

EGS		**0.77**	**15**	*e*P		Pb	05 37 48.8	0.0

baz=21

YULB	**Yu-li**	**0.80**	**208**	*e*P		Pg	05 37 47.9	-0.6

baz=221

YULB				*e*S		Sg	05 37 59.0	+0.1

baz=221

TYC	**Yuchr**	**0.80**	**256**	*e*P		Pg	05 37 48.6	0.0

baz=257

TYC				*e*S		Sg	05 37 58.4	-0.7

baz=257

EYUL	**Yuli**	**0.83**	**206**	*e*P		Pg	05 37 48.0	-1.1

baz=219

EYUL				*e*S		Sb	05 38 00.5	-0.4

baz=219

TWF1	**Yuli**	**0.83**	**207**	*e*P		Pg	05 37 48.7	-0.5

baz=219

LIOB	**Emei**	**0.83**	**311**	*e*P		Pb	05 37 50.1	+0.3

baz=310

NSTT	**Nanjuang**	**0.84**	**310**	*e*P		Pb	05 37 49.8	-0.1

baz=309

NSTT				*e*S		Sb	05 38 01.3	+0.1

baz=309

NHDH	**Xindian Distri**	**0.88**	**349**	*e*P		Pn	05 37 51.2	-0.5

baz=348

TWA	**Mucha**	**0.89**	**353**	*e*P		Pg	05 37 49.6	-0.7

baz=351

TWA				*e*S		Sg	05 38 02.0	+0.1

baz=351

TWQ1	**Liyutan**	**0.89**	**287**	*e*P		Pn	05 37 52.0	+0.2

baz=287

TWB1	**Santiao Chiao**	**0.94**	**16**	*e*P		Pg	05 37 50.8	-0.6

baz=7.0

TWB1				*e*S		Sg	05 38 03.5	-0.2

baz=7.0

NMLH	**Miaoli**	**0.94**	**298**	*e*P		Pn	05 37 53.4	+0.8

baz=297

CHKH	**Chenggong**	**0.94**	**198**	*e*P		Pb	05 37 51.8	+0.1

baz=189

NWF	**Wu-fen Shan**	**0.97**	**4**	*e*P		Pb	05 37 52.2	-0.1

baz=352

NWF				*e*S		Sg	05 38 04.4	-0.2

baz=352

WFSB	**Wu-fen Shan**	**0.97**	**4**	*e*P		Pb	05 37 52.1	-0.1

baz=353

WFSB				S		Sg	05 38 04.6	-0.1

baz=353

SXI1	**Grass Mountain**	**1.00**	**9**	*e*P		Pb	05 37 53.0	+0.2

baz=360

SXI1				*e*S		Sg	05 38 05.1	-0.5

baz=360

ALS	**Alishan**	**1.01**	**235**	*e*P		Pb	05 37 53.3	+0.3

baz=236

EHD	**Haiduan**	**1.05**	**206**	*e*P		Pg	05 37 52.5	-0.9

baz=220

YM01	**YM01**	**1.05**	**353**	*e*P		Pg	05 37 52.7	-0.8

baz=336

CHN5	**Tsauling**	**1.07**	**242**	*e*P		Pn	05 37 55.0	+0.6

baz=244

CHN5				*i* S		Sn	05 38 10.2	+0.9

baz=244

ELDTW	**Lidau**	**1.10**	**215**	*e*P		Pg	05 37 53.7	-0.7

baz=217

JYNG	**Yonagunijimaku**	**1.18**	**72**	*e*P		Pg	05 37 55.3	-0.7
JYNG				*e*S		Sb	05 38 12.1	+0.9
WRL	**Guolierlin Hig**	**1.23**	**261**	*e*P		Pn	05 37 57.8	+1.2

baz=262

| | | | | | | | | |
|---|---|---|---|---|---

KLR	**Kul'dur**	14.09	344	Pn	Pn	05 43 07.3	+3.4
	comp=N,0.1nm,0.3s,baz=114,slow=15,SNR=2.7 comp=N,1.5nm,0.8s						
TOLI2	**Tolitoli**	37.93	208	P	P	05 46 58.6	-3.5
MKAR	**Makanchi Array**	42.22	303	LR	LR	06 05 30.3	
	comp=N,41nm,18.5s,baz=284,slow=36						
ILAR	**Eielson Array**	52.13	32	P	P	05 48 55.0	+0.5
	comp=N,0.4nm,0.8s,baz=268,slow=5.9,SNR=4.4 comp=N,0.4nm,0.8s						
WRA	**Warramunga Arr**	55.54	184	P	P	05 49 19.8	-0.1
	comp=N,1.1nm,0.8s,baz=359,slow=7.6,SNR=3.5 comp=N,1.1nm,0.8s						
ASAR	**Alice Springs**	59.27	184	P	P	05 49 45.8	-0.4
	comp=N,0.5nm,0.8s,baz=15,slow=8.7,SNR=2.0 comp=N,0.5nm,0.8s						
YKA	**Yellowknife Ar**	66.35	29	P	P	05 50 34.1	+1.1
	comp=N,0.7nm,1.0s,baz=299,slow=6.8,SNR=7.2 comp=N,0.7nm,1.0s						
PDAR	**Pinedale Array**	80.65	43	P	P	05 51 57.4	-0.4
	comp=N,0.4nm,0.8s,baz=262,slow=4.4,SNR=2.9 comp=N,0.4nm,0.8s						
DAVOX	**Davos/Dischmat**	85.36	327	LR	LR	06 32 10.5	
	comp=N,36nm,18.2s,baz=40,slow=37						

IDC ***13*** *05:44:42.5±20.0, 7°.94S×121°.77E, h394km±257km, mb3.2/2, mbtmp3.9/4, MS3.0/1, Error ellipse: s-maj=247.3km s-min=63.3km az=70.0*

DJA ***13*** *05:44:52.7±0.8, 7°.S±6°×12°.3E±°, h526km±10km, M4.2/12, mb4.3/7, mB4.8/5, MLv4.2/12, Mw(mB)4.1/5*

ISC 13 05:44:53.2±0.8, 7°.2S±0°.1×123°.4E±0°.1, h500km, n22, σ2s11/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	1.82	220	P	P	05 45 58.6	+1.2
EDFI	**Ende, Flores**	2.28	229	P	P	05 46 00.8	+0.9
EDFI				S	S	05 46 57.0	+3.0
SOEI	**Soe**	2.64	162	P	P	05 46 04.4	+2.4
SOEI	**Soe**	2.64	162	P	P	05 46 03.4	+1.4
SOEI				S	S	05 47 00.5	+2.6
BKSI	**Bulukumba**	3.79	300	P	P	05 46 12.1	+2.1
BASI	**Baing, Sumba**	4.09	223	P	P	05 46 13.5	+1.2
NLAI	**Namlea**	5.40	43	P	P	05 46 26.4	+2.5
	89nm,0.5s,5µm0.8nm						
SANI	**Sanana**	5.75	27	P	P	05 46 29.9	+2.7
SANI	**Sanana**	5.75	27	P	P	05 46 29.1	+1.9
	49nm,0.5s,952nm0.2nm						
PLAI	**Plampang**	5.81	254	P	P	05 46 27.9	+0.2
PLAI	**Plampang**	5.81	254	P	P	05 46 27.4	-0.3
	35nm,0.8s,0.2nm						
KMSI	**Cibinong**	7.78	4	P	P	05 46 49.8	+2.4
	568nm,0.7s,7µm2.1nm						
MRSI	**Marisa**	7.80	349	P	P	05 46 49.3	+1.7
	78nm,0.8s,0.3nm						
MPSI	**Mapaga**	8.30	335	P	P	05 46 55.2	+2.4
WRA	**Warramunga Arr**	16.48	141	P	P	05 48 16.9	-2.0
	1.7nm,0.5s,baz=309,slow=12,SNR=25						
WRKA	**Warakurna**	18.31	166	P	P	05 48 35.0	-1.4
ASAR	**Alice Springs**	19.19	150	P	P	05 48 42.9	-1.6
	1.4nm,0.4s,baz=322,slow=8.1,SNR=16						
AS01	**Alice Springs**	19.21	149	P	P	05 48 44.2	-0.5
COEN	**Coen**	20.52	111	P	P	05 48 54.9	-1.8
MJAR	**Matsushiro Arr**	45.70	17	LR	LR	06 12 18.1	
	comp=Z,17nm,20.0s,baz=146,slow=35						
MKAR	**Makanchi Array**	65.01	330	P	P	05 54 40.9	-2.4
	0.7nm,0.6s,baz=134,slow=7.6,SNR=9.8 0.7nm,0.6s						
KURBB	**Kurchatov Arra**	69.44	331	P	P	05 55 07.8	-2.7
	0.4nm,0.3s,baz=146,slow=5.2,SNR=2.6 0.4nm,0.3s						

IDC ***13*** *05:48:01.5±3.5, 55°.42N×149°.81W, h0km, mb3.4/1, mbtmp3.5/6, ML3.3/5, MS3.3/7, Error ellipse: s-maj=56.2km s-min=30.3km az=3.0*

NEIC ***13*** *05:48:06.5±1.6, 55°.97N±0°.10×150°.1W±0°.1, h6km±7km, ML3.8/40, ML3.6(AEIC), Error ellipse: s-maj=14.5km s-min=8.4km az=165.0*

AEIC ***13*** *05:48:10.3±1.9, 55°.9N±0°.1×149°.95W±0°.09, h12km±7km, Error ellipse: s-maj=15.3km s-min=7.2km az=170.0*

ISC 13 05:48:06.5±1.5, 56°.0N±0°.1×150°.02W±0°.06, h10km, n195, σ1s21/186, MS3.2/6, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	2.17	305	Pn	Pn	05 48 42.3	-0.3
OHAK	**Old Harbor**	2.17	305		Sn	05 49 07.5	-2.0
OHAK	**Old Harbor**	2.17	305	P	Pn	05 48 42.3	-0.3
OHAK	**Old Harbor**	2.17	305	P	Pn	05 48 42.3	-0.3
	baz=122						
OHAK				S	Sn	05 49 07.5	-2.0
	baz=122						
KDAK	**Kodiak Island**	2.25	322	Pn	Pn	05 48 44.1	+0.3
	15nm,0.3s,baz=143,slow=4.7,SNR=185						
KDAK				Sn	Sn	05 49 10.8	-0.8
	7.2nm,0.3s,baz=248,slow=23,SNR=13						
KDAK				LR	LR	05 49 55.3	
	comp=Z,497nm,19.1s,baz=190,slow=40 42nm,0.4s						
SII	**Sitkinak Islan**	2.38	285		Pn	05 48 44.4	-1.2
SII				IAML		05 49 28.7	
	comp=N,274nm,0.9s						
SII	**Sitkinak Islan**	2.38	285	P	Pn	05 48 45.0	-0.6
SYI	**Shuyak Island**	2.89	335		Pn	05 48 53.4	+0.8
SYI				IAML		05 49 29.7	
	comp=E,148nm,0.7s						
Q20K	**Shuyak Island**	2.89	335	P	Pn	05 48 53.1	+0.5
	baz=152						
Q20K				S	Sn	05 49 26.8	-0.5
	baz=152						
Q19K	**Cape Douglas,**	3.51	328		Pn	05 49 02.3	+1.2
Q19K	**Cape Douglas,**	3.51	328	P	Pn	05 49 02.3	+1.2
	baz=144						
CNPM	**China Poot**	3.57	350		Pn	05 49 02.1	+0.2
CNPM					Sn	05 49 42.8	-1.3
CNPM	**China Poot**	3.57	350	IAML		05 49 45.4	
	comp=E,124nm,0.6s						
KCE	**Katmai Mt Cerb**	3.58	310		Pn	05 49 04.0	+1.9
ACHA	**Angle Creek He**	3.63	309		Pn	05 49 03.6	+0.9
ANCK	**Angle Creek**	3.69	308		Pn	05 49 04.4	+0.7
KVTA	**Katmai Vly 10**	3.71	312		Pn	05 49 05.2	+1.4
BRSE	**Bradley Lake S**	3.75	354		Pn	05 49 04.2	-0.1
BRSE					Sn	05 49 47.0	-1.5
BRSE	**Bradley Lake S**	3.75	354	P	Pn	05 49 04.2	-0.1
	baz=173						
BRSE				S	Sn	05 49 47.0	-1.5
	baz=173						
KAHC	**Katmai Hardscr**	3.77	316		Pn	05 49 05.9	+1.2
KAHC	**Katmai Hardscr**	3.77	316	P	Pn	05 49 05.9	+1.2
	baz=132						
BRLK	**Bradley Lake**	3.78	353		Pn	05 49 04.5	-0.2
BRLK					Sn	05 49 48.3	-0.9
BRLK	**Bradley Lake**	3.78	353	IAML		05 49 50.5	
	comp=N,68nm,0.7s						
BRLK				IAML		05 49 50.7	
	comp=E,92nm,0.5s						
CNTC	**Contact Creek**	3.90	307		Pn	05 49 07.1	+0.6
Q17K	**Contact Creek**	3.90	307	P	Pn	05 49 07.4	+0.8
	baz=122						
KELA	**Mount Kelaz**	3.94	310		Pn	05 49 07.8	+0.8
Q23K	**Middleton Isla**	3.94	28		Pn	05 49 05.7	-1.3
Q23K	**Middleton Isla**	3.94	28	IAML		05 51 36.6	
	comp=N,179nm,1.5s						
Q23K	**Middleton Isla**	3.94	28	P	Pn	05 49 07.5	+0.5
	baz=211						
P19K	**Oil Pt**	4.02	336		Pn	05 49 09.1	+1.0
P19K				IAML		05 50 01.8	
	comp=E,192nm,0.5s						
P19K	**Oil Pt**	4.02	336	P	Pn	05 49 09.6	+1.5
	baz=153						
SEW	**Seward**	4.10	4		Pn	05 49 09.2	+0.1
SEW	**Seward**	4.10	4	P	Pn	05 49 09.2	+0.1
	baz=184						
P23K	**Montague Islan**	4.22	18		Pn	05 49 10.9	+0.1
P23K	**Montague Islan**	4.22	18	P	Pn	05 49 11.3	+0.5
	baz=200						
O20K	**Slope Mountain**	4.29	342		Pn	05 49 13.1	+1.2
O20K	**Slope Mountain**	4.29	342	P	Pn	05 49 13.1	+1.2
	baz=160						
IVE	**Iliamna Volcan**	4.31	340		Pn	05 49 13.0	+0.9
P18K	**Big Mountain,**	4.38	323		Pn	05 49 13.7	+0.6
P18K	**Big Mountain,**	4.38	323	P	Pn	05 49 13.7	+0.6
	baz=138						
Q16K	**King Salmon**	4.47	309		Pn	05 49 14.8	+0.6
Q16K	**King Salmon**	4.47	309	P	Pn	05 49 14.8	+0.6
	baz=124						
SLKM	**Skilak Lake**	4.50	359		Pn	05 49 14.6	-0.1
P17K	**Kvichak River**	4.69	315		Pn	05 49 18.2	+0.9
P17K	**Kvichak River**	4.69	315	P	Pn	05 49 18.2	+0.9
	baz=130						
CHGN	**Chignik**	4.70	277		Pn	05 49 17.1	-0.3
CHGN				IAML		05 51 28.2	
	comp=E,137nm,0.1s						
RDWB	**Redoubt West**	4.71	343		Pn	05 49 17.8	0.0
O18K	**Koktuh Hills**	4.73	326		Pn	05 49 18.3	+0.5
O18K	**Koktuh Hills**	4.73	326	IAML		05 50 13.8	
	comp=N,50nm,1.1s						
O18K				IAML		05 50 16.1	
	comp=E,43nm,1.5s						
O18K	**Koktuh Hills**	4.73	326	P	Pn	05 49 18.3	+0.5
	baz=142						
HIN	**Hinchinbrook I**	4.76	22	Pn	Pn	05 49 19.2	+0.9
HIN				IAML		05 50 12.4	
	comp=E,100nm,1.3s						
HIN				IAML		05 50 13.9	
	comp=N,91nm,1.3s						
O19K	**Port Alsworth**	4.76	333		Pn	05 49 19.3	+1.1
O19K	**Port Alsworth**	4.76	333	P	Pn	05 49 19.3	+1.1
	baz=149						
KAIM	**Kayak Island**	4.92	35	Pn	Pn	05 49 22.1	+1.7
KAIM				IAML		05 51 39.1	
	comp=N,88nm,1.4s						
KAIM	**Kayak Island**	4.92	35	P	Pn	05 49 21.2	+0.8
	baz=219						
EYAK	**Cordova Ski Ar**	5.06	25		Pn	05 49 23.1	+0.7
EYAK	**Cordova Ski Ar**	5.06	25	P	Pn	05 49 23.3	+0.9
EYAK	**Cordova Ski Ar**	5.06	25	P	Pn	05 49 23.1	+0.7
	baz=208						
RC01	**Rabbit Creek A**	5.08	2		Pn	05 49 22.6	0.0
RC01				IAML		05 50 25.6	
	comp=E,37nm,0.7s						
RC01				IAML		05 50 34.2	
	comp=N,40nm,0.6s						
VNHG	**Veniaminof 1**	5.12	276		Pn	05 49 23.9	+0.6
FIS	**Fire Island**	5.13	359	Pn	Pn	05 49 24.8	+1.5
FIS				IAML		05 50 33.9	
	comp=E,77nm,0.9s						
FIS				IAML		05 50 37.5	
	comp=N,81nm,0.5s						
RAGM	**Ragged Mountai**	5.21	31	Pn	Pn	05 49 25.2	+0.8
SUCK	**Suckling Hills**	5.24	37	Pn	Pn	05 49 25.2	+0.4
SUCK				IAML		05 50 10.9	
	comp=N,72nm,1.4s						
SUCK				IAML		05 50 41.5	
	comp=E,74nm,1.1s						
P16K	**Nushagak River**	5.24	308		Pn	05 49 25.3	+0.5
P16K	**Nushagak River**	5.24	308	P	Pn	05 49 25.3	+0.5
	baz=122						
O17K	**Koliganek Bris**	5.32	318		Pn	05 49 26.7	+0.8
O17K	**Koliganek Bris**	5.32	318	P	Pn	05 49 26.7	+0.8
	baz=132						
N19K	**Bonanza Creek**	5.34	336	Pn	Pn	05 49 27.3	+1.0
N19K				IAML		05 50 45.1	
	comp=N,22nm,1.1s						
N19K	**Bonanza Creek**	5.34	336	P	Pn	05 49 26.6	+0.3
	baz=152						
GOAT	**Goat Mountain**	5.35	29		Pn	05 49 27.1	+0.7
KNK	**Knik Glacier**	5.46	8		Pn	05 49 28.3	+0.4
KNK	**Knik Glacier**	5.46	8	P	Pn	05 49 28.3	+0.4
	baz=189						
GRIN	**Grindle Hills**	5.55	37		Pn	05 49 30.3	+1.2
DIV	**Divide**	5.58	22		Pn	05 49 30.1	+0.6
N18K	**Kilae Creek**	5.59	329		Pn	05 49 30.1	+0.4
N18K	**Kilae Creek**	5.59	329	P	Pn	05 49 30.1	+0.4
	baz=144						
PMR	**Palmer**	5.60	4	P	Pn	05 49 33.2	+3.5
O16K	**Kokwok River B**	5.60	313		Pn	05 49 30.8	+1.0
O16K	**Kokwok River B**	5.60	313	P	Pn	05 49 30.7	+1.0
	baz=126						
SNH	**Sunshine Point**	5.64	39	Pn	Pn	05 49 31.5	+1.2
KHIT	**Khitrov Hills**	5.69	36		Pn	05 49 31.8	+0.7
BMRM	**Bremner River**	5.71	28		Pn	05 49 32.2	+0.9
BMRM	**Bremner River**	5.71	28	P	Pn	05 49 32.2	+0.9
	baz=212						
GHO	**Glory Hole Cre**	5.79	5		Pn	05 49 33.8	+1.4
WAX	**Waxell Ridge**	5.83	38		Pn	05 49 33.9	+0.9
SVW2	**Sparrevohn**	5.86	333	Pn	Pn	05 49 33.3	0.0
SVW2	**Sparrevohn**	5.86	333	P	Pn	05 49 34.2	+0.9
SML	**Sawmill**	5.86	8	Pn	Pn	05 49 34.8	+1.4
KLU	**Klutina**	5.88	20		Pn	05 49 34.7	+1.0
KLU	**Klutina**	5.88	20	P	Pn	05 49 34.7	+1.0
	baz=203						
N17K	**Nushagak Hills**	5.88	323	Pn	Pn	05 49 33.9	+0.3
SDPT	**Sand Point**	5.95	268	P	Pn	05 49 29.8	-4.8
CRQM	**Cirque**	5.96	34		Pn	05 49 35.8	+0.8
MESA	**MESA**	5.97	42	Pn	Pn	05 49 36.0	+1.0
MESA	**MESA**	5.97	42	P	Pn	05 49 35.7	+0.7
	baz=229						
CRQE	**Cirque**	5.97	35	P	Pn	05 49 35.8	+0.7
	baz=220						
SCM	**Sheep Creek Mo**	5.99	12		Pn	05 49 37.8	+2.7
SKT	**Skwentna**	6.02	353		Pn	05 49 36.6	+1.0
TGL	**Tana Glacier**	6.06	36		Pn	05 49 37.0	+0.8
M20K	**Styx River**	6.09	346		Pn	05 49 37.2	+0.7
ISLE	**Juniper Island**	6.12	38		Pn	05 49 38.0	+1.0
BAGL	**Bagley Icefiel**	6.12	40		Pn	05 49 37.9	+1.0
O15K	**Ungaliktthiuk R**	6.14	305		Pn	05 49 38.0	+0.8
O15K	**Ungaliktthiuk R**	6.14	305	P	Pn	05 49 38.0	+0.8
	baz=117						
VRDI	**Verde Repeater**	6.24	31	Pn	Pn	05 49 39.3	+0.5
N25K	**Chitina, Valde**	6.26	24		Pn	05 49 40.2	+1.3
N25K	**Chitina, Valde**	6.26	24	P	Pn	05 49 40.2	+1.3
	baz=209						
GLB	**Gilahina Butte**	6.32	28		Pn	05 49 40.8	+1.1
KIAG	**Kiagna River**	6.34	36		Pn	05 49 40.9	+0.8
SAMH	**Samovar Hills**	6.39	46		Pn	05 49 42.4	+1.6
M24K	**Tolsona, Glenn**	6.41	16		Pn	05 49 42.1	+1.2
GRNC	**Granite Creek**	6.41	39		Pn	05 49 41.9	+0.7
N16K	**Nishlik Lake**	6.42	318		Pn	05 49 42.0	+1.0
N16K	**Nishlik Lake**	6.42	318	P	Pn	05 49 42.0	+1.0
	baz=130						
TABL	**Table Mountain**	6.44	43	Pn	Pn	05 49 42.7	+1.2
MCARA	**McCarthy VSAT**	6.49	31	Pn	Pn	05 49 43.7	+1.8
MCARA	**McCarthy VSAT**	6.49	31	P	Pn	05 49 43.0	+1.0
	baz=217						
PCA	**Pinnacle**	6.59	48		Pn	05 49 44.3	+0.8
PINM	**Pinnacle**	6.59	48	P	Pn	05 49 44.3	+0.8
	baz=236						
M17K	**Holitna River**	6.63	327		Pn	05 49 44.6	+0.7
L19K	**White Mountain**	6.65	340		Pn	05 49 44.6	+0.3
WACK	**Wrangell Chich**	6.66	24		Pn	05 49 45.7	+1.2
BARN	**Barnard Glacie**	6.68	37		Pn	05 49 45.6	+0.9
CTG	**Chitina Glacier**	6.72	39	P	Pn	05 49 46.3	+1.0
	baz=226						
CTGM	**Chitina Glacie**	6.72	39	Pn	Pn	05 49 46.4	+1.1
PNL	**Peninsula**	6.74	53		Pn	05 49 46.6	+1.2
PNL	**Peninsula**	6.74	53	P	Pn	05 49 46.9	+1.5
PNL	**Peninsula**	6.74	53	P	Pn	05 49 46.6	+1.2
	baz=242						
LOGN	**Logan Glacier**	6.75	41	Pn	Pn	05 49 45.8	+0.2
N15K	**Kwethluk River**	6.76	312	Pn	Pn	05 49 47.2	+1.5
BCPM	**Bancas Point**	6.78	50		Pn	05 49 47.0	+1.1
O14K	**Tigyukauivet M**	6.85	303	Pn	Pn	05 49 47.6	+0.8
O14K	**Tigyukauivet M**	6.85	303	P	Pn	05 49 48.0	+1.1
	baz=113						
M16K	**Timber Creek**	6.85	321		Pn	05 49 47.8	+0.9
M16K	**Timber Creek**	6.85	321	P	Pn	05 49 47.8	+0.9
	baz=133						
L18K	**Granite Mounta**	7.09	334	Pn	Pn	05 49 50.0	-0.2
M15K	**Kasigluk River**	7.30	314		Pn	05 49 54.1	+1.1
M15K	**Kasigluk River**	7.30	314	P	Pn	05 49 54.1	+1.1
	baz=125						
M26K	**Nabesna, AK**	7.33	26	Pn	Pn	05 49 56.0	+2.4
O29M	**Mount Kennedy**	7.41	50		Pn	05 49 55.8	+1.1
O29M	**Mount Kennedy**	7.41	50	P	Pn	05 49 55.8	+1.1
	baz=239						
P29M	**Windy Craggy**	7.48	56		Pn	05 49 56.2	+0.6
P29M	**Windy Craggy**	7.48	56	P	Pn	05 49 56.2	+0.6
	baz=246						
L16K	**Owhat River**	7.51	323		Pn	05 49 56.9	+1.0
TTA	**Tatalina**	7.56	339	Pn	Pn	05 49 56.7	0.0
K20K	**Telida**	7.63	346	Pn	Pn	05 49 57.8	+0.1
M14K	**Bethel**	7.85	312		Pn	05 50 01.9	+1.3
M14K	**Bethel**	7.85	312	P	Pn	05 50 01.9	+1.3
	baz=122						
K17K	**Iditarod**	7.92	331	Pn	Pn	05 50 02.0	+0.4
HYT	**Haines Junctio**	8.13	49	Pn	Pn	05 50 05.8	+1.2
RIDG	**Independent Ri**	8.16	16	Pn	Pn	05 50 07.6	+2.7
M13K	**Dall Lake**	8.29	307		Pn	05 50 07.7	+1.1
L14K	**Kuka Creek**	8.47	314		Pn	05 50 09.8	+0.8
K15K	**Wolf Creek Mou**	8.62	322	Pn	Pn	05 50 12.5	+1.4
J17K	**VABM Dome**	8.68	332	Pn	Pn	05 50 13.1	+1.1
M29M	**Somme Creek**	8.73	38		Pn	05 50 14.7	+1.8
IL31		8.91	9	Pn	Pn	05 50 16.8	+1.8
ILAR	**Eielson Array**	8.91	9	Pn	Pn	05 50 17.8	+2.7
	comp=N,0.1nm,0.3s,baz=185,slow=14,SNR=8.5						
ILAR				Sn	Sn	05 51 52.5	-2.8
	comp=N,0.4nm,0.3s,baz=192,slow=21,SNR=6.1 comp=N,0.6nm,0.5s						
K27K	**Chicken**	8.95	23		Pn	05 50 17.3	+1.7
J16K	**Anvik River**	9.02	328	Pn	Pn	05 50 17.3	+0.6
J26L	**Joseph Creek**	9.08	18		Pn	05 50 19.4	+1.8
N31M	**Braeburn, Yuko**	9.19	48	Pn	Pn	05 50 20.6	+1.5
I21K	**Tanana**	9.23	355	Pn	Pn	05 50 21.7	+2.2
L29M	**L29M**	9.30	35	Pn	Pn	05 50 22.4	+1.9
J14K	**Nanvaranak Lak**	9.63	320	Pn	Pn	05 50 27.0	+2.0
H21K	**Melozitna Rive**	9.76	353	Pn	Pn	05 50 27.4	+0.6
P33M	**Teslin, Yukon**	10.01	58	Pn	Pn	05 50 31.1	+0.9
K29M	**Barlow Dome**	10.02	33	Pn	Pn	05 50 32.3	+1.9
H18K	**Honhosa River**	10.02	339	Pn	Pn	05 50 31.7	+1.4
M31M	**Drury Creek, Y**	10.12	46	Pn	Pn	05 50 32.9	+1.1
IMAR	**Indian Mountai**	10.15	351	Pn	Pn	05 50 33.6	+1.5
G23K	**Bananza Creek**	10.72	360	Pn	Pn	05 50 42.3	+2.4
R33M	**Jennings River**	10.73	64	Pn	Pn	05 50 40.8	+0.7
G24K	**Hadweenzic Riv**	10.78	5	Pn	Pn	05 50 43.5	+2.8
J30M	**Hart River**	10.91	33	Pn	Pn	05 50 45.6	+3.0
DLBC	**Dease Lake**	11.09	69	Pn	Pn	05 50 44.0	-1.1
	comp=N,0.1nm,0.3s,baz=249,slow=17,SNR=1.6 comp=N,1.5nm,0.8s						
E18K	**Tukpahlearik C**	12.46	341	Pn	Pn	05 51 06.8	+3.2
G31M	**Satah River**	13.21	28	Pn	Pn	05 51 16.2	+2.4
INK	**Inuvik**	14.45	25	Pn	Pn	05 51 32.6	+1.9
	comp=N,0.1nm,0.3s,baz=218,slow=10,SNR=7.5 comp=N,2.5nm,0.9s						
C36M	**Paulatuk**	17.67	31	P	P	05 52 14.1	+0.9
YKA	**Yellowknife Ar**	19.03	56	P	P	05 52 26.8	-1.4
	comp=N,0.1nm,0.3s,baz=266,slow=10.0,SNR=14 comp=N,0.6nm,0.6s						
A36M	**Sachs Harbour**	19.08	24	P	P	05 52 28.3	-0.4
YBH	**Yreka Blue Hor**	22.76	117	LR	LR	05 59 21.7	
	comp=N,82nm,19.3s,baz=330,slow=30						
PFO	**Pinyon Flats O**	32.18	120	LR	LR	06 05 58.5	
	comp=N,44nm,18.9s,baz=292,slow=34						
TXAR	**Lajitas Array**	42.12	110	LR	LR	06 12 42.4	
	comp=N,31nm,18.0s,baz=260,slow=35						
KLR	**Kul'dur**	45.57	296	LR	LR	06 16 32.4	
	comp=N,32nm,18.3s,baz=6.0,slow=37						
H11N2	**WAKE ISLAND Hy**	48.40	239	T	T	06 48 50.5	
	baz=31,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	48.40	239	T	T	06 48 51.2	
	baz=31,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	48.41	239	T	T	06 48 50.8	
	baz=31,slow=76,SNR=12						
USRK	**Ussuriysk Ar.**	48.78	291	LR	LR	06 16 53.8	
	comp=N,40nm,19.4s,baz=38,slow=35						
H11S1	**WAKE ISLAND Hy**	49.54	239	T	T	06 50 16.8	
	baz=30,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	49.55	239	T	T	06 50 20.6	
	baz=30,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	49.56	239	T	T	06 50 19.0	
	baz=30,slow=76,SNR=9.7						
KSRS	**Korea Array**	55.75	288	LR	LR	06 23 09.2	
	comp=N,15nm,18.0s,baz=285,slow=38						
MKAR	**Makanchi Array**	68.56	324	P	P	05 59 09.4	+0.3
	comp=N,0.2nm,0.5s,baz=31,slow=4.8,SNR=4.1 comp=N,0.2nm,0.5s						

IDC 13 05:58:29.8±3.1, 54°.21N×87°.22E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=24.4km s-min=16.7km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.44	261	I	I	06 07 00.0	
	0.1nm,0.8s,baz=78,slow=330,SNR=4.8						
ZALV	**Zalesovo Beam**	1.44	261	Pg	Pn	05 58 54.8	-2.3
	0.5nm,0.3s,baz=76,slow=16,SNR=7.8						
ZALV				Lg	Lg	05 59 16.5	
	1.2nm,0.3s,baz=76,slow=30,SNR=5.5						
KURBB	**Kurchatov Arra**	6.41	240	Pn	Pn	06 00 06.7	+1.2
	baz=51,slow=15,SNR=2.6						
KURBB				Sn	Sn	06 01 18.2	-1.0
	baz=59,slow=26,SNR=2.2						
KURBB				Lg	Lg	06 01 53.8	
	baz=55,slow=32,SNR=1.4 0.3nm,0.3s						
MKAR	**Makanchi Array**	8.06	205	Pn	Pn	06 00 29.9	+1.9
	baz=26,slow=14,SNR=1.4						
MKAR				Sn	Sn	06 01 58.0	-1.8
	0.1nm,0.3s,baz=20,slow=26,SNR=5.2						
MKAR				Lg	Lg	06 02 45.6	
	0.1nm,0.3s,baz=16,slow=30,SNR=2.5 0.1nm,0.3s						

**IDC 13 06:00:29.8±4.7, 49°.31S×106°.23E, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=173.2km s-min=38.2km az=108.0, South

AAK	**Ala-Archa**	**95.69**	**337**	LR	LR	06 56 30.9	
	comp=Z,58nm,18.1s,baz=141,slow=34						
NVAR	**Mina Array Bea**	**146.54**	**92**	PKPbc	**PKPab**	**06 21 09.4**	**0.0**
	1.7nm,0.9s,baz=224,slow=4.2,SNR=6.6						
TXAR	**Lajitas Array**	**149.77**	**120**	PKPbc	**PKPbc**	**06 21 16.1**	**-0.9**
	0.4nm,0.8s,baz=215,slow=5.5,SNR=4.2						

IDC 13 06:09:34.6±3.2, 53°.61N×87°.21E, h0km, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=31.4km s-min=18.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**285**	I	I	06 18 29.6	
	baz=102,slow=338,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.46**	**285**	Pg	Pn	06 10 02.0	-0.2
	0.4nm,0.3s,baz=102,slow=19,SNR=2.6						
ZALV				Lg	Lg	06 10 20.8	
	0.3nm,0.3s,baz=105,slow=27,SNR=1.8						
KURBB	**Kurchatov Arra**	**6.12**	**244**	Pn	Pn	06 11 06.6	+0.4
	baz=61,slow=14,SNR=2.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.51**	**207**	Pn	Pn	06 11 26.5	+1.1
	baz=26,slow=15,SNR=1.9						
	0.2nm,0.5s						

IDC 13 06:20:19.4±3.8, 54°.55N×87°.20E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=32.7km s-min=22.0km az=41.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**248**	I	I	06 28 20.0	
	baz=67,slow=339,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.52**	**248**	Pg	Pn	06 20 45.6	-2.2
	0.5nm,0.3s,baz=65,slow=17,SNR=6.7						
ZALV				Lg	Lg	06 21 08.2	
	0.8nm,0.3s,baz=65,slow=27,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.58**	**237**	Pn	Pn	06 21 57.8	+0.5
	0.1nm,0.3s,baz=53,slow=14,SNR=2.3						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.36**	**204**	Pn	Pn	06 22 23.2	+1.4
	baz=25,slow=14,SNR=1.3						
	0.1nm,0.4s						

*NEIC **13** 06:43:19±2.0, 56°.41N±0°.05×149°.4W±0°.1, h21km±9km, ML3.6/54, ML3.4(AEIC), Error ellipse: s-maj=9.1km s-min=7.3km az=123.0*
*AEIC **13** 06:43:21.4±1.8, 56°.44N±0°.05×149°.3W±0°.1, h4km±7km, Error ellipse: s-maj=9.5km s-min=6.1km az=54.0*

ISC 13 06:43:17.2±1.8, 56°.4N±0°.1×149°.35W±0°.06, h10km, n156, σ0s90/160, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.24**	**309**	Pn	**Pn**	**06 43 54.3**	**0.0**
KDAK	**Kodiak Island**	**2.24**	**309**		**Sn**	**06 44 19.8**	**-2.1**
OHAK	**Old Harbor**	**2.31**	**292**	Pn	**Pn**	**06 43 54.4**	**-0.9**
OHAK	**Old Harbor**	**2.31**	**292**		**Sn**	**06 44 21.7**	**-2.1**
OHAK	**Old Harbor**	**2.31**	**292**	P	**Pn**	**06 43 54.7**	**-0.6**
	baz=108						
OHAK				S	**Sn**	**06 44 21.7**	**-2.1**
	baz=108						
SII	**Sitkinak Islan**	**2.69**	**275**	Pn	**Pn**	**06 44 00.5**	**0.0**
SII				IAML		06 44 51.7	
	comp=N,190nm,1.5s						
SII				IAML		06 45 42.4	
	comp=E,150nm,1.4s						
Q20K	**Shuyak Island**	**2.75**	**325**	P	**Pn**	**06 44 01.2**	**-0.1**
	baz=141						
Q20K				S	**Sn**	**06 44 33.8**	**-0.7**
	baz=141						
SYI	**Shuyak Island**	**2.75**	**325**		**Pn**	**06 44 01.7**	**+0.4**
SYI				IAML		06 44 36.8	
	comp=E,108nm,1.3s						
CNPM	**China Poot**	**3.28**	**343**		**Pn**	**06 44 08.4**	**-0.2**
CNPM					**Sn**	**06 44 45.4**	**-2.3**
Q19K	**Cape Douglas,**	**3.42**	**319**		**Pn**	**06 44 11.6**	**+1.1**
Q19K				IAML		06 45 12.5	
	comp=N,221nm,1.1s						
Q19K	**Cape Douglas,**	**3.42**	**319**	P	**Pn**	**06 44 11.3**	**+0.8**
	baz=135						
BRSE	**Bradley Lake S**	**3.42**	**348**		**Pn**	**06 44 09.8**	**-0.7**
BRSE					**Sn**	**06 44 49.9**	**-1.3**
BRSE	**Bradley Lake S**	**3.42**	**348**	P	**Pn**	**06 44 09.8**	**-0.7**
	baz=166						
BRSE				S	**Sn**	**06 44 49.8**	**-1.3**
	baz=166						
Q23K	**Middleton Isla**	**3.42**	**27**		**Pn**	**06 44 09.8**	**-0.8**
Q23K	**Middleton Isla**	**3.42**	**27**	IAML		06 45 38.3	
	comp=N,213nm,1.5s						
Q23K	**Middleton Isla**	**3.42**	**27**	P	**Pn**	**06 44 09.8**	**-0.8**
	baz=209						
BRLK	**Bradley Lake**	**3.46**	**347**	Pn	**Pn**	**06 44 11.0**	**-0.1**
BRLK				IAML		06 45 05.0	
	comp=E,73nm,1.5s						
ACHA	**Angle Creek He**	**3.71**	**302**		**Pn**	**06 44 16.2**	**+1.6**
P23K	**Montague Islan**	**3.74**	**15**		**Pn**	**06 44 14.3**	**-0.7**
P23K	**Montague Islan**	**3.74**	**15**	P	**Pn**	**06 44 14.3**	**-0.7**
	baz=196						
ANCK	**Angle Creek**	**3.78**	**301**		**Pn**	**06 44 17.3**	**+1.7**
KAHC	**Katmai Hardscr**	**3.79**	**309**		**Pn**	**06 44 16.8**	**+1.1**
KAHC	**Katmai Hardscr**	**3.79**	**309**	P	**Pn**	**06 44 16.8**	**+1.1**
	baz=123						
P19K	**Oil Pt**	**3.85**	**329**	Pn	**Pn**	**06 44 17.5**	**+1.0**
P19K				IAML		06 45 08.9	
	comp=E,135nm,0.5s						
P19K				IAML		06 45 08.9	
	comp=N,89nm,0.5s						
P19K	**Oil Pt**	**3.85**	**329**	P	**Pn**	**06 44 16.9**	**+0.4**
	baz=145						
CNTC	**Contact Creek**	**4.00**	**300**		**Pn**	**06 44 19.6**	**+1.0**
Q17K	**Contact Creek**	**4.00**	**300**	P	**Pn**	**06 44 19.6**	**+1.0**
	baz=114						
O20K	**Slope Mountain**	**4.07**	**336**		**Pn**	**06 44 19.7**	**+0.2**
O20K	**Slope Mountain**	**4.07**	**336**	P	**Pn**	**06 44 19.7**	**+0.2**
	baz=153						
O22K	**Cooper Landing**	**4.08**	**357**		**Pn**	**06 44 20.7**	**+1.0**
O22K				IAML		06 45 30.6	
	comp=E,140nm,0.8s						
O22K	**Cooper Landing**	**4.08**	**357**	P	**Pn**	**06 44 19.2**	**-0.5**
	baz=176						
SLKM	**Skilak Lake**	**4.13**	**354**		**Pn**	**06 44 19.9**	**-0.5**
HIN	**Hinchinbrook I**	**4.27**	**19**	Pn	**Pn**	**06 44 22.1**	**-0.1**
HIN				IAML		06 45 12.1	
	comp=E,101nm,1.3s						
P18K	**Big Mountain,**	**4.33**	**316**	Pn	**Pn**	**06 44 23.4**	**+0.3**
P18K	**Big Mountain,**	**4.33**	**316**	P	**Pn**	**06 44 23.2**	**+0.1**
	baz=130						
KAIM	**Kayak Island**	**4.38**	**34**	Pn	**Pn**	**06 44 23.4**	**-0.4**
KAIM	**Kayak Island**	**4.38**	**34**	P	**Pn**	**06 44 23.7**	**-0.1**
	baz=218						
RSO	**Redoubt South**	**4.44**	**338**		**Pn**	**06 44 25.4**	**+0.6**
CAPN	**Captain Cook N**	**4.47**	**349**	Pn	**Pn**	**06 44 25.7**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.56**	**23**	P	**Pn**	**06 44 25.9**	**-0.2**
	baz=206						
O19K	**Port Alsworth**	**4.61**	**327**		**Pn**	**06 44 26.7**	**-0.2**
O19K				IAML		06 45 25.6	
	comp=E,81nm,0.5s						
O19K				IAML		06 45 27.2	
	comp=N,100nm,0.5s						
O19K	**Port Alsworth**	**4.61**	**327**	P	**Pn**	**06 44 26.6**	**-0.3**
	baz=143						
O18K	**Koktuh Hills**	**4.64**	**320**	Pn	**Pn**	**06 44 27.3**	**0.0**
O18K				IAML		06 45 38.8	
	comp=N,28nm,0.8s						
RAGM	**Ragged Mountai**	**4.68**	**30**	Pn	**Pn**	**06 44 27.9**	**-0.1**
RC01	**Rabbit Creek A**	**4.70**	**358**	Pn	**Pn**	**06 44 28.4**	**+0.3**
RC01				IAML		06 45 23.8	
	comp=N,34nm,0.5s						
RC01				IAML		06 45 29.2	
	comp=E,35nm,1.3s						
SUCK	**Suckling Hills**	**4.70**	**36**	Pn	**Pn**	**06 44 28.3**	**+0.1**
SUCK				IAML		06 46 43.1	
	comp=N,86nm,1.4s						
SUCK				IAML		06 46 55.0	
	comp=E,88nm,1.3s						
P17K	**Kvichak River**	**4.71**	**309**		**Pn**	**06 44 28.6**	**+0.4**
P17K	**Kvichak River**	**4.71**	**309**	P	**Pn**	**06 44 28.6**	**+0.4**
	baz=123						
NICHA	**Nichawak Mount**	**4.77**	**34**		**Pn**	**06 44 28.9**	**-0.2**
GOAT	**Goat Mountain**	**4.83**	**28**		**Pn**	**06 44 29.5**	**-0.5**
GRIN	**Grindle Hills**	**5.01**	**37**		**Pn**	**06 44 32.5**	**0.0**
KNK	**Knik Glacier**	**5.04**	**5**	Pn	**Pn**	**06 44 32.9**	**+0.1**
KNK				IAML		06 45 36.3	
	comp=E,21nm,1.3s						
KNK				IAML		06 45 36.6	
	comp=N,25nm,1.2s						
KNK	**Knik Glacier**	**5.04**	**5**	P	**Pn**	**06 44 32.4**	**-0.4**
	baz=185						
SPCP	**Crater Peak Br**	**5.08**	**345**		**Pn**	**06 44 33.7**	**+0.2**
DIV	**Divide**	**5.08**	**20**		**Pn**	**06 44 33.1**	**-0.3**
SNH	**Sunshine Point**	**5.10**	**40**	Pn	**Pn**	**06 44 33.0**	**-0.7**
SUA	**Susitna One**	**5.12**	**352**	Pn	**Pn**	**06 44 34.3**	**+0.3**
SUA				IAML		06 45 37.1	
	comp=E,17nm,1.5s						
SUA				IAML		06 45 57.3	
	comp=N,16nm,1.3s						
KHIT	**Khitrov Hills**	**5.16**	**36**		**Pn**	**06 44 34.0**	**-0.5**
N19K	**Bonanza Creek**	**5.16**	**331**	Pn	**Pn**	**06 44 34.9**	**+0.4**
N19K	**Bonanza Creek**	**5.16**	**331**	P	**Pn**	**06 44 34.0**	**-0.6**
	baz=146						
BMRM	**Bremner River**	**5.19**	**26**		**Pn**	**06 44 34.4**	**-0.6**
BMRM	**Bremner River**	**5.19**	**26**	P	**Pn**	**06 44 34.3**	**-0.6**
	baz=210						
PMR	**Palmer**	**5.20**	**1**	Pn	**Pn**	**06 44 35.6**	**+0.7**
PMR				IAML		06 45 41.2	
	comp=N,18nm,1.0s						
PMR				IAML		06 45 45.5	
	comp=E,18nm,1.4s						
STLK	**Strandline Lak**	**5.26**	**347**		**Pn**	**06 44 35.5**	**-0.4**
WAX	**Waxell Ridge**	**5.29**	**37**		**Pn**	**06 44 35.7**	**-0.6**
WAX				IAML		06 45 37.0	
	comp=E,43nm,0.8s						
O17K	**Koliganek Bris**	**5.31**	**313**		**Pn**	**06 44 37.1**	**+0.6**
O17K	**Koliganek Bris**	**5.31**	**313**	P	**Pn**	**06 44 37.1**	**+0.6**
	baz=126						
GHO	**Glory Hole Cre**	**5.38**	**2**		**Pn**	**06 44 38.5**	**+1.0**
GHO				IAML		06 45 42.9	
	comp=E,28nm,0.7s						
GHO				IAML		06 45 49.8	
	comp=N,45nm,0.8s						
KLU	**Klutina**	**5.39**	**18**		**Pn**	**06 44 38.1**	**+0.3**
KLU				IAML		06 45 39.2	
	comp=N,24nm,1.5s						
KLU				IAML		06 45 52.5	
	comp=E,24nm,0.9s						
KLU	**Klutina**	**5.39**	**18**	P	**Pn**	**06 44 37.9**	**+0.1**
	baz=200						
CRQM	**Cirque**	**5.43**	**34**		**Pn**	**06 44 37.9**	**-0.4**
SML	**Sawmill**	**5.44**	**5**	Pn	**Pn**	**06 44 38.8**	**+0.5**
CRQE	**Cirque**	**5.44**	**34**	P	**Pn**	**06 44 38.1**	**-0.4**
	baz=219						
N18K	**Kilae Creek**	**5.48**	**324**	Pn	**Pn**	**06 44 38.8**	**0.0**
N18K	**Kilae Creek**	**5.48**	**324**	P	**Pn**	**06 44 38.5**	**-0.4**
	baz=138						
TGL	**Tana Glacier**	**5.53**	**35**		**Pn**	**06 44 38.9**	**-0.7**
SCM	**Sheep Creek Mo**	**5.54**	**10**	Pn	**Pn**	**06 44 41.9**	**+2.2**
ISLE	**Juniper Island**	**5.58**	**38**		**Pn**	**06 44 39.6**	**-0.7**
BAGL	**Bagley Icefiel**	**5.59**	**40**		**Pn**	**06 44 39.8**	**-0.5**
O16K	**Kokwok River B**	**5.64**	**308**	Pn	**Pn**	**06 44 42.6**	**+1.6**
O16K	**Kokwok River B**	**5.64**	**308**	P	**Pn**	**06 44 41.5**	**+0.5**
	baz=120						
S14K	**Fog Glacier**	**5.68**	**273**	P	**Pn**	**06 44 43.4**	**+1.7**
	baz=84						
VNFG	**Fog Glacier, M**	**5.68**	**273**		**Pn**	**06 44 43.4**	**+1.7**
SKT	**Skwentna**	**5.70**	**350**		**Pn**	**06 44 42.5**	**+0.7**
SVW2	**Sparrevohn**	**5.71**	**328**	Pn	**Pn**	**06 44 41.6**	**-0.3**
VRDI	**Verde Repeater**	**5.72**	**30**	Pn	**Pn**	**06 44 41.4**	**-0.9**
N25K	**Chitina, Valde**	**5.76**	**23**		**Pn**	**06 44 42.6**	**-0.1**
GLB	**Gilahina Butte**	**5.80**	**27**		**Pn**	**06 44 42.6**	**-0.7**
KIAG	**Kiagna River**	**5.81**	**36**		**Pn**	**06 44 42.5**	**-1.0**
M20K	**Styx River**	**5.82**	**342**		**Pn**	**06 44 44.1**	**+0.5**
N17K	**Nushagak Hills**	**5.82**	**318**	Pn	**Pn**	**06 44 43.5**	**0.0**
N17K	**Nushagak Hills**	**5.82**	**318**	P	**Pn**	**06 44 43.6**	**0.0**
	baz=131						
SAMH	**Samovar Hills**	**5.86**	**47**		**Pn**	**06 44 44.2**	**+0.1**
GRNC	**Granite Creek**	**5.88**	**39**		**Pn**	**06 44 43.9**	**-0.6**
TABL	**Table Mountain**	**5.91**	**43**		**Pn**	**06 44 45.1**	**+0.2**
MCARA	**McCarthy VSAT**	**5.96**	**31**	Pn	**Pn**	**06 44 46.3**	**+0.8**
PTPK	**Patty Peak**	**5.97**	**34**		**Pn**	**06 44 45.5**	**-0.3**
PCA	**Pinnacle**	**6.05**	**49**		**Pn**	**06 44 46.0**	**-0.8**
PINM	**Pinnacle**	**6.06**	**49**	P	**Pn**	**06 44 46.0**	**-0.8**
	baz=236						
M19K	**Big River Lodg**	**6.08**	**337**	Pn	**Pn**	**06 44 48.0**	**+0.9**
M18K	**Stony River**	**6.09**	**329**		**Pn**	**06 44 46.2**	**-1.1**
M18K	**Stony River**	**6.09**	**329**	P	**Pn**	**06 44 46.2**	**-1.1**
	baz=143						
BARN	**Barnard Glacie**	**6.14**	**37**		**Pn**	**06 44 47.6**	**-0.5**
CTG	**Chitna Glacier**	**6.18**	**39**	P	**Pn**	**06 44 47.7**	**-0.9**
	baz=226						
CTGM	**Chitina Glacie**	**6.19**	**39**		**Pn**	**06 44 47.7**	**-0.9**
LOGN	**Logan Glacier**	**6.21**	**41**	Pn	**Pn**	**06 44 48.8**	**-0.2**
PNL	**Peninsula**	**6.21**	**54**		**Pn**	**06 44 48.4**	**-0.5**
PNL	**Peninsula**	**6.21**	**54**	P	**Pn**	**06 44 48.4**	**-0.5**
	baz=242						
BCPM	**Bancas Point**	**6.24**	**51**	Pn	**Pn**	**06 44 49.2**	**-0.1**
O15K	**Ungalikthiuk R**	**6.25**	**301**		**Pn**	**06 44 50.5**	**+1.1**
O15K	**Ungalikthiuk R**	**6.25**	**301**	P	**Pn**	**06 44 50.5**	**+1.1**
	baz=111						
L19K	**White Mountain**	**6.43**	**336**	Pn	**Pn**	**06 44 52.4**	**+0.4**
M17K	**Holitna River**	**6.52**	**323**	Pn	**Pn**	**06 44 52.9**	**-0.2**
N15K	**Kwethluk River**	**6.80**	**308**	Pn	**Pn**	**06 44 58.3**	**+1.4**
M16K	**Timber Creek**	**6.81**	**317**	Pn	**Pn**	**06 44 58.1**	**+1.1**
M26K	**Nabesna, AK**	**6.82**	**26**	Pn	**Pn**	**06 44 58.3**	**+1.0**
O29M	**Mount Kennedy**	**6.88**	**51**		**Pn**	**06 44 57.7**	**-0.4**
O29M	**Mount Kennedy**	**6.88**	**51**	P	**Pn**	**06 44 57.8**	**-0.4**
	baz=240						
P29M	**Windy Craggy**	**6.96**	**58**		**Pn**	**06 44 58.8**	**-0.4**
P29M	**Windy Craggy**	**6.96**	**58**	P	**Pn**	**06 44 58.1**	**-1.0**
	baz=247						
M27K	**Edge Creek, AK**	**7.07**	**30**	Pn	**Pn**	**06 45 01.1**	**+0.3**
CAST	**Castle Rocks**	**7.16**	**350**	Pn	**Pn**	**06 45 03.5**	**+1.6**
L26K	**Log Cabin Wild**	**7.29**	**22**		**Pn**	**06 45 05.0**	**+1.3**
S31K	**Pelican**	**7.30**	**72**	Pn	**Pn**	**06 45 02.1**	**-1.6**
YUK6	**Outpost Mounta**	**7.30**	**47**	P	**Pn**	**06 45 04.6**	**+0.5**
	baz=236						
K20K	**Telida**	**7.36**	**343**	Pn	**Pn**	**06 45 05.8**	**+1.2**
L16K	**Owhat River**	**7.44**	**320**	Pn	**Pn**	**06 45 06.2**	**+0.5**
BCAR	**Beaver Creek A**	**7.68**	**27**	Pn	**Pn**	**06 45 09.6**	**+0.5**
RIDG	**Independent Ri**	**7.69**	**15**	Pn	**Pn**	**06 45 10.7**	**+1.6**
K17K	**Kitarod**	**7.78**	**328**	Pn	**Pn**	**06 45 10.0**	**-0.4**
SCRK	**Sand Creek**	**8.04**	**17**	Pn	**Pn**	**06 45 14.8**	**+0.7**
O30N	**Mendenhall**	**8.18**	**52**	Pn	**Pn**	**06 45 16.4**	**+0.5**
M29M	**Somme Creek**	**8.20**	**38**		**Pn**	**06 45 17.3**	**+1.0**
CCB	**Clear Creek Bu**	**8.30**	**5**	Pn	**Pn**	**06 45 18.9**	**+1.5**
K27K	**Chicken**	**8.45**	**22**	Pn	**Pn**	**06 45 20.0**	**+0.5**
IL31		**8.47**	**7**		**Pn**	**06 45 20.9**	**+1.1**
ILAR	**Eielson Array**	**8.47**	**7**	Pn	**Pn**	**06 45 21.0**	**+1.2**
K15K	**Wolf Creek Mou**	**8.56**	**319**	Pn	**Pn**	**06 45 22.0**	**+0.9**
MDM	**Murphy Dome**	**8.59**	**3**	Pn	**Pn**	**06 45 22.3**	**+0.8**
J26L	**Joseph Creek**	**8.60**	**17**		**Pn**	**06 45 23.2**	**+1.5**
N31M	**Braeburn, Yuko**	**8.65**	**48**	Pn	**Pn**	**06 45 23.3**	**+0.9**
WHY	**Whitehorse**	**8.68**	**55**	Pn	**Pn**	**06 45 23.5**	**+0.7**
L29M	**L29M**	**8.77**	**35**	Pn	**Pn**	**06 45 25.2**	**+1.2**
P32M	**Atlin**	**8.89**	**63**	Pn	**Pn**	**06 45 25.5**	**-0.1**
I21K	**Tanana**	**8.89**	**353**	Pn	**Pn**	**06 45 27.1**	**+1.6**
DAWY	**Dawson**	**9.12**	**29**	Pn	**Pn**	**06 45 29.7**	**+0.9**
H21K	**Melozitna Rive**	**9.42**	**351**		**Pn**	**06 45 34.2**	**+1.3**
P33M	**Teslin, Yukon**	**9.49**	**60**	Pn	**Pn**	**06 45 33.7**	**-0.2**
K29M	**Barlow Dome**	**9.49**	**33**	Pn	**Pn**	**06 45 34.3**	**+0.4**
IMAR	**Indian Mountai**	**9.83**	**349**	Pn	**Pn**	**06 45 39.9**	**+1.4**
H17K	**Granite Mounta**	**9.98**	**333**	Pn	**Pn**	**06 45 42.3**	**+1.8**
R33M	**Jennings River**	**10.22**	**65**	Pn	**Pn**	**06 45 43.6**	**-0.4**
BMAR	**Burnt Mountain**	**11.28**	**9**	Pn	**Pn**	**06 45 57.9**	**-0.4**
TOLK	**Toolik Lake Re**	**12.28**	**360**	Pn	**Pn**	**06 46 13.8**	**+1.9**
INK	**Inuvik**	**13.94**	**25**	Pn	**Pn**	**06 46 36.8**	**+2.2**
A36M	**Sachs Harbour**	**18.57**	**24**		**Pn**	**06 47 34.9**	**+0.8**

RSNC 13 07:09:24.1±2.2, 6°.85N×73°.14W, h148km±9km, ML3.3, Mw3.8, 4C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**188**	↓	*iP*	Pn	07 09 44.3	-0.4
BARC					*eS*	Sn	07 09 59.6	-0.6
BARC					*i*		07 10 00.7	
	comp=Z,655nm,0.5s							
PAMC	**Pamplona, Colo**	**0.66**	**42**	↑	*iP*	Pn	07 09 47.1	+0.4
PAMC					*eS*	Sn	07 10 04.2	+0.3
PAMC					*i*		07 10 06.5	
	comp=Z,446nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.34**	**257**	↓	*iP*	Pn	07 09 50.6	-1.3
PTBC					*eS*	Sn	07 10 12.1	-1.0
PTBC					*i*		07 10 19.1	
	comp=Z,211nm,0.4s							
OCAC	**Ocana**	**1.39**	**353**		*eP*	Pn	07 09 52.5	-0.1
OCAC					*eS*	Sn	07 10 14.7	+0.3
OCAC					*i*		07 10 20.7	
	comp=Z,511nm,0.3s							
TAMC	**Tame, Arauca**	**1.41**	**107**	↑	*iP*	Pn	07 09 52.7	+0.1
TAMC					*eS*	Sn	07 10 14.2	-0.1
TAMC					*i*		07 10 15.3	
	comp=Z,66nm,0.6s							
SPBC	**San Pablo de B**	**1.51**	**218**	↓	*iP*	Pn	07 09 53.0	-0.7
SPBC					*eS*	Sn	07 10 15.1	-1.3
SPBC					*i*		07 10 22.2	
	comp=Z,414nm,0.3s							
ROSC	**El Rosal**	**2.31**	**210**	↓	*iP*	Pn	07 10 04.0	+0.7
ROSC					*eS*	Sn	07 10 34.8	+1.4
ROSC					*i*		07 10 40.6	
	comp=Z,213nm,0.3s							
CVER	**Cruz Verde, Cu**	**2.49**	**202**	↓	*eP*	Pn	07 10 05.7	+0.1
CVER					*eS*	Sn	07 10 37.5	+0.1
CVER					*i*		07 10 48.6	
	comp=Z,78nm,0.4s							
UREC	**San Jos de Ur**	**2.53**	**291**		*eP*	Pn	07 10 04.0	-1.5
UREC					*eS*	Sn	07 10 35.0	-2.6
UREC					*i*		07 10 50.0	
	comp=Z,130nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.74**	**234**		*eP*	Pn	07 10 08.2	-0.3
GUY2C					*eS*	Sn	07 10 41.8	-1.0
GUY2C					*i*		07 10 49.6	
	comp=Z,104nm,0.6s							
VILC	**Villavicencio,**	**2.77**	**191**		*eP*	Pn	07 10 07.9	-0.9
VILC					*eS*	Sn	07 10 42.1	-1.1
VILC					*i*		07 10 45.1	
	comp=Z,144nm,0.4s							
PTGC	**Puerto Gaitan,**	**2.82**	**159**	↑	*iP*	Pn	07 10 07.5	-1.7
PTGC					*eS*	Sn	07 10 40.8	-3.2
PTGC					*i*		07 10 42.7	
	comp=Z,144nm,0.3s							
LL6C	**La Loma 6 Bece**	**2.87**	**358**		*eP*	Pn	07 10 08.9	-0.9
LL6C					*eS*	Sn	07 10 44.7	-0.4
LL6C					*i*		07 10 50.3	
	comp=Z,53nm,0.5s							
NIZA	**Niza - Manizal**	**2.92**	**233**		*eP*	Pn	07 10 15.4	+4.7
CBOC	**Ciudad Bolivar**	**3.01**	**251**		*eP*	Pn	07 10 12.0	+0.2
CBOC					*eS*	Sn	07 10 48.7	+0.2
CBOC					*i*		07 11 05.4	
	comp=Z,46nm,0.7s							
DBBC	**Dabeiba**	**3.05**	**273**		*eP*	Pn	07 10 11.6	-0.5
DBBC					*eS*	Sn	07 10 46.5	-2.7
DBBC					*i*		07 10 51.7	
	comp=Z,65nm,0.2s							
ARGC	**Ariguani, Magd**	**3.18**	**340**		*eP*	Pn	07 10 14.3	+0.6
ARGC					*eS*	Sn	07 10 53.9	+1.7
ARGC					*i*		07 11 04.5	
	comp=Z,41nm,0.3s							
SDV	**Santo Domingo**	**3.21**	**51**		*eP*	Pn	07 10 14.0	-0.2
SDV					*eS*	Sn	07 10 50.9	-2.1
SDV					*i*		07 10 53.3	
	comp=Z,36nm,0.4s							
APAC	**Apartado, Choc**	**3.56**	**287**	↑	*eP*	Pn	07 10 18.1	-0.5
APAC					*eS*	Sn	07 11 00.1	-0.8
APAC					*i*		07 11 05.0	
	comp=Z,60nm,0.4s							
ORTC	**Ortega, Tolima**	**3.59**	**216**		*eP*	Pn	07 10 18.5	-0.6
ORTC					*eS*	Sn	07 11 01.6	-0.1
ORTC					*i*		07 11 08.3	
	comp=Z,52nm,0.3s							
SJCC	**San Jacinto, C**	**3.63**	**326**		*eP*	Pn	07 10 17.9	-1.7
SJCC					*eS*	Sn	07 10 59.4	-3.3
SJCC					*i*		07 11 07.1	
	comp=Z,36nm,0.4s							
PLMC	**San Jos del P**	**3.67**	**238**		*eP*	Pn	07 10 19.9	-0.2
PLMC					*eS*	Sn	07 11 02.5	-1.0
PLMC					*i*		07 11 08.3	
	comp=Z,40nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.15**	**4**		*eP*	Pn	07 10 24.6	-1.8
CRJC					*eS*	Sn	07 11 12.6	-2.3
CRJC					*i*		07 11 19.6	
	comp=Z,45nm,0.2s							
YOTC	**Yotoco, Valle**	**4.27**	**228**		*eP*	Pn	07 10 27.0	-1.1
YOTC					*eS*	Sn	07 11 18.1	+0.3
YOTC					*i*		07 11 29.1	
	comp=Z,9.4nm,0.7s							
JAMC	**Jamundi, Valle**	**5.04**	**224**		*eP*	Pn	07 10 37.4	-0.9
JAMC					*eS*	Sn	07 11 36.0	-0.1
JAMC					*i*		07 11 45.2	
	comp=Z,6.8nm,0.2s							
GARC	**Garzon, Huila**

WB2				IAmb	IAmb	07 15 01.2	
	comp=Z,15nm,0.7s						
WR0	**Warramunga Arr**	**23.11**	**154**	P	**P**	**07 14 59.6**	**+0.3**
WR0				IAmb	IAmb	07 15 01.6	
	comp=Z,12nm,0.8s						
COEN	**Coen**	**24.06**	**128**	P	**P**	**07 15 08.5**	**+0.6**
COEN				IAmb	IAmb	07 15 11.5	
	comp=Z,4.8nm,0.8s						
AS31	**Alice Springs**	**26.18**	**159**	P	**P**	**07 15 27.4**	**+0.5**
ASAR	**Alice Springs**	**26.18**	**159**	P	**P**	**07 15 27.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=342,slow=6.9,SNR=15						
ASAR				PcP	**PcP**	**07 18 46.4**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=359,slow=2.2,SNR=2.4						
ASAR				S	**S**	**07 19 38.7**	**-1.5**
	comp=Z,1.3nm,0.9s,baz=348,slow=21,SNR=6.7						
ASAR				ScP	**ScP**	**07 21 58.6**	**-4.4**
	comp=Z,0.4nm,0.7s,baz=345,slow=2.8,SNR=4.4						
	comp=Z,0.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.15**	**307**	P	**P**	**07 16 02.9**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=134,slow=7.7,SNR=5.1						
	comp=Z,1.0nm,0.3s						
FORT	**Forrest**	**31.64**	**173**	P	**P**	**07 16 15.2**	**+0.2**
STKA	**Stephens Creek**	**36.56**	**154**	P	**P**	**07 16 57.5**	**+0.3**
	comp=Z,2.3nm,0.4s,baz=327,slow=9.3,SNR=4.7						
	comp=Z,2.3nm,0.4s						
ARMA	**Armidale**	**40.74**	**142**	P	**P**	**07 17 32.9**	**+0.9**
ARMA				IAmb	IAmb	07 18 06.3	
	comp=Z,11nm,1.4s						
CAN	**Canberra**	**42.89**	**149**	P	**P**	**07 17 50.5**	**+1.2**
CAN				IAmb	IAmb	07 17 55.1	
	comp=Z,22nm,1.3s						
USRK	**Ussuriysk Ar.**	**43.82**	**8**	P	**P**	**07 17 55.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**43.82**	**8**	P	**P**	**07 17 56.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=192,slow=4.6,SNR=5.4						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**49.26**	**344**	P	**P**	**07 18 38.3**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=162,slow=8.6,SNR=4.8						
	comp=Z,0.7nm,0.6s						
DGAR	**Diego Garcia**	**51.96**	**260**	P	**P**	**07 18 57.5**	**-1.7**
MK31	**Makanchi Array**	**58.43**	**328**	P	**P**	**07 19 44.1**	**-0.6**
MKAR	**Makanchi Array**	**58.43**	**328**	P	**P**	**07 19 43.7**	**-1.0**
MKAR	**Makanchi Array**	**58.43**	**328**	P	**P**	**07 19 44.1**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=126,slow=8.0,SNR=27						
MKAR				PcP	**PcP**	**07 20 31.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=130,slow=4.3,SNR=4.3						
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**61.98**	**335**	P	**P**	**07 20 08.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=131,slow=6.5,SNR=2.7						
	comp=Z,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**62.74**	**329**	P	**P**	**07 20 12.8**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=127,slow=6.5,SNR=7.7						
	comp=Z,0.4nm,0.3s						
KURK	**Kurchatov**	**62.76**	**329**	P	**P**	**07 20 12.4**	**-1.3**
KURK				IAmb	IAmb	07 20 13.3	
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**72.67**	**322**	P	**P**	**07 21 14.3**	**-1.2**
AKTO	**Aktyubinsk**	**74.23**	**323**	P	**P**	**07 21 23.8**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=107,slow=7.0,SNR=7.4						
	comp=Z,1.7nm,0.6s						
ILAR	**Eielson Array**	**88.95**	**25**	P	**P**	**07 22 39.9**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=254,slow=5.5,SNR=2.2						
	comp=Z,0.2nm,0.6s						

IDC 13 07:15:35.7±2.7, 53.74N×86.65E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=23.6km s-min=13.3km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**281**	I	I	07 23 20.0	
	baz=99,slow=339,SNR=6.2						
ZALV	**Zalesovo Beam**	**1.10**	**281**	Pg	Pg	07 15 57.2	+0.4
	0.9nm,0.3s,baz=98,slow=16,SNR=14						
ZALV				Lg	Lg	07 16 11.4	
	0.7nm,0.3s,baz=101,slow=28,SNR=7.9						
KURBB	**Kurchatov Arra**	**5.89**	**241**	Pn	Pn	07 17 05.3	+1.1
	baz=56,slow=13,SNR=3.2						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.50**	**204**	Pn	Pn	07 17 27.2	+1.0
	0.1nm,0.3s,baz=23,slow=13,SNR=5.5						
MKAR				Lg	Lg	07 19 32.0	
	baz=18,slow=38,SNR=1.8						
	0.2nm,0.3s						

IDC 13 07:21:37.0±2.6, 0.30S×100.16E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=157.9km s-min=21.9km az=55.0

DJA 13 07:21:40.8±0.5, 1.3S×9.9E±, h12km±6km, M4.0/9, mb4.3/2, MLv3.8/9

ISC 13 07:21:37.8±0.7, 0.63S±0.05×99.41E±0.05, h10km±1.1, n11, σ1§64/16, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.76**	**205**	P	**Pb**	**07 21 54.5**	**+1.3**
SISI				S	**Sb**	**07 22 04.3**	**+0.7**
PDSI	**Padang**	**1.09**	**105**	P	**Pn**	**07 22 00.9**	**+1.7**
PDSI				S	**Sg**	**07 22 14.0**	**+1.0**
PBSI	**Pulau Batu**	**1.27**	**297**	P	**Pg**	**07 22 03.1**	**+0.9**
BKNI	**Bangkinang**	**1.89**	**60**	P	**Pb**	**07 22 13.4**	**+1.0**
PPSI	**Pulau Pagai**	**2.20**	**164**	P	**Pn**	**07 22 14.4**	**-0.1**
GSI	**Gunungsitoli**	**2.66**	**316**	P	**Pb**	**07 22 26.2**	**+0.7**
MNAI	**Manna**	**5.13**	**136**	P	**Pn**	**07 22 56.2**	**+1.5**
	188nm,1.4s,1.0nm						
WRA	**Warramunga Arr**	**39.20**	**122**	P	**P**	**07 29 03.6**	**-2.9**
	0.2nm,0.4s,baz=302,slow=9.0,SNR=8.1						
WRA				PcP	**PcP**	**07 31 14.0**	**-1.9**
	0.3nm,0.7s,baz=317,slow=2.5,SNR=1.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**40.54**	**127**	P	**P**	**07 29 15.2**	**-2.4**
	0.7nm,0.7s,baz=302,slow=7.7,SNR=9.3						
ASAR				PcP	**PcP**	**07 31 18.5**	**-1.6**
	0.2nm,0.6s,baz=301,slow=2.2,SNR=1.7						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**49.56**	**345**	P	**P**	**07 30 28.6**	**-0.4**
	0.7nm,0.5s,baz=162,slow=8.5,SNR=9.7						
MKAR				PcP	**PcP**	**07 31 52.5**	**+1.8**
	0.1nm,0.5s,baz=160,slow=4.6,SNR=1.2						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**55.72**	**350**	P	**P**	**07 31 13.8**	**-0.6**
	1.0nm,0.4s,baz=157,slow=7.1,SNR=4.3						
	1.0nm,0.4s						

IDC 13 07:21:37.3±1.0, 39.60N×74.41E, h0km, mb3.8/7, mbtmp3.7/10, ML2.8/4, Error ellipse: s-maj=23.7km s-min=11.6km az=87.0

SOME 13 07:21:38.7, 39.80N×74.27E, h10km

KRNET 13 07:21:41.7±0.1, 39.84N×74.29E, h20km, mb3.6

NNC 13 07:21:42.9±2.0, 39.92N×74.48E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=15.5km s-min=10.2km az=170.0

ISC 13 07:21:39.0±1.5, 39.61N±0.05×74.32E±0.03, h9km±9km, n74, σ1§75/114, mb3.9/7, 36C-26D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.75**	**303**	⇑*i*P	**Pg**	**07 21 53.8**	**+0.4**
	baz=86						
SFK				⇑*i*S	**Sg**	**07 22 02.5**	**-0.7**
	baz=86						
OHH	**Osh**	**1.49**	**308**	⇓*e*P	**Pn**	**07 22 06.5**	**+0.5**
	baz=1.0						
OHH				⇓*e*S	**Sn**	**07 22 24.4**	**-1.3**
	baz=1.0						
DRK	**Karamyk**	**1.95**	**267**	⇓*e*P	**Pg**	**07 22 16.8**	**+0.4**
	baz=60						
DRK				⇓*e*S	**Sg**	**07 22 42.3**	**+0.6**
	baz=60						
ARSB	**Arslanbob**	**1.99**	**330**	⇑*i*P	**Pn**	**07 22 14.2**	**+1.2**
	baz=26						
ARSB				⇑*i*S	**Sn**	**07 22 37.8**	**-0.4**
	baz=26						
NRN	**Naryn**	**2.23**	**35**	⇓*i*P	**Pn**	**07 22 17.3**	**+0.9**
	baz=39						
NRN				⇓*i*S	**Sn**	**07 22 44.0**	**-0.2**
	baz=39						
UCH	**Uchtor**	**2.62**	**3**	P	**Pn**	**07 22 24.4**	**+2.4**
	SNR=119						
UCH	**Uchtor**	**2.62**	**3**	⇓*i*P	**Pn**	**07 22 22.8**	**+0.9**
	baz=4.0						
UCH				⇓*i*S	**Sn**	**07 22 52.8**	**-1.3**
	baz=4.0						
BTK	**Batken**	**2.73**	**281**	⇑*i*P	**Pb**	**07 22 26.5**	**-1.6**
	baz=76						
BTK				⇑*i*S	**Sn**	**07 22 59.0**	**+2.6**
	baz=76						
ARK	**Arkit**	**2.83**	**321**	⇑*i*P	**Pn**	**07 22 26.0**	**+1.5**
	baz=19						
ARK				⇑*i*S	**Sn**	**07 22 58.1**	**-0.6**
	baz=19						
ULHL	**Ulahol**	**3.01**	**28**	P	**Pn**	**07 22 29.2**	**+2.2**
	SNR=18						
ULHL	**Ulahol**	**3.01**	**28**	⇑*i*P	**Pn**	**07 22 28.7**	**+1.6**
	baz=31						
ULHL				⇑*i*S	**Sn**	**07 23 02.9**	**-0.5**
	baz=31						
AAK	**Ala-Archa**	**3.03**	**2**	P	**Pn**	**07 22 30.1**	**+2.8**
	SNR=53						
AAK	**Ala-Archa**	**3.03**	**2**	Pn	**Pn**	**07 22 30.1**	**+2.8**
	6.9nm,0.3s,baz=178,slow=7.0,SNR=69						
AAK				Pg	**Pb**	**07 22 34.7**	**+1.5**
	20nm,0.3s,baz=178,slow=12,SNR=27						
AAK				Sn	**Sn**	**07 23 06.3**	**+2.5**
	4.4nm,0.3s,baz=114,slow=18,SNR=1.4						
AAK				Lg	Lg	07 23 11.5	
	10nm,0.3s,baz=109,slow=22,SNR=9.0						
	27nm,0.3s						
AAK	**Ala-Archa**	**3.03**	**2**	⇑*i*P	**Pn**	**07 22 28.4**	**+1.1**
	baz=3.0						
AAK				⇑*i*S	**Sn**	**07 23 02.4**	**-1.4**
	baz=3.0						
EKS2	**Erkin-Say**	**3.08**	**353**	P	**Pn**	**07 22 30.6**	**+2.7**
	SNR=28						
EKS2	**Erkin-Say**	**3.08**	**353**	⇑*i*P	**Pn**	**07 22 29.0**	**+1.1**
	baz=52						
EKS2				⇑*i*S	**Sn**	**07 23 03.3**	**-1.6**
	baz=52						
KBK	**Karagaybulak**	**3.08**	**9**	P	**Pn**	**07 22 31.0**	**+3.0**
	SNR=45						
KBK	**Karagaybulak**	**3.08**	**9**	⇓*i*P	**Pn**	**07 22 29.1**	**+1.1**
	baz=10.0						
KBK				⇓*i*S	**Sn**	**07 23 03.7**	**-1.4**
	baz=10.0						
TRKS	**Terek-Say**	**3.09**	**309**	⇓*e*P	**Pn**	**07 22 29.3**	**+1.2**
	baz=5.0						
TRKS				⇓*i*S	**Sn**	**07 23 04.0**	**-1.3**
	baz=5.0						
BOOM	**Boomskoye usch**	**3.13**	**23**	⇑*i*P	**Pn**	**07 22 30.0**	**+1.4**
	baz=25						
BOOM				⇑*i*S	**Sn**	**07 23 05.3**	**-0.9**
	baz=25						
MNAS	**Manas**	**3.19**	**335**	⇑*i*P	**Pn**	**07 22 30.6**	**+1.2**
	baz=34						
MNAS				⇑*i*S	**Sn**	**07 23 06.5**	**-1.1**
	baz=34						
FRU1	**Bishkek**	**3.21**	**4**	⇑*i*P	**Pn**	**07 22 31.1**	**+1.5**
	baz=5.0						
FRU1				⇑*i*S	**Sn**	**07 23 06.8**	**-1.2**
	baz=5.0						
MRKS	**Merke**	**3.24**	**346**	Pg	**Pn**	**07 22 33.4**	**+3.3**
	25nm,0.4s						
MRKS				Lg	Lg	07 23 13.8	
	64nm,0.5s						
MRKS	**Merke**	**3.24**	**346**	*e*P	**Pb**	**07 22 35.8**	**-1.0**
	12nm,0.3s						
MRKS				*e*S	**Sb**	**07 23 16.2**	**-0.1**
	108nm,0.4s						
KDJ	**Kajisay**	**3.32**	**40**	⇑*i*P	**Pn**	**07 22 33.2**	**+1.9**
	baz=43						
KDJ				⇑*i*S	**Sn**	**07 23 11.3**	**+0.2**
	baz=43						
CHMS	**Chumysh**	**3.40**	**5**	P	**Pn**	**07 22 35.0**	**+2.8**
	SNR=13						
CHMS	**Chumysh**	**3.40**	**5**	⇑Pg	**Pn**	**07 22 34.5**	**+2.2**
	6.4nm,0.4s						
CHMS				⇓Lg	Lg	07 23 22.8	
	37nm,0.6s						
CHMS	**Chumysh**	**3.40**	**5**	⇑*i*P	**Pn**	**07 22 33.4**	**+1.1**
	baz=6.0						
CHMS				⇑*i*S	**Sn**	**07 23 10.9**	**-1.9**
	baz=6.0						
TKM2	**Tokmak 2**	**3.45**	**16**	P	**Pn**	**07 22 35.8**	**+2.7**
	SNR=52						
TKM2	**Tokmak 2**	**3.45**	**16**	⇑Pn	**Pn**	**07 22 35.3**	**+2.3**
	20nm,0.4s						
TKM2				⇓Lg	Lg	07 23 22.0	
	74nm,0.6s						
TKM2	**Tokmak 2**	**3.45**	**16**	⇑*i*P	**Pn**	**07 22 34.2**	**+1.1**
	baz=17						
TKM2				⇑*i*S	**Sn**	**07 23 12.7**	**-1.4**
	baz=17						
KST	**Kastek**	**3.65**	**19**	Pg	**Pn**	**07 22 39.1**	**+3.4**
	108nm,0.5s						
KST				Lg	Lg	07 23 23.7	
	143nm,0.8s						
KST	**Kastek**	**3.65**	**19**	*e*P	**Pb**	**07 22 43.3**	**-0.4**
	32nm,0.4s						
KST				*e*S	**Sb**	**07 23 28.9**	**+0.9**
	109nm,0.6s						
USP	**Ospenovka**	**3.66**	**2**	P	**Pn**	**07 22 38.6**	**+2.8**
	SNR=7.8						
USP	**Ospenovka**	**3.66**	**2**	⇓*i*P	**Pn**	**07 22 37.0**	**+1.2**
	baz=3.0						
USP				⇓*i*S	**Sn**	**07 23 17.3**	**-1.8**
	baz=3.0						
DGS	**Degeres**	**3.79**	**16**	Pg	**Pb**	**07 22 47.0**	**+0.9**
	49nm,0.6s						
DGS				Lg	Lg	07 23 36.3	
	68nm,0.7s						
DGS	**Degeres**	**3.79**	**16**	*e*P	**Pb**	**07 22 45.3**	**-0.8**
	9.8nm,0.4s						
DGS				*e*S	**Sb**	**07 23 32.7**	**+0.5**
	48nm,0.4s						
SGDS	**Sogindy**	**3.85**	**3**	Pg	**Pb**	**07 22 47.3**	**+0.3**
	12nm,0.3s						
SGDS				Lg	Lg	07 23 36.4	
	60nm,0.6s						
MTBS	**Maitube**	**3.86**	**24**	Pg	**Pb**	**07 22 47.6**	**+0.3**
	73nm,0.4s						
MTBS				Lg	Lg	07 23 36.7	
	56nm,0.6s						
MTBS	**Maitube**	**3.86**	**24**	*e*P	**Pb**	**07 22 47.6**	**+0.3**
	73nm,0.4s						
MTBS				*e*S	**Sb**	**07 23 36.7**	**+2.6**
	56nm,0.6s						
TNSS	**Tian-Shan**	**3.96**	**29**	Pg	**Pb**	**07 22 48.9**	**-0.2**
	121nm,0.5s						
TNSS				Lg	Lg	07 23 39.0	
	36nm,0.6s						
TNSS	**Tian-Shan**	**3.96**	**29**	*e*P	**Pb**	**07 22 48.9**	**-0.2**
	121nm,0.5s						
TNSS				*e*S	**Sb**	**07 23 39.0**	**+1.8**
	36nm,0.6s						
ANVS	**Anan'yevo**	**4.05**	**37**	⇓*i*P	**Pn**	**07 22 43.6**	**+2.2**
	baz=40						
ANVS				⇓*i*S	**Sn**	**07 23 28.6**	**-0.5**
	baz=40						
MDOK	**Medeo**	**4.10**	**29**	Pg	**Pb**	**07 22 51.4**	**-0.1**
	23nm,0.4s						
MDOK				Pg	**Pb**	**07 22 52.0**	**+0.5**
	38nm,0.4s						
MDOK				Lg	Lg	07 23 44.7	
	82nm,1.2s						
MDOK				Lg	Lg	07 23 44.9	
	35nm,0.8s						
MDOK	**Medeo**	**4.10**	**29**	*e*P	**Pb**	**07 22 52.0**	**+0.5**
	38nm,0.4s						
MDOK				*e*S	**Sb**	**07 23 43.8**	**+2.7**
	35nm,0.8s						
KNDC	**Almaty**	**4.12**	**28**	⇑Pg	**Pb**	**07 22 51.9**	**+0.2**
	98nm,0.5s						
KNDC				⇑Lg	Lg	07 23 45.7	
	200nm,0.7s						
KOTS	**Kotyrbulak**	**4.19**	**29**	Pg	**Pb**	**07 22 54.5**	**+1.6**
	41nm,0.6s						
KOTS				Lg	Lg	07 23 48.8	
	117nm,0.6s						
KOTS	**Kotyrbulak**	**4.19**	**29**	*e*P	**Pb**	**07 22 54.5**	**+1.6**
	41nm,0.6s						
KOTS				*e*S	**Sg**	**07 23 48.8**	**-4.6**
	117nm,0.6s						
KRBS	**Karabastau**	**4.21**	**14**	Pg	**Pb**	**07 22 54.0**	**+0.8**
	15nm,0.4s						
KRBS				Lg	Lg	07 23 48.0	
	42nm,0.5s						
KRBS	**Karabastau**	**4.21**	**14**	*e*P	**Pb**	**07 22 54.0**	**+0.8**
	15nm,0.4s						
KRBS				*e*S	**Sb**	**07 23 48.0**	**+3.9**
	42nm,0.5s						
PRZ	**Przheval'sk**	**4.21**	**46**	⇓*e*P	**Pn**	**07 22 45.9**	**+2.3**
	baz=48						
PRZ				⇓*i*S	**Sn**	**07 23 33.1**	**+0.1**
	baz=48						
KTBS	**Karatobe**	**4.46**	**23**	Pg	**Pb**	**07 22 58.4**	**+0.9**
	43nm,0.4s						
KTBS				Lg	Lg	07 23 55.9	
	68nm,0.5s						
KTBS	**Karatobe**	**4.46**	**23**	*e*P	**Pb**	**07 22 58.5**	**+0.9**
	43nm,0.4s						
KTBS				*e*S	**Sb**	**07 23 55.3**	**+3.7**
	68nm,0.5s						
KK31	**Karatay Array**	**4.52**	**322**	Pn	**Pn**	**07 22 50.0**	**+2.5**
	0.7nm,0.3s,baz=120,slow=12,SNR=52						
KK31				⇑Pg	**Pg**	**07 23 05.9**	**+0.5**
	2.2nm,0.3s,baz=143,slow=16,SNR=9.2						
KK31				⇓Sn	**Sn**	**07 23 44.6**	**+4.4**
	6.8nm,0.5s,baz=62,slow=12,SNR=4.9						
KK31				⇑Lg	Lg	07 24 01.9	
	34nm,0.8s,baz=133,slow=30,SNR=5.0						
KKAR	**Karatay Array**	**4.52**	**322**	⇓*i*P	**Pn**	**07 22 49.2**	**+1.6**
	baz=20						
KKAR				⇓*i*S	**Sn**	**07 23 38.7**	**-1.5**
	baz=20						
KUU	**Kurty**	**4.54**	**19**	Pg	**Pb**	**07 22 58.4**	**-0.4**
	16nm,0.3s						
KUU				Lg	Lg	07 23 55.9	
	58nm,0.7s						
KUU	**Kurty**	**4.54**	**19**	*e*P	**Pb**	**07 22 59.5**	**+0.7**
	8.5nm,0.5s						
KUU				*e*S	**Sb**	**07 23 57.0**	**+3.3**
	58nm,0.7s						
CHKK	**Chushkaly**	**4.69**	**24**	Pg	**Pb**	**07 23 02.5**	**+1.2**
	24nm,0.5s						
CHKK				Lg	Lg	07 24 02.7	
	23nm,0.5s						
BRLS	**Borolday**	**4.80**	**317**	Pg	**Pn**	**07 22 53.4**	**+1.8**
	2.6nm,0.2s						
BRLS				Lg	Lg	07 23 47.0	
	11nm,0.4s						
BRLS	**Borolday**	**4.80**	**317**	*e*P	**Pb**	**07 23 02.9**	**-0.4**
	2.1nm,0.1s						
BRLS				*e*S	**Sb**	**07 24 03.2**	**+1.9**
	7.6nm,0.2s						
PDGK	**Podgornoye**	**5.38**	**45**	⇑Pn	**Pn**	**07 23 01.2**	**+1.7**
	2.0nm,0.5s						
PDGK				⇑Pg	**Pb**	**07 23 13.4**	**+0.3**
	17nm,0.6s						
PDGK				⇓Lg	Lg	07 24 23.0	
	22nm,0.8s						
BTLS	**Baital**	**5.43**	**358**	Pg	**Pb**	**07 23 15.4**	**+1.4**
	4.5nm,0.8s						
BTLS				Lg	Lg	07 24 25.2	
	6.8nm,0.8s						
MAKZ	**Makanchi**	**9.11**	**35**	⇓Pn	**Pn**	**07 23 49.9**	**-0.7**
	0.3nm,0.4s						
MAKZ				⇑Lg	Lg	07 26 20.5	
	2.5nm,0.9s						
MK31	**Makanchi Array**	**9.24**	**36**	⇓Pn	**Pn**	**07 23 55.2**	**+2.8**
	0.1nm,0.5s,baz=220,slow=14,SNR=5.4						
MK31				⇑Lg	Lg	07 26 23.6	
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**9.24**	**36**	Pn	**Pn**	**07 23 53.1**	**+0.7**
	0.1nm,0.3s,baz=218,slow=7.7,SNR=4.3						
MKAR				Lg	Lg	07 26 27.9	
	0.1nm,0.3s,baz=218,slow=26,SNR=1.7						
KURBB	**Kurchatov Arra**	**11.40**	**14**	Pn	**Pn**	**07 24 20.0**	**-2.0**
	0.1nm,0.3s,baz=211,slow=6.7,SNR=2.0						
KURBB				Lg	Lg	07 27 35.3	
	baz=203,slow=28,SNR=4.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**13.69**	**350**	Pn	**Pn**	**07 24 50.2**	**-2.9**
	baz=158,slow=12,SNR=3.4						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**36.48**	**323**	P	**P**	**07 28 44.2**	**+0.2**
	4.8nm,1.2s,baz=106,slow=8.8,SNR=3.8						
	4.8nm,1.2s						
ARCES	**ARCESS Array B**	**39.34**	**335**	P	**P**	**07 29 08.5**	**+0.3**
	1.7nm,0.9s,baz=101,slow=9.3,SNR=1.5						
	1.7nm,0.9s						
HFS	**Hagfors**	**42.32**	**320**	P	**P**	**07 29 32.7**	**-0.1**
	2.4nm,0.8s,baz=71,slow=11,SNR=1.8						
	2.4nm,0.8s						
NOA	**NORSAR Array B**	**43.55**	**321**	P	**P**	**07 29 41.9**	**-0.9**
	0.6nm,0.7s,baz=73,slow=9.2,SNR=1.7						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**77.99**	**4**	P	**P**	**07 33 37.2**	**0.0**
	0.2nm,0.6s,baz=5.0,slow=6.6,SNR=3.1						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**81.50**	**125**	P	**P**	**07 33 56.0**	**-0.9**
	0.7nm,0.6s,baz=318,slow=4.2,SNR=7.2						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**83.97**	**127**	P	**P**	**07 34 08.7**	**-1.0**
	0.4nm,0.6s,baz=318,slow=5.1,SNR=9.6						
	0.4nm,0.6s						

NEIC 13 07:23:15.2±1.2, 55.9N±0.1×149.2W±0.1, h8km±8km, ML3.6/34, ML3.3(AEIC), Error ellipse: s-maj=16.7km s-min=8.9km az=171.0

AEIC 13 07:23:19.6±1.4, 55.9N±0.1×149.19W±0.09, h9km±8km, Error ellipse: s-maj=17.7km s-min=6.8km az=172.0

ISC 13 07:23:15.0±2.3, 55.9N±0.1×149.26W±0.06, h10km, n99, σ1§01/98, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.59**	**302**		**Pn**	**07 23 57.5**	**+0.6**
OHAK					**Sn**	**07 24 26.9**	**-1.6**
OHAK	**Old Harbor**	**2.59**	**302**	P	**Pn**	**07 23 57.5**	**+0.6**
	baz=119						
OHAK				S	**Sn**	**07 24 26.9**	**-1.6**
	baz=119						
KDAK	**Kodiak Island**	**2.62**	**317**		**Pn**	**07 23 58.4**	**+1.0**
KDAK					**Sn**	**07 24 28.1**	**-1.2**
SII	**Sitkinak Islan**	**2.83**	**285**	Pn	**Pn**	**07 24 00.6**	**+0.4**
SII				IAML		07 24 31.3	
	comp=N,180nm,2.8s						
SII				IAML		07 24 49.9	
	comp=E,202nm,2.7s						
SYI	**Shuyak Island**	**3.20**	**329**		**Pn**	**07 24 06.3**	**+1.0**
SYI					**Sn**	**07 24 43.2**	**-0.3**
SYI	**Shuyak Island**	**3.20**	**329**	IAML		07 25 50.6	
	comp=N,93nm,3.0s						
Q20K	**Shuyak Island**	**3.20**	**329**	P	**Pn**	**07 24 06.3**	**+1.0**
	baz=146						
Q20K				S	**Sn**	**07 24 43.2**	**-0.4**
	baz=146						
CNPM	**China Poot**	**3.78**	**345**		**Pn**	**07 24 14.0**	**+0.6**
CNPM					**Sn**	**07 24 56.5**	**-1.4**
CNPM	**China Poot**	**3.78**	**345**	IAML		07 25 22.8	
	comp=N,70nm,3.5s						
CNPM				IAML		07 26 26.7	
	comp=E,67nm,2.7s						
Q19K	**Cape Douglas,**	**3.85**	**324**		**Pn**	**07 24 15.7**	**+

O22K				IAML			07 26 43.7	
	comp=E,61nm,1.6s							
SLKM	**Skilak Lake**	**4.65**	**354**		**Pn**	**Pn**	**07 24 25.6**	**+0.4**
HIN	**Hinchinbrook I**	**4.74**	**17**		**Pn**	**Pn**	**07 24 27.0**	**+0.5**
HIN	**Hinchinbrook I**	**4.74**	**17**	IAML			07 25 06.9	
	comp=N,128nm,2.4s							
HIN				IAML			07 26 54.9	
	comp=E,116nm,2.6s							
P18K	**Big Mountain,**	**4.75**	**320**			**Pn**	**07 24 27.2**	**+0.6**
P18K	**Big Mountain,**	**4.75**	**320**	IAML			07 25 31.7	
	comp=E,33nm,4.0s							
P18K	**Big Mountain,**	**4.75**	**320**	P		**Pn**	**07 24 27.2**	**+0.6**
	baz=135							
RSO	**Redoubt South**	**4.93**	**339**	Pn		**Pn**	**07 24 28.7**	**-0.6**
O19K	**Port Alsworth**	**5.07**	**330**			**Pn**	**07 24 31.9**	**+0.9**
O19K	**Port Alsworth**	**5.07**	**330**	IAML			07 25 21.6	
	comp=E,24nm,3.5s							
O19K	**Port Alsworth**	**5.07**	**330**	P		**Pn**	**07 24 31.9**	**+0.9**
	baz=146							
O18K	**Koktuh Hills**	**5.08**	**324**			**Pn**	**07 24 32.2**	**+1.2**
O18K	**Koktuh Hills**	**5.08**	**324**	IAML			07 25 58.1	
	comp=E,31nm,3.1s							
O18K				IAML			07 26 04.4	
	comp=N,30nm,3.0s							
O18K	**Koktuh Hills**	**5.08**	**324**	P		**Pn**	**07 24 32.2**	**+1.2**
	baz=139							
RAGM	**Ragged Mountai**	**5.11**	**26**	Pn		**Pn**	**07 24 31.1**	**-0.4**
RAGM				IAML			07 25 09.6	
	comp=E,106nm,2.8s							
HMT	**Hamilton**	**5.17**	**29**	Pn		**Pn**	**07 24 33.1**	**+0.7**
GOAT	**Goat Mountain**	**5.26**	**25**			**Pn**	**07 24 34.8**	**+1.1**
GRIN	**Grindle Hills**	**5.40**	**33**			**Pn**	**07 24 36.4**	**+0.8**
KNK	**Knik Glacier**	**5.54**	**4**			**Pn**	**07 24 38.7**	**+1.2**
KNK	**Knik Glacier**	**5.54**	**4**	P		**Pn**	**07 24 38.7**	**+1.2**
	baz=184							
KHIT	**Khitrov Hills**	**5.55**	**32**			**Pn**	**07 24 38.2**	**+0.5**
SUA	**Susitna One**	**5.63**	**353**	Pn		**Pn**	**07 24 38.9**	**+0.1**
BMRM	**Bremner River**	**5.63**	**24**			**Pn**	**07 24 39.8**	**+1.0**
BMRM	**Bremner River**	**5.63**	**24**	P		**Pn**	**07 24 39.8**	**+1.0**
	baz=207							
N19K	**Bonanza Creek**	**5.64**	**333**			**Pn**	**07 24 39.2**	**+0.3**
N19K	**Bonanza Creek**	**5.64**	**333**	P		**Pn**	**07 24 39.2**	**+0.3**
	baz=148							
WAX	**Waxell Ridge**	**5.68**	**34**			**Pn**	**07 24 39.9**	**+0.5**
O17K	**Koliganek Bris**	**5.71**	**316**			**Pn**	**07 24 41.1**	**+1.4**
O17K	**Koliganek Bris**	**5.71**	**316**	P		**Pn**	**07 24 41.1**	**+1.4**
	baz=130							
CRQM	**Cirque**	**5.84**	**31**			**Pn**	**07 24 42.1**	**+0.4**
CRQE	**Cirque**	**5.85**	**31**	P		**Pn**	**07 24 42.1**	**+0.4**
	baz=216							
GHO	**Glory Hole Cre**	**5.89**	**2**			**Pn**	**07 24 43.6**	**+1.3**
TGL	**Tana Glacier**	**5.93**	**32**			**Pn**	**07 24 43.5**	**+0.7**
N18K	**Kilae Creek**	**5.93**	**327**	Pn		**Pn**	**07 24 42.6**	**-0.2**
SML	**Sawmill**	**5.94**	**4**	Pn		**Pn**	**07 24 43.3**	**+0.3**
BAGL	**Bagley Icefiel**	**5.96**	**37**			**Pn**	**07 24 43.9**	**+0.7**
ISLE	**Juniper Island**	**5.96**	**35**			**Pn**	**07 24 43.9**	**+0.5**
O16K	**Kokwok River B**	**6.00**	**312**	Pn		**Pn**	**07 24 44.7**	**+0.9**
KIAG	**Kiagna River**	**6.20**	**33**			**Pn**	**07 24 47.2**	**+0.5**
N17K	**Nushagak Hills**	**6.25**	**321**			**Pn**	**07 24 48.4**	**+1.3**
N17K	**Nushagak Hills**	**6.25**	**321**	P		**Pn**	**07 24 48.4**	**+1.3**
	baz=134							
GRNC	**Granite Creek**	**6.25**	**36**			**Pn**	**07 24 47.9**	**+0.5**
TABL	**Table Mountain**	**6.25**	**40**			**Pn**	**07 24 48.1**	**+0.7**
PCA	**Pinnacle**	**6.37**	**45**			**Pn**	**07 24 49.7**	**+0.9**
PINM	**Pinnacle**	**6.37**	**45**	P		**Pn**	**07 24 49.7**	**+0.8**
	baz=232							
MCARA	**McCarthy VSAT**	**6.38**	**28**	Pn		**Pn**	**07 24 49.7**	**+0.7**
PNL	**Peninsula**	**6.48**	**50**			**Pn**	**07 24 51.0**	**+0.6**
PNL	**Peninsula**	**6.48**	**50**	P		**Pn**	**07 24 51.0**	**+0.6**
	baz=238							
BARN	**Barnard Glacie**	**6.52**	**34**	Pn		**Pn**	**07 24 50.0**	**-1.1**
BCPM	**Bancas Point**	**6.54**	**48**			**Pn**	**07 24 51.7**	**+0.6**
CTGM	**Chitina Glacie**	**6.56**	**36**	Pn		**Pn**	**07 24 52.6**	**+1.1**
LOGN	**Logan Glacier**	**6.57**	**38**	Pn		**Pn**	**07 24 51.8**	**0.0**
M17K	**Holitna River**	**6.97**	**326**			**Pn**	**07 24 58.4**	**+1.4**
M17K	**Holitna River**	**6.97**	**326**	P		**Pn**	**07 24 58.4**	**+1.4**
	baz=139							
N15K	**Kwethluk River**	**7.16**	**311**	Pn		**Pn**	**07 25 01.5**	**+1.8**
O29M	**Mount Kennedy**	**7.17**	**48**			**Pn**	**07 25 00.9**	**+1.0**
O29M	**Mount Kennedy**	**7.17**	**48**	P		**Pn**	**07 25 00.9**	**+1.0**
	baz=236							
P29M	**Windy Craggy**	**7.20**	**54**			**Pn**	**07 25 00.6**	**+0.3**
P29M	**Windy Craggy**	**7.20**	**54**	P		**Pn**	**07 25 00.6**	**+0.3**
	baz=243							
M16K	**Timber Creek**	**7.22**	**319**	Pn		**Pn**	**07 25 02.8**	**+2.3**
S31K	**Pelican**	**7.42**	**68**	Pn		**Pn**	**07 25 02.1**	**-1.1**
CAST	**Castle Rocks**	**7.67**	**350**	Pn		**Pn**	**07 25 09.5**	**+2.8**
L16K	**Owhat River**	**7.87**	**322**	Pn		**Pn**	**07 25 10.3**	**+1.0**
HYT	**Haines Junctio**	**7.90**	**47**	Pn		**Pn**	**07 25 11.3**	**+1.3**
K17K	**Iditarod**	**8.24**	**330**	Pn		**Pn**	**07 25 13.8**	**-0.6**
O30N	**Mendenhall**	**8.46**	**49**	Pn		**Pn**	**07 25 16.7**	**-0.9**
M29M	**Somme Creek**	**8.58**	**36**	Pn		**Pn**	**07 25 19.9**	**+0.7**
J20K	**Nowinta River**	**8.65**	**346**	Pn		**Pn**	**07 25 21.6**	**+1.6**
WHY	**Whitehorse**	**8.94**	**52**	Pn		**Pn**	**07 25 24.9**	**+0.8**
N31M	**Braeburn, Yuko**	**8.96**	**46**	Pn		**Pn**	**07 25 25.0**	**+0.5**

IDC ***13*** *07:29:33.9±1.1,56˚.20N×149˚.72W,h0km,mb3.5/7, mbtmp3.7/11,ML3.8/4,MS2.8/3,Error ellipse: s-maj=31.1km s-min=15.8km az=28.0*

NEIC ***13*** *07:29:35.2±1.6,56˚.05N±0˚.08×149˚.67W±0˚.10,h21km±9km, ML4.2/52,ML3.9(AEIC),Error ellipse: s-maj=11.5km s-min=7.5km az=159.0*

AEIC ***13*** *07:29:38.4±1.5,56˚.07N±0˚.08×149˚.6W±0˚.1,h12km±7km, Error ellipse: s-maj=11.8km s-min=8.6km az=167.0*

ISC 13 07:29:34.9±0.7,56˚.19N±0˚.06×149˚.68W±0˚.05,h10km, n334,σt1s10/331,mb3.8/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.24**	**299**			**Pn**	**07 30 11.5**	**-0.5**
OHAK	**Old Harbor**	**2.24**	**299**			**Sn**	**07 30 36.8**	**-2.9**
OHAK	**Old Harbor**	**2.24**	**299**	P		**Pn**	**07 30 11.4**	**-0.7**
	baz=118							
OHAK				S		**Sn**	**07 30 36.8**	**-2.9**
	baz=118							
KDAK	**Kodiak Island**	**2.25**	**316**			**Pn**	**07 30 11.8**	**-0.3**
KDAK	**Kodiak Island**	**2.25**	**316**			**Sn**	**07 30 38.2**	**-1.8**
KDAK	**Kodiak Island**	**2.25**	**316**	S		**Sn**	**07 30 38.2**	**-1.8**
	baz=136							
KDAK	**Kodiak Island**	**2.25**	**316**	Pn		**Pn**	**07 30 09.7**	**-2.5**
	18nm,0.3s,baz=144,slow=5.7,SNR=121							
KDAK					Sn	**Sn**	**07 30 38.4**	**-1.5**
	18nm,0.3s,baz=163,slow=20,SNR=13							
KDAK					LR	LR	07 30 54.6	
	comp=Z,198nm,18.6s,baz=225,slow=36 51nm,0.3s							
SII	**Sitkinak Islan**	**2.53**	**280**			**Pn**	**07 30 15.1**	**-1.0**
SII						**Sn**	**07 30 44.5**	**-2.5**
SII	**Sitkinak Islan**	**2.53**	**280**	IAML			07 30 45.5	
	comp=E,2μm,0.7s							
SII				IAML			07 30 46.9	
	comp=N,1μm,0.7s							
SII	**Sitkinak Islan**	**2.53**	**280**	P		**Pn**	**07 30 15.1**	**-1.0**
	baz=99							
SII				S		**Sn**	**07 30 44.5**	**-2.5**
	baz=99							
Q20K	**Shuyak Island**	**2.83**	**330**	P		**Pn**	**07 30 20.5**	**+0.4**
	baz=148							
Q20K				S		**Sn**	**07 30 54.1**	**-0.2**
	baz=148							
SYI	**Shuyak Island**	**2.83**	**330**			**Pn**	**07 30 20.7**	**+0.6**
SYI	**Shuyak Island**	**2.83**	**330**			**Sn**	**07 30 54.1**	**-0.2**
CHIR	**Chirikof Islan**	**3.36**	**266**			**Sn**	**07 31 02.6**	**-4.6**
CHIR	**Chirikof Islan**	**3.36**	**266**	Pn		**Pn**	**07 30 26.1**	**-1.3**
CHIR				IAML			07 31 03.1	
	comp=N,552nm,0.5s							
CNPM	**China Poot**	**3.44**	**347**			**Pn**	**07 30 28.7**	**+0.2**
CNPM				IAML			07 31 10.5	
	comp=E,270nm,0.8s							
CNPM	**China Poot**	**3.44**	**347**			**Sn**	**07 31 08.9**	**-0.4**
Q19K	**Cape Douglas,**	**3.48**	**324**			**Pn**	**07 30 28.7**	**-0.3**
Q19K	**Cape Douglas,**	**3.48**	**324**	IAML			07 31 19.8	
	comp=N,344nm,0.6s							
Q19K				IAML			07 31 23.1	
	comp=E,649nm,1.2s							
Q19K	**Cape Douglas,**	**3.48**	**324**	P		**Pn**	**07 30 28.7**	**-0.3**
	baz=141							
BRSE	**Bradley Lake S**	**3.60**	**351**			**Pn**	**07 30 30.6**	**-0.1**
BRSE						**Sn**	**07 31 11.9**	**-1.4**
BRSE	**Bradley Lake S**	**3.60**	**351**	P		**Pn**	**07 30 30.6**	**-0.1**
	baz=170							
BRSE				S		**Sn**	**07 31 11.9**	**-1.4**
	baz=170							
HOM	**Homer**	**3.63**	**344**	Pn		**Pn**	**07 30 31.0**	**-0.1**
HOM				IAML			07 31 16.3	
	comp=N,478nm,0.5s							
HOM				IAML			07 31 19.2	
	comp=E,589nm,0.8s							
KCE	**Katmai Mt Cerb**	**3.63**	**307**			**Pn**	**07 30 33.1**	**+1.9**
BRLK	**Bradley Lake**	**3.64**	**350**			**Pn**	**07 30 31.1**	**-0.2**
BRLK						**Sn**	**07 31 12.7**	**-1.5**
ACHA	**Angle Creek He**	**3.68**	**306**			**Pn**	**07 30 32.4**	**+0.6**
Q23K	**Middleton Isla**	**3.70**	**27**			**Pn**	**07 30 31.8**	**-0.3**
Q23K	**Middleton Isla**	**3.70**	**27**	IAML			07 31 59.9	
	comp=E,372nm,2.2s							
Q23K				IAML			07 32 10.2	
	comp=N,427nm,3.3s							
Q23K	**Middleton Isla**	**3.70**	**27**	P		**Pn**	**07 30 31.8**	**-0.3**
	baz=209							
MID	**Middleton Isla**	**3.70**	**27**	Pn		**Pn**	**07 30 31.6**	**-0.4**
MID				IAML			07 31 21.5	
	comp=E,364nm,2.5s							
MID				IAML			07 32 08.4	
	comp=N,362nm,2.3s							
ANCK	**Angle Creek**	**3.75**	**305**			**Pn**	**07 30 33.5**	**+0.7**
KVTA	**Katmai Vly 10**	**3.75**	**308**			**Pn**	**07 30 34.2**	**+1.3**
KAHC	**Katmai Hardscr**	**3.79**	**313**			**Pn**	**07 30 34.2**	**+0.8**
PLK3	**Peulik 3**	**3.91**	**295**			**Pn**	**07 30 35.5**	**+0.6**
SEW	**Seward**	**3.92**	**2**			**Pn**	**07 30 34.8**	**-0.3**
SEW	**Seward**	**3.92**	**2**	P		**Pn**	**07 30 34.8**	**-0.3**
	baz=181							
P19K	**Oil Pt**	**3.95**	**333**			**Pn**	**07 30 36.2**	**+0.6**
P19K				IAML			07 31 30.6	
	comp=N,238nm,0.5s							
P19K				IAML			07 31 30.8	
	comp=E,288nm,0.8s							
P19K	**Oil Pt**	**3.95**	**333**	P		**Pn**	**07 30 36.3**	**+0.7**
	baz=150							
CNTC	**Contact Creek**	**3.96**	**304**			**Pn**	**07 30 35.9**	**+0.1**
Q17K	**Contact Creek**	**3.96**	**304**	P		**Pn**	**07 30 35.9**	**+0.1**
	baz=120							
KELA	**Mount Kelaz**	**3.98**	**307**			**Pn**	**07 30 36.9**	**+0.8**
P23K	**Montague Islan**	**4.00**	**17**			**Pn**	**07 30 36.2**	**0.0**
P23K						**Sn**	**07 31 20.8**	**-2.3**
P23K	**Montague Islan**	**4.00**	**17**	P		**Pn**	**07 30 36.2**	**0.0**
	baz=198							
P23K				S		**Sn**	**07 31 20.8**	**-2.3**
	baz=198							
PLK1	**Peulik 1**	**4.12**	**296**			**Pn**	**07 30 38.5**	**+0.7**
O20K	**Slope Mountain**	**4.20**	**339**			**Pn**	**07 30 39.5**	**+0.5**
O20K	**Slope Mountain**	**4.20**	**339**	P		**Pn**	**07 30 39.5**	**+0.5**
	baz=157							
IVE	**Iliamna Volcan**	**4.22**	**337**			**Pn**	**07 30 39.3**	**-0.1**
O22K	**Cooper Landing**	**4.30**	**360**			**Pn**	**07 30 40.8**	**+0.6**
O22K	**Cooper Landing**	**4.30**	**360**	P		**Pn**	**07 30 40.3**	**+0.1**
	baz=179							
SLKM	**Skilak Lake**	**4.34**	**356**			**Pn**	**07 30 40.5**	**-0.3**
P18K	**Big Mountain,**	**4.37**	**319**			**Pn**	**07 30 39.6**	**-1.7**
P18K	**Big Mountain,**	**4.37**	**319**	P		**Pn**	**07 30 39.4**	**-1.9**
	baz=136							
Q16K	**King Salmon**	**4.52**	**306**			**Pn**	**07 30 43.9**	**+0.6**
Q16K	**King Salmon**	**4.52**	**306**	P		**Pn**	**07 30 43.9**	**+0.6**
	baz=122							
HIN	**Hinchinbrook I**	**4.54**	**20**			**Pn**	**07 30 43.6**	**+0.1**
HIN				IAML			07 31 37.9	
	comp=E,240nm,1.3s							
HIN				IAML			07 31 39.4	
	comp=N,192nm,0.8s							
R16K	**Pilot Point**	**4.54**	**291**			**Pn**	**07 30 44.1**	**+0.5**
R16K	**Pilot Point**	**4.54**	**291**	P		**Pn**	**07 30 44.2**	**+0.5**
	baz=106							
RSO	**Redoubt South**	**4.58**	**341**			**Pn**	**07 30 44.6**	**+0.3**
RDWB	**Redoubt West**	**4.62**	**340**			**Pn**	**07 30 45.0**	**+0.2**
RDT	**Redoubt**	**4.62**	**343**			**Pn**	**07 30 44.2**	**-0.6**
CAPN	**Captain Cook N**	**4.65**	**351**			**Pn**	**07 30 43.6**	**-1.5**
KAIM	**Kayak Island**	**4.67**	**35**			**Pn**	**07 30 45.6**	**+0.3**
KAIM	**Kayak Island**	**4.67**	**35**	P		**Pn**	**07 30 45.6**	**+0.3**
	baz=218							
O18K	**Koktuh Hills**	**4.70**	**324**			**Pn**	**07 30 46.0**	**+0.2**
O18K	**Koktuh Hills**	**4.70**	**324**	P		**Pn**	**07 30 46.0**	**+0.2**
	baz=140							
O19K	**Port Alsworth**	**4.70**	**330**			**Pn**	**07 30 45.8**	**-0.1**
O19K	**Port Alsworth**	**4.70**	**330**	IAML			07 31 44.5	
	comp=E,283nm,0.5s							
O19K	**Port Alsworth**	**4.70**	**330**	P		**Pn**	**07 30 45.8**	**-0.1**
	baz=147							
P17K	**Kvichak River**	**4.71**	**312**			**Pn**	**07 30 46.7**	**+0.7**
P17K	**Kvichak River**	**4.71**	**312**	P		**Pn**	**07 30 46.7**	**+0.7**
	baz=128							
EYAK	**Cordova Ski Ar**	**4.83**	**24**			**Pn**	**07 30 48.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.83**	**24**	P		**Pn**	**07 30 48.0**	**+0.4**
	baz=206							
CHGN	**Chignik**	**4.88**	**275**			**Pn**	**07 30 47.2**	**-0.9**
CHGN				IAML			07 31 44.2	
	comp=E,140nm,0.5s							
CHGN				IAML			07 31 47.1	
	comp=N,137nm,0.6s							
RC01	**Rabbit Creek A**	**4.91**	**360**			**Pn**	**07 30 49.0**	**+0.3**
RC01				IAML			07 31 47.1	
	comp=N,137nm,0.5s							
RC01				IAML			07 31 50.8	
	comp=E,111nm,0.5s							
RC01	**Rabbit Creek A**	**4.91**	**360**	P		**Pn**	**07 30 48.7**	**0.0**
	baz=179							
RAGM	**Ragged Mountai**	**4.96**	**30**			**Pn**	**07 30 49.6**	**+0.2**
RAGM	**Ragged Mountai**	**4.96**	**30**	IAML			07 31 54.7	
	comp=E,179nm,1.0s							
FIS	**Fire Island**	**4.97**	**357**			**Pn**	**07 30 50.1**	**+0.6**
FIS	**Fire Island**	**4.97**	**357**	IAML			07 31 51.4	
	comp=E,224nm,0.6s							
SUCK	**Suckling Hills**	**4.99**	**36**			**Pn**	**07 30 50.1**	**+0.4**
SUCK	**Suckling Hills**	**4.99**	**36**	IAML			07 32 58.9	
	comp=E,240nm,3.2s							
HMT	**Hamilton**	**5.04**	**32**			**Pn**	**07 30 51.1**	**+0.5**
HMT	**Hamilton**	**5.04**	**32**	IAML			07 31 56.7	
	comp=E,236nm,0.7s							
HMT				IAML			07 31 57.1	
	comp=N,180nm,0.8s							
NICHA	**Nichawak Mount**	**5.05**	**34**			**Pn**	**07 30 51.1**	**+0.5**
GOAT	**Goat Mountain**	**5.11**	**29**			**Pn**	**07 30 52.1**	**+0.6**
BGLC	**Bering Glacier**	**5.19**	**38**			**Pn**	**07 30 53.2**	**+0.7**
BGLC	**Bering Glacier**	**5.19**	**38**	P		**Pn**	**07 30 53.2**	**+0.7**
	baz=222							
N20K	**Mount Spurr**	**5.19**	**346**	P		**Pn**	**07 30 52.2**	**-0.5**
	baz=164							
SPCR	**Spurr Chakacha**	**5.19**	**346**			**Pn**	**07 30 52.2**	**-0.5**
CKL	**Chakachamna La**	**5.21**	**346**			**Pn**	**07 30 52.5**	**-0.3**
SPCP	**Crater Peak Br**	**5.25**	**347**			**Pn**	**07 30 54.0**	**+0.6**
SPCG	**Spurr Capps Gl**	**5.26**	**348**			**Pn**	**07 30 53.6**	**+0.1**
N19K	**Bonanza Creek**	**5.27**	**333**			**Pn**	**07 30 53.3**	**-0.5**
N19K	**Bonanza Creek**	**5.27**	**333**	P		**Pn**	**07 30 53.4**	**-0.3**
	baz=150							
KNK	**Knik Glacier**	**5.27**	**6**			**Pn**	**07 30 53.9**	**+0.2**
KNK	**Knik Glacier**	**5.27**	**6**	P		**Pn**	**07 30 53.9**	**+0.2**
	baz=187							
GRIN	**Grindle Hills**	**5.30**	**37**			**Pn**	**07 30 54.5**	**+0.5**
P16K	**Nushagak River**	**5.30**	**306**			**Pn**	**07 30 54.7**	**+0.7**
P16K	**Nushagak River**	**5.30**	**306**	P		**Pn**	**07 30 54.7**	**+0.7**
	baz=120							
SUA	**Susitna One**	**5.32**	**354**			**Pn**	**07 30 54.1**	**-0.2**
O17K	**Koliganek Bris**	**5.33**	**315**			**Pn**	**07 30 54.7**	**+0.2**
O17K	**Koliganek Bris**	**5.33**	**315**	P		**Pn**	**07 30 54.7**	**+0.2**
	baz=130							
DIV	**Divide**	**5.35**	**21**			**Pn**	**07 30 55.3**	**+0.5**
SNH	**Sunshine Point**	**5.39**	**39**			**Pn**	**07 30 55.4**	**+0.1**
SPNN	**North Nagishla**	**5.42**	**344**			**Pn**	**07 30 56.1**	**+0.3**
PMR	**Palmer**	**5.42**	**3**			**Pn**	**07 30 56.2**	**+0.5**
PMR	**Palmer**	**5.42**	**3**	P		**Pn**	**07 30 56.2**	**+0.5**
	baz=183							
STLK	**Strandline Lak**	**5.44**	**349**			**Pn**	**07 30 56.1**	**+0.1**
KHIT	**Khitrov Hills**	**5.44**	**36**			**Pn**	**07 30 56.2**	**+0.1**
BMRM	**Bremner River**	**5.47**	**27**			**Pn**	**07 30 56.7**	**+0.3**
BMRM	**Bremner River**	**5.47**	**27**	P		**Pn**	**07 30 56.7**	**+0.3**
	baz=210							
N18K	**Kilae Creek**	**5.56**	**327**			**Pn**	**07 30 57.6**	**0.0**
WAX	**Waxell Ridge**	**5.58**	**37**	Pn		**Pn**	**07 30 58.5**	**+0.5**
M22K	**Willow**	**5.58**	**358**			**Pn**	**07 30 58.2**	**+0.4**
GHO	**Glory Hole Cre**	**5.61**	**4**			**Pn**	**07 30 59.1**	**+0.8**
O16K	**Kokwok River B**	**5.63**	**311**			**Pn**	**07 30 59.2**	**+0.6**
O16K	**Kokwok River B**	**5.63**	**311**	P		**Pn**	**07 30 59.2**	**+0.6**
	baz=124							
KLU	**Klutina**	**5.66**	**19**			**Pn**	**07 30 59.8**	**+0.8**
KLU	**Klutina**	**5.66**	**19**	P		**Pn**	**07 30 59.8**	**+0.8**
	baz=201							
SML	**Sawmill**	**5.67**	**6**			**Pn**	**07 31 00.2**	**+1.0**
SML	**Sawmill**	**5.67**	**6**	P		**Pn**	**07 31 00.2**	**+1.0**
	baz=187							
M23K	**Glacier View**	**5.71**	**9**			**Pn**	**07 31 00.7**	**+1.1**
M23K	**Glacier View**	**5.71**	**9**	P		**Pn**	**07 31 00.7**	**+1.1**
	baz=191							
MESA	**MESA**	**5.71**	**42**			**Pn**	**07 31 01.1**	**+1.2**
MESA	**MESA**	**5.71**	**42**	P		**Pn**	**07 31 00.1**	**+0.2**
	baz=228							
CRQM	**Cirque**	**5.72**	**34**			**Pn**	**07 31 00.4**	**+0.5**
CRQE	**Cirque**	**5.73**	**34**	P		**Pn**	**07 31 00.4**	**+0.4**
	baz=219							
SCM	**Sheep Creek Mo**	**5.79**	**11**			**Pn**	**07 31 01.8**	**+1.1**
SCM	**Sheep Creek Mo**	**5.79**	**11**	P		**Pn**	**07 31 01.8**	**+1.1**
	baz=193							
CHNA	**Chernabura Isl**	**5.80**	**260**	P		**Pn**	**07 30 59.6**	**-1.2**
	baz=74							
CNBA	**Chernabura Isl**	**5.80**	**260**			**Pn**	**07 30 59.6**	**-1.2**
SVW2	**Sparrevohn**	**5.80**	**330**	Pn		**Pn**	**07 31 00.9**	**0.0**
TGL	**Tana Glacier**	**5.81**	**35**			**Pn**	**07 31 01.7**	**+0.6**
ISLE	**Juniper Island**	**5.87**	**38**			**Pn**	**07 31 02.2**	**+0.3**
N17K	**Nushagak Hills**	**5.87**	**321**			**Pn**	**07 31 02.0**	**+0.2**
N17K	**Nushagak Hills**	**5.87**	**321**	P		**Pn**	**07 31 02.0**	**+0.2**
	baz=135							
BAGL	**Bagley Icefiel**	**5.87**	**40**			**Pn**	**07 31 02.2**	**+0.4**
SKT	**Skwentna**	**5.88**	**351**			**Pn**	**07 31 02.2**	**+0.2**
SKT	**Skwentna**	**5.88**	**351**	P		**Pn**	**07 31 02.2**	**+0.2**
	baz=170							
M20K	**Styx River**	**5.98**	**344**			**Pn**	**07 31 03.5**	**+0.1**
VRDI	**Verde Repeater**	**6.00**	**30**			**Pn**	**07 31 03.8**	**0.0**
N25K	**Chitina, Valde**	**6.03**	**24**	Pn		**Pn**	**07 31 05.0**	**+0.8**
N25K	**Chitina, Valde**	**6.03**	**24**	P		**Pn**	**07 31 04.3**	**+0.1**
	baz=207							
GLB	**Gilahina Butte**	**6.08**	**28**			**Pn**	**07 31 05.2**	**+0.4**
KIAG	**Kiagna River**	**6.09**	**36**			**Pn**	**07 31 05.5**	**+0.4**
SAMH	**Samovar Hills**	**6.14**	**46**			**Pn**	**07 31 06.2**	**+0.6**
SDPT	**Sand Point**	**6.16**	**267**			**Pn**	**07 31 05.2**	**-0.6**
GRNC	**Granite Creek**	**6.16**	**39**			**Pn**	**07 31 06.5**	**+0.4**
TABL	**Table Mountain**	**6.19**	**43**			**Pn**	**07 31 06.8**	**+0.4**
M18K	**Stony River**	**6.19**	**332**			**Pn**	**07 31 06.0**	**-0.2**
M18K	**Stony River**	**6.19**	**332**	P		**Pn**	**07 31 06.0**	**-0.2**
	baz=147							
M24K	**Tolsona, Glenn**	**6.20**	**15**			**Pn**	**07 31 07.4**	**+1.0**
M24K	**Tolsona, Glenn**	**6.20**	**15**	P		**Pn**	**07 31 07.4**	**+1.0**
	baz=198							
O15K	**Ungalikthiuk R**	**6.21**	**303**			**Pn**	**07 31 06.9**	**+0.5**
O15K	**Ungalikthiuk R**	**6.21**	**303**	P		**Pn**	**07 31 06.9**	**+0.5**
	baz=115							
M19K	**Big River Lodg**	**6.22**	**339**	Pn		**Pn**	**07 31 07.0**	**+0.3**
MCARA	**McCarthy VSAT**	**6.25**	**31**			**Pn**	**07 31 07.4**	**+0.4**
MCARA	**McCarthy VSAT**	**6.25**	**31**	P		**Pn**	**07 31 07.4**	**+0.4**
	baz=216							
PTPK	**Patty Peak**	**6.26**	**34**			**Pn**	**07 31 08.0**	**+0.6**
PCA	**Pinnacle**	**6.34**	**48**			**Pn**	**07 31 08.8**	**+0.5**
PINM	**Pinnacle**	**6.34**	**48**	P		**Pn**	**07 31 08.9**	**+0.5**
	baz=235							
WASW	**Wrangell South**	**6.41**	**24**			**Pn**	**07 31 10.3**	**+0.8**
BARN	**Barnard Glacie**	**6.43**	**37**			**Pn**	**07 31 10.2**	**+0.5**
N16K	**Nishlik Lake**	**6.43**	**316**			**Pn**	**07 31 10.5**	**+1.0**
N16K	**Nishlik Lake**	**6.43**	**316**	P		**Pn**	**07 31 10.5**	**+1.0**
	baz=129							
CTG	**Chitina Glacier**	**6.47**	**39**	P		**P

O30N	**Mendenhall**	**8.46**	**52**	P		**Pn**	**07 31 37.5**	**+0.1**
	baz=242							
M29M	**Somme Creek**	**8.48**	**38**			**Pn**	**07 31 38.2**	**+0.4**
M29M	**Somme Creek**	**8.48**	**38**	P		**Pn**	**07 31 38.2**	**+0.4**
	baz=227							
L14K	**Kuka Creek**	**8.49**	**313**	Pn		**Pn**	**07 31 39.3**	**+1.6**
CCB	**Clear Creek Bu**	**8.53**	**5**			**Pn**	**07 31 40.2**	**+1.9**
JIS	**Juneau Island**	**8.55**	**70**	Pn		**Pn**	**07 31 37.9**	**-0.7**
K15K	**Wolf Creek Mou**	**8.61**	**320**			**Pn**	**07 31 41.1**	**+1.8**
J17K	**VABM Dome**	**8.63**	**331**			**Pn**	**07 31 40.2**	**+0.6**
J25K	**Salcha River,**	**8.71**	**12**			**Pn**	**07 31 42.1**	**+1.3**
IL31		**8.71**	**8**			**Pn**	**07 31 42.8**	**+2.0**
ILAR	**Eielson Array**	**8.71**	**8**	Pn		**Pn**	**07 31 41.8**	**+1.0**
	comp=N,0.7nm,0.3s,baz=189,slow=13,SNR=43							
ILAR				Sn		**Sn**	**07 33 14.8**	**-4.2**
	comp=N,0.7nm,0.3s,baz=194,slow=18,SNR=6.8							
ILAR				LR		LR	07 35 10.7	
	comp=N,66nm,20.6s,baz=238,slow=39							
K27K	**Chicken**	**8.72**	**23**			**Pn**	**07 31 42.9**	**+2.0**
MDM	**Murphy Dome**	**8.82**	**4**			**Pn**	**07 31 43.8**	**+1.4**
J26L	**Joseph Creek**	**8.86**	**17**			**Pn**	**07 31 43.9**	**+0.9**
N31M	**Braeburn, Yuko**	**8.94**	**48**			**Pn**	**07 31 44.5**	**+0.6**
N31M	**Braeburn, Yuko**	**8.94**	**48**	P		**Pn**	**07 31 44.5**	**+0.6**
	baz=239							
WHY	**Whitehorse**	**8.95**	**54**	Pn		**Pn**	**07 31 44.7**	**+0.5**
I23K	**Minto, Yukon-K**	**8.99**	**1**			**Pn**	**07 31 45.6**	**+1.1**
I23K	**Minto, Yukon-K**	**8.99**	**1**	P		**Pn**	**07 31 46.5**	**+1.9**
	baz=181							
J16K	**Anvik River**	**8.99**	**327**	Pn		**Pn**	**07 31 44.1**	**-0.4**
J16K	**Anvik River**	**8.99**	**327**	P		**Pn**	**07 31 45.4**	**+0.9**
	baz=138							
POKR	**Poker Plat Res**	**9.02**	**6**			**Pn**	**07 31 45.8**	**+0.8**
L29M	**L29M**	**9.06**	**35**			**Pn**	**07 31 46.7**	**+1.1**
I21K	**Tanana**	**9.09**	**354**			**Pn**	**07 31 47.5**	**+1.5**
P32M	**Atlin**	**9.15**	**62**	Pn		**Pn**	**07 31 47.1**	**+0.2**
P32M	**Atlin**	**9.15**	**62**	P		**Pn**	**07 31 47.1**	**+0.2**
	baz=254							
M30M	**Minto, Yukon**	**9.16**	**40**	Pn		**Pn**	**07 31 48.2**	**+1.2**
M30M	**Minto, Yukon**	**9.16**	**40**	P		**Pn**	**07 31 47.8**	**+0.8**
	baz=231							
DAWY	**Dawson**	**9.40**	**29**	Pn		**Pn**	**07 31 51.2**	**+0.9**
PRP	**Porcupine Dome**	**9.57**	**10**			**Pn**	**07 31 54.1**	**+1.5**
EGAK	**Eagle**	**9.57**	**22**	Pn		**Pn**	**07 31 54.2**	**+1.7**
H21K	**Melozitna Rive**	**9.62**	**352**			**Pn**	**07 31 52.9**	**-0.3**
J14K	**Nanvaranak Lak**	**9.63**	**319**	Pn		**Pn**	**07 31 55.0**	**+1.6**
I26K	**Coal Creek Min**	**9.68**	**16**	Pn		**Pn**	**07 31 54.2**	**+0.2**
H24K	**Noodor Dome**	**9.71**	**4**			**Pn**	**07 31 56.2**	**+1.6**
Q32M	**Nakina River**	**9.75**	**66**	Pn		**Pn**	**07 31 55.5**	**+0.3**
P33M	**Teslin, Yukon**	**9.76**	**59**	Pn		**Pn**	**07 31 55.5**	**+0.2**
P33M	**Teslin, Yukon**	**9.76**	**59**	P		**Pn**	**07 31 55.4**	**+0.2**
	baz=252							
K29M	**Barlow Dome**	**9.77**	**33**			**Pn**	**07 31 56.8**	**+1.3**
K29M	**Barlow Dome**	**9.77**	**33**	P		**Pn**	**07 31 56.7**	**+1.3**
	baz=223							
M31M	**Drury Creek, Y**	**9.87**	**46**			**Pn**	**07 31 58.2**	**+1.5**
H18K	**Honhosa River**	**9.93**	**338**	Pn		**Pn**	**07 31 57.7**	**+0.1**
N32M	**Quiet Lake**	**9.95**	**53**			**Pn**	**07 31 58.8**	**+0.9**
IMAR	**Indian Mountai**	**10.02**	**350**	Pn		**Pn**	**07 31 59.1**	**+0.4**
J29N	**Klondike Camp**	**10.03**	**30**	Pn		**Pn**	**07 32 00.8**	**+2.0**
FARO	**Faro, Yukon**	**10.31**	**47**			**Pn**	**07 32 04.1**	**+1.4**
I28M	**Miner Creek**	**10.41**	**23**	Pn		**Pn**	**07 32 06.8**	**+2.6**
R33M	**Jennings River**	**10.48**	**64**			**Pn**	**07 32 05.1**	**0.0**
G23K	**Bananza Creek**	**10.56**	**359**	Pn		**Pn**	**07 32 06.4**	**+0.4**
FYU	**Fort Yukon**	**10.62**	**10**	Pn		**Pn**	**07 32 08.1**	**+1.2**
J30M	**Hart River**	**10.66**	**33**			**Pn**	**07 32 09.8**	**+2.2**
DLBC	**Dease Lake**	**10.86**	**70**	Pn		**Pn**	**07 32 10.3**	**0.0**
DLBC	**Dease Lake**	**10.86**	**70**	Pn		**Pn**	**07 32 10.5**	**+0.3**
	comp=N,1.1nm,0.3s,baz=266,slow=7.7,SNR=22							
DLBC				Sn		**Sn**	**07 34 06.2**	**-5.4**
	comp=N,0.2nm,0.3s,baz=24,slow=20,SNR=1.7							
	comp=N,2.6nm,0.3s							
I30M	**Mount Dempster**	**11.12**	**30**	Pn		**Pn**	**07 32 17.3**	**+3.4**
F21K	**Alatna River**	**11.21**	**352**	Pn		**Pn**	**07 32 16.3**	**+1.3**
F24K	**Squaw Lake**	**11.40**	**3**	Pn		**Pn**	**07 32 19.3**	**+1.8**
ANM	**Nome**	**11.40**	**324**	Pn		**Pn**	**07 32 19.4**	**+1.8**
H29M	**Whitestone**	**11.41**	**24**	Pn		**Pn**	**07 32 19.7**	**+1.9**
BMAR	**Burnt Mountain**	**11.52**	**10**	Pn		**Pn**	**07 32 20.4**	**+1.1**
E19K	**Redstone River**	**11.84**	**346**	Pn		**Pn**	**07 32 24.1**	**+0.6**
F15K	**North Star Dit**	**11.96**	**329**	Pn		**Pn**	**07 32 25.6**	**+0.4**
E25K	**Arctic Village**	**12.12**	**7**	Pn		**Pn**	**07 32 29.0**	**+1.6**
H31M	**Peel River**	**12.13**	**31**	Pn		**Pn**	**07 32 30.4**	**+2.8**
F28M	**Old Crow**	**12.33**	**18**	Pn		**Pn**	**07 32 31.5**	**+1.2**
E18K	**Tukpahlearik C**	**12.36**	**340**	Pn		**Pn**	**07 32 30.8**	**+0.1**
TOLK	**Toolik Lake Re**	**12.49**	**0**	Pn		**Pn**	**07 32 33.1**	**+0.6**
G30M	**tAoh Zraii Nji**	**12.53**	**25**	Pn		**Pn**	**07 32 35.4**	**+2.3**
G31M	**Satah River**	**12.97**	**28**	Pn		**Pn**	**07 32 39.8**	**+0.8**
BBB	**Bella Bella**	**13.23**	**99**	Sn		Sn	07 34 57.4	-12
	comp=N,0.1nm,0.3s,baz=244,slow=13,SNR=1.4							
F31M	**Tsiigehtchic**	**13.50**	**27**			**Pn**	**07 32 47.1**	**+0.9**
INK	**Inuvik**	**14.22**	**25**	Pn		**Pn**	**07 32 57.0**	**+1.1**
	comp=N,0.2nm,0.3s,baz=207,slow=14,SNR=16							
INK				LR		LR	07 39 17.0	
	comp=N,48nm,19.1s,baz=107,slow=41							
	comp=N,5.2nm,1.0s							
C36M	**Paulatuk**	**17.43**	**31**			**Pn**	**07 33 37.6**	**-0.1**
YKA	**Yellowknife Ar**	**18.77**	**56**	P		**P**	**07 33 54.1**	**+0.3**
YKA	**Yellowknife Ar**	**18.77**	**56**	P		**Pn**	**07 33 55.3**	**+1.0**
	comp=N,0.1nm,0.3s,baz=266,slow=9.6,SNR=21							
	comp=N,2.6nm,1.0s							
A36M	**Sachs Harbour**	**18.85**	**23**	P		**Pn**	**07 33 56.5**	**+1.4**
NEW	**Newport**	**21.30**	**98**	P		**P**	**07 34 23.0**	**+1.6**
	comp=N,0.3nm,0.3s,baz=278,slow=15,SNR=2.2							
	comp=N,0.3nm,0.3s							
NVAR	**Mina Array Bea**	**27.37**	**117**	P		**P**	**07 35 21.5**	**+1.2**
	comp=N,0.4nm,0.6s,baz=310,slow=9.5,SNR=3.6							
	comp=N,0.4nm,0.6s							
TXAR	**Lajitas Array**	**42.00**	**110**	P		**P**	**07 37 25.9**	**-0.3**
	comp=N,0.2nm,0.7s,baz=126,slow=1.2,SNR=2.9							
	comp=N,0.2nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**48.65**	**240**	T		T	08 30 41.2	
	baz=31,slow=76,SNR=22							
H11N3	**WAKE ISLAND Hy**	**48.65**	**240**	T		T	08 30 38.3	
	baz=31,slow=76,SNR=24							
H11N1	**WAKE ISLAND Hy**	**48.67**	**240**	T		T	08 30 42.6	
	baz=31,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**49.79**	**239**	T		T	08 32 07.6	
	baz=30,slow=76,SNR=17							
H11S2	**WAKE ISLAND Hy**	**49.80**	**239**	T		T	08 32 04.6	
	baz=30,slow=76,SNR=15							
H11S3	**WAKE ISLAND Hy**	**49.81**	**239**	T		T	08 32 08.3	
	baz=30,slow=76,SNR=16							
SONM	**Songino Array**	**58.53**	**310**	P		**P**	**07 39 32.2**	**+1.0**
	comp=N,1.1nm,0.7s,baz=49,slow=7.1,SNR=5.7							
	comp=N,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**61.51**	**327**	P		**P**	**07 39 52.0**	**+0.6**
	comp=N,0.5nm,0.4s,baz=35,slow=5.3,SNR=1.9							
	comp=N,0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**66.30**	**329**	P		**P**	**07 40 22.8**	**-0.2**
	comp=N,0.5nm,0.6s,baz=32,slow=6.3,SNR=4.2							
	comp=N,0.5nm,0.6s							
MKAR	**Makanchi Array**	**68.54**	**324**	P		**P**	**07 40 37.9**	**+0.6**
	comp=N,0.6nm,0.8s,baz=27,slow=6.4,SNR=5.1							
	comp=N,0.6nm,0.8s							
QSPA	**South Pole Qui**	**145.99**	**180**	PKPbc		**PKPdf**	**07 49 13.0**	**+0.6**
	comp=N,1.1nm,0.7s,baz=314,slow=2.0,SNR=5.7							

*NEIC **13** 07:41:24.8±0.7, 35°.70N±0°.02×97°.32W±0°.02, h9km±7km, Error ellipse: s-maj=3.0km s-min=2.5km az=125.0*

TUL 13 07:41:24.9±0.7, 35°.69N±0°.01×97°.30W±0°.01, h5km±5km, ML2.6, mb_Lg2.4/20(NEIC), ML2.6/40(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=201.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.07**	**235**		Pg	07 41 26.7	+0.3
ADOK				Sg	Sg	07 41 28.2	+0.7
OK029	**Liberty Lake**	**0.16**	**311**	Pg	Pg	07 41 28.6	+0.5
OK029				Sg	Sg	07 41 31.2	+0.9
OK029				IAML		07 41 31.5	
	1μm,0.3s						
OK029				IAML		07 41 31.5	
	3μm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.30**	**201**	Pg	Pg	07 41 31.2	+0.4
OKCSW				IAML		07 41 36.3	
	comp=N,570nm,0.4s						
OKCSW				IAML		07 41 36.0	
	comp=E,730nm,0.5s						
FNO	**Franklin**	**0.44**	**190**	Pg	Pg	07 41 33.6	+0.2
OK033	**Mehan**	**0.46**	**40**	Pg	Pg	07 41 34.3	+0.5
OK033				IAML		07 41 41.1	
	comp=E,499nm,0.2s						
OK033				IAML		07 41 41.1	
	comp=E,700nm,0.3s						
OK052	**Battle Ridge R**	**0.51**	**53**	Pg	Pg	07 41 35.1	+0.4
OK052				IAML		07 41 42.6	
	comp=E,624nm,0.2s						
OK052				IAML		07 41 42.8	
	comp=E,664nm,0.4s						
W35A	**Tecumseh**	**0.64**	**147**		Pg	07 41 37.1	-0.1
W35A				IAML		07 41 46.5	
	comp=N,173nm,0.4s						
W35A				IAML		07 41 48.9	
	comp=E,247nm,0.5s						
DEOK	**Depew**	**0.67**	**77**	Pg	Pg	07 41 37.9	+0.1
DEOK				IAML		07 41 47.6	
	comp=N,442nm,0.1s						
QUOK	**Quay**	**0.68**	**45**	Pg	Pg	07 41 37.9	-0.1
QUOK				IAML		07 41 47.8	
	comp=E,322nm,0.4s						
QUOK				IAML		07 41 47.9	
	comp=N,312nm,0.3s						
OK048	**Pawnee Station**	**0.78**	**22**	Pg	Pg	07 41 39.8	-0.1
OK048				IAML		07 41 52.9	
	comp=N,172nm,0.1s						
OK051	**E0350 and S346**	**0.90**	**25**		Pg	07 41 41.8	-0.3
CROK	**Carrier**	**0.98**	**326**		Pg	07 41 43.0	-0.7
CROK				IAML		07 42 03.4	
	comp=N,256nm,0.4s						
BLOK	**Blackwell**	**1.07**	**4**	Pg	Pg	07 41 45.4	-0.1
CSTR	**Hydro, Custer**	**1.13**	**268**		Pg	07 41 45.6	-0.9
X34A	**Smith Ranch, M**	**1.17**	**202**	Pg	Pg	07 41 46.9	-0.5
GC02	**Grant County #**	**1.24**	**339**	Pg	Pg	07 41 48.0	-0.7
TUL3	**Leonard**	**1.25**	**79**		Pg	07 41 48.1	-0.7
KAN13	**South Haven SW**	**1.33**	**354**	Pg	Pn	07 41 49.2	-1.0
OK032	**Salt Plains WL**	**1.33**	**327**	Pg	Pn	07 41 49.9	-0.3
T35A	**Sooner Cattle**	**1.38**	**27**		Pn	07 41 49.9	-1.0
KAN17	**Caldwell West**	**1.40**	**345**	Pg	Pn	07 41 50.4	-0.8
OK038	**West end E0370**	**1.41**	**304**	Pg	Pn	07 41 50.3	-1.0
KAN09	**Caldwell North**	**1.46**	**350**		Pn	07 41 51.7	-0.3
KAN01	**Argonia South**	**1.50**	**346**	Pg	Pn	07 41 52.5	-0.1
OK035	**E0210 Rd and N**	**1.52**	**312**	Pg	Pn	07 41 52.3	-0.6
U32A	**Winter Ranch,**	**1.54**	**297**		Pn	07 41 52.3	-0.8
WMOK	**Wichita Mounta**	**1.54**	**232**		Pn	07 41 52.8	-0.3
KAN10	**Anthony SW Sta**	**1.57**	**336**		Pn	07 41 53.5	+0.1
KAN06	**Argonia West S**	**1.62**	**344**		Pn	07 41 54.5	+0.3
KAN08	**Anthony NE Sta**	**1.62**	**341**	Pg	Pn	07 41 54.1	-0.1
KAN08				IAmb_Lg		07 42 19.3	
	comp=Z,16nm,0.7s						
KAN12	**Harper NE Stat**	**1.70**	**341**		Pn	07 41 55.4	+0.1
LOOK	**Love County**	**1.70**	**177**		Pn	07 41 55.4	+0.1
LOOK				IAmb_Lg		07 42 20.2	
	comp=Z,31nm,1.2s						
RLO	**Rose Lookout**	**1.91**	**75**		Pn	07 41 59.1	+0.9
X37A	**Clayton**	**1.93**	**124**		Pn	07 41 59.0	+0.6
WTFS	**Witchita Falls**	**2.15**	**207**	Pn	Pn	07 42 01.9	+0.5
Z35A	**Perchaven, San**	**2.35**	**179**	Pn	Pn	07 42 04.4	+0.1
SMWD	**Samnorwood**	**2.47**	**257**	Pn	Pn	07 42 05.8	-0.2
U38A	**Gravette**	**2.48**	**72**		Pn	07 42 07.4	+1.4
Z38A	**Mt. Pleasant**	**3.09**	**141**	IAmb_Lg		07 43 10.3	
	comp=Z,6.2nm,0.8s						
KSU1	**Kansas State U**	**3.45**	**9**	IAmb_Lg		07 43 18.3	
	comp=Z,7.0nm,0.9s						
CBKS	**Cedar Bluff**	**3.67**	**329**	IAmb_Lg		07 43 22.1	
	comp=Z,14nm,0.8s						
POST	**Post**	**4.35**	**234**	IAmb_Lg		07 43 43.0	
	comp=Z,12nm,1.1s						
SGCY	**Sterling City**	**4.93**	**221**	IAmb_Lg		07 44 10.8	
	comp=Z,11nm,1.1s						
P38A	**Dawn**	**4.94**	**36**	IAmb_Lg		07 44 02.0	
	comp=Z,6.3nm,0.8s						
CCM	**Cathedral Cave**	**5.40**	**62**	IAmb_Lg		07 44 26.5	
	comp=Z,7.7nm,0.9s						
JCT	**Junction City**	**5.60**	**203**	IAmb_Lg		07 44 30.7	
	comp=Z,8.2nm,1.0s						

KRSC 13 07:42:40.2±1.7, 49°.68N×157°.14E, h16km±37km, Ml3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.20**	**327**	*eP*	Pn	07 43 01.8	-0.5
SKR				*eS*	Sb	07 43 16.4	-1.3
PAU	**Pauzhetka**	**1.80**	**353**	*eP*	Pb	07 43 13.3	+0.5
PAU				*eS*	Sb	07 43 35.8	+0.8
KDTR	**Khodutka, Kamc**	**2.21**	**15**	*eP*	Pb	07 43 18.7	-1.1
KDTR				*eS*	Sb	07 43 46.4	-0.4
ASAK	**Asacha**	**2.75**	**10**	*eP*	Pn	07 43 26.2	+2.6
MTVR	**Mutnovka**	**2.88**	**13**	*eP*	Pn	07 43 28.3	+2.8
MTVR				*eS*	Sn	07 44 02.4	+2.4
RUS	**Russkaya**	**2.89**	**17**	*eP*	Pn	07 43 27.6	+2.2
RUS				*eS*	Sn	07 44 01.7	+1.9
GRL	**Gorelyy**	**2.93**	**11**	*eP*	Pb	07 43 29.3	-2.9
GRL				*eS*	Sn	07 44 04.3	+3.1
KRMR	**Karymshinskiy**	**3.21**	**11**	*eP*	Pn	07 43 33.1	+3.2
KRMR				*eS*	Sb	07 44 12.0	-3.7
APC	**Apacha**	**3.25**	**0**	*eP*	Pn	07 43 33.3	+2.8
DALK	**Dalny**	**3.50**	**16**	*eP*	Pn	07 43 36.7	+2.8
DALK				*eS*	Sn	07 44 17.9	+2.9
AVH	**Avacha**	**3.73**	**15**	*eP*	Pn	07 43 40.8	+3.7
SMAR	**Somma**	**3.73**	**15**	*eP*	Pn	07 43 41.0	+3.7
KOK	**Koryaka**	**3.73**	**14**	*eP*	Pn	07 43 41.2	+3.9
KRX	**Arik**	**3.80**	**14**	*eP*	Pn	07 43 41.7	+3.5
GNL	**Ganaly**	**4.05**	**7**	*eP*	Pn	07 43 45.2	+3.6
TUMR	**Tumrok**	**5.90**	**17**	*eP*	Pn	07 44 10.6	+3.6

*NNC **13** 07:43:02.9±2.8, 54°.37N×87°.43E, h17km±24km, mb3.0, mpv2.6, Error ellipse: s-maj=25.4km s-min=15.8km az=40.0, Suspected Mining explosion.*
*IDC **13** 07:43:06.5±2.5, 54°.21N×86°.95E, h0km, mbtmp3.3/3, ML2.5/3, Error ellipse: s-maj=21.4km s-min=13.4km az=62.0.*

ISC 13 07:43:04.9±4.0, 54°.3N±0°.2×87°.0E±0°.2, h0km, n10, σ1s 84/17, 8C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**256**	I	I	07 51 47.0	
	0.1nm,0.9s,baz=75,slow=331,SNR=4.3						
ZAA0	**Zalesovo Array**	**1.31**	**256**	⇓P	**Pg**	**07 43 29.4**	**-0.6**
	0.3nm,0.3s						
ZAA0				⇓S	**Sn**	**07 43 51.2**	**+2.6**
	2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**1.31**	**256**	Pg	**Pb**	**07 43 29.8**	**-0.6**
	3.0nm,0.3s,baz=77,slow=20,SNR=21						
ZALV				Lg	Lg	07 43 47.8	
	1.9nm,0.3s,baz=79,slow=30,SNR=8.4						
KURK	**Kurchatov**	**6.22**	**238**	⇓Pn	**Pn**	**07 44 39.6**	**+1.7**
	0.2nm,0.4s						
KURK				⇑Sn	**Sn**	**07 45 51.0**	**+1.4**
	0.5nm,0.5s						
KURK				⇑Lg	Lg	07 46 26.9	
	5.9nm,0.9s						
KURBB	**Kurchatov Arra**	**6.32**	**238**	⇑Pn	**Pn**	**07 44 40.6**	**+1.3**
	0.7nm,0.4s						
KURBB				⇓Sn	**Sn**	**07 45 52.5**	**+0.4**
	2.6nm,0.6s						
KURBB				⇑Lg	Lg	07 46 34.5	
	8.8nm,0.9s						
KURBB	**Kurchatov Arra**	**6.32**	**238**	Pn	**Pn**	**07 44 41.1**	**+1.8**
	0.1nm,0.3s,baz=56,slow=14,SNR=21						
KURBB				Sn	**Sn**	**07 45 52.6**	**+0.5**
	baz=58,slow=21,SNR=1.2						
KURBB				Lg	Lg	07 46 26.9	
	baz=52,slow=29,SNR=2.5						
	2.6nm,0.6s						
MK31	**Makanchi Array**	**8.06**	**204**	⇓Pn	**Pn**	**07 45 04.0**	**+0.8**
	0.2nm,0.5s,baz=30,slow=13,SNR=5.8						
MK31				⇑Sn	**Sn**	**07 46 34.7**	**-0.3**
	0.7nm,0.5s,baz=30,slow=26,SNR=5.6						
MK31				⇑Lg	Lg	07 47 24.1	
	3.9nm,1.0s,baz=24,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**8.06**	**204**	Pn	**Pn**	**07 45 04.8**	**+1.6**
	0.1nm,0.3s,baz=26,slow=12,SNR=5.8						
MKAR				Sn	**Sn**	**07 46 34.3**	**-0.7**
	0.2nm,0.3s,baz=26,slow=23,SNR=7.1						
MKAR				Lg	Lg	07 47 18.1	
	0.1nm,0.3s,baz=27,slow=28,SNR=5.5						
	0.5nm,0.8s						
MAKZ	**Makanchi**	**8.12**	**205**	⇑Pn	**Pn**	**07 45 02.8**	**-1.2**
	0.2nm,0.3s						
MAKZ				⇑Sn	**Sn**	**07 46 37.6**	**+1.0**
	0.5nm,0.5s						
MAKZ				⇓Lg	Lg	07 47 27.6	
	3.3nm,0.9s						
BVAR	**Borovoye Array**	**9.92**	**269**	Pn	**Pn**	**07 45 29.9**	**+1.2**
	baz=75,slow=14,SNR=1.5						
BVAR				Sn	**Sn**	**07 47 16.0**	**-4.7**
	baz=70,slow=26,SNR=5.1						
	1.0nm,0.4s						

IDC 13 07:47:33.0±4.1, 54°.00N×90°.00E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=39.3km s-min=25.1km az=32.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.06**	**271**	I	I	08 06 30.0	
	baz=86,slow=335,SNR=3.9						
ZALV	**Zalesovo Beam**	**3.06**	**271**	Pn	Pn	07 48 24.0	+1.4
	0.4nm,0.3s,baz=90,slow=13,SNR=2.9						
ZALV				Lg	Lg	07 49 08.8	
	0.7nm,0.3s,baz=85,slow=27,SNR=5.5						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**7.80**	**249**	Pn	Pn	07 49 27.5	-0.2
	0.1nm,0.3s,baz=62,slow=14,SNR=3.3						
KURBB				Sn	Sn	07 50 55.7	-0.8
	baz=63,slow=39,SNR=1.8						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.73**	**217**	Pn	Pn	07 49 41.0	+0.6
	0.1nm,0.3s,baz=33,slow=13,SNR=6.0						
	0.2nm,0.4s						

*IDC **13** 07:51:51.7±2.8, 53°.57N×87°.80E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=23.4km s-min=14.8km az=64.0*
*NNC **13** 07:51:51.1±2.1, 53°.52N×87°.90E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=18.1km s-min=7.8km az=54.0, Suspected Mining explosion.*

ISC 13 07:51:51.6±3.3, 53°.6N±0°.1×87°.8E±0°.2, h0km, n9, σ1s 08/13, 8C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.78**	**283**	I	I	08 03 39.3	
	0.2nm,0.9s,baz=98,slow=326,SNR=5.7						
ZAA0	**Zalesovo Array**	**1.78**	**283**	⇑P	**Pn**	**07 52 23.6**	**0.0**
	0.1nm,0.3s						
ZAA0				⇑S	**Sg**	**07 52 49.8**	**+0.9**
	2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**1.78**	**283**	Pg	**Pb**	**07 52 24.4**	**-0.7**
	1.4nm,0.3s,baz=102,slow=15,SNR=16						
ZALV				Lg	Lg	07 52 49.1	
	1.7nm,0.3s,baz=99,slow=29,SNR=3.9						
KURK	**Kurchatov**	**6.32**	**247**	⇓Pn	**Pn**	**07 53 27.8**	**+1.8**
	0.5nm,0.3s						
KURK				⇑Lg	Lg	07 55 12.7	
	3.6nm,1.0s						
KURBB	**Kurchatov Arra**	**6.42**	**246**	⇑Pn	**Pn**	**07 53 28.1**	**+0.8**
	0.5nm,0.4s						
KURBB				⇑Lg	Lg	07 55 20.4	
	3.6nm,0.6s						
KURBB	**Kurchatov Arra**	**6.42**	**246**	Pn	**Pn**	**07 53 28.3**	**+1.0**
	0.2nm,0.3s,baz=61,slow=14,SNR=5.9						
KURBB				Sn	**Sn**	**07 54 40.1**	**-1.1**
	0.3nm,0.3s,baz=12,slow=14,SNR=1.7						
KURBB				Lg	Lg	07 55 14.9	
	baz=65,slow=34						
	1.3nm,0.3s						
MK31	**Makanchi Array**	**7.66**	**209**	⇓Pn	**Pn**	**07 53 45.2**	**+0.8**
	0.1nm,0.3s,baz=29,slow=11,SNR=9.9						
MK31				⇓Sn	**Sn**	**07 55 11.0**	**-0.9**
	1.6nm,0.8s,baz=30,slow=24,SNR=3.5						
MK31				⇓Lg	Lg	07 55 51.3	
	1.4nm,0.8s,baz=25,slow=29						
MKAR	**Makanchi Array**	**7.66**	**209**	Pn	**Pn**	**07 53 45.6**	**+1.2**
	0.1nm,0.3s,baz=30,slow=12,SNR=7.4						
MKAR				Sn	**Sn**	**07 55 11.4**	**-0.4**
	0.1nm,0.3s,baz=30,slow=27,SNR=7.4						
MKAR				Lg	Lg	07 55 51.6	
	0.1nm,0.3s,baz=30,slow=29,SNR=5.5						
	0.3nm,0.3s						
MAKZ	**Makanchi**	**7.74**	**211**	⇑Pn	**Pn**	**07 53 45.5**	**0.0**
	0.2nm,0.5s						
MAK

IDC 13 08:00:06.1±3.4, 54°44N×86°97E, h0km, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=31.3km s-min=19.7km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**250**	I	I	08 07 00.0	
	baz=68,slow=335,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.36**	**250**	Pg	Pg	08 00 30.4	-1.7
	1.6nm,0.3s,baz=68,slow=16,SNR=4.0						
ZALV				Lg	Lg	08 00 49.2	
	1.9nm,0.3s,baz=66,slow=23,SNR=2.7						
KURBB	**Kurchatov Arra**	**6.41**	**237**	Pn	Pn	08 01 42.9	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=9.9						
	1.8nm,0.4s						
MKAR	**Makanchi Array**	**8.21**	**203**	Pn	Pn	08 02 07.0	+0.5
	0.1nm,0.3s,baz=27,slow=15,SNR=1.5						
MKAR				Lg	Lg	08 04 28.2	
	0.1nm,0.3s,baz=24,slow=29,SNR=1.2						
	0.1nm,0.3s						

*NEIC **13** 08:02:41.5±0.7, 56°.07N±0°.08×149°.8W±0°.1, h21km±9km, ML3.6/38, ML3.3(AEIC), Error ellipse: s-maj=13.8km s-min=7.7km az=148.0*

*AEIC **13** 08:02:44.5±0.7, 56°.10N±0°.09×149°.8W±0°.1, h4km±8km, Error ellipse: s-maj=14.2km s-min=8.0km az=147.0*

ISC 13 08:02:40.2±2.1, 56°.1N±0°.1×149°.83W±0°.05, h10km, n98, σ0s80/95, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.20**	**301**		**Pn**	**08 03 17.0**	**+0.3**
OHAK	**Old Harbor**	**2.20**	**301**		**Sn**	**08 03 42.4**	**-1.5**
OHAK	**Old Harbor**	**2.20**	**301**	IAML		08 03 35.6	
	comp=N,48nm,3.4s						
OHAK	**Old Harbor**	**2.20**	**301**	P	**Pn**	**08 03 17.0**	**+0.3**
	baz=119						
OHAK				S	**Sn**	**08 03 42.4**	**-1.5**
	baz=119						
KDAK	**Kodiak Island**	**2.24**	**319**		**Pn**	**08 03 17.9**	**+0.6**
KDAK					**Sn**	**08 03 44.2**	**-0.7**
SII	**Sitkinak Islan**	**2.46**	**282**	Pn	**Pn**	**08 03 20.1**	**-0.3**
SII				IAML		08 04 31.2	
	comp=E,185nm,2.6s						
SII				IAML		08 04 45.5	
	comp=N,192nm,2.5s						
Q20K	**Shuyak Island**	**2.84**	**332**	P	**Pn**	**08 03 26.4**	**+0.8**
	baz=150						
Q20K				S	**Sn**	**08 03 59.4**	**-0.4**
	baz=150						
SYI	**Shuyak Island**	**2.84**	**332**		**Pn**	**08 03 26.4**	**+0.8**
SYI					**Sn**	**08 03 59.4**	**-0.4**
SYI	**Shuyak Island**	**2.84**	**332**	IAML		08 04 02.7	
	comp=N,97nm,2.7s						
CHIR	**Chirikof Islan**	**3.27**	**267**	Pn	**Pn**	**08 03 31.8**	**+0.3**
CHIR				IAML		08 04 20.0	
	comp=N,248nm,2.9s						
CHIR				IAML		08 04 40.2	
	comp=E,238nm,2.7s						
Q19K	**Cape Douglas,**	**3.48**	**325**		**Pn**	**08 03 35.9**	**+1.6**
Q19K	**Cape Douglas,**	**3.48**	**325**	IAML		08 04 07.0	
	comp=N,134nm,1.9s						
Q19K				IAML		08 04 57.5	
	comp=E,233nm,1.6s						
Q19K	**Cape Douglas,**	**3.48**	**325**	P	**Pn**	**08 03 35.9**	**+1.6**
	baz=142						
CNPM	**China Poot**	**3.48**	**348**		**Pn**	**08 03 34.9**	**+0.4**
CNPM					**Sn**	**08 04 15.3**	**-0.4**
ACHA	**Angle Creek He**	**3.64**	**307**		**Pn**	**08 03 37.9**	**+1.2**
BRSE	**Bradley Lake S**	**3.65**	**353**		**Pn**	**08 03 36.8**	**+0.1**
BRSE					**Sn**	**08 04 18.4**	**-1.4**
BRSE	**Bradley Lake S**	**3.65**	**353**	P	**Pn**	**08 03 36.8**	**+0.1**
	baz=172						
BRSE				S	**Sn**	**08 04 18.4**	**-1.4**
	baz=172						
BRLK	**Bradley Lake**	**3.68**	**352**		**Pn**	**08 03 37.2**	**+0.1**
BRLK	**Bradley Lake**	**3.68**	**352**	IAML		08 05 56.6	
	comp=N,67nm,3.0s						
ANCK	**Angle Creek**	**3.71**	**306**		**Pn**	**08 03 39.4**	**+1.8**
CNTC	**Contact Creek**	**3.92**	**305**		**Pn**	**08 03 41.5**	**+1.0**
Q17K	**Contact Creek**	**3.92**	**305**	P	**Pn**	**08 03 41.5**	**+1.0**
	baz=121						
P19K	**Oil Pt**	**3.97**	**334**		**Pn**	**08 03 42.3**	**+1.2**
P19K	**Oil Pt**	**3.97**	**334**	IAML		08 04 32.1	
	comp=N,77nm,2.0s						
P19K				IAML		08 05 11.3	
	comp=E,61nm,3.6s						
P19K	**Oil Pt**	**3.97**	**334**	P	**Pn**	**08 03 42.3**	**+1.2**
	baz=151						
P23K	**Montague Islan**	**4.08**	**17**		**Pn**	**08 03 42.9**	**+0.3**
P23K	**Montague Islan**	**4.08**	**17**	P	**Pn**	**08 03 42.9**	**+0.3**
	baz=199						
P18K	**Big Mountain,**	**4.36**	**321**		**Pn**	**08 03 47.3**	**+0.8**
P18K	**Big Mountain,**	**4.36**	**321**	IAML		08 06 16.7	
	comp=E,32nm,4.0s						
P18K	**Big Mountain,**	**4.36**	**321**	P	**Pn**	**08 03 47.3**	**+0.8**
	baz=136						
SLKM	**Skilak Lake**	**4.39**	**357**		**Pn**	**08 03 46.8**	**-0.1**
HIN	**Hinchinbrook I**	**4.62**	**21**		**Pn**	**08 03 50.3**	**+0.3**
HIN	**Hinchinbrook I**	**4.62**	**21**	IAML		08 06 46.0	
	comp=E,114nm,1.7s						
O18K	**Koktuh Hills**	**4.70**	**325**		**Pn**	**08 03 51.5**	**+0.4**
O18K	**Koktuh Hills**	**4.70**	**325**	IAML		08 05 00.2	
	comp=N,31nm,2.8s						
O18K				IAML		08 05 25.0	
	comp=E,26nm,3.3s						
O18K	**Koktuh Hills**	**4.70**	**325**	P	**Pn**	**08 03 51.5**	**+0.4**
	baz=140						
O19K	**Port Alsworth**	**4.71**	**332**		**Pn**	**08 03 51.9**	**+0.6**
O19K	**Port Alsworth**	**4.71**	**332**	IAML		08 04 48.9	
	comp=N,30nm,0.5s						
O19K				IAML		08 04 49.0	
	comp=E,52nm,0.5s						
O19K	**Port Alsworth**	**4.71**	**332**	P	**Pn**	**08 03 51.9**	**+0.6**
	baz=148						
KAIM	**Kayak Island**	**4.77**	**35**		**Pn**	**08 03 52.6**	**+0.6**
KAIM	**Kayak Island**	**4.77**	**35**	P	**Pn**	**08 03 52.6**	**+0.6**
	baz=219						
CHGN	**Chignik**	**4.79**	**276**	Pn	**Pn**	**08 03 52.2**	**-0.2**
CHGN				IAML		08 06 01.6	
	comp=E,49nm,3.3s						
CHGN				IAML		08 07 03.0	
	comp=N,52nm,3.7s						
EYAK	**Cordova Ski Ar**	**4.92**	**24**		**Pn**	**08 03 54.5**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.92**	**24**	P	**Pn**	**08 03 54.5**	**+0.4**
	baz=207						
RAGM	**Ragged Mountai**	**5.06**	**30**	Pn	**Pn**	**08 03 57.1**	**+1.0**
SUCK	**Suckling Hills**	**5.09**	**37**		**Pn**	**08 03 57.1**	**+0.6**
HMT	**Hamilton**	**5.14**	**33**		**Pn**	**08 03 57.9**	**+0.7**
NICHA	**Nichawak Mount**	**5.15**	**35**		**Pn**	**08 03 58.0**	**+0.6**
GOAT	**Goat Mountain**	**5.21**	**29**		**Pn**	**08 03 58.7**	**+0.6**
N19K	**Bonanza Creek**	**5.29**	**334**		**Pn**	**08 03 59.6**	**+0.4**
N19K	**Bonanza Creek**	**5.29**	**334**	IAML		08 05 55.9	
	comp=N,30nm,3.4s						
N19K				IAML		08 06 48.0	
	comp=E,16nm,4.4s						
N19K	**Bonanza Creek**	**5.29**	**334**	P	**Pn**	**08 03 59.6**	**+0.4**
	baz=150						
GRIN	**Grindle Hills**	**5.40**	**37**		**Pn**	**08 04 01.2**	**+0.5**
DIV	**Divide**	**5.44**	**21**		**Pn**	**08 04 01.9**	**+0.6**
SNH	**Sunshine Point**	**5.49**	**39**		**Pn**	**08 04 02.6**	**+0.6**
KHIT	**Khitrov Hills**	**5.54**	**36**		**Pn**	**08 04 03.0**	**+0.3**
BMRM	**Bremner River**	**5.56**	**27**		**Pn**	**08 04 03.7**	**+0.7**
BMRM	**Bremner River**	**5.56**	**27**	P	**Pn**	**08 04 03.7**	**+0.7**
	baz=211						
Q16K	**Kokwok River B**	**5.61**	**312**	Pn	**Pn**	**08 04 04.8**	**+1.3**
WAX	**Waxell Ridge**	**5.68**	**37**		**Pn**	**08 04 05.1**	**+0.5**
CRQM	**Cirque**	**5.81**	**34**		**Pn**	**08 04 07.0**	**+0.4**
MESA	**MESA**	**5.82**	**43**		**Pn**	**08 04 07.0**	**+0.4**
MESA	**MESA**	**5.82**	**43**	P	**Pn**	**08 04 07.0**	**+0.4**
	baz=229						
CRQE	**Cirque**	**5.83**	**35**	P	**Pn**	**08 04 07.0**	**+0.3**
	baz=220						
N17K	**Nushagak Hills**	**5.86**	**322**	Pn	**Pn**	**08 04 06.8**	**-0.2**
TGL	**Tana Glacier**	**5.91**	**36**		**Pn**	**08 04 08.3**	**+0.5**
ISLE	**Juniper Island**	**5.96**	**38**		**Pn**	**08 04 09.3**	**+0.7**
BAGL	**Bagley Icefiel**	**5.97**	**40**		**Pn**	**08 04 09.3**	**+0.7**
VRDI	**Verde Repeater**	**6.09**	**30**		**Pn**	**08 04 10.9**	**+0.5**
N25K	**Chitina, Valde**	**6.12**	**24**		**Pn**	**08 04 11.3**	**+0.6**
N25K	**Chitina, Valde**	**6.12**	**24**	P	**Pn**	**08 04 11.3**	**+0.6**
	baz=208						
KIAG	**Kiagna River**	**6.19**	**36**		**Pn**	**08 04 12.2**	**+0.4**
M18K	**Stony River**	**6.21**	**332**		**Pn**	**08 04 12.2**	**+0.4**
	baz=147						
GRNC	**Granite Creek**	**6.26**	**39**		**Pn**	**08 04 13.0**	**+0.2**
TABL	**Table Mountain**	**6.29**	**43**		**Pn**	**08 04 13.6**	**+0.4**
MCARA	**McCarthy VSAT**	**6.34**	**31**		**Pn**	**08 04 14.0**	**+0.4**
MCARA	**McCarthy VSAT**	**6.34**	**31**	P	**Pn**	**08 04 14.0**	**+0.4**
	baz=217						
PTPK	**Patty Peak**	**6.36**	**34**		**Pn**	**08 04 14.8**	**+0.8**
PCA	**Pinnacle**	**6.44**	**48**		**Pn**	**08 04 15.8**	**+0.8**
PINM	**Pinnacle**	**6.44**	**48**	P	**Pn**	**08 04 15.8**	**+0.7**
	baz=236						
BARN	**Barnard Glacie**	**6.53**	**37**		**Pn**	**08 04 16.8**	**+0.5**
CTG	**Chitna Glacier**	**6.57**	**39**	P	**Pn**	**08 04 17.3**	**+0.5**
	baz=226						
CTGM	**Chitina Glacie**	**6.57**	**39**		**Pn**	**08 04 17.4**	**+0.4**
L19K	**White Mountain**	**6.59**	**339**	Pn	**Pn**	**08 04 18.7**	**+1.6**
PNL	**Peninsula**	**6.59**	**53**		**Pn**	**08 04 17.5**	**+0.5**
PNL	**Peninsula**	**6.59**	**53**	P	**Pn**	**08 04 17.5**	**+0.5**
	baz=242						
LOGN	**Logan Glacier**	**6.59**	**41**		**Pn**	**08 04 17.7**	**+0.5**
M17K	**Holitna River**	**6.59**	**326**	Pn	**Pn**	**08 04 17.9**	**+0.8**
BCPM	**Bancas Point**	**6.63**	**51**		**Pn**	**08 04 18.2**	**+0.7**
N15K	**Kwethluk River**	**6.77**	**311**	Pn	**Pn**	**08 04 21.4**	**+1.9**
M16K	**Timber Creek**	**6.84**	**320**	Pn	**Pn**	**08 04 21.7**	**+1.3**
O14K	**Tigyukauivet M**	**6.88**	**302**	Pn	**Pn**	**08 04 21.7**	**+0.7**
O29M	**Mount Kennedy**	**7.26**	**50**	Pn	**Pn**	**08 04 26.9**	**+0.5**
P29M	**Windy Craggy**	**7.33**	**56**	Pn	**Pn**	**08 04 27.4**	**+0.1**
L16K	**Owhat River**	**7.49**	**322**	Pn	**Pn**	**08 04 30.4**	**+1.1**
M29M	**Somme Creek**	**8.58**	**38**	Pn	**Pn**	**08 04 45.1**	**+0.7**
K15K	**Wolf Creek Mou**	**8.60**	**321**	Pn	**Pn**	**08 04 46.5**	**+1.9**

IDC 13 08:04:54.5±2.6, 54°08N×86°47E, h0km, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=20.4km s-min=11.7km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**263**	I	I	08 11 40.0	
	0.1nm,0.8s,baz=82,slow=334,SNR=7.5						
ZALV	**Zalesovo Beam**	**0.98**	**263**	Pg	Pg	08 05 12.4	-0.9
	1.4nm,0.3s,baz=83,slow=17,SNR=14						
ZALV				Lg	Lg	08 05 27.5	
	2.5nm,0.3s,baz=80,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	08 06 24.8	+0.8
	0.2nm,0.3s,baz=55,slow=14,SNR=7.8						
KURBB				Lg	Lg	08 08 03.2	
	baz=59,slow=32,SNR=1.6						
	1.6nm,0.2s						
MKAR	**Makanchi Array**	**7.76**	**202**	Pn	Pn	08 06 49.8	+1.1
	0.2nm,0.3s,baz=24,slow=13,SNR=4.9						
MKAR				Sn	Sn	08 08 16.7	-0.5
	0.1nm,0.3s,baz=16,slow=25,SNR=2.7						
MKAR				Lg	Lg	08 08 59.1	
	0.1nm,0.3s,baz=21,slow=29,SNR=1.5						
	0.3nm,0.3s						

*NNC **13** 08:05:27.5±1.5, 41°.27N×75°.88E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=10.7km s-min=7.2km az=0.0*

*SOME **13** 08:05:27.6, 41°.37N×75°.85E, h15km*

*KRNET **13** 08:05:28.5±0.1, 41°.47N×75°.73E, h15km, mb2.5*

*KNET **13** 08:05:30.1±0.4, 41°.58N×75°.66E, h2km±3km, ml2.2, Error ellipse: s-maj=2.4km s-min=1.6km az=161.0*

ISC 13 08:05:27.2±1.2, 41°37N±0°.03×75°.66E±0°.02, h1km±10km, n73, σ1s33/125, 32C-28D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.27**	**75**	⇑*i*P	**Pg**	**08 05 32.4**	**+0.1**
	baz=6.0						
NRN				⇑*i*S	**Sg**	**08 05 35.3**	**-0.5**
	baz=6.0						
ULHL	**Ulahol**	**0.98**	**26**	P	**Pg**	**08 05 45.5**	**-0.5**
	7.8nm,0.1s,SNR=20						
ULHL				⇑S	**Sg**	**08 05 57.5**	**-1.2**
	18nm,0.1s						
ULHL	**Ulahol**	**0.98**	**26**	⇑*i*P	**Pg**	**08 05 45.1**	**-0.9**
	baz=26						
ULHL				⇑*i*S	**Sg**	**08 05 56.6**	**-2.1**
	baz=26						
ARLS	**Aral**	**1.11**	**297**	⇑*e*P	**Pn**	**08 05 49.5**	**-0.6**
	baz=90						
ARLS				⇑*e*S	**Sn**	**08 06 05.1**	**-1.0**
	baz=90						
BOOM	**Boomskoye usch**	**1.14**	**11**	⇑*i*P	**Pg**	**08 05 48.2**	**-0.9**
	baz=9.0						
BOOM				⇑*i*S	**Sg**	**08 06 02.0**	**-1.9**
	baz=9.0						
UCH	**Uchtor**	**1.21**	**316**	⇓P	**Pb**	**08 05 50.7**	**-0.5**
	7.8nm,0.3s,SNR=7.0						
UCH				⇑S	**Sb**	**08 06 07.0**	**-0.5**
	11nm,0.1s						
UCH	**Uchtor**	**1.21**	**316**	⇓*i*P	**Pb**	**08 05 50.5**	**-0.7**
	baz=10.0						
UCH				⇓*i*S	**Sg**	**08 06 06.7**	**+0.5**
	baz=10.0						
KDJ	**Kajisay**	**1.37**	**56**	⇓*e*P	**Pn**	**08 05 52.6**	**-1.0**
	baz=59						
KDJ				⇓*i*S	**Sg**	**08 06 09.7**	**-1.6**
	baz=59						
KBK	**Karagaybulak**	**1.39**	**338**	⇓P	**Pg**	**08 05 53.8**	**-0.1**
	8.3nm,0.1s,SNR=5.8						
KBK				⇓S	**Sb**	**08 06 11.7**	**-0.8**
	52nm,0.3s						
KBK	**Karagaybulak**	**1.39**	**338**	⇑*i*P	**Pn**	**08 05 53.2**	**-0.7**
	baz=34						
KBK				⇑*i*S	**Sb**	**08 06 10.9**	**-1.5**
	baz=34						
AAK	**Ala-Archa**	**1.54**	**326**	⇑P	**Pg**	**08 05 56.6**	**-0.1**
	6.7nm,0.2s,SNR=8.9						
AAK	**Ala-Archa**	**1.54**	**326**	⇓*i*P	**Pb**	**08 05 56.1**	**-0.5**
	baz=22						
AAK				⇓*i*S	**Sn**	**08 06 16.1**	**-0.5**
	baz=22						
TKM2	**Tokmak 2**	**1.55**	**358**	⇑P	**Pb**	**08 05 56.2**	**-0.7**
	16nm,0.3s,SNR=7.8						
TKM2				⇓S	**Sn**	**08 06 15.9**	**-1.1**
	13nm,0.1s						
TKM2	**Tokmak 2**	**1.55**	**358**	⇑Pn	**Pb**	**08 05 56.0**	**-0.9**
	1.8nm,0.3s						
TKM2				⇓Sn	**Sg**	**08 06 23.6**	**+6.5**
	32nm,0.6s						
TKM2	**Tokmak 2**	**1.55**	**358**	⇑*i*P	**Pn**	**08 05 55.4**	**-0.7**
	baz=56						
TKM2				⇑*i*S	**Sn**	**08 06 14.9**	**-2.1**
	baz=56						
TARG	**Taragay, Kyrgy**	**1.65**	**77**	⇓*i*P	**Pb**	**08 05 57.7**	**-1.0**
	baz=80						
TARG				⇓*i*S	**Sb**	**08 06 19.0**	**-1.1**
	baz=80						
KST	**Kastek**	**1.69**	**8**	P	**Pb**	**08 05 58.7**	**-0.4**
	15nm,0.4s						
KST				S	**Sb**	**08 06 20.9**	**0.0**
	79nm,0.5s						
KST	**Kastek**	**1.69**	**8**	*e*P	**Pb**	**08 05 58.7**	**-0.4**
	15nm,0.4s						
KST				*e*S	**Sb**	**08 06 20.9**	**0.0**
	79nm,0.5s						
CHMS	**Chumysh**	**1.76**	**338**	⇑P	**Pb**	**08 06 00.0**	**-0.3**
	4.6nm,0.1s,SNR=7.9						
CHMS				⇑S	**Sb**	**08 06 22.7**	**-0.2**
	70nm,0.3s						
CHMS	**Chumysh**	**1.76**	**338**	⇑Pn	**Pg**	**08 06 00.8**	**-0.2**
	3.4nm,0.3s						
CHMS				⇓Sn	**Sg**	**08 06 28.8**	**+4.9**
	68nm,0.6s						
CHMS	**Chumysh**	**1.76**	**338**	⇑*i*P	**Pb**	**08 05 59.5**	**-0.8**
	baz=35						
CHMS				⇑*i*S	**Sb**	**08 06 22.3**	**-0.7**
	baz=35						
MTBS	**Maitube**	**1.85**	**18**	P	**Pb**	**08 06 01.2**	**-0.7**
MTBS				S	**Sb**	**08 06 25.3**	**-0.3**
MTBS	**Maitube**	**1.85**	**18**	*e*P	**Pb**	**08 06 01.2**	**-0.7**
	2.7nm,0.1s						
MTBS				*e*S	**Sb**	**08 06 25.3**	**-0.3**
	13nm,0.3s						
DGS	**Degeres**	**1.88**	**3**	P	**Pg**	**08 06 02.6**	**-0.6**
	14nm,0.5s						
DGS				S	**Sg**	**08 06 27.7**	**+0.2**
	45nm,0.8s						
DGS	**Degeres**	**1.88**	**3**	*e*P	**Pg**	**08 06 02.6**	**-0.6**
	14nm,0.5s						
DGS				*e*S	**Sg**	**08 06 27.7**	**+0.2**
	45nm,0.8s						
EKS2	**Erkin-Say**	**1.91**	**313**	⇓*i*P	**Pg**	**08 06 03.1**	**-0.6**
	baz=10.0						
EKS2				⇓*i*S	**Sg**	**08 06 28.0**	**-0.5**
	baz=10.0						
TNSS	**Tian-Shan**	**1.93**	**29**	Pg	**Pg**	**08 06 04.2**	**+0.1**
	9.9nm,0.3s						
TNSS				Lg	Lg	08 06 30.4	
	9.5nm,0.4s						
TNSS	**Tian-Shan**	**1.93**	**29**	*e*P	**Pg**	**08 06 03.7**	**-0.4**
	2.9nm,0.2s						
TNSS				*e*S	**Sg**	**08 06 29.0**	**0.0**
	13nm,0.3s						
ARSB	**Arslanbob**	**2.01**	**270**	⇑*e*P	**Pg**	**08 06 05.5**	**-0.3**
	baz=67						
ARSB				⇑*e*S	**Sg**	**08 06 32.9**	**+1.0**
	baz=67						
ANVS	**Anan'yevo**	**2.06**	**46**	⇓*i*P	**Pb**	**08 06 04.3**	**-1.2**
	baz=47						
ANVS				⇓*i*S	**Sb**	**08 06 30.2**	**-1.4**
	baz=47						
MDOK	**Medeo**	**2.07**	**29**	Pn	**Pn**	**08 06 03.5**	**+0.3**
	0.9nm,0.3s						
MDOK				Pg	**Pb**	**08 06 04.7**	**-0.9**
	5.9nm,0.5s						
MDOK				Lg	Lg	08 06 30.9	
	11nm,0.7s						
MDOK				Sn	**Sb**	**08 06 31.9**	**0.0**
	9.7nm,0.6s						
MDOK	**Medeo**	**2.07**	**29**	*e*P	**Pb**	**08 06 04.7**	**-0.9**
	5.9nm,0.5s						
MDOK				*e*S	**Sb**	**08 06 30.9**	**-1.1**
	11nm,0.7s						
USP	**Ospenovka**	**2.08**	**336**	⇑P	**Pb**	**08 06 05.7**	**-0.1**
	13nm,0.2s,SNR=18						
USP				⇓S	**Sg**	**08 06 33.5**	**-0.7**
	22nm,0.3s						
USP	**Ospenovka**	**2.08**	**336**	⇓*i*P	**Pb**	**08 06 04.9**	**-0.9**
	baz=34						
USP				⇓*i*S	**Sb**	**08 06 31.1**	**-1.1**
	baz=34						
KNDC	**Almaty**	**2.09**	**27**	⇓Pn	**Pn**	**08 06 04.0**	**+0.6**
	4.8nm,0.2s						
KNDC				⇓Sn	**Sb**	**08 06 32.9**	**+0.5**
	18nm,0.6s						
SFK	**Sufi-Kurgan**	**2.12**	**231**	⇑*i*P	**Pg**	**08 06 07.8**	**-0.1**
	baz=30						
SFK				⇑*i*S	**Sg**	**08 06 36.4**	**+1.0**
	baz=30						
KOTS	**Kotyrbulak**	**2.16**	**30**	Pg	**Pg**	**08 06 07.6**	**-0.9**
	8.6nm,0.3s						
KOTS				Lg	Lg	08 06 35.9	
	31nm,0.5s						
KOTS	**Kotyrbulak**	**2.16**	**30**	*e*P	**Pg**	**08 06 07.6**	**-0.9**
	8.6nm,0.3s						
KOTS				*e*S	**Sg**	**08 06 35.9**	**-0.6**
	31nm,0.5s						
SGDS	**Sogindy**	**2.22**	**340**	Pg	**Pb**	**08 06 08.6**	**+0.5**
	13nm,0.4s						
SGDS				Lg	Lg	08 06 37.5	
	25nm,0.5s						
MRKS	**Merke**	**2.27**	**308**	Pg	**Pg**	**08 06 11.1**	**+0.3**
	3.6nm,0.6s						
MRKS				Lg	Lg	08 06 42.4	
	8.4nm,0.4s						
MRKS	**Merke**	**2.27**	**308**	*e*P	**Pg**	**08 06 11.1**	**+0.3**
	3.6nm,0.6s						
MRKS				*e*S	**Sg**	**08 06 42.5**	**+2.2**
	8.4nm,0.4s						
KRBS	**Karabastau**	**2.33**	**0**	Pg	**Pg**	**08 06 10.8**	**-1.0**
	8.2nm,0.3s						
KRBS				Lg	Lg	08 06 41.4	
	22nm,0.5s						
KRBS	**Karabastau**	**2.33**	**0**	*e*P	**Pg**	**08 06 10.8**	**-1.0**
	8.2nm,0.3s						
KRBS				*e*S	**Sg**	**08 06 41.4**	**-0.6**
	22nm,0.5s						
KTBS	**Karatobe**	**2.46**	**18**	Pg	**Pb**	**08 06 12.5**	**+0.3**
	10.0nm,0.3s						
KTBS				Lg	Lg	08 06 44.3	
	20nm,0.5s						
KTBS	**Karatobe**	**2.46**	**18**	*e*P	**Pb**	**08 06 12.5**	**+0.3**
	10.0nm,0.3s						
KTBS				*e*S	**Sb**	**08 06 44.3**	**+1.2**
	20nm,0.5s						
KUU	**Kurty**	**2.57**	**11**	Pg	**Pb**	**08 06 14.5**	**+0.4**
	6.8nm,0.3s						
KUU				Lg	Lg	08 06 48.1	
	48nm,0.7s						
KUU	**Kurty**	**2.57**	**11**	*e*P	**Pb**	**08 06 14.5**	**+0.4**
	6.8nm,0.3s						
KUU				*e*S	**Sb**	**08 06 48.1**	**+1.9**
	48nm,0.7s						
MNAS	**Manas**	**2.60**	**296**	⇓*i*P	**Pb**	**08 06 13.1**	**-1.6**
	baz=94						
MNAS				⇓*i*S	**Sb**	**08 06 45.7**	**-1.6**
	baz=94						
CHKK	**Chushkaly**	**2.67**	**21**	Pg	**Pb**	**08 06 16.4**	**+0.6**
	6.5nm,0.3s						
CHKK				Lg	Lg	08 06 50.9	
	16nm,0.3s						
CHKK	**Chushkaly**	**2.67**	**21**	*e*P	**Pb**	**08 06 16.4**	**+0.6**
	6.5nm,0.3s						
CHKK				*e*S	**Sb**	**08 06 51.0**	**+1.8**
	16nm,0.3s						
ZHN	**Zhinishke**	**2.74**	**48**	Pg	**Pb**	**08 06 17.0**	**0.0**
	13nm,0.2s						
ZHN				Lg	Lg	08 06 52.3	
	50nm,0.2s						
ZHN	**Zhinishke**	**2.74**	**48**	*e*P	**Pb**	**08 06 17.0**	**0.0**
	13nm,0.2s						
ZHN				*e*S	**Sb**	**08 06 52.3**	**+1.3**
	50nm,0.2s						
ARK	**Arkit**	**2.80**	**280**	⇑*i*P	**Pb**	**08 06 16.4**	**-1.7**
	baz=78						
ARK				⇑*i*S	**Sb**	**08 06 51.3**	**-1.7**
	baz=78						
KURS	**Kuram**	**2.82**	**40**	Pg	**Pb**	**08 06 18.8**	**+0.5**
	2.8nm,0.6s						
KURS				Lg	Lg	08 06 55.2	
	7.9nm,0.6s						
KURS	**Kuram**	**2.82**	**40**	*e*P	**Pb**	**08 06 18.8**	**+0.5**
	2.8nm,0.6s						
KURS				*e*S	**Sb**	**08 06 55.2**	**+1.9**
	7.9nm,0.6s						
UZB	**Uzynbulak**	**3.07**	**53**	Pg	**Pb**	**08 06 22.7**	**0.0**

BTLS				Lg	Lg	08 07 28.3		
BTLS	**Baital**	**3.86**	**343**	*eP*	**Pb**	**08 06 38.1**	**+2.2**
	1.5nm,0.6s							
BTLS				*eS*	**Sg**	**08 07 28.3**	**-2.7**
KNOS	**Konyrlen**	**3.96**	**40**	Pg	**Pb**	**08 06 39.0**	**+1.2**
	3.3nm,0.7s							
KNOS				Lg	Lg	08 07 29.7		
	3.3nm,0.5s							
KTMS	**Ketmen**	**4.05**	**58**	Pg	**Pb**	**08 06 40.0**	**+0.7**
	0.8nm,0.3s							
KTMS				Lg	Lg	08 07 31.4		
	1.9nm,0.3s							
KTMS	**Ketmen**	**4.05**	**58**	*eP*	**Pb**	**08 06 40.0**	**+0.7**
	0.8nm,0.3s							
KTMS				*eS*	**Sb**	**08 07 31.4**	**+2.6**
	1.9nm,0.3s							
KK31	**Karatay Array**	**4.20**	**296**	⇑Pg	**Pg**	**08 06 48.2**	**+0.6**
	0.4nm,0.5s,baz=113,slow=16,SNR=9.0							
KK31				⇑Lg	Lg	08 07 47.2		
	3.1nm,0.8s,baz=117,slow=29,SNR=4.8							
KKAR	**Karatay Array**	**4.20**	**296**	⇓*iP*	**Pn**	**08 06 35.0**	**+2.7**
	baz=95							
KKAR				⇓*iS*	**Sn**	**08 07 23.7**	**+1.8**
	baz=95							

*NOU **13** 08:08:20.5,41°.95S×174°.43E,h14km,MLv3.6/8,Cook Strait, New Zealand*
*WEL **13** 08:08:21.0±0.3,42°.S±2°.×17°.4E±°.,h10km±2km,M3.1/18, ML3.3/18,MLv3.1/18,Error ellipse: s-maj=0.0km s-min=0.0km az=114.2,confirmed*

ISC 13 08:08:20.9±0.8,41°.82S±0°.03×174°.22E±0°.03,h16km±5km, n87,σ1§15/98,Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WDFS	**Ward Fire Stat**	**0.06**	**259**	P	**Pg**	**08 08 24.3**	**+0.4**
WDFS				S	**Sg**	**08 08 27.0**	**+1.2**
CMWZ	**Cape Campbell**	**0.07**	**356**	P	**Pg**	**08 08 23.9**	**0.0**
SDNS	**Seddon**	**0.16**	**338**	P	**Pg**	**08 08 24.5**	**-0.5**
SEDS	**Seddon Fire St**	**0.18**	**323**	P	**Pg**	**08 08 24.5**	**-0.7**
SEDS				S	**Sg**	**08 08 27.2**	**-0.9**
KEKS	**Kekerengu Vall**	**0.23**	**232**	P	**Pb**	**08 08 26.9**	**+0.2**
KEKS				S	**Sb**	**08 08 31.5**	**+1.0**
BSWZ	**Blackbirch Sta**	**0.28**	**291**	P	**Pg**	**08 08 26.2**	**-0.6**
BSWZ				S	**Sg**	**08 08 30.0**	**-0.8**
TUWZ	**Tuamarina**	**0.44**	**332**	P	**Pg**	**08 08 28.7**	**-1.0**
TUWZ				S	**Sg**	**08 08 34.2**	**-1.4**
TCW	**Tory Channel**	**0.61**	**4**	P	**Pg**	**08 08 31.7**	**-1.1**
TCW				S	**Sg**	**08 08 39.5**	**-1.3**
SNZO	**South Karori**	**0.62**	**36**	P	**Pb**	**08 08 33.1**	**-0.3**
BHW	**Baring Head**	**0.64**	**50**	P	**Pb**	**08 08 33.8**	**+0.2**
WEL	**Wellington**	**0.67**	**38**	P	**Pb**	**08 08 34.1**	**-0.2**
KHZ	**Kahutara**	**0.79**	**220**	P	**Pn**	**08 08 37.6**	**+0.3**
KHZ	**Kahutara**	**0.79**	**220**	P	**Pn**	**08 08 37.7**	**+0.3**
KHZ				S	**Sn**	**08 08 50.4**	**+1.7**
PLWZ	**Palliser**	**0.81**	**73**	P	**Pn**	**08 08 37.6**	**-0.1**
NNZ	**Nelson**	**0.87**	**313**	P	**Pg**	**08 08 36.3**	**-1.4**
CAW	**Cannon Point**	**0.95**	**42**	P	**Pb**	**08 08 39.3**	**+0.3**
CAW				S	**Sn**	**08 08 53.1**	**+0.3**
THZ	**Tophouse**	**0.98**	**273**	P	**Pb**	**08 08 39.2**	**-0.4**
PAWZ	**Paruwai Farm**	**1.00**	**65**	P	**Pn**	**08 08 40.2**	**-0.2**
DUWZ	**D'Urville Isla**	**1.04**	**347**	P	**Pb**	**08 08 39.0**	**-1.5**
DUWZ				S	**Sb**	**08 08 52.5**	**-1.3**
KIW	**Kapiti Island**	**1.09**	**29**	P	**Pb**	**08 08 40.7**	**-0.6**
KIW				S	**Sb**	**08 08 55.7**	**+0.4**
MTW	**Mount Morrison**	**1.17**	**56**	P	**Pb**	**08 08 42.1**	**-0.5**
MTW				S	**Sn**	**08 08 58.6**	**+0.5**
MRNZ	**Matariki Terra**	**1.17**	**290**	P	**Pn**	**08 08 42.5**	**-0.2**
TRWZ	**Traveller**	**1.18**	**70**	P	**Pb**	**08 08 42.2**	**-0.6**
OGWZ	**Otaki Gorge**	**1.23**	**36**	P	**Pn**	**08 08 43.5**	**0.0**
TKNZ	**Takaka Hill**	**1.23**	**309**	P	**Pn**	**08 08 42.8**	**-0.6**
HOWZ	**Holdsworth Sta**	**1.34**	**47**	P	**Pn**	**08 08 44.6**	**-0.4**
TMWZ	**Te Maipa**	**1.44**	**61**	P	**Pn**	**08 08 45.6**	**-0.7**
GVZ	**Greta Valley S**	**1.45**	**217**	P	**Pn**	**08 08 46.7**	**+0.3**
MRZ	**Mangatainoka R**	**1.54**	**42**	P	**Pn**	**08 08 47.4**	**-0.3**
QRZ	**Quartz Range**	**1.61**	**307**	P	**Pn**	**08 08 49.9**	**+1.2**
QRZ	**Quartz Range**	**1.61**	**307**	P	**Pn**	**08 08 49.3**	**+0.6**
TIWZ	**Tintock**	**1.63**	**51**	P	**Pn**	**08 08 48.6**	**-0.3**
LTZ	**Lake Taylor**	**1.74**	**236**	P	**Pn**	**08 08 50.9**	**+0.4**
CPWZ	**Castlepoint**	**1.75**	**59**	P	**Pg**	**08 08 56.3**	**+2.0**
AMCZ	**Amberley**	**1.79**	**220**	P	**Pn**	**08 08 52.0**	**-0.1**
DSZ	**Denniston Nort**	**1.81**	**271**	P	**Pn**	**08 08 52.8**	**+1.4**
OHWZ	**Ohakea**	**1.81**	**28**	P	**Pb**	**08 08 53.1**	**-0.5**
PRWZ	**Pori Road**	**1.83**	**47**	P	**Pn**	**08 08 51.4**	**-0.3**
POWZ	**Post Office Ro**	**1.84**	**40**	P	**Pn**	**08 08 51.7**	**-0.2**
BFZ	**Birch Farm**	**1.90**	**54**	P	**Pn**	**08 08 51.4**	**-1.3**
BFZ	**Birch Farm**	**1.90**	**54**	P	**Pn**	**08 08 51.5**	**-1.2**
DVHZ	**Dannevirke**	**2.11**	**45**	P	**Pn**	**08 08 54.6**	**-1.0**
WAZ	**Wanganui**	**2.14**	**16**	P	**Pb**	**08 08 59.0**	**-0.2**
OXZ	**Oxford**	**2.21**	**226**	P	**Pn**	**08 08 56.2**	**-0.7**
MQZ	**McQueen's Vall**	**2.21**	**211**	P	**Pn**	**08 08 55.6**	**-1.3**
INZ	**Inchbonnie**	**2.25**	**245**	P	**Pn**	**08 08 57.9**	**+0.5**
AKCZ	**Akaroa Harbour**	**2.27**	**205**	P	**Pn**	**08 08 57.1**	**-0.7**
PNHZ	**Pukenui**	**2.42**	**39**	P	**Pn**	**08 08 58.9**	**-0.9**
RACZ	**Rakaia**	**2.45**	**218**	P	**Pn**	**08 08 59.0**	**-1.2**
PREZ	**Palmer Road**	**2.47**	**359**	P	**Pn**	**08 09 03.1**	**+2.5**
KHEZ	**Kahui Hut**	**2.52**	**356**	P	**Pn**	**08 09 04.0**	**+2.7**
KHEZ	**Kahui Hut**	**2.52**	**356**	P	**Pb**	**08 09 06.0**	**+0.2**
NEZ	**North Egmont**	**2.54**	**355**	P	**Pb**	**08 09 05.8**	**-0.5**
NBEZ	**Newall Road No**	**2.56**	**354**	P	**Pb**	**08 09 07.0**	**+0.6**
MHCZ	**Mount Hutt**	**2.60**	**228**	P	**Pb**	**08 09 01.5**	**-0.8**
MTVZ	**Mangateitei**	**2.61**	**22**	P	**Pb**	**08 09 07.9**	**+0.6**
DREZ	**Durham Road**	**2.62**	**360**	P	**Pb**	**08 09 06.3**	**-1.2**
PKE	**Pukeiti**	**2.62**	**356**	P	**Pn**	**08 09 05.7**	**+3.0**
WNVZ	**Wahianoa**	**2.70**	**23**	P	**Pb**	**08 09 07.4**	**-1.5**
BHHZ	**Black Hill Sta**	**2.71**	**32**	P	**Pb**	**08 09 09.1**	**0.0**
KRHZ	**Kereru**	**2.72**	**38**	P	**Pn**	**08 09 02.9**	**-1.0**
VRZ	**Vera Road**	**2.72**	**9**	P	**Pn**	**08 09 06.1**	**+2.2**
MAVZ	**Matarangi**	**2.74**	**22**	P	**Pb**	**08 09 09.3**	**-0.5**
COVZ	**Chateau Observ**	**2.80**	**22**	P	**Pb**	**08 09 10.8**	**+0.2**
NGZ	**Ngauruhoe**	**2.84**	**22**	P	**Pb**	**08 09 10.8**	**-0.5**
SNVZ	**South Ngauruho**	**2.84**	**23**	P	**Pb**	**08 09 10.5**	**-0.9**
WVZ	**Waitaha Valley**	**2.87**	**243**	P	**Pb**	**08 09 10.5**	**-1.2**
OTVZ	**Oturere**	**2.87**	**23**	P	**Pn**	**08 09 07.8**	**+1.7**
NNVZ	**North Ngauruho**	**2.88**	**22**	P	**Pb**	**08 09 10.6**	**-1.5**
WTVZ	**West Tongariro**	**2.89**	**22**	P	**Pb**	**08 09 12.2**	**0.0**
ETVZ	**East Tongariro**	**2.91**	**23**	P	**Pb**	**08 09 11.1**	**-1.4**
KWHZ	**Kaweka Forest**	**2.92**	**36**	P	**Pb**	**08 09 13.4**	**+0.8**
TMVZ	**Te Maari**	**2.92**	**23**	P	**Pb**	**08 09 11.6**	**-1.2**
KRVZ	**Karewarewa**	**2.93**	**22**	P	**Pb**	**08 09 12.3**	**-0.4**
NTVZ	**North Tongarir**	**2.93**	**23**	P	**Pb**	**08 09 13.1**	**+0.3**
RPZ	**Rata Peaks**	**3.01**	**230**	P	**Pn**	**08 09 07.3**	**-0.6**
RPZ	**Rata Peaks**	**3.01**	**230**	P	**Pn**	**08 09 07.3**	**-0.6**
KATZ	**Kakaramea**	**3.05**	**22**	P	**Pb**	**08 09 15.7**	**+0.8**
ARCZ	**Arundel**	**3.09**	**225**	P	**Pn**	**08 09 08.4**	**-0.6**
HIZ	**Hauiti**	**3.33**	**9**	P	**Pn**	**08 09 15.0**	**+2.6**
HIZ	**Hauiti**	**3.33**	**9**	P	**Pn**	**08 09 15.6**	**+3.2**
TMZ	**Timaru**	**3.48**	**221**	P	**Pn**	**08 09 13.7**	**-0.7**
NGRZ	**Ngongotaha**	**4.00**	**23**	P	**Pn**	**08 09 21.0**	**-0.7**
ODZ	**Otahua Downs**	**4.15**	**218**	P	**Pn**	**08 09 23.0**	**-0.5**
ODZ	**Otahua Downs**	**4.15**	**218**	P	**Pn**	**08 09 22.6**	**-0.9**
JCZ	**Jackson Bay**	**4.58**	**239**	P	**Pn**	**08 09 33.3**	**+3.7**
MKAZ	**Moumakai**	**4.76**	**9**	P	**Pn**	**08 09 34.0**	**+2.0**

IDC 13 08:12:28.2±631.0,45°.49N×65°.22E,h0km,Error ellipse: s-maj=255.2km s-min=153.5km az=161.0,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**6.89**	**318**	I	I	08 47 10.0	
	baz=131,slow=333,SNR=1.6						
I46RU	**ZALESOVO INFRA**	**15.21**	**49**	I	I	09 44 20.0	
	baz=242,slow=339,SNR=3.6						
I37NO	**I37NO**	**33.19**	**332**	I	I	11 41 20.0	
	baz=111,slow=332,SNR=1.5						

*ISK **13** 08:41:55.5,36°.63N×27°.07E,h124km,ML2.9/14*
*IDC **13** 08:41:55.4±2.8,36°.59N×27°.05E,h120km±31km,mb3.6/5, mbtmp3.9/7,Error ellipse: s-maj=30.8km s-min=17.9km az=150.0*
*GII **13** 08:41:57.0±0.6,36°.170N±0°.007×27°.176E±0°.002,h40km, Mws3.4,confirmed*
*ATH **13** 08:41:56.3,36°.59N×27°.05E,h121km±6km,ML3.4/5,Error ellipse: s-maj=7.3km s-min=1.8km az=72.0*
*THE **13** 08:41:58.1,36°.61N×27°.01E,h129km±1km,ML3.2/5,Error ellipse: s-maj=2.0km s-min=0.5km az=72.0*

*AFAD **13** 08:42:01.3±0.0,36°.59N×27°.37E,h79km±2km,ML2.7*

ISC 13 08:41:55.5±0.7,36°.54N±0°.04×27°.15E±0°.04,h125km±6km, n88,σ1§23/112,mb3.9/6,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	**0.08**	**347**	P	**Pn**	**08 42 12.8**	**+0.3**
YAZI	**Mula-Dat§a-**	**0.28**	**59**	P	**Pn**	**08 42 13.5**	**+0.5**
DAT	**Datca**	**0.40**	**60**	Pg	**Pn**	**08 42 13.8**	**+0.2**
DAT				Sg	**Sn**	**08 42 27.3**	**+0.1**
DAT	**Datca**	**0.40**	**60**	P	**Pn**	**08 42 13.9**	**+0.4**
DAT				S	**Sn**	**08 42 27.4**	**+0.2**
DATC	**Datca-Mugla**	**0.47**	**61**	Pg	**Pn**	**08 42 14.2**	**+0.4**
DATC				Sg	**Sn**	**08 42 28.1**	**+0.5**
BODT	**Bodrum**	**0.54**	**14**	Pg	**Pn**	**08 42 14.1**	**-0.2**
BODT				Sg	**Sn**	**08 42 27.5**	**-1.0**
BODT	**Bodrum**	**0.54**	**14**	P	**Pn**	**08 42 14.4**	**+0.1**
BODT				S	**Sn**	**08 42 27.6**	**-1.0**
BDRM	**Kayabasi**	**0.58**	**24**	P	**Pn**	**08 42 14.8**	**+0.3**
RFTAA	**Mazikoy-Bodrum**	**0.67**	**46**	Pg	**Pn**	**08 42 15.2**	**+0.2**
RFTAA				Sg	**Sn**	**08 42 29.8**	**-0.1**
ARG	**Arkhangelos**	**0.85**	**112**	Pg	**Pn**	**08 42 18.0**	**+1.4**
ARG	**Arkhangelos**	**0.85**	**112**	P	**Pn**	**08 42 18.2**	**+1.7**
ARG				S	**Sn**	**08 42 34.0**	**+1.5**
	1µm,0.2s						
ARG	**Arkhangelos**	**0.85**	**112**	P	**Pn**	**08 42 18.0**	**+1.4**
ARG				S	**Sn**	**08 42 33.8**	**+1.3**
ARG				AML	AML	08 42 35.1	
	comp=N,1463µm,0.2s						
ARG				AML	AML	08 42 35.4	
	comp=E,2860µm,0.3s						
MLSB	**Milas**	**0.91**	**33**	Pg	**Pn**	**08 42 17.4**	**+0.3**
TURN	**Turunc**	**0.91**	**74**	Pg	**Pn**	**08 42 17.9**	**+0.8**
TURN	**Turunc**	**0.91**	**74**	P	**Pn**	**08 42 18.0**	**+1.0**
TURN				*i* AML	AML	08 42 34.0	
	comp=E,131nm,0.3s						
TURN				*i* AML	AML	08 42 35.0	
	comp=E,270nm,0.3s						
KARP	**Karpathos**	**0.99**	**179**	Pn	**Pn**	**08 42 18.7**	**+0.9**
KARP	**Karpathos**	**0.99**	**179**	P	**Pn**	**08 42 18.8**	**+0.9**
KARP				S	**Sn**	**08 42 35.6**	**+0.8**
	comp=E,850nm,0.2s						
KARP	**Karpathos**	**0.99**	**179**	P	**Pn**	**08 42 18.8**	**+0.9**
KARP				S	**Sn**	**08 42 35.3**	**+0.5**
KARP				AML	AML	08 42 39.7	
	comp=N,1756µm,0.2s						
KARP				AML	AML	08 42 42.3	
	comp=E,1722µm,0.3s						
YER	**Yerkesik**	**1.09**	**56**	Pn	**Pn**	**08 42 19.4**	**+0.5**
YER	**Yerkesik**	**1.09**	**56**	P	**Pn**	**08 42 20.2**	**+1.3**
YER				S	**Sn**	**08 42 37.2**	**+0.6**
MULA	**Mugla, Merkez-**	**1.18**	**52**	P	**Pn**	**08 42 21.1**	**+1.2**
MULA				S	**Sn**	**08 42 38.5**	**+0.1**
DALY	**Dalyan (Mula)**	**1.24**	**76**	Pn	**Pn**	**08 42 22.1**	**+1.8**
THR8	**Santorini-Mono**	**1.35**	**265**	P	**Pn**	**08 42 21.4**	**-0.2**
SANT	**Santorini**	**1.37**	**264**	Pn	**Pn**	**08 42 21.8**	**0.0**
APE	**Apeiranthos**	**1.41**	**293**	Pn	**Pn**	**08 42 21.9**	**-0.3**
APE	**Apeiranthos**	**1.41**	**293**	P	**Pn**	**08 42 21.8**	**-0.3**
APE	**Apeiranthos**	**1.41**	**293**	P	**Pn**	**08 42 21.9**	**-0.3**
THR3	**Thira Island,**	**1.42**	**265**	P	**Pn**	**08 42 22.1**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.42**	**265**	P	**Pn**	**08 42 22.1**	**-0.2**
THR6	**Thira Island,**	**1.42**	**263**	P	**Pn**	**08 42 22.6**	**+0.2**
FETY	**Fethiye**	**1.56**	**86**	Pn	**Pn**	**08 42 25.1**	**+1.2**
FETY	**Fethiye**	**1.56**	**86**	P	**Pn**	**08 42 25.8**	**+1.9**
FETI	**Fethiye-Mugla**	**1.57**	**84**	Pn	**Pn**	**08 42 25.5**	**+1.5**
ESEN	**Aydn-Nazilli**	**1.58**	**37**	P	**Pn**	**08 42 24.9**	**+0.7**
ZKR	**Zakros**	**1.61**	**208**	Pn	**Pn**	**08 42 25.7**	**+1.2**
ZKR	**Zakros**	**1.61**	**208**	P	**Pn**	**08 42 26.0**	**+1.5**
ZKR				S	**Sn**	**08 42 47.3**	**+0.7**
	comp=E,150nm,0.3s						
ZKR	**Zakros**	**1.61**	**208**	P	**Pn**	**08 42 26.0**	**+1.5**
ZKR				AML	AML	08 42 50.1	
	comp=E,401µm,0.3s						
ZKR				AML	AML	08 42 50.5	
	comp=N,212µm,0.3s						
IZZE	**Mula-Seydike**	**1.68**	**93**	P	**Pn**	**08 42 26.4**	**+1.2**
IZZE				*i* AML	AML	08 42 56.0	
	comp=N,118nm,0.3s						
IZZE				*i* AML	AML	08 43 00.0	
	comp=N,75nm,0.4s						
DNZT	**Denizli-Tavas-**	**1.68**	**63**	P	**Pn**	**08 42 26.4**	**+1.0**
DNZT				S	**Sn**	**08 42 48.2**	**0.0**
CAME	**Cameli-Denizli**	**1.78**	**76**	Pn	**Pn**	**08 42 27.8**	**+1.2**
CAEL	**Denizli, Camel**	**1.84**	**71**	P	**Pn**	**08 42 28.3**	**+0.9**
CAEL				S	**Sn**	**08 42 51.2**	**-0.4**
CAEL				*i* AML	AML	08 42 54.0	
	comp=N,77nm,0.3s						
CAEL				*i* AML	AML	08 43 03.0	
	comp=N,111nm,0.6s						
DNIZ	**Denizli-Tavas-**	**1.86**	**54**	P	**Pn**	**08 42 28.4**	**+0.8**
DNIZ				*i* AML	AML	08 42 54.0	
	comp=N,194nm,0.3s						
DNIZ				*i* AML	AML	08 42 54.0	
	comp=N,99nm,0.3s						
FRMA	**Ierapetra Chan**	**1.91**	**218**	P	**Pn**	**08 42 28.4**	**+0.4**
KNIK	**Mula-Seydike**	**1.97**	**80**	P	**Pn**	**08 42 30.3**	**+1.3**
KNIK				S	**Sn**	**08 42 55.7**	**+1.2**
KNIK				*i* AML	AML	08 42 57.0	
	comp=N,52nm,0.4s						
KNIK				*i* AML	AML	08 42 58.0	
	comp=N,51nm,0.3s						
AKAS	**Kas**	**2.00**	**98**	Pn	**Pn**	**08 42 30.9**	**+1.6**
AKAS	**Kas**	**2.00**	**98**	P	**Pn**	**08 42 30.4**	**+1.1**
AKAS				S	**Sn**	**08 42 55.5**	**+0.3**
AKAS				*i* AML	AML	08 43 01.0	
	comp=N,92nm,0.4s						
AKAS				*i* AML	AML	08 43 05.0	
	comp=N,82nm,0.3s						
GOLH	**Golhisar**	**2.06**	**69**	P	**Pn**	**08 42 31.7**	**+1.8**
GOLH				S	**Sn**	**08 42 56.3**	**-0.1**
GOLH				*i* AML	AML	08 42 59.0	
	comp=N,62nm,0.3s						
GOLH				*i* AML	AML	08 43 00.0	
	comp=N,66nm,0.4s						
HRKL	**Herakleio**	**2.06**	**234**	Pn	**Pn**	**08 42 31.0**	**+1.1**
HRKL	**Herakleio**	**2.06**	**234**	P	**Pn**	**08 42 31.0**	**+1.1**
IACM	**Heraklion**	**2.09**	**235**	P	**Pn**	**08 42 30.9**	**+0.7**
KSTL	**Kastelli Herak**	**2.09**	**235**	P	**Pn**	**08 42 29.5**	**-0.7**
IDI	**Anoyia**	**2.22**	**237**	P	**Pn**	**08 42 31.9**	**-0.1**
AKUM	**Antalya-Kumluc**	**2.58**	**94**	P	**Pn**	**08 42 38.4**	**+1.9**
AKUM				S	**Sn**	**08 43 09.1**	**+1.0**
AKUM				*i* AML	AML	08 43 10.0	
	comp=N,30nm,0.6s						
AKUM				*i* AML	AML	08 43 13.0	
	comp=N,43nm,0.5s						
KORT	**Korkueli**	**2.61**	**79**	P	**Pn**	**08 42 38.7**	**+1.7**
KORT				S	**Sn**	**08 43 09.6**	**+0.7**
KORT				*i* AML	AML	08 43 13.0	
	comp=N,58nm,0.5s						
KORT				*i* AML	AML	08 43 17.0	
	comp=N,52nm,0.5s						
IMMV	**Iera Moni Meta**	**2.78**	**248**	P	**Pn**	**08 42 39.4**	**+0.3**
IMMV				S	**Sn**	**08 43 10.5**	**-2.2**
	comp=N,380nm,0.4s						
IMMV	**Iera Moni Meta**	**2.78**	**248**	P	**Pn**	**08 42 39.4**	**+0.3**
IMMV				AML	AML	08 43 16.7	
	comp=N,650µm,0.5s						
IMMV				AML	AML	08 43 17.5	
	comp=E,868µm,0.4s						
RODP	**Rodopos**	**2.92**	**252**	P	**Pn**	**08 42 41.2**	**+0.4**
RODP				S	**Sn**	**08 43 13.4**	**-2.4**
	comp=E,58nm,0.3s						
GVDS	**Gavdos**	**3.01**	**237**	P	**Pn**	**08 42 43.3**	**+1.3**
GVD	**Gavdhos**	**3.01**	**237**	P	**Pn**	**08 42 42.8**	**+0.7**
GVD				AML	AML	08 43 19.6	
	comp=E,1308µm,0.4s						
GVD				AML	AML	08 43 20.2	
	comp=N,1366µm,0.3s						
ANKY	**Antikythira Is**	**3.18**	**259**	P	**Pn**	**08 42 44.3**	**0.0**
VLI	**Veliai**	**3.39**	**274**	P	**Pn**	**08 42 46.1**	**-1.0**
VLI	**Veliai**	**3.39**	**274**	P	**Pn**	**08 42 47.0**	**-0.1**
PYL	**PYLOS**	**4.36**	**276**	P	**Pn**	**08 42 59.0**	**-0.9**
CSS	**Mathiatis**	**5.26**	**106**	P	**Pn**	**08 43 12.3**	**+0.3**
BRTR	**Keskin Array B**	**6.03**	**56**	P	**Pn**	**08 43 24.6**	**+2.2**
	comp=N,1.2nm,0.6s,baz=227,slow=15,SNR=5.6						
MMA0B	**Mount Meron ar**	**7.64**	**115**	P	**Pn**	**08 43 44.1**	**-0.1**
MMA0B	**Mount Meron ar**	**7.64**	**115**	S	**Sn**	**08 45 07.9**	**-1.3**
MMAI	**Mount Meron Ar**	**7.64**	**115**	P	**Pn**	**08 43 44.2**	**0.0**
	comp=N,2.8nm,0.3s,baz=307,slow=10,SNR=14						
MMAI				S	**Sn**	**08 45 06.0**	**-3.2**
	comp=N,1.1nm,0.3s,baz=329,slow=34,SNR=3.0						
NATI	**Neve Ativ**	**7.77**	**112**	S	**Sn**	**08 45 10.7**	**-1.6**
NATI	**Neve Ativ**	**7.77**	**112**	P	**Pn**	**08 43 44.1**	**-1.7**
KSHT	**Keshet**	**7.96**	**114**	P	**Pn**	**08 43 46.6**	**-1.8**
SALP	**Salfit**	**8.01**	**121**	P	**Pn**	**08 43 47.6**	**-1.4**
KZIT	**Kziot**	**8.24**	**131**	S	**Sn**	**08 45 19.7**	**-4.0**
KZIT	**Kziot**	**8.24**	**131**	P	**Pn**	**08 43 51.8**	**-0.4**
DSI	**Dead Sea**	**8.43**	**124**	S	**Sn**	**08 45 26.4**	**-1.9**
DSI	**Dead Sea**	**8.43**	**124**	P	**Pn**	**08 43 55.3**	**+0.6**
KRMI	**Paran Flat**	**9.00**	**133**	S	**Sn**	**08 45 38.7**	**-3.5**
KRMI	**Paran Flat**	**9.00**	**133**	P	**Pn**	**08 44 01.9**	**-0.6**
EIL	**Elat**	**9.47**	**134**	P	**Pn**	**08 44 09.2**	**+0.5**
	comp=N,1.4nm,0.3s,baz=5.0,slow=21,SNR=0.9						
EIL				S	**Sn**	**08 45 49.3**	**-4.0**
	comp=N,5.0nm,0.4s,baz=279,slow=2.1,SNR=7.2						
EIL	**Elat**	**9.47**	**134**	P	**Pn**	**08 44 08.9**	**+0.2**
KBZ	**Khabaz**	**14.02**	**54**	P	**P**	**08 45 12.9**	**+0.6**
	comp=N,3.7nm,0.9s,baz=237,slow=11,SNR=7.9						
AKASG	**Malin Array Be**	**14.24**	**5**	P	**P**	**08 45 14.2**	**-0.6**
	comp=N,0.8nm,0.4s,baz=194,slow=12,SNR=3.0						
ESDC	**Sonseca Array**	**24.62**	**287**	P	**P**	**08 47 03.5**	**-0.7**
	comp=N,0.9nm,1.0s,baz=78,slow=12,SNR=3.4						
	comp=N,0.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.61**	**231**	P	**P**	**08 48 15.9**	**+0.6**
	comp=N,0.6nm,0.3s,baz=35,slow=9.1,SNR=4.9						
ARCES	**ARCESS Array B**	**33.07**	**359**	P	**P**	**08 48 17.5**	**-1.3**
	comp=N,1.5nm,0.8s,baz=172,slow=7.3,SNR=1.4						
	comp=N,1.5nm,0.8s						
KURBB	**Kurchatov Arra**	**39.00**	**52**	P	**P**	**08 49 10.0**	**+0.6**
	comp=N,0.9nm,0.3s,baz=277,slow=8.8,SNR=6.9						
	comp=N,0.9nm,0.3s						
MKAR	**Makanchi Array**	**41.67**	**58**	P	**P**	**08 49 32.6**	**+1.1**
	comp=N,1.2nm,0.3s,baz=271,slow=8.8,SNR=30						
	comp=N,1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**42.89**	**47**	P	**P**	**08 49 41.3**	**+0.1**
	comp=N,1.2nm,0.5s,baz=277,slow=8.5,SNR=7.8						
	comp=N,1.2nm,0.5s						

*SOME **13** 08:48:13.8,40°.92N×79°.05E,h0km*
*KRNET **13** 08:48:14.7±0.1,40°.65N×78°.64E,mb2.2*
*NNC **13** 08:48:15.1±1.0,40°.89N×79°.11E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=8.9km s-min=6.5km az=85.0*

ISC 13 08:48:14.8±3.3,40°.9N±0°.1×78°.96E±0°.07,h5km±17km,n15, σ0§78/25,10C,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.21**	**314**	⇑*eP*	**Pn**	**08 48 38.4**	**-0.3**
	baz=30						
TARG				⇑*iS*	**Sn**	**08 48 55.8**	**+0.1**
	baz=30						
KDJ	**Kajisay**	**1.82**	**313**	⇑*eP*	**Pb**	**08 48 48.6**	**-0.2**
	baz=24						
KDJ				⇑*eS*	**Sg**	**08 49 13.5**	**+0.1**
	baz=24						
ANVS	**Anan'yevo**	**2.12**	**333**	⇑*eP*	**Pg**	**08 48 55.1**	**-0.4**
	baz=42						
ANVS				⇑*eS*	**Sg**	**08 49 24.7**	**+1.6**
	baz=42						
SATY	**Saty**	**2.21**	**349**	Pg	**Pb**	**08 48 55.7**	**+0.5**
	1.7nm,0.4s						
SATY				Lg	Lg	08 49 26.2	
	7.5nm,0.3s						
SATY	**Saty**	**2.21**	**349**	*eP*	**Pb**	**08 48 55.7**	**+0.5**
	1.7nm,0.4s						
SATY				*eS*	**Sg**	**08 49 26.2**	**+0.5**
	7.5nm,0.3s						
UZB	**Uzunbulak**	**2.25**	**1**	Pg	**Pb**	**08 48 56.6**	**+0.5**
UZB				Lg	Lg	08 49 27.4	
UZB	**Uzunbulak**	**2.25**	**1**	*eP

SNAL comp=E,650µm,0.9s AML AML
SNAL comp=N,708µm,0.8s AML AML
SNAL comp=N,731µm,0.8s AML AML
SNAL comp=N,708µm,1.2s AML AML
SNAL comp=N,731µm,1.2s AML AML
SNAL comp=E,614µm,0.9s AML AML
SNAL comp=E,650µm,0.9s AML AML
CDRU Civita di Ruta 0.28 207 P Pg 08 49 14.0 +0.6
CDRU S Sb 08 49 19.5 -0.7
CDRU AML AML
CDRU comp=E,698µm,0.9s AML AML
CDRU comp=N,338µm,0.3s AML AML
CDRU comp=N,328µm,0.3s AML AML
CDRU comp=E,577µm,0.2s AML AML
CAFE Carife 0.34 328 P Pb 08 49 15.3 -0.8
CAFE S Sb 08 49 21.0 -0.7
CAFE AML AML
CAFE comp=E,736µm,0.5s AML AML
CAFE comp=N,380µm,1.1s AML AML
CAFE comp=E,697µm,0.5s AML AML
CAFE comp=N,401µm,0.8s AML AML
CAFE comp=E,736µm,0.5s AML AML
CAFE comp=N,380µm,1.1s AML AML
CAFE comp=N,401µm,0.8s AML AML
CAFE comp=E,736µm,0.5s AML AML
CAFE comp=E,697µm,0.5s AML AML
CAFE comp=N,401µm,1.2s AML AML
CAFE comp=N,351µm,0.5s AML AML
ACER Acerenza 0.36 83 P Pg 08 49 15.4 +0.6
ACER S Sb 08 49 21.8 -0.4
ACER AML AML
ACER comp=E,569µm,0.3s AML AML
ACER comp=E,598µm,0.6s AML AML
ACER comp=N,614µm,0.6s AML AML
ACER comp=E,570µm,0.3s AML AML
ACER comp=N,671µm,0.6s AML AML
ACER comp=N,522µm,0.3s AML AML
ACER comp=N,561µm,0.3s AML AML
ACER comp=E,569µm,0.3s AML AML
ACER comp=E,574µm,0.3s AML AML
SLCN Sala Consilina 0.37 161 P Pb 08 49 16.1 -0.6
SLCN AML AML
SLCN comp=E,780µm,0.3s AML AML
SLCN comp=E,779µm,0.3s AML AML
SLCN comp=N,534µm,0.4s AML AML
SLCN comp=E,814µm,0.3s AML AML
SLCN comp=N,560µm,0.9s AML AML
SLCN comp=E,813µm,0.3s AML AML
SLCN comp=E,779µm,0.3s AML AML
SLCN comp=N,534µm,0.4s AML AML
SLCN comp=N,502µm,0.4s AML AML
CMPR Campora 0.44 197 P Pg 08 49 17.1 +0.7
CMPR S Sb 08 49 24.0 -0.7
CMPR AML AML
CMPR comp=E,224µm,0.3s AML AML
CMPR comp=N,188µm,1.6s AML AML
CMPR comp=E,225µm,0.3s AML AML
CMPR comp=N,160µm,0.5s AML AML
MCEL Monticello 0.49 149 P Pb 08 49 18.2 -0.4
MCEL AML AML
MCEL comp=N,174µm,1.4s AML AML
MCEL comp=E,210µm,1.4s AML AML
MCEL comp=E,201µm,0.6s AML AML
MCEL comp=N,182µm,1.1s AML AML
MCEL comp=N,173µm,0.5s AML AML
MCEL comp=E,201µm,0.6s AML AML
MCEL comp=E,205µm,0.6s AML AML
MCEL comp=N,173µm,0.9s AML AML
MCEL comp=N,173µm,1.5s AML AML
MCEL comp=N,173µm,1.1s AML AML
PTRP Pietrapertosa 0.50 116 P Pb 08 49 18.3 -0.5
PTRP AML AML
PTRP comp=E,207µm,0.6s AML AML
PTRP comp=N,260µm,1.6s AML AML
PTRP comp=N,210µm,0.6s AML AML
PTRP comp=E,207µm,0.6s AML AML
PTRP comp=E,207µm,1.4s AML AML
MTSN Montesano sull 0.52 156 P Pg 08 49 18.5 +0.7
MTSN AML AML
MTSN comp=E,179µm,1.5s AML AML
MTSN comp=N,186µm,1.1s AML AML
MTSN comp=E,179µm,0.5s AML AML
MTSN comp=N,186µm,0.9s AML AML
MTSN comp=N,183µm,0.4s AML AML
MTSN comp=E,163µm,0.5s AML AML
MTSN comp=N,183µm,1.6s AML AML
MTSN comp=E,163µm,1.5s AML AML
MRB1 Monte Rocchett 0.54 315 P Pg 08 49 18.6 +0.4
MGR Morigerati 0.61 174 P Pg 08 49 19.6 +0.2
MGR AML AML
MGR comp=E,122µm,0.7s AML AML
MGR comp=N,155µm,0.4s AML AML
MGR comp=N,210µm,0.7s AML AML
MGR comp=E,117µm,0.5s AML AML
MGR comp=E,122µm,1.3s AML AML
MGR comp=E,201µm,0.7s AML AML
MGR comp=N,156µm,0.4s AML AML
MRVN Minervino Murg 0.63 60 AML AML
MRVN comp=N,148µm,0.2s AML AML
MRVN comp=E,194µm,1.2s AML AML
MRVN comp=N,178µm,1.2s AML AML
MRVN AML AML
SIRI comp=E,169µm,0.3s AML AML
SIRI Monte Sirino - 0.64 152 P Pg 08 49 20.0 0.0
SIRI AML AML
SIRI comp=E,218µm,0.3s AML AML
SIRI comp=N,160µm,0.6s AML AML
SIRI comp=E,214µm,0.3s AML AML
SIRI comp=N,167µm,1.6s AML AML
SIRI comp=N,140µm,0.2s AML AML
SIRI comp=N,144µm,0.5s AML AML
SIRI comp=N,160µm,1.4s AML AML
SIRI comp=E,218µm,0.3s AML AML
SIRI comp=E,215µm,0.3s AML AML
SIRI comp=N,167µm,0.4s AML AML
AMUR Altamura 0.87 79 AML AML
AMUR comp=N,127µm,1.6s AML AML
AMUR comp=E,148µm,1.6s AML AML
AMUR comp=N,91µm,0.4s AML AML
AMUR comp=E,106µm,0.8s AML AML
MATE Matera 0.94 95 AML AML
MATE comp=N,120µm,0.6s AML AML
MATE comp=E,136µm,0.3s AML AML
MATE comp=N,120µm,1.4s AML AML
MSAG Monte S. Angel 1.02 19 AML AML
MSAG comp=E,162µm,0.6s AML AML
MSAG comp=E,71µm,1.2s AML AML
MSAG comp=N,345µm,0.2s AML AML
MSAG comp=N,147µm,0.2s AML AML
MSAG comp=E,71µm,0.8s AML AML

ROM 13 08:49:40.6 ±0.1, 40°.744N ±0°.004 × 15°.473E ±0°.006, h8 km, ML 2.8/78, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=254.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MRLC	**Muro Lucano**	**0.02**	**44**	P	Pg		08 49 41.9	-0.3
MRLC				S	Sg		08 49 42.9	-0.4
MRLC				AML	AML			
MRLC	comp=E,47650µm,0.5s			AML	AML			
MRLC	comp=N,79650µm,0.2s			AML	AML			
MRLC	comp=E,88550µm,0.5s			AML	AML			
VDS3	**Muro Lucano (V**	**0.04**	**265**	P	Pg		08 49 42.5	+0.2
VDS3				S	Sg		08 49 44.0	+0.4
SCL3	**Muro Lucano (S**	**0.06**	**149**	P	Pg		08 49 42.8	+0.3
SCL3				S	Sg		08 49 44.3	+0.5
CSG3	**Toppo Di Caste**	**0.07**	**355**	P	Pg		08 49 42.7	-0.1
CSG3				S	Sg		08 49 45.0	+0.7
SFL3	**San Fele**	**0.09**	**61**	P	Pg		08 49 42.8	-0.2
SFL3				S	Sg		08 49 45.3	+0.6
RDM3	**Ruvo Del Monte**	**0.14**	**20**	P	Pg		08 49 44.1	+0.4
VDP3	**Vietri Di Pote**	**0.16**	**151**	P	Pg		08 49 45.1	+1.1
CAGG	**Caggiano**	**0.19**	**171**	P	Pg		08 49 45.8	+1.2
AND3	**Andretta**	**0.21**	**330**	P	Pg		08 49 45.8	+0.8
MCRV	**Calabrutti - M**	**0.23**	**280**	P	Pg		08 49 45.8	+0.4
MCRV				S	Sg		08 49 50.0	+1.4
MCRV				AML	AML			
MCRV	comp=E,4630µm,1.4s			AML	AML			
MCRV	comp=N,6540µm,0.6s			AML	AML			
MCRV	comp=E,4630µm,0.6s			AML	AML			
VULT	**Monte Vulture**	**0.24**	**27**	P	Pg		08 49 46.1	+0.7
VULT				S	Sg		08 49 50.4	+1.7
VULT				AML	AML			
VULT	comp=N,9995µm,0.9s			AML	AML			
VULT	comp=E,5365µm,1.2s			AML	AML			
VULT	comp=E,5365µm,1.2s			AML	AML			
VULT	comp=E,5660µm,1.2s			AML	AML			
VULT	comp=N,9995µm,0.9s			AML	AML			
VULT	comp=N,10245µm,0.9s			AML	AML			
VULT	comp=E,5660µm,0.8s			AML	AML			
VULT	comp=E,5365µm,0.8s			AML	AML			
SRN3	**Sant'Arsenio**	**0.26**	**182**	P	Pb		08 49 46.7	-0.9
SNAL	**S. Angelo Dei**	**0.27**	**312**	P	Pg		08 49 46.6	+0.6
SNAL				S	Sb		08 49 52.2	-0.5
SNAL				AML	AML			
SNAL	comp=N,4240µm,0.8s			AML	AML			
SNAL	comp=E,3510µm,0.5s			AML	AML			
SNAL	comp=N,4185µm,0.8s			AML	AML			
SNAL	comp=E,3475µm,0.4s			AML	AML			
SNAL	comp=N,4185µm,1.2s			AML	AML			
SNAL	comp=N,4240µm,1.2s			AML	AML			
PZUN	**Potenza**	**0.27**	**111**	P	Pb		08 49 47.4	-0.4
PZUN				AML	AML			
PZUN	comp=E,5225µm,0.5s			AML	AML			
PZUN	comp=E,5500µm,0.5s			AML	AML			
PZUN	comp=N,4145µm,0.4s			AML	AML			
PZUN	comp=N,4450µm,0.7s			AML	AML			
PZUN	comp=E,5225µm,0.5s			AML	AML			
PZUN	comp=E,5500µm,1.5s			AML	AML			
PZUN	comp=E,5225µm,1.5s			AML	AML			
PZUN	comp=N,4450µm,0.7s			AML	AML			
CDRU	**Civita di Ruta**	**0.28**	**207**	P	Pg		08 49 46.9	+0.5
CDRU				S	Sb		08 49 52.0	-1.0
CDRU				AML	AML			
CDRU	comp=N,1260µm,0.8s			AML	AML			
CDRU	comp=E,2725µm,0.3s			AML	AML			
CAFE	**Carife**	**0.34**	**328**	P	Pg		08 49 47.9	+0.6
CAFE				S	Sb		08 49 54.1	-0.5
CAFE				AML	AML			
CAFE	comp=E,3630µm,0.7s			AML	AML			
CAFE	comp=N,1920µm,0.3s			AML	AML			
CAFE	comp=E,3630µm,0.6s			AML	AML			
CAFE	comp=E,3655µm,0.7s			AML	AML			
CAFE	comp=N,1870µm,0.3s			AML	AML			
CAFE	comp=N,1920µm,1.7s			AML	AML			
CAFE	comp=E,3630µm,1.4s			AML	AML			
CAFE	comp=N,1870µm,1.7s			AML	AML			
CAFE	comp=E,3655µm,1.3s			AML	AML			
ACER	**Acerenza**	**0.36**	**83**	P	Pg		08 49 48.3	+0.5
ACER				S	Sb		08 49 54.9	-0.3
ACER				AML	AML			
ACER	comp=E,3095µm,1.5s			AML	AML			
ACER	comp=E,3200µm,1.4s			AML	AML			
ACER	comp=N,3215µm,0.6s			AML	AML			
ACER	comp=N,3380µm,0.6s			AML	AML			
ACER	comp=E,3200µm,0.6s			AML	AML			
ACER	comp=E,3095µm,0.5s			AML	AML			
SLCN	**Sala Consilina**	**0.37**	**161**	P	Pg		08 49 48.7	+0.7
SLCN				AML	AML			
SLCN	comp=E,2975µm,1.4s			AML	AML			
SLCN	comp=N,2185µm,0.4s			AML	AML			
SLCN	comp=N,2180µm,0.4s			AML	AML			
SLCN	comp=E,2975µm,1.4s			AML	AML			
SLCN	comp=E,3140µm,1.4s			AML	AML			
SLCN	comp=N,2375µm,0.4s			AML	AML			
SGTA	**Sant Agata di**	**0.40**	**348**	P	Pg		08 49 49.2	+0.7
SGTA				AML	AML			
SGTA	comp=N,896µm,0.9s			AML	AML			
SGTA	comp=N,906µm,0.9s			AML	AML			
SGTA	comp=E,1405µm,0.4s			AML	AML			
SGTA	comp=E,1445µm,0.4s			AML	AML			
SGTA	comp=N,906µm,0.9s			AML	AML			
SGTA	comp=E,1400µm,0.4s			AML	AML			
CMPR	**Campora**	**0.44**	**197**	P	Pg		08 49 49.8	+0.5
CMPR				S	Sb		08 49 56.8	-0.8
CMPR				AML	AML			
CMPR	comp=E,860µm,0.4s			AML	AML			
CMPR	comp=N,762µm,0.4s			AML	AML			
MCEL	**Monticello**	**0.49**	**149**	P	Pg		08 49 50.6	+0.5
MCEL				AML	AML			
MCEL	comp=E,934µm,0.6s			AML	AML			
MCEL	comp=E,934µm,0.6s			AML	AML			
MCEL	comp=E,935µm,0.6s			AML	AML			
MCEL	comp=N,968µm,0.6s			AML	AML			
MCEL	comp=E,934µm,1.4s			AML	AML			
MCEL	comp=E,935µm,1.4s			AML	AML			
MCEL	comp=N,968µm,0.6s			AML	AML			
PTRP	**Pietrapertosa**	**0.50**	**116**	P	Pb		08 49 51.2	-0.6
PTRP				AML	AML			
PTRP	comp=N,810µm,0.5s			AML	AML			
PTRP	comp=E,991µm,0.6s			AML	AML			
MTSN	**Montesano sull**	**0.52**	**156**	P	Pg		08 49 51.3	+0.5
MTSN				AML	AML			
MTSN	comp=N,820µm,0.9s			AML	AML			
MTSN	comp=N,820µm,1.1s			AML	AML			
MTSN	comp=E,692µm,0.7s			AML	AML			
MRB1	**Monte Rocchett**	**0.54**	**315**	P	Pg		08 49 51.3	+0.2
MRB1				AML	AML			
MRB1	comp=N,1105µm,0.4s			AML	AML			
MRB1	comp=N,1102µm,0.7s			AML	AML			
MRB1	comp=E,895µm,0.9s			AML	AML			
MRB1	comp=E,880µm,0.4s			AML	AML			
MRB1	comp=N,1102µm,1.3s			AML	AML			
MGR	**Morigerati**	**0.61**	**174**	P	Pg		08 49 52.4	0.0
MGR				AML	AML			
MGR	comp=E,594µm,1.3s			AML	AML			
MGR	comp=N,718µm,0.5s			AML	AML			
MGR	comp=N,726µm,0.5s			AML	AML			
MGR	comp=E,594µm,0.7s			AML	AML			
MGR	comp=N,718µm,0.5s			AML	AML			
MGR	comp=E,566µm,0.4s			AML	AML			
MRVN	**Minervino Murg**	**0.63**	**60**	P	Pg		08 49 52.7	-0.1
MRVN				AML	AML			
MRVN	comp=E,871µm,0.7s			AML	AML			
MRVN	comp=N,811µm,0.3s			AML	AML			
MRVN	comp=N,811µm,1.7s			AML	AML			
MRVN	comp=E,871µm,1.3s			AML	AML			
SIRI	**Monte Sirino -**	**0.64**	**152**	P	Pg		08 49 52.9	-0.1
SIRI				AML	AML			
SIRI	comp=E,828µm,0.3s			AML	AML			
SIRI	comp=N,748µm,0.6s			AML	AML			
SIRI	comp=E,816µm,0.3s			AML	AML			
SIRI	comp=N,747µm,0.6s			AML	AML			
SIRI	comp=N,744µm,0.6s			AML	AML			
MOCO	**Biccari - m.te**	**0.67**	**339**	P	Pb		08 49 54.6	-0.1
MOCO				AML	AML			
MOCO	comp=N,238µm,0.5s			AML	AML			
MOCO	comp=E,366µm,0.5s			AML	AML			
MOCO	comp=E,366µm,0.5s			AML	AML			
MOCO	comp=N,258µm,0.5s			AML	AML			
MOCO	comp=N,237µm,0.5s			AML	AML			
PAOL	**Paolisi**	**0.74**	**293**	P	Pb		08 49 56.2	+0.3
MIGL	**Miglionico**	**0.75**	**100**	P	Pg		08 49 54.8	-0.2
MIGL				AML	AML			
MIGL	comp=N,1390µm,0.7s			AML	AML			
MIGL	comp=E,1545µm,0.4s			AML	AML			
MIGL	comp=N,1390µm,1.3s			AML	AML			
VITU	**Vitulano (BN)**	**0.78**	**305**	P	Pb		08 49 56.2	-0.2
VITU				AML	AML			
VITU	comp=E,367µm,1.1s			AML	AML			
VITU	comp=E,1144µm,0.4s			AML	AML			
VITU	comp=E,366µm,1.1s			AML	AML			
VITU	comp=N,1195µm,0.6s			AML	AML			
VITU	comp=E,366µm,0.9s			AML	AML			
VITU	comp=N,1224µm,0.5s			AML	AML			
CRAC	**Craco**	**0.82**	**117**	P	Pg		08 49 56.6	+0.1
CRAC				AML	AML			
CRAC	comp=E,1050µm,1.6s			AML	AML			
CRAC	comp=N,775µm,1.5s			AML	AML			
CRAC	comp=N,775µm,0.5s			AML	AML			
CRAC	comp=E,1050µm,0.4s			AML	AML			
AMUR	**Altamura**	**0.87**	**79**	P	Pb		08 49 58.0	-0.1
AMUR				AML	AML			
AMUR	comp=N,384µm,1.6s			AML	AML			
AMUR	comp=E,410µm,0.4s			AML	AML			
AMUR	comp=N,384µm,0.4s			AML	AML			
MATE	**Matera**	**0.94**	**95**	P	Pg		08 49 58.9	+0.1
MATE				AML	AML			
MATE	comp=E,620µm,0.8s			AML	AML			
MATE	comp=N,536µm,0.4s			AML	AML			
MATE	comp=E,620µm,1.2s			AML	AML			
MSAG	**Monte S. Angel**	**1.02**	**19**	P	Pg		08 50 00.1	-0.2
MSAG				AML	AML			
MSAG	comp=E,722µm,0.5s			AML	AML			

MSAG					AML	AML		
	comp=N,1165μm,0.3s							
MSAG					AML	AML		
	comp=N,479μm,0.3s							
MSAG					AML	AML		
	comp=E,301μm,0.5s							
SGRT	**San Giovanni R**	**1.03**	**11**	P	Pg		08 50 00.1	-0.3
SGRT				AML	AML			
	comp=N,730μm,0.5s							
SGRT				AML	AML			
	comp=E,731μm,0.6s							
SGRT				AML	AML			
	comp=E,731μm,1.4s							
LSTV	**Lastovo**	**2.29**	**27**	*e*Pn	Pn		08 50 18.4	-0.2
STON	**Ston**	**2.70**	**37**	*e*Pn	Pn		08 50 23.6	-0.7
ZIRJ	**Zirje**	**2.91**	**2**	*e*Pn	Pn		08 50 26.5	-0.8
RICI	**Ricice**	**3.01**	**24**	*e*Pn	Pn		08 50 28.1	-0.6
MORI	**Morici**	**3.12**	**3**	*e*Pn	Pn		08 50 28.6	-1.6
DUGI	**Dugi Otok**	**3.26**	**355**	*e*Pn	Pn		08 50 31.1	-0.9
KIJV	**Kijevo**	**3.33**	**12**	*e*Pn	Pn		08 50 32.4	-0.6
KIJV					Sn	Sn	08 51 10.0	-2.8

IDC 13 08:50:07.2±3.7, 54°24'N×87°57'E, h0 km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=32.0km s-min=19.9km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**261**	I	I	08 59 19.8	
	baz=80,slow=336,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.65**	**261**	Pg	Pn	08 50 36.2	-1.3
	1.1nm,0.3s,baz=79,slow=13,SNR=12						
ZALV				Lg	Lg	08 51 00.0	
	2.1nm,0.3s,baz=77,slow=26,SNR=11						
KURBB	**Kurchatov Arra**	**6.61**	**240**	Pn	Pn	08 51 46.2	+0.7
	baz=52,slow=13,SNR=3.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.17**	**206**	Pn	Pn	08 52 08.2	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=1.8						
	0.1nm,0.3s						

NNC 13 08:51:22.8±1.4, 51°.75N×75°.32E, h0 km, mb2.9, mpv2.5, Error ellipse: s-maj=29.7km s-min=8.8km az=22.0, Suspected Mining explosion.
IDC 13 08:51:24.6±1.0, 51°.65N×75°.51E, h0 km, mbtmp2.5/4, ML2.0/4, Error ellipse: s-maj=32.2km s-min=8.4km az=31.0

ISC 13 08:51:23.5±0.9, 51°.50N±0°.09×75°.36E±0°.06, h0 km, n11, σ1 s15/13, 3C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.19**	**113**	⇑Pn	**Pb**	**08 52 03.2**	**-0.7**
	2.1nm,0.3s						
KURBB				⇑Sn	**Sg**	**08 52 33.8**	**+0.1**
	23nm,0.7s						
KURBB	**Kurchatov Arra**	**2.19**	**113**	Pn	**Pn**	**08 52 01.7**	**+0.7**
	0.4nm,0.3s,baz=303,slow=18,SNR=30						
KURBB				Lg	Lg	08 52 32.7	
	0.5nm,0.3s,baz=309,slow=31,SNR=11						
	1.2nm,0.3s						
KURK	**Kurchatov**	**2.20**	**110**	⇓Pn	**Pn**	**08 52 02.1**	**+0.8**
	0.5nm,0.3s						
KURK				⇓Sn	**Sb**	**08 52 30.6**	**-1.2**
	6.5nm,0.7s						
BVA0	**Borovoye Array**	**3.41**	**298**	⇓Pg	**Pb**	**08 52 23.7**	**-1.1**
	0.5nm,0.5s,baz=104,slow=15,SNR=8.9						
BVA0				⇓Lg	Lg	08 53 06.8	
	3.1nm,0.7s,baz=114,slow=28,SNR=8.4						
BVAR	**Borovoye Array**	**3.41**	**298**	Pn	**Pn**	**08 52 18.9**	**+1.0**
	0.1nm,0.3s,baz=110,slow=15,SNR=5.8						
BVAR				Sn	**Sn**	**08 52 59.6**	**+0.4**
	0.1nm,0.3s,baz=110,slow=28,SNR=5.8						
BVAR				Lg	Lg	08 53 08.2	
	0.4nm,0.3s,baz=115,slow=27,SNR=11						
	0.6nm,0.4s						
BRVK	**Borovoye**	**3.49**	**299**	⇓Pg	**Pn**	**08 52 21.3**	**+2.4**
	0.5nm,0.4s						
BRVK				⇓Lg	Lg	08 53 11.5	
	5.6nm,0.9s						
OTUK	**Ortayu**	**3.80**	**212**	⇓Pg	**Pg**	**08 52 36.0**	**-0.4**
	0.8nm,0.5s						
OTUK				⇑Lg	Lg	08 53 28.5	
	2.1nm,0.7s						
I46RU	**ZALESOVO INFRA**	**6.25**	**63**	I	I	09 26 10.0	
	baz=248,slow=340,SNR=2.1						
ZALV	**Zalesovo Beam**	**6.25**	**63**	Pn	**Pn**	**08 52 56.8**	**0.0**
	0.3nm,0.3s,baz=251,slow=14,SNR=3.8						
	0.9nm,0.4s						
MK31	**Makanchi Array**	**6.55**	**133**	⇓Lg	Lg	08 54 52.8	
	2.7nm,0.7s,baz=329,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**6.55**	**133**	Pn	**Pn**	**08 53 02.2**	**+1.2**
	0.1nm,0.3s,baz=316,slow=13,SNR=1.9						
MKAR				Sn	**Sn**	**08 54 16.9**	**+0.5**
	0.2nm,0.3s,baz=325,slow=23,SNR=5.6						
MKAR				Lg	Lg	08 54 51.7	
	0.3nm,0.3s,baz=325,slow=28,SNR=5.6						
	0.1nm,0.5s						

IDC 13 08:55:08.5±2.6, 54°32N×86°17E, h0 km, mbtmp2.9/2, ML2.9/2, Error ellipse: s-maj=19.0km s-min=12.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**245**	I	I	09 00 50.0	
	baz=67,slow=332,SNR=1.7						
ZALV	**Zalesovo Beam**	**0.88**	**245**	Pg	Pg	08 55 23.3	-2.0
	1.4nm,0.3s,baz=63,slow=18,SNR=11						
ZALV				Lg	Lg	08 55 37.5	
	6.3nm,0.3s,baz=68,slow=33,SNR=12						
KURBB	**Kurchatov Arra**	**5.96**	**235**	Pn	Pn	08 56 38.9	+1.0
	0.1nm,0.3s,baz=52,slow=13,SNR=2.7						
KURBB				Sn	Sn	08 57 46.9	+0.1
	baz=34,slow=20,SNR=2.1						
KURBB				Lg	Lg	08 58 19.3	
	baz=90,slow=23,SNR=1.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.93**	**200**	Pn	Pn	08 57 05.9	+0.8
	0.5nm,0.3s,baz=20,slow=14,SNR=13						
MKAR				Sn	Sn	08 58 36.6	+1.2
	0.1nm,0.3s,baz=17,slow=30,SNR=2.8						
MKAR				Lg	Lg	08 59 23.8	
	baz=17,slow=32,SNR=2.9						
	0.4nm,0.3s						

IDC 13 09:01:20.2±2.1, 51°.91N×178°.30E, h110 km±17 km, mb3.4/12, mbtmp3.8/14, Error ellipse: s-maj=29.1km s-min=14.3km az=179.0
AEIC 13 09:01:20.1±1.7, 51°.9N±0°.2×178°.3E±0°.1, h118 km±3 km, Error ellipse: s-maj=24.5km s-min=9.6km az=185.0
NEIC 13 09:01:21.6±2.0, 52°.0N±0°.2×178°.3E±0°.1, h112 km±7 km, mb3.9/57, ML3.3(AEIC), Error ellipse: s-maj=25.4km s-min=9.5km az=184.0

ISC 13 09:01:20.7±0.7, 51°.9N±0°.1×178°.27E±0°.04, h116 km±5 km, n87, σ0 s97/91, mb3.8/28, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.17**	**65**		**Pn**	**09 01 36.7**	**-0.1**
LSNW					**Sn**	**09 01 48.9**	**0.0**
LSSE	**Little Sitkin**	**0.19**	**80**		**Pn**	**09 01 37.1**	**+0.2**
LSPA	**Little Sitkin**	**0.20**	**73**		**Pn**	**09 01 36.9**	**+0.1**
LSPA					**Sn**	**09 01 51.2**	**+2.2**
CEAP	**Semis' Anvil P**	**0.82**	**82**		**Pn**	**09 01 40.6**	**-0.1**
AMKA	**Amchitka**	**0.83**	**129**		**Pn**	**09 01 40.5**	**-0.2**
AMKA					**Sn**	**09 01 55.3**	**-0.6**
CERB	**Semis' Cerberu**	**0.84**	**87**		**Pn**	**09 01 41.3**	**+0.4**
CERB					**Sn**	**09 01 56.9**	**+0.8**
TASE	**Tanaga Southea**	**2.29**	**90**		**Pn**	**09 01 57.7**	**0.0**
TAFP	**Tanaga Falls P**	**2.32**	**89**		**Pn**	**09 01 57.7**	**-0.3**
TAFP					**Sn**	**09 02 26.5**	**-0.2**
SHEM	**Shemya Is, Ala**	**2.69**	**290**	P	**Pn**	**09 02 02.6**	**-0.1**
	40nm,0.3s,baz=158,slow=3.2,SNR=6.4						
SHEM				S	**Sn**	**09 02 35.2**	**+0.2**
	77nm,0.3s,baz=279,slow=20,SNR=17						
KIMD	**Kanaga Island**	**2.79**	**91**		**Pn**	**09 02 03.7**	**-0.4**
KIWB	**Kanaga Island**	**2.84**	**89**	Pn	**Pn**	**09 02 04.0**	**-0.8**
PETK	**Petropavlovsk-**	**12.59**	**284**	S	**Sn**	**09 06 29.6**	**-4.2**
	3.4nm,0.8s,baz=10,slow=33,SNR=2.0						
N17K	**Nushagak Hills**	**16.07**	**48**		**P**	**09 05 01.2**	**+0.5**
N17K					IAmb	IAmb	09 05 18.7	
	comp=Z,15nm,1.4s							
M17K	**Holitna River**	**16.30**	**45**	Pn	**Pn**	**09 05 01.1**	**-1.4**
M17K					IAmb	IAmb	09 05 27.6	
	comp=Z,19nm,1.5s							
I17K	**Unalakleet**	**16.30**	**34**		**Pn**	**09 05 02.2**	**-0.3**
F15K	**North Star Dit**	**16.34**	**26**		**Pn**	**09 05 01.2**	**-1.8**
F15K					IAmb	IAmb	09 05 11.7	
	comp=Z,6.4nm,1.4s							
K17K	**Iditarod**	**16.55**	**40**	Pn	**Pn**	**09 05 03.9**	**-1.6**
L18K	**Granite Mounta**	**16.97**	**43**	P	**P**	**09 05 10.7**	**-0.1**
O19K	**Port Alsworth**	**17.31**	**51**	P	**P**	**09 05 13.8**	**-0.6**
Q19K	**Cape Douglas,**	**17.33**	**55**	P	**P**	**09 05 13.0**	**-1.7**
N19K	**Bonanza Creek**	**17.42**	**49**	P	**P**	**09 05 13.7**	**-2.0**
N19K					IAmb	IAmb	09 05 13.8	
	comp=Z,8.0nm,1.1s							
J18K	**Innoko River**	**17.55**	**39**	P	**P**	**09 05 15.6**	**-1.4**
TTA	**Tatalina**	**17.57**	**41**	P	**Pn**	**09 05 18.4**	**+0.4**
TTA					IAmb	IAmb	09 05 22.1	
	comp=Z,8.6nm,1.3s							
KDAK	**Kodiak Island**	**17.70**	**59**	P	**P**	**09 05 18.4**	**-0.3**
KDAK	**Kodiak Island**	**17.70**	**59**	P	**Pn**	**09 05 18.9**	**-0.6**
	comp=Z,16nm,1.0s,baz=266,slow=4.4,SNR=6.4							
L19K	**White Mountain**	**17.74**	**44**	P	**P**	**09 05 18.1**	**-1.1**
L19K					IAmb	IAmb	09 05 37.6	
	comp=Z,9.5nm,1.4s							
K20K	**Telida**	**18.55**	**41**	P	**Pn**	**09 05 29.3**	**-0.3**
K20K					IAmb	IAmb	09 05 35.4	
	comp=Z,9.1nm,1.4s							
CNPM	**China Poot**	**18.66**	**54**	P	**Pn**	**09 05 29.8**	**-1.1**
BRLK	**Bradley Lake**	**18.88**	**53**	P	**P**	**09 05 31.8**	**+0.1**
J20K	**Nowinta River**	**18.89**	**39**	P	**Pn**	**09 05 32.8**	**-0.8**
J20K					IAmb	IAmb	09 06 01.1	
	comp=Z,6.7nm,1.4s							
SUA	**Susitna One**	**19.34**	**48**	P	**P**	**09 05 35.7**	**-1.0**
SUA					IAmb	IAmb	09 06 04.3	
	comp=Z,15nm,1.4s							
CAST	**Castle Rocks**	**19.39**	**42**	P	**P**	**09 05 37.7**	**+0.5**
CAST					IAmb	IAmb	09 05 43.0	
	comp=Z,7.8nm,1.4s							
C18K	**Utukok River**	**19.46**	**23**	P	**P**	**09 05 38.0**	**0.0**
IMAR	**Indian Mountai**	**19.93**	**34**	P	**Pn**	**09 05 44.7**	**-1.0**
H21K	**Melozitna Rive**	**20.10**	**36**	P	**P**	**09 05 44.3**	**-0.5**
D19K	**Kuna River**	**20.13**	**25**	P	**P**	**09 05 45.5**	**+0.4**
D19K					IAmb	IAmb	09 05 56.6	
	comp=Z,6.1nm,1.4s							
GHO	**Glory Hole Cre**	**20.26**	**48**	P	Pn	09 05 48.5	-1.2
GHO					IAmb	IAmb	09 05 56.4	
	comp=Z,13nm,1.2s							
SML	**Sawmill**	**20.54**	**48**	P	Pn	09 05 51.8	-1.2
SML					IAmb	IAmb	09 05 57.0	
	comp=Z,10nm,1.2s							
SCM	**Sheep Creek Mo**	**21.01**	**48**	P	**P**	**09 05 54.8**	**+0.1**
B20K	**Meade River**	**21.44**	**23**	P	**P**	**09 06 00.6**	**+1.5**
B20K					IAmb	IAmb	09 06 25.3	
	comp=Z,8.7nm,1.5s							
KLU	**Klutina**	**21.60**	**50**	P	**P**	**09 06 01.1**	**+0.1**
KLU					IAmb	IAmb	09 06 17.6	
	comp=Z,19nm,1.4s							
D22K	**Ayikyak River**	**21.90**	**28**	P	**P**	**09 06 04.0**	**0.0**
D22K					IAmb	IAmb	09 06 30.7	
	comp=Z,6.2nm,1.4s							
H24K	**Noodor Dome**	**22.01**	**38**	P	**P**	**09 06 06.0**	**+0.9**
G24K	**Hadweenzic Riv**	**22.50**	**36**	P	**P**	**09 06 11.2**	**+1.0**
G24K					IAmb	IAmb	09 06 13.0	
	comp=Z,4.4nm,1.1s							
J25K	**Salcha River,**	**22.58**	**42**	P	**P**	**09 06 10.1**	**-1.0**
J25K					IAmb	IAmb	09 06 34.5	
	comp=Z,4.7nm,1.4s							
B22K	**Teshekpuk Lake**	**22.60**	**25**	P	**P**	**09 06 12.6**	**+1.6**
B22K					IAmb	IAmb	09 06 30.9	
	comp=Z,5.3nm,1.4s							
TOLK	**Toolik Lake Re**	**22.70**	**30**	P	**P**	**09 06 13.0**	**+0.8**
F24K	**Squaw Lake**	**22.71**	**34**	P	**P**	**09 06 13.7**	**+1.4**
SCRK	**Sand Creek**	**23.00**	**44**	P	**P**	**09 06 14.1**	**-1.1**
SCRK					IAmb	IAmb	09 06 16.4	
	comp=Z,6.4nm,1.4s							
TGL	**Tana Glacier**	**23.00**	**52**	P	**P**	**09 06 16.3**	**+1.1**
M26K	**Nabesna, AK**	**23.12**	**48**	P	**P**	**09 06 16.7**	**+0.4**
M26K					IAmb	IAmb	09 06 24.9	
	comp=Z,8.0nm,1.3s							
ISLE	**Juniper Island**	**23.22**	**53**	P	**P**	**09 06 17.0**	**-0.3**
MESA	**MESA**	**23.39**	**54**	P	**P**	**09 06 17.1**	**-1.8**
GRNC	**Granite Creek**	**23.52**	**52**	P	**P**	**09 06 21.0**	**+0.8**
M27K	**Edge Creek, AK**	**23.63**	**48**	P	**P**	**09 06 20.7**	**-0.3**
M27K					IAmb	IAmb	09 06 45.5	
	comp=Z,16nm,1.5s							
E25K	**Arctic Village**	**23.77**	**33**	P	**P**	**09 06 23.3**	**+1.3**
BCAR	**Beaver Creek A**	**23.78**	**46**	P	**P**	**09 06 23.4**	**+1.2**
LOGN	**Logan Glacier**	**23.89**	**52**	P	**P**	**09 06 23.5**	**+0.1**
EGAK	**Eagle**	**24.38**	**42**	P	**P**	**09 06 27.4**	**-0.2**
EGAK					IAmb	IAmb	09 06 56.6	
	comp=Z,3.8nm,1.0s							
DAWY	**Dawson**	**25.00**	**45**	P	**P**	**09 06 33.3**	**0.0**
DAWY					IAmb	IAmb	09 06 34.8	
	comp=Z,3.2nm,1.1s							
I28M	**Miner Creek**	**25.03**	**41**	P	**P**	**09 06 33.1**	**-0.5**
L29M	**L29M**	**25.43**	**47**	P	**P**	**09 06 38.0**	**+0.7**
L29M					IAmb	IAmb	09 06 46.9	
	comp=Z,5.8nm,1.2s							
P29M	**Windy Craggy**	**25.51**	**55**	P	**P**	**09 06 38.1**	**+0.2**
D27M	**Malcolm River**	**25.76**	**32**	P	**P**	**09 06 41.6**	**+1.4**
H29M	**Whitestone**	**25.82**	**40**	P	**P**	**09 06 40.6**	**-0.1**
J30M	**Hart River**	**26.39**	**44**	P	**P**	**09 06 45.1**	**-0.8**
J30M					IAmb	IAmb	09 07 10.7	
	comp=Z,6.7nm,1.4s							
I30M	**Mount Dempster**	**26.45**	**42**	P	**P**	**09 06 46.5**	**+0.1**
G30M	**tAoh Zraii Nji**	**26.82**	**38**	P	**P**	**09 06 49.1**	**-0.5**
H31M	**Peel River**	**27.37**	**41**	P	**P**	**09 06 54.7**	**+0.1**
G31M	**Satah River**	**27.57**	**39**	P	**P**	**09 06 56.6**	**+0.4**
G31M					IAmb	IAmb	09 07 13.0	
	comp=Z,3.8nm,1.5s							
WRAK	**Wrangell Islan**	**28.75**	**61**	P	**P**	**09 07 06.6**	**-0.3**
KLR	**Kul'dur**	**29.28**	**283**	P	**P**	**09 07 12.2**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=55,slow=8.0,SNR=5.8							
	comp=Z,1.0nm,0.4s							
YKA	**Yellowknife Ar**	**36.20**	**46**	P	**P**	**09 08 11.5**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=280,slow=8.6,SNR=3.6							
	comp=Z,0.4nm,0.9s							
SONM	**Songino Array**	**44.77**	**295**	P	**P**	**09 09 23.0**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=64,slow=6.2,SNR=4.3							
	comp=Z,0.6nm,0.5s							
NVAR	**Mina Array Bea**	**45.29**	**81**	P	**P**	**09 09 27.4**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=2.4							
	comp=Z,0.2nm,0.6s							
PDAR	**Pinedale Array**	**47.88**	**71**	P	**P**	**09 09 46.0**	**-1.0**
	comp=Z,0.1nm,0.2s,baz=305,slow=3.2,SNR=2.7							
	comp=Z,0.1nm,0.2s							
KURK	**Kurchatov**	**57.32**	**312**	P	**P**	**09 10 57.0**	**+1.0**
KURK					IAmb	IAmb	09 11 14.4	
	comp=Z,1.7nm,1.1s							
KURBB	**Kurchatov Arra**	**57.43**	**312**	P	**P**	**09 10 57.3**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=44,slow=6.9,SNR=5.0							
	comp=Z,0.8nm,0.4s							
MKAR	**Makanchi Array**	**58.27**	**307**	P	**P**	**09 11 03.2**	**+0.4**
MKAR	**Makanchi Array**	**58.27**	**307**	P	**P**	**09 11 01.9**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=49,slow=6.6,SNR=8.2							
	comp=Z,0.4nm,0.5s							
BVAR	**Borovoye Array**	**59.29**	**318**	P	**P**	**09 11 10.2**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=56,slow=6.9,SNR=9.5							
	comp=Z,1.5nm,0.3s							
TXAR	**Lajitas Array**	**60.37**	**79**	P	**P**	**09 11 17.5**	**0.0**
TXAR	**Lajitas Array**	**60.37**	**79**	P	**P**	**09 11 16.9**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=309,slow=5.7,SNR=2.5							
	comp=Z,0.2nm,0.5s							
ABKAR	**Akbulak array**	**66.40**	**321**	P	**P**	**09 11 58.6**	**+1.9**
ABKAR					IAmb	IAmb	09 12 00.7	
	comp=Z,1.1nm,0.8s							
AKASG	**Malin Array Be**	**74.46**	**340**	P	**P**	**09 12 46.0**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=21,slow=6.1,SNR=3.4							
	comp=Z,0.7nm,0.4s							
WRA	**Warramunga Arr**	**81.16**	**221**	P	**P**	**09 13 23.7**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=36,slow=6.2,SNR=4.7							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**84.67**	**220**	P	**P**	**09 13 41.2**	**0.0**
	comp=Z,0.7nm,1.0s,baz=24,slow=7.2,SNR=2.9							
	comp=Z,0.7nm,1.0s							

IDC 13 09:03:58.7±1.7, 54°.65N×83°.76E, h0 km, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=14.6km s-min=9.9km az=3.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**138**	I	I	09 09 46.3	
	0.4nm,0.9s,baz=316,slow=339,SNR=42						
ZALV	**Zalesovo Beam**	**0.94**	**138**	Pg	Pg	09 04 16.1	-0.6
	1.9nm,0.3s,baz=321,slow=16,SNR=15						
ZALV				Lg	Lg	09 04 29.8	
	3.7nm,0.3s,baz=316,slow=29,SNR=6.3						
KURBB	**Kurchatov Arra**	**5.14**	**220**	Pn	Pn	09 05 17.1	+0.3
	baz=42,slow=13,SNR=2.3						
KURBB				Sn	Sn	09 06 16.5	-0.3
	0.1nm,0.3s,baz=336,slow=32,SNR=4.6						
KURBB				Lg	Lg	09 06 42.5	
	0.1nm,0.3s,baz=44,slow=32,SNR=3.7						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**7.92**	**187**	Pn	Pn	09 05 55.5	+0.4
	0.1nm,0.3s,baz=9.6,slow=12,SNR=2.8						
MKAR				Sn	Sn	09 07 25.1	-0.3
	baz=32,slow=27,SNR=1.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**8.08**	**264**	Pn	Pn	09 05 55.8	-1.3
	0.1nm,0.3s,baz=68,slow=16,SNR=4.3						
	0.7nm,0.4s						

IDC 13 09:04:30.4±1.5, 0°.31N×126°.45E, h0 km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=154.8km s-min=19.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.56**	**159**	P	P	09 09 21.2	-0.5
	1.1nm,0.6s,baz=337,slow=10.0,SNR=7.6						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**24.91**	**164**	P	P	09 09 55.8	+0.4
	0.8nm,0.6s,baz=344,slow=7.8,SNR=17						
	0.8nm,0.6s						
STKA	**Stephens Creek**	**35.08**	**157**	P	P	09 11 25.1	-0.3
	1.4nm,0.7s,baz=331,slow=13,SNR=4.1						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**60.21**	**327**	P	P	09 14 40.6	+0.2
	0.5nm,0.4s,baz=126,slow=7.0,SNR=13						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**64.47**	**328**	P	P	09 15 08.3	-0.4
	0.4nm,0.5s,baz=134,slow=5.5,SNR=2.2						
	0.4nm,0.5s						

NNC 13 09:05:15.6±4.3, 37°.98N×71°.67E, h211 km±66 km, mb2.6, mpv3.8, Error ellipse: s-maj=45.1km s-min=23.0km az=9.0

ISC 13 09:05:15.2±3.3, 38°.0N±0°.2×71°.7E±0°.1, h200 km, n10, σ1 s08/14, 4C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**4.80**	**26**	P	**Pn**	**09 06 26.6**	**-0.9**
	SNR=12						
EKS2	**Erkin-Say**	**4.98**	**18**	P	**Pn**	**09 06 29.8**	**+0.4**
	SNR=19						
AAK	**Ala-Archa**	**5.16**	**24**	P	**Pn**	**09 06 32.0**	**+0.2**
	SNR=13						
KK31	**Karatay Array**	**5.22**	**351**	⇑P	**Pn**	**09 06 33.8**	**+1.4**
	4.3nm,0.3s,baz=173,slow=12,SNR=4.2						
KK31				⇓S	**Sn**	**09 07 34.3**	**+1.0**
	6.8nm,0.6s,baz=172,slow=22,SNR=9.9						
CHMS	**Chumysh**	**5.56**	**24**	P	**Pn**	**09 06 37.1**	**+0.3**
	SNR=10						
CHMS	**Chumysh**	**5.56**	**24**	⇓P	**Pn**	**09 06 36.0**	**-0.8**
	8.2nm,0.4s						
CHMS				⇑S	**Sn**	**09 07 41.8**	**+0.4**
	8.4nm,0.8s						
USP	**Ospenovka**	**5.73**	**21**	P	**Pn**	**09 06 39.4**	**+0.4**
	SNR=5.0						
TKM2	**Tokmak 2**	**5.80**	**30**	P	**Pn**	**09 06 40.4**	**+0.4**
	SNR=9.6						
TKM2	**Tokmak 2**	**5.80**	**30**	⇑P	**Pn**	**09 06 39.5**	**-0.5**
	3.7nm,0.5s						
TKM2				⇓S	**Sn**	**09 07 48.0**	**+0.9**
	4.3nm,0.7s						
AB31	**Akbulak array**	**14.11**	**327**	⇑P	**P**	**09 08 28.3**	**+0.3**
	0.2nm,0.3s,baz=134,slow=16,SNR=15						
AB31				⇓S	**S**	**09 11 00.7**	**-2.6**
	0.9nm,0.8s,baz=151,slow=22,SNR=5.0						

UPA 13 09:08:19.2±0.5, 8°.47N×83°.09W, h11 km±2 km, MW3.2
CATAC 13 09:08:19.9±0.5, 8°.45N×83°.08W, h6 km±2 km, ML2.9

ISC 13 09:08:19.9±1.0, 8°.48N±0°.04×83°.08W±0°.02, h16 km±8 km, n27, σ1 s07/40, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.23**	**65**	*e*P	**Pg**	**09 08 24.4**	**-0.7**
CDITO	**Canoas**	**0.23**	**65**	*i* P	**Pg**	**09 08 25.1**	**0.0**
CDITO				*i* S	**Sg**	**09 08 29.8**	**+1.2**
CDITO				IAML		09 08 33.0	
	comp=Z,1μm,1.0s						
PIRO	**Carate, Puerto**	**0.26**	**254**	*i* P	**Pg**	**09 08 25.2**	**-0.5**
PIRO				*i* S	**Sb**	**09 08 30.6**	**0.0**
PIRO				IAML		09 08 33.0	
	comp=Z,4μm,1.0s						
PTPM	**Petroterminale**	**0.34**	**144**	*e*P	**Pb**	**09 08 26.8**	**-0.7**
BRU2	**Volcan**	**0.50**	**51**	*e*P	**Pg**	**09 08 30.0**	**+0.1**
BRU2				*e*S	**Sb**	**09 08 38.3**	**+0.9**
BRU2	**Volcan**	**0.50**	**51**	*i* P	**Pg**	**09 08 30.2**	**+0.3**
BRU2				IAML		09 08 30.4	
	comp=Z,780nm,1.0s						
BRU2				*i* S	**Sb**	**09 08 38.6**	**+1.1**
POTG	**Potrero Grande**	**0.57**	**356**	*i* P	**Pg**	**09 08 31.2**	**-0.1**

TAP 13 09:14:59.6, 24.42N×121.76E, h7km, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.02**	**308**	*eP*	Pg	09 15 01.5	+0.6
	baz=321						
ENA				*eS*	Sg	09 15 02.5	+0.6
	baz=321						
EWUT	**Wuta**	**0.04**	**32**	*i* P	Pg	09 15 01.7	+0.6
	baz=31						
EWUT				*i* S	Sg	09 15 02.5	+0.5
	baz=31						
EAHA	**Aohua**	**0.09**	**191**	P	Pg	09 15 02.7	+1.0
	baz=191						
EAHA				*eS*	Sg	09 15 04.2	+1.1
	baz=191						
EAHA	**Aohua**	**0.09**	**191**	*eP*	Sg	09 15 04.2	+1.0
	baz=217						
ESAO	**Su ao**	**0.18**	**26**	*eP*	Pg	09 15 04.1	+0.8
	baz=26						
ESAO				*eS*	Sg	09 15 06.4	+0.7
	baz=26						
TWC	**Suao**	**0.21**	**23**	P	Pg	09 15 04.8	+1.0
	baz=25						
TWC				*eS*	Sg	09 15 07.8	+1.1
	baz=25						
TWC	**Suao**	**0.21**	**23**	*eP*	Sg	09 15 07.7	+1.1
	baz=14						
LATG	**Datong**	**0.24**	**299**	*eP*	Pg	09 15 06.2	+1.7
	baz=299						
LATG				*eS*	Sg	09 15 09.7	+1.9
	baz=299						
ENTT	**Nioudou**	**0.28**	**322**	P	Pb	09 15 06.8	-0.2
	baz=322						
ENTT				*eS*	Sg	09 15 10.5	+1.5
	baz=322						
NACB	**Ninganchiao**	**0.28**	**212**	*eP*	Pg	09 15 06.0	+0.9
	baz=211						
NACB				*eS*	Sg	09 15 10.3	+1.3
	baz=211						
ETL	**Fush Village**	**0.28**	**206**	*eP*	Pb	09 15 06.3	-0.7
	baz=205						
NDT	**Datong Townshi**	**0.29**	**310**	*eP*	Pb	09 15 06.7	-0.5
	baz=309						
TWE	**Neicheng**	**0.32**	**345**	*eP*	Pb	09 15 07.3	-0.2
	baz=347						
ETLH	**Xiulin Townshi**	**0.33**	**230**	*eP*	Pb	09 15 07.2	-0.6
	baz=230						
ETLH				*eS*	Sg	09 15 11.6	+1.2
	baz=230						
NNSB	**Datong**	**0.34**	**272**	*eP*	Pb	09 15 07.3	-0.8
	baz=272						
NNSB				*eS*	Sb	09 15 12.7	-1.1
	baz=272						
NNS	**Nan Shan**	**0.35**	**274**	*eP*	Pb	09 15 07.9	-0.3
	baz=273						
TWD	**Chiawan**	**0.37**	**204**	*eP*	Pb	09 15 07.7	-0.7
	baz=202						
FUSB	**Fushanzhiwuyua**	**0.38**	**336**	*eP*	Pb	09 15 08.6	-0.1
	baz=335						
FUSB				*eS*	Sb	09 15 14.7	0.0
	baz=335						
YHNB	**Yeheng**	**0.43**	**306**	*eP*	Pb	09 15 09.8	+0.2
	baz=305						
YHNB				*eS*	Sb	09 15 15.8	-0.5
	baz=305						
EOS2	**EOS2**	**0.43**	**90**	*eP*	Pb	09 15 09.7	+0.2
	baz=89						
NSK	**Sanguang**	**0.45**	**305**	*eP*	Pb	09 15 10.4	+0.5
	baz=305						
LXIB	**Xiulin Townshi**	**0.50**	**219**	P	Pb	09 15 10.6	-0.2
	baz=218						
WHF	**Hehuan Shan**	**0.53**	**239**	*eP*	Pb	09 15 10.8	-0.5
	baz=238						

TAP 13 09:15:02.2, 24.40N×121.79E, h3km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.05**	**344**	*i* P	Pg	09 15 03.4	+0.1
	baz=343						
EWUT				S	Sg	09 15 04.3	+0.3
	baz=343						
ENA	**Nanau**	**0.06**	**302**	*eP*	Pg	09 15 03.4	0.0
	baz=305						
ENA				*eS*	Sg	09 15 04.4	+0.2
	baz=305						
EAHA	**Aohua**	**0.08**	**216**	*eS*	Sg	09 15 05.8	+0.8
	baz=217						
LATG	**Datong**	**0.28**	**299**	*eP*	Pb	09 15 08.8	-1.2
	baz=301						

IDC 13 09:18:07.0±2.9, 54.22N×87.27E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=23.3km s-min=16.2km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.47**	**260**	I	I	09 27 00.0	
	baz=79,slow=329,SNR=4.7						
ZALV	**Zalesovo Beam**	**1.47**	**260**	Pg	Pn	09 18 33.5	-1.2
	1.9nm,0.3s,baz=81,slow=17,SNR=18						
ZALV				Lg	Lg	09 18 53.5	
	1.8nm,0.3s,baz=78,slow=31,SNR=7.1						
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	Pn	09 19 43.8	+0.7
	0.1nm,0.3s,baz=55,slow=14,SNR=5.5						
KURBB				Sn	Sn	09 20 56.8	-0.5
	baz=57,slow=22,SNR=2.0						
KURBB				Lg	Lg	09 21 32.2	
	baz=53,slow=26,SNR=2.1						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	09 20 06.7	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=5.9						
MKAR				Sn	Sn	09 21 37.2	-0.4
	0.1nm,0.3s,baz=162,slow=41,SNR=1.4						
MKAR				Lg	Lg	09 22 24.5	
	baz=32,slow=28,SNR=2.4						
	0.2nm,0.3s						

IDC 13 09:22:30.0±2.7, 53.74N×86.99E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=23.9km s-min=13.6km az=75.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**280**	I	I	09 30 30.0	
	baz=100,slow=335,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.30**	**280**	Pg	Pg	09 22 53.7	-1.2
	0.4nm,0.3s,baz=99,slow=17,SNR=8.3						
ZALV				Lg	Lg	09 23 11.9	
	1.0nm,0.3s,baz=102,slow=29,SNR=10						
KURBB	**Kurchatov Arra**	**6.07**	**242**	Pn	Pn	09 24 01.5	+0.7
	baz=58,slow=14,SNR=6.0						
KURBB				Lg	Lg	09 25 44.0	
	baz=50,slow=21,SNR=2.2						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**7.58**	**205**	Pn	Pn	09 24 22.9	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=4.4						
MKAR				Sn	Sn	09 25 47.8	-0.5
	0.1nm,0.3s,baz=27,slow=20,SNR=2.2						
MKAR				Lg	Lg	09 26 34.0	
	0.1nm,0.3s,baz=15,slow=28,SNR=5.2						
	0.2nm,0.3s						

IDC 13 09:28:35.1±2.4, 57.57N×32.82W, h0km, mb3.4/5, mbtmp3.4/5, MS3.4/9, Error ellipse: s-maj=84.0km s-min=27.5km az=6.0

ISC 13 09:28:37.3±2.2, 57.6N±0.6×32.8W±0.2, h15km, n14, σ0s42/6, mb3.5/5, MS3.4/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**19.00**	**276**	LR	LR	09 39 10.3	
	comp=Z,101nm,18.5s,baz=88,slow=33						
GERES	**GERESS Array B**	**28.68**	**87**	LR	LR	09 44 33.2	
	comp=Z,44nm,20.0s,baz=305,slow=33						
VRAC	**Vranov**	**29.96**	**84**	LR	LR	09 45 36.5	
	comp=Z,62nm,18.6s,baz=324,slow=34						
SADO	**Sadowa**	**31.09**	**266**	LR	LR	09 45 57.0	
	comp=Z,85nm,21.1s,baz=78,slow=34						
AKASG	**Malin Array Be**	**35.83**	**74**	P	**P**	**09 35 35.9**	**+0.1**
	0.2nm,0.3s,baz=307,slow=8.3,SNR=5.3						
	0.2nm,0.3s						
MLR	**Muntele Rosu**	**37.32**	**83**	LR	LR	09 51 19.5	
	comp=Z,73nm,19.7s,baz=332,slow=37						
YKA	**Yellowknife Ar**	**38.58**	**313**	P	**P**	**09 35 59.0**	**0.0**
	0.2nm,0.9s,baz=66,slow=8.4,SNR=4.1						
	0.2nm,0.9s						
ARU	**Arti**	**46.12**	**50**	LR	LR	09 55 12.2	
	comp=Z,49nm,18.9s,baz=342,slow=35						
ILAR	**Eielson Array**	**48.18**	**328**	P	**P**	**09 37 16.3**	**-0.1**
	0.7nm,0.8s,baz=34,slow=6.5,SNR=8.3						
	0.7nm,0.8s						
NEW	**Newport**	**48.52**	**297**	LR	LR	09 56 26.8	
	comp=Z,83nm,19.5s,baz=300,slow=34						
PDAR	**Pinedale Array**	**48.63**	**287**	P	**P**	**09 37 20.1**	**-0.3**
	0.8nm,0.9s,baz=55,slow=7.8,SNR=4.8						
PDAR				LR	LR	09 59 11.0	
	comp=Z,24nm,18.1s,baz=320,slow=38						
	0.8nm,0.9s						
AKTO	**Aktyubinsk**	**50.02**	**57**	LR	LR	10 00 07.3	
	comp=Z,32nm,20.2s,baz=246,slow=38						
NVAR	**Mina Array Bea**	**56.31**	**290**	P	**P**	**09 38 18.0**	**+0.6**
	0.2nm,0.6s,baz=57,slow=3.3,SNR=2.1						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**144.81**	**21**	PKP	**PKPdf**	**09 48 13.0**	**-0.3**
	0.2nm,0.7s,baz=352,slow=3.7,SNR=1.7						

IDC 13 09:31:43.6±0.8, 12.07N×143.92E, h0km, mb4.1/13, mbtmp4.1/13, MS3.1/2, Error ellipse: s-maj=26.9km s-min=18.1km az=116.0

NEIC 13 09:31:49.3±1.6, 12.1N±0.1×143.9E±0.2, h29km±6km, mb4.6/95, Error ellipse: s-maj=22.7km s-min=13.7km az=109.0

ISC 13 09:31:48.3±0.6, 12.14N±0.08×143.9E±0.1, h26km, n123, σ0s85/119, mb4.5/61, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.74**	**34**	Pn	**Pn**	**09 32 16.6**	**-0.2**
	128nm,0.3s,baz=179,slow=5.1,SNR=36						
GUMO				Sn	**Sb**	**09 32 40.1**	**-0.9**
	168nm,0.3s,baz=160,slow=22,SNR=13						
GUMO				LR	LR	09 33 08.0	
	comp=Z,324nm,19.5s,baz=192,slow=48						
JOW	**Kunigami**	**20.70**	**317**	P	**P**	**09 36 27.0**	**+0.4**
JOW				IAmb	IAmb	09 36 33.0	
	comp=Z,23nm,1.0s						
JHJ2	**Mitsune**	**21.20**	**351**	P	**P**	**09 36 31.7**	**-0.3**
PMG	**Port Moresby**	**21.65**	**171**	LR	LR	09 44 40.7	
	comp=Z,32nm,21.7s,baz=335,slow=36						
H11N1	**WAKE ISLAND Hy**	**23.37**	**68**	T	T	10 01 19.6	
	baz=255,slow=74						
H11N2	**WAKE ISLAND Hy**	**23.38**	**68**	T	T	10 01 20.9	
	baz=255,slow=74						
H11N3	**WAKE ISLAND Hy**	**23.38**	**68**	T	T	10 01 22.6	
	baz=255						
TPUB	**Ta-pu**	**24.72**	**300**	P	**P**	**09 37 06.8**	**-0.9**
MJB9	**Matsu-Tunnel**	**24.83**	**349**	P	**P**	**09 37 07.7**	**-0.9**
MJB9				IAmb	IAmb	09 37 33.8	
	comp=Z,39nm,1.5s						
KNMB	**Chin-men Tao**	**27.06**	**300**	P	**P**	**09 37 27.9**	**-0.9**
CTA	**Charters Tower**	**32.11**	**176**	LR	LR	09 51 04.8	
	comp=Z,47nm,18.4s,baz=105,slow=36						
WB2	**Warramunga Arr**	**33.23**	**196**	P	**P**	**09 38 23.1**	**-0.3**
WB2				IAmb	IAmb	09 38 44.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**33.23**	**197**	P	**P**	**09 38 21.6**	**-1.9**
WRA	**Warramunga Arr**	**33.23**	**197**	P	**P**	**09 38 22.1**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=20,slow=9.6,SNR=2.9						
	comp=Z,1.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**34.72**	**359**	P	**P**	**09 38 35.6**	**-0.4**
ASAR	**Alice Springs**	**36.90**	**195**	P	**P**	**09 38 54.1**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=13,slow=9.1,SNR=5.3						
	comp=Z,0.5nm,0.9s						
BBOO	**Buckleboo**	**45.31**	**189**	P	**P**	**09 40 05.2**	**+1.1**
SONM	**Songino Array**	**47.37**	**326**	P	**P**	**09 40 21.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=155,slow=9.5,SNR=2.1						
	comp=Z,0.3nm,0.5s						
MK31	**Makanchi Array**	**61.86**	**317**	P	**P**	**09 42 06.0**	**+0.6**
MKAR	**Makanchi Array**	**61.86**	**317**	P	**P**	**09 42 05.3**	**-0.1**
MKAR	**Makanchi Array**	**61.86**	**317**	P	**P**	**09 42 05.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=87,slow=8.4,SNR=8.1						
	comp=Z,0.5nm,0.5s						
ANM	**Nome**	**62.90**	**22**	P	**P**	**09 42 12.0**	**+0.1**
ANM				IAmb	IAmb	09 42 32.0	
	comp=Z,9.4nm,1.4s						
L16K	**Owhat River**	**63.91**	**26**	P	**P**	**09 42 18.5**	**-0.2**
L16K				IAmb	IAmb	09 42 24.1	
	comp=Z,8.5nm,1.4s						
K17K	**Iditarod**	**64.83**	**26**	P	**P**	**09 42 26.0**	**+1.3**
KURK	**Kurchatov**	**65.07**	**320**	P	**P**	**09 42 27.0**	**+0.5**
KURK				IAmb	IAmb	09 42 27.5	
	comp=Z,3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**65.11**	**320**	P	**P**	**09 42 26.4**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=108,slow=6.6,SNR=12						
	comp=Z,1.8nm,0.7s						
H17K	**Granite Mounta**	**65.13**	**23**	P	**P**	**09 42 25.7**	**-0.9**
H17K				IAmb	IAmb	09 42 46.9	
	comp=Z,8.5nm,1.5s						
F17K	**Baldwin Pennin**	**65.33**	**21**	P	**P**	**09 42 27.8**	**-0.1**
F17K				IAmb	IAmb	09 42 28.6	
	comp=Z,4.6nm,1.1s						
H18K	**Honhosa River**	**65.81**	**23**	P	**P**	**09 42 29.7**	**-1.4**
H18K				IAmb	IAmb	09 42 32.7	
	comp=Z,6.2nm,1.2s						
N19K	**Bonanza Creek**	**65.81**	**28**	P	**P**	**09 42 29.9**	**-1.3**
TTA	**Tatalina**	**65.88**	**26**	P	**P**	**09 42 29.9**	**-1.7**
TTA				IAmb	IAmb	09 42 49.5	
	comp=Z,5.2nm,1.3s						
E18K	**Tukpahlearik C**	**66.02**	**20**	P	**P**	**09 42 31.4**	**-0.9**
L19K	**White Mountain**	**66.11**	**27**	P	**P**	**09 42 34.1**	**+1.0**
L19K				IAmb	IAmb	09 43 02.3	
	comp=Z,11nm,1.4s						
J19K	**Poorman**	**66.44**	**25**	P	**P**	**09 42 34.1**	**-0.9**
G19K	**Purcell Mounta**	**66.71**	**22**	P	**P**	**09 42 36.7**	**0.0**
G19K				IAmb	IAmb	09 42 41.2	
	comp=Z,5.7nm,1.4s						
HOM	**Homer**	**66.81**	**30**	P	**P**	**09 42 37.7**	**+0.2**
CNPM	**China Poot**	**66.97**	**30**	P	**P**	**09 42 38.2**	**-0.4**
J20K	**Nowinta River**	**67.11**	**25**	P	**P**	**09 42 39.9**	**+0.5**
J20K				IAmb	IAmb	09 43 05.0	
	comp=Z,6.4nm,1.4s						
C19K	**Lookout Ridge**	**67.14**	**19**	P	**P**	**09 42 41.0**	**+1.5**
E19K	**Redstone River**	**67.20**	**21**	P	**P**	**09 42 40.5**	**+0.6**
E19K				IAmb	IAmb	09 42 42.7	
	comp=Z,4.2nm,1.2s						
BRLK	**Bradley Lake**	**67.21**	**30**	P	**P**	**09 42 40.0**	**-0.1**
F20K	**Kvaraert Lake**	**67.57**	**22**	P	**P**	**09 42 42.8**	**+0.7**
MCQ	**Macquarie Isla**	**67.60**	**171**	P	**P**	**09 42 42.0**	**-0.4**
CAST	**Castle Rocks**	**67.72**	**26**	P	**P**	**09 42 43.7**	**+0.4**
CAST				IAmb	IAmb	09 42 43.7	
	comp=Z,2.3nm,0.8s						
RC01	**Rabbit Creek A**	**68.11**	**29**	P	**P**	**09 42 45.5**	**-0.2**
RC01				IAmb	IAmb	09 42 59.2	
	comp=Z,10nm,1.1s						
H21K	**Melozitna Rive**	**68.16**	**24**	P	**P**	**09 42 46.2**	**+0.3**
B20K	**Meade River**	**68.31**	**18**	P	**P**	**09 42 47.8**	**+1.0**
B20K				IAmb	IAmb	09 42 48.8	
	comp=Z,8.2nm,1.4s						
I21K	**Tanana**	**68.32**	**24**	P	**P**	**09 42 47.2**	**+0.3**
I21K				IAmb	IAmb	09 43 01.6	
	comp=Z,8.2nm,1.4s						
F21K	**Alatna River**	**68.45**	**22**	P	**P**	**09 42 47.3**	**-0.5**
GHO	**Glory Hole Cre**	**68.66**	**28**	P	**P**	**09 42 49.4**	**+0.2**
GHO				IAmb	IAmb	09 43 08.0	
	comp=Z,9.7nm,1.2s						
KNK	**Knik Glacier**	**68.79**	**29**	P	**P**	**09 42 49.5**	**-0.5**
KNK				IAmb	IAmb	09 43 08.3	
	comp=Z,9.8nm,1.2s						
SML	**Sawmill**	**68.94**	**28**	P	**P**	**09 42 50.7**	**-0.3**
B21K	**Ikpikpuk River**	**68.96**	**19**	P	**P**	**09 42 51.9**	**+1.1**
RND	**Reindeer**	**69.11**	**26**	P	**P**	**09 42 51.5**	**-0.6**
RND				IAmb	IAmb	09 43 10.9	
	comp=Z,12nm,1.5s						
D22K	**Ayikyak River**	**69.32**	**20**	P	**P**	**09 42 54.4**	**+1.2**
D22K				IAmb	IAmb	09 42 57.3	
	comp=Z,8.2nm,1.4s						
E22K	**Anaktuvuk Pass**	**69.36**	**21**	P	**P**	**09 42 54.3**	**+0.9**
E22K				IAmb	IAmb	09 43 00.1	
	comp=Z,6.2nm,1.4s						
I23K	**Minto, Yukon-K**	**69.37**	**25**	P	**P**	**09 42 54.5**	**+1.0**
I23K				IAmb	IAmb	09 42 55.3	
	comp=Z,4.1nm,1.4s						
SCM	**Sheep Creek Mo**	**69.41**	**28**	P	**P**	**09 42 54.4**	**+0.5**
HIN	**Hinchinbrook I**	**69.49**	**30**	P	**P**	**09 42 54.7**	**+0.3**
G23K	**Bananza Creek**	**69.56**	**23**	P	**P**	**09 42 55.5**	**+0.8**
B22K	**Teshekpuk Lake**	**69.61**	**19**	P	**P**	**09 42 55.8**	**+0.9**
B22K				IAmb	IAmb	09 43 04.9	
	comp=Z,9.0nm,1.4s						
MDM	**Murphy Dome**	**69.78**	**25**	P	**P**	**09 42 56.5**	**+0.4**
MDM				IAmb	IAmb	09 43 06.6	
	comp=Z,6.6nm,1.4s						
KLU	**Klutina**	**69.99**	**29**	P	**P**	**09 42 57.9**	**+0.4**
H24K	**Noodor Dome**	**70.15**	**24**	P	**P**	**09 42 59.8**	**+1.4**
ILAR	**Eielson Array**	**70.29**	**25**	P	**P**	**09 42 58.2**	**-0.9**
ILAR	**Eielson Array**	**70.29**	**25**	P	**P**	**09 42 57.6**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=251,slow=5.7,SNR=20						
	comp=Z,1.1nm,0.5s						
TOLK	**Toolik Lake Re**	**70.31**	**21**	P	**P**	**09 43 00.5**	**+1.1**
TOLK				IAmb	IAmb	09 43 01.3	
	comp=Z,10nm,1.5s						
BVAR	**Borovoye Array**	**70.46**	**322**	P	**P**	**09 43 00.8**	**+0.4**
	comp=Z,2.9nm,0.4s,baz=103,slow=7.6,SNR=15						
	comp=Z,2.9nm,0.4s						
BRVK	**Borovoye**	**70.53**	**322**	P	**P**	**09 43 01.6**	**+0.7**
BRVK				IAmb	IAmb	09 43 02.5	
	comp=Z,2.5nm,0.6s						
G24K	**Hadweenzic Riv**	**70.53**	**23**	P	**P**	**09 43 01.6**	**+1.0**
G24K				IAmb	IAmb	09 43 13.1	
	comp=Z,5.2nm,1.4s						
F24K	**Squaw Lake**	**70.59**	**22**	P	**P**	**09 43 02.1**	**+1.0**
D24K	**Happy Valley**	**70.72**	**20**	P	**P**	**09 43 03.0**	**+1.3**
J25K	**Salcha River,**	**70.89**	**26**	P	**P**	**09 43 01.9**	**-1.0**
J25K				IAmb	IAmb	09 43 26.8	
	comp=Z,4.3nm,1.4s						
RIDG	**Independent Ri**	**70.93**	**26**	P	**P**	**09 43 02.6**	**-0.6**
RIDG				IAmb	IAmb	09 43 04.8	
	comp=Z,5.2nm,1.0s						
VRDI	**Verde Repeater**	**71.11**	**29**	P	**P**	**09 43 04.2**	**-0.3**
L26K	**Log Cabin Wild**	**71.46**	**27**	P	**P**	**09 43 06.9**	**+0.5**
L26K				IAmb	IAmb	09 43 16.4	
	comp=Z,9.4nm,1.4s						
E25K	**Arctic Village**	**71.60**	**22**	P	**P**	**09 43 08.6**	**+1.4**
E25K				IAmb	IAmb	09 43 12.8	
	comp=Z,6.2nm,1.4s						
D25K	**Kavik River**	**71.61**	**21**	P	**P**	**09 43 07.7**	**+0.5**
D25K				IAmb	IAmb	09 43 08.6	
	comp=Z,6.3nm,1.2s						
BMAR	**Burnt Mountain**	**71.81**	**23**	P	**P**	**09 43 09.7**	**+1.3**
BARN	**Barnard Glacie**	**71.95**	**30**	P	**P**	**09 43 10.4**	**+0.9**
M27K	**Edge Creek, AK**	**72.03**	**28**	P	**P**	**09 43 09.2**	**-0.7**
M27K				IAmb	IAmb	09 43 16.9	
	comp=Z,13nm,1.4s						
CTGM	**Chitina Glacie**	**72.09**	**30**	P	**P**	**09 43 10.1**	**-0.2**
L27K	**Beaver Creek,**	**72.15**	**27**	P	**P**	**09 43 11.2**	**+0.7**
L27K				IAmb	IAmb	09 43 38.0	
	comp=Z,8.2nm,1.5s						
BCAR	**Beaver Creek A**	**72.17**	**27**	P	**P**	**09 43 11.4**	**+0.8**
LOGN	**Logan Glacier**	**72.24**	**30**	P	**P**	**09 43 12.1**	**+0.9**
EGAK	**Eagle**	**72.70**	**26**	P	**P**	**09 43 14.3**	**+0.6**
EGAK				IAmb	IAmb	09 43 29.8	
	comp=Z,5.4nm,1.2s						
I28M	**Miner Creek**	**73.30**	**25**	P	**P**	**09 43 17.6**	**+0.2**
D27M	**Malcolm River**	**73.47**	**21**	P	**P**	**09 43 19.1**	**+0.8**
F28M	**Old Crow**	**73.62**	**23**	P	**P**	**09 43 20.1**	**+1.0**
E28M	**Babbage River**	**73.89**	**22**	P	**P**	**09 43 22.1**	**+1.4**
E29M	**Blow River**	**74.46**	**22**	P	**P**	**09 43 25.0**	**+1.0**
G30M	**tAoh Zraii Nji**	**74.96**	**24**	P	**P**	**09 43 27.5**	**+0.5**
G30M				IAmb	IAmb	09 43 28.0	
	comp=Z,6.5nm,1.1s						
G31M	**Satah River**	**75.72**	**24**	P	**P**	**09 43 31.9**	**+0.6**
G31M				IAmb	IAmb	09 43 32.6	
	comp=Z,6.5nm,0.8s						
F31M	**Tsiigehtchic**	**75.95**	**23**	P	**P**	**09 43 32.9**	**+0.4**
F31M				IAmb	IAmb	09 43 33.4	
	comp=Z,3.3nm,0.7s						
INK	**Inuvik**	**76.07**	**22**	P	**P**	**09 43 33.3**	**+0.1**
INK				IAmb	IAmb	09 43 33.8	
	comp=Z,3.8nm,0.8s						
ABKAR	**Akbulak array**	**76.96**	**318**	P	**P**	**09 43 38.7**	**0.0**
ABKAR	**Akbulak array**	**76.96**	**318**	P	**P**	**09 43 38.9**	**+0.3**
ABKAR				IAmb	IAmb	09 43 39.3	
	comp=Z,1.2nm,0.6s						
C36M	**Paulatuk**	**79.46**	**21**	P	**P**	**09 43 52.0**	**-0.1**
BELG	**Belogornoye**	**84.27**	**322**	P	**P**	**09 44 17.8**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=311,slow=3.2,SNR=6.0						
	comp=Z,5.5nm,0.6s						
YKA	**Yellowknife Ar**	**84.59**	**27**	P	**P**	**09 44 19.2**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=286,slow=5.3,SNR=26						
	comp=Z,0.9nm,0.5s						
YKAB2	**New Yellowknif**	**84.61**	**27**	P	**P**	**09 44 19.8**	**+0.6**
LTY	**Liberty**	**84.86**	**43**	P	**P**	**09 44 20.2**	**-0.8**
RES	**Resolute Bay**	**86.18**	**13**	P	**P**	**09 44 27.1**	**+0.2**
RES				IAmb	IAmb	09 44 28.2	
	comp=Z,2.5nm,0.7s						
NEW	**Newport**	**86.95**	**41**	P	**P**	**09 44 31.2**	**-0.1**
NEW				IAmb	IAmb	09 44 54.3	
	comp=Z,7.6nm,1.5s						
F10A	**Beach Ranch, E**	**87.47**	**44**	P	**P**	**09 44 35.6**	**+1.7**
F10A				IAmb	IAmb	09 44 36.7	
	comp=Z,3.4nm,1.2s						
BMO	**Blue Mountains**	**87.70**	**45**	P	**P**	**09 44 36.1**	**+1.0**
EDM	**Edmonton**	**87.89**	**36**	P	**P**	**09 44 37.4**	**+1.7**
EDM				IAmb	IAmb	09 45 02.2	
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**88.16**	**342**	P	**P**	**09 44 36.9**	**+0.3**
ARCES	**ARCESS Array B**	**88.16**	**342**	P	**P**	**09 44 36.4**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=60,slow=5.8,SNR=4.8						
	comp=Z,1.4nm,0.7s						
PLID	**Pearl Lake**	**88.53**	**44**	P	**P**	**09 44 39.3**	**+0.2**
PLID				IAmb	IAmb	09 44 41.4	
	comp=Z,5.3nm,1.4s						
NVAR	**Mina Array Bea**	**88.58**	**51**	P	**P**	**09 44 40.9**	**+1.3**
NVAR	**Mina Array Bea**	**88.58**	**51**	P	**P**	**09 44 40.1**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=267,slow=4.7,SNR=12						
	comp=Z,1.1nm,0.6s						
KVN	**Kaiserville**	**88.58**	**50**	P	**P**	**09 44 40.5**	**+1.0**
HLID	**Hailey**	**90.05**	**45**	P	**P**	**09 44 47.1**	**+0.9**
TPNV	**Topopah Spring**	**90.54**	**52**	P	**P**	**09 44 49.7**	**+1.1**
TPNV				IAmb	IAmb	09 44 50.4

ZAA0	**Zalesovo Array**	**18.93**	**338**	P		**P**	**09 36 23.4**	**-0.9**
ZALV	**Zalesovo Beam**	**18.93**	**338**	P		**Pn**	**09 36 25.3**	**+0.4**
ZALV	**Zalesovo Beam**	**18.93**	**338**	P		**P**	**09 36 24.5**	**+0.3**
	0.5nm,0.3s,baz=152,slow=9.8,SNR=8.3							
	2.3nm,0.6s							
KURK	**Kurchatov**	**18.94**	**322**	P		**P**	**09 36 22.5**	**-1.9**
ARSB	**Arslanbob**	**18.95**	**291**	P		**P**	**09 36 23.9**	**-0.8**
KK31	**Karatay Array**	**20.98**	**295**	P		**P**	**09 36 47.3**	**+0.5**
KKAR	**Karatay Array**	**20.98**	**295**	P		**P**	**09 36 46.4**	**-0.3**
KKAR	**Karatay Array**	**20.98**	**295**	P		**P**	**09 36 47.1**	**+0.3**
KKAR				IAmb		IAmb	09 36 50.5	
	comp=Z,3.1nm,1.0s							
SIMJ	**Simiganj**	**21.97**	**283**	P		**P**	**09 36 57.6**	**+0.1**
SIMJ				IAmb		IAmb	09 36 58.8	
	comp=Z,4.9nm,0.7s							
BVAR	**Borovoye Array**	**24.44**	**320**	P		**P**	**09 37 22.3**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=117,slow=9.3,SNR=15							
	comp=Z,2.5nm,0.5s							
BRVK	**Borovoye**	**24.51**	**320**	P		**P**	**09 37 24.8**	**+2.0**
BRVK				IAmb		IAmb	09 37 25.7	
	comp=Z,4.8nm,0.6s							
KSRS	**Korea Array**	**24.78**	**79**	P		**P**	**09 37 24.6**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=271,slow=10,SNR=11							
KSRS				LR		LR	09 46 40.0	
	comp=Z,19nm,18.4s,baz=275,slow=36							
	comp=Z,3.4nm,0.7s							
ABKAR	**Akbulak array**	**29.28**	**307**	P		**P**	**09 38 05.5**	**-0.1**
AKTO	**Aktyubinsk**	**30.73**	**308**	P		**P**	**09 38 19.1**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=120,slow=6.5,SNR=4.2							
	comp=Z,1.6nm,0.7s							
WSAR	**Wadi Sarin**	**35.46**	**258**	LR		LR	09 56 18.5	
	comp=Z,52nm,18.9s,baz=252,slow=41							
BR131	**Keskin Array S**	**48.69**	**294**	P		**P**	**09 40 49.4**	**+1.4**
BR131				IAmb		IAmb	09 40 50.6	
	comp=Z,2.5nm,0.8s							
BRTR	**Keskin Array B**	**48.69**	**294**	P		**P**	**09 40 49.5**	**+1.5**
BRTR	**Keskin Array B**	**48.69**	**294**	P		**P**	**09 40 49.4**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=97,slow=7.6,SNR=9.4							
	comp=Z,1.6nm,0.7s							
FINES	**FINESS Array B**	**49.31**	**323**	P		**P**	**09 40 53.6**	**+1.3**
FINES	**FINESS Array B**	**49.31**	**323**	P		**P**	**09 40 53.2**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=73,slow=6.6,SNR=6.2							
	comp=Z,2.9nm,0.8s							
ARCES	**ARCESS Array B**	**49.42**	**334**	P		**P**	**09 40 53.6**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=92,slow=8.5,SNR=1.7							
	comp=Z,1.0nm,0.6s							
HFS	**Hagfors**	**55.51**	**323**	P		**P**	**09 41 39.0**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=116,slow=6.8,SNR=7.0							
	comp=Z,1.6nm,0.5s							
NC405	**NORSAR Array S**	**56.19**	**324**	P		**P**	**09 41 43.9**	**+0.8**
NC602	**NORSAR Array S**	**56.37**	**324**	P		**P**	**09 41 44.9**	**+0.5**
NB201	**NORSAR Array S**	**56.40**	**324**	P		**P**	**09 41 44.6**	**-0.1**
NB2	**NORSAR Subarra**	**56.44**	**324**	P		**P**	**09 41 45.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=72,slow=7.4							
NOA	**NORSAR Array B**	**56.44**	**324**	P		**P**	**09 41 45.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=76,slow=6.6,SNR=4.0							
	comp=Z,1.0nm,0.6s							
C16K	**Lisburne Hills**	**59.06**	**25**	P		**P**	**09 42 04.0**	**+0.8**
C16K				IAmb		IAmb	09 42 13.3	
	comp=Z,5.4nm,1.4s							
C18K	**Utukok River**	**60.31**	**24**	P		**P**	**09 42 12.8**	**+0.9**
C18K				IAmb		IAmb	09 42 24.8	
	comp=Z,3.8nm,1.4s							
E18K	**Tukpahlearik C**	**61.05**	**26**	P		**P**	**09 42 16.7**	**-0.2**
E18K				IAmb		IAmb	09 42 32.7	
	comp=Z,3.4nm,1.1s							
F17K	**Baldwin Pennin**	**61.26**	**27**	P		**P**	**09 42 19.1**	**+0.8**
D19K	**Kuna River**	**61.39**	**24**	P		**P**	**09 42 19.2**	**0.0**
D19K				IAmb		IAmb	09 42 42.8	
	comp=Z,2.0nm,1.1s							
B22K	**Teshekpuk Lake**	**61.91**	**21**	P		**P**	**09 42 23.2**	**+0.6**
B22K				IAmb		IAmb	09 42 32.7	
	comp=Z,5.5nm,1.1s							
B21K	**Ikpikpuk River**	**61.93**	**22**	P		**P**	**09 42 24.2**	**+1.5**
B21K				IAmb		IAmb	09 42 31.7	
	comp=Z,5.5nm,1.5s							
J14K	**Nanvaranak Lak**	**62.03**	**31**	P		**P**	**09 42 23.5**	**-0.1**
E19K	**Redstone River**	**62.18**	**25**	P		**P**	**09 42 22.7**	**-1.8**
E22K	**Anaktuvuk Pass**	**63.58**	**23**	P		**P**	**09 42 34.9**	**+1.0**
TOLK	**Toolik Lake Re**	**63.98**	**22**	P		**P**	**09 42 36.4**	**-0.1**
J18K	**Innoko River**	**64.40**	**29**	P		**P**	**09 42 39.6**	**+0.3**
J18K				IAmb		IAmb	09 42 49.2	
	comp=Z,6.9nm,1.4s							
WB0	**Warramunga Arr**	**66.63**	**141**	P		**P**	**09 42 54.9**	**+0.7**
WB0				IAmb		IAmb	09 42 56.0	
	comp=Z,4.9nm,1.2s							
WRA	**Warramunga Arr**	**66.75**	**141**	P		**P**	**09 42 55.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=328,slow=6.6,SNR=6.1							
	comp=Z,0.7nm,0.8s							
WB2	**Warramunga Arr**	**66.76**	**141**	P		**P**	**09 42 54.5**	**-0.6**
WR0	**Warramunga Arr**	**66.87**	**141**	P		**P**	**09 42 56.3**	**+0.6**
WR0				IAmb		IAmb	09 42 57.2	
	comp=Z,7.0nm,1.3s							
O18K	**Koktuh Hills**	**66.97**	**31**	P		**P**	**09 42 56.6**	**+0.6**
IL31		**67.17**	**25**	P		**P**	**09 42 57.7**	**+0.6**
IL31				IAmb		IAmb	09 42 58.2	
	comp=Z,6.2nm,1.5s							
E29M	**Blow River**	**67.43**	**19**	P		**P**	**09 43 00.1**	**+1.4**
E29M				IAmb		IAmb	09 43 01.1	
	comp=Z,5.9nm,1.5s							
F28M	**Old Crow**	**67.44**	**20**	P		**P**	**09 42 59.3**	**+0.5**
INK	**Inuvik**	**68.60**	**18**	P		**P**	**09 43 06.8**	**+0.8**
G30M	**tAoh Zraii Nji**	**68.89**	**20**	P		**P**	**09 43 08.9**	**+1.0**
KDAK	**Kodiak Island**	**69.29**	**32**	P		**P**	**09 43 10.4**	**-0.1**
AS31	**Alice Springs**	**69.70**	**144**	P		**P**	**09 43 14.1**	**+0.7**
ASAR	**Alice Springs**	**69.70**	**144**	P		**P**	**09 43 14.2**	**+0.8**
ASAR	**Alice Springs**	**69.70**	**144**	P		**P**	**09 43 13.9**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=329,slow=6.3,SNR=16							
	comp=Z,1.2nm,0.7s							
J30M	**Hart River**	**70.62**	**21**	P		**P**	**09 43 17.1**	**-1.6**
J30M				IAmb		IAmb	09 43 28.8	
	comp=Z,8.5nm,1.4s							
K29M	**Barlow Dome**	**70.80**	**22**	P		**P**	**09 43 17.7**	**-2.2**
L29M	**L29M**	**71.15**	**23**	P		**P**	**09 43 21.9**	**0.0**
OPO	**Ambohidratompo**	**72.32**	**229**	LR		LR	10 13 43.1	
	comp=Z,37nm,18.4s,baz=1.5,slow=35							
YKA	**Yellowknife Ar**	**77.76**	**14**	P		**P**	**09 44 00.4**	**+0.2**
YKA	**Yellowknife Ar**	**77.76**	**14**	P		**P**	**09 43 59.7**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=332,slow=5.1,SNR=5.7							
	comp=Z,0.2nm,0.6s							
FCC	**Fort Churchill**	**84.24**	**6**	P		**P**	**09 44 35.3**	**+0.5**

IDC 13 09:45:06.2±3.0, 54°.34N×86°.75E, h0km, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=24.9km s-min=14.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**252**	I	I	09 52 54.0	
	baz=70,slow=336,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.21**	**252**	Pg	Pg	09 45 27.6	-1.7
	0.8nm,0.3s,baz=69,slow=16,SNR=9.4						
ZALV				Lg	Lg	09 45 47.1	
	0.9nm,0.3s,baz=68,slow=28,SNR=7.5						
KURBB	**Kurchatov Arra**	**6.25**	**237**	Pn	Pn	09 46 40.2	+0.6
	baz=54,slow=14,SNR=5.0						
KURBB				Sn	Sn	09 47 49.0	-2.7
	0.1nm,0.3s,baz=40,slow=49,SNR=2.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**8.07**	**202**	Pn	Pn	09 47 05.8	+1.2
	baz=23,slow=12,SNR=1.9						
MKAR				Sn	Sn	09 48 36.1	-0.5
	baz=36,slow=27,SNR=2.5						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**9.80**	**269**	Pn	Pn	09 47 28.2	-0.1
	baz=69,slow=17,SNR=2.6						
	0.3nm,0.3s						

IDC 13 09:48:37.2±999.0, 51°.32N×31°.07E, h0km, Error ellipse: s-maj=421.7km s-min=127.8km az=39.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**6.51**	**31**	I	I	10 23 20.0	
	0.1nm,0.6s,baz=216,slow=335,SNR=5.2						
I31KZ	**AKTYUBINSK INF**	**17.02**	**82**	I	I	11 28 50.0	
	baz=286,slow=340,SNR=1.8						
I46RU	**ZALESOVO INFRA**	**32.08**	**64**	I	I	13 09 20.0	
	baz=280,slow=338,SNR=4.2						

*NNC **13** 09:50:43.1±4.0, 52°.90N×87°.39E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=43.2km s-min=16.6km az=67.0,*
Suspected Mining explosion.
*IDC **13** 09:50:44.1±3.3, 53°.56N×87°.79E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=27.4km s-min=15.3km az=64.0*

ISC 13 09:50:48.3±3.2, 52°.79N±0°.06×86°.7E±0°.2, h0km, n9, σ1°50/8, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.59**	**317**	⇑Pn	**Pn**	**09 51 16.7**	**-1.1**
	0.1nm,0.3s						
ZAA0				⇑Sn	**Sb**	**09 51 41.2**	**+1.9**
	1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**1.59**	**317**	Pg	**Pn**	**09 51 16.9**	**-0.9**
	1.2nm,0.3s,baz=103,slow=12,SNR=14						
ZALV				Lg	Lg	09 51 41.6	
	1.8nm,0.3s,baz=101,slow=30,SNR=17						
I46RU	**ZALESOVO INFRA**	**1.59**	**317**	I	I	10 02 36.2	
	0.1nm,0.9s,baz=97,slow=328,SNR=1.2						
KURK	**Kurchatov**	**5.40**	**251**	⇑Pn	**Pn**	**09 52 10.3**	**+0.1**
	0.2nm,0.3s						
KURK				⇓Lg	Lg	09 53 48.5	
	3.5nm,1.1s						
KURBB	**Kurchatov Arra**	**5.50**	**250**	⇑Pn	**Pn**	**09 52 10.7**	**-0.7**
	0.1nm,0.4s						
KURBB				⇑Lg	Lg	09 53 53.1	
	5.4nm,0.9s						
KURBB	**Kurchatov Arra**	**5.50**	**250**	Pn	Pb	09 52 20.9	-4.2
	0.1nm,0.3s,baz=62,slow=14,SNR=2.9						
KURBB				Lg	Lg	09 54 05.7	
	baz=62,slow=34						
	0.5nm,0.5s						
MK31	**Makanchi Array**	**6.63**	**207**	⇓Pn	**Pn**	**09 52 28.9**	**+1.8**
	baz=25,slow=12,SNR=7.0						
MK31				⇑Lg	Lg	09 54 20.3	
	1.3nm,0.9s,baz=32,slow=30,SNR=10.0						
MKAR	**Makanchi Array**	**6.63**	**207**	Pn	Pb	09 52 37.8	-6.7
	0.1nm,0.3s,baz=29,slow=16,SNR=2.2						
MKAR				Sn	**Sb**	**09 54 03.1**	**-1.2**
	0.1nm,0.3s,baz=37,slow=25,SNR=3.1						
MKAR				Lg	Lg	09 54 44.0	
	baz=33,slow=30,SNR=3.6						
	0.1nm,0.3s						
MAKZ	**Makanchi**	**6.71**	**209**	⇓Pn	**Pn**	**09 52 27.5**	**-0.6**
	0.1nm,0.3s						
MAKZ				⇑Lg	Lg	09 54 24.9	
	2.4nm,1.1s						

*ISN **13** 09:53:19.9±1.9, 34°.83N×45°.90E, h10km, ML2.5*
*TEH **13** 09:53:20.1, 34°.85N×45°.88E, h10km±3.83km, ML2.5*

ISC 13 09:53:19.9±1.1, 34°.85N±0°.07×45°.86E±0°.05, h10km, n7, σ0°69/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.41**	**213**	Pg	**Pg**	**09 53 28.0**	**+0.1**
KGS1				Sg	**Sb**	**09 53 35.6**	**+0.1**
IDHR	**Dehrash**	**0.46**	**109**	Pg	**Pg**	**09 53 28.9**	**0.0**
IGHG	**Ghaleghazi**	**0.78**	**132**	Pg	**Pb**	**09 53 35.2**	**-0.5**
ILIN	**Lien**	**0.91**	**85**	Pg	**Pb**	**09 53 38.0**	**+0.2**
KCHF	**Cheshme Sefid,**	**1.13**	**120**	Pg	**Pn**	**09 53 41.7**	**-0.2**
ILBA	**Ilam Banvizeh**	**1.26**	**167**	Pg	**Pn**	**09 53 43.5**	**0.0**
IKRK	**Kirkuk**	**1.36**	**294**	*e*Pg	**Pn**	**09 53 44.0**	**-1.0**
	baz=114						
IKRK				*e*Sg	**Sg**	**09 54 05.0**	**+1.3**

IDC 13 09:55:08.2±2.3, 54°.24N×86°.15E, h0km, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=19.4km s-min=13.3km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.84**	**250**	I	I	10 00 57.3	
	baz=68,slow=332,SNR=2.6						
ZALV	**Zalesovo Beam**	**0.84**	**250**	Pg	Pg	09 55 22.4	-1.8
	1.9nm,0.3s,baz=66,slow=16,SNR=12						
ZALV				Lg	Lg	09 55 36.4	
	6.4nm,0.3s,baz=59,slow=26,SNR=22						
KURBB	**Kurchatov Arra**	**5.90**	**235**	Pn	Pn	09 56 37.9	+1.1
	0.2nm,0.3s,baz=52,slow=13,SNR=11						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.85**	**200**	Pn	Pn	09 57 04.1	+0.5
	0.2nm,0.3s,baz=24,slow=13,SNR=7.0						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**9.44**	**269**	Pn	Pn	09 57 25.3	0.0
	baz=76,slow=13,SNR=2.4						
	0.2nm,0.3s						

IDC 13 09:58:57.5±1.7, 10°.85N×124°.95E, h0km, mb3.6/6, mbtmp3.6/6, MS3.1/2, Error ellipse: s-maj=173.6km s-min=19.8km az=68.0, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**5.08**	**310**	LR	LR	10 02 26.4	
	comp=Z,677nm,18.0s,baz=123,slow=41						
KSRS	**Korea Array**	**26.63**	**5**	LR	LR	10 15 39.9	
	comp=Z,11nm,19.6s,baz=25,slow=38						
WRA	**Warramunga Arr**	**31.96**	**163**	P	P	10 05 23.5	-1.9
	0.5nm,0.7s,baz=342,slow=9.7,SNR=2.0						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**35.40**	**166**	P	P	10 05 56.5	+1.1
	0.8nm,0.7s,baz=346,slow=7.1,SNR=9.9						
	0.8nm,0.7s						
SONM	**Songino Array**	**40.04**	**341**	P	P	10 06 34.4	-0.1
	0.4nm,0.4s,baz=169,slow=7.8,SNR=4.8						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**50.79**	**323**	P	P	10 07 60.0	+0.3
	0.6nm,0.7s,baz=124,slow=8.4,SNR=6.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**54.87**	**326**	P	P	10 08 29.2	-0.4
	0.4nm,0.3s,baz=126,slow=6.5,SNR=5.1						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**60.46**	**326**	P	P	10 09 08.9	-0.2
	0.4nm,0.5s,baz=106,slow=5.2,SNR=3.6						
	0.4nm,0.5s						

*SOME **13** 10:01:06.9, 43°.40N×69°.46E*
*NNC **13** 10:01:07.7±1.2, 43°.65N×69°.72E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=6.6km s-min=5.8km az=135.0, Suspected Mining explosion.*

ISC 13 10:01:05.5±1.6, 43°.78N±0°.05×69°.62E±0°.10, h0km, n8, σ0°90/11, 4C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.76**	**168**	P	**Pn**	**10 01 24.4**	**+0.8**
	5.8nm,0.2s						
BRLS				S	**Sn**	**10 01 35.9**	**+0.2**
	14nm,0.2s						
KK31	**Karatay Array**	**0.94**	**136**	⇑P	**Pg**	**10 01 23.0**	**-0.5**
	2.0nm,0.3s,baz=307,slow=15,SNR=84						
KK31				⇑S	**Sg**	**10 01 34.2**	**-1.3**
	56nm,0.8s,baz=304,slow=29,SNR=92						
IUG	**Iuzhnay**	**1.66**	**169**	P	**Pb**	**10 01 37.0**	**+0.1**
	33nm,0.4s						
IUG				S	**Sb**	**10 01 58.2**	**-0.2**
	91nm,0.5s						
MRKS	**Merke**	**2.83**	**110**	Pg	**Pb**	**10 01 57.3**	**+0.4**
	5.5nm,0.6s						
MRKS				Lg	Lg	10 02 33.5	
	8.4nm,0.6s						
BTLS	**Baital**	**3.42**	**67**	Pg	**Pg**	**10 02 10.5**	**-0.4**
	12nm,0.4s						
BTLS				Lg	Lg	10 02 55.5	
	1.6nm,0.3s						
CHMS	**Chumysh**	**3.82**	**100**	⇓Pg	**Pb**	**10 02 13.6**	**-0.3**
	2.2nm,0.4s						
CHMS				⇓Lg	Lg	10 03 05.6	
	5.6nm,0.8s						
TKM2	**Tokmak 2**	**4.44**	**99**	⇑Pg	**Pb**	**10 02 26.2**	**+1.7**
	1.7nm,0.5s						
TKM2				⇑Lg	Lg	10 03 26.0	
	3.7nm,0.8s						
OTUK	**Ortayu**	**4.85**	**22**	Pg	**Pg**	**10 02 37.7**	**-0.8**
	0.4nm,0.3s						
OTUK				Lg	Lg	10 03 41.9	
	1.1nm,0.6s						

*IDC **13** 10:03:43.0±3.6, 19°.55N×109°.24W, h0km, mb3.3/5, mbtmp3.4/7, ML3.5/2, MS3.3/8, Error ellipse: s-maj=72.4km s-min=13.7km az=132.0*

*NEIC **13** 10:03:43.9±2.4, 19°.31N±0°.08×109°.07W±0°.06, h10km±2km, mb4.0/37, Md4.0/12(MEX), Error ellipse: s-maj=14.0km s-min=9.2km az=159.0*
*MEX **13** 10:03:46.0±0.4, 19°.53N×109°.09W, h10km, MD4.0*

ISC 13 10:03:43.3±3.2, 19°.30N±0°.09×109°.06W±0°.05, h12km±22km, n86, σ1°12/87, mb4.0/16, MS3.2/3, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E		**1.83**	**254**		**Pn**	**10 04 15.4**	**+0.8**
H06E					**Sn**	**10 04 37.3**	**-0.5**
H06E		**1.83**	**254**	*e*P	**Pn**	**10 04 15.4**	**+0.8**
H06E				*e*S	**Sn**	**10 04 37.3**	**-0.5**
H06E1	**SOCORRO T-PHAS**	**1.84**	**254**	Pn	**Pb**	**10 04 16.0**	**-0.9**
H06E1				Sn	**Sn**	**10 04 37.4**	**-0.6**
H06E1				T	T	10 06 23.0	
	SNR=13						
H06N1	**SOCORRO T-PHAS**	**1.87**	**257**	Pn	**Pn**	**10 04 15.2**	**+0.1**
H06N1				Sn	**Sn**	**10 04 38.2**	**-0.6**
H06N1				T	T	10 06 24.7	
	SNR=74						
H06N	**Isla Socorro**	**1.88**	**257**		**Pn**	**10 04 15.4**	**+0.2**
H06N					**Sn**	**10 04 37.7**	**-1.2**
H06N	**Isla Socorro**	**1.88**	**257**	*e*P	**Pn**	**10 04 15.4**	**+0.2**
H06N				*e*S	**Sn**	**10 04 37.7**	**-1.2**
H06S1	**SOCORRO T**	**1.88**	**253**	Pn	**Pn**	**10 04 15.8**	**+0.5**
H06S1				Sn	**Sn**	**10 04 38.3**	**-0.7**
H06S1				T	T	10 06 23.9	
	SNR=16						
H06S		**1.89**	**253**		**Pn**	**10 04 15.9**	**+0.5**
H06S					**Sn**	**10 04 38.2**	**-0.9**
H06S		**1.89**	**253**	*e*P	**Pn**	**10 04 15.9**	**+0.5**
H06S				*e*S	**Sn**	**10 04 38.2**	**-0.9**
CJM	**Chamela**	**3.80**	**86**	*e*P	**Pn**	**10 04 41.6**	**0.0**
CJM				*i* S	**Sn**	**10 05 25.8**	**-0.5**
CIHU	**Emiliano Zapat**	**4.08**	**90**	*i* P	**Pn**	**10 04 46.5**	**+0.8**
ESTA	**Talpa de Allen**	**4.11**	**74**	*e*P	**Pn**	**10 04 45.4**	**-0.7**
SLBS	**Sierra La Lagu**	**4.44**	**349**		**Pn**	**10 04 47.9**	**-2.7**
LPIG	**La Paz**	**4.92**	**347**		**Pn**	**10 04 54.5**	**-2.6**
LPIG	**La Paz**	**4.92**	**347**	Pn	**Pn**	**10 04 53.7**	**-3.3**
	3.3nm,0.3s,baz=184,slow=6.3,SNR=5.7						
LPIG				LR	LR	10 06 23.0	
	comp=Z,218nm,19.4s,baz=174,slow=34						
	14nm,0.5s						
LPIG	**La Paz**	**4.92**	**347**	*e*P	**Pn**	**10 04 54.5**	**-2.6**
MMIG	**Aquila**	**5.51**	**100**		**Pn**	**10 05 04.2**	**-1.0**
MMIG	**Aquila**	**5.51**	**100**	*i* P	**Pn**	**10 05 04.2**	**-1.0**
ZAIG	**Zacatecas**	**6.98**	**59**	Pn	**Pn**	**10 05 26.0**	**+0.3**
HPIG		**8.21**	**22**	Pn	**Pn**	**10 05 43.3**	**+0.7**
SRIG	**Santa Rosalia**	**8.50**	**340**	Pn	**Pn**	**10 05 47.0**	**+0.7**
TLIG	**Tlapa**	**10.11**	**98**	Pn	**Pn**	**10 06 07.3**	**-1.2**
TX31	**Lajitas Ar. Si**	**11.13**	**25**	Pn	**Pn**	**10 06 22.5**	**-0.5**
TXAR	**Lajitas Array**	**11.13**	**25**	Pn	**Pn**	**10 06 22.1**	**-0.3**
TXAR	**Lajitas Array**	**11.13**	**25**	Pn	**Pn**	**10 06 21.1**	**-1.4**
	0.1nm,0.3s,baz=200,slow=14,SNR=12						
TXAR				LR	LR	10 10 00.4	
	comp=Z,54nm,21.9s,baz=193,slow=34						
	0.8nm,0.7s						
319A	**Douglas**	**12.03**	**359**	Pn	**Pn**	**10 06 35.0**	**+0.3**
ALPN	**Alpine**	**12.07**	**23**	Pn	**Pn**	**10 06 34.0**	**-1.3**
PIX	**Pinacate**	**12.84**	**343**	Pn	**Pn**	**10 06 45.8**	**+0.1**
TUC	**Tucson**	**13.05**	**354**	Pn	**Pn**	**10 06 49.0**	**+0.4**
121A	**Cookes Peak, D**	**13.23**	**5**	Pn	**Pn**	**10 06 53.5**	**+2.3**
HNDO	**Hondo**	**13.52**	**39**	Pn	**Pn**	**10 06 56.2**	**+1.1**
CMIG	**Matias Romero**	**13.65**	**97**	LR	LR	10 11 41.7	
	comp=Z,78nm,21.3s,baz=228,slow=35						
113A	**Mohawk Valley,**	**14.06**	**343**	Pn	**Pn**	**10 07 03.5**	**+1.1**
CCX	**Cicese**	**14.26**	**333**	Pn	**Pn**	**10 07 04.4**	**-0.7**
GLA	**Glamis**	**14.63**	**340**	Pn	**Pn**	**10 07 10.6**	**+0.3**
X18A	**Snowflake**	**15.19**	**357**	Pn	**Pn**	**10 07 19.2**	**+1.3**
BLYC	**Blythe**	**15.19**	**342**	Pn	**Pn**	**10 07 17.6**	**-0.2**
BLYC				IAmb	IAmb	10 07 24.7	
	comp=Z,14nm,1.2s						
X16A	**Lo Mia Camp, P**	**15.21**	**352**	Pn	**Pn**	**10 07 16.2**	**-1.9**
X16A				IAmb	IAmb	10 07 26.8	
	comp=Z,5.1nm,1.2s						
PFO	**Pinyon Flats O**	**15.71**	**337**	LR	LR	10 12 26.7	
	comp=Z,126nm,20.0s,baz=167,slow=34						
ANMO	**Albuquerque**	**15.75**	**8**	Pn	**Pn**	**10 07 26.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=280,slow=6.7,SNR=5.1						
W18A	**Petrified Fore**	**15.77**	**358**		**Pn**	**10 07 25.6**	**+0.1**
V12A	**Nelson**	**17.14**	**344**	P	**P**	**10 07 43.8**	**-0.7**
U15A	**North Rim**	**17.30**	**351**	P	**P**	**10 07 46.5**	**+0.1**
U15A				IAmb	IAmb	10 07 53.0	
	comp=Z,8.1nm,1.3s						
GSC	**Goldstone, Bar**	**17.35**	**338**	P	**Pn**	**10 07 43.5**	**-2.0**
MVCO	**Mesa Verde**	**17.85**	**1**	P	**P**	**10 07 52.9**	**+0.4**
KNB	**Kanab**	**17.95**	**350**	P	**P**	**10 07 54.6**	**+1.0**
KNB				IAmb	IAmb	10 07 55.9	
	comp=Z,16nm,1.2s						
SHPR	**Sheep Range**	**17.96**	**344**	P	**P**	**10 07 53.8**	**+0.2**
SZCU	**Shurtz Canyon**	**18.56**	**350**	P	**Pn**	**10 08 01.7**	**+1.2**
MTPU	**Mount Pierson**	**18.87**	**352**	P	**Pn**	**10 08 05.3**	**+0.9**
GMN	**Gold Mountain**	**19.32**	**340**	P	**P**	**10 08 09.1**	**+0.5**
TEIG	**Tep

L18K	**Granite Mounta**	**53.95**	**335**	P		**P**	**10 13 06.7**	**0.0**
J20K	**Nowinta River**	**54.02**	**337**	P		**P**	**10 13 07.6**	**+0.4**
TTA	**Tatalina**	**54.05**	**336**	P		**P**	**10 13 08.3**	**+0.8**
M16K	**Timber Creek**	**54.32**	**333**	P		**P**	**10 13 11.0**	**+1.5**
IMAR	**Indian Mountai**	**54.93**	**339**	P		**P**	**10 13 14.6**	**+0.8**
H03N2	**Juan Fernandez** baz=329,slow=77	**59.81**	**151**	T		T	11 19 27.9	
H03N1	**Juan Fernandez** baz=329,slow=77	**59.82**	**151**	T		T	11 19 33.9	
H03N3	**Juan Fernandez** baz=329,slow=77	**59.83**	**151**	T		T	11 19 34.1	

*CATAC **13** 10:05:57.9±0.6, 12°.70N×88°.69W, h36^{km}±13^{km}, ML3.6*
*SNET **13** 10:05:59.4±1.0, 12°.81N×88°.62W, h47^{km}, ML3.8*
ISC 13 10:05:52.3±1.6, 12°.41N±0°.06×88°.75W±0°.04, h29^{km}±14^{km}, n68, σ0^{s}89/83, 5C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.93**	**11** ⇓	*i* P	**Pb**	10 06 01.7	-8.2
ALJI				*e*S	Sb	10 06 11.3	-10
JUCU	**Jucuar¡n**	**0.97**	**30** ⇑	*e*P	**Pn**	**10 06 11.8**	**+1.7**
JUCU				*e*S	**Sb**	**10 06 21.6**	**-1.4**
LCY	**Lacayo**	**1.10**	**24** ⇑	*e*P	**Pb**	**10 06 13.7**	**+0.9**
TECA	**Tecapa**	**1.10**	**12**	*e*P	**Pb**	**10 06 13.6**	**+0.7**
RANC	**El Ranchito**	**1.11**	**24**	*e*P	**Pb**	**10 06 13.7**	**+0.7**
TECO	**Alcaldia de Te**	**1.12**	**358**	*e*P	**Pb**	**10 06 13.6**	**+0.5**
PACA	**Pacayal**	**1.13**	**21**	*e*P	**Pb**	**10 06 14.0**	**+0.7**
PACA	**Pacayal**	**1.13**	**21**	*i* P	**Pb**	**10 06 13.9**	**+0.6**
PACA				*i* S	**Sb**	**10 06 25.7**	**-2.0**
PACA	comp=Z,18μm,1.0s			IAML		10 06 26.7	
BLLM	**Bellamira**	**1.14**	**26** ⇓	*i* P	**Pb**	**10 06 14.1**	**+0.6**
CNRM	**Centro Naciona**	**1.20**	**28**	*e*P	**Pb**	**10 06 14.9**	**+0.5**
CNRM	**Centro Naciona**	**1.20**	**28**	*i* P	**Pb**	**10 06 14.7**	**+0.3**
CNRM				*i* S	**Sn**	**10 06 26.9**	**-1.5**
CNRM	comp=Z,10μm,1.0s			IAML		10 06 29.5	
PQSS	**Presa 15 de Se**	**1.22**	**9**	*e*P	**Pb**	**10 06 14.9**	**+0.2**
UESV	**Universidad de**	**1.22**	**358**	*e*P	**Pb**	**10 06 15.3**	**+0.5**
UESV	**Universidad de**	**1.22**	**358**	*i* P	**Pb**	**10 06 15.2**	**+0.5**
UESV				*i* S	**Sn**	**10 06 27.9**	**-1.1**
UESV	comp=Z,3μm,1.0s			IAML		10 06 28.5	
SJTE	**Alcalda de S**	**1.22**	**348** ⇓	*e*P	**Pb**	**10 06 15.3**	**+0.5**
SJTE				*e*S	**Sn**	**10 06 27.9**	**-1.3**
SJTE	**Alcalda de S**	**1.22**	**348**	*i* P	**Pb**	**10 06 15.3**	**+0.5**
SJTE				*i* S	**Sn**	**10 06 28.0**	**-1.2**
SJTE	comp=Z,2μm,1.0s			IAML		10 06 29.3	
LCND	**La Caada**	**1.22**	**43** ⇑	*e*P	**Pb**	**10 06 15.3**	**+0.4**
LCND				*e*S	**Sn**	**10 06 28.2**	**-0.9**
LCND	**La Caada**	**1.22**	**43**	*i* P	**Pb**	**10 06 15.4**	**+0.6**
LCND	comp=Z,27μm,1.0s			IAML		10 07 21.9	
CNCH	**Conchagua**	**1.24**	**46**	*e*P	**Pb**	**10 06 16.1**	**+0.9**
CNCH	**Conchagua**	**1.24**	**46**	*i* P	**Pb**	**10 06 15.9**	**+0.7**
CNCH	comp=Z,4μm,1.0s			IAML		10 06 16.7	
LFRS	**El Faro**	**1.24**	**346**	*e*P	**Pb**	**10 06 15.9**	**+0.7**
PANCS	**Alcalda de**	**1.27**	**341**	*i* P	**Pb**	**10 06 15.8**	**+0.2**
PANCS				*i* S	**Sn**	**10 06 29.2**	**-1.0**
PANCS	comp=Z,2μm,1.0s			IAML		10 06 40.0	
SCLA	**Alcaldia de Sa**	**1.28**	**1** ⇓	*e*P	**Pb**	**10 06 16.2**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.28**	**1**	*i* P	**Pb**	**10 06 16.1**	**+0.3**
SCLA				*i* S	**Sn**	**10 06 30.0**	**-0.6**
SCLA	comp=Z,830nm,1.0s			IAML		10 06 31.5	
CSGN	**Cosiguina Volc**	**1.29**	**64**	*i* P	**Pb**	**10 06 17.1**	**+1.1**
CSGN	comp=Z,3μm,1.0s			IAML		10 06 38.6	
LOMA	**Loma Larga**	**1.29**	**341**	*e*P	**Pb**	**10 06 16.9**	**+0.7**
LOMA	**Loma Larga**	**1.29**	**341**	*i* P	**Pb**	**10 06 16.7**	**+0.6**
LOMA				*i* S	**Sn**	**10 06 30.8**	**-0.2**
LOMA	comp=Z,2μm,1.0s			IAML		10 06 32.3	
PAVA	**Las Pavas**	**1.31**	**352**	*e*P	**Pb**	**10 06 16.7**	**+0.4**
PAVA	**Las Pavas**	**1.31**	**352**	*i* P	**Pn**	**10 06 15.9**	**+1.1**
PAVA				*i* S	**Sn**	**10 06 30.1**	**-1.2**
PAVA	comp=Z,2μm,1.0s			IAML		10 06 34.6	
SNET	**Serv Nac Est T**	**1.35**	**340**	*e*P	**Pb**	**10 06 18.3**	**+1.2**
SNET	**Serv Nac Est T**	**1.35**	**340**	*i* P	**Pb**	**10 06 16.8**	**-0.3**
SNET				*i* S	**Sn**	**10 06 31.8**	**-0.6**
SNET	comp=Z,2μm,1.0s			IAML		10 06 32.1	
UDBS	**Universidad Do**	**1.35**	**343**	*i* P	**Pn**	**10 06 16.4**	**+1.0**
UDBS				*i* S	**Sn**	**10 06 31.4**	**-1.1**
UDBS	comp=Z,880nm,1.0s			IAML		10 06 33.4	
UTEC	**Universidad Te**	**1.35**	**341**	*i* P	**Pb**	**10 06 18.0**	**+0.9**
UTEC				*i* S	**Sn**	**10 06 31.4**	**-1.1**
UTEC	comp=Z,730nm,1.0s			IAML		10 06 34.2	
IGN	**Direccin Gen**	**1.36**	**342**	*i* P	**Pb**	**10 06 17.6**	**+0.4**
IGN				*i* S	**Sn**	**10 06 32.1**	**-0.4**
IGN	comp=Z,5μm,1.0s			IAML		10 06 33.8	
SEMO	**Seminario San**	**1.36**	**340**	*i* P	**Pb**	**10 06 17.6**	**+0.3**
SEMO				*i* S	**Sn**	**10 06 31.9**	**-0.8**
SEMO	comp=Z,3μm,1.0s			IAML		10 06 35.9	
AMPH	**Amapala**	**1.37**	**51** ⇑	*e*P	**Pb**	**10 06 17.8**	**+0.5**
UESS	**Universidad de**	**1.37**	**341**	*e*P	**Pb**	**10 06 18.5**	**+1.1**
UEES	**Universidad Ev**	**1.38**	**340**	*e*P	**Pb**	**10 06 18.1**	**+0.5**
UEES	**Universidad Ev**	**1.38**	**340**	*i* P	**Pb**	**10 06 18.1**	**+0.5**
UEES				*i* S	**Sn**	**10 06 32.5**	**-0.7**
UEES	comp=Z,540nm,1.0s			IAML		10 06 34.9	
PMON	**Piamonte**	**1.41**	**337**	*e*P	**Pb**	**10 06 18.6**	**+0.6**
JAYA	**Jayaque - finc**	**1.41**	**331**	*e*P	**Pb**	**10 06 19.2**	**+1.1**
JAYA	**Jayaque - finc**	**1.41**	**331**	*i* P	**Pb**	**10 06 18.8**	**+0.7**
JAYA				*i* S	**Sn**	**10 06 34.1**	**+0.1**
JAYA	comp=Z,4μm,1.0s			IAML		10 06 36.6	
BOQS	**Boqueron**	**1.41**	**339**	*e*P	**Pb**	**10 06 19.0**	**+0.8**
PIC2	**El Picacho**	**1.41**	**340**	*e*P	**Pb**	**10 06 19.1**	**+0.8**
SNJE	**San Jose**	**1.67**	**330**	*e*P	**Pb**	**10 06 22.9**	**+0.3**
CRIN	**San Cristobal**	**1.68**	**80**	*i* P	**Pb**	**10 06 24.5**	**+1.8**
CRIN	comp=Z,2μm,1.0s			IAML		10 06 48.1	
RTR	**El Retiro**	**1.72**	**329**	*e*P	**Pb**	**10 06 24.0**	**+0.7**
UNIC	**Universidad Ca**	**1.74**	**334**	*i* P	**Pb**	**10 06 23.6**	**-0.1**
UNIC				*i* S	**Sn**	**10 06 42.3**	**+0.2**
UNIC	comp=Z,260nm,1.0s			IAML		10 06 43.5	
NUBE	**Las Nubes**	**1.79**	**326** ⇑	*e*P	**Pb**	**10 06 24.5**	**-0.1**
NUBE	**Las Nubes**	**1.79**	**326**	*i* P	**Pb**	**10 06 24.5**	**-0.1**
NUBE				*i* S	**Sn**	**10 06 44.0**	**+0.7**
NUBE	comp=Z,740nm,1.0s			IAML		10 06 45.0	
HERN	**Volcan Telica**	**1.88**	**84**	*i* P	**Pb**	**10 06 26.8**	**+0.7**
HERN	comp=Z,480nm,1.0s			IAML		10 06 27.2	
PACN	**Al O del Volca**	**1.91**	**87**	*i* P	**Pb**	**10 06 26.8**	**+0.3**
PACN	comp=Z,530nm,1.0s			IAML		10 06 56.2	
CNGN	**Cerro Negro**	**2.00**	**87**	*i* P	**Pb**	**10 06 28.6**	**+0.5**
CNGN	comp=Z,350nm,1.0s			IAML		10 06 58.4	
ILCN	**San Idelfonso**	**2.01**	**85**	*i* P	**Pn**	**10 06 26.6**	**+2.3**
ILCN	comp=Z,130nm,1.0s			IAML		10 06 51.8	
MACN	**El Madrono**	**2.02**	**88**	*i* P	**Pb**	**10 06 29.1**	**+0.6**
MACN	comp=Z,260nm,1.0s			IAML		10 06 58.6	
MTO3	**Montecristo**	**2.06**	**343**	*i* P	**Pb**	**10 06 28.3**	**-1.0**
MTO3	comp=Z,130nm,1.0s			IAML		10 06 30.2	
COPN	**Copaltepe**	**2.12**	**96**	*i* P	**Pb**	**10 06 30.0**	**-0.1**
COPN	comp=Z,270nm,1.0s			IAML		10 06 55.6	
MOMN	**Momotombo**	**2.16**	**90**	*i* P	**Pb**	**10 06 30.9**	**+0.2**
MOMN	comp=Z,13nm,1.0s			IAML		10 06 59.1	
TGUH	**Tegucigalpa,Un**	**2.18**	**41**	*i* P	Pn	10 06 28.5	+1.8
TGUH	comp=Z,230nm,1.0s			IAML		10 06 47.8	
MOM2	**El Cardon**	**2.21**	**89**	*i* P	**Pb**	**10 06 31.6**	**0.0**
MOM2	comp=Z,140nm,1.0s			IAML		10 07 00.8	
SAPS	**Ciudad Sandino**	**2.30**	**96**	*i* P	**Pb**	**10 06 33.6**	**+0.4**
SAPS	comp=Z,410nm,1.0s			IAML		10 07 09.6	
LIMN	**Finca el Limon**	**2.41**	**74**	*i* P	**Pb**	**10 06 33.3**	**-1.8**
LIMN	comp=Z,240nm,1.0s			IAML		10 06 33.8	
NANN	**Nandasmo**	**2.61**	**100**	*i* P	**Pb**	**10 06 38.9**	**+0.4**
NANN	comp=Z,3μm,1.0s			IAML		10 07 11.2	
GCG4	**OSOP**	**2.77**	**321**	*i* P	**Pn**	**10 06 35.8**	**+0.8**
GCG4	comp=Z,2μm,1.0s			IAML		10 06 48.6	
MATN	**Matagalpa**	**2.80**	**79**	*i* P	Pn	10 06 38.9	+3.6
MATN	comp=Z,94nm,1.0s			IAML		10 06 39.2	
RCPN	**Sur Rio San Ju**	**2.81**	**67**	*i* P	Pn	10 06 37.2	+1.7
RCPN	comp=Z,0.8nm,1.0s			IAML		10 06 40.4	
BOAB	**BOACO BROADBAN**	**3.01**	**89**	*i* P	Pn	10 06 42.2	+4.1
BOAB	comp=Z,64nm,1.0s			IAML		10 06 42.6	
ORTG	**Ortega, Santa**	**3.81**	**122**	*i* P	**Pb**	**10 06 57.2**	**-1.8**
ORTG	comp=Z,52nm,1.0s			IAML		10 08 43.8	

*IDC **13** 10:13:42.8±0.7, 12°.86N×144°.19E, h0^{km}, mb3.9/15, mbtmp3.9/15, MS3.4/14, Error ellipse: s-maj=20.0km s-min=14.1km az=119.0*
*NEIC **13** 10:13:49.2±1.4, 12°.9N±0°.1×144°.2E±0°.1, h32^{km}±6^{km}, mb4.5/83, Error ellipse: s-maj=18.4km s-min=10.5km az=136.0*
ISC 13 10:13:48.6±0.6, 12°.87N±0°.09×144°.18E±0°.09, h35^{km}, n123, σ0^{s}76/109, mb4.5/57, MS3.3/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.98**	**43**	Pn	**Pn**	**10 14 04.6**	**-1.2**
GUMO	971nm,0.3s,baz=202,slow=4.3,SNR=276			Sn	**Sn**	**10 14 18.9**	**+0.3**
DAV	**Davao City (W)**	**19.20**	**254**	LR	LR	10 24 06.7	
PMG	**Port Moresby**	**22.33**	**172**	LR	LR	10 26 49.6	
H11S3	**WAKE ISLAND Hy**	**22.37**	**73**	T	T	10 41 42.2	
H11S1	**WAKE ISLAND Hy**	**22.39**	**73**	T	T	10 41 47.2	
H11S2	**WAKE ISLAND Hy**	**22.39**	**73**	T	T	10 41 46.1	
H11N1	**WAKE ISLAND Hy**	**22.82**	**70**	T	T	10 42 16.4	
H11N2	**WAKE ISLAND Hy**	**22.83**	**70**	T	T	10 42 19.9	
H11N3	**WAKE ISLAND Hy**	**22.84**	**70**	T	T	10 42 20.6	
JNU	**Nakatsue**	**23.54**	**331**	LR	LR	10 26 07.8	
YULB	**Yu-li**	**24.10**	**299**	P	**P**	**10 19 01.6**	**+0.5**
YULB				IAmb	IAmb	10 19 18.2	
MJAR	**Matsushiro Arr**	**24.18**	**348**	P	**P**	**10 19 01.5**	**-0.2**
MJAR				LR	LR	10 27 50.4	
SSLB	**Suanglung**	**24.54**	**300**	P	**P**	**10 19 05.9**	**+0.7**
SSLB				IAmb	IAmb	10 19 33.5	
LUWI	**Luwuk**	**25.34**	**239**	P	**P**	**10 19 11.5**	**-0.9**
KSRS	**Korea Array**	**28.47**	**332**	P	**P**	**10 19 40.7**	**+0.3**
ASAJ	**Asahikawa**	**31.17**	**358**	LR	LR	10 31 33.0	
CTA	**Charters Tower**	**32.81**	**176**	LR	LR	10 33 14.9	
USRK	**Ussuriysk Ar.**	**32.93**	**344**	P	**P**	**10 20 19.4**	**-0.2**
WB0	**Warramunga Arr**	**33.83**	**197**	P	**P**	**10 20 26.9**	**-0.8**
WB0				IAmb	IAmb	10 20 30.8	
WRAB	**Tennant Creek**	**34.00**	**197**	P	**P**	**10 20 30.5**	**+1.3**
WRAB				IAmb	IAmb	10 20 35.7	
WB2	**Warramunga Arr**	**34.01**	**197**	P	**P**	**10 20 29.5**	**+0.2**
WRA	**Warramunga Arr**	**34.01**	**197**	P	**P**	**10 20 30.4**	**+1.0**
WRA	**Warramunga Arr**	**34.01**	**197**	P	**P**	**10 20 28.6**	**-0.8**
WRA				PcP	**PcP**	**10 23 07.1**	**+0.2**
BJT	**Baijiatuan**	**36.59**	**323**	P	**P**	**10 20 52.5**	**+1.2**
BJT				IAmb	IAmb	10 20 53.0	
AS31	**Alice Springs**	**37.67**	**196**	P	**P**	**10 21 01.0**	**+0.2**
ASAR	**Alice Springs**	**37.67**	**196**	P	**P**	**10 20 60.0**	**-0.8**
ASAR				PcP	**PcP**	**10 23 17.6**	**-0.2**
KLR	**Kul'dur**	**37.68**	**347**	LR	LR	10 35 31.7	
PETK	**Petropavlovsk-**	**41.57**	**12**	LR	LR	10 39 52.1	
CMAR	**Chiang Mai Arr**	**43.82**	**283**	P	**P**	**10 21 52.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**43.82**	**283**	P	**P**	**10 21 50.7**	**-0.9**
CMAR				LR	LR	10 40 10.9	
BBOO	**Buckleboo**	**46.08**	**190**	P	**P**	**10 22 09.0**	**-0.2**
SONM	**Songino Array**	**46.94**	**326**	P	**P**	**10 22 15.7**	**-0.3**
ZALV	**Zalesovo Beam**	**61.82**	**325**	P	**P**	**10 24 03.2**	**-0.7**
F17K	**Baldwin Pennin**	**64.54**	**21**	P	**P**	**10 24 20.7**	**-1.1**
F17K				IAmb	IAmb	10 24 30.2	
KURK	**Kurchatov**	**64.70**	**320**	P	**P**	**10 24 22.8**	**-0.3**
KURK				IAmb	IAmb	10 24 47.5	
KURBB	**Kurchatov Arra**	**64.74**	**320**	P	**P**	**10 24 22.8**	**-0.5**
E18K	**Tukpahlearik C**	**65.23**	**20**	P	**P**	**10 24 26.1**	**-0.2**
E18K				IAmb	IAmb	10 24 42.5	
C19K	**Lookout Ridge**	**66.36**	**19**	P	**P**	**10 24 34.2**	**+0.7**
C19K				IAmb	IAmb	10 24 43.3	
C19K				PcP	**PcP**	**10 25 04.0**	**+0.8**
CAST	**Castle Rocks**	**66.94**	**26**	P	**P**	**10 24 37.9**	**+0.6**
CAST				IAmb	IAmb	10 24 42.7	
RC01	**Rabbit Creek A**	**67.33**	**29**	P	**P**	**10 24 38.5**	**-1.3**
I21K	**Tanana**	**67.54**	**24**	P	**P**	**10 24 39.8**	**-1.3**
I21K				IAmb	IAmb	10 24 45.0	
BPAW	**Bear Paw Mtn.**	**67.61**	**25**	P	**P**	**10 24 40.7**	**-0.8**
GHO	**Glory Hole Cre**	**67.88**	**28**	P	**P**	**10 24 43.5**	**+0.2**
KNK	**Knik Glacier**	**68.00**	**29**	P	**P**	**10 24 44.6**	**+0.5**
SML	**Sawmill**	**68.16**	**28**	P	**P**	**10 24 45.5**	**+0.4**
D22K	**Ayikyak River**	**68.53**	**20**	P	**P**	**10 24 48.0**	**+0.7**
E22K	**Anaktuvuk Pass**	**68.58**	**21**	P	**P**	**10 24 47.9**	**+0.3**
I23K	**Minto, Yukon-K**	**68.58**	**25**	P	**P**	**10 24 48.6**	**+1.0**
SCM	**Sheep Creek Mo**	**68.63**	**28**	P	**P**	**10 24 48.3**	**+0.3**
G23K	**Bananza Creek**	**68.78**	**23**	P	**P**	**10 24 50.9**	**+2.1**
G23K				IAmb	IAmb	10 25 07.7	
B22K	**Teshekpuk Lake**	**68.83**	**19**	P	**P**	**10 24 51.8**	**+2.7**
B22K				IAmb	IAmb	10 25 04.9	
POKR	**Poker Plat Res**	**69.36**	**25**	P	**P**	**10 24 52.8**	**+0.4**
POKR				IAmb	IAmb	10 24 58.1	
KK31	**Karatay Array**	**69.42**	**311**	P	**P**	**10 24 52.4**	**-0.9**
KKAR	**Karatay Array**	**69.42**	**311**	P	**P**	**10 24 53.3**	**+0.1**
IL31		**69.50**	**25**	P	**P**	**10 24 52.2**	**-1.0**
IL31				IAmb	IAmb	10 24 58.9	
ILAR	**Eielson Array**	**69.50**	**25**	P	**P**	**10 24 52.1**	**-1.2**
TOLK	**Toolik Lake Re**	**69.53**	**21**	P	**P**	**10 24 53.5**	**0.0**
D24K	**Happy Valley**	**69.94**	**21**	P	**P**	**10 24 56.7**	**+0.7**
D24K				IAmb	IAmb	10 25 05.3	
SUCK	**Suckling Hills**	**69.99**	**31**	P	**P**	**10 24 56.4**	**0.0**
BVAR	**Borovoye Array**	**70.07**	**322**	P	**P**	**10 24 56.2**	**-0.9**
J25K	**Salcha River,**	**70.10**	**26**	P	**P**	**10 24 56.4**	**-0.7**
J25K				IAmb	IAmb	10 25 16.0	
BMAR	**Burnt Mountain**	**71.02**	**23**	P	**P**	**10 25 02.5**	**-0.2**
TABL	**Table Mountain**	**71.34**	**30**	P	**P**	**10 25 04.6**	**-0.3**
BCAR	**Beaver Creek A**	**71.39**	**28**	P	**P**	**10 25 05.9**	**+0.9**
K27K	**Chicken**	**71.41**	**26**	P	**P**	**10 25 05.4**	**+0.4**
I28M	**Miner Creek**	**72.52**	**25**	P	**P**	**10 25 11.8**	**+0.1**
F28M	**Old Crow**	**72.84**	**23**	P	**P**	**10 25 14.7**	**+1.2**
L29M	**L29M**	**73.05**	**28**		**P**	**10 25 13.5**	**-1.3**
L29M				IAmb	IAmb	10 25 14.0	
H29M	**Whitestone**	**73.25**	**24**	P	**P**	**10 25 16.5**	**+0.6**
J30M	**Hart River**	**73.95**	**26**	P	**P**	**10 25 20.8**	**+0.6**
I30M	**Mount Dempster**	**73.98**	**26**	P	**P**	**10 25 21.8**	**+0.5**
M31M	**Drury Creek, Y**	**74.72**	**29**	P	**P**	**10 25 25.2**	**+0.6**
M31M				IAmb	IAmb	10 25 53.5	
G31M	**Satah River**	**74.94**	**24**	P	**P**	**10 25 26.1**	**+0.3**
G31M				IAmb	IAmb	10 25 36.8	
F31M	**Tsiigehtchic**	**75.17**	**23**	P	**P**	**10 25 27.8**	**+0.7**
Q32M	**Nakina River**	**75.76**	**32**	P	**P**	**10 25 31.8**	**+0.9**
R33M	**Jennings River**	**76.42**	**32**	P	**P**	**10 25 35.0**	**+0.4**
R33M				IAmb	IAmb	10 25 59.3	
ABKAR	**Akbulak array**	**76.62**	**318**	P	**P**	**10 25 35.1**	**-0.6**
A36M	**Sachs Harbour**	**78.04**	**19**	P	**P**	**10 25 43.3**	**+0.1**
TAOE	**Nuku Hiva Isla**	**78.19**	**102**	P	**P**	**10 25 46.1**	**+0.8**
GEYT	**Alibeck**	**79.14**	**307**	P	**P**	**10 25 50.2**	**+0.2**
GEYT				IAmb	IAmb	10 25 51.3	
GEYT	**Alibeck**	**79.14**	**307**	P	**P**	**10 25 49.9**	**-0.2**
KHMM	**Horse Mountain**	**83.27**	**50**	P	**P**	**10 26 13.8**	**+1.7**
HUMO	**Hull Mountain**	**83.50**	**48**	P	**P**	**10 26 13.8**	**+0.7**
HUMO				IAmb	IAmb	10 26 16.6	
H04A	**Detroit Lake**	**83.63**	**46**	P	**P**	**10 26 14.1**	**+0.4**
YBH	**Yreka Blue Hor**	**83.85**	**49**		**P**	**10 26 15.2**	**+0.2**
YBH				IAmb	IAmb	10 26 16.4	
YBH	**Yreka Blue Hor**	**83.85**	**49**	LR	LR	10 55 07.7	
HOOD	**Mount Hood Mea**	**83.87**	**45**	P	**P**	**10 26 14.5**	**-0.5**
HOOD				IAmb	IAmb	10 26 15.6	
LTY	**Liberty**	**84.12**	**43**	P	**P**	**10 26 15.7**	**-0.6**
LTY				IAmb	IAmb	10 26 20.2	
K04D	**Chiloquin, OR**	**84.36**	**48**	P	**P**	**10 26 16.4**	**-1.2**
J05D	**Fort Rock, OR**	**84.59**	**47**		**P**	**10 26 19.4**	**+0.7**
SPB2	**Spitsbergen Ar**	**84.65**	**351**	P	**P**	**10 26 18.3**	**+0.1**
PINE	**Pine Mountain**	**84.69**	**46**		**P**	**10 26 20.1**	**+0.7**
K05A	**Summer Lake**	**84.96**	**47**	P	**P**	**10 26 21.3**	**+0.6**
K05A				IAmb	IAmb	10 26 34.4	
NEW	**Newport**	**86.21**	**41**	P	**P**	**10 26 26.7**	**+0.1**
NEW				IAmb	IAmb	10 26 27.8	
NEW	**Newport**	**86.21**	**41**	LR	LR	11 01 02.4	
WVOR	**Wild Horse Val**	**86.65**	**47**	P	**P**	**10 26 29.3**	**+0.3**
F10A	**Beach Ranch, E**	**86.73**	**44**	P	**P**	**10 26 29.6**	**+0.3**
F10A				IAmb	IAmb	10 26 47.3	
PNTR	**Pine Nut**	**86.75**	**51**	P	**P**	**10 26 28.3**	**-1.4**
PNTR				IAmb	IAmb	10 26 31.0	
BMO	**Blue Mountains**	**86.97**	**45**		**P**	**10 26 30.3**	**-0.2**
BMO				IAmb	IAmb	10 26 31.3	
WAKR	**Walker**	**87.01**	**51**	P	**P**	**10 26 31.2**	**+0.3**
WAKR				IAmb	IAmb	10 26 42.8	
YERR	**Yerington**	**87.05**	**51**	P	**P**	**10 26 30.6**	**-0.5**
YERR				IAmb	IAmb	10 26 37.7	
PLID	**Pearl Lake**	**87.80**	**44**	P	**P**	**10 26 34.1**	**-0.5**
PLID				IAmb	IAmb	10 26 34.4	
KVN	**Kaiserville**	**87.89**	**51**	P	**P**	**10 26 35.3**	**+0.2**
KVN				IAmb	IAmb	10 26 36.4	
NVAR	**Mina Array Bea**	**87.89**	**51**	P	**P**	**10 26 35.2**	**0.0**
NVAR	**Mina Array Bea**	**87.89**	**51**	P	**P**	**10 26 35.4**	**+0.2**
NV11	**Mina Array Sit**	**88.01**	**51**	P	**P**	**10 26 36.2**	**+0.5**
BMN	**Battle Mountai**	**88.19**	**49**	P	**P**	**10 26 37.0**	**+0.5**
BMN				IAmb	IAmb	10 26 37.7	
DSP	**Deep Springs**	**88.42**	**52**	P	**P**	**10 26 38.3**	**+0.9**
DSP				IAmb	IAmb	10 26 38.8	
TPH	**Tonopah**	**88.81**	**51**	P	**P**	**10 26 40.0**	**+0.4**
GMN	**Gold Mountain**	**88.98**	**52**	P	**P**	**10 26 41.0**	**+0.6**
GMN				IAmb	IAmb	10 26 41.6	
HLID	**Hailey**	**89.33**	**45**		**P**	**10 26 42.3**	**+0.5**
HLID				IAmb	IAmb	10 26 43.0	
ELK	**Elko**	**89.55**	**48**		**P**	**10 26 43.6**	**+0.5**
ELK				IAmb	IAmb	10 26 44.3	
ELK	**Elko**	**89.55**	**48**	LR	LR	11 02 45.6	
WCT	**Wildcat Mounta**	**89.61**	**52**	P	**P**	**10 26 43.6**	**+0.4**
WCT				IAmb	IAmb	10 26 44.5	
TPNV	**Topopah Spring**	**89.86**	**52**		**P**	**10 26 45.0**	**+0.6**
TPNV				IAmb	IAmb	10 26 45.7	
PFO	**Pinyon Flats O**	**90.60**	**55**	LR	LR	11 08 32.5	
IMW	**Indian Meadow**	**91.61**	**44**	P	**P**	**10 26 53.4**	**+0.7**
IMW				IAmb	IAmb	10 27 19.1	
PDAR	**Pinedale Array**	**92.95**	**45**	P	**P**	**10 26 57.6**	**-1.1**

*NNC **13** 10:16:04.6±0.6, 51°.33N×75°.51E, h0^{km}, mb2.5, mpv2.1, Error ellipse: s-maj=10.7km s-min=3.7km az=16.0, Suspected Mining explosion.*
*IDC **13** 10:16:05.9±1.0, 51°.37N×75°.80E, h0^{km}, mbtmp2.4/3, ML1.7/3, Error ellipse: s-maj=21.3km s-min=7.8km az=26.0*
ISC 13 10:16:02.8±1.0, 51°.27N±0°.07×75°.30E±0°.07, h0^{km}, n11, σ0^{s}47/12, 7C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.15**	**106** ⇑	Pn	**Pn**	**10 16 39.9**	**+0.1**
KURBB	1.9nm,0.3s			⇓Sn	**Sn**	**10 17 07.6**	**+0.5**
KURBB	**Kurchatov Arra**	**2.15**	**106**	Pg	**Pn**	**10 16 40.1**	**+0.3**
KURBB	20nm,0.7s			Lg	Lg	10 17 06.7	
KURK	**Kurchatov**	**2.17**	**103** ⇓	Pn	**Pn**	**10 16 40.1**	**-0.1**
KURK	0.2nm,0.3s,baz=295,slow=30,SNR=7.4 0.6nm,0.4s 12nm,0.9s			⇓Sn	**Sn**	**10 17 07.8**	**+0.1**

BVA0	**Borovoye Array** baz=105,slow=11,SNR=1.8	**3.50**	**302**	⇑Pg	**Pg**	**10 17 09.9**	**+0.1**
BVA0	0.1nm,0.5s,baz=129,slow=14,SNR=5.2			⇓Lg	Lg	10 18 01.0	
BVAR	**Borovoye Array** baz=114,slow=18,SNR=6.0	**3.50**	**302**	Pn	**Pb**	**10 17 05.4**	**-0.1**
BVAR	2.9nm,1.1s,baz=121,slow=25,SNR=4.3			Pg	**Pg**	**10 17 10.7**	**+0.9**
BVAR	0.1nm,0.3s,baz=112,slow=27,SNR=5.7			Lg	Lg	10 18 02.3	
BRVK	**Borovoye** 0.4nm,0.4s	**3.57**	**302**	⇑Pg	**Pg**	**10 17 10.7**	**-0.4**
BRVK	0.2nm,0.3s			⇑Lg	Lg	10 18 02.0	
OTUK	**Ortayu** 3.1nm,1.0s	**3.58**	**213**	⇑Pg	**Pg**	**10 17 11.2**	**-0.2**
OTUK	0.2nm,0.4s			⇑Lg	Lg	10 18 05.1	
ZALV	**Zalesovo Beam** 5.9nm,1.0s	**6.39**	**61**	Pn	**Pn**	**10 17 37.4**	**-0.7**
ZALV	0.2nm,0.3s,baz=249,slow=12,SNR=1.8			Lg	Lg	10 19 16.9	
I46RU	**ZALESOVO INFRA** 0.5nm,0.4s	**6.39**	**61**	I	I	10 51 10.0	
MK31	**Makanchi Array** 1.3nm,0.7s,baz=326,slow=23,SNR=6.6	**6.42**	**132**	⇑Lg	Lg	10 19 27.9	
MKAR	**Makanchi Array** baz=321,slow=11,SNR=1.5	**6.42**	**132**	Pn	**Pn**	**10 17 38.4**	**-0.1**
MKAR	0.1nm,0.3s,baz=319,slow=26,SNR=9.0 0.2nm,0.7s			Lg	Lg	10 19 24.3	

*TAP **13** 10:37:48.8,24.°42N×121.°79E,h6km,ML2.5,B*
*JMA **13** 10:37:49.0±0.1,24.°4N±0.°3×121.°8E±0.°6,h4km,TAIWAN REGION*
ISC 13 10:37:48.9±0.9,24.°40N±0.°01×121.°80E±0.°02,h5km±5km, n55,σ0s51/105,2C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta** baz=345	**0.05**	**337**	⇑*i* P	**Pg**	**10 37 50.1**	**-0.1**
EWUT	baz=345			*i* S	**Sg**	**10 37 50.8**	**-0.4**
ENA	**Nanau** baz=284	**0.06**	**299**	⇓*i* P	**Pg**	**10 37 50.3**	**0.0**
ENA	baz=284			*i* S	**Sg**	**10 37 51.2**	**-0.2**
EAHA	**Aohua** baz=207	**0.09**	**219**	*e*P	**Pg**	**10 37 51.1**	**+0.3**
EAHA	baz=207			*e*S	**Sg**	**10 37 52.6**	**+0.5**
EHP	**Heping Village** baz=205	**0.10**	**211**	*e*P	**Pg**	**10 37 51.7**	**+0.7**
EHP	baz=205			*e*S	**Sg**	**10 37 53.3**	**+0.8**
ESAO	**Su ao** baz=11	**0.18**	**13**	*i* P	**Pg**	**10 37 52.5**	**0.0**
ESAO	baz=11			S	**Sg**	**10 37 54.8**	**-0.1**
TWC	**Suao** baz=13	**0.21**	**12**	⇑*i* P	**Pg**	**10 37 53.3**	**+0.2**
TWC	baz=13			S	**Sg**	**10 37 56.1**	**+0.2**
NDS	**Dongshan** baz=349	**0.25**	**342**	*e*P	**Pg**	**10 37 54.0**	**+0.3**
NDS	baz=349			*e*S	**Sg**	**10 37 57.6**	**+0.6**
ETL	**Fush Village** baz=210	**0.29**	**214**	*e*P	**Pg**	**10 37 54.8**	**+0.3**
ETL	baz=210			*e*S	**Sg**	**10 37 59.0**	**+0.8**
NACB	**Ninganchiao** baz=207	**0.29**	**220**	*e*P	**Pg**	**10 37 54.8**	**+0.3**
NACB	baz=207			*e*S	**Sg**	**10 37 58.9**	**+0.5**
ENTT	**Nioudou** baz=318	**0.32**	**319**	*e*P	**Pg**	**10 37 55.2**	**+0.1**
ENTT	baz=318			*e*S	**Sg**	**10 37 58.8**	**-0.6**
NDT	**Datong Townshi** baz=306	**0.33**	**308**	*e*P	**Pg**	**10 37 55.7**	**+0.4**
NDT	baz=306			*e*S	**Sg**	**10 37 59.8**	**+0.1**
TWE	**Neicheng** baz=342	**0.34**	**339**	*e*P	**Pg**	**10 37 55.7**	**+0.2**
TWE	baz=342			*e*S	**Sg**	**10 38 00.3**	**+0.3**
ETLH	**Xiulin Townshi** baz=233	**0.35**	**237**	*e*P	**Pg**	**10 37 55.7**	**+0.1**
ETLH	baz=233			*e*S	**Sg**	**10 38 00.1**	**-0.1**
TWD	**Chiawan** baz=214	**0.37**	**210**	*e*P	**Pg**	**10 37 56.3**	**+0.3**
TWD	baz=214			*e*S	**Sg**	**10 38 01.3**	**+0.5**
NNSB	**Datong** baz=272	**0.38**	**275**	*e*P	**Pg**	**10 37 56.4**	**+0.1**
NNSB	baz=272			*e*S	**Sg**	**10 38 01.3**	**0.0**
NNS	**Nan Shan** baz=273	**0.39**	**276**	*e*P	**Pg**	**10 37 56.6**	**+0.1**
NNS	baz=273			*e*S	**Sg**	**10 38 01.1**	**-0.6**
FUSB	**Fushanzhiwuyua** baz=332	**0.41**	**332**	*e*P	**Pg**	**10 37 57.3**	**+0.5**
FUSB	baz=332			*e*S	**Sg**	**10 38 02.5**	**+0.4**
NWLT	**Wulai** baz=324	**0.46**	**324**	*e*P	**Pg**	**10 37 58.4**	**+0.5**
NWLT	baz=324			*e*S	**Sg**	**10 38 03.8**	**-0.1**
YHNB	**Yeheng** baz=304	**0.47**	**305**	P	**Pg**	**10 37 58.5**	**+0.5**
YHNB	baz=304			*e*S	**Sg**	**10 38 04.2**	**+0.1**
NSK	**Sanguang** baz=304	**0.49**	**305**	*e*P	**Pg**	**10 37 58.8**	**+0.6**
NSK	baz=304			*e*S	**Sg**	**10 38 04.5**	**-0.2**
ETM	**Tongmen** baz=209	**0.51**	**213**	*e*P	**Pg**	**10 37 58.7**	**-0.1**
LXIB	**Xiulin Townshi** baz=221	**0.52**	**223**	P	**Pg**	**10 37 58.8**	**0.0**
LXIB	baz=221			*e*S	**Sg**	**10 38 06.3**	**+0.8**
EOS4	**EOS4** baz=121	**0.55**	**120**	*e*P	**Pb**	**10 38 00.6**	**-0.1**
EOS4	baz=121			*e*S	**Sb**	**10 38 09.1**	**+0.3**
WHF	**Hehuan Shan** baz=240	**0.55**	**243**	*e*P	**Pg**	**10 37 59.5**	**+0.1**
WHF	baz=240			*e*S	**Sg**	**10 38 06.9**	**+0.2**
TWT	**Tachien** baz=261	**0.59**	**256**	*e*S	**Sb**	**10 38 09.2**	**-1.2**
TDCB	**Techi** baz=262	**0.60**	**256**	*e*P	**Pg**	**10 38 00.7**	**+0.2**
TDCB	baz=262			*e*S	**Sg**	**10 38 07.8**	**-0.5**
TWA	**Mucha** baz=332	**0.61**	**341**	*e*P	**Pb**	**10 38 01.3**	**-0.7**
TWA	baz=332			*e*S	**Sg**	**10 38 09.3**	**+0.7**
TWB1	**Santiao Chiao** baz=8.0	**0.63**	**16**	*e*P	**Pg**	**10 38 01.5**	**+0.5**
TWB1	baz=8.0			*e*S	**Sg**	**10 38 09.8**	**+0.6**
SHUL	**Shoufeng** baz=208	**0.65**	**200**	*e*P	**Pb**	**10 38 02.5**	**-0.1**
SHUL	baz=208			*e*S	**Sb**	**10 38 11.9**	**0.0**
CHGB	**Renai** baz=231	**0.66**	**240**	*e*P	**Pg**	**10 38 01.7**	**+0.1**
CHGB	baz=231			*e*S	**Sb**	**10 38 11.4**	**-1.2**
NFF	**Wufeng Townshi** baz=289	**0.66**	**291**	*e*P	**Pg**	**10 38 01.4**	**-0.2**
NFF	baz=289			*e*S	**Sg**	**10 38 10.6**	**+0.3**
ESL	**Shilin** baz=208	**0.67**	**210**	*e*P	**Pg**	**10 38 01.3**	**-0.4**
ESL	baz=208			*e*S	**Sg**	**10 38 10.8**	**+0.3**
SXI1	**Grass Mountain** baz=16	**0.70**	**6**	*e*P	**Pg**	**10 38 02.8**	**+0.5**
SXI1	baz=16			*e*S	**Sg**	**10 38 11.8**	**+0.5**
WUSB	**Renai** baz=235	**0.74**	**237**	P	**Pg**	**10 38 03.4**	**+0.3**
WUSB	baz=235			*e*S	**Sb**	**10 38 13.9**	**-1.0**
LIOB	**Emei** baz=288	**0.76**	**289**	*e*P	**Pb**	**10 38 04.7**	**+0.2**
LIOB	baz=288			*e*S	**Sb**	**10 38 14.3**	**-0.8**
NSTT	**Nanjuang** baz=287	**0.76**	**288**	*e*P	**Pb**	**10 38 04.4**	**-0.3**
NSTT	baz=287			*e*S	**Sg**	**10 38 14.0**	**+0.5**
YM01	**YM01** baz=345	**0.77**	**344**	*e*P	**Pb**	**10 38 04.6**	**-0.3**
YM01	baz=345			*e*S	**Sb**	**10 38 15.5**	**-0.1**
WARBT	**Fenglin Townsh** baz=208	**0.78**	**209**	*e*P	**Pg**	**10 38 03.3**	**-0.4**
WARBT	baz=208			*e*S	**Sg**	**10 38 13.4**	**-0.5**
TWS1	**Kuangyinshan** baz=334	**0.78**	**334**	*e*P	**Pb**	**10 38 05.4**	**+0.4**
TWS1	baz=334			*e*S	**Sb**	**10 38 15.1**	**-0.8**
WCS	**Beigang Elemen** baz=234	**0.88**	**247**	*e*P	**Pb**	**10 38 06.4**	**-0.2**
WCS	baz=234			*e*S	**Sg**	**10 38 17.5**	**+0.4**
VWDT	**VWDT** baz=229	**0.88**	**223**	*e*P	**Pg**	**10 38 05.7**	**0.0**
VWDT	baz=229			*e*S	**Sg**	**10 38 17.4**	**+0.3**
SMLT	**Sun Moon Lake** baz=236	**0.97**	**238**	*e*P	**Pg**	**10 38 07.6**	**+0.1**
SMLT	baz=236			*e*S	**Sg**	**10 38 19.9**	**-0.1**
SSLB	**Suanglung** baz=231	**0.98**	**232**	*e*P	**Pg**	**10 38 07.8**	**0.0**
SSLB	baz=231			*e*S	**Sg**	**10 38 20.0**	**-0.5**
EHY	**Hungye** baz=211	**0.99**	**206**	*e*P	**Pg**	**10 38 07.5**	**-0.3**
EHY	baz=211			*e*S	**Sg**	**10 38 20.4**	**-0.3**
JYNG	**Yonaguni jima**	**1.05**	**87**	P	**Pg**	**10 38 08.9**	**0.0**
YULB	**Yu-li** baz=215	**1.10**	**205**	*e*P	**Pg**	**10 38 10.0**	**0.0**
YULB	baz=215			*e*S	**Sg**	**10 38 23.4**	**-0.9**
YOJ	**Yonaguni jima**	**1.11**	**86**	*e*P	**Pg**	**10 38 09.9**	**-0.2**
TWF1	**Yuli** baz=213	**1.14**	**204**	*e*P	**Pg**	**10 38 10.0**	**-0.7**
TWF1	baz=213			*e*S	**Sg**	**10 38 25.5**	**0.0**
ALS	**Alishan** baz=224	**1.27**	**226**	*e*P	**Pn**	**10 38 13.6**	**+0.1**
ALS	baz=224			*e*S	**Sn**	**10 38 31.6**	**+0.5**
CHN5	**Tsauling** baz=231	**1.30**	**232**	*e*P	**Pb**	**10 38 14.6**	**+0.8**
CHN5	baz=231			*e*S	**Sn**	**10 38 33.1**	**+1.6**
EHD	**Haiduan** baz=212	**1.36**	**204**	*e*P	**Pb**	**10 38 14.7**	**-0.1**
EHD	baz=212			*e*S	**Sb**	**10 38 31.5**	**-0.9**
ELDTW	**Lidau** baz=219	**1.40**	**211**	*e*P	**Pg**	**10 38 15.9**	**+0.1**
ELDTW	baz=219			*e*S	**Sn**	**10 38 34.2**	**+0.1**
TPUB	**Ta-pu** baz=214	**1.53**	**225**	*e*P	**Pg**	**10 38 18.0**	**-0.2**
TPUB	baz=214			*e*S	**Sg**	**10 38 39.6**	**+1.6**
STYH	**Taoyuan** baz=208	**1.54**	**218**	*e*P	**Pg**	**10 38 18.2**	**-0.2**
STYH	baz=208			*e*S	**Sg**	**10 38 39.2**	**+0.8**
JKRS	**Kuro-shima**	**2.02**	**94**	*e*S	**Sn**	**10 38 48.4**	**-0.8**

IDC 13 10:57:23.9±2.2,4.°59N×126.°66E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=208.9km s-min=22.8km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=342,slow=10,SNR=9.3 0.7nm,0.6s	**25.52**	**163**	P	P	11 02 54.0	-0.4
ASAR	**Alice Springs** 0.4nm,0.8s,baz=346,slow=8.5,SNR=2.9 0.4nm,0.8s	**28.96**	**166**	P	P	11 03 26.0	+0.6
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=114,slow=9.0,SNR=5.1 0.3nm,0.4s	**56.81**	**325**	P	P	11 07 10.4	+0.2
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=126,slow=5.6,SNR=5.5 0.4nm,0.5s	**60.98**	**327**	P	P	11 07 38.7	-0.3

*IDC **13** 11:00:28.8±0.9,4.°33N×127.°65E,h0km,mb4.0/10, mbtmp4.0/10,MS3.1/5,Error ellipse: s-maj=74.6km s-min=15.0km az=67.0*
*DJA **13** 11:00:33.0±1.5,4.°N±15.°×12.°7E±.°,h10km,M4.5/8,mB5.1/2, mb4.6/6,MLv4.4/8,Mw(mB)4.4/2*
ISC 13 11:00:35.0±0.8,4.°15N±0.°10×126.°91E±0.°09,h35km,n21, σ1s23/16,mb4.0/10,MS3.0/6,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.45**	**251**	P	**Pn**	**11 00 58.7**	**0.0**
SGSI				S	**Sn**	**11 01 16.4**	**-0.1**
TNTI	**Ternate**	**3.39**	**172**	P	**Pn**	**11 01 26.7**	**+1.3**
LBMI	**Labuha**	**4.79**	**173**	P	**Pn**	**11 01 46.4**	**+1.7**
MRSI	**Marisa** 61nm,0.8s,2μm0.2nm	**6.16**	**234**	P	**Pn**	**11 02 04.8**	**+1.3**
LUWI	**Luwuk** 114nm,1.2s,985nm0.4nm	**6.61**	**219**	P	Pn	11 02 14.0	+4.3
MPSI	**Mapaga**	**7.96**	**242**	P	**Pn**	**11 02 29.5**	**+1.3**
PMG	**Port Moresby** comp=Z,54nm,20.9s,baz=266,slow=36	**24.27**	**124**	LR	LR	11 14 41.7	
WRA	**Warramunga Arr** 5.6nm,0.7s,baz=343,slow=11,SNR=58 5.6nm,0.7s	**25.03**	**163**	P	**P**	**11 05 53.9**	**-2.2**
ASAR	**Alice Springs** 0.4nm,0.4s,baz=342,slow=11,SNR=12	**28.48**	**166**	P	**P**	**11 06 25.1**	**-1.9**
ASAR	0.7nm,0.8s,baz=357,slow=2.7,SNR=4.0 0.4nm,0.4s			PcP	**PcP**	**11 09 38.7**	**+0.2**
CMAR	**Chiang Mai Arr** 0.6nm,0.6s,baz=92,slow=6.3,SNR=4.3	**30.81**	**300**	P	P	11 06 52.9	+5.0
CMAR	comp=Z,12nm,18.3s,baz=75,slow=40 0.6nm,0.6s			LR	LR	11 21 17.6	
KSRS	**Korea Array** comp=Z,18nm,18.1s,baz=185,slow=46	**33.16**	**1**	LR	LR	11 25 35.9	
MJAR	**Matsushiro Arr** comp=Z,30nm,20.2s,baz=190,slow=33	**33.87**	**16**	LR	LR	11 18 51.0	
STKA	**Stephens Creek** 3.0nm,0.7s,baz=334,slow=7.1,SNR=7.7 3.0nm,0.7s	**38.46**	**160**	P	**P**	**11 07 53.1**	**-0.5**
SONM	**Songino Array** 0.5nm,0.4s,baz=155,slow=9.2,SNR=2.6 0.5nm,0.4s	**46.96**	**341**	P	**P**	**11 09 03.8**	**+1.2**
MKAR	**Makanchi Array** 0.6nm,0.4s,baz=118,slow=7.5,SNR=14 0.6nm,0.4s	**57.31**	**325**	P	**P**	**11 10 19.8**	**+0.3**
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=137,slow=8.3,SNR=2.9 0.7nm,0.5s	**60.30**	**333**	P	**P**	**11 10 39.4**	**-0.6**
KURBB	**Kurchatov Arra** 0.6nm,0.5s,baz=128,slow=6.4,SNR=8.4 0.6nm,0.5s	**61.48**	**327**	P	**P**	**11 10 48.2**	**+0.1**
BVAR	**Borovoye Array** 0.7nm,0.4s,baz=91,slow=4.9,SNR=5.8 0.7nm,0.4s	**67.06**	**327**	P	**P**	**11 11 25.7**	**+1.0**
NRIK	**Noril'sk** 1.5nm,0.6s,baz=92,slow=5.7,SNR=2.6 1.5nm,0.6s	**70.06**	**346**	P	**P**	**11 11 42.5**	**-0.5**
SPITS	**Spitsbergen Ar** comp=Z,26nm,20.6s,baz=132,slow=39	**90.10**	**349**	LR	LR	11 59 37.6	
HFS	**Hagfors** comp=Z,141nm,18.2s,baz=147,slow=40	**97.73**	**332**	LR	LR	12 05 55.5	

IDC 13 11:10:27.0±5.0,5.°18N×129.°48E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=401.4km s-min=22.9km az=69.0,East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 1.0nm,0.5s,baz=349,slow=10,SNR=13 1.0nm,0.5s	**25.42**	**169**	P	P	11 15 55.1	-1.4
ASAR	**Alice Springs** 0.2nm,0.4s,baz=345,slow=10,SNR=6.2 0.2nm,0.4s	**28.99**	**172**	P	P	11 16 30.2	+1.6
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=114,slow=8.0,SNR=5.3 0.2nm,0.3s	**57.98**	**324**	P	P	11 20 21.4	-0.1
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=128,slow=6.9,SNR=2.6 0.2nm,0.4s	**62.05**	**326**	P	P	11 20 49.3	0.0

KRSC 13 11:11:10.7±1.5,49.°36N×156.°53E,h7km±12km,MI3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.35**	**349**	*e*P	Pn	11 11 34.8	-1.2
SKR				*e*S	Sb	11 11 53.0	-0.9
PAU	**Pauzhetka**	**2.12**	**5**	*e*P	Pn	11 11 47.5	+1.0
PAU				*e*S	Sb	11 12 15.0	-0.9
RUS	**Russkaya**	**3.33**	**21**	*e*P	Pn	11 12 06.4	+3.3
GRL	**Gorelyy**	**3.34**	**16**	*e*P	Pn	11 12 06.9	+3.4
DALK	**Dalny**	**3.94**	**20**	*e*P	Pn	11 12 15.0	+3.5
AVH	**Avacha**	**4.15**	**19**	*e*P	Pn	11 12 19.3	+4.7
KOK	**Koryaka**	**4.16**	**18**	*e*P	Pb	11 12 19.6	-4.6
SMAR	**Somma**	**4.16**	**19**	*e*P	Pn	11 12 19.3	+4.5
KRX	**Arik**	**4.22**	**18**	*e*P	Pn	11 12 19.9	+4.3

IDC 13 11:15:45.8±315.0,57.°75N×29.°87E,h0km,Error ellipse: s-maj=123.0km s-min=94.0km az=100.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON** 0.3nm,1.2s,baz=282,slow=330,SNR=4.0	**4.13**	**101**	I	I	11 41 39.4	
I37NO	**I37NO** baz=148,slow=323,SNR=2.2	**12.40**	**341**	I	I	12 23 40.0	
I26DE	**FREYUNG INFRAS** baz=36,slow=335,SNR=2.3	**13.11**	**234**	I	I	12 40 40.0	
I31KZ	**AKTYUBINSK INF** baz=300,slow=333,SNR=4.6	**17.99**	**102**	I	I	13 03 34.7	

DJA 13 11:18:18.4±0.6,9.°S±5.°×11.°8E±.°,h39km±11km,M3.7/6, MLv3.7/6,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.64**	**330**	P	Pn	11 18 31.9	+0.9
PLAI				S	Sn	11 18 42.0	+2.1
TWSI	**Taliwang, Sumb**	**1.36**	**298**	P	Pn	11 18 41.8	+0.9
TWSI				S	Sn	11 18 58.9	+1.2
BASI	**Baing, Sumba**	**2.58**	**109**	P	Pn	11 18 58.4	+0.7
SRBI	**Singaraja**	**3.13**	**294**	P	Pn	11 19 05.5	+0.3
EDFI	**Ende, Flores**	**3.60**	**80**	P	Pn	11 19 11.9	+0.1
JAGI	**Jajag, Banyuwa**	**4.00**	**283**	P	Pn	11 19 16.1	-1.2
BKSI	**Bulukumba**	**4.50**	**27**	P	Pn	11 19 22.7	-1.4
GMJI	**Gumukmas**	**4.73**	**283**	P	Pn	11 19 26.4	-0.8

*TEH **13** 11:37:43.8,27.°84N×57.°28E,h16km±24km,ML2.9*
*OMAN **13** 11:37:58.1±0.1,26.°89N×57.°29E,h16km,ml2.2/9,Error ellipse: s-maj=1.6km s-min=0.9km az=12.0*
ISC 13 11:37:44.6±1.2,27.°83N±0.°05×57.°32E±0.°05,h25km±13km, n22,σ2s39/25,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.37**	**70**	Pg	**Pb**	**11 37 52.2**	**-0.4**
KHNJ				Sg	**Sb**	**11 37 57.9**	**-0.2**
IBND	**Bandar-abas**	**0.78**	**242**	Pg	**Pb**	**11 37 58.9**	**-0.7**
GENO	**Geno**	**1.10**	**248**	Pg	**Pn**	**11 38 04.0**	**-0.6**
KBAM	**BAM**	**1.65**	**37**	Pg	**Pn**	**11 38 13.8**	**+1.7**
JASK	**Jask - Hormozg**	**2.01**	**166**	Pn	**Pn**	**11 38 19.2**	**+2.2**
JASK	**Jask - Hormozg** SNR=7.8	**2.01**	**166**	P	**Pb**	**11 38 19.9**	**-0.6**
JASK				S	Sn	11 38 33.7	-7.6
CHMN	**Cheshme madani**	**2.04**	**5**	Pn	**Pn**	**11 38 19.1**	**+1.4**
SHME	**Shamm** SNR=7.7	**2.06**	**211**	P	**Pb**	**11 38 21.6**	**+0.3**
SHME				S	Sn	11 38 37.0	-5.5
BANOM	**Banah**	**2.10**	**206**	P	**Pb**	**11 38 21.1**	**-0.9**
BANOM				S	Sn	11 38 37.5	-6.1
KHGB	**Koh Gabri**	**2.65**	**344**	Pn	**Pn**	**11 38 28.0**	**+2.0**
MASF	**Masafi**	**2.65**	**203**	P	**Pn**	**11 38 29.1**	**+3.3**
MASF				S	Sn	11 38 51.5	-5.8
MDH	**Madha**	**2.68**	**200**	P	**Pb**	**11 38 29.6**	**-2.1**
MDH				S	Sn	11 38 54.2	-3.6
UOSS	**Minazif**	**3.04**	**199**	P	**Pn**	**11 38 34.6**	**+3.5**
UOSS				S	Sn	11 38 59.8	-6.9
HATD	**Hatta, Dubai**	**3.17**	**200**	P	**Pn**	**11 38 36.2**	**+3.2**
NAZ	**Nazwa, Dubai**	**3.19**	**208**	P	**Pn**	**11 38 37.2**	**+4.0**
ASHO	**Ashiyiah**	**3.33**	**200**	P	**Pn**	**11 38 38.6**	**+3.5**
ASHO				S	Sn	11 39 06.9	-7.0
WSAR	**Wadi Sarin**	**4.72**	**165**	P	**Pn**	**11 38 55.5**	**+1.2**
WSAR				S	Sn	11 39 43.7	-4.5
BSY	**Bisya**	**5.06**	**181**	P	**Pn**	**11 39 01.5**	**+2.6**
BSY				S	Sn	11 39 48.4	-8.3
WBK	**Wadi Bani Khal**	**5.40**	**164**	P	**Pn**	**11 39 05.5**	**+1.8**
WBK				S	Sn	11 39 59.5	-5.7
JMDO	**Jabal Madar**	**5.48**	**172**	P	**Pn**	**11 39 06.0**	**+1.3**
JLN	**Jalan Bani Buh**	**5.96**	**161**	P	**Pn**	**11 39 12.4**	**+1.1**
JLN				S	**Sn**	**11 40 16.1**	**-2.7**
MHTO	**MHTO**	**6.83**	**175**	P	**Pn**	**11 39 25.7**	**+2.4**
MHTO				S	**Sn**	**11 40 37.2**	**-3.1**

*IDC **13** 11:49:00.2±2.2,37.°06N×142.°25E,h0km,mb3.3/4, mbtmp3.3/5,ML2.7/1,MS2.4/2,Error ellipse: s-maj=49.1km s-min=27.6km az=52.0*
*JMA **13** 11:49:03.1±0.3,36.°7N±0.°7×14.°2E±.°,h29km,MV3.4/35,E OFF FUKUSHIMA PREF*
ISC 13 11:49:02.5±1.3,36.°77N±0.°07×142.°14E±0.°10,h19km,n24, σ1s55/19,mb3.4/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.12**	**287**	P	**Pn**	**11 49 22.7**	**-0.6**
JFK	**Kawauchi**	**1.17**	**301**	P	**Pn**	**11 49 23.9**	**-0.1**
JHO	**Hitachi**	**1.27**	**263**	P	**Pn**	**11 49 24.3**	**-1.0**
JFFD	**Fukushimafurud**	**1.30**	**285**	P	**Pn**	**11 49 25.1**	**-0.7**
JHYU	**Hitachinakayam**	**1.32**	**251**	P	**Pn**	**11 49 24.9**	**-1.1**
JHYU				*e*S	**Sn**	**11 49 41.1**	**-2.0**
JMM	**Marumori**	**1.53**	**316**	P	**Pb**	**11 49 29.7**	**-0.7**
JOTO	**OTAMA OYAMA**	**1.64**	**299**	P	**Pb**	**11 49 31.6**	**-0.7**
JIO	**Ouri**	**1.79**	**340**	P	**Pb**	**11 49 34.2**	**-0.6**
JOU	**Okura**	**1.98**	**324**	*e*P	**Pb**	**11 49 37.0**	**-0.9**
JOU				*e*S	**Sb**	**11 50 02.8**	**+0.6**
JFY	**Yanaizu**	**2.05**	**289**	P	**Pb**	**11 49 37.8**	**-1.3**
JAG	**Ashikaga**	**2.19**	**262**	*e*P	**Pn**	**11 49 37.9**	**0.0**
BSO1	**Boso 1**	**2.32**	**204**	*e*P	**Pn**	**11 49 39.3**	**+0.2**
MJAR	**Matsushiro Arr** 0.8nm,0.3s,baz=78,slow=17,SNR=46	**3.17**	**267**	Pn	**Pn**	**11 49 52.8**	**+1.3**
MJAR	0.3nm,0.3s,baz=56,slow=21,SNR=2.3			Sn	**Sn**	**11 50 33.1**	**+4.4**
MJAR	comp=Z,26nm,20.6s,baz=181,slow=34 12nm,0.6s			LR	LR	11 50 50.3	
KSRS	**Korea Array** comp=Z,38nm,18.4s,baz=45,slow=37	**11.38**	**278**	LR	LR	11 56 08.5	
H11N2	**WAKE ISLAND Hy** baz=304	**27.51**	**121**	T	T	12 24 09.3	
H11N1	**WAKE ISLAND Hy** baz=304	**27.52**	**121**	T	T	12 24 12.7	
H11N3	**WAKE ISLAND Hy** baz=304	**27.53**	**121**	T	T	12 24 09.1	
H11S1	**WAKE ISLAND Hy** baz=315	**28.23**	**124**	T	T	12 25 09.7	
H11S3	**WAKE ISLAND Hy** baz=315	**28.23**	**124**	T	T	12 25 15.7	
H11S2	**WAKE ISLAND Hy** baz=315	**28.25**	**124**	T	T	12 25 08.8	

SONM	**Songino Array**	**28.41**	**304**	P		**P**	**11 54 57.2**	**+1.3**
	0.8nm,0.9s,baz=97,slow=9.9,SNR=5.5							
	0.8nm,0.9s							
MKAR	**Makanchi Array**	**44.75**	**302**	P		**P**	**11 57 12.7**	**-2.0**
	0.2nm,0.7s,baz=81,slow=9.1,SNR=2.6							
	0.2nm,0.7s							
WRA	**Warramunga Arr**	**56.89**	**189**	P		**P**	**11 58 47.1**	**+0.9**
	0.3nm,0.7s,baz=6.1,slow=8.2,SNR=1.7							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**60.61**	**189**	P		P	11 59 16.6	+4.5
	0.3nm,1.0s,baz=7.0,slow=8.4,SNR=1.5							
	0.3nm,1.0s							

NEIC ***13*** *11:57:49.3±2.0,56.22N±0.07×149.2W±0.1,h22km±9km, ML3.7/59,ML3.5(AEIC),Error ellipse: s-maj=11.3km s-min=7.5km az=157.0*

AEIC ***13*** *11:57:55.2±1.8,56.45N±0.05×149.24W±0.10,h10km±6km, Error ellipse: s-maj=9.2km s-min=5.2km az=127.0*

ISC 13 11:57:48.1±1.3,56.35N±0.08×149.23W±0.06,h10km, n244,σ1s50/255,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KDAK	**Kodiak Island**	**2.33**	**310**	Pn	**Pn**		**11 58 27.3**	**+0.9**
KDAK				Sn	**Sn**		**11 58 53.9**	**-1.1**
OHAK	**Old Harbor**	**2.40**	**293**	Pn	**Pn**		**11 58 27.9**	**+0.5**
OHAK				Sn	**Sn**		**11 58 55.0**	**-1.8**
OHAK				IAML			11 58 55.8	
	comp=N,164nm,0.7s							
OHAK	**Old Harbor**	**2.40**	**293**	P	**Pn**		**11 58 28.1**	**+0.8**
OHAK	**Old Harbor**	**2.40**	**293**	P	**Pn**		**11 58 27.9**	**+0.5**
	baz=108							
OHAK				S	**Sn**		**11 58 54.9**	**-1.8**
	baz=108							
SII	**Sitkinak Islan**	**2.76**	**276**	Pn	**Pn**		**11 58 32.7**	**+0.4**
SII				Sn	**Sn**		**11 59 03.1**	**-2.5**
SII				IAML			11 59 07.5	
	comp=E,222nm,1.1s							
SII				IAML			11 59 17.6	
	comp=N,153nm,1.5s							
SII	**Sitkinak Islan**	**2.76**	**276**	P	**Pn**		**11 58 33.8**	**+1.5**
SYI	**Shuyak Island**	**2.84**	**324**	Pn	**Pn**		**11 58 34.5**	**+1.1**
SYI					**Sn**		**11 59 07.0**	**-0.6**
SYI				IAML			11 59 09.1	
	comp=E,115nm,0.5s							
Q20K	**Shuyak Island**	**2.84**	**324**	P	**Pn**		**11 58 34.5**	**+1.1**
	baz=140							
Q20K				S	**Sn**		**11 59 06.3**	**-1.3**
	baz=140							
CNPM	**China Poot**	**3.36**	**342**	Pn	**Pn**		**11 58 40.5**	**-0.1**
CNPM					**Sn**		**11 59 21.5**	**+0.9**
Q23K	**Middleton Isla**	**3.45**	**25**	Pn	**Pn**		**11 58 42.2**	**+0.4**
Q23K				IAML			11 59 16.2	
	comp=E,248nm,1.4s							
Q23K				IAML			11 59 59.9	
	comp=N,264nm,1.4s							
MID	**Middleton Isla**	**3.45**	**25**	Pn	**Pn**		**11 58 42.3**	**+0.4**
MID				IAML			11 59 59.8	
	comp=N,268nm,1.2s							
MID				IAML			12 00 58.5	
	comp=E,206nm,1.4s							
BRSE	**Bradley Lake S**	**3.50**	**347**		**Pn**		**11 58 43.1**	**+0.6**
BRSE					**Sn**		**11 59 22.2**	**-1.7**
BRSE	**Bradley Lake S**	**3.50**	**347**	P	**Pn**		**11 58 43.1**	**+0.6**
	baz=166							
BRSE				S	**Sn**		**11 59 22.3**	**-1.7**
	baz=166							
Q19K	**Cape Douglas,**	**3.51**	**319**		**Pn**		**11 58 45.1**	**+2.4**
Q19K				IAML			11 59 33.3	
	comp=N,238nm,1.0s							
Q19K	**Cape Douglas,**	**3.51**	**319**	P	**Pn**		**11 58 44.5**	**+1.8**
	baz=134							
BRLK	**Bradley Lake**	**3.54**	**346**	Pn	**Pn**		**11 58 43.9**	**+0.8**
BRLK				IAML			11 59 28.3	
	comp=E,57nm,0.5s							
HOM	**Homer**	**3.56**	**340**	Pn	**Pn**		**11 58 45.2**	**+1.9**
HOM				IAML			11 59 57.0	
	comp=E,252nm,1.1s							
CHIR	**Chirikof Islan**	**3.62**	**264**	Pn	**Pn**		**11 58 45.8**	**+1.6**
CHIR				IAML			11 59 37.3	
	comp=N,96nm,1.4s							
CHIR				IAML			12 00 38.1	
	comp=E,101nm,1.4s							
SEW	**Seward**	**3.77**	**358**		**Pn**		**11 58 46.7**	**+0.5**
SEW	**Seward**	**3.77**	**358**	P	**Pn**		**11 58 46.8**	**+0.6**
	baz=178							
P23K	**Montague Islan**	**3.79**	**14**		**Pn**		**11 58 46.9**	**+0.4**
P23K					**Sn**		**11 59 28.8**	**-2.2**
P23K	**Montague Islan**	**3.79**	**14**	P	**Pn**		**11 58 46.9**	**+0.4**
	baz=196							
P23K				S	**Sn**		**11 59 28.8**	**-2.2**
	baz=196							
ACHA	**Angle Creek He**	**3.80**	**302**		**Pn**		**11 58 49.0**	**+2.3**
KAHC	**Katmai Hardscr**	**3.88**	**309**		**Pn**		**11 58 49.9**	**+2.1**
KAHC	**Katmai Hardscr**	**3.88**	**309**	P	**Pn**		**11 58 49.9**	**+2.1**
	baz=123							
P19K	**Oil Pt**	**3.94**	**329**	Pn	**Pn**		**11 58 50.1**	**+1.6**
P19K				IAML			11 59 37.6	
	comp=N,99nm,0.9s							
P19K				IAML			11 59 39.7	
	comp=E,119nm,0.7s							
P19K	**Oil Pt**	**3.94**	**329**	P	**Pn**		**11 58 49.9**	**+1.4**
	baz=145							
CNTC	**Contact Creek**	**4.09**	**301**		**Pn**		**11 58 52.7**	**+2.1**
Q17K	**Contact Creek**	**4.09**	**301**	P	**Pn**		**11 58 52.7**	**+2.0**
	baz=114							
Q22K	**Cooper Landing**	**4.16**	**357**		**Pn**		**11 58 52.8**	**+1.3**
Q22K				IAML			11 59 57.9	
	comp=N,180nm,0.8s							
Q22K	**Cooper Landing**	**4.16**	**357**	P	**Pn**		**11 58 52.4**	**+0.9**
	baz=176							
IVE	**Iliamna Volcan**	**4.19**	**333**		**Pn**		**11 58 52.8**	**+0.7**
SLKM	**Skilak Lake**	**4.21**	**353**		**Pn**		**11 58 52.6**	**+0.4**
HIN	**Hinchinbrook I**	**4.31**	**18**	Pn	**Pn**		**11 58 54.7**	**+1.1**
HIN				IAML			11 59 42.9	
	comp=E,107nm,0.6s							
KAIM	**Kayak Island**	**4.40**	**33**	Pn	**Pn**		**11 58 56.7**	**+1.8**
KAIM	**Kayak Island**	**4.40**	**33**	P	**Pn**		**11 58 56.0**	**+1.1**
	baz=218							
P18K	**Big Mountain,**	**4.42**	**316**		**Pn**		**11 58 56.3**	**+1.1**
P18K	**Big Mountain,**	**4.42**	**316**	P	**Pn**		**11 58 56.4**	**+1.1**
	baz=130							
RSO	**Redoubt South**	**4.52**	**337**	Pn	**Pn**		**11 58 57.9**	**+1.2**
CAPN	**Captain Cook N**	**4.55**	**348**	Pn	**Pn**		**11 58 58.1**	**+1.3**
CAPN	**Captain Cook N**	**4.55**	**348**	P	**Pn**		**11 58 58.5**	**+1.7**
	baz=166							
RDWB	**Redoubt West**	**4.57**	**337**		**Pn**		**11 58 57.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.59**	**22**		**Pn**		**11 58 58.9**	**+1.3**
EYAK	**Cordova Ski Ar**	**4.59**	**22**	P	**Pn**		**11 58 58.8**	**+1.3**
EYAK	**Cordova Ski Ar**	**4.59**	**22**	P	**Pn**		**11 58 58.5**	**+1.0**
	baz=206							
O19K	**Port Alsworth**	**4.70**	**327**		**Pn**		**11 59 00.2**	**+1.2**
O19K				IAML			11 59 59.6	
	comp=N,113nm,0.5s							
O19K	**Port Alsworth**	**4.70**	**327**	P	**Pn**		**11 58 59.8**	**+0.8**
	baz=142							
RAGM	**Ragged Mountai**	**4.71**	**29**	Pn	**Pn**		**11 59 00.0**	**+0.9**
SUCK	**Suckling Hills**	**4.72**	**35**		**Pn**		**11 59 01.0**	**+1.8**
SUCK				IAML			12 00 00.3	
	comp=E,80nm,1.1s							
O18K	**Koktuh Hills**	**4.73**	**320**		**Pn**		**11 59 00.5**	**+1.0**
O18K	**Koktuh Hills**	**4.73**	**320**	P	**Pn**		**11 59 00.3**	**+0.9**
	baz=135							
RC01	**Rabbit Creek A**	**4.76**	**357**		**Pn**		**11 59 00.3**	**+0.5**
RC01				IAML			11 59 56.2	
	comp=E,40nm,0.7s							
RC01				IAML			12 00 01.4	
	comp=N,32nm,0.6s							
RC01	**Rabbit Creek A**	**4.76**	**357**	P	**Pn**		**11 59 00.3**	**+0.5**
	baz=177							
HMT	**Hamilton**	**4.78**	**31**	Pn	**Pn**		**11 59 01.3**	**+1.2**
NICHA	**Nichawak Mount**	**4.79**	**33**		**Pn**		**11 59 01.7**	**+1.5**
P17K	**Kvichak River**	**4.80**	**309**		**Pn**		**11 59 02.1**	**+1.8**
P17K	**Kvichak River**	**4.80**	**309**	P	**Pn**		**11 59 02.1**	**+1.8**
	baz=122							
FIS	**Fire Island**	**4.84**	**354**	Pn	**Pn**		**11 59 02.8**	**+2.0**
FIS				IAML			12 00 04.9	
	comp=N,73nm,1.2s							
FIS				IAML			12 00 07.4	
	comp=E,66nm,1.4s							
GOAT	**Goat Mountain**	**4.86**	**27**		**Pn**		**11 59 02.8**	**+1.5**
GRIN	**Grindle Hills**	**5.03**	**36**		**Pn**		**11 59 05.2**	**+1.7**
KNK	**Knik Glacier**	**5.10**	**4**	Pn	**Pn**		**11 59 04.2**	**-0.3**
KNK				IAML			12 00 07.6	
	comp=N,35nm,1.4s							
KNK				IAML			12 00 11.4	
	comp=E,33nm,1.0s							
KNK	**Knik Glacier**	**5.10**	**4**	P	**Pn**		**11 59 05.8**	**+1.3**
	baz=185							
CHGN	**Chignik**	**5.11**	**273**	Pn	**Pn**		**11 59 04.6**	**0.0**
CHGN				IAML			12 00 05.8	
	comp=N,36nm,0.3s							
CHGN				IAML			12 00 07.6	
	comp=E,38nm,1.2s							
SNH	**Sunshine Point**	**5.12**	**39**		**Pn**		**11 59 06.1**	**+1.4**
SNH				IAML			12 00 14.0	
	comp=E,83nm,1.2s							
SNH				IAML			12 01 48.7	
	comp=N,68nm,1.4s							
SPCP	**Crater Peak Br**	**5.16**	**344**		**Pn**		**11 59 06.4**	**+0.9**
SPCG	**Spurr Capps Gl**	**5.17**	**345**		**Pn**		**11 59 06.4**	**+0.9**
KHIT	**Khitrov Hills**	**5.17**	**35**		**Pn**		**11 59 06.7**	**+1.1**
SUA	**Susitna One**	**5.19**	**352**	Pn	**Pn**		**11 59 06.7**	**+0.9**
BGL	**Barrier Glacie**	**5.20**	**343**		**Pn**		**11 59 07.2**	**+1.3**
BMRM	**Bremner River**	**5.23**	**26**		**Pn**		**11 59 07.3**	**+1.1**
BMRM	**Bremner River**	**5.23**	**26**	P	**Pn**		**11 59 07.4**	**+1.1**
	baz=210							
N19K	**Bonanza Creek**	**5.25**	**331**		**Pn**		**11 59 05.8**	**-0.8**
N19K	**Bonanza Creek**	**5.25**	**331**	P	**Pn**		**11 59 07.4**	**+0.7**
	baz=146							
PMR	**Palmer**	**5.26**	**1**		**Pn**		**11 59 07.5**	**+0.9**
PMR				IAML			12 00 18.3	
	comp=N,20nm,0.8s							
PMR				IAML			12 00 18.6	
	comp=E,18nm,1.4s							
PMR	**Palmer**	**5.26**	**1**	P	**Pn**		**11 59 07.9**	**+1.2**
PMR	**Palmer**	**5.26**	**1**	P	**Pn**		**11 59 07.6**	**+0.9**
	baz=181							
WAX	**Waxell Ridge**	**5.31**	**37**	Pn	**Pn**		**11 59 07.5**	**+0.1**
STLK	**Strandline Lak**	**5.34**	**346**		**Pn**		**11 59 08.1**	**+0.2**
SPNN	**North Nagishla**	**5.35**	**342**		**Pn**		**11 59 09.1**	**+1.1**
O17K	**Koliganek Bris**	**5.41**	**313**		**Pn**		**11 59 10.0**	**+1.4**
O17K	**Koliganek Bris**	**5.41**	**313**	P	**Pn**		**11 59 10.0**	**+1.4**
	baz=125							
P16K	**Nushagak River**	**5.41**	**303**		**Pn**		**11 59 10.9**	**+2.2**
P16K	**Nushagak River**	**5.41**	**303**	P	**Pn**		**11 59 10.9**	**+2.2**
	baz=115							
KLU	**Klutina**	**5.44**	**17**		**Pn**		**11 59 10.5**	**+1.3**
KLU	**Klutina**	**5.44**	**17**	P	**Pn**		**11 59 10.3**	**+1.1**
	baz=200							
M22K	**Willow**	**5.44**	**356**	Pn	**Pn**		**11 59 11.4**	**+2.3**
GHO	**Glory Hole Cre**	**5.45**	**2**		**Pn**		**11 59 10.5**	**+1.2**
CRQM	**Cirque**	**5.45**	**33**	Pn	**Pn**		**11 59 10.4**	**+0.9**
SML	**Sawmill**	**5.50**	**4**		**Pn**		**11 59 11.1**	**+1.1**
SML	**Sawmill**	**5.50**	**4**	P	**Pn**		**11 59 11.6**	**+1.6**
	baz=185							
TGL	**Tana Glacier**	**5.55**	**35**		**Pn**		**11 59 11.9**	**+1.2**
N18K	**Kilae Creek**	**5.57**	**324**	Pn	**Pn**		**11 59 11.8**	**+0.8**
N18K	**Kilae Creek**	**5.57**	**324**	P	**Pn**		**11 59 11.6**	**+0.6**
	baz=138							
SCM	**Sheep Creek Mo**	**5.59**	**9**	Pn	**Pn**		**11 59 13.0**	**+1.7**
ISLE	**Juniper Island**	**5.59**	**37**	Pn	**Pn**		**11 59 12.9**	**+1.6**
BAGL	**Bagley Icefiel**	**5.60**	**39**		**Pn**		**11 59 12.2**	**+0.9**
O16K	**Kokwok River B**	**5.73**	**308**	Pn	**Pn**		**11 59 15.3**	**+2.1**
O16K	**Kokwok River B**	**5.73**	**308**	P	**Pn**		**11 59 15.2**	**+2.1**
	baz=120							
VRDI	**Verde Repeater**	**5.74**	**29**	Pn	**Pn**		**11 59 14.6**	**+1.1**
SKT	**Skwentna**	**5.77**	**349**	Pn	**Pn**		**11 59 15.4**	**+1.7**
N25K	**Chitina, Valde**	**5.79**	**22**		**Pn**		**11 59 15.4**	**+1.3**
N25K	**Chitina, Valde**	**5.79**	**22**	P	**Pn**		**11 59 15.5**	**+1.4**
	baz=207							
SVW2	**Sparrevohn**	**5.80**	**328**	Pn	**Pn**		**11 59 15.0**	**+1.0**
SVW2	**Sparrevohn**	**5.80**	**328**	P	**Pn**		**11 59 14.9**	**+0.8**
KIAG	**Kiagna River**	**5.83**	**35**		**Pn**		**11 59 16.0**	**+1.4**
GLB	**Gilahina Butte**	**5.83**	**27**	Pn	**Pn**		**11 59 16.2**	**+1.7**
SAMH	**Samovar Hills**	**5.86**	**46**		**Pn**		**11 59 16.4**	**+1.5**
GRNC	**Granite Creek**	**5.89**	**39**		**Pn**		**11 59 16.9**	**+1.5**
M20K	**Styx River**	**5.90**	**342**		**Pn**		**11 59 16.1**	**+0.5**
M20K	**Styx River**	**5.90**	**342**	P	**Pn**		**11 59 16.3**	**+0.8**
	baz=158							
TABL	**Table Mountain**	**5.91**	**43**		**Pn**		**11 59 17.4**	**+1.6**
N17K	**Nushagak Hills**	**5.92**	**318**	Pn	**Pn**		**11 59 16.2**	**+0.6**
N17K	**Nushagak Hills**	**5.92**	**318**	P	**Pn**		**11 59 16.8**	**+1.1**
	baz=131							
M24K	**Tolsona, Glenn**	**5.99**	**14**		**Pn**		**11 59 17.6**	**+0.9**
M24K	**Tolsona, Glenn**	**5.99**	**14**	P	**Pn**		**11 59 18.9**	**+2.2**
	baz=197							
MCARA	**McCarthy VSAT**	**5.99**	**30**		**Pn**		**11 59 18.7**	**+2.0**
MCARA	**McCarthy VSAT**	**5.99**	**30**	P	**Pn**		**11 59 18.7**	**+2.0**
	baz=216							
PTPK	**Patty Peak**	**6.00**	**33**		**Pn**		**11 59 18.7**	**+1.8**
PCA	**Pinnacle**	**6.05**	**48**		**Pn**		**11 59 18.1**	**+0.5**
PINM	**Pinnacle**	**6.05**	**48**	P	**Pn**		**11 59 18.9**	**+1.3**
	baz=236							
CNBA	**Chernabura Isl**	**6.07**	**260**	Pn	**Pn**		**11 59 18.0**	**+0.2**
CUT	**Chulitna**	**6.10**	**355**	Pn	**Pn**		**11 59 19.1**	**+1.0**
BARN	**Barnard Glacie**	**6.16**	**37**		**Pn**		**11 59 20.6**	**+1.5**
M19K	**Big River Lodg**	**6.17**	**337**	Pn	**Pn**		**11 59 19.8**	**+0.6**
M19K	**Big River Lodg**	**6.17**	**337**	P	**Pn**		**11 59 19.7**	**+0.5**
	baz=152							
M18K	**Stony River**	**6.18**	**329**		**Pn**		**11 59 19.8**	**+0.4**
M18K	**Stony River**	**6.18**	**329**	P	**Pn**		**11 59 19.8**	**+0.4**
	baz=143							
CTG	**Chitna Glacier**	**6.20**	**38**	P	**Pn**		**11 59 20.8**	**+1.2**
	baz=226							
PNL	**Peninsula**	**6.20**	**53**		**Pn**		**11 59 21.1**	**+1.5**
PNL	**Peninsula**	**6.20**	**53**	P	**Pn**		**11 59 21.1**	**+1.5**
PNL	**Peninsula**	**6.20**	**53**	P	**Pn**		**11 59 21.1**	**+1.5**
	baz=242							
CTGM	**Chitina Glacie**	**6.20**	**38**	Pn	**Pn**		**11 59 19.7**	**0.0**
LOGN	**Logan Glacier**	**6.22**	**40**	Pn	**Pn**		**11 59 19.5**	**-0.4**
BCPM	**Bancas Point**	**6.23**	**51**	Pn	**Pn**		**11 59 19.6**	**-0.4**
WAT6	**Susitna Watana**	**6.30**	**6**		**Pn**		**11 59 22.6**	**+1.5**
WAT6	**Susitna Watana**	**6.30**	**6**	P	**Pn**		**11 59 22.6**	**+1.5**
	baz=188							
O15K	**Ungalikthiuk R**	**6.34**	**301**		**Pn**		**11 59 23.5**	**+2.1**
O15K	**Ungalikthiuk R**	**6.34**	**301**	P	**Pn**		**11 59 23.5**	**+2.1**
	baz=111							
SDPT	**Sand Point**	**6.41**	**266**		**Pn**		**11 59 20.9**	**-1.6**
SDPT	**Sand Point**	**6.41**	**266**	P	**Pn**		**11 59 24.6**	**+2.1**
SDPT	**Sand Point**	**6.41**	**266**	P	**Pn**		**11 59 24.4**	**+1.9**
	baz=75							
HARP	**HAARP**	**6.42**	**17**		**Pn**		**11 59 24.5**	**+1.9**
HARP	**HAARP**	**6.42**	**17**	P	**Pn**		**11 59 24.5**	**+1.9**
	baz=201							
N16K	**Nishlik Lake**	**6.50**	**314**		**Pn**		**11 59 25.2**	**+1.5**
N16K	**Nishlik Lake**	**6.50**	**314**	P	**Pn**		**11 59 25.2**	**+1.5**
	baz=125							
WAT7	**Susitna Watana**	**6.51**	**2**		**Pn**		**11 59 25.8**	**+1.9**
WAT1	**Susitna Watana**	**6.51**	**3**		**Pn**		**11 59 26.1**	**+2.2**
WAT1	**Susitna Watana**	**6.51**	**3**	P	**Pn**		**11 59 26.0**	**+2.2**
	baz=183							
L19K	**White Mountain**	**6.52**	**336**	Pn	**Pn**		**11 59 25.1**	**+1.1**
L19K	**White Mountain**	**6.52**	**336**	P	**Pn**		**11 59 24.6**	**+0.6**
	baz=151							
M17K	**Holitna River**	**6.61**	**323**	Pn	**Pn**		**11 59 26.3**	**+1.1**
DHY	**Denali Highway**	**6.81**	**7**	Pn	**Pn**		**11 59 28.3**	**+0.2**
DHY	**Denali Highway**	**6.81**	**7**	P	**Pn**		**11 59 29.5**	**+1.3**
	baz=189							
M26K	**Nabesna, AK**	**6.86**	**25**	Pn	**Pn**		**11 59 30.3**	**+1.7**
O29M	**Mount Kennedy**	**6.87**	**50**	Pn	**Pn**		**11 59 30.5**	**+1.7**
O29M	**Mount Kennedy**	**6.87**	**50**	P	**Pn**		**11 59 30.8**	**+1.9**
	baz=240							
N15K	**Kwethluk River**	**6.89**	**308**	P	**Pn**		**11 59 31.3**	**+2.2**
	baz=118							
M16K	**Timber Creek**	**6.90**	**317**	Pn	**Pn**		**11 59 30.8**	**+1.7**
M16K	**Timber Creek**	**6.90**	**317**	P	**Pn**		**11 59 30.7**	**+1.5**
	baz=128							
PAX	**Paxson**	**6.91**	**14**		**Pn**		**11 59 31.1**	**+1.7**
PAX	**Paxson**	**6.91**	**14**	P	**Pn**		**11 59 31.0**	**+1.6**
	baz=198							
P29M	**Windy Craggy**	**6.94**	**57**	Pn	**Pn**		**11 59 30.8**	**+1.1**
P29M	**Windy Craggy**	**6.94**	**57**	P	**Pn**		**11 59 31.0**	**+1.2**
	baz=247							
L18K	**Granite Mounta**	**7.02**	**330**	Pn	**Pn**		**11 59 31.3**	**+0.6**
RND	**Reindeer**	**7.09**	**1**	Pn	**Pn**		**11 59 34.0**	**+2.2**
TRF	**Thorofare Moun**	**7.15**	**356**	Pn	**Pn**		**11 59 32.9**	**+0.2**
MENT	**Mentasta**	**7.17**	**21**	Pn	**Pn**		**11 59 35.1**	**+2.2**
CAST	**Castle Rocks**	**7.24**	**350**	Pn	**Pn**		**11 59 34.9**	**+1.1**
CAST	**Castle Rocks**	**7.24**	**350**	P	**Pn**		**11 59 34.8**	**+0.9**
	baz=167							
S31K	**Pelican**	**7.25**	**72**	Pn	**Pn**		**11 59 34.4**	**+0.4**
S31K	**Pelican**	**7.25**	**72**	P	**Pn**		**11 59 33.9**	**0.0**
	baz=263							
KTH	**Kantishna Hill**	**7.28**	**354**	Pn	**Pn**		**11 59 35.4**	**+0.9**
L26K	**Log Cabin Wild**	**7.33**	**22**	Pn	**Pn**		**11 59 37.9**	**+2.8**
TTA	**Tatalina**	**7.44**	**335**	P	**Pn**		**11 59 38.3**	**+1.7**
P30M	**Million Dollar**	**7.50**	**55**		**Pn**		**11 59 37.7**	**+0.3**
	baz=246							
P30M	**Million Dollar**	**7.50**	**55**	P	**Pn**		**11 59 39.3**	**+1.9**
SIT	**Sitka**	**7.69**	**79**	Pn	**Pn**		**11 59 39.5**	**-0.5**
SIT	**Sitka**	**7.69**	**79**	P	**Pn**		**11 59 38.4**	**-1.6**
L27K	**Beaver Creek,**	**7.70**	**26**	Pn	**Pn**		**11 59 40.5**	**+0.3**
BCAR	**Beaver Creek A**	**7.71**	**26**	Pn	**Pn**		**11 59 42.9**	**+2.5**
RIDG	**Independent Ri**	**7.73**	**15**		**Pn**		**11 59 43.5**	**+2.8**
K17K	**Iditarod**	**7.87**	**328**	Pn	**Pn**		**11 59 43.0**	**+0.5**
SKAG	**Skagway**	**8.03**	**61**	Pn	**Pn**		**11 59 45.3**	**+0.6**
SKAG	**Skagway**	**8.03**	**61**	P	**Pn**		**11 59 45.1**	**+0.4**
J18K	**Innoko River**	**8.06**	**335**	Pn	**Pn**		**11 59 46.2**	**+1.1**
SCRK	**Sand Creek**	**8.09**	**17**	Pn	**Pn**		**11 59 47.9**	**+2.3**
S32K	**Kiliinsnoo**	**8.10**	**76**	Pn	**Pn**		**11 59 45.8**	**+0.1**
HDA	**Harding Lake**	**8.17**	**7**	Pn	**Pn**		**11 59 47.9**	**+1.3**
O30N	**Mendenhall**	**8.17**	**52**	Pn	**Pn**		**11 59 48.5**	**+1.9**
WRH	**Wood River Hil**	**8.17**	**3**	Pn	**Pn**		**11 59 48.2**	**+1.6**
R32K	**Eaglecrest**	**8.20**	**70**	Pn	**Pn**		**11 59 48.3**	**+1.3**
M29M	**Somme Creek**	**8.21**	**37**		**Pn**		**11 59 49.5**	**+2.3**
J20K	**Nowinta River**	**8.22**	**345**	Pn	**Pn**		**11 59 48.1**	**+0.8**
JIS	**Juneau Island**	**8.27**	**70**		**Pn**		**11 59 49.1**	**+1.2**
JIS	**Juneau Island**	**8.27**	**70**	P	**Pn**		**11 59 48.4**	**+0.5**
J19K	**Poorman**	**8.30**	**340**	Pn	**Pn**		**11 59 48.7**	**+0.3**
CCB	**Clear Creek Bu**	**8.36**	**4**	Pn	**Pn**		**11 59 50.9**	**+1.7**
ISLZ	**Isanotski Laza**	**8.37**	**265**		**Pn**		**11 59 50.8**	**+1.4**
J25K	**Salcha River,**	**8.51**	**11**	Pn	**Pn**		**11 59 52.0**	**+0.8**
IL31		**8.53**	**7**		**Pn**		**11 59 53.7**	**+2.2**
ILAR	**Eielson Array**	**8.53**	**7**	Pn	**Pn**		**11 59 54.1**	**+2.6**
L14K	**Kuka Creek**	**8.58**	**311**	Pn	**Pn**		**11 59 50.5**	**-1.6**
COLA	**College**	**8.58**	**4**		**Pn**		**11 59 53.1**	**+0.9**
COLA	**College**	**8.58**	**4**	P	**Pn**		**11 59 54.6**	**+2.4**
J26L	**Joseph Creek**	**8.64**	**17**		**Pn**		**11 59 53.4**	**+0.3**
K15K	**Wolf Creek Mou**	**8.65**	**319**	Pn	**Pn**		**11 59 54.1**	**+0.9**
MDM	**Murphy Dome**	**8.66**	**3**	Pn	**Pn**		**11 59 55.2**	**+2.0**
WHY	**Whitehorse**	**8.66**	**54**	Pn	**Pn**		**11 59 55.5**	**+2.1**
MLY	**Manley**	**8.74**	**356**	Pn	**Pn**		**11 59 56.2**	**+1.8**
L29M	**L29M**	**8.79**	**35**	Pn	**Pn**		**11 59 57.2**	**+2.1**
I23K	**Minto, Yukon-K**	**8.83**	**360**		**Pn**		**11 59 56.9**	**+1.3**
POKR	**Poker Plat Res**	**8.85**	**5**	Pn	**Pn**		**11 59 58.8**	**+3.0**
P32M	**Atlin**	**8.86**	**62**	Pn	**Pn**		**11 59 57.5**	**+1.4**
I21K	**Tanana**	**8.96**	**353**	Pn	**Pn**		**11 59 59.0**	**+1.6**
U33K	**Whale Pass**	**8.98**	**85**	Pn	**Pn**		**11 59 56.0**	**-1.7**
CRAG	**Craig**	**9.09**	**89**	P	**Pn**		**11 59 57.4**	**-1.8**
DAWY	**Dawson**	**9.15**	**28**	Pn	**Pn**		**12 00 03.0**	**+3.0**
EGAK	**Eagle**	**9.34**	**22**	Pn	**Pn**		**12 00 05.1**	**+2.5**
Q32M	**Nakina River**	**9.46**	**67**	Pn	**Pn**		**12 00 03.8**	**-0.7**
I26K	**Coal Creek Min**	**9.46**	**16**	Pn	**Pn**		**12 00 06.6**	**+2.4**
P33M	**Teslin, Yukon**	**9.47**	**59**		**Pn**		**12 00 05.8**	**+1.4**
H21K	**Melozitna Rive**	**9.50**	**351**		**Pn**		**12 00 05.1**	**+0.3**
K29M	**Barlow Dome**	**9.51**	**33**	Pn	**Pn**		**12 00 07.5**	**+2.5**
H24K	**Noodor Dome**	**9.55**	**3**	Pn	**Pn**		**12 00 07.8**	**+2.4**
M31M	**Drury Creek, Y**	**9.59**	**46**	Pn	**Pn**		**12 00 08.9**	**+2.9**
H18K	**Honhosa River**	**9.89**	**337**	Pn	**Pn**		**12 00 09

YSS A A 12 44 44.1
comp=E,20nm,0.5s
YUK Yuzh-Kuril'sk 4.57 212 *e*PN **Pn 12 43 40.1 +0.3**
YUK *e*S **S 12 44 41.5 -1.4**
YUK pmax pmax
comp=Z,159nm,0.2s
YUK smax smax
comp=E,318nm,0.5s
YUK smax smax
comp=N,485nm,0.6s
YUK Yuzh-Kuril'sk 4.57 212 *e*P **Pn 12 43 40.9 +1.1**
YUK AMB AMB 12 43 41.2
comp=N,160nm,0.2s
YUK *e*S **S 12 44 43.4 +0.5**
YUK A A 12 44 45.2
comp=N,490nm,0.6s
YUK A A 12 44 45.2
comp=N,320nm,0.6s
RUSJ Misakicho 4.75 217 *e*PN **Pn 12 43 42.7 +1.1**
RUSJ *e*S **S 12 44 46.1 0.0**
TYV Tymovskoe 5.17 307 *e*PN **Pn 12 43 44.0 -1.7**
TYV *e*S **S 12 44 50.5 -3.4**
TYV pmax pmax
comp=Z,49nm,0.9s
TYV smax smax
comp=N,42nm,1.2s
TYV smax smax
comp=E,77nm,1.2s
TYV Tymovskoe 5.17 307 *e*P **Pn 12 43 44.1 -1.7**
TYV AMB AMB 12 43 44.6
comp=E,40nm,0.6s
TYV AMB AMB 12 43 46.9
comp=E,400nm,5.0s
TYV *e*S **S 12 44 50.6 -3.4**
TYV A A 12 44 52.0
comp=E,30nm,0.9s
TYV A A 12 44 52.0
comp=E,40nm,0.9s
TYV A A 12 44 57.7
comp=E,600nm,4.0s
TYV A A 12 44 57.7
comp=E,500nm,4.0s
NEM2 Nemuro 2 5.20 209 *e*P **Pn 12 43 44.2 -2.1**
NEM2 *e*S **S 12 44 48.3 -6.4**
NMR Nemuro--Hokkai 5.20 209 *e*PN **Pn 12 43 44.1 -2.2**
NMR *e*S **S 12 44 49.4 -5.3**
NMR Nemuro--Hokkai 5.20 209 *e*P **Pn 12 43 44.2 -2.1**
SKR Severo-Kuril's 5.27 56 *i* PN **Pn 12 43 44.7 -2.1**
SKR Severo-Kuril's 5.27 56 *e*P **Pn 12 43 44.7 -2.1**
JTKR Abashiri--Toko 5.44 225 *e*P **Pn 12 43 50.0 +1.2**
AKK Akkeshi 5.82 213 *e*P **Pn 12 43 51.9 -1.0**
JAK Akkeshi 5.89 214 *e*P **Pn 12 43 52.1 -1.5**
JAK *e*S **S 12 45 03.3 -4.9**
JKA Kamikawa-asahi 6.00 233 *e*P **Pn 12 43 56.5 +1.7**
ASAJ Asahikawa 6.00 233 P **Pn 12 43 56.5 +1.6**
comp=E,39nm,0.4s,baz=53,slow=9.5,SNR=77
ASAJ S **S 12 45 10.8 +0.6**
comp=E,9.8nm,0.8s,baz=108,slow=19,SNR=1.2
JAR Ashorobuto 6.03 221 *e*P **Pn 12 43 55.1 0.0**
JKK2 Kamakawa 2 6.09 230 *e*P **Pn 12 43 57.9 +2.1**
JOB Onbets 6.32 219 *e*P **Pn 12 43 57.1 -1.1**
JOB *e*S **S 12 45 12.1 -4.5**
JCH Churui 6.75 220 *e*P **Pn 12 44 01.7 -1.5**
JCH *e*S **S 12 45 19.7 -5.8**
JNBK Urakawa-nobuka 7.29 221 *e*P **Pn 12 44 07.4 -1.7**
JNBK *e*S **S 12 45 30.3 -6.2**
PETK Petropavlovsk- 7.46 43 P **Pn 12 44 08.1 -2.7**
comp=E,14nm,1.0s,baz=217,slow=8.1,SNR=7.2
JANG Nango 9.39 219 *e*S **S 12 46 13.2 -7.4**
KLR Kul'dur 11.64 283 *de*PN **Pn 12 44 59.6 +0.6**
KLR pmax pmax
comp=Z,16nm,0.8s
KLR Kul'dur 11.64 283 P **Pn 12 44 58.6 -0.4**
comp=Z,12nm,0.7s,baz=84,slow=11,SNR=41
KLR Kul'dur 11.64 283 *e*P **Pn 12 44 59.6 +0.6**
MA2 Magadan 11.67 4 P **P 12 44 55.3 -2.6**
comp=Z,6.7nm,0.5s,baz=190,slow=9.6,SNR=7.6
USRK Ussuriysk Ar. 12.54 259 P **Pn 12 45 08.8 -0.7**
comp=Z,5.1nm,0.6s,baz=67,slow=12,SNR=14
MSHR Mys Shultsa 13.80 254 *i* P **Pn 12 45 24.0 -0.1**
MSHR pmax pmax
comp=Z,6.0nm,0.5s
MDJ Mudanjiang 13.97 263 P **P 12 45 24.3 +0.9**
MDJ pmax pmax
comp=Z,22nm,0.7s
MDJ pmax pmax
comp=Z,240nm,4.8s
PSTR Posyet 13.99 254 *i* P **P 12 45 24.4 +0.8**
PSTR Posyet 13.99 254 *e*P **Pn 12 45 26.2 -0.1**
MJAR Matsushiro Arr 14.01 219 P **P 12 45 27.8 +3.9**
comp=Z,4.5nm,0.4s,baz=26,slow=10.0,SNR=14
HEH HeiHe 14.46 287 *e*P **P 12 45 28.6 +0.1**
HEH pmax pmax
comp=Z,20nm,0.6s
HEH pmax pmax
comp=Z,300nm,6.0s
BNX BinXian 15.08 270 ⇓P **P 12 45 34.8 -0.6**
BNX pmax pmax
comp=Z,5.0nm,2.1s
BNX pmax pmax
comp=Z,220nm,5.3s
SEY Seymchan 15.11 6 *ce*P **P 12 45 34.2 -1.2**
SEY pmax pmax
comp=Z,9.0nm,1.3s
SEY Seymchan 15.11 6 P **P 12 45 34.0 -1.4**
comp=Z,5.4nm,0.6s,baz=183,slow=7.7,SNR=14
SEY Seymchan 15.11 6 *e*P **P 12 45 34.2 -1.2**
KSRS Korea Array 18.79 244 P **P 12 46 17.9 +3.0**
comp=Z,5.5nm,0.8s,baz=40,slow=11,SNR=12
JNU Nakatsue 20.27 230 P **P 12 46 32.4 +3.3**
comp=Z,5.5nm,0.8s,baz=17,slow=11,SNR=5.0
comp=Z,5.5nm,0.8s
BILL Bilibino 21.91 17 *i* P **P 12 46 43.2 -0.3**
BILL pmax pmax
comp=Z,11nm,1.9s
BILL Bilibino 21.91 17 *e*P **P 12 46 43.2 -0.3**
TIXI Tiksi 25.59 345 *ce*P **P 12 47 13.9 -2.5**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
TIXI Tiksi 25.59 345 *e*P **P 12 47 13.9 -2.5**
SONM Songino Array 28.44 286 P **P 12 47 42.1 0.0**
comp=Z,0.3nm,0.3s,baz=64,slow=9.8,SNR=2.2
comp=Z,0.3nm,0.3s
NRIK Noril'sk 36.34 328 *ce*P **P 12 48 49.2 -0.3**
NRIK pmax pmax
comp=Z,7.0nm,1.5s
ILAR Eielson Array 37.27 39 P **P 12 48 57.8 +0.4**
comp=Z,2.3nm,0.8s,baz=270,slow=7.9,SNR=26
ILAR PcP **PcP 12 51 07.0 +0.3**
comp=Z,0.2nm,0.6s,baz=282,slow=4.0,SNR=2.2
comp=Z,2.3nm,0.8s
ZALV Zalesovo Beam 39.74 304 P **P 12 49 17.2 -0.5**
comp=Z,0.7nm,0.5s,baz=86,slow=7.4,SNR=1.4
ZALV PcP **PcP 12 51 15.9 +1.3**
comp=Z,1.1nm,0.3s,baz=49,slow=2.9,SNR=4.5
comp=Z,0.7nm,0.5s
MK31 Makanchi Array 44.03 295 *ce*P **P 12 49 52.4 +0.4**
MKAR Makanchi Array 44.03 295 P **P 12 49 52.3 +0.3**
comp=Z,0.5nm,0.4s,baz=63,slow=7.0,SNR=9.5
MKAR PcP **PcP 12 51 30.1 +0.9**
comp=Z,0.2nm,0.6s,baz=57,slow=5.3,SNR=1.8
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 44.03 295 *e*P **P 12 49 52.5 +0.5**
KURK Kurchatov 44.48 301 *ce*P **P 12 49 55.3 -0.1**
KURK Kurchatov 44.48 301 *e*P **P 12 49 55.3 -0.1**
KURBB Kurchatov Arra 44.57 301 P **P 12 49 55.7 -0.4**
comp=Z,1.6nm,0.7s,baz=68,slow=8.4,SNR=11
KURBB PcP **PcP 12 51 31.5 +0.5**
comp=Z,0.4nm,0.7s,baz=67,slow=4.3,SNR=3.2
comp=Z,1.6nm,0.7s
BVAR Borovoye Array 48.03 307 P **P 12 50 22.9 +0.3**
comp=Z,3.2nm,0.5s,baz=50,slow=7.8,SNR=16
BVAR PcP **PcP 12 51 43.8 +0.6**
comp=Z,0.4nm,0.6s,baz=64,slow=6.7,SNR=2.4
comp=Z,3.2nm,0.5s
BRVK Borovoye 48.07 307 *ce*P **P 12 50 23.1 +0.2**
BRVK Borovoye 48.07 307 *e*P **P 12 50 23.1 +0.2**
CMAR Chiang Mai Arr 50.15 252 P **P 12 50 42.2 +3.3**
comp=Z,0.3nm,0.3s,baz=41,slow=6.2,SNR=2.3
comp=Z,0.3nm,0.3s
YKA Yellowknife Ar 51.52 36 P **P 12 50 49.0 +0.7**
comp=Z,1.4nm,0.7s,baz=302,slow=7.4,SNR=23
comp=Z,1.4nm,0.7s
ARU Arti 52.31 315 *c* *i*P **P 12 50 53.7 -0.4**
ARU 12 52 00.6
ARU 12 52 50.6
ARU S **S 12 57 50.7 +2.9**
ARU SS **SKiKP 13 01 28.8 -1.4**
ARU pmax pmax
comp=Z,3.0nm,0.6s
ARU Arti 52.31 315 *e*P **P 12 50 53.8 -0.4**
FINES FINESS Array B 61.78 333 P **P 12 51 58.4 -1.1**
comp=Z,1.5nm,0.9s,baz=34,slow=14,SNR=4.6
comp=Z,1.5nm,0.9s
OBN Obninsk 62.78 323⇑ *e*P **P 12 52 06.6 +0.4**
OBN *i* *SP **sP 12 54 06.8 -7.0**
OBN S **S 13 00 04.0 +1.5**
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 62.78 323 *e*P **P 12 52 06.6 +0.4**
NVAR Mina Array Bea 64.18 61 P **P 12 52 18.4 +2.5**
comp=Z,0.7nm,0.8s,baz=297,slow=7.7,SNR=4.8
comp=Z,0.7nm,0.8s
PDAR Pinedale Array 66.13 52 P **P 12 52 30.1 +1.9**
comp=Z,1.0nm,0.6s,baz=328,slow=0.8,SNR=13
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 66.19 339 P **P 12 52 26.9 -1.1**
comp=Z,1.2nm,0.6s,baz=29,slow=6.5,SNR=2.1
comp=Z,1.2nm,0.6s
HFS Hagfors 66.36 337 P **P 12 52 27.1 -1.9**
comp=Z,3.6nm,0.9s,baz=132,slow=2.2,SNR=2.7
comp=Z,3.6nm,0.9s
KIV Kislovodsk 68.03 312 *e*P **P 12 52 38.0 -1.8**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 68.03 312 *e*P **P 12 52 38.4 -1.4**
KBZ Khabaz 68.09 311 *i* P **P 12 52 40.1 +0.1**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 68.09 311 *e*P **P 12 52 40.1 +0.1**
WRA Warramunga Arr 68.90 195 P **P 12 52 48.6 +3.5**
comp=Z,0.3nm,0.6s,baz=9.1,slow=6.1,SNR=1.6
comp=Z,0.3nm,0.6s
AKASG Malin Array Be 69.03 324 P **P 12 52 44.5 -1.2**
comp=Z,0.5nm,0.4s,baz=39,slow=6.2,SNR=2.7
comp=Z,0.5nm,0.4s
ASAR Alice Springs 72.61 195 P **P 12 53 11.7 +4.4**
comp=Z,0.4nm,0.5s,baz=6.9,slow=5.6,SNR=12
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 79.15 58 P **P 12 53 46.2 +2.2**
comp=Z,1.1nm,0.7s,baz=287,slow=3.6,SNR=6.2
comp=Z,1.1nm,0.7s
PLCA Paso Flores 150.91 91 PKPbc **PKiKP 13 01 30.1 +1.9**
comp=Z,1.0nm,0.6s,baz=266,slow=3.5,SNR=6.4

TEH ***13*** *12:49:07.2,34.˚50N×45.˚68E,h8km±54km,ML2.8*
ISN ***13*** *12:49:07.2±1.0,34.˚50N×45.˚69E,h16km±38km,ML2.8*
ISC 13 12:49:07.3±1.0,**34.˚49N**±0.˚03×**45.˚66E**±0.˚05,**h11**km±10km,
n11,σ**0.˚73/14,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.06**	**283**	Pg	**Pg**	**12 49 09.4**	**-0.2**
IDHR	**Dehrash**	**0.63**	**71**	Pg	**Pg**	**12 49 18.9**	**-0.7**
IGHG	**Ghaleghazi**	**0.77**	**102**	Pg	**Pg**	**12 49 22.0**	**-0.1**
ILBA	**Ilam Banvizeh**	**0.98**	**152**	Pg	**Pg**	**12 49 25.5**	**-0.6**
ILIN	**Lien**	**1.15**	**68**	Pg	**Pn**	**12 49 29.5**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.16**	**100**	Pg	**Pg**	**12 49 29.8**	**+0.2**
IBDR	**Badra**	**1.40**	**171**	*e*Pn	**Pg**	**12 49 34.5**	**+0.4**
IBDR				*e*Sn	**Sg**	**12 49 53.0**	**+0.8**
IBDR				AML	AML	12 49 57.8	
	comp=E,176nm,0.3s						
IBDR				AML	AML	12 50 07.4	
	comp=N,144nm,0.6s						
IKRK	**Kirkuk**	**1.42**	**310**	*e*Pg	**Pn**	**12 49 33.0**	**+0.1**
IKRK				*e*Sg	**Sg**	**12 49 53.0**	**+0.2**
IKRK				AML	AML	12 49 59.2	
	comp=E,136nm,0.2s						
IKRK				AML	AML	12 50 08.0	
	comp=N,204nm,0.5s						
BHD	**Baghdad**	**1.62**	**222**	*e*Pn	**Pb**	**12 49 37.0**	**-0.1**
BHD				*e*Sn	**Sg**	**12 49 59.0**	**-0.4**
SDS1	**Sardasht. Az.**	**1.66**	**355**	Sg	**Sg**	**12 50 02.5**	**+1.8**
MAHB	**Mahabad**	**2.27**	**1**	Pn	**Pb**	**12 49 47.8**	**-0.6**

VAO ***13*** *12:54:38.7±1.1,21.˚45S×69.˚04W,h69km,mb4.3*
SJA ***13*** *12:54:40.0±0.6,21.˚91S×68.˚59W,h113km±4km,ML3.6, MW3.6*
GUC ***13*** *12:54:42.1±0.7,21.˚92S×68.˚67W,h114km±3km,ML3.7*
ISC 13 12:54:41.4±0.8,**21.˚93S**±0.˚03×**68.˚68W**±0.˚06,**h116**km±7km,
n50,σ**0.˚89/77,10C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.54**	**284**	*e*P	**Pn**	**12 54 58.9**	**-0.5**
PB09				*e*S	**Pn**	**12 54 59.5**	**+0.2**
PB09				IAML		12 55 00.8	
	comp=Z,896nm,0.2s						
PB09	**IPOC Station P**	**0.54**	**284**⇑	*i*P	**Pn**	**12 54 59.5**	**+0.2**
PB09				*i*S	**Sn**	**12 55 13.0**	**+0.1**
LVC	**Limon Verde**	**0.71**	**198**	*e*P	**Pn**	**12 55 00.2**	**-0.7**
LVC				*e*S	**Sn**	**12 55 15.2**	**-0.3**
LVC				IAML		12 55 15.9	
	comp=Z,546nm,0.4s						
LVC	**Limon Verde**	**0.71**	**198**	*e*P	**Pn**	**12 55 00.7**	**-0.2**
LVC				*e*S	**Sn**	**12 55 14.9**	**-0.6**
LVC	**Limon Verde**	**0.71**	**198**	*e*P	**Pn**	**12 54 59.8**	**-1.1**
LVC				*i*S	**Sn**	**12 55 14.7**	**-0.8**
LVC				IAML		12 55 15.7	
	comp=Z,7μm,0.4s						
AF01	**San Pedro de A**	**1.12**	**156**	*e*P	**Pn**	**12 55 05.4**	**+0.8**
AF01				*e*S	**Sn**	**12 55 22.5**	**+0.3**
AF01				IAML		12 55 36.8	
	comp=N,870nm,0.7s						
PB06	**IPOC Station P**	**1.13**	**227**	*e*P	**Pn**	**12 55 05.0**	**+0.4**
PB06				*e*S	**Sn**	**12 55 23.2**	**+1.0**
PB06				IAML		12 55 24.3	
	comp=Z,839nm,0.5s						
PB06	**IPOC Station P**	**1.13**	**227**⇑	*i*P	**Pn**	**12 55 05.1**	**+0.4**
PB06				*i*S	**Sn**	**12 55 22.8**	**+0.6**
PB06				IAML		12 55 23.9	
	comp=E,1μm,0.3s						
PB07	**IPOC Station P**	**1.14**	**280**	*e*P	**Pn**	**12 55 04.5**	**-0.3**
PB07				*e*S	**Pn**	**12 55 05.1**	**+0.4**
PB07				IAML		12 55 25.0	
	comp=Z,910nm,0.7s						
PB07	**IPOC Station P**	**1.14**	**280**⇑	*i*P	**Pn**	**12 55 05.0**	**+0.2**
PB07				*i*S	**Sn**	**12 55 22.7**	**+0.3**
PB07				IAML		12 55 23.3	
	comp=N,1μm,0.3s						
PB01	**IPOC Station P**	**1.16**	**319**	*e*P	**Pn**	**12 55 05.1**	**+0.2**
PB01				IAML		12 55 25.8	
	comp=Z,549nm,0.2s						
PB01	**IPOC Station P**	**1.16**	**319**⇑	*i*P	**Pn**	**12 55 04.8**	**-0.1**
PB01				*i*S	**Sn**	**12 55 22.2**	**-0.4**
PB02	**IPOC Station P**	**1.28**	**298**	*e*P	**Pn**	**12 55 05.8**	**-0.4**
PB02				*e*S	**Pn**	**12 55 06.4**	**+0.1**
PB02				IAML		12 55 27.6	
	comp=Z,1μm,0.2s						
PB02	**IPOC Station P**	**1.28**	**298**⇑	*i*P	**Pn**	**12 55 06.3**	**+0.1**
PB02				*i*S	**Sn**	**12 55 24.9**	**-0.1**
PB02				IAML		12 55 30.3	
	comp=E,1μm,0.2s						
PB04	**IPOC Station P**	**1.42**	**253**	*e*P	**Pn**	**12 55 08.0**	**+0.2**
PB04				IAML		12 55 31.7	
	comp=Z,650nm,0.2s						
PB04	**IPOC Station P**	**1.42**	**253**⇑	*i*P	**Pn**	**12 55 08.1**	**+0.2**
PB04				*i*S	**Sn**	**12 55 28.3**	**+0.4**
PB04				IAML		12 55 29.9	
	comp=N,744nm,0.4s						
PX03	**IPOC Station P**	**1.76**	**330**	*e*P	**Pn**	**12 55 11.4**	**-0.4**
PX03				*e*S	**Sn**	**12 55 34.9**	**-0.1**
PX03				IAML		12 55 35.9	
	comp=N,787nm,0.3s						
PATCX	**Punta Patache**	**1.76**	**309**	*e*P	**Pn**	**12 55 11.8**	**0.0**
PATCX				*e*S	**Sn**	**12 55 36.5**	**+1.5**
PATCX				IAML		12 55 38.9	
	comp=Z,340nm,0.5s						
PATCX	**Punta Patache**	**1.76**	**309**⇑	*i*P	**Pn**	**12 55 11.9**	**+0.1**
PATCX				*e*S	**Sn**	**12 55 35.1**	**+0.1**
PATCX				IAML		12 55 36.6	
	comp=N,1μm,0.3s						
PB08	**IPOC Station P**	**1.84**	**346**	*e*P	**Pn**	**12 55 14.3**	**+1.2**
PB08				*e*S	**Sn**	**12 55 39.9**	**+2.8**
PB08	**IPOC Station P**	**1.84**	**346**⇑	*i*P	**Pn**	**12 55 14.2**	**+1.2**
PB08				*i*S	**Sn**	**12 55 37.8**	**+0.8**
TA01	**Diego Aracena**	**1.95**	**314**	*e*P	**Pn**	**12 55 14.0**	**0.0**
TA01				*e*S	**Sn**	**12 55 39.4**	**+0.4**
TA01				IAML		12 55 40.9	
	comp=Z,398nm,0.3s						
TA01	**Diego Aracena**	**1.95**	**314**	*e*P	**Pn**	**12 55 13.8**	**-0.2**
TA01				*e*S	**Sn**	**12 55 38.2**	**-0.8**
TA01				IAML		12 55 40.9	
	comp=E,1μm,0.2s						
HMBC	**Humberstone**	**2.00**	**325**	*e*P	**Pn**	**12 55 14.7**	**-0.1**
HMBC				*e*S	**Sn**	**12 55 40.3**	**+0.1**
HMBC				IAML		12 55 43.1	
	comp=Z,491nm,0.2s						
HMBC	**Humberstone**	**2.00**	**325**⇑	*i*P	**Pn**	**12 55 14.6**	**-0.2**
HMBC				*i*S	**Sn**	**12 55 39.5**	**-0.7**
HMBC				IAML		12 55 41.4	
	comp=E,796nm,0.6s						
TA02	**Huaiquique**	**2.14**	**320**	*e*P	**Pn**	**12 55 16.2**	**-0.2**
TA02				IAML		12 55 49.3	
	comp=Z,377nm,0.4s						
TA02	**Huaiquique**	**2.14**	**320**	*e*P	**Pn**	**12 55 16.1**	**-0.2**
TA02				*i*S	**Sn**	**12 55 43.7**	**+0.5**
TA02				IAML		12 55 45.0	
	comp=N,804nm,0.1s						
GO01	**Chusmiza**	**2.30**	**348**	*e*P	**Pn**	**12 55 20.3**	**+1.3**
GO01	**Chusmiza**	**2.30**	**348**	*e*P	**Pn**	**12 55 19.9**	**+0.9**
GO01				*i*S	**Sn**	**12 55 49.6**	**+1.9**
GO01				IAML		12 55 51.4	
	comp=N,399nm,0.2s						
PB11	**IPOC Station P**	**2.34**	**337**	*e*P	**Pn**	**12 55 19.3**	**+0.1**
PB11				IAML		12 55 52.1	
	comp=Z,145nm,0.2s						
PB11	**IPOC Station P**	**2.34**	**337**⇑	*i*P	**Pn**	**12 55 19.2**	**0.0**
PB11				*i*S	**Sn**	**12 55 47.4**	**-0.8**
PB11				IAML		12 55 49.6	
	comp=E,370nm,0.2s						
PB14	**IPOC Station P**	**3.12**	**210**	*e*P	**Pn**	**12 55 30.0**	**+0.6**
PB14				IAML		12 56 16.9	
	comp=Z,147nm,0.3s						
PB14	**IPOC Station P**	**3.12**	**210**	*e*P	**Pn**	**12 55 29.8**	**+0.4**
GO02	**Mina Guanaco**	**3.32**	**194**	*e*P	**Pn**	**12 55 32.5**	**+0.4**
GO02	**Mina Guanaco**	**3.32**	**194**	*e*P	**Pn**	**12 55 32.0**	**-0.2**
GO02				*i*S	**Sn**	**12 56 11.4**	**+0.2**
PB12	**IPOC Station P**	**3.65**	**335**	*e*P	**Pn**	**12 55 35.3**	**-1.0**
PB12				IAML		12 56 32.8	
	comp=Z,58nm,0.5s						
PB12	**IPOC Station P**	**3.65**	**335**	*e*P	**Pn**	**12 55 35.0**	**-1.3**
PB16	**IPOC Station P**	**3.66**	**348**	*e*P	**Pn**	**12 55 38.1**	**+1.2**
PB16	**IPOC Station P**	**3.66**	**348**	*e*P	**Pn**	**12 55 38.5**	**+1.5**
AC01	**Pan de Azucar**	**4.55**	**202**	*e*P	**Pn**	**12 55 46.9**	**-1.4**
AC01				IAML		12 56 57.0	
	comp=E,58nm,0.4s						
AC02	**Maricunga**	**4.90**	**185**	*e*P	**Pn**	**12 55 53.8**	**+0.4**
AC02				IAML		12 57 23.4	
	comp=Z,21nm,0.8s						
BBSD	**Serra de San D**	**8.95**	**60**	*e*P	**Pn**	**12 56 44.3**	**-3.5**
RVDE	**Rio Verde (Bra**	**13.20**	**80**	*e*P	**Pn**	**12 57 45.5**	**+1.1**
MCR1	**Marechal Candi**	**13.70**	**103**	*e*P	**P**	**12 57 54.9**	**-0.7**
UNIS	**Unistalda (Bra**	**14.19**	**123**	*e*P	**P**	**12 58 01.9**	**+1.0**
CRSM	**Crissiumal (Br**	**14.40**	**116**	*e*P	**P**	**12 58 03.5**	**+0.1**
RODS	**Rosario do Sul**	**14.71**	**127**	*e*P	**P**	**12 58 07.5**	**+0.7**
FRBT	**Francisco Belt**	**14.83**	**109**	*e*P	**P**	**12 58 08.5**	**+0.3**
TRCB	**Terra Rica**	**14.87**	**96**	*e*P	**P**	**12 58 09.6**	**+0.9**
ITTB	**Itaituba**	**21.50**	**38**	*e*P	**P**	**12 59 19.2**	**-1.9**

IDC ***13*** *13:06:17.7±1.2,56.˚36N×149.˚28W,h0km,mb3.7/8, mbtmp3.5/13,ML2.9/5,MS3.8/2,Error ellipse: s-maj=25.0km s-min=17.8km az=10.0*
NEIC ***13*** *13:06:18.1±0.8,56.˚43N±0.˚08×149.˚3W±0.˚1,h10km±2km, ML3.5/54,ML3.4(AEIC),Error ellipse: s-maj=14.3km s-min=9.4km az=170.0*
AEIC ***13*** *13:06:21.1±0.9,56.˚37N±0.˚09×149.˚3W±0.˚1,h3km±8km, Error ellipse: s-maj=14.0km s-min=8.9km az=167.0*
ISC 13 13:06:20.2±3.2,**56.˚53N**±0.˚07×**149.˚31W**±0.˚04,
h16km±20km,**n217,**σ**0.˚68/198,mb3.8/8,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.18**	**307**		**Pn**	**13 06 54.8**	**-0.9**
KDAK					**Sn**	**13 07 21.2**	**-1.2**
KDAK	**Kodiak Island**	**2.18**	**307**	Pn	**Pn**	**13 06 54.9**	**-0.8**
	2.9nm,0.3s,baz=132,slow=5.9,SNR=16						
KDAK				Sn	**Sn**	**13 07 22.1**	**-0.3**
	6.2nm,0.3s,baz=223,slow=19,SNR=10						
	7.5nm,0.3s						
OHAK	**Old Harbor**	**2.29**	**289**		Pn	13 06 55.1	-2.1
OHAK					**Sn**	**13 07 22.2**	**-2.8**
OHAK	**Old Harbor**	**2.29**	**289**	P	Pn	13 06 55.6	-1.6
OHAK	**Old Harbor**	**2.29**	**289**	P	Pn	13 06 55.1	-2.1
	baz=109						
OHAK				S	**Sn**	**13 07 22.2**	**-2.8**
	baz=109						
SYI	**Shuyak Island**	**2.67**	**323**		**Pn**	**13 07 02.1**	**-0.3**
SYI					**Sn**	**13 07 35.2**	**+0.9**
SYI	**Shuyak Island**	**2.67**	**323**	IAML		13 07 36.5	
	comp=E,91nm,1.4s						
Q20K	**Shuyak Island**	**2.67**	**323**	P	**Pn**	**13 07 02.1**	**-0.3**
	baz=142						
Q20K				S	**Sn**	**13 07 35.2**	**+0.9**
	baz=142						
CNPM	**China Poot**	**3.18**	**342**		**Pn**	**13 07 09.2**	**-0.3**
CNPM					**Sn**	**13 07 47.4**	**+0.4**
CNPM	**China Poot**	**3.18**	**342**	IAML		13 07 54.3	
	comp=E,52nm,0.6s						
Q23K	**Middleton Isla**	**3.31**	**27**		**Pn**	**13 07 10.4**	**-0.8**
Q23K	**Middleton Isla**	**3.31**	**27**	P	**Pn**	**13 07 10.4**	**-0.8**
	baz=208						
MID	**Middleton Isla**	**3.31**	**27**	Pn	**Pn**	**13 07 10.4**	**-0.8**
MID	**Middleton Isla**	**3.31**	**27**	P	**Pn**	**13 07 10.6**	**-0.6**
BRSE	**Bradley Lake S**	**3.31**	**347**		**Pn**	**13 07 10.9**	**-0.4**
BRSE					**Sn**	**13 07 49.9**	**-0.4**
BRSE	**Bradley Lake S**	**3.31**	**347**	P	**Pn**	**13 07 10.9**	**-0.4**
	baz=166						
BRSE				S	**Sn**	**13 07 49.9**	**-0.4**
	baz=166						
Q19K	**Cape Douglas,**	**3.35**	**318**		**Pn**	**13 07 11.3**	**-0.5**
Q19K				IAML		13 07 59.9	
	comp=N,178nm,1.2s						
Q19K	**Cape Douglas,**	**3.35**	**318**	P	**Pn**	**13 07 12.1**	**+0.3**
	baz=136						
BRLK	**Bradley Lake**	**3.35**	**346**		**Pn**	**13 07 11.3**	**-0.6**
BRLK					**Sn**	**13 07 50.9**	**-0.4**
BRLK	**Bradley Lake**	**3.35**	**346**	IAML		13 07 57.3	
	comp=E,45nm,0.7s						
KAHG	**Katmai Hook Gl**	**3.44**	**307**		**Pn**	**13 07 13.7**	**+0.6**
SEW	**Seward**	**3.59**	**359**		Pn	13 07 14.3	-0.7
SEW	**Seward**	**3.59**	**359**	P	Pn	13 07 14.3	-0.7
	baz=178						
P23K	**Montague Islan**	**3.62**	**15**		**Pn**	**13 07 15.1**	**-0.4**
P23K	**Montague Islan**	**3.62**	**15**	P	**Pn**	**13 07 15.1**	**-0.4**
	baz=196						
P19K	**Oil Pt**	**3.76**	**328**		**Pn**	**13 07 17.5**	**+0.1**
P19K	**Oil Pt**	**3.76**	**328**	IAML		13 08 05.3	
	comp=E,93nm,0.4s						
P19K				IAML		13 08 10.3	
	comp=N,91nm,1.3s						
P19K	**Oil Pt**	**3.76**	**328**	P	**Pn**	**13 07 17.5**	**+0.1**
	baz=146						
CNTC	**Contact Creek**	**3.96**	**299**		**Pn**	**13 07 20.7**	**+0.4**
Q17K	**Contact Creek**	**3.96**	**299**	P	**Pn**	**13 07 20.7**	**+0.4**
	baz=115						
O20K	**Slope Mountain**	**3.97**	**335**		**Pn**	**13 07 20.4**	**+0.1**
O20K	**Slope Mountain**	**3.97**	**335**	P	**Pn**	**13 07 20.4**	**+0.1**
	baz=153						
O22K	**Cooper Landing**	**3.97**	**357**		**Pn**	**13 07 20.5**	**+0.2**
O22K	**Cooper Landing**	**3.97**	**357**	IAML		13 08 23.8	
	comp=N,134nm,0.8s						
O22K	**Cooper Landing**	**3.97**	**357**	P	**Pn**	**13 07 20.5**	**+0.2**
	baz=176						
IVE	**Iliamna Volcan**	**4.01**	**332**		**Pn**	**13 07 20.4**	**-0.5**
SLKM	**Skilak Lake**	**4.02**	**354**		**Pn**	**13 07 20.5**	**-0.5**
HIN	**Hinchinbrook I**	**4.15**	**20**		**Pn**	**13 07 22.5**	**-0.3**
HIN	**Hinch

EYAK	Cordova Ski Ar	4.44	23	P		Pn	13 07 26.8	0.0	
EYAK	Cordova Ski Ar	4.44	23	P		Pn	13 07 26.6	-0.2	
	baz=205								
NCT	North Crescent	4.47	336			Pn	13 07 26.5	-0.7	
Q16K	King Salmon	4.50	302			Pn	13 07 27.5	0.0	
Q16K	King Salmon	4.50	302	P		Pn	13 07 27.5	0.0	
	baz=117								
O19K	Port Alsworth	4.53	326			Pn	13 07 27.6	-0.3	
O19K	Port Alsworth	4.53	326	IAML			13 08 39.3		
	comp=E,80nm,0.5s								
O19K				IAML			13 08 39.7		
	comp=N,68nm,0.4s								
O19K	Port Alsworth	4.53	326	P		Pn	13 07 27.6	-0.3	
	baz=143								
O18K	Koktuh Hills	4.57	319			Pn	13 07 27.9	-0.6	
O18K				IAML			13 08 28.3		
	comp=N,19nm,1.4s								
O18K	Koktuh Hills	4.57	319	P		Pn	13 07 28.5	-0.1	
	baz=135								
RAGM	Ragged Mountai	4.57	30			Pn	13 07 28.4	-0.2	
RC01	Rabbit Creek A	4.58	357			Pn	13 07 28.5	-0.2	
RC01	Rabbit Creek A	4.58	357	IAML			13 08 22.2		
	comp=N,30nm,1.0s								
RC01				IAML			13 08 23.3		
	comp=E,35nm,1.3s								
RC01	Rabbit Creek A	4.58	357	P		Pn	13 07 28.5	-0.2	
	baz=177								
SUCK	Suckling Hills	4.60	37			Pn	13 07 28.8	-0.2	
SUCK	Suckling Hills	4.60	37	IAML			13 08 34.7		
	comp=E,74nm,1.1s								
HMT	Hamilton	4.65	33			Pn	13 07 29.6	-0.1	
NICHA	Nichawak Mount	4.66	35			Pn	13 07 29.9	+0.1	
GOAT	Goat Mountain	4.72	29			Pn	13 07 30.4	-0.3	
GRIN	Grindle Hills	4.91	37			Pn	13 07 33.0	-0.2	
KNK	Knik Glacier	4.92	5			Pn	13 07 33.2	-0.1	
KNK	Knik Glacier	4.92	5	IAML			13 08 37.8		
	comp=E,20nm,1.3s								
KNK				IAML			13 08 38.9		
	comp=N,18nm,1.0s								
KNK	Knik Glacier	4.92	5	P		Pn	13 07 33.2	-0.1	
	baz=185								
DIV	Divide	4.97	20			Pn	13 07 34.1	0.0	
SNH	Sunshine Point	5.00	40			Pn	13 07 34.3	-0.3	
SNH	Sunshine Point	5.00	40	IAML			13 09 45.1		
	comp=N,64nm,1.5s								
SNH				IAML			13 10 46.7		
	comp=E,62nm,1.3s								
SUA	Susitna One	5.01	352	Pn		Pn	13 07 34.1	-0.6	
SUA				IAML			13 09 42.6		
	comp=E,12nm,1.3s								
CHGN	Chignik	5.06	271	Pn		Pn	13 07 33.8	-1.5	
CHGN				IAML			13 08 41.1		
	comp=N,24nm,1.2s								
CHGN				IAML			13 09 26.8		
	comp=E,27nm,1.3s								
N19K	Bonanza Creek	5.08	330			Pn	13 07 35.0	-0.6	
N19K	Bonanza Creek	5.08	330	P		Pn	13 07 35.0	-0.6	
	baz=146								
BMRM	Bremner River	5.08	27			Pn	13 07 35.6	-0.1	
BMRM	Bremner River	5.08	27	P		Pn	13 07 35.6	-0.1	
	baz=210								
PMR	Palmer	5.08	1			Pn	13 07 35.2	-0.3	
PMR	Palmer	5.08	1	IAML			13 08 41.2		
	comp=E,11nm,1.3s								
PMR				IAML			13 08 43.3		
	comp=N,13nm,0.9s								
PMR	Palmer	5.08	1	P		Pn	13 07 36.9	+1.4	
PMR	Palmer	5.08	1	P		Pn	13 07 35.2	-0.3	
	baz=181								
STLK	Strandline Lak	5.16	346			Pn	13 07 36.4	-0.2	
WAX	Waxell Ridge	5.19	38			Pn	13 07 36.6	-0.5	
O17K	Koliganek Bris	5.25	312			Pn	13 07 38.0	+0.1	
O17K	Koliganek Bris	5.25	312	P		Pn	13 07 38.0	+0.1	
	baz=126								
GHO	Glory Hole Cre	5.27	2			Pn	13 07 38.3	+0.2	
GHO	Glory Hole Cre	5.27	2	IAML			13 08 46.0		
	comp=N,35nm,0.8s								
GHO				IAML			13 08 47.0		
	comp=E,29nm,0.7s								
KLU	Klutina	5.28	18			Pn	13 07 38.1	-0.2	
KLU				IAML			13 08 38.9		
	comp=E,24nm,1.0s								
KLU				IAML			13 08 39.7		
	comp=N,31nm,1.0s								
KLU	Klutina	5.28	18	P		Pn	13 07 38.5	+0.1	
	baz=200								
SML	Sawmill	5.32	5			Pn	13 07 39.2	+0.3	
SML	Sawmill	5.32	5	P		Pn	13 07 39.2	+0.3	
	baz=186								
CRQM	Cirque	5.33	35			Pn	13 07 38.6	-0.4	
MESA	MESA	5.33	44			Pn	13 07 38.7	-0.4	
MESA	MESA	5.33	44	P		Pn	13 07 38.7	-0.4	
	baz=228								
CRQE	Cirque	5.34	35	P		Pn	13 07 38.6	-0.5	
	baz=219								
M23K	Glacier View	5.34	8			Pn	13 07 39.1	-0.1	
M23K	Glacier View	5.34	8	P		Pn	13 07 39.1	-0.1	
	baz=189								
N18K	Kilae Creek	5.40	323			Pn	13 07 39.4	-0.5	
N18K	Kilae Creek	5.40	323	P		Pn	13 07 39.4	-0.5	
	baz=138								
SCM	Sheep Creek Mo	5.42	10	Pn		Pn	13 07 40.4	+0.1	
TGL	Tana Glacier	5.42	36			Pn	13 07 39.9	-0.5	
ISLE	Juniper Island	5.48	39			Pn	13 07 40.5	-0.6	
BAGL	Bagley Icefiel	5.49	41			Pn	13 07 40.6	-0.4	
O16K	Kokwok River B	5.58	307			Pn	13 07 42.5	+0.1	
O16K	Kokwok River B	5.58	307	P		Pn	13 07 42.5	+0.1	
	baz=121								
SKT	Skwentna	5.59	349	Pn		Pn	13 07 42.6	+0.1	
VRDI	Verde Repeater	5.61	30	Pn		Pn	13 07 42.4	-0.6	
SVW2	Sparrevohn	5.62	327	Pn		Pn	13 07 42.4	-0.6	
SVW2	Sparrevohn	5.62	327	P		Pn	13 07 42.7	-0.3	
N25K	Chitina, Valde	5.64	24			Pn	13 07 43.4	+0.1	
N25K	Chitina, Valde	5.64	24	P		Pn	13 07 43.4	+0.1	
	baz=207								
GLB	Gilahina Butte	5.69	28			Pn	13 07 43.8	-0.1	
KIAG	Kiagna River	5.70	36			Pn	13 07 43.5	-0.7	
M20K	Styx River	5.72	342			Pn	13 07 43.9	-0.4	
M20K	Styx River	5.72	342	P		Pn	13 07 43.9	-0.4	
	baz=159								
N17K	Nushagak Hills	5.75	317			Pn	13 07 44.5	-0.3	
N17K	Nushagak Hills	5.75	317	P		Pn	13 07 44.5	-0.3	
	baz=132								
GRNC	Granite Creek	5.77	40			Pn	13 07 44.9	-0.3	
TABL	Table Mountain	5.81	44			Pn	13 07 45.2	-0.5	
M24K	Tolsona, Glenn	5.82	15			Pn	13 07 46.3	+0.5	
MCARA	McCarthy VSAT	5.86	31	Pn		Pn	13 07 46.2	0.0	
PTPK	Patty Peak	5.87	34			Pn	13 07 46.6	0.0	
CUT	Chulitna	5.92	356	Pn		Pn	13 07 46.3	-0.7	
PCA	Pinnacle	5.96	49			Pn	13 07 46.9	-0.8	
PINM	Pinnacle	5.96	49	P		Pn	13 07 46.9	-0.8	
	baz=236								
M19K	Big River Lodg	5.99	336	Pn		Pn	13 07 46.8	-1.2	
M18K	Stony River	6.01	329			Pn	13 07 47.6	-0.6	
M18K	Stony River	6.01	329	P		Pn	13 07 47.6	-0.6	
	baz=144								
BARN	Barnard Glacie	6.04	38			Pn	13 07 48.5	-0.3	
CTG	Chitna Glacier	6.08	40	P		Pn	13 07 49.2	-0.3	
	baz=225								
CTGM	Chitina Glacie	6.08	40			Pn	13 07 49.1	-0.3	
LOGN	Logan Glacier	6.11	42			Pn	13 07 49.2	-0.6	
PNL	Peninsula	6.13	55			Pn	13 07 49.2	-0.7	
PNL	Peninsula	6.13	55	P		Pn	13 07 49.5	-0.4	
PNL	Peninsula	6.13	55	P		Pn	13 07 49.2	-0.7	
	baz=242								
BCPM	Bancas Point	6.16	52			Pn	13 07 49.6	-0.6	
O15K	Ungalikthiuk R	6.21	300			Pn	13 07 51.4	+0.4	
O15K	Ungalikthiuk R	6.21	300	P		Pn	13 07 51.4	+0.4	
	baz=112								
HARP	HAARP	6.26	18			Pn	13 07 52.8	+1.1	
HARP	HAARP	6.26	18	P		Pn	13 07 52.8	+1.1	
	baz=201								
WAT1	Susitna Watana	6.33	3			Pn	13 07 53.5	+0.7	
WAT1	Susitna Watana	6.33	3	P		Pn	13 07 53.5	+0.7	
	baz=184								
L19K	White Mountain	6.34	336	Pn		Pn	13 07 52.0	-0.9	
M17K	Holitna River	6.44	323	Pn		Pn	13 07 53.6	-0.6	
DHY	Denali Highway	6.64	8	Pn		Pn	13 07 57.2	+0.1	
M26K	Nabesna, AK	6.71	26	Pn		Pn	13 07 58.2	+0.2	
M16K	Timber Creek	6.74	316	Pn		Pn	13 07 58.2	-0.1	
O29M	Mount Kennedy	6.79	52			Pn	13 07 58.8	-0.3	
L18K	Granite Mounta	6.84	330	Pn		Pn	13 07 59.6	-0.1	
P29M	Windy Craggy	6.88	58			Pn	13 07 59.1	-1.1	
P29M	Windy Craggy	6.88	58	P		Pn	13 07 59.1	-1.1	
	baz=247								
RND	Reindeer	6.91	2	Pn		Pn	13 08 00.4	-0.2	
M27K	Edge Creek, AK	6.96	30			Pn	13 08 02.5	+1.0	
M27K	Edge Creek, AK	6.96	30	P		Pn	13 08 02.5	+1.0	
	baz=215								
CAST	Castle Rocks	7.05	350	Pn		Pn	13 08 02.7	+0.1	
KTH	Kantishna Hill	7.10	354	Pn		Pn	13 08 03.1	-0.2	
YUK6	Outpost Mounta	7.21	48			Pn	13 08 05.6	+0.7	
YUK6	Outpost Mounta	7.21	48	P		Pn	13 08 05.6	+0.7	
	baz=236								
TTA	Tatalina	7.26	335	Pn		Pn	13 08 05.0	-0.4	
L16K	Owhat River	7.37	319	Pn		Pn	13 08 06.2	-0.7	
HYT	Haines Junctio	7.51	50	Pn		Pn	13 08 08.4	-0.6	
L27K	Beaver Creek,	7.56	27	Pn		Pn	13 08 09.4	-0.2	
BCAR	Beaver Creek A	7.57	27	Pn		Pn	13 08 09.7	-0.1	
K17K	Iditarod	7.70	327	Pn		Pn	13 08 10.2	-1.2	
M29M	Somme Creek	8.10	38			Pn	13 08 17.0	0.0	
O30N	Mendenhall	8.10	53	Pn		Pn	13 08 16.1	-0.8	
JIS	Juneau Island	8.25	72	Pn		Pn	13 08 17.2	-1.7	
JIS	Juneau Island	8.25	72	P		Pn	13 08 17.5	-1.5	
J25K	Salcha River,	8.34	12	Pn		Pn	13 08 20.2	0.0	
IL31		8.36	7			Pn	13 08 20.1	-0.3	
ILAR	Eielson Array	8.36	7	Pn		Pn	13 08 20.5	+0.1	
ILAR	Eielson Array	8.36	7	Pn		Pn	13 08 20.1	-0.3	
	comp=N,0.3nm,0.3s,baz=188,slow=13,SNR=15								
ILAR				Sn		Sn	13 09 52.5	-1.9	
	comp=N,0.2nm,0.3s,baz=184,slow=25,SNR=4.6 comp=N,0.7nm,0.3s								
COLA	College	8.41	4	P		Pn	13 08 22.1	+1.0	
J26L	Joseph Creek	8.48	17	Pn		Pn	13 08 22.9	+0.7	
K15K	Wolf Creek Mou	8.49	318	Pn		Pn	13 08 22.0	-0.3	
WHY	Whitehorse	8.59	55	Pn		Pn	13 08 23.5	-0.3	
I23K	Minto, Yukon-K	8.65	360	Pn		Pn	13 08 24.9	+0.4	
L29M	L29M	8.67	36			Pn	13 08 25.0	+0.2	
M30M	Minto, Yukon	8.77	41	Pn		Pn	13 08 26.3	0.0	
I21K	Tanana	8.78	353	Pn		Pn	13 08 26.5	+0.3	
P32M	Atlin	8.82	63	Pn		Pn	13 08 26.1	-0.7	
J16K	Anvik River	8.83	325	Pn		Pn	13 08 26.8	-0.1	
DAWY	Dawson	9.01	29	Pn		Pn	13 08 29.3	-0.1	
EGAK	Eagle	9.19	22	Pn		Pn	13 08 31.9	+0.1	
I26K	Coal Creek Min	9.30	16	Pn		Pn	13 08 33.1	-0.3	
H21K	Melozitna Rive	9.32	351	Pn		Pn	13 08 33.0	-0.6	
K29M	Barlow Dome	9.38	34	Pn		Pn	13 08 34.6	-0.1	
P33M	Teslin, Yukon	9.41	60	Pn		Pn	13 08 34.1	-0.9	
IMAR	Indian Mountai	9.72	349	Pn		Pn	13 08 38.9	-0.3	
FARO	Faro, Yukon	9.93	48	Pn		Pn	13 08 41.3	-0.8	
I28M	Miner Creek	10.03	23	Pn		Pn	13 08 43.3	-0.1	
R33M	Jennings River	10.15	66	Pn		Pn	13 08 44.3	-0.9	
G23K	Bananza Creek	10.23	358	Pn		Pn	13 08 46.2	+0.1	
J30M	Hart River	10.27	33	Pn		Pn	13 08 46.7	-0.1	
DLBC	Dease Lake	10.55	72	Pn		Pn	13 08 49.5	-1.1	
DLBC	Dease Lake	10.55	72	Pn		Pn	13 08 49.9	-0.7	
	comp=N,0.1nm,0.3s,baz=262,slow=11,SNR=2.4								
DLBC				Sn		Sn	13 10 46.4	-2.0	
	comp=N,0.1nm,0.3s,baz=265,slow=8.8,SNR=1.7 comp=N,2.5nm,0.8s								
F20K	Avaraart Lake	10.98	347	Pn		Pn	13 08 56.3	+0.1	
BMAR	Burnt Mountain	11.16	9	Pn		Pn	13 08 59.3	+0.4	
G31M	Satah River	12.58	28	Pn		Pn	13 09 18.1	-0.1	
INK	Inuvik	13.83	25	Pn		Pn	13 09 36.8	+1.6	
	baz=211,slow=16,SNR=4.2 comp=N,0.5nm,0.7s								
YKA	Yellowknife Ar	18.42	57	P		P	13 10 34.9	+0.6	
	baz=277,slow=4.9,SNR=1.3 comp=N,0.2nm,0.7s								
NVAR	Mina Array Bea	27.34	118	P		P	13 12 04.3	-0.1	
	comp=N,0.6nm,0.8s,baz=310,slow=10.0,SNR=2.9								
NVAR				LR		LR	13 20 30.0		
	comp=N,68nm,21.3s,baz=308,slow=31 comp=N,0.6nm,0.8s								
H11N2	WAKE ISLAND Hy	48.99	240	T		T	14 07 49.8		
	baz=30,slow=76,SNR=19								
H11N3	WAKE ISLAND Hy	49.00	240	T		T	14 07 51.1		
	baz=30,slow=76,SNR=23								
H11N1	WAKE ISLAND Hy	49.01	240	T		T	14 07 52.2		
	baz=30,slow=76,SNR=15								
H11S1	WAKE ISLAND Hy	50.14	239	T		T	14 09 18.0		
	baz=30,slow=76,SNR=15								
H11S2	WAKE ISLAND Hy	50.15	239	T		T	14 09 15.7		
	baz=30,slow=76,SNR=15								
H11S3	WAKE ISLAND Hy	50.15	239	T		T	14 09 17.4		
	baz=30,slow=76,SNR=19								
TEIG	Tepich	57.45	103	LR		LR	13 42 38.6		
	comp=N,268nm,18.3s,baz=140,slow=38								
SONM	Songino Array	58.47	310	P		P	13 16 16.7	+1.7	
	comp=N,0.7nm,0.8s,baz=57,slow=9.0,SNR=5.4 comp=N,0.7nm,0.8s								
ZALV	Zalesovo Beam	61.35	327	P		P	13 16 35.8	+1.3	
	comp=N,0.6nm,0.6s,baz=14,slow=13,SNR=4.1 comp=N,0.6nm,0.6s								
FINES	FINESS Array B	62.31	3	P		P	13 16 43.3	+2.4	
	comp=N,2.6nm,1.0s,baz=12,slow=7.1,SNR=1.8 comp=N,2.6nm,1.0s								
KURBB	Kurchatov Arra	66.12	329	P		P	13 17 06.5	+0.4	
	comp=N,0.2nm,0.9s,baz=30,slow=6.4,SNR=1.8 comp=N,0.2nm,0.9s								
MKAR	Makanchi Array	68.39	325	P		P	13 17 20.9	+0.4	
	comp=N,0.2nm,0.4s,baz=36,slow=5.8,SNR=4.4 comp=N,0.2nm,0.4s								
AKASG	Malin Array Be	73.13	1	P		P	13 17 49.7	+0.4	
	comp=N,0.3nm,0.4s,baz=0.4,slow=6.4,SNR=1.9 comp=N,0.3nm,0.4s								
CMAR	Chiang Mai Arr	86.15	298	P		P	13 19 01.4	+0.9	
	comp=N,0.4nm,0.4s,baz=3.2,slow=4.9,SNR=4.7 comp=N,0.4nm,0.4s								

*NEIC **13** 13:14:43.2±1.3,6°.37S±0°.08×130°.29E±0°.07, h120km±11km, mb4.0/7, Error ellipse: s-maj=12.8km s-min=9.2km az=211.0*
*DJA **13** 13:14:44.3±0.2,6°.S±3°×13°.0E±°, h133km±7km, M4.7/13, mB5.4/5, mb4.4/11, MLv4.8/13, Mw(mB)4.8/5*
*IDC **13** 13:14:44.1±8.2,6°.67S×129°.98E, h133km±83km, mb3.2/5, mbtmp3.8/7, Error ellipse: s-maj=78.5km s-min=26.6km az=68.0*

ISC 13 13:14:44.0±0.6,**6°.38S**±0°.06×**130°.47E**±0°.07,**h150**km,**n46,** σ1§**79**/49,**mb3.4**/6,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	Saumlaki	1.80	153			Pn	13 15 17.4	+0.7
SAUI	Saumlaki	1.80	153	P		Pn	13 15 18.6	+1.8
SAUI	Saumlaki	1.80	153	P		Pn	13 15 18.2	+1.4
BNDI	Bandanaira	1.93	343	P		Pn	13 15 18.6	+0.3
BNDI	Bandanaira	1.93	343	P		Pn	13 15 18.4	+0.1
BNDI				S		Sn	13 15 42.4	-2.2
FAKI	Fak Fak	3.87	27	Pn		Pn	13 15 41.1	-1.5
FAKI	Fak Fak	3.87	27	P		Pn	13 15 41.4	-1.1
FAKI	Fak Fak	3.87	27	P		Pn	13 15 41.4	-1.1
FAKI				S		Sn	13 16 23.7	-4.3
KMPI	Kaimana, Papua	4.20	50	P		Pn	13 15 48.2	+1.3
KMPI				S		Sn	13 16 33.7	-2.2
NLAI	Namlea	4.58	313	P		Pn	13 15 53.0	+1.1
SWI	Sorong	5.54	8	P		Pn	13 16 02.4	-2.1
	38nm,0.5s,3μm1.2nm							
SANI	Sanana	6.20	314	P		Pn	13 16 13.8	+0.4
LBMI	Labuha	6.42	332	P		Pn	13 16 15.5	-0.9
	113nm,0.6s,2μm0.5nm							
MTN	Manton Dam	6.46	174			Pn	13 16 16.4	-0.4
MTN	Manton Dam	6.46	174	P		Pn	13 16 16.8	0.0
KDU	Kakadu	6.57	163	P		Pn	13 16 18.4	0.0
SOEI	Soe	7.00	241			Pn	13 16 18.4	-5.8
SOEI	Soe	7.00	241	P		Pn	13 16 23.4	-0.7
	57nm,0.9s,0.5nm							
TNTI	Ternate	7.75	336	Pn		Pn	13 16 33.1	-1.0
TNTI	Ternate	7.75	336	P		Pn	13 16 32.3	-1.8
	41nm,0.9s,0.2nm							
EDFI	Ende, Flores	9.02	254	P		Pn	13 16 51.4	+0.3
	12nm,1.4s							
LUWI	Luwuk	9.33	304			Pn	13 16 53.6	-1.5
LUWI	Luwuk	9.33	304	P		Pn	13 16 54.9	-0.2
	321nm,0.5s,5μm							
KAPI	Kappang	10.75	277	Pn		Pn	13 17 12.0	-2.0
FITZ	Fitzroy Crossi	12.57	202			Pn	13 17 34.0	-3.7
WB0	Warramunga Arr	13.85	164			Pn	13 17 52.1	-1.9
WRAB	Tennant Creek	13.99	165			Pn	13 17 54.5	-1.3
WRA	Warramunga Arr	14.00	165			Pn	13 17 53.6	-2.3
WRA	Warramunga Arr	14.00	165	P		Pn	13 17 53.9	-2.1
	3.1nm,0.4s,baz=340,slow=14,SNR=48							
WRA				S		Sn	13 20 19.8	-11
	8.1nm,0.7s,baz=353,slow=21,SNR=8.5							
WB2	Warramunga Arr	14.00	165			Pn	13 17 53.5	-2.5
WR0	Warramunga Arr	14.07	164			Pn	13 17 54.4	-2.4
COEN	Coen	14.59	122	Pn		P	13 18 05.3	-0.5
AS31	Alice Springs	17.50	169			Pn	13 18 39.1	+0.1
AS31				IAmb		IAmb	13 18 46.2	
	comp=Z,3.3nm,0.6s							
ASAR	Alice Springs	17.50	169			Pn	13 18 38.8	-0.2
ASAR	Alice Springs	17.50	169	P		Pn	13 18 39.0	0.0
	comp=Z,3.9nm,0.5s,baz=345,slow=10,SNR=112							
ASAR				S		S	13 21 50.0	-2.5
	comp=Z,1.8nm,0.6s,baz=355,slow=28,SNR=6.4							
MBWA	Marble Bar	18.00	214			P	13 18 41.8	-1.5
MBWA				IAmb		IAmb	13 18 57.7	
	comp=Z,16nm,1.1s							
PSA00	Pilbara Seismi	18.27	213			P	13 18 46.0	-0.3
PSA00				IAmb		IAmb	13 18 49.1	
	comp=Z,4.4nm,0.9s							
CMAR	Chiang Mai Arr	39.70	309	P		P	13 22 02.2	+0.3
	comp=Z,0.4nm,0.6s,baz=132,slow=7.5,SNR=4.3 comp=Z,0.4nm,0.6s							
SONM	Songino Array	58.01	341	P		P	13 24 22.7	+1.6
	comp=Z,0.3nm,0.6s,baz=148,slow=7.4,SNR=2.0 comp=Z,0.3nm,0.6s							
MK31	Makanchi Array	67.96	326	P		P	13 25 27.9	+1.1
MKAR	Makanchi Array	67.96	326	P		P	13 25 27.8	+1.0
MKAR	Makanchi Array	67.96	326	P		P	13 25 29.2	+2.4
	comp=Z,0.6nm,0.3s,baz=117,slow=8.0,SNR=17 comp=Z,0.6nm,0.3s							
KURBB	Kurchatov Arra	72.23	328	P		P	13 25 54.1	+1.5
	comp=Z,0.5nm,0.8s,baz=132,slow=4.9,SNR=6.1 comp=Z,0.5nm,0.8s							
BVAR	Borovoye Array	77.79	328	P		P	13 26 26.1	+1.6
	comp=Z,0.2nm,0.4s,baz=104,slow=6.1,SNR=2.3 comp=Z,0.2nm,0.4s							
G18K	Tagagawik	88.10	23	P		P	13 27 21.3	+4.1
G18K				IAmb		IAmb	13 27 55.5	
	comp=Z,2.6nm,1.3s							
D19K	Kuna River	89.19	20	P		P	13 27 25.0	+2.7

*CNRM **13** 13:22:31.4,34°.80N×3°.81W, h14km, ML2.6*

ISC 13 13:22:31.3±0.8,**34°.79N**±0°.02×**3°.76W**±0°.03,**h10**km,**n38,** σ1§**00**/41,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKLM	AKL	0.29	197	P		Pg	13 22 36.3	-0.8
AKLM	AKL	0.29	197	S		Sg	13 22 41.0	0.0
AKLM	AKL	0.29	197	P		Pb	13 22 39.0	+0.3
AKLM	AKL	0.29	197	P		Pb	13 22 39.0	+0.3
PALE	Palemas	0.45	342	P		Pg	13 22 40.4	+0.2
PALE	Palemas	0.45	342	S		Sg	13 22 46.5	+0.3
PALE	Palemas	0.45	342	P		Pg	13 22 40.2	0.0
PALE	Palemas	0.45	342	P		Pg	13 22 40.2	0.0
GOG	Mont Gurugu	0.77	55	P		Pg	13 22 46.3	+0.1
GOG	Mont Gurugu	0.77	55	S		Sb	13 22 57.9	+0.6
GOG	Mont Gurugu	0.77	55	P		Pb	13 22 47.0	+0.2
GOG	Mont Gurugu	0.77	55	P		Pb	13 22 47.0	+0.2
JBK	JBK	1.08	114	P		Pg	13 22 51.8	-0.4
JBK	JBK	1.08	114	S		Sg	13 23 05.9	-0.4
JBK	JBK	1.08	114	P		Pg	13 22 51.8	-0.4
JBK	JBK	1.08	114	P		Pg	13 22 51.8	-0.4
TAF	Taforalt	1.11	88	P		Pb	13 22 52.5	-0.1
TAF	Taforalt	1.11	88	S		Sn	13 23 09.5	+1.1
TAF	Taforalt	1.11	88	P		Pn	13 22 53.0	0.0
TAF	Taforalt	1.11	88	P		Pn	13 22 53.0	0.0
LCRM	LCR	1.42	220	S		Sg	13 23 18.7	+1.6
LCRM	LCR	1.42	220	P		Pn	13 22 58.0	+0.6
LCRM	LCR	1.42	220	P		Pn	13 22 58.0	+0.6
SMIR	Smir Dam	1.60	305	P		Pn	13 22 59.7	0.0
SMIR	Smir Dam	1.60	305	S		Sn	13 23 19.8	-0.6
MD31	MD31	2.08	204	P		Pn	13 23 05.9	-0.5
MD31	MD31	2.08	204	S		Sn	13 23 32.6	+0.1
MDT	Midelt	2.09	200	P		Pn	13 23 05.9	-0.6
MDT	Midelt	2.09	200	S		Sn	13 23 32.8	+0.2
MDT	Midelt	2.09	200	P		Pn	13 23 05.9	-0.6
MDT	Midelt	2.09	200	P		Pn	13 23 05.9	-0.6
ZHG	ZHG	2.74	242	P		Pn	13 23 16.7	+1.3
PVAQ	Vaqueiros	4.13	310	*e*P		Pn	13 23 35.1	+0.6
PVAQ				*e*S		S

KLR	**Kul'dur**	**18.79**	**347**	*i* P		**Pn**	**13 29 32.2**	**+3.8**
KLR	**Kul'dur**	**18.79**	**347**	P		**P**	**13 29 27.1**	**-0.6**
	0.1nm,0.3s,baz=137,slow=16,SNR=4.2							
KLR				LR		LR	13 36 35.8	
	comp=Z,49nm,18.1s,baz=198,slow=36							
	0.7nm,0.6s							
BJT	**Baijiatuau**	**19.95**	**303**	P		**P**	**13 29 39.5**	**-1.0**
BJT	**Baijiatuau**	**19.95**	**303**	P		**P**	**13 29 39.5**	**-1.0**
BJT				pmax		pmax		
	comp=Z,11nm,1.2s							
ZEA	**Zeya**	**24.00**	**344**	*e*P		**P**	**13 30 24.3**	**+1.6**
ZEA				pmax		pmax		
	comp=N,10.0nm,0.7s							
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.1s							
ENH	**Enshi**	**24.63**	**276**	P		**P**	**13 30 28.4**	**-0.4**
ENH				IAmb		IAmb	13 30 39.1	
	comp=Z,8.4nm,0.8s							
DAV	**Davao City (W)**	**26.60**	**209**	LR		LR	13 39 25.0	
	comp=Z,43nm,21.0s,baz=9.0,slow=32							
H11N2	**WAKE ISLAND Hy**	**28.25**	**107**	T		T	14 00 45.5	
	baz=300,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**28.25**	**107**	T		T	14 00 38.1	
	baz=300,slow=75,SNR=4.1							
H11N3	**WAKE ISLAND Hy**	**28.26**	**107**	T		T	14 00 40.7	
	baz=300,slow=75,SNR=7.5							
H11S3	**WAKE ISLAND Hy**	**28.69**	**109**	T		T	14 00 54.9	
	baz=302							
H11S1	**WAKE ISLAND Hy**	**28.70**	**109**	T		T	14 00 55.5	
	baz=302							
H11S2	**WAKE ISLAND Hy**	**28.71**	**109**	T		T	14 00 57.8	
	baz=302							
SONM	**Songino Array**	**29.42**	**314**	P		**P**	**13 31 13.6**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=133,slow=8.8,SNR=4.6							
	comp=Z,0.7nm,0.7s							
MA2	**Magadan**	**29.77**	**13**	P		**P**	**13 31 12.9**	**-1.6**
MA2				IAmb		IAmb	13 31 23.1	
	comp=Z,9.4nm,0.9s							
MA2	**Magadan**	**29.77**	**13**	P		**P**	**13 31 12.9**	**-1.6**
MA2				pmax		pmax		
	comp=Z,9.0nm,0.9s							
YAK	**Yakutsk**	**31.47**	**352**	LR		LR	13 43 21.2	
	comp=Z,76nm,20.1s,baz=236,slow=35							
CMAR	**Chiang Mai Arr**	**37.54**	**260**	P		**P**	**13 32 23.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**37.54**	**260**	P		**P**	**13 32 24.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**37.54**	**260**	P		**P**	**13 32 24.0**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=160,slow=4.6,SNR=2.5							
	comp=Z,0.3nm,0.4s							
BILL	**Bilibino**	**40.51**	**16**	*i* P		**P**	**13 32 47.9**	**+1.1**
BILL				pmax		pmax		
	comp=Z,8.0nm,1.9s							
TIXI	**Tiksi**	**40.96**	**356**	P		**P**	**13 32 50.5**	**+0.2**
TIXI	**Tiksi**	**40.96**	**356**	*ce*P		P	13 32 56.7	+6.3
TIXI				pmax		pmax		
	comp=Z,8.0nm,2.5s							
DGZ	**Jazzator, Alta**	**41.98**	**311**	*i* P		P	13 33 08.1	+8.8
DGZ				pmax		pmax		
	comp=Z,8.0nm,2.1s							
ZALV	**Zalesovo Beam**	**44.18**	**317**	P		**P**	**13 33 18.7**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=109,slow=7.8,SNR=2.2							
	comp=Z,0.2nm,0.4s							
COEN	**Coen**	**45.01**	**173**	P		**P**	**13 33 24.2**	**+0.4**
COEN				IAmb		IAmb	13 34 07.6	
	comp=Z,8.4nm,1.3s							
MK31	**Makanchi Array**	**45.25**	**307**	P		**P**	**13 33 25.2**	**-0.2**
MK31	**Makanchi Array**	**45.25**	**307**	P		**P**	**13 33 25.2**	**-0.2**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**45.25**	**307**	P		**P**	**13 33 25.5**	**+0.1**
MKAR	**Makanchi Array**	**45.25**	**307**	P		**P**	**13 33 26.9**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=96,slow=9.7,SNR=9.8							
	comp=Z,1.1nm,0.7s							
NRIK	**Noril'sk**	**47.68**	**338**	P		**P**	**13 33 45.2**	**+1.1**
NRIK	**Noril'sk**	**47.68**	**338**	*e*P		P	13 33 52.2	+8.1
NRIK				pmax		pmax		
	comp=Z,8.0nm,1.4s							
NRIK	**Noril'sk**	**47.68**	**338**	P		**P**	**13 33 44.3**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=106,slow=7.4,SNR=1.5							
	comp=Z,1.4nm,0.4s							
KURK	**Kurchatov**	**47.70**	**312**	*ce*P		P	13 33 52.3	+7.8
KURK				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KURBB	**Kurchatov Arra**	**47.75**	**312**	P		**P**	**13 33 45.4**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=100,slow=6.3,SNR=3.2							
	comp=Z,0.4nm,0.8s							
GSI	**Gunungsitoli**	**48.43**	**240**	P		**P**	**13 33 51.5**	**+0.9**
MNAI	**Manna**	**48.64**	**230**	P		**P**	**13 33 52.7**	**+0.5**
F15K	**North Star Dit**	**48.74**	**28**	P		**P**	**13 33 51.2**	**-1.2**
K15K	**Wolf Creek Mou**	**49.29**	**32**	P		**P**	**13 33 54.5**	**-2.1**
WB0	**Warramunga Arr**	**50.66**	**185**	P		**P**	**13 34 06.6**	**-0.8**
WB0				IAmb		IAmb	13 34 21.3	
	comp=Z,8.5nm,1.2s							
WRAB	**Tennant Creek**	**50.82**	**185**	P		**P**	**13 34 07.2**	**-1.5**
WRAB				IAmb		IAmb	13 34 18.3	
	comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	**50.82**	**185**	P		**P**	**13 34 07.2**	**-1.5**
WRAB				pmax		pmax		
	comp=Z,11nm,1.4s							
WB2	**Warramunga Arr**	**50.83**	**185**	P		**P**	**13 34 07.0**	**-1.7**
WB2				IAmb		IAmb	13 34 22.8	
	comp=Z,9.6nm,1.4s							
WRA	**Warramunga Arr**	**50.83**	**185**	P		**P**	**13 34 07.2**	**-1.5**
WRA	**Warramunga Arr**	**50.83**	**185**	*e*P		**P**	**13 34 08.0**	**-0.8**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	**50.83**	**185**	P		**P**	**13 34 07.7**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=1.3,slow=7.8,SNR=16							
WRA				LR		LR	13 54 16.9	
	comp=Z,539nm,21.7s,baz=206,slow=34							
	comp=Z,1.1nm,0.5s							
AAK	**Ala-Archa**	**51.12**	**302**	*ce*P		P	13 34 18.2	+7.2
AAK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
D19K	**Kuna River**	**51.90**	**25**	P		**P**	**13 34 16.4**	**+0.1**
D19K				IAmb		IAmb	13 34 47.9	
	comp=Z,9.0nm,1.4s							
BVAR	**Borovoye Array**	**52.74**	**315**	P		**P**	**13 34 23.6**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=91,slow=7.4,SNR=2.3							
BVAR				PcP		**PcP**	**13 35 31.6**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=76,slow=6.1,SNR=2.7							
	comp=Z,0.3nm,0.4s							
B21K	**Ikpikpuk River**	**53.34**	**24**	P		**P**	**13 34 26.0**	**-0.8**
B21K				IAmb		IAmb	13 34 53.0	
	comp=Z,11nm,1.5s							
D22K	**Ayikyak River**	**53.92**	**25**	P		**P**	**13 34 30.8**	**-0.3**
D22K				IAmb		IAmb	13 34 37.5	
	comp=Z,6.2nm,1.4s							
AS31	**Alice Springs**	**54.56**	**185**	P		**P**	**13 34 36.9**	**+0.6**
ASAR	**Alice Springs**	**54.56**	**185**	P		**P**	**13 34 33.8**	**-2.5**
	comp=Z,0.8nm,0.6s,baz=14,slow=11,SNR=21							
	comp=Z,0.8nm,0.6s							
RND	**Reindeer**	**55.17**	**32**	P		**P**	**13 34 39.8**	**-0.5**
RND				IAmb		IAmb	13 34 45.4	
	comp=Z,9.4nm,1.3s							
RND	**Reindeer**	**55.17**	**32**	P		**P**	**13 34 39.8**	**-0.5**
RND				pmax		pmax		
	comp=Z,9.0nm,1.3s							
ILAR	**Eielson Array**	**56.01**	**30**	*e*P		**P**	**13 34 47.7**	**+1.4**
ILAR	**Eielson Array**	**56.01**	**30**	P		**P**	**13 34 45.1**	**-1.2**
	comp=Z,0.7nm,1.0s,baz=277,slow=4.8,SNR=5.2							
	comp=Z,0.7nm,1.0s							
BMAR	**Burnt Mountain**	**56.88**	**27**	P		**P**	**13 34 53.9**	**+1.4**
BCAR	**Beaver Creek A**	**58.38**	**32**	P		**P**	**13 35 02.4**	**-0.7**
I28M	**Miner Creek**	**58.89**	**29**	P		**P**	**13 35 07.0**	**+0.3**
I28M				IAmb		IAmb	13 35 08.1	
	comp=Z,4.8nm,1.1s							
ARU	**Arti**	**59.13**	**320**	*d i*P		**P**	**13 35 08.0**	**-0.3**
ARU				S		**S**	**13 43 16.2**	**+3.2**
ARU				pmax		pmax		
	comp=Z,2.0nm,0.6s							
ARU	**Arti**	**59.13**	**320**	LR		LR	14 00 52.2	
	comp=Z,37nm,18.2s,baz=342,slow=36							
ABKAR	**Akbulak array**	**59.81**	**312**	P		**P**	**13 35 13.5**	**+0.3**
ABKAR				IAmb		IAmb	13 35 21.5	
	comp=Z,2.0nm,0.6s							
M29M	**Somme Creek**	**59.98**	**32**	P		**P**	**13 35 13.8**	**-0.6**
M29M				IAmb		IAmb	13 35 23.6	
	comp=Z,4.0nm,0.9s							
G31M	**Satah River**	**60.93**	**27**	P		**P**	**13 35 20.1**	**-0.4**
G31M				IAmb		IAmb	13 35 32.6	
	comp=Z,7.1nm,1.3s							
INK	**Inuvik**	**60.94**	**25**	P		**P**	**13 35 19.7**	**-0.8**
INK	**Inuvik**	**60.94**	**25**	P		**P**	**13 35 19.7**	**-0.8**
INK				pmax		pmax		
	comp=Z,2.0nm,1.0s							
F31M	**Tsiigehtchic**	**61.03**	**26**	P		**P**	**13 35 20.8**	**-0.3**
F31M				IAmb		IAmb	13 35 58.9	
	comp=Z,4.7nm,1.2s							
FARO	**Faro, Yukon**	**62.36**	**32**	P		**P**	**13 35 30.4**	**+0.1**
STKA	**Stephens Creek**	**62.67**	**177**	P		**P**	**13 35 30.3**	**-2.3**
	comp=Z,2.3nm,0.7s,baz=4.7,slow=6.2,SNR=4.2							
	comp=Z,2.3nm,0.7s							
ARCES	**ARCESS Array B**	**68.63**	**340**	LR		LR	14 10 43.7	
	comp=Z,51nm,18.0s,baz=228,slow=40							
YKA	**Yellowknife Ar**	**70.34**	**28**	*e*P		**P**	**13 36 21.1**	**-0.2**
YKA				pmax		pmax		
	comp=Z,1.0nm,1.0s							
YKA	**Yellowknife Ar**	**70.34**	**28**	P		**P**	**13 36 20.8**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=292,slow=6.0,SNR=5.1							
	comp=Z,0.5nm,1.0s							
OBN	**Obninsk**	**71.26**	**324**	*e*P		P	13 36 33.7	+6.7
OBN				*PP		pP	13 36 36.0	-0.6
OBN				*SP		sP	13 36 39.0	-1.2
OBN							13 36 50.0	
OBN				pmax		pmax		
	comp=Z,5.0nm,1.0s							
OBN				MLR		MLR		
	comp=Z,75nm,14.0s							
KBZ	**Khabaz**	**72.73**	**311**	*i* P		P	13 36 42.5	+6.5
KBZ				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KBZ	**Khabaz**	**72.73**	**311**	P		**P**	**13 36 37.4**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=45,slow=5.7,SNR=4.9							
	comp=Z,2.2nm,0.8s							
KIV	**Kislovodsk**	**72.77**	**311**	*e*P		P	13 36 43.4	+7.0
KIV				pmax		pmax		
	comp=Z,8.0nm,1.1s							
FINES	**FINESS Array B**	**72.82**	**332**	P		**P**	**13 36 36.4**	**+0.2**
FINES	**FINESS Array B**	**72.82**	**332**	P		**P**	**13 36 36.4**	**+0.2**
FINES	**FINESS Array B**	**72.82**	**332**	P		**P**	**13 36 36.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=73,slow=2.6,SNR=6.3							
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**77.33**	**322**	*ce*P		P	13 37 10.3	+7.9
AKASG	**Malin Array Be**	**77.33**	**322**	P		**P**	**13 37 02.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=52,slow=6.0,SNR=1.4							
AKASG				LR		LR	14 11 13.8	
	comp=Z,8.1nm,18.4s,baz=204,slow=36							
	comp=Z,0.2nm,0.3s							
HFS	**Hagfors**	**78.38**	**335**	P		**P**	**13 37 08.8**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=35,slow=7.8,SNR=2.1							
	comp=Z,2.9nm,0.9s							
BRTR	**Keskin Array B**	**80.73**	**311**	P		**P**	**13 37 22.2**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=67,slow=3.2,SNR=4.0							
	comp=Z,1.2nm,0.9s							
NNA	**Nana**	**142.56**	**67**	*c i*PKIKP		**PKiKP**	**13 44 44.7**	**+0.1**
NNA				pmax		pmax		
	comp=Z,33nm,1.7s							

*EST **13** 13:29:37.2, 60.03N×23.95E, h0km, ML1.3(HEL), Explosion*

HEL 13 13:29:37.2±0.1, 60.03N×23.95E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.29**	**49**	*e*P		Pg	13 29 42.3	-0.5
MEF				*e*S		Sg	13 29 46.2	-0.4
HEL1	**Helsinki**	**0.49**	**72**	*e*P		Pg	13 29 46.1	-0.4
NUR	**Nurmijrvi** baz=219	**0.60**	**35**	*e*P		Pg	13 29 48.6	0.0
NUR				MSG			13 29 57.0	
	comp=Z,2.3nm,0.2s							
EE01	**Perakula, Nova**	**0.84**	**192**	*e*P		Pg	13 29 52.1	-1.2
EE01				*e*S		Sg	13 30 03.0	-1.1
EE02	**Kiisa, Saku**	**0.92**	**155**	*e*P		Pg	13 29 53.8	-1.0
EE02				*e*S		Sg	13 30 05.8	-0.9
PVF	**Pernaja**	**1.08**	**61**	*e*P		Pg	13 29 56.7	-1.3
PVF				MSG			13 30 10.7	
	comp=Z,1.7nm,0.2s							
PVF				*e*SN		Sn	13 30 17.8	+2.5
MTSE	**Matsula**	**1.32**	**183**	*e*S		Sg	13 30 17.5	-2.0
RAF	**Rauma** baz=130	**1.47**	**314**	*e*PG		Pn	13 30 03.8	-1.2
RAF				MSG			13 30 21.8	
	comp=Z,2.2nm,0.2s							
EE08	**Sarghaua, Vand**	**1.52**	**154**	*e*PG		Pn	13 30 04.7	-1.0
EE08				*e*SB		Sg	13 30 24.4	-1.7
EE03	**Tooma soojaam,**	**1.66**	**133**	*e*PN		Pn	13 30 07.8	+0.3
EE03				*e*S		Sn	13 30 27.5	-2.0
FIA0	**FINESS Array S**	**1.76**	**35**	*e*PN		Pn	13 30 08.6	-0.4
FIA0				MSG			13 30 30.6	
	comp=Z,1.6nm,0.2s							
FIA0				*e*SN		Sb	13 30 33.3	+0.3
VJF	**Virojoki**	**1.87**	**72**	*e*PG		Pn	13 30 10.5	+0.2
VJF				MSG			13 30 33.0	
	comp=Z,1.5nm,0.2s							
KPF	**Kankaanpaa**	**2.03**	**334**	*e*PG		Pb	13 30 13.9	-1.1
KPF				*e*SG		Sb	13 30 41.2	+0.5
KEF	**Keuruu**	**2.19**	**11**	*e*PG		Pn	13 30 16.2	+1.4
KEF				MSG			13 30 43.1	
	comp=Z,1.3nm,0.2s							
KEF				*e*SG		Sb	13 30 44.9	-0.5
KAF	**Kangasniemi**	**2.39**	**28**	MSG			13 30 48.5	
	comp=Z,1.3nm,0.2s							
KAF				*e*SG		Sb	13 30 50.4	-0.6
SLIT	**Slitere, Latvi**	**2.56**	**200**	*e*P		Pn	13 30 19.1	-0.7
VAF	**Ylistaro**	**3.09**	**349**	MSG			13 31 08.7	
	comp=Z,0.8nm,0.2s							
OUF	**Merijarvi**	**4.37**	**4**	*e*SB		Sb	13 31 46.2	-1.8

HEL 13 13:30:46.3±0.2, 62.61N×25.84E, h0km, ML0.8, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SUF	**Sumiainen**	**0.18**	**53**	PG		Pg	13 30 49.6	-0.1
SUF				SG		Sg	13 30 50.9	-1.1
KAF	**Kangasniemi**	**0.55**	**156**	PG		Pg	13 30 56.5	-0.2
KAF				SG		Sg	13 31 00.8	-3.0
KAF				MSG			13 31 04.0	
	comp=Z,1.8nm,0.2s							
KEF	**Keuruu**	**0.64**	**226**	PG		Pg	13 30 57.1	-1.3
KEF				MSG			13 31 06.5	
	comp=Z,1.4nm,0.2s							
FIA0	**FINESS Array S**	**1.18**	**175**	PG		Pg	13 31 07.4	-1.4
FIA0				MSG			13 31 22.1	
	comp=Z,1.0nm,0.2s							
FIA0				SG		Sg	13 31 23.0	-1.1
NIF	**Nilsia** baz=233	**1.19**	**48**	PB		Pg	13 31 08.6	-0.5
VAF	**Ylistaro** baz=101	**1.52**	**288**	PG		Pn	13 31 13.6	-1.1
VAF				MSG			13 31 31.9	
	comp=Z,0.7nm,0.2s							
VAF				SN		Sg	13 31 34.1	-0.9
VAF	**Ylistaro**	**1.52**	**288**	*e*SG		Pn	13 31 13.6	-1.1
OUF	**Merijarvi**	**1.83**	**345**	PG		Pn	13 31 19.4	+0.4
OUF				MSG			13 31 40.7	
	comp=Z,0.5nm,0.2s							
KPF	**Kankaanpaa**	**1.93**	**248**	PG		Pb	13 31 22.1	-0.2
KPF				SG		Sn	13 31 45.1	-0.2
NUR	**Nurmijrvi**	**2.19**	**196**	MSG			13 31 51.1	
	comp=Z,0.6nm,0.2s							
NUR				SG		Sb	13 31 54.7	+0.4
OBF4	**Vikkela, Lumij**	**2.23**	**352**	MSG			13 31 52.4	
	comp=Z,0.4nm,0.2s							
OBF4				SG		Sb	13 31 55.6	-0.1
RMF	**Romuvaara**	**2.44**	**47**	MSG			13 31 58.6	
	comp=Z,0.4nm,0.2s							
RMF				SG		Sg	13 32 04.2	-0.6
RAF	**Rauma**	**2.51**	**232**	MSG			13 32 00.4	
	comp=Z,0.5nm,0.2s							
RAF				SG		Sb	13 32 02.2	-1.3
UMAU	**Umeaa**	**2.66**	**301**	*e*S		Pn	13 31 31.3	+0.9
UMAU	**Umeaa** baz=114	**2.66**	**301**	PB		Pn	13 31 31.3	+0.9

*IDC **13** 13:38:38.1±1.1, 25.99S×69.97W, h0km, mb4.3/3, mbtmp4.1/6, ML3.7/3, MS2.9/2, Error ellipse: s-maj=40.1km s-min=16.8km az=110.0*
*NEIC **13** 13:38:42.5±2.1, 25.60S±0.05×70.85W±0.02, h43km±8km, mb4.3/8, Error ellipse: s-maj=7.0km s-min=2.5km az=177.0*
*GUC **13** 13:38:43.9±0.8, 25.63S×70.54W, h56km±8km, ML4.1*
*SJA **13** 13:38:43.3±1.1, 25.65S×70.57W, h51km±10km, ML4.0, MW3.9*
ISC 13 13:38:42.7±0.8, **25.64S**±0.03×**70.75W**±0.06, **h53**km±8km,

n88, σ1°47/101, mb4.2/5, 5C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AC01	**Pan de Azucar**	**0.53**	**165**	P		**Pn**	**13 38 55.8**	**+1.2**
AC01				S		Sn	**13 39 03.7**	**+0.6**
AC01	**Pan de Azucar**	**0.53**	**165**	*e*P		**Pn**	**13 38 56.0**	**+1.4**
AC01				*e*S		**Sn**	**13 39 04.0**	**+0.9**
AC01				IAML			13 39 04.5	
	comp=Z,9μm,0.3s							
AC01	**Pan de Azucar**	**0.53**	**165**	*e*P		**Pn**	**13 38 55.8**	**+1.2**
AC01				*i* S		**Sn**	**13 39 04.0**	**+0.9**
AC01				IAML			13 39 04.2	
	comp=E,18μm,0.2s							
PB14	**IPOC Station P**	**1.05**	**17**	P		**Pn**	**13 39 02.5**	**+0.9**
PB14	**IPOC Station P**	**1.05**	**17**	*e*P		**Pn**	**13 39 02.9**	**+1.3**
PB14				*e*S		**Sn**	**13 39 17.3**	**+1.9**
PB14				IAML			13 39 19.7	
	comp=Z,3μm,0.3s							
PB14	**IPOC Station P**	**1.05**	**17**	*i*P		**Pn**	**13 39 02.7**	**+1.1**
PB14				*i* S		**Sn**	**13 39 16.6**	**+1.1**
GO02	**Mina Guanaco**	**1.15**	**66**	P		**Pn**	**13 39 02.0**	**-0.8**
GO02	**Mina Guanaco**	**1.15**	**66**	*e*P		**Pn**	**13 39 02.1**	**-0.8**
GO02				*e*S		**Sn**	**13 39 17.7**	**0.0**
GO02	**Mina Guanaco**	**1.15**	**66**	*i*P		**Pn**	**13 39 02.0**	**-0.8**
GO02				*i* S		**Sn**	**13 39 15.8**	**-1.9**
AC02	**Maricunga**	**1.88**	**130**	P		**Pn**	**13 39 13.4**	**+0.5**
AC02	**Maricunga**	**1.88**	**130**	*e*P		**Pn**	**13 39 13.5**	**+0.5**
AC02				*e*S		**Sn**	**13 39 35.1**	**-0.7**
AC02				IAML			13 39 35.3	
	comp=Z,1μm,0.2s							
AC02	**Maricunga**	**1.88**	**130**	*i*P		**Pn**	**13 39 13.4**	**+0.5**
AC02				*i* S		**Sn**	**13 39 34.9**	**-1.0**
AC02				IAML			13 39 36.7	
	comp=E,3μm,0.3s							
GO03	**Copiap**	**2.00**	**167**	Pn		**Pn**	**13 39 15.3**	**+1.1**
GO03	**Copiap**	**2.00**	**167**	*e*P		**Pn**	**13 39 15.8**	**+1.6**
GO03	**Copiap**	**2.00**	**167**	*i*P		**Pn**	**13 39 15.6**	**+1.3**
GO03				*i* S		**Sn**	**13 39 39.7**	**+1.5**
GO03				IAML			13 39 44.8	
	comp=E,1μm,0.3s							
AC04	**Llanos de Chal**	**2.58**	**186**			**Pn**	**13 39 22.1**	**+0.1**
AC04	**Llanos de Chal**	**2.58**	**186**	*e*P		**Pn**	**13 39 22.3**	**+0.3**
AC04				IAML			13 40 08.7	
	comp=Z,443nm,0.6s							
AC04	**Llanos de Chal**	**2.58**	**186**	*i*P		**Pn**	**13 39 22.3**	**+0.3**
AC04				*i* S		**Sn**	**13 39 52.6**	**+0.5**
AC04				IAML			13 40 06.4	
	comp=E,665nm,0.5s							
PB06	**IPOC Station P**	**3.11**	**20**			**Pn**	**13 39 29.8**	**+0.3**
PB06	**IPOC Station P**	**3.11**	**20**	*e*P		**Pn**	**13 39 30.2**	**+0.7**
PB06				IAML			13 40 24.7	
	comp=Z,535nm,0.7s							
PB06	**IPOC Station P**	**3.11**	**20**	*e*P		**Pn**	**13 39 29.9**	**+0.4**
PB06				*i* S		**Sn**	**13 40 04.9**	**-0.6**
PB06				IAML			13 40 18.9	
	comp=N,613nm,0.5s							
AC05	**El Transito**	**3.22**	**173**	Pn		**Pn**	**13 39 32.3**	**+1.4**
PB04	**IPOC Station P**	**3.33**	**10**			**Pn**	**13 39 32.3**	**-0.2**
PB04	**IPOC Station P**	**3.33**	**10**	*e*P		**Pn**	**13 39 32.9**	**+0.4**
PB04				IAML			13 40 42.8	
	comp=Z,472nm,0.5s							
PB04	**IPOC Station P**	**3.33**	**10**	*e*P		**Pn**	**13 39 32.5**	**-0.1**
PB04				*i* S		**Sn**	**13 40 10.7**	**-0.3**
PB04				IAML			13 40 35.8	
	comp=N,589nm,0.6s							
LCO	**Las Campanas**	**3.36**	**179**			**Pn**	**13 39 33.6**	**+0.5**
LCO	**Las Campanas**	**3.36**	**179**	*e*P		**Pn**	**13 39 34.4**	**+1.4**
LCO				IAML			13 40 35.9	
	comp=Z,3μm,0.4s							
LCO	**Las Campanas**	**3.36**	**179**	*e*P		**Pn**	**13 39 33.5**	**+0.5**
LCO				*i* S		**Sn**	**13 40 11.5**	**-0.3**
LVC	**Limon Verde**	**3.45**	**30**	Pn		**Pn**	**13 39 33.7**	**-0.6**
LVC	**Limon Verde**	**3.45**	**30**	Pn		**Pn**	**13 39 35.8**	**+1.5**
	comp=Z,5.3nm,0.3s,baz=170,slow=10,SNR=32							
LVC				Sn		**Sn**	**13 40 18.8**	**+4.7**
	comp=Z,57nm,0.3s,baz=161,slow=20,SNR=12							
LVC				Lg		Lg	13 40 30.7	
	comp=Z,200nm,0.3s,baz=75,slow=20,SNR=19							
LVC				LR		LR	13 41 06.4	
	comp=Z,133nm,21.4s,baz=204,slow=42							
	comp=Z,27nm,0.5s							
LVC	**Limon Verde**	**3.45**	**30**	*e*P		**Pn**	**13 39 35.2**	**+0.8**
LVC				*i* S		**Sn**	**13 40 14.4**	**+0.3**
AF01	**San Pedro de A**	**3.55**	**42**			**Pn**	**13 39 35.8**	**+0.1**
VCA	**Vinchina**	**3.83**	**144**	*e*P		**Pn**	**13 39 43.0**	**+3.6**
VCA				IAML			13 40 50.1	
	comp=Z,160nm,0.5s							
PB07	**IPOC Station P**	**3.97**	**12**			**Pn**	**13 39 41.1**	**-0.2**
PB07	**IPOC Station P**	**3.97**	**12**	*e*P		**Pn**	**13 39 41.2**	**-0.1**
PB07				IAML			13 41 07.5	
	comp=Z,252nm,1.1s							
PB07	**IPOC Station P**	**3.97**	**12**	*e*P		**Pn**	**13 39 41.2**	**-0.2**
PB09	**IPOC Station P**	**4.06**	**20**			**Pn**	**13 39 43.2**	**+0.7**
PB09	**IPOC Station P**	**4.06

comp=Z,5.7nm,0.8s
OTAV Otavalo 26.78 343 P **P** **13 44 16.9 -1.4**
BOAV Boa Vista 29.57 21 P **P** **13 44 43.4 +0.6**
QSPA South Pole Qui 64.57 180 P **P** **13 49 16.3 +2.1**
QSPA IAmb IAmb 13 49 22.1
comp=Z,4.4nm,1.5s
QSPA South Pole Qui 64.57 180 P **P** **13 49 16.4 +2.1**
comp=Z,0.9nm,0.6s,baz=250,slow=0.8,SNR=8.5
comp=Z,0.9nm,0.6s
DBIC Dimbokro 71.54 73 P **P** **13 49 59.3 +0.7**
ULM Lac du Bonnet 78.77 344 P **P** **13 50 40.0 +0.7**
ULM IAmb IAmb 13 51 11.8
comp=Z,4.1nm,1.3s
TOA0 Torodi Ar. Sit 80.33 70 P **P** **13 50 48.9 +0.3**
TOA0 IAmb IAmb 13 50 49.7
comp=Z,3.0nm,0.6s
TORD Torodi Ar. Bea 80.33 70 P **P** **13 50 48.7 +0.1**
comp=Z,5.2nm,0.4s,baz=270,slow=3.6,SNR=1.2
comp=Z,5.2nm,0.4s
ASAR Alice Springs 125.48 208 PKP **PKiKP** **13 57 40.2 +1.2**
comp=Z,0.2nm,0.7s,baz=141,slow=1.8,SNR=1.5
KURBB Kurchatov Arra 145.69 35 PKPbc **PKiKP** **13 58 17.6 -1.4**
comp=Z,0.6nm,0.3s,baz=304,slow=3.1,SNR=4.3
ZALV Zalesovo Beam 146.40 26 PKPbc **PKPab** **13 58 19.0 +0.7**
comp=Z,2.4nm,0.7s,baz=307,slow=4.7,SNR=11
MKAR Makanchi Array 149.93 38 PKPbc **PKiKP** **13 58 28.8 +0.9**
comp=Z,1.6nm,0.7s,baz=324,slow=3.3,SNR=19

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*DJA **13** 14:06:30.0±0.7, 19˚N±5˚×14˚6E±˚, h222km±7km, M4.9/35, mB5.6/6, mb4.8/35, MLv4.8/1, Mw(mB)5.1/6*
*IDC **13** 14:06:32.1±0.5, 18˚.83N×145˚.54E, h238km±3km, mb3.8/26, mbtmp4.4/31, Error ellipse: s-maj=11.9km s-min=6.4km az=82.0*
*NEIC **13** 14:06:32.1±1.2, 18˚.80N±0˚.07×145˚.5E±0˚.1, h223km±7km, mb4.5/111, Error ellipse: s-maj=16.4km s-min=10.3km az=85.0*

ISC 13 14:06:30.2±0.3, 18˚.79N±0˚.04×145˚.51E±0˚.07, h214km, n202, σ1$20/221, mb4.4/103, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GUMO	**Guam**	**5.21**	**187**		**Pn**		**14 07 48.8**	**+1.1**
GUMO	**Guam**	**5.21**	**187**	P	**Pn**		**14 07 50.4**	**+2.7**
	341nm,1.1s,baz=354,slow=3.1,SNR=5.6							
GUMO				S	**S**		**14 08 52.7**	**+3.9**
	74nm,0.3s,baz=350,slow=23,SNR=4.3							
JCJ	**Chichijima**	**8.81**	**340**	Pn	**Pn**		**14 08 33.1**	**-0.8**
JCJ	**Chichijima**	**8.81**	**340**	P	Pn		14 08 27.3	-6.6
	168nm,0.5s,baz=267,slow=19,SNR=7.0							
JCJ				S	S		14 10 03.3	-10
	204nm,0.5s,baz=297,slow=22,SNR=5.8							
JHJ	**Hachijo jima 2**	**15.16**	**341**	P	**Pn**		**14 09 52.7**	**-1.1**
	185nm,0.9s,baz=71,slow=14,SNR=2.3							
JHJ				S	**S**		**14 12 37.7**	**-3.9**
	79nm,0.7s,baz=240,slow=24,SNR=1.3							
JOW	**Kunigami**	**17.78**	**300**	P	**Pn**		**14 10 25.1**	**+0.1**
JOW	**Kunigami**	**17.78**	**300**	P	**Pn**		**14 10 25.5**	**+0.5**
JOW	**Kunigami**	**17.78**	**300**	P	**Pn**		**14 10 24.5**	**-0.5**
	52nm,0.4s,baz=134,slow=11,SNR=40							
INU	**Inuyama**	**18.13**	**337**	P	**P**		**14 10 26.5**	**+0.1**
JMN	**Monobe**	**18.15**	**327**	P	**P**		**14 10 28.1**	**+1.3**
JGF	**Kuroka**	**18.23**	**338**	P	**P**		**14 10 28.3**	**+0.6**
JGF	**Kuroka**	**18.23**	**338**	P	**P**		**14 10 28.2**	**+0.6**
MJAR	**Matsushiro Arr**	**18.82**	**341**	P	**P**		**14 10 33.5**	**-0.4**
	4.6nm,0.4s,baz=168,slow=10,SNR=26							
MJAR				S	**S**		**14 13 55.0**	**-1.5**
	4.0nm,0.8s,baz=162,slow=17,SNR=4.2							
MAJO	**Matsushiro**	**18.82**	**341**	P	**P**		**14 10 33.8**	**-0.1**
MJB9	**Matsu-Tunnel**	**18.82**	**341**	P	**P**		**14 10 34.0**	**+0.1**
JNU	**Nakatsue**	**19.38**	**320**	P	**P**		**14 10 40.8**	**+0.7**
JNU				IAmb	IAmb		14 11 06.8	
	comp=Z,22nm,1.1s							
JNU	**Nakatsue**	**19.38**	**320**	P	**P**		**14 10 40.1**	**0.0**
	comp=Z,9.8nm,0.9s,baz=108,slow=9.6,SNR=2.1							
JMM	**Marumori**	**19.45**	**349**	P	**P**		**14 10 42.1**	**+1.5**
JMM	**Marumori**	**19.45**	**349**	P	**P**		**14 10 42.1**	**+1.5**
MANU	**Manus Island**	**20.79**	**175**	P	**P**		**14 10 55.3**	**+0.2**
SMPI	**Sarmi**	**21.71**	**199**	P	**P**		**14 11 02.8**	**-1.8**
	comp=Z,186nm,1.6s,comp=Z,8μm							
GENI	**Genyem**	**21.89**	**194**	P	**P**		**14 11 05.6**	**-0.8**
	comp=Z,229nm,1.2s,comp=Z,3μm							
JTM	**Tenmabayashi**	**22.25**	**351**	P	**P**		**14 11 10.2**	**+0.7**
YHNB	**Yeheng**	**23.16**	**289**	P	**P**		**14 11 19.0**	**+1.0**
SSLB	**Suanglung**	**23.41**	**287**	P	**P**		**14 11 21.4**	**+1.2**
SSLB				IAmb	IAmb		14 11 22.9	
	comp=Z,22nm,0.9s							
SWI	**Sorong**	**24.04**	**217**	P	**P**		**14 11 25.6**	**-0.3**
	comp=Z,31nm,1.2s							
KSRS	**Korea Array**	**24.14**	**324**	P	**P**		**14 11 26.1**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=141,slow=8.8,SNR=14							
KSRS				pP	**pwP**		**14 12 10.7**	**+0.3**
	comp=Z,20nm,0.7s,baz=148,slow=8.6,SNR=10							
	comp=Z,2.7nm,0.6s							
TABU	**Tabubil**	**24.28**	**190**	P	**P**		**14 11 30.0**	**+1.8**
FAKI	**Fak Fak**	**25.22**	**213**	P	**P**		**14 11 37.3**	**+0.7**
JKA	**Kamikawa-asahi**	**25.37**	**355**	P	**P**		**14 11 39.0**	**+1.3**
JKA				IAmb	IAmb		14 11 42.7	
	comp=Z,35nm,1.3s							
LBMI	**Labuha**	**26.19**	**224**	P	**P**		**14 11 46.5**	**+1.1**
	comp=Z,35nm,1.2s							
NJ2	**Nanjing**	**27.37**	**304**	*e*P	**P**		**14 11 57.8**	**+2.0**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,160nm,3.9s							
USRK	**Ussuriysk Ar.**	**27.75**	**339**	P	**P**		**14 11 58.4**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=131,slow=12,SNR=2.9							
USRK				pP	**pwP**		**14 12 46.0**	**+1.2**
	comp=Z,3.7nm,0.6s,baz=147,slow=12,SNR=4.5							
	comp=Z,1.3nm,0.6s							
PMG	**Port Moresby**	**28.07**	**177**	P	**P**		**14 12 01.8**	**-0.3**
YSS	**Yuzh-Sakhalins**	**28.18**	**356**	P	**P**		**14 12 03.2**	**+0.5**
YSS				IAmb	IAmb		14 12 40.4	
	comp=Z,25nm,1.4s							
MDJ	**Mudanjiang**	**28.98**	**336**	P	**P**		**14 12 11.6**	**+1.7**
MDJ				pmax	pmax			
	comp=Z,4.0nm,1.1s							
MDJ				pmax	pmax			
	comp=Z,260nm,4.1s							
MRSI	**Marisa**	**29.44**	**234**	P	**P**		**14 12 14.2**	**0.0**
	comp=Z,27nm,1.0s							
LUWI	**Luwuk**	**29.80**	**231**	P	**P**		**14 12 16.4**	**-1.0**
MPSI	**Mapaga**	**31.12**	**237**	P	**P**		**14 12 29.4**	**+0.4**
KKM	**Kota Kinabalu**	**31.23**	**250**	P	**P**		**14 12 30.6**	**+0.5**
KKM				IAmb	IAmb		14 12 31.9	
	comp=Z,12nm,0.9s							
HNR	**Honiara**	**31.45**	**152**	P	**P**		**14 12 31.6**	**-0.3**
	comp=Z,249nm,0.3s,baz=0.0,slow=20,SNR=2.5							
COEN	**Coen**	**32.62**	**184**	P	**P**		**14 12 42.0**	**-0.1**
COEN				IAmb	IAmb		14 12 42.7	
	comp=Z,12nm,0.8s							
TTSI	**Tana Toraja**	**33.32**	**232**	P	**P**		**14 12 49.7**	**+1.5**
	comp=Z,65nm,1.0s,comp=Z,658nm							
MTN	**Manton Dam**	**34.49**	**205**	P	**P**		**14 12 58.2**	**+0.1**
MTN	**Manton Dam**	**34.49**	**205**	P	**P**		**14 12 58.5**	**+0.4**
HEH	**HeiHe**	**34.56**	**339**	*e*P	**P**		**14 12 58.8**	**+0.4**
HEH				pmax	pmax			
	comp=Z,6.0nm,1.0s							
HEH				pmax	pmax			
	comp=Z,250nm,4.0s							
SOEI	**Soe**	**35.27**	**218**	P	**P**		**14 13 04.1**	**-0.9**
PETK	**Petropavlovsk-**	**35.54**	**13**	P	**P**		**14 13 06.0**	**-0.7**
	comp=Z,11nm,1.1s,baz=180,slow=4.4,SNR=1.8							
PETK				pP	**pwP**		**14 13 55.9**	**+1.7**
	comp=Z,3.9nm,0.9s,baz=211,slow=45,SNR=1.8							
	comp=Z,11nm,1.1s							
EDFI	**Ende, Flores**	**36.07**	**223**	P	**P**		**14 13 09.7**	**-2.1**
	comp=Z,11nm,1.6s							
HHC	**Hu-ho-hao-te**	**36.41**	**314**	*e*P	**P**		**14 13 16.4**	**+1.9**
HHC				pP	pwP		14 14 01.9	-0.8
HHC				pmax	pmax			
	comp=Z,6.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,46nm,4.3s							
SBUM	**Sibu**	**36.42**	**247**	P	**P**		**14 13 15.7**	**+1.1**
SBUM				IAmb	IAmb		14 13 17.0	
	comp=Z,18nm,1.3s							
MTSU	**Mount Surprise**	**36.72**	**182**	P	**P**		**14 13 17.4**	**+0.3**
CTAO	**Charters Tower**	**38.65**	**179**	P	**P**		**14 13 33.6**	**+0.3**
CTAO				IAmb	IAmb		14 13 36.7	
	comp=Z,21nm,1.2s							
PLAI	**Plampang**	**38.75**	**227**	P	**P**		**14 13 33.3**	**-0.9**
	comp=Z,41nm,0.9s							
TWSI	**Taliwang, Sumb**	**39.32**	**228**	P	**P**		**14 13 38.0**	**-0.9**
	comp=Z,89nm,0.9s							
QIS	**Mount Isa**	**39.53**	**189**	P	**P**		**14 13 40.9**	**+0.3**
WB0	**Warramunga Arr**	**39.84**	**196**	P	**P**		**14 13 43.5**	**+0.4**
WR0	**Warramunga Arr**	**39.99**	**196**	P	**P**		**14 13 44.7**	**+0.4**
WRAB	**Tennant Creek**	**40.01**	**196**	P	**P**		**14 13 45.1**	**+0.5**
WB2	**Warramunga Arr**	**40.02**	**196**	P	**P**		**14 13 45.1**	**+0.5**
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**		**14 13 45.0**	**+0.3**
	comp=Z,44nm,0.8s,baz=15,slow=8.8,SNR=90							
WRA				ScP	**ScP**		**14 19 09.9**	**-4.0**
	comp=Z,1.1nm,0.8s,baz=14,slow=3.9,SNR=4.2							
WRA				S	**S**		**14 19 30.4**	**-3.8**
	comp=Z,3.4nm,1.3s,baz=8.8,slow=17,SNR=4.3							
PZH	**PanZhiHua**	**40.96**	**289**	P	**P**		**14 13 54.3**	**+1.8**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,110nm,4.7s							
FITZ	**Fitzroy Crossi**	**41.54**	**209**	P	**P**		**14 13 57.6**	**+0.7**
SONM	**Songino Array**	**42.96**	**321**	P	**P**		**14 14 08.3**	**0.0**
SONM	**Songino Array**	**42.96**	**321**	P	**P**		**14 14 07.7**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=134,slow=9.7,SNR=8.3							
SONM				pP	**pwP**		**14 14 58.7**	**+1.0**
	comp=Z,2.9nm,1.0s,baz=135,slow=8.4,SNR=3.6							
SONM				ScP	**ScP**		**14 19 22.2**	**-3.3**
	comp=Z,0.9nm,0.9s,baz=124,slow=3.0,SNR=5.2							
	comp=Z,0.7nm,0.4s							
KOUNC	**Koumac, New Ca**	**43.21**	**154**	P	**P**		**14 14 10.9**	**+0.5**
KOUNC				IAmb	IAmb		14 14 12.3	
	comp=Z,37nm,1.0s							
KOUNC	**Koumac, New Ca**	**43.21**	**154**	P	**P**		**14 14 11.2**	**+0.8**
AS01	**Alice Springs**	**43.68**	**195**	P	**P**		**14 14 14.4**	**+0.2**
AS31	**Alice Springs**	**43.69**	**195**	P	**P**		**14 14 14.5**	**+0.2**
ASAR	**Alice Springs**	**43.70**	**195**	P	**P**		**14 14 14.3**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=18,slow=7.8,SNR=54							
ASAR				ScP	**ScP**		**14 19 24.8**	**-3.8**
	comp=Z,0.6nm,0.9s,baz=23,slow=5.0,SNR=3.6							
ASAR				S	**S**		**14 20 28.1**	**0.0**
	comp=Z,0.9nm,1.0s,baz=24,slow=20,SNR=4.7							
	comp=Z,6.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**44.03**	**277**	P	**P**		**14 14 18.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**44.03**	**277**	P	**P**		**14 14 18.1**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=69,slow=7.0,SNR=16							
CMAR				pP	**pwP**		**14 15 08.6**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=99,slow=5.6,SNR=1.2							
	comp=Z,2.0nm,0.6s							
KPJI	**Karang Pucung**	**44.44**	**238**	P	**P**		**14 14 19.5**	**-0.8**
	comp=Z,38nm,1.0s							
QLP	**Quilpie**	**45.12**	**182**	P	**P**		**14 14 24.5**	**-1.0**
DZM	**Mont Dzumac**	**45.48**	**152**	P	**P**		**14 14 28.7**	**+0.2**
DZM				IAmb	IAmb		14 14 30.3	
	comp=Z,36nm,0.9s							
DZM	**Mont Dzumac**	**45.48**	**152**	P	**P**		**14 14 29.4**	**+0.9**
DZM	**Mont Dzumac**	**45.48**	**152**	P	**P**		**14 14 28.0**	**-0.5**
	comp=Z,31nm,0.9s,baz=18,slow=7.3,SNR=8.9							
	comp=Z,31nm,0.9s							
KULM	**Kulim**	**45.74**	**259**	P	**P**		**14 14 32.1**	**+1.5**
KULM				IAmb	IAmb		14 14 32.8	
	comp=Z,11nm,0.9s							
OUENC	**Ouen Island, N**	**45.96**	**152**	P	**P**		**14 14 33.2**	**+1.1**
OUENC				IAmb	IAmb		14 14 33.6	
	comp=Z,29nm,1.0s							
MND	**Mandalay**	**46.26**	**283**	P	P		14 14 29.5	-5.0
INKA	**Innaminka**	**46.49**	**186**	P	**P**		**14 14 35.5**	**-0.6**
WRKA	**Warakurna**	**46.68**	**202**	P	**P**		**14 14 38.0**	**+0.3**
MBWA	**Marble Bar**	**47.05**	**214**	P	**P**		**14 14 40.8**	**+0.1**
MBWA				IAmb	IAmb		14 14 41.9	
	comp=Z,17nm,1.0s							
KASI	**Kota Agung**	**47.09**	**243**	P	**P**		**14 14 38.1**	**-2.9**
	comp=Z,34nm,1.2s							
OOD	**Oodnadatta**	**47.28**	**192**	P	**P**		**14 14 42.4**	**+0.2**
PSA00	**Pilbara Seismi**	**47.34**	**213**	P	**P**		**14 14 43.0**	**+0.2**
PSA00				IAmb	IAmb		14 14 44.3	
	comp=Z,25nm,1.1s							
AULRC	**Lightning Ridg**	**48.00**	**177**	P	**P**		**14 14 46.5**	**-1.2**
PSI	**Prapat**	**48.26**	**257**	P	**P**		**14 14 46.8**	**-3.4**
ARMA	**Armidale**	**49.28**	**173**	P	**P**		**14 14 58.1**	**+0.5**
ARMA				IAmb	IAmb		14 15 34.0	
	comp=Z,16nm,1.2s							
LCRK	**Leigh Creek**	**49.46**	**188**	P	**P**		**14 14 58.8**	**0.0**
SISI	**Saibi**	**49.80**	**251**	P	**P**		**14 14 59.8**	**-1.9**
	comp=Z,15nm,1.0s							
MULG	**Mulgathing**	**50.02**	**193**	P	**P**		**14 15 03.5**	**+0.4**
CMSA	**Cobar Meteorol**	**50.04**	**180**	P	**P**		**14 15 03.0**	**-0.2**
GSI	**Gunungsitoli**	**50.08**	**255**	P	**P**		**14 15 03.3**	**-0.6**
GSI	**Gunungsitoli**	**50.08**	**255**	P	**P**		**14 15 00.7**	**-3.2**
GSI	**Gunungsitoli**	**50.08**	**255**	P	**P**		**14 15 04.2**	**+0.3**
	comp=Z,45nm,1.0s							
STKA	**Stephens Creek**	**50.52**	**184**	P	**P**		**14 15 06.1**	**-0.6**
STKA	**Stephens Creek**	**50.52**	**184**	P	**P**		**14 15 06.3**	**-0.5**
STKA	**Stephens Creek**	**50.52**	**184**	P	**P**		**14 15 05.8**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=352,slow=12,SNR=6.0							
	comp=Z,4.2nm,0.7s							
BILL	**Bilibino**	**50.96**	**10**	P	**P**		**14 15 10.4**	**+0.8**
AKUT	**Akutan**	**51.19**	**35**	P	**P**		**14 15 12.2**	**+0.7**
FORT	**Forrest**	**52.07**	**199**	P	**P**		**14 15 18.6**	**+0.4**
BBOO	**Buckleboo**	**52.10**	**190**	P	**P**		**14 15 17.9**	**-0.6**
BBOO				IAmb	IAmb		14 15 18.9	
	comp=Z,19nm,1.1s							
YNG	**Young**	**52.87**	**177**	P	**P**		**14 15 24.0**	**-0.1**
CAN	**Canberra**	**53.92**	**176**	P	**P**		**14 15 31.3**	**-0.5**
CAN				IAmb	IAmb		14 15 48.6	
	comp=Z,21nm,1.3s							
WMQ	**Urumqi**	**54.12**	**311**	*e*P	**P**		**14 15 35.8**	**+2.5**
MORW	**Morawa**	**55.44**	**212**	P	**P**		**14 15 42.8**	**0.0**
MORW				IAmb	IAmb		14 15 43.6	
	comp=Z,21nm,1.0s							
L14K	**Kuka Creek**	**55.74**	**27**	P	**P**		**14 15 45.3**	**+0.9**
L14K				IAmb	IAmb		14 16 12.0	
	comp=Z,22nm,1.4s							
M14K	**Bethel**	**55.81**	**28**	P	**P**		**14 15 46.0**	**+1.1**
M14K				IAmb	IAmb		14 16 06.8	
	comp=Z,26nm,1.2s							
TOO	**Toolangi**	**56.06**	**180**	P	**P**		**14 15 47.1**	**+0.1**
TOO				IAmb	IAmb		14 16 11.1	
	comp=Z,8.2nm,1.1s							
ANM	**Nome**	**56.18**	**23**	P	**P**		**14 15 48.4**	**+0.9**
K15K	**Wolf Creek Mou**	**56.64**	**27**	P	**P**		**14 15 51.9**	**+1.1**
K15K				IAmb	IAmb		14 16 08.8	
	comp=Z,29nm,1.4s							
M16K	**Timber Creek**	**57.26**	**29**	P	**P**		**14 15 56.5**	**+1.3**
M16K				IAmb	IAmb		14 16 16.1	
	comp=Z,19nm,1.3s							
J16K	**Anvik River**	**57.45**	**26**	P	**P**		**14 15 57.6**	**+1.1**
J16K				IAmb	IAmb		14 16 11.4	
	comp=Z,6.8nm,0.9s							
ZALV	**Zalesovo Beam**	**57.84**	**322**	P	**P**		**14 15 56.9**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=112,slow=7.1,SNR=3.5							
ZALV				pP	**pwP**		**14 16 51.3**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=101,slow=7.5,SNR=5.1							
	comp=Z,0.6nm,0.5s							
N17K	**Nushagak Hills**	**57.90**	**29**	P	**P**		**14 16 01.0**	**+1.3**
N17K				IAmb	IAmb		14 16 02.7	
	comp=Z,13nm,1.2s							
NWAO	**Narrogin (SRO)**	**58.10**	**208**	P	**P**		**14 16 01.9**	**+0.5**
NWAO				IAmb	IAmb		14 16 03.1	
	comp=Z,24nm,1.0s							
C16K	**Lisburne Hills**	**58.13**	**19**	P	**P**		**14 16 01.8**	**+0.7**
MK31	**Makanchi Array**	**58.27**	**314**	P	**P**		**14 16 02.0**	**-0.5**
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**		**14 16 02.0**	**-0.6**
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**		**14 16 02.2**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=90,slow=8.8,SNR=17							
MKAR				pP	**pwP**		**14 16 53.6**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=90,slow=7.9,SNR=3.7							
	comp=Z,1.2nm,0.6s							
H17K	**Granite Mounta**	**58.42**	**24**	P	**P**		**14 16 03.3**	**+0.1**
H17K				IAmb	IAmb		14 16 17.3	
	comp=Z,7.2nm,0.9s							
MAKZ	**Makanchi**	**58.49**	**314**	P	**P**		**14 16 03.6**	**-0.4**
N18K	**Kilae Creek**	**58.55**	**29**	P	**P**		**14 16 05.1**	**+0.9**
N18K				IAmb	IAmb		14 16 20.6	
	comp=Z,33nm,1.5s							
F17K	**Baldwin Pennin**	**58.59**	**22**	P	**P**		**14 16 05.2**	**+0.9**
F17K				IAmb	IAmb		14 16 23.9	
	comp=Z,13nm,1.4s							
H18K	**Honhosa River**	**59.11**	**24**	P	**P**		**14 16 08.4**	**+0.5**
H18K				IAmb	IAmb		14 16 17.8	
	comp=Z,7.6nm,1.1s							
E18K	**Tukpahlearik C**	**59.27**	**21**	P	**P**		**14 16 09.8**	**+0.9**
G18K	**Tagagawik**	**59.30**	**23**	P	**P**		**14 16 09.6**	**+0.3**
G18K				IAmb	IAmb		14 16 24.6	
	comp=Z,11nm,1.4s							
G19K	**Purcell Mounta**	**59.99**	**23**	P	**P**		**14 16 14.8**	**+0.9**
G19K				IAmb	IAmb		14 16 19.2	
	comp=Z,8.9nm,1.3s							
K20K	**Telida**	**60.22**	**27**	P	**P**		**14 16 16.7**	**+1.2**
K20K				IAmb	IAmb		14 16 32.1	
	comp=Z,11nm,1.4s							
CAST	**Castle Rocks**	**61.09**	**27**	P	**P**		**14 16 22.1**	**+0.7**
CAST				IAmb	IAmb		14 16 29.2	
	comp=Z,6.2nm,0.7s							
KURBB	**Kurchatov Arra**	**61.13**	**318**	P	**P**		**14 16 20.9**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=95,slow=7.5,SNR=12							
KURBB				pP	**pwP**		**14 17 14.3**	**+0.2**
	comp=Z,8.6nm,0.9s,baz=92,slow=7.5,SNR=5.1							
	comp=Z,1.4nm,0.5s							
IMAR	**Indian Mountai**	**61.20**	**24**	P	**P**		**14 16 22.9**	**+0.8**
NRIK	**Noril'sk**	**61.46**	**340**	P	**P**		**14 16 22.7**	**-1.1**
	comp=Z,4.9nm,0.6s,baz=98,slow=7.8,SNR=5.5							
NRIK				pP	**pwP**		**14 17 15.3**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=120,slow=5.4,SNR=2.1							
	comp=Z,4.9nm,0.6s							
MLY	**Manley**	**62.11**	**26**	P	**P**		**14 16 28.8**	**+0.5**
MLY				IAmb	IAmb		14 16 41.8	
	comp=Z,5.1nm,0.8s							
SML	**Sawmill**	**62.38**	**29**	P	**P**		**14 16 30.5**	**+0.4**
D22K	**Ayikyak River**	**62.57**	**21**	P	**P**		**14 16 32.2**	**+1.0**
D22K				IAmb	IAmb		14 16 45.0	
	comp=Z,5.5nm,0.8s							
BOOM	**Boomskoye usch**	**62.61**	**309**	P	**P**		**14 16 32.2**	**+0.1**
KSH	**Kashi**	**62.67**	**305**	P	P		14 16 39.6	+7.1
KSH				pP	pwP		14 17 28.5	+2.7
KSH				pmax	pmax			
	comp=Z,2.0nm,1.6s							
I23K	**Minto, Yukon-K**	**62.70**	**26**	P	**P**		**14 16 32.5**	**+0.5**
I23K				IAmb	IAmb		14 16 53.9	
	comp=Z,11nm,1.4s							
G23K	**Bananza Creek**	**62.86**	**24**	P	**P**		**14 16 33.9**	**+0.7**
G23K				IAmb	IAmb		14 16 35.8	
	comp=Z,7.2nm,1.5s							
MDM	**Murphy Dome**	**63.12**	**26**	P	**P**		**14 16 35.9**	**+1.0**
MDM				IAmb	IAmb		14 17 05.9	
	comp=Z,6.9nm,1.0s							
H24K	**Noodor Dome**	**63.47**	**25**	P	**P**		**14 16 37.5**	**+0.3**
H24K				IAmb	IAmb		14 16 55.2	
	comp=Z,7.7nm,1.4s							
TOLK	**Toolik Lake Re**	**63.57**	**22**	P	**P**		**14 16 38.6**	**+0.8**
TOLK				IAmb	IAmb		14 16 41.1	
	comp=Z,4.3nm,0.9s							
ILAR	**Eielson Array**	**63.64**	**26**	P	**P**		**14 16 37.9**	**-0.3**
ILAR	**Eielson Array**	**63.64**	**26**	P	**P**		**14 16 36.7**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=254,slow=5.3,SNR=18							
ILAR				pP	**pwP**		**14 17 30.4**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=262,slow=5.6,SNR=4.6							
	comp=Z,1.4nm,0.7s							
AAK	**Ala-Archa**	**63.67**	**309**	P	**P**		**14 16 37.2**	**-1.9**
	comp=Z,0.7nm,0.6s,baz=63,slow=4.5,SNR=2.1							
AAK				pP	**pwP**		**14 17 34.0**	**+1.8**
	comp=Z,1.2nm,0.7s,baz=126,slow=10,SNR=2.7							
	comp=Z,0.7nm,0.6s							
RTZ	**Ruatahuna**	**64.28**	**153**	P	**P**		**14 16 41.9**	**-0.9**
BMAR	**Burnt Mountain**	**65.10**	**24**	P	**P**		**14 16 48.4**	**+0.7**
MRZ	**Mangatainoka R**	**65.42**	**155**	P	**P**		**14 16 49.2**	**-0.9**
MRZ				IAmb	IAmb		14 16 51.7	
	comp=Z,13nm,0.9s							
BCAR	**Beaver Creek A**	**65.58**	**29**	P	**P**		**14 16 51.1**	**+0.2**
BVAR	**Borovoye Array**	**66.29**	**320**	P	**P**		**14 16 54.5**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=99,slow=7.4,SNR=23							
BVAR				pP	**pwP**		**14 17 49.1**	**+0.6**
	comp=Z,6.7nm,0.7s,baz=90,slow=7.4,SNR=4.3							
	comp=Z,5.0nm,0.6s							
BRVK	**Borovoye**	**66.36**	**320**	P	**P**		**14 16 55.4**	**-0.5**
BRVK				IAmb	IAmb		14 16 57.2	
	comp=Z,4.1nm,0.8s							
GVZ	**Greta Valley S**	**66.47**	**158**	P	**P**		**14 16 55.6**	**-1.0**
KKAR	**Karatay Array**	**66.57**	**310**	P	**P**		**14 16 57.2**	**-0.4**
MOZ	**McQueen's Vall**	**66.99**	**159**	P	**P**		**14 16 58.9**	**-1.0**
M29M	**Som

HFS	**Hagfors**	**92.23**	**338**	P	**P**	**14 19 13.6**	**-2.0**
	comp=Z,2.1nm,0.9s,baz=73,slow=4.8,SNR=1.9						
	comp=Z,2.1nm,0.9s						
BRTR	**Keskin Array B**	**93.92**	**314**	P	**P**	**14 19 21.6**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=116,slow=5.0,SNR=3.6						
	comp=Z,0.6nm,0.6s						
PLCA	**Paso Flores**	**142.19**	**133**	PKP	**PKPdf**	**14 25 33.3**	**-4.0**
	comp=Z,2.6nm,0.9s,baz=314,slow=3.5,SNR=5.1						
CPUP	**Villa Florida**	**157.63**	**114**	PKPab	**PKPab**	**14 26 34.9**	**0.0**
	comp=Z,1.1nm,0.6s,baz=245,slow=7.7,SNR=4.8						

*ISN **13** 14:07:57.0±0.8, 34.°60N×46.°24E, h14km±10km, ML3.2*
*TEH **13** 14:07:57.7, 34.°65N×46.°25E, h8km±35km, ML3.0*
ISC 13 14:07:57.4±1.4, **34.°60N**±0.°04×**46.°22E**±0.°04, **h3**km±14km, **n13**,σ=**0.88**/**17**, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.17**	**53**	Pg	**Pg**	**14 08 00.9**	**+0.1**
IGHG	**Ghaleghazi**	**0.39**	**133**	Pg	**Pg**	**14 08 05.3**	**+0.3**
KGS1	**Ghasr-e-Shirin**	**0.53**	**260**	Pg	**Pb**	**14 08 09.2**	**-0.2**
ILIN	**Lien**	**0.69**	**62**	Pg	**Pg**	**14 08 10.3**	**-0.4**
KCHF	**Cheshme Sefid,**	**0.75**	**115**	Pg	**Pb**	**14 08 12.4**	**-0.8**
KCHF				Sg	**Sb**	**14 08 23.8**	**-0.1**
ILBA	**Ilam Banvizeh**	**0.97**	**181**	Pg	**Pn**	**14 08 17.6**	**-0.4**
IBDR	**Badra**	**1.50**	**189**	*e*Pn	**Pn**	**14 08 25.0**	**-0.2**
IBDR				*e*Sn	**Sg**	**14 08 46.5**	**+0.8**
IBDR				AML	AML	14 08 54.0	
	comp=E,339nm,0.6s						
IBDR				AML	AML	14 09 00.6	
	comp=N,223nm,0.6s						
SDS1	**Sardasht. Az.**	**1.66**	**339**	Pg	**Pb**	**14 08 27.4**	**-1.3**
IKRK	**Kirkuk**	**1.74**	**298**	*e*Pn	**Pb**	**14 08 29.0**	**-1.0**
IKRK				*e*Sn	**Sb**	**14 08 52.0**	**-0.3**
IKRK				AML	AML	14 08 59.6	
	comp=E,400nm,0.4s						
IKRK				AML	AML	14 08 59.9	
	comp=N,428nm,1.0s						
BHD	**Baghdad**	**2.02**	**230**	*e*Pn	**Pn**	**14 08 33.0**	**+0.6**
BHD				*e*Sn	**Sn**	**14 08 58.5**	**+0.3**
MAHB	**Mahabad**	**2.21**	**349**	Pn	**Pb**	**14 08 36.9**	**-1.1**
ISRB	**Sarab**	**3.43**	**20**	Pn	**Pn**	**14 08 53.7**	**+1.7**
ISHB	**Shabestar**	**3.71**	**353**	Pn	**Pn**	**14 08 56.7**	**+0.9**

CNRM 13 14:17:21.3, 30.°19N×7.°87W, h1km**, ML3.5, Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTIG	**Tnine Tigouga,**	**0.61**	**306**	P	Pg	14 17 31.8	-1.2
TTIG	**Tnine Tigouga,**	**0.61**	**306**	S	Sg	14 17 40.8	-0.2
TTIG	**Tnine Tigouga,**	**0.61**	**306**	P	Pg	14 17 32.0	-1.1
TTIG	**Tnine Tigouga,**	**0.61**	**306**	P	Pg	14 17 32.0	-1.1
OUK	**Oukaimeden**	**1.02**	**0**	P	Pg	14 17 35.5	-5.4
OUK	**Oukaimeden**	**1.02**	**0**	P	Pg	14 17 35.5	-5.4
OUZM	**OUZ**	**1.20**	**53**	P	Pg	14 17 40.0	-4.4
OUZM	**OUZ**	**1.20**	**53**	P	Pg	14 17 40.1	-4.2
OUZM	**OUZ**	**1.20**	**53**	P	Pg	14 17 40.1	-4.2
ZGR	**Zagora**	**1.95**	**91**	P	Pn	14 17 54.4	-1.3
ZGR	**Zagora**	**1.95**	**91**	S	Sn	14 18 19.6	-1.3
ZGR	**Zagora**	**1.95**	**91**	P	Pn	14 17 56.0	+0.3
ZGR	**Zagora**	**1.95**	**91**	P	Pn	14 17 56.0	+0.3
SRHM	**Skhour des Reh**	**2.28**	**359**	P	Pn	14 17 56.3	-3.9
SRHM	**Skhour des Reh**	**2.28**	**359**	S	Sn	14 18 25.5	-3.4
ARF	**Arif**	**3.38**	**67**	P	Pn	14 18 14.7	-0.6
ZHG	**ZHG**	**3.41**	**18**	P	Pn	14 18 14.4	-1.3
ZHG	**ZHG**	**3.41**	**18**	P	Pn	14 18 09.2	-6.6
ZHG	**ZHG**	**3.41**	**18**	P	Pn	14 18 09.2	-6.6
MD31	**MD31**	**3.77**	**44**	P	Pn	14 18 20.1	-0.6
MDT	**Midelt**	**3.83**	**46**	P	Pn	14 18 20.8	-0.7
FIGM	**Figuig**	**5.99**	**69**	P	Pn	14 18 49.6	-1.6
PVAQ	**Vaqueiros**	**7.20**	**1**	P	Pn	14 19 07.4	-0.3

*ISK **13** 14:27:01.4, 37.°06N×40.°70E, h5km, ML3.3/19*
*AFAD **13** 14:27:01.0±0.0, 36.°95N×40.°72E, h24km±1km, ML3.2*
ISC 13 14:26:59.2±1.4, **36.°89N**±0.°05×**40.°63E**±0.°03, **h9**km±10km, **n38**,σ=**1.8**/**12**/**60**, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARD	**Mardin**	**0.44**	**15**	P	**Pb**	**14 27 08.9**	**-0.3**
MARD				*i* AML	AML	14 27 15.0	
	comp=N,2μm,0.2s						
MARD				S	**Sb**	**14 27 15.2**	**-0.8**
MARD				*i* AML	AML	14 27 17.0	
	comp=E,2μm,0.3s						
MAZI	**Mazidag**	**0.59**	**346**	Pg	**Pb**	**14 27 11.4**	**-0.4**
MAZI				Sg	**Sg**	**14 27 18.9**	**+0.5**
MIDY	**Mardin/Midyat-**	**0.80**	**50**	P	**Pb**	**14 27 15.2**	**-0.2**
MIDY				S	**Sg**	**14 27 25.1**	**0.0**
MIDY				*i* AML	AML	14 27 28.0	
	comp=E,754nm,0.2s						
MIDY				*i* AML	AML	14 27 29.0	
	comp=N,500nm,0.2s						
DIYA	**Diyarbakir**	**1.11**	**339**	P	**Pn**	**14 27 20.7**	**-0.3**
DIYA				S	**Sg**	**14 27 35.4**	**+0.4**
DIYA				*i* AML	AML	14 27 38.0	
	comp=E,586nm,0.3s						
DIYA				*i* AML	AML	14 27 39.0	
	comp=N,775nm,0.2s						
BTMN	**Batman**	**1.12**	**27**	P	**Pg**	**14 27 21.6**	**+0.8**
BTMN				S	**Sn**	**14 27 36.7**	**0.0**
BTMN				*i* AML	AML	14 27 39.0	
	comp=N,275nm,0.4s						
DYBB	**Diyarbakir**	**1.13**	**340**	Pg	**Pg**	**14 27 21.4**	**+0.4**
DYBB				Sg	**Sn**	**14 27 36.9**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.34**	**20**	Pn	**Pb**	**14 27 24.4**	**-0.1**
SVAN				Sn	**Sg**	**14 27 42.1**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.34**	**20**	P	**Pb**	**14 27 24.8**	**+0.2**
SVAN				S	**Sg**	**14 27 42.8**	**+0.5**
SANL	**SANLIURFA_Merk**	**1.34**	**283**	P	**Pn**	**14 27 24.4**	**+0.2**
SANL				S	**Sb**	**14 27 42.5**	**+0.6**
SANL				*i* AML	AML	14 27 44.0	
	comp=E,502nm,0.7s						
SANL				*i* AML	AML	14 27 46.0	
	comp=N,398nm,0.3s						
HANI	**Diyarbakir_Han**	**1.54**	**353**	P	**Pb**	**14 27 27.9**	**+0.1**
HANI				S	**Sg**	**14 27 48.2**	**-0.4**
HANI				*i* AML	AML	14 27 49.0	
	comp=N,613nm,0.3s						
HANI				*i* AML	AML	14 27 49.0	
	comp=E,944nm,0.3s						
HANM	**anlurfa/Hi**	**1.56**	**297**	P	**Pn**	**14 27 27.0**	**-0.1**
HANM				S	**Sg**	**14 27 48.9**	**-0.4**
HANM				*i* AML	AML	14 27 53.0	
	comp=N,340nm,0.4s						
SURC	**SANLIURFA_SURC**	**1.62**	**270**	P	**Pn**	**14 27 28.5**	**+0.5**
SURC				S	**Sb**	**14 27 50.0**	**+0.2**
SURC				*i* AML	AML	14 27 52.0	
	comp=N,518nm,0.4s						
SURC				*i* AML	AML	14 27 52.0	
	comp=E,222nm,0.2s						
NARI	**Adyaman-Kaht**	**1.79**	**304**	P	**Pn**	**14 27 31.1**	**+0.8**
NARI				S	**Sb**	**14 27 55.8**	**+1.0**
PERV	**Siirt/Pervari-**	**1.85**	**55**	P	**Pb**	**14 27 32.6**	**-0.7**
PERV				S	**Sg**	**14 27 58.6**	**-0.1**
PERV				*i* AML	AML	14 28 05.0	
	comp=N,1μm,0.9s						
PERV				*i* AML	AML	14 28 06.0	
	comp=E,1μm,0.7s						
BLIS	**Bitlis-Merkez**	**1.93**	**37**	P	**Pb**	**14 27 33.2**	**-1.3**
BLIS				S	**Sn**	**14 27 56.5**	**-0.2**
BLIS				*i* AML	AML	14 28 07.0	
	comp=E,126nm,0.5s						
KOVA	**Elazig, Kovanc**	**1.93**	**341**	P	**Pb**	**14 27 34.0**	**-0.5**
KOVA				S	**Sb**	**14 27 59.6**	**+0.8**
KOVA				*i* AML	AML	14 28 06.0	
	comp=E,221nm,0.4s						
ATAB	**Bozova**	**1.95**	**288**	P	**Pb**	**14 27 35.0**	**0.0**
ATAB				S	**Sg**	**14 28 01.5**	**-0.5**
ATAB				*i* AML	AML	14 28 07.0	
	comp=N,333nm,0.3s						
ATAB				*i* AML	AML	14 28 08.0	
	comp=E,300nm,0.3s						
MUSM	**Mu-Merkez**	**1.96**	**21**	P	**Pn**	**14 27 33.4**	**+0.6**
MUSM				S	**Sn**	**14 27 57.2**	**-0.3**
GURO	**Guroymak-BITLI**	**2.00**	**33**	Pn	**Pb**	**14 27 35.9**	**+0.1**
SLHN	**Bingol, Solhan**	**2.09**	**8**	P	**Pg**	**14 27 39.2**	**0.0**
SLHN				S	**Sb**	**14 28 03.0**	**-0.4**
SLHN				*i* AML	AML	14 28 08.0	
	comp=N,256nm,0.3s						
SLHN				*i* AML	AML	14 28 08.0	
	comp=E,499nm,0.4s						
BNGB	**Bingl**	**2.10**	**1**	Pn	**Pb**	**14 27 36.6**	**-0.9**
AZEY	**Adyaman-Merk**	**2.11**	**297**	P	**Pn**	**14 27 35.0**	**+0.2**
AZEY				S	**Sg**	**14 28 07.7**	**+0.7**
AZEY				*i* AML	AML	14 28 16.0	
	comp=E,106nm,0.5s						
PTK	**Pertek**	**2.23**	**334**	Pn	**Pb**	**14 27 38.7**	**-1.0**
AKDM	**Akdamar-Van**	**2.35**	**52**	Pn	**Pb**	**14 27 40.6**	**-1.3**
VRTB	**Varto-Mus**	**2.36**	**16**	Pn	**Pb**	**14 27 40.7**	**-1.3**
TNCL	**Tunceli-Merkez**	**2.38**	**339**	P	**Pn**	**14 27 39.8**	**+1.2**
TNCL				S	**Sb**	**14 28 11.3**	**-0.6**
TNCL				*i* AML	AML	14 28 19.0	
	comp=N,106nm,0.7s						
TNCL				*i* AML	AML	14 28 22.0	
	comp=E,161nm,0.7s						
GEVA	**Gevas**	**2.40**	**53**	P	**Pb**	**14 27 43.6**	**+1.0**
GEVA				S	**Sg**	**14 28 14.1**	**-2.1**
GEVA				*i* AML	AML	14 28 21.0	
	comp=E,89nm,0.6s						
CUKT	**Cukurca**	**2.41**	**81**	Pn	**Pb**	**14 27 41.9**	**-0.9**
KARO	**Karliova-Bingo**	**2.44**	**8**	Pn	**Pb**	**14 27 41.7**	**-1.6**
GAZ	**Gaziantep**	**2.75**	**277**	Pn	**Pb**	**14 27 49.2**	**+0.6**
VANB	**Van**	**2.77**	**51**	Pn	**Pb**	**14 27 46.3**	**-2.7**
ERZN	**Erzincan**	**2.79**	**345**	Pn	**Pb**	**14 27 46.9**	**-2.3**
ARPR	**Arapgir-MALATY**	**2.85**	**321**	Pn	**Pb**	**14 27 47.9**	**-2.5**
DARE	**Darende-Malaty**	**3.01**	**305**	Pn	**Pn**	**14 27 49.3**	**+2.2**
KMRS	**Kahramanmaras**	**3.04**	**283**	Pn	**Pb**	**14 27 53.1**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**3.24**	**17**	Pn	**Pn**	**14 27 53.3**	**+2.9**
TAHT	**Tahtakopru-Hat**	**3.61**	**263**	Pn	**Pb**	**14 28 01.9**	**-1.3**
SARI	**SarD1z-Kayseri**	**3.67**	**296**	Pn	**Pb**	**14 28 01.2**	**-3.1**

*TAP **13** 14:41:23.2, 23.°90N×121.°56E, h9km, ML2.8, C*
*JMA **13** 14:41:23.1±0.3, 23.°9N±0.°9×12.°2E±°, h5km, TAIWAN REGION*
ISC 13 14:41:23.5±0.8, **23.°90N**±0.°01×**121.°58E**±0.°02, **h10**km±5km, **n78**,σ=**0.49**/**127**, **4C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.08**	**19**	*i* P	**Pg**	**14 41 26.1**	**+0.1**
HWA				*i* S	**Sg**	**14 41 28.7**	**+1.0**
	baz=28						
ETM	**Tongmen**	**0.10**	**312**	⇓*i* P	**Pg**	**14 41 26.0**	**-0.2**
ETM				*i* S	**Sg**	**14 41 27.6**	**-0.5**
	baz=317						
SHUL	**Shoufeng**	**0.11**	**186**	⇑*i* P	**Pg**	**14 41 26.4**	**+0.1**
SHUL				S	**Sg**	**14 41 28.8**	**+0.6**
	baz=183						
ESL	**Shilin**	**0.15**	**237**	⇓*i* P	**Pg**	**14 41 26.6**	**-0.4**
ESL				S	**Sg**	**14 41 28.6**	**-0.8**
	baz=242						
TWD	**Chiawan**	**0.18**	**6**	⇑*i* P	**Pg**	**14 41 27.4**	**0.0**
TWD				S	**Sg**	**14 41 29.8**	**-0.4**
	baz=3.0						
TEGC	**Jichi Village**	**0.19**	**190**	*e*P	**Pg**	**14 41 28.1**	**+0.6**
TEGC				*e*S	**Sg**	**14 41 31.8**	**+1.5**
	baz=186						
LXIB	**Xiulin Townshi**	**0.19**	**310**	⇓*i* P	**Pg**	**14 41 27.6**	**-0.1**
LXIB				S	**Sg**	**14 41 30.3**	**-0.3**
	baz=312						
WARBT	**Fenglin Townsh**	**0.25**	**224**	⇑*i* P	**Pg**	**14 41 28.3**	**-0.3**
WARBT				S	**Sg**	**14 41 30.9**	**-1.1**
	baz=230						
ETL	**Fush Village**	**0.26**	**10**	*e*P	**Pg**	**14 41 28.7**	**-0.2**
ETL				*e*S	**Sg**	**14 41 32.5**	**-0.1**
	baz=8.0						
NACB	**Ninganchiao**	**0.28**	**4**	P	**Pg**	**14 41 28.9**	**-0.2**
NACB	**Ninganchiao**	**0.28**	**4**	⇑*i* P	**Pg**	**14 41 28.8**	**-0.3**
NACB				*e*S	**Sg**	**14 41 32.7**	**-0.1**
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.32**	**345**	*e*P	**Pg**	**14 41 29.9**	**-0.1**
ETLH				S	**Sg**	**14 41 34.1**	**-0.1**
	baz=344						
WHF	**Hehuan Shan**	**0.38**	**311**	*e*P	**Pg**	**14 41 31.0**	**-0.1**
WHF				*e*S	**Sg**	**14 41 36.0**	**-0.2**
	baz=312						
CHGB	**Renai**	**0.40**	**294**	⇓*i* P	**Pg**	**14 41 31.8**	**+0.4**
CHGB				*e*S	**Sg**	**14 41 37.6**	**+0.8**
	baz=295						
VWDT	**VWDT**	**0.42**	**250**	*i* P	**Pb**	**14 41 32.3**	**-0.7**
VWDT				*e*S	**Sg**	**14 41 37.6**	**+0.2**
	baz=252						
HGSD	**Ruisui**	**0.43**	**199**	*e*P	**Pb**	**14 41 32.2**	**-0.9**
WUSB	**Renai**	**0.43**	**283**	*i* P	**Pb**	**14 41 32.5**	**-0.7**
WUSB				*e*S	**Sg**	**14 41 37.5**	**-0.2**
	baz=284						
EHY	**Hungye**	**0.45**	**211**	*e*P	**Pg**	**14 41 32.1**	**-0.3**
EAHA	**Aohua**	**0.46**	**19**	*e*P	**Pg**	**14 41 32.5**	**0.0**
	baz=10.0						
TWT	**Tachien**	**0.51**	**314**	*e*P	**Pb**	**14 41 34.2**	**-0.4**
TWT				*i* S	**Sg**	**14 41 40.8**	**+0.6**
	baz=303						
TDCB	**Techi**	**0.52**	**313**	*e*P	**Pb**	**14 41 34.2**	**-0.5**
TDCB				*i* S	**Sg**	**14 41 41.3**	**+0.7**
	baz=306						
ENA	**Nanau**	**0.55**	**16**	*e*P	**Pg**	**14 41 34.2**	**0.0**
ENA				*e*S	**Sg**	**14 41 41.6**	**+0.1**
	baz=1.0						
NNSB	**Datong**	**0.56**	**342**	*e*P	**Pg**	**14 41 34.5**	**+0.2**
NNSB				*e*S	**Sg**	**14 41 41.2**	**-0.6**
	baz=333						
YULB	**Yu-li**	**0.56**	**207**	P	**Pg**	**14 41 34.3**	**-0.2**
YULB	**Yu-li**	**0.56**	**207**	*e*P	**Pg**	**14 41 34.0**	**-0.4**
YULB				S	**Sg**	**14 41 42.3**	**+0.4**
	baz=217						
NNS	**Nan Shan**	**0.57**	**341**	*e*P	**Pb**	**14 41 35.0**	**-0.6**
NNS				S	**Sg**	**14 41 42.3**	**+0.1**
	baz=333						
EWUT	**Wuta**	**0.58**	**19**	*e*P	**Pg**	**14 41 34.6**	**-0.2**
EWUT				*e*S	**Sg**	**14 41 42.6**	**+0.3**
	baz=7.0						
SSLB	**Suanglung**	**0.58**	**259**	P	**Pb**	**14 41 35.2**	**-0.5**
SSLB	**Suanglung**	**0.58**	**259**	*i* P	**Pb**	**14 41 35.1**	**-0.6**
SSLB				*i* S	**Sg**	**14 41 42.6**	**+0.2**
	baz=269						
EYUL	**Yuli**	**0.60**	**203**	*e*P	**Pb**	**14 41 35.8**	**-0.2**
TWF1	**Yuli**	**0.60**	**205**	*e*P	**Pg**	**14 41 35.0**	**-0.1**
	baz=215						
SMLT	**Sun Moon Lake**	**0.62**	**269**	P	**Pb**	**14 41 36.1**	**-0.4**
SMLT				*e*S	**Sg**	**14 41 43.9**	**+0.3**
	baz=270						
WCS	**Beigang Elemen**	**0.63**	**285**	*e*P	**Pb**	**14 41 36.5**	**0.0**
WCS				*e*S	**Sg**	**14 41 43.7**	**-0.3**
	baz=286						
LATG	**Datong**	**0.64**	**356**	*e*P	**Pg**	**14 41 36.0**	**+0.1**
LATG				*e*S	**Sb**	**14 41 45.3**	**-0.5**
	baz=345						
TYC	**Yuchr**	**0.66**	**271**	*e*P	**Pb**	**14 41 36.6**	**-0.4**
TYC				S	**Sb**	**14 41 45.5**	**-0.7**
	baz=281						
NDT	**Datong Townshi**	**0.70**	**355**	*e*P	**Pb**	**14 41 37.3**	**-0.6**
NDT				S	**Sg**	**14 41 46.4**	**+0.1**
	baz=345						
EOS4	**EOS4**	**0.71**	**72**	*e*P	**Pb**	**14 41 37.8**	**0.0**
	baz=82						
ESAO	**Su ao**	**0.72**	**20**	*e*P	**Pb**	**14 41 38.0**	**-0.1**
	baz=11						
ENTT	**Nioudou**	**0.74**	**359**	P	**Pb**	**14 41 38.1**	**-0.4**
	baz=358						
ENTT				*e*S	**Sb**	**14 41 48.3**	**-0.3**
	baz=358						
NDS	**Dongshan**	**0.74**	**10**	*e*P	**Pb**	**14 41 38.0**	**-0.5**
	baz=8.0						
NDS				*e*S	**Sg**	**14 41 47.7**	**+0.1**
	baz=8.0						
TWC	**Suao**	**0.75**	**19**	*e*P	**Pb**	**14 41 38.2**	**-0.4**
	baz=10.0						
TWC				*e*S	**Sg**	**14 41 47.9**	**0.0**
	baz=10.0						
WJS	**Zhushan**	**0.78**	**265**	*e*P	**Pn**	**14 41 40.5**	**0.0**
	baz=260						
YHNB	**Yeheng**	**0.79**	**347**	P	**Pb**	**14 41 39.4**	**0.0**
YHNB	**Yeheng**	**0.79**	**347**	*e*P	**Pb**	**14 41 39.2**	**-0.1**
	baz=345						
YHNB				*e*S	**Sg**	**14 41 48.5**	**-0.6**
	baz=345						
NSK	**Sanguang**	**0.80**	**346**	*e*P	**Pb**	**14 41 39.5**	**0.0**
	baz=345						
NSK				*e*S	**Sb**	**14 41 50.0**	**-0.4**
	baz=345						
ALS	**Alishan**	**0.80**	**242**	*e*P	**Pb**	**14 41 39.6**	**-0.1**
	baz=243						
ALS				*e*S	**Sb**	**14 41 50.5**	**-0.2**
	baz=243						
WNT	**Mingjian**	**0.81**	**269**	*e*P	**Pn**	**14 41 40.7**	**-0.3**
	baz=270						
CHKT	**Chengkung**	**0.82**	**194**	*e*P	**Pb**	**14 41 39.4**	**-0.4**
	baz=196						
EHD	**Haiduan**	**0.82**	**204**	*e*P	**Pb**	**14 41 39.3**	**-0.5**
	baz=207						
TWE	**Neicheng**	**0.82**	**6**	*e*P	**Pb**	**14 41 39.8**	**-0.1**
	baz=4.0						
TWE				*e*S	**Sg**	**14 41 50.2**	**0.0**
	baz=4.0						
NFF	**Wufeng Townshi**	**0.84**	**330**	*e*P	**Pb**	**14 41 40.4**	**+0.2**
	baz=329						
NFF				*e*S	**Sb**	**14 41 51.4**	**-0.2**
	baz=329						
FUSB	**Fushanzhiwuyua**	**0.86**	**1**	*e*P	**Pb**	**14 41 40.5**	**0.0**
	baz=358						
TWQ1	**Liyutan**	**0.86**	**302**	*e*P	**Pn**	**14 41 41.6**	**0.0**
	baz=302						
ECS	**Chishang**	**0.86**	**202**	*e*P	**Pn**	**14 41 41.8**	**+0.1**
	baz=205						
ELDTW	**Lidau**	**0.87**	**216**	*e*P	**Pg**	**14 41 39.5**	**-0.8**
	baz=209						
ELDTW				*e*S	**Sg**	**14 41 51.6**	**-0.1**
	baz=209						
CHN5	**Tsauling**	**0.87**	**250**	*e*P	**Pn**	**14 41 41.4**	**-0.5**
	baz=253						
NWLT	**Wulai**	**0.88**	**356**	*e*P	**Pb**	**14 41 40.9**	**+0.1**
	baz=353						
NWLT				*e*S	**Sg**	**14 41 51.6**	**-0.3**
	baz=353						
NSTT	**Nanjuang**	**0.90**	**324**	*e*P	**Pb**	**14 41 41.4**	**+0.2**
	baz=324						
NSTT				*e*S	**Sb**	**14 41 53.2**	**0.0**
	baz=324						
LIOB	**Emei**	**0.90**	**326**	*e*P	**Pn**	**14 41 42.1**	**-0.1**
	baz=325						
LIOB				*i* S	**Sb**	**14 41 53.8**	**+0.4**
	baz=325						
NMLH	**Miaoli**	**0.96**	**312**	*e*P	**Pn**	**14 41 43.5**	**+0.5**
	baz=311						
NMLH				S	**Sn**	**14 41 56.7**	**0.0**
	baz=311						
WCKO	**Fanlu**	**1.00**	**243**	*e*P	**Pn**	**14 41 44.0**	**+0.4**
	baz=241						
WCKO				*e*S	**Sn**	**14 41 57.4**	**-0.3**
	baz=241						
STYH	**Taoyuan**	**1.03**	**226**	*e*P	**Pn**	**14 41 43.6**	**-0.3**
	baz=215						
TPUB	**Ta-pu**	**1.05**	**236**	P	**Pn**	**14 41 44.7**	**+0.4**
TPUB	**Ta-pu**	**1.05**	**236**	*e*P	**Pn**	**14 41 44.3**	**0.0**
	baz=239						
TPUB				*e*S	**Sb**	**14 41 57.7**	**+0.1**
	baz=239						
CHN4	**Tsaushan**	**1.05**	**239**	*e*P	**Pn**	**14 41 44.5**	**+0.3**
	baz=242						
TATO	**Taipei**	**1.08**	**356**	P	**Pn**	**14 41 44.9**	**+0.3**
WTP	**Ta-pu**	**1.09**	**234**	*e*P	**Pn**	**14 41 45.3**	**+0.4**
	baz=237						
WTP				S	**Sn**	**14 42 00.2**	**+0.1**
	baz=237						
WRL	**Guolierlin Hig**	**1.10**	**270**	*e*P	**Pn**	**14 41 45.3**	**+0.4**
	baz=272						
TWK	**Hsinying**	**1.18**	**238**	*e*P	**Pn**	**14 41 46.5**	**+0.5**
	baz=242						
TWK				*e*S	**Sn**	**14 42 03.6**	**+1.4**
	baz=242						
CHN1	**Nanshi**	**1.19**	**234**	*e*P	**Pn**	**14 41 47.1**	**+0.9**
	baz=237						
CHN1				*e*S	**Sn**	**14 42 03.8**	**+1.3**
	baz=237						
SNST	**Tainan City**	**1.20**	**236**	*e*P	**Pn**	**14 41 47.3**	**+1.1**
	baz=240						
SNST				*e*S	**Sn**	**14 42 03.4**	**+0.8**
	baz=240						
SGST	**Jiashian**	**1.22**	**228**	*e*P	**Pn**	**14 41 47.1**	**+0.5**
	baz=232						
SGST				*i* S	**Sn**	**14 42 04.3**	**+1.2**
	baz=232						
SXI1	**Grass Mountain**	**1.22**	**13**	*e*P	**Pn**	**14 41 46.9**	**+0.2**
	baz=352						
YM01	**YM01**	**1.24**	**360**	*e*P	**Pg**	**14 41 48.5**	**+1.0**
	baz=356						
SCST	**Cishan**	**1.41**	**225**	*e*P	**Pg**	**14 41 50.9**	**+0.2**
	baz=215						
MASBT	**Mashibuluo**	**1.54**	**214**	*e*P	**Pn**	**14 41 51.1**	**+0.1**
	baz=211						
TSCK	**Chigu Township**	**1.56**	**242**	*e*P	**Pb**	**14 41 52.1**	**-0.3**
	baz=246						
JISG	**Ishigakijimahi**	**2.59**	**74**	P	**Pn**	**14 42 04.7**	**-0.7**
JISG				*e*S	**Sn**	**14 42 36.2**	**-0.8**

*NEIC **13** 14:44:58.2±0.7, 19.°535N±0.°008×155.°602W±0.°006, h16km±3km, Error ellipse: s-maj=1.2km s-min=0.9km az=187.0*
HVO 13 14:44:58.6±0.8, **19.°531N**±0.°005×**155.°605W**±0.°009, **h8**km±4km, **ML2.6**/22, **ML2.6**/52(NEIC), **Error ellipse: s-maj=1.2km s-min=0.8km az=104.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLOA	**Mauna Loa Obse**	**0.03**	**79**	Pg	Pg	14 45 01.1	+0.4
MWH	**Moku'aweowe**	**0.05**	**170**	Pg	Pg	14 45 01.1	+0.3
HMH	**Humu'ula Sheep**	**0.14**	**58**		Pg	14 45 02.3	+0.6
HMH					Sg	14 45 05.1	+1.1
HMH	**Humu'ula Sheep**	**0.14**	**58**	IAML		14 45 05.2	
	comp=N,2μm,0.2s						
HMH				IAML		14 45 06.5	
	comp=E,1μm,0.5s						
MLH	**Mauna Loa**	**0.21**	**100**		Pg	14 45 03.4	+0.4
MLH	**Mauna Loa**	**0.21**	**100**	IAML		14 45 07.9	
	comp=E,2μm,0.2s						
MLH			

comp=E,2µm,0.6s
UWE Uwekahuna 0.31 110 Pg 14 45 05.2 +0.3
UWE Sg 14 45 10.3 +1.2
UWE Uwekahuna 0.31 110 IAML 14 45 11.1
comp=E,3µm,0.3s
UWE IAML 14 45 13.4
comp=N,2µm,0.5s
RSD Rainshed 0.32 102 Pg 14 45 05.2 +0.2
RSD Sg 14 45 10.1 +0.9
RSD Rainshed 0.32 102 IAML 14 45 10.9
comp=E,2µm,0.5s
RSD IAML 14 45 11.0
comp=N,2µm,0.2s
OBL Observatory Le 0.32 110 Pg 14 45 05.2 +0.1
OBL Observatory Le 0.32 110 IAML 14 45 11.0
comp=E,2µm,0.6s
OBL IAML 14 45 14.8
comp=N,2µm,0.5s
SDHHI Sand Hill 0.33 116 Pg 14 45 05.2 +0.1
SDHHI Sand Hill 0.33 116 IAML 14 45 10.6
comp=N,1µm,0.5s
SDHHI IAML 14 45 14.1
comp=E,1µm,0.2s
UWB Uwekahuna B 0.33 109 Pg 14 45 05.1 0.0
UWB Sg 14 45 10.4 +0.9
UWB Uwekahuna B 0.33 109 IAML 14 45 10.8
comp=E,296nm,0.5s
UWB IAML 14 45 16.1
comp=N,382nm,0.8s
NPH North Pit 0.33 111 Pg 14 45 05.1 -0.1
NPH IAML 14 45 14.1
comp=N,500nm,0.3s
SBLHI Steaming Bluff 0.34 108 Pg 14 45 05.2 -0.1
SBLHI Sg 14 45 10.3 +0.6
SBLHI Steaming Bluff 0.34 108 IAML 14 45 11.5
comp=E,977nm,0.4s
SBLHI IAML 14 45 12.2
comp=N,828nm,0.6s
RIM Rim 0.34 113 Pg 14 45 05.5 +0.1
RIM Rim 0.34 113 IAML 14 45 17.1
comp=E,580nm,1.1s
RIM IAML 14 45 17.8
comp=N,699nm,0.8s
HATHI Halema'uma'u T 0.34 108 Pg 14 45 05.3 -0.1
HATHI Halema'uma'u T 0.34 108 IAML 14 45 13.3
comp=N,620nm,0.4s
HATHI IAML 14 45 14.1
comp=E,928nm,0.4s
KKO Keanakako`i 0.35 112 Pg 14 45 05.6 +0.1
KKO Keanakako`i 0.35 112 IAML 14 45 15.8
comp=E,665nm,1.4s
BYL Byron's Ledge 0.35 110 Pg 14 45 05.6 +0.1
BYL Byron's Ledge 0.35 110 IAML 14 45 10.7
comp=N,574nm,0.8s
BYL IAML 14 45 14.5
comp=E,508nm,0.7s
HTC Hot Caves 0.35 146 Pg 14 45 05.4 -0.2
HLP Hilina Pali 0.36 130 Pg 14 45 05.8 0.0
HLP Sg 14 45 11.7 +1.1
HLP Hilina Pali 0.36 130 IAML 14 45 12.2
comp=N,706nm,0.6s
HLP IAML 14 45 14.0
comp=E,604nm,0.5s
PUH Pauahi 0.40 113 Pg 14 45 06.1 -0.4
PUH Pauahi 0.40 113 IAML 14 45 15.3
comp=E,191nm,0.4s
PUH IAML 14 45 16.0
comp=N,434nm,1.6s
KNHH Kane Nui o Ham 0.44 110 Pg 14 45 06.7 -0.5
STCH Steam Cracks 0.48 108 Pg 14 45 07.2 -0.7
STCH Steam Cracks 0.48 108 IAML 14 45 15.5
comp=E,284nm,0.2s
STCH IAML 14 45 18.8
comp=N,264nm,0.8s
NPOC North of Pu'u 0.49 106 Pg 14 45 07.5 -0.6
NPOC North of Pu'u 0.49 106 IAML 14 45 12.4
comp=N,421nm,0.6s
NPOC IAML 14 45 16.9
comp=E,293nm,0.6s
JCUZ Jacuzzi 0.50 107 Pg 14 45 07.8 -0.5
JCUZ IAML 14 45 21.5
comp=E,339nm,0.8s
JCUZ IAML 14 45 26.3
comp=N,248nm,0.8s
HPAH Hawaii Prepara 0.51 350 Pg 14 45 07.7 -0.8
HPAH Sg 14 45 14.2 -0.9
MHA Mahukona 0.71 337 Pg Pg 14 45 12.3 -0.1

*RSPR **13** 14:47:09.5, 19.27N×65.55W, h134km±11km, MD3.6/7*
*NEIC **13** 14:47:10.5±2.0, 19.59N±0.07×65.59W±0.06, h35km±2km, ML2.8/20, Md3.6/7(RSPR), Error ellipse: s-maj=14.2km s-min=7.0km az=34.0*
ISC 13 14:47:07.4±2.8, 19.57N±0.10×65.5W±0.1, h16km, n36, σ0s65/37, 7C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**1.36 203**	↓	*eP*	**Pb**	**14 47 32.3**	**-0.2**
GCPR	**Guaynabo City**	**1.36 203**		*eS*	**Sg**	**14 47 50.5**	**-0.8**
GCPR	**Guaynabo City**	**1.36 203**			**Pb**	**14 47 32.3**	**-0.2**
GCPR					**Sg**	**14 47 50.5**	**-0.8**
HUMP	**Col San Antoni**	**1.45 192**	↑	*eP*	**Pb**	**14 47 33.6**	**-0.5**
HUMP	**Col San Antoni**	**1.45 192**		*eS*	**Sg**	**14 47 54.4**	**+0.1**
HUMP	**Col San Antoni**	**1.45 192**			**Pb**	**14 47 33.6**	**-0.5**
HUMP					**Sg**	**14 47 54.4**	**+0.1**
HUMP	**Col San Antoni**	**1.45 192**		IAML		14 47 57.5	
	comp=E,126nm,0.2s						
HUMP				IAML		14 48 02.6	
	comp=N,116nm,0.2s						
SJG	**San Juan**	**1.56 202**	↑	*eP*	**Pb**	**14 47 35.7**	**-0.2**
SJG	**San Juan**	**1.56 202**			**Pb**	**14 47 35.7**	**-0.2**
SJG	**San Juan**	**1.56 202**		IAML		14 48 00.9	
	comp=N,125nm,0.4s						
SJG				IAML		14 48 01.7	
	comp=N,143nm,0.4s						
AOPR	**Arecibo Observ**	**1.68 224**	↑	*eP*	**Pb**	**14 47 37.6**	**-0.3**
AOPR	**Arecibo Observ**	**1.68 224**		*eS*	**Sb**	**14 47 59.6**	**+0.8**
AOPR	**Arecibo Observ**	**1.68 224**			**Pb**	**14 47 37.6**	**-0.3**
AOPR					**Sb**	**14 47 59.6**	**+0.8**
UUPR	**Utuado, UPR, P**	**1.73 221**	↓	*eP*	**Pn**	**14 47 37.6**	**+0.8**
UUPR	**Utuado, UPR, P**	**1.73 221**		*eS*	**Sn**	**14 47 59.6**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.73 221**			**Pn**	**14 47 37.6**	**+0.8**
UUPR					**Sn**	**14 47 59.6**	**+1.1**
CELP	**Cerrillos**	**1.79 214**	↑	*eP*	**Pb**	**14 47 38.9**	**-0.9**
CELP	**Cerrillos**	**1.79 214**		*eS*	**Sn**	**14 48 00.2**	**+0.2**
CELP	**Cerrillos**	**1.79 214**			**Pb**	**14 47 38.9**	**-0.9**
CELP					**Sn**	**14 48 00.2**	**+0.2**
CELP	**Cerrillos**	**1.79 214**		IAML		14 48 06.7	
	comp=E,76nm,0.5s						
OBIP	**Obispado Ponce**	**1.83 214**	↑	*eP*	**Pn**	**14 47 38.8**	**+0.6**
OBIP	**Obispado Ponce**	**1.83 214**		*eS*	**Sn**	**14 48 01.4**	**+0.4**
OBIP	**Obispado Ponce**	**1.83 214**			**Pn**	**14 47 38.8**	**+0.6**
OBIP					**Sn**	**14 48 01.4**	**+0.4**
AGPR	**Aguadilla, PR**	**1.85 234**	↑	*eP*	**Pb**	**14 47 40.5**	**-0.3**
AGPR	**Aguadilla, PR**	**1.85 234**			**Pb**	**14 47 40.5**	**-0.3**
AGPR	**Aguadilla, PR**	**1.85 234**		IAML		14 47 58.8	
	comp=N,150nm,2.6s						
MLPR	**Magueyes Islan**	**2.14 222**	↑	*eP*	**Pn**	**14 47 42.6**	**+0.1**
MLPR	**Magueyes Islan**	**2.14 222**		*eS*	**Sn**	**14 48 07.8**	**-0.9**
MLPR	**Magueyes Islan**	**2.14 222**			**Pn**	**14 47 42.6**	**+0.1**
MLPR					**Sn**	**14 48 07.8**	**-0.9**
MLPR	**Magueyes Islan**	**2.14 222**		IAML		14 48 15.8	
	comp=E,63nm,2.7s						
MLPR				IAML		14 48 22.8	
	comp=N,61nm,2.0s						
CRPR	**Cabo Rojo, PR**	**2.15 224**	↓	*eP*	**Pn**	**14 47 41.6**	**-1.1**
CRPR	**Cabo Rojo, PR**	**2.15 224**		*eS*	**Sn**	**14 48 08.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.15 224**			**Pn**	**14 47 41.6**	**-1.1**
CRPR						14 48 45.3	
	comp=E,58nm,2.9s						
CRPR	**Cabo Rojo, PR**	**2.15 224**		IAML		14 48 08.6	
	comp=N,63nm,2.5s						
CRPR	**Cabo Rojo, PR**	**2.15 224**			**Sn**	**14 48 08.9**	**-0.2**
SDDR	**Presa de Saban**	**5.46 265**		Pn	**Pn**	**14 48 28.6**	**+0.3**

*IDC **13** 14:51:02.5±0.8, 2.40N×126.74E, h0km, mb3.9/9, mbtmp3.9/9, MS3.1/2, Error ellipse: s-maj=61.1km s-min=14.9km az=67.0*
*DJA **13** 14:51:07.2±0.4, 3.1N±4.4×12.7E±., h10km, M4.0/12, mb4.2/7, mB4.8/1, MLv4.0/12, Mw(mB)4.1/1*
*NEIC **13** 14:51:09.4±1.4, 2.49N±0.09×127.0E±0.1, h49km±10km, mb4.2/15, Error ellipse: s-maj=18.7km s-min=10.6km az=58.0*
ISC 13 14:51:09.8±0.6, 2.49N±0.07×126.92E±0.09, h53km, n43, σ1s16/43, mb4.2/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.76 165**		Pn	**Pn**	**14 51 37.2**	**-0.8**
TNTI	**Ternate**	**1.76 165**		P	**Pn**	**14 51 37.1**	**-0.9**
SGSI	**Sangihe**	**1.83 311**		P	**Pn**	**14 51 37.5**	**-1.4**
SGSI				S	**Sn**	**14 51 59.9**	**-1.0**
LBMI	**Labuha**	**3.16 169**		P	**Pn**	**14 51 56.5**	**-0.6**
KMSI	**Cibinong**	**3.50 237**		P	**Pn**	**14 52 02.8**	**+1.0**
SANI	**Sanana**	**4.60 192**		P	**Pn**	**14 52 15.2**	**-1.7**
MRSI	**Marisa**	**5.36 248**		P	**Pn**	**14 52 28.5**	**+1.2**
	48nm,0.5s,0.2nm						
SWI	**Sorong**	**5.47 127**		P	**Pn**	**14 52 30.3**	**+1.5**
	8.8nm,0.8s,0.1nm						
NLAI	**Namlea**	**5.69 178**		P	**Pn**	**14 52 29.4**	**-2.5**
	8.6nm,1.0s,0.1nm						
TOLI2	**Tolitoli**	**6.29 258**		Pn	**Pn**	**14 52 40.0**	**0.0**
MPSI	**Mapaga**	**7.34 253**		P	**Pn**	**14 52 56.2**	**+1.8**
	20nm,1.3s,654nm0.1nm						
MYLDM	**Lahad Datu**	**8.82 288**		Pn	**Pn**	**14 53 16.4**	**+1.7**
SBUM	**Sibu**	**14.69 270**		Pn	**Pn**	**14 54 35.2**	**+0.6**
YULB	**Yu-li**	**21.48 346**		P	**P**	**14 55 53.9**	**-0.2**
YULB				IAmb	IAmb	14 56 10.0	
	comp=Z,35nm,1.5s						
TPUB	**Ta-pu**	**21.57 344**		P	**P**	**14 55 53.9**	**-1.2**
WB0	**Warramunga Arr**	**23.30 162**		P	**P**	**14 56 12.4**	**-0.9**
WB0				IAmb	IAmb	14 56 18.7	
	comp=Z,7.5nm,1.1s						
PMG	**Port Moresby**	**23.37 121**		LR	LR	15 07 46.8	
	comp=Z,41nm,18.5s,baz=264,slow=43						
WRAB	**Tennant Creek**	**23.45 162**		P	**P**	**14 56 13.6**	**-1.1**
WRAB				IAmb	IAmb	14 56 29.8	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**23.45 162**		P	**P**	**14 56 13.4**	**-1.3**
WRA	**Warramunga Arr**	**23.45 162**		P	**P**	**14 56 13.6**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=342,slow=11,SNR=19						
	comp=Z,1.5nm,0.6s						
WB2	**Warramunga Arr**	**23.46 162**		P	**P**	**14 56 13.6**	**-1.1**
WB2				IAmb	IAmb	14 56 27.0	
	comp=Z,5.9nm,1.0s						
WR0	**Warramunga Arr**	**23.53 162**		P	**P**	**14 56 15.2**	**-0.2**
WR0				IAmb	IAmb	14 56 43.8	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**26.87 166**		P	**P**	**14 56 45.1**	**-0.7**
ASAR	**Alice Springs**	**26.87 166**		P	**P**	**14 56 45.3**	**-0.5**
ASAR	**Alice Springs**	**26.87 166**		P	**P**	**14 56 44.6**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=345,slow=7.6,SNR=17						
ASAR				PcP	**PcP**	**15 00 07.5**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=346,slow=2.0,SNR=1.7						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.67 302**		P	**P**	**14 57 27.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=118,slow=6.9,SNR=6.2						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**34.81 1**		P	**P**	**14 57 56.0**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=176,slow=9.2,SNR=2.1						
	comp=Z,0.8nm,0.7s						
STKA	**Stephens Creek**	**36.91 159**		P	**P**	**14 58 14.2**	**+0.6**
STKA				IAmb	IAmb	14 58 46.0	
	comp=Z,2.7nm,1.4s						
STKA	**Stephens Creek**	**36.91 159**		P	**P**	**14 58 13.0**	**-0.6**
	comp=Z,4.2nm,0.9s,baz=333,slow=11,SNR=9.5						
	comp=Z,4.2nm,0.9s						
SONM	**Songino Array**	**48.53 342**		P	**P**	**14 59 48.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=163,slow=10,SNR=3.1						
	comp=Z,0.6nm,0.8s						
MK31	**Makanchi Array**	**58.68 326**		P	**P**	**15 01 01.3**	**-0.6**
MKAR	**Makanchi Array**	**58.68 326**		P	**P**	**15 01 01.5**	**-0.4**
MKAR	**Makanchi Array**	**58.68 326**		P	**P**	**15 01 01.6**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=119,slow=8.0,SNR=38						
	comp=Z,0.9nm,0.4s						
MAKZ	**Makanchi**	**58.86 325**		P	**P**	**15 01 02.8**	**-0.4**
MAKZ				IAmb	IAmb	15 01 11.7	
	comp=Z,2.5nm,1.3s						
AAK	**Ala-Archa**	**61.40 318**		LR	LR	15 31 34.1	
	comp=Z,12nm,18.3s,baz=198,slow=40						
ZAA0	**Zalesovo Array**	**61.77 333**		P	**P**	**15 01 21.6**	**-1.2**
ZAA0				IAmb	IAmb	15 01 38.0	
	comp=Z,2.5nm,1.1s						
ZALV	**Zalesovo Beam**	**61.77 333**		P	**P**	**15 01 21.7**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=123,slow=9.4,SNR=4.3						
	comp=Z,0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**62.88 328**		P	**P**	**15 01 30.2**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=128,slow=6.4,SNR=12						
	comp=Z,1.7nm,0.5s						
KURK	**Kurchatov**	**62.88 328**		P	**P**	**15 01 30.2**	**-0.1**
ABKAR	**Akbulak array**	**73.23 321**		P	**P**	**15 02 35.0**	**-0.3**
SVW2	**Sparrevohn**	**81.79 29**		P	**P**	**15 03 24.0**	**+1.1**
D19K	**Kuna River**	**82.20 21**		P	**P**	**15 03 26.9**	**+2.0**
D19K				IAmb	IAmb	15 03 50.4	
	comp=Z,5.3nm,1.3s						
BMAR	**Burnt Mountain**	**87.14 23**		P	**P**	**15 03 52.8**	**+2.9**

IDC 13 15:01:33.4±57.0, 16.31S×176.26W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1072.0km s-min=185.1km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.20 240**		P	P	15 09 20.6	+0.5
	2.3nm,1.0s,baz=74,slow=15,SNR=1.5						
	2.3nm,1.0s						
WRA	**Warramunga Arr**	**46.96 258**		P	P	15 10 06.2	-0.3
	0.2nm,0.4s,baz=95,slow=7.6,SNR=8.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**47.21 253**		P	P	15 10 08.2	-0.3
	2.0nm,0.6s,baz=88,slow=8.2,SNR=62						
	2.0nm,0.6s						

*IDC **13** 15:06:58.4±1.8, 1.68S×77.58W, h170km±17km, mb3.6/12, mbtmp4.2/17, MS2.9/1, Error ellipse: s-maj=20.4km s-min=11.8km az=73.0*
*NEIC **13** 15:06:58.9±1.7, 1.79S±0.04×77.69W±0.08, h163km±6km, mb4.3/84, Error ellipse: s-maj=11.8km s-min=5.3km az=75.0*
ISC 13 15:06:58.5±0.4, 1.77S±0.04×77.70W±0.06, h170km, n156, σ1s19/162, mb4.2/48, 1C, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIAT	**Ana Tenorio**	**0.95 324**		*eP*	**Pn**	**15 07 25.1**	**-0.1**
CHSH	**Refugio Sur-Vo**	**1.20 283**			**Pn**	**15 07 26.9**	**-0.5**
SLOR	**San Lorenzo -**	**1.30 322**			**Pn**	**15 07 28.3**	**0.0**
BOSC	**San Juan Bosco**	**1.59 210**			**Pn**	**15 07 30.3**	**-0.4**
COHC	**Cochancay**	**1.70 246**			**Pn**	**15 07 30.4**	**-1.3**
COHC	**Cochancay**	**1.70 246**		*i* P	**Pn**	**15 07 30.6**	**-1.1**
COHC				*eS*	**Sn**	**15 07 55.9**	**-1.4**
PULU	**Pululahua**	**1.95 336**			**Pn**	**15 07 34.3**	**-0.5**
IMBA	**Imbabura, San**	**2.09 346**			**Pn**	**15 07 36.8**	**+0.4**
OTAV	**Otavalo**	**2.13 339**			**Pn**	**15 07 36.2**	**-0.6**
OTAV	**Otavalo**	**2.13 339**		*eP*	**Pn**	**15 07 36.1**	**-0.6**
OTAV				*eS*	**Sn**	**15 08 05.6**	**-0.8**
BONI	**La Bonita**	**2.21**	**41**	↑*iP*	**Pn**	**15 07 37.7**	**+0.2**
BONI				*eS*	**Sn**	**15 08 06.9**	**-0.9**
BONI				*i*		15 08 14.5	
	comp=Z,27nm,0.6s						
PAC1	**Pacto, Paraso**	**2.29 332**		*eP*	**Pn**	**15 07 38.2**	**-0.2**
PAC1				*eS*	Sn	15 08 18.1	+8.7
PAC1				*i*		15 08 22.7	
	comp=Z,268nm,0.3s						
TULM	**Tulcn-Chalpat**	**2.47 358**		Pn	**Pn**	**15 07 40.8**	**0.0**
TULM	**Tulcn-Chalpat**	**2.47 358**		*eP*	**Pn**	**15 07 40.3**	**-0.4**
ARNL	**Arenillas**	**2.96 233**		Pn	Pn	15 07 42.9	-3.2
GCUF	**Volcan Galeras**	**2.99 7**		*eP*	**Pn**	**15 07 47.9**	**+0.8**
SALI	**Salinas**	**3.32 263**		Pn	**Pn**	**15 07 48.1**	**-2.5**
CRUC	**La Cruz**	**3.39 13**		*eP*	**Pn**	**15 07 53.0**	**+1.1**
MCRA	**Macar, Loja**	**3.43 221**			**Pn**	**15 07 49.2**	**-2.8**
MCRA	**Macar, Loja**	**3.43 221**		*eP*	**Pn**	**15 07 49.6**	**-2.5**
PTLC	**Puerto Leguiza**	**3.48 56**		*eP*	**Pn**	**15 07 50.1**	**-2.6**
BBAC	**Balboa, Cauca**	**3.79 7**		*eP*	**Pn**	**15 07 57.0**	**+0.2**
BBAC				*eS*	**Sn**	**15 08 44.5**	**+2.1**
BBAC				*i*		15 08 55.6	
	comp=Z,25nm,0.4s						
POPC	**Popayan, Colom**	**4.40 13**		*eP*	**Pn**	**15 08 04.3**	**-0.3**
GARC	**Garzon, Huila**	**4.50 29**		*eP*	**Pn**	**15 08 06.2**	**+0.2**
GR1C	**Gorgona, Isla**	**4.76 354**		*eP*	**Pn**	**15 08 08.8**	**-0.4**
GR1C				*eS*	**Sn**	**15 09 01.0**	**-3.5**
GR1C				*i*		15 09 08.5	
	comp=Z,502nm,0.6s						
BETC	**Betania**	**4.96 27**		*eP*	**Pn**	**15 08 13.7**	**+1.9**

JAMC	**Jamundi, Valle**	**5.05 12**		*eP*	**Pn**	**15 08 12.7**	**-0.5**
ATAH	**Atahualpa**	**5.38 187**		P	**Pn**	**15 08 18.2**	**+0.6**
	comp=Z,120nm,0.5s,baz=14,slow=9.2,SNR=89						
ATAH				S	**Sn**	**15 09 17.5**	**-2.1**
	comp=Z,64nm,0.6s,baz=52,slow=19,SNR=3.9						
YOTC	**Yotoco, Valle**	**5.87 13**		*eP*	**Pn**	**15 08 21.4**	**-2.5**
ORTC	**Ortega, Tolima**	**6.15 23**		*eP*	**Pn**	**15 08 26.9**	**-0.5**
ANIL	**Santa Ana**	**6.62 20**		*eP*	**Pn**	**15 08 32.7**	**-1.2**
PLMC	**San Jos del P**	**6.78 12**		*eP*	**Pn**	**15 08 33.1**	**-2.7**
VILC	**Villavicencio,**	**7.08 34**		*eP*	**Pn**	**15 08 41.2**	**+1.4**
GUY2C	**Guyana, Caldas**	**7.32 19**		*eP*	**Pn**	**15 08 41.2**	**-2.1**
ROSC	**El Rosal**	**7.38 27**		P	**Pn**	**15 08 42.4**	**-1.6**
	comp=Z,4.9nm,0.4s,baz=249,slow=17,SNR=1.6						
CZSB	**Cruzeiro do Su**	**7.74 140**			**Pn**	**15 08 47.7**	**-0.6**
CZSB	**Cruzeiro do Su**	**7.74 140**		*eP*	**Pn**	**15 08 47.9**	**-0.5**
SPBC	**San Pablo de B**	**8.21 26**		*eP*	**Pn**	**15 08 52.7**	**-2.0**
DBBC	**Dabeiba**	**8.85 10**		*eP*	**Pn**	**15 09 05.5**	**+2.3**
BARC	**Barichara**	**9.45 28**		*eP*	**Pn**	**15 09 12.8**	**+1.6**
APAC	**Apartado, Choc**	**9.67 7**		*eP*	Pn	15 09 17.5	+3.7
URDC	**San Jos de Ur**	**9.70 13**		*eP*	**Pn**	**15 09 15.5**	**+1.2**
NNA	**Nana**	**10.19 175**		P	**Pn**	**15 09 20.3**	**-0.5**
	comp=Z,9.7nm,0.3s,baz=348,slow=13,SNR=2.6						
NNA				S	Sn	15 11 03.9	-10
	comp=Z,12nm,0.3s,baz=62,slow=23,SNR=6.1						
PAMC	**Pamplona, Colo**	**10.33 29**		*eP*	**Pn**	**15 09 23.4**	**+0.4**
BCIP	**Isla Barro Col**	**11.07 349**		Pn	**Pn**	**15 09 34.6**	**+2.4**
SDV	**Santo Domingo**	**12.71 34**			**Pn**	**15 09 53.8**	**+0.2**
SDV	**Santo Domingo**	**12.71 34**		P	**Pn**	**15 09 52.7**	**-0.8**
	comp=Z,9.6nm,0.5s,baz=228,slow=10,SNR=13						
SDV	**Santo Domingo**	**12.71 34**		*eP*	**Pn**	**15 09 53.0**	**-0.5**
CRJC	**Cerrejon, Guaj**	**13.57 21**		*eP*	**Pn**	**15 10 02.9**	**-1.6**
ETMB	**Extrema**	**13.94 125**			**Pn**	**15 10 07.0**	**-1.9**
BAUV	**El Baul**	**14.35 42**			**P**	**15 10 13.6**	**-2.6**
AUA1	**Aruba**	**16.10 28**		P	**P**	**15 10 36.9**	**+1.3**
SAML	**Samuel**	**16.11 117**		P	**P**	**15 10 36.5**	**+0.8**
SAML				IAmb	IAmb	15 10 39.1	
	comp=Z,6.2nm,0.6s						
LPAZ	**La Paz**	**17.23 147**		P	**P**	**15 10 48.1**	**-0.6**
PCRV	**Puerto La Cruz**	**17.60 47**		P	**Pn**	**15 10 52.4**	**-1.3**
	comp=Z,7.8nm,0.5s,baz=196,slow=2.5,SNR=1.4						
PB12	**IPOC Station P**	**18.24 157**		P	**P**	**15 10 59.9**	**+0.8**
PB12				IAmb	IAmb	15 11 16.0	
	comp=Z,14nm,1.0s						
PB16	**IPOC Station P**	**18.32 155**			**Pn**	**15 11 02.5**	**-0.1**
PB16				IAmb	IAmb	15 11 17.9	
	comp=Z,11nm,1.1s						
PB11	**IPOC Station P**	**19.54 157**		P	**P**	**15 11 14.5**	**+1.2**
SIV	**San Ignacio**	**21.64 132**		P	**P**	**15 11 35.6**	**0.0**
	comp=Z,1.6nm,0.6s,baz=310,slow=9.6,SNR=8.1						
	comp=Z,1.6nm,0.6s						
PTLB	**Pontes e Lacer**	**22.80 128**		P	**P**	**15 11 48.2**	**+1.4**
PTLB				IAmb	IAmb	15 11 49.5	
	comp=Z,12nm,1.5s						
MT09	**Talagante**	**32.46 170**		P	**P**	**15 13 14.8**	**+1.9**
ITAB	**Concordia**	**35.24 138**		P	**P**	**15 13 36.6**	**-0.3**
HNDO	**Hondo**	**37.34 328**		P	**P**	**15 13 55.8**	**+1.1**
DRIO	**Del Rio**	**37.98 326**		P	**P**	**15 14 01.0**	**+1.0**
PLCA	**Paso Flores**	**39.33 171**		P	**P**	**15 14 12.4**	**+1.3**
PLCA				IAmb	IAmb	15 14 17.8	
	comp=Z,10.0nm,1.4s						
PLCA	**Paso Flores**	**39.33 171**		P	**P**	**15 14 12.2**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=338,slow=9.6,SNR=6.2						
	comp=Z,2.3nm,0.8s						
PLPT	**Palo Pinto**	**39.53 332**		P	**P**	**15 14 13.2**	**+0.3**
PLPT				IAmb	IAmb	15 14 14.4	
	comp=Z,6.5nm,0.7s						
TXAR	**Lajitas Array**	**39.67 323**		P	**P**	**15 14 15.1**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=147,slow=8.2,SNR=12						
TXAR				PcP	**PcP**	**15 16 18.3**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=146,slow=5.8,SNR=5.1						
TXAR				LR	LR	15 30 28.8	
	comp=Z,15nm,18.9s,baz=298,slow=36						
	comp=Z,0.6nm,0.5s						
TX31	**Lajitas Ar. Si**	**39.67 323**		P	**P**	**15 14 15.5**	**+1.3**
SGCY	**Sterling City**	**40.20 328**		P	**P**	**15 14 19.0**	**+0.6**
SLBS	**Sierra La Lagu**	**40.29 311**		P	**P**	**15 14 21.3**	**+2.0**
SLBS				IAmb	IAmb	15 14 22.1	
	comp=Z,4.8nm,0.8s						
DKNS	**Dickens**	**41.48 330**		P	**P**	**15 14 29.8**	**+0.9**
DKNS				IAmb	IAmb	15 14 30.9	
	comp=Z,7.7nm,0.7s						
VHRN	**Van Horn**	**41.51 323**		P	**P**	**15 14 30.3**	**+1.0**
MNTX	**Cornudas Mount**	**42.40 324**		P	**P**	**15 14 37.0**	**+0.7**
319A	**Douglas**	**44.57 320**		P	**P**	**15 14 54.9**	**+1.1**
319A				IAmb	IAmb	15 14 55.8	
	comp=Z,6.3nm,0.5s						
J59A	**Piesco**	**45.12 3**		P	**P**	**15 14 58.7**	**+0.8**
J59A				IAmb	IAmb	15 15 27.5	
	comp=Z,8.5nm,1.2s						
DUN6	**Lazy B Ranch**	**45.24 322**		P	**P**	**15 15 00.7**	**+1.5**
ANMO	**Albuquerque**	**45.38 326**		P	**P**	**15 15 01.6**	**+1.3**
ANMO				IAmb	IAmb	15 15 02.4	
	comp=Z,6.4nm,0.6s						
TUC	**Tucson**	**46.14 320**		P	**P**	**15 15 07.3**	**+1.1**
SDCO	**Great Sand Dun**	**46.98 330**			**P**	**15 15 14.2**	**+1.3**
SDCO				IAmb	IAmb	15 15 14.9	
	comp=Z,3.9nm,0.7s						
214A	**Organ Pipe Nat**	**47.24 318**		P	**P**	**15 15 16.1**	**+1.4**
214A				IAmb	IAmb	15 15 17.0	
	comp=Z,8.8nm,0.9s						
X16A	**Lo Mia Camp, P**	**47.94 322**		P	**P**	**15 15 21.6**	**+1.4**
X16A				IAmb	IAmb	15 15 22.5	
	comp=Z,8.8nm,1.5s						
WUAZ	**Wupatki**	**48.63

F31M	**Tsiigehtchic**	**79.21**	**341**	P	**P**	**15 18 44.5**	**+0.3**
F31M				IAmb	IAmb	15 18 46.3	
	comp=Z,12nm,1.5s						
BARN	**Barnard Glacie**	**79.24**	**334**	P	**P**	**15 18 45.4**	**+0.6**
BELA	**Belgrano 2**	**79.38**	**172**	P	**P**	**15 18 45.9**	**+0.9**
BELA				IAmb	IAmb	15 19 22.2	
	comp=Z,13nm,1.4s						
A36M	**Sachs Harbour**	**79.58**	**347**	P	**P**	**15 18 45.9**	**-0.2**
A36M				IAmb	IAmb	15 18 46.9	
	comp=Z,5.1nm,0.8s						
INK	**Inuvik**	**79.61**	**342**	P	**P**	**15 18 46.5**	**+0.2**
INK	**Inuvik**	**79.61**	**342**	P	**P**	**15 18 46.5**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=84,slow=4.3,SNR=9.2						
	comp=Z,1.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**80.08**	**76**	P	**P**	**15 18 48.4**	**-1.7**
	comp=Z,4.4nm,0.3s,baz=281,slow=5.9,SNR=1.5						
	comp=Z,4.4nm,0.3s						
BCAR	**Beaver Creek A**	**80.11**	**335**	P	**P**	**15 18 50.5**	**+1.2**
H29M	**Whitestone**	**80.18**	**339**	P	**P**	**15 18 50.1**	**+0.5**
H29M				IAmb	IAmb	15 18 50.8	
	comp=Z,5.0nm,0.9s						
I28M	**Miner Creek**	**80.40**	**338**	P	**P**	**15 18 51.1**	**+0.3**
EGAK	**Eagle**	**80.58**	**337**	P	**P**	**15 18 52.0**	**+0.3**
EGAK				IAmb	IAmb	15 18 53.5	
	comp=Z,5.2nm,0.9s						
E29M	**Blow River**	**81.05**	**341**	P	**P**	**15 18 54.2**	**+0.1**
J26L	**Joseph Creek**	**81.41**	**336**	P	**P**	**15 18 57.0**	**+0.7**
J26L				IAmb	IAmb	15 18 57.6	
	comp=Z,3.6nm,0.7s						
J25K	**Salcha River,**	**82.18**	**336**	P	**P**	**15 19 00.6**	**+0.4**
D27M	**Malcolm River**	**82.43**	**341**	P	**P**	**15 19 01.9**	**+0.4**
DHY	**Denali Highway**	**82.48**	**334**	P	**P**	**15 19 01.6**	**-0.3**
ILAR	**Eielson Array**	**82.84**	**336**	P	**P**	**15 19 02.2**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=148,slow=4.5,SNR=16						
	comp=Z,1.5nm,0.8s						
BMAR	**Burnt Mountain**	**82.92**	**339**	P	**P**	**15 19 04.5**	**+0.6**
RND	**Reindeer**	**83.22**	**335**	P	**P**	**15 19 06.3**	**+0.7**
RND				IAmb	IAmb	15 19 07.7	
	comp=Z,3.4nm,0.7s						
E25K	**Arctic Village**	**83.53**	**340**	P	**P**	**15 19 07.8**	**+0.8**
H24K	**Noodor Dome**	**83.59**	**337**	P	**P**	**15 19 08.2**	**+0.8**
H24K				IAmb	IAmb	15 19 17.6	
	comp=Z,7.4nm,1.4s						
I23K	**Minto, Yukon-K**	**83.96**	**336**	P	**P**	**15 19 09.5**	**+0.3**
SKT	**Skwentna**	**84.00**	**333**	P	**P**	**15 19 09.7**	**+0.2**
SKT				IAmb	IAmb	15 19 10.6	
	comp=Z,4.9nm,0.7s						
D25K	**Kavik River**	**84.23**	**341**	P	**P**	**15 19 11.0**	**+0.4**
E22K	**Anaktuvuk Pass**	**85.75**	**339**	P	**P**	**15 19 18.4**	**+0.3**
E22K				IAmb	IAmb	15 19 22.8	
	comp=Z,5.6nm,1.4s						
F21K	**Alatna River**	**86.14**	**338**	P	**P**	**15 19 21.0**	**+0.9**
B22K	**Teshekpuk Lake**	**86.87**	**341**	P	**P**	**15 19 24.1**	**+0.6**
B21K	**Ikpikpuk River**	**87.10**	**340**	P	**P**	**15 19 25.0**	**+0.4**
G19K	**Purcell Mounta**	**87.31**	**336**	P	**P**	**15 19 26.3**	**+0.5**
G19K				IAmb	IAmb	15 20 08.3	
	comp=Z,3.8nm,1.3s						
H18K	**Honhosa River**	**87.66**	**335**	P	**P**	**15 19 29.2**	**+1.8**
G18K	**Tagagawik**	**87.90**	**336**	P	**P**	**15 19 29.6**	**+1.0**
G18K				IAmb	IAmb	15 19 30.1	
	comp=Z,3.2nm,0.7s						
B20K	**Meade River**	**88.04**	**340**	P	**P**	**15 19 29.9**	**+0.9**
B20K				IAmb	IAmb	15 19 30.8	
	comp=Z,3.3nm,0.7s						
D19K	**Kuna River**	**88.11**	**339**	P	**P**	**15 19 30.3**	**+0.7**
D19K				IAmb	IAmb	15 19 32.3	
	comp=Z,8.1nm,1.4s						
QSPA	**South Pole Qui**	**88.30**	**180**	P	**P**	**15 19 31.8**	**+1.2**
QSPA				IAmb	IAmb	15 20 07.4	
	comp=Z,3.1nm,1.1s						
QSPA	**South Pole Qui**	**88.30**	**180**	P	**P**	**15 19 30.9**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=145,slow=2.5,SNR=15						
	comp=Z,2.2nm,0.7s						
J16K	**Anvik River**	**88.37**	**333**	P	**P**	**15 19 32.3**	**+1.6**
J16K				IAmb	IAmb	15 19 59.3	
	comp=Z,6.0nm,1.2s						
C19K	**Lookout Ridge**	**88.74**	**339**	P	**P**	**15 19 33.7**	**+1.3**
C19K				IAmb	IAmb	15 19 48.6	
	comp=Z,8.1nm,1.5s						
F17K	**Baldwin Pennin**	**89.02**	**336**	P	**P**	**15 19 34.8**	**+1.1**
ZALV	**Zalesovo Beam**	**126.03**	**13**	PKP	**PKPdf**	**15 25 39.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=286,slow=2.8,SNR=3.5						
KURBB	**Kurchatov Arra**	**127.32**	**19**	PKP	**PKPdf**	**15 25 41.9**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=316,slow=2.1,SNR=2.7						
MKAR	**Makanchi Array**	**131.88**	**18**	PKP	**PKPdf**	**15 25 50.9**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=287,slow=2.5,SNR=9.3						
SONM	**Songino Arrway**	**132.47**	**336**	PKP	**PKPdf**	**15 25 55.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=25,slow=2.3,SNR=2.0						
ASAR	**Alice Springs**	**140.20**	**229**	PKhKP	PKPpre	15 25 59.0	
	comp=Z,0.6nm,0.8s,baz=128,slow=3.8,SNR=8.5						
ASAR				PKP	**PKPdf**	**15 26 07.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=105,slow=1.9,SNR=7.9						
WRA	**Warramunga Arr**	**141.88**	**234**	PKhKP	PKPpre	15 26 04.9	
	comp=Z,0.9nm,0.7s,baz=111,slow=2.8,SNR=8.4						
WRA				PKP	**PKPdf**	**15 26 10.2**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=113,slow=2.1,SNR=14						

*NEIC **13** 15:10:23.7±0.8,56.40N±0.08°×148.57W±0.09,h10km±2km, ML3.6/68,ML3.3(AEIC),Error ellipse: s-maj=13.9km s-min=7.5km az=159.0*

*AEIC **13** 15:10:28.0±1.0,56.34N±0.09°×148.5W±0.1°,h12km±7km, Error ellipse: s-maj=13.3km s-min=7.9km az=160.0*

ISC 13 15:10:23.0±1.6,56.41N±0.09°×148.55W±0.06,h10km, n212,σ0.99/210,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.60**	**304**			**Pn**	**15 11 05.7**	**+0.6**
KDAK						**Sn**	**15 11 35.0**	**-1.7**
OHAK	**Old Harbor**	**2.73**	**289**			**Pn**	**15 11 07.0**	**+0.1**
OHAK						**Sn**	**15 11 37.1**	**-2.8**
OHAK	**Old Harbor**	**2.73**	**289**	P		**Pn**	**15 11 06.8**	**-0.1**
OHAK	**Old Harbor**	**2.73**	**289**	P		**Pn**	**15 11 07.0**	**+0.1**
	baz=107							
OHAK				S		**Sn**	**15 11 37.1**	**-2.8**
	baz=107							
SYI	**Shuyak Island**	**3.03**	**318**			**Pn**	**15 11 12.0**	**+1.0**
SYI						**Sn**	**15 11 47.5**	**+0.2**
Q20K	**Shuyak Island**	**3.03**	**318**	P		**Pn**	**15 11 12.0**	**+1.0**
	baz=136							
Q20K				S		**Sn**	**15 11 47.5**	**+0.2**
	baz=136							
SII	**Sitkinak Islan**	**3.13**	**275**	Pn		**Pn**	**15 11 13.2**	**+0.7**
SII				IAML			15 11 47.8	
	comp=N,103nm,1.3s							
SII				IAML			15 11 48.8	
	comp=E,133nm,1.0s							
MID	**Middleton Isla**	**3.25**	**20**	Pn		**Pn**	**15 11 14.4**	**+0.4**
MID				IAML			15 12 24.0	
	comp=E,213nm,1.4s							
MID				IAML			15 13 01.8	
	comp=N,193nm,1.4s							
Q23K	**Middleton Isla**	**3.25**	**20**	Pn		**Pn**	**15 11 14.3**	**+0.3**
Q23K				IAML			15 13 25.1	
	comp=N,175nm,1.2s							
CNPM	**China Poot**	**3.44**	**336**			**Pn**	**15 11 17.5**	**+0.9**
CNPM						**Sn**	**15 11 57.2**	**-0.2**
BRSE	**Bradley Lake S**	**3.54**	**342**			**Pn**	**15 11 18.5**	**+0.5**
BRSE						**Sn**	**15 11 58.8**	**-1.2**
BRSE	**Bradley Lake S**	**3.54**	**342**	P		**Pn**	**15 11 18.5**	**+0.5**
	baz=160							
BRSE				S		**Sn**	**15 11 58.8**	**-1.2**
	baz=160							
BRLK	**Bradley Lake**	**3.59**	**341**			**Pn**	**15 11 19.3**	**+0.6**
P23K	**Montague Islan**	**3.65**	**9**			**Pn**	**15 11 19.8**	**+0.3**
P23K						**Sn**	**15 12 00.5**	**-2.1**
P23K	**Montague Islan**	**3.65**	**9**	P		**Pn**	**15 11 19.8**	**+0.3**
	baz=190							
P23K				S		**Sn**	**15 12 00.5**	**-2.1**
	baz=190							
HOM	**Homer**	**3.65**	**334**			**Pn**	**15 11 21.1**	**+1.5**
HOM	**Homer**	**3.65**	**334**	P		**Pn**	**15 11 21.1**	**+1.5**
	baz=152							
Q19K	**Cape Douglas,**	**3.73**	**315**			**Pn**	**15 11 22.1**	**+1.4**
Q19K	**Cape Douglas,**	**3.73**	**315**	IAML			15 12 11.2	
	comp=N,134nm,1.2s							
Q19K	**Cape Douglas,**	**3.73**	**315**	P		**Pn**	**15 11 22.0**	**+1.4**
	baz=131							
SEW	**Seward**	**3.74**	**353**			**Pn**	**15 11 21.0**	**+0.3**
SEW	**Seward**	**3.74**	**353**	P		**Pn**	**15 11 21.0**	**+0.3**
	baz=172							
KAHG	**Katmai Hook Gl**	**3.86**	**305**			**Pn**	**15 11 24.1**	**+1.7**
CHIR	**Chirikof Islan**	**4.01**	**264**			**Pn**	**15 11 24.3**	**-0.1**
CHIR				IAML			15 12 21.9	
	comp=E,129nm,1.5s							
CHIR				IAML			15 13 50.9	
	comp=N,72nm,1.4s							
CHIR	**Chirikof Islan**	**4.01**	**264**	P		**Pn**	**15 11 24.8**	**+0.4**
	baz=80							
P19K	**Oil Pt**	**4.10**	**324**			**Pn**	**15 11 27.1**	**+1.4**
P19K	**Oil Pt**	**4.10**	**324**	IAML			15 12 16.4	
	comp=E,76nm,0.7s							
P19K				IAML			15 12 16.7	
	comp=N,75nm,0.4s							
P19K	**Oil Pt**	**4.10**	**324**	P		**Pn**	**15 11 27.1**	**+1.4**
	baz=141							
O22K	**Cooper Landing**	**4.13**	**352**			**Pn**	**15 11 26.3**	**+0.2**
O22K				IAML			15 12 15.7	
	comp=E,115nm,0.7s							
O22K				IAML			15 12 20.5	
	comp=N,119nm,0.5s							
O22K	**Cooper Landing**	**4.13**	**352**	P		**Pn**	**15 11 27.2**	**+1.1**
	baz=171							
HIN	**Hinchinbrook I**	**4.14**	**14**			**Pn**	**15 11 27.1**	**+0.8**
HIN	**Hinchinbrook I**	**4.14**	**14**	IAML			15 12 16.0	
	comp=E,84nm,1.0s							
KAHC	**Katmai Hardscr**	**4.14**	**305**			**Pn**	**15 11 27.8**	**+1.4**
KAHC	**Katmai Hardscr**	**4.14**	**305**	P		**Pn**	**15 11 27.8**	**+1.4**
	baz=121							
KAIM	**Kayak Island**	**4.15**	**30**			**Pn**	**15 11 26.9**	**+0.5**
KAIM	**Kayak Island**	**4.15**	**30**	IAML			15 13 28.9	
	comp=E,106nm,1.5s							
KAIM	**Kayak Island**	**4.15**	**30**	P		**Pn**	**15 11 26.9**	**+0.5**
	baz=213							
SLKM	**Skilak Lake**	**4.20**	**349**			**Pn**	**15 11 27.7**	**+0.6**
O20K	**Slope Mountain**	**4.27**	**331**			**Pn**	**15 11 28.4**	**+0.4**
O20K	**Slope Mountain**	**4.27**	**331**	P		**Pn**	**15 11 28.5**	**+0.4**
	baz=148							
IVE	**Iliamna Volcan**	**4.32**	**329**			**Pn**	**15 11 29.1**	**+0.3**
CNTC	**Contact Creek**	**4.39**	**298**			**Pn**	**15 11 31.3**	**+1.5**
Q17K	**Contact Creek**	**4.39**	**298**	P		**Pn**	**15 11 31.3**	**+1.5**
	baz=113							
EYAK	**Cordova Ski Ar**	**4.40**	**18**			**Pn**	**15 11 30.8**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.40**	**18**	P		**Pn**	**15 11 30.9**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.40**	**18**	P		**Pn**	**15 11 30.8**	**+1.0**
	baz=200							
SUCK	**Suckling Hills**	**4.45**	**32**			**Pn**	**15 11 31.2**	**+0.6**
SUCK	**Suckling Hills**	**4.45**	**32**	IAML			15 12 22.2	
	comp=N,68nm,1.5s							
SUCK				IAML			15 14 10.2	
	comp=E,51nm,1.3s							
RAGM	**Ragged Mountai**	**4.48**	**25**	Pn		**Pn**	**15 11 31.8**	**+0.8**
NICHA	**Nichawak Mount**	**4.53**	**30**			**Pn**	**15 11 32.2**	**+0.5**
HMT	**Hamilton**	**4.54**	**28**	Pn		**Pn**	**15 11 32.8**	**+1.0**
RDSO	**Redoubt South**	**4.62**	**333**			**Pn**	**15 11 33.4**	**+0.4**
RSO	**Redoubt South**	**4.63**	**333**			**Pn**	**15 11 33.6**	**+0.4**
BGLC	**Bering Glacier**	**4.64**	**35**			**Pn**	**15 11 34.5**	**+1.4**
BGLC	**Bering Glacier**	**4.64**	**35**	P		**Pn**	**15 11 34.5**	**+1.4**
	baz=218							
P18K	**Big Mountain,**	**4.65**	**313**			**Pn**	**15 11 34.0**	**+0.6**
P18K	**Big Mountain,**	**4.65**	**313**	P		**Pn**	**15 11 34.0**	**+0.6**
	baz=128							
RDWB	**Redoubt West**	**4.67**	**333**			**Pn**	**15 11 34.0**	**+0.4**
DFR	**Drift River**	**4.72**	**334**			**Pn**	**15 11 34.8**	**+0.4**
RC01	**Rabbit Creek A**	**4.74**	**353**	Pn		**Pn**	**15 11 35.1**	**+0.7**
RC01				IAML			15 12 29.2	
	comp=E,36nm,0.4s							
RC01				IAML			15 12 31.2	
	comp=N,46nm,0.5s							
NCT	**North Crescent**	**4.76**	**333**			**Pn**	**15 11 35.3**	**+0.5**
GRIN	**Grindle Hills**	**4.76**	**33**			**Pn**	**15 11 35.6**	**+0.8**
FIS	**Fire Island**	**4.83**	**350**	Pn		**Pn**	**15 11 37.0**	**+1.3**
FIS				IAML			15 12 36.1	
	comp=N,66nm,0.7s							
SNH	**Sunshine Point**	**4.83**	**36**			**Pn**	**15 11 36.5**	**+0.7**
SNH	**Sunshine Point**	**4.83**	**36**	IAML			15 14 03.7	
	comp=E,61nm,1.4s							
SNH				IAML			15 14 49.0	
	comp=N,65nm,1.5s							
O19K	**Port Alsworth**	**4.87**	**324**			**Pn**	**15 11 36.7**	**+0.5**
O19K	**Port Alsworth**	**4.87**	**324**	P		**Pn**	**15 11 36.7**	**+0.5**
	baz=139							
KHIT	**Khitrov Hills**	**4.91**	**32**			**Pn**	**15 11 37.4**	**+0.5**
O18K	**Koktuh Hills**	**4.94**	**317**			**Pn**	**15 11 38.0**	**+0.8**
O18K	**Koktuh Hills**	**4.94**	**317**	P		**Pn**	**15 11 38.0**	**+0.8**
	baz=132							
DIV	**Divide**	**4.95**	**16**			**Pn**	**15 11 38.3**	**+0.9**
BMRM	**Bremner River**	**5.01**	**23**			**Pn**	**15 11 39.0**	**+0.7**
BMRM	**Bremner River**	**5.01**	**23**	P		**Pn**	**15 11 39.0**	**+0.7**
	baz=205							
KNK	**Knik Glacier**	**5.02**	**0**			**Pn**	**15 11 39.3**	**+0.9**
KNK	**Knik Glacier**	**5.02**	**0**	IAML			15 12 43.1	
	comp=E,21nm,0.7s							
KNK	**Knik Glacier**	**5.02**	**0**	P		**Pn**	**15 11 39.3**	**+0.9**
	baz=180							
WAX	**Waxell Ridge**	**5.04**	**34**			**Pn**	**15 11 39.0**	**+0.4**
P17K	**Kvichak River**	**5.06**	**307**			**Pn**	**15 11 40.5**	**+1.7**
P17K	**Kvichak River**	**5.06**	**307**	P		**Pn**	**15 11 40.5**	**+1.7**
	baz=121							
MESA	**MESA**	**5.14**	**40**			**Pn**	**15 11 40.3**	**+0.2**
MESA	**MESA**	**5.14**	**40**	P		**Pn**	**15 11 40.3**	**+0.2**
	baz=225							
CRQM	**Cirque**	**5.20**	**31**			**Pn**	**15 11 41.6**	**+0.7**
CRQM	**Cirque**	**5.20**	**31**	IAML			15 12 40.2	
	comp=E,31nm,1.4s							
CRQM				IAML			15 12 40.5	
	comp=N,33nm,0.5s							
SUA	**Susitna One**	**5.20**	**348**	Pn		**Pn**	**15 11 41.3**	**+0.5**
CRQE	**Cirque**	**5.21**	**31**	P		**Pn**	**15 11 41.6**	**+0.6**
	baz=215							
PMR	**Palmer**	**5.21**	**357**	Pn		**Pn**	**15 11 41.7**	**+0.8**
PMR				IAML			15 12 39.8	
	comp=N,19nm,0.4s							
PMR				IAML			15 12 43.3	
	comp=E,17nm,0.9s							
SPCP	**Crater Peak Br**	**5.22**	**340**			**Pn**	**15 11 42.5**	**+1.3**
KLU	**Klutina**	**5.28**	**14**			**Pn**	**15 11 43.0**	**+1.1**
KLU	**Klutina**	**5.28**	**14**	IAML			15 12 42.0	
	comp=N,37nm,0.3s							
KLU				IAML			15 12 42.7	
	comp=E,50nm,0.3s							
KLU	**Klutina**	**5.28**	**14**	P		**Pn**	**15 11 43.0**	**+1.1**
	baz=196							
TGL	**Tana Glacier**	**5.29**	**32**			**Pn**	**15 11 42.8**	**+0.7**
TGL	**Tana Glacier**	**5.29**	**32**	IAML			15 12 43.1	
	comp=E,25nm,0.4s							
TGL				IAML			15 12 47.0	
	comp=N,21nm,0.4s							
BAGL	**Bagley Icefiel**	**5.31**	**37**			**Pn**	**15 11 42.9**	**+0.6**
ISLE	**Juniper Island**	**5.32**	**35**			**Pn**	**15 11 43.1**	**+0.6**
ISLE	**Juniper Island**	**5.32**	**35**	IAML			15 12 42.7	
	comp=N,43nm,1.4s							
ISLE				IAML			15 12 43.4	
	comp=E,22nm,1.0s							
STLK	**Strandline Lak**	**5.38**	**343**			**Pn**	**15 11 44.4**	**+1.0**
GHO	**Glory Hole Cre**	**5.38**	**358**			**Pn**	**15 11 44.9**	**+1.5**
GHO	**Glory Hole Cre**	**5.38**	**358**	IAML			15 12 48.9	
	comp=E,24nm,1.2s							
GHO				IAML			15 12 49.5	
	comp=N,37nm,0.5s							
N19K	**Bonanza Creek**	**5.40**	**327**			**Pn**	**15 11 44.1**	**+0.6**
N19K	**Bonanza Creek**	**5.40**	**327**	P		**Pn**	**15 11 44.2**	**+0.6**
	baz=143							
SML	**Sawmill**	**5.42**	**1**			**Pn**	**15 11 45.2**	**+1.4**
SML	**Sawmill**	**5.42**	**1**	P		**Pn**	**15 11 45.2**	**+1.4**
	baz=181							
SPNN	**North Nagishla**	**5.42**	**338**			**Pn**	**15 11 45.1**	**+1.1**
SCM	**Sheep Creek Mo**	**5.48**	**6**			**Pn**	**15 11 46.7**	**+2.0**
SCM	**Sheep Creek Mo**	**5.48**	**6**	P		**Pn**	**15 11 46.7**	**+2.0**
	baz=187							
CHGN	**Chignik**	**5.49**	**273**	Pn		**Pn**	**15 11 45.4**	**+0.7**
SAMH	**Samovar Hills**	**5.54**	**44**			**Pn**	**15 11 46.7**	**+1.1**
KIAG	**Kiagna River**	**5.56**	**33**			**Pn**	**15 11 46.4**	**+0.5**
N25K	**Chitina, Valde**	**5.60**	**20**			**Pn**	**15 11 47.4**	**+1.1**
N25K	**Chitina, Valde**	**5.60**	**20**	P		**Pn**	**15 11 47.4**	**+1.1**
	baz=203							
GRNC	**Granite Creek**	**5.60**	**37**			**Pn**	**15 11 47.1**	**+0.6**
TABL	**Table Mountain**	**5.61**	**41**			**Pn**	**15 11 47.4**	**+0.8**
GLB	**Gilahina Butte**	**5.61**	**24**			**Pn**	**15 11 47.2**	**+0.7**
O17K	**Koliganek Bris**	**5.65**	**310**			**Pn**	**15 11 47.9**	**+1.0**
O17K	**Koliganek Bris**	**5.65**	**310**	P		**Pn**	**15 11 47.9**	**+1.0**
	baz=123							
P16K	**Nushagak River**	**5.70**	**301**			**Pn**	**15 11 49.2**	**+1.5**
P16K	**Nushagak River**	**5.70**	**301**	P		**Pn**	**15 11 49.2**	**+1.5**
	baz=114							
PCA	**Pinnacle**	**5.73**	**46**			**Pn**	**15 11 48.8**	**+0.7**
PINM	**Pinnacle**	**5.73**	**46**	P		**Pn**	**15 11 48.8**	**+0.7**
	baz=233							
MCARA	**McCarthy VSAT**	**5.75**	**28**	Pn		**Pn**	**15 11 49.0**	**+0.7**
N18K	**Kilae Creek**	**5.75**	**321**			**Pn**	**15 11 49.0**	**+0.6**
N18K	**Kilae Creek**	**5.75**	**321**	P		**Pn**	**15 11 49.0**	**+0.6**
	baz=135							
SKT	**Skwentna**	**5.79**	**346**	Pn		**Pn**	**15 11 49.9**	**+0.9**
PNL	**Peninsula**	**5.85**	**52**			**Pn**	**15 11 50.2**	**+0.4**
PNL	**Peninsula**	**5.85**	**52**	P		**Pn**	**15 11 50.7**	**+0.9**
PNL	**Peninsula**	**5.85**	**52**	P		**Pn**	**15 11 50.2**	**+0.4**
	baz=239							
BARN	**Barnard Glacie**	**5.88**	**35**			**Pn**	**15 11 50.9**	**+0.6**
BCPM	**Bancas Point**	**5.90**	**49**			**Pn**	**15 11 51.2**	**+0.8**
CTG	**Chitna Glacier**	**5.91**	**36**	P		**Pn**	**15 11 51.3**	**+0.6**
	baz=222							
CTGM	**Chitina Glacie**	**5.92**	**36**			**Pn**	**15 11 51.3**	**+0.6**
LOGN	**Logan Glacier**	**5.92**	**39**			**Pn**	**15 11 51.5**	**+0.6**
SVW2	**Sparrevohn**	**5.96**	**325**	Pn		**Pn**	**15 11 51.4**	**+0.2**
SVW2	**Sparrevohn**	**5.96**	**325**	P		**Pn**	**15 11 51.5**	**+0.2**
M20K	**Styx River**	**5.97**	**339**	Pn		**Pn**	**15 11 52.4**	**+0.9**
O16K	**Kokwok River B**	**6.00**	**306**			**Pn**	**15 11 53.0**	**+1.3**
O16K	**Kokwok River B**	**6.00**	**306**	P		**Pn**	**15 11 53.0**	**+1.3**
	baz=118							
WACK	**Wrangell Chich**	**6.00**	**19**			**Pn**	**15 11 53.4**	**+1.4**
N17K	**Nushagak Hills**	**6.13**	**316**			**Pn**	**15 11 54.4**	**+0.8**
N17K	**Nushagak Hills**	**6.13**	**316**	P		**Pn**	**15 11 54.4**	**+0.8**
	baz=129							
WAT6	**Susitna Watana**	**6.21**	**3**			**Pn**	**15 11 56.3**	**+1.5**
WAT6	**Susitna Watana**	**6.21**	**3**	P		**Pn**	**15 11 56.3**	**+1.5**
	baz=184							
M19K	**Big River Lodg**	**6.28**	**334**			**Pn**	**15 11 56.0**	**+0.4**
M19K	**Big River Lodg**	**6.28**	**334**	P		**Pn**	**15 11 56.0**	**+0.4**
	baz=149							
M18K	**Stony River**	**6.33**	**327**			**Pn**	**15 11 57.0**	**+0.7**
M18K	**Stony River**	**6.33**	**327**	P		**Pn**	**15 11 57.0**	**+0.7**
	baz=141							
CNBA	**Chernabura Isl**	**6.46**	**260**	Pn		**Pn**	**15 11 58.0**	**0.0**
O29M	**Mount Kennedy**	**6.54**	**49**			**Pn**	**15 12 00.2**	**+0.9**
O29M	**Mount Kennedy**	**6.54**	**49**	P		**Pn**	**15 12 00.2**	**+0.9**
	baz=237							
P29M	**Windy Craggy**	**6.59**	**56**			**Pn**	**15 11 60.0**	**+0.1**
P29M	**Windy Craggy**	**6.59**	**56**	P		**Pn**	**15 11 60.0**	**+0.1**
	baz=245							
L19K	**White Mountain**	**6.63**	**333**			**Pn**	**15 12 00.7**	**+0.2**
L19K	**White Mountain**	**6.63**	**333**	P		**Pn**	**15 12 00.6**	**+0.2**
	baz=148							
O15K	**Ungalikthiuk R**	**6.64**	**299**			**Pn**	**15 12 02.3**	**+1.8**
O15K	**Ungalikthiuk R**	**6.64**	**299**	P		**Pn**	**15 12 02.3**	**+1.8**
	baz=110							
M26K	**Nabesna, AK**	**6.64**	**23**	Pn		**Pn**	**15 12 01.5**	**+0.8**
YUK2	**White River**	**6.69**	**33**			**Pn**	**15 12 03.2**	**+1.8**
N16K	**Nishlik Lake**	**6.74**	**311**			**Pn**	**15 12 03.0**	**+1.1**
N16K	**Nishlik Lake**	**6.74**	**311**	P		**Pn**	**15 12 03.0**	**+1.1**
	baz=123							
SDPT	**Sand Point**	**6.80**	**266**			**Pn**	**15 12 03.7**	**+1.0**
SDPT	**Sand Point**	**6.80**	**266**	P		**Pn**	**15 12 03.9**	**+1.2**
SDPT	**Sand Point**	**6.80**	**266**	P		**Pn**	**15 12 03.7**	**+1.0**
	baz=77							
M17K	**Holitna River**	**6.80**	**321**			**Pn**	**15 12 03.7**	**+1.0**
M17K	**Holitna River**	**6.80**	**321**	P		**Pn**	**15 12 03.7**	**+1.0**
	baz=134							
YUK3	**Moose Creek**	**6.80**	**34**			**Pn**	**15 12 04.6**	**+1.6**
YUK3	**Moose Creek**	**6.80**	**34**	P		**Pn**	**15 12 04.6**	**+1.6**
	baz=221							
YUK7	**Dusty Glacier**	**6.84**	**49**			**Pn**	**15 12 04.8**	**+1.3**
M27K	**Edge Creek, AK**	**6.87**	**27**	Pn		**Pn**	**15 12 04.8**	**+1.0**
M16K	**Timber Creek**	**7.12**	**315**			**Pn**	**15 12 08.3**	**+1.1**
M16K	**Timber Creek**	**7.12**	**315**	P		**Pn**	**15 12 08.3**	**+1.1**
	baz=126							
P30M	**Million Dollar**	**7.15**	**54**			**Pn**	**15 12 08.7**	**+1.0**
P30M	**Million Dollar**	**7.15**	**54**	P		**Pn**	**15 12 08.7**	**+1.

PB08	**IPOC Station P**	**2.60**	**317**	⇑	*i*P	**Pn**	**15 12 19.0**	**+1.2**
PB08					*i* S	**Sn**	**15 12 52.9**	**+0.3**
PB08					IAML		15 12 57.2	
	comp=N,136nm,0.5s							
PB08	**IPOC Station P**	**2.60**	**317**		Pg	**Pn**	**15 12 18.8**	**+1.0**
PB08					Sg	**Sn**	**15 12 53.2**	**+0.6**
PB08					IAML		15 12 57.0	
	comp=N,89nm,0.3s							
PB04	**IPOC Station P**	**2.69**	**264**	⇑	*e*P	**Pn**	**15 12 18.5**	**-0.1**
PB04					*i* S	**Sn**	**15 12 52.1**	**-2.0**
PB04					IAML		15 12 54.6	
	comp=N,209nm,0.2s							
PB04	**IPOC Station P**	**2.69**	**264**		Pg	**Pn**	**15 12 18.9**	**+0.3**
PATCX	**Punta Patache**	**2.96**	**294**		*e*P	**Pn**	**15 12 21.4**	**-0.3**
PATCX					*e*S	**Sn**	**15 12 57.6**	**-2.1**
PATCX					IAML		15 13 00.2	
	comp=E,341nm,0.3s							
GO01	**Chusmiza**	**2.98**	**322**	⇑	*i*P	**Pn**	**15 12 23.3**	**+0.9**
GO01					*e*S	**Sn**	**15 13 00.9**	**0.0**
GO01	**Chusmiza**	**2.98**	**322**		Pg	**Pn**	**15 12 23.3**	**+0.9**
HMBC	**Humberstone**	**3.02**	**305**	⇑	*i*P	**Pn**	**15 12 22.1**	**-0.4**
HMBC					*i* S	**Sn**	**15 12 58.8**	**-2.3**
HMBC					IAML		15 13 00.1	
	comp=N,266nm,0.3s							
HMBC	**Humberstone**	**3.02**	**305**		Pg	**Pn**	**15 12 22.2**	**-0.3**
TA01	**Diego Aracena**	**3.10**	**298**	⇑	*i*P	**Pn**	**15 12 22.7**	**-0.6**
TA01					*i* S	**Sn**	**15 12 59.8**	**-2.7**
TA01					IAML		15 13 01.9	
	comp=N,237nm,0.3s							
TA01	**Diego Aracena**	**3.10**	**298**		Pg	**Pn**	**15 12 22.9**	**-0.4**
PB11	**IPOC Station P**	**3.20**	**315**	⇑	*i*P	**Pn**	**15 12 24.4**	**-0.2**
PB11					*i* S	**Sn**	**15 13 03.3**	**-1.7**
PB11	**IPOC Station P**	**3.20**	**315**		Pg	**Pn**	**15 12 24.2**	**-0.5**
TA02	**Huaiquique**	**3.21**	**303**		*e*P	**Pn**	**15 12 24.3**	**-0.3**
TA02					*e*S	**Sn**	**15 13 02.7**	**-2.3**
TA02	**Huaiquique**	**3.21**	**303**		Pg	**Pn**	**15 12 24.4**	**-0.3**
SOEO	**Opoqueri**	**3.52**	**350**		Pg	**Pn**	**15 12 29.6**	**+0.6**
GO02	**Mina Guanaco**	**3.76**	**214**		*e*P	**Pn**	**15 12 28.1**	**-3.7**
GO02	**Mina Guanaco**	**3.76**	**214**		Pg	**Pn**	**15 12 31.6**	**-0.1**
PB14	**IPOC Station P**	**3.86**	**228**	⇓	*i*P	**Pn**	**15 12 32.5**	**-0.5**
SOET	**ToroToro**	**4.15**	**19**		Pg	**Pn**	**15 12 36.8**	**+0.1**
PB16	**IPOC Station P**	**4.26**	**330**	⇑	*i*P	**Pn**	**15 12 39.1**	**+0.8**
PB16	**IPOC Station P**	**4.26**	**330**		Pg	**Pn**	**15 12 38.8**	**+0.5**
AOEA	**Aiquile**	**4.30**	**27**		Pg	**Pn**	**15 12 38.5**	**-0.1**
PB12	**IPOC Station P**	**4.47**	**319**		*e*P	**Pn**	**15 12 38.7**	**-1.8**
SIV	**San Ignacio**	**8.40**	**45**		P	**Pn**	**15 13 29.0**	**-2.6**
	comp=N,4.9nm,0.3s,baz=238,slow=11,SNR=45							
SIV					S	Sn	15 14 56.2	-10
	comp=N,2.0nm,0.5s,baz=194,slow=17,SNR=2.4							
TXAR	**Lajitas Array**	**61.97**	**324**		P	P	15 21 39.8	+6.7
	comp=N,0.3nm,0.8s,baz=156,slow=9.9,SNR=2.4							
	comp=N,0.3nm,0.8s							
QSPA	**South Pole Qui**	**68.14**	**180**		P	**P**	**15 22 14.2**	**+1.7**
	comp=N,0.7nm,0.8s,baz=144,slow=17,SNR=1.4							
	comp=N,0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.11**	**69**		P	**P**	**15 23 00.2**	**-0.2**
	comp=N,3.8nm,0.3s,baz=262,slow=5.2,SNR=4.8							
MKAR	**Makanchi Array**	**145.16**	**38**		PKP	**PKPdf**	**15 30 49.0**	**+1.0**
	comp=N,0.3nm,0.8s,baz=306,slow=3.4,SNR=2.2							

IDC 13 15:14:50.3±71.0, 17°.60S×179°.14W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=1294.0km s-min=181.6km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.17**	**241**	P	P	15 22 11.1	-0.7
	1.5nm,1.0s,baz=61,slow=10,SNR=3.1						
	1.5nm,1.0s						
WRA	**Warramunga Arr**	**44.00**	**259**	P	P	15 22 59.9	0.0
	0.3nm,0.7s,baz=90,slow=8.0,SNR=1.3						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.20**	**254**	P	P	15 23 01.6	+0.1
	0.4nm,0.3s,baz=89,slow=7.7,SNR=27						
	0.4nm,0.3s						

*JMA **13** 15:27:23.9±0.3, 44°.1×14°.8E±°, h0km, MV3.6/24, E OFF HOKKAIDO*
*SKHL **13** 15:27:24.5±0.3, 44°.30N×148°.10E, h50km±4km, mb4.3/2*
ISC 13 15:27:21.4±2.8, 44°.2N±0°.1×148°.2E±0°.2, h29km±24km, n15, σ1°46/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.10**	**347**	*e*P	**Pb**	**15 27 41.2**	**-0.6**
KUR				AMB	AMB	15 27 41.6	
	120nm,0.3s						
KUR				*i* S	**Sn**	**15 27 53.8**	**-1.3**
KUR				A	A	15 27 56.4	
	240nm,0.2s						
KUR				A	A	15 27 56.4	
	150nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.71**	**267**	*e*P	**Pn**	**15 27 49.7**	**+0.5**
YUK				AMB	AMB	15 27 51.1	
	80nm,0.2s						
YUK				*e*S	**Sn**	**15 28 08.4**	**-1.6**
YUK				A	A	15 28 15.1	
	320nm,0.3s						
YUK				A	A	15 28 15.1	
	280nm,0.3s						
NEM2	**Nemuro 2**	**1.96**	**247**	*e*P	**Pn**	**15 27 53.2**	**+0.4**
NEM2				*e*S	**Sn**	**15 28 14.4**	**-2.0**
NMR	**Nemuro--Hokkai**	**1.97**	**247**	*e*P	**Pn**	**15 27 53.4**	**+0.5**
NMR				*e*S	**Sn**	**15 28 15.2**	**-1.4**
JRA	**Rausu**	**2.25**	**265**	*e*P	**Pn**	**15 27 58.2**	**+1.6**
JRA				*e*S	**Sn**	**15 28 22.9**	**-0.4**
JNSB	**Nemuroshibetsu**	**2.35**	**262**	*e*P	**Pn**	**15 27 59.6**	**+1.5**
JNSB				*e*S	**Sn**	**15 28 25.8**	**-0.2**
JKHN	**Kushirohamanak**	**2.47**	**245**	*e*P	**Pn**	**15 28 00.7**	**+1.0**
JKHN				*e*S	**Sn**	**15 28 27.5**	**-1.4**
JNK	**Nakash**	**2.60**	**258**	*e*P	**Pn**	**15 28 02.8**	**+1.3**
JNK				*e*S	**Sn**	**15 28 31.4**	**-0.7**
AKK	**Akkeshi**	**2.71**	**246**	*e*P	**Pn**	**15 28 03.9**	**+0.9**
AKK				*e*S	**Sn**	**15 28 33.2**	**-1.6**
JAK	**Akkeshi**	**2.81**	**247**	*e*P	**Pn**	**15 28 05.4**	**+1.0**
JAK				*e*S	**Sn**	**15 28 35.4**	**-1.9**
JTKR	**Abashiri--Toko**	**3.12**	**268**	*e*P	**Pn**	**15 28 10.4**	**+1.8**
JAR	**Ashorobuto**	**3.34**	**257**	*e*P	**Pn**	**15 28 13.9**	**+2.2**
JAR				*e*S	**Sn**	**15 28 50.9**	**+0.5**
JOB	**Onbets**	**3.43**	**250**	*e*P	**Pn**	**15 28 14.6**	**+1.7**
JOB				*e*S	**Sn**	**15 28 52.6**	**0.0**
JCH	**Churui**	**3.87**	**248**	*e*P	**Pn**	**15 28 20.3**	**+1.4**
JCH				*e*S	**Sn**	**15 29 01.4**	**-1.9**
JNBK	**Urakawa-nobuka**	**4.42**	**247**	*e*P	**Pn**	**15 28 28.6**	**+2.1**

*NEIC **13** 15:27:39.9±2.9, 17°.37N±0°.07×120°.3E±0°.2, h61km±8km, mb4.4/11, Error ellipse: s-maj=21.2km s-min=9.6km az=87.0*
*IDC **13** 15:27:42.2±2.0, 17°.23N×120°.45E, h94km±22km, mb3.4/12, mbtmp3.8/14, MS3.1/3, Error ellipse: s-maj=25.4km s-min=13.1km az=76.0*
ISC 13 15:27:38.6±0.6, 17°.34N±0°.06×120°.4E±0°.1, h50km, n36, σ1°25/34, mb3.7/16, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.26**	**171**	P	**Pn**	**15 28 29.5**	**+2.1**
	180nm,0.4s,baz=328,slow=14,SNR=1.9						
TGY				S	**Sn**	**15 29 07.0**	**+2.0**
	253nm,0.3s,baz=295,slow=17,SNR=4.2						
TWG	**Pinlang**	**5.49**	**7**	Pn	**Pn**	**15 28 58.3**	**+0.4**
TPUB	**Ta-pu**	**5.93**	**2**	Pn	**Pn**	**15 29 03.0**	**-1.0**
YULB	**Yu-li**	**6.08**	**8**	Pn	**Pn**	**15 29 05.1**	**-0.9**
SSLB	**Suanglung**	**6.44**	**5**	Pn	**Pn**	**15 29 11.5**	**+0.6**
NACB	**Ninganchiao**	**6.89**	**9**	Pn	**Pn**	**15 29 17.7**	**+0.5**
KNMB	**Chin-men Tao**	**7.33**	**346**	Pn	Pn	15 29 18.8	-4.3
YHNB	**Yeheng**	**7.35**	**7**	Pn	**Pn**	**15 29 25.1**	**+1.6**
DAV	**Davao City (W)**	**11.40**	**153**	LR	LR	15 34 47.9	
	comp=Z,81nm,19.1s,baz=356,slow=38						
JNU	**Nakatsue**	**18.34**	**29**	P	**P**	**15 31 49.8**	**+0.8**
JNU				IAmb	IAmb	15 31 54.0	
	comp=Z,34nm,1.2s						
JNU	**Nakatsue**	**18.34**	**29**	P	**P**	**15 31 49.6**	**+0.7**
	comp=Z,14nm,0.9s,baz=156,slow=9.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**20.44**	**276**	P	**P**	**15 32 12.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=83,slow=7.4,SNR=1.3						
CMAR				LR	LR	15 39 59.5	
	comp=Z,20nm,19.6s,baz=315,slow=36						
	comp=Z,0.5nm,0.3s						
KSRS	**Korea Array**	**21.11**	**17**	P	**P**	**15 32 20.3**	**+1.3**
	comp=Z,5.2nm,0.7s,baz=203,slow=11,SNR=19						
	comp=Z,5.2nm,0.7s						
KS19	**Wonju Array Si**	**21.14**	**17**	P	**P**	**15 32 20.9**	**+1.6**
KS19				IAmb	IAmb	15 32 31.3	
	comp=Z,49nm,1.4s						
SONM	**Songino Array**	**32.51**	**342**	P	**P**	**15 34 05.2**	**+0.5**
SONM	**Songino Array**	**32.51**	**342**	P	**P**	**15 34 05.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=166,slow=9.4,SNR=5.5						
	comp=Z,0.6nm,0.7s						
KLR	**Kul'dur**	**33.12**	**14**	P	**P**	**15 34 10.9**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=190,slow=3.1,SNR=7.1						
	comp=Z,2.2nm,0.9s						
WRA	**Warramunga Arr**	**39.50**	**159**	P	**P**	**15 35 02.6**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=339,slow=8.8,SNR=8.1						
	comp=Z,0.4nm,0.4s						
WB2	**Warramunga Arr**	**39.51**	**159**	P	**P**	**15 35 03.1**	**-1.6**
WB2				IAmb	IAmb	15 35 34.8	
	comp=Z,13nm,1.5s						
WR0	**Warramunga Arr**	**39.59**	**159**	P	**P**	**15 35 03.7**	**-1.6**
WR0				IAmb	IAmb	15 35 31.0	
	comp=Z,8.9nm,1.3s						
AS31	**Alice Springs**	**42.84**	**162**	P	**P**	**15 35 30.8**	**-1.2**
AS31				IAmb	IAmb	15 35 50.6	
	comp=Z,1.6nm,1.2s						
ASAR	**Alice Springs**	**42.84**	**162**	P	**P**	**15 35 31.1**	**-1.0**
ASAR	**Alice Springs**	**42.84**	**162**	P	**P**	**15 35 30.7**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=337,slow=6.7,SNR=34						
	comp=Z,0.7nm,0.6s						
MK31	**Makanchi Array**	**42.98**	**322**	P	**P**	**15 35 32.9**	**0.0**
MKAR	**Makanchi Array**	**42.98**	**322**	P	**P**	**15 35 33.1**	**+0.2**
MKAR	**Makanchi Array**	**42.98**	**322**	P	**P**	**15 35 33.5**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=104,slow=8.0,SNR=7.0						
	comp=Z,0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**45.72**	**331**	P	**P**	**15 35 54.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=134,slow=4.2,SNR=2.0						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**47.04**	**324**	P	**P**	**15 36 04.9**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=121,slow=8.6,SNR=7.2						
	comp=Z,0.9nm,0.8s						
BBOO	**Buckleboo**	**52.07**	**163**	P	**P**	**15 36 42.1**	**-1.5**
BVAR	**Borovoye Array**	**52.63**	**324**	P	**P**	**15 36 46.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=62,slow=6.5,SNR=2.4						
	comp=Z,0.3nm,0.4s						
TIXI	**Tiksi**	**54.53**	**3**	LR	LR	16 03 49.5	
	comp=Z,52nm,18.7s,baz=20,slow=40						
ABKAR	**Akbulak array**	**57.83**	**318**	P	**P**	**15 37 24.5**	**-0.5**
ANM	**Nome**	**67.71**	**27**	P	**P**	**15 38 31.4**	**+0.8**
ANM				IAmb	IAmb	15 38 52.0	
	comp=Z,9.8nm,1.4s						
ILAR	**Eielson Array**	**75.63**	**26**	P	**P**	**15 39 15.2**	**-2.9**
	comp=Z,0.8nm,1.2s,baz=266,slow=7.1,SNR=2.3						
	comp=Z,0.8nm,1.2s						
RIDG	**Independent Ri**	**76.70**	**27**	P	**P**	**15 39 24.2**	**-0.2**
FINES	**FINESS Array B**	**76.98**	**331**	P	**P**	**15 39 25.3**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=12,slow=7.7,SNR=1.6						
	comp=Z,2.0nm,0.9s						

*IDC **13** 15:29:59.7±1.1, 31°.22N×140°.14E, h0km, mb3.4/8, mbtmp3.4/10, ML2.6/1, MS3.0/4, Error ellipse: s-maj=30.8km s-min=17.8km az=83.0*
ISC 13 15:30:04.9±1.0, 31°.22N±0°.1×140°.1E±0°.2, h35km, n23, σ1°72/12, mb3.4/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.91**	**352**	Pn	**Pn**	**15 30 32.0**	**-3.0**
	38nm,0.3s,baz=100,slow=20,SNR=13						
JHJ				Sn	**Sn**	**15 31 00.5**	**+2.7**
	12nm,0.3s,baz=73,slow=19,SNR=2.4						
MJAR	**Matsushiro Arr**	**5.53**	**344**	Pn	**Pn**	**15 31 23.2**	**-1.6**
	0.2nm,0.3s,baz=132,slow=13,SNR=11						
MJAR				LR	LR	15 33 32.0	
	comp=Z,108nm,20.1s,baz=156,slow=38						
	4.4nm,1.0s						
JNU	**Nakatsue**	**8.04**	**286**	LR	LR	15 34 50.0	
	comp=Z,70nm,21.8s,baz=168,slow=36						
KSRS	**Korea Array**	**11.82**	**305**	Pn	**Pn**	**15 32 50.9**	**0.0**
	1.0nm,0.9s,baz=113,slow=15,SNR=2.3						
USRK	**Ussuriysk Ar.**	**14.44**	**336**	LR	LR	15 38 30.3	
	comp=Z,83nm,18.9s,baz=70,slow=35						
GUMO	**Guam**	**18.09**	**165**	LR	LR	15 40 30.5	
	comp=Z,47nm,18.7s,baz=74,slow=35						
H11N2	**WAKE ISLAND Hy**	**26.70**	**109**	T	T	16 03 37.5	
	baz=302,slow=75,SNR=520						
H11N1	**WAKE ISLAND Hy**	**26.70**	**109**	T	T	16 03 38.1	
	baz=302,slow=75,SNR=331						
H11N3	**WAKE ISLAND Hy**	**26.71**	**109**	T	T	16 03 38.8	
	baz=302,slow=75,SNR=417						
H11S3	**WAKE ISLAND Hy**	**27.18**	**112**	T	T	16 04 13.2	
	baz=304,slow=75,SNR=6756						
H11S1	**WAKE ISLAND Hy**	**27.18**	**111**	T	T	16 04 13.5	
	baz=304,slow=75						
H11S2	**WAKE ISLAND Hy**	**27.19**	**112**	T	T	16 04 14.2	
	baz=304,slow=75,SNR=4959						
SONM	**Songino Array**	**30.53**	**313**	P	**P**	**15 36 14.2**	**-0.8**
	0.3nm,0.8s,baz=130,slow=6.6,SNR=2.2						
	0.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.23**	**261**	P	**P**	**15 37 31.8**	**+1.7**
	1.6nm,0.7s,baz=54,slow=6.8,SNR=4.2						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**46.49**	**307**	P	**P**	**15 38 28.3**	**-0.4**
	0.3nm,0.8s,baz=82,slow=8.2,SNR=2.2						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**48.89**	**312**	P	**P**	**15 38 47.3**	**+0.1**
	0.9nm,1.0s,baz=97,slow=6.3,SNR=3.6						
	0.9nm,1.0s						
WRA	**Warramunga Arr**	**51.17**	**187**	P	**P**	**15 39 04.8**	**0.0**
	0.2nm,0.3s,baz=5.2,slow=7.7,SNR=4.8						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**54.90**	**187**	P	**P**	**15 39 30.7**	**-1.5**
	0.3nm,0.9s,baz=4.7,slow=5.8,SNR=4.1						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**69.40**	**29**	P	**P**	**15 41 09.7**	**+0.8**
	0.1nm,0.5s,baz=302,slow=5.8,SNR=1.9						
	0.1nm,0.5s						
TXAR	**Lajitas Array**	**94.55**	**52**	P	**P**	**15 43 23.4**	**+1.0**
	0.2nm,0.7s,baz=286,slow=1.7,SNR=1.9						
	0.2nm,0.7s						
H03N2	**Juan Fernandez**	**147.08**	**104**	T	T	18 34 06.5	
	baz=281,slow=75,SNR=255						
H03N3	**Juan Fernandez**	**147.09**	**104**	T	T	18 34 07.7	
	baz=281,slow=75,SNR=269						
H03N1	**Juan Fernandez**	**147.10**	**104**	T	T	18 34 07.6	
	baz=281,slow=75,SNR=306						

*TAP **13** 15:41:55.2, 24°.20N×121°.78E, h11km, ML2.7, D*
ISC 13 15:41:55.3±0.9, 24°.20N±0°.01×121°.79E±0°.03, h9km±6km, n79, σ0°68/147, 3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**338**	P	**Pg**	**15 41 58.3**	**+0.2**
	baz=345						
EHP				S	**Sg**	**15 42 00.7**	**+0.6**
	baz=345						
EAHA	**Aohua**	**0.14**	**341**	⇓ *i*P	**Pg**	**15 41 58.5**	**+0.1**
	baz=336						
EAHA				*i* S	**Sg**	**15 42 01.0**	**+0.5**
	baz=336						
ETL	**Fush Village**	**0.16**	**255**	P	**Pg**	**15 41 58.7**	**0.0**
	baz=254						
ETL				S	**Sg**	**15 42 01.4**	**+0.3**
	baz=254						
NACB	**Ninganchiao**	**0.18**	**262**	P	**Pg**	**15 41 58.7**	**-0.3**
NACB	**Ninganchiao**	**0.18**	**262**	*i* P	**Pg**	**15 41 58.9**	**-0.2**
	baz=261						
NACB				*e*S	**Sg**	**15 42 01.5**	**-0.1**
	baz=261						
TWD	**Chiawan**	**0.21**	**236**	*e*P	**Pg**	**15 41 59.5**	**-0.2**
	baz=240						
TWD				*e*S	**Sg**	**15 42 02.7**	**+0.1**
	baz=240						
ENA	**Nanau**	**0.23**	**349**	⇓ *i*P	**Pg**	**15 42 00.2**	**+0.2**
	baz=347						
ENA				*i* S	**Sg**	**15 42 03.7**	**+0.5**
	baz=347						
EWUT	**Wuta**	**0.25**	**358**	⇓ *i*P	**Pg**	**15 42 00.4**	**+0.2**
	baz=354						
EWUT				S	**Sg**	**15 42 04.0**	**+0.4**
	baz=354						
ETLH	**Xiulin Townshi**	**0.28**	**272**	P	**Pg**	**15 42 00.7**	**-0.2**
	baz=267						
ETLH				*e*S	**Sg**	**15 42 04.7**	**0.0**
	baz=267						
ETM	**Tongmen**	**0.36**	**229**	P	**Pg**	**15 42 02.2**	**-0.1**
	baz=233						
ETM				*e*S	**Sg**	**15 42 07.2**	**+0.2**
	baz=233						
ESAO	**Su ao**	**0.38**	**8**	P	**Pg**	**15 42 02.8**	**+0.1**
	baz=4.0						
ESAO				S	**Sg**	**15 42 08.2**	**+0.4**
	baz=4.0						
LXIB	**Xiulin Townshi**	**0.39**	**243**	P	**Pg**	**15 42 02.6**	**-0.3**
	baz=244						
LXIB				S	**Sg**	**15 42 08.2**	**+0.1**
	baz=244						
LATG	**Datong**	**0.41**	**325**	P	**Pg**	**15 42 03.4**	**0.0**
	baz=324						
LATG				*e*S	**Sg**	**15 42 08.8**	**-0.1**
	baz=324						
TWC	**Suao**	**0.41**	**8**	P	**Pg**	**15 42 03.6**	**+0.2**
	baz=2.0						
TWC				*e*S	**Sg**	**15 42 08.9**	**+0.1**
	baz=2.0						
NNSB	**Datong**	**0.43**	**302**	P	**Pg**	**15 42 04.0**	**+0.1**
	baz=302						
NNSB				S	**Sg**	**15 42 09.7**	**+0.1**
	baz=302						
NDS	**Dongshan**	**0.44**	**351**	P	**Pg**	**15 42 04.1**	**+0.3**
	baz=351						
NDS				*e*S	**Sg**	**15 42 10.2**	**+0.5**
	baz=351						
NNS	**Nan Shan**	**0.45**	**302**	P	**Pg**	**15 42 04.2**	**+0.1**
	baz=303						
NNS				*e*S	**Sg**	**15 42 10.1**	**0.0**
	baz=303						
SHUL	**Shoufeng**	**0.46**	**207**	*e*P	**Pb**	**15 42 05.6**	**+0.1**
	baz=214						
SHUL				*e*S	**Sb**	**15 42 14.5**	**+2.1**
	baz=214						
NDT	**Datong Townshi**	**0.47**	**328**	P	**Pg**	**15 42 04.8**	**+0.2**
	baz=327						
NDT				*e*S	**Sb**	**15 42 11.8**	**-1.1**
	baz=327						
WHF	**Hehuan Shan**	**0.48**	**264**	*e*P	**Pg**	**15 42 04.7**	**0.0**
	baz=264						
WHF				*e*S	**Sg**	**15 42 11.2**	**0.0**
	baz=264						
ENTT	**Nioudou**	**0.48**	**335**	P	**Pg**	**15 42 05.0**	**+0.3**
	baz=335						
ENTT				*e*S	**Sb**	**15 42 12.0**	**-1.1**
	baz=335						
FUSS	**Fushou**	**0.50**	**276**	*e*P	**Pg**	**15 42 05.2**	**+0.1**
	baz=268						
FUSS				*e*S	**Sg**	**15 42 11.8**	**+0.1**
	baz=268						
ESL	**Shilin**	**0.50**	**220**	*e*P	**Pg**	**15 42 04.8**	**-0.3**
	baz=230						
ESL				*e*S	**Sg**	**15 42 11.9**	**+0.3**
	baz=230						
TWE	**Neicheng**	**0.53**	**348**	P	**Pg**	**15 42 05.9**	**+0.3**
	baz=348						
TWE				*e*S	**Sg**	**15 42 12.4**	**-0.2**
	baz=348						
TWT	**Tachien**	**0.56**	**276**	*e*P	**Pg**	**15 42 06.5**	**+0.3**
	baz=276						
TWT				*e*S	**Sb**	**15 42 14.3**	**-1.3**
	baz=276						
CHGB	**Renai**	**0.58**	**256**	*e*P	**Pg**	**15 42 06.6**	**+0.1**
	baz=257						
CHGB				*e*S	**Sg**	**15 42 14.3**	**+0.1**
	baz=257						
TDCB	**Techi**	**0.58**	**275**	*e*P	**Pg**	**15 42 06.6**	**+0.1**
	baz=276						
TDCB				*e*S	**Sg**	**15 42 14.0**	**-0.1**
	baz=276						
FUSB	**Fushanzhiwuyua**	**0.59**	**342**	P	**Pg**	**15 42 06.9**	**+0.2**
	baz=341						
FUSB				*e*S	**Sg**	**15 42 14.6**	**+0.2**
	baz=341						
YHNB	**Yeheng**	**0.60**	**321**	P	**Pb**	**15 42 07.3**	**-0.7**
YHNB	**Yeheng**	**0.60**	**321**	P	**Pb**	**15 42 07.3**	**-0.7**
	baz=321						
YHNB				*e*S	**Sg**	**15 42 14.6**	**-0.3**
	baz=321						
WARBT	**Fenglin Townsh**	**0.60**	**218**	*e*P	**Pg**	**15 42 06.8**	**-0.2**
	baz=223						
WARBT				*e*S	**Sb**	**15 42 16.5**	**-0.1**
	baz=223						
NSK	**Sanguang**	**0.62**	**321**	*e*P	**Pb**	**15 42 07.5**	**-0.7**
	baz=320						
NSK				*e*S	**Sg**	**15 42 15.7**	**+0.3**
	baz=320						
NWLT	**Wulai**	**0.63**	**336**	P	**Pb**	**15 42 07.8**	**-0.7**
	baz=335						
NWLT				*e*S	**Sg**	**15 42 16.3**	**+0.4**
	baz=335						
WUSB	**Renai**	**0.65**	**252**	*e*P	**Pg**	**15 42 08.0**	**+0.2**
	baz=252						
WUSB				*e*S	**Sg**	**15 42 16.2**	**-0.1**
	baz=252						
VWDT	**VWDT**	**0.74**	**233**	*e*P	**Pb**	**15 42 10.0**	**-0.3**
	baz=243						
VWDT				*e*S	**Sb**	**15 42 19.9**	**-0.6**
	baz=243						
NFF	**Wufeng Townshi**	**0.75**	**305**	*e*P	**Pb**	**15 42 09.9**	**-0.6**
	baz=305						
NFF				*e*S	**Sg**	**15 42 19.5**	**0.0**
	baz=305						
HGSD	**Ruisui**	**0.78**	**205**	*e*P	**Pb**	**15 42 10.7**	**-0.3**
	baz=196						
HGSD				*e*S	**Sn**	**15 42 24.1**	**-0.1**
	baz=196						
NHDH	**Xindian Distri**	**0.80**	**343**	*e*P	**Pb**	**15 42 10.9**	**-0.4**
	baz=342						
NHDH				*e*S	**Sb**	**15 42 22.2**	**0.0**
	baz=342						
TWA	**Mucha**	**0.80**	**347**	*e*P	**Pb**	**15 42 11.2**	**-0.2**
	baz=347						
EHY	**Hungye**	**0.81**	**212**	*e*P	**Pg**	**15 42 10.2**	**-0.6**

TWF1	**Yuli**	**0.96**	**208**	*eP*	**Pg**	**15 42 12.9**	**-0.7**
	baz=222							
TWS1	**Kuangyinshan**	**0.96**	**339**	*eP*	**Pn**	**15 42 14.5**	**-0.4**
	baz=345							
TWS1				*eS*	**Sn**	**15 42 29.3**	**+0.6**
	baz=345							
YM01	**YM01**	**0.96**	**348**	*eP*	**Pb**	**15 42 14.2**	**0.0**
	baz=347							
WJS	**Zhushan**	**1.04**	**249**	*eP*	**Pb**	**15 42 15.2**	**-0.2**
	baz=251							
WJS				*eS*	**Sn**	**15 42 31.3**	**+0.6**
	baz=251							
ALS	**Alishan**	**1.13**	**233**	*eP*	**Pn**	**15 42 17.6**	**+0.1**
	baz=235							
ALS				*eS*	**Sn**	**15 42 34.1**	**+0.7**
	baz=235							
YOJ	**Yonaguni jima**	**1.15**	**77**	P	**Pn**	**15 42 17.3**	**-0.1**
EHD	**Haiduan**	**1.17**	**207**	*eP*	**Pb**	**15 42 17.1**	**-0.6**
	baz=211							
EHD				*eS*	**Sg**	**15 42 33.2**	**+0.2**
	baz=211							
CHN5	**Tsauling**	**1.18**	**240**	*eP*	**Pg**	**15 42 18.4**	**+0.5**
	baz=242							
CHN5				*eS*	**Sn**	**15 42 36.5**	**+2.2**
	baz=242							
ELDTW	**Lidau**	**1.23**	**215**	*eP*	**Pn**	**15 42 16.9**	**-1.8**
	baz=205							
ELDTW				*eS*	**Sn**	**15 42 35.1**	**-0.3**
	baz=205							
WCKO	**Fanlu**	**1.32**	**235**	*eP*	**Pg**	**15 42 21.1**	**+0.5**
	baz=239							
WCKO				*eS*	**Sg**	**15 42 39.9**	**+2.1**
	baz=239							
WRL	**Guolierlin Hig**	**1.32**	**257**	*eP*	**Pg**	**15 42 20.4**	**-0.3**
	baz=260							
WRL				*eS*	**Sg**	**15 42 39.8**	**+1.9**
	baz=260							
WTK	**Tuku**	**1.38**	**249**	*eP*	**Pg**	**15 42 21.5**	**-0.2**
	baz=252							
WTK				*eS*	**Sg**	**15 42 42.0**	**+2.3**
	baz=252							
STYH	**Taoyuan**	**1.38**	**222**	*eP*	**Pn**	**15 42 20.1**	**-0.6**
	baz=227							
STYH				*eS*	**Sg**	**15 42 41.0**	**+1.3**
	baz=227							
CHN4	**Tsaushan**	**1.38**	**233**	*eP*	**Pg**	**15 42 21.4**	**-0.4**
	baz=237							
CHN4				*eS*	**Sg**	**15 42 42.2**	**+2.5**
	baz=237							
TPUB	**Ta-pu**	**1.39**	**230**	P	**Pb**	**15 42 21.4**	**0.0**
TPUB	**Ta-pu**	**1.39**	**230**	*eP*	**Pb**	**15 42 21.3**	**-0.1**
	baz=220							
TPUB				*eS*	**Sg**	**15 42 41.3**	**+1.4**
	baz=220							
WTP	**Ta-pu**	**1.44**	**229**	*eP*	**Pg**	**15 42 22.5**	**-0.3**
	baz=232							
WTP				*eS*	**Sg**	**15 42 43.1**	**+1.6**
	baz=232							
TWK	**Hsinying**	**1.51**	**232**	*eP*	**Pb**	**15 42 23.5**	**0.0**
	baz=236							
TWK				*eS*	**Sg**	**15 42 45.2**	**+1.3**
	baz=236							
SNST	**Tainan City**	**1.53**	**231**	*eP*	**Pg**	**15 42 24.2**	**-0.5**
	baz=235							
SNST				*eS*	**Sg**	**15 42 45.5**	**+1.0**
	baz=235							
CHN1	**Nanshi**	**1.53**	**229**	*eP*	**Pg**	**15 42 25.0**	**+0.3**
	baz=233							
CHN1				*eS*	**Sg**	**15 42 46.2**	**+1.6**
	baz=233							
SGST	**Jiashian**	**1.57**	**225**	*eP*	**Pn**	**15 42 23.3**	**0.0**
	baz=229							
SGST				*eS*	**Sg**	**15 42 45.6**	**-0.1**
	baz=229							
SCST	**Cishan**	**1.77**	**223**	*eP*	**Pb**	**15 42 27.3**	**-0.5**
	baz=227							
SCST				*eS*	**Sg**	**15 42 51.3**	**-0.7**
	baz=227							
MASBT	**Mashibuluo**	**1.90**	**214**	*eP*	**Pn**	**15 42 28.3**	**+0.4**
	baz=219							
MASBT				*eS*	**Sb**	**15 42 54.0**	**-0.1**
	baz=219							

IDC 13 15:53:10.4±62.0, 20°40S×178°35W, h0km, mb4.0/3, mbtmp4.0/3, MS3.4/2, Error ellipse: s-maj=1127.0km s-min=166.6km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.54**	**244**	P	P	16 00 25.8	-0.7
	1.1nm,0.4s,baz=77,slow=4.2,SNR=3.3						
STKA				LR	LR	16 14 44.4	
	comp=Z,43nm,18.1s,baz=204,slow=34						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**44.23**	**257**	P	P	16 01 21.6	-0.3
	1.0nm,0.4s,baz=84,slow=7.6,SNR=38						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**44.29**	**262**	P	P	16 01 22.7	+0.4
	0.7nm,0.3s,baz=96,slow=8.3,SNR=49						
	0.7nm,0.3s						
ATAH	**Atahualpa**	**96.79**	**100**	LR	LR	16 40 41.9	
	comp=Z,23nm,19.6s,baz=7.1,slow=30						

*IDC **13** 16:03:42.9±1.1, 4°98N×126°79E, h0km, mb3.3/6, mbtmp3.3/6, MS3.2/1, Error ellipse: s-maj=75.2km s-min=22.6km az=70.0*

ISC 13 16:03:48.2±1.1, 5°0N±0°2×126°8E±0°5, h35km, n7, σ0s62/6, mb3.3/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.84**	**164**	P	**P**	**16 09 15.8**	**-0.8**
	0.6nm,1.0s,baz=343,slow=10,SNR=2.2						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**29.30**	**167**	P	**P**	**16 09 48.0**	**+0.5**
	0.2nm,0.9s,baz=354,slow=7.5,SNR=1.9						
	0.2nm,0.9s						
JHJ	**Hachijo jima 2**	**30.52**	**22**	LR	LR	16 23 10.0	
	comp=Z,41nm,19.3s,baz=127,slow=38						
SONM	**Songino Array**	**46.15**	**341**	P	**P**	**16 12 09.7**	**+0.3**
	0.2nm,0.6s,baz=146,slow=8.0,SNR=1.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**56.58**	**325**	P	**P**	**16 13 27.4**	**0.0**
	0.2nm,0.5s,baz=112,slow=7.1,SNR=5.5						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**60.73**	**327**	P	**P**	**16 13 55.8**	**-0.4**
	0.3nm,0.8s,baz=126,slow=7.7,SNR=2.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**83.97**	**25**	P	**P**	**16 16 14.6**	**0.0**
	0.3nm,0.7s,baz=256,slow=5.6,SNR=4.3						
	0.3nm,0.7s						

IDC 13 16:36:48.6±315.0, 57°28N×29°97E, h0km, Error ellipse: s-maj=124.2km s-min=82.0km az=94.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.01**	**95**	I	I	17 01 10.0	
	0.3nm,0.8s,baz=276,slow=328,SNR=3.3						
I37NO	**I37NO**	**12.86**	**341**	I	I	17 45 40.0	
	baz=148,slow=327,SNR=3.8						
I26DE	**FREYUNG INFRAS**	**12.88**	**236**	I	I	18 01 40.0	
	baz=35,slow=332,SNR=2.1						
I31KZ	**AKTYUBINSK INF**	**17.84**	**101**	I	I	18 25 58.3	
	baz=300,slow=339,SNR=4.3						

*IDC **13** 16:41:24.1±7.4, 6°36S×153°60E, h100km±58km, mb3.2/5, mbtmp3.5/6, Error ellipse: s-maj=53.2km s-min=34.9km az=92.0*

ISC 13 16:41:15.6±1.4, 6°3S±0°2×154°1E±0°2, h35km, n6, σ1s03/7, mb3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.52**	**246**	P	**Pn**	**16 43 03.9**	**+1.1**
	6.1nm,0.9s,baz=14,slow=12,SNR=2.2						
PMG				S	**Sn**	**16 44 26.4**	**-0.4**
	3.1nm,0.6s,baz=160,slow=9.5,SNR=1.3						
WRA	**Warramunga Arr**	**23.48**	**233**	P	**P**	**16 46 20.7**	**-1.6**
	0.5nm,0.7s,baz=54,slow=10,SNR=2.4						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**25.96**	**226**	P	**P**	**16 46 44.7**	**-0.4**
	0.3nm,1.0s,baz=51,slow=8.8,SNR=1.8						
	0.3nm,1.0s						
MKAR	**Makanchi Array**	**82.31**	**319**	P	**P**	**16 53 33.7**	**-0.1**
	0.3nm,0.8s,baz=92,slow=7.2,SNR=2.4						
	0.3nm,0.8s						
QSPA	**South Pole Qui**	**83.64**	**180**	P	**P**	**16 53 40.8**	**+0.3**
	0.8nm,0.6s,baz=27,slow=18,SNR=7.3						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**91.22**	**323**	P	**P**	**16 54 17.1**	**-0.1**
	0.3nm,0.7s,baz=81,slow=4.7,SNR=2.1						
	0.3nm,0.7s						

*KNET **13** 16:54:24.5±0.3, 42°40N×74°33E, h16km±2km, ml2.4, Error ellipse: s-maj=2.8km s-min=1.8km az=58.0*
*KRNET **13** 16:54:24.7±0.1, 42°38N×74°31E, h19km, mb2.8*
*NNC **13** 16:54:24.7±0.4, 42°42N×74°30E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=2.8km s-min=1.8km az=170.0*
*SOME **13** 16:54:25.4, 42°38N×74°30E, h20km*

ISC 13 16:54:25.5±0.9, 42°42N±0°02×74°31E±0°01, h10km±7km, n94, σ1s22/168, 52C-24D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**0.24**	**141**	P	**Pg**	**16 54 29.9**	**-0.8**
	449nm,0.1s,SNR=1155						
UCH				⇑S	**Sg**	**16 54 33.4**	**-0.8**
	362nm,0.1s						
UCH	**Uchtor**	**0.24**	**141**	⇑*i*P	**Pg**	**16 54 29.9**	**-0.8**
	baz=35						
UCH				⇑*i*S	**Sg**	**16 54 33.0**	**-1.2**
	baz=35						
AAK	**Ala-Archa**	**0.26**	**32**	⇑P	**Pg**	**16 54 31.0**	**+0.2**
	608nm,0.1s,SNR=1214						
AAK				⇓S	**Sg**	**16 54 35.2**	**+0.7**
	2μm,0.2s						
AAK	**Ala-Archa**	**0.26**	**32**	⇑*i*P	**Pg**	**16 54 31.0**	**+0.2**
	baz=29						
AAK				⇑*i*S	**Sg**	**16 54 34.9**	**+0.5**
	baz=29						
FRU1	**Bishkek**	**0.46**	**31**	⇑*i*P	**Pb**	**16 54 34.9**	**-0.8**
	baz=29						
FRU1				⇑*i*S	**Sb**	**16 54 41.9**	**-0.8**
	baz=29						
EKS2	**Erkin-Say**	**0.46**	**302**	P	**Pg**	**16 54 34.5**	**-0.1**
	84nm,0.1s,SNR=531						
EKS2				⇓S	**Sg**	**16 54 41.4**	**+0.7**
	134nm,0.1s						
EKS2	**Erkin-Say**	**0.46**	**302**	⇑*i*P	**Pg**	**16 54 34.4**	**-0.1**
	baz=6.0						
EKS2				⇑*i*S	**Sg**	**16 54 41.2**	**+0.6**
	baz=6.0						
KBK	**Karagaybulak**	**0.53**	**63**	P	**Pg**	**16 54 35.7**	**-0.1**
	239nm,0.1s,SNR=387						
KBK				⇓S	**Sg**	**16 54 43.3**	**+0.4**
	465nm,0.2s						
KBK	**Karagaybulak**	**0.53**	**63**	⇓*i*P	**Pg**	**16 54 35.5**	**-0.3**
	baz=60						
KBK				⇓*i*S	**Sg**	**16 54 43.1**	**+0.2**
	baz=60						
ARLS	**Aral**	**0.56**	**179**	⇑*i*P	**Pg**	**16 54 35.2**	**-1.1**
	baz=78						
ARLS				⇑*i*S	**Sg**	**16 54 42.3**	**-1.4**
	baz=78						
CHMS	**Chumysh**	**0.67**	**29**	⇑P	**Pg**	**16 54 38.3**	**-0.1**
	48nm,0.2s,SNR=43						
CHMS				⇓S	**Sb**	**16 54 47.6**	**-1.0**
	330nm,0.1s						
CHMS	**Chumysh**	**0.67**	**29**	⇑P	**Pg**	**16 54 38.0**	**-0.4**
	25nm,0.3s						
CHMS				⇓S	**Sg**	**16 54 47.2**	**+0.1**
	227nm,0.6s						
CHMS	**Chumysh**	**0.67**	**29**	⇑*i*P	**Pg**	**16 54 38.0**	**-0.4**
	baz=28						
CHMS				⇑*i*S	**Sb**	**16 54 47.5**	**-1.0**
	baz=28						
USP	**Ospenovka**	**0.86**	**9**	⇑P	**Pg**	**16 54 41.8**	**-0.3**
	13nm,0.1s,SNR=59						
USP				⇑S	**Sb**	**16 54 53.6**	**-0.6**
	111nm,0.1s						
USP	**Ospenovka**	**0.86**	**9**	⇑*i*P	**Pg**	**16 54 41.4**	**-0.7**
	baz=9.0						
USP				⇑*i*S	**Sb**	**16 54 53.3**	**-0.9**
	baz=9.0						
MRKS	**Merke**	**0.86**	**293**	P	**Pg**	**16 54 41.4**	**-0.7**
	46nm,0.1s						
MRKS				P	**Pg**	**16 54 41.4**	**-0.7**
	43nm,0.1s						
MRKS				S	**Sg**	**16 54 52.7**	**-0.6**
	109nm,0.3s						
MRKS				S	**Sg**	**16 54 52.8**	**-0.6**
	136nm,0.2s						
MRKS	**Merke**	**0.86**	**293**	*eP*	**Pg**	**16 54 41.5**	**-0.7**
	43nm,0.1s						
MRKS				*eS*	**Sg**	**16 54 52.7**	**-0.6**
	109nm,0.3s						
SGDS	**Sogindy**	**1.06**	**13**	P	**Pg**	**16 54 45.4**	**-0.5**
	12nm,0.1s						
SGDS				P	**Pg**	**16 54 45.5**	**-0.5**
	12nm,0.1s						
SGDS				S	**Sg**	**16 54 59.3**	**-0.4**
	142nm,0.1s						
SGDS				S	**Sb**	**16 54 59.5**	**-0.5**
	146nm,0.2s						
TKM2	**Tokmak 2**	**1.08**	**62**	⇑P	**Pg**	**16 54 45.2**	**-1.0**
	40nm,0.1s,SNR=19						
TKM2				⇑S	**Sg**	**16 54 59.5**	**-0.8**
	94nm,0.1s						
TKM2	**Tokmak 2**	**1.08**	**62**	⇓P	**Pg**	**16 54 44.8**	**-1.3**
	10nm,0.3s						
TKM2				⇓S	**Sg**	**16 54 59.2**	**-1.0**
	44nm,0.5s						
TKM2	**Tokmak 2**	**1.08**	**62**	⇑*i*P	**Pg**	**16 54 44.9**	**-1.3**
	baz=60						
TKM2				⇑*i*S	**Sg**	**16 54 59.4**	**-0.8**
	baz=60						
MNAS	**Manas**	**1.34**	**274**	⇑*i*P	**Pn**	**16 54 49.2**	**-1.1**
	baz=75						
MNAS				⇑*i*S	**Sb**	**16 55 07.1**	**-0.8**
	baz=75						
DGS	**Degeres**	**1.36**	**52**	P	**Pn**	**16 54 50.4**	**-0.2**
	21nm,0.2s						
DGS				P	**Pn**	**16 54 50.5**	**-0.1**
	21nm,0.2s						
DGS				S	**Sb**	**16 55 08.4**	**-0.1**
	61nm,0.2s						
DGS				S	**Sn**	**16 55 08.6**	**-0.1**
	64nm,0.2s						
DGS	**Degeres**	**1.36**	**52**	*eP*	**Pn**	**16 54 50.5**	**-0.1**
	21nm,0.2s						
DGS				*eS*	**Sn**	**16 55 08.6**	**-0.1**
	64nm,0.2s						
KST	**Kastek**	**1.37**	**62**	P	**Pn**	**16 54 50.9**	**+0.1**
	13nm,0.1s						
KST				S	**Sg**	**16 55 09.4**	**-0.2**
	70nm,0.4s						
KST	**Kastek**	**1.37**	**62**	*eP*	**Pn**	**16 54 50.9**	**+0.1**
	13nm,0.1s						
KST				*eS*	**Sg**	**16 55 09.4**	**-0.2**
	70nm,0.4s						
ULHL	**Ulahol**	**1.45**	**96**	⇓P	**Pn**	**16 54 51.3**	**-0.7**
	14nm,0.1s,SNR=45						
ULHL				⇓S	**Sn**	**16 55 10.9**	**-0.2**
	33nm,0.2s						
ULHL	**Ulahol**	**1.45**	**96**	⇑*i*P	**Pn**	**16 54 51.2**	**-0.7**
	baz=95						
ULHL				⇑*i*S	**Sn**	**16 55 10.4**	**-0.7**
	baz=95						
ARSB	**Arslanbob**	**1.47**	**223**	⇑*i*P	**Pn**	**16 54 51.3**	**-0.9**
	baz=24						
ARSB				⇑*i*S	**Sn**	**16 55 10.6**	**-1.1**
	baz=24						
NRN	**Naryn**	**1.60**	**127**	⇓*i*P	**Pn**	**16 54 53.4**	**-0.8**
	baz=27						
NRN				⇓*i*S	**Sn**	**16 55 14.3**	**-0.8**
	baz=27						
KRBS	**Karabastau**	**1.62**	**38**	P	**Pb**	**16 54 55.4**	**-0.2**
	27nm,0.2s						
KRBS				P	**Pb**	**16 54 55.4**	**-0.2**
	27nm,0.2s						
KRBS				S	**Sg**	**16 55 16.9**	**-0.8**
	115nm,0.5s						
KRBS				S	**Sb**	**16 55 17.1**	**+0.9**
	76nm,0.2s						
KRBS	**Karabastau**	**1.62**	**38**	*eP*	**Pb**	**16 54 55.4**	**-0.2**
	27nm,0.2s						
KRBS				*eS*	**Sg**	**16 55 16.9**	**-0.8**
	115nm,0.5s						
MTBS	**Maitube**	**1.72**	**65**	P	**Pb**	**16 54 56.9**	**-0.3**
	21nm,0.2s						
MTBS				S	**Sg**	**16 55 20.0**	**-0.7**
	40nm,0.4s						
MTBS	**Maitube**	**1.72**	**65**	*eP*	**Pb**	**16 54 56.9**	**-0.3**
	21nm,0.2s						
MTBS				*eS*	**Sg**	**16 55 20.0**	**-0.7**
	40nm,0.4s						
IZV	**Izvestkoviy**	**1.81**	**69**	P	**Pb**	**16 54 58.6**	**-0.2**
	18nm,0.2s						
IZV				P	**Pb**	**16 54 58.7**	**0.0**
	18nm,0.2s						
IZV				S	**Sg**	**16 55 22.6**	**-1.0**
	26nm,0.2s						
IZV				S	**Sg**	**16 55 22.7**	**-1.0**
	35nm,0.1s						
IZV	**Izvestkoviy**	**1.81**	**69**	*eP*	**Pb**	**16 54 58.7**	**0.0**
	18nm,0.2s						
IZV				*eS*	**Sg**	**16 55 22.7**	**-1.0**
	35nm,0.1s						
ARK	**Arkit**	**1.85**	**251**	⇓*i*P	**Pn**	**16 54 57.9**	**+0.5**
	baz=52						
ARK				⇓*i*S	**Sn**	**16 55 22.0**	**+1.1**
	baz=52						
TNSS	**Tian-Shan**	**2.04**	**71**	Pg	**Pb**	**16 55 03.4**	**+0.5**
	12nm,0.1s						
TNSS				Lg	Lg	16 55 30.3	
	28nm,0.3s						
TNSS	**Tian-Shan**	**2.04**	**71**	Pg	**Pb**	**16 55 02.8**	**-0.1**
	9.6nm,0.2s						
TNSS				Lg	Lg	16 55 29.9	
	59nm,0.4s						
TNSS	**Tian-Shan**	**2.04**	**71**	*eP*	**Pb**	**16 55 03.4**	**+0.5**
	12nm,0.1s						
TNSS				*eS*	**Sg**	**16 55 30.3**	**-0.8**
	28nm,0.3s						
AAA	**Alma-Ata**	**2.08**	**67**	Pg	**Pb**	**16 55 03.8**	**+0.5**
	51nm,0.1s						
AAA				Lg	Lg	16 55 31.2	
	8.2nm,0.1s						
AAA	**Alma-Ata**	**2.08**	**67**	*eP*	**Pb**	**16 55 03.8**	**+0.5**
	51nm,0.1s						
AAA				*eS*	**Sg**	**16 55 31.2**	**-1.0**
	8.2nm,0.1s						
KUU	**Kurty**	**2.09**	**45**	Pg	**Pb**	**16 55 03.0**	**-0.6**
	29nm,0.3s						
KUU				Lg	Lg	16 55 30.2	
	52nm,0.3s						
KUU	**Kurty**	**2.09**	**45**	*eP*	**Pb**	**16 55 03.0**	**-0.6**
	29nm,0.3s						
KUU				*eS*	**Sb**	**16 55 30.2**	**+0.6**
	52nm,0.3s						
KNDC	**Almaty**	**2.11**	**67**	⇑Pg	**Pb**	**16 55 04.1**	**+0.2**
	28nm,0.3s						
KNDC				⇑Lg	Lg	16 55 32.7	
	30nm,0.6s						
MDOK	**Medeo**	**2.15**	**69**	⇑Pg	**Pb**	**16 55 04.2**	**-0.4**
	10nm,0.3s						
MDOK				Pg	**Pb**	**16 55 04.6**	**0.0**
	33nm,0.2s						
MDOK				Lg	Lg	16 55 32.4	
	21nm,0.2s						
MDOK				⇑Lg	Lg	16 55 33.4	
	22nm,0.7s						
MDOK	**Medeo**	**2.15**	**69**	*eP*	**Pb**	**16 55 04.6**	**0.0**
	33nm,0.2s						
MDOK				*eS*	**Sb**	**16 55 32.4**	**+1.0**
	21nm,0.2s						
KDJ	**Kajisay**	**2.15**	**97**	⇓*i*P	**Pn**	**16 55 02.5**	**+0.9**
	baz=96						
KDJ				⇓*i*S	**Sn**	**16 55 30.0**	**+1.6**
	baz=96						
KTBS	**Karatobe**	**2.17**	**53**	Pg	**Pb**	**16 55 04.4**	**-0.5**
	17nm,0.2s						
KTBS				Pg	**Pb**	**16 55 04.7**	**-0.1**
	19nm,0.3s						
KTBS				Lg	Lg	16 55 33.1	
	59nm,0.4s						
KTBS				Lg	Lg	16 55 33.4	
	71nm,0.3s						
KTBS	**Karatobe**	**2.17**	**53**	*eP*	**Pb**	**16 55 04.7**	**-0.1**
	19nm,0.3s						
KTBS				*eS*	**Sb**	**16 55 33.1**	**+1.3**
	59nm,0.4s						
OHH	**Osh**	**2.21**	**212**	⇑*e*P	**Pn**	**16 55 02.6**	**+0.3**
	baz=12						
OHH				⇑*e*S	**Sn**	**16 55 30.1**	**+0.3**
	baz=12						
KOTS	**Kotyrbulak**	**2.22**	**67**	Pg	**Pb**	**16 55 06.2**	**+0.4**
	36nm,0.2s						
KOTS				Lg	Lg	16 55 35.3	
	48nm,0.3s						
KOTS	**Kotyrbulak**	**2.22**	**67**	*eP*	**Pb**	**16 55 06.2**	**+0.4**
	36nm,0.2s						
KOTS				*eS*	**Sg**	**16 55 35.3**	**-1.5**
	48nm,0.3s						
DZA	**Taraz**	**2.25**	**283**	Pg	**Pb**	**16 55 06.6**	**+0.4**
	43nm,0.1s						
DZA				Lg	Lg	16 55 35.4	
	119nm,0.4s						
DZA	**Taraz**	**2.25**	**283**	*eP*	**Pb**	**16 55 06.0**	**-0.2**
	30nm,0.1s						
DZA				*eS*	**Sb**	**16 55 34.8**	**+0.8**
	119nm,0.3s						
CHKK	**Chushkaly**	**2.43**	**53**	Pg	**Pb**	**16 55 09.0**	**-0.3**
	9.5nm,0.2s						
CHKK				Lg	Lg	16 55 40.4	
	40nm,0.3s						
CHKK	**Chushkaly**	**2.43**	**53**	*eP*	**Pb**	**16 55 09.0**	**-0.3**
	9.5nm,0.2s						
CHKK				*eS*	**Sb**	**16 55 40.4**	**+1.0**
	40nm,0.3s						
SFK	**Sufi-Kurgan**	**2.48**	**194**	⇑*i*P	**Pn**	**16 55 06.3**	**+0.2**
	baz=95						
SFK				⇑*i*S	**Sn**	**16 55 36.7**	**+0.1**
	baz=95						
ANVS	**Anan'yevo**	**2.51**	**81**	⇑*i*P	**Pn**	**16 55 07.3**	**+0.8**
	baz=80						
ANVS				⇑*i*S	**Sn**	**16 55 38.4**	**+1.2**
	baz=80						
TRKS	**Terek-Say**	**2.52**	**250**	⇑*i*P	**Pn**	**16 55 07.4**	**+0.7**
	baz=50						
TRKS				⇑*i*S	**Sn**	**16 55 38.4**	**+0.8**
	baz=50						
BTLS	**Baital**	**2.63**	**356**	Pg	**Pb**	**16 55 11.9**	**-0.7**
	3.9nm,0.1s						
BTLS				Lg	Lg	16 55 45.8	
	30nm,0.3s						
BTLS	**Baital**	**2.63**	**356**	*eP*	**Pb**	**16 55 13.2**	**+0.6**
	3.2nm,0.2s						
BTLS				*eS*	**Sg**	**16 55 47.3**	**-2.6**
	39nm,0.3s						
KK31	**Karatay Array**	**2.88**	**285**	⇑Pg	**Pb**	**16 55 16.7**	**-0.2**
	0.5nm,0.3s,baz=105,slow=17,SNR=20						
KK31				⇓Lg	Lg	16 55 54.3	
	21nm,0.6s,baz=104,slow=29,SNR=32						
KKAR	**Karatay Array**	**2.88**	**285**	⇓*i*P	**Pn**	**16 55 12.3**	**+0.9**
	baz=86						
KKAR				⇓*i*S	**Sn**	**16 55 47.1**	**+1.0**
	baz=86						
PRZ	**Przheval'sk**	**3.03**	**87**	⇑*i*P	**Pn**	**16 55 14.5**	**+0.8**
	baz=86						
PRZ				⇑*i*S	**Sn**	**16 55 50.9**	**+0.8**
	baz=86						
KURS	**Kuram**	**3.03**	**68**	Pg	**Pb**	**16 55 19.8**	**+0.2**
	4.7nm,0.4s						
KURS				Lg	Lg	16 56 00.1	
	15nm,0.5s						
KURS	**Kuram**	**3.03**	**68**	*eP*	**Pb**	**16 55 20.0**	**+0.5**
	3.6nm,0.5s						
KURS				*eS*	**Sb**	**16 55 59.6**	**+2.9**
	15nm,0.5s						
SATY	**Saty**	**3.09**	**77**	Pg	**Pb**	**16 55 21.9**	**+1.3**
	9.7nm,0.4s						
SATY				Lg	Lg	16 56 02.1	
	27nm,0.4s						
SATY	**Saty**	**3.09**	**77**	*eP*	**Pb**	**16 55 21.9**	**+1.3**
	9.7nm,0.4s						
SATY				*eS*	**Sg**	**16 56 02.1**	**-2.5**
	27nm,0.4s						
ZHN	**Zhinishke**	**3.13**	**75**	Pg	**Pb**	**16 55 22.5**	**+1.2**
	2.6nm,0.1s						
ZHN				Lg	Lg	16 56 03.1	
	32nm,0.2s						
**Z

ARXS					Lg	Lg	16 56 02.5		
	23nm,0.4s								
ARXS	**Arharly**	**3.13**	**54**	*eP*	**Pb**		**16 55 21.7**	**+0.3**	
	5.0nm,0.2s								
ARXS				*eS*	**Sb**		**16 56 02.5**	**+2.9**	
	23nm,0.4s								
IUG	**Iuzhnay**	**3.18**	**267**		Pg	**Pb**	**16 55 21.7**	**-0.5**	
	14nm,0.3s								
IUG					Pg	**Pb**	**16 55 23.0**	**+0.8**	
	14nm,0.3s								
IUG					Lg	Lg	16 56 04.3		
	68nm,0.4s								
IUG					Lg	Lg	16 56 04.5		
	59nm,0.5s								
IUG	**Iuzhnay**	**3.18**	**267**	*eP*		**Pb**	**16 55 23.0**	**+0.8**	
	14nm,0.3s								
IUG				*eS*		**Sb**	**16 56 04.3**	**+3.2**	
	68nm,0.4s								
KPKS	**Kokpek**	**3.38**	**70**		Pg	**Pb**	**16 55 25.7**	**+0.2**	
	6.4nm,0.2s								
KPKS					Lg	Lg	16 56 09.5		
	37nm,0.5s								
KPKS	**Kokpek**	**3.38**	**70**	*eP*		**Pb**	**16 55 25.7**	**+0.2**	
	6.4nm,0.2s								
KPKS				*eS*		**Sb**	**16 56 09.5**	**+2.8**	
	37nm,0.5s								
BTK	**Batken**	**3.53**	**229**	⇑*iP*		**Pn**	**16 55 21.1**	**+0.6**	
	baz=30								
BTK				⇑*iS*		**Sn**	**16 56 02.2**	**-0.2**	
	baz=30								
UZB	**Uzynbulak**	**3.55**	**77**		Pg	**Pb**	**16 55 28.9**	**+0.5**	
	6.8nm,0.2s								
UZB					Lg	Lg	16 56 14.1		
	10nm,0.3s								
UZB	**Uzynbulak**	**3.55**	**77**	*eP*		**Pb**	**16 55 28.9**	**+0.5**	
	6.8nm,0.2s								
UZB				*eS*		**Sb**	**16 56 14.1**	**+2.6**	
	10nm,0.3s								
PDGK	**Podgornoye**	**3.92**	**75**		Pg	**Pb**	**16 55 35.1**	**+0.4**	
	1.2nm,0.2s								
PDGK					Lg	Lg	16 56 24.7		
	4.8nm,0.6s								
PDGK	**Podgornoye**	**3.92**	**75**	⇓Pg		**Pb**	**16 55 34.7**	**0.0**	
	1.1nm,0.3s								
PDGK				⇑Lg		Lg	16 56 26.2		
	12nm,0.7s								
KNOS	**Konyrlen**	**4.05**	**60**		Pg	**Pb**	**16 55 39.2**	**+2.2**	
	6.2nm,0.3s								
KNOS					Lg	Lg	16 56 31.1		
	6.9nm,0.5s								
DJR	**Jarkent**	**4.43**	**63**		Pg	**Pb**	**16 55 45.7**	**+2.2**	
	2.0nm,0.3s								
DJR					Lg	Lg	16 56 43.1		
	7.6nm,0.5s								
DJR	**Jarkent**	**4.43**	**63**	*eP*		**Pb**	**16 55 45.7**	**+2.2**	
	2.0nm,0.3s								
DJR				*eS*		**Sg**	**16 56 43.1**	**-4.7**	
	7.6nm,0.5s								
KTMS	**Ketmen**	**4.56**	**75**		Pg	**Pb**	**16 55 47.4**	**+1.8**	
	0.9nm,0.2s								
KTMS					Lg	Lg	16 56 45.9		
	2.6nm,0.4s								
KTMS	**Ketmen**	**4.56**	**75**	*eP*		**Pb**	**16 55 47.4**	**+1.8**	
	0.9nm,0.2s								
KTMS				*eS*		**Sb**	**16 56 45.9**	**+5.3**	
	2.6nm,0.4s								
KAPS	**Kapalarasan**	**4.64**	**50**		Pg	**Pb**	**16 55 48.3**	**+1.3**	
	0.9nm,0.1s								
KAPS					Lg	Lg	16 56 47.2		
	4.2nm,0.3s								
KAPS	**Kapalarasan**	**4.64**	**50**	*eP*		**Pb**	**16 55 49.2**	**+2.2**	
	1.0nm,0.2s								
KAPS				*eS*		**Sg**	**16 56 48.9**	**-5.6**	
	5.8nm,0.3s								
OTUK	**Ortayu**	**5.99**	**347**	⇓Lg		Lg	16 57 33.6		
	3.1nm,0.6s								
MAKZ	**Makanchi**	**7.01**	**49**	⇓Pn		**Pn**	**16 56 07.1**	**-1.1**	
	0.1nm,0.5s								
MAKZ				⇑Lg		Lg	16 58 03.5		
	1.8nm,1.1s								
MK31	**Makanchi Array**	**7.18**	**50**	⇑Pn		**Pn**	**16 56 09.2**	**-1.3**	
	0.1nm,0.3s,baz=230,slow=14,SNR=8.8								
MK31				⇑Lg		Lg	16 58 08.1		
	1.6nm,0.9s								
KURBB	**Kurchatov Arra**	**8.71**	**18**	⇓Lg		Lg	16 59 00.5		
	8.5nm,1.1s								
KURK	**Kurchatov**	**8.81**	**18**	⇑Lg		Lg	16 59 02.5		
	4.6nm,0.8s								

*IDC **13** 16:59:18.2±0.8, 13°.77N×146°.70E, h0km, mb3.9/16, mbtmp3.9/16, Error ellipse: s-maj=20.6km s-min=17.6km az=132.0*
*NEIC **13** 16:59:20.2±1.4, 13°.80N±0°.08×146°.66E±0°.04, h10km±2km, mb4.5/10, Error ellipse: s-maj=13.7km s-min=5.6km az=21.0*
ISC 13 16:59:19.6±0.8, 13°.8N±0°.1×146°.69E±0°.09, h10km, n29, σ0s75/31, mb4.2/21, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**265**			Pn	**Pn**	**16 59 50.5**	**+0.2**
GUMO	**Guam**	**1.78**	**265**			Pn	**Pn**	**16 59 50.7**	**+0.3**
	183nm,0.3s,baz=116,slow=6.5,SNR=108								
GUMO						Sn	**Sb**	**17 00 15.6**	**+1.0**
	63nm,0.3s,baz=162,slow=20,SNR=5.6								
GUMO						LR	LR	17 00 49.4	
	comp=Z,229nm,18.0s,baz=108,slow=51								
JOW	**Kunigami**	**21.59**	**310**			P	**P**	**17 04 10.4**	**+0.7**
JOW						IAmb	IAmb	17 04 45.3	
	comp=Z,25nm,1.0s								
JOW	**Kunigami**	**21.59**	**310**			P	**P**	**17 04 10.6**	**+0.9**
	comp=Z,9.1nm,0.7s,baz=109,slow=18,SNR=1.9								
	comp=Z,9.1nm,0.7s								
JNU	**Nakatsue**	**24.07**	**326**			P	**P**	**17 04 35.9**	**+0.6**
KSRS	**Korea Array**	**28.93**	**328**			P	**P**	**17 05 18.4**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=148,slow=9.5,SNR=3.2								
	comp=Z,1.2nm,0.8s								
WB0	**Warramunga Arr**	**35.43**	**200**			P	**P**	**17 06 16.2**	**0.0**
WB0						IAmb	IAmb	17 06 20.3	
	comp=Z,9.6nm,1.4s								
WB2	**Warramunga Arr**	**35.61**	**200**			P	**P**	**17 06 17.7**	**0.0**
WB2						IAmb	IAmb	17 06 23.9	
	comp=Z,6.9nm,1.2s								
WRA	**Warramunga Arr**	**35.62**	**200**			P	**P**	**17 06 17.3**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=19,slow=9.1,SNR=3.2								
WRA						PcP	**PcP**	**17 08 47.6**	**+1.1**
	comp=Z,0.9nm,1.0s,baz=17,slow=3.5,SNR=1.8								
	comp=Z,0.6nm,0.7s								
ASAR	**Alice Springs**	**39.23**	**199**			P	**P**	**17 06 48.3**	**0.0**
	comp=Z,0.3nm,0.8s,baz=37,slow=8.2,SNR=7.4								
	comp=Z,0.3nm,0.8s								
PETK	**Petropavlovsk-**	**40.23**	**10**			P	**P**	**17 06 57.5**	**+1.2**
	comp=Z,4.9nm,1.0s,baz=172,slow=4.4,SNR=1.6								
	comp=Z,4.9nm,1.0s								
CRAI	**Chiangrai**	**44.65**	**285**			P	**P**	**17 07 32.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**46.01**	**282**			P	**P**	**17 07 44.4**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=83,slow=6.4,SNR=8.0								
	comp=Z,1.0nm,0.5s								
SONM	**Songino Array**	**47.64**	**324**			P	**P**	**17 07 55.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=168,slow=7.4,SNR=1.4								
	comp=Z,0.3nm,0.3s								
GSI	**Gunungsitoli**	**50.12**	**260**			P	**P**	**17 08 14.2**	**-1.2**
GSI						IAmb	IAmb	17 08 31.9	
	comp=Z,7.7nm,1.0s								
ZALV	**Zalesovo Beam**	**62.53**	**324**			P	**P**	**17 09 42.3**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=99,slow=5.6,SNR=4.9								
	comp=Z,1.0nm,0.6s								
MK31	**Makanchi Array**	**62.61**	**316**			P	**P**	**17 09 44.6**	**+0.4**
MKAR	**Makanchi Array**	**62.61**	**316**			P	**P**	**17 09 44.5**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=90,slow=8.4,SNR=35								
	comp=Z,1.1nm,0.4s								
MAKZ	**Makanchi**	**62.83**	**316**			P	**P**	**17 09 45.8**	**+0.2**
MAKZ						IAmb	IAmb	17 09 55.2	
	comp=Z,5.4nm,1.4s								
KURK	**Kurchatov**	**65.61**	**320**			P	**P**	**17 10 03.8**	**+0.1**
KURK						IAmb	IAmb	17 10 04.6	
	comp=Z,4.3nm,0.9s								
KURBB	**Kurchatov Arra**	**65.65**	**320**			P	**P**	**17 10 03.9**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=99,slow=6.7,SNR=22								
	comp=Z,2.7nm,0.8s								
ILAR	**Eielson Array**	**67.67**	**25**			P	**P**	**17 10 16.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=252,slow=5.8,SNR=8.0								
	comp=Z,0.3nm,0.5s								
BVAR	**Borovoye Array**	**70.90**	**322**			P	**P**	**17 10 37.1**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=101,slow=8.9,SNR=18								
	comp=Z,2.2nm,0.6s								
ABKAR	**Akbulak array**	**77.61**	**318**			P	**P**	**17 11 15.6**	**-0.5**
YKA	**Yellowknife Ar**	**81.90**	**28**			P	**P**	**17 11 39.5**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=285,slow=5.7,SNR=2.7								
	comp=Z,0.2nm,0.7s								
NVAR	**Mina Array Bea**	**85.44**	**52**			P	**P**	**17 11 59.4**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=289,slow=2.8,SNR=2.8								
	comp=Z,0.3nm,0.4s								
PDAR	**Pinedale Array**	**90.59**	**46**			P	**P**	**17 12 21.5**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=278,slow=8.1,SNR=1.1								
	comp=Z,0.1nm,0.4s								
FINES	**FINESS Array B**	**91.76**	**336**			P	**P**	**17 12 26.4**	**-0.9**
	comp=Z,1.8nm,1.0s,baz=52,slow=7.2,SNR=5.6								
	comp=Z,1.8nm,1.0s								
DBIC	**Dimbokro**	**145.22**	**304**		PKPbc		**PKPab**	**17 18 58.5**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=45,slow=3.4,SNR=4.3								

*IDC **13** 17:00:50.1±0.8, 11°.19N×124°.97E, h0km, mb4.0/14, mbtmp4.0/14, MS3.5/18, Error ellipse: s-maj=39.2km s-min=17.4km az=74.0*
*NEIC **13** 17:00:51.5±1.4, 11°.3N±0°.1×124°.7E±0°.2, h10km±1km, mb4.5/8, Error ellipse: s-maj=25.9km s-min=18.1km az=111.0*
ISC 13 17:00:51.5±0.6, 11°.18N±0°.09×124°.9E±0°.1, h10km, n46, σ1s06/26, mb3.9/17, MS3.5/16, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**8.67**	**227**			Pn	**Pn**	**17 02 58.0**	**+0.9**
SBUM	**Sibu**	**15.24**	**236**			P	**Pn**	**17 04 26.9**	**0.0**
JOW	**Kunigami**	**15.90**	**11**			LR	LR	17 11 16.0	
	comp=Z,53nm,18.2s,baz=156,slow=39								
UBPT	**Khong Chiam**	**19.30**	**284**			P	**P**	**17 05 14.5**	**-2.3**
UBPT						IAmb	IAmb	17 05 22.0	
	comp=Z,45nm,1.5s								
GUMO	**Guam**	**19.69**	**81**			LR	LR	17 11 18.5	
	comp=Z,98nm,21.3s,baz=297,slow=32								
JNU	**Nakatsue**	**22.52**	**13**			LR	LR	17 15 16.2	
	comp=Z,39nm,19.4s,baz=188,slow=38								
LEM	**Lembang**	**24.79**	**225**			LR	LR	17 17 16.0	
	comp=Z,123nm,19.8s,baz=262,slow=40								
JHJ	**Hachijo jima 2**	**25.78**	**30**			LR	LR	17 14 21.4	
	comp=Z,90nm,21.2s,baz=86,slow=32								
CMAR	**Chiang Mai Arr**	**26.05**	**289**			P	**P**	**17 06 27.4**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=101,slow=7.2,SNR=4.6								
CMAR						LR	LR	17 18 17.5	
	comp=Z,33nm,18.7s,baz=130,slow=40								
	comp=Z,0.5nm,0.7s								
KSRS	**Korea Array**	**26.30**	**6**			P	**P**	**17 06 28.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=143,slow=14,SNR=1.4								
	comp=Z,1.5nm,0.8s								
MJAR	**Matsushiro Arr**	**27.98**	**23**			LR	LR	17 16 46.4	
	comp=Z,62nm,20.9s,baz=204,slow=34								
WRA	**Warramunga Arr**	**32.31**	**163**			P	**P**	**17 07 21.3**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=342,slow=9.2,SNR=3.2								
	comp=Z,0.6nm,0.6s								
WB2	**Warramunga Arr**	**32.31**	**163**			P	**P**	**17 07 21.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**33.47**	**9**			P	**P**	**17 07 30.6**	**-0.2**
USRK	**Ussuriysk Ar.**	**33.47**	**9**			P	**P**	**17 07 30.7**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=194,slow=7.3,SNR=4.4								
	comp=Z,2.6nm,0.8s								
AS31	**Alice Springs**	**35.75**	**166**			P	**P**	**17 07 50.7**	**0.0**
ASAR	**Alice Springs**	**35.75**	**166**			P	**P**	**17 07 51.2**	**+0.5**
ASAR	**Alice Springs**	**35.75**	**166**			P	**P**	**17 07 51.0**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=349,slow=6.8,SNR=13								
ASAR						PcP	**PcP**	**17 10 18.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=354,slow=2.5,SNR=1.4								
	comp=Z,1.2nm,0.7s								
GTA	**Gaotai**	**35.85**	**326**			P	**P**	**17 07 50.0**	**-1.6**
GTA						pP	pP	17 07 53.8	-0.9
GTA						pmax	pmax		
	comp=Z,2.0nm,1.2s								
SONM	**Songino Array**	**39.69**	**340**			P	**P**	**17 08 25.5**	**+1.5**
	comp=Z,1.5nm,1.0s,baz=158,slow=8.7,SNR=4.6								
SONM						LR	LR	17 23 40.7	
	comp=Z,70nm,19.8s,baz=206,slow=34								
	comp=Z,1.5nm,1.0s								
HNR	**Honiara**	**40.47**	**119**			LR	LR	17 24 43.0	
	comp=Z,441nm,19.6s,baz=214,slow=36								
H11S3	**WAKE ISLAND Hy**	**41.01**	**75**			T	T	17 51 15.7	
	baz=263								
H11S1	**WAKE ISLAND Hy**	**41.02**	**75**			T	T	17 51 22.3	
	baz=263								
H11S2	**WAKE ISLAND Hy**	**41.03**	**75**			T	T	17 51 30.8	
	baz=263								
H11N1	**WAKE ISLAND Hy**	**41.30**	**73**			T	T	17 52 10.1	
	baz=268,slow=74								
H11N2	**WAKE ISLAND Hy**	**41.31**	**73**			T	T	17 52 03.4	
	baz=268								
H11N3	**WAKE ISLAND Hy**	**41.32**	**73**			T	T	17 51 56.5	
	baz=268,slow=74								
BBOO	**Buckleboo**	**45.04**	**167**			P	**P**	**17 09 06.7**	**-0.8**
YAK	**Yakutsk**	**50.88**	**3**			LR	LR	17 34 18.1	
	comp=Z,42nm,18.2s,baz=226,slow=40								
ZALV	**Zalesovo Beam**	**53.16**	**332**			P	**P**	**17 10 11.2**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=103,slow=7.0,SNR=4.3								
	comp=Z,0.9nm,0.6s								
KURBB	**Kurchatov Arra**	**54.54**	**326**			P	**P**	**17 10 18.7**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=99,slow=6.9,SNR=4.8								
	comp=Z,1.0nm,0.7s								
TIXI	**Tiksi**	**60.47**	**1**			LR	LR	17 37 19.3	
	comp=Z,38nm,21.2s,baz=208,slow=36								
NRIK	**Noril'sk**	**62.79**	**346**			P	**P**	**17 11 17.5**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=140,slow=8.0,SNR=5.4								
NRIK						LR	LR	17 39 28.6	
	comp=Z,56nm,18.5s,baz=149,slow=37								
	comp=Z,2.5nm,0.8s								
ARU	**Arti**	**67.70**	**327**			LR	LR	17 45 23.0	
	comp=Z,50nm,19.5s,baz=89,slow=39								
B20K	**Meade River**	**75.45**	**20**			P	**P**	**17 12 34.5**	**-0.8**
B20K						IAmb	IAmb	17 12 39.0	
	comp=Z,8.9nm,1.5s								
B21K	**Ikpikpuk River**	**76.29**	**21**			P	**P**	**17 12 39.7**	**-0.4**
B21K						IAmb	IAmb	17 12 50.6	
	comp=Z,8.3nm,1.4s								
SPITS	**Spitsbergen Ar**	**82.85**	**349**			P	**P**	**17 13 15.0**	**-0.7**
	comp=Z,8.3nm,0.8s,baz=86,slow=8.8,SNR=2.4								
	comp=Z,8.3nm,0.8s								
ARCES	**ARCESS Array B**	**82.86**	**340**			P	**P**	**17 13 15.7**	**-0.2**
	comp=Z,4.6nm,1.1s,baz=89,slow=6.2,SNR=6.7								
	comp=Z,4.6nm,1.1s								
FINES	**FINESS Array B**	**84.43**	**332**			P	**P**	**17 13 22.8**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=90,slow=4.2,SNR=2.5								
	comp=Z,1.4nm,0.6s								
AKASG	**Mid Array Ba**	**84.98**	**321**			P	**P**	**17 13 27.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=69,slow=3.8,SNR=4.8								
	comp=Z,0.2nm,0.3s								
MLR	**Muntele Rosu**	**88.28**	**316**			LR	LR	17 56 06.5	
	comp=Z,62nm,19.4s,baz=50,slow=38								
JMIC	**Jan Mayen**	**92.22**	**346**			LR	LR	17 58 33.1	
	comp=Z,16nm,18.6s,baz=322,slow=38								
VRAC	**Vranov**	**93.18**	**322**			LR	LR	17 59 17.4	
	comp=Z,45nm,18.3s,baz=136,slow=38								
YKA	**Yellowknife Ar**	**93.49**	**24**			P	**P**	**17 14 07.8**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=270,slow=4.9,SNR=3.3								
	comp=Z,0.3nm,0.9s								
MBAR	**Mbarara**	**94.15**	**270**			LR	LR	17 56 16.2	
	comp=Z,30nm,18.8s,baz=103,slow=35								
DAVOX	**Davos/Dischmat**	**98.32**	**321**			LR	LR	17 59 52.2	
	comp=Z,36nm,21.8s,baz=84,slow=36								

*IDC **13** 17:17:51.5±1.9, 30°.10N×140°.97E, h47km±21km, mb3.4/7, mbtmp3.7/10, ML2.2/2, MS3.0/4, Error ellipse: s-maj=55.5km s-min=14.3km az=74.0*
*JMA **13** 17:17:51.8±0.2, 30°.N±1°×14°.1E±°, h44km, MV3.7/20, NEAR TORISHIMA IS*
ISC 13 17:17:52.0±0.8, 29°.99N±0°.06×140°.9E±0°.2, h50km, n21, σ2s12/22, mb3.6/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.11**	**158**		*eS*		**Sn**	**17 19 15.5**	**+1.0**
JCJ	**Chichijima**	**3.11**	**158**		P		**Pn**	**17 18 39.5**	**+0.9**
	89nm,0.6s,baz=329,slow=21,SNR=2.1								
JCJ						S	**Sn**	**17 19 11.1**	**-3.5**
	157nm,0.3s,baz=284,slow=22,SNR=10								
JCJ						LR	LR	17 19 35.3	
	comp=Z,101nm,18.9s,baz=103,slow=33								
JHJ2	**Mitsune**	**3.23**	**344**		*eS*		**Sn**	**17 19 16.2**	**-1.3**
JHJ	**Hachijo jima 2**	**3.25**	**344**		P		**Pn**	**17 18 40.1**	**-0.3**
	1.5nm,0.3s,baz=127,slow=20,SNR=1.2								
JHJ						S	**Sn**	**17 19 14.6**	**-3.2**
	123nm,0.8s,baz=75,slow=18,SNR=2.0								
	54nm,0.7s								
BSO1	**Boso 1**	**4.65**	**1**		*eP*		**Pn**	**17 19 01.2**	**+2.1**
BSO3	**Boso 3**	**4.80**	**357**		*eP*		**Pn**	**17 19 03.3**	**+1.8**
JRY	**Ryogami san**	**6.23**	**345**		*eP*		**Pn**	**17 19 25.3**	**+4.0**
JAG	**Ashikaga**	**6.52**	**350**			P	**Pn**	**17 19 27.8**	**+2.4**
JHO	**Hitachi**	**6.60**	**358**			P	**Pn**	**17 19 27.7**	**+1.2**
JHO						S	**Sn**	**17 20 36.3**	**-4.0**
MJAR	**Matsushiro Arr**	**6.90**	**342**			P	**Pn**	**17 19 30.3**	**-0.2**
	baz=158,slow=13,SNR=1.4								
	0.9nm,0.7s								
JOW	**Kunigami**	**11.52**	**257**			LR	LR	17 24 25.4	
	comp=Z,87nm,20.9s,baz=290,slow=34								
KLR	**Kul'dur**	**20.43**	**343**			P	**P**	**17 22 27.0**	**+2.1**
	0.8nm,0.4s,baz=153,slow=7.9,SNR=2.8								
CMAR	**Chiang Mai Arr**	**39.71**	**263**			P	**P**	**17 25 21.0**	**+1.3**
	0.7nm,0.7s,baz=64,slow=6.4,SNR=6.1								
CMAR						LR	LR	17 41 30.6	
	comp=Z,7.9nm,20.5s,baz=65,slow=36								
	0.7nm,0.7s								
MMRI	**Maumere**	**42.38**	**208**			P	**P**	**17 25 41.1**	**-0.5**
MKAR	**Makanchi Array**	**47.76**	**308**			P	**P**	**17 26 23.8**	**-0.2**
	0.3nm,0.7s,baz=78,slow=9.0,SNR=2.7								
	0.3nm,0.7s								
WRA	**Warramunga Arr**	**50.04**	**188**			P	**P**	**17 26 41.5**	**-0.2**
	0.7nm,0.7s,baz=23,slow=7.3,SNR=4.7								
	0.7nm,0.7s								
ASAR	**Alice Springs**	**53.77**	**188**			P	**P**	**17 27 09.3**	**-0.2**
	0.2nm,0.5s,baz=5.7,slow=5.9,SNR=5.5								
	0.2nm,0.5s								
BVAR	**Borovoye Array**	**55.14**	**316**			P	**P**	**17 27 17.0**	**-2.1**
	0.2nm,0.5s,baz=90,slow=3.0,SNR=2.0								
	0.2nm,0.5s								
STKA	**Stephens Creek**	**61.54**	**179**			LR	LR	17 55 10.2	
	comp=Z,50nm,18.0s,baz=198,slow=36								
FINES	**FINESS Array B**	**74.84**	**333**			P	**P**	**17 29 27.3**	**+0.4**
	3.7nm,1.1s,baz=39,slow=7.3,SNR=5.5								
	3.7nm,1.1s								
BRTR	**Keskin Array B**	**83.19**	**312**			P	**P**	**17 30 14.1**	**+0.9**
	1.2nm,0.9s,baz=90,slow=2.5,SNR=6.2								
	1.2nm,0.9s								

*IDC **13** 17:19:00.5±1.0, 23°.23N×123°.45E, h0km, mb3.5/10, mbtmp3.5/11, ML2.8/1, Error ellipse: s-maj=28.4km s-min=20.2km az=67.0*
*JMA **13** 17:19:02.1±0.2, 23°.2N±0°.9×123°.5E±0°.6, h55km, MV3.3/19, NEAR ISHIGAKIJIMA ISLAND*
ISC 13 17:19:02.3±2.0, 23°.22N±0°.06×123°.49E±0°.04, h14km±12km, n31, σ1s17/44, mb3.4/10, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.88**	**19**			P	**Pg**	**17 19 19.7**	**+0.3**
HATJ						S	**Sb**	**17 19 32.3**	**+1.3**
JKRS	**Kuro-shima**	**1.12**	**25**			P	**Pb**	**17 19 23.1**	**-0.3**
JKRS						S	**Sb**	**17 19 38.1**	**+0.3**
IRIF	**Iriomote-Funau**	**1.13**	**11**			P	**Pb**	**17 19 23.4**	**-0.3**
IRIF					*eS*		**Sb**	**17 19 38.3**	**+0.1**
JIJ	**Ishigaki jima**	**1.29**	**28**		*i* P		**Pn**	**17 19 25.1**	**-0.7**
JIJ						S	**Sb**	**17 19 41.1**	**-1.5**
YOJ	**Yonaguni jima**	**1.31**	**341**			P	**Pn**	**17 19 26.0**	**-0.2**
YOJ	**Yonaguni jima**	**1.31**	**341**			P	**Pn**	**17 19 25.9**	**-0.2**
YOJ						S	**Sb**	**17 19 42.9**	**-0.5**
JYNG	**Yonagunijimaku**	**1.32**	**338**			P	**Pn**	**17 19 26.0**	**-0.3**
JYNG					*eS*		**Sb**	**17 19 42.3**	**-1.4**
JISG	**Ishigakijimahi**	**1.56**	**29**			P	**Pn**	**17 19 28.7**	**-0.8**
JISG						S	**Sn**	**17 19 48.7**	**-0.7**
JTJ	**Tarama**	**1.80**	**38**			P	**Pn**	**17 19 32.5**	**-0.4**
JTJ						S	**Sn**	**17 19 55.1**	**-0.3**
NACB	**Ninganchiao**	**1.98**	**299**			P	**Pn**	**17 19 33.8**	**-1.5**
YULB	**Yu-li**	**2.02**	**275**			P	**Pn**	**17 19 34.2**	**-1.7**
JIRB	**Irabujima**	**2.22**	**44**			P	**Pn**	**17 19 37.9**	**-0.8**
JIRB						S	**Sn**	**17 20 04.9**	**-1.0**
TWGBT	**Beinan**	**2.25**	**260**			P	**Pn**	**17 19 37.5**	**-1.6**
JMJ2	**Miyako jima3**	**2.26**	**48**			P	**Pn**	**17 19 38.7**	**-0.5**
JMJ2					*eS*		**Sn**	**17 20 06.5**	**-0.4**
JOGS	**Gusukube**	**2.33**	**48**			P	**Pn**	**17 19 39.8**	**-0.4**
JOGS					*eS*		**Sn**	**17 20 08.3**	**-0.2**
JIKM	**Ikemajima**	**2.34**	**43**			P	**P

LL6C				*e*S		Sn	17 24 58.2	+0.5
LL6C				*i*			17 24 59.4	
	comp=Z,78nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.68**	**89**	*e*P		Pn	17 24 08.2	-1.2
CRJC				*e*S		Sn	17 24 59.3	-3.2
CRJC				*i*			17 25 02.5	
	comp=Z,258nm,0.4s							
OCAC	**Ocana**	**5.08**	**122**	*e*P		Pn	17 24 14.2	-0.8
OCAC				*e*S		Sn	17 25 12.1	-0.4
OCAC				*i*			17 25 17.0	
	comp=Z,188nm,0.4s							
CBOC	**Ciudad Bolivar**	**5.36**	**162**	*e*P		Pn	17 24 20.3	+1.4
CBOC				*e*S		Sn	17 25 17.5	-2.1
PTBC	**PUERTO BERRIO,**	**5.45**	**144**	*e*P		Pn	17 24 19.5	-0.4
PTBC				*e*S		Sn	17 25 20.2	-1.2
PTBC				*i*			17 25 22.3	
	comp=Z,34nm,0.5s							
URIC	**Uribia, Colomb**	**5.59**	**82**	*e*P		Pn	17 24 20.7	-1.1
URIC				*e*S		Sn	17 25 23.6	-1.2
URIC				*i*			17 25 26.2	
	comp=Z,92nm,0.3s							
NORC	**Norcasia**	**6.07**	**153**	*e*P		Pn	17 24 29.5	+1.0
NORC				*e*S		Sn	17 25 32.2	-4.7
PAMC	**Pamplona, Colo**	**6.10**	**126**	*e*P		Pn	17 24 29.7	+0.4
PAMC				*e*S		Sn	17 25 38.0	-0.1
PAMC				*i*			17 25 47.2	
	comp=Z,56nm,0.5s							
GUY2C	**Guyana, Caldas**	**6.18**	**158**	*e*P		Pn	17 24 32.3	+1.9
GUY2C				*e*S		Sn	17 25 42.2	+2.1
BARC	**Barichara**	**6.22**	**134**	*e*P		Pn	17 24 30.7	-0.1
BARC				*e*S		Sn	17 25 40.1	-0.8
SPBC	**San Pablo de B**	**6.39**	**146**	*e*P		Pn	17 24 32.8	-0.2
SPBC				*e*S		Sn	17 25 43.2	-1.6
SPBC				*i*			17 25 58.9	
	comp=Z,16nm,0.4s							
ROSC	**El Rosal**	**6.96**	**152**	Pn		Pn	17 24 43.0	+2.0
	comp=Z,6.3nm,0.3s,baz=350,slow=11,SNR=5.7							
ROSC				Sn		Sn	17 26 01.8	+2.5
	comp=Z,5.2nm,0.3s,baz=35,slow=19,SNR=5.5							
	comp=Z,17nm,0.4s							
JTS	**Las Juntas de**	**7.22**	**265**	Pn		Pn	17 24 45.3	+1.1
	comp=Z,2.1nm,0.3s,baz=73,slow=19,SNR=2.4							
JTS				Sn		Sn	17 26 04.0	-1.0
	comp=Z,0.9nm,0.3s,baz=347,slow=20,SNR=3.6							
	comp=Z,4.8nm,0.3s							
SDV	**Santo Domingo**	**7.22**	**106**	Pn		Pn	17 24 42.8	-1.7
	comp=Z,1.8nm,0.3s,baz=245,slow=9.6,SNR=3.2							
SDV				Sn		Sn	17 26 02.3	-3.2
	comp=Z,19nm,0.3s,baz=229,slow=19,SNR=14							
	comp=Z,4.9nm,0.3s							
TXAR	**Lajitas Array**	**30.36**	**311**	P		P	17 29 12.0	+2.1
	comp=Z,0.4nm,0.7s,baz=129,slow=8.6,SNR=3.6							
	comp=Z,0.4nm,0.7s							
SIV	**San Ignacio**	**31.45**	**148**	LR		LR	17 44 37.0	
	comp=Z,22nm,18.3s,baz=209,slow=41							
YKA	**Yellowknife Ar**	**57.84**	**341**	P		P	17 32 49.7	+0.7
	comp=Z,0.1nm,0.6s,baz=135,slow=7.4,SNR=3.2							
	comp=Z,0.1nm,0.6s							

IDC 13 17:25:10.9±8.8, 8°77'S×125°97'E, h178^{km}±95^{km}, mb2.7/1, mbtmp3.6/3, Error ellipse: s-maj=151.4km s-min=35.8km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.49**	**129**	P	Pn	17 26 46.8	+2.5
SANI	**Sanana**	**6.68**	**0**	P	Pn	17 26 36.8	-10
KDU	**Kakadu**	**7.48**	**122**	P	Pn	17 27 00.6	+3.3
WRA	**Warramunga Arr**	**13.74**	**145**	P	Pn	17 28 18.4	-0.2
	4.3nm,0.7s,baz=318,slow=14,SNR=19						
WRA				S	Sn	17 30 50.5	-1.0
	1.1nm,0.9s,baz=323,slow=23,SNR=2.2						
WRKA	**Warakurna**	**16.32**	**172**	P	P	17 28 50.1	+0.2
ASAR	**Alice Springs**	**16.64**	**154**	P	Pn	17 28 55.1	+1.0
	1.2nm,0.8s,baz=325,slow=11,SNR=10						
ASAR				S	S	17 31 57.1	-0.8
	2.6nm,1.3s,baz=338,slow=22,SNR=1.0						
QIS	**Mount Isa**	**17.62**	**133**	P	Pn	17 29 14.9	+9.1
MKAR	**Makanchi Array**	**67.60**	**329**	P	P	17 35 48.2	-0.2
	0.1nm,0.5s,baz=124,slow=7.2,SNR=2.2						
	0.1nm,0.5s						

JMA 13 17:36:31.8±0.2, 23°N×1°×123°.5E±0°.8, h59^{km}, MV2.6/19, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.95**	**19**	P	Pn	17 36 49.3	+0.2
HATJ				S	Sn	17 37 01.8	-0.1
JKRS	**Kuro-shima**	**1.19**	**25**	P	Pn	17 36 53.1	+0.8
JKRS				*e*S	Sn	17 37 08.2	+0.7
IRIF	**Iriomote-Funau**	**1.20**	**12**	P	Pn	17 36 52.9	+0.5
IRIF				*e*S	Sn	17 37 08.4	+0.6
JIJ	**Ishigaki jima**	**1.35**	**27**	P	Pn	17 36 54.7	+0.2
JIJ				*e*S	Sn	17 37 10.8	-0.7
YOJ	**Yonaguni jima**	**1.36**	**342**	*e*S	Sn	17 37 11.7	0.0
JYNG	**Yonagunijimaku**	**1.37**	**340**	P	Pn	17 36 54.7	0.0
JYNG				*e*S	Sn	17 37 12.2	+0.2
JISG	**Ishigakijimahi**	**1.62**	**28**	P	Pn	17 36 58.4	+0.3
JISG				S	Sn	17 37 18.0	0.0
JTJ	**Tarama**	**1.86**	**37**	P	Pn	17 37 02.0	+0.7
JTJ				*e*S	Sn	17 37 24.8	+1.0
JIRB	**Irabujima**	**2.28**	**43**	P	Pn	17 37 07.5	+0.5
JIRB				*e*S	Sn	17 37 34.6	+0.6
JMJ2	**Miyako jima3**	**2.32**	**47**	*e*P	Pn	17 37 08.2	+0.6
JMJ2				*e*S	Sn	17 37 36.0	+1.0
JOGS	**Gusukube**	**2.39**	**48**	*e*S	Sn	17 37 38.0	+1.4
JIKM	**Ikemajima**	**2.40**	**42**	*e*P	Pn	17 37 09.2	+0.5
JIKM				*e*S	Sn	17 37 37.4	+0.6

TAP 13 17:37:09.4, 24°.13N×121°.63E, h10^{km}±1^{km}, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.03**	**346**	P	Pg	17 37 11.6	+0.3
	baz=346						
ETL				S	Sg	17 37 13.1	+0.6
	baz=346						
NACB	**Ninganchiao**	**0.06**	**323**	P	Pg	17 37 11.8	+0.5
	baz=323						
NACB				S	Sg	17 37 13.6	+0.7
	baz=323						
TWD	**Chiawan**	**0.06**	**213**	*e*P	Pg	17 37 12.0	+0.6
	baz=206						
TWD				*e*S	Sg	17 37 14.0	+1.2
	baz=206						
ETLH	**Xiulin Townshi**	**0.16**	**300**	*e*P	Pg	17 37 13.8	+1.0
	baz=299						
ETLH				*e*S	Sg	17 37 16.8	+1.5
	baz=299						
ETM	**Tongmen**	**0.21**	**218**	*e*P	Pg	17 37 14.4	+0.8
	baz=217						
ETM				*e*S	Sg	17 37 17.9	+1.4
	baz=217						

*IDC **13** 18:12:55.7±1.8, 55°.63N×149°.23W, h0^{km}, mb3.7/3, mbtmp3.6/7, ML3.2/4, MS2.7/1, Error ellipse: s-maj=35.9km s-min=24.1km az=57.0*

*NEIC **13** 18:12:55.1±1.7, 55°.71N±0°.07×149°.3W±0°.1, h10^{km}±7^{km}, mb4.0/2, ML4.0/46, ML3.6(AEIC), Error ellipse: s-maj=10.6km s-min=8.6km az=169.0*

*AEIC **13** 18:12:59.9±1.8, 55°.72N±0°.08×149°.3W±0°.1, h6^{km}±7^{km}, Error ellipse: s-maj=12.0km s-min=9.3km az=173.0*

ISC 13 18:12:56.1±1.0, 55°.81N±0°.08×149°.26W±0°.06, h10^{km}, n192, σ1°.16/187, mb3.7/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.64**	**304**	Pn	**Pn**	**18 13 38.6**	**-0.1**
OHAK	**Old Harbor**	**2.64**	**304**		**Sn**	**18 14 09.2**	**-1.6**
OHAK	**Old Harbor**	**2.64**	**304**	IAML		18 14 16.8	
	comp=E,110nm,0.5s						
OHAK				IAML		18 14 17.6	
	comp=N,110nm,0.6s						
OHAK	**Old Harbor**	**2.64**	**304**	P	**Pn**	**18 13 38.6**	**-0.1**
	baz=122						
OHAK				S	**Sn**	**18 14 09.2**	**-1.6**
	baz=122						
KDAK	**Kodiak Island**	**2.69**	**319**	Pn	**Pn**	**18 13 39.5**	**+0.1**
KDAK	**Kodiak Island**	**2.69**	**319**		**Sn**	**18 14 10.7**	**-1.4**
KDAK	**Kodiak Island**	**2.69**	**319**	Pn	**Pn**	**18 13 40.0**	**+0.5**
	comp=N,3.4nm,0.3s,baz=138,slow=5.7,SNR=32						
KDAK				Sn	**Sn**	**18 14 11.5**	**-0.6**
	comp=N,8.6nm,0.3s,baz=37,slow=20,SNR=8.1						
KDAK				LR	LR	18 14 57.3	
	comp=N,143nm,20.7s,baz=168,slow=43						
	comp=N,8.9nm,0.3s						
SII	**Sitkinak Islan**	**2.85**	**287**		**Pn**	**18 13 41.1**	**-0.6**
SII	**Sitkinak Islan**	**2.85**	**287**		**Sn**	**18 14 13.5**	**-2.5**
SII	**Sitkinak Islan**	**2.85**	**287**	IAML		18 14 20.8	
	comp=E,270nm,0.8s						
SII				IAML		18 14 24.3	
	comp=N,230nm,0.7s						
SII	**Sitkinak Islan**	**2.85**	**287**	P	**Pn**	**18 13 40.9**	**-0.7**
	baz=105						
Q20K	**Shuyak Island**	**3.28**	**330**	P	**Pn**	**18 13 48.0**	**+0.5**
	baz=148						
Q20K				S	**Sn**	**18 14 26.9**	**+0.3**
	baz=148						
SYI	**Shuyak Island**	**3.28**	**330**	Pn	**Pn**	**18 13 47.6**	**+0.1**
SYI	**Shuyak Island**	**3.28**	**330**		**Sn**	**18 14 26.5**	**-0.1**
SYI	**Shuyak Island**	**3.28**	**330**	IAML		18 14 35.8	
	comp=N,80nm,1.4s						
SYI				IAML		18 14 51.3	
	comp=E,90nm,2.7s						
R18K	**Karluk**	**3.36**	**304**		**Pn**	**18 13 49.2**	**+0.6**
R18K	**Karluk**	**3.36**	**304**	IAML		18 14 37.2	
	comp=E,198nm,0.4s						
R18K				IAML		18 14 42.6	
	comp=N,254nm,0.5s						
R18K	**Karluk**	**3.36**	**304**	P	**Pn**	**18 13 49.2**	**+0.6**
	baz=121						
CHIR	**Chirikof Islan**	**3.59**	**273**	Pn	**Pn**	**18 13 50.6**	**-1.2**
CHIR				IAML		18 14 49.8	
	comp=E,161nm,2.6s						
CHIR				IAML		18 15 43.4	
	comp=N,244nm,2.6s						
CNPM	**China Poot**	**3.88**	**345**	Pn	**Pn**	**18 13 55.9**	**+0.2**
CNPM	**China Poot**	**3.88**	**345**		**Sn**	**18 14 40.7**	**-0.5**
CNPM	**China Poot**	**3.88**	**345**	IAML		18 14 49.5	
	comp=N,91nm,0.4s						
CNPM				IAML		18 14 50.5	
	comp=E,72nm,0.5s						
Q19K	**Cape Douglas,**	**3.93**	**325**		**Pn**	**18 13 55.9**	**-0.5**
Q19K				IAML		18 14 57.3	
	comp=N,391nm,0.8s						
Q23K	**Middleton Isla**	**3.95**	**22**	Pn	**Pn**	**18 13 56.3**	**-0.4**
Q23K				IAML		18 14 34.7	
	comp=N,332nm,3.0s						
MID	**Middleton Isla**	**3.96**	**22**	Pn	**Pn**	**18 13 56.3**	**-0.4**
MID				IAML		18 14 43.1	
	comp=N,302nm,2.5s						
BRSE	**Bradley Lake S**	**4.02**	**349**		**Pn**	**18 13 57.8**	**+0.1**
BRSE					**Sn**	**18 14 44.5**	**-0.4**
BRSE	**Bradley Lake S**	**4.02**	**349**	P	**Pn**	**18 13 57.8**	**+0.1**
	baz=168						
BRSE				S	**Sn**	**18 14 44.5**	**-0.4**
	baz=168						
BRLK	**Bradley Lake**	**4.06**	**348**		**Pn**	**18 13 57.7**	**-0.6**
HOM	**Homer**	**4.07**	**343**	Pn	**Pn**	**18 13 57.1**	**-1.1**
HOM				IAML		18 16 29.7	
	comp=E,274nm,2.1s						
ACHA	**Angle Creek He**	**4.10**	**308**		**Pn**	**18 13 60.0**	**+1.2**
PLK3	**Peulik 3**	**4.29**	**299**		**Pn**	**18 14 02.3**	**+0.9**
P23K	**Montague Islan**	**4.32**	**13**		**Pn**	**18 14 02.2**	**+0.4**
P23K	**Montague Islan**	**4.32**	**13**	P	**Pn**	**18 14 02.2**	**+0.4**
	baz=194						
CNTC	**Contact Creek**	**4.38**	**307**		**Pn**	**18 14 03.5**	**+0.9**
Q17K	**Contact Creek**	**4.38**	**307**	P	**Pn**	**18 14 03.5**	**+0.9**
	baz=122						
P19K	**Oil Pt**	**4.40**	**333**	Pn	**Pn**	**18 14 00.1**	**-2.9**
P19K				IAML		18 15 02.7	
	comp=N,111nm,1.0s						
P19K				IAML		18 15 10.3	
	comp=E,103nm,0.7s						
P19K	**Oil Pt**	**4.40**	**333**	P	**Pn**	**18 14 03.8**	**+0.8**
	baz=150						
O22K	**Cooper Landing**	**4.69**	**357**		**Pn**	**18 14 03.2**	**-3.7**
O22K				IAML		18 15 10.0	
	comp=N,161nm,0.7s						
O22K				IAML		18 15 19.7	
	comp=E,149nm,0.8s						
P18K	**Big Mountain,**	**4.82**	**321**		**Pn**	**18 14 07.8**	**-0.8**
P18K	**Big Mountain,**	**4.82**	**321**	P	**Pn**	**18 14 09.0**	**+0.3**
	baz=136						
KAIM	**Kayak Island**	**4.87**	**30**	Pn	**Pn**	**18 14 08.3**	**-1.0**
KAIM	**Kayak Island**	**4.87**	**30**	P	**Pn**	**18 14 09.6**	**+0.3**
	baz=214						
RSO	**Redoubt South**	**5.02**	**340**		**Pn**	**18 14 08.5**	**-3.1**
CAPN	**Captain Cook N**	**5.07**	**349**	Pn	**Pn**	**18 14 11.2**	**-0.8**
EYAK	**Cordova Ski Ar**	**5.10**	**20**		**Pn**	**18 14 13.0**	**+0.5**
EYAK	**Cordova Ski Ar**	**5.10**	**20**	P	**Pn**	**18 14 13.0**	**+0.5**
	baz=203						
P17K	**Kvichak River**	**5.15**	**314**		**Pn**	**18 14 14.3**	**+1.2**
P17K	**Kvichak River**	**5.15**	**314**	P	**Pn**	**18 14 14.3**	**+1.2**
	baz=129						
O18K	**Koktuh Hills**	**5.15**	**324**		**Pn**	**18 14 12.9**	**-0.3**
O18K				IAML		18 15 15.5	
	comp=E,38nm,3.4s						
O18K				IAML		18 15 22.5	
	comp=N,40nm,0.8s						
O18K	**Koktuh Hills**	**5.15**	**324**	P	**Pn**	**18 14 13.4**	**+0.2**
	baz=140						
CHGN	**Chignik**	**5.15**	**279**	Pn	**Pn**	**18 14 11.1**	**-2.1**
CHGN				IAML		18 15 12.8	
	comp=N,59nm,0.2s						
CHGN				IAML		18 15 17.6	
	comp=E,65nm,0.5s						
O19K	**Port Alsworth**	**5.16**	**331**		**Pn**	**18 14 13.2**	**0.0**
O19K				IAML		18 15 15.8	
	comp=N,90nm,0.5s						
O19K				IAML		18 15 32.3	
	comp=E,159nm,0.5s						
SUCK	**Suckling Hills**	**5.18**	**32**		**Pn**	**18 14 14.0**	**+0.4**
SUCK				IAML		18 15 19.1	
	comp=N,149nm,2.5s						
RAGM	**Ragged Mountai**	**5.20**	**26**	Pn	**Pn**	**18 14 13.5**	**-0.3**
RAGM				IAML		18 15 23.5	
	comp=E,127nm,2.0s						
NICHA	**Nichawak Mount**	**5.26**	**30**		**Pn**	**18 14 15.1**	**+0.5**
HMT	**Hamilton**	**5.26**	**28**		**Pn**	**18 14 14.6**	**-0.1**
HMT				IAML		18 15 29.8	
	comp=N,144nm,0.5s						
RC01	**Rabbit Creek A**	**5.30**	**358**	Pn	**Pn**	**18 14 15.3**	**+0.1**
RC01	**Rabbit Creek A**	**5.30**	**358**	P	**Pn**	**18 14 15.3**	**+0.1**
	baz=177						
BERG	**Berg Lake**	**5.46**	**30**		**Pn**	**18 14 17.3**	**-0.2**
GRIN	**Grindle Hills**	**5.48**	**33**		**Pn**	**18 14 18.3**	**+0.5**
SNH	**Sunshine Point**	**5.56**	**35**	Pn	**Pn**	**18 14 18.3**	**-0.5**
KNK	**Knik Glacier**	**5.64**	**4**	Pn	**Pn**	**18 14 19.8**	**-0.1**
N19K	**Bonanza Creek**	**5.72**	**333**	Pn	**Pn**	**18 14 20.6**	**-0.5**
N19K	**Bonanza Creek**	**5.72**	**333**	P	**Pn**	**18 14 20.8**	**-0.3**
	baz=149						
BMRM	**Bremner River**	**5.72**	**23**		**Pn**	**18 14 21.6**	**+0.5**
BMRM	**Bremner River**	**5.72**	**23**	P	**Pn**	**18 14 21.6**	**+0.5**
	baz=207						
SUA	**Susitna One**	**5.72**	**353**	Pn	**Pn**	**18 14 20.4**	**-0.7**
WAX	**Waxell Ridge**	**5.76**	**33**		**Pn**	**18 14 21.1**	**-0.5**
PMR	**Palmer**	**5.80**	**1**	Pn	**Pn**	**18 14 22.7**	**+0.6**
MESA	**MESA**	**5.86**	**39**	Pn	**Pn**	**18 14 23.5**	**+0.4**
STLK	**Strandline Lak**	**5.86**	**348**		**Pn**	**18 14 23.4**	**+0.4**
CRQM	**Cirque**	**5.92**	**31**		**Pn**	**18 14 24.0**	**+0.1**
CRQE	**Cirque**	**5.93**	**31**	P	**Pn**	**18 14 24.0**	**+0.1**
	baz=216						
KLU	**Klutina**	**5.96**	**16**		**Pn**	**18 14 24.8**	**+0.5**
KLU	**Klutina**	**5.96**	**16**	P	**Pn**	**18 14 24.5**	**+0.1**
	baz=198						
GHO	**Glory Hole Cre**	**5.98**	**2**		**Pn**	**18 14 25.5**	**+0.8**
TGL	**Tana Glacier**	**6.01**	**32**		**Pn**	**18 14 25.2**	**+0.2**
BAGL	**Bagley Icefiel**	**6.04**	**36**		**Pn**	**18 14 25.5**	**+0.2**
SML	**Sawmill**	**6.04**	**4**	Pn	**Pn**	**18 14 26.3**	**+0.9**
SML	**Sawmill**	**6.04**	**4**	P	**Pn**	**18 14 26.5**	**+1.1**
	baz=185						
ISLE	**Juniper Island**	**6.04**	**34**		**Pn**	**18 14 25.7**	**+0.2**
O16K	**Kokwok River B**	**6.07**	**312**		**Pn**	**18 14 26.8**	**+1.1**
SCM	**Sheep Creek Mo**	**6.13**	**9**		**Pn**	**18 14 26.9**	**+0.3**
VRDI	**Verde Repeater**	**6.23**	**27**	Pn	**Pn**	**18 14 27.0**	**-1.2**
SVW2	**Sparrevohn**	**6.25**	**331**	Pn	**Pn**	**18 14 28.0**	**-0.3**
KIAG	**Kiagna River**	**6.28**	**32**		**Pn**	**18 14 28.9**	**0.0**
N25K	**Chitina, Valde**	**6.30**	**21**		**Pn**	**18 14 29.4**	**+0.4**
N25K	**Chitina, Valde**	**6.30**	**21**	P	**Pn**	**18 14 29.7**	**+0.7**
	baz=204						
SKT	**Skwentna**	**6.30**	**350**	Pn	**Pn**	**18 14 27.9**	**-1.0**
GLB	**Gilahina Butte**	**6.33**	**24**	Pn	**Pn**	**18 14 29.7**	**+0.4**
GRNC	**Granite Creek**	**6.33**	**36**		**Pn**	**18 14 29.7**	**+0.1**
TABL	**Table Mountain**	**6.33**	**39**		**Pn**	**18 14 30.0**	**+0.5**
SDPT	**Sand Point**	**6.38**	**270**	Pn	**Pn**	**18 14 28.9**	**-1.1**
PTPK	**Patty Peak**	**6.46**	**31**		**Pn**	**18 14 31.8**	**+0.4**
MCARA	**McCarthy VSAT**	**6.47**	**28**	Pn	**Pn**	**18 14 31.9**	**+0.6**
M24K	**Tolsona, Glenn**	**6.51**	**13**	Pn	**Pn**	**18 14 33.2**	**+1.2**
PNL	**Peninsula**	**6.55**	**50**		**Pn**	**18 14 32.7**	**+0.3**
PNL	**Peninsula**	**6.55**	**50**	P	**Pn**	**18 14 32.7**	**+0.3**
	baz=238						
BCPM	**Bancas Point**	**6.60**	**47**		**Pn**	**18 14 33.1**	**0.0**
BARN	**Barnard Glacie**	**6.60**	**34**		**Pn**	**18 14 33.6**	**+0.3**
O15K	**Ungalikthiuk R**	**6.62**	**305**		**Pn**	**18 14 33.9**	**+0.6**
O15K	**Ungalikthiuk R**	**6.62**	**305**	P	**Pn**	**18 14 33.9**	**+0.6**
	baz=117						
CTG	**Chitna Glacier**	**6.64**	**36**	P	**Pn**	**18 14 33.9**	**+0.3**
	baz=222						
CTGM	**Chitina Glacie**	**6.64**	**36**		**Pn**	**18 14 33.7**	**-0.1**
LOGN	**Logan Glacier**	**6.65**	**37**		**Pn**	**18 14 33.4**	**-0.4**
M17K	**Holitna River**	**7.04**	**326**		**Pn**	**18 14 40.1**	**+1.0**
N15K	**Kwethluk River**	**7.22**	**312**		**Pn**	**18 14 43.1**	**+1.4**
O29M	**Mount Kennedy**	**7.24**	**47**		**Pn**	**18 14 41.7**	**-0.2**
O29M	**Mount Kennedy**	**7.24**	**47**	P	**Pn**	**18 14 42.6**	**+0.7**
	baz=236						
P29M	**Windy Craggy**	**7.26**	**53**		**Pn**	**18 14 41.9**	**-0.2**
P29M	**Windy Craggy**	**7.26**	**53**	P	**Pn**	**18 14 42.6**	**+0.4**
	baz=243						
O14K	**Tigyukauivet M**	**7.32**	**303**	Pn	**Pn**	**18 14 42.1**	**-0.9**
DHY	**Denali Highway**	**7.35**	**7**	Pn	**Pn**	**18 14 44.3**	**+0.8**
S31K	**Pelican**	**7.46**	**68**	Pn	**Pn**	**18 14 42.3**	**-2.5**
L18K	**Granite Mounta**	**7.48**	**332**	Pn	**Pn**	**18 14 44.8**	**-0.4**
YUK7	**Dusty Glacier**	**7.54**	**47**		**Pn**	**18 14 47.5**	**+1.3**
M27K	**Edge Creek, AK**	**7.58**	**27**	Pn	**Pn**	**18 14 47.5**	**+0.8**
RND	**Reindeer**	**7.62**	**1**	Pn	**Pn**	**18 14 48.2**	**+1.0**
TRF	**Thorofare Moun**	**7.68**	**357**	Pn	**Pn**	**18 14 48.7**	**+0.6**
MENT	**Mentasta**	**7.69**	**19**	Pn	**Pn**	**18 14 48.7**	**+0.6**
CAST	**Castle Rocks**	**7.77**	**351**		**Pn**	**18 14 50.4**	**+1.3**
CAST	**Castle Rocks**	**7.77**	**351**	P	**Pn**	**18 14 51.5**	**+2.5**
	baz=168						
KTH	**Kantishna Hill**	**7.81**	**355**	Pn	**Pn**	**18 14 49.4**	**-0.4**
YUK4	**Talbot Arm**	**7.84**	**41**	P	**Pn**	**18 14 53.4**	**+3.2**
	baz=229						
L16K	**Owhat River**	**7.94**	**322**	Pn	**Pn**	**18 14 51.3**	**-0.1**
HYT	**Haines Junctio**	**7.97**	**46**	Pn	**Pn**	**18 14 51.5**	**-0.5**
L27K	**Beaver Creek,**	**8.20**	**24**	Pn	**Pn**	**18 14 54.5**	**-0.5**
BCAR	**Beaver Creek A**	**8.21**	**25**	Pn	**Pn**	**18 14 54.6**	**-0.6**
RIDG	**Independent Ri**	**8.26**	**14**	Pn	**Pn**	**18 14 54.6**	**-1.3**
S32K	**Killisnoo**	**8.27**	**72**	Pn	**Pn**	**18 14 53.5**	**-2.4**
M14K	**Bethel**	**8.32**	**312**	Pn	**Pn**	**18 14 55.0**	**-1.6**
SKAG	**Skagway**	**8.32**	**58**	Pn	**Pn**	**18 14 55.5**	**-1.1**
BPAW	**Bear Paw Mtn.**	**8.36**	**355**	Pn	**Pn**	**18 14 54.0**	**-3.3**
R32K	**Eaglecrest**	**8.41**	**67**	Pn	**Pn**	**18 14 56.5**	**-1.4**
JIS	**Juneau Island**	**8.48**	**67**	Pn	**Pn**	**18 14 57.7**	**-1.1**
N30M	**Aishikik Lake**	**8.50**	**43**		**Pn**	**18 14 60.0**	**+0.8**
O30M	**Mendenhall**	**8.53**	**49**	Pn	**Pn**	**18 14 59.2**	**+0.1**
SCRK	**Sand Creek**	**8.61**	**16**	Pn	**Pn**	**18 15 00.2**	**-0.5**
M29M	**Somme Creek**	**8.66**	**35**		**Pn**	**18 15 02.5**	**+1.1**
HDA	**Harding Lake**	**8.71**	**7**	Pn	**Pn**	**18 15 02.7**	**+0.8**
WRH	**Wood River Hil**	**8.71**	**3**	Pn	**Pn**	**18 15 02.6**	**+0.6**
J20K	**Nowinta River**	**8.74**	**346**	Pn	**Pn**	**18 15 01.6**	**-0.8**
M13K	**Dall Lake**	**8.76**	**308**	Pn	**Pn**	**18 15 02.8**	**+0.1**
CCB	**Clear Creek Bu**	**8.90**	**4**	Pn	**Pn**	**18 15 03.7**	**-0.8**
L14K	**Kuka Creek**	**8.93**	**314**		**Pn**	**18 15 05.3**	**+0.4**
WHY	**Whitehorse**	**9.00**	**51**		**Pn**	**18 15 05.1**	**-1.0**
J25K	**Salcha River,**	**9.04**	**11**	Pn	**Pn**	**18 15 05.0**	**-1.5**
IL31		**9.07**	**6**		**Pn**	**18 15 06.5**	**-0.4**
ILAR	**Eielson Array**	**9.07**	**6**	Pn	**Pn**	**18 15 05.9**	**-1.0**
ILAR	**Eielson Array**	**9.07**	**6**	Pn	**Pn**	**18 15 08.8**	**+2.0**
	comp=N,0.3nm,0.3s,baz=189,slow=14,SNR=14						
ILAR				Sn	**Sn**	**18 16 46.7**	**-2.2**
	comp=N,0.2nm,0.3s,baz=184,slow=21,SNR=7.3						
	comp=N,1.1nm,0.6s						
P32M	**Atlin**	**9.14**	**59**	Pn	**Pn**	**18 15 07.6**	**-0.3**
J26L	**Joseph Creek**	**9.17**	**16**		**Pn**	**18 15 08.1**	**-0.2**
MDM	**Murphy Dome**	**9.20**	**3**	Pn	**Pn**	**18 15 09.4**	**+0.8**
L29M	**L29M**	**9.24**	**33**		**Pn**	**18 15 10.7**	**+1.4**
M30M	**Minto, Yukon**	**9.31**	**38**	Pn	**Pn**	**18 15 10.1**	**-0.1**
J16K	**Anvik River**	**9.44**	**327**	Pn	**Pn**	**18 15 11.6**	**-0.4**
WRAK	**Wrangell Islan**	**9.47**	**79**	Pn	**Pn**	**18 15 10.8**	**-1

QRZ	Quartz Range	17.26	200	P	P	18 18 43.2	-1.0
MRNZ	Matariki Terra	17.72	199	P	P	18 18 47.2	-1.4
THZ	Tophouse	18.01	198	P	P	18 18 49.9	-1.3
LTZ	Lake Taylor	19.13	198	P	P	18 19 00.1	-1.4
INZ	Inchbonnie	19.32	200	P	P	18 19 02.0	-1.2
INZ	comp=Z,25nm,0.7s			IAmb	IAmb	18 19 03.9	
OXZ	Oxford	19.70	198	P	P	18 19 05.2	-1.4
RPZ	Rata Peaks	20.34	200	P	P	18 19 11.0	-1.5
RPZ	Rata Peaks	20.34	200	P	P	18 19 11.6	-0.9
	comp=Z,9.2nm,0.5s,baz=320,slow=3.1,SNR=13 comp=Z,9.2nm,0.5s						
WKZ	Wanaka	21.99	202	P	P	18 19 25.7	-1.7
WKZ	comp=Z,39nm,1.2s			IAmb	IAmb	18 19 59.6	
EIDS	Eidsvold	26.45	263	P	P	18 20 06.8	-0.5
CTAO	Charters Tower	31.76	272	P	P	18 20 53.9	+0.3
CTAO	comp=Z,28nm,1.4s			IAmb	IAmb	18 21 10.0	
TAU	Tasmania Unive	32.54	228	P	P	18 20 59.3	-0.6
TAU	comp=Z,40nm,1.2s			IAmb	IAmb	18 21 28.0	
STKA	Stephens Creek	34.65	249	P	P	18 21 18.2	+0.2
STKA	Stephens Creek	34.65	249	P	P	18 21 18.6	+0.6
	comp=Z,1.5nm,0.4s,baz=90,slow=9.1,SNR=9.4 comp=Z,1.5nm,0.4s						
INKA	Innaminka	35.49	256	P	P	18 21 22.5	-2.5
COEN	Coen	36.53	280	P	P	18 21 34.5	+0.7
BBOO	Buckleboo	39.35	248	P	P	18 21 55.8	-0.9
BBOO	comp=Z,14nm,1.1s			IAmb	IAmb	18 22 10.5	
AS31	Alice Springs	42.16	262	P	P	18 22 19.1	-0.2
ASAR	Alice Springs	42.16	262	P	P	18 22 20.3	+1.0
ASAR	Alice Springs	42.16	262	P	P	18 22 19.2	-0.1
	comp=Z,0.9nm,0.3s,baz=92,slow=7.6,SNR=12 comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	42.62	267	P	P	18 22 22.1	-0.8
	comp=Z,1.3nm,0.5s,baz=96,slow=7.2,SNR=2.5 comp=Z,1.3nm,0.5s						
FORT	Forrest	46.26	250	P	P	18 22 49.9	-1.0
FORT	comp=Z,28nm,1.0s			IAmb	IAmb	18 23 00.4	
SBA	Scott Base	53.51	184	P	P	18 23 43.5	0.0
SBA	comp=Z,92nm,1.5s			IAmb	IAmb	18 23 55.5	
VNDA	Vanda	53.52	185	P	P	18 23 45.5	+2.0
VNDA	comp=Z,20nm,1.4s			IAmb	IAmb	18 23 48.7	
VNDA	Vanda	53.52	185	P	P	18 23 45.5	+2.0
	comp=Z,2.7nm,0.9s,baz=17,slow=9.1,SNR=2.6 comp=Z,2.7nm,0.9s						
MORW	Morawa	56.83	250	P	P	18 24 06.9	-0.6
MORW	comp=Z,27nm,1.4s			IAmb	IAmb	18 24 12.5	
QSPA	South Pole Qui	65.30	180	P	P	18 25 03.8	+1.0
QSPA	comp=Z,6.1nm,0.8s			IAmb	IAmb	18 25 05.6	
QSPA	South Pole Qui	65.30	180	P	P	18 25 04.6	+1.9
	comp=Z,5.4nm,0.7s,baz=1.8,slow=0.9,SNR=27 comp=Z,5.4nm,0.7s						
BELA	Belgrano 2	75.53	173	P	P	18 26 03.6	+0.6
HFS	Hagfors	143.46	349	PKhKP	PKPpre	18 33 44.7	
	comp=Z,2.3nm,0.9s,baz=41,slow=4.6,SNR=4.6						
MMAI	Mount Meron Ar	148.30	293	PKPbc	PKPbc	18 34 01.3	+0.5
	comp=Z,1.3nm,0.4s,baz=88,slow=7.8,SNR=6.3						

IDC ***13*** *18:16:10.6±1.8, 7.49S×127.12E, h0km, mb3.7/2, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=268.4km s-min=30.0km az=63.0*

DJA ***13*** *18:16:25.0±0.3, 8.3S×4.3×12.8E±.1°, h223km±8km, M4.2/9, mb4.0/6, mB5.0/2, MLv4.3/9, Mw(mB)4.3/2*

ISC 13 18:16:27.3±0.8, 7.52S±0.08×128.20E±0.07, h200km, n19, σ2.41/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.10	99	P	Pn	18 17 15.3	-2.9
SOEI	Soe	4.48	240	P	Pn	18 17 35.4	+0.2
SOEI	Soe	4.48	240	P	Pn	18 17 35.3	+0.1
SOEI				S	Sn	18 18 27.2	-1.4
MTN	Manton Dam	6.02	152	P	Pn	18 17 53.1	-1.8
FAKI	Fak Fak	6.10	42	P	Pn	18 17 53.0	-2.8
	28nm,1.1s,0.1nm						
EDFI	Ende, Flores	6.56	259	P	Pn	18 18 02.8	+0.9
	11nm,1.0s,0.1nm						
KDU	Kakadu	6.63	141	P	Pn	18 18 01.0	-1.8
SWI	Sorong	7.29	25	P	Pn	18 18 09.5	-1.8
BASI	Baing, Sumba	7.99	250	P	Pn	18 18 19.0	-1.5
	99nm,1.1s						
PLAI	Plampang	10.40	262	P	P	18 18 56.2	-3.0
WRA	Warramunga Arr	13.71	155	Pn	Pn	18 19 32.5	-1.1
	0.5nm,0.3s,baz=326,slow=14,SNR=20						
WRA				Sn	S	18 21 55.3	-11
	1.0nm,0.3s,baz=330,slow=22,SNR=10.0 0.7nm,0.5s						
COEN	Coen	16.04	115	P	Pn	18 20 04.4	+2.2
ASAR	Alice Springs	16.96	162	P	Pn	18 20 15.0	+1.8
	0.6nm,0.3s,baz=345,slow=11,SNR=112						
ASAR				S	S	18 23 15.1	-3.4
	0.7nm,0.5s,baz=323,slow=17,SNR=4.3 2.6nm,0.5s						
AS01	Alice Springs	16.97	162	P	Pn	18 20 14.6	+1.3
	5.1nm,0.5s						
QIS	Mount Isa	17.02	141	P	Pn	18 20 15.9	+2.0
WRKA	Warakurna	17.42	180	P	Pn	18 20 20.6	+2.1
OOD	Oodnadatta	21.37	162	P	P	18 21 02.7	+3.5
MKAR	Makanchi Array	67.70	328	P	P	18 27 06.0	+3.0
	0.2nm,0.5s,baz=122,slow=7.6,SNR=2.3 0.2nm,0.5s						
KURBB	Kurchatov Arra	72.03	329	P	P	18 27 32.9	+3.7
	0.5nm,0.2s,baz=135,slow=4.9,SNR=4.9 0.5nm,0.2s						

NEIC ***13*** *18:25:57.9±2.0, 55.99N±0.06×149.79W±0.09, h11km±7km, ML3.8/42, ML3.5(AEIC), Error ellipse: s-maj=10.9km s-min=4.2km az=139.0*

IDC ***13*** *18:25:58.8±2.8, 55.93N×149.81W, h0km, mb3.3/2, mbtmp3.3/5, ML3.1/3, MS3.0/2, Error ellipse: s-maj=43.9km s-min=32.8km az=149.0*

AEIC ***13*** *18:26:03.0±1.9, 56.02N±0.09×149.8W±0.1, h12km±7km, Error ellipse: s-maj=12.5km s-min=8.3km az=171.0*

ISC 13 18:25:58.5±1.1, 56.07N±0.08×149.83W±0.06, h10km, n193, σ1.14/196, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.23	303		Pn	18 26 34.6	-0.8
OHAK	Old Harbor	2.23	303		Sn	18 27 01.4	-1.6
OHAK	Old Harbor	2.23	303	IAML		18 27 02.3	
	comp=N,120nm,0.9s						
OHAK				IAML		18 27 03.9	
	comp=E,115nm,0.5s						
OHAK	Old Harbor	2.23	303	P	Pn	18 26 35.8	+0.4
OHAK	Old Harbor	2.23	303	P	Pn	18 26 35.6	+0.2
	baz=120						
OHAK				S	Sn	18 27 01.4	-1.6
	baz=120						
KDAK	Kodiak Island	2.28	320		Sn	18 27 02.4	-2.0
KDAK	Kodiak Island	2.28	320	Pn	Pn	18 26 36.6	+0.4
	comp=E,12nm,0.3s,baz=158,slow=5.6,SNR=118						
KDAK				Sn	Sn	18 27 02.9	-1.4
	comp=E,8.9nm,0.3s,baz=317,slow=21,SNR=12						
KDAK				LR	LR	18 27 39.8	
	comp=E,169nm,21.6s,baz=191,slow=42 comp=E,30nm,0.3s						
SII	Sitkinak Islan	2.47	283	Pn	Pn	18 26 37.1	-1.7
SII				IAML		18 27 08.4	
	comp=E,555nm,0.6s						
SII				IAML		18 27 08.5	
	comp=N,348nm,0.5s						
SII	Sitkinak Islan	2.47	283	P	Pn	18 26 38.9	+0.1
SII	Sitkinak Islan	2.47	283	S	Sn	18 27 07.3	-1.7
	baz=100						
SYI	Shuyak Island	2.90	332	Pn	Pn	18 26 45.1	+0.5
SYI	Shuyak Island	2.90	332		Sn	18 27 18.8	-0.7
Q20K	Shuyak Island	2.90	332	P	Pn	18 26 45.0	+0.4
	baz=150						
Q20K				S	Sn	18 27 18.8	-0.7
	baz=150						
R18K	Karluk	2.95	302		Pn	18 26 46.1	+0.8
R18K	Karluk	2.95	302	IAML		18 27 21.7	
	comp=N,150nm,0.4s						
R18K				IAML		18 27 24.0	
	comp=E,180nm,0.7s						
R18K	Karluk	2.95	302	P	Pn	18 26 46.1	+0.8
	baz=118						
CHIR	Chirikof Islan	3.27	268	Pn	Pn	18 26 48.8	-0.9
CHIR				IAML		18 27 26.5	
	comp=E,322nm,0.5s						
CHIR				IAML		18 27 26.5	
	comp=N,217nm,0.4s						
CHIR	Chirikof Islan	3.27	268		Sn	18 27 25.1	-3.5
Q19K	Cape Douglas,	3.52	326		Pn	18 26 54.4	+1.1
Q19K				IAML		18 27 41.1	
	comp=E,344nm,0.9s						
Q19K				IAML		18 27 41.6	
	comp=N,258nm,0.9s						
Q19K	Cape Douglas,	3.52	326	P	Pn	18 26 54.4	+1.1
	baz=142						
KAHG	Katmai Hook Gl	3.53	315		Pn	18 26 54.9	+1.5
CNPM	China Poot	3.54	348	Pn	Pn	18 26 53.3	-0.2
CNPM				IAML		18 27 36.4	
	comp=N,83nm,0.5s						
CNPM	China Poot	3.54	348		Sn	18 27 34.1	-1.4
ACHA	Angle Creek He	3.68	308		Pn	18 26 56.5	+1.1
BRSE	Bradley Lake S	3.71	353		Pn	18 26 55.4	-0.4
BRSE					Sn	18 27 37.7	-1.9
BRSE	Bradley Lake S	3.71	353	P	Pn	18 26 55.4	-0.4
	baz=171						
BRSE				S	Sn	18 27 37.7	-1.9
	baz=171						
HOM	Homer	3.72	346	Pn	Pn	18 26 55.9	0.0
HOM				IAML		18 27 43.2	
	comp=N,331nm,1.0s						
HOM				IAML		18 29 30.0	
	comp=E,276nm,1.5s						
BRLK	Bradley Lake	3.74	352	Pn	Pn	18 26 55.9	-0.5
ANCK	Angle Creek	3.75	307		Pn	18 26 57.8	+1.4
KVTA	Katmai Vly 10	3.77	310		Pn	18 26 58.4	+1.9
Q23K	Middleton Isla	3.85	28	Pn	Pn	18 26 56.1	-1.6
Q23K	Middleton Isla	3.85	28	P	Pn	18 26 57.2	-0.5
	baz=210						
MID	Middleton Isla	3.85	28	Pn	Pn	18 26 56.3	-1.4
MID				IAML		18 28 00.8	
	comp=N,352nm,1.9s						
MID	Middleton Isla	3.85	28	P	Pn	18 26 57.2	-0.5
CNTC	Contact Creek	3.96	306		Pn	18 27 00.4	+1.0
Q17K	Contact Creek	3.96	306	P	Pn	18 27 00.4	+1.0
	baz=121						
KELA	Mount Kelaz	3.99	309		Pn	18 27 01.2	+1.5
P19K	Oil Pt	4.02	335	Pn	Pn	18 27 01.0	+0.9
P19K				IAML		18 27 50.4	
	comp=E,114nm,0.4s						
P19K				IAML		18 27 52.5	
	comp=N,134nm,0.5s						
P19K	Oil Pt	4.02	335	P	Pn	18 27 00.7	+0.6
	baz=151						
SEW	Seward	4.05	3	Pn	Pn	18 26 59.9	-0.5
P23K	Montague Islan	4.14	17		Pn	18 27 01.6	-0.2
P23K	Montague Islan	4.14	17	P	Pn	18 27 01.6	-0.2
	baz=198						
P18K	Big Mountain,	4.41	321	Pn	Pn	18 27 05.8	+0.4
P18K	Big Mountain,	4.41	321	P	Pn	18 27 05.7	+0.2
	baz=136						
SLKM	Skilak Lake	4.45	358		Pn	18 27 05.2	-0.8
Q16K	King Salmon	4.52	308		Pn	18 27 07.8	+0.9
Q16K	King Salmon	4.52	308	P	Pn	18 27 07.8	+0.9
	baz=122						
RSO	Redoubt South	4.66	342		Pn	18 27 09.2	+0.1
RDT	Redoubt	4.71	344		Pn	18 27 09.5	-0.1
P17K	Kvichak River	4.73	314		Pn	18 27 10.9	+1.1
P17K	Kvichak River	4.73	314	P	Pn	18 27 10.9	+1.1
	baz=128						
O18K	Koktuh Hills	4.75	325	Pn	Pn	18 27 10.4	+0.3
O18K				IAML		18 28 08.5	
	comp=N,49nm,0.8s						
O18K	Koktuh Hills	4.75	325	P	Pn	18 27 10.3	+0.2
	baz=140						
CAPN	Captain Cook N	4.76	352	Pn	Pn	18 27 11.1	+0.9
O19K	Port Alsworth	4.77	332		Pn	18 27 10.2	0.0
O19K				IAML		18 28 09.8	
	comp=N,125nm,0.5s						
CHGN	Chignik	4.80	276	Pn	Pn	18 27 08.8	-2.0
CHGN				IAML		18 28 09.2	
	comp=N,58nm,0.6s						
CHGN				IAML		18 28 14.9	
	comp=E,47nm,0.6s						
KAIM	Kayak Island	4.82	34	Pn	Pn	18 27 11.0	0.0
EYAK	Cordova Ski Ar	4.98	24	Pn	Pn	18 27 12.9	-0.2
EYAK	Cordova Ski Ar	4.98	24	P	Pn	18 27 13.4	+0.2
EYAK	Cordova Ski Ar	4.98	24	P	Pn	18 27 13.1	0.0
	baz=207						
RC01	Rabbit Creek A	5.03	1	Pn	Pn	18 27 13.6	-0.3
RC01				IAML		18 28 12.7	
	comp=E,46nm,0.6s						
RC01				IAML		18 28 14.6	
	comp=N,34nm,0.4s						
RAGM	Ragged Mountai	5.11	30	Pn	Pn	18 27 14.6	-0.5
RAGM				IAML		18 28 16.8	
	comp=E,102nm,3.1s						
SUCK	Suckling Hills	5.14	36	Pn	Pn	18 27 15.2	-0.2
SUCK				IAML		18 28 11.3	
	comp=N,124nm,3.6s						
GOAT	Goat Mountain	5.26	29		Pn	18 27 16.8	-0.4
P16K	Nushagak River	5.30	307		Pn	18 27 18.8	+1.2
P16K	Nushagak River	5.30	307	P	Pn	18 27 18.8	+1.2
	baz=120						
N19K	Bonanza Creek	5.34	335		Pn	18 27 17.6	-0.7
N19K	Bonanza Creek	5.34	335	P	Pn	18 27 18.4	+0.1
	baz=150						
O17K	Koliganek Bris	5.36	317		Pn	18 27 19.3	+0.8
O17K	Koliganek Bris	5.36	317	P	Pn	18 27 19.3	+0.8
	baz=130						
KNK	Knik Glacier	5.40	7	Pn	Pn	18 27 17.8	-1.3
SUA	Susitna One	5.43	355	Pn	Pn	18 27 18.6	-0.9
GRIN	Grindle Hills	5.45	37		Pn	18 27 19.9	+0.2
DIV	Divide	5.50	21	Pn	Pn	18 27 19.5	-0.9
SNH	Sunshine Point	5.54	39	Pn	Pn	18 27 20.0	-0.9
STLK	Strandline Lak	5.54	350		Pn	18 27 20.8	-0.1
PMR	Palmer	5.55	3	P	Pn	18 27 21.2	+0.2
KHIT	Khitrov Hills	5.59	36		Pn	18 27 21.5	-0.2
N18K	Kilae Creek	5.61	328		Pn	18 27 21.9	0.0
N18K	Kilae Creek	5.61	328	P	Pn	18 27 21.9	0.0
	baz=142						
BMRM	Bremner River	5.62	27	Pn	Pn	18 27 22.1	+0.1
BMRM	Bremner River	5.62	27	P	Pn	18 27 22.2	+0.2
	baz=211						
O16K	Kokwok River B	5.65	312		Pn	18 27 23.6	+1.2
O16K	Kokwok River B	5.65	312	P	Pn	18 27 23.6	+1.2
	baz=125						
CNBA	Chernabura Isl	5.70	261	Pn	Pn	18 27 19.8	-3.2
WAX	Waxell Ridge	5.73	37	Pn	Pn	18 27 23.3	-0.3
GHO	Glory Hole Cre	5.74	4		Pn	18 27 24.9	+1.2
KLU	Klutina	5.80	19		Pn	18 27 25.2	+0.6
KLU	Klutina	5.80	19	P	Pn	18 27 24.9	+0.3
	baz=202						
SML	Sawmill	5.80	7	Pn	Pn	18 27 25.2	+0.6
MESA	MESA	5.86	42	Pn	Pn	18 27 25.4	-0.1
MESA	MESA	5.86	42	P	Pn	18 27 25.4	-0.1
	baz=228						
CRQM	Cirque	5.87	34		Pn	18 27 25.7	+0.1
SVW2	Sparrevohn	5.87	332	Pn	Pn	18 27 25.0	-0.4
SVW2	Sparrevohn	5.87	332	P	Pn	18 27 25.4	0.0
CRQE	Cirque	5.88	34	P	Pn	18 27 25.5	-0.1
	baz=219						
N17K	Nushagak Hills	5.91	322		Pn	18 27 26.5	+0.5
N17K	Nushagak Hills	5.91	322	P	Pn	18 27 26.5	+0.5
	baz=136						
SCM	Sheep Creek Mo	5.92	12	Pn	Pn	18 27 27.1	+0.9
TGL	Tana Glacier	5.96	35		Pn	18 27 26.3	-0.5
SKT	Skwentna	5.99	352		Pn	18 27 26.9	-0.2
ISLE	Juniper Island	6.01	38		Pn	18 27 26.6	-0.9
SDPT	Sand Point	6.06	268	Pn	Pn	18 27 25.9	-2.2
VRDI	Verde Repeater	6.15	30	Pn	Pn	18 27 28.3	-1.1
N25K	Chitina, Valde	6.18	24		Pn	18 27 30.0	+0.2
N25K	Chitina, Valde	6.18	24	P	Pn	18 27 30.1	+0.4
	baz=208						
O15K	Ungalikthiuk R	6.20	304		Pn	18 27 31.1	+1.0
O15K	Ungalikthiuk R	6.20	304	P	Pn	18 27 31.1	+1.0
	baz=116						
GLB	Gilahina Butte	6.23	28		Pn	18 27 30.1	-0.2
KIAG	Kiagna River	6.24	36		Pn	18 27 30.7	0.0
M18K	Stony River	6.26	333		Pn	18 27 30.6	-0.2
M18K	Stony River	6.26	333	P	Pn	18 27 30.6	-0.2
	baz=147						
SAMH	Samovar Hills	6.29	46		Pn	18 27 31.9	+0.7
GRNC	Granite Creek	6.31	39		Pn	18 27 31.2	-0.4
M24K	Tolsona, Glenn	6.34	16	Pn	Pn	18 27 32.7	+0.8
TABL	Table Mountain	6.34	43		Pn	18 27 31.7	-0.4
CUT	Chulitna	6.36	358	Pn	Pn	18 27 33.8	+1.7
MCARA	McCarthy VSAT	6.39	31		Pn	18 27 32.8	+0.2
MCARA	McCarthy VSAT	6.39	31	P	Pn	18 27 33.0	+0.4
	baz=216						
PTPK	Patty Peak	6.41	34		Pn	18 27 33.1	+0.1
N16K	Nishlik Lake	6.45	317		Pn	18 27 34.5	+1.0
N16K	Nishlik Lake	6.45	317	P	Pn	18 27 34.5	+1.0
	baz=129						
PCA	Pinnacle	6.48	48		Pn	18 27 34.4	+0.5
PINM	Pinnacle	6.48	48	P	Pn	18 27 34.4	+0.4
	baz=235						
BARN	Barnard Glacie	6.57	37		Pn	18 27 34.6	-0.7
CTG	Chitna Glacier	6.62	39	P	Pn	18 27 35.8	-0.1
	baz=225						
CTGM	Chitina Glacie	6.62	39	Pn	Pn	18 27 35.6	-0.3
PNL	Peninsula	6.63	53		Pn	18 27 36.0	+0.1
PNL	Peninsula	6.63	53	P	Pn	18 27 36.0	+0.1
PNL	Peninsula	6.63	53	P	Pn	18 27 36.0	+0.1
	baz=241						
LOGN	Logan Glacier	6.64	41		Pn	18 27 35.2	-1.0
BCPM	Bancas Point	6.67	50	Pn	Pn	18 27 36.7	+0.3
M16K	Timber Creek	6.88	320		Pn	18 27 40.3	+1.0
M16K	Timber Creek	6.88	320	P	Pn	18 27 40.3	+1.0
	baz=132						
O14K	Tigyukauivet M	6.91	302		Pn	18 27 41.0	+1.3
O14K	Tigyukauivet M	6.91	302	P	Pn	18 27 41.0	+1.3
	baz=112						
DHY	Denali Highway	7.13	9	Pn	Pn	18 27 40.6	-2.3
O29M	Mount Kennedy	7.30	50		Pn	18 27 45.5	+0.3
O29M	Mount Kennedy	7.30	50	P	Pn	18 27 45.5	+0.3
	baz=239						
P29M	Windy Craggy	7.37	56		Pn	18 27 45.7	-0.4
P29M	Windy Craggy	7.37	56	P	Pn	18 27 45.7	-0.4
	baz=246						
RND	Reindeer	7.37	3	Pn	Pn	18 27 47.0	+0.9
TRF	Thorofare Moun	7.40	358	Pn	Pn	18 27 47.3	+0.6
CAST	Castle Rocks	7.46	352	Pn	Pn	18 27 47.9	+0.7
M27K	Edge Creek, AK	7.50	30	Pn	Pn	18 27 48.6	+0.6
KTH	Kantishna Hill	7.52	356	Pn	Pn	18 27 50.0	+1.8
L16K	Owhat River	7.54	323	Pn	Pn	18 27 48.1	-0.2
MENT	Mentasta	7.55	22	Pn	Pn	18 27 49.7	+1.2
S31K	Pelican	7.66	70	Pn	Pn	18 27 48.0	-2.0
L26K	Log Cabin Wild	7.71	23	Pn	Pn	18 27 50.5	-0.2
M14K	Bethel	7.90	311	Pn	Pn	18 27 52.2	-1.1
HYT	Haines Junctio	8.02	49	Pn	Pn	18 27 54.4	-0.7
BPAW	Bear Paw Mtn.	8.07	356	Pn	Pn	18 27 52.8	-2.9
RIDG	Independent Ri	8.09	16	Pn	Pn	18 27 54.6	-1.3
L27K	Beaver Creek,	8.10	27	Pn	Pn	18 27 56.4	+0.4
BCAR	Beaver Creek A	8.11	27	Pn	Pn	18 27 56.2	0.0
M13K	Dall Lake	8.35	307	Pn	Pn	18 28 00.1	+0.7
SCRK	Sand Creek	8.45	18	Pn	Pn	18 28 00.5	-0.4
SKAG	Skagway	8.46	60	Pn	Pn	18 28 01.1	+0.2
SKAG	Skagway	8.46	60	P	Pn	18 28 02.2	+1.3
WRH	Wood River Hil	8.47	5	Pn	Pn	18 27 59.8	-1.3
HDA	Harding Lake	8.48	9	Pn	Pn	18 27 59.5	-1.7
O30N	Mendenhall	8.60	51	Pn	Pn	18 28 00.9	-2.1
R32K	Eaglecrest	8.61	69	Pn	Pn	18 27 59.4	-3.5
M29M	Somme Creek	8.63	38		Pn	18 28 04.2	+0.7
CCB	Clear Creek Bu	8.66	6	Pn	Pn	18 28 03.9	+0.3
JIS	Juneau Island	8.68	69	Pn	Pn	18 28 02.8	-1.1
IL31		8.85	8		Pn	18 28 07.9	+1.7
ILAR	Eielson Array	8.85	8	Pn	Pn	18 28 07.3	+1.1
ILAR	Eielson Array	8.85	8	Pn	Pn	18 28 07.9	+1.7
	comp=N,0.2nm,0.3s,baz=194,slow=13,SNR=8.1						
ILAR				Sn	Sn	18 29 41.8	-4.0
	comp=N,0.4nm,0.3s,baz=202,slow=23,SNR=8.3 comp=N,0.5nm,0.5s						
MDM	Murphy Dome	8.95	4	Pn	Pn	18 28 08.1	+0.4
J16K	Anvik River	9.04	327	Pn	Pn	18 28 08.7	-0.2
WHY	Whitehorse	9.09	54	Pn	Pn	18 28 09.3	-0.4
P32M	Atlin	9.29	61	Pn	Pn	18 28 11.9	-0.4
M30M	Minto, Yukon	9.31	40	Pn	Pn	18 28 12.6	0.0
U33K	Whale Pass	9.34	83	Pn	Pn	18 28 10.2	-2.8
CRAG	Craig	9.44	87	Pn	Pn	18 28 15.2	+0.9
DAWY	Dawson	9.55	29	Pn	Pn	18 28 16.9	+0.9
H24K	Noodor Dome	9.84	5	Pn	Pn	18 28 23.0	+3.1
P33M	Teslin, Yukon	9.89	58	Pn	Pn	18 28 20.3	-0.4
IMAR	Indian Mountai	10.12	351	Pn	Pn	18 28 24.4	+0.7
G19K	Purcell Mounta	10.69	344	Pn	Pn	18 28 31.8	+0.4
G24K	Hadweenzic Riv	10.72	5	Pn	Pn	18 28 32.5	+0.5
FYU	Fort Yukon	10.75	10	Pn	Pn	18 28 32.7	+0.4
T35M	Bob Quinn	10.85	77	Pn	Pn	18 28 31.8	-1.9
ANM	Nome	11.45	324	Pn	Pn	18 28 41.6	-0.2
BMAR	Burnt Mountain	11.66	10	Pn	Pn	18 28 43.5	-1.3
TOLK	Toolik Lake Re	12.62	0	Pn	Pn	18 28 58.2	+0.4
G31M	Satah River	13.12	28	Pn	Pn	18 29 01.6	-3.0
YKA	Yellowknife Ar	18.91	56	P	Pn	18 30 20.7	+1.1
	baz=264,slow=11,SNR=7.8 comp=N,1.1nm,1.0s						
TIXI	Tiksi	35.69	328	LR	LR	18 49 17.0	
	comp=N,36nm,18.2s,baz=26,slow=39						
SONM	Songino Array	58.54	310	P	P	18 35 57.4	+2.5
	comp=N,0.4nm,0.8s,baz=57,slow=5.3,SNR=3.1 comp=N,0.4nm,0.8s						
MKAR	Makanchi Array	68.59	324	P	P	18 37 03.9	+2.7
	comp=N,0.2nm,0.7s,baz=46,slow=6.2,SNR=2.7 comp=N,0.2nm,0.7s						

IDC ***13*** *18:48:49.9±0.6, 2.77S×141.98E, h0km, mb4.5/17, mbtmp4.5/19, ML4.2/2, MS4.1/41, Error ellipse: s-maj=23.4km s-min=10.9km az=86.0*

MOS ***13*** *18:48:50.7±0.8, 2.80S×141.85E, h18km, mb5.1/39, Error ellipse: s-maj=11.9km s-min=5.4km az=110.8*

NEIC ***13*** *18:48:52.8±1.4, 2.83S±0.08×141.79E±0.07, h18km±4km, mb5.1/127, Mww4.9/7, Error ellipse: s-maj=12.1km s-min=10.0km az=200

KDU **Kakadu** **13.44 223** P **Pn** **18 52 03.8 +0.8**
MTN **Manton Dam** **14.49 226** P **Pn** **18 52 18.3 +1.0**
baz=15,SNR=3.7
MTN **Manton Dam** **14.49 226** Pn **Pn** **18 52 17.3 -0.1**
LBMI **Labuha** **14.49 279** P **Pn** **18 52 20.0 +2.6**
103nm,1.0s
TNTI **Ternate** **14.90 284** Pn **Pn** **18 52 24.1 +1.1**
MTSU **Mount Surprise** **15.35 171** P **Pn** **18 52 30.2 +1.2**
baz=16,SNR=10
SANI **Sanana** **15.84 273** P **P** **18 52 37.6 -1.1**
25nm,1.4s
GUMO **Guam** **16.64 10** LR LR 18 59 44.1
comp=Z,431nm,18.5s,baz=198,slow=40
CTA **Charters Tower** **17.64 166** P **P** **18 52 59.7 +1.0**
0.1nm,0.3s,baz=352,slow=14,SNR=2.9
CTA LR LR 18 59 31.2
comp=Z,912nm,20.3s,baz=356,slow=36
6.1nm,1.0s
CTAO **Charters Tower** **17.64 166** P **Pn** **18 52 58.3 +0.4**
CTAO **Charters Tower** **17.64 166** P **Pn** **18 52 58.3 +0.4**
CTAO pmax pmax
comp=Z,52nm,1.8s
QIS **Mount Isa** **17.70 187** P **Pn** **18 52 59.5 +0.9**
baz=18,SNR=15
QIS **Mount Isa** **17.70 187** P **P** **18 53 00.1 +0.8**
KMSI **Cibinong** **18.16 281** P **P** **18 53 05.3 +0.9**
comp=Z,167nm,1.2s,comp=Z,2µm
WB0 **Warramunga Arr** **18.29 203** **P** **18 53 05.4 -0.3**
WR0 **Warramunga Arr** **18.40 202** P **P** **18 53 06.5 -0.6**
WRAB **Tennant Creek** **18.45 203** P **P** **18 53 07.5 -0.1**
WRAB **Tennant Creek** **18.45 203** P **P** **18 53 07.5 -0.1**
WRAB pmax pmax
comp=Z,26nm,0.8s
WB2 **Warramunga Arr** **18.46 203** **P** **18 53 07.0 -0.7**
WRA **Warramunga Arr** **18.46 203** P **P** **18 53 07.0 -0.7**
WRA **Warramunga Arr** **18.46 203** P **P** **18 53 08.6 +0.8**
comp=Z,1.8nm,0.3s,baz=23,slow=12,SNR=57
WRA S **Sn** **18 56 29.2 -4.3**
comp=Z,6.1nm,0.8s,baz=26,slow=22,SNR=4.4
comp=Z,12nm,0.7s
WC3 **Warramunga Arr** **18.47 203** P **P** **18 53 08.5 +0.7**
baz=19
SOEI **Soe** **18.73 248** P **P** **18 53 10.6 -0.2**
SOEI IAmb IAmb 18 53 21.0
comp=Z,73nm,0.7s
SOEI **Soe** **18.73 248** P **Pn** **18 53 12.6 +1.2**
SOEI **Soe** **18.73 248** P **Pn** **18 53 13.1 +1.7**
comp=Z,170nm,0.9s,comp=Z,2µm
DAV **Davao City (W)** **18.99 301** LR LR 19 00 58.5
comp=Z,371nm,18.4s,baz=90,slow=38
LUWI **Luwuk** **19.13 275** P **P** **18 53 14.8 -0.2**
LUWI **Luwuk** **19.13 275** P **Pn** **18 53 16.7 +0.6**
LUWI **Luwuk** **19.13 275** P **Pn** **18 53 18.4 +2.3**
comp=Z,66nm,0.8s,comp=Z,1µm
HNR **Honiara** **19.15 111** P **P** **18 53 15.0 -0.3**
HNR **Honiara** **19.15 111** P **Pn** **18 53 16.8 +0.5**
HNR **Honiara** **19.15 111** P **P** **18 53 15.3 0.0**
comp=Z,3µm,0.6s,baz=321,slow=3.4,SNR=24
MRSI **Marisa** **20.15 279** P Pn 18 53 30.2 +1.9
comp=Z,49nm,1.0s,comp=Z,662nm
MMRI **Maumere** **20.30 253** P **P** **18 53 27.5 -0.3**
EDFI **Ende, Flores** **20.85 253** P Pn 18 53 44.8 +8.3
TOLI2 **Tolitoli** **21.41 280** P **P** **18 53 39.1 -0.7**
TOLI2 **Tolitoli** **21.41 280** P **P** **18 53 41.2 +1.4**
FITZ **Fitzroy Crossi** **21.92 225** P **P** **18 53 45.3 +0.1**
baz=22,SNR=17
FITZ **Fitzroy Crossi** **21.92 225** P **P** **18 53 44.7 -0.5**
FITZ **Fitzroy Crossi** **21.92 225** P **P** **18 53 45.2 0.0**
TTSI **Tana Toraja** **21.98 269** P **P** **18 53 49.9 +4.0**
comp=Z,49nm,1.0s,comp=Z,991nm
AS01 **Alice Springs** **22.02 200** P **P** **18 53 48.0 +1.7**
AS31 **Alice Springs** **22.04 200** P **P** **18 53 45.9 -0.6**
ASAR **Alice Springs** **22.04 200** P **P** **18 53 46.4 -0.1**
ASAR **Alice Springs** **22.04 200** P **P** **18 53 47.4 +0.8**
comp=Z,11nm,0.8s,baz=26,slow=11,SNR=47
ASAR S Sn 18 57 55.4 -4.1
comp=Z,3.8nm,0.8s,baz=20,slow=27,SNR=2.1
comp=Z,11nm,0.8s
MPSI **Mapaga** **22.15 278** P **P** **18 53 49.7 +1.9**
comp=Z,52nm,1.3s,comp=Z,709nm
QLP **Quilpie** **23.68 175** P **P** **18 54 03.6 +0.2**
baz=24,SNR=5.5
QLP **Quilpie** **23.68 175** P **P** **18 54 04.7 +1.4**
EIDS **Eidsvold** **24.07 159** P **P** **18 54 08.3 +1.2**
baz=24,SNR=11
EIDS **Eidsvold** **24.07 159** P **P** **18 54 07.0 0.0**
EIDS IAmb IAmb 18 54 30.9
comp=Z,83nm,1.2s
EIDS **Eidsvold** **24.07 159** P **P** **18 54 09.1 +2.1**
MYLDM **Lahad Datu** **24.64 289** P **P** **18 54 12.8 +0.5**
INKA **Innaminka** **24.74 182** P **P** **18 54 14.6 +1.5**
BKB **Balikpapan** **24.96 273** P **P** **18 54 14.7 -0.6**
BKB **Balikpapan** **24.96 273** P P 18 54 26.9 +12
OOD **Oodnadatta** **25.46 193** P **P** **18 54 21.1 +1.5**
WRKA **Warakurna** **25.59 209** P **P** **18 54 21.7 +0.7**
baz=26,SNR=23
WRKA **Warakurna** **25.59 209** P **P** **18 54 21.7 +0.7**
KKM **Kota Kinabalu** **27.07 289** P **P** **18 54 33.1 -1.4**
LCRK **Leigh Creek** **27.63 187** P **P** **18 54 40.8 +1.6**
KOUNC **Koumac, New Ca** **28.07 130** P **P** **18 54 41.5 -1.7**
KOUNC IAmb IAmb 18 55 05.3
comp=Z,55nm,1.2s
JAGI **Jajag, Banyuwa** **28.08 257** P **P** **18 54 42.0 -1.4**
JAGI IAmb IAmb 18 55 32.5
comp=Z,43nm,1.2s
MBWA **Marble Bar** **28.15 228** P **P** **18 54 43.0 -0.9**
MBWA IAmb IAmb 18 55 15.1
comp=Z,34nm,1.3s
MULG **Mulgathing** **28.23 194** P **P** **18 54 45.6 +1.1**
PSA00 **Pilbara Seismi** **28.32 227** P **P** **18 54 44.4 -1.1**
PSA00 IAmb IAmb 18 55 45.4
comp=Z,40nm,1.4s
CMSA **Cobar Meteorol** **28.74 173** P **P** **18 54 50.7 +1.7**
baz=29,SNR=17
CMSA **Cobar Meteorol** **28.74 173** P **P** **18 54 51.9 +2.9**
STKA **Stephens Creek** **28.84 180** P **P** **18 54 49.4 -0.6**
STKA **Stephens Creek** **28.84 180** P **P** **18 54 49.4 -0.6**
STKA pmax pmax
comp=Z,7.0nm,1.5s
STKA **Stephens Creek** **28.84 180** P **P** **18 54 50.0 +0.1**
comp=Z,4.2nm,0.7s,baz=4.6,slow=11,SNR=8.2
STKA LR LR 19 06 28.9
comp=Z,519nm,19.3s,baz=358,slow=37
comp=Z,4.2nm,0.7s
ARMA **Armidale** **28.92 162** P **P** **18 54 52.8 +2.0**
SBUM **Sibu** **30.06 280** P **P** **18 54 58.5 -2.5**
BBOO **Buckleboo** **30.26 190** P **P** **18 55 03.5 +0.9**
baz=30,SNR=12
BBOO **Buckleboo** **30.26 190** P **P** **18 55 00.5 -2.1**
BBOO IAmb IAmb 18 55 14.5
comp=Z,36nm,1.2s
BBOO **Buckleboo** **30.26 190** P **P** **18 55 03.8 +1.3**
HTT **Hallett** **30.51 185** P **P** **18 55 06.0 +1.1**
baz=31,SNR=4.2
HTT **Hallett** **30.51 185** P **P** **18 55 06.2 +1.4**
DZM **Mont Dzumac** **30.59 131** P **P** **18 55 03.7 -1.9**
DZM IAmb IAmb 18 55 09.7
comp=Z,29nm,0.8s
DZM **Mont Dzumac** **30.59 131** P **P** **18 55 06.8 +1.1**
DZM **Mont Dzumac** **30.59 131** LR LR 19 07 10.7
comp=Z,719nm,19.5s,baz=308,slow=36
FORT **Forrest** **30.65 204** P **P** **18 55 07.4 +1.4**
baz=31,SNR=22
FORT **Forrest** **30.65 204** P **P** **18 55 03.9 -2.1**
FORT **Forrest** **30.65 204** P **P** **18 55 07.1 +1.1**
YNG **Young** **31.85 170** P **P** **18 55 17.9 +1.3**
baz=32,SNR=6.3
YNG **Young** **31.85 170** P **P** **18 55 18.8 +2.2**
JOW **Kunigami** **32.31 337** LR LR 19 06 21.6
comp=Z,666nm,19.0s,baz=140,slow=33
H11S3 **WAKE ISLAND Hy** **32.41 48** T T 19 29 23.0
baz=231,slow=76,SNR=142
H11S2 **WAKE ISLAND Hy** **32.42 48** T T 19 29 25.6
baz=231,slow=76,SNR=129
H11S1 **WAKE ISLAND Hy** **32.43 48** T T 19 29 24.2
baz=231,slow=76,SNR=144
MEEK **Meekatharra** **32.45 221** P **P** **18 55 23.1 +1.2**
baz=33,SNR=7.0
MEEK **Meekatharra** **32.45 221** P **P** **18 55 22.7 +0.7**
CAN **Canberra** **32.96 169** P **P** **18 55 27.4 +1.1**
CAN IAmb IAmb 18 55 30.5
comp=Z,38nm,1.1s
CAN **Canberra** **32.96 169** P **P** **18 55 28.3 +2.0**
CAN **Canberra** **32.96 169** P **P** **18 55 27.4 +1.1**
CAN pmax pmax
comp=Z,38nm,1.1s
H11N1 **WAKE ISLAND Hy** **33.33 47** T T 19 30 35.0
baz=230,slow=76,SNR=433
H11N2 **WAKE ISLAND Hy** **33.34 47** T T 19 30 31.6
baz=230,slow=76,SNR=28
H11N3 **WAKE ISLAND Hy** **33.34 47** T T 19 30 32.9
baz=230,slow=76,SNR=7.5
LEM **Lembang** **34.30 262** LR LR 19 12 26.9
comp=Z,273nm,19.9s,baz=114,slow=41
BBJI **Bungbulang** **34.33 261** P **P** **18 55 37.9 -0.6**
MILA **Mila** **34.67 170** P **P** **18 55 42.5 +1.3**
baz=35
TOO **Toolangi** **34.69 175** P **P** **18 55 42.9 +1.6**
baz=35,SNR=5.4
TOO **Toolangi** **34.69 175** P **P** **18 55 42.4 +1.1**
TOO IAmb IAmb 18 55 46.4
comp=Z,22nm,1.0s
TOO **Toolangi** **34.69 175** P **P** **18 55 42.4 +1.1**
TOO pmax pmax
comp=Z,22nm,1.0s
QZH **Quanzhou** **35.69 322** ⇑*i*P **P** **18 55 52.1 +2.1**
QZH S **S** **19 01 30.9 +6.3**
QZH LR LR
comp=Z,570nm,22.7s
MORW **Morawa** **35.76 221** P **P** **18 55 51.4 +0.8**
baz=36,SNR=5.0
MORW **Morawa** **35.76 221** P **P** **18 55 50.3 -0.4**
MORW **Morawa** **35.76 221** P **P** **18 55 51.5 +0.8**
BLDU **Ballidu** **36.40 218** P **P** **18 55 56.9 +0.9**
JNU **Nakatsue** **37.27 345** LR LR 19 08 22.8
comp=Z,218nm,21.2s,baz=156,slow=32
QIZ **Qiongzhong** **38.26 306** P **P** **18 56 11.4 -0.5**
QIZ S **S** **19 02 05.4 +1.4**
QIZ pmax pmax
comp=Z,32nm,1.8s
QIZ LR LR
comp=Z,500nm,13.0s
QIZ LR LR
comp=Z,290nm,13.2s
QIZ LR LR
comp=Z,480nm,17.3s
SSE **Sheshan** **39.09 331** P **P** **18 56 19.0 +0.2**
SSE S **S** **19 02 17.5 +1.3**
SSE pmax pmax
comp=Z,16nm,1.0s
SSE pmax pmax
comp=Z,78nm,3.8s
SSE LR LR
comp=Z,190nm,16.2s
SSE LR LR
comp=Z,120nm,16.4s
MJAR **Matsushiro Arr** **39.37 355** P **P** **18 56 19.3 -1.7**
comp=Z,2.2nm,0.7s,baz=171,slow=8.4,SNR=3.8
MJAR LR LR 19 11 49.5
comp=Z,261nm,18.8s,baz=142,slow=35
comp=Z,2.2nm,0.7s
KRJI **Kerinci** **40.33 270** P **P** **18 56 30.8 +1.3**
comp=Z,58nm,1.1s
NJ2 **Nanjing** **41.02 330** *e*P **P** **18 56 35.3 +0.6**
NJ2 pP **pP** **18 56 42.8 -1.6**
NJ2 sP **sP** **18 56 48.4 -0.2**
NJ2 PP **PP** **18 58 10.8 +1.0**
NJ2 S **S** **19 02 49.9 +4.9**
NJ2 sS **sS** **19 03 04.6 +4.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.9s
NJ2 pmax pmax
comp=Z,340nm,6.6s
NJ2 LR LR
comp=Z,310nm,8.5s
NJ2 LR LR
comp=Z,310nm,11.8s
NJ2 LR LR
comp=Z,430nm,9.9s
KSRS **Korea Array** **42.16 343** P **P** **18 56 44.1 +0.1**
comp=Z,0.9nm,0.6s,baz=160,slow=9.7,SNR=4.5
KSRS LR LR 19 11 14.7
comp=Z,234nm,21.7s,baz=170,slow=32
comp=Z,0.9nm,0.6s
WHN **Wuhan** **42.33 324** P **P** **18 56 48.1 +2.6**
RPSI **Rantau Prapat** **43.24 277** P **P** **18 56 52.0 -1.2**
PSI **Prapat** **43.25 277** P **P** **18 56 52.0 -1.4**
PSI pmax pmax
comp=Z,22nm,1.0s
SLVN **Son La** **44.23 305** P **P** **18 57 01.3 +0.2**
GSI **Gunungsitoli** **44.43 275** P **P** **18 57 01.4 -1.4**
GSI **Gunungsitoli** **44.43 275** P **P** **18 57 03.6 +0.8**
KCSI **Kotacane, Aceh** **44.48 278** P **P** **18 57 03.5 +0.3**
GYA **Guiyang** **44.78 313** ⇑*i*P **P** **18 57 07.3 +1.8**
GYA pP sP 18 57 17.9 -1.5
GYA pmax pmax
comp=Z,22nm,1.5s
GYA pmax pmax
comp=Z,410nm,5.1s
GYA LR LR
comp=Z,310nm,14.0s
ENH **Enshi** **45.17 319** P **P** **18 57 07.3 -1.2**
TIA **Tai'an** **45.21 332** *e*P **P** **18 57 04.8 -3.9**
TIA S **S** **19 03 47.8 +1.3**
TIA pmax pmax
comp=Z,9.0nm,2.2s
TIA LR LR
comp=Z,160nm,19.1s
TIA LR LR
comp=Z,160nm,18.6s
TIA LR LR
comp=Z,280nm,18.6s
MSHR **Mys Shultsa** **46.27 349** *i*P **P** **18 57 16.7 -0.1**
MSHR pmax pmax
comp=Z,8.0nm,0.8s
LYN **LuoYang** **46.34 326** ⇓P **P** **18 57 17.6 0.0**
LYN pP sP 18 57 29.6 -1.9
LYN sP pP 18 57 34.4 +7.1
LYN sS sS 19 04 23.6 +5.7
LYN pmax pmax
comp=Z,16nm,0.8s
LYN pmax pmax
comp=Z,620nm,5.1s
LYN LR LR
comp=Z,660nm,17.7s
LYN LR LR
comp=Z,380nm,15.1s
LYN LR LR
comp=Z,690nm,18.4s
PSTR **Posyet** **46.41 349** *i*P **P** **18 57 17.8 -0.1**
CRAI **Chiangrai** **46.70 301** P **P** **18 57 19.6 -1.1**
ASAJ **Asahikawa** **46.79 1** LR LR 19 15 05.5
comp=Z,54nm,20.6s,baz=50,slow=34
QRZ **Quartz Range** **46.83 148** P **P** **18 57 22.9 +1.6**
KMI **Kunming** **47.02 309** ⇑P **P** **18 57 25.0 +1.6**
KMI pmax pmax
comp=Z,17nm,1.6s
KMI LR LR
comp=Z,400nm,28.2s
CMAR **Chiang Mai Arr** **47.24 298** P **P** **18 57 23.4 -1.5**
CMAR PcP **PcP** **18 58 57.3 +1.4**
CMAR **Chiang Mai Arr** **47.24 298** P **P** **18 57 25.8 +0.9**
comp=Z,3.0nm,1.0s,baz=115,slow=6.0,SNR=14
CMAR LR LR 19 15 57.0
comp=Z,44nm,21.4s,baz=100,slow=34
comp=Z,3.0nm,1.0s
HNS **HongShan** **47.33 330** ⇓P **P** **18 57 25.5 +0.3**
HNS PP **PP** **18 59 13.9 -2.9**
HNS S **S** **19 04 19.9 +3.1**
HNS pmax pmax
comp=Z,22nm,1.5s
HNS pmax pmax
comp=Z,250nm,5.7s
HNS LR LR
comp=Z,390nm,15.5s
HNS LR LR
comp=Z,230nm,14.5s
HNS LR LR
comp=Z,520nm,16.3s
JCZ **Jackson Bay** **47.45 154** P **P** **18 57 28.1 +1.9**
USA0B **Ussuriysk Arra** **47.69 350** P **P** **18 57 27.1 -0.8**
USA0B IAmb IAmb 18 58 05.3
comp=Z,22nm,1.2s
USA0B **Ussuriysk Arra** **47.69 350** P **P** **18 57 27.1 -0.8**
USA0B pmax pmax
comp=Z,22nm,1.3s
USRK **Ussuriysk Ar.** **47.69 350** P **P** **18 57 27.2 -0.7**
USRK **Ussuriysk Ar.** **47.69 350** P **P** **18 57 28.1 +0.2**
USRK LR LR 19 15 57.1
comp=Z,225nm,19.6s,baz=176,slow=34
comp=Z,5.8nm,0.9s
URZ **Urewera** **47.73 142** LR LR 19 18 19.6
comp=Z,427nm,18.6s,baz=121,slow=37
DCZ **Deep Cove** **47.87 156** P **P** **18 57 30.1 +0.7**
RTZ **Ruatahuna** **47.88 143** P **P** **18 57 30.0 +0.4**
BKZ **Black Stump Fm** **47.94 143** P **P** **18 57 30.0 0.0**
BKZ IAmb IAmb 18 57 43.2
comp=Z,21nm,1.0s
TUWZ **Tuamarina** **48.01 147** P **P** **18 57 30.1 -0.4**
TCW **Tory Channel** **48.04 147** P **P** **18 57 30.8 +0.1**
XAN **Xi'an** **48.05 323** ⇓P **P** **18 57 31.1 +0.1**
XAN pP sP 18 57 44.5 -0.4
XAN PP **PP** **18 59 24.3 +0.9**
XAN S **S** **19 04 28.5 +1.2**
XAN sS sS 19 04 48.0 +5.7
XAN pmax pmax
comp=Z,18nm,2.0s
XAN pmax pmax
comp=Z,390nm,4.8s
XAN LR LR
comp=Z,440nm,16.1s
XAN LR LR
comp=Z,390nm,17.9s
XAN LR LR
comp=Z,510nm,16.5s
MLZ **Mavora Lakes** **48.19 155** P **P** **18 57 31.9 +0.1**
RPZ **Rata Peaks** **48.21 152** P **P** **18 57 32.5 +0.5**
RPZ **Rata Peaks** **48.21 152** P **P** **18 57 33.7 +1.6**
RPZ **Rata Peaks** **48.21 152** LR LR 19 18 15.1
comp=Z,388nm,18.5s,baz=298,slow=37
MRZ **Mangatainoka R** **48.39 146** P **P** **18 57 32.9 -0.5**
KHZ **Kahutara** **48.49 149** P **P** **18 57 34.8 +0.6**
PZH **PanZhiHua** **48.50 310** P **P** **18 57 35.1 +0.4**
PZH pmax pmax
comp=Z,10.0nm,1.4s
PZH pmax pmax
comp=Z,200nm,6.7s
MDJ **Mudanjiang** **48.54 348** P **P** **18 57 34.4 -0.1**
MDJ pP sP 18 57 45.4 -3.1
MDJ sP pwP 18 57 49.3 +4.9
MDJ PcP **PcP** **18 58 55.0 -5.0**
MDJ PP **PP** **18 59 28.8 +1.2**
MDJ ScP **ScP** **19 02 47.8 -4.7**
MDJ PcS **PcS** **19 02 54.0 -1.9**
MDJ S **S** **19 04 39.8 +6.1**
MDJ ScS **ScS** **19 07 22.4 -2.2**
MDJ pmax pmax
comp=Z,7.0nm,0.9s
MDJ pmax pmax
comp=Z,280nm,7.2s
MDJ LR LR
comp=Z,300nm,18.1s
MDJ LR LR
comp=Z,320nm,19.2s
MDJ LR LR
comp=Z,560nm,21.6s
TIY **Taiyuan** **48.72 329** P **P** **18 57 37.0 +0.9**
TIY pP **sP** **18 57 49.8 -0.3**
TIY pmax pmax
comp=Z,7.0nm,1.5s
TIY pmax pmax
comp=Z,220nm,6.8s
TIY LR LR
comp=Z,500nm,17.9s
TIY LR LR
comp=Z,350nm,11.7s
TIY LR LR
comp=Z,470nm,17.2s
BJT **Baijiatuau** **48.74 334** P **P** **18 57 35.6 -0.6**
BJT IAmb IAmb 18 57 46.3
comp=Z,48nm,1.8s
BJT **Baijiatuau** **48.74 334** P **P** **18 57 35.6 -0.6**
BJT pmax pmax
comp=Z,48nm,1.8s
CN2 **Changchun** **48.75 344** *e*P **P** **18 57 35.3 -0.8**
CN2 *e*sP sP 18 57 53.0 +2.9
CN2 *e*S **S** **19 04 34.0 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
CN2 LR LR
comp=Z,210nm,12.0s
CN2 LR LR
comp=Z,250nm,12.0s
BJI **Beijing** **48.76 334** P **P** **18 57 36.1 -0.1**
BJI pP **pP** **18 57 45.1 -1.0**
BJI sP **sP** **18 57 49.0 -1.2**
BJI S **S** **19 04 33.9 -3.1**
BJI pmax pmax
comp=Z,7.0nm,1.4s
BJI pmax pmax
comp=Z,150nm,6.0s
BJI LR LR
comp=Z,210nm,18.9s
BJI LR LR
comp=Z,110nm,17.5s
BJI LR LR
comp=Z,300nm,18.1s
CD2 **Chengdu** **49.43 316** P **P** **18 57 42.6 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.7s
YSS **Yuzh-Sakhalins** **49.63 1** P **P** **18 57 41.7 -1.1**
YSS IAmb IAmb 18 57 43.4
comp=Z,26nm,0.9s
YSS **Yuzh-Sakhalins** **49.63 1** *e*P **P** **18 57 42.3 -0.5**
YSS *e*S **S** **19 04 48.9 0.0**
YSS *e*PS **sS** **19 05 01.4 -2.1**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=Z,200nm,5.0s
YSS smax smax
comp=N,400nm,4.4s
YSS smax smax
comp=E,300nm,3.9s
BNX **BinXian** **50.08 347** ⇓P **P** **18 57 45.8 -0.4**
BNX pmax pmax
comp=E,20nm,1.1s
BNX pmax pmax
comp=E,280nm,7.7s
TNCH **TengChong** **50.33 306** ⇓P **P** **18 57 49.3 +0.5**
TNCH pP sP 18 58 00.1 -2.7
TNCH PP **PP** **18 59 45.9 +1.4**
TNCH PcS **PcS** **19 03 00.6 -4.2**
TNCH S **S** **19 04 58.4 -1.5**
TNCH sS sS 19 05 16.8 +0.8
TNCH pmax pmax
comp=E,12nm,1.7s
TNCH pmax pmax
comp=E,180nm,4.9s
TNCH LR LR
comp=E,130nm,11.9s
TNCH LR LR
comp=E,150nm,14.1s
TNCH LR LR
comp=E,190nm,15.7s
HHC **Hu-ho-hao-te** **51.55 331** ⇓*i*P **P** **18 57 57.8 +0.3**
HHC S **S** **19 05 18.8 +2.8**
HHC sS sS 19 05 31.8 +1.3
HHC SS **SS** **19 08 47.5 -5.1**
HHC pmax pmax
comp=E,8.0nm,1.5s
HHC pmax pmax
comp=E,190nm,4.8s
HHC LR LR
comp=E,210nm,15.5s
HHC LR LR
comp=E,240nm,17.3s
HHC LR LR
comp=E,320nm,14.9s
BTO **Baotou** **52.13 329** *e*P **P** **18 58 03.8 +1.9**
BTO pP **sP** **18 58 16.6 +0.7**
BTO sP pP 18 58 21.8 +10
BTO PP **PP** **19 00 03.8 +3.3**
BTO S **S** **19 05 27.8 +3.7**
BTO sS sS 19 05 46.4 +7.1
BTO SS **SS** **19 08 58.5 -3.4**
BTO pmax pmax
comp=E,21nm,2.0s
BTO pmax pmax
comp=E,560nm,6.9s
BTO LR LR
comp=E,840nm,19.8s
BTO LR LR
comp=E,650nm,17.6s
BTO LR LR

comp=E,1μm,18.7s
LZH Lanzhou 52.53 321 *e*P **P** **18 58 06.3 +1.3**
LZH pP pP 18 58 13.6 -1.4
LZH S **S** **19 05 32.6 +2.8**
LZH sS sS 19 05 49.9 +3.5
LZH pmax pmax
comp=E,19nm,1.0s
LZH pmax pmax
comp=E,370nm,4.8s
LZH LR LR
comp=E,480nm,13.4s
LZH LR LR
comp=E,280nm,11.3s
LZH LR LR
comp=E,270nm,14.8s
KLR Kul'dur 52.63 352*c e*P **P** **18 58 05.0 -0.3**
KLR pmax pmax
comp=Z,15nm,1.1s
KLR Kul'dur 52.63 352 LR LR 19 17 03.3
comp=Z,237nm,21.7s,baz=162,slow=32
TYV Tymovskoe 53.54 1 *e*P **P** **18 58 12.8 +0.9**
TYV pmax pmax
comp=Z,43nm,1.1s
TYV pmax pmax
comp=Z,2μm,5.7s
HEH HeiHe 54.36 349 *e*P **P** **18 58 17.8 -0.2**
HEH pmax pmax
comp=Z,9.0nm,1.4s
HEH pmax pmax
comp=Z,200nm,5.5s
HEH LR LR
comp=Z,340nm,16.7s
HEH LR LR
comp=Z,260nm,16.3s
HEH LR LR
comp=Z,470nm,15.7s
SHL Shillong 56.00 304 P **P** **18 58 29.2 -1.3**
SHL Shillong 56.00 304 P **P** **18 58 29.2 -1.3**
SHL pmax pmax
comp=Z,9.0nm,0.8s
GTA Gaotai 57.09 322 ⇓P **P** **18 58 38.8 +0.9**
GTA sP sP 18 58 53.6 +1.5
GTA PcP **PcP** **18 59 33.4 +0.8**
GTA sS sS 19 06 50.8 +3.0
GTA pmax pmax
comp=Z,11nm,1.4s
GTA pmax pmax
comp=Z,200nm,6.5s
GTA LR LR
comp=Z,130nm,17.1s
GTA LR LR
comp=Z,180nm,17.8s
GTA LR LR
comp=Z,210nm,17.4s
PETK Petropavlovsk- 57.36 11 LR LR 19 19 28.4
comp=Z,122nm,21.8s,baz=202,slow=32
ZEA Zeya 57.72 350 *e*P **P** **18 58 42.2 +0.3**
ZEA *e* 18 59 33.6
ZEA pmax pmax
comp=Z,10.0nm,1.0s
LSA Lhasa 58.26 308 P **P** **18 58 46.7 -0.1**
LSA IAmb IAmb 18 59 00.5
comp=Z,14nm,1.1s
LSA Lhasa 58.26 308 P **P** **18 58 46.7 -0.1**
LSA pmax pmax
comp=Z,14nm,1.1s
GOMU GeErMu 58.57 316 P **P** **18 58 50.3 +1.6**
GOMU sP sP 18 59 04.5 +1.7
GOMU PP **PP** **19 01 01.5 +2.9**
GOMU S **S** **19 06 48.8 -2.0**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU LR LR
comp=Z,190nm,16.7s
GOMU LR LR
comp=Z,140nm,16.7s
GOMU LR LR
comp=Z,300nm,17.3s
ULN Ulaanbaatar 58.97 333 P **P** **18 58 51.1 +0.1**
ULN IAmb IAmb 18 58 55.4
comp=Z,18nm,1.3s
ULN Ulaanbaatar 58.97 333 P **P** **18 58 51.1 +0.1**
ULN pmax pmax
comp=Z,18nm,1.3s
SONM Songino Array 59.24 333 P **P** **18 58 51.9 -0.9**
SONM IAmb IAmb 18 58 55.2
comp=Z,31nm,2.0s
SONM Songino Array 59.24 333 P **P** **18 58 51.9 -0.9**
SONM pmax pmax
comp=Z,31nm,2.0s
SONM Songino Array 59.24 333 P **P** **18 58 53.6 +0.7**
comp=Z,3.5nm,1.0s,baz=153,slow=7.4,SNR=16
SONM LR LR 19 23 46.9
comp=Z,360nm,19.7s,baz=147,slow=35
comp=Z,3.5nm,1.0s
RAR Rarotonga 59.59 113 LR LR 19 23 00.4
comp=Z,62nm,18.9s,baz=296,slow=34
SHEM Shemya Is, Ala 61.71 22 LR LR 19 23 01.6
comp=Z,122nm,18.7s,baz=206,slow=33
PALK Pallekele 61.82 280 LR LR 19 30 36.3
comp=Z,76nm,18.1s,baz=201,slow=40
ZAK Zakamensk 62.50 333 *e*P **P** **18 59 14.6 -0.3**
ZAK pmax pmax
comp=Z,16nm,1.2s
MA2 Magadan 62.67 5 LR LR 19 23 49.9
comp=Z,101nm,21.0s,baz=194,slow=34
MOY Mondy 64.43 333 *e*P **P** **18 59 28.8 +1.1**
MOY pmax pmax
comp=Z,40nm,2.1s
BOD Bodaibo 64.50 344 *e*P **P** **18 59 27.7 -0.1**
BOD pmax pmax
comp=Z,10.0nm,2.1s
YAK Yakutsk 65.40 354 P **P** **18 59 33.2 -0.4**
YAK Yakutsk 65.40 354 *e*P **P** **18 59 33.5 -0.1**
YAK *e*S **S** **19 08 15.5 +0.1**
YAK *e**SS sS 19 08 43.0 +10
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK smax smax
comp=N,45nm,3.8s
YAK smax smax
comp=E,53nm,3.7s
YAK Yakutsk 65.40 354 LR LR 19 26 26.8
comp=E,174nm,18.3s,baz=132,slow=35
HYB Hyderabad 65.54 290 *e*P **P** **18 59 35.8 +0.3**
SEY Seymchan 66.12 5*c e*P **P** **18 59 38.7 +0.5**
SEY pmax pmax
comp=Z,16nm,1.7s
WMQ Urumqi 67.10 320 *e*P **P** **18 59 46.3 +1.3**
WMQ pP sP 18 59 55.9 -3.3
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ pmax pmax
comp=Z,260nm,3.6s
DGZ Jazzator, Alta 70.15 326*d i*P **P** **19 00 04.7 +0.7**
DGZ pmax pmax
comp=Z,21nm,0.9s
ZSN Zaisan 70.55 323 *e*P **P** **19 00 07.2 +0.9**
comp=Z,24nm,1.9s,baz=323
ZSN Zaisan 70.55 323 *e*P **P** **19 00 07.2 +0.9**
ZSN pmax pmax
comp=Z,24nm,1.9s
MK31 Makanchi Array 71.84 321 P **P** **19 00 13.8 -0.4**
MK31 Makanchi Array 71.84 321 P **P** **19 00 13.8 -0.4**
MK31 pmax pmax
comp=Z,12nm,1.0s
MKAR Makanchi Array 71.84 321 P **P** **19 00 14.2 0.0**
MKAR Makanchi Array 71.84 321 P **P** **19 00 15.1 +1.0**
comp=Z,11nm,0.8s,baz=112,slow=7.5,SNR=112
MKAR LR LR 19 32 05.1
comp=Z,90nm,19.3s,baz=70,slow=36
comp=Z,11nm,0.8s
MAKZ Makanchi 72.04 321 P **P** **19 00 15.4 0.0**
MAKZ IAmb IAmb 19 00 17.4
comp=Z,18nm,0.8s
MAKZ Makanchi 72.04 321 P **P** **19 00 15.4 0.0**
MAKZ pmax pmax
comp=Z,18nm,0.9s
SHLS Shalkode 72.24 317 ⇓*i*P **P** **19 00 16.1 -0.7**
comp=Z,14nm,1.3s,baz=317
SHLS Shalkode 72.24 317*d i*P **P** **19 00 16.1 -0.7**
SHLS pmax pmax
comp=Z,13nm,1.3s
UZB Uzynbulak 72.54 317 *e*P **P** **19 00 19.7 +1.1**
comp=Z,39nm,2.3s,baz=317
UZB Uzynbulak 72.54 317 *e*P **P** **19 00 19.6 +1.0**
UZB pmax pmax
comp=Z,39nm,2.3s
PRZ Przheval'sk 72.73 316 IAmb IAmb 19 00 34.0
comp=Z,28nm,1.0s
BILL Bilibino 72.80 9 P **P** **19 00 19.0 -0.4**
BILL IAmb IAmb 19 00 25.4
comp=Z,50nm,2.0s
BILL Bilibino 72.80 9 *i*P **P** **19 00 20.3 +0.9**
BILL pmax pmax
comp=Z,44nm,2.7s
KPKS Kokpek 72.88 317 ⇓*i*P **P** **19 00 21.6 +1.1**
comp=Z,24nm,2.1s,baz=317
KPKS Kokpek 72.88 317*d i*P **P** **19 00 21.6 +1.1**
KPKS pmax pmax
comp=Z,24nm,2.1s
SATY Saty 72.93 317 ⇓*i*P **P** **19 00 22.0 +1.1**
comp=Z,20nm,2.0s,baz=317
SATY Saty 72.93 317*d i*P **P** **19 00 21.9 +1.1**
SATY pmax pmax
comp=Z,20nm,2.0s
ZHN Zhinishke 72.94 317 *e*P **P** **19 00 21.8 +0.8**
baz=317
ZHN Zhinishke 72.94 317 *e*P **P** **19 00 21.8 +0.8**
KSH Kashi 73.47 313 P **P** **19 00 26.4 +2.2**
KSH pP sP 19 00 38.1 -0.4
KSH pmax pmax
comp=Z,11nm,1.7s
KSH LR LR
comp=Z,300nm,13.7s
KSH LR LR
comp=Z,190nm,14.8s
KSH LR LR
comp=Z,240nm,17.2s
ZAAO Zalesovo Array 73.67 329 P **P** **19 00 23.8 -1.0**
ZALV Zalesovo Beam 73.67 329 P **P** **19 00 24.0 -0.8**
ZALV Zalesovo Beam 73.67 329 P **P** **19 00 25.1 +0.3**
comp=Z,6.3nm,0.7s,baz=108,slow=6.1,SNR=33
ZALV LR LR 19 33 45.3
comp=Z,194nm,18.4s,baz=123,slow=37
comp=Z,6.3nm,0.7s
MDOK Medeo 73.89 316 *i*P **P** **19 00 27.8 +1.1**
baz=316
MDOK Medeo 73.89 316 *i*P **P** **19 00 27.7 +1.1**
NIL Nilore 73.93 306 P **P** **19 00 26.9 0.0**
NIL IAmb IAmb 19 00 46.5
comp=Z,16nm,0.9s
NIL Nilore 73.93 306 P **P** **19 00 26.9 0.0**
NIL pmax pmax
comp=Z,16nm,0.9s
CHKK Chushkaly 74.17 317 *e*P **P** **19 00 28.5 +0.5**
baz=317
CHKK Chushkaly 74.17 317⇓*e*P **P** **19 00 28.5 +0.5**
TKM2 Tokmak 2 74.82 316 P **P** **19 00 33.6 +1.5**
SNR=7.7
TIXI Tiksi 74.87 356 P **P** **19 00 30.4 -1.1**
TIXI Tiksi 74.87 356*c e*P **P** **19 00 29.8 -1.7**
TIXI pmax pmax
comp=Z,18nm,2.5s
TIXI Tiksi 74.87 356 LR LR 19 33 09.8
comp=Z,114nm,18.7s,baz=198,slow=36
KBK Karagaybulak 75.19 315 P **P** **19 00 35.8 +1.7**
SNR=5.9
VNDA Vanda 75.35 176 P **P** **19 00 35.5 +1.3**
comp=Z,1.6nm,0.4s,baz=345,slow=8.1,SNR=8.2
comp=Z,1.6nm,0.4s
UCH Uchtor 75.36 315 P **P** **19 00 37.7 +2.2**
SNR=14
CHMS Chumysh 75.43 316 P **P** **19 00 36.3 +1.0**
SNR=6.4
AAK Ala-Archa 75.50 315 P **P** **19 00 36.4 +0.5**
AAK Ala-Archa 75.50 315 P **P** **19 00 36.4 +0.5**
AAK pmax pmax
comp=Z,7.0nm,1.1s
AAK Ala-Archa 75.50 315 LR LR 19 36 44.3
comp=Z,74nm,18.4s,baz=120,slow=38
KURK Kurchatov 75.66 324 P **P** **19 00 36.0 -0.4**
KURK IAmb IAmb 19 00 39.3
comp=Z,16nm,1.1s
KURK Kurchatov 75.66 324*c e*P **P** **19 00 36.5 +0.1**
KURK pmax pmax
comp=Z,42nm,2.3s
KURBB Kurchatov Arra 75.67 324 P **P** **19 00 37.0 +0.5**
comp=Z,5.1nm,0.8s,baz=112,slow=5.6,SNR=44
comp=Z,5.1nm,0.8s
USP Ospenovka 75.69 316 P **P** **19 00 38.4 +1.5**
SNR=9.3
EKS2 Erkin-Say 76.01 315 P **P** **19 00 40.7 +1.9**
SNR=16
BTLS Baital 76.55 318 ⇓*i*P **P** **19 00 42.2 +0.5**
comp=Z,16nm,1.7s,baz=318
BTLS Baital 76.55 318*d i*P **P** **19 00 42.1 +0.5**
BTLS pmax pmax
comp=Z,16nm,1.7s
BTK Batken 77.44 312 IAmb IAmb 19 00 51.2
comp=Z,31nm,1.6s
DZA Taraz 77.81 315 *e*P **P** **19 00 49.7 +0.9**
baz=315
DZA Taraz 77.81 315 *e*P **P** **19 00 49.7 +0.9**
KK31 Karatay Array 78.44 315 P **P** **19 00 52.7 +0.4**
KK31 IAmb IAmb 19 00 56.5
comp=Z,23nm,1.5s
KK31 Karatay Array 78.44 315 P **P** **19 00 52.7 +0.4**
KK31 pmax pmax
comp=Z,23nm,1.5s
KKAR Karatay Array 78.44 315 P **P** **19 00 52.6 +0.3**
KKAR IAmb IAmb 19 00 56.5
comp=Z,23nm,1.5s
KKAR Karatay Array 78.44 315 P **P** **19 00 52.6 +0.3**
IUG luzhnay 78.54 314 *e*P **P** **19 00 53.8 +0.9**
comp=Z,31nm,1.8s,baz=314
IUG luzhnay 78.54 314 *e*P **P** **19 00 53.8 +0.9**
IUG pmax pmax
comp=Z,31nm,1.8s
BRZS Berezniki 78.97 322 *i*P **P** **19 00 54.0 -1.0**
BRZS pmax pmax
comp=Z,15nm,2.2s
L18K Granite Mounta 79.67 25 IAmb IAmb 19 01 29.3
comp=Z,32nm,1.4s
KDAK Kodiak Island 79.69 30 LR LR 19 29 47.5
comp=Z,173nm,21.0s,baz=259,slow=31
H17K Granite Mounta 79.71 22 IAmb IAmb 19 01 02.2
comp=Z,19nm,1.2s
N19K Bonanza Creek 80.01 26 IAmb IAmb 19 01 03.7
comp=Z,19nm,1.1s
TTA Tatalina 80.27 24 P **P** **19 01 02.4 +0.5**
TTA Tatalina 80.27 24 P **P** **19 01 02.4 +0.5**
TTA pmax pmax
comp=Z,10.0nm,1.1s
L19K White Mountain 80.43 25 IAmb IAmb 19 01 10.7
comp=Z,22nm,1.3s
G18K Tagagawik 80.65 21 IAmb IAmb 19 01 10.8
comp=Z,26nm,1.5s
NRIK Noril'sk 80.77 343 P **P** **19 01 03.6 -0.7**
NRIK IAmb IAmb 19 01 05.8
comp=Z,18nm,0.9s
NRIK Noril'sk 80.77 343*de*P **P** **19 01 04.5 +0.1**
NRIK pmax pmax
comp=Z,24nm,1.0s
NRIK Noril'sk 80.77 343 P **P** **19 01 04.8 +0.5**
comp=Z,10nm,0.8s,baz=124,slow=5.9,SNR=19
NRIK LR LR 19 37 07.8
comp=Z,117nm,19.2s,baz=147,slow=36
comp=Z,10nm,0.8s
J19K Poorman 80.90 23 IAmb IAmb 19 01 25.6
comp=Z,49nm,1.8s
M20K Styx River 81.05 26 IAmb IAmb 19 01 13.2
comp=Z,44nm,1.5s
BVAR Borovoye Array 81.24 325 P **P** **19 01 08.1 +0.9**
comp=Z,12nm,0.8s,baz=110,slow=7.3,SNR=69
BVAR LR LR 19 37 19.9
comp=Z,84nm,19.9s,baz=96,slow=36
comp=Z,12nm,0.8s
BRVK Borovoye 81.31 325 P **P** **19 01 07.3 -0.3**
BRVK IAmb IAmb 19 01 09.5
comp=Z,11nm,0.8s
BRVK Borovoye 81.31 325*de*P **P** **19 01 07.8 +0.2**
BRVK pmax pmax
comp=Z,13nm,0.9s
G19K Purcell Mounta 81.33 21 IAmb IAmb 19 01 28.5
comp=Z,17nm,1.2s
J20K Nowinta River 81.57 23 IAmb IAmb 19 01 14.4
comp=Z,24nm,1.1s
C19K Lookout Ridge 81.94 18 IAmb IAmb 19 01 32.0
comp=Z,28nm,1.3s
CAST Castle Rocks 82.10 25 IAmb IAmb 19 01 14.8
comp=Z,50nm,2.0s
F20K Avaraart Lake 82.23 21 IAmb IAmb 19 01 19.6
comp=Z,35nm,1.6s
IMAR Indian Mountai 82.48 22 P **P** **19 01 12.7 -0.7**
KTH Kantishna Hill 82.63 25 IAmb IAmb 19 01 20.9
comp=Z,26nm,1.2s
I21K Tanana 82.83 23 IAmb IAmb 19 01 20.2
comp=Z,31nm,1.4s
SML Sawmill 83.14 27 P **P** **19 01 16.9 -0.1**
RND Reindeer 83.45 25 IAmb IAmb 19 01 18.9
comp=Z,16nm,1.0s
B21K Ikpikpuk River 83.74 18 IAmb IAmb 19 01 29.1
comp=Z,14nm,1.3s
NEA2 Nenana 83.77 24 IAmb IAmb 19 01 23.6
comp=Z,38nm,1.8s
I23K Minto, Yukon-K 83.84 23 IAmb IAmb 19 01 24.7
comp=Z,22nm,1.2s
DHY Denali Highway 83.97 26 IAmb IAmb 19 01 37.4
comp=Z,20nm,1.2s
D22K Ayikyak River 84.05 19 IAmb IAmb 19 01 43.8
comp=Z,33nm,1.9s
WRH Wood River Hil 84.12 24 IAmb IAmb 19 01 25.9
comp=Z,25nm,1.2s
G23K Bananza Creek 84.15 22 P **P** **19 01 21.8 -0.3**
G23K IAmb IAmb 19 01 25.9
comp=Z,11nm,1.1s
H24K Noodor Dome 84.66 23 IAmb IAmb 19 01 32.0
comp=Z,32nm,1.7s
IL31 84.71 24 P **P** **19 01 23.0 -1.8**
IL31 IAmb IAmb 19 01 31.6
comp=Z,13nm,1.3s
ILAR Eielson Array 84.71 24 P **P** **19 01 22.7 -2.3**
ILAR Eielson Array 84.71 24 P **P** **19 01 23.8 -1.1**
comp=Z,4.9nm,0.9s,baz=256,slow=5.1,SNR=32
ILAR LR LR 19 33 33.4
comp=Z,54nm,20.2s,baz=232,slow=32
comp=Z,4.9nm,0.9s
G24K Hadweenzic Riv 85.10 22 IAmb IAmb 19 01 32.1
comp=Z,16nm,1.2s
J25K Salcha River, 85.28 24 IAmb IAmb 19 01 30.6
comp=Z,18nm,1.2s
J26L Joseph Creek 86.00 25 IAmb IAmb 19 01 42.4
comp=Z,24nm,1.6s
M27K Edge Creek, AK 86.21 27 P **P** **19 01 32.7 +0.1**
D25K Kavik River 86.32 20 IAmb IAmb 19 01 40.8
comp=Z,23nm,1.3s
L27K Beaver Creek, 86.39 26 IAmb IAmb 19 01 35.1
comp=Z,10nm,1.2s
BMAR Burnt Mountain 86.40 22 P **P** **19 01 32.6 -0.7**
BCAR Beaver Creek A 86.41 26 P **P** **19 01 33.1 -0.4**
GEYT Alibeck 86.79 308 P **P** **19 01 36.4 +0.5**
comp=Z,2.5nm,0.9s,baz=104,slow=6.3,SNR=6.2
comp=Z,2.5nm,0.9s
ABKAR Akbulak array 86.86 319 P **P** **19 01 35.1 -0.8**
ABKAR Akbulak array 86.86 319 P **P** **19 01 34.5 -1.4**
QSPA South Pole Qui 87.06 180 P **P** **19 01 37.6 +0.9**
comp=Z,9.1nm,0.9s,baz=231,slow=0.7,SNR=31
comp=Z,9.1nm,0.9s
DAWY Dawson 87.67 26 P **P** **19 01 39.8 +0.2**
DAWY IAmb IAmb 19 01 44.3
comp=Z,17nm,1.1s
I28M Miner Creek 87.73 24 IAmb IAmb 19 02 06.8
comp=Z,23nm,1.5s
M29M Somme Creek 87.78 27 IAmb IAmb 19 01 45.1
comp=Z,16nm,1.2s
L29M L29M 88.05 27 P **P** **19 01 41.5 +0.1**
D27M Malcolm River 88.16 20 IAmb IAmb 19 01 49.5
comp=Z,18nm,1.3s
F28M Old Crow 88.20 22 IAmb IAmb 19 02 09.4
comp=Z,14nm,1.2s
J29N Klondike Camp 88.25 25 IAmb IAmb 19 02 10.4
comp=Z,42nm,1.9s
ARU Arti 88.65 327*d i*P **P** **19 01 43.0 -1.3**
ARU S **SKSac** **19 12 08.1 -2.9**
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 88.65 327 LR LR 19 43 04.1
comp=Z,157nm,19.1s,baz=78,slow=37
EPYK Eagle Plains 89.19 23 P **P** **19 01 46.4 -0.3**
G30M tAoh Zraii Nji 89.48 23 P **P** **19 01 47.5 -0.6**
G30M IAmb IAmb 19 02 36.8
comp=Z,20nm,1.5s
INK Inuvik 90.67 22 P **P** **19 01 52.4 -1.1**
INK IAmb IAmb 19 01 56.2
comp=Z,25nm,1.8s
INK Inuvik 90.67 22 P **P** **19 01 52.4 -1.1**
INK pmax pmax
comp=Z,25nm,1.8s
INK Inuvik 90.67 22 LR LR 19 38 19.9
comp=Z,95nm,20.9s,baz=9.5,slow=33
KIRV Kirov 93.70 328 LR LR 19 46 13.9
comp=Z,210nm,18.9s,baz=93,slow=37
BELG Belogornoye 94.83 322 *i*P **P** **19 02 11.2 -1.8**
BELG pmax pmax
comp=Z,2.0nm,1.0s
BELG Belogornoye 94.83 322 LR LR 19 47 14.8
comp=Z,81nm,19.8s,baz=140,slow=37
ELIB Princess Elisa 95.80 196 *d*P **P** **19 02 18.0 +0.7**
YBH Yreka Blue Hor 95.99 49 LR LR 19 38 35.6
comp=Z,130nm,19.7s,baz=322,slow=31
KBZ Khabaz 98.44 314 LR LR 19 50 26.0
comp=Z,49nm,19.8s,baz=322,slow=38
YKA Yellowknife Ar 98.80 27 P **P** **19 02 30.2 -0.6**
comp=Z,1.2nm,0.9s,baz=279,slow=4.6,SNR=12
YKA LR LR 19 41 36.3
comp=Z,129nm,20.4s,baz=281,slow=32
comp=Z,1.2nm,0.9s
NEW Newport 99.50 42 LR LR 19 38 26.7
comp=Z,65nm,21.2s,baz=262,slow=30
SPITS Spitsbergen Ar 99.69 350 LR LR 19 47 28.7
comp=Z,98nm,19.5s,baz=8.0,slow=35
SOC Sochi 100.75 314 *e*P **Pdif** **19 02 38.7 -1.2**
SOC *e* 19 06 44.7
SOC *e*PPP PPP 19 08 52.9
SOC *e*S **SKSac** **19 13 15.1 -1.6**
SOC *e*SS SS **19 21 09.8 -3.1**
SOC *e*SSS SSS 19 25 01.2
OBN Obninsk 101.06 326⇑*e*P **Pdif** **19 02 41.0 0.0**
OBN SS SS 19 21 19.0 +2.6
OBN pmax pmax
comp=Z,2.0nm,0.6s
OBN MLR MLR
comp=Z,126nm,16.0s
CLL Collm 115.59 327 *e*PKIKP **PKiKP** **19 07 31.0 -2.3**
CLL pmax pmax
comp=Z,19nm,1.7s
CLL Collm 115.59 327 *e*PKiKP **PKiKP** **19 07 31.0 -2.3**
BTNL Ternell 119.61 329 *d*PKPdf **PKPdf** **19 07 41.1 -0.1**
MEM Membach 119.66 329 *d*PKPdf **PKPdf** **19 07 39.3 -1.9**
BSTI Sart Tilman 119.90 329 *d*PKP **PKPdf** **19 07 41.2 -0.4**
WLF Walferdange 120.14 328 *d*PKPdf **PKPdf** **19 07 40.1 -2.0**
BMRD Maredsous 120.47 330 *d*PKPdf **PKPdf** **19 07 41.3 -1.4**
PLCA Paso Flores 127.48 149 PKP **PKPdf** **19 07 57.4 +0.7**
comp=Z,2.0nm,1.0s,baz=236,slow=3.6,SNR=3.1
ROSC El Rosal 143.89 86 PKP PKPbc 19 08 27.3 +1.4
comp=Z,25nm,0.8s,baz=50,slow=10,SNR=6.2
CPUP Villa Florida 145.56 149 PKPbc **PKPdf** **19 08 30.9 +0.7**
comp=Z,7.9nm,1.1s,baz=270,slow=3.0,SNR=5.3
KIC Kosan Boka 146.50 277⇑*e*PKP1 **PKPbc** **19 08 34.2 +0.6**
comp=Z,28nm,1.0s
DBIC Dimbokro 146.59 278 PKPbc **PKPbc** **19 08 34.1 +0.3**
comp=Z,16nm,0.8s,baz=102,slow=3.6,SNR=17
TIC Toumodi 146.75 278⇑*i*PKP1 **PKPbc** **19 08 35.1 +0.8**
comp=Z,18nm,0.8s
LIC Lamto 146.79 277⇓*e*P **PKPbc** **19 08 34.7 +0.3**
comp=Z,20nm,0.7s

*ATH **13** 18:55:30.9, 38°.89N×26°.48E, h8km±1km, ML2.6/7, Error ellipse: s-maj=1.7km s-min=0.8km az=284.0*
*AFAD **13** 18:55:30.4±0.0, 38°.91N×26°.43E, h7km±3km, ML2.6*
*THE **13** 18:55:31.3, 38°.91N×26°.43E, h2km±1km, ML2.6/9, Error ellipse: s-maj=1.8km s-min=0.6km az=138.0*
*ISK **13** 18:55:31.3, 38°.94N×26°.50E, h9km, ML2.6/21*
ISC 13 18:55:31.1±0.8, 38°.91N±0'.01×26°.46E±0'.02, h13km±6km, n78, σ0°65/126, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAG3	**Mitilini, Lesv**	**0.20**	**26**	P	**Pg**	**18 55 35.3**	**-0.2**
EAG3				S	**Sg**	**18 55 38.2**	**-0.3**
LESV	**Lesvos island,**	**0.21**	**22**	P	**Pg**	**18 55 35.5**	**-0.3**
LESV				S	**Sg**	**18 55 39.5**	**+0.6**
	6μm,0.3s						

KARB	**zmir-Karabur**	**0.25**	**188**	P	**Pg**	**18 55 36.1**	**-0.2**
KARB				S	**Sg**	**18 55 39.3**	**-0.5**
CAND	**Candarli**	**0.27**	**80**	Pg	**Pg**	**18 55 36.7**	**-0.1**
CAND				Sg	**Sg**	**18 55 40.6**	**0.0**
FOCM	**Foa**	**0.29**	**132**	Pg	**Pg**	**18 55 36.7**	**-0.3**
FOCM				Sg	**Sg**	**18 55 41.7**	**+0.7**
RFT7	**Candarli**	**0.36**	**82**	Pg	**Pg**	**18 55 38.4**	**0.0**
RFT7				Sg	**Sg**	**18 55 43.6**	**+0.2**
PRK	**Paraskevi**	**0.37**	**337**	P	**Pg**	**18 55 38.2**	**-0.3**
PRK				S	**Sg**	**18 55 43.6**	**+0.2**
	2µm,0.3s						
PRK	**Paraskevi**	**0.37**	**337**	P	**Pg**	**18 55 38.3**	**-0.2**
PRK				S	**Sg**	**18 55 43.6**	**+0.2**
PRK				AML	AML	18 55 44.0	
	comp=E,4805µm,0.3s						
PRK				AML	AML	18 55 44.5	
	comp=N,2349µm,0.3s						
IZMD	**zmir-Dikili-**	**0.38**	**78**	P	**Pg**	**18 55 38.8**	**+0.1**
IZMD				P	**Pg**	**18 55 38.8**	**+0.1**
IZMD				S	**Sg**	**18 55 43.4**	**-0.3**
DKL	**Dikili**	**0.39**	**65**	Pg	**Pg**	**18 55 38.4**	**-0.4**
DKL				Sg	**Sg**	**18 55 44.2**	**+0.2**
AYVA	**Ayvalik**	**0.44**	**24**	P	**Pg**	**18 55 39.6**	**-0.2**
AYVA				S	**Sg**	**18 55 43.7**	**-2.0**
EAG2	**Marmaro, Chios**	**0.45**	**217**	P	**Pg**	**18 55 39.2**	**-0.9**
EAG2				S	**Sg**	**18 55 46.0**	**-0.1**
ZEDA	**zmir-Bergama**	**0.49**	**83**	P	**Pg**	**18 55 40.9**	**+0.2**
ZEDA				S	**Sg**	**18 55 47.2**	**0.0**
URLA	**Izmir**	**0.56**	**169**	P	**Pg**	**18 55 41.5**	**-0.4**
URLA				S	**Sg**	**18 55 49.1**	**-0.3**
URLA				*i* AML	AML	18 55 52.0	
	comp=N,295nm,0.4s						
URLA				*i* AML	AML	18 55 52.0	
	comp=N,291nm,0.2s						
SIGR	**SIGRI**	**0.56**	**303**	Pg	**Pg**	**18 55 42.9**	**+0.9**
SIGR				Sg	**Sb**	**18 55 51.2**	**+0.5**
SIGR	**SIGRI**	**0.56**	**303**	P	**Pg**	**18 55 42.2**	**+0.2**
SIGR				S	**Sg**	**18 55 50.5**	**+1.1**
	comp=N,348nm,0.3s						
SIGR	**SIGRI**	**0.56**	**303**	P	**Pb**	**18 55 43.9**	**+1.2**
SIGR				S	**Sg**	**18 55 50.2**	**+0.8**
SIGR				AML	AML	18 55 52.7	
	comp=N,755µm,0.2s						
SIGR				AML	AML	18 55 57.7	
	comp=E,574µm,0.2s						
GPNR	**Gulpinar-Canak**	**0.60**	**335**	Pg	**Pg**	**18 55 43.2**	**+0.3**
GPNR				Sg	**Sg**	**18 55 51.3**	**+0.5**
CHOS	**Chios island**	**0.61**	**211**	P	**Pg**	**18 55 42.5**	**-0.5**
CHOS				S	**Sg**	**18 55 52.1**	**+1.1**
	comp=E,642nm,0.3s						
CHOS	**Chios island**	**0.61**	**211**	P	**Pg**	**18 55 42.6**	**-0.3**
CHOS				S	**Sg**	**18 55 50.7**	**-0.3**
CHOS				AML	AML	18 55 54.7	
	comp=E,1675µm,0.2s						
CHOS				AML	AML	18 55 56.3	
	comp=N,747µm,0.2s						
KOCA	**Canakkale, Ayv**	**0.64**	**337**	P	**Pg**	**18 55 43.1**	**-0.5**
KOCA				S	**Sg**	**18 55 51.3**	**-0.8**
ZEYE	**Izmir, Urla-Ze**	**0.67**	**177**	P	**Pg**	**18 55 43.9**	**-0.2**
ZEYE				S	**Sb**	**18 55 53.7**	**-0.1**
ZEYE				*i* AML	AML	18 55 56.0	
	comp=N,771nm,0.3s						
ZEYE				*i* AML	AML	18 55 56.0	
	comp=N,787nm,0.3s						
BLCB	**Balcova**	**0.69**	**139**	Pg	**Pb**	**18 55 45.6**	**+0.5**
BLCB				Sg	**Sb**	**18 55 55.5**	**+0.9**
BLCB	**Balcova**	**0.69**	**139**	P	**Pg**	**18 55 44.8**	**+0.2**
BLCB				S	**Sb**	**18 55 56.3**	**+1.7**
BUHA	**Balikesir, Bur**	**0.76**	**39**	P	**Pg**	**18 55 45.0**	**-0.9**
BUHA				S	**Sg**	**18 55 56.4**	**+0.5**
BUHA				*i* AML	AML	18 56 00.0	
	comp=N,405nm,0.4s						
BUHA				*i* AML	AML	18 56 02.0	
	comp=N,210nm,0.5s						
PSRA	**Psara**	**0.79**	**243**	P	**Pg**	**18 55 45.6**	**-0.7**
PSRA				S	**Sg**	**18 55 56.8**	**+0.2**
PSRA				AML	AML	18 55 58.8	
	comp=N,1050µm,0.3s						
PSRA				AML	AML	18 55 59.5	
	comp=E,1231µm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.83**	**5**	P	**Pg**	**18 55 46.6**	**-0.7**
BAYC				S	**Sg**	**18 55 57.9**	**-0.3**
BAYC				*i* AML	AML	18 56 00.0	
	comp=E,258nm,0.6s						
BAYC				*i* AML	AML	18 56 01.0	
	comp=E,222nm,0.3s						
GMLD	**Gumuldur**	**0.91**	**156**	Pg	**Pn**	**18 55 49.8**	**+0.3**
DGB	**zmir**	**0.92**	**158**	P	**Pg**	**18 55 48.1**	**-0.7**
DGB				S	**Sg**	**18 55 59.2**	**-1.6**
EZN	**Ezine**	**0.92**	**354**	Pg	**Pg**	**18 55 48.6**	**-0.3**
EZN	**Ezine**	**0.92**	**354**	P	**Pg**	**18 55 48.0**	**-0.9**
EZN				S	**Sn**	**18 56 03.2**	**+0.3**
	comp=E,315nm,0.3s						
BOZC	**Bozcaada**	**0.98**	**342**	P	**Pg**	**18 55 49.4**	**-0.7**
BOZC				S	**Sg**	**18 56 01.7**	**-1.3**
BOZC				*i* AML	AML	18 56 04.0	
	comp=E,216nm,0.4s						
BOZC				*i* AML	AML	18 56 05.0	
	comp=E,182nm,0.2s						
AKS	**Akhisar**	**1.06**	**91**	Pg	**Pg**	**18 55 51.3**	**-0.2**
AKHS	**Akhisar**	**1.06**	**91**	P	**Pg**	**18 55 51.2**	**-0.3**
AKHS				S	**Sb**	**18 56 06.0**	**+0.9**
STEP	**BALIKESIR_Sava**	**1.09**	**64**	P	**Pg**	**18 55 51.9**	**-0.1**
STEP				S	**Sb**	**18 56 06.5**	**+0.6**
STEP				*i* AML	AML	18 56 11.0	
	comp=E,218nm,0.6s						
STEP				*i* AML	AML	18 56 11.0	
	comp=E,206nm,0.4s						
ECEA	**Canakkale, Ece**	**1.16**	**349**	P	**Pb**	**18 55 52.9**	**-0.1**
ECEA				S	**Sg**	**18 56 08.0**	**-0.4**
ECEA				*i* AML	AML	18 56 10.0	
	comp=E,431nm,0.5s						
ECEA				*i* AML	AML	18 56 11.0	
	comp=E,317nm,0.3s						
CNKL	**anakkale-Mer**	**1.16**	**357**	P	**Pg**	**18 55 52.5**	**-0.9**
CNKL				P	**Pg**	**18 55 52.5**	**-0.9**
CNKL				S	**Sg**	**18 56 08.2**	**-0.3**
COMU	**Canakkale**	**1.19**	**1**	Pn	**Pb**	**18 55 53.8**	**+0.2**
CANM	**Can-anakkale**	**1.20**	**23**	Pn	**Pb**	**18 55 52.7**	**-0.9**
BALY	**Balya**	**1.23**	**47**	P	**Pb**	**18 55 54.5**	**+0.3**
BALY				S	**Sg**	**18 56 09.2**	**-1.5**
BALY				*i* AML	AML	18 56 15.0	
	comp=E,90nm,0.3s						
BALY				*i* AML	AML	18 56 17.0	
	comp=E,90nm,0.8s						
SMG	**Samos**	**1.23**	**166**	P	**Pb**	**18 55 53.8**	**-0.5**
SMG				S	**Sn**	**18 56 11.8**	**+1.2**
	comp=E,358nm,0.5s						
SMG	**Samos**	**1.23**	**166**	P	**Pb**	**18 55 53.4**	**-0.9**
SMG				AML	AML	18 56 13.7	
	comp=E,730µm,0.4s						
SMG				AML	AML	18 56 16.3	
	comp=N,641µm,0.3s						
GOAD	**anakkale-G¶**	**1.32**	**342**	P	**Pn**	**18 55 55.4**	**+0.1**
GOAD				S	**Sb**	**18 56 12.0**	**-0.6**
GOAD				*i* AML	AML	18 56 14.0	
	comp=N,124nm,0.3s						
GOAD				*i* AML	AML	18 56 17.0	
	comp=N,144nm,0.5s						
BALB	**Balikesir**	**1.32**	**56**	Pn	**Pn**	**18 55 55.9**	**+0.6**
GADA	**Gvkgeada**	**1.35**	**342**	Pn	**Pn**	**18 55 55.9**	**+0.2**
GCAM	**G?zelcaml?**	**1.35**	**153**	P	**Pn**	**18 55 55.8**	**+0.2**
GCAM				*i* AML	AML	18 56 17.0	
	comp=N,93nm,0.3s						
LIA	**Limnos Island**	**1.40**	**315**	P	**Pn**	**18 55 56.1**	**-0.3**
LIA				S	**Sb**	**18 56 15.1**	**+0.3**
	comp=N,310nm,0.5s						
LIA	**Limnos Island**	**1.40**	**315**	P	**Pn**	**18 55 56.0**	**-0.3**
LIA				S	**Sb**	**18 56 14.7**	**-0.1**
LIA				AML	AML	18 56 17.1	
	comp=N,480µm,0.5s						
LIA				AML	AML	18 56 17.2	
	comp=E,763µm,0.5s						
IZMR	**zmir-demi**	**1.40**	**123**	P	**Pn**	**18 55 56.6**	**+0.2**
IZMR				S	**Sb**	**18 56 14.0**	**-1.0**
BKES	**Balkesir-Mer**	**1.41**	**54**	P	**Pn**	**18 55 57.0**	**+0.5**
BKES				S	**Sb**	**18 56 14.5**	**-0.7**
LPK	**Lapseki**	**1.48**	**9**	Pn	**Pn**	**18 55 58.1**	**+0.6**
GONE	**Gonen-Balikesi**	**1.48**	**40**	Pn	**Pn**	**18 55 58.3**	**+0.8**
GELI	**Tayfur-Gelibol**	**1.49**	**1**	Pn	**Pn**	**18 55 58.3**	**+0.7**
BLKS	**Balkesir-Sus**	**1.52**	**50**	P	**Pn**	**18 55 58.3**	**+0.3**
BLKS				S	**Sn**	**18 56 16.7**	**-1.0**
KNL	**Balıkesir**	**1.59**	**31**	P	**Pn**	**18 55 58.7**	**-0.3**
KNL				S	**Sn**	**18 56 19.9**	**+0.4**
KNL				*i* AML	AML	18 56 25.0	
	comp=E,75nm,0.6s						
KRBG	**Karabiga-Canak**	**1.62**	**23**	Pn	**Pn**	**18 56 00.4**	**+1.0**
KIRA	**zmir-Kiraz**	**1.68**	**114**	P	**Pn**	**18 56 00.6**	**+0.2**
MANT	**Manisa**	**1.70**	**104**	P	**Pn**	**18 56 01.3**	**+0.6**
DURS	**Dursunbey**	**1.71**	**66**	P	**Pn**	**18 56 00.4**	**-0.4**
SMTH	**Samothraki Isl**	**1.72**	**336**	P	**Pn**	**18 56 01.2**	**+0.4**
SMTH				S	**Sn**	**18 56 23.6**	**+1.0**
SMTH	**Samothraki Isl**	**1.72**	**336**	P	**Pn**	**18 56 01.3**	**+0.6**
KULA	**Kula-Manisa**	**1.77**	**102**	Pn	**Pn**	**18 56 02.7**	**+1.2**
EDC	**Edincik**	**1.80**	**37**	Pn	**Pn**	**18 56 02.7**	**+0.8**
ENEZ	**Enez**	**1.84**	**353**	P	**Pn**	**18 56 02.4**	**0.0**
ENEZ				S	**Sb**	**18 56 27.9**	**+0.3**
ESEN	**Aydn-Nazilli**	**1.85**	**126**	P	**Pn**	**18 56 02.8**	**+0.2**
BAND	**Balkesir-Ban**	**1.92**	**41**	P	**Pn**	**18 56 03.5**	**-0.1**
BODT	**Bodrum**	**1.96**	**160**	Pn	**Pb**	**18 56 06.4**	**-0.3**
APE	**Apeiranthos**	**1.98**	**202**	P	**Pn**	**18 56 03.5**	**-0.9**
SIMA	**Simav-Kutahya**	**1.98**	**84**	Pn	**Pn**	**18 56 05.4**	**+1.0**
KCTX	**Karacabey (Bur**	**2.00**	**47**	Pn	**Pn**	**18 56 04.8**	**+0.2**
USAK	**Uak-Merkez**	**2.01**	**95**	P	**Pn**	**18 56 05.4**	**+0.6**
ALN	**Alexandroupoli**	**2.01**	**351**	P	**Pn**	**18 56 04.8**	**+0.1**
ALN				S	**Sb**	**18 56 32.4**	**-0.1**
	comp=E,60nm,0.6s						
ALN	**Alexandroupoli**	**2.01**	**351**	P	**Pn**	**18 56 04.9**	**+0.1**
ALN				AML	AML	18 56 36.2	
	comp=E,104µm,0.7s						
ALN				AML	AML	18 56 36.5	
	comp=N,140µm,0.5s						
RFTAA	**Mazikoy-Bodrum**	**2.16**	**151**	Pn	**Pb**	**18 56 09.2**	**-0.9**
RDO	**Rodhopi**	**2.34**	**343**	P	**Pn**	**18 56 09.7**	**+0.3**
TVSB	**Tavsanli**	**2.40**	**76**	Pn	**Pn**	**18 56 11.4**	**+1.2**
KAVA	**Kavala**	**2.57**	**325**	P	**Pn**	**18 56 11.9**	**-0.5**
KOKK	**Kokkinochori,**	**2.69**	**316**	P	**Pn**	**18 56 13.7**	**-0.4**

AFAD 13 18:58:20.1±0.0, 38.14N×26.59E, h7km±2km, ML1.5, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEYE	**Izmir, Urla-Ze**	**0.12**	**325**	P	Pg	18 58 22.7	+0.1
ZEYE				*i* AML	AML	18 58 25.0	
	comp=N,158nm,0.1s						
ZEYE				S	Sg	18 58 25.1	+0.7
URLA	**Izmir**	**0.22**	**2**	P	Pg	18 58 24.5	+0.1
URLA				S	Sg	18 58 28.2	+0.8
GCAM	**G?zelcaml?**	**0.68**	**131**	P	Pg	18 58 33.6	+0.5
GCAM				*i* AML	AML	18 59 03.0	
	comp=N,34nm,1.0s						
GCAM				*i* AML	AML	18 59 03.0	
	comp=E,26nm,0.9s						

*ISK **13** 18:59:29.0, 40.83N×31.34E, h2km, ML3.0/31*
*AFAD **13** 18:59:30.2±0.0, 40.80N×31.34E, h8km, ML3.0*
ISC 13 18:59:29.9±0.9, 40.83N±0.02×31.33E±0.01, h11km±7km, n69, σ1.9 14/94, 5C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YIGI	**Dzce**	**0.16**	**34**	P	**Pg**	**18 59 33.9**	**+0.5**
YIGI				S	**Sg**	**18 59 35.8**	**-0.2**
YIGI				*i* AML	AML	18 59 36.0	
	comp=E,4µm,0.3s						
BOLU	**Bolu-Merkez-Mu**	**0.27**	**102**	P	**Pg**	**18 59 35.5**	**+0.1**
BOLU				S	**Sg**	**18 59 38.8**	**-0.3**
BTAS	**Taskesti**	**0.37**	**224**	P	**Pg**	**18 59 37.3**	**+0.1**
BTAS				S	**Sg**	**18 59 41.3**	**-0.8**
BTAS				*i* AML	AML	18 59 43.0	
	comp=N,2µm,0.3s						
BTAS				*i* AML	AML	18 59 43.0	
	comp=E,3µm,0.3s						
MDUB	**Mudurnu**	**0.38**	**196**	Pg	**Pg**	**18 59 37.3**	**-0.1**
MDUB				Sg	**Sg**	**18 59 43.2**	**+0.7**
YUVA	**Yuva-Kibriscik**	**0.52**	**149**	Pg	**Pb**	**18 59 40.5**	**-0.5**
YUVA				Sg	**Sb**	**18 59 47.6**	**-1.0**
BCAM	**Yenicaga**	**0.56**	**92**	P	**Pg**	**18 59 40.5**	**-0.2**
BCAM				S	**Sg**	**18 59 46.9**	**-1.2**
KIBS	**BOLU**	**0.57**	**136**	P	**Pg**	**18 59 41.3**	**+0.2**
KIBS				S	**Sg**	**18 59 47.8**	**-0.8**
DEVR	**Zonguldak/Devr**	**0.57**	**57**	P	**Pg**	**18 59 40.5**	**-0.6**
DEVR				S	**Sg**	**18 59 47.2**	**-1.4**
SUSU	**Bolu-G¶lynk-**	**0.62**	**217**	P	**Pg**	**18 59 42.0**	**+0.1**
SUSU				S	**Sg**	**18 59 49.8**	**-0.3**
GULT	**Gulveren**	**0.74**	**238**	Pg	**Pg**	**18 59 44.4**	**+0.2**
GULT				Sg	**Sb**	**18 59 55.6**	**+0.6**
KAYN	**Sakarya, Kayna**	**0.77**	**280**	P	**Pg**	**18 59 44.4**	**-0.3**
KAYN				S	**Sg**	**18 59 51.3**	**-3.4**
SAUV	**Serdivan-Sakar**	**0.77**	**263**	Pg	**Pg**	**18 59 44.7**	**-0.1**
SAUV				Sg	**Sb**	**18 59 56.4**	**+0.6**
GEYV	**SAKARYA_Geyve**	**0.86**	**247**	P	**Pg**	**18 59 46.5**	**-0.1**
GEYV				S	**Sg**	**18 59 57.7**	**-0.1**
GEYV				*i* AML	AML	19 00 02.0	
	comp=N,402nm,0.4s						
KAND	**Kocaeli-Kandir**	**0.90**	**287**	P	**Pg**	**18 59 46.9**	**-0.4**
KAND				S	**Sg**	**18 59 56.9**	**-2.2**
CMDR	**Camlidere-ANKA**	**0.93**	**111**	P	**Pg**	**18 59 47.5**	**-0.4**
CMDR				S	**Sg**	**18 59 59.4**	**-0.6**
CMDR				*i* AML	AML	19 00 06.0	
	comp=N,549nm,0.4s						
GPA	**Golpazari**	**0.95**	**235**	Pg	**Pg**	**18 59 47.7**	**-0.5**
SRCK	**Saricakaya, Es**	**0.96**	**215**	Pg	**Pg**	**18 59 48.2**	**-0.1**
AUMIH	**MIHALICIK**	**0.97**	**173**	P	**Pb**	**18 59 48.7**	**-0.1**
AUMIH				S	**Sg**	**19 00 00.0**	**-1.2**
KBUK	**KARABUK-Merkez**	**1.06**	**67**	P	**Pg**	**18 59 49.0**	**-1.3**
KBUK				S	**Sg**	**19 00 02.9**	**-1.1**
BTIN	**Bartın**	**1.06**	**40**	P	**Pg**	**18 59 49.2**	**-1.0**
BTIN				S	**Sg**	**19 00 02.0**	**-2.0**
BTIN				*i* AML	AML	19 00 09.0	
	comp=E,294nm,0.4s						
SAFT	**Safranbolu**	**1.10**	**68**	Pn	**Pg**	**18 59 51.2**	**+0.1**
HISA	**Bilecik-Osmane**	**1.14**	**252**	P	**Pb**	**18 59 50.9**	**-0.6**
HISA				S	**Sb**	**19 00 06.1**	**-0.3**
SEMS	**Kocaeli-K¶rfe**	**1.21**	**272**	P	**Pn**	**18 59 52.5**	**-0.2**
SEMS				S	**Sb**	**19 00 08.2**	**-0.2**
SEMS				*i* AML	AML	19 00 12.0	
	comp=N,234nm,0.3s						
SEMS				*i* AML	AML	19 00 12.0	
	comp=E,307nm,0.3s						
OSMT	**Osmaniye**	**1.26**	**260**	Pn	**Pg**	**18 59 54.5**	**+0.3**
HRT	**Hereke**	**1.27**	**270**	Pn	**Pn**	**18 59 53.7**	**+0.2**
ADVT	**Abdulvahap**	**1.28**	**252**	Pn	**Pn**	**18 59 53.8**	**+0.1**
BILE	**Bilecik/Merkez**	**1.30**	**239**	P	**Pn**	**18 59 53.5**	**-0.6**
CAVI	**Cavuskoy**	**1.30**	**241**	Pn	**Pn**	**18 59 54.2**	**+0.2**
SILT	**Sile**	**1.32**	**285**	Pn	**Pb**	**18 59 54.9**	**+0.3**
AUBOZ	**BOZOYUK**	**1.36**	**228**	P	**Pn**	**18 59 54.8**	**0.0**
SGAZ	**Eskisehir, Sey**	**1.36**	**196**	P	**Pb**	**18 59 55.4**	**+0.1**
SGAZ				S	**Sb**	**19 00 12.1**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.39**	**174**	Pn	**Pb**	**18 59 56.2**	**+0.2**
AUSIV	**SIVRIHISAR**	**1.40**	**173**	P	**Pn**	**18 59 55.7**	**+0.3**
KURC	**Kurucasile-Bar**	**1.47**	**46**	Pn	**Pn**	**18 59 56.2**	**0.0**
ANTO	**Ankara**	**1.47**	**130**	⇑P	**Pg**	**18 59 58.4**	**+0.2**
CIFT	**Cifteler, Eski**	**1.48**	**188**	Pn	**Pg**	**18 59 58.4**	**0.0**
YLV	**Yalova**	**1.52**	**260**	Pn	**Pb**	**18 59 58.3**	**+0.3**
PELI	**Kastamonı-Ara**	**1.57**	**72**	P	**Pb**	**18 59 58.7**	**-0.2**
PELI				S	**Sn**	**19 00 18.1**	**0.0**
CIDE	**Kastamonu/Cide**	**1.60**	**49**	P	**Pn**	**18 59 58.6**	**+0.4**
CIDE				S	**Sn**	**19 00 17.3**	**-1.5**
ELDT	**Eldivan**	**1.63**	**101**	P	**Pb**	**19 00 00.2**	**+0.2**
ELDT				S	**Sb**	**19 00 21.2**	**+0.6**
DOMA	**Ktahya-Doman**	**1.63**	**231**	P	**Pn**	**18 59 58.5**	**-0.1**
AUKIR	**Kırka- Seyitga**	**1.67**	**202**	P	**Pb**	**19 00 00.4**	**-0.3**
AUKIR				S	**Sn**	**19 00 20.5**	**-0.1**
AUKIR				*i* AML	AML	19 00 26.0	
	comp=E,210nm,1.2s						
AUKIR				*i* AML	AML	19 00 29.0	
	comp=N,178nm,0.8s						
GEMT	**Gemlik**	**1.68**	**257**	Pn	**Pb**	**19 00 00.3**	**-0.5**
KAVV	**Kandilli-Istan**	**1.74**	**278**	Pn	**Pb**	**19 00 01.1**	**-0.7**
ISK	**Istanbul-Kandi**	**1.74**	**278**	Pn	**Pb**	**19 00 01.2**	**-0.6**
KLYT	**Kilyos**	**1.78**	**284**	Pn	**Pb**	**19 00 01.9**	**-0.7**
ILGA	**Ilgaz**	**1.82**	**82**	P	**Pb**	**19 00 03.1**	**-0.2**
ARMT	**Armutlu**	**1.90**	**263**	Pn	**Pn**	**19 00 03.5**	**+1.3**
YENC	**ankr-Yen**	**1.91**	**94**	P	**Pg**	**19 00 05.8**	**-0.8**
AFSR	**Afar-Bala (An**	**1.92**	**136**	Pn	**Pb**	**19 00 03.9**	**-1.1**
MDNY	**Mudanya-Bursa**	**1.92**	**257**	Pn	**Pb**	**19 00 03.9**	**-1.0**
KMON	**Kastamonu**	**1.93**	**73**	Pn	**Pn**	**19 00 03.7**	**+1.0**
BGKT	**Bogazkoy**	**1.97**	**281**	Pn	**Pb**	**19 00 04.8**	**-0.9**
TVSB	**Tavsanli**	**1.99**	**227**	Pn	**Pn**	**19 00 04.6**	**+1.0**
KIZT	**Kizilcal**	**2.00**	**168**	Pn	**Pn**	**19 00 04.6**	**+0.9**
ORLT	**Orhaneli**	**2.02**	**248**	Pn	**Pn**	**19 00 05.2**	**+1.3**
BR131	**Keskin Array S**	**2.08**	**121**	Pn	**Pn**	**19 00 06.1**	**+1.2**
CTKS	**Kestanelik-??a**	**2.18**	**282**	Pn	**Pn**	**19 00 07.2**	**+1.2**
KULU	**Kulu**	**2.20**	**144**	Pn	**Pn**	**19 00 07.8**	**+1.3**
GEDZ	**Gediz**	**2.32**	**220**	Pn	**Pn**	**19 00 09.6**	**+1.5**
KCTX	**Karacabey (Bur**	**2.34**	**257**	Pn	**Pn**	**19 00 09.8**	**+1.5**
SHUT	**Suhut-Afyon**	**2.36**	**195**	Pn	**Pn**	**19 00 09.8**	**+1.2**
SIMA	**Simav-Kutahya**	**2.52**	**227**	Pn	**Pn**	**19 00 12.1**	**+1.3**
DIKM	**Dikmen**	**3.07**	**73**	⇑P	**Pb**	**19 00 25.9**	**+1.4**
TIRR	**Tirgusor**	**4.21**	**330**	⇑P	**Pn**	**19 00 37.5**	**+3.5**
HARR	**Harsova**	**4.60**	**328**	⇓P	**Pn**	**19 00 42.3**	**+3.0**
CFR	**Carcaliu**	**4.93**	**333**	⇑P	**Pn**	**19 00 45.9**	**+2.0**
NEHR	**Nehoiu**	**5.89**	**323**	⇓P	**Pn**	**19 01 00.9**	**+3.9**
COVR	**Voineasa-Covas**	**6.25**	**325**	⇑P	**Pn**	**19 01 05.3**	**+3.2**

*IDC **13** 19:22:03.9±1.5, 33.55N×136.21E, h406km±37km, mbtmp3.3/7, Error ellipse: s-maj=59.4km s-min=17.7km az=60.0*
*JMA **13** 19:22:04.0±0.1, 34.1°N±2.2°×13.6°E±.1°, h408km, MV2.7/14, SE OFF KII PENINSULA*
ISC 13 19:22:04.9±2.0, 33.7N±0.3×136.1E±0.2, h400km, n15, σ0.87/12, mb2.8/6, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTNC	**Tanabenakahech**	**0.43**	**287**	*e*P	Pn	19 22 55.0	+0.4
JWY	**Kouya**	**0.68**	**321**	P	**Pn**	**19 22 55.6**	**+0.5**
JWY				*e*S	**S**	**19 23 35.9**	**+0.2**
JIE	**Ise**	**0.86**	**35**	*e*P	Pn	19 22 55.8	+0.3
JAI	**Aioi**	**1.38**	**275**	P	**Pn**	**19 22 58.0**	**+0.5**
JWT	**Wachi**	**1.69**	**340**	P	**Pn**	**19 22 59.1**	**+0.1**
JMN	**Monobe**	**1.86**	**272**	P	**Pn**	**19 23 00.7**	**+0.6**
JYTA	**Yamagatataniai**	**1.97**	**15**	P	**Pn**	**19 23 00.7**	**+0.1**
JOD2	**Odawara 2**	**2.92**	**57**	P	Pn	19 23 07.6	+0.2
JOD2				*e*S	**S**	**19 23 57.8**	**-0.2**
MJAR	**Matsushiro Arr**	**3.32**	**31**	P	**Pn**	**19 23 10.8**	**0.0**
	1.4nm,0.5s,baz=189,slow=7.3,SNR=8.2						
MJAR				S	**S**	**19 24 05.6**	**+1.4**
	4.1nm,1.0s,baz=174,slow=15,SNR=5.2						
SONM	**Songino Array**	**26.38**	**311**	P	**P**	**19 27 08.1**	**+1.4**
	0.3nm,0.7s,baz=101,slow=6.7,SNR=2.7						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.45**	**255**	P	P	19 28 32.6	-1.3
	0.3nm,0.6s,baz=55,slow=7.8,SNR=2.3						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**42.32**	**305**	P	**P**	**19 29 20.2**	**-1.2**
	0.2nm,0.7s,baz=89,slow=8.3,SNR=2.4						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**49.67**	**314**	P	**P**	**19 30 17.1**	**-0.8**
	0.2nm,0.4s,baz=94,slow=12,SNR=2.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.36**	**182**	P	P	19 30 42.6	-2.5
	0.5nm,0.3s,baz=0.3,slow=7.6,SNR=12						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**57.08**	**182**	P	P	19 31 08.9	-2.4
	0.4nm,0.9s,baz=360,slow=6.2,SNR=5.4						
	0.4nm,0.9s						

IDC 13 19:22:34.8±7.0, 2.75S×141.90E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=284.4km s-min=27.3km az=92.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.61**	**203**	P	P	19 26 54.0	0.0
	0.1nm,0.3s,baz=24,slow=12,SNR=5.7						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**22.18**	**200**	P	P	19 27 32.7	-0.1
	0.3nm,0.6s,baz=28,slow=12,SNR=5.1						
	0.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**32.27**	**48**	T	T	20 03 15.2	
	baz=231,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**32.28**	**48**	T	T	20 03 06.5	
	baz=231,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**32.29**	**48**	T	T	20 03 06.6	
	baz=231,slow=76,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**33.18**	**47**	T	T	20 04 13.6	
	baz=230,slow=76,SNR=58						
H11N2	**WAKE ISLAND Hy**	**33.20**	**

TEH ***13*** *19:29:10.9, 35°.21N × 45°.56E, h10 km ± 91 km, ML2.5*
ISN ***13*** *19:29:10.2 ± 0.7, 35°.21N × 45°.55E, h10 km, ML2.5*
ISC 13 19:29:11.6 ± 1.1, 35°.17N ± 0°.06 × 45°.41E ± 0°.10, h10 km, n6, σ 0 62/8, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.67**	**168**	Pg	**Pg**	**19 29 24.0**	**-0.6**
KGS1				Sg	**Sb**	**19 29 35.4**	**+0.6**
IKRK	**Kirkuk** baz=101	**0.91**	**285**	*e*Pg	**Pb**	**19 29 29.0**	**-0.5**
IKRK				*e*Sg	**Sn**	**19 29 44.0**	**+0.4**
IKRK	comp=N,142nm,0.7s			AML	AML	19 29 55.0	
IKRK	comp=E,101nm,0.4s			AML	AML	19 30 00.8	
MAHB	**Mahabad**	**1.61**	**8**	Pg	**Pn**	**19 29 40.8**	**+0.5**
ILBA	**Ilam Banvizeh**	**1.67**	**157**	Pg	**Pn**	**19 29 41.5**	**+0.5**
IAZR	**Azarshahr**	**2.55**	**10**	Pn	**Pn**	**19 29 53.8**	**+0.6**
ISRB	**Sarab**	**3.21**	**34**	Pn	**Pn**	**19 30 02.2**	**-0.1**

NEIC ***13*** *19:34:40.4 ± 2.2, 50°.1S × 0°.1 × 164°.3E ± 0°.1, h17 km ± 7 km, mb4.3/7, Error ellipse: s-maj=16.7km s-min=9.8km az=144.0*
IDC ***13*** *19:34:41.2 ± 1.2, 49°.62S × 164°.01E, h0 km, mb4.2/4, mbtmp4.2/6, ML3.7/2, MS3.8/14, Error ellipse: s-maj=29.9km s-min=24.6km az=92.0*
GCMT ***13*** *19:34:48.4 ± 0.4, 49°.78S ± 0°.02 × 163°.26E ± 0°.04, h25 km ± 1 km, MW4.9/68, Moment Tensor Solution. s15,c18; s68,c89; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.35±.19; Mθθ 2.49±.14; Mφφ-2.14±.12; Mrθ 0.52±.25; Mθφ-0.55±.11; Mφr 0.23±.32; Best double couple: M0 2.44300×10^16 NP1: φ 52.00000°, δ 90.00000°, λ 167.00000°. NP2: φ 142.00000°, δ 77.00000°, λ 0.00000°. Principal axes: T 2.6350, Plg9.0000°, Azm6.0000°; N -0.3810, Plg77.0000°, Azm231.0000°; P -2.2510, Plg9.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 19:34:42.7 ± 0.9, 49°.66S ± 0°.09 × 163°.90E ± 0°.07, h10 km, n89, σ 1 53/97, mb4.2/8, MS3.8/13, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APZ	**The Paps**	**3.93**	**46**	P	**Pn**	**19 35 44.2**	**+1.1**
APZ				S	**Sn**	**19 36 29.0**	**-0.2**
PYZ	**Puysegur Point**	**3.96**	**29**		**Pn**	**19 35 43.3**	**-0.2**
PYZ				Sn	**Sn**	**19 36 29.4**	**-0.5**
PYZ	**Puysegur Point**	**3.96**	**29**	P	**Pn**	**19 35 43.6**	**+0.1**
PYZ	**Puysegur Point**	**3.96**	**29**	P	**Pn**	**19 35 43.1**	**-0.4**
PYZ				S	**Sn**	**19 36 28.8**	**-1.1**
RRKS	**Rarakau**	**4.25**	**36**	P	**Pn**	**19 35 48.4**	**+1.0**
RRKS				S	**Sn**	**19 36 37.2**	**+0.1**
WHZ	**Wether Hill Ro**	**4.65**	**37**		**Pn**	**19 35 53.2**	**+0.3**
WHZ				Sn	**Sn**	**19 36 47.0**	**+0.1**
WHZ	**Wether Hill Ro**	**4.65**	**37**	P	**Pn**	**19 35 54.5**	**+1.6**
WHZ				S	**Sn**	**19 36 47.2**	**+0.3**
SYZ	**Scrubby Hill**	**4.70**	**50**	P	**Pn**	**19 35 55.1**	**+1.6**
SYZ	**Scrubby Hill**	**4.70**	**50**	P	**Pn**	**19 35 55.4**	**+1.9**
SYZ				S	**Sn**	**19 36 46.0**	**-2.0**
DCZ	**Deep Cove**	**4.74**	**29**		**Pn**	**19 35 54.5**	**+0.4**
DCZ	**Deep Cove**	**4.74**	**29**	P	**Pn**	**19 35 54.7**	**+0.6**
DCZ				S	**Sn**	**19 36 48.3**	**-0.7**
MLZ	**Mavora Lakes**	**5.15**	**35**	Pn	**Pn**	**19 36 01.2**	**+1.3**
TUZ	**Tuapeka**	**5.35**	**48**	P	**Pn**	**19 36 04.1**	**+1.6**
TUZ				S	**Sn**	**19 37 03.0**	**-1.1**
MCQ	**Macquarie Isla**	**5.73**	**210**	Pn	Pn	19 36 00.6	-7.1
MCQ	**Macquarie Isla**	**5.73**	**210**	P	Pn	19 36 02.8	-4.9
EAZ	**Earnscleugh**	**5.75**	**42**	P	**Pn**	**19 36 08.9**	**+0.9**
EAZ				S	**Sn**	**19 37 16.4**	**+2.4**
HHSZ	**Highcliff Hill**	**5.88**	**53**	P	**Pn**	**19 36 11.9**	**+2.0**
HHSZ				S	**Sn**	**19 37 17.2**	**-0.1**
WKZ	**Wanaka**	**5.95**	**38**		**Pn**	**19 36 12.5**	**+1.6**
WKZ	**Wanaka**	**5.95**	**38**	P	**Pn**	**19 36 13.4**	**+2.5**
WKZ				S	**Sn**	**19 37 21.3**	**+2.2**
ODZ	**Otahua Downs**	**6.50**	**47**		**Pn**	**19 36 18.4**	**0.0**
ODZ	**Otahua Downs**	**6.50**	**47**	P	**Pn**	**19 36 18.8**	**+0.4**
ODZ	**Otahua Downs**	**6.50**	**47**	P	**Pn**	**19 36 18.8**	**+0.4**
JCZ	**Jackson Bay**	**6.51**	**33**	P	**Pn**	**19 36 21.1**	**+2.5**
JCZ	**Jackson Bay**	**6.51**	**33**	P	**Pn**	**19 36 21.5**	**+2.9**
JCZ				S	**Sn**	**19 37 37.1**	**+4.2**
LBZ	**Lake Benmore**	**6.80**	**42**	Pn	**Pn**	**19 36 21.6**	**-0.9**
LBZ	**Lake Benmore**	**6.80**	**42**	P	**Pn**	**19 36 21.8**	**-0.7**
LBZ				S	**Sn**	**19 37 39.0**	**-0.9**
TMZ	**Timaru**	**7.17**	**45**	P	**Pn**	**19 36 29.8**	**+2.3**
TMZ				S	**Sn**	**19 37 48.1**	**-0.9**
FOZ	**Fox Glacier**	**7.35**	**36**		**Pn**	**19 36 31.3**	**+1.3**
FOZ	**Fox Glacier**	**7.35**	**36**	P	**Pn**	**19 36 32.6**	**+2.5**
FOZ				S	**Sn**	**19 37 53.5**	**0.0**
ARCZ	**Arundel**	**7.58**	**44**	P	**Pn**	**19 36 37.1**	**+3.9**
ARCZ				S	**Sn**	**19 37 58.4**	**-0.8**
RPZ	**Rata Peaks**	**7.71**	**42**	Pn	**Pn**	**19 36 32.9**	**-2.1**
RPZ	**Rata Peaks** 1.6nm,0.3s,baz=220,slow=3.9,SNR=7.8	**7.71**	**42**	Pn	**Pn**	**19 36 33.1**	**-1.8**
RPZ	3.8nm,0.3s,baz=177,slow=22,SNR=6.7 3.9nm,0.3s			Sn	**Sn**	**19 38 01.1**	**-1.2**
RPZ	**Rata Peaks**	**7.71**	**42**	P	**Pn**	**19 36 33.4**	**-1.6**
RPZ				S	**Sn**	**19 38 01.1**	**-1.2**
MHCZ	**Mount Hutt**	**8.08**	**44**	P	**Pn**	**19 36 41.6**	**+1.5**
MHCZ				S	**Sn**	**19 38 09.9**	**-1.6**
WVZ	**Waitaha Valley**	**8.10**	**38**	P	Pn	19 36 48.3	+8.0
OXZ	**Oxford**	**8.46**	**45**		**Pn**	**19 36 44.5**	**-0.7**
OXZ	**Oxford**	**8.46**	**45**	P	**Pn**	**19 36 45.5**	**+0.3**
MQZ	**McQueen's Vall**	**8.46**	**49**	Pn	**Pn**	**19 36 43.1**	**-2.1**
MQZ	**McQueen's Vall**	**8.46**	**49**	P	**Pn**	**19 36 46.4**	**+1.3**
MQZ				S	**Sn**	**19 38 18.8**	**-1.8**
AKCZ	**Akaroa Harbour**	**8.46**	**50**	P	**Pn**	**19 36 47.8**	**+2.5**
AKCZ				S	**Sn**	**19 38 19.4**	**-1.4**
INZ	**Inchbonnie**	**8.68**	**40**	Pn	**Pn**	**19 36 46.0**	**-2.2**
LTZ	**Lake Taylor**	**8.99**	**43**	Pn	**Pn**	**19 36 51.2**	**-1.4**
LTZ	**Lake Taylor**	**8.99**	**43**	P	**Pn**	**19 36 53.0**	**+0.5**
LTZ				S	**Sn**	**19 38 31.1**	**-2.7**
GVZ	**Greta Valley S**	**9.20**	**47**	Pn	**Pn**	**19 36 54.1**	**-1.3**
DSZ	**Denniston Nort**	**9.64**	**38**	Pn	**Pn**	**19 36 59.4**	**-2.1**
KHZ	**Kahutara**	**9.86**	**46**	Pn	**Pn**	**19 37 00.9**	**-3.5**
KHZ	**Kahutara**	**9.86**	**46**	P	**Pn**	**19 37 05.4**	**+1.0**
THZ	**Tophouse**	**10.09**	**42**	Pn	**Pn**	**19 37 07.0**	**-0.7**
MRNZ	**Matariki Terra**	**10.32**	**40**	Pn	**Pn**	**19 37 11.7**	**+0.9**
MRNZ	**Matariki Terra**	**10.32**	**40**	P	**Pn**	**19 37 12.5**	**+1.7**
MRNZ				S	**Sn**	**19 39 04.2**	**-2.4**
BSWZ	**Blackbirch Sta**	**10.56**	**45**	Pn	**Pn**	**19 37 14.3**	**+0.3**
QRZ	**Quartz Range**	**10.71**	**38**		**Pn**	**19 37 15.9**	**-0.2**
QRZ	**Quartz Range**	**10.71**	**38**	P	**Pn**	**19 37 17.5**	**+1.4**
TCW	**Tory Channel**	**11.14**	**45**	Pn	**Pn**	**19 37 21.9**	**-0.1**
BFZ	**Birch Farm**	**12.49**	**49**	Pn	**Pn**	**19 37 39.2**	**-1.2**
TAU	**Tasmania Unive**	**13.29**	**294**	P	**Pn**	**19 37 49.4**	**-1.9**
MOO	**Moorlands**	**13.65**	**296**	P	**Pn**	**19 37 55.3**	**-0.9**
GLAD	**Gladstone**	**14.13**	**302**	P	**Pn**	**19 38 02.3**	**-0.4**
RTZ	**Ruatahuna**	**14.47**	**45**		**Pn**	**19 38 10.8**	**+3.3**
CTZ	**Chatham Island**	**14.60**	**73**		**Pn**	**19 38 10.2**	**+1.0**
CTZ	**Chatham Island**	**14.60**	**73**	P	**Pn**	**19 38 10.1**	**+0.9**
URZ	**Urewera** 0.3nm,0.3s,baz=204,slow=20,SNR=2.1	**14.81**	**45**	Pn	**Pn**	**19 38 12.5**	**+0.4**
URZ	comp=Z,2 μm,19.1s,baz=312,slow=40 10nm,0.9s			LR	LR	19 44 31.7	
TOO	**Toolangi**	**17.93**	**305**	P	**P**	**19 38 53.5**	**+0.8**
TOO	comp=Z,20nm,1.1s			IAmb	IAmb	19 39 30.5	
STKA	**Stephens Creek**	**24.36**	**308**	P	**P**	**19 40 00.7**	**-0.1**
DZM	**Mont Dzumac** comp=Z,254nm,20.2s,baz=204,slow=32	**27.60**	**5**	LR	LR	19 49 24.3	
VNDA	**Vanda** comp=Z,180nm,18.8s,baz=3.5,slow=31	**27.98**	**181**	LR	LR	19 49 18.8	
AS31	**Alice Springs**	**34.97**	**307**	P	**P**	**19 41 34.8**	**-0.3**
AS31	comp=Z,1.6nm,0.7s			IAmb	IAmb	19 41 44.1	
ASAR	**Alice Springs**	**34.97**	**307**	P	**P**	**19 41 35.9**	**+0.9**
ASAR	**Alice Springs** comp=Z,3.0nm,0.7s,baz=138,slow=8.8,SNR=18 comp=Z,3.0nm,0.7s	**34.97**	**307**	P	**P**	**19 41 35.1**	**+0.1**
WR0	**Warramunga Arr**	**37.75**	**311**	P	**P**	**19 41 59.1**	**+0.4**
WR0	comp=Z,11nm,1.2s			IAmb	IAmb	19 42 06.9	
WRA	**Warramunga Arr**	**37.86**	**311**	P	**P**	**19 41 59.3**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=144,slow=7.8,SNR=6.9 comp=Z,1.8nm,0.9s						
WB0	**Warramunga Arr**	**37.98**	**311**	P	**P**	**19 42 01.5**	**+0.8**
WB0	comp=Z,9.4nm,1.1s			IAmb	IAmb	19 42 12.5	
NWAO	**Narrogin (SRO)**	**38.16**	**278**	LR	LR	19 53 14.8	
RAR	**Rarotonga** comp=Z,284nm,21.6s,baz=195,slow=29	**40.36**	**59**	LR	LR	19 58 11.8	
	comp=Z,83nm,18.3s,baz=166,slow=35						
QSPA	**South Pole Qui** comp=Z,8.5nm,1.0s,baz=17,slow=4.9,SNR=12	**40.47**	**180**	P	**P**	**19 42 21.2**	**0.0**
QSPA	comp=Z,129nm,19.1s,baz=12,slow=32 comp=Z,8.5nm,1.0s			LR	LR	19 56 21.2	
PMG	**Port Moresby** comp=Z,166nm,21.9s,baz=150,slow=31	**42.48**	**335**	LR	LR	19 56 50.1	
FITZ	**Fitzroy Crossi**	**43.94**	**302**	P	**P**	**19 42 49.6**	**-0.2**
FITZ	comp=Z,6.0nm,1.4s			IAmb	IAmb	19 43 08.4	
MBWA	**Marble Bar**	**44.94**	**293**	P	**P**	**19 42 56.3**	**-1.5**
PPT	**Papeete** comp=Z,88nm,20.9s,baz=164,slow=32	**49.11**	**66**	LR	LR	20 00 45.6	
SNAA	**Sanae** comp=Z,99nm,18.5s,baz=161,slow=33	**58.61**	**185**	LR	LR	20 07 17.0	
RPN	**Rapa Nui** comp=Z,29nm,21.0s,baz=131,slow=31	**67.83**	**106**	LR	LR	20 09 21.2	
JNU	**Nakatsue** comp=Z,56nm,19.0s,baz=148,slow=33	**87.48**	**333**	LR	LR	20 22 15.3	
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.7s,baz=159,slow=3.8,SNR=6.5 comp=Z,0.6nm,0.7s	**88.74**	**301**	P	**P**	**19 47 38.0**	**+1.5**
MJAR	**Matsushiro Arr** comp=Z,31nm,18.6s,baz=162,slow=35	**88.79**	**340**	LR	LR	20 25 58.2	
KSRS	**Korea Array** comp=Z,19nm,21.6s,baz=145,slow=33	**92.39**	**332**	LR	LR	20 25 48.7	
ASAJ	**Asahikawa** comp=Z,49nm,21.1s,baz=126,slow=32	**95.23**	**345**	LR	LR	20 24 51.1	
HHC	**Hu-ho-hao-te**	**101.18**	**322**	*e*P	**Pdif**	**19 48 34.0**	**+1.1**
HHC	comp=Z,5.0nm,0.7s			pmax	pmax		
HHC	comp=Z,130nm,5.6s			pmax	pmax		
BRTR	**Keskin Array B** comp=Z,0.5nm,1.0s,baz=183,slow=2.9,SNR=1.8	**143.88**	**273**	PKP	PKPbc	19 54 16.7	+1.1
AKASG	**Malin Array Be** comp=Z,0.4nm,0.4s,baz=81,slow=2.1,SNR=1.5	**151.30**	**290**	PKPbc	**PKPbc**	**19 54 35.9**	**+0.4**

IDC ***13*** *19:56:03.3 ± 1.9, 3°.34S × 150°.27E, h0 km, mb3.7/8, mbtmp3.7/8, MS3.3/7, Error ellipse: s-maj=61.9km s-min=23.8km az=110.0*
ISC 13 19:56:05.0 ± 1.9, 3°.35S ± 0°.2 × 150°.2E ± 0°.4, h10 km, n21, σ 0 99/8, mb3.7/8, MS3.3/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** comp=Z,126nm,18.5s,baz=24,slow=35	**17.09**	**193**	LR	LR	20 05 55.4	
GUMO	**Guam** comp=Z,61nm,20.9s,baz=120,slow=33	**17.64**	**343**	LR	LR	20 05 50.0	
WRA	**Warramunga Arr** 2.6nm,0.9s,baz=48,slow=9.0,SNR=7.4 2.6nm,0.9s	**22.64**	**222**	P	**P**	**20 01 06.8**	**+0.4**
DZM	**Mont Dzumac** comp=Z,93nm,21.9s,baz=285,slow=34	**24.38**	**141**	LR	LR	20 09 43.5	
ASAR	**Alice Springs** 1.0nm,0.8s,baz=49,slow=8.3,SNR=11 1.0nm,0.8s	**25.62**	**217**	P	**P**	**20 01 34.9**	**-0.2**
H11S3	**WAKE ISLAND Hy** baz=217,slow=74,SNR=32	**27.08**	**36**	T	T	20 29 01.6	
H11S2	**WAKE ISLAND Hy** baz=217,slow=74,SNR=20	**27.09**	**36**	T	T	20 29 00.6	
H11S1	**WAKE ISLAND Hy** baz=217,slow=74,SNR=20	**27.10**	**36**	T	T	20 29 03.0	
H11N1	**WAKE ISLAND Hy** baz=218,slow=76,SNR=27	**28.16**	**35**	T	T	20 30 26.8	
H11N3	**WAKE ISLAND Hy** baz=218,slow=76,SNR=24	**28.17**	**35**	T	T	20 30 30.6	
H11N2	**WAKE ISLAND Hy** baz=218,slow=76,SNR=62	**28.18**	**35**	T	T	20 30 28.4	
STKA	**Stephens Creek** comp=Z,72nm,19.4s,baz=29,slow=38	**29.53**	**195**	LR	LR	20 14 31.6	
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=120,slow=8.4,SNR=1.7 0.2nm,0.3s	**54.94**	**295**	P	**P**	**20 05 35.4**	**-1.2**
MA2	**Magadan** comp=Z,21nm,19.7s,baz=142,slow=36	**62.73**	**0**	LR	LR	20 33 08.8	
SONM	**Songino Array** 0.7nm,1.0s,baz=147,slow=3.0,SNR=3.7 0.7nm,1.0s	**63.74**	**329**	P	**P**	**20 06 36.9**	**-0.3**
YAK	**Yakutsk** comp=Z,18nm,21.9s,baz=276,slow=36	**67.06**	**350**	LR	LR	20 36 13.0	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=93,slow=5.8,SNR=4.8 0.2nm,0.6s	**77.55**	**319**	P	**P**	**20 08 02.0**	**+0.8**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=108,slow=4.7,SNR=2.9 0.3nm,0.3s	**78.53**	**327**	P	**P**	**20 08 08.0**	**+1.5**
ILAR	**Eielson Array** 0.6nm,0.8s,baz=234,slow=5.9,SNR=4.9 0.6nm,0.8s	**81.79**	**23**	P	**P**	**20 08 23.3**	**-0.6**
BVAR	**Borovoye Array** 1.6nm,0.8s,baz=107,slow=1.5,SNR=6.9 1.6nm,0.8s	**86.55**	**323**	P	**P**	**20 08 48.6**	**+0.3**
LPIG	**La Paz** comp=Z,24nm,18.9s,baz=216,slow=31	**99.99**	**66**	LR	LR	20 47 11.6	

IDC 13 20:14:50.0 ± 3.6, 2°.40S × 140°.40E, h0 km, mb3.3/3, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=102.9km s-min=27.9km az=82.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=19,slow=12,SNR=17 0.5nm,0.3s	**18.41**	**198**	P	Pn	20 19 06.2	-0.7
ASAR	**Alice Springs** 0.9nm,0.7s,baz=30,slow=12,SNR=15 0.9nm,0.7s	**22.06**	**196**	P	P	20 19 46.4	-0.2
CMAR	**Chiang Mai Arr** 0.2nm,0.4s,baz=112,slow=6.9,SNR=4.2 0.2nm,0.4s	**45.76**	**299**	P	P	20 23 13.3	-0.3
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=109,slow=8.0,SNR=1.8 0.1nm,0.4s	**70.58**	**322**	P	P	20 26 07.7	+0.6

IDC ***13*** *20:19:44.7 ± 1.1, 48°.73S × 124°.09E, h0 km, mb4.2/7, mbtmp4.2/8, ML2.9/1, MS4.0/33, Error ellipse: s-maj=42.1km s-min=24.8km az=103.0*
NEIC ***13*** *20:19:45.3 ± 1.8, 48°.75S ± 0°.1 × 123°.7E ± 0°.2, h10 km ± 1 km, mb4.8/29, Error ellipse: s-maj=25.1km s-min=20.0km az=243.0*
GCMT ***13*** *20:19:45.3 ± 0.3, 48°.87S ± 0°.02 × 124°.13E ± 0°.06, h15 km ± 1 km, MW4.9/87, Moment Tensor Solution. s30,c34; s87,c116; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.62±.19; Mθθ 2.63±.13; Mφφ 0.00±.12; Mrθ 0.57±.22; Mθφ-0.30±.08; Mφr 0.38±.31; Best double couple: M0 2.73000×10^16 NP1: φ 267.00000°, δ 51.00000°, λ -102.00000°. NP2: φ 106.00000°, δ 40.00000°, λ -76.00000°. Principal axes: T 2.7160, Plg6.0000°, Azm6.0000°; N 0.0360, Plg9.0000°, Azm275.0000°; P -2.7440, Plg79.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 20:19:45.1 ± 0.6, 48°.73S ± 0°.09 × 123°.7E ± 0°.1, h10 km, n96, σ 1 23/50, mb4.7/26, MS4.0/34, 3C-1D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H** baz=153,slow=74,SNR=70	**15.53**	**329**	T	T	20 39 33.8	
H01W2	**Cape Leeuwin H** baz=153,slow=74,SNR=68	**15.53**	**329**	T	T	20 39 33.3	
H01W3	**Cape Leeuwin H** baz=153,slow=74,SNR=50	**15.54**	**329**	T	T	20 39 37.0	
NWAO	**Narrogin (SRO)**	**16.51**	**341**	P	**Pn**	**20 23 37.3**	**+0.5**
NWAO	**Narrogin (SRO)**	**16.51**	**341**	P	**Pn**	**20 23 36.7**	**-0.1**
NWAO	comp=Z,147nm,1.4s			IAmb	IAmb	20 23 38.6	
NWAO	**Narrogin (SRO)**	**16.51**	**341**	P	P	20 23 50.1	+11
NWAO	**Narrogin (SRO)** comp=Z,2.3nm,0.3s,baz=153,slow=9.7,SNR=14	**16.51**	**341**	Pn	**P**	**20 23 40.4**	**+1.0**
NWAO				LR	LR	20 28 26.0	
TAU	**Tasmania Unive** comp=Z,1 μm,21.9s,baz=196,slow=31 comp=Z,14nm,0.5s	**17.43**	**79**	P	**Pn**	**20 23 46.5**	**-1.8**
FORT	**Forrest**	**18.23**	**12**	P	**Pn**	**20 23 56.9**	**-1.3**
BBOO	**Buckleboo**	**18.41**	**35**	P	**Pn**	**20 24 00.5**	**+0.1**
BBOO	comp=Z,52nm,1.2s			IAmb	IAmb	20 24 10.9	
WHYH	**Whyalla**	**18.82**	**39**	P	Pn	20 24 13.7	+8.4
MULG	**Mulgathing**	**20.05**	**27**	P	Pn	20 24 29.2	+9.1
MORW	**Morawa**	**20.49**	**341**	P	**P**	**20 24 21.5**	**-1.6**
MORW	comp=Z,78nm,1.2s			IAmb	IAmb	20 24 37.1	
STKA	**Stephens Creek**	**21.58**	**45**	P	**P**	**20 24 34.6**	**-0.3**
STKA	**Stephens Creek**	**21.58**	**45**	P	P	20 24 43.5	+8.6
STKA	**Stephens Creek** comp=Z,4.3nm,0.7s,baz=211,slow=6.6,SNR=5.9	**21.58**	**45**	P	**P**	**20 24 35.0**	**+0.2**
STKA	comp=Z,528nm,21.1s,baz=208,slow=33 comp=Z,4.3nm,0.7s			LR	LR	20 31 26.1	
MEEK	**Meekatharra**	**22.40**	**348**	P	P	20 24 53.4	+10
OOD	**Oodnadatta**	**22.87**	**28**	P	P	20 24 56.7	+8.1
CMSA	**Cobar Meteorol**	**23.90**	**52**	P	P	20 25 07.3	+8.4
WRKA	**Warakurna**	**23.92**	**10**	P	P	20 25 08.0	+8.8
INKA	**Innaminka**	**24.76**	**38**	P	P	20 25 15.2	+8.4
ASAR	**Alice Springs**	**26.28**	**22**	P	**P**	**20 25 20.6**	**-0.1**
ASAR	**Alice Springs** comp=Z,4.6nm,0.6s,baz=204,slow=8.8,SNR=44	**26.28**	**22**	P	**P**	**20 25 20.5**	**-0.3**
ASAR	comp=Z,1 μm,20.5s,baz=190,slow=34 comp=Z,4.6nm,0.6s			LR	LR	20 34 43.5	
AS31	**Alice Springs**	**26.28**	**22**	P	**P**	**20 25 20.4**	**-0.4**
QLP	**Quilpie**	**27.28**	**43**	P	P	20 25 38.7	+9.1
ARMA	**Armidale**	**28.01**	**60**	P	**P**	**20 25 35.5**	**-0.8**
WRA	**Warramunga Arr**	**29.97**	**20**	P	**P**	**20 25 53.3**	**-0.4**
WRA	**Warramunga Arr** comp=Z,1.1nm,0.7s,baz=195,slow=7.8,SNR=9.2 comp=Z,1.1nm,0.7s	**29.97**	**20**	P	**P**	**20 25 53.4**	**-0.2**
WB2	**Warramunga Arr**	**29.97**	**20**	P	**P**	**20 25 53.5**	**-0.1**
WB2	comp=Z,20nm,1.6s			IAmb	IAmb	20 26 43.6	
WRAB	**Tennant Creek**	**29.98**	**20**	P	**P**	**20 25 53.6**	**-0.2**
WRAB	comp=Z,16nm,1.5s			IAmb	IAmb	20 26 44.7	
WR0	**Warramunga Arr**	**30.00**	**21**	P	**P**	**20 25 53.6**	**-0.3**
WR0	comp=Z,21nm,1.4s			IAmb	IAmb	20 26 02.5	
WB0	**Warramunga Arr**	**30.15**	**20**	P	**P**	**20 25 55.0**	**-0.3**
WB0	comp=Z,22nm,1.4s			IAmb	IAmb	20 27 01.3	
FITZ	**Fitzroy Crossi**	**30.59**	**4**	P	**P**	**20 25 58.2**	**-0.9**
FITZ	comp=Z,24nm,2.0s			IAmb	IAmb	20 26 16.8	
WKZ	**Wanaka**	**30.93**	**100**	P	**P**	**20 26 02.0**	**0.0**
EIDS	**Eidsvold**	**31.66**	**52**	P	**P**	**20 26 09.2**	**+0.7**
EIDS	comp=Z,13nm,1.2s			IAmb	IAmb	20 26 48.6	
VNDA	**Vanda** comp=Z,507nm,20.1s,baz=329,slow=34	**32.36**	**165**	LR	LR	20 38 06.7	
RPZ	**Rata Peaks** comp=Z,115nm,19.4s,baz=239,slow=30	**32.73**	**99**	LR	LR	20 36 11.6	
CTA	**Charters Tower** comp=Z,497nm,18.3s,baz=212,slow=36	**33.84**	**40**	LR	LR	20 40 13.4	
MRZ	**Mangatainoka R**	**37.13**	**97**	P	**P**	**20 26 56.5**	**+0.8**
MRZ	comp=Z,42nm,1.5s			IAmb	IAmb	20 27 28.0	
BFZ	**Birch Farm**	**37.55**	**98**	P	**P**	**20 26 59.5**	**+0.1**
RTZ	**Ruatahuna**	**39.12**	**96**	P	**P**	**20 27 12.6**	**-0.1**
URZ	**Urewera** comp=Z,84nm,21.9s,baz=300,slow=29	**39.40**	**95**	LR	LR	20 38 56.2	
QSPA	**South Pole Qui** comp=Z,1.2nm,0.5s,baz=297,slow=6.8,SNR=1.9	**41.40**	**180**	P	**P**	**20 27 32.4**	**+1.1**
QSPA	comp=Z,911nm,19.2s,baz=336,slow=35 comp=Z,1.2nm,0.5s			LR	LR	20 43 55.7	
DZM	**Mont Dzumac** comp=Z,197nm,28.4s	**43.03**	**67**	*e*LR	LR	20 39 29.7	
DZM	**Mont Dzumac** comp=Z,100nm,18.5s,baz=304,slow=33	**43.06**	**67**	LR	LR	20 43 25.4	
PMG	**Port Moresby** comp=Z,228nm,20.8s,baz=238,slow=34	**43.86**	**35**	LR	LR	20 44 54.3	
LEM	**Lembang** comp=Z,117nm,18.1s,baz=174,slow=37	**43.92**	**337**	LR	LR	20 46 55.5	
ELIB	**Princess Elisa**	**47.55**	**205**	*e*P	**P**	**20 28 18.2**	**-2.2**
HNR	**Honiara** comp=Z,2 μm,19.8s,baz=216,slow=34	**49.55**	**50**	LR	LR	20 47 58.3	
SNAA	**Sanae**	**54.12**	**198**	P	**P**	**20 29 10.3**	**+0.6**
SNAA	**Sanae** comp=Z,483nm,19.5s,baz=163,slow=34	**54.12**	**198**	LR	LR	20 50 49.5	
GSI	**Gunungsitoli**	**54.73**	**327**	P	**P**	**20 29 13.7**	**-1.0**
RPSI	**Rantau Prapat**	**55.56**	**330**	P	**P**	**20 29 20.1**	**-0.6**
RPSI	comp=Z,6.2nm,0.9s			IAmb	IAmb	20 29 30.9	
DAV	**Davao City (W)** comp=Z,122nm,20.7s,baz=164,slow=36	**55.58**	**2**	LR	LR	20 53 05.5	
TGY	**Tagaytay City** comp=Z,180nm,18.7s,baz=108,slow=38	**62.59**	**357**	LR	LR	20 58 59.0	
GUMO	**Guam** comp=Z,101nm,19.1s,baz=155,slow=36	**64.82**	**23**	LR	LR	20 58 50.2	
PMSA	**Palmer Station** comp=Z,222nm,20.8s,baz=204,slow=35	**66.68**	**176**	LR	LR	20 58 25.0	
PALK	**Pallekele** comp=Z,60nm,18.1s,baz=237,slow=35	**67.28**	**313**	LR	LR	20 59 09.2	
CMAR	**Chiang Mai Arr**	**70.43**	**335**	P	**P**	**20 30 59.8**	**+0.3**
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.4s,baz=185,slow=6.0,SNR=10	**70.43**	**335**	P	**P**	**20 31 01.4**	**+1.9**
CMAR	comp=Z,61nm,20.7s,baz=190,slow=35 comp=Z,1.0nm,0.4s			LR	LR	21 00 28.3	
TBI	**Tubuai** comp=Z,412nm,28.0s	**70.80**	**104**	*e*LR	LR	20 52 34.1	
CRAI	**Chiangrai**	**71.

LZH					pmax	pmax			
	comp=Z,8.0nm,1.0s								
HHC	**Hu-ho-hao-te**	**89.84**	**351**	*eP*	**P**		**20 32 46.6**	**+3.0**
HHC				sP	pwP		20 32 53.6	+2.8
HHC				pmax	pmax			
	comp=Z,4.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,80nm,5.5s								
PLCA	**Paso Flores**	**90.04**	**169**	LR	LR		21 11 31.8		
	comp=Z,60nm,18.3s,baz=168,slow=34								
GTA	**Gaotai**	**90.27**	**342**	P	**P**		**20 32 47.8**	**+2.0**
GTA				sP	pwP		20 32 55.1	+2.2
GTA				pmax	pmax				
	comp=Z,2.0nm,1.6s								
MBAR	**Mbarara**	**91.51**	**267**	LR	LR		21 08 38.0		
	comp=Z,39nm,18.7s,baz=144,slow=32								
WSAR	**Wadi Sarin**	**92.13**	**303**	LR	LR		21 08 02.7		
	comp=Z,94nm,18.7s,baz=176,slow=31								
USRK	**Uesuriysk Ar.**	**92.83**	**6**	LR	LR		21 13 01.5		
	comp=Z,42nm,21.1s,baz=186,slow=34								
MDJ	**Mudanjiang**	**93.10**	**4**	P	**P**		**20 32 58.8**	**+0.3**
MDJ				pmax	pmax				
	comp=Z,8.0nm,1.6s								
MDJ				pmax	pmax				
	comp=Z,140nm,5.2s								
ASAJ	**Asahikawa**	**93.94**	**14**	LR	LR		21 17 43.9		
	comp=Z,17nm,18.4s,baz=22,slow=37								
SONM	**Songino Array**	**97.34**	**348**	P	Pdif		20 33 19.6	+1.5	
	comp=Z,0.5nm,0.8s,baz=156,slow=5.0,SNR=4.7								
SONM				LR	LR		21 17 26.4		
	comp=Z,50nm,21.8s,baz=138,slow=36								
	comp=Z,0.5nm,0.8s								
WMQ	**Urumqi**	**97.43**	**335**	*eP*	Pdif		20 33 20.0	+1.5	
KLR	**Kul'dur**	**97.82**	**5**	LR	LR		21 16 37.4		
	comp=Z,46nm,20.6s,baz=204,slow=35								
ILAR	**Eielson Array**	**132.39**	**35**	PKP	**PKiKP**		**20 38 58.9**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=288,slow=3.7,SNR=5.2								
TXAR	**Lajitas Array**	**139.19**	**101**	PKiKP	PKPpre		20 39 03.8		
	comp=Z,0.2nm,0.6s,baz=212,slow=5.9,SNR=3.9								
YKA	**Yellowknife Ar**	**145.61**	**44**	PKPbc	**PKPab**		**20 39 22.5**	**-0.5**	
	comp=Z,3.2nm,0.8s,baz=270,slow=3.0,SNR=28								
EKA	**Eskdalemuir Ar**	**147.34**	**302**	PKPbc	**PKPab**		**20 39 28.9**	**-1.0**	
	comp=Z,1.2nm,0.6s,baz=112,slow=4.1,SNR=6.5								

IDC ***13*** *20:26:35.0±2.1, 48.°91S×124.°27E, h0km, mb4.0/4, mbtmp4.1/5, ML2.5/1, Error ellipse: s-maj=55.2km s-min=39.2km az=144.0*
NEIC ***13*** *20:26:36.1±1.0, 48.°88S±0.°08×124.°0E±0.°2, h10km±1km, mb4.6/19, Error ellipse: s-maj=24.4km s-min=7.0km az=118.0*
ISC 13 20:26:36.1±0.8, 48.°9S±0.°1×124.°1E±0.°1, h10km, n28, σ0s68/25, mb4.5/9, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**15.77**	**329**	T	T	20 46 26.8	
	baz=153,slow=74,SNR=40						
H01W2	**Cape Leeuwin H**	**15.78**	**329**	T	T	20 46 26.8	
	baz=153,slow=74,SNR=33						
H01W3	**Cape Leeuwin H**	**15.79**	**329**	T	T	20 46 26.9	
	baz=153,slow=74,SNR=34						
NWAO	**Narrogin (SRO)**	**16.73**	**340**		**Pn**	**20 30 31.4**	**+0.9**
NWAO				IAmb	IAmb	20 30 46.2	
	comp=Z,52nm,1.3s						
NWAO	**Narrogin (SRO)**	**16.73**	**340**		**Pn**	**20 30 31.9**	**+1.4**
NWAO				IAmb	IAmb	20 30 46.3	
	comp=Z,188nm,1.4s						
NWAO	**Narrogin (SRO)**	**16.73**	**340**	Pn	**P**	**20 30 32.8**	**0.0**
	comp=Z,0.9nm,0.3s,baz=150,slow=12,SNR=7.1						
	comp=Z,6.4nm,0.5s						
TOO	**Toolangi**	**19.19**	**62**	P	**Pn**	**20 31 00.4**	**-0.5**
TOO				IAmb	IAmb	20 31 31.3	
	comp=Z,42nm,1.4s						
MORW	**Morawa**	**20.71**	**340**	P	**P**	**20 31 15.7**	**-0.8**
MORW				IAmb	IAmb	20 31 29.5	
	comp=Z,57nm,1.4s						
STKA	**Stephens Creek**	**21.50**	**44**	P	**P**	**20 31 25.4**	**+0.3**
STKA	**Stephens Creek**	**21.50**	**44**	P	**P**	**20 31 24.8**	**-0.2**
	comp=Z,7.9nm,1.1s,baz=221,slow=9.3,SNR=4.6						
	comp=Z,7.9nm,1.1s						
ASAR	**Alice Springs**	**26.32**	**21**	P	**P**	**20 32 11.6**	**-0.5**
ASAR	**Alice Springs**	**26.32**	**21**	P	**P**	**20 32 12.3**	**+0.2**
	comp=Z,4.3nm,1.0s,baz=195,slow=9.5,SNR=13						
	comp=Z,4.3nm,1.0s						
AS31	**Alice Springs**	**26.32**	**21**	P	**P**	**20 32 11.6**	**-0.5**
WRA	**Warramunga Arr**	**30.02**	**20**	P	**P**	**20 32 45.0**	**0.0**
WRA	**Warramunga Arr**	**30.02**	**20**	P	**P**	**20 32 45.5**	**+0.4**
	comp=Z,2.2nm,1.2s,baz=192,slow=12,SNR=2.4						
	comp=Z,2.2nm,1.2s						
WRAB	**Tennant Creek**	**30.03**	**20**	P	**P**	**20 32 44.9**	**-0.2**
WRAB				IAmb	IAmb	20 33 28.0	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**30.20**	**20**	P	**P**	**20 32 47.2**	**+0.6**
WB0				IAmb	IAmb	20 32 58.1	
	comp=Z,11nm,1.4s						
RTZ	**Ruatahuna**	**38.85**	**95**	P	**P**	**20 34 02.0**	**+0.5**
SNAA	**Sanae**	**54.06**	**198**	P	**P**	**20 36 00.4**	**+0.1**
GSI	**Gunungsitoli**	**54.98**	**327**	P	**P**	**20 36 07.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**70.66**	**335**	P	**P**	**20 37 50.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**70.66**	**335**	P	**P**	**20 37 53.0**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=192,slow=6.9,SNR=5.5						
	comp=Z,0.4nm,0.3s						
CRAI	**Chiangrai**	**71.96**	**337**	P	**P**	**20 37 59.1**	**-0.5**
CRAI				IAmb	IAmb	20 38 20.5	
	comp=Z,7.2nm,1.5s						
GO09	**Cerro Castillo**	**79.26**	**170**	P	**P**	**20 38 41.3**	**+0.1**
SHL	**Shillong**	**79.49**	**331**	P	**P**	**20 38 41.6**	**-1.3**
SHL				IAmb	IAmb	20 38 52.7	
	comp=Z,7.9nm,1.1s						
LSA	**Lhasa**	**83.57**	**332**	P	**P**	**20 39 04.8**	**+0.1**
LSA				IAmb	IAmb	20 39 14.1	
	comp=Z,6.9nm,1.3s						
YKA	**Yellowknife Ar**	**145.54**	**45**	PKPbc	**PKPdf**		**20 46 13.0**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=268,slow=2.7,SNR=19								
EKA	**Eskdalemuir Ar**	**147.63**	**302**	PKPbc	**PKPbc**		**20 46 19.9**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=96,slow=1.7,SNR=5.7								

IDC 13 20:30:13.6±8.3, 5.°79S×146.°60E, h89km±85km, mb2.9/2, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=75.9km s-min=36.8km az=137.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.63**	**171**	P	Pn	20 31 07.7	0.0
	8.3nm,0.3s,baz=1.8,slow=9.7,SNR=9.5						
PMG				S	Sn	20 31 50.1	+0.6
	12nm,0.3s,baz=287,slow=24,SNR=8.6						
WRA	**Warramunga Arr**	**18.44**	**219**	P	P	20 34 21.8	-0.4
	0.1nm,0.3s,baz=41,slow=12,SNR=5.4						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**21.57**	**213**	P	P	20 34 56.3	+0.2
	0.3nm,0.6s,baz=46,slow=8.4,SNR=6.3						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.45**	**23**	P	P	20 42 41.1	0.0
	0.2nm,0.5s,baz=249,slow=5.7,SNR=4.3						
	0.2nm,0.5s						

IDC ***13*** *20:46:11.1±2.9, 39.°18N×68.°18E, h0km, mbtmp3.2/6, ML2.8/6, Error ellipse: s-maj=52.3km s-min=18.2km az=161.0*
ISU ***13*** *20:46:18.8, 39.°77N×67.°88E, h16km*
ISC 13 20:46:17.4±1.0, 39.°85N±0.°03×67.°82E±0.°03, h19km±3km, n21, σ1s86/38, 6C, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BXML	**Bakhmal**	**0.23**	**135**	P	**Pb**	**20 46 22.8**	**-0.1**
BXML				S	**Sb**	**20 46 25.8**	**-0.6**
DZI	**Dzhizak**	**0.27**	**1**	P	**Pn**	**20 46 26.3**	**-0.2**
DZI				S	**Sn**	**20 46 31.9**	**-0.2**
SAM	**Samarkand**	**0.69**	**255**	P	**Pn**	**20 46 32.8**	**+0.4**
SAM				S	**Sn**	**20 46 43.2**	**+0.6**
AGL	**Agalyk**	**0.80**	**246**	P	**Pn**	**20 46 34.4**	**+0.6**
AGL				S	**Sn**	**20 46 45.9**	**+0.7**
PKMR	**Pachkamar**	**1.71**	**221**	P	**Pb**	**20 46 49.8**	**+1.4**
PKMR				S	**Sg**	**20 47 12.7**	**0.0**
TAS	**Tashkent**	**1.85**	**37**	P	**Pg**	**20 46 53.2**	**+0.1**
TAS				S	**Sg**	**20 47 18.7**	**+1.5**
ZRB	**Zarabog**	**2.12**	**215**	P	**Pg**	**20 46 57.8**	**-0.4**
ZRB				S	**Sg**	**20 47 27.0**	**+1.3**
CHRV	**Charvak**	**2.42**	**41**	P	**Pb**	**20 47 01.7**	**+1.3**
CHRV				S	**Sg**	**20 47 34.7**	**-0.4**
MINT	**Mingtut**	**2.50**	**75**	P	**Pb**	**20 47 02.1**	**+0.4**
MINT				S	**Sg**	**20 47 35.4**	**-2.3**
CHMI	**Chimion**	**2.87**	**80**	P	**Pb**	**20 47 07.3**	**-0.9**
CHMI				S	**Sb**	**20 47 45.1**	**+2.1**
TMD	**Tamdy-Bulak**	**3.07**	**309**	P	**Pb**	**20 47 11.9**	**+0.4**
TMD				S	**Sg**	**20 47 54.1**	**-2.0**
KSNS	**Kasansay**	**3.11**	**64**	P	**Pb**	**20 47 11.1**	**-1.1**
KSNS				S	**Sb**	**20 47 52.5**	**+2.7**
KK31	**Karatay Array**	**3.83**	**31**	⇑Pn	**Pn**	**20 47 16.8**	**+1.3**
	0.8nm,0.3s,baz=218,slow=13,SNR=74						
KK31				⇑Pg	**Pb**	**20 47 27.1**	**+2.6**
	4.4nm,0.5s,baz=216,slow=17,SNR=6.0						
KK31				⇑Lg	Lg	20 48 16.4	
	21nm,0.5s,baz=211,slow=28,SNR=14						
AAK	**Ala-Archa**	**5.75**	**59**	Pn	**Pn**	**20 47 41.1**	**-0.8**
	1.1nm,0.3s,baz=236,slow=7.9,SNR=18						
AAK				Sn	**Sn**	**20 48 49.5**	**+1.9**
	0.9nm,0.3s,baz=224,slow=17,SNR=6.0						
	1.6nm,0.3s						
TKM2	**Tokmak 2**	**6.61**	**60**	⇑Pn	**Pn**	**20 47 52.3**	**-1.4**
	0.4nm,0.3s						
TKM2				⇑Sn	**Sn**	**20 49 14.0**	**+5.4**
	2.6nm,0.6s						
TKM2				⇑Lg	Lg	20 49 46.7	
	4.9nm,0.8s						
GEYT	**Alibeck**	**7.81**	**259**	Pn	**Pn**	**20 48 09.2**	**-0.9**
	0.3nm,0.3s,baz=82,slow=12,SNR=5.4						
GEYT				Sn	**Sn**	**20 49 39.9**	**+1.9**
	0.9nm,0.3s,baz=64,slow=29,SNR=2.2						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**12.61**	**52**	Pn	**Pn**	**20 49 12.9**	**-2.9**
	baz=236,slow=16,SNR=2.5						
MKAR				Lg	Lg	20 52 53.2	
	baz=255,slow=27,SNR=2.8						
	0.2nm,0.6s						
AKTO	**Aktyubinsk**	**12.63**	**330**	Sn	**Sn**	**20 51 34.0**	**-2.1**
	0.2nm,0.3s,baz=245,slow=18,SNR=2.1						
KURBB	**Kurchatov Arra**	**13.14**	**31**	Pn	**Pn**	**20 49 20.8**	**-2.2**
	baz=224,slow=12,SNR=2.4						
KURBB				Lg	Lg	20 53 15.9	
	baz=196,slow=27,SNR=4.2						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**13.30**	**7**	Pn	**Pn**	**20 49 25.0**	**-0.2**
	baz=181,slow=12,SNR=2.6						
BVAR				Sn	**Sn**	**20 51 48.2**	**-4.2**
	baz=194,slow=27,SNR=2.8						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**18.20**	**34**	P	**P**	**20 50 29.8**	**+0.7**
	0.1nm,0.3s,baz=225,slow=12,SNR=4.3						
	0.5nm,0.4s						

TAP ***13*** *20:49:31.9, 24.°64N×122.°78E, h104km, ML2.6, D*
JMA ***13*** *20:49:32.9±0.1, 24.°N±1.°×122.°7E±0.°4, h99km, MV2.1/13, NW OFF ISHIGAKIJIMA IS*
ISC 13 20:49:33.3±1.4, 24.°57N±0.°05×122.°70E±0.°03, h96km±8km, n65, σ0s82/119, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonaunijimaku**	**0.25**	**118**	*eP*	**Pn**	**20 49 47.2**	**0.0**
JYNG				*eS*	**Sn**	**20 49 57.9**	**+0.4**
YOJ	**Yonaguni jima**	**0.30**	**111**	*eP*	**Pn**	**20 49 46.7**	**-0.7**
	baz=135						
YOJ				*eS*	**Sn**	**20 49 58.1**	**+0.2**
	baz=135						
YOJ	**Yonaguni jima**	**0.30**	**111**	P	**Pn**	**20 49 47.4**	**0.0**
YOJ				eS	**Sn**	**20 49 58.0**	**+0.2**
EOS3	**EOS3**	**0.45**	**231**	*eP*	**Pn**	**20 49 48.9**	**+0.9**
	baz=239						
EOS3				*eS*	**Sn**	**20 50 00.7**	**+1.6**
	baz=239						
EOS2	**EOS2**	**0.45**	**251**	*eP*	**Pn**	**20 49 48.7**	**+0.6**
	baz=243						
EOS2				*eS*	**Sn**	**20 50 00.6**	**+1.4**
	baz=243						
EOS4	**EOS4**	**0.57**	**218**	*eP*	**Pn**	**20 49 49.2**	**+0.5**
	baz=225						
EOS4				*eS*	**Sn**	**20 50 01.8**	**+1.5**
	baz=225						
TWC	**Suao**	**0.78**	**273**	P	**Pn**	**20 49 50.7**	**-0.3**
	baz=268						
TWC				S	**Sn**	**20 50 03.4**	**-0.9**
	baz=268						
ESAO	**Su ao**	**0.78**	**271**	*eP*	**Pn**	**20 49 51.0**	**-0.1**
	baz=265						
ESAO				*eS*	**Sn**	**20 50 03.1**	**-1.3**
	baz=265						
EWUT	**Wuta**	**0.85**	**262**	*eP*	**Pn**	**20 49 51.8**	**+0.1**
	baz=261						
EWUT				*eS*	**Sn**	**20 50 03.9**	**-1.7**
	baz=261						
SXI1	**Grass Mountain**	**0.91**	**305**	*eP*	**Pn**	**20 49 52.7**	**+0.2**
	baz=292						
SXI1				*eS*	**Sn**	**20 50 07.0**	**-0.1**
	baz=292						
TWE	**Neicheng**	**0.95**	**279**	P	**Pn**	**20 49 53.0**	**+0.1**
	baz=274						
TWE				*eS*	**Sn**	**20 50 06.8**	**-0.8**
	baz=274						
IRIF	**Iriomote-Funau**	**0.97**	**104**	P	**Pn**	**20 49 52.9**	**-0.1**
FUSB	**Fushanzhiwuyua**	**1.03**	**281**	*eP*	**Pn**	**20 49 53.7**	**-0.1**
	baz=282						
FUSB				*eS*	**Sn**	**20 50 08.6**	**-0.7**
	baz=282						
ENTT	**Nioudou**	**1.03**	**274**	*eP*	**Pn**	**20 49 53.9**	**+0.1**
	baz=270						
ENTT				*eS*	**Sn**	**20 50 08.7**	**-0.6**
	baz=270						
ETL	**Fush Village**	**1.06**	**248**	*eP*	**Pn**	**20 49 53.4**	**-0.8**
	baz=245						
ETL				*eS*	**Sn**	**20 50 09.2**	**-0.7**
	baz=245						
LATG	**Datong**	**1.07**	**268**	*eP*	**Pn**	**20 49 54.2**	**-0.1**
	baz=267						
LATG				*eS*	**Sn**	**20 50 10.2**	**+0.1**
	baz=267						
NACB	**Ninganchiao**	**1.08**	**249**	P	**Pn**	**20 49 54.0**	**-0.3**
NACB	**Ninganchiao**	**1.08**	**249**	*eP*	**Pn**	**20 49 53.5**	**-0.8**
	baz=241						
NACB				*eS*	**Sn**	**20 50 09.0**	**-1.2**
	baz=241						
NDT	**Datong Townshi**	**1.08**	**272**	*eP*	**Pn**	**20 49 54.6**	**+0.3**
	baz=268						
NDT				*eS*	**Sn**	**20 50 10.2**	**0.0**
	baz=268						
NWLT	**Wulai**	**1.11**	**281**	*eP*	**Pn**	**20 49 55.0**	**+0.3**
	baz=281						
NWLT				*eS*	**Sn**	**20 50 10.3**	**-0.5**
	baz=281						
TWD	**Chiawan**	**1.12**	**244**	*eP*	**Pn**	**20 49 54.4**	**-0.4**
	baz=242						
TWD				*eS*	**Sn**	**20 50 10.2**	**-0.7**
	baz=242						
ETLH	**Xiulin Townshi**	**1.17**	**252**	*eP*	**Pn**	**20 49 54.8**	**-0.6**
	baz=250						
ETLH				*eS*	**Sn**	**20 50 11.5**	**-0.6**
	baz=250						
NNSB	**Datong**	**1.21**	**264**	*eP*	**Pn**	**20 49 55.6**	**-0.3**
	baz=254						
NNSB				*eS*	**Sn**	**20 50 12.3**	**-0.7**
	baz=254						
YHNB	**Yeheng**	**1.21**	**275**	P	**Pn**	**20 49 56.5**	**+0.6**
YHNB	**Yeheng**	**1.21**	**275**	P	**Pn**	**20 49 56.2**	**+0.3**
	baz=280						
YHNB				S	**Sn**	**20 50 12.7**	**-0.3**
	baz=280						
NNS	**Nan Shan**	**1.22**	**264**	*eP*	**Pn**	**20 49 55.9**	**-0.1**
	baz=261						
NNS				*eS*	**Sn**	**20 50 12.0**	**-1.2**
	baz=261						
NSK	**Sanguang**	**1.23**	**275**	*eP*	**Pn**	**20 49 56.3**	**+0.2**
	baz=280						
NSK				*eS*	**Sn**	**20 50 12.8**	**-0.4**
	baz=280						
JKRS	**Kuro-shima**	**1.24**	**105**	P	**Pn**	**20 49 56.4**	**+0.3**
JKRS				eS	**Sn**	**20 50 14.4**	**+1.0**
ETM	**Tongmen**	**1.25**	**242**	*eP*	**Pn**	**20 49 55.9**	**-0.5**
	baz=240						
LXIB	**Xiulin Townshi**	**1.29**	**245**	P	**Pn**	**20 49 56.4**	**-0.6**
	baz=244						
LXIB				*eS*	**Sn**	**20 50 13.8**	**-1.0**
	baz=244						
SHUL	**Shoufeng**	**1.30**	**233**	*eP*	**Pn**	**20 49 55.9**	**-0.9**
	baz=232						
SHUL				*eS*	**Sn**	**20 50 14.1**	**-0.5**
	baz=232						
JIJ	**Ishigaki jima**	**1.33**	**99**	P	**Pn**	**20 49 57.0**	**-0.2**
JIJ				S	**Sn**	**20 50 14.9**	**-0.4**
FUSS	**Fushou**	**1.37**	**257**	*eP*	**Pn**	**20 49 57.9**	**0.0**
	baz=254						
FUSS				*eS*	**Sn**	**20 50 16.6**	**+0.1**
	baz=254						
WHF	**Hehuan Shan**	**1.38**	**252**	*eP*	**Pn**	**20 49 57.9**	**-0.3**
	baz=245						
WHF				*eS*	**Sn**	**20 50 14.4**	**-2.6**
	baz=245						
ESL	**Shilin**	**1.38**	**237**	*eP*	**Pn**	**20 49 57.2**	**-0.7**
	baz=236						
ESL				*eS*	**Sn**	**20 50 15.3**	**-1.2**
	baz=236						
NFF	**Wufeng Townshi**	**1.44**	**273**	*eP*	**Pn**	**20 49 58.8**	**+0.1**
	baz=270						
NFF				*eS*	**Sn**	**20 50 17.6**	**-0.3**
	baz=270						
JISG	**Ishigakijimahi**	**1.47**	**89**	P	**Pn**	**20 49 58.8**	**-0.1**
JISG				S	**Sn**	**20 50 17.5**	**-0.8**
WARBT	**Fenglin Townsh**	**1.47**	**235**	*eP*	**Pn**	**20 49 58.3**	**-0.7**
	baz=234						
WARBT				*eS*	**Sn**	**20 50 16.9**	**-1.5**
	baz=234						
CHGB	**Renai**	**1.48**	**250**	*eP*	**Pn**	**20 49 59.5**	**+0.1**
	baz=248						
CHGB				*eS*	**Sn**	**20 50 18.4**	**-0.6**
	baz=248						
LIOB	**Emei**	**1.54**	**273**	*eP*	**Pn**	**20 49 60.0**	**+0.2**
	baz=270						
LIOB				*eS*	**Sn**	**20 50 19.3**	**-0.6**
	baz=270						
NSTT	**Nanjuang**	**1.55**	**273**	*eP*	**Pn**	**20 50 00.3**	**+0.4**
	baz=269						
NSTT				*eS*	**Sn**	**20 50 20.0**	**-0.2**
	baz=269						
WUSB	**Renai**	**1.56**	**249**	*eP*	**Pn**	**20 50 00.2**	**+0.1**
	baz=247						
WUSB				*eS*	**Sn**	**20 50 19.0**	**-1.5**
	baz=247						
HGSD	**Ruisui**	**1.58**	**228**	*eP*	**Pn**	**20 49 59.9**	**-0.5**
	baz=224						
HGSD				*eS*	**Sn**	**20 50 20.6**	**-0.3**
	baz=224						
VWDT	**VWDT**	**1.64**	**241**	*eP*	**Pn**	**20 50 01.4**	**+0.3**
	baz=236						
VWDT				*eS*	**Sn**	**20 50 21.7**	**-0.4**
	baz=236						
EHY	**Hungye**	**1.65**	**230**	*eP*	**Pn**	**20 50 00.4**	**-0.8**
	baz=237						
EHY				*eS*	**Sn**	**20 50 20.4**	**-1.9**
	baz=237						
WCS	**Beigang Elemen**	**1.71**	**253**	*eP*	**Pn**	**20 50 03.0**	**+1.0**
	baz=248						
WCS				*eS*	**Sn**	**20 50 24.8**	**+1.0**
	baz=248						
YULB	**Yu-li**	**1.74**	**228**	P	**Pn**	**20 50 01.7**	**-0.7**
YULB	**Yu-li**	**1.74**	**228**	*eP*	**Pn**	**20 50 01.7**	**-0.7**
	baz=235						
YULB				*eS*	**Sn**	**20 50 22.9**	**-1.5**
	baz=235						
EYUL	**Yuli**	**1.75**	**226**	*eP*	**Pn**	**20 50 02.6**	**0.0**
	baz=235						
TWF1	**Yuli**	**1.77**	**227**	*eP*	**Pn**	**20 50 02.0**	**-0.7**
	baz=234						
TWF1				*eS*	**Sn**	**20 50 24.0**	**-1.1**
	baz=234						
SSLB	**Suanglung**	**1.77**	**244**	P	**Pn**	**20 50 03.2**	**+0.4**
SSLB	**Suanglung**	**1.77**	**244**	*eP*	**Pn**	**20 50 03.1**	**+0.2**
	baz=239						
SSLB				*eS*	**Sn**	**20 50 25.9**	**+0.5**
	baz=239						
SMLT	**Sun Moon Lake**	**1.78**	**248**	*eP*	**Pn**	**20 50 03.7**	**+0.7**
	baz=244						
SMLT				*eS*	**Sn**	**20 50 26.9**	**+1.4**
	baz=244						
TYC	**Yuchr**	**1.81**	**249**	*eP*	**Pn**	**20 50 04.2**	**+1.0**
	baz=246						
TYC				*eS*	**Sn**	**20 50 26.6**	**+0.6**
	baz=246						
JTJ	**Tarama**	**1.82**	**87**	P	**Pn**	**20 50 03.4**	**0.0**
JTJ				S	**Sn**	**20 50 25.5**	**-0.8**
WJS	**Zhushan**	**1.95**	**248**	*eP*	**Pn**	**20 50 05.5**	**+0.4**
	baz=246						
WJS				*eS*	**Sn**	**20 50 29.7**	**+0.4**
	baz=246						
EHD	**Haiduan**	**1.97**	**224**	*eP*	**Pn**	**20 50 04.6**	**-0.8**
	baz=224						
ALS	**Alishan**	**2.03**	**239**	*eP*	**Pn**	**20 50 07.0**	**+0.7**
	baz=238						
ELDTW	**Lidau**	**2.06**	**229**	*eP*	**Pn**	**20 50 06.3**	**-0.4**
	baz=228						
CHN5	**Tsauling**	**2.09**	**243**	*eP*	**Pn**	**20 50 07.6**	**+0.7**
	baz=241						
CHN5				*eS*	**Sn**	**20 50 34.3**	**+1.7**
	baz=241						
WCKO	**Fanlu**	**2.22**	**240**	*eP*	**Pn**	**20 50 10.0**	**+1.4**
	baz=239						
WCKO				*eS*	**Sn**	**20 50 37.5**	**+1.8**
	baz=239						
STYH	**Taoyuan**	**2.25**	**232**	*eP*	**Pn**	**20 50 09.9**	**+0.9**
	baz=229						
STYH				*eS*	**Sn**	**20 50 37.6**	**+1.5**
	baz=229						
CHN4	**Tsaushan**	**2.28**	**238**	*eP*	**Pn**	**20 50 10.4**	**+1.1**
	baz=237						
CHN4				*eS*	**Sn**	**20 50 37.2**	**+0.2**
	baz=237						
TPUB	**Ta-pu**	**2.28**	**237**	P	**Pn**	**20 50 11.0**	**+1.6**
TPUB	**Ta-pu**	**2.28**	**237**	*eP*	**Pn**	**20 50 10.1**	**+0.7**
	baz=236						
TPUB				*eS*	**Sn**	**20 50 37.4**	**+0.4**
	baz=236						

SDD ***13*** *21:13:12.3±2.5, 18.°13N×68.°63W, h58km±14km, MD2.5, ML2.4, MW2.7*
RSPR ***13*** *21:13:12.3, 17.°95N×68.°19W, h129km±3km, MD3.6/7*
NEIC ***13*** *21:13:12.2±1.2, 18.°1N±0.°1×68.°50W±0.°06, h38km±29km, ML2.6/18, Md3.6/7(RSPR), Error ellipse: s-maj=16.2km s-min=7.3km az=199.0*
ISC 13 21:13:12.4±1.1, 18.°17N±0.°06×68.°44W±0.°03, h27km±11km, n31, σ1s11/40, 11C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SADR	**Isla Saona**	**0.33**	**273**	⇑*eP*	**Pb**	**21 13 19.9**	**-0.1**
SADR				⇓*eP*	**Pb**	**21 13 20.0**	**-0.1**
SADR				⇓*eS*	**Sn**	**21 13 27.7**	**+0.5**
SAD

MLPR	**Magueyes Islan**	**1.34**	**98**	↑*eP*		**Pn**	**21 13 34.8**	**-0.5**
MLPR	**Magueyes Islan**	**1.34**	**98**	*eS*		**Sn**	**21 13 51.7**	**-0.5**
MLPR	**Magueyes Islan**	**1.34**	**98**			**Pn**	**21 13 34.8**	**-0.5**
MLPR					IAML		21 14 00.1	
	comp=E,52nm,3.1s							
MLPR	**Magueyes Islan**	**1.34**	**98**			**Sn**	**21 13 51.7**	**-0.5**
MLPR	**Magueyes Islan**	**1.34**	**98**	↑*ePg*		**Pn**	**21 13 35.0**	**-0.3**
MLPR				↑*eSg*		**Sb**	**21 13 53.5**	**-0.1**
MLPR					IAML		21 13 56.2	
	comp=N,34nm,2.2s							
MLPR					IAML		21 13 59.3	
	comp=E,48nm,2.5s							
AOPR	**Arecibo Observ**	**1.61**	**84**	↑*eP*		**Pn**	**21 13 39.5**	**+0.5**
AOPR	**Arecibo Observ**	**1.61**	**84**	*eS*		**Sb**	**21 14 00.5**	**-0.9**
AOPR	**Arecibo Observ**	**1.61**	**84**			**Pn**	**21 13 38.8**	**-0.2**
AOPR						**Sn**	**21 13 59.2**	**+0.3**
AOPR					IAML		21 14 03.9	
	comp=N,93nm,0.3s							
AOPR	**Arecibo Observ**	**1.61**	**84**	↓*ePg*		**Pb**	**21 13 40.6**	**-0.8**
AOPR				↓*eSg*		**Sb**	**21 14 01.7**	**+0.4**
AOPR					IAML		21 14 03.7	
	comp=E,104nm,0.3s							
AOPR					IAML		21 14 04.9	
	comp=N,74nm,0.2s							
UUPR	**Utuado, UPR, P**	**1.63**	**87**	↓*eP*		**Pn**	**21 13 39.5**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.63**	**87**			**Pn**	**21 13 39.2**	**-0.1**
CELP	**Cerrillos**	**1.77**	**93**	↑*eP*		**Pn**	**21 13 40.1**	**-1.1**
CELP	**Cerrillos**	**1.77**	**93**	*eS*		**Sn**	**21 14 02.3**	**-0.5**
CELP	**Cerrillos**	**1.77**	**93**			**Pn**	**21 13 40.0**	**-1.3**
CELP					IAML		21 13 58.8	
	comp=N,36nm,2.5s							
CELP						**Sn**	**21 14 02.0**	**-0.9**
CELP					IAML		21 14 26.9	
	comp=E,29nm,3.6s							
HUMP	**Col San Antoni**	**2.46**	**90**	Pn		**Pn**	**21 13 51.1**	**+0.4**
HUMP					IAML		21 14 23.6	
	comp=N,27nm,0.2s							
HUMP					IAML		21 14 26.2	
	comp=E,34nm,0.2s							
SDDR	**Presa de Saban**	**2.82**	**287**	↑*eP*		**Pn**	**21 13 57.4**	**+1.6**
SDDR	**Presa de Saban**	**2.82**	**287**	*eS*		**Sn**	**21 14 30.7**	**+1.7**
SDDR	**Presa de Saban**	**2.82**	**287**			**Pn**	**21 13 54.8**	**-1.0**
SDDR					IAML		21 14 28.8	
	comp=E,31nm,3.4s							
SDDR	**Presa de Saban**	**2.82**	**287**		IAML		21 14 32.2	
	comp=E,23nm,2.0s							
SDDR					IAML		21 14 34.5	
	comp=N,19nm,1.8s							

IDC 13 21:24:25.3±7.3, **2°86S**×**142°31E, h0**km, **mb3.2**/2, **mbtmp3.3/3, ML3.5/1, MS3.5/1, Error ellipse: s-maj=263.7km s-min=33.4km az=91.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.67**	**204**	P	Pn	21 28 45.4	0.0
	0.2nm,0.3s,baz=26,slow=13,SNR=4.0 0.8nm,0.6s						
ASAR	**Alice Springs**	**22.22**	**201**	P	P	21 29 23.7	-0.1
	0.3nm,0.5s,baz=30,slow=11,SNR=7.1 0.3nm,0.5s						
TGY	**Tagaytay City**	**27.07**	**309**	LR	LR	21 40 47.5	
	comp=Z,106nm,20.8s,baz=113,slow=36						
MKAR	**Makanchi Array**	**72.13**	**321**	P	P	21 35 51.8	0.0
	0.2nm,0.6s,baz=109,slow=7.8,SNR=3.4 0.2nm,0.6s						

*DJA **13** 21:26:44.4*±*0.2, 6°S*±*3°*×*10°6E*±*°, h174km*±*2km, M4.5/23, mb4.5/19, mB4.9/3, MLv4.6/23, Mw(mB)4.2/3*

*NEIC **13** 21:26:44.9*±*2.1, 5°.97S*±*0°.08*×*105°.81E*±*0°.07, h167km*±*8km, mb4.3/27, Error ellipse: s-maj=12.6km s-min=9.8km az=209.0*

*IDC **13** 21:26:46.8*±*1.0, 5°.83S*×*105°.87E, h187km*±*7km, mb3.7/17, mbtmp4.2/18, MS2.6/1, Error ellipse: s-maj=23.7km s-min=8.0km az=47.0*

ISC 13 21:26:44.8±0.6, **6°03S**±0°.06×**105°74E**±0°.05, **h176**km±5km, **n106,** σ**1s23/116, mb4.1/29, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.40**	**102**	P	Pn	**21 27 09.3**	**+0.6**
SBJI				S	Sn	**21 27 26.4**	**-0.6**
BLSI	**Bandar Lampung**	**0.83**	**323**	P	Pn	**21 27 11.7**	**+0.8**
TNG	**Tangerang**	**0.91**	**99**	P	Pn	**21 27 12.1**	**+0.7**
DBJI	**Dramaga**	**1.13**	**117**	P	Pn	**21 27 14.0**	**+0.9**
DBJI				S	Sn	**21 27 35.2**	**+0.2**
SKJI	**Sukabumi**	**1.26**	**140**	P	Pn	**21 27 14.8**	**+0.6**
SKJI				S	Sn	**21 27 36.9**	**-0.1**
KASI	**Kota Agung**	**1.34**	**292**	P	Pn	**21 27 16.3**	**+1.4**
KASI				S	Sn	**21 27 38.5**	**+0.4**
CNJI	**Cibinong**	**1.87**	**133**	P	Pn	**21 27 19.8**	**-0.4**
CNJI				S	Sn	**21 27 45.1**	**-2.6**
LWLI	**Liwa**	**1.96**	**301**	P	Pn	**21 27 22.8**	**+1.6**
LEM	**Lembang**	**2.02**	**113**	P	Pn	**21 27 23.8**	**+1.8**
	220nm,0.5s,baz=315,slow=6.0,SNR=38						
LEM				S	Sn	**21 27 54.2**	**+3.4**
	183nm,0.7s,baz=170,slow=19,SNR=4.1						
LEM				LR	LR	21 28 07.9	
	comp=Z,122nm,19.0s,baz=230,slow=40						
LEM	**Lembang**	**2.02**	**113**	P	Pn	**21 27 23.4**	**+1.4**
BBJI	**Bungbulang**	**2.37**	**127**	P	Pn	**21 27 26.2**	**+0.4**
JCJI	**Jatiwangi**	**2.55**	**100**	P	Pn	**21 27 29.7**	**+1.8**
CMJI	**Cimerak**	**3.20**	**123**	P	Pn	**21 27 35.6**	**-0.1**
CMJI				S	Sn	**21 28 13.0**	**-2.4**
MNAI	**Manna**	**3.23**	**301**		Pn	**21 27 38.1**	**+1.9**
MNAI				Sn	Sn	**21 28 15.3**	**-0.9**
MNAI	**Manna**	**3.23**	**301**	P	Pn	**21 27 38.4**	**+2.2**
MNAI	**Manna**	**3.23**	**301**	P	Pn	**21 27 38.1**	**+1.9**
MNAI				S	Sn	**21 28 15.5**	**-0.7**
KPJI	**Karang Pucung**	**3.42**	**112**	P	Pn	**21 27 39.6**	**+1.1**
PPBI	**Pangkal Pinang**	**3.87**	**6**	P	Pn	**21 27 44.7**	**+0.6**
XMI	**Christmas Isla**	**4.39**	**181**	P	Pn	**21 27 50.0**	**-0.8**
XMIS	**Christmas Isla**	**4.42**	**181**	Pn	Pn	**21 27 49.8**	**-1.4**
XMIS	**Christmas Isla**	**4.42**	**181**	P	Pn	**21 27 50.0**	**-1.2**
UGM	**Wanagama**	**5.10**	**112**	Pn	Pn	**21 28 00.2**	**+0.2**
UGM	**Wanagama**	**5.10**	**112**	P	Pn	**21 28 00.7**	**+0.7**
UGM	**Wanagama**	**5.10**	**112**	P	Pn	**21 28 00.0**	**0.0**
	151nm,1.5s,0.8nm						
DSRI	**Dabo**	**5.64**	**348**	P	Pn	**21 28 05.3**	**-1.8**
	29nm,1.4s,0.1nm						
KRJI	**Kerinci**	**5.79**	**312**	P	Pn	**21 28 09.9**	**+0.7**
	106nm,1.2s,0.5nm						
PPSI	**Pulau Pagai**	**6.57**	**299**	P	Pn	**21 28 18.7**	**-0.6**
	86nm,0.6s,0.7nm						
PDSI	**Padang**	**7.32**	**314**	P	Pn	**21 28 28.3**	**-1.0**
GMJI	**Gumukmas**	**7.96**	**107**	P	Pn	**21 28 38.7**	**+1.1**
	25nm,1.1s						
BLJI	**Banyuglugur**	**7.98**	**103**	P	Pn	**21 28 38.8**	**+0.9**
	43nm,0.9s,1.1nm						
SISI	**Saibi**	**8.12**	**305**	P	Pn	**21 28 38.8**	**-0.9**
	31nm,1.0s						
JAGI	**Jajag, Banyuwa**	**8.69**	**107**	Pn	Pn	**21 28 46.1**	**-1.2**
JAGI	**Jajag, Banyuwa**	**8.69**	**107**	P	Pn	**21 28 47.7**	**+0.5**
JAGI	**Jajag, Banyuwa**	**8.69**	**107**	P	Pn	**21 28 46.9**	**-0.3**
	36nm,0.6s						
PBSI	**Pulau Batu**	**9.53**	**308**	P	Pn	**21 28 56.1**	**-2.2**
	55nm,1.0s						
SBUM	**Sibu**	**10.62**	**38**	Pn	Pn	**21 29 12.6**	**-0.1**
GSI	**Gunungsitoli**	**10.94**	**312**		Pn	**21 29 13.8**	**-3.0**
GSI	**Gunungsitoli**	**10.94**	**312**	P	Pn	**21 29 13.7**	**-3.0**
	23nm,0.4s						
TWSI	**Taliwang, Sumb**	**11.37**	**104**	P	Pn	**21 29 22.5**	**+0.2**
	27nm,1.0s						
IPM	**Ipoh**	**11.46**	**336**	Pn	Pn	**21 29 21.2**	**-2.2**
PLAI	**Plampang**	**12.25**	**104**	P	Pn	**21 29 31.8**	**-1.9**
	78nm,0.5s,1μm						
BASI	**Baing, Sumba**	**15.26**	**107**	P	Pn	**21 30 11.2**	**-0.2**
	85nm,1.7s						
MPSI	**Mapaga**	**15.48**	**66**	P	P	**21 30 14.7**	**0.0**
	40nm,0.9s						
KKM	**Kota Kinabalu**	**15.91**	**41**	P	P	**21 30 18.8**	**-0.8**
KKM				IAmb	IAmb	21 30 22.2	
	comp=Z,14nm,1.0s						
EDFI	**Ende, Flores**	**16.04**	**101**	P	Pn	**21 30 19.9**	**-1.1**
	comp=Z,20nm,1.0s						
MMRI	**Maumere**	**16.56**	**100**		P	**21 30 25.4**	**-1.3**
MMRI	**Maumere**	**16.56**	**100**	P	Pn	**21 30 27.8**	**+0.6**
TOLI2	**Tolitoli**	**16.61**	**65**		Pn	**21 30 26.7**	**-1.1**
TOLI2				IAmb	IAmb	21 30 41.7	
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**16.61**	**65**	P	Pn	**21 30 29.4**	**+1.6**
MYLDM	**Lahad Datu**	**16.92**	**49**		Pn	**21 30 31.5**	**0.0**
SOEI	**Soe**	**18.72**	**103**		P	**21 30 49.8**	**-0.5**
SOEI	**Soe**	**18.72**	**103**	P	Pn	**21 30 51.8**	**-1.0**
SOEI	**Soe**	**18.72**	**103**	P	Pn	**21 30 52.1**	**-0.7**
	comp=Z,49nm,0.6s						
LBMI	**Labuha**	**22.37**	**77**	P	P	**21 31 29.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**25.24**	**345**	P	P	**21 31 54.0**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=181,slow=8.3,SNR=8.5						
CMAR				ScP	ScP	**21 38 46.8**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=196,slow=4.1,SNR=6.6 comp=Z,0.4nm,0.5s						
MTN	**Manton Dam**	**25.93**	**107**	P	P	**21 32 02.0**	**+1.0**
H01W3	**Cape Leeuwin H**	**29.74**	**166**	T	T	22 03 34.9	
	baz=344,slow=76,SNR=20						
H01W1	**Cape Leeuwin H**	**29.75**	**166**	T	T	22 03 37.1	
	baz=344,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**29.75**	**166**	T	T	22 03 35.7	
	baz=344,slow=76,SNR=14						
WB0	**Warramunga Arr**	**31.01**	**119**	P	P	**21 32 46.6**	**+0.5**
WB0				IAmb	IAmb	21 33 12.1	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**31.03**	**119**	P	P	**21 32 46.4**	**+0.2**
WRA	**Warramunga Arr**	**31.03**	**119**	P	P	**21 32 47.5**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=312,slow=9.0,SNR=43						
WRA				PcP	PcP	**21 35 38.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=320,slow=2.4,SNR=4.9						
WRA				S	S	**21 37 37.3**	**-1.1**
	comp=Z,1.4nm,1.1s,baz=292,slow=16,SNR=4.1 comp=Z,0.7nm,0.3s						
AS31	**Alice Springs**	**32.26**	**126**	P	P	**21 32 57.0**	**0.0**
ASAR	**Alice Springs**	**32.26**	**126**	P	P	**21 32 58.0**	**+1.0**
ASAR	**Alice Springs**	**32.26**	**126**	P	P	**21 32 58.9**	**+1.8**
	comp=Z,1.0nm,0.4s,baz=303,slow=7.9,SNR=11						
ASAR				PcP	PcP	**21 35 41.7**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=298,slow=2.0,SNR=3.6						
ASAR				S	S	**21 37 56.7**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=300,slow=15,SNR=4.3 comp=Z,1.0nm,0.4s						
COEN	**Coen**	**37.65**	**105**	P	P	**21 33 42.1**	**-1.1**
COEN				IAmb	IAmb	21 34 01.1	
	comp=Z,15nm,1.4s						
STKA	**Stephens Creek**	**42.21**	**132**	P	P	**21 34 23.4**	**+2.8**
	comp=Z,2.2nm,0.3s,baz=315,slow=9.4,SNR=4.4 comp=Z,2.2nm,0.3s						
KSRS	**Korea Array**	**47.96**	**24**	P	P	**21 35 05.8**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=223,slow=7.9,SNR=4.8 comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**53.64**	**1**	P	P	**21 35 47.9**	**-0.2**
SONM	**Songino Array**	**53.64**	**1**	P	P	**21 35 48.5**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=177,slow=10.0,SNR=15 comp=Z,1.7nm,0.6s						
ULN	**Ulaanbaatar**	**53.68**	**1**	P	P	**21 35 48.2**	**-0.2**
NRN	**Naryn**	**54.52**	**333**	P	P	**21 35 53.9**	**-0.9**
USA0B	**Ussuriysk Arra**	**55.32**	**23**	P	P	**21 35 59.7**	**-0.4**
USA0B				IAmb	IAmb	21 36 00.4	
	comp=Z,5.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**55.32**	**23**	P	P	**21 35 60.0**	**-0.2**
	comp=Z,4.5nm,0.6s,baz=201,slow=5.9,SNR=19 comp=Z,4.5nm,0.6s						
BTK	**Batken**	**56.02**	**328**	P	P	**21 36 05.6**	**+0.3**
BTK				IAmb	IAmb	21 36 12.0	
	comp=Z,4.0nm,1.4s						
MK31	**Makanchi Array**	**56.56**	**341**	P	P	**21 36 08.3**	**-0.7**
MK31				IAmb	IAmb	21 36 08.6	
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**56.56**	**341**	P	P	**21 36 08.0**	**-1.0**
MKAR	**Makanchi Array**	**56.56**	**341**	P	P	**21 36 08.2**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=151,slow=8.7,SNR=54						
MKAR				ScP	ScP	**21 40 45.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=145,slow=5.3,SNR=3.0 comp=Z,1.9nm,0.4s						
ABPO	**Ambohimpanom**	**58.31**	**251**	P	P	**21 36 23.6**	**+1.7**
ABPO				IAmb	IAmb	21 36 41.4	
	comp=Z,11nm,1.4s						
VOI	**Vohitsoka**	**58.99**	**248**	P	P	**21 36 29.0**	**+2.4**
KURBB	**Kurchatov Arra**	**61.13**	**341**	P	P	**21 36 39.7**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=150,slow=6.4,SNR=12						
KURBB				ScP	ScP	**21 41 05.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=149,slow=3.9,SNR=4.4 comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**61.18**	**341**	P	P	**21 36 39.3**	**-1.3**
KURK				IAmb	IAmb	21 36 40.3	
	comp=Z,1.6nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.19**	**220**	T	T	22 43 17.2	
	baz=66,slow=75,SNR=34						
H04N1	**CROZET ISLANDS**	**61.20**	**220**	T	T	22 43 17.4	
	baz=66,slow=75,SNR=40						
H04N3	**CROZET ISLANDS**	**61.20**	**220**	T	T	22 43 16.1	
	baz=66,slow=75,SNR=6.4						
GEYT	**Alibeck**	**62.22**	**319**	P	P	**21 36 48.0**	**0.0**
	comp=Z,1.2nm,0.5s,baz=185,slow=5.6,SNR=6.2 comp=Z,1.2nm,0.5s						
ZAA0	**Zalesovo Array**	**62.30**	**346**	P	P	**21 36 46.4**	**-1.7**
ZAA0				IAmb	IAmb	21 36 47.1	
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**62.30**	**346**	P	P	**21 36 46.5**	**-1.6**
ZALV	**Zalesovo Beam**	**62.30**	**346**	P	P	**21 36 46.9**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=155,slow=6.1,SNR=10 comp=Z,1.7nm,0.3s						
RAYN	**Ar Rayn**	**65.69**	**299**	P	P	**21 37 11.8**	**+1.0**
RAYN				IAmb	IAmb	21 37 12.9	
	comp=Z,5.2nm,1.2s						
BVAR	**Borovoye Array**	**66.00**	**338**	P	P	**21 37 11.4**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=137,slow=8.6,SNR=20 comp=Z,1.8nm,0.5s						
BRVK	**Borovoye**	**66.06**	**337**	P	P	**21 37 11.7**	**-0.9**
BRVK				IAmb	IAmb	21 37 12.3	
	comp=Z,1.5nm,0.5s						
KIBK	**Kibwezi**	**67.58**	**270**	P	P	**21 37 24.1**	**+1.0**
ABKAR	**Akbulak array**	**67.95**	**330**	P	P	**21 37 23.8**	**-0.7**
ABKAR				IAmb	IAmb	21 37 24.6	
	comp=Z,2.1nm,0.6s						
ABKAR	**Akbulak array**	**67.95**	**330**	P	P	**21 37 23.9**	**-0.7**
GURO	**Guroymak-BITLI**	**73.70**	**313**	P	P	**21 38 00.4**	**+0.6**
GURO				IAmb	IAmb	21 38 01.6	
	comp=Z,3.9nm,0.4s						
KBZ	**Khabaz**	**75.10**	**318**	P	P	**21 38 08.1**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=114,slow=4.0,SNR=2.3 comp=Z,1.3nm,0.8s						
GHAJ	**Ghor Haditha**	**76.42**	**304**	P	P	**21 38 15.4**	**+0.2**
MMAI	**Mount Meron Ar**	**77.03**	**306**	P	P	**21 38 20.8**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=95,slow=10,SNR=1.9 comp=Z,1.4nm,0.5s						
BRTR	**Keskin Array B**	**80.26**	**312**	P	P	**21 38 36.2**	**-0.1**
BRTR	**Keskin Array B**	**80.26**	**312**	P	P	**21 38 36.8**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=145,slow=6.7,SNR=12 comp=Z,1.5nm,0.7s						
BURAR	**Bucovina Array**	**88.06**	**318**	P	P	**21 39 16.8**	**+1.4**
FINES	**FINESS Array B**	**90.33**	**332**	P	P	**21 39 23.9**	**-1.6**
	comp=Z,3.5nm,1.0s,baz=85,slow=4.0,SNR=3.9 comp=Z,3.5nm,1.0s						
ARCES	**ARCESS Array B**	**92.20**	**340**	P	P	**21 39 33.9**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=116,slow=2.8,SNR=4.2 comp=Z,2.5nm,0.9s						
TXAR	**Lajitas Array**	**143.84**	**47**	PKP	**PKPdf**	**21 45 59.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=271,slow=2.3,SNR=4.5						
BDFB	**Brasilia**	**146.25**	**230**	PKPbc	**PKPab**	**21 46 08.1**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=166,slow=4.2,SNR=4.1						

*PGC **13** 21:30:49.5*±*0.2, 48°.32N*×*124°.55W, h34km, ML2.6, ML2.5/21, 81km Wsw of Duncan, Bc Vancouver Island, Canada Region*

*NEIC **13** 21:30:49.1*±*1.0, 48°.33N*±*0°.02*×*124°.54W*±*0°.03, h32km*±*7km, Error ellipse: s-maj=3.3km s-min=2.8km az=200.0*

*SEA **13** 21:30:49.9*±*1.2, 48°.35N*±*0°.02*×*124°.52W*±*0°.02, h33km*±*6km, ML2.6/22, ML2.5(OTT), ML2.6/26(NEIC), Error ellipse: s-maj=3.3km s-min=2.4km az=190.0*

ISC 13 21:30:49.2±0.9, **48°33N**±0°.02×**124°54W**±0°.02, **h32**km±6km, **n101,** σ**0s57/139, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCP	**Olym-Cheeka Pk**	**0.06**	**243**		Pb	**21 30 54.8**	**+0.1**
OCP	**Olym-Cheeka Pk**	**0.06**	**243**	P	Pb	**21 30 54.8**	**+0.1**
PTRF	**Port Renfrew**	**0.23**	**22**		Pn	**21 30 55.9**	**-0.6**
PTRF					Sb	**21 31 00.6**	**-0.1**
PTRF	**Port Renfrew**	**0.23**	**22**	P	Pn	**21 30 55.9**	**-0.6**
PTRF				S	Sb	**21 31 00.6**	**-0.1**
PFB	**Port Renfrew**	**0.26**	**16**		Pn	**21 30 56.3**	**-0.5**
PFB					Sb	**21 31 01.2**	**0.0**
PFB	**Port Renfrew**	**0.26**	**16**	P	Pn	**21 30 56.3**	**-0.5**
PFB				S	Sb	**21 31 01.2**	**0.0**
OTR	**Olympics--Tyee**	**0.28**	**151**		Pn	**21 30 56.9**	**-0.2**
P403	**Sandy Floe Qua**	**0.38**	**134**		Pb	**21 30 57.7**	**-0.2**
P403					Sb	**21 31 04.0**	**+0.1**
C03A	**Quillayute Air**	**0.38**	**182**		Pn	**21 30 58.4**	**0.0**
C03A					Sn	**21 31 05.2**	**+0.6**
C03A				IAML		21 31 06.2	
	comp=N,650nm,0.7s						
C03A				IAML		21 31 06.9	
	comp=E,728nm,0.5s						
OBC	**Olympics--Boni**	**0.43**	**133**		Pb	**21 30 58.7**	**0.0**
OBC	**Olympics--Boni**	**0.43**	**133**		Sb	**21 31 05.7**	**+0.6**
OBC	**Olympics--Boni**	**0.43**	**133**	P	Pb	**21 30 58.7**	**0.0**
SYMB	**Survey Mountai**	**0.55**	**64**		Pb	**21 31 00.2**	**-0.4**
SYMB					Sb	**21 31 07.9**	**-0.5**
SYMB	**Survey Mountai**	**0.55**	**64**	P	Pb	**21 31 00.2**	**-0.4**
SYMB				S	Sb	**21 31 07.7**	**-0.7**
B926	**Mesachie Lake**	**0.57**	**29**		Pn	**21 31 00.5**	**-0.5**
B926					Sb	**21 31 08.3**	**-0.5**
B926	**Mesachie Lake**	**0.57**	**29**	P	Pn	**21 31 00.5**	**-0.5**
B926				S	Sb	**21 31 08.3**	**-0.5**
CLRS	**Cowichan Lake**	**0.57**	**29**	P	Pn	**21 31 00.5**	**-0.5**
CLRS					Sb	**21 31 08.5**	**-0.3**
CLRS	**Cowichan Lake**	**0.57**	**29**	P	Pn	**21 31 00.6**	**-0.5**
CLRS				S	Sb	**21 31 08.5**	**-0.3**
STW	**Striped Peak**	**0.61**	**106**		Pn	**21 31 01.0**	**-0.6**
STW	**Striped Peak**	**0.61**	**106**	P	Pn	**21 31 01.1**	**-0.6**
B928	**Bamfield**	**0.64**	**323**		Pn	**21 31 01.7**	**-0.4**
B928					Sn	**21 31 10.2**	**-0.9**
B928	**Bamfield**	**0.64**	**323**	P	Pn	**21 31 01.7**	**-0.4**
B928				S	Sn	**21 31 10.2**	**-0.9**
BFSB	**Bamfield**	**0.64**	**322**		Pn	**21 31 01.7**	**-0.4**
BFSB	**Bamfield**	**0.64**	**322**		Sn	**21 31 10.7**	**-0.5**
BFSB	**Bamfield**	**0.64**	**322**	P	Pn	**21 31 01.7**	**-0.4**
BFSB				S	Sn	**21 31 10.7**	**-0.5**
OSD	**Olympics--Snow**	**0.76**	**132**		Pn	**21 31 03.4**	**-0.5**
OSD	**Olympics--Snow**	**0.76**	**132**	P	Pn	**21 31 03.5**	**-0.4**
B009	**North Saanich**	**0.80**	**66**		Pn	**21 31 03.7**	**-0.5**
B009					Sn	**21 31 14.4**	**-0.5**
B009	**North Saanich**	**0.80**	**66**	P	Pn	**21 31 03.7**	**-0.5**
B009				S	Sn	**21 31 14.4**	**-0.5**
B010	**North Saanich**	**0.80**	**66**		Pn	**21 31 03.7**	**-0.5**
B010					Sn	**21 31 14.3**	**-0.6**
B010	**North Saanich**	**0.80**	**66**	P	Pn	**21 31 03.7**	**-0.5**
B010				S	Sn	**21 31 14.3**	**-0.6**
PGC	**Sidney**	**0.80**	**66**		Pn	**21 31 03.6**	**-0.5**
PGC	**Sidney**	**0.80**	**66**		Sn	**21 31 14.1**	**-0.8**
PGC	**Sidney**	**0.80**	**66**	P	Pn	**21 31 03.7**	**-0.5**
PGC				S	Sn	**21 31 14.1**	**-0.8**
B011	**North Saanich**	**0.80**	**66**		Pn	**21 31 03.7**	**-0.5**
B011					Sn	**21 31 14.4**	**-0.6**
B011	**North Saanich**	**0.80**	**66**	P	Pn	**21 31 03.7**	**-0.5**
B011				S	Sn	**21 31 14.4**	**-0.6**
PA01	**PA01 North**	**0.80**	**65**		Pn	**21 31 03.7**	**-0.5**
PA01					Sn	**21 31 14.7**	**-0.4**
PA01	**PA01 North**	**0.80**	**65**	P	Pn	**21 31 03.7**	**-0.5**
PA01				S	Sn	**21 31 14.7**	**-0.4**
VGZ	**Gonzales**	**0.82**	**83**		Sn	**21 31 14.5**	**-1.0**
VGZ	**Gonzales**	**0.82**	**83**	P	Pn	**21 31 03.5**	**-1.0**
VGZ				S	Sn	**21 31 14.5**	**-1.0**
B012	**Ucluelet**	**0.89**	**313**		Pn	**21 31 05.1**	**-0.4**
B012					Sn	**21 31 16.1**	**-1.2**
B012	**Ucluelet**	**0.89**	**313**	P	Pn	**21 31 05.1**	**-0.4**
B012				S	Sn	**21 31 16.1**	**-1.2**
OZB	**Mount Ozzard**	**0.89**	**316**		Pn	**21 31 05.1**	**-0.5**
OZB				IAML		21 31 20.3	
	comp=N,133nm,0.4s						
OZB				IAML		21 31 26.3	
	comp=E,126nm,0.6s						
OZB	**Mount Ozzard**	**0.89**	**316**		Sn	**21 31 16.6**	**-0.9**
OZB	**Mount Ozzard**	**0.89**	**316**	P	Pn	**21 31 05.1**	**-0.5**
OZB				S	Sn	**21 31 16.6**	**-0.9**
B927	**Port Alberni**	**0.91**	**349**		Pn	**21 31 05.8**	**0.0**
B927					Sn	**21 31 17.4**	**-0.4**
B927	**Port Alberni**	**0.91**	**349**	P	Pn	**21 31 05.8**	**0.0**
B927				S	Sn	**21 31 17.4**	**-0.4**
GOBB	**Galiano Island**	**0.93**	**47**		Pn	**21 31 06.2**	**+0.2**
GOBB	**Galiano Island**	**0.93**	**47**		Sn	**21 31 18.0**	**-0.2**
GOBB	**Galiano Island**	**0.93**	**47**	P	Pn	**21 31 06.2**	**+0.2**
GOBB				S	Sn	**21 31 18.0**	**-0.2**
NLLB	**Nanaimo Lost L**	**0.97**	**22**		Pn	**21 31 06.8**	**+0.2**
NLLB					Sn	**21 31 19.6**	**+0.2**
NLLB	**Nanaimo Lost L**	**0.97**	**22**	P	Pn	**21 31 06.8**	**+0.2**
NLLB				S	Sn	**21 31 19.6**	**+0.2**

RNO Roman Nose 4.45 173 Pn 21 31 55.6 +1.1

IDC ***13*** *22:15:14.3±1.0,55°.96N×149°.41W,h0km,mb3.9/13, mbtmp4.0/16,ML4.1/3,MS3.6/10,Error ellipse: s-maj=26.3km s-min=19.1km az=1.0*
NEIC ***13*** *22:15:19.1±1.5,55°.93N±0'.08×149°.4W±0°.1,h32km±6km, mb4.3/3,ML4.7/48, ML4.4(AEIC),Error ellipse: s-maj=11.8km s-min=8.2km az=168.0*
AEIC ***13*** *22:15:21.7±1.7,55°.97N±0'.08×149°.4W±0°.1,h10km±5km, Error ellipse: s-maj=11.8km s-min=8.0km az=166.0*
ISC 13 22:15:18.2±2.8,55°.99N±0'.07×149°.34W±0'.05, h24km±21km,n371,σ1s15/374,mb4.2/26,MS3.6/8,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.51**	**301**	Pn	**Pn**	**22 15 57.6**	**+0.2**
OHAK				Sn	**Sn**	**22 16 25.5**	**-1.6**
OHAK	**Old Harbor**	**2.51**	**301**	P	**Pn**	**22 15 57.6**	**+0.2**
OHAK	**Old Harbor**	**2.51**	**301**	P	**Pn**	**22 15 57.5**	**+0.2**
	baz=118						
OHAK				S	**Sn**	**22 16 25.4**	**-1.7**
	baz=118						
KDAK	**Kodiak Island**	**2.53**	**317**	Pn	**Pn**	**22 15 58.2**	**+0.6**
KDAK				Sn	**Sn**	**22 16 26.4**	**-1.3**
KDAK	**Kodiak Island**	**2.53**	**317**	Pn	**Pn**	**22 15 58.2**	**+0.6**
	31nm,0.3s,baz=149,slow=4.4,SNR=269						
KDAK				Sn	**Sn**	**22 16 26.3**	**-1.3**
	183nm,0.3s,baz=30,slow=20,SNR=41						
KDAK				LR	LR	22 16 40.6	
	comp=Z,82nm,19.4s,baz=220,slow=34						
SII	**Sitkinak Islan**	**2.76**	**284**	Pn	**Pn**	**22 16 01.0**	**+0.1**
SII					**Sn**	**22 16 31.6**	**-1.8**
SII				IAML		22 16 32.4	
	comp=E,2μm,0.7s						
SII				IAML		22 16 33.7	
	comp=N,1μm,0.6s						
SII	**Sitkinak Islan**	**2.76**	**284**	P	**Pn**	**22 16 01.0**	**+0.1**
SII	**Sitkinak Islan**	**2.76**	**284**	P	**Pn**	**22 16 00.9**	**0.0**
	baz=100						
SII				S	**Sn**	**22 16 31.4**	**-2.0**
	baz=100						
Q20K	**Shuyak Island**	**3.10**	**329**	P	**Pn**	**22 16 05.9**	**+0.3**
	baz=147						
Q20K				S	**Sn**	**22 16 41.6**	**-0.2**
	baz=147						
SYI	**Shuyak Island**	**3.10**	**329**	Pn	**Pn**	**22 16 06.0**	**+0.5**
SYI					**Sn**	**22 16 42.1**	**+0.3**
R18K	**Karluk**	**3.22**	**301**		**Pn**	**22 16 08.0**	**+0.8**
R18K					**Sn**	**22 16 43.2**	**-1.6**
R18K	**Karluk**	**3.22**	**301**	P	**Pn**	**22 16 08.1**	**+0.8**
	baz=118						
R18K				S	**Sn**	**22 16 43.4**	**-1.4**
	baz=118						
CHIR	**Chirikof Islan**	**3.54**	**270**	Pn	**Pn**	**22 16 11.4**	**-0.2**
CHIR				IAML		22 16 50.6	
	comp=E,1μm,0.7s						
CHIR				IAML		22 16 51.1	
	comp=N,2μm,0.4s						
CHIR	**Chirikof Islan**	**3.54**	**270**	P	**Pn**	**22 16 11.3**	**-0.2**
	baz=85						
CNPM	**China Poot**	**3.69**	**345**	Pn	**Pn**	**22 16 13.9**	**+0.3**
CNPM					**Sn**	**22 16 55.9**	**-0.3**
CNPM				IAML		22 16 57.8	
	comp=N,830nm,0.4s						
CNPM				IAML		22 16 59.2	
	comp=E,731nm,0.4s						
Q19K	**Cape Douglas,**	**3.75**	**323**	Pn	**Pn**	**22 16 15.7**	**+1.2**
Q19K				IAML		22 17 06.3	
	comp=N,1μm,0.7s						
Q19K				IAML		22 17 13.4	
	comp=E,2μm,0.9s						
Q19K	**Cape Douglas,**	**3.75**	**323**	P	**Pn**	**22 16 15.7**	**+1.2**
	baz=140						
Q23K	**Middleton Isla**	**3.80**	**24**		**Pn**	**22 16 15.5**	**+0.4**
Q23K				IAML		22 16 58.7	
	comp=N,806nm,0.6s						
Q23K				IAML		22 16 59.2	
	comp=E,757nm,0.6s						
Q23K	**Middleton Isla**	**3.80**	**24**	P	**Pn**	**22 16 15.9**	**+0.8**
	baz=206						
Q23K				S	**Sn**	**22 16 57.7**	**-1.2**
	baz=206						
MID	**Middleton Isla**	**3.80**	**24**	Pn	**Pn**	**22 16 15.8**	**+0.7**
MID				IAML		22 16 58.4	
	comp=N,780nm,0.6s						
MID				IAML		22 17 00.8	
	comp=E,743nm,0.3s						
MID	**Middleton Isla**	**3.80**	**24**	P	**Pn**	**22 16 16.8**	**+1.7**
BRSE	**Bradley Lake S**	**3.83**	**349**		**Pn**	**22 16 15.6**	**0.0**
BRSE	**Bradley Lake S**	**3.83**	**349**	P	**Pn**	**22 16 15.6**	**0.0**
	baz=168						
BRSE				S	**Sn**	**22 16 58.0**	**-1.9**
	baz=168						
BRLK	**Bradley Lake**	**3.87**	**348**	Pn	**Pn**	**22 16 15.9**	**-0.2**
BRLK				IAML		22 17 01.3	
	comp=N,648nm,0.3s						
BRLK				IAML		22 17 01.3	
	comp=E,868nm,0.5s						
KCE	**Katmai Mt Cerb**	**3.90**	**308**		**Pn**	**22 16 18.3**	**+1.7**
ACHA	**Angle Creek He**	**3.95**	**307**		**Pn**	**22 16 18.4**	**+1.1**
AUL	**Augustine Lava**	**4.05**	**329**		**Pn**	**22 16 19.7**	**+1.2**
KAHC	**Katmai Hardscr**	**4.07**	**313**		**Pn**	**22 16 20.2**	**+1.3**
KAHC	**Katmai Hardscr**	**4.07**	**313**	P	**Pn**	**22 16 20.2**	**+1.3**
	baz=129						
SEW	**Seward**	**4.12**	**359**		**Pn**	**22 16 19.3**	**-0.2**
SEW	**Seward**	**4.12**	**359**	P	**Pn**	**22 16 19.3**	**-0.2**
	baz=179						
P23K	**Montague Islan**	**4.15**	**14**		**Pn**	**22 16 20.1**	**+0.2**
P23K	**Montague Islan**	**4.15**	**14**	P	**Pn**	**22 16 20.1**	**+0.2**
	baz=195						
P19K	**Oil Pt**	**4.22**	**332**		**Pn**	**22 16 21.4**	**+0.5**
P19K				IAML		22 17 13.8	
	comp=N,2μm,0.5s						
P19K				IAML		22 17 14.9	
	comp=E,2μm,0.5s						
P19K	**Oil Pt**	**4.22**	**332**	P	**Pn**	**22 16 21.7**	**+0.8**
	baz=149						
CNTC	**Contact Creek**	**4.23**	**305**		**Pn**	**22 16 22.2**	**+1.0**
Q17K	**Contact Creek**	**4.23**	**305**	P	**Pn**	**22 16 22.2**	**+1.0**
	baz=120						
O20K	**Slope Mountain**	**4.46**	**338**		**Pn**	**22 16 24.5**	**+0.3**
O20K	**Slope Mountain**	**4.46**	**338**	P	**Pn**	**22 16 24.5**	**+0.3**
	baz=156						
IVE	**Iliamna Volcan**	**4.48**	**336**		**Pn**	**22 16 24.6**	**0.0**
SLKM	**Skilak Lake**	**4.55**	**354**		**Pn**	**22 16 25.5**	**0.0**
P18K	**Big Mountain,**	**4.65**	**320**		**Pn**	**22 16 27.0**	**+0.2**
P18K	**Big Mountain,**	**4.65**	**320**	P	**Pn**	**22 16 26.3**	**-0.5**
	baz=135						
HIN	**Hinchinbrook I**	**4.66**	**18**	Pn	**Pn**	**22 16 27.8**	**+0.7**
KAIM	**Kayak Island**	**4.73**	**32**	Pn	**Pn**	**22 16 28.9**	**+1.0**
KAIM				IAML		22 17 25.5	
	comp=E,1μm,0.8s						
KAIM				IAML		22 17 26.3	
	comp=N,1μm,0.6s						
KAIM	**Kayak Island**	**4.73**	**32**	P	**Pn**	**22 16 28.8**	**+0.8**
	baz=216						
Q16K	**King Salmon**	**4.79**	**307**		**Pn**	**22 16 28.7**	**0.0**
Q16K	**King Salmon**	**4.79**	**307**	P	**Pn**	**22 16 28.7**	**0.0**
	baz=121						
RDSO	**Redoubt South**	**4.82**	**340**		**Pn**	**22 16 28.7**	**-0.6**
RSO	**Redoubt South**	**4.83**	**339**		**Pn**	**22 16 29.1**	**-0.4**
RDWB	**Redoubt West**	**4.87**	**339**		**Pn**	**22 16 29.4**	**-0.6**
CAPN	**Captain Cook N**	**4.88**	**349**		**Pn**	**22 16 30.9**	**+1.0**
CAPN	**Captain Cook N**	**4.88**	**349**	P	**Pn**	**22 16 30.8**	**+0.8**
	baz=168						
EYAK	**Cordova Ski Ar**	**4.95**	**21**		**Pn**	**22 16 32.0**	**+1.2**
EYAK	**Cordova Ski Ar**	**4.95**	**21**	P	**Pn**	**22 16 32.4**	**+1.6**
EYAK	**Cordova Ski Ar**	**4.95**	**21**	P	**Pn**	**22 16 32.1**	**+1.2**
	baz=204						
NCT	**North Crescent**	**4.96**	**339**		**Pn**	**22 16 30.6**	**-0.5**
O19K	**Port Alsworth**	**4.97**	**330**	Pn	**Pn**	**22 16 31.2**	**0.0**
O19K	**Port Alsworth**	**4.97**	**330**	P	**Pn**	**22 16 31.2**	**0.0**
	baz=146						
O18K	**Koktuh Hills**	**4.97**	**323**	Pn	**Pn**	**22 16 31.7**	**+0.4**
O18K	**Koktuh Hills**	**4.97**	**323**	P	**Pn**	**22 16 31.5**	**+0.2**
	baz=139						
P17K	**Kvichak River**	**4.99**	**313**		**Pn**	**22 16 32.6**	**+1.2**
P17K	**Kvichak River**	**4.99**	**313**	P	**Pn**	**22 16 32.6**	**+1.2**
	baz=127						
SUCK	**Suckling Hills**	**5.04**	**34**		**Pn**	**22 16 33.5**	**+1.3**
SUCK				IAML		22 17 31.4	
	comp=E,590nm,0.4s						
RAGM	**Ragged Mountai**	**5.05**	**27**		**Pn**	**22 16 34.4**	**+2.0**
CHGN	**Chignik**	**5.08**	**277**	Pn	**Pn**	**22 16 32.5**	**-0.3**
CHGN				IAML		22 17 31.4	
	comp=E,279nm,0.2s						
CHGN				IAML		22 17 32.0	
	comp=N,308nm,0.4s						
RC01	**Rabbit Creek A**	**5.12**	**358**	Pn	**Pn**	**22 16 33.5**	**+0.3**
RC01				IAML		22 17 34.0	
	comp=E,540nm,0.5s						
RC01				IAML		22 17 37.6	
	comp=N,337nm,0.4s						
RC01	**Rabbit Creek A**	**5.12**	**358**	P	**Pn**	**22 16 33.5**	**+0.3**
	baz=178						
HMT	**Hamilton**	**5.12**	**30**		**Pn**	**22 16 35.0**	**+1.7**
FIS	**Fire Island**	**5.19**	**355**		**Pn**	**22 16 34.6**	**+0.5**
FIS				IAML		22 17 41.3	
	comp=N,821nm,0.5s						
GOAT	**Goat Mountain**	**5.20**	**26**		**Pn**	**22 16 36.0**	**+1.5**
GRIN	**Grindle Hills**	**5.35**	**34**		**Pn**	**22 16 37.9**	**+1.5**
SNH	**Sunshine Point**	**5.43**	**37**		**Pn**	**22 16 38.9**	**+1.3**
N20K	**Mount Spurr**	**5.43**	**345**	P	**Pn**	**22 16 37.1**	**-0.6**
	baz=163						
SPCR	**Spurr Chakacha**	**5.43**	**345**		**Pn**	**22 16 37.1**	**-0.6**
SPCN	**Chakachatna No**	**5.45**	**345**		**Pn**	**22 16 37.9**	**0.0**
KNK	**Knik Glacier**	**5.46**	**4**		**Pn**	**22 16 38.5**	**+0.6**
KNK	**Knik Glacier**	**5.46**	**4**	P	**Pn**	**22 16 38.4**	**+0.6**
	baz=185						
DIV	**Divide**	**5.48**	**18**		**Pn**	**22 16 39.1**	**+0.9**
SPCP	**Crater Peak Br**	**5.49**	**346**		**Pn**	**22 16 38.4**	**0.0**
SPCG	**Spurr Capps Gl**	**5.50**	**346**		**Pn**	**22 16 38.7**	**+0.2**
SUA	**Susitna One**	**5.54**	**353**	Pn	**Pn**	**22 16 38.8**	**-0.3**
SUA	**Susitna One**	**5.54**	**353**	P	**Pn**	**22 16 39.0**	**0.0**
	baz=172						
N19K	**Bonanza Creek**	**5.54**	**333**		**Pn**	**22 16 38.9**	**-0.2**
N19K	**Bonanza Creek**	**5.54**	**333**	P	**Pn**	**22 16 38.9**	**-0.2**
	baz=149						
P16K	**Nushagak River**	**5.57**	**307**		**Pn**	**22 16 40.5**	**+1.1**
P16K	**Nushagak River**	**5.57**	**307**	P	**Pn**	**22 16 40.5**	**+1.1**
	baz=120						
BMRM	**Bremner River**	**5.57**	**25**		**Pn**	**22 16 40.7**	**+1.2**
BMRM	**Bremner River**	**5.57**	**25**	P	**Pn**	**22 16 40.8**	**+1.3**
	baz=208						
O17K	**Koliganek Bris**	**5.61**	**316**		**Pn**	**22 16 40.6**	**+0.7**
O17K	**Koliganek Bris**	**5.61**	**316**	P	**Pn**	**22 16 40.6**	**+0.7**
	baz=129						
PMR	**Palmer**	**5.62**	**1**	Pn	**Pn**	**22 16 40.5**	**+0.4**
PMR	**Palmer**	**5.62**	**1**	P	**Pn**	**22 16 41.9**	**+1.9**
PMR	**Palmer**	**5.62**	**1**	P	**Pn**	**22 16 40.8**	**+0.8**
	baz=181						
WAX	**Waxell Ridge**	**5.63**	**35**		**Pn**	**22 16 41.4**	**+1.1**
SPNN	**North Nagishla**	**5.67**	**343**		**Pn**	**22 16 41.0**	**+0.1**
STLK	**Strandline Lak**	**5.67**	**348**		**Pn**	**22 16 41.0**	**+0.1**
S14K	**Fog Glacier**	**5.72**	**277**	P	**Pn**	**22 16 42.8**	**+1.2**
	baz=89						
VNFG	**Fog Glacier, M**	**5.72**	**277**		**Pn**	**22 16 42.4**	**+0.8**
MESA	**MESA**	**5.74**	**40**		**Pn**	**22 16 43.2**	**+1.2**
MESA	**MESA**	**5.74**	**40**	P	**Pn**	**22 16 43.2**	**+1.2**
	baz=226						
CRQM	**Cirque**	**5.78**	**32**		**Pn**	**22 16 43.7**	**+1.2**
M22K	**Willow**	**5.79**	**356**	Pn	**Pn**	**22 16 43.0**	**+0.6**
CRQE	**Cirque**	**5.79**	**32**	P	**Pn**	**22 16 43.8**	**+1.2**
	baz=217						
KLU	**Klutina**	**5.79**	**16**		**Pn**	**22 16 43.8**	**+1.2**
KLU	**Klutina**	**5.79**	**16**	P	**Pn**	**22 16 43.8**	**+1.2**
	baz=199						
GHO	**Glory Hole Cre**	**5.80**	**2**		**Pn**	**22 16 43.9**	**+1.2**
N18K	**Kilae Creek**	**5.83**	**326**		**Pn**	**22 16 43.1**	**+0.1**
N18K	**Kilae Creek**	**5.83**	**326**	P	**Pn**	**22 16 43.1**	**+0.1**
	baz=141						
SML	**Sawmill**	**5.86**	**5**		**Pn**	**22 16 44.3**	**+0.9**
SML	**Sawmill**	**5.86**	**5**	P	**Pn**	**22 16 44.4**	**+1.1**
	baz=186						
TGL	**Tana Glacier**	**5.88**	**33**		**Pn**	**22 16 45.0**	**+1.3**
M23K	**Glacier View**	**5.88**	**8**		**Pn**	**22 16 45.0**	**+1.4**
M23K	**Glacier View**	**5.88**	**8**	P	**Pn**	**22 16 45.0**	**+1.4**
	baz=189						
O16K	**Kokwok River B**	**5.91**	**311**		**Pn**	**22 16 45.1**	**+1.1**
O16K	**Kokwok River B**	**5.91**	**311**	P	**Pn**	**22 16 44.9**	**+0.8**
	baz=124						
ISLE	**Juniper Island**	**5.91**	**36**		**Pn**	**22 16 45.4**	**+1.2**
BAGL	**Bagley Icefiel**	**5.91**	**37**		**Pn**	**22 16 45.5**	**+1.4**
SCM	**Sheep Creek Mo**	**5.95**	**9**		**Pn**	**22 16 46.0**	**+1.3**
SCM	**Sheep Creek Mo**	**5.95**	**9**	P	**Pn**	**22 16 45.8**	**+1.1**
	baz=191						
CHNA	**Chernabura Isl**	**5.95**	**263**	P	**Pn**	**22 16 44.2**	**-0.5**
	baz=75						
CNBA	**Chernabura Isl**	**5.96**	**263**		**Pn**	**22 16 44.2**	**-0.6**
SVW2	**Sparrevohn**	**6.07**	**330**	Pn	**Pn**	**22 16 45.8**	**-0.5**
SVW2	**Sparrevohn**	**6.07**	**330**	P	**Pn**	**22 16 46.5**	**+0.2**
VRDI	**Verde Repeater**	**6.08**	**28**	Pn	**Pn**	**22 16 47.8**	**+1.1**
SKT	**Skwentna**	**6.11**	**350**	Pn	**Pn**	**22 16 47.1**	**+0.2**
SKT	**Skwentna**	**6.11**	**350**	P	**Pn**	**22 16 47.3**	**+0.5**
	baz=168						
N25K	**Chitina, Valde**	**6.14**	**22**		**Pn**	**22 16 49.0**	**+1.6**
N25K	**Chitina, Valde**	**6.14**	**22**	P	**Pn**	**22 16 48.8**	**+1.4**
	baz=206						
N17K	**Nushagak Hills**	**6.15**	**321**		**Pn**	**22 16 47.5**	**+0.2**
N17K	**Nushagak Hills**	**6.15**	**321**	P	**Pn**	**22 16 48.0**	**+0.6**
	baz=134						
SAMH	**Samovar Hills**	**6.15**	**44**		**Pn**	**22 16 49.5**	**+2.1**
GLB	**Gilahina Butte**	**6.17**	**26**		**Pn**	**22 16 49.3**	**+1.5**
TABL	**Table Mountain**	**6.21**	**41**		**Pn**	**22 16 49.9**	**+1.5**
M20K	**Styx River**	**6.22**	**343**		**Pn**	**22 16 48.5**	**0.0**
M20K	**Styx River**	**6.22**	**343**	P	**Pn**	**22 16 48.2**	**-0.3**
	baz=160						
PTPK	**Patty Peak**	**6.33**	**32**		**Pn**	**22 16 51.5**	**+1.6**
MCARA	**McCarthy VSAT**	**6.33**	**29**	Pn	**Pn**	**22 16 51.8**	**+1.9**
MCARA	**McCarthy VSAT**	**6.33**	**29**	P	**Pn**	**22 16 51.6**	**+1.7**
	baz=214						
SDPT	**Sand Point**	**6.33**	**269**	Pn	**Pn**	**22 16 50.0**	**+0.1**
SDPT	**Sand Point**	**6.33**	**269**	P	**Pn**	**22 16 50.5**	**+0.6**
SDPT	**Sand Point**	**6.33**	**269**	P	**Pn**	**22 16 50.3**	**+0.3**
	baz=80						
PCA	**Pinnacle**	**6.34**	**46**		**Pn**	**22 16 51.3**	**+1.3**
PINM	**Pinnacle**	**6.34**	**46**	P	**Pn**	**22 16 51.8**	**+1.8**
	baz=233						
M24K	**Tolsona, Glenn**	**6.34**	**14**	Pn	**Pn**	**22 16 51.5**	**+1.4**
M24K	**Tolsona, Glenn**	**6.34**	**14**	P	**Pn**	**22 16 51.8**	**+1.7**
	baz=196						
CUT	**Chulitna**	**6.45**	**356**	Pn	**Pn**	**22 16 52.4**	**+1.0**
M18K	**Stony River**	**6.46**	**331**		**Pn**	**22 16 51.3**	**-0.3**
M18K	**Stony River**	**6.46**	**331**	P	**Pn**	**22 16 51.3**	**-0.3**
	baz=146						
PNL	**Peninsula**	**6.46**	**51**		**Pn**	**22 16 52.9**	**+1.2**
PNL	**Peninsula**	**6.46**	**51**	P	**Pn**	**22 16 53.3**	**+1.6**
PNL	**Peninsula**	**6.46**	**51**	P	**Pn**	**22 16 52.9**	**+1.2**
	baz=239						
BARN	**Barnard Glacie**	**6.48**	**35**		**Pn**	**22 16 53.3**	**+1.3**
M19K	**Big River Lodg**	**6.48**	**338**		**Pn**	**22 16 52.0**	**+0.2**
M19K	**Big River Lodg**	**6.48**	**338**	P	**Pn**	**22 16 51.7**	**-0.2**
	baz=154						
O15K	**Ungalikthiuk R**	**6.48**	**304**		**Pn**	**22 16 53.0**	**+1.1**
O15K	**Ungalikthiuk R**	**6.48**	**304**	P	**Pn**	**22 16 53.0**	**+1.1**
	baz=115						
BCPM	**Bancas Point**	**6.51**	**48**		**Pn**	**22 16 53.8**	**+1.4**
CTG	**Chitna Glacier**	**6.51**	**37**	P	**Pn**	**22 16 53.8**	**+1.3**
	baz=224						
CTGM	**Chitina Glacie**	**6.51**	**37**	Pn	**Pn**	**22 16 53.7**	**+1.1**
WASW	**Wrangell South**	**6.52**	**22**		**Pn**	**22 16 54.3**	**+1.6**
LOGN	**Logan Glacier**	**6.53**	**39**		**Pn**	**22 16 54.0**	**+1.3**
WACK	**Wrangell Chich**	**6.54**	**21**		**Pn**	**22 16 55.0**	**+2.0**
WAT6	**Susitna Watana**	**6.66**	**6**	P	**Pn**	**22 16 55.5**	**+1.0**
	baz=188						
WAZA	**Wrangell Mount**	**6.66**	**22**		**Pn**	**22 16 56.4**	**+1.8**
N16K	**Nishlik Lake**	**6.70**	**316**		**Pn**	**22 16 55.9**	**+0.9**
N16K	**Nishlik Lake**	**6.70**	**316**	P	**Pn**	**22 16 55.9**	**+0.9**
	baz=128						
HARP	**HAARP**	**6.77**	**17**		**Pn**	**22 16 57.9**	**+2.0**
HARP	**HAARP**	**6.77**	**17**	P	**Pn**	**22 16 57.9**	**+2.0**
	baz=200						
L19K	**White Mountain**	**6.82**	**338**		**Pn**	**22 16 56.4**	**-0.3**
L19K	**White Mountain**	**6.82**	**338**	P	**Pn**	**22 16 56.3**	**-0.3**
	baz=153						
M17K	**Holitna River**	**6.87**	**325**		**Pn**	**22 16 57.6**	**+0.4**
M17K	**Holitna River**	**6.87**	**325**	P	**Pn**	**22 16 57.6**	**+0.4**
	baz=139						
WAT7	**Susitna Watana**	**6.87**	**2**		**Pn**	**22 16 58.3**	**+1.0**
WAT1	**Susitna Watana**	**6.87**	**3**		**Pn**	**22 16 58.5**	**+1.2**
WAT1	**Susitna Watana**	**6.87**	**3**	P	**Pn**	**22 16 58.4**	**+1.2**
	baz=184						
L20K	**Farewell, AK**	**6.91**	**342**		**Pn**	**22 16 57.2**	**-0.6**
L20K	**Farewell, AK**	**6.91**	**342**	P	**Pn**	**22 16 57.2**	**-0.6**
	baz=158						
N15K	**Kwethluk River**	**7.07**	**311**		**Pn**	**22 17 01.5**	**+1.5**
PVV	**Pavlof Volcano**	**7.07**	**270**		**Pn**	**22 17 00.2**	**+0.2**
M16K	**Timber Creek**	**7.12**	**319**		**Pn**	**22 17 01.5**	**+0.8**
M16K	**Timber Creek**	**7.12**	**319**	P	**Pn**	**22 17 01.5**	**+0.8**
	baz=131						
O29M	**Mount Kennedy**	**7.14**	**48**		**Pn**	**22 17 03.1**	**+1.9**
O29M	**Mount Kennedy**	**7.14**	**48**	P	**Pn**	**22 17 02.9**	**+1.8**
	baz=237						
DHY	**Denali Highway**	**7.17**	**7**		**Pn**	**22 17 02.9**	**+1.3**
DHY	**Denali Highway**	**7.17**	**7**	P	**Pn**	**22 17 02.9**	**+1.3**
	baz=189						
O14K	**Tigyukauivet M**	**7.19**	**302**	Pn	**Pn**	**22 17 02.5**	**+0.9**
O14K	**Tigyukauivet M**	**7.19**	**302**	P	**Pn**	**22 17 02.8**	**+1.2**
	baz=112						
P29M	**Windy Craggy**	**7.19**	**55**		**Pn**	**22 17 02.8**	**+1.2**
P29M	**Windy Craggy**	**7.19**	**55**	P	**Pn**	**22 17 02.9**	**+1.3**
	baz=244						
M26K	**Nabesna, AK**	**7.20**	**24**		**Pn**	**22 17 04.0**	**+2.1**
M26K	**Nabesna, AK**	**7.20**	**24**	P	**Pn**	**22 17 03.6**	**+1.8**
	baz=210						
PAX	**Paxson**	**7.27**	**14**		**Pn**	**22 17 04.5**	**+1.7**
PAX	**Paxson**	**7.27**	**14**	P	**Pn**	**22 17 04.4**	**+1.6**
	baz=198						
L18K	**Granite Mounta**	**7.30**	**332**	Pn	**Pn**	**22 17 02.6**	**-0.5**
L18K	**Granite Mounta**	**7.30**	**332**	P	**Pn**	**22 17 02.6**	**-0.5**
	baz=146						
S31K	**Pelican**	**7.43**	**69**		**Pn**	**22 17 03.7**	**-1.2**
M27K	**Edge Creek, AK**	**7.44**	**28**		**Pn**	**22 17 07.2**	**+2.0**
M27K	**Edge Creek, AK**	**7.44**	**28**	P	**Pn**	**22 17 06.8**	**+1.6**
	baz=214						
RND	**Reindeer**	**7.44**	**2**	Pn	**Pn**	**22 17 06.6**	**+1.5**
TRF	**Thorofare Moun**	**7.50**	**357**		**Pn**	**22 17 06.7**	**+0.7**
TRF	**Thorofare Moun**	**7.50**	**357**	P	**Pn**	**22 17 06.7**	**+0.7**
	baz=176						
MENT	**Mentasta**	**7.53**	**20**	P	**Pn**	**22 17 08.6**	**+2.3**
CAST	**Castle Rocks**	**7.58**	**351**		**Pn**	**22 17 07.4**	**+0.4**
CAST	**Castle Rocks**	**7.58**	**351**	P	**Pn**	**22 17 07.7**	**+0.7**
	baz=168						
KTH	**Kantishna Hill**	**7.63**	**355**		**Pn**	**22 17 08.2**	**+0.5**
L17K	**Donlin**	**7.69**	**327**		**Pn**	**22 17 08.9**	**+0.5**
L17K	**Donlin**	**7.69**	**327**	P	**Pn**	**22 17 09.0**	**+0.5**
	baz=139						
TTA	**Tatalina**	**7.74**	**337**	Pn	**Pn**	**22 17 08.9**	**-0.3**
TTA	**Tatalina**	**7.74**	**337**	P	**Pn**	**22 17 10.3**	**+1.1**
P30M	**Million Dollar**	**7.76**	**53**		**Pn**	**22 17 11.3**	**+1.9**
P30M	**Million Dollar**	**7.76**	**53**	P	**Pn**	**22 17 11.4**	**+1.9**
	baz=243						
K20K	**Telida**	**7.76**	**344**		**Pn**	**22 17 09.2**	**-0.3**
PLBC	**Pleasant Camp**	**7.76**	**58**	P	**Pn**	**22 17 11.2**	**+1.7**
	baz=249						
MCK	**McKinley**	**7.77**	**1**		**Pn**	**22 17 11.0**	**+1.4**
MCK	**McKinley**	**7.77**	**1**	P	**Pn**	**22 17 11.5**	**+2.0**
	baz=182						
L16K	**Owhat River**	**7.77**	**322**	Pn	**Pn**	**22 17 10.2**	**+0.6**
L16K	**Owhat River**	**7.77**	**322**	P	**Pn**	**22 17 10.1**	**+0.6**
	baz=133						
SIT	**Sitka**	**7.83**	**76**	Pn	**Pn**	**22 17 08.5**	**-1.8**
SIT	**Sitka**	**7.83**	**76**	P	**Pn**	**22 17 09.1**	**-1.2**
HYT	**Haines Junctio**	**7.87**	**47**	Pn	**Pn**	**22 17 13.0**	**+1.9**
HYT	**Haines Junctio**	**7.87**	**47**	P	**Pn**	**22 17 13.0**	**+1.9**
	baz=237						
L27K	**Beaver Creek,**	**8.05**	**25**		**Pn**	**22 17 15.2**	**+1.8**
BCAR	**Beaver Creek A**	**8.06**	**25**	Pn	**Pn**	**22 17 15.0**	**+1.4**
RIDG	**Independent Ri**	**8.09**	**14**		**Pn**	**22 17 16.2**	**+2.2**
K17K	**Iditarod**	**8.14**	**330**		**Pn**	**22 17 14.6**	**0.0**
K17K	**Iditarod**	**8.14**	**330**	P	**Pn**	**22 17 14.7**	**0.0**
	baz=142						
M14K	**Bethel**	**8.16**	**311**	Pn	**Pn**	**22 17 16.1**	**+1.2**
BPAW	**Bear Paw Mtn.**	**8.17**	**355**		**Pn**	**22 17 15.1**	**0.0**
BPAW	**Bear Paw Mtn.**	**8.17**	**355**	P	**Pn**	**22 17 15.0**	**-0.1**
	baz=174						
S32K	**Killisnoo**	**8.25**	**74**	Pn	**Pn**	**22 17 15.9**	**-0.3**
SKAG	**Skagway**	**8.26**	**59**		**Pn**	**22 17 17.0**	**+0.7**
SKAG	**Skagway**	**8.26**	**59**	P	**Pn**	**22 17 18.5**	**+2.2**
SKAG	**Skagway**	**8.26**	**59**	P	**Pn**	**22 17 17.6**	**+1.3**
	baz=251						
BESE	**Bessie Mountai**	**8.26**	**66**		**Pn**	**22 17 17.2**	**+0.8**
ISLZ	**Isanotski Laza**	**8.29**	**267**

DLBC	**Dease Lake**	**10.75**	**69**	Pn		**Pn**	**22 17 51.6**	**+1.1**
	comp=N,2.1nm,0.3s,baz=246,slow=11,SNR=17							
DLBC				Sn		**Sn**	**22 19 48.1**	**-1.7**
	comp=N,0.8nm,0.3s,baz=141,slow=23,SNR=1.9							
	comp=N,28nm,1.0s							
G23K	**Bananza Creek**	**10.76**	**359**			**Pn**	**22 17 50.8**	**+0.3**
MMPY	**Sheldon Lake,**	**11.35**	**47**			**Pn**	**22 18 00.6**	**+2.0**
G16K	**Koyuk River**	**11.35**	**331**	Pn		**Pn**	**22 17 58.2**	**-0.4**
F21K	**Alatna River**	**11.44**	**352**			**Pn**	**22 17 59.9**	**+0.2**
F20K	**Avaraart Lake**	**11.49**	**347**			**Pn**	**22 18 01.8**	**+1.2**
H29M	**Whitestone**	**11.52**	**23**			**Pn**	**22 18 02.0**	**+1.1**
F19K	**Shaleruckik Mo**	**11.59**	**343**	Pn		**Pn**	**22 18 00.7**	**-1.0**
F24K	**Squaw Lake**	**11.59**	**3**			**Pn**	**22 18 03.0**	**+1.1**
BMAR	**Burnt Mountain**	**11.69**	**9**	Pn		**Pn**	**22 18 03.9**	**+0.6**
E19K	**Redstone River**	**12.08**	**345**			**Pn**	**22 18 09.7**	**+1.2**
E25K	**Arctic Village**	**12.29**	**7**			**Pn**	**22 18 13.4**	**+1.9**
E18K	**Tukpahlearik C**	**12.62**	**340**	Pn		**Pn**	**22 18 16.7**	**+0.9**
G30M	**tAoh Zrail Nji**	**12.64**	**24**			**Pn**	**22 18 18.4**	**+2.2**
TOLK	**Toolik Lake Re**	**12.70**	**360**			**Pn**	**22 18 18.9**	**+1.9**
D19K	**Kuna River**	**13.17**	**346**	Pn		**Pn**	**22 18 24.0**	**+0.5**
E29M	**Blow River**	**13.50**	**18**			**Pn**	**22 18 30.0**	**+2.1**
D27M	**Malcolm River**	**13.82**	**13**			**Pn**	**22 18 34.2**	**+1.8**
B21K	**Ikpikpuk River**	**13.88**	**352**			**Pn**	**22 18 32.6**	**-0.4**
C23K	**Itkillik River**	**13.91**	**358**			**Pn**	**22 18 33.9**	**+0.5**
INK	**Inuvik**	**14.32**	**24**	Pn		**Pn**	**22 18 40.3**	**+1.2**
INK	**Inuvik**	**14.32**	**24**	Pn		**Pn**	**22 18 39.9**	**+0.8**
	comp=N,0.3nm,0.3s,baz=202,slow=13,SNR=27							
INK				LR		LR	22 24 14.4	
	comp=N,176nm,19.8s,baz=139,slow=38							
	comp=N,8.7nm,0.9s							
ADK	**Adak**	**16.56**	**267**	P		**Pn**	**22 19 08.2**	**-0.3**
C36M	**Paulatuk**	**17.51**	**30**			**Pn**	**22 19 20.2**	**0.0**
C36M				IAmb		IAmb	22 19 23.3	
	comp=Z,24nm,0.8s							
YKA	**Yellowknife Ar**	**18.73**	**55**	P		**P**	**22 19 35.5**	**+0.7**
YKA	**Yellowknife Ar**	**18.73**	**55**	P		**P**	**22 19 35.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=263,slow=11,SNR=79							
YKA				LR		LR	22 26 39.5	
	comp=Z,176nm,18.0s,baz=298,slow=36							
	comp=Z,8.1nm,0.8s							
NVAR	**Mina Array Bea**	**27.11**	**117**	P		**P**	**22 20 59.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=306,slow=8.8,SNR=3.4							
	comp=Z,0.4nm,0.5s							
RES	**Resolute Bay**	**27.83**	**28**	LR		LR	22 31 24.9	
	comp=Z,72nm,19.2s,baz=46,slow=35							
FRB	**Frobisher Bay**	**38.66**	**45**	LR		LR	22 38 40.8	
	comp=Z,124nm,19.0s,baz=324,slow=36							
SFJD	**Kangerlussuaq**	**43.35**	**34**	LR		LR	22 41 02.3	
	comp=Z,89nm,18.5s,baz=345,slow=36							
SCHQ	**Schefferville**	**44.18**	**55**	LR		LR	22 41 51.3	
	comp=Z,108nm,18.7s,baz=146,slow=36							
SADO	**Sadowa**	**44.26**	**74**	LR		LR	22 41 30.7	
	comp=Z,59nm,18.5s,baz=75,slow=36							
H11N2	**WAKE ISLAND Hy**	**48.71**	**240**	T		T	23 16 22.8	
	baz=31,slow=76,SNR=22							
H11N3	**WAKE ISLAND Hy**	**48.72**	**240**	T		T	23 16 32.5	
	baz=31,slow=76,SNR=19							
H11N1	**WAKE ISLAND Hy**	**48.73**	**240**	T		T	23 16 26.8	
	baz=31,slow=76,SNR=16							
H11S1	**WAKE ISLAND Hy**	**49.85**	**240**	T		T	23 18 11.4	
	baz=30,slow=76,SNR=8.6							
H11S2	**WAKE ISLAND Hy**	**49.86**	**239**	T		T	23 18 08.9	
	baz=30,slow=76,SNR=10							
H11S3	**WAKE ISLAND Hy**	**49.87**	**240**	T		T	23 17 52.1	
	baz=30,slow=76,SNR=7.5							
ARCES	**ARCESS Array B**	**54.72**	**2**	P		**P**	**22 24 44.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=355,slow=6.9,SNR=15							
	comp=Z,0.7nm,0.3s							
SONM	**Songino Array**	**58.80**	**310**	P		**P**	**22 25 14.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=43,slow=7.0,SNR=7.2							
	comp=Z,0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**61.79**	**327**	P		**P**	**22 25 35.0**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=35,slow=5.3,SNR=3.7							
	comp=Z,0.7nm,0.4s							
HHC	**Hu-ho-hao-te**	**61.86**	**302**	*e*P		**P**	**22 25 35.8**	**+0.6**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,71nm,5.0s							
NOA	**NORSAR Array B**	**62.30**	**11**	P		**P**	**22 25 37.9**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=335,slow=3.7,SNR=2.0							
	comp=Z,1.1nm,0.6s							
FINES	**FINESS Array B**	**62.85**	**2**	P		**P**	**22 25 41.5**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=3.2,slow=9.2,SNR=14							
	comp=Z,2.1nm,0.6s							
EKA	**Eskdalemuir Ar**	**65.66**	**20**	P		**P**	**22 25 59.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=330,slow=4.8,SNR=4.5							
	comp=Z,0.7nm,0.6s							
KURK	**Kurchatov**	**66.46**	**329**	P		**P**	**22 26 04.9**	**-0.1**
KURK				IAmb		IAmb	22 26 21.7	
	comp=Z,3.1nm,1.1s							
BVAR	**Borovoye Array**	**66.53**	**335**	P		**P**	**22 26 05.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=38,slow=7.5,SNR=4.0							
	comp=Z,0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**66.57**	**329**	LR		LR	22 57 30.8	
	comp=Z,36nm,20.7s,baz=184,slow=38							
MK31	**Makanchi Array**	**68.81**	**325**	P		**P**	**22 26 20.0**	**0.0**
MK31				IAmb		IAmb	22 26 35.2	
	comp=Z,2.3nm,1.1s							
MKAR	**Makanchi Array**	**68.81**	**325**	P		**P**	**22 26 19.7**	**-0.3**
MKAR	**Makanchi Array**	**68.81**	**325**	P		**P**	**22 26 20.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=18,slow=5.3,SNR=5.9							
	comp=Z,0.2nm,0.4s							
WMQ	**Urumqi**	**69.54**	**320**	*e*P		**P**	**22 26 22.8**	**-1.8**
WMQ				PcP		**PcP**	**22 26 47.6**	**-0.1**
WMQ				PP		**PP**	**22 28 59.8**	**+1.9**
WMQ				pmax		pmax		
	comp=Z,11nm,0.9s							
BELG	**Belogornoye**	**71.07**	**349**	LR		LR	23 00 41.7	
	comp=Z,21nm,19.6s,baz=150,slow=38							
AKASG	**Malin Array Be**	**73.67**	**1**	P		**P**	**22 26 49.2**	**0.0**
	comp=Z,1.0nm,0.5s,baz=358,slow=5.6,SNR=5.1							
	comp=Z,1.0nm,0.5s							
GERES	**GERESS Array B**	**74.57**	**12**	P		**P**	**22 26 54.7**	**0.0**
	comp=Z,0.8nm,0.6s,baz=350,slow=5.7,SNR=6.0							
	comp=Z,0.8nm,0.6s							
CONA	**Conrad Observa**	**75.71**	**10**	*i* P		**P**	**22 27 02.1**	**+0.9**
	comp=Z,1.0nm,0.6s							
WATA	**Walderalm**	**75.80**	**13**	*e*P		**P**	**22 27 02.5**	**+0.6**
	comp=Z,1.2nm,0.3s							
SQTA	**Sankt Quirin**	**75.87**	**14**	*e*pP		**P**	**22 27 03.5**	**+1.3**
	comp=Z,0.8nm,0.4s							
WTTA	**Wattenberg**	**75.88**	**13**	*i* P		**P**	**22 27 03.2**	**+0.9**
	comp=Z,1.1nm,0.4s							
FETA	**Feichten**	**76.00**	**14**	*e*P		**P**	**22 27 03.9**	**+0.8**
	comp=Z,1.1nm,0.6s							
KBA	**Koelnbreinsper**	**76.27**	**12**	*i* pP		**P**	**22 27 05.5**	**+1.0**
	comp=Z,3.2nm,0.6s							
SOKA	**Soboth**	**76.86**	**11**	*e*P		**P**	**22 27 08.4**	**+0.6**
	comp=Z,1.0nm,0.4s							
OBKA	**Obir**	**76.97**	**11**	*i* P		**P**	**22 27 09.1**	**+0.6**
	comp=Z,2.3nm,0.4s							
HNR	**Honiara**	**77.50**	**231**	LR		LR	22 54 42.0	
	comp=Z,440nm,21.8s,baz=338,slow=31							
PZH	**PanZhiHua**	**78.23**	**300**	P		**P**	**22 27 16.4**	**+0.6**
PZH				pmax		pmax		
	comp=Z,7.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,120nm,4.8s							
ESDC	**Sonseca Array**	**80.26**	**26**	P		**P**	**22 27 27.2**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=335,slow=6.3,SNR=7.2							
	comp=Z,1.6nm,0.8s							
CMAR	**Chiang Mai Ar**	**86.39**	**298**	P		**P**	**22 27 58.1**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=9.9,slow=5.0,SNR=13							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**145.78**	**180**	PKPbc		**PKPdf**	**22 34 52.8**	**-0.3**
	comp=Z,4.6nm,0.6s,baz=289,slow=0.9,SNR=10							

SOME ***13*** *22:46:45.8, 39˚.13N×73˚.60E, h15km*
IDC ***13*** *22:46:47.3±6.2, 38˚.66N×75˚.55E, h0km, mb2.8/1, mbtmp3.1/6, ML2.7/4, Error ellipse: s-maj=83.7km s-min=32.1km az=43.0*

ISC 13 22:46:43.2±1.9, 38˚.6N±0˚.1×74˚.5E±0˚.1, h10km, n12, σ2 23/19, 2C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.05**	**360**	Pn	**Pb**	**22 47 53.8**	**-1.0**
	0.4nm,0.3s,baz=167,slow=8.6,SNR=7.3						
AAK				Sn	**Sb**	**22 48 42.0**	**-1.9**
	0.8nm,0.3s,baz=328,slow=22,SNR=13						
	0.8nm,0.3s						
MRKS	**Merke**	**4.28**	**347**	*e*P	**Pn**	**22 47 52.6**	**+4.2**
	0.4nm,0.1s						
MRKS				*e*S	**Sn**	**22 48 40.3**	**+1.8**
	3.4nm,0.3s						
TKM2	**Tokmak 2**	**4.41**	**10**	⇑P	**Pb**	**22 47 58.8**	**-2.0**
	0.4nm,0.3s						
TKM2				⇑S	**Sb**	**22 48 52.3**	**-1.9**
	11nm,0.7s						
KST	**Kastek**	**4.59**	**13**	*e*P	**Pb**	**22 48 04.8**	**+1.0**
	1.6nm,0.4s						
KST				*e*S	**Sb**	**22 49 01.2**	**+2.0**
	24nm,0.6s						
DZA	**Taraz**	**4.95**	**332**	*e*P	**Pn**	**22 48 00.9**	**+3.3**
	7.9nm,0.1s						
DZA				*e*S	**Sn**	**22 48 55.0**	**+0.1**
	103nm,0.3s						
IUG	**Iuzhnay**	**4.95**	**317**	*e*P	**Pn**	**22 48 00.1**	**+2.3**
	18nm,0.2s						
IUG				*e*S	**Sn**	**22 48 53.5**	**-1.7**
	61nm,0.3s						
KK31	**Karatay Array**	**5.45**	**327**	⇓P	**Pn**	**22 48 07.2**	**+2.7**
	0.9nm,0.2s,baz=136,slow=13,SNR=49						
KK31				⇓S	**Sn**	**22 49 06.1**	**-1.3**
	14nm,0.6s,baz=148,slow=23,SNR=24						
MKAR	**Makanchi Array**	**9.99**	**32**	Pn	**Pn**	**22 49 07.0**	**+0.2**
	baz=218,slow=11,SNR=1.8						
	0.2nm,0.9s						
KURBB	**Kurchatov Arra**	**12.37**	**12**	Pn	**Pn**	**22 49 41.4**	**+2.2**
	0.1nm,0.2s,baz=184,slow=11,SNR=1.0						
BVAR	**Borovoye Array**	**14.73**	**350**	Pn	**P**	**22 50 15.1**	**-2.5**
	0.1nm,0.3s,baz=157,slow=7.8,SNR=25						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**16.91**	**21**	Pn	**P**	**22 50 40.3**	**-1.4**
	0.2nm,0.3s,baz=206,slow=10,SNR=6.1						
	0.8nm,0.5s						
SONM	**Songino Array**	**24.84**	**58**	P	**P**	**22 52 04.7**	**-1.1**
	0.2nm,0.6s,baz=257,slow=9.9,SNR=2.1						
	0.2nm,0.6s						

IDC ***13*** *22:55:59.0±4.5, 3˚.39S×140˚.39E, h0km, mb3.8/2, mbtmp4.0/3, ML4.1/1, MS3.2/4, Error ellipse: s-maj=164.6km s-min=31.9km az=89.0*
NEIC ***13*** *22:56:00.9±1.5, 3˚.5S±0˚.1×140˚.5E±0˚.1, h10km±1km, mb4.1/10, Error ellipse: s-maj=22.6km s-min=16.7km az=48.0*

ISC 13 22:56:05.0±0.9, 3˚.55S±0˚.09×140˚.3E±0˚.1, h39km, n22, σ0 92/20, mb3.6/3, MS3.2/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**8.08**	**274**	Pn	**Pn**	**22 58 00.7**	**+0.8**
COEN	**Coen**	**10.72**	**165**	Pn	**Pn**	**22 58 36.1**	**+0.1**
MTN	**Manton Dam**	**12.95**	**224**	Pn	**Pn**	**22 59 05.8**	**-0.8**
SOEI	**Soe**	**17.08**	**248**	Pn	**Pn**	**23 00 00.5**	**-0.7**
SOEI				IAmb	IAmb	23 00 22.8	
	comp=Z,31nm,1.0s						
WB0	**Warramunga Arr**	**17.12**	**199**		**Pn**	**23 00 00.4**	**-1.1**
WB0				IAmb	IAmb	23 00 06.4	
	comp=Z,8.7nm,0.9s						
WRA	**Warramunga Arr**	**17.30**	**199**	Pn	**Pn**	**23 00 02.3**	**-1.4**
WRA	**Warramunga Arr**	**17.30**	**199**	P	**Pn**	**23 00 04.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=18,slow=13,SNR=22						
WRA				S	**Sn**	**23 03 13.6**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=22,slow=22,SNR=2.3						
	comp=Z,6.3nm,0.8s						
CTA	**Charters Tower**	**17.43**	**161**	LR	LR	23 06 59.8	
	comp=Z,105nm,18.6s,baz=53,slow=38						
TOLI2	**Tolitoli**	**20.07**	**283**	P	**P**	**23 00 34.9**	**-0.4**
TOLI2				IAmb	IAmb	23 00 57.0	
	comp=Z,27nm,1.3s						
FITZ	**Fitzroy Crossi**	**20.39**	**224**	P	**P**	**23 00 40.2**	**+1.6**
AS31	**Alice Springs**	**20.93**	**197**		**P**	**23 00 44.9**	**+0.3**
AS31				IAmb	IAmb	23 00 49.6	
	comp=Z,4.2nm,0.8s						
ASAR	**Alice Springs**	**20.93**	**197**		**P**	**23 00 45.3**	**+0.7**
ASAR	**Alice Springs**	**20.93**	**197**	P	**P**	**23 00 45.5**	**+0.8**
	comp=Z,9.9nm,0.7s,baz=28,slow=9.3,SNR=77						
ASAR				LR	LR	23 08 45.9	
	comp=Z,101nm,19.5s,baz=24,slow=36						
	comp=Z,9.9nm,0.7s						
DZM	**Mont Dzumac**	**31.33**	**128**	LR	LR	23 14 43.3	
	comp=Z,49nm,18.4s,baz=247,slow=36						
KSRS	**Korea Array**	**42.40**	**345**	LR	LR	23 20 56.2	
	comp=Z,15nm,19.2s,baz=135,slow=35						
MK31	**Makanchi Array**	**71.43**	**322**	P	**P**	**23 07 20.9**	**-0.6**
MK31				IAmb	IAmb	23 07 38.1	
	comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**71.43**	**322**	P	**P**	**23 07 20.8**	**-0.7**
MKAR	**Makanchi Array**	**71.43**	**322**	P	**P**	**23 07 21.0**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=104,slow=7.6,SNR=3.9						
	comp=Z,0.2nm,0.7s						
VNDA	**Vanda**	**74.81**	**175**	P	**P**	**23 07 41.4**	**+0.5**
QSPA	**South Pole Qui**	**86.40**	**180**	P	**P**	**23 08 43.8**	**+0.6**
QSPA				IAmb	IAmb	23 09 08.6	
	comp=Z,5.0nm,1.4s						
M27K	**Edge Creek, AK**	**87.49**	**27**	P	**P**	**23 08 48.1**	**-0.5**
BMAR	**Burnt Mountain**	**87.58**	**22**	P	**P**	**23 08 48.4**	**-0.4**

NEIC ***13*** *23:01:30.8±1.1, 19˚.57N±0˚.03×156˚.03W±0˚.03, h50km±4km, Error ellipse: s-maj=6.3km s-min=1.0km az=220.0*

HVO 13 23:01:33.2±1.0, 19˚.59N±0˚.02×155˚.98W±0˚.04, h40km±4km, ML3.2/30, MLh3.4/54(NEIC), Error ellipse: s-maj=5.3km s-min=3.0km az=72.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKH	**Kailua Kona**	**0.07**	**332**		Pn	23 01 39.2	-0.5
KKH					Sn	23 01 43.8	-0.4
KHLU	**Kahalu`u**	**0.09**	**92**		Pn	23 01 39.2	-0.7
KHLU				Sn	Sn	23 01 43.5	-1.0
CPH	**Captain Cook**	**0.12**	**150**		Pn	23 01 39.2	-1.2
HUH	**Hualalai**	**0.17**	**57**		Pn	23 01 39.7	-1.2
HUH				IAML		23 01 47.8	
	comp=E,3μm,0.2s						
HUH				IAML		23 01 49.3	
	comp=N,3μm,0.3s						
ALEP	**Alea Permanent**	**0.32**	**99**		Pn	23 01 41.5	-0.6
ALEP					Sn	23 01 47.5	-0.9
MWH	**Moku'aweowe**	**0.38**	**107**		Pn	23 01 41.7	-1.2
MWH				Sn	Sn	23 01 48.1	-1.6
MWH				IAML		23 01 55.4	
	comp=E,2μm,0.4s						
MLOA	**Mauna Loa Obse**	**0.39**	**99**		Pn	23 01 42.0	-1.0
MLOA					Sn	23 01 48.3	-1.4
POHA	**Pohakuloa**	**0.46**	**69**	Pn	Pn	23 01 42.5	-1.1
POHA				Sn	Sn	23 01 49.3	-1.6
POHA				IAML		23 01 49.5	
	comp=E,1μm,0.2s						
POHA				IAML		23 01 49.9	
	comp=E,2μm,0.1s						
HMH	**Humu'ula Sheep**	**0.47**	**89**		Pn	23 01 43.2	-0.7
HMH					Sn	23 01 50.6	-0.8
HMH				IAML		23 01 51.3	
	comp=N,2μm,0.3s						
KHU	**Kahuku**	**0.49**	**135**		Pn	23 01 42.7	-1.4
KHU				Sn	Sn	23 01 49.7	-1.9
KHU				IAML		23 01 50.0	
	comp=N,3μm,0.3s						
HPAH	**Hawaii Prepara**	**0.51**	**32**		Pn	23 01 42.8	-1.4
HPAH				Sn	Sn	23 01 49.7	-2.2
HPAH				IAML		23 01 49.9	
	comp=E,2μm,0.3s						
HPAH				IAML		23 01 50.4	
	comp=N,1μm,0.3s						
MLH	**Mauna Loa**	**0.57**	**100**		Pn	23 01 43.9	-1.2
MLH					Sn	23 01 52.1	-1.5
MLH				IAML		23 01 52.4	
	comp=E,1μm,0.4s						
MHA	**Mahukona**	**0.59**	**7**		Pn	23 01 44.1	-1.1
MHA	**Mahukona**	**0.59**	**7**		Sn	23 01 52.2	-1.6
HPO	**Honuapo**	**0.65**	**141**		Pn	23 01 44.5	-1.4
HTC	**Hot Caves**	**0.66**	**123**		Pn	23 01 44.7	-1.4
WRMHI	**West Rim**	**0.67**	**106**		Pn	23 01 44.9	-1.5
WRMHI				IAML		23 02 00.5	
	comp=N,2μm,0.6s						
UWE	**Uwekahuna**	**0.67**	**105**		Pn	23 01 45.0	-1.5
UWE				Sn	Sn	23 01 53.9	-2.0
UWE				IAML		23 01 56.8	
	comp=N,2μm,0.9s						
RSD	**Rainshed**	**0.68**	**101**		Pn	23 01 45.1	-1.4
RSD				Sn	Sn	23 01 53.9	-2.1
RSD				IAML		23 01 54.7	
	comp=E,1μm,0.3s						
SDHHI	**Sand Hill**	**0.68**	**107**		Pn	23 01 45.0	-1.5
SDHHI				Sn	Sn	23 01 53.6	-2.5
OBL	**Observatory Le**	**0.68**	**105**		Pn	23 01 45.0	-1.6
UWB	**Uwekahuna B**	**0.69**	**104**		Pn	23 01 44.9	-1.7
SBLHI	**Steaming Bluff**	**0.69**	**104**		Pn	23 01 44.9	-1.8
SBLHI					Sn	23 01 53.8	-2.5
SBLHI				IAML		23 01 58.6	
	comp=E,1μm,0.5s						
SBLHI				IAML		23 01 60.0	
	comp=N,1μm,0.5s						
RIM	**Rim**	**0.70**	**106**		Pn	23 01 45.1	-1.7
RIM					Sn	23 01 54.3	-2.2
RIM				IAML		23 02 01.3	
	comp=N,2μm,0.6s						
RIM				IAML		23 02 01.9	
	comp=E,1μm,1.2s						
HATHI	**Halema'uma'u T**	**0.70**	**104**		Pn	23 01 45.1	-1.8
HATHI				IAML		23 02 04.5	
	comp=N,974nm,0.9s						
HATHI				IAML		23 02 14.7	
	comp=E,1μm,1.0s						
HLP	**Hilina Pali**	**0.70**	**115**		Pn	23 01 45.3	-1.5
HLP				IAML		23 02 05.6	
	comp=N,1μm,0.6s						
HLP				IAML		23 02 05.8	
	comp=E,2μm,0.6s						
KKO	**Keanakako`i**	**0.70**	**106**		Pn	23 01 45.2	-1.7
KKO				IAML		23 01 58.7	
	comp=E,1μm,0.6s						
KKO				IAML		23 02 14.3	
	comp=N,2μm,1.4s						
BYL	**Byron's Ledge**	**0.71**	**105**	Pn	Pn	23 01 45.1	-1.8
BYL				IAML		23 02 04.3	
	comp=N,912nm,1.1s						
PUH	**Pauahi**	**0.76**	**107**		Pn	23 01 45.6	-1.9
KNHH	**Kane Nui o Ham**	**0.80**	**105**		Pn	23 01 46.2	-1.9
STCH	**Steam Cracks**	**0.84**	**104**		Pn	23 01 46.7	-1.9
STCH				IAML		23 01 57.4	
	comp=N,730nm,0.3s						
NPOC	**North of Pu'u**	**0.85**	**104**	Pn	Pn	23 01 46.9	-1.8
JOKA	**Jonika Flow**	**0.94**	**100**		Pn	23 01 47.9	-2.0
JOKA					Sn	23 01 59.0	-3.2
HLK	**Haleakala**	**1.18**	**348**		Pn	23 01 51.5	-2.1
HLK	**Haleakala**	**1.18**	**348**		Sn	23 02 05.7	-2.9
KHLH	**Kahului Airpor**	**1.36**	**342**		Pn	23 01 54.3	-1.5
KHLH					Sn	23 02 10.1	-2.5
KHLH				IAML		23 02 12.7	
	comp=E,362nm,0.4s						
KPA	**Kalaupapa**	**1.84**	**330**		Pn	23 01 59.7	-2.6
KPA					Sn	23 02 12.5	-12
WMR	**Waimanalo Ridg**	**2.34**	**317**		Pn	23 02 06.8	-2.4
WMR					Sn	23 02 33.0	-3.8
KIP	**Kipapa**	**2.63**	**314**	Pn	Pn	23 02 10.4	-2.9
KIP				IAML		23 02 43.1	
	comp=E,170nm,0.5s						
KIP				IAML		23 02 51.4	
	comp=E,232nm,3.6s						
OPA	**Opana**	**2.82**	**318**	Pn	Pn	23 02 12.7	-3.0
KEKH	**Kekaha**	**4.22**	**305**	Pn	Pn	23 02 31.7	-3.4
KEKH	**Kekaha**	**4.22**	**305**		Sn	23 03 16.5	-6.6

NEIC ***13*** *23:03:01.8±1.2, 36˚.54N±0˚.02×98˚.97W±0˚.02, h5km±1km, Error ellipse: s-maj=4.3km s-min=2.6km az=131.0*

TUL 13 23:03:02.3±1.5, 36˚.53N±0˚.02×98˚.96W±0˚.03, h5km±2km, ML2.7, mb_Lg2.3/16(NEIC), ML2.5/8(NEIC), Error ellipse: s-maj=4.0km s-min=1.6km az=124.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.16**	**193**	Pg	Pg	23 03 05.7	+0.3
U32A				Sg	Sg	23 03 08.3	+0.7
U32A				IAML		23 03 10.9	
	comp=N,2μm,0.4s						
OK038	**West end E0370**	**0.18**	**108**	Pg	Pg	23 03 06.4	+0.5
OK038				Sg	Sg	23 03 09.4	+1.1
OK038				IAML		23 03 09.7	
	comp=N,1μm,0.4s						
OK035	**E0210 Rd and N**	**0.27**	**49**	Pg	Pg	23 03 07.5	0.0
OK035				IAML		23 03 12.3	
	comp=N,1μm,0.3s						
ELIS	**Ellis County**	**0.60**	**219**		Pg	23 03 13.8	0.0
ELIS				IAML		23 03 32.9	
	comp=N,289nm,0.3s						
CROK	**Carrier**	**0.79**	**92**	Pg	Pg	23 03 17.3	-0.1
CROK				Sg	Sg	23 03 28.4	+0.8
KAN14	**Manchester OK**	**0.90**	**62**	Pg	Pg	23 03 17.6	-2.0
KAN10	**Anthony SW Sta**	**0.91**	**49**	Pg	Pg	23 03 19.6	-0.1
CSTR	**Hydro, Custer**	**0.91**	**166**	Pg	Pg	23 03 18.6	-1.2
GC02	**Grant County #**	**0.94**	**70**	Pg	Pg	23 03 18.9	-1.5
KAN08	**Anthony NE Sta**	**1.05**	**49**	Pg	Pg	23 03 21.1	-1.3
KAN12	**Harper NE Stat**	**1.08**	**45**	Pg	Pg	23 03 22.0	-1.1
KAN06	**Argonia West S**	**1.13**	**51**	Pg	Pg	23 03 23.1	-0.9
KAN01	**Argonia South**	**1.14**	**57**	Pg	Pg	23 03 23.5	-0.8
KAN09	**Caldwell North**	**1.23**	**60**	Pg	Pg	23

ETLH					*e*S		Sg	23 21 59.3	+0.6
	baz=265								
ESAO	**Su ao**	**0.34**	**10**	*e*P			Pg	23 21 56.3	+0.1
	baz=4.0								
ESAO					*e*S		Sg	23 22 01.1	+0.3
	baz=4.0								
LATG	**Datong**	**0.38**	**322**	P			Pg	23 21 57.1	+0.3
	baz=312								
LATG				S			Sb	23 22 03.1	-0.7
	baz=312								
TWC	**Suao**	**0.38**	**10**	P			Pg	23 21 57.0	+0.3
	baz=5.0								
TWC					*e*S		Sg	23 22 02.6	+0.8
	baz=5.0								
LXIB	**Xiulin Townshi**	**0.40**	**238**	*e*P			Pg	23 21 56.9	-0.2
	baz=240								
LXIB					*e*S		Sg	23 22 03.3	+0.9
	baz=240								
NDS	**Dongshan**	**0.40**	**352**	*e*P			Pg	23 21 57.5	+0.4
	baz=350								
NDS					*e*S		Sg	23 22 03.1	+0.6
	baz=350								
NNSB	**Datong**	**0.41**	**298**	*e*P			Pg	23 21 57.8	+0.4
	baz=298								
NNSB					*e*S		Sg	23 22 03.6	+0.7
	baz=298								
NNS	**Nan Shan**	**0.42**	**299**	*e*P			Pg	23 21 57.9	+0.3
	baz=299								
NNS					*e*S		Sg	23 22 04.2	+0.9
	baz=299								
NDT	**Datong Townshi**	**0.44**	**326**	*e*P			Pg	23 21 58.2	+0.4
	baz=325								
NDT					*e*S		Sb	23 22 05.1	-0.4
	baz=325								
ENTT	**Nioudou**	**0.45**	**334**	P			Pb	23 21 58.6	-0.4
	baz=333								
ENTT					*e*S		Sb	23 22 05.0	-0.8
	baz=333								
WHF	**Hehuan Shan**	**0.48**	**259**	*e*P			Pg	23 21 59.0	+0.3
	baz=261								
WHF					*e*S		Sg	23 22 05.7	+0.6
	baz=261								
SHUL	**Shoufeng**	**0.49**	**204**	*e*P			Pg	23 21 59.1	+0.4
	baz=213								
SHUL					*e*S		Sb	23 22 08.6	+1.8
	baz=213								
FUSS	**Fushou**	**0.49**	**272**	*e*P			Pg	23 21 59.0	+0.2
	baz=273								
FUSS					*e*S		Sg	23 22 06.0	+0.6
	baz=273								
TWE	**Neicheng**	**0.50**	**348**	*e*P			Pb	23 21 59.5	-0.3
	baz=347								
TWE					*e*S		Sb	23 22 06.5	-0.5
	baz=347								
FUSB	**Fushanzhiwuyua**	**0.55**	**342**	*e*P			Pb	23 22 00.7	-0.1
	baz=339								
FUSB					*e*S		Sg	23 22 07.9	+0.6
	baz=339								
YHNB	**Yeheng**	**0.57**	**320**	P			Pb	23 22 00.9	-0.2
	baz=319								
YHNB					*e*S		Sb	23 22 08.8	-0.4
	baz=319								
CHGB	**Renai**	**0.58**	**253**	*e*P			Pg	23 22 00.8	+0.2
	baz=249								
CHGB					*e*S		Sg	23 22 08.9	+0.6
	baz=249								
NSK	**Sanguang**	**0.58**	**319**	*e*P			Pb	23 22 01.1	-0.2
	baz=319								
NSK					*e*S		Sb	23 22 09.0	-0.7
	baz=319								
NWLT	**Wulai**	**0.60**	**335**	*e*P			Pb	23 22 01.2	-0.4
	baz=334								
NWLT					*e*S		Sb	23 22 09.5	-0.6
	baz=334								
WARBT	**Fenglin Townsh**	**0.63**	**215**	*e*P			Pg	23 22 01.3	-0.1
	baz=222								
WARBT					*e*S		Sb	23 22 10.5	-0.3
	baz=222								
WUSB	**Renai**	**0.65**	**248**	*e*P			Pb	23 22 02.2	-0.3
	baz=250								
WUSB					*e*S		Sg	23 22 10.6	+0.1
	baz=250								
NFF	**Wufeng Townshi**	**0.72**	**303**	*e*P			Pb	23 22 03.8	+0.1
	baz=303								
NFF					*e*S		Sb	23 22 13.7	0.0
	baz=303								
VWDT	**VWDT**	**0.76**	**231**	*e*P			Pb	23 22 04.3	0.0
	baz=241								
VWDT					*e*S		Sb	23 22 14.7	+0.2
	baz=241								
HGSD	**Ruisui**	**0.81**	**204**	*e*P			Pb	23 22 05.8	+0.6
	baz=223								
LIOB	**Emei**	**0.81**	**301**	*e*P			Pn	23 22 05.9	-0.5
	baz=301								
LIOB					*e*S		Sb	23 22 17.0	+0.9
	baz=301								

IDC 13 23:26:46.0±7.4, **48°.71S**×**124°.32E**, **h0**km, **mb3.5**/2, **mbtmp3.5**/2, **Error ellipse: s-maj=479.7km s-min=73.3km az=97.0**, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.72**	**328**	T	T	23 46 35.1	
	baz=154,slow=75,SNR=14						
H01W2	**Cape Leeuwin H**	**15.73**	**328**	T	T	23 46 33.5	
	baz=154,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**15.74**	**328**	T	T	23 46 36.2	
	baz=154,slow=75,SNR=14						
ASAR	**Alice Springs**	**26.12**	**20**	P	P	23 32 21.1	-0.5
	1.1nm,0.9s,baz=191,slow=9.2,SNR=7.1 1.1nm,0.9s						
WRA	**Warramunga Arr**	**29.81**	**19**	P	P	23 32 55.3	+0.7
	0.4nm,0.7s,baz=195,slow=10.0,SNR=1.4 0.4nm,0.7s						
YKA	**Yellowknife Ar**	**145.31**	**44**	PKPbc	PKPbc	23 46 23.4	-0.9
	0.3nm,0.6s,baz=275,slow=3.2,SNR=6.8						

DJA 13 23:32:01.5±0.6, **8°.3S**×**110°.8E**, **h24**km±5km, **M3.8**/13, **mb4.2**/2, **mB5.1**/1, **MLv3.6**/13, **Mw(mB)4.5**/1, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.64**	**31**	P	Pn	23 32 14.9	-0.2
CMJI				S	Sb	23 32 23.2	+0.6
KPJI	**Karang Pucung**	**1.28**	**39**	P	Pb	23 32 24.8	-0.2
CNJI	**Cibinong**	**1.42**	**316**	P	Pn	23 32 25.6	-0.2
CNJI				S	Sn	23 32 42.5	-1.2
LEM	**Lembang**	**1.58**	**342**	P	Pb	23 32 29.9	-0.3
SKJI	**Sukabumi**	**2.04**	**310**	P	Pn	23 32 34.8	+0.4
SKJI				S	Sn	23 32 59.0	-0.1
DBJI	**Dramaga**	**2.23**	**322**	P	Pn	23 32 38.7	+1.6
UGM	**Wanagama**	**2.42**	**80**	P	Pn	23 32 39.3	-0.3
UGM				S	Sn	23 33 06.3	-2.2
SMRI	**Semarang**	**2.63**	**61**	P	Pn	23 32 43.8	+1.2
TWSI	**Taliwang, Sumb**	**8.68**	**93**	P	Pn	23 34 07.7	+2.1

IDC ***13*** *23:33:38.5*±*1.8, 3°.37S*×*150°.95E, h0km, mb4.1/10, mbtmp4.1/10, MS3.4/17, Error ellipse: s-maj=56.5km s-min=22.4km az=112.0*

NEIC ***13*** *23:33:42.4*±*1.5, 3°.0S*±*0°.1*×*150°.62E*±*0°.09, h35km*±*3km, mb4.4/17, Error ellipse: s-maj=21.4km s-min=8.6km az=210.0*

ISC 13 23:33:42.7±0.7, **3°.1S**±0°.1×**150°.58E**±0°.09, **h35**km, **n56**, σ**1°.38**/27, **mb4.3**/17, **MS3.4**/15, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.91**	**124**	Pn	**Pn**	**23 34 11.7**	**-1.1**
MANU	**Manus Island**	**3.38**	**288**	Pn	**Pn**	**23 34 32.0**	**-1.0**
PMG	**Port Moresby**	**7.13**	**208**	Pn	Pn	23 35 29.8	+5.3
	1.4nm,0.3s,baz=14,slow=4.2,SNR=1.6						
PMG				LR	LR	23 38 05.6	
	comp=Z,200nm,18.6s,baz=66,slow=38						
HNR	**Honiara**	**11.23**	**124**	LR	LR	23 40 26.7	
	comp=Z,4μm,19.5s,baz=314,slow=38						
CTA	**Charters Tower**	**17.40**	**194**	LR	LR	23 43 54.4	
	comp=Z,132nm,18.8s,baz=22,slow=36						
FAKI	**Fak Fak**	**18.31**	**270**		**P**	**23 37 53.2**	**-0.8**
FAKI					IAmb	IAmb	23 37 57.6	
	comp=Z,46nm,1.3s						
WB0	**Warramunga Arr**	**22.89**	**222**	P	**P**	**23 38 44.2**	**+0.6**
WB0					IAmb	IAmb	23 38 55.7	
	comp=Z,24nm,1.4s						
WR0	**Warramunga Arr**	**22.93**	**222**	P	**P**	**23 38 43.9**	**-0.1**
WR0					IAmb	IAmb	23 38 54.9	
	comp=Z,13nm,1.1s						
WRAB	**Tennant Creek**	**23.04**	**222**	P	**P**	**23 38 44.2**	**-0.8**
WRAB					IAmb	IAmb	23 38 47.6	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**23.05**	**222**	P	**P**	**23 38 45.6**	**+0.5**
WRA	**Warramunga Arr**	**23.05**	**222**	P	**P**	**23 38 46.2**	**+1.0**
WRA	**Warramunga Arr**	**23.05**	**222**	P	**P**	**23 38 45.9**	**+0.7**
	comp=Z,7.8nm,0.9s,baz=46,slow=9.8,SNR=32 comp=Z,7.8nm,0.9s						
DZM	**Mont Dzumac**	**24.35**	**142**	LR	LR	23 45 34.3	
	comp=Z,78nm,21.4s,baz=298,slow=30						
ASAR	**Alice Springs**	**26.04**	**217**	P	**P**	**23 39 14.1**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=54,slow=8.8,SNR=19 comp=Z,2.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.69**	**36**	T	T	00 06 42.1	
	baz=219,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**26.70**	**36**	T	T	00 06 50.4	
	baz=219,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**26.71**	**36**	T	T	00 06 46.0	
	baz=219,slow=76,SNR=20						
DAV	**Davao City (W)**	**26.92**	**292**	LR	LR	23 49 48.1	
	comp=Z,43nm,19.6s,baz=148,slow=35						
H11N1	**WAKE ISLAND Hy**	**27.77**	**35**	T	T	00 08 16.1	
	baz=218,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**27.78**	**35**	T	T	00 08 11.3	
	baz=218,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**27.78**	**35**	T	T	00 08 17.6	
	baz=218,slow=76,SNR=55						
FITZ	**Fitzroy Crossi**	**28.62**	**237**	P	**P**	**23 39 36.1**	**+0.1**
STKA	**Stephens Creek**	**29.85**	**195**	LR	LR	23 51 58.9	
	comp=Z,118nm,19.0s,baz=23,slow=37						
JCJ	**Chichijima**	**31.10**	**345**	LR	LR	23 51 05.5	
	comp=Z,83nm,20.6s,baz=102,slow=33						
PSA00	**Pilbara Seismi**	**35.06**	**236**	P	**P**	**23 40 31.3**	**-1.3**
PSA00					IAmb	IAmb	23 41 09.6	
	comp=Z,6.1nm,1.2s						
JOW	**Kunigami**	**36.74**	**325**	LR	LR	23 55 37.9	
	comp=Z,22nm,18.4s,baz=90,slow=36						
JNU	**Nakatsue**	**40.56**	**334**	LR	LR	23 56 40.6	
	comp=Z,46nm,19.4s,baz=163,slow=34						
MJAR	**Matsushiro Arr**	**41.09**	**345**	LR	LR	23 57 16.6	
	comp=Z,48nm,20.1s,baz=168,slow=34						
URZ	**Urewera**	**42.57**	**149**	LR	LR	23 58 06.8	
	comp=Z,124nm,18.6s,baz=318,slow=35						
RTZ	**Rustaluna**	**42.77**	**149**	P	**P**	**23 41 37.9**	**+0.9**
RPZ	**Rata Peaks**	**44.33**	**159**	LR	LR	23 58 36.0	
	comp=Z,119nm,18.2s,baz=327,slow=34						
KSRS	**Korea Array**	**45.51**	**335**	LR	LR	23 59 29.5	
	comp=Z,38nm,21.7s,baz=145,slow=34						
ASAJ	**Asahikawa**	**47.55**	**352**	LR	LR	00 03 09.2	
	comp=Z,29nm,18.3s,baz=39,slow=37						
KLR	**Kul'dur**	**54.62**	**345**	LR	LR	00 03 27.7	
	comp=Z,27nm,21.6s,baz=142,slow=32						
CM31	**Chiang Mai Arr**	**55.16**	**295**	P	**P**	**23 43 11.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**55.16**	**295**	P	**P**	**23 43 10.7**	**-1.5**
CMAR	**Chiang Mai Arr**	**55.16**	**295**	P	**P**	**23 43 15.4**	**+3.2**
	comp=Z,1.9nm,0.3s,baz=116,slow=6.2,SNR=10 comp=Z,1.9nm,0.3s						
PETK	**Petropavlovsk-**	**56.33**	**5**	LR	LR	00 03 44.0	
	comp=Z,48nm,19.3s,baz=149,slow=32						
SONM	**Songino Array**	**63.72**	**328**	P	P	23 44 14.9	+3.9
	comp=Z,0.7nm,0.8s,baz=145,slow=8.8,SNR=2.4 comp=Z,0.7nm,0.8s						
K15K	**Wolf Creek Mou**	**74.61**	**21**	P	**P**	**23 45 17.3**	**-0.7**
KDAK	**Kodiak Island**	**75.69**	**28**	LR	LR	00 11 43.1	
	comp=Z,23nm,21.8s,baz=213,slow=30						
M20K	**Styx River**	**77.57**	**24**	P	**P**	**23 45 34.0**	**-1.0**
MKAR	**Makanchi Array**	**77.60**	**319**	P	P	23 45 40.6	+5.2
	comp=Z,0.5nm,0.8s,baz=96,slow=5.8,SNR=3.6 comp=Z,0.5nm,0.8s						
MAKZ	**Makanchi**	**77.81**	**319**	P	**P**	**23 45 36.2**	**-0.3**
J20K	**Nowinta River**	**78.42**	**22**	P	**P**	**23 45 38.1**	**-1.4**
J20K					IAmb	IAmb	23 45 48.6	
	comp=Z,8.2nm,1.2s						
ZALV	**Zalesovo Beam**	**78.53**	**327**	P	**P**	**23 45 43.7**	**+3.4**
	comp=Z,0.5nm,0.5s,baz=111,slow=6.5,SNR=4.8 comp=Z,0.5nm,0.5s						
CAST	**Castle Rocks**	**78.79**	**23**	P	**P**	**23 45 41.0**	**-0.6**
CAST					IAmb	IAmb	23 45 50.1	
	comp=Z,3.9nm,0.8s						
IMAR	**Indian Mountai**	**79.55**	**20**	P	**P**	**23 45 45.2**	**-0.5**
KURBB	**Kurchatov Arra**	**81.11**	**322**	P	P	23 45 58.2	+3.8
	comp=Z,0.6nm,0.7s,baz=102,slow=4.2,SNR=6.0 comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**81.44**	**23**	P	**P**	**23 45 54.1**	**-1.8**
ILAR	**Eielson Array**	**81.44**	**23**	P	**P**	**23 45 57.0**	**+1.1**
	comp=Z,1.1nm,1.0s,baz=249,slow=4.3,SNR=5.9 comp=Z,1.1nm,1.0s						
NRIK	**Noril'sk**	**83.66**	**341**	P	P	23 46 10.8	+3.5
	comp=Z,3.9nm,1.0s,baz=118,slow=9.2,SNR=1.9 comp=Z,3.9nm,1.0s						
KK31	**Karatay Array**	**84.86**	**314**	P	**P**	**23 46 12.9**	**-1.1**
KK31					IAmb	IAmb	23 46 23.5	
	comp=Z,2.6nm,0.9s						
KKAR	**Karatay Array**	**84.86**	**314**	P	**P**	**23 46 12.7**	**-1.4**
BVAR	**Borovoye Array**	**86.57**	**323**	P	P	23 46 26.2	+4.0
	comp=Z,3.2nm,0.7s,baz=96,slow=5.9,SNR=14 comp=Z,3.2nm,0.7s						
ARU	**Arti**	**93.68**	**326**	LR	LR	00 30 36.0	
	comp=Z,50nm,19.7s,baz=106,slow=36						

IDC 13 23:45:20.3±1.6, **3°.36N**×**123°.39E**, **h0**km, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=244.6km s-min=21.1km az=63.0**, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.53**	**156**	P	P	23 50 50.6	-0.3
	0.4nm,0.4s,baz=333,slow=10,SNR=9.6 0.4nm,0.4s						
ASAR	**Alice Springs**	**28.75**	**160**	P	P	23 51 20.2	+0.4
	0.2nm,0.3s,baz=341,slow=7.5,SNR=4.7 0.2nm,0.3s						
MKAR	**Makanchi Array**	**56.00**	**327**	P	P	23 55 01.1	+0.4
	0.6nm,0.3s,baz=122,slow=8.0,SNR=27 0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**60.29**	**329**	P	P	23 55 30.1	-0.6
	0.5nm,0.5s,baz=130,slow=6.1,SNR=6.4 0.5nm,0.5s						

JMA ***13*** *23:56:05.1*±*0.1, 24°.1N*±*0°.2*×*121°.7E*±*0°.4, h4km*±*1km, TAIWAN REGION*

TAP ***13*** *23:56:05.0, 24°.14N*×*121°.68E, h13km, ML2.9, C*

ISC 13 23:56:05.3±0.8, **24°.13N**±0°.02×**121°.71E**±0°.02, **h11**km±5km, **n68**, σ**0°.48**/109, **1C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.08**	**290**	⇓*i*P	**Pg**	**23 56 07.8**	**0.0**
	baz=287						
ETL				*i* S	**Sg**	**23 56 09.3**	**-0.4**
	baz=287						
NACB	**Ninganchiao**	**0.11**	**292**	⇓*i*P	**Pg**	**23 56 08.1**	**-0.1**
	baz=292						
NACB				*i* S	**Sg**	**23 56 09.9**	**-0.3**
	baz=292						
TWD	**Chiawan**	**0.11**	**243**	⇓*i*P	**Pg**	**23 56 08.2**	**+0.1**
	baz=230						
TWD				*i* S	**Sg**	**23 56 10.3**	**0.0**
	baz=230						
EHP	**Heping Village**	**0.18**	**10**	*e*P	**Pg**	**23 56 09.2**	**0.0**
	baz=19						
EHP				*e*S	**Sg**	**23 56 12.3**	**+0.3**
	baz=19						
HWA	**Hwalien**	**0.18**	**211**	*e*P	**Pg**	**23 56 09.7**	**+0.5**
	baz=202						
HWA				*e*S	**Sg**	**23 56 13.3**	**+1.4**
	baz=202						
EAHA	**Aohua**	**0.20**	**9**	*i* P	**Pg**	**23 56 09.4**	**-0.1**
	baz=14						
EAHA				*e*S	**Sg**	**23 56 12.7**	**+0.2**
	baz=14						
ETLH	**Xiulin Townshi**	**0.22**	**290**	⇓*i*P	**Pg**	**23 56 10.0**	**+0.1**
	baz=289						
ETLH				S	**Sg**	**23 56 13.3**	**+0.2**
	baz=289						
ETM	**Tongmen**	**0.26**	**230**	⇑P	**Pg**	**23 56 10.7**	**+0.2**
	baz=221						
ETM				*e*S	**Sg**	**23 56 14.4**	**+0.3**
	baz=221						
LXIB	**Xiulin Townshi**	**0.29**	**248**	⇓*i*P	**Pg**	**23 56 11.2**	**-0.1**
	baz=245						
LXIB				*e*S	**Sg**	**23 56 15.3**	**+0.1**
	baz=245						
ENA	**Nanau**	**0.30**	**6**	⇓*i*P	**Pg**	**23 56 11.2**	**-0.1**
	baz=11						
ENA				*e*S	**Sg**	**23 56 15.4**	**0.0**
	baz=11						
EWUT	**Wuta**	**0.32**	**12**	*e*P	**Pg**	**23 56 11.6**	**-0.1**
	baz=15						
EWUT				S	**Sg**	**23 56 16.2**	**+0.2**
	baz=15						
SHUL	**Shoufeng**	**0.37**	**201**	*e*P	**Pb**	**23 56 14.3**	**+0.5**
	baz=201						
ESL	**Shilin**	**0.40**	**218**	*e*P	**Pg**	**23 56 13.5**	**+0.2**
	baz=222						
ESL				*e*S	**Sb**	**23 56 20.4**	**-0.2**
	baz=222						
WHF	**Hehuan Shan**	**0.40**	**272**	*e*P	**Pg**	**23 56 13.6**	**+0.1**
	baz=271						
WHF				*e*S	**Sg**	**23 56 19.3**	**+0.4**
	baz=271						
NNSB	**Datong**	**0.42**	**315**	*e*P	**Pg**	**23 56 13.7**	**+0.1**
	baz=315						
NNSB				S	**Sg**	**23 56 19.6**	**+0.4**
	baz=315						
NNS	**Nan Shan**	**0.43**	**315**	⇓*i*P	**Pg**	**23 56 13.8**	**0.0**
	baz=316						
NNS				*e*S	**Sg**	**23 56 20.1**	**+0.4**
	baz=316						
LATG	**Datong**	**0.43**	**338**	*i* P	**Pg**	**23 56 13.8**	**-0.1**
	baz=339						
LATG				*e*S	**Sg**	**23 56 19.7**	**0.0**
	baz=339						
TEGC	**Jichi Village**	**0.45**	**200**	*e*P	**Pb**	**23 56 14.7**	**-0.5**
	baz=189						
ESAO	**Su ao**	**0.46**	**16**	*e*P	**Pg**	**23 56 14.2**	**-0.2**
	baz=11						
ESAO					*e*S	**Sg**	**23 56 19.9**	**-0.5**
	baz=11						
CHGB	**Renai**	**0.49**	**262**	*e*P	**Pb**	**23 56 15.4**	**-0.7**
	baz=255						
CHGB					*e*S	**Sb**	**23 56 22.4**	**-1.0**
	baz=255						
TWC	**Suao**	**0.49**	**15**	*e*P	**Pg**	**23 56 15.2**	**+0.2**
	baz=12						
TWC					*e*S	**Sg**	**23 56 21.7**	**+0.2**
	baz=12						
TWT	**Tachien**	**0.50**	**284**	*e*P	**Pb**	**23 56 15.7**	**-0.5**
	baz=283						
TWT					*e*S	**Sb**	**23 56 22.6**	**-0.9**
	baz=283						
NDS	**Dongshan**	**0.50**	**1**	*e*P	**Pg**	**23 56 15.2**	**+0.1**
	baz=9.0						
NDT	**Datong Townshi**	**0.50**	**339**	⇓P	**Pg**	**23 56 15.3**	**+0.2**
	baz=340						
NDT					*e*S	**Sg**	**23 56 21.7**	**0.0**
	baz=340						
WARBT	**Fenglin Townsh**	**0.51**	**215**	*e*P	**Pg**	**23 56 15.2**	**0.0**
	baz=216						
TDCB	**Techi**	**0.52**	**284**	*e*P	**Pb**	**23 56 15.9**	**-0.6**
	baz=286						
ENTT	**Nioudou**	**0.52**	**346**	⇓*i*P	**Pg**	**23 56 15.7**	**+0.2**
	baz=347						
ENTT					*e*S	**Sg**	**23 56 22.7**	**+0.3**
	baz=347						
WUSB	**Renai**	**0.56**	**256**	⇓P	**Pb**	**23 56 16.5**	**-0.6**
	baz=250						
WUSB					*e*S	**Sg**	**23 56 23.0**	**-0.5**
	baz=250						
TWE	**Neicheng**	**0.59**	**357**	*e*P	**Pg**	**23 56 16.9**	**+0.2**
	baz=359						
TWE					*e*S	**Sb**	**23 56 25.2**	**-0.7**
	baz=359						
YHNB	**Yeheng**	**0.61**	**331**	⇓*e*P	**Pg**	**23 56 17.5**	**+0.3**
	baz=332						
NSK	**Sanguang**	**0.63**	**330**	⇓P	**Pg**	**23 56 17.7**	**+0.2**
	baz=330						
NSK					*e*S	**Sg**	**23 56 25.7**	**-0.1**
	baz=330						
FUSB	**Fushanzhiwuyua**	**0.63**	**350**	*i* P	**Pb**	**23 56 18.0**	**-0.4**
	baz=351						
FUSB					*e*S	**Sg**	**23 56 26.6**	**+0.5**
	baz=351						
VWDT	**VWDT**	**0.64**	**234**	*e*P	**Pb**	**23 56 18.0**	**-0.5**
	baz=233						
VWDT					*e*S	**Sg**	**23 56 26.2**	**+0.1**
	baz=233						
NWLT	**Wulai**	**0.67**	**344**	*e*P	**Pb**	**23 56 18.5**	**-0.5**
	baz=349						
NWLT					*e*S	**Sg**	**23 56 26.8**	**-0.3**
	baz=349						
HGSD	**Ruisui**	**0.69**	**202**	*e*P	**Pn**	**23 56 20.4**	**-0.6**
	baz=213						
EHY	**Hungye**	**0.72**	**210**	*e*P	**Pg**	**23 56 19.2**	**0.0**
	baz=217						
EHY					*e*S	**Sb**	**23 56 29.8**	**+0.1**
	baz=217						
WCS	**Beigang Elemen**	**0.73**	**264**	*e*P	**Pb**	**23 56 19.9**	**-0.1**
	baz=264						
NFF	**Wufeng Townshi**	**0.73**	**313**	*e*P	**Pg**	**23 56 19.2**	**-0.2**
	baz=304						
NFF					*e*S	**Sg**	**23 56 29.2**	**+0.1**
	baz=304						
EGS		**0.74**	**16**	*e*P	**Pg**	**23 56 18.9**	**-0.7**
	baz=24						
SSLB	**Suanglung**	**0.77**	**244**	*i* P	**Pb**	**23 56 20.4**	**-0.3**
	baz=251						
SSLB				S	**Sg**	**23 56 30.1**	**-0.1**
	baz=251						
SMLT	**Sun Moon Lake**	**0.78**	**252**	*e*P	**Pb**	**23 56 20.7**	**-0.2**
	baz=251						
SMLT					*e*S	**Sb**	**23 56 30.9**	**-0.6**
	baz=251						
TYC	**Yuchr**	**0.81**	**254**	*e*P	**Pb**	**23 56 21.0**	**-0.3**
	baz=246						
TYC					*e*S	**Sg**	**23 56 31.0**	**-0.5**
	baz=246						
LIOB	**Emei**	**0.81**	**309**	*e*P	**Pb**	**23 56 21.5**	**+0.1**
	baz=310						
NSTT	**Nanjuang**	**0.81**	**308**	*e*P	**Pb**	**23 56 21.8**	**+0.4**
	baz=308						
YULB	**Yu-li**	**0.83**	**207**	*e*P	**Pg**	**23 56 20.8**	**-0.4**
	baz=216						
YULB					S	**Sb**	**23 56 32.3**	**-0.5**
	baz=216						
NHDH	**Xindian Distri**	**0.84**	**349**	*e*P	**Pb**	**23 56 22.1**	**+0.1**
	baz=350						
TWA	**Mucha**	**0.85**	**352**	*e*P	**Pb**	**23 56 22.2**	**+0.1**
	baz=354						
TWF1	**Yuli**	**0.86**	**206**	*e*P	**Pg**	**23 56 21.8**	**-0.2**
	baz=214						
TWF1					*e*S	**Sb**	**23 56 34.8**	**+1.0**
	baz=214						
TWQ1	**Liyutan**	**0.88**	**284**	*e*P	**Pn**	**23 56 24.1**	**+0.6**
	baz=284						
TWB1	**Santiao Chiao**	**0.91**	**16**	*e*P	**Pb**	**23 56 23.4**	**+0.4**
	baz=10.0						
TWB1					*e*S	**Sg**	**23 56 34.5**	**-0.2**
	baz=10.0						
SXI1	**Grass Mountain**	**0.97**	**9**	*e*P	**Pb**	**23 56 24.4**	**+0.3**
	baz=2.0						
SXI1					*e*S	**Sb**	**23 56 37.0**	**-0.1**
	baz=2.0						
CHKH	**Chenggong**	**0.98**	**197**	*e*P	**Pb**	**23 56 24.5**	**+0.2**

WRL	**Guolierlin Hig** baz=260	**1.24**	**260**	*eP*	**Pg**	**23 56 29.8**	**+0.7**
STYH	**Taoyuan** baz=222	**1.28**	**222**	*eP*	**Pn**	**23 56 28.6**	**-0.5**
CHN4	**Tsaushan** baz=234	**1.28**	**233**	*eP*	**Pg**	**23 56 30.6**	**+0.7**
TPUB	**Ta-pu** baz=231	**1.29**	**230**	*eP*	**Pn**	**23 56 28.8**	**-0.5**
TWK	**Hsinying** baz=233	**1.41**	**233**	*eP*	**Pg**	**23 56 32.8**	**+0.4**
VWUC	**VWUC** baz=292	**2.23**	**293**	*eP*	**Pn**	**23 56 42.0**	**-0.1**
JISG	**Ishigakijimahi**	**2.42**	**79**	*eP*	**Pn**	**23 56 45.9**	**+1.2**

IDC ***13*** *23:59:21.3±1.3, 30.63N×57.27E, h0km, mb3.6/10, mbtmp3.7/14, ML3.6/4, MS4.0/5, Error ellipse: s-maj=26.1km s-min=19.4km az=147.0*

TEH ***13*** *23:59:22.0, 30.69N×57.32E, h12km±39km, ML4.0*

DSN ***13*** *23:59:25.8±2.1, 30.29N×58.57E, h10km, ML3.1/9, Error ellipse: s-maj=93.3km s-min=20.3km az=110.0*

ISC 13 23:59:23.5±0.6, 30.69N±0.03×57.32E±0.04, h15km, n58, σ1§61/58, mb3.5/11, MS4.2/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.19**	**194**	Pg	**Pg**	**23 59 26.5**	**-1.6**
ZRDN	**Zarand Kerman**	**0.73**	**293**	Pg	**Pg**	**23 59 36.4**	**-1.4**
KHGB	**Koh Gabri**	**0.79**	**247**	Pg	**Pg**	**23 59 37.4**	**-1.6**
KHGB				Sg	**Sg**	**23 59 47.7**	**-1.8**
CHMN	**Cheshme madani**	**0.84**	**167**	Pg	**Pg**	**23 59 38.1**	**-1.8**
TVBK	**TV Kerman**	**0.85**	**215**	Pg	**Pg**	**23 59 39.3**	**-0.8**
NGRK	**Negar Kerman**	**1.16**	**206**	Pg	**Pn**	**23 59 44.8**	**-0.7**
NGRK				Sg	**Sb**	**00 00 01.0**	**+0.5**
IBAF	**Bafgh**	**1.75**	**301**	Pg	**Pb**	**23 59 54.6**	**-0.9**
KBAM	**BAM**	**1.83**	**147**	Pn	**Pn**	**23 59 55.0**	**+0.5**
BSRN	**Basiran**	**2.00**	**50**	Pn	**Pn**	**23 59 57.1**	**+0.1**
IKOO	**Kooshah**	**2.25**	**39**	Pn	**Pn**	**00 00 00.5**	**0.0**
TPRV	**Parvadeh(Tabas**	**2.40**	**347**	Pn	**Pn**	**00 00 02.6**	**+0.3**
IMEH	**Mehriz**	**2.43**	**288**	Pn	**Pn**	**00 00 03.2**	**+0.2**
NHDN	**Nehbandan**	**2.44**	**73**	Pn	**Pn**	**00 00 03.7**	**+0.7**
ITEG	**Tejag**	**2.52**	**28**	Pn	**Pn**	**00 00 04.2**	**+0.1**
TKDS	**Koohdasht(Taba**	**2.92**	**357**	Pn	**Pn**	**00 00 10.1**	**+0.5**
ICHK	**Chekchek**	**2.94**	**303**	Pn	**Pn**	**00 00 11.2**	**+1.3**
AFRZ	**Afriz**	**3.09**	**27**	Pn	**Pn**	**00 00 12.3**	**+0.5**
ZHDN	**Zahedan**	**3.28**	**112**	Pn	**Pn**	**00 00 14.5**	**-0.1**
SHRT	**Shahrakht**	**3.88**	**40**	Pn	**Pn**	**00 00 24.2**	**+1.5**
ANAR	**Anarak**	**3.95**	**310**	Pn	**Pn**	**00 00 24.5**	**+0.9**
IRAM	**Ramesheh**	**4.38**	**286**	Pn	**Pn**	**00 00 30.4**	**+0.7**
SHME	**Shamm**	**4.73**	**193**	P	**Pn**	**00 00 36.7**	**+2.3**
IZEF	**Zefreh**	**4.79**	**299**	Pn	**Pn**	**00 00 36.6**	**+1.2**
MSFE	**Esma-Masafi**	**5.40**	**191**	P	**Pn**	**00 00 46.1**	**+2.5**
MDH	**Madha**	**5.44**	**190**	P	**Pn**	**00 00 45.9**	**+1.7**
KRSH	**Karshahi**	**5.48**	**308**	Pn	**Pn**	**00 00 46.2**	**+1.4**
SRVN	**Saravan**	**5.52**	**125**	Pn	**Pn**	**00 00 46.1**	**+0.8**
ISFB	**Sefidab**	**5.64**	**312**	Pn	**Pn**	**00 00 47.5**	**+0.6**
SBZV	**Sabzevar**	**5.69**	**2**	Pn	**Pn**	**00 00 49.2**	**+1.5**
UOSS	**Minazif**	**5.80**	**190**	P	**Pn**	**00 00 52.7**	**+3.7**
HATD	**Hatta, Dubai**	**5.93**	**191**	P	**Pn**	**00 00 54.0**	**+3.2**
ASHO	**Ashiyiah**	**6.08**	**191**	P	**Pn**	**00 00 55.3**	**+2.4**
ASHO				S	**Sn**	**00 02 05.3**	**+2.9**
FAQ	**Al Faqa, Dubai**	**6.11**	**195**	P	**Pn**	**00 00 57.8**	**+4.5**
ASUD	**Al Ashush, Dub**	**6.29**	**197**	P	**Pn**	**00 00 59.0**	**+3.2**
IVRN	**Varamin**	**6.38**	**314**	Pn	**Pn**	**00 00 58.4**	**+1.4**
SOHO	**SOHO**	**6.56**	**186**	P	**Pn**	**00 00 59.8**	**+0.3**
ALNE	**Al Ain**	**6.75**	**192**	P	**Pn**	**00 01 03.7**	**+1.6**
MRVT	**Maraveh tapeh**	**7.03**	**352**	Pn	**Pn**	**00 01 07.1**	**+1.1**
GEYT	**Alibeck** 0.3nm,0.3s,baz=190,slow=15,SNR=5.7	**7.26**	**5**	Pn	**Pn**	**00 01 09.9**	**+0.8**
GEYT	0.7nm,0.3s,baz=137,slow=18,SNR=3.2 0.6nm,0.3s			Sn	**Sn**	**00 02 34.4**	**+3.2**
WSAR	**Wadi Sarin** 1.2nm,0.3s,baz=5.0,slow=14,SNR=16 12nm,0.6s	**7.51**	**171**	Pn	**Pn**	**00 01 12.8**	**+0.2**
ASF	**Jabal al Asfar** 0.3nm,0.3s,baz=28,slow=1.3,SNR=7.0 1.6nm,0.5s	**17.50**	**280**	P	**Pn**	**00 03 26.8**	**-0.3**
KSH	**Kashi**	**17.60**	**55**	P	**Pn**	**00 03 25.4**	**-2.9**
KSH	comp=Z,3.0nm,1.3s			pmax	pmax		
AKTO	**Aktyubinsk** comp=Z,0.4nm,0.3s,baz=185,slow=10,SNR=6.9 comp=Z,2.5nm,0.6s	**19.74**	**1**	P	**Pn**	**00 03 53.5**	**-0.6**
BRTR	**Keskin Array B** comp=Z,1.9nm,0.9s,baz=116,slow=12,SNR=10.0 comp=Z,1.9nm,0.9s	**21.30**	**301**	P	**P**	**00 04 10.3**	**+0.6**
BVAR	**Borovoye Array** comp=Z,2.3nm,0.7s,baz=202,slow=6.4,SNR=12 comp=Z,2.3nm,0.7s	**24.27**	**19**	P	**P**	**00 04 41.0**	**+1.0**
MKAR	**Makanchi Array** comp=Z,0.3nm,0.5s,baz=230,slow=9.1,SNR=5.9 comp=Z,0.3nm,0.5s	**25.11**	**43**	P	**P**	**00 04 48.5**	**+0.9**
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.6s,baz=231,slow=9.3,SNR=7.1 comp=Z,0.5nm,0.6s	**25.44**	**32**	P	**P**	**00 04 51.5**	**+0.9**
ZALV	**Zalesovo Beam** comp=Z,1.2nm,0.7s,baz=245,slow=9.7,SNR=5.7	**30.54**	**32**	P	**P**	**00 05 36.7**	**+0.6**
ZALV	comp=Z,36nm,20.8s,baz=110,slow=36 comp=Z,1.2nm,0.7s			LR	LR	00 17 56.5	
FINES	**FINESS Array B** comp=Z,1.8nm,0.9s,baz=148,slow=11,SNR=5.6 comp=Z,1.8nm,0.9s	**36.94**	**336**	P	**P**	**00 06 32.2**	**+0.5**
GERES	**GERESS Array B** comp=Z,0.5nm,0.6s,baz=120,slow=7.3,SNR=4.4 comp=Z,0.5nm,0.6s	**37.52**	**312**	P	**P**	**00 06 37.4**	**+0.5**
EKA	**Eskdalemuir Ar** comp=Z,0.7nm,0.5s,baz=104,slow=7.1,SNR=4.1 comp=Z,0.7nm,0.5s	**48.76**	**319**	P	**P**	**00 08 07.3**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,3.3nm,0.3s,baz=60,slow=7.5,SNR=2.2	**53.95**	**264**	P	**P**	**00 08 46.0**	**-1.0**
KLR	**Kul'dur** comp=Z,214nm,19.8s,baz=182,slow=39	**57.65**	**48**	LR	LR	00 36 55.9	
ILAR	**Eielson Array** comp=Z,0.1nm,0.5s,baz=306,slow=5.3,SNR=1.9 comp=Z,0.1nm,0.5s	**82.99**	**10**	P	**P**	**00 11 47.2**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.4s,baz=353,slow=5.1,SNR=5.0 comp=Z,0.1nm,0.4s	**86.92**	**356**	P	**P**	**00 12 07.3**	**-0.2**
KDAK	**Kodiak Island** comp=Z,261nm,18.3s,baz=256,slow=39	**88.35**	**15**	LR	LR	00 56 28.6	
PMG	**Port Moresby** comp=Z,75nm,18.3s,baz=201,slow=40	**94.59**	**98**	LR	LR	01 02 19.8	
BBB	**Bella Bella** comp=Z,80nm,18.2s,baz=234,slow=39	**97.35**	**3**	LR	LR	01 02 36.7	

BJI ***14*** *00:05:27.3±0.0, 6.09N×133.84E, h8km, mb5.7/85, mB5.3/48, Ms4.8/50, Ms7 4.5/52*

IDC ***14*** *00:05:28.1±0.4, 6.07N×133.68E, h0km, mb5.3/19, mbtmp5.4/23, ML5.5/3, MS4.3/41, Error ellipse: s-maj=24.7km s-min=11.4km az=73.0*

MOS ***14*** *00:05:28.5±1.1, 6.00N×133.75E, h12km, mb5.7/69, Error ellipse: s-maj=9.2km s-min=4.6km az=115.6*

NEIC ***14*** *00:05:30.5, 6.02N×133.77E, h26km*

NEIC ***14*** *00:05:30.2±2.0, 5.99N±0.06×133.81E±0.07, h10km±1km, mb5.5/193, Ms_20 5.0/82, Mww5.2/21, Error ellipse: s-maj=11.5km s-min=9.6km az=81.0*

NEIC ***14*** *00:05:30.5, 6.22N×133.57E, h26km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 1016Nm; Mrr=5.76; Mθθ=0.00; Mϕϕ=5.76; Mrθ=-4.75; Mθϕ=2.22; Mϕr=-1.77; Fault plane solution: M0 7.94000×10 16 NP1:ϕs45.58000°, δ64.69000°, λ=-63.63000°. NP2:ϕs176.35000°, δ35.91000°, λ=-133.21000°. Principal axes: T 7.4237, Plg16.0000°, Azm117.0000°; N 1.0249, Plg24.0000°, Azm214.0000°; P -8.4486, Plg61.0000°, Azm356.0000°;*

DJA ***14*** *00:05:31.8±0.6, 6.51×13.4E±, h26km±5km, M5.5/90, mb5.6/90, mB5.9/49, MLv6.1/13, Mw5.2/39, Mw(mB)5.5/49, MwMwp4.9/14, Mwp5.2/14*

GCMT ***14*** *00:05:35.2±0.2, 5.91S±0.01×133.70E±0.01, h24km, MW5.2/117, Moment Tensor Solution. s93,c151; s117,c195; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=5.73±.15; Mθθ=0.22±.11; Mϕϕ=5.95±.12; Mrθ=2.18±.18; Mθϕ=2.68±.09; Mϕr=2.65±.18; Best double couple: M07.23400×1016 NP1:ϕs31.00000°, δ59.00000°, λ=-78.00000°. NP2:ϕs188.00000°, δ33.00000°, λ=-110.00000°. Principal axes: T 7.7420, Plg14.0000°, Azm112.0000°; N -1.0160, Plg10.0000°, Azm205.0000°; P -6.7260, Plg73.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 00:05:31.2±0.4, 6.07S±0.03×133.74E±0.04, h20km±1km, h21km:pP-P, n1039, σ1§18/1002, mb5.5/225, MS4.6/103, 10C-45D, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**2.39**	**359**	P	**Pn**	**00 06 09.7**	**+0.5**
KMPI				S	**Sn**	**00 06 35.3**	**-2.7**
SAUI	**Saumlaki**	**3.08**	**232**		**Pn**	**00 06 20.9**	**+2.1**
SAUI	**Saumlaki**	**3.08**	**232**	P	**Pn**	**00 06 19.8**	**+1.0**
SAUI	**Saumlaki**	**3.08**	**232**	P	**Pb**	**00 06 22.5**	**-2.9**
FAKI	**Fak Fak**	**3.46**	**335**	Pn	**Pn**	**00 06 23.5**	**-0.6**
FAKI	**Fak Fak**	**3.46**	**335**	P	**Pn**	**00 06 23.8**	**-0.2**
FAKI	**Fak Fak**	**3.46**	**335**	P	**Pn**	**00 06 23.8**	**-0.2**
FAKI				S	**Sn**	**00 06 59.8**	**-4.7**
BNDI	**Bandanaira**	**4.11**	**292**	P	**Pn**	**00 06 34.6**	**+1.6**
BNDI	**Bandanaira**	**4.11**	**292**	P	**Pn**	**00 06 34.4**	**+1.4**
BNDI				S	**Sn**	**00 07 19.9**	**-0.7**
SWI	**Sorong** 1μm,0.6s,25μm7μm39nm	**5.73**	**334**	P	**Pn**	**00 06 55.0**	**-0.2**
SMPI	**Sarmi** 397nm,0.8s,7μm5μm3.4nm	**6.40**	**51**	P	**Pn**	**00 07 05.9**	**+1.5**
KDU	**Kakadu** baz=6.8,SNR=406	**6.70**	**191**	P	**Pn**	**00 07 09.9**	**+1.3**
KDU	**Kakadu** 396nm,0.5s	**6.70**	**191**	P	**Pn**	**00 07 10.1**	**+1.6**
MMPI	**Merauke** 3μm,0.5s,59μm29nm	**7.01**	**110**	P	**Pn**	**00 07 15.0**	**+2.2**
NLAI	**Namlea** 422nm,1.0s,10μm4.1nm	**7.19**	**293**	P	**Pn**	**00 07 15.3**	**0.0**
MTN	**Manton Dam** baz=7.3,SNR=466	**7.21**	**201**	P	**Pn**	**00 07 14.9**	**-0.6**
MTN	**Manton Dam**	**7.21**	**201**	Pn	**Pn**	**00 07 17.2**	**+1.6**
MTN	**Manton Dam** 724nm,0.5s	**7.21**	**201**	P	**Pn**	**00 07 17.7**	**+2.1**
GENI	**Genyem** 1μm,0.8s	**7.28**	**62**	P	**Pn**	**00 07 18.8**	**+2.2**
GENI	**Genyem** 1μm,0.9s,13μm5μm6.8nm	**7.28**	**62**	P	**Pn**	**00 07 18.7**	**+2.2**
TABU	**Tabubil** 196μm,0.6s	**7.49**	**84**	P	**Pn**	**00 07 21.7**	**+2.2**
LBMI	**Labuha** 1μm,0.9s,12μm	**8.23**	**311**	P	**Pn**	**00 07 29.2**	**-0.5**
SANI	**Sanana**	**8.70**	**297**	P	**Pn**	**00 07 34.2**	**-1.8**
SANI	**Sanana** 387nm,0.6s,5μm5μm	**8.70**	**297**	P	**Pn**	**00 07 32.9**	**-3.1**
TNTI	**Ternate**	**9.31**	**317**	Pn	**Pn**	**00 07 43.2**	**-1.2**
TNTI	**Ternate**	**9.31**	**317**	P	**Pn**	**00 07 44.8**	**+0.5**
TNTI	**Ternate** 180nm,0.8s,2μm2μm	**9.31**	**317**	P	**Pn**	**00 07 44.8**	**+0.5**
SOEI	**Soe**	**10.07**	**248**	Pn	**Pn**	**00 07 54.7**	**-0.3**
SOEI	**Soe** 848nm,0.9s	**10.07**	**248**	P	**Pn**	**00 07 55.4**	**+0.4**
SOEI	**Soe** 843nm,0.9s,7μm4μm	**10.07**	**248**	P	**Pn**	**00 07 55.7**	**+0.7**
BBSI	**Bau Bau** 317nm,1.1s,3μm	**11.13**	**272**	P	**Pn**	**00 08 11.8**	**+2.5**
MMRI	**Maumere**	**11.69**	**257**		**Pn**	**00 08 17.0**	**0.0**
MMRI	**Maumere** 212nm,0.9s	**11.69**	**257**	P	**Pn**	**00 08 17.7**	**+0.7**
MMRI	**Maumere** 215nm,0.7s,2μm3μm	**11.69**	**257**	P	**Pn**	**00 08 16.2**	**-0.8**
KMSI	**Cibinong** 1μm,0.7s,11μm4μm	**11.76**	**304**	P	**Pn**	**00 08 16.2**	**-1.8**
LUWI	**Luwuk**	**12.03**	**294**	Pn	**Pn**	**00 08 20.3**	**-1.3**
LUWI	**Luwuk** 270nm,0.7s	**12.03**	**294**	P	**Pn**	**00 08 21.4**	**-0.2**
LUWI	**Luwuk** 266nm,0.9s,4μm	**12.03**	**294**	P	**Pn**	**00 08 19.7**	**-1.9**
COEN	**Coen** baz=12,SNR=394	**12.15**	**131**	P	**Pn**	**00 08 21.0**	**-2.4**
COEN	**Coen**	**12.15**	**131**	Pn	**Pn**	**00 08 21.4**	**-2.0**
EDFI	**Ende, Flores** 130nm,0.8s,1μm	**12.24**	**257**	P	**Pn**	**00 08 24.5**	**-0.2**
SGSI	**Sangihe** 489nm,0.9s	**12.69**	**320**	P	**Pn**	**00 08 30.6**	**-0.1**
MRSI	**Marisa**	**13.45**	**298**	P	**Pn**	**00 08 39.7**	**-1.4**
WB0	**Warramunga Arr**	**13.63**	**177**	Pn	**Pn**	**00 08 39.7**	**-4.0**
BASI	**Baing, Sumba** 626nm,0.9s,6μm3μm	**13.66**	**252**	P	**Pn**	**00 08 40.9**	**-3.1**
PMG	**Port Moresby**	**13.71**	**105**		**Pn**	**00 08 44.4**	**-0.1**
PMG	**Port Moresby**	**13.71**	**105**	P	**Pn**	**00 08 45.0**	**+0.4**
PMG	**Port Moresby** 453nm,0.8s,baz=292,slow=11,SNR=128	**13.71**	**105**	Pn	**Pn**	**00 08 45.5**	**+1.0**
PMG	2.9nm,0.3s,baz=184,slow=20,SNR=0.9			Sn	**Sn**	**00 11 08.8**	**-7.5**
PMG	comp=Z,6μm,18.8s,baz=282,slow=42			LR	LR	00 15 13.2	
WRAB	**Tennant Creek**	**13.80**	**178**	Pn	**Pn**	**00 08 42.3**	**-3.5**
WRAB	**Tennant Creek**	**13.80**	**178**	P	**Pn**	**00 08 42.3**	**-3.5**
WRA	**Warramunga Arr**	**13.81**	**178**	Pn	**Pn**	**00 08 42.0**	**-4.0**
WRA	**Warramunga Arr** 18nm,0.3s,baz=1.2,slow=13,SNR=394	**13.81**	**178**	Pn	**Pn**	**00 08 43.3**	**-2.7**
WRA	38nm,0.3s,baz=0.2,slow=23,SNR=8.2			Sn	Sn	00 11 08.7	-10
WRA	comp=Z,2μm,18.1s,baz=356,slow=40 68nm,0.4s			LR	LR	00 14 37.5	
WB2	**Warramunga Arr** baz=14	**13.81**	**178**	P	**Pn**	**00 08 43.0**	**-3.0**
WB2	**Warramunga Arr**	**13.81**	**178**	Pn	**Pn**	**00 08 42.9**	**-3.1**
WR0	**Warramunga Arr**	**13.83**	**177**	Pn	**Pn**	**00 08 43.3**	**-3.0**
MANU	**Manus Island**	**14.17**	**74**	Pn	**Pn**	**00 08 49.9**	**-1.0**
MANU	**Manus Island**	**14.17**	**74**	P	**Pn**	**00 08 52.2**	**+1.3**
TTSI	**Tana Toraja** 120nm,0.9s	**14.20**	**282**	P	**Pn**	**00 08 51.0**	**-0.3**
FITZ	**Fitzroy Crossi** baz=14,SNR=56	**14.34**	**213**	P	**Pn**	**00 08 51.0**	**-2.2**
FITZ	**Fitzroy Crossi**	**14.34**	**213**	Pn	**Pn**	**00 08 51.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**14.34**	**213**	P	**Pn**	**00 08 52.0**	**-1.2**
TOLI2	**Tolitoli**	**14.77**	**298**	Pn	**Pn**	**00 08 58.8**	**-0.4**
TOLI2	**Tolitoli**	**14.77**	**298**	P	**Pn**	**00 08 59.7**	**+0.5**
QIS	**Mount Isa** baz=16,SNR=164	**15.49**	**159**	P	**Pn**	**00 09 05.0**	**-3.8**
MTSU	**Mount Surprise**	**15.83**	**140**	P	**Pn**	**00 09 13.0**	**-0.1**
PLAI	**Plampang**	**16.06**	**259**	P	**Pn**	**00 09 17.1**	**+1.0**
PLAI	**Plampang** 166nm,0.7s,3μm2μm	**16.06**	**259**	P	**Pn**	**00 09 14.0**	**-2.1**
TWSI	**Taliwang, Sumb** 88nm,0.7s,997nm	**16.93**	**260**	P	**Pn**	**00 09 24.9**	**-2.2**
KAVG	**Kavieng**	**17.36**	**79**	P	**P**	**00 09 34.3**	**+0.5**
BKB	**Balikpapan**	**17.47**	**285**	Pn	**Pn**	**00 09 32.4**	**-1.5**
BKB	**Balikpapan** 96nm,0.9s,3μm	**17.47**	**285**	P	**P**	**00 09 35.6**	**+0.6**
AS31	**Alice Springs**	**17.50**	**179**		**Pn**	**00 09 32.5**	**-1.8**
ASAR	**Alice Springs**	**17.50**	**179**	Pn	**Pn**	**00 09 31.9**	**-2.4**
ASAR	**Alice Springs** 35nm,0.3s,baz=1.4,slow=7.5,SNR=397	**17.50**	**179**	P	**Pn**	**00 09 32.5**	**-1.7**
ASAR	28nm,0.5s,baz=2.0,slow=29,SNR=5.0			S	Sn	00 12 36.2	-13
ASAR	101nm,0.6s			LR	LR	00 16 52.3	
ASPA	**Alice Springs** baz=18	**17.50**	**180**	P	**Pn**	**00 09 32.2**	**-2.1**
TV1H	**Townsville Har** 205nm,0.9s	**18.27**	**137**	P	**P**	**00 09 44.4**	**+0.7**
RABL	**Rabaul**	**18.45**	**85**		**P**	**00 09 44.5**	**-1.3**
RABL	comp=Z,341nm,0.7s			IAmb	IAmb	00 09 50.1	
RABL	**Rabaul**	**18.45**	**85**	P	**Pn**	**00 09 47.5**	**+1.6**
CTA	**Charters Tower**	**18.50**	**140**	P	**Pn**	**00 09 47.8**	**+1.3**
CTA	**Charters Tower** comp=Z,13nm,0.3s,baz=318,slow=12,SNR=108	**18.50**	**140**	P	**Pn**	**00 09 47.0**	**+0.5**
CTA	comp=Z,5μm,20.1s,baz=318,slow=39 comp=Z,167nm,0.7s			LR	LR	00 17 26.1	
CTAO	**Charters Tower**	**18.50**	**140**	P	**P**	**00 09 45.6**	**-0.7**
CTAO	comp=Z,183nm,0.7s			IAmb	IAmb	00 09 50.1	
CTAO	**Charters Tower**	**18.50**	**140**	P	**Pn**	**00 09 48.2**	**+1.7**
CTAO	**Charters Tower**	**18.50**	**140**	P	**P**	**00 09 45.6**	**-0.7**
CTAO	comp=Z,183nm,0.7s			pmax	pmax		
MYLDM	**Lahad Datu**	**18.87**	**306**	P	**Pn**	**00 09 51.4**	**+0.2**
MYLDM	comp=Z,326nm,1.2s			IAmb	IAmb	00 10 00.1	
AUAYR	**Ayr State High**	**18.90**	**137**	P	**Pn**	**00 09 53.1**	**+1.7**
WRKA	**Warakurna** baz=20,SNR=230	**19.57**	**195**	P	**P**	**00 09 58.3**	**+0.2**
WRKA	**Warakurna** comp=Z,150nm,1.0s	**19.57**	**195**	P	**P**	**00 09 58.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**19.57**	**262**	P	**P**	**00 09 58.4**	**+0.2**
JAGI	**Jajag, Banyuwa**	**19.57**	**262**	P	**P**	**00 09 55.4**	**-2.8**
BLJI	**Banyuglugur** comp=Z,135nm,0.7s,comp=Z,2μm	**20.07**	**264**	P	**P**	**00 10 03.7**	**+0.2**
MBWA	**Marble Bar**	**20.23**	**221**	P	**P**	**00 10 05.8**	**+0.5**
MBWA	**Marble Bar**	**20.23**	**221**	P	**P**	**00 10 06.2**	**+1.0**
MBWA	**Marble Bar**	**20.23**	**221**	P	**P**	**00 10 06.3**	**+1.0**
GMJI	**Gumukmas**	**20.25**	**263**	P	**P**	**00 10 06.5**	**+0.9**
PSA00	**Pilbara Seismi**	**20.46**	**220**	P	**P**	**00 10 08.3**	**+0.6**
PSA00	**Pilbara Seismi**	**20.46**	**220**	P	**P**	**00 10 08.6**	**+0.9**
KKM	**Kota Kinabalu**	**21.23**	**304**	P	**P**	**00 10 16.8**	**+0.6**
KKM	comp=Z,179nm,0.7s			IAmb	IAmb	00 10 23.0	
KKM	**Kota Kinabalu**	**21.23**	**304**	P	**P**	**00 10 17.5**	**+1.3**
OOD	**Oodnadatta** comp=Z,359nm,0.7s	**21.69**	**175**	P	**P**	**00 10 22.5**	**+1.6**
GUMO	**Guam**	**22.44**	**29**	P	**P**	**00 10 28.3**	**-0.8**
GUMO	**Guam**	**22.44**	**29**	P	**P**	**00 10 28.3**	**-0.8**
GUMO	comp=Z,486nm,1.2s			pmax	pmax		
GUMO	**Guam** comp=Z,168nm,18.6s,baz=186,slow=41	**22.44**	**29**	LR	LR	00 20 47.3	
INKA	**Innaminka** comp=Z,430nm,1.1s	**22.56**	**164**	P	**P**	**00 10 31.8**	**+1.5**
QLP	**Quilpie** baz=23,SNR=27	**22.73**	**155**	P	**P**	**00 10 33.5**	**+1.4**
QLP	**Quilpie** comp=Z,310nm,0.9s	**22.73**	**155**	P	**P**	**00 10 33.5**	**+1.4**
STKI	**Sintang**	**23.04**	**285**	P	**P**	**00 10 35.8**	**+0.3**
SBUM	**Sibu**	**23.09**	**291**	P	**P**	**00 10 36.5**	**+0.4**
UGM	**Wanagama**	**23.11**	**264**	P	**P**	**00 10 35.5**	**-0.8**
UGM	comp=Z,119nm,1.1s			IAmb	IAmb	00 10 59.8	
UGM	**Wanagama**	**23.11**	**264**	P	**P**	**00 10 37.3**	**+1.0**
RK1H	**Rockhampton Ha** comp=Z,645nm,0.9s	**23.60**	**139**	P	**P**	**00 10 42.8**	**+1.8**
MULG	**Mulgathing**	**24.09**	**179**	P	**P**	**00 10 46.8**	**+1.2**
GD1S	**Gladstone Soft** comp=Z,282nm,1.0s	**24.36**	**138**	P	**P**	**00 10 49.7**	**+1.6**
KSM	**Kuching**	**24.56**	**287**	P	**P**	**00 10 50.0**	**-0.1**
KSM	comp=Z,83nm,1.0s			IAmb	IAmb	00 10 53.1	
KSM	**Kuching**	**24.56**	**287**	P	**P**	**00 10 50.9**	**+0.8**
LCRK	**Leigh Creek**	**24.62**	**171**	P	**P**	**00 10 52.2**	**+1.8**
KPJI	**Karang Pucung** comp=Z,91nm,1.0s	**24.67**	**266**	P	**P**	**00 10 49.6**	**-1.4**
RMQ	**Roma**	**24.85**	**146**	P	**P**	**00 10 55.2**	**+2.6**
GIRL	**Giralia** baz=25,SNR=11	**25.02**	**227**	P	**P**	**00 10 54.3**	**+0.3**
GIRL	**Giralia**	**25.02**	**227**	P	**P**	**00 10 55.2**	**+1.1**
GIRL	**Giralia**	**25.02**	**227**	P	**P**	**00 10 54.9**	**+0.8**
MEEK	**Meekatharra** baz=25,SNR=18	**25.03**	**214**	P	**P**	**00 10 54.1**	**-0.1**
MEEK	**Meekatharra**	**25.03**	**214**	P	**P**	**00 10 55.0**	**+0.8**
FORT	**Forrest** baz=25,SNR=120	**25.16**	**192**	P	**P**	**00 10 55.8**	**+0.5**
FORT	**Forrest**	**25.16**	**192**	P	**P**	**00 10 55.2**	**-0.1**
FORT	**Forrest** comp=Z,430nm,0.7s	**25.16**	**192**	P	**P**	**00 10 56.4**	**+1.1**
EIDS	**Eidsvold** baz=25,SNR=53	**25.38**	**141**	P	**P**	**00 10 57.6**	**+0.3**
EIDS	**Eidsvold**	**25.38**	**141**	P	**P**	**00 10 58.5**	**+1.2**
EIDS	comp=Z,3μm,22.0s			IAms_20	IAms_20	00 21 19.2	
EIDS	**Eidsvold** comp=Z,211nm,1.1s	**25.38**	**141**	P	**P**	**00 10 59.2**	**+1.9**
BBJI	**Bungbulang** comp=Z,124nm,1.0s	**25.94**	**265**	P	**P**	**00 11 03.4**	**+0.7**
LEM	**Lembang** comp=Z,418nm,18.9s,baz=74,slow=44	**25.97**	**267**	LR	LR	00 24 27.5	
LEM	**Lembang** comp=Z,66nm,0.8s	**25.97**	**267**	P	**P**	**00 11 03.1**	**+0.1**
HNR	**Honiara**	**26.18**	**99**	P	**P**	**00 11 02.7**	**-2.0**
HNR	**Honiara**	**26.18**	**99**	P	**P**	**00 11 06.3**	**+1.6**
HNR	**Honiara**	**26.18**	**99**	P	**P**	**00 11 02.7**	**-2.0**
HNR	comp=Z,201nm,0.8s			pmax	pmax		
HNR	**Honiara** comp=Z,15μm,21.1s,baz=298,slow=38	**26.18**	**99**	LR	LR	00 21 58.8	
CNJI	**Cibinong** comp=Z,86nm,1.1s,comp=Z,1μm	**26.46**	**266**	P	**P**	**00 11 06.3**	**-0.9**
BBOO	**Buckleboo** baz=27,SNR=21	**26.70**	**176**	P	**P**	**00 11 09.4**	**+0.2**
BBOO	**Buckleboo**	**26.70**	**176**	P	**P**	**00 11 08.4**	**-0.9**
BBOO	comp=Z,72nm,0.7s			IAmb	IAmb	00 11 29.3	
BBOO	**Buckleboo**	**26.70**	**176**	P	**P**	**00 11 10.6**	**+1.4**
STKA	**Stephens Creek** baz=27,SNR=32	**26.71**	**165**	P	**P**	**00 11 09.8**	**+0.5**
STKA	**Stephens Creek**	**26.71**	**165**	P	**P**	**00 11 10.1**	**+0.7**
STKA	**Stephens Creek**	**26.71**	**165**	P	**P**	**00 11 10.5**	**+1.2**
STKA	**Stephens Creek**	**26.71**	**165**	P	**P**	**00 11 10.1**	**+0.7**
STKA	comp=Z,16nm,0.9s			pmax	pmax		
STKA	comp=Z,500nm,22.0s			MLR	MLR		
STKA	**Stephens Creek** comp=Z,36nm,0.7s,baz=353,slow=8.1,SNR=35	**26.71**	**165**	P	**P**	**00 11 09.8**	**+0.5**
STKA	comp=Z,276nm,18.9s,baz=336,slow=42 comp=Z,36nm,0.7s			LR	LR	00 24 16.1	
CBJI	**Citeko** comp=Z,87nm,0.7s	**26.73**	**268**	P	**P**	**00 11 09.9**	**+0.2**
KMBL	**Kambalda** baz=28,SNR=33	**

CAN	**Canberra**	**32.33**	**156**	P	**P**	**00 12 00.4**	**+1.1**
CAN	**Canberra**	**32.33**	**156**	P	**P**	**00 12 00.0**	**+0.7**
CAN				pmax	pmax		
	comp=Z,230nm,2.0s						
CAN				MLR	MLR		
	comp=Z,2µm,20.0s						
RKGY	**Rocky Gully**	**32.35**	**206**	P	**P**	**00 11 59.8**	**+0.5**
	baz=32,SNR=7.8						
RKGY	**Rocky Gully**	**32.35**	**206**	P	**P**	**00 11 59.9**	**+0.5**
KRJI	**Kerinci**	**32.43**	**276**	P	**P**	**00 12 02.5**	**+2.1**
	comp=Z,157nm,0.6s,comp=Z,15µm						
CNB	**Canberra Magne**	**32.47**	**156**	P	**P**	**00 12 02.4**	**+1.9**
BRAT	**Ballarat**	**32.69**	**165**	P	**P**	**00 12 04.3**	**+2.1**
	comp=Z,27nm,0.8s						
YHNB	**Yeheng**	**32.84**	**339**	P	**P**	**00 12 01.9**	**-1.9**
YHNB				IAmb	IAmb	00 12 21.4	
	comp=Z,45nm,0.8s						
YHNB	**Yeheng**	**32.84**	**339**	P	**P**	**00 12 05.6**	**+1.8**
KOUNC	**Koumac, New Ca**	**32.94**	**119**	P	**P**	**00 12 04.9**	**+0.2**
KOUNC				IAmb	IAmb	00 12 20.4	
	comp=Z,59nm,0.9s						
KOUNC	**Koumac, New Ca**	**32.94**	**119**	P	**P**	**00 12 06.1**	**+1.4**
JOW	**Kunigami**	**33.13**	**351**	P	**P**	**00 12 05.2**	**-1.0**
JOW				IAmb	IAmb	00 12 10.6	
	comp=Z,118nm,1.5s						
JOW	**Kunigami**	**33.13**	**351**	P	**P**	**00 12 06.6**	**+0.4**
JOW	**Kunigami**	**33.13**	**351**	P	**P**	**00 12 05.8**	**-0.4**
	comp=Z,18nm,0.7s,baz=190,slow=7.6,SNR=5.9						
JOW				LR	LR	00 23 29.8	
	comp=Z,750nm,21.8s,baz=145,slow=33						
	comp=Z,18nm,0.7s						
TOO	**Toolangi**	**33.14**	**163**	P	**P**	**00 12 06.7**	**+0.4**
	baz=33,SNR=4.4						
TOO	**Toolangi**	**33.14**	**163**	IAMs_20	IAMs_20	00 27 23.5	
	comp=Z,957nm,18.0s						
TOO	**Toolangi**	**33.14**	**163**	P	**P**	**00 12 07.7**	**+1.4**
BKNI	**Bangkinang**	**33.25**	**280**	P	**P**	**00 12 06.4**	**-1.2**
BKNI	**Bangkinang**	**33.25**	**280**	P	**P**	**00 12 08.2**	**+0.7**
	comp=Z,113nm,0.6s						
BKNI	**Bangkinang**	**33.25**	**280**	P	**P**	**00 12 06.8**	**-0.7**
	comp=Z,114nm,0.5s,comp=Z,6µm						
PDSI	**Padang**	**33.60**	**277**	P	**P**	**00 12 08.9**	**-1.7**
	comp=Z,45nm,0.9s						
JCJ	**Chichijima**	**33.96**	**14**	LR	LR	00 25 03.1	
	comp=Z,501nm,18.9s,baz=214,slow=35						
QZH	**Quanzhou**	**34.17**	**335**	⇓*i*P	**P**	**00 12 15.1**	**-0.2**
QZH				S	**S**	**00 17 39.4**	**-1.4**
QZH				pmax	pmax		
	comp=Z,120nm,1.0s						
QZH				LR	LR		
	comp=Z,630nm,16.5s						
QIZ	**Qiongzhong**	**34.30**	**317**	P	**P**	**00 12 16.0**	**-0.5**
QIZ				S	**S**	**00 17 47.3**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,51nm,0.8s						
QIZ				LR	LR		
	comp=Z,320nm,17.7s						
QIZ				LR	LR		
	comp=Z,270nm,19.6s						
QIZ				LR	LR		
	comp=Z,320nm,22.7s						
QIZ	**Qiongzhong**	**34.30**	**317**	IAmb	IAmb	00 12 17.4	
	comp=Z,42nm,0.8s						
QIZ	**Qiongzhong**	**34.30**	**317**	P	**P**	**00 12 15.1**	**-1.4**
IPM	**Ipoh**	**34.30**	**287**	P	**P**	**00 12 15.7**	**-1.0**
IPM				IAmb	IAmb	00 12 18.1	
	comp=Z,84nm,0.9s						
IPM	**Ipoh**	**34.30**	**287**	P	**P**	**00 12 17.3**	**+0.6**
SISI	**Saibi**	**34.88**	**276**	P	**P**	**00 12 19.2**	**-2.5**
	comp=Z,42nm,0.8s						
KULM	**Kulim**	**34.91**	**288**	P	**P**	**00 12 21.4**	**-0.5**
KULM				IAmb	IAmb	00 12 25.4	
	comp=Z,40nm,0.9s						
UBPT	**Khong Chiam**	**35.13**	**307**	P	**P**	**00 12 23.9**	**+0.2**
UBPT				IAmb	IAmb	00 12 25.1	
	comp=Z,60nm,0.9s						
UBPT	**Khong Chiam**	**35.13**	**307**	P	**P**	**00 12 24.3**	**+0.5**
DZM	**Mont Dzumac**	**35.37**	**120**	P	**P**	**00 12 25.3**	**-0.6**
DZM				IAmb	IAmb	00 12 44.4	
	comp=Z,65nm,0.9s						
DZM	**Mont Dzumac**	**35.37**	**120**	P	**P**	**00 12 27.3**	**+1.4**
DZM	**Mont Dzumac**	**35.37**	**120**	*e*P	**P**	**00 12 25.5**	**-0.4**
	comp=Z,131nm,0.9s						
DZM				*e*S	**S**	**00 17 58.4**	**-1.4**
	comp=Z,361nm,36.0s						
DZM				*e*SS	**SnSn**	**00 20 19.6**	**+0.5**
	comp=Z,315nm,25.9s						
DZM				*e*LR	LR	00 21 52.5	
	comp=Z,988nm,22.9s						
DZM	**Mont Dzumac**	**35.37**	**120**	LR	LR	00 27 10.6	
	comp=Z,662nm,18.9s,baz=318,slow=37						
ONTNC	**Ouen Toro**	**35.47**	**120**	P	**P**	**00 12 26.3**	**-0.3**
ONTNC	**Ouen Toro**	**35.47**	**120**	P	**P**	**00 12 28.0**	**+1.4**
YATNC	**Mamie plateau,**	**35.75**	**120**	P	**P**	**00 12 31.9**	**+2.8**
RPSI	**Rantau Prapat**	**35.84**	**283**	P	**P**	**00 12 29.5**	**-0.4**
RPSI				IAmb	IAmb	00 12 30.7	
	comp=Z,51nm,1.0s						
OUENC	**Ouen Island, N**	**35.84**	**120**	P	**P**	**00 12 31.3**	**+1.5**
PSI	**Prapat**	**35.86**	**283**	P	**P**	**00 12 29.0**	**-1.3**
PSI	**Prapat**	**35.86**	**283**	P	**P**	**00 12 29.5**	**-0.8**
PSI				pmax	pmax		
	comp=Z,51nm,1.0s						
PSI				MLR	MLR		
	comp=Z,200nm,22.0s						
PBSI	**Pulau Batu**	**35.89**	**278**	P	**P**	**00 12 29.3**	**-1.1**
	comp=Z,59nm,1.3s						
GSI	**Gunungsitoli**	**36.84**	**280**	P	**P**	**00 12 37.0**	**-1.5**
GSI				IAmb	IAmb	00 12 48.5	
	comp=Z,49nm,1.0s						
GSI	**Gunungsitoli**	**36.84**	**280**	P	**P**	**00 12 38.0**	**-0.5**
GSI	**Gunungsitoli**	**36.84**	**280**	P	**P**	**00 12 37.2**	**-1.3**
	comp=Z,50nm,0.7s						
SRIT	**Nakonsritamara**	**37.02**	**293**	P	**P**	**00 12 40.5**	**+0.5**
SRIT				IAmb	IAmb	00 12 41.9	
	comp=Z,122nm,0.9s						
SRIT	**Nakonsritamara**	**37.02**	**293**	P	**P**	**00 12 41.5**	**+1.5**
KCSI	**Kotacane, Aceh**	**37.16**	**284**	P	**P**	**00 12 37.9**	**-3.3**
	comp=Z,23nm,0.8s						
SURA	**Surathani**	**37.21**	**294**	P	**P**	**00 12 42.2**	**+0.6**
NAYO	**Nakonayok**	**38.00**	**302**	P	**P**	**00 12 49.7**	**+1.4**
SNSI	**Sinabang, Aceh**	**38.30**	**282**	P	**P**	**00 12 47.3**	**-3.5**
	comp=Z,40nm,0.8s						
LHMI	**Lhok Sumawe**	**38.41**	**286**	P	**P**	**00 12 51.3**	**-0.5**
LHMI	**Lhok Sumawe**	**38.41**	**286**	P	**P**	**00 12 52.6**	**+0.9**
LHMI	**Lhok Sumawe**	**38.41**	**286**	P	**P**	**00 12 51.5**	**-0.2**
	comp=Z,178nm,0.9s,comp=Z,2µm						
NONG	**Nongkai**	**38.55**	**309**	P	**P**	**00 12 53.3**	**+0.4**
MLSI	**Meulaboh, Aceh**	**38.67**	**285**	P	**P**	**00 12 53.1**	**-0.8**
	comp=Z,161nm,1.0s						
JNU	**Nakatsue**	**39.06**	**356**	P	**P**	**00 12 57.4**	**+0.4**
JNU	**Nakatsue**	**39.06**	**356**	P	**P**	**00 12 58.0**	**+1.0**
JNU	**Nakatsue**	**39.06**	**356**	LR	LR	00 30 06.6	
	comp=Z,417nm,19.0s,baz=160,slow=38						
JHJ	**Hachijo jima 2**	**39.39**	**8**	LR	LR	00 27 02.8	
	comp=Z,950nm,21.6s,baz=103,slow=33						
CNSH	**ChangSha**	**39.53**	**330**	⇑P	**P**	**00 13 00.8**	**-0.1**
CNSH				pmax	pmax		
	comp=Z,46nm,1.2s						
JMN	**Monobe**	**39.58**	**0**	P	**P**	**00 13 01.9**	**+0.6**
JMN				IAMs_20	IAMs_20	00 26 32.6	
	comp=Z,819nm,21.0s						
JMN	**Monobe**	**39.58**	**0**	P	**P**	**00 13 03.0**	**+1.7**
SRDT	**SRDT**	**39.88**	**301**	P	**P**	**00 13 04.8**	**+0.7**
SLVN	**Son La**	**39.98**	**314**	P	**P**	**00 13 04.8**	**-0.1**
NJ2	**Nanjing**	**40.47**	**340**	⇓*i*P	**P**	**00 13 10.1**	**+1.4**
NJ2				pP	**pP**	**00 13 13.3**	**-0.5**
NJ2				sP	**pwP**	**00 13 17.4**	**-0.4**
NJ2				S	**S**	**00 19 17.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,77nm,1.2s						
NJ2				LR	LR		
	comp=Z,770nm,6.5s						
NJ2				LR	LR		
	comp=Z,400nm,4.2s						
NJ2				LR	LR		
	comp=Z,790nm,8.5s						
JTU	**Tsushima**	**40.58**	**354**	IAMs_20	IAMs_20	00 30 26.3	
	comp=Z,889nm,22.0s						
WHN	**Wuhan**	**40.87**	**334**	⇓*i*P	**P**	**00 13 13.4**	**+1.4**
WHN				sP	**pwP**	**00 13 22.3**	**+1.2**
WHN				S	**S**	**00 19 19.0**	**-3.5**
WHN				pmax	pmax		
	comp=Z,350nm,1.0s						
WHN				LR	LR		
	comp=Z,1µm,23.9s						
INU	**Inuyama**	**41.31**	**4**	P	**P**	**00 13 14.8**	**-0.8**
INU				IAMs_20	IAMs_20	00 28 05.4	
	comp=Z,1µm,21.0s						
INU	**Inuyama**	**41.31**	**4**	P	**P**	**00 13 16.0**	**+0.5**
JGF	**Kuroka**	**41.58**	**4**	P	**P**	**00 13 17.0**	**-0.8**
JGF	**Kuroka**	**41.58**	**4**	P	**P**	**00 13 20.0**	**+2.2**
GYA	**Guiyang**	**41.64**	**322**	⇓*i*P	**P**	**00 13 18.9**	**+0.3**
GYA				S	**S**	**00 19 34.8**	**+0.4**
GYA				pmax	pmax		
	comp=Z,98nm,0.8s						
GYA				pmax	pmax		
	comp=Z,190nm,4.1s						
GYA				LR	LR		
	comp=Z,230nm,9.9s						
GYA				LR	LR		
	comp=Z,490nm,9.4s						
GYA				LR	LR		
	comp=Z,620nm,9.4s						
CRAI	**Chiangrai**	**41.94**	**309**	P	**P**	**00 13 20.5**	**-0.4**
CM31	**Chiang Mai Arr**	**42.09**	**306**	P	**P**	**00 13 22.7**	**+0.5**
CM31				IAmb	IAmb	00 13 24.0	
	comp=Z,68nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.09**	**306**	P	**P**	**00 13 22.1**	**-0.1**
	comp=Z,31nm,0.8s,baz=136,slow=7.3,SNR=177						
CMAR				PcP	**PcP**	**00 15 17.9**	**+1.0**
	comp=Z,5.0nm,0.7s,baz=156,slow=3.0,SNR=4.8						
CMAR				ScP	**ScP**	**00 19 05.8**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=142,slow=3.4,SNR=1.9						
CMAR				LR	LR	00 32 01.7	
	comp=Z,142nm,21.5s,baz=115,slow=38						
	comp=Z,31nm,0.8s						
CHTO	**Chiang Mai**	**42.27**	**307**	P	**P**	**00 13 23.9**	**+0.2**
CHTO				IAmb	IAmb	00 13 24.8	
	comp=Z,43nm,0.8s						
CHTO	**Chiang Mai**	**42.27**	**307**	P	**P**	**00 13 24.6**	**+0.9**
CHTO	**Chiang Mai**	**42.27**	**307**	P	**P**	**00 13 23.9**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,43nm,0.8s						
CHTO	**Chiang Mai**	**42.27**	**307**	P	**P**	**00 13 24.2**	**+0.5**
CHTO				P	**P**	**00 13 24.2**	**+0.5**
MJAR	**Matsushiro Arr**	**42.59**	**5**	P	**P**	**00 13 25.1**	**-1.0**
	comp=Z,22nm,0.9s,baz=189,slow=8.8,SNR=35						
MJAR				PcP	**PcP**	**00 15 18.3**	**+0.1**
	comp=Z,7.4nm,0.9s,baz=192,slow=2.6,SNR=4.9						
MJAR				LR	LR	00 28 57.6	
	comp=Z,866nm,21.3s,baz=189,slow=33						
	comp=Z,22nm,0.9s						
MAJO	**Matsushiro**	**42.59**	**5**	P	**P**	**00 13 24.9**	**-1.1**
MAJO				IAmb	IAmb	00 13 26.6	
	comp=Z,44nm,0.8s						
MAJO	**Matsushiro**	**42.59**	**5**	IAMs_20	IAMs_20	00 28 24.3	
	comp=Z,989nm,21.0s						
MAJO	**Matsushiro**	**42.59**	**5**	P	**P**	**00 13 25.5**	**-0.5**
MAJO	**Matsushiro**	**42.59**	**5**	P	**P**	**00 13 24.9**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,44nm,0.8s						
MJB9	**Matsu-Tunnel**	**42.59**	**5**	IAmb	IAmb	00 13 27.5	
	comp=Z,44nm,0.8s						
TJN	**Taejon**	**42.64**	**352**	P	**P**	**00 13 26.2**	**-0.2**
TJN	**Taejon**	**42.64**	**352**	P	**P**	**00 13 27.1**	**+0.7**
TJN	**Taejon**	**42.64**	**352**	P	**P**	**00 13 26.2**	**-0.2**
ENH	**Enshi**	**42.97**	**329**	IAmb	IAmb	00 13 30.3	
	comp=Z,71nm,0.7s						
ENH	**Enshi**	**42.97**	**329**	P	**P**	**00 13 29.9**	**+0.7**
KMI	**Kunming**	**43.25**	**317**	⇓P	**P**	**00 13 32.8**	**+1.0**
KMI				sP	sP	00 13 37.3	-2.6
KMI				PcP	**PcP**	**00 15 22.3**	**+1.4**
KMI				S	**S**	**00 19 55.5**	**-2.8**
KMI				pmax	pmax		
	comp=Z,72nm,0.9s						
KMI				LR	LR		
	comp=Z,250nm,18.2s						
KMI				LR	LR		
	comp=Z,190nm,20.4s						
KMI				LR	LR		
	comp=Z,290nm,20.6s						
KSAR	**Wonju Array Be**	**43.62**	**353**	P	**P**	**00 13 35.2**	**+0.9**
KSAR	**Wonju Array Be**	**43.62**	**353**	P	**P**	**00 13 35.2**	**+0.9**
KSRS	**Korea Array**	**43.63**	**353**	P	**P**	**00 13 35.0**	**+0.7**
	comp=Z,49nm,1.1s,baz=173,slow=9.9,SNR=45						
KSRS				PcP	**PcP**	**00 15 21.6**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=177,slow=5.0,SNR=4.3						
KSRS				LR	LR	00 32 16.9	
	comp=Z,351nm,20.0s,baz=175,slow=37						
	comp=Z,49nm,1.1s						
KS19	**Wonju Array Si**	**43.69**	**353**	P	**P**	**00 13 35.0**	**+0.1**
KS19				IAmb	IAmb	00 13 36.5	
	comp=Z,159nm,1.6s						
JMM	**Marumori**	**44.20**	**8**	P	**P**	**00 13 38.6**	**-0.4**
JMM	**Marumori**	**44.20**	**8**	P	**P**	**00 13 39.6**	**+0.7**
PZH	**PanZhiHua**	**44.83**	**318**	⇓P	**P**	**00 13 44.3**	**-0.1**
PZH				pmax	pmax		
	comp=Z,70nm,1.2s						
PZH				pmax	pmax		
	comp=Z,210nm,4.7s						
TIA	**Tai'an**	**44.85**	**341**	⇓P	**P**	**00 13 44.3**	**+0.1**
TIA				pmax	pmax		
	comp=Z,71nm,0.8s						
TIA				LR	LR		
	comp=Z,250nm,11.2s						
TIA				LR	LR		
	comp=Z,190nm,10.6s						
TIA				LR	LR		
	comp=Z,330nm,10.0s						
LYN	**LuoYang**	**45.12**	**335**	⇓*i*P	**P**	**00 13 47.1**	**+0.7**
LYN				pP	sP	00 13 52.3	-2.3
LYN				sP	pwP	00 13 55.3	-0.3
LYN				S	**S**	**00 20 27.3**	**+2.5**
LYN				sS	sS	00 20 34.3	-0.6
LYN				pmax	pmax		
	comp=Z,170nm,0.8s						
LYN				pmax	pmax		
	comp=Z,650nm,4.5s						
LYN				LR	LR		
	comp=Z,1µm,8.6s						
LYN				LR	LR		
	comp=Z,340nm,8.9s						
LYN				LR	LR		
	comp=Z,970nm,9.3s						
DL2	**Dalian**	**46.13**	**347**	P	**P**	**00 13 54.4**	**+0.1**
DL2				pmax	pmax		
	comp=Z,79nm,0.7s						
TNCH	**TengChong**	**46.14**	**313**	⇓P	**P**	**00 13 55.0**	**+0.1**
TNCH				pP	pP	00 13 58.1	-2.2
TNCH				S	**S**	**00 20 41.0**	**+0.7**
TNCH				pmax	pmax		
	comp=Z,78nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,270nm,5.0s						
TNCH				LR	LR		
	comp=Z,180nm,8.8s						
TNCH				LR	LR		
	comp=Z,260nm,8.1s						
TNCH				LR	LR		
	comp=Z,310nm,10.8s						
MND	**Mandalay**	**46.23**	**308**	P	**P**	**00 13 55.5**	**+0.1**
XAN	**Xi'an**	**46.29**	**331**	⇓P	**P**	**00 13 55.6**	**-0.1**
XAN				pP	pP	00 14 00.3	-0.6
XAN				sP	sP	00 14 02.3	-1.6
XAN				pmax	pmax		
	comp=Z,120nm,0.9s						
XAN				LR	LR		
	comp=Z,450nm,9.6s						
XAN				LR	LR		
	comp=Z,650nm,10.3s						
CD2	**Chengdu**	**46.63**	**324**	P	**P**	**00 13 58.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
HNS	**HongShan**	**46.75**	**339**	⇓P	**P**	**00 13 59.4**	**+0.3**
HNS				S	**S**	**00 20 51.4**	**+3.3**
HNS				pmax	pmax		
	comp=Z,180nm,1.0s						
HNS				LR	LR		
	comp=Z,350nm,12.6s						
HNS				LR	LR		
	comp=Z,340nm,12.3s						
HNS				LR	LR		
	comp=Z,470nm,12.0s						
TIY	**Taiyuan**	**47.87**	**337**	⇓P	**P**	**00 14 08.4**	**+0.4**
TIY				pmax	pmax		
	comp=Z,200nm,0.8s						
TIY				LR	LR		
	comp=Z,310nm,8.2s						
TIY				LR	LR		
	comp=Z,260nm,9.6s						
TIY				LR	LR		
	comp=Z,370nm,11.0s						
MSHR	**Mys Shultsa**	**48.47**	**357**	*i*P	**P**	**00 14 12.1**	**-0.3**
MSHR				pmax	pmax		
	comp=Z,41nm,0.8s						
MSHR				MLR	MLR		
	comp=Z,269nm,18.0s						
PSTR	**Posyet**	**48.56**	**357**	*i*P	**P**	**00 14 12.7**	**-0.4**
SNY	**Shenyang**	**48.56**	**350**	⇓P	**P**	**00 14 13.0**	**-0.1**
SNY				S	**S**	**00 21 13.3**	**-0.4**
SNY				pmax	pmax		
	comp=Z,51nm,1.3s						
SNY				pmax	pmax		
	comp=Z,210nm,4.6s						
SNY				LR	LR		
	comp=Z,250nm,19.8s						
SNY				LR	LR		
	comp=Z,340nm,16.1s						
SNY				LR	LR		
	comp=Z,500nm,24.8s						
BJT	**Baijiatuau**	**48.63**	**342**	P	**P**	**00 14 13.1**	**-0.7**
BJT	**Baijiatuau**	**48.63**	**342**	P	**P**	**00 14 14.7**	**+0.9**
BJT	**Baijiatuau**	**48.63**	**342**	P	**P**	**00 14 13.1**	**-0.7**
BJT				pmax	pmax		
	comp=Z,138nm,0.8s						
BJI	**Beijing**	**48.65**	**342**	P	**P**	**00 14 14.3**	**+0.4**
BJI				pP	**pP**	**00 14 18.5**	**-0.6**
BJI				sP	**sP**	**00 14 20.5**	**-1.7**
BJI				PcP	**PcP**	**00 15 39.3**	**+0.1**
BJI				PP	**PP**	**00 16 06.0**	**-1.1**
BJI				PcS	**PcS**	**00 19 31.4**	**-3.8**
BJI				S	**S**	**00 21 16.8**	**+1.7**
BJI				pmax	pmax		
	comp=Z,88nm,0.8s						
BJI				pmax	pmax		
	comp=Z,190nm,3.7s						
BJI				LR	LR		
	comp=Z,140nm,19.0s						
BJI				LR	LR		
	comp=Z,68nm,17.1s						
BJI				LR	LR		
	comp=Z,190nm,19.0s						
JCZ	**Jackson Bay**	**48.73**	**147**	P	**P**	**00 14 17.0**	**+2.3**
QRZ	**Quartz Range**	**48.96**	**141**	IAMs_20	IAMs_20	00 34 52.8	
	comp=Z,3µm,21.0s						
DSZ	**Denniston Nort**	**49.04**	**142**	IAMs_20	IAMs_20	00 35 08.9	
	comp=Z,2µm,19.0s						
HIZ	**Hauiti**	**49.24**	**137**	P	**P**	**00 14 19.3**	**+0.7**
	comp=Z,44nm,1.1s						
NNZ	**Nelson**	**49.71**	**141**	IAMs_20	IAMs_20	00 34 34.7	
	comp=Z,2µm,19.0s						
RPZ	**Rata Peaks**	**49.78**	**145**	P	**P**	**00 14 21.6**	**-0.9**
RPZ	**Rata Peaks**	**49.78**	**145**	P	**P**	**00 14 24.6**	**+2.0**
	comp=Z,31nm,0.8s						
RPZ	**Rata Peaks**	**49.78**	**145**	LR	LR	00 35 30.8	
	comp=Z,1µm,19.0s,baz=307,slow=36						
USA0B	**Ussuriysk Arra**	**50.06**	**358**	P	**P**	**00 14 25.0**	**+0.4**
USA0B	**Ussuriysk Arra**	**50.06**	**358**	P	**P**	**00 14 25.0**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,362nm,2.0s						
USRK	**Ussuriysk Ar.**	**50.06**	**358**	P	**P**	**00 14 24.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**50.06**	**358**	P	**P**	**00 14 25.1**	**+0.5**
	comp=Z,34nm,0.7s,baz=179,slow=6.6,SNR=78						
USRK				LR	LR	00 35 15.4	
	comp=Z,296nm,19.4s,baz=178,slow=36						
	comp=Z,34nm,0.7s						
TUWZ	**Tuamarina**	**50.18**	**141**	P	**P**	**00 14 25.7**	**0.0**
CN2	**Changchun**	**50.20**	**352**	*e*P	**P**	**00 14 25.3**	**-0.3**
CN2				*e*S	**S**	**00 21 42.0**	**+5.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,14.1s						
LZH	**Lanzhou**	**50.45**	**328**	⇓*i*P	**P**	**00 14 29.3**	**+1.4**
LZH				sP	pwP	00 14 36.1	-1.1
LZH				pmax	pmax		
	comp=Z,120nm,1.5s						
LZH				pmax	pmax		
	comp=Z,200nm,4.8s						
LZH				LR	LR		
	comp=Z,320nm,9.6s						
LZH				LR	LR		
	comp=Z,210nm,9.3s						
LZH				LR	LR		
	comp=Z,480nm,10.7s						
KHZ	**Kahutara**	**50.48**	**142**	IAMs_20	IAMs_20	00 35 08.1	
	comp=Z,2µm,21.0s						
KHZ	**Kahutara**	**50.48**	**142**	P	**P**	**00 14 29.3**	**+1.4**
GVZ	**Greta Valley S**	**50.49**	**143**	IAMs_20	IAMs_20	00 36 10.4	
	comp=Z,2µm,20.0s						
ASAJ	**Asahikawa**	**50.59**	**8**	LR	LR	00 34 11.9	
	comp=Z,306nm,21.5s,baz=306,slow=34						
MDJ	**Mudanjiang**	**50.59**	**356**	P	**P**	**00 14 28.5**	**0.0**
MDJ				pmax	pmax		
	comp=Z,100nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,490nm,3.6s						
MDJ	**Mudanjiang**	**50.59**	**356**	P	**P**	**00 14 28.6**	**0.0**
URZ	**Urewera**	**50.67**	**136**	LR	LR	00 36 59.9	
	comp=Z,630nm,18.3s,baz=101,slow=37						
BKZ	**Black Stump Fm**	**50.68**	**137**	P	**P**	**00 14 30.9**	**+1.4**
	comp=Z,28nm,1.0s						
RTZ	**Ruatahuna**	**50.75**	**136**	IAmb	IAmb	00 14 45.6	
	comp=Z,58nm,1.3s						
BHW	**Baring Head**	**50.76**	**140**	IAMs_20	IAMs_20	00 35 48.4	
	comp=Z,2µm,19.0s						
MRZ	**Mangatainoka R**	**50.82**	**139**	P	**P**	**00 14 30.1**	**-0.4**
MRZ				IAmb	IAmb	00 14 43.9	
	comp=Z,153nm,1.8s						
HHC	**Hu-ho-hao-te**	**50.93**	**338**	*e*P	**P**	**00 14 32.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,99nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,3.5s						
HHC				LR	LR		
	comp=Z,170nm,13.0s						
HHC				LR	LR		
	comp=Z,200nm,13.8s						
HHC				LR	LR		
	comp=Z,320nm,13.9s						
TEY	**Ternei**	**50.93**	**3**	*e*P	**P**	**00 14 31.1**	**-0.1**
RAO	**Raoul Island**	**51.05**	**123**	LR	LR	00 32 50.5	
	comp=Z,311nm,20.3s,baz=68,slow=32						
YUK	**Yuzh-Kuril'sk**	**51.05**	**11**	*i*P	**P**	**00 14 31.7**	**-0.4**
BFZ	**Birch Farm**	**51.27**	**139**	P	**P**	**00 14 34.5**	**+0.6**
	comp=Z,36nm,2.7s						
BTO	**Baotou**	**51.31**	**337**	⇓*i*P	**P**	**00 14 35.8**	**+1.6**
BTO				pP	**sP**	**00 14 40.3**	**-2.2**
BTO				sP	**pwP**	**00 14 42.8**	**-0.7**
BTO				PP	**PP**	**00 16 34.1**	**+2.7**
BTO				S	**S**	**00 21 55.8**	**+3.4**
BTO				sS	**sS**	**00 22 03.3**	**+0.8**
BTO				SS	**SS**	**00 25 30.8**	**+2.4**
BTO				pmax	pmax		
	comp=Z,120nm,0.9s						
BTO				pmax	pmax		
	comp=Z,420nm,6.2s						
BTO				LR	LR		
	comp=Z,720nm,11.9s						
BTO				LR	LR		
	comp=Z,360nm,15.8s

comp=Z,32nm,17.4s
XLT LR LR
comp=Z,260nm,20.4s
XLT LR LR
comp=Z,460nm,20.8s
YSS Yuzh-Sakhalins 53.39 8 P **P** **00 14 49.2 -0.2**
YSS IAmb IAmb 00 14 51.5
comp=Z,76nm,1.1s
YSS Yuzh-Sakhalins 53.39 8 P **P** **00 14 51.5 +2.1**
YSS Yuzh-Sakhalins 53.39 8 *e*P **P** **00 14 50.4 +1.0**
YSS *e*S **S** **00 22 18.7 -1.8**
YSS *e*PS **PKiKP** **00 22 38.0 +4.3**
YSS *e*SS **SKiKP** **00 26 05.8 +0.5**
YSS pmax pmax
comp=Z,50nm,1.0s
YSS MLR MLR
comp=Z,600nm,17.0s
LSA Lhasa 54.18 313 IAmb IAmb 00 14 58.4
comp=Z,50nm,0.8s
LSA Lhasa 54.18 313 P **P** **00 14 57.3 +1.2**
LSA Lhasa 54.18 313 P **P** **00 14 57.3 +1.2**
PALK Pallekele 54.55 283 P **P** **00 14 58.3 -0.3**
PALK IAmb IAmb 00 15 00.1
comp=Z,68nm,1.2s
PALK Pallekele 54.55 283 P **P** **00 14 58.3 -0.3**
PALK pmax pmax
comp=Z,68nm,1.3s
PALK Pallekele 54.55 283 LR LR 00 39 59.0
comp=Z,231nm,19.9s,baz=226,slow=38
GTA Gaotai 55.05 328 ⇓P **P** **00 15 03.0 +1.2**
GTA pP pwP 00 15 11.9 +1.6
GTA PcP **PcP** **00 16 04.3 +1.0**
GTA S **S** **00 22 41.3 -2.2**
GTA pmax pmax
comp=Z,130nm,0.9s
GTA LR LR
comp=Z,99nm,15.6s
GTA LR LR
comp=Z,130nm,16.4s
GTA LR LR
comp=Z,220nm,16.4s
KLR Kul'dur 55.09 358 *de*P **P** **00 15 02.0 +0.2**
KLR pmax pmax
comp=Z,30nm,0.8s
KLR MLR MLR
comp=Z,208nm,20.0s
UGL Uglegorsk 55.39 7 *e*P **P** **00 15 05.1 +1.2**
UGL pmax pmax
comp=Z,410nm,1.2s
UGL pmax pmax
comp=E,220nm,0.9s
UGL pmax pmax
comp=N,80nm,0.7s
UGL pmax pmax
comp=Z,230nm,1.0s
GOMU GeErMu 55.66 322 P **P** **00 15 07.6 +1.0**
GOMU pP sP 00 15 13.1 -1.9
GOMU PcP **PcP** **00 16 07.8 +1.7**
GOMU S **S** **00 22 50.1 -2.2**
GOMU pmax pmax
comp=Z,19nm,1.2s
GOMU LR LR
comp=Z,160nm,17.5s
GOMU LR LR
comp=Z,140nm,17.0s
GOMU LR LR
comp=Z,230nm,17.2s
HEH HeiHe 56.36 355 *e*P **P** **00 15 10.4 -0.4**
HEH pmax pmax
comp=Z,39nm,1.3s
HEH pmax pmax
comp=Z,190nm,5.4s
HEH LR LR
comp=Z,320nm,16.9s
HEH LR LR
comp=Z,260nm,17.0s
HEH LR LR
comp=Z,370nm,18.9s
HIA Hailar 56.44 349 P **P** **00 15 12.4 +0.9**
HIA Hailar 56.44 349 *i* P **P** **00 15 11.3 -0.2**
HIA pmax pmax
comp=Z,12nm,1.0s
GRNR Gornyy 56.65 2 ⇓*i*P **P** **00 15 13.7 +0.7**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,30nm,0.9s
TYV Tymovskoe 57.22 7 *e*P **P** **00 15 18.7 +1.8**
TYV *e*S **S** **00 23 17.4 +5.8**
TYV pmax pmax
comp=Z,2μm,5.5s
TYV pmax pmax
comp=Z,251nm,1.4s
TYV smax smax
comp=N,3μm,6.2s
TYV smax smax
comp=E,5μm,6.2s
ULN Ulaanbaatar 58.62 339 P **P** **00 15 27.9 +0.8**
ULN Ulaanbaatar 58.62 339 P **P** **00 15 27.9 +0.8**
ULN pmax pmax
comp=Z,107nm,1.2s
ULN Ulaanbaatar 58.62 339 P **P** **00 15 28.2 +1.1**
SONM Songino Array 58.83 339 IAmb IAmb 00 15 29.9
comp=Z,32nm,0.7s
SONM Songino Array 58.83 339 P **P** **00 15 29.2 +0.7**
comp=Z,27nm,0.6s,baz=155,slow=8.1,SNR=257
SONM LR LR 00 42 41.8
comp=Z,126nm,20.5s,baz=124,slow=38
SONM PKP2bc 00 45 14.9
comp=Z,1.0nm,0.9s,baz=318,slow=4.0,SNR=6.6
comp=Z,27nm,0.6s
HYB Hyderabad 59.28 294 *e*P **P** **00 15 32.0 0.0**
HYB *e*PcS **PcS** **00 20 22.0 -0.5**
ZEA Zeya 59.83 356 *e*P **P** **00 15 35.2 +0.1**
ZEA pmax pmax
comp=Z,100nm,1.8s
ZEA pmax pmax
comp=N,30nm,1.3s
ZEA pmax pmax
comp=Z,40nm,1.2s
ZEA MLR MLR
comp=Z,200nm,13.0s
DGAR Diego Garcia 60.84 265 P **P** **00 15 43.9 +1.1**
DGAR Diego Garcia 60.84 265 P **P** **00 15 43.9 +1.1**
DGAR pmax pmax
comp=Z,153nm,0.9s
DGAR Diego Garcia 60.84 265 P **P** **00 15 44.5 +1.7**
DGAR P **P** **00 15 44.5 +1.7**
ZAK Zakamensk 62.08 338 *e*P **P** **00 15 50.7 0.0**
ZAK pmax pmax
comp=Z,43nm,1.2s
PETK Petropavlovsk- 62.34 16 P **P** **00 15 52.9 +0.7**
comp=Z,19nm,0.9s,baz=179,slow=7.4,SNR=11
PETK LR LR 00 41 08.8
comp=Z,137nm,20.7s,baz=196,slow=34
comp=Z,19nm,0.9s
PET Petropavlovsk 62.54 17 *i* P **P** **00 15 52.5 -0.9**
PET pmax pmax
comp=Z,60nm,1.2s
IRK Irkutsk 63.28 340 *e*P **P** **00 15 58.6 +0.1**
IRK pmax pmax
comp=Z,99nm,1.8s
WMQ Urumqi 64.71 325 ⇓P **P** **00 16 09.3 +1.2**
WMQ sP pwP 00 16 16.8 0.0
WMQ pmax pmax
comp=Z,230nm,0.9s
WMQ pmax pmax
comp=Z,460nm,3.8s
WMQ LR LR
comp=Z,190nm,18.3s
BOD Bodaibo 65.65 349 ⇑*i*P **P** **00 16 13.7 -0.1**
BOD pmax pmax
comp=Z,62nm,1.8s
RAR Rarotonga 65.92 110 LR LR 00 41 21.1
comp=Z,110nm,22.0s,baz=300,slow=33
MA2 Magadan 66.82 9 P **P** **00 16 21.3 0.0**
MA2 IAmb IAmb 00 16 23.2
comp=Z,37nm,0.9s
MA2 Magadan 66.82 9 P **P** **00 16 21.3 0.0**
MA2 pmax pmax
comp=Z,37nm,0.9s
SHEM Shemya Is, Ala 67.82 25 LR LR 00 44 32.1
comp=Z,89nm,20.1s,baz=280,slow=34
YAK Yakutsk 67.97 358 P **P** **00 16 28.4 -0.1**
YAK Yakutsk 67.97 358 *e*P **P** **00 16 28.7 +0.2**
YAK *e**PP **pP** **00 16 33.4 -0.7**
YAK *e* 00 16 54.9
YAK *e* 00 18 58.1
YAK *e*PPP PPP 00 20 31.6
YAK *e*S **S** **00 25 28.0 +1.7**
YAK *e**SS sS 00 25 49.9 +14
YAK *e* 00 26 27.2
YAK *e*SS **SS** **00 29 49.8 +1.0**
YAK *e*SSS SSS 00 32 53.9
YAK pmax pmax
comp=Z,135nm,1.5s
YAK pmax pmax
comp=N,40nm,1.4s
YAK pmax pmax
comp=E,9.0nm,1.6s
YAK pmax pmax
comp=Z,306nm,6.9s
YAK pmax pmax
comp=N,166nm,5.9s
YAK pmax pmax
comp=E,168nm,6.3s
YAK smax smax
comp=N,204nm,7.2s
YAK smax smax
comp=E,104nm,3.9s
YAK Yakutsk 67.97 358 LR LR 00 44 57.3
comp=E,202nm,20.7s,baz=128,slow=35
ZSN Zaisan 68.48 327 ⇓*i*P **P** **00 16 32.8 +0.6**
comp=E,30nm,1.0s,baz=327
ZSN Zaisan 68.48 327 *d i*P **P** **00 16 32.7 +0.6**
ZSN pmax pmax
comp=Z,30nm,1.0s
DGZ Jazzator, Alta 68.52 330 *i* P **P** **00 16 32.4 -0.1**
DGZ pmax pmax
comp=Z,131nm,1.5s
DGZ MLR MLR
comp=Z,214nm,23.0s
SHLS Shalkode 69.31 321 ⇓*i*P **P** **00 16 36.9 -0.6**
baz=321
SHLS Shalkode 69.31 321 *i* P **P** **00 16 36.9 -0.6**
SHLS pmax pmax
comp=Z,38nm,0.6s
PDGK Podgornoye 69.38 321 P **P** **00 16 38.1 +0.2**
NIL Nilore 69.47 309 P **P** **00 16 38.8 +0.2**
NIL Nilore 69.47 309 P **P** **00 16 38.8 +0.2**
NIL pmax pmax
comp=Z,89nm,1.1s
NIL Nilore 69.47 309 P **P** **00 16 39.3 +0.7**
MK31 Makanchi Array 69.54 325 P **P** **00 16 39.4 +0.7**
MK31 Makanchi Array 69.54 325 P **P** **00 16 39.4 +0.7**
MK31 pmax pmax
comp=Z,87nm,0.9s
MKAR Makanchi Array 69.54 325 P **P** **00 16 39.2 +0.5**
MKAR Makanchi Array 69.54 325 P **P** **00 16 39.5 +0.8**
comp=Z,92nm,0.7s,baz=122,slow=7.7,SNR=969
MKAR PKPPKP **P'P'df** **00 44 53.0 +7.5**
comp=Z,0.4nm,0.8s,baz=345,slow=4.1,SNR=3.6
comp=Z,92nm,0.7s
UZB Uzynbulak 69.58 320 ⇓*i*P **P** **00 16 40.1 +0.8**
comp=Z,52nm,0.9s,baz=320
UZB Uzynbulak 69.58 320 *d i*P **P** **00 16 40.0 +0.8**
UZB pmax pmax
comp=Z,52nm,0.9s
TARG Taragay, Kyrgy 69.67 319 IAmb IAmb 00 16 50.1
comp=Z,32nm,0.9s
MAKZ Makanchi 69.73 325 P **P** **00 16 39.8 -0.1**
MAKZ Makanchi 69.73 325 P **P** **00 16 39.8 -0.1**
MAKZ pmax pmax
comp=Z,136nm,1.0s
KSH Kashi 69.89 316 P **P** **00 16 43.0 +1.8**
KSH pP sP 00 16 47.8 -1.9
KSH sP pwP 00 16 53.0 +3.1
KSH pmax pmax
comp=Z,92nm,0.9s
KSH pmax pmax
comp=Z,210nm,5.2s
SATY Saty 69.93 320 ⇓*i*P **P** **00 16 42.2 +0.9**
comp=Z,52nm,0.9s,baz=320
SATY Saty 69.93 320 *d i*P **P** **00 16 42.2 +0.9**
SATY pmax pmax
comp=Z,52nm,0.9s
KPKS Kokpek 69.95 321 ⇓*i*P **P** **00 16 42.2 +0.8**
comp=Z,60nm,1.0s,baz=320
KPKS Kokpek 69.95 321 *d i*P **P** **00 16 42.2 +0.8**
KPKS pmax pmax
comp=Z,60nm,1.0s
ZHN Zhinishke 69.96 320 ⇓*i*P **P** **00 16 42.3 +0.8**
baz=320
ZHN Zhinishke 69.96 320 *i* P **P** **00 16 42.3 +0.8**
ZHN pmax pmax
comp=Z,15nm,0.7s
SEY Seymchan 70.26 9 *de*P **P** **00 16 43.6 +0.9**
SEY pmax pmax
comp=Z,53nm,1.0s
SEY Seymchan 70.26 9 LR LR 00 45 44.1
comp=Z,188nm,20.9s,baz=234,slow=34
NRN Naryn 70.73 318 IAmb IAmb 00 16 48.2
comp=Z,40nm,0.9s
MDOK Medeo 70.85 320 *i* P **P** **00 16 48.0 +1.0**
baz=320
MDOK Medeo 70.85 320 *i* P **P** **00 16 48.0 +1.0**
ARXS Arharly 70.86 321 *e*P **P** **00 16 47.1 +0.2**
TDK Taldyqorghan 70.89 322 ⇓*i*P **P** **00 16 48.0 +0.9**
comp=Z,60nm,0.8s,baz=322
TDK Taldyqorghan 70.89 322 *d i*P **P** **00 16 47.9 +0.9**
TDK pmax pmax
comp=Z,60nm,0.8s
ULHL Ulahol 70.94 319 P **P** **00 16 48.6 +0.9**
SNR=10
CHKK Chushkaly 71.22 320 ⇓*i*P **P** **00 16 49.5 +0.4**
baz=320
CHKK Chushkaly 71.22 320 ⇓*i*P **P** **00 16 49.4 +0.4**
TKM2 Tokmak 2 71.68 319 P **P** **00 16 53.0 +0.9**
SNR=69
TKM2 Tokmak 2 71.68 319 P **P** **00 16 52.2 +0.1**
KBK Karagaybulak 71.98 318 P **P** **00 16 55.0 +1.1**
SNR=34
UCH Uchtor 72.08 318 P **P** **00 16 56.1 +1.3**
SNR=78
FRU1 Bishkek 72.26 318 IAmb IAmb 00 16 56.8
comp=Z,21nm,0.7s
AAK Ala-Archa 72.28 318 P **P** **00 16 56.2 +0.6**
SNR=44
AAK Ala-Archa 72.28 318 P **P** **00 16 55.9 +0.3**
AAK IAmb IAmb 00 16 57.8
comp=Z,51nm,1.0s
AAK Ala-Archa 72.28 318 *i* P **P** **00 16 56.5 +0.9**
SNR=62
AAK Ala-Archa 72.28 318 *de*P **P** **00 16 56.3 +0.6**
AAK pmax pmax
comp=Z,59nm,1.0s
AAK Ala-Archa 72.28 318 P **P** **00 16 56.7 +1.1**
AAK P **P** **00 16 56.7 +1.1**
ZAA0 Zalesovo Array 72.44 332 P **P** **00 16 55.6 -0.5**
ZALV Zalesovo Beam 72.44 332 P **P** **00 16 55.7 -0.5**
ZALV Zalesovo Beam 72.44 332 P **P** **00 16 55.9 -0.3**
comp=Z,88nm,0.9s,baz=114,slow=5.4,SNR=319
ZALV LR LR 00 54 47.0
comp=Z,42nm,18.2s,baz=138,slow=41
comp=Z,88nm,0.9s
SGDS Sogindy 72.55 319 ⇓*i*P **P** **00 16 57.5 +0.4**
baz=319
SGDS Sogindy 72.55 319 *i* P **P** **00 16 57.5 +0.4**
SGDS pmax pmax
comp=Z,10.0nm,0.6s
USP Ospenovka 72.55 319 P **P** **00 16 57.9 +0.8**
SNR=86
ARSB Arslanbob 72.73 317 IAmb IAmb 00 17 00.3
comp=Z,31nm,0.8s
EKS2 Erkin-Say 72.76 318 P **P** **00 16 59.7 +1.2**
SNR=75
VNDA Vanda 72.95 174 P **P** **00 16 59.0 +0.2**
VNDA Vanda 72.95 174 P **P** **00 16 59.0 +0.2**
VNDA pmax pmax
comp=Z,18nm,1.1s
VNDA Vanda 72.95 174 P **P** **00 16 59.2 +0.5**
comp=Z,7.6nm,0.8s,baz=322,slow=6.1,SNR=12
VNDA LR LR 00 49 15.4
comp=Z,312nm,18.4s,baz=343,slow=36
comp=Z,7.6nm,0.8s
BTLS Baital 73.63 320 ⇓*i*P **P** **00 17 03.9 +0.4**
baz=320
BTLS Baital 73.63 320 *i* P **P** **00 17 03.8 +0.4**
BTLS pmax pmax
comp=Z,27nm,1.1s
KURBB Kurchatov Arra 73.71 327 P **P** **00 17 02.9 -0.8**
KURBB Kurchatov Arra 73.71 327 P **P** **00 17 03.9 +0.2**
comp=Z,44nm,0.7s,baz=124,slow=4.7,SNR=384
comp=Z,44nm,0.7s
KURK Kurchatov 73.71 327 P **P** **00 17 03.9 +0.2**
KURK Kurchatov 73.71 327 P **P** **00 17 03.9 +0.2**
KURK pmax pmax
comp=Z,75nm,1.0s
KURK Kurchatov 73.71 327 P **P** **00 17 04.0 +0.2**
MWH Moku'aweowe 73.99 68 IAMs_20 IAMs_20 00 44 59.8
comp=Z,1μm,18.0s
DZA Taraz 74.49 317 *e*P **P** **00 17 09.2 +0.6**
comp=Z,57nm,0.8s,baz=317
DZA Taraz 74.49 317 *e*P **P** **00 17 09.1 +0.6**
DZA pmax pmax
comp=Z,57nm,0.8s
SIMJ Simiganj 74.51 313 P **P** **00 17 08.3 -0.5**
IUG luzhnay 75.08 316 ⇓*i*P **P** **00 17 12.8 +0.7**
comp=Z,79nm,1.1s,baz=316
IUG luzhnay 75.08 316 *d i*P **P** **00 17 12.8 +0.7**
IUG pmax pmax
comp=Z,79nm,1.1s
KK31 Karatay Array 75.13 317 P **P** **00 17 12.2 0.0**
KK31 Karatay Array 75.13 317 P **P** **00 17 12.2 0.0**
KK31 pmax pmax
comp=Z,66nm,0.9s
TBI Tubuai 75.52 112 *e*P **P** **00 17 15.4 +0.6**
comp=Z,270nm,34.5s
TBI *e*S **S** **00 26 49.5 -5.4**
comp=Z,456nm,40.5s
TBI *e*SS **SS** **00 31 45.1 -0.8**
comp=Z,485nm,37.0s
TBI *e*LR LR 00 40 30.3
comp=Z,834nm,28.8s
PPT2 Papeete2 75.52 107 *e*SS SS 00 31 49.9 +3.6
comp=Z,290nm,27.2s
PPT2 *e*LR LR 00 40 20.5
comp=Z,556nm,27.0s
PPT2 *e*LR LR 00 40 32.5
comp=Z,768nm,26.0s
PPT Papeete 75.52 107 LR LR 00 45 37.3
comp=Z,159nm,22.0s,baz=339,slow=32
RER Riviere de l'E 76.66 250 P **P** **00 17 21.9 +0.5**
RER Riviere de l'E 76.66 250 P **P** **00 17 23.6 +2.1**
BRZS Berezniki 76.67 325 ⇓*i*P **P** **00 17 20.9 +0.1**
baz=324
BRZS Berezniki 76.67 325 *i* P **P** **00 17 20.8 0.0**
BRZS pmax pmax
comp=Z,21nm,0.9s
NGCH Negor - Chabah 77.04 298 P **P** **00 17 24.8 +1.4**
BILL Bilibino 77.40 12 P **P** **00 17 23.9 -0.7**
BILL Bilibino 77.40 12 *e*P **P** **00 17 25.3 +0.8**
BILL pmax pmax
comp=Z,21nm,2.5s
TIXI Tiksi 77.62 358 IAMs_20 IAMs_20 00 52 01.6
comp=Z,435nm,20.0s
TIXI Tiksi 77.62 358 *ce*P **P** **00 17 24.9 -0.8**
TIXI pmax pmax
comp=Z,21nm,0.7s
TIXI MLR MLR
comp=Z,354nm,18.0s
TIXI Tiksi 77.62 358 LR LR 00 52 21.8
comp=Z,311nm,19.1s,baz=196,slow=36
UNV Unalaska Valle 77.75 32 P **P** **00 17 27.5 +0.8**
baz=242
MSEY Mahe Island 77.87 267 P **P** **00 17 28.5 +0.1**
MSEY IAmb IAmb 00 17 30.0
comp=Z,27nm,0.9s
MSEY Mahe Island 77.87 267 *i* P **P** **00 17 29.2 +0.8**
SNR=8.3
MSEY Mahe Island 77.87 267 P **P** **00 17 28.5 +0.1**
MSEY pmax pmax
comp=Z,27nm,0.9s
MSEY Mahe Island 77.87 267 P **P** **00 17 29.1 +0.8**
MSEY P **P** **00 17 29.1 +0.8**
JLN Jalan Bani Buh 77.89 294 P **P** **00 17 28.5 +0.3**
SNR=5.1
HRA Herat 78.34 307 P **P** **00 17 30.7 -0.1**
HRA IAmb IAmb 00 17 31.9
comp=Z,40nm,0.8s
WBK Wadi Bani Khal 78.39 294 P **P** **00 17 31.8 +0.8**
WBK P **P** **00 17 31.8 +0.8**
WSAR Wadi Sarin 78.82 295 LR LR 00 54 21.1
comp=Z,49nm,21.2s,baz=110,slow=37
MHTO MHTO 78.99 293 P **P** **00 17 34.5 +0.2**
SNR=11
MHTO P **P** **00 17 34.5 +0.2**
SNR=11
JMDO Jabal Madar 79.13 294 P **P** **00 17 35.6 +0.5**
DQM DQM 79.19 292 P **P** **00 17 36.0 +0.5**
BVA0 Borovoye Array 79.29 327 *i* P **P** **00 17 34.9 -0.4**
BVAR Borovoye Array 79.29 327 P **P** **00 17 35.3 0.0**
comp=Z,35nm,0.7s,baz=124,slow=7.9,SNR=130
BVAR LR LR 00 55 29.1
comp=Z,90nm,18.8s,baz=130,slow=38
comp=Z,35nm,0.7s
SMDO Samad 79.31 295 P **P** **00 17 36.9 +0.7**
SNR=7.3
BIDO Bidbid 79.33 295 P **P** **00 17 37.2 +1.0**
SNR=10.0
BRVK Borovoye 79.36 327 P **P** **00 17 35.5 -0.1**
BRVK IAmb IAmb 00 17 36.9
comp=Z,44nm,0.8s
BRVK Borovoye 79.36 327 *ce*P **P** **00 17 35.7 0.0**
BRVK pmax pmax
comp=Z,96nm,1.7s
BRVK Borovoye 79.36 327 P **P** **00 17 36.1 +0.4**
BRVK P **P** **00 17 36.1 +0.4**
FALS False Pass 79.81 32 P **P** **00 17 38.5 +0.4**
baz=244
BSY Bisya 80.02 294 P **P** **00 17 40.1 +0.2**
SNR=5.4
BSY P **P** **00 17 40.1 +0.2**
SNR=5.4
JASK Jask - Hormozg 80.03 297 P **P** **00 17 41.8 +1.9**
SHAO Shalim 80.64 289 P **P** **00 17 43.7 +0.4**
SHAO Shalim 80.64 289 P **P** **00 17 44.0 +0.6**
SHAO P **P** **00 17 44.0 +0.6**
ARQ Araqi 80.74 295 P **P** **00 17 44.2 +0.4**
ARQ P **P** **00 17 44.2 +0.4**
SOHO SOHO 80.88 296 *i* P **P** **00 17 44.8 +0.3**
SNR=32
SOHO SOHO 80.88 296 P **P** **00 17 44.9 +0.5**
DMTO DMTO 81.23 289 P **P** **00 17 46.9 +0.4**
MDH Madha 81.31 297 P **P** **00 17 46.4 -0.3**
UOSS Minazif 81.32 296 P **P** **00 17 46.2 -0.7**
UOSS IAmb IAmb 00 17 47.6
comp=Z,42nm,0.9s
UOSS Minazif 81.32 296 *i* P **P** **00 17 47.0 +0.1**
SNR=8.6
UOSS Minazif 81.32 296 P **P** **00 17 46.9 +0.1**
HATD Hatta, Dubai 81.37 296 *i* P **P** **00 17 47.3 +0.1**
SNR=7.5
HATD Hatta, Dubai 81.37 296 P **P** **00 17 47.2 +0.1**
HATD P **P** **00 17 47.2 +0.1**
ASHO Ashiyiah 81.41 296 *i* P **P** **00 17 47.7 +0.3**
SNR=11
ASHO Ashiyiah 81.41 296 P **P** **00 17 47.9 +0.5**
MSFE Esma-Masafi 81.44 297 *i* P **P** **00 17 48.7 +0.3**
SNR=14
MASF Masafi 81.44 297 P **P** **00 17 48.1 +0.6**
MASF P **P** **00 17 48.1 +0.6**
SDPT Sand Point 81.56 32 P **P** **00 17 47.7 +0.3**
baz=246
ALNE Al Ain 81.57 295 *i* P **P** **00 17 48.1 0.0**
SNR=21
ALNE Al Ain 81.57 295 P **P** **00 17 48.6 +0.4**
SNR=8.3
SHME Shamm 81.59 297 *i* P **P** **00 17 48.6 +0.4**
SNR=12
SHME Shamm 81.59 297 P **P** **00 17 48.9 +0.7**
NRIK Noril'sk 81.59 345 P **P** **00 17 47.4 +0.1**
NRIK IAMs_20 IAMs_20 00 57 18.3
comp=Z,438nm,19.0s
NRIK Noril'sk 81.59 345 *ce*P **P** **00 17 47.3 +0.1**
NRIK pmax pmax
comp=Z,102nm,1.0s
NRIK Noril'sk 81.59 345 P **P** **00 17 47.5 +0.2**
comp=Z,51nm,0.8s,baz=127,slow=6.1,SNR=94
comp=Z,51nm,0.8s
NAZ Nazwa, Dubai 81.82 296 *i* P **P** **00 17 49.6 +0.1**
SNR=6.1
NAZ Nazwa, Dubai 81.82 296 P **P** **00 17 49.4 0.0**
CHNA Chernabura Isl 81.82 32 P **P** **00 17 49.3 +0.5**
baz=247
FAQ Al Faqa, Dubai 81.83 296 *i* P **P** **00 17 49.4 -0.2**
SNR=7.7
FAQ Al Faqa, Dubai 81.83 296 P **P** **00 17 49.8 +0.2**

SNR=5.3
UMZA Um Al Zommool 81.86 294 P **P** **00 17 49.4 -0.3**
UMZA P **P** **00 17 49.4 -0.3**
RBK Rabkut 81.89 289 P **P** **00 17 50.0 -0.1**
SNR=15
UMQ Umm Al-Quwin 81.91 297 P **P** **00 17 51.0 +1.0**
ASUD Al Ashush, Dub 82.05 296 *i* P **P** **00 17 51.5 +0.7**
SNR=12
ASUD Al Ashush, Dub 82.05 296 P **P** **00 17 51.4 +0.7**
ASUD P **P** **00 17 51.4 +0.7**
DOK Doka 82.14 290 P **P** **00 17 51.1 -0.2**
SNR=13
DOK P **P** **00 17 51.1 -0.2**
SNR=13
M13K Dall Lake 82.32 26 P **P** **00 17 51.7 +0.4**
baz=243
AJN Ajban 82.34 296 P **P** **00 17 52.3 +0.1**
AJN P **P** **00 17 52.3 +0.1**
WHFO Wadi Hawf 82.37 289 P **P** **00 17 52.2 -0.3**
SNR=17
S14K Fog Glacier 82.41 31 P **P** **00 17 52.4 +0.4**
baz=247
GEYT Alibeck 82.47 309 P **P** **00 17 53.1 +0.5**
comp=Z,30nm,0.8s,baz=130,slow=4.6,SNR=56
comp=Z,30nm,0.8s
GYA0B ALIBECK ARRAY 82.47 309 IAmb IAmb 00 17 54.6
comp=Z,50nm,1.0s
ABTO Aybut 82.73 288 P **P** **00 17 54.6 +0.2**
SNR=18
ABTO P **P** **00 17 54.6 +0.2**
SNR=18
O14K Tigyukauivet M 82.77 28 P **P** **00 17 54.8 +1.1**
baz=245
N14K Kuskokwak Cree 82.86 27 P **P** **00 17 54.7 +0.7**
baz=245
CHGN Chignik 83.00 31 P **P** **00 17 55.4 +0.5**
baz=248
TNA Tin City 83.01 21 P **P** **00 17 56.1 +1.3**
baz=236
L14K Kuka Creek 83.03 26 P **P** **00 17 56.0 +1.1**
baz=244
M14K Bethel 83.09 26 P **P** **00 17 56.4 +1.2**
baz=244
MZWR Madinat Zayed 83.20 295 P **P** **00 17 57.1 +0.4**
J14K Nanvaranak Lak 83.30 24 P **P** **00 17 57.4 +1.1**
baz=243
O15K Ungalikthiuk R 83.41 28 P **P** **00 17 57.7 +0.7**
baz=246
ANM Nome 83.44 22 P **P** **00 17 58.3 +1.2**
baz=241
MZR Muzera 83.44 294 P **P** **00 17 58.9 +0.9**
F14K Arctic Creek 83.53 21 P **P** **00 17 58.6 +1.1**
baz=240
M15K Kasigluk River 83.63 27 P **P** **00 17 58.6 +0.6**
baz=246
N15K Kwethluk River 83.69 27 P **P** **00 17 59.4 +1.0**
baz=246
L15K Ungalak Mounta 83.69 26 P **P** **00 17 59.5 +1.2**
baz=245
QSPA South Pole Qui 83.90 180 P **P** **00 17 59.0 -0.6**
QSPA South Pole Qui 83.90 180 P **P** **00 17 59.9 +0.2**
comp=Z,30nm,0.6s,baz=326,slow=1.8,SNR=74
QSPA LR LR 00 54 41.3
comp=Z,561nm,20.7s,baz=358,slow=35
comp=Z,30nm,0.6s
K15K Wolf Creek Mou 83.94 25 IAmb IAmb 00 18 01.4
comp=Z,42nm,1.1s
K15K Wolf Creek Mou 83.94 25 P **P** **00 18 00.9 +1.3**
baz=245
AB31 Akbulak array 84.11 321 *i* P **P** **00 17 59.9 -0.9**
ABKAR Akbulak array 84.11 321 P **P** **00 18 00.1 -0.7**
ABKAR IAmb IAmb 00 18 01.6
comp=Z,39nm,0.8s
GHWR Ruwais 84.14 295 P **P** **00 18 02.1 +0.6**
GHWR P **P** **00 18 02.1 +0.6**
G15K Niukluk 84.15 22 P **P** **00 18 01.1 +0.5**
baz=242
P16K Nushagak River 84.23 29 P **P** **00 18 01.9 +0.7**
baz=248
F15K North Star Dit 84.26 21 IAmb IAmb 00 18 03.1
comp=Z,46nm,1.2s
F15K North Star Dit 84.26 21 P **P** **00 18 02.1 +0.9**
baz=242
JRN Qarnain Island 84.32 296 P **P** **00 18 02.6 +0.2**
O16K Kokwok River B 84.39 28 P **P** **00 18 02.6 +0.6**
baz=248
N16K Nishlik Lake 84.41 27 P **P** **00 18 03.2 +1.0**
baz=247
M16K Timber Creek 84.54 27 IAmb IAmb 00 18 04.7
comp=Z,31nm,0.9s
M16K Timber Creek 84.54 27 P **P** **00 18 03.6 +0.9**
baz=247
L16K Owhat River 84.58 26 P **P** **00 18 03.5 +0.6**
baz=247
H16K Elim 84.67 23 P **P** **00 18 03.7 +0.4**
baz=244
J16K Anvik River 84.74 24 IAmb IAmb 00 18 06.2
comp=Z,35nm,0.9s
J16K Anvik River 84.74 24 P **P** **00 18 05.1 +1.4**
baz=245
ABPO Ambohimpanom 84.77 251 P **P** **00 18 04.4 -0.6**
ABPO IAmb IAmb 00 18 06.8
comp=Z,54nm,1.6s
ABPO Ambohimpanom 84.77 251 P **P** **00 18 04.4 -0.6**
ABPO pmax pmax
comp=Z,54nm,1.7s
O17K Koliganek Bris 84.93 28 P **P** **00 18 05.7 +1.0**
baz=249
VOI Vohitsoka 84.94 249 IAmb IAmb 00 18 07.4
comp=Z,28nm,0.7s
VOI Vohitsoka 84.94 249 P **P** **00 18 06.6 +0.8**
VOI Vohitsoka 84.94 249 P **P** **00 18 06.8 +1.0**
I17K Unalakleet 84.96 24 IAmb IAmb 00 18 07.2
comp=Z,47nm,1.1s
I17K Unalakleet 84.96 24 P **P** **00 18 05.9 +1.2**
baz=245,SNR=5.5
G16K Koyuk River 84.96 22 IAmb IAmb 00 18 06.5
comp=Z,40nm,1.0s
G16K Koyuk River 84.96 22 P **P** **00 18 05.3 +0.5**
baz=244
Q17K Contact Creek 84.98 30 P **P** **00 18 04.5 -0.6**
baz=250
P17K Kvichak River 85.03 29 P **P** **00 18 04.5 -0.8**
baz=250
N17K Nushagak Hills 85.16 28 P **P** **00 18 06.6 +0.8**
baz=249
SLWR Sila 85.23 295 P **P** **00 18 07.6 +0.6**
L17K Donlin 85.26 26 P **P** **00 18 07.4 +1.1**
baz=248
TAOE Nuku Hiva Isla 85.26 98 *e* LR LR 00 44 51.7
comp=Z,302nm,25.0s
C16K Lisburne Hills 85.26 19 P **P** **00 18 06.7 +0.5**
baz=241
SII Sitkinak Islan 85.29 32 P **P** **00 18 07.0 +0.3**
baz=252
M17K Holitna River 85.36 27 IAmb IAmb 00 18 09.5
comp=Z,44nm,1.2s
M17K Holitna River 85.36 27 P **P** **00 18 07.1 +0.3**
baz=248
J17K VABM Dome 85.42 25 IAmb IAmb 00 18 09.4
comp=Z,44nm,0.9s
J17K VABM Dome 85.42 25 P **P** **00 18 07.9 +0.8**
baz=247
K17K Iditarod 85.48 25 IAmb IAmb 00 18 09.7
comp=Z,50nm,1.1s
K17K Iditarod 85.48 25 P **P** **00 18 08.5 +1.1**
baz=248,SNR=9.1
AKTO Aktyubinsk 85.63 322 P **P** **00 18 07.7 -0.8**
AKTO Aktyubinsk 85.63 322 LR LR 00 59 04.8
comp=Z,99nm,22.0s,baz=68,slow=38
G17K Kiwalik Mounta 85.65 22 P **P** **00 18 08.5 +0.3**
baz=245
P18K Big Mountain, 85.69 29 P **P** **00 18 07.8 -0.8**
P18K Big Mountain, 85.69 29 P **P** **00 18 07.7 -0.8**
baz=250
H17K Granite Mounta 85.70 23 IAmb IAmb 00 18 10.4
comp=Z,43nm,0.9s
H17K Granite Mounta 85.70 23 P **P** **00 18 09.0 +0.6**
baz=246,SNR=17
N18K Kilae Creek 85.81 28 IAmb IAmb 00 18 11.3
comp=Z,33nm,1.4s
N18K Kilae Creek 85.81 28 P **P** **00 18 10.0 +0.9**
baz=250
F17K Baldwin Pennin 85.83 21 P **P** **00 18 09.3 +0.3**
baz=245
O18K Koktuh Hills 85.85 29 IAmb IAmb 00 18 11.7
comp=Z,18nm,0.8s
O18K Koktuh Hills 85.85 29 P **P** **00 18 10.1 +0.7**
baz=250
E17K Hotham Inlet 85.90 21 P **P** **00 18 10.2 +0.8**
baz=244
SVE Sverdlovsk 85.92 328 *e* P **P** **00 18 08.8 -0.9**
SVE pmax pmax
comp=Z,21nm,1.0s
RDOG Red Dog Mine 85.96 20 P **P** **00 18 10.0 +0.3**
baz=243
OHAK Old Harbor 85.97 31 IAmb IAmb 00 18 11.3
comp=Z,37nm,1.0s
OHAK Old Harbor 85.97 31 P **P** **00 18 09.7 -0.2**
baz=252
L18K Granite Mounta 85.99 26 IAmb IAmb 00 18 12.1
comp=Z,29nm,1.0s
L18K Granite Mounta 85.99 26 P **P** **00 18 09.9 -0.1**
baz=249
C17K DeLong Mountai 86.07 19 P **P** **00 18 10.0 -0.3**
baz=243
SVW2 Sparrevohn 86.09 27 IAmb IAmb 00 18 12.6
comp=Z,31nm,1.2s
SMRA Abu-Samra 86.11 295 P **P** **00 18 11.6 +0.3**
M18K Stony River 86.12 27 P **P** **00 18 11.5 +0.9**
baz=250
SHMA Al-Shehemyia 86.15 296 P **P** **00 18 11.9 +0.3**
Q19K Cape Douglas, 86.31 30 P **P** **00 18 11.7 0.0**
baz=252
O19K Port Alsworth 86.38 28 P **P** **00 18 12.2 +0.4**
baz=251
H18K Honhosa River 86.39 23 IAmb IAmb 00 18 13.9
comp=Z,53nm,1.5s
H18K Honhosa River 86.39 23 P **P** **00 18 11.9 0.0**
baz=247
J18K Innoko River 86.43 25 IAmb IAmb 00 18 13.7
comp=Z,38nm,1.0s
J18K Innoko River 86.43 25 P **P** **00 18 12.4 +0.3**
baz=249
E18K Tukpahlearik C 86.48 21 P **P** **00 18 13.1 +0.9**
baz=245
F18K Selawik 86.48 22 P **P** **00 18 12.4 +0.2**
baz=246,SNR=5.2
KDAK Kodiak Island 86.50 31 P **P** **00 18 12.9 +0.4**
baz=253
N19K Bonanza Creek 86.51 28 P **P** **00 18 13.0 +0.3**
baz=251,SNR=13
TTA Tatalina 86.54 26 P **P** **00 18 12.3 -0.4**
TTA IAmb IAmb 00 18 14.4
comp=Z,30nm,1.0s
TTA Tatalina 86.54 26 P **P** **00 18 13.2 +0.5**
baz=250
TTA Tatalina 86.54 26 P **P** **00 18 12.3 -0.4**
TTA pmax pmax
comp=Z,30nm,1.0s
SAKB Bahrain 86.55 296 P **P** **00 18 13.7 +0.2**
G18K Tagagawik 86.57 22 P **P** **00 18 13.0 +0.2**
baz=247,SNR=6.1
P19K Oil Pt 86.73 29 P **P** **00 18 14.0 +0.2**
baz=252
L19K White Mountain 86.79 26 IAmb IAmb 00 18 15.9
comp=Z,47nm,1.0s
L19K White Mountain 86.79 26 P **P** **00 18 14.6 +0.7**
baz=251
C18K Utukok River 86.80 19 P **P** **00 18 13.4 -0.5**
baz=244
Q20K Shuyak Island 86.83 30 P **P** **00 18 14.4 +0.2**
baz=253
ARU Arti 86.90 327 P **P** **00 18 12.7 -1.8**
ARU Arti 86.90 327 *d i* P **P** **00 18 12.7 -1.8**
ARU 00 21 34.1
ARU S **SKSac** **00 28 39.3 -1.2**
ARU pmax pmax
comp=Z,19nm,0.9s
M19K Big River Lodg 86.90 27 IAmb IAmb 00 18 16.6
comp=Z,28nm,1.0s
M19K Big River Lodg 86.90 27 P **P** **00 18 15.2 +0.8**
baz=251
B18K Kokolik River 86.91 19 P **P** **00 18 15.2 +0.9**
baz=244
J19K Poorman 87.07 25 IAmb IAmb 00 18 17.1
comp=Z,30nm,1.1s
J19K Poorman 87.07 25 P **P** **00 18 16.1 +0.8**
baz=250
G19K Purcell Mounta 87.25 22 P **P** **00 18 16.4 +0.3**
baz=248,SNR=8.3
F19K Shaleruckik Mo 87.25 22 IAmb IAmb 00 21 11.0
comp=Z,35nm,2.0s
F19K Shaleruckik Mo 87.25 22 P **P** **00 18 16.2 +0.1**
baz=248
H19K Roundabout Mou 87.27 23 P **P** **00 18 16.9 +0.8**
baz=249
L20K Farewell, AK 87.31 26 P **P** **00 18 17.3 +0.9**
baz=252
M20K Styx River 87.46 27 P **P** **00 18 17.9 +0.6**
baz=252
K20K Telida 87.51 25 IAmb IAmb 00 18 19.4
comp=Z,26nm,0.9s
K20K Telida 87.51 25 P **P** **00 18 18.4 +1.0**
baz=251
C19K Lookout Ridge 87.52 19 IAmb IAmb 00 18 18.5
comp=Z,19nm,0.9s
C19K Lookout Ridge 87.52 19 P **P** **00 18 17.5 +0.1**
baz=246
N20K Mount Spurr 87.68 28 P **P** **00 18 17.9 -0.5**
baz=253
E19K Redstone River 87.69 21 IAmb IAmb 00 18 19.6
comp=Z,18nm,0.8s
E19K Redstone River 87.69 21 P **P** **00 18 18.4 +0.2**
baz=248
J20K Nowinta River 87.74 25 IAmb IAmb 00 18 20.5
comp=Z,35nm,1.1s
J20K Nowinta River 87.74 25 P **P** **00 18 19.5 +1.1**
baz=251
D19K Kuna River 87.77 20 IAmb IAmb 00 18 19.1
comp=Z,16nm,0.9s
D19K Kuna River 87.77 20 P **P** **00 18 18.2 -0.3**
baz=247
I20K Naaghedeneel 87.81 24 P **P** **00 18 18.6 -0.1**
I20K Naaghedeneel 87.81 24 P **P** **00 18 19.0 +0.3**
baz=251
H20K Anotleneega Mo 87.88 23 P **P** **00 18 19.4 +0.3**
baz=250
BRSE Bradley Lake S 87.97 29 P **P** **00 18 19.6 -0.1**
baz=254
F20K Avaraart Lake 88.08 22 P **P** **00 18 20.3 +0.3**
baz=250,SNR=9.3
PPLA Purkeypile 88.18 26 P **P** **00 18 20.8 0.0**
baz=253
E20K Nigu River 88.34 21 P **P** **00 18 21.5 +0.1**
baz=249
D20K Etivluk River 88.36 20 P **P** **00 18 21.1 -0.2**
baz=249
SUA Susitna One 88.43 28 P **P** **00 18 21.5 -0.4**
baz=254
O22K Cooper Landing 88.66 29 P **P** **00 18 22.8 0.0**
baz=255,SNR=7.3
B20K Meade River 88.66 19 P **P** **00 18 22.2 -0.4**
baz=248
SEW Seward 88.69 29 P **P** **00 18 23.2 +0.2**
baz=256
G21K Allakaket 88.74 23 P **P** **00 18 23.3 +0.1**
baz=252
H21K Melozitna Rive 88.75 23 P **P** **00 18 24.0 +0.8**
baz=252
M22K Willow 88.80 28 P **P** **00 18 24.1 +0.6**
baz=255
I21K Tanana 88.94 24 P **P** **00 18 24.5 +0.4**
baz=253
F21K Alatna River 88.97 22 P **P** **00 18 24.9 +0.6**
baz=252
C21K Knifeblade Rid 89.14 20 P **P** **00 18 24.8 -0.1**
baz=250
E21K Killik River 89.18 21 P **P** **00 18 25.0 -0.2**
baz=251
PMR Palmer 89.21 28 P **P** **00 18 24.9 -0.5**
PMR IAmb IAmb 00 18 26.7
comp=Z,22nm,0.8s
PMR Palmer 89.21 28 P **P** **00 18 25.0 -0.4**
baz=256
PMR Palmer 89.21 28 P **P** **00 18 24.9 -0.5**
PMR pmax pmax
comp=Z,21nm,0.8s
A21K Barrow 89.31 18 P **P** **00 18 25.4 -0.2**
baz=249
B21K Ikpikpuk River 89.35 19 P **P** **00 18 26.2 +0.3**
baz=251
H22K Ishtalitna Cre 89.38 23 P **P** **00 18 26.6 +0.4**
baz=254
G22K Bettles 89.62 22 P **P** **00 18 27.9 +0.6**
baz=254
P23K Montague Islan 89.67 30 P **P** **00 18 28.3 +0.7**
baz=257
D22K Ayikyak River 89.77 20 P **P** **00 18 27.9 -0.1**
baz=252
WAT1 Susitna Watana 89.77 27 P **P** **00 18 28.5 +0.4**
baz=256
M23K Glacier View 89.91 28 P **P** **00 18 29.3 +0.5**
baz=257
I23K Minto, Yukon-K 89.99 24 IAmb IAmb 00 18 48.6
comp=Z,48nm,1.8s
I23K Minto, Yukon-K 89.99 24 P **P** **00 18 29.5 +0.5**
baz=256
WAT6 Susitna Watana 90.08 27 P **P** **00 18 29.7 0.0**
baz=257
G23K Bananza Creek 90.13 23 P **P** **00 18 29.8 +0.1**
baz=255
ELIB Princess Elisa 90.48 197 *d* P **P** **00 18 32.1 +0.7**
D23K Nanushuk River 90.48 20 P **P** **00 18 31.5 +0.2**
baz=254
E23K Chandalar 90.63 21 P **P** **00 18 32.2 +0.1**
baz=255,SNR=12
KLU Klutina 90.69 28 P **P** **00 18 32.8 +0.3**
baz=259
M24K Tolsona, Glenn 90.69 28 P **P** **00 18 32.8 +0.4**
baz=258
H24K Noodor Dome 90.76 24 P **P** **00 18 32.5 -0.2**
baz=257
RAYN Ar Rayn 90.78 293 P **P** **00 18 32.7 -1.0**
RAYN Ar Rayn 90.78 293 *i* P **P** **00 18 33.6 -0.2**
SNR=24
RAYN Ar Rayn 90.78 293 P **P** **00 18 32.7 -1.0**
RAYN pmax pmax
comp=Z,48nm,1.0s
RAYN Ar Rayn 90.78 293 P **P** **00 18 34.0 +0.3**
POKR Poker Flat Res 90.78 25 P **P** **00 18 32.7 0.0**
baz=257
TOLK Toolik Lake Re 90.79 21 IAmb IAmb 00 18 33.5
comp=Z,13nm,0.9s
TOLK Toolik Lake Re 90.79 21 P **P** **00 18 32.6 -0.2**
baz=255,SNR=6.3
HDA Harding Lake 90.83 25 P **P** **00 18 32.3 -0.7**
baz=258
IL31 90.93 25 P **P** **00 18 30.7 -2.6**
ILAR Eielson Array 90.93 25 P **P** **00 18 31.8 -1.7**
comp=Z,4.7nm,0.8s,baz=266,slow=4.2,SNR=26
ILAR PKKPbc **PKKPdf** **00 35 58.0 +0.6**
comp=Z,0.5nm,0.6s,baz=44,slow=0.3,SNR=7.6
ILAR LR LR 00 55 31.5
comp=Z,95nm,20.0s,baz=252,slow=33
comp=Z,4.7nm,0.8s
G24K Hadweenzic Riv 91.11 23 P **P** **00 18 34.3 +0.1**
baz=257
F24K Squaw Lake 91.14 22 P **P** **00 18 33.8 -0.6**
baz=257
D24K Happy Valley 91.18 20 IAmb IAmb 00 18 35.3
comp=Z,14nm,0.9s
D24K Happy Valley 91.18 20 P **P** **00 18 34.5 +0.1**
baz=256
K24K Donnelly Dome 91.21 26 P **P** **00 18 34.4 -0.3**
baz=259
BMRM Bremner River 91.22 29 P **P** **00 18 34.5 -0.4**
baz=260
HARP HAARP 91.22 27 P **P** **00 18 34.7 -0.1**
baz=259
N25K Chitina, Valde 91.33 28 P **P** **00 18 35.0 -0.5**
baz=260
SEKA Sheki 91.35 311 P **P** **00 18 36.0 0.0**
C24K Franklin Bluff 91.36 20 P **P** **00 18 34.9 -0.4**
baz=256
J25K Salcha River, 91.54 25 P **P** **00 18 35.9 -0.4**
baz=259
ZKTA Zakatala 91.83 311 P **P** **00 18 38.4 +0.2**
CRQE Cirque 91.91 29 P **P** **00 18 38.1 -0.1**
baz=261
GANJ Ganja 91.95 310 P **P** **00 18 39.2 +0.4**
F25K Christian Rive 91.99 22 P **P** **00 18 38.4 0.0**
baz=259,SNR=5.9
D25K Kavik River 92.07 20 P **P** **00 18 38.0 -0.7**
baz=258
E25K Arctic Village 92.12 22 IAmb IAmb 00 18 40.2
comp=Z,14nm,1.1s
E25K Arctic Village 92.12 22 P **P** **00 18 39.2 +0.2**
baz=259,SNR=11
KIRV Kirov 92.17 329 *ce* P **P** **00 18 38.1 -1.1**
KIRV Kirov 92.17 329 LR LR 01 03 50.1
comp=Z,103nm,19.8s,baz=104,slow=38
J26L Joseph Creek 92.29 25 IAmb IAmb 00 18 41.0
comp=Z,21nm,1.4s
J26L Joseph Creek 92.29 25 P **P** **00 18 39.9 +0.1**
baz=261
BELG Belogornoye 92.39 322 *i* P **P** **00 18 38.4 -2.0**
BELG pmax pmax
comp=Z,7.0nm,0.9s
BELG Belogornoye 92.39 322 LR LR 01 03 50.7
comp=Z,56nm,21.4s,baz=143,slow=38
NAX Nakhchivan 92.43 309 P **P** **00 18 41.3 +0.2**
F26K Sheenjek River 92.58 22 P **P** **00 18 40.8 -0.2**
baz=260
I26K Coal Creek Min 92.58 25 IAmb IAmb 00 19 22.8
comp=Z,30nm,1.8s
I26K Coal Creek Min 92.58 25 P **P** **00 18 41.0 -0.1**
baz=261
G26K Porcupine Rive 92.59 23 P **P** **00 18 41.0 0.0**
baz=261,SNR=11
C26K Camden Bay 92.68 20 P **P** **00 18 41.5 +0.1**
baz=260
M27K Edge Creek, AK 92.72 28 IAmb IAmb 00 18 46.1
comp=Z,10.0nm,0.8s
M27K Edge Creek, AK 92.72 28 P **P** **00 18 41.5 -0.4**
baz=262,SNR=6.7
CTG Chitna Glacier 92.79 29 P **P** **00 18 42.5 +0.2**
baz=263
L27K Beaver Creek, 92.84 27 P **P** **00 18 43.0 +0.6**
baz=262
BCAR Beaver Creek A 92.86 27 P **P** **00 18 41.6 -0.9**
K27K Chicken 92.86 26 IAmb IAmb 00 18 44.8
comp=Z,16nm,1.1s
K27K Chicken 92.86 26 P **P** **00 18 42.7 +0.4**
baz=262
PINM Pinnacle 93.22 30 P **P** **00 18 44.4 +0.2**
baz=264
I27K Kandik River 93.26 24 P **P** **00 18 44.6 +0.3**
baz=263
YUK3 Moose Creek 93.31 28 P **P** **00 18 45.6 +0.8**
baz=263,SNR=5.9
EGAK Eagle 93.35 25 P **P** **00 18 44.8 +0.2**
baz=263
H27K Steamboat Moun 93.38 24 P **P** **00 18 44.8 0.0**
baz=263,SNR=9.5
I28M Miner Creek 93.94 25 IAmb IAmb 00 18 48.5
comp=Z,14nm,0.9s
I28M Miner Creek 93.94 25 P **P** **00 18 47.1 -0.4**
baz=264,SNR=9.4
ZEI Tsey 93.95 312 *e* P **P** **00 18 46.6 -1.6**
ZEI pmax pmax
comp=Z,26nm,1.4s
D27M Malcolm River 93.96 21 P **P** **00 18 47.7 +0.3**
baz=263
DAWY Dawson 94.04 26 P **P** **00 18 47.7 -0.1**
baz=264,SNR=6.6
O29M Mount Kennedy 94.07 30 P **P** **00 18 48.5 +0.3**
baz=265
F28M Old Crow 94.18 23 P **P** **00 18 47.4 -1.0**
F28M Old Crow 94.18 23 P **P** **00 18 48.4 -0.1**
baz=264
M29M Somme Creek 94.31 28 P **P** **00 18 49.3 0.0**
baz=265
E28M Babbage River 94.40 22 IAmb IAmb 00 18 50.0
comp=Z,24nm,1.9s
E28M Babbage River 94.40 22 P **P** **00 18 49.3 -0.2**
baz=265
L29M L29M 94.52 27 P **P** **00 18 50.7 +0.6**
baz=266
HYT Haines Junctio 94.64 29 P **P** **00 18 51.1 +0.3**
baz=266
H29M Whitestone 94.65 24 P **P** **00 18 50.7 +0.1**
baz=266
KBZ Khabaz 94.75 313 *ce* P **P** **00 18 50.6 -0.9**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KBZ Khabaz 94.75 313 P **P** **00 18 50.2 -1.3**
comp=Z,3.8nm,0.8s,baz=90,slow=6.2,SNR=9.7
comp=Z,3.8nm,0.8s
K29M Barlow Dome 94.84 26 P **P** **00 18 51.6 -0.1**
baz=266
NEUR Neytrino 94.87 313 *i* P **P** **00 18 53.3 +1.0**
NEUR pmax pmax

comp=Z,4.0nm,1.0s
KIV Kislovodsk 94.92 314 *e*P **P 00 18 51.4 -1.0**
KIV pmax pmax
comp=Z,4.0nm,1.0s
SHA1 Shidzhatmaz 94.93 313 *i* P **P 00 18 51.6 -1.1**
E29M Blow River 94.99 22 P **P 00 18 52.5 +0.4**
baz=266
M30M Minto, Yukon 95.09 28 P **P 00 18 53.8 +1.1**
baz=267
S31K Pelican 95.11 32 P **P 00 18 53.3 +0.5**
baz=267
EPYK Eagle Plains 95.33 24 IAmb IAmb 00 18 54.6
comp=Z,14nm,1.1s
EPYK Eagle Plains 95.33 24 P **P 00 18 53.5 -0.2**
baz=267
J30M Hart River 95.40 26 P **P 00 18 54.2 0.0**
baz=267
KIBK Kibwezi 95.41 267 IAmb IAmb 00 18 57.1
comp=Z,14nm,1.2s
KIBK Kibwezi 95.41 267 P **P 00 18 56.0 +0.7**
SNR=5.2
I30M Mount Dempster 95.41 25 IAmb IAmb 00 19 27.1
comp=Z,19nm,1.9s
I30M Mount Dempster 95.41 25 P **P 00 18 54.0 -0.2**
baz=267
G30M tAoh Zraii Nji 95.55 23 IAmb IAmb 00 18 54.5
comp=Z,14nm,0.9s
G30M tAoh Zraii Nji 95.55 23 P **P 00 18 54.4 -0.3**
baz=268
SKAG Skagway 95.65 31 P **P 00 18 55.3 +0.1**
baz=268
F30M Barrier River 95.75 23 P **P 00 18 55.3 -0.2**
baz=268
WHY Whitehorse 95.92 30 P **P 00 18 56.6 0.0**
baz=268
VRH Novokhopyorsk 95.95 321 *e*P **P 00 18 54.0 -2.8**
VRH pmax pmax
comp=Z,10.0nm,0.8s
TROLL Troll, Antarti 95.96 194 ||P **P 00 18 57.3 +0.6**
comp=Z,373nm,0.7s
S32K Killisnoo 95.98 33 P **P 00 18 56.6 -0.2**
baz=268
M31M Drury Creek, Y 96.20 28 P **P 00 18 57.2 -0.5**
baz=269
G31M Satah River 96.32 23 IAmb IAmb 00 18 58.0
comp=Z,9.5nm,0.9s
G31M Satah River 96.32 23 P **P 00 18 57.3 -0.8**
baz=269
KMBO Kilima Mbogo 96.33 268 P **P 00 18 59.9 +0.2**
KMBO Kilima Mbogo 96.33 268 *i* P **P 00 19 00.2 +0.4**
SNR=6.6
KMBO Kilima Mbogo 96.33 268 P **P 00 18 59.9 +0.2**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 96.33 268 P **P 00 19 00.7 +0.9**
KMBO P **P 00 19 00.7 +0.9**
P32M Atlin 96.48 31 P **P 00 18 59.4 +0.3**
baz=269
F31M Tsiigehtchic 96.53 23 IAmb IAmb 00 18 59.5
comp=Z,32nm,1.7s
F31M Tsiigehtchic 96.53 23 P **P 00 18 58.5 -0.6**
baz=270
ERBR Yeremizino-Bor 96.57 315 *e*P **P 00 18 58.5 -1.3**
ERBR pmax pmax
comp=Z,16nm,1.5s
INK Inuvik 96.61 22 P **P 00 18 58.0 -1.4**
INK IAmb IAmb 00 18 59.8
comp=Z,16nm,1.4s
INK Inuvik 96.61 22 P **P 00 18 59.0 -0.4**
baz=270
INK Inuvik 96.61 22 P **P 00 18 58.0 -1.4**
INK pmax pmax
comp=Z,16nm,1.4s
INK Inuvik 96.61 22 LR LR 00 59 02.3
comp=Z,52nm,20.5s,baz=248,slow=33
FARO Faro, Yukon 96.68 28 P **P 00 18 59.6 -0.3**
baz=270
N32M Quiet Lake 96.81 29 P **P 00 19 00.3 -0.3**
baz=270
P33M Teslin, Yukon 96.94 30 P **P 00 19 01.3 +0.1**
baz=270
SOC Sochi 97.05 313 *e*P **P 00 18 58.0 -4.0**
SOC *e* 00 22 55.1
SOC *e*S **SKSac 00 29 34.6 -3.7**
SOC *e*SS **SS 00 37 01.1 +0.1**
SOC *e*SSS SSS 00 40 44.4
KLMR Klimovskoe 97.32 331 *e*P **P 00 18 58.5 -4.3**
KLMR *e* 00 22 57.6
KLMR pmax pmax
comp=Z,38nm,1.6s
SNAA Sanae 97.41 193 P **P 00 19 02.0 -1.2**
comp=Z,4.7nm,0.9s,baz=228,slow=14,SNR=2.7
SNAA LR LR 01 02 06.5
comp=Z,399nm,20.0s,baz=166,slow=35
comp=Z,4.7nm,0.9s
VORD Divnogorie 97.47 321 *e*P **P 00 19 01.3 -2.4**
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORR Voronezh 97.53 321 *e*P **P 00 19 01.6 -2.4**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 97.55 321 *e*P **P 00 19 01.1 -3.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 97.70 322 *e*P **P 00 19 02.7 -2.0**
LPSR pmax pmax
comp=Z,20nm,1.0s
S34M Telegraph Cree 97.83 32 P **P 00 19 04.9 -0.2**
baz=271
ARPR Arapgir-MALATY 97.98 309 IAmb IAmb 00 19 10.1
comp=Z,11nm,1.1s
DLBC Dease Lake 98.40 32 P **P 00 19 07.5 -0.4**
baz=272
MOS Moscow 98.42 325 *e*P Pdif 00 19 14.7 +6.8
MOS *e* 00 23 05.0
ANN Anapa 98.71 314 *e*P **P 00 19 05.7 -3.7**
ANN pmax pmax
comp=Z,57nm,0.8s
OBN Obninsk 99.05 325|| *e*P **Pdif 00 19 09.6 -1.1**
OBN *e* 00 23 15.9
OBN pmax pmax
comp=Z,8.0nm,0.9s
A36M Sachs Harbour 99.14 18 IAmb IAmb 00 19 10.7
comp=Z,8.8nm,0.9s
A36M Sachs Harbour 99.14 18 P **Pdif 00 19 10.2 -0.5**
baz=279
APA Apatity 99.52 337|| *i*P **Pdif 00 19 09.0 -3.5**
APA pmax pmax
comp=Z,5.0nm,1.0s
C36M Paulatuk 99.94 21 P **Pdif 00 19 13.5 -0.8**
baz=279
MMAI Mount Meron Ar 100.26 302 P **Pdif 00 19 14.7 -2.0**
comp=Z,1.5nm,0.6s,baz=73,slow=5.0,SNR=1.9
GRHM Grahamstown, E 101.03 235 IAMs_20 IAMs_20 00 53 17.1
comp=Z,525nm,20.0s
SIM Simferopol' 101.07 314 *e*P **Pdif 00 19 18.0 -1.9**
SIM pmax pmax
comp=Z,24nm,1.0s
WRGLY Wrigley 101.15 27 IAMs_20 IAMs_20 01 08 33.0
comp=E,794nm,19.0s
SPITS Spitsbergen Ar 101.36 349 P **Pdif 00 19 18.9 -1.6**
comp=E,8.1nm,0.8s,baz=129,slow=11,SNR=2.2
BRTR Keskin Array B 101.61 309 P **Pdif 00 19 21.4 -1.4**
comp=E,1.7nm,0.8s,baz=137,slow=6.7,SNR=14
ARCES ARCESS Array B 101.99 340 Pdif **Pdif 00 19 21.9 -1.7**
ARCES ARCESS Array B 101.99 340 P **Pdif 00 19 22.7 -0.8**
comp=E,14nm,0.8s,baz=74,slow=5.2,SNR=18
ARCES PKiKP **PKiKP 00 23 45.1 -1.0**
comp=E,2.9nm,0.9s,baz=31,slow=2.1,SNR=2.3
FINES FINESS Array B 103.71 332 Pdiff **Pdif 00 19 29.7 -1.6**
comp=E,4.6nm,1.0s,baz=60,slow=11,SNR=5.6
FINES PKiKP **PKiKP 00 23 48.7 -0.6**
comp=E,1.7nm,0.7s,baz=92,slow=5.7,SNR=6.1
AKASG Malin Array Be 103.86 321 Pdiff **Pdif 00 19 36.1 +4.0**
comp=E,2.4nm,0.7s,baz=73,slow=4.7,SNR=3.6
AKASG PKiKP **PKiKP 00 23 50.5 +0.5**
comp=E,1.4nm,0.8s,baz=97,slow=6.5,SNR=4.0
MNK Minsk 104.11 325 *i* P **Pdif 00 19 30.2 -3.0**
MNK *i* S **Sdif 00 31 20.7 -2.2**
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=N,68nm,19.0s
MNK MLR MLR
comp=E,59nm,19.0s
MNK MLR MLR
comp=Z,89nm,19.0s
LTY Liberty 105.00 43 IAMs_20 IAMs_20 01 07 33.2
comp=Z,414nm,18.0s
YKA Yellowknife Ar 105.27 27 Pdiff **Pdif 00 19 37.2 -1.0**
comp=Z,1.7nm,1.0s,baz=290,slow=5.0,SNR=13
YKA PKiKP **PKiKP 00 23 52.3 +0.1**
comp=Z,0.3nm,0.6s,baz=293,slow=2.2,SNR=4.9
NVAR Mina Array Bea 107.81 52 Pdiff **Pdif 00 19 50.2 -0.1**
comp=Z,0.8nm,0.9s,baz=248,slow=4.8,SNR=2.1
CIS Catalina Islan 108.21 57 P **PKiKP 00 23 58.7 +0.1**
baz=275
KOLS Kolonicke sedl 108.60 320 *e*PKP **PKiKP 00 24 00.2 +1.4**
HFS Hagfors 109.88 333 PKiKP **PKiKP 00 23 59.4 -1.5**
comp=Z,1.5nm,0.7s,baz=108,slow=4.7,SNR=1.5
UABX UABC, Campus M 110.77 58 IAMs_20 IAMs_20 01 00 41.0
comp=Z,690nm,22.0s
CPBX Cerro Prieto 110.91 58 IAMs_20 IAMs_20 01 09 22.7
comp=Z,287nm,21.0s
MORC Moravsky Berou 111.38 321 *e*PKiKP **PKiKP 00 24 04.6 +0.5**
JAVC Velka Javorina 111.56 320 *e*PKiKP **PKiKP 00 24 05.8 +1.3**
KRLC Kraliky 111.76 322 *e*PKP **PKiKP 00 24 05.8 +1.0**
KRLC Kraliky 111.76 322 *e*PKiKP **PKiKP 00 24 05.8 +1.0**
MODS Modra-Piesok 111.94 320 *e*PKiKP **PKiKP 00 24 05.8 +0.6**
MODS Modra-Piesok 111.94 320 *e*PKP **PKiKP 00 24 05.8 +0.6**
DPC Dobruska-Polom 111.96 322 *e*PKP **PKiKP 00 24 05.6 +0.4**
DPC Dobruska-Polom 111.96 322 *e*PKiKP **PKiKP 00 24 05.6 +0.4**
OSTC Ostas 111.96 322 *e*PKP **PKiKP 00 24 06.0 +0.9**
OSTC Ostas 111.96 322 *e*PKiKP **PKiKP 00 24 06.0 +0.9**
VRAC Vranov 112.11 321 *e*PKiKP **PKiKP 00 24 05.7 +0.3**
KRUC Moravsky 112.30 321 *e*PKiKP **PKiKP 00 24 06.1 +0.3**
RONA Rosalia, Austr 112.77 319 *i* PKiKP **PKiKP 00 24 06.2 -0.6**
comp=Z,0.3nm,0.2s
TREC Trest 112.80 321 *e*PKP **PKiKP 00 24 07.2 +0.4**
TREC Trest 112.80 321 *e*PKiKP **PKiKP 00 24 07.2 +0.4**
PVCC Panska Ves 112.96 323 *e*PKP **PKiKP 00 24 07.9 +0.9**
PVCC Panska Ves 112.96 323 *e*PKiKP **PKiKP 00 24 07.9 +0.9**
CONA Conrad Observa 112.98 320 *i* PKiKP **PKiKP 00 24 07.1 -0.2**
comp=Z,0.9nm,0.3s
PRU Pruhonice 113.16 322 *e*PKP **PKiKP 00 24 07.3 -0.1**
PRU Pruhonice 113.16 322 *e*PKiKP **PKiKP 00 24 07.3 -0.1**
BRG Berggiesshubel 113.22 323 *i* PKP **PKiKP 00 24 07.9 +0.4**
BRG Amp 00 24 09.3
comp=Z,8.4nm,1.1s
BRG Berggiesshubel 113.22 323 *i* PKiKP **PKiKP 00 24 07.8 +0.4**
BRG 00 24 59.1
BRG pmax pmax
comp=Z,8.0nm,1.1s
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG Berggiesshubel 113.22 323 *e*PKPdf **PKiKP 00 24 08.0 +0.4**
baz=68,slow=1.9
ZVC Zvikov 113.56 322 *e*PKP **PKiKP 00 24 08.5 +0.3**
CLL Collm 113.62 324 *i* PKiKP **PKiKP 00 24 08.2 0.0**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 113.62 324 *i* PKiKP **PKiKP 00 24 08.2 0.0**
comp=Z,8.0nm,0.9s
CLL *e*PP **PP 00 24 59.0 -1.2**
CLL Collm 113.62 324 *e*PKPdf **PKiKP 00 24 08.4 +0.2**
baz=68,slow=1.9
CKRC Cesky Krumlov 113.69 321 *e*PKP **PKiKP 00 24 08.9 +0.4**
CKRC Cesky Krumlov 113.69 321 *e*PKiKP **PKiKP 00 24 08.9 +0.4**
SOKA Soboth 113.89 319 *e*PKP **PKiKP 00 24 08.6 -0.4**
comp=Z,1.8nm,0.7s
LEGS Legarje 113.92 318 *i* PKPdf **PKiKP 00 24 08.9 -0.1**
MOA Molln 114.03 320 *i* PKP PKPdf 00 24 08.6 -0.6
comp=Z,0.9nm,0.4s
KHC Kasperske Hory 114.04 322 *e*PKP **PKiKP 00 24 09.4 +0.2**
KHC Kasperske Hory 114.04 322 *c i*PKiKP **PKiKP 00 24 10.0 +0.8**
KHC pmax pmax
comp=Z,19nm,1.7s
GEC2 GERESS Array S 114.06 321 *e*PKPdf **PKiKP 00 24 09.4 +0.1**
baz=68,slow=1.9
GERES GERESS Array B 114.06 321 PKP PKPdf 00 24 09.1 -0.2
comp=Z,3.7nm,0.7s,baz=53,slow=2.9,SNR=18
BOJS Bojanci 114.09 317 *i* PKPdf **PKiKP 00 24 09.5 +0.1**
BSEG Bad Segeberg 114.11 327 *e*PKPdf **PKiKP 00 24 09.9 +0.8**
baz=68,slow=1.9
FLTG Flechtingen 114.25 325 *e*PKPdf **PKiKP 00 24 09.6 +0.2**
baz=68,slow=1.9
TANN Tannenbergstha 114.27 323 *e*PKPdf **PKiKP 00 24 09.9 +0.3**
baz=68,slow=1.9
NEUB Neuenburg 114.38 324 *e*PKPdf **PKiKP 00 24 10.0 +0.3**
baz=68,slow=1.9
WET Wettzell 114.47 322 *e*PKPdf **PKiKP 00 24 10.4 +0.4**
baz=68,slow=1.9
CRNS Crni Vrh 114.58 318 *i* PKPdf **PKiKP 00 24 09.9 -0.4**
KBA Koelnbreinsper 114.87 319 *i* PKP **PKiKP 00 24 10.0 -1.0**
comp=Z,2.4nm,0.7s
CLZ Clausthal 114.94 325 *e*PKPdf PKPdf 00 24 11.5 +0.7
baz=68,slow=1.9
LESA Schwarzleotal 115.18 320 *i* PKP **PKiKP 00 24 10.8 -0.7**
comp=Z,3.5nm,0.6s
O20A White River Ci 115.19 48 P **PKPdf 00 24 12.3 +0.4**
baz=284
GRF Grafenberg Arr 115.28 323 *e*PKPdf **PKPdf 00 24 11.8 +0.3**
baz=68,slow=1.9
ABTA Abfaltersbach 115.51 319 *e*PKP **PKiKP 00 24 11.2 -0.9**
comp=Z,3.9nm,0.6s,SNR=11
STAL STALIGIAL 115.55 319 PKiKP 00 24 11.2 -0.9
MVCO Mesa Verde 115.66 52 P **PKiKP 00 24 12.7 -0.2**
baz=283
FUR Furstenfeldbru 115.81 321 *e*PKPdf **PKPdf 00 24 12.8 +0.2**
baz=68,slow=1.9
PAOL Paolisi 115.81 313 IAMs_20 IAMs_20 01 17 03.2
comp=Z,563nm,22.0s
WTTA Wattenberg 115.90 320 *i* PKP **PKiKP 00 24 12.8 -0.2**
comp=Z,9.5nm,0.4s,SNR=14
WATA Walderalm 115.91 320 *i* PKP **PKiKP 00 24 12.5 -0.5**
comp=Z,3.2nm,0.5s
SQTA Sankt Quirin 116.19 320 *i* PKP **PKPdf 00 24 13.3 -0.2**
comp=Z,2.4nm,0.6s,SNR=4.8
MOTA Moosalm 116.21 320 *i* PKP **PKPdf 00 24 12.9 -0.7**
comp=Z,3.4nm,0.5s
RETA Reutte 116.38 321 *i* PKP **PKPdf 00 24 13.2 -0.6**
comp=Z,0.7nm,0.3s
FETA Feichten 116.56 320 *i* PKP **PKPdf 00 24 14.0 -0.3**
comp=Z,2.3nm,0.6s,SNR=5.5
TNS Taunus Mts 116.71 324 *e*PKPdf **PKiKP 00 24 14.7 +0.4**
baz=68,slow=1.9
UBR Ueberruh 116.72 321 *e*PKPdf **PKPdf 00 24 14.3 -0.1**
baz=68,slow=1.9
S22A 4UR Ranch, Cre 116.83 51 P **PKPdf 00 24 15.0 -0.3**
baz=284
DAVA Damuels 117.01 321 *i* PKP **PKPdf 00 24 15.0 -0.1**
comp=Z,6.2nm,0.5s
RSSD Black Hills 117.05 43 P **PKiKP 00 24 15.6 +0.2**
baz=289
121A Cookes Peak, D 117.17 57 P **PKPdf 00 24 15.4 -0.5**
baz=281
ISCO Idaho Springs 117.22 48 P **PKPdf 00 24 15.8 -0.2**
baz=286
BFO Black Forest 117.56 322 *e*PKPdf **PKPdf 00 24 15.6 -0.4**
baz=68,slow=1.9
TUE Stuetta 117.65 320 PKPdf **PKPdf 00 24 15.7 -0.7**
ANMO Albuquerque 117.77 54 PKPdf **PKiKP 00 24 17.2 +0.2**
ANMO Albuquerque 117.77 54 P **PKiKP 00 24 17.3 +0.2**
baz=283
ANMO Albuquerque 117.77 54 PKiKP **PKiKP 00 24 17.2 +0.2**
SDCO Great Sand Dun 117.85 50 P **PKiKP 00 24 17.3 +0.1**
baz=285
T25A Trinidad 118.85 51 IAMs_20 IAMs_20 01 03 04.2
comp=Z,498nm,20.0s
T25A Trinidad 118.85 51 P **PKiKP 00 24 19.5 +0.4**
baz=285
MNTX Cornudas Mount 119.34 57 P **PKiKP 00 24 20.1 +0.1**
baz=282
ULM Lac du Bonnet 119.61 34 PKP **PKPdf 00 24 18.2 -1.6**
comp=Z,2.1nm,0.8s,baz=355,slow=9.2,SNR=4.5
LPL La Plagne 119.70 320 *e*PKiKP **PKPdf 00 24 19.9 -0.5**
LPL pmax pmax
comp=Z,10.0nm,0.7s
EKA Eskdalemuir Ar 120.07 333 PKP **PKPdf 00 24 20.1 -0.4**
comp=Z,2.3nm,0.6s,baz=9.2,slow=3.0,SNR=10
MSTX Muleshoe 120.96 54 P **PKPdf 00 24 22.4 -0.6**
baz=285
SSF Saint Saulge 121.05 322 *e*PKIKP **PKPdf 00 24 22.4 -0.3**
SSF pmax pmax
comp=Z,13nm,0.7s
KEST Kesra 121.20 308 PKP **PKiKP 00 24 23.7 +0.2**
comp=Z,11nm,0.9s,baz=77,slow=1.4,SNR=9.5
TXAR Lajitas Array 121.26 59 PKP **PKiKP 00 24 24.0 +0.1**
comp=Z,1.3nm,0.8s,baz=227,slow=1.7,SNR=13
TXAR PKKPbc **PKKPbc 00 34 25.2 -0.5**
comp=Z,0.6nm,0.7s,baz=160,slow=4.0,SNR=6.1
CLF Chambon-Foret 121.33 324 PKPdf **PKiKP 00 24 23.6 +0.3**
AMTX Amarillo 121.59 53 P **PKPdf 00 24 24.2 0.0**
baz=286
CBKS Cedar Bluff 121.86 48 P **PKPdf 00 24 24.4 -0.2**
baz=290
ECSD EROS Data Cent 122.16 41 PKPdf **PKPdf 00 24 24.3 -0.7**
EYMN Ely 123.27 35 P **PKiKP 00 24 27.4 +0.3**
baz=302
OK038 West end E0370 123.39 50 IAMs_20 IAMs_20 01 23 09.1
comp=Z,309nm,18.0s
MFF Saint Martin d 123.46 323 *e*PKiKP **PKPdf 00 24 26.9 -0.4**
MFF pmax pmax
comp=Z,19nm,0.6s
OK032 Salt Plains WL 123.68 49 IAMs_20 IAMs_20 01 11 31.9
comp=Z,456nm,22.0s
ABTX Abilene, Hawle 123.84 55 P **PKPdf 00 24 28.6 +0.1**
baz=286
SPMN Marine on St. 123.89 38 P **PKiKP 00 24 28.7 +0.2**
baz=300
WMOK Wichita Mounta 123.91 52 P **PKPdf 00 24 28.5 -0.1**
baz=288
KSU1 Kansas State U 124.03 46 P **PKiKP 00 24 29.0 0.0**
baz=293
JCT Junction City 124.27 57 P **PKiKP 00 24 29.9 +0.2**
baz=285
OK051 E0350 and S346 124.82 49 IAMs_20 IAMs_20 01 22 07.0
comp=Z,329nm,19.0s
T35A Sooner Cattle 124.92 49 PKPdf **PKPdf 00 24 30.0 -0.5**
QUOK Quay 125.03 50 IAMs_20 IAMs_20 01 26 23.8
comp=Z,501nm,20.0s
833A Chaparral WMA, 125.14 60 P **PKiKP 00 24 31.6 +0.1**
baz=284
JRQG Juriquilla Cam 125.57 69 IAMs_20 IAMs_20 01 07 18.0
comp=Z,129nm,22.0s
WHTX Lake Whitney, 125.80 55 P **PKiKP 00 24 32.5 -0.1**
baz=287
TUL3 Leonard 125.82 50 P **PKPdf 00 24 32.7 +0.1**
baz=291
JFWS Jewell Farm 126.65 39 P **PKPdf 00 24 33.4 -0.1**
baz=301
TLIG Tlapa 127.70 73 IAMs_20 IAMs_20 01 23 51.8
comp=Z,216nm,20.0s
MIAR Mount Ida 128.01 50 P **PKiKP 00 24 36.7 -0.2**
baz=292
CCM Cathedral Cave 128.29 45 PKPdf **PKPdf 00 24 36.9 +0.1**
CCM Cathedral Cave 128.29 45 P **PKiKP 00 24 37.5 0.0**
baz=296
CCM Cathedral Cave 128.29 45 PKiKP **PKPdf 00 24 36.9 +0.1**
PLCA Paso Flores 128.36 157 PKPdf **PKiKP 00 24 38.2 +0.5**
PLCA Paso Flores 128.36 157 PKiKP **PKiKP 00 24 38.2 +0.5**
PLCA Paso Flores 128.36 157 PKP **PKPdf 00 24 37.0 0.0**
comp=Z,7.2nm,1.0s,baz=211,slow=3.0,SNR=8.8
HDIL Hopedale 128.45 42 P **PKiKP 00 24 37.6 0.0**
baz=300
SCHQ Schefferville 128.63 15 PKP **PKPdf 00 24 37.1 +0.2**
comp=Z,3.3nm,0.7s,baz=13,slow=1.7,SNR=6.9
ES18 SONSECA Array 129.35 318 IAMs_20 IAMs_20 01 04 53.1
comp=Z,438nm,18.0s
ESDC Sonseca Array 129.38 318 PKP **PKPdf 00 24 39.0 +0.1**
comp=Z,1.3nm,0.7s,baz=19,slow=2.3,SNR=7.4
ESDC PP **PP 00 26 49.2 +1.4**
comp=Z,2.0nm,1.0s,baz=54,slow=6.1,SNR=7.3
SFIN Lafayette 129.98 41 P **PKiKP 00 24 40.5 -0.3**
baz=302
PVRL Vila Real 130.94 322 *e*PKP **PKiKP 00 24 42.8 +0.1**
OXF Oxford 131.17 49 P **PKPdf 00 24 42.6 +0.2**
baz=296
MTE Manteigas 131.32 321 *e*PKP **PKiKP 00 24 43.9 +0.3**
PVIS Viseu 131.37 321 *e*PKP **PKiKP 00 24 44.3 +0.7**
PCBR Castelo Branco 131.59 320 *e*PKP **PKPdf 00 24 42.8 -0.2**
WVT Waverly 131.60 46 P **PKPdf 00 24 43.6 +0.5**
baz=298
WCI Wyandotte Cave 131.63 43 P **PKiKP 00 24 43.7 -0.4**
baz=301
PMRV Marv??o 131.76 319 *e*PKP **PKPdf 00 24 42.8 -0.6**
O49A Covington 131.85 39 PKPdf **PKPdf 00 24 43.2 -0.3**
P49A Miami Univ. Ec 131.97 40 P **PKiKP 00 24 44.4 -0.4**
baz=304
COI Coimbra 131.98 321 *e*PKP **PKiKP 00 24 44.5 -0.3**
PCAS Casmilo, Conde 132.12 321 *e*PKP **PKiKP 00 24 45.1 0.0**
PESTR Estremoz 132.20 319 *e*PKP **PKiKP 00 24 45.4 +0.1**
PBAR Barrancos 132.21 318 *e*PKP **PKiKP 00 24 44.9 -0.4**
TORD Torodi Ar. Bea 132.26 282 IAMs_20 IAMs_20 01 24 30.8
comp=Z,141nm,20.0s
TORD Torodi Ar. Bea 132.26 282 PKP **PKPdf 00 24 45.1 +0.2**
comp=Z,7.4nm,0.3s,baz=48,slow=4.1,SNR=4.9
ACSO Alum Creek Sta 132.67 39 P **PKiKP 00 24 45.9 -0.3**
baz=306
PBEJ Beja 132.84 318 *e*PKP **PKiKP 00 24 47.3 +0.7**
PCVE Castro Verde 133.16 318 *e*PKP **PKiKP 00 24 47.7 +0.4**
MESJ Messejana 133.17 318 *e*PKP **PKiKP 00 24 48.1 +0.8**
PNCL Nicolau / Gran 133.23 319 *e*PKP **PKiKP 00 24 47.7 +0.3**
M53A WI Miller and 133.32 36 P **PKiKP 00 24 47.0 -0.5**
baz=310
MEDO Medina 133.42 32 IAMs_20 IAMs_20 01 24 02.7
comp=Z,337nm,22.0s
LRAL Lakeview Retre 133.62 49 P **PKPdf 00 24 47.5 +0.4**
baz=296
O53A New Philadelph 133.74 37 P **PKPdf 00 24 47.6 +0.5**
baz=308
MORF Marmelete 133.75 318 *e*PKP **PKiKP 00 24 49.4 +0.9**
PFVI Vila Bisbo 133.96 318 *e*PKP **PKiKP 00 24 49.5 +0.6**
MT03 Universidad Ad 134.43 151 IAMs_20 IAMs_20 01 12 08.5
comp=Z,278nm,19.0s
MCWV Mont Chateau 134.93 37 P **PKPdf 00 24 50.1 +0.8**
baz=309
BINY Binghamton 135.39 32 P **PKPdf 00 24 50.9 +0.8**
baz=316
SSPA Standing Stone 135.44 35 P **PKPdf 00 24 50.9 +0.6**
baz=312
LBNH Lisbon 135.83 27 P **PKiKP 00 24 52.0 -0.5**
baz=322
GOGA Godfrey 136.06 47 P **PKiKP 00 24 52.6 -0.7**
baz=300
BLA Blacksburg 136.07 40 P **PKiKP 00 24 52.7 -0.6**
baz=306
PKME Peaks-Kenny Pk 136.11 23 P **PKiKP 00 24 52.6 -0.4**
baz=326
KMSC Kings Mountain 136.65 43 P **PKiKP 00 24 53.6 -0.8**
baz=304
MVL Millersville 136.73 34 IAMs_20 IAMs_20 01 36 11.7
comp=Z,404nm,21.0s
L61B Northampton 136.87 29 P **PKiKP 00 24 53.8 -0.8**
baz=320
PAL Palisades 137.33 31 P **PKPdf 00 24 54.5 +0.8**
baz=317
HRV Adam Dziewonsk 137.35 28 P **PKPdf 00 24 54.4 +0.7**
baz=321
NHSC New Hope 138.57 45 P **PKPdf 00 24 57.1 +0.9**
baz=303
DBIC Dimbokro 138.85 273 PKPdf **PKPdf 00 24 54.5 -2.8**
DBIC Dimbokro 138.85 273 PKiKP **PKPdf 00 24 54.5 -2.8**
DBIC Dimbokro 138.85 273 PKhKP PKPpre 00 24 47.4
comp=Z,2.8nm,0.5s,baz=322,slow=2.3,SNR=4.3
AC02 Maricunga 140.50 147 IAMs_20 IAMs_20 01 31 40.5
comp=Z,508nm,20.0s
HZTE Horizontes, Gu 140.84 81 IAMs_20 IAMs_20 01 18 02.4
comp=Z,402nm,18.0s
LVC Limon Verde 143.90 143 PKPdf PKPbc 00 25 04.6 +0.3
LVC Limon Verde 143.90 143 PKiKP PKPbc 00 25 04.6 +0.3
NNA Nana 144.69 121 *c i*PKiKP **PKPdf 00 25 07.7 -0.1**
NNA pmax pmax
comp=Z,13nm,0.6s
MCRA Macar, Loja 144.80 106 *e*P **PKPdf 00 25 07.7 -0.3**
GMAL Guarumal, Vera 145.25 85 *e*P **PKPdf 00 25 10.0 +1.3**
COHC Cochancay 145.98 103 *e*P **PKPab 00 25 11.0 -0.2**
CPUP Villa Florida 146.06 162 PKPdf **PKPdf 00 25 09.5 -0.3**
CPUP Villa Florida 146.06 162 PKP2 **PKPab 00 25 11.0 -0.1**
CPUP Villa Florida 146.06 162 PKPbc **PKPab 00 25 11.0 -0.1**
comp=Z,13nm,0.6s,baz=209,slow=2.9,SNR=30
PIAT Ana Tenorio 147.29 101 *e*P **PKPab 00 25 16.8 0.0**
OTAV Otavalo 147.36 99 *e*P **PKPbc 00 25 15.7 +0.4**
TULM Tulcn-Chalpat 148.10 98 PKPdf **PKPdf 00 25 12.3 -1.8**
TULM IAMs_20 IAMs_20 01 21 38.9
comp=Z,236nm,19.0s
TULM Tulcn-Chalpat 148.10 98 *e*P **PKiKP 00 25 18.6 -0.5**
BONI La Bonita 148.30 99 *e*P **PKPbc 00 25 16.5 -1.1**
PTAC Punta Ardita, 148.65 86 *e*P **PKPbc 00 25 18.5 +0.4**
BBAC Balboa, Cauca 148.84 96 *e*P **PKPdf 00 25 15.5 +0.5**
POPC Popayan, Colom 149.47 95 *e*P **PKPdf 00 25 12.2 -3.9**
JAMC Jamundi, Valle 149.56 94 *e*P **PKPbc 00 25 20.8 +0.1**
APAC Apartado, Choc 149.85 85 *e*P **PKiKP 00 25 21.7 -0.4**
YOTC Yotoco, Valle 149.96 93 *e*P **PKPdf 00 25 17.4 +0.6**
PLMC San Jos del P 150.09 91 *e*P **PKiKP 00 25 22.5 -0.2**

DBBC	**Dabeiba**	**150.23**	**86**	*eP*		**PKPbc**	**00 25 22.5**	**+0.3**
CZSB	**Cruzeiro do Su**	**150.28**	**117**	*eP*		**PKPdf**	**00 25 19.0**	**+1.9**
GARC	**Garzon, Huila**	**150.60**	**96**	*eP*		**PKiKP**	**00 25 24.1**	**+0.1**
BETC	**Betania**	**150.72**	**95**	*eP*		**PKiKP**	**00 25 24.9**	**+0.9**
UREC	**San Jos de Ur**	**150.90**	**85**	*eP*		**PKPbc**	**00 25 23.6**	**0.0**
PTLC	**Puerto Leguiza**	**150.92**	**101**	*eP*		**PKiKP**	**00 25 24.2**	**-0.2**
GUY2C	**Guyana, Caldas**	**151.03**	**90**	*eP*		**PKPbc**	**00 25 24.3**	**-0.3**
ORTC	**Ortega, Tolima**	**151.05**	**93**	*eP*		**PKPdf**	**00 25 18.8**	**+0.5**
SMRC	**Santa Marta, M**	**151.90**	**78**	*eP*		**PKiKP**	**00 25 26.3**	**0.0**
PTBC	**PUERTO BERRIO,**	**151.97**	**87**	*eP*		**PKPbc**	**00 25 25.3**	**-0.9**
ROSC	**El Rosal**	**152.04**	**91**	PKPbc		**PKiKP**	**00 25 27.9**	**+0.7**
	comp=Z,43nm,0.6s,baz=168,slow=3.8,SNR=20							
ROSC	**El Rosal**	**152.04**	**91**	*eP*		**PKiKP**	**00 25 27.7**	**+0.6**
SPBC	**San Pablo de B**	**152.33**	**89**	*eP*		**PKPbc**	**00 25 26.9**	**-0.2**
LL6C	**La Loma 6 Bece**	**153.00**	**81**	*eP*		**PKiKP**	**00 25 28.9**	**+0.3**
BARC	**Barichara**	**153.24**	**87**	*eP*		**PKPbc**	**00 25 28.7**	**-0.6**
ETMB	**Extrema**	**154.62**	**128**	IAMs_20		IAMs_20	01 38 45.9	
	comp=Z,271nm,22.0s							
PTLB	**Pontes e Lacer**	**155.11**	**149**	PKPdf		**PKPdf**	**00 25 24.1**	**+0.1**
PTLB				PKPbc		**sPKPdf**	**00 25 33.0**	**+1.2**
SDV	**Santo Domingo**	**155.68**	**82**	*eP*		**PKPdf**	**00 25 24.4**	**-0.7**

FUNV 14 00:10:08.5,10.75N×65.68W,h10km,MW3.8,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**1.15**	**256**	*eP*	Pb	00 10 29.3	-1.2
FUNV				*eS*	Sg	00 10 43.9	-1.6
PCRV	**Puerto La Cruz**	**1.17**	**119**	*eP*	Pb	00 10 30.9	0.0
PCRV				*eS*	Sn	00 10 47.0	-0.2
TACV	**Tcata**	**1.46**	**246**	*eP*	Pn	00 10 34.8	-0.2
TACV				*eS*	Sn	00 10 54.1	-0.1
CUMV	**Cumana_UDO**	**1.49**	**102**	*eP*	Pn	00 10 34.9	-0.5
CUMV				*eS*	Sn	00 10 54.4	-0.7
BENV	**Beln**	**2.04**	**248**	*eP*	Pn	00 10 43.6	+0.5
BENV				*eS*	Sn	00 11 07.6	-1.2
TURV	**Turiamo**	**2.15**	**262**	*eP*	Pn	00 10 43.6	-0.8
TURV				*eS*	Sn	00 11 09.7	-1.5
BAUV	**El Baul**	**2.94**	**233**	*eP*	Pn	00 10 55.0	-0.4
BAUV				*eS*	Sn	00 11 28.3	-2.5
CACV	**CAICARA DEL OR**	**3.28**	**195**	*eP*	Pn	00 10 59.0	-1.0
CACV				*eS*	Sn	00 11 35.5	-3.6
TEPV	**Terepaima**	**3.54**	**258**	*eP*	Pn	00 11 02.6	-1.2
TEPV				*eS*	Sn	00 11 42.6	-3.2
SANV	**Sanarito**	**4.00**	**252**	*eP*	Pn	00 11 08.6	-1.5
SANV				*eS*	Sn	00 11 53.1	-4.0
SIQV	**Siquisique**	**4.06**	**269**	*eP*	Pn	00 11 09.2	-1.6
SIQV				*eS*	Sn	00 11 54.2	-4.3
CURV	**Curarigua**	**4.28**	**261**	*eP*	Pn	00 11 12.3	-1.5
CURV				*eS*	Sn	00 11 59.0	-4.9
SOCV	**Socops**	**5.66**	**245**	*eP*	Pn	00 11 31.2	-1.7
SOCV				*eS*	Sn	00 12 32.3	-5.8
LUEV	**Luepa**	**6.42**	**139**	*eP*	Pn	00 11 41.5	-1.9
LUEV				*eS*	Sn	00 12 48.6	-8.3

RSNC 14 00:15:48.8±2.1,6.87N×73.16W,h148km±9km,ML3.1, Mw4.2,2C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**185**	↑*iP*	Pn	00 16 08.9	-0.4
BARC				*eS*	Sn	00 16 23.9	-1.0
BARC				*i*		00 16 25.0	
	comp=Z,392nm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**44**	↓*iP*	Pn	00 16 11.7	+0.3
PAMC				*eS*	Sn	00 16 28.5	+0.1
PAMC				*i*		00 16 29.6	
	comp=Z,220nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	*eP*	Pn	00 16 15.5	-1.0
PTBC				*eS*	Sn	00 16 36.2	-1.3
PTBC				*i*		00 16 42.7	
	comp=Z,113nm,0.5s						
OCAC	**Ocana**	**1.37**	**353**	*eP*	Pn	00 16 16.9	-0.1
OCAC				*eS*	Sn	00 16 38.8	+0.1
OCAC				*i*		00 16 42.2	
	comp=Z,479nm,0.3s						
TAMC	**Tame, Arauca**	**1.42**	**107**	↑*iP*	Pn	00 16 17.4	-0.1
TAMC				*eS*	Sn	00 16 38.8	-0.5
TAMC				*i*		00 16 40.5	
	comp=Z,80nm,0.4s						
SPBC	**San Pablo de B**	**1.51**	**217**	*eP*	Pn	00 16 17.7	-0.7
SPBC				*eS*	Sn	00 16 40.2	-0.8
SPBC				*i*		00 16 47.0	
	comp=Z,215nm,0.2s						
ROSC	**El Rosal**	**2.32**	**210**	*eP*	Pn	00 16 28.9	+0.9
ROSC				*eS*	Sn	00 16 58.0	-0.2
CVER	**Cruz Verde, Cu**	**2.50**	**201**	*eP*	Pn	00 16 30.4	+0.1
CVER				*eS*	Sn	00 17 01.8	-0.5
CVER				*i*		00 17 07.4	
	comp=Z,101nm,0.3s						
UREC	**San Jos de Ur**	**2.51**	**291**	*eP*	Pn	00 16 28.6	-1.4
UREC				*eS*	Sn	00 16 59.5	-2.3
UREC				*i*		00 17 12.5	
	comp=Z,110nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.73**	**234**	*eP*	Pn	00 16 32.9	-0.3
GUY2C				*eS*	Sn	00 17 10.6	+3.2
GUY2C				*i*		00 17 15.5	
	comp=Z,79nm,0.5s						
VILC	**Villavicencio,**	**2.79**	**191**	*eP*	Pn	00 16 32.8	-0.7
VILC				*eS*	Sn	00 17 06.8	-1.3
VILC				*i*		00 17 09.8	
	comp=Z,170nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.85**	**358**	*eP*	Pn	00 16 33.4	-0.9
LL6C				*eS*	Sn	00 17 09.2	-0.2
LL6C				*i*		00 17 14.8	
	comp=Z,56nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.00**	**251**	*eP*	Pn	00 16 36.7	+0.4
CBOC				*eS*	Sn	00 17 13.9	+0.9
CBOC				*i*		00 17 20.1	
	comp=Z,21nm,0.3s						
DBBC	**Dabeiba**	**3.03**	**273**	*eP*	Pn	00 16 37.1	+0.5
DBBC				*eS*	Sn	00 17 12.3	-1.2
DBBC				*i*		00 17 13.6	
	comp=Z,59nm,0.4s						
ARGC	**Ariguani, Magd**	**3.16**	**340**	*eP*	Pn	00 16 39.0	+0.8
ARGC				*eS*	Sn	00 17 19.4	+3.0
ARGC				*i*		00 17 24.6	
	comp=Z,26nm,0.3s						
SDV	**Santo Domingo**	**3.21**	**51**	*eP*	Pn	00 16 38.5	-0.5
SDV				*eS*	Sn	00 17 15.6	-2.2
SDV				*i*		00 17 18.9	
	comp=Z,21nm,0.4s						
APAC	**Apartado, Choc**	**3.54**	**287**	*eP*	Pn	00 16 42.8	-0.3
APAC				*eS*	Sn	00 17 24.6	-0.6
APAC				*i*		00 17 29.7	
	comp=Z,32nm,0.4s						
SJCC	**San Jacinto, C**	**3.62**	**327**	*eP*	Pn	00 16 42.6	-1.5
SJCC				*eS*	Sn	00 17 23.7	-3.2
SJCC				*i*		00 17 38.8	
	comp=Z,28nm,0.3s						
PLMC	**San Jos del P**	**3.67**	**238**	*eP*	Pn	00 16 44.4	-0.4
PLMC				*eS*	Sn	00 17 26.0	-2.1
PLMC				*i*		00 17 32.6	
	comp=Z,18nm,0.7s						
CRJC	**Cerrejon, Guaj**	**4.14**	**4**	*eP*	Pn	00 16 49.2	-1.7
CRJC				*eS*	Sn	00 17 36.1	-3.2
CRJC				*i*		00 17 40.1	
	comp=Z,43nm,0.2s						
YOTC	**Yotoco, Valle**	**4.27**	**228**	*eP*	Pn	00 16 51.6	-1.1
YOTC				*i*		00 17 54.9	
	comp=Z,42nm,1.1s						
JAMC	**Jamundi, Valle**	**5.04**	**224**	*eP*	Pn	00 17 02.1	-0.9
JAMC				*eS*	Sn	00 18 03.9	+3.1
GARC	**Garzon, Huila**	**5.20**	**207**	*eP*	Pn	00 17 02.9	-2.2
POPC	**Popayan, Colom**	**5.54**	**219**	*eP*	Pn	00 17 09.0	-0.7

*ASIES **14** 00:16:44.6,23.89N×121.56E,h9km,ML3.8,Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; Mrr0.41; Mθθ-0.33; Mφφ-0.39; Mrθ1.34; Mrφ-0.45; Mθφ0.98; Fault plane solution: M0 1.78375×10^{21} NP1:φs53.58000°, δ80.25000°, λ95.13000°. NP2:φs205.64000°, δ11.00000°, λ62.50000°. Principal axes: T Plg54.4680°, Azm329.8220°; N Plg5.0550°, Azm232.7070°; P Plg35.0600°, Azm139.1480°;*

*JMA **14** 00:16:44.5±0.1,23.9N±0.4×12.2E±, h8km±3km, MV3.0/14, TAIWAN REGION*

*TAP **14** 00:16:44.6,23.89N×121.56E,h9km,ML3.8,C*

ISC 14 00:16:44.2±0.8,23.84N±0.02×121.66E±0.02,h14km±5km, n137,σ1s06/182,1C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.10**	**239**	*iP*	**Pg**	**00 16 47.8**	**+0.4**
	baz=183						
SHUL				S	**Sg**	**00 16 50.4**	**+0.8**
	baz=183						
HWA	**Hwalien**	**0.14**	**339**	*iP*	**Pg**	**00 16 47.8**	**-0.2**
	baz=25						
HWA				S	**Sg**	**00 16 50.2**	**-0.3**
	baz=25						
TEGC	**Jichi Village**	**0.17**	**220**	*iP*	**Pg**	**00 16 49.5**	**+1.2**
	baz=185						
TEGC				*eS*	**Sg**	**00 16 53.8**	**+2.7**
	baz=185						
ETM	**Tongmen**	**0.20**	**309**	*iP*	**Pg**	**00 16 47.4**	**-1.3**
	baz=319						
ETM				S	**Sg**	**00 16 49.3**	**-2.5**
	baz=319						
ESL	**Shilin**	**0.21**	**263**	↓*iP*	**Pg**	**00 16 47.9**	**-1.0**
	baz=237						
ESL				S	**Sg**	**00 16 50.0**	**-2.2**
	baz=237						
TWD	**Chiawan**	**0.24**	**346**	↓*iP*	**Pg**	**00 16 49.0**	**-0.5**
	baz=3.0						
TWD				S	**Sg**	**00 16 52.1**	**-1.0**
	baz=3.0						
WARBT	**Fenglin Townsh**	**0.28**	**244**	↓*iP*	**Pg**	**00 16 49.5**	**-0.6**
	baz=231						
WARBT				S	**Sg**	**00 16 52.6**	**-1.5**
	baz=231						
LXIB	**Xiulin Townshi**	**0.29**	**308**	↓*iP*	**Pg**	**00 16 49.0**	**-1.4**
	baz=314						
LXIB				*eS*	**Sg**	**00 16 52.1**	**-2.4**
	baz=314						
ETL	**Fush Village**	**0.32**	**354**	*iP*	**Pg**	**00 16 50.4**	**-0.5**
	baz=7.0						
ETL				S	**Sg**	**00 16 54.1**	**-1.2**
	baz=7.0						
NACB	**Ninganchiao**	**0.34**	**350**	P	**Pg**	**00 16 50.5**	**-0.6**
NACB	**Ninganchiao**	**0.34**	**350**	↓*iP*	**Pg**	**00 16 50.5**	**-0.6**
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.40**	**336**	↓*iP*	**Pg**	**00 16 51.3**	**-1.0**
	baz=345						
ETLH				*eS*	**Sg**	**00 16 55.6**	**-2.2**
	baz=345						
HGSD	**Ruisui**	**0.41**	**212**	P	**Pb**	**00 16 54.0**	**+0.7**
	baz=207						
EHY	**Hungye**	**0.46**	**223**	*iP*	**Pb**	**00 16 53.4**	**-0.7**
	baz=212						
WHF	**Hehuan Shan**	**0.47**	**310**	*iP*	**Pg**	**00 16 52.6**	**-1.2**
	baz=313						
WHF				S	**Sg**	**00 16 58.1**	**-2.0**
	baz=313						
VWDT	**VWDT**	**0.48**	**260**	↓*iP*	**Pg**	**00 16 53.5**	**-0.3**
	baz=260						
VWDT				S	**Sg**	**00 16 59.2**	**-1.1**
	baz=260						
EAHA	**Aohua**	**0.49**	**8**	*eP*	**Pg**	**00 16 54.0**	**+0.1**
	baz=10.0						
CHGB	**Renai**	**0.50**	**296**	↓*iP*	**Pg**	**00 16 53.3**	**-0.8**
	baz=296						
CHGB				*eS*	**Sg**	**00 16 59.8**	**-1.0**
	baz=296						
WUSB	**Renai**	**0.52**	**287**	↓*iP*	**Pg**	**00 16 53.8**	**-0.7**
	baz=285						
WUSB				*eS*	**Sg**	**00 16 59.9**	**-1.6**
	baz=285						
FUSS	**Fushou**	**0.56**	**317**	↓*iP*	**Pg**	**00 16 54.4**	**-0.9**
	baz=328						
FUSS				*eS*	**Sg**	**00 17 00.6**	**-2.1**
	baz=328						
ECBN	**Changbin**	**0.56**	**200**	*eP*	**Pn**	**00 16 56.8**	**-1.0**
	baz=179						
YULB	**Yu-li**	**0.56**	**217**	P	**Pb**	**00 16 55.6**	**-0.2**
YULB	**Yu-li**	**0.56**	**217**	*eP*	**Pb**	**00 16 55.6**	**-0.2**
	baz=217						
EYUL	**Yuli**	**0.58**	**213**	*eP*	**Pb**	**00 16 56.7**	**+0.5**
	baz=217						
ENA	**Nanau**	**0.59**	**7**	P	**Pg**	**00 16 55.8**	**0.0**
	baz=6.0						
TWF1	**Yuli**	**0.59**	**215**	*eP*	**Pb**	**00 16 56.2**	**-0.2**
	baz=215						
TWT	**Tachien**	**0.60**	**313**	*iP*	**Pg**	**00 16 55.6**	**-0.6**
	baz=304						
TWT				*eS*	**Sg**	**00 17 03.0**	**-1.3**
	baz=304						
EWUT	**Wuta**	**0.61**	**10**	*eP*	**Pg**	**00 16 56.2**	**0.0**
	baz=9.0						
TDCB	**Techi**	**0.62**	**312**	*iP*	**Pg**	**00 16 55.8**	**-0.6**
	baz=306						
TDCB				*eS*	**Sg**	**00 17 02.9**	**-1.6**
	baz=306						
NNSB	**Datong**	**0.64**	**337**	*iP*	**Pg**	**00 16 56.0**	**-0.7**
	baz=340						
NNSB				*eS*	**Sg**	**00 17 03.7**	**-1.5**
	baz=340						
SSLB	**Suanglung**	**0.65**	**265**	P	**Pg**	**00 16 56.4**	**-0.6**
SSLB	**Suanglung**	**0.65**	**265**	P	**Pg**	**00 16 56.3**	**-0.7**
	baz=269						
SSLB				*eS*	**Sg**	**00 17 03.6**	**-2.0**
	baz=269						
NNS	**Nan Shan**	**0.65**	**336**	↓*iP*	**Pg**	**00 16 56.4**	**-0.7**
	baz=336						
EOS4	**EOS4**	**0.66**	**65**	*eP*	**Pn**	**00 16 59.4**	**+0.5**
	baz=88						
EOS4				*eS*	**Sn**	**00 17 10.6**	**+1.7**
	baz=88						
CHKH	**Chenggong**	**0.69**	**201**	*eP*	**Pn**	**00 16 59.4**	**-0.2**
	baz=184						
CHKH				*eS*	**Sn**	**00 17 11.7**	**+1.6**
	baz=184						
SMLT	**Sun Moon Lake**	**0.70**	**274**	P	**Pg**	**00 16 57.4**	**-0.5**
	baz=270						
SMLT				S	**Sg**	**00 17 06.4**	**-0.7**
	baz=270						
LATG	**Datong**	**0.70**	**350**	↓*iP*	**Pg**	**00 16 57.4**	**-0.6**
	baz=346						
LATG				*eS*	**Sb**	**00 17 08.4**	**+0.5**
	baz=346						
WCS	**Beigang Elemen**	**0.72**	**288**	P	**Pg**	**00 16 57.9**	**-0.3**
	baz=286						
TYC	**Yuzhr**	**0.74**	**275**	P	**Pg**	**00 16 57.9**	**-0.8**
	baz=282						
TYC				*eS*	**Sg**	**00 17 07.1**	**-1.3**
	baz=282						
EOS3	**EOS3**	**0.75**	**53**	*eP*	**Pn**	**00 17 01.7**	**+1.5**
	baz=55						
ESAO	**Su ao**	**0.75**	**13**	*eP*	**Pb**	**00 16 59.9**	**+0.8**
	baz=11						
NDT	**Datong Townshi**	**0.77**	**350**	*eP*	**Pg**	**00 16 59.1**	**-0.2**
	baz=347						
TWC	**Suao**	**0.78**	**13**	*eP*	**Pb**	**00 16 59.8**	**+0.1**
	baz=11						
CHKT	**Chengkung**	**0.79**	**200**	*eP*	**Pn**	**00 17 00.5**	**-0.4**
	baz=196						
CHKT				*eS*	**Sn**	**00 17 14.4**	**+1.9**
	baz=196						
NDS	**Dongshan**	**0.79**	**4**	*eP*	**Pb**	**00 16 59.9**	**+0.1**
	baz=1.0						
ENTT	**Nioudou**	**0.80**	**354**	*iP*	**Pg**	**00 16 59.5**	**-0.3**
	baz=358						
EHD	**Haiduan**	**0.81**	**211**	*eP*	**Pb**	**00 17 00.3**	**+0.2**
	baz=207						
ECS	**Chishang**	**0.85**	**209**	*eP*	**Pn**	**00 17 03.3**	**+1.5**
	baz=204						
ALS	**Alishan**	**0.85**	**247**	P	**Pb**	**00 17 00.8**	**-0.1**
	baz=253						
WJS	**Zhushan**	**0.85**	**269**	*eP*	**Pb**	**00 17 00.8**	**-0.1**
	baz=260						
YHNB	**Yeheng**	**0.86**	**343**	P	**Pg**	**00 17 00.9**	**-0.2**
YHNB	**Yeheng**	**0.86**	**343**	*iP*	**Pg**	**00 17 00.9**	**-0.2**
	baz=356						
NSK	**Sanguang**	**0.88**	**342**	*iP*	**Pg**	**00 17 00.9**	**-0.3**
	baz=336						
NSK				*eS*	**Sg**	**00 17 10.9**	**-1.8**
	baz=336						
TWE	**Neicheng**	**0.88**	**0**	*iP*	**Pb**	**00 17 01.3**	**+0.1**
	baz=355						
ELDTW	**Lidau**	**0.88**	**222**	*eP*	**Pg**	**00 17 00.7**	**-0.6**
	baz=218						
WNT	**Mingjian**	**0.90**	**273**	*eP*	**Pb**	**00 17 02.4**	**+0.8**
	baz=271						
WNT				*eS*	**Sb**	**00 17 14.6**	**+1.2**
	baz=271						
FUSB	**Fushanzhiwuyua**	**0.92**	**356**	*iP*	**Pb**	**00 17 02.0**	**0.0**
	baz=358						
EDH	**Donghe**	**0.93**	**201**	P	**Pg**	**00 17 01.3**	**-0.9**
	baz=187						
NFF	**Wufeng Townshi**	**0.93**	**328**	*iP*	**Pg**	**00 17 01.9**	**-0.4**
	baz=330						
NFF				*eS*	**Sg**	**00 17 13.1**	**-1.3**
	baz=330						
CHN5	**Tsauling**	**0.93**	**255**	P	**Pb**	**00 17 02.8**	**+0.5**
	baz=253						
NWLT	**Wulai**	**0.94**	**351**	P	**Pg**	**00 17 02.3**	**-0.2**
	baz=344						
TWQ1	**Liyutan**	**0.96**	**302**	*eP*	**Pb**	**00 17 03.0**	**+0.4**
	baz=303						
NSTT	**Nanjuang**	**0.99**	**323**	*eP*	**Pg**	**00 17 03.1**	**-0.3**
	baz=324						
LIOB	**Emei**	**0.99**	**324**	*eP*	**Pb**	**00 17 03.5**	**+0.3**
	baz=325						
LIOB				*eS*	**Sg**	**00 17 15.5**	**-0.9**
	baz=325						
WGK	**Gukeng**	**1.02**	**261**	*eP*	**Pn**	**00 17 05.0**	**+0.8**
	baz=260						
WGK				*eS*	**Sn**	**00 17 19.0**	**+0.7**
	baz=260						
WCHH	**Zhanghua**	**1.04**	**283**	*eP*	**Pn**	**00 17 05.1**	**+0.7**
	baz=283						
WDLH	**Douliu**	**1.04**	**262**	*eP*	**Pn**	**00 17 04.9**	**+0.5**
	baz=261						
WDLH				*eS*	**Sn**	**00 17 19.4**	**+0.6**
	baz=261						
WCKO	**Fanlu**	**1.05**	**248**	*eP*	**Pn**	**00 17 05.1**	**+0.5**
	baz=246						
LONT	**Longtian**	**1.05**	**208**	*eP*	**Pb**	**00 17 04.3**	**+0.1**
	baz=205						
STYH	**Taoyuan**	**1.05**	**231**	P	**Pb**	**00 17 04.4**	**+0.1**
	baz=215						
NMLH	**Miaoli**	**1.05**	**311**	*eP*	**Pn**	**00 17 05.2**	**+0.6**
	baz=312						
TPUB	**Ta-pu**	**1.09**	**241**	P	**Pn**	**00 17 05.6**	**+0.5**
TPUB	**Ta-pu**	**1.09**	**241**	P	**Pn**	**00 17 05.8**	**+0.7**
	baz=238						
CHN4	**Tsaushan**	**1.09**	**244**	*iP*	**Pn**	**00 17 06.0**	**+0.8**
	baz=235						
CHN4				*eS*	**Sn**	**00 17 21.8**	**+1.7**
	baz=235						
WTP	**Ta-pu**	**1.13**	**239**	P	**Pn**	**00 17 06.3**	**+0.6**
	baz=236						
SBCB	**Hsinchu**	**1.13**	**327**	*eP*	**Pn**	**00 17 07.1**	**+1.4**
	baz=328						
TWA	**Mucha**	**1.14**	**356**	*eP*	**Pn**	**00 17 06.3**	**+0.5**
	baz=358						
TATO	**Taipei**	**1.14**	**352**	P	**Pn**	**00 17 06.6**	**+0.8**
HSN	**Hsinchu**	**1.15**	**327**	*eP*	**Pn**	**00 17 07.8**	**+1.9**
	baz=330						
TWG	**Pinlang**	**1.15**	**208**	*eP*	**Pg**	**00 17 05.4**	**-1.0**
	baz=192						
TWGBT	**Beinan**	**1.15**	**208**	P	**Pg**	**00 17 05.4**	**-1.0**
TWGBT	**Beinan**	**1.15**	**208**	*eP*	**Pg**	**00 17 04.5**	**-1.9**
	baz=192						
LDUT	**Ludao**	**1.18**	**189**	*eP*	**Pg**	**00 17 05.0**	**-1.9**
	baz=171						
WTK	**Tuku**	**1.18**	**263**	*eP*	**Pn**	**00 17 07.6**	**+1.3**
	baz=262						
WRL	**Guolierlin Hig**	**1.18**	**273**	*eP*	**Pn**	**00 17 06.9**	**+0.6**
	baz=273						
WRL				*eS*	**Sg**	**00 17 22.3**	**0.0**
	baz=273						
TWB1	**Santiao Chiao**	**1.20**	**14**	*eP*	**Pn**	**00 17 08.4**	**+1.8**
	baz=7.0						
NCUH	**Zhongli**	**1.20**	**339**	*eP*	**Pn**	**00 17 08.2**	**+1.6**
	baz=341						
TWK	**Hsinying**	**1.22**	**242**	P	**Pn**	**00 17 08.1**	**+1.1**
	baz=242						
TWK				*eS*	**Sn**	**00 17 25.3**	**+2.0**
	baz=242						
CHN1	**Nanshi**	**1.23**	**238**	*eP*	**Pn**	**00 17 08.1**	**+1.1**
	baz=238						
CHN1				*eS*	**Sn**	**00 17 25.5**	**+2.1**
	baz=238						
NWF	**Wu-fen Shan**	**1.23**	**5**	*eP*	**Pn**	**00 17 08.0**	**+0.9**
	baz=6.0						
WFSB	**Wu-fen Shan**	**1.23**	**5**	*eP*	**Pn**	**00 17 07.7**	**+0.7**
	baz=6.0						
SNST	**Tainan City**	**1.23**	**240**	*eP*	**Pn**	**00 17 07.7**	**+0.6**
	baz=239						
SGST	**Jiashian**	**1.25**	**233**	*eP*	**Pg**	**00 17 07.5**	**-0.7**
	baz=232						
SGST				*eS*	**Sn**	**00 17 26.0**	**+2.1**
	baz=232						
SXI1	**Grass Mountain**	**1.26**	**9**	*eP*	**Pn**	**00 17 08.6**	**+0.7**
	baz=354						
TWS1	**Kuangyinshan**	**1.27**	**350**	*eP*	**Pg**	**00 17 08.7**	**-0.1**
	baz=352						
YM01	**YM01**	**1.30**	**356**	*eP*	**Pg**	**00 17 09.5**	**+0.2**
	baz=358						
TNOU	**National Taiwa**	**1.31**	**4**	*eP*	**Pg**	**00 17 09.8**	**+0.4**
	baz=5.0						
JYNG	**Yonagunijimaku**	**1.32**	**62**	*eP*	**Pg**	**00 17 09.6**	**-0.1**
JYNG				*eS*	**Sn**	**00 17 27.6**	**+1.9**
WSF	**Szhu**	**1.33**	**262**	*eP*	**Pg**	**00 17 10.5**	**+0.6**
	baz=261						
YM08	**YM08**	**1.34**	**357**	*eP*	**Pg**	**00 17 10.1**	**0.0**
	baz=359						
ANP	**Anpu**	**1.34**	**355**	*eP*	**Pg**	**00 17 10.0**	**-0.2**
	baz=356						
ICHU	**Yijhu**	**1.35**	**250**	*eP*	**Pg**	**00 17 10.1**	**-0.2**
	baz=251						
ICHU				*eS*	**Sn**	**00 17 28.9**	**+2.4**
	baz=251						
YOJ	**Yonaguni jima**	**1.38**	**63**	P	**Pg**	**00 17 10.5**	**-0.3**
YOJ	**Yonaguni jima**	**1.38**	**63**	*eP*	**Pg**	**00 17 10.5**	**-0.3**
	baz=64						
YOJ	**Yonaguni jima**	**1.38**	**63**	*eP*	**Pg**	**00 17 10.2**	**-0.6**
YOJ				S	**Sn**	**00 17 27.8**	**+0.6**
ECL	**Taimali**	**1.40**	**208**	*eP*	**Pb**	**00 17 09.9**	**-0.3**
	baz=191						
SCST	**Cishan**	**1.43**	**229**	*eP*	**Pg**	**00 17 13.1**	**+1.3**
	baz=214						
TSMG	**Majia**	**1.47**	**220**	*eP*	**Pg**	**00 17 12.0**	**-0.5**
	baz=211						
MASBT	**Mashibuluo**	**1.55**	**218**	*eP*	**Pb**	**00 17 12.5**	**-0.2**
	baz=210						
TSCK	**Chigu Township**	**1.60**	**245**	*eP*	**Pb**	**00 17 13.6**	**-0.1**
	baz=248						
TSCK				*eS*	**Sg**	**00 17 35.0**	**-0.9**
	baz=248						
EAST	**Anshuo**	**1.63**	**207**	*eP*	**Pn**	**00 17 11.8**	**-0.8**
	baz=195						
TAWH	**Dawu Township**	**1.66**	**206**	*eP*	**Pg**	**00 17 14.9**	**-1.1**
	baz=193						
**SCZT

QZH	comp=E,130nm,0.6s			smax	smax			
QZH	comp=N,430nm,8.2s			LR	LR			
QZH	comp=E,600nm,7.0s			LR	LR			
QZH	comp=Z,600nm,8.9s			LR	LR			
KNMB	**Chin-men Tao** baz=285	**3.05**	**282**	*e*P	**Pn**	**00 17 32.1**	**0.0**
LYJJ	**Jianjiangzhen** baz=317	**3.20**	**328**	*e*P	**Pn**	**00 17 34.3**	**+0.1**
MHZQ	**Yeshan** baz=316	**3.28**	**314**	*e*P	**Pn**	**00 17 35.2**	**-0.1**
XPSS	**Dashiqiu** baz=338	**3.35**	**337**	*e*P	**Pn**	**00 17 36.0**	**-0.2**
AXDP	**Jialang** baz=290	**3.53**	**288**	*e*P	**Pn**	**00 17 38.9**	**+0.3**
ZPLA	**Ao Xicun** baz=275	**3.58**	**272**	*e*P	**Pn**	**00 17 39.7**	**+0.3**
DSXP	**Dongshan** baz=271	**3.88**	**269**	*e*P	**Pn**	**00 17 44.3**	**+0.8**
GZH	**Guangzhou**	**7.67**	**266**	P	Pn	00 18 29.1	-6.5
GZH				S	Sn	00 19 52.5	-10
GZH	comp=N,80nm,1.1s			smax	smax			
GZH	comp=E,74nm,1.0s			smax	smax			

ASIES ***14*** *00:17:18.6,23˚.89N×121˚.57E,h11km,ML3.6,Mw3.2, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}8.59; $M_{\theta\theta}$-1.13; $M_{\phi\phi}$-4.40; $M_{r\theta}$1.90; $M_{r\phi}$-4.35; $M_{\theta\phi}$2.60; Fault plane solution: $M_0$8.74763×10^{20} NP1:ϕ_s35.33000°, δ55.97000°,λ90.77000°. NP2:ϕ_s213.95000°,δ34.04000°, λ88.86000°. Principal axes: T Plg79.0160°, Azm308.1840°; N Plg0.6380°, Azm214.8950°; P Plg10.9650°, Azm124.7710°;*

TAP 14 00:17:18.6,23˚.90N×121˚.57E,h11km,ML3.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien** baz=23	**0.09**	**24**	*i* P	Pg	00 17 21.9	+0.7
HWA	baz=23			*e*S	Sg	00 17 24.3	+1.3
ETM	**Tongmen** baz=316	**0.10**	**317**	*i* P	Pg	00 17 21.6	+0.3
ETM	baz=316			*e*S	Sg	00 17 23.4	+0.2
SHUL	**Shoufeng** baz=184	**0.11**	**181**	*i* P	Pg	00 17 21.8	+0.5
SHUL	baz=184			S	Sg	00 17 24.8	+1.5
ESL	**Shilin** baz=236	**0.14**	**236**	*i* P	Pg	00 17 22.1	+0.1
ESL	baz=236			*e*S	Sg	00 17 24.2	-0.1
TWD	**Chiawan** baz=2.0	**0.19**	**9**	*i* P	Pg	00 17 23.2	+0.5
TWD	baz=2.0			*e*S	Sg	00 17 26.2	+0.8
LXIB	**Xiulin Townshi** baz=306	**0.19**	**312**	P	Pg	00 17 23.3	+0.5
LXIB	baz=306			*e*S	Sg	00 17 26.4	+0.8
TEGC	**Jichi Village** baz=186	**0.19**	**187**	P	Pb	00 17 23.7	-0.3
WARBT	**Fenglin Townsh** baz=230	**0.24**	**223**	*i* P	Pg	00 17 23.8	+0.3
ETL	**Fush Village** baz=8.0	**0.27**	**11**	*i* P	Pg	00 17 24.5	+0.4
ETL	baz=8.0			S	Sg	00 17 28.3	+0.5
NACB	**Ninganchiao** baz=4.0	**0.28**	**6**	P	Pg	00 17 24.6	+0.3
NACB	baz=4.0			*e*S	Sg	00 17 28.5	+0.4
ETLH	**Xiulin Townshi** baz=345	**0.32**	**346**	*i* P	Pg	00 17 25.6	+0.6
ETLH	baz=345			*e*S	Sg	00 17 30.2	+0.8
WHF	**Hehuan Shan** baz=312	**0.37**	**312**	P	Pg	00 17 26.8	+0.7
WHF	baz=312			*e*S	Sg	00 17 32.0	+0.8
CHGB	**Renai** baz=295	**0.39**	**295**	*i* P	Pb	00 17 27.4	-0.3
VWDT	**VWDT** baz=252	**0.41**	**250**	*e*P	Pb	00 17 27.9	0.0
WUSB	**Renai** baz=291	**0.42**	**283**	P	Pb	00 17 28.0	-0.1
WUSB	baz=291			*e*S	Sb	00 17 34.0	-0.6
EHY	**Hungye** baz=217	**0.45**	**210**	*e*P	Pb	00 17 28.1	-0.4
FUSS	**Fushou** baz=326	**0.46**	**320**	P	Pb	00 17 28.9	0.0
EAHA	**Aohua** baz=12	**0.46**	**20**	*e*P	Pb	00 17 28.5	-0.3
TWT	**Tachien** baz=305	**0.50**	**315**	P	Pb	00 17 29.9	+0.3
TWT	baz=305			*e*S	Sb	00 17 37.4	+0.3
TDCB	**Techi** baz=305	**0.52**	**314**	*i* P	Pb	00 17 30.0	+0.3
TDCB	baz=305			*e*S	Sb	00 17 37.0	-0.4
ENA	**Nanau** baz=9.0	**0.55**	**17**	*e*P	Pb	00 17 30.2	-0.2
NNSB	**Datong** baz=336	**0.56**	**343**	P	Pb	00 17 30.5	0.0
NNS	**Nan Shan** baz=337	**0.57**	**342**	*e*P	Pb	00 17 30.7	0.0
SSLB	**Suanglung** baz=260	**0.57**	**259**	*e*P	Pb	00 17 30.8	+0.2
EWUT	**Wuta** baz=11	**0.58**	**20**	*e*P	Pb	00 17 30.4	-0.4
SMLT	**Sun Moon Lake** baz=270	**0.61**	**269**	*e*P	Pb	00 17 31.8	+0.5
SMLT	baz=270			*e*S	Sb	00 17 40.5	+0.6
TYC	**Yuchr** baz=272	**0.65**	**271**	*e*P	Pb	00 17 32.6	+0.7
NDT	**Datong Townshi** baz=349	**0.71**	**356**	*e*P	Pb	00 17 33.5	+0.6
ENTT	**Nioudou** baz=360	**0.74**	**0**	*e*P	Pb	00 17 33.7	+0.2
NDS	**Dongshan** baz=9.0	**0.75**	**11**	*e*P	Pb	00 17 33.8	+0.2
TWC	**Suao** baz=13	**0.76**	**20**	*e*P	Pb	00 17 34.0	+0.2
YHNB	**Yeheng** baz=358	**0.79**	**347**	*e*P	Pb	00 17 34.9	+0.4
NSK	**Sanguang** baz=347	**0.80**	**346**	*e*P	Pb	00 17 35.1	+0.5
TWE	**Neicheng** baz=357	**0.83**	**6**	*e*P	Pb	00 17 35.5	+0.6

IDC ***14*** *00:21:43.2˚0.8,23˚.70N×121˚.50E,h0km,mb3.7/13, mbtmp3.7/15,ML3.6/2,MS4.0/8,Error ellipse: s-maj=24.8km s-min=17.7km az=64.0*

TAP ***14*** *00:21:46.2,23˚.89N×121˚.57E,h9km,ML4.2,C*

JMA ***14*** *00:21:46.2±0.1,23˚.9N±0˚.2×121˚.6E±0˚.7,h3km,MV3.6/14, TAIWAN REGION*

ASIES ***14*** *00:21:46.2,23˚.89N×121˚.57E,h9km,ML4.2,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.52; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$-1.05; $M_{r\theta}$7.05; $M_{r\phi}$-2.20; $M_{\theta\phi}$7.21; Fault plane solution: $M_0$10.55100×10^{21} NP1: ϕ_s44.39000°,δ81.75000°,λ88.64000°. NP2:ϕ_s233.81000°, δ8.36000°,λ99.32000°. Principal axes: T Plg53.2300°, Azm312.7810°; N Plg1.3490°, Azm44.5870°; P Plg36.7370°, Azm135.5950°;*

ISC 14 00:21:46.1±0.7,23˚.87N±0˚.01×121˚.59E±0˚.02,h14km±4km, n171,σ1§12/222,mb3.7/14,MS4.1/8,2C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHUL	**Shoufeng** baz=187	**0.09**	**198**	⇑*i* P	**Pg**	**00 21 49.4**	**+0.3**
SHUL	baz=187			*i* S	**Sg**	**00 21 51.9**	**+0.8**
HWA	**Hwalien** baz=21	**0.10**	**7**	⇓*i* P	**Pg**	**00 21 49.3**	**0.0**
HWA	baz=21			S	**Sg**	**00 21 51.8**	**+0.4**
ETM	**Tongmen** baz=316	**0.13**	**315**	*i* P	**Pg**	**00 21 49.1**	**-0.6**
ETM	baz=316			*e*S	**Sg**	**00 21 50.9**	**-1.1**
ESL	**Shilin** baz=246	**0.16**	**248**	⇓*i* P	**Pg**	**00 21 49.6**	**-0.4**
ESL	baz=246			S	**Sg**	**00 21 51.7**	**-1.0**
TEGC	**Jichi Village** baz=188	**0.17**	**196**	P	**Pg**	**00 21 51.2**	**+1.0**
TEGC	baz=188			S	**Sg**	**00 21 55.6**	**+2.6**
TWD	**Chiawan** baz=1.0	**0.21**	**1**	⇓*i* P	**Pg**	**00 21 50.7**	**-0.1**
TWD	baz=1.0			*e*S	**Sg**	**00 21 53.8**	**-0.2**
LXIB	**Xiulin Townshi** baz=312	**0.22**	**312**	⇓*i* P	**Pg**	**00 21 50.7**	**-0.4**
LXIB	baz=312			S	**Sg**	**00 21 54.3**	**-0.2**
WARBT	**Fenglin Townsh** baz=232	**0.24**	**231**	*i* P	**Pg**	**00 21 51.2**	**-0.2**
WARBT	baz=232			S	**Sg**	**00 21 54.3**	**-0.7**
ETL	**Fush Village** baz=6.0	**0.29**	**6**	*i* P	**Pg**	**00 21 52.0**	**-0.2**
ETL	baz=6.0			*e*S	**Sg**	**00 21 55.7**	**-0.5**
NACB	**Ninganchiao**	**0.30**	**0**	P	**Pg**	**00 21 52.0**	**-0.4**
NACB	**Ninganchiao** baz=3.0	**0.30**	**0**	⇓*i* P	**Pg**	**00 21 52.1**	**-0.2**
NACB	baz=3.0			S	**Sg**	**00 21 56.0**	**-0.7**
ETLH	**Xiulin Townshi** baz=344	**0.35**	**343**	*i* P	**Pg**	**00 21 53.1**	**-0.2**
ETLH	baz=344			*e*S	**Sg**	**00 21 57.0**	**-1.1**
WHF	**Hehuan Shan** baz=312	**0.40**	**312**	*i* P	**Pg**	**00 21 54.2**	**-0.2**
HGSD	**Ruisui** baz=208	**0.41**	**202**	*i* P	**Pb**	**00 21 55.8**	**+0.6**
CHGB	**Renai** baz=295	**0.42**	**296**	⇓*i* P	**Pb**	**00 21 55.0**	**-0.6**
CHGB	baz=295			S	**Sb**	**00 22 01.2**	**-0.8**
VWDT	**VWDT** baz=260	**0.43**	**254**	*i* P	**Pb**	**00 21 55.2**	**-0.3**
VWDT	baz=260			S	**Sb**	**00 22 01.5**	**-0.3**
EHY	**Hungye** baz=212	**0.44**	**214**	*i* P	**Pg**	**00 21 55.2**	**+0.3**
WUSB	**Renai** baz=285	**0.45**	**285**	⇓*i* P	**Pb**	**00 21 55.5**	**-0.4**
WUSB	baz=285			*i* S	**Sb**	**00 22 01.8**	**-0.8**
EAHA	**Aohua** baz=10.0	**0.47**	**16**	*i* P	**Pg**	**00 21 55.4**	**-0.2**
FUSS	**Fushou** baz=319	**0.49**	**320**	⇓*i* P	**Pg**	**00 21 56.0**	**+0.1**
FUSS	baz=319			S	**Sg**	**00 22 02.3**	**-0.3**
TWT	**Tachien** baz=303	**0.54**	**315**	*i* P	**Pb**	**00 21 57.2**	**-0.3**
TWT	baz=303			*e*S	**Sb**	**00 22 04.8**	**-0.3**
TDCB	**Techi** baz=313	**0.55**	**314**	*i* P	**Pb**	**00 21 57.2**	**-0.4**
YULB	**Yu-li**	**0.55**	**210**	P	**Pb**	**00 21 57.7**	**+0.1**
YULB	**Yu-li** baz=217	**0.55**	**210**	*i* P	**Pg**	**00 21 57.1**	**+0.2**
ECBN	**Changbin** baz=180	**0.57**	**193**	P	**Pb**	**00 21 58.3**	**+0.4**
ENA	**Nanau** baz=5.0	**0.57**	**14**	*e*P	**Pg**	**00 21 57.4**	**+0.1**
EYUL	**Yuli** baz=217	**0.58**	**206**	*e*P	**Pb**	**00 21 58.2**	**+0.2**
NNSB	**Datong** baz=334	**0.58**	**341**	*i* P	**Pg**	**00 21 57.7**	**0.0**
TWF1	**Yuli** baz=216	**0.58**	**208**	*i* P	**Pg**	**00 21 57.7**	**+0.1**
TWF1	baz=216			*e*S	**Sb**	**00 22 07.9**	**+1.6**
SSLB	**Suanglung**	**0.59**	**262**	P	**Pb**	**00 21 58.3**	**0.0**
SSLB	**Suanglung** baz=269	**0.59**	**262**	*i* P	**Pb**	**00 21 58.1**	**-0.2**
SSLB	baz=269			S	**Sg**	**00 22 05.6**	**0.0**
EWUT	**Wuta** baz=9.0	**0.59**	**17**	*i* P	**Pg**	**00 21 57.8**	**-0.1**
NNS	**Nan Shan** baz=336	**0.60**	**341**	⇓*i* P	**Pb**	**00 21 58.0**	**-0.5**
SMLT	**Sun Moon Lake** baz=270	**0.63**	**271**	*i* P	**Pb**	**00 21 59.0**	**0.0**
SMLT	baz=270			S	**Sb**	**00 22 07.8**	**0.0**
WCS	**Beigang Elemen** baz=286	**0.65**	**287**	P	**Pb**	**00 21 59.5**	**+0.2**
WCS	baz=286			*e*S	**Sb**	**00 22 08.1**	**-0.1**
LATG	**Datong** baz=345	**0.66**	**355**	⇓*i* P	**Pg**	**00 21 59.0**	**-0.1**
LATG	baz=345			S	**Sb**	**00 22 10.1**	**+1.4**
TYC	**Yuchr** baz=282	**0.67**	**273**	*i* P	**Pb**	**00 21 59.5**	**-0.1**
TYC	baz=282			*e*S	**Sb**	**00 22 08.7**	**-0.2**
CHKH	**Chenggong** baz=184	**0.70**	**195**	P	**Pg**	**00 22 00.1**	**+0.3**
EOS4	**EOS4** baz=80	**0.71**	**69**	*e*P	**Pb**	**00 22 00.9**	**+0.9**
NDT	**Datong Townshi** baz=345	**0.73**	**354**	*i* P	**Pb**	**00 22 00.5**	**-0.2**
NDT	baz=345			S	**Sb**	**00 22 10.0**	**-0.6**
ESAO	**Su ao** baz=11	**0.74**	**18**	*e*P	**Pb**	**00 22 00.7**	**-0.1**
ENTT	**Nioudou** baz=358	**0.76**	**358**	*i* P	**Pb**	**00 22 01.2**	**-0.1**
NDS	**Dongshan** baz=7.0	**0.77**	**8**	P	**Pb**	**00 22 01.1**	**-0.2**
TWC	**Suao** baz=9.0	**0.77**	**18**	*i* P	**Pg**	**00 22 01.2**	**+0.1**
TWC	baz=9.0			*e*S	**Sb**	**00 22 12.9**	**+1.3**
WJS	**Zhushan** baz=272	**0.79**	**266**	*i* P	**Pn**	**00 22 03.1**	**+0.2**
WJS	baz=272			*e*S	**Sn**	**00 22 14.9**	**+0.3**
CHKT	**Chengkung** baz=186	**0.80**	**195**	*i* P	**Pg**	**00 22 01.9**	**+0.3**
CHKT	baz=186			*e*S	**Sn**	**00 22 15.3**	**+0.6**
EHD	**Haiduan** baz=207	**0.80**	**206**	*e*P	**Pb**	**00 22 02.2**	**+0.3**
ALS	**Alishan** baz=253	**0.81**	**244**	*i* P	**Pb**	**00 22 02.5**	**+0.4**
YHNB	**Yeheng**	**0.82**	**346**	P	**Pb**	**00 22 02.5**	**+0.3**
YHNB	**Yeheng** baz=345	**0.82**	**346**	⇓*i* P	**Pb**	**00 22 02.3**	**+0.1**
YHNB	baz=345			*e*S	**Sg**	**00 22 12.3**	**-0.5**
NSK	**Sanguang** baz=344	**0.83**	**345**	P	**Pb**	**00 22 02.5**	**+0.1**
NSK	baz=344			*e*S	**Sb**	**00 22 13.4**	**0.0**
WNT	**Mingjian** baz=271	**0.83**	**271**	*e*P	**Pn**	**00 22 04.0**	**+0.5**
WNT	baz=271			*e*S	**Sn**	**00 22 16.5**	**+1.0**
ECS	**Chishang** baz=219	**0.85**	**204**	*e*P	**Pb**	**00 22 03.7**	**+1.1**
ELDTW	**Lidau** baz=218	**0.86**	**218**	P	**Pg**	**00 22 02.3**	**-0.6**
NFF	**Wufeng Townshi** baz=336	**0.87**	**330**	P	**Pb**	**00 22 03.5**	**+0.4**
CHN5	**Tsauling** baz=253	**0.88**	**252**	P	**Pn**	**00 22 04.5**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=358	**0.88**	**360**	⇓*i* P	**Pb**	**00 22 03.4**	**+0.1**
FUSB	baz=358			*e*S	**Sb**	**00 22 14.9**	**-0.1**
TWQ1	**Liyutan** baz=302	**0.89**	**302**	*e*P	**Pn**	**00 22 04.4**	**+0.2**
NWLT	**Wulai** baz=343	**0.90**	**355**	*i* P	**Pb**	**00 22 03.9**	**+0.2**
NSTT	**Nanjuang** baz=324	**0.93**	**325**	*e*P	**Pn**	**00 22 04.8**	**+0.1**
NSTT	baz=324			*e*S	**Sn**	**00 22 17.2**	**-0.7**
LIOB	**Emei** baz=325	**0.93**	**326**	*i* P	**Pn**	**00 22 05.1**	**+0.2**
NSY	**Sanyi** baz=305	**0.93**	**306**	*e*P	**Pn**	**00 22 05.7**	**+0.8**
EDH	**Donghe** baz=187	**0.94**	**197**	P	**Pg**	**00 22 02.9**	**-1.4**
WGK	**Gukeng** baz=261	**0.96**	**259**	P	**Pn**	**00 22 06.3**	**+1.1**
WGK	baz=261			*e*S	**Sn**	**00 22 20.7**	**+2.0**
WCHH	**Zhanghua** baz=282	**0.97**	**282**	*e*P	**Pn**	**00 22 06.3**	**+1.0**
WDLH	**Douliu** baz=261	**0.98**	**259**	*i* P	**Pn**	**00 22 06.6**	**+1.0**
WDLH	baz=261			*e*S	**Sn**	**00 22 21.0**	**+1.7**
NMLH	**Miaoli** baz=322	**0.99**	**312**	P	**Pn**	**00 22 06.8**	**+1.2**
NMLH	baz=322			*e*S	**Sn**	**00 22 21.2**	**+1.8**
WCKO	**Fanlu** baz=246	**1.00**	**245**	*e*P	**Pn**	**00 22 06.8**	**+1.0**
EGS	baz=16	**1.02**	**18**	*e*P	**Pn**	**00 22 06.5**	**+0.5**
STYH	**Taoyuan** baz=215	**1.02**	**227**	P	**Pb**	**00 22 06.2**	**+0.5**
STYT	**Tauyuan** baz=230	**1.04**	**227**	P	**Pn**	**00 22 06.8**	**+0.4**
STYT	baz=230			*e*S	**Sg**	**00 22 17.8**	**-2.1**
TPUB	**Ta-pu**	**1.05**	**237**	P	**Pn**	**00 22 07.5**	**+1.0**
TPUB	**Ta-pu** baz=238	**1.05**	**237**	*i* P	**Pn**	**00 22 07.3**	**+0.8**
TPUB	baz=238			*e*S	**Sn**	**00 22 21.5**	**+0.5**
LONT	**Longtian** baz=205	**1.05**	**204**	*e*P	**Pg**	**00 22 06.1**	**-0.3**
CHN4	**Tsaushan** baz=235	**1.05**	**241**	*e*P	**Pn**	**00 22 07.7**	**+1.2**
CHN4	baz=235			*e*S	**Sn**	**00 22 23.8**	**+2.7**
SBCB	**Hsinchu** baz=336	**1.07**	**329**	P	**Pn**	**00 22 08.4**	**+1.7**
SBCB	baz=336			*e*S	**Sn**	**00 22 22.7**	**+1.3**
HSN	**Hsinchu** baz=330	**1.08**	**329**	*e*P	**Pn**	**00 22 08.8**	**+1.9**
NHDH	**Xindian Distri** baz=355	**1.09**	**357**	*e*P	**Pn**	**00 22 07.7**	**+0.7**
WTP	**Ta-pu** baz=244	**1.09**	**235**	*e*P	**Pn**	**00 22 08.0**	**+0.9**
WTP	baz=244			*e*S	**Sn**	**00 22 24.1**	**+2.0**
TATO	**Taipei**	**1.10**	**355**	P	**Pn**	**00 22 08.0**	**+0.8**
TWA	**Mucha** baz=349	**1.10**	**360**	*e*P	**Pb**	**00 22 07.2**	**+0.2**
TWA	baz=349			*e*S	**Sn**	**00 22 22.9**	**+0.7**
WRL	**Guolierlin Hig** baz=273	**1.11**	**272**	*e*P	**Pn**	**00 22 08.4**	**+1.1**
WRL	baz=273			*e*S	**Sn**	**00 22 24.0**	**+1.6**
WTK	**Tuku** baz=263	**1.12**	**261**	*e*P	**Pn**	**00 22 08.6**	**+1.2**
WTK	baz=263			*e*S	**Sn**	**00 22 25.3**	**+2.7**
TWG	**Pinlang** baz=206	**1.15**	**205**	*e*P	**Pb**	**00 22 06.4**	**-1.4**
TWGBT	**Beinan** baz=206	**1.15**	**204**	*e*P	**Pb**	**00 22 06.2**	**-1.6**
NCUH	**Zhongli** baz=348	**1.15**	**341**	*e*P	**Pn**	**00 22 09.5**	**+1.6**
NCUH	baz=348			*e*S	**Sn**	**00 22 27.7**	**+4.2**
TAP	**Taipei** baz=354	**1.16**	**356**	*e*P	**Pn**	**00 22 09.9**	**+1.9**
TAP	baz=354			*e*S	**Sn**	**00 22 25.9**	**+2.1**
TWK	**Hsinying** baz=242	**1.18**	**239**	P	**Pn**	**00 22 09.6**	**+1.3**
TWK	baz=242			*e*S	**Sn**	**00 22 26.9**	**+2.6**
TWB1	**Santiao Chiao** baz=7.0	**1.19**	**18**	*e*P	**Pg**	**00 22 09.7**	**+0.7**
CHN1	**Nanshi** baz=238	**1.19**	**235**	P	**Pg**	**00 22 10.0**	**+0.9**
CHN1	baz=238			*e*S	**Sn**	**00 22 26.7**	**+2.2**
SNST	**Tainan City** baz=241	**1.20**	**237**	*e*P	**Pg**	**00 22 10.2**	**+1.0**
SNST	baz=241			*e*S	**Sn**	**00 22 27.0**	**+2.5**
LDUT	**Ludao** baz=170	**1.20**	**185**	*e*P	**Pn**	**00 22 06.8**	**-1.7**
NWF	**Wu-fen Shan** baz=6.0	**1.21**	**8**	*e*P	**Pg**	**00 22 09.9**	**+0.5**
WFSB	**Wu-fen Shan** baz=5.0	**1.21**	**8**	*e*P	**Pg**	**00 22 09.8**	**+0.4**
WFSB	baz=5.0			*e*S	**Sn**	**00 22 26.1**	**+1.3**
SGST	**Jiashian** baz=233	**1.22**	**230**	P	**Pg**	**00 22 09.4**	**-0.1**
SGST	baz=233			*e*S	**Sn**	**00 22 27.9**	**+2.8**
TWS1	**Kuangyinshan** baz=350	**1.23**	**353**	*e*P	**Pg**	**00 22 10.5**	**+0.6**
TWS1	baz=350			*e*S	**Sn**	**00 22 26.9**	**+1.5**
SXI1	**Grass Mountain** baz=358	**1.24**	**12**	*e*P	**Pg**	**00 22 10.2**	**+0.1**
YM01	**YM01** baz=358	**1.27**	**359**	*e*P	**Pg**	**00 22 11.1**	**+0.5**
WSF	**Szhu** baz=261	**1.28**	**260**	*e*P	**Pg**	**00 22 11.5**	**+0.8**
TNOU	**National Taiwa** baz=5.0	**1.28**	**7**	*e*P	**Pb**	**00 22 10.4**	**+0.3**
NTST	**Danshui** baz=351	**1.29**	**354**	*e*P	**Pg**	**00 22 11.2**	**+0.1**
NTST	baz=351			*e*S	**Sn**	**00 22 30.3**	**+3.3**
WSL	**Shuilin Townsh** baz=270	**1.30**	**255**	*e*P	**Pg**	**00 22 11.9**	**+0.8**
WSL	baz=270			*e*S	**Sn**	**00 22 30.5**	**+3.5**
ICHU	**Yijhu** baz=249	**1.31**	**247**	*e*P	**Pg**	**00 22 11.8**	**+0.5**
ANP	**Anpu** baz=356	**1.31**	**357**	*e*P	**Pg**	**00 22 12.0**	**+0.6**
JYNG	**Yonagunijimaku**	**1.36**	**65**	P	**Pn**	**00 22 11.1**	**+0.3**
JYNG				*e*S	**Sb**	**00 22 29.4**	**+0.6**
TWY	**Chenhua** baz=359	**1.40**	**0**	*e*P	**Pg**	**00 22 12.7**	**-0.3**
ECL	**Taimali** baz=192	**1.40**	**205**	*e*P	**Pn**	**00 22 10.8**	**-0.5**
SCST	**Cishan** baz=214	**1.41**	**226**	*e*P	**Pg**	**00 22 14.1**	**+0.9**
YOJ	**Yonaguni jima** baz=65	**1.42**	**65**	*e*P	**Pn**	**00 22 12.1**	**+0.5**
YOJ	**Yonaguni jima**	**1.42**	**65**	P	**Pn**	**00 22 11.9**	**+0.4**
YOJ				*e*S	**Sn**	**00 22 30.6**	**+0.5**
SHHT	**Tainan City** baz=236	**1.42**	**234**	*e*P	**Pg**	**00 22 15.1**	**+1.6**
TSMG	**Majia** baz=212	**1.45**	**217**	*e*P	**Pb**	**00 22 13.6**	**+0.6**
MASBT	**Mashibuluo** baz=210	**1.53**	**215**	*e*P	**Pn**	**00 22 13.9**	**+0.8**
TSCK	**Chigu Township** baz=248	**1.56**	**243**	*e*P	**Pb**	**00 22 15.1**	**+0.3**
TSCK	baz=248			*e*S	**Sg**	**00 22 36.8**	**+0.4**
EAST	**Anshuo** baz=195	**1.63**	**205**	*e*P	**Pn**	**00 22 13.4**	**-1.1**
SCZT	**Fangliau** baz=200	**1.74**	**211**	*e*P	**Pb**	**00 22 18.2**	**+0.3**
SLIU	**Shizi** baz=195	**1.80**	**204**	*e*P	**Pn**	**00 22 17.9**	**+1.1**
LAY	**Lan-yu** baz=165	**1.83**	**181**	*e*P	**Pn**	**00 22 15.2**	**-1.9**
LYUB	**Lan-yu** baz=165	**1.86**	**180**	*e*P	**Pn**	**00 22 15.1**	**-2.5**
WDGT	**Dungji** baz=255	**1.88**	**251**	*e*P	**Pn**	**00 22 19.0**	**+1.2**
PHUB	**P'eng-hu** baz=262	**1.89**	**259**	*e*P	**Pb**	**00 22 19.7**	**-0.6**

PHUB					*e*S		**Sb**	**00 22 44.4**	**+0.6**
	baz=262								
PNG	**Penghu**	**1.89**	**261**	*e*P			**Pb**	**00 22 19.6**	**-0.8**
	baz=264								
IRIF	**Iriomote-Funau**	**2.01**	**76**	*e*P			**Pn**	**00 22 21.3**	**+1.7**
IRIF				*e*S			**Sn**	**00 22 46.1**	**+1.5**
HATJ	**Hateruma jima**	**2.03**	**84**	*e*S			**Sn**	**00 22 45.1**	**-0.1**
TWKBT	**Hengchun**	**2.05**	**201**	*e*P			**Pb**	**00 22 23.3**	**+0.1**
	baz=204								
VCHM	**Qimei**	**2.09**	**252**	*e*P			**Pn**	**00 22 22.1**	**+1.4**
	baz=256								
VCHM					*e*S		**Sb**	**00 22 48.9**	**-0.8**
	baz=256								
JKRS	**Kuro-shima**	**2.24**	**80**	P			**Pn**	**00 22 25.0**	**+2.2**
VWUC	**VWUC**	**2.25**	**300**	*e*P			**Pn**	**00 22 23.0**	**+0.1**
	baz=299								
VWUC					*e*S		**Sn**	**00 22 50.8**	**+0.3**
	baz=299								
JIJ	**Ishigaki jima**	**2.38**	**78**	P			**Pn**	**00 22 24.7**	**-0.1**
JIJ					*e*S		**Sn**	**00 22 54.7**	**+0.9**
PTMZ	**Houxiangcun**	**2.54**	**298**	*e*P			**Pn**	**00 22 27.3**	**+0.4**
	baz=300								
JISG	**Ishigakijimahi**	**2.58**	**73**	P			**Pn**	**00 22 27.5**	**0.0**
JISG					*e*S		**Sn**	**00 22 59.0**	**+0.3**
MATB	**Ma-tsu**	**2.72**	**327**	*e*P			**Pn**	**00 22 30.1**	**+0.7**
	baz=315								
QZH	**Quanzhou**	**2.94**	**292**	⇑*i*Pn			**Pn**	**00 22 32.9**	**+0.5**
QZH				Sn			**Sn**	**00 23 07.9**	**+0.4**
QZH				smax		smax			
	comp=N,360nm,0.8s								
QZH				smax		smax			
	comp=E,370nm,0.6s								
QZH				LR		LR			
	comp=N,1μm,8.9s								
QZH				LR		LR			
	comp=E,2μm,10.0s								
QZH				LR		LR			
	comp=Z,2μm,8.6s								
KNM	**Kinmen**	**2.94**	**281**	*e*P			**Pn**	**00 22 34.9**	**+2.5**
	baz=284								
KNMB	**Chin-men Tao**	**2.98**	**282**	*e*P			**Pn**	**00 22 33.8**	**+0.8**
	baz=286								
LYJJ	**Jianjiangzhen**	**3.14**	**328**	*e*P			**Pn**	**00 22 35.9**	**+0.7**
	baz=317								
MHZQ	**Yeshan**	**3.21**	**314**	*e*P			**Pn**	**00 22 36.4**	**+0.2**
	baz=317								
XPSS	**Dashiqiu**	**3.30**	**338**	*e*P			**Pn**	**00 22 37.5**	**+0.2**
	baz=337								
AXDP	**Jialang**	**3.46**	**288**	*e*P			**Pn**	**00 22 40.4**	**+0.8**
	baz=291								
ZPLA	**Ao Xicun**	**3.52**	**272**	*e*P			**Pn**	**00 22 41.4**	**+1.0**
	baz=275								
JOW	**Kunigami**	**6.72**	**63**	P			**Pn**	**00 23 23.6**	**-1.0**
JOW	**Kunigami**	**6.72**	**63**	Pn			**Pn**	**00 23 23.5**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=154,slow=15,SNR=8.3								
	comp=Z,6.5nm,0.3s								
WHN	**Wuhan**	**9.26**	**317**	P			**Pn**	**00 24 00.3**	**+1.1**
WHN				S			**Sn**	**00 25 44.5**	**+1.3**
WHN				LR		LR			
	comp=N,1μm,11.8s								
WHN				LR		LR			
	comp=E,1μm,10.1s								
WHN				LR		LR			
	comp=Z,2μm,9.9s								
KSRS	**Korea Array**	**14.59**	**20**	Pn			**Pn**	**00 25 12.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=199,slow=12,SNR=1.6								
	comp=Z,0.6nm,0.4s								
CMAR	**Chiang Mai Arr**	**21.79**	**260**	P			**P**	**00 26 35.4**	**-2.4**
	comp=Z,1.1nm,0.3s,baz=69,slow=7.8,SNR=2.6								
	comp=Z,1.1nm,0.3s								
GTA	**Gaotai**	**24.07**	**315**	P		P		00 27 10.1	+8.8
GTA				pP		sP		00 27 14.8	+7.6
GTA				sP		pP		00 27 17.8	+12
GTA				pmax		pmax			
	comp=Z,2.0nm,1.1s								
SONM	**Songino Array**	**26.80**	**337**	P			**P**	**00 27 26.2**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=156,slow=10,SNR=6.6								
	comp=Z,0.7nm,0.7s								
MKAR	**Makanchi Array**	**38.82**	**316**	P			**P**	**00 29 09.7**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=102,slow=8.3,SNR=2.6								
MKAR				PcP			**PcP**	**00 31 19.5**	**-2.2**
	comp=Z,0.5nm,0.9s,baz=98,slow=4.4,SNR=2.6								
	comp=Z,0.4nm,0.6s								
ZALV	**Zalesovo Beam**	**40.71**	**327**	P			**P**	**00 29 26.1**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=106,slow=8.0,SNR=2.7								
	comp=Z,0.9nm,0.8s								
H11N1	**WAKE ISLAND Hy**	**42.13**	**87**	T		T		01 14 40.7	
	baz=277,slow=75,SNR=13								
H11N2	**WAKE ISLAND Hy**	**42.13**	**87**	T		T		01 14 41.3	
	baz=277,slow=75,SNR=14								
H11N3	**WAKE ISLAND Hy**	**42.15**	**87**	T		T		01 14 40.7	
	baz=277,slow=75,SNR=8.9								
H11S3	**WAKE ISLAND Hy**	**42.25**	**88**	T		T		01 14 42.4	
	baz=284,slow=75,SNR=71								
H11S1	**WAKE ISLAND Hy**	**42.26**	**88**	T		T		01 14 44.0	
	baz=284,slow=75,SNR=32								
H11S2	**WAKE ISLAND Hy**	**42.27**	**88**	T		T		01 14 43.5	
	baz=284,slow=75,SNR=22								
KURBB	**Kurchatov Arra**	**42.59**	**320**	P			**P**	**00 29 42.5**	**+0.9**
	comp=Z,0.4nm,0.2s,baz=108,slow=7.9,SNR=3.5								
	comp=Z,0.4nm,0.2s								
WRA	**Warramunga Arr**	**45.29**	**163**	P			**P**	**00 30 02.4**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=345,slow=8.8,SNR=9.5								
WRA				PcP			**PcP**	**00 31 40.1**	**-3.3**
	comp=Z,0.8nm,1.1s,baz=356,slow=4.1,SNR=2.4								
	comp=Z,1.1nm,0.8s								
BVAR	**Borovoye Array**	**48.15**	**321**	P			**P**	**00 30 26.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=133,slow=8.1,SNR=2.1								
	comp=Z,0.5nm,0.5s								
ASAR	**Alice Springs**	**48.74**	**165**	P			**P**	**00 30 28.8**	**-1.8**
	comp=Z,1.1nm,1.0s,baz=0.0,slow=7.5,SNR=4.4								
	comp=Z,1.1nm,1.0s								
GEYT	**Alibeck**	**55.28**	**301**	LR		LR		00 58 33.2	
	comp=Z,103nm,20.8s,baz=106,slow=40								
GNI	**Garni**	**65.29**	**305**	LR		LR		01 05 20.4	
	comp=Z,43nm,18.1s,baz=90,slow=40								
ILAR	**Eielson Array**	**69.32**	**27**	P			**P**	**00 32 54.1**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=264,slow=4.4,SNR=2.3								
	comp=Z,0.3nm,0.6s								
SPITS	**Spitsbergen Ar**	**69.86**	**348**	LR		LR		01 09 30.5	
	comp=Z,139nm,18.8s,baz=14,slow=41								
ARCES	**ARCESS Array B**	**69.97**	**338**	LR		LR		01 07 30.2	
	comp=Z,240nm,21.9s,baz=56,slow=39								
FINES	**FINESS Array B**	**71.90**	**330**	P			**P**	**00 33 09.0**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=59,slow=8.3,SNR=1.7								
FINES				LR		LR		01 08 10.4	
	comp=Z,178nm,19.3s,baz=61,slow=39								
	comp=Z,1.5nm,0.9s								
BRTR	**Keskin Array B**	**73.66**	**307**	P			**P**	**00 33 18.8**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=90,slow=3.6,SNR=2.0								
	comp=Z,0.2nm,0.5s								
JMIC	**Jan Mayen**	**79.22**	**345**	LR		LR		01 15 13.9	
	comp=Z,50nm,18.3s,baz=58,slow=40								
YKA	**Yellowknife Ar**	**83.11**	**23**	P			**P**	**00 34 11.2**	**0.0**
	comp=Z,0.9nm,0.8s,baz=315,slow=4.8,SNR=11								
	comp=Z,0.9nm,0.8s								
SFJD	**Kangerlussuaq**	**89.22**	**357**	LR		LR		01 17 16.3	
	comp=Z,66nm,18.2s,baz=356,slow=37								
FRB	**Frobisher Bay**	**92.31**	**4**	LR		LR		01 18 39.7	
	comp=Z,77nm,19.6s,baz=350,slow=37								
NVAR	**Mina Array Bea**	**96.40**	**43**	P			**P**	**00 35 17.4**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=284,slow=3.6,SNR=1.8								
	comp=Z,0.4nm,0.8s								

TAP ***14*** *00:24:51.7,23˚.90N×121˚.56E,h10km,ML3.3,C*
JMA ***14*** *00:24:51.3±0.2,23˚.9N±0˚.4×12˚2E±˚,h0km,TAIWAN REGION*

ISC 14 00:24:52.1±0.8,23˚.90N±0˚.02×121˚.59E±0˚.02,h11km±5km, n77,σ0§60/102,4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.08**	**12**	*i* P		**Pg**	**00 24 54.7**	**+0.1**
	baz=29							
HWA				S		**Sg**	**00 24 57.0**	**+0.6**
	baz=29							
ETM	**Tongmen**	**0.11**	**309**	*i* P		**Pg**	**00 24 54.5**	**-0.5**
	baz=317							
ETM				*e*S		**Sg**	**00 24 56.2**	**-0.9**
	baz=317							
SHUL	**Shoufeng**	**0.11**	**191**	*i* P		**Pg**	**00 24 54.9**	**-0.1**
	baz=182							
SHUL				S		**Sg**	**00 24 57.6**	**+0.5**
	baz=182							
ESL	**Shilin**	**0.16**	**240**	⇓*i* P		**Pg**	**00 24 55.1**	**-0.7**
	baz=233							
ESL				S		**Sg**	**00 24 57.2**	**-1.1**
	baz=233							
TWD	**Chiawan**	**0.18**	**3**	*i* P		**Pg**	**00 24 56.0**	**-0.2**
	baz=4.0							
TWD				*e*S		**Sg**	**00 24 59.0**	**+0.1**
	baz=4.0							
TEGC	**Jichi Village**	**0.19**	**193**	*e*P		**Pg**	**00 24 56.8**	**+0.5**
	baz=191							
TEGC				*e*S		**Sg**	**00 25 01.1**	**+2.0**
	baz=191							
LXIB	**Xiulin Townshi**	**0.20**	**308**	⇓*i* P		**Pg**	**00 24 56.0**	**-0.5**
	baz=312							
LXIB				*e*S		**Sg**	**00 24 59.8**	**+0.2**
	baz=312							
WARBT	**Fenglin Townsh**	**0.26**	**226**	*i* P		**Pg**	**00 24 56.7**	**-0.7**
	baz=229							
WARBT				S		**Sg**	**00 25 00.0**	**-0.9**
	baz=229							
ETL	**Fush Village**	**0.26**	**7**	P		**Pg**	**00 24 57.4**	**-0.2**
	baz=9.0							
ETL				*e*S		**Sg**	**00 25 01.2**	**-0.1**
	baz=9.0							
NACB	**Ninganchiao**	**0.28**	**2**	*i* P		**Pg**	**00 24 57.4**	**-0.4**
	baz=5.0							
NACB				*e*S		**Sg**	**00 25 01.1**	**-0.4**
	baz=5.0							
ETLH	**Xiulin Townshi**	**0.32**	**343**	⇓*i* P		**Pg**	**00 24 58.4**	**-0.3**
	baz=345							
ETLH				S		**Sg**	**00 25 02.7**	**-0.4**
	baz=345							
WHF	**Hehuan Shan**	**0.38**	**310**	*i* P		**Pg**	**00 24 59.7**	**-0.2**
	baz=313							
CHGB	**Renai**	**0.41**	**293**	⇓*i* P		**Pg**	**00 25 00.4**	**0.0**
	baz=295							
CHGB				S		**Sb**	**00 25 06.7**	**-1.2**
	baz=295							
HGSD	**Ruisui**	**0.43**	**200**	P		**Pb**	**00 25 01.5**	**-0.2**
	baz=206							
VWDT	**VWDT**	**0.43**	**251**	*i* P		**Pg**	**00 25 00.6**	**0.0**
	baz=252							
VWDT				S		**Sg**	**00 25 06.7**	**+0.3**
	baz=252							
WUSB	**Renai**	**0.44**	**283**	*i* P		**Pb**	**00 25 00.9**	**-1.0**
	baz=284							
EAHA	**Aohua**	**0.45**	**18**	*e*P		**Pg**	**00 25 00.9**	**-0.1**
	baz=11							
EHY	**Hungye**	**0.46**	**212**	*e*P		**Pg**	**00 25 00.6**	**-0.5**
	baz=211							
TWT	**Tachien**	**0.52**	**314**	P		**Pb**	**00 25 02.7**	**-0.6**
	baz=314							
TDCB	**Techi**	**0.53**	**312**	P		**Pb**	**00 25 02.7**	**-0.8**
	baz=314							
ENA	**Nanau**	**0.55**	**15**	*e*P		**Pg**	**00 25 02.7**	**-0.1**
	baz=7.0							
NNSB	**Datong**	**0.56**	**341**	*i* P		**Pg**	**00 25 03.1**	**0.0**
	baz=335							
YULB	**Yu-li**	**0.57**	**208**	*e*P		**Pg**	**00 25 02.9**	**-0.3**
	baz=216							
EWUT	**Wuta**	**0.57**	**18**	*e*P		**Pb**	**00 25 03.6**	**-0.6**
	baz=10.0							
NNS	**Nan Shan**	**0.57**	**340**	P		**Pg**	**00 25 03.4**	**0.0**
	baz=336							
SSLB	**Suanglung**	**0.59**	**259**	*i* P		**Pg**	**00 25 03.5**	**-0.1**
	baz=268							
SSLB				*e*S		**Sg**	**00 25 10.8**	**-0.6**
	baz=268							
TWF1	**Yuli**	**0.60**	**206**	*e*P		**Pg**	**00 25 03.6**	**-0.3**
	baz=216							
TWF1				*e*S		**Sb**	**00 25 12.9**	**-0.3**
	baz=216							
SMLT	**Sun Moon Lake**	**0.63**	**269**	P		**Pb**	**00 25 04.5**	**-0.7**
	baz=270							
SMLT				*e*S		**Sb**	**00 25 13.4**	**-0.7**
	baz=270							
WCS	**Beigang Elemen**	**0.64**	**285**	*i* P		**Pb**	**00 25 04.9**	**-0.4**
	baz=286							
LATG	**Datong**	**0.64**	**355**	*i* P		**Pg**	**00 25 04.4**	**-0.2**
	baz=346							
TYC	**Yuchr**	**0.67**	**271**	P		**Pb**	**00 25 05.4**	**-0.4**
	baz=281							
TYC				*e*S		**Sb**	**00 25 14.9**	**-0.2**
	baz=281							
EOS4	**EOS4**	**0.71**	**71**	*e*S		**Sn**	**00 25 18.3**	**-0.1**
	baz=90							
NDT	**Datong Townshi**	**0.71**	**355**	*e*P		**Pb**	**00 25 06.1**	**-0.3**
	baz=348							
CHKH	**Chenggong**	**0.72**	**194**	*e*P		**Pb**	**00 25 06.7**	**0.0**
	baz=181							
ENTT	**Nioudou**	**0.74**	**359**	P		**Pg**	**00 25 06.3**	**-0.2**
	baz=359							
NDS	**Dongshan**	**0.74**	**9**	*e*P		**Pb**	**00 25 06.5**	**-0.6**
	baz=2.0							
TWC	**Suao**	**0.75**	**19**	*e*P		**Pb**	**00 25 06.7**	**-0.5**
	baz=12							
YHNB	**Yeheng**	**0.79**	**346**	P		**Pb**	**00 25 07.9**	**-0.1**
	baz=357							
NSK	**Sanguang**	**0.80**	**345**	P		**Pb**	**00 25 07.9**	**-0.3**
	baz=345							
NSK				*e*S		**Sb**	**00 25 19.8**	**+0.7**
	baz=345							
ALS	**Alishan**	**0.81**	**242**	P		**Pb**	**00 25 08.1**	**-0.3**
	baz=243							
ALS				*e*S		**Sb**	**00 25 20.1**	**+0.5**
	baz=243							
CHKT	**Chengkung**	**0.82**	**194**	*e*P		**Pb**	**00 25 07.6**	**-0.3**
	baz=194							
EHD	**Haiduan**	**0.82**	**205**	*e*P		**Pb**	**00 25 08.3**	**-0.1**
	baz=206							
TWE	**Neicheng**	**0.82**	**5**	*e*P		**Pb**	**00 25 08.2**	**-0.3**
	baz=356							
WNT	**Mingjian**	**0.83**	**269**	*e*P		**Pn**	**00 25 09.5**	**-0.2**
	baz=270							
NFF	**Wufeng Townshi**	**0.85**	**330**	*e*P		**Pb**	**00 25 08.8**	**-0.1**
	baz=337							
FUSB	**Fushanzhiwuyua**	**0.86**	**0**	*e*P		**Pb**	**00 25 08.9**	**-0.2**
	baz=359							
TWQ1	**Liyutan**	**0.87**	**301**	*e*P		**Pn**	**00 25 10.1**	**-0.2**
	baz=302							
ELDTW	**Liu**	**0.88**	**217**	*e*P		**Pg**	**00 25 08.5**	**-0.6**
	baz=206							
NWLT	**Wulai**	**0.88**	**355**	*e*P		**Pb**	**00 25 09.2**	**-0.2**
	baz=344							
CHN5	**Tsauling**	**0.88**	**250**	*e*P		**Pb**	**00 25 10.0**	**+0.4**
	baz=252							
NSTT	**Nanjuang**	**0.91**	**324**	P		**Pb**	**00 25 10.3**	**+0.4**
	baz=324							
NSTT				*e*S		**Sb**	**00 25 22.9**	**+0.9**
	baz=324							
LIOB	**Emei**	**0.91**	**325**	*e*P		**Pn**	**00 25 10.9**	**0.0**
	baz=325							
NSY	**Sanyi**	**0.91**	**305**	*e*P		**Pn**	**00 25 11.3**	**+0.3**
	baz=305							
EDH	**Donghe**	**0.96**	**196**	*e*P		**Pg**	**00 25 08.6**	**-2.0**
	baz=200							
EDH				*e*S		**Sb**	**00 25 23.6**	**+0.3**
	baz=200							
WGK	**Gukeng**	**0.96**	**258**	*e*P		**Pn**	**00 25 12.0**	**+0.5**
	baz=260							
WGK				*e*S		**Sn**	**00 25 26.6**	**+1.3**
	baz=260							
NMLH	**Miaoli**	**0.97**	**311**	*e*P		**Pn**	**00 25 12.2**	**+0.5**
	baz=312							
WDLH	**Douliu**	**0.98**	**258**	*e*P		**Pn**	**00 25 12.2**	**+0.3**
	baz=260							
WDLH				*e*S		**Sn**	**00 25 26.7**	**+1.0**
	baz=260							
EGS		**0.99**	**18**	*e*P		**Pn**	**00 25 12.2**	**+0.1**
	baz=17							
WCKO	**Fanlu**	**1.01**	**243**	*e*P		**Pn**	**00 25 12.2**	**-0.1**
	baz=245							
STYH	**Taoyuan**	**1.04**	**226**	*e*P		**Pb**	**00 25 12.0**	**-0.1**
	baz=214							
STYT	**Tauyuan**	**1.05**	**226**	*e*P		**Pb**	**00 25 12.6**	**+0.1**
	baz=214							
TPUB	**Ta-pu**	**1.06**	**236**	*e*P		**Pn**	**00 25 13.2**	**+0.2**
	baz=238							
CHN4	**Tsaushan**	**1.06**	**239**	*e*P		**Pn**	**00 25 13.2**	**+0.3**
	baz=241							
NHDH	**Xindian Distri**	**1.06**	**357**	*e*P		**Pn**	**00 25 13.8**	**+0.8**
	baz=355							
WTP	**Ta-pu**	**1.10**	**234**	*e*P		**Pn**	**00 25 13.6**	**+0.1**
	baz=236							
WRL	**Guolierlin Hig**	**1.11**	**270**	*e*P		**Pn**	**00 25 14.2**	**+0.6**
	baz=272							
WRL				*e*S		**Sn**	**00 25 29.9**	**+1.1**
	baz=272							
WTK	**Tuku**	**1.12**	**259**	*e*P		**Pn**	**00 25 14.2**	**+0.6**
	baz=261							
TWK	**Hsinying**	**1.19**	**238**	*e*P		**Pn**	**00 25 15.5**	**+0.8**
	baz=252							
CHN1	**Nanshi**	**1.20**	**234**	*e*P		**Pn**	**00 25 15.8**	**+0.9**
	baz=248							
SXI1	**Grass Mountain**	**1.22**	**12**	*e*P		**Pn**	**00 25 15.7**	**+0.4**
	baz=360							
SGST	**Jiashian**	**1.23**	**229**	*e*P		**Pn**	**00 25 15.5**	**+0.3**
	baz=219							
YM01	**YM01**	**1.24**	**359**	*e*P		**Pn**	**00 25 16.8**	**+1.2**
	baz=359							
JYNG	**Yonagunijimaku**	**1.36**	**66**	*e*S		**Sn**	**00 25 36.0**	**+1.0**
YOJ	**Yonaguni jima**	**1.42**	**66**	*e*P		**Pn**	**00 25 17.8**	**0.0**
MASBT	**Mashibuluo**	**1.55**	**215**	*e*P		**Pb**	**00 25 20.7**	**-0.2**
	baz=210							
JIJ	**Ishigaki jima**	**2.38**	**78**	*e*S		**Sn**	**00 25 59.6**	**-0.7**
JISG	**Ishigakijimahi**	**2.58**	**74**	P		**Pn**	**00 25 33.9**	**0.0**
JISG				*e*S		**Sn**	**00 26 04.3**	**-0.9**

IDC ***14*** *00:31:40.8±2.0,15˚.43S×172˚.85W,h0km,mb3.7/6, mbtmp3.7/6,Error ellipse: s-maj=118.8km s-min=28.8km az=150.0*

ISC 14 00:31:45.4±2.0,15˚.4S±0˚.7×172˚.9W±0˚.4,h29km,n7, σ1§14/7,mb3.6/6,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**50.55**	**252**	P		**P**	**00 40 41.5**	**-0.2**
	0.6nm,0.6s,baz=88,slow=7.9,SNR=10							
	0.6nm,0.6s							
NVAR	**Mina Array Bea**	**74.01**	**42**	P		**P**	**00 43 16.8**	**-2.0**
	0.4nm,0.7s,baz=246,slow=6.8,SNR=3.0							
	0.4nm,0.7s							
TXAR	**Lajitas Array**	**80.22**	**56**	P		**P**	**00 43 54.3**	**+0.5**
	0.6nm,1.0s,baz=231,slow=5.7,SNR=4.0							
	0.6nm,1.0s							
PDAR	**Pinedale Array**	**81.95**	**42**	P		**P**	**00 44 03.0**	**+0.2**
	0.3nm,0.5s,baz=211,slow=5.1,SNR=2.6							
	0.3nm,0.5s							
ILAR	**Eielson Array**	**82.34**	**11**	P		**P**	**00 44 04.0**	**0.0**
	0.5nm,0.8s,baz=228,slow=6.8,SNR=6.6							
	0.5nm,0.8s							
YKA	**Yellowknife Ar**	**89.90**	**23**	P		**P**	**00 44 42.3**	**+0.9**
	0.4nm,0.7s,baz=233,slow=4.2,SNR=7.4							
	0.4nm,0.7s							
BRTR	**Keskin Array B**	**146.42**	**321**	PKPbc		**PKPbc**	**00 51 24.3**	**+0.1**
	0.6nm,0.7s,baz=46,slow=4.2,SNR=5.1							

ISN ***14*** *00:46:01.6±0.6,34˚.71N×46˚.05E,h4km±6km,ML3.0*
TEH ***14*** *00:46:02.5,34˚.69N×46˚.10E,h6km±137km,ML2.7*

ISC 14 00:46:02.6±1.0,34˚.70N±0˚.05×46˚.09E±0˚.03,h10km,n9, σ0§67/13,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.25**	**89**	Pg		**Pg**	**00 46 07.8**	**+0.1**
IDHR				Sg		**Sg**	**00 46 10.8**	**-0.4**
KGS1	**Ghasr-e-Shirin**	**0.45**	**245**	Pg		**Pg**	**00 46 11.4**	**0.0**
IGHG	**Ghaleghazi**	**0.54**	**132**	Pg		**Pb**	**00 46 13.7**	**-0.6**
ILIN	**Lien**	**0.76**	**73**	Pg		**Pb**	**00 46 18.1**	**+0.2**
KCHF	**Kheshme Sefid,**	**0.89**	**118**	Pg		**Pg**	**00 46 19.2**	**-0.6**
ILBA	**Ilam Banvizeh**	**1.07**	**175**	Pg		**Pn**	**00 46 24.4**	**+0.6**
IBDR	**Badra**	**1.59**	**185**	*e*Pn		**Pb**	**00 46 32.0**	**0.0**
IBDR				*e*Sn		**Sg**	**00 46 55.0**	**+1.3**
IKRK	**Kirkuk**	**1.59**	**297**	*e*Pn		**Pb**	**00 46 32.0**	**-0.1**
IKRK				*e*Sn		**Sg**	**00 46 54.0**	**+0.1**
IKRK				AML		AML	00 47 04.7	
	comp=E,164nm,0.4s							
IKRK				AML		AML	00 47 05.8	
	comp=N,285nm,0.4s							
BHD	**Baghdad**	**2.01**	**225**	*e*Pn		**Pb**	**00 46 38.0**	**-1.2**
BHD				*e*Sn		**Sb**	**00 47 04.0**	**-0.2**

JMA ***14*** *00:58:09.8±0.2,25˚.N±1˚×122˚.5E±0˚.5,h13km±3km, MV2.5/9,NW OFF ISHIGAKIJIMA IS*
TAP ***14*** *00:58:09.5,24˚.83N×122˚.50E,h11km,ML2.8,D*

ISC 14 00:58:09.0±1.1,24˚.80N±0˚.03×122˚.48E±0˚.02,h19km±3km, n49,σ0§47/81,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS2	**EOS2**	**0.44**	**211**	*i* P		**Pb**	**00 58 18.7**	**+0.6**
	baz=210							
EOS2				*e*S		**Sb**	**00 58 25.7**	**+1.3**
	baz=210							
TWB1	**Santiao Chiao**	**0.49**	**295**	*i* P		**Pb**	**00 58 19.2**	**+0.1**
	baz=291							
TWB1				*i* S		**Sg**	**00 58 25.3**	**-0.3**
	baz=291							
EGS		**0.50**	**276**	*e*P		**Pb**	**00 58 19.3**	**+0.1**
	baz=271							
EOS3	**EOS3**	**0.53**	**196**	*e*P		**Pg**	**00 58 20.3**	**+0.6**
	baz=197							
EOS3				*e*S		**Sn**	**00 58 29.6**	**-0.3**
	baz=197							
JYNG	**Yonagunijimaku**	**0.55**	**129**	P		**Pg**	**00 58 20.1**	**+0.1**
JYNG				S		**Sg**	**00 58 27.4**	**0.0**
YOJ	**Yonaguni jima**	**0.59**	**124**	*i* P		**Pg**	**00 58 20.9**	**+0.1**
	baz=127							
YOJ				*i* S		**Sg**	**00 58 28.6**	**-0.1**
	baz=127							
YOJ	**Yonaguni jima**	**0.59**	**124**	P		**Pg**	**00 58 20.9**	**+0.1**
YOJ				*e*S		**Sg**	**00 58 28.3**	**-0.4**
TWC	**Suao**	**0.60**	**252**	*i* P		**Pg**	**00 58 21.2**	**+0.2**
	baz=249							
TWC				*e*S		**Sg**	**00 58 29.9**	**+0.8**
	baz=249							
ESAO	**Su ao**	**0.62**	**249**	*i* P		**Pg**	**00 58 21.7

YM01	**YM01**	**0.89**	**293**	*e*P	**Pg**	**00 58 26.3**	**-0.2**
	baz=290							
YM01				*e*S	**Sg**	**00 58 37.9**	**-0.4**
	baz=290							
YM08	**YM08**	**0.89**	**296**	*e*P	**Pg**	**00 58 26.1**	**-0.4**
	baz=293							
NDT	**Datong Townshi**	**0.90**	**258**	*e*P	**Pn**	**00 58 27.0**	**+0.2**
	baz=256							
NDT				S	**Sn**	**00 58 39.1**	**-0.1**
	baz=256							
LATG	**Datong**	**0.90**	**253**	P	**Pg**	**00 58 26.5**	**-0.2**
	baz=251							
LATG				*e*S	**Sn**	**00 58 40.0**	**+0.6**
	baz=251							
PCYT	**Pengchaiyu**	**0.91**	**336**	*e*P	**Pn**	**00 58 27.6**	**+0.8**
	baz=334							
TWY	**Chenhua**	**0.93**	**301**	*e*P	**Pg**	**00 58 27.1**	**0.0**
	baz=298							
TWY				*e*S	**Sn**	**00 58 39.8**	**-0.1**
	baz=298							
ETL	**Fush Village**	**1.00**	**231**	*e*P	**Pn**	**00 58 27.9**	**-0.3**
	baz=230							
YHNB	**Yeheng**	**1.01**	**263**	P	**Pg**	**00 58 28.5**	**-0.1**
	baz=261							
NACB	**Ninganchiao**	**1.01**	**232**	P	**Pn**	**00 58 28.1**	**-0.2**
	baz=231							
NACB				S	**Sn**	**00 58 41.7**	**-0.4**
	baz=231							
NSK	**Sanguang**	**1.02**	**263**	P	**Pg**	**00 58 28.9**	**-0.1**
	baz=261							
NSK				*e*S	**Sb**	**00 58 41.3**	**0.0**
	baz=261							
NNSB	**Datong**	**1.06**	**250**	P	**Pn**	**00 58 29.2**	**+0.1**
	baz=248							
NNS	**Nan Shan**	**1.06**	**251**	*e*P	**Pg**	**00 58 29.7**	**0.0**
	baz=249							
NNS				*e*S	**Sg**	**00 58 44.1**	**+0.3**
	baz=249							
TWD	**Chiawan**	**1.07**	**228**	P	**Pg**	**00 58 29.6**	**-0.3**
	baz=227							
TWD				*e*S	**Sg**	**00 58 44.1**	**+0.1**
	baz=227							
ETLH	**Xiulin Townshi**	**1.08**	**237**	P	**Pg**	**00 58 29.8**	**-0.2**
	baz=236							
LXIB	**Xiulin Townshi**	**1.24**	**232**	*i* P	**Pg**	**00 58 32.6**	**-0.5**
	baz=230							
LXIB				S	**Sg**	**00 58 49.6**	**+0.3**
	baz=230							
NFF	**Wufeng Townshi**	**1.25**	**263**	*e*P	**Pb**	**00 58 32.1**	**+0.1**
	baz=261							
WHF	**Hehuan Shan**	**1.28**	**240**	P	**Pg**	**00 58 33.6**	**-0.3**
	baz=238							
WARBT	**Fenglin Townsh**	**1.47**	**223**	*e*P	**Pb**	**00 58 35.9**	**+0.1**
	baz=222							
WUSB	**Renai**	**1.48**	**237**	*e*P	**Pg**	**00 58 37.3**	**-0.2**
	baz=236							
WUSB				*e*S	**Sg**	**00 58 57.4**	**+0.6**
	baz=236							
JKRS	**Kuro-shima**	**1.50**	**111**	*e*S	**Sb**	**00 58 55.0**	**-0.1**
JIJ	**Ishigaki jima**	**1.58**	**106**	*e*P	**Pb**	**00 58 38.1**	**+0.4**
JIJ				*e*S	**Sb**	**00 58 56.8**	**-0.4**
VWDT	**VWDT**	**1.60**	**230**	*e*P	**Pb**	**00 58 37.9**	**-0.2**
	baz=229							
SSLB	**Suanglung**	**1.71**	**234**	*e*P	**Pg**	**00 58 41.5**	**-0.6**
	baz=233							
TYC	**Yuchr**	**1.72**	**239**	*e*P	**Pg**	**00 58 41.3**	**-0.9**
	baz=238							
YULB	**Yu-li**	**1.77**	**218**	*e*P	**Pb**	**00 58 40.2**	**-0.7**
	baz=217							

JMA ***14*** *01:01:53.1±0.2,24.2°N±0.6×122.2°E, h14km±2km, TAIWAN REGION*
TAP ***14*** *01:01:54.0,24.25°N×121.80E, h14km, ML2.6, C*
ISC 14 01:01:53.4±1.0**,24.23N**±0.02×**121.87E**±0.03**, h17**km±6km**, n38**, σ0.9**45/71, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.16**	**310**	P	**Pb**	**01 01 57.7**	**-0.2**
	baz=323						
EAHA				S	**Sg**	**01 02 00.3**	**-0.1**
	baz=323						
ENA	**Nanau**	**0.23**	**329**	*i* P	**Pg**	**01 01 58.8**	**+0.1**
	baz=345						
ENA				*i* S	**Sg**	**01 02 02.4**	**0.0**
	baz=345						
EWUT	**Wuta**	**0.23**	**339**	P	**Pb**	**01 01 59.0**	**-0.2**
	baz=354						
EWUT				*e*S	**Sg**	**01 02 02.3**	**-0.1**
	baz=354						
ETL	**Fush Village**	**0.24**	**254**	P	**Pb**	**01 01 58.9**	**-0.4**
	baz=239						
ETL				S	**Sb**	**01 02 02.7**	**-0.5**
	baz=239						
NACB	**Ninganchiao**	**0.26**	**259**	*i* P	**Pg**	**01 01 59.1**	**0.0**
	baz=246						
NACB				*i* S	**Sb**	**01 02 03.1**	**-0.7**
	baz=246						
TWD	**Chiawan**	**0.29**	**240**	P	**Pb**	**01 02 00.1**	**0.0**
	baz=225						
TWD				S	**Sb**	**01 02 04.5**	**-0.3**
	baz=225						
ESAO	**Su ao**	**0.35**	**356**	*i* P	**Pg**	**01 02 01.0**	**+0.3**
	baz=7.0						
ESAO				*i* S	**Sg**	**01 02 05.8**	**+0.1**
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.36**	**267**	P	**Pg**	**01 02 00.7**	**-0.1**
	baz=260						
ETLH				S	**Sg**	**01 02 05.7**	**-0.3**
	baz=260						
EOS2	**EOS2**	**0.38**	**60**	*e*P	**Pn**	**01 02 03.7**	**-0.3**
	baz=67						
EOS2				*e*S	**Sn**	**01 02 11.6**	**+0.7**
	baz=67						
TWC	**Suao**	**0.38**	**357**	*i* P	**Pb**	**01 02 01.6**	**-0.1**
	baz=8.0						
TWC				S	**Sg**	**01 02 06.7**	**+0.1**
	baz=8.0						
NDS	**Dongshan**	**0.43**	**341**	P	**Pb**	**01 02 02.4**	**-0.1**
	baz=348						
NDS				S	**Sb**	**01 02 08.4**	**-0.4**
	baz=348						
ETM	**Tongmen**	**0.43**	**233**	P	**Pb**	**01 02 02.4**	**-0.2**
	baz=224						
ETM				S	**Sb**	**01 02 08.9**	**+0.1**
	baz=224						
LATG	**Datong**	**0.44**	**314**	P	**Pg**	**01 02 02.4**	**0.0**
	baz=318						
LATG				S	**Sb**	**01 02 08.7**	**-0.5**
	baz=318						
LXIB	**Xiulin Townshi**	**0.47**	**244**	P	**Pg**	**01 02 02.9**	**+0.1**
	baz=236						
LXIB				S	**Sb**	**01 02 09.4**	**-0.5**
	baz=236						
NNSB	**Datong**	**0.49**	**294**	*i* P	**Pb**	**01 02 03.3**	**-0.3**
	baz=294						
NNSB				*i* S	**Sg**	**01 02 09.7**	**-0.2**
	baz=294						
ENTT	**Nioudou**	**0.50**	**326**	*i* P	**Pb**	**01 02 03.6**	**-0.2**
	baz=331						
ENTT				*i* S	**Sg**	**01 02 10.2**	**+0.1**
	baz=331						
NDT	**Datong Townshi**	**0.50**	**319**	*i* P	**Pb**	**01 02 03.6**	**-0.1**
	baz=323						
NDT				*i* S	**Sg**	**01 02 10.2**	**+0.1**
	baz=323						
NNS	**Nan Shan**	**0.50**	**295**	P	**Pb**	**01 02 03.5**	**-0.3**
	baz=295						
NNS				S	**Sg**	**01 02 10.2**	**-0.2**
	baz=295						
SHUL	**Shoufeng**	**0.52**	**213**	*e*P	**Pb**	**01 02 05.1**	**+1.1**
	baz=204						
SHUL				*e*S	**Sn**	**01 02 14.4**	**-0.1**
	baz=204						
TWE	**Neicheng**	**0.53**	**339**	P	**Pb**	**01 02 04.3**	**0.0**
	baz=347						
TWE				S	**Sb**	**01 02 11.9**	**+0.4**
	baz=347						
WHF	**Hehuan Shan**	**0.56**	**262**	*e*P	**Pb**	**01 02 04.9**	**-0.1**
	baz=257						
FUSS	**Fushou**	**0.57**	**272**	P	**Pb**	**01 02 05.1**	**0.0**
	baz=269						
FUSS				S	**Sb**	**01 02 12.7**	**-0.5**
	baz=269						
FUSB	**Fushanzhiwuyua**	**0.59**	**334**	*i* P	**Pb**	**01 02 05.4**	**+0.1**
	baz=339						
FUSB				*i* S	**Sg**	**01 02 13.1**	**0.0**
	baz=339						
YHNB	**Yeheng**	**0.63**	**314**	*i* P	**Pb**	**01 02 06.1**	**0.0**
	baz=316						
YHNB				*i* S	**Sg**	**01 02 13.4**	**-0.9**
	baz=316						
NWLT	**Wulai**	**0.64**	**329**	P	**Pb**	**01 02 06.4**	**+0.1**
	baz=332						
NWLT				S	**Sg**	**01 02 14.3**	**-0.4**
	baz=332						
NSK	**Sanguang**	**0.65**	**314**	*i* P	**Pg**	**01 02 06.2**	**0.0**
	baz=316						
NSK				*i* S	**Sg**	**01 02 14.7**	**-0.2**
	baz=316						
CHGB	**Renai**	**0.66**	**256**	P	**Pb**	**01 02 06.5**	**-0.1**
	baz=251						
CHGB				S	**Sb**	**01 02 15.1**	**-0.4**
	baz=251						
WARBT	**Fenglin Townsh**	**0.67**	**221**	*e*P	**Pg**	**01 02 06.5**	**-0.1**
	baz=215						
WUSB	**Renai**	**0.73**	**252**	P	**Pb**	**01 02 07.9**	**+0.2**
	baz=247						
WUSB				S	**Sb**	**01 02 17.3**	**-0.2**
	baz=247						
NFF	**Wufeng Townshi**	**0.80**	**301**	*e*P	**Pb**	**01 02 09.1**	**+0.3**
	baz=301						
NFF				*e*S	**Sb**	**01 02 19.6**	**+0.2**
	baz=301						
VWDT	**VWDT**	**0.82**	**235**	P	**Pb**	**01 02 09.4**	**+0.3**
	baz=230						
VWDT				S	**Sb**	**01 02 20.9**	**+1.0**
	baz=230						
HGSD	**Ruisui**	**0.84**	**209**	*e*P	**Pn**	**01 02 11.4**	**+1.0**
	baz=204						
SXI1	**Grass Mountain**	**0.86**	**0**	P	**Pn**	**01 02 11.0**	**+0.1**
	baz=4.0						
SXI1				*e*S	**Sb**	**01 02 22.6**	**+1.2**
	baz=4.0						
LIOB	**Emei**	**0.89**	**298**	*e*P	**Pn**	**01 02 11.4**	**+0.3**
	baz=298						
LIOB				*e*S	**Sn**	**01 02 22.9**	**-0.7**
	baz=298						
NSTT	**Nanjuang**	**0.89**	**297**	*e*P	**Pb**	**01 02 10.8**	**+0.4**
	baz=297						
NSTT				*e*S	**Sb**	**01 02 22.6**	**+0.5**
	baz=297						
SSLB	**Suanglung**	**0.95**	**243**	P	**Pg**	**01 02 11.7**	**0.0**
	baz=239						
SSLB				S	**Sb**	**01 02 23.8**	**+0.1**
	baz=239						
YULB	**Yu-li**	**0.98**	**213**	*e*P	**Pb**	**01 02 11.0**	**-1.0**
	baz=208						
JYNG	**Yonagunijimaku**	**1.00**	**77**	*e*S	**Sb**	**01 02 23.8**	**-1.5**

ANF ***14*** *01:07:34.9±0.2,32.89N×115.74W, h15km, ML2.3/10, Error ellipse: s-maj=2.5km s-min=1.5km az=158.0*
ECX ***14*** *01:07:36.4±0.5,32.85N×115.75W, h7km±3km, MD2.5, ML2.7*
ISC 14 01:07:35.1±0.9**,32.87N**±0.02×**115.74W**±0.02**, h16**km±5km**, n29**, σ0.948/46**, 8C-9D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK2	**Cook Ranch 2**	**0.02**	**155**	⇓*i*P	**Pg**	**01 07 37.8**	**-0.2**
SWSC	**Sam W. Stewart**	**0.09**	**326**	P	**Pg**	**01 07 38.4**	**-0.1**
	baz=152,SNR=414						
SWSC				S	**Sg**	**01 07 40.3**	**-0.4**
	baz=152						
SWSC	**Sam W. Stewart**	**0.09**	**326**	⇑*e*P	**Pg**	**01 07 38.4**	**-0.1**
SWSC				*e*S	**Sg**	**01 07 40.1**	**-0.6**
SWSC				IAML		01 07 40.9	
	comp=E,4μm,0.2s						
SWSC				⇑*e*		01 07 40.9	
SWSC				*e*		01 07 42.8	
SWSC				IAML		01 07 42.8	
	comp=N,2μm,0.3s						
WESC	**Westside Schoo**	**0.11**	**176**	⇓*i*P	**Pg**	**01 07 38.7**	**0.0**
CRR	**Carrizo Plain**	**0.19**	**275**	⇑*i*P	**Pg**	**01 07 40.0**	**+0.2**
SGL	**Mount Signal**	**0.22**	**177**	⇓*i*P	**Pg**	**01 07 40.1**	**-0.1**
SGL				*i* S	**Sg**	**01 07 43.5**	**-0.2**
DREC	**Desert Rsrch C**	**0.26**	**105**	⇑*i*P	**Pb**	**01 07 41.7**	**+0.4**
YUH2	**Yuha Desert**	**0.27**	**215**	⇓*i*P	**Pg**	**01 07 41.0**	**0.0**
YUH2				*e*S	**Sg**	**01 07 44.8**	**-0.3**
JARAX	**Ej. Heriberto**	**0.36**	**158**	*e*P	**Pg**	**01 07 42.6**	**+0.1**
JARAX				*e*S	**Sg**	**01 07 47.8**	**+0.2**
JARAX				IAML		01 07 48.4	
	comp=E,3μm,0.3s						
JARAX				⇑*e*		01 07 48.4	
JARAX				IAML		01 07 48.4	
	comp=N,2μm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.38**	**235**	P	**Pg**	**01 07 43.1**	**+0.1**
	baz=56,SNR=210						
IKP				S	**Sg**	**01 07 48.2**	**-0.2**
	baz=56						
IKP	**In-Ko-Pah, Jac**	**0.38**	**235**	*e*P	**Pg**	**01 07 43.2**	**+0.1**
IKP				*e*S	**Sg**	**01 07 48.2**	**-0.2**
RMX	**La Rumorosa**	**0.39**	**227**	⇓*i*P	**Pg**	**01 07 43.4**	**+0.2**
RMX				*e*S	**Sg**	**01 07 48.7**	**0.0**
RMX				IAML		01 07 49.1	
	comp=N,305nm,0.2s						
RMX				IAML		01 07 49.9	
	comp=E,385nm,0.3s						
COA	**Coachella**	**0.52**	**91**	*i* P	**Pg**	**01 07 45.8**	**+0.3**
MONP2	**Monument Peak**	**0.57**	**272**	P	**Pg**	**01 07 46.8**	**+0.2**
	baz=94,SNR=45						
MONP2				S	**Sg**	**01 07 54.6**	**+0.3**
	baz=94						
MONP2	**Monument Peak**	**0.57**	**272**	*e*P	**Pg**	**01 07 46.8**	**+0.2**
MONP2				*e*S	**Sg**	**01 07 54.4**	**0.0**
MONP2				*e*		01 07 56.0	
MONP2				IAML		01 07 56.0	
	comp=E,127nm,0.1s						
MONP2				*e*		01 07 56.6	
MONP2				IAML		01 07 56.6	
	comp=N,171nm,0.3s						
CPBX	**Cerro Prieto**	**0.58**	**141**	⇑*i*P	**Pg**	**01 07 46.5**	**-0.1**
CPBX				*e*S	**Sg**	**01 07 54.5**	**+0.1**
CPBX				IAML		01 07 59.1	
	comp=N,2μm,0.2s						
CPBX				⇑*e*		01 07 59.1	
CPBX				*e*		01 08 00.5	
CPBX				IAML		01 08 00.5	
	comp=E,2μm,0.3s						
EMSC	**East Mesa**	**0.65**	**101**	⇑*e*P	**Pg**	**01 07 47.8**	**0.0**
GLA	**Glamis**	**0.79**	**77**	P	**Pg**	**01 07 50.0**	**-0.5**
	baz=256						
BC3	**Big Chuckawall**	**0.82**	**17**	P	**Pg**	**01 07 50.7**	**-0.4**
	baz=197,SNR=45						
BC3				S	**Sg**	**01 08 01.8**	**-0.2**
	baz=197						
RHX	**Rio Hardy**	**0.83**	**152**	*e*P	**Pg**	**01 07 50.1**	**-1.2**
ALAMX	**Rancho Alamar**	**0.86**	**178**	⇓*i*P	**Pg**	**01 07 51.4**	**-0.5**
ALAMX				*e*S	**Sg**	**01 08 02.5**	**-0.7**
ALAMX				IAML		01 08 04.4	
	comp=N,466nm,0.2s						
ALAMX				⇓*e*		01 08 04.4	
ALAMX				IAML		01 08 04.8	
	comp=E,287nm,0.2s						
ALAMX				⇓*e*		01 08 04.8	
EML	**El Monte Cty P**	**0.93**	**272**	*e*P	**Pg**	**01 07 52.4**	**-0.8**
PFO	**Pinyon Flats O**	**0.95**	**321**	P	**Pg**	**01 07 52.7**	**-1.0**
	baz=142,SNR=9.9						
PFO				S	**Sg**	**01 08 06.3**	**+0.1**
	baz=142						
SJX	**San Joaquin**	**1.12**	**190**	⇓*i*P	Pb	01 07 51.7	-4.4
BELC	**Belle Mtn. Jos**	**1.15**	**349**	P	**Pb**	**01 07 55.5**	**-1.1**
	baz=169,SNR=34						
BELC				S	**Sb**	**01 08 12.0**	**+0.6**
	baz=169						
109C	**Camp Elliot, M**	**1.15**	**271**	P	**Pb**	**01 07 56.4**	**-0.2**
	baz=91,SNR=9.5						
109C				S	**Sb**	**01 08 11.3**	**0.0**
	baz=91						
IRM	**Iron Mountain**	**1.38**	**21**	Pg	**Pb**	**01 08 01.4**	**+0.9**
	baz=201,SNR=8.5						
MURC	**Murrieta**	**1.42**	**301**	Pg	**Pb**	**01 08 02.2**	**+0.9**
	baz=121						
MURC				Sb	**Sg**	**01 08 20.8**	**-0.3**
	baz=121						
GMRC	**Granite Mounta**	**1.91**	**2**	Pb	**Pb**	**01 08 09.8**	**+0.2**
	baz=182						
GMRC				Sg	**Sg**	**01 08 37.4**	**+0.7**
	baz=182						

NEIC ***14*** *01:12:10.1±1.7,25.44S±0.07×179.21W±0.07, h415km±10km, mb4.1/19, Error ellipse: s-maj=22.0km s-min=6.1km az=159.0*
IDC ***14*** *01:12:13.0±2.2,25.48S×179.38W, h446km±23km, mb3.3/5, mbtmp4.3/7, Error ellipse: s-maj=27.3km s-min=18.8km az=11.0*
ISC 14 01:12:11.6±0.7**,25.44S**±0.07×**179.07W**±0.09**, h450**km**, n102, σ1.981/122, mb3.9**/15**, 3C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.94**	**165**	P	**P**	**01 13 27.9**	**+1.8**
	1μm,0.3s,baz=55,slow=9.3,SNR=6.9						
RAO				S	**S**	**01 14 24.7**	**-2.1**
	2μm,0.3s,baz=128,slow=9.9,SNR=7.5						
GLKZ	**Green Lake**	**3.95**	**165**	P	**P**	**01 13 27.3**	**+1.1**
GLKZ				S	**S**	**01 14 19.8**	**-7.2**
NIUE	**Niue**	**10.57**	**55**	P	**P**	**01 14 34.6**	**-0.4**
OUZ	**Omahuta**	**11.62**	**211**	P	**P**	**01 14 48.5**	**+2.3**
WCZ	**Waipu Caves**	**11.90**	**207**	P	**P**	**01 14 51.7**	**+2.4**
MXZ	**Matakaoa Point**	**12.29**	**190**	P	**P**	**01 14 51.9**	**-1.6**
PINNC	**Pines Island,**	**12.64**	**280**	P	**P**	**01 14 55.8**	**-1.7**
RUGZ	**Raukumara Rang**	**12.79**	**192**	P	**P**	**01 14 59.0**	**0.0**
RUGZ				S	**S**	**01 17 14.7**	**-2.6**
TWGZ	**Tauwhareparae**	**12.95**	**190**	P	**P**	**01 15 00.9**	**+0.3**
TWGZ				S	**S**	**01 17 21.1**	**+0.9**
KMRZ	**Kaimai**	**13.08**	**198**	P	P	01 15 05.1	+3.0
KARZ	**Kaharoa**	**13.16**	**196**	P	P	01 15 06.0	+3.1
MWZ	**Matawai**	**13.18**	**192**	P	**P**	**01 15 03.4**	**+0.3**
MWZ				S	**S**	**01 17 24.0**	**-0.8**
URZ	**Urewera**	**13.19**	**193**	P	**P**	**01 15 01.5**	**-1.7**
	87nm,0.4s,baz=65,slow=2.9,SNR=68						
URZ				S	**S**	**01 17 25.1**	**+0.3**
	125nm,0.5s,baz=350,slow=22,SNR=18						
URZ	**Urewera**	**13.19**	**193**	P	**P**	**01 15 01.8**	**-1.3**
URZ				S	**S**	**01 17 24.4**	**-0.4**
OMRZ	**Omania**	**13.21**	**196**	P	P	01 15 07.1	+3.6
CNGZ	**Carnagh Statio**	**13.21**	**189**	P	**P**	**01 15 03.8**	**+0.3**
CNGZ				S	**S**	**01 17 25.3**	**0.0**
TKGZ	**Te Karaka**	**13.22**	**191**	P	**P**	**01 15 03.5**	**-0.1**
TKGZ				S	**S**	**01 17 23.7**	**-1.9**
TARZ	**Mount Tarawera**	**13.30**	**195**	P	**P**	**01 15 06.6**	**+2.1**
HLRZ	**Highlands Stat**	**13.35**	**196**	P	**P**	**01 15 04.6**	**-0.5**
RAGZ	**Rawiri**	**13.36**	**192**	P	**P**	**01 15 05.5**	**+0.4**
RAGZ				S	**S**	**01 17 27.7**	**-0.6**
MUGZ	**Murupara**	**13.47**	**194**	P	**P**	**01 15 06.8**	**+0.6**
RIGZ	**Rimuhau**	**13.50**	**191**	P	**P**	**01 15 06.4**	**-0.2**
RIGZ				S	**S**	**01 17 29.3**	**-1.8**
HRRZ	**Handcock Road**	**13.50**	**196**	P	**P**	**01 15 07.9**	**+1.2**
RTZ	**Ruatahuna**	**13.56**	**193**	P	**P**	**01 15 05.9**	**-1.4**
RTZ	**Ruatahuna**	**13.56**	**193**	P	**P**	**01 15 07.3**	**0.0**
RTZ				S	**S**	**01 17 30.9**	**-1.4**
TLZ	**Tolley Road**	**13.64**	**198**	P	**P**	**01 15 10.9**	**+2.7**
SNGZ	**Shannon Statio**	**13.65**	**192**	P	**P**	**01 15 08.8**	**+0.6**
SNGZ				S	**S**	**01 17 34.8**	**+0.8**
WPRZ	**Whakapapatarin**	**13.65**	**196**	P	**P**	**01 15 04.3**	**-3.9**
DZM	**Mont Dzumac**	**13.68**	**281**	P	**P**	**01 15 07.1**	**-1.7**
DZM	**Mont Dzumac**	**13.68**	**281**	P	**P**	**01 15 08.5**	**-0.4**
	22nm,0.8s,baz=87,slow=17,SNR=12						
PRGZ	**Paritu Road**	**13.69**	**190**	P	**P**	**01 15 09.5**	**+0.9**
PRGZ				S	**S**	**01 17 36.3**	**+1.4**
MTHZ	**Maungataniwha**	**13.81**	**193**	P	**P**	**01 15 09.5**	**-0.5**
MTHZ				S	**S**	**01 17 37.0**	**-0.3**
KNZ	**Kokohu**	**13.82**	**191**	P	**P**	**01 15 09.4**	**-0.6**
KNZ				S	**S**	**01 17 35.1**	**-2.2**
RAHZ	**Arahi**	**13.83**	**193**	P	**P**	**01 15 09.4**	**-0.7**
RAHZ				S	**S**	**01 17 38.2**	**+0.7**
MRHZ	**Matea Rd**	**13.89**	**195**	P	**P**	**01 15 10.3**	**-0.5**
MRHZ				S	**S**	**01 17 40.2**	**+1.3**
MHGZ	**Mahia Peninsul**	**13.91**	**190**	P	**P**	**01 15 13.1**	**+2.1**
MHGZ				S	**S**	**01 17 40.5**	**+1.4**
WHHZ	**Waihua**	**13.95**	**192**	P	**P**	**01 15 14.3**	**+2.8**
WHHZ				S	**S**	**01 17 41.7**	**+1.7**
HIZ	**Hauiti**	**14.01**	**200**	P	P	**01 15 11.8**	**-0.3**
HIZ	**Hauiti**	**14.01**	**200**	P	P	01 15 15.3	+3.2
NMHZ	**Naumai**	**14.06**	**193**	P	**P**	**01 15 13.5**	**+0.9**
NMHZ				S	**S**	**01 17 44.1**	**+1.9**
ARHZ	**Aropaoanui**	**14.18**	**193**	P	**P**	**01 15 14.3**	**+0.5**
ARHZ				S	**S**	**01 17 46.3**	**+1.9**
BKZ	**Black Stump Fm**	**14.19**	**194**	P	**P**	**01 15 13.1**	**-0.9**
BKZ	**Black Stump Fm**	**14.19**	**194**	P	**P**	**01 15 13.4**	**-0.6**
BKZ				S	**S**	**01 17 45.0**	**+0.3**
KATZ	**Kakaramea**	**14.20**	**197**	P	**P**	**01 15 15.8**	**+1.5**
NTVZ	**North Tongarir**	**14.32**	**197**	P	**P**	**01 15 15.2**	**-0.4**
NTVZ				S	**S**	**01 17 54.0**	**+6.5**
TMVZ	**Te Maari**	**14.33**	**197**	P	**P**	**01 15 16.1**	**+0.4**
ETVZ	**East Tongariro**	**14.35**	**197**	P	**P**	**01 15 15.0**	**-0.8**
ETVZ				S	**S**	**01 17 54.6**	**+6.6**
NNVZ	**North Ngauruho**	**14.37**	**197**	P	**P**	**01 15 16.7**	**+0.6**
MCHZ	**McNeill Hill**	**14.41**	**193**	P	**P**	**01 15 16.9**	**+0.5**
MCHZ				S	**S**	**01 17 51.6**	**+2.6**
SNVZ	**South Ngauruho**	**14.42**	**197**	P	**P**	**01 15 15.8**	**-0.7**
NGZ	**Ngauruhoe**	**14.42**	**197**	P	**P**	**01 15 17.5**	**+0.9**
KWHZ	**Kaweka Forest**	**14.45**	**194**	P	**P**	**01 15 16.4**	**-0.5**
KWHZ				S	**S**	**01 17 49.3**	**-0.5**
CKHZ	**Cape Kidnapper**	**14.55**	**192**	P	**P**	**01 15 18.5**	**+0.7**
PKVZ	**Pokaka**	**14.59**	**197**	P	**P**	**01 15 18.3**	**-0.1**
MOVZ	**Moawhango**	**14.60**	**196**	P	**P**	**01 15 17.7**	**-0.7**
BHHZ	**Black Hill Sta**	**14.60**	**195**	P	**P**	**01 15 16.1**	**-2.3**
KRHZ	**Kereru**	**14.68**	**194**	P	**P**	**01 15 17.0**	**-2.2**
KAHZ	**Kahuranaki**	**14.72**	**192**	P	**P**	**01 15 18.7**	**-0.9**
PXZ	**Pawanui**	**14.95**	**192**	P	**P**	**01 15 21.1**	**-1.0**
PNHZ	**Pukenui**	**14.97**	**194**	P	**P**	**01 15 21.4**	**-1.0**
TSZ	**Takapari Road**	**15.16**	**195**	P	**P**	**01 15 23.6**	**-0.8**
PRHZ	**Porangahau**	**15.22**	**193**	P	**P**	**01 15 25.8**	**+0.8**
DVHZ	**Dannevirke**	**15.35**	**194**	P	**P**	**01 15 25.6**	**-0.7**
PRWZ	**Pori Road**	**15.63**	**194**	P	**P**	**01 15 29.2**	**-0.2**
BFZ	**Birch Farm**	**15.70**	**193**	P	**P**	**01 15 27.6**	**-2.4**
BFZ	**Birch Farm**	**15.70**	**193**	P	**P**	**01 15 28.2**	**-1.8**
MRZ	**Mangatainoka R**	**15.83**	**195**	P	**P**	**01 15 28.6**	**-2.8**
MRZ	**Mangatainoka R**	**15.83**	**195**	P	**P**	**01 15 29.1**	**-2.3**
HOWZ	**Holdsworth Sta**	**16.07**	**195**	P	**P**	**01 15 33.0**	**-1.0**
SNZO	**South Karori**	**16.66**	**197**	P	**P**	**01 15 36.1**	**-3.9**
TCW	**Tory Channel**	**16.68**	**198**	P	**P**	**01 15 38.9**	**-1.5**
BHW	**Baring Head**	**16.70**	**196**	P	**P**	**01 15 38.3**	**-2.3**
BHW				IAmb	IAmb	01 15 47.1	
	comp=Z,41nm,1.1s						
QRZ	**Quartz Range**	**16.87**	**202**	P	**P**	**01 15 42.5**	**+0.1**
TUWZ	**Tuamarina**	**16.97**	**198**	P	**P**	**01 15 42.3**	**-1.1**
LTZ	**Lake Taylor**	**18.71**	**200**	P	**P**	**01 15

QSPA					IAmb	IAmb	01 22 08.2		
	comp=Z,9.4nm,0.9s								
QSPA	**South Pole Qui**	**64.65**	**180**		P	P	01 22 07.6	+4.0	
	comp=Z,5.8nm,0.7s,baz=-4.7,slow=0.7,SNR=21								
BELA	**Belgrano 2**	**74.81**	**173**		P	**P**	**01 23 07.1**	**+2.9**	
BELA					IAmb	IAmb	01 23 08.0		
	comp=Z,5.3nm,0.8s								
TROLL	**Troll, Antarti**	**82.81**	**181**	⇑	P	**P**	**01 23 50.0**	**+2.7**	
	comp=Z,559nm,0.6s								
VNA3	**Neumayer Olymp**	**83.30**	**177**	⇑	P	**P**	**01 23 51.5**	**+1.9**	
	comp=Z,19nm,0.8s								
VNA2	**Neumayer--Watz**	**83.73**	**177**	⇑	P	**P**	**01 23 53.9**	**+2.1**	
	comp=Z,8.1nm,0.6s,baz=208,slow=0.7								
PLCA	**Paso Flores**	**86.59**	**134**		P	P	01 24 10.8	+4.4	
	comp=Z,2.4nm,0.8s,baz=210,slow=8.7,SNR=4.5								
	comp=Z,2.4nm,0.8s								
TXAR	**Lajitas Array**	**90.53**	**58**		P	**P**	**01 24 26.9**	**+2.0**	
	comp=Z,0.4nm,0.8s,baz=158,slow=3.6,SNR=3.5								
	comp=Z,0.4nm,0.8s								
ARCES	**ARCESS Array B**	**133.56**	**348**		PKP	**PKiKP**	**01 30 37.0**	**+0.4**	
	comp=Z,2.4nm,0.9s,baz=33,slow=1.8,SNR=6.3								
NOA	**NORSAR Array B**	**143.72**	**352**		PKP	**PKiKP**	**01 30 54.8**	**-2.8**	
	comp=Z,1.0nm,0.9s,baz=13,slow=2.4,SNR=1.9								
HFS	**Hagfors**	**144.21**	**349**		PKP	**PKPdf**	**01 30 54.8**	**+0.1**	
	comp=Z,2.2nm,0.5s,baz=56,slow=4.5,SNR=14								

GUC 14 01:27:16.6±0.6, 37°54S×73°94W, h23km±10km, ML3.6, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
BI04	**Isla Mocha**	**0.87**	**177**	*eP*		Pb	01 27 31.3		-1.7
BI04				IAML			01 27 57.1		
	comp=E,2μm,0.4s								
BI05	**Punta Hualpn**	**1.00**	**37**	*eP*		Pn	01 27 33.8		-1.3
BI05				*eS*		Sb	01 27 46.7		-1.2
BI05				IAML			01 27 54.9		
	comp=E,2μm,0.5s								
LC02	**Puerto Saavedr**	**1.32**	**161**	*eP*		Pn	01 27 38.9		-0.7
LC02				IAML			01 28 09.7		
	comp=E,3μm,0.4s								
BI02	**San Fabín de**	**2.31**	**68**	*eP*		Pn	01 27 54.0		+0.7
BI02				*eS*		Sn	01 28 22.3		+1.4
LR04	**Corral**	**2.37**	**170**	*eP*		Pn	01 27 53.6		-0.4
LR04				*eS*		Sn	01 28 19.1		-3.2
LR04				IAML			01 28 22.1		
	comp=N,570nm,0.3s								
LR03	**Panguipulli**	**2.43**	**150**	*eP*		Pn	01 27 55.9		+1.0
LR03				IAML			01 28 56.1		
	comp=E,565nm,0.7s								
ML02	**Panimavida**	**2.70**	**50**	*eP*		Pn	01 27 59.1		+0.6
ML02				IAML			01 28 51.0		
	comp=E,511nm,0.5s								
GO06	**Curarrehue**	**2.81**	**137**	*eP*		Pn	01 28 01.7		+1.5
GO05	**Huala**	**3.01**	**33**	*eP*		Pn	01 28 02.0		-0.8
GO05				IAML			01 29 06.2		
	comp=E,138nm,0.7s								
LR05	**Currie**	**3.08**	**151**	*eP*		Pn	01 28 05.5		+1.7
LR05				IAML			01 29 04.2		
	comp=E,190nm,0.5s								
BO03	**Pichilemu**	**3.44**	**28**	*eP*		Pn	01 28 07.4		-1.3
BO03				IAML			01 29 23.8		
	comp=N,51nm,0.3s								
BO02	**Sierra Bellavi**	**3.75**	**44**	*eP*		Pn	01 28 13.1		0.0
LL05	**Los Muermos**	**3.87**	**175**	*eP*		Pn	01 28 13.9		-0.8
BO01	**Tunca**	**3.91**	**37**	*eP*		Pn	01 28 14.9		-0.2
MT01	**Popeta**	**4.28**	**32**	*eP*		Pn	01 28 18.9		-1.4
MT09	**Talagante**	**4.46**	**33**	*eP*		Pn	01 28 22.2		-0.8
BO04	**La Punta**	**4.46**	**38**	*eP*		Pn	01 28 22.6		-0.2
MT02	**Curacaví**	**4.85**	**29**	*eP*		Pn	01 28 26.3		-1.9
MT10	**Hacienda Santa**	**5.09**	**34**	*eP*		Pn	01 28 30.8		-0.7
ROCH	**El Roble**	**5.15**	**29**	*eP*		Pn	01 28 31.3		-1.2
ROCH				*eP*		Pn	01 28 31.2		-1.4
FCH	**Farellones**	**5.16**	**36**	*eP*		Pn	01 28 31.6		-1.0

GUC 14 01:31:13.1±0.6, 37°52S×74°03W, h24km±4km, ML3.5,1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
BI04	**Isla Mocha**	**0.90**	**173**	*eP*		Pb	01 31 28.7		-1.3
BI04				*eS*		Sb	01 31 40.4		-1.1
BI04				IAML			01 31 52.1		
	comp=E,2μm,0.3s								
BI05	**Punta Hualpn**	**1.02**	**41**	*eP*		Pn	01 31 30.8		-1.2
BI05				*eS*		Sb	01 31 43.9		-1.2
BI05				IAML			01 31 50.8		
	comp=E,1μm,0.3s								
LC02	**Puerto Saavedr**	**1.37**	**158**	*eP*		Pn	01 31 35.6		-1.1
LC02				IAML			01 32 08.3		
	comp=N,3μm,0.5s								
BI02	**San Fabín de**	**2.37**	**70**	⇑ *iP*		Pn	01 31 50.8		+0.3
BI02				*eS*		Sn	01 32 20.4		+1.6
BI02				IAML			01 32 39.6		
	comp=N,159nm,0.6s								
LR04	**Corral**	**2.40**	**169**	*eP*		Pn	01 31 50.2		-0.7
LR04				IAML			01 32 20.0		
	comp=N,394nm,0.3s								
LR03	**Panguipulli**	**2.49**	**148**	*eP*		Pn	01 31 53.0		+0.9
ML02	**Panimavida**	**2.74**	**51**	*eP*		Pn	01 31 56.4		+0.8
GO06	**Curarrehue**	**2.87**	**137**	*eP*		Pn	01 31 58.6		+1.0
GO05	**Huala**	**3.03**	**35**	*eP*		Pn	01 31 58.8		-0.8
GO05				IAML			01 33 02.1		
	comp=E,117nm,0.6s								
LR05	**Currie**	**3.13**	**150**	*eP*		Pn	01 32 01.9		+0.9
LR05				IAML			01 32 59.6		
	comp=E,230nm,0.6s								
BO03	**Pichilemu**	**3.45**	**30**	*eP*		Pn	01 32 03.9		-1.5
BO02	**Sierra Bellavi**	**3.79**	**45**	*eP*		Pn	01 32 10.0		-0.1
BO01	**Tunca**	**3.93**	**38**	*eP*		Pn	01 32 11.2		-0.8
MT01	**Popeta**	**4.29**	**33**	*eP*		Pn	01 32 15.5		-1.5
MT09	**Talagante**	**4.48**	**34**	*eP*		Pn	01 32 18.9		-0.8

*NEIC **14** 01:31:18.4±1.1, 19°.20N±0°.02×155°.54W±0°.02, h43km±2km, Error ellipse: s-maj=3.3km s-min=2.4km az=194.0*

HVO 14 01:31:20.3±0.8, 19°20N±0°.03×155°51W±0°.02, h35km±3km, ML2.8/29, ML3.0/52(NEIC), Error ellipse: s-maj=4.5km s-min=2.9km az=168.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
KHU	**Kahuku**	**0.11**	**297**			Pn	01 31 25.9		-1.0
KHU						Sn	01 31 29.8		-1.7
HPO	**Honuapo**	**0.12**	**200**			Pn	01 31 25.9		-0.7
HTC	**Hot Caves**	**0.12**	**69**			Pn	01 31 26.0		-0.6
HLP	**Hilina Pali**	**0.22**	**63**			Pn	01 31 26.7		-0.7
HLP				IAML			01 31 32.9		
	comp=E,1μm,0.2s								
HLP				IAML			01 31 37.7		
	comp=N,1μm,0.3s								
SDHHI	**Sand Hill**	**0.28**	**47**			Pn	01 31 27.1		-1.0
SDHHI	**Sand Hill**	**0.28**	**47**			Sn	01 31 32.2		-1.3
WRMHI	**West Rim**	**0.29**	**44**			Pn	01 31 27.2		-1.0
MWH	**Moku'aweowe**	**0.30**	**344**			Pn	01 31 27.3		-1.4
MWH	**Moku'aweowe**	**0.30**	**344**			Sn	01 31 32.8		-1.8
RIM	**Rim**	**0.30**	**49**			Pn	01 31 27.3		-1.1
RIM				IAML			01 31 38.4		
	comp=N,1μm,0.3s								
RIM				IAML			01 31 38.4		
	comp=E,894nm,0.4s								
UWE	**Uwekahuna**	**0.30**	**43**			Pn	01 31 27.3		-1.1
UWE				IAML			01 31 38.8		
	comp=N,1μm,0.6s								
UWE	**Uwekahuna**	**0.30**	**43**			Sn	01 31 32.8		-1.3
NPH	**North Pit**	**0.30**	**45**			Pn	01 31 27.2		-1.2
KKO	**Keanakako`i**	**0.31**	**49**			Pn	01 31 27.4		-1.1
KKO				IAML			01 31 33.0		
	comp=E,1μm,0.9s								
KKO				IAML			01 31 43.2		
	comp=N,2μm,1.3s								
OBL	**Observatory Le**	**0.31**	**44**			Pn	01 31 27.3		-1.2
OBL				IAML			01 31 32.9		
	comp=E,2μm,0.6s								
OBL				IAML			01 31 36.8		
	comp=N,2μm,0.4s								
UWB	**Uwekahuna B**	**0.32**	**44**			Pn	01 31 27.3		-1.3
UWB						Sn	01 31 32.3		-1.9
MLH	**Mauna Loa**	**0.32**	**22**			Pn	01 31 27.6		-1.1
MLH						Sn	01 31 33.0		-1.5
MLH				IAML			01 31 33.3		
	comp=N,884nm,0.2s								
BYL	**Byron's Ledge**	**0.32**	**48**			Pn	01 31 27.4		-1.2
SBLHI	**Steaming Bluff**	**0.33**	**45**			Pn	01 31 27.3		-1.3
SBLHI						Sn	01 31 32.5		-1.9
SBLHI				IAML			01 31 32.9		
	comp=E,1μm,0.2s								
HATHI	**Halema'uma'u T**	**0.33**	**46**			Pn	01 31 27.4		-1.2
HATHI						Sn	01 31 32.8		-1.7
HATHI				IAML			01 31 33.1		
	comp=N,1μm,0.3s								
HATHI				IAML			01 31 40.1		
	comp=E,984nm,0.9s								
PUH	**Pauahi**	**0.33**	**58**			Pn	01 31 27.5		-1.2
PUH						Sn	01 31 32.8		-1.7
MLOA	**Mauna Loa Obse**	**0.34**	**350**			Pn	01 31 27.8		-1.4
MLOA						Sn	01 31 33.2		-2.2
MLOA				IAML			01 31 33.3		
	comp=E,872nm,0.2s								
MLOA				IAML			01 31 33.6		
	comp=N,1μm,0.2s								
RSD	**Rainshed**	**0.34**	**40**			Pn	01 31 27.6		-1.3
RSD						Sn	01 31 33.6		-1.3
RSD				IAML			01 31 34.1		
	comp=N,934nm,0.1s								
RSD				IAML			01 31 34.1		
	comp=E,1μm,0.1s								
ALEP	**Alea Permanent**	**0.36**	**340**			Pn	01 31 27.9		-1.5
ALEP						Sn	01 31 33.4		-2.2
KNHH	**Kane Nui o Ham**	**0.37**	**61**			Pn	01 31 28.0		-1.2
HMH	**Humu'ula Sheep**	**0.41**	**4**			Pn	01 31 28.9		-1.1
HMH						Sn	01 31 35.2		-1.3
HMH				IAML			01 31 35.6		
	comp=N,1μm,0.1s								
HMH				IAML			01 31 35.9		
	comp=E,1μm,0.2s								
STCH	**Steam Cracks**	**0.41**	**63**			Pn	01 31 28.4		-1.3
STCH						Sn	01 31 34.4		-1.9
STCH				IAML			01 31 34.8		
	comp=E,1μm,0.1s								
STCH				IAML			01 31 37.0		
	comp=N,820nm,0.1s								
NPOC	**North of Pu'u**	**0.43**	**63**			Pn	01 31 28.6		-1.3
NPOC						Sn	01 31 34.7		-2.0
NPOC				IAML			01 31 35.0		
	comp=E,934nm,0.2s								
NPOC				IAML			01 31 35.0		
	comp=N,1μm,0.2s								
JCUZ	**Jacuzzi**	**0.43**	**64**			Pn	01 31 28.8		-1.3
JCUZ						Sn	01 31 34.8		-2.0
JCUZ				IAML			01 31 35.2		
	comp=E,684nm,0.3s								
CPH	**Captain Cook**	**0.48**	**307**			Pn	01 31 28.9		-1.7
KHLU	**Kahalu`u**	**0.53**	**318**			Pn	01 31 29.8		-1.8
KHLU						Sn	01 31 36.5		-2.8
KHLU				IAML			01 31 37.1		
	comp=E,966nm,0.1s								
JOKA	**Jonika Flow**	**0.53**	**64**			Pn	01 31 29.8		-1.6
JOKA						Sn	01 31 36.9		-2.3
POHA	**Pohakuloa**	**0.56**	**358**		Pn	Pn	01 31 30.2		-1.7
POHA				IAML			01 31 44.5		
	comp=E,593nm,0.2s								
HUH	**Hualalai**	**0.57**	**328**			Pn	01 31 30.7		-1.5
HUH						Sn	01 31 39.2		-1.4
HPAH	**Hawaii Prepara**	**0.85**	**348**			Pn	01 31 33.9		-1.9
HPAH						Sn	01 31 43.3		-3.8
MHA	**Mahukona**	**1.05**	**340**		Pn	Pn	01 31 36.6		-1.9
MHA	**Mahukona**	**1.05**	**340**			Sn	01 31 48.6		-3.4
HLK	**Haleakala**	**1.70**	**336**		Pn	Pn	01 31 45.2		-2.6
HLK						Sn	01 32 03.4		-5.0

IDC 14 02:03:05.7±6.9, 4°24N×123°87E, h641km±109km, mb2.8/4, mbtmp4.0/4, Error ellipse: s-maj=256.1km s-min=29.5km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
WRA	**Warramunga Arr**	**26.14**	**157**	P		P	02 07 52.0		-0.1
	0.9nm,0.3s,baz=334,slow=9.8,SNR=30								
	0.9nm,0.3s								
ASAR	**Alice Springs**	**29.41**	**161**	P		P	02 08 20.9		+0.4
	0.7nm,0.3s,baz=342,slow=6.9,SNR=13								
	0.7nm,0.3s								
MKAR	**Makanchi Array**	**55.54**	**326**	P		P	02 11 42.7		+0.1
	0.7nm,0.3s,baz=126,slow=7.7,SNR=13								
MKAR				PcP		PcP	02 12 32.2		-0.3
	0.3nm,0.5s,baz=139,slow=3.1,SNR=3.0								
	0.7nm,0.3s								
KURBB	**Kurchatov Arra**	**59.80**	**328**	P		P	02 12 11.2		+0.1
	0.5nm,0.5s,baz=132,slow=6.7,SNR=8.1								
	0.5nm,0.5s								

*SDD **14** 02:03:35.7±2.0, 18°.67N×69°.64W, h124km±15km, MD3.1, ML2.8, MW3.5*

*OSPL **14** 02:03:37.1±1.6, 18°.45N×69°.65W, h111km±11km, ML3.0*

ISC 14 02:03:36.6±2.0, 18°.65N±0°.08×69°.66W±0°.04, h103km±14km, n12, σ0°.91/22, 8C-6D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SDD	**Santo Domingo**	**0.31**	**232**	*i* P		Pn	02 03 51.2		-0.4
SDD				*eS*		Sn	02 04 02.9		+0.2
MIDR	**Miches**	**0.67**	**60**	⇑ *ePg*		Pn	02 03 53.8		-0.2
MIDR				⇓ *eSg*		Sn	02 04 07.2		+0.1
MIDR				IAML			02 04 09.3		
	comp=E,150nm,0.2s								
MIDR				IAML			02 04 09.4		
	comp=N,212nm,0.2s								
BANI	**BANI**	**0.71**	**249**	⇓ *ePg*		Pn	02 03 54.2		-0.4
BANI				IAML			02 04 06.2		
	comp=N,357nm,1.7s								
BANI				⇑ *eSg*		Sn	02 04 08.1		+0.2
BANI				IAML			02 04 12.6		
	comp=E,147nm,0.3s								
NADR	**Nagua**	**0.73**	**345**	⇓ *ePg*		Pn	02 03 52.6		-1.9
NADR				⇑ *eSg*		Sn	02 04 08.7		+0.8
NADR				IAML			02 04 13.4		
	comp=N,494nm,0.2s								
NADR				IAML			02 04 17.1		
	comp=E,311nm,0.8s								
ABDR	**Alto Bandera**	**0.93**	**280**	⇑ *ePg*		Pn	02 03 56.1		-0.8
ABDR				IAML			02 04 07.7		
	comp=E,79nm,0.8s								
ABDR				⇓ *eSg*		Sn	02 04 12.9		+0.7
ABDR				IAML			02 04 14.1		
	comp=N,128nm,0.3s								
SADR	**Isla Saona**	**0.95**	**118**	⇓ *ePg*		Pn	02 03 56.7		0.0
SADR				⇑ *eSg*		Sn	02 04 12.7		+0.9
SADR				IAML			02 04 13.6		
	comp=E,130nm,0.7s								
SADR				IAML			02 04 13.6		
	comp=N,195nm,1.9s								
PCDR	**Punta Cana, DR**	**1.22**	**96**	*i* P		Pn	02 04 00.0		+0.4
SC01	**Santiago de lo**	**1.27**	**308**	⇓ *ePg*		Pn	02 04 00.5		+0.1
SC01				⇑ *eSg*		Sn	02 04 18.2		-0.1
SC01				IAML			02 04 23.4		
	comp=E,94nm,0.3s								
SC01				IAML			02 04 29.5		
	comp=N,106nm,4.7s								
SC01	**Santiago de lo**	**1.27**	**308**	*i* P		Pn	02 04 01.1		+0.8
SC01				*eS*		Sn	02 04 20.4		+2.1
SC01				IAML			02 04 26.6		
	comp=Z,43nm,0.3s								
SDDR	**Presa de Saban**	**1.58**	**282**	⇑ *ePg*		Pn	02 04 04.0		-0.1
SDDR				⇓ *eSg*		Sn	02 04 23.7		-1.2
SDDR				IAML			02 04 31.8		
	comp=E,58nm,0.7s								
SDDR				IAML			02 04 33.4		
	comp=N,47nm,2.0s								
SDDR	**Presa de Saban**	**1.58**	**282**	*i* P		Pn	02 04 03.8		-0.2
SDDR				*eS*		Sn	02 04 25.5		+0.6
SDDR				IAML			02 04 32.2		
	comp=Z,27nm,1.1s								
CRPR	**Cabo Rojo, PR**	**2.50**	**104**	*i* P		Pn	02 04 14.8		-1.1
CRPR				IAML			02 05 02.4		
	comp=Z,58nm,1.6s								

*CATAC **14** 02:30:18.9±0.7, 7°.94N×82°.90W, h1km±3km, MB4.5, mb4.7, ML4.3*

*IDC **14** 02:30:19.3±3.5, 8°.42N×82°.70W, h0km, mb3.7/2, mbtmp3.9/3, ML4.5/1, MS3.0/2, Error ellipse: s-maj=92.0km s-min=35.2km az=30.0*

*UCR **14** 02:30:20.2±0.6, 8°.01N×82°.85W, h13km±3km, MW4.6, MB4.1(NEIC)*

*NEIC **14** 02:30:22.7±2.0, 8°.13N±0°.01×83°.05W±0°.06, h10km±1km, mb4.1/2, Error ellipse: s-maj=10.0km s-min=2.9km az=84.0*

ISC 14 02:30:21.3±1.6, 8°.09N±0°.06×83°.00W±0°.04, h12km±9km, n66, σ1°28/83, mb4.0/4, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
PIRO	**Carate, Puerto**	**0.46**	**313**	*i* P		**Pb**	**02 30 31.5**		**+0.2**
PIRO				IAML			02 30 49.5		
	comp=Z,12μm,1.0s								
CDITO	**Canoas**	**0.50**	**15**			**Pg**	**02 30 31.0**		**-0.1**
CDITO				Sg		**Sg**	**02 30 38.1**		**+0.4**
CDITO	**Canoas**	**0.50**	**15**	*eP*		**Pg**	**02 30 31.0**		**-0.1**
CDITO	**Canoas**	**0.50**	**15**	*i* P		**Pg**	**02 30 31.1**		**-0.1**
CDITO				*i* S		**Sb**	**02 30 39.7**		**+0.4**
CDITO				IAML			02 30 44.8		
	comp=Z,10μm,1.0s								
PTJ1	**Puerto Jimnez**	**0.54**	**326**	*eP*		**Pb**	**02 30 33.2**		**+0.5**
JIME	**Puerto Jimenez**	**0.55**	**324**	*eP*		**Pb**	**02 30 33.5**		**+0.6**
FITO	**Golfito**	**0.55**	**344**	*eP*		**Pg**	**02 30 32.1**		**-0.1**
EDAD	**Golfito**	**0.58**	**344**	*eP*		**Pg**	**02 30 32.6**		**-0.1**
VITO	**San Vito**	**0.73**	**2**	*eP*		**Pg**	**02 30 35.8**		**+0.3**
BRU2	**Volcan**	**0.77**	**24**	Pg		**Pg**	**02 30 35.9**		**-0.4**
BRU2				Sg		**Sg**	**02 30 45.7**		**-0.5**
PLAN	**Los Planes de**	**0.89**	**311**	*i* P		**Pg**	**02 30 38.2**		**-0.3**
PLAN				*i* S		**Sn**	**02 30 54.8**		**+2.3**
PLAN				IAML			02 30 57.2		
	comp=Z,10μm,1.0s								
POTG	**Potrero Grande**	**0.96**	**353**	*eP*		**Pg**	**02 30 39.5**		**-0.4**
POTG				*eS*		**Sn**	**02 30 53.9**		**-0.6**
POTG	**Potrero Grande**	**0.96**	**353**	*i* P		**Pg**	**02 30 39.6**		**-0.4**
POTG				*i* S		**Sn**	**02 30 54.2**		**-0.3**
POTG				IAML			02 31 00.9		
	comp=Z,11μm,1.0s								
EDPN	**Palmar Norte**	**0.98**	**333**	*eP*		**Pg**	**02 30 40.1**		**-0.1**
BURE	**Buenos Aires**	**1.13**	**343**	*eP*		**Pg**	**02 30 42.7**		**-0.4**
OCHAL	**Ojochal**	**1.19**	**328**	*i* P		**Pb**	**02 30 42.7**		**-1.1**
OCHAL				IAML			02 30 45.5		
	comp=Z,35nm,1.0s								
OCHAL				*i* S		**Sn**	**02 31 02.0**		**+2.1**
DRK0	**Durika**	**1.19**	**348**			**Pb**	**02 30 43.6**		**-0.4**
DRK0				Sg		**Sg**	**02 30 59.2**		**-0.6**
DRK0	**Durika**	**1.19**	**348**	*eP*		**Pb**	**02 30 43.4**		**-0.6**
PEZE	**Perez Zeledon,**	**1.45**	**333**			**Pn**	**02 30 47.4**		**-0.1**
PEZE	**Perez Zeledon,**	**1.45**	**333**	*eP*		**Pn**	**02 30 47.6**		**+0.1**
PEZE	**Perez Zeledon,**	**1.45**	**333**	*i* P		**Pn**	**02 30 47.1**		**-0.4**
PEZE				*i* S		**Sg**	**02 31 10.6**		**+2.5**
PEZE				IAML			02 31 12.9		
	comp=Z,2μm,1.0s								
RGM0	**Gandoca**	**1.54**	**15**	Pn		**Pn**	**02 30 49.3**		**+0.6**
RGM0	**Gandoca**	**1.54**	**15**	*i* P		**Pn**	**02 30 49.5**		**+0.8**
RGM0				IAML			02 31 18.4		
	comp=Z,2μm,1.0s								
CDM	**Cerro de Muert**	**1.64**	**333**	*i* P		**Pn**	**02 30 50.3**		**-0.1**
CDM				*i* S		**Sg**	**02 31 14.2**		**0.0**
CDM				IAML			02 31 18.7		
	comp=Z,2μm,1.0s								
LLNJ	**Naranjito**	**1.75**	**322**	*eP*		**Pn**	**02 30 52.6**		**+1.0**
RIMA	**Rio Macho**	**1.87**	**333**	Pn		**Pn**	**02 30 53.8**		**+0.4**
LCR2	**La Lucha 2**	**1.92**	**329**	Pn		**Pn**	**02 30 54.9**		**+0.8**
LCR2	**La Lucha 2**	**1.92**	**329**	*i* P		**Pn**	**02 30 54.3**		**+0.2**
LCR2				IAML			02 30 56.2		
	comp=Z,2μm,1.0s								
LCR2				*i* S		**Sb**	**02 31 21.0**		**+0.6**
OCM	**Ochomogo**	**2.03**	**332**	*i* P		**Pn**	**02 30 56.7**		**+1.1**
OCM				*i* S		**Sb**	**02 31 24.2**		**+0.6**
OCM				IAML			02 31 30.7		
	comp=Z,1μm,1.0s								
VIRE	**VIRE**	**2.06**	**335**	*i* P		**Pb**	**02 30 59.0**		**0.0**
VIRE				*i* S		**Sg**	**02 31 26.9**		**-1.0**
VIRE				IAML			02 31 31.3		
	comp=Z,3μm,1.0s								
JACO	**JACO, Garabito**	**2.27**	**314**	Pn		**Pn**	**02 30 58.8**		**+0.1**
JACO	**JACO, Garabito**	**2.27**	**314**	*eP*		**Pn**	**02 30 59.0**		**+0.4**
JACO	**JACO, Garabito**	**2.27**	**314**	*i* P		**Pn**	**02 30 58.4**		**-0.2**
JACO				IAML			02 31 09.0		
	comp=Z,790nm,1.0s								
JACO				*i* S		**Sb**	**02 31 32.1**		**+1.0**
LAFE	**Finca La Fe, P**	**2.54**	**312**	*i* P		**Pn**	**02 31 03.4**		**+0.9**
LAFE				IAML			02 32 07.2		
	comp=Z,3.4nm,1.0s								
CPMI	**Catarata Coope**	**2.57**	**328**	*i* P		**Pn**	**02 31 04.7**		**+1.7**
CPMI				*i* S		**Sb**	**02 31 40.5**		**+1.3**
CPMI				IAML			02 31 49.6		
	comp=Z,940nm,1.0s								
SOCE	**Pocosol**	**2.78**	**325**	Pn		**Pn**	**02 31 07.5**		**+1.7**
SOCE	**Pocosol**	**2.78**	**325**	*i* P		**Pn**	**02 31 07.9**		**+2.1**
SOCE				IAML			02 31 14.4		
	comp=Z,250nm,1.0s								
SOCE				*i* S		**Sb**	**02 31 43.5**		**-1.7**
ARE1	**Arenal 1**	**2.90**	**324**	Pn		**Pn**	**02 31 09.4**		**+2.0**
JTS	**Las Juntas de**	**2.92**	**319**	Pn		**Pn**	**02 31 08.2**		**+0.6**
JTS	**Las Juntas de**	**2.92**	**319**	Pn		**Pn**	**02 31 08.8**		**+1.2**
	comp=Z,62nm,0.3s,baz=136,slow=10,SNR=207								
JTS				Pg		**Pb**	**02 31 10.5**		**-2.8**
	comp=Z,62nm,0.3

CATAC **14** *02:39:30.7±0.6,8.04N×83.01W,h4km±2km,ML4.3*
UCR **14** *02:39:31.0±0.9,8.07N×82.92W,h13km±4km,MW4.7*
UPA **14** *02:39:33.2±1.9,8.21N×82.75W,h3km±8km,MW3.5*
ISC 14 02:39:29.7±1.1,**8.06N**±0.04×**82.91W**±0.02,**h16**km±7km,
n88,σ1§**51**/114,**8D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.15**	**11**	⇓*i*P		**Pb**	**02 39 35.2**	**+1.0**
PTPM				*e*S		**Sg**	**02 39 38.3**	**+1.8**
CDITO	**Canoas**	**0.51**	**4**	⇓*i*P		**Pb**	**02 39 40.5**	**+0.1**
CDITO				*e*S		**Sb**	**02 39 47.9**	**+0.3**
CDITO	**Canoas**	**0.51**	**4**	*e*P		**Pb**	**02 39 40.3**	**-0.1**
CDITO	**Canoas**	**0.51**	**4**	*i* P		**Pg**	**02 39 39.8**	**-0.2**
CDITO				*i* S		**Sb**	**02 39 48.2**	**+0.6**
CDITO				IAML			02 39 59.4	
	comp=Z,14μm,1.0s							
PIRO	**Carate, Puerto**	**0.55**	**309**	*e*P		**Pb**	**02 39 41.1**	**+0.1**
PIRO	**Carate, Puerto**	**0.55**	**309**	*i* P		**Pb**	**02 39 41.0**	**+0.1**
PIRO				*i* S		**Sb**	**02 39 48.5**	**-0.1**
PIRO				IAML			02 39 51.7	
	comp=Z,14μm,1.0s							
PEDE3	**Pedregal, Chir**	**0.58**	**56**	⇓*i*P		**Pn**	**02 39 42.9**	**-0.4**
PEDE3				*e*S		**Sg**	**02 39 45.2**	**-3.8**
FITO	**Golfito**	**0.61**	**337**	*e*P		**Pg**	**02 39 41.5**	**-0.4**
FITO				*e*S		**Sg**	**02 39 49.9**	**-0.2**
PTJ1	**Puerto Jimnez**	**0.62**	**321**	*e*P		**Pb**	**02 39 42.6**	**+0.5**
JIME	**Puerto Jimenez**	**0.63**	**319**	*e*P		**Pb**	**02 39 42.6**	**+0.3**
EDAD	**Golfito**	**0.64**	**337**	*e*P		**Pg**	**02 39 42.0**	**-0.4**
MLIR3	**Monte Lirio, C**	**0.74**	**6**	⇓*i*P		**Pb**	**02 39 44.9**	**+0.7**
MLIR3				*e*S		**Sb**	**02 39 55.0**	**+0.9**
BCO2	**Palmira**	**0.76**	**30**	⇓*i*P		**Pb**	**02 39 45.5**	**+0.9**
BCO2				*e*S		**Sg**	**02 39 54.0**	**-0.7**
VITO	**San Vito**	**0.76**	**355**	*e*P		**Pb**	**02 39 45.2**	**+0.5**
LNBQ3	**Los Naranjos,**	**0.86**	**32**	⇓*i*P		**Pb**	**02 39 46.8**	**+0.4**
LNBQ3				*e*S		**Sb**	**02 39 58.7**	**+0.8**
PLAN	**Los Planes de**	**0.98**	**309**	*i* P		**Pg**	**02 39 48.1**	**-0.6**
PLAN				*i* S		**Sn**	**02 40 02.6**	**+0.2**
PLAN				IAML			02 40 04.6	
	comp=Z,15μm,1.0s							
POTG	**Potrero Grande**	**1.01**	**348**	*e*P		**Pb**	**02 39 49.1**	**+0.2**
POTG	**Potrero Grande**	**1.01**	**348**	*i* P		**Pg**	**02 39 48.8**	**-0.6**
POTG				*i* S		**Sn**	**02 40 03.7**	**+0.4**
POTG				IAML			02 40 12.5	
	comp=Z,10μm,1.0s							
CHGR2	**Aguacate**	**1.16**	**41**	⇓*i*P		**Pb**	**02 39 51.6**	**+0.2**
CHGR2				*e*S		**Sb**	**02 40 05.7**	**-0.5**
EDBA	**Buenos Aires**	**1.16**	**342**	*e*P		**Pg**	**02 39 52.4**	**+0.3**
BURE	**Buenos Aires**	**1.19**	**339**	*e*P		**Pg**	**02 39 52.6**	**-0.1**
DRK0	**Durika**	**1.24**	**344**	*e*P		**Pn**	**02 39 52.7**	**+0.1**
OCHAL	**Ojochal**	**1.27**	**325**	*i* P		**Pn**	**02 39 52.9**	**+0.1**
OCHAL				IAML			02 40 13.2	
	comp=Z,48nm,1.0s							
CNI2	**El Empalme, Bo**	**1.43**	**18**	⇓*i*P		**Pb**	**02 39 55.9**	**-0.1**
CNI2				*e*S		**Sb**	**02 40 14.3**	**+0.4**
PEZE	**Perez Zeledon,**	**1.52**	**330**	*e*P		**Pn**	**02 39 56.7**	**+0.3**
PEZE	**Perez Zeledon,**	**1.52**	**330**	*i* P		**Pb**	**02 39 57.2**	**-0.4**
PEZE				*i* S		**Sg**	**02 40 19.3**	**+0.4**
PEZE				IAML			02 40 21.8	
	comp=Z,2μm,1.0s							
RGM0	**Gandoca**	**1.55**	**11**	*i* P		**Pg**	**02 39 59.3**	**-0.3**
RGM0				IAML			02 40 36.4	
	comp=Z,2μm,1.0s							
GMAL	**Guarumal, Vera**	**1.68**	**100**	*e*P		**Pg**	**02 40 01.4**	**-0.8**
CDM	**Cerro de Muert**	**1.71**	**330**	*e*P		**Pn**	**02 40 00.2**	**+0.9**
CDM	**Cerro de Muert**	**1.71**	**330**	*i* P		**Pn**	**02 40 00.2**	**+0.9**
CDM				*i* S		**Sg**	**02 40 24.0**	**-1.0**
CDM				IAML			02 40 28.4	
	comp=Z,3μm,1.0s							
LLNJ	**Naranjito**	**1.84**	**320**	*e*P		**Pb**	**02 40 02.4**	**-0.6**
LCR2	**La Lucha 2**	**2.00**	**327**	*e*P		**Pb**	**02 40 04.5**	**-1.2**
LCR2	**La Lucha 2**	**2.00**	**327**	*i* P		**Pb**	**02 40 04.7**	**-1.1**
LCR2				*i* S		**Sb**	**02 40 30.7**	**+0.2**
LCR2				IAML			02 40 35.9	
	comp=Z,2μm,1.0s							
RVSTA	**Santa Teresita**	**2.04**	**339**	*e*P		**Pb**	**02 40 06.0**	**-0.5**
VTCV	**VTCV, Calle Va**	**2.08**	**337**	*i* P		**Pb**	**02 40 06.9**	**-0.3**
VTCV				*i* S		**Sb**	**02 40 33.3**	**+0.4**
VTCV				IAML			02 40 42.9	
	comp=Z,3μm,1.0s							
OCM	**Ochomogo**	**2.10**	**330**	*i* P		**Pb**	**02 40 06.7**	**-0.9**
OCM				*i* S		**Sb**	**02 40 34.1**	**+0.5**
OCM				IAML			02 40 40.2	
	comp=Z,1μm,1.0s							
IRES	**Siquirres**	**2.11**	**344**	*e*P		**Pb**	**02 40 07.4**	**-0.2**
LCOCO	**El Coco**	**2.11**	**342**	*e*P		**Pb**	**02 40 07.2**	**-0.5**
VTRT	**Volcan Turrial**	**2.12**	**336**	*i* P		**Pb**	**02 40 07.8**	**-0.2**
VTRT				*i* S		**Sg**	**02 40 36.8**	**-1.3**
VTRT				IAML			02 40 46.2	
	comp=Z,3μm,1.0s							
HAYA	**Volcan Irazu**	**2.12**	**334**	*i* P		**Pb**	**02 40 08.0**	**-0.1**
HAYA				IAML			02 40 42.0	
	comp=Z,3μm,1.0s							
VICA	**Volcano Irazu**	**2.13**	**334**	*e*P		**Pb**	**02 40 08.8**	**+0.6**
ACOS	**Acosta**	**2.13**	**324**	*e*P		**Pb**	**02 40 07.2**	**-0.8**
VIRE	**VIRE**	**2.13**	**333**	*i* P		**Pb**	**02 40 07.5**	**-0.8**
VIRE				*i* S		**Sb**	**02 40 36.4**	**+1.7**
VIRE				IAML			02 40 42.1	
	comp=Z,3μm,1.0s							
RVLA	**Villa Bonita**	**2.15**	**342**	*e*P		**Pb**	**02 40 07.7**	**-0.6**
CACAO	**El Cacao, Vera**	**2.15**	**109**	*e*S		**Sg**	**02 40 38.7**	**-0.2**
CACAO	**El Cacao, Vera**	**2.15**	**109**	*e*P		**Pb**	**02 40 09.4**	**+1.1**
CVIMO	**Finca Echandi**	**2.21**	**332**	*e*P		**Pb**	**02 40 09.3**	**-0.1**
SANTA	**Santa Ana**	**2.25**	**326**	*e*P		**Pb**	**02 40 09.2**	**-0.9**
HDC3	**Heredia 3**	**2.27**	**328**	*e*P		**Pb**	**02 40 09.8**	**-0.6**
HDC3	**Heredia 3**	**2.27**	**328**	*i* P		**Pb**	**02 40 09.0**	**-1.4**
HDC3				IAML			02 40 46.0	
	comp=Z,2μm,1.0s							
HDC	**Heredia**	**2.27**	**328**	*e*P		**Pb**	**02 40 09.8**	**-0.7**
HDC	**Heredia**	**2.27**	**328**	*i* P		**Pb**	**02 40 09.3**	**-1.1**
HDC				*i* S		**Sb**	**02 40 37.8**	**-0.6**
HDC				IAML			02 40 45.9	
	comp=Z,2μm,1.0s							
BELE	**Belen**	**2.29**	**327**	*e*P		**Pb**	**02 40 10.8**	**+0.1**
JACO	**JACO, Garabito**	**2.35**	**313**	*e*P		**Pn**	**02 40 08.3**	**+0.6**
JACO	**JACO, Garabito**	**2.35**	**313**	*i* P		**Pn**	**02 40 07.6**	**-0.1**
JACO				IAML			02 41 05.9	
	comp=Z,670nm,1.0s							
RIFO	**Rio Frio, Sara**	**2.46**	**336**	*i* P		**Pb**	**02 40 12.0**	**-1.6**
RIFO				IAML			02 41 02.5	
	comp=Z,1μm,1.0s							
PNME	**Penonome**	**2.59**	**80**	*e*P		**Pb**	**02 40 15.0**	**-0.8**
PNME				*e*S		**Sg**	**02 40 55.5**	**+2.4**
PNME				*i*			02 41 00.3	
	comp=Z,163nm,0.6s							
LAFE	**Finca La Fe, P**	**2.63**	**311**	*i* P		**Pn**	**02 40 11.9**	**+0.3**
LAFE				IAML			02 41 03.7	
	comp=Z,5.3nm,1.0s							
CBL1	**Cabuya**	**2.64**	**305**	*e*P		**Pn**	**02 40 12.4**	**+0.8**
CPMI	**Catarata Coope**	**2.65**	**327**	*i* P		**Pb**	**02 40 15.5**	**-1.4**
CPMI				IAML			02 41 11.3	
	comp=Z,730nm,1.0s							
ITAL	**Pital**	**2.73**	**331**	*e*P		**Pb**	**02 40 17.5**	**-0.8**
SOCE	**Pocosol**	**2.86**	**324**	*i* P		**Pb**	**02 40 18.5**	**-2.0**
SOCE				IAML			02 40 23.0	
	comp=Z,420nm,1.0s							
SOCE				*i* S		**Sb**	**02 40 55.1**	**-0.2**
VACR	**Volcan Arenal**	**2.97**	**324**	*e*P		**Pb**	**02 40 20.8**	**-1.5**
JUNT	**Juntas**	**3.00**	**318**	*e*P		**Pn**	**02 40 19.7**	**+3.1**
JTS	**Las Juntas de**	**3.00**	**318**	*e*P		**Pn**	**02 40 18.1**	**+1.5**
JTS	**Las Juntas de**	**3.00**	**318**	*e*P		**Pn**	**02 40 18.2**	**+1.5**
COVE	**Coope Vega, Sa**	**3.03**	**331**	*e*P		**Pn**	**02 40 20.1**	**+3.1**
COVE	**Coope Vega, Sa**	**3.03**	**331**	*i* P		**Pb**	**02 40 20.8**	**-2.5**
COVE				IAML			02 41 32.0	
	comp=Z,980nm,1.0s							
INDI	**Punta indio, G**	**3.13**	**305**	*i* P		**Pn**	**02 40 19.0**	**+0.6**
INDI				*i* S		**Sn**	**02 40 55.6**	**+0.1**
INDI				IAML			02 41 18.4	
	comp=Z,460nm,1.0s							
BCIP	**Isla Barro Col**	**3.23**	**70**	*e*P		**Pb**	**02 40 24.3**	**-2.4**
BCIP	**Isla Barro Col**	**3.23**	**70**	*i* P		**Pb**	**02 40 23.9**	**-2.8**
BCIP				IAML			02 41 19.1	
	comp=Z,320nm,1.0s							
DUNO	**Dulce Nombre,**	**3.25**	**308**	*i* P		**Pn**	**02 40 21.3**	**+1.2**
DUNO				IAML			02 41 01.0	
	comp=Z,900nm,1.0s							
PLVR	**Palo Verde**	**3.32**	**314**	*e*P		**Pn**	**02 40 23.6**	**+2.4**
JUD3	**Juan Diaz 3**	**3.34**	**309**	*e*P		**Pn**	**02 40 23.1**	**+1.8**
VERA	**Finca Concepci**	**3.39**	**325**	*e*P		**Pb**	**02 40 26.2**	**-3.2**
ORTG	**Ortega, Santa**	**3.41**	**312**	*e*P		**Pn**	**02 40 24.3**	**+2.0**
ORTG	**Ortega, Santa**	**3.41**	**312**	*i* P		**Pn**	**02 40 24.3**	**+2.0**
ORTG				IAML			02 40 25.2	
	comp=Z,180nm,1.0s							
ORTG				*i* S		**Sn**	**02 41 03.5**	**+1.1**
SAJU	**San Juanillo,**	**3.41**	**306**	*i* P		**Pn**	**02 40 23.5**	**+1.2**
SAJU				*i* S		**Sn**	**02 41 01.7**	**-0.8**
SAJU				IAML			02 41 37.3	
	comp=Z,280nm,1.0s							
COLC	**Colonia**	**3.44**	**319**	*e*P		**Pn**	**02 40 26.4**	**+3.7**
UPA	**Univ. de Panam**	**3.46**	**74**	*e*P		**Pb**	**02 40 31.0**	**+0.4**
VMAR	**Armenia, Volca**	**3.50**	**322**	*e*P		**Pb**	**02 40 27.8**	**-3.6**
HZTE	**Horizontes, Gu**	**3.74**	**315**	*e*P		**Pn**	**02 40 30.3**	**+3.4**
HZTE	**Horizontes, Gu**	**3.74**	**315**	*i* P		**Pn**	**02 40 29.9**	**+3.0**
HZTE				*i* S		**Sn**	**02 41 14.0**	**+3.4**
HZTE				IAML			02 41 43.7	
	comp=Z,370nm,1.0s							
BLUN	**Bluefields**	**4.02**	**348**	*i* P		**Pn**	**02 40 31.1**	**+0.5**
BLUN				IAML			02 40 37.5	
	comp=Z,210nm,1.0s							
ACON	**Acoyapa**	**4.48**	**330**	*e*P		**Pn**	**02 40 39.9**	**+2.9**
ACON	**Acoyapa**	**4.48**	**330**	*i* P		**Pn**	**02 40 39.9**	**+2.9**
ACON				IAML			02 40 48.2	
	comp=Z,240nm,1.0s							
ACON				*i* S		**Sn**	**02 41 23.0**	**-5.9**
DBBC	**Dabeiba**	**6.72**	**98**	*e*P		Pn	02 41 13.2	+5.3
PLMC	**San Jos del P**	**7.29**	**115**	*e*P		Pn	02 41 22.5	+6.8

SOME **14** *02:41:33.6,43.37N×83.85E,h5km*
NNC **14** *02:41:34.2±0.9,43.37N×83.89E,h0km,mb3.7,mpv3.5,*
Error ellipse: s-maj=8.1km s-min=3.5km az=139.0
ISC 14 02:41:33.5±1.9,**43.34N**±0.08×**83.81E**±0.08,**h10**km,**n40,**
σ1§**98**/61,**3C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**3.08**	**290**	*e*P		**Pb**	**02 42 30.5**	**+2.2**
DJR	7.3nm,0.3s							
DJR				*e*S		**Sg**	**02 43 11.8**	**-0.5**
	30nm,0.3s							
PDGK	**Podgornoye**	**3.15**	**271**	⇑Pn		**Pn**	**02 42 25.0**	**+1.7**
PDGK	3.3nm,0.5s							
PDGK				⇓Pg		**Pb**	**02 42 32.1**	**+2.4**
	3.4nm,0.3s							
PDGK				⇓Lg		Lg	02 43 15.0	
	26nm,0.4s							
SHLS	**Shalkode**	**3.19**	**268**	Pg		**Pb**	**02 42 28.8**	**-1.4**
SHLS	11nm,0.1s							
SHLS				Lg		Lg	02 43 08.4	
	86nm,0.5s							
SHLS	**Shalkode**	**3.19**	**268**	*e*P		**Pb**	**02 42 28.8**	**-1.4**
SHLS	11nm,0.1s							
SHLS				*e*S		**Sb**	**02 43 08.4**	**-0.7**
	86nm,0.5s							
KNOS	**Konyrlen**	**3.50**	**289**	Pg		**Pg**	**02 42 38.9**	**-1.7**
KNOS	14nm,0.2s							
KNOS				Lg		Lg	02 43 26.2	
	16nm,0.3s							
UZB	**Uzynbulak**	**3.51**	**269**	Pg		**Pg**	**02 42 39.5**	**-1.2**
UZB	14nm,0.7s							
UZB				Lg		Lg	02 43 26.7	
	37nm,0.3s							
UZB	**Uzynbulak**	**3.51**	**269**	*e*P		**Pg**	**02 42 39.5**	**-1.2**
UZB	14nm,0.7s							
UZB				*e*S		**Sg**	**02 43 26.7**	**+0.6**
	37nm,0.3s							
MK31	**Makanchi Array**	**3.62**	**343**	⇓Pn		**Pn**	**02 42 30.7**	**+1.1**
	0.4nm,0.3s,baz=154,slow=13,SNR=41							
MK31				⇓Pg		**Pg**	**02 42 40.3**	**-2.5**
	2.5nm,0.5s,baz=155,slow=17,SNR=21							
MK31				⇓Lg		Lg	02 43 29.0	
	8.8nm,0.4s,baz=155,slow=29,SNR=11							
MAKZ	**Makanchi**	**3.71**	**340**	⇑Pn		**Pn**	**02 42 32.0**	**+1.2**
MAKZ	0.9nm,0.5s							
MAKZ				⇑Pg		**Pg**	**02 42 42.3**	**-2.1**
	3.6nm,0.6s							
MAKZ				⇓Lg		Lg	02 43 32.2	
	8.8nm,0.8s							
KPKS	**Kokpek**	**3.74**	**274**	Pg		**Pg**	**02 42 43.8**	**-1.3**
KPKS	5.3nm,0.2s							
KPKS				Lg		Lg	02 43 34.5	
	47nm,0.4s							
KPKS	**Kokpek**	**3.74**	**274**	*e*P		**Pg**	**02 42 43.8**	**-1.3**
KPKS	5.3nm,0.2s							
KPKS				*e*S		**Sg**	**02 43 34.5**	**+0.9**
	47nm,0.4s							
KAPS	**Kapalarasan**	**3.75**	**303**	Pg		**Pg**	**02 42 43.9**	**-1.2**
KAPS	3.8nm,0.5s							
KAPS				Lg		Lg	02 43 34.8	
	12nm,0.3s							
KAPS	**Kapalarasan**	**3.75**	**303**	*e*P		**Pg**	**02 42 44.0**	**-1.2**
KAPS	3.8nm,0.5s							
KAPS				*e*S		**Sg**	**02 43 34.8**	**+1.1**
	12nm,0.3s							
ZHN	**Zhinishke**	**3.93**	**269**	Pg		**Pg**	**02 42 47.2**	**-1.6**
ZHN	8.4nm,0.1s							
ZHN				Lg		Lg	02 43 39.9	
	40nm,0.2s							
ZHN	**Zhinishke**	**3.93**	**269**	*e*P		**Pg**	**02 42 47.2**	**-1.6**
ZHN	8.4nm,0.1s							
ZHN				*e*S		**Sg**	**02 43 39.9**	**+0.2**
	40nm,0.2s							
SATY	**Saty**	**3.96**	**268**	Pg		**Pg**	**02 42 48.4**	**-1.0**
SATY	8.8nm,0.3s							
SATY				Lg		Lg	02 43 42.1	
	48nm,0.2s							
SATY	**Saty**	**3.96**	**268**	*e*P		**Pg**	**02 42 48.4**	**-1.0**
SATY	8.8nm,0.3s							
SATY				*e*S		**Sg**	**02 43 42.1**	**+1.4**
	48nm,0.2s							
KURS	**Kuram**	**4.12**	**274**	Pg		**Pg**	**02 42 50.6**	**-1.7**
KURS	4.8nm,0.5s							
KURS				Lg		Lg	02 43 45.9	
	8.2nm,0.7s							
KURS	**Kuram**	**4.12**	**274**	*e*P		**Pg**	**02 42 50.6**	**-1.7**
KURS	4.8nm,0.5s							
KURS				*e*S		**Sg**	**02 43 45.9**	**+0.4**
	8.2nm,0.7s							
ZSN	**Zaisan**	**4.18**	**10**	Pg		**Pb**	**02 42 49.7**	**+2.6**
ZSN	2.0nm,0.3s							
ZSN				Lg		Lg	02 43 44.2	
	14nm,0.7s							
ZSN	**Zaisan**	**4.18**	**10**	*e*P		**Pb**	**02 42 49.7**	**+2.6**
ZSN	2.0nm,0.3s							
ZSN				*e*S		**Sg**	**02 43 44.2**	**-3.4**
	14nm,0.7s							
KOTS	**Kotyrbulak**	**4.89**	**271**	Pg		**Pg**	**02 43 05.3**	**-1.9**
KOTS	6.9nm,0.3s							
KOTS				Lg		Lg	02 44 11.5	
	24nm,0.4s							
KOTS	**Kotyrbulak**	**4.89**	**271**	*e*P		**Pg**	**02 43 05.3**	**-1.9**
KOTS	6.9nm,0.3s							
KOTS				*e*S		**Sg**	**02 44 11.5**	**+1.0**
	24nm,0.4s							
MDOK	**Medeo**	**4.95**	**270**	Pg		**Pg**	**02 43 06.2**	**-1.9**
MDOK	2.1nm,0.2s							
MDOK				Pg		Pb	02 43 07.7	+7.5
	4.3nm,0.9s							
MDOK				Lg		Lg	02 44 12.7	
	11nm,0.5s							
MDOK				Lg		Lg	02 44 13.3	
	9.9nm,0.5s							
MDOK	**Medeo**	**4.95**	**270**	*e*P		**Pg**	**02 43 06.2**	**-1.9**
MDOK	2.1nm,0.2s							
MDOK				*e*S		**Sg**	**02 44 12.8**	**+0.5**
	11nm,0.5s							
CHKK	**Chushkaly**	**4.99**	**278**	Pg		**Pg**	**02 43 05.5**	**-3.4**
CHKK	1.5nm,0.2s							
CHKK				Lg		Lg	02 44 12.7	
	6.3nm,0.2s							
CHKK	**Chushkaly**	**4.99**	**278**	*e*P		**Pg**	**02 43 06.1**	**-2.8**
CHKK	1.5nm,0.2s							
CHKK				*e*S		**Sg**	**02 44 12.7**	**-0.8**
	6.8nm,0.1s							
TNSS	**Tian-Shan**	**5.03**	**269**	Pg		**Pg**	**02 43 08.9**	**-1.0**
TNSS	4.4nm,0.3s							
TNSS				Lg		Lg	02 44 17.1	
	8.2nm,0.6s							
TNSS	**Tian-Shan**	**5.03**	**269**	*e*P		**Pg**	**02 43 08.9**	**-1.0**
TNSS	4.4nm,0.3s							
TNSS				*e*S		**Sg**	**02 44 17.1**	**+2.1**
	8.2nm,0.6s							
KTBS	**Karatobe**	**5.20**	**277**	Pg		**Pg**	**02 43 11.0**	**-2.1**
KTBS	2.3nm,0.2s							
KTBS				Lg		Lg	02 44 21.4	
	21nm,0.5s							
KTBS	**Karatobe**	**5.20**	**277**	*e*P		**Pg**	**02 43 10.9**	**-2.1**
KTBS	2.3nm,0.2s							
KTBS				*e*S		**Sg**	**02 44 21.4**	**+1.1**
	21nm,0.4s							
MTBS	**Maitube**	**5.40**	**270**	Pg		**Pg**	**02 43 14.0**	**-2.9**
MTBS	2.8nm,0.4s							
MTBS				Lg		Lg	02 44 26.0	
	10nm,0.3s							
MTBS	**Maitube**	**5.40**	**270**	*e*P		**Pg**	**02 43 14.0**	**-2.9**
MTBS	2.8nm,0.4s							
MTBS				*e*S		**Sg**	**02 44 26.0**	**-0.7**
	10nm,0.3s							
KST	**Kastek**	**5.75**	**270**	*e*P		**Pg**	**02 43 21.3**	**-2.2**
KST	2.5nm,0.4s							
KST				*e*S		**Sg**	**02 44 38.2**	**+0.3**
	13nm,0.6s							
DGS	**Degeres**	**5.87**	**272**	Pg		**Pg**	**02 43 21.9**	**-3.9**
DGS	1.6nm,0.3s							
DGS				Lg		Lg	02 44 40.2	
	8.4nm,0.6s							
DGS	**Degeres**	**5.87**	**272**	*e*P		**Pg**	**02 43 21.9**	**-3.9**
DGS	1.6nm,0.3s							
DGS				*e*S		**Sg**	**02 44 40.2**	**-1.6**
	8.4nm,0.6s							
KRBS	**Karabastau**	**5.93**	**276**	Pg		**Pg**	**02 43 24.6**	**-2.3**
KRBS	1.6nm,0.9s							
KRBS				Lg		Lg	02 44 44.5	
	2.8nm,0.5s							
KRBS	**Karabastau**	**5.93**	**276**	*e*P		**Pg**	**02 43 24.6**	**-2.3**
KRBS	1.6nm,0.4s							
KRBS				*e*S		**Sg**	**02 44 44.5**	**+0.7**
	2.8nm,0.3s							
TKM2	**Tokmak 2**	**6.03**	**269**	⇓Pg		**Pg**	**02 43 24.8**	**-4.1**
TKM2	2.4nm,0.8s							
TKM2				⇓Lg		Lg	02 44 49.6	
	4.1nm,0.6s							
SGDS	**Sogindy**	**6.69**	**274**	Pg		**Pg**	**02 43 39.3**	**-2.3**
SGDS	0.7nm,0.6s							
SGDS				Lg		Lg	02 45 09.2	
	2.8nm,0.7s							

LDG **14** *02:48:58.6±0.1,43.97N×6.50W,h10km,Ml2.6/20,Error ellipse: s-maj=3.9km s-min=2.3km az=123.0*
MDD **14** *02:48:59.4±0.4,43.90N×6.48W,h12km,mb_Lg2.8/6,*
Error ellipse: s-maj=4.4km s-min=2.6km az=152.0
ISC 14 02:48:55.9±1.8,**43.95N**±0.04×**6.42W**±0.04,**h16**km±13km,
n37,σ2§**40**/68,**Spain**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.81**	**221**		Pg	**Pn**	**02 49 14.0**	**+1.2**
EPON					Sg	**Sb**	**02 49 23.3**	**+0.9**
EPON					*i* Vmb_Lg		02 49 25.9	
EARI	**Arriondas**	**1.09**	**126**		Pg	**Pn**	**02 49 18.6**	**+2.0**
EARI					Sg	**Sn**	**02 49 33.0**	**+1.5**
EARI					*i* Vmb_Lg		02 49 34.2	
EAGO	**Agolada(Pontev**	**1.67**	**227**		Pn	**Pb**	**02 49 26.1**	**-0.2**
EAGO					Sn	**Sn**	**02 49 44.4**	**-1.2**
EAGO					*i* Vmb_Lg		02 49 51.3	
ECAL	**Calabor**	**2.02**	**187**		Pn	**Pn**	**02 49 30.9**	**+1.5**
ECAL					Sn	**Sb**	**02 49 58.9**	**+1.7**
ECAL					*i* Vmb_Lg		02 50 07.7	
PBRG	**Braganca**	**2.15**	**186**		*e*Sg	**Sg**	**02 50 04.5**	**-0.7**
PBRG					A	A	02 50 08.7	
	6.3nm,0.3s							
ELAN	**Lanestosa**	**2.29**	**107**		Pn	**Pb**	**02 49 35.9**	**-0.9**
ELAN					Sn	**Sn**	**02 50 02.9**	**+2.0**
ELAN					*i* Vmb_Lg		02 50 16.6	
PGAV	**Gavieira, Arco**	**2.40**	**215**		*e*Sg	**Sg**	**02 50 12.7**	**-0.4**
ELOB	**Lobios**	**2.40**	**211**		Pn	**Pn**	**02 49 36.8**	**+2.1**
ELOB					Sn	**Sn**	**02 50 01.6**	**-2.2**
ELOB					Sg	**Sg**	**02 50 13.9**	**+0.8**
MVO	**Moncorvo**	**2.82**	**189**		*e*Sg	**Sg**	**02 50 25.6**	**-0.8**
MVO					A	A	02 50 36.7	
	5.5nm,0.7s							
PVRL	**Vila Real**	**2.84**	**200**		*e*Sg	**Sg**	**02 50 25.1**	**-1.9**
PVRL					A	A	02 50 33.9	
	4.0nm,0.3s							
PVIS	**Viseu**	**3.41**	**199**		*e*Pn	**Pn**	**02 49 50.6**	**+2.1**
EALK	**Alkurruntz**	**3.65**	**100**		Pn	**Pn**	**02 49 54.4**	**+2.6**
EALK					Sn	**Sn**	**02 50 34.8**	**+0.3**
SJPF	**Ste Jean**	**3.87**	**101**		*e*Pn	**Pn**	**02 49 57.9**	**+3.1**
SJPF					*e*Sn	**Sn**	**02 50 41.3**	**+1.3**
	3.6nm,0.3s							
EPLA	**Plasencia**	**3.89**	**176**		Pn	**Pn**	**02 49 57.0**	**+1.9**
EPLA					Sn	**Sn**	**02 50 37.1**	**-3.4**
EPLA

IKFM	**Kafar-mosalman**	**1.77**	**69**	Pg	**Pg**	**03 08 19.3**	**+0.3**
IDHR	**Dehrash**	**1.84**	**13**	Pg	**Pg**	**03 08 21.1**	**+0.6**
ILIN	**Lien**	**2.21**	**24**	Pn	**Pn**	**03 08 25.5**	**-0.2**

*IDC **14** 03:19:52.0±0.9, 22°.68S×66°.43W, h217^{km}±9^{km}, mb3.6/8, mbtmp4.2/14, Error ellipse: s-maj=14.9km s-min=13.3km az=23.0*
*GUC **14** 03:19:52.6±0.6, 22°.76S×66°.78W, h262^{km}±11^{km}, ML4.3*
*VAO **14** 03:19:52.5±0.3, 22°.50S×66°.59W, h240^{km}±5^{km}, mb4.2*
*SJA **14** 03:19:52.2±0.7, 22°.72S×66°.57W, h236^{km}±10^{km}, ML4.3, MW4.0*
*NEIC **14** 03:19:53.1±1.6, 22°.77S±0°.06×66°.53W±0°.09, h224^{km}±8^{km}, mb4.2/35, Error ellipse: s-maj=12.6km s-min=9.1km az=87.0*

ISC 14 03:19:52.1±0.6, **22°.73S**±0°.04×**66°.51W**±0°.05, **h224**^{km}±6^{km}, **n167**, σ1^{s}**16**/188, **mb4.2**/26, **9C**, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**1.07**	**59**	*eP*	**Pn**	**03 20 27.7**	**+2.2**
AF01	**San Pedro de A**	**1.56**	**262**		**Pn**	**03 20 29.1**	**+0.3**
SLA	**San Lorenzo**	**2.19**	**155**	*eP*	**Pn**	**03 20 36.8**	**+2.3**
LVC	**Limon Verde**	**2.22**	**273**		**Pn**	**03 20 36.1**	**+1.0**
LVC	**Limon Verde**	**2.22**	**273**	*eP*	**Pn**	**03 20 35.6**	**+0.5**
LVC	**Limon Verde**	**2.22**	**273**	P	**Pn**	**03 20 36.3**	**+1.2**
	413nm,0.3s,baz=95,slow=5.6,SNR=963						
LVC				S	**S**	**03 21 08.7**	**+0.2**
	64nm,0.3s,baz=246,slow=20,SNR=6.6						
LVC	**Limon Verde**	**2.22**	**273**	*eP*	**Pn**	**03 20 36.1**	**+1.0**
LVC				*eS*	**S**	**03 21 09.3**	**+0.8**
LVC	**Limon Verde**	**2.22**	**273**	*eP*	**Pn**	**03 20 36.2**	**+1.0**
LVC				*eS*	**S**	**03 21 08.5**	**0.0**
LVC				IAML		03 21 16.7	
	766nm,0.2s						
PB09	**IPOC Station P**	**2.70**	**290**		**Pn**	**03 20 40.8**	**+0.9**
PB09	**IPOC Station P**	**2.70**	**290**	*eP*	**Pn**	**03 20 40.8**	**+0.9**
PB09				IAML		03 21 22.1	
	comp=Z,308nm,0.6s						
PB09	**IPOC Station P**	**2.70**	**290**	⇑*iP*	**Pn**	**03 20 41.4**	**+1.5**
PB09				*eS*	**S**	**03 21 17.4**	**+0.3**
PB09				IAML		03 21 21.9	
	comp=N,346nm,0.3s						
PB15	**IPOC Station P**	**2.77**	**260**		**Pn**	**03 20 41.5**	**+0.8**
PB06	**IPOC Station P**	**2.83**	**270**		**Pn**	**03 20 42.1**	**+0.8**
PB06	**IPOC Station P**	**2.83**	**270**	*eP*	**Pn**	**03 20 42.1**	**+0.8**
PB06				IAML		03 21 24.0	
	comp=Z,375nm,0.2s						
PB06	**IPOC Station P**	**2.83**	**270**	*i* P	**Pn**	**03 20 41.8**	**+0.4**
PB06				*eS*	**S**	**03 21 19.3**	**-0.4**
PB06				IAML		03 21 24.9	
	comp=N,632nm,0.2s						
PB01	**IPOC Station P**	**3.24**	**301**	Pn	**Pn**	**03 20 46.5**	**+0.6**
PB01	**IPOC Station P**	**3.24**	**301**	*eP*	**Pn**	**03 20 46.5**	**+0.6**
PB01				*eS*	**S**	**03 21 27.8**	**-0.1**
PB01				IAML		03 21 28.9	
	comp=Z,269nm,0.2s						
PB01	**IPOC Station P**	**3.24**	**301**	⇑*iP*	**Pn**	**03 20 46.5**	**+0.6**
PB01				*eS*	**S**	**03 21 27.1**	**-0.8**
PB07	**IPOC Station P**	**3.29**	**287**		**Pn**	**03 20 46.6**	**0.0**
PB07	**IPOC Station P**	**3.29**	**287**	*eP*	**Pn**	**03 20 46.4**	**-0.1**
PB07				IAML		03 21 30.9	
	comp=Z,548nm,0.3s						
PB07	**IPOC Station P**	**3.29**	**287**	⇑*iP*	**Pn**	**03 20 47.1**	**+0.5**
PB07				*eS*	**S**	**03 21 27.1**	**-2.0**
PB04	**IPOC Station P**	**3.39**	**276**		**Pn**	**03 20 48.2**	**+0.5**
PB04	**IPOC Station P**	**3.39**	**276**	*eP*	**Pn**	**03 20 48.2**	**+0.5**
PB04				*eS*	**S**	**03 21 31.0**	**-0.3**
PB04				IAML		03 21 34.3	
	comp=Z,472nm,0.1s						
PB04	**IPOC Station P**	**3.39**	**276**	⇑*iP*	**Pn**	**03 20 48.1**	**+0.3**
PB04				*eS*	**S**	**03 21 29.5**	**-1.8**
FSA	**Cafayete**	**3.40**	**172**	*eP*	**Pn**	**03 20 49.3**	**+1.4**
PB02	**IPOC Station P**	**3.44**	**293**		**Pn**	**03 20 48.6**	**+0.3**
PB02	**IPOC Station P**	**3.44**	**293**	*eP*	**Pn**	03 20 34.9	-13
PB02	**IPOC Station P**	**3.44**	**293**	⇑*iP*	**Pn**	**03 20 48.5**	**+0.2**
PB02				*eS*	**S**	**03 21 30.2**	**-2.1**
PB08	**IPOC Station P**	**3.56**	**316**		**Pn**	**03 20 51.6**	**+1.5**
PB08	**IPOC Station P**	**3.56**	**316**	*eP*	**Pn**	**03 20 51.5**	**+1.5**
PB08				*eS*	**S**	**03 21 36.7**	**+1.3**
PB08				IAML		03 21 38.7	
	comp=Z,286nm,0.8s						
PB08	**IPOC Station P**	**3.56**	**316**	⇑*iP*	**Pn**	**03 20 51.5**	**+1.5**
PX03	**IPOC Station P**	**3.71**	**308**	*eP*	**Pn**	**03 20 51.0**	**-0.6**
PX03				*eS*	**S**	**03 21 36.4**	**-1.8**
GO02	**Mina Guanaco**	**3.72**	**229**	Pn	**Pn**	**03 20 52.4**	**+0.7**
GO02	**Mina Guanaco**	**3.72**	**229**	*eP*	**Pn**	**03 20 52.8**	**+1.1**
GO02				*eS*	**S**	**03 21 38.5**	**0.0**
GO02	**Mina Guanaco**	**3.72**	**229**	⇑*eP*	**Pn**	**03 20 52.2**	**+0.5**
GO02				*eS*	**S**	**03 21 37.9**	**-0.6**
PATCX	**Punta Patache**	**3.88**	**299**		**Pn**	**03 20 53.4**	**-0.1**
PATCX	**Punta Patache**	**3.88**	**299**	*eP*	**Pn**	**03 20 53.5**	**-0.1**
PATCX				*eS*	**S**	**03 21 40.1**	**-1.7**
PATCX	**Punta Patache**	**3.88**	**299**	*eP*	**Pn**	**03 20 53.2**	**-0.4**
GO01	**Chusmiza**	**3.94**	**320**		**Pn**	**03 20 55.6**	**+0.9**
GO01	**Chusmiza**	**3.94**	**320**	*eP*	**Pn**	**03 20 55.6**	**+0.9**
GO01				*eS*	**S**	**03 21 46.8**	**+3.0**
GO01	**Chusmiza**	**3.94**	**320**	⇑*iP*	**Pn**	**03 20 55.5**	**+0.8**
HMBC	**Humberstone**	**3.98**	**307**	*eP*	**Pn**	**03 20 54.3**	**-0.5**
HMBC				*eS*	**S**	**03 21 41.5**	**-2.5**
HMBC	**Humberstone**	**3.98**	**307**	*eP*	**Pn**	**03 20 54.2**	**-0.5**
TA01	**Diego Aracena**	**4.04**	**302**	Pn	**Pn**	**03 20 54.8**	**-0.5**
TA01	**Diego Aracena**	**4.04**	**302**	*eP*	**Pn**	**03 20 55.0**	**-0.4**
TA01				*eS*	**S**	**03 21 42.8**	**-2.2**
TA01				IAML		03 21 43.4	
	comp=Z,226nm,0.8s						
TA01	**Diego Aracena**	**4.04**	**302**	*i* P	**Pn**	**03 20 54.6**	**-0.7**
PB14	**IPOC Station P**	**4.04**	**241**	Pn	**Pn**	**03 20 55.8**	**+0.2**
PB14	**IPOC Station P**	**4.04**	**241**	⇑*iP*	**Pn**	**03 20 55.6**	**0.0**
PB11	**IPOC Station P**	**4.16**	**315**	Pn	**Pn**	**03 20 56.8**	**-0.3**
PB11	**IPOC Station P**	**4.16**	**315**	*eP*	**Pn**	**03 20 56.9**	**-0.2**
PB11				*eS*	**S**	**03 21 46.1**	**-2.0**
PB11				IAML		03 21 48.5	
	comp=Z,461nm,0.3s						
PB11	**IPOC Station P**	**4.16**	**315**	*eP*	**Pn**	**03 20 56.6**	**-0.4**
TA02	**Huaiquique**	**4.17**	**305**		**Pn**	**03 20 56.0**	**-0.9**
TA02	**Huaiquique**	**4.17**	**305**	*eP*	**Pn**	**03 20 56.6**	**-0.3**
TA02				IAML		03 21 48.5	
	comp=Z,252nm,0.1s						
TA02	**Huaiquique**	**4.17**	**305**	*eP*	**Pn**	**03 20 55.8**	**-1.1**
AC02	**Maricunga**	**4.73**	**210**	Pn	**Pn**	**03 21 04.8**	**+0.5**
AC02	**Maricunga**	**4.73**	**210**	*eP*	**Pn**	**03 21 05.1**	**+0.8**
AC02	**Maricunga**	**4.73**	**210**	*eP*	**Pn**	**03 21 04.8**	**+0.5**
AC01	**Pan de Azucar**	**5.05**	**227**	Pn	**Pn**	**03 21 06.7**	**-1.0**
AC01	**Pan de Azucar**	**5.05**	**227**	*eP*	**Pn**	**03 21 06.9**	**-0.8**
AC01				*eS*	**S**	**03 22 03.5**	**-4.1**
AC01				IAML		03 22 05.1	
	comp=Z,199nm,0.2s						
AC01	**Pan de Azucar**	**5.05**	**227**	*i* P	**Pn**	**03 21 06.6**	**-1.2**
PB16	**IPOC Station P**	**5.20**	**327**		**Pn**	**03 21 10.2**	**-0.1**
PB16	**IPOC Station P**	**5.20**	**327**	*eP*	**Pn**	**03 21 11.1**	**+0.8**
PB16				*eS*	**S**	**03 22 12.3**	**+0.3**
PB16				IAML		03 22 13.3	
	comp=Z,117nm,1.0s						
PB16	**IPOC Station P**	**5.20**	**327**	*i* P	**Pn**	**03 21 10.9**	**+0.7**
PB12	**IPOC Station P**	**5.44**	**318**	Pn	**Pn**	**03 21 11.0**	**-1.8**
PB12	**IPOC Station P**	**5.44**	**318**	*eP*	**Pn**	**03 21 11.0**	**-1.8**
PB12				IAML		03 22 15.3	
	comp=Z,246nm,0.4s						
PB12	**IPOC Station P**	**5.44**	**318**	*eP*	**Pn**	**03 21 10.8**	**-2.0**
GO03	**Copiap**	**5.90**	**214**	Pn	**Pn**	**03 21 17.1**	**-1.4**
GO03	**Copiap**	**5.90**	**214**	*eP*	**Pn**	**03 21 16.9**	**-1.6**
LPAZ	**La Paz**	**6.59**	**346**	Pn	**Pn**	**03 21 28.5**	**+0.6**
AC04	**Llanos de Chal**	**6.84**	**216**		**Pn**	**03 21 28.4**	**-2.0**
AC05	**El Transito**	**6.96**	**208**	Pn	**Pn**	**03 21 30.5**	**-1.6**
LCO	**Las Campanas**	**7.30**	**210**	Pn	**Pn**	**03 21 34.5**	**-2.2**
BBRB	**Robore, Bolivi**	**7.68**	**56**	*eP*	**Pn**	**03 21 39.2**	**-2.2**
BBSD	**Serra de San D**	**7.82**	**46**	*eP*	**Pn**	**03 21 42.9**	**-0.3**
MURT	**Porto Murtinho**	**8.31**	**84**	*eP*	**Pn**	**03 21 49.2**	**-0.2**
SIV	**San Ignacio**	**8.44**	**38**	P	**Pn**	**03 21 50.1**	**-1.1**
	comp=Z,5.6nm,0.3s,baz=211,slow=12,SNR=50						
CO03	**El Pedregal**	**8.90**	**204**	Pn	**Pn**	**03 21 54.8**	**-2.2**
CPUP	**Villa Florida**	**9.09**	**115**	P	**Pn**	**03 21 59.0**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=310,slow=11,SNR=3.3						
PTLB	**Pontes e Lacer**	**10.05**	**45**	Pn	**Pn**	**03 22 10.6**	**-1.1**
PTLB	**Pontes e Lacer**	**10.05**	**45**	*eP*	**Pn**	**03 22 10.9**	**-0.8**
AQDB	**Aquidauana**	**10.30**	**79**	Pn	**Pn**	**03 22 16.4**	**+1.5**
AQDB	**Aquidauana**	**10.30**	**79**	*eP*	**Pn**	**03 22 16.0**	**+1.1**
MT03	**Universidad Ad**	**11.29**	**197**	Pn	**Pn**	**03 22 27.9**	**+0.5**
VILB	**Vilhena**	**11.43**	**33**	P	**Pn**	**03 22 30.7**	**+1.4**
MT13	**San Alfonso**	**11.47**	**196**		**Pn**	**03 22 31.2**	**+1.6**
LMEL	**Las Melosas**	**11.54**	**196**	Pn	**Pn**	**03 22 31.2**	**+0.5**
BO04	**La Punta**	**11.78**	**197**	Pn	**Pn**	**03 22 34.4**	**+0.8**
MT01	**Popeta**	**11.85**	**200**	Pn	**Pn**	**03 22 32.9**	**-1.5**
UNIS	**Unistalda (Bra**	**12.07**	**124**	*eP*	**P**	**03 22 40.6**	**-0.4**
RPRD	**Ribas do Rio P**	**12.12**	**82**	*eP*	**Pn**	**03 22 38.8**	**+0.8**
CRSM	**Crissiumal (Br**	**12.25**	**115**	*eP*	**P**	**03 22 42.6**	**-0.3**
SALV	**Santo Antonio**	**12.26**	**58**	*eP*	**Pn**	**03 22 39.4**	**-0.3**
BO01	**Tunca**	**12.29**	**198**	Pn	**Pn**	**03 22 39.1**	**-0.8**
BO02	**Sierra Bellavi**	**12.59**	**196**	Pn	**Pn**	**03 22 44.3**	**+0.6**
RODS	**Rosario do Sul**	**12.65**	**129**	*eP*	**Pn**	**03 22 45.2**	**+0.8**
FRBT	**Francisco Belt**	**12.68**	**107**	*eP*	**P**	**03 22 47.9**	**+0.1**
TRCB	**Terra Rica**	**12.80**	**93**	Pn	**Pn**	**03 22 47.1**	**+0.7**
TBOT	**Tacuaremb**	**12.95**	**136**	*eP*	**P**	**03 22 51.5**	**+0.8**
PTGB	**Pitanga**	**13.38**	**101**	*eP*	**P**	**03 22 54.4**	**-1.3**
ALGR	**Alto Alegre (B**	**13.56**	**119**	*eP*	**P**	**03 22 58.6**	**+1.0**
ITAB	**Concordia**	**13.79**	**112**	*eP*	**P**	**03 23 01.1**	**+1.1**
CPSB	**Cacapava Do Su**	**13.96**	**126**	*eP*	**P**	**03 23 02.7**	**+0.7**
SAML	**Samuel**	**14.07**	**14**		**P**	**03 23 03.8**	**+0.5**
PCMB	**Pacaembu**	**14.17**	**88**	*eP*	**P**	**03 23 04.8**	**+0.4**
LDASE	**Londrina, Braz**	**14.18**	**96**	*eP*	**Pn**	**03 23 03.3**	**-0.3**
PDRB	**Porto dos Gac**	**14.47**	**42**	*eP*	**Pn**	**03 23 05.1**	**-1.9**
NNA	**Nana**	**14.53**	**316**	P	**P**	**03 23 09.7**	**+1.3**
	comp=Z,7.1nm,0.7s,baz=157,slow=14,SNR=3.8						
PLTB	**Pedras Altas**	**14.57**	**131**	Pn	**Pn**	**03 23 07.1**	**-1.1**
ITRB	**Iturama**	**15.36**	**82**	*eP*	**Pn**	**03 23 17.1**	**-0.6**
FRTB	**Fartura**	**15.61**	**96**	*eP*	**Pn**	**03 23 20.6**	**-0.2**
PET01	**Itanhaem-SP**	**17.71**	**99**	*eP*	**P**	**03 23 43.1**	**-0.2**
IPMB	**Ipameri, GO**	**17.79**	**78**	*eP*	**P**	**03 23 44.4**	**+0.2**
SNDB	**Serra Nova Dou**	**18.02**	**56**	*eP*	**P**	**03 23 46.1**	**-0.6**
PLCA	**Paso Flores**	**18.27**	**190**	P	**P**	**03 23 49.4**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=346,slow=8.9,SNR=14						
BDFB	**Brasilia**	**18.83**	**71**	P	**P**	**03 23 55.6**	**+0.1**
BDFB	**Brasilia**	**18.83**	**71**	P	**P**	**03 23 55.4**	**-0.2**
	comp=Z,26nm,1.0s,baz=240,slow=12,SNR=30						
NPGB	**Novo Progresso**	**18.93**	**36**	*eP*	**P**	**03 23 54.4**	**-2.2**
TEFE	**Tefe**	**19.19**	**6**	*eP*	**P**	**03 23 57.4**	**-2.0**
ITTB	**Itaituba**	**21.02**	**31**	*eP*	**P**	**03 24 16.4**	**-2.4**
JANB	**Januaria**	**22.33**	**74**	*eP*	**P**	**03 24 29.8**	**-1.7**
MCRA	**Macar, Loja**	**22.41**	**323**	P	**P**	**03 24 33.7**	**+1.4**
SDBA	**SAO DESIDERIO**	**22.98**	**67**	*eP*	**P**	**03 24 35.5**	**-1.9**
COHC	**Cochancay**	**23.64**	**327**	P	**P**	**03 24 45.1**	**+1.8**
COHC				IAmb	IAmb	03 24 47.9	
	comp=Z,4.1nm,0.6s						
NAN01	**Guarapari, ES**	**25.20**	**84**	*eP*	**P**	**03 24 55.9**	**-1.6**
GDU01	**Guandu, BA**	**27.07**	**75**	*eP*	**P**	**03 25 12.8**	**-1.4**
833A	**Chaparral WMA,**	**59.85**	**326**	P	**P**	**03 29 35.1**	**+0.9**
V55A	**Taylorsville**	**59.90**	**346**	P	**P**	**03 29 34.7**	**+0.3**
V53A	**Saluda**	**60.10**	**345**	P	**P**	**03 29 35.7**	**-0.1**
V53A				IAmb	IAmb	03 30 03.9	
	comp=Z,12nm,1.1s						
X48A	**Hartselle**	**60.12**	**340**	P	**P**	**03 29 35.3**	**-0.6**
X48A				IAmb	IAmb	03 29 36.3	
	comp=Z,4.8nm,0.7s						
SNAA	**Sanae**	**60.40**	**161**	P	**P**	**03 29 38.5**	**+1.0**
SAND	**Sanderson**	**62.58**	**325**	P	**P**	**03 29 53.2**	**+0.7**
SAND				IAmb	IAmb	03 29 54.0	
	comp=Z,5.2nm,1.1s						
TXAR	**Lajitas Array**	**62.92**	**324**	P	**P**	**03 29 55.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=149,slow=7.0,SNR=10						
	comp=Z,0.6nm,0.6s						
TX31	**Lajitas Ar. Si**	**62.92**	**324**	P	**P**	**03 29 55.4**	**+0.5**
MNHN	**Monahans**	**64.01**	**326**	P	**P**	**03 30 02.9**	**+1.0**
VHRN	**Van Horn**	**64.76**	**324**	P	**P**	**03 30 07.5**	**+0.6**
VHRN				IAmb	IAmb	03 30 08.1	
	comp=Z,4.3nm,0.8s						
CCM	**Cathedral Cave**	**64.78**	**339**	P	**P**	**03 30 06.4**	**-0.3**
S39A	**Bolivar**	**65.18**	**337**	P	**P**	**03 30 09.2**	**-0.1**
S39A				IAmb	IAmb	03 30 09.8	
	comp=Z,5.8nm,0.7s						
P38A	**Dawn**	**66.97**	**338**	P	**P**	**03 30 20.5**	**-0.1**
DBIC	**Dimbokro**	**66.98**	**72**	P	**P**	**03 30 21.5**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=216,slow=6.4,SNR=3.7						
	comp=Z,1.6nm,0.6s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**03 30 24.8**	**+1.2**
QSPA				IAmb	IAmb	03 30 27.7	
	comp=Z,4.8nm,1.1s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**03 30 25.3**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=338,slow=1.0,SNR=14						
	comp=Z,2.4nm,0.8s						
ANMO	**Albuquerque**	**68.75**	**326**	P	**P**	**03 30 33.4**	**+1.3**
SDCO	**Great Sand Dun**	**70.45**	**328**	P	**P**	**03 30 43.4**	**+0.9**
SDCO				IAmb	IAmb	03 30 45.1	
	comp=Z,7.8nm,1.5s						
U15A	**North Rim**	**73.01**	**323**	P	**P**	**03 30 58.8**	**+1.0**
O20A	**White River Ci**	**73.65**	**328**	P	**P**	**03 31 02.6**	**+1.3**
O20A				IAmb	IAmb	03 31 04.0	
	comp=Z,5.5nm,1.0s						
KNB	**Kanab**	**73.73**	**323**	P	**P**	**03 31 02.8**	**+1.0**
KNB				IAmb	IAmb	03 31 04.8	
	comp=Z,5.6nm,1.0s						
P18A	**Preston Nutter**	**74.27**	**326**	P	**P**	**03 31 05.5**	**+0.5**
P18A				IAmb	IAmb	03 31 07.3	
	comp=Z,3.3nm,0.7s						
MVU	**Marysvale**	**74.47**	**324**	P	**P**	**03 31 07.8**	**+1.7**
BSUT	**Blindstream Ca**	**75.21**	**327**	P	**P**	**03 31 11.4**	**+1.0**
BSUT				IAmb	IAmb	03 31 12.8	
	comp=Z,4.2nm,0.9s						
GWY	**Greenwater Val**	**75.36**	**320**	P	**P**	**03 31 12.4**	**+1.2**
TORD	**Torodi Ar. Bea**	**75.69**	**69**	P	**P**	**03 31 12.3**	**-1.0**
	comp=Z,6.3nm,0.3s,baz=262,slow=4.9,SNR=3.4						
	comp=Z,6.3nm,0.3s						
PDAR	**Pinedale Array**	**76.30**	**329**	P	**P**	**03 31 17.1**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=124,slow=8.5,SNR=4.6						
	comp=Z,0.5nm,0.6s						
GMN	**Gold Mountain**	**76.47**	**321**	P	**P**	**03 31 19.0**	**+1.5**
ULM	**Lac du Bonnet**	**77.17**	**341**	P	**P**	**03 31 20.8**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=168,slow=5.7,SNR=4.8						
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**77.84**	**321**	P	**P**	**03 31 26.6**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=167,slow=6.2,SNR=6.3						
	comp=Z,1.1nm,0.8s						
KVN	**Kaiserville**	**78.14**	**321**	P	**P**	**03 31 27.7**	**+1.0**
KVN				IAmb	IAmb	03 31 28.2	
	comp=Z,2.8nm,0.7s						
PNTR	**Pine Nut**	**79.03**	**321**	P	**P**	**03 31 32.8**	**+1.2**
PNTR				IAmb	IAmb	03 31 34.6	
	comp=Z,4.8nm,0.7s						
HLID	**Hailey**	**79.28**	**327**	P	**P**	**03 31 34.4**	**+1.7**
HLID				IAmb	IAmb	03 31 35.4	
	comp=Z,4.3nm,0.8s						
PAHR	**Pah Rah Range**	**79.31**	**321**	P	**P**	**03 31 34.8**	**+1.8**
PAHR				IAmb	IAmb	03 31 35.5	
	comp=Z,6.3nm,0.9s						
ORV	**Oroville**	**80.45**	**320**	P	**P**	**03 31 38.4**	**-0.6**
ORV				IAmb	IAmb	03 31 41.2	
	comp=Z,4.8nm,1.1s						
PLID	**Pearl Lake**	**81.16**	**327**	P	**P**	**03 31 43.9**	**+1.1**
PLID				IAmb	IAmb	03 31 44.7	
	comp=Z,2.6nm,0.8s						
K05A	**Summer Lake**	**82.16**	**323**	P	**P**	**03 31 49.9**	**+1.8**
K05A				IAmb	IAmb	03 31 50.7	
	comp=Z,6.3nm,1.0s						
YKA	**Yellowknife Ar**	**93.09**	**340**	P	**P**	**03 32 40.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=128,slow=4.2,SNR=4.8						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**129.79**	**205**	PKP	**PKPdf**	**03 38 35.3**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=147,slow=1.9,SNR=2.7						
WRA	**Warramunga Arr**	**132.96**	**207**	PKP	**PKPdf**	**03 38 41.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=163,slow=1.6,SNR=1.8						
ZALV	**Zalesovo Beam**	**142.06**	**27**	PKP	**PKPdf**	**03 38 57.7**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=302,slow=3.2,SNR=2.4						
MKAR	**Makanchi Array**	**145.26**	**39**	PKPbc	**PKPdf**	**03 39 02.7**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=320,slow=2.5,SNR=8.7						

*IDC **14** 03:20:25.1±0.8, 14°.06N×145°.18E, h109^{km}±6^{km}, mb3.4/10, mbtmp3.8/10, Error ellipse: s-maj=29.3km s-min=16.5km az=94.0*
*NEIC **14** 03:20:26.9±1.0, 14°.03N±0°.07×144°.99E±0°.08, h116^{km}±6^{km}, mb4.4/42, Error ellipse: s-maj=11.9km s-min=8.1km az=125.0*

ISC 14 03:20:27.1±0.6, **14°.0N**±0°.1×**145°.0E**±0°.2, **h125**^{km}, **n60**, σ0^{s}**71**/61, **mb4.2**/32, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.42**	**204**	P	**Pn**	**03 20 44.2**	**-1.0**
	2µm,0.3s,baz=337,slow=2.0,SNR=114						
GUMO				S	**Sn**	**03 20 56.5**	**-2.3**
	3µm,0.5s,baz=0.0,slow=19,SNR=24						
WB0	**Warramunga Arr**	**35.13**	**198**	P	**P**	**03 27 08.6**	**-0.3**
WB0				IAmb	IAmb	03 27 32.9	
	comp=Z,7.1nm,1.2s						
WR0	**Warramunga Arr**	**35.27**	**197**	P	**P**	**03 27 10.1**	**+0.1**
WR0				IAmb	IAmb	03 27 15.3	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**35.31**	**198**	P	**P**	**03 27 10.6**	**+0.3**
WB2				IAmb	IAmb	03 27 20.6	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**35.32**	**198**	P	**P**	**03 27 10.8**	**+0.4**
WRA	**Warramunga Arr**	**35.32**	**198**	P	**P**	**03 27 10.6**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=18,slow=9.1,SNR=10						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**38.97**	**196**	P	**P**	**03 27 41.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=17,slow=6.3,SNR=5.1						
	comp=Z,0.3nm,0.3s						
STKA	**Stephens Creek**	**45.71**	**184**	P	**P**	**03 28 35.8**	**+0.1**
STKA	**Stephens Creek**	**45.71**	**184**	P	**P**	**03 28 36.1**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=360,slow=8.5,SNR=3.5						
	comp=Z,3.4nm,0.9s						
SONM	**Songino Array**	**46.51**	**325**	P	**P**	**03 28 43.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=126,slow=7.3,SNR=2.6						
	comp=Z,0.2nm,0.3s						
BBOO	**Buckleboo**	**47.31**	**190**	P	**P**	**03 28 48.8**	**+0.6**
FORT	**Forrest**	**47.41**	**200**	P	**P**	**03 28 49.6**	**+0.7**
KIWB	**Kanaga Island**	**48.39**	**31**	P	**P**	**03 28 56.8**	**+0.5**
NWAO	**Narrogin (SRO)**	**53.68**	**209**	P	**P**	**03 29 37.2**	**+1.2**
K15K	**Wolf Creek Mou**	**61.15**	**25**	P	**P**	**03 30 28.6**	**+0.5**
MKAR	**Makanchi Array**	**61.33**	**316**	P	**P**	**03 30 29.1**	**-0.4**
MKAR	**Makanchi Array**	**61.33**	**316**	P	**P**	**03 30 29.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=88,slow=9.0,SNR=7.4						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.44**	**320**	P	**P**	**03 30 49.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=102,slow=6.6,SNR=4.3						
	comp=Z,0.5nm,0.3s						
K20K	**Telida**	**64.71**	**26**	P	**P**	**03 30 51.6**	**0.0**
K20K				IAmb	IAmb	03 30 52.2	
	comp=Z,11nm,1.5s						
J20K	**Nowinta River**	**64.97**	**25**	P	**P**	**03 30 53.7**	**+0.5**
J20K				IAmb	IAmb	03 31 14.4	
	comp=Z,7.7nm,1.4s						
D19K	**Kuna River**	**65.23**	**20**	P	**P**	**03 30 55.4**	**+0.5**
D19K				IAmb	IAmb	03 30 56.3	
	comp=Z,6.5nm,1.5s						
CAST	**Castle Rocks**	**65.57**	**26**	P	**P**	**03 30 56.8**	**-0.4**
CAST				IAmb	IAmb	03 31 35.0	
	comp=Z,6.5nm,1.4s						
RC01	**Rabbit Creek A**	**65.95**	**29**	P	**P**	**03 30 59.3**	**-0.3**
KNK	**Knik Glacier**	**66.63**	**29**	P	**P**	**03 31 03.4**	**-0.

NSS					*e*S	**Sn**	**04 13 39.0**	**-1.5**
NSS					IAML		04 13 42.2	
	comp=Z,19nm,0.4s							
LRW	**Lerwick**	**4.92**	**191**		*e*P	**Pn**	**04 12 48.2**	**+2.3**
LRW					*e*S	**Sn**	**04 13 40.7**	**-2.2**
LRW	**Lerwick**	**4.92**	**191**		Pn	**Pn**	**04 12 48.3**	**+2.3**
LRW					Sn	**Sn**	**04 13 40.5**	**-2.4**
ASK	**Askoy**	**4.93**	**153**		*e*P	Pn	04 12 51.1	+5.0
ASK					*e*S	**Sn**	**04 13 45.0**	**+1.8**
ASK					IAML		04 13 52.5	
	comp=Z,15nm,0.3s							
BER	**Bergen**	**5.05**	**153**		*e*P	**Pn**	**04 12 50.0**	**+2.2**
BER					*e*S	**Sn**	**04 13 44.8**	**-1.3**
BER					IAML		04 13 48.5	
	comp=Z,10nm,0.3s							
KONS	**Konsvik**	**5.33**	**68**		*e*P	**Pn**	**04 12 52.7**	**+1.1**
KONS					*e*S	**Sn**	**04 13 47.2**	**-5.8**
KONS					IAML		04 13 51.6	
	comp=Z,17nm,0.5s							
SKAR	**Skarslia**	**5.51**	**138**		*e*P	**Pn**	**04 12 57.0**	**+2.8**
SKAR					*e*S	**Sn**	**04 13 56.7**	**-0.8**
SKAR					IAML		04 14 14.7	
	comp=Z,9.2nm,0.5s							
ODD1	**Odda**	**5.75**	**149**		*e*P	**Pn**	**04 12 59.9**	**+2.4**
ODD1					*e*S	**Sn**	**04 14 02.1**	**-1.3**
ODD1					IAML		04 14 03.7	
	comp=Z,13nm,0.3s							
MOR8	**Moi Rana**	**5.81**	**72**		*e*P	**Pn**	**04 13 01.7**	**+3.4**
MOR8					*e*S	**Sn**	**04 14 04.6**	**-0.2**
MOR8					IAML		04 14 13.1	
	comp=Z,22nm,0.3s							
MOR8	**Moi Rana**	**5.81**	**72**		Pn	**Pn**	**04 13 01.5**	**+3.2**
MOR8					Sn	**Sn**	**04 14 04.7**	**-0.2**
NC2	**NORSAR Subarra**	**5.88**	**124**		Pn	**Pn**	**04 13 01.3**	**+2.1**
NC2					Sn	**Sn**	**04 14 07.7**	**+1.2**
NC2	**NORSAR Subarra**	**5.88**	**124**		Pn	**Pn**	**04 13 01.3**	**+2.1**
NC2					Sn	**Sn**	**04 14 07.7**	**+1.2**
LOF	**Lofoten**	**6.01**	**52**		*e*P	**Pn**	**04 13 00.7**	**-0.3**
LOF					*e*S	**Sn**	**04 14 02.3**	**-7.5**
LOF					IAML		04 14 08.1	
	comp=Z,7.0nm,0.7s							
NBO	**NORSAR Subarra**	**6.03**	**126**		Pn	**Pn**	**04 13 02.8**	**+1.6**
NBO					Sn	**Sn**	**04 14 11.6**	**+1.4**
NBO	**NORSAR Subarra**	**6.03**	**126**		Pn	**Pn**	**04 13 02.8**	**+1.6**
NBO					Sn	**Sn**	**04 14 11.6**	**+1.4**
NC3	**NORSAR Subarra**	**6.09**	**123**		Pn	**Pn**	**04 13 03.8**	**+1.7**
NC3					Sn	**Sn**	**04 14 13.0**	**+1.2**
NC3	**NORSAR Subarra**	**6.09**	**123**		Pn	**Pn**	**04 13 03.8**	**+1.7**
NC3					Sn	**Sn**	**04 14 13.0**	**+1.2**
BLS5	**Blasjo**	**6.16**	**152**		*e*P	**Pn**	**04 13 05.0**	**+2.0**
BLS5					*e*S	**Sn**	**04 14 11.1**	**-2.4**
BLS5					IAML		04 14 17.6	
	comp=Z,6.4nm,0.4s							
NB2	**NORSAR Subarra**	**6.17**	**125**		Pn	**Pn**	**04 13 04.3**	**+1.1**
	baz=314,slow=14							
NB2	**NORSAR Subarra**	**6.17**	**125**		Pn	**Pn**	**04 13 04.3**	**+1.1**
	baz=314,slow=14							
NOA	**NORSAR Array B**	**6.17**	**125**		Pn	**Pn**	**04 13 04.5**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=311,slow=13,SNR=17							
NOA					Sn	**Sn**	**04 14 13.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=54,slow=22,SNR=4.6							
	comp=Z,0.7nm,0.3s							
NAO	**NORSAR Subarra**	**6.20**	**127**		Pn	**Pn**	**04 13 05.3**	**+1.8**
NAO	**NORSAR Subarra**	**6.20**	**127**		Pn	**Pn**	**04 13 05.3**	**+1.8**
NAO01	**NORSAR Array S**	**6.20**	**127**		*e*P	**Pn**	**04 13 05.1**	**+1.5**
NC4	**NORSAR Subarra**	**6.33**	**123**		Pn	**Pn**	**04 13 06.5**	**+1.2**
NC4	**NORSAR Subarra**	**6.33**	**123**		Pn	**Pn**	**04 13 06.5**	**+1.2**
FAUS	**Fauske**	**6.37**	**61**		*e*P	**Pn**	**04 13 07.6**	**+1.7**
FAUS					*e*S	**Sn**	**04 14 12.9**	**-5.6**
FAUS					IAML		04 14 26.4	
	comp=Z,12nm,0.7s							
NC6	**NORSAR Subarra**	**6.47**	**126**		Pn	**Pn**	**04 13 08.2**	**+1.0**
NC6	**NORSAR Subarra**	**6.47**	**126**		Pn	**Pn**	**04 13 08.2**	**+1.0**
NRA0	**NORESS Array S**	**6.50**	**126**		Pn	**Pn**	**04 13 08.8**	**+1.1**
	baz=318,slow=14							
NRA0					Sn	**Sn**	**04 14 20.8**	**-1.0**
	baz=319,slow=22							
NRA0	**NORESS Array S**	**6.50**	**126**		Pn	**Pn**	**04 13 08.8**	**+1.1**
	baz=318,slow=14							
NRA0					Sn	**Sn**	**04 14 20.8**	**-1.0**
	baz=319,slow=22							
STEI	**Steigen**	**6.52**	**56**		*e*P	**Pn**	**04 13 08.3**	**+0.4**
BIGH	**Upper Bighouse**	**6.85**	**201**		*e*P	**Pn**	**04 13 13.3**	**+0.8**
BIGH					*e*S	**Sn**	**04 14 27.1**	**-3.3**
SNART	**Snartemo**	**7.32**	**152**		*e*P	**Pn**	**04 13 20.8**	**+2.0**
SNART					*e*S	**Sn**	**04 14 39.7**	**-2.1**
SNART					IAML		04 14 47.1	
	comp=Z,11nm,0.8s							
SALU	**Saltoluokta**	**7.58**	**63**		*e*P	**Pn**	**04 13 24.6**	**+2.1**
HOMB	**Homborsund**	**7.66**	**148**		*e*P	**Pn**	**04 13 25.4**	**+1.9**
HOMB					*e*S	**Sn**	**04 14 47.7**	**-2.4**
HFS	**Hagfors**	**7.69**	**123**		Pn	**Pn**	**04 13 25.3**	**+1.4**
	baz=315,slow=14							
HFS					Sn	**Sn**	**04 14 50.7**	**-0.2**
	baz=308,slow=22							
HFS	**Hagfors**	**7.69**	**123**		Pn	**Pn**	**04 13 24.9**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=310,slow=13,SNR=36							
HFS					Sn	**Sn**	**04 14 49.0**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=302,slow=22,SNR=1.7							
	comp=Z,1.8nm,0.3s							
HFS	**Hagfors**	**7.69**	**123**		Pn	**Pn**	**04 13 25.3**	**+1.4**
	baz=315,slow=14							
HFS					Sn	**Sn**	**04 14 50.7**	**-0.2**
	baz=308,slow=22							
STRU	**Stroemstad**	**7.70**	**136**		*e*P	**Pn**	**04 13 25.4**	**+1.3**
DRUM	**Mains of Drumt**	**8.22**	**192**		*e*	**Pn**	**04 13 33.2**	**+1.9**
KPL	**Plockton**	**8.24**	**205**		*e*P	**Pn**	**04 13 32.5**	**+0.9**
JETT	**Jettan, Norway**	**8.87**	**50**		Pn	**Pn**	**04 13 41.6**	**+1.4**
JETT					*e*		04 13 43.8	
JETT	**Jettan, Norway**	**8.87**	**50**		Pn	**Pn**	**04 13 41.6**	**+1.4**
HEF	**Hetta**	**9.69**	**59**		*e*P	**Pn**	**04 13 53.0**	**+1.6**
EKA	**Eskdalemuir Ar**	**9.85**	**193**		Pn	**Pn**	**04 13 55.0**	**+1.4**
EKA	**Eskdalemuir Ar**	**9.85**	**193**		Pn	**Pn**	**04 13 54.0**	**+0.5**
	baz=6.0,slow=13							
EKA					Sn	**Sn**	**04 15 38.4**	**-5.6**
	baz=10.0,slow=25							
	comp=Z,0.4nm,0.3s							
EKA	**Eskdalemuir Ar**	**9.85**	**193**		Pn	**Pn**	**04 13 55.0**	**+1.4**
ARA0	**ARCESS Array S**	**10.57**	**53**		Pn	**Pn**	**04 14 03.4**	**0.0**
	baz=245,slow=14							
ARA0	**ARCESS Array S**	**10.57**	**53**		Pn	**Pn**	**04 14 03.4**	**0.0**
	baz=245,slow=14							
ARCES	**ARCESS Array B**	**10.57**	**53**		Pn	**Pn**	**04 14 03.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=244,slow=12,SNR=5.3							
	comp=Z,1.7nm,0.9s							
FIA0	**FINESS Array S**	**11.92**	**95**		Pn	**Pn**	**04 14 21.6**	**-0.2**
FIA0	**FINESS Array S**	**11.92**	**95**		Pn	**Pn**	**04 14 21.6**	**-0.2**
FINES	**FINESS Array B**	**11.92**	**95**		Pn	**Pn**	**04 14 21.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=301,slow=11,SNR=4.5							
FINES					Sn	**Sn**	**04 16 29.8**	**-4.8**
	comp=Z,0.3nm,0.3s,baz=304,slow=23,SNR=4.0							
	comp=Z,1.7nm,0.9s							
APA0	**Apatity Array**	**13.15**	**64**		Pn	**Pn**	**04 14 38.9**	**+0.2**
	baz=283,slow=11							
APA0	**Apatity Array**	**13.15**	**64**		Pn	**Pn**	**04 14 38.9**	**+0.2**
	baz=283,slow=11							
SPA0	**Spitsbergen Ar**	**14.08**	**13**		Pn	**Pn**	**04 14 52.2**	**+1.0**
	baz=195,slow=16							
SPA0	**Spitsbergen Ar**	**14.08**	**13**		Pn	**Pn**	**04 14 52.2**	**+1.0**
	baz=195,slow=16							
SPITS	**Spitsbergen Ar**	**14.08**	**13**		Pn	**Pn**	**04 14 51.9**	**+0.7**
	baz=191,slow=13							
	comp=Z,4.8nm,0.7s							
YKA	**Yellowknife Ar**	**44.21**	**323**		P	**P**	**04 19 40.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=32,slow=8.1,SNR=4.8							
	comp=Z,0.3nm,0.5s							
ILAR	**Eielson Array**	**48.43**	**342**		P	**P**	**04 20 14.9**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=14,slow=4.6,SNR=4.8							
	comp=Z,0.1nm,0.5s							

***IDC 14** 04:18:09.2±2.1, 6°.62S×129°.32E, h0km, mb3.5/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=115.3km s-min=31.4km az=68.0, Banda Sea*

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.12**	**160**		Pn	Pn	04 21 29.8	-0.8
	0.3nm,0.3s,baz=339,slow=13,SNR=17							
WRA					Sn	Sn	04 23 53.0	-15
	0.3nm,0.3s,baz=334,slow=23,SNR=2.3							
	1.0nm,0.8s							
ASAR	**Alice Springs**	**17.52**	**166**		P	P	04 22 15.7	-0.6
	0.2nm,0.3s,baz=344,slow=9.6,SNR=13							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**67.54**	**327**		P	P	04 29 07.4	0.0
	0.2nm,0.5s,baz=120,slow=7.7,SNR=6.1							
	0.2nm,0.5s							

*CATAC **14** 04:18:38.1±1.3, 12°.81N×88°.82W, h25km±11km, ML3.4*
*SNET **14** 04:18:39.7±0.5, 12°.89N×88°.81W, h48km, ML3.5*
ISC 14 04:18:37.9±2.5, **12°.76N**±0°.09×**88°.85W**±0°.05, **h31**km±16km, **n38**, σ0**°28**/47, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JUCU	**Jucuarın**	**0.76**	**50**		*e*P	**Pn**	**04 18 52.7**	**+0.1**
JUCU					*e*S	**Sb**	**04 19 03.3**	**+0.5**
TECO	**Alcaldia de Te**	**0.77**	**5**		*e*P	**Pn**	**04 18 52.9**	**+0.1**
TECO					*e*S	**Sb**	**04 19 02.9**	**-0.3**
TECO	**Alcaldia de Te**	**0.77**	**5**		*i* P	**Pn**	**04 18 52.7**	**0.0**
TECO					*i* S	**Sb**	**04 19 02.7**	**-0.4**
TECO					IAML		04 19 05.4	
	comp=Z,1μm,1.0s							
TECA	**Tecapa**	**0.80**	**25**		*e*P	**Pn**	**04 18 53.6**	**+0.4**
LCY	**Lacayo**	**0.85**	**39**		*e*P	**Pn**	**04 18 54.0**	**+0.1**
LALI	**Alcalda de L**	**0.86**	**327**		*i* P	**Pn**	**04 18 54.2**	**+0.3**
LALI					*i* S	**Sn**	**04 19 05.0**	**-0.4**
LALI					IAML		04 19 06.5	
	comp=Z,180nm,1.0s							
SJTE	**Alcalda de S**	**0.86**	**349**		*e*P	**Pn**	**04 18 54.0**	**0.0**
SJTE					*e*S	**Sn**	**04 19 05.2**	**-0.4**
SJTE	**Alcalda de S**	**0.86**	**349**		*i* P	**Pn**	**04 18 54.0**	**0.0**
SJTE					*i* S	**Sn**	**04 19 05.6**	**0.0**
SJTE					IAML		04 19 07.5	
	comp=Z,3μm,1.0s							
VSM	**San Miguel**	**0.86**	**40**		*e*P	**Pn**	**04 18 54.6**	**+0.3**
PACA	**Pacayal**	**0.87**	**36**		*e*P	**Pn**	**04 18 54.5**	**+0.3**
PACA	**Pacayal**	**0.87**	**36**		*i* P	**Pn**	**04 18 54.3**	**+0.2**
PACA					*i* S	**Sn**	**04 19 05.8**	**0.0**
PACA					IAML		04 19 10.6	
	comp=Z,10μm,1.0s							
UESV	**Universidad de**	**0.87**	**4**		*i* P	**Pn**	**04 18 54.1**	**0.0**
UESV					IAML		04 18 55.1	
	comp=Z,2μm,1.0s							
BLLM	**Bellamira**	**0.90**	**41**		*e*P	**Pn**	**04 18 54.6**	**+0.1**
PANCS	**Alcalda de**	**0.90**	**339**		*i* P	**Pn**	**04 18 54.5**	**-0.1**
PANCS					IAML		04 19 07.2	
	comp=Z,2μm,1.0s							
LOMA	**Loma Larga**	**0.93**	**340**		*e*P	**Pn**	**04 18 55.3**	**+0.2**
LOMA					*e*S	**Sn**	**04 19 07.1**	**-0.3**
LOMA	**Loma Larga**	**0.93**	**340**		*i* P	**Pn**	**04 18 55.1**	**+0.1**
LOMA					IAML		04 19 08.2	
	comp=Z,1μm,1.0s							
SCLA	**Alcaldia de Sa**	**0.94**	**7**		*e*P	**Pn**	**04 18 55.5**	**+0.4**
SCLA	**Alcaldia de Sa**	**0.94**	**7**		*i* P	**Pn**	**04 18 55.1**	**0.0**
SCLA					IAML		04 19 08.1	
	comp=Z,480nm,1.0s							
PAVA	**Las Pavas**	**0.95**	**355**		*e*S	**Sn**	**04 19 08.0**	**+0.2**
PAVA	**Las Pavas**	**0.95**	**355**		*i* P	**Pn**	**04 18 55.3**	**0.0**
PAVA					IAML		04 19 08.5	
	comp=Z,3μm,1.0s							
SNET	**Serv Nac Est T**	**0.99**	**338**		*i* P	**Pn**	**04 18 55.9**	**+0.1**
SNET					IAML		04 19 10.1	
	comp=Z,1μm,1.0s							
UDBS	**Universidad Do**	**0.99**	**342**		*i* P	**Pn**	**04 18 55.9**	**+0.1**
UDBS					IAML		04 19 10.3	
	comp=Z,2μm,1.0s							
UTEC	**Universidad Te**	**0.99**	**340**		*i* P	**Pn**	**04 18 56.5**	**+0.7**
UTEC					IAML		04 19 11.8	
	comp=Z,810nm,1.0s							
UEES	**Universidad Ev**	**1.02**	**338**		*e*P	**Pn**	**04 18 56.5**	**+0.2**
UEES	**Universidad Ev**	**1.02**	**338**		*i* P	**Pn**	**04 18 56.2**	**0.0**
UEES					IAML		04 19 15.9	
	comp=Z,510nm,1.0s							
PMON	**Piamonte**	**1.05**	**334**		*i* P	**Pn**	**04 18 56.8**	**+0.2**
PMON					IAML		04 19 13.4	
	comp=Z,920nm,1.0s							
JAYA	**Jayaque - finc**	**1.06**	**326**		*e*P	**Pn**	**04 18 57.2**	**+0.3**
JAYA	**Jayaque - finc**	**1.06**	**326**		*i* P	**Pn**	**04 18 57.1**	**+0.2**
JAYA					IAML		04 19 12.7	
	comp=Z,3μm,1.0s							
LCND	**La Caada**	**1.08**	**60**		*e*P	**Pn**	**04 18 57.2**	**+0.3**
LCND					*e*S	**Sn**	**04 19 10.9**	**+0.1**
LCND	**La Caada**	**1.08**	**60**		*i* P	**Pn**	**04 18 56.9**	**0.0**
LCND					IAML		04 19 12.5	
	comp=Z,720nm,1.0s							
CSGN	**Cosiguina Volc**	**1.27**	**80**		*i* P	**Pn**	**04 19 00.1**	**+0.4**
CSGN					IAML		04 19 21.0	
	comp=Z,2μm,1.0s							
POTN	**Potosi Cosigui**	**1.33**	**80**		*i* P	**Pn**	**04 19 00.0**	**-0.3**
POTN					IAML		04 19 18.0	
	comp=Z,110nm,1.0s							
UNIC	**Universidad Ca**	**1.39**	**331**		*i* P	**Pn**	**04 19 01.5**	**+0.2**
UNIC					IAML		04 19 22.2	
	comp=Z,240nm,1.0s							
NUBE	**Las Nubes**	**1.45**	**321**		*i* P	**Pn**	**04 19 02.8**	**+0.6**
NUBE					IAML		04 19 22.9	
	comp=Z,590nm,1.0s							
MTO3	**Montecristo**	**1.70**	**343**		*i* P	**Pn**	**04 19 05.5**	**-0.2**
MTO3					IAML		04 20 22.1	
	comp=Z,140nm,1.0s							
PACN	**Al O del Volca**	**2.02**	**97**		*i* P	**Pn**	**04 19 09.7**	**-0.2**
PACN					IAML		04 19 39.7	
	comp=Z,360nm,1.0s							
LIMN	**Finca el Limon**	**2.44**	**83**		*i* P	**Pn**	**04 19 15.7**	**0.0**
LIMN					IAML		04 19 47.1	
	comp=Z,49nm,1.0s							
BOAB	**BOACO BROADBAN**	**3.12**	**95**		*i* P	**Pn**	**04 19 25.0**	**0.0**
BOAB					IAML		04 20 53.2	
	comp=Z,38nm,1.0s							

*IDC **14** 04:34:07.7±0.9, 10°.02S×161°.03E, h0km, mb4.0/9, mbtmp4.0/10, ML3.8/1, MS3.0/3, Error ellipse: s-maj=22.1km s-min=20.3km az=153.0*
*NEIC **14** 04:34:13.9±1.9, 10°.0S±0°.1×160°.91E±0°.05, h35km±1km, mb4.3/26, Error ellipse: s-maj=17.9km s-min=8.7km az=8.0*
ISC 14 04:34:13.2±0.6, **10°.03S**±0°.09×**160°.93E**±0°.09, **h35**km, **n43**, σ0**°87**/43, **mb4.2/23, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HNR	**Honiara**	**1.14**	**301**		Pn	**Pn**	**04 34 31.4**	**-1.3**
HNR					Sn	**Sn**	**04 34 47.8**	**+0.7**
HNR	**Honiara**	**1.14**	**301**		Pn	**Pn**	**04 34 32.1**	**-0.6**
	7μm,0.3s,baz=151,slow=6.5,SNR=68							
HNR					Sn	**Sn**	**04 34 49.0**	**+1.9**
	7μm,0.3s,baz=301,slow=14,SNR=5.7							
PMG	**Port Moresby**	**13.59**	**271**		LR	LR	04 41 55.6	
	comp=Z,41nm,20.5s,baz=166,slow=34							
CTA	**Charters Tower**	**17.34**	**233**		P	**P**	**04 38 14.1**	**+0.3**
	0.2nm,0.3s,baz=74,slow=11,SNR=6.1							
CTA					LR	LR	04 43 36.7	
	comp=Z,37nm,18.2s,baz=100,slow=33							
	3.6nm,0.6s							
COEN	**Coen**	**17.80**	**256**			**Pn**	**04 38 17.9**	**-0.5**
WR0	**Warramunga Arr**	**27.30**	**246**		P	**P**	**04 39 54.7**	**-0.1**
WR0					IAmb	IAmb	04 39 58.5	
	comp=Z,3.4nm,0.6s							
WB0	**Warramunga Arr**	**27.38**	**246**		P	**P**	**04 39 55.0**	**-0.6**
WB0					IAmb	IAmb	04 39 59.2	
	comp=Z,3.6nm,0.8s							
WB2	**Warramunga Arr**	**27.47**	**246**		P	**P**	**04 39 55.9**	**-0.5**
WRA	**Warramunga Arr**	**27.48**	**246**		P	**P**	**04 39 56.4**	**0.0**
WRA	**Warramunga Arr**	**27.48**	**246**		P	**P**	**04 39 56.5**	**0.0**
	comp=Z,2.0nm,0.6s,baz=74,slow=9.1,SNR=15							
	comp=Z,2.0nm,0.6s							
STKA	**Stephens Creek**	**28.17**	**217**		P	**P**	**04 40 03.1**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=36,slow=12,SNR=3.1							
	comp=Z,1.1nm,0.5s							
ASAR	**Alice Springs**	**29.14**	**239**		P	**P**	**04 40 11.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=68,slow=10,SNR=6.0							
	comp=Z,0.6nm,0.7s							
BKZ	**Black Stump Fm**	**32.17**	**157**		P	**P**	**04 40 38.3**	**+0.5**
BKZ					IAmb	IAmb	04 40 45.6	
	comp=Z,4.9nm,0.8s							
BFZ	**Birch Farm**	**33.41**	**159**		P	**P**	**04 40 47.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**35.11**	**253**		P	**P**	**04 41 03.0**	**-0.6**
FITZ					IAmb	IAmb	04 41 03.7	
	comp=Z,5.9nm,1.4s							
NWAO	**Narrogin (SRO)**	**46.18**	**234**		LR	LR	05 00 23.4	
	comp=Z,31nm,19.0s,baz=202,slow=34							
USA0B	**Ussuriysk Arra**	**60.02**	**336**		P	**P**	**04 44 14.9**	**-1.5**
VNDA	**Vanda**	**67.48**	**180**		P	**P**	**04 45 04.6**	**-0.5**
SBA	**Scott Base**	**67.88**	**179**		P	**P**	**04 45 09.0**	**+1.4**
SONM	**Songino Array**	**75.10**	**325**		P	**P**	**04 45 51.6**	**-0.2**
SONM	**Songino Array**	**75.10**	**325**		P	**P**	**04 45 52.7**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=134,slow=4.7,SNR=5.5							
	comp=Z,0.8nm,0.8s							
SVW2	**Sparrevohn**	**78.70**	**20**		P	**P**	**04 46 12.0**	**+0.4**
L18K	**Granite Mounta**	**79.16**	**19**		P	**P**	**04 46 15.8**	**+1.7**
L18K					IAmb	IAmb	04 46 21.9	
	comp=Z,6.8nm,1.2s							
M19K	**Big River Lodg**	**79.68**	**20**		P	**P**	**04 46 16.9**	**-0.1**
QSPA	**South Pole Qui**	**79.97**	**180**		P	**P**	**04 46 17.9**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=56,slow=0.7,SNR=5.2							
	comp=Z,1.6nm,0.8s							
M20K	**Styx River**	**80.09**	**20**		P	**P**	**04 46 18.8**	**-0.4**
M20K					IAmb	IAmb	04 46 21.1	
	comp=Z,10nm,1.4s							
CTGM	**Chitina Glacie**	**83.94**	**25**		P	**P**	**04 46 40.4**	**+0.7**
ILAR	**Eielson Array**	**84.11**	**20**		P	**P**	**04 46 39.2**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=258,slow=4.7,SNR=6.7							
	comp=Z,0.4nm,0.6s							
M27K	**Edge Creek, AK**	**84.50**	**23**		P	**P**	**04 46 41.7**	**-0.7**
M27K					IAmb	IAmb	04 46 46.5	
	comp=Z,1.9nm,0.8s							
SCRK	**Sand Creek**	**84.64**	**21**		P	**P**	**04 46 42.9**	**-0.1**
SCRK					IAmb	IAmb	04 46 50.1	
	comp=Z,1.9nm,1.1s							
E22K	**Anaktuvuk Pass**	**84.83**	**16**		P	**P**	**04 46 45.0**	**+1.2**
B20K	**Meade River**	**84.86**	**13**		P	**P**	**04 46 44.6**	**+0.8**
B20K					IAmb	IAmb	04 46 45.5	
	comp=Z,2.3nm,0.8s							
BCAR	**Beaver Creek A**	**84.93**	**23**		P	**P**	**04 46 44.1**	**-0.3**
D22K	**Ayikyak River**	**85.12**	**15**		P	**P**	**04 46 45.0**	**-0.2**
D22K					IAmb	IAmb	04 46 47.3	
	comp=Z,2.1nm,0.8s							
B21K	**Ikpikpuk River**	**85.17**	**14**		P	**P**	**04 46 46.3**	**+0.9**
B21K					IAmb	IAmb	04 46 49.7	
	comp=Z,3.5nm,1.1s							
F24K	**Squaw Lake**	**85.54**	**17**		P	**P**	**04 46 48.6**	**+1.2**
F24K					IAmb	IAmb	04 46 48.7	
	comp=Z,3.7nm,1.4s							
TOLK	**Toolik Lake Re**	**85.79**	**16**		P	**P**	**04 46 49.9**	**+1.2**
EGAK	**Eagle**	**86.11**	**21**		P	**P**	**04 46 51.8**	**+1.6**
EGAK					IAmb	IAmb	04 46 52.2	
	comp=Z,3.2nm,1.1s							
M30M	**Minto, Yukon**	**86.63**	**24**		P	**P**	**04 46 53.7**	**+0.9**
I28M	**Miner Creek**	**86.91**	**21**		P	**P**	**04 46 54.9**	**+0.7**
I28M					IAmb	IAmb	04 46 56.0	
	comp=Z,0.9nm,0.7s							
NVAR	**Mina Array Bea**	**89.02**	**51**		P	**P**	**04 47 05.8**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=238,slow=5.0,SNR=2.6							
	comp=Z,0.2nm,0.5s							
NRIK	**Norilsk**	**93.54**	**340**		P	**P**	**04 47 24.7**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=119,slow=8.1,SNR=2.2							
	comp=Z,2.0nm,0.4s							
YKA	**Yellowknife Ar**	**96.26**	**28**		P	**P**	**04 47 37.6**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=262,slow=4.3,SNR=4.4							
	comp=Z,0.2nm,0.7s							

*IDC **14** 04:39:45.3±8.0, 21°.83S×68°.39W, h81km±73km, mb3.5/6, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=30.5km s-min=23.7km az=109.0*
*GUC **14** 04:39:49.2±0.8, 22°.01S×68°.66W, h118km±5km, ML4.0*
*VAO **14** 04:39:50.4±0.5, 21°.83S×68°.55W, h82km, mb4.3*
ISC 14 04:39:48.8±0.6, **22°.02S**±0°.03×**68°.66W**±0°.06, **h118**km±6km, **n51**, σ1**°28**/62, **mb3.9**/6, **5C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.59**	**292**	⇑	*i*P	**Pn**	**04 40 07.6**	**+0.2**
PB09					*e*S	**Sn**	**04 40 21.4**	**0.0**
LVC	**Limon Verde**	**0.63**	**202**		LR	LR	04 40 22.8	
	comp=Z,60nm,19.8s,baz=220,slow=41							
LVC	**Limon Verde**	**0.63**	**202**		*e*P	**Pn**	**04 40 07.6**	**-0.4**
LVC	**Limon Verde**	**0.63**	**202**		*e*P	**Pn**	**04 40 07.3**	**-0.7**
LVC					*e*S	**Sn**	**04 40 21.2**	**-1.1**
LVC					IAML		04 40 23.

	comp=E,2.8nm,0.7s,baz=247,slow=7.7,SNR=3.2							
	comp=E,2.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.31**	**70**	P		**P**	**04 51 30.2**	**-0.6**
	comp=E,1.3nm,0.4s,baz=262,slow=4.8,SNR=11							
YKA	**Yellowknife Ar**	**91.76**	**340**	P		**P**	**04 52 42.0**	**-0.5**
	comp=E,0.2nm,0.6s,baz=129,slow=4.9,SNR=4.1							
	comp=E,0.2nm,0.6s							

*TEH **14** 04:50:47.0,35˚.10N×45˚.90E,h9km±29km,ML2.8*
*ISN **14** 04:50:52.1±2.3,35˚.04N×45˚.69E,h9km,ML2.8*
ISC 14 04:50:47.0±1.0,**35˚.16N**±0˚.05×**45˚.92E**±0˚.04,**h10km**,**n10,**
σ0s85/12,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.60**	**139**	Pg	**Pg**	**04 50 58.0**	**-0.7**
IDHR				Sg	**Sg**	**04 51 07.3**	**+0.8**
KGS1	**Ghasr-e-Shirin**	**0.70**	**203**	Pg	**Pg**	**04 50 59.8**	**-0.8**
ILIN	**Lien**	**0.89**	**105**	Pg	**Pg**	**04 51 04.1**	**-0.2**
IGHG	**Ghaleghazi**	**0.98**	**147**	Pg	**Pg**	**04 51 05.5**	**-0.5**
KCHF	**Cheshme Sefid,**	**1.28**	**133**	Pg	**Pn**	**04 51 10.8**	**-0.3**
IKRK	**Kirkuk**	**1.31**	**281**	*e*Pg	**Pg**	**04 51 12.0**	**-0.2**
	baz=108						
IKRK				*e*Sg	**Sg**	**04 51 30.0**	**+0.8**
IKRK				AML	AML	04 51 32.1	
	comp=E,213nm,0.5s						
IKRK				AML	AML	04 51 32.8	
	comp=N,240nm,0.4s						
ILBA	**Ilam Banvizeh**	**1.55**	**171**	Pg	**Pn**	**04 51 15.4**	**+0.8**
MAHB	**Mahabad**	**1.62**	**354**	Pg	**Pg**	**04 51 17.9**	**-0.1**
IKFM	**Kafar-mosalman**	**2.28**	**135**	Pn	**Pn**	**04 51 26.2**	**+1.5**
IAZR	**Azarshahr**	**2.52**	**1**	Pn	**Pb**	**04 51 31.5**	**-1.0**

*ASRS **14** 04:53:26.7±0.3,48˚N±2˚×8˚0E±˚,h9km,MLh3.4/8,Error ellipse: s-maj=3.8km s-min=3.3km az=108.1,confirmed*
*NNC **14** 04:53:27.8±0.5,47˚.64N×80˚.02E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=4.3km s-min=2.6km az=169.0*
*SOME **14** 04:53:29.5,47˚.62N×79˚.67E,h5km*
ISC 14 04:53:29.6±1.2,**47.77N**±0˚.02×**80˚.23E**±0˚.03,**h9**km±11km,
n71,**σ2s00**/106,**8C-2D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**1.53**	**128**	⇑P	**Pn**	**04 53 57.3**	**+0.1**
	5.5nm,0.3s						
MAKZ				⇑S	**Sn**	**04 54 17.2**	**+0.1**
	26nm,0.2s						
MAKZ	**Makanchi**	**1.53**	**128**	Pg	**Pb**	**04 53 57.5**	**-0.6**
MAKZ				Sg	**Sg**	**04 54 18.4**	**-0.3**
MK31	**Makanchi Array**	**1.71**	**124**	⇑P	**Pb**	**04 54 00.5**	**-0.7**
	3.5nm,0.2s,baz=303,slow=15,SNR=478						
MK31				⇑S	**Sg**	**04 54 23.4**	**-1.1**
	25nm,0.3s,baz=299,slow=29,SNR=20						
MKAR	**Makanchi Array**	**1.71**	**124**	Pg	**Pb**	**04 54 00.9**	**-0.3**
MKAR				Sg	**Sg**	**04 54 24.2**	**-0.3**
KAPS	**Kapalarasan**	**2.56**	**194**	Pg	**Pn**	**04 54 11.6**	**+0.3**
	2.3nm,0.1s						
KAPS				Lg	Lg	04 54 42.5	
	40nm,0.3s						
KAPS	**Kapalarasan**	**2.56**	**194**	*e*P	**Pn**	**04 54 11.6**	**+0.3**
	2.3nm,0.1s						
KAPS				*e*S	**Sn**	**04 54 42.5**	**-0.1**
	40nm,0.3s						
SEM	**Semipalatinsk**	**2.64**	**0**	*e*P	**Pg**	**04 54 21.5**	**+1.3**
	3.4nm,0.1s						
SEM				*e*S	**Sg**	**04 54 58.4**	**+4.0**
	34nm,0.1s						
TDK	**Taldyqorghan**	**3.04**	**205**	Pg	**Pn**	**04 54 20.5**	**+2.5**
	20nm,0.2s						
TDK				Lg	Lg	04 54 57.1	
	86nm,0.3s						
TDK	**Taldyqorghan**	**3.04**	**205**	*e*P	**Pn**	**04 54 20.5**	**+2.5**
	20nm,0.2s						
TDK				*e*S	**Sn**	**04 54 57.1**	**+2.6**
	86nm,0.3s						
KURK	**Kurchatov**	**3.13**	**341**	⇑Pg	**Pb**	**04 54 25.0**	**-0.4**
	2.6nm,0.5s						
KURK				⇓Lg	Lg	04 55 08.3	
	16nm,0.5s						
KURK	**Kurchatov**	**3.13**	**341**	Pn	**Pn**	**04 54 18.8**	**-0.3**
KURK				Pg	**Pb**	**04 54 25.1**	**-0.3**
KURK				Sg	**Sg**	**04 55 08.8**	**-1.3**
ZSN	**Zaisan**	**3.15**	**94**	*e*P	**Pg**	**04 54 29.0**	**-1.0**
	4.2nm,0.2s						
ZSN				*e*S	**Sg**	**04 55 12.3**	**+1.5**
	9.4nm,0.3s						
DJR	**Jarkent**	**3.45**	**185**	Pg	**Pb**	**04 54 29.3**	**-1.6**
	0.9nm,0.2s						
DJR				Lg	Lg	04 55 12.6	
	19nm,0.3s						
DJR	**Jarkent**	**3.45**	**185**	*e*P	**Pb**	**04 54 29.4**	**-1.6**
	0.9nm,0.2s						
DJR				*e*S	**Sb**	**04 55 12.6**	**-0.5**
	19nm,0.3s						
KNOS	**Konyrlen**	**3.49**	**193**	Pg	**Pb**	**04 54 29.5**	**-2.1**
	4.3nm,0.1s						
KNOS				Lg	Lg	04 55 13.4	
	14nm,0.3s						
BLB	**Baldybastay**	**3.87**	**199**	Pg	**Pb**	**04 54 37.6**	**-0.5**
	10nm,0.2s						
BLB				Lg	Lg	04 55 26.9	
	38nm,0.6s						
ARXS	**Arharly**	**3.93**	**206**	Pg	**Pb**	**04 54 36.7**	**-2.4**
	5.2nm,0.3s						
ARXS				Lg	Lg	04 55 25.8	
	82nm,0.5s						
ARXS	**Arharly**	**3.93**	**206**	*e*P	**Pb**	**04 54 36.7**	**-2.4**
	5.2nm,0.3s						
ARXS				*e*S	**Sb**	**04 55 25.8**	**-1.0**
	82nm,0.5s						
KTMS	**Ketmen**	**4.33**	**179**	Pg	**Pb**	**04 54 45.0**	**-0.8**
	0.4nm,0.3s						
KTMS				Lg	Lg	04 55 39.4	
	7.4nm,0.4s						
KTMS	**Ketmen**	**4.33**	**179**	*e*P	**Pb**	**04 54 45.0**	**-0.8**
	0.4nm,0.3s						
KTMS				*e*S	**Sb**	**04 55 39.4**	**+1.2**
	7.4nm,0.4s						
UKR	**Ust'-Kan**	**4.34**	**41**	Sg	**Sg**	**04 55 50.4**	**+1.5**
KPKS	**Kokpek**	**4.44**	**195**	Pg	**Pb**	**04 54 47.3**	**-0.5**
	1.3nm,0.1s						
KPKS				Lg	Lg	04 55 43.6	
	34nm,0.6s						
KPKS	**Kokpek**	**4.44**	**195**	*e*P	**Pb**	**04 54 47.2**	**-0.5**
	1.3nm,0.1s						
KPKS				*e*S	**Sb**	**04 55 43.6**	**+2.2**
	34nm,0.6s						
PDGK	**Podgornoye**	**4.47**	**187**	Pg	**Pb**	**04 54 47.9**	**-0.4**
	0.9nm,0.4s						
PDGK				Lg	Lg	04 55 44.3	
	9.1nm,0.5s						
PDGK	**Podgornoye**	**4.47**	**187**	⇑Pn	**Pn**	**04 54 34.8**	**-2.9**
	2.1nm,0.6s						
PDGK				⇓Lg	Lg	04 55 44.2	
	19nm,0.7s						
KURS	**Kuram**	**4.52**	**199**	Pg	**Pb**	**04 54 47.6**	**-1.5**
	1.1nm,0.2s						
KURS				Lg	Lg	04 55 43.8	
	12nm,0.6s						
KURS	**Kuram**	**4.52**	**199**	*e*P	**Pb**	**04 54 47.6**	**-1.5**
	1.1nm,0.2s						
KURS				*e*S	**Sb**	**04 55 43.8**	**+0.1**
	12nm,0.6s						
CHKK	**Chushkaly**	**4.53**	**211**	Pg	**Pb**	**04 54 47.4**	**-1.8**
	2.7nm,0.3s						
CHKK				Lg	Lg	04 55 43.5	
	24nm,0.3s						
CHKK	**Chushkaly**	**4.53**	**211**	*e*P	**Pb**	**04 54 47.4**	**-1.8**
	2.7nm,0.3s						
CHKK				*e*S	**Sb**	**04 55 43.5**	**-0.4**
	24nm,0.3s						
SHLS	**Shalkode**	**4.65**	**187**	Pg	**Pb**	**04 54 50.4**	**-0.9**
	6.0nm,0.3s						
SHLS				Lg	Lg	04 55 48.5	
	12nm,0.5s						
SHLS	**Shalkode**	**4.65**	**187**	*e*P	**Pb**	**04 54 50.5**	**-0.9**
	6.0nm,0.3s						
SHLS				*e*S	**Sb**	**04 55 48.5**	**+1.1**
	12nm,0.5s						
UZB	**Uzynbulak**	**4.70**	**191**	Pg	**Pb**	**04 54 52.1**	**-0.2**
	5.0nm,0.6s						
UZB				Lg	Lg	04 55 51.3	
	20nm,0.7s						
UZB	**Uzynbulak**	**4.70**	**191**	*e*P	**Pb**	**04 54 52.1**	**-0.2**
	5.0nm,0.6s						
UZB				*e*S	**Sb**	**04 55 51.3**	**+2.3**
	20nm,0.7s						
KTBS	**Karatobe**	**4.76**	**213**	Pg	**Pb**	**04 54 51.7**	**-1.5**
	1.3nm,0.2s						
KTBS				Lg	Lg	04 55 50.8	
	24nm,0.5s						
KTBS	**Karatobe**	**4.76**	**213**	*e*P	**Pb**	**04 54 51.7**	**-1.5**
	1.3nm,0.2s						
KTBS				*e*S	**Sb**	**04 55 50.8**	**+0.2**
	24nm,0.5s						
ZHN	**Zhinishke**	**4.77**	**196**	Pg	**Pb**	**04 54 54.0**	**+0.5**
	1.8nm,0.1s						
ZHN				Lg	Lg	04 55 54.5	
	25nm,0.3s						
ZHN	**Zhinishke**	**4.77**	**196**	*e*P	**Pb**	**04 54 54.0**	**+0.5**
	1.8nm,0.1s						
ZHN				*e*S	**Sb**	**04 55 54.5**	**+3.4**
	25nm,0.3s						
SATY	**Saty**	**4.88**	**196**	Pg	**Pb**	**04 54 55.9**	**+0.5**
	0.9nm,0.2s						
SATY				Lg	Lg	04 55 57.9	
	14nm,0.2s						
SATY	**Saty**	**4.88**	**196**	*e*P	**Pb**	**04 54 55.9**	**+0.5**
	0.9nm,0.1s						
SATY				*e*S	**Sb**	**04 55 57.9**	**+3.6**
	14nm,0.2s						
BTLS	**Baital**	**5.08**	**240**	Pg	**Pb**	**04 54 56.6**	**-2.0**
	5.9nm,0.7s						
BTLS				Lg	Lg	04 55 59.8	
	38nm,0.4s						
BTLS	**Baital**	**5.08**	**240**	*e*P	**Pb**	**04 54 56.6**	**-2.0**
	5.9nm,0.7s						
BTLS				*e*S	**Sb**	**04 55 59.8**	**+0.2**
	38nm,0.4s						
MDOK	**Medeo**	**5.12**	**207**	Pg	**Pb**	**04 54 57.7**	**-1.7**
	2.0nm,0.3s						
MDOK				Lg	Lg	04 56 01.1	
	7.9nm,0.7s						
MDOK	**Medeo**	**5.12**	**207**	*e*P	**Pb**	**04 54 57.8**	**-1.7**
	2.0nm,0.3s						
MDOK				*e*S	**Sb**	**04 56 01.1**	**0.0**
	7.9nm,0.7s						
DGZ	**Jazzator, Alta**	**5.14**	**65**	Pn	**Pn**	**04 54 44.7**	**-2.2**
DGZ				Pg	**Pg**	**04 55 06.9**	**-1.1**
DGZ				Sg	**Sg**	**04 56 18.1**	**+3.5**
ELDR	**Elanda**	**5.14**	**46**	Pg	**Pg**	**04 55 04.6**	**-3.4**
ELDR				Sg	**Sg**	**04 56 17.4**	**+2.8**
TNSS	**Tian-Shan**	**5.27**	**207**	Pg	**Pb**	**04 55 01.6**	**-0.5**
	1.7nm,0.3s						
TNSS				Lg	Lg	04 56 07.6	
	4.2nm,0.5s						
TNSS	**Tian-Shan**	**5.27**	**207**	*e*P	**Pb**	**04 55 01.6**	**-0.5**
	1.7nm,0.3s						
TNSS				*e*S	**Sb**	**04 56 07.6**	**+2.0**
	4.1nm,0.3s						
OTUK	**Ortayu**	**5.32**	**278**	Pg	**Pb**	**04 55 01.0**	**-1.8**
	0.5nm,0.2s						
OTUK				Lg	Lg	04 56 07.7	
	8.7nm,0.7s						
MTBS	**Maitube**	**5.36**	**211**	Pg	**Pb**	**04 55 03.1**	**-0.3**
	2.8nm,0.7s						
MTBS				Lg	Lg	04 56 10.3	
	13nm,0.6s						
MTBS	**Maitube**	**5.36**	**211**	*e*P	**Pb**	**04 55 03.1**	**-0.3**
	2.8nm,0.7s						
MTBS				*e*S	**Sb**	**04 56 10.3**	**+2.5**
	13nm,0.6s						
CHBI	**Chibit, Altay**	**5.42**	**59**	Sg	**Sg**	**04 56 24.8**	**+1.4**
BRZS	**Berezniki**	**5.45**	**297**	Pg	**Pb**	**04 55 03.2**	**-1.8**
	1.2nm,0.4s						
BRZS				Lg	Lg	04 56 10.9	
	13nm,0.6s						
BRZS	**Berezniki**	**5.45**	**297**	*e*P	**Pb**	**04 55 03.2**	**-1.8**
	1.2nm,0.4s						
BRZS				*e*S	**Sb**	**04 56 10.9**	**+0.4**
	13nm,0.6s						
AKAR	**Aktash**	**5.49**	**60**	Sg	**Sg**	**04 56 26.3**	**+0.7**
DGS	**Degeres**	**5.51**	**216**	Pg	**Pb**	**04 55 05.3**	**-0.7**
	2.9nm,0.5s						
DGS				Lg	Lg	04 56 14.8	
	12nm,0.5s						
DGS	**Degeres**	**5.51**	**216**	*e*P	**Pb**	**04 55 05.3**	**-0.7**
	2.8nm,0.3s						
DGS				*e*S	**Sb**	**04 56 14.8**	**+2.6**
	12nm,0.5s						
GALT	**Gorno-Altaysk,**	**5.59**	**39**	Sg	**Sg**	**04 56 29.6**	**+0.7**
KST	**Kastek**	**5.60**	**214**	Pg	**Pb**	**04 55 06.6**	**-1.0**
	0.7nm,0.3s						
KST				Lg	Lg	04 56 17.2	
	4.2nm,0.3s						
KST	**Kastek**	**5.60**	**214**	*e*P	**Pb**	**04 55 06.6**	**-1.0**
	0.8nm,0.3s						
KST				*e*S	**Sb**	**04 56 17.1**	**+2.3**
	4.4nm,0.3s						
ULGR	**Ulagan, Altay**	**5.81**	**58**	Sg	**Sg**	**04 56 36.9**	**+0.7**
CUR	**Chagan-Uzun**	**5.83**	**63**	Sg	**Sg**	**04 56 37.6**	**+0.8**
SGDS	**Sogindy**	**5.84**	**224**	Pg	**Pb**	**04 55 10.1**	**-1.5**
	2.0nm,0.2s						
SGDS				Lg	Lg	04 56 22.6	
	3.3nm,0.3s						
TKM2	**Tokmak 2**	**5.85**	**216**	⇑Pn	**Pn**	**04 54 52.9**	**-3.8**
	1.2nm,0.6s						
TKM2				⇑Lg	Lg	04 56 30.9	
	13nm,1.1s						
BOOM	**Boomskoye usch**	**6.09**	**211**	Pn	**Pn**	**04 54 57.6**	**-2.4**
BOOM				S	**Sn**	**04 56 04.2**	**-5.6**
AAK	**Ala-Archa**	**6.54**	**220**	Sg	**Sb**	**04 56 48.4**	**+6.5**
ELT	**Eltsovka**	**6.70**	**33**	Pg	**Pb**	**04 55 30.0**	**+3.9**
ELT				S	**Sn**	**04 56 24.3**	**-0.1**
ELT				Sg	**Sg**	**04 57 05.0**	**+0.6**
TASR	**Tashtagol**	**7.00**	**42**	Sg	**Sg**	**04 57 13.1**	**-0.8**
MRKS	**Merke**	**7.05**	**227**	Pg	**Pb**	**04 55 34.3**	**+2.1**
	0.8nm,0.5s						
MRKS				Lg	Lg	04 57 03.7	
	3.0nm,0.8s						
MRKS	**Merke**	**7.05**	**227**	*e*P	**Pb**	**04 55 34.3**	**+2.1**
	0.7nm,0.1s						
MRKS				*e*S	**Sb**	**04 57 03.7**	**+7.3**
	3.7nm,0.3s						
NVS	**Novosibirsk**	**7.33**	**14**	Sg	**Sg**	**04 57 23.2**	**-1.3**
NVSII	**Novosibirsk**	**7.33**	**14**	Sg	**Sg**	**04 57 23.2**	**-1.3**

IDC 14 04:55:33.6±2.0,**5˚.96S×149˚.36E,h0km,mb3.8/3,**
mbtmp3.9/4,ML2.2/1,Error ellipse: s-maj=117.0km
s-min=27.3km az=123.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.06**	**212**	Pn	Pn	04 56 38.6	+1.5
	10nm,0.3s,baz=20,slow=7.6,SNR=12						
PMG				Sn	Sn	04 57 22.3	-3.1
	28nm,0.3s,baz=53,slow=17,SNR=13						
	26nm,0.4s						
WRA	**Warramunga Arr**	**20.16**	**225**	P	P	05 00 09.1	-0.7
	10.0nm,0.6s,baz=51,slow=11,SNR=67						
	10.0nm,0.6s						
ASAR	**Alice Springs**	**23.05**	**219**	P	P	05 00 40.4	-0.4
	0.7nm,0.4s,baz=55,slow=9.5,SNR=21						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**84.53**	**23**	P	P	05 08 08.6	+0.3
	0.4nm,0.8s,baz=262,slow=4.4,SNR=4.5						
	0.4nm,0.8s						

*IDC **14** 05:09:34.2±3.4,0˚.22N×96˚.70E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=150.9km s-min=22.0km az=57.0*
*DJA **14** 05:09:38.4±0.7,0˚N±3˚×9˚7E±˚,h48km±27km,M3.8/6, MLv3.8/6*
ISC 14 05:09:36.3±1.1,**0˚.28N**±0˚.06×**96˚.83E**±0˚.09,**h10**km,**n16,**
σ1s72/17,mb3.6/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.26**	**36**	P	**Pn**	**05 10 00.0**	**0.0**
GSI				S	**Sb**	**05 10 15.6**	**-0.9**
PBSI	**Pulau Batu**	**1.49**	**103**	P	**Pn**	**05 10 03.5**	**+0.3**
PBSI				S	**Sn**	**05 10 21.9**	**-0.9**
SNSI	**Sinabang, Aceh**	**2.17**	**347**	P	**Pn**	**05 10 10.8**	**-1.8**
SISI	**Saibi**	**2.77**	**125**	P	**Pn**	**05 10 20.7**	**-0.1**
SISI				S	**Sn**	**05 10 51.8**	**-2.6**
KCSI	**Kotacane, Aceh**	**3.35**	**16**	P	**Pn**	**05 10 28.3**	**-0.6**
KCSI				S	**Sn**	**05 11 07.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**18.18**	**6**	P	**P**	**05 13 54.6**	**+5.3**
	0.5nm,0.3s,baz=200,slow=10,SNR=1.6						
WRA	**Warramunga Arr**	**41.88**	**121**	P	**P**	**05 17 27.0**	**-0.2**
	0.6nm,0.7s,baz=303,slow=8.9,SNR=7.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**43.15**	**126**	P	**P**	**05 17 37.7**	**+0.1**
	0.5nm,0.6s,baz=296,slow=8.0,SNR=5.8						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**48.04**	**347**	P	**P**	**05 18 16.0**	**+0.1**
	0.4nm,0.6s,baz=158,slow=8.1,SNR=5.4						
	0.4nm,0.6s						
SONM	**Songino Array**	**48.09**	**9**	P	**P**	**05 18 16.1**	**-0.2**
	0.3nm,0.6s,baz=168,slow=8.4,SNR=1.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**52.52**	**345**	P	**P**	**05 18 49.5**	**-0.1**
	0.2nm,0.2s,baz=156,slow=9.7,SNR=1.8						
	0.2nm,0.2s						
ZALV	**Zalesovo Beam**	**54.40**	**351**	P	**P**	**05 19 02.6**	**-0.8**
	0.4nm,0.3s,baz=152,slow=6.5,SNR=2.0						
	0.4nm,0.3s						
H04N2	**CROZET ISLANDS**	**60.81**	**214**	T	T	06 26 31.9	
	baz=54,slow=75,SNR=12						
H04N1	**CROZET ISLANDS**	**60.82**	**214**	T	T	06 26 34.8	
	baz=54,slow=75,SNR=12						
H04N3	**CROZET ISLANDS**	**60.83**	**214**	T	T	06 26 31.9	
	baz=54,slow=75,SNR=27						
TXAR	**Lajitas Array**	**144.64**	**32**	PKP	**PKPab**	**05 29 12.4**	**-0.4**
	0.1nm,0.5s,baz=248,slow=1.2,SNR=6.1						

*IDC **14** 05:10:57.6±1.2,50˚.75N×170˚.87W,h0km,mb3.8/10, mbtmp3.8/11,ML3.6/1,MS2.9/2,Error ellipse: s-maj=35.4km s-min=20.3km az=4.0*
*NEIC **14** 05:10:59.6±2.0,50˚.83N±0˚.10×170˚.95W±0˚.07,h10km±2km, mb3.9/45,Error ellipse: s-maj=16.6km s-min=6.4km az=193.0*
ISC 14 05:10:59.5±0.9,**50˚.9N**±0˚.1×**170˚.93W**±0˚.06,**h10**km,**n75,**
σ1s27/67,mb3.9/16,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**2.42**	**304**	Pn	**Pn**	**05 11 38.8**	**-0.3**
ATKA				Sn	**Sn**	**05 12 06.8**	**-1.9**
GSTR	**Great Sitkin T**	**3.42**	**293**	Pn	**Pn**	**05 11 53.5**	**+0.6**
ADK	**Adak**	**3.74**	**288**	Pn	**Pn**	**05 11 56.7**	**-0.5**
ADK				Sn	**Sn**	**05 12 37.7**	**-3.5**
KIWB	**Kanaga Island**	**4.01**	**286**	Pn	**Pn**	**05 12 00.2**	**-0.8**
AKUT	**Akutan**	**4.52**	**42**	Pn	**Pn**	**05 12 08.4**	**+0.5**
AKUT				Sn	**Sn**	**05 12 56.2**	**-4.4**
CHGN	**Chignik**	**9.20**	**49**	Pn	**Pn**	**05 13 12.4**	**+0.4**
SII	**Sitkinak Islan**	**11.41**	**54**	Pn	**Pn**	**05 13 41.1**	**-1.3**
OHAK	**Old Harbor**	**12.13**	**52**	Pn	**Pn**	**05 13 50.8**	**-1.4**
P18K	**Big Mountain,**	**12.35**	**40**	Pn	**Pn**	**05 13 55.4**	**+0.3**
KDAK	**Kodiak Island**	**12.71**	**50**	Pn	**Pn**	**05 13 58.2**	**-1.9**
	0.5nm,0.3s,baz=182,slow=9.9,SNR=4.4						
Q19K	**Cape Douglas,**	**12.76**	**44**	Pn	**Pn**	**05 14 00.2**	**-0.6**
SUA	**Susitna One**	**15.36**	**39**	Pn	**Pn**	**05 14 34.7**	**-1.5**
CAST	**Castle Rocks**	**16.10**	**32**		**Pn**	**05 14 46.8**	**+1.1**
GHO	**Glory Hole Cre**	**16.26**	**40**	Pn	**Pn**	**05 14 47.4**	**-0.4**
GHO				IAmb	IAmb	05 14 51.8	
	comp=Z,14nm,1.4s						
TRF	**Thorofare Moun**	**16.73**	**33**		**Pn**	**05 14 55.5**	**+1.7**
TRF				IAmb	IAmb	05 14 57.6	
	comp=Z,11nm,1.3s						
BPAW	**Bear Paw Mtn.**	**16.92**	**31**	Pn	**Pn**	**05 14 56.9**	**+0.8**
BPAW				IAmb	IAmb	05 15 26.5	
	comp=Z,13nm,1.4s						
RND	**Reindeer**	**17.21**	**35**	Pn	**Pn**	**05 15 00.2**	**+0.4**
I21K	**Tanana**	**17.37**	**27**		**Pn**	**05 15 02.7**	**+1.1**
I21K				IAmb	IAmb	05 15 26.5	
	comp=Z,9.4nm,1.3s						
MLY	**Manley**	**17.63**	**29**	P	**P**	**05 15 07.9**	**+2.0**
I23K	**Minto, Yukon-K**	**18.14**	**30**		**Pn**	**05 15 11.5**	**+0.3**
GLB	**Gilahina Butte**	**18.28**	**44**		**Pn**	**05 15 12.1**	**-0.8**
GLB				IAmb	IAmb	05 15 16.8	
	comp=Z,6.3nm,0.7s						
MCARA	**McCarthy VSAT**	**18.60**	**45**		**Pn**	**05 15 17.8**	**+0.9**
IL31		**18.72**	**33**	P	**P**	**05 15 17.6**	**-0.3**
ILAR	**Eielson Array**	**18.72**	**33**	P	**P**	**05 15 18.4**	**+0.5**
ILAR	**Eielson Array**	**18.72**	**33**	P	**P**	**05 15 16.5**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=228,slow=9.0,SNR=12						
	comp=Z,1.5nm,0.8s						
D19K	**Kuna River**	**18.73**	**15**	P	**P**	**05 15 18.7**	**+0.8**
RIDG	**Independent Ri**	**18.89**	**37**	P	**P**	**05 15 20.7**	**+0.9**
RIDG				IAmb	IAmb	05 15 48.9	
	comp=Z,6.8nm,1.2s						
M26K	**Nabesna, AK**	**19.02**	**42**	P	**P**	**05 15 21.3**	**0.0**
M26K				IAmb	IAmb	05 15 51.8	
	comp=Z,9.4nm,1.3s						
G23K	**Bananza Creek**	**19.03**	**26**	P	**Pn**	**05 15 22.9**	**+0.8**
G23K				IAmb	IAmb	05 15 26.5	
	comp=Z,4.7nm,0.8s						
H24K	**Noodor Dome**	**19.06**	**30**	P	**P**	**05 15 22.7**	**+1.0**
H24K				IAmb	IAmb	05 15 24.8	
	comp=Z,5.9nm,0.8s						
BARN	**Barnard Glacie**	**19.11**	**47**	P	**Pn**	**05 15 23.6**	**+0.4**
J25K	**Salcha River,**	**19.16**	**35**	P	**P**	**05 15 22.7**	**-0.1**
J25K				IAmb	IAmb	05 15 25.1	
	comp=Z,8.6nm,0.7s						
SCRK	**Sand Creek**	**19.34**	**37**	P	**P**	**05 15 25.2**	**+0.4**
PRP	**Porcupine Dome**	**19.63**	**32**	P	**P**	**05 15 28.7**	**+0.7**
PRP				IAmb	IAmb	05 15 30.2	
	comp=Z,4.0nm,0.7s						
G24K	**Hadweenzic Riv**	**19.76**	**28**	P	**Pn**	**05 15 30.8**	**+0.1**
G24K				IAmb	IAmb	05 15 33.3	
	comp=Z,7.2nm,0.8s						
J26L	**Joseph Creek**	**19.77**	**36**	P	**P**	**05 15 29.2**	**-0.2**
J26L				IAmb	IAmb	05 15 33.0	
	comp=Z,5.5nm,0.7s						
BCAR	**Beaver Creek A**	**19.80**	**41**	P	**P**	**05 15 30.8**	**+1.0**
D22K	**Ayikyak River**	**20.07**	**19**	P	**P**	**05 15 34.1**	**+1.5**
D22K				IAmb	IAmb	05 16 13.2	
	comp=Z,9.3nm,1.4s						
F24K	**Squaw Lake**	**20.20**	**26**	P	**P**	**05 15 35.1**	**+1.0**
B20K	**Meade River**	**20.24**	**14**	P	**P**	**05 15 35.0**	**+0.6**
B21K	**Ikpikpuk River**	**20.32**	**16**	P	**P**	**05 15 35.9**	**+0.7**

comp=Z,2.3nm,0.8s
JNU Nakatsue 45.49 270 LR LR 05 45 19.9
comp=Z,11nm,18.3s,baz=0.0,slow=45
TXAR Lajitas Array 53.78 87 P **P** **05 20 21.4 -0.7**
comp=Z,0.3nm,0.5s,baz=303,slow=5.7,SNR=7.5
comp=Z,0.3nm,0.5s
KURBB Kurchatov Arra 62.93 318 P **P** **05 21 26.2 +0.6**
comp=Z,0.5nm,0.5s,baz=44,slow=7.0,SNR=6.8
comp=Z,0.5nm,0.5s
MKAR Makanchi Array 64.11 313 P **P** **05 21 33.8 +0.3**
comp=Z,0.6nm,0.7s,baz=60,slow=7.2,SNR=6.8
comp=Z,0.6nm,0.7s
BVAR Borovoye Array 64.33 324 P **P** **05 21 36.1 +1.2**
comp=Z,1.7nm,0.8s,baz=46,slow=8.5,SNR=8.3
comp=Z,1.7nm,0.8s
FINES FINESS Array B 67.19 351 P **P** **05 21 53.4 +0.3**
comp=Z,0.7nm,0.6s,baz=12,slow=14,SNR=3.4
comp=Z,0.7nm,0.6s
HFS Hagfors 69.26 358 P **P** **05 22 07.2 +1.1**
comp=Z,1.1nm,0.5s,baz=29,slow=3.4,SNR=8.6
comp=Z,1.1nm,0.5s
AAK Ala-Archa 70.85 315 P **P** **05 22 17.0 +0.6**
comp=Z,0.7nm,0.3s,baz=78,slow=5.5,SNR=4.2
comp=Z,0.7nm,0.3s
ASAR Alice Springs 88.69 229 P **P** **05 23 51.8 -1.1**
comp=Z,0.4nm,0.7s,baz=30,slow=3.1,SNR=4.5
comp=Z,0.4nm,0.7s

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*ISK **14** 05:14:02.7, 38.66N×27.44E, h10km, ML3.6/37*
*AFAD **14** 05:14:02.9±0.0, 38.65N×27.43E, h10km±1km, MW3.6*
*THE **14** 05:14:03.9, 38.66N×27.42E, h7km±1km, ML3.4/8, Error ellipse: s-maj=1.3km s-min=0.4km az=247.0*
*CFUSG **14** 05:14:04.1, 38.82N×27.63E, h26km, mb2.4/1, Western Turkey Magtype MSH 3.1 from 1 stations*
*ATH **14** 05:14:05.1, 38.65N×27.37E, h14km±2km, ML3.5/4, Error ellipse: s-maj=4.0km s-min=1.6km az=65.0*

ISC 14 05:14:02.8±0.9, 38.67N±0.01×27.47E±0.02, h15km±8km, n92, σ0.82/130, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.34**	**53**	Pg	**Pb**	**05 14 10.1**	**-0.5**
AKS				Sg	**Sb**	**05 14 16.2**	**+0.4**
AKHS	**Akhisar**	**0.34**	**53**	P	**Pb**	**05 14 10.3**	**-0.3**
AKHS				S	**Sb**	**05 14 15.6**	**-0.2**
GOMA	**Golmarmara-Man**	**0.35**	**84**	Pg	**Pb**	**05 14 10.6**	**-0.2**
GOMA				Sg	**Sb**	**05 14 16.6**	**+0.4**
ZEDA	**zmir-Bergama**	**0.42**	**314**	P	**Pg**	**05 14 11.5**	**+0.1**
ZEDA				S	**Sg**	**05 14 16.1**	**-1.0**
BLCB	**Balcova**	**0.44**	**229**	Pg	**Pg**	**05 14 11.5**	**-0.2**
BLCB				Sg	**Sg**	**05 14 18.0**	**+0.4**
BLCB	**Balcova**	**0.44**	**229**	P	**Pg**	**05 14 11.4**	**-0.2**
BLCB				S	**Sg**	**05 14 18.1**	**+0.4**
RFT7	**Candarli**	**0.51**	**304**	Pg	**Pb**	**05 14 13.1**	**-0.4**
IZMD	**zmir-Dikili-**	**0.52**	**307**	P	**Pg**	**05 14 13.2**	**+0.1**
IZMD				P	**Pg**	**05 14 13.3**	**+0.1**
FOCM	**Foa**	**0.58**	**274**	Pg	**Pg**	**05 14 13.9**	**-0.3**
CAND	**Candarli**	**0.59**	**299**	Pg	**Pg**	**05 14 14.4**	**0.0**
DKL	**Dikili**	**0.59**	**312**	Pg	**Pg**	**05 14 14.4**	**-0.1**
DKL				Sg	**Sb**	**05 14 23.3**	**+0.3**
IZMR	**zmir-demi**	**0.66**	**144**	P	**Pb**	**05 14 15.9**	**0.0**
IZMR				P	**Pb**	**05 14 16.0**	**0.0**
STEP	**BALIKESIR_Sava**	**0.73**	**15**	P	**Pg**	**05 14 17.3**	**+0.2**
STEP				S	**Sb**	**05 14 27.0**	**0.0**
GMLD	**Gumuldur**	**0.74**	**216**	Pg	**Pg**	**05 14 17.3**	**+0.1**
URLA	**Izmir**	**0.75**	**246**	P	**Pb**	**05 14 16.6**	**-1.0**
DGB	**zmir**	**0.77**	**217**	P	**Pb**	**05 14 17.4**	**-0.5**
DGB				S	**Sb**	**05 14 27.6**	**-0.6**
EAG3	**Mitilini, Lesv**	**0.81**	**301**	P	**Pn**	**05 14 19.6**	**0.0**
EAG3				S	**Sg**	**05 14 29.6**	**+0.3**
EAG3				AML	AML	05 14 33.8	
	comp=E,18588μm,0.9s						
EAG3				AML	AML	05 14 36.0	
	comp=N,8393μm,0.4s						
KARB	**zmir-Karabur**	**0.83**	**270**	P	**Pg**	**05 14 19.0**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**0.87**	**240**	P	**Pg**	**05 14 19.9**	**+0.1**
ZEYE				S	**Sg**	**05 14 31.3**	**+0.1**
KIRA	**zmir-Kiraz**	**0.87**	**123**	P	**Pg**	**05 14 20.0**	**+0.2**
KIRA				S	**Sb**	**05 14 31.1**	**-0.1**
AYVA	**Ayvalik**	**0.88**	**317**	P	**Pg**	**05 14 19.9**	**+0.1**
BUHA	**Balikesir, Bur**	**0.88**	**340**	P	**Pg**	**05 14 19.9**	**0.0**
KULA	**Kula-Manisa**	**0.95**	**99**	Pg	**Pn**	**05 14 21.5**	**-0.2**
GCAM	**G?zelcaml?**	**0.99**	**191**	P	**Pb**	**05 14 21.3**	**-0.3**
DEMI	**Demirci**	**1.04**	**69**	P	**Pg**	**05 14 23.6**	**+0.6**
EAG2	**Marmaro, Chios**	**1.07**	**263**	P	**Pn**	**05 14 23.2**	**0.0**
EAG2				S	**Sb**	**05 14 36.9**	**+0.1**
SMG	**Samos**	**1.08**	**207**	P	**Pb**	**05 14 22.9**	**-0.4**
SMG				S	**Sg**	**05 14 39.2**	**+1.3**
	comp=N,2μm,0.4s						
SMG	**Samos**	**1.08**	**207**	P	**Pb**	**05 14 23.0**	**-0.2**
SMG				S	**Sg**	**05 14 38.1**	**+0.2**
PRK	**Paraskevi**	**1.09**	**302**	P	**Pg**	**05 14 24.3**	**+0.4**
PRK				S	**Sg**	**05 14 38.9**	**+0.7**
	comp=N,3μm,0.7s						
PRK	**Paraskevi**	**1.09**	**302**	P	**Pg**	**05 14 24.7**	**+0.7**
PRK				S	**Sg**	**05 14 38.7**	**+0.5**
PRK				AML	AML	05 14 44.4	
	comp=N,5596μm,0.9s						
PRK				AML	AML	05 14 46.2	
	comp=E,5099μm,0.6s						
ESEN	**Aydn-Nazilli**	**1.12**	**141**	P	**Pg**	**05 14 24.1**	**-0.3**
BKES	**Balkesir-Mer**	**1.12**	**19**	P	**Pg**	**05 14 24.3**	**-0.1**
CHOS	**Chios island**	**1.14**	**256**	P	**Pg**	**05 14 24.5**	**-0.4**
CHOS				S	**Sg**	**05 14 40.0**	**+0.2**
	comp=E,2μm,0.5s						
CHOS	**Chios island**	**1.14**	**256**	P	**Pg**	**05 14 24.7**	**-0.2**
CHOS				S	**Sn**	**05 14 39.4**	**-0.4**
CHOS				AML	AML	05 14 42.1	
	comp=N,3894μm,0.5s						
CHOS				AML	AML	05 14 46.5	
	comp=E,3626μm,0.4s						
DURS	**Dursunbey**	**1.21**	**40**	P	**Pb**	**05 14 25.7**	**+0.2**
DURS				S	**Sg**	**05 14 41.8**	**-0.3**
USAK	**Uak-Merkez**	**1.21**	**88**	P	**Pg**	**05 14 26.4**	**+0.1**
DDIM	**Aydin, Didim**	**1.23**	**188**	P	**Pg**	**05 14 26.8**	**+0.3**
SIMA	**Simav-Kutahya**	**1.25**	**70**	Pn	**Pg**	**05 14 27.6**	**+0.6**
SIMA				Sn	**Sg**	**05 14 45.1**	**+1.8**
BLKS	**Balkesir-Sus**	**1.26**	**18**	P	**Pb**	**05 14 25.9**	**-0.4**
BLKS				P	**Pb**	**05 14 26.0**	**-0.4**
BLKS				S	**Sn**	**05 14 42.3**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**1.28**	**326**	P	**Pb**	**05 14 26.9**	**+0.2**
BAYC				S	**Sb**	**05 14 42.6**	**-0.4**
DST	**Dursunbey**	**1.29**	**44**	Pn	**Pg**	**05 14 27.2**	**-0.5**
GPNR	**Gulpinar-Canak**	**1.30**	**307**	Pn	**Pg**	**05 14 27.7**	**-0.1**
KOCA	**Canakkale, Ayv**	**1.32**	**309**	P	**Pb**	**05 14 27.0**	**-0.3**
KOCA				S	**Sg**	**05 14 44.8**	**-0.8**
SIGR	**SIGRI**	**1.37**	**294**	Pn	**Pg**	**05 14 28.8**	**-0.3**
SIGR	**SIGRI**	**1.37**	**294**	P	**Pg**	**05 14 28.7**	**-0.4**
SIGR				S	**Sn**	**05 14 43.9**	**-1.3**
SIGR				AML	AML	05 14 53.2	
	comp=N,2029μm,0.6s						
SIGR				AML	AML	05 14 55.4	
	comp=E,1674μm,0.7s						
GONE	**Gonen-Balikesi**	**1.38**	**7**	Pn	**Pb**	**05 14 28.3**	**0.0**
GONE				Sn	**Sg**	**05 14 48.4**	**+1.0**
MLSB	**Milas**	**1.40**	**170**	Pn	**Pb**	**05 14 28.1**	**-0.5**
EZN	**Ezine**	**1.45**	**323**	Pn	**Pb**	**05 14 29.9**	**+0.4**
EZN	**Ezine**	**1.45**	**323**	P	**Pb**	**05 14 29.0**	**-0.5**
EZN				S	**Sg**	**05 14 49.0**	**-0.7**
	comp=E,1μm,0.4s						
YKAV	**Yalikavak-Bodr**	**1.55**	**186**	Pn	**Pb**	**05 14 31.1**	**-0.1**
GEDZ	**Gediz**	**1.56**	**76**	Pn	**Pb**	**05 14 31.9**	**+0.5**
BODT	**Bodrum**	**1.61**	**184**	Pn	**Pb**	**05 14 31.7**	**-0.6**
BODT	**Bodrum**	**1.61**	**184**	P	**Pn**	**05 14 30.8**	**+0.1**
BODT				S	**Sb**	**05 14 52.2**	**-0.3**
YER	**Yerkesik**	**1.67**	**157**	Pn	**Pb**	**05 14 32.9**	**-0.3**
YER	**Yerkesik**	**1.67**	**157**	P	**Pb**	**05 14 32.6**	**-0.6**
YER				S	**Sb**	**05 14 54.4**	**+0.4**
RFTAA	**Mazikoy-Bodrum**	**1.69**	**172**	Pn	**Pn**	**05 14 32.0**	**+0.3**
EDC	**Edincik**	**1.70**	**10**	Pn	**Pb**	**05 14 33.9**	**+0.1**
KRBG	**Karabiga-Canak**	**1.72**	**356**	Pn	**Pb**	**05 14 34.1**	**0.0**
KCTX	**Karacabey (Bur**	**1.73**	**23**	Pn	**Pb**	**05 14 33.4**	**-0.9**
TVSB	**Tavsanli**	**1.73**	**63**	Pn	**Pb**	**05 14 34.5**	**+0.1**
KLNA	**Kalymnos**	**1.76**	**193**	P	**Pb**	**05 14 34.5**	**-0.2**
ORLT	**Orhaneli**	**1.76**	**38**	Pn	**Pb**	**05 14 34.6**	**-0.3**
LPK	**Lapseki**	**1.78**	**342**	Pn	**Pb**	**05 14 34.1**	**-1.1**
APMY	**Acipayam-Deniz**	**1.88**	**129**	Pn	**Pn**	**05 14 35.3**	**+0.8**
GELI	**Tayfur-Gelibol**	**1.89**	**336**	Pn	**Pb**	**05 14 35.6**	**-1.3**
MRMT	**Marmara Adasi**	**1.93**	**3**	Pn	**Pb**	**05 14 36.7**	**-1.0**
GADA	**Gvkgeada**	**1.94**	**322**	Pn	**Pb**	**05 14 36.7**	**-1.2**
DAT	**Datca**	**1.94**	**177**	Pn	**Pn**	**05 14 36.3**	**+0.9**
MDNY	**Mudanya-Bursa**	**2.02**	**32**	Pn	**Pn**	**05 14 37.1**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.02**	**354**	Pn	**Pn**	**05 14 37.2**	**+0.8**
DALY	**Dalyan (Mula)**	**2.08**	**153**	Pn	**Pb**	**05 14 38.6**	**-1.6**
ERIK	**Erikli-Kesan**	**2.13**	**340**	Pn	**Pn**	**05 14 38.9**	**+1.1**
LIA	**Limnos Island**	**2.15**	**305**	P	**Pn**	**05 14 39.0**	**+0.9**
LIA				S	**Sn**	**05 15 05.2**	**+0.7**
	comp=E,708nm,0.7s						
BASM	**Basmaki-Afyon**	**2.17**	**110**	Pn	**Pb**	**05 14 39.9**	**-1.9**
ARMT	**Armutlu**	**2.17**	**29**	Pn	**Pb**	**05 14 40.7**	**-1.2**
GEMT	**Gemlik**	**2.21**	**37**	Pn	**Pb**	**05 14 41.3**	**-1.1**
ENEZ	**Enez**	**2.30**	**334**	P	**Pn**	**05 14 40.7**	**+0.6**
SMTH	**Samothraki Isl**	**2.34**	**321**	P	**Pn**	**05 14 41.5**	**+0.8**
SMTH				S	**Sn**	**05 15 10.5**	**+1.4**
CAVI	**Cavuskoy**	**2.39**	**50**	Pn	**Pb**	**05 14 43.9**	**-1.6**
YLV	**Yalova**	**2.40**	**37**	Pn	**Pb**	**05 14 43.5**	**-2.2**
SHUT	**Suhut-Afyon**	**2.42**	**92**	Pn	**Pb**	**05 14 43.8**	**-2.3**
ALN	**Alexandroupoli**	**2.48**	**334**	P	**Pn**	**05 14 43.0**	**+0.4**
ALN				S	**Sn**	**05 15 13.8**	**+1.3**
	comp=E,298nm,0.4s						
ADVT	**Abdulvahap**	**2.48**	**44**	Pn	**Pb**	**05 14 45.4**	**-1.7**
ARG	**Arkhangelos**	**2.51**	**168**	P	**Pn**	**05 14 43.8**	**+0.8**
ARG				S	**Sn**	**05 15 14.8**	**+1.5**
	comp=E,318nm,0.7s						
RDO	**Rodhopi**	**2.88**	**330**	P	**Pn**	**05 14 49.6**	**+1.5**
RDO				S	**Sn**	**05 15 24.8**	**+2.3**
PAIG	**Paliouri**	**3.19**	**294**	P	**Pn**	**05 14 52.9**	**+0.5**
KAVA	**Kavala**	**3.25**	**317**	P	**Pn**	**05 14 53.6**	**+0.4**
KOKK	**Kokkinochori,**	**3.42**	**310**	P	**Pn**	**05 14 56.5**	**+0.9**
KOKK				S	**Sn**	**05 15 36.9**	**+0.9**
SRS	**Serrai**	**3.85**	**311**	P	**Pn**	**05 15 02.9**	**+1.4**
SEV	**Sevastopol'**	**7.48**	**36**	Pm		05 15 57.1	
	comp=Z,1.0nm,0.3s						
SEV				eS	**Sn**	**05 17 13.7**	**-2.1**
SEV				Sm		05 17 15.5	
	comp=E,1.0nm,0.3s						
SEV				Sm		05 17 15.6	
	comp=N,1.0nm,0.3s						
TARU	**Tarkhankut**	**7.69**	**28**	eS	**Sn**	**05 17 18.9**	**-1.9**
TARU				Sm		05 17 20.9	
	comp=N,5.0nm,0.3s						
TARU				Sm		05 17 20.9	
	comp=E,5.0nm,0.6s						
SUDU	**Sudak**	**8.38**	**40**	eS	**Sn**	**05 17 36.7**	**-1.2**
SUDU				Sm		05 17 39.9	
	comp=N,10.0nm,0.4s						
SUDU				Sm		05 17 39.9	
	comp=E,1.0nm,0.2s						

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*IDC **14** 05:23:24.7±1.0, 39.53N×74.07E, h0km, mb3.7/9, mbtmp3.7/14, ML3.2/5, Error ellipse: s-maj=18.7km s-min=14.5km az=114.0*
*MOS **14** 05:23:25.0±0.8, 39.67N×73.97E, h14km, mb3.9/3, Error ellipse: s-maj=9.4km s-min=4.4km az=86.8*
*KRNET **14** 05:23:26.6±0.1, 39.71N×74.02E, h12km, mb3.9*
*SOME **14** 05:23:27.7, 39.90N×73.83E, h0km*
*NNC **14** 05:23:30.8±1.0, 39.90N×74.00E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=8.1km s-min=4.6km az=177.0*

ISC 14 05:23:25.6±0.6, 39.70N±0.03×74.11E±0.02, h10km, n120, σ2.05/184, mb3.7/11, 42C-24D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.56**	**304**	*e*PG	**Pg**	**05 23 35.7**	**-0.8**
SFK				*e*S	**Sg**	**05 23 43.1**	**-0.8**
SFK	**Sufi-Kurgan**	**0.56**	**304**	⇑*e*P	**Pb**	**05 23 36.3**	**-1.3**
	baz=8.0						
SFK				⇑*e*S	**Sb**	**05 23 43.8**	**-2.0**
	baz=8.0						
OHH	**Osh**	**1.30**	**309**	⇑*e*P	**Pg**	**05 23 50.4**	**-0.2**
	baz=11						
OHH				⇑*e*S	**Sg**	**05 24 07.7**	**+0.1**
	baz=11						
KSH	**Kashi**	**1.45**	**97**	Pn	**Pn**	**05 23 51.3**	**-0.7**
KSH				pP	Pg	05 23 55.3	+1.8
KSH				Sn	**Sn**	**05 24 09.8**	**-1.4**
KSH				pmax	pmax		
	comp=Z,120nm,0.8s						
KSH				smax	smax		
	comp=N,1μm,0.4s						
KSH				smax	smax		
	comp=E,440nm,0.8s						
DRK	**Karamyk**	**1.80**	**264**	⇑*e*P	**Pg**	**05 23 59.0**	**-1.0**
	baz=63						
DRK				⇑*e*S	**Sg**	**05 24 22.7**	**-0.6**
	baz=63						
ARSB	**Arslanbob**	**1.83**	**332**	*e*PN	**Pb**	**05 23 57.2**	**-2.1**
ARSB				*e*S	**Sg**	**05 24 25.3**	**+0.8**
ARSB	**Arslanbob**	**1.83**	**332**	⇑*e*P	**Pg**	**05 24 00.5**	**-0.2**
	baz=34						
ARSB				⇑*e*S	**Sg**	**05 24 24.6**	**+0.1**
	baz=34						
ARLS	**Aral**	**2.16**	**4**	*e*PN	**Pb**	**05 24 02.8**	**-2.1**
ARLS				*e*S	**Sg**	**05 24 34.6**	**-0.5**
ARLS	**Aral**	**2.16**	**4**	⇑*e*P	**Pg**	**05 24 06.2**	**-0.9**
	baz=6.0						
ARLS				⇑*e*S	**Sg**	**05 24 34.6**	**-0.5**
	baz=6.0						
NRN	**Naryn**	**2.25**	**39**	*e*PN	**Pn**	**05 24 03.3**	**+0.1**
NRN				*e*S	**Sg**	**05 24 35.9**	**-2.1**
NRN	**Naryn**	**2.25**	**39**	⇑*e*P	**Pg**	**05 24 07.6**	**-1.2**
	baz=40						
NRN				⇑*e*S	**Sg**	**05 24 37.0**	**-1.0**
	baz=40						
UCH	**Uchtor**	**2.54**	**7**	P	**Pg**	**05 24 12.6**	**-1.7**
	SNR=101						
UCH	**Uchtor**	**2.54**	**7**	*e*PN	**Pn**	**05 24 08.2**	**+0.9**
UCH				*e*S	**Sb**	**05 24 44.1**	**+1.0**
UCH	**Uchtor**	**2.54**	**7**	⇓*e*P	**Pb**	**05 24 11.4**	**-0.2**
	baz=8.0						
UCH				⇓*e*S	**Sg**	**05 24 44.6**	**-2.7**
	baz=8.0						
BTK	**Batken**	**2.56**	**279**	*e*PN	**Pn**	**05 24 03.6**	**-3.5**
BTK				*e*S	**Sn**	**05 24 36.3**	**-2.0**
BTK	**Batken**	**2.56**	**279**	⇑*e*P	**Pb**	**05 24 10.4**	**-1.2**
	baz=79						
BTK				⇑*e*S	**Sb**	**05 24 42.4**	**-0.7**
	baz=79						
ARK	**Arkit**	**2.65**	**323**	*e*PN	**Pn**	**05 24 08.2**	**-0.3**
ARK				*e*S	**Sb**	**05 24 44.1**	**-1.8**
ARK	**Arkit**	**2.65**	**323**	⇑*e*P	**Pb**	**05 24 11.9**	**-1.3**
	baz=24						
ARK				⇑*e*S	**Sb**	**05 24 45.4**	**-0.5**
	baz=24						
TRKS	**Terek-Say**	**2.90**	**310**	*e*PN	**Pn**	**05 24 09.9**	**-2.1**
TRKS				*e*S	**Sn**	**05 24 47.2**	**+0.1**
TRKS	**Terek-Say**	**2.90**	**310**	⇓*e*P	**Pb**	**05 24 14.6**	**-3.0**
	baz=10.0						
TRKS				⇓*e*S	**Sb**	**05 24 50.1**	**-3.1**
	baz=10.0						
AAK	**Ala-Archa**	**2.95**	**6**	P	**Pb**	**05 24 19.0**	**+0.7**
	SNR=22						
AAK	**Ala-Archa**	**2.95**	**6**	*e*PN	**Pn**	**05 24 13.6**	**+1.0**
AAK				*e*S	**Sb**	**05 24 53.6**	**-0.8**
AAK	**Ala-Archa**	**2.95**	**6**	Pn	**Pb**	**05 24 17.8**	**-0.5**
	comp=E,21nm,0.3s,baz=157,slow=6.8,SNR=74						
AAK				Sn	**Sg**	**05 24 57.9**	**-2.3**
	comp=E,34nm,0.3s,baz=190,slow=21,SNR=13						
	comp=E,46nm,0.3s						
AAK	**Ala-Archa**	**2.95**	**6**	⇓*e*P	**Pb**	**05 24 16.7**	**-1.6**
	baz=7.0						
AAK				⇓*e*S	**Sb**	**05 24 53.6**	**-0.8**
	baz=7.0						
EKS2	**Erkin-Say**	**2.97**	**355**	P	**Pg**	**05 24 20.1**	**-2.3**
	SNR=33						
EKS2	**Erkin-Say**	**2.97**	**355**	*e*PN	**Pn**	**05 24 13.7**	**+0.8**
EKS2				*e*S	**Sb**	**05 24 53.8**	**-1.2**
EKS2	**Erkin-Say**	**2.97**	**355**	⇓*e*P	**Pb**	**05 24 17.0**	**-1.6**
	baz=57						
EKS2				⇓*e*S	**Sb**	**05 24 53.7**	**-1.2**
	baz=57						
ULHL	**Ulahol**	**3.01**	**32**	P	**Pb**	**05 24 19.5**	**+0.1**
	SNR=29						
ULHL	**Ulahol**	**3.01**	**32**	*e*PN	**Pn**	**05 24 14.5**	**+1.0**
ULHL				*e*S	**Sb**	**05 24 55.0**	**-1.3**
ULHL	**Ulahol**	**3.01**	**32**	⇓*e*P	**Pb**	**05 24 18.3**	**-1.1**
	baz=33						
ULHL				⇓*e*S	**Sb**	**05 24 56.0**	**-0.3**
	baz=33						
KBK	**Karagaybulak**	**3.02**	**12**	P	**Pb**	**05 24 19.2**	**-0.4**
	SNR=42						
KBK	**Karagaybulak**	**3.02**	**12**	*e*PN	**Pn**	**05 24 14.7**	**+1.1**
KBK				*e*S	**Sb**	**05 24 55.4**	**-1.1**
KBK	**Karagaybulak**	**3.02**	**12**	⇑*i*P	**Pb**	**05 24 18.1**	**-1.4**
	baz=13						
KBK				⇑*e*S	**Sb**	**05 24 55.6**	**-0.9**
	baz=13						
MNAS	**Manas**	**3.04**	**337**	*e*PN	**Pn**	**05 24 14.1**	**+0.3**
MNAS				*e*S	**Sb**	**05 24 54.5**	**-2.4**
MNAS	**Manas**	**3.04**	**337**	⇓*e*P	**Pb**	**05 24 17.3**	**-2.5**
	baz=38						
MNAS				⇓*e*S	**Sb**	**05 24 54.9**	**-2.0**
	baz=38						
BOOM	**Boomskoye usch**	**3.11**	**26**	*e*PN	**Pn**	**05 24 15.9**	**+1.0**
BOOM				*e*S	**Sb**	**05 24 57.5**	**-1.7**
BOOM	**Boomskoye usch**	**3.11**	**26**	⇑*e*P	**Pb**	**05 24 19.6**	**-1.5**
	baz=27						
BOOM				⇑*e*S	**Sb**	**05 24 58.4**	**-0.8**
	baz=27						
MRKS	**Merke**	**3.11**	**348**	Pg	**Pg**	**05 24 23.5**	**-1.7**
	comp=E,117nm,0.3s						
MRKS				Lg	Lg	05 25 03.7	
	comp=E,223nm,0.5s						
MRKS	**Merke**	**3.11**	**348**	*e*P	**Pg**	**05 24 23.6**	**-1.7**
	comp=E,117nm,0.3s						
MRKS				*e*S	**Sg**	**05 25 03.7**	**-1.8**
	comp=E,223nm,0.5s						
FRU1	**Bishkek**	**3.13**	**7**	*e*PN	**Pn**	**05 24 16.4**	**+1.4**
FRU1				*e*S	**Sb**	**05 24 58.4**	**-1.2**
FRU1	**Bishkek**	**3.13**	**7**	⇑*e*P	**Pb**	**05 24 19.5**	**-1.9**
	baz=8.0						
FRU1				⇑*e*S	**Sb**	**05 24 57.9**	**-1.7**
	baz=8.0						
CHMS	**Chumysh**	**3.33**	**8**	P	**Sg**	**05 25 12.4**	**0.0**
	SNR=7.6						
KDJ	**Kajisay**	**3.36**	**43**	*e*PN	**Pn**	**05 24 19.1**	**+0.8**
KDJ				*e*S	**Sb**	**05 25 02.9**	**-3.5**
KDJ	**Kajisay**	**3.36**	**43**	⇑*e*P	**Pb**	**05 24 23.4**	**-2.0**
	baz=44						
KDJ				⇑*e*S	**Sb**	**05 25 04.8**	**-1.6**
	baz=44						
TKM2	**Tokmak 2**	**3.41**	**19**	P	**Pb**	**05 24 24.5**	**-1.6**
	SNR=17						
TKM2	**Tokmak 2**	**3.41**	**19**	⇑Pn	**Pb**	**05 24 24.7**	**-1.5**
	comp=E,31nm,0.6s						
TKM2				⇓Lg	Lg	05 25 12.4	
	comp=E,93nm,0.6s						
TKM2	**Tokmak 2**	**3.41**	**19**	*e*PN	**Pn**	**05 24 20.1**	**+1.1**
TKM2				*e*S	**Sb**	**05 25 04.8**	**-2.9**
TKM2	**Tokmak 2**	**3.41**	**19**	⇓*e*P	**Pb**	**05 24 23.6**	**-2.5**
	baz=20						
TKM2				⇓*e*S	**Sb**	**05 25 05.1**	**-2.6**
	baz=20						
USP	**Ospenovka**	**3.57**	**5**	P	**Pb**	**05 24 27.7**	**-1.2**
	SNR=12						
USP	**Ospenovka**	**3.57**	**5**	*e*PN	**Pn**	**05 24 22.3**	**+1.2**
USP				*e*S	**Sb**	**05 25 08.5**	**-3.9**
USP	**Ospenovka**	**3.57**	**5**	⇑*e*P	**Pb**	**05 24 25.4**	**-3.5**
	baz=6.0						
USP				⇑*e*S	**Sb**	**05 25 08.5**	**-3.9**
	baz=6.0						
KST	**Kastek**	**3.62**	**22**	Pg	**Pg**	**05 24 34.0**	**-0.9**
	comp=E,34nm,0.4s						
KST				Lg	Lg	05 25 21.9	
	comp=E,169nm,0.7s						
KST	**Kastek**	**3.62**	**22**	*e*P	**Pg**	**05 24 34.0**	**-0.9**
	comp=E,34nm,0.4s						
KST				*e*S	**Sg**	**05 25 21.9**	**+0.2**
	comp=E,169nm,0.4s						
DGS	**Degeres**	**3.75**	**19**	Pg	**Pg**	**05 24 36.6**	**-0.8**
	comp=E,51nm,0.4s						
DGS				Lg	Lg	05 25 26.3	
	comp=E,88nm,0.6s						
DGS	**Degeres**	**3.75**	**19**	*e*P	**Pg**	**05 24 36.6**	**-0.8**
	comp=E,51nm,0.4s						
DGS				*e*S	**Sg**	**05 25 26.3**	**+0.2**
	comp=E,88nm,0.6s						
DZA	**Taraz**	**3.81**	**328**	*e*P	**Pb**	**05 24 30.3**	**-2.6**
	comp=E,68nm,0.1s						
DZA				*e*S	**Sb**	**05 25 15.5**	**-3.6**
	comp=E,238nm,0.2s						
IZV	**Izvestkoviy**	**3.83**	**29**	Pg	**Pg**	**05 24 38.1**	**-0.8**
	comp=E,34nm,0.6s						
IZV				Lg	Lg	05 25 28.6	
	comp=E,129nm,0.6s						
IZV	**Izvestkoviy**	**3.83**	**29**	*e*P	**Pg**	**05 24 38.1**	**-0.8**
	comp=E,34nm,0.3s						
IZV				*e*S	**Sg**	**05 25 28.6**	**+0.1**
	comp=E,127nm,0.4s						
MTBS	**Maitube**	**3.84**	**26**	*e*P	**Pg**	**05 24 37.6**	**-1.6**
	comp=E,38nm,0.4s						
MTBS				*e*S	**Sg**	**05 25 27.7**	**-1.3**
	comp=E,159nm,0.5s						
IUG	**Iuzhnay**	**3.94**	**310**	*e*P	**Pg**	**05 24 39.0**	**-1.9**
	comp=E,113nm,0.3s						
IUG				*e*S	**Sg**	**05 25 31.0**	**-1.0**
	comp=E,217nm,0.3s						
TNSS	**Tian-Shan**	**3.96**	**32**	*e*P	**Pg**	**05 24 40.9**	**-0.6**
	comp=E,24nm,0.2s			

UZB	**Uzynbulak**	**5.05**	**45**	*eP*		**Pg**	**05 25 00.9**	**-1.4**
	comp=E,15nm,0.5s								
UZB				*eS*		**Sg**	**05 26 07.2**	**-0.5**
	comp=E,25nm,0.5s								
KPKS	**Kokpek**	**5.09**	**41**	Pg		**Pg**	**05 25 01.9**	**-1.2**
	comp=E,26nm,0.7s								
KPKS				Lg		Lg	05 26 09.4		
	comp=E,40nm,0.6s								
KPKS	**Kokpek**	**5.09**	**41**	*eP*		**Pg**	**05 25 01.9**	**-1.2**
	comp=E,25nm,0.4s								
KPKS				*eS*		**Sg**	**05 26 09.4**	**+0.4**
	comp=E,40nm,0.6s								
ARXS	**Arharly**	**5.29**	**30**	Pg		**Pg**	**05 25 03.6**	**-3.3**
	comp=E,24nm,0.5s								
ARXS				Lg		Lg	05 26 12.6		
	comp=E,54nm,0.8s								
ARXS	**Arharly**	**5.29**	**30**	*eP*		**Pg**	**05 25 03.6**	**-3.3**
	comp=E,25nm,0.3s								
ARXS				*eS*		**Sg**	**05 26 12.6**	**-2.8**
	comp=E,54nm,0.8s								
BTLS	**Baital**	**5.34**	**360**	Pg		**Pg**	**05 25 03.5**	**-4.2**
	comp=E,1.9nm,0.3s								
BTLS				Lg		Lg	05 26 12.4		
	comp=E,29nm,0.6s								
BTLS	**Baital**	**5.34**	**360**	*eP*		**Pg**	**05 25 03.5**	**-4.2**
	comp=E,3.6nm,0.3s								
BTLS				*eS*		**Sg**	**05 26 12.4**	**-4.4**
	comp=E,29nm,0.3s								
PDGK	**Podgornoye**	**5.43**	**46**	⇑Pn		Pn	05 24 51.4	+4.7
	comp=E,5.9nm,0.6s								
PDGK				⇑Pg		**Pg**	**05 25 07.0**	**-2.5**
	comp=E,21nm,0.8s								
PDGK				⇑Lg		Lg	05 26 21.9		
	comp=E,66nm,1.3s								
PDGK	**Podgornoye**	**5.43**	**46**	PN		Pn	05 24 51.4	+4.7
PDGK				PG		**Pg**	**05 25 07.4**	**-2.1**
BLB	**Baldybastay**	**5.47**	**35**	Pg		**Pg**	**05 25 08.1**	**-2.2**
	comp=E,21nm,0.5s								
BLB				Lg		Lg	05 26 20.3		
	comp=E,25nm,0.8s								
KNOS	**Konyrlen**	**5.99**	**37**	Pg		**Pg**	**05 25 17.3**	**-3.0**
	comp=E,13nm,0.6s								
KNOS				Lg		Lg	05 26 36.9		
	comp=E,13nm,0.8s								
DJR	**Jarkent**	**6.27**	**41**	Pg		**Pg**	**05 25 23.7**	**-1.9**
	comp=E,9.1nm,0.6s								
DJR				Lg		Lg	05 26 47.7		
	comp=E,18nm,0.7s								
DJR	**Jarkent**	**6.27**	**41**	*eP*		**Pg**	**05 25 23.7**	**-1.9**
	comp=E,9.0nm,0.3s								
DJR				*eS*		**Sg**	**05 26 47.7**	**+1.0**
	comp=E,18nm,0.5s								
OTUK	**Ortayu**	**8.63**	**352**	⇑Pn		**Pn**	**05 25 33.9**	**+3.3**
	comp=E,1.9nm,0.7s								
OTUK				⇑Lg		Lg	05 27 59.0		
	comp=E,11nm,0.7s								
OTUK	**Ortayu**	**8.63**	**352**	P		**Pn**	**05 25 33.9**	**+3.3**
MK31	**Makanchi Array**	**9.26**	**37**	⇑Pn		Pn	05 25 44.7	+5.6
	comp=E,0.6nm,0.5s,baz=216,slow=13,SNR=5.1								
MK31				⇑Lg		Lg	05 28 23.6		
	comp=E,2.7nm,0.6s								
MK31	**Makanchi Array**	**9.26**	**37**	⇑*eP*		**Pn**	**05 25 41.9**	**+2.7**
MKAR	**Makanchi Array**	**9.26**	**37**	Pn		Pn	05 25 43.6	+4.5
	comp=E,0.1nm,0.3s,baz=214,slow=13,SNR=5.6								
WMQ	**Urumqi**	**10.95**	**64**	*eP*		Pn	05 26 06.6	+4.3
WMQ				smax		smax			
	comp=N,12nm,0.5s								
WMQ				smax		smax			
	comp=E,23nm,1.1s								
KURBB	**Kurchatov Arra**	**11.36**	**14**	Pn		**Pn**	**05 26 10.8**	**+3.1**
	baz=207,slow=12,SNR=1.8								
	comp=E,0.1nm,0.2s								
KURK	**Kurchatov**	**11.46**	**15**	P		**Pn**	**05 26 10.8**	**+1.6**
BVAR	**Borovoye Array**	**13.57**	**350**	Pn		**Pn**	**05 26 39.2**	**+1.2**
	comp=E,0.1nm,0.3s,baz=154,slow=16,SNR=5.6								
	comp=E,0.7nm,0.4s								
BRVK	**Borovoye**	**13.62**	**350**	⇑*eP*		**Pn**	**05 26 39.9**	**+1.3**
BRVK				pmax		pmax			
	comp=Z,1.0nm,0.4s								
DGZ	**Jazzator, Alta**	**13.75**	**39**	⇑*eP*		**Pn**	**05 26 43.6**	**+2.9**
AKTO	**Aktyubinsk**	**15.60**	**319**	Pn		**Pn**	**05 27 05.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=126,slow=6.9,SNR=3.3								
	comp=Z,1.4nm,0.4s								
ZALV	**Zalesovo Beam**	**16.00**	**23**	Pn		**P**	**05 27 12.2**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=219,slow=11,SNR=2.0								
ARU	**Arti**	**19.62**	**334**	⇑*eP*		**P**	**05 27 51.7**	**-2.2**
BELG	**Belogornoye**	**22.19**	**314**	⇑*eP*		**P**	**05 28 20.2**	**-1.5**
BELG				pmax		pmax			
	comp=Z,2.0nm,1.5s								
SONM	**Songino Array**	**24.55**	**60**	P		**P**	**05 28 47.0**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=275,slow=11,SNR=4.5								
	comp=Z,0.6nm,0.9s								
FINES	**FINESS Array B**	**36.30**	**323**	P		**P**	**05 30 30.8**	**+1.8**
	comp=Z,0.8nm,0.4s,baz=104,slow=8.0,SNR=6.2								
	comp=Z,0.8nm,0.4s								
ARCES	**ARCESS Array B**	**39.19**	**335**	*eP*		**P**	**05 30 55.5**	**+2.2**
ARCES				pmax		pmax			
	comp=Z,1.0nm,0.5s								
ARCES	**ARCESS Array B**	**39.19**	**335**	P		**P**	**05 30 55.7**	**+2.3**
	comp=Z,0.8nm,0.5s,baz=112,slow=9.2,SNR=12								
	comp=Z,0.8nm,0.5s								
HFS	**Hagfors**	**42.14**	**320**	P		**P**	**05 31 19.6**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=98,slow=11,SNR=11								
	comp=Z,1.4nm,0.5s								
NB2	**NORSAR Subarra**	**43.37**	**321**	P		**P**	**05 31 29.5**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=90,slow=8.6								
NOA	**NORSAR Array B**	**43.37**	**321**	P		**P**	**05 31 29.4**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=101,slow=7.3,SNR=4.3								
	comp=Z,0.7nm,0.5s								
ESDC	**Sonseca Array**	**58.15**	**297**	P		**P**	**05 33 20.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=55,slow=7.1,SNR=4.2								
	comp=Z,0.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**68.23**	**269**	P		**P**	**05 34 27.1**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=48,slow=6.3,SNR=5.6								
ILAR	**Eielson Array**	**71.02**	**17**	*eP*		**P**	**05 34 43.8**	**+0.7**
ILAR	**Eielson Array**	**71.02**	**17**	P		**P**	**05 34 43.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=324,slow=4.9,SNR=4.5								
	comp=Z,0.2nm,0.4s								
YKA	**Yellowknife Ar**	**77.91**	**4**	P		**P**	**05 35 24.7**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=353,slow=5.5,SNR=9.1								
	comp=Z,0.3nm,0.6s								
WRA	**Warramunga Arr**	**81.69**	**124**	P		**P**	**05 35 45.2**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=330,slow=5.3,SNR=7.3								
	comp=Z,0.6nm,0.6s								

*KRNET **14** 05:37:39.4±0.1, 40.37N×77.59E, h18km, mb2.9*
*SOME **14** 05:37:39.0, 40.38N×77.68E, h5km*
*NNC **14** 05:37:40.1±1.0, 40.38N×77.69E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=6.9km s-min=5.0km az=168.0
ISC 14 05:37:39.5±2.3, 40.40N±0.09×77.56E±0.03, h16km±14km, n62,σ1°79/96, 18C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.34**	**8**	⇑*iP*		**Pg**	**05 38 05.4**	**-0.1**
	baz=7.0							
TARG				⇑*iS*		**Sg**	**05 38 24.4**	**+1.4**
	baz=7.0							
NRN	**Naryn**	**1.57**	**312**	⇑*iP*		**Pg**	**05 38 09.9**	**+0.2**
	baz=11							
NRN				⇑*iS*		**Sg**	**05 38 32.0**	**+1.9**
	baz=11							
KDJ	**Kajisay**	**1.75**	**351**	⇓*iP*		**Pg**	**05 38 12.8**	**-0.4**
	baz=50							
KDJ				⇓*iS*		**Sg**	**05 38 37.1**	**+1.1**
	baz=50							
ULHL	**Ulahol**	**2.10**	**332**	⇓*iP*		**Pb**	**05 38 18.4**	**+1.2**
	baz=32							
ULHL				⇓*iS*		**Sg**	**05 38 47.1**	**+0.2**
	baz=32							
ANVS	**Anan'yevo**	**2.38**	**2**	⇑*iP*		**Pb**	**05 38 22.3**	**+0.2**
	baz=1.0							
ANVS				⇑*iS*		**Sb**	**05 38 53.7**	**+2.3**
	baz=1.0							
BOOM	**Boomskoye usch**	**2.42**	**330**	⇓*iP*		**Pb**	**05 38 23.0**	**+0.3**
	baz=30							
BOOM				⇓*iS*		**Sb**	**05 38 54.7**	**+2.4**
	baz=30							
TNSS	**Tian-Shan**	**2.68**	**350**	Pg		**Pg**	**05 38 29.9**	**-0.9**
	45nm,0.4s							
TNSS				Lg		Lg	05 39 07.1	
	40nm,0.5s							
TNSS	**Tian-Shan**	**2.68**	**350**	*eP*		**Pg**	**05 38 29.9**	**-0.9**
	45nm,0.4s							
TNSS				*eS*		**Sg**	**05 39 07.1**	**+1.6**
	40nm,0.5s							
IZV	**Izvestkoviy**	**2.73**	**345**	Pg		**Pg**	**05 38 31.4**	**-0.4**
	26nm,0.5s							
IZV				Lg		Lg	05 39 09.1	
	42nm,0.5s							
IZV	**Izvestkoviy**	**2.73**	**345**	*eP*		**Pg**	**05 38 31.4**	**-0.4**
	26nm,0.5s							
IZV				*eS*		**Sg**	**05 39 09.1**	**+1.9**
	42nm,0.5s							
SATY	**Saty**	**2.73**	**13**	Pg		**Pg**	**05 38 30.5**	**-1.4**
	29nm,0.6s							
SATY				Lg		Lg	05 39 07.4	
	19nm,0.7s							
SATY	**Saty**	**2.73**	**13**	*eP*		**Pg**	**05 38 30.5**	**-1.4**
	29nm,0.6s							
SATY				*eS*		**Sg**	**05 39 07.4**	**+0.1**
	19nm,0.7s							
MDOK	**Medeo**	**2.79**	**352**	Pg		**Pg**	**05 38 31.9**	**-1.1**
	10nm,0.4s							
MDOK				Pg		**Pg**	**05 38 32.1**	**-0.9**
	22nm,0.2s							
MDOK				Lg		Lg	05 39 10.4	
	123nm,0.6s							
MDOK				Lg		Lg	05 39 10.5	
	152nm,0.5s							
MDOK	**Medeo**	**2.79**	**352**	*eP*		**Pg**	**05 38 32.1**	**-0.9**
	22nm,0.2s							
MDOK				*eS*		**Sg**	**05 39 10.5**	**+1.4**
	152nm,0.5s							
ARLS	**Aral**	**2.85**	**302**	⇑*iP*		**Pb**	**05 38 28.7**	**-1.3**
	baz=2.0							
ARLS				⇑*iS*		**Sb**	**05 39 04.6**	**0.0**
	baz=2.0							
ZHN	**Zhinishke**	**2.85**	**13**	Pg		**Pg**	**05 38 32.5**	**-1.5**
	22nm,0.4s							
ZHN				Lg		Lg	05 39 11.4	
	39nm,0.2s							
ZHN	**Zhinishke**	**2.85**	**13**	*eP*		**Pg**	**05 38 32.5**	**-1.5**
	22nm,0.4s							
ZHN				*eS*		**Sg**	**05 39 11.4**	**+0.5**
	39nm,0.2s							
KOTS	**Kotyrbulak**	**2.85**	**353**	Pg		**Pg**	**05 38 33.7**	**-0.5**
	19nm,0.3s							
KOTS				Lg		Lg	05 39 13.0	
	58nm,0.4s							
KOTS	**Kotyrbulak**	**2.85**	**353**	*eP*		**Pg**	**05 38 33.7**	**-0.5**
	19nm,0.3s							
KOTS				*eS*		**Sg**	**05 39 13.0**	**+1.8**
	58nm,0.4s							
MTBS	**Maitube**	**2.86**	**343**	Pg		**Pg**	**05 38 33.3**	**-1.0**
	18nm,0.5s							
MTBS				Lg		Lg	05 39 12.5	
	27nm,0.4s							
MTBS	**Maitube**	**2.86**	**343**	*eP*		**Pg**	**05 38 33.3**	**-1.0**
	18nm,0.5s							
MTBS				*eS*		**Sg**	**05 39 12.5**	**+1.2**
	27nm,0.4s							
KST	**Kastek**	**2.90**	**336**	Pg		**Pg**	**05 38 34.3**	**-0.8**
	8.9nm,0.2s							
KST				Lg		Lg	05 39 14.0	
	22nm,0.6s							
KST	**Kastek**	**2.90**	**336**	*eP*		**Pg**	**05 38 34.3**	**-0.8**
	8.9nm,0.1s							
KST				*eS*		**Sg**	**05 39 14.0**	**+1.4**
	22nm,0.6s							
TKM2	**Tokmak 2**	**2.92**	**330**	⇑Pg		**Pg**	**05 38 34.3**	**-1.1**
	3.3nm,0.5s							
TKM2				⇑Lg		Lg	05 39 14.5	
	9.9nm,0.8s							
TKM2	**Tokmak 2**	**2.92**	**330**	⇑*eP*		**Pb**	**05 38 29.8**	**-1.4**
	baz=30							
TKM2				⇑*iS*		**Sb**	**05 39 06.7**	**0.0**
	baz=30							
UCH	**Uchtor**	**2.93**	**310**	⇓*iP*		**Pb**	**05 38 30.2**	**-1.4**
	baz=10.0							
UCH				⇓*iS*		**Sb**	**05 39 07.2**	**-0.2**
	baz=10.0							
UZB	**Uzynbulak**	**2.96**	**21**	Pg		**Pb**	**05 38 33.9**	**+2.1**
	6.9nm,0.5s							
UZB				Lg		Lg	05 39 14.1	
	9.7nm,0.3s							
UZB	**Uzynbulak**	**2.96**	**21**	*eP*		**Pb**	**05 38 34.0**	**+2.1**
	6.9nm,0.5s							
UZB				*eS*		**Sg**	**05 39 14.1**	**-0.4**
	9.7nm,0.3s							
KBK	**Karagaybulak**	**2.99**	**320**	⇑*iP*		**Pb**	**05 38 30.9**	**-1.5**
	baz=20							
KBK				⇑*iS*		**Sb**	**05 39 08.5**	**-0.2**
	baz=20							
SHLS	**Shalkode**	**3.10**	**27**	Pg		**Pg**	**05 38 37.5**	**-1.5**
	9.3nm,0.6s							
SHLS				Lg		Lg	05 39 19.4	
	9.6nm,0.5s							
SHLS	**Shalkode**	**3.10**	**27**	*eP*		**Pg**	**05 38 37.5**	**-1.5**
	9.3nm,0.6s							
SHLS				*eS*		**Sg**	**05 39 19.4**	**+0.2**
	9.6nm,0.5s							
KURS	**Kuram**	**3.12**	**8**	Pg		**Pg**	**05 38 37.5**	**-1.8**
	10nm,0.5s							
KURS				Lg		Lg	05 39 19.4	
	6.4nm,0.3s							
KURS	**Kuram**	**3.12**	**8**	*eP*		**Pg**	**05 38 37.5**	**-1.8**
	10nm,0.5s							
KURS				*eS*		**Sg**	**05 39 19.4**	**-0.3**
	6.4nm,0.3s							
DGS	**Degeres**	**3.14**	**335**	Pg		**Pg**	**05 38 38.4**	**-1.2**
	5.8nm,0.4s							
DGS				Lg		Lg	05 39 21.2	
	14nm,0.6s							
DGS	**Degeres**	**3.14**	**335**	*eP*		**Pg**	**05 38 38.4**	**-1.2**
	6.9nm,0.3s							
DGS				*eS*		**Sg**	**05 39 21.2**	**+0.9**
	16nm,0.4s							
KPKS	**Kokpek**	**3.18**	**15**	Pg		**Pg**	**05 38 38.4**	**-2.0**
	20nm,0.4s							
KPKS				Lg		Lg	05 39 20.9	
	25nm,0.7s							
KPKS	**Kokpek**	**3.18**	**15**	*eP*		**Pg**	**05 38 38.4**	**-2.0**
	20nm,0.4s							
KPKS				*eS*		**Sg**	**05 39 20.9**	**-0.7**
	25nm,0.7s							
AAK	**Ala-Archa**	**3.21**	**315**	⇑*eP*		**Pb**	**05 38 33.8**	**-2.3**
	baz=15							
AAK				⇑*iS*		**Sb**	**05 39 13.8**	**-1.2**
	baz=15							
PDGK	**Podgornoye**	**3.27**	**26**	Pg		**Pb**	**05 38 39.2**	**+2.1**
	4.8nm,0.5s							
PDGK				Lg		Lg	05 39 22.7	
	9.7nm,0.7s							
PDGK	**Podgornoye**	**3.27**	**26**	⇑Pg		**Pb**	**05 38 38.9**	**+1.8**
	4.8nm,0.4s							
PDGK				⇑Lg		Lg	05 39 21.1	
	12nm,0.5s							
KTBS	**Karatobe**	**3.38**	**349**	Pg		**Pg**	**05 38 42.0**	**-2.1**
	10nm,0.5s							
KTBS				Lg		Lg	05 39 27.2	
	30nm,0.5s							
KTBS	**Karatobe**	**3.38**	**349**	*eP*		**Pg**	**05 38 42.0**	**-2.1**
	10nm,0.3s							
KTBS				*eS*		**Sg**	**05 39 27.2**	**-0.7**
	30nm,0.3s							
CHKK	**Chushkaly**	**3.48**	**353**	Pg		**Pg**	**05 38 44.1**	**-2.0**
	16nm,0.4s							
CHKK				Lg		Lg	05 39 31.1	
	22nm,0.4s							
CHKK	**Chushkaly**	**3.48**	**353**	*eP*		**Pg**	**05 38 44.1**	**-2.0**
	16nm,0.2s							
CHKK				*eS*		**Sg**	**05 39 31.1**	**-0.1**
	22nm,0.4s							
KRBS	**Karabastau**	**3.58**	**338**	Pg		**Pg**	**05 38 46.0**	**-2.1**
	8.1nm,0.3s							
KRBS				Lg		Lg	05 39 34.2	
	13nm,0.5s							
KRBS	**Karabastau**	**3.58**	**338**	*eP*		**Pg**	**05 38 46.0**	**-2.1**
	8.1nm,0.3s							
KRBS				*eS*		**Sg**	**05 39 34.2**	**-0.2**
	13nm,0.4s							
KTMS	**Ketmen**	**3.69**	**33**	Pg		**Pb**	**05 38 46.3**	**+1.9**
	1.6nm,0.3s							
KTMS				Lg		Lg	05 39 34.5	
	4.1nm,0.4s							
KTMS	**Ketmen**	**3.69**	**33**	*eP*		**Pb**	**05 38 46.3**	**+1.9**
	1.6nm,0.3s							
KTMS				*eS*		**Sg**	**05 39 34.5**	**-3.6**
	4.1nm,0.4s							
SGDS	**Sogindy**	**3.75**	**325**	Pg		**Pg**	**05 38 49.3**	**-2.0**
	5.0nm,0.5s							
SGDS				Lg		Lg	05 39 39.7	
	8.6nm,0.6s							
BLB	**Baldybastay**	**3.76**	**10**	Pg		**Pg**	**05 38 49.3**	**-2.2**
	21nm,0.6s							
BLB				Lg		Lg	05 39 40.2	
	8.6nm,0.3s							
ARXS	**Arharly**	**3.82**	**3**	Pg		**Pg**	**05 38 49.9**	**-2.7**
	6.1nm,0.7s							
ARXS				Lg		Lg	05 39 41.7	
	15nm,0.6s							
ARXS	**Arharly**	**3.82**	**3**	*eP*		**Pg**	**05 38 49.9**	**-2.7**
	6.1nm,0.7s							
ARXS				*eS*		**Sg**	**05 39 41.6**	**-0.4**
	15nm,0.6s							
MRKS	**Merke**	**4.01**	**307**	Pg		**Pb**	**05 38 53.4**	**+3.6**
	1.7nm,0.6s							
MRKS				Lg		Lg	05 39 47.0	
	5.0nm,0.7s							
MRKS	**Merke**	**4.01**	**307**	*eP*		**Pb**	**05 38 53.4**	**+3.6**
	1.7nm,0.6s							
MRKS				*eS*		**Sg**	**05 39 47.0**	**-1.1**
	5.0nm,0.7s							
KNOS	**Konyrlen**	**4.14**	**16**	Pg		**Pb**	**05 38 54.9**	**+2.9**
	6.2nm,0.4s							
KNOS				Lg		Lg	05 39 49.6	
	4.0nm,0.7s							
DJR	**Jarkent**	**4.27**	**22**	Pg		**Pb**	**05 38 57.5**	**+3.4**
	2.7nm,0.6s							
DJR				Lg		Lg	05 39 54.0	
	6.3nm,0.7s							
DJR	**Jarkent**	**4.27**	**22**	*eP*		**Pb**	**05 38 57.5**	**+3.4**
	2.7nm,0.6s							
DJR				*eS*		**Sg**	**05 39 54.0**	**-2.5**
	6.3nm,0.7s							
KAPS	**Kapalarasan**	**5.06**	**15**	Pg		**Pg**	**05 39 13.1**	**-3.3**
	1.9nm,0.5s							
KAPS				Lg		Lg	05 40 20.9	
	2.6nm,0.6s							
KAPS	**Kapalarasan**	**5.06**	**15**	*eP*		**Pg**	**05 39 13.1**	**-3.3**
	1.9nm,0.5s							
KAPS				*eS*		**Sg**	**05 40 20.9**	**-1.0**
	2.6nm,0.6s							
BTLS	**Baital**	**5.31**	**332**	Pg		**Pg**	**05 39 17.4**	**-3.7**
	1.6nm,0.8s							
BTLS				Lg		Lg	05 40 28.2	
	3.0nm,0.8s							
BTLS	**Baital**	**5.31**	**332**	*eP*		**Pg**	**05 39 17.6**	**-3.5**
	1.5nm,0.4s							
BTLS				*eS*		**Sg**	**05 40 28.6**	**-1.3**
	3.0nm,0.3s							
KK31	**Karatay Array**	**5.92**	**299**	⇓Pg		**Pg**	**05 39 33.6**	**+0.8**
	0.8nm,0.6s,baz=120,slow=14,SNR=4.1							
KK31				⇓Lg		Lg	05 40 53.6	
	0.8nm,0.6s,baz=118,slow=30							

*DJA **14** 05:46:03.6±1.3, 0.3S±4.4×9.7E±.*, h14km±8km, M4.8/14, mb5.0/7, mB5.5/2, MLv4.7/14, Mw(mB)5.0/2*
*IDC **14** 05:46:07.4±0.5, 0.08S×97.35E, h28km±2km, mb4.1/21, mbtmp4.3/22, ML4.8/1, MS3.3/13, Error ellipse: s-maj=19.5km s-min=10.0km az=54.0*
*NEIC **14** 05:46:07.5±1.6, 0.00S±0.07×97.4E±0.1, h27km±5km, mb4.7/34, Error ellipse: s-maj=15.1km s-min=9.6km az=77.0*
ISC 14 05:46:07.3±0.4, 0.15S±0.05×97.36E±0.07, h30km±2km, h30km:pP-P,n120,σ1°66/113, mb4.6/56, MS3.5/14, 1C-1D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.93**	**84**	P		**Pn**	**05 46 22.3**	**-2.0**
GSI	**Gunungsitoli**	**1.46**	**9**			**Pn**	**05 46 29.3**	**-2.3**
GSI	**Gunungsitoli**	**1.46**	**9**	P		**Pn**	**05 46 29.0**	**-2.6**
SISI	**Saibi**	**2.09**	**124**	P		**Pn**	**05 46 38.9**	**-1.5**
SNSI	**Sinabang, Aceh**	**2.74**	**338**	P		**Pn**	**05 46 47.1**	**-2.1**
PDSI	**Padang**	**3.20**	**104**	P		**Pn**	**05 46 53.5**	**-2.1**
RPSI	**Rantau Prapat**	**3.23**	**29**	Pn		**Pn**	**05 46 53.9**	**-2.0**
KCSI	**Kotacane, Aceh**	**3.67**	**7**	P		**Pn**	**05 46 59.2**	**-2.8**
BKNI	**Bangkinang**	**3.71**	**83**			**Pn**	**05 47 03.5**	**+0.8**
BKNI	**Bangkinang**	**3.71**	**83**	P		**Pn**	**05 47 05.4**	**+2.7**
PPSI	**Pulau Pagai**	**3.72**	**134**	P		**Pn**	**05 46 59.8**	**-2.9**
MLSI	**Meulaboh, Aceh**	**4.48**	**348**	P		**Pn**	**05 47 11.1**	**-2.1**
KRJI	**Kerinci**	**4.54**	**115**	P		**Pn**	**05 47 13.6**	**-0.5**
IPM	**Ipoh**	**5.88**	**39**			**Pn**	**05 47 30.3**	**-2.1**
KULM	**Kulim**	**6.32**	**31**	Pn		**Pn**	**05 47 35.4**	**-3.1**
MNAI	**Manna**	**6.99**	**127**	Pn		**Pn**	**05 47 47.0**	**-0.7**
MNAI	**Manna**	**6.99**	**127**	P		**Pn**	**05 47 46.3**	**-1.4**
	185nm,0.8s,1.4nm							
KASI	**Kota Agung**	**8.91**	**127**	P		**Pn**	**05 48 12.9**	**-1.2**
	40nm,0.8s							
COCO	**West Island**	**11.98**	**182**	Pn		**Pn**	**05 48 55.9**	**-0.2**
LEM	**Lembang**	**12.20**	**123**	LR		LR	05 54 32.6	
	comp=Z,168nm,20.9s,baz=218,slow=41							
SBUM	**Sibu**	**15.08**	**80**			**Pn**	**05 49 37.5**	**-0.9**
PALK	**Pallekele**	**18.17**	**294**	LR		LR	05 56 04.8	
	comp=Z,90nm,18.5s,baz=216,slow=33							
CM31	**Chiang Mai Arr**	**18.55**	**5**	P		**P**	**05 50 20.1**	**-1.7**
CMAR	**Chiang Mai Arr**	**18.55**	**5**			**P**	**05 50 20.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**18.55**	**5**	P		**P**	**05 50 21.4**	**-0.3**
	1.1nm,0.3s,baz=194,slow=11,SNR=25							
CMAR				LR		LR	05 57 47.2	
	comp=Z,53nm,18.9s,baz=190,slow=38							
	5.7nm,0.7s							
CHTO	**Chiang Mai**	**18.91**	**5**	P		**P**	**05 50 24.0**	**-1.6**
KKM	**Kota Kinabalu**	**19.80**	**72**	P		**P**	**05 50 34.7**	**-0.9**
KKM				IAmb		IAmb	05 50 45.4	
	comp=Z,44nm,1.1s							
CRAI	**Chiangrai**	**20.46**	**8**			**P**	**05 50 40.6**	**-2.1**
SLVN	**Son La**	**22.29**	**16**	P		**P**	**05 50 59.9**	**-2.4**
TNCH	**TengChong**	**25.05**	**2**	P		**P**	**05 51 31.8**	**+2.5**
TNCH				pP		pP	05

HNS	**HongShan**	**40.66**	**21**	‖P	P	05 53 52.0	+7.2		
HNS				pmax	pmax				
	comp=Z,13nm,0.9s								
WB0	**Warramunga Arr**	**41.18**	**121**	P	**P**	**05 53 49.5**	**0.0**		
WB0				IAmb	IAmb	05 54 00.0			
	comp=Z,10nm,0.7s								
WRA	**Warramunga Arr**	**41.21**	**121**	P	**P**	**05 53 49.6**	**-0.1**		
	comp=Z,3.6nm,0.6s,baz=302,slow=8.9,SNR=31								
WRA				pP	**pP**	**05 53 58.4**	**+0.4**		
	comp=Z,9.1nm,0.6s,baz=300,slow=9.0,SNR=16								
	comp=Z,3.6nm,0.6s								
WB2	**Warramunga Arr**	**41.22**	**121**	P	**P**	**05 53 49.9**	**+0.1**		
WB2				IAmb	IAmb	05 54 00.5			
	comp=Z,10nm,0.7s								
WR0	**Warramunga Arr**	**41.39**	**121**	P	**P**	**05 53 50.7**	**-0.5**		
WR0				IAmb	IAmb	05 54 02.0			
	comp=Z,14nm,0.7s								
BTO	**Baotou**	**42.17**	**14**	*e*P	**P**	**05 54 00.0**	**+2.7**		
BTO				pP	**pwP**	**05 54 09.9**	**+0.9**		
BTO				sP	**sP**	**05 54 13.9**	**+5.0**		
BTO				PP	**PP**	**05 55 41.6**	**+6.2**		
BTO				S	**S**	**06 00 20.6**	**+5.1**		
BTO				sS	sS	06 00 36.0	+6.9		
BTO				SS	**SS**	**06 03 22.4**	**-1.7**		
BTO				pmax	pmax				
	comp=Z,16nm,0.6s								
BTO				pmax	pmax				
	comp=Z,150nm,3.7s								
BTO				LR	LR				
	comp=N,200nm,8.6s								
BTO				LR	LR				
	comp=E,510nm,14.0s								
BTO				LR	LR				
	comp=Z,250nm,10.6s								
ASAR	**Alice Springs**	**42.48**	**126**	P	**P**	**05 54 00.4**	**+0.3**		
	comp=Z,1.6nm,0.8s,baz=307,slow=7.6,SNR=13								
ASAR				pP	**pP**	**05 54 09.3**	**+1.0**		
	comp=Z,3.4nm,0.5s,baz=300,slow=8.2,SNR=18								
ASAR				PcP	**PcP**	**05 55 53.5**	**+0.8**		
	comp=Z,0.8nm,0.8s,baz=294,slow=2.5,SNR=3.4								
ASAR				pPcP		05 56 02.6			
	comp=Z,0.6nm,0.5s,baz=301,slow=2.6,SNR=4.9								
	comp=Z,1.6nm,0.8s								
HHC	**Hu-ho-hao-te**	**42.80**	**16**	*e*P	**P**	**05 54 04.1**	**+1.6**		
HHC				pmax	pmax				
	comp=Z,8.0nm,0.6s								
HHC				pmax	pmax				
	comp=Z,110nm,4.7s								
BJI	**Beijing**	**43.53**	**21**	P	**P**	**05 54 08.5**	**+0.3**		
BJI				pmax	pmax				
	comp=Z,2.0nm,1.0s								
WMQ	**Urumqi**	**44.62**	**350**	*e*P	**P**	**05 54 18.3**	**+1.3**		
WMQ				pP	sP	05 54 26.8	-1.5		
WMQ				pmax	pmax				
	comp=Z,14nm,0.9s								
TARG	**Taragay, Kyrgy**	**45.28**	**339**	IAmb	IAmb	05 54 25.0			
	comp=Z,8.5nm,0.8s								
NRN	**Naryn**	**45.68**	**337**	P	**P**	**05 54 25.8**	**0.0**		
JNU	**Nakatsue**	**45.72**	**40**	LR	LR	06 13 51.4			
	comp=Z,36nm,21.1s,baz=355,slow=36								
SIMJ	**Simiganj**	**46.57**	**329**	P	**P**	**05 54 31.6**	**-1.0**		
BOOM	**Boomskoye usch**	**46.62**	**338**	P	**P**	**05 54 32.9**	**-0.1**		
BOOM				IAmb	IAmb	05 54 43.3			
	comp=Z,7.9nm,0.7s								
BTK	**Batken**	**46.76**	**332**	P	**P**	**05 54 31.7**	**-2.4**		
BTK				IAmb	IAmb	05 54 48.3			
	comp=Z,8.1nm,0.8s								
ARSB	**Arslanbob**	**46.81**	**335**	P	**P**	**05 54 34.0**	**-0.5**		
ARSB				IAmb	IAmb	05 54 45.1			
	comp=Z,6.2nm,0.8s								
KSRS	**Korea Array**	**46.87**	**34**	P	**P**	**05 54 34.2**	**-0.6**		
	comp=Z,2.2nm,0.6s,baz=218,slow=8.9,SNR=7.1								
	comp=Z,2.2nm,0.6s								
XLT	**XiLinHaoTe**	**46.93**	**19**	*e*P	**P**	**05 54 39.3**	**+4.0**		
XLT				pP	sP	05 54 44.8	-2.1		
XLT				sP	pwP	05 54 52.9	+5.8		
XLT				pmax	pmax				
	comp=Z,3.0nm,1.0s								
XLT				pmax	pmax				
	comp=Z,150nm,6.1s								
AAK	**Ala-Archa**	**47.29**	**337**	P	**P**	**05 54 37.1**	**-1.2**		
AAK				IAmb	IAmb	05 54 54.1			
	comp=Z,4.1nm,0.8s								
SONM	**Songino Array**	**48.43**	**8**	P	**P**	**05 54 46.7**	**-0.3**		
SONM				IAmb	IAmb	05 54 57.4			
	comp=Z,6.2nm,1.0s								
SONM	**Songino Array**	**48.43**	**8**	P	**P**	**05 54 47.2**	**+0.2**		
	comp=Z,0.6nm,0.4s,baz=191,slow=9.9,SNR=6.9								
SONM				pP	**pP**	**05 54 55.6**	**+0.3**		
	comp=Z,3.3nm,0.6s,baz=192,slow=8.4,SNR=15								
SONM				PcP	**PcP**	**05 56 13.1**	**+0.1**		
	comp=Z,0.9nm,0.6s,baz=206,slow=4.2,SNR=1.9								
SONM				pPcP		05 56 22.0			
	comp=Z,0.9nm,0.6s,baz=180,slow=4.6,SNR=2.5								
	comp=Z,0.6nm,0.4s								
ULN	**Ulaanbaatar**	**48.56**	**9**	P	**P**	**05 54 47.5**	**-0.4**		
ULN				IAmb	IAmb	05 54 57.6			
	comp=Z,7.1nm,1.2s								
MK31	**Makanchi Array**	**48.58**	**346**	P	**P**	**05 54 47.3**	**-0.7**		
MKAR	**Makanchi Array**	**48.58**	**346**	P	**P**	**05 54 47.3**	**-0.7**		
MKAR	**Makanchi Array**	**48.58**	**346**	P	**P**	**05 54 48.3**	**+0.3**		
	comp=Z,8.8nm,0.7s,baz=156,slow=8.0,SNR=107								
MKAR				pP	**sP**	**05 54 57.5**	**-1.9**		
	comp=Z,19nm,0.7s,baz=160,slow=8.4,SNR=42								
	comp=Z,8.8nm,0.7s								
MAKZ	**Makanchi**	**48.66**	**346**	P	**P**	**05 54 48.5**	**-0.1**		
KK31	**Karatay Array**	**49.32**	**334**	P	**P**	**05 54 53.0**	**-0.7**		
KK31				IAmb	IAmb	05 55 06.9			
	comp=Z,6.1nm,0.8s								
KKAR	**Karatay Array**	**49.32**	**334**	P	**P**	**05 54 53.3**	**-0.5**		
KKAR				IAmb	IAmb	05 55 06.9			
	comp=Z,6.1nm,0.8s								
GEYT	**Alibeck**	**52.34**	**321**	P	**P**	**05 55 16.0**	**-0.6**		
	comp=Z,2.6nm,0.8s,baz=213,slow=6.9,SNR=2.7								
GEYT				pP	**pP**	**05 55 25.5**	**+0.6**		
	comp=Z,2.6nm,0.7s,baz=145,slow=8.7,SNR=3.7								
	comp=Z,2.6nm,0.8s								
STKA	**Stephens Creek**	**52.35**	**131**	P	**P**	**05 55 17.6**	**+0.9**		
	comp=Z,3.1nm,0.8s,baz=306,slow=12,SNR=2.9								
STKA				pP	**sP**	**05 55 27.2**	**-1.4**		
	comp=Z,6.1nm,0.8s,baz=300,slow=7.2,SNR=4.5								
STKA				LR	LR	06 19 56.1			
	comp=Z,47nm,19.4s,baz=212,slow=39								
	comp=Z,3.1nm,0.8s								
MJAR	**Matsushiro Arr**	**52.58**	**42**	LR	LR	06 19 44.5			
	comp=Z,18nm,18.0s,baz=155,slow=38								
KURBB	**Kurchatov Arra**	**53.06**	**345**	P	**P**	**05 55 21.9**	**+0.3**		
	comp=Z,1.9nm,0.7s,baz=170,slow=7.2,SNR=23								
KURBB				pP	**sP**	**05 55 30.7**	**-2.3**		
	comp=Z,6.6nm,0.7s,baz=166,slow=7.2,SNR=15								
	comp=Z,1.9nm,0.7s								
KURK	**Kurchatov**	**53.12**	**345**	P	**P**	**05 55 21.6**	**-0.5**		
KURK				IAmb	IAmb	05 55 32.0			
	comp=Z,13nm,1.1s								
USRK	**Ussuriysk Ar.**	**53.84**	**30**	P	**P**	**05 55 26.6**	**-0.9**		
USRK	**Ussuriysk Ar.**	**53.84**	**30**	P	**P**	**05 55 26.8**	**-0.6**		
	comp=Z,3.0nm,0.7s,baz=228,slow=6.0,SNR=6.9								
	comp=Z,3.0nm,0.7s								
ZAA0	**Zalesovo Array**	**54.90**	**351**	P	**P**	**05 55 34.3**	**-0.7**		
ZALV	**Zalesovo Beam**	**54.90**	**351**	P	**P**	**05 55 34.6**	**-0.4**		
ZALV	**Zalesovo Beam**	**54.90**	**351**	P	**P**	**05 55 35.0**	**0.0**		
	comp=Z,6.8nm,0.7s,baz=178,slow=6.4,SNR=28								
ZALV				pP	**pP**	**05 55 43.8**	**+0.4**		
	comp=Z,20nm,0.7s,baz=176,slow=6.3,SNR=25								
	comp=Z,6.8nm,0.7s								
BVAR	**Borovoye Array**	**57.56**	**341**	P	**P**	**05 55 53.2**	**-0.8**		
	comp=Z,1.5nm,0.6s,baz=134,slow=8.5,SNR=6.9								
BVAR				pP	**pP**	**05 56 02.5**	**+0.1**		
	comp=Z,2.9nm,0.5s,baz=146,slow=8.2,SNR=10								
	comp=Z,1.5nm,0.6s								
ABKAR	**Akbulak array**	**58.77**	**332**	P	**P**	**05 56 01.5**	**-1.0**		
ASAJ	**Asahikawa**	**59.64**	**36**	LR	LR	06 24 44.8			
	comp=Z,24nm,18.4s,baz=92,slow=39								
H04N2	**CROZET ISLANDS**	**60.76**	**215**	T	T	07 02 24.2			
	baz=55,slow=75,SNR=784								
H04N1	**CROZET ISLANDS**	**60.77**	**215**	T	T	07 02 29.4			
	baz=55,slow=75,SNR=560								
H04N3	**CROZET ISLANDS**	**60.78**	**215**	T	T	07 02 26.1			
	baz=55,slow=75,SNR=698								
H04S1	**CROZET ISLANDS**	**61.09**	**214**	T	T	07 02 41.9			
	baz=54,slow=75,SNR=46								
H04S3	**CROZET ISLANDS**	**61.10**	**214**	T	T	07 02 43.0			
	baz=54,slow=75,SNR=69								
H04S2	**CROZET ISLANDS**	**61.11**	**214**	T	T	07 02 41.9			
	baz=54,slow=75,SNR=34								
HNR	**Honiara**	**62.96**	**100**	LR	LR	06 26 52.2			
	comp=Z,306nm,18.2s,baz=124,slow=39								

KBZ	**Khabaz**	**65.19**	**319**	P	**P**	**05 56 46.2**	**+0.4**		
	comp=Z,2.5nm,0.8s,baz=111,slow=6.8,SNR=7.2								
KBZ				pP	**pP**	**05 56 54.8**	**+0.6**		
	comp=Z,2.8nm,0.7s,baz=106,slow=6.4,SNR=6.0								
	comp=Z,2.5nm,0.8s								
MBAR	**Mbarara**	**66.62**	**269**	LR	LR	06 24 09.1			
	comp=Z,32nm,18.1s,baz=161,slow=34								
NRIK	**Noril'sk**	**69.67**	**356**	P	**P**	**05 57 13.2**	**-0.4**		
	comp=Z,1.2nm,0.5s,baz=90,slow=5.1,SNR=1.4								
NRIK				pP	**pP**	**05 57 22.0**	**-0.2**		
	comp=Z,3.0nm,0.6s,baz=172,slow=4.0,SNR=2.8								
	comp=Z,1.2nm,0.5s								
BRTR	**Keskin Array B**	**70.13**	**313**	P	**P**	**05 57 16.7**	**-0.6**		
	comp=Z,1.3nm,0.7s,baz=128,slow=8.6,SNR=7.2								
BRTR				pP	**pP**	**05 57 25.8**	**0.0**		
	comp=Z,1.6nm,0.6s,baz=130,slow=6.9,SNR=6.6								
BRTR				LR	LR	06 30 48.2			
	comp=Z,37nm,18.5s,baz=248,slow=38								
	comp=Z,1.3nm,0.7s								
LBTB	**Lobatse**	**73.44**	**244**	LR	LR	06 27 04.2			
	comp=Z,19nm,18.3s,baz=170,slow=33								
BOSA	**Boshof**	**74.25**	**240**	P	**P**	**05 57 43.5**	**+1.3**		
	comp=Z,4.6nm,1.1s,baz=107,slow=9.0,SNR=3.7								
	comp=Z,4.6nm,1.1s								
TIXI	**Tiksi**	**74.47**	**10**	P	**P**	**05 57 40.1**	**-2.3**		
TIXI	**Tiksi**	**74.47**	**10**	LR	LR	06 32 22.8			
	comp=Z,27nm,20.6s,baz=198,slow=37								
AKASG	**Malin Array Be**	**76.41**	**323**	P	**P**	**05 57 53.3**	**-0.6**		
	comp=Z,2.0nm,0.7s,baz=91,slow=4.7,SNR=8.0								
AKASG				pP	**pP**	**05 58 02.3**	**-0.1**		
	comp=Z,3.1nm,0.5s,baz=88,slow=5.2,SNR=9.9								
	comp=Z,2.0nm,0.7s								
BURAR	**Bucovina Array**	**78.13**	**319**	P	**P**	**05 58 03.2**	**-0.5**		
BURAR				IAmb	IAmb	05 58 14.4			
	comp=Z,3.7nm,0.7s								
BUR08	**Bucovina Ar. S**	**78.15**	**319**	P	**P**	**05 58 03.1**	**-0.8**		
BUR08				IAmb	IAmb	05 58 17.2			
	comp=Z,7.2nm,1.1s								
KOLS	**Kolonicke sedl**	**80.33**	**320**	*e*P	**P**	**05 58 17.4**	**+1.7**		
KOLS				*e*		05 58 25.9			
FINES	**FINESS Array B**	**81.25**	**333**	P	**P**	**05 58 20.1**	**-0.2**		
	comp=Z,2.2nm,0.6s,baz=95,slow=4.5,SNR=9.2								
FINES				pP	**pP**	**05 58 28.9**	**+0.1**		
	comp=Z,4.0nm,0.5s,baz=105,slow=5.3,SNR=5.6								
	comp=Z,2.2nm,0.6s								
MODS	**Modra-Piesok**	**83.51**	**319**	*e*P	**P**	**05 58 34.4**	**+2.0**		
ARCES	**ARCESS Array B**	**83.84**	**340**	P	**P**	**05 58 33.9**	**+0.3**		
	comp=Z,1.6nm,0.7s,baz=90,slow=3.6,SNR=5.8								
ARCES				pP	**pP**	**05 58 42.8**	**+0.5**		
	comp=Z,4.1nm,0.7s,baz=116,slow=4.7,SNR=3.9								
	comp=Z,1.6nm,0.7s								
RONA	**Rosalia, Austr**	**84.08**	**318**	*e*pP	pP	05 58 44.8	+0.8		
	comp=Z,0.8nm,0.4s								
GERES	**GERESS Array B**	**85.92**	**319**	P	**P**	**05 58 44.8**	**+0.1**		
	comp=Z,1.2nm,0.7s,baz=64,slow=6.1,SNR=5.9								
GERES				pP	**pP**	**05 58 53.6**	**+0.4**		
	comp=Z,1.8nm,0.7s,baz=106,slow=4.4,SNR=5.0								
	comp=Z,1.2nm,0.7s								
LESA	**Schwarzleotal**	**86.50**	**317**	*i* pP	pP	05 58 56.0	-0.1		
	comp=Z,2.5nm,0.4s								
HFS	**Hagfors**	**86.96**	**330**	P	**P**	**05 58 50.1**	**+0.8**		
	comp=Z,2.0nm,0.7s,baz=147,slow=2.9,SNR=2.7								
HFS				pP	**pP**	**05 58 58.7**	**+0.7**		
	comp=Z,2.8nm,0.7s,baz=145,slow=5.4,SNR=4.4								
	comp=Z,2.0nm,0.7s								
WTTA	**Wattenberg**	**87.19**	**317**	*i* pP	pP	05 58 59.6	0.0		
	comp=Z,2.2nm,0.4s								
WATA	**Walderalm**	**87.24**	**317**	*i* pP	pP	05 58 59.5	-0.3		
	comp=Z,3.8nm,0.6s								
SQTA	**Sankt Quirin**	**87.48**	**317**	*i* pP	pP	05 59 01.2	+0.2		
	comp=Z,2.4nm,0.3s								
FETA	**Feichten**	**87.80**	**317**	*i* pP	pP	05 59 03.0	+0.5		
	comp=Z,1.1nm,0.5s								
NB2	**NORSAR Subarra**	**88.25**	**331**	P	P	05 59 04.8	+9.2		
	comp=Z,1.1nm,0.7s,baz=97,slow=4.6								
NOA	**NORSAR Array B**	**88.25**	**331**	LR	LR	06 40 21.9			
	comp=Z,9.5nm,18.6s,baz=270,slow=37								
QSPA	**South Pole Qui**	**89.81**	**180**	P	**P**	**05 59 04.4**	**+1.5**		
	comp=Z,1.9nm,0.7s,baz=312,slow=1.7,SNR=11								
	comp=Z,1.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**95.55**	**283**	P	**P**	**05 59 31.0**	**+0.6**		
	comp=Z,12nm,0.3s,baz=75,slow=6.9,SNR=5.4								
CPUP	**Villa Florida**	**144.11**	**221**	PKP	PKPbc	06 05 40.2	+1.3		
	comp=Z,12nm,0.7s,baz=122,slow=2.8,SNR=36								
CPUP				pPKP	pPKPdf	06 05 49.6	-0.5		
	comp=Z,9.4nm,0.8s,baz=120,slow=5.6,SNR=11								
TXAR	**Lajitas Array**	**144.71**	**33**	PKP	PKPbc	06 05 41.5	+0.6		
	comp=Z,1.6nm,1.0s,baz=181,slow=1.2,SNR=12								
TXAR				pPKP	pPKPdf	06 05 50.6	-0.5		
	comp=Z,1.0nm,0.5s,baz=144,slow=0.7,SNR=9.8								

*INMG **14** 05:46:28.2±1.9, 37.00N×4.27W, h12km±4km, ML2.1, Error ellipse: s-maj=4.0km s-min=3.2km az=7.0*
*SFS **14** 05:46:28.5, 37.03N×4.31W, h8km, ML2.3/7, ML2.3/7, MLv2.2/7*
*MDD **14** 05:46:28.9±0.4, 37.04N×4.32W, h11km, mb_Lg2.5/14, Error ellipse: s-maj=3.3km s-min=2.0km az=178.0*
*CNRM **14** 05:46:34.7, 36.61N×4.36W, h19km, ML2.5*

ISC 14 05:46:28.0±0.8, 37.03N±0.02×4.28W±0.02, h16km±5km, n64, σ1s69/100, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EGOR	**Sierra Gorda,**	**0.16**	**58**	Pg	**Pg**	**Pg**	**05 46 31.6**	**-0.5**
EGOR				Sg	**Sg**	**Sg**	**05 46 34.8**	**-0.1**
EGOR	**Sierra Gorda,**	**0.16**	**58**	Pg	**Pg**	**Pg**	**05 46 31.7**	**-0.5**
EGOR				Sg	**Sg**	**Sg**	**05 46 34.7**	**-0.3**
EGOR				*i* Vmb_Lg			05 46 36.2	
EMAL	**Malaga-Limoner**	**0.29**	**205**	Pg	**Pg**	**Pg**	**05 46 34.0**	**-0.2**
EMAL				Sg	**Sg**	**Sg**	**05 46 38.5**	**+0.1**
ELGU	**Los Guajares,**	**0.54**	**107**	Pg	**Pg**	**Pg**	**05 46 38.2**	**-0.6**
ELGU				Sg	**Sb**	**Sb**	**05 46 47.0**	**+0.2**
ELGU	**Los Guajares,**	**0.54**	**107**	Pg	**Pg**	**Pg**	**05 46 38.1**	**-0.6**
ELGU				Sg	**Sb**	**Sb**	**05 46 47.3**	**+0.5**
ELGU				*i* Vmb_Lg			05 46 51.0	
EMIJ	**Mijas**	**0.61**	**221**	Pg	**Pg**	**Pg**	**05 46 38.7**	**-1.3**
EMIJ				Sg	**Sg**	**Sg**	**05 46 47.8**	**-0.4**
EMIJ	**Mijas**	**0.61**	**221**	Pg	**Pg**	**Pg**	**05 46 38.6**	**-1.4**
EMIJ				Sg	**Sg**	**Sg**	**05 46 47.4**	**-0.7**
EMIJ				*i* Vmb_Lg			05 46 50.6	
EQTA	**Presa de Quent**	**0.69**	**75**	Pg	**Pg**	**Pg**	**05 46 41.4**	**-0.1**
EQTA				Sg	**Sb**	**Sb**	**05 46 51.7**	**+0.7**
EQUE	**Quentar**	**0.69**	**75**	Pg	**Pg**	**Pg**	**05 46 41.5**	**-0.1**
EQUE				Sg	**Sg**	**Sg**	**05 46 50.5**	**-0.5**
EBER	**Berja**	**1.12**	**96**	Pg	**Pg**	**Pg**	**05 46 49.5**	**0.0**
EBER				Sg	**Sg**	**Sn**	**05 47 06.6**	**+2.3**
EBER				*i* Vmb_Lg			05 47 10.4	
EJIF	**Jimena Fronter**	**1.12**	**239**	Pg	**Pg**	**Pg**	**05 46 50.1**	**+0.5**
EJIF				Sg	**Sg**	**Sg**	**05 47 06.2**	**+2.0**
EADA	**Adamuz**	**1.16**	**348**	Pn	**Pn**	**Pn**	**05 46 49.3**	**-0.3**
EADA				Sn	**Sn**	**Sn**	**05 47 05.4**	**+0.2**
EADA	**Adamuz**	**1.16**	**348**	P	**Pn**	**Pn**	**05 46 49.0**	**-0.7**
EADA	**Adamuz**	**1.16**	**348**	Pg	**Pn**	**Pn**	**05 46 49.2**	**-0.5**
EADA				Sg	**Sb**	**Sb**	**05 47 03.5**	**-1.1**
EADA				*i* Vmb_Lg			05 47 07.8	
EQES	**Quesada**	**1.23**	**51**	Pg	**Pg**	**Pg**	**05 46 52.2**	**+0.5**
EQES				Sg	**Sg**	**Sg**	**05 47 10.3**	**+2.5**
EQES				*i* Vmb_Lg			05 47 13.3	
ESPR	**Espera**	**1.28**	**263**	P	**Pg**	**Pg**	**05 46 55.3**	**+2.7**
ESPR	**Espera**	**1.28**	**263**	Pg	**Pg**	**Pg**	**05 46 53.8**	**+1.2**
ESPR				Sg	**Sg**	**Sg**	**05 47 13.0**	**+3.8**
ESPR				*i* Vmb_Lg			05 47 17.9	
ECAB	**El Cabril**	**1.39**	**319**	Pn	**Pn**	**Pn**	**05 46 52.6**	**-0.2**
ECAB				P	**Pn**	**Pn**	**05 46 52.4**	**-0.3**
ECAB				Sn	**Sn**	**Sn**	**05 47 10.3**	**-0.4**
ECAB	**El Cabril**	**1.39**	**319**	Pn	**Pn**	**Pn**	**05 46 52.5**	**-0.2**
ECAB				Sg	**Sb**	**Sb**	**05 47 11.0**	**0.0**
ECAB				*i* Vmb_Lg			05 47 12.5	
SMIR	**Smir Dam**	**1.61**	**214**	P	**Pb**	**Pb**	**05 46 57.4**	**0.0**
SMIR	**Smir Dam**	**1.61**	**214**	S	**Sn**	**Sn**	**05 47 14.4**	**-1.8**
ENIJ	**Nijar**	**1.66**	**91**	Pg	**Pg**	**Pg**	**05 47 00.9**	**+1.1**
ENIJ				Sg	**Sg**	**Sg**	**05 47 21.8**	**+0.5**
ENIJ				*i* Vmb_Lg			05 47 32.9	
PSIM	**Granatula de C**	**1.83**	**13**	Pg	**Pb**	**Pb**	**05 47 01.2**	**0.0**
PSIM				Sg	**Sb**	**Sb**	**05 47 24.8**	**+0.8**
EMLI	**Melilla**	**2.03**	**148**	P	**Pg**		05 47 23.6	+17
GOG	**Mont Gurugu**	**2.08**	**150**	P	**Pb**	**Pb**	**05 47 04.2**	**-1.2**
GOG	**Mont Gurugu**	**2.08**	**150**	S	**Sn**	**Sn**	**05 47 27.9**	**0.0**
PBAR	**Barrancos**	**2.48**	**298**	*e*Pn	**Pn**	**Pn**	**05 47 07.4**	**-0.3**
PBAR				*e*Sn	**Sn**	**Sn**	**05 47 37.4**	**-0.2**
PBAR				*e*Sg	**Sg**	**Sg**	**05 47 45.2**	**-2.3**
PBAR				A	A		05 47 48.2	
	7.1nm,0.5s							

PBAR	**Barrancos**	**2.48**	**298**	P	**Pn**	**Pn**	**05 47 07.4**	**-0.3**	
PAB	**San Pablo**	**2.51**	**359**	Pn	**Pn**	**Pn**	**05 47 09.9**	**+1.6**	
PAB				Pg	**Pg**	**Pg**	**05 47 15.3**	**-0.9**	
PAB				Sg	**Sg**	**Sg**	**05 47 46.8**	**-2.0**	
PAB				*i* Vmb_Lg			05 47 56.0		
AKLM	**AKL**	**2.54**	**172**	P	**Pn**	**Pn**	**05 47 08.3**	**-0.2**	
AKLM	**AKL**	**2.54**	**172**	S	**Sn**	**Sn**	**05 47 33.7**	**-5.5**	
EGRO	**El Granado**	**2.61**	**282**	P	**Pn**	**Pn**	**05 47 09.6**	**+0.2**	
TAF	**Taforalt**	**2.68**	**145**	P	**Pn**	**Pn**	**05 47 12.7**	**+2.2**	
TAF	**Taforalt**	**2.68**	**145**	S	**Sn**	**Sn**	**05 47 42.3**	**-0.4**	
EBAD	**Badajoz**	**2.77**	**309**	P	**Pn**	**Pn**	**05 47 12.4**	**+0.7**	
EBAD	**Badajoz**	**2.77**	**309**	Pn	**Pn**	**Pn**	**05 47 12.9**	**+1.2**	
EBAD				Pg	**Pb**	**Pb**	**05 47 17.6**	**+0.5**	
EBAD				Sn	**Sn**	**Sn**	**05 47 42.8**	**-2.1**	
EBAD				Sg	**Sg**	**Sg**	**05 47 54.1**	**-2.8**	
EBAD				*i* Vmb_Lg			05 47 58.8		
PVAQ	**Vaqueiros**	**2.77**	**279**	*e*Sn	**Sn**	**Sn**	**05 47 44.1**	**-0.8**	
PVAQ	**Vaqueiros**	**2.77**	**279**	P	**Pb**	**Pb**	**05 47 17.6**	**+0.4**	
PVAQ	**Vaqueiros**	**2.77**	**279**	S	**Sb**	**Sb**	**05 47 52.9**	**+2.0**	
PBDV	**Barranco-do-Ve**	**2.93**	**275**	*e*Sn	**Sn**	**Sn**	**05 47 46.9**	**-1.9**	
PBDV				A	A		05 48 14.1		
	4.9nm,0.5s								
PBEJ	**Beja**	**3.02**	**290**	*e*Sn	**Sn**	**Sn**	**05 47 51.0**	**-0.1**	
PBEJ				*e*Sg	**Sb**	**Sb**	**05 48 01.2**	**+3.1**	
PBEJ				A	A		05 48 08.3		
	4.1nm,0.4s								
SICH	**Sidi Chahed**	**3.04**	**197**	P	**Pn**	**Pn**	**05 47 16.9**	**+1.5**	
SICH	**Sidi Chahed**	**3.04**	**197**	S	**Sn**	**Sn**	**05 47 47.9**	**-3.6**	
PCVE	**Castro Verde**	**3.06**	**282**	*e*Sn	**Sn**	**Sn**	**05 47 50.3**	**-1.7**	
PCVE				*e*Sg	**Sg**	**Sg**	**05 48 04.7**	**-1.6**	
PCVE				A	A		05 48 08.5		
	4.2nm,0.7s								
PESTR	**Estremoz**	**3.20**	**306**	*e*Pn	**Pn**	**Pn**	**05 47 19.3**	**+1.7**	
PESTR	**Estremoz**	**3.20**	**306**	*e*Pg	**Pb**	**Pb**	**05 47 26.0**	**+1.6**	
PESTR				*e*Sn	**Sn**	**Sn**	**05 47 54.9**	**-0.6**	
PESTR				*e*Sg	**Sg**	**Sg**	**05 48 07.5**	**-3.2**	
PESTR				A	A		05 48 16.9		
	4.1nm,0.5s								
PESTR	**Estremoz**	**3.20**	**306**	P	**Pb**	**Pb**	**05 47 25.7**	**+1.2**	
PESTR	**Estremoz**	**3.20**	**306**	S	**Sg**	**Sg**	**05 48 08.4**	**-2.3**	
MESJ	**Messejana**	**3.24**	**286**	*e*Pn	**Pn**	**Pn**	**05 47 18.1**	**-0.1**	
EVO	**Evora**	**3.32**	**298**	*e*Sn	**Sn**	**Sn**	**05 47 57.6**	**-0.8**	
EVO				*e*Sg	**Sb**	**Sb**	**05 48 10.2**	**+3.6**	
EVO				A	A		05 48 16.1

baz=119
KDAK Kodiak Island 2.02 300 Pn Pn 06 22 12.4 -0.2
2.3nm,0.3s,baz=125,slow=5.9,SNR=61
KDAK Sn **Sn 06 22 35.8 -2.1**
15nm,0.3s,baz=191,slow=23,SNR=21
KDAK LR LR 06 23 07.6
comp=Z,230nm,18.1s,baz=108,slow=42
8.1nm,0.4s
OHAK Old Harbor 2.21 282 Pn 06 22 14.4 -0.8
OHAK IAML 06 22 40.9
comp=E,98nm,0.5s
OHAK IAML 06 22 41.2
comp=N,106nm,0.7s
OHAK Old Harbor 2.21 282 Sn 06 22 39.8 -2.8
OHAK Old Harbor 2.21 282 P Pn 06 22 14.5 -0.8
OHAK Old Harbor 2.21 282 P Pn 06 22 14.5 -0.8
baz=101
OHAK S **Sn 06 22 39.8 -2.8**
baz=101
SYI Shuyak Island 2.44 319 Pn 06 22 18.4 +0.1
SYI Sn **06 22 47.4 -0.8**
SYI Shuyak Island 2.44 319 IAML 06 22 49.8
comp=E,84nm,0.5s
Q20K Shuyak Island 2.44 319 P Pn 06 22 18.4 +0.1
baz=136
Q20K S **Sn 06 22 47.4 -0.8**
baz=136
SII Sitkinak Islan 2.70 266 Sn 06 22 52.2 -2.5
SII Sitkinak Islan 2.70 266 Pn Pn 06 22 23.5 +1.5
SII IAML 06 22 52.9
comp=N,154nm,0.9s
SII IAML 06 22 58.9
comp=E,134nm,0.6s
SII Sitkinak Islan 2.70 266 P Pn 06 22 23.0 +1.0
SII Sitkinak Islan 2.70 266 S Sn 06 22 52.2 -2.5
baz=84
CNPM China Poot 2.90 340 Pn 06 22 24.6 -0.1
CNPM China Poot 2.90 340 Sn 06 22 58.5 -1.1
BRSE Bradley Lake S 3.02 346 Pn 06 22 26.0 -0.4
BRSE Sn **06 23 01.3 -1.3**
BRSE Bradley Lake S 3.02 346 P Pn 06 22 26.0 -0.4
baz=164
BRSE S **Sn 06 23 01.3 -1.3**
baz=164
Q23K Middleton Isla 3.05 30 Pn 06 22 25.9 -0.7
Q23K Middleton Isla 3.05 30 P Pn 06 22 26.0 -0.7
baz=211
MID Middleton Isla 3.05 30 Pn 06 22 26.0 -0.7
BRLK Bradley Lake 3.07 345 Pn 06 22 26.4 -0.6
HOM Homer 3.10 338 Pn Pn 06 22 27.6 +0.2
Q19K Cape Douglas, 3.14 314 Pn 06 22 28.3 +0.4
Q19K Sn **06 23 04.3 -1.1**
Q19K Cape Douglas, 3.14 314 P Pn 06 22 28.3 +0.4
baz=131
Q19K S **Sn 06 23 04.3 -1.1**
baz=131
SEW Seward 3.29 359 P Pn 06 22 29.6 -0.5
baz=178
P23K Montague Islan 3.34 17 Pn 06 22 30.3 -0.4
P23K Sn **06 23 07.5 -2.9**
P23K Montague Islan 3.34 17 P Pn 06 22 30.3 -0.4
baz=197
P23K S **Sn 06 23 07.5 -2.9**
baz=197
P19K Oil Pt 3.52 325 Pn 06 22 33.4 +0.3
P19K Oil Pt 3.52 325 IAML 06 23 17.9
comp=N,70nm,0.5s
P19K IAML 06 23 25.2
comp=E,84nm,0.6s
P19K Oil Pt 3.52 325 P Pn 06 22 33.4 +0.3
baz=142
CHIR Chirikof Islan 3.66 257 Pn Pn 06 22 33.8 -1.3
CHIR IAML 06 23 16.6
comp=E,81nm,0.9s
CHIR IAML 06 23 17.8
comp=N,76nm,1.2s
O22K Cooper Landing 3.68 357 Pn Pn 06 22 35.7 +0.4
O22K IAML 06 23 42.0
comp=E,91nm,0.9s
O20K Slope Mountain 3.71 333 Pn 06 22 35.5 -0.3
O20K Slope Mountain 3.71 333 P Pn 06 22 35.5 -0.3
baz=150
IVE Iliamna Volcan 3.75 330 Pn 06 22 35.9 -0.5
CNTC Contact Creek 3.83 295 Pn 06 22 38.0 +0.5
Q17K Contact Creek 3.83 295 P Pn 06 22 38.0 +0.5
baz=110
HIN Hinchinbrook I 3.87 21 Pn 06 22 37.6 -0.4
HIN Hinchinbrook I 3.87 21 IAML 06 23 29.7
comp=E,60nm,1.4s
HIN IAML 06 23 31.9
comp=N,52nm,1.1s
KAIM Kayak Island 4.04 38 Pn 06 22 39.7 -0.6
KAIM Kayak Island 4.04 38 IAML 06 23 35.6
comp=E,67nm,1.3s
KAIM Kayak Island 4.04 38 P Pn 06 22 39.7 -0.6
baz=220
RDSO Redoubt South 4.06 335 Pn 06 22 40.2 -0.6
P18K Big Mountain, 4.06 312 P Pn 06 22 40.7 0.0
baz=127
RSO Redoubt South 4.07 335 Pn 06 22 40.9 -0.1
CAPN Captain Cook N 4.07 347 Pn Pn 06 22 39.9 -0.9
RDWB Redoubt West 4.11 335 Pn 06 22 40.9 -0.6
DFR Drift River 4.17 336 Pn 06 22 41.8 -0.4
EYAK Cordova Ski Ar 4.17 25 Pn 06 22 41.7 -0.5
EYAK Cordova Ski Ar 4.17 25 P Pn 06 22 42.5 +0.4
EYAK Cordova Ski Ar 4.17 25 P Pn 06 22 41.7 -0.5
baz=207
O19K Port Alsworth 4.28 324 Pn 06 22 43.7 0.0
O19K Port Alsworth 4.28 324 P Pn 06 22 43.7 0.0
baz=140
RC01 Rabbit Creek A 4.29 357 IAML 06 23 40.5
comp=E,21nm,0.5s
RC01 Rabbit Creek A 4.29 357 P Pn 06 22 43.4 -0.3
baz=176
O18K Koktuh Hills 4.35 317 Pn 06 22 44.4 -0.2
O18K Koktuh Hills 4.35 317 IAML 06 23 40.1
comp=N,18nm,1.1s
O18K Koktuh Hills 4.35 317 P Pn 06 22 44.4 -0.2
baz=132
Q16K King Salmon 4.36 298 Pn 06 22 45.4 +0.8
Q16K King Salmon 4.36 298 P Pn 06 22 45.4 +0.8
baz=113
SUCK Suckling Hills 4.37 39 Pn 06 22 44.1 -0.7
SUCK Suckling Hills 4.37 39 IAML 06 23 36.8
comp=N,49nm,0.6s
SUCK IAML 06 23 43.2
comp=E,53nm,1.4s
HMT Hamilton 4.40 35 Pn 06 22 45.6 +0.3
NICHA Nichawak Mount 4.42 37 Pn 06 22 45.0 -0.6
P17K Kvichak River 4.48 305 Pn 06 22 46.9 +0.6
P17K Kvichak River 4.48 305 P Pn 06 22 46.9 +0.6
baz=120
KNK Knik Glacier 4.63 5 Pn 06 22 48.7 +0.3
KNK Knik Glacier 4.63 5 IAML 06 23 46.9
comp=E,17nm,1.5s
KNK IAML 06 23 57.9
comp=N,13nm,1.3s
KNK Knik Glacier 4.63 5 P Pn 06 22 48.7 +0.3
baz=185
N20K Mount Spurr 4.64 342 P Pn 06 22 48.6 0.0
baz=160
SPCR Spurr Chakacha 4.64 342 Pn 06 22 48.6 0.0
SPCP Crater Peak Br 4.69 343 Pn 06 22 49.5 +0.1
SUA Susitna One 4.71 352 Pn 06 22 49.4 -0.3
SUA Susitna One 4.71 352 IAML 06 23 47.1
comp=E,14nm,1.3s
SUA Susitna One 4.71 352 P Pn 06 22 49.4 -0.3
baz=170
SNH Sunshine Point 4.78 43 Pn Pn 06 22 50.1 -0.4
SNH IAML 06 23 39.1
comp=E,38nm,1.5s
PMR Palmer 4.79 1 Pn Pn 06 22 51.2 +0.7
KHIT Khitrov Hills 4.82 39 Pn 06 22 50.6 -0.5
BMRM Bremner River 4.82 28 Pn 06 22 50.7 -0.4
BMRM Bremner River 4.82 28 P Pn 06 22 50.7 -0.4
baz=211
N19K Bonanza Creek 4.82 328 Pn 06 22 50.9 -0.2
N19K Bonanza Creek 4.82 328 P Pn 06 22 50.9 -0.2
baz=144
GHO Glory Hole Cre 4.97 2 Pn 06 22 53.7 +0.6
GHO Glory Hole Cre 4.97 2 IAML 06 23 55.3
comp=E,21nm,0.6s
GHO IAML 06 23 56.1
comp=N,23nm,0.9s
KLU Klutina 5.00 19 Pn 06 22 53.5 0.0
KLU Klutina 5.00 19 IAML 06 23 53.0
comp=N,16nm,0.5s
KLU IAML 06 23 55.3
comp=E,13nm,0.6s
KLU Klutina 5.00 19 P Pn 06 22 53.5 0.0
baz=201
SML Sawmill 5.03 5 Pn 06 22 53.9 0.0
SML Sawmill 5.03 5 IAML 06 23 51.2
comp=E,14nm,1.4s
SML IAML 06 24 03.0
comp=N,16nm,1.2s
SML Sawmill 5.03 5 P Pn 06 22 53.9 0.0
baz=186
O17K Koliganek Bris 5.06 309 Pn 06 22 54.2 -0.2
O17K Koliganek Bris 5.06 309 P Pn 06 22 54.2 -0.2
baz=123
CHGN Chignik 5.07 268 Pn 06 22 53.7 -0.6
CHGN Chignik 5.07 268 IAML 06 23 52.4
comp=N,30nm,0.6s
CHGN IAML 06 23 54.6
comp=E,34nm,0.7s
CHGN Chignik 5.07 268 P Pn 06 22 53.7 -0.6
baz=81
MESA MESA 5.12 46 Pn Pn 06 22 55.1 -0.2
MESA IAML 06 24 11.7
comp=E,32nm,1.2s
SCM Sheep Creek Mo 5.13 11 Pn Pn 06 22 56.2 +0.8
SCM IAML 06 24 02.4
comp=N,15nm,1.3s
SCM IAML 06 24 03.6
comp=E,23nm,0.8s
N18K Kilae Creek 5.17 321 Pn 06 22 55.4 -0.4
N18K Kilae Creek 5.17 321 P Pn 06 22 55.4 -0.4
baz=136
TGL Tana Glacier 5.19 38 IAML 06 23 57.6
comp=E,24nm,1.0s
TGL IAML 06 23 58.7
comp=N,18nm,1.2s
ISLE Juniper Island 5.25 41 Pn Pn 06 22 57.1 +0.1
ISLE IAML 06 23 59.3
comp=N,28nm,1.3s
ISLE IAML 06 24 04.2
comp=E,21nm,1.3s
BAGL Bagley Icefiel 5.26 43 Pn 06 22 56.4 -0.7
SKT Skwentna 5.30 349 Pn 06 22 58.3 +0.7
VRDI Verde Repeater 5.35 32 Pn Pn 06 22 58.4 -0.2
N25K Chitina, Valde 5.37 25 Pn 06 22 59.0 +0.2
N25K Chitina, Valde 5.37 25 P Pn 06 22 59.0 +0.2
baz=208
SVW2 Sparrevohn 5.38 325 Pn Pn 06 22 58.8 0.0
SVW2 Sparrevohn 5.38 325 P Pn 06 22 58.7 0.0
O16K Kokwok River B 5.41 305 Pn 06 22 59.2 +0.1
O16K Kokwok River B 5.41 305 P Pn 06 22 59.2 +0.1
baz=118
GLB Gilahina Butte 5.43 29 Pn 06 22 59.0 -0.5
M20K Styx River 5.44 341 Pn 06 22 59.4 -0.2
M20K Styx River 5.44 341 P Pn 06 22 59.4 -0.2
baz=157
KIAG Kiagna River 5.47 38 Pn 06 22 59.4 -0.7
N17K Nushagak Hills 5.54 315 Pn 06 23 00.9 0.0
N17K Nushagak Hills 5.54 315 P Pn 06 23 00.9 0.0
baz=129
GRNC Granite Creek 5.55 42 Pn 06 23 01.4 +0.1
TABL Table Mountain 5.60 46 Pn 06 23 01.7 -0.2
MCARA McCarthy VSAT 5.60 33 Pn Pn 06 23 02.0 +0.3
PTPK Patty Peak 5.63 36 Pn 06 23 02.0 -0.3
M19K Big River Lodg 5.72 335 Pn 06 23 03.5 +0.1
M19K Big River Lodg 5.72 335 P Pn 06 23 03.5 +0.1
baz=151
M18K Stony River 5.76 327 Pn 06 23 03.4 -0.5
M18K Stony River 5.76 327 P Pn 06 23 03.4 -0.5
baz=142
PCA Pinnacle 5.77 52 Pn 06 23 03.3 -0.9
PINM Pinnacle 5.78 52 P Pn 06 23 03.3 -0.9
baz=238
BARN Barnard Glacie 5.81 40 Pn 06 23 03.9 -0.9
WAT6 Susitna Watana 5.83 7 Pn 06 23 05.0 -0.1
WAT6 Susitna Watana 5.83 7 P Pn 06 23 05.0 -0.1
baz=188
CTGM Chitina Glacie 5.86 42 Pn Pn 06 23 05.6 +0.2
LOGN Logan Glacier 5.89 44 Pn 06 23 05.1 -0.8
PNL Peninsula 5.96 57 P Pn 06 23 07.8 +1.1
HARP HAARP 5.98 19 Pn 06 23 07.3 +0.4
HARP HAARP 5.98 19 P Pn 06 23 07.3 +0.4
baz=202
WAT7 Susitna Watana 6.04 2 Pn 06 23 08.1 +0.3
O15K Ungalikthiuk R 6.07 297 Pn 06 23 08.7 +0.5
O15K Ungalikthiuk R 6.07 297 P Pn 06 23 08.7 +0.5
baz=109
L19K White Mountain 6.07 335 Pn 06 23 07.6 -0.6
L19K White Mountain 6.07 335 P Pn 06 23 07.6 -0.6
baz=150
M17K Holitna River 6.21 321 Pn 06 23 10.1 0.0
M17K Holitna River 6.21 321 P Pn 06 23 10.1 0.0
baz=134
DHY Denali Highway 6.35 8 Pn Pn 06 23 13.1 +1.0
SDPT Sand Point 6.42 261 Pn Pn 06 23 13.4 +0.4
SDPT Sand Point 6.42 261 P Pn 06 23 14.2 +1.2
M16K Timber Creek 6.53 314 Pn 06 23 14.5 0.0
M16K Timber Creek 6.53 314 P Pn 06 23 14.5 0.0
baz=126
RND Reindeer 6.61 2 Pn 06 23 15.9 +0.2
P29M Windy Craggy 6.73 60 Pn 06 23 16.5 -0.8
P29M Windy Craggy 6.73 60 P Pn 06 23 16.5 -0.8
baz=249
K20K Telida 6.97 342 Pn 06 23 20.3 -0.3
K20K Telida 6.97 342 P Pn 06 23 20.3 -0.3
baz=158
L17K Donlin 7.02 323 Pn 06 23 21.0 -0.2
L17K Donlin 7.02 323 P Pn 06 23 21.0 -0.2
baz=136
S31K Pelican 7.16 75 Pn 06 23 21.1 -2.0
S31K Pelican 7.16 75 P Pn 06 23 21.1 -2.0
baz=266
CHUM Lake Minchumin 7.24 349 Pn 06 23 24.1 -0.1
CHUM Lake Minchumin 7.24 349 P Pn 06 23 24.1 -0.1
baz=166
RIDG Independent Ri 7.28 16 Pn 06 23 25.7 +0.8
BCAR Beaver Creek A 7.31 28 Pn Pn 06 23 26.4 +1.2
BPAW Bear Paw Mtn. 7.35 354 Pn Pn 06 23 26.6 +0.8
K17K Iditarod 7.45 326 Pn Pn 06 23 26.8 -0.3
SCRK Sand Creek 7.64 18 Pn Pn 06 23 32.0 +2.1
SIT Sitka 7.65 82 Pn Pn 06 23 26.6 -3.3
J20K Nowinta River 7.75 344 Pn Pn 06 23 31.4 +0.1
N30M Aishikik Lake 7.81 48 Pn 06 23 30.8 -1.4
N30M Aishikik Lake 7.81 48 P Pn 06 23 30.7 -1.4
baz=238
SKAG Skagway 7.85 65 P Pn 06 23 34.9 +2.3
M29M Somme Creek 7.87 40 Pn 06 23 33.4 +0.5
M29M Somme Creek 7.87 40 P Pn 06 23 33.4 +0.5
baz=228
IL31 8.06 7 Pn Pn 06 23 37.0 +1.6
ILAR Eielson Array 8.06 7 Pn Pn 06 23 35.9 +0.4
ILAR Eielson Array 8.06 7 Pn Pn 06 23 35.5 -0.1
comp=E,0.2nm,0.3s,baz=194,slow=13,SNR=10
ILAR Sn **Sn 06 25 01.7 -4.9**
comp=E,0.1nm,0.3s,baz=189,slow=16,SNR=2.4
comp=E,0.3nm,0.3s
MLY Manley 8.27 356 Pn Pn 06 23 39.0 +0.7
IMAR Indian Mountai 9.43 349 Pn Pn 06 23 54.4 +0.1
DLBC Dease Lake 10.46 73 Pn Pn 06 24 08.9 +0.5
comp=E,0.3nm,0.3s,baz=301,slow=8.0,SNR=8.8
comp=E,0.6nm,0.3s
BMAR Burnt Mountain 10.87 10 Pn Pn 06 24 17.1 +3.2
YKA Yellowknife Ar 18.26 58 P P 06 25 54.5 +2.7
comp=E,0.1nm,0.3s,baz=268,slow=11,SNR=6.4
comp=E,0.2nm,0.6s
H11N2 WAKE ISLAND Hy 49.14 240 T T 07 23 23.8
baz=30,slow=76,SNR=8.1
H11N3 WAKE ISLAND Hy 49.15 240 T T 07 23 29.4
baz=30,slow=76,SNR=12
H11N1 WAKE ISLAND Hy 49.16 240 T T 07 23 33.3
baz=30,slow=76,SNR=8.4
H11S1 WAKE ISLAND Hy 50.29 239 T T 07 24 59.2
baz=29,slow=76,SNR=16
H11S2 WAKE ISLAND Hy 50.30 239 T T 07 24 54.1
baz=29,slow=76,SNR=10
H11S3 WAKE ISLAND Hy 50.31 239 T T 07 24 52.8
baz=29,slow=76,SNR=12
MKAR Makanchi Array 68.15 325 P P 06 32 40.0 +1.7
comp=E,0.2nm,0.8s,baz=47,slow=6.7,SNR=2.0
comp=E,0.2nm,0.8s

IDC 14 06:25:11.2±3.3, 53°43N×87°49E, h0km, mbtmp2.4/2,
ML2.2/2, Error ellipse: s-maj=30.2km s-min=16.6km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.67**	**289**	Pg		Pn	06 25 41.2	-0.5
	0.6nm,0.3s,baz=106,slow=19,SNR=11							
ZALV				Lg		Lg	06 26 03.8	
	0.6nm,0.3s,baz=109,slow=31,SNR=5.7							
I46RU	**ZALESOVO INFRA**	**1.67**	**289**	I		I	06 35 30.0	
	0.1nm,0.7s,baz=106,slow=334,SNR=5.6							
KURBB	**Kurchatov Arra**	**6.20**	**247**	Pn		Pn	06 26 45.2	+1.3
	baz=61,slow=14,SNR=2.9							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**7.44**	**209**	Pn		Pn	06 27 01.7	+0.7
	0.1nm,0.3s,baz=26,slow=14,SNR=1.8							
	0.1nm,0.3s							

*RSNC **14** 06:35:08.2±2.1, 6°87N×73°14W, h148km±8km, ML3.2, Mw3.9*
*IDC **14** 06:35:09.5±4.2, 6°67N×73°43W, h172km±34km, mb2.7/2, mbtmp3.3/3, MS3.0/1, Error ellipse: s-maj=85.4km s-min=41.7km az=84.0*
ISC 14 06:35:07.5±0.9, 6°87N±0°03×73°12W±0°04, h149km±7km, n37, σ1°62/66, 4C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**192**	⇑*i*P		**Pn**	**06 35 28.3**	**+0.1**
BARC				*e*S		**Sn**	**06 35 43.2**	**-0.8**
BARC				*i*			06 35 44.8	
	comp=Z,495nm,0.2s							
PAMC	**Pamplona, Colo**	**0.63**	**42**	⇓*i*P		**Pn**	**06 35 31.1**	**+1.0**
PAMC				*e*S		**Sn**	**06 35 48.0**	**+0.8**
PAMC				*i*			06 35 50.3	
	comp=Z,355nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.36**	**256**	*e*P		**Pn**	**06 35 34.9**	**-0.8**
PTBC				*e*S		**Sn**	**06 35 56.2**	**-0.9**
PTBC				*i*			06 36 02.7	
	comp=Z,119nm,0.2s							
OCAC	**Ocana**	**1.38**	**352**	*e*P		**Pn**	**06 35 36.4**	**+0.5**
OCAC				*e*S		**Sn**	**06 35 58.0**	**+0.3**
OCAC				*i*			06 36 02.9	
	comp=Z,621nm,0.3s							
TAMC	**Tame, Arauca**	**1.39**	**108**	⇑*i*P		**Pn**	**06 35 36.7**	**+0.7**
TAMC				*e*S		**Sn**	**06 35 58.1**	**+0.5**
TAMC				*i*			06 35 59.7	
	comp=Z,102nm,0.5s							
SPBC	**San Pablo de B**	**1.53**	**218**	*e*P		**Pn**	**06 35 37.2**	**-0.3**
SPBC				*e*S		**Sn**	**06 35 60.0**	**-0.5**
SPBC				*i*			06 36 04.2	
	comp=Z,304nm,0.4s							
ROSC	**El Rosal**	**2.34**	**211**	P		**Pn**	**06 35 48.4**	**+1.3**
	comp=Z,48nm,0.3s,baz=119,slow=22,SNR=118							
ROSC				S		**Sn**	**06 36 15.4**	**-2.0**
	comp=Z,198nm,0.3s,baz=103,slow=16,SNR=11							
ROSC	**El Rosal**	**2.34**	**211**	⇑*e*P		**Pn**	**06 35 48.4**	**+1.3**
ROSC				*e*S		**Sn**	**06 36 18.5**	**+1.1**
ROSC				*i*			06 36 22.7	
	comp=Z,251nm,0.7s							
CVER	**Cruz Verde, Cu**	**2.51**	**202**	*e*P		**Pn**	**06 35 49.9**	**+0.6**
CVER				*e*S		**Sn**	**06 36 21.2**	**-0.2**
CVER				*i*			06 36 32.0	
	comp=Z,146nm,0.6s							
MEDEC	**Medellin, Ant**	**2.52**	**257**	*e*P		**Pn**	**06 35 50.3**	**+1.3**
MEDEC				*e*S		**Sn**	**06 36 21.3**	**+0.4**
UREC	**San Jos de Ur**	**2.55**	**290**	*e*P		**Pn**	**06 35 48.3**	**-0.9**
UREC				*e*S		**Sn**	**06 36 19.3**	**-2.1**
UREC				*i*			06 36 32.5	
	comp=Z,90nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.76**	**234**	*i* P		**Pn**	**06 35 52.4**	**+0.1**
GUY2C				*e*S		**Sn**	**06 36 27.8**	**+1.0**
GUY2C				*i*			06 36 35.0	
	comp=Z,124nm,0.6s							
VILC	**Villavicencio,**	**2.79**	**192**	*e*P		**Pn**	**06 35 51.8**	**-0.7**
VILC				*e*S		**Sn**	**06 36 25.6**	**-1.5**
VILC				*i*			06 36 30.3	
	comp=Z,146nm,0.4s							
PTGC	**Puerto Gaitan,**	**2.83**	**160**	⇑*i*P		**Pn**	**06 35 51.5**	**-1.2**
PTGC				*e*S		**Sn**	**06 36 24.9**	**-2.8**
PTGC				*i*			06 36 27.6	
	comp=Z,60nm,0.5s							
LL6C	**La Loma 6 Bece**	**2.85**	**357**	*e*P		**Pn**	**06 35 52.9**	**-0.2**
LL6C				*e*S		**Sn**	**06 36 28.7**	**+0.4**
LL6C				*i*			06 36 31.6	
	comp=Z,32nm,0.5s							
RECRC	**Villamaria, Ca**	**2.92**	**230**	*e*P		**Pn**	**06 35 57.2**	**+2.9**
RECRC				*e*S		**Sn**	**06 36 34.1**	**+3.7**
NIZA	**Niza - Manizal**	**2.94**	**233**	*e*P		Pn	06 35 59.8	+5.3
NIZA				*e*S		**Sn**	**06 36 34.9**	**+4.2**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*e*P		**Pn**	**06 35 56.3**	**+0.7**
CBOC				*e*S		**Sn**	**06 36 31.1**	**-1.5**
CBOC				*i*			06 36 44.7	
	comp=Z,36nm,0.8s							
DBBC	**Dabeiba**	**3.07**	**273**	*e*P		**Pn**	**06 35 56.1**	**+0.3**
DBBC				*e*S		**Sn**	**06 36 30.9**	**-2.2**
DBBC				*i*			06 36 34.2	
	comp=Z,52nm,0.2s							
ARGC	**Ariguani, Magd**	**3.17**	**340**	*e*P		**Pn**	**06 35 58.6**	**+1.5**
ARGC				*e*S		**Sn**	**06 36 36.7**	**+1.2**
ARGC				*i*			06 36 44.1	
	comp=Z,31nm,0.6s							
SDV	**Santo Domingo**	**3.18**	**51**	⇓*e*P		**Pn**	**06 35 57.7**	**+0.4**
SDV				*e*S		**Sn**	**06 36 35.0**	**-1.0**
SDV				*i*			06 36 40.1	
	comp=Z,26nm,0.4s							
ANIL	**Santa Ana**	**3.27**	**224**	*e*P		**Pn**	**06 35 58.8**	**+0.1**
ANIL				*e*S		**Sn**	**06 36 37.9**	**-0.2**
APAC	**Apartado, Choc**	**3.58**	**287**	*e*P		**Pn**	**06 36 02.5**	**+0.2**
APAC				*e*S		**Sn**	**06 36 43.6**	**-1.1**
APAC				*i*			06 36 53.8	
	comp=Z,25nm,0.3s							
ORTC	**Ortega, Tolima**	**3.62**	**216**	*e*P		**Pn**	**06 36 02.8**	**-0.1**
ORTC				*e*S		**Sn**	**06 36 46.2**	**+0.4**
ORTC				*i*			06 36 52.7	
	comp=Z,79nm,0.6s							
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P		**Pn**	**06 36 02.2**	**-0.9**
SJCC				*e*S		**Sn**	**06 36 44.1**	**-2.1**
SJCC				*i*			06 36 48.1	
	comp=Z,38nm,0.5s							
PLMC	**San Jos del P**	**3.70**	**238**	*e*P		**Pn**	**06 36 03.9**	**0.0**
PLMC				*e*S		**Sn**	**06 36 48.4**	**+0.8**
PLMC				*i*			06 36 51.3	
	comp=Z,29nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	*e*P		**Pn**	**06 36 08.7**	**-0.9**
CRJC				*e*S		**Sn**	**06 36 54.0**	**-3.9**
CRJC				*i*			06 37 08.7	
	comp=Z,31nm,0.2s							
YOTC	**Yotoco, Valle**	**4.30**	**228**	*e*P		**Pn**	**06 36 11.2**	**-0.6**
YOTC				*i*			06 37 13.5	
	comp=Z,7.8nm,0.5s							
SMRC	**Santa Marta, M**	**4.41**	**346**	*e*P		**Pn**	**06 36 14.1**	**+1.0**
SMRC				*e*S		**Sn**	**06 37 01.6**	**-2.7**
SMRC				*i*			06 37 02.3	
	comp=Z,23nm,0.2s							
JAMC	**Jamundi, Valle**	**5.07**	**224**	*e*P		**Pn**	**06 36 21.8**	**-0.3**
JAMC				*e*S		**Sn**	**06 37 19.0**	**-1.1**
JAMC				*i*			06 37 30.0	
	comp=Z,6.5nm,0.4s							
GARC	**Garzon, Huila**	**5.21**	**207**	*e*P		**Pn**	**06 36 22.5**	**-1.5**
GARC				*e*S		**Sn**	**06 37 19.5**	**-4.2**
GARC				*i*			06 37 24.9	
	comp=Z,30nm,0.2s							
POPC	**Popayan, Colom**	**5.57**	**220**	*e*P		**Pn**	**06 36 28.6**	**-0.1**
BBAC	**Balboa, Cauca**	**6.33**	**221**	*e*P		**Pn**	**06 36 38.3**	**-0.5**
BBAC				*e*S		**Sn**	**06 37 47.5**	**-2.8**
BBAC				*i*			06 37 53.9	
	comp=Z,5.1nm,0.3s							
MDP	**Montagnes des**	**20.45**	**94**	LR		LR	06 48 11.0	
	comp=Z,42nm,19.4s,baz=189,slow=38							
TXAR	**Lajitas Array**	**36.43**	**312**	P		**P**	**06 41 57.7**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=121,slow=9.6,SNR=4.1							
	comp=Z,0.1nm,0.4s							
YKA	**Yellowknife Ar**	**63.22**	**340**	P		**P**	**06 45 18.9**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=133,slow=6.7,SNR=6.9							
	comp=Z,0.3nm,0.7s							
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc		**PKPdf**	**06 54 40.6**	**+3.7**
	comp=Z,0.7nm,1.0s,baz=106,slow=2.8,SNR=1.8							

IDC 14 07:00:57.1±3.9, 55°85N×85°97E, h0km, mbtmp2.4/3, ML1.9/3, Error ellipse: s-maj=33.8km s-min=28.9km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.02**	**200**	I	I	07 13 00.0	
	0.1nm,0.8s,baz=19,slow=336,SNR=9.9						
ZALV	**Zalesovo Beam**	**2.02**	**200**	Pn	Pn	07 01 30.8	-1.6
	0.5nm,0.3s,baz=20,slow=17,SNR=4.7						
ZALV				Pg	Pg	07 01 35.4	-0.4
	1.5nm,0.3s,baz=23,slow=17,SNR=12						
ZALV				Lg	Lg	07 02 00.9	
	1.6nm,0.3s,baz=19,slow=31,SNR=5.9						
	1.1nm,0.3s						
KURBB	**Kurchatov Arra**	**6.88**	**224**	Pn	Pn	07 02 38.3	-0.8
	baz=44,slow=14,SNR=3.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**9.36**	**196**	Pn	Pn	07 03 13.7	+0.5
	baz=22,slow=14,SNR=1.9						
	0.1nm,0.3s						

IDC ***14*** *07:02:08.8±3.4,53.82N×90.93E,h0km,mbtmp3.2/2, ML2.8/2,Error ellipse: s-maj=28.3km s-min=23.6km az=53.0*

NNC ***14*** *07:02:12.6±4.5,53.75N×90.40E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=32.9km s-min=24.3km az=54.0, Suspected Mining explosion.*

ISC 14 07:02:11.2±4.3,53.9N±0.2×90.4E±0.2,h0km,n9,σ1s41/10, 3C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.32**	**273**	I	I	07 24 10.0	
	0.2nm,0.9s,baz=89,slow=332,SNR=16						
ZAA0	**Zalesovo Array**	**3.32**	**273**	⇑Pg	**Pb**	**07 03 12.0**	**+1.1**
	1.2nm,0.8s						
ZAA0				⇓Lg	Lg	07 04 01.6	
	3.8nm,0.8s						
ZALV	**Zalesovo Beam**	**3.32**	**273**	Pg	**Pg**	**07 03 12.8**	**-2.0**
	1.0nm,0.3s,baz=93,slow=15,SNR=8.6						
ZALV				Lg	Lg	07 04 03.5	
	1.6nm,0.3s,baz=94,slow=28,SNR=8.0						
KURK	**Kurchatov**	**7.91**	**251**	⇓Sn	**Sn**	**07 05 36.9**	**-0.6**
	3.3nm,0.8s						
KURK				⇓Lg	Lg	07 06 26.5	
	26nm,1.2s						
KURBB	**Kurchatov Arra**	**8.01**	**251**	⇑Pn	**Pn**	**07 04 09.3**	**+0.7**
	3.2nm,1.0s						
KURBB				⇓Sn	**Sn**	**07 05 39.5**	**-0.3**
	10nm,0.7s						
KURBB				⇑Lg	Lg	07 06 26.5	
	26nm,0.8s						
KURBB	**Kurchatov Arra**	**8.01**	**251**	Pn	**Pn**	**07 04 09.7**	**+1.0**
	0.1nm,0.3s,baz=65,slow=14,SNR=9.4						
KURBB				Sn	**Sn**	**07 05 42.1**	**+2.2**
	baz=68,slow=24,SNR=3.3						
KURBB				Lg	Lg	07 06 31.3	
	0.1nm,0.3s,baz=66,slow=32,SNR=7.5						
	1.0nm,0.5s						
MK31	**Makanchi Array**	**8.81**	**219**	Pn	Pn	07 04 21.6	+1.8
	0.2nm,0.4s,baz=39,slow=12,SNR=6.8						
MK31				⇓Sn	**Sn**	**07 05 58.8**	**-0.8**
	1.4nm,0.8s						
MK31				Lg	Lg	07 06 49.2	
	12nm,1.1s,baz=38,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**8.81**	**219**	Pn	**Pn**	**07 04 19.6**	**-0.2**
	0.1nm,0.3s,baz=42,slow=12,SNR=6.1						
MKAR				Sn	**Sn**	**07 06 00.6**	**+1.0**
	0.1nm,0.3s,baz=40,slow=25,SNR=4.0						
MKAR				Lg	Lg	07 06 49.4	
	0.1nm,0.3s,baz=34,slow=32,SNR=5.3						
	0.5nm,0.6s						
SONM	**Songino Array**	**11.76**	**115**	Lg	Lg	07 08 03.9	
	0.1nm,0.3s,baz=305,slow=21,SNR=7.0						

IDC 14 07:05:02.1±2.8,54.17N×86.57E,h0km,mbtmp3.0/2, ML2.6/2,Error ellipse: s-maj=23.7km s-min=13.8km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**259**	I	I	07 11 10.0	
	baz=78,slow=330,SNR=3.2						
ZALV	**Zalesovo Beam**	**1.06**	**259**	Pg	Pg	07 05 20.6	-1.7
	0.8nm,0.3s,baz=81,slow=17,SNR=10						
ZALV				Lg	Lg	07 05 38.1	
	2.7nm,0.3s,baz=77,slow=29,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.07**	**237**	Pn	Pn	07 06 33.5	+0.6
	0.1nm,0.3s,baz=54,slow=13,SNR=4.8						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.87**	**202**	Pn	Pn	07 06 59.0	+1.3
	0.1nm,0.3s,baz=24,slow=14,SNR=9.9						
	0.6nm,0.5s						

IDC ***14*** *07:05:46.8±2.7,59.76N×153.94W,h46km±39km,mb3.4/4, mbtmp3.4/7,ML3.2/3,Error ellipse: s-maj=38.4km s-min=18.7km az=93.0*

NEIC ***14*** *07:05:50.1±0.8,59.70N±0.04×152.97W±0.05,h97km±5km, Error ellipse: s-maj=5.3km s-min=3.6km az=174.0*

AEIC ***14*** *07:05:51.2±0.9,59.70N±0.04×152.94W±0.08,h91km±5km, ML3.0,ML3.3/134(NEIC),Error ellipse: s-maj=6.5km s-min=6.1km az=154.0*

ISC 14 07:05:50.1±0.8,59.69N±0.03×152.95W±0.04,h99km±5km, n150,σ0s67/129,mb3.7/4,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.15**	**255**		**Pn**	**07 06 03.8**	**-0.3**
P19K	**Oil Pt**	**0.15**	**255**		**Sn**	**07 06 14.0**	**-0.6**
IVE	**Iliamna Volcan**	**0.33**	**354**		**Pn**	**07 06 04.2**	**-0.6**
IVE					**Sn**	**07 06 14.9**	**-1.0**
AU22	**Augustine Moun**	**0.38**	**213**		**Pn**	**07 06 04.7**	**-0.3**
AU22					**Sn**	**07 06 15.9**	**-0.2**
AUL	**Augustine Lava**	**0.40**	**219**		**Pn**	**07 06 05.0**	**-0.1**
AUL					**Sn**	**07 06 15.9**	**-0.4**
AUCH	**Augustine Cone**	**0.41**	**217**		**Pn**	**07 06 05.2**	**-0.1**
O20K	**Slope Mountain**	**0.42**	**23**		**Pn**	**07 06 05.2**	**-0.2**
HOM	**Homer**	**0.67**	**92**		**Pn**	**07 06 07.3**	**+0.2**
HOM				IAML		07 06 22.0	
	comp=E,1μm,0.6s						
HOM				IAML		07 06 22.0	
	comp=N,1μm,0.7s						
RED	**Redoubt Volcan**	**0.73**	**7**		**Pn**	**07 06 07.3**	**-0.5**
RED					**Sn**	**07 06 20.3**	**-0.9**
RSO	**Redoubt South**	**0.78**	**7**		**Pn**	**07 06 08.1**	**-0.3**
RDWB	**Redoubt West**	**0.80**	**4**		**Sn**	**07 06 21.5**	**-0.9**
Q19K	**Cape Douglas,**	**0.84**	**205**		**Pn**	**07 06 08.4**	**-0.4**
Q19K				IAML		07 06 34.8	
	comp=N,275nm,0.9s						
O19K	**Port Alsworth**	**0.85**	**307**		**Pn**	**07 06 08.6**	**-0.2**
O19K				IAML		07 06 26.0	
	comp=E,922nm,0.5s						
NCT	**North Crescent**	**0.87**	**1**		**Sn**	**07 06 22.8**	**-0.8**
CNPM	**China Poot**	**0.89**	**100**	Pn	**Pn**	**07 06 09.2**	**-0.1**
CNPM				IAML		07 06 24.4	
	comp=N,451nm,0.3s						
CNPM				IAML		07 06 24.5	
	comp=E,338nm,0.4s						
RDJH	**Redoubt Jeurge**	**0.91**	**5**		**Sn**	**07 06 23.6**	**-0.6**
RDT	**Redoubt**	**0.93**	**17**		**Sn**	**07 06 23.7**	**-0.7**
BRLK	**Bradley Lake**	**1.05**	**85**	Pn	**Pn**	**07 06 10.4**	**-0.5**
BRLK				IAML		07 06 27.4	
	comp=E,389nm,0.3s						
BRLK				IAML		07 06 27.0	
	comp=N,393nm,0.2s						
BRSE	**Bradley Lake S**	**1.12**	**86**		**Pn**	**07 06 11.2**	**-0.6**
SYI	**Shuyak Island**	**1.12**	**165**	Pn	**Pn**	**07 06 12.0**	**+0.2**
SYI				IAML		07 06 29.4	
	comp=E,505nm,0.5s						
SYI				IAML		07 06 30.1	
	comp=N,562nm,0.3s						
O18K	**Koktuh Hills**	**1.15**	**279**	Pn	**Pn**	**07 06 11.8**	**-0.4**
O18K				IAML		07 06 28.5	
	comp=N,281nm,0.8s						
O18K	**Koktuh Hills**	**1.15**	**279**		**Sn**	**07 06 27.8**	**-1.0**
P18K	**Big Mountain,**	**1.20**	**256**	Pn	**Pn**	**07 06 12.0**	**-0.7**
N19K	**Bonanza Creek**	**1.36**	**327**		**Pn**	**07 06 14.3**	**-0.3**
CAPN	**Captain Cook N**	**1.40**	**39**		**Pn**	**07 06 16.8**	**+1.7**
SLKM	**Skilak Lake**	**1.59**	**58**		**Pn**	**07 06 17.5**	**0.0**
N18K	**Kilae Creek**	**1.77**	**305**		**Pn**	**07 06 19.4**	**-0.3**
KVTA	**Katmai Vly 10**	**1.79**	**224**		**Pn**	**07 06 20.0**	**+0.1**
O22K	**Cooper Landing**	**1.80**	**63**		**Pn**	**07 06 20.0**	**0.0**
SEW	**Seward**	**1.81**	**75**		**Pn**	**07 06 19.5**	**-0.6**
P17K	**Kvichak River**	**1.85**	**256**		**Pn**	**07 06 20.7**	**+0.1**
STLK	**Strandline Lak**	**1.90**	**16**		**Pn**	**07 06 21.5**	**+0.2**
SVW2	**Sparrevohn**	**1.92**	**318**	Pn	**Pn**	**07 06 21.1**	**-0.5**
SVW2	**Sparrevohn**	**1.92**	**318**	P	**Pn**	**07 06 21.1**	**-0.5**
KDAK	**Kodiak Island**	**1.92**	**174**		**Pn**	**07 06 21.1**	**-0.5**
KDAK	**Kodiak Island**	**1.92**	**174**	IAML		07 06 46.3	
	comp=N,207nm,0.3s						
KDAK				IAML		07 06 53.5	
	comp=N,181nm,0.7s						
KDAK	**Kodiak Island**	**1.92**	**174**	P	**Pn**	**07 06 21.0**	**-0.6**
	comp=N,21nm,0.3s,baz=64,slow=9.5,SNR=362						
KDAK				S	**Sn**	**07 06 44.7**	**-0.9**
	comp=N,85nm,0.4s,baz=153,slow=23,SNR=23						
	comp=N,66nm,0.4s						
ACHA	**Angle Creek He**	**1.93**	**221**		**Pn**	**07 06 22.6**	**+0.8**
FIS	**Fire Island**	**1.99**	**42**		**Pn**	**07 06 23.7**	**+1.3**
FIS				IAML		07 06 51.7	
	comp=N,317nm,0.6s						
FIS				IAML		07 06 51.8	
	comp=E,286nm,0.8s						
ANCK	**Angle Creek**	**1.99**	**222**		**Pn**	**07 06 22.8**	**+0.2**
SUA	**Susitna One**	**2.08**	**31**		**Pn**	**07 06 24.4**	**+0.6**
SUA				IAML		07 06 50.8	
	comp=E,289nm,0.7s						
SUA				IAML		07 06 51.9	
	comp=N,326nm,0.5s						
CNTC	**Contact Creek**	**2.09**	**228**		**Pn**	**07 06 23.9**	**+0.1**
O17K	**Koliganek Bris**	**2.10**	**274**		**Pn**	**07 06 23.6**	**-0.3**
RC01	**Rabbit Creek A**	**2.12**	**47**	Pn	**Pn**	**07 06 24.3**	**+0.1**
M20K	**Styx River**	**2.20**	**358**		**Pn**	**07 06 25.5**	**+0.2**
N17K	**Nushagak Hills**	**2.28**	**293**	Pn	**Pn**	**07 06 25.9**	**-0.3**
M18K	**Stony River**	**2.29**	**323**		**Pn**	**07 06 26.1**	**-0.3**
M19K	**Big River Lodg**	**2.33**	**343**		**Pn**	**07 06 26.8**	**-0.1**
SKT	**Skwentna**	**2.40**	**16**	IAML		07 07 01.4	
	comp=E,64nm,0.3s						
OHAK	**Old Harbor**	**2.48**	**184**	Pn	**Pn**	**07 06 27.9**	**-1.0**
OHAK				IAML		07 06 58.3	
	comp=N,181nm,0.2s						
OHAK				IAML		07 06 58.6	
	comp=E,162nm,0.3s						
OHAK	**Old Harbor**	**2.48**	**184**	P	**Pn**	**07 06 27.9**	**-1.0**
O16K	**Kokwok River B**	**2.61**	**270**		**Pn**	**07 06 30.4**	**-0.2**
P16K	**Nushagak River**	**2.66**	**258**		**Pn**	**07 06 31.6**	**+0.4**
L19K	**White Mountain**	**2.67**	**340**	Pn	**Pn**	**07 06 31.1**	**-0.2**
PMR	**Palmer**	**2.68**	**43**	Pn	**Pn**	**07 06 31.2**	**-0.2**
PMR				IAML		07 07 02.9	
	comp=E,153nm,0.3s						
PMR				IAML		07 07 03.5	
	comp=N,140nm,0.2s						
PMR	**Palmer**	**2.68**	**43**	P	**Pn**	**07 06 31.3**	**-0.2**
M17K	**Holitna River**	**2.80**	**310**		**Pn**	**07 06 33.1**	**0.0**
M17K				IAML		07 07 06.0	
	comp=N,74nm,0.8s						
M17K				IAML		07 07 08.2	
	comp=E,63nm,0.8s						
KNK	**Knik Glacier**	**2.81**	**50**		**Pn**	**07 06 32.8**	**-0.5**
N16K	**Nishlik Lake**	**3.02**	**288**		**Pn**	**07 06 36.1**	**+0.1**
SML	**Sawmill**	**3.11**	**45**	IAML		07 07 18.3	
	comp=E,106nm,0.7s						
SML				IAML		07 07 18.7	
	comp=N,127nm,0.5s						
L18K	**Granite Mounta**	**3.12**	**326**		**Pn**	**07 06 37.1**	**-0.3**
SII	**Sitkinak Islan**	**3.21**	**192**		**Pn**	**07 06 38.1**	**-0.4**
SII	**Sitkinak Islan**	**3.21**	**192**	IAML		07 08 27.1	
	comp=E,109nm,2.9s						
SII	**Sitkinak Islan**	**3.21**	**192**	P	**Pn**	**07 06 38.2**	**-0.4**
PPLA	**Purkeypile**	**3.24**	**6**		**Pn**	**07 06 39.8**	**+0.8**
M16K	**Timber Creek**	**3.27**	**297**		**Pn**	**07 06 39.6**	**+0.2**
M16K	**Timber Creek**	**3.27**	**297**	IAML		07 07 17.5	
	comp=E,34nm,2.9s						
HIN	**Hinchinbrook I**	**3.31**	**75**	IAML		07 07 19.4	
	comp=E,63nm,0.8s						
HIN				IAML		07 07 19.9	
	comp=N,78nm,1.0s						
Q23K	**Middleton Isla**	**3.37**	**92**		**Pn**	**07 06 40.4**	**-0.2**
MID	**Middleton Isla**	**3.38**	**92**		**Pn**	**07 06 40.3**	**-0.4**
MID	**Middleton Isla**	**3.38**	**92**	P	**Pn**	**07 06 40.5**	**-0.2**
SCM	**Sheep Creek Mo**	**3.50**	**50**		**Pn**	**07 06 41.9**	**-0.6**
SCM	**Sheep Creek Mo**	**3.50**	**50**	IAML		07 07 22.4	
	comp=E,104nm,0.4s						
SCM				IAML		07 07 25.1	
	comp=N,105nm,0.6s						
O15K	**Ungalikthiuk R**	**3.55**	**265**		**Pn**	**07 06 43.6**	**+0.5**
TTA	**Tatalina**	**3.57**	**337**	Pn	**Pn**	**07 06 42.9**	**-0.5**
TTA	**Tatalina**	**3.57**	**337**	P	**Pn**	**07 06 43.0**	**-0.4**
L17K	**Donlin**	**3.58**	**315**		**Pn**	**07 06 43.1**	**-0.4**
N15K	**Kwethluk River**	**3.62**	**281**		**Pn**	**07 06 44.9**	**+0.8**
N15K	**Kwethluk River**	**3.62**	**281**	IAML		07 08 17.8	
	comp=N,37nm,3.1s						
N15K				IAML		07 08 36.6	
	comp=E,33nm,4.2s						
EYAK	**Cordova Ski Ar**	**3.71**	**73**	P	**Pn**	**07 06 44.9**	**-0.2**
WAT7	**Susitna Watana**	**3.72**	**30**		**Pn**	**07 06 45.6**	**+0.1**
CAST	**Castle Rocks**	**3.76**	**6**		**Pn**	**07 06 46.2**	**+0.3**
DIV	**Divide**	**3.84**	**65**		**Pn**	**07 06 46.6**	**-0.5**
KLU	**Klutina**	**3.91**	**59**		**Pn**	**07 06 47.1**	**-0.8**
KLU	**Klutina**	**3.91**	**59**	IAML		07 07 32.5	
	comp=E,73nm,0.2s						
TRF	**Thorofare Moun**	**3.98**	**18**	IAML		07 07 53.9	
	comp=N,29nm,1.5s						
TRF				IAML		07 08 07.2	
	comp=E,23nm,3.1s						
K17K	**Iditarod**	**3.99**	**322**	IAML		07 08 29.9	
	comp=E,26nm,3.3s						
K17K				IAML		07 08 48.5	
	comp=N,23nm,3.7s						
M15K	**Kasigluk River**	**3.99**	**288**		**Pn**	**07 06 49.3**	**+0.3**
KTH	**Kantishna Hill**	**4.00**	**13**	IAML		07 07 58.4	
	comp=N,20nm,1.0s						
M24K	**Tolsona, Glenn**	**4.10**	**51**		**Pn**	**07 06 50.3**	**-0.3**
GOAT	**Goat Mountain**	**4.21**	**74**		**Pn**	**07 06 51.0**	**-1.0**
RND	**Reindeer**	**4.21**	**26**	IAML		07 07 40.3	
	comp=E,27nm,0.3s						
RND				IAML		07 07 44.3	
	comp=N,18nm,0.6s						
CHUM	**Lake Minchumin**	**4.22**	**4**		**Pn**	**07 06 52.3**	**+0.3**
O14K	**Tigyukauivet M**	**4.26**	**268**		**Pn**	**07 06 52.8**	**+0.1**
O14K	**Tigyukauivet M**	**4.26**	**268**	IAML		07 07 51.7	
	comp=E,36nm,3.7s						
O14K				IAML		07 09 20.3	
	comp=N,48nm,2.9s						
KAIM	**Kayak Island**	**4.32**	**83**		**Pn**	**07 06 53.2**	**-0.2**
J19K	**Poorman**	**4.50**	**345**	IAML		07 07 43.8	
	comp=E,12nm,4.5s						
J19K				IAML		07 08 09.9	
	comp=N,12nm,4.0s						
BPAW	**Bear Paw Mtn.**	**4.52**	**11**		**Pn**	**07 06 55.8**	**-0.4**
BPAW	**Bear Paw Mtn.**	**4.52**	**11**	IAML		07 08 13.2	
	comp=N,17nm,4.1s						
BPAW				IAML		07 08 28.7	
	comp=E,13nm,4.3s						
J20K	**Nowinta River**	**4.54**	**353**		**Pn**	**07 06 56.3**	**-0.1**
J20K	**Nowinta River**	**4.54**	**353**	IAML		07 08 00.0	
	comp=N,12nm,3.5s						
J20K				IAML		07 08 03.7	
	comp=E,14nm,4.1s						
N25K	**Chitina, Valde**	**4.54**	**61**	IAML		07 07 49.8	
	comp=E,20nm,0.6s						
N25K				IAML		07 08 14.8	
	comp=N,20nm,3.7s						
HARP	**HAARP**	**4.66**	**51**		**Pn**	**07 06 57.9**	**-0.2**
J17K	**VABM Dome**	**4.73**	**324**		**Pn**	**07 06 58.7**	**-0.3**
J17K	**VABM Dome**	**4.73**	**324**	IAML		07 08 23.8	
	comp=N,16nm,4.1s						
J17K				IAML		07 09 58.6	
	comp=E,19nm,4.2s						
BWN	**Browne**	**4.79**	**19**		**Pn**	**07 07 00.0**	**+0.2**
BWN	**Browne**	**4.79**	**19**	IAML		07 08 18.5	
	comp=E,34nm,1.3s						
BWN				IAML		07 08 43.5	
	comp=N,40nm,2.8s						
GLB	**Gilahina Butte**	**4.84**	**65**		**Pn**	**07 06 59.6**	**-0.9**
GLB	**Gilahina Butte**	**4.84**	**65**	IAML		07 08 24.3	
	comp=E,16nm,3.5s						
GLB				IAML		07 08 32.7	
	comp=N,18nm,3.7s						
PAX	**Paxson**	**4.88**	**44**		**Pn**	**07 07 00.5**	**-0.6**
KHIT	**Khitrov Hills**	**4.92**	**77**		**Pn**	**07 07 00.2**	**-1.5**
VRDI	**Verde Repeater**	**4.95**	**68**	IAML		07 08 51.1	
	comp=N,18nm,4.5s						
VRDI				IAML		07 10 06.5	
	comp=E,11nm,3.9s						
CRQM	**Cirque**	**5.01**	**73**		**Pn**	**07 07 02.6**	**-0.4**
WAX	**Waxell Ridge**	**5.12**	**77**		**Pn**	**07 07 03.8**	**-0.5**
TGL	**Tana Glacier**	**5.16**	**74**		**Pn**	**07 07 04.4**	**-0.5**
TGL	**Tana Glacier**	**5.16**	**74**	IAML		07 08 04.4	
	comp=N,22nm,2.1s						
TGL				IAML		07 08 31.8	
	comp=E,24nm,4.5s						
MCARA	**McCarthy VSAT**	**5.19**	**67**		**Pn**	**07 07 05.4**	**+0.2**
MCARA	**McCarthy VSAT**	**5.19**	**67**	IAML		07 08 41.4	
	comp=N,26nm,2.9s						
NEA2	**Nenana**	**5.25**	**19**	IAML		07 08 16.4	
	comp=E,13nm,3.3s						
NEA2				IAML		07 08 36.8	
	comp=N,11nm,3.5s						
WRH	**Wood River Hil**	**5.31**	**23**	IAML		07 08 07.1	
	comp=N,12nm,4.7s						
WRH				IAML		07 10 33.9	
	comp=E,11nm,4.7s						
ISLE	**Juniper Island**	**5.38**	**76**		**Pn**	**07 07 07.5**	**-0.5**
ISLE	**Juniper Island**	**5.38**	**76**	IAML		07 08 08.8	
	comp=E,26nm,1.5s						
MLY	**Manley**	**5.46**	**10**		**Pn**	**07 07 08.8**	**-0.1**
MESA	**MESA**	**5.55**	**80**		**Pn**	**07 07 11.0**	**+0.6**
RIDG	**Independent Ri**	**5.60**	**40**		**Pn**	**07 07 10.6**	**-0.2**
GRNC	**Granite Creek**	**5.68**	**75**		**Pn**	**07 07 12.2**	**+0.1**
COLA	**College**	**5.72**	**22**		**Pn**	**07 07 11.9**	**-0.4**
COLA	**College**	**5.72**	**22**	P	**Pn**	**07 07 12.0**	**-0.4**
ILAR	**Eielson Array**	**5.83**	**26**	P	**Pn**	**07 07 13.2**	**-0.7**
	comp=E,0.9nm,0.3s,baz=220,slow=14,SNR=28						
ILAR				S	**Sn**	**07 08 15.8**	**-3.4**
	comp=E,1.7nm,0.5s,baz=191,slow=16,SNR=4.3						
	comp=E,1.9nm,0.4s						
H21K	**Melozitna Rive**	**5.99**	**1**		**Pn**	**07 07 15.8**	**-0.2**
POKR	**Poker Plat Res**	**6.02**	**23**		**Pn**	**07 07 16.1**	**-0.4**
H18K	**Honhosa River**	**6.03**	**338**		**Pn**	**07 07 16.2**	**-0.4**
SCRK	**Sand Creek**	**6.04**	**41**		**Pn**	**07 07 16.9**	**+0.1**
SAMH	**Samovar Hills**	**6.14**	**81**		**Pn**	**07 07 19.0**	**+0.8**
IMAR	**Indian Mountai**	**6.33**	**357**	Pn	**Pn**	**07 07 20.9**	**+0.3**
BCAR	**Beaver Creek A**	**6.34**	**53**	Pn	**Pn**	**07 07 21.2**	**+0.3**
PCA	**Pinnacle**	**6.40**	**81**		**Pn**	**07 07 21.8**	**0.0**
J26L	**Joseph Creek**	**6.53**	**38**		**Pn**	**07 07 23.6**	**+0.2**
PRP	**Porcupine Dome**	**6.77**	**27**	Pn	**Pn**	**07 07 26.2**	**-0.6**
PNL	**Peninsula**	**6.87**	**84**	P	**Pn**	**07 07 27.6**	**-0.4**
I26K	**Coal Creek Min**	**7.23**	**35**		**Pn**	**07 07 32.7**	**-0.1**
YUK6	**Outpost Mounta**	**7.35**	**74**		**Pn**	**07 07 35.4**	**+0.6**
F21K	**Alatna River**	**7.56**	**358**		**Pn**	**07 07 38.5**	**+1.0**
P29M	**Windy Craggy**	**7.71**	**84**		**Pn**	**07 07 40.0**	**+0.6**
SKAG	**Skagway**	**8.95**	**84**	P	**Pn**	**07 07 56.9**	**+0.7**
YKA	**Yellowknife Ar**	**18.56**	**65**	P	**Pn**	**07 10 03.0**	**+2.9**
	baz=274,slow=8.0,SNR=4.0						
	comp=E,0.1nm,0.5s						
SONM	**Songino Array**	**54.99**	**306**	P	**P**	**07 15 11.6**	**+0.9**
	comp=E,0.6nm,0.8s,baz=53,slow=7.9,SNR=3.5						
	comp=E,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**57.64**	**324**	P	**P**	**07 15 29.3**	**+0.1**
	comp=E,0.8nm,0.5s,baz=16,slow=7.5,SNR=3.3						
	comp=E,0.8nm,0.5s						
BVAR	**Borovoye Array**	**62.35**	**332**	P	**P**	**07 16 01.0**	**-0.5**
	comp=E,0.4nm,0.5s,baz=33,slow=8.6,SNR=3.0						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**64.69**	**321**	P	**P**	**07 16 16.4**	**-0.6**
	comp=E,0.1nm,0.4s,baz=48,slow=8.6,SNR=2.2						
	comp=E,0.1nm,0.4s						

BJI ***14*** *07:13:58.2±0.0,18.50N×95.17E,h92km,mb4.7/57, mb4.9/29*

MOS ***14*** *07:13:59.9±0.8,18.81N×95.39E,h85km,mb4.8/32,Error ellipse: s-maj=9.3km s-min=4.5km az=115.4*

NEIC ***14*** *07:14:02.0±1.4,18.75N±0.07×95.30E±0.08,h85km±7km, mb4.7/90,Error ellipse: s-maj=12.7km s-min=8.1km az=53.0*

IDC ***14*** *07:14:01.4±1.4,18.81N×95.42E,h83km±11km,mb4.2/26, mbtmp4.5/29,MS3.5/29,Error ellipse: s-maj=15.1km s-min=7.9km az=38.0*

NDI ***14*** *07:14:01.2±3.4,18.61N×95.29E,h116km±136km,ML4.9, MW4.7,mb4.7(NEIC)*

DJA ***14*** *07:14:01.5±0.5,19.3×9.5E±.,h77km±6km,M5.2/16, mB5.7/6,mb4.8/16,MLv5.3/6,Mw(mB)5.2/6*

ISC 14 07:14:01.5±0.5,18.75N±0.04×95.26E±0.04,h87km±4km, h87km:pP-P,n274,σ1s46/267,mb4.7/108,20C-11D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MND	**Mandalay**	**3.35**	**14**	Pn	**Pn**	**07 14 51.6**	**-0.1**
CHTO	**Chiang Mai**	**3.49**	**88**	Pn	**Pn**	**07 14 53.1**	**-0.5**
CHTO	**Chiang Mai**	**3.49**	**88**	P	**Pn**	**07 14 53.8**	**+0.2**
CHTO	**Chiang Mai**	**3.49**	**88**	P	**Pn**	**07 14 53.9**	**-0.2**
CM31	**Chiang Mai Arr**	**3.50**	**94**		**Pn**	**07 14 53.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**3.50**	**94**	Pn	**Pn**	**07 14 54.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**3.50**	**94**	P	**Pn**	**07 14 53.1**	**-0.7**
	22nm,0.8s,baz=272,slow=14,SNR=37						
CMAR				S	**Sn**	**07 15 30.6**	**-3.6**
	45nm,0.4s,baz=276,slow=16,SNR=7.0						
SAIH	**SAIHA**	**4.29**	**331**	*e*P	**Pn**	**07 15 06.5**	**+1.9**
SAIH				*e*S	**Sn**	**07 15 55.6**	**+2.1**
SAIH				IAML		07 15 57.6	
	comp=E,2μm,0.4s						
SAIH				IAML		07 16 01.8	
	comp=E,2μm,0.5s						
CRAI	**Chiangrai**	**5.04**	**72**	Pn	**Pn**	**07 15 15.2**	**+0.4**
BRDH	**Bariadhala**	**5.17**	**320**	P	**Pn**	**07 15 17.2**	**+0.7**
	comp=E,116nm,0.3s,baz=90,slow=9.2,SNR=8.0						
BRDH				S	**Sn**	**07 16 14.6**	**

SLVN Son La 8.52 71 Pn **Pn** 07 16 02.3 0.0
DIBR DIBRUGARH 8.69 358 *ex* x 07 17 39.8
ZIRO ZIRO 8.84 352 *eP* **Pn** 07 16 06.6 +0.1
ZIRO *eS* **Sn** 07 17 39.3 -5.3
BWNR Bhubaneshwar 9.05 281 *eP* **Pn** 07 16 08.7 -0.7
PASG PASIGHAT 9.39 341 *eP* **Pn** 07 16 12.9 -1.1
PASG *eS* **Sn** 07 17 51.3 -6.5
KMI Kunming 9.40 46 ⇑P Pn 07 16 19.3 +4.9
KMI S **Sn** 07 18 02.3 +3.9
KMI pmax pmax
comp=E,57nm,1.1s
KMI pmax pmax
comp=E,390nm,4.9s
KMI LR LR
comp=E,360nm,7.0s
KMI LR LR
comp=E,330nm,10.5s
KMI LR LR
comp=E,250nm,7.6s
PZH PanZhiHua 9.77 37 P **Pn** 07 16 21.3 +2.1
PZH pmax pmax
comp=E,7.0nm,0.8s
PZH pmax pmax
comp=E,100nm,4.7s
BOK Bokaro 10.08 302 *eP* **Pn** 07 16 22.7 -0.7
UBPT Khong Chiam 10.35 108 Pn **Pn** 07 16 26.8 -0.4
UBPT Khong Chiam 10.35 108 P **Pn** 07 16 27.8 +0.6
GTK Tadong 10.51 326 *eP* **Pn** 07 16 30.8 +1.5
GTK IAML 07 18 24.4
comp=E,717nm,0.3s
GTK IAML 07 18 24.9
comp=N,785nm,0.4s
VIS Vishakhapatnam 11.39 267 *eP* **Pn** 07 16 41.2 0.0
VIS *eS* Sn 07 18 35.1 -11
LSA Lhasa 11.53 342 **Pn** 07 16 42.2 -1.3
LSA Lhasa 11.53 342 P **Pn** 07 16 42.2 -1.3
GYA Guiyang 13.02 52⇑ *iP* **Pn** 07 17 04.5 +1.2
GYA pmax pmax
comp=N,18nm,1.2s
GYA pmax pmax
comp=N,190nm,3.6s
CD2 Chengdu 14.35 31 P **Pn** 07 17 20.6 +0.1
IPM Ipoh 15.26 158 **Pn** 07 17 30.8 -1.4
IPM Ipoh 15.26 158 P **P** 07 17 34.6 -0.6
HYB Hyderabad 15.94 268 *eP* **P** 07 17 43.7 +0.9
HYB *eS* **S** 07 20 47.5 +1.6
PSI Prapat 16.25 167 P **P** 07 17 48.5 +2.2
PSI Prapat 16.25 167 P **P** 07 17 45.8 -0.5
PSI pmax pmax
comp=Z,7.0nm,0.8s
RPSI Rantau Prapat 16.35 167 Pn **Pn** 07 17 45.8 -0.1
ENH Enshi 17.28 46 **Pn** 07 17 56.0 -1.3
ENH Enshi 17.28 46 P **P** 07 17 58.7 +1.3
LGTI Lohaghat 17.34 311 *eP* **P** 07 18 01.4 +3.3
GOMU GeErMu 17.39 359 P **Pn** 07 17 57.5 -1.4
GOMU pmax pmax
comp=Z,20nm,0.8s
PTH Pithoragarh 17.42 311 *eP* **P** 07 18 03.2 +3.9
GSI Gunungsitoli 17.48 172 P **P** 07 17 58.3 -1.5
PALK Pallekele 18.18 233 P **Pn** 07 18 10.3 +1.9
comp=Z,3.9nm,0.4s,baz=165,slow=12,SNR=2.6
PALK S S 07 21 16.7 -14
comp=Z,2.6nm,0.4s,baz=45,slow=19,SNR=1.8
PALK LR LR 07 26 08.5
comp=Z,56nm,18.2s,baz=161,slow=40
LZH Lanzhou 18.86 22 ⇓P **Pn** 07 18 16.6 +0.2
LZH sP sP 07 18 44.4 +1.4
LZH pmax pmax
comp=Z,43nm,1.4s
XAN Xi'an 19.50 36 ⇑P **P** 07 18 21.0 -0.8
XAN pmax pmax
comp=Z,18nm,1.1s
WHN Wuhan 20.91 52 ⇓P **P** 07 18 37.8 +0.8
WHN pP **pP** 07 18 55.0 +0.6
GTA Gaotai 20.97 10 *eP* **P** 07 18 37.8 +0.1
GTA S **S** 07 22 27.9 +1.4
GTA ScP **ScP** 07 26 11.0 0.0
GTA pmax pmax
comp=Z,35nm,0.8s
LYN LuoYang 21.95 41 ⇓P **P** 07 18 48.1 0.0
LYN pP pP 07 19 08.8 +3.2
LYN pmax pmax
comp=Z,49nm,0.9s
LYN pmax pmax
comp=Z,190nm,6.1s
QZH Quanzhou 22.50 70 P **P** 07 18 52.0 -2.0
KSM Kuching 22.63 138 P **P** 07 18 54.5 -1.0
KSM IAmb IAmb 07 19 12.5
comp=Z,39nm,0.7s
SBUM Sibu 23.20 132 P **P** 07 19 00.2 -0.8
NIL Nilore 24.63 311 P **P** 07 19 14.5 +0.6
NIL **pP** 07 19 33.9 +0.2
NIL IAmb IAmb 07 19 37.9
comp=Z,42nm,0.8s
NJ2 Nanjing 25.02 53 *eP* **P** 07 19 19.0 +1.5
NJ2 pP **pP** 07 19 35.8 -1.5
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
NJ2 pmax pmax
comp=Z,120nm,4.7s
HNS HongShan 25.20 39 ⇑P **P** 07 19 19.8 +0.8
HNS pmax pmax
comp=Z,13nm,1.1s
BTO Baotou 25.21 27⇓ *iP* **P** 07 19 19.5 +0.3
BTO pP **pP** 07 19 41.0 +2.1
BTO sP **sP** 07 19 52.8 +3.6
BTO PP **PnPn** 07 20 02.8 +4.3
BTO S **S** 07 23 38.9 +0.6
BTO pmax pmax
comp=Z,42nm,1.4s
BTO pmax pmax
comp=Z,110nm,4.6s
WMQ Urumqi 25.80 347 *eP* **P** 07 19 26.3 +1.8
WMQ pmax pmax
comp=Z,29nm,0.9s
WMQ pmax pmax
comp=Z,210nm,4.7s
HHC Hu-ho-hao-te 26.09 29 *eP* **P** 07 19 27.5 +0.3
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,110nm,3.9s
TARG Taragay, Kyrgy 27.32 331 IAmb IAmb 07 20 01.8
comp=Z,19nm,0.9s
SHLS Shalkode 27.75 335 *eP* **P** 07 19 41.7 -0.4
baz=335
SHLS Shalkode 27.75 335 *eP* **P** 07 19 41.7 -0.4
BJT Baijiatuan 27.82 36 P **P** 07 19 45.0 +2.4
BJI Beijing 27.84 36 P **P** 07 19 43.8 +1.1
BJI pmax pmax
comp=Z,4.0nm,1.0s
NRN Naryn 27.96 328 P **P** 07 19 44.8 +0.6
NRN Naryn 27.96 328 P **P** 07 19 44.8 +0.6
NRN pmax pmax
comp=Z,10.0nm,1.2s
KBL Kabul 28.11 309 P **P** 07 19 46.1 +0.6
KBL IAmb IAmb 07 20 14.8
comp=Z,11nm,0.8s
KBL Kabul 28.11 309 P **P** 07 19 46.1 +0.6
KBL pmax pmax
comp=Z,11nm,0.8s
SATY Saty 28.11 333⇑ *iP* **P** 07 19 46.6 +1.3
baz=333
SATY Saty 28.11 333 *c iP* **P** 07 19 46.6 +1.3
LEM Lembang 28.18 153 LR LR 07 33 55.3
comp=Z,58nm,18.1s,baz=249,slow=42
KPKS Kokpek 28.33 334 *eP* **P** 07 19 48.0 +0.8
baz=334
KPKS Kokpek 28.33 334 *eP* **P** 07 19 48.0 +0.8
BOOM Boomskoye usch 28.79 329 P **P** 07 19 50.6 -0.8
BOOM IAmb IAmb 07 20 19.7
comp=Z,14nm,1.4s
BOOM Boomskoye usch 28.79 329 P **P** 07 19 50.6 -0.8
BOOM pmax pmax
comp=Z,14nm,1.4s
MDOK Medeo 28.79 332 *i* P **P** 07 19 52.7 +1.3
baz=332
MDOK Medeo 28.79 332 *i* P **P** 07 19 52.7 +1.3
CHKK Chushkaly 29.37 332 *eP* **P** 07 19 56.6 +0.2
baz=332
CHKK Chushkaly 29.37 332 *eP* **P** 07 19 56.5 +0.2
AAK Ala-Archa 29.61 328 P **P** 07 19 59.1 +0.5
AAK IAmb IAmb 07 20 22.3
comp=Z,21nm,1.1s
AAK Ala-Archa 29.61 328 *c iP* **P** 07 20 00.2 +1.6
AAK pmax pmax
comp=Z,11nm,1.0s
AAK Ala-Archa 29.61 328 P **P** 07 20 00.5 +1.9
comp=Z,10nm,0.9s,baz=153,slow=6.1,SNR=23
comp=Z,10nm,0.9s
ZSN Zaisan 29.87 346 *eP* **P** 07 20 01.6 +0.9
baz=346
ZSN Zaisan 29.87 346 *eP* **P** 07 20 01.5 +0.9
BTK Batken 29.90 320 P **P** 07 20 01.6 +0.4
BTK IAmb IAmb 07 20 03.5
comp=Z,7.2nm,0.6s
BTK Batken 29.90 320 P **P** 07 20 01.6 +0.4
BTK pmax pmax
comp=Z,7.0nm,0.6s
MK31 Makanchi Array 29.94 342 P **P** 07 20 02.0 +0.7
MK31 Makanchi Array 29.94 342 P **P** 07 20 02.0 +0.7
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 29.94 342 P **P** 07 20 02.0 +0.7
MKAR Makanchi Array 29.94 342 P **P** 07 20 02.0 +0.7
MKAR Makanchi Array 29.94 342 P **P** 07 20 01.8 +0.5
comp=Z,3.7nm,0.4s,baz=163,slow=8.4,SNR=98
MKAR LR LR 07 35 07.7
comp=Z,65nm,20.4s,baz=100,slow=42
comp=Z,3.7nm,0.4s
MAKZ Makanchi 30.04 342 P **P** 07 20 02.7 +0.4
MAKZ Makanchi 30.04 342 P **P** 07 20 02.7 +0.4
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
SGDS Sogindy 30.15 329 *eP* **P** 07 20 04.2 +0.9
baz=329
SGDS Sogindy 30.15 329 *eP* **P** 07 20 04.1 +0.9
SIMJ Simiganj 30.22 317 P **P** 07 20 04.0 0.0
SIMJ IAmb IAmb 07 20 05.4
comp=Z,19nm,1.2s
SONM Songino Array 30.40 15 P **P** 07 20 06.0 +0.5
SONM IAmb IAmb 07 20 07.0
comp=Z,7.2nm,0.9s
SONM Songino Array 30.40 15 P **P** 07 20 06.0 +0.5
SONM pmax pmax
comp=Z,7.0nm,0.9s
SONM Songino Array 30.40 15 P **P** 07 20 05.8 +0.3
comp=Z,5.2nm,0.7s,baz=202,slow=10.0,SNR=27
SONM ScP **ScP** 07 26 37.5 -0.5
comp=Z,1.4nm,0.8s,baz=198,slow=2.8,SNR=10
SONM LR LR 07 33 36.0
comp=Z,73nm,19.0s,baz=174,slow=39
comp=Z,5.2nm,0.7s
XLT XiLinHaoTe 30.57 30 *eP* **P** 07 20 07.1 +0.1
XLT pP pP 07 20 26.5 -0.6
XLT sP sP 07 20 37.8 +0.6
XLT PP **PP** 07 21 15.3 -2.2
XLT pmax pmax
comp=Z,14nm,0.7s
XLT pmax pmax
comp=Z,130nm,4.1s
ULN Ulaanbaatar 30.59 16 P **P** 07 20 07.7 +0.5
ULN Ulaanbaatar 30.59 16 P **P** 07 20 07.7 +0.5
ULN pmax pmax
comp=Z,5.0nm,0.8s
JOW Kunigami 31.41 69 LR LR 07 32 24.8
comp=Z,25nm,20.4s,baz=348,slow=35
DGZ Jazzator, Alta 31.52 350 *c iP* **P** 07 20 16.1 +0.8
DGZ pmax pmax
comp=Z,7.0nm,0.8s
BTLS Baital 31.62 331⇑ *iP* **P** 07 20 16.6 +0.5
baz=331
BTLS Baital 31.62 331 *c iP* **P** 07 20 16.6 +0.5
IUG Iuzhnay 31.68 323 *eP* **P** 07 20 18.0 +1.2
comp=Z,5.2nm,0.5s,baz=323
IUG Iuzhnay 31.68 323 *eP* **P** 07 20 18.0 +1.2
IUG pmax pmax
comp=Z,5.0nm,0.5s
KK31 Karatay Array 32.03 325 P **P** 07 20 17.9 -1.9
KK31 Karatay Array 32.03 325 P **P** 07 20 17.9 -1.9
KK31 pmax pmax
comp=Z,1.0nm,0.9s
KKAR Karatay Array 32.03 325 P **P** 07 20 18.1 -1.7
KKAR Karatay Array 32.03 325 P **P** 07 20 18.1 -1.7
ZAK Zakamensk 32.21 10 *eP* **P** 07 20 21.0 -0.3
ZAK pmax pmax
comp=Z,15nm,1.1s
KSRS Korea Array 34.07 50 LR LR 07 36 41.2
comp=Z,25nm,19.6s,baz=230,slow=40
KURBB Kurchatov Arra 34.48 341 P **P** 07 20 41.2 +0.2
comp=Z,12nm,0.6s,baz=153,slow=8.2,SNR=114
KURBB PcP **PcP** 07 23 14.8 +0.5
comp=Z,0.4nm,0.4s,baz=160,slow=3.1,SNR=4.1
KURBB ScP **ScP** 07 26 52.6 +0.8
comp=Z,0.8nm,0.7s,baz=151,slow=3.3,SNR=6.9
comp=Z,12nm,0.6s
KURK Kurchatov 34.54 341 P **P** 07 20 41.8 +0.4
KURK Kurchatov 34.54 341 P **P** 07 20 41.8 +0.4
KURK pmax pmax
comp=Z,14nm,0.7s
JNU Nakatsue 34.90 59 LR LR 07 36 02.7
comp=Z,30nm,19.2s,baz=190,slow=38
BRZS Berezniki 36.02 335⇑ *iP* **P** 07 20 54.9 +0.7
comp=Z,3.7nm,0.5s,baz=335
BRZS Berezniki 36.02 335 *c iP* **P** 07 20 54.9 +0.7
BRZS pmax pmax
comp=Z,4.0nm,0.5s
ZALV Zalesovo Beam 36.05 350 P **P** 07 20 54.7 +0.4
comp=Z,30nm,0.6s,baz=168,slow=9.1,SNR=152
ZALV LR LR 07 36 52.4
comp=Z,56nm,18.7s,baz=137,slow=38
comp=Z,30nm,0.6s
HIA Hailar 36.26 27⇓ *eP* **P** 07 20 56.7 +0.4
HIA pmax pmax
comp=Z,10.0nm,1.0s
GEYT Alibeck 37.55 308 P **P** 07 21 08.8 +1.4
comp=Z,3.4nm,0.6s,baz=164,slow=6.0,SNR=7.5
comp=Z,3.4nm,0.6s
BVAR Borovoye Array 39.30 336 P **P** 07 21 21.9 +0.1
comp=Z,8.1nm,0.6s,baz=134,slow=11,SNR=40
BVAR PcP **PcP** 07 23 29.3 +0.5
comp=Z,0.7nm,0.5s,baz=145,slow=5.3,SNR=1.9
comp=Z,8.1nm,0.6s
BRVK Borovoye 39.36 336 P **P** 07 21 22.5 +0.2
BRVK IAmb IAmb 07 21 23.2
comp=Z,9.4nm,0.6s
BRVK Borovoye 39.36 336 P **P** 07 21 22.5 +0.2
BRVK pmax pmax
comp=Z,9.0nm,0.6s
USRK Ussuriysk Ar. 39.81 42 LR LR 07 41 07.3
comp=Z,34nm,19.3s,baz=248,slow=41
SOEI Soe 40.26 132 P **P** 07 21 29.8 -0.5
SOEI Soe 40.26 132 P **P** 07 21 28.6 -1.7
HEH HeiHe 40.54 32 *eP* **P** 07 21 31.9 -0.2
HEH pmax pmax
comp=Z,11nm,0.8s
HEH pmax pmax
comp=Z,170nm,3.8s
MJAR Matsushiro Arr 41.58 56 LR LR 07 39 18.1
comp=Z,28nm,18.2s,baz=255,slow=37
ABKAR Akbulak array 41.59 325 P **P** 07 21 41.8 +1.1
ABKAR Akbulak array 41.59 325 IAmb IAmb 07 21 42.5
comp=Z,12nm,0.6s
KLR Kul'dur 42.21 35⇑ *eP* **P** 07 21 45.0 -0.8
KLR pmax pmax
comp=Z,7.0nm,1.5s
KLR Kul'dur 42.21 35 P **P** 07 21 45.2 -0.5
comp=Z,2.1nm,1.0s,baz=231,slow=13,SNR=4.0
KLR LR LR 07 39 51.6
comp=Z,70nm,18.9s,baz=239,slow=37
comp=Z,2.1nm,1.0s
ZEA Zeya 42.74 28 *eP* **P** 07 21 48.1 -1.9
ZEA pmax pmax
comp=Z,10.0nm,0.7s
AKTO Aktyubinsk 43.28 326 LR LR 07 42 45.5
comp=Z,97nm,19.3s,baz=110,slow=40
SVE Sverdlovsk 45.93 334 *de* P **P** 07 22 16.2 +0.8
SVE pmax pmax
comp=Z,50nm,0.6s
ARU Arti 46.55 333 P **P** 07 22 20.6 +0.3
ARU Arti 46.55 333 *c iP* **P** 07 22 20.3 0.0
ARU *PP **pP** 07 22 39.3 -2.0
ARU 07 24 10.0
ARU S **S** 07 29 06.0 +3.7
ARU pmax pmax
comp=Z,13nm,0.5s
ARU Arti 46.55 333 LR LR 07 42 23.3
comp=Z,67nm,18.7s,baz=122,slow=37
PSA00 Pilbara Seismi 46.74 148 P **P** 07 22 22.3 +0.2
FITZ Fitzroy Crossi 47.24 139 P **P** 07 22 25.9 -0.2
YSS Yuzh-Sakhalins 47.83 43 *ce* P **P** 07 22 30.6 +0.3
YSS pmax pmax
comp=Z,48nm,1.7s
GNI Garni 48.17 307 LR LR 07 46 31.0
comp=Z,34nm,18.7s,baz=35,slow=40
ZEI Tsey 49.32 311 *eP* **P** 07 22 41.7 -0.5
ZEI pmax pmax
comp=Z,8.0nm,0.7s
YAK Yakutsk 49.44 21 *ce* P **P** 07 22 41.6 -0.8
YAK pmax pmax
comp=Z,10.0nm,0.9s
BELG Belogornoye 49.93 324 *de* P **P** 07 22 46.4 +0.1
BELG pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 50.24 312⇓ *eP* **P** 07 22 49.3 +0.5
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 50.24 312 P **P** 07 22 49.7 +0.9
comp=Z,2.8nm,0.8s,baz=128,slow=7.6,SNR=7.7
comp=Z,2.8nm,0.8s
NEUR Neytrino 50.28 311 *eP* **P** 07 22 50.7 +1.3
NEUR pmax pmax
comp=Z,4.0nm,0.7s
KIV Kislovodsk 50.44 312 P **P** 07 22 51.2 +0.7
KIV Kislovodsk 50.44 312 *eP* **P** 07 22 52.0 +1.5
KIV pmax pmax
comp=Z,22nm,1.1s
NRIK Noril'sk 50.81 356 P **P** 07 22 52.9 +0.2
NRIK Noril'sk 50.81 356 *c iP* **P** 07 22 52.4 -0.3
NRIK pmax pmax
comp=Z,5.0nm,0.9s
NRIK Noril'sk 50.81 356 P **P** 07 22 52.5 -0.1
comp=Z,7.3nm,0.4s,baz=155,slow=5.8,SNR=12
comp=Z,7.3nm,0.4s
MORW Morawa 51.60 157 P **P** 07 22 59.1 0.0
KIRV Kirov 51.84 331 *de* P **P** 07 23 00.9 +0.4
KIRV *i* *PP **pP** 07 23 22.0 +0.1
KIRV Kirov 51.84 331 LR LR 07 48 56.9
comp=Z,59nm,18.7s,baz=158,slow=40
WB0 Warramunga Arr 54.20 133 P **P** 07 23 18.3 -0.2
WRA Warramunga Arr 54.29 133 P **P** 07 23 18.5 -0.6
WRA Warramunga Arr 54.29 133 P **P** 07 23 18.5 -0.6
WRA Warramunga Arr 54.29 133 P **P** 07 23 18.8 -0.3
comp=Z,3.9nm,0.4s,baz=320,slow=7.5,SNR=51
comp=Z,3.9nm,0.4s
WB2 Warramunga Arr 54.29 133 P **P** 07 23 18.9 -0.3
WB2 IAmb IAmb 07 23 19.3
comp=Z,9.2nm,0.8s
ANN Anapa 54.30 312⇓ *eP* **P** 07 23 19.6 +0.8
ANN pmax pmax
comp=Z,22nm,1.0s
WR0 Warramunga Arr 54.44 133 P **P** 07 23 19.8 -0.4
WR0 IAmb IAmb 07 23 20.6
comp=Z,10.0nm,0.8s
NWAO Narrogin (SRO) 55.51 158 P **P** 07 23 28.2 +0.6
NWAO Narrogin (SRO) 55.51 158 P **P** 07 23 28.2 +0.6
NWAO pmax pmax
comp=Z,127nm,1.5s
NWAO Narrogin (SRO) 55.51 158 LR LR 07 49 04.9
comp=Z,32nm,18.0s,baz=214,slow=38
EIL Elat 55.54 294 LR LR 07 50 11.3
comp=Z,14nm,21.9s,baz=64,slow=39
TIXI Tiksi 56.43 12 P **P** 07 23 32.8 -0.9
TIXI Tiksi 56.43 12⇑ *eP* **P** 07 23 32.3 -1.4
TIXI pmax pmax
comp=Z,19nm,1.7s
TIXI Tiksi 56.43 12 LR LR 07 49 33.1
comp=Z,45nm,19.3s,baz=228,slow=38
AS31 Alice Springs 56.56 137 P **P** 07 23 35.1 -0.2
ASAR Alice Springs 56.56 137 P **P** 07 23 34.6 -0.8
ASAR Alice Springs 56.56 137 P **P** 07 23 35.5 +0.2
comp=Z,4.9nm,0.6s,baz=318,slow=7.1,SNR=70
ASAR PcP **PcP** 07 24 30.4 -0.6
comp=Z,1.0nm,0.7s,baz=310,slow=4.3,SNR=4.5
comp=Z,4.9nm,0.6s
BRTR Keskin Array B 56.59 306 P **P** 07 23 36.4 +0.8
comp=Z,0.7nm,0.6s,baz=113,slow=9.5,SNR=4.7
BRTR LR LR 07 51 55.1
comp=Z,29nm,19.8s,baz=184,slow=40
comp=Z,0.7nm,0.6s
MA2 Magadan 56.76 30 P **P** 07 23 36.0 -0.2
MA2 Magadan 56.76 30 P **P** 07 23 36.0 -0.2
MA2 pmax pmax
comp=Z,20nm,0.7s
COEN Coen 57.31 121 P **P** 07 23 40.6 -0.2
COEN IAmb IAmb 07 23 41.4
comp=Z,4.8nm,0.8s
KLMR Klimovskoe 57.34 331 *eP* **P** 07 23 38.6 -1.7
KLMR *e*PP **pP** 07 24 00.0 -2.0
KLMR pmax pmax
comp=Z,33nm,1.8s
FORT Forrest 58.47 147 P **P** 07 23 47.4 -1.2
SEY Seymchan 58.71 27⇑ *eP* **P** 07 23 48.9 -0.9
SEY pmax pmax
comp=Z,39nm,2.5s
SEY Seymchan 58.71 27 P **P** 07 23 48.1 -1.7
comp=Z,3.1nm,0.8s,baz=237,slow=4.5,SNR=9.1
comp=Z,3.1nm,0.8s
AKASG Malin Array Be 60.58 318 P **P** 07 24 02.5 -0.4
comp=Z,3.2nm,0.7s,baz=82,slow=6.4,SNR=11
AKASG LR LR 07 55 38.5
comp=Z,48nm,18.3s,baz=50,slow=41
comp=Z,3.2nm,0.7s
AKBB Malin Array Si 60.58 318 P **P** 07 24 02.4 -0.5
AKBB IAmb IAmb 07 24 03.3
comp=Z,4.6nm,0.7s
AKBB Malin Array Si 60.58 318 P **P** 07 24 02.4 -0.5
AKBB pmax pmax
comp=Z,5.0nm,0.7s
KIEV Kiev 60.59 318 P **P** 07 24 02.3 -0.6
KIEV IAmb IAmb 07 24 03.3
comp=Z,4.2nm,0.7s
KIEV Kiev 60.59 318 P **P** 07 24 02.3 -0.6
KIEV pmax pmax
comp=Z,4.0nm,0.7s
MLR Muntele Rosu 62.45 312 P **P** 07 24 17.1 +1.3
MLR IAmb IAmb 07 24 18.1
comp=Z,7.5nm,0.8s
MLR Muntele Rosu 62.45 312 P **P** 07 24 17.1 +1.3
MLR pmax pmax
comp=Z,8.0nm,0.8s
VSU Vasula 62.99 327 *de* P **P** 07 24 19.1 +0.2
VSU pmax pmax
comp=Z,27nm,1.7s
BUR08 Bucovina Ar. S 63.01 314 P **P** 07 24 20.2 +0.8
FIA1 FINESS Array S 63.77 330 P **P** 07 24 24.5 +0.5
FINES FINESS Array B 63.77 330 P **P** 07 24 24.5 +0.5
FINES FINESS Array B 63.77 330 P **P** 07 24 24.5 +0.5
FINES FINESS Array B 63.77 330 P **P** 07 24 24.2 +0.2
comp=Z,6.7nm,0.6s,baz=105,slow=7.3,SNR=39
FINES LR LR 07 53 37.6
comp=Z,58nm,19.0s,baz=38,slow=37
comp=Z,6.7nm,0.6s
PABE Paberze 64.18 323 P **P** 07 24 27.6 +0.8
BBOO Buckleboo 64.42 142 P **P** 07 24 28.5 -0.2
KEV Kevo 65.06 339 P **P** 07 24 32.5 +0.3
KEV IAmb IAmb 07 24 56.7
comp=Z,23nm,1.3s
KEV Kevo 65.06 339 P **P** 07 24 32.6 +0.3
KEV pmax pmax
comp=Z,23nm,1.3s
ARA0 ARCESS Array S 65.52 339 *eP* **P** 07 24 35.9 +0.6
ARCES ARCESS Array B 65.52 339 P **P** 07 24 35.6 +0.3
ARCES IAmb IAmb 07 24 58.6
comp=Z,23nm,1.5s
ARCES ARCESS Array B 65.52 339 P **P** 07 24 35.6 +0.3
ARCES pmax pmax
comp=Z,23nm,1.5s
ARCES ARCESS Array B 65.52 339 P **P** 07 24 35.6 +0.3
comp=Z,7.2nm,0.8s,baz=87,slow=7.1,SNR=30
ARCES LR LR 07 57 16.2
comp=Z,74nm,18.2s,baz=145,slow=40
comp=Z,7.2nm,0.8s
BILL Bilibino 65.67 23 P **P** 07 24 35.2 -1.0
BILL IAmb IAmb 07 24 36.4
comp=Z,18nm,1.3s
BILL Bilibino 65.67 23 *eP* **P** 07 24 35.8 -0.5
BILL pmax pmax
comp=Z,11nm,1.7s
KTK1 Kautokeino 66.21 338 *eP* **P** 07 24 40.2 +0.5
KTK1 IAmb IAmb 07 24 41.0
comp=Z,8.3nm,0.8s
STKA Stephens Creek 67.12 138 P **P** 07 24 46.6 +0.6
STKA Stephens Creek 67.12 138 P **P** 07 24 46.6 +0.6
STKA pmax pmax
comp=Z,1.0nm,0.8s

STKA	**Stephens Creek**	**67.12**	**138**	P		**P**	**07 24 45.8**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=305,slow=6.5,SNR=11							
	comp=Z,4.0nm,0.7s							
JETT	**Jettan, Norway**	**67.29**	**338**	*e*P		**P**	**07 24 47.5**	**+0.9**
JETT				IAmb		IAmb	07 24 50.5	
	comp=Z,64nm,1.5s							
TRO	**Tromso**	**67.81**	**338**	*e*P		**P**	**07 24 50.3**	**+0.4**
VRAC	**Vranov**	**68.69**	**316**	LR		LR	08 03 07.7	
	comp=Z,37nm,18.3s,baz=162,slow=43							
FAUS	**Fauske**	**69.00**	**336**	*e*P		**P**	**07 24 57.4**	**+0.1**
SPB2	**Spitsbergen Ar**	**69.50**	**348**	P		**P**	**07 25 00.4**	**+0.2**
SPA0	**Spitsbergen Ar**	**69.50**	**348**	*e*P		**P**	**07 25 00.6**	**+0.4**
SPA0				IAmb		IAmb	07 25 02.1	
	comp=Z,31nm,1.2s							
SPITS	**Spitsbergen Ar**	**69.50**	**348**	P		**P**	**07 25 00.6**	**+0.4**
SPITS				pmax		pmax		
	comp=Z,35nm,1.1s							
SPITS	**Spitsbergen Ar**	**69.50**	**348**	P		**P**	**07 25 00.6**	**+0.4**
	comp=Z,5.8nm,0.6s,baz=112,slow=8.2,SNR=18							
	comp=Z,5.8nm,0.6s							
HSPB	**Hornsund (broa**	**69.55**	**346**	*e*P		**P**	**07 25 01.1**	**+0.6**
HFS	**Hagfors**	**69.75**	**328**	P		**P**	**07 25 02.3**	**+0.3**
	comp=Z,7.8nm,0.5s,baz=106,slow=5.3,SNR=51							
HFS				LR		LR	07 59 10.2	
	comp=Z,90nm,18.7s,baz=57,slow=39							
	comp=Z,7.8nm,0.5s							
GERES	**GERESS Array B**	**70.63**	**316**	P		**P**	**07 25 08.5**	**+0.7**
GERES	**GERESS Array B**	**70.63**	**316**	P		**P**	**07 25 08.9**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=79,slow=8.3,SNR=10							
	comp=Z,3.3nm,0.6s							
NC405	**NORSAR Array S**	**70.67**	**329**	P		**P**	**07 25 08.1**	**+0.4**
NOA	**NORSAR Array B**	**70.92**	**329**	P		**P**	**07 25 09.4**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=86,slow=5.9,SNR=6.6							
NOA				LR		LR	08 00 32.5	
	comp=Z,32nm,18.2s,baz=270,slow=39							
	comp=Z,2.5nm,0.6s							
E18K	**Tukpahlearik C**	**78.15**	**22**	IAmb		IAmb	07 25 52.3	
	comp=Z,5.2nm,0.9s							
F17K	**Baldwin Pennin**	**78.25**	**24**	P		**P**	**07 25 52.3**	**+0.9**
F17K				IAmb		IAmb	07 25 52.5	
	comp=Z,8.8nm,0.7s							
D19K	**Kuna River**	**78.64**	**21**	IAmb		IAmb	07 25 55.1	
	comp=Z,14nm,1.4s							
B21K	**Ikpikpuk River**	**79.34**	**20**	P		**P**	**07 25 57.9**	**+0.6**
B21K				IAmb		IAmb	07 25 59.0	
	comp=Z,12nm,1.4s							
EKA	**Eskdalemuir Ar**	**79.46**	**325**	P		**P**	**07 25 59.7**	**+1.4**
	comp=Z,3.2nm,0.7s,baz=74,slow=6.1,SNR=7.2							
	comp=Z,3.2nm,0.7s							
D22K	**Ayikyak River**	**80.28**	**20**	IAmb		IAmb	07 26 04.2	
	comp=Z,8.4nm,0.9s							
F21K	**Alatna River**	**80.77**	**22**	IAmb		IAmb	07 26 06.3	
	comp=Z,7.0nm,1.0s							
E22K	**Anaktuvuk Pass**	**80.91**	**20**	IAmb		IAmb	07 26 25.5	
	comp=Z,7.2nm,1.2s							
D24K	**Happy Valley**	**81.37**	**19**	IAmb		IAmb	07 26 09.3	
	comp=Z,5.9nm,0.8s							
TOLK	**Toolik Lake Re**	**81.39**	**20**	IAmb		IAmb	07 26 09.5	
	comp=Z,5.7nm,0.6s							
H21K	**Melozitna Rive**	**81.72**	**23**	IAmb		IAmb	07 26 11.3	
	comp=Z,7.1nm,0.9s							
NEEM	**North Greenlan**	**82.00**	**353**	*i* P		**P**	**07 26 09.3**	**-2.6**
NEEM				IAmb		IAmb	07 26 14.0	
	comp=Z,4.8nm,1.0s							
D25K	**Kavik River**	**82.03**	**18**	IAmb		IAmb	07 26 13.4	
	comp=Z,7.9nm,0.8s							
G23K	**Bananza Creek**	**82.21**	**21**	IAmb		IAmb	07 26 13.8	
	comp=Z,5.8nm,1.1s							
BOSA	**Boshof**	**82.38**	**236**	P		**P**	**07 26 15.5**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=71,slow=3.3,SNR=7.5							
BOSA				LR		LR	08 01 44.5	
	comp=Z,49nm,18.0s,baz=194,slow=35							
	comp=Z,2.8nm,0.6s							
MLY	**Manley**	**82.78**	**23**	IAmb		IAmb	07 26 17.1	
	comp=Z,5.0nm,0.8s							
CAST	**Castle Rocks**	**83.04**	**25**	P		**P**	**07 26 17.6**	**+0.4**
CAST				IAmb		IAmb	07 26 18.3	
	comp=Z,7.4nm,0.9s							
BPAW	**Bear Paw Mtn.**	**83.14**	**24**	P		**P**	**07 26 17.5**	**-0.2**
BPAW				IAmb		IAmb	07 26 19.2	
	comp=Z,5.4nm,0.6s							
BMAR	**Burnt Mountain**	**83.63**	**20**	P		**P**	**07 26 21.2**	**+1.1**
MDM	**Murphy Dome**	**83.74**	**23**	IAmb		IAmb	07 26 21.8	
	comp=Z,13nm,0.9s							
SUMG	**Summit**	**83.84**	**347**	*i* P		**P**	**07 26 21.0**	**-0.5**
SUMG				IAmb		IAmb	07 26 22.5	
	comp=Z,4.3nm,0.5s							
IL31		**84.32**	**22**	P		**P**	**07 26 22.8**	**-0.8**
IL31				IAmb		IAmb	07 26 23.8	
	comp=Z,3.4nm,0.8s							
ILAR	**Eielson Array**	**84.32**	**22**	P		**P**	**07 26 22.4**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=297,slow=4.9,SNR=24							
ILAR				LR		LR	08 07 11.9	
	comp=Z,56nm,18.1s,baz=264,slow=38							
	comp=Z,2.0nm,0.7s							
PRP	**Porcupine Dome**	**84.39**	**21**	IAmb		IAmb	07 26 25.6	
	comp=Z,11nm,0.9s							
TULEG	**Thule**	**84.43**	**356**	*i* P		**P**	**07 26 20.8**	**-3.2**
TULEG				IAmb		IAmb	07 26 22.0	
	comp=Z,31nm,0.8s							
J25K	**Salcha River,**	**84.96**	**22**	IAmb		IAmb	07 26 28.8	
	comp=Z,9.2nm,1.4s							
E29M	**Blow River**	**85.05**	**17**	IAmb		IAmb	07 26 28.4	
	comp=Z,10nm,1.4s							
RIDG	**Independent Ri**	**85.64**	**23**	IAmb		IAmb	07 26 30.3	
	comp=Z,7.7nm,0.9s							
J26L	**Joseph Creek**	**85.66**	**22**	IAmb		IAmb	07 26 31.0	
	comp=Z,5.4nm,0.9s							
SCRK	**Sand Creek**	**85.82**	**22**	P		**P**	**07 26 31.3**	**+0.1**
SCRK				IAmb		IAmb	07 26 32.1	
	comp=Z,4.2nm,0.8s							
INK	**Inuvik**	**86.31**	**16**	IAmb		IAmb	07 26 36.3	
	comp=Z,7.7nm,1.3s							
G30M	**tAoh Zrail Nji**	**86.47**	**18**	IAmb		IAmb	07 26 38.4	
	comp=Z,8.6nm,1.4s							
MENT	**Mentasta**	**86.52**	**23**	IAmb		IAmb	07 26 35.9	
	comp=Z,8.8nm,1.1s							
C36M	**Paulatuk**	**87.79**	**13**	P		**P**	**07 26 40.0**	**-0.5**
SFJD	**Kangerlussuaq**	**90.84**	**347**	*i* P		**P**	**07 26 53.5**	**-1.4**
SFJD				IAmb		IAmb	07 26 56.0	
	comp=Z,4.1nm,0.6s							
SFJD	**Kangerlussuaq**	**90.84**	**347**	LR		LR	08 12 37.5	
	comp=Z,26nm,18.6s,baz=0.5,slow=39							
YKA	**Yellowknife Ar**	**95.66**	**13**	P		**P**	**07 27 16.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=333,slow=4.5,SNR=9.0							
YKA				PP		**PP**	**07 31 05.0**	**-3.6**
	comp=Z,0.4nm,0.8s,baz=334,slow=7.8,SNR=5.1							
	comp=Z,0.4nm,0.6s							
FRB	**Frobisher Bay**	**96.81**	**353**	LR		LR	08 14 13.2	
	comp=Z,19nm,20.4s,baz=166,slow=37							
TXAR	**Lajitas Array**	**128.83**	**21**	PKP		**PKiKP**	**07 33 00.4**	**0.0**
	comp=Z,0.1nm,0.5s,baz=85,slow=2.2,SNR=3.6							
CPUP	**Villa Florida**	**153.62**	**249**	PKPbc		**PKPbc**	**07 33 50.7**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=135,slow=1.8,SNR=3.4							
CPUP				PKPab		**PKPab**	**07 34 04.2**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=90,slow=3.0,SNR=3.4							

*IDC **14** 07:51:03.8±3.5, 53.57N×90.37E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=28.9km s-min=21.8km az=50.0*
*NNC **14** 07:51:04.7±5.0, 53.55N×90.32E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=36.4km s-min=25.9km az=59.0, Suspected Mining explosion.*

ISC 14 07:51:03.7±4.2, 53.5N±0.1×90.4E±0.2, h0km, n8, σ1s41/10, 4C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.33**	**279**	I		I	08 12 55.0	
	0.2nm,1.1s,baz=90,slow=329,SNR=15							
ZAA0	**Zalesovo Array**	**3.33**	**279**	⇓Pg		**Pb**	**07 52 03.1**	**-0.5**
	0.8nm,0.8s							
ZAA0				⇑Lg		Lg	07 52 52.1	
	4.1nm,0.8s							
ZALV	**Zalesovo Beam**	**3.33**	**279**	Pg		**Pb**	**07 52 02.4**	**-1.2**
	0.7nm,0.3s,baz=95,slow=16,SNR=8.8							
ZALV				Lg		Lg	07 52 50.1	
	0.6nm,0.3s,baz=93,slow=28,SNR=4.2							
KURK	**Kurchatov**	**7.78**	**253**	⇓Sn		**Sn**	**07 54 29.0**	**+2.3**
	5.1nm,0.8s							
KURK				⇓Lg		Lg	07 55 11.5	
	8.5nm,1.0s							
KURBB	**Kurchatov Arra**	**7.87**	**253**	⇓Pn		**Pn**	**07 52 59.7**	**+0.5**
	2.0nm,0.8s							
KURBB				⇑Sn		**Sn**	**07 54 29.9**	**+0.9**
	21nm,0.9s							
KURBB				⇑Lg		Lg	07 55 11.1	
	18nm,0.9s							
KURBB	**Kurchatov Arra**	**7.87**	**253**	Pn		**Pn**	**07 52 59.6**	**+0.3**
	0.1nm,0.3s,baz=64,slow=14,SNR=4.1							
KURBB				Sn		**Sn**	**07 54 27.9**	**-1.1**
	baz=66,slow=25,SNR=3.2							
KURBB				Lg		Lg	07 55 14.3	
	baz=73,slow=35,SNR=2.8							
	0.7nm,0.6s							
MK31	**Makanchi Array**	**8.52**	**221**	⇑Pn		Pn	07 53 11.7	+3.5
	1.5nm,1.0s,baz=34,slow=12,SNR=9.6							
MK31				⇓Sn		**Sn**	**07 54 44.6**	**-0.5**
	1.1nm,0.8s,baz=35,slow=27,SNR=4.1							
MK31				⇓Lg		Lg	07 55 33.4	
	2.6nm,0.9s							
MKAR	**Makanchi Array**	**8.52**	**221**	Pn		**Pn**	**07 53 09.5**	**+1.3**
	0.2nm,0.3s,baz=32,slow=13,SNR=9.5							
MKAR				Sn		**Sn**	**07 54 43.4**	**-1.7**
	baz=33,slow=24							
MKAR				Lg		Lg	07 55 32.9	
	baz=33,slow=26,SNR=2.7							
	0.3nm,0.5s							

*GUC **14** 07:59:53.4±0.5, 30.88S×69.44W, h160km±5km, ML3.7*
*SJA **14** 07:59:53.3±0.9, 30.91S×69.08W, h103km±5km, ML3.6, MW3.6*

ISC 14 07:59:54.3±1.6, 30.90S±0.04×69.09W±0.05, h106km±11km, n21, σ0s90/39, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ACCO	**Cerro Coronel**	**0.32**	**5**	*e*P		**Pn**	**08 00 09.9**	**-0.2**
ACCO				*e*S		**Sn**	**08 00 21.9**	**0.0**
ACCO				IAML			08 00 23.9	
	comp=Z,892nm,0.5s							
RTLL	**Cerro Villicun**	**0.68**	**129**	*e*P		**Pn**	**08 00 11.7**	**-0.5**
RTLL				*e*S		**Sn**	**08 00 24.4**	**-1.2**
RTLL				IAML			08 00 36.1	
	comp=Z,3µm,2.0s							
ACDV	**Cuesta del Vie**	**0.73**	**358**	*e*P		**Pn**	**08 00 12.7**	**-0.1**
ACDV				*e*S		**Sn**	**08 00 27.1**	**+0.5**
ACDV				IAML			08 00 28.0	
	comp=Z,696nm,0.4s							
RTLS	**Leoncito**	**0.91**	**191**	*e*P		**Pn**	**08 00 14.2**	**-0.3**
RTLS				*e*S		**Sn**	**08 00 30.5**	**+0.7**
RTLS				IAML			08 00 33.0	
	comp=Z,2µm,0.5s							
RTCV	**Cerro Valdivia**	**1.07**	**154**	*e*P		**Pn**	**08 00 15.6**	**-0.4**
RTCV				*e*S		**Sn**	**08 00 32.5**	**+0.2**
RTCV				IAML			08 00 35.3	
	comp=Z,239nm,2.2s							
CO01	**Juntas del Tor**	**1.26**	**317**	⇑*i*P		**Pn**	**08 00 19.4**	**+1.1**
CO01				*e*S		**Sn**	**08 00 38.4**	**+1.9**
CO03	**El Pedregal**	**1.37**	**272**	⇑*e*P		**Pn**	**08 00 19.6**	**+0.2**
CO03				IAML			08 00 39.7	
	comp=E,1µm,0.2s							
CO03				*e*S		**Sn**	**08 00 39.8**	**+1.3**
AVFE	**Valle Fertil**	**1.43**	**81**	*e*P		**Pn**	**08 00 20.0**	**-0.1**
AVFE				*e*S		**Sn**	**08 00 39.4**	**-0.3**
AVFE				IAML			08 00 40.9	
	comp=Z,913nm,0.3s							
GO04	**Tololo Observa**	**1.64**	**296**	*e*S		**Sn**	**08 00 44.7**	**+0.2**
CO02	**Combarbal**	**1.66**	**259**	⇑*i*P		**Pn**	**08 00 22.6**	**-0.4**
CO02				*e*S		**Sn**	**08 00 44.8**	**0.0**
CO02				IAML			08 00 46.4	
CO05	**La Serena**	**2.10**	**297**	*e*P		**Pn**	**08 00 27.4**	**-0.9**
CO05				*e*S		**Sn**	**08 00 53.0**	**-1.4**
AAGR	**Agrelo**	**2.19**	**174**	*e*P		**Pn**	**08 00 29.2**	**-0.4**
AAGR				*e*S		**Sn**	**08 00 56.4**	**-0.2**
AAGR				IAML			08 00 59.8	
	comp=Z,460nm,0.3s							
CO06	**Fray Jorge**	**2.20**	**275**	⇑*e*P		**Pn**	**08 00 27.8**	**-1.8**
CO06				*e*S		**Sn**	**08 00 54.6**	**-2.1**
CO06				IAML			08 00 59.5	
	comp=E,580nm,0.1s							
VA03	**San Esteban**	**2.23**	**213**	*e*P		**Pn**	**08 00 30.1**	**0.0**
VA03				*e*S		**Sn**	**08 00 58.8**	**+1.2**
VA03				IAML			08 01 03.1	
	comp=E,306nm,0.2s							
AC05	**El Transito**	**2.30**	**333**	⇑*e*P		**Pn**	**08 00 31.4**	**+0.3**
AC05				*e*S		**Sn**	**08 01 00.1**	**+0.8**
AC05				IAML			08 01 04.3	
	comp=N,438nm,0.2s							
VA06	**Catapilco**	**2.50**	**228**	*e*P		**Pn**	**08 00 32.2**	**-1.3**
VA06				IAML			08 01 05.7	
	comp=E,206nm,0.3s							
PEL	**Peldehue**	**2.61**	**211**	*e*P		**Pn**	**08 00 35.2**	**+0.1**
PEL				*e*S		**Sn**	**08 01 06.6**	**+0.2**
MT04	**Ro Olivares**	**2.65**	**199**	*e*P		**Pn**	**08 00 36.7**	**+1.0**
MT10	**Hacienda Santa**	**2.66**	**207**	*e*P		**Pn**	**08 01 08.9**	**+0.3**
MT10				*e*S		**Sn**	**08 01 08.9**	**+1.1**
MT10				IAML			08 01 12.2	
	comp=E,360nm,0.9s							
MT05	**Renca**	**2.85**	**209**	⇑*e*P		**Pn**	**08 00 37.9**	**-0.3**
MT05				*e*S		**Sn**	**08 01 12.7**	**+0.7**
MT05				IAML			08 01 16.6	
	comp=E,284nm,0.5s							
MT03	**Universidad Ad**	**2.85**	**205**	*e*P		**Pn**	**08 00 38.3**	**0.0**
MT03				*e*S		**Sn**	**08 01 13.2**	**+1.1**

IDC 14 08:10:43.8±2.8, 53.95N×86.64E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=23.9km s-min=13.9km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.08**	**271**	I		I	08 17 30.0	
	baz=88,slow=334,SNR=7.2							
ZALV	**Zalesovo Beam**	**1.08**	**271**	Pg		Pg	08 11 04.2	-0.2
	0.7nm,0.3s,baz=94,slow=10,SNR=6.4							
ZALV				Lg		Lg	08 11 19.1	
	1.5nm,0.3s,baz=90,slow=28,SNR=12							
KURBB	**Kurchatov Arra**	**5.99**	**239**	Pn		Pn	08 12 14.4	+0.8
	0.1nm,0.3s,baz=56,slow=13,SNR=4.1							
	0.7nm,0.2s							
MKAR	**Makanchi Array**	**7.69**	**203**	Pn		Pn	08 12 38.0	+1.0
	0.1nm,0.3s,baz=25,slow=13,SNR=7.8							
	0.1nm,0.3s							

*IDC **14** 08:13:50.8±25.0, 30.03N×138.17E, h367km±243km, mb2.8/6, mbtmp3.6/6, Error ellipse: s-maj=293.3km s-min=17.4km az=69.0*
*JMA **14** 08:13:56.7±0.5, 31.1N±4.4×13.8E±.7, h407km, MV3.2/14, SHIKOKU BASIN*

ISC 14 08:13:55.2±1.2, 30.4N±0.1×138.9E±0.2, h450km, n12, σ1s50/13, mb2.9/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSO1	**Boso 1**	**4.57**	**22**	S		**S**	**08 16 21.0**	**+1.3**
BSO3	**Boso 3**	**4.57**	**17**	*e*S		**S**	**08 16 18.6**	**-1.7**
BSO4	**Boso 4**	**4.71**	**14**	*e*S		**S**	**08 16 22.4**	**-0.6**
JAG	**Ashikaga**	**6.00**	**4**	P		**P**	**08 15 29.9**	**+0.5**
JAG				S		**S**	**08 16 43.1**	**-3.3**
JHO	**Hitachi**	**6.33**	**12**	P		**P**	**08 15 34.0**	**+1.3**
JFK	**Kawauchi**	**7.12**	**13**	*e*S		**S**	**08 17 06.9**	**-0.8**
SONM	**Songino Array**	**30.33**	**314**	P		**P**	**08 19 28.0**	**-0.4**
	0.2nm,0.4s,baz=115,slow=9.0,SNR=1.8							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**46.16**	**307**	P		**P**	**08 21 38.4**	**+0.6**
	0.3nm,0.6s,baz=94,slow=10,SNR=4.1							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**48.67**	**312**	P		**P**	**08 21 57.3**	**+0.6**
	0.5nm,0.4s,baz=92,slow=7.8,SNR=7.8							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**50.27**	**186**	P		**P**	**08 22 08.0**	**-0.9**
	0.3nm,0.4s,baz=1.7,slow=7.9,SNR=5.4							
	0.3nm,0.4s							
BVAR	**Borovoye Array**	**53.66**	**316**	P		**P**	**08 22 34.2**	**+1.1**
	0.9nm,0.4s,baz=99,slow=7.7,SNR=7.5							
	0.9nm,0.4s							
ASAR	**Alice Springs**	**53.99**	**186**	P		**P**	**08 22 34.9**	**-0.9**
	0.4nm,0.7s,baz=14,slow=12,SNR=6.0							
	0.4nm,0.7s							

IDC 14 08:26:45.0±2.9, 53.55N×87.85E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=23.7km s-min=15.7km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**284**	I		I	08 38 25.0	
	0.1nm,1.2s,baz=98,slow=334,SNR=7.3							
ZALV	**Zalesovo Beam**	**1.84**	**284**	Pn		Pn	08 27 18.1	+0.2
	1.5nm,0.3s,baz=102,slow=15,SNR=20							
ZALV				Lg		Lg	08 27 44.1	
	2.6nm,0.3s,baz=96,slow=26,SNR=21							
KURBB	**Kurchatov Arra**	**6.45**	**247**	Pn		Pn	08 28 21.5	+0.4
	baz=62,slow=14,SNR=4.2							
KURBB				Sn		Sn	08 29 33.6	-1.7
	baz=62,slow=26,SNR=1.8							
KURBB				Lg		Lg	08 30 09.4	
	baz=59,slow=32,SNR=1.6							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**7.65**	**210**	Pn		Pn	08 28 39.3	+1.7
	0.1nm,0.3s,baz=28,slow=14,SNR=4.9							
MKAR				Sn		Sn	08 30 04.3	-0.6
	baz=25,slow=30,SNR=2.9							
MKAR				Lg		Lg	08 30 45.7	
	0.1nm,0.3s,baz=32,slow=33,SNR=5.9							
	0.1nm,0.3s							

*LDG **14** 08:26:52.0±0.0, 42.33N×0.61E, h2km, Ml4.1/55, Error ellipse: s-maj=1.3km s-min=1.0km az=134.0*
*MRB **14** 08:26:53.2±0.6, 42.34N×0.63E, h5km±4km, ML3.7/31, Error ellipse: s-maj=1.8km s-min=1.3km az=249.0*
*IDC **14** 08:26:53.2±1.6, 42.46N×0.40E, h0km, mb3.5/2, mbtmp3.9/7, ML4.6/3, MS3.0/2, Error ellipse: s-maj=36.1km s-min=15.6km az=139.0*
*INMG **14** 08:26:53.5±1.7, 42.33N×0.63E, h12km±3km, ML3.5, Error ellipse: s-maj=2.7km s-min=2.4km az=60.0*
*IGIL **14** 08:26:54.0, 42.33N×0.64E, h1km*
*STR **14** 08:26:54.1±0.4, 42°N±4°×±°, h2km, MLv4.2/55, Error ellipse: s-maj=0.0km s-min=0.0km az=11.7, preliminary*
*MDD **14** 08:26:54.4±0.1, 42.30N×0.66E, h12km, mb_Lg4.0/60, Error ellipse: s-maj=1.1km s-min=0.9km az=156.0*
*SFS **14** 08:26:55.9, 42.28N×0.46E, h19km, mb4.0/7, ML4.4/10, ML4.5/9, MLv4.4/10*

ISC 14 08:26:52.4±0.7, 42.34N±0.01×0.63E±0.01, h14km±5km, n278, σ2s33/497, 1C-6D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CTRE	**Tremp**	**0.10**	**99**	P		**Pg**	**08 26 55.3**	**-0.4**
CTRE				S		**Sg**	**08 26 56.5**	**-1.4**
	24µm,0.2s							
CSOR	**Sort**	**0.37**	**85**	P		**Pb**	**08 27 00.3**	**-0.5**
CSOR				S		**Sb**	**08 27 06.0**	**-0.6**
	4µm,0.3s							
CARA	**Val d'Aran**	**0.39**	**20**	P		**Pb**	**08 27 00.8**	**-0.5**
CARA				S		**Sg**	**08 27 06.6**	**+0.9**
	4µm,0.2s							
ECHI	**Chisagues Biel**	**0.46**	**315**	P		**Pg**	**08 27 01.8**	**+0.3**
ECHI				S		**Sg**	**08 27 08.4**	**+0.7**
	1µm,0.5s							
ECHI	**Chisagues Biel**	**0.46**	**315**	Pg		**Pg**	**08 27 01.8**	**+0.3**
ECHI				Sg		**Sg**	**08 27 08.4**	**+0.7**
ECHI				*i* Vmb_Lg			08 27 15.8	
ECHI	**Chisagues Biel**	**0.46**	**315**	Pg		**Pg**	**08 27 01.8**	**+0.3**
CAVN	**Les Avellanes**	**0.47**	**169**	P		**Pb**	**08 27 01.9**	**-0.6**
CAVN				S		**Sb**	**08 27 09.1**	**-0.1**
	8µm,0.3s							
CORG	**Organya**	**0.52**	**102**	P		**Pb**	**08 27 02.8**	**-0.6**
CORG				S		**Sb**	**08 27 10.6**	**-0.2**
	2µm,0.5s							
CEST	**Esterri de Car**	**0.53**	**60**	P		**Pb**	**08 27 03.2**	**-0.3**
CEST				S		**Sg**	**08 27 10.5**	**+0.7**
	3µm,0.5s							
SALF	**Salau**	**0.59**	**44**	Pg		**Pg**	**08 27 04.0**	**+0.2**
SALF				Sg		**Sg**	**08 27 12.3**	**+0.6**
ARBS	**La Rabassa**	**0.69**	**81**	P		**Pg**	**08 27 05.8**	**0.0**
ARBS				S		**Sb**	**08 27 16.1**	**+0.3**
	2µm,0.5s							
PAND	**Andorre**	**0.70**	**75**	P		**Pb**	**08 27 06.9**	**+0.4**
PAND				S		**Sb**	**08 27 16.4**	**+0.3**
	2µm,0.5s							
PAND	**Andorre**	**0.70**	**75**	Pg		**Pb**	**08 27 06.3**	**-0.2**
PAND				Sg		**Sb**	**08 27 16.1**	**0.0**
MLS	**Moulis**	**0.70**	**29**	P		**Pb**	**08 27 06.9**	**+0.4**
MLS				S		**Sb**	**08 27 16.3**	**+0.2**
	596nm,0.5s							
MLS	**Moulis**	**0.70**	**29**	Pg		**Pb**	**08 27 06.4**	**-0.1**
MLS				Sg		**Sg**	**08 27 15.7**	**+0.4**
VIEF	**Viey**	**0.70**	**320**	Pg		**Pb**	**08 27 06.3**	**-0.2**
VIEF				Sg		**Sg**	**08 27 15.9**	**+0.5**
EPF	**Esparros**	**0.72**	**343**	*e*Pg		**Pg**	**08 27 05.8**	**-0.7**
EPF				*e*Sg		**Sg**	**08 27 15.5**	**-0.5**
	1µm,0.4s							
EPF	**Esparros**	**0.72**	**343**	Pg		**Pg**	**08 27 05.8**	**-0.7**
EMIR	**Miracle**	**0.79**	**122**	P		**Pb**	**08 27 07.7**	**-0.2**
EMIR				S		**Sb**	**08 27 18.9**	**+0.4**
	3µm,0.3s							
EMIR	**Miracle**	**0.79**	**122**	⇑Pg		**Pb**	**08 27 07.7**	**-0.2**
EMIR				Sg		**Sb**	**08 27 18.3**	**-0.2**
EMIR				*i* Vmb_Lg			08 27 24.2	
PYLO	**Lourdes**	**0.91**	**327**	P		**Pb**	**08 27 10.6**	**+0.7**
PYLO				S		**Sb**	**08 27 23.2**	**+1.3**
PYLO	**Lourdes**	**0.91**	**327**	Pg		**Pb**	**08 27

CBEU S Sg 08 27 42.1 +0.8
2µm,0.3s
EBR Ebro Roquetas 1.52 184 P Pg 08 27 21.1 -0.5
EBR S Sg 08 27 41.5 +0.1
MTLF Montolieu 1.53 49 eP Pb 08 27 21.2 +0.6
MTLF eSg Sg 08 27 41.7 -0.1
296nm,0.3s
MTLF Montolieu 1.53 49 P Pb 08 27 21.2 +0.6
MTLF Montolieu 1.53 49 Sn Sg 08 27 42.6 +0.8
EORO Oroz-Betelu 1.54 292 Pg Pg 08 27 21.8 -0.1
EORO Oroz-Betelu 1.54 292 Pg Pg 08 27 21.8 -0.1
EORO Sg Sg 08 27 44.5 +2.6
EORO i Vmb_Lg 08 27 47.9
SJPF Ste Jean 1.57 300 ePg Pb 08 27 21.2 -0.1
SJPF eSg Sg 08 27 42.3 -0.7
992nm,0.3s
SJPF Ste Jean 1.57 300 Pg Pb 08 27 21.2 -0.1
CMAS Mas de Barbera 1.63 189 P Pb 08 27 22.6 +0.3
CMAS S Sg 08 27 44.1 -0.7
3µm,0.2s
CBUD Illa de Buda 1.64 175 P Pb 08 27 22.4 0.0
CBUD S Sg 08 27 44.4 -0.8
OSSF Osses 1.67 304 Pn Pb 08 27 23.5 +0.6
OSSF Sg Sg 08 27 48.1 +2.0
SJAF Saint Jean de 1.67 84 P Pb 08 27 23.5 +0.5
SJAF S Sg 08 27 45.8 -0.4
568nm,0.4s
SJAF Saint Jean de 1.67 84 Pn Pb 08 27 23.4 +0.5
SJAF Sn Sg 08 27 47.0 +0.8
EJON La Jonquera 1.67 86 Pg Pb 08 27 23.6 +0.5
EJON Sg Sg 08 27 47.1 +0.9
EJON La Jonquera 1.67 86 P Pg 08 27 24.0 -0.5
EJON S Sg 08 27 47.5 +1.3
EJON La Jonquera 1.67 86 Pg Pb 08 27 23.5 +0.5
EJON Sg Sg 08 27 47.1 +0.9
EJON i Vmb_Lg 08 27 51.1
EARA Aranguren 1.69 286 Pg Pb 08 27 23.9 +0.5
EARA Sg Sg 08 27 48.0 +1.2
EARA Aranguren 1.69 286 Pg Pb 08 27 23.9 +0.5
EARA Sg Sg 08 27 48.0 +1.2
EARA i Vmb_Lg 08 27 50.6
EARA Aranguren 1.69 286 Pn Pb 08 27 23.8 +0.5
CCAS Cassa de la Se 1.75 104 P Pn 08 27 23.6 +1.3
CCAS S Sg 08 27 47.6 -1.1
910nm,0.3s
CFAR Far de la Bany 1.78 179 P Pn 08 27 23.6 +0.9
CFAR S Sg 08 27 48.1 -1.5
ALCN Alcanar 1.79 184 P Pb 08 27 24.5 -0.5
ALCN S Sb 08 27 47.9 +0.5
2µm,0.3s
EALK Alkurruntz 1.81 300 ⇓Pg Pb 08 27 26.0 +0.7
EALK Sg Sg 08 27 49.8 -0.7
EALK i Vmb_Lg 08 27 57.6
EALK Alkurruntz 1.81 300 Pn Pb 08 27 26.0 +0.7
EALK Pg Pg 08 27 27.8 +0.8
EALK Alkurruntz 1.81 300 Sg Sg 08 27 52.2 +1.8
TERF Tercis-les-Bai 1.85 317 Pn Pg 08 27 27.4 -0.5
CPAL Palau Saverder 1.88 90 P Pn 08 27 25.6 +1.5
CPAL S Sb 08 27 50.5 +0.8
307nm,0.3s
CLAF Gruissan 1.98 65 Pn Pb 08 27 27.5 -0.6
MONQ Montcuq 2.07 11 Pn Pn 08 27 27.9 +1.2
MONQ Sn Sb 08 27 56.2 +1.0
ALCX Castello 2.10 188 P Pn 08 27 28.1 +1.0
ALCX S Sn 08 27 54.8 +1.8
1µm,0.5s
EMOS Mosqueruela 2.14 203 P Pn 08 27 29.3 +1.4
EMOS S Sb 08 27 56.9 -0.8
666nm,0.4s
EMOS Mosqueruela 2.14 203 Pn Pn 08 27 28.9 +0.9
EMOS Pg Pb 08 27 31.2 +0.1
EMOS Sg Sb 08 27 58.7 +1.1
EMOS i Vmb_Lg 08 28 05.7
E0901 Celadas (Terue 2.28 216 ⇓Pn Pn 08 27 31.2 +1.4
E0901 Sg Sb 08 28 03.4 +1.8
E0901 i Vmb_Lg 08 28 13.2
ECOL Islas Columbre 2.44 179 S Sn 08 28 03.2 +1.8
601nm,0.4s
ECOL Islas Columbre 2.44 179 Pg Pb 08 27 35.0 -1.0
ECOL Sn Sn 08 27 59.1 -2.4
ECOL Sg Sg 08 28 09.8 -1.0
ETOR Torete 2.53 234 ⇓Pn Pn 08 27 34.7 +1.6
ETOR Pg Pg 08 27 41.7 +0.9
ETOR Sn Sn 08 28 05.3 +1.5
ETOR Sg Sg 08 28 11.5 -2.1
ETOR i Vmb_Lg 08 28 22.5
LFF La Frestale 2.60 2 eP Pn 08 27 36.3 +2.3
LFF eSn Sn 08 28 05.2 -0.2
652nm,0.6s
LRVF chteau la Riv 2.69 346 Pn Pn 08 27 36.6 +1.3
LRVF Sn Sb 08 28 11.7 -1.6
CAF Calviac 2.78 21 eP Pn 08 27 38.4 +1.8
CAF eSn Sn 08 28 10.5 +0.4
203nm,0.3s
CAF eSg Sg 08 28 21.5 -0.3
307nm,0.3s
LASF Ste Croix 2.92 53 eP Pn 08 27 40.8 +2.3
LASF eSn Sn 08 28 12.9 -0.6
LASF eSg Sg 08 28 24.5 -1.8
460nm,0.9s
ECHE Chera 3.00 204 P Pn 08 27 41.1 +1.4
ECHE Chera 3.00 204 Pn Pn 08 27 41.0 +1.4
ECHE Pg Pg 08 27 48.2 -1.7
ECHE Sg Sg 08 28 25.9 -2.9
ECHE i Vmb_Lg 08 28 35.8
RJF Les Rejaudoux 3.03 12 eP Pn 08 27 41.3 +1.3
RJF eSn Sn 08 28 13.9 -2.2
154nm,0.3s
RJF eSg Sg 08 28 28.1 -1.6
387nm,0.5s
ETOS Mallorca 3.05 147 Pn Pn 08 27 41.0 +0.7
ETOS Sn Sn 08 28 15.3 -1.4
ELAN Lanestosa 3.12 288 Pn Pn 08 27 43.2 +1.9
ELAN Sn Sn 08 28 21.3 +2.8
ELAN Sg Sg 08 28 33.3 +0.6
ELAN i Vmb_Lg 08 28 48.6
EVIV Cofrentes, Val 3.35 204 Pn Pn 08 27 45.7 +1.4
EVIV Pg Pg 08 27 54.0 -2.5
EVIV Sn Sn 08 28 24.7 +0.7
EVIV Sg Sb 08 28 35.1 +3.0
EVIV i Vmb_Lg 08 28 46.2
FRNF Fournols 3.35 24 Pn Pn 08 27 46.0 +1.6
EIBI Ibiza 3.35 171 S Sn 08 28 21.1 -3.0
EIBI Ibiza 3.35 171 Pn Pn 08 27 44.7 +0.2
EIBI Sn Sn 08 28 22.2 -1.9
EIBI i Vmb_Lg 08 28 23.8
LBL Lubilhac 3.45 32 Pn Pn 08 27 47.1 +1.2
LBL Sn Sn 08 28 29.4 +2.8
UCM Universidad Co 3.56 236 P Pn 08 27 48.3 +1.1
SAUF chteau de Sau 3.64 62 Pn Pn 08 27 51.6 +3.2
VERF Verneugheol 3.66 21 Pn Pn 08 27 49.7 +1.0
VERF Sn Sn 08 28 33.9 +2.2
EBEN2 Beniarda presa 3.71 190 Pn Pn 08 27 50.0 +0.6
EBEN2 Pg Pb 08 27 57.8 0.0
EBEN2 Sn Sn 08 28 33.1 +0.1
EBEN2 i Vmb_Lg 08 28 56.0
AFON Font Roja 3.78 194 Pn Pn 08 27 49.3 -1.1
AFON Pg Pb 08 28 00.3 +1.3
AFON Sn Sn 08 28 33.9 -0.8
AFON Sg Sg 08 28 52.2 -1.5
AFON i Vmb_Lg 08 28 59.1
VIVF Saint-Julien-l 3.86 48 eP Pn 08 27 53.3 +2.4
VIVF Saint-Julien-l 3.86 48 ePg Pg 08 28 04.1 -2.3
VIVF eSn Sn 08 28 33.5 -3.1
VIVF eSg Sg 08 28 53.7 -2.7
93nm,0.4s
COLF Collangettes 3.87 34 Pn Pn 08 27 52.6 +1.0
COLF Sn Sn 08 28 39.1 +2.2
LEPF PUYLOUBIER 3.90 71 Pn Pn 08 27 54.3 +2.4
LEPF Sn Sn 08 28 41.2 +3.6
SMRF Simiane la Rot 3.97 64 eP Pn 08 27 55.2 +2.3
SMRF eSn Sn 08 28 37.8 -1.4
124nm,0.6s
GUD Guadarrama 3.98 246 Pn Pn 08 27 54.3 +1.2
GUD Sn Sn 08 28 40.7 +0.8
GUD i Vmb_Lg 08 29 07.7
BSTF la Bastide-des 3.98 66 Pn Pn 08 27 54.8 +1.8
ARTF Artigues 3.99 70 Pn Pn 08 27 55.4 +2.2
ETOB Tobarra 4.05 205 P Pn 08 27 55.8 +1.7
ETOB Tobarra 4.05 205 Pn Pn 08 27 55.0 +0.9
ETOB Sg Sg 08 28 57.5 -4.9

ETOB i Vmb_Lg 08 29 08.5
SSB Saint Sauveur 4.08 43 Pn Pn 08 27 56.7 +2.3
MLYF Mely 4.10 65 Pn Pn 08 27 57.1 +2.4
TCF Toulx Ste Croi 4.11 15 eP Pn 08 27 56.4 +1.6
TCF eSn Sn 08 28 39.8 -2.8
141nm,0.5s
TCF eSg Sg 08 29 00.6 -3.5
73nm,0.4s
FLAF Flassans-sur-I 4.26 74 Pn Pn 08 27 59.4 +2.5
FLAF Sn Sn 08 28 51.1 +4.7
BLAF les Blancs 4.27 66 Pn Pn 08 27 56.8 -0.3
MFF Saint Martin d 4.30 353 eP Pn 08 27 59.6 +2.3
MFF eSn Sn 08 28 44.1 -3.2
156nm,0.6s
MFF eSg Sg 08 29 07.3 -3.0
90nm,0.4s
MFF Saint Martin d 4.30 353 Pn Pn 08 27 58.9 +1.6
MFF Saint Martin d 4.30 353 Sn Sn 08 28 48.4 +1.1
ESDC Sonseca Array 4.38 234 Pn Pn 08 27 58.9 +0.3
16nm,0.3s,baz=52,slow=14,SNR=245
ESDC Sn Sn 08 28 49.3 -0.1
4.9nm,0.3s,baz=52,slow=24,SNR=6.6
ESDC Lg Lg 08 29 13.2
9.2nm,0.3s,baz=44,slow=28,SNR=5.7
34nm,0.4s
EARI Arriondas 4.41 285 Pn Pn 08 28 00.2 +1.3
EARI Sn Sn 08 28 50.1 +0.1
EARI i Vmb_Lg 08 29 21.9
LMR La Mourre 4.43 75 eP Pn 08 28 01.4 +2.2
LMR eSn Sn 08 28 48.4 -2.2
38nm,0.4s
OGDI Digne 4.50 65 Pn Pn 08 28 01.9 +1.7
OGDI Sn Sn 08 28 54.7 +2.2
BGF Bois d'Agland 4.50 20 eP Pn 08 28 02.5 +2.3
BGF eSn Sn 08 28 48.2 -4.2
BGF eSg Sg 08 29 15.9 -1.0
1µm,0.8s
E1002 Yechar (Murcia 4.55 201 Sn Sn 08 28 55.1 +1.6
E001A Albudeite (Mur 4.59 200 Pn Pn 08 28 00.2 -1.2
ORIF Oris-en-Rattie 4.60 54 eP Pn 08 28 04.7 +3.2
ORIF eSn Sn 08 28 51.9 -2.9
16nm,0.5s
ORIF eSg Sg 08 29 18.0 -1.9
45nm,0.7s
ORIF Oris-en-Rattie 4.60 54 Pn Pn 08 28 04.8 +3.2
SALSA La sagne 4.69 69 Pn Pn 08 28 05.3 +2.4
SALSA Sn Sn 08 28 00.8 +3.6
PAB San Pablo 4.69 235 Pn Pn 08 28 03.3 +0.4
PAB Sg Sg 08 29 19.7 -3.4
PAB i Vmb_Lg 08 29 29.2
PAB San Pablo 4.69 235 Pn Pn 08 28 03.4 +0.4
EMUR La Murta 4.72 198 Pn Pn 08 28 03.6 +0.4
EMUR Pg Pb 08 28 16.5 +1.6
EMUR i Vmb_Lg 08 29 29.4
OGAG Argentiere 4.79 62 Pn Pn 08 28 09.7 +5.3
EZAR Zarzadilla de 4.80 203 Pn Pn 08 28 05.8 +1.4
EZAR Sg Sg 08 29 23.5 -3.1
EZAR i Vmb_Lg 08 29 44.2
CALF Calern 4.82 71 Pn Pn 08 28 06.9 +2.3
ENAUX Enaux 4.82 66 Pn Pn 08 28 07.1 +2.4
PSIM Granatula de C 4.85 225 Pn Pn 08 28 04.7 -0.3
PSIM Sn Sn 08 28 59.8 -1.3
PSIM Sg Sg 08 29 25.4 -2.7
AVF Avril sur Loir 4.85 23 ePn Pn 08 28 05.7 +0.7
AVF Avril sur Loir 4.85 23 eP Pn 08 28 08.5 +3.5
AVF eSn Sn 08 29 02.0 +1.0
AVF eSg Sg 08 29 24.8 -3.3
50nm,0.3s
SMF Signal de Mont 4.88 27 eP Pn 08 28 06.9 +1.6
SMF eSn Sn 08 28 57.6 -4.0
SMF eSg Sg 08 29 24.6 -4.2
89nm,0.6s
CREF Crivoux 4.89 61 Pn Pn 08 28 08.5 +2.8
OGSM Saint Maurice 4.90 46 Pn Pn 08 28 08.3 +2.6
JAUF Jausiers 4.92 63 Pn Pn 08 28 08.9 +2.8
SURF Saint Ours 4.98 62 Pn Pn 08 28 10.3 +3.3
MVIF Mont Vial 5.02 70 Pn Pn 08 28 09.9 +2.5
ISO Isola 5.03 66 Pn Pn 08 28 10.3 +2.7
EJUZ Juzbado, Salam 5.04 258 Pn Pn 08 28 08.7 +1.0
EJUZ Sn Sn 08 29 04.8 -1.0
MBDF Montbardon 5.06 60 eP Pn 08 28 11.3 +3.3
MBDF eSn Sn 08 29 03.9 -2.4
26nm,0.6s
SPIF crte de Spivo 5.12 68 Pn Pn 08 28 11.2 +2.4
OG35 Corcelles 5.13 42 Pn Pn 08 28 10.8 +2.0
HYF Humbligny 5.13 15 eP Pn 08 28 11.8 +3.0
HYF eSn Sn 08 29 05.3 -2.5
375nm,0.3s
HYF eSg Sg 08 29 33.2 -3.8
602nm,0.6s
SSF Saint Saulge 5.14 22 eP Pn 08 28 11.4 +2.4
SSF eSn Sn 08 29 03.8 -4.4
SSF eSg Sg 08 29 32.8 -4.6
98nm,0.7s
BNI Bardonecchia 5.15 56 Pn Pn 08 28 12.5 +3.3
BNI Sn Sn 08 29 10.8 +2.3
ESCA l'Escarene 5.16 71 Pn Pn 08 28 11.5 +2.4
RRL Rocca Remolon 5.16 58 Pn Pn 08 28 13.1 +3.7
PZZ Stroppo 5.19 63 Pn Pn 08 28 12.9 +3.1
SBF Sospel 5.21 71 eP Pn 08 28 12.1 +2.2
SBF eSn Sn 08 29 07.7 -2.1
75nm,0.6s
STV Sant Anna di V 5.24 66 Pn Pn 08 28 13.1 +2.7
BURY Giardini Botan 5.27 72 Pn Pn 08 28 13.3 +2.6
SAOF Saorge 5.32 70 Pn Pn 08 28 13.8 +2.3
EQES Quesada 5.35 213 Pn Pn 08 28 12.1 +0.1
EQES Sg Sg 08 29 39.1 -5.0
EQES i Vmb_Lg 08 29 51.0
BHB Bricherasio 5.42 60 Pn Pn 08 28 16.3 +3.4
LPL La Plagne 5.43 52 eP Pn 08 28 16.4 +3.3
LPL eSn Sn 08 29 12.1 -3.4
6.0nm,0.2s
LPG La Plagne 5.43 52 eP Pn 08 28 17.2 +4.0
LPG eSn Sn 08 29 13.3 -2.3
11nm,0.4s
LPG eSg Sg 08 29 46.3 -0.3
25nm,0.6s
LOR Lormes 5.43 24 eP Pn 08 28 15.2 +2.2
baz=209
LOR eSn Sn 08 29 12.9 -2.4
LOR eSg Sg 08 29 42.6 -4.1
56nm,0.4s,baz=201
LOR Lormes 5.43 24 Pn Pn 08 28 15.1 +2.2
RSL Roselend 5.46 50 Pn Pn 08 28 17.3 +3.8
ECAL Calabor 5.50 268 Pn Pn 08 28 14.5 +0.5
ECAL Sn Sn 08 29 15.4 -1.5
PBRG Braganca 5.52 267 ePn Pn 08 28 14.8 +0.6
PBRG eSn Sn 08 29 14.4 -3.0
PBRG A A 08 30 06.4
35nm,0.5s
EPLA Plasencia 5.55 248 Pn Pn 08 28 15.0 +0.4
EPLA Sn Sn 08 29 16.8 -1.5
EPLA i Vmb_Lg 08 30 07.4
RSP Reno Superiore 5.56 57 Pn Pn 08 28 19.0 +4.1
GBOS Grotte di Boss 5.59 68 Pn Pn 08 28 17.9 +2.7
LSD Lago del Serru 5.64 54 Pn Pn 08 28 20.6 +4.6
RORO Rocca Rossa 5.71 69 Pn Pn 08 28 19.5 +2.8
EADA Adamuz 5.77 225 P Pn 08 28 16.5 -1.1
EADA Adamuz 5.77 225 Pn Pn 08 28 17.2 -0.4
EADA Sn Sn 08 29 22.7 -0.9
EADA Sg Sg 08 29 53.1 -4.3
EADA i Vmb_Lg 08 30 05.5
CABF La Chapelle 5.78 41 eP Pn 08 28 20.1 +2.3
CABF eSn Sn 08 29 20.5 -3.5
CABF eSg Sg 08 29 54.4 -3.5
319nm,1.2s
CLF Chambon-Foret 5.80 11 Pn Pn 08 28 20.6 +2.7
CLF Sn Sn 08 29 26.0 +1.7
EPON Pontenova 5.81 282 Pn Pn 08 28 19.1 +1.0
EPON Sn Sn 08 29 24.4 -0.1
EPON i Vmb_Lg 08 30 06.9
GIMEL St. Georges / 5.82 42 Pn Pn 08 28 20.4 +2.1
MVO Moncorvo 5.85 261 ⇓ePn Pn 08 28 19.5 +0.7
MVO eSn Sn 08 29 23.6 -2.1
MVO eSg Sg 08 29 59.6 -0.5
MVO A A 08 30 11.7
71nm,0.6s
EQTA Presa de Quent 6.01 213 P Pn 08 28 21.2 +0.1
EQUE Quentar 6.01 213 Pn Pn 08 28 21.9 +0.9
EQUE Sn Sn 08 29 29.2 -0.6
EQUE Sg Sg 08 30 00.9 -4.4
EQUE i Vmb_Lg 08 30 11.3

EBER Berja 6.08 208 P Pn 08 28 24.4 +2.4
EBER Berja 6.08 208 Pn Pn 08 28 20.9 -1.1
EBER Sg Sg 08 30 06.4 -1.1
EBER i Vmb_Lg 08 30 31.2
GRR Gorron 6.14 351 eP Pn 08 28 24.6 +2.0
GRR eSn Sn 08 29 28.2 -4.4
24nm,0.3s
QUIF Quistinic 6.19 336 eP Pn 08 28 26.3 +3.0
QUIF eSn Sn 08 29 29.5 -4.3
29nm,0.3s
QUIF eSg Sg 08 30 06.2 -4.7
44nm,0.6s
PGF Pioggiola 6.19 85 ePn Pn 08 28 23.8 +0.3
PGF eSn Sn 08 29 29.3 -4.9
42nm,0.4s
SENIN Lac Senin/Sane 6.24 48 Pn Pn 08 28 27.8 +3.5
SENIN Sn Sn 08 29 38.7 +3.1
LDF La Druitiere 6.28 355 eP Pn 08 28 26.5 +2.0
LDF eSn Sn 08 29 31.6 -4.4
41nm,0.3s
LDF eSg Sg 08 30 09.1 -4.6
44nm,0.5s
ECAB El Cabril 6.29 229 P Pn 08 28 24.4 -0.5
ECAB El Cabril 6.29 229 Pn Pn 08 28 24.6 -0.2
ECAB Sn Sn 08 29 33.5 -3.0
ECAB Sg Sg 08 30 10.4 -3.9
ECAB i Vmb_Lg 08 30 20.2
SGMF Saint Gilles 6.33 340 eP Pn 08 28 28.0 +2.8
SGMF eSn Sn 08 29 34.3 -2.9
15nm,0.4s
PVRL Vila Real 6.33 263 ePn Pn 08 28 25.7 +0.4
PVRL eSn Sn 08 29 35.8 -1.7
PVRL A A 08 30 21.1
48nm,0.6s
EGOR Sierra Gorda, 6.38 217 P Pn 08 28 26.3 +0.2
EGOR Sierra Gorda, 6.38 217 Pn Pn 08 28 27.4 +1.4
EGOR i Vmb_Lg 08 30 31.8
ELGU Los Guajares, 6.38 212 Pn Pn 08 28 26.8 +0.8
ELGU i Vmb_Lg 08 30 38.6
MTE Manteigas 6.45 255 ePn Pn 08 28 27.8 +0.8
MTE eSn Sn 08 29 38.2 -2.3
MTE eSg Sg 08 30 19.8 +0.4
MTE A A 08 30 32.7
39nm,0.6s
EAGO Agolada(Pontev 6.46 277 Pn Pn 08 28 27.6 +0.6
EAGO Sn Sn 08 29 39.1 -1.5
EAGO i Vmb_Lg 08 30 30.9
FLN La Foliniere 6.47 353 ePn Pn 08 28 26.5 -0.7
baz=171
FLN La Foliniere 6.47 353 eP Pn 08 28 31.2 +4.0
FLN eSn Sn 08 29 36.2 -4.6
18nm,0.4s
PCAB Cabril 6.48 267 ePn Pn 08 28 26.0 -1.4
PCAB eSg Sg 08 30 16.9 -3.4
PCAB A A 08 30 31.0
42nm,0.5s
ELOB Lobios 6.49 269 Pn Pn 08 28 27.5 0.0
ELOB Sn Sn 08 29 38.2 -3.1
ELOB i Vmb_Lg 08 30 31.8
ROSF Rostrenen 6.60 337 eP Pn 08 28 31.3 +2.4
ROSF eSn Sn 08 29 40.2 -3.7
84nm,0.5s
PVIS Viseu 6.60 259 ePn Pn 08 28 29.3 +0.2
PVIS eSn Sn 08 29 41.5 -2.7
PVIS A A 08 30 40.2
19nm,0.4s
PCBR Castelo Branco 6.62 251 ePn Pn 08 28 29.3 +0.1
PCBR eSn Sn 08 29 41.2 -3.3
PCBR A A 08 30 35.9
22nm,0.4s
PGAV Gavieira, Arco 6.63 270 ePn Pn 08 28 30.2 +0.7
PGAV eSn Sn 08 29 43.0 -1.9
PGAV A A 08 30 39.8
31nm,0.6s
SFTF Sexfontaines 6.63 26 eP Pn 08 28 32.9 +3.4
SFTF eSn Sn 08 29 41.5 -3.4
SFTF eSg Sg 08 30 20.5 -4.7
42nm,0.5s
FIESA Fiescheralp 6.74 50 Pn Pn 08 28 35.4 +4.2
FIESA Sn Sn 08 29 54.6 +6.8
PMRV Marv??o 6.74 247 ePn Pn 08 28 31.3 +0.3
PMRV eSn Sn 08 29 45.1 -2.5
PMRV A A 08 30 42.1
25nm,0.6s
EBAD Badajoz 6.84 241 P Pn 08 28 31.8 -0.4
EBAD S Sn 08 29 42.9 -6.9
EBAD Badajoz 6.84 241 Pn Pn 08 28 31.9 -0.4
EBAD i Vmb_Lg 08 30 47.2
MEZF Maizieres J'vi 6.90 25 eSn Sn 08 29 46.8 -4.5
MEZF eSg Sg 08 30 28.7 -4.9
64nm,0.6s
HASLI Hasliberg/Brie 6.95 48 Pn Pn 08 28 37.7 +3.8
HASLI Sn Sn 08 29 55.1 +2.3
HAU Haudompre 6.95 34 ePn Pn 08 28 33.9 0.0
SAVF Savonnieres en 7.02 25 eP Pn 08 28 38.3 +3.5
SAVF eSg Sg 08 30 31.8 -5.8
41nm,0.7s
HINF Hinteralfeld 7.02 37 ePn Pn 08 28 34.9 +0.1
HINF eSg Sg 08 30 32.8 -4.8
28nm,0.5s
MUGIO Muggio 7.03 57 Pn Pn 08 28 37.8 +2.8
MUGIO Sn Sn 08 29 59.2 +4.6
EMAZ Mazaricos 7.11 278 Pn Pn 08 28 36.5 +0.4
EMAZ Sn Sn 08 29 54.7 -2.0
EMAZ i Vmb_Lg 08 30 13.9
JSA Saint Aubin 7.12 345 Pn Pn 08 28 38.7 +2.6
JSA Sn Sn 08 29 54.5 -2.3
EMIJ Mijas 7.12 218 Pn Pn 08 28 38.5 +2.3
EMIJ i Vmb_Lg 08 30 50.9
COI Coimbra 7.14 256 ePn Pn 08 28 37.5 +1.1
PESTR Estremoz 7.16 244 ePn Pn 08 28 36.7 +0.1
PESTR eSn Sn 08 29 55.1 -2.6
PESTR A A 08 30 51.7
18nm,0.6s
PESTR Estremoz 7.16 244 S Sn 08 29 51.0 -6.7
PESTR P Pn 08 28 35.2 -1.5
PAGF Fort de Pagny 7.17 28 eP Pn 08 28 39.8 +3.0
PAGF eSn Sn 08 29 54.2 -3.8
PAGF eSg Sg 08 30 38.4 -3.9
17nm,0.4s
PBAR Barrancos 7.19 237 ePn Pn 08 28 37.0 -0.1
PBAR eSn Sn 08 29 56.3 -2.3
PBAR eSg Sg 08 30 43.9 +0.8
PBAR A A 08 31 01.1
25nm,0.6s
PBAR Barrancos 7.19 237 P Pn 08 28 36.8 -0.4
PBAR S Sn 08 29 51.9 -6.7
VSL Villasalto 7.21 110 Pn Pn 08 28 37.6 +0.3
VSL Sn Sn 08 29 56.4 -2.6
PCAS Casmilo, Conde 7.26 255 ePn Pn 08 28 38.5 +0.5
PCAS eSn Sn 08 29 57.5 -2.7
PCAS A A 08 31 11.5
28nm,0.6s
VLC Villacollemand 7.35 72 Pn Pn 08 28 41.8 +2.5
ESPR Espera 7.41 225 Pn Pn 08 28 41.1 +1.0
ESPR Sn Sn 08 30 04.6 +0.5
ESPR i Vmb_Lg 08 31 05.4
TUE Stuetta 7.48 54 Pn Pn 08 28 45.4 +4.1
TUE Sn Sn 08 30 11.6 +5.6
PMTG Montargil 7.48 247 ePn Pn 08 28 41.0 -0.1
PMTG eSn Sn 08 30 02.0 -3.7
PMTG A A 08 31 03.3
25nm,0.6s
EJIF Jimena Fronter 7.54 221 Pn Pn 08 28 43.5 +1.6
EJIF Sg Sb 08 30 41.4 +8.6
EVO Evora 7.61 243 ePn Pn 08 28 42.6 -0.3
EVO eSn Sn 08 30 05.0 -4.0
EVO eSg Sg 08 30 56.5 -0.1
EVO A A 08 31 10.9
17nm,0.6s
CDF Champ du Feu 7.66 35 eP Pn 08 28 44.5 +0.9
CDF eSn Sn 08 30 05.9 -4.3
CDF eSg Sg 08 30 51.2 -6.8
47nm,0.9s
PSBE So Bento 7.68 252 ePn Pn 08 28 45.0 +1.2
SLE Schleitheim 7.77 43 Pn Pn 08 28 46.6 +1.6
SLE Sn Sn 08 30 14.7 +1.9
PBEJ Beja 7.80 239 ePn Pn 08 28 44.9 -0.6
PBEJ eSn Sn 08 30 11.1 -2.6
PBEJ A A 08 31 20.8
14nm,0.6s
EGRO El Granado 7.87 235 Pn Pn 08 28 45.7 -0.7

EGRO					Sn		**Sn**	**08 30 12.7**	**-2.6**
EGRO					Sg		**Sg**	**08 31 03.5**	**-1.2**
EGRO					*i* Vmb_Lg			08 31 15.8	
DAVOX	**Davos/Dischmat**	**7.95**	**53**		Pn		**Pn**	**08 28 51.8**	**+4.0**
	1.9nm,0.3s,baz=250,slow=10,SNR=2.5								
DAVOX					LR		LR	08 31 44.8	
	comp=Z,68nm,19.9s,baz=295,slow=36								
BFO	**Black Forest**	**8.07**	**40**		Pn		**Pn**	**08 28 50.5**	**+1.3**
BFO					Sn		**Sn**	**08 30 21.8**	**+1.5**
PVAQ	**Vaqueiros**	**8.09**	**235**	*e*	Pn		**Pn**	**08 28 49.0**	**-0.5**
PVAQ				*e*	Sn		**Sn**	**08 30 16.6**	**-4.2**
FUORN	**Ofenpass-Fuorn**	**8.10**	**55**		Pn		Pn	08 28 54.8	+5.0
BAIF	**Baives**	**8.11**	**17**	*e*	P		**Pn**	**08 28 51.9**	**+2.3**
BAIF				*e*	Sn		**Sn**	**08 30 17.6**	**-3.4**
	11nm,0.3s								
MESJ	**Messejana**	**8.14**	**239**	*e*	Pn		**Pn**	**08 28 49.9**	**-0.2**
MESJ				*e*	Sn		**Sn**	**08 30 18.4**	**-3.5**
MESJ					A		A	08 31 24.4	
	16nm,0.5s								
MESJ	**Messejana**	**8.14**	**239**	*e*	P		**Pn**	**08 28 49.5**	**-0.6**
PCVE	**Castro Verde**	**8.15**	**238**	*e*	Pn		**Pn**	**08 28 49.4**	**-0.9**
PCVE				*e*	Sn		**Sn**	**08 30 18.0**	**-4.2**
PCVE					A		A	08 31 31.6	
	12nm,0.6s								
PNCL	**Nicolau / Gran**	**8.18**	**242**	*e*	Pn		**Pn**	**08 28 50.3**	**-0.4**
PNCL				*e*	Sn		**Sn**	**08 30 17.3**	**-5.7**
PNCL					A		A	08 31 32.4	
	10nm,0.5s								
PNCL	**Nicolau / Gran**	**8.18**	**242**		P		**Pn**	**08 28 49.8**	**-0.9**
PNCL					S		Sn	08 30 14.5	-8.4
DOU	**Dourbes**	**8.23**	**18**		Pn		**Pn**	**08 28 53.5**	**+2.2**
DOU					Sn		**Sn**	**08 30 22.5**	**-1.5**
GIVF	**Givet**	**8.29**	**19**	*e*	P		**Pn**	**08 28 54.9**	**+2.8**
GIVF				*e*	Sn		**Sn**	**08 30 20.0**	**-5.5**
	5.8nm,0.2s								
PBDV	**Barranco-do-Ve**	**8.33**	**235**	*e*	Pn		**Pn**	**08 28 51.6**	**-1.1**
PBDV				*e*	Sn		**Sn**	**08 30 22.0**	**-4.6**
PBDV					A		A	08 31 31.6	
	13nm,0.7s								
HMNX	**Herstmonceux**	**8.53**	**359**		Sn		**Sn**	**08 30 28.8**	**-2.6**
FETA	**Feichten**	**8.58**	**54**	*i*	Pn		**Pn**	**08 29 00.6**	**+4.3**
	2.1nm,0.3s								
PTEO	**Sao Teotonio**	**8.63**	**239**	*e*	Pn		**Pn**	**08 28 57.2**	**+0.3**
DYA	**Yadsworthy**	**8.69**	**340**		Pn		**Pn**	**08 28 59.0**	**+1.4**
DYA					Sn		**Sn**	**08 30 30.9**	**-4.4**
MORF	**Marmelete**	**8.74**	**238**	*e*	Pn		**Pn**	**08 28 57.7**	**-0.6**
MORF				*e*	Sn		**Sn**	**08 30 32.8**	**-3.9**
MORF					A		A	08 31 50.7	
	7.4nm,0.6s								
MORF	**Marmelete**	**8.74**	**238**	*e*	P		**Pn**	**08 28 57.5**	**-0.8**
CCA1	**Carnmenellis**	**8.83**	**335**		Pn		**Pn**	**08 29 02.5**	**+3.0**
CCA1					Sn		**Sn**	**08 30 34.2**	**-4.6**
RETA	**Reutte**	**8.84**	**51**	*i*	Pn		**Pn**	**08 29 02.8**	**+3.0**
	2.2nm,0.3s								
PFVI	**Vila Bisbo**	**8.95**	**238**	*e*	Pn		**Pn**	**08 29 00.4**	**-0.9**
PFVI				*e*	Sn		**Sn**	**08 30 37.6**	**-4.3**
MOTA	**Moosalm**	**8.96**	**53**	*i*	Pn		**Pn**	**08 29 05.2**	**+3.6**
	3.7nm,0.4s								
SQTA	**Sankt Quirin**	**8.96**	**53**	*e*	Pn		**Pn**	**08 29 05.3**	**+3.8**
	2.1nm,0.3s								
WTTA	**Wattenberg**	**9.24**	**54**	*e*	Pn		**Pn**	**08 29 09.8**	**+4.5**
	1.2nm,0.3s								
ABTA	**Abfaltersbach**	**9.55**	**59**	*e*	Pn		Pn	08 29 14.8	+5.2
	0.4nm,0.2s								
LESA	**Schwarzleotal**	**9.94**	**55**	*i*	Pn		Pn	08 29 20.0	+5.2
	0.7nm,0.2s								
MOA	**Molln**	**11.09**	**56**	*e*	Pn		**Pn**	**08 29 34.7**	**+4.1**
	0.9nm,0.3s								
GERES	**GERESS Array B**	**11.22**	**50**		Pn		**Pn**	**08 29 35.2**	**+2.8**
	0.7nm,0.3s,baz=239,slow=13,SNR=14								
GERES					Sn		**Sn**	**08 31 40.0**	**+2.4**
	0.5nm,0.3s,baz=242,slow=23,SNR=4.4								
	2.5nm,0.4s								
KHC	**Kasperske Hory**	**11.30**	**49**	*e*	SN		**Sn**	**08 31 38.0**	**-1.5**
ARSA	**Arzberg**	**11.66**	**60**	*i*	Pn		**Pn**	**08 29 40.0**	**+1.7**
	0.4nm,0.3s								
EKA	**Eskdalemuir Ar**	**13.24**	**350**		Pn		**Pn**	**08 30 00.5**	**+0.7**
	baz=161,slow=14								
	6.9nm,0.4s								
HFS	**Hagfors**	**19.54**	**20**		P		**Pn**	**08 31 22.2**	**+1.6**
	3.8nm,1.1s,baz=206,slow=13,SNR=1.9								
FINES	**FINESS Array B**	**24.46**	**30**		P		**P**	**08 32 12.5**	**+1.9**
	1.0nm,0.7s,baz=238,slow=11,SNR=4.4								
	1.0nm,0.7s								
WSAR	**Wadi Sarin**	**51.34**	**93**		LR		LR	09 02 05.1	
	comp=Z,25nm,18.4s,baz=34,slow=41								
YKA	**Yellowknife Ar**	**63.41**	**332**		P		**P**	**08 37 22.9**	**+1.8**
	0.2nm,0.6s,baz=51,slow=6.8,SNR=6.0								
	0.2nm,0.6s								

JMA ***14*** *08:30:09.7±0.1,24.2°N±0.2°×121.8°E±0.2,h4km±1km, MV3.2/12,TAIWAN REGION*
TAP ***14*** *08:30:09.3,24.1°N×121.81°E,h8km,ML3.6,C*
ASIES ***14*** *08:30:09.3,24.1°N×121.81°E,h8km,ML3.6,Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.89; $M_{\theta\theta}$-3.07; $M_{\phi\phi}$-0.65; $M_{r\theta}$0.72; $M_{r\phi}$-0.33; $M_{\theta\phi}$0.12; Fault plane solution: $M_0$2.71048×10^{21} NP1:ϕ_s81.76000°, δ53.14000°, λ89.33000°. NP2:ϕ_s262.87000°, δ36.86000°, λ90.89000°. Principal axes: T Plg81.8390°, Azm348.4320°; N Plg0.5340°, Azm82.1580°; P Plg8.1430°, Azm172.2340°;*

ISC 14 08:30:09.5±0.9,24.19N±0.01×121.83E±0.02,h7km±7km, n131,σ0.80/181,10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**328**	P			**Pg**	**08 30 12.5**	**0.0**
	baz=332								
EHP				*e*S			**Sg**	**08 30 15.1**	**+0.5**
	baz=332								
EAHA	**Aohua**	**0.16**	**331**	⇓*i*P			**Pg**	**08 30 12.9**	**+0.1**
	baz=332								
EAHA				S			**Sg**	**08 30 15.7**	**+0.6**
	baz=332								
ETL	**Fush Village**	**0.19**	**261**	P			**Pg**	**08 30 13.2**	**-0.1**
	baz=268								
NACB	**Ninganchiao**	**0.21**	**266**	P			**Pg**	**08 30 13.6**	**-0.1**
NACB	**Ninganchiao**	**0.21**	**266**	⇓*i*P			**Pg**	**08 30 13.5**	**-0.3**
	baz=267								
TWD	**Chiawan**	**0.24**	**243**	P			**Pg**	**08 30 14.1**	**-0.1**
	baz=255								
TWD				*e*S			**Sg**	**08 30 17.8**	**+0.4**
	baz=255								
ENA	**Nanau**	**0.25**	**342**	⇓*i*P			**Pg**	**08 30 14.6**	**+0.1**
	baz=341								
ENA				S			**Sg**	**08 30 18.3**	**+0.4**
	baz=341								
EWUT	**Wuta**	**0.26**	**350**	⇓*i*P			**Pg**	**08 30 14.8**	**+0.2**
	baz=347								
EWUT				S			**Sg**	**08 30 19.2**	**+1.0**
	baz=347								
HWA	**Hwalien**	**0.29**	**224**	*e*P			**Pb**	**08 30 17.6**	**+0.6**
	baz=238								
ETLH	**Xiulin Townshi**	**0.31**	**273**	*e*P			**Pg**	**08 30 15.6**	**-0.1**
	baz=275								
ETLH				*e*S			**Sg**	**08 30 20.6**	**+0.7**
	baz=275								
ETM	**Tongmen**	**0.38**	**234**	*e*P			**Pg**	**08 30 16.8**	**-0.1**
	baz=237								
ETM				*e*S			**Sb**	**08 30 24.6**	**+0.1**
	baz=237								
ESAO	**Su ao**	**0.39**	**3**	⇓P			**Pg**	**08 30 17.1**	**+0.1**
	baz=354								
ESAO				*e*S			**Sb**	**08 30 23.2**	**-1.6**
	baz=354								
LXIB	**Xiulin Townshi**	**0.41**	**246**	*e*P			**Pg**	**08 30 17.3**	**-0.2**
	baz=250								
LXIB				*e*S			**Sg**	**08 30 23.2**	**+0.2**
	baz=250								
TWC	**Suao**	**0.42**	**3**	⇓*i*P			**Pg**	**08 30 17.8**	**+0.1**
	baz=353								
TWC				S			**Sg**	**08 30 23.2**	**0.0**
	baz=353								
LATG	**Datong**	**0.44**	**322**	⇓*i*P			**Pg**	**08 30 18.2**	**+0.1**
	baz=321								
LATG				S			**Sg**	**08 30 23.8**	**-0.1**
	baz=321								
NDS	**Dongshan**	**0.45**	**347**	P			**Pg**	**08 30 18.6**	**+0.3**
	baz=343								
NDS				*e*S			**Sg**	**08 30 24.9**	**+0.6**
	baz=343								
SHUL	**Shoufeng**	**0.47**	**211**	*e*P			**Pb**	**08 30 19.5**	**-0.5**
	baz=215								
NNSB	**Datong**	**0.47**	**301**	P			**Pg**	**08 30 18.8**	**+0.1**
	baz=302								
NNSB				S			**Sg**	**08 30 25.0**	**+0.2**
	baz=302								
NNS	**Nan Shan**	**0.48**	**301**	P			**Pg**	**08 30 19.0**	**+0.1**
	baz=303								
NNS				*e*S			**Sg**	**08 30 25.7**	**+0.5**
	baz=303								
NDT	**Datong Townshi**	**0.50**	**325**	P			**Pg**	**08 30 19.5**	**+0.3**
	baz=324								
NDT				*e*S			**Sg**	**08 30 26.3**	**+0.5**
	baz=324								
ENTT	**Nioudou**	**0.51**	**332**	⇓*i*P			**Pg**	**08 30 19.6**	**+0.3**
	baz=331								
ENTT				*i* S			**Sb**	**08 30 27.7**	**-0.7**
	baz=331								
WHF	**Hehuan Shan**	**0.51**	**265**	*e*P			**Pg**	**08 30 19.4**	**-0.1**
	baz=268								
WHF				*e*S			**Sg**	**08 30 26.1**	**-0.2**
	baz=268								
ESL	**Shilin**	**0.52**	**224**	*e*P			**Pg**	**08 30 19.5**	**0.0**
	baz=239								
FUSS	**Fushou**	**0.53**	**276**	*e*P			**Pg**	**08 30 20.0**	**+0.1**
	baz=278								
FUSS				*e*S			**Sb**	**08 30 27.7**	**-1.6**
	baz=278								
TEGC	**Jichi Village**	**0.54**	**209**	*e*P			**Pb**	**08 30 20.9**	**-0.5**
	baz=214								
TEGC				*e*S			**Sn**	**08 30 31.7**	**-1.3**
	baz=214								
TWE	**Neicheng**	**0.55**	**345**	⇓*i*P			**Pg**	**08 30 20.5**	**+0.3**
	baz=343								
ILA	**Ilan**	**0.58**	**353**	P			**Pb**	**08 30 21.2**	**-0.8**
	baz=343								
ILA				*e*S			**Sb**	**08 30 31.2**	**+0.9**
	baz=343								
TWT	**Tachien**	**0.60**	**276**	*e*P			**Pb**	**08 30 22.2**	**-0.2**
	baz=277								
TWT				*e*S			**Sb**	**08 30 29.6**	**-1.4**
	baz=277								
FUSB	**Fushanzhiwuyua**	**0.61**	**339**	P			**Pb**	**08 30 21.6**	**-0.9**
	baz=337								
FUSB				*e*S			**Sb**	**08 30 30.9**	**-0.4**
	baz=337								
CHGB	**Renai**	**0.61**	**258**	P			**Pg**	**08 30 21.4**	**+0.1**
	baz=251								
CHGB				*e*S			**Sb**	**08 30 31.5**	**0.0**
	baz=251								
TDCB	**Techi**	**0.61**	**276**	*e*P			**Pb**	**08 30 22.3**	**-0.3**
	baz=278								
TDCB				*e*S			**Sg**	**08 30 29.6**	**+0.2**
	baz=278								
WARBT	**Fenglin Townsh**	**0.62**	**221**	⇓P			**Pg**	**08 30 21.4**	**0.0**
	baz=231								
WARBT				*e*S			**Sb**	**08 30 31.4**	**-0.1**
	baz=231								
YHNB	**Yeheng**	**0.63**	**320**	P			**Pb**	**08 30 22.0**	**-0.9**
YHNB	**Yeheng**	**0.63**	**320**	P			**Pb**	**08 30 22.2**	**-0.7**
	baz=319								
YHNB				*e*S			**Sb**	**08 30 31.1**	**-0.9**
	baz=319								
NSK	**Sanguang**	**0.65**	**319**	P			**Pb**	**08 30 22.3**	**-0.8**
	baz=318								
NSK				*e*S			**Sg**	**08 30 30.0**	**-0.4**
	baz=318								
NWLT	**Wulai**	**0.66**	**333**	P			**Pb**	**08 30 22.6**	**-0.7**
	baz=331								
NWLT				S			**Sb**	**08 30 31.7**	**-0.9**
	baz=331								
EGS		**0.66**	**8**	*e*P			**Pg**	**08 30 22.6**	**+0.3**
	baz=6.0								
WUSB	**Renai**	**0.68**	**253**	*e*P			**Pg**	**08 30 22.6**	**0.0**
	baz=256								
WUSB				*e*S			**Sb**	**08 30 32.1**	**-1.2**
	baz=256								
VWDT	**VWDT**	**0.76**	**235**	*e*P			**Pb**	**08 30 24.8**	**-0.3**
	baz=248								
NFF	**Wufeng Townshi**	**0.78**	**305**	P			**Pb**	**08 30 25.0**	**-0.5**
	baz=305								
NFF				*e*S			**Sb**	**08 30 35.2**	**-1.0**
	baz=305								
HGSD	**Ruisui**	**0.79**	**208**	*e*P			**Pb**	**08 30 25.1**	**-0.4**
	baz=200								
NHDH	**Xindian Distri**	**0.82**	**341**	P			**Pb**	**08 30 25.6**	**-0.5**
	baz=338								
TWA	**Mucha**	**0.82**	**344**	*e*P			**Pb**	**08 30 25.7**	**-0.4**
	baz=334								
EHY	**Hungye**	**0.82**	**214**	*e*P			**Pg**	**08 30 25.3**	**0.0**
	baz=231								
TWB1	**Santiao Chiao**	**0.83**	**10**	*e*P			**Pg**	**08 30 25.4**	**0.0**
	baz=359								
TATO	**Taipei**	**0.84**	**339**	P			**Pb**	**08 30 26.2**	**-0.2**
WCS	**Beigang Elemen**	**0.84**	**261**	*e*P			**Pb**	**08 30 26.7**	**+0.2**
	baz=266								
LIOB	**Emei**	**0.87**	**302**	*e*P			**Pb**	**08 30 27.0**	**+0.1**
	baz=304								
NSTT	**Nanjuang**	**0.87**	**301**	P			**Pb**	**08 30 26.9**	**0.0**
	baz=303								
NWF	**Wu-fen Shan**	**0.88**	**357**	P			**Pb**	**08 30 27.1**	**0.0**
	baz=344								
NWF				*e*S			**Sn**	**08 30 40.1**	**-1.3**
	baz=344								
WFSB	**Wu-fen Shan**	**0.88**	**357**	P			**Pb**	**08 30 27.2**	**+0.1**
	baz=344								
WFSB				*e*S			**Sn**	**08 30 39.9**	**-1.4**
	baz=344								
SSLB	**Suanglung**	**0.89**	**244**	P			**Pb**	**08 30 26.8**	**-0.5**
SSLB	**Suanglung**	**0.89**	**244**	*e*P			**Pg**	**08 30 26.5**	**-0.2**
	baz=258								
SSLB				*e*S			**Sb**	**08 30 39.5**	**+0.1**
	baz=258								
SMLT	**Sun Moon Lake**	**0.90**	**250**	*e*P			**Pb**	**08 30 26.9**	**-0.6**
	baz=255								
SXI1	**Grass Mountain**	**0.90**	**3**	*e*P			**Pb**	**08 30 27.1**	**-0.5**
	baz=4.0								
SXI1				*e*S			**Sb**	**08 30 40.2**	**+0.4**
	baz=4.0								
TYC	**Yuchr**	**0.93**	**252**	*e*P			**Pb**	**08 30 27.7**	**-0.2**
	baz=256								
TYC				*e*S			**Sb**	**08 30 40.6**	**+0.2**
	baz=256								
YULB	**Yu-li**	**0.93**	**211**	P			**Pb**	**08 30 27.5**	**-0.4**
YULB	**Yu-li**	**0.93**	**211**	*e*P			**Pg**	**08 30 26.9**	**-0.5**
	baz=228								
ECBN	**Changbin**	**0.93**	**202**	*e*P			**Pg**	**08 30 26.9**	**-0.6**
	baz=206								
EYUL	**Yuli**	**0.96**	**209**	*e*P			**Pg**	**08 30 27.8**	**-0.1**
	baz=225								
TNOU	**National Taiwa**	**0.96**	**357**	*e*P			**Pb**	**08 30 28.2**	**-0.2**
	baz=353								
TWF1	**Yuli**	**0.96**	**210**	P			**Pg**	**08 30 27.5**	**-0.5**
	baz=230								
TWF1				*e*S			**Sn**	**08 30 42.3**	**-1.1**
	baz=230								
NCUH	**Zhongli**	**0.97**	**323**	*e*P			**Pn**	**08 30 29.3**	**-0.2**
	baz=317								
SBCB	**Hsinchu**	**0.97**	**308**	*e*P			**Pn**	**08 30 28.8**	**-0.7**
	baz=310								
TWQ1	**Liyutan**	**0.97**	**280**	*e*P			**Pn**	**08 30 30.6**	**+1.0**
	baz=283								
TWS1	**Kuangyinshan**	**0.98**	**338**	*e*P			**Pn**	**08 30 29.7**	**0.0**
	baz=335								
YM01	**YM01**	**0.98**	**346**	*e*P			**Pn**	**08 30 29.2**	**-0.5**
	baz=343								
HSN	**Hsinchu**	**0.99**	**308**	*e*P			**Pn**	**08 30 29.8**	**0.0**
	baz=303								
NMLH	**Miaoli**	**1.00**	**290**	*e*P			**Pn**	**08 30 31.4**	**+1.4**
	baz=301								
YM08	**YM08**	**1.02**	**348**	*e*P			**Pn**	**08 30 29.6**	**-0.6**
	baz=344								
NTST	**Danshui**	**1.03**	**341**	*e*P			**Pn**	**08 30 30.0**	**-0.3**
	baz=337								
TCU	**Taichung**	**1.05**	**268**	*e*P			**Pn**	**08 30 31.1**	**+0.5**
	baz=271								
TCU				*e*S			**Sn**	**08 30 46.7**	**+1.2**
	baz=271								
JYNG	**Yonagunijimaku**	**1.05**	**75**	P			**Pb**	**08 30 30.1**	**0.0**
JYNG				*e*S			**Sn**	**08 30 48.1**	**+2.5**
CHKH	**Chenggong**	**1.07**	**202**	*e*P			**Pg**	**08 30 29.5**	**-0.5**
	baz=196								
WJS	**Zhushan**	**1.07**	**250**	*e*P			**Pn**	**08 30 31.1**	**+0.2**
	baz=248								
WNT	**Mingjian**	**1.09**	**254**	*e*P			**Pn**	**08 30 31.8**	**+0.7**
	baz=259								
TWY	**Chenhua**	**1.10**	**349**	*e*P			**Pn**	**08 30 31.2**	**-0.1**
	baz=345								
YOJ	**Yonaguni jima**	**1.11**	**76**	P			**Pn**	**08 30 31.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.11**	**76**	*e*P			**Pg**	**08 30 31.0**	**+0.1**
	baz=55								
YOJ	**Yonaguni jima**	**1.11**	**76**	P			**Pn**	**08 30 31.5**	**0.0**
YOJ				S			**Sn**	**08 30 50.6**	**+3.5**
ALS	**Alishan**	**1.15**	**234**	*e*P			**Pb**	**08 30 31.6**	**-0.3**
	baz=240								
ALS				*e*S			**Sb**	**08 30 47.0**	**-0.2**
	baz=240								
CHKT	**Chengkung**	**1.16**	**201**	*e*P			**Pb**	**08 30 31.2**	**-0.7**
	baz=208								
CHKT				*e*S			**Sn**	**08 30 48.6**	**+0.3**
	baz=208								
EHD	**Haiduan**	**1.18**	**209**	*e*P			**Pb**	**08 30 31.1**	**-1.2**
	baz=216								
CHN5	**Tsauling**	**1.20**	**241**	*e*P			**Pn**	**08 30 33.0**	**+0.2**
	baz=248								
CHN5				*e*S			**Sn**	**08 30 51.7**	**+2.3**
	baz=248								
ELDTW	**Lidau**	**1.24**	**217**	*e*P			**Pb**	**08 30 31.9**	**-1.4**
	baz=208								
WGK	**Gukeng**	**1.26**	**247**	*e*P			**Pg**	**08 30 33.9**	**+0.2**
	baz=254								
WDLH	**Douliu**	**1.28**	**247**	*e*P			**Pg**	**08 30 34.8**	**+0.8**
	baz=254								
EDH	**Donghe**	**1.30**	**202**	*e*P			**Pn**	**08 30 31.9**	**-2.1**
	baz=192								
WCKO	**Fanlu**	**1.34**	**237**	*e*P			**Pg**	**08 30 35.6**	**+0.3**
	baz=244								
WCKO				*e*S			**Sg**	**08 30 56.1**	**+3.4**
	baz=244								
WRL	**Guolierlin Hig**	**1.35**	**258**	*e*P			**Pg**	**08 30 35.3**	**-0.2**
	baz=265								
CHN2	**Minshiung**	**1.40**	**242**	*e*P			**Pb**	**08 30 35.7**	**-0.2**
	baz=250								
STYH	**Taoyuan**	**1.40**	**224**	*e*P			**Pn**	**08 30 35.0**	**-0.3**
	baz=232								
STYH				*e*S			**Sn**	**08 30 53.7**	**-0.4**
	baz=232								
CHN4	**Tsaushan**	**1.40**	**234**	*e*P			**Pg**	**08 30 36.4**	**0.0**
	baz=242								
CHN4				*e*S			**Sg**	**08 30 57.6**	**+2.9**
	baz=242								
WTK	**Tuku**	**1.41**	**250**	*e*P			**Pn**	**08 30 34.9**	**-0.6**
	baz=242								
TPUB	**Ta-pu**	**1.41**	**231**	P			**Pg**	**08 30 36.3**	**-0.2**
TPUB	**Ta-pu**	**1.41**	**231**	*e*P			**Pb**	**08 30 35.9**	**-0.2**
	baz=228								
TPUB				*e*S			**Sg**	**08 30 56.0**	**+1.2**
	baz=228								
LONT	**Longtian**	**1.43**	**207**	*e*P			**Pn**	**08 30 35.3**	**-0.5**
	baz=214								
PCYT	**Pengchaiyu**	**1.45**	**9**	*e*P			**Pg**	**08 30 37.0**	**-0.3**
WTP	**Ta-pu**	**1.45**	**230**	*e*P			**Pb**	**08 30 36.8**	**-0.1**
	baz=238								
TWG	**Pinlang**	**1.53**	**207**	*e*P			**Pn**	**08 30 37.2**	**0.0**
	baz=214								
TWGBT	**Beinan**	**1.53**	**207**	*e*P			**Pn**	**08 30 35.7**	**-1.5**
	baz=214								
TWK	**Hsinying**	**1.53**	**233**	*e*P			**Pg**	**08 30 38.3**	**-0.6**
	baz=242								
CHN1	**Nanshi**	**1.55**	**230**	*e*P			**Pg**	**08 30 38.8**	**-0.5**
	baz=239								
CHN1				*e*S			**Sg**	**08 31 00.2**	**+0.7**
	baz=239								
SNST	**Tainan City**	**1.55**	**232**	*e*P			**Pg**	**08 30 38.8**	**-0.5**
	baz=241								
SGST	**Jiashian**	**1.58**	**226**	*e*P			**Pn**	**08 30 38.1**	**+0.1**
	baz=235								
ICHU	**Yijhu**	**1.64**	**240**	*e*P			**Pb**	**08 30 39.0**	**-1.0**
	baz=249								
SCST	**Cishan**	**1.78**	**224**	*e*P			**Pb**	**08 30 42.0**	**-0.5**
	baz=233								
TSMG	**Majia**	**1.83**	**217**	*e*P			**Pn**	**08 30 41.6**	**+0.2**
	baz=213								
TSCK	**Chigu Township**	**1.90**	**237**	*e*P			**Pb**	**08 30 43.1**	**-1.4**
	baz=247								
MASBT	**Mashibuluo**	**1.91**	**215**	*e*P			**Pn**	**08 30 43.2**	**+0.7**
	baz=211								
JKRS	**Kuro-shima**	**2.00**	**88**	*e*P			**Pb**	**08 30 45.1**	**-1.0**
EAST	**Anshuo**	**2.01**	**207**	*e*P			**Pb**	**08 30 44.8**	**-1.5**
	baz=202								
SCZT	**Fangliau**	**2.12**	**212**	*e*P			**Pn**	**08 30 46.0**	**+0.7**
	baz=220								
JIJ	**Ishigaki jima**	**2.12**	**85**	*e*P			**Pn**	**08 30 45.3**	**-0.1**
JIJ				*e*S			**Sb**	**08 31 14.0**	**-0.8**
PNG	**Penghu**	**2.17**	**254**	*e*P			**Pn**	**08 30 46.5**	**+0.5**
	baz=263								
PHUB	**P'eng-hu**	**2.17**	**252**	*e*P			**Pn**	**08 30 44.2**	**-1.8**
	baz=260								
PHUB				*e*S			**Sn**	**08 31 13.4**	**+0.3**
	baz=260								
WDGT	**Dungji**	**2.19**	**245**	*e*P			**Pn**	**08 30 46.6**	**+0.3**
	baz=241								
WDGT				*e*S			**Sn**	**08 31 14.5**	**+0.9**
	baz=241								
JISG	**Ishigakijimahi**	**2.30**	**80**	P			**Pn**	**08 30 47.8**	**0.0**
VWUC	**VWUC**	**2.31**	**291**	*e*P			**Pn**	**08 30 47.9**	**0.0**
	baz=284								
VCHM	**Qimei**	**2.40**	**247**	*e*P			**Pn**	**08 30 49.6**	**+0.3**
	baz=241								
MATB	**Ma-tsu**	**2.59**	**319**	*e*P			**Pn**	**08 30 51.8**	**0.0**
	baz=318								
PTMZ	**Houxiangcun**	**2.60**	**290**	*e*P			**Pn**	**08 30 52.1**	**+0.2**
	baz=295								
LYJJ	**Jianjiangzhen**	**3.00**	**322**	*e*P			**Pn**	**08 30 57.1**	**-0.4**
	baz=321	

MEX ***14*** *08:35:31.1±0.7, 15°.32N×95°.91W, h3km±4km, MD5.0*
NEIC ***14*** *08:35:32.0±2.3, 15°.54N±0°.06×95°.70W±0°.04, h16km±4km, mb5.0/391, Md5.0/158(MEX), Error ellipse: s-maj=9.3km s-min=4.8km az=206.0*
GCMT ***14*** *08:35:33.0±0.2, 15°.39N±0°.01×95°.65W±0°.02, h12km, MW5.0/121, Moment Tensor Solution. s48,c64; s121,c182; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.51±.06; Mθθ-2.51±.06; Mϕϕ-1.00±.07; Mrθ2.85±.20; Mθϕ0.83±.06; Mϕr-0.81±.26; Best double couple: Mo4.35500×10¹⁶ NP1:ϕs109.00000°, δ66.00000°, λ87.00000°. NP2:ϕs297.00000°, δ24.00000°, λ97.00000°. Principal axes: T 4.6810, Plg68.0000°, Azm13.0000°; N -0.6520, Plg3.0000°, Azm110.0000°; P -4.0290, Plg21.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***14*** *08:35:35.9±2.6, 15°.57N×95°.49W, h44km±23km, mb4.2/13, mbtmp4.5/16, ML4.0/2, MS4.3/56 Error ellipse: s-maj=27.5km s-min=13.6km az=54.0*
ISC 14 08:35:29.2±1.3, 15°.35N±0°.04×95°.78W±0°.03, h7km±8km, n794, σ1¶84/680, mb5.0/175, MS4.4/57, 10C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.53**	**323**		**Pg**	**08 35 39.7**	**+0.3**
HUIG					**Sg**	**08 35 47.4**	**+1.0**
HUIG	**Huatulco**	**0.53**	**323**	⇑ *iP*	**Pg**	**08 35 39.7**	**+0.3**
HUIG				*eS*	**Sg**	**08 35 47.4**	**+1.0**
PEIG	**Puerto Escondi**	**1.47**	**296**	⇑ *eP*	**Pn**	**08 35 53.3**	**-2.9**
PEIG				*eS*	**Sn**	**08 36 09.7**	**-6.0**
NILT	**Santiago Nilte**	**1.65**	**42**	*eP*	**Pn**	**08 35 56.5**	**-2.1**
NILT				*eS*	**Sn**	**08 36 18.0**	**-2.0**
CMIG	**Matias Romero**	**1.94**	**26**		**Pn**	**08 36 00.6**	**-2.0**
CMIG					**Sn**	**08 36 24.7**	**-2.5**
CMIG	**Matias Romero**	**1.94**	**26**	P	**Pn**	**08 36 00.8**	**-1.7**
	351nm,0.8s,baz=213,slow=12,SNR=32						
CMIG				S	**Sn**	**08 36 27.4**	**+0.3**
	796nm,0.6s,baz=26,slow=15,SNR=8.9						
CMIG	**Matias Romero**	**1.94**	**26**	⇑ *iP*	**Pn**	**08 36 00.6**	**-2.0**
CMIG				*eS*	**Sn**	**08 36 24.7**	**-2.5**
OXBJ	**Oaxaca**	**1.94**	**332**		**Sn**	**08 36 26.2**	**-1.3**
OXBJ	**Oaxaca**	**1.94**	**332**	*eS*	**Sn**	**08 36 26.2**	**-1.3**
OXIG	**Oaxaca**	**1.95**	**332**		**Pn**	**08 36 02.2**	**-0.7**
OXIG					**Sn**	**08 36 25.0**	**-2.7**
VHO	**Vista Hermosa**	**1.95**	**332**	⇑ *eP*	**Pn**	**08 36 02.2**	**-0.7**
VHO				*i S*	**Sn**	**08 36 25.0**	**-2.7**
CARR	**Arriaga**	**2.00**	**63**	*eP*	**Pn**	**08 36 00.1**	**-3.4**
CARR				*eS*	**Sn**	**08 36 24.2**	**-4.7**
YOIG	**Yosondua**	**2.27**	**312**		**Pn**	**08 36 06.9**	**-0.6**
YOIG					**Sn**	**08 36 33.1**	**-2.7**
YOIG	**Yosondua**	**2.27**	**312**	⇑ *eP*	**Pn**	**08 36 06.9**	**-0.6**
YOIG				*eS*	**Sn**	**08 36 33.2**	**-3.6**
NEUV	**Arroyo Zacate**	**2.35**	**359**	⇑ *eP*	**Pn**	**08 36 07.0**	**-1.3**
NEUV				*eS*	**Sn**	**08 36 36.0**	**-1.5**
PCIG		**2.49**	**81**		**Pn**	**08 36 07.7**	**-2.5**
PCIG		**2.49**	**81**	*eP*	**Pn**	**08 36 07.7**	**-2.5**
PCIG				*eS*	**Sn**	**08 36 35.4**	**-5.4**
PNIG	**Pinotepa**	**2.49**	**295**		**Pn**	**08 36 08.6**	**-1.7**
PNIG	**Pinotepa**	**2.49**	**295**	*eP*	**Pn**	**08 36 08.0**	**-2.2**
PNIG				*i S*	**Sn**	**08 36 37.2**	**-3.7**
TXIG	**Tlaxiaco**	**2.69**	**315**		**Pn**	**08 36 10.4**	**-2.9**
TXIG					**Sn**	**08 36 43.9**	**-2.4**
TXIG	**Tlaxiaco**	**2.69**	**315**	*eP*	**Pn**	**08 36 10.4**	**-2.9**
TXIG				*eS*	**Sn**	**08 36 42.8**	**-3.5**
TGIG		**2.92**	**60**		**Pn**	**08 36 13.5**	**-2.7**
TGIG					**Sn**	**08 36 50.4**	**-1.2**
TGIG		**2.92**	**60**	⇑ *eP*	**Pn**	**08 36 13.5**	**-2.7**
TGIG				*eS*	**Sn**	**08 36 50.4**	**-1.2**
TUIG	**Tuzandepetl**	**2.97**	**26**	*eP*	**Pn**	**08 36 17.4**	**+0.6**
TUIG				*eS*	**Sn**	**08 36 52.5**	**-0.2**
TOIG	**Toxpalan**	**3.00**	**336**		**Pn**	**08 36 18.4**	**+1.0**
TOIG					**Sn**	**08 36 52.1**	**-1.5**
TOIG	**Toxpalan**	**3.00**	**336**	⇑ *eP*	**Pn**	**08 36 18.4**	**+1.0**
TOIG				*eS*	**Sn**	**08 36 52.1**	**-1.5**
HLIG	**Huajuapan de L**	**3.14**	**322**		**Pn**	**08 36 20.1**	**+0.7**
HLIG					**Sn**	**08 36 52.7**	**-4.6**
HLIG	**Huajuapan de L**	**3.14**	**322**	⇑ *eP*	**Pn**	**08 36 20.1**	**+0.7**
HLIG				*eS*	**Sn**	**08 36 55.5**	**-1.9**
PMUV	**Sontecomapan**	**3.24**	**11**	*eP*	**Pn**	**08 36 17.2**	**-3.5**
PMUV				*eS*	**Sn**	**08 36 56.9**	**-2.7**
MGIG	**Malinaltepec**	**3.33**	**305**		**Pn**	**08 36 22.2**	**+0.3**
MGIG					**Sn**	**08 37 00.2**	**-1.6**
MGIG	**Malinaltepec**	**3.33**	**305**	*eP*	**Pn**	**08 36 22.2**	**+0.3**
MGIG				*eS*	**Sn**	**08 36 58.5**	**-3.3**
FTIG	**Fresnillo de T**	**3.41**	**319**		**Pn**	**08 36 22.9**	**-0.1**
FTIG					**Sn**	**08 37 02.8**	**-0.9**
FTIG	**Fresnillo de T**	**3.41**	**319**	*eP*	**Pn**	**08 36 22.9**	**-0.1**
FTIG				*eS*	**Sn**	**08 37 02.8**	**-0.9**
TPIG	**Tehuac#an**	**3.41**	**334**		**Pn**	**08 36 22.7**	**-0.4**
TPIG					**Sn**	**08 37 00.8**	**-3.1**
TPIG	**Tehuac#an**	**3.41**	**334**	*eP*	**Pn**	**08 36 22.7**	**-0.4**
TPIG				*eS*	**Sn**	**08 37 00.8**	**-3.1**
THIG		**3.42**	**97**	*eP*	**Pn**	**08 36 18.7**	**-4.3**
THIG				*eS*	**Sn**	**08 36 58.9**	**-4.8**
PATR	**El Naranjo**	**3.43**	**93**	*eP*	**Pn**	**08 36 20.9**	**-2.4**
PATR				*eS*	**Sn**	**08 36 57.3**	**-7.0**
TLIG	**Tlapa**	**3.47**	**310**	Pn	**Pn**	**08 36 24.2**	**+0.5**
TLIG	**Tlapa**	**3.47**	**310**	*eP*	**Pn**	**08 36 21.5**	**-2.3**
TLIG				*eS*	**Sn**	**08 37 03.9**	**-1.3**
PAVE	**Pavencul**	**3.48**	**92**	*eP*	**Pn**	**08 36 21.4**	**-2.6**
PAVE				*eS*	**Sn**	**08 36 59.8**	**-5.7**
CRIG	**Cruz Grande**	**3.51**	**294**		**Pn**	**08 36 22.9**	**-1.3**
CRIG	**Cruz Grande**	**3.51**	**294**	*eP*	**Pn**	**08 36 22.9**	**-1.3**
CRIG				*eS*	**Sn**	**08 37 00.9**	**-5.2**
CHUJ	**Union Juarez**	**3.55**	**94**	*eP*	**Pn**	**08 36 22.9**	**-2.1**
CHUJ				*eS*	**Sn**	**08 37 01.9**	**-5.5**
CCIG	**Comitan**	**3.62**	**75**		**Pn**	**08 36 24.1**	**-1.9**
CCIG	**Comitan**	**3.62**	**75**	*eP*	**Pn**	**08 36 24.2**	**-1.8**
CCIG				*eS*	**Sn**	**08 37 08.5**	**-0.7**
OZST	**Orizaba**	**3.72**	**340**	*eP*	**Pn**	**08 36 26.7**	**-0.5**
OZST				*i S*	**Sn**	**08 37 15.4**	**+4.0**
DAIG	**Los Arroyos**	**4.08**	**295**		**Pn**	**08 36 32.1**	**0.0**
DAIG	**Los Arroyos**	**4.08**	**295**	*eP*	**Pn**	**08 36 32.1**	**0.0**
DAIG				*eS*	**Sn**	**08 37 13.7**	**-6.5**
JAUV	**Jalcomulco**	**4.12**	**346**	*eP*	**Pn**	**08 36 30.8**	**-1.9**
JAUV				*eS*	**Sn**	**08 37 18.1**	**-3.1**
HUEH	**Huehuetenango**	**4.12**	**90**	Pn	**Pn**	**08 36 31.4**	**-1.5**
HUEH	**Huehuetenango**	**4.12**	**90**	*e*	**Pn**	**08 36 35.0**	**+2.2**
LVIG	**Laguna Verde**	**4.40**	**352**	*eP*	**Pn**	**08 36 34.5**	**-1.9**
LVIG				*eS*	**Sn**	**08 37 22.9**	**-5.0**
MEIG	**Mezcala**	**4.49**	**305**		**Pn**	**08 36 38.9**	**+1.0**
MEIG					**Sn**	**08 37 27.7**	**-2.7**
MEIG	**Mezcala**	**4.49**	**305**	*eP*	**Pn**	**08 36 38.9**	**+1.0**
MEIG				*eS*	**Sn**	**08 37 27.7**	**-2.7**
PPM	**Popocatepetl**	**4.59**	**324**	*eP*	**Pn**	**08 36 43.1**	**+3.5**
PPM				*e*		08 37 47.3	
PPIG	**Popocatepetl**	**4.60**	**324**		**Pn**	**08 36 43.1**	**+3.5**
CAIG	**El Cayaco**	**4.64**	**292**		**Pn**	**08 36 39.6**	**-0.2**
CAIG	**El Cayaco**	**4.64**	**292**	⇑ *eP*	**Pn**	**08 36 39.6**	**-0.2**
CAIG				*eS*	**Sn**	**08 37 27.1**	**-6.7**
PLIG	**Platanillo**	**4.68**	**311**		**Pn**	**08 36 41.4**	**+1.0**
PLIG					**Sn**	**08 37 32.0**	**-3.1**
PLIG	**Platanillo**	**4.68**	**311**	*eP*	**Pn**	**08 36 41.4**	**+1.0**
PLIG				*eS*	**Sn**	**08 37 32.0**	**-3.1**
YAIG	**Yautepec**	**4.70**	**318**		**Pn**	**08 36 42.6**	**+1.7**
YAIG					**Sn**	**08 37 32.6**	**-3.1**
YAIG	**Yautepec**	**4.70**	**318**	*eP*	**Pn**	**08 36 42.6**	**+1.7**
YAIG				*eS*	**Sn**	**08 37 32.6**	**-3.1**
AMVM	**AMECAMECA**	**4.74**	**323**		**Pn**	**08 36 44.6**	**+3.2**
AMVM					**Sn**	**08 37 35.1**	**-1.5**
AMVM	**AMECAMECA**	**4.74**	**323**	*eP*	**Pn**	**08 36 44.6**	**+3.2**
AMVM				*eS*	**Sn**	**08 37 35.1**	**-1.6**
MPVM	**San Francisco**	**4.92**	**322**	*eP*	**Pn**	**08 36 46.1**	**+2.2**
MPVM				*eS*	**Sn**	**08 37 43.8**	**+2.4**
THVM	**De Xico**	**4.99**	**323**	*eP*	**Pn**	**08 36 47.0**	**+2.2**
THVM				*eS*	**Sn**	**08 37 36.5**	**-6.4**
TLVM	**San Miguel Top**	**5.02**	**320**	*eP*	**Pn**	**08 36 42.5**	**-2.9**
TLVM				*eS*	**Sn**	**08 37 43.2**	**-0.5**
XCVM	**Xochimilco**	**5.03**	**321**	*eP*	Pn	08 36 39.7	-5.7
XCVM				*eS*	**Sn**	**08 37 41.9**	**-2.0**
TXVM	**Universitario**	**5.05**	**324**	*eS*	**Sn**	**08 37 47.8**	**+3.3**
UNM	**Universidad Na**	**5.12**	**321**		**Pn**	**08 36 46.6**	**-0.1**
UNM	**Universidad Na**	**5.12**	**321**	*eP*	**Pn**	**08 36 45.2**	**-1.4**
UNM				*eS*	**Sn**	**08 37 45.5**	**-0.7**
CUP5	**Mexico City**	**5.13**	**321**	*e*		08 38 17.7	
COVM	**Coyoacan**	**5.13**	**321**	*eP*	**Pn**	**08 36 49.0**	**+2.3**
COVM				*eS*	**Sn**	**08 37 41.6**	**-4.7**
COVM				*eS*	**Sn**	**08 37 43.9**	**-2.4**
BJVM	**Benito Juarez**	**5.15**	**322**	*eP*	**Pn**	**08 36 48.6**	**+1.5**
BJVM				*eS*	**Sn**	**08 37 44.2**	**-2.8**
PBVM	**Pinon**	**5.15**	**323**	*eP*	**Pn**	**08 36 49.2**	**+2.4**
PBVM				*eS*	**Sn**	**08 37 48.2**	**+1.6**
AOVM	**Tlapan**	**5.17**	**320**	*eP*	**Pn**	**08 36 50.0**	**+2.6**
AOVM				*eS*	**Sn**	**08 37 46.0**	**-1.5**
MHVM	**Bosque de Chap**	**5.20**	**321**	*eP*	**Pn**	**08 36 50.6**	**+2.8**
MHVM				*eS*	**Sn**	**08 37 40.1**	**-8.1**
CJVM	**Cuajimalpa**	**5.21**	**320**	*eP*	**Pn**	**08 36 49.0**	**+1.1**
CJVM				*eS*	**Sn**	**08 37 44.4**	**-4.0**
INVM	**La Marquesa**	**5.22**	**319**	*eP*	**Pn**	**08 36 49.0**	**+0.8**
INVM				*eS*	**Sn**	**08 37 49.8**	**+1.0**
VTVM	**Tizayuca**	**5.25**	**327**	*eP*	**Pn**	**08 36 50.5**	**+2.0**
VTVM				*eS*	**Sn**	**08 37 43.7**	**-5.7**
ARIG	**Puente Sto Nin**	**5.26**	**304**		**Pn**	**08 36 50.3**	**+1.9**
ARIG					**Sn**	**08 37 46.5**	**-2.8**
ARIG	**Puente Sto Nin**	**5.26**	**304**	*eP*	**Pn**	**08 36 50.3**	**+1.9**
ARIG				*eS*	**Sn**	**08 37 46.5**	**-2.8**
PTVM	**Pico Tres Padr**	**5.29**	**323**	*eP*	**Pn**	**08 36 51.1**	**+2.2**
PTVM				*eS*	**Sn**	**08 37 49.6**	**-0.8**
AZVM	**Cuida Lopez Ma**	**5.38**	**322**		**Pn**	**08 36 51.2**	**+0.9**
AZVM					**Sn**	**08 37 51.6**	**-1.1**
AZVM	**Cuida Lopez Ma**	**5.38**	**322**	*eP*	**Pn**	**08 36 51.2**	**+0.9**
AZVM				*eS*	**Sn**	**08 37 51.6**	**-1.1**
TOVM	**TOLUCA**	**5.41**	**317**		**Pn**	**08 36 53.0**	**+2.4**
TOVM					**Sn**	**08 37 49.5**	**-3.8**
TOVM	**TOLUCA**	**5.41**	**317**	*eP*	**Pn**	**08 36 53.0**	**+2.4**
TOVM				*eS*	**Sn**	**08 37 49.5**	**-3.8**
ZUVM	**ZUMPANGO**	**5.46**	**325**	*eP*	**Pn**	**08 36 53.4**	**+2.1**
ZUVM				*eS*	**Sn**	**08 37 58.1**	**+3.7**
SCIG	**Sabancuy**	**5.68**	**50**	*eP*	**Pn**	**08 36 52.7**	**-1.4**
SCIG				*eS*	**Sn**	**08 37 56.3**	**-3.2**
DEIG	**Demacu**	**5.82**	**328**	*eP*	**Pn**	**08 36 59.8**	**+3.5**
DEIG				*eS*	**Sn**	**08 38 06.5**	**+3.0**
PETF	**Flores**	**5.89**	**74**		**Pn**	**08 36 55.0**	**-2.0**
PETF	**Flores**	**5.89**	**74**	*eP*	**Pn**	**08 36 54.5**	**-2.5**
PETF				*eS*	**Sn**	**08 37 59.9**	**-4.9**
ACIG	**Acambay**	**6.04**	**320**	*eP*	**Pn**	**08 36 57.3**	**-2.0**
ACIG				*eS*	**Sn**	**08 38 02.9**	**-6.0**
ESQI	**Esquipulas**	**6.27**	**96**		**Pn**	**08 37 02.5**	**+0.2**
MTO3	**Montecristo**	**6.27**	**98**		**Pn**	**08 37 02.9**	**+0.4**
CTUV	**Llano Grande**	**6.57**	**338**	*e*	**Pb**	**08 37 22.0**	**-1.8**
CTUV				*e*		08 38 51.1	
MOIG	**Morelia**	**6.72**	**311**	Pn	**Pn**	**08 37 10.1**	**+1.4**
MOIG	**Morelia**	**6.72**	**311**	*eP*	**Pn**	**08 37 13.3**	**+4.6**
MOIG				*eS*	**Sn**	**08 38 23.0**	**-2.7**
RPIG	**Rio Verde**	**7.63**	**329**	*e*	**Pg**	**08 37 53.2**	**-2.2**
RPIG				*e*		08 39 26.6	
MMIG	**Aquila**	**7.82**	**293**		**Pn**	**08 37 24.0**	**+0.5**
MMIG	**Aquila**	**7.82**	**293**	*eP*	**Pn**	**08 37 24.0**	**+0.5**
MMIG				*eS*	**Sn**	**08 38 48.9**	**-3.4**
MYIG	**Mrida**	**8.00**	**45**	*eP*	**Pn**	**08 37 24.7**	**-1.3**
MYIG				*eS*	**Sn**	**08 38 55.2**	**-1.6**
TGUH	**Tegucigalpa,Un**	**8.33**	**98**		**Pn**	**08 37 33.2**	**+2.6**
COIG	**Colima**	**8.47**	**298**	*eP*	**Pn**	**08 37 36.0**	**+3.5**
COIG				*eS*	**Sn**	**08 39 06.8**	**-1.6**
JUBC	**Volcan de Coli**	**8.52**	**300**	*eP*	**Pn**	**08 37 35.7**	**+2.4**
JUBC				*eS*	**Sn**	**08 39 04.0**	**-5.8**
EZ5V		**8.53**	**300**		**Pn**	**08 37 34.5**	**+1.1**
EZ5V		**8.53**	**300**	*eP*	**Pn**	**08 37 34.5**	**+1.1**
EZ5V				*eS*	**Sn**	**08 39 04.1**	**-6.0**
MNGA	**Volcan de Coli**	**8.54**	**300**	*eP*	**Pn**	**08 37 34.0**	**+0.4**
MNGA				*eS*	**Sn**	**08 39 07.5**	**-2.9**
SOMAC	**Volcano de Col**	**8.57**	**300**	*eP*	**Pn**	**08 37 32.3**	**-1.8**
TEIG	**Tepich**	**8.63**	**55**	Pn	**Pn**	**08 37 31.8**	**-2.9**
TEIG	**Tepich**	**8.63**	**55**	LR	LR	08 41 25.2	
	comp=Z,23μm,20.8s,baz=22,slow=42						
CDAR	**Ciudad de Arme**	**8.65**	**296**	*eP*	**Pn**	**08 37 33.4**	**-1.4**
CEGR	**Campo Tres**	**8.70**	**299**	*eP*	**Pn**	**08 37 37.7**	**+1.9**
CEGR				*eS*	**Sn**	**08 39 12.7**	**-1.6**
AAIG	**Aguscalientes**	**9.09**	**317**	*e*		08 39 57.0	
MATN	**Matagalpa**	**9.85**	**103**		**Pn**	**08 37 51.6**	**+0.1**
LNIG	**Linares**	**10.11**	**341**	*e*		08 40 35.8	
HZTE	**Horizontes, Gu**	**10.93**	**114**		**Pn**	**08 38 08.2**	**+2.0**
ORTG	**Ortega, Santa**	**11.21**	**115**	Pn	**Pn**	**08 38 11.0**	**+0.9**
DUNO	**Dulce Nombre,**	**11.31**	**116**		**Pn**	**08 38 13.9**	**+2.5**
JTS	**Las Juntas de**	**11.69**	**114**	Pn	**Pn**	**08 38 18.2**	**+1.6**
JTS	**Las Juntas de**	**11.69**	**114**	P	**Pn**	**08 38 19.6**	**+3.0**
	0.9nm,0.3s,baz=244,slow=13,SNR=3.9						
	25nm,1.0s						
ARE1	**Arenal 1**	**11.82**	**113**		**Pn**	**08 38 20.6**	**+2.2**
COVE	**Coope Vega, Sa**	**12.00**	**111**		**Pn**	**08 38 22.6**	**+1.8**
LCR2	**La Lucha 2**	**12.77**	**114**		**Pn**	**08 38 33.5**	**+2.0**
RIMA	**Rio Macho**	**12.88**	**114**		**Pn**	**08 38 35.1**	**+2.0**
PEZE	**Perez Zeledon,**	**13.22**	**115**		**Pn**	**08 38 38.4**	**+0.8**
833A	**Chaparral WMA,**	**13.34**	**346**	P	**Pn**	**08 38 37.3**	**-1.8**
	baz=163						
HNDO	**Hondo**	**14.48**	**348**		**Pn**	**08 38 52.5**	**-2.2**
HKT	**Hockley**	**14.54**	**360**	Pn	**Pn**	**08 38 52.1**	**-3.3**
DRIO	**Del Rio**	**14.71**	**343**	Pn	**Pn**	**08 38 57.0**	**-0.8**
HPIG		**14.76**	**323**	Pn	**Pn**	**08 38 58.6**	**-0.1**
HNVL	**Huntsville, TX**	**15.34**	**1**		**Pn**	**08 39 04.8**	**-1.5**
HNVL					IAmb	IAmb	08 39 12.7
	comp=Z,61nm,1.4s						
435B	**Jarrell**	**15.46**	**354**	Pn	**Pn**	**08 39 08.0**	**+0.2**
435B	**Jarrell**	**15.46**	**354**	P	**Pn**	**08 39 05.9**	**-1.8**
	baz=172						
JCT	**Junction City**	**15.51**	**347**	Pn	**Pn**	**08 39 06.7**	**-1.9**
JCT	**Junction City**	**15.51**	**347**	P	**Pn**	**08 39 07.2**	**-1.4**
	baz=164						
SAND	**Sanderson**	**15.67**	**339**	Pn	**Pn**	**08 39 10.5**	**-0.1**
TXAR	**Lajitas Array**	**15.71**	**334**	Pn	**Pn**	**08 39 12.1**	**+0.8**
TXAR	**Lajitas Array**	**15.71**	**334**	P	**Pn**	**08 39 13.2**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=28						
	comp=Z,7.1nm,1.1s						
TX31	**Lajitas Ar. Si**	**15.71**	**334**	Pn	**Pn**	**08 39 12.1**	**+0.8**
SLBS	**Sierra La Lagu**	**15.71**	**304**	Pn	**Pn**	**08 39 12.5**	**+1.2**
BRDY	**Brady**	**16.14**	**350**	Pn	**Pn**	**08 39 14.4**	**-2.3**
LPIG	**La Paz**	**16.21**	**305**	P	**P**	**08 39 22.6**	**+1.9**
	comp=Z,13nm,0.8s,baz=282,slow=1.5,SNR=3.8						
NATX	**Nacogdoches**	**16.37**	**3**	P	**Pn**	**08 39 16.7**	**-2.9**
	baz=183						
ALPN	**Alpine**	**16.61**	**336**		**P**	**08 39 24.7**	**-0.6**
ALPN					IAmb	IAmb	08 39 28.9
	comp=Z,128nm,1.2s						
WHTX	**Lake Whitney,**	**16.64**	**355**		**Pn**	**08 39 22.7**	**-0.3**
WHTX	**Lake Whitney,**	**16.64**	**355**	P	**Pn**	**08 39 21.6**	**-1.5**
	baz=173,SNR=10						
FW13	**Cleburne**	**17.00**	**355**	P	**Pn**	**08 39 26.3**	**-1.3**
MNHN	**Monahans**	**17.16**	**339**	P	**Pn**	**08 39 29.9**	**+0.3**
SGCY	**Sterling City**	**17.20**	**344**	Pn	**Pn**	**08 39 29.4**	**-0.7**
VBMS	**Vicksburg**	**17.47**	**15**	P	**Pn**	**08 39 30.7**	**-2.7**
	baz=196						
VHRN	**Van Horn**	**17.54**	**333**		**P**	**08 39 35.9**	**+0.3**
PLPT	**Palo Pinto**	**17.54**	**353**	P	**Pn**	**08 39 33.8**	**-0.6**
ABTX	**Abilene, Hawle**	**17.56**	**349**		**Pn**	**08 39 33.8**	**-0.8**
ABTX					IAmb	IAmb	08 39 38.7
	comp=Z,124nm,1.6s						
ABTX	**Abilene, Hawle**	**17.56**	**349**	P	**Pn**	**08 39 33.6**	**-0.9**
	baz=166,SNR=14						
FW06	**Azle**	**17.62**	**355**	P	**Pn**	**08 39 35.2**	**-0.1**
FW06					IAmb	IAmb	08 39 39.0
	comp=Z,148nm,1.7s						
BRAL	**Brewton**	**17.66**	**25**	P	**Pn**	**08 39 32.4**	**-3.4**
	baz=208						
FW03	**Perrin-Whitt E**	**17.74**	**354**	P	**Pn**	**08 39 35.7**	**-1.1**
ODSA	**Odessa**	**17.80**	**341**		**Pn**	**08 39 37.5**	**-0.2**
ODSA					IAmb	IAmb	08 39 42.9
	comp=Z,157nm,1.6s						
Z35A	**Perchaven, San**	**17.96**	**356**	P	**Pn**	**08 39 39.5**	**0.0**
Z41A	**Richland Creek**	**18.04**	**8**	IAmb	IAmb	08 39 44.0	
	comp=Z,91nm,1.2s						
APMT	**Aspermont**	**18.33**	**348**		**Pn**	**08 39 41.6**	**-2.4**
DWPF	**Disney Wildern**	**18.38**	**44**	P	**Pn**	**08 39 42.8**	**-1.9**
	baz=229						
WLAR	**White Oak Lake**	**18.42**	**7**	P	**P**	**08 39 42.8**	**-2.3**
MNTX	**Cornudas Mount**	**18.49**	**333**	P	**Pn**	**08 39 47.2**	**+1.2**
	baz=148,SNR=20						
WTFS	**Witchita Falls**	**18.50**	**353**		**P**	**08 39 45.0**	**-1.1**
WTFS					IAmb	IAmb	08 39 48.3
	comp=Z,141nm,1.6s						
CGIG		**18.68**	**325**	P	**Pn**	**08 39 50.8**	**+2.2**
CGIG		**18.68**	**325**	*i*	**Pn**	**08 39 50.8**	**+2.2**
X37A	**Clayton**	**19.16**	**1**	IAmb	IAmb	08 40 02.7	
	comp=Z,65nm,1.1s						
MIAR	**Mount Ida**	**19.22**	**6**	P	**P**	**08 39 52.7**	**-1.2**
MIAR	**Mount Ida**	**19.22**	**6**	P	**P**	**08 39 53.2**	**-0.8**
	baz=186,SNR=10						
LRAL	**Lakeview Retre**	**19.33**	**23**	P	**P**	**08 39 51.0**	**-4.2**
	baz=206						
WMOK	**Wichita Mounta**	**19.50**	**353**	P	**P**	**08 39 56.8**	**-0.2**
	baz=170,SNR=17						
TIGA	**Tifton**	**19.51**	**33**	P	**P**	**08 39 54.1**	**-3.1**
	baz=217						
HSIG		**19.53**	**317**	*e*	**Pn**	**08 39 59.3**	**+0.6**
MSTX	**Muleshoe**	**19.59**	**342**	P	**P**	**08 39 58.3**	**+0.2**
	baz=158,SNR=15						
UALR	**University of**	**19.59**	**8**	IAmb	IAmb	08 40 06.0	
	comp=Z,121nm,1.9s						
FNO	**Franklin**	**19.88**	**356**	IAmb	IAmb	08 40 05.7	
	comp=Z,72nm,1.5s						
OXF	**Oxford**	**19.93**	**16**	P	**P**	**08 39 58.3**	**-3.4**
	baz=198						
OKCSW	**OKLAHOMA CITY**	**20.03**	**356**		**P**	**08 40 03.6**	**+0.8**
SMWD	**Samnorwood**	**20.08**	**349**	IAmb	IAmb	08 40 06.6	
	comp=Z,58nm,1.2s						
WHAR	**Wooly Hollow**	**20.11**	**8**	IAmb	IAmb	08 40 09.9	
	comp=Z,71nm,1.4s						
AMTX	**Amarillo**	**20.17**	**346**	P	**P**	**08 40 03.8**	**-0.6**
	baz=162						
APAC	**Apartado, Choc**	**20.19**	**109**	*eP*	Pn	08 40 06.1	-0.5
121A	**Cookes Peak, D**	**20.30**	**330**	P	Pn	08 40 08.2	+0.3
	baz=144,SNR=37						
OK029	**Liberty Lake**	**20.42**	**356**	IAmb	IAmb	08 40 09.8	
	comp=Z,78nm,1.2s						
DEOK	**Depew**	**20.42**	**358**	P	**P**	**08 40 06.3**	**-0.8**
TUL3	**Leonard**	**20.48**	**360**	IAmb	IAmb	08 40 13.1	
	comp=Z,181nm,1.8s						
TUL3	**Leonard**	**20.48**	**360**	P	**P**	**08 40 06.9**	**-0.8**
	baz=179						
OK052	**Battle Ridge R**	**20.58**	**358**	IAmb	IAmb	08 40 12.5	
	comp=Z,67nm,1.0s						
OK033	**Mehan**	**20.64**	**357**		**P**	**08 40 08.8**	**-0.7**
FCAR	**Ozark Folk Cen**	**20.72**	**8**	P	**P**	**08 40 08.8**	**-1.5**
FCAR				IAmb	IAmb	08 40 15.2	
	comp=Z,134nm,1.7s						
RLO	**Rose Lookout**	**20.75**	**2**	IAmb	IAmb	08 40 26.1	
	comp=Z,24nm,1.0s						
QUOK	**Quay**	**20.76**	**358**	IAmb	IAmb	08 40 14.4	
	comp=Z,138nm,1.3s						
DBBC	**Dabeiba**	**20.89**	**111**	*eP*	Pn	08 40 14.3	-0.6
ELIS	**Ellis County**	**20.89**	**352**	IAmb	IAmb	08 40 14.9	
	comp=Z,117nm,1.5s						
HHAR	**Hobbs**	**20.91**	**4**	IAmb	IAmb	08 40 17.2	
	comp=Z,119nm,1.6s						
LCAR	**Lake Charles**	**21.05**	**10**	P	**P**	**08 40 11.5**	**-2.3**
U32A	**Winter Ranch,**	**21.14**	**353**	IAmb	IAmb	08 40 16.4	
	comp=Z,107nm,1.2s				

baz=163,SNR=7.3
S22A 4UR Ranch, Cre 24.36 338 P P 08 40 50.2 +1.9
baz=152,SNR=13
ARNL Arenillas 24.38 139 IAmb IAmb 08 40 57.0
comp=Z,44nm,1.4s
WUAZ Wupatki 24.47 328 IAmb IAmb 08 40 53.9
comp=Z,69nm,1.4s
WUAZ Wupatki 24.47 328 P P 08 40 51.2 +2.0
baz=140,SNR=23
MVCO Mesa Verde 24.53 335 P P 08 40 51.6 +1.8
baz=148,SNR=37
P43A Skaggs, Pawnee 24.82 12 IAmb IAmb 08 40 52.1
comp=Z,23nm,1.0s
Q24A Divide 24.93 342 IAmb IAmb 08 40 57.5
comp=Z,71nm,1.6s
Q24A Divide 24.93 342 P P 08 40 54.9 +1.5
baz=157,SNR=11
BLYC Blythe 24.95 321 P P 08 40 52.2 -1.1
MCRA Macar, Loja 25.09 140 P P 08 40 55.1 +0.4
MCRA Macar, Loja 25.09 140 eP P 08 40 54.4 -0.4
BLO Bloomington 25.09 17 IAmb IAmb 08 40 54.6
comp=Z,30nm,1.1s
PDMCI Parker Dam,Lak 25.10 322 P P 08 40 56.7 +2.0
baz=133,SNR=14
YUH Yuha Desert 25.13 317 P P 08 40 54.3 -0.7
TAMC Tame, Arauca 25.14 108 eP P 08 40 58.1 +2.9
SWSC Sam W. Stewart 25.24 318 P P 08 40 58.5 +2.6
baz=128,SNR=16
IKP In-Ko-Pah, Jac 25.25 317 P P 08 40 58.5 +2.3
baz=127,SNR=11
P46A Rosedale 25.32 16 IAmb IAmb 08 40 57.5
comp=Z,35nm,1.1s
SDV Santo Domingo 25.39 102 P P 08 40 57.5 -0.2
SDV Santo Domingo 25.39 102 LR LR 08 52 29.8
comp=Z,545nm,19.3s,baz=298,slow=40
SDV Santo Domingo 25.39 102 eP P 08 40 58.5 +0.7
SDV Santo Domingo 25.39 102 eP P 08 40 58.3 +0.6
BC3 Big Chuckawall 25.47 319 P P 08 41 00.6 +2.4
baz=130,SNR=30
CNNC Cliffs of the 25.49 36 P P 08 40 56.6 -1.6
baz=223
TKX Tecate 25.54 316 IAmb IAmb 08 41 03.9
comp=Z,50nm,1.6s
IRM Iron Mountain 25.61 320 P P 08 41 02.0 +2.6
baz=131,SNR=24
MONP2 Monument Peak 25.61 317 P P 08 41 02.0 +2.4
baz=127,SNR=9.2
PTLC Puerto Laguiza 25.63 124 eP P 08 41 03.7 +4.1
N41A Harden Midland 25.63 9 P P 08 40 57.4 -2.0
U15A North Rim 25.64 328 IAmb IAmb 08 41 09.2
comp=Z,64nm,1.8s
BAR Barrett 25.65 316 P P 08 40 57.8 -1.9
BLA Blacksburg 25.69 29 P P 08 40 58.9 -1.2
baz=216
SMCO Snowmass 25.70 340 IAmb IAmb 08 41 07.4
comp=Z,48nm,1.4s
NEE2 Needles Airpor 25.71 322 P P 08 41 01.7 +1.5
baz=133
HDIL Hopedale 25.75 11 IAmb IAmb 08 41 00.5
comp=Z,44nm,1.2s
HDIL Hopedale 25.75 11 P P 08 40 59.0 -1.5
baz=194
ISCO Idaho Springs 25.84 342 IAmb IAmb 08 41 07.3
comp=Z,97nm,1.9s
ISCO Idaho Springs 25.84 342 P P 08 41 01.9 +0.2
baz=157,SNR=12
P49A Miami Univ. Ec 25.97 20 IAmb IAmb 08 41 03.4
comp=Z,32nm,1.4s
BELC Belle Mtn. Jos 26.04 319 P P 08 41 04.7 +1.3
baz=130,SNR=13
BGNE Belgrade 26.05 356 P P 08 41 01.4 -1.8
baz=174
SFIN Lafayette 26.06 15 IAmb IAmb 08 41 03.2
comp=Z,44nm,1.2s
SFIN Lafayette 26.06 15 P P 08 41 02.0 -1.4
baz=199,SNR=8.5
109C Camp Elliot, M 26.07 316 P P 08 41 04.3 +0.8
baz=126
TPFO Pinon Flats 26.08 318 P P 08 41 04.3 +0.6
baz=128,SNR=7.0
OGNE Ogallala 26.08 349 P P 08 41 03.8 +0.2
baz=165,SNR=11
PFO Pinyon Flats O 26.08 318 P P 08 41 03.0 -0.8
PFO Pinyon Flats O 26.08 318 P P 08 41 05.1 +1.3
baz=128,SNR=8.1
PFO Pinyon Flats O 26.08 318 LR LR 08 50 37.1
comp=Z,26nm,19.9s,baz=129,slow=34
HMU Henry Mountain 26.11 332 IAmb IAmb 08 41 08.4
comp=Z,75nm,1.7s
GMRC Granite Mounta 26.35 321 P P 08 41 08.2 +2.0
baz=132,SNR=9.6
Q52A Bidwell 26.35 24 IAmb IAmb 08 41 34.8
comp=Z,47nm,1.4s
KNB Kanab 26.37 328 IAmb IAmb 08 41 10.1
comp=Z,56nm,1.8s
O48B Farmland 26.49 18 IAmb IAmb 08 41 07.2
comp=Z,31nm,1.1s
O48B Farmland 26.49 18 P P 08 41 05.4 -1.9
baz=203,SNR=6.5
V12A Nelson 26.52 323 IAmb IAmb 08 41 11.3
comp=Z,27nm,1.2s
MURC Murrieta 26.56 317 P P 08 41 10.0 +2.1
baz=127
SCIA State Center 26.56 4 P P 08 41 06.9 -0.9
baz=185
O49A Covington 26.69 20 IAmb IAmb 08 41 08.6
comp=Z,25nm,1.1s
HEC Hector,Ludlow 26.79 320 P P 08 41 11.9 +1.8
baz=130
BBRC Big Bear Solar 26.79 318 P P 08 41 12.4 +2.1
baz=129
M44A Midewin, Midew 26.80 13 IAmb IAmb 08 41 11.4
comp=Z,72nm,1.4s
TUQ Turquoise Moun 26.95 322 P P 08 41 13.6 +2.1
baz=132,SNR=7.6
N23A Red Feather La 26.95 343 P P 08 41 12.1 +0.4
baz=157
SZCU Shurtz Canyon 26.95 329 IAmb IAmb 08 41 15.6
comp=Z,39nm,1.7s
P52A Corning 26.98 24 P P 08 41 09.8 -1.8
baz=210
O20A White River Ci 26.99 339 IAmb IAmb 08 41 15.3
comp=Z,48nm,1.6s
O20A White River Ci 26.99 339 P P 08 41 13.1 +1.1
baz=152,SNR=11
L42A Oliver, Polo 27.08 10 IAmb IAmb 08 41 18.4
comp=Z,35nm,0.8s
Q16A Castle Valley 27.10 333 IAmb IAmb 08 41 16.5
comp=Z,39nm,1.9s
MSU Marysvale 27.23 331 P P 08 41 14.7 +0.5
RRX Edison Barstow 27.23 319 P P 08 41 15.6 +1.6
baz=129
MVU Marysvale 27.24 331 P P 08 41 14.1 -0.1
BFSC Mount Baldy Ra 27.25 318 P P 08 41 15.9 +1.6
baz=127
CIS Catalina Islan 27.25 315 P P 08 41 15.5 +1.3
baz=125
GSC Goldstone, Bar 27.39 320 P P 08 41 15.9 +0.4
baz=130
SHOC Shoshone, Teco 27.47 322 P P 08 41 16.7 +0.6
baz=132
L44A Lake County Fo 27.59 13 P P 08 41 14.4 -2.6
baz=196
DECC Green Verdugo 27.70 317 P P 08 41 19.0 +0.7
baz=126
BAUV El Baul 27.83 100 P P 08 41 18.4 -1.2
BAUV IAmb IAmb 08 41 24.7
comp=Z,32nm,1.1s
EDW2 Edwards Air Fo 27.87 318 P P 08 41 20.6 +0.9
baz=128
O53A New Philadelph 27.88 24 P P 08 41 17.2 -2.4
baz=211
JFWS Jewell Farm 27.88 9 IAmb IAmb 08 41 25.8
comp=Z,37nm,0.8s
JFWS Jewell Farm 27.88 9 P P 08 41 18.7 -1.0
baz=191,SNR=9.5
SNCC San Nicolas Is 27.93 314 P P 08 41 20.9 +0.6
baz=123
LRMC Laurel Mtn Rad 28.05 320 P P 08 41 22.4 +1.0
baz=129
RWWY Rawlins 28.05 342 IAmb IAmb 08 41 24.7
comp=Z,33nm,1.4s
TPNV Topopah Spring 28.18 324 P P 08 41 24.7 +2.1
baz=134
FURC Furnace Creek, 28.20 322 P P 08 41 24.2 +1.6
baz=132,SNR=8.2
ATAH Atahualpa 28.21 141 LR LR 08 50 03.3
comp=Z,739nm,20.1s,baz=312,slow=31

L48A N Adams 28.26 18 IAmb IAmb 08 41 22.1
comp=Z,21nm,1.1s
BSUT Blindstream Ca 28.29 335 IAmb IAmb 08 41 27.3
comp=Z,30nm,1.5s
ECSD EROS Data Cent 28.30 359 IAmb IAmb 08 41 37.9
comp=Z,34nm,1.5s
MPMC Manual Prospec 28.31 321 P P 08 41 26.0 +2.2
baz=130,SNR=10
NLU North Lily Min 28.35 333 IAmb IAmb 08 41 27.8
comp=Z,36nm,1.9s
N53A Lisbon 28.50 24 IAmb IAmb 08 41 25.2
comp=Z,34nm,1.3s
ARVC Arvin 28.56 318 P P 08 41 27.5 +1.7
baz=127
ISA Isabella, Lake 28.66 319 P P 08 41 28.4 +1.6
baz=128
K22A Casper 28.74 343 P P 08 41 27.4 -0.1
baz=157
I40A Norwalk 28.79 8 IAmb IAmb 08 41 28.1
comp=Z,53nm,1.3s
R11B Troy Canyon, C 28.81 326 P P 08 41 29.9 +1.6
baz=136,SNR=11
GRAC Grapevine Rang 28.86 322 P P 08 41 31.1 +2.6
baz=132,SNR=6.8
DUG Dugway, Tooele 28.88 332 IAmb IAmb 08 41 32.5
comp=Z,30nm,1.8s
DUG Dugway, Tooele 28.88 332 P P 08 41 30.3 +1.5
baz=143,SNR=7.5
CWC Cottonwood Cre 28.92 321 P P 08 41 31.3 +2.1
baz=130
M53A WI Miller and 29.10 24 P P 08 41 29.2 -1.4
baz=211
VES Vestal, Richgr 29.16 319 P P 08 41 33.5 +2.3
baz=128,SNR=9.3
J47A Sunmer 29.34 16 IAmb IAmb 08 41 32.6
comp=Z,48nm,1.4s
BW06 Boulder Array 29.78 339 P P 08 41 36.8 0.0
baz=152
PD31 Pinedale Array 29.78 339 P P 08 41 36.0 -0.8
PDAR Pinedale Array 29.78 339 P P 08 41 36.5 -0.4
PDAR Pinedale Array 29.78 339 P P 08 41 37.6 +0.8
comp=Z,0.6nm,0.9s,baz=123,slow=11,SNR=6.9
comp=Z,0.6nm,0.9s
SPMN Marine on St. 29.89 4 P P 08 41 36.5 -1.0
baz=185,SNR=7.2
NV11 Mina Array Sit 30.29 324 P P 08 41 43.2 +1.9
NV11 IAmb IAmb 08 41 45.8
comp=Z,42nm,1.4s
MDPB Devils Postpil 30.30 321 P P 08 41 42.7 +1.2
MDPB IAmb IAmb 08 41 45.6
comp=Z,19nm,1.3s
NVAR Mina Array Bea 30.38 323 P P 08 41 44.8 +2.6
comp=Z,12nm,1.1s,baz=140,slow=8.0,SNR=55
NVAR PcP PcP 08 44 43.2 +1.1
comp=Z,1.1nm,0.9s,baz=150,slow=3.2,SNR=4.1
NVAR LR LR 08 53 11.8
comp=Z,954nm,19.5s,baz=134,slow=35
comp=Z,12nm,1.1s
ELK Elko 30.44 330 LR LR 08 54 30.9
comp=Z,1μm,18.1s,baz=150,slow=37
F36A Milaca 30.48 3 IAmb IAmb 08 41 44.2
comp=Z,27nm,1.6s
KVN Kaiserville 30.69 325 IAmb IAmb 08 41 48.9
comp=Z,32nm,1.6s
PCRV Puerto La Cruz 30.78 96 LR LR 08 55 02.0
comp=Z,191nm,21.8s,slow=38
SNOW Snow King Moun 30.81 338 IAmb IAmb 08 41 49.0
comp=Z,27nm,1.1s
LOHW Long Hollow 30.89 339 IAmb IAmb 08 41 49.6
comp=Z,42nm,1.6s
TPAW Teton Pass 30.90 338 P P 08 41 46.4 -0.4
TPAW IAmb IAmb 08 41 49.0
comp=Z,34nm,1.4s
MOOW Moose Ponds 31.05 339 IAmb IAmb 08 41 51.0
comp=Z,37nm,1.9s
FXWY Fox Creek 31.06 338 IAmb IAmb 08 41 51.2
comp=Z,39nm,1.9s
COWI Conover 31.16 9 IAmb IAmb 08 41 48.7
comp=Z,18nm,1.1s
IMW Indian Meadow 31.25 339 IAmb IAmb 08 41 52.8
comp=Z,30nm,1.8s
YERR Yerington 31.29 323 IAmb IAmb 08 41 54.4
comp=Z,41nm,1.7s
FLWY Flag Ranch 31.33 339 IAmb IAmb 08 42 50.2
comp=Z,33nm,1.8s
E38A The Farm, Brul 31.36 6 IAmb IAmb 08 41 52.1
comp=Z,27nm,1.2s
E28A Huff 31.41 353 IAmb IAmb 08 41 54.5
comp=Z,25nm,1.1s
H17A Grant Village 31.56 340 IAmb IAmb 08 41 57.1
comp=Z,23nm,1.7s
H17A Grant Village 31.56 340 P P 08 41 54.1 +1.4
baz=151
BINY Binghamton 31.73 29 P P 08 41 51.7 -2.1
baz=218
PAHR Pah Rah Range 31.86 324 IAmb IAmb 08 41 59.4
comp=Z,25nm,1.6s
YHL Hebgen Lake 32.17 339 IAmb IAmb 08 42 02.4
comp=Z,20nm,1.2s
HLID Hailey 32.31 334 P P 08 41 58.8 -0.3
HLID IAmb IAmb 08 42 02.1
comp=Z,14nm,1.2s
HLID Hailey 32.31 334 P P 08 41 59.8 +0.7
baz=144,SNR=13
CZSB Cruzeiro do Su 32.38 134 P P 08 42 01.2 +1.4
CZSB IAmb IAmb 08 42 07.1
comp=Z,30nm,1.5s
SADO Sadowa 32.53 22 LR LR 08 57 15.3
comp=Z,553nm,20.3s,baz=230,slow=40
MFID Camas Ranch 32.80 333 P P 08 42 02.2 -1.2
MFID IAmb IAmb 08 42 11.8
comp=Z,22nm,1.8s
AGMN Agassiz Nation 32.86 360 P P 08 42 02.6 -1.0
baz=179,SNR=7.5
B35A Bob, Littlefor 32.96 3 IAmb IAmb 08 42 04.9
comp=Z,19nm,1.4s
NNA Nana 33.00 144 LR LR 08 53 00.1
comp=Z,511nm,19.0s,baz=342,slow=32
WVOR Wild Horse Val 33.39 328 IAmb IAmb 08 42 11.8
comp=Z,40nm,1.4s
J08A Circle Bar Ran 33.99 330 P P 08 42 15.2 +1.5
PLID Pearl Lake 34.21 334 P P 08 42 16.2 +0.4
PLID IAmb IAmb 08 42 18.5
comp=Z,42nm,1.4s
BMO Blue Mountains 34.59 333 IAmb IAmb 08 42 21.2
comp=Z,20nm,1.5s
ULM Lac du Bonnet 34.81 360 IAmb IAmb 08 42 21.5
comp=Z,32nm,1.5s
ULM Lac du Bonnet 34.81 360 P P 08 42 19.1 -1.5
comp=Z,15nm,1.2s,baz=184,slow=9.6,SNR=10.0
ULM LR LR 08 57 58.6
comp=Z,413nm,18.8s,baz=192,slow=39
comp=Z,15nm,1.2s
YBH Yreka Blue Hor 35.09 324 LR LR 08 58 26.4
comp=Z,1μm,21.2s,baz=150,slow=39
F10A Beach Ranch, E 35.44 334 P P 08 42 26.9 +0.7
F10A IAmb IAmb 08 42 28.6
comp=Z,24nm,1.2s
TEFE Tefe 36.08 119 eP P 08 42 31.1 -0.8
I03D Drain, OR 36.74 326 IAmb IAmb 08 42 40.1
comp=Z,26nm,1.2s
H04A Detroit Lake 36.80 328 IAmb IAmb 08 42 41.3
comp=Z,47nm,1.4s
BUCK Buck Mountain 36.88 327 IAmb IAmb 08 42 51.9
comp=Z,45nm,1.4s
BOAV Boa Vista 37.05 107 P P 08 42 39.7 -0.5
BOAV Boa Vista 37.05 107 eP P 08 42 39.7 -0.5
NEW Newport 37.24 336 P P 08 42 42.7 +1.2
baz=144
C09A Chrisman Ranch 37.33 335 P P 08 42 43.4 +1.2
C09A IAmb IAmb 08 42 45.5
comp=Z,32nm,1.4s
ETMB Extrema 38.51 129 eP P 08 42 52.3 -0.2
MACA Manacapuru-AM 39.30 115 IAmb IAmb 08 43 04.5
comp=Z,53nm,1.3s
MACA Manacapuru-AM 39.30 115 eP P 08 42 58.1 -1.1
FFC Flin Flon 39.59 354 P P 08 43 00.5 -0.6
FFC IAmb IAmb 08 43 02.6
comp=Z,32nm,1.5s
EDM Edmonton 40.25 344 IAmb IAmb 08 43 08.5
comp=Z,92nm,2.0s
SAML Samuel 40.32 125 P P 08 43 09.9 +2.3
PB11 IPOC Station P 43.32 143 P P 08 43 33.2 +0.9
PB11 IAmb IAmb 08 43 35.9
comp=Z,19nm,1.2s
FCC Fort Churchill 43.36 1 P P 08 43 31.1 -0.8
FCC IAmb IAmb 08 43 33.3
comp=Z,48nm,1.5s
GO01 Chusmiza 43.52 142 IAmb IAmb 08 43 39.3
comp=Z,23nm,1.3s
MDP Montagnes des 43.57 99 LR LR 09 03 12.0
comp=Z,394nm,19.9s,baz=288,slow=38
TA01 Diego Aracena 43.66 144 P P 08 43 36.3 +1.5
TA01 IAmb IAmb 08 43 38.2
comp=Z,26nm,1.1s
ITTB Itaituba 44.22 113 eP P 08 43 37.9 -1.7
RPN Rapa Nui 44.22 197 LR LR 08 57 52.6
comp=Z,146nm,18.3s,baz=25,slow=30
PB09 IPOC Station P 45.16 144 IAmb IAmb 08 43 50.9
comp=Z,14nm,1.1s
SCHQ Schefferville 45.33 23 P P 08 43 45.7 -2.2
SCHQ IAmb IAmb 08 43 46.6
comp=Z,19nm,1.2s
SCHQ Schefferville 45.33 23 P P 08 43 45.5 -2.3
comp=Z,6.8nm,0.9s,baz=213,slow=5.3,SNR=6.4
SCHQ LR LR 09 06 44.0
comp=Z,649nm,18.1s,baz=216,slow=42
comp=Z,6.8nm,0.9s
MCPB Macapa, AP 45.92 106 eP P 08 43 53.3 +0.2
LVC Limon Verde 45.99 145 LR LR 09 01 53.3
comp=Z,224nm,19.2s,baz=324,slow=34
LVC Limon Verde 45.99 145 eP P 08 43 55.6 +1.8
SIV San Ignacio 46.30 131 LR LR 09 02 25.1
comp=Z,434nm,18.2s,baz=322,slow=35
PTLB Pontes e Lacer 47.40 129 IAmb IAmb 08 44 13.1
comp=Z,12nm,1.1s
PTLB Pontes e Lacer 47.40 129 eP P 08 44 03.9 -0.6
BBSD Serra de San D 47.41 132 eP P 08 44 04.1 -0.6
GO02 Mina Guanaco 47.67 147 IAmb IAmb 08 44 10.5
comp=Z,15nm,1.3s
YKA Yellowknife Ar 48.94 349 P P 08 44 16.1 +0.2
comp=Z,2.6nm,0.9s,baz=152,slow=7.6,SNR=35
YKA PP PP 08 46 10.9 +1.8
comp=Z,4.5nm,1.3s,baz=155,slow=9.4,SNR=5.5
comp=Z,2.6nm,0.9s
AC02 Maricunga 49.28 148 IAmb IAmb 08 44 32.6
comp=Z,11nm,1.1s
DLBC Dease Lake 49.97 337 P P 08 44 24.9 +1.0
DLBC Dease Lake 49.97 337 P P 08 44 24.7 +0.8
baz=134
DLBC Dease Lake 49.97 337 LR LR 09 04 36.7
comp=Z,945nm,19.0s,baz=124,slow=35
S34M Telegraph Cree 50.03 336 P P 08 44 25.9 +1.7
baz=133
SALV Santo Antonio 50.31 126 eP P 08 44 27.5 +0.5
WTLY Watson Lake, Y 50.74 339 IAmb IAmb 08 44 32.8
comp=Z,38nm,1.4s
WTLY Watson Lake, Y 50.74 339 P P 08 44 31.0 +1.3
baz=137,SNR=6.5
R33M Jennings River 50.99 338 IAmb IAmb 08 44 35.6
comp=Z,30nm,1.4s
R33M Jennings River 50.99 338 P P 08 44 32.9 +1.2
baz=134
S32K Killisnoo 51.13 334 P P 08 44 35.8 +3.3
baz=129
Q32M Nakina River 51.18 337 P P 08 44 34.8 +1.6
baz=132
CO01 Juntas del Tor 51.41 151 IAmb IAmb 08 45 08.7
comp=Z,25nm,1.8s
WRGLY Wrigley 51.58 344 IAmb IAmb 08 44 38.2
comp=Z,40nm,1.4s
WRGLY Wrigley 51.58 344 P P 08 44 36.4 +0.6
baz=145,SNR=7.0
SNDB Serra Nova Dou 51.73 119 eP P 08 44 37.5 -0.2
CO03 El Pedregal 51.87 152 IAmb IAmb 08 44 41.8
comp=Z,15nm,1.1s
FRB Frobisher Bay 51.90 15 LR LR 09 08 21.2
comp=Z,227nm,20.4s,baz=220,slow=38
P32M Atlin 52.16 337 P P 08 44 42.1 +1.8
baz=131
P33M Teslin, Yukon 52.24 338 P P 08 44 43.2 +2.2
baz=132
BDQN Bodoquena, MS 52.30 132 eP P 08 44 41.1 -0.7
MURT Porto Murtinho 52.47 134 eP P 08 44 41.7 -1.3
SKAG Skagway 52.70 336 P P 08 44 45.4 +1.2
baz=129
RVDE Rio Verde (Bra 52.75 129 eP P 08 44 44.7 -0.5
N32M Quiet Lake 52.97 338 IAmb IAmb 08 44 49.6
comp=Z,18nm,1.1s
N32M Quiet Lake 52.97 338 P P 08 44 47.3 +1.0
baz=132
AQDB Aquidauana 53.08 131 eP P 08 44 48.1 +0.5
ARAG Araguaiana, MT 53.27 123 eP P 08 44 48.1 -0.9
WHY Whitehorse 53.30 337 P P 08 44 50.5 +1.7
baz=130
SMTB Santa Maria do 53.46 114 eP P 08 44 50.6 +0.1
VA03 San Esteban 53.58 153 P P 08 44 52.4 +1.3
VA03 IAmb IAmb 08 44 54.5
comp=Z,26nm,1.1s
P30M Million Dollar 53.76 336 P P 08 44 53.4 +1.3
baz=128
P29M Windy Craggy 53.77 335 P P 08 44 53.3 +1.1
baz=126
FARO Faro, Yukon 53.80 339 P P 08 44 53.4 +1.0
baz=133
O30N Mendenhall 53.83 337 IAmb IAmb 08 44 55.4
comp=Z,25nm,1.4s
O30N Mendenhall 53.83 337 P P 08 44 54.4 +1.8
baz=129
M31M Drury Creek, Y 54.15 339 IAmb IAmb 08 44 58.0
comp=Z,37nm,1.8s
M31M Drury Creek, Y 54.15 339 P P 08 44 56.6 +1.8
baz=132
HYT Haines Junctio 54.40 336 P P 08 44 57.9 +1.0
baz=127
PNL Peninsula 54.47 335 P P 08 44 57.0 -0.3
baz=125
O29M Mount Kennedy 54.51 335 P P 08 44 58.2 +0.5
baz=126
VACA Villa Angela C 54.61 141 eP P 08 44 59.6 +1.0
N30M Aishikik Lake 54.64 337 IAmb IAmb 08 45 01.5
comp=Z,35nm,1.6s
N30M Aishikik Lake 54.64 337 P P 08 45 00.0 +1.5
baz=128
BO01 Tunca 54.76 155 P P 08 45 01.1 +1.5
BO01 IAmb IAmb 08 45 02.8
comp=Z,10nm,0.9s
YUK6 Outpost Mounta 54.81 336 P P 08 45 01.1 +1.1
baz=126
YUK4 Talbot Arm 55.16 336 P P 08 45 02.5 0.0
baz=127
M30M Minto, Yukon 55.24 338 IAmb IAmb 08 45 05.1
comp=Z,18nm,1.4s
M30M Minto, Yukon 55.24 338 P P 08 45 03.1 +0.2
baz=129
YUK8 Steele Glacier 55.56 336 P P 08 45 06.2 +0.8
baz=125
MAYO Mayo, Yukon 55.59 340 P P 08 45 05.0 -0.3
baz=131
M29M Somme Creek 55.76 338 IAmb IAmb 08 45 10.1
comp=Z,22nm,1.2s
M29M Somme Creek 55.76 338 P P 08 45 07.4 +0.7
baz=127
CPUP Villa Florida 55.80 138 LR LR 09 08 59.5
comp=Z,201nm,20.6s,baz=333,slow=36
CPUP Villa Florida 55.80 138 eP P 08 45 07.5 +0.2
ML02 Panimavida 55.82 156 P P 08 45 09.1 +1.9
CTG Chitna Glacier 56.01 335 P P 08 45 08.5 0.0
baz=123
L29M L29M 56.05 338 P P 08 45 07.9 -0.8
baz=128,SNR=8.1
K29M Barlow Dome 56.30 339 IAmb IAmb 08 45 13.1
comp=Z,33nm,1.6s
K29M Barlow Dome 56.30 339 P P 08 45 10.7 +0.1
baz=129
BDFB Brasilia 56.33 121 P P 08 45 11.8 +0.3
comp=Z,3.2nm,0.8s,baz=23,slow=3.8,SNR=3.4
comp=Z,3.2nm,0.8s
J30M Hart River 56.38 340 IAmb IAmb 08 45 13.9
comp=Z,23nm,1.9s
J30M Hart River 56.38 340 P P 08 45 11.9 +0.8
baz=131
BVCY Beaver Creek 56.64 337 P P 08 45 13.9 +1.0
baz=125,SNR=5.4
I30M Mount Dempster 56.82 341 IAmb IAmb 08 45 29.4
comp=Z,28nm,1.9s
I30M Mount Dempster 56.82 341 P P 08 45 13.8 -0.5
baz=131
MCARA McCarthy VSAT 56.92 335 P P 08 45 14.4 -0.4
MCARA McCarthy VSAT 56.92 335 P P 08 45 15.2 +0.4
baz=122
M27K Edge Creek, AK 57.00 336 P P 08 45 15.7 +0.2
baz=124
DAWY Dawson 57.09 339 P P 08 45 16.2 +0.2

baz=127
GLB **Gilahina Butte** **57.27 335** IAmb IAmb 08 45 20.8
comp=Z,30nm,1.4s
BMRM **Bremner River** **57.36 334** P **P** **08 45 18.6 +0.6**
baz=120
G31M **Satah River** **57.36 343** P **P** **08 45 17.9 +0.1**
baz=134
BCAR **Beaver Creek A** **57.36 337** P **P** **08 45 18.5 +0.5**
Q23K **Middleton Isla** **57.37 332** P **P** **08 45 17.7 -0.3**
baz=117
L27K **Beaver Creek,** **57.38 337** IAmb IAmb 08 45 21.1
comp=Z,24nm,1.4s
L27K **Beaver Creek,** **57.38 337** P **P** **08 45 18.1 0.0**
baz=124
SDBA **SAO DESIDERIO** **57.41 116** *eP* **P** **08 45 18.1 -0.9**
M26K **Nabesna, AK** **57.46 336** IAmb IAmb 08 45 21.8
comp=Z,26nm,1.4s
M26K **Nabesna, AK** **57.46 336** P **P** **08 45 18.0 -0.7**
baz=122
F31M **Tsiigehtchic** **57.58 344** P **P** **08 45 19.0 -0.3**
baz=135,SNR=10
EYAK **Cordova Ski Ar** **57.64 333** P **P** **08 45 20.1 +0.2**
baz=118
N25K **Chitina, Valde** **57.68 335** IAmb IAmb 08 45 23.9
N25K **Chitina, Valde** **57.68 335** P **P** **08 45 19.1 -1.2**
baz=120
EPYK **Eagle Plains** **57.69 342** IAmb IAmb 08 46 59.6
comp=Z,35nm,1.9s
EPYK **Eagle Plains** **57.69 342** P **P** **08 45 19.6 -0.6**
baz=131
L26K **Log Cabin Wild** **57.94 337** IAmb IAmb 08 45 25.1
comp=Z,24nm,1.4s
L26K **Log Cabin Wild** **57.94 337** P **P** **08 45 22.8 +0.8**
baz=122,SNR=7.8
G30M **tAoh Zraii Nji** **57.96 342** P **P** **08 45 21.0 -1.2**
baz=132
K27K **Chicken** **58.02 338** IAmb IAmb 08 45 25.8
comp=Z,30nm,1.4s
K27K **Chicken** **58.02 338** P **P** **08 45 22.6 0.0**
baz=124,SNR=8.3
MENT **Mentasta** **58.03 336** IAmb IAmb 08 45 25.6
comp=Z,27nm,1.6s
H29M **Whitestone** **58.10 341** IAmb IAmb 08 45 26.7
comp=Z,14nm,1.2s
H29M **Whitestone** **58.10 341** P **P** **08 45 23.0 -0.1**
baz=129
I28M **Miner Creek** **58.12 340** P **P** **08 45 23.9 +0.6**
baz=127
EGAK **Eagle** **58.13 339** P **P** **08 45 22.9 -0.3**
EGAK IAmb IAmb 08 45 24.3
comp=Z,13nm,1.3s
EGAK **Eagle** **58.13 339** P **P** **08 45 23.3 0.0**
baz=126
INK **Inuvik** **58.15 344** P **P** **08 45 23.8 +0.5**
INK **Inuvik** **58.15 344** P **P** **08 45 22.7 -0.6**
baz=136,SNR=17
INK **Inuvik** **58.15 344** LR LR 09 11 51.5
comp=Z,901nm,18.1s,baz=184,slow=38
KLU **Klutina** **58.17 334** P **P** **08 45 24.0 +0.3**
baz=119
LDASE **Londrina, Braz** **58.22 131** *eP* **P** **08 45 24.4 -0.2**
F30M **Barrier River** **58.26 343** P **P** **08 45 24.4 +0.2**
baz=133
HARP **HAARP** **58.31 335** P **P** **08 45 24.7 0.0**
baz=120
M24K **Tolsona, Glenn** **58.58 335** P **P** **08 45 26.9 +0.3**
baz=119
SCRK **Sand Creek** **58.69 337** P **P** **08 45 28.6 +1.2**
SCRK IAmb IAmb 08 45 30.3
comp=Z,24nm,1.4s
SCRK **Sand Creek** **58.69 337** P **P** **08 45 27.0 -0.3**
baz=122,SNR=10
PAX **Paxson** **58.73 336** P **P** **08 45 27.6 0.0**
baz=120,SNR=7.4
I27K **Kandik River** **58.77 340** P **P** **08 45 28.8 +0.9**
baz=126
J26L **Joseph Creek** **58.82 338** IAmb IAmb 08 45 31.3
comp=Z,26nm,1.4s
J26L **Joseph Creek** **58.82 338** P **P** **08 45 28.2 -0.1**
baz=123
RIDG **Independent Ri** **58.89 337** P **P** **08 45 29.2 +0.5**
baz=121,SNR=12
SCM **Sheep Creek Mo** **58.92 334** P **P** **08 45 29.3 +0.3**
baz=118
PSAL **Palomas, Salto** **58.96 142** *eP* **P** **08 45 29.0 -0.5**
H27K **Steamboat Moun** **59.12 340** P **P** **08 45 29.8 -0.4**
baz=126
I26K **Coal Creek Min** **59.13 339** P **P** **08 45 30.2 0.0**
baz=124
KNK **Knik Glacier** **59.21 334** P **P** **08 45 31.3 +0.4**
baz=116
A36M **Sachs Harbour** **59.25 350** IAmb IAmb 08 45 32.2
comp=Z,23nm,1.4s
A36M **Sachs Harbour** **59.25 350** P **P** **08 45 30.7 -0.2**
baz=146,SNR=5.6
K24K **Donnelly Dome** **59.28 337** P **P** **08 45 31.4 0.0**
baz=120
SML **Sawmill** **59.34 334** P **P** **08 45 33.5 +1.7**
SML **Sawmill** **59.34 334** P **P** **08 45 31.9 +0.1**
baz=117
RES **Resolute Bay** **59.34 0** P **P** **08 45 29.9 -1.6**
RES IAmb IAmb 08 45 32.5
comp=Z,32nm,1.9s
RES **Resolute Bay** **59.34 0** LR LR 09 13 05.9
comp=Z,369nm,19.8s,baz=189,slow=38
E29M **Blow River** **59.38 343** P **P** **08 45 32.0 +0.1**
baz=131
SFJD **Kangerlussuaq** **59.39 19** LR LR 09 14 33.3
comp=Z,408nm,18.1s,baz=210,slow=40
F28M **Old Crow** **59.45 342** P **P** **08 45 32.8 +0.4**
baz=128,SNR=22
WAT6 **Susitna Watana** **59.45 335** P **P** **08 45 33.6 +0.9**
baz=118,SNR=10.0
DHY **Denali Highway** **59.54 336** P **P** **08 45 35.4 +2.1**
baz=118
J25K **Salcha River,** **59.54 338** IAmb IAmb 08 45 35.8
comp=Z,14nm,1.3s
J25K **Salcha River,** **59.54 338** P **P** **08 45 34.2 +0.9**
baz=121
PMR **Palmer** **59.58 334** P **P** **08 45 35.3 +1.9**
baz=116
RC01 **Rabbit Creek A** **59.62 333** IAmb IAmb 08 45 36.4
comp=Z,21nm,1.2s
RC01 **Rabbit Creek A** **59.62 333** P **P** **08 45 35.2 +1.4**
baz=115
KDAK **Kodiak Island** **59.67 329** P **P** **08 45 35.5 +1.4**
baz=110
KDAK **Kodiak Island** **59.67 329** LR LR 09 11 04.4
comp=Z,343nm,18.1s,baz=139,slow=36
OHAK **Old Harbor** **59.83 328** P **P** **08 45 36.8 +1.6**
baz=109
WAT1 **Susitna Watana** **59.90 335** P **P** **08 45 36.2 +0.6**
baz=117
E28M **Babbage River** **59.98 343** IAmb IAmb 08 45 37.9
comp=Z,27nm,1.6s
E28M **Babbage River** **59.98 343** P **P** **08 45 35.9 -0.1**
baz=129
HDA **Harding Lake** **60.03 337** P **P** **08 45 36.9 +0.4**
baz=119,SNR=7.4
PRP **Porcupine Dome** **60.08 338** P **P** **08 45 36.7 -0.3**
PRP **Porcupine Dome** **60.08 338** P **P** **08 45 36.5 -0.4**
baz=121,SNR=8.6
IL31 **60.18 337** P **P** **08 45 38.1 +0.6**
ILAR **Eielson Array** **60.18 337** P **P** **08 45 37.9 +0.4**
ILAR **Eielson Array** **60.18 337** P **P** **08 45 38.4 +0.9**
comp=Z,6.6nm,1.1s,baz=137,slow=4.3,SNR=39
ILAR LR LR 09 12 18.2
comp=Z,311nm,18.0s,baz=117,slow=37
comp=Z,6.6nm,1.1s
SUA **Susitna One** **60.22 333** P **P** **08 45 38.8 +0.8**
SUA **Susitna One** **60.22 333** P **P** **08 45 38.8 +0.8**
baz=114,SNR=6.1
G26K **Porcupine Rive** **60.27 340** P **P** **08 45 38.9 +0.8**
baz=124,SNR=6.6
RND **Reindeer** **60.28 336** P **P** **08 45 39.6 +1.3**
TBOT **Tacuaremb** **60.39 141** *eP* **P** **08 45 39.8 +0.4**
CUT **Chulitna** **60.42 334** P **P** **08 45 39.3 +0.1**
baz=115
CCB **Clear Creek Bu** **60.47 337** P **P** **08 45 40.4 +0.9**
CCB IAmb IAmb 08 45 41.3
comp=Z,32nm,1.8s
MCK **McKinley** **60.47 336** P **P** **08 45 39.6 0.0**
baz=117,SNR=5.3
PLCA **Paso Flores** **60.51 158** P **P** **08 45 41.4 +1.3**
PLCA **Paso Flores** **60.51 158** P **P** **08 45 41.2 +1.1**
comp=Z,9.3nm,1.1s,baz=349,slow=7.5,SNR=7.4
PLCA LR LR 09 05 50.6
comp=Z,235nm,18.8s,baz=346,slow=30
comp=Z,9.3nm,1.1s
PLCA **Paso Flores** **60.51 158** *eP* **P** **08 45 41.2 +1.1**
O20K **Slope Mountain** **60.52 331** P **P** **08 45 39.9 -0.1**
baz=112
POKR **Poker Plat Res** **60.56 338** P **P** **08 45 40.1 0.0**
baz=119
CHIR **Chisf Islan** **60.62 326** P **P** **08 45 40.6 0.0**
baz=106
N20K **Mount Spurr** **60.76 332** P **P** **08 45 42.2 +0.6**
baz=112
MDM **Murphy Dome** **60.78 337** P **P** **08 45 41.9 +0.3**
MDM IAmb IAmb 08 45 43.4
comp=Z,23nm,1.7s
SKT **Skwentna** **60.78 333** P **P** **08 45 43.0 +1.4**
baz=114
D27M **Malcolm River** **60.78 343** IAmb IAmb 08 45 43.2
comp=Z,20nm,1.5s
D27M **Malcolm River** **60.78 343** P **P** **08 45 41.6 0.0**
baz=128
BMAR **Burnt Mountain** **60.80 341** P **P** **08 45 43.0 +1.3**
F26K **Sheenjek River** **60.81 341** P **P** **08 45 42.2 +0.4**
baz=124
TRF **Thorofare Moun** **60.88 335** P **P** **08 45 42.5 -0.1**
TRF **Thorofare Moun** **60.88 335** P **P** **08 45 42.5 -0.1**
baz=116,SNR=13
NEA2 **Nenana** **60.92 337** P **P** **08 45 42.9 +0.3**
baz=117
H24K **Noodor Dome** **61.08 338** P **P** **08 45 44.1 +0.4**
baz=119
KTH **Kantishna Hill** **61.18 335** IAmb IAmb 08 45 47.3
comp=Z,16nm,1.2s
F25K **Christian Rive** **61.23 340** P **P** **08 45 45.0 +0.4**
baz=122
I23K **Minto, Yukon-K** **61.29 337** P **P** **08 45 45.5 +0.5**
baz=117,SNR=15
O19K **Port Alsworth** **61.36 331** P **P** **08 45 46.3 +0.8**
baz=110
G24K **Hadweenzic Riv** **61.37 339** IAmb IAmb 08 47 41.4
comp=Z,18nm,1.4s
G24K **Hadweenzic Riv** **61.37 339** P **P** **08 45 46.0 +0.4**
baz=120
PPLA **Purkeypile** **61.43 334** P **P** **08 45 46.6 +0.4**
baz=113
M20K **Styx River** **61.43 333** IAmb IAmb 08 45 49.9
comp=Z,12nm,1.1s
M20K **Styx River** **61.43 333** P **P** **08 45 47.5 +1.3**
baz=112
BPAW **Bear Paw Mtn.** **61.44 336** P **P** **08 45 47.1 +1.0**
BPAW IAmb IAmb 08 45 48.1
comp=Z,13nm,1.3s
BPAW **Bear Paw Mtn.** **61.44 336** P **P** **08 45 46.2 0.0**
baz=115
Q17K **Contact Creek** **61.48 329** P **P** **08 45 47.5 +0.9**
baz=107
E25K **Arctic Village** **61.49 341** P **P** **08 45 46.9 +0.5**
baz=123,SNR=8.2
P18K **Big Mountain,** **61.52 330** P **P** **08 45 47.6 +0.8**
baz=109
CAST **Castle Rocks** **61.60 335** P **P** **08 45 47.5 +0.2**
baz=114,SNR=7.8
N19K **Bonanza Creek** **61.65 332** IAmb IAmb 08 45 51.7
comp=Z,17nm,1.0s
N19K **Bonanza Creek** **61.65 332** P **P** **08 45 47.5 -0.2**
baz=110
O18K **Koktuh Hills** **61.66 330** P **P** **08 45 48.1 +0.4**
baz=109
MLY **Manley** **61.76 337** IAmb IAmb 08 45 50.4
comp=Z,17nm,1.1s
MLY **Manley** **61.76 337** P **P** **08 45 48.8 +0.5**
baz=116,SNR=9.3
TRQA **Tornquist** **61.87 150** P **P** **08 45 49.7 +0.3**
TRQA IAmb IAmb 08 45 52.2
comp=Z,19nm,1.1s
CHUM **Lake Minchumin** **61.88 335** P **P** **08 45 49.4 +0.4**
baz=114
F24K **Squaw Lake** **61.92 340** P **P** **08 45 50.0 +0.6**
baz=120
L20K **Farewell, AK** **61.98 333** P **P** **08 45 50.2 +0.3**
baz=112
Q16K **King Salmon** **62.00 329** P **P** **08 45 50.9 +1.1**
baz=107
M19K **Big River Lodg** **62.00 333** P **P** **08 45 50.0 +0.1**
baz=111
P17K **Kvichak River** **62.05 329** P **P** **08 45 50.5 +0.3**
baz=107
R16K **Pilot Point** **62.15 328** P **P** **08 45 51.4 +0.5**
baz=106
N18K **Kilae Creek** **62.25 331** P **P** **08 45 52.1 +0.4**
baz=109
G23K **Bananza Creek** **62.26 339** P **P** **08 45 52.1 +0.5**
G23K IAmb IAmb 08 46 00.6
comp=Z,17nm,1.4s
G23K **Bananza Creek** **62.26 339** P **P** **08 45 51.6 -0.1**
baz=117
I21K **Tanana** **62.30 337** IAmb IAmb 08 45 53.0
comp=Z,19nm,1.4s
I21K **Tanana** **62.30 337** P **P** **08 45 51.6 -0.2**
baz=115
C26K **Camden Bay** **62.30 343** P **P** **08 45 52.2 +0.4**
baz=124
L19K **White Mountain** **62.30 333** P **P** **08 45 52.3 +0.3**
baz=110
PPT **Papeete** **62.31 240** LR LR 09 04 59.1
comp=Z,279nm,21.8s,baz=346,slow=28
H22K **Ishtalitna Cre** **62.38 338** P **P** **08 45 53.1 +0.7**
baz=116
D25K **Kavik River** **62.40 342** P **P** **08 45 53.6 +1.1**
baz=122
K20K **Telida** **62.40 334** P **P** **08 45 53.0 +0.5**
baz=112
M18K **Stony River** **62.49 332** P **P** **08 45 53.7 +0.5**
baz=109
O17K **Koliganek Bris** **62.54 330** P **P** **08 45 54.1 +0.6**
baz=107
COLD **Coldfoot** **62.56 339** P **P** **08 45 53.8 +0.2**
baz=117,SNR=8.2
J20K **Nowinta River** **62.74 335** IAmb IAmb 08 45 55.9
comp=Z,15nm,1.2s
J20K **Nowinta River** **62.74 335** P **P** **08 45 53.9 -0.9**
baz=112
E23K **Chandalar** **62.76 340** P **P** **08 45 55.8 +0.8**
baz=118
H21K **Melozitna Rive** **62.81 337** IAmb IAmb 08 45 56.8
comp=Z,14nm,1.3s
H21K **Melozitna Rive** **62.81 337** P **P** **08 45 54.9 -0.4**
baz=114,SNR=5.6
N17K **Nushagak Hills** **62.81 331** P **P** **08 45 55.1 -0.3**
baz=107
G22K **Bettles** **62.88 339** P **P** **08 45 55.9 +0.2**
baz=116,SNR=6.5
O16K **Kokwok River B** **62.97 330** P **P** **08 45 57.1 +0.7**
baz=106
TOLK **Toolik Lake Re** **63.03 341** P **P** **08 45 57.3 +0.6**
TOLK IAmb IAmb 08 45 59.1
comp=Z,21nm,1.6s
TOLK **Toolik Lake Re** **63.03 341** P **P** **08 45 56.6 -0.1**
baz=119
D24K **Happy Valley** **63.05 341** P **P** **08 45 57.4 +0.6**
D24K **Happy Valley** **63.05 341** P **P** **08 45 57.2 +0.4**
baz=120
TTA **Tatalina** **63.06 334** P **P** **08 45 56.6 -0.5**
baz=110
I20K **Naaghedeneel** **63.11 336** P **P** **08 45 57.3 +0.1**
baz=112
L18K **Granite Mounta** **63.12 333** P **P** **08 45 57.5 +0.1**
baz=109
SDPT **Sand Point** **63.17 325** P **P** **08 45 57.9 +0.1**
baz=102
M17K **Holitna River** **63.20 332** P **P** **08 45 58.0 +0.1**
baz=108
J19K **Poorman** **63.27 335** P **P** **08 45 58.4 0.0**
baz=110
IMAR **Indian Mountai** **63.30 337** P **P** **08 45 57.4 -1.1**
C24K **Franklin Bluff** **63.30 342** P **P** **08 45 59.4 +0.9**
baz=120
G21K **Allakaket** **63.42 338** IAmb IAmb 08 46 01.3
comp=Z,22nm,1.4s
G21K **Allakaket** **63.42 338** P **P** **08 45 59.6 +0.2**
baz=114,SNR=6.0
E22K **Anaktuvuk Pass** **63.53 340** P **P** **08 46 00.4 +0.4**
baz=116
H20K **Anotleneega Mo** **63.53 336** P **P** **08 46 00.4 +0.3**
baz=112
D23K **Nanushuk River** **63.54 341** P **P** **08 46 00.2 +0.2**
baz=118
N16K **Nishlik Lake** **63.55 330** P **P** **08 46 00.7 +0.4**
baz=106
J18K **Innoko River** **63.55 334** IAmb IAmb 08 46 01.9
comp=Z,19nm,1.4s
J18K **Innoko River** **63.55 334** P **P** **08 45 59.5 -0.7**
baz=109
F21K **Alatna River** **63.71 338** P **P** **08 46 02.2 +0.9**
baz=114
O15K **Ungalikthiuk R** **63.71 329** P **P** **08 46 01.1 -0.2**
baz=104
M16K **Timber Creek** **63.79 331** P **P** **08 46 02.3 +0.4**
baz=106
L17K **Donlin** **63.81 332** P **P** **08 46 02.1 +0.1**
baz=107
D22K **Ayikyak River** **64.15 340** P **P** **08 46 04.6 +0.5**
baz=116,SNR=10
H19K **Roundabout Mou** **64.16 336** IAmb IAmb 08 46 05.8
comp=Z,24nm,1.4s
H19K **Roundabout Mou** **64.16 336** P **P** **08 46 04.5 +0.4**
baz=110
L16K **Owhat River** **64.22 332** P **P** **08 46 05.7 +1.0**
baz=106
E21K **Killik River** **64.39 340** P **P** **08 46 06.0 +0.3**
baz=114
F20K **Avaraart Lake** **64.44 338** P **P** **08 46 06.3 +0.3**
baz=112
G19K **Purcell Mounta** **64.62 337** IAmb IAmb 08 46 09.1
comp=Z,13nm,1.1s
G19K **Purcell Mounta** **64.62 337** P **P** **08 46 07.6 +0.4**
baz=110
N14K **Kuskokwak Cree** **64.81 329** P **P** **08 46 09.5 +1.0**
baz=103
C21K **Knifeblade Rid** **64.95 340** P **P** **08 46 09.5 +0.2**
baz=114
E20K **Nigu River** **65.07 339** P **P** **08 46 10.8 +0.6**
baz=112
B21K **Ikpikpuk River** **65.09 341** P **P** **08 46 10.4 +0.2**
baz=114,SNR=6.8
F19K **Shaleruckik Mo** **65.12 337** P **P** **08 46 11.1 +0.7**
baz=110
G18K **Tagagawik** **65.14 336** IAmb IAmb 08 46 12.4
comp=Z,13nm,1.3s
G18K **Tagagawik** **65.14 336** P **P** **08 46 11.6 +1.0**
baz=108
E19K **Redstone River** **65.14 338** P **P** **08 46 10.8 +0.2**
baz=110
L15K **Ungalaq Mounta** **65.14 331** P **P** **08 46 11.1 +0.5**
baz=104
M14K **Bethel** **65.14 330** P **P** **08 46 11.1 +0.5**
baz=103
J16K **Anvik River** **65.16 333** P **P** **08 46 11.5 +0.8**
baz=105
K15K **Wolf Creek Mou** **65.31 332** P **P** **08 46 12.7 +0.9**
baz=104
H17K **Granite Mounta** **65.34 335** P **P** **08 46 12.3 +0.4**
H17K **Granite Mounta** **65.34 335** P **P** **08 46 12.5 +0.6**
baz=107
I17K **Unalakleet** **65.36 334** P **P** **08 46 13.5 +1.5**
baz=106
D20K **Etivluk River** **65.39 339** P **P** **08 46 13.1 +0.9**
baz=112
M13K **Dall Lake** **65.73 330** P **P** **08 46 15.5 +1.0**
baz=102
F18K **Selawik** **65.75 337** P **P** **08 46 15.4 +0.9**
baz=108
G17K **Kiwalik Mounta** **65.80 336** P **P** **08 46 15.8 +0.9**
baz=106,SNR=5.4
D19K **Kuna River** **65.82 339** IAmb IAmb 08 46 16.9
comp=Z,12nm,1.1s
D19K **Kuna River** **65.82 339** P **P** **08 46 16.1 +1.1**
baz=110
B20K **Meade River** **66.05 341** P **P** **08 46 17.6 +1.2**
baz=112
H16K **Elim** **66.22 334** P **P** **08 46 18.8 +1.3**
baz=104,SNR=7.2
J14K **Nanvaranak Lak** **66.33 332** P **P** **08 46 19.2 +0.9**
baz=102
E18K **Tukpahlearik C** **66.36 338** IAmb IAmb 08 46 20.3
comp=Z,16nm,1.1s
E18K **Tukpahlearik C** **66.36 338** P **P** **08 46 19.4 +1.0**
baz=107
A21K **Barrow** **66.39 342** P **P** **08 46 19.7 +1.2**
baz=113
G16K **Koyuk River** **66.46 335** IAmb IAmb 08 46 22.6
comp=Z,20nm,1.2s
G16K **Koyuk River** **66.46 335** P **P** **08 46 20.4 +1.3**
baz=105
C19K **Lookout Ridge** **66.53 339** P **P** **08 46 20.0 +0.4**
baz=109,SNR=6.0
E17K **Hotham Inlet** **66.71 337** P **P** **08 46 22.2 +1.5**
baz=106
C18K **Utukok River** **66.94 339** IAmb IAmb 08 46 23.8
comp=Z,8.8nm,1.1s
C18K **Utukok River** **66.94 339** P **P** **08 46 23.5 +1.4**
baz=107
G15K **Niukluk** **67.05 335** P **P** **08 46 24.2 +1.3**
baz=103
M11K **Mekoryuk** **67.12 329** P **P** **08 46 23.9 +0.5**
baz=99
D17K **Noatak River** **67.35 338** P **P** **08 46 25.3 +0.6**
baz=105
B18K **Kokolik River** **67.36 339** P **P** **08 46 26.0 +1.2**
baz=107
RDOG **Red Dog Mine** **67.38 338** IAmb IAmb 08 46 27.4
comp=Z,24nm,1.4s
RDOG **Red Dog Mine** **67.38 338** P **P** **08 46 26.4 +1.4**
baz=105
F15K **North Star Dit** **67.46 335** P **P** **08 46 26.7 +1.3**
baz=103
ANM **Nome** **67.51 334** P **P** **08 46 27.1 +1.3**
baz=101
C17K **DeLong Mountai** **67.59 338** P **P** **08 46 27.3 +1.0**
baz=105,SNR=5.4
NIKH **Nikolski High** **67.71 321** P **P** **08 46 28.1 +0.8**
baz=94
F14K **Arctic Creek** **68.09 335** P **P** **08 46 30.5 +1.0**
baz=101
C16K **Lisburne Hills** **68.32 338** IAmb IAmb 08 46 33.0
comp=Z,21nm,1.5s
C16K **Lisburne Hills** **68.32 338** P **P** **08 46 31.6 +0.8**
baz=103,SNR=5.2
TNA **Tin City** **68.76 335** P **P** **08 46 34.5 +0.9**
baz=99
BORG **Borgarnes** **69.60 26** LR LR 09 19 31.0
comp=Z,183nm,18.1s,baz=309,slow=38
RAR **Rarotonga** **72.54 242** LR LR 09 12 46.2
comp=Z,60nm,19.0s,baz=88,slow=31
JMIC **Jan Mayen** **74.72 20** LR LR 09 22 14.0
comp=Z,256nm,18.9s,baz=249,slow=38
BBTS **Babate** **76.09 78** LR LR 09 18 14.2
comp=Z,144nm,19.8s,baz=237,slow=34
SHEM **Shemya Is, Ala** **78.03 322** LR LR 09 17 57.9
comp=Z,119nm,21.9s,baz=239,slow=33
BILL **Bilibino** **78.84 338** P **P** **08 47 32.9 +0.2**
BILL IAmb IAmb 08 47 35.0
comp=Z,19nm,1.3s
SPITS **Spitsbergen Ar** **79.49 11** LR LR 09 28 23.4
comp=Z,267nm,18.2s,baz=248,slow=40
ESDC **Sonseca Array** **81.74 51** P **P** **08 47 47.9 -1.0**
ESDC IAmb IAmb 08 47 56.1
comp=Z,16nm,1.3s
ESDC **Sonseca Array** **81.74 51** P **P** **08 47 48.4 -0.6**
comp=Z,9.3nm,1.1s,baz=290,slow=4.9,SNR=15
ESDC LR LR 09 22 30.5
comp=Z,257nm,19.1s,baz=280,slow=35
comp=Z,9.3nm,1.1s
MDT **Midelt** **82.80 58** LR LR 09 17 51.2
comp=Z,122nm,20.1s,baz=309,slow=31
PMSA **Palmer Station** **83.45 167** LR LR 09 18 12.8
comp=Z,97nm,19.1s,baz=329,slow=31
NOA **NORSAR Array B** **84.69 28** P **P** **08 48 05.0 +1.2**
comp=Z,4.7nm,1.1s,baz=293,slow=4.7,SNR=5.8
NOA LR LR 09 24 56.5
comp=Z,203nm,21.2s,baz=280,slow=35
comp=Z,4.7nm,1.1s
ARCES **ARCESS Array B** **85.98 18** LR LR 09 27 10.4
comp=Z,194nm,21.1s,baz=284,slow=36
SEY **Seynchan** **86.01 335** LR LR 09 29 08.0
comp=Z,228nm,18.2s,baz=35,slow=37
HFS **Hagfors** **86.17 28** LR LR 09 28 25.0
comp=Z,162nm,18.1s,baz=284,slow=37
PETK **Petropavlovsk-** **87.46 325** LR LR 09 26 58.8
comp=Z,100nm,20.5s,baz=43,slow=35
TIXI **Tiksi** **88.17 347** P **P** **08 48 19.8 -0.7**
TIXI **Tiksi** **88.17 347** LR LR 09 31 46.9
comp=Z,124nm,20.4s,baz=38,slow=38
MA2 **Magadan** **88.23 332** LR LR 09 28 11.6
comp=Z,89nm,20.9s,baz=58,slow=36
DBIC **Dimbokro** **89.14 83** LR LR 09 27 01.8
comp=Z,68nm,18.9s,baz=256,slow=35

DAVOX	**Davos/Dischmat**	**89.31**	**41**	LR	LR	09 25 34.3			
	comp=Z,217nm,19.7s,baz=259,slow=34								
FINES	**FINESS Array B**	**90.80**	**24**	LR	LR	09 32 18.9			
	comp=Z,98nm,18.7s,baz=306,slow=38								
GERES	**GERESS Array B**	**90.86**	**39**	P	**P**	**08 48 34.3**	**+0.5**		
	comp=Z,0.4nm,0.3s,baz=297,slow=4.3,SNR=3.9								
GERES				LR	LR	09 28 45.3			
	comp=Z,234nm,20.2s,baz=288,slow=35								
	comp=Z,0.4nm,0.3s								
VRAC	**Vranov**	**92.38**	**37**	LR	LR	09 30 49.2			
	comp=Z,97nm,19.0s,baz=294,slow=36								
KEST	**Kesra**	**92.97**	**52**	LR	LR	09 28 44.0			
	comp=Z,161nm,18.3s,baz=196,slow=34								
TORD	**Torodi Ar. Bea**	**93.60**	**75**	LR	LR	09 25 58.5			
	comp=Z,155nm,21.8s,baz=319,slow=32								
YAK	**Yakutsk**	**95.00**	**340**	LR	LR	09 37 48.8			
	comp=Z,104nm,18.0s,baz=79,slow=39								
VAE	**Valguarnera**	**96.06**	**49**	LR	LR	09 32 18.0			
	comp=Z,268nm,18.7s,baz=322,slow=36								
URZ	**Urewera**	**97.12**	**232**	LR	LR	09 22 51.3			
	comp=Z,111nm,20.5s,baz=120,slow=29								
AKASG	**Malin Array Be**	**98.56**	**32**	LR	LR	09 32 22.4			
	comp=Z,124nm,21.9s,baz=328,slow=35								
OBN	**Obninsk**	**99.10**	**25**	LR	LR	09 33 50.0			
	comp=Z,148nm,20.9s,baz=358,slow=35								
MLR	**Muntele Rosu**	**99.78**	**37**	LR	LR	09 39 05.7			
	comp=Z,170nm,18.0s,baz=289,slow=38								
KURBB	**Kurchatov Arra**	**114.13**	**4**	PP	**PP**	**08 55 02.5**	**-0.3**		
	comp=Z,0.9nm,1.1s,baz=343,slow=6.7,SNR=5.1								
XLT	**XiLinHaoTe**	**114.25**	**335**	*e*P	**PKiKP**	**08 54 09.5**	**-0.5**		
XLT				pmax	pmax				
	comp=Z,3.0nm,0.8s								
XLT				pmax	pmax				
	comp=Z,190nm,3.7s								
HHC	**Hu-ho-hao-te**	**118.61**	**337**	*e*P	**PKiKP**	**08 54 18.8**	**+0.3**		
HHC				LR	LR				
	comp=N,240nm,16.2s								
HHC				LR	LR				
	comp=E,240nm,17.6s								
HHC				LR	LR				
	comp=Z,250nm,16.8s								
WMQ	**Urumqi**	**121.04**	**357**	*e*P	**PKiKP**	**08 54 25.0**	**+1.8**		
WMQ				LR	LR				
	comp=Z,140nm,22.5s								
NJ2	**Nanjing**	**122.36**	**325**	*e*P	**PKiKP**	**08 54 28.0**	**+2.0**		
NJ2				pmax	pmax				
	comp=Z,6.0nm,0.5s								
STKA	**Stephens Creek**	**125.51**	**242**	PKP	**PKPdf**	**08 54 31.7**	**-0.1**		
	comp=Z,2.4nm,0.7s,baz=43,slow=2.4,SNR=5.8								
WRA	**Warramunga Arr**	**132.16**	**257**	PKP	**PKiKP**	**08 54 46.9**	**+1.1**		
	comp=Z,1.1nm,0.9s,baz=78,slow=1.2,SNR=4.7								
ASAR	**Alice Springs**	**132.64**	**252**	PKP	**PKiKP**	**08 54 46.6**	**-0.2**		
	comp=Z,1.5nm,1.0s,baz=108,slow=1.7,SNR=7.5								
PZH	**PanZhiHua**	**135.05**	**338**	PKP	**PKiKP**	**08 54 51.8**	**+0.1**		
CMAR	**Chiang Mai Arr**	**143.41**	**336**	PKhKP	PKPpre	08 55 01.9			
	comp=Z,0.9nm,0.3s,baz=347,slow=4.5,SNR=7.8								

PRE ***14*** *08:38:08.9±0.6, 28°.55S×20°.34E, h5km, ML2.6*
NAM ***14*** *08:38:27.0±20.0, 28°.55S×20°.01E, h0km±132km, ML2.1*

ISC 14 08:38:09.1±0.9, 28°.52S±0°.05×20°.39E±0°.04, h10km, n13, σ1§88/26, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMS	**Ukamas**	**0.75**	**310**	*i* P	**Pn**	**08 38 29.0**	**+3.2**
ARMS				*i* S	**Sn**	**08 38 41.5**	**+4.2**
ARMS				IAML		08 38 44.6	
	comp=Z,95nm,0.3s						
PKA	**Prieska**	**2.37**	**119**	*e*P	**Pn**	**08 38 50.0**	**+1.9**
PKA				*e*S	**Sn**	**08 39 19.0**	**+1.8**
PKA				IAML		08 39 23.7	
	comp=Z,20nm,0.2s						
KOMG	**Komaggas**	**2.84**	**243**	*e*P	**Pn**	**08 38 54.8**	**+0.3**
KOMG				*e*S	**Sn**	**08 39 28.8**	**-0.1**
KOMG				IAML		08 39 39.4	
	comp=Z,45nm,0.3s						
FRAZ	**Fraserburg**	**3.51**	**166**	*e*P	**Pn**	**08 39 04.8**	**+1.0**
FRAZ				*e*S	**Sn**	**08 39 45.8**	**+0.3**
FRAZ				IAML		08 39 58.6	
	comp=Z,32nm,0.2s						
BRAK	**Brakfontein**	**3.91**	**147**	*e*P	**Pn**	**08 39 09.9**	**+0.7**
BRAK				*e*S	**Sn**	**08 39 55.7**	**+0.5**
BRAK				IAML		08 40 11.5	
	comp=Z,31nm,0.3s						
GRAN	**Grantham**	**4.07**	**158**	*e*P	**Pn**	**08 39 12.7**	**+1.2**
GRAN				*e*S	**Sn**	**08 39 59.2**	**-0.1**
GRAN				IAML		08 40 13.6	
	comp=Z,40nm,0.3s						
AUSN	**Aus**	**4.10**	**296**	*i* P	**Pg**	**08 39 26.6**	**-1.1**
AUSN				*i* S	**Sn**	**08 40 02.2**	**+2.0**
AUSN				IAML		08 40 25.1	
	comp=Z,10nm,0.3s						
MERW	**Merweville**	**4.25**	**167**	*e*P	**Pn**	**08 39 15.0**	**+1.0**
MERW				*e*S	**Sn**	**08 40 03.4**	**-0.3**
MERW				IAML		08 40 18.1	
	comp=Z,41nm,0.6s						
BOSA	**Boshof**	**4.28**	**92**	*e*P	**Pn**	**08 39 16.8**	**+2.3**
BOSA				*e*S	**Sn**	**08 40 06.2**	**+1.7**
BOSA				IAML		08 40 33.4	
	comp=Z,16nm,0.3s						
GRAF	**Camdeboo Natio**	**5.15**	**138**	*e*P	**Pn**	**08 39 27.7**	**+1.3**
GRAF				*e*S	**Sn**	**08 40 25.2**	**-0.8**
GRAF				IAML		08 40 50.2	
	comp=Z,20nm,0.4s						
LBTB	**Lobatse**	**5.82**	**54**	*e*P	**Pn**	**08 39 37.3**	**+1.7**
LBTB				*e*S	**Sn**	**08 40 43.0**	**+0.6**
LBTB				IAML		08 41 32.4	
	comp=Z,4.7nm,0.3s						
WIN	**Windhoek**	**6.63**	**333**	*i* P	**Pb**	**08 40 02.8**	**-1.9**
WIN				*i* S	**Sg**	**08 41 39.0**	**-3.1**
LEPH	**Lephalale, Lim**	**8.11**	**57**	*e*P	**Pn**	**08 40 09.5**	**+2.4**
LEPH				*e*S	**Sn**	**08 41 37.2**	**-1.8**
LEPH				IAML		08 42 29.3	
	comp=Z,5.8nm,0.6s						

IDC 14 08:40:33.8±3.5, 54°.45N×86°.79E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=31.8km s-min=18.9km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVINFRA**	**1.27**	**247**	I	I	08 48 30.0	
	0.1nm,0.9s,baz=67,slow=329,SNR=8.3						
ZALV	**Zalesovo Beam**	**1.27**	**247**	Pg	Pg	08 40 56.1	-1.9
	0.8nm,0.3s,baz=64,slow=18,SNR=17						
ZALV				Lg	Lg	08 41 15.1	
	0.7nm,0.3s,baz=67,slow=26,SNR=4.6						
KURBB	**Kurchatov Arra**	**6.33**	**236**	Pn	Pn	08 42 09.1	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=8.6						
	2.3nm,0.8s						
MKAR	**Makanchi Array**	**8.18**	**202**	Pn	Pn	08 42 35.3	+1.6
	0.1nm,0.3s,baz=25,slow=13,SNR=4.1						
	0.3nm,0.7s						

KRNET ***14*** *08:41:48.5±0.1, 40°.60N×77°.03E, h35km, mb2.2*
NNC ***14*** *08:41:50.1±0.6, 42°.72N×78°.25E, h0km, mb2.8, mpv3.0, Error ellipse: s-maj=4.8km s-min=1.6km az=170.0*
SOME ***14*** *08:41:50.4, 42°.75N×78°.23E, h10km*

ISC 14 08:41:50.4±1.2, 42.74N±0°.04×78°.25E±0°.02, h7km±11km, n31, σ1§14/56, 6C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.34**	**20**	P	**Pg**	**08 41 57.0**	**-0.1**
	14nm,0.1s						
SATY				S	**Sg**	**08 42 01.5**	**0.0**
	39nm,0.1s						
SATY	**Saty**	**0.34**	**20**	*e*P	**Pg**	**08 41 57.0**	**-0.1**
	14nm,0.1s						
SATY				*e*S	**Sg**	**08 42 01.5**	**0.0**
	39nm,0.1s						
UZB	**Uzynbulak**	**0.70**	**54**	P	**Pg**	**08 42 03.6**	**-0.2**
	3.0nm,0.1s						
UZB				S	**Sg**	**08 42 13.4**	**+0.5**
	5.1nm,0.1s						
UZB	**Uzynbulak**	**0.70**	**54**	*e*P	**Pg**	**08 42 03.6**	**-0.2**
	3.0nm,0.1s						
UZB				*e*S	**Sg**	**08 42 13.4**	**+0.5**
	5.1nm,0.1s						
KPKS	**Kokpek**	**0.79**	**23**	P	**Pg**	**08 42 05.2**	**-0.4**
	4.2nm,0.1s						
KPKS				S	**Sg**	**08 42 15.7**	**-0.2**
	5.5nm,0.2s						
KPKS	**Kokpek**	**0.79**	**23**	*e*P	**Pg**	**08 42 05.2**	**-0.4**
	4.2nm,0.1s						
KPKS				*e*S	**Sg**	**08 42 15.7**	**-0.2**
	5.5nm,0.1s						
KDJ	**Kajisay**	**1.00**	**233**	⇓*i* P	Pn	08 42 15.3	+4.2
	baz=5.0						
KDJ				⇓*i* S	Sn	08 42 35.2	+10
	10nm,0.5s						
TNSS	**Tian-Shan**	**1.00**	**288**	*e*P	**Pg**	**08 42 09.4**	**-0.3**
	0.8nm,0.1s						
TNSS				*e*S	**Sb**	**08 42 22.9**	**-1.1**
	0.7nm,0.3s						
KNDC	**Almaty**	**1.06**	**297**	⇑P	**Pb**	**08 42 10.5**	**-0.6**
	17nm,0.4s						
KNDC				⇑S	**Sb**	**08 42 25.0**	**-0.1**
	10nm,0.5s						
TARG	**Taragay, Kyrgy**	**1.06**	**198**	⇑*i* P	**Pn**	**08 42 11.8**	**-0.4**
	baz=27						
TARG				⇑*i* S	**Sn**	**08 42 28.1**	**+0.6**
	baz=27						
PDGK	**Podgornoye**	**1.08**	**57**	P	**Pg**	**08 42 10.9**	**-0.3**
	0.9nm,0.2s						
PDGK				S	**Sg**	**08 42 25.4**	**+0.2**
	1.3nm,0.5s						
PDGK	**Podgornoye**	**1.08**	**57**	⇑P	**Pg**	**08 42 10.8**	**-0.3**
	0.6nm,0.4s						
PDGK				⇓S	**Sb**	**08 42 25.9**	**-0.1**
	1.2nm,0.5s						
BLB	**Baldybastay**	**1.36**	**7**	P	**Pg**	**08 42 16.9**	**+0.3**
	33nm,0.1s						
BLB				S	**Sg**	**08 42 35.9**	**+1.6**
	7.4nm,0.3s						
KTBS	**Karatobe**	**1.50**	**311**	P	**Pb**	**08 42 18.5**	**-0.2**
	1.2nm,0.1s						
KTBS				S	**Sg**	**08 42 39.0**	**+0.3**
	3.1nm,0.3s						
KTBS	**Karatobe**	**1.50**	**311**	*e*P	**Pb**	**08 42 18.5**	**-0.2**
	1.2nm,0.1s						
KTBS				*e*S	**Sg**	**08 42 39.0**	**+0.3**
	3.1nm,0.2s						
ARXS	**Arharly**	**1.50**	**348**	P	**Pg**	**08 42 19.1**	**-0.1**
	8.4nm,0.2s						
ARXS				S	**Sg**	**08 42 40.0**	**+1.3**
	12nm,0.5s						
ARXS	**Arharly**	**1.50**	**348**	*e*P	**Pb**	**08 42 18.2**	**-0.5**
	8.4nm,0.1s						
ARXS				*e*S	**Sb**	**08 42 38.1**	**0.0**
	6.7nm,0.3s						
ULHL	**Ulahol**	**1.57**	**252**	⇓*i* P	**Pn**	**08 42 18.2**	**-0.7**
	baz=40						
ULHL				⇓*i* S	**Sg**	**08 42 40.3**	**-0.5**
	baz=40						
BOOM	**Boomskoye usch**	**1.73**	**262**	⇓*e*P	**Pg**	**08 42 22.5**	**-1.0**
	baz=37						
BOOM				⇓*e*S	**Sg**	**08 42 47.5**	**+1.7**
	baz=37						
KNOS	**Konyrlen**	**1.75**	**22**	P	**Pb**	**08 42 23.0**	**0.0**
	18nm,0.2s						
KNOS				S	**Sb**	**08 42 46.2**	**+0.9**
	5.3nm,0.3s						
KUU	**Kurty**	**1.81**	**310**	P	**Pb**	**08 42 23.8**	**-0.1**
	1.9nm,0.2s						
KUU				S	**Sg**	**08 42 48.1**	**-0.4**
	4.3nm,0.3s						
KUU	**Kurty**	**1.81**	**310**	*e*P	**Pb**	**08 42 23.8**	**-0.1**
	1.5nm,0.2s						
KUU				*e*S	**Sg**	**08 42 48.1**	**-0.4**
	3.2nm,0.1s						
DJR	**Jarkent**	**1.94**	**35**	P	**Pb**	**08 42 26.2**	**0.0**
	5.7nm,0.2s						
DJR				S	**Sb**	**08 42 51.9**	**+1.1**
	4.7nm,0.3s						
DJR	**Jarkent**	**1.94**	**35**	*e*P	**Pb**	**08 42 26.2**	**0.0**
	5.7nm,0.2s						
DJR				*e*S	**Sb**	**08 42 51.9**	**+1.1**
	4.7nm,0.3s						
TKM2	**Tokmak 2**	**1.96**	**276**	⇑Pn	**Pb**	**08 42 24.9**	**-1.7**
	1.6nm,0.7s						
TKM2				⇓Sn	**Sb**	**08 42 51.0**	**-0.3**
	1.2nm,0.4s						
TKM2	**Tokmak 2**	**1.96**	**276**	⇓*i* P	**Pg**	**08 42 29.4**	**+1.4**
	baz=36						
TKM2				⇓*i* S	**Sg**	**08 42 59.6**	**+6.2**
	baz=36						
KRBS	**Karabastau**	**2.11**	**298**	Pg	**Pb**	**08 42 29.0**	**-0.1**
	1.5nm,0.2s						
KRBS				Lg	Lg	08 42 56.3	
	3.4nm,0.5s						
KRBS	**Karabastau**	**2.11**	**298**	*e*P	**Pb**	**08 42 29.0**	**-0.1**
	1.6nm,0.2s						
KRBS				*e*S	**Sg**	**08 42 56.3**	**-1.9**
	2.7nm,0.3s						
NRN	**Naryn**	**2.12**	**233**	⇓*e*P	Pn	08 42 09.8	-17
	baz=16						
NRN				⇓*e*S	Sn	08 42 25.0	-29
	baz=16						
KAPS	**Kapalarasan**	**2.67**	**17**	Pg	**Pb**	**08 42 38.6**	**+0.1**
	2.5nm,0.5s						
KAPS				Lg	Lg	08 43 13.0	
	2.6nm,0.5s						
KAPS	**Kapalarasan**	**2.67**	**17**	*e*P	**Pb**	**08 42 39.3**	**+0.8**
	1.2nm,0.2s						
KAPS				*e*S	**Sg**	**08 43 14.1**	**-1.9**
	2.3nm,0.2s						

AEIC ***14*** *08:43:50.4±1.6, 56°.1N±0°.1×149°.2W±0°.1, h10km±9km, Error ellipse: s-maj=19.0km s-min=11.4km az=176.0*

NEIC 14 08:43:47.7±1.4, 56°.2N±0°.1×149°.30W±0°.03, h21km±11km, ML3.0/30, MLB2.8(AEIC), Error ellipse: s-maj=17.8km s-min=2.2km az=178.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.40**	**313**		Pn	08 44 25.6	-0.1
KDAK	**Kodiak Island**	**2.40**	**313**		Sn	08 44 52.8	-1.7
OHAK	**Old Harbor**	**2.43**	**297**		Pn	08 44 25.9	-0.3
OHAK					Sn	08 44 52.9	-2.3
SYI	**Shuyak Island**	**2.94**	**327**		Pn	08 44 33.7	+0.5
SYI					Sn	08 45 07.7	-0.2
SYI	**Shuyak Island**	**2.94**	**327**	IAML		08 45 13.4	
	comp=N,19nm,1.1s						
CNPM	**China Poot**	**3.50**	**344**		Pn	08 44 40.6	-0.3
Q19K	**Cape Douglas,**	**3.60**	**321**		Pn	08 44 43.2	+0.8
Q19K	**Cape Douglas,**	**3.60**	**321**	IAML		08 45 42.6	
	comp=N,43nm,1.1s						
Q19K				IAML		08 45 46.3	
	comp=E,48nm,1.1s						
BRSE	**Bradley Lake S**	**3.64**	**348**		Pn	08 44 42.4	-0.4
KAHG	**Katmai Hook Gl**	**3.66**	**311**		Pn	08 44 43.4	+0.3
BRLK	**Bradley Lake**	**3.68**	**347**		Pn	08 44 43.1	-0.2
BRLK	**Bradley Lake**	**3.68**	**347**	IAML		08 45 12.4	
	comp=E,34nm,0.2s						
BRLK				IAML		08 45 13.7	
	comp=N,29nm,1.0s						
SEW	**Seward**	**3.92**	**359**		Pn	08 44 46.0	-0.7
P23K	**Montague Islan**	**3.94**	**14**		Pn	08 44 46.5	-0.4
CNTC	**Contact Creek**	**4.14**	**303**		Pn	08 44 49.0	-0.7
O22K	**Cooper Landing**	**4.30**	**357**	Pn	Pn	08 44 51.9	0.0
O22K				IAML		08 45 50.8	
	comp=E,37nm,1.1s						
O22K				IAML		08 45 50.9	
	comp=N,35nm,1.1s						
SLKM	**Skilak Lake**	**4.35**	**354**		Pn	08 44 52.1	-0.5
HIN	**Hinchinbrook I**	**4.46**	**18**		Pn	08 44 54.0	-0.2
HIN	**Hinchinbrook I**	**4.46**	**18**	IAML		08 45 44.6	
	comp=N,21nm,1.1s						
HIN				IAML		08 46 22.4	
	comp=E,21nm,1.1s						
P18K	**Big Mountain,**	**4.51**	**318**	Pn	Pn	08 44 54.8	0.0
RSO	**Redoubt South**	**4.65**	**338**	Pn	Pn	08 44 55.9	-1.0
RAGM	**Ragged Mountai**	**4.86**	**28**	Pn	Pn	08 44 57.4	-2.2
RC01	**Rabbit Creek A**	**4.91**	**358**	Pn	Pn	08 45 00.1	-0.2
RC01				IAML		08 45 58.4	
	comp=E,6.7nm,0.4s						
RC01				IAML		08 45 58.5	
	comp=N,4.5nm,0.3s						
HMT	**Hamilton**	**4.93**	**31**	Pn	Pn	08 45 00.5	0.0
BERG	**Berg Lake**	**5.14**	**33**		Pn	08 45 03.1	-0.3
BERG	**Berg Lake**	**5.14**	**33**	IAML		08 46 07.2	
	comp=N,19nm,1.2s						
KNK	**Knik Glacier**	**5.25**	**4**	Pn	Pn	08 45 04.0	-0.9
KNK				IAML		08 46 05.0	
	comp=N,5.2nm,1.0s						
KNK				IAML		08 47 04.7	
	comp=E,5.7nm,1.1s						
KHIT	**Khitrov Hills**	**5.32**	**34**		Pn	08 45 05.5	-0.4
SUA	**Susitna One**	**5.34**	**353**	Pn	Pn	08 45 05.0	-1.2
SUA				IAML		08 45 54.1	
	comp=E,6.8nm,1.2s						
SUA				IAML		08 47 12.5	
	comp=N,3.3nm,1.0s						
PMR	**Palmer**	**5.41**	**1**	Pn	Pn	08 45 07.0	-0.2
MESA	**MESA**	**5.57**	**41**		Pn	08 45 08.6	-0.9
KLU	**Klutina**	**5.59**	**17**	Pn	Pn	08 45 10.3	+0.7
GHO	**Glory Hole Cre**	**5.60**	**2**	Pn	Pn	08 45 09.7	0.0
SML	**Sawmill**	**5.65**	**5**	Pn	Pn	08 45 10.6	+0.1
N18K	**Kilae Creek**	**5.67**	**325**	Pn	Pn	08 45 11.8	+1.0
ISLE	**Juniper Island**	**5.74**	**37**	Pn	Pn	08 45 11.8	+0.1
SCM	**Sheep Creek Mo**	**5.75**	**9**	Pn	Pn	08 45 12.9	+1.1
O16K	**Kokwok River B**	**5.79**	**310**	Pn	Pn	08 45 13.8	+1.4
VRDI	**Verde Repeater**	**5.89**	**29**	Pn	Pn	08 45 15.3	+1.4
SVW2	**Sparrevohn**	**5.91**	**329**	Pn	Pn	08 45 13.7	-0.2
SKT	**Skwentna**	**5.91**	**350**	Pn	Pn	08 45 15.5	+1.5
N25K	**Chitina, Valde**	**5.95**	**22**	Pn	Pn	08 45 15.6	+1.0
GLB	**Gilahina Butte**	**5.98**	**26**	Pn	Pn	08 45 12.7	-2.3
MCARA	**McCarthy VSAT**	**6.14**	**29**	Pn	Pn	08 45 18.8	+1.7
M24K	**Tolsona, Glenn**	**6.14**	**14**	Pn	Pn	08 45 19.0	+1.8
BARN	**Barnard Glacie**	**6.30**	**36**	Pn	Pn	08 45 19.8	+0.3
LOGN	**Logan Glacier**	**6.36**	**40**	Pn	Pn	08 45 20.1	-0.1
M17K	**Holitna River**	**6.71**	**324**	Pn	Pn	08 45 25.5	+0.5
CAST	**Castle Rocks**	**7.38**	**350**	Pn	Pn	08 45 36.1	+1.9
BPAW	**Bear Paw Mtn.**	**7.97**	**355**	Pn	Pn	08 45 42.5	+0.3

MRB ***14*** *08:53:42.5±0.6, 42°.34N×0°.63E, h5km±3km, ML2.4/30, Error ellipse: s-maj=1.8km s-min=1.4km az=249.0*
LDG ***14*** *08:53:42.1±0.1, 42°.32N×0°.62E, h2km, Md2.8/1, Ml3.0/26, Error ellipse: s-maj=1.5km s-min=1.4km az=39.0*
STR ***14*** *08:53:43.2±0.5, 42°.N±4′×′±′, h2km, MLv2.7/11, Error ellipse: s-maj=0.0km s-min=0.0km az=7.7, preliminary*
MDD ***14*** *08:53:43.7±0.2, 42°.36N×0°.67E, h11km, mb_Lg3.0/26, Error ellipse: s-maj=1.7km s-min=1.3km az=178.0*
SFS ***14*** *08:53:43.9, 42°.18N×0°.51E, h8km, ML3.9/4, ML3.9/4, MLv4.0/4*

ISC 14 08:53:41.9±0.8, 42°.35N±0°.01×0°.64E±0°.01, h13km±6km, n121, σ1§30/226, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTRE	**Tremp**	**0.10**	**107**	P	**Pg**	**08 53 44.4**	**-0.7**
CTRE				S	**Sg**	**08 53 46.3**	**-1.0**
	2μm,0.1s						
CSOR	**Sort**	**0.37**	**87**	P	**Pg**	**08 53 49.5**	**+0.2**
CSOR				S	**Sb**	**08 53 55.4**	**-0.6**
	187nm,0.3s						
CARA	**Val d'Aran**	**0.38**	**20**	P	**Pg**	**08 53 49.9**	**+0.3**
CARA				S	**Sg**	**08 53 55.8**	**+1.1**
	1μm,0.1s						
ECHI	**Chisagues Biel**	**0.45**	**313**	P	**Pg**	**08 53 50.9**	**0.0**
ECHI				S	**Sg**	**08 53 57.5**	**+0.5**
	234nm,0.1s						
ECHI	**Chisagues Biel**	**0.45**	**313**	Pg	**Pg**	**08 53 50.9**	**0.0**
ECHI				Sg	**Sg**	**08 53 57.4**	**+0.3**
ECHI				*i* Vmb_Lg		08 53 57.6	
ECHI	**Chisagues Biel**	**0.45**	**313**	Pg	**Pg**	**08 53 50.9**	**0.0**
ECHI				Sg	**Sg**	**08 53 57.0**	**0.0**
CAVN	**Les Avellanes**	**0.48**	**170**	P	**Pg**	**08 53 51.0**	**-0.3**
CAVN				S	**Sg**	**08 53 57.9**	**+0.1**
	327nm,0.2s						
CEST	**Esterri de Car**	**0.52**	**62**	P	**Pg**	**08 53 52.3**	**+0.2**
CEST				S	**Sg**	**08 53 59.6**	**+0.7**
	145nm,0.1s						
CORG	**Organya**	**0.52**	**104**	P	**Pg**	**08 53 52.0**	**-0.1**
CORG				S	**Sg**	**08 53 59.7**	**+0.7**
	74nm,0.3s						
SALF	**Salau**	**0.57**	**45**	Pg	**Pg**	**08 53 53.3**	**+0.2**
SALF				Sg	**Sg**	**08 54 01.1**	**+0.3**
ARBS	**La Rabassa**	**0.68**	**82**	P	**Pg**	**08 53 54.9**	**-0.3**
ARBS				S	**Sg**	**08 54 04.1**	**0.0**
	86nm,0.3s						
MLS	**Moulis**	**0.69**	**29**	P	**Pb**	**08 53 56.1**	**+0.3**
MLS				S	**Sg**	**08 54 05.0**	**+0.5**
	44nm,0.1s						
MLS	**Moulis**	**0.69**	**29**	Pg	**Pg**	**08 53 55.6**	**+0.2**
MLS				Sg	**Sg**	**08 54 04.4**	**-0.1**
PAND	**Andorre**	**0.69**	**76**	P	**Pb**	**08 53 56.1**	**+0.2**
PAND				S	**Sb**	**08 54 05.6**	**+0.2**
	81nm,0.1s						
PAND	**Andorre**	**0.69**	**76**	Pg	**Pg**	**08 53 55.6**	**+0.2**
PAND				Sg	**Sg**	**08 54 05.0**	**+0.5**
VIEF	**Viey**	**0.70**	**319**	Pg	**Pg**	**08 53 55.4**	**-0.1**
VIEF				Sg	**Sg**	**08 54 04.6**	**-0.1**
EPF	**Esparros**	**0.71**	**342**	*e*Pg	**Pg**	**08 53 55.8**	**+0.1**
EPF				*e*Sg	**Sg**	**08 54 04.8**	**-0.3**
	85nm,0.2s						
EPF	**Esparros**	**0.71**	**342**	Pg	**Pg**	**08 53 55.8**	**+0.1**
EMIR	**Miracle**	**0.79**	**123**	P	**Pg**	**08 53 56.9**	**-0.4**
EMIR				S	**Sb**	**08 54 08.6**	**+0.5**
	133nm,0.1s						
EMIR	**Miracle**	**0.79**	**123**	Pg	**Pg**	**08 53 56.9**	**-0.4**
EMIR				Sg	**Sb**	**08 54 08.7**	**+0.5**
EMIR				*i* Vmb_Lg		08 54 13.3	
PYLO	**Lourdes**	**0.90**	**326**	P	**Pb**	**08 53 59.7**	**+0.3**
PYLO				S	**Sb**	**08 54 11.5**	**+0.2**
PYLO	**Lourdes**	**0.90**	**326**	Pg	**Pg**	**08 53 59.1**	**-0.2**
PYLO				Sg	**Sg**	**08 54 11.0**	**-0.1**
CANF	**Canfranc**	**0.95**	**296**	Pg	**Pg**	**08 53 59.9**	**-0.4**
CANF				Sg	**Sb**	**08 54 13.4**	**+0.7**
CLLI	**Llivia**	**0.99**	**82**	P	**Pg**	**08 54 00.6**	**-0.5**
CLLI				S	**Sn**	**08 54 15.5**	**-0.2**
	39nm,0.2s						
ETSF	**Etsaut**	**1.04**	**302**	*e*Pg	**Pb**	**08 54 01.7**	**-0.1**
ETSF	**Etsaut**	**1.04**	**302**	*e*P	**Pn**	**08 54 03.7**	**+1.5**
ETSF				*e*Sg	**Sb**	**08 54 16.2**	**+0.9**
	209nm,0.3s						
ETSF	**Etsaut**	**1.04**	**302**	Pg	**Pb**	**08 54 01.7**	**-0.1**
ETSF				Sg	**Sb**	**08 54 16.2**	**+0.9**
VALC	**Valcebollere**	**1.04**	**88**	Pg	**Pb**	**08 54 02.0**	**+0.2**
VALC				Sg	**Sn**	**08 54 17.0**	**+0.2**
ESAC	**San Caprasio**	**1.04**	**233**	Pg	**Pb**	**08 53 59.9**	**-1.9**
ESAC				Sg	**Sg**	**08 54 14.8**	**-0.7**
ESAC				*i* Vmb_Lg		08 54

99nm,0.3s
MTLF Montolieu 1.52 49 *e*Pg Pg 08 54 10.9 -0.2
MTLF *e*Sg Sg 08 54 31.7 +0.8
41nm,0.2s
MTLF Montolieu 1.52 49 Pg Pg 08 54 10.9 -0.2
MTLF Sg Sg 08 54 31.7 +0.8
MTLF Montolieu 1.52 49 Pn Pg 08 54 10.8 -0.3
MTLF Montolieu 1.52 49 Sn Sg 08 54 31.5 +0.6
EBR Ebro Roquetas 1.54 184 P Pb 08 54 10.3 +0.1
EBR S Sg 08 54 30.6 -0.7
177nm,0.2s
EORO Oroz-Betelu 1.54 291 Pn Pg 08 54 11.6 +0.2
EORO Sn Sg 08 54 31.1 -0.2
EORO *i* Vmb_Lg 08 54 36.8
SJPF Ste Jean 1.57 300 *e*Pg Pg 08 54 11.7 -0.3
SJPF *e*Sg Sg 08 54 32.9 +0.5
43nm,0.3s
SJPF Ste Jean 1.57 300 Pg Pg 08 54 11.7 -0.3
SJPF Sg Sg 08 54 32.9 +0.5
CMAS Mas de Barbera 1.65 189 S Sb 08 54 33.3 +0.6
92nm,0.2s
CBUD Illa de Buda 1.66 175 P Pb 08 54 12.3 +0.1
CBUD S Sb 08 54 33.5 +0.6
147nm,0.2s
OSSF Osses 1.67 303 Pn Pb 08 54 12.7 +0.3
OSSF Sn Sg 08 54 35.0 -0.5
SJAF Saint Jean de 1.67 85 P Pb 08 54 12.5 +0.1
SJAF S Sb 08 54 34.3 +1.0
25nm,0.2s
SJAF Saint Jean de 1.67 85 Pn Pb 08 54 12.3 -0.1
SJAF Sn Sg 08 54 35.5 0.0
EJON La Jonquera 1.67 86 Pn Pb 08 54 12.1 -0.3
EJON Sg Sg 08 54 36.0 +0.4
EJON La Jonquera 1.67 86 P Pg 08 54 13.7 -0.2
EJON S Sg 08 54 35.9 +0.3
EJON La Jonquera 1.67 86 Pn Pb 08 54 12.1 -0.3
EJON Sg Sg 08 54 36.0 +0.4
EJON *i* Vmb_Lg 08 54 37.0
EARA Aranguren 1.69 285 Pn Pb 08 54 12.9 +0.1
CCAS Cassa de la Se 1.75 105 P Pn 08 54 12.9 +1.0
CCAS S Sb 08 54 36.3 +0.6
30nm,0.3s
EALK Alkurruntz 1.80 299 Pn Pb 08 54 15.2 +0.4
EALK Sg Sg 08 54 40.7 +0.8
EALK *i* Vmb_Lg 08 54 42.2
EALK Alkurruntz 1.80 299 Sn Sb 08 54 38.5 +1.2
EALK Alkurruntz 1.80 299 Pn Pb 08 54 14.7 -0.1
ALCN Alcanar 1.81 184 P Pb 08 54 14.4 -0.4
ALCN S Sb 08 54 36.9 -0.4
48nm,0.1s
CPAL Palau Saverder 1.87 90 P Pb 08 54 15.3 -0.6
CPAL S Sb 08 54 38.8 -0.4
17nm,0.2s
CLAF Gruissan 1.97 66 Pn Pb 08 54 17.2 -0.3
CLAF Sn Sb 08 54 42.8 +0.9
MONQ Montcuq 2.05 11 Pn Pn 08 54 17.6 +1.5
MONQ Sn Sb 08 54 44.1 -0.3
ALCX Castello 2.11 188 S Sb 08 54 44.7 -1.4
39nm,0.2s
EMOS Mosqueruela 2.16 203 P Pn 08 54 19.3 +1.6
EMOS S Sb 08 54 46.7 -0.9
21nm,0.4s
EMOS Mosqueruela 2.16 203 Pn Pb 08 54 19.9 -1.0
EMOS Sn Sb 08 54 47.3 -0.3
EMOS *i* Vmb_Lg 08 54 54.8
E0901 Celadas (Terue 2.30 216 Pn Pn 08 54 20.4 +0.9
E0901 Sn Sn 08 54 49.5 +1.8
E0901 *i* Vmb_Lg 08 54 58.8
ETOR Torete 2.54 234 Pn Pn 08 54 23.9 +1.0
ETOR Sn Sn 08 54 55.5 +1.8
ETOR *i* Vmb_Lg 08 55 11.6
LFF La Frestale 2.58 2 *e*P Pb 08 54 26.1 -2.0
LFF *e*Sn Sn 08 54 55.4 +0.7
16nm,0.3s
CAF Calviac 2.77 21 *e*Pn Pn 08 54 27.1 +1.1
CAF Calviac 2.77 21 *e*P Pn 08 54 28.8 +2.8
CAF *e*Sn Sn 08 54 59.2 -0.1
CAF *e*Sg Sg 08 55 10.0 -0.9
16nm,0.2s
LASF Ste Croix 2.91 53 *e*P Pn 08 54 30.1 +2.2
LASF *e*Sn Sn 08 55 02.3 -0.5
LASF *e*Sg Sg 08 55 14.4 -1.1
4.2nm,0.2s
RJF Les Rejaudoux 3.02 12 *e*P Pn 08 54 31.6 +2.3
RJF Les Rejaudoux 3.02 12 *e*Pg Pg 08 54 38.3 -1.4
RJF *e*Sn Sn 08 55 05.8 +0.5
RJF *e*Sg Sg 08 55 17.7 -1.1
16nm,0.3s
ETOS Mallorca 3.06 147 P Pn 08 54 31.3 +1.3
ETOS S Sn 08 55 04.1 -2.4
ETOS Mallorca 3.06 147 Pn Pn 08 54 30.8 +0.8
ETOS Sn Sn 08 55 03.7 -2.8
ETOS *i* Vmb_Lg 08 55 05.2
ELAN Lanestosa 3.12 288 Pn Pn 08 54 32.7 +1.8
ELAN Sn Sn 08 55 09.1 +1.0
ELAN *i* Vmb_Lg 08 55 13.6
FRNF Fournols 3.33 24 Pn Pn 08 54 35.3 +1.5
FRNF Sn Sn 08 55 15.0 +1.8
LBL Lubilhac 3.44 32 Pn Pn 08 54 37.0 +1.8
LBL Sn Sn 08 55 16.7 +0.8
VERF Verneugheol 3.65 21 Pn Pn 08 54 39.3 +1.2
VERF Sn Sn 08 55 21.5 +0.6
VIVF Saint-Julien-l 3.85 48 *e*Pn Pn 08 54 41.2 +0.4
VIVF Saint-Julien-l 3.85 48 *e*Pg Pg 08 54 53.7 -1.9
VIVF *e*Sg Sg 08 55 43.8 -1.7
3.8nm,0.2s
COLF Collangettes 3.85 34 Pn Pn 08 54 41.7 +0.8
COLF Sn Sn 08 55 26.8 +0.7
SMRF Simiane la Rot 3.96 64 *e*P Pn 08 54 42.5 +0.2
GUD Guadarrama 3.99 246 Pn Pn 08 54 43.5 +0.7
GUD Sn Sn 08 55 27.5 -1.9
GUD *i* Vmb_Lg 08 55 30.8
TCF Toulx Ste Croi 4.09 15 *e*P Pn 08 54 45.2 +1.1
TCF *e*Sn Sn 08 55 31.1 -0.8
TCF *e*Sg Sg 08 55 51.0 -2.2
7.2nm,0.4s
MFF Saint Martin d 4.28 353 *e*P Pn 08 54 48.9 +2.2
MFF *e*Sn Sn 08 55 35.4 -1.2
6.2nm,0.4s
MFF *e*Sg Sg 08 55 57.5 -1.9
5.4nm,0.3s
EARI Arriondas 4.41 284 Pn Pn 08 54 49.9 +1.4
EARI Sn Sn 08 55 39.0 -0.7
EARI *i* Vmb_Lg 08 55 41.0
TRIGF Trigance 4.45 70 Pn Pn 08 54 51.5 +2.4
TRIGF Sn Sn 08 55 42.1 +1.3
BGF Bois d'Agland 4.49 20 *e*Pn Pn 08 54 50.8 +1.2
BGF Bois d'Agland 4.49 20 *e*Pg Pg 08 55 05.5 -2.3
BGF *e*Sn Sn 08 55 39.1 -2.5
BGF *e*Sg Sg 08 56 04.4 -1.6
10nm,0.3s
ORIF Oris-en-Rattie 4.58 54 *e*P Pn 08 54 54.0 +3.0
PAB San Pablo 4.71 235 Pn Pn 08 54 52.5 -0.1
PAB Sn Sn 08 55 45.0 -2.0
PAB *i* Vmb_Lg 08 55 45.5
AVF Avril sur Loir 4.84 23 *e*P Pn 08 54 56.1 +1.7
AVF *e*Sg Sg 08 56 14.7 -2.5
0.9nm,0.2s
SMF Signal de Mont 4.86 27 *e*Pn Pn 08 54 55.5 +0.8
SMF Signal de Mont 4.86 27 *e*P Pn 08 54 58.0 +3.3
SMF *e*Sn Sn 08 55 49.8 -1.0
SMF *e*Sg Sg 08 56 15.6 -2.3
3.3nm,0.3s
PSIM Granatula de C 4.87 225 Pn Pn 08 54 53.7 -1.1
PSIM Sn Sn 08 55 48.4 -2.6
JAUF Jausiers 4.91 63 Pn Pn 08 54 57.6 +2.1
JAUF Sn Sn 08 55 52.7 +0.5
MBDF Montbardon 5.05 60 *e*P Pn 08 55 00.8 +3.4
SSF Saint Saulge 5.13 22 *e*P Pn 08 55 01.2 +2.8
LOR Lormes 5.42 24 *e*P Pn 08 55 07.6 +5.2
LOR *e*Sg Sg 08 56 32.7 -3.1
1.2nm,0.3s
ECAL Calabor 5.50 268 P Sn 08 55 02.8 -0.7
ECAL S Sn 08 56 02.6 -4.1
CABF La Chapelle 5.77 41 *e*P Pn 08 55 09.7 +2.5
EADA Adamuz 5.78 225 P Pn 08 55 05.5 -1.8
GRR Gorron 6.13 351 *e*Pg Pg 08 55 36.2 -2.9
GRR *e*Sn Sn 08 56 19.2 -2.7
2.1nm,0.2s
QUIF Quistinic 6.18 335 *e*Pn Pn 08 55 12.6 -0.1
QUIF *e*Sn Sn 08 56 21.6 -1.6
4.0nm,0.3s
PGF Pioggiola 6.19 85 *e*Pn Pn 08 55 13.4 +0.4
PGF *e*Sn Sn 08 56 19.3 -4.3
1.3nm,0.2s
LDF La Druitiere 6.26 355 *e*Sn Sn 08 56 22.7 -2.6
1.9nm,0.2s
LDF *e*Sg Sg 08 56 58.9 -3.9
2.9nm,0.4s
SGMF Saint Gilles 6.32 340 *e*P Pn 08 55 18.0 +3.4
FLN La Foliniere 6.46 353 *e*P Pn 08 55 18.1 +1.5
FLN *e*Sn Sn 08 56 27.9 -2.2
1.0nm,0.1s
ROSF Rostrenen 6.59 337 *e*Pn Pn 08 55 18.1 -0.2
ROSF Rostrenen 6.59 337 *e*P Pn 08 55 21.1 +2.8
ROSF *e*Sn Sn 08 56 30.4 -2.9
4.5nm,0.3s
MOR8 Moi Rana 25.07 13 *e*P P 08 59 08.5 +2.8

IDC 14 09:00:10.2±2.6, 53°61N×86°83E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=24.4km s-min=13.7km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**287**	I	I	09 08 20.0	
	baz=103,slow=332,SNR=14						
ZALV	**Zalesovo Beam**	**1.24**	**287**	Pg	Pg	09 00 33.0	-0.9
	0.5nm,0.3s,baz=106,slow=18,SNR=7.8						
ZALV				Lg	Lg	09 00 51.5	
	1.0nm,0.3s,baz=110,slow=31,SNR=11						
KURBB	**Kurchatov Arra**	**5.92**	**243**	Pn	Pn	09 01 38.3	-0.7
	baz=60,slow=14,SNR=3.4						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**7.41**	**205**	Pn	Pn	09 02 01.6	+2.1
	0.1nm,0.3s,baz=28,slow=13,SNR=6.6						
MKAR				Lg	Lg	09 04 05.5	
	baz=16,slow=28,SNR=5.2						
	0.2nm,0.4s						

IDC 14 09:01:39.5±2.9, 54°15N×86°40E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=22.7km s-min=13.3km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**258**	I	I	09 07 30.0	
	baz=76,slow=334,SNR=1.2						
ZALV	**Zalesovo Beam**	**0.96**	**258**	Pg	Pg	09 01 56.5	-1.2
	1.3nm,0.3s,baz=75,slow=17,SNR=7.1						
ZALV				Lg	Lg	09 02 11.6	
	1.7nm,0.3s,baz=80,slow=30,SNR=8.0						
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn	Pn	09 03 10.1	+1.0
	baz=53,slow=13,SNR=4.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.82**	**201**	Pn	Pn	09 03 35.4	+1.0
	0.1nm,0.3s,baz=24,slow=12,SNR=2.0						
	0.2nm,0.5s						

*CATAC **14** 09:02:15.7±2.9, 8°17N×82°84W, h2km±13km, ML2.3*
*UPA **14** 09:02:19.0±1.3, 8°33N×82°82W, h12km±6km, MW2.8*

ISC 14 09:02:15.6±2.4, 8°2N±0°1.1×82°77W±0°05, h21km±2km, n12, σ0s81/20, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.11**	**274**	⇑*i* P	**Pb**	**09 02 22.2**	**+0.3**
PTPM				*e*S	**Sb**	**09 02 25.8**	**-0.4**
CDITO	**Canoas**	**0.39**	**345**	*e*P	**Pb**	**09 02 24.8**	**+1.1**
CDITO				*e*S	**Sb**	**09 02 29.4**	**+0.3**
CDITO	**Canoas**	**0.39**	**345**	*i* P	**Pb**	**09 02 24.2**	**+0.5**
CDITO				IAML		09 02 34.4	
	comp=Z,420nm,1.0s						
DVD	**David**	**0.40**	**53**	*e*S	**Sn**	**09 02 33.3**	**+0.3**
BCO2	**Palmira**	**0.57**	**25**	*e*P	**Pn**	**09 02 28.5**	**-0.2**
BCO2				*e*S	**Sn**	**09 02 37.1**	**-0.5**
BRU2	**Volcan**	**0.60**	**8**	*e*P	**Pn**	**09 02 28.7**	**-0.4**
BRU2				*e*S	**Sn**	**09 02 37.0**	**-1.3**
BRU2	**Volcan**	**0.60**	**8**	*i* P	**Pb**	**09 02 27.5**	**-0.1**
BRU2				*i* S	**Sn**	**09 02 37.0**	**-1.3**
BRU2				IAML		09 02 44.9	
	comp=Z,160nm,1.0s						
POTG	**Potrero Grande**	**0.92**	**338**	*i* P	**Pb**	**09 02 32.8**	**-0.1**
POTG				*i* S	**Sn**	**09 02 44.9**	**-1.1**
POTG				IAML		09 02 46.9	
	comp=Z,360nm,1.0s						
CHGR2	**Aguacate**	**0.96**	**40**	*e*P	**Pb**	**09 02 34.4**	**+0.8**
CHGR2				*e*S	**Sb**	**09 02 46.6**	**+0.7**
OCHAL	**Ojochal**	**1.24**	**316**	*i* P	**Pn**	**09 02 37.5**	**-0.3**
OCHAL				*i* S	**Sn**	**09 02 55.4**	**+1.4**
OCHAL				IAML		09 03 00.5	
	comp=Z,1.2nm,1.0s						
CNI2	**El Empalme, Bo**	**1.25**	**14**	*e*S	**Sn**	**09 02 54.8**	**+0.6**
RIMA	**Rio Macho**	**1.90**	**325**	*i* P	**Pb**	**09 02 49.5**	**-0.1**
RIMA				IAML		09 03 13.7	
	comp=Z,40nm,1.0s						

IDC 14 09:10:17.9±2.8, 53°54N×87°85E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=25.3km s-min=15.5km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**284**	I	I	09 22 00.0	
	0.1nm,0.7s,baz=98,slow=326,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.85**	**284**	Pn	Pn	09 10 50.5	-0.3
	1.0nm,0.3s,baz=98,slow=15,SNR=14						
ZALV				Lg	Lg	09 11 16.3	
	1.4nm,0.3s,baz=101,slow=28,SNR=10.0						
KURBB	**Kurchatov Arra**	**6.44**	**247**	Pn	Pn	09 11 54.6	+0.8
	0.1nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Lg	Lg	09 13 42.1	
	baz=60,slow=33,SNR=4.2						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.63**	**210**	Pn	Pn	09 12 11.7	+1.4
	0.1nm,0.3s,baz=29,slow=14,SNR=6.0						
MKAR				Sn	Sn	09 13 36.4	-1.0
	baz=26,slow=22,SNR=1.7						
MKAR				Lg	Lg	09 14 16.7	
	baz=29,slow=33,SNR=2.7						
	0.1nm,0.3s						

IDC 14 09:20:57.1±3.3, 54°23N×87°25E, h0km, mbtmp2.3/2, ML2.0/2, Error ellipse: s-maj=28.9km s-min=20.4km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	I	I	09 29 40.0	
	0.1nm,0.9s,baz=79,slow=330,SNR=13						
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg	Pn	09 21 23.4	-1.4
	1.3nm,0.3s,baz=76,slow=16,SNR=13						
ZALV				Lg	Lg	09 21 44.2	
	0.4nm,0.3s,baz=81,slow=28,SNR=3.7						
KURBB	**Kurchatov Arra**	**6.44**	**239**	Pn	Pn	09 22 32.5	-0.6
	baz=52,slow=13,SNR=2.1						
KURBB				Lg	Lg	09 24 23.1	
	baz=50,slow=30,SNR=2.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	Pn	09 22 58.1	+2.3
	baz=27,slow=10.0,SNR=1.7						

*STR **14** 09:29:07.7±0.5, 42°N±4°×±°, h2km, MLv3.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=6.4, preliminary*
*LDG **14** 09:29:07.0±0.0, 42°.30N×0°.66E, h2km, Md3.0/1, Ml3.3/35, Error ellipse: s-maj=1.6km s-min=1.4km az=139.0*
*MRB **14** 09:29:07.0±0.6, 42°.34N×0°.64E, h5km±3km, ML2.9/27, Error ellipse: s-maj=1.8km s-min=1.3km az=250.0*
*INMG **14** 09:29:07.7±1.8, 42°.31N×0°.62E, h1km, ML2.7, Error ellipse: s-maj=3.6km s-min=2.7km az=92.0*
*MDD **14** 09:29:08.4±0.2, 42°.32N×0°.67E, h12km, mb_Lg3.3/37, Error ellipse: s-maj=1.4km s-min=1.1km az=170.0*
*SFS **14** 09:29:08.8, 42°.30N×0°.64E, h20km, mb3.8/4, ML3.5/9, ML4.0/7, MLv3.2/9*

ISC 14 09:29:06.5±0.8, 42°34N±0°01×0°68E±0°01, h13km±5km, n156, σ1s55/295, 2C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTRE	**Tremp**	**0.07**	**106**	P	**Pg**	**09 29 09.0**	**-0.4**
CTRE				S	**Sg**	**09 29 10.9**	**-0.4**

6µm,0.1s
CSOR Sort 0.34 84 P Pb 09 29 14.0 -0.4
CSOR S Sb 09 29 19.2 -0.6
700nm,0.2s
CARA Val d'Aran 0.38 16 P Pb 09 29 14.5 -0.7
CARA S Sb 09 29 20.4 -0.6
1µm,0.1s
CAVN Les Avellanes 0.46 173 P Pg 09 29 15.6 -0.1
CAVN S Sb 09 29 22.7 -0.5
996nm,0.2s
ECHI Chisagues Biel 0.48 312 P Pg 09 29 15.5 -0.5
ECHI S Sg 09 29 22.2 -0.2
258nm,0.1s
ECHI Chisagues Biel 0.48 312 ⇑Pg Pg 09 29 15.5 -0.5
ECHI Sg Sg 09 29 21.9 -0.6
ECHI *i* Vmb_Lg 09 29 31.4
ECHI Chisagues Biel 0.48 312 Pg Pg 09 29 15.5 -0.5
ECHI Sg Sg 09 29 22.3 -0.2
CORG Organya 0.49 103 P Pb 09 29 16.6 -0.3
CORG S Sb 09 29 24.8 +0.8
311nm,0.4s
CEST Esterri de Car 0.50 59 P Pb 09 29 16.9 -0.2
CEST S Sb 09 29 24.1 -0.3
344nm,0.5s
SALF Salau 0.56 42 Pg Pb 09 29 18.0 -0.2
SALF Sg Sb 09 29 26.1 0.0
ARBS La Rabassa 0.65 81 P Pb 09 29 19.5 -0.3
ARBS S Sb 09 29 29.1 +0.2
250nm,0.3s
PAND Andorre 0.67 74 P Pb 09 29 20.6 +0.5
PAND S Sb 09 29 30.1 +0.8
268nm,0.4s
PAND Andorre 0.67 74 Pg Pb 09 29 20.0 -0.1
PAND Sg Sb 09 29 29.7 +0.4
MLS Moulis 0.69 26 P Pb 09 29 20.6 +0.3
MLS S Sb 09 29 29.9 +0.2
112nm,0.4s
MLS Moulis 0.69 26 Pg Pb 09 29 20.0 -0.3
MLS Sg Sb 09 29 29.9 +0.2
VIEF Viey 0.72 318 Pg Pg 09 29 20.6 0.0
VIEF Sg Sg 09 29 30.0 -0.1
EPF Esparros 0.73 340 *e*Pg Pb 09 29 20.8 -0.3
EPF *e*Sg Sg 09 29 30.7 +0.4
125nm,0.2s
EPF Esparros 0.73 340 Pg Pb 09 29 20.8 -0.3
EPF Sg Sg 09 29 30.7 +0.4
EMIR Miracle 0.76 124 P Pb 09 29 21.4 -0.2
EMIR S Sb 09 29 33.5 +1.6
398nm,0.1s
EMIR Miracle 0.76 124 ⇑Pg Pb 09 29 21.4 -0.2
EMIR Sg Sb 09 29 32.9 +1.0
EMIR *i* Vmb_Lg 09 29 37.9
PYLO Lourdes 0.93 325 P Pg 09 29 24.3 -0.1
PYLO S Sg 09 29 36.5 +0.1
PYLO Lourdes 0.93 325 Pg Pb 09 29 24.6 +0.2
PYLO Sg Sb 09 29 36.9 +0.4
CLLI Llivia 0.97 82 P Pb 09 29 25.2 0.0
CLLI S Sn 09 29 40.1 +0.5
CANF Canfranc 0.98 296 Pg Pg 09 29 24.7 -0.7
CANF Sg Sb 09 29 38.7 +0.5
VALC Valcebollere 1.01 87 Pg Pb 09 29 26.1 +0.2
VALC Sg Sn 09 29 41.2 +0.6
EPOB Poblet 1.03 163 P Pg 09 29 26.0 -0.4
EPOB S Sb 09 29 40.4 +0.7
224nm,0.1s
EPOB Poblet 1.03 163 Pg Pg 09 29 26.3 -0.1
EPOB Sg Sb 09 29 40.2 +0.5
EPOB *i* Vmb_Lg 09 29 43.0
ESAC San Caprasio 1.06 234 Pg Pg 09 29 24.5 -2.3
ESAC Sg Sg 09 29 39.7 -0.9
ESAC *i* Vmb_Lg 09 29 42.2
ETSF Etsaut 1.07 302 *e*Pg Pg 09 29 26.3 -0.8
ETSF Etsaut 1.07 302 *e*P Pn 09 29 28.7 +1.5
ETSF *e*Sg Sg 09 29 41.1 +0.1
353nm,0.3s
ETSF Etsaut 1.07 302 Pg Pg 09 29 26.3 -0.8
ETSF Sg Sg 09 29 41.1 +0.1
DUNF Dun 1.08 50 Pg Pn 09 29 28.1 +0.8
DUNF Sg Sb 09 29 41.9 +1.0
CORI Orista 1.08 110 P Pb 09 29 27.3 +0.2
CORI S Sb 09 29 42.2 +1.1
301nm,0.2s
CBRU Bruguera 1.11 93 P Pb 09 29 28.1 +0.5
CBRU S Sn 09 29 44.7 +1.6
146nm,0.2s
CARF Carcanieres 1.12 70 Pg Pn 09 29 28.4 +0.5
CARF Sg Sn 09 29 44.7 +1.5
FNEB Nbias 1.19 62 P Pn 09 29 30.4 +1.5
FNEB S Sn 09 29 46.8 +1.9
141nm,0.4s
FNEB Nbias 1.19 62 Pg Pn 09 29 29.8 +0.9
FNEB Sg Sn 09 29 46.2 +1.3
ATE Arette 1.26 307 P Pg 09 29 30.2 -0.4
ATE S Sb 09 29 47.1 +0.9
ATE Arette 1.26 307 Pg Pn 09 29 30.8 +1.0
ATE Sg Sn 09 29 47.8 +1.3
CGAR Garraf 1.40 138 P Pb 09 29 32.7 +0.3
CGAR S Sn 09 29 52.0 +2.0
122nm,0.2s
FILF Fillols 1.41 81 P Pn 09 29 31.9 +0.1
FILF S Sg 09 29 50.5 -1.4
105nm,0.4s
FILF Fillols 1.41 81 Pg Pn 09 29 32.0 +0.1
FILF Sg Sg 09 29 50.5 -1.4
ERTA Horta de San J 1.41 191 P Pn 09 29 32.4 +0.5
ERTA S Sg 09 29 51.6 -0.3
267nm,0.3s
ERTA Horta de San J 1.41 191 Pn Pn 09 29 32.4 +0.5
ERTA Pg Pb 09 29 33.1 +0.4
ERTA Sg Sb 09 29 51.3 +0.8
ERTA *i* Vmb_Lg 09 29 53.5
CFON Fontmartina 1.43 113 P Pg 09 29 33.7 -0.3
CFON S Sn 09 29 53.6 +2.7
URDF Urds 1.44 320 Pn Pg 09 29 33.9 -0.2
URDF Sn Sn 09 29 53.2 +2.3
MTJR Montjuic 1.47 131 S Sg 09 29 54.7 +0.9
CBEU Beuda 1.48 93 P Pg 09 29 35.0 0.0
CBEU S Sg 09 29 55.5 +1.3
294nm,0.3s
MTLF Montolieu 1.51 48 *e*Pg Pg 09 29 35.7 +0.3
MTLF *e*Sg Sg 09 29 56.2 +1.2
71nm,0.2s
MTLF Montolieu 1.51 48 Pg Pg 09 29 35.7 +0.3
MTLF Sg Sg 09 29 56.2 +1.2
MTLF Montolieu 1.51 48 Sn Sg 09 29 55.9 +0.9
MTLF Montolieu 1.51 48 Pn Pg 09 29 35.5 +0.1
EBR Ebro Roquetas 1.53 185 P Pn 09 29 34.5 +1.1
EBR S Sg 09 29 55.2 -0.5
EORO Oroz-Betelu 1.57 291 Pg Pb 09 29 35.6 +0.3
EORO Oroz-Betelu 1.57 291 Pg Pb 09 29 35.6 +0.3
EORO Sg Sg 09 29 58.2 +1.3
EORO *i* Vmb_Lg 09 30 00.6
SJPF Ste Jean 1.60 299 *e*Pg Pb 09 29 36.4 +0.5
SJPF *e*Sg Sg 09 29 58.8 +0.9
214nm,0.3s
SJPF Ste Jean 1.60 299 Pg Pb 09 29 36.4 +0.5
SJPF Sg Sg 09 29 58.8 +0.9
SJAF Saint Jean de 1.64 84 P Pg 09 29 37.4 -0.5
SJAF S Sg 09 29 59.3 +0.2
93nm,0.4s
SJAF Saint Jean de 1.64 84 Pn Pg 09 29 37.4 -0.5
SJAF Sn Sg 09 29 58.7 -0.4
CMAS Mas de Barbera 1.64 190 P Pn 09 29 35.1 +0.1
CMAS S Sn 09 29 57.8 +1.9
372nm,0.2s
EJON La Jonquera 1.64 86 Pg Pg 09 29 37.7 -0.3
EJON Sg Sg 09 30 00.7 +1.4
EJON La Jonquera 1.64 86 Pn Pg 09 29 37.7 -0.3
EJON Sn Sn 09 29 55.7 -0.3
EJON Sg Sg 09 30 00.6 +1.4
EJON La Jonquera 1.64 86 Pg Pg 09 29 37.7 -0.3
EJON Sg Sg 09 30 00.7 +1.4
EJON *i* Vmb_Lg 09 30 03.2
CBUD Illa de Buda 1.64 176 P Pb 09 29 36.6 0.0
CBUD S Sb 09 29 58.0 +0.9
406nm,0.2s
OSSF Osses 1.69 303 Pn Pb 09 29 37.4 -0.1
OSSF Sn Sb 09 29 59.3 +0.6
CCAS Cassa de la Se 1.72 105 P Pb 09 29 37.5 -0.4
CCAS S Sg 09 30 01.2 -0.6
127nm,0.3s
EARA Aranguren 1.72 285 Pn Pn 09 29 37.5 +1.4

EARA				Sg	**Sg**	09 30 02.6	+0.8	
EARA	**Aranguren**	1.72	285	Pn	**Pn**	09 29 37.5	+1.4	
EARA				Sg	**Sg**	09 30 02.6	+0.8	
EARA				*i* Vmb_Lg		09 30 07.1		
EARA	**Aranguren**	1.72	285	Sn	**Sn**	09 29 60.0	+2.0	
EARA	**Aranguren**	1.72	285	Pn	**Pn**	09 29 37.5	+1.4	
ALCN	**Alcanar**	1.80	185	P	**Pb**	09 29 39.0	-0.2	
ALCN				S	**Sn**	09 30 01.8	+2.0	
	241nm,0.2s							
EALK	**Alkurruntz**	1.83	299	Pn	**Pb**	09 29 39.7	-0.1	
EALK				Sn	**Sn**	09 30 02.9	+2.1	
EALK				Sg	**Sg**	09 30 05.8	+0.4	
EALK				*i* Vmb_Lg		09 30 09.1		
EALK	**Alkurruntz**	1.83	299	Pn	**Pb**	09 29 39.5	-0.4	
CPAL	**Palau Saverder**	1.84	90	P	**Pb**	09 29 39.5	-0.4	
CPAL				S	**Sb**	09 30 04.1	+1.2	
	49nm,0.3s							
TERF	**Tercis-les-Bai**	1.87	316	Pn	**Pn**	09 29 39.9	+1.8	
CLAF	**Gruissan**	1.94	65	Pn	**Pb**	09 29 41.3	-0.4	
CLAF				Sn	**Sb**	09 30 06.1	+0.2	
MONQ	**Montcuq**	2.06	10	Pn	**Pn**	09 29 42.6	+1.9	
MONQ				Sn	**Sn**	09 30 08.3	+2.1	
ALCX	**Castello**	2.10	189	P	**Pn**	09 29 41.8	+0.4	
ALCX				S	**Sn**	09 30 09.5	+2.2	
	146nm,0.3s							
EMOS	**Mosqueruela**	2.16	204	P	**Pn**	09 29 44.0	+1.7	
EMOS				S	**Sn**	09 30 11.0	+2.0	
	91nm,0.3s							
EMOS	**Mosqueruela**	2.16	204	Pn	**Pn**	09 29 44.0	+1.7	
EMOS				Sn	**Sn**	09 30 09.3	+0.3	
EMOS				Sg	**Sb**	09 30 12.5	+0.3	
EMOS				*i* Vmb_Lg		09 30 17.8		
E0901	**Celadas (Terue**	2.31	217	Pn	**Pn**	09 29 45.1	+0.9	
E0901				Sn	**Sn**	09 30 13.7	+1.2	
E0901				*i* Vmb_Lg		09 30 21.3		
ECOL	**Islas Columbre**	2.44	180	Pn	**Pn**	09 29 46.5	+0.6	
ECOL				Sn	**Sn**	09 30 15.3	-0.4	
ETOR	**Torete**	2.56	234	Pn	**Pn**	09 29 48.5	+0.8	
ETOR				Sn	**Sn**	09 30 20.7	+2.1	
ETOR				Sg	**Sb**	09 30 26.3	+2.8	
ETOR				*i* Vmb_Lg		09 30 30.8		
LFF	**La Frestale**	2.59	1	*e*P	**Pn**	09 29 50.5	+2.4	
LFF				*e*Sn	**Sn**	09 30 20.2	+0.7	
	54nm,0.3s							
LRVF	**chteau la Riv**	2.70	345	Pn	**Pn**	09 29 51.5	+1.9	
LRVF				Sn	**Sn**	09 30 23.9	+1.9	
CAF	**Calviac**	2.77	21	*e*P	**Pn**	09 29 53.1	+2.6	
CAF				*e*Sn	**Sn**	09 30 24.9	+1.0	
CAF				*e*Sg	**Sg**	09 30 34.6	-0.8	
	53nm,0.3s							
LASF	**Ste Croix**	2.90	52	*e*P	**Pn**	09 29 54.5	+2.2	
LASF	**Ste Croix**	2.90	52	*e*Pg	**Pg**	09 30 01.5	-0.5	
LASF				*e*Sg	**Sg**	09 30 39.6	+0.1	
	18nm,0.3s							
ECHE	**Chera**	3.02	205	Pn	**Pn**	09 29 54.6	+0.6	
ECHE				Sg	**Sb**	09 30 39.4	+2.5	
ECHE	**Chera**	3.02	205	Pn	**Pn**	09 29 55.0	+1.0	
ECHE				Sn	**Sn**	09 30 30.1	+0.1	
ECHE				*i* Vmb_Lg		09 30 50.9		
RJF	**Les Rejaudoux**	3.02	11	*e*Pn	**Pn**	09 29 54.7	+0.7	
RJF				*e*Sn	**Sn**	09 30 29.2	-0.8	
RJF				*e*Sg	**Sg**	09 30 43.6	+0.1	
	30nm,0.3s							
ETOS	**Mallorca**	3.04	147	Pn	**Pn**	09 29 54.4	+0.2	
ETOS				Sn	**Sn**	09 30 28.4	-2.1	
ETOS	**Mallorca**	3.04	147	Pn	**Pn**	09 29 54.6	+0.4	
ETOS				Sn	**Sn**	09 30 28.6	-1.9	
ELAN	**Lanestosa**	3.15	288	Pn	**Pn**	09 29 57.2	+1.4	
ELAN				Sn	**Sn**	09 30 35.0	+1.7	
ELAN				Sg	**Sg**	09 30 44.7	-3.0	
ELAN				*i* Vmb_Lg		09 30 50.6		
FRNF	**Fournols**	3.33	23	Pn	**Pn**	09 30 00.4	+2.1	
FRNF				Sn	**Sn**	09 30 38.7	+1.0	
EVIV	**Cofrentes, Val**	3.36	205	Pn	**Pn**	09 29 59.9	+1.1	
EVIV				Sn	**Sn**	09 30 40.1	+1.6	
EVIV				*i* Vmb_Lg		09 31 00.2		
LBL	**Lubilhac**	3.43	32	Pn	**Pn**	09 30 01.6	+1.9	
LBL				Sn	**Sn**	09 30 41.8	+1.5	
UCM	**Universidad Co**	3.59	237	Pn	**Pn**	09 30 01.5	-0.2	
UCM				Sg	**Sg**	09 30 58.9	-2.7	
VERF	**Verneugheol**	3.65	20	Pn	**Pn**	09 30 04.4	+1.8	
VERF				Sn	**Sn**	09 30 46.1	+0.6	
VIVF	**Saint-Julien-l**	3.84	48	*e*P	**Pn**	09 30 07.8	+2.6	
VIVF	**Saint-Julien-l**	3.84	48	*e*Pg	**Pg**	09 30 18.0	-1.9	
VIVF				*e*Sn	**Sn**	09 30 50.0	-0.1	
VIVF				*e*Sg	**Sg**	09 31 08.2	-1.4	
	12nm,0.3s							
COLF	**Collangettes**	3.85	33	Pn	**Pn**	09 30 07.0	+1.6	
COLF				Sn	**Sn**	09 30 51.6	+1.1	
RUSF	**Rustrel**	3.86	64	Pn	**Pn**	09 30 07.8	+2.3	
SMRF	**Simiane la Rot**	3.94	64	*e*P	**Pn**	09 30 08.9	+2.3	
SMRF				*e*Sn	**Sn**	09 30 51.7	-0.9	
SMRF				*e*Sg	**Sg**	09 31 12.5	-0.3	
	6.8nm,0.3s							
GUD	**Guadarrama**	4.01	247	Pn	**Pn**	09 30 08.0	+0.3	
GUD				Sn	**Sn**	09 30 53.5	-1.0	
ETOB	**Tobarra**	4.07	205	Pn	**Pn**	09 30 09.2	+0.8	
ETOB	**Tobarra**	4.07	205	Pn	**Pn**	09 30 08.3	-0.1	
ETOB				Sn	**Sn**	09 30 57.6	+1.8	
TCF	**Toulx Ste Croi**	4.09	15	*e*P	**Pn**	09 30 10.1	+1.4	
TCF				*e*Sn	**Sn**	09 30 56.0	-0.5	
TCF				*e*Sg	**Sg**	09 31 15.7	-2.1	
	13nm,0.4s							
MFF	**Saint Martin d**	4.30	352	*e*Pn	**Pn**	09 30 12.8	+1.3	
MFF				*e*Sn	**Sn**	09 31 00.4	-1.1	
	14nm,0.3s							
MFF				*e*Sg	**Sg**	09 31 22.7	-1.7	
	5.8nm,0.3s							
LMR	**La Mourre**	4.40	75	*e*P	**Pn**	09 30 14.5	+1.6	
LMR	**La Mourre**	4.40	75	*e*Pg	**Pg**	09 30 27.3	-3.4	
LMR				*e*Sn	**Sn**	09 31 01.7	-2.3	
	5.1nm,0.3s							
EARI	**Arriondas**	4.44	284	Pn	**Pn**	09 30 13.9	+0.4	
EARI				Sn	**Sn**	09 31 03.6	-1.3	
EARI				*i* Vmb_Lg		09 31 05.8		
BGF	**Bois d'Agland**	4.49	19	*e*Pn	**Pn**	09 30 15.0	+0.9	
BGF	**Bois d'Agland**	4.49	19	*e*Pg	**Pg**	09 30 29.9	-2.5	
BGF				*e*Sg	**Sg**	09 31 30.3	-0.2	
	81nm,0.4s							
ORIF	**Oris-en-Rattie**	4.57	54	*e*Pn	**Pn**	09 30 18.7	+3.4	
PAB	**San Pablo**	4.72	235	Pn	**Pn**	09 30 17.0	-0.4	
PAB				Sn	**Sn**	09 31 10.1	-1.9	
PAB				*i* Vmb_Lg		09 31 38.7		
AVF	**Avril sur Loir**	4.84	22	*e*P	**Pn**	09 30 20.6	+1.7	
AVF				*e*Sn	**Sn**	09 31 13.7	-1.1	
	4.0nm,0.3s							
AVF				*e*Sg	**Sg**	09 31 39.4	-2.3	
	6.5nm,0.4s							
SMF	**Signal de Mont**	4.86	27	*e*P	**Pn**	09 30 21.2	+2.0	
PSIM	**Granatula de C**	4.88	225	Pn	**Pn**	09 30 18.6	-0.9	
PSIM				Sn	**Sn**	09 31 13.2	-2.6	
MBDF	**Montbardon**	5.03	60	*e*P	**Pn**	09 30 25.7	+4.0	
HYF	**Humbligny**	5.12	15	*e*P	**Pn**	09 30 26.6	+3.8	
HYF				*e*Sn	**Sn**	09 31 20.6	-1.1	
	102nm,0.5s							
SSF	**Saint Saulge**	5.13	22	*e*Pn	**Pn**	09 30 24.5	+1.6	
SSF				*e*Sn	**Sn**	09 31 21.6	-0.3	
SSF				*e*Sg	**Sg**	09 31 47.9	-3.1	
	4.8nm,0.3s							
SBF	**Sospel**	5.17	71	*e*P	**Pn**	09 30 25.8	+2.2	
SBF				*e*Sn	**Sn**	09 31 20.9	-2.3	
	2.8nm,0.3s							
LPG	**La Plagne**	5.40	52	*e*P	**Pn**	09 30 31.0	+4.1	
LOR	**Lormes**	5.42	24	*e*Sn	**Sn**	09 31 27.7	-1.4	
LOR				*e*Sg	**Sg**	09 32 00.4	+0.1	
	5.6nm,0.4s							
ECAL	**Calabor**	5.53	268	Pn	**Pn**	09 30 28.1	-0.4	
ECAL	**Calabor**	5.53	268	Pn	**Pn**	09 30 28.3	-0.2	
ECAL				Sn	**Sn**	09 31 30.4	-1.5	
ECAL				*i* Vmb_Lg		09 31 32.5		
PBRG	**Braganca**	5.55	267	*e*Pn	**Pn**	09 30 28.9	+0.2	
PBRG				*e*Sn	**Sn**	09 31 29.2	-3.2	
PBRG				A	A	09 32 17.1		
	5.2nm,0.6s							
EPLA	**Plasencia**	5.58	248	Pn	**Pn**	09 30 29.0	-0.2	
EPLA				Sn	**Sn**	09 31 30.2	-3.0	
EPLA				*i* Vmb_Lg		09 31 35.3		
CABF	**La Chapelle**	5.76	40	*e*Pn	**Pn**	09 30 33.7	+2.1	
CABF				*e*Sn	**Sn**	09 31 34.2	-3.4	
	0.7nm,0.2s							
EADA	**Adamuz**	5.79	226	Pn	**Pn**	09 30 30.9	-1.2	
EADA				Sn	**Sn**	09 31 33.6	-4.8	
EADA	**Adamuz**	5.79	226	Pn	**Pn**	09 30 31.2	-0.9	
EADA				Sn	**Sn**	09 31 34.5	-3.9	
EADA				*i* Vmb_Lg		09 32 16.5		
EPON	**Pontenova**	5.84	282	Pn	**Pn**	09 30 33.7	+1.0	
EPON				Sn	**Sn**	09 31 39.8	+0.4	
EPON				*i* Vmb_Lg		09 32 13.2		
MVO	**Moncorvo**	5.88	261	*e*Pn	**Pn**	09 30 33.3	-0.1	
MVO				*e*Sn	**Sn**	09 31 37.2	-3.5	
MVO				A	A	09 32 25.6		
	8.4nm,0.5s							
GRR	**Gorron**	6.14	350	*e*Pn	**Pn**	09 30 38.2	+1.4	
GRR	**Gorron**	6.14	350	*e*P	Pn	09 30 42.2	+5.4	
GRR				*e*Sn	**Sn**	09 31 44.0	-2.8	
	6.4nm,0.3s							
PGF	**Pioggiola**	6.16	85	*e*Pn	**Pn**	09 30 37.6	+0.4	
PGF				*e*Sn	**Sn**	09 31 47.8	+0.3	
	4.1nm,0.3s							
QUIF	**Quistinic**	6.20	335	*e*P	**Pn**	09 30 40.2	+2.6	
QUIF				*e*Sn	**Sn**	09 31 46.6	-1.7	
	22nm,0.5s							
LDF	**La Druitiere**	6.28	355	*e*P	**Pn**	09 30 39.9	+1.3	
LDF				*e*Sn	**Sn**	09 31 47.0	-3.2	
	6.0nm,0.3s							
ECAB	**El Cabril**	6.32	230	Pn	**Pn**	09 30 38.5	-0.8	
ECAB	**El Cabril**	6.32	230	Pn	**Pn**	09 30 38.8	-0.5	
ECAB				Sn	**Sn**	09 31 46.5	-4.9	
ECAB				*i* Vmb_Lg		09 32 32.1		
SGMF	**Saint Gilles**	6.33	340	*e*P	**Pn**	09 30 44.1	+4.7	
SGMF				*e*Sn	**Sn**	09 31 49.1	-2.5	
	7.9nm,0.4s							
PVRL	**Vila Real**	6.36	263	*e*Pn	**Pn**	09 30 39.3	-0.6	
FLN	**La Foliniere**	6.47	353	*e*Pn	**Pn**	09 30 41.5	+0.2	
FLN				*e*Sn	**Sn**	09 31 52.6	-2.3	
	5.7nm,0.3s							
EAGO	**Agolada(Pontev**	6.49	277	Pn	**Pn**	09 30 41.1	-0.5	
EAGO				*i* Vmb_Lg		09 31 41.8		
ROSF	**Rostrenen**	6.61	336	*e*Pn	**Pn**	09 30 45.3	+2.1	
ROSF				*e*Sn	**Sn**	09 31 54.7	-3.6	
	7.0nm,0.3s							
PVIS	**Viseu**	6.64	259	*e*Pn	**Pn**	09 30 43.0	-0.7	
PVIS				*e*Sn	**Sn**	09 31 55.4	-3.8	
PVIS				A	A	09 32 53.9		
	5.0nm,0.6s							
PCBR	**Castelo Branco**	6.65	251	*e*Pn	**Pn**	09 30 43.1	-0.7	
PCBR				*e*Sn	**Sn**	09 31 55.4	-4.0	
PCBR				A	A	09 32 47.3		
	3.3nm,0.5s							
FIESA	**Fiescheralp**	6.71	50	Pn	**Pn**	09 30 48.2	+3.3	
PMRV	**Marv??o**	6.77	247	*e*Pn	**Pn**	09 30 45.2	-0.3	
PMRV				*e*Sn	**Sn**	09 31 59.2	-3.3	
PMRV				A	A	09 32 59.5		
	3.9nm,0.6s							
EBAD	**Badajoz**	6.87	241	Pn	**Pn**	09 30 45.8	-1.0	
EBAD	**Badajoz**	6.87	241	Pn	**Pn**	09 30 45.4	-1.4	
EBAD				*i* Vmb_Lg		09 32 11.3		
PESTR	**Estremoz**	7.18	244	*e*Pn	**Pn**	09 30 50.5	-0.7	
PBAR	**Barrancos**	7.22	237	*e*Pn	**Pn**	09 30 51.0	-0.7	
PBAR				*e*Sn	**Sn**	09 32 08.8	-4.7	
PBAR				A	A	09 33 03.6		
	3.7nm,0.7s							
MESJ	**Messejana**	8.17	240	*e*Pn	**Pn**	09 31 04.4	-0.3	
PCVE	**Castro Verde**	8.18	238	*e*Pn	**Pn**	09 31 03.5	-1.3	

IDC ***14*** *09:34:45.3±2.8,* ***54***˚***01N**×**86***˚***57E,h0**km**,mbtmp2.4/2, ML2.1/2,Error ellipse: s-maj=23.1km s-min=13.6km az=61.0,Southwestern Siberia*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**267**	I	I	09 41 20.0	
	baz=84,slow=333,SNR=5.9						
ZALV	**Zalesovo Beam**	**1.04**	**267**	Pg	Pg	09 35 04.1	-1.0
	0.5nm,0.3s,baz=83,slow=16,SNR=3.4						
ZALV				Lg	Lg	09 35 19.8	
	1.1nm,0.3s,baz=89,slow=28,SNR=8.3						
KURBB	**Kurchatov Arra**	**5.99**	**239**	Pn	Pn	09 36 16.3	+1.2
	0.1nm,0.3s,baz=56,slow=14,SNR=3.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	09 36 39.9	+0.9
	baz=25,slow=14,SNR=5.8						
MKAR				Lg	Lg	09 38 50.8	
	baz=19,slow=31,SNR=4.0						
	0.1nm,0.3s						

IDC ***14*** *09:45:11.7±3.6,* ***53***˚***62N**×**87***˚***94E,h0**km**,mbtmp2.7/2, ML2.5/2,Error ellipse: s-maj=34.8km s-min=17.9km az=51.0,Southwestern Siberia*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**281**	I	I	09 56 50.0	
	0.1nm,1.0s,baz=97,slow=326,SNR=3.9						
ZALV	**Zalesovo Beam**	**1.88**	**281**	Pg	Pn	09 45 44.7	-0.4
	1.5nm,0.3s,baz=104,slow=13,SNR=13						
ZALV				Lg	Lg	09 46 11.6	
	2.1nm,0.3s,baz=103,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.52**	**246**	Pn	Pn	09 46 49.9	+1.0
	0.1nm,0.3s,baz=61,slow=14,SNR=6.2						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.73**	**210**	Pn	Pn	09 47 06.4	+1.0
	0.1nm,0.3s,baz=32,slow=15,SNR=4.9						
	0.1nm,0.3s						

ASRS ***14*** *09:47:16.8±0.3,48˚N±2˚×8˚4E±˚,h9km,MLh3.0/10,Error ellipse: s-maj=5.4km s-min=2.3km az=138.1,confirmed*
NNC ***14*** *09:47:19.4±2.0,47˚.98N×84˚.52E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=13.3km s-min=12.5km az=33.0*
SOME ***14*** *09:47:20.3,48˚.02N×84˚.13E,h10km*
ISC 14 09:47:20.7**±0.8,**48˚00N**±0˚.04×**84˚20E**±0˚.03,**h10**km,**n22,
*σ2s31/41,**2C-2D,Eastern Kazakhstan***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**0.71**	**141**	*e*P	**Pg**	09 47 32.1	-2.3
	10nm,0.2s						
ZSN				*e*S	**Sg**	09 47 40.4	-3.4
	25nm,0.2s						
MK31	**Makanchi Array**	**1.78**	**228**	⇓Pn	**Pg**	09 47 53.2	-1.5
	1.5nm,0.2s,baz=50,slow=16,SNR=17.1						
MK31				⇑Sn	**Sg**	09 48 19.2	+1.4
	30nm,0.5s,baz=51,slow=27,SNR=23						
MKAR	**Makanchi Array**	**1.78**	**228**	Pg	**Pg**	09 47 54.9	+0.1
MKAR				Sg	**Sg**	09 48 19.6	+1.9
MAKZ	**Makanchi**	**1.93**	**232**	⇑Pn	**Pg**	09 47 56.0	-1.7
	3.2nm,0.3s						
MAKZ				⇓Sn	**Sg**	09 48 23.9	+1.2
	35nm,0.3s						
MAKZ	**Makanchi**	**1.93**	**232**	Pg	**Pg**	09 47 56.4	-1.3
MAKZ				Sg	**Sg**	09 48 23.6	+1.0
DGZ	**Jazzator, Alta**	**2.73**	**50**	Pg	**Pn**	09 48 06.9	+2.2
DGZ				Sg	**Sn**	09 48 39.9	+2.1
UKR	**Ust'-Kan**	**2.96**	**7**	Pg	**Pn**	09 48 09.5	+1.7
UKR				Sg	**Sb**	09 48 46.1	-3.7
CHBI	**Chibit, Altay**	**3.17**	**42**	Pg	**Pb**	09 48 15.8	-1.3
CHBI				Sg	**Sb**	09 48 53.9	-1.9
AKAR	**Aktash**	**3.23**	**43**	Pg	**Pb**	09 48 17.6	-0.5
AKAR				Sg	**Sb**	09 48 55.2	-2.3
CUR	**Chagan-Uzun**	**3.44**	**51**	Pg	**Pb**	09 48 20.9	-0.9
CUR				Sg	**Sb**	09 49 03.5	-0.2
ELDR	**Elanda**	**3.44**	**20**	Pg	**Pb**	09 48 20.4	-1.3
ELDR				Sg	**Sb**	09 49 03.6	0.0
ULGR	**Ulagan, Altay**	**3.59**	**42**	Pg	**Pb**	09 48 24.8	+0.4
ULGR				Sg	**Sb**	09 49 09.8	+1.7
ARTR	**Artybash**	**4.29**	**26**	Pg	**Pb**	09 48 37.4	+1.2
ARTR				Sg	**Sb**	09 49 31.8	+3.8
KAPS	**Kapalarasan**	**4.30**	**233**	Pg	**Pg**	09 48 40.6	-2.5
	1.0nm,0.2s						
KAPS				Lg	Lg	09 49 38.3	
	5.7nm,0.5s						
KAPS	**Kapalarasan**	**4.30**	**233**	*e*P	**Pg**	09 48 40.5	-2.6
	1.0nm,0.2s						
KAPS				*e*S	**Sg**	09 49 38.1	-0.7
	5.7nm,0.5s						
YALR	**Yailyu, Altay**	**4.37**	**29**	Pg	**Pb**	09 48 37.4	0.0
YALR				Sg	**Sb**	09 49 32.5	+2.3
KURK	**Kurchatov**	**4.55**	**309**	Pn	**Pn**	09 48 27.9	-1.6
KURK				Pg	**Pg**	09 48 40.8	+0.3
KURK				Sg	**Sg**	09 49 43.5	-3.2
KNOS	**Konyrlen**	**5.04**	**226**	Pg	**Pb**	09 48 52.0	+2.8
	0.8nm,0.2s						
KNOS				Lg	Lg	09 49 57.5	
	3.7nm,0.5s						
ARXS	**Arharly**	**5.83**	**232**	Pg	**Pg**	09 49 09.6	-2.8
	1.6nm,0.3s						
ARXS				Lg	Lg	09 50 27.3	
	8.2nm,0.5s						
ARXS	**Arharly**	**5.83**	**232**	*e*P	**Pg**	09 49 09.6	-2.8
	1.6nm,0.3s						
ARXS				*e*S	**Sg**	09 50 27.3	-0.6
	8.2nm,0.5s						
KPKS	**Kokpek**	**5.96**	**222**	Pg	**Pb**	09 49 08.4	+3.8
	1.2nm,0.1s						
KPKS				Lg	Lg	09 50 24.9	
	6.6nm,0.8s						
KPKS	**Kokpek**	**5.96**	**222**	*e*P	**Pb**	09 49 08.4	+3.8
	1.2nm,0.1s						
KPKS				*e*S	**Sg**	09 50 26.5	-5.4
	6.6nm,0.4s						

IDC ***14*** *09:57:46.0±1.6,53˚.41N×160˚.35W,h0km,mb3.5/4, mbtmp3.5/7,ML3.4/3,MS3.0/1,Error ellipse: s-maj=27.7km s-min=25.4km az=179.0*
NEIC ***14*** *09:57:47.9±0.9,53˚.29N±0˚.09×160˚.1W±0˚.1,h30km±10km, mb3.5/5,ML3.6/14,ML3.5(AEIC),Error ellipse: s-maj=14.3km s-min=8.8km az=159.0*
AEIC ***14*** *09:57:49.6±1.1,53˚.21N±0˚.09×160˚.1W±0˚.1,h12km±8km, Error ellipse: s-maj=14.5km s-min=8.6km az=156.0*
ISC 14 09:57:46.8**±0.9,**53˚39N**±0˚.08×**160˚15W**±0˚.05,**h10**km,
n112,σ0s99/114,mb3.6/4,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.47**	**13**		**Pn**	09 58 13.4	+0.2
CNBA					**Sn**	09 58 32.5	0.0
CHNA	**Chernabura Isl**	**1.48**	**13**	P	**Pn**	09 58 13.3	-0.1
	baz=190						
CHNA				S	**Sn**	09 58 32.4	-0.3
	baz=190						
SDPT	**Sand Point**	**1.97**	**355**		**Pn**	09 58 20.2	+0.1
SDPT					**Sn**	09 58 44.9	+0.1
SDPT				IAML		09 58 45.7	
	comp=N,254nm,0.5s						
SDPT	**Sand Point**	**1.97**	**355**	P	**Pn**	09 58 20.4	+0.3
SDPT	**Sand Point**	**1.97**	**355**	P	**Pn**	09 58 20.3	+0.1
	baz=174						
SDPT				S	**Sn**	09 58 45.2	+0.4
	baz=174						
DT1	**Dutton Round H**	**2.12**	**325**		**Pn**	09 58 22.4	+0.2
PS4A	**Pavlof South-4**	**2.20**	**334**		**Pn**	09 58 23.9	+0.6
PVV	**Pavlof Volcano**	**2.20**	**335**		**Pn**	09 58 23.9	+0.5
PVV					**Sn**	09 58 51.2	+0.5
PS1A	**Pavlof South-1**	**2.23**	**336**		**Pn**	09 58 24.4	+0.6
PS1A					**Sn**	09 58 52.3	+0.9
FALS	**False Pass**	**2.42**	**309**		**Pn**	09 58 26.3	0.0
FALS	**False Pass**	**2.42**	**309**		**Sn**	09 58 53.9	-2.0
FALS	**False Pass**	**2.42**	**309**	P	**Pn**	09 58 26.9	+0.6
FALS	**False Pass**	**2.42**	**309**	P	**Pn**	09 58 25.8	-0.5
	baz=129						
FALS				S	**Sn**	09 58 53.9	-2.0
	baz=129						
ISLZ	**Isanotski Laza**	**2.49**	**304**		**Pn**	09 58 26.9	-0.5
ISLZ					**Sn**	09 58 55.6	-2.1
WESE	**West Dahl East**	**2.84**	**294**		**Pn**	09 58 31.8	-0.4
VNSS	**Veniaminof 8**	**2.87**	**8**		**Pn**	09 58 32.9	+0.3
S14K	**Fog Glacier**	**2.92**	**7**	P	**Pn**	09 58 33.7	+0.4
	baz=186						
CHGN	**Chignik**	**3.08**	**18**	Pn	**Pn**	09 58 35.4	-0.1
CHGN				IAML		09 59 13.8	
	comp=N,148nm,0.3s						
CHGN				IAML		09 59 14.0	
	comp=E,164nm,0.3s						
CHGN	**Chignik**	**3.08**	**18**	S	**Sn**	09 59 12.7	+0.4
	baz=198						
AKUT	**Akutan**	**3.42**	**285**	Pn	**Pn**	09 58 39.6	-0.4
AKUT				IAML		09 59 19.3	
	comp=N,177nm,1.3s						
AKUT				IAML		09 59 20.0	
	comp=E,147nm,0.6s						
AHB	**Akutan Harbor**	**3.44**	**284**		**Pn**	09 58 40.1	-0.2
AKV	**Akutan Volcano**	**3.53**	**284**		**Pn**	09 58 41.4	-0.2
CHIR	**Chirikof Islan**	**3.58**	**45**		**Pn**	09 58 42.2	-0.1
CHIR				IAML		09 59 39.0	
	comp=N,89nm,1.9s						
CHIR				IAML		10 00 24.6	
	comp=E,80nm,1.7s						
CHIR	**Chirikof Islan**	**3.58**	**45**	P	**Pn**	09 58 42.1	-0.2
	baz=227						
**U

HIN	**Hinchinbrook I**	**10.23**	**41**	Pn	**Pn**	**10 00 12.6**	**-0.9**
GHO	**Glory Hole Cre**	**10.32**	**31**	Pn	**Pn**	**10 00 15.3**	**+0.5**
SML	**Sawmill**	**10.53**	**32**	Pn	**Pn**	**10 00 17.9**	**+0.3**
RAGM	**Ragged Mountai**	**10.97**	**44**	Pn	**Pn**	**10 00 24.1**	**+0.5**
KLU	**Klutina**	**11.14**	**38**		**Pn**	**10 00 25.5**	**-0.5**
KLU	**Klutina** baz=229	**11.14**	**38**	P	**Pn**	**10 00 26.6**	**+0.6**
BERG	**Berg Lake**	**11.38**	**45**	Pn	**Pn**	**10 00 29.8**	**+0.6**
DHY	**Denali Highway**	**11.78**	**30**	Pn	**Pn**	**10 00 35.0**	**+0.1**
ISLE	**Juniper Island**	**12.07**	**46**	Pn	**Pn**	**10 00 38.3**	**-0.5**
ILAR	**Eielson Array** comp=E,0.1nm,0.3s,baz=220,slow=15,SNR=1.7	**13.25**	**25**	Pn	Pn	10 00 52.0	-2.7
ILAR				Sn	Sn	10 03 11.8	-10
	baz=218,slow=23,SNR=1.1 comp=E,0.2nm,0.4s						
J26L	**Joseph Creek**	**13.98**	**31**	Pn	**Pn**	**10 01 04.4**	**-0.4**
PRP	**Porcupine Dome**	**14.20**	**25**	Pn	**Pn**	**10 01 06.4**	**-1.3**
M29M	**Somme Creek**	**14.59**	**43**	Pn	**Pn**	**10 01 13.3**	**+0.2**
I26K	**Coal Creek Min**	**14.68**	**29**	Pn	**Pn**	**10 01 13.2**	**-1.1**
EGAK	**Eagle**	**14.93**	**33**	Pn	**Pn**	**10 01 17.2**	**-0.4**
O30N	**Mendenhall**	**14.95**	**51**	Pn	**Pn**	**10 01 17.2**	**-0.7**
O30N	comp=Z,3.3nm,1.1s			IAmb	IAmb	10 01 37.4	
L29M	**L29M**	**15.05**	**41**	Pn	**Pn**	**10 01 19.3**	**0.0**
L29M	comp=Z,3.0nm,0.9s			IAmb	IAmb	10 01 46.1	
DAWY	**Dawson**	**15.09**	**37**	Pn	**Pn**	**10 01 20.0**	**+0.1**
C16K	**Lisburne Hills**	**15.13**	**353**	Pn	**Pn**	**10 01 21.2**	**+0.9**
C16K				IAmb	IAmb	10 01 22.0	
INK	**Inuvik** comp=Z,2.8nm,1.1s	**19.53**	**30**	P	**P**	**10 02 16.1**	**+2.1**
INK	comp=Z,0.2nm,0.3s,baz=239,slow=10,SNR=8.5			S	**S**	**10 05 50.7**	**-3.5**
	comp=Z,0.5nm,0.9s,baz=36,slow=19,SNR=1.4 comp=Z,1.1nm,0.6s						
PETK	**Petropavlovsk-** comp=Z,3.3nm,0.8s,baz=77,slow=13,SNR=4.7 comp=Z,3.3nm,0.8s	**24.96**	**287**	P	**P**	**10 03 09.7**	**-0.4**
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.7s,baz=312,slow=8.4,SNR=7.4 comp=Z,0.6nm,0.7s	**32.21**	**101**	P	**P**	**10 04 17.4**	**+2.3**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.6s,baz=282,slow=4.5,SNR=3.6 comp=Z,0.2nm,0.6s	**34.74**	**87**	P	**P**	**10 04 38.6**	**+1.5**
KLR	**Kulʲdur** comp=Z,19nm,18.7s,baz=236,slow=36	**41.31**	**293**	LR	LR	10 22 36.8	
H11N2	**WAKE ISLAND Hy** baz=29	**42.09**	**230**	T	T	10 52 10.5	
H11N3	**WAKE ISLAND Hy** baz=29	**42.09**	**230**	T	T	10 52 07.3	
H11N1	**WAKE ISLAND Hy** baz=29	**42.10**	**230**	T	T	10 52 04.6	
H11S1	**WAKE ISLAND Hy** baz=26	**43.24**	**229**	T	T	10 53 42.8	
H11S2	**WAKE ISLAND Hy** baz=26	**43.25**	**229**	T	T	10 53 30.7	
H11S3	**WAKE ISLAND Hy** baz=26	**43.26**	**229**	T	T	10 53 34.2	
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=4.3 comp=Z,0.2nm,0.5s	**47.23**	**97**	P	**P**	**10 06 20.7**	**+0.8**

IDC 14 10:11:56.9±3.0, 54°07.N×86°64.E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=24.6km s-min=14.7km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO ARRA** baz=83,slow=333,SNR=3.3	**1.08**	**264**	I	I	10 18 40.0	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=80,slow=16,SNR=9.9	**1.08**	**264**	Pg	Pg	10 12 16.8	-0.8
ZALV	1.7nm,0.3s,baz=85,slow=23,SNR=14			Lg	Lg	10 12 33.7	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=56,slow=13,SNR=7.3 0.4nm,0.4s	**6.05**	**239**	Pn	Pn	10 13 27.1	-0.5
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=24,slow=13,SNR=3.7	**7.79**	**203**	Pn	Pn	10 13 54.0	+2.5
MKAR	baz=20,slow=29,SNR=3.2 0.2nm,0.3s			Lg	Lg	10 16 01.8	

*NEIC **14** 10:19:05.9±1.1, 7°.2S±0°.1×123°.57E±0°.04, h558km±10km, mb4.2/22, Error ellipse: s-maj=14.9km s-min=5.4km az=186.0*
*DJA **14** 10:19:05.4±0.4, 7°S±4°×123°3E±°, h556km±6km, M4.2/14, mb4.3/14, mB4.8/5, MLv4.3/14, Mw(mB)4.0/5*
*IDC **14** 10:19:07.2±1.9, 7°.18S×123°.64E, h586km±26km, mb3.2/8, mbtmp4.2/10, Error ellipse: s-maj=33.2km s-min=9.5km az=67.0*

ISC 14 10:19:04.8±0.5, 7°20S±0°.06×123°.55E±0°.07, h550km, n78, σ1°15/86, mb4.0/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.93**	**222**	P	**P**	**10 20 16.1**	**+1.9**
MMRI	**Maumere**	**1.93**	**222**	P	**P**	**10 20 16.0**	**+1.7**
MMRI				S	**S**	**10 21 11.7**	**+1.0**
EDFI	**Ende, Flores**	**2.40**	**230**	P	**P**	**10 20 17.0**	**+0.4**
EDFI				S	**S**	**10 21 14.7**	**-0.3**
SOEI	**Soe**	**2.64**	**164**	P	**P**	**10 20 19.5**	**+1.6**
SOEI	**Soe**	**2.64**	**164**	P	**P**	**10 20 19.8**	**+1.9**
SOEI	**Soe**	**2.64**	**164**	P	**P**	**10 20 19.3**	**+1.4**
SOEI				S	**S**	**10 21 18.8**	**+1.4**
BASI	**Baing, Sumba**	**4.20**	**224**	P	**P**	**10 20 28.7**	**+0.5**
BASI				S	**S**	**10 21 35.4**	**-0.8**
KAPI	**Kappang**	**4.35**	**300**	P	**P**	**10 20 32.2**	**+2.7**
NLAI	**Namlea** 95nm,0.5s,0.5nm	**5.29**	**42**	P	**P**	**10 20 38.9**	**+1.7**
NLAI	95nm,0.5s,0.5nm			S	**S**	**10 21 53.3**	**+0.7**
TTSI	**Tana Toraja** 43nm,0.9s,1μm0.2nm	**5.55**	**318**	P	**P**	**10 20 41.7**	**+2.2**
SANI	**Sanana**	**5.66**	**26**	P	**P**	**10 20 42.0**	**+1.4**
SANI	**Sanana** 87nm,0.7s,0.3nm	**5.66**	**26**	P	**P**	**10 20 41.9**	**+1.4**
PLAI	**Plampang**	**5.94**	**254**	P	**P**	**10 20 42.5**	**-0.5**
PLAI	**Plampang** 90nm,0.7s,1μm0.4nm	**5.94**	**254**	P	**P**	**10 20 42.7**	**-0.3**
TWSI	**Taliwang, Sumb** 52nm,0.5s,1μm0.3nm	**6.78**	**256**	P	**P**	**10 20 50.2**	**-0.5**
LBMI	**Labuha** 110nm,0.5s,0.4nm	**7.62**	**31**	P	**P**	**10 21 00.7**	**+1.8**
KMSI	**Cibinong** 324nm,0.6s,1.5nm	**7.73**	**3**	P	**P**	**10 21 02.2**	**+2.2**
MRSI	**Marisa** 60nm,0.7s,0.2nm	**7.79**	**348**	P	**P**	**10 21 01.5**	**+0.9**
MPSI	**Mapaga** 6.2nm,1.2s,1μm	**8.32**	**334**	P	**P**	**10 21 07.5**	**+1.6**
TOLI2	**Tolitoli**	**8.70**	**341**	P	**P**	**10 21 10.7**	**+1.0**
TOLI2	**Tolitoli**	**8.70**	**341**	P	**P**	**10 21 10.5**	**+0.8**
MTN	**Manton Dam**	**9.34**	**128**	P	**P**	**10 21 17.1**	**+1.0**
JAGI	**Jajag, Banyuwa**	**9.39**	**262**	P	**P**	**10 21 16.2**	**-0.4**
JAGI	**Jajag, Banyuwa**	**9.39**	**262**	P	**P**	**10 21 16.1**	**-0.6**
JAGI	**Jajag, Banyuwa** 47nm,0.7s	**9.39**	**262**	P	**P**	**10 21 16.0**	**-0.6**
FAKI	**Fak Fak**	**9.65**	**64**	P	**P**	**10 21 19.9**	**+0.6**
FAKI	**Fak Fak**	**9.65**	**64**	P	**P**	**10 21 20.7**	**+1.4**
FAKI	**Fak Fak** 39nm,1.0s	**9.65**	**64**	P	**P**	**10 21 21.1**	**+1.8**
KDU	**Kakadu**	**10.35**	**123**	P	**P**	**10 21 26.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.03**	**170**	P	**P**	**10 21 34.2**	**+0.8**
MBWA	**Marble Bar**	**14.36**	**194**	P	**P**	**10 22 08.0**	**+0.3**
MBWA	**Marble Bar**	**14.36**	**194**	P	**P**	**10 22 07.9**	**+0.1**
PSA00	**Pilbara Seismi**	**14.73**	**194**	P	**P**	**10 22 11.6**	**+0.1**
PSA00	**Pilbara Seismi**	**14.73**	**194**	P	**P**	**10 22 12.0**	**+0.4**
WB0	**Warramunga Arr**	**16.34**	**141**	P	**P**	**10 22 27.6**	**-0.1**
WRA	**Warramunga Arr**	**16.44**	**141**	P	**P**	**10 22 27.9**	**-0.6**
WRA	**Warramunga Arr** 4.2nm,0.5s,baz=328,slow=8.6,SNR=99	**16.44**	**141**	P	**P**	**10 22 28.2**	**-0.3**
WRA	2.1nm,0.9s,baz=317,slow=18,SNR=5.1			S	**S**	**10 25 11.7**	**-3.0**
WRAB	**Tennant Creek**	**16.44**	**141**	P	**P**	**10 22 28.1**	**-0.4**
WRAB	comp=Z,7.1nm,0.6s			IAmb	IAmb	10 22 29.3	
WB2	**Warramunga Arr**	**16.44**	**141**	P	**P**	**10 22 28.7**	**+0.1**
WB2	comp=Z,9.2nm,0.8s			IAmb	IAmb	10 22 29.3	
WR0	**Warramunga Arr**	**16.57**	**141**	P	**P**	**10 22 30.3**	**+0.5**
GIRL	**Giralia**	**17.78**	**209**	P	**P**	**10 22 42.2**	**+1.5**
GIRL	**Giralia**	**17.78**	**209**	P	**P**	**10 22 41.5**	**+0.7**
WRKA	**Warakurna**	**18.31**	**166**	P	**P**	**10 22 47.0**	**+1.4**
AS31	**Alice Springs**	**19.16**	**150**	P	**P**	**10 22 54.0**	**+0.7**
AS31	comp=Z,1.4nm,0.3s			IAmb	IAmb	10 22 58.2	
ASAR	**Alice Springs** comp=Z,1.5nm,0.4s,baz=341,slow=12,SNR=45	**19.16**	**150**	P	**P**	**10 22 53.9**	**+0.5**
ASAR	comp=Z,1.0nm,0.8s,baz=336,slow=21,SNR=5.6			S	**S**	**10 25 57.0**	**-1.9**
ASAR	comp=Z,0.6nm,0.8s,baz=330,slow=1.9,SNR=7.2			ScP	**ScP**	**10 29 30.2**	**-4.0**
AS01	**Alice Springs** comp=Z,5.7nm,1.1s	**19.18**	**150**	P	**P**	**10 22 53.6**	**0.0**
MEEK	**Meekatharra**	**19.90**	**193**	P	**P**	**10 22 59.9**	**-0.1**
COEN	**Coen**	**20.42**	**111**	P	**P**	**10 23 04.5**	**-0.4**
COEN	comp=Z,3.3nm,0.6s			IAmb	IAmb	10 23 06.2	
COEN	**Coen**	**20.42**	**111**	P	**P**	**10 23 04.8**	**-0.1**
QIS	**Mount Isa**	**20.45**	**132**	P	**P**	**10 23 05.7**	**+0.6**
MORW	**Morawa**	**22.88**	**197**	P	**P**	**10 23 27.2**	**+0.4**
MORW	comp=Z,6.7nm,0.9s			IAmb	IAmb	10 23 44.6	
PMG	**Port Moresby**	**23.47**	**97**	P	**P**	**10 23 30.8**	**-1.4**
PMG	comp=Z,5.0nm,0.7s			IAmb	IAmb	10 23 30.9	
OOD	**Oodnadatta**	**23.50**	**152**	P	**P**	**10 23 32.3**	**0.0**
KMBL	**Kambalda**	**24.10**	**183**	P	**P**	**10 23 37.6**	**0.0**
BLDU	**Ballidu**	**24.16**	**195**	P	**P**	**10 23 38.2**	**0.0**
MULG	**Mulgathing**	**25.00**	**158**	P	**P**	**10 23 45.9**	**+0.4**
INKA	**Innaminka**	**26.14**	**143**	P	**P**	**10 23 56.8**	**+1.2**
NWAO	**Narrogin (SRO)**	**26.27**	**192**	P	**P**	**10 23 57.0**	**+0.3**
BBOO	**Buckleboo**	**28.01**	**157**	P	**P**	**10 24 11.9**	**-0.1**
BBOO	comp=Z,8.1nm,1.0s			IAmb	IAmb	10 24 25.7	
STKA	**Stephens Creek**	**29.77**	**148**	P	**P**	**10 24 28.0**	**+0.7**
STKA	**Stephens Creek** comp=Z,4.5nm,0.5s,baz=341,slow=8.1,SNR=15 comp=Z,4.5nm,0.5s	**29.77**	**148**	P	**P**	**10 24 28.0**	**+0.7**
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=150,slow=7.3,SNR=4.7 comp=Z,0.5nm,0.3s	**35.20**	**317**	P	**P**	**10 25 14.1**	**+0.5**
TOO	**Toolangi**	**36.21**	**150**	P	**P**	**10 25 22.9**	**+1.2**
TOO	comp=Z,6.4nm,0.9s			IAmb	IAmb	10 25 51.2	
CAN	**Canberra**	**36.46**	**144**	P	**P**	**10 25 25.5**	**+1.8**
KSRS	**Korea Array** comp=Z,1.4nm,0.8s,baz=169,slow=6.8,SNR=5.0 comp=Z,1.4nm,0.8s	**44.61**	**5**	P	**P**	**10 26 28.9**	**+0.4**
MJAR	**Matsushiro Arr** comp=Z,2.9nm,0.7s,baz=189,slow=8.5,SNR=5.2 comp=Z,2.9nm,0.7s	**45.63**	**17**	P	**P**	**10 26 34.9**	**-1.5**
LSA	**Lhasa**	**48.12**	**321**	P	**P**	**10 26 56.2**	**+0.4**
LSA	comp=Z,5.0nm,0.4s			IAmb	IAmb	10 26 56.6	
USA0B	**Ussuriysk Arra**	**51.72**	**8**	P	**P**	**10 27 21.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**51.72**	**8**	P	**P**	**10 27 21.3**	**-0.1**
USRK	**Ussuriysk Ar.** comp=Z,2.3nm,0.6s,baz=186,slow=7.7,SNR=12 comp=Z,2.3nm,0.6s	**51.72**	**8**	P	**P**	**10 27 20.8**	**-0.6**
FOZ	**Fox Glacier**	**54.25**	**140**	P	**P**	**10 27 39.1**	**-0.3**
FOZ	comp=Z,18nm,1.1s			IAmb	IAmb	10 27 49.9	
WHZ	**Wether Hill Ro**	**54.26**	**143**	P	**P**	**10 27 39.2**	**-0.3**
WHZ	comp=Z,4.7nm,1.1s			IAmb	IAmb	10 28 01.6	
SONM	**Songino Array**	**56.85**	**346**	P	**P**	**10 27 57.2**	**-0.3**
SONM	**Songino Array** comp=Z,1.2nm,0.5s,baz=161,slow=9.2,SNR=11 comp=Z,1.2nm,0.5s	**56.85**	**346**	P	**P**	**10 27 56.9**	**-0.6**
MK31	**Makanchi Array**	**65.03**	**330**	P	**P**	**10 28 50.8**	**-0.3**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.5s,baz=131,slow=7.5,SNR=13 comp=Z,1.3nm,0.5s	**65.03**	**330**	P	**P**	**10 28 50.5**	**-0.6**
PETK	**Petropavlovsk-** comp=Z,6.1nm,1.1s,baz=236,slow=4.7,SNR=1.0 comp=Z,6.1nm,1.1s	**66.69**	**22**	P	**P**	**10 29 01.0**	**-0.2**
QSPA	**South Pole Qui**	**82.78**	**180**	P	**P**	**10 30 30.8**	**-0.6**

IDC 14 10:35:33.7±9.6, 5°.65S×128°.82E, h482km±141km, mb2.2/1, mbtmp3.3/3, Error ellipse: s-maj=114.5km s-min=54.6km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=341,slow=10,SNR=14	**15.19**	**160**	P	P	10 38 45.8	-0.4
WRA	0.6nm,0.8s,baz=328,slow=20,SNR=2.6			S	S	10 41 25.6	+0.5
ASAR	**Alice Springs** 0.6nm,0.4s,baz=343,slow=11,SNR=22	**18.57**	**165**	P	P	10 39 20.5	+0.2
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=128,slow=8.1,SNR=1.7 0.1nm,0.4s	**66.46**	**327**	P	P	10 45 34.5	0.0

*NEIC **14** 10:42:06.4±2.1, 7°.52S±0°.05×127°.72E±0°.06, h125km±9km, mb4.4/23, Error ellipse: s-maj=10.0km s-min=3.8km az=130.0*
*DJA **14** 10:42:09.5±0.2, 8°S±3°×127°8E±°, h155km±6km, M4.8/14, mb4.6/13, mB5.2/6, MLv5.0/14, Mw(mB)4.6/6*
*IDC **14** 10:42:11.8±7.5, 7°.48S×128°.00E, h182km±75km, mb3.6/10, mbtmp4.3/12, MS3.2/2, Error ellipse: s-maj=37.9km s-min=15.5km az=72.0*

ISC 14 10:42:08.0±0.4, 7°41S±0°.05×128°07E±0°.05, h142km, n95, σ1°89/96, mb4.2/25, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.25**	**100**		**Pn**	**10 43 00.4**	**+2.2**
SAUI	**Saumlaki**	**3.25**	**100**	P	**Pn**	**10 43 00.2**	**+1.9**
SAUI	**Saumlaki**	**3.25**	**100**	P	**Pn**	**10 43 00.5**	**+2.2**
SAUI				S	**Sn**	**10 43 38.4**	**+1.3**
BNDI	**Bandanaira**	**3.40**	**33**	P	**Pn**	**10 43 01.8**	**+1.6**
SOEI	**Soe**	**4.43**	**238**	Pn	Pn	10 43 06.5	-7.3
SOEI	**Soe**	**4.43**	**238**	P	**Pn**	**10 43 16.7**	**+2.9**
SOEI				S	**Sn**	**10 44 07.0**	**+2.1**
SANI	**Sanana** 24nm,0.8s,0.1nm	**5.71**	**339**	P	**Pn**	**10 43 34.7**	**+3.9**
MMRI	**Maumere**	**5.90**	**258**	Pn	Pn	10 43 25.9	-7.5
FAKI	**Fak Fak**	**6.10**	**43**	Pn	**Pn**	**10 43 36.9**	**+0.9**
FAKI	**Fak Fak** 97nm,0.8s,2μm0.6nm	**6.10**	**43**	P	**Pn**	**10 43 36.7**	**+0.7**
FAKI	97nm,0.8s,2μm0.6nm			S	**Sn**	**10 44 43.4**	**-1.4**
MTN	**Manton Dam**	**6.18**	**151**	Pn	**Pn**	**10 43 37.1**	**0.0**
MTN	**Manton Dam**	**6.18**	**151**	P	**Pn**	**10 43 36.8**	**-0.3**
EDFI	**Ende, Flores** 25nm,1.0s,0.1nm	**6.46**	**258**	P	**Pn**	**10 43 42.7**	**+1.8**
KMPI	**Kaimana, Papua** 373nm,0.7s,5μm3.4nm	**6.73**	**57**	P	**Pn**	**10 43 45.8**	**+1.4**
LBMI	**Labuha** 34nm,0.8s,0.2nm	**6.75**	**355**	P	**Pn**	**10 43 49.2**	**+4.5**
KDU	**Kakadu**	**6.80**	**141**	P	**Pn**	**10 43 44.9**	**-0.5**
SWI	**Sorong** 108nm,1.0s,2μm0.5nm	**7.24**	**26**	P	**Pn**	**10 43 53.4**	**+2.2**
BASI	**Baing, Sumba** 91nm,1.0s,0.5nm	**7.91**	**249**	P	**Pn**	**10 44 01.2**	**+0.9**
LUWI	**Luwuk**	**8.24**	**320**	Pn	Pn	10 43 59.3	-5.3
LUWI	**Luwuk** 39nm,1.1s,1μm	**8.24**	**320**	P	Pn	10 44 09.6	+4.9
KNRA	**Kununurra**	**8.24**	**175**	Pn	**Pn**	**10 44 02.5**	**-2.2**
PLAI	**Plampang** 36nm,1.0s	**10.29**	**261**	P	**Pn**	**10 44 32.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**10.89**	**192**	Pn	**Pn**	**10 44 37.4**	**-2.5**
TABU	**Tabubil**	**13.24**	**82**	P	**Pn**	**10 45 13.5**	**+2.8**
WB0	**Warramunga Arr**	**13.73**	**154**	Pn	**Pn**	**10 45 14.5**	**-2.4**
WRAB	**Tennant Creek**	**13.86**	**155**		**Pn**	**10 45 15.1**	**-3.5**
WRA	**Warramunga Arr**	**13.86**	**155**	Pn	**Pn**	**10 45 14.8**	**-3.8**
WRA	**Warramunga Arr** 18nm,0.6s,baz=331,slow=13,SNR=94	**13.86**	**155**	P	**Pn**	**10 45 15.0**	**-3.5**
WRA	88nm,0.8s,baz=326,slow=25,SNR=6.7			S	Sn	10 47 36.7	-15
WB2	**Warramunga Arr**	**13.87**	**155**	Pn	**Pn**	**10 45 15.8**	**-2.8**
WR0	**Warramunga Arr**	**13.96**	**154**		**Pn**	**10 45 17.2**	**-2.7**
MBWA	**Marble Bar**	**15.87**	**210**	P	**P**	**10 45 44.5**	**+0.1**
PSA00	**Pilbara Seismi**	**16.17**	**209**	P	**Pn**	**10 45 43.2**	**-4.1**
PSA00	**Pilbara Seismi**	**16.17**	**209**	P	**P**	**10 45 49.4**	**+1.7**
COEN	**Coen**	**16.20**	**115**	Pn	**Pn**	**10 45 48.1**	**+0.4**
COEN	**Coen**	**16.20**	**115**	P	**Pn**	**10 45 47.8**	**+0.1**
AS31	**Alice Springs**	**17.11**	**162**	P	**Pn**	**10 45 58.9**	**+0.2**
AS31	comp=Z,11nm,0.4s			IAmb	IAmb	10 45 59.9	
ASAR	**Alice Springs**	**17.11**	**162**	P	**Pn**	**10 45 59.4**	**+0.7**
ASAR	**Alice Springs** comp=Z,18nm,0.6s,baz=339,slow=10,SNR=376	**17.11**	**162**	P	**Pn**	**10 45 59.0**	**+0.3**
ASAR				S	S	10 48 55.0	-14
AS01	**Alice Springs** comp=Z,4.2nm,0.8s,baz=345,slow=24,SNR=4.3	**17.12**	**161**	P	**Pn**	**10 45 58.4**	**-0.5**
QIS	**Mount Isa**	**17.19**	**141**	P	**Pn**	**10 45 59.5**	**-0.2**
UGM	**Wanagama**	**17.40**	**267**	P	**P**	**10 45 55.7**	**-5.7**
UGM	comp=Z,41nm,1.1s			IAmb	IAmb	10 46 05.1	
WRKA	**Warakurna**	**17.53**	**179**	P	**Pn**	**10 46 04.0**	**+0.2**
KKM	**Kota Kinabalu**	**17.85**	**318**	P	**P**	**10 46 03.4**	**-3.0**
KKM	comp=Z,24nm,1.1s			IAmb	IAmb	10 46 15.6	
PMG	**Port Moresby**	**18.99**	**97**	P	**Pn**	**10 46 21.5**	**+0.5**
PMG	**Port Moresby** comp=Z,28nm,0.6s,baz=295,slow=3.3,SNR=27	**18.99**	**97**	P	**Pn**	**10 46 22.0**	**+1.0**
PMG	comp=Z,1.7nm,0.3s,baz=0.0,slow=20,SNR=1.1			S	**S**	**10 49 41.8**	**-5.2**
PMG	comp=Z,47nm,18.5s,baz=251,slow=37			LR	LR	10 53 58.4	
MTSU	**Mount Surprise**	**19.08**	**126**	P	**P**	**10 46 20.4**	**+0.7**
KSM	**Kuching**	**19.80**	**296**	P	**P**	**10 46 23.8**	**-3.7**
KSM	comp=Z,15nm,0.8s			IAmb	IAmb	10 46 37.2	
OOD	**Oodnadatta**	**21.52**	**161**	P	**P**	**10 46 46.5**	**+0.6**
CTA	**Charters Tower** comp=Z,4.3nm,0.4s,baz=297,slow=11,SNR=20	**21.67**	**127**	P	**P**	**10 46 47.7**	**+0.2**
CTA	comp=Z,2.3nm,0.7s,baz=16,slow=18,SNR=1.4			S	**S**	**10 50 40.6**	**+2.1**
CTA	comp=Z,83nm,18.2s,baz=272,slow=36 comp=Z,4.3nm,0.4s			LR	LR	10 55 19.3	
CTAO	**Charters Tower**	**21.67**	**127**	P	**P**	**10 46 48.0**	**+0.5**
CTAO	**Charters Tower**	**21.67**	**127**	P	**P**	**10 46 47.9**	**+0.4**
FORT	**Forrest**	**23.25**	**180**	P	**P**	**10 47 01.8**	**-0.9**
FORT	comp=Z,16nm,0.8s			IAmb	IAmb	10 47 03.9	
FORT	**Forrest**	**23.25**	**180**	P	**P**	**10 47 03.8**	**+1.0**
MULG	**Mulgathing**	**23.44**	**167**	P	**P**	**10 47 05.7**	**+1.2**
INKA	**Innaminka**	**23.52**	**151**	P	**P**	**10 47 06.2**	**+1.0**
MORW	**Morawa**	**24.35**	**206**	P	**P**	**10 47 09.8**	**-3.0**
MORW	comp=Z,12nm,1.0s			IAmb	IAmb	10 47 30.4	
QLP	**Quilpie**	**24.49**	**143**	P	**P**	**10 47 15.2**	**+1.1**
KMBL	**Kambalda**	**24.53**	**193**	P	**P**	**10 47 15.4**	**+1.0**
LCRK	**Leigh Creek**	**24.82**	**159**	P	**P**	**10 47 17.3**	**+0.3**
BLDU	**Ballidu**	**25.42**	**203**	P	**P**	**10 47 24.2**	**+1.7**
BBOO	**Buckleboo**	**26.34**	**165**	P	**P**	**10 47 29.9**	**-0.8**
BBOO	comp=Z,6.6nm,0.9s			IAmb	IAmb	10 47 58.3	
RK1H	**Rockhampton Ha**	**26.76**	**129**	P	**P**	**10 47 34.8**	**+0.2**
STKA	**Stephens Creek**	**27.42**	**154**	P	**P**	**10 47 40.4**	**0.0**
STKA	**Stephens Creek**	**27.42**	**154**	P	**P**	**10 47 41.0**	**+0.6**
STKA	**Stephens Creek** comp=Z,5.3nm,0.9s,baz=322,slow=12,SNR=11 comp=Z,5.3nm,0.9s	**27.42**	**154**	P	**P**	**10 47 39.5**	**-0.9**
CMSA	**Cobar Meteorol**	**29.10**	**148**	P	**P**	**10 47 55.8**	**+0.4**
KULM	**Kulim**	**30.13**	**294**	P	**P**	**10 48 05.2**	**+0.5**
KULM	comp=Z,11nm,1.1s			IAmb	IAmb	10 48 06.8	
ARMA	**Armidale**	**31.80**	**139**	P	**P**	**10 48 19.9**	**+0.5**
ARPS	**Mount Arapiles**	**31.81**	**159**	P	**P**	**10 48 20.3**	**+1.2**
TOO	**Toolangi**	**33.94**	**155**	P	**P**	**10 48 39.5**	**+1.8**
TOO	comp=Z,12nm,1.0s			IAmb	IAmb	10 48 49.9	
CMAR	**Chiang Mai Arr**	**38.55**	**312**	P	**P**	**10 49 16.2**	**-0.9**
CMAR	**Chiang Mai Ar** comp=Z,0.9nm,0.3s,baz=130,slow=7.3,SNR=2.2 comp=Z,0.9nm,0.3s	**38.55**	**312**	P	**P**	**10 49 17.9**	**+0.8**
OUENC	**Uien Island, N**	**40.18**	**116**	P	**P**	**10 49 31.5**	**+0.9**
KMI	**Kunming**	**40.67**	**323**	⇑P	**P**	**10 49 37.8**	**+3.0**
KMI	comp=Z,14nm,1.2s			pmax	pmax		
PZH	**PanZhiHua**	**42.30**	**324**	P	**P**	**10 49 49.6**	**+1.7**
PZH	comp=Z,10.0nm,1.2s			pmax	pmax		
PZH	comp=Z,140nm,5.5s			pmax	pmax		
XAN	**Xi'an**	**45.04**	**337**	⇓P	**P**	**10 50 09.3**	**-0.4**
XAN	comp=Z,9.0nm,1.6s			pmax	pmax		
LZH	**Lanzhou**	**48.89**	**334**	*e*P	**P**	**10 50 41.3**	**+1.6**
LZH				pP	pP	10 50 53.9	-17
LZH	comp=Z,18nm,1.5s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**50.37**	**344**	*e*P	**P**	**10 50 54.0**	**+3.3**
HHC	comp=Z,4.0nm,0.7s			pmax	pmax		
HHC	comp=Z,68nm,5.1s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,0.8nm,0.4s,baz=187,slow=5.3,SNR=5.7 comp=Z,0.8nm,0.4s	**51.49**	**4**	P	**P**	**10 50 57.3**	**-1.6**
RPZ	**Rata Peaks**	**52.10**	**141**	P	**P**	**10 51 04.6**	**+1.0**
XLT	**XiLinHaoTe**	**52.21**	**349**	*e*P	**P**	**10 51 04.8**	**+0.4**
XLT				pP	pP	10 51 33.9	-1.8
XLT				sP	sP	10 51 50.6	-0.2
XLT	comp=Z,5.0nm,0.9s			pmax	pmax		
XLT	comp=Z,140nm,4.0s			pmax	pmax		
TCW	**Tory Channel**	**52.99**	**137**	P	**P**	**10 51 10.0**	**-0.2**
GTA	**Gaotai**	**53.43**	**333**	*e*P	**P**	**10 51 14.4**	**+0.9**
GTA	comp=Z,4.0nm,0.9s			pmax	pmax		
ULN	**Ulaanbaatar**	**58.09**	**343**	P	**P**	**10 51 47.1**	**+0.6**
ULN	comp=Z,6.0nm,1.1s			IAmb	IAmb	10 51 48.8	
SONM	**Songino Array**	**58.24**	**343**	P	**P**	**10 51 48.9**	**+1.3**
SONM	comp=Z,3.6nm,1.0s			IAmb	IAmb	10 51 49.8	
**SON

	baz=259							
H11N3	**WAKE ISLAND Hy**	**21.77**	**72**	T	T	11 19 52.7		
	baz=259							
MAJO	**Matsushiro**	**23.23**	**346**	P	**P**	**10 56 54.2**	**+0.7**	
MAJO				IAmb	IAmb	10 57 12.0		
	comp=Z,3.4nm,0.8s							
YULB	**Yu-li**	**24.23**	**296**	P	**P**	**10 57 03.3**	**+0.6**	
YULB				IAmb	IAmb	10 57 17.3		
	comp=Z,11nm,1.1s							
KSRS	**Korea Array**	**27.84**	**330**	P	**P**	**10 57 34.9**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=145,slow=9.7,SNR=2.6							
KSRS				LR	LR	11 07 21.9		
	comp=Z,16nm,21.7s,baz=130,slow=33							
	comp=Z,1.3nm,0.7s							
COEN	**Coen**	**27.84**	**184**	P	**P**	**10 57 35.5**	**+0.3**	
COEN				IAmb	IAmb	10 57 46.7		
	comp=Z,4.5nm,1.1s							
WB0	**Warramunga Arr**	**35.13**	**197**	P	**P**	**10 58 38.5**	**-0.6**	
WB0				IAmb	IAmb	10 58 38.8		
	comp=Z,3.6nm,0.6s							
WR0	**Warramunga Arr**	**35.27**	**197**	P	**P**	**10 58 39.8**	**-0.5**	
WR0				IAmb	IAmb	10 58 40.2		
	comp=Z,2.7nm,0.6s							
WB2	**Warramunga Arr**	**35.31**	**197**	P	**P**	**10 58 40.1**	**-0.5**	
WB2				IAmb	IAmb	10 58 41.0		
	comp=Z,5.6nm,0.8s							
WRA	**Warramunga Arr**	**35.31**	**197**	P	**P**	**10 58 39.7**	**-0.9**	
	comp=Z,2.5nm,0.6s,baz=18,slow=9.4,SNR=15							
	comp=Z,2.5nm,0.6s							
FITZ	**Fitzroy Crossi**	**37.15**	**211**	P	**P**	**10 58 56.1**	**-0.1**	
FITZ				IAmb	IAmb	10 59 08.6		
	comp=Z,2.2nm,1.1s							
AS31	**Alice Springs**	**38.97**	**196**	P	**P**	**10 59 10.8**	**-0.7**	
ASAR	**Alice Springs**	**38.97**	**196**	P	**P**	**10 59 10.5**	**-1.0**	
ASAR	**Alice Springs**	**38.97**	**196**	P	**P**	**10 59 10.8**	**-0.7**	
	comp=Z,0.8nm,0.7s,baz=20,slow=13,SNR=12							
	comp=Z,0.8nm,0.7s							
BBOO	**Buckleboo**	**47.32**	**190**	P	**P**	**11 00 18.0**	**-0.5**	
FORT	**Forrest**	**47.40**	**200**	P	**P**	**11 00 18.8**	**-0.3**	
MK31	**Makanchi Array**	**61.24**	**316**	P	**P**	**11 02 00.3**	**+1.0**	
MK31				IAmb	IAmb	11 02 09.8		
	comp=Z,1.1nm,1.1s							
MKAR	**Makanchi Array**	**61.24**	**316**	P	**P**	**11 01 59.9**	**+0.7**	
	comp=Z,0.2nm,0.4s,baz=90,slow=7.7,SNR=9.3							
	comp=Z,0.2nm,0.4s							
TCW	**Tory Channel**	**61.28**	**155**	P	**P**	**11 01 59.8**	**+0.3**	
KURBB	**Kurchatov Arra**	**64.35**	**320**	P	**P**	**11 02 17.9**	**-1.8**	
	comp=Z,0.7nm,0.2s,baz=102,slow=6.8,SNR=2.0							
	comp=Z,0.7nm,0.2s							
WRH	**Wood River Hil**	**67.58**	**26**	P	**P**	**11 02 41.1**	**+1.0**	
ILAR	**Eielson Array**	**68.16**	**25**	P	**P**	**11 02 41.7**	**-2.1**	
	comp=Z,0.3nm,0.5s,baz=253,slow=5.8,SNR=7.1							
	comp=Z,0.3nm,0.5s							
TOLK	**Toolik Lake Re**	**68.20**	**21**	P	**P**	**11 02 44.4**	**+0.3**	
BVAR	**Borovoye Array**	**69.64**	**322**	P	**P**	**11 02 50.9**	**-2.3**	
	comp=Z,0.6nm,0.4s,baz=104,slow=7.1,SNR=6.1							
	comp=Z,0.6nm,0.4s							
BMAR	**Burnt Mountain**	**69.69**	**23**	P	**P**	**11 02 53.5**	**+0.2**	
ABKAR	**Akbulak array**	**76.28**	**318**	P	**P**	**11 03 32.3**	**0.0**	
NVAR	**Mina Array Bea**	**86.61**	**51**	P	**P**	**11 04 27.5**	**+0.2**	
	comp=Z,0.4nm,0.6s,baz=280,slow=5.4,SNR=7.2							
	comp=Z,0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**134.68**	**305**	PKP	**PKiKP**	**11 11 03.1**	**-0.6**	
	comp=Z,0.4nm,0.8s,baz=82,slow=3.1,SNR=2.2							

IDC 14 11:09:47.1±2.5, 6.77S×129.77E, h0km, mb3.2/1, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=147.7km s-min=33.4km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.83**	**162**	Pn	Pn	11 13 03.4	-1.1
	0.2nm,0.3s,baz=345,slow=13,SNR=8.5						
WRA				Sn	Sn	11 15 26.5	-12
	0.3nm,0.3s,baz=344,slow=21,SNR=8.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.27**	**167**	P	P	11 13 50.7	-0.7
	0.1nm,0.3s,baz=334,slow=9.3,SNR=11						
ASAR				S	Sn	11 16 45.3	-17
	0.3nm,0.9s,baz=353,slow=27,SNR=1.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**67.91**	**327**	P	P	11 20 47.7	0.0
	0.2nm,0.7s,baz=111,slow=7.9,SNR=1.7						
	0.2nm,0.7s						

*SSNC **14** 11:35:16.6±0.8, 18°.25N×76°.86W, h7km±7km, ML2.8*
*JSN **14** 11:35:16.3±0.3, 18°.07N×76°.84W, h11km±3km, MD3.1*
ISC 14 11:35:12.2±1.1, 18°.31N±0°.03×76°.73W±0°.08, h11km±14km, n9, σ0§71/15, 2C, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.23**	**181**	*i*P	**Pb**	**11 35 19.0**	**+0.5**
STH	**Stony Hill**	**0.24**	**199**	*i*P	**Pb**	**11 35 18.3**	**-0.3**
STH				*i*S	**Sg**	**11 35 19.8**	**-0.9**
HOJ	**Hope**	**0.30**	**184**	*i*P	**Pg**	**11 35 19.0**	**+0.7**
CHIV	**Chivirico**	**1.69**	**10**	*e*P	**Pg**	**11 35 45.2**	**+0.6**
CHIV				*e*S	**Sg**	**11 36 06.4**	**-0.1**
CHIV				IAML		11 36 08.0	
	comp=E,14nm,0.2s						
CHIV				IAML		11 36 08.6	
	comp=N,18nm,0.2s						
PILO	**Pilon**	**1.72**	**338**	*e*P	**Pb**	**11 35 44.6**	**+0.8**
PILO				*e*S	**Sb**	**11 36 05.2**	**-0.2**
PILO				IAML		11 36 07.9	
	comp=E,109nm,0.1s						
PILO				IAML		11 36 08.0	
	comp=N,103nm,0.1s						
LMGC	**Las Mercedes**	**1.77**	**351**	*e*P	**Pb**	**11 35 44.9**	**+0.2**
LMGC				*e*S	**Sb**	**11 36 06.9**	**0.0**
LMGC				*e*Sg	**Sg**	**11 36 08.5**	**-0.6**
LMGC				IAML		11 36 09.2	
	comp=E,142nm,0.1s						
LMGC				IAML		11 36 10.1	
	comp=N,142nm,0.1s						
RCC	**Rio Carpintero**	**1.94**	**30**	*e*P	**Pg**	**11 35 49.0**	**-0.5**
GTBY	**Guantanamo Bay**	**2.22**	**43**	*e*P	**Pb**	**11 35 53.4**	**+1.0**
PINC	**Pinares de May**	**2.34**	**22**	*e*P	**Pb**	**11 35 54.4**	**0.0**
PINC				*e*S	**Sb**	**11 36 22.2**	**-1.1**
PINC				IAML		11 36 26.1	
	comp=E,86nm,0.1s						
PINC				IAML		11 36 26.6	
	comp=N,90nm,0.1s						

*IDC **14** 11:46:44.3±15.0, 17°.19S×178°.89W, h460km±179km, mb3.2/7, mbtmp4.0/7, Error ellipse: s-maj=100.7km s-min=41.7km az=165.0*
ISC 14 11:46:47.8±1.4, 17°.05S±0°.5×179°.2W±0°.3, h500km, n8, σ1§15/8, mb3.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.48**	**240**	P	**P**	**11 53 25.6**	**-0.9**
	2.5nm,0.4s,baz=63,slow=6.8,SNR=4.3						
	2.5nm,0.4s						
WRA	**Warramunga Arr**	**44.11**	**259**	P	**P**	**11 54 12.3**	**+0.9**
	1.0nm,0.5s,baz=98,slow=7.1,SNR=28						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**44.37**	**253**	P	**P**	**11 54 14.4**	**+1.0**
	14nm,0.6s,baz=89,slow=8.1,SNR=454						
	14nm,0.6s						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	**P**	**11 58 01.1**	**0.0**
	0.4nm,0.6s,baz=222,slow=9.3,SNR=3.2						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**85.13**	**13**	P	**P**	**11 58 30.7**	**+0.6**
	0.3nm,0.4s,baz=226,slow=5.2,SNR=5.7						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**11 58 35.9**	**+0.2**
	0.6nm,0.8s,baz=213,slow=6.5,SNR=7.4						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**87.16**	**44**	P	**P**	**11 58 40.6**	**0.0**
	0.2nm,0.5s,baz=240,slow=1.8,SNR=4.6						
	0.2nm,0.5s						
GERES	**GERESS Array B**	**146.51**	**345**	PKPbc	**PKPab**	**12 05 33.1**	**-1.9**
	0.8nm,0.5s,baz=38,slow=5.0,SNR=2.0						

KRSC 14 11:51:30.6±4.7, 54.07N×169.36E, h33km±52km, Ml3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.27**	**301**	*e*S	Sn	11 52 34.2	+1.6
TUMD	**Tumrok D**	**5.33**	**286**	*e*P	Pn	11 52 53.4	+5.6
TUMR	**Tumrok**	**5.48**	**287**	*e*P	Pn	11 52 56.7	+6.7
KMNR	**Kamenistaya**	**5.53**	**292**	*e*P	Pn	11 52 57.0	+6.4
KPT	**Kopyto**	**5.59**	**294**	*e*P	Pn	11 52 57.2	+5.7
SMAR	**Somma**	**6.33**	**267**	*e*P	Pn	11 53 06.3	+4.6
AVH	**Avacha**	**6.36**	**267**	*e*P	Pn	11 53 07.1	+5.0
KRX	**Arik**	**6.40**	**268**	*e*P	Pn	11 53 07.2	+4.6
DALK	**Dalny**	**6.41**	**265**	*e*P	Pn	11 53 07.2	+4.7
KOK	**Koryaka**	**6.42**	**267**	*e*P	Pn	11 53 07.5	+4.6
MTVR	**Mutnovka**	**6.89**	**261**	*e*P	Pn	11 53 14.3	+5.0
ASAK	**Asacha**	**7.08**	**261**	*e*P	Pn	11 53 17.1	+5.1
KMSK	**Kamenskaya**	**8.59**	**350**	*e*P	Pn	11 53 36.8	+4.4

*TEH **14** 11:56:55.2, 30°.61N×57°.35E, h6km±29km, ML3.3*
*IDC **14** 11:56:57.5±10.0, 30°.58N×57°.45E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=216.8km s-min=37.8km az=174.0*
ISC 14 11:56:56.8±0.8, 30°.60N±0°.04×57°.36E±0°.04, h10km, n23, σ2§54/23, mb3.5/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRM1	**Kerman Provinc**	**0.12**	**216**	Pg	**Pg**	**11 56 59.3**	**-0.7**
CHMN	**Cheshme madani**	**0.76**	**168**	Pg	**Pb**	**11 57 11.5**	**-0.9**
KHGB	**Koh Gabri**	**0.79**	**254**	Pg	**Pb**	**11 57 11.2**	**-1.6**
ZRDN	**Zarand Kerman**	**0.79**	**297**	Pg	**Pb**	**11 57 11.5**	**-1.4**
TVBK	**TV Kerman**	**0.80**	**220**	Pg	**Pn**	**11 57 12.7**	**-1.8**
NGRK	**Negar Kerman**	**1.10**	**210**	Pg	**Pn**	**11 57 17.8**	**-0.9**
KBAM	**BAM**	**1.75**	**147**	Pg	**Pb**	**11 57 28.1**	**-1.0**
IBAF	**Bafgh**	**1.82**	**303**	Pn	**Pg**	**11 57 30.0**	**-1.8**
BSRN	**Basiran**	**2.04**	**48**	Pn	**Pb**	**11 57 33.0**	**-1.0**
IKOO	**Kooshah**	**2.30**	**37**	Pn	**Pb**	**11 57 36.9**	**-1.7**
NHDN	**Nehbandan**	**2.44**	**71**	Pn	**Pb**	**11 57 38.7**	**-2.3**
IMEH	**Mehriz**	**2.48**	**289**	Pn	**Pb**	**11 57 39.4**	**-2.3**
TPRV	**Parvadeh(Tabas**	**2.48**	**347**	Pn	**Pb**	**11 57 39.0**	**-2.7**
TKDS	**Koohdasht(Taba**	**3.01**	**356**	Pn	**Pb**	**11 57 46.2**	**-4.4**
AFRZ	**Afriz**	**3.15**	**26**	Pn	**Pb**	**11 57 48.6**	**-4.4**
ZHDN	**Zahedan**	**3.23**	**111**	Pn	**Pb**	**11 57 49.9**	**-4.5**
SHRT	**Shahrakht**	**3.92**	**39**	Pn	**Pn**	**11 57 59.2**	**+1.9**
ANAR	**Anarak**	**4.02**	**311**	Pn	**Pn**	**11 58 00.8**	**+2.2**
BRTR	**Keskin Array B**	**21.37**	**302**	P	**P**	**12 01 47.7**	**+3.1**
	1.2nm,1.0s,baz=116,slow=9.8,SNR=2.4						
	1.2nm,1.0s						
BVAR	**Borovoye Array**	**24.34**	**19**	P	**P**	**12 02 16.7**	**+1.9**
	1.7nm,0.7s,baz=190,slow=7.3,SNR=10						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**25.14**	**43**	P	**P**	**12 02 24.2**	**+2.1**
	0.3nm,0.7s,baz=237,slow=7.9,SNR=3.6						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**25.50**	**32**	P	**P**	**12 02 27.3**	**+2.1**
	0.9nm,0.8s,baz=231,slow=9.4,SNR=8.3						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**30.59**	**32**	P	**P**	**12 03 12.4**	**+1.7**
	0.6nm,0.6s,baz=237,slow=10,SNR=3.8						
	0.6nm,0.6s						

JMA 14 12:00:19.2±0.1, 32.7N±0°.1×130.7E±0°.2, h9km, MV-0.2/9, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.17**	**156**	P	Pg	12 00 22.9	0.0
JIU3				S	Sg	12 00 25.8	+0.4

*IDC **14** 12:01:06.8±1.1, 30°.81N×130°.27E, h125km±9km, mb3.9/25, mbtmp4.3/31, MS2.7/3, Error ellipse: s-maj=14.3km s-min=9.6km az=86.0*
*MOS **14** 12:01:06.4±0.9, 30°.78N×130°.36E, h136km, mb4.2/20, Error ellipse: s-maj=10.7km s-min=5.7km az=102.6*
*NEIC **14** 12:01:07.6±1.3, 30°.78N±0°.06×130°.34E±0°.10, h124km±1km, mb4.3/44, Error ellipse: s-maj=12.3km s-min=8.2km az=101.0*
*JMA **14** 12:01:07.1±0.1, 30°.8N±0°.2×130°.4E±0°.4, h112km, MV3.9/38, NEAR TANEGASHIMA ISLAND*
JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .
*NIED **14** 12:01:07.1, 30°.75N×130°.36E, h112km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=2.15; Mθθ=1.77; Mφφ=0.38; Mrθ=0.52; Mθφ=-0.82; Mφr=-0.70; Fault plane solution: Mo=2.32000×10¹⁵ NP1: φs=305.00000°, δs=56.00000°, λ=-79.00000°. NP2: φs=105.00000°, δs=36.00000°, λ=-106.00000°.*
ISC 14 12:01:06.5±0.5, 30°.75N±0°.04×130°.36E±0°.05, h120km±4km, n178, σ1§07/200, mb4.2/66, 5C-8D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKC	**Kuchinoerabu**	**0.32**	**206**	P	**Pn**	**12 01 23.4**	**-0.1**
JYAK	**Yakushimahirau**	**0.53**	**165**	P	**Pn**	**12 01 24.5**	**-0.1**
JYAK				S	**Sn**	**12 01 37.5**	**-0.6**
JTN	**Tanegashima 3**	**0.54**	**100**	P	**Pn**	**12 01 24.6**	**-0.1**
JTN				S	**Sn**	**12 01 38.5**	**+0.1**
JMTN	**Minamitane**	**0.58**	**127**	P	**Pn**	**12 01 24.9**	**0.0**
JMTN				S	**Sn**	**12 01 38.6**	**-0.2**
JTSR	**Tashiro 2**	**0.64**	**49**	P	**Pn**	**12 01 25.2**	**-0.2**
JTSR				S	**Sn**	**12 01 38.7**	**-0.9**
JSU	**Suzuyama**	**0.76**	**6**	P	**Pn**	**12 01 26.5**	**+0.1**
JSU				S	**Sn**	**12 01 41.0**	**-0.3**
JNN	**Nakanoshima**	**1.00**	**205**	*i* P	**Pn**	**12 01 28.5**	**+0.1**
JNN				S	**Sn**	**12 01 45.1**	**0.0**
JSJ	**Shimokoshiki**	**1.08**	**330**	*i* P	**Pn**	**12 01 28.8**	**-0.4**
JSJ				S	**Sn**	**12 01 45.7**	**-0.8**
JNAR	**Kushima--Naru**	**1.10**	**45**	*i* P	**Pn**	**12 01 29.9**	**+0.4**
JNAR				S	**Sn**	**12 01 47.5**	**+0.5**
JTZ	**Takazaki**	**1.31**	**28**	*i* P	**Pn**	**12 01 32.0**	**+0.3**
JTZ				S	**Sn**	**12 01 50.8**	**-0.1**
JZO	**Okuchi**	**1.40**	**8**	*i* P	**Pn**	**12 01 33.2**	**+0.4**
JIU3	**Izumi3**	**1.84**	**12**	*i* P	**Pn**	**12 01 38.6**	**+0.7**
JIU3				S	**Sn**	**12 02 02.1**	**+0.2**
JNU	**Nakatsue**	**2.41**	**10**	Pn	**Pn**	**12 01 46.3**	**+1.2**
JNU	**Nakatsue**	**2.41**	**10**	P	**Pn**	**12 01 45.9**	**+0.8**
JNU	**Nakatsue**	**2.41**	**10**	P	**Pn**	**12 01 45.8**	**+0.7**
	1μm,0.8s,baz=165,slow=8.9,SNR=948						
JNU				S	**Sn**	**12 02 14.9**	**+0.2**
	428nm,0.6s,baz=289,slow=24,SNR=10						
JTU	**Tsushima**	**3.85**	**348**	Pn	**Pn**	**12 02 04.8**	**+0.8**
JTU	**Tsushima**	**3.85**	**348**	P	**Pn**	**12 02 04.9**	**+0.9**
JMN	**Monobe**	**4.21**	**44**	Pn	**Pn**	**12 02 09.1**	**+0.3**
JMN	**Monobe**	**4.21**	**44**	P	**Pn**	**12 02 09.1**	**+0.3**
JOW	**Kunigami**	**4.31**	**206**	Pn	**Pn**	**12 02 10.0**	**-0.2**
JOW	**Kunigami**	**4.31**	**206**	P	**Pn**	**12 02 09.6**	**-0.6**
JOW	**Kunigami**	**4.31**	**206**	P	**Pn**	**12 02 09.4**	**-0.7**
	166nm,0.4s,baz=114,slow=25,SNR=180						
JOW				S	**Sn**	**12 02 57.6**	**-1.9**
	65nm,0.2s,baz=104,slow=25,SNR=6.3						
JHS	**Saijyo**	**4.83**	**28**	Pn	**Pn**	**12 02 18.9**	**+1.7**
JMZ	**Minamidaito 2**	**4.97**	**171**		**Pn**	**12 02 18.6**	**-0.4**
JMZ	**Minamidaito 2**	**4.97**	**171**	P	**Pn**	**12 02 18.6**	**-0.4**
TJN	**Taejon**	**6.14**	**337**	Pn	**Pn**	**12 02 36.5**	**+1.7**
TJN	**Taejon**	**6.14**	**337**	P	**Pn**	**12 02 36.9**	**+2.1**
TJN	**Taejon**	**6.14**	**337**	P	**Pn**	**12 02 36.5**	**+1.7**
JWT	**Wachi**	**6.20**	**42**	P	**Pn**	**12 02 38.6**	**+3.1**
KSAR	**Wonju Array Be**	**6.99**	**344**	Pn	**Pn**	**12 02 47.0**	**+0.8**
KSAR	**Wonju Array Be**	**6.99**	**344**	P	**Pn**	**12 02 47.0**	**+0.8**
KSRS	**Korea Array**	**6.99**	**344**	P	**Pn**	**12 02 46.0**	**-0.1**
	6.7nm,0.8s,baz=160,slow=14,SNR=19						
KSRS				LR	LR	12 05 47.9	
	comp=Z,34nm,19.6s,baz=140,slow=41						
KS19	**Wonju Array Si**	**7.05**	**344**	Pn	**Pn**	**12 02 47.3**	**+0.3**
INU	**Inuyama**	**7.23**	**49**	Pn	**Pn**	**12 02 51.2**	**+1.7**
INU	**Inuyama**	**7.23**	**49**	P	**Pn**	**12 02 51.6**	**+2.1**
INCN	**Inchon**	**7.39**	**336**	Pn	**Pn**	**12 02 52.4**	**+0.7**
INCN	**Inchon**	**7.39**	**336**	P	**Pn**	**12 02 52.4**	**+0.7**
JGF	**Kuroka**	**7.60**	**49**		**Pn**	**12 02 56.1**	**+1.6**
JGF	**Kuroka**	**7.60**	**49**	P	**Pn**	**12 02 56.2**	**+1.6**
MAJO	**Matsushiro**	**8.73**	**46**		**Pn**	**12 03 11.2**	**+1.4**
MAJO	**Matsushiro**	**8.73**	**46**	P	**Pn**	**12 03 11.2**	**+1.4**
MAJO	**Matsushiro**	**8.73**	**46**	P	**Pn**	**12 03 11.2**	**+1.4**
MJB9	**Matsu-Tunnel**	**8.73**	**46**		**Pn**	**12 03 12.2**	**+2.5**
MJAR	**Matsushiro Arr**	**8.73**	**46**	P	**Pn**	**12 03 10.5**	**+0.8**
	36nm,0.4s,baz=246,slow=14,SNR=166						
MJAR				S	**Sn**	**12 04 40.9**	**-5.5**
	5.6nm,0.6s,baz=224,slow=17,SNR=2.6						
YHNB	**Yeheng**	**10.00**	**235**	Pn	**Pn**	**12 03 28.3**	**+1.3**
SSLB	**Suanglung**	**10.86**	**233**	P	**Pn**	**12 03 37.4**	**-1.2**
TPUB	**Ta-pu**	**11.41**	**232**	P	**Pn**	**12 03 43.1**	**-2.8**
MSHR	**Mys Shultsa**	**11.83**	**3**	*i*P	**Pn**	**12 03 51.3**	**0.0**
JTM	**Tenmabayashi**	**13.25**	**38**	Pn	**Pn**	**12 04 11.1**	**+1.2**
JTM	**Tenmabayashi**	**13.25**	**38**	P	**Pn**	**12 04 10.8**	**+0.9**
USRK	**Ussuriysk Ar.**	**13.49**	**5**	P	**P**	**12 04 19.2**	**+1.3**
	0.8nm,0.4s,baz=178,slow=10,SNR=5.0						
BJI	**Beijing**	**14.81**	**313**	P	**P**	**12 04 34.3**	**+1.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ERM	**Erimo**	**15.23**	**39**	Pn	**Pn**	**12 04 34.3**	**-0.8**
ERM	**Erimo**	**15.23**	**39**	P	**Pn**	**12 04 34.3**	**-0.8**
ERM				pmax	pmax		
	comp=Z,72nm,1.1s						
LYN	**LuoYang**	**15.54**	**289**	*e*P	**P**	**12 04 40.9**	**+0.2**
LYN				pmax	pmax		
	comp=Z,18nm,0.5s						
LYN				pmax	pmax		
	comp=Z,270nm,4.7s						
ASAJ	**Asahikawa**	**16.48**	**33**	P	**Pn**	**12 04 49.2**	**-1.4**
ASAJ				pmax	pmax		
	comp=Z,25nm,0.7s						
ASAJ	**Asahikawa**	**16.48**	**33**	P	**Pn**	**12 04 49.0**	**-1.6**
	comp=Z,20nm,0.6s,baz=237,slow=11,SNR=34						
ASAJ				LR	LR	12 10 11.4	
	comp=Z,52nm,19.7s,baz=173,slow=33						
JKA	**Kamikawa-asahi**	**16.48**	**33**	Pn	**Pn**	**12 04 49.2**	**-1.3**
XLT	**XiLinHaoTe**	**17.32**	**323**	*e*P	**Pn**	**12 05 03.0**	**+2.1**
XLT				sP	sP	12 05 38.0	+1.2
XLT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,120nm,4.6s						
ENH	**Enshi**	**17.99**	**274**	P	**P**	**12 05 08.1**	**+0.3**
ENH				IAmb	IAmb	12 05 12.4	
	comp=Z,24nm,0.9s						
HHC	**Hu-ho-hao-te**	**18.24**	**309**	*e*P	**Pn**	**12 05 12.8**	**+0.9**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,96nm,5.6s						
XAN	**Xi'an**	**18.39**	**286**	*i*P	**P**	**12 05 12.5**	**+0.2**
XAN				sP	sP	12 05 50.3	+1.6
XAN				pmax	pmax		
	comp=Z,21nm,1.0s						
KLR	**Kul'dur**	**18.49**	**3**	*e*P	**P**	**12 05 13.2**	**+0.1**
KLR	**Kul'dur**	**18.49**	**3**	P	**P**	**12 05 11.9**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=173,slow=8.8,SNR=6.9						
LZH	**Lanzhou**	**22.73**	**291**	*e*P	**P**	**12 05 58.5**	**0.0**
LZH				sP	sP	12 06 47.3	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
ULN	**Ulaanbaatar**	**24.70**	**320**	P	**P**	**12 06 15.6**	**-0.8**
ULN				IAmb	IAmb	12 06 18.7	
	comp=Z,4.4nm,0.7s						
ULN	**Ulaanbaatar**	**24.70**	**320**	*e*P	**P**	**12 06 16.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	**Songino Array**	**25.04**	**320**	P	**P**	**12 06 19.1**	**-0.5**
SONM				IAmb	IAmb	12 06 22.1	
	comp=Z,6.7nm,1.0s						
SONM	**Songino Array**	**25.04**	**320**	P	**P**	**12 06 19.1**	**-0.5**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**25.04**	**320**	P	**P**	**12 06 18.7**	**-0.9**
	comp=Z,5.9nm,0.9s,baz=132,slow=9.2,SNR=24						
SONM				PcP	**PcP**	**12 09 50.4**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=168,slow=12,SNR=2.6						
	comp=Z,5.9nm,0.9s						
PZH	**PanZhiHua**	**25.44**	**268**	P	**P**	**12 06 24.3**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
CMAR	**Chiang Mai Arr**	**30.96**	**254**	P	**P**	**12 07 13.5**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=64,slow=7.1,SNR=1.3						
CMAR				PcP	**PcP**	**12 10 06.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=20,slow=2.2,SNR=6.9						
CMAR				LR	LR	12 20 52.2	
	comp=Z,9.0nm,20.3s,baz=75,slow=38						
	comp=Z,0.3nm,0.5s						
FAKI	**Fak Fak**	**33.53**	**177**	P	**P**	**12 07 35.0**	**+0.2**
WMQ	**Urumqi**	**35.98**	**303**	*e*P	**P**	**12 07 57.8**	**+2.0**
KULM	**Kulim**	**37.70**	**234**	P	**P**	**12 08 10.3**	**-0.3**
KULM				IAmb	IAmb	12 08 37.7	
	comp=Z,7.0nm,1.0s						
IPM	**Ipoh**	**38.02**	**232**	P	**P**	**12 08 12.3**	**-1.0**
IPM				IAmb	IAmb	12 08 29.9	
	comp=Z,6.9nm,1.0s						
ZALV	**Zalesovo Beam**	**39.93**	**319**	P	**P**	**12 08 27.5**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=125,slow=9.3,SNR=3.9						
ZALV				PcP	**PcP**	**12 10 30.2**	**-1.6**
	comp=Z,1.2nm,0.7s,ba

WB2	**Warramunga Arr**	**50.55**	**175**	P	**P**	**12 09 52.6**	**-0.2**
WB2				IAmb	IAmb	12 09 53.3	
	comp=Z,3.7nm,0.6s						
WR0	**Warramunga Arr**	**50.58**	**175**	P	**P**	**12 09 53.0**	**0.0**
WR0				IAmb	IAmb	12 09 53.7	
	comp=Z,5.3nm,0.8s						
ANM	**Nome**	**51.66**	**30**	P	**P**	**12 10 01.9**	**+1.2**
ANM				IAmb	IAmb	12 10 23.9	
	comp=Z,5.7nm,1.2s						
ANM	**Nome**	**51.66**	**30**	P	**P**	**12 10 01.9**	**+1.2**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CTAO	**Charters Tower**	**52.80**	**161**	P	**P**	**12 10 10.2**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,7.0nm,2.0s						
PSA00	**Pilbara Seismi**	**52.99**	**192**	P	**P**	**12 10 11.0**	**+0.1**
E18K	**Tukpahlearik C**	**53.97**	**26**	P	**P**	**12 10 18.6**	**+1.0**
E18K				IAmb	IAmb	12 10 19.2	
	comp=Z,1.7nm,0.9s						
AS31	**Alice Springs**	**54.21**	**176**	P	**P**	**12 10 20.2**	**+0.4**
AS31				IAmb	IAmb	12 10 21.8	
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**54.21**	**176**	P	**P**	**12 10 20.0**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=8.0,slow=14,SNR=57						
	comp=Z,3.1nm,0.6s						
K17K	**Iditarod**	**54.66**	**32**	P	**P**	**12 10 24.1**	**+1.5**
ABKAR	**Akbulak array**	**55.01**	**311**	P	**P**	**12 10 26.4**	**+1.0**
ABKAR				IAmb	IAmb	12 10 26.6	
	comp=Z,1.7nm,0.5s						
ARU	**Arti**	**55.08**	**320**	*c i*P	**P**	**12 10 25.9**	**+0.2**
ARU				*PP	**pP**	**12 10 53.1**	**-0.9**
ARU				S	**S**	**12 18 00.4**	**+1.5**
ARU				SS	**SS**	**12 21 43.0**	**-1.0**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
J19K	**Poorman**	**55.87**	**31**	P	**P**	**12 10 32.2**	**+0.9**
J19K				IAmb	IAmb	12 10 32.7	
	comp=Z,1.5nm,0.7s						
CAST	**Castle Rocks**	**57.47**	**31**	P	**P**	**12 10 43.9**	**+1.2**
CAST				IAmb	IAmb	12 10 43.9	
	comp=Z,2.2nm,0.8s						
ILAR	**Eielson Array**	**59.59**	**30**	P	**P**	**12 10 56.4**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=293,slow=7.5,SNR=4.5						
	comp=Z,0.4nm,0.7s						
BELG	**Belogornoye**	**62.05**	**317**‖	*e*P	**P**	**12 11 13.2**	**-0.9**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STKA	**Stephens Creek**	**63.19**	**169**	P	**P**	**12 11 22.4**	**+0.6**
STKA	**Stephens Creek**	**63.19**	**169**	P	**P**	**12 11 22.4**	**+0.6**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	**Stephens Creek**	**63.19**	**169**	P	**P**	**12 11 21.8**	**0.0**
	comp=Z,3.1nm,0.5s,baz=342,slow=6.5,SNR=8.8						
	comp=Z,3.1nm,0.5s						
EPYK	**Eagle Plains**	**63.39**	**27**	P	**P**	**12 11 23.6**	**+0.7**
EPYK				IAmb	IAmb	12 11 24.1	
	comp=Z,3.6nm,0.7s						
INK	**Inuvik**	**64.01**	**24**	P	**P**	**12 11 27.1**	**+0.3**
INK	**Inuvik**	**64.01**	**24**	P	**P**	**12 11 27.1**	**+0.3**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SPITS	**Spitsbergen Ar**	**64.81**	**348**	P	**P**	**12 11 30.9**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=83,slow=9.3,SNR=6.6						
	comp=Z,4.2nm,0.7s						
A36M	**Sachs Harbour**	**65.36**	**19**	P	**P**	**12 11 36.1**	**+0.6**
A36M				IAmb	IAmb	12 11 36.4	
	comp=Z,3.5nm,0.7s						
FARO	**Faro, Yukon**	**66.09**	**31**	P	**P**	**12 11 41.5**	**+1.1**
ARCES	**ARCESS Array B**	**66.51**	**338**	P	**P**	**12 11 40.9**	**-2.1**
	comp=Z,4.7nm,0.9s,baz=51,slow=7.9,SNR=4.3						
	comp=Z,4.7nm,0.9s						
C36M	**Paulatuk**	**66.82**	**22**	P	**P**	**12 11 45.2**	**+0.3**
KBZ	**Khabaz**	**67.78**	**309**‖	*e*P	**P**	**12 11 52.1**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**67.78**	**309**	P	**P**	**12 11 51.1**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=61,slow=2.7,SNR=8.2						
	comp=Z,3.8nm,0.8s						
FIA1	**FINESS Array S**	**69.87**	**330**	P	**P**	**12 12 03.1**	**-0.8**
FINES	**FINESS Array B**	**69.87**	**330**	P	**P**	**12 12 03.0**	**-1.0**
FINES	**FINESS Array B**	**69.87**	**330**	P	**P**	**12 12 03.0**	**-1.0**
FINES	**FINESS Array B**	**69.87**	**330**	P	**P**	**12 12 02.9**	**-1.1**
	comp=Z,5.9nm,0.5s,baz=70,slow=6.0,SNR=60						
	comp=Z,5.9nm,0.5s						
RES	**Resolute Bay**	**70.77**	**12**	P	**P**	**12 12 09.6**	**+0.4**
RES	**Resolute Bay**	**70.77**	**12**	P	**P**	**12 12 09.6**	**+0.4**
RES				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VSU	**Vasula**	**70.96**	**327**‖	*e*P	**P**	**12 12 10.3**	**-0.4**
VSU				pmax	pmax		
	comp=Z,34nm,2.5s						
AKASG	**Malin Array Be**	**73.33**	**319**	P	**P**	**12 12 23.5**	**-1.4**
	comp=Z,2.1nm,0.4s,baz=57,slow=6.5,SNR=5.8						
	comp=Z,2.1nm,0.4s						
AKBB	**Malin Array Si**	**73.33**	**319**	P	**P**	**12 12 23.9**	**-1.0**
AKBB				IAmb	IAmb	12 12 24.3	
	comp=Z,4.9nm,0.6s						
AKBB	**Malin Array Si**	**73.33**	**319**	P	**P**	**12 12 23.9**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA	**Yellowknife Ar**	**73.66**	**26**	P	**P**	**12 12 27.6**	**+1.1**
YKA	**Yellowknife Ar**	**73.66**	**26**	P	**P**	**12 12 27.7**	**+1.1**
YKA	**Yellowknife Ar**	**73.66**	**26**	P	**P**	**12 12 26.6**	**0.0**
	comp=Z,0.7nm,0.7s,baz=307,slow=5.5,SNR=17						
	comp=Z,0.7nm,0.7s						
HFS	**Hagfors**	**75.70**	**333**	P	**P**	**12 12 36.9**	**-1.5**
	comp=Z,2.1nm,0.5s,baz=102,slow=3.5,SNR=9.1						
	comp=Z,2.1nm,0.5s						
BRTR	**Keskin Array B**	**75.75**	**308**	P	**P**	**12 12 38.1**	**-1.2**
	comp=Z,4.2nm,0.7s,baz=134,slow=11,SNR=19						
	comp=Z,4.2nm,0.7s						
NC405	**NORSAR Array S**	**75.86**	**334**	P	**P**	**12 12 38.3**	**-1.1**
NB2	**NORSAR Subarra**	**76.09**	**334**	P	**P**	**12 12 39.1**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=49,slow=5.6						
NOA	**NORSAR Array B**	**76.09**	**334**	P	**P**	**12 12 39.2**	**-1.6**
	comp=Z,3.1nm,0.7s,baz=36,slow=14,SNR=4.5						
	comp=Z,3.1nm,0.7s						
SUMG	**Summit**	**76.67**	**357**	P	**P**	**12 12 44.8**	**+0.6**
SUMG	**Summit**	**76.67**	**357**	P	**P**	**12 12 44.8**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**77.14**	**318**	P	**P**	**12 12 46.9**	**-0.1**
BUR08				IAmb	IAmb	12 12 49.9	
	comp=Z,3.6nm,1.1s						
KOLS	**Kolonicke sedl**	**78.10**	**320**	*e*P	**P**	**12 12 52.3**	**+0.1**
KOLS	**Kolonicke sedl**	**78.10**	**320**	*e*P	**P**	**12 12 52.3**	**+0.1**
OJC	**Ojcow**	**78.72**	**322**	P	**P**	**12 12 55.3**	**-0.2**
OJC	**Ojcow**	**78.72**	**322**	P	**P**	**12 12 55.3**	**-0.2**
OJC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MORC	**Moravsky Berou**	**80.16**	**323**	P	**P**	**12 13 03.2**	**-0.2**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
CLL	**Collm**	**81.51**	**326**‖	*i*P	**P**	**12 13 09.9**	**-0.5**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CLL	**Collm**	**81.51**	**326**‖	*i*P	**P**	**12 13 09.9**	**-0.5**
	comp=Z,8.0nm,0.7s						
CONA	**Conrad Observa**	**82.16**	**322**	*e*P	**P**	**12 13 14.9**	**+0.8**
	comp=Z,2.5nm,0.5s						
GERES	**GERESS Array B**	**82.72**	**323**	P	**P**	**12 13 16.4**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=64,slow=6.1,SNR=4.8						
	comp=Z,1.0nm,0.5s						
FCC	**Fort Churchill**	**83.46**	**22**	P	**P**	**12 13 20.4**	**0.0**
FCC	**Fort Churchill**	**83.46**	**22**	P	**P**	**12 13 20.4**	**0.0**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBKA	**Obir**	**83.74**	**321**	*e*P	**P**	**12 13 22.5**	**+0.3**
	comp=Z,3.1nm,0.7s						
KBA	**Koelnbreinsper**	**84.02**	**322**	*e*P	**P**	**12 13 23.3**	**-0.5**
	comp=Z,1.7nm,0.4s						
LESA	**Schwarzleotal**	**84.15**	**323**	*i* P	**P**	**12 13 24.1**	**-0.2**
	comp=Z,2.3nm,0.3s						
MYKA	**Terra Mystica**	**84.15**	**322**	*e*P	**P**	**12 13 23.6**	**-0.7**
	comp=Z,3.1nm,0.4s						
EKA	**Eskdalemuir Ar**	**85.48**	**335**	P	**P**	**12 13 29.1**	**-1.6**
	comp=Z,0.9nm,0.4s,baz=46,slow=4.1,SNR=5.8						
	comp=Z,0.9nm,0.4s						
NVAR	**Mina Array Bea**	**86.05**	**47**	P	**P**	**12 13 34.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=293,slow=5.4,SNR=12						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**88.49**	**40**	P	**P**	**12 13 46.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=343,slow=1.5,SNR=3.9						
	comp=Z,0.3nm,0.6s						
ULM	**Lac du Bonnet**	**89.56**	**28**	P	**P**	**12 13 50.1**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=310,slow=5.2,SNR=9.1						
	comp=Z,3.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**114.14**	**304**	PKP	PKPdf	12 19 30.8	-1.6
	comp=Z,0.2nm,0.4s,baz=0.7,slow=1.2,SNR=2.7						
QSPA	**South Pole Qui**	**120.51**	**180**	PKP	**PKPdf**	**12 19 42.6**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=269,slow=1.7,SNR=7.3						

IDC 14 12:03:23.5±3.6, 2.89S×130.74E, h0km, mb3.3/2, mbtmp3.4/3, ML3.0/1, Error ellipse: s-maj=249.8km s-min=29.9km az=71.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.31**	**169**	P	Pn	12 07 26.2	-0.6
	0.1nm,0.3s,baz=352,slow=13,SNR=3.0						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**20.88**	**172**	P	P	12 08 07.7	+0.2
	0.7nm,0.7s,baz=355,slow=9.1,SNR=16						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**65.24**	**326**	P	P	12 14 07.1	0.0
	0.5nm,0.9s,baz=116,slow=7.0,SNR=3.4						
	0.5nm,0.9s						

IDC 14 12:19:38.7±1.0, 3.20S×140.94E, h0km, mb3.7/7, mbtmp3.8/10, ML3.9/2, MS3.3/7, Error ellipse: s-maj=37.8km s-min=18.7km az=71.0
NEIC 14 12:19:39.1±1.7, 3.31S±0.08×140.99E±0.07, h10km±1km, mb4.3/21, Error ellipse: s-maj=14.0km s-min=10.1km az=152.0

ISC 14 12:19:39.1±0.5, 3.26S±0.05×140.88E±0.07, h10km, n62, σ1s65/52, mb4.0/11, MS3.3/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.97**	**313**	P	**Pb**	**12 19 58.1**	**+0.1**
TABU	**Tabubil**	**2.03**	**170**	P	**Pg**	**12 20 19.1**	**+1.0**
MANU	**Manus Island**	**6.59**	**80**	Pn	**Pn**	**12 21 14.5**	**-1.6**
FAKI	**Fak Fak**	**8.62**	**272**	Pn	**Pn**	**12 21 44.4**	**+0.2**
PMG	**Port Moresby**	**8.73**	**135**		**Pn**	**12 21 43.5**	**-2.1**
PMG	**Port Moresby**	**8.73**	**135**	Pn	**Pn**	**12 21 47.3**	**+1.7**
	3.5nm,0.5s,baz=227,slow=15,SNR=3.1						
PMG				Sn	**Sn**	**12 23 27.5**	**+3.3**
	0.3nm,0.3s,baz=271,slow=18,SNR=1.6						
PMG				LR	LR	12 26 13.5	
	comp=Z,104nm,19.3s,baz=62,slow=45						
SAUI	**Saumlaki**	**10.63**	**243**	Pn	**Pn**	**12 22 11.2**	**-0.4**
COEN	**Coen**	**10.87**	**168**		**Pn**	**12 22 13.3**	**-1.6**
COEN	**Coen**	**10.87**	**168**	P	Pn	12 22 20.6	+5.7
RABL	**Rabaul**	**11.30**	**95**	Pn	**Pn**	**12 22 18.5**	**-2.3**
KDU	**Kakadu**	**12.53**	**221**	P	Pn	12 22 43.3	+5.7
MTN	**Manton Dam**	**13.55**	**225**	Pn	**Pn**	**12 22 51.5**	**-0.1**
MTN	**Manton Dam**	**13.55**	**225**	P	**P**	**12 22 56.6**	**-4.2**
QIS	**Mount Isa**	**17.24**	**184**	P	**P**	**12 23 44.5**	**+2.8**
CTA	**Charters Tower**	**17.53**	**163**	P	**P**	**12 23 46.9**	**+1.9**
	0.1nm,0.3s,baz=299,slow=6.5,SNR=2.0						
	2.6nm,0.9s						
CTAO	**Charters Tower**	**17.53**	**163**		**P**	**12 23 43.5**	**-1.4**
WB0	**Warramunga Arr**	**17.59**	**201**	P	**Pn**	**12 23 44.2**	**-0.4**
WB0				IAmb	IAmb	12 24 03.3	
	comp=Z,15nm,0.8s						
SOEI	**Soe**	**17.72**	**248**		**Pn**	**12 23 47.0**	**+0.7**
SOEI				IAmb	IAmb	12 24 13.7	
	comp=Z,37nm,0.7s						
WR0	**Warramunga Arr**	**17.72**	**200**	P	**P**	**12 23 48.4**	**+1.4**
WR0				IAmb	IAmb	12 24 12.3	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**17.76**	**201**	P	**Pn**	**12 23 45.4**	**-1.2**
WRAB				IAmb	IAmb	12 24 05.3	
	comp=Z,20nm,0.9s						
WB2	**Warramunga Arr**	**17.77**	**201**	P	**Pn**	**12 23 45.3**	**-1.5**
WB2				IAmb	IAmb	12 24 05.4	
	comp=Z,19nm,0.9s						
WRA	**Warramunga Arr**	**17.77**	**201**	P	**P**	**12 23 47.4**	**-0.2**
WRA	**Warramunga Arr**	**17.77**	**201**	P	**P**	**12 23 48.6**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=22,slow=12,SNR=31						
WRA				S	**Sn**	**12 27 04.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=17,slow=22,SNR=3.1						
	comp=Z,6.5nm,0.7s						
LUWI	**Luwuk**	**18.23**	**277**	P	**Pn**	**12 23 53.2**	**+0.7**
MMRI	**Maumere**	**19.29**	**253**	P	**Pn**	**12 24 06.2**	**+0.8**
HNR	**Honiara**	**19.91**	**109**	P	**P**	**12 24 09.2**	**-1.9**
HNR	**Honiara**	**19.91**	**109**	LR	LR	12 32 27.4	
	comp=Z,603nm,18.1s,baz=315,slow=39						
FITZ	**Fitzroy Crossi**	**20.99**	**224**	P	**P**	**12 24 22.4**	**-0.4**
AS31	**Alice Springs**	**21.38**	**198**	P	**P**	**12 24 26.6**	**-0.5**
ASAR	**Alice Springs**	**21.38**	**198**	P	**P**	**12 24 27.0**	**0.0**
ASAR	**Alice Springs**	**21.38**	**198**	P	**P**	**12 24 28.1**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=31,slow=10,SNR=91						
ASAR				S	**S**	**12 28 27.2**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=21,slow=18,SNR=2.6						
ASAR				LR	LR	12 33 35.8	
	comp=Z,126nm,21.4s,baz=36,slow=39						
	comp=Z,3.7nm,0.6s						
EIDS	**Eidsvold**	**24.08**	**157**	P	**P**	**12 24 50.8**	**-4.1**
EIDS				IAmb	IAmb	12 25 05.5	
	comp=Z,6.7nm,0.8s						
EIDS	**Eidsvold**	**24.08**	**157**	P	**P**	**12 24 57.5**	**+2.6**
WRKA	**Warakurna**	**24.82**	**208**	P	**P**	**12 25 03.9**	**+2.2**
BBOO	**Buckleboo**	**29.75**	**188**	P	**P**	**12 25 44.6**	**-1.2**
BBOO				IAmb	IAmb	12 25 59.8	
	comp=Z,13nm,1.1s						
FORT	**Forrest**	**29.94**	**203**	P	**P**	**12 25 44.6**	**-2.9**
H11S3	**WAKE ISLAND Hy**	**33.36**	**49**	T	T	13 00 52.6	
	baz=232,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**33.38**	**49**	T	T	13 00 56.0	
	baz=232,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**33.38**	**49**	T	T	13 00 56.2	
	baz=232,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**34.27**	**47**	T	T	13 01 49.7	
	baz=230						
H11N2	**WAKE ISLAND Hy**	**34.28**	**47**	T	T	13 01 55.7	
	baz=230						
H11N3	**WAKE ISLAND Hy**	**34.28**	**47**	T	T	13 01 46.5	
	baz=230						
KSRS	**Korea Array**	**42.26**	**345**	LR	LR	12 44 01.2	
	comp=Z,16nm,19.6s,baz=115,slow=35						
CMAR	**Chiang Mai Arr**	**46.59**	**299**	P	**P**	**12 28 09.2**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=126,slow=6.1,SNR=4.2						
	comp=Z,0.4nm,0.6s						
PETK	**Petropavlovsk-**	**57.91**	**12**	LR	LR	12 50 48.7	
	comp=Z,20nm,21.9s,baz=73,slow=32						
SONM	**Songino Array**	**59.15**	**334**	P	**P**	**12 29 41.5**	**+1.3**
SONM	**Songino Array**	**59.15**	**334**	P	**P**	**12 29 41.5**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=134,slow=4.2,SNR=2.9						
	comp=Z,0.3nm,0.6s						
MK31	**Makanchi Array**	**71.55**	**322**	P	**P**	**12 31 00.5**	**0.0**
MK31				IAmb	IAmb	12 31 12.9	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**71.55**	**322**	P	**P**	**12 30 59.8**	**-0.7**
MKAR	**Makanchi Array**	**71.55**	**322**	P	**P**	**12 31 02.2**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=97,slow=8.7,SNR=5.2						
	comp=Z,0.3nm,0.6s						
MAKZ	**Makanchi**	**71.75**	**322**	P	**P**	**12 31 01.2**	**-0.5**
MAKZ				IAmb	IAmb	12 31 21.7	
	comp=Z,1.3nm,0.8s						
AKUT	**Akutan**	**72.23**	**30**	P	**P**	**12 31 03.3**	**-1.1**
ZALV	**Zalesovo Beam**	**73.50**	**329**	P	**P**	**12 31 12.3**	**+0.4**
KURBB	**Kurchatov Arra**	**75.42**	**324**	LR	LR	13 07 20.9	
	comp=Z,13nm,18.1s,baz=158,slow=38						
BVAR	**Borovoye Array**	**81.00**	**325**	P	**P**	**12 31 55.3**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=108,slow=6.5,SNR=6.9						
	comp=Z,1.3nm,0.7s						
ILAR	**Eielson Array**	**85.43**	**24**	P	**P**	**12 32 16.7**	**0.0**
	comp=Z,0.3nm,0.6s,baz=262,slow=5.1,SNR=2.8						
	comp=Z,0.3nm,0.6s						
ABKAR	**Akbulak array**	**86.53**	**320**	P	**P**	**12 32 23.0**	**+0.5**
QSPA	**South Pole Qui**	**86.69**	**180**	P	**P**	**12 32 23.6**	**+0.5**
QSPA				IAmb	IAmb	12 32 48.3	
	comp=Z,2.7nm,1.1s						
QSPA	**South Pole Qui**	**86.69**	**180**	P	**P**	**12 32 23.8**	**+0.7**
	comp=Z,1.2nm,1.0s,baz=45,slow=1.4,SNR=1.6						
	comp=Z,1.2nm,1.0s						
KIRV	**Kirov**	**93.52**	**328**	LR	LR	13 16 36.5	
	comp=Z,18nm,20.4s,baz=254,slow=36						
TORD	**Torodi Ar. Bea**	**138.49**	**286**	PKP	**PKPdf**	**12 39 06.1**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=34,slow=3.8,SNR=3.5						
DBIC	**Dimbokro**	**145.70**	**277**	PKPbc	**PKPab**	**12 39 20.6**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=90,slow=5.1,SNR=2.0						

IDC 14 12:29:51.9±1.9, 63.87N×28.90E, h0km, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=36.8km s-min=9.7km az=100.0
HEL 14 12:29:52.0±0.1, 63.98N×28.10E, h0km, ML1.7, Suspected explosion

UPP 14 12:29:53.9±2.7, 63.93N×27.77E, h0km, ML1.8

ISC 14 12:29:52.0±0.8, 63.94N±0.02×28.11E±0.03, h0km, n37, σ1s31/60, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.57**	**194**	PG	**Pg**	**12 30 03.0**	**+0.1**
	baz=15						
NIF				SG	**Sg**	**12 30 10.5**	**+0.2**
RMF	**Romuvaara**	**0.85**	**70**	PG	**Pg**	**12 30 07.7**	**-0.6**
RMF				MSG		12 30 17.9	
	comp=Z,8.3nm,0.2s						
RMF				SG	**Sg**	**12 30 18.3**	**-0.9**
OUL	**Oulu**	**1.49**	**321**	PN	**Pn**	**12 30 19.1**	**-1.0**
OUL				SN	**Sg**	**12 30 39.6**	**-0.3**
SUF	**Sumiainen**	**1.51**	**217**	PG	**Pn**	**12 30 20.0**	**-0.3**
SUF				MSG		12 30 38.1	
	comp=Z,6.0nm,0.2s						
SUF				SN	**Sn**	**12 30 42.9**	**+2.2**
OUF	**Merijarvi**	**1.54**	**288**	PN	**Pn**	**12 30 19.9**	**-0.8**
OUF				MSG		12 30 37.6	
	comp=Z,9.8nm,0.2s						
OUF				SN	**Sg**	**12 30 40.9**	**-0.5**
OBF4	**Vikkela, Lumij**	**1.57**	**305**	PN	**Pn**	**12 30 20.4**	**-0.8**
OBF4				MSG		12 30 38.4	
	comp=Z,7.0nm,0.2s						
OBF4				SN	**Sg**	**12 30 43.0**	**+0.5**
JOF	**Joensuu**	**1.77**	**124**	PG	**Pn**	**12 30 24.1**	**+0.3**
	baz=305						
JOF				SG	**Sg**	**12 30 49.0**	**+0.2**
OBF0	**Syolatti, Pyha**	**1.78**	**290**	PG	**Pn**	**12 30 24.1**	**+0.1**
OBF0				MSG		12 30 44.6	
	comp=Z,14nm,0.2s						
KAF	**Kangasniemi**	**2.01**	**205**	PG	**Pb**	**12 30 28.6**	**-0.8**
KAF				MSG		12 30 52.9	
	comp=Z,18nm,0.2s						
KAF				SG	**Sg**	**12 30 57.0**	**+0.5**
MSF	**Maaselka**	**2.02**	**11**	PG	**Pn**	**12 30 27.5**	**+0.2**
MSF				SG	**Sn**	**12 30 54.4**	**+1.2**
OBF8	**Ulkokalla**	**2.08**	**283**	PG	**Pb**	**12 30 29.5**	**-1.1**
OBF8				MSG		12 30 53.4	
	comp=Z,5.8nm,0.2s						
RANF	**Ranua**	**2.16**	**346**	PG	**Pn**	**12 30 30.0**	**+0.8**
RANF				SG	**Sn**	**12 30 58.0**	**+1.4**
KU6	**Riekki**	**2.23**	**19**	PG	**Pn**	**12 30 30.9**	**+0.8**
	baz=204						
KU6				MSG		12 30 56.8	
	comp=Z,2.8nm,0.2s						
KU6				SG	**Sn**	**12 31 00.4**	**+2.1**
KEF	**Keuruu**	**2.31**	**221**	PG	**Pb**	**12 30 33.7**	**-0.8**
KEF				MSG		12 31 01.2	
	comp=Z,9.1nm,0.2s						
KEF				SG	**Sg**	**12 31 04.6**	**-1.6**
OLKF	**Oulanka, Finla**	**2.45**	**12**	PG	**Pn**	**12 30 34.9**	**+1.7**
OLKF				MSG		12 31 03.3	
	comp=Z,2.6nm,0.2s						
OLKF				SG	**Sn**	**12 31 06.6**	**+2.8**
RUF	**Ruokolahti**	**2.56**	**171**	PG	**Pb**	**12 30 37.5**	**-1.2**
	baz=348						
RUF				MSG		12 31 08.7	
	comp=Z,7.0nm,0.2s						
RUF				SG	**Sg**	**12 31 11.9**	**-2.2**
VAF	**Ylistaro**	**2.60**	**252**	PG	**Pb**	**12 30 37.8**	**-1.6**
VAF				MSG		12 31 09.0	
	comp=Z,6.2nm,0.2s						
VAF				SG	**Sb**	**12 31 11.8**	**0.0**
FIA0	**FINESS Array S**	**2.68**	**201**	PB	**Pb**	**12 30 39.3**	**-1.4**
FIA0				MSG		12 31 12.1	
	comp=Z,4.9nm,0.2s						
FIA0				SB	**Sb**	**12 31 13.0**	**-1.1**
FINES	**FINESS Array B**	**2.68**	**201**	Pn	**Pb**	**12 30 38.6**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=24,slow=15,SNR=18						
FINES				Sn	**Sb**	**12 31 13.2**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=24,slow=24,SNR=16						
	comp=Z,2.0nm,0.4s						
TOF	**Tornio**	**2.68**	**325**	PB	**Pn**	**12 30 36.9**	**+0.5**
TOF				MSG		12 31 09.7	
	comp=Z,1.2nm,0.2s						
TOF				SB	**Sn**	**12 31 10.6**	**+1.1**
KALU	**Kalix**	**2.79**	**316**	P	**Pn**	**12 30 38.7**	**+0.8**
KALU				S	**Sn**	**12 31 11.5**	**-0.7**
RNF	**Rovaniemi**	**2.82**	**343**	PB	**Pn**	**12 30 39.9**	**+1.6**
RNF				SG	**Sb**	**12 31 17.3**	**-0.9**
BURU	**Burvik**	**3.01**	**285**	P	**Pn**	**12 30 41.1**	**+0.2**
BURU	**Burvik**	**3.01**	**285**	PB	**Pn**	**12 30 42.1**	**+1.3**
BURU				SB	**Sn**	**12 31 19.5**	**+2.0**
SJUU	**Sjulsmark**	**3.20**	**302**	P	**Pn**	**12 30 43.6**	**+0.1**
ODEU	**Stanfors**	**3.27**	**282**

AAK S Sn 12 35 00.7 -1.9
comp=E,138nm,0.5s,baz=343,slow=20,SNR=24
AAK LR LR 12 35 56.6
comp=E,25nm,19.8s,baz=298,slow=37
CHM Chimkent 5.04 333 *e*P **Pn 12 34 06.3 -0.8**
baz=332
CHM Chimkent 5.04 333 *e*PN **Pn 12 34 06.3 -0.8**
KBK Karagaybulak 5.06 19 P **Pn 12 34 07.5 -0.1**
SNR=46
DZA Taraz 5.12 348 *e*P **Pn 12 34 07.1 -1.1**
baz=348
DZA Taraz 5.12 348 *e*PN **Pn 12 34 07.0 -1.1**
ULHL Ulahol 5.12 31 P **Pn 12 34 07.8 -0.6**
SNR=21
FRU1 Bishkek 5.13 16 Pn 12 34 09.0 +0.6
FRU1 Bishkek 5.13 16 PN **Pn 12 34 09.0 +0.6**
BOOM Boomskoye usch 5.21 27 Pn 12 34 09.5 -0.1
BOOM Boomskoye usch 5.21 27 PN **Pn 12 34 09.5 -0.1**
CHMS Chumysh 5.34 16 P **Pn 12 34 11.4 +0.3**
SNR=16
JMU Jammu 5.45 160 *e*P **Pn 12 34 12.4 -0.2**
JMU *e*S **Sn 12 35 09.8 -4.8**
TARG Taragay, Kyrgy 5.48 44 Pn 12 34 12.8 -0.5
TARG Taragay, Kyrgy 5.48 44 PN **Pn 12 34 12.8 -0.5**
KK31 Karatay Array 5.48 343 ⇓P **Pn 12 34 09.7 -3.3**
comp=E,32nm,0.3s,baz=156,slow=12,SNR=650
KK31 ⇑S **Sn 12 35 09.4 -5.9**
comp=E,321nm,0.5s,baz=173,slow=24,SNR=6.3
KK31 Karatay Array 5.48 343 Pn 12 34 12.2 -0.8
KK31 Karatay Array 5.48 343 PN **Pn 12 34 09.7 -3.3**
KKAR Karatay Array 5.48 343 Pn 12 34 12.0 -1.0
KKAR Karatay Array 5.48 343 PN **Pn 12 34 12.0 -1.0**
TKM2 Tokmak 2 5.49 23 P **Pn 12 34 12.9 -0.3**
SNR=13
TKM2 Tokmak 2 5.49 23 ⇑P **Pn 12 34 12.5 -0.7**
comp=E,46nm,0.8s
TKM2 ⇑S **Sn 12 35 14.3 -1.4**
comp=E,87nm,1.0s
TKM2 Tokmak 2 5.49 23 PN **Pn 12 34 12.5 -0.7**
TKM2 S **Sn 12 35 14.3 -1.4**
USP Ospenovka 5.54 13 P **Pn 12 34 13.3 -0.5**
SNR=82
BRLS Borolday 5.59 338 *e*P **Pn 12 34 10.3 -4.2**
baz=335
BRLS Borolday 5.59 338 *e*PN **Pn 12 34 10.3 -4.2**
SGDS Sogindy 5.75 14 *e*P **Pn 12 34 15.2 -1.4**
baz=14
SGDS Sogindy 5.75 14 *e*PN **Pn 12 34 15.1 -1.4**
THN Thein Dam 5.96 155 *e*P **Pn 12 34 19.5 +0.1**
THN *e*S **Sn 12 35 23.0 -3.9**
THN IAML 12 35 27.6
comp=E,558nm,0.4s
THN IAML 12 35 28.2
comp=N,893nm,0.3s
TNSS Tian-Shan 6.07 31 *e*P **Pn 12 34 19.9 -1.2**
baz=31
TNSS Tian-Shan 6.07 31 *e*PN **Pn 12 34 19.9 -1.2**
ANVS Anan'yevo 6.18 36 PN **Pn 12 34 22.4 0.0**
AAA Alma-Ata 6.20 30 *e*P **Pn 12 34 21.6 -1.0**
baz=30
AAA Alma-Ata 6.20 30 *e*PN **Pn 12 34 21.5 -1.0**
MDOK Medeo 6.21 31 ⇓P **Pn 12 34 22.3 -0.6**
comp=N,34nm,1.2s
MDOK ⇑S **Sn 12 35 35.2 +2.2**
comp=N,45nm,0.8s
MDOK Medeo 6.21 31 *i* P **Pn 12 34 22.3 -0.6**
baz=30
MDOK Medeo 6.21 31 PN **Pn 12 34 22.3 -0.6**
MDOK S **Sn 12 35 35.2 +2.2**
KNDC Almaty 6.23 30 ⇑P **Pn 12 34 23.4 +0.4**
comp=N,58nm,0.5s
KNDC ⇑S **Sn 12 35 33.6 +0.4**
comp=N,100nm,0.6s
KNDC Almaty 6.23 30 PN **Pn 12 34 23.4 +0.4**
KNDC S **Sn 12 35 33.6 +0.4**
PRZ Przheval'sk 6.32 42 Pn **Pn 12 34 24.6 +0.3**
PRZ Przheval'sk 6.32 42 PN **Pn 12 34 24.8 +0.5**
DHRM DHARAMSHALA 6.34 151 *e*P **Pn 12 34 24.7 0.0**
DHRM *e*S **Sn 12 35 31.6 -4.6**
DHRM IAML 12 35 35.0
comp=E,1μm,0.4s
DHRM IAML 12 35 38.6
comp=E,1μm,0.4s
KUU Kurty 6.59 23 *e*P **Pn 12 34 26.4 -1.4**
baz=23
KUU Kurty 6.59 23 *e*PN **Pn 12 34 26.4 -1.4**
SATY Saty 6.74 38 *e*P **Pn 12 34 28.6 -1.3**
comp=E,9.9nm,0.6s,baz=38
SATY Saty 6.74 38 *e*PN **Pn 12 34 28.5 -1.3**
SATY pmax pmax
comp=Z,10.0nm,0.6s
CHKK Chushkaly 6.78 27 *e*P **Pn 12 34 28.7 -1.6**
baz=27
CHKK Chushkaly 6.78 27 *e*PN **Pn 12 34 28.6 -1.6**
ZHN Zhinishke 6.83 38 *e*P **Pn 12 34 30.1 -1.1**
comp=Z,8.1nm,0.6s,baz=38
ZHN Zhinishke 6.83 38 *e*PN **Pn 12 34 30.0 -1.1**
ZHN pmax pmax
comp=Z,8.0nm,0.6s
UZB Uzynbulak 7.11 40 *e*P **Pn 12 34 34.0 -0.8**
baz=40
UZB Uzynbulak 7.11 40 *e*PN **Pn 12 34 34.0 -0.8**
BHK Bhakra 7.13 154 *e*P **Pn 12 34 34.5 -0.5**
BHK *e*S **Sn 12 35 49.1 -5.8**
BHK IAML 12 35 56.4
comp=E,443nm,0.4s
BHK IAML 12 36 03.9
comp=E,359nm,0.6s
KPKS Kokpek 7.18 37 *e*P **Pn 12 34 34.9 -0.8**
baz=37
KPKS Kokpek 7.18 37 *e*PN **Pn 12 34 34.9 -0.8**
BTLS Baital 7.22 7 *e*P **Pn 12 34 34.7 -1.4**
comp=E,4.6nm,0.5s,baz=7.2
BTLS Baital 7.22 7 *e*PN **Pn 12 34 34.7 -1.4**
BTLS pmax pmax
comp=Z,5.0nm,0.5s
SHLS Shalkode 7.35 42 *e*P **Pn 12 34 39.5 +1.5**
baz=44
SHLS Shalkode 7.35 42 *e*PN **Pn 12 34 39.4 +1.5**
PDGK Podgornoye 7.48 41 ⇑P **Pn 12 34 38.5 -1.2**
comp=Z,47nm,0.8s
PDGK ⇓S **Sn 12 36 05.3 +1.9**
comp=Z,77nm,0.9s
PDGK Podgornoye 7.48 41 PN **Pn 12 34 38.5 -1.2**
PDGK S **Sn 12 36 05.3 +1.9**
SMLA Simla 7.67 150 *e*P **Pn 12 34 40.7 -1.5**
SMLA *e*S **Sn 12 36 01.0 -6.7**
TDK Taldyqorghan 8.29 29 *i* P **Pn 12 34 49.0 -1.4**
baz=29
TDK Taldyqorghan 8.29 29 *i* PN **Pn 12 34 49.0 -1.4**
DDI Dehra Dun 8.74 148 *e*P **Pn 12 34 55.2 -1.3**
DDI *e*S **Sn 12 36 27.3 -6.4**
DDI IAML 12 36 31.1
comp=E,367nm,0.2s
DDI IAML 12 36 35.4
comp=E,470nm,0.4s
NDI New Delhi 9.91 156 *e*P **Pn 12 35 11.3 -0.8**
NDI *e*S Sn 12 36 51.8 -10
NDI IAML 12 36 56.2
comp=N,59nm,0.5s
NDI IAML 12 36 57.6
comp=E,84nm,0.6s
KUDL Kundal 10.21 161 *e*P Pn 12 35 12.0 -4.0
SONA Sohna 10.28 158 *e*S Sn 12 37 00.6 -10
PTH Pithoragarh 10.38 141 *e*P Pn 12 35 14.6 -3.9
LGTI Lohaghat 10.48 141 *e*P Pn 12 35 15.0 -4.6
LGTI *e*S Sn 12 37 03.2 -12
LGTI IAML 12 37 08.6
comp=E,53nm,0.5s
LGTI IAML 12 37 11.1
comp=N,57nm,0.5s
MAKZ Makanchi 11.23 35 ⇑P **Pn 12 35 28.3 -1.1**
comp=N,30nm,0.8s
MAKZ Makanchi 11.23 35 Pn 12 35 29.0 -0.3
MAKZ Makanchi 11.23 35 P **Pn 12 35 29.0 -0.3**
MK31 Makanchi Array 11.36 35 P **Pn 12 35 29.8 -1.3**
comp=N,9.8nm,0.7s,baz=213,slow=13,SNR=60
MK31 Makanchi Array 11.36 35 Pn 12 35 31.1 +0.1
MK31 Makanchi Array 11.36 35 P **Pn 12 35 31.2 +0.1**
MKAR Makanchi Array 11.36 35 Pn **Pn 12 35 30.6 -0.5**
MKAR Makanchi Array 11.36 35 P **Pn 12 35 30.6 -0.5**
MKAR Makanchi Array 11.36 35 P **Pn 12 35 29.8 -1.3**
comp=N,3.3nm,0.6s,baz=219,slow=14,SNR=58
AJM Ajmer 11.49 171 *e*P **Pn 12 35 33.1 +0.2**
GEYT Alibeck 11.55 275 P **Pn 12 35 29.6 -4.0**
comp=N,17nm,0.4s,baz=100,slow=10,SNR=28
GEYT S Sn 12 37 30.0 -11
comp=N,10nm,0.6s,baz=57,slow=16,SNR=4.4
BRZS Berezniki 12.10 360 *e*P **Pn 12 35 39.8 -0.8**
baz=360
BRZS Berezniki 12.10 360 *e*P **Pn 12 35 39.7 -0.8**
WMQ Urumqi 12.78 58 *e*P **Pn 12 35 48.3 -1.3**
WMQ S **Sn 12 38 06.3 -4.5**
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.5s
ZSN Zaisan 13.07 39 *e*P **Pn 12 35 52.3 -0.8**
baz=39
ZSN Zaisan 13.07 39 *e*P **Pn 12 35 52.3 -0.8**
KURBB Kurchatov Arra 13.39 16 ⇓P **P 12 35 59.9 -1.4**
comp=Z,13nm,0.7s
KURBB Kurchatov Arra 13.39 16 P **P 12 35 59.9 -1.4**
KURBB Kurchatov Arra 13.39 16 P **Pn 12 35 54.3 -2.9**
comp=Z,6.9nm,0.9s,baz=206,slow=12,SNR=42
KURK Kurchatov 13.50 16 ⇓P **Pn 12 35 59.7 +1.1**
comp=Z,13nm,0.9s
KURK Kurchatov 13.50 16 Pn **Pn 12 35 55.9 -2.6**
KURK Kurchatov 13.50 16 P **Pn 12 35 55.9 -2.6**
SEM Semipalatinsk 13.62 21 *e*P **Pn 12 36 00.4 0.0**
baz=21
SEM Semipalatinsk 13.62 21 *e*P **Pn 12 36 00.4 0.0**
AB31 Akbulak array 14.64 325 P **Pn 12 36 09.9 -3.1**
comp=Z,12nm,0.6s,baz=138,slow=12,SNR=162
AB31 ⇓S **Sn 12 38 49.2 -6.1**
comp=Z,13nm,0.5s,baz=137,slow=23,SNR=26
AB31 Akbulak array 14.64 325 P **Pn 12 36 09.9 -3.1**
AB31 S **Sn 12 38 49.3 -6.1**
ABKAR Akbulak array 14.64 325 Pn 12 36 10.5 -2.5
BVA0 Borovoye Array 15.23 355 P **Pn 12 36 19.6 -0.7**
comp=Z,2.4nm,0.6s,baz=158,slow=12,SNR=10
BVA0 ⇓S **Sn 12 39 08.9 -0.5**
comp=Z,11nm,1.0s,baz=174,slow=26,SNR=3.7
BVA0 Borovoye Array 15.23 355 P **Pn 12 36 19.6 -0.7**
BVA0 S **Sn 12 39 08.9 -0.5**
BVAR Borovoye Array 15.23 355 P **Pn 12 36 18.4 -1.8**
comp=Z,2.1nm,0.5s,baz=158,slow=13,SNR=6.5
BVAR S Sn 12 38 56.0 -13
comp=Z,0.7nm,0.6s,baz=170,slow=18,SNR=3.5
BRVK Borovoye 15.27 354 ⇑P **P 12 36 21.5 -0.7**
comp=Z,6.1nm,0.9s
BRVK ⇑S **Sn 12 39 09.3 -1.1**
comp=Z,4.3nm,0.8s
BRVK Borovoye 15.27 354 Pn **Pn 12 36 20.5 -0.3**
BRVK Borovoye 15.27 354 P **P 12 36 21.5 -0.7**
BRVK S **Sn 12 39 09.3 -1.1**
DGZ Jazzator, Alta 15.85 37 *d* *i*P **Pn 12 36 27.1 -0.9**
DGZ pmax pmax
comp=Z,18nm,0.8s
AKTO Aktyubinsk 16.36 325 ⇑P **Pn 12 36 33.4 -0.7**
comp=Z,20nm,0.7s
AKTO ⇑S **S 12 39 31.0 -4.8**
comp=Z,14nm,0.8s
AKTO Aktyubinsk 16.36 325 P **Pn 12 36 33.4 -0.7**
AKTO S **S 12 39 30.9 -4.8**
AKTO Aktyubinsk 16.36 325 P **Pn 12 36 33.0 -1.1**
comp=Z,25nm,0.5s,baz=133,slow=11,SNR=59
AKTO S S 12 39 21.0 -15
comp=Z,9.1nm,0.9s,baz=113,slow=18,SNR=4.3
LSA Lhasa 17.33 113 P **Pn 12 36 47.1 +0.6**
LSA IAmb IAmb 12 36 49.0
comp=Z,15nm,0.9s
LSA Lhasa 17.33 113 P **Pn 12 36 47.1 +0.6**
LSA pmax pmax
comp=Z,15nm,0.9s
GOMU GeErMu 17.71 89 P **Pn 12 36 52.1 +1.2**
GOMU pP pP 12 37 11.9 -4.8
GOMU sP sP 12 37 30.9 -5.4
GOMU pmax pmax
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 18.09 23 P **Pn 12 36 54.0 -0.8**
ZALV Zalesovo Beam 18.09 23 P **Pn 12 36 54.0 -0.8**
ZALV Zalesovo Beam 18.09 23 P **Pn 12 36 54.0 -0.8**
ZALV Zalesovo Beam 18.09 23 P **Pn 12 36 53.8 -1.1**
comp=Z,11nm,0.5s,baz=214,slow=11,SNR=55
ZALV S **S 12 40 11.7 -0.8**
comp=Z,1.3nm,0.8s,baz=214,slow=9.5,SNR=2.0
SHL Shillong 20.35 122 P **P 12 37 19.4 +1.3**
SHL IAmb IAmb 12 37 23.4
comp=Z,16nm,0.9s
SHL Shillong 20.35 122 P **P 12 37 19.4 +1.3**
SHL pmax pmax
comp=Z,16nm,0.9s
SVE Sverdlovsk 20.59 341 *e*P **P 12 37 21.1 +0.9**
SVE pmax pmax
comp=Z,16nm,0.8s
ARU Arti 20.83 338 P **P 12 37 23.4 +0.7**
ARU Arti 20.83 338 *d* *i*P **P 12 37 23.1 +0.4**
ARU 12 37 53.3
ARU S **S 12 41 09.8 +3.2**
ARU pmax pmax
comp=Z,10.0nm,0.8s
ARU Arti 20.83 338 P **P 12 37 22.9 +0.2**
comp=Z,3.9nm,0.3s,baz=129,slow=4.5,SNR=13
ARU S **S 12 41 07.6 +1.1**
comp=Z,3.0nm,0.2s,baz=192,slow=14,SNR=2.1
comp=Z,3.9nm,0.3s
GTA Gaotai 21.18 77 *e*P **P 12 37 31.3 +4.4**
GTA pP pP 12 37 58.4 +3.7
GTA sP sP 12 38 21.3 +7.2
GTA pmax pmax
comp=Z,4.0nm,0.8s
GNI Garni 21.83 285 P **P 12 37 37.1 +3.3**
GNI Garni 21.83 285 P **P 12 37 37.1 +3.3**
GNI pmax pmax
comp=Z,46nm,1.0s
GNI Garni 21.83 285 P **P 12 37 34.6 +0.9**
comp=Z,3.3nm,0.3s,baz=122,slow=4.6,SNR=5.7
comp=Z,3.3nm,0.3s
ZEI Tsey 22.46 292 *e*P **P 12 37 40.9 +0.9**
ZEI pmax pmax
comp=Z,6.0nm,0.7s
BELG Belogornoye 22.74 318 *d* *i*P **P 12 37 44.3 +2.1**
BELG pmax pmax
comp=Z,6.0nm,0.9s
BELG Belogornoye 22.74 318 P **P 12 37 42.4 +0.2**
comp=Z,32nm,0.9s,baz=96,slow=1.0,SNR=5.9
comp=Z,32nm,0.9s
AKH Akhalkalaki 22.74 288 P **P 12 37 45.5 +2.9**
AKH Akhalkalaki 22.74 288 P **P 12 37 45.5 +2.9**
AKH pmax pmax
comp=Z,53nm,0.9s
ONI Oni 22.78 291 P **P 12 37 46.2 +3.3**
ONI IAmb IAmb 12 37 48.3
comp=Z,19nm,0.8s
ONI Oni 22.78 291 P **P 12 37 46.2 +3.3**
ONI pmax pmax
comp=Z,19nm,0.8s
KBZ Khabaz 23.25 294 ⇑*e*P **P 12 37 48.8 +1.7**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 23.25 294 P **P 12 37 46.9 -0.2**
comp=Z,3.3nm,0.8s,baz=123,slow=6.6,SNR=9.4
comp=Z,3.3nm,0.8s
NEUR Neytrino 23.36 293 *e*P **P 12 37 49.6 +1.2**
NEUR pmax pmax
comp=Z,4.0nm,1.1s
KIV Kislovodsk 23.42 295 *e*P **P 12 37 50.2 +1.4**
KIV pmax pmax
comp=Z,5.0nm,0.9s
ZAK Zakamensk 25.04 50 *e*P **P 12 38 05.1 +1.7**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
TNCH TengChong 25.36 113 P **P 12 38 10.4 +3.7**
TNCH pP pP 12 38 31.1 -8.3
TNCH sP sP 12 38 45.8 -11
TNCH pmax pmax
comp=Z,6.0nm,0.4s
TNCH pmax pmax
comp=Z,36nm,3.6s
KIRV Kirov 25.64 331 ⇓*e*P **P 12 38 10.8 +2.2**
KIRV Kirov 25.64 331 P **P 12 38 09.4 +0.8**
comp=Z,7.5nm,0.4s,baz=90,slow=1.0,SNR=2.8
comp=Z,7.5nm,0.4s
SONM Songino Array 26.42 57 P **P 12 38 17.9 +2.0**
comp=Z,1.3nm,0.9s,baz=266,slow=9.7,SNR=6.9
comp=Z,1.3nm,0.9s
ARPR Arapgir-MALATY 26.86 283 P **P 12 38 20.8 +0.8**
PZH PanZhiHua 26.94 106 P **P 12 38 23.3 +2.5**
PZH pmax pmax
comp=Z,9.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.3s
HHC Hu-ho-hao-te 30.00 72 *e*P **P 12 38 49.0 +1.2**
BR131 Keskin Array S 30.36 286 P **P 12 38 52.6 +1.6**
BR131 IAmb IAmb 12 38 54.1
comp=Z,6.7nm,1.1s
BR131 Keskin Array S 30.36 286 P **P 12 38 52.6 +1.6**
BR131 pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 30.36 286 P **P 12 38 53.0 +2.0**
BRTR Keskin Array B 30.36 286 P **P 12 38 53.0 +2.0**
BRTR Keskin Array B 30.36 286 P **P 12 38 52.5 +1.5**
comp=Z,2.4nm,0.9s,baz=79,slow=6.7,SNR=8.8
comp=Z,2.4nm,0.9s
GYA Guiyang 30.74 102 *e*P P 12 38 59.8 +5.4
GYA pmax pmax
comp=Z,6.0nm,0.7s
BR231 Keskin MP Arra 31.00 286 P **P 12 38 58.1 +1.5**
XLT XiLinHaoTe 33.02 66 *e*P **P 12 39 11.6 -2.6**
XLT pP pP 12 39 44.3 -3.1
XLT sP sP 12 39 59.1 -6.0
XLT PP **PnPn 12 40 23.5 -5.9**
XLT PcP **PcP 12 41 56.9 +2.6**
XLT pmax pmax
comp=Z,4.0nm,1.0s
XLT pmax pmax
comp=Z,82nm,5.5s
AKASG Malin Array Be 33.19 307 P **P 12 39 15.2 -0.2**
comp=Z,1.3nm,0.5s,baz=113,slow=8.7,SNR=6.5
comp=Z,1.3nm,0.5s
AKBB Malin Array Si 33.19 307 P **P 12 39 16.4 +1.0**
AKBB IAmb IAmb 12 39 17.3
comp=Z,5.3nm,0.6s
AKBB Malin Array Si 33.19 307 P **P 12 39 16.4 +1.0**
AKBB pmax pmax
comp=Z,5.0nm,0.6s
MLR Muntele Rosu 35.34 298 P **P 12 39 37.1 +3.0**
MLR IAmb IAmb 12 39 38.3
comp=Z,19nm,1.1s
MLR Muntele Rosu 35.34 298 P **P 12 39 37.1 +3.0**
MLR pmax pmax
comp=Z,19nm,1.1s
MLR Muntele Rosu 35.34 298 LR LR 12 58 17.2
comp=Z,53nm,20.7s,baz=22,slow=43
FIA1 FINESS Array S 37.13 325 P **P 12 39 50.4 +1.5**
FIA1 IAmb IAmb 12 40 18.0
comp=Z,13nm,1.1s
FINES FINESS Array B 37.13 325 P **P 12 39 50.4 +1.4**
FINES FINESS Array B 37.13 325 P **P 12 39 50.4 +1.4**
FINES FINESS Array B 37.13 325 P **P 12 39 49.1 +0.1**
comp=Z,3.7nm,0.5s,baz=110,slow=9.5,SNR=37
comp=Z,3.7nm,0.5s
SANT Santorini 37.41 283 P **P 12 39 55.2 +3.6**
NJ2 Nanjing 37.94 85 *e*P **P 12 39 57.3 +1.1**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
NJ2 pmax pmax
comp=Z,300nm,3.5s
STHS Stebnicka Huta 38.29 304 *e*P **P 12 40 00.0 +1.1**
STHS Stebnicka Huta 38.29 304 *e*P **P 12 40 00.0 +1.1**
HEH HeiHe 40.31 54 *e*P **P 12 40 17.8 +2.2**
HEH pmax pmax
comp=Z,6.0nm,0.8s
HEH pmax pmax
comp=Z,190nm,4.7s
ARCES ARCESS Array B 40.41 337 P **P 12 40 17.9 +1.7**
ARCES ARCESS Array B 40.41 337 P **P 12 40 17.9 +1.7**
ARCES ARCESS Array B 40.41 337 P **P 12 40 17.1 +0.9**
comp=Z,1.0nm,0.5s,baz=107,slow=8.2,SNR=13
comp=Z,1.0nm,0.5s
HFS Hagfors 42.85 321 P **P 12 40 37.4 +1.3**
comp=Z,6.1nm,0.5s,baz=98,slow=11,SNR=29
comp=Z,6.1nm,0.5s
KHC Kasperske Hory 43.32 305 *e*P **P 12 40 41.5 +1.4**
KHC Kasperske Hory 43.32 305 ⇓*e*P **P 12 40 42.1 +2.0**
KHC pmax pmax
comp=Z,6.0nm,1.7s
CLL Collm 43.41 308 *e*P **P 12 40 41.0 +0.2**
CLL Collm 43.41 308 *e*P **P 12 40 41.0 +0.2**
PRED Cave del Predi 43.77 301 P **P 12 40 45.4 +1.6**
NC405 NORSAR Array S 43.88 322 P **P 12 40 45.8 +1.4**
NC405 IAmb IAmb 12 40 56.4
comp=Z,9.5nm,1.1s
TIXI Tiksi 43.97 22 P **P 12 40 46.4 +1.5**
TIXI IAmb IAmb 12 40 47.1
comp=Z,3.5nm,0.5s
TIXI Tiksi 43.97 22 ⇓*e*P **P 12 40 46.5 +1.5**
TIXI pmax pmax
comp=Z,10.0nm,1.8s
TIXI Tiksi 43.97 22 P **P 12 40 46.1 +1.2**
comp=Z,2.4nm,0.3s,baz=270,slow=6.1,SNR=15
comp=Z,2.4nm,0.3s
NB2 NORSAR Subarra 44.12 322 P **P 12 40 47.3 +0.9**
comp=Z,2.0nm,0.5s,baz=92,slow=8.6
NOA NORSAR Array B 44.12 322 P **P 12 40 47.0 +0.7**
comp=Z,3.4nm,0.7s,baz=108,slow=6.9,SNR=9.0
comp=Z,3.4nm,0.7s
SENIN Lac Senin/Sane 48.01 302 P **P 12 41 18.9 +1.7**
SENIN IAmb IAmb 12 41 38.7
comp=Z,3.5nm,0.5s
BMRD Maredsous 48.73 308 *d*PcP **PcP 12 42 47.5 +2.4**
ESDC Sonseca Array 58.04 298 P **P 12 42 31.6 +1.1**
comp=Z,1.6nm,0.8s,baz=55,slow=7.3,SNR=7.1
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 79.79 3 P **P 12 44 45.2 +0.9**
comp=Z,0.2nm,0.5s,baz=25,slow=2.0,SNR=9.9
comp=Z,0.2nm,0.5s
WRA Warramunga Arr 81.57 123 P **P 12 44 55.3 +1.0**
comp=Z,0.4nm,0.8s,baz=322,slow=5.0,SNR=2.4
comp=Z,0.4nm,0.8s

IDC ***14*** *12:37:28.8±1.4,54.36N×168.96E,h0km,mb3.6/8, mbtmp3.7/10,ML3.5/2,MS3.0/3,Error ellipse: s-maj=45.8km s-min=17.4km az=9.0*
KRSC ***14*** *12:37:33.1±1.6,53.96N×168.23E,h20km±30km,Ml4.1*
ISC 14 12:37:31.4±0.8,54.01N±0.09×168.89E±0.05,h25km,n39,
σ1°83/37,mb3.5/8,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time h m s	Res ISC
BKI	**Bering**	**2.08**	**306**	*e*P	**Pn**	**12 38 04.5**	**0.0**
BKI				*e*S	**Sn**	**12 38 27.1**	**-2.5**
SHEM	**Shemya Is, Ala**	**3.37**	**110**	Pn	**Pn**	**12 38 22.8**	**+0.4**
	13nm,0.3s,baz=17,slow=4.9,SNR=7.7						
SHEM				Sn	**Sn**	**12 39 01.3**	**-0.2**
	7.6nm,0.3s,baz=293,slow=21,SNR=2.9						
	45nm,0.4s						
SMKR	**Semkarok**	**4.96**	**304**	*e*P	**Pn**	**12 38 46.6**	**+2.3**
TUMD	**Tumrok D**	**5.08**	**287**	*e*P	**Pn**	**12 38 47.0**	**+1.1**
TUMD				*e*S	**Sn**	**12 39 42.4**	**-1.3**
TUMR	**Tumrok**	**5.24**	**288**	*e*P	**Pn**	**12 38 49.9**	**+1.9**
KMNR	**Kamenistaya**	**5.29**	**293**	*e*P	**Pn**	**12 38 50.9**	**+2.1**
KPT	**Kopyto**	**5.36**	**295**	*e*P	**Pn**	**12 38 50.5**	**+0.7**
SPN	**Mys Shipunski**	**5.37**	**264**	*e*P	**Pn**	**12 38 50.1**	**+0.4**
SPN				*e*S	**Sn**	**12 39 49.0**	**-1.6**
KII	**Karymskiy**	**5.57**	**274**	*e*P	**Pn**	**12 38 54.0**	**+1.4**
SRDR	**Sredinnyy**	**5.75**	**297**	*e*P	**Pn**	**12 38 59.4**	**+4.5**
SMAR	**Somma**	**6.05**	**267**	*e*P	**Pn**	**12 39 00.7**	**+1.4**
AVH	**Avacha**	**6.09**	**267**	*e*P	**Pn**	**12 39 01.2**	**+1.5**
KRX	**Arik**	**6.12**	**268**	*e*P	**Pn**	**12 39 01.8**	**+1.6**
DALK	**Dalny**	**6.13**	**265**	*e*P	**Pn**	**12 39 01.7**	**+1.5**
DALK				*e*S	**Sn**	**12 40 08.8**	**-0.6**
KOK	**Koryaka**	**6.14**	**267**	*e*P	**Pn**	**12 39 01.7**	**+1.3**
GNL	**Ganaly**	**6.49**	**272**	*e*P	**Pn**	**12 39 07.7**	**+2.5**
KRMR	**Karymshinskiy**	**6.54**	**264**	*e*P	**Pn**	**12 39 07.4**	**+1.5**
KRMR				*e*S	**Sn**	**12 40 16.3**	**-3.3**
GRL	**Gorelyy**	**6.65**	**262**	*e*P	**Pn**	**12 39 10.2**	**+2.7**
PETK	**Petropavlovsk-**	**6.73**	**267**	Pn	**Pn**	**12 39 10.6**	**+2.2**
	1.9nm,0.3s,baz=87,slow=17,SNR=3.7						
PETK				Sn	**Sn**	**12 40 24.9**	**+0.6**
	0.8nm,0.3s,baz=110,slow=22,SNR=1.9						
	11nm,0.9s						
ASAK	**Asacha**	**6.80**	**261**	*e*P	**Pn**	**12 39 11.8**	**+2.3**
KDTR	**Khodutka, Kamc**	**6.90**	**256**	*e*P	**Pn**	**12 39 12.4**	**+1.6**
SKR	**Severo-Kuril's**	**8.50**	**252**	*e*P	**Pn**	**12 39 35.2**	**+2.5**
MA2	**Magadan**	**11.38**	**307**	LR	LR	12 44 04.2	
	comp=Z,29nm,20.2s,baz=51,slow=35						
KLR	**Kul'dur**	**23.36**	**273**	LR	LR	12 51 51.4	
	comp=Z,30nm,18.4s,baz=346,slow=37						
ILAR	**Eielson Array**	**24.41**	**46**	P	**P**	**12 42 45.5**	**-1.8**
	0.9nm,1.0s,baz=249,slow=6.8,SNR=6.4						
	0.9nm,1.0s						
TIXI	**Tiksi**	**24.66**	**331**	P	**P**	**12 42 48.6**	**-0.9**
	4.2nm,0.4s,baz=129,slow=7.6,SNR=3.5						

4.2nm,0.4s
H11N2 WAKE ISLAND Hy 34.25 183 T T 13 20 38.6
baz=2.4,slow=76,SNR=299
H11N3 WAKE ISLAND Hy 34.26 183 T T 13 20 43.3
baz=2.4,slow=76,SNR=338
H11N1 WAKE ISLAND Hy 34.27 183 T T 13 20 47.5
baz=2.4,slow=76,SNR=271
H11S1 WAKE ISLAND Hy 35.47 184 T T 13 22 15.8
baz=2.4,slow=76,SNR=122
H11S3 WAKE ISLAND Hy 35.49 184 T T 13 22 15.8
baz=2.4,slow=76,SNR=89
H11S2 WAKE ISLAND Hy 35.49 184 T T 13 22 17.0
baz=2.4,slow=76,SNR=116
SONM Songino Array 38.73 287 P **P** **12 44 54.2 +1.0**
0.2nm,0.5s,baz=53,slow=8.2,SNR=1.8
0.2nm,0.5s
NVAR Mina Array Bea 50.45 77 P **P** **12 46 27.8 +0.8**
0.3nm,0.7s,baz=306,slow=11,SNR=2.7
0.3nm,0.7s
KURBB **Kurchatov Arra 51.69 306** P **P** **12 46 34.2 -1.6**
0.3nm,0.5s,baz=55,slow=7.7,SNR=1.5
0.3nm,0.5s
PDAR Pinedale Array 52.41 67 P **P** **12 46 41.5 -0.1**
0.6nm,0.9s,baz=298,slow=3.2,SNR=4.0
0.6nm,0.9s
BVAR Borovoye Array 53.80 312 P **P** **12 46 51.0 -0.4**
1.6nm,0.6s,baz=52,slow=7.7,SNR=8.6
1.6nm,0.6s
AAK Ala-Archa 59.24 301 LR LR 13 17 17.8
comp=Z,27nm,18.9s,baz=304,slow=40
TXAR Lajitas Array 65.39 74 P **P** **12 48 12.7 +1.0**
0.4nm,0.6s,baz=293,slow=4.6,SNR=7.1
0.4nm,0.6s

*NEIC **14** 12:42:18.6±2.6,20.°67S±0.°09×178.°5W±0.°1,h561km±7km, mb4.2/43,Error ellipse: s-maj=18.7km s-min=12.1km az=70.0*
*IDC **14** 12:42:24.1±2.5,20.°65S×178.°87W,h633km±28km, mb3.4/11,mbtmp4.4/12,Error ellipse: s-maj=20.4km s-min=11.4km az=156.0*
ISC 14 12:42:20.3±0.6,20.°6S±0.°1×178.°74W±0.°10,h587km,n81,
σ1s23/78,mb4.1/33,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**13.01**	**259**	P	**P**	**12 45 11.2**	**+2.0**
OUENC	**Ouen Island, N**	**13.55**	**260**	P	**P**	**12 45 15.3**	**+0.4**
DZM	**Mont Dzumac**	**13.89**	**261**	P	**P**	**12 45 19.9**	**+1.5**
DZM	**Mont Dzumac**	**13.89**	**261**	P	**P**	**12 45 18.5**	**+0.1**
	10nm,0.5s,baz=86,slow=16,SNR=11						
KOUNC	**Koumac, New Ca**	**15.90**	**267**	P	**P**	**12 45 40.8**	**+3.4**
EIDS	**Eidsvold**	**28.16**	**255**	P	**P**	**12 47 28.0**	**+1.1**
EIDS				IAmb	IAmb	12 47 29.4	
	comp=Z,5.8nm,1.1s						
ARMA	**Armidale**	**28.41**	**244**	P	**P**	**12 47 31.0**	**+1.9**
ARMA				IAmb	IAmb	12 47 31.9	
	comp=Z,5.1nm,1.1s						
CTAO	**Charters Tower**	**32.80**	**265**	P	**P**	**12 48 07.6**	**+1.0**
CTAO				IAmb	IAmb	12 48 08.3	
	comp=Z,6.8nm,0.9s						
PMG	**Port Moresby**	**34.69**	**284**	P	**P**	**12 48 23.3**	**+0.7**
COEN	**Coen**	**36.90**	**274**	P	**P**	**12 48 41.8**	**+1.0**
COEN				IAmb	IAmb	12 48 43.1	
	comp=Z,7.1nm,0.9s						
BBOO	**Buckleboo**	**41.89**	**244**	P	**P**	**12 49 20.1**	**-0.4**
BBOO				IAmb	IAmb	12 49 41.0	
	comp=Z,16nm,1.1s						
WR0	**Warramunga Arr**	**43.72**	**262**	P	**P**	**12 49 35.0**	**0.0**
AS31	**Alice Springs**	**43.83**	**257**	P	**P**	**12 49 36.4**	**+0.6**
ASAR	**Alice Springs**	**43.83**	**257**	P	**P**	**12 49 36.0**	**+0.2**
ASAR	**Alice Springs**	**43.83**	**257**	P	**P**	**12 49 36.0**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=98,slow=7.6,SNR=62						
ASAR				PcP	**PcP**	**12 51 08.8**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=103,slow=3.7,SNR=9.4						
ASAR				S	**S**	**12 55 22.8**	**-2.4**
	comp=Z,1.9nm,1.0s,baz=100,slow=14,SNR=11						
	comp=Z,5.2nm,0.7s						
WB0	**Warramunga Arr**	**43.88**	**263**	P	**P**	**12 49 36.1**	**-0.1**
WB0				IAmb	IAmb	12 49 36.3	
	comp=Z,5.3nm,0.8s						
WB2	**Warramunga Arr**	**43.89**	**262**	P	**P**	**12 49 36.2**	**-0.1**
WB2				IAmb	IAmb	12 49 37.4	
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**43.91**	**262**	P	**P**	**12 49 36.3**	**-0.1**
WRA	**Warramunga Arr**	**43.91**	**262**	P	**P**	**12 49 35.9**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=96,slow=7.6,SNR=17						
WRA				S	**S**	**12 55 21.6**	**-4.7**
	comp=Z,0.9nm,0.9s,baz=98,slow=12,SNR=3.6						
	comp=Z,1.3nm,0.3s						
MTN	**Manton Dam**	**48.47**	**271**	P	**P**	**12 50 10.9**	**-0.1**
MTN				IAmb	IAmb	12 50 21.6	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.33**	**263**	P	**P**	**12 50 39.4**	**+0.5**
SOEI	**Soe**	**55.81**	**272**	P	**P**	**12 51 05.3**	**+1.7**
PSA00	**Pilbara Seismi**	**56.98**	**257**	P	**P**	**12 51 11.7**	**+0.4**
PSA00				IAmb	IAmb	12 51 20.0	
	comp=Z,9.6nm,1.1s						
MBWA	**Marble Bar**	**57.16**	**258**	P	**P**	**12 51 12.7**	**+0.1**
MBWA				IAmb	IAmb	12 51 17.5	
	comp=Z,10nm,1.1s						
QSPA	**South Pole Qui**	**69.48**	**180**	P	**P**	**12 52 30.8**	**+0.3**
QSPA				IAmb	IAmb	12 52 35.0	
	comp=Z,5.7nm,1.1s						
QSPA	**South Pole Qui**	**69.48**	**180**	P	**P**	**12 52 30.3**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=79,slow=12,SNR=14						
	comp=Z,3.0nm,1.0s						
ADK	**Adak**	**72.18**	**1**	P	**P**	**12 52 46.0**	**-0.2**
TPUB	**Ta-pu**	**73.45**	**303**	P	**P**	**12 52 53.6**	**-0.6**
PETK	**Petropavlovsk-**	**76.18**	**346**	P	**P**	**12 53 09.5**	**+0.7**
PETK	**Petropavlovsk-**	**76.18**	**346**	P	**P**	**12 53 08.4**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=99,slow=8.9,SNR=4.5						
	comp=Z,4.1nm,0.7s						
KSRS	**Korea Array**	**76.50**	**319**	P	**P**	**12 53 10.5**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=206,slow=11,SNR=4.1						
	comp=Z,2.5nm,1.0s						
USRK	**Ussuriysk Ar.**	**78.65**	**326**	P	**P**	**12 53 24.4**	**+2.1**
USRK	**Ussuriysk Ar.**	**78.65**	**326**	P	**P**	**12 53 23.2**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=117,slow=5.6,SNR=4.9						
	comp=Z,2.4nm,0.7s						
KMRM	**Mail Ridge**	**79.26**	**40**	P	**P**	**12 53 27.8**	**+2.0**
KMRM				IAmb	IAmb	12 53 28.4	
	comp=Z,17nm,1.0s						
BELA	**Belgrano 2**	**79.56**	**173**	P	**P**	**12 53 26.6**	**0.0**
MDPB	**Devils Postpil**	**80.61**	**44**	P	**P**	**12 53 34.2**	**+1.2**
YBH	**Yreka Blue Hor**	**80.79**	**39**	P	**P**	**12 53 35.8**	**+2.1**
NVAR	**Mina Array Bea**	**81.56**	**44**	P	**P**	**12 53 38.9**	**+1.0**
NVAR	**Mina Array Bea**	**81.56**	**44**	P	**P**	**12 53 38.6**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=224,slow=8.4,SNR=13						
	comp=Z,1.5nm,0.7s						
PAHR	**Pah Rah Range**	**81.61**	**42**	P	**P**	**12 53 38.8**	**+0.8**
GMN	**Gold Mountain**	**81.62**	**45**	P	**P**	**12 53 38.3**	**+0.1**
O16K	**Kokwok River B**	**81.67**	**10**	P	**P**	**12 53 37.3**	**-0.3**
O16K				IAmb	IAmb	12 53 51.6	
	comp=Z,8.7nm,1.0s						
P18K	**Big Mountain,**	**82.00**	**12**	P	**P**	**12 53 39.5**	**+0.2**
P18K				IAmb	IAmb	12 53 52.9	
	comp=Z,4.0nm,1.1s						
TPH	**Tonopah**	**82.07**	**44**	P	**P**	**12 53 41.4**	**+1.0**
TPNV	**Topopah Spring**	**82.10**	**46**	P	**P**	**12 53 41.4**	**+0.8**
TPNV				IAmb	IAmb	12 53 42.4	
	comp=Z,2.9nm,0.8s						
O19K	**Port Alsworth**	**82.92**	**12**	P	**P**	**12 53 43.7**	**-0.1**
F10A	**Beach Ranch, E**	**86.50**	**38**	P	**P**	**12 54 02.0**	**+0.3**
TRF	**Thorofare Moun**	**86.68**	**12**	P	**P**	**12 54 01.9**	**-0.4**
TRF				IAmb	IAmb	12 54 02.2	
	comp=Z,6.8nm,0.8s						
RND	**Reindeer**	**86.94**	**13**	P	**P**	**12 54 03.5**	**+0.1**
DHY	**Denali Highway**	**86.97**	**14**	P	**P**	**12 54 03.7**	**0.0**
DHY				IAmb	IAmb	12 54 23.3	
	comp=Z,3.4nm,1.2s						
TXAR	**Lajitas Array**	**87.69**	**58**	P	**P**	**12 54 08.9**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=220,slow=6.0,SNR=18						
	comp=Z,1.5nm,0.8s						
M27K	**Edge Creek, AK**	**87.69**	**16**	IAmb	IAmb	12 54 08.4	
	comp=Z,7.0nm,1.1s						
HDA	**Harding Lake**	**88.23**	**13**	IAmb	IAmb	12 54 09.7	
	comp=Z,3.7nm,0.7s						
CCB	**Clear Creek Bu**	**88.25**	**13**	IAmb	IAmb	12 54 09.3	
	comp=Z,4.5nm,0.7s						
ILAR	**Eielson Array**	**88.56**	**13**	P	**P**	**12 54 09.8**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=215,slow=5.1,SNR=21						
	comp=Z,2.3nm,0.9s						
J26L	**Joseph Creek**	**89.06**	**14**	IAmb	IAmb	12 54 14.6	
	comp=Z,4.5nm,0.8s						
M30M	**Minto, Yukon**	**89.27**	**18**	IAmb	IAmb	12 54 15.7	
	comp=Z,3.6nm,0.8s						
L29M	**L29M**	**89.31**	**17**	IAmb	IAmb	12 54 15.8	
	comp=Z,4.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.50**	**290**	P	**P**	**12 54 17.8**	**+1.5**
CMAR	**Chiang Mai Arr**	**89.50**	**290**	P	**P**	**12 54 17.1**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=124,slow=2.6,SNR=15						
	comp=Z,1.2nm,0.4s						
PDAR	**Pinedale Array**	**89.50**	**43**	P	**P**	**12 54 16.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=220,slow=3.7,SNR=14						
	comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**110.13**	**321**	PKiKP	**PKiKP**	**12 59 44.1**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=158,slow=1.6,SNR=4.6						
MKAR	**Makanchi Array**	**110.76**	**313**	PKiKP	**PKiKP**	**12 59 45.8**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=105,slow=0.9,SNR=7.5						
KURBB	**Kurchatov Arra**	**113.64**	**317**	PKiKP	**PKiKP**	**12 59 50.9**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=86,slow=1.9,SNR=7.8						
BVAR	**Borovoye Array**	**118.70**	**320**	PKP	**PKPdf**	**13 00 00.9**	**-1.2**
	comp=Z,1.8nm,0.3s,baz=31,slow=1.3,SNR=11						
ARU	**Arti**	**124.88**	**325**	PKP	**PKPdf**	**13 00 12.6**	**-1.3**
	comp=Z,2.7nm,0.4s,baz=90,slow=4.0,SNR=5.6						
AKTO	**Aktyubinsk**	**126.67**	**318**	PKP	**PKPdf**	**13 00 16.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=72,slow=1.2,SNR=4.4						
ARCES	**ARCESS Array B**	**128.88**	**349**	PKP	**PKPdf**	**13 00 19.7**	**-1.5**
	comp=Z,4.7nm,1.0s,baz=18,slow=4.3,SNR=6.7						
BELG	**Belogornoye**	**132.26**	**323**	PKP	**PKPdf**	**13 00 26.4**	**-1.6**
	comp=Z,8.5nm,0.9s,baz=157,slow=7.7,SNR=3.9						
FINES	**FINESS Array B**	**135.66**	**343**	PKP	**PKPdf**	**13 00 33.5**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=52,slow=3.1,SNR=4.9						
HFS	**Hagfors**	**139.52**	**350**	PKhKP	PKPpre	13 00 32.8	
	comp=Z,1.3nm,0.4s,baz=64,slow=3.4,SNR=10						
AKASG	**Malin Array Be**	**142.75**	**330**	PKP	**PKPdf**	**13 00 44.0**	**-3.4**
	comp=Z,2.9nm,0.3s,baz=43,slow=4.4,SNR=20						
EKA	**Eskdalemuir Ar**	**145.15**	**4**	PKPbc	**PKPdf**	**13 00 51.7**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=7.1,slow=3.4,SNR=3.5						
ASF	**Jabal al Asfar**	**146.21**	**297**	PKPbc	**PKPbc**	**13 00 55.9**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=152,slow=0.4,SNR=4.5						
BRTR	**Keskin Array B**	**146.39**	**312**	PKPbc	**PKPbc**	**13 00 55.6**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=136,slow=4.9,SNR=7.6						
MMAI	**Mount Meron Ar**	**147.26**	**299**	PKPbc	**PKPbc**	**13 00 58.6**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=69,slow=4.6,SNR=5.5						
CLL	**Collm**	**147.99**	**346**		**PKPbc**	**13 01 00.1**	**0.0**
CLL	**Collm**	**147.99**	**346**	*i* PKPab	**PKPab**	**13 01 04.9**	**-0.2**
CLL	**Collm**	**147.99**	**346**	*i* PKPbc	**PKPbc**	**13 01 00.2**	**0.0**
	comp=Z,9.0nm,0.8s						
GERES	**GERESS Array B**	**150.09**	**343**	PKPbc	**PKPbc**	**13 01 04.9**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=42,slow=4.2,SNR=7.4						
DAVOX	**Davos/Dischmat**	**152.94**	**347**	PKPbc	**PKPbc**	**13 01 11.1**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=315,slow=11,SNR=4.0						
DAVOX				PKPab	**PKPab**	**13 01 26.5**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=51,slow=3.8,SNR=3.8						

IDC 14 12:53:11.1±380.0,53.°18N×33.°37E,h0km,Error ellipse: s-maj=148.0km s-min=82.3km az=29.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.18**	**30**	I	I	13 19 30.0	
	0.3nm,0.8s,baz=213,slow=335,SNR=8.1						
I26DE	**FREYUNG INFRAS**	**13.10**	**259**	I	I	14 11 40.0	
	0.1nm,0.6s,baz=60,slow=336,SNR=8.2						
I31KZ	**AKTYUBINSK INF**	**15.49**	**90**	I	I	14 25 40.0	
	baz=286,slow=336,SNR=1.9						

DNK 14 12:59:41.1±0.5,56.°21N×13.°35E,h0km,ML1.2, ML1.5(UPP),Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJUU	**Bjuv**	**0.23**	**234**	*i* P	Pg	12 59 45.1	-0.3
BJUU				P		12 59 45.3	
BJUU				*i* S	Sg	12 59 48.3	-0.1
BJUU				S		12 59 48.5	
DEL	**Delary**	**0.39**	**47**	*i* P	Pg	12 59 48.0	-0.6
DEL				P	Pb	12 59 48.4	-2.6
DEL				*i* S	Sg	12 59 53.3	-0.4
LUNU	**Lund**	**0.58**	**175**	P	Pg	12 59 51.5	-0.6
FABU	**Falkenberg**	**0.87**	**337**	P	Pg	12 59 56.9	-0.9
VXJU	**Vaexsjoe**	**1.13**	**50**	P	Pg	13 00 02.0	-0.8
BLEU	**Blekinge**	**1.38**	**85**	P	Pg	13 00 06.1	-1.3
BLEU				*i* P	Pn	13 00 06.2	-1.4
BLEU				*i* S	Sg	13 00 24.8	-0.5
BSD	**Bornholm Skovb**	**1.41**	**140**	*i* P	Pn	13 00 06.3	-1.7
BSD				*i* S	Sg	13 00 25.3	-1.0
BSD				IAML		13 00 27.2	
	comp=Z,1.0nm,0.2s						
ONAU	**Onsala**	**1.43**	**327**	P	Pn	13 00 07.0	-1.2
BORU	**Boraas**	**1.47**	**348**	P	Pn	13 00 07.7	-1.1

*NNC **14** 13:01:39.4±5.3,36.°95N×71.°14E,h0km,mb4.4,mpv4.2, Error ellipse: s-maj=43.7km s-min=35.0km az=17.0*
ISC 14 13:01:40.0±3.8,36.°6N±0.°2×71.°2E±0.°1,h100km,n11,
σ0s97/14,4C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.15**	**23**	P	**Pn**	**13 03 09.8**	**+1.1**
	SNR=29						
EKS2	**Erkin-Say**	**6.34**	**17**	P	**Pn**	**13 03 12.5**	**+1.4**
	SNR=6.0						
KK31	**Karatay Array**	**6.49**	**355**	⇑P	**Pn**	**13 03 13.7**	**+0.7**
	1.1nm,0.2s,baz=163,slow=11,SNR=40						
KK31				⇑S	**Sn**	**13 04 24.1**	**-1.4**
	28nm,0.5s,baz=186,slow=25,SNR=7.8						
AAK	**Ala-Archa**	**6.51**	**22**	P	**Pn**	**13 03 14.5**	**+1.2**
	SNR=30						
KBK	**Karagaybulak**	**6.67**	**24**	P	**Pn**	**13 03 16.8**	**+1.3**
	SNR=13						
ULHL	**Ulahol**	**6.82**	**33**	P	**Pn**	**13 03 17.6**	**0.0**
	SNR=23						
USP	**Ospenovka**	**7.09**	**20**	P	**Pn**	**13 03 21.4**	**+0.3**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.13**	**27**	P	**Pn**	**13 03 22.1**	**+0.3**
	SNR=43						
TKM2	**Tokmak 2**	**7.13**	**27**	⇑P	**Pn**	**13 03 21.8**	**0.0**
	16nm,0.5s						
TKM2				⇓S	**Sn**	**13 04 41.6**	**+0.3**
	9.6nm,0.8s						
MDOK	**Medeo**	**7.92**	**33**	P	**Pn**	**13 03 31.6**	**-0.8**
	16nm,0.6s						
AB31	**Akbulak array**	**15.06**	**330**	P	**Pn**	**13 05 06.7**	**-0.7**
	2.2nm,0.7s,baz=148,slow=11,SNR=35						
AB31				⇑S	**Sn**	**13 07 53.8**	**+0.3**
	0.9nm,0.6s,baz=152,slow=23,SNR=4.7						

*IDC **14** 13:06:32.0±3.2,15.°77N×98.°47W,h0km,mb3.8/7, mbtmp3.7/9,ML3.2/2,MS3.4/5,Error ellipse: s-maj=55.5km s-min=18.6km az=3.0*
*NEIC **14** 13:06:37.0±3.0,16.°07N±0.°04×98.°38W±0.°04,h10km±1km, mb4.4/32,Md4.3/134(MEX),Error ellipse: s-maj=7.9km s-min=4.9km az=230.0*
*MEX **14** 13:06:38.8±0.8,16.°00N×98.°41W,h16km±632km,MD4.3*
ISC 14 13:06:35.5±0.7,16.°00N±0.°04×98.°40W±0.°02,h10km,n153,
σ2s01/213,mb4.3/21,MS3.2/5,Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.47**	**34**		**Pb**	**13 06 46.1**	**+0.2**
PNIG	**Pinotepa**	**0.47**	**34**	*i* P	**Pb**	**13 06 46.1**	**+0.2**
PNIG				*i* S	**Sb**	**13 06 52.5**	**-0.6**
CRIG	**Cruz Grande**	**1.01**	**317**		**Pg**	**13 06 54.1**	**-0.9**
CRIG					**Sb**	**13 07 08.1**	**-0.5**
CRIG	**Cruz Grande**	**1.01**	**317**	eP	**Pg**	**13 06 54.1**	**-0.9**
CRIG				eS	**Sg**	**13 07 07.1**	**-1.1**
YOIG	**Yosondua**	**1.19**	**44**		**Pn**	**13 06 57.5**	**-0.9**
YOIG					**Sn**	**13 07 14.8**	**0.0**
YOIG	**Yosondua**	**1.19**	**44**	eP	**Pn**	**13 06 57.5**	**-0.9**
YOIG				eS	**Sb**	**13 07 11.0**	**-2.9**
PEIG	**Puerto Escondi**	**1.21**	**90**		**Sn**	**13 07 15.9**	**+1.0**
PEIG	**Puerto Escondi**	**1.21**	**90**	*i* P	**Pn**	**13 06 57.1**	**-1.4**
PEIG				eS	**Sb**	**13 07 12.6**	**-1.6**
MGIG	**Malinaltepec**	**1.25**	**350**		**Pb**	**13 06 58.4**	**-1.0**
MGIG	**Malinaltepec**	**1.25**	**350**	*i* P	**Pb**	**13 06 58.4**	**-1.0**
MGIG				eS	**Sb**	**13 07 13.7**	**-1.8**
TXIG	**Tlaxiaco**	**1.39**	**26**		**Pb**	**13 07 00.8**	**-1.0**
TXIG					**Sg**	**13 07 20.2**	**-0.1**
TXIG	**Tlaxiaco**	**1.39**	**26**	*i* P	**Pb**	**13 07 00.8**	**-1.0**
TXIG				eS	**Sb**	**13 07 17.7**	**-2.0**
TLIG	**Tlapa**	**1.56**	**354**		**Pn**	**13 07 02.3**	**-1.3**
TLIG	**Tlapa**	**1.56**	**354**	*i* P	**Pb**	**13 07 03.1**	**-1.5**
TLIG				eS	**Sn**	**13 07 21.2**	**-2.7**
DAIG	**Los Arroyos**	**1.57**	**311**		**Pn**	**13 07 02.3**	**-1.2**
DAIG	**Los Arroyos**	**1.57**	**311**	eP	**Pn**	**13 07 02.3**	**-1.2**
DAIG				eS	**Sn**	**13 07 23.1**	**-0.9**
HLIG	**Huajuapan de L**	**1.91**	**17**		**Pn**	**13 07 08.1**	**-0.2**
HLIG					**Sn**	**13 07 32.1**	**-0.5**
HLIG	**Huajuapan de L**	**1.91**	**17**	eP	**Pn**	**13 07 08.1**	**-0.2**
HLIG				eS	**Sn**	**13 07 32.1**	**-0.5**
FTIG	**Fresnillo de T**	**1.92**	**8**		**Pn**	**13 07 08.2**	**-0.1**
FTIG					**Sb**	**13 07 34.9**	**+0.2**
FTIG	**Fresnillo de T**	**1.92**	**8**	*i* P	**Pn**	**13 07 08.2**	**-0.1**
FTIG				eS	**Sb**	**13 07 34.9**	**+0.2**
VHO	**Vista Hermosa**	**1.93**	**56**	eP	**Pn**	**13 07 08.0**	**-0.6**
VHO				eS	**Sb**	**13 07 33.1**	**-1.9**
OXIG	**Oaxaca**	**1.93**	**56**		**Pn**	**13 07 08.0**	**-0.6**
OXBJ	**Oaxaca**	**1.93**	**56**		**Sb**	**13 07 34.6**	**-0.6**
OXBJ	**Oaxaca**	**1.93**	**56**	eP	**Pg**	**13 07 11.9**	**-0.7**
OXBJ				eS	**Sb**	**13 07 34.6**	**-0.6**
CAIG	**El Cayaco**	**2.07**	**301**		**Pn**	**13 07 09.4**	**-1.0**
CAIG	**El Cayaco**	**2.07**	**301**	eP	**Pn**	**13 07 09.4**	**-1.0**
CAIG				eS	**Sn**	**13 07 31.7**	**-4.6**
HUIG	**Huatulco**	**2.22**	**96**		**Pn**	**13 07 11.9**	**-0.5**
HUIG	**Huatulco**	**2.22**	**96**	eP	**Pn**	**13 07 11.9**	**-0.5**
HUIG				eS	**Sn**	**13 07 36.2**	**-3.7**
MEIG	**Mezcala**	**2.24**	**329**		**Pb**	**13 07 15.2**	**-1.0**
MEIG	**Mezcala**	**2.24**	**329**	eP	**Pb**	**13 07 15.2**	**-1.0**
MEIG				eS	**Sg**	**13 07 45.3**	**-2.4**
TOIG	**Toxpalan**	**2.45**	**31**		**Pn**	**13 07 15.3**	**-0.4**
TOIG	**Toxpalan**	**2.45**	**31**	eP	**Pn**	**13 07 15.3**	**-0.4**
TOIG				eS	**Sb**	**13 07 48.1**	**-1.9**
PLIG	**Platanillo**	**2.60**	**336**		**Pn**	**13 07 18.7**	**+0.9**
PLIG					**Sb**	**13 07 53.5**	**-1.0**
PLIG	**Platanillo**	**2.60**	**336**	eP	**Pn**	**13 07 18.7**	**+0.9**
PLIG				eS	**Sb**	**13 07 53.5**	**-1.0**
TPIG	**Tehuac#an**	**2.61**	**22**		**Pb**	**13 07 22.8**	**+0.3**
TPIG	**Tehuac#an**	**2.61**	**22**	eP	**Pb**	**13 07 22.8**	**+0.3**
TPIG				eS	**Sb**	**13 07 52.1**	**-2.5**
YAIG	**Yautepec**	**2.92**	**348**	eP	**Pb**	**13 07 26.0**	**-1.7**
YAIG				eS	**Sn**	**13 07 59.5**	**+2.1**
ARIG	**Puente Sto Nin**	**2.93**	**321**		**Pn**	**13 07 23.3**	**+1.1**
ARIG	**Puente Sto Nin**	**2.93**	**321**	eP	**Pn**	**13 07 23.3**	**+1.1**
ARIG				eS	**Sb**	**13 08 05.5**	**+1.6**
NEUV	**Arroyo Zacate**	**3.02**	**55**	eP	**Pn**	**13 07 23.8**	**+0.4**
NEUV				eS	**Sn**	**13 08 00.1**	**+0.5**
PPM	**Popocatepetl**	**3.06**	**356**	eP	**Pb**	**13 07 31.1**	**+0.7**
PPM				eS	**Sb**	**13 08 06.8**	**-1.2**
PPIG	**Popocatepetl**	**3.06**	**356**		**Pb**	**13 07 31.1**	**+0.7**
PPIG					**Sb**	**13 08 06.8**	**-1.2**
AMVM	**AMECAMECA**	**3.14**	**353**		**Pb**	**13 07 31.1**	**-0.5**
AMVM	**AMECAMECA**	**3.14**	**353**	eP	**Pb**	**13 07 31.1**	**-0.5**
AMVM				eS	**Sn**	**13 08 04.2**	**+1.1**
MPVM	**San Francisco**	**3.24**	**350**	eP	**Pb**	**13 07 33.5**	**+0.3**
MPVM				eS	**Sb**	**13 08 11.4**	**-1.5**
TLVM	**San Miguel Top**	**3.27**	**347**	eP	**Pb**	**13 07 34.0**	**+0.1**
TLVM				eS	**Sn**	**13 08 05.7**	**-0.7**
XCVM	**Xochimilco**	**3.31**	**348**	eP	**Pb**	**13 07 35.1**	**+0.6**
XCVM				eS	**Sb**	**13 08 14.1**	**-0.8**
THVM	**De Xico**	**3.34**	**351**	eP	**Pb**	**13 07 35.0**	**0.0**
THVM				eS	**Sb**	**13 08 15.5**	**-0.3**
AOVM	**Tlapan**	**3.37**	**345**	eP	**Pb**	**13 07 35.0**	**-0.6**
AOVM				eS	**Sb**	**13 08 15.7**	**-1.2**
CNCY	**Coyoacan**	**3.38**	**348**	eS	**Sn**	**13 08 10.4**	**+1.4**
UNM	**Universidad Na**	**3.39**	**348**	Pn	**Pn**	**13 07 28.3**	**-0.5**
UNM	**Universidad Na**	**3.39**	**348**	eP	**Pb**	**13 07 35.6**	**-0.4**
UNM				eS	**Sb**	**13 08 13.8**	**-3.6**
INVM	**La Marquesa**	**3.41**	**344**	eP	**Pb**	**13 07 36.2**	**-0.1**
INVM				eS	**Sb**	**13 08 18.5**	**+0.7**
COVM	**Coyoacan**	**3.41**	**348**	eS	**Sn**	**13 08 06.2**	**-2.9**
BJVM	**Benito Juarez**	**3.44**	**348**	eP	**Pb**	**13 07 30.8**	**+1.4**
BJVM				eS	**Sb**	**13 08 14.9**	**-3.7**
CJVM	**Cuajimalpa**	**3.45**	**346**	eS	**Sn**	**13 08 09.2**	**-1.4**
TXVM	**Universitario**	**3.45**	**352**	eP	**Pb**	**13 07 37.1**	**+0.2**

CJM	**Chamela**	**7.22**	**300**	*e*P		**Pn**	**13 08 24.6**	**+3.4**
CJM				*e*S		**Sn**	**13 09 44.4**	**+1.1**
ESTA	**Talpa de Allen**	**7.52**	**306**	*e*P		**Pn**	**13 08 28.8**	**+3.3**
ESTA				*e*S		**Sn**	**13 09 52.9**	**+1.9**
ZAIG	**Zacatecas**	**7.80**	**330**	Pn		**Pn**	**13 08 29.5**	**+0.1**
TGUH	**Tegucigalpa,Un**	**10.93**	**99**	Pn		**Pn**	**13 09 14.4**	**+2.3**
H06E1	**SOCORRO T-PHAS**	**12.27**	**285**	T		T	13 21 45.3	
	SNR=45							
833A	**Chaparral WMA,**	**12.30**	**356**	Pn		**Pn**	**13 09 29.8**	**-1.0**
TXAR	**Lajitas Array**	**14.13**	**341**	Pn		**Pn**	**13 09 56.7**	**+0.8**
	baz=159,slow=13,SNR=3.0							
TXAR				Lg		Lg	13 14 01.9	
	baz=205,slow=25,SNR=3.0 0.5nm,1.0s							
SAND	**Sanderson**	**14.31**	**347**	Pn		**Pn**	**13 10 00.0**	**+1.7**
OZNA	**Ozona**	**15.06**	**351**	Pn		**Pn**	**13 10 07.8**	**-0.8**
BRDY	**Brady**	**15.23**	**358**	Pn		**Pn**	**13 10 10.5**	**-0.2**
ANMO	**Albuquerque**	**20.20**	**341**	P		Pn	13 11 12.2	-0.5
	4.3nm,0.7s,baz=237,slow=11,SNR=19							
ANMO				LR		LR	13 19 06.2	
	comp=Z,40nm,19.7s,baz=246,slow=37 4.3nm,0.7s							
RTBA	**Rita Blanca**	**20.72**	**350**	P		Pn	13 11 17.6	-1.1
X16A	**Lo Mia Camp, P**	**21.77**	**330**	P		**P**	**13 11 29.8**	**+2.2**
PBMO	**Poplar Bluff**	**21.88**	**17**	P		**P**	**13 11 27.7**	**-0.9**
Y52A	**Lilburn**	**21.99**	**33**	P		**P**	**13 11 29.6**	**-0.3**
Y52A				IAmb		IAmb	13 11 31.0	
	comp=Z,14nm,0.8s							
HICK	**Hickman**	**22.03**	**20**	P		**P**	**13 11 31.5**	**+1.3**
S39A	**Bolivar**	**22.07**	**11**	P		**P**	**13 11 30.8**	**+0.2**
S39A				IAmb		IAmb	13 11 34.4	
	comp=Z,13nm,1.0s							
WVT	**Waverly**	**22.15**	**23**	P		**P**	**13 11 30.9**	**-0.7**
WVT				IAmb		IAmb	13 11 34.7	
	comp=Z,13nm,0.8s							
SWET	**Sewanee**	**22.16**	**28**	P		**P**	**13 11 31.1**	**-0.6**
SWET				IAmb		IAmb	13 11 33.0	
	comp=Z,16nm,1.1s							
WUAZ	**Wupatki**	**22.63**	**332**			**P**	**13 11 38.5**	**+1.6**
R40A	**Maddies Statio**	**22.86**	**13**	P		**P**	**13 11 39.2**	**+0.2**
R40A				IAmb		IAmb	13 11 42.2	
	comp=Z,12nm,0.8s							
CCM	**Cathedral Cave**	**22.86**	**15**	P		**P**	**13 11 39.4**	**+0.3**
CCM				IAmb		IAmb	13 11 41.5	
	comp=Z,11nm,1.1s							
FVM	**French Village**	**23.00**	**16**	P		**P**	**13 11 39.3**	**-1.3**
FVM				IAmb		IAmb	13 11 42.8	
	comp=Z,8.1nm,0.9s							
W52A	**Murphy**	**23.02**	**32**	P		**P**	**13 11 39.3**	**-1.5**
T47A	**Sharon Grove**	**23.18**	**23**	P		**P**	**13 11 41.4**	**-1.1**
P40A	**Paris**	**24.09**	**12**	P		**P**	**13 11 51.3**	**0.0**
ISCO	**Idaho Springs**	**24.54**	**347**	P		**P**	**13 11 58.4**	**+2.7**
ISCO				IAmb		IAmb	13 11 59.5	
	comp=Z,6.6nm,0.8s							
Q16A	**Castle Valley**	**25.43**	**336**	P		**P**	**13 12 06.2**	**+2.5**
Q16A				IAmb		IAmb	13 12 09.6	
	comp=Z,4.1nm,0.7s							
N41A	**Harden Midland**	**25.48**	**13**	P		**P**	**13 12 04.4**	**+0.5**
N41A				IAmb		IAmb	13 12 05.4	
	comp=Z,8.7nm,0.9s							
P46A	**Rosedale**	**25.48**	**20**	P		**P**	**13 12 05.4**	**+1.4**
MSU	**Marysvale**	**25.49**	**334**	P		**P**	**13 12 06.2**	**+1.9**
O20A	**White River Ci**	**25.53**	**342**			**P**	**13 12 06.0**	**+1.4**
O20A				IAmb		IAmb	13 12 14.4	
	comp=Z,11nm,1.1s							
V58A	**Windy Hill, Pi**	**26.17**	**38**	P		**P**	**13 12 10.2**	**0.0**
Q52A	**Bidwell**	**26.90**	**29**	P		**P**	**13 12 16.8**	**+0.1**
PDAR	**Pinedale Array**	**28.34**	**343**	P		**P**	**13 12 30.0**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=146,slow=8.6,SNR=5.0							
PDAR				LR		LR	13 23 26.8	
	comp=Z,60nm,19.8s,baz=166,slow=36 comp=Z,0.4nm,0.6s							
NVAR	**Mina Array Bea**	**28.38**	**326**	P		**P**	**13 12 30.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=150,slow=9.0,SNR=6.5							
NVAR				LR		LR	13 25 42.0	
	comp=Z,59nm,18.8s,baz=252,slow=40 comp=Z,0.6nm,0.7s							
ELK	**Elko**	**28.66**	**333**	LR		LR	13 25 27.7	
	comp=Z,145nm,18.4s,baz=154,slow=39							
ULM	**Lac du Bonnet**	**34.23**	**3**	P		**P**	**13 13 22.1**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=190,slow=6.1,SNR=3.5 comp=Z,1.8nm,0.9s							
NEW	**Newport**	**35.67**	**338**	LR		LR	13 29 31.8	
	comp=Z,139nm,18.8s,baz=180,slow=38							
SCHQ	**Schefferville**	**45.77**	**25**	P		**P**	**13 14 56.9**	**-0.3**
	comp=Z,5.0nm,1.0s,baz=207,slow=13,SNR=4.3 comp=Z,5.0nm,1.0s							
YKA	**Yellowknife Ar**	**47.83**	**350**	P		**P**	**13 15 12.3**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=156,slow=7.2,SNR=11 comp=Z,0.6nm,0.8s							
H03N2	**Juan Fernandez**	**52.56**	**159**	T		T	14 12 40.4	
	baz=338,slow=77,SNR=226							
H03N1	**Juan Fernandez**	**52.57**	**159**	T		T	14 12 41.5	
	baz=338,slow=77,SNR=534							
H03N3	**Juan Fernandez**	**52.58**	**159**	T		T	14 12 34.4	
	baz=338,slow=77,SNR=450							
K27K	**Chicken**	**56.48**	**339**	P		**P**	**13 16 20.4**	**+2.9**
K27K				IAmb		IAmb	13 16 21.6	
	comp=Z,4.5nm,1.0s							
EGAK	**Eagle**	**56.63**	**340**	P		**P**	**13 16 20.1**	**+1.6**
EGAK				IAmb		IAmb	13 16 32.7	
	comp=Z,6.5nm,1.5s							
H29M	**Whitestone**	**56.68**	**342**	P		**P**	**13 16 20.6**	**+1.7**
H29M				IAmb		IAmb	13 16 33.9	
	comp=Z,5.6nm,1.3s							
INK	**Inuvik**	**56.86**	**345**	P		**P**	**13 16 20.7**	**+0.7**
J26L	**Joseph Creek**	**57.29**	**339**	P		**P**	**13 16 25.7**	**+2.4**
J26L				IAmb		IAmb	13 16 27.7	
	comp=Z,2.7nm,0.8s							
ILAR	**Eielson Array**	**58.62**	**338**	P		**P**	**13 16 30.2**	**-2.3**
	comp=Z,0.7nm,1.0s,baz=136,slow=5.4,SNR=1.4 comp=Z,0.7nm,1.0s							

*IDC **14** 13:23:03.5±2.0,3°.70S×143°.96E, h0km,mb3.3/4, mbtmp3.3/6,ML2.7/1,Error ellipse: s-maj=60.8km s-min=26.9km az=79.0*
ISC 14 13:23:04.7±1.4,3°.8S±0°.2×144°.0E±0°.2,h10km,n6,σ1s75/7, mb3.5/4,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**6.37**	**151**	Pn		**Pn**	**13 24 40.5**	**+1.9**
	3.5nm,0.8s,baz=309,slow=14,SNR=2.5							
PMG				Sn		**Sn**	**13 25 49.0**	**-2.5**
	0.1nm,0.3s,baz=317,slow=19,SNR=1.3							
WRA	**Warramunga Arr**	**18.62**	**210**	P		**Pn**	**13 27 22.3**	**-0.6**
	baz=39,slow=10.0,SNR=1.1 0.3nm,0.7s							
ASAR	**Alice Springs**	**22.04**	**205**	P		**P**	**13 28 00.9**	**+1.1**
	0.3nm,0.9s,baz=31,slow=9.2,SNR=2.6 0.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**49.62**	**298**	P		**P**	**13 31 56.3**	**-0.5**
	0.3nm,0.4s,baz=113,slow=6.9,SNR=1.2 0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**77.72**	**324**	P		**P**	**13 35 01.1**	**-0.7**
	0.2nm,0.8s,baz=93,slow=6.1,SNR=2.6 0.2nm,0.8s							
BVAR	**Borovoye Array**	**83.28**	**324**	P		**P**	**13 35 31.8**	**+0.1**
	0.4nm,0.6s,baz=102,slow=6.5,SNR=2.5 0.4nm,0.6s							

*NEIC **14** 13:30:00.1±0.4,36°.804N±0°.006×98°.00W±0°.02, h8km±6km, Error ellipse: s-maj=2.1km s-min=0.9km az=91.0*
TUL 14 13:30:00±0.3,36°.803N±0°.006×98°.00W±0°.01,h6km±6km, ML2.7,mb_Lg2.5/33(NEIC),ML2.9/48(NEIC),Error ellipse: s-maj=1.8km s-min=0.8km az=76.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GC02	**Grant County #**	**0.12**	**66**	Pg		Pg	13 30 03.0	+0.4
KAN14	**Manchester OK**	**0.16**	**11**	Pg		Pg	13 30 03.8	+0.5
KAN14				IAML			13 30 06.5	
	comp=E,5μm,0.1s							
KAN14				IAML			13 30 06.5	
	comp=N,4μm,0.2s							
OK032	**Salt Plains WL**	**0.17**	**270**			Pg	13 30 03.8	+0.4
OK032				IAML			13 30 09.6	
	comp=N,4μm,0.2s							
CROK	**Carrier**	**0.30**	**178**	Pg		Pg	13 30 06.1	+0.2
CROK				IAML			13 30 12.4	
	comp=N,2μm,0.3s							
CROK				IAML			13 30 16.5	
	comp=E,2μm,0.3s							
KAN17	**Caldwell West**	**0.30**	**38**	Pg		Pg	13 30 06.5	+0.5
KAN17				IAML			13 30 11.1	
	comp=E,2μm,0.3s							
KAN17				IAML			13 30 11.1	
	comp=N,2μm,0.3s							
KAN05	**Bluff City Nor**	**0.32**	**18**			Pg	13 30 06.8	+0.5
KAN05				IAML			13 30 11.9	
	comp=N,1μm,0.2s							
KAN10	**Anthony SW Sta**	**0.33**	**346**			Pg	13 30 07.0	+0.5
KAN10				IAML			13 30 14.0	
	comp=E,913nm,0.1s							
KAN01	**Argonia South**	**0.40**	**29**	Pg		Pg	13 30 08.2	+0.4
KAN08	**Anthony NE Sta**	**0.42**	**3**			Pg	13 30 08.6	+0.4
KAN08				IAML			13 30 14.8	
	comp=E,854nm,0.1s							
KAN09	**Caldwell North**	**0.45**	**42**			Pg	13 30 08.9	+0.2
KAN13	**South Haven SW**	**0.47**	**63**	Pg		Pg	13 30 09.2	+0.2
KAN13				IAML			13 30 21.2	
	comp=N,1μm,0.3s							
KAN13				IAML			13 30 22.6	
	comp=E,912nm,0.3s							
KS21	**Milan North St**	**0.55**	**29**	IAML			13 30 19.4	
	comp=E,684nm,0.2s							
KS21				IAML			13 30 20.0	
	comp=E,544nm,0.1s							
KS21	**Milan North St**	**0.55**	**29**			Pg	13 30 10.9	+0.2
BLOK	**Blackwell**	**0.63**	**94**	Pg		Pg	13 30 12.4	+0.2
BLOK				IAML			13 30 22.0	
	comp=E,868nm,0.2s							
OK038	**West end E0370**	**0.68**	**242**			Pg	13 30 13.2	+0.1
OK038				IAML			13 30 32.2	
	comp=E,910nm,0.4s							
U32A	**Winter Ranch,**	**0.91**	**243**			Pg	13 30 17.2	-0.2
OK048	**Pawnee Station**	**0.93**	**114**			Pg	13 30 17.6	-0.3
OK048				IAML			13 30 30.8	
	comp=E,220nm,0.2s							
OK051	**E0350 and S346**	**0.98**	**107**			Pg	13 30 18.8	0.0
OK029	**Liberty Lake**	**1.10**	**156**	Pg		Pg	13 30 20.5	-0.6
OK029				IAML			13 30 39.8	
	comp=E,195nm,0.2s							
OK029				IAML			13 30 43.5	
	comp=E,168nm,0.5s							
OK033	**Mehan**	**1.14**	**131**			Pg	13 30 21.4	-0.5
OK033				IAML			13 30 38.8	
	comp=E,378nm,0.2s							
OK033				IAML			13 30 40.3	
	comp=E,318nm,0.2s							
T35A	**Sooner Cattle**	**1.20**	**84**	Pg		Pg	13 30 22.6	-0.4
T35A				IAML			13 30 42.5	
	comp=N,176nm,0.2s							
T35A				IAML			13 30 46.3	
	comp=E,154nm,0.3s							
QUOK	**Quay**	**1.22**	**121**			Pg	13 30 22.7	-0.6
OK052	**Battle Ridge R**	**1.26**	**130**			Pn	13 30 23.4	-0.7
CSTR	**Hydro, Custer**	**1.28**	**206**	Pg		Pn	13 30 24.1	-0.4
DEOK	**Depew**	**1.54**	**128**			Pn	13 30 27.9	-0.1
FNO	**Franklin**	**1.62**	**162**			Pn	13 30 29.3	+0.2
R32A	**Long Quarter,**	**1.71**	**341**			Pb	13 30 31.4	-0.5
W35A	**Tecumseh**	**1.88**	**151**			Pn	13 30 33.1	+0.5
WMOK	**Wichita Mounta**	**2.16**	**197**	Pn		Pn	13 30 37.1	+0.6
WMOK				IAmb_Lg			13 31 11.5	
	comp=Z,24nm,1.0s							
KSU1	**Kansas State U**	**2.54**	**25**	IAmb_Lg			13 31 25.1	
	comp=Z,16nm,0.8s							
U38A	**Gravette**	**2.93**	**96**	IAmb_Lg			13 31 33.6	
	comp=Z,15nm,0.7s							
X37A	**Clayton**	**3.07**	**135**	IAmb_Lg			13 31 40.7	
	comp=Z,20nm,0.7s							
Z35A	**Perchaven, San**	**3.52**	**170**	IAmb_Lg			13 31 58.9	
	comp=Z,12nm,0.7s							
S39A	**Bolivar**	**3.83**	**75**	IAmb_Lg			13 32 10.9	
	comp=Z,12nm,1.1s							
DKNS	**Dickens**	**3.94**	**218**	IAmb_Lg			13 32 03.5	
	comp=Z,12nm,1.0s							
MSTX	**Muleshoe**	**4.82**	**235**	IAmb_Lg			13 32 44.7	
	comp=Z,7.6nm,1.1s							
T25A	**Trinidad**	**5.14**	**276**	IAmb_Lg			13 32 47.1	
	comp=Z,12nm,0.8s							
CCM	**Cathedral Cave**	**5.52**	**75**	IAmb_Lg			13 33 01.4	
	comp=Z,8.8nm,0.7s							
PBMO	**Poplar Bluff**	**6.07**	**88**	IAmb_Lg			13 33 26.0	
	comp=Z,8.2nm,0.8s							
FVM	**French Village**	**6.14**	**77**	IAmb_Lg			13 33 14.0	
	comp=Z,9.1nm,0.9s							
P43A	**Skaggs, Pawnee**	**7.25**	**64**	IAmb_Lg			13 33 53.8	
	comp=Z,9.7nm,0.8s							
HNDO	**Hondo**	**7.33**	**189**	IAmb_Lg			13 33 57.8	
	comp=Z,4.4nm,0.8s							
PHWY	**Pilot Hill**	**7.34**	**310**	IAmb_Lg			13 33 51.4	
	comp=Z,5.3nm,0.8s							
MNTX	**Cornudas Mount**	**7.95**	**232**	IAmb_Lg			13 34 26.2	
	comp=Z,4.5nm,1.2s							
RSSD	**Black Hills**	**8.63**	**330**	IAmb_Lg			13 34 55.1	
	comp=Z,4.0nm,0.9s							

*DNK **14** 13:43:34.2±1.4,59°.40N×6°.30E, h0km,ML2.7,ML1.5(UPP), Suspected explosion*
*BER **14** 13:43:35.6±1.1,59°.36N×6°.18E, h0km,ML1.1,Explosion*
*UPP **14** 13:43:36.0±2.5,59°.38N×6°.48E, h0km,ML1.5*
ISC 14 13:43:33.5±1.1,59°.32N±0°.04×6°.15E±0°.06,h0km,n23, σ0s81/34,Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BLS5	**Blasju**	**0.19**	**56**	*e*P		**Pg**	**13 43 37.9**	**+0.7**
BLS5				*e*S		**Sg**	**13 43 41.2**	**+1.6**
BLS5				IAML			13 43 42.2	
	comp=Z,28nm,0.1s							
ODD1	**Odda**	**0.65**	**22**	*e*P		**Pg**	**13 43 45.5**	**-0.4**
ODD1				*e*S		**Sg**	**13 43 54.2**	**0.0**
ODD1				IAML			13 43 56.3	
	comp=Z,6.9nm,0.3s							
SNART	**Snartemo**	**1.13**	**150**	*e*P		**Pb**	**13 43 56.1**	**+0.3**
SNART				*e*S		**Sn**	**13 44 12.0**	**-0.6**
SNART				IAML			13 44 15.1	
	comp=Z,10.0nm,0.1s							
SNART	**Snartemo**	**1.13**	**150**	*i* P		**Pg**	**13 43 55.1**	**+0.1**
SNART				*i* S		**Sb**	**13 44 11.4**	**+0.4**
ASK	**Askoy**	**1.27**	**338**	*e*P		**Pg**	**13 43 58.1**	**+0.3**
ASK				*e*S		**Sg**	**13 44 14.3**	**+0.2**
HOMB	**Homborsund**	**1.62**	**129**	*i* P		**Pn**	**13 44 03.1**	**-0.1**
HOMB				*i* S		**Sb**	**13 44 25.0**	**0.0**
STRU	**Stroemstad**	**2.61**	**94**	P		**Pn**	**13 44 17.3**	**+0.5**
STRU				*i* S		**Sn**	**13 44 46.8**	**-2.4**
STRU				S		**Sn**	**13 44 47.9**	**-1.3**
STRU	**Stroemstad**	**2.61**	**94**	P		**Pn**	**13 44 17.3**	**+0.5**
STRU				S		**Sn**	**13 44 47.9**	**-1.3**
TJOU	**Tjoern**	**3.14**	**112**	P		**Pn**	**13 44 24.9**	**+0.7**
TJOU				S		**Sn**	**13 45 01.3**	**-1.0**
TJOU	**Tjoern**	**3.14**	**112**	P		**Pn**	**13 44 24.9**	**+0.7**
TJOU				S		**Sn**	**13 45 01.3**	**-1.0**
VANU	**Vaenersborg**	**3.18**	**102**	P		**Pn**	**13 44 25.2**	**+0.4**
VANU	**Vaenersborg**	**3.18**	**102**	P		**Pn**	**13 44 25.2**	**+0.4**
FINU	**Finntorp**	**3.24**	**86**	P		**Pn**	**13 44 25.5**	**-0.1**
FINU	**Finntorp**	**3.24**	**86**	P		**Pn**	**13 44 25.5**	**-0.1**
MUD	**Monsted U'grnd**	**3.29**	**149**	*i* S		**Sn**	**13 45 04.6**	**-1.4**
MUD				IAML			13 45 35.1	
	comp=Z,10nm,0.1s							
ONAU	**Onsala**	**3.60**	**120**	P		**Pn**	**13 44 31.2**	**+0.7**
ONAU	**Onsala**	**3.60**	**120**	P		**Pn**	**13 44 31.2**	**+0.7**
NASU	**Vaermlandsnaes**	**3.65**	**93**	P		**Pn**	**13 44 31.2**	**+0.1**
NASU	**Vaermlandsnaes**	**3.65**	**93**	P		**Pn**	**13 44 31.2**	**+0.1**
BORU	**Boraas**	**3.87**	**113**	P		**Pn**	**13 44 34.3**	**+0.2**
BORU	**Boraas**	**3.87**	**113**	P		**Pn**	**13 44 34.3**	**+0.2**
FKPU	**Falk**	**4.12**	**103**	P		**Pn**	**13 44 37.6**	**0.0**
FKPU	**Falk**	**4.12**	**103**	P		**Pn**	**13 44 37.6**	**0.0**

*IDC **14** 13:46:27.8±4.8,15°.66N×98°.27W, h0km,mb3.7/6, mbtmp3.7/7,ML3.3/1,MS3.4/8,Error ellipse: s-maj=89.3km s-min=18.1km az=177.0*
*MEX **14** 13:46:32.3±0.8,15°.99N×98°.42W, h3km±5km,MD4.3*
ISC 14 13:46:29.1±1.4,16°.00N±0°.05×98°.38W±0°.03,h1km±9km, n57,σ2s06/89,mb3.6/5,MS3.4/7,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PNIG	**Pinotepa**	**0.46**	**32**	*i* P		**Pb**	**13 46 41.3**	**+1.2**
PNIG				*i* S		**Sb**	**13 46 47.9**	**+0.5**
CRIG	**Cruz Grande**	**1.03**	**316**	*e*P		**Pg**	**13 46 49.0**	**+0.2**
CRIG				*e*S		**Sg**	**13 47 01.4**	**-0.7**
YOIG	**Yosondua**	**1.17**	**43**	*i* P		**Pb**	**13 46 52.6**	**+0.2**
YOIG				*e*S		**Sb**	**13 47 08.0**	**-0.1**
PEIG	**Puerto Escondi**	**1.19**	**90**	*e*P		**Pg**	**13 46 52.1**	**+0.2**
PEIG				*e*S		**Sg**	**13 47 07.7**	**+0.4**
MGIG	**Malinaltepec**	**1.25**	**349**	*e*P		**Pg**	**13 46 53.4**	**+0.3**
MGIG				*e*S		**Sg**	**13 47 09.4**	**0.0**
TXIG	**Tlaxiaco**	**1.38**	**25**	*e*P		**Pb**	**13 46 55.9**	**0.0**
TXIG				*e*S		**Sb**	**13 47 13.2**	**-1.0**
TLIG	**Tlapa**	**1.56**	**354**	*e*P		**Pn**	**13 46 58.5**	**+0.2**
TLIG				*e*S		**Sb**	**13 47 16.3**	**-3.1**
DAIG	**Los Arroyos**	**1.58**	**310**	*e*P		**Pn**	**13 46 59.7**	**+1.2**
DAIG				*e*S		**Sn**	**13 47 16.1**	**-3.5**
HLIG	**Huajuapan de L**	**1.90**	**17**	*e*P		**Pn**	**13 47 03.2**	**+0.2**
HLIG				*e*S		**Sb**	**13 47 27.8**	**-1.3**
VHO	**Vista Hermosa**	**1.91**	**56**	*e*P		**Pn**	**13 47 02.4**	**-0.6**
VHO				*e*S		**Sn**	**13 47 27.0**	**-0.8**
FTIG	**Fresnillo de T**	**1.91**	**7**	*e*P		**Pn**	**13 47 03.4**	**+0.4**
FTIG				*e*S		**Sn**	**13 47 25.0**	**-2.8**
OXBJ	**Oaxaca**	**1.91**	**56**	*e*P		**Pn**	**13 47 03.0**	**-0.1**
OXBJ				*i* S		**Sg**	**13 47 29.4**	**-1.2**
CAIG	**El Cayaco**	**2.09**	**300**	*e*P		**Pn**	**13 47 04.5**	**-0.8**
CAIG				*e*S		**Sn**	**13 47 27.1**	**-4.9**
HUIG	**Huatulco**	**2.20**	**96**	*e*P		**Pn**	**13 47 06.7**	**-0.2**
HUIG				*e*S		**Sn**	**13 47 31.0**	**-3.7**
MEIG	**Mezcala**	**2.25**	**328**	*e*P		**Pn**	**13 47 08.6**	**+1.0**
MEIG				*e*S		**Sn**	**13 47 32.6**	**-3.5**
TOIG	**Toxpalan**	**2.43**	**31**	*e*P		**Pn**	**13 47 11.4**	**+1.2**
TOIG				*e*S		**Sb**	**13 47 42.6**	**-1.9**
TPIG	**Tehuac#an**	**2.59**	**22**	*e*P		**Pn**	**13 47 13.1**	**+0.6**
TPIG				*e*S		**Sn**	**13 47 40.5**	**-4.3**
PLIG	**Platanillo**	**2.61**	**336**	*e*P		**Pn**	**13 47 12.7**	**+0.1**
PLIG				*e*S		**Sn**	**13 47 44.6**	**-0.4**
YAIG	**Yautepec**	**2.92**	**347**	*e*P		**Pb**	**13 47 21.3**	**-0.8**
YAIG				*e*S		**Sn**	**13 47 52.2**	**-0.6**
ARIG	**Puente Sto Nin**	**2.94**	**321**	*e*P		**Pn**	**13 47 24.6**	**+2.1**
ARIG				*e*S		**Sn**	**13 47 48.5**	**-4.7**
NEUV	**Arroyo Zacate**	**3.00**	**55**	*e*P		**Pn**	**13 47 18.4**	**+0.6**
NEUV				*e*S		**Sn**	**13 47 52.4**	**-2.1**
PPM	**Popocatepetl**	**3.06**	**356**	*e*P		**Pb**	**13 47 25.2**	**+0.5**
AMVM	**AMECAMECA**	**3.14**	**353**	*e*P		**Pn**	**13 47 22.8**	**+2.8**
AMVM				*e*S		**Sn**	**13 47 53.9**	**-4.5**
MPVM	**San Francisco**	**3.24**	**349**	*e*P		**Pb**	**13 47 26.6**	**-1.0**
MPVM				*e*S		**Sn**	**13 48 00.9**	**+0.1**
TLVM	**San Miguel Top**	**3.27**	**347**	*e*P		**Pn**	**13 47 23.5**	**+1.5**
TLVM				*e*S		**Sn**	**13 47 59.9**	**-1.9**
XCVM	**Xochimilco**	**3.31**	**348**	*e*P		**Pb**	**13 47 27.4**	**-1.4**
XCVM				*e*S		**Sn**	**13 47 59.9**	**-2.6**
THVM	**De Xico**	**3.34**	**350**	*e*P		**Pn**	**13 47 22.5**	**-0.3**
THVM				*e*S		**Sn**	**13 47 59.3**	**-4.0**
AOVM	**Tlapan**	**3.37**	**345**	*e*P		**Pb**	**13 47 30.4**	**+0.3**
AOVM				*e*S		**Sn**	**13 48 01.1**	**-3.2**
INVM	**La Marquesa**	**3.41**	**344**	*e*P		**Pn**	**13 47 25.0**	**+1.2**
INVM				*e*S		**Sn**	**13 48 00.9**	**-4.2**
PBVM	**Pinon**	**3.49**	**349**	*e*P		**Pn**	**13 47 26.7**	**+2.1**
PBVM				*e*S		**Sn**	**13 48 04.6**	**-1.9**
TOVM	**TOLUCA**	**3.49**	**339**	*e*P		**Pb**	**13 47 30.3**	**-1.7**
TOVM				*e*S		**Sn**	**13 48 05.7**	**-1.4**
CMIG	**Matias Romero**	**3.52**	**72**	Pn		**Pn**	**13 47 25.1**	**0.0**
	2.6nm,0.3s,baz=252,slow=12,SNR=14							
CMIG					Pg	**Pb**	**13 47 30.7**	**-1.7**
	4.4nm,0.3s,baz=256,slow=14,SNR=12							
CMIG					Sn	**Sn**	**13 48 06.0**	**-1.5**
	19nm,0.3s,baz=269,slow=23,SNR=6.2							
CMIG					Lg	Lg	13 48 22.9	
	37nm,0.3s,baz=280,slow=14,SNR=4.6 9.0nm,0.3s							
CMIG	**Matias Romero**	**3.52**	**72**	*e*P		**Pn**	**13 47 25.2**	**0.0**
CMIG				*e*S		**Sb**	**13 48 13.1**	**-2.7**
PTVM	**Pico Tres Padr**	**3.64**	**349**	*e*P		**Pb**	**13 47 35.0**	**+0.5**
PTVM				*e*S		**Sn**	**13 48 04.8**	**-5.9**
AZVM	**Cuida Lopez Ma**	**3.67**	**347**	*e*P		**Pb**	**13 47 31.7**	**-3.3**
AZVM				*e*S		**Sn**	**13 48 11.7**	**+0.3**
JAUV	**Jalcomulco**	**3.67**	**24**	*e*P		**Pn**	**13 47 27.5**	**+0.3**
JAUV				*e*S		**Sn**	**13 48 12.4**	**+1.3**
VTVM	**Tizayuca**	**3.77**	**354**	*e*P		**Pb**	**13 47 36.8**	**+0.1**
VTVM				*e*S		**Sn**	**13 48 15.4**	**+1.5**
ZUVM	**ZUMPANGO**	**3.86**	**350**	*e*S		**Sn**	**13 48 16.8**	**+0.6**
PMUV	**Sontecomapan**	**4.01**	**50**	*e*P		**Pn**	**13 47 30.2**	**-1.7**
PMUV				*i* S		**Sn**	**13 48 21.5**	**+1.9**
LVIG	**Laguna Verde**	**4.15**	**27**	*e*P		**Pn**	**13

CNPM	**China Poot**	**3.50**	**343**	IAML		13 57 07.8	
	comp=E,73nm,0.7s						
CNPM				IAML		13 57 10.0	
	comp=N,67nm,0.9s						
Q23K	**Middleton Isla**	**3.59**	**24**		**Pn**	**13 55 02.5**	**-0.1**
Q23K	**Middleton Isla**	**3.59**	**24**	IAML		13 56 39.3	
	comp=N,118nm,1.1s						
Q23K				IAML		13 57 20.5	
	comp=E,127nm,1.1s						
CHIR	**Chirikof Islan**	**3.60**	**267**	Pn	**Pn**	**13 55 03.4**	**+0.6**
CHIR				IAML		13 57 08.4	
	comp=E,69nm,1.1s						
Q19K	**Cape Douglas,**	**3.62**	**321**		**Pn**	**13 55 05.0**	**+1.9**
Q19K	**Cape Douglas,** baz=137	**3.62**	**321**	P	**Pn**	**13 55 05.0**	**+1.9**
BRSE	**Bradley Lake S**	**3.64**	**348**		**Pn**	**13 55 04.0**	**+0.6**
BRSE					**Sn**	**13 55 45.0**	**-1.3**
BRSE	**Bradley Lake S** baz=166	**3.64**	**348**	P	**Pn**	**13 55 04.0**	**+0.6**
BRSE				S	**Sn**	**13 55 45.0**	**-1.3**
	baz=166						
BRLK	**Bradley Lake**	**3.68**	**347**		**Pn**	**13 55 04.5**	**+0.6**
BRLK	**Bradley Lake**	**3.68**	**347**	IAML		13 57 15.1	
	comp=N,54nm,0.7s						
BRLK				IAML		13 57 15.5	
	comp=E,71nm,0.5s						
SEW	**Seward**	**3.92**	**358**		**Pn**	**13 55 07.5**	**+0.4**
SEW	**Seward** baz=178	**3.92**	**358**	P	**Pn**	**13 55 07.5**	**+0.4**
P23K	**Montague Islan**	**3.93**	**14**		**Pn**	**13 55 07.8**	**+0.5**
P23K					**Sn**	**13 55 51.8**	**-1.7**
P23K	**Montague Islan** baz=195	**3.93**	**14**	P	**Pn**	**13 55 07.8**	**+0.5**
P23K				S	**Sn**	**13 55 51.8**	**-1.7**
	baz=195						
P19K	**Oil Pt**	**4.06**	**330**		**Pn**	**13 55 10.7**	**+1.5**
CNTC	**Contact Creek**	**4.16**	**303**		**Pn**	**13 55 12.5**	**+1.9**
O20K	**Slope Mountain**	**4.28**	**337**		**Pn**	**13 55 13.4**	**+1.1**
O20K	**Slope Mountain** baz=154	**4.28**	**337**	P	**Pn**	**13 55 13.4**	**+1.1**
IVE	**Iliamna Volcan**	**4.32**	**334**		**Pn**	**13 55 13.7**	**+1.0**
SLKM	**Skilak Lake**	**4.35**	**354**		**Pn**	**13 55 13.7**	**+0.6**
SLKM					**Sn**	**13 56 01.2**	**-2.6**
HIN	**Hinchinbrook I**	**4.45**	**18**		**Pn**	**13 55 15.2**	**+0.7**
P18K	**Big Mountain,**	**4.53**	**317**		**Pn**	**13 55 16.6**	**+1.1**
P18K	**Big Mountain,** baz=133	**4.53**	**317**	P	**Pn**	**13 55 16.6**	**+1.1**
RSO	**Redoubt South**	**4.66**	**338**	Pn	**Pn**	**13 55 18.3**	**+0.9**
RDT	**Redoubt**	**4.69**	**341**		**Pn**	**13 55 18.2**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.73**	**21**		**Pn**	**13 55 19.2**	**+0.9**
EYAK	**Cordova Ski Ar** baz=204	**4.73**	**21**	P	**Pn**	**13 55 19.2**	**+0.9**
SUCK	**Suckling Hills**	**4.84**	**34**		**Pn**	**13 55 20.9**	**+1.0**
O18K	**Koktuh Hills**	**4.84**	**322**		**Pn**	**13 55 20.5**	**+0.6**
HMT	**Hamilton**	**4.91**	**30**	Pn	**Pn**	**13 55 21.5**	**+0.8**
RC01	**Rabbit Creek A**	**4.91**	**357**		**Pn**	**13 55 21.5**	**+0.7**
RC01	**Rabbit Creek A** baz=176	**4.91**	**357**	P	**Pn**	**13 55 21.5**	**+0.7**
KNK	**Knik Glacier**	**5.24**	**4**		**Pn**	**13 55 26.5**	**+1.1**
KNK	**Knik Glacier** baz=184	**5.24**	**4**	P	**Pn**	**13 55 26.5**	**+1.1**
KHIT	**Khitrov Hills**	**5.30**	**34**		**Pn**	**13 55 27.0**	**+0.9**
SUA	**Susitna One**	**5.33**	**352**	Pn	**Pn**	**13 55 27.6**	**+0.9**
BMRM	**Bremner River**	**5.36**	**25**		**Pn**	**13 55 27.8**	**+0.8**
BMRM	**Bremner River** baz=208	**5.36**	**25**	P	**Pn**	**13 55 27.8**	**+0.8**
N19K	**Bonanza Creek**	**5.38**	**331**		**Pn**	**13 55 28.2**	**+1.0**
N19K	**Bonanza Creek** baz=147	**5.38**	**331**	P	**Pn**	**13 55 28.2**	**+1.0**
STLK	**Strandline Lak**	**5.48**	**347**		**Pn**	**13 55 29.7**	**+1.1**
CRQM	**Cirque**	**5.58**	**32**	Pn	**Pn**	**13 55 30.6**	**+0.5**
KLU	**Klutina**	**5.58**	**17**		**Pn**	**13 55 31.1**	**+1.1**
KLU	**Klutina** baz=199	**5.58**	**17**	P	**Pn**	**13 55 31.1**	**+1.1**
SML	**Sawmill**	**5.64**	**4**		**Pn**	**13 55 32.2**	**+1.4**
SML	**Sawmill** baz=185	**5.64**	**4**	P	**Pn**	**13 55 32.2**	**+1.4**
N18K	**Kilae Creek**	**5.69**	**325**	Pn	**Pn**	**13 55 32.0**	**+0.5**
BAGL	**Bagley Icefiel**	**5.71**	**38**		**Pn**	**13 55 32.9**	**+1.1**
VRDI	**Verde Repeater**	**5.87**	**28**	Pn	**Pn**	**13 55 35.2**	**+1.1**
N25K	**Chitina, Valde**	**5.93**	**22**		**Pn**	**13 55 36.2**	**+1.4**
N25K	**Chitina, Valde** baz=206	**5.93**	**22**	P	**Pn**	**13 55 36.2**	**+1.4**
KIAG	**Kiagna River**	**5.95**	**34**		**Pn**	**13 55 36.3**	**+1.1**
GLB	**Gilahina Butte**	**5.96**	**26**	Pn	**Pn**	**13 55 36.5**	**+1.2**
PCA	**Pinnacle**	**6.15**	**47**		**Pn**	**13 55 39.2**	**+1.3**
PINM	**Pinnacle** baz=234	**6.15**	**47**	P	**Pn**	**13 55 39.2**	**+1.3**
PNL	**Peninsula**	**6.29**	**52**		**Pn**	**13 55 40.5**	**+0.8**
PNL	**Peninsula** baz=240	**6.29**	**52**	P	**Pn**	**13 55 40.5**	**+0.8**
CTG	**Chitna Glacier** baz=224	**6.31**	**38**	P	**Pn**	**13 55 41.2**	**+1.0**
CTGM	**Chitina Glacie**	**6.32**	**38**		**Pn**	**13 55 41.2**	**+1.0**
LOGN	**Logan Glacier**	**6.33**	**40**	Pn	**Pn**	**13 55 40.9**	**+0.5**
O29M	**Mount Kennedy**	**6.97**	**49**		**Pn**	**13 55 50.7**	**+1.6**
O29M	**Mount Kennedy** baz=238	**6.97**	**49**	P	**Pn**	**13 55 50.7**	**+1.6**
N15K	**Kwethluk River**	**6.98**	**309**	Pn	**Pn**	**13 55 51.0**	**+1.8**
P29M	**Windy Craggy**	**7.02**	**56**		**Pn**	**13 55 50.8**	**+1.0**
P29M	**Windy Craggy** baz=245	**7.02**	**56**	P	**Pn**	**13 55 50.8**	**+1.0**
M27K	**Edge Creek, AK**	**7.23**	**28**	Pn	**Pn**	**13 55 54.7**	**+2.0**
S31K	**Pelican**	**7.31**	**71**		**Pn**	**13 55 53.1**	**-0.5**
S31K	**Pelican** baz=261	**7.31**	**71**	P	**Pn**	**13 55 53.1**	**-0.5**
MENT	**Mentasta**	**7.31**	**20**	Pn	**Pn**	**13 55 56.0**	**+2.2**
K17K	**Iditarod**	**7.99**	**329**	Pn	**Pn**	**13 56 04.4**	**+1.4**
M29M	**Somme Creek**	**8.33**	**37**	Pn	**Pn**	**13 56 09.2**	**+1.4**
L14K	**Kuka Creek**	**8.67**	**312**	Pn	**Pn**	**13 56 14.9**	**+2.6**
IL31		**8.68**	**7**	Pn	**Pn**	**13 56 14.1**	**+1.7**
P32M	**Atlin**	**8.93**	**61**	Pn	**Pn**	**13 56 16.6**	**+0.5**
H21K	**Melozitna Rive**	**9.64**	**351**	Pn	**Pn**	**13 56 26.8**	**+1.2**
M31M	**Drury Creek, Y**	**9.69**	**46**	Pn	**Pn**	**13 56 28.2**	**+1.9**

*IDC **14** 13:55:28.6±2.1,55°.88N×149°.26W,h0km,mb3.4/3, mbtmp3.4/5,ML3.1/2,MS3.0/5,Error ellipse: s-maj=48.4km s-min=30.4km az=52.0*
*NEIC **14** 13:55:33.7±1.2,56°.25N±0°.09×149°.4W±0°.1,h21km±10km, ML3.7/50,ML3.5(AEIC),Error ellipse: s-maj=12.9km s-min=7.7km az=160.0*
*AEIC **14** 13:55:35.8±1.7,56°.15N±0°.09×149°.2W±0°.1,h12km±8km, Error ellipse: s-maj=12.8km s-min=9.5km az=160.0*
ISC 14 13:55:31.6±1.0,56°.27N±0°.07×149°.28W±0°.05,h10km, n169,σ1$39/165,mb3.3/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.36**	**311**	Pn	**Pn**	**13 56 10.8**	**+0.5**
KDAK	**Kodiak Island**	**2.36**	**311**		**Sn**	**13 56 38.1**	**-1.1**
KDAK	**Kodiak Island** comp=Z,72nm,21.4s,baz=155,slow=39	**2.36**	**311**	LR	LR	13 57 11.6	
OHAK	**Old Harbor**	**2.40**	**295**	Pn	**Pn**	**13 56 10.9**	**+0.1**
OHAK	**Old Harbor**	**2.40**	**295**		**Sn**	**13 56 38.2**	**-2.1**
OHAK	**Old Harbor**	**2.40**	**295**	P	**Pn**	**13 56 11.1**	**+0.2**
OHAK	**Old Harbor** baz=114	**2.40**	**295**	P	**Pn**	**13 56 11.0**	**+0.1**
OHAK				S	**Sn**	**13 56 38.2**	**-2.1**
	baz=114						
SII	**Sitkinak Islan**	**2.74**	**278**		**Pn**	**13 56 15.3**	**-0.3**
SII				IAML		13 56 51.0	
	comp=E,180nm,0.6s						
SII				IAML		13 56 53.5	
	comp=N,200nm,0.8s						
SII	**Sitkinak Islan**	**2.74**	**278**	P	**Pn**	**13 56 16.1**	**+0.5**
SII	**Sitkinak Islan** baz=96	**2.74**	**278**	P	**Pn**	**13 56 15.8**	**+0.2**
SII				S	**Sn**	**13 56 46.2**	**-2.5**
	baz=96						
SYI	**Shuyak Island**	**2.88**	**326**		**Pn**	**13 56 17.8**	**+0.2**
SYI				IAML		13 56 54.1	
	comp=N,143nm,0.6s						
Q20K	**Shuyak Island** baz=144	**2.89**	**326**	P	**Pn**	**13 56 18.5**	**+1.0**
Q20K				S	**Sn**	**13 56 51.9**	**-0.4**
	baz=144						
CNPM	**China Poot**	**3.43**	**343**	Pn	**Pn**	**13 56 25.7**	**+0.7**
CNPM	**China Poot**	**3.43**	**343**		**Sn**	**13 57 05.4**	**-0.2**
Q23K	**Middleton Isla**	**3.53**	**25**		**Pn**	**13 56 27.1**	**+0.7**
Q23K					**Sn**	**13 57 05.6**	**-2.5**
Q23K	**Middleton Isla** comp=E,219nm,1.5s	**3.53**	**25**	IAML		13 57 06.7	
Q23K				IAML		13 57 53.7	
	comp=N,188nm,1.7s						
Q23K	**Middleton Isla** baz=206	**3.53**	**25**	P	**Pn**	**13 56 27.1**	**+0.7**
Q23K				S	**Sn**	**13 57 05.6**	**-2.5**
	baz=206						
MID	**Middleton Isla**	**3.53**	**25**	Pn	**Pn**	**13 56 26.8**	**+0.3**
MID				IAML		13 57 06.8	
	comp=N,181nm,1.7s						
MID				IAML		13 58 26.6	
	comp=E,215nm,1.6s						
MID	**Middleton Isla**	**3.53**	**25**	P	**Pn**	**13 56 27.4**	**+1.0**
Q19K	**Cape Douglas,**	**3.55**	**320**		**Pn**	**13 56 27.7**	**+1.0**
Q19K	**Cape Douglas,** baz=138	**3.55**	**320**	P	**Pn**	**13 56 28.3**	**+1.5**
BRSE	**Bradley Lake S**	**3.57**	**348**		**Pn**	**13 56 27.6**	**+0.7**
BRSE	**Bradley Lake S** baz=167	**3.57**	**348**	P	**Pn**	**13 56 27.6**	**+0.7**
CHIR	**Chirikof Islan**	**3.59**	**265**	Pn	**Pn**	**13 56 26.9**	**-0.2**
CHIR				IAML		13 57 09.0	
	comp=E,98nm,1.3s						
CHIR				IAML		13 57 17.9	
	comp=N,113nm,1.6s						
CHIR	**Chirikof Islan** baz=82	**3.59**	**265**	P	**Pn**	**13 56 26.8**	**-0.3**
BRLK	**Bradley Lake**	**3.60**	**347**	Pn	**Pn**	**13 56 27.6**	**+0.2**
BRLK	**Bradley Lake**	**3.60**	**347**		**Sn**	**13 57 10.4**	**+0.4**
HOM	**Homer**	**3.62**	**341**	Pn	**Pn**	**13 56 28.8**	**+1.1**
HOM	**Homer** baz=159	**3.62**	**341**	P	**Pn**	**13 56 28.4**	**+0.8**
AUL	**Augustine Lava**	**3.83**	**326**		**Pn**	**13 56 32.2**	**+1.7**
SEW	**Seward**	**3.84**	**359**		**Pn**	**13 56 31.2**	**+0.5**
SEW					**Sn**	**13 57 14.0**	**-1.9**
SEW	**Seward** baz=178	**3.84**	**359**	P	**Pn**	**13 56 31.2**	**+0.5**
SEW				S	**Sn**	**13 57 14.0**	**-1.9**
	baz=178						
P23K	**Montague Islan**	**3.87**	**14**		**Pn**	**13 56 32.0**	**+1.0**
P23K	**Montague Islan** baz=195	**3.87**	**14**	P	**Pn**	**13 56 32.0**	**+1.0**
P19K	**Oil Pt**	**3.99**	**330**		**Pn**	**13 56 33.5**	**+0.7**
P19K				IAML		13 57 25.0	
	comp=E,168nm,0.5s						
P19K				IAML		13 57 30.3	
	comp=N,175nm,0.6s						
P19K	**Oil Pt** baz=147	**3.99**	**330**	P	**Pn**	**13 56 33.8**	**+1.1**
CNTC	**Contact Creek**	**4.10**	**302**		**Pn**	**13 56 35.2**	**+0.8**
Q17K	**Contact Creek** baz=118	**4.11**	**302**	P	**Pn**	**13 56 35.2**	**+0.8**
O20K	**Slope Mountain**	**4.21**	**337**		**Pn**	**13 56 36.6**	**+0.8**
O20K	**Slope Mountain** baz=154	**4.21**	**337**	P	**Pn**	**13 56 36.6**	**+0.8**
IVE	**Iliamna Volcan**	**4.25**	**334**		**Pn**	**13 56 37.2**	**+0.9**
SLKM	**Skilak Lake**	**4.28**	**354**		**Pn**	**13 56 37.5**	**+0.8**
HIN	**Hinchinbrook I**	**4.39**	**18**		**Pn**	**13 56 38.9**	**+0.7**
HIN				IAML		13 57 35.2	
	comp=E,95nm,0.7s						
HIN				IAML		13 57 45.0	
	comp=N,105nm,1.0s						
P18K	**Big Mountain,**	**4.46**	**317**		**Pn**	**13 56 39.7**	**+0.5**
P18K	**Big Mountain,** baz=133	**4.46**	**317**	P	**Pn**	**13 56 40.0**	**+0.8**
KAIM	**Kayak Island**	**4.48**	**33**		**Pn**	**13 56 40.0**	**+0.6**
KAIM	**Kayak Island** baz=216	**4.48**	**33**	P	**Pn**	**13 56 40.0**	**+0.6**
RED	**Redoubt Volcan**	**4.55**	**338**		**Pn**	**13 56 40.8**	**+0.4**
RSO	**Redoubt South**	**4.58**	**338**		**Pn**	**13 56 42.6**	**+1.6**
RDT	**Redoubt**	**4.62**	**340**		**Pn**	**13 56 41.9**	**+0.5**
RDWB	**Redoubt West**	**4.62**	**338**		**Pn**	**13 56 42.3**	**+0.7**
EYAK	**Cordova Ski Ar**	**4.67**	**22**		**Pn**	**13 56 43.3**	**+1.2**
EYAK	**Cordova Ski Ar**	**4.67**	**22**	P	**Pn**	**13 56 43.7**	**+1.6**
EYAK	**Cordova Ski Ar** baz=204	**4.67**	**22**	P	**Pn**	**13 56 43.3**	**+1.2**
NCT	**North Crescent**	**4.71**	**337**		**Pn**	**13 56 43.3**	**+0.6**
O19K	**Port Alsworth**	**4.75**	**328**	Pn	**Pn**	**13 56 43.8**	**+0.7**
O19K	**Port Alsworth** baz=144	**4.75**	**328**	P	**Pn**	**13 56 43.9**	**+0.8**
O18K	**Koktuh Hills**	**4.78**	**321**	Pn	**Pn**	**13 56 43.5**	**-0.1**
O18K				IAML		13 57 39.0	
	comp=N,46nm,0.9s						
O18K				IAML		13 57 42.6	
	comp=E,36nm,0.8s						
O18K	**Koktuh Hills** baz=137	**4.78**	**321**	P	**Pn**	**13 56 44.1**	**+0.6**
SUCK	**Suckling Hills**	**4.80**	**35**	Pn	**Pn**	**13 56 45.1**	**+1.3**
SUCK				IAML		13 57 52.9	
	comp=E,94nm,1.2s						
SUCK				IAML		13 58 00.1	
	comp=N,100nm,1.6s						
RC01	**Rabbit Creek A**	**4.84**	**357**	Pn	**Pn**	**13 56 45.0**	**+0.7**
RC01				IAML		13 57 44.3	
	comp=N,36nm,0.4s						
RC01				IAML		13 57 48.8	
	comp=E,44nm,0.5s						
RC01	**Rabbit Creek A** baz=177	**4.84**	**357**	P	**Pn**	**13 56 45.4**	**+1.0**
HMT	**Hamilton**	**4.86**	**31**		**Pn**	**13 56 46.8**	**+2.1**
BERG	**Berg Lake**	**5.07**	**33**		**Pn**	**13 56 48.8**	**+1.2**
CHGN	**Chignik**	**5.09**	**274**		**Pn**	**13 56 48.6**	**+0.9**
CHGN				IAML		13 57 46.4	
	comp=N,57nm,0.1s						
CHGN				IAML		13 58 16.2	
	comp=E,85nm,0.9s						
N20K	**Mount Spurr** baz=162	**5.17**	**344**	P	**Pn**	**13 56 49.6**	**+0.6**
SPCR	**Spurr Chakacha**	**5.17**	**344**		**Pn**	**13 56 49.6**	**+0.6**
KNK	**Knik Glacier**	**5.17**	**4**	Pn	**Pn**	**13 56 51.2**	**+2.2**
KNK				IAML		13 57 59.1	
	comp=N,30nm,0.7s						
KNK				IAML		13 58 08.5	
	comp=E,30nm,0.9s						
DIV	**Divide**	**5.20**	**19**		**Pn**	**13 56 50.3**	**+0.9**
SPCG	**Spurr Capps Gl**	**5.23**	**345**		**Pn**	**13 56 50.6**	**+0.7**
SUA	**Susitna One**	**5.26**	**352**		**Pn**	**13 56 50.9**	**+0.7**
SUA				IAML		13 57 59.6	
	comp=N,24nm,2.7s						
SUA				IAML		14 00 03.9	
	comp=E,26nm,3.6s						
SUA	**Susitna One** baz=171	**5.26**	**352**	P	**Pn**	**13 56 51.0**	**+0.7**
BMRM	**Bremner River**	**5.30**	**25**		**Pn**	**13 56 51.5**	**+0.7**
BMRM	**Bremner River** baz=209	**5.30**	**25**	P	**Pn**	**13 56 51.5**	**+0.7**
PMR	**Palmer**	**5.34**	**1**	Pn	**Pn**	**13 56 52.6**	**+1.5**
PMR				IAML		13 58 03.9	
	comp=E,26nm,0.8s						
PMR	**Palmer**	**5.34**	**1**	P	**Pn**	**13 56 53.6**	**+2.4**
PMR	**Palmer** baz=181	**5.34**	**1**	P	**Pn**	**13 56 52.1**	**+0.9**
WAX	**Waxell Ridge**	**5.38**	**36**		**Pn**	**13 56 53.6**	**+1.6**
STLK	**Strandline Lak**	**5.41**	**347**		**Pn**	**13 56 53.0**	**+0.7**
MESA	**MESA**	**5.51**	**42**	Pn	**Pn**	**13 56 36.3**	**+2.5**
KLU	**Klutina**	**5.52**	**17**		**Pn**	**13 56 55.5**	**+1.7**
KLU	**Klutina** baz=199	**5.52**	**17**	P	**Pn**	**13 56 55.0**	**+1.3**
GHO	**Glory Hole Cre**	**5.52**	**2**		**Pn**	**13 56 55.6**	**+1.8**
SML	**Sawmill**	**5.57**	**5**	Pn	**Pn**	**13 56 56.1**	**+1.6**
SML	**Sawmill** baz=185	**5.57**	**5**	P	**Pn**	**13 56 55.7**	**+1.2**
N18K	**Kilae Creek**	**5.62**	**325**		**Pn**	**13 56 55.7**	**+0.6**
N18K	**Kilae Creek** baz=140	**5.62**	**325**	P	**Pn**	**13 56 55.7**	**+0.6**
ISLE	**Juniper Island**	**5.67**	**37**		**Pn**	**13 56 57.5**	**+1.6**
SCM	**Sheep Creek Mo**	**5.67**	**9**		**Pn**	**13 56 57.3**	**+1.5**
O16K	**Kokwok River B**	**5.75**	**309**		**Pn**	**13 56 57.7**	**+0.8**
O16K	**Kokwok River B** baz=122	**5.75**	**309**	P	**Pn**	**13 56 57.7**	**+0.8**
VRDI	**Verde Repeater**	**5.82**	**29**		**Pn**	**13 57 00.1**	**+2.0**
SVW2	**Sparrevohn**	**5.85**	**328**	Pn	**Pn**	**13 56 58.5**	**+0.3**
SVW2	**Sparrevohn**	**5.85**	**328**	P	**Pn**	**13 56 59.1**	**+0.9**
N25K	**Chitina, Valde**	**5.87**	**22**		**Pn**	**13 57 00.6**	**+2.0**
GLB	**Gilahina Butte**	**5.91**	**26**		**Pn**	**13 57 00.8**	**+1.7**
TABL	**Table Mountain**	**5.98**	**42**		**Pn**	**13 57 01.8**	**+1.6**
CHNA	**Chernabura Isl** baz=73	**6.03**	**260**	P	**Pn**	**13 56 59.8**	**-0.8**
CNBA	**Chernabura Isl**	**6.03**	**260**		**Pn**	**13 56 59.8**	**-0.9**
M24K	**Tolsona, Glenn**	**6.07**	**14**		**Pn**	**13 57 03.2**	**+1.9**
MCARA	**McCarthy VSAT**	**6.07**	**30**		**Pn**	**13 57 03.8**	**+2.5**
PCA	**Pinnacle**	**6.12**	**47**		**Pn**	**13 57 03.6**	**+1.6**
PINM	**Pinnacle** baz=234	**6.12**	**48**	P	**Pn**	**13 57 03.6**	**+1.6**
PNL	**Peninsula**	**6.26**	**53**		**Pn**	**13 57 05.5**	**+1.5**
PNL	**Peninsula**	**6.26**	**53**	P	**Pn**	**13 57 06.4**	**+2.5**
PNL	**Peninsula** baz=240	**6.26**	**53**	P	**Pn**	**13 57 05.4**	**+1.5**
CTGM	**Chitina Glacie**	**6.27**	**38**	Pn	**Pn**	**13 57 05.7**	**+1.5**
LOGN	**Logan Glacier**	**6.29**	**40**	Pn	**Pn**	**13 57 06.3**	**+1.8**
O15K	**Ungalikthiuk R**	**6.35**	**302**		**Pn**	**13 57 06.7**	**+1.5**
O15K	**Ungalikthiuk R** baz=114	**6.35**	**302**	P	**Pn**	**13 57 06.7**	**+1.5**
SDPT	**Sand Point**	**6.38**	**266**		**Pn**	**13 57 05.9**	**+0.4**
SDPT	**Sand Point**	**6.38**	**266**	P	**Pn**	**13 57 06.5**	**+1.0**
SDPT	**Sand Point** baz=78	**6.38**	**266**	P	**Pn**	**13 57 05.9**	**+0.4**
L19K	**White Mountain**	**6.58**	**337**	Pn	**Pn**	**13 57 08.9**	**+0.7**
M17K	**Holitna River**	**6.66**	**324**		**Pn**	**13 57 10.1**	**+0.8**
M17K	**Holitna River** baz=137	**6.66**	**324**	P	**Pn**	**13 57 10.3**	**+1.0**
RND	**Reindeer**	**7.16**	**2**		**Pn**	**13 57 16.3**	**0.0**
S31K	**Pelican**	**7.30**	**71**		**Pn**	**13 57 17.6**	**-0.6**
S31K	**Pelican** baz=261	**7.30**	**71**	P	**Pn**	**13 57 17.6**	**-0.6**
CAST	**Castle Rocks**	**7.31**	**350**		**Pn**	**13 57 18.8**	**+0.6**
MCK	**McKinley**	**7.49**	**1**		**Pn**	**13 57 21.6**	**+0.8**
MCK	**McKinley** baz=181	**7.49**	**1**	P	**Pn**	**13 57 21.5**	**+0.8**
L16K	**Owhat River**	**7.57**	**320**	Pn	**Pn**	**13 57 22.7**	**+0.9**
L16K	**Owhat River** baz=132	**7.57**	**320**	P	**Pn**	**13 57 22.3**	**+0.4**
SIT	**Sitka**	**7.73**	**78**	P	**Pn**	**13 57 24.0**	**0.0**
RIDG	**Independent Ri**	**7.81**	**15**		**Pn**	**13 57 26.4**	**+1.2**
BPAW	**Bear Paw Mtn.**	**7.90**	**355**		**Pn**	**13 57 25.6**	**-0.7**
BPAW	**Bear Paw Mtn.** baz=173	**7.90**	**355**	P	**Pn**	**13 57 27.1**	**+0.7**
K17K	**Iditarod**	**7.92**	**328**		**Pn**	**13 57 27.2**	**+0.6**
K17K	**Iditarod** baz=141	**7.92**	**328**	P	**Pn**	**13 57 27.2**	**+0.6**
SKAG	**Skagway**	**8.09**	**61**	Pn	**Pn**	**13 57 31.2**	**+2.3**
SKAG	**Skagway**	**8.09**	**61**	P	**Pn**	**13 57 31.3**	**+2.3**
J18K	**Innoko River**	**8.12**	**336**		**Pn**	**13 57 30.1**	**+0.7**
J18K	**Innoko River** baz=150	**8.12**	**336**	P	**Pn**	**13 57 30.1**	**+0.7**
FALS	**False Pass**	**8.14**	**266**	P	**Pn**	**13 57 30.7**	**+1.1**
SCRK	**Sand Creek**	**8.17**	**17**	Pn	**Pn**	**13 57 32.2**	**+2.1**
HDA	**Harding Lake**	**8.25**	**7**		**Pn**	**13 57 33.0**	**+1.9**
WRH	**Wood River Hil**	**8.25**	**4**	Pn	**Pn**	**13 57 32.0**	**+0.9**
NEA2	**Nenana**	**8.35**	**1**		**Pn**	**13 57 33.4**	**+0.9**
IL31		**8.61**	**7**		**Pn**	**13 57 38.1**	**+2.1**
ILAR	**Eielson Array** comp=E,0.6nm,0.3s,baz=189,slow=13,SNR=21	**8.61**	**7**	Pn	**Pn**	**13 57 37.7**	**+1.6**
ILAR					**Sn**	**13 59 07.8**	**-5.2**
	baz=172,slow=18 comp=E,1.4nm,0.3s						
WHY	**Whitehorse**	**8.73**	**54**		**Pn**	**13 57 39.7**	**+1.9**
MLY	**Manley**	**8.82**	**356**		**Pn**	**13 57 40.0**	**+1.1**
L29M	**L29M**	**8.87**	**35**		**Pn**	**13 57 41.9**	**+2.2**
I23K	**Minto, Yukon-K**	**8.91**	**360**		**Pn**	**13 57 41.3**	**+1.2**
P32M	**Atlin**	**8.92**	**62**		**Pn**	**13 57 42.2**	**+1.8**
EGAK	**Eagle**	**9.41**	**22**	Pn	**Pn**	**13 57 49.9**	**+2.8**
P33M	**Teslin, Yukon**	**9.53**	**59**		**Pn**	**13 57 51.0**	**+2.2**
M31M	**Drury Creek, Y**	**9.66**	**46**	Pn	**Pn**	**13 57 53.4**	**+3.0**
IMAR	**Indian Mountai**	**9.98**	**349**	Pn	**Pn**	**13 57 55.3**	**+0.5**
UNV	**Unalaska Valle**	**10.17**	**263**	P	**Pn**	**13 57 57.3**	**-0.2**
J30M	**Hart River**	**10.48**	**32**	Pn	**Pn**	**13 58 04.7**	**+3.0**
FYU	**Fort Yukon**	**10.51**	**9**	Pn	**Pn**	**13 58 04.0**	**+2.0**
DLBC	**Dease Lake** comp=E,102nm,18.8s,baz=128,slow=34	**10.62**	**70**	LR	LR	14 01 30.2	
BMAR	**Burnt Mountain**	**11.41**	**9**	Pn	**Pn**	**13 58 16.1**	**+1.7**
BBB	**Bella Bella** comp=E,87nm,18.3s,baz=318,slow=33	**13.03**	**99**	LR	LR	14 02 40.5	
INK	**Inuvik**	**14.05**	**25**	Pn	**Pn**	**13 58 52.9**	**+2.5**
YKA	**Yellowknife Ar** baz=266,slow=9.7,SNR=2.7 comp=E,0.5nm,1.0s	**18.55**	**56**	P	**P**	**13 59 48.5**	**+0.5**
NVAR	**Mina Array Bea** comp=E,0.1nm,0.3s,baz=307,slow=8.9,SNR=1.3 comp=E,0.1nm,0.3s	**27.21**	**118**	P	**P**	**14 01 12.8**	**-2.7**
RES	**Resolute Bay** comp=E,38nm,21.1s,baz=34,slow=38	**27.57**	**28**	LR	LR	14 13 15.9	
PETK	**Petropavlovsk-** comp=E,38nm,18.3s,baz=75,slow=38	**30.18**	**287**	LR	LR	14 14 49.8	
H11N2	**WAKE ISLAND Hy** baz=30,slow=76	**48.88**	**240**	T	T	14 57 03.6	
H11N3	**WAKE ISLAND Hy** baz=30,slow=76	**48.88**	**240**	T	T	14 57 11.8	
H11N1	**WAKE ISLAND Hy** baz=30,slow=76	**48.90**	**240**	T	T	14 57 03.8	
H11S1	**WAKE ISLAND Hy** baz=29,slow=76	**50.02**	**239**	T	T	14 59 07.0	
H11S2	**WAKE ISLAND Hy** baz=29,slow=76	**50.03**	**239**	T	T	14 59 03.6	
H11S3	**WAKE ISLAND Hy** baz=29,slow=76	**50.04**	**239**	T	T	14 59 05.8	
FINES	**FINESS Array B** comp=E,0.6nm,0.6s,baz=2.8,slow=8.5,SNR=0.9 comp=E,0.6nm,0.6s	**62.57**	**3**	P	**P**	**14 05 54.5**	**-0.5**
MKAR	**Makanchi Array** comp=E,0.1n

SII					Sn	14 16 30.3	-1.9
SII	**Sitkinak Islan**	**2.76**	**281**	IAML		14 16 31.8	
	comp=E,112nm,1.5s						
SII				IAML		14 16 34.1	
	comp=N,96nm,0.8s						
SII	**Sitkinak Islan**	**2.76**	**281**	P	Pn	14 15 59.9	+1.0
SII	**Sitkinak Islan**	**2.76**	**281**	P	Pn	14 15 59.9	+1.0
	baz=98						
SII				S	Sn	14 16 30.6	-1.6
	baz=98						
SYI	**Shuyak Island**	**3.01**	**327**		Pn	14 16 03.6	+1.3
Q20K	**Shuyak Island**	**3.01**	**327**	P	Pn	14 16 03.6	+1.3
	baz=144						
Q20K				S	Sn	14 16 38.2	-0.1
	baz=144						
CHIR	**Chirikof Islan**	**3.57**	**268**		Pn	14 16 10.9	+0.9
CHIR					Sn	14 16 49.2	-2.9
CHIR	**Chirikof Islan**	**3.57**	**268**	IAML		14 17 08.7	
	comp=E,70nm,1.4s						
CHIR				IAML		14 17 55.8	
	comp=N,79nm,1.4s						
CHIR	**Chirikof Islan**	**3.57**	**268**	P	Pn	14 16 11.1	+1.2
	baz=83						
CNPM	**China Poot**	**3.57**	**344**		Pn	14 16 11.3	+1.2
CNPM	**China Poot**	**3.57**	**344**		Sn	14 16 51.5	-0.8
CNPM	**China Poot**	**3.57**	**344**	IAML		14 16 54.0	
	comp=E,40nm,0.7s						
CNPM				IAML		14 16 55.1	
	comp=N,36nm,0.4s						
Q19K	**Cape Douglas,**	**3.67**	**322**		Pn	14 16 13.2	+1.8
Q19K	**Cape Douglas,**	**3.67**	**322**	IAML		14 17 03.3	
	comp=N,119nm,0.7s						
Q19K	**Cape Douglas,**	**3.67**	**322**	P	Pn	14 16 13.2	+1.8
	baz=138						
Q23K	**Middleton Isla**	**3.68**	**24**		Pn	14 16 12.2	+0.7
Q23K					Sn	14 16 52.6	-2.2
Q23K	**Middleton Isla**	**3.68**	**24**	IAML		14 18 06.1	
	comp=E,127nm,1.4s						
Q23K				IAML		14 18 24.6	
	comp=N,164nm,1.4s						
Q23K	**Middleton Isla**	**3.68**	**24**	P	Pn	14 16 12.2	+0.7
	baz=206						
Q23K				S	Sn	14 16 52.6	-2.2
	baz=206						
MID	**Middleton Isla**	**3.68**	**24**		Pn	14 16 12.2	+0.7
MID	**Middleton Isla**	**3.68**	**24**	IAML		14 17 57.8	
	comp=E,154nm,1.4s						
BRSE	**Bradley Lake S**	**3.71**	**349**		Pn	14 16 12.8	+0.7
BRSE	**Bradley Lake S**	**3.71**	**349**	P	Pn	14 16 12.8	+0.7
	baz=167						
BRLK	**Bradley Lake**	**3.75**	**348**		Pn	14 16 13.2	+0.6
BRLK	**Bradley Lake**	**3.75**	**348**		Sn	14 16 56.0	-0.8
BRLK	**Bradley Lake**	**3.75**	**348**	IAML		14 16 59.6	
	comp=E,30nm,0.5s						
BRLK				IAML		14 17 01.3	
	comp=N,21nm,1.0s						
HOM	**Homer**	**3.77**	**342**		Pn	14 16 13.6	+0.9
HOM	**Homer**	**3.77**	**342**	IAML		14 17 39.4	
	comp=N,161nm,1.1s						
HOM	**Homer**	**3.77**	**342**	P	Pn	14 16 13.6	+0.9
	baz=159						
AUL	**Augustine Lava**	**3.95**	**328**		Pn	14 16 17.1	+1.8
SEW	**Seward**	**4.00**	**359**		Pn	14 16 16.3	+0.4
SEW	**Seward**	**4.00**	**359**	P	Pn	14 16 16.3	+0.4
	baz=178						
P23K	**Montague Islan**	**4.02**	**14**		Pn	14 16 17.1	+0.9
P23K					Sn	14 17 00.5	-2.8
P23K	**Montague Islan**	**4.02**	**14**	P	Pn	14 16 17.1	+0.9
	baz=195						
P23K				S	Sn	14 17 00.5	-2.8
	baz=195						
P19K	**Oil Pt**	**4.12**	**331**	Pn	Pn	14 16 18.9	+1.3
P19K				IAML		14 17 10.9	
	comp=E,95nm,0.4s						
P19K				IAML		14 17 11.0	
	comp=N,125nm,0.4s						
CNTC	**Contact Creek**	**4.18**	**304**		Pn	14 16 19.5	+0.9
Q17K	**Contact Creek**	**4.18**	**304**	P	Pn	14 16 19.5	+0.9
	baz=118						
O20K	**Slope Mountain**	**4.35**	**337**		Pn	14 16 21.9	+1.0
O20K	**Slope Mountain**	**4.35**	**337**	P	Pn	14 16 21.9	+1.0
	baz=154						
IVE	**Iliamna Volcan**	**4.38**	**335**		Pn	14 16 21.9	+0.7
O22K	**Cooper Landing**	**4.38**	**357**		Pn	14 16 22.4	+1.2
O22K				IAML		14 17 22.0	
	comp=E,69nm,0.8s						
O22K				IAML		14 19 16.7	
	comp=N,86nm,1.0s						
O22K	**Cooper Landing**	**4.38**	**357**	P	Pn	14 16 22.6	+1.4
	baz=176						
SLKM	**Skilak Lake**	**4.43**	**354**		Pn	14 16 22.6	+0.7
HIN	**Hinchinbrook I**	**4.54**	**18**		Pn	14 16 24.3	+0.9
HIN	**Hinchinbrook I**	**4.54**	**18**	IAML		14 17 14.6	
	comp=E,55nm,0.7s						
P18K	**Big Mountain,**	**4.57**	**318**		Pn	14 16 24.9	+1.1
P18K	**Big Mountain,**	**4.57**	**318**	P	Pn	14 16 24.9	+1.1
	baz=133						
KAIM	**Kayak Island**	**4.62**	**32**		Pn	14 16 25.2	+0.8
KAIM	**Kayak Island**	**4.62**	**32**	IAML		14 17 18.5	
	comp=N,72nm,1.2s						
KAIM				IAML		14 17 20.6	
	comp=E,71nm,1.4s						
KAIM	**Kayak Island**	**4.62**	**32**	P	Pn	14 16 25.2	+0.8
	baz=216						
RED	**Redoubt Volcan**	**4.69**	**338**		Pn	14 16 25.9	+0.5
RDSO	**Redoubt South**	**4.71**	**339**		Pn	14 16 26.3	+0.4
RDT	**Redoubt**	**4.76**	**341**		Pn	14 16 27.0	+0.5
RDWB	**Redoubt West**	**4.76**	**338**		Pn	14 16 27.2	+0.7
EYAK	**Cordova Ski Ar**	**4.82**	**21**		Pn	14 16 28.7	+1.5
EYAK	**Cordova Ski Ar**	**4.82**	**21**	P	Pn	14 16 28.6	+1.5
EYAK	**Cordova Ski Ar**	**4.82**	**21**	P	Pn	14 16 28.7	+1.5
	baz=204						
O19K	**Port Alsworth**	**4.88**	**329**		Pn	14 16 28.8	+0.8
O19K	**Port Alsworth**	**4.88**	**329**	P	Pn	14 16 28.8	+0.8
	baz=145						
O18K	**Koktuh Hills**	**4.89**	**322**		Pn	14 16 29.4	+1.1
O18K	**Koktuh Hills**	**4.89**	**322**	IAML		14 17 24.9	
	comp=N,22nm,0.7s						
O18K	**Koktuh Hills**	**4.89**	**322**	P	Pn	14 16 29.3	+1.1
	baz=137						
P17K	**Kvichak River**	**4.92**	**312**		Pn	14 16 30.3	+1.8
P17K	**Kvichak River**	**4.92**	**312**	P	Pn	14 16 30.3	+1.8
	baz=126						
RAGM	**Ragged Mountai**	**4.93**	**28**		Pn	14 16 30.6	+1.9
RAGM				IAML		14 17 35.1	
	comp=E,58nm,0.7s						
RC01	**Rabbit Creek A**	**4.99**	**358**		Pn	14 16 30.2	+0.6
RC01	**Rabbit Creek A**	**4.99**	**358**	IAML		14 18 52.9	
	comp=N,41nm,0.4s						
RC01	**Rabbit Creek A**	**4.99**	**358**	P	Pn	14 16 30.2	+0.6
	baz=177						
FIS	**Fire Island**	**5.07**	**355**		Pn	14 16 31.1	+0.6
FIS	**Fire Island**	**5.07**	**355**	IAML		14 18 53.1	
	comp=E,58nm,1.4s						
FIS				IAML		14 19 00.9	
	comp=N,58nm,1.1s						
BERG	**Berg Lake**	**5.21**	**32**	Pn	Pn	14 16 33.3	+0.8
BERG				IAML		14 17 31.0	
	comp=N,51nm,0.4s						
N20K	**Mount Spurr**	**5.32**	**345**	P	Pn	14 16 35.0	+0.9
	baz=162						
SPCR	**Spurr Chakacha**	**5.32**	**345**		Pn	14 16 35.0	+0.9
KNK	**Knik Glacier**	**5.33**	**4**		Pn	14 16 35.0	+0.8
KNK	**Knik Glacier**	**5.33**	**4**	P	Pn	14 16 35.0	+0.8
	baz=185						
SPCG	**Spurr Capps Gl**	**5.38**	**346**		Pn	14 16 35.9	+0.9
SUA	**Susitna One**	**5.42**	**353**		Pn	14 16 36.2	+0.7
SUA	**Susitna One**	**5.42**	**353**	P	Pn	14 16 36.2	+0.7
	baz=171						
N19K	**Bonanza Creek**	**5.44**	**332**		Pn	14 16 36.5	+0.7
N19K	**Bonanza Creek**	**5.44**	**332**	P	Pn	14 16 36.5	+0.7
	baz=148						
BMRM	**Bremner River**	**5.45**	**25**		Pn	14 16 36.7	+0.8
BMRM	**Bremner River**	**5.45**	**25**	P	Pn	14 16 36.7	+0.8
	baz=208						
PMR	**Palmer**	**5.49**	**1**		Pn	14 16 37.2	+0.8
PMR	**Palmer**	**5.49**	**1**	P	Pn	14 16 37.6	+1.2
P16K	**Nushagak River**	**5.51**	**306**		Pn	14 16 38.6	+1.9
P16K	**Nushagak River**	**5.51**	**306**	P	Pn	14 16 38.6	+1.9
	baz=118						
WAX	**Waxell Ridge**	**5.51**	**35**		Pn	14 16 38.1	+1.2
O17K	**Koliganek Bris**	**5.54**	**315**		Pn	14 16 38.5	+1.5
O17K	**Koliganek Bris**	**5.54**	**315**	P	Pn	14 16 38.5	+1.5
	baz=128						
SPNN	**North Nagishla**	**5.55**	**343**		Pn	14 16 38.6	+1.1
STLK	**Strandline Lak**	**5.56**	**347**		Pn	14 16 38.4	+1.0
KLU	**Klutina**	**5.67**	**17**		Pn	14 16 40.3	+1.3
KLU	**Klutina**	**5.67**	**17**	P	Pn	14 16 40.3	+1.3
	baz=199						
GHO	**Glory Hole Cre**	**5.68**	**2**		Pn	14 16 40.1	+1.1
SML	**Sawmill**	**5.73**	**5**		Pn	14 16 41.0	+1.3
SML	**Sawmill**	**5.73**	**5**	P	Pn	14 16 41.0	+1.3
	baz=185						
N18K	**Kilae Creek**	**5.74**	**326**		Pn	14 16 40.5	+0.7
N18K	**Kilae Creek**	**5.74**	**326**	P	Pn	14 16 40.5	+0.7
	baz=140						
BAGL	**Bagley Icefiel**	**5.80**	**38**		Pn	14 16 41.8	+1.1
SCM	**Sheep Creek Mo**	**5.82**	**9**		Pn	14 16 42.7	+1.7
SCM	**Sheep Creek Mo**	**5.82**	**9**	P	Pn	14 16 42.7	+1.7
	baz=190						
O16K	**Kokwok River B**	**5.85**	**310**		Pn	14 16 42.6	+1.4
O16K	**Kokwok River B**	**5.85**	**310**	P	Pn	14 16 42.6	+1.4
	baz=123						
SVW2	**Sparrevohn**	**5.97**	**329**	Pn	Pn	14 16 43.5	+0.5
SVW2	**Sparrevohn**	**5.97**	**329**	P	Pn	14 16 43.9	+0.8
SKT	**Skwentna**	**5.99**	**350**		Pn	14 16 44.0	+0.7
SKT	**Skwentna**	**5.99**	**350**	P	Pn	14 16 44.0	+0.7
	baz=168						
CHNA	**Chernabura Isl**	**5.99**	**262**	P	Pn	14 16 43.9	+0.6
	baz=74						
CNBA	**Chernabura Isl**	**6.00**	**262**		Pn	14 16 43.9	+0.6
N25K	**Chitina, Valde**	**6.02**	**22**		Pn	14 16 44.8	+1.1
N25K	**Chitina, Valde**	**6.02**	**22**	P	Pn	14 16 44.8	+1.1
	baz=206						
KIAG	**Kiagna River**	**6.04**	**34**		Pn	14 16 45.3	+1.2
GLB	**Gilahina Butte**	**6.05**	**26**		Pn	14 16 45.5	+1.3
M20K	**Styx River**	**6.11**	**343**		Pn	14 16 45.7	+0.7
M20K	**Styx River**	**6.11**	**343**	P	Pn	14 16 45.7	+0.7
	baz=159						
M24K	**Tolsona, Glenn**	**6.22**	**14**		Pn	14 16 48.4	+1.9
M24K	**Tolsona, Glenn**	**6.22**	**14**	P	Pn	14 16 48.4	+1.9
	baz=196						
PCA	**Pinnacle**	**6.23**	**46**		Pn	14 16 48.0	+1.3
PINM	**Pinnacle**	**6.23**	**47**	P	Pn	14 16 48.0	+1.3
	baz=234						
SDPT	**Sand Point**	**6.36**	**268**		Pn	14 16 49.0	+0.7
SDPT	**Sand Point**	**6.36**	**268**	P	Pn	14 16 50.0	+1.6
SDPT	**Sand Point**	**6.36**	**268**	P	Pn	14 16 49.0	+0.7
	baz=79						
M18K	**Stony River**	**6.36**	**331**		Pn	14 16 48.9	+0.5
M18K	**Stony River**	**6.36**	**331**	P	Pn	14 16 48.9	+0.5
	baz=145						
PNL	**Peninsula**	**6.37**	**52**		Pn	14 16 49.7	+1.3
PNL	**Peninsula**	**6.37**	**52**	P	Pn	14 16 50.3	+1.9
PNL	**Peninsula**	**6.37**	**52**	P	Pn	14 16 49.7	+1.3
	baz=240						
M19K	**Big River Lodg**	**6.37**	**338**	Pn	Pn	14 16 48.9	+0.4
CTGM	**Chitina Glacie**	**6.40**	**37**	Pn	Pn	14 16 50.9	+1.9
O15K	**Ungalikthiuk R**	**6.43**	**303**		Pn	14 16 51.1	+1.9
O15K	**Ungaliikthiuk R**	**6.43**	**303**	P	Pn	14 16 51.1	+1.9
	baz=114						
L19K	**White Mountain**	**6.72**	**337**		Pn	14 16 53.6	+0.3
L19K	**White Mountain**	**6.72**	**337**	P	Pn	14 16 53.6	+0.3
	baz=152						
M17K	**Holitna River**	**6.78**	**325**		Pn	14 16 54.9	+0.8
M17K	**Holitna River**	**6.78**	**325**	P	Pn	14 16 54.9	+0.8
	baz=138						
L20K	**Farewell, AK**	**6.80**	**342**		Pn	14 16 55.2	+0.8
L20K	**Farewell, AK**	**6.80**	**342**	P	Pn	14 16 55.2	+0.8
	baz=158						
N15K	**Kwethluk River**	**7.01**	**310**	Pn	Pn	14 16 59.7	+2.5
O29M	**Mount Kennedy**	**7.05**	**49**		Pn	14 16 59.5	+1.6
O29M	**Mount Kennedy**	**7.05**	**49**	P	Pn	14 16 59.5	+1.6
	baz=238						
DHY	**Denali Highway**	**7.05**	**7**		Pn	14 16 58.7	+0.8
DHY	**Denali Highway**	**7.05**	**7**	P	Pn	14 16 58.7	+0.8
	baz=188						
S31K	**Pelican**	**7.37**	**70**	P	Pn	14 17 01.3	-0.8
	baz=261						
KTH	**Kantishna Hill**	**7.50**	**354**	Pn	Pn	14 17 05.3	+1.2
SIT	**Sitka**	**7.77**	**77**	Pn	Pn	14 17 06.9	-0.8
FALS	**False Pass**	**8.12**	**267**	P	Pn	14 17 14.4	+1.9
SKAG	**Skagway**	**8.18**	**60**	P	Pn	14 17 15.2	+2.0
N30M	**Aishikik Lake**	**8.29**	**45**	Pn	Pn	14 17 15.6	+0.7
MLY	**Manley**	**8.97**	**356**	Pn	Pn	14 17 24.8	+0.7
P32M	**Atlin**	**9.00**	**61**	Pn	Pn	14 17 26.1	+1.4
Z33K	**Minto, Yukon-K**	**9.06**	**360**	Pn	Pn	14 17 26.8	+1.4
CRAG	**Craig**	**9.14**	**87**	P	Pn	14 17 26.6	+0.2
P33M	**Teslin, Yukon**	**9.62**	**58**	Pn	Pn	14 17 34.2	+1.2
UNV	**Unalaska Valle**	**10.15**	**264**	P	Pn	14 17 40.7	+0.5

GRAL 14 14:23:03.5±0.3, 34°62N×36°19E, h7km±2km, MD2.7, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEIL	**Beino**	**0.08**	**182**	*e*P	Pg	14 23 05.4	-0.1
BEIL				*e*S	Sg	14 23 06.7	-0.2
HWQ	**Hawqa**	**0.40**	**210**	*e*P	Pg	14 23 10.7	-0.6
HWQ				*e*S	Sg	14 23 16.1	-0.4
ZAHL	**Zahle**	**0.80**	**198**	*e*P	Pg	14 23 18.0	-1.0
BHL	**Bhannes**	**0.84**	**212**	*e*P	Pg	14 23 18.7	-1.0
DQRL	**Deir Qamar**	**1.05**	**209**	*e*P	Pg	14 23 22.1	-1.6
QRWL	**Qaraoun**	**1.15**	**202**	*e*P	Pg	14 23 23.6	-2.0
RCY	**Rachaya**	**1.16**	**195**	*e*P	Pg	14 23 24.1	-1.7

GII 14 14:23:57.3±0.3, 32°78N×35°39E, h0km, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLGI	**Bet Lehem HaGe**	**0.17**	**253**	P	Pg	14 24 01.8	+1.2
BLGI	**Bet Lehem HaGe**	**0.17**	**253**	S	Sg	14 24 05.1	+2.3
MMA0B	**Mount Meron ar**	**0.23**	**3**	P	Pg	14 24 03.5	+1.8
MMA0B	**Mount Meron ar**	**0.23**	**3**	S	Sg	14 24 07.1	+2.4
MMLI	**Mount Malkishu**	**0.34**	**175**	S	Sb	14 24 11.1	-1.2
OFRI	**`Ofer**	**0.38**	**245**	S	Sb	14 24 12.9	-0.3
KSHT	**Keshet**	**0.41**	**61**	S	Sb	14 24 13.7	-0.5
HMDT	**Nahal Hemdat**	**0.54**	**167**	P	Pg	14 24 08.6	+1.0
HMDT	**Nahal Hemdat**	**0.54**	**167**	S	Sb	14 24 17.5	-0.4
NATI	**Neve Ativ**	**0.56**	**31**	P	Pb	14 24 09.5	-0.5
NATI	**Neve Ativ**	**0.56**	**31**	S	Sb	14 24 18.4	-0.1

*IDC **14** 14:27:11.7±1.2, 56°.35N×149°.09W, h0km, mb3.6/7, mbtmp3.6/12, ML3.4/5, MS3.2/20, Error ellipse: s-maj=25.6km s-min=16.7km az=30.0*
*NEIC **14** 14:27:12.4±1.6, 56°.30N±0°.08×149°.0W±0°.1, h20km±7km, ML3.9/50, ML3.7(AEIC), Error ellipse: s-maj=12.5km s-min=7.0km az=155.0*
*AEIC **14** 14:27:14.1±1.9, 56°.17N±0°.10×148°.9W±0°.1, h9km±7km, Error ellipse: s-maj=14.7km s-min=8.5km az=164.0*

ISC 14 14:27:12.2±0.8, 56°.39N±0°.06×149°.05W±0°.04, h10km, n251, σ1§15/239, mb3.7/7, MS3.2/15, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.38**	**307**	Pn	Pn	14 27 51.1	-0.1
KDAK	**Kodiak Island**	**2.38**	**307**	S	Sn	14 28 18.5	-2.0
	baz=127						
KDAK	**Kodiak Island**	**2.38**	**307**	Pn	Pn	14 27 50.9	-0.3
	7.3nm,0.3s,baz=127,slow=5.6,SNR=181						
KDAK				Sn	Sn	14 28 18.5	-2.0
	12nm,0.3s,baz=162,slow=20,SNR=8.4						
KDAK				LR	LR	14 28 31.7	
	comp=Z,168nm,21.3s,baz=128,slow=33						
	38nm,0.5s						
OHAK	**Old Harbor**	**2.48**	**291**	Pn	Pn	14 27 51.6	-1.0
OHAK	**Old Harbor**	**2.48**	**291**		Sn	14 28 20.8	-2.0
OHAK	**Old Harbor**	**2.48**	**291**	P	Pn	14 27 52.1	-0.4
OHAK	**Old Harbor**	**2.48**	**291**	P	Pn	14 27 51.9	-0.6
	baz=112						
OHAK				S	Sn	14 28 20.8	-2.0
	baz=112						
SII	**Sitkinak Islan**	**2.85**	**276**		Pn	14 27 58.9	+1.1
SII				IAML		14 28 30.4	
	comp=N,319nm,0.9s						
SII				IAML		14 28 36.5	
	comp=E,361nm,0.7s						
SII	**Sitkinak Islan**	**2.85**	**276**		Sn	14 28 29.5	-2.7
SII	**Sitkinak Islan**	**2.85**	**276**	S	Sn	14 28 29.5	-2.7
	baz=95						
SYI	**Shuyak Island**	**2.86**	**322**		Pn	14 27 58.0	+0.1
SYI	**Shuyak Island**	**2.86**	**322**		Sn	14 28 32.6	+0.2
Q20K	**Shuyak Island**	**2.87**	**322**	P	Pn	14 27 58.1	+0.2
	baz=141						
Q20K				S	Sn	14 28 32.6	+0.2
	baz=141						
CNPM	**China Poot**	**3.35**	**341**		Pn	14 28 04.2	-0.4
Q23K	**Middleton Isla**	**3.37**	**24**		Pn	14 28 04.3	-0.6
Q23K	**Middleton Isla**	**3.37**	**24**	IAML		14 29 08.6	
	comp=E,251nm,2.2s						
Q23K				IAML		14 29 34.0	
	comp=N,224nm,1.8s						
Q23K	**Middleton Isla**	**3.37**	**24**	P	Pn	14 28 04.3	-0.6
	baz=204						
MID	**Middleton Isla**	**3.37**	**24**	Pn	Pn	14 28 04.0	-0.8
MID				IAML		14 29 08.5	
	comp=E,260nm,2.2s						
MID				IAML		14 30 01.3	
	comp=N,221nm,2.0s						
MID	**Middleton Isla**	**3.37**	**24**	P	Pn	14 28 04.3	-0.5
BRSE	**Bradley Lake S**	**3.48**	**346**		Pn	14 28 06.3	-0.1
BRSE					Sn	14 28 46.4	-1.2
BRSE	**Bradley Lake S**	**3.48**	**346**	P	Pn	14 28 06.5	+0.1
	baz=164						
BRSE				S	Sn	14 28 47.3	-0.3
	baz=164						
BRLK	**Bradley Lake**	**3.52**	**345**		Pn	14 28 06.4	-0.6
BRLK				IAML		14 28 53.0	
	comp=E,147nm,0.5s						
Q19K	**Cape Douglas,**	**3.54**	**318**	Pn	Pn	14 28 07.9	+0.6
Q19K	**Cape Douglas,**	**3.54**	**318**	P	Pn	14 28 07.6	+0.3
	baz=135						
P23K	**Montague Islan**	**3.72**	**13**		Pn	14 28 09.3	-0.4
P23K					Sn	14 28 50.6	-2.9
P23K	**Montague Islan**	**3.72**	**13**	P	Pn	14 28 09.3	-0.4
	baz=192						
P23K				S	Sn	14 28 50.6	-2.9
	baz=192						
CHIR	**Chirikof Islan**	**3.73**	**264**		Sn	14 28 49.0	-4.6
CHIR	**Chirikof Islan**	**3.73**	**264**	S	Sn	14 28 49.0	-4.6
	baz=82						
SEW	**Seward**	**3.73**	**357**		Pn	14 28 09.7	-0.1
SEW	**Seward**	**3.73**	**357**	P	Pn	14 28 09.7	-0.1
	baz=175						
ANCK	**Angle Creek**	**3.94**	**300**		Pn	14 28 14.2	+1.5
P19K	**Oil Pt**	**3.96**	**328**		Pn	14 28 13.6	+0.7
P19K				IAML		14 29 08.9	
	comp=E,217nm,0.5s						
P19K				IAML		14 29 08.9	
	comp=N,202nm,0.5s						
P19K	**Oil Pt**	**3.96**	**328**	P	Pn	14 28 12.7	-0.2
	baz=145						
O22K	**Cooper Landing**	**4.12**	**355**		Pn	14 28 15.0	-0.1
O22K	**Cooper Landing**	**4.12**	**355**	P	Pn	14 28 15.3	+0.2
	baz=174						
CNTC	**Contact Creek**	**4.15**	**300**		Pn	14 28 16.1	+0.4
O20K	**Slope Mountain**	**4.16**	**334**		Pn	14 28 15.7	0.0
O20K	**Slope Mountain**	**4.16**	**334**	P	Pn	14 28 16.5	+0.8
	baz=152						
Q17K	**Contact Creek**	**4.16**	**300**	P	Pn	14 28 16.1	+0.3
	baz=116						
SLKM	**Skilak Lake**	**4.17**	**352**		Pn	14 28 15.5	-0.4
IVE	**Iliamna Volcan**	**4.20**	**332**		Pn	14 28 16.1	-0.3
HIN	**Hinchinbrook I**	**4.24**	**17**		Pn	14 28 16.0	-0.8
HIN				IAML		14 29 13.2	
	comp=N,143nm,1.4s						
HIN				IAML		14 29 14.1	
	comp=E,152nm,1.5s						
KAIM	**Kayak Island**	**4.31**	**33**		Pn	14 28 17.3	-0.4
KAIM	**Kayak Island**	**4.31**	**33**	IAML		14 29 15.0	
	comp=N,149nm,0.8s						
P18K	**Big Mountain,**	**4.46**	**315**		Pn	14 28 19.8	-0.1
P18K	**Big Mountain,**	**4.46**	**315**	P	Pn	14 28 19.9	-0.1
	baz=131						
RED	**Redoubt Volcan**	**4.49**	**336**		Pn	14 28 20.0	-0.3
EYAK	**Cordova Ski Ar**	**4.51**	**21**		Pn	14 28 20.5	-0.1
EYAK	**Cordova Ski Ar**	**4.51**	**21**	P	Pn	14 28 20.6	+0.1
EYAK	**Cordova Ski Ar**	**4.51**	**21**	P	Pn	14 28 20.5	-0.1
	baz=202						
RSO	**Redoubt South**	**4.52**	**336**		Pn	14 28 20.1	-0.8
RDT	**Redoubt**	**4.55**	**339**		Pn	14 28 20.6	-0.5
RDWB	**Redoubt West**	**4.57**	**336**		Pn	14 28 21.0	-0.4
RAGM	**Ragged Mountai**	**4.62**	**28**		Pn	14 28 22.1	0.0
SUCK	**Suckling Hills**	**4.62**	**35**		Pn	14 28 21.9	-0.2
SUCK				IAML		14 29 21.5	
	comp=E,99nm,1.3s						
DFR	**Drift River**	**4.62**	**337**		Pn	14 28 21.9	-0.2
NCT	**North Crescent**	**4.65**	**336**		Pn	14 28 22.2	-0.3
HMT	**Hamilton**	**4.69**	**31**		Pn	14 28 22.6	-0.4
NICHA	**Nichawak Mount**	**4.70**	**33**		Pn	14 28 23.2	+0.1
Q16K	**King Salmon**	**4.70**	**302**		Pn	14 28 24.1	+1.1
Q16K	**King Salmon**	**4.70**	**302**	P	Pn	14 28 24.2	+1.1
	baz=118						
RC01	**Rabbit Creek A**	**4.73**	**356**		Pn	14 28 23.1	-0.4
RC01				IAML		14 29 18.0	
	comp=N,61nm,0.6s						
RC01				IAML		14 29 21.6	
	comp=E,80nm,0.6s						
RC01	**Rabbit Creek A**	**4.73**	**356**	P	Pn	14 28 23.5	0.0
	baz=174						
O18K	**Koktuh Hills**	**4.77**	**319**	Pn	Pn	14 28 24.1	+0.1
O18K				IAML		14 29 26.8	
	comp=N,46nm,0.8s						
O18K	**Koktuh Hills**	**4.77**	**319**	P	Pn	14 28 24.1	+0.1
	baz=135						
GOAT	**Goat Mountain**	**4.77**	**27**		Pn	14 28 24.2	0.0
P17K	**Kvichak River**	**4.85**	**308**		Pn	14 28 25.6	+0.4
P17K	**Kvichak River**	**4.85**	**308**	P	Pn	14 28 25.6	+0.4
	baz=124						
**BER

BAGL	Bagley Icefiel	5.50	39			Pn		14 28 34.0	-0.1
SCM	Sheep Creek Mo	5.53	8			Pn		14 28 35.5	+0.9
SCM	Sheep Creek Mo	5.53	8	P		Pn		14 28 35.2	+0.6
	baz=189								
N18K	Kilae Creek	5.60	323	Pn		Pn		14 28 34.8	-0.6
VRDI	Verde Repeater	5.66	29	Pn		Pn		14 28 35.9	-0.5
N25K	Chitina, Valde	5.71	22			Pn		14 28 37.0	-0.1
N25K	Chitina, Valde	5.71	22	P		Pn		14 28 37.5	+0.4
	baz=204								
KIAG	Kiagna River	5.73	35			Pn		14 28 37.2	-0.2
GLB	Gilahina Butte	5.75	26			Pn		14 28 37.5	0.0
SKT	Skwentna	5.75	348	Pn		Pn		14 28 37.9	+0.3
SAMH	Samovar Hills	5.75	46			Pn		14 28 37.2	-0.4
O16K	Kokwok River B	5.78	307			Pn		14 28 38.6	+0.6
O16K	Kokwok River B	5.78	307	P		Pn		14 28 38.8	+0.8
	baz=121								
GRNC	Granite Creek	5.79	38			Pn		14 28 37.6	-0.6
TABL	Table Mountain	5.81	42			Pn		14 28 38.2	-0.3
SVW2	Sparrevohn	5.82	327	Pn		Pn		14 28 38.1	-0.4
SVW2	Sparrevohn	5.82	327	P		Pn		14 28 38.4	0.0
MCARA	McCarthy VSAT	5.90	29			Pn		14 28 38.4	-1.2
MCARA	McCarthy VSAT	5.90	29	P		Pn		14 28 38.5	-1.1
	baz=213								
PTPK	Patty Peak	5.90	33			Pn		14 28 40.0	+0.2
M24K	Tolsona, Glenn	5.92	13	Pn		Pn		14 28 40.6	+0.7
M24K	Tolsona, Glenn	5.92	13	P		Pn		14 28 40.3	+0.4
	baz=194								
PCA	Pinnacle	5.94	48			Pn		14 28 40.3	0.0
N17K	Nushagak Hills	5.95	318	Pn		Pn		14 28 39.9	-0.4
BARN	Barnard Glacie	6.06	36			Pn		14 28 41.2	-0.7
PNL	Peninsula	6.09	53			Pn		14 28 41.1	-1.1
PNL	Peninsula	6.09	53	P		Pn		14 28 42.4	+0.2
PNL	Peninsula	6.09	53	P		Pn		14 28 41.1	-1.1
	baz=239								
CTG	Chitna Glacier	6.10	38	P		Pn		14 28 42.5	+0.1
	baz=223								
CTGM	Chitina Glacie	6.10	38	Pn		Pn		14 28 41.8	-0.7
LOGN	Logan Glacier	6.12	40			Pn		14 28 42.3	-0.4
BCPM	Bancas Point	6.13	50			Pn		14 28 43.0	+0.3
M19K	Big River Lodg	6.17	336			Pn		14 28 42.9	-0.4
M18K	Stony River	6.20	328			Pn		14 28 43.1	-0.6
WAT6	Susitna Watana	6.25	6			Pn		14 28 45.0	+0.6
WAT6	Susitna Watana	6.25	6	P		Pn		14 28 45.0	+0.6
	baz=186								
HARP	HAARP	6.34	17			Pn		14 28 46.1	+0.4
HARP	HAARP	6.34	17	P		Pn		14 28 46.1	+0.4
	baz=199								
O15K	Ungalikthiuk R	6.40	300			Pn		14 28 47.4	+0.9
O15K	Ungalikthiuk R	6.40	300	P		Pn		14 28 46.9	+0.4
	baz=112								
WAT7	Susitna Watana	6.46	1			Pn		14 28 48.4	+1.0
WAT1	Susitna Watana	6.46	2			Pn		14 28 48.0	+0.6
WAT1	Susitna Watana	6.46	2	P		Pn		14 28 48.0	+0.6
	baz=182								
SDPT	Sand Point	6.52	266			Pn		14 28 47.7	-0.3
SDPT						Sn		14 29 56.8	-5.5
SDPT	Sand Point	6.52	266	P		Pn		14 28 48.4	+0.4
SDPT	Sand Point	6.52	266	P		Pn		14 28 48.1	+0.1
	baz=78								
SDPT				S		Sn		14 29 56.8	-5.5
	baz=78								
L19K	White Mountain	6.52	335			Pn		14 28 47.8	-0.3
N16K	Nishlik Lake	6.54	313			Pn		14 28 48.8	+0.4
L20K	Farewell, AK	6.58	340			Pn		14 28 48.6	-0.4
M17K	Holitna River	6.64	323			Pn		14 28 49.8	+0.1
DHY	Denali Highway	6.76	6	Pn		Pn		14 28 52.5	+1.0
DHY	Denali Highway	6.76	6	P		Pn		14 28 52.0	+0.5
	baz=187								
O29M	Mount Kennedy	6.76	50			Pn		14 28 51.8	+0.2
P29M	Windy Craggy	6.83	57			Pn		14 28 51.7	-0.7
M16K	Timber Creek	6.94	316			Pn		14 28 54.5	+0.6
N15K	Kwethluk River	6.94	308			Pn		14 28 54.9	+1.0
M27K	Edge Creek, AK	7.01	28			Pn		14 28 54.7	-0.2
M27K	Edge Creek, AK	7.01	28	P		Pn		14 28 54.7	-0.2
	baz=213								
L18K	Granite Mounta	7.03	329			Pn		14 28 55.2	+0.2
RND	Reindeer	7.04	1			Pn		14 28 56.4	+1.1
MENT	Mentasta	7.10	20			Pn		14 28 56.6	+0.5
TRF	Thorofare Moun	7.11	355	Pn		Pn		14 28 56.6	+0.3
S31K	Pelican	7.14	72			Pn		14 28 54.5	-2.1
S31K	Pelican	7.14	72	P		Pn		14 28 54.7	-2.0
	baz=261								
CAST	Castle Rocks	7.21	349	Pn		Pn		14 28 58.6	+1.0
KTH	Kantishna Hill	7.25	353			Pn		14 28 59.1	+1.0
TTA	Tatalina	7.44	335	P		Pn		14 29 00.5	-0.3
HYT	Haines Junctio	7.49	49	Pn		Pn		14 29 01.8	+0.4
L16K	Owhat River	7.57	319	Pn		Pn		14 29 02.2	-0.2
RIDG	Independent Ri	7.67	14	Pn		Pn		14 29 04.6	+0.7
RIDG	Independent Ri	7.67	14	P		Pn		14 29 05.6	+1.7
	baz=197								
BPAW	Bear Paw Mtn.	7.79	354			Pn		14 29 05.1	-0.5
SKAG	Skagway	7.92	61			Pn		14 29 07.9	+0.6
SKAG	Skagway	7.92	61	P		Pn		14 29 07.3	0.0
S32K	Killisnoo	7.99	76			Pn		14 29 06.3	-1.9
S32K	Killisnoo	7.99	76	P		Pn		14 29 06.3	-1.9
	baz=267								
N30M	Aishikik Lake	8.00	46			Pn		14 29 08.7	+0.2
J18K	Innoko River	8.07	335	Pn		Pn		14 29 08.8	-0.5
HDA	Harding Lake	8.11	6			Pn		14 29 11.2	+1.3
M29M	Somme Creek	8.12	37			Pn		14 29 10.4	+0.4
M29M	Somme Creek	8.12	37	P		Pn		14 29 10.5	+0.4
	baz=225								
JIS	Juneau Island	8.16	71	P		Pn		14 29 09.9	-0.6
J20K	Nowinta River	8.21	344	Pn		Pn		14 29 10.5	-0.7
J20K	Nowinta River	8.21	344	P		Pn		14 29 11.7	+0.4
	baz=160								
J19K	Poorman	8.29	340			Pn		14 29 11.4	-1.0
K27K	Chicken	8.41	21			Pn		14 29 14.0	0.0
ILAR	Eielson Array	8.48	6	Pn		Pn		14 29 14.3	-0.6
	comp=E,0.4nm,0.3s,baz=190,slow=13,SNR=18								
ILAR				Sn		Sn		14 30 44.7	-5.8
	comp=E,0.3nm,0.3s,baz=186,slow=15,SNR=4.3								
ILAR				LR		LR		14 32 35.8	
	comp=E,100nm,19.5s,baz=260,slow=38								
	comp=E,0.8nm,0.3s								
WHY	Whitehorse	8.55	54	Pn		Pn		14 29 16.7	+0.6
J26L	Joseph Creek	8.57	16			Pn		14 29 17.5	+1.2
L14K	Kuka Creek	8.62	311			Pn		14 29 18.5	+1.6
L14K	Kuka Creek	8.62	311	P		Pn		14 29 17.2	+0.3
	baz=120								
J17K	VABM Dome	8.64	329			Pn		14 29 16.8	-0.3
J17K	VABM Dome	8.64	329	P		Pn		14 29 16.8	-0.3
	baz=140								
L29M	L29M	8.69	35			Pn		14 29 18.3	+0.4
P32M	Atlin	8.75	62			Pn		14 29 18.1	-0.6
P32M	Atlin	8.75	62	P		Pn		14 29 17.6	-1.1
	baz=254								
M30M	Minto, Yukon	8.78	40	Pn		Pn		14 29 19.3	+0.2
I23K	Minto, Yukon-K	8.79	359			Pn		14 29 20.2	+1.1
I23K	Minto, Yukon-K	8.79	359	P		Pn		14 29 19.8	+0.7
	baz=178								
I21K	Tanana	8.93	352			Pn		14 29 21.5	+0.4
DAWY	Dawson	9.06	28			Pn		14 29 23.6	+0.6
EGAK	Eagle	9.26	21			Pn		14 29 26.2	+0.6
P33M	Teslin, Yukon	9.36	59	Pn		Pn		14 29 26.4	-0.7
I26K	Coal Creek Min	9.39	15			Pn		14 29 28.5	+1.1
K29M	Barlow Dome	9.42	33			Pn		14 29 27.8	-0.1
K29M	Barlow Dome	9.42	33	P		Pn		14 29 27.8	-0.1
	baz=222								
H21K	Melozitna Rive	9.47	351			Pn		14 29 28.5	0.0
M31M	Drury Creek, Y	9.48	46			Pn		14 29 29.2	+0.6
H24K	Noodor Dome	9.50	3			Pn		14 29 29.9	+1.0
H24K	Noodor Dome	9.50	3	P		Pn		14 29 29.9	+1.0
	baz=183								
FARO	Faro, Yukon	9.92	47	Pn		Pn		14 29 35.2	+0.6
J30M	Hart River	10.31	32	Pn		Pn		14 29 41.4	+1.3
G23K	Bananza Creek	10.37	358			Pn		14 29 41.6	+0.8
DLBC	Dease Lake	10.46	71	Pn		Pn		14 29 42.1	0.0
	comp=E,0.4nm,0.3s,baz=242,slow=11,SNR=6.3								
DLBC				Sn		Sn		14 31 34.8	-4.4
	comp=E,0.2nm,0.3s,baz=220,slow=17,SNR=1.5								
	comp=E,1.2nm,0.4s								
F21K	Alatna River	11.07	351			Pn		14 29 50.3	0.0
F20K	Avaraart Lake	11.14	346			Pn		14 29 50.6	-0.8
BBB	Bella Bella	12.92	100	LR		LR		14 33 15.1	
	comp=E,40nm,18.3s,baz=292,slow=28								
INK	Inuvik	13.89	24	Pn		Pn		14 30 31.4	+2.6
	comp=E,0.1nm,0.3s,baz=204,slow=15,SNR=10								
INK				LR		LR		14 36 02.4	
	comp=E,59nm,20.5s,baz=7.0,slow=38								
	comp=E,2.6nm,0.9s								
B20K	Meade River	14.13	349	Pn		Pn		14 30 31.9	-0.2
C36M	Paulatuk	17.08	31	P		Pn		14 31 11.0	+0.3

YKAB2	New Yellowknif	18.37	57	P		P		14 31 26.2	-0.5
YKA	Yellowknife Ar	18.37	56	P		P		14 31 26.5	-0.2
YKA	Yellowknife Ar	18.37	56	P		Pn		14 31 27.5	+0.8
	comp=E,0.1nm,0.3s,baz=262,slow=11,SNR=11								
YKA				LR		LR		14 38 19.2	
	comp=E,76nm,19.5s,baz=320,slow=36								
	comp=E,0.3nm,0.4s								
A36M	Sachs Harbour	18.53	23	P		P		14 31 28.9	+0.5
NEW	Newport	20.98	99	LR		LR		14 38 11.2	
	comp=E,106nm,18.0s,baz=308,slow=31								
YBH	Yreka Blue Hor	22.45	120	LR		LR		14 38 29.9	
	comp=E,90nm,20.9s,baz=346,slow=30								
ELK	Elko	26.95	111	LR		LR		14 41 36.1	
	comp=E,40nm,19.9s,baz=344,slow=32								
NVAR	Mina Array Bea	27.15	118	P		P		14 32 56.1	+0.5
	comp=E,0.6nm,0.8s,baz=216,slow=4.5,SNR=3.3								
NVAR				LR		LR		14 41 40.6	
	comp=E,60nm,18.7s,baz=351,slow=32								
	comp=E,0.6nm,0.8s								
RES	Resolute Bay	27.40	28	LR		LR		14 44 43.3	
	comp=E,36nm,21.3s,baz=359,slow=38								
SEY	Seymchan	29.34	307	LR		LR		14 46 13.6	
	comp=E,93nm,18.6s,baz=299,slow=39								
PFO	Pinyon Flats O	31.90	122	LR		LR		14 43 59.8	
	comp=E,42nm,18.8s,baz=327,slow=32								
TIXI	Tiksi	35.65	327	LR		LR		14 50 22.7	
	comp=E,32nm,19.3s,baz=19,slow=39								
FRB	Frobisher Bay	38.26	45	LR		LR		14 49 31.7	
	comp=E,92nm,18.4s,baz=320,slow=35								
TXAR	Lajitas Array	41.74	111	P		P		14 35 03.7	+2.3
	comp=E,0.4nm,1.0s,baz=293,slow=4.7,SNR=3.2								
	comp=E,0.4nm,1.0s								
SFJD	Kangerlussuaq	42.93	35	LR		LR		14 51 22.3	
	comp=E,43nm,20.2s,baz=30,slow=34								
SCHQ	Schefferville	43.82	56	LR		LR		14 55 21.2	
	comp=E,87nm,18.0s,baz=246,slow=38								
NRIK	Noril'sk	48.06	337	LR		LR		14 57 27.7	
	comp=E,48nm,21.1s,baz=48,slow=38								
H11N2	WAKE ISLAND Hy	49.05	240	T		T		15 27 27.1	
	baz=31,slow=76,SNR=4.7								
H11N3	WAKE ISLAND Hy	49.05	240	T		T		15 27 27.1	
	baz=31,slow=76,SNR=5.7								
H11N1	WAKE ISLAND Hy	49.07	240	T		T		15 27 27.1	
	baz=31,slow=76,SNR=5.8								
H11S1	WAKE ISLAND Hy	50.19	240	T		T		15 28 53.7	
	baz=26,slow=76,SNR=9.1								
H11S2	WAKE ISLAND Hy	50.20	240	T		T		15 28 54.3	
	baz=26,slow=76,SNR=5.2								
H11S3	WAKE ISLAND Hy	50.21	240	T		T		15 28 50.6	
	baz=26,slow=76,SNR=4.6								
MJAR	Matsushiro Arr	51.28	280	LR		LR		14 56 10.1	
	comp=E,7.4nm,21.1s,baz=40,slow=34								
ARCES	ARCESS Array B	54.32	2	LR		LR		14 58 27.1	
	comp=E,32nm,21.6s,baz=194,slow=34								
CMIG	Matias Romero	56.35	111	LR		LR		15 00 18.0	
	comp=E,36nm,18.3s,baz=1.5,slow=35								
SONM	Songino Array	58.67	310	P		P		14 37 10.9	+1.4
	comp=E,1.0nm,0.8s,baz=59,slow=7.3,SNR=5.8								
	comp=E,1.0nm,0.8s								
ZALV	Zalesovo Beam	61.54	327	P		P		14 37 31.2	+2.3
	comp=E,0.7nm,0.6s,baz=10,slow=9.0,SNR=2.5								
	comp=E,0.7nm,0.6s								
BVAR	Bovoye Array	66.24	335	P		P		14 38 00.6	+0.7
	comp=E,0.3nm,0.6s,baz=46,slow=8.5,SNR=2.2								
	comp=E,0.3nm,0.6s								
KURBB	Kurchatov Arra	66.31	329	P		P		14 38 00.7	+0.3
	comp=E,0.2nm,0.3s,baz=17,slow=6.8,SNR=3.0								
	comp=E,0.2nm,0.3s								
MKAR	Makanchi Array	68.58	325	P		P		14 38 15.5	+0.6
	comp=E,0.3nm,0.6s,baz=29,slow=5.5,SNR=6.5								
	comp=E,0.3nm,0.6s								

*MOS **14** 14:28:10.5±1.2, 44˚.54N×149˚.13E, h55km, mb4.2/1, Error ellipse: s-maj=14.6km s-min=12.0km az=150.2*
*SKHL **14** 14:28:10.9±0.4, 44˚.40N×149˚.30E, h58km±2km, mb4.8/2*
*JMA **14** 14:28:11.1±0.6, 45˚N±3˚×14˚9E±˚, h30km, MV4.1/14, SE OFF ETOROFU*
*NIED **14** 14:28:11.1, 44˚.65N×149˚.11E, h30km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-1.90; $M_{\theta\theta}$4.82; $M_{\phi\phi}$-2.92; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.33; $M_{\phi r}$1.67; Fault plane solution: $M_0$4.53000×10¹⁴ NP1: ϕ_s126.00000°, δ68.00000°, λ-30.00000°. NP2: ϕ_s228.00000°, δ62.00000°, λ-155.00000°.*
*IDC **14** 14:28:12.5±0.8, 44˚.54N×149˚.09E, h53km±8km, mb3.2/8, mbtmp3.5/11 Error ellipse: s-maj=24.1km s-min=16.4km az=140.0*

ISC 14 14:28:10.8±0.7, 44˚.36N±0˚.05×149˚.26E±0˚.07, h43km±5km, n46, σ1s56/53, mb3.5/8, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.32**	**312**	*d*	*i* P	**Pn**	**14 28 31.8**	**-1.0**
KUR					*i* S	**Sn**	**14 28 47.8**	**-1.4**
KUR					pmax	pmax		
	comp=Z,529nm,0.5s							
KUR					pmax	pmax		
	comp=E,33nm,0.2s							
KUR					pmax	pmax		
	comp=N,178nm,0.4s							
KUR					smax	smax		
	comp=N,708nm,0.3s							
KUR					smax	smax		
	comp=E,933nm,0.3s							
KUR	**Kuril'sk**	**1.32**	**312**	*e*	P	**Pn**	**14 28 31.8**	**-1.0**
KUR					AMB	AMB	14 28 32.3	
	comp=E,530nm,0.5s							
KUR					eS	**Sn**	**14 28 47.8**	**-1.4**
KUR					A	A	14 28 50.4	
	comp=E,790nm,0.3s							
KUR					A	A	14 28 50.4	
	comp=E,830nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.46**	**264**	*e*	PN	**Pn**	**14 28 48.8**	**+0.3**
YUK					eS	**Sn**	**14 29 17.9**	**+0.6**
YUK					pmax	pmax		
	comp=N,49nm,0.2s							
YUK					pmax	pmax		
	comp=Z,129nm,0.2s							
YUK					pmax	pmax		
	comp=E,70nm,0.3s							
YUK					smax	smax		
	comp=N,311nm,0.5s							
YUK					smax	smax		
	comp=E,459nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.46**	**264**	*e*	P	**Pn**	**14 28 48.8**	**+0.3**
YUK					AMB	AMB	14 28 51.0	
	comp=E,90nm,0.2s							
YUK					eS	**Sn**	**14 29 17.0**	**-0.3**
YUK					A	A	14 29 24.1	
	comp=E,270nm,0.4s							
YUK					A	A	14 29 24.1	
	comp=E,400nm,0.4s							
NEM2	**Nemuro 2**	**2.73**	**250**	*e*	P	**Pn**	**14 28 52.0**	**-0.1**
NEM2					eS	**Sn**	**14 29 22.8**	**-1.0**
NMR	**Nemuro--Hokkai**	**2.74**	**250**	*e*	PN	**Pn**	**14 28 52.2**	**0.0**
NMR					eS	**Sn**	**14 29 22.2**	**-1.8**
NMR	**Nemuro--Hokkai**	**2.74**	**250**	*e*	P	**Pn**	**14 28 52.2**	**0.0**
NMR					eS	**Sn**	**14 29 23.3**	**-0.7**
RUSJ	**Misakicho**	**2.89**	**266**	*e*	PN	**Pn**	**14 28 56.1**	**+1.7**
RUSJ					eS	**Sn**	**14 29 29.8**	**+1.9**
JRA	**Rausu**	**3.01**	**263**	*e*	P	**Pn**	**14 28 57.4**	**+1.5**
JRA					eS	**Sn**	**14 29 31.5**	**+0.8**
JNK	**Nakash**	**3.37**	**258**	*e*	P	**Pn**	**14 29 01.7**	**+0.9**
JNK					eS	**Sn**	**14 29 38.9**	**-0.7**
AKK	**Akkeshi**	**3.47**	**249**	*e*	P	**Pn**	**14 29 02.5**	**+0.2**
JAK	**Akkeshi**	**3.58**	**249**	*e*	P	**Pn**	**14 29 04.0**	**+0.2**
JTKR	**Abashiri--Toko**	**3.87**	**266**	*e*	P	**Pn**	**14 29 09.6**	**+1.9**
JAR	**Ashorobuto**	**4.11**	**257**	*e*	P	**Pn**	**14 29 12.7**	**+1.6**
JOB	**Onbets**	**4.20**	**252**	*e*	P	**Pn**	**14 29 13.2**	**+0.9**
JCH	**Churui**	**4.63**	**250**	*e*	P	**Pn**	**14 29 19.1**	**+0.9**
JKK2	**Kamakawa 2**	**4.71**	**266**	*e*	P	**Pn**	**14 29 21.9**	**+2.5**
ASAJ	**Asahikawa**	**4.79**	**269**		P	**Pn**	**14 29 18.9**	**-1.5**
	comp=E,8.6nm,1.0s,baz=121,slow=16,SNR=2.4							
JNBK	**Urakawa-nobuka**	**5.18**	**249**	*e*	P	**Pn**	**14 29 26.4**	**+0.6**
JNBK					eS	**Sn**	**14 30 22.5**	**-1.7**
YSS	**Yuzh-Sakhalins**	**5.25**	**302**	*e*	PN	**Pn**	**14 29 25.5**	**-1.2**
YSS					eS	**Sn**	**14 30 26.7**	**+0.9**
YSS					pmax	pmax		
	comp=Z,10.0nm,0.5s							
YSS					smax	smax		
	comp=N,20nm,0.9s							
YSS					smax	smax		
	comp=E,20nm,0.7s							
YSS	**Yuzh-Sakhalins**	**5.25**	**302**	*e*	P	**Pn**	**14 29 27.0**	**+0.3**
YSS					AMB	AMB	14 29 30.0	
	comp=E,10.0nm,0.5s							
YSS				*e*	S	**Sn**	**14 30 26.1**	**+0.3**
YSS					A	A	14 30 28.8	
	comp=E,20nm,0.5s							
YSS					A	A	14 30 28.8	
	comp=E,20nm,0.5s							
JTH	**Tanohata**	**7.05**	**234**	*e*	S	**Sn**	**14 31 03.1**	**-7.0**
TYV	**Tymovskoe**	**7.89**	**328**	*e*	P	**Pn**	**14 30 04.6**	**+1.7**
TYV					AMB	AMB	14 30 07.0	
PETK	**Petropavlovsk-**	**10.38**	**29**	P		**Pn**	**14 30 36.1**	**-0.8**
	comp=E,1.4nm,0.6s,baz=201,slow=7.4,SNR=1.4							
MJAR	**Matsushiro Arr**	**11.47**	**231**	P		**Pn**	**14 30 55.2**	**+3.2**
	comp=E,1.2nm,0.7s,baz=62,slow=18,SNR=4.4							
H11N2	**WAKE ISLAND Hy**	**28.62**	**143**	T		T	15 04 57.1	
	baz=334,slow=76,SNR=82							
H11N1	**WAKE ISLAND Hy**	**28.64**	**143**	T		T	15 04 54.0	
	baz=334,slow=76,SNR=71							
H11N3	**WAKE ISLAND Hy**	**28.64**	**143**	T		T	15 04 48.5	
	baz=334,slow=76,SNR=70							
H11S1	**WAKE ISLAND Hy**	**29.63**	**145**	T		T	15 06 20.3	
	baz=335,slow=76,SNR=46							
H11S3	**WAKE ISLAND Hy**	**29.64**	**145**	T		T	15 06 13.5	
	baz=335,slow=76,SNR=39							
SONM	**Songino Array**	**29.65**	**292**	P		**P**	**14 34 12.0**	**-0.2**
SONM	**Songino Array**	**29.65**	**292**	P		**P**	**14 34 12.0**	**-0.2**
	comp=E,0.2nm,0.3s,baz=67,slow=11,SNR=4.0							
	comp=E,0.2nm,0.3s							
H11S2	**WAKE ISLAND Hy**	**29.65**	**145**	T		T	15 06 20.7	
	baz=335,slow=76,SNR=32							
ILAR	**Eielson Array**	**40.10**	**37**	P		**P**	**14 35 42.0**	**+0.2**
ILAR	**Eielson Array**	**40.10**	**37**	P		**P**	**14 35 42.0**	**+0.2**
	comp=E,0.7nm,0.9s,baz=268,slow=9.3,SNR=5.5							
	comp=E,0.7nm,0.9s							
MKAR	**Makanchi Array**	**45.65**	**298**	P		**P**	**14 36 25.8**	**-1.2**
	comp=E,0.3nm,0.5s,baz=78,slow=7.8,SNR=7.4							
	comp=E,0.3nm,0.5s							
KURK	**Kurchatov**	**46.45**	**304**	P		**P**	**14 36 32.5**	**-0.6**
KURK	**Kurchatov**	**46.45**	**304**	*e*P		**P**	**14 36 32.5**	**-0.6**
KURBB	**Kurchatov Arra**	**46.54**	**304**	P		**P**	**14 36 32.5**	**-1.3**
	comp=E,0.5nm,0.8s,baz=75,slow=7.5,SNR=2.5							
	comp=E,0.5nm,0.8s							
YKA	**Yellowknife Ar**	**54.45**	**35**	P		**P**	**14 37 33.4**	**+0.1**
	comp=E,0.4nm,0.9s,baz=298,slow=6.8,SNR=4.8							
	comp=E,0.4nm,0.9s							
WRA	**Warramunga Arr**	**65.42**	**195**	P		**P**	**14 38 49.4**	**+0.3**
	comp=E,0.4nm,1.0s,baz=41,slow=1.8,SNR=1.5							
WRA				pP		**sP**	**14 39 05.1**	**+0.6**
	comp=E,0.4nm,0.7s,baz=11,slow=6.7,SNR=2.7							
	comp=E,0.4nm,1.0s							
ASAR	**Alice Springs**	**69.14**	**195**	P		**P**	**14 39 14.3**	**+1.8**
	comp=E,1.1nm,1.2s,baz=13,slow=5.6,SNR=4.2							
ASAR				pP		**sP**	**14 39 29.6**	**+1.5**
	comp=E,0.3nm,0.7s,baz=3.9,slow=5.5,SNR=2.0							
	comp=E,1.1nm,1.2s							
TXAR	**Lajitas Array**	**81.05**	**58**	P		**P**	**14 40 22.0**	**+0.6**
	comp=E,0.3nm,0.5s,baz=302,slow=4.4,SNR=9.8							
TXAR				pP		**sP**	**14 40 36.6**	**-0.8**
	comp=E,0.2nm,0.4s,baz=284,slow=2.8,SNR=2.9							
	comp=E,0.3nm,0.5s							
H03N2	**Juan Fernandez**	**141.44**	**90**	T		T	17 25 40.1	
	baz=305,slow=77,SNR=6.5							
H03N3	**Juan Fernandez**	**141.46**	**90**	T		T	17 25 38.3	
	baz=305,slow=77,SNR=7.7							
H03N1	**Juan Fernandez**	**141.46**	**90**	T		T	17 25 39.8	
	baz=305,slow=77,SNR=6.9							

*IDC **14** 14:57:31.6±0.6, 16˚.30S×177˚.97E, h0km, mb4.4/16, mbtmp4.4/16, MS4.1/50, Error ellipse: s-maj=22.5km s-min=16.7km az=124.0*
*MOS **14** 14:57:32.2±0.9, 16˚.17S×177˚.92E, h10km, mb4.9/25, Error ellipse: s-maj=12.1km s-min=10.5km az=104.6*
*BJI **14** 14:57:32.3±0.0, 15˚.98S×178˚.13E, h4km, mb4.7/45, mB5.4/21, Ms5.0/2, Ms7 4.6/2*
*NEIC **14** 14:57:33.7±1.5, 16˚.3S±0˚.1×178˚.0E±0˚.2, h10km±

STKA Stephens Creek 36.46 238 P **P** **15 04 39.1 +0.4**
comp=Z,7.5nm,0.8s,baz=47,slow=9.6,SNR=11
STKA LR LR 15 17 45.4
comp=Z,179nm,21.8s,baz=43,slow=33
comp=Z,7.5nm,0.8s
TAOE Nuku Hiva Isla 41.45 85 *e*S **S** **15 11 35.0 -0.3**
comp=Z,76nm,24.1s
TAOE *e*LR LR 15 16 43.2
comp=Z,617nm,25.3s
WB0 Warramunga Arr 41.52 258 P **P** **15 05 20.6 -0.7**
WB2 Warramunga Arr 41.56 258 P **P** **15 05 21.1 -0.6**
WRA Warramunga Arr 41.57 258 *e*P **P** **15 05 22.0 +0.3**
WRA pmax pmax
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 41.57 258 P **P** **15 05 20.6 -1.1**
comp=Z,2.0nm,0.9s,baz=94,slow=9.3,SNR=7.7
comp=Z,2.0nm,0.9s
AS31 Alice Springs 41.95 253 P **P** **15 05 24.1 -0.7**
ASAR Alice Springs 41.95 253 P **P** **15 05 24.5 -0.4**
ASAR Alice Springs 41.95 253 P **P** **15 05 24.1 -0.8**
comp=Z,6.4nm,0.9s,baz=83,slow=8.9,SNR=50
ASAR PcP **PcP** **15 07 19.7 -0.5**
comp=Z,1.0nm,1.0s,baz=96,slow=3.5,SNR=1.4
ASAR LR LR 15 21 09.1
comp=Z,460nm,21.5s,baz=88,slow=34
comp=Z,6.4nm,0.9s
GUMO Guam 44.23 310 LR LR 15 22 09.7
comp=Z,117nm,19.4s,baz=118,slow=34
FORT Forrest 47.62 243 P **P** **15 06 08.9 -0.9**
JCJ Chichijima 55.42 321 LR LR 15 26 01.1
comp=Z,244nm,21.9s,baz=116,slow=31
DAV Davao City (W) 56.84 290 LR LR 15 30 53.2
comp=Z,50nm,19.2s,baz=124,slow=35
NWAO Narrogin (SRO) 56.94 241 LR LR 15 29 42.6
comp=Z,254nm,22.0s,baz=84,slow=34
TOLI2 Tolitoli 59.05 281 P **P** **15 07 33.7 -0.4**
TOLI2 IAmb IAmb 15 07 44.0
comp=Z,26nm,1.6s
VNDA Vanda 61.75 184 P **P** **15 07 52.1 +0.5**
VNDA Vanda 61.75 184 P **P** **15 07 52.1 +0.5**
VNDA pmax pmax
comp=Z,43nm,1.8s
VNDA Vanda 61.75 184 LR LR 15 31 39.2
comp=Z,96nm,18.1s,baz=2.5,slow=33
MJA0 Matsu Arr-Jizo 64.61 325 *e*P **P** **15 08 10.9 -0.3**
MJA0 pmax pmax
comp=Z,9.0nm,0.9s
MJAR Matsushiro Arr 64.63 325 P **P** **15 08 10.1 -1.2**
comp=Z,8.8nm,0.9s,baz=153,slow=5.5,SNR=11
MJAR LR LR 15 30 50.2
comp=Z,170nm,21.1s,baz=143,slow=31
comp=Z,8.8nm,0.9s
MAJO Matsushiro 64.63 325⇓ *e*P **P** **15 08 10.2 -1.1**
MAJO pmax pmax
comp=Z,8.0nm,0.8s
JNU Nakatsue 66.65 318 LR LR 15 32 25.1
comp=Z,85nm,21.4s,baz=114,slow=31
RPN Rapa Nui 67.56 113 LR LR 15 30 31.0
comp=Z,74nm,19.8s,baz=253,slow=29
JKA Kamikawa-asahi 68.29 333 P **P** **15 08 34.2 -0.3**
ASAJ Asahikawa 68.30 333 P **P** **15 08 34.2 -0.4**
ASAJ pmax pmax
comp=Z,116nm,1.9s
ASAJ Asahikawa 68.30 333 LR LR 15 32 34.0
comp=Z,288nm,21.9s,baz=153,slow=31
SHEM Shemya Is, Ala 68.85 357 LR LR 15 31 37.4
comp=Z,280nm,21.8s,baz=148,slow=30
LEM Lembang 69.33 269 LR LR 15 37 58.2
comp=Z,86nm,21.5s,baz=179,slow=35
YSS Yuzh-Sakhalins 70.51 335 *e*P **P** **15 08 47.9 -0.3**
YSS *e*S **S** **15 18 03.4 +3.2**
YSS pmax pmax
comp=Z,10.0nm,1.1s
KSRS Korea Array 71.27 320 P **P** **15 08 53.0 0.0**
KSRS Korea Array 71.27 320 P **P** **15 08 52.9 0.0**
comp=Z,2.6nm,1.0s,baz=150,slow=6.4,SNR=3.8
KSRS LR LR 15 34 39.9
comp=Z,131nm,21.9s,baz=130,slow=31
comp=Z,2.6nm,1.0s
PETK Petropavlovsk- 71.34 347 P **P** **15 08 53.7 +0.6**
comp=Z,8.5nm,0.9s,baz=110,slow=8.2,SNR=4.6
PETK LR LR 15 38 07.0
comp=Z,70nm,18.5s,baz=166,slow=34
comp=Z,8.5nm,0.9s
MSHR Mys Shultsa 72.74 326⇑ *e*P **P** **15 08 59.8 -1.9**
MSHR pmax pmax
comp=Z,23nm,1.1s
PMBI Palembang 73.09 272 P **P** **15 09 02.6 -1.9**
USA0B Ussuriysk Arra 73.41 327⇑ *e*P **P** **15 09 05.2 -0.5**
USRK Ussuriysk Ar. 73.41 327 P **P** **15 09 05.2 -0.4**
comp=Z,3.5nm,0.7s,baz=134,slow=5.0,SNR=7.4
comp=Z,3.5nm,0.7s
QSPA South Pole Qui 73.71 180 P **P** **15 09 07.2 -0.2**
QSPA IAmb IAmb 15 09 13.3
comp=Z,17nm,0.9s
QSPA South Pole Qui 73.71 180 P **P** **15 09 06.4 -1.0**
comp=Z,4.5nm,0.7s,baz=357,slow=1.3,SNR=27
QSPA LR LR 15 36 11.7
comp=Z,87nm,20.8s,baz=45,slow=32
comp=Z,4.5nm,0.7s
TYV Tymovskoe 73.73 338 *e*P **P** **15 09 07.6 +0.2**
TYV pmax pmax
comp=Z,1μm,5.0s
TYV pmax pmax
comp=Z,53nm,1.0s
NJ2 Nanjing 74.30 311 *e*P **P** **15 09 12.6 +1.4**
NJ2 pP **pP** **15 09 15.3 -2.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,310nm,4.2s
MDJ Mudanjiang 74.95 326 P **P** **15 09 15.4 +0.7**
MDJ sP pP 15 09 21.8 +0.9
MDJ S **S** **15 18 51.3 +0.3**
MDJ ScS **ScS** **15 19 26.1 +0.5**
MDJ pmax pmax
comp=Z,20nm,1.0s
MDJ pmax pmax
comp=Z,180nm,4.9s
MDJ LR LR
comp=Z,410nm,14.3s
CN2 Changchun 76.70 324 *e*P **P** **15 09 25.3 +0.6**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
BNX BinXian 76.86 326 ⇑P **P** **15 09 25.1 -0.4**
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,220nm,3.8s
KLR Kul'dur 77.04 331⇓ *e*P **P** **15 09 27.4 +0.9**
KLR pmax pmax
comp=Z,4.0nm,0.8s
KLR Kul'dur 77.04 331 LR LR 15 37 27.0
comp=Z,123nm,20.1s,baz=175,slow=31
KDAK Kodiak Island 77.75 16 LR LR 15 37 08.0
comp=Z,74nm,19.5s,baz=221,slow=31
KMRM Mail Ridge 78.07 42 P **P** **15 09 33.0 +0.5**
KMRM IAmb IAmb 15 09 41.7
comp=Z,15nm,0.9s
MA2 Magadan 78.82 346⇓ *e*P **P** **15 09 33.8 -2.3**
MA2 pmax pmax
comp=Z,6.0nm,1.1s
MA2 Magadan 78.82 346 LR LR 15 40 47.4
comp=Z,89nm,19.8s,baz=140,slow=33
YBH Yreka Blue Hor 79.53 41 LR LR 15 36 57.9
comp=Z,83nm,20.2s,baz=234,slow=30
PFO Pinyon Flats O 79.75 51⇑ *e*P **P** **15 09 41.7 -0.3**
PFO pmax pmax
comp=Z,3.0nm,1.0s
PFO Pinyon Flats O 79.75 51 LR LR 15 36 43.8
comp=Z,110nm,21.2s,baz=254,slow=30
HEH HeiHe 79.80 330 *e*P **P** **15 09 41.9 +0.2**
HEH pmax pmax
comp=Z,6.0nm,0.7s
HNS HongShan 79.94 314⇓P **P** **15 09 43.8 +1.1**
HNS pmax pmax
comp=Z,14nm,1.1s
K15K Wolf Creek Mou 80.01 10 P **P** **15 09 42.0 -0.6**
LYN LuoYang 80.19 310⇑P **P** **15 09 44.6 +0.4**
LYN pP PcP 15 09 50.0 -1.4
LYN sP pP 15 09 51.6 +1.2
LYN pmax pmax
comp=Z,13nm,0.9s
LYN pmax pmax
comp=Z,170nm,3.7s
BJT Baijiatuau 80.27 317 P **P** **15 09 43.9 -0.6**
BJT IAmb IAmb 15 09 56.0
comp=Z,7.3nm,0.4s
BJT Baijiatuau 80.27 317 P **P** **15 09 43.9 -0.6**
BJT pmax pmax
comp=Z,7.0nm,0.4s
DSP Deep Springs 80.44 47 P **P** **15 09 45.8 +0.4**
LHV Little Huntoon 80.50 46 P **P** **15 09 45.8 +0.1**
QSM Queen of Sheba 80.55 48 P **P** **15 09 46.7 +0.6**
LPIG La Paz 80.67 62 LR LR 15 37 49.4
comp=Z,128nm,18.8s,baz=214,slow=30
NVAR Mina Array Bea 80.72 46 P **P** **15 09 47.2 -0.1**
NVAR Mina Array Bea 80.72 46 P **P** **15 09 48.3 +1.1**
comp=Z,3.4nm,1.0s,baz=232,slow=9.2,SNR=12
NVAR LR LR 15 37 04.4
comp=Z,150nm,21.3s,baz=246,slow=29
comp=Z,3.4nm,1.0s
GWY Greenwater Val 80.79 48 P **P** **15 09 47.4 -0.3**
L18K Granite Mounta 80.80 12 P **P** **15 09 47.5 +0.7**
L18K IAmb IAmb 15 09 55.3
comp=Z,19nm,1.2s
NV11 Mina Array Sit 80.82 46 P **P** **15 09 47.3 -0.4**
MZP Montezuma Peak 81.00 47 P **P** **15 09 48.5 -0.3**
J16K Anvik River 81.09 10 P **P** **15 09 48.8 +0.4**
GYA Guiyang 81.28 301 *e*P **P** **15 09 51.8 +1.4**
GYA pmax pmax
comp=Z,7.0nm,1.0s
SUA Susitna One 81.43 15 P **P** **15 09 49.6 -0.7**
SEY Seymchan 81.51 348⇑ *i*P **P** **15 09 49.7 -0.9**
SEY pmax pmax
comp=Z,21nm,2.4s
SEY Seymchan 81.51 348 LR LR 15 42 05.0
comp=Z,150nm,19.6s,slow=33
TTA Tatalina 81.58 12 P **P** **15 09 49.9 -1.1**
TTA IAmb IAmb 15 09 58.6
comp=Z,14nm,1.2s
TTA Tatalina 81.58 12 P **P** **15 09 49.9 -1.1**
TTA pmax pmax
comp=Z,14nm,1.2s
TIY Taiyuan 81.68 313 P **P** **15 09 51.8 -0.4**
TIY pmax pmax
comp=Z,9.0nm,1.0s
PINE Pine Mountain 81.73 40 P **P** **15 09 52.2 -0.2**
PINE IAmb IAmb 15 10 00.2
comp=Z,16nm,1.0s
J18K Innoko River 81.93 11 P **P** **15 09 52.5 -0.3**
ZEA Zeya 82.18 332 *e*P **P** **15 09 55.1 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
XLT XiLinHaoTe 82.32 320 *e*P **P** **15 09 55.5 +0.1**
XLT pP pP 15 10 01.8 +0.1
XLT sP sP 15 10 03.9 -0.1
XLT pmax pmax
comp=Z,4.0nm,0.9s
XLT pmax pmax
comp=Z,160nm,4.5s
BMN Battle Mountai 82.42 44 P **P** **15 09 55.8 -0.3**
BMN IAmb IAmb 15 10 04.2
comp=Z,12nm,1.2s
BMN Battle Mountai 82.42 44 P **P** **15 09 55.8 -0.3**
BMN pmax pmax
comp=Z,12nm,1.2s
WVOR Wild Horse Val 82.48 42 P **P** **15 09 56.3 0.0**
WVOR pmax pmax
comp=Z,9.0nm,1.3s
PRN Pahroc Range 82.51 48 P **P** **15 09 56.5 -0.1**
PRN IAmb IAmb 15 10 04.9
comp=Z,17nm,1.3s
XAN Xi'an 82.59 309⇓P **P** **15 09 57.5 +0.5**
XAN sP pP 15 10 04.3 +1.0
XAN pmax pmax
comp=Z,12nm,1.4s
G16K Koyuk River 82.83 8 P **P** **15 09 57.8 +0.4**
G16K IAmb IAmb 15 10 05.0
comp=Z,9.3nm,1.0s
CAST Castle Rocks 82.83 13 P **P** **15 09 55.8 -1.7**
CAST IAmb IAmb 15 10 03.2
comp=Z,16nm,1.2s
HIA Hailar 83.12 326⇓ *e*P **P** **15 09 59.5 +0.1**
HIA pmax pmax
comp=Z,4.0nm,0.9s
N25K Chitina, Valde 83.16 17 P **P** **15 09 58.9 -0.4**
TUC Tucson 83.50 54 P **P** **15 10 02.2 +0.4**
TUC pmax pmax
comp=Z,6.0nm,2.4s
RND Reindeer 83.55 14 P **P** **15 10 00.7 -0.6**
RND Reindeer 83.55 14 P **P** **15 10 00.7 -0.6**
RND pmax pmax
comp=Z,22nm,0.9s
SPR3 Spring Creek 3 83.73 46 P **P** **15 10 02.7 -0.4**
SPR3 IAmb IAmb 15 10 10.7
comp=Z,10nm,1.3s
HHC Hu-ho-hao-te 83.74 316 *e*P **P** **15 10 03.6 +0.8**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,110nm,4.7s
X16A Lo Mia Camp, P 83.86 52 P **P** **15 10 02.7 -1.0**
X16A IAmb IAmb 15 10 11.3
comp=Z,16nm,1.6s
ELK Elko 83.90 45 P **P** **15 10 04.4 +0.5**
ELK Elko 83.90 45 P **P** **15 10 04.4 +0.5**
ELK pmax pmax
comp=Z,5.0nm,1.1s
ELK Elko 83.90 45 LR LR 15 39 34.0
comp=Z,122nm,21.9s,baz=251,slow=30
F17K Baldwin Pennin 83.97 8 P **P** **15 10 03.4 +0.1**
SZCU Shurtz Canyon 83.99 48 P **P** **15 10 03.1 -1.3**
SZCU IAmb IAmb 15 10 12.6
comp=Z,13nm,1.3s
KMI Kunming 84.06 298⇑P **P** **15 10 04.0 -1.0**
KMI pmax pmax
comp=Z,5.0nm,0.9s
U15A North Rim 84.06 50 P **P** **15 10 05.1 +0.3**
U15A IAmb IAmb 15 10 13.2
comp=Z,16nm,1.3s
BELA Belgrano 2 84.14 173 P **P** **15 10 02.1 -2.1**
BELA IAmb IAmb 15 10 09.0
comp=Z,10nm,0.8s
M26K Nabesna, AK 84.25 17 P **P** **15 10 04.1 -0.8**
I21K Tanana 84.40 12 P **P** **15 10 04.5 -1.0**
I21K IAmb IAmb 15 10 12.2
comp=Z,15nm,1.1s
MLY Manley 84.53 13 P **P** **15 10 05.2 -1.0**
MLY IAmb IAmb 15 10 12.8
comp=Z,8.5nm,1.1s
M27K Edge Creek, AK 84.53 18 P **P** **15 10 05.7 -0.7**
WRH Wood River Hil 84.64 14 P **P** **15 10 05.5 -1.2**
H21K Melozitna Rive 84.66 12 P **P** **15 10 06.3 -0.5**
H21K IAmb IAmb 15 10 13.9
comp=Z,9.2nm,1.2s
CCB Clear Creek Bu 84.85 14 P **P** **15 10 06.8 -1.0**
CCB IAmb IAmb 15 10 13.8
comp=Z,12nm,0.9s
COLA College 85.03 14 P **P** **15 10 08.3 -0.3**
COLA pmax pmax
comp=Z,20nm,1.2s
CMAR Chiang Mai Arr 85.12 291 P **P** **15 10 10.0 -0.2**
CMAR Chiang Mai Arr 85.12 291 P **P** **15 10 11.2 +0.9**
comp=Z,2.3nm,0.9s,baz=113,slow=3.6,SNR=14
CMAR LR LR 15 47 25.6
comp=Z,28nm,19.1s,baz=100,slow=35
comp=Z,2.3nm,0.9s
ILAR Eielson Array 85.17 14 P **P** **15 10 08.1 -1.3**
ILAR Eielson Array 85.17 14 *e*P **P** **15 10 08.4 -1.0**
ILAR pmax pmax
comp=Z,5.0nm,0.9s
ILAR Eielson Array 85.17 14 P **P** **15 10 08.4 -1.0**
comp=Z,4.3nm,0.9s,baz=235,slow=6.2,SNR=38
ILAR LR LR 15 39 47.5
comp=Z,83nm,20.9s,baz=228,slow=30
comp=Z,4.3nm,0.9s
CHTO Chiang Mai 85.24 291 P **P** **15 10 10.3 -0.5**
CHTO IAmb IAmb 15 10 18.3
comp=Z,21nm,1.6s
CHTO Chiang Mai 85.24 291 P **P** **15 10 10.3 -0.5**
CHTO pmax pmax
comp=Z,21nm,1.7s
DUG Dugway, Tooele 85.31 46 P **P** **15 10 11.1 +0.2**
DUG pmax pmax
comp=Z,6.0nm,1.2s
CD2 Chengdu 85.34 304 P **P** **15 10 10.5 -0.6**
PZH PanZhiHua 85.39 299 P **P** **15 10 12.1 +0.5**
PZH pmax pmax
comp=Z,12nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.1s
J26L Joseph Creek 85.78 16 P **P** **15 10 11.5 -1.0**
J26L IAmb IAmb 15 10 19.8
comp=Z,15nm,1.1s
DLBC Dease Lake 85.78 25 LR LR 15 40 33.7
comp=Z,76nm,20.0s,baz=248,slow=30
NEW Newport 86.30 37 LR LR 15 42 56.8
comp=Z,64nm,18.1s,baz=253,slow=32
I26K Coal Creek Min 86.53 15 P **P** **15 10 15.7 -0.5**
I26K IAmb IAmb 15 10 23.8
comp=Z,13nm,1.1s
PMSA Palmer Station 86.58 158 LR LR 15 40 33.6
comp=Z,209nm,21.5s,baz=284,slow=30
YAK Yakutsk 86.87 339⇑ *e*P **P** **15 10 17.1 -0.7**
YAK pmax pmax
comp=Z,5.0nm,0.6s
YAK Yakutsk 86.87 339 LR LR 15 43 07.1
comp=Z,68nm,21.1s,baz=114,slow=32
LZH Lanzhou 87.22 309⇑P **P** **15 10 21.5 +1.1**
LZH sP pP 15 10 28.4 +1.7
LZH pmax pmax
comp=Z,13nm,1.6s
TNCH TengChong 87.63 297 P **P** **15 10 23.0 +0.4**
TNCH pP PcP 15 10 25.4 +0.8
TNCH sP pP 15 10 29.0 +0.1
TNCH S **S** **15 21 00.3 -3.4**
TNCH sS ScS 15 21 10.0 -0.5
TNCH pmax pmax
comp=Z,5.0nm,1.0s
TNCH pmax pmax
comp=Z,62nm,3.9s
TNCH LR LR
comp=Z,62nm,5.5s
ANMO Albuquerque 87.84 53⇑ *e*P **P** **15 10 21.7 -1.8**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 88.08 59 P **P** **15 10 24.6 0.0**
comp=Z,0.8nm,0.8s,baz=255,slow=4.9,SNR=7.8
TXAR LR LR 15 41 05.1
comp=Z,107nm,21.7s,baz=253,slow=30
comp=Z,0.8nm,0.8s
I30M Mount Dempster 88.30 18 P **P** **15 10 23.4 -1.4**
PDAR Pinedale Array 88.61 45 P **P** **15 10 27.0 0.0**
comp=Z,1.2nm,0.9s,baz=245,slow=2.8,SNR=8.0
PDAR LR LR 15 44 37.4
comp=Z,84nm,19.6s,baz=258,slow=32
comp=Z,1.2nm,0.9s
ULN Ulaanbaatar 89.75 320 P **P** **15 10 31.8 -0.3**
ULN Ulaanbaatar 89.75 320 P **P** **15 10 31.8 -0.3**
ULN pmax pmax
comp=Z,6.0nm,1.0s
SONM Songino Array 90.14 320 *e*P **P** **15 10 34.3 +0.4**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 90.14 320 P **P** **15 10 33.1 -0.7**
comp=Z,1.8nm,0.9s,baz=131,slow=4.6,SNR=10
SONM PP **PP** **15 14 04.5 -3.2**
comp=Z,0.6nm,0.9s,baz=105,slow=3.4,SNR=3.6
comp=Z,1.8nm,0.9s
INK Inuvik 91.30 16 LR LR 15 49 02.5
comp=Z,35nm,20.1s,baz=210,slow=34
GTA Gaotai 91.40 311 *e*P **P** **15 10 41.8 +1.8**
GTA pP pP 15 10 47.0 +0.7
GTA pmax pmax
comp=Z,3.0nm,0.9s
TROLL Troll, Antarti 91.83 181⇓P **P** **15 10 40.4 -1.0**
comp=Z,753nm,0.6s
CMIG Matias Romero 92.03 73 LR LR 15 44 00.1
comp=Z,96nm,18.2s,baz=196,slow=30
SNAA Sanae 92.22 180 LR LR 15 48 31.5
comp=Z,81nm,20.1s,baz=194,slow=33
RSSD Black Hills 92.84 45 P **P** **15 10 45.4 -1.2**
RSSD pmax pmax
comp=Z,13nm,1.2s
TIXI Tiksi 93.79 346 LR LR 15 47 17.8
comp=Z,70nm,21.6s,baz=180,slow=32
YKA Yellowknife Ar 94.36 25 *e*P **P** **15 10 53.9 +1.0**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 94.36 25 P **P** **15 10 52.0 -0.9**
comp=Z,0.8nm,1.0s,baz=252,slow=4.9,SNR=6.5
YKA LR LR 15 44 58.2
comp=Z,72nm,21.6s,baz=302,slow=30
comp=Z,0.8nm,1.0s
HKT Hockley 94.76 60 *de*P **P** **15 10 51.8 -3.6**
HKT pmax pmax
comp=Z,11nm,0.9s
PLCA Paso Flores 94.89 135 LR LR 15 44 38.2
comp=Z,57nm,20.2s,baz=226,slow=30
TEIG Tepich 98.89 72 LR LR 15 50 33.4
comp=Z,340nm,18.1s,baz=9.5,slow=32
PALK Pallekele 98.99 275 LR LR 15 58 09.1
comp=Z,48nm,18.5s,baz=211,slow=37
JTS Las Juntas de 99.52 82 LR LR 15 46 50.9
comp=Z,75nm,19.3s,baz=56,slow=30
WMQ Urumqi 101.33 312 *e*P **Pdif** **15 11 26.3 +1.4**
ZALV Zalesovo Beam 104.89 322 PKiKP **PKiKP** **15 16 00.7 +5.4**
comp=Z,0.3nm,0.4s,baz=204,slow=3.3,SNR=1.8
MKAR Makanchi Array 105.59 315 PKiKP **PKiKP** **15 16 01.4 +4.6**
comp=Z,0.8nm,0.8s,baz=92,slow=1.4,SNR=7.2
BVAR Borovoye Array 113.47 321 PKiKP **PKiKP** **15 16 16.5 +5.0**
comp=Z,2.1nm,0.6s,baz=123,slow=1.1,SNR=16
BRVK Borovoye 113.53 321⇑ *i*PKiKP **PKiKP** **15 16 10.8 -0.8**
ARU Arti 119.64 326 *i* PKiKP **PKPdf** **15 16 22.8 -0.4**
ARU 15 17 46.0
ARU 15 23 34.8
ARU SS SS 15 34 04.3 -4.3
ARCES ARCESS Array B 124.13 349 PKiKP **PKPdf** **15 16 31.0 -0.5**
ARCES ARCESS Array B 124.13 349 PKP **PKPdf** **15 16 31.0 -0.5**
comp=Z,1.7nm,0.7s,baz=355,slow=10.0,SNR=1.6
BELG Belogornoye 127.01 324⇓ *i*PKiKP **PKPdf** **15 16 37.5 +0.1**
BELG Belogornoye 127.01 324 PKP **PKPdf** **15 16 37.2 -0.2**
comp=Z,10nm,1.1s,baz=89,slow=12,SNR=1.9
ZEI Tsey 132.92 314 *e*PKiKP **PKiKP** **15 16 51.3 +0.8**
ZEI pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 133.34 316 *i* PKiKP **PKPdf** **15 16 49.2 -0.7**
KIV pmax pmax
comp=Z,4.0nm,1.1s
AKASG Malin Array Be 137.54 331 PKP **PKPdf** **15 16 56.7 -0.7**
comp=Z,0.4nm,0.4s,baz=53,slow=1.4,SNR=1.1
BRTR Keskin Array B 141.23 314 PKP **PKPdf** **15 17 05.5 +0.8**
comp=Z,0.7nm,0.8s,baz=148,slow=7.2,SNR=3.0
MORC Moravsky Berou 143.07 339 *e*PKP **PKiKP** **15 17 12.5 +1.8**
CLL Collm 143.10 344 *e*PKPdf **PKiKP** **15 17 11.0 +0.3**
VRAC Vranov 143.79 339 *e*PKP **PKiKP** **15 17 13.3 +1.1**
JAVC Velka Javorina 143.80 338 *e*PKP **PKiKP** **15 17 14.6 +2.3**
KRUC Moravsky 144.07 339 *e*PKP **PKiKP** **15 17 13.8 +1.1**
MODS Modra-Piesok 144.35 338 *e*PKiKP **PKiKP** **15 17 16.0 +2.6**
MODS Modra-Piesok 144.35 338 *e*PKP **PKiKP** **15 17 16.0 +2.6**
KHC Kasperske Hory 144.91 342 *e*PKP **PKPab** **15 17 09.5 -0.3**
KHC Kasperske Hory 144.91 342 *e*PKP **PKPab** **15 17 09.5 -0.3**
GRF Grafenberg Arr 145.04 345 *e*PKPbc **PKPdf** **15 17 10.8 -0.1**
baz=22,slow=3.0
GRF *e*pPKPbc pPKPab 15 17 16.7 +0.3
GRF *e*L L 16 15 03.0
comp=Z,98nm,20.4s
GERES GERESS Array B 145.12 342 *e*PKiKP **PKPbc** **15 17 10.6 -0.1**
GERES pmax pmax
comp=Z,2.0nm,0.8s
GERES GERESS Array B 145.12 342 PKPbc **PKPbc** **15 17 09.6 -1.0**
comp=Z,2.3nm,0.8s,baz=25,slow=4.4,SNR=10
CONA Conrad Observa 145.23 339 *i* PKP **PKPdf** **15 17 11.2 -0.2**
comp=Z,11nm,1.0s
CONA *e*pPKiKP pPKPab 15 17 17.6 +0.3
comp=Z,21nm,1.3s
RONA Rosalia, Austr 145.27 338 *e*PKP **PKPdf** **15 17 12.0 +0.6**
comp=Z,6.3nm,1.3s
RONA *e*pPKiKP pPKPab 15 17 17.5 0.0
comp=Z,26nm,1.6s
MOA Molln 145.83 340 *e*pPKiKP **PKiKP** **15 17 19.5 +3.0**
comp=Z,8.3nm,0.9s
BIOA Bad Ischl, Aus 146.17 341 *e*pPKiKP **PKiKP** **15 17 19.9 +2.8**
comp=Z,17nm,1.4s
SOKA Soboth 146.59 339 *e*PKP **PKPbc** **15 17 14.8 -0.4**
comp=Z,6.4nm,1.2s
LESA Schwarzleotal 146.70 342 *e*PKP **PKPbc** **15 17 15.7 +0.1**
comp=Z,4.0nm,1.0s
LESA *e*pPKiKP **pPKPdf** **15 17 20.3 0.0**
comp=Z,12nm,1.3s
KBA Koelnbreinsper 146.81 341 *e*PKP **PKPbc** **15 17 15.7 -0.3**
comp=Z,6.8nm,1.3s
KBA *e*pPKiKP **pPKPdf** **15 17 21.4 +0.8**
comp=Z,9.9nm,1.0s
OBKA Obir 146.91 339 pPKP **PKiKP** **15 17 20.0 +1.2**
comp=Z,6.3nm,1.2s
WATA Walderalm 147.10 343 *e*PKP **PKPbc** **15 17 16.9 +0.1**

	comp=Z,1.4nm,0.5s						
MYKA	**Terra Mystica**	**147.11**	**340**	*e*PKP	**PKPdf**	**15 17 13.7**	**-0.9**
	comp=Z,5.5nm,1.1s						
WTTA	**Wattenberg**	**147.15**	**343**	*e*PKP	**PKPbc**	**15 17 16.7**	**-0.2**
	comp=Z,4.0nm,0.7s						
WTTA				*e*pPKiKP	**pPKPdf**	**15 17 22.6**	**+1.4**
	comp=Z,21nm,1.0s						
RETA	**Reutte**	**147.19**	**344**	*i* pPKP	**PKPbc**	**15 17 17.3**	**+0.4**
	comp=Z,8.8nm,1.1s						
RETA				*e*pPKiKP	**pPKPdf**	**15 17 23.0**	**+1.9**
	comp=Z,14nm,1.2s						
MOTA	**Moosalm**	**147.23**	**343**	*e*pPKP	**PKPbc**	**15 17 17.3**	**+0.1**
	comp=Z,7.8nm,1.0s						
MOTA				*e*pPKiKP	**pPKPdf**	**15 17 23.1**	**+1.8**
	comp=Z,20nm,1.1s						
SQTA	**Sankt Quirin**	**147.31**	**343**	*e*PKP	**PKPbc**	**15 17 16.4**	**-0.9**
	comp=Z,9.0nm,1.0s						
SQTA				*e*pPKiKP	**pPKPdf**	**15 17 22.8**	**+1.4**
	comp=Z,16nm,1.1s						
ABTA	**Abfaltersbach**	**147.36**	**341**	*e*pPKP	**PKPbc**	**15 17 17.5**	**0.0**
	comp=Z,2.0nm,0.6s						
ABTA				*e*pPKP	**pPKPdf**	**15 17 22.0**	**+0.5**
	comp=Z,14nm,1.0s						
DAVA	**Damuels**	**147.60**	**345**	*i* PKP	**PKPbc**	**15 17 18.8**	**+0.6**
	comp=Z,6.8nm,0.9s						
DAVA				*e*pPKiKP	**sPKPdf**	**15 17 24.9**	**+0.8**
	comp=Z,14nm,1.0s						
FETA	**Feichten**	**147.63**	**344**	*e*pPKP	**PKPbc**	**15 17 18.3**	**0.0**
	comp=Z,7.0nm,1.0s						
DAVOX	**Davos/Dischmat**	**148.07**	**344**	PKPbc	**PKPbc**	**15 17 18.7**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=14,slow=6.6,SNR=6.8						
TORD	**Torodi Ar. Bea**	**175.23**	**229**	PKP	**PKPdf**	**15 17 46.6**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=51,slow=5.7,SNR=4.5						
TORD				PKPab	**PKPab**	**15 19 22.8**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=62,slow=6.0,SNR=6.7						

DJA 14 15:05:56.6±1.6, 10°S±8°×10°5E±1°2, h10km, M4.2/9, mb4.8/1, MLv3.9/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**3.44**	**24**	P	Pn	15 06 49.9	-0.4
CNJI	**Cibinong**	**3.45**	**34**	P	Pn	15 06 49.5	-0.9
DBJI	**Dramaga**	**3.93**	**24**	P	Pn	15 06 56.4	-0.6
CMJI	**Cimerak**	**4.02**	**54**	P	Pn	15 06 57.9	-0.4
LEM	**Lembang**	**4.12**	**36**	P	Pn	15 07 01.3	+1.5
SBJI	**Serang**	**4.14**	**13**	P	Pn	15 06 59.8	-0.2
KPJI	**Karang Pucung**	**4.67**	**53**	P	Pn	15 07 08.0	+0.8
UGM	**Wanagama**	**5.75**	**67**	P	Pn	15 07 22.4	+0.3

NEIC ***14*** *15:13:23.3±1.3, 10.66S±0.03×165.9E±0.1, h147km±13km, mb4.1/16, Error ellipse: s-maj=21.2km s-min=3.7km az=87.0*

IDC ***14*** *15:13:24.4±3.1, 10.84S×165.83E, h154km±28km, mb3.4/5, mbtmp4.2/7, Error ellipse: s-maj=25.3km s-min=22.2km az=131.0*

ISC 14 15:13:24.0±0.8, 10.93S±0.09×165.86E±0.10, h150km, n40, σ1s91/35, mb4.0/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.01**	**284**	P	**Pn**	**15 14 50.7**	**-0.2**
	405nm,0.4s,baz=194,slow=14,SNR=9.8						
HNR				S	**Sn**	**15 15 57.9**	**-1.0**
	841nm,0.5s,baz=45,slow=15,SNR=3.1						
KOUNC	**Koumac, New Ca**	**9.69**	**189**	Pn	**Pn**	**15 15 43.9**	**+4.0**
DZM	**Mont Dzumac**	**11.10**	**177**	Pn	**Pn**	**15 15 59.6**	**+1.0**
DZM	**Mont Dzumac**	**11.10**	**177**	P	**Pn**	**15 16 00.2**	**+1.6**
DZM	**Mont Dzumac**	**11.10**	**177**	P	**Pn**	**15 15 59.9**	**+1.3**
	5.6nm,0.3s,baz=308,slow=14,SNR=42						
DZM				S	**Sn**	**15 17 54.9**	**-6.4**
	baz=32,slow=19						
YATNC	**Mamie plateau,**	**11.11**	**175**	P	**Pn**	**15 15 59.8**	**+1.1**
ONTNC	**Ouen Toro**	**11.33**	**177**	Pn	**Pn**	**15 16 03.9**	**+2.3**
ONTNC	**Ouen Toro**	**11.33**	**177**	P	**Pn**	**15 16 04.6**	**+3.0**
OUENC	**Ouen Island, N**	**11.46**	**175**	Pn	**Pn**	**15 16 05.2**	**+1.9**
OUENC	**Ouen Island, N**	**11.46**	**175**	P	**Pn**	**15 16 05.6**	**+2.3**
PINNC	**Pines Island,**	**11.72**	**173**	Pn	**Pn**	**15 16 09.7**	**+3.0**
EIDS	**Eidsvold**	**20.06**	**222**	P	Pn	15 17 48.8	-0.3
EIDS				IAmb	IAmb	15 17 49.3	
	comp=Z,3.1nm,0.8s						
CTA	**Charters Tower**	**20.95**	**242**	P	**P**	**15 17 56.8**	**+1.4**
	comp=Z,5.8nm,0.8s,baz=78,slow=11,SNR=6.6						
	comp=Z,5.8nm,0.8s						
CTAO	**Charters Tower**	**20.95**	**242**	P	**P**	**15 17 57.1**	**+1.8**
CTAO				IAmb	IAmb	15 17 57.9	
	comp=Z,5.3nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	15 49 55.0	
	baz=182,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	15 49 60.0	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**29.26**	**2**	T	T	15 49 52.1	
	baz=182,slow=74						
RTZ	**Ruatahuna**	**29.31**	**162**	P	**P**	**15 19 13.2**	**+0.7**
BKZ	**Black Stump Fm**	**29.67**	**163**	P	**P**	**15 19 16.6**	**+0.8**
BKZ				IAmb	IAmb	15 19 18.4	
	comp=Z,4.4nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	15 51 30.5	
	baz=182						
H11N3	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	15 51 31.1	
	baz=182						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	15 51 21.6	
	baz=182						
MRZ	**Mangatainoka R**	**30.83**	**165**	P	**P**	**15 19 26.6**	**+0.7**
BFZ	**Birch Farm**	**31.02**	**165**	P	**P**	**15 19 28.0**	**+0.5**
WR0	**Warramunga Arr**	**31.45**	**250**	P	**P**	**15 19 31.5**	**-0.1**
WR0				IAmb	IAmb	15 19 40.2	
	comp=Z,3.2nm,1.1s						
WB0	**Warramunga Arr**	**31.55**	**250**	P	**P**	**15 19 32.6**	**+0.2**
WB0				IAmb	IAmb	15 19 33.7	
	comp=Z,3.5nm,0.7s						
WB2	**Warramunga Arr**	**31.62**	**250**	P	**P**	**15 19 32.3**	**-0.8**
WB2				IAmb	IAmb	15 19 33.3	
	comp=Z,3.2nm,1.1s						
WRA	**Warramunga Arr**	**31.63**	**250**	P	**P**	**15 19 32.7**	**-0.5**
WRA	**Warramunga Arr**	**31.63**	**250**	P	**P**	**15 19 33.6**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=81,slow=8.8,SNR=12						
	comp=Z,1.8nm,0.7s						
LTZ	**Lake Taylor**	**32.22**	**171**	P	**P**	**15 19 39.7**	**+1.6**
LTZ				IAmb	IAmb	15 19 42.1	
	comp=Z,2.7nm,0.8s						
AS31	**Alice Springs**	**32.95**	**243**	P	**P**	**15 19 44.0**	**-0.6**
ASAR	**Alice Springs**	**32.95**	**243**	P	**P**	**15 19 45.0**	**+0.3**
ASAR	**Alice Springs**	**32.95**	**243**	P	**P**	**15 19 44.0**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=65,slow=10,SNR=14						
	comp=Z,1.3nm,0.8s						
KNRA	**Kununurra**	**36.38**	**258**	P	**P**	**15 20 13.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**39.52**	**255**	P	**P**	**15 20 39.6**	**-0.9**
PSA00	**Pilbara Seismi**	**45.28**	**250**	P	**P**	**15 21 27.2**	**+0.2**
PSA00				IAmb	IAmb	15 21 42.5	
	comp=Z,7.3nm,1.1s						
SONM	**Songino Array**	**78.64**	**324**	P	**P**	**15 25 07.6**	**-1.9**
ILAR	**Eielson Array**	**83.37**	**18**	P	**P**	**15 25 33.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=240,slow=5.0,SNR=16						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**85.86**	**50**	P	**P**	**15 25 48.0**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=224,slow=5.0,SNR=2.5						
	comp=Z,0.2nm,0.4s						
CPUP	**Villa Florida**	**124.02**	**132**	PKP	**PKPdf**	**15 32 03.7**	**-1.6**
	comp=Z,1.4nm,0.4s,baz=219,slow=0.8,SNR=3.8						

IDC ***14*** *15:16:08.7±0.8, 0.34N×126.40E, h0km, mb4.0/9, mbtmp4.1/9, Error ellipse: s-maj=56.5km s-min=15.5km az=69.0*

NEIC ***14*** *15:16:11.1±1.7, 0.38N±0.09×126.51E±0.04, h10km±1km, mb4.1/14, Error ellipse: s-maj=15.6km s-min=3.0km az=157.0*

DJA ***14*** *15:16:12.2±1.4, 0°N±4°×12°7E±°, h15km±12km, M3.8/6, MLv3.8/6*

ISC 14 15:16:11.3±3.7, 0.39N±0.05×126.56E±0.04, h15km±24km, n36, σ0s89/43, mb4.1/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.89**	**65**		**Pn**	**15 16 29.1**	**-0.1**
TNTI				Sg	**Sn**	**15 16 42.3**	**+0.5**
TNTI	**Ternate**	**0.89**	**65**	P	**Pn**	**15 16 31.0**	**+1.8**
TNTI				S	**Sn**	**15 16 42.8**	**+1.0**
LBMI	**Labuha**	**1.39**	**137**	P	**Pb**	**15 16 36.9**	**-0.1**
LBMI				S	**Sb**	**15 16 54.8**	**+0.2**
SANI	**Sanana**	**2.49**	**193**	P	**Pn**	**15 16 51.0**	**-0.3**
SANI				S	**Sn**	**15 17 22.4**	**+0.9**
KMSI	**Cibinong**	**2.59**	**274**	P	**Pn**	**15 16 53.5**	**+0.9**
KMSI				S	**Sn**	**15 17 25.7**	**+1.9**
NLAI	**Namlea**	**3.65**	**172**	P	**Pn**	**15 17 09.1**	**+1.9**
NLAI				S	**Sn**	**15 17 50.1**	**+0.1**
LUWI	**Luwuk**	**4.05**	**249**	Pn	**Pn**	**15 17 13.2**	**+0.4**
TOLI2	**Tolitoli**	**5.82**	**277**	Pn	**Pn**	**15 17 37.1**	**0.0**
FAKI	**Fak Fak**	**6.57**	**120**	Pn	**Pn**	**15 17 48.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**18.40**	**183**	P	**P**	**15 20 26.3**	**+0.3**
WB0	**Warramunga Arr**	**21.46**	**159**	P	**P**	**15 20 59.5**	**+0.3**
WB0				IAmb	IAmb	15 21 14.6	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**21.60**	**160**	P	**P**	**15 21 00.5**	**-0.3**
WRA	**Warramunga Arr**	**21.60**	**160**	P	**P**	**15 21 00.4**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=337,slow=9.6,SNR=25						
	comp=Z,2.2nm,0.5s						
WB2	**Warramunga Arr**	**21.61**	**160**	P	**P**	**15 21 00.7**	**-0.1**
WB2				IAmb	IAmb	15 21 23.8	
	comp=Z,20nm,1.5s						
WR0	**Warramunga Arr**	**21.69**	**159**	P	**P**	**15 21 00.2**	**-1.5**
WR0				IAmb	IAmb	15 21 16.9	
	comp=Z,6.6nm,1.1s						
COEN	**Coen**	**21.77**	**132**	P	**P**	**15 21 01.6**	**-1.1**
COEN				IAmb	IAmb	15 21 28.0	
	comp=Z,11nm,1.4s						
TPUB	**Ta-pu**	**23.49**	**346**	P	**P**	**15 21 18.9**	**-1.7**
AS31	**Alice Springs**	**24.96**	**164**	P	**P**	**15 21 33.9**	**-0.4**
AS31				IAmb	IAmb	15 21 46.2	
	comp=Z,1.8nm,0.9s						
ASAR	**Alice Springs**	**24.96**	**164**	P	**P**	**15 21 34.5**	**+0.1**
ASAR	**Alice Springs**	**24.96**	**164**	P	**P**	**15 21 33.9**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=346,slow=11,SNR=33						
ASAR				PcP	**PcP**	**15 25 09.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=343,slow=2.1,SNR=4.3						
	comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**35.11**	**157**	P	**P**	**15 23 03.6**	**-0.6**
STKA	**Stephens Creek**	**35.11**	**157**	P	**P**	**15 23 03.9**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=339,slow=5.3,SNR=5.8						
	comp=Z,2.5nm,0.7s						
BJT	**Baijiatuan**	**40.56**	**348**	P	**P**	**15 23 51.0**	**+0.9**
BJT				IAmb	IAmb	15 23 52.5	
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**50.40**	**342**	P	**P**	**15 25 08.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=154,slow=8.2,SNR=6.2						
	comp=Z,0.7nm,0.6s						
PEA0B	**Petropavlovsk-**	**58.57**	**21**	P	**P**	**15 26 08.6**	**+1.3**
PETK	**Petropavlovsk-**	**58.57**	**21**		**P**	**15 26 07.1**	**-0.2**
PETK	**Petropavlovsk-**	**58.57**	**21**	P	**P**	**15 26 07.8**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=182,slow=3.1,SNR=9.0						
	comp=Z,3.4nm,0.8s						
MK31	**Makanchi Array**	**60.20**	**326**	P	**P**	**15 26 19.1**	**+0.4**
MK31				IAmb	IAmb	15 26 22.6	
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**60.20**	**326**	P	**P**	**15 26 19.1**	**+0.3**
MKAR	**Makanchi Array**	**60.20**	**326**	P	**P**	**15 26 18.5**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=120,slow=7.3,SNR=36						
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	**60.38**	**326**	P	**P**	**15 26 19.2**	**-0.8**
MAKZ				IAmb	IAmb	15 26 23.7	
	comp=Z,3.8nm,1.3s						
ZALV	**Zalesovo Beam**	**63.48**	**334**	P	**P**	**15 26 39.1**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=122,slow=5.2,SNR=2.4						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**64.45**	**328**	P	**P**	**15 26 46.9**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=127,slow=6.1,SNR=9.8						
	comp=Z,2.2nm,0.6s						
BVAR	**Borovoye Array**	**70.02**	**328**	P	**P**	**15 27 21.7**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=132,slow=8.7,SNR=8.6						
	comp=Z,1.4nm,0.6s						
BRVK	**Borovoye**	**70.09**	**328**	P	**P**	**15 27 22.8**	**0.0**
ABKAR	**Akbulak array**	**74.62**	**321**	P	**P**	**15 27 48.6**	**-1.3**

JMA 14 15:29:58.3±0.2, 24°N±1°×123.7E±0.6, h30km±3km, MV1.4/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.19**	**160**	P	Pb	15 30 04.1	-0.2
HATJ				S	Sb	15 30 08.3	-0.2
JKRS	**Kuro-shima**	**0.25**	**89**	P	Pb	15 30 05.0	-0.1
JKRS				S	Sb	15 30 09.8	+0.1
JIJ	**Ishigaki jima**	**0.39**	**71**	P	Pb	15 30 06.7	-0.4
JIJ				S	Sb	15 30 12.8	-0.3
JISG	**Ishigakijimahi**	**0.63**	**56**	P	Pb	15 30 10.7	-0.2
JISG				S	Sb	15 30 19.8	+0.3
YOJ	**Yonaguni jima**	**0.70**	**289**	*e*P	Pb	15 30 11.8	-0.2
YOJ				S	Sb	15 30 20.1	-1.2
JYNG	**Yonagunijimaku**	**0.75**	**287**	*e*S	Sb	15 30 22.8	-0.1
JTJ	**Tarama**	**0.97**	**65**	S	Sb	15 30 31.1	+2.1

TAP 14 15:30:57.8, 24.22N×121.75E, h16km, ML1.9, 3D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.11**	**354**	P	Pg	15 31 01.3	0.0
	baz=354						
EAHA				S	Sb	15 31 04.0	-0.2
	baz=354						
ETL	**Fush Village**	**0.13**	**243**	*i* P	Pg	15 31 01.6	0.0
	baz=245						
ETL				*i* S	Sg	15 31 04.3	+0.3
	baz=245						
NACB	**Ninganchiao**	**0.15**	**253**	⇓*i* P	Pg	15 31 01.8	0.0
	baz=254						
NACB				*i* S	Sg	15 31 04.6	+0.2
	baz=254						
TWD	**Chiawan**	**0.20**	**226**	*e*P	Pg	15 31 02.4	-0.1
	baz=232						
TWD				S	Sb	15 31 06.1	-0.5
	baz=232						
ENA	**Nanau**	**0.21**	**358**	⇓*i* P	Pg	15 31 02.8	+0.1
	baz=358						
ENA				S	Sg	15 31 06.4	+0.5
	baz=358						
EWUT	**Wuta**	**0.23**	**6**	P	Pg	15 31 03.2	+0.2
	baz=4.0						
EWUT				S	Sb	15 31 07.0	-0.5
	baz=4.0						
ETLH	**Xiulin Townshi**	**0.25**	**267**	P	Pg	15 31 03.3	0.0
	baz=269						
ETLH				S	Sg	15 31 07.3	+0.3
	baz=269						
LXIB	**Xiulin Townshi**	**0.37**	**238**	*e*P	Pg	15 31 05.0	-0.4
	baz=239						
LXIB				*e*S	Sg	15 31 10.6	0.0
	baz=239						
LATG	**Datong**	**0.38**	**327**	⇓*i* P	Pg	15 31 05.9	+0.3
	baz=326						
LATG				*e*S	Sg	15 31 10.9	0.0
	baz=326						
NNSB	**Datong**	**0.40**	**302**	*e*P	Pg	15 31 06.2	+0.3
	baz=302						
NNSB				*e*S	Sg	15 31 11.9	+0.5
	baz=302						
TWC	**Suao**	**0.40**	**13**	*e*P	Pg	15 31 06.1	+0.2
	baz=9.0						
TWC				*e*S	Sg	15 31 11.6	+0.2
	baz=9.0						
NNS	**Nan Shan**	**0.41**	**303**	*e*P	Pg	15 31 06.4	+0.3
	baz=303						
NNS				*e*S	Sg	15 31 12.3	+0.5
	baz=303						
NDS	**Dongshan**	**0.41**	**356**	*e*P	Pb	15 31 06.6	-0.3
	baz=353						
NDS				*e*S	Sb	15 31 12.9	-0.1
	baz=353						
NDT	**Datong Townshi**	**0.44**	**330**	*e*P	Pg	15 31 07.0	+0.3
	baz=329						
NDT				*e*S	Sb	15 31 13.9	+0.2
	baz=329						
WHF	**Hehuan Shan**	**0.45**	**261**	*e*P	Pg	15 31 07.2	+0.2
	baz=262						
WHF				*e*S	Sg	15 31 13.4	+0.2
	baz=262						
ENTT	**Nioudou**	**0.45**	**338**	*e*P	Pg	15 31 06.9	-0.1
	baz=337						
ENTT				S	Sb	15 31 13.9	-0.2
	baz=337						
FUSS	**Fushou**	**0.46**	**274**	*e*P	Pb	15 31 08.0	+0.1
	baz=275						
FUSS				*e*S	Sg	15 31 13.6	+0.1
	baz=275						
TWE	**Neicheng**	**0.51**	**351**	*e*P	Pg	15 31 08.1	+0.2
	baz=350						
TWE				*e*S	Sb	15 31 16.4	+0.8
	baz=350						
CHGB	**Renai**	**0.55**	**254**	*i* P	Pg	15 31 09.0	+0.2
	baz=250						
CHGB				S	Sg	15 31 16.1	-0.1
	baz=250						
FUSB	**Fushanzhiwuyua**	**0.56**	**345**	*e*P	Pb	15 31 09.4	0.0
	baz=343						
FUSB				*e*S	Sg	15 31 15.8	-0.6
	baz=343						
YHNB	**Yeheng**	**0.56**	**323**	P	Pb	15 31 09.3	-0.2
	baz=322						
YHNB				*e*S	Sg	15 31 16.7	+0.1
	baz=322						
NSK	**Sanguang**	**0.58**	**322**	*e*P	Pb	15 31 09.5	-0.2
	baz=321						
NSK				*e*S	Sb	15 31 17.6	-0.2
	baz=321						
WARBT	**Fenglin Townsh**	**0.60**	**214**	*e*P	Pg	15 31 09.0	-0.7
	baz=228						
NWLT	**Wulai**	**0.60**	**338**	*e*P	Pn	15 31 11.2	-0.6
	baz=342						
NWLT				*e*S	Sb	15 31 18.1	-0.3
	baz=342						
WUSB	**Renai**	**0.62**	**249**	*e*P	Pg	15 31 10.0	-0.1
	baz=245						
WUSB				*e*S	Sg	15 31 18.5	+0.2
	baz=245						
NFF	**Wufeng Townshi**	**0.71**	**306**	*e*P	Pb	15 31 12.3	+0.4
	baz=305						
NFF				*e*S	Sb	15 31 21.3	-0.1
	baz=305						
VWDT	**VWDT**	**0.72**	**230**	*e*P	Pg	15 31 11.3	-0.7
	baz=238						
VWDT				*e*S	Sn	15 31 23.1	-1.2
	baz=238						
LIOB	**Emei**	**0.79**	**303**	*e*P	Pn	15 31 14.6	+0.1
	baz=302						
SSLB	**Suanglung**	**0.85**	**240**	*e*P	Pb	15 31 13.8	-0.4
	baz=241						

IDC 14 15:37:19.0±2.3, 5.92S×130.05E, h0km, mb3.5/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=146.1km s-min=30.6km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.54**	**164**	Pn	Pn	15 40 44.9	-1.4
	0.2nm,0.3s,baz=346,slow=13,SNR=9.4						
WRA				Sn	Sn	15 43 17.7	-11
	0.2nm,0.3s,baz=344,slow=22,SNR=1.9						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**18.03**	**169**	P	P	15 41 31.7	0.0
	0.1nm,0.3s,baz=350,slow=10,SNR=13						
ASAR				S	Sn	15 44 46.1	-6.9
	0.4nm,0.8s,baz=358,slow=25,SNR=1.9						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	15 48 16.1	0.0
	0.2nm,0.4s,baz=110,slow=7.6,SNR=7.9						
	0.2nm,0.4s						

MEX ***14*** *15:37:28.4±0.6, 14.89N×92.51W, h94km±9km, MD3.9*
CATAC ***14*** *15:37:29.4±0.8, 14.92N×92.56W, h66km±6km, ML3.9*

ISC 14 15:37:29.0±1.3, 14.92N±0.05×92.57W±0.04, h79km±7km, n27, σ1s71/48, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.29**	**93**	*e*P	**Pn**	**15 37 40.7**	**-0.4**
THIG				*e*S	**Sn**	**15 37 50.2**	**+0.1**
PATR	**El Naranjo**	**0.38**	**59**	*e*P	**Pn**	**15 37 41.2**	**-0.8**
PATR				*e*S	**Sn**	**15 37 51.2**	**-0.4**
PAVE	**Pavencul**	**0.47**	**54**	*e*P	**Pn**	**15 37 42.0**	**-0.6**
PAVE				*e*S	**Sn**	**15 37 53.1**	**+0.4**
CHUJ	**Union Juarez**	**0.48**	**69**	*e*P	**Pn**	**15 37 42.0**	**-0.7**
CHUJ				*e*S	**Sn**	**15 37 53.0**	**+0.1**
SMCA	**Catarina**	**0.48**	**98**	*i* P	**Pn**	**15 37 41.7**	**-0.8**
SMCA				*i* S	**Sn**	**15 37 52.3**	**-0.2**
SMCA				IAML		15 37 54.2	
	comp=Z,3μm,1.0s						
SMSP	**San Marcos**	**0.76**	**86**	*e*P	**Pn**	**15 37 45.1**	**-0.4**
SMSP				*e*S	**Sn**	**15 37 58.4**	**+0.6**
SMSP	**San Marcos**	**0.76**	**86**	*i* P	**Pn**	**15 37 45.3**	**-0.3**
SMSP				*i* S	**Sn**	**15 37 58.5**	**+0.6**
SMSP				IAML		15 38 03.0	
	comp=Z,6μm,1.0s						
RTAL	**Retalhuleu**	**0.93**	**115**	*e*P	**Pn**	**15 37 46.8**	**-0.4**
RTAL				*e*S	**Sn**	**15 38 01.3**	**+0.5**
RTAL	**Retalhuleu**	**0.93**	**115**	*i* P	**Pn**	**15 37 46.8**	**-0.4**
RTAL				*i* S	**Sn**	**15 38 00.5**	**-0.3**
RTAL				IAML		15 38 05.8	
	comp=Z,2μm,1.0s						
PCIG		**1.00**	**321**	*e*P	**Pn**	**15 37 48.0**	**+0.1**
PCIG				*e*S	**Sn**	**15 38 03.2**	**+1.0**
HUEH	**Huehuetenango**	**1.10**	**69**	*e*P	**Pn**	**15 37 50.6**	**+1.2**
HUEH				*e*S	**Sn**	**15 38 05.9**	**+1.1**
HUEH	**Huehuetenango**	**1.10**	**69**	*i* P	**Pn**	**15 37 50.1**	**+0.6**
HUEH				*i* S	**Sn**	**15 38 06.1**	**+1.3**
HUEH				IAML		15 38 12.6	
	comp=Z,2μm,1.0s						
CCIG	**Comitan**	**1.41**	**17**	*e*P	**Pn**	**15 37 53.8**	**+0.5**
CCIG				*e*S	**Sn**	**15 38 12.8**	**+1.1**
CCIG	**Comitan**	**1.41**	**17**	*i* P	**Pn**	**15 37 54.1**	**+0.7**
CCIG				*i* S	**Sn**	**15 38 13.1**	**+1.4**
CCIG				IAML		15 38 16.2	
	comp=Z,430nm,1.0s						
CARR	**Arriaga**	**1.85**	**316**	*e*P	**Pn**	**15 37 59.6**	**+0.8**
CARR				*e*S	**Sn**	**15 38 22.9**	**+1.3**
TGIG		**1.92**	**344**	*e*P	**Pn**	**15 37 59.2**	**-0.7**
TGIG				*e*S	**Sn**	**15 38 21.9**	**-1.5**
NUBE	**Las Nubes**	**2.89**	**110**	*i* P	**Pn**	**15 38 13.3**	**+0.4**
NUBE				*i* S	**Sn**	**15 38 47.1**	**+0.3**
NUBE				IAML		15 39 07.2	
	comp=Z,210nm,1.0s						
CEVE	**Cerro Verde**	**3.05**	**111**	*i* P

CACV	**CAICARA DEL OR**	**4.32**	**244**	*e*P		Pn	15 50 59.3	-4.0
CACV				*e*S		Sn	15 51 41.9	-11
TACV	**Tcata**	**4.37**	**279**	*e*P		**Pn**	**15 51 05.1**	**+1.0**
TACV				*e*S		**Sn**	**15 51 52.2**	**-1.5**
BENV	**Beln**	**4.91**	**276**	*e*P		**Pn**	**15 51 12.5**	**+1.0**
BENV				*e*S		**Sn**	**15 52 05.0**	**-2.0**
TURV	**Turiamo**	**5.20**	**281**	*e*P		**Pn**	**15 51 16.7**	**+1.2**
TURV				*e*S		**Sn**	**15 52 11.9**	**-2.3**
BAUV	**El Baul**	**5.36**	**264**	*e*P		**Pn**	**15 51 18.8**	**+1.2**
BAUV				*e*S		**Sn**	**15 52 16.2**	**-1.9**
BAUV	**El Baul**	**5.36**	**264**	*e*P		**Pn**	**15 51 19.4**	**+1.7**
BAUV				*e*S		**Sn**	**15 52 18.0**	**-0.1**
CURV	**Curarigua**	**7.23**	**275**	*e*P		**Pn**	**15 51 44.1**	**+0.7**

NEIC 14 15:53:55.8±0.8, 32°.87N±0°.02×100°.94W±0°.05, h5km±2km, mb_Lg2.6/48, Error ellipse: s-maj=7.3km s-min=3.1km az=289.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SN01	**Snyder 1**	**0.04**	**102**				Pg	15 53 57.5	+0.3
SN01							Sg	15 53 58.4	+0.3
SN05	**Snyder 5**	**0.05**	**82**				Pg	15 53 57.5	+0.3
SN05							Sg	15 53 58.5	+0.3
POST	**Post**	**0.51**	**293**				Pg	15 54 06.0	+0.4
POST							Sg	15 54 12.8	+0.5
DKNS	**Dickens**	**0.79**	**1**				Pg	15 54 11.0	-0.1
DKNS							Sg	15 54 21.6	+0.2
APMT	**Aspermont**	**0.82**	**56**				Pg	15 54 11.5	-0.1
APMT							Sg	15 54 22.0	-0.4
SGCY	**Sterling City**	**0.97**	**189**				Pg	15 54 14.2	-0.2
SGCY							Sg	15 54 26.8	-0.1
ODSA	**Odessa**	**1.55**	**242**				Pg	15 54 25.6	0.0
MSTX	**Muleshoe**	**1.88**	**306**	Pn			Pb	15 54 30.0	-0.8
OZNA	**Ozona**	**1.95**	**185**	Pn			Pb	15 54 31.0	-0.9
AMTX	**Amarillo**	**2.10**	**343**	Pn			Pb	15 54 33.8	-0.7
MNHN	**Monahans**	**2.17**	**226**	Pn			Pn	15 54 33.5	+0.8
PLPT	**Palo Pinto**	**2.21**	**91**	Pn			Pb	15 54 35.0	-1.4
WTFS	**Witchita Falls**	**2.26**	**66**	Pn			Pn	15 54 35.1	+1.3
BRDY	**Brady**	**2.29**	**133**	Pn			Pn	15 54 35.2	+1.0
SMWD	**Samnorwood**	**2.30**	**14**	Pn			Pn	15 54 36.1	+1.6
FW03	**Perrin-Whitt E**	**2.42**	**85**	Pn			Pn	15 54 37.9	+1.8
JCT	**Junction City**	**2.58**	**158**	Pn			Pn	15 54 38.0	-0.2
WMOK	**Wichita Mounta**	**2.59**	**43**	Pn			Pn	15 54 39.2	+0.8
FW07	**Weatherford**	**2.66**	**93**	Pn			Pn	15 54 40.8	+1.4
PECS	**Pecos**	**2.90**	**240**	Pn			Pn	15 54 43.8	+1.1
WHTX	**Lake Whitney,**	**3.08**	**106**	Pn			Pn	15 54 47.0	+1.9
SAND	**Sanderson**	**3.08**	**199**	Pn			Pn	15 54 46.3	+1.2
X34A	**Smith Ranch, M**	**3.11**	**55**	Pn			Pn	15 54 47.7	+2.1
Z35A	**Perchaven, San** comp=Z,16nm,0.7s	**3.13**	**81**	IAmb_Lg				15 55 38.8	
ALPN	**Alpine**	**3.39**	**223**	Pn			Pn	15 54 50.8	+1.2
DRIO	**Del Rio**	**3.45**	**175**	Pn			Pn	15 54 52.1	+1.9
DRIO	comp=Z,21nm,0.7s			IAmb_Lg				15 55 43.7	
435B	**Jarrell**	**3.54**	**125**	Pn			Pn	15 54 54.4	+3.0
HNDO	**Hondo**	**3.62**	**156**	Pn			Pn	15 54 54.5	+1.9
FNO	**Franklin** comp=Z,21nm,0.7s	**3.78**	**50**	IAmb_Lg				15 55 59.8	
U32A	**Winter Ranch,** comp=Z,18nm,0.8s	**3.85**	**24**	IAmb_Lg				15 56 07.1	
RTBA	**Rita Blanca**	**3.85**	**338**	Pn			Pn	15 54 57.7	+1.8
MNTX	**Cornudas Mount**	**3.94**	**254**	Pn			Pn	15 54 59.2	+2.2
VHRN	**Van Horn**	**4.02**	**240**	Pn			Pn	15 54 58.8	+0.6
W35A	**Tecumseh** comp=Z,11nm,0.8s	**4.07**	**55**	IAmb_Lg				15 56 10.7	
TX31	**Lajitas Ar. Si**	**4.23**	**214**	Pn			Pn	15 55 02.2	+1.2
TXAR	**Lajitas Array**	**4.23**	**214**	Pn			Pn	15 55 02.2	+1.2
EF01	**Eagle Ford 01** comp=Z,17nm,0.9s	**4.33**	**149**	IAmb_Lg				15 56 20.4	
833A	**Chaparral WMA,**	**4.72**	**163**	Pn			Pn	15 55 06.5	-1.3
833A	comp=Z,14nm,0.7s			IAmb_Lg				15 56 35.4	
KAN14	**Manchester OK** comp=Z,11nm,0.8s	**4.75**	**30**	IAmb_Lg				15 56 25.8	
X37A	**Clayton**	**4.95**	**68**	Pn			Pn	15 55 11.7	+0.9
ANMO	**Albuquerque** comp=Z,15nm,1.1s	**5.03**	**296**	IAmb_Lg				15 56 35.8	
ANMO	**Albuquerque** comp=Z,15nm,1.1s	**5.03**	**296**	IAmb_Lg				15 56 35.7	
R32A	**Long Quarter,** comp=Z,9.0nm,0.9s	**5.83**	**18**	IAmb_Lg				15 57 16.3	
MIAR	**Mount Ida**	**6.36**	**73**	Pn			Pn	15 55 30.7	+0.5
MGMO	**Mountain Grove** comp=Z,4.4nm,0.8s	**8.30**	**57**	IAmb_Lg				15 58 23.1	

IDC 14 15:54:43.2±5.0, 4°.16S×154°.20E, h436km±58km, mb2.8/3, mbtmp3.7/5, Error ellipse: s-maj=89.2km s-min=32.7km az=125.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 1.2nm,0.3s,baz=6.3,slow=7.4,SNR=1.9	**8.72**	**233**	P			P	15 56 47.0	+0.6
CTA	**Charters Tower** 2.7nm,0.7s,baz=26,slow=10,SNR=5.5	**17.63**	**205**	P			P	15 58 22.3	-0.4
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=54,slow=9.3,SNR=8.7 0.6nm,0.4s	**24.92**	**229**	P			P	15 59 30.3	+0.3
ASAR	**Alice Springs** 0.3nm,0.3s,baz=55,slow=9.1,SNR=28 0.3nm,0.3s	**27.57**	**223**	P			P	15 59 53.2	-0.2
ILAR	**Eielson Array** 0.4nm,1.0s,baz=246,slow=4.5,SNR=5.2 0.4nm,1.0s	**81.04**	**22**	P			P	16 06 11.1	0.0

*IDC **14** 16:28:54.0±2.2, 15°.33N×90°.55W, h254km±26km, mb3.3/7, mbtmp4.1/9, Error ellipse: s-maj=27.9km s-min=13.9km az=55.0*
*CATAC **14** 16:28:54.4±0.5, 15°.11N×91°.18W, h261km±4km, MB5.3, mb5.0, ML4.7*
*SNET **14** 16:28:54.1±1.1, 15°.32N×91°.08W, h242km±27km, ML3.8*
*NEIC **14** 16:28:55.0±1.9, 15°.14N±0°.08×91°.09W±0°.08, h254km±8km, mb4.4/30, Error ellipse: s-maj=14.2km s-min=9.3km az=223.0*
*GCG **14** 16:28:58.7±0.5, 15°.26N×91°.24W, h217km±7km, MD4.4*
ISC 14 16:28:54.4±0.6, 15°.13N±0°.06×91°.18W±0°.05, h259km±5km, n138, σ1§30/153, mb4.0/12, 1C, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HUEH	**Huehuetenango**	**0.36**	**301**	Pn			**Pn**	**16 29 27.5**	**-0.7**
STG3	**Santiaguito 3,**	**0.56**	**222**	*e*P			**Pn**	**16 29 29.5**	**+0.7**
STG3				*e*S			**S**	**16 29 53.0**	**-2.7**
FUG	**Fuego 3**	**0.75**	**154**	*e*P			**Pn**	**16 29 30.5**	**+1.1**
FUG				*e*S			**S**	**16 29 55.7**	**-1.3**
RTAL	**Retalhuleu**	**0.78**	**220**	Pn			**Pn**	**16 29 29.0**	**-0.3**
RTAL	**Retalhuleu**	**0.78**	**220**	*e*P			**Pn**	**16 29 29.1**	**-0.3**
RTAL				*e*S			**S**	**16 29 55.2**	**-1.6**
RTAL	**Retalhuleu**	**0.78**	**220**	*i*P			**Pn**	**16 29 29.4**	**+0.1**
RTAL	comp=Z,2μm,1.0s			IAML				16 29 29.7	
RTAL				*i*S			**S**	**16 29 57.9**	**+1.1**
SULM	**Suchitepequez,**	**0.90**	**204**	*e*P			**Pn**	**16 29 30.5**	**+0.6**
SMCA	**Catarina**	**0.91**	**253**	*i*P			**Pn**	**16 29 29.8**	**-0.1**
SMCA	comp=Z,1μm,1.0s			IAML				16 29 30.0	
SMCA				*i*S			**S**	**16 29 58.3**	**+0.5**
PCG	**Pacaya**	**0.92**	**143**	*e*S			**S**	**16 29 57.7**	**-0.8**
NBG	**Las Nubes**	**0.97**	**124**	*e*P			**Pn**	**16 29 32.1**	**+1.6**
CCIG	**Comitan**	**1.47**	**321**	Pn			**Pn**	**16 29 34.6**	**+1.1**
CCIG	**Comitan**	**1.47**	**321**	*i*P			**Pn**	**16 29 33.1**	**+1.6**
CCIG				*i*S			**S**	**16 30 06.3**	**+1.9**
CCIG	comp=Z,850nm,1.0s			IAML				16 30 12.0	
SLOZ	**Alcaldia de Sa**	**1.74**	**129**	*e*P			**Pn**	**16 29 35.2**	**-0.2**
SLOZ				*e*S			**S**	**16 30 06.9**	**-1.0**
SLOZ	comp=Z,143nm,0.3s			IAML				16 30 15.1	
NUBE	**Las Nubes**	**1.82**	**132**	*e*P			**Pn**	**16 29 35.9**	**-0.3**
NUBE				*e*S			**S**	**16 30 08.6**	**-0.8**
NUBE	**Las Nubes**	**1.82**	**132**	*i*P			**Pn**	**16 29 36.0**	**-0.3**
NUBE	comp=Z,510nm,1.0s			IAML				16 29 36.3	
NUBE				*i*S			**S**	**16 30 09.5**	**+0.1**
ESQI	**Esquipulas**	**1.87**	**107**	Pn			**Pn**	**16 29 36.4**	**-0.2**
MTO3	**Montecristo**	**1.91**	**112**	Pn			**Pn**	**16 29 36.4**	**-0.7**
MTO3	**Montecristo**	**1.91**	**112**	*i*P			**Pn**	**16 29 37.1**	**+0.1**
MTO3	comp=Z,150nm,1.0s			IAML				16 30 16.9	
RTR	**El Retiro**	**1.93**	**129**	*e*P			**Pn**	**16 29 37.1**	**-0.1**
SNJE	**San Jose**	**1.98**	**129**	*e*P			**Pn**	**16 29 37.4**	**-0.2**
SNJE				*e*S			**S**	**16 30 11.3**	**-0.5**
SBLS	**San Blas**	**1.98**	**130**	*e*P			**Pn**	**16 29 37.7**	**0.0**
PETF	**Flores**	**2.18**	**35**	Pn			**Pn**	**16 29 39.3**	**+0.2**
PETF	**Flores**	**2.18**	**35**	*i*P			**Pn**	**16 29 40.0**	**+0.8**
PETF				*i*S			**S**	**16 30 14.8**	**+0.1**
PETF	comp=Z,290nm,1.0s			IAML				16 30 16.5	
JAYA	**Jayaque - finc**	**2.23**	**131**	*e*P			**Pn**	**16 29 39.2**	**-0.6**
JAYA	comp=Z,1μm,0.2s			IAML				16 30 18.3	
JAYA	**Jayaque - finc**	**2.23**	**131**	*i*P			**Pn**	**16 29 39.5**	**-0.4**
JAYA				*i*S			**S**	**16 30 14.2**	**-1.6**
JAYA	comp=Z,3μm,1.0s			IAML				16 30 18.3	
PMON	**Piamonte**	**2.29**	**128**	*i*P			**Pn**	**16 29 40.3**	**-0.1**
PMON	comp=Z,1μm,1.0s			IAML				16 29 40.6	
PMON				*i*S			**S**	**16 30 20.3**	**+3.5**
LALI	**Alcalda de L**	**2.43**	**132**	*e*P			**Pn**	**16 29 41.4**	**-0.2**
LALI	**Alcalda de L**	**2.43**	**132**	*i*P			**Pn**	**16 29 41.6**	**0.0**
LOMA	**Loma Larga**	**2.44**	**127**	*e*P			**Pn**	**16 29 42.7**	**+0.8**
LOMA	**Loma Larga**	**2.44**	**127**	*i*P			**Pn**	**16 29 42.5**	**+0.6**
LOMA				*i*S			**S**	**16 30 21.5**	**+2.0**
LOMA	comp=Z,500nm,1.0s			IAML				16 30 27.0	
LFRS	**El Faro**	**2.54**	**126**	*e*P			**Pn**	**16 29 42.5**	**-0.3**
LFRS				*e*S			**S**	**16 30 20.9**	**-0.3**
PAVA	**Las Pavas**	**2.59**	**123**	*e*P			**Pn**	**16 29 43.1**	**-0.2**
SJTE	**Alcalda de S**	**2.59**	**125**	*e*P			**Pn**	**16 29 43.0**	**-0.3**
SJTE	comp=Z,122nm,0.3s			IAML				16 30 29.1	
SCLA	**Alcaldia de Sa**	**2.77**	**121**	*e*P			**Pn**	**16 29 44.7**	**-0.3**
SCLA	**Alcaldia de Sa**	**2.77**	**121**	*i*P			**Pn**	**16 29 44.8**	**-0.3**
SCLA	comp=Z,110nm,1.0s			IAML				16 30 43.6	
TECA	**Tecapa**	**3.06**	**122**	*e*P			**Pn**	**16 29 49.3**	**+1.0**
JUCU	**Jucuarın**	**3.40**	**123**	*e*P			**Pn**	**16 29 53.1**	**+1.2**
LCND	**La Caada**	**3.67**	**119**	*e*P			**Pn**	**16 29 55.7**	**+0.9**
CNCH	**Conchagua**	**3.73**	**119**	*e*P			**Pn**	**16 29 56.3**	**+0.6**
CNCH	**Conchagua**	**3.73**	**119**	*i*P			**Pn**	**16 29 56.4**	**+0.8**
CNCH	comp=Z,790nm,1.0s			IAML				16 31 01.1	
CMIG	**Matias Romero** comp=Z,205nm,0.3s,baz=132,slow=8.9,SNR=558	**4.06**	**299**	P			**Pn**	**16 29 59.4**	**+0.1**
CMIG							**S**	**16 30 47.1**	**-3.8**
CSGN	**Cosiguina Volc**	**4.12**	**121**	*i*P			**Pn**	**16 29 57.0**	**-3.0**
POTN	**Potosi Cosigui**	**4.15**	**120**	*i*P			**Pn**	**16 30 03.1**	**+2.8**
CRIN	**San Cristobal**	**4.68**	**121**	Pn			**Pn**	**16 30 06.0**	**-0.7**
CRIN	**San Cristobal**	**4.68**	**121**	*i*P			**Pn**	**16 30 06.8**	**+0.1**
CRIN	comp=Z,2μm,1.0s			IAML				16 31 11.4	
CRIN	**San Cristobal** comp=Z,2μm,1.0s	**4.68**	**121**	IAML				16 31 11.4	
CRIN	**San Cristobal**	**4.68**	**121**	*i*P			**Pn**	**16 30 05.6**	**-1.1**
HERN	**Volcan Telica**	**4.91**	**120**	*i*P			**Pn**	**16 30 08.7**	**-0.8**
HERN	comp=Z,1μm,1.0s			IAML				16 31 12.8	
TELN	**Telica**	**4.91**	**120**	*i*P			**Pn**	**16 30 08.3**	**-1.2**
TELN	comp=Z,40000μm,1.0s			IAML				16 32 31.1	
CNGN	**Cerro Negro**	**5.08**	**120**	Pn			**Pn**	**16 30 10.9**	**-0.6**
LIMN	**Finca el Limon**	**5.10**	**113**	*i*P			**Pn**	**16 30 12.5**	**+0.7**
MACN	**El Madrono**	**5.12**	**121**	*i*P			**Pn**	**16 30 09.6**	**-2.3**
LEVN	**Ruinas Leon Vi**	**5.20**	**121**	*i*P			**Pn**	**16 30 13.5**	**+0.6**
MOMN	**Momotombo**	**5.26**	**120**	*i*P			**Pn**	**16 30 13.5**	**-0.2**
MOMN	comp=Z,10.0nm,0.6s			IAmb		IAmb		16 30 15.9	
MOMN	comp=Z,27nm,1.0s			IAML				16 30 16.5	
MOMN	comp=Z,390nm,1.0s			IVmB_BB				16 30 16.5	
COPN	**Copaltepe**	**5.34**	**123**	*i*P			**Pn**	**16 30 13.3**	**-1.3**
SAPS	**Ciudad Sandino**	**5.50**	**122**	*i*P			**Pn**	**16 30 17.0**	**+0.5**
SAPS	**Ciudad Sandino**	**5.50**	**122**	*i*S			**Pn**	**16 30 17.4**	**+0.9**
TISN	**Laguna Tiscapa**	**5.62**	**121**	*i*P			**Pn**	**16 30 18.0**	**-0.1**
UNAN	**Cigeo UNAN**	**5.64**	**122**	*i*P			**Pn**	**16 30 18.9**	**+0.6**
UNAN	comp=Z,800nm,0.6s			IAmb		IAmb		16 30 19.3	
UNAN	comp=Z,3μm,1.0s			IAML				16 31 30.5	
TEIG	**Tepich**	**5.78**	**28**	Pn			**Pn**	**16 30 18.8**	**-1.1**
NANN	**Nandasmo**	**5.85**	**122**	*i*P			**Pn**	**16 30 22.2**	**+1.2**
NANN	comp=Z,2μm,0.6s			IAmb		IAmb		16 30 23.2	
NANN	comp=Z,61μm,1.0s			IVmB_BB				16 30 25.7	
NANN	comp=Z,11μm,1.0s			IAML				16 31 34.1	
NANN	**Nandasmo**	**5.85**	**122**	*i*S			**Pn**	**16 30 22.2**	**+1.2**
NANN	**Nandasmo** comp=Z,5μm,1.0s	**5.85**	**122**	IAML				16 30 22.6	
BOAB	**BOACO BROADBAN**	**5.98**	**116**	Pn			**Pn**	**16 30 21.9**	**-0.6**
BOAB	**BOACO BROADBAN**	**5.98**	**116**	*i*P			**Pn**	**16 30 22.6**	**+0.1**
BOAB	comp=Z,84nm,1.0s			IAML				16 30 25.8	
BOAB	comp=Z,32nm,0.7s			IAmb		IAmb		16 30 33.1	
SIUN	**Universidad Ur**	**6.37**	**102**	*i*P			**Pn**	**16 30 27.7**	**+0.4**
CONN	**Concepcion**	**6.46**	**123**	*i*P			**Pn**	**16 30 27.9**	**-0.6**
CONN	comp=Z,1μm,0.8s			IAmb		IAmb		16 30 30.1	
CONN	comp=Z,3μm,1.0s			IAML				16 32 09.6	
ACON	**Acoyapa**	**6.63**	**118**	Pn			**Pn**	**16 30 30.6**	**0.0**
HZTE	**Horizontes, Gu**	**6.99**	**128**	Pn			**Pn**	**16 30 34.9**	**-0.2**
HZTE	**Horizontes, Gu**	**6.99**	**128**	*i*P			**Pn**	**16 30 35.4**	**+0.3**
HZTE	comp=Z,300nm,0.9s			IAmb		IAmb		16 30 35.9	
HZTE	comp=Z,5μm,1.0s			IVmB_BB				16 30 37.4	
HZTE	comp=Z,440nm,1.0s			IAML				16 32 04.0	
ORTG	**Ortega, Santa**	**7.32**	**130**	Pn			**Pn**	**16 30 38.7**	**-0.7**
ORTG	**Ortega, Santa**	**7.32**	**130**	*i*P			**Pn**	**16 30 39.1**	**-0.2**
ORTG	comp=Z,440nm,1.0s			IAML				16 30 39.5	
ORTG	comp=Z,320nm,0.8s			IAmb		IAmb		16 30 39.6	
ORTG	comp=Z,15μm,1.0s			IVmB_BB				16 31 18.3	
DUNO	**Dulce Nombre,**	**7.48**	**131**	Pn			**Pn**	**16 30 40.5**	**-0.8**
DUNO	**Dulce Nombre,**	**7.48**	**131**	*i*P			**Pn**	**16 30 41.2**	**-0.1**
DUNO	comp=Z,1μm,1.0s			IAML				16 32 11.3	
TLIG	**Tlapa**	**7.49**	**290**	Pn			**Pn**	**16 30 44.2**	**+2.8**
JTS	**Las Juntas de**	**7.75**	**128**	Pn			**Pn**	**16 30 42.9**	**-1.7**
JTS	**Las Juntas de** comp=Z,69nm,0.3s,baz=303,slow=14,SNR=44	**7.75**	**128**	P			**Pn**	**16 30 41.8**	**-2.9**
JTS							S	16 32 02.8	-11
ARE1	**Arenal 1**	**7.83**	**126**	Pn			**Pn**	**16 30 44.7**	**-0.9**
SOCE	**Pocosol**	**7.95**	**126**	Pn			**Pn**	**16 30 46.6**	**-0.7**
SOCE	**Pocosol**	**7.95**	**126**	*i*P			**Pn**	**16 30 46.8**	**-0.4**
SOCE	comp=Z,2μm,1.0s			IVmB_BB				16 30 51.5	
SOCE	comp=Z,140nm,1.0s			IAML				16 30 51.6	
JACO	**JACO, Garabito**	**8.37**	**130**	*i*P			**Pn**	**16 30 52.4**	**-0.1**
JACO	comp=Z,130nm,0.5s			IAmb		IAmb		16 30 54.1	
JACO	comp=Z,3μm,1.0s			IVmB_BB				16 30 57.2	
OCM	**Ochomogo**	**8.76**	**126**	*i*P			**Pn**	**16 30 57.5**	**-0.1**
LCR2	**La Lucha 2**	**8.82**	**127**	Pn			**Pn**	**16 30 57.7**	**-0.6**
LCR2	**La Lucha 2**	**8.82**	**127**	*i*P			**Pn**	**16 30 58.2**	**-0.1**
LCR2	comp=Z,110nm,0.7s			IAmb		IAmb		16 30 59.4	
LCR2	comp=Z,2μm,1.0s			IVmB_BB				16 31 00.9	
VTCV	**VTCV, Calle Va**	**8.89**	**124**	*i*P			**Pn**	**16 30 59.8**	**+0.6**
RIMA	**Rio Macho**	**8.91**	**126**	Pn			**Pn**	**16 30 58.5**	**-1.0**
CDM	**Cerro de Muert**	**9.12**	**127**	*i*P			**Pn**	**16 31 01.8**	**-0.5**
CDM	comp=Z,68nm,0.6s			IAmb		IAmb		16 31 04.1	
CDM	comp=Z,3μm,1.0s			IVmB_BB				16 31 04.6	
PEZE	**Perez Zeledon,**	**9.29**	**127**	Pn			**Pn**	**16 31 03.4**	**-0.7**
PEZE	**Perez Zeledon,**	**9.29**	**127**	*i*P			**Pn**	**16 31 03.5**	**-0.7**
PEZE	comp=Z,4μm,1.0s			IVmB_BB				16 31 05.7	
PEZE				IAmb		IAmb		16 31 06.9	
OCHAL	**Ojochal** comp=Z,79nm,0.8s	**9.50**	**128**	*i*P			**Pn**	**16 31 07.4**	**+0.8**
SRBA	**San Rafael, Bu**	**9.63**	**127**	Pn			**Pn**	**16 31 07.1**	**-1.3**
SRBA	**San Rafael, Bu**	**9.63**	**127**	*i*P			**Pn**	**16 31 07.5**	**-0.9**
SRBA	comp=Z,40nm,0.5s			IAmb		IAmb		16 31 10.1	
SRBA	comp=Z,2μm,1.0s			IVmB_BB				16 31 10.4	
DRK0	**Durika**	**9.70**	**126**	Pn			**Pn**	**16 31 08.6**	**-0.8**
PLAN	**Los Planes de**	**9.75**	**130**	*i*P			**Pn**	**16 31 12.3**	**+2.5**
BRU2	**Volcan**	**10.42**	**126**	Pn			**Pn**	**16 31 17.8**	**-0.6**
ZAIG	**Zacatecas**	**13.18**	**307**				**P**	**16 31 56.0**	**+2.2**
HBVL	**Hebbronville**	**13.77**	**331**				**P**	**16 32 00.9**	**+0.8**
061Z	**Ochoppi**	**14.37**	**40**				**P**	**16 32 07.6**	**+0.9**
441A	**DeRidder**	**15.66**	**354**	Pn			**Pn**	**16 32 23.2**	**+1.2**
GTBY	**Guantanamo Bay**	**16.05**	**70**				**P**	**16 32 25.5**	**+0.2**
JCT	**Junction City**	**17.21**	**334**				**P**	**16 32 38.5**	**+0.6**
JCT	comp=Z,9.6nm,0.9s			IAmb		IAmb		16 32 43.8	
237A	**Washetta, Mont**	**17.32**	**347**				**P**	**16 32 39.7**	**+0.7**
BRDY	**Brady**	**17.60**	**337**				**P**	**16 32 43.0**	**+0.8**
BRDY	comp=Z,13nm,0.8s			IAmb		IAmb		16 32 43.9	
WHTX	**Lake Whitney,**	**17.73**	**342**				**P**	**16 32 44.0**	**+0.5**
SAND	**Sanderson**	**17.86**	**328**				**Pn**	**16 32 46.8**	**-1.2**
SAND	comp=Z,8.3nm,0.8s			IAmb		IAmb		16 33 15.5	
HPIG		**17.89**	**313**				**P**	**16 32 46.7**	**+1.2**
HPIG	comp=Z,22nm,0.6s			IAmb		IAmb		16 32 49.2	
FW14	**Alvarado**	**18.04**	**343**				**P**	**16 32 47.1**	**+0.2**
TX31	**Lajitas Ar. Si**	**18.24**	**323**				**Pn**	**16 32 51.2**	**-1.3**
TXAR	**Lajitas Array**	**18.24**	**323**				**P**	**16 32 50.1**	**+0.9**
TXAR	**Lajitas Array** comp=Z,2.2nm,0.5s,baz=147,slow=12,SNR=41	**18.24**	**323**				**Pn**	**16 32 51.7**	**-0.7**
Z38A	**Mt. Pleasant**	**18.38**	**350**				**P**	**16 32 51.4**	**+0.9**
PLPT	**Palo Pinto**	**18.76**	**341**				**P**	**16 32 56.1**	**+1.5**
PLPT	comp=Z,12nm,0.7s			IAmb		IAmb		16 33 14.3	
ALPN	**Alpine**	**19.00**	**325**				**P**	**16 32 58.8**	**+1.4**
ALPN	comp=Z,4.2nm,0.8s			IAmb		IAmb		16 33 02.8	
MIAR	**Mount Ida**	**19.45**	**354**				**P**	**16 33 01.6**	**-0.3**
MIAR	comp=Z,12nm,0.8s			IAmb		IAmb		16 33 03.2	
X37A	**Clayton**	**19.74**	**350**				**P**	**16 33 05.7**	**+0.7**
X37A	comp=Z,19nm,1.1s			IAmb		IAmb		16 33 33.0	
APMT	**Aspermont**	**19.85**	**337**				**P**	**16 33 06.2**	**0.0**
APMT	comp=Z,8.6nm,0.7s			IAmb		IAmb		16 33 06.8	
W35A	**Tecumseh**	**20.58**	**347**				**P**	**16 33 13.3**	**-0.7**
W35A	comp=Z,17nm,0.6s			IAmb		IAmb		16 33 14.2	
FNO	**Franklin**	**20.81**	**346**				**P**	**16 33 14.7**	**-1.6**
FNO	comp=Z,20nm,0.8s			IAmb		IAmb		16 33 16.6	
RLO	**Rose Lookout**	**21.23**	**351**				**P**	**16 33 20.1**	**-0.3**
RLO	comp=Z,25nm,0.5s			IAmb		IAmb		16 33 21.0	
SMWD	**Samnorwood**	**21.49**	**339**				**P**	**16 33 22.9**	**-0.2**
SMWD	comp=Z,15nm,1.0s			IAmb		IAmb		16 33 24.9	
AMTX	**Amarillo**	**21.82**	**336**				**P**	**16 33 25.1**	**-1.0**
AMTX	comp=Z,11nm,0.9s			IAmb		IAmb		16 33 34.3	
MGMO	**Mountain Grove**	**21.96**	**358**				**P**	**16 33 28.7**	**+1.5**
MGMO	comp=Z,6.7nm,0.9s			IAmb		IAmb		16 33 29.5	
BOSC	**San Juan Bosco**	**22.09**	**144**				**P**	**16 33 29.9**	**+1.1**
121A	**Cookes Peak, D**	**22.98**	**322**				**P**	**16 33 38.9**	**+2.1**
121A	comp=Z,6.3nm,0.8s			IAmb		IAmb		16 33 41.9	
X16A	**Lo Mia Camp, P**	**26.50**	**320**				**P**	**16 34 10.8**	**+2.3**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.5s,baz=142,slow=9.2,SNR=2.2 comp=Z,0.2nm,0.5s	**31.74**	**334**				**P**	**16 34 55.2**	**+0.5**
ELK	**Elko**	**33.00**	**325**				**P**	**16 35 07.4**	**+1.8**
NV11	**Mina Array Sit**	**33.22**	**319**				**P**	**16 35 10.9**	**+3.5**
NVAR	**Mina Array Bea**	**33.31**	**319**				**P**	**16 35 11.8**	**+3.4**
NVAR	**Mina Array Bea** comp=Z,2.5nm,0.7s,baz=129,slow=8.2,SNR=22 comp=Z,2.5nm,0.7s	**33.31**	**319**				**P**	**16 35 10.6**	**+2.3**
LHV	**Little Huntoon**	**33.34**	**319**				**P**	**16 35 11.8**	**+3.6**
LHV	comp=Z,5.4nm,0.6s			IAmb		IAmb		16 35 12.6	
KVN	**Kaiserville**	**33.56**	**320**				**P**	**16 35 12.6**	**+2.2**
ULM	**Lac du Bonnet** comp=Z,2.5nm,0.6s,baz=167,slow=13,SNR=5.7 comp=Z,2.5nm,0.6s	**35.23

FRMA AML AML 16 32 20.0
comp=N,15590µm,0.6s
FRMA AML AML 16 32 23.9
comp=E,15808µm,0.5s
ZKR Zakros 0.67 49 Pg **Pn** **16 32 14.0 +1.3**
ZKR Zakros 0.67 49 P **Pn** **16 32 15.3 +2.7**
ZKR S **Sn** **16 32 26.9 +4.6**
ZKR Zakros 0.67 49 P **Pn** **16 32 15.3 +2.7**
ZKR S **Sn** **16 32 24.9 +2.6**
ZKR AML AML 16 32 27.4
comp=N,4482µm,0.7s
ZKR AML AML 16 32 29.6
comp=E,12979µm,0.8s
HRKL Herakleio 0.75 328 Pg **Pn** **16 32 13.1 -0.6**
HRKL Herakleio 0.75 328 P **Pn** **16 32 13.2 -0.5**
HRKL S **Sn** **16 32 22.7 -1.4**
comp=E,19µm,0.6s
HRKL Herakleio 0.75 328 P **Pn** **16 32 13.6 -0.1**
HRKL S **Sn** **16 32 22.0 -2.0**
IACM Heraklion 0.76 326 P **Pn** **16 32 13.7 -0.1**
IACM S **Sn** **16 32 23.6 -0.7**
IACM Heraklion 0.76 326 P **Pn** **16 32 13.7 -0.1**
TMBK Timbaki Herakl 0.79 300 P **Pn** **16 32 14.6 +0.5**
TMBK S **Sn** **16 32 24.2 -0.7**
TMBK Timbaki Herakl 0.79 300 P **Pn** **16 32 14.1 -0.1**
IDI Anoyia 0.84 317 Pg **Pn** **16 32 14.8 -0.2**
IDI Sg **Sn** **16 32 25.2 -1.1**
IDI Anoyia 0.84 317 P **Pn** **16 32 14.2 -0.8**
IDI S **Sn** **16 32 24.3 -2.0**
IDI Anoyia 0.84 317 P **Pn** **16 32 14.6 -0.3**
IDI S **Sn** **16 32 24.9 -1.4**
PRNS Prines Rethymn 1.13 308 P **Pn** **16 32 20.1 +1.3**
PRNS S **Sn** **16 32 34.6 +1.4**
comp=E,2µm,0.6s
GVDS Gavdos 1.25 278 Pn **Pn** **16 32 23.1 +2.7**
GVDS Gavdos 1.25 278 P **Pn** **16 32 21.9 +1.5**
GVD Gavdhos 1.25 278 Pn **Pn** **16 32 22.7 +2.3**
GVD Gavdhos 1.25 278 P **Pn** **16 32 22.2 +1.8**
GVD S **Sn** **16 32 37.5 +1.3**
GVD AML AML 16 32 47.8
comp=N,5618µm,0.5s
GVD AML AML 16 32 48.1
comp=E,7544µm,0.5s
CHAN Chania 1.52 304 P **Pn** **16 32 26.1 +2.0**
IMMV Iera Moni Meta 1.54 301 Pn **Pn** **16 32 25.1 +0.7**
IMMV Iera Moni Meta 1.54 301 P **Pn** **16 32 25.3 +0.9**
IMMV Iera Moni Meta 1.54 301 P **Pn** **16 32 25.8 +1.5**
IMMV S **Sn** **16 32 43.1 0.0**
IMMV AML AML 16 32 52.7
comp=N,4724µm,0.4s
IMMV AML AML 16 32 56.6
comp=E,5802µm,0.8s
KARP Karpathos 1.55 55 Pn **Pn** **16 32 25.9 +1.3**
KARP Karpathos 1.55 55 **Pn** **16 32 28.3 +3.8**
KARP Karpathos 1.55 55 P **Pn** **16 32 28.4 +3.8**
KARP Karpathos 1.55 55 P **Pn** **16 32 28.4 +3.8**
KARP S **Sn** **16 32 48.2 +4.6**
KARP AML AML 16 33 01.8
comp=E,2612µm,0.6s
KARP AML AML 16 33 07.6
comp=N,3319µm,1.0s
SANT Santorini 1.69 356 Pn **Pn** **16 32 25.9 -0.7**
SANT Santorini 1.69 356 Pn **Pn** **16 32 26.9 -0.7**
RODP Rodopos 1.75 301 Pn **Pn** **16 32 28.6 +1.4**
RODP Rodopos 1.75 301 P **Pn** **16 32 28.8 +1.6**
THR2 Thira island, 1.77 356 P **Pn** **16 32 27.8 +0.2**
ANKY Antikythira Is 2.22 303 P **Pn** **16 32 34.9 +1.2**
ANKY Antikythira Is 2.22 303 P **Pn** **16 32 35.0 +1.3**
APE Apeiranthos 2.39 359 Pn **Pn** **16 32 35.6 -0.5**
APE Apeiranthos 2.39 359⇑*e*P **Pn** **16 32 35.3 -0.8**
APE Apeiranthos 2.39 359 P **Pn** **16 32 35.2 -0.9**
APE S **Sn** **16 32 60.0 -4.2**
APE Apeiranthos 2.39 359 P **Pn** **16 32 35.8 -0.3**
ARG Arkhangelos 2.58 53 Pn **Pn** **16 32 40.8 +2.2**
ARG Arkhangelos 2.58 53 P **Pn** **16 32 40.8 +2.2**
ARG Arkhangelos 2.58 53 P **Pn** **16 32 41.7 +3.1**
ARG S Sn 16 33 20.5 +12
DAT Datca 2.61 38 Pn **Pn** **16 32 40.2 +1.1**
BODT Bodrum 2.76 30 Pn **Pn** **16 32 42.4 +1.3**
RFTAA Mazikoy-Bodrum 2.90 36 Pn **Pn** **16 32 44.5 +1.4**
MLSB Milas 3.16 33 Pn **Pn** **16 32 48.7 +2.1**
SLUM Salum 3.19 186 P **Pn** **16 32 49.6 +2.5**
baz=186
DALY Dalyan (Mula) 3.28 48 Pn **Pn** **16 32 50.4 +2.2**
YER Yerkesik 3.28 41 Pn **Pn** **16 32 50.7 +2.3**
YER Yerkesik 3.28 41 P **Pn** **16 32 50.3 +1.9**
IZZE Mula-Seydike 3.44 58 P **Pn** **16 32 52.3 +1.8**
IZZE S **Sn** **16 33 28.6 -1.5**
IZZE *i* AML AML 16 33 31.0
comp=N,219nm,0.4s
IZZE *i* AML AML 16 33 33.0
comp=N,98nm,0.4s
FETY Fethiye 3.45 54 Pn **Pn** **16 32 51.9 +1.3**
FETY Fethiye 3.45 54 P **Pn** **16 32 55.0 +4.4**
FETY S **Sn** **16 33 29.8 -0.5**
AKAS Kas 3.62 63 P **Pn** **16 32 55.3 +2.2**
AKAS S **Sn** **16 33 31.9 -2.8**
AKAS *i* AML AML 16 33 44.0
comp=N,163nm,1.2s
AKAS *i* AML AML 16 33 52.0
comp=N,78nm,0.5s
CAME Cameli-Denizli 3.77 52 Pn **Pn** **16 32 57.2 +2.1**
DNZT Denizli-Tavas- 3.81 46 P **Pn** **16 32 57.7 +2.1**
DNZT S **Sn** **16 33 39.6 +0.5**
DNZT *i* AML AML 16 33 53.0
comp=N,27nm,1.5s
DNZT *i* AML AML 16 33 54.0
comp=N,31nm,1.3s
TAVA DENIZLI_Tavas 3.87 43 P **Pn** **16 32 57.3 +0.8**
TAVA S **Sn** **16 33 37.4 -3.3**
BLCB Balcova 3.88 17 Pn **Pn** **16 32 56.9 +0.4**
KNIK Mula-Seydike 3.89 55 P **Pn** **16 32 58.7 +2.0**
KNIK S **Sn** **16 33 38.9 -2.4**
KNIK *i* AML AML 16 33 40.0
comp=N,19nm,1.0s
KNIK *i* AML AML 16 33 43.0
comp=N,27nm,0.5s
DNIZ Denizli-Tavas- 4.05 42 P **Pn** **16 32 59.8 +0.9**
DNIZ S **Sn** **16 33 45.2 0.0**
ELL Elmali 4.08 58 Pn **Pn** **16 33 01.7 +2.4**
ELL Elmali 4.08 58 Pn **Pn** **16 33 00.8 +1.5**
ELL Elmali 4.08 58 P **Pn** **16 33 00.8 +1.5**
APMY Acipayam-Deniz 4.10 46 Pn **Pn** **16 33 01.3 +1.7**
GOLH Golhisar 4.11 50 P **Pn** **16 33 02.4 +2.7**
GOLH S **Sn** **16 33 45.1 -1.5**
GOLH *i* AML AML 16 33 48.0
comp=N,55nm,1.8s
GOLH *i* AML AML 16 33 56.0
comp=N,27nm,0.6s
AKUM Antalya-Kumluc 4.21 66 P **Pn** **16 33 02.3 +1.4**
AKUM S **Sn** **16 33 46.3 -2.5**
AKUM *i* AML AML 16 33 51.0
comp=N,56nm,0.6s
AKUM *i* AML AML 16 33 55.0
comp=N,33nm,0.5s
DB3 El Dabaa 4.40 145⇑P **Pn** **16 33 06.2 +2.6**
baz=145
KORT Korkueli 4.51 58 P **Pn** **16 33 08.7 +3.5**
KORT S **Sn** **16 33 56.0 -0.4**
AGG Agios Georgios 5.07 330 Pn **Pn** **16 33 12.0 -0.8**
AGG Agios Georgios 5.07 330 P **Pn** **16 33 12.0 -0.8**
SWA2 5.42 181 P **Pn** **16 33 19.9 +2.3**
baz=182
SWA2 S **Sn** **16 34 18.1 -0.5**
baz=182
ALN Alexandroupoli 6.22 3 Pn **Pn** **16 33 29.3 +0.7**
ALN Alexandroupoli 6.22 3 P **Pn** **16 33 29.3 +0.7**
CSS Mathiatis 6.37 85 Pn **Pn** **16 33 31.1 +0.4**
CSS Mathiatis 6.37 85 S **Sn** **16 34 40.1 -2.0**
CSS Mathiatis 6.37 85 P **Pn** **16 33 31.3 +0.6**
RDO Rodhopi 6.46 360 Pn **Pn** **16 33 32.0 +0.1**
KEK Kerkira 6.83 319 Pn Pn 16 33 32.1 -4.9
RYAN Fayoum 6.85 143 P **Pn** **16 33 40.1 +2.9**
baz=143
RYAN S **Sn** **16 34 52.3 -1.7**
baz=143
FNA Florina 6.95 333 Pn **Pn** **16 33 36.5 -2.2**
FNA Florina 6.95 333 P **Pn** **16 33 36.5 -2.2**
KOT Kottamia 7.09 130 S **Sn** **16 34 57.6 -2.2**
baz=130
SUZ Suez 7.80 126 P **Pn** **16 33 53.3 +3.1**
baz=126
SCTE Santa Cesarea 7.82 316 Pn Pn 16 33 45.7 -4.9

HFRF Wahat Farafira 7.86 162⇑P **Pn** **16 33 53.2 +2.1**
baz=161
OFRI `Ofer 8.09 102 S **Sn** **16 35 21.3 -3.2**
HNTI Hanita 8.12 99 S **Sn** **16 35 22.9 -2.3**
BR131 Keskin Array S 8.16 50 Pn **Pn** **16 33 56.1 +0.8**
BR131 Keskin Array S 8.16 50⇓*e*P **Pn** **16 33 57.5 +2.2**
BRTR Keskin Array B 8.16 50 Pn **Pn** **16 33 57.0 +1.7**
BRTR Keskin Array B 8.16 50 P **Pn** **16 33 57.0 +1.7**
BRTR Keskin Array B 8.16 50 Pn **Pn** **16 33 54.1 -1.2**
comp=N,0.2nm,0.3s,baz=212,slow=12,SNR=9.1
BRTR Sn **Sn** **16 35 19.1 -7.1**
baz=218,slow=18
BRTR LR LR 16 38 01.6
comp=N,30nm,19.8s,baz=235,slow=45
comp=N,1.1nm,0.7s
SLTI Sal'it 8.26 104 S **Sn** **16 35 25.6 -2.9**
SLTI Sal'it 8.26 104 P Pn 16 33 50.4 -6.1
KZIT Kziot 8.31 114 P **Pn** **16 33 58.4 +1.1**
KZIT S Sn 16 35 14.3 -15
KZIT Kziot 8.31 114 S **Sn** **16 35 26.3 -3.5**
KZIT Kziot 8.31 114 P Pn 16 33 51.3 -5.9
MMA0B Mount Meron ar 8.33 99 P Pn 16 33 51.4 -6.1
MMA0B Mount Meron ar 8.33 99 S **Sn** **16 35 27.6 -2.7**
MMAI Mount Meron Ar 8.33 99 Pn **Pn** **16 33 57.0 -0.6**
comp=N,1.4nm,0.3s,baz=295,slow=12,SNR=3.2
MMAI Sn **Sn** **16 35 29.6 -0.7**
comp=N,6.1nm,0.3s,baz=304,slow=29,SNR=7.4
comp=N,1.1nm,0.4s
TIP Timpagrande 8.38 305 Pn **Pn** **16 33 54.1 -4.2**
AMAZ Amatzia 8.42 109 S **Sn** **16 35 29.3 -3.3**
SALP Salfit 8.44 105 S **Sn** **16 35 29.4 -3.5**
SALP Salfit 8.44 105 P Pn 16 33 53.4 -5.6
NATI Neve Ativ 8.54 97 P **Pn** **16 34 00.5 +0.1**
NATI Neve Ativ 8.54 97 S **Sn** **16 35 32.7 -2.8**
NATI Neve Ativ 8.54 97 P Pn 16 33 55.1 -5.3
CEL Celeste 8.59 297 Pn **Pn** **16 33 59.0 -2.2**
HMDT Nahal Hemdat 8.64 103 P **Pn** **16 34 03.5 +1.7**
HMDT Nahal Hemdat 8.64 103 S **Sn** **16 35 34.6 -3.3**
HMDT Nahal Hemdat 8.64 103 P Pn 16 33 55.4 -6.4
YTIR Yattir 8.65 110 S **Sn** **16 35 34.9 -3.4**
YTIR Yattir 8.65 110 P Pn 16 33 56.4 -5.6
KSHT Keshet 8.67 98 S **Sn** **16 35 35.8 -2.8**
KSHT Keshet 8.67 98 P Pn 16 33 56.5 -5.7
DSI Dead Sea 8.77 108 P **Pn** **16 34 03.9 +0.3**
DSI Dead Sea 8.77 108 P Pn 16 33 58.2 -5.4
DSI Dead Sea 8.77 108 S **Sn** **16 35 37.4 -3.8**
BALJ Balqa 8.79 104 Pn **Pn** **16 34 05.8 +2.0**
MDBI Mazsada 8.86 110 P **Pn** **16 34 05.8 +1.1**
MDBI Mazsada 8.86 110 S **Sn** **16 35 39.2 -4.0**
MSBI Mazada 8.86 110 P **Pn** **16 34 05.0 +0.3**
KRMI Paran Flat 8.96 118 S **Sn** **16 35 41.7 -4.0**
KRMI Paran Flat 8.96 118 P Pn 16 33 59.7 -6.5
LISJ El Lisan 8.98 110 P **Pn** **16 34 07.9 +1.4**
GHAJ Ghor Haditha 9.03 109 Pn **Pn** **16 34 07.6 +0.5**
GHAJ Ghor Haditha 9.03 109 P **Pn** **16 34 08.6 +1.6**
GHAJ Ghor Haditha 9.03 109 P Pn 16 34 01.7 -5.4
GHAJ Ghor Haditha 9.03 109 S **Sn** **16 35 44.0 -3.2**
PRNI Paran 9.04 116 P **Pn** **16 34 09.5 +2.2**
PRNI Paran 9.04 116 S **Sn** **16 35 43.2 -4.5**
PRNI Paran 9.04 116 P Pn 16 34 01.7 -5.6
ZFRI Zfri 9.07 114 S **Sn** **16 35 44.1 -4.2**
HRFI Mount Harif 9.23 117 S **Sn** **16 35 47.9 -4.4**
HRFI Mount Harif 9.23 117 P Pn 16 34 04.5 -5.4
MBRI Mt Berech 9.27 119 P **Pn** **16 34 11.8 +1.3**
MBRI Mt Berech 9.27 119 P Pn 16 34 04.4 -6.2
MBRI Mt Berech 9.27 119 S **Sn** **16 35 49.7 -3.8**
EIL Elat 9.37 120 Pn **Pn** **16 34 13.7 +1.9**
comp=N,0.6nm,0.3s,baz=326,slow=3.6,SNR=8.6
EIL Sn **Sn** **16 35 50.6 -5.2**
comp=N,2.3nm,0.3s,baz=128,slow=1.5,SNR=8.1
comp=N,2.9nm,0.5s
EIL Elat 9.37 120 P **Pn** **16 34 14.6 +2.8**
EIL Elat 9.37 120 S **Sn** **16 35 51.2 -4.6**
CUC Castrocucco 9.42 307 Pn **Pn** **16 34 09.0 -3.4**
RAFF Raffo Rosso 9.45 289 Pn **Pn** **16 34 11.1 -1.8**
VAE Valguarnera 9.47 290 Pn **Pn** **16 34 10.7 -2.5**
comp=N,2.6nm,0.3s,baz=153,slow=9.0,SNR=3.3
VAE Sn Sn 16 35 48.0 -10
comp=N,1.3nm,0.3s,baz=185,slow=23,SNR=1.6
comp=N,18nm,0.6s
HDK1 Dakhla 9.68 159 P **Pn** **16 34 19.2 +3.1**
baz=159
ASF Jabal al Asfar 9.77 102 Pn **Pn** **16 34 19.3 +1.9**
comp=N,0.6nm,0.3s,baz=150,slow=11,SNR=1.9
ASF Sn **Sn** **16 36 04.0 -1.7**
comp=N,0.7nm,0.3s,baz=336,slow=3.8,SNR=2.0
comp=N,1.4nm,0.4s
MLR Mutele Rosu 10.81 1 LR LR 16 39 29.2
comp=N,65nm,20.6s,baz=350,slow=43
CASP Castiglione de 14.05 310 Pn **Pn** **16 35 11.8 -3.9**
KOLS Kolonicke sedl 14.46 351 *e*P **P** **16 35 26.3 -0.5**
KOLS Kolonicke sedl 14.46 351 *e*PN **P** **16 35 26.3 -0.5**
SABO M.te Sabotino 14.51 325 Pn Pn 16 35 16.3 -5.5
STHS Stebnicka Huta 15.08 349 *e*P **P** **16 35 32.1 -1.6**
STHS Stebnicka Huta 15.08 349 *e*PN **P** **16 35 32.1 -1.6**
STAL STALIGIAL 15.14 324 Pn **Pn** **16 35 27.2 -2.9**
CTI Castel Tesino 15.53 321 P **Pn** **16 35 37.1 +1.9**
CTI IAmb IAmb 16 35 39.2
comp=Z,4.7nm,0.5s
CTI Castel Tesino 15.53 321 P **Pn** **16 35 37.1 +1.9**
CTI pmax pmax
comp=Z,5.0nm,0.5s
ABTA Abfaltersbach 15.59 325 *e*Pn **P** **16 35 39.4 -0.1**
comp=Z,4.6nm,0.8s
LESA Schwarzleotal 16.01 327 *e*Pn **P** **16 35 43.7 -0.3**
comp=Z,0.9nm,0.3s
ONI Oni 16.02 55 P **P** **16 35 45.6 +1.4**
ONI Oni 16.02 55 P **P** **16 35 45.6 +1.4**
ONI pmax pmax
comp=Z,5.0nm,0.7s
KIV Kislovodsk 16.12 50 *e*P **Pn** **16 35 42.2 -0.6**
KIV pmax pmax
comp=Z,9.0nm,0.9s
KVAR Kislovodsk Arr 16.13 50 Pn **P** **16 35 46.3 +0.8**
baz=263,slow=19
comp=Z,3.9nm,0.7s
KBZ Khabaz 16.15 51 *e*P **P** **16 35 48.5 +2.9**
KBZ pmax pmax
comp=Z,15nm,0.8s
KBZ Khabaz 16.15 51 Pn **P** **16 35 47.2 +1.6**
comp=Z,0.6nm,0.3s,baz=246,slow=9.0,SNR=40
KIEV Kiev 16.23 8 **Pn** **16 35 44.6 +0.7**
KIEV IAmb IAmb 16 35 46.3
comp=Z,8.0nm,0.7s
KIEV Kiev 16.23 8 P **Pn** **16 35 44.6 +0.7**
KIEV pmax pmax
comp=Z,8.0nm,0.7s
AKASG Malin Array Be 16.23 8 *e*P **Pn** **16 35 45.3 +1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 16.23 8 Pn **Pn** **16 35 41.5 -2.5**
comp=Z,3.1nm,0.3s,baz=202,slow=11,SNR=13
comp=Z,0.5nm,0.3s
AKBB Malin Array Si 16.23 8 **Pn** **16 35 44.7 +0.7**
AKBB IAmb IAmb 16 35 46.3
comp=Z,8.9nm,0.7s
AKBB Malin Array Si 16.23 8 P **Pn** **16 35 44.7 +0.7**
AKBB pmax pmax
comp=Z,9.0nm,0.7s
ZEI Tsey 16.40 55 *e*P **P** **16 35 49.0 +0.4**
ZEI pmax pmax
comp=Z,8.0nm,0.6s
FUORN Ofenpass-Fuorn 16.63 320 P **P** **16 35 51.0 -0.2**
GEC2 GERESS Array S 16.68 332 P **Pn** **16 35 50.0 +0.2**
GERES GERESS Array B 16.68 332 P **Pn** **16 35 50.4 +0.7**
GERES GERESS Array B 16.68 332 P **Pn** **16 35 50.4 +0.7**
GERES GERESS Array B 16.68 332 Pn **Pn** **16 35 48.2 -1.5**
comp=Z,0.2nm,0.3s,baz=143,slow=11,SNR=4.1
comp=Z,1.1nm,0.6s
DAVOX Davos/Dischmat 16.93 320 P **Pn** **16 35 50.0 -3.1**
DAVOX Davos/Dischmat 16.93 320 Pn **Pn** **16 35 50.0 -3.1**
comp=Z,0.2nm,0.3s,baz=178,slow=20,SNR=1.5
comp=Z,0.7nm,0.3s
CLL Collm 18.96 335 *e*P **P** **16 36 16.0 -0.5**
CLL Collm 18.96 335 *e*P **P** **16 36 16.0 -0.5**
CLL *e*pP **Pn** **16 36 21.0 +3.5**
VSR Storozhevoye 19.23 27 *e*P **P** **16 36 18.1 -1.4**
VSR pmax pmax
comp=Z,3.0nm,0.9s
ECH Echery 19.27 320 P **P** **16 36 19.3 -0.7**
ECH IAmb IAmb 16 36 41.8
comp=Z,12nm,1.3s
ECH Echery 19.27 320 P **P** **16 36 19.3 -0.7**
ECH pmax pmax
comp=Z,12nm,1.3s
VRH Novokhopyorsk 20.23 30 *e*P **P** **16 36 28.4 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.8s
PABE Paberze 20.86 357 P **P** **16 36 34.7 -2.4**
OBN Obninsk 21.81 17 *e*P **P** **16 36 48.2 +0.9**
OBN pmax pmax
comp=Z,6.0nm,0.5s
BELG Belogornoye 23.69 35*d**e*P **P** **16 37 06.9 +0.3**
BELG pmax pmax
comp=Z,3.0nm,1.0s
ESDC Sonseca Array 24.02 291 P **P** **16 37 08.0 -1.8**
ESDC Sonseca Array 24.02 291 P **P** **16 37 08.9 -1.0**
comp=Z,0.9nm,0.5s,baz=77,slow=9.8,SNR=10
comp=Z,0.9nm,0.5s
GEYT Alibeck 26.34 73 P **P** **16 37 32.4 +1.4**
GEYT Alibeck 26.34 73 P **P** **16 37 32.4 +1.4**
GEYT pmax pmax
comp=Z,5.0nm,1.3s
GEYT Alibeck 26.34 73 P **P** **16 37 32.3 +1.4**
comp=Z,1.4nm,0.5s,baz=274,slow=10,SNR=6.3
comp=Z,1.4nm,0.5s
GYA0B ALIBECK ARRAY 26.34 73 P **P** **16 37 31.4 +0.5**
GYA0B IAmb IAmb 16 38 02.6
comp=Z,7.9nm,1.5s
HFS Hagfors 26.63 347 P **P** **16 37 30.8 -2.5**
comp=Z,0.9nm,0.4s,baz=139,slow=12,SNR=7.9
comp=Z,0.9nm,0.4s
FINES FINESS Array B 26.79 1 P **P** **16 37 32.2 -2.4**
FINES FINESS Array B 26.79 1 P **P** **16 37 31.9 -2.7**
comp=Z,1.3nm,0.4s,baz=164,slow=10,SNR=21
FINES PcP **PcP** **16 40 57.3 +0.9**
comp=Z,0.8nm,0.4s,baz=166,slow=1.9,SNR=9.4
comp=Z,1.3nm,0.4s
FIA1 FINESS Array S 26.79 1 P **P** **16 37 32.1 -2.6**
NOA NORSAR Array B 27.96 345 LR LR 16 49 39.8
comp=Z,21nm,22.0s,baz=295,slow=38
EKA Eskdalemuir Ar 28.64 325 P **P** **16 37 49.9 -1.4**
comp=Z,1.8nm,0.6s,baz=128,slow=10,SNR=2.6
comp=Z,1.8nm,0.6s
ABKAR Akbulak array 29.11 49 P **P** **16 37 56.5 +1.0**
TOA0 Torodi Ar. Sit 30.46 231 P **P** **16 38 08.8 +1.0**
TORD Torodi Ar. Bea 30.46 231 P **P** **16 38 09.5 +1.7**
comp=Z,11nm,0.5s,baz=36,slow=9.2,SNR=5.9
comp=Z,11nm,0.5s
ARU Arti 31.23 36*c i*P **P** **16 38 14.6 +0.4**
ARU S **S** **16 43 24.2 +7.0**
ARU SS **SnSn** **16 45 07.8 +5.0**
ARU pmax pmax
comp=Z,16nm,2.3s
ARCES ARCESS Array B 34.91 360 P **P** **16 38 44.1 -2.0**
ARCES ARCESS Array B 34.91 360 P **P** **16 38 44.2 -2.0**
ARCES pmax pmax
comp=Z,16nm,1.4s
ARCES ARCESS Array B 34.91 360 P **P** **16 38 43.7 -2.4**
comp=Z,2.2nm,0.5s,baz=191,slow=10.0,SNR=29
comp=Z,2.2nm,0.5s
KK31 Karatay Array 35.60 63 P **P** **16 38 54.2 +1.7**
KK31 IAmb IAmb 16 38 55.2
comp=Z,2.7nm,0.7s
KK31 Karatay Array 35.60 63 P **P** **16 38 54.2 +1.7**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 35.60 63 P **P** **16 38 54.0 +1.5**
KKAR Karatay Array 35.60 63 P **P** **16 38 54.4 +1.9**
KKAR IAmb IAmb 16 38 55.2
comp=Z,2.7nm,0.7s
KKAR Karatay Array 35.60 63 P **P** **16 38 54.4 +1.9**
KKAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 36.37 46⇑*e*P **P** **16 38 59.9 +1.1**
BRVK pmax pmax
comp=Z,8.0nm,3.1s
BVAR Borovoye Array 36.43 46 P **P** **16 39 00.5 +1.2**
comp=Z,1.4nm,0.7s,baz=228,slow=6.3,SNR=10
comp=Z,1.4nm,0.7s
ARSB Arslanbob 37.55 65 P **P** **16 39 11.6 +2.4**
ARSB Arslanbob 37.55 65 P **P** **16 39 11.6 +2.4**
ARSB pmax pmax
comp=Z,1.0nm,0.5s
AAK Ala-Archa 38.55 63 P **P** **16 39 19.5 +1.8**
AAK IAmb IAmb 16 39 20.8
comp=Z,2.6nm,0.6s
AAK Ala-Archa 38.55 63 P **P** **16 39 19.5 +1.8**
AAK pmax pmax
comp=Z,3.0nm,0.6s
BORG Borgarnes 41.14 332 *i* P P 16 39 31.9 -6.7
KURBB Kurchatov Arra 41.15 51 P **P** **16 39 40.2 +1.3**
comp=Z,4.9nm,0.6s,baz=277,slow=8.7,SNR=57
comp=Z,4.9nm,0.6s
KURK Kurchatov 41.21 50 P **P** **16 39 40.4 +1.0**
KURK IAmb IAmb 16 39 41.3
comp=Z,3.9nm,0.8s
KURK Kurchatov 41.21 50 P **P** **16 39 40.4 +1.0**
KURK pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 43.53 56 P **P** **16 39 59.6 +1.3**
MAKZ Makanchi 43.53 56 P **P** **16 39 59.6 +1.3**
MAKZ pmax pmax
comp=Z,3.0nm,1.5s
MK31 Makanchi Array 43.74 56 P **P** **16 40 01.4 +1.3**
MK31 IAmb IAmb 16 40 02.0
comp=Z,1.6nm,0.5s
MK31 Makanchi Array 43.74 56 P **P** **16 40 01.4 +1.3**
MK31 pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 43.74 56 P **P** **16 40 01.6 +1.6**
comp=Z,1.9nm,0.6s,baz=272,slow=7.9,SNR=57
comp=Z,1.9nm,0.6s
SPITS Spitsbergen Ar 43.79 357 P **P** **16 39 58.4 -1.6**
comp=Z,11nm,1.1s,baz=127,slow=9.6,SNR=1.7
comp=Z,11nm,1.1s
ZAA0 Zalesovo Array 45.08 46 P **P** **16 40 10.6 0.0**
ZALV Zalesovo Beam 45.08 46 P **P** **16 40 10.6 0.0**
ZALV Zalesovo Beam 45.08 46 P **P** **16 40 11.2 +0.6**
comp=Z,3.9nm,0.4s,baz=267,slow=8.5,SNR=26
comp=Z,3.9nm,0.4s
DGZ Jazzator, Alta 46.90 52⇑*e*P **P** **16 40 26.4 +1.2**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
NRIK Noril'sk 48.17 25 P **P** **16 40 34.6 +0.2**
NRIK Noril'sk 48.17 25 *e*P **P** **16 40 35.3 +0.8**
NRIK pmax pmax
comp=Z,4.0nm,0.5s
NRIK Noril'sk 48.17 25 P **P** **16 40 34.7 +0.2**
comp=Z,3.9nm,0.5s,baz=202,slow=3.5,SNR=6.1
comp=Z,3.9nm,0.5s
SONM Songino Array 59.52 51 P **P** **16 41 58.5 +0.6**
SONM IAmb IAmb 16 42 00.2
comp=Z,2.2nm,0.6s
SONM Songino Array 59.52 51 P **P** **16 41 59.7 +1.8**
comp=Z,2.8nm,0.5s,baz=290,slow=7.4,SNR=38
comp=Z,2.8nm,0.5s
ULN Ulaanbaatar 59.92 50 P **P** **16 42 02.1 +1.3**
ULN Ulaanbaatar 59.92 50 P **P** **16 42 02.1 +1.3**
ULN pmax pmax
comp=Z,4.0nm,0.6s
TIXI Tiksi 61.49 21 P **P** **16 42 10.9 +0.1**
TIXI IAmb IAmb 16 42 11.2
comp=Z,1.9nm,0.6s
TIXI Tiksi 61.49 21⇓*e*P **P** **16 42 10.4 -0.4**
TIXI pmax pmax
comp=Z,7.0nm,2.5s
SCHQ Schefferville 63.78 320 P **P** **16 42 26.2 -0.2**
SCHQ Schefferville 63.78 320 P **P** **16 42 26.2 -0.2**
comp=Z,4.9nm,0.4s,baz=67,slow=4.8,SNR=27
comp=Z,4.9nm,0.4s
YAK Yakutsk 66.12 30⇓*e*P **P** **16 42 40.9 -0.4**
YAK pmax pmax
comp=Z,3.0nm,0.5s
CMAR Chiang Mai Arr 66.27 83 *e*P **P** **16 42 43.4 +0.3**
CMAR Chiang Mai Arr 66.27 83 P **P** **16 42 44.4 +1.3**
comp=Z,0.3nm,0.3s,baz=304,slow=9.7,SNR=4.7
comp=Z,0.3nm,0.3s
ENH Enshi 68.91 67 P **P** **16 42 57.7 -1.8**
KLR Kul'dur 73.90 41⇓*e*P **P** **16 43 30.3 +1.0**
KLR pmax pmax
comp=Z,7.0nm,2.5s
B20K Meade River 75.60 1 P **P** **16 43 39.3 +0.5**
B20K IAmb IAmb 16 43 40.8
comp=Z,3.4nm,1.1s
B21K Ikpikpuk River 76.01 0 P **P** **16 43 41.3 +0.2**
B21K IAmb IAmb 16 43 43.8
comp=Z,5.3nm,1.4s
E28M Babbage River 76.44 354 P **P** **16 43 43.5 -0.1**
E28M IAmb IAmb 16 43 43.9

comp=Z,3.1nm,1.4s
E29M Blow River 76.51 354 P P 16 43 43.6 -0.4
E29M IAmb IAmb 16 43 58.9
comp=Z,6.4nm,1.4s
C18K Utukok River 76.86 3 P P 16 43 46.0 -0.1
C18K IAmb IAmb 16 44 23.6
comp=Z,3.3nm,1.4s
USA0B Ussuriysk Arra 76.93 45 P P 16 43 47.0 +0.2
USA0B Ussuriysk Arra 76.93 45 P P 16 43 47.0 +0.2
USA0B pmax pmax
comp=Z,11nm,1.4s
USRK Ussuriysk Ar. 76.93 45 P P 16 43 47.2 +0.5
USRK Ussuriysk Ar. 76.93 45 P P 16 43 47.5 +0.7
comp=Z,2.0nm,0.6s,baz=298,slow=4.7,SNR=15
comp=Z,2.0nm,0.6s
C16K Lisburne Hills 77.03 4 P P 16 43 47.0 0.0
D19K Kuna River 77.10 1 P P 16 43 47.8 +0.4
E22K Anaktuvuk Pass 77.48 359 P P 16 43 49.4 -0.2
E22K IAmb IAmb 16 43 51.1
comp=Z,4.8nm,1.4s
G31M Satah River 77.56 352 P P 16 43 49.0 -0.8
G31M IAmb IAmb 16 44 15.0
comp=Z,3.2nm,1.2s
G30M tAoh Zraii Nji 77.72 353 P P 16 43 50.3 -0.5
BMAR Burnt Mountain 77.94 356 P P 16 43 51.8 -0.3
F24K Squaw Lake 78.00 357 P P 16 43 53.1 +0.7
F24K IAmb IAmb 16 43 53.2
comp=Z,3.4nm,1.5s
YKA Yellowknife Ar 78.02 342 P P 16 43 52.0 -0.5
YKA Yellowknife Ar 78.02 342 P P 16 43 52.2 -0.3
comp=Z,0.5nm,0.5s,baz=32,slow=5.6,SNR=13
comp=Z,0.5nm,0.5s
YKAB2 New Yellowknif 78.08 342 P P 16 43 52.2 -0.6
KSRS Korea Array 78.29 53 P P 16 43 55.7 +1.2
comp=Z,1.1nm,0.7s,baz=308,slow=4.5,SNR=2.8
comp=Z,1.1nm,0.7s
F21K Alatna River 78.42 360 P P 16 43 55.2 +0.5
F21K IAmb IAmb 16 43 56.5
comp=Z,7.9nm,1.5s
H29M Whitestone 78.67 353 P P 16 43 55.8 -0.3
H29M IAmb IAmb 16 44 20.1
comp=Z,2.8nm,1.1s
F17K Baldwin Pennin 79.07 3 P P 16 43 57.5 -0.7
I30M Mount Dempster 79.44 352 P P 16 44 00.1 -0.4
I30M IAmb IAmb 16 44 00.6
comp=Z,4.1nm,1.4s
I28M Miner Creek 79.57 354 P P 16 44 00.9 -0.2
IMAR Indian Mountai 79.66 360 P P 16 44 01.5 0.0
H21K Melozitna Rive 79.98 359 P P 16 44 04.0 +0.7
H21K IAmb IAmb 16 44 15.0
comp=Z,3.9nm,1.4s
J30M Hart River 80.06 352 P P 16 44 03.8 0.0
J30M IAmb IAmb 16 44 46.2
comp=Z,1.4nm,0.7s
MLY Manley 80.58 358 P P 16 44 06.7 +0.1
MLY IAmb IAmb 16 44 12.6
comp=Z,2.8nm,1.3s
ILAR Eielson Array 80.70 357 eP P 16 44 07.1 0.0
ILAR Eielson Array 80.70 357 P P 16 44 07.0 -0.2
comp=Z,0.2nm,0.7s,baz=350,slow=4.6,SNR=5.6
comp=Z,0.2nm,0.7s
J26L Joseph Creek 80.78 355 P P 16 44 07.7 0.0
DAWY Dawson 80.87 353 P P 16 44 08.1 0.0
DAWY IAmb IAmb 16 44 17.7
comp=Z,3.7nm,1.5s
K29M Barlow Dome 80.90 353 P P 16 44 08.3 0.0
WRH Wood River Hil 81.06 357 P P 16 44 08.5 -0.5
WRH IAmb IAmb 16 44 09.5
comp=Z,1.9nm,0.6s
K27K Chicken 81.14 355 P P 16 44 10.1 +0.6
SCRK Sand Creek 81.33 355 P P 16 44 10.7 +0.1
BPAW Bear Paw Mtn. 81.52 358 P P 16 44 10.7 -0.8
CAST Castle Rocks 82.22 359 P P 16 44 15.2 0.0
CAST IAmb IAmb 16 44 26.7
comp=Z,5.2nm,1.4s
SKT Skwentna 83.66 359 P P 16 44 21.9 -0.8
R33M Jennings River 84.28 348 P P 16 44 27.3 +1.3
R33M IAmb IAmb 16 45 05.8
comp=Z,3.2nm,1.1s
EFI East Falkland 112.73 222 *c* iPKIKP **PKiKP 16 50 25.4 -4.8**
EFI pmax pmax
comp=Z,117nm,1.7s
QSPA South Pole Qui 124.53 180 PKP **PKPdf 16 50 54.0 +1.4**
comp=Z,1.1nm,0.8s,baz=300,slow=0.3,SNR=7.0

IDC 14 16:40:08.3±2.1, 7°54'S×126°61'E, h0km, mb3.2/1, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=123.1km s-min=32.7km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.43**	**149**	Pn	Pn	16 43 33.3	-0.7
	0.4nm,0.3s,baz=326,slow=12,SNR=18						
WRA				Sn	Sn	16 45 56.6	-18
	0.8nm,0.3s,baz=333,slow=22,SNR=13						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**17.49**	**157**	P	Pn	16 44 14.2	+0.3
	0.5nm,0.3s,baz=335,slow=11,SNR=37						
ASAR				S	Sn	16 47 15.3	-14
	0.3nm,0.3s,baz=321,slow=22,SNR=6.8						
	2.2nm,0.5s						
MKAR	**Makanchi Array**	**66.88**	**329**	P	P	16 51 02.5	+0.1
	0.1nm,0.5s,baz=129,slow=4.6,SNR=2.6						
	0.1nm,0.5s						

WEL ***14*** *16:41:39.8±0.4, 42°S±4°×17°4'E±°, h11km±3km, M3.4/18, ML3.5/18, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=131.6, confirmed*
NOU ***14*** *16:41:39.1, 42.58S×173.56E, h1km, MLv3.8/7, South Island, New Zealand*
ISC 14 16:41:39.5±1.0, 42°56'S±0.04'×173°63'E±0.04', h11km±7km, n74, σ1°14/80, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIKS	**Kaikoura**	**0.14**	**16**	P	**Pg**	**16 41 43.6**	**+0.8**
KIKS				S	**Sg**	**16 41 46.0**	**+0.9**
KHZ	**Kahutara**	**0.16**	**335**	P	**Pg**	**16 41 42.5**	**-0.6**
KHZ	**Kahutara**	**0.16**	**335**	P	**Pg**	**16 41 42.5**	**-0.6**
KHZ				S	**Sg**	**16 41 44.2**	**-1.4**
CECS	**Cheviot Emerge**	**0.36**	**226**	P	**Pn**	**16 41 49.9**	**-0.8**
MOLW	**Molesworth Sta**	**0.55**	**329**	P	**Pg**	**16 41 48.9**	**-1.3**
HSES	**Hanmer Springs**	**0.59**	**273**	P	**Pb**	**16 41 51.4**	**-0.5**
GVZ	**Greta Valley S**	**0.60**	**227**	P	**Pn**	**16 41 54.2**	**+0.2**
GVZ				S	**Sn**	**16 42 04.5**	**+0.8**
CULC	**Culverden Airl**	**0.64**	**252**	P	**Pb**	**16 41 53.0**	**+0.3**
SCAC	**Scargill**	**0.65**	**234**	P	**Pb**	**16 41 53.3**	**+0.5**
KEKS	**Kekerengu Vall**	**0.66**	**23**	P	**Pb**	**16 41 52.8**	**-0.2**
KEKS				S	**Sb**	**16 42 02.0**	**-0.1**
BSWZ	**Blackbirch Sta**	**0.86**	**12**	P	**Pg**	**16 41 55.6**	**-0.6**
BSWZ				S	**Sg**	**16 42 07.1**	**-0.4**
CMWZ	**Cape Campbell**	**0.92**	**28**	P	**Pb**	**16 41 57.8**	**+0.4**
AMCZ	**Amberley**	**0.95**	**229**	P	**Pn**	**16 41 59.3**	**+0.6**
THZ	**Tophouse**	**0.96**	**326**	P	**Pg**	**16 41 56.9**	**-1.1**
LTZ	**Lake Taylor**	**1.03**	**257**	P	**Pn**	**16 41 59.7**	**-0.2**
LTZ				S	**Sn**	**16 42 14.2**	**-0.1**
TUWZ	**Tuamarina**	**1.15**	**12**	P	**Pg**	**16 42 00.6**	**-1.0**
MRNZ	**Matariki Terra**	**1.33**	**330**	P	**Pn**	**16 42 03.4**	**-0.6**
MQZ	**McQueen's Vall**	**1.35**	**212**	P	**Pn**	**16 42 03.9**	**-0.4**
NNZ	**Nelson**	**1.35**	**352**	P	**Pn**	**16 42 03.5**	**-0.8**
OXZ	**Oxford**	**1.40**	**236**	P	**Pn**	**16 42 04.6**	**-0.4**
AKCZ	**Akaroa Harbour**	**1.41**	**202**	P	**Pn**	**16 42 05.4**	**+0.3**
TCW	**Tory Channel**	**1.43**	**20**	P	**Pn**	**16 42 04.3**	**-1.1**
BHW	**Baring Head**	**1.48**	**39**	P	**Pn**	**16 42 04.9**	**-1.1**
WEL	**Wellington**	**1.53**	**34**	P	**Pn**	**16 42 05.9**	**-0.9**
PLWZ	**Palliser**	**1.56**	**51**	P	**Pn**	**16 42 06.2**	**-1.1**
DSZ	**Denniston Nort**	**1.58**	**300**	P	**Pn**	**16 42 07.5**	**-0.1**
RACZ	**Rakaia**	**1.60**	**223**	P	**Pn**	**16 42 07.6**	**-0.1**
TKNZ	**Takaka Hill**	**1.61**	**342**	P	**Pn**	**16 42 07.7**	**-0.1**
INZ	**Inchbonnie**	**1.62**	**263**	P	**Pn**	**16 42 08.3**	**+0.3**
DUWZ	**D'Urville Isla**	**1.77**	**7**	P	**Pn**	**16 42 10.3**	**+0.2**
PAWZ	**Paruwai Farm**	**1.78**	**49**	P	**Pn**	**16 42 08.7**	**-1.5**
MHCZ	**Mount Hutt**	**1.80**	**237**	P	**Pn**	**16 42 10.0**	**-0.5**
CAW	**Cannon Point**	**1.81**	**37**	P	**Pn**	**16 42 09.4**	**-1.2**
WACZ	**Wakanui South**	**1.90**	**223**	P	**Pn**	**16 42 11.8**	**0.0**
QRZ	**Quartz Range**	**1.92**	**334**	P	**Pn**	**16 42 12.8**	**+0.7**
QRZ	**Quartz Range**	**1.92**	**334**	P	**Pn**	**16 42 12.3**	**+0.2**
TRWZ	**Traveller**	**1.92**	**54**	P	**Pn**	**16 42 11.9**	**-0.2**
KIW	**Kapiti Island**	**1.95**	**30**	P	**Pn**	**16 42 11.7**	**-0.8**
MTW	**Mount Morrison**	**1.98**	**46**	P	**Pn**	**16 42 11.4**	**-1.6**
OGWZ	**Otaki Gorge**	**2.09**	**34**	P	**Pn**	**16 42 13.2**	**-1.2**
HOWZ	**Holdsworth Sta**	**2.18**	**41**	P	**Pg**	**16 42 21.1**	**-0.2**
WVZ	**Waitaha Valley**	**2.19**	**255**	P	**Pn**	**16 42 16.3**	**+0.4**
RPZ	**Rata Peaks**	**2.21**	**238**	P	**Pn**	**16 42 16.0**	**-0.1**
RPZ	**Rata Peaks**	**2.21**	**238**	P	**Pn**	**16 42 15.8**	**-0.4**
TMWZ	**Te Maipa**	**2.23**	**50**	P	**Pb**	**16 42 20.0**	**+0.2**
ARCZ	**Arundel**	**2.27**	**231**	P	**Pn**	**16 42 16.3**	**-0.6**
MRZ	**Mangatainoka R**	**2.40**	**38**	P	**Pn**	**16 42 17.0**	**-1.6**
TMZ	**Timaru**	**2.64**	**225**	P	**Pn**	**16 42 22.1**	**+0.1**
BFZ	**Birch Farm**	**2.71**	**47**	P	**Pn**	**16 42 24.6**	**+1.6**
BFZ	**Birch Farm**	**2.71**	**47**	P	**Pn**	**16 42 21.0**	**-2.0**
FOZ	**Fox Glacier**	**2.96**	**250**	P	**Pn**	**16 42 27.3**	**+0.9**
LBZ	**Lake Benmore**	**3.10**	**233**	P	**Pn**	**16 42 28.4**	**+0.1**
ODZ	**Otahua Downs**	**3.29**	**220**	P	**Pn**	**16 42 30.9**	**-0.1**
ODZ	**Otahua Downs**	**3.29**	**220**	P	**Pn**	**16 42 30.6**	**-0.4**
NBEZ	**Newall Road No**	**3.29**	**3**	P	**Pn**	**16 42 34.5**	**+3.5**
PKE	**Pukeiti**	**3.37**	**5**	P	**Pn**	**16 42 34.5**	**+2.4**
MTVZ	**Mangateitei**	**3.46**	**24**	P	**Pn**	**16 42 35.3**	**+1.8**
VRZ	**Vera Road**	**3.54**	**14**	P	**Pn**	**16 42 36.2**	**+1.9**
WNVZ	**Wahianoa**	**3.56**	**25**	P	**Pn**	**16 42 36.6**	**+1.8**
NGZ	**Ngauruhoe**	**3.70**	**24**	P	**Pn**	**16 42 40.0**	**+3.3**
JCZ	**Jackson Bay**	**3.85**	**245**	P	**Pn**	**16 42 38.6**	**-0.1**
JCZ	**Jackson Bay**	**3.85**	**245**	P	**Pn**	**16 42 38.4**	**-0.3**
HHSZ	**Highcliff Hill**	**3.97**	**212**	P	**Pn**	**16 42 40.4**	**+0.1**
WKZ	**Wanaka**	**4.04**	**234**	P	**Pn**	**16 42 40.8**	**-0.5**
EAZ	**Earnscleugh**	**4.11**	**228**	P	**Pn**	**16 42 42.0**	**-0.2**
HIZ	**Hauiti**	**4.15**	**13**	P	**Pn**	**16 42 43.9**	**+1.1**
HIZ	**Hauiti**	**4.15**	**13**	P	**Pn**	**16 42 45.0**	**+2.2**
TUZ	**Tuapeka**	**4.45**	**219**	P	**Pn**	**16 42 47.2**	**+0.4**
TLZ	**Tolley Road**	**4.47**	**20**	P	**Pn**	**16 42 50.8**	**+3.6**
SYZ	**Scrubby Hill**	**5.11**	**217**	P	**Pn**	**16 42 56.1**	**+0.2**
AWAZ	**Awhitu Peninsu**	**5.54**	**8**	P	**Pn**	**16 43 03.0**	**+1.1**
MKAZ	**Moumakai**	**5.58**	**13**	P	**Pn**	**16 43 03.3**	**+0.9**
PKGZ	**Pakihiroa**	**5.77**	**38**	P	**Pn**	**16 43 05.0**	**-0.2**
APZ	**The Paps**	**5.87**	**221**	P	**Pn**	**16 43 06.8**	**+0.4**

IDC 14 16:51:13.0±2.4, 28°27'N×86°90'E, h0km, mb3.3/4, mbtmp3.4/5, ML3.8/1, MS3.2/1, Error ellipse: s-maj=88.5km s-min=24.1km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.84**	**350**	P	Pn	16 55 34.9	0.0
	0.3nm,0.3s,baz=175,slow=11,SNR=22						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**23.21**	**346**	P	P	16 56 21.0	-0.4
	0.4nm,0.3s,baz=163,slow=11,SNR=2.1						
	0.4nm,0.3s						
SONM	**Songino Array**	**24.71**	**33**	P	P	16 56 36.1	+0.1
	0.4nm,0.6s,baz=218,slow=11,SNR=4.4						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**27.58**	**338**	LR	LR	17 09 07.2	
	comp=Z,46nm,18.1s,baz=307,slow=39						
WRA	**Warramunga Arr**	**66.33**	**131**	P	P	17 02 03.9	+0.2
	0.7nm,1.1s,baz=324,slow=6.4,SNR=7.8						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**68.69**	**134**	P	P	17 02 18.1	-0.4
	0.2nm,0.8s,baz=321,slow=5.8,SNR=1.4						
	0.2nm,0.8s						

IDC 14 16:56:04.2±1.9, 5°46'N×121°70'E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=258.7km s-min=26.9km az=62.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.14**	**154**	P	P	17 01 57.4	-0.9
	0.2nm,0.7s,baz=331,slow=10,SNR=1.3						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**31.31**	**158**	P	P	17 02 27.1	+0.7
	0.3nm,0.8s,baz=336,slow=7.0,SNR=8.2						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**53.33**	**327**	P	P	17 05 25.1	-0.1
	0.1nm,0.3s,baz=116,slow=7.2,SNR=6.3						
	0.1nm,0.3s						

IDC 14 16:59:14.1±2.4, 6°34'S×129°95E, h0km, mb3.4/1, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=143.3km s-min=32.4km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.17**	**163**	Pn	Pn	17 02 35.7	-0.6
	0.1nm,0.3s,baz=346,slow=14,SNR=1.3						
WRA				Sn	Sn	17 05 03.6	-11
	0.2nm,0.3s,baz=340,slow=22,SNR=5.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**17.64**	**168**	P	Pn	17 03 21.8	+0.3
	0.1nm,0.3s,baz=350,slow=10,SNR=7.5						
ASAR				S	Sn	17 06 25.5	-13
	0.6nm,1.1s,baz=352,slow=26,SNR=2.7						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	17 10 13.1	0.0
	0.2nm,0.4s,baz=123,slow=8.2,SNR=4.9						
	0.2nm,0.4s						

CATAC ***14*** *17:06:36.2±0.5, 12°.99N×89°.03W, h26km±4km, ML3.7*
SNET ***14*** *17:06:37.8±1.1, 13°.09N×89°.02W, h48km, ML3.7*
ISC 14 17:06:35.8±1.7, 12°96N±0°08×89°04W±0°04, h25km±13km, n41, σ0°29/75, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.59**	**333**	*e*P	**Pn**	**17 06 49.2**	**+0.6**
LALI				*e*S	**Sn**	**17 06 57.5**	**+0.2**
LALI	**Alcalda de L**	**0.59**	**333**	*i* P	**Pn**	**17 06 48.8**	**+0.3**
LALI				*i* S	**Sn**	**17 06 57.5**	**+0.2**
LALI				IAML		17 07 02.2	
	comp=Z,580nm,1.0s						
TECO	**Alcaldia de Te**	**0.63**	**24**	*e*P	**Pn**	**17 06 49.0**	**-0.1**
TECO				*e*S	**Sn**	**17 06 58.2**	**-0.1**
TECO	**Alcaldia de Te**	**0.63**	**24**	*i* P	**Pn**	**17 06 48.8**	**-0.3**
TECO				*i* S	**Sn**	**17 06 58.2**	**-0.1**
TECO				IAML		17 07 01.0	
	comp=Z,3μm,1.0s						
SJTE	**Alcalda de S**	**0.65**	**3**	*e*P	**Pn**	**17 06 49.2**	**-0.2**
SJTE				*e*S	**Sn**	**17 06 58.8**	**-0.2**
SJTE	**Alcalda de S**	**0.65**	**3**	*i* P	**Pn**	**17 06 49.4**	**-0.1**
SJTE				*i* S	**Sn**	**17 06 58.8**	**-0.2**
SJTE				IAML		17 07 00.1	
	comp=Z,3μm,1.0s						
LFRS	**El Faro**	**0.66**	**358**	*e*P	**Pn**	**17 06 49.5**	**-0.1**
PANCS	**Alcalda de**	**0.66**	**348**	*i* P	**Pn**	**17 06 49.9**	**+0.3**
PANCS				*i* S	**Sn**	**17 06 58.3**	**-0.9**
PANCS				IAML		17 07 00.7	
	comp=Z,3μm,1.0s						
LOMA	**Loma Larga**	**0.69**	**349**	*i* P	**Pn**	**17 06 50.0**	**0.0**
LOMA				*e*S	**Sn**	**17 06 59.8**	**-0.3**
LOMA	**Loma Larga**	**0.69**	**349**	*i* P	**Pn**	**17 06 50.0**	**0.0**
LOMA				*i* S	**Sn**	**17 06 59.9**	**-0.1**
LOMA				IAML		17 07 01.7	
	comp=Z,4μm,1.0s						
UESV	**Universidad de**	**0.72**	**20**	*i* P	**Pn**	**17 06 50.3**	**0.0**
UESV				*i* S	**Sn**	**17 07 00.5**	**0.0**
UESV				IAML		17 07 01.5	
	comp=Z,2μm,1.0s						
ITCA	**Escuela Especi**	**0.74**	**342**	*i* P	**Pb**	**17 06 50.1**	**-0.1**
ITCA				*i* S	**Sn**	**17 07 00.9**	**-0.4**
ITCA				IAML		17 07 01.9	
	comp=Z,3μm,1.0s						
SNET	**Serv Nac Est T**	**0.74**	**346**	*i* P	**Pn**	**17 06 50.7**	**-0.1**
SNET				*i* S	**Sn**	**17 07 00.9**	**-0.4**
SNET				IAML		17 07 02.3	
	comp=Z,4μm,1.0s						
UTEC	**Universidad Te**	**0.75**	**348**	*i* P	**Pn**	**17 06 51.0**	**+0.2**
UTEC				*i* S	**Sn**	**17 07 01.2**	**-0.3**
UTEC				IAML		17 07 04.1	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**0.76**	**8**	*e*P	**Pn**	**17 06 51.0**	**+0.1**
PAVA				*e*S	**Sn**	**17 07 01.8**	**+0.1**
PAVA	**Las Pavas**	**0.76**	**8**	*i* P	**Pn**	**17 06 51.0**	**+0.1**
PAVA				*i* S	**Sn**	**17 07 01.7**	**+0.1**
PAVA				IAML		17 07 03.5	
	comp=Z,4μm,1.0s						
UEES	**Universidad Ev**	**0.78**	**346**	*i* P	**Pn**	**17 06 51.3**	**+0.1**
UEES				*i* S	**Sn**	**17 07 02.4**	**+0.3**
UEES				IAML		17 07 05.9	
	comp=Z,2μm,1.0s						
LFU	**La Fuente**	**0.79**	**355**	*e*P	**Pn**	**17 06 51.5**	**+0.1**
PMON	**Piamonte**	**0.79**	**340**	*i* P	**Pn**	**17 06 51.4**	**0.0**
PMON				*i* S	**Sn**	**17 07 02.4**	**-0.1**
PMON				IAML		17 07 04.5	
	comp=Z,4μm,1.0s						
JAYA	**Jayaque - finc**	**0.80**	**330**	*e*P	**Pn**	**17 06 51.6**	**+0.1**
JAYA				*e*S	**Sn**	**17 07 02.5**	**-0.2**
JAYA	**Jayaque - finc**	**0.80**	**330**	*i* P	**Pb**	**17 06 51.4**	**+0.3**
JAYA				*i* S	**Sn**	**17 07 02.5**	**-0.2**
JAYA				IAML		17 07 04.3	
	comp=Z,9μm,1.0s						
SCLA	**Alcaldia de Sa**	**0.80**	**22**	*e*P	**Pn**	**17 06 51.6**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.80**	**22**	*i* P	**Pn**	**17 06 51.3**	**-0.1**
SCLA				*i* S	**Sn**	**17 07 03.0**	**+0.5**
SCLA				IAML		17 07 03.7	
	comp=Z,890nm,1.0s						
BOQS	**Boqueron**	**0.80**	**343**	*e*P	**Pn**	**17 06 51.9**	**+0.2**
PQSS	**Presa 15 de Se**	**0.81**	**35**	*i* P	**Pn**	**17 06 51.7**	**+0.2**
PQSS				*i* S	**Sn**	**17 07 03.0**	**+0.3**
PQSS				IAML		17 07 04.9	
	comp=Z,7μm,1.0s						
JUCU	**Jucuarįn**	**0.82**	**69**	*e*P	**Pb**	**17 06 51.8**	**+0.3**
JUCU				*e*S	**Sn**	**17 07 03.0**	**-0.2**
PACA	**Pacayal**	**0.86**	**54**	*e*P	**Pn**	**17 06 53.0**	**+0.5**
PACA				*e*S	**Sn**	**17 07 04.7**	**+0.5**
PACA	**Pacayal**	**0.86**	**54**	*i* P	**Pn**	**17 06 52.9**	**+0.5**
PACA				*i* S	**Sn**	**17 07 04.3**	**0.0**
PACA				IAML		17 07 05.9	
	comp=Z,31μm,1.0s						
QUEZ	**Alcaldia de Qu**	**0.90**	**346**	*i* P	**Pb**	**17 06 52.4**	**-0.3**
QUEZ				*i* S	**Sn**	**17 07 04.8**	**-0.2**
QUEZ				IAML		17 07 21.4	
	comp=Z,4μm,1.0s						
CEVE	**Cerro Verde**	**1.03**	**327**	*i* P	**Pn**	**17 06 54.4**	**-0.4**
CEVE				*i* S	**Sn**	**17 07 09.4**	**+0.8**
CEVE				IAML		17 07 10.4	
	comp=Z,1μm,1.0s						
UNIC	**Universidad Ca**	**1.13**	**334**	*i* P	**Pn**	**17 06 56.2**	**+0.2**
UNIC				IAML		17 06 56.4	
	comp=Z,580nm,1.0s						
UNIC				*i* S	**Sb**	**17 07 11.0**	**0.0**
LCND	**La Caada**	**1.17**	**73**	*e*P	**Pn**	**17 06 56.8**	**+0.2**
LCND				*e*S	**Sb**	**17 07 12.1**	**-0.2**
LCND	**La Caada**	**1.17**	**73**	*i* P	**Pn**	**17 06 56.8**	**+0.2**
LCND				*i* S	**Sn**	**17 07 11.9**	**+0.1**
LCND				*i* P	**Sb**	**17 07 12.0**	**-0.2**
LCND				IAML		17 07 16.6	
	comp=Z,1μm,1.0s						
NUBE	**Las Nubes**	**1.18**	**323**	*e*P	**Pn**	**17 06 57.1**	**+0.3**
NUBE				*e*S	**Sn**	**17 07 12.1**	**0.0**
NUBE	**Las Nubes**	**1.18**	**323**	*i* P	**Pn**	**17 06 57.1**	**+0.3**
NUBE				*i* S	**Sn**	**17 07 11.9**	**-0.2**
NUBE				IAML		17 07 13.5	
	comp=Z,1μm,1.0s						
CNCH	**Conchagua**	**1.22**	**75**	*e*P	**Pn**	**17 06 57.3**	**0.0**
CNCH				*e*S	**Sn**	**17 07 13.2**	**+0.2**
CNCH	**Conchagua**	**1.22**	**75**	*i* P	**Pn**	**17 06 57.2**	**0.0**
CNCH				*i* S	**Sn**	**17 07 13.2**	**+0.2**
CNCH				IAML		17 07 14.1	
	comp=Z,2μm,1.0s						
CSGN	**Cosiguina Volc**	**1.45**	**89**	*i* P	**Pn**	**17 06 59.7**	**-0.7**
CSGN				IAML		17 07 22.6	
	comp=Z,2μm,1.0s						
MTO3	**Montecristo**	**1.46**	**348**	*i* P	**Pn**	**17 07 00.5**	**-0.3**
MTO3				IAML		17 07 00.9	
	comp=Z,230nm,1.0s						
ESQI	**Esquipulas**	**1.62**	**350**	*i* P	**Pn**	**17 07 02.9**	**+0.1**
ESQI				IAML		17 07 03.1	
	comp=Z,300nm,1.0s						
LIMN	**Finca el Limon**	**2.61**	**87**	*i* P	**Pn**	**17 07 16.1**	**-0.3**
LIMN				IAML		17 07 58.5	
	comp=Z,68nm,1.0s						

IDC ***14*** *17:14:28.6±0.9, 43°.89N×81°.62E, h0km, mb3.8/6, mbtmp3.6/13, ML3.1/7, MS3.4/1, Error ellipse: s-maj=13.9km s-min=10.0km az=100.0*
NNC ***14*** *17:14:32.2±0.6, 44°.00N×81°.51E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=6.1km s-min=2.2km az=129.0*
SOME ***14*** *17:14:33.1, 44°.00N×81°.40E, h5km*
ISC 14 17:14:30.2±1.4, 43°95N±0°04×81°58E±0°04, h10km±9km, n79, σ1°80/119, mb3.7/7, 17C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.03**	**241**	P	**Pn**	**17 14 51.6**	**+0.9**
	31nm,0.1s						
KTMS				S	**Sn**	**17 15 05.3**	**0.0**
	1μm,0.4s						
KTMS	**Ketmen**	**1.03**	**241**	*e*P	**Pn**	**17 14 51.6**	**+0.9**
	31nm,0.1s						
KTMS				*e*S	**Sn**	**17 15 05.3**	**0.0**
	1μm,0.4s						
DJR	**Jarkent**	**1.35**	**287**	P	**Pg**	**17 14 57.6**	**+1.6**
	181nm,0.3s						
DJR				S	**Sn**	**17 15 15.4**	**+2.3**
	2μm,0.3s						
DJR	**Jarkent**	**1.35**	**287**	*e*P	**Pg**	**17 14 57.6**	**+1.6**
	181nm,0.3s						
DJR				*e*S	**Sn**	**17 15 15.4**	**+2.3**
	2μm,0.3s						
PDGK	**Podgornoye**	**1.64**	**248**	P	**Pb**	**17 15 01.3**	**+0.6**
	92nm,0.3s						
PDGK				S	**Sg**	**17 15 22.5**	**-0.4**
	244nm,0.4s						
PDGK	**Podgornoye**	**1.64**	**248**	⇑P	**Pb**	**17 15 01.2**	**+0.6**
	117nm,0.5s						
PDGK				⇑S	**Sg**	**17 15 23.1**	**+0.1**
	880nm,0.7s						
SHLS	**Shalkode**	**1.73**	**243**	P	**Pn**	**17 14 59.3**	**-1.2**
	226nm,0.3s						
SHLS				S	**Sn**	**17 15 18.1**	**-4.7**
	1μm,0.3s						
SHLS	**Shalkode**	**1.73**	**243**	*e*P	**Pn**	**17 14 59.3**	**-1.2**
	226nm,0.3s						
SHLS				*e*S	**Sn**	**17 15 18.1**	**-4.7**
	1μm,0.3s						
UZB	**Uzynbulak**	**2.03**	**248**	*e*P	**Pb**	**17 15 07.3**	**+0.1**
	49nm,0.

MAKZ	**Makanchi**	**2.87**	**5**	⇑Pn	**Pn**	**17 15 19.2**	**+3.1**
	6.2nm,0.3s							
MAKZ				⇓Pg	**Pg**	**17 15 25.0**	**-0.2**
	19nm,0.3s							
MAKZ				⇓Sn	**Sb**	**17 15 53.8**	**-2.9**
	19nm,0.3s							
MAKZ				⇓Lg	Lg	17 16 03.6		
	162nm,0.8s							
MK31	**Makanchi Array**	**2.88**	**10**	Pn	**Pn**	**17 15 19.4**	**+3.1**
	2.8nm,0.3s,baz=194,slow=13,SNR=1366							
MK31				⇓Pg	**Pg**	**17 15 25.7**	**+0.2**
	11nm,0.2s,baz=187,slow=16,SNR=40							
MK31				Sn	**Sb**	**17 15 54.1**	**-3.1**
	31nm,0.5s,baz=177,slow=25,SNR=5.4							
MK31				⇑Lg	Lg	17 16 03.4		
	145nm,0.6s,baz=193,slow=27,SNR=12							
MKAR	**Makanchi Array**	**2.88**	**10**	Pn	**Pn**	**17 15 19.5**	**+3.2**
	4.5nm,0.3s,baz=192,slow=14,SNR=305							
MKAR				Sn	**Sb**	**17 15 54.9**	**-2.3**
	42nm,0.3s,baz=180,slow=24,SNR=15							
MKAR				Lg	Lg	17 16 03.6		
	25nm,0.3s,baz=191,slow=28,SNR=7.8							
	7.7nm,0.3s							
CHKK	**Chushkaly**	**3.32**	**270**	Pg	**Pg**	**17 15 33.5**	**-0.3**
	20nm,0.4s							
CHKK				Lg	Lg	17 16 17.0		
	234nm,0.2s							
CHKK	**Chushkaly**	**3.32**	**270**	*e*P	**Pg**	**17 15 33.5**	**-0.3**
	20nm,0.4s							
CHKK				*e*S	**Sg**	**17 16 16.9**	**+0.1**
	234nm,0.2s							
KOTS	**Kotyrbulak**	**3.33**	**259**	*e*P	**Pg**	**17 15 34.4**	**+0.5**
	124nm,0.5s							
KOTS				*e*S	**Sg**	**17 16 18.7**	**+1.8**
	316nm,0.6s							
MDOK	**Medeo**	**3.39**	**258**	⇓Pn	**Pn**	**17 15 25.3**	**+2.0**
	7.3nm,0.5s							
MDOK				⇓Pg	**Pg**	**17 15 34.2**	**-0.9**
	43nm,0.5s							
MDOK				Pg	**Pg**	**17 15 34.5**	**-0.6**
	65nm,0.3s							
MDOK				Lg	Lg	17 16 18.8		
	96nm,0.3s							
MDOK				⇓Lg	Lg	17 16 19.2		
	151nm,0.7s							
MDOK	**Medeo**	**3.39**	**258**	*e*P	**Pg**	**17 15 34.5**	**-0.6**
	65nm,0.3s							
MDOK				*e*S	**Sg**	**17 16 18.8**	**-0.2**
	96nm,0.3s							
KNDC	**Almaty**	**3.43**	**259**	⇑Pg	**Pg**	**17 15 35.2**	**-0.8**
	51nm,0.5s							
KNDC				⇑Lg	Lg	17 16 20.7		
	241nm,0.8s							
AAA	**Alma-Ata**	**3.47**	**259**	Pg	**Pg**	**17 15 36.9**	**+0.3**
	56nm,0.4s							
AAA				Lg	Lg	17 16 22.9		
	169nm,0.3s							
AAA	**Alma-Ata**	**3.47**	**259**	*e*P	**Pg**	**17 15 36.5**	**-0.1**
	56nm,0.2s							
AAA				*e*S	**Sg**	**17 16 22.0**	**+0.3**
	171nm,0.2s							
TNSS	**Tian-Shan**	**3.50**	**256**	Pg	**Pg**	**17 15 36.5**	**-0.6**
	38nm,0.3s							
TNSS				Lg	Lg	17 16 23.1		
	45nm,0.4s							
TNSS	**Tian-Shan**	**3.50**	**256**	*e*P	**Pg**	**17 15 36.5**	**-0.6**
	38nm,0.3s							
TNSS				*e*S	**Sg**	**17 16 23.1**	**+0.7**
	45nm,0.4s							
KTBS	**Karatobe**	**3.55**	**268**	Pg	**Pg**	**17 15 37.7**	**-0.5**
	14nm,0.5s							
KTBS				Lg	Lg	17 16 24.6		
	181nm,0.5s							
KTBS	**Karatobe**	**3.55**	**268**	*e*P	**Pg**	**17 15 37.7**	**-0.5**
	14nm,0.5s							
KTBS				*e*S	**Sg**	**17 16 24.6**	**+0.3**
	181nm,0.5s							
KASK	**Kaskelen**	**3.67**	**260**	⇑Pg	**Pb**	**17 15 37.5**	**+2.4**
KASK				⇑Lg	Lg	17 16 27.2		
IZV	**Izvestkoviy**	**3.73**	**258**	Pg	**Pg**	**17 15 41.9**	**+0.3**
	10.0nm,0.2s							
IZV				Lg	Lg	17 16 31.5		
	185nm,0.5s							
IZV	**Izvestkoviy**	**3.73**	**258**	*e*P	**Pg**	**17 15 41.9**	**+0.3**
	10.0nm,0.2s							
IZV				*e*S	**Sg**	**17 16 31.5**	**+1.5**
	185nm,0.5s							
KUU	**Kurty**	**3.79**	**271**	Pg	**Pg**	**17 15 41.2**	**-1.5**
	16nm,0.3s							
KUU				Lg	Lg	17 16 30.5		
	130nm,0.3s							
KUU	**Kurty**	**3.79**	**271**	*e*P	**Pg**	**17 15 41.2**	**-1.5**
	16nm,0.3s							
KUU				*e*S	**Sg**	**17 16 30.5**	**-1.3**
	130nm,0.3s							
MTBS	**Maitube**	**3.84**	**259**	Pg	**Pg**	**17 15 41.8**	**-1.8**
	27nm,0.4s							
MTBS				Lg	Lg	17 16 31.9		
	117nm,0.5s							
MTBS	**Maitube**	**3.84**	**259**	*e*P	**Pg**	**17 15 41.8**	**-1.8**
	27nm,0.4s							
MTBS				*e*S	**Sg**	**17 16 31.9**	**-1.4**
	117nm,0.5s							
ZSN	**Zaisan**	**4.19**	**32**	*e*P	**Pg**	**17 15 49.4**	**-0.9**
	18nm,0.4s							
ZSN				*e*S	**Sg**	**17 16 44.1**	**-0.4**
	124nm,1.1s							
KST	**Kastek**	**4.19**	**259**	Pg	**Pg**	**17 15 49.0**	**-1.3**
	9.7nm,0.3s							
KST				Lg	Lg	17 16 43.8		
	94nm,0.5s							
KST	**Kastek**	**4.19**	**259**	*e*P	**Pg**	**17 15 49.0**	**-1.3**
	9.7nm,0.3s							
KST				*e*S	**Sg**	**17 16 43.8**	**-0.9**
	94nm,0.5s							
ULHL	**Ulahol**	**4.27**	**248**	P	**Pn**	**17 15 38.8**	**+3.4**
	SNR=7.4							
DGS	**Degeres**	**4.28**	**262**	Pg	**Pg**	**17 15 50.0**	**-2.1**
	12nm,0.3s							
DGS				Lg	Lg	17 16 45.1		
	131nm,0.5s							
DGS	**Degeres**	**4.28**	**262**	*e*P	**Pg**	**17 15 50.0**	**-2.1**
	12nm,0.3s							
DGS				*e*S	**Sg**	**17 16 45.1**	**-2.4**
	131nm,0.5s							
KRBS	**Karabastau**	**4.28**	**269**	Pg	**Pg**	**17 15 50.8**	**-1.4**
	8.6nm,0.4s							
KRBS				Lg	Lg	17 16 46.5		
	55nm,0.6s							
KRBS	**Karabastau**	**4.28**	**269**	*e*P	**Pg**	**17 15 50.8**	**-1.4**
	8.6nm,0.4s							
KRBS				*e*S	**Sg**	**17 16 46.5**	**-1.1**
	55nm,0.6s							
TKM2	**Tokmak 2**	**4.48**	**259**	P	Pn	17 15 43.6	+5.3
	SNR=6.3							
TKM2	**Tokmak 2**	**4.48**	**259**	⇑Pn	**Pn**	**17 15 41.4**	**+3.1**
	4.2nm,0.5s							
TKM2				⇓Pg	**Pg**	**17 15 54.4**	**-1.6**
	12nm,0.5s							
TKM2				⇓Lg	Lg	17 16 50.7		
	49nm,0.6s							
KBK	**Karagaybulak**	**5.01**	**257**	P	**Pn**	**17 15 49.0**	**+3.3**
	SNR=5.5							
SGDS	**Sogindy**	**5.07**	**267**	Pg	**Pg**	**17 16 03.9**	**-3.2**
	2.5nm,0.3s							
SGDS				Lg	Lg	17 17 09.0		
	18nm,0.4s							
USP	**Ospenovka**	**5.19**	**265**	P	**Pn**	**17 15 50.4**	**+2.5**
	SNR=5.2							
AAK	**Ala-Archa**	**5.34**	**258**	Pn	**Pn**	**17 15 53.3**	**+3.2**
	0.4nm,0.3s,baz=112,slow=8.9,SNR=9.2							
AAK				Lg	Lg	17 17 19.9		
	2.2nm,0.3s,baz=325,slow=22,SNR=2.1							
	1.2nm,0.4s							
BTLS	**Baital**	**5.50**	**284**	Pg	**Pg**	**17 16 11.8**	**-3.7**
	4.5nm,0.3s							
BTLS				Lg	Lg	17 17 22.9		
	13nm,0.5s							
BTLS	**Baital**	**5.50**	**284**	*e*P	**Pg**	**17 16 11.8**	**-3.7**
	4.5nm,0.3s							
BTLS				*e*S	**Sg**	**17 17 22.9**	**-3.8**
	13nm,0.5s							
EKS2	**Erkin-Say**	**5.84**	**260**	P	**Pn**	**17 16 00.1**	**+3.2**
	SNR=6.3							
KSH	**Kashi**	**6.10**	**225**	P	Pb	17 16 12.4	-4.2
KSH				S	**Sb**	**17 17 31.1**	**+1.3**
KSH				pmax	pmax			
	comp=Z,1.0nm,0.8s							
KSH				smax	smax			
	comp=N,14nm,1.0s							
KSH				smax	smax			
	comp=E,15nm,0.8s							
MRKS	**Merke**	**6.21**	**262**	*e*P	**Pg**	**17 16 26.1**	**-3.0**
	comp=E,4.4nm,0.5s							
MRKS				*e*S	**Sg**	**17 17 47.2**	**-2.3**
	comp=E,22nm,0.5s							
KURBB	**Kurchatov Arra**	**6.99**	**344**	⇓Pn	**Pn**	**17 16 13.0**	**+0.5**
	comp=E,6.0nm,0.9s							
KURBB				⇑Sn	**Sn**	**17 17 33.4**	**+1.4**
	comp=E,30nm,0.6s							
KURBB				⇑Lg	Lg	17 18 12.1		
	comp=E,74nm,0.7s							
KURBB	**Kurchatov Arra**	**6.99**	**344**	Pn	**Pn**	**17 16 14.0**	**+1.5**
	comp=E,0.4nm,0.3s,baz=155,slow=12,SNR=45							
KURBB				Sn	**Sn**	**17 17 31.1**	**-0.9**
	comp=E,0.8nm,0.3s,baz=157,slow=24,SNR=13							
KURBB				Lg	Lg	17 18 12.8		
	comp=E,0.7nm,0.3s,baz=166,slow=28,SNR=5.0							
	comp=E,2.2nm,0.6s							
KURK	**Kurchatov**	**7.06**	**344**	⇑Pn	**Pn**	**17 16 14.8**	**+1.3**
	comp=E,3.0nm,0.5s							
KURK				⇑Sn	**Sn**	**17 17 33.2**	**-0.6**
	comp=E,29nm,0.7s							
KURK				⇑Lg	Lg	17 18 12.3		
	comp=E,51nm,1.0s							
OTUK	**Ortayu**	**7.73**	**307**	⇑Pn	**Pn**	**17 16 27.1**	**+4.4**
	comp=E,5.5nm,1.1s							
OTUK				⇑Lg	Lg	17 18 34.1		
	comp=E,26nm,0.9s							
KK31	**Karatay Array**	**8.09**	**268**	⇑Pg	Pb	17 16 55.6	+5.1
	comp=E,1.1nm,0.4s,baz=80,slow=15,SNR=3.5							
KK31				⇓Lg	Lg	17 18 45.9		
	comp=E,8.1nm,0.6s,baz=74,slow=29,SNR=3.8							
ZALV	**Zalesovo Beam**	**10.23**	**11**	Pn	**Pn**	**17 16 58.6**	**+1.7**
	comp=E,1.3nm,0.3s,baz=193,slow=14,SNR=20							
ZALV				Sn	**Sn**	**17 18 47.5**	**-4.0**
	comp=E,1.6nm,0.3s,baz=186,slow=25,SNR=9.2							
ZALV				Lg	Lg	17 19 58.2		
	baz=188,slow=28							
	comp=E,2.5nm,0.3s							
BVAR	**Borovoye Array**	**11.72**	**325**	Pn	**Pn**	**17 17 18.1**	**+0.8**
	baz=145,slow=13,SNR=4.3							
BVAR				Lg	Lg	17 20 41.4		
	comp=E,0.1nm,0.3s,baz=129,slow=26,SNR=4.1							
	comp=E,0.3nm,0.4s							
AKTO	**Aktyubinsk**	**17.24**	**300**	P	**P**	**17 18 32.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=90,slow=12,SNR=1.5							
AKTO				Lg	Lg	17 23 38.2		
	comp=E,0.1nm,0.3s,baz=290,slow=5.3,SNR=2.6							
	comp=E,0.6nm,0.4s							
SONM	**Songino Array**	**17.68**	**69**	P	**Pn**	**17 18 36.8**	**+0.3**
	comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=8.0							
	comp=E,0.6nm,0.5s							
NRIK	**Noril'sk**	**25.64**	**5**	LR	LR	17 30 25.3		
	comp=E,89nm,20.8s,baz=338,slow=37							
ARCES	**ARCESS Array B**	**37.89**	**332**	P	**P**	**17 21 47.5**	**+0.5**
	comp=E,3.2nm,0.9s,baz=84,slow=9.2,SNR=3.9							
	comp=E,3.2nm,0.9s							
SPITS	**Spitsbergen Ar**	**42.34**	**344**	P	**P**	**17 22 25.0**	**+1.2**
	comp=E,12nm,1.0s,baz=87,slow=13,SNR=1.9							
	comp=E,12nm,1.0s							
ILAR	**Eielson Array**	**65.19**	**21**	P	**P**	**17 25 10.8**	**-0.2**
	comp=E,0.4nm,0.8s,baz=316,slow=5.6,SNR=5.2							
	comp=E,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**73.11**	**8**	P	**P**	**17 26 00.4**	**+0.2**
	comp=E,0.2nm,0.6s,baz=351,slow=6.3,SNR=4.1							
	comp=E,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.75**	**273**	P	**P**	**17 26 04.1**	**-0.7**
	comp=E,0.3nm,0.3s,baz=37,slow=5.8,SNR=3.1							
WRA	**Warramunga Arr**	**79.82**	**130**	P	**P**	**17 26 38.5**	**-0.4**
	comp=E,0.3nm,0.6s,baz=330,slow=5.0,SNR=2.0							
	comp=E,0.3nm,0.6s							
ASAR	**Alice Springs**	**82.61**	**133**	P	**P**	**17 26 53.1**	**-0.5**
	comp=E,0.4nm,0.8s,baz=325,slow=5.4,SNR=6.9							
	comp=E,0.4nm,0.8s							

*IDC **14** 17:21:06.8±1.6,23˚.29S×178˚.96W,h0km,mb4.1/5, mbtmp4.1/5,Error ellipse: s-maj=43.9km s-min=31.0km az=17.0*
*NEIC **14** 17:21:53.9±1.1,22˚.9S±0˚.1×179˚.2W±0˚.3,h480km±20km, mb4.3/19,Error ellipse: s-maj=40.4km s-min=7.7km az=59.0*

ISC 14 17:21:54.7±1.2,23˚.4S±0˚.2×179˚.6W±0˚.2,h450km,n25, σ1s24/25,mb4.1/16,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**18.65**	**199**	P	**P**	**17 25 45.6**	**+2.1**
NNZ	**Nelson**	**18.77**	**197**	P	**P**	**17 25 47.4**	**+2.7**
GVZ	**Greta Valley S**	**20.50**	**196**	P	**P**	**17 26 01.2**	**+0.6**
MLZ	**Mavora Lakes**	**24.15**	**202**	P	**P**	**17 26 35.8**	**+2.4**
MLZ				IAmb	IAmb	17 27 07.9	
	comp=Z,26nm,1.4s						
WHZ	**Wether Hill Ro**	**24.66**	**201**	P	**P**	**17 26 39.6**	**+1.6**
WHZ				IAmb	IAmb	17 26 40.5	
	comp=Z,33nm,1.3s						
EIDS	**Eidsvold**	**26.80**	**260**	P	**P**	**17 26 56.9**	**-0.3**
EIDS				IAmb	IAmb	17 27 09.2	
	comp=Z,12nm,1.4s						
CTAO	**Charters Tower**	**31.88**	**269**	P	**P**	**17 27 42.8**	**+1.2**
CTAO				IAmb	IAmb	17 27 43.3	
	comp=Z,7.9nm,0.5s						
PMG	**Port Moresby**	**34.70**	**288**	P	**P**	**17 28 06.3**	**+0.6**
PMG				IAmb	IAmb	17 28 07.4	
	comp=Z,6.2nm,0.8s						
BBOO	**Buckleboo**	**40.03**	**246**	P	**P**	**17 28 48.8**	**-0.6**
BBOO				IAmb	IAmb	17 28 57.2	
	comp=Z,20nm,1.3s						
AS31	**Alice Springs**	**42.53**	**260**	P	**P**	**17 29 08.9**	**-0.6**
ASAR	**Alice Springs**	**42.53**	**260**	P	**P**	**17 29 09.1**	**-0.4**
ASAR	**Alice Springs**	**42.53**	**260**	P	**P**	**17 29 08.9**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=96,slow=7.7,SNR=65						
	comp=Z,1.1nm,0.3s						
WR0	**Warramunga Arr**	**42.66**	**265**	P	**P**	**17 29 09.6**	**-0.9**
WR0				IAmb	IAmb	17 29 38.9	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**42.84**	**265**	P	**P**	**17 29 10.9**	**-1.0**
WB2				IAmb	IAmb	17 29 32.1	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**42.84**	**266**	P	**P**	**17 29 11.3**	**-0.7**
WB0				IAmb	IAmb	17 29 11.9	
	comp=Z,6.4nm,0.8s						
WRAB	**Tennant Creek**	**42.84**	**265**	P	**P**	**17 29 10.9**	**-1.1**
WRA	**Warramunga Arr**	**42.85**	**265**	P	**P**	**17 29 11.4**	**-0.7**
WRA	**Warramunga Arr**	**42.85**	**265**	P	**P**	**17 29 11.3**	**-0.7**
	comp=Z,3.1nm,0.5s,baz=102,slow=8.3,SNR=51						
	comp=Z,3.1nm,0.5s						
FORT	**Forrest**	**46.88**	**249**	P	**P**	**17 29 42.1**	**-1.0**
FORT				IAmb	IAmb	17 29 56.5	
	comp=Z,23nm,1.2s						
MTN	**Manton Dam**	**47.82**	**274**	P	**P**	**17 29 49.6**	**-0.8**
VNDA	**Vanda**	**54.96**	**185**	P	**P**	**17 30 40.4**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=34,slow=8.7,SNR=1.5						
	comp=Z,1.5nm,0.8s						
QSPA	**South Pole Qui**	**66.73**	**180**	P	**P**	**17 31 59.7**	**-0.1**
QSPA	**South Pole Qui**	**66.73**	**180**	P	**P**	**17 31 59.8**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=259,slow=1.1,SNR=11						
	comp=Z,2.7nm,0.6s						
BELA	**Belgrano 2**	**76.92**	**173**	P	**P**	**17 32 57.5**	**-1.6**
BELA				IAmb	IAmb	17 33 01.6	
	comp=Z,9.4nm,1.5s						
TXAR	**Lajitas Array**	**89.80**	**58**	P	**P**	**17 34 05.5**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=211,slow=5.1,SNR=3.5						
	comp=Z,0.3nm,0.6s						

TAP 14 17:31:57.0,24˚.00N×122˚.48E,h24km,ML3.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.19**	**308**	P	Pb	17 32 02.7	+0.7
	baz=308						
EOS4				S	Sb	17 32 06.9	+1.5
	baz=308						
EOS3	**EOS3**	**0.32**	**332**	P	Pb	17 32 04.8	+0.7
	baz=332						
EOS3				S	Sb	17 32 10.3	+1.5
	baz=332						
EOS2	**EOS2**	**0.47**	**331**	*e*P	Pb	17 32 07.3	+0.7
	baz=331						
EOS2				*e*S	Sn	17 32 14.7	-0.9
	baz=331						
YOJ	**Yonaguni jima**	**0.67**	**47**	*e*P	Pn	17 32 10.4	-0.5
	baz=45						
YOJ				S	Sn	17 32 20.0	-0.6
	baz=45						
EAHA	**Aohua**	**0.75**	**296**	*e*S	Sb	17 32 21.9	+0.7
	baz=295						
PCYT	**Pengchaiyu**	**1.66**	**347**	*e*P	Pn	17 32 24.6	0.0
	baz=347						

*JMA **14** 17:32:04.0±0.3,24˚.0N±0˚.5×12˚.2E±˚,h0km,TAIWAN REGION*
*TAP **14** 17:32:04.4,23˚.98N×121˚.60E,h6km,ML2.7,B*

ISC 14 17:32:04.7±0.8,23˚.98N±0˚.01×121˚.61E±0˚.02,h8km±4km, n107,σ0˚69/167,4C-26D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.00**	**304**	⇑*i*P	**Pg**	**17 32 05.9**	**-0.2**
	baz=99						
HWA				S	**Sg**	**17 32 07.0**	**+0.1**
	baz=99						
TWD	**Chiawan**	**0.11**	**354**	⇓*i*P	**Pg**	**17 32 07.2**	**+0.1**
	baz=2.0						
TWD				S	**Sg**	**17 32 09.1**	**+0.3**
	baz=2.0						
ETM	**Tongmen**	**0.11**	**265**	P	**Pg**	**17 32 07.2**	**+0.1**
	baz=264						
ETM				*i* S	**Sg**	**17 32 08.9**	**+0.1**
	baz=264						
ETL	**Fush Village**	**0.18**	**4**	⇓*i*P	**Pg**	**17 32 08.6**	**+0.1**
	baz=7.0						
ETL				S	**Sg**	**17 32 11.4**	**+0.3**
	baz=7.0						
LXIB	**Xiulin Townshi**	**0.18**	**285**	⇓*i*P	**Pg**	**17 32 08.8**	**+0.2**
	baz=278						
LXIB				S	**Sg**	**17 32 11.1**	**-0.1**
	baz=278						
SHUL	**Shoufeng**	**0.19**	**193**	⇑P	**Pg**	**17 32 09.3**	**+0.7**
	baz=191						
SHUL				*e*S	**Sg**	**17 32 12.9**	**+1.8**
	baz=191						
NACB	**Ninganchiao**	**0.20**	**356**	P	**Pg**	**17 32 08.9**	**+0.1**
NACB	**Ninganchiao**	**0.20**	**356**	⇓*i*P	**Pg**	**17 32 08.8**	**+0.1**
	baz=10.0						
NACB				S	**Sg**	**17 32 11.0**	**-0.5**
	baz=10.0						
ESL	**Shilin**	**0.23**	**225**	⇑*i*P	**Pg**	**17 32 09.1**	**-0.2**
	baz=234						
ESL				*e*S	**Sg**	**17 32 12.2**	**-0.1**
	baz=234						
ETLH	**Xiulin Townshi**	**0.26**	**333**	⇓*i*P	**Pg**	**17 32 10.2**	**+0.3**
	baz=335						
ETLH				*e*S	**Sg**	**17 32 14.0**	**+0.6**
	baz=335						
TEGC	**Jichi Village**	**0.27**	**193**	*e*P	**Pb**	**17 32 11.1**	**-0.8**
	baz=191						
TEGC				*e*S	**Sb**	**17 32 16.9**	**+0.2**
	baz=191						
WARBT	**Fenglin Townsh**	**0.33**	**219**	⇑*i*P	**Pg**	**17 32 10.9**	**-0.2**
	baz=227						
WARBT				*e*S	**Sg**	**17 32 16.1**	**+0.7**
	baz=227						
WHF	**Hehuan Shan**	**0.36**	**298**	⇓*i*P	**Pg**	**17 32 12.1**	**+0.2**
	baz=299						
WHF				*e*S	**Sg**	**17 32 17.2**	**+0.6**
	baz=299						
EAHA	**Aohua**	**0.37**	**19**	*e*P	**Pg**	**17 32 12.1**	**+0.1**
	baz=28						
EAHA				*e*S	**Sb**	**17 32 19.7**	**+0.1**
	baz=28						
EAHA	**Aohua**	**0.37**	**19**	*e*P	**Pg**	**17 32 12.0**	**0.0**
	baz=295						
CHGB	**Renai**	**0.41**	**282**	⇓*i*P	**Pb**	**17 32 13.2**	**-1.1**
	baz=283						
CHGB				*e*S	**Sg**	**17 32 18.6**	**+0.5**
	baz=283						
FUSS	**Fushou**	**0.43**	**309**	⇓*i*P	**Pb**	**17 32 13.7**	**-1.0**
	baz=310						
FUSS				*e*S	**Sg**	**17 32 19.1**	**+0.3**
	baz=310						
WUSB	**Renai**	**0.45**	**272**	⇓*i*P	**Pb**	**17 32 14.0**	**-1.0**
	baz=273						
WUSB				*e*S	**Sg**	**17 32 20.0**	**+0.6**
	baz=273						
ENA	**Nanau**	**0.47**	**15**	⇓*i*P	**Pg**	**17 32 13.8**	**+0.1**
	baz=26						
ENA				*e*S	**Sg**	**17 32 19.8**	**-0.1**
	baz=26						
VWDT	**VWDT**	**0.48**	**243**	⇓*e*P	**Pb**	**17 32 14.5**	**-1.0**
	baz=244						
VWDT				*e*S	**Sg**	**17 32 20.4**	**0.0**
	baz=244						
TWT	**Tachien**	**0.48**	**305**	⇓P	**Pb**	**17 32 15.0**	**-0.7**
	baz=304						
TWT				*e*S	**Sb**	**17 32 22.0**	**-1.0**
	baz=304						
EWUT	**Wuta**	**0.49**	**18**	⇓P	**Pg**	**17 32 14.4**	**+0.2**
	baz=28						
EWUT				*e*S	**Sg**	**17 32 20.7**	**0.0**
	baz=28						
TDCB	**Techi**	**0.50**	**304**	⇓P	**Pb**	**17 32 15.0**	**-0.8**
	baz=305						
TDCB				*e*S	**Sg**	**17 32 20.8**	**0.0**
	baz=305						
NNSB	**Datong**	**0.50**	**335**	⇓*i*P	**Pg**	**17 32 14.8**	**+0.4**
	baz=337						
NNSB				*e*S	**Sg**	**17 32 21.3**	**+0.4**
	baz=337						
HGSD	**Ruisui**	**0.51**	**199**	*e*P	**Pb**	**17 32 15.3**	**-0.7**
	baz=212						
HGSD				*e*S	**Sb**	**17 32 23.8**	**+0.3**
	baz=212						
NNS	**Nan Shan**	**0.51**	**335**	⇓*i*P	**Pg**	**17 32 15.0**	**+0.4**
	baz=337						
NNS				*e*S	**Sb**	**17 32 22.4**	**-1.3**
	baz=337						
EHY	**Hungye**	**0.54**	**209**	*e*P	**Pg**	**17 32 14.8**	**-0.3**
	baz=218						
EHY				*e*S	**Sg**	**17 32 22.5**	**+0.4**
	baz=218						
LATG	**Datong**	**0.56**	**352**	⇓*i*P	**Pg**	**17 32 15.8**	**+0.1**
	baz=354						
LATG				*e*S	**Sb**	**17 32 25.9**	**+0.7**
	baz=354						
SSLB	**Suanglung**	**0.63**	**253**	P	**Pg**	**17 32 17.1**	**+0.3**
SSLB	**Suanglung**	**0.63**	**253**	⇓*i*P	**Pg**	**17 32 17.1**	**+0.3**
	baz=253						
SSLB				S	**Sg**	**17 32 24.9**	**-0.1**
	baz=253						
NDT	**Datong Townshi**	**0.63**	**352**	⇓*e*P	**Pb**	**17 32 17.3**	**-0.7**
	baz=343						
NDT				*e*S	**Sb**	**17 32 26.0**	**-1.1**
	baz=343						
ESAO	**Su ao**	**0.64**	**20**	*e*P	**Pg**	**17 32 16.9**	**0.0**
	baz=22						
WCS	**Beigang Elemen**	**0.64**	**277**	⇓P	**Pb**	**17 32 17.8**	**-0.4**
	baz=278						
WCS				*e*S	**Sb**	**17 32 26.3**	**-1.1**
	baz

baz=265
YHNB Yeheng 0.72 343 ⇓*i*P Pb 17 32 19.2 -0.4
baz=344
YHNB *e*S Sg 17 32 27.8 -0.4
baz=344
NSK Sanguang 0.73 342 ⇓*i*P Pb 17 32 19.4 -0.5
baz=343
NSK *e*S Sb 17 32 29.3 -0.8
baz=343
TWE Neicheng 0.74 4 ⇓*i*P Pb 17 32 19.4 -0.6
baz=6.0
TWE *e*S Sg 17 32 29.3 +0.5
baz=6.0
FUSB Fushanzhiwuyua 0.78 359 *e*P Pb 17 32 20.2 -0.4
baz=360
FUSB *e*S Sb 17 32 31.2 -0.3
baz=360
NFF Wufeng Townshi 0.79 326 *e*P Pb 17 32 20.7 -0.1
baz=327
NFF *e*S Sb 17 32 31.1 -0.7
baz=327
CHKH Chenggong 0.80 194 P Pb 17 32 21.1 +0.1
baz=182
CHKH S Sn 17 32 33.6 -1.0
baz=182
NWLT Wulai 0.81 353 *e*P Pb 17 32 20.7 -0.4
baz=354
NWLT *e*S Sb 17 32 31.6 -0.5
baz=354
WJS Zhushan 0.82 260 *e*P Pn 17 32 21.9 -0.7
baz=260
WJS *e*S Sb 17 32 33.1 +0.6
baz=260
TWQ1 Liyutan 0.85 296 *e*P Pn 17 32 22.6 -0.5
baz=297
TWQ1 *e*S Sn 17 32 35.0 -0.7
baz=297
WNT Mingjian 0.85 264 *e*P Pn 17 32 22.8 -0.2
baz=264
WNT *e*S Sn 17 32 34.7 -1.1
baz=264
NSTT Nanjuang 0.86 320 P Pb 17 32 22.3 +0.4
baz=321
NSTT *e*S Sb 17 32 33.5 -0.1
baz=321
LIOB Emei 0.86 321 *e*P Pn 17 32 22.6 -0.7
baz=322
ALS Alishan 0.87 238 P Pb 17 32 21.9 -0.3
baz=235
CHKT Chengkung 0.90 194 *e*P Pb 17 32 22.6 0.0
baz=183
CHKT *e*S Sb 17 32 35.5 +0.7
baz=183
EHD Haiduan 0.90 204 P Pb 17 32 22.3 -0.3
baz=217
EHD *e*S Sb 17 32 34.4 -0.4
baz=217
EGS 0.92 19 *e*P Pb 17 32 22.5 -0.4
baz=32
NMLH Miaoli 0.93 307 *e*P Pn 17 32 24.5 +0.3
baz=306
ECS Chishang 0.95 202 *e*P Pn 17 32 24.4 0.0
baz=202
ELDTW Lidau 0.95 215 *e*P Pg 17 32 22.1 -0.9
baz=215
ELDTW *e*S Sb 17 32 37.0 +0.5
baz=215
NHDH Xindian Distri 0.99 356 *e*P Pb 17 32 24.2 +0.1
baz=359
SBCB Hsinchu 0.99 325 *e*P Pn 17 32 26.0 +1.0
baz=326
WGK Gukeng 1.00 254 *e*P Pn 17 32 25.7 +0.6
baz=255
WGK *e*S Sn 17 32 40.4 +1.0
baz=255
TATO Taipei 1.00 354 P Pn 17 32 24.8 -0.3
TWA Mucha 1.00 359 *e*P Pb 17 32 24.6 +0.2
baz=350
TWA *e*S Sb 17 32 38.0 +0.2
baz=350
WDLH Douliu 1.02 254 *e*P Pn 17 32 26.1 +0.7
baz=253
WCKO Fanlu 1.06 240 *e*P Pn 17 32 26.3 +0.3
baz=239
TWB1 Santiao Chiao 1.09 18 *e*P Pg 17 32 25.4 -0.1
baz=14
STYH Taoyuan 1.11 224 P Pb 17 32 26.1 0.0
baz=231
STYH *e*S Sg 17 32 39.5 -0.8
baz=231
CHN4 Tsaushan 1.12 237 *e*P Pn 17 32 27.1 +0.3
baz=236
TPUB Ta-pu 1.12 233 P Pn 17 32 27.2 +0.4
TPUB Ta-pu 1.12 233 *i*P Pn 17 32 27.1 +0.3
baz=240
TPUB *e*S Sg 17 32 40.5 -0.3
baz=240
WRL Guolierlin Hig 1.13 267 *e*P Pn 17 32 27.8 +1.0
baz=264
TWS1 Kuangyinshan 1.14 351 *e*P Pg 17 32 25.7 -0.8
baz=355
SXI1 Grass Mountain 1.14 12 *e*P Pn 17 32 27.4 +0.3
baz=1.0
LONT Longtian 1.15 203 *e*P Pg 17 32 24.6 -2.2
baz=203
WTK Tuku 1.15 256 *e*P Pn 17 32 28.3 +1.1
baz=257
WTK *e*S Sn 17 32 44.3 +1.1
baz=257
WTP Ta-pu 1.17 232 *e*P Pn 17 32 27.7 +0.2
baz=238
WTP *e*S Sn 17 32 43.9 +0.3
baz=238
YM01 YM01 1.17 358 *e*P Pn 17 32 27.9 +0.4
baz=13
YM08 YM08 1.21 359 *e*P Pn 17 32 28.3 +0.3
baz=350
TWK Hsinying 1.25 236 *e*P Pn 17 32 29.3 +0.8
baz=225
TWK *e*S Sn 17 32 47.0 +1.4
baz=225
CHN1 Nanshi 1.27 232 *e*P Pb 17 32 29.7 +0.8
baz=231
SNST Tainan City 1.27 234 *e*P Pb 17 32 29.6 +0.7
baz=236
SNST *e*S Sn 17 32 47.5 +1.4
baz=236
SGST Jiashian 1.29 227 *e*P Pn 17 32 28.9 -0.3
baz=229
SGST *e*S Sn 17 32 48.1 +1.3
baz=229
LDUT Ludao 1.30 186 *e*P Pn 17 32 26.3 -3.0
baz=170
ICHU Yijhu 1.36 244 *e*P Pg 17 32 31.8 +0.9
baz=245
YOJ Yonaguni jima 1.37 69 P Pg 17 32 32.1 +1.1
YOJ Yonaguni jima 1.37 69 *e*P Pg 17 32 31.6 +0.6
baz=68
SCST Cishan 1.49 224 *e*P Pg 17 32 33.7 +0.4
baz=210
SHHT Tainan City 1.50 231 *e*P Pg 17 32 33.4 0.0
baz=234
ECL Taimali 1.50 204 *e*P Pn 17 32 30.6 -1.3
baz=187
TSMG Majia 1.54 215 *e*P Pn 17 32 32.9 +0.3
baz=205
TWM1 Shoushan 1.58 224 *e*P Pg 17 32 35.6 +0.5
baz=227
TSCK Chigu Township 1.62 240 *e*P Pg 17 32 35.3 -0.6
baz=244
TSCK S Sg 17 32 58.1 +1.3
baz=244
MASBT Mashibuluo 1.63 214 *e*P Pn 17 32 33.3 -0.4
baz=202
EAST Anshuo 1.73 204 *e*P Pn 17 32 35.3 +0.1
baz=187
SCZT Fangliau 1.84 210 *e*P Pb 17 32 37.8 -0.8
baz=214
SLIU Shizi 1.90 203 *e*P Pn 17 32 38.1 +0.6
baz=193
WDGT Dungji 1.92 249 *e*P Pb 17 32 39.0 -1.1
baz=251
PNG Penghu 1.93 258 *e*P Pn 17 32 38.0 +0.2
baz=258
VWUC VWUC 2.21 298 *e*P Pn 17 32 42.1 +0.3
baz=296
PTMZ Houxiangcun 2.50 296 *e*P Pn 17 32 46.6 +0.8
baz=294

JISG Ishigakijimahi 2.54 76 P Pn 17 32 46.5 +0.2
MATB Ma-tsu 2.64 326 *e*P Pn 17 32 47.5 -0.2
baz=308
KNMB Chin-men Tao 2.98 280 *e*P Pn 17 32 52.9 +0.5
baz=279
MHZQ Yeshan 3.15 313 *e*P Pn 17 32 55.8 +1.1
baz=311

IDC 14 17:33:29.8±3.4, 9°.89N×125°.50E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=316.0km s-min=23.5km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.90**	**164**	P	P	17 39 48.0	-0.3
	0.6nm,1.0s,baz=343,slow=8.9,SNR=1.7						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**34.35**	**166**	P	P	17 40 18.6	+0.1
	0.3nm,0.7s,baz=351,slow=7.0,SNR=8.0						
	0.3nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**41.09**	**71**	T	T	18 24 32.6	
	baz=265,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	**41.10**	**71**	T	T	18 24 31.5	
	baz=265,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**41.11**	**71**	T	T	18 24 33.2	
	baz=265,slow=75,SNR=11						
MKAR	**Makanchi Array**	**51.87**	**323**	P	P	17 42 40.2	+0.2
	0.3nm,0.6s,baz=128,slow=8.4,SNR=4.1						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**55.96**	**326**	P	P	17 43 09.5	-0.3
	0.3nm,0.5s,baz=129,slow=6.1,SNR=4.7						
	0.3nm,0.5s						

IDC 14 17:52:41.5±56.0, 20°.14S×179°.34E, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=1013.0km s-min=145.8km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.70**	**243**	P	P	17 59 41.7	-0.2
	1.3nm,0.5s,baz=80,slow=10,SNR=5.9						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**42.17**	**257**	P	P	18 00 36.0	-0.1
	3.1nm,0.5s,baz=93,slow=7.7,SNR=121						
	3.1nm,0.5s						
WRA	**Warramunga Arr**	**42.17**	**262**	P	P	18 00 36.2	0.0
	1.1nm,0.3s,baz=97,slow=7.7,SNR=73						
	1.1nm,0.3s						

*IDC **14** 17:59:58.7±4.4, 47°.35N×92°.62W, h0km, mbtmp3.0/3, ML1.9/2, Error ellipse: s-maj=51.0km s-min=20.6km az=95.0*
*NEIC **14** 18:00:02.8±1.1, 47°.42N±0°.02×93°.11W±0°.05, h0km±1km, mb_Lg2.7/18, mb_Lg2.7(OTT), Error ellipse: s-maj=5.9km s-min=3.2km az=102.0*
*OTT **14** 18:00:03.5±0.3, 47°.41N×93°.03W, h0km, MN2.7/8, Blast, Minnesota, U.S. 136km south from Fort Frances, On Mining explosion.*

ISC 14 18:00:01.2±0.8, 47°.40N±0°.04×93°.07W±0°.03, h0km, n36, σ1$28/43, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
B35A	**Bob, Littlefor**	**1.06**	**336**		**Pg**	**18 00 21.7**	**+0.1**
EYMN	**Ely**	**1.20**	**62**		**Pg**	**18 00 24.4**	**+0.3**
EYMN	**Ely**	**1.20**	**62**	PG	**Pg**	**18 00 24.1**	**0.0**
EYMN				SG	**Sg**	**18 00 39.5**	**-0.2**
E38A	**The Farm, Brul**	**1.31**	**127**		**Sb**	**18 00 44.2**	**+0.2**
E38A				IAmb_Lg		18 00 46.2	
	comp=Z,32nm,0.8s						
F36A	**Milaca**	**1.57**	**192**		**Pn**	**18 00 31.3**	**+0.9**
F36A				IAmb_Lg		18 00 55.3	
	comp=Z,71nm,1.0s						
ATKO	**Atikokan Iron**	**1.73**	**34**	Pn	**Pb**	**18 00 34.0**	**0.0**
ATKO					**Sg**	**18 00 56.8**	**-0.1**
ATKO	**Atikokan Iron**	**1.73**	**34**	PN	**Pb**	**18 00 34.0**	**0.0**
ATKO				SN	**Sg**	**18 00 56.8**	**-0.1**
ATKO				Trac		18 00 58.2	
	comp=Z,90nm,0.4s						
AGMN	**Agassiz Nation**	**2.08**	**297**	Pn	**Pn**	**18 00 37.3**	**-0.2**
SPMN	**Marine on St.**	**2.18**	**175**		**Pn**	**18 00 39.8**	**+1.0**
SPMN				IAmb_Lg		18 01 11.7	
	comp=Z,50nm,1.0s						
EPLO	**Experimental L**	**2.32**	**349**	Pn	**Pn**	**18 00 42.2**	**+1.5**
EPLO					**Sn**	**18 01 11.3**	**+1.4**
EPLO	**Experimental L**	**2.32**	**349**	PN	**Pn**	**18 00 42.2**	**+1.5**
EPLO				SN	**Sn**	**18 01 11.3**	**+1.4**
EPLO				Trac		18 01 23.3	
	comp=Z,2.9nm,0.1s						
D32A	**Dogwood Acres,**	**2.70**	**266**	Pn	**Pn**	**18 00 45.2**	**-0.7**
SOLO	**Sioux Lookout**	**2.71**	**14**	Pn	**Pn**	**18 00 47.1**	**+1.2**
SOLO					**Sn**	**18 01 20.4**	**+0.9**
SOLO	**Sioux Lookout**	**2.71**	**14**	PN	**Pn**	**18 00 47.1**	**+1.2**
SOLO				SN	**Sn**	**18 01 20.4**	**+0.9**
SOLO				Trac		18 01 34.0	
	comp=Z,10nm,0.2s						
F33A	**5 Mile Ranch,**	**2.71**	**236**		**Pn**	**18 00 48.7**	**+2.6**
F33A				IAmb_Lg		18 01 32.4	
	comp=Z,14nm,1.0s						
TBO	**Thunder Bay**	**2.76**	**62**	Pn	**Pn**	**18 00 47.3**	**+0.6**
TBO	**Thunder Bay**	**2.76**	**62**	PN	**Pn**	**18 00 47.3**	**+0.6**
TBO				SN	**Sn**	**18 01 20.4**	**-0.3**
TBO				Trac		18 01 41.9	
	comp=Z,18nm,0.3s						
G40A	**Rib Lake**	**2.91**	**136**	Pn	**Pn**	**18 00 50.5**	**+1.7**
D41A	**Chassel**	**3.09**	**95**	Pn	**Pn**	**18 00 52.5**	**+1.3**
I37A	**Lemond, Waseca**	**3.39**	**184**	IAmb_Lg		18 01 55.0	
	comp=Z,12nm,0.9s						
ULM	**Lac du Bonnet**	**3.40**	**328**	IAmb_Lg		18 01 48.1	
	comp=Z,17nm,0.7s						
ULM	**Lac du Bonnet**	**3.40**	**328**	Pn	**Pn**	**18 00 55.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=148,slow=13,SNR=2.2						
ULM				Pg	**Pb**	**18 01 03.4**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=147,slow=16,SNR=10						
ULM				Sn	**Sn**	**18 01 35.5**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=87,slow=18,SNR=6.1						
ULM				Lg	Lg	18 01 44.9	
	comp=Z,1.8nm,0.3s,baz=52,slow=20,SNR=19						
	comp=Z,0.8nm,0.4s						
ULM	**Lac du Bonnet**	**3.40**	**328**	PN	**Pn**	**18 00 56.2**	**+0.6**
ULM				SN	**Sn**	**18 01 38.5**	**+2.0**
ULM				Trac		18 01 49.9	
	comp=Z,27nm,0.6s						
I10CA	**LAC DU BONNET**	**3.42**	**326**	I	I	18 22 40.0	
	comp=Z,0.1nm,1.2s,baz=136,slow=334,SNR=5.8						
I40A	**Norwalk**	**3.91**	**153**	IAmb_Lg		18 02 08.6	
	comp=Z,11nm,0.7s						
ECSD	**EROS Data Cent**	**4.43**	**215**	IAmb_Lg		18 02 21.8	
	comp=Z,26nm,1.0s						
PKLO	**Pickle Lake**	**4.47**	**22**	Pn	**Pn**	**18 01 10.4**	**+0.2**
PKLO	**Pickle Lake**	**4.47**	**22**	PN	**Pn**	**18 01 10.4**	**+0.2**
PKLO				SN	**Sn**	**18 02 01.0**	**-1.9**
PKLO				LG	Lg	18 02 20.6	
PKLO				Trac		18 02 21.6	
	comp=Z,9.6nm,0.4s						
GTO	**Geraldton**	**4.69**	**58**	Pn	**Pn**	**18 01 15.7**	**+2.5**
GTO	**Geraldton**	**4.69**	**58**	PN	**Pn**	**18 01 15.7**	**+2.5**
GTO				SN	**Sn**	**18 02 06.0**	**-2.2**
GTO				Trac		18 02 34.2	
	comp=Z,1.7nm,0.1s						
PNPO	**Pukaskwa Natio**	**4.71**	**73**	Pn	**Pn**	**18 01 14.7**	**+1.2**
PNPO	**Pukaskwa Natio**	**4.71**	**73**	PN	**Pn**	**18 01 14.7**	**+1.2**
PNPO				SN	**Sn**	**18 02 06.9**	**-1.9**
PNPO				Trac		18 02 34.3	
	comp=Z,4.5nm,0.3s						
E28A	**Huff**	**5.28**	**264**	IAmb_Lg		18 02 49.8	
	comp=Z,16nm,0.9s						
L42A	**Oliver, Polo**	**5.91**	**155**	IAmb_Lg		18 03 08.0	
	comp=Z,19nm,0.8s						
PDAR	**Pinedale Array**	**12.54**	**254**	Pn	**Pn**	**18 02 59.4**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=73,slow=12,SNR=4.8						
YKA	**Yellowknife Ar**	**19.38**	**329**	P	**P**	**18 04 27.1**	**-1.2**
	baz=129,slow=12,SNR=8.0						
	comp=Z,0.6nm,0.9s						

TAP 14 18:10:16.5, 24°.63N×121°.65E, h8km, ML0.7, 1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDS	**Dongshan**	**0.06**	**83**	P	Pg	18 10 19.1	+0.7
	baz=82						
NDS				S	Sg	18 10 20.8	+0.9
	baz=82						
ENTT	**Nioudou**	**0.07**	**281**	*e*P	Pg	18 10 19.5	+0.9
	baz=280						
ENTT				S	Sg	18 10 20.6	+0.5
	baz=280						
TWE	**Neicheng**	**0.10**	**11**	⇓P	Pg	18 10 19.8	+0.9
	baz=19						
TWE				S	Sg	18 10 21.6	+1.0
	baz=19						
NDT	**Datong Townshi**	**0.12**	**259**	P	Pg	18 10 20.1	+0.8
	baz=259						
NDT				S	Sg	18 10 22.4	+1.1
	baz=259						
LATG	**Datong**	**0.14**	**230**	P	Pg	18 10 20.6	+0.9
	baz=230						
LATG				S	Sg	18 10 23.0	+1.1
	baz=230						
FUSB	**Fushanzhiwuyua**	**0.14**	**338**	P	Pg	18 10 20.6	+1.0
	baz=338						
FUSB				S	Sg	18 10 23.0	+1.1
	baz=338						
TWC	**Suao**	**0.19**	**95**	*e*P	Pg	18 10 21.2	+0.9
	baz=95						
TWC				*i* S	Sg	18 10 25.1	+2.1
	baz=95						
ESAO	**Su ao**	**0.19**	**105**	P	Pg	18 10 21.4	+1.1
	baz=105						
ESAO				S	Sg	18 10 24.4	+1.4
	baz=105						
NWLT	**Wulai**	**0.20**	**319**	*i* P	Pg	18 10 21.6	+1.0
	baz=319						
NWLT				*e*S	Sg	18 10 24.4	+0.9
	baz=319						
ENA	**Nanau**	**0.21**	**156**	*e*S	Sg	18 10 24.8	+0.9
	baz=154						
EWUT	**Wuta**	**0.22**	**146**	P	Pg	18 10 21.5	+0.6
	baz=146						
YHNB	**Yeheng**	**0.25**	**280**	*i* P	Pg	18 10 22.6	+1.0
	baz=280						
YHNB				S	Sg	18 10 26.6	+1.6
	baz=280						
NSK	**Sanguang**	**0.27**	**281**	P	Pb	18 10 22.9	-0.7
	baz=280						
NSK				*e*S	Sg	18 10 26.5	+1.0
	baz=280						
NNSB	**Datong**	**0.31**	**231**	*e*P	Pb	18 10 24.4	+0.1
	baz=230						
NNSB				*i* S	Sb	18 10 29.0	-0.6
	baz=230						
NHY	**Taipei**	**0.42**	**350**	S	Sb	18 10 32.4	-0.2
	baz=350						

*IDC **14** 18:24:06.7±1.9, 42°.53S×74°.39W, h0km, mb3.9/3, mbtmp3.9/4, ML4.0/1, MS2.9/1, Error ellipse: s-maj=44.3km s-min=34.1km az=159.0*
*NEIC **14** 18:24:07.1±1.9, 42°.21S±0°.05×74°.65W±0°.03, h10km±2km, mb4.4/2, Error ellipse: s-maj=8.0km s-min=3.6km az=358.0*
*GUC **14** 18:24:13.3±0.8, 42°.24S×74°.14W, h42km±2km, ML3.9*

ISC 14 18:24:11.4±1.7, 42°.22S±0°.04×74°.29W±0°.08, h27km±11km, n47, σ1$43/52, mb4.2/4, 1C-2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LL06	**Loncomilla**	**0.49**	**90**		**Pb**	**18 24 21.8**	**+0.2**
LL06	**Loncomilla**	**0.49**	**90** ⇓	*e*P	**Pb**	**18 24 22.0**	**+0.4**
LL06				*i* S	**Sb**	**18 24 28.9**	**+0.4**
LL06				IAML		18 24 29.9	
	comp=E,11μm,0.3s						
LL07	**Hotel Espejo d**	**0.86**	**136**		**Pn**	**18 24 27.8**	**0.0**
LL07	**Hotel Espejo d**	**0.86**	**136** ⇓	*e*P	**Pn**	**18 24 27.8**	**0.0**
LL07				*e*S	**Sb**	**18 24 38.2**	**-0.7**
LL07				IAML		18 24 40.9	
	comp=N,12μm,0.4s						
GO07	**Milladeo Hill,**	**1.01**	**153**		**Pn**	**18 24 30.1**	**+0.3**
GO07	**Milladeo Hill,**	**1.01**	**153**	*e*P	**Pn**	**18 24 30.1**	**+0.3**
GO07				*e*S	**Sn**	**18 24 42.5**	**-0.7**
GO07				IAML		18 24 56.4	
	comp=E,9μm,0.7s						
LL05	**Los Muermos**	**1.01**	**37**		**Pn**	**18 24 29.9**	**+0.1**
LL05	**Los Muermos**	**1.01**	**37**	*e*P	**Pn**	**18 24 30.2**	**+0.3**
LL05				*e*S	**Sn**	**18 24 43.6**	**+0.4**
LL05				IAML		18 24 45.7	
	comp=E,8μm,0.3s						
LL01	**San Ignacio de**	**1.41**	**97**		**Pn**	**18 24 34.6**	**-0.6**
LL01	**San Ignacio de**	**1.41**	**97**	*e*P	**Pn**	**18 24 34.5**	**-0.7**
LL01				*e*S	**Sn**	**18 24 51.4**	**-1.4**
LL02	**Futaleuf**	**2.05**	**119**		**Pn**	**18 24 44.8**	**+0.7**
LL02	**Futaleuf**	**2.05**	**119**	*e*P	**Pn**	**18 24 44.7**	**+0.7**
LL02				*e*S	**Sn**	**18 25 09.0**	**+0.2**
LR04	**Corral**	**2.42**	**16**		**Pn**	**18 24 49.9**	**+0.7**
LR04	**Corral**	**2.42**	**16**	*e*P	**Pn**	**18 24 50.1**	**+0.9**
AY01	**Puyuhuapi**	**2.51**	**152**		**Pn**	**18 24 50.4**	**0.0**
AY01	**Puyuhuapi**	**2.51**	**152**	*e*P	**Pn**	**18 24 51.1**	**+0.7**
AY01				*e*S	**Sn**	**18 25 19.6**	**-0.5**
AY01				IAML		18 25 26.3	
	comp=N,849nm,0.6s						
LR05	**Currie**	**2.63**	**42**		**Pn**	**18 24 52.4**	**+0.3**
LR05	**Currie**	**2.63**	**42**	*e*P	**Pn**	**18 24 53.0**	**+0.9**
LR05				*e*S	**Sn**	**18 25 23.3**	**+0.2**
LR05				IAML		18 25 30.8	
	comp=E,568nm,0.4s						
LR03	**Panguipulli**	**2.97**	**30**	Pn	**Pn**	**18 24 56.0**	**-0.8**
LR03	**Panguipulli**	**2.97**	**30**	*e*S	**Sn**	**18 25 31.7**	**+0.1**
LR03				IAML		18 25 47.7	
	comp=N,690nm,0.5s						
PLCA	**Paso Flores**	**3.18**	**63**		**Pn**	**18 25 00.8**	**+1.1**
PLCA	**Paso Flores**	**3.18**	**63**	Pn	**Pn**	**18 25 01.3**	**+1.6**
	comp=N,3.1nm,0.3s,baz=235,slow=16,SNR=94						
PLCA				Sn	**Sb**	**18 25 44.9**	**-0.6**
	comp=N,6.5nm,0.3s,baz=42,slow=18,SNR=4.7						
PLCA				LR	LR	18 26 35.7	
	comp=N,194nm,20.1s,baz=306,slow=44						
	comp=N,28nm,0.5s						
PLCA	**Paso Flores**	**3.18**	**63**	*e*P	**Pn**	**18 25 00.8**	**+1.1**
GO06	**Curarrehue**	**3.39**	**40**		**Pn**	**18 25 03.9**	**+1.3**
GO06	**Curarrehue**	**3.39**	**40** ⇓	*e*P	**Pn**	**18 25 04.0**	**+1.3**
LC02	**Puerto Saavedr**	**3.49**	**12**	Pn	**Pn**	**18 25 00.6**	**-3.3**
COYC	**Coyhaique**	**3.72**	**155**		**Pn**	**18 25 06.8**	**-0.2**
AY02	**Valle Explorad**	**4.34**	**170**	Pn	**Pn**	**18 25 13.8**	**-1.7**
AY03	**Cochrane**	**5.18**	**167**	Pn	**Pn**	**18 25 25.0**	**-2.1**
BI05	**Punta Hualpn**	**5.53**	**9**	Pn	**Pn**	**18 25 28.1**	**-3.8**
GO08	**Villa O'Higgin**	**6.37**	**170**	Pn	**Pn**	**18 25 46.7**	**+3.3**
ML02	**Panimavida**	**6.82**	**20**	Pn	**Pn**	**18 25 46.8**	**-2.9**
GO05	**Huala**	**7.43**	**15**	Pn	**Pn**	**18 25 55.6**	**-2.4**
BO02	**Sierra Bellavi**	**7.91**	**22**	Pn	**Pn**	**18 26 02.4**	**-2.2**
BO01	**Tunca**	**8.21**	**19**	Pn	**Pn**	**18 26 07.3**	**-1.4**
MT09	**Talagante**	**8.82**	**18**	Pn	**Pn**	**18 26 14.2**	**-3.0**
H03S1	**Juan Fernandez**	**9.11**	**335**	T	T	18 35 30.3	
	baz=155,slow=75						
H03S2	**Juan Fernandez**	**9.13**	**335**	T	T	18 35 29.5	
	baz=155,slow=75						
H03S3	**Juan Fernandez**	**9.13**	**335**	T	T	18 35 30.9	
	baz=155,slow=75						
MT02	**Curacav**	**9.28**	**17**	Pn	Pn	18 26 18.7	-4.8
TRQA	**Tornquist**	**10.30**	**70**	Pn	**Pn**	**18 26 37.5**	**+0.1**
CO06	**Fray Jorge**	**11.71**	**11**	Pn	**Pn**	**18 26 55.0**	**-1.8**
CPUP	**Villa Florida**	**21.09**	**47**	P	**P**	**18 28 54.1**	**+0.3**
CPUP				IAmb	IAmb	18 28 55.9	
	comp=Z,4.8nm,0.6s						
CPUP	**Villa Florida**	**21.09**	**47**	P	**P**	**18 28 54.8**	**+1.0**
	comp=Z,4.1nm,0.5s,baz=228,slow=11,SNR=9.8						
	comp=Z,4.1nm,0.5s						
QSPA	**South Pole Qui**	**48.03**	**180**	P	**P**	**18 32 48.1**	**+0.1**
QSPA				IAmb	IAmb	18 33 11.5	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**76.17**	**334**	P	**P**	**18 35 58.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=124,slow=8.0,SNR=3.7						
	comp=Z,0.2nm,0.6s						
BOSA	**Boshof**	**77.84**	**118**	P	**P**	**18 36 06.0**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=228,slow=5.3,SNR=4.9						
	comp=Z,2.1nm,0.8s						

*IDC **14** 18:25:35.8±3.9, 47°.87N×92°.06W, h0km, mbtmp2.7/2, ML1.8/2, Error ellipse: s-maj=75.2km s-min=25.2km az=42.0*
*NEIC **14** 18:25:36.3±0.9, 47°.56N±0°.02×92°.60W±0°.03, h0km±2km, mb_Lg2.4/8, ML2.4/6, Error ellipse: s-maj=4.9km s-min=3.0km az=34.0*

ISC 14 18:25:34.8±0.9, 47°55N±0.05×92°65W±0.06, h0km, n12, σ0§94/12, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.87**	**63**	Pg	**Pg**	**18 25 51.5**	**0.0**
EYMN				IAML		18 26 08.0	
	213nm,1.2s						
B35A	**Bob, Littlefor**	**1.08**	**318**		**Pb**	**18 25 56.3**	**-0.1**
B35A				IAML		18 26 16.2	
	comp=E,64nm,1.6s						
E38A	**The Farm, Brul**	**1.21**	**141**	Pg	**Pb**	**18 25 58.2**	**-0.3**
E38A				IAML		18 26 18.4	
	comp=E,86nm,0.7s						
E38A				IAML		18 26 29.1	
	comp=N,60nm,0.4s						
F36A	**Milaca**	**1.80**	**200**	Pn	**Pb**	**18 26 08.6**	**0.0**
F36A					**Sb**	**18 26 31.3**	**-0.3**
F36A				IAmb_Lg		18 26 35.8	
	comp=Z,25nm,1.2s						
AGMN	**Agassiz Nation**	**2.29**	**290**	Pn	**Pn**	**18 26 14.8**	**+1.1**
AGMN				IAmb_Lg		18 26 54.6	
	comp=Z,11nm,0.8s						
SPMN	**Marine on St.**	**2.33**	**183**	Pn	**Pn**	**18 26 15.1**	**+0.7**
SPMN				IAmb_Lg		18 26 50.3	
	comp=Z,15nm,0.9s						
COWI	**Conover**	**2.81**	**120**	IAmb_Lg		18 27 11.9	
	comp=Z,11nm,1.0s						
G40A	**Rib Lake**	**2.84**	**143**	Pn	**Pn**	**18 26 22.4**	**+0.9**
ULM	**Lac du Bonnet**	**3.44**	**323**	Pn	**Pn**	**18 26 30.8**	**+1.2**
ULM	**Lac du Bonnet**	**3.44**	**323**	Pn	**Pn**	**18 26 30.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=132,slow=12,SNR=2.3						
ULM				Sn	**Sn**	**18 27 09.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=212,slow=21,SNR=2.2						
ULM				Lg	Lg	18 27 22.6	
	comp=Z,1.4nm,0.3s,baz=50,slow=23,SNR=17						
	comp=Z,0.6nm,0.3s						
I10CA	**LAC DU BONNET**	**3.46**	**321**	I	I	18 49 00.0	
	baz=131,slow=335,SNR=1.9						
YKA	**Yellowknife Ar**	**19.40**	**328**	P	**P**	**18 30 01.1**	**-0.9**
	baz=132,slow=12,SNR=5.3						
	comp=Z,0.3nm,0.8s						

*HLW **14** 18:27:04.3, 36°48N×25°20E, h10km±22km, Md4.1, MI4.8*
*IDC **14** 18:27:05.8±1.8, 36°16N×25°24E, h138km±28km, mb3.6/5, mbtmp3.9/14, Error ellipse: s-maj=24.1km s-min=14.5km az=21.0*
*GII **14** 18:27:06.1±0.6, 35°98N±0°01×25°283E±0°005, h105km, mB4.1/14, Md3.8/3, Mws3.9, confirmed*
*NEIC **14** 18:27:07.0±1.3, 36°49N±0°08×25°01E±0°09, h111km±9km, mb4.1/7, Error ellipse: s-maj=11.9km s-min=10.0km az=178.0*
*ATH **14** 18:27:07.7, 36°40N×25°03E, h109km±2km, ML3.7/15, Error ellipse: s-maj=2.6km s-min=1.0km az=92.0*
*ISK **14** 18:27:07.2, 36°41N×25°06E, h103km±1km, ML3.5/27*
*THE **14** 18:27:08.8, 36°40N×25°00E, h105km±2km, ML3.7/18, Error ellipse: s-maj=2.3km s-min=0.6km az=104.0*
*AFAD **14** 18:27:09.3±0.0, 35°93N×25°51E, h7km±3km, MW4.0*
*PDG **14** 18:27:12.9±0.4, 37°21N×24°69E, h105km±11km, ML4.1/10, Error ellipse: s-maj=2.8km s-min=4.2km az=0.0*
*TIR **14** 18:27:13.5, 36°93N×23°78E, h5km±23km, Ml4.1*

ISC 14 18:27:05.9±0.6, 36°38N±0°03×25°06E±0°03, h118km±6km, n271, σ1§96/288, mb3.8/8, 5C-5D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNT5	**Nea Kammeni, S**	**0.27**	**84**	P	**Pn**	**18 27 23.7**	**+1.3**
THR6	**Thira Island,**	**0.27**	**95**	P	**Pn**	**18 27 23.6**	**+1.2**
THR6	**Thira Island,**	**0.27**	**95**	P	**Pn**	**18 27 23.6**	**+1.2**
THR3	**Thira Island,**	**0.27**	**83**	P	**Pn**	**18 27 23.6**	**+1.2**
THR3	**Thira Island,**	**0.27**	**83**	P	**Pn**	**18 27 23.8**	**+1.3**
CMBO	**Columbo, Santo**	**0.29**	**71**	P	**Pn**	**18 27 23.5**	**+1.0**
CMBO	**Columbo, Santo**	**0.29**	**71**	P	**Pn**	**18 27 23.6**	**+1.1**
THT2	**Imerovigli**	**0.29**	**79**	P	**Pn**	**18 27 23.5**	**+0.9**
THR2	**Thira island,**	**0.31**	**77**	P	**Pn**	**18 27 23.7**	**+1.1**
SANT	**Santorini**	**0.32**	**91**	Pn	**Pn**	**18 27 23.2**	**+0.5**
SANT	**Santorini**	**0.32**	**91**	P	**Pn**	**18 27 23.8**	**+1.1**
SANT	**Santorini**	**0.32**	**91**	P	**Pn**	**18 27 23.8**	**+1.1**
SANT				S	**Sn**	**18 27 35.6**	**+0.2**
SANT				AML	AML	18 27 36.1	
	comp=N,2171µm,0.4s						
SANT				AML	AML	18 27 36.8	
	comp=E,8350µm,0.7s						
THR8	**Santorini-Mono**	**0.34**	**85**	P	**Pn**	**18 27 23.7**	**+1.0**
THR8	**Santorini-Mono**	**0.34**	**85**	P	**Pn**	**18 27 23.7**	**+1.0**
MHLO	**Agia Marina, M**	**0.62**	**300**	P	**Pn**	**18 27 25.4**	**+1.0**
MHLO	**Agia Marina, M**	**0.62**	**300**	P	**Pn**	**18 27 25.5**	**+1.2**
MHLO				S	**Sn**	**18 27 37.5**	**-0.8**
MHLO				AML	AML	18 27 45.0	
	comp=N,5088µm,0.4s						
MHLO				AML	AML	18 27 46.5	
	comp=E,5700µm,0.4s						
APE	**Apeiranthos**	**0.79**	**28**	Pg	**Pn**	**18 27 26.5**	**+0.8**
APE				Sg	**Sn**	**18 27 39.8**	**-1.0**
APE	**Apeiranthos**	**0.79**	**28**	P	**Pn**	**18 27 26.6**	**+0.8**
APE				S	**Sn**	**18 27 40.1**	**-0.8**
	comp=E,3µm,0.6s						
APE	**Apeiranthos**	**0.79**	**28**	P	**Pn**	**18 27 25.9**	**+0.1**
APE				S	**Sn**	**18 27 40.4**	**-0.4**
APE	**Apeiranthos**	**0.79**	**28**	P	**Pn**	**18 27 26.6**	**+0.8**
APE				S	**Sn**	**18 27 40.0**	**-0.8**
APE				AML	AML	18 27 41.1	
	comp=N,4905µm,0.5s						
APE				AML	AML	18 27 41.5	
	comp=E,6715µm,0.6s						
HRKL	**Herakleio**	**1.06**	**178**	Pn	**Pn**	**18 27 30.1**	**+1.7**
HRKL				Sn	**Sn**	**18 27 45.9**	**+0.6**
HRKL	**Herakleio**	**1.06**	**178**	P	**Pn**	**18 27 29.9**	**+1.5**
HRKL				S	**Sn**	**18 27 46.0**	**+0.6**
	comp=E,7µm,0.2s						
HRKL	**Herakleio**	**1.06**	**178**	P	**Pn**	**18 27 30.1**	**+1.7**
HRKL				S	**Sn**	**18 27 45.9**	**+0.6**
IACM	**Heraklion**	**1.07**	**180**	P	**Pn**	**18 27 29.8**	**+1.3**
IDI	**Anoyia**	**1.10**	**187**	Pn	**Pn**	**18 27 29.9**	**+1.1**
IDI				Sn	**Sn**	**18 27 46.5**	**+0.3**
IDI	**Anoyia**	**1.10**	**187**	P	**Pn**	**18 27 29.9**	**+1.1**
IDI				S	**Sn**	**18 27 46.4**	**+0.3**
	comp=E,4µm,0.3s						
IDI	**Anoyia**	**1.10**	**187**	P	**Pn**	**18 27 29.9**	**+1.1**
IDI				S	**Sn**	**18 27 46.1**	**0.0**
IDI				AML	AML	18 27 46.7	
	comp=E,10103µm,0.4s						
IDI				AML	AML	18 27 46.8	
	comp=N,8906µm,0.2s						
TNSA	**Tinos**	**1.16**	**4**	P	**Pn**	**18 27 30.3**	**+0.9**
TNSA				S	**Sn**	**18 27 46.3**	**-0.9**
TNSA				AML	AML	18 27 47.0	
	comp=E,1881µm,0.6s						
TNSA				AML	AML	18 27 47.1	
	comp=N,2620µm,0.5s						
CHAN	**Chania**	**1.19**	**224**	P	**Pn**	**18 27 31.0**	**+1.3**
CHAN				S	**Sn**	**18 27 47.6**	**-0.1**
CHAN				AML	AML	18 27 51.0	
	comp=N,4962µm,0.2s						
CHAN				AML	AML	18 27 52.1	
	comp=E,5660µm,0.2s						
IMMV	**Iera Moni Meta**	**1.27**	**224**	Pn	**Pn**	**18 27 31.8**	**+1.3**
IMMV	**Iera Moni Meta**	**1.27**	**224**	P	**Pn**	**18 27 31.9**	**+1.3**
IMMV				S	**Sn**	**18 27 49.0**	**-0.2**
	comp=E,3µm,0.4s						
IMMV	**Iera Moni Meta**	**1.27**	**224**	P	**Pn**	**18 27 31.9**	**+1.3**
IMMV				S	**Sn**	**18 27 49.0**	**-0.2**
IMMV				AML	AML	18 27 53.9	
	comp=E,5364µm,0.4s						
IMMV				AML	AML	18 27 55.2	
	comp=N,4847µm,0.3s						
TMBK	**Timbaki Herakl**	**1.32**	**191**	P	**Pn**	**18 27 33.0**	**+1.8**
RODP	**Rodopos**	**1.34**	**233**	P	**Pn**	**18 27 32.9**	**+1.6**
FRMA	**Ierapetra Chan**	**1.47**	**158**	P	**Pn**	**18 27 35.4**	**+2.6**
FRMA				S	**Sn**	**18 27 55.3**	**+2.1**
	comp=N,1µm,0.2s						
ANKY	**Antikythira Is**	**1.52**	**251**	P	**Pn**	**18 27 34.5**	**+1.2**
ANKY				S	**Sn**	**18 27 53.7**	**-0.4**
	comp=N,1µm,0.5s						
ANKY	**Antikythira Is**	**1.52**	**251**	P	**Pn**	**18 27 34.5**	**+1.2**
ANKY				S	**Sn**	**18 27 53.8**	**-0.4**
ANKY				AML	AML	18 27 54.3	
	comp=N,2163µm,0.4s						
ANKY				AML	AML	18 27 58.2	
	comp=E,2632µm,0.4s						
ZKR	**Zakros**	**1.57**	**143**	Pn	**Pn**	**18 27 35.9**	**+1.9**
ZKR	**Zakros**	**1.57**	**143**	P	**Pn**	**18 27 36.0**	**+1.9**
ZKR				S	**Sn**	**18 27 56.6**	**+1.2**
	comp=E,2µm,0.2s						
ZKR	**Zakros**	**1.57**	**143**	P	**Pn**	**18 27 36.1**	**+2.0**
ZKR				S	**Sn**	**18 27 56.4**	**+1.0**
ZKR				AML	AML	18 28 00.3	
	comp=E,3285µm,0.3s						
ZKR				AML	AML	18 28 02.1	
	comp=N,1638µm,0.3s						
YDRA	**Hydra**	**1.61**	**308**	P	**Pn**	**18 27 35.6**	**+1.2**
YDRA				S	**Sn**	**18 27 55.7**	**-0.5**
YDRA				AML	AML	18 27 58.4	
	comp=N,2090µm,0.5s						
YDRA				AML	AML	18 27 59.1	
	comp=E,2191µm,0.4s						
MNVA	**Monemvasia**	**1.66**	**281**	P	**Pn**	**18 27 36.9**	**+1.9**
MNVA				S	**Sn**	**18 27 57.1**	**-0.2**
MNVA				AML	AML	18 27 59.3	
	comp=E,1816µm,0.3s						
MNVA				AML	AML	18 27 59.6	
	comp=N,3041µm,0.3s						
GVD	**Gavdhos**	**1.73**	**208**	P	**Pn**	**18 27 38.0**	**+2.1**
GVD				S	**Sn**	**18 28 00.0**	**+1.2**
	comp=N,3µm,0.2s						
VLI	**Velíai**	**1.75**	**282**	P	**Pn**	**18 27 36.8**	**+0.8**
VLI				S	**Sn**	**18 27 57.9**	**-1.2**
	comp=N,2µm,0.3s						
VLI	**Velíai**	**1.75**	**282**	P	**Pn**	**18 27 36.8**	**+0.8**
VLI				S	**Sn**	**18 27 58.0**	**-1.2**
VLI				AML	AML	18 27 58.4	
	comp=N,3366µm,0.3s						
VLI				AML	AML	18 27 60.0	
	comp=E,2809µm,0.3s						
VLY	**Voula,Athens**	**1.79**	**326**	P	**Pn**	**18 27 37.7**	**+1.1**
VLY	**Voula,Athens**	**1.79**	**326**	P	**Pn**	**18 27 38.0**	**+1.4**
VLY				S	**Sn**	**18 27 59.8**	**-0.3**
VLY				AML	AML	18 28 01.7	
	comp=E,760µm,0.4s						
VLY				AML	AML	18 28 01.9	
	comp=N,743µm,0.8s						
KRND	**KRANIDI**	**1.83**	**304**	P	**Pn**	**18 27 38.6**	**+1.4**
KRND				S	**Sn**	**18 28 00.9**	**-0.1**
	comp=N,1µm,0.8s						
KRND	**KRANIDI**	**1.83**	**304**	P	**Pn**	**18 27 38.5**	**+1.4**
KRND				S	**Sn**	**18 28 00.9**	**-0.1**
KRND				AML	AML	18 28 02.2	
	comp=N,3072µm,0.6s						
KRND				AML	AML	18 28 02.8	
	comp=E,2961µm,0.7s						
ATHU	**Athens Univers**	**1.89**	**328**	P	**Pn**	**18 27 39.1**	**+1.3**
ATHU				S	**Sn**	**18 28 01.5**	**-0.7**
	comp=E,498nm,0.9s						
ATHU	**Athens Univers**	**1.89**	**328**	P	**Pn**	**18 27 39.2**	**+1.3**
KARP	**Karpathos**	**1.89**	**115**	Pn	**Pn**	**18 27 39.6**	**+1.6**
KARP	**Karpathos**	**1.89**	**115**	Pn	**Pn**	**18 27 39.0**	**+1.0**
KARP	**Karpathos**	**1.89**	**115**	P	**Pn**	**18 27 39.5**	**+1.6**
KARP	**Karpathos**	**1.89**	**115**	P	**Pn**	**18 27 39.5**	**+1.6**
KARP				S	**Sn**	**18 28 03.1**	**+0.7**
KARP				AML	AML	18 28 06.1	
	comp=N,6118µm,0.2s						
KARP				AML	AML	18 28 06.8	
	comp=E,6393µm,0.3s						
ATH	**Athens Observa**	**1.92**	**326**	P	**Pn**	**18 27 39.6**	**+1.4**
ATH				S	**Sn**	**18 28 02.9**	**0.0**
	comp=E,918nm,0.8s						
ATH	**Athens Observa**	**1.92**	**326**	P	**Pn**	**18 27 39.7**	**+1.4**
PTL	**Penteli**	**1.92**	**331**	P	**Pn**	**18 27 40.7**	**+2.4**
PTL				S	**Sn**	**18 28 03.0**	**-0.1**
	comp=E,525nm,0.6s						
BODT	**Bodrum**	**1.93**	**69**	Pn	**Pn**	**18 27 39.9**	**+1.6**
BODT	**Bodrum**	**1.93**	**69**	P	**Pn**	**18 27 40.3**	**+2.0**
YKAV	**Yalikavak-Bodr**	**1.93**	**67**	Pn	**Pn**	**18 27 39.5**	**+1.2**
SMG	**Samos**	**1.94**	**46**	P	**Pn**	**18 27 40.0**	**+1.5**
SMG	**Samos**	**1.94**	**46**	P	**Pn**	**18 27 40.0**	**+1.5**
YAZI	**Mula-Dat§a-**	**1.95**	**80**	P	**Pn**	**18 27 39.9**	**+1.4**
EPID	**Epidavros**	**1.99**	**309**	P	**Pn**	**18 27 40.5**	**+1.4**
EPID	**Epidavros**	**1.99**	**309**	P	**Pn**	**18 27 40.4**	**+1.4**
DAT	**Datca**	**2.06**	**79**	Pn	**Pn**	**18 27 41.6**	**+1.6**
DAT	**Datca**	**2.06**	**79**	P	**Pn**	**18 27 41.7**	**+1.6**
DATC	**Datca-Mugla**	**2.12**	**79**	Pn	**Pn**	**18 27 42.5**	**+1.7**
RFTAA	**Mazikoy-Bodrum**	**2.24**	**73**	Pn	**Pn**	**18 27 43.7**	**+1.5**
GMLD	**Gumuldur**	**2.25**	**41**	Pn	**Pn**	**18 27 43.7**	**+1.4**
VILL	**Villia**	**2.27**	**322**	P	**Pn**	**18 27 44.0**	**+1.4**
VILL				S	**Sn**	**18 28 10.7**	**-0.1**
	comp=E,425nm,0.7s						
MLSB	**Milas**	**2.36**	**66**	Pn	**Pn**	**18 27 45.4**	**+1.6**
KYMI	**Kymi, Euboea I**	**2.38**	**342**	P	**Pn**	**18 27 45.2**	**+1.2**
ARG	**Arkhangelos**	**2.48**	**93**	Pn	**Pn**	**18 27 47.3**	**+2.0**
ARG	**Arkhangelos**	**2.48**	**93**	Pn	**Pn**	**18 27 47.3**	**+2.0**
THAL	**Thalero**	**2.53**	**312**	P	**Pn**	**18 27 47.7**	**+1.7**
BLCB	**Balcova**	**2.55**	**38**	Pn	**Pn**	**18 27 47.5**	**+1.3**
TURN	**Turunc**	**2.59**	**80**	P	**Pn**	**18 27 49.0**	**+2.2**
TURN				S	**Sn**	**18 28 18.4**	**+0.3**
TURN				*i* AML	AML	18 28 21.0	
	comp=E,105nm,0.4s						
TURN				*i* AML	AML	18 28 22.0	
	comp=E,137nm,0.4s						
GUR	**Goura**	**2.67**	**306**	P	**Pn**	**18 27 49.0**	**+1.1**
GUR				S	**Sn**	**18 28 19.5**	**-0.7**
	comp=E,2µm,0.2s						
YER	**Yerkesik**	**2.69**	**73**	Pn	**Pn**	**18 27 50.5**	**+2.4**
PYL	**PYLOS**	**2.72**	**282**	P	**Pn**	**18 27 49.1**	**+0.7**
PYL				S	**Sn**	**18 28 21.2**	**0.0**
	comp=E,1µm,0.3s						
MULA	**Mugla, Merkez-**	**2.76**	**70**	P	**Pn**	**18 27 51.7**	**+2.8**
SIGR	**SIGRI**	**2.90**	**12**	Pn	**Pn**	**18 27 52.5**	**+1.8**
DALY	**Dalyan (Mula)**	**2.92**	**80**	Pn	**Pn**	**18 27 53.5**	**+2.5**
ESEN	**Aydn-Nazilli**	**2.98**	**61**	P	**Pn**	**18 27 54.4**	**+2.6**
DRO	**Drossia**	**3.10**	**301**	P	**Pn**	**18 27 56.1**	**+1.6**
DRO				S	**Sn**	**18 28 31.3**	**+1.1**
	comp=E,1µm,0.4s						
EFP	**Efpalio**	**3.24**	**310**	P	**Pn**	**18 27 56.5**	**+1.3**
FETY	**Fethiye**	**3.25**	**84**	Pn	**Pn**	**18 27 57.7**	**+2.3**
FETY	**Fethiye**	**3.25**	**84**	P	Pn	18 28 00.1	+4.7
FETY				S	**Sn**	**18 28 34.2**	**+0.6**
FETI	**Fethiye-Mugla**	**3.26**	**83**	Pn	**Pn**	**18 27 57.0**	**+1.5**
TAVA	**DENIZLI_Tavas**	**3.27**	**69**	P	**Pn**	**18 27 58.6**	**+2.9**
TAVA				S	**Sn**	**18 28 36.9**	**+2.7**
TAVA				*i* AML	AML	18 28 43.0	
	comp=E,16nm,0.5s						
TAVA				*i* AML	AML	18 28 46.0	
	comp=E,22nm,0.5s						
DNZT	**Denizli-Tavas-**	**3.30**	**73**	P	**Pn**	**18 27 59.1**	**+2.9**
DNZT				S	**Sn**	**18 28 35.8**	**+0.8**
DNZT				*i* AML	AML	18 28 47.0	
	comp=E,20nm,0.2s						
DNZT				*i* AML	AML	18 28 48.0	
	comp=E,27nm,0.4s						
IZZE	**Mula-Seydike**	**3.36**	**88**	P	**Pn**	**18 27 58.8**	**+2.0**
IZZE				S	**Sn**	**18 28 34.0**	**-2.2**
IZZE				*i* AML	AML	18 28 40.0	
	comp=E,348nm,0.3s						
IZZE				*i* AML	AML	18 28 44.0	
	comp=E,274nm,0.3s						
AGG	**Agios Georgios**	**3.42**	**321**	Pn	**Pn**	**18 27 59.2**	**+1.7**
AGG	**Agios Georgios**	**3.42**	**321**	P	**Pn**	**18 27 59.4**	**+1.8**
AGG				S	**Sn**	**18 28 38.2**	**+0.6**
	comp=E,208nm,0.4s						
DNIZ	**Denizli-Tavas-**	**3.42**	**67**	P	**Pn**	**18 28 00.6**	**+2.9**
DNIZ				S	**Sn**	**18 28 40.9**	**+3.2**
DNIZ				*i* AML	AML	18 28 46.0	
	comp=E,88nm,0.3s						
DNIZ				*i* AML	AML	18 28 51.0	
	comp=E,44nm,0.4s						
CAME	**Cameli-Denizli**	**3.46**	**79**	Pn	**Pn**	**18 28 00.8**	**+2.6**
CAEL	**Denizli, Camel**	**3.50**	**76**	P	**Pn**	**18 28 01.2**	**+2.4**
CAEL				S	**Sn**	**18 28 41.2**	**+1.5**
CAEL				*i* AML	AML	18 28 49.0	
	comp=E,92nm,0.6s						
CAEL				*i* AML	AML	18 28 51.0	
	comp=E,66nm,0.7s						
APMY	**Acipayam-Deniz**	**3.57**	**71**	Pn	**Pn**	**18 28 01.5**	**+1.8**
KULA	**Kula-Manisa**	**3.57**	**52**	Pn	**Pn**	**18 28 01.4**	**+1.7**
EZN	**Ezine**	**3.58**	**16**	Pn	**Pn**	**18 28 00.7**	**+1.0**
KNIK	**Mula-Seydike**	**3.66**	**81**	P	**Pn**	**18 28 02.8**	**+1.9**
KNIK				S	**Sn**	**18 28 43.5**	**0.0**
KNIK				*i* AML	AML	18 28 46.0	
	comp=E,68nm,0.4s						
KNIK				*i* AML	AML	18 28 46.0	
	comp=E,96nm,0.4s						
AKAS	**Kas**	**3.67**	**91**	P	**Pn**	**18 28 02.2**	**+1.1**
AKAS				S	**Sn**	**18 28 40.6**	**-3.2**
AKAS				*i* AML	AML	18 28 48.0	
	comp=E,501nm,0.3s						
AKAS				*i* AML	AML	18 28 48.0	
	comp=E,311nm,0.4s						
PAIG	**Paliouri**	**3.71**	**343**	P	**Pn**	**18 28 02.8**	**+1.4**
GOLH	**Golhisar**	**3.71**	**75**	P	**Pn**	**18 28 04.6**	**+3.1**
GOLH				S	**Sn**	**18 28 45.6**	**+1.0**
GOLH				*i* AML	AML	18 28 54.0	
	comp=E,48nm,0.4s						
GOLH				*i* AML	AML	18 28 55.0	
	comp=E,35nm,0.6s						
INCE	**Denizli-Bozkur**	**3.85**	**68**	P	**Pn**	**18 28 06.3**	**+3.0**
INCE				S	**Sn**	**18 28 48.6**	**+0.7**
INCE				*i* AML	AML	18 28 53.0	
	comp=E,41nm,0.4s						
INCE				*i* AML	AML	18 28 55.0	
	comp=E,17nm,0.6s						
DEMR	**Demre-Antalya**	**3.91**	**91**	Pn	**Pn**	**18 28 06.1**	**+1.9**
ELL	**Elmali**	**3.92**	**83**	Pn	**Pn**	**18 28 06.7**	**+2.3**
ELL	**Elmali**	**3.92**	**83**	Pn	**Pn**	**18 28 05.5**	**+1.2**
OUR	**Ouranopolis**	**4.04**	**348**	P	**Pn**	**18 28 07.5**	**+1.7**
EVGI	**Lefkada island**	**4.16**	**304**	P	**Pn**	**18 28 08.0**	**+0.6**
BRDR	**BURDUR-Merkez**	**4.21**	**70**	P	**Pn**	**18 28 11.4**	**+3.2**
BRDR				S	**Sn**	**18 28 57.7**	**+1.1**
BRDR				*i* AML	AML	18 29 02.0	
	comp=E,19nm,1.0s						
BRDR				*i* AML	AML	18 29 04.0	
	comp=E,17nm,0.9s						
LIT	**Litokhoron**	**4.23**	**332**	Pn	**Pn**	**18 28 07.2**	**-1.2**
LKD2	**Lefkada island**	**4.25**	**306**	P	**Pn**	**18 28 08.1**	**-0.6**
	baz=308						
LKD2				S	Sn	18 28 47.9	-10
	baz=308						
LKD2				AMP			
	comp=N,1.6nm,0.1s,baz=308						
AKUM	**Antalya-Kumluc**	**4.26**	**89**	P	**Pn**	**18 28 10.9**	**+2.1**
AKUM				S	**Sn**	**18 28 53.6**	**-4.1**
AKUM				*i* AML	AML	18 29 00.0	
	comp=N,179nm,0.4s						
AKUM				*i* AML	AML	18 29 01.0	
	comp=N,110nm,0.4s						
TSLK	**Tsoukalades, L**	**4.27**	**306**	P	**Pn**	**18 28 10.0**	**+1.1**
BASM	**Basmaki-Afyon**	**4.27**	**67**	Pn	**Pn**	**18 28 10.9**	**+1.9**
KORT	**Korkueli**	**4.29**	**80**	P	**Pn**	**18 28 12.2**	**+2.8**
KORT				S	**Sn**	**18 28 57.9**	**-0.8**
KORT				*i* AML	AML	18 29 05.0	
	comp=N,73nm,0.4s						
KORT				*i* AML	AML	18 29 06.0	
	comp=N,58nm,0.4s						
ANTB	**Antalya**	**4.53**	**82**	Pn	**Pn**	**18 28 14.5**	**+2.1**
ALN	**Alexandroupoli**	**4.58**	**9**	Pn	**Pn**	**18 28 14.0**	**+0.9**
KPRO	**Kipourio**	**4.61**	**322**	P	**Pn**	**18 28 14.4**	**+0.8**
RDO	**Rodhopi**	**4.78**	**4**	Pn	**Pn**	**18 28 15.6**	**-0.1**
SLUM	**Salum**	**4.88**	**179**	P	**Pn**	**18 28 17.4**	**+0.3**
	baz=179						
IGT	**Igoumenitsa**	**4.89**	**312**	P	**Pn**	**18 28 17.1**	**-0.1**
	baz=315						
IGT				S	**Sn**	**18 29 05.0**	**-7.8**
	baz=315						
IGT				AMP			
	comp=E,0.7nm,0.2s,baz=315						
LSK	**Leskovik**	**5.15**	**318**	P	**Pn**	**18 28 21.9**	**+1.1**
	baz=324						
LSK				S	**Sn**	**18 29 13.4**	**-5.7**
	baz=324						
LSK				AMP			
	comp=E,0.9nm,0.5s,baz=324						
KDZ	**Kurdzhali**	**5.25**	**2**	*e*P	**Pn**	**18 28 23.6**	**+1.5**
FNA	**Florina**	**5.26**	**328**	Pn	**Pn**	**18 28 21.6**	**-0.8**
FNA	**Florina**	**5.26**	**328**	P	**Pn**	**18 28 23.4**	**+1.0**
	baz=335						
FNA				S	**Sn**	**18 29 18.1**	**-3.7**
	baz=335						
MMB	**Musomishta**	**5.26**	**349**	*e*P	**Pn**	**18 28 24.6**	**+2.3**
KEPZ	**Antalya-Kepez**	**5.29**	**82**	P	**Pn**	**18 28 24.7**	**+2.1**
KEPZ				S	**Sn**	**18 29 22.5**	**0.0**
KEPZ				*i* AML	AML	18 29 25.0	
	comp=E,47nm,0.7s						
KEPZ				*i* AML	AML	18 29 26.0	
	comp=E,57nm,0.6s						
SRN	**Sarande**	**5.30**	**313**	P	**Pn**	**18 28 22.9**	**+0.1**
	baz=316						
SRN				S	**Sn**	**18 29 16.5**	**-6.2**
	baz=316						
SRN				AMP			
	comp=E,0.5nm,0.2s,baz=316						
RZN	**Rozhen**	**5.32**	**357**	*e*P	**Pn**	**18 28 25.3**	**+2.2**
KEK	**Kerkira**	**5.32**	**310**	Pn	**Pn**	**18 28 20.7**	**-2.4**
KKB	**Krupnik**	**5.66**	**345**	*e*P	**Pn**	**18 28 30.3**	**+2.7**
DIM	**Dimitrovgrad**	**5.67**	**4**	*e*P	**Pn**	**18 28 29.6**	**+1.8**
STIP	**Stip**	**5.76**	**338**	*i* P	**Pn**	**18 28 30.8**	**+1.8**
DB3	**El Dabaa**	**6.07**	**150**	S	**Sn**	**18 29 36.4**	**-4.9**
	baz=152						
SCTE	**Santa Cesarea**	**6.37**	**307**	Pn	**Pn**	**18 28 35.8**	**-1.4**
SCTE	**Santa Cesarea**	**6.37**	**307**	P	**Pn**	**18 28 36.4**	**-0.8**
	baz=309						
SCTE				S	**Sn**	**18 29 41.9**	**-6.6**
	baz=309						
VTS	**Vitosha**	**6.39**	**348**	*e*P	**Pn**	**18 28 40.4**	**+2.8**
CSS	**Mathiatis**	**6.88**	**99**	Pn	**Pn**	**18 28 43.7**	**-0.4**
CSS	**Mathiatis**	**6.88**	**99**	P	**Pn**	**18 28 41.8**	**-2.3**
CSS	**Mathiatis**	**6.88**	**99**	S	**Sn**	**18 29 56.3**	**-4.6**
PUK	**Puka**	**6.94**	**326**	Pn	**Pn**	**18 28 44.0**	**-0.9**
SWA2		**7.12**	**177**	P	**Pn**	**18 28 47.6**	**+0.1**
	baz=178						
TIP	**Timpagrande**	**7.15**	**296**			**18 28 47.1**	**-0.7**
ULC	**Ulcinj**	**7.

SLTI	**Sal'it**	**9.23**	**114**	P	Pn	18 29 12.1	-3.8
BEIL	**Beino**	**9.26**	**98**	*e*P	**Pn**	**18 29 15.1**	**-1.3**
MAKA	**Makarska**	**9.26**	**321**	*e*Pn	Pn	18 29 12.9	-3.4
MAKA				Sn	Sn	18 30 47.8	-11
RCY	**Rachaya**	**9.30**	**105**	*e*P	**Pn**	**18 29 15.6**	**-1.4**
NATI	**Neve Ativ**	**9.31**	**106**	P	**Pn**	**18 29 15.7**	**-1.3**
NATI	**Neve Ativ**	**9.31**	**106**	S	**Sn**	**18 30 53.6**	**-6.3**
NATI	**Neve Ativ**	**9.31**	**106**	P	**Pn**	**18 29 14.8**	**-2.2**
NBNS	**Bani Suef**	**9.35**	**144**	P	**Pn**	**18 29 17.7**	**+0.1**
	baz=145						
RICI	**Ricice**	**9.36**	**322**	*e*Pn	**Pn**	**18 29 14.4**	**-3.2**
SALP	**Salfit**	**9.42**	**114**	P	**Pn**	**18 29 17.9**	**-0.7**
SALP	**Salfit**	**9.42**	**114**	P	Pn	18 29 14.7	-3.8
SALP	**Salfit**	**9.42**	**114**	S	Sn	18 30 56.1	-6.6
KSHT	**Keshet**	**9.48**	**108**	S	**Sn**	**18 30 57.8**	**-6.3**
AMAZ	**Amatzia**	**9.50**	**118**	P	Pn	18 29 11.5	-8.2
AMAZ	**Amatzia**	**9.50**	**118**	S	Sn	18 30 57.0	-7.6
KZIT	**Kziot**	**9.50**	**122**	S	Sn	18 30 56.1	-8.5
KZIT	**Kziot**	**9.50**	**122**	P	Pn	18 29 15.4	-4.2
QRNJ	**Al-Qirein**	**9.58**	**112**	P	**Pn**	**18 29 19.8**	**-0.8**
HMDT	**Nahal Hemdat**	**9.58**	**112**	P	**Pn**	**18 29 20.1**	**-0.6**
HMDT	**Nahal Hemdat**	**9.58**	**112**	S	Sn	18 30 59.0	-7.5
ZNM	**Zenema**	**9.58**	**135**	P	**Pn**	**18 29 19.9**	**-0.8**
	baz=135						
UJAP	**Al Uja**	**9.68**	**114**	P	**Pn**	**18 29 21.7**	**-0.3**
UJAP	**Al Uja**	**9.68**	**114**	S	Sn	18 31 01.7	-7.2
YTIR	**Yattir**	**9.74**	**118**	P	Pn	18 29 16.6	-6.3
YTIR	**Yattir**	**9.74**	**118**	S	Sn	18 31 03.0	-7.4
BALJ	**Balqa**	**9.74**	**113**	Pn	**Pn**	**18 29 21.8**	**-1.2**
BALJ	**Balqa**	**9.74**	**113**	P	**Pn**	**18 29 22.3**	**-0.6**
DSI	**Dead Sea**	**9.81**	**116**	P	**Pn**	**18 29 23.1**	**-0.8**
DSI	**Dead Sea**	**9.81**	**116**	S	Sn	18 31 04.7	-7.5
MDBI	**Mazsada**	**9.94**	**118**	P	Pn	18 29 21.2	-4.3
MDBI	**Mazsada**	**9.94**	**118**	S	Sn	18 31 07.3	-7.8
MSBI	**Mazada**	**9.94**	**118**	P	**Pn**	**18 29 24.7**	**-0.8**
MSBI	**Mazada**	**9.94**	**118**	S	Sn	18 31 08.3	-6.8
LISJ	**El Lisan**	**10.07**	**118**	P	**Pn**	**18 29 25.2**	**-2.0**
KIJV	**Kijevo**	**10.09**	**322**	*e*Pn	**Pn**	**18 29 25.0**	**-2.5**
GHAJ	**Ghor Haditha**	**10.09**	**117**	Pn	**Pn**	**18 29 27.2**	**-0.4**
GHAJ	**Ghor Haditha**	**10.09**	**117**	P	**Pn**	**18 29 29.2**	**+1.6**
KRMI	**Paran Flat**	**10.21**	**125**	S	Sn	18 31 13.0	-8.9
ZIRJ	**Zirje**	**10.24**	**318**	*e*Pn	Pn	18 29 26.2	-3.3
ZFRI	**Zfri**	**10.25**	**122**	S	Sn	18 31 14.1	-8.6
PRNI	**Paran**	**10.25**	**123**	P	**Pn**	**18 29 29.2**	**-0.6**
PRNI	**Paran**	**10.25**	**123**	S	Sn	18 31 14.2	-8.7
INTR	**Introdacqua**	**10.32**	**306**	Pn	**Pn**	**18 29 31.6**	**+0.8**
MORI	**Morici**	**10.35**	**319**	*e*Pn	**Pn**	**18 29 28.2**	**-2.7**
HRFI	**Mount Harif**	**10.47**	**124**	P	**Pn**	**18 29 32.2**	**-0.6**
HRFI	**Mount Harif**	**10.47**	**124**	S	Sn	18 31 19.8	-8.4
HRFI	**Mount Harif**	**10.47**	**124**	P	Pn	18 29 28.8	-4.0
MBRI	**Mt Berech**	**10.55**	**126**	P	**Pn**	**18 29 33.4**	**-0.5**
MBRI	**Mt Berech**	**10.55**	**126**	P	Pn	18 29 29.9	-4.0
MBRI	**Mt Berech**	**10.55**	**126**	S	Sn	18 31 21.7	-8.4
ASF	**Jabal al Asfar**	**10.65**	**110**	P	**Pn**	**18 29 33.9**	**-1.3**
	comp=E,1.5nm,0.3s,baz=328,slow=0.9,SNR=9.2						
ASF				S	Sn	18 31 25.4	-7.2
	comp=E,2.9nm,0.4s,baz=331,slow=3.8,SNR=2.7						
EIL	**Elat**	**10.65**	**126**	P	**Pn**	**18 29 32.9**	**-2.3**
	comp=E,2.3nm,0.4s,baz=324,slow=3.2,SNR=17						
EIL				S	Sn	18 31 23.4	-9.2
	comp=E,27nm,0.4s,baz=258,slow=1.8,SNR=13						
EIL	**Elat**	**10.65**	**126**	P	**Pn**	**18 29 34.9**	**-0.3**
EIL	**Elat**	**10.65**	**126**	S	Sn	18 31 23.9	-8.7
EIL	**Elat**	**10.65**	**126**	P	Pn	18 29 31.5	-3.7
AQBJ	**Aqaba**	**10.68**	**126**	P	Pn	18 29 26.3	-9.3
DUGI	**Dugi Otok**	**10.78**	**318**	*e*Pn	Pn	18 29 33.2	-3.7
CAMP	**Campotosto**	**10.90**	**308**	Pn	**Pn**	**18 29 38.6**	**0.0**
VIRC	**Vir**	**10.99**	**319**	*e*Pn	Pn	18 29 36.1	-3.4
NRCA	**Norcia**	**11.24**	**309**	Pn	**Pn**	**18 29 42.8**	**-0.2**
NVLJ	**Novalja**	**11.27**	**320**	*e*Pn	Pn	18 29 40.1	-3.2
KEST	**Kesra**	**12.74**	**272**	Pn	**Pn**	**18 30 03.4**	**+0.6**
KEST	**Kesra**	**12.74**	**272**	P	**Pn**	**18 30 02.9**	**+0.1**
	comp=E,5.4nm,1.0s,baz=72,slow=13,SNR=2.0						
KEST				S	**Sn**	**18 32 16.4**	**-6.6**
	comp=E,3.5nm,0.7s,baz=241,slow=16,SNR=2.0						
KWP	**Kalwaria Pacla**	**13.36**	**353**		**Pn**	**18 30 12.2**	**+1.6**
AKASG	**Malin Array Be**	**14.63**	**11**	P	**Pn**	**18 30 29.3**	**+2.4**
	comp=E,0.2nm,0.3s,baz=200,slow=9.6,SNR=4.2						
GERES	**GERESS Array B**	**14.98**	**330**		**Pn**	**18 30 33.2**	**+1.7**
GERES	**GERESS Array B**	**14.98**	**330**	P	**Pn**	**18 30 33.7**	**+2.2**
	comp=E,1.5nm,0.6s,baz=145,slow=12,SNR=7.7						
FUORN	**Ofenpass-Fuorn**	**15.06**	**317**	P	**P**	**18 30 36.9**	**+1.8**
KBZ	**Khabaz**	**15.49**	**56**	P	**Pn**	**18 30 37.4**	**-0.3**
	comp=E,1.1nm,0.9s,baz=227,slow=13,SNR=2.4						
SENIN	**Lac Senin/Sane**	**16.62**	**312**	P	**Pn**	**18 30 53.5**	**+1.6**
SENIN				IAmb	IAmb	18 31 24.2	
	comp=Z,9.2nm,0.8s						
CLL	**Collm**	**17.24**	**334**	*i* P	**P**	**18 31 00.0**	**+1.2**
CLL				*es*PP		18 31 41.0	
ESDC	**Sonseca Array**	**23.06**	**287**	P	**P**	**18 32 02.3**	**+1.2**
ESDC	**Sonseca Array**	**23.06**	**287**	P	**P**	**18 32 01.2**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=83,slow=9.7,SNR=14						
	comp=Z,2.9nm,0.9s						
PAB	**San Pablo**	**23.36**	**287**	P	**P**	**18 32 05.0**	**+1.2**
PAB				IAmb	IAmb	18 32 06.6	
	comp=Z,16nm,1.4s						
HFS	**Hagfors**	**24.88**	**346**	P	**P**	**18 32 17.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=158,slow=9.3,SNR=2.2						
	comp=Z,2.8nm,0.9s						
FINES	**FINESS Array B**	**25.10**	**1**	P	**P**	**18 32 19.4**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=181,slow=9.7,SNR=5.0						
	comp=Z,1.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**27.01**	**323**	P	**P**	**18 32 37.5**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=119,slow=9.1,SNR=12						
	comp=Z,0.9nm,0.3s						
ARCES	**ARCESS Array B**	**33.22**	**0**	P	**P**	**18 33 30.3**	**-0.8**
	comp=Z,2.8nm,1.1s,baz=184,slow=9.9,SNR=6.3						
	comp=Z,2.8nm,1.1s						
MAKZ	**Makanchi**	**42.96**	**58**	P	**P**	**18 34 54.8**	**+1.7**
MAKZ				IAmb	IAmb	18 35 06.5	
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**43.18**	**58**	P	**P**	**18 34 55.7**	**+0.8**
MK31				IAmb	IAmb	18 35 04.7	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**43.18**	**58**	P	**P**	**18 34 55.7**	**+0.8**
ZALV	**Zalesovo Beam**	**44.23**	**47**	P	**P**	**18 35 04.2**	**+1.1**
ENH	**Enshi**	**68.65**	**68**	P	P	18 37 52.9	-3.7
BMAR	**Burnt Mountain**	**76.21**	**356**	P	**P**	**18 38 41.7**	**+0.9**

IDC ***14*** *18:27:30.8±0.8,24.25N×121.97E,h0km,mb3.8/18, mbtmp3.8/19,ML3.5/1,MS3.4/19,Error ellipse: s-maj=20.4km s-min=17.2km az=66.0*

NEIC ***14*** *18:27:31.9±1.6,24.08N±0.08×121.86E±0.05,h8km±5km, mb4.6/64,Error ellipse: s-maj=11.9km s-min=5.5km az=157.0*

TAP ***14*** *18:27:32.5,24.18N×121.81E,h8km,ML4.4,C*

ASIES ***14*** *18:27:32.5,24.18N×121.81E,h8km,ML4.4,Mw4.1, Moment Tensor Solution. Moment tenso: Scale 1022Nm; Mrr1.67; Mθθ-1.14; Mφφ0.45; Mrθ-0.19; Mφθ-0.08; Mφr-0.68; Fault plane solution: M0 1.62490×1022 NP1: φs244.97000°,δ54.22000°,λ60.90000°. NP2: φs108.57000°,δ44.86000°,λ124.02000°. Principal axes: T Plg66.1530°, Azm96.6730°; N Plg23.2440°, Azm263.0000°; P Plg5.0380°, Azm355.1700°;*

NIED ***14*** *18:27:32.8,24.14N×121.80E,h9km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr-0.25; Mθθ-0.82; Mφφ1.08; Mrθ-1.60; Mφθ0.13; Mφr-0.81; Fault plane solution: M02.01000×1015 NP1:φs53.00000°, δ87.00000°,λ-61.00000°. NP2:φs149.00000°,δ29.00000°, λ-174.00000°.*

JMA ***14*** *18:27:32.8±0.1,24.1N±0.3×121.8E±0.4,h9km±1km, MD4.4/18,MV4.2/18,TAIWAN REGION*

BJI ***14*** *18:27:32.0±0.0,24.14N×121.94E,h5km,mb3.9/13, mB4.5/7,ML4.0/4,Ms4.2/9,Ms7 4.0/8*

ISC 14 18:27:32.5±0.8, 24.18N±0.01×121.85E±0.02, h9km±5km, n316, σ1§10/385, mb4.5/51, MS3.4/14, 20C-56D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.17**	**323**	*i* P		**Pg**	**18 27 36.0**	**-0.1**
	baz=335							
EHP				*i* S		**Sg**	**18 27 38.7**	**+0.1**
	baz=335							
EAHA	**Aohua**	**0.18**	**326**	⇓*i*P		**Pg**	**18 27 36.3**	**-0.1**
	baz=335							
EAHA				*i* S		**Sg**	**18 27 39.2**	**+0.2**
	baz=335							
ETL	**Fush Village**	**0.21**	**265**	⇑*i*P		**Pg**	**18 27 36.5**	**-0.3**
	baz=266							
ETL				*e*S		**Sg**	**18 27 40.9**	**+1.1**
	baz=266							
NACB	**Ninganchiao**	**0.23**	**269**			**Pg**	**18 27 36.6**	**-0.7**
NACB	**Ninganchiao**	**0.23**	**269**	P		**Pg**	**18 27 37.0**	**-0.3**
NACB	**Ninganchiao**	**0.23**	**269**	⇑*i*P		**Pg**	**18 27 36.9**	**-0.3**
	baz=272							
NACB				*i* S		**Sg**	**18 27 39.7**	**-0.8**
	baz=272							
TWD	**Chiawan**	**0.25**	**248**	⇑*i*P		**Pg**	**18 27 37.5**	**-0.1**
	baz=257							
TWD				S		**Sg**	**18 27 41.9**	**+0.9**
	baz=257							
ENA	**Nanau**	**0.27**	**338**	⇓*i*P		**Pg**	**18 27 37.9**	**0.0**
	baz=342							
ENA				*i* S		**Sg**	**18 27 41.7**	**+0.1**
	baz=342							
EWUT	**Wuta**	**0.28**	**346**	⇓*i*P		**Pg**	**18 27 38.2**	**+0.1**
	baz=347							
EWUT				S		**Sg**	**18 27 42.4**	**+0.6**
	baz=347							
HWA	**Hwalien**	**0.30**	**229**	P		**Pb**	**18 27 39.9**	**-0.1**
	baz=241							
ETLH	**Xiulin Townshi**	**0.34**	**275**	⇑*i*P		**Pg**	**18 27 39.0**	**-0.3**
	baz=271							
ETLH				S		**Sg**	**18 27 44.2**	**+0.5**
	baz=271							
ETM	**Tongmen**	**0.39**	**237**	⇑*i*P		**Pg**	**18 27 40.0**	**-0.1**
	baz=238							
ETM				*e*S		**Sb**	**18 27 48.0**	**+0.3**
	baz=238							
ESAO	**Su ao**	**0.40**	**359**	⇓*i*P		**Pg**	**18 27 40.4**	**+0.1**
	baz=353							
ESAO				*i* S		**Sg**	**18 27 46.4**	**+0.8**
	baz=353							
EOS2	**EOS2**	**0.42**	**55**	⇓*e*P		**Pb**	**18 27 42.7**	**+0.6**
	baz=33							
LXIB	**Xiulin Townshi**	**0.43**	**249**	⇑*i*P		**Pg**	**18 27 40.7**	**-0.2**
	baz=252							
LXIB				*e*S		**Sb**	**18 27 49.5**	**+0.6**
	baz=252							
EOS4	**EOS4**	**0.43**	**97**	*e*P		**Pb**	**18 27 43.2**	**+1.1**
	baz=89							
TWC	**Suao**	**0.43**	**360**	⇓*i*P		**Pg**	**18 27 41.1**	**+0.2**
	baz=353							
TWC				S		**Sg**	**18 27 47.4**	**+0.7**
	baz=353							
EOS3	**EOS3**	**0.44**	**75**	*e*P		**Pb**	**18 27 43.0**	**+0.7**
	baz=71							
LATG	**Datong**	**0.46**	**320**	⇓*i*P		**Pg**	**18 27 41.6**	**0.0**
	baz=322							
LATG				*i* S		**Sg**	**18 27 47.8**	**0.0**
	baz=322							
SHUL	**Shoufeng**	**0.47**	**214**	⇓*i*P		**Pb**	**18 27 43.1**	**+0.2**
	baz=216							
NDS	**Dongshan**	**0.47**	**345**	⇓*i*P		**Pg**	**18 27 42.0**	**+0.3**
	baz=344							
NDS				*i* S		**Sg**	**18 27 48.5**	**+0.6**
	baz=344							
NNSB	**Datong**	**0.50**	**300**	⇓*i*P		**Pg**	**18 27 42.3**	**+0.1**
	baz=303							
NNSB				*i* S		**Sg**	**18 27 48.2**	**-0.5**
	baz=303							
NNSH	**Datong**	**0.50**	**300**	⇓*i*P		**Pg**	**18 27 42.2**	**0.0**
	baz=303							
NNSH				*e*S		**Sg**	**18 27 48.4**	**-0.3**
	baz=303							
NNS	**Nan Shan**	**0.51**	**301**	⇓*i*P		**Pg**	**18 27 42.5**	**0.0**
	baz=304							
NNS				S		**Sg**	**18 27 49.0**	**-0.2**
	baz=304							
NDT	**Datong Townshi**	**0.53**	**324**	⇓*i*P		**Pg**	**18 27 43.0**	**+0.3**
	baz=325							
NDT				S		**Sg**	**18 27 50.1**	**+0.5**
	baz=325							
ESL	**Shilin**	**0.53**	**227**	⇑*i*P		**Pg**	**18 27 42.7**	**0.0**
	baz=237							
ESL				*e*S		**Sb**	**18 27 52.3**	**+0.7**
	baz=237							
ENTT	**Nioudou**	**0.53**	**331**	⇓*i*P		**Pg**	**18 27 43.0**	**+0.2**
	baz=331							
ENTT				S		**Sg**	**18 27 50.3**	**+0.5**
	baz=331							
WHF	**Hehuan Shan**	**0.54**	**267**	P		**Pg**	**18 27 42.7**	**-0.3**
	baz=270							
WHF				S		**Sg**	**18 27 50.9**	**+0.8**
	baz=270							
TEGC	**Jichi Village**	**0.55**	**212**	*e*P		**Pb**	**18 27 43.9**	**-0.3**
	baz=215							
TEGC				*e*S		**Sn**	**18 27 54.8**	**-0.9**
	baz=215							
FUSS	**Fushou**	**0.56**	**277**	⇑*i*P		**Pg**	**18 27 43.4**	**0.0**
	baz=281							
FUSS				*e*S		**Sg**	**18 27 51.5**	**+0.6**
	baz=281							
TWE	**Neicheng**	**0.57**	**343**	⇓*i*P		**Pg**	**18 27 43.8**	**+0.3**
	baz=342							
TWE				S		**Sg**	**18 27 50.9**	**-0.1**
	baz=342							
ILA	**Ilan**	**0.59**	**351**	*e*P		**Pg**	**18 27 44.3**	**+0.3**
	baz=342							
TWT	**Tachien**	**0.62**	**277**	⇑P		**Pg**	**18 27 44.9**	**+0.3**
	baz=286							
WARBT	**Fenglin Townsh**	**0.62**	**223**	⇑*i*P		**Pg**	**18 27 44.6**	**+0.1**
	baz=234							
WARBT				*e*S		**Sb**	**18 27 56.0**	**+1.5**
	baz=234							
FUSB	**Fushanzhiwuyua**	**0.63**	**338**	⇓*i*P		**Pg**	**18 27 45.0**	**+0.3**
	baz=337							
FUSB				*e*S		**Sg**	**18 27 52.5**	**-0.5**
	baz=337							
CHGB	**Renai**	**0.63**	**260**	⇑*i*P		**Pg**	**18 27 44.8**	**0.0**
	baz=252							
CHGB				*e*S		**Sg**	**18 27 53.6**	**+0.6**
	baz=252							
TDCB	**Techi**	**0.64**	**277**	⇑P		**Pg**	**18 27 45.0**	**+0.1**
	baz=278							
TDCB				S		**Sg**	**18 27 53.1**	**-0.2**
	baz=278							
YHNB	**Yeheng**	**0.66**	**319**	P		**Pg**	**18 27 45.5**	**+0.3**
YHNB	**Yeheng**	**0.66**	**319**	⇓*i*P		**Pg**	**18 27 45.5**	**+0.3**
	baz=320							
YHNB				*i* S		**Sg**	**18 27 54.4**	**+0.6**
	baz=320							
EGS		**0.67**	**6**	⇓*i*P		**Pg**	**18 27 45.8**	**+0.4**
	baz=6.0							
NSK	**Sanguang**	**0.67**	**318**	⇓*i*P		**Pg**	**18 27 45.7**	**+0.2**
	baz=319							
NSK				*i* S		**Sg**	**18 27 54.4**	**+0.2**
	baz=319							
NTC	**Toucheng**	**0.68**	**358**	*e*P		**Pg**	**18 27 45.6**	**0.0**
	baz=357							
NWLT	**Wulai**	**0.68**	**332**	⇓*i*P		**Pg**	**18 27 45.9**	**+0.3**
	baz=332							
NWLT				S		**Sg**	**18 27 54.5**	**0.0**
	baz=332							
WUSB	**Renai**	**0.70**	**255**	⇑*i*P		**Pg**	**18 27 46.0**	**0.0**
	baz=257							
WUSB				*e*S		**Sb**	**18 27 56.4**	**-0.2**
	baz=257							
VWDT	**VWDT**	**0.77**	**237**	⇑*i*P		**Pg**	**18 27 47.4**	**0.0**
	baz=240							
VWDT				*e*S		**Sb**	**18 27 59.9**	**+1.2**
	baz=240							
HGSD	**Ruisui**	**0.79**	**210**	⇓*i*P		**Pb**	**18 27 48.4**	**+0.1**
	baz=199							
NFF	**Wufeng Townshi**	**0.81**	**304**	⇓*i*P		**Pg**	**18 27 48.4**	**+0.3**
	baz=306							
NFF				S		**Sg**	**18 27 58.6**	**0.0**
	baz=306							
EHY	**Hungye**	**0.82**	**216**	⇓*i*P		**Pg**	**18 27 47.9**	**-0.5**
	baz=218							
WPL	**Puli Township**	**0.83**	**259**	*e*P		**Pg**	**18 27 48.8**	**+0.2**
	baz=262							
WPL				*e*S		**Sb**	**18 28 01.2**	**+0.7**
	baz=262							
TWA	**Mucha**	**0.84**	**343**	⇓*i*P		**Pb**	**18 27 49.1**	**-0.1**
	baz=334							
NHDH	**Xindian Distri**	**0.84**	**339**	⇓*i*P		**Pb**	**18 27 49.0**	**-0.2**
	baz=339							
TWB1	**Santiao Chiao**	**0.84**	**9**	⇓P		**Pg**	**18 27 48.6**	**0.0**
	baz=359							
DPDB	**Guoxing**	**0.86**	**261**	⇑P		**Pg**	**18 27 49.1**	**+0.1**
	baz=265							
TATO	**Taipei**	**0.86**	**337**			**Pg**	**18 27 49.1**	**0.0**
TATO	**Taipei**	**0.86**	**337**	P		**Pb**	**18 27 49.8**	**+0.2**
TATO	**Taipei**	**0.86**	**337**	⇓*i*P		**Pb**	**18 27 49.5**	**-0.1**
	baz=337							
WCS	**Beigang Elemen**	**0.87**	**262**	*e*P		**Pg**	**18 27 49.5**	**+0.3**
	baz=267							
NJD	**Zhudong**	**0.89**	**309**	⇓*e*P		**Pb**	**18 27 50.7**	**+0.6**
	baz=310							
NJD				S		**Sb**	**18 28 02.2**	**0.0**
	baz=310							
NWF	**Wu-fen Shan**	**0.89**	**356**	⇓*i*P		**Pb**	**18 27 50.2**	**0.0**
	baz=344							
NWF				*e*S		**Sb**	**18 28 03.1**	**+0.8**
	baz=344							
WFSB	**Wu-fen Shan**	**0.89**	**356**	⇓*i*P		**Pb**	**18 27 50.3**	**+0.1**
	baz=353							
LIOB	**Emei**	**0.89**	**302**	*e*P		**Pb**	**18 27 50.3**	**+0.1**
	baz=303							
LIOB				S		**Sb**	**18 28 02.2**	**0.0**
	baz=303							
NHY	**Taipei**	**0.90**	**343**	P		**Pb**	**18 27 50.5**	**+0.3**
	baz=342							
NSTT	**Nanjuang**	**0.90**	**300**	P		**Pb**	**18 27 50.3**	**+0.1**
	baz=304							
BACT	**New Taipei Cit**	**0.90**	**336**	*e*P		**Pb**	**18 27 50.2**	**0.0**
	baz=335							
SSLB	**Suanglung**	**0.91**	**245**			**Pg**	**18 27 49.7**	**-0.3**
SSLB	**Suanglung**	**0.91**	**245**	P		**Pg**	**18 27 50.1**	**+0.1**
SSLB	**Suanglung**	**0.91**	**245**	⇑*i*P		**Pg**	**18 27 49.7**	**-0.3**
	baz=259							
SSLB				*e*S		**Sg**	**18 28 02.4**	**+0.6**
	baz=259							
SXI1	**Grass Mountain**	**0.91**	**1**	⇓*i*P		**Pb**	**18 27 50.5**	**-0.1**
	baz=357							
SXI1				S		**Sb**	**18 28 03.5**	**+0.6**
	baz=357							
TAP	**Taipei**	**0.92**	**340**	⇓*i*P		**Pb**	**18 27 50.7**	**+0.2**
	baz=334							
SMLT	**Sun Moon Lake**	**0.92**	**252**	⇑*i*P		**Pg**	**18 27 50.1**	**-0.1**
	baz=256							
YULB	**Yu-li**	**0.93**	**213**			**Pg**	**18 27 49.3**	**-1.1**
YULB	**Yu-li**	**0.93**	**213**	P		**Pg**	**18 27 50.0**	**-0.4**
YULB	**Yu-li**	**0.93**	**213**	P		**Pg**	**18 27 49.6**	**-0.8**
	baz=228							
ECBN	**Changbin**	**0.93**	**203**	*e*P		**Pg**	**18 27 50.3**	**-0.1**
	baz=206							
TYC	**Yuchr**	**0.95**	**254**	⇑*i*P		**Pg**	**18 27 50.5**	**-0.2**
	baz=257							
TYC				*e*S		**Sb**	**18 28 04.0**	**+0.2**
	baz=257							
EYUL	**Yuli**	**0.96**	**211**	*e*P		**Pg**	**18 27 50.6**	**-0.4**
	baz=225							
NTY	**Taoyuan**	**0.96**	**329**	*e*P		**Pb**	**18 27 51.8**	**+0.5**
	baz=329							
TWF1	**Yuli**	**0.96**	**212**	⇓*e*P		**Pg**	**18 27 50.0**	**-1.0**
	baz=226							
HSN1	**Hsinchu**	**0.97**	**308**	P		**Pb**	**18 27 52.0**	**+0.6**
	baz=310							
HSN1				*e*S		**Sb**	**18 28 04.6**	**+0.3**
	baz=310							
TNOU	**National Taiwa**	**0.97**	**356**	⇓*i*P		**Pb**	**18 27 51.5**	**0.0**
	baz=353							
NCU	**National Centr**	**0.99**	**323**	*e*P		**Pb**	**18 27 52.2**	**+0.3**
	baz=323							
NCU				*e*S		**Sn**	**18 28 08.7**	**+1.9**
	baz=323							
NCUH	**Zhongli**	**0.99**	**323**	⇓P		**Pb**	**18 27 52.3**	**+0.4**
	baz=323							
NCUH				*e*S		**Sn**	**18 28 09.4**	**+2.6**
	baz=323							
SBCB	**Hsinchu**	**1.00**	**308**	⇓*i*P		**Pn**	**18 27 52.9**	**+0.2**
	baz=309							
SBCB				S		**Sb**	**18 28 05.8**	**+0.5**
	baz=309							
TWQ1	**Liyutan**	**1.00**	**280**	P		**Pb**	**18 27 52.4**	**+0.4**
	baz=284							
YM01	**YM01**	**1.00**	**345**	⇓*i*P		**Pb**	**18 27 52.2**	**+0.2**
	baz=343							
TWS1	**Kuangyinshan**	**1.00**	**337**	⇓*i*P		**Pn**	**18 27 52.6**	**-0.1**
	baz=335							
TWS1				*e*S		**Sn**	**18 28 08.4**	**+1.5**
	baz=335							
HSN	**Hsinchu**	**1.02**	**308**	⇑P		**Pn**	**18 27 53.5**	**+0.6**
	baz=303							
NSY	**Sanyi**	**1.02**	**284**	P		**Pb**	**18 27 52.8**	**+0.4**
	baz=286							
NSY				*e*S		**Sn**	**18 28 08.9**	**+1.4**
	baz=286							
NJN	**Zhunan**	**1.03**	**300**	*e*P		**Pn**	**18 27 53.0**	**0.0**
	baz=303							
NMLH	**Miaoli**	**1.03**	**291**	P		**Pb**	**18 27 52.9**	**+0.4**
	baz=301							
JYNG	**Yonagunijimaku**	**1.03**	**74**	P		**Pn**	**18 27 53.3**	**+0.2**
JYNG				S		**Sn**	**18 28 07.6**	**-0.1**
JYNG	**Yonagunijimaku**	**1.03**	**74**	A		A	18 27 53.3	
	comp=E,9.0nm,1.6s,comp=N,14nm,3.4s							
YM08	**YM08**	**1.03**	**347**	⇓*i*P		**Pb**	**18 27 52.6**	**0.0**
	baz=344							
NWRT	**Kuosheng**	**1.04**	**350**	*e*P		**Pb**	**18 27 52.9**	**+0.3**
	baz=347							
ANP	**Anpu**	**1.05**	**343**	⇓P		**Pb**	**18 27 52.9**	**0.0**
	baz=341							
NTST	**Danshui**	**1.05**	**340**	⇓P		**Pn**	**18 27 53

baz=245
WCKO eS Sg 18 28 19.2 +3.0
baz=245
WRL Guolierlin Hig 1.38 259 ⇓eP Pb 18 27 58.6 +0.3
baz=266
RLNB Erlin 1.39 259 ⇓iP Pb 18 27 59.1 +0.5
baz=264
RLNB eS Sg 18 28 19.5 +2.2
baz=264
STYH Taoyuan 1.41 225 eP Pn 18 27 58.0 -0.2
baz=214
CHN2 Minshiung 1.41 243 eP Pg 18 28 00.2 +0.6
baz=252
CHN4 Tsaushan 1.42 235 P Pb 18 27 59.2 +0.2
baz=243
CHN4 eS Sg 18 28 21.4 +3.4
baz=243
TPUB Ta-pu 1.42 232 Pn 18 27 58.9 +0.5
TPUB Ta-pu 1.42 232 P Pg 18 27 59.7 0.0
TPUB Ta-pu 1.42 232 ⇓iP Pb 18 27 59.1 0.0
baz=240
TPUB S Sg 18 28 18.6 +0.5
baz=240
STYT Tauyuan 1.42 225 ⇓iP Pn 18 27 58.6 +0.1
baz=232
STYT eS Sg 18 28 20.5 +2.2
baz=232
WTK Tuku 1.42 250 eP Pb 18 27 59.2 0.0
baz=256
WTK eS Sg 18 28 20.2 +1.9
baz=256
LONT Longtian 1.43 208 eP Pn 18 27 58.8 +0.2
baz=214
PCYT Pengchaiyu 1.46 8 eP Pn 18 27 59.1 +0.1
baz=359
WTP Ta-pu 1.46 231 ⇓iP Pb 18 27 59.8 -0.1
baz=238
WTP eS Sg 18 28 22.8 +3.1
baz=238
WTCT Ta-ch'eng 1.47 258 eP Pn 18 27 57.8 -1.3
baz=265
CHY Chiayi 1.47 243 eP Pg 18 28 02.5 +1.7
baz=251
TWGBT Beinan 1.53 208 P Pn 18 27 58.4 -1.5
TWG Pinlang 1.53 208 Pn 18 27 57.7 -2.3
TWG Pinlang 1.53 208 eP Pn 18 27 57.9 -2.1
baz=214
LDUT Ludao 1.54 193 eP Pn 18 27 58.0 -2.1
baz=183
TWK Hsinying 1.54 234 ⇓P Pn 18 28 01.0 +0.7
baz=243
TWK eS Sg 18 28 25.2 +3.1
baz=243
TTN Taitung 1.56 205 eP Pb 18 28 01.3 -0.2
baz=210
CHN1 Nanshi 1.56 231 P Pb 18 28 01.8 +0.1
baz=239
CHN1 eS Sg 18 28 26.1 +3.2
baz=239
SNST Tainan City 1.56 233 eP Pb 18 28 01.3 -0.3
baz=242
WSF Szhu 1.58 251 eP Pb 18 28 01.8 -0.1
baz=257
WSF eS Sg 18 28 25.1 +1.6
baz=257
SGST Jiashian 1.59 227 ⇓eP Pn 18 28 00.9 0.0
baz=235
SGST eS Sg 18 28 25.2 +1.4
baz=235
WSL Shuilin Townsh 1.62 247 eP Pb 18 28 02.4 -0.2
baz=254
WSL eS Sg 18 28 26.6 +1.9
baz=254
ICHU Yijhu 1.65 241 eP Pb 18 28 03.0 -0.1
baz=250
ICHU eS Sg 18 28 27.3 +1.6
baz=250
CHN8 Yiju 1.71 242 P Pb 18 28 03.7 -0.5
baz=251
CHN8 S Sg 18 28 27.7 0.0
baz=251
CHN3 Shinhua 1.75 232 eP Pb 18 28 05.0 +0.3
baz=242
SSHA Shanhua 1.77 234 eP Pb 18 28 05.0 -0.1
baz=245
ECL Taimali 1.77 208 eP Pn 18 28 02.3 -1.1
baz=214
HATJ Hateruma jima 1.79 93 P Pb 18 28 05.0 -0.4
HATJ eS Sb 18 28 28.6 +0.7
HATJ Hateruma jima 1.79 93 A A 18 28 05.0
comp=E,8.0nm,3.6s,comp=N,12nm,2.5s
SCST Cishan 1.79 224 eP Pb 18 28 05.4 0.0
baz=234
SCST eS Sg 18 28 31.7 +1.6
baz=234
SHHT Tainan City 1.80 230 eP Pb 18 28 06.0 +0.4
baz=241
SSD Sandimen 1.81 218 eP Pn 18 28 03.6 -0.2
baz=240
SSD eS Sb 18 28 29.7 +1.1
baz=240
SCLT Jiali 1.82 237 eP Pb 18 28 06.4 +0.5
baz=247
SCLT eS Sg 18 28 32.3 +1.3
baz=247
TSMG Majia 1.84 217 eP Pn 18 28 05.2 +1.0
baz=212
TWM1 Shoushan 1.88 225 eP Pb 18 28 07.6 +0.6
baz=234
SGLT Jiouru 1.91 221 eP Pb 18 28 06.8 -0.7
baz=215
TSCK Chigu Township 1.92 238 eP Pn 18 28 06.4 +1.1
baz=249
MASBT Mashibuluo 1.92 216 eP Pn 18 28 05.8 +0.5
baz=210
TSPT Pingtung City 1.94 220 eP Pb 18 28 07.5 -0.5
baz=229
JKRS Kuro-shima 1.97 88 P Pb 18 28 07.5 -1.0
JKRS S Sn 18 28 31.8 +0.9
JKRS Kuro-shima 1.97 88 A A 18 28 07.5
comp=E,10.0nm,1.7s,comp=N,9.0nm,2.6s
SNJT Kaohsiung City 1.99 225 eP Pb 18 28 07.9 -0.8
baz=235
EAST Anshuo 2.01 208 eP Pb 18 28 07.2 +0.5
baz=200
TAW Tawu 2.01 206 eP Pb 18 28 08.4 -0.8
baz=212
TAWH Dawu Township 2.03 206 eP Pn 18 28 08.4 +1.5
baz=212
JIJ Ishigaki jima 2.10 84 P Pn 18 28 08.6 +0.8
JIJ S Sn 18 28 35.4 +1.4
SCZT Fangliau 2.12 212 eP Pb 18 28 09.9 -1.2
baz=221
LAY Lan-yu 2.15 187 eP Pn 18 28 06.0 -2.5
baz=192
SLIU Shizi 2.18 207 eP Pb 18 28 11.4 -0.6
baz=200
LYUB Lan-yu 2.18 187 eP Pn 18 28 06.0 -2.9
baz=191
PNG Penghu 2.19 254 eP Pn 18 28 09.4 +0.4
baz=265
PHUB P'eng-hu 2.19 253 eP Pn 18 28 09.8 +0.8
baz=261
PHUB eS Sn 18 28 38.1 +1.9
baz=261
WDGT Dungji 2.21 246 ⇑iP Pn 18 28 10.2 +0.9
baz=243
WDGT eS Sn 18 28 38.2 +1.5
baz=243
JISG Ishigakijimahi 2.28 79 P Pn 18 28 11.4 +1.1
JISG eS Sb 18 28 40.4 -1.7
TWP Hsiaoliuchiu 2.28 217 eP Pb 18 28 14.2 +0.4
baz=226
VWUC VWUC 2.33 291 eP Pn 18 28 11.3 +0.3
baz=297
HEN Hengchun 2.39 206 eP Pb 18 28 14.8 -0.9
baz=200
VCHM Qimei 2.42 247 eP Pn 18 28 13.7 +1.5
baz=242
TWKBT Hengchun 2.42 203 eP Pn 18 28 13.9 +1.7
baz=197
TWK1 Hengchun 2.42 204 eP Pn 18 28 13.6 +1.3
baz=196
TSEB Hengchuen, Pin 2.43 201 eP Pb 18 28 15.1 -1.2
baz=196
MATB Ma-tsu 2.62 319 eP Pn 18 28 15.1 +0.1
baz=320
PTMZ Houxiangcun 2.63 290 eP Pn 18 28 15.5 +0.4
baz=293
PTMZ eS Sn 18 28 46.4 -0.7
baz=293
JTJ Tarama 2.64 79 P Pn 18 28 17.2 +2.0
JTJ S Sb 18 28 50.0 -2.5
LYJJ Jianjiangzhen 3.03 322 eP Pn 18 28 21.3 +0.7
baz=323
QZH Quanzhou 3.06 285 Pn Pn 18 28 21.3 +0.2
QZH Sn Sn 18 28 56.9 -1.0
QZH smax smax
comp=N,360nm,0.6s
QZH smax smax
comp=N,330nm,0.6s
QZH LR LR
comp=N,1μm,6.7s
QZH LR LR
comp=N,830nm,6.7s
QZH LR LR
comp=N,1μm,8.6s
JIRB Irabujima 3.09 77 eP Pn 18 28 23.9 +2.4
JIRB S Sn 18 29 01.4 +2.9
XPSS Dashiqiu 3.13 332 eP Pn 18 28 22.2 +0.3
baz=330
KNM Kinmen 3.13 275 eP Pn 18 28 24.0 +2.0
baz=284
KNMB Chin-men Tao 3.17 276 Pn 18 28 22.6 0.0
KNMB Chin-men Tao 3.17 276 eP Pn 18 28 22.9 +0.3
baz=285
JIKM Ikemajima 3.18 76 P Pn 18 28 25.0 +2.3
JIKM S Sn 18 29 03.3 +2.6
MHZQ Yeshan 3.19 307 eP Pn 18 28 23.1 +0.2
baz=311
JMJ Miyako jima 2 3.20 78 P Pn 18 28 25.5 +2.6
JMJ Miyako jima 2 3.20 78 eP Pn 18 28 25.1 +2.2
baz=66
JMJ2 Miyako jima3 3.22 79 eP Pn 18 28 25.6 +2.5
JMJ2 S Sn 18 29 04.2 +2.5
JOGS Gusukube 3.29 79 eP Pn 18 28 27.2 +3.0
JOGS eS Sn 18 29 07.0 +3.5
AXDP Jialang 3.61 282 eP Pn 18 28 28.9 +0.4
baz=290
ZPLA Ao Xicun 3.76 267 eP Pn 18 28 30.9 +0.3
baz=277
DSXP Dongshan 4.08 264 eP Pn 18 28 34.9 -0.1
baz=274
SXFK Yanhouchang 4.40 301 eP Pn 18 28 40.0 +0.4
baz=307
JOW Kunigami 6.38 64 Pn Pn 18 29 06.9 +0.2
JOW Kunigami 6.38 64 P Pn 18 29 07.0 +0.4
JOW Kunigami 6.38 64 eP Pn 18 29 07.1 +0.5
baz=52
JOW Kunigami 6.38 64 Pn Pn 18 29 05.7 -1.0
comp=N,2.5nm,0.3s,baz=231,slow=14,SNR=6.7
comp=N,6.3nm,0.3s
WHN Wuhan 9.20 315 eP Pn 18 29 48.0 +2.6
WHN S Sn 18 31 27.6 -1.4
WHN LR LR
comp=N,2μm,6.4s
WHN LR LR
comp=N,2μm,10.0s
WHN LR LR
comp=N,1μm,10.4s
TGY Tagaytay City 10.06 185 LR LR 18 33 28.3
comp=N,120nm,21.4s,baz=111,slow=35
JNU Nakatsue 11.92 40 LR LR 18 36 19.7
comp=N,126nm,18.1s,baz=220,slow=45
KSRS Korea Array 14.22 20 Pn Pn 18 30 56.8 +2.8
baz=207,slow=13
KSRS LR LR 18 37 15.9
comp=N,170nm,18.5s,baz=195,slow=42
DAV Davao City (W) 17.38 168 LR LR 18 37 58.6
comp=N,52nm,20.6s,baz=346,slow=36
MJAR Matsushiro Arr 18.70 45 LR LR 18 38 27.9
comp=N,34nm,21.5s,baz=223,slow=35
LZH Lanzhou 19.55 312 eP Pn 18 32 09.5 +7.6
LZH pP sP 18 32 13.8 +10
LZH pmax pmax
comp=N,5.0nm,1.5s
USRK Ussuriysk Ar. 21.63 20 P P 18 32 21.9 -1.0
comp=N,1.7nm,0.5s,baz=206,slow=8.5,SNR=6.9
USRK LR LR 18 41 16.9
comp=N,77nm,18.5s,baz=212,slow=38
comp=N,1.7nm,0.5s
CMAR Chiang Mai Arr 22.07 259 P P 18 32 30.5 +2.6
comp=N,0.7nm,1.0s,baz=64,slow=7.2,SNR=1.8
CMAR LR LR 18 41 23.4
comp=N,50nm,19.9s,baz=80,slow=38
comp=N,0.7nm,1.0s
ASAJ Asahikawa 26.14 35 LR LR 18 43 44.2
comp=N,114nm,18.9s,baz=236,slow=37
KLR Kul'dur 26.19 15 P P 18 33 06.2 -1.0
comp=N,1.2nm,0.5s,baz=214,slow=8.6,SNR=8.0
KLR LR LR 18 44 22.3
comp=N,109nm,18.2s,baz=202,slow=39
comp=N,1.2nm,0.5s
HEH HeiHe 26.39 8 eP P 18 33 08.5 -0.6
HEH pmax pmax
comp=N,4.0nm,1.4s
ULN Ulaanbaatar 26.40 337 P P 18 33 07.2 -2.2
SONM Songino Array 26.61 336 P P 18 33 10.3 -1.0
SONM Songino Array 26.61 336 P P 18 33 11.6 +0.3
comp=N,1.6nm,0.7s,baz=152,slow=9.4,SNR=7.3
SONM LR LR 18 44 53.2
comp=N,92nm,18.3s,baz=226,slow=39
comp=N,1.6nm,0.7s
LSA Lhasa 27.87 288 P P 18 33 23.2 0.0
YAK Yakutsk 38.21 6 LR LR 18 51 23.6
comp=N,57nm,18.0s,baz=169,slow=38
MKAR Makanchi Array 38.77 316 P P 18 34 56.5 -0.8
comp=N,0.8nm,0.6s,baz=105,slow=9.8,SNR=18
comp=N,0.8nm,0.6s
PETK Petropavlovsk- 39.53 34 LR LR 18 51 46.0
comp=N,40nm,19.2s,baz=189,slow=37
ZAA0 Zalesovo Array 40.58 327 P P 18 35 11.4 -0.8
ZALV Zalesovo Beam 40.58 327 P P 18 35 11.2 -1.1
comp=N,1.1nm,0.5s,baz=108,slow=9.5,SNR=5.4
comp=N,1.1nm,0.5s
MA2 Magadan 40.76 22 LR LR 18 52 28.3
comp=N,43nm,18.7s,baz=266,slow=37
NRN Naryn 41.69 306 P P 18 35 21.6 -0.3
H11S3 WAKE ISLAND Hy 42.01 89 T T 19 21 10.2
baz=284,slow=74
H11S1 WAKE ISLAND Hy 42.02 89 T T 19 20 48.3
baz=284,slow=74
H11S2 WAKE ISLAND Hy 42.03 89 T T 19 20 46.0
baz=284
KURBB Kurhatov Arra 42.51 320 P P 18 35 27.1 -1.0
comp=N,0.3nm,0.3s,baz=106,slow=6.8,SNR=1.9
comp=N,0.3nm,0.3s
AAK Ala-Archa 43.00 307 LR LR 18 54 09.5
comp=N,68nm,19.7s,baz=84,slow=37
WRA Warramunga Arr 45.51 163 P P 18 35 51.9 -0.5
comp=N,1.2nm,0.8s,baz=345,slow=8.7,SNR=5.2
comp=N,1.2nm,0.8s
KKAR Karatay Array 45.96 307 P P 18 35 54.2 -1.7
TIXI Tiksi 47.67 3 P P 18 36 07.2 -1.6
TIXI IAmb IAmb 18 36 08.1
comp=Z,3.7nm,0.6s
TIXI Tiksi 47.67 3 LR LR 18 58 59.4
comp=Z,120nm,18.5s,baz=205,slow=40
BVAR Borovoye Array 48.07 321 P P 18 36 12.1 -0.1
comp=Z,0.7nm,0.6s,baz=92,slow=8.3,SNR=4.9
BVAR LR LR 18 58 35.5
comp=Z,36nm,18.2s,baz=329,slow=39
comp=Z,0.7nm,0.6s
BRVK Borovoye 48.14 321 P P 18 36 12.5 -0.2
BRVK IAmb IAmb 18 36 19.2
comp=Z,4.1nm,1.1s
AS31 Alice Springs 48.98 165 P P 18 36 14.9 -4.6
ASAR Alice Springs 48.98 165 P P 18 36 14.3 -5.1
ASAR Alice Springs 48.98 165 P P 18 36 19.4 -0.1
comp=Z,0.3nm,0.6s,baz=343,slow=7.1,SNR=11
comp=Z,0.3nm,0.6s
NRIK Noril'sk 49.57 345 P P 18 36 22.0 -1.5
comp=Z,0.7nm,0.3s,baz=159,slow=8.6,SNR=1.8
comp=Z,0.7nm,0.3s
ABKAR Akbulak array 53.88 314 P P 18 36 56.4 +0.4
GEYT Alibeck 55.33 300 P P 18 37 06.9 +0.2
comp=Z,1.5nm,0.8s,baz=120,slow=8.5,SNR=2.8
comp=Z,1.5nm,0.8s
L14K Kuka Creek 62.14 32 P P 18 37 53.8 +0.1
K15K Wolf Creek Mou 62.69 31 P P 18 37 57.8 +0.5
F17K Baldwin Pennin 62.86 26 P P 18 37 58.5 +0.1
C18K Utukok River 62.97 24 P P 18 37 58.3 -0.9
C18K IAmb IAmb 18 38 04.9
comp=Z,7.1nm,1.4s
H17K Granite Mounta 63.40 28 P P 18 38 02.2 +0.2
H17K IAmb IAmb 18 38 38.5
comp=Z,6.6nm,1.4s
N15K Kwethluk River 63.44 33 P P 18 38 03.1 +0.7
C19K Lookout Ridge 63.57 23 P P 18 38 03.8 +0.6
C19K IAmb IAmb 18 38 44.6
comp=Z,5.3nm,1.5s
J17K VABM Dome 63.79 30 P P 18 38 03.8 -0.8
G18K Tagagawik 63.91 27 P P 18 38 03.7 -1.7
G18K IAmb IAmb 18 38 47.1
comp=Z,4.8nm,1.4s
D19K Kuna River 64.10 24 P P 18 38 06.3 -0.3
D19K IAmb IAmb 18 38 07.4
comp=Z,2.6nm,0.6s
K17K Iditarod 64.17 30 P 18 38 07.5 +0.3
E19K Redstone River 64.45 25 P P 18 38 07.4 -1.5
E19K IAmb IAmb 18 38 10.0
comp=Z,4.4nm,1.2s
H19K Roundabout Mou 64.84 27 P P 18 38 11.3 -0.2
H19K IAmb IAmb 18 38 28.5
comp=Z,7.0nm,1.4s
L18K Granite Mounta 64.95 31 P P 18 38 12.1 -0.1
TTA Tatalina 65.21 30 P P 18 38 13.6 -0.4
TTA IAmb IAmb 18 38 17.2
comp=Z,4.9nm,1.2s
J19K Poorman 65.30 29 P P 18 38 15.6 +1.1
J19K IAmb IAmb 18 38 18.8
comp=Z,6.6nm,1.3s
B21K Ikpikpuk River 65.33 23 P P 18 38 14.7 +0.2
B21K IAmb IAmb 18 38 16.0
comp=Z,3.8nm,0.8s
SVW2 Sparrevohn 65.58 32 P P 18 38 15.5 -0.9
L19K White Mountain 65.81 31 P P 18 38 17.7 -0.2
O18K Koktuh Hills 65.91 33 P P 18 38 19.8 +1.2
F21K Alatna River 65.91 25 P P 18 38 18.4 0.0
IMAR Indian Mountai 65.92 26 P P 18 38 18.0 -0.4
J20K Nowinta River 65.93 28 P P 18 38 18.4 -0.1
J20K IAmb IAmb 18 38 22.6
comp=Z,7.8nm,1.4s
P18K Big Mountain, 65.95 34 P P 18 38 17.4 -1.5
KBZ Khabaz 65.96 309 P P 18 38 18.8 -0.2
comp=Z,1.3nm,0.9s,baz=129,slow=6.5,SNR=2.7
comp=Z,1.3nm,0.9s
G21K Allakaket 65.97 26 P P 18 38 17.4 -1.4
G21K IAmb IAmb 18 38 39.3
comp=Z,6.0nm,1.4s
K20K Telida 66.05 29 P P 18 38 19.4 0.0
D22K Ayikyak River 66.06 23 P P 18 38 18.7 -0.7
H21K Melozitna Rive 66.34 27 P P 18 38 20.9 -0.3
M20K Styx River 66.66 31 P P 18 38 23.8 +0.5
TOLK Toolik Lake Re 67.22 23 P P 18 38 26.0 -0.8
TOLK IAmb IAmb 18 38 40.8
comp=Z,2.8nm,0.9s
MLY Manley 67.28 27 P P 18 38 27.0 -0.3
D24K Happy Valley 67.41 23 P P 18 38 28.1 +0.1
D24K IAmb IAmb 18 38 41.6
comp=Z,3.7nm,0.8s
KTH Kantishna Hill 67.42 29 P P 18 38 27.8 -0.4
F24K Squaw Lake 68.02 25 P P 18 38 32.0 +0.1
F24K IAmb IAmb 18 38 34.0
comp=Z,2.7nm,0.6s
ILAR Eielson Array 68.94 27 P P 18 38 37.0 -0.7
comp=Z,0.2nm,0.5s,baz=299,slow=8.2,SNR=6.3
comp=Z,0.2nm,0.5s
SPITS Spitsbergen Ar 69.62 348 LR LR 19 12 50.9
comp=Z,17nm,18.5s,baz=184,slow=39
D27M Malcolm River 70.14 22 P P 18 38 44.2 -0.8
I26K Coal Creek Min 70.36 26 P P 18 38 46.1 -0.2
I26K IAmb IAmb 18 39 26.3
comp=Z,5.8nm,1.4s
J26L Joseph Creek 70.39 27 P P 18 38 46.4 -0.3
J26L IAmb IAmb 18 38 58.3
comp=Z,4.3nm,1.3s
E28M Babbage River 70.81 23 P P 18 38 48.6 -0.5
E28M IAmb IAmb 18 39 31.1
comp=Z,6.4nm,1.4s
F28M Old Crow 70.98 24 P P 18 38 49.9 -0.3
K27K Chicken 71.15 28 P P 18 38 51.1 -0.1
K27K IAmb IAmb 18 39 25.6
comp=Z,4.7nm,1.4s
M26K Nabesna, AK 71.20 29 P P 18 38 51.1 -0.5
M26K IAmb IAmb 18 39 05.7
comp=Z,7.4nm,1.4s
E29M Blow River 71.45 23 P P 18 38 53.0 0.0
L27K Beaver Creek, 71.53 29 P P 18 38 53.3 -0.3
L27K IAmb IAmb 18 39 03.3
comp=Z,7.2nm,1.5s
BCAR Beaver Creek A 71.55 28 P P 18 38 54.2 +0.5
I28M Miner Creek 71.61 26 P P 18 38 54.2 +0.2
M27K Edge Creek, AK 71.72 29 P P 18 38 53.6 -1.3
M27K IAmb IAmb 18 38 57.9
comp=Z,9.2nm,1.4s
FINES FINESS Array B 71.76 330 P P 18 38 54.6 -0.3
comp=Z,1.6nm,0.9s,baz=74,slow=6.8,SNR=5.0
comp=Z,1.6nm,0.9s
H29M Whitestone 71.98 25 P P 18 38 54.5 -1.7
H29M IAmb IAmb 18 39 25.9
comp=Z,8.5nm,1.4s
DAWY Dawson 72.26 27 P P 18 38 57.4 -0.6
DAWY IAmb IAmb 18 39 07.5
comp=Z,5.1nm,1.4s
EPYK Eagle Plains 72.56 24 P P 18 38 58.6 -1.0
EPYK IAmb IAmb 18 39 09.9
comp=Z,8.0nm,1.4s
I30M Mount Dempster 73.09 26 P P 18 39 02.6 -0.3
L29M L29M 73.11 28 P P 18 39 03.4 +0.4
K29M Barlow Dome 73.12 27 P P 18 39 03.5 +0.3
K29M IAmb IAmb 18 39 05.8
comp=Z,4.8nm,1.3s
M29M Somme Creek 73.20 29 P P 18 39 04.3 +0.7
M29M IAmb IAmb 18 39 18.1
comp=Z,9.0nm,1.4s
J30M Hart River 73.34 26 P P 18 39 03.5 -0.9
BRTR Keskin Array B 73.67 307 P P 18 39 08.2 +1.3
comp=Z,0.8nm,0.9s,baz=99,slow=4.5,SNR=2.6
comp=Z,0.8nm,0.9s
M30M Minto, Yukon 73.88 28 P 18 39 07.9 +0.4
M30M IAmb IAmb 18 39 27.6
comp=Z,7.2nm,1.5s
M31M Drury Creek, Y 75.05 28 P P 18 39 13.8 -0.5
M31M IAmb IAmb 18 39 31.6
comp=Z,10nm,1.5s
WHY Whitehorse 75.45 30 P P 18 39 16.7 -0.1
WHY IAmb IAmb 18 39 46.1
comp=Z,7.5nm,1.4s
HFS Hagfors 77.87 331 LR LR 19 19 52.6
comp=Z,182nm,18.1s,baz=268,slow=40
NOA NORSAR Array B 78.52 332 LR LR 19 16 22.2
comp=Z,36nm,18.0s,baz=260,slow=37
YKA Yellowknife Ar 82.74 23 P P 18 39 54.9 -1.6
comp=Z,0.9nm,0.6s,baz=315,slow=4.9,SNR=20
comp=Z,0.9nm,0.6s
NVAR Mina Array Bea 96.02 43 P P 18 41 00.8 +0.1
comp=Z,0.1nm,0.3s,baz=296,slow=2.9,SNR=2.1
comp=Z,0.1nm,0.3s

TAP 14 18:45:21.4, 24.79N × 121.67E, h55km, ML1.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.06**	**183**	P		Pn		18 45 30.0	+0.3
	baz=170								
TWE				S		Sn		18 45 36.1	+0.5
	baz=170								
FUSB	**Fushanzhiwuyua**	**0.08**	**252**	eP		Pn		18 45 30.0	+0.1
	baz=251								
FUSB				S		Sn		18 45 36.1	+0.2
	baz=251								
NWLT	**Wulai**	**0.15**	**267**	eP		Pn		18 45 30.1	0.0
	baz=267								
NWLT				eS		Sn		18 45 37.0	+0.7
	baz=267								
ENTT	**Nioudou**	**0.17**	**214**	P		Pn		18 45 30.5	+0.3
	baz=211								
ENTT				S		Sn		18 45 37.2	+0.8
	baz=211								
NHDH	**Xindian Distri**	**0.22**	**323**	eP		Pn		18 45 30.8	+0.3
	baz=323								
NDT	**Datong Townshi**	**0.23**	**218**	P		Pn		18 45 30.8	+0.3
	baz=218								
NDT				S		Sn		18 45 37.6	+0.6
	baz=218								
TWC	**Suao**	**0.24**	**137**	eP		Pn		18 45 31.0	+0.5
	baz=135								
EGS		**0.24**	**76**	eP		Pn		18 45 29.5	-1.1
	baz=76								

LATG	**Datong**	**0.28 208**	P	Pn	18 45 31.3	+0.3
	baz=207					
YHNB	**Yeheng**	**0.29 247**	P	Pn	18 45 31.5	+0.4
	baz=246					
YHNB			*e*S	Sn	18 45 38.5	+0.5
	baz=246					
NWF	**Wu-fen Shan**	**0.30 19**	*e*P	Pn	18 45 31.5	+0.3
	baz=19					
WFSB	**Wu-fen Shan**	**0.30 19**	*e*P	Pn	18 45 31.6	+0.5
	baz=19					
NSK	**Sanguang**	**0.30 249**	*e*P	Pn	18 45 31.4	+0.3
	baz=248					
NSK			*e*S	Sn	18 45 38.6	+0.5
	baz=248					
SXI1	**Grass Mountain**	**0.36 31**	P	Pn	18 45 31.9	+0.3
	baz=31					
YM01	**YM01**	**0.37 346**	P	Pn	18 45 31.8	+0.1
	baz=345					
YM01			S	Sn	18 45 40.0	+0.9
	baz=345					
TWS1	**Kuangyinshan**	**0.39 324**	*e*P	Pn	18 45 32.4	+0.6
	baz=324					
NNS	**Nan Shan**	**0.44 218**	*e*P	Pn	18 45 32.7	+0.2
	baz=217					
NNSB	**Datong**	**0.44 217**	P	Pn	18 45 32.7	+0.2
	baz=216					
NNSB			S	Sn	18 45 41.0	+0.5
	baz=216					
NFF	**Wufeng Townshi**	**0.53 253**	*e*P	Pn	18 45 33.8	+0.5
	baz=253					
NFF			*e*S	Sn	18 45 43.2	+1.2
	baz=253					
LIOB	**Emei**	**0.61 257**	*e*P	Pn	18 45 35.3	+0.9
	baz=257					
LIOB			*e*S	Sn	18 45 45.4	+1.7
	baz=257					
EOS2	**EOS2**	**0.63 125**	*e*P	Pn	18 45 34.6	+0.2
	baz=125					
EOS2			*e*S	Sn	18 45 44.4	+0.6
	baz=125					
NSTT	**Nanjuang**	**0.63 256**	*e*P	Pn	18 45 35.0	+0.5
	baz=255					
NSTT			*e*S	Sn	18 45 45.4	+1.3
	baz=255					
FUSS	**Fushou**	**0.66 216**	*e*P	Pn	18 45 35.9	+0.7
	baz=216					
FUSS			*e*S	Sn	18 45 46.2	+1.1
	baz=216					
WHF	**Hehuan Shan**	**0.74 210**	*e*P	Pn	18 45 36.9	+0.6
	baz=209					
CHGB	**Renai**	**0.85 212**	*e*P	Pn	18 45 38.0	+0.4
	baz=212					
WUSB	**Renai**	**0.94 213**	*e*P	Pn	18 45 39.1	+0.5
	baz=212					
WUSB			*e*S	Sn	18 45 52.2	+1.0
	baz=212					
YOJ	**Yonaguni jima**	**1.26 105**	*e*P	Pn	18 45 42.1	-0.7
	baz=104					

IDC 14 18:59:37.2±2.4, 2°77′N×128°38′E, h0km, mb3.2/3, mbtmp3.3/3, MS4.2/1, Error ellipse: s-maj=160.4km s-min=28.7km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.32**	**166**	P	P	19 04 47.5	+0.4
	0.9nm,0.6s,baz=345,slow=10,SNR=9.4						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**26.82**	**169**	P	P	19 05 18.5	-0.9
	0.2nm,0.9s,baz=2.0,slow=11,SNR=1.9						
	0.2nm,0.9s						
JHJ	**Hachijo jima 2**	**32.03**	**18**	LR	LR	19 17 14.0	
	comp=Z,486nm,21.6s,baz=102,slow=33						
MKAR	**Makanchi Array**	**59.28**	**325**	P	P	19 09 41.1	+0.3
	0.2nm,0.7s,baz=104,slow=6.1,SNR=2.4						
	0.2nm,0.7s						

*IDC **14** 19:19:59.0±3.1, 55°.59N×149°.07W, h0km, mb3.4/1, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=41.1km s-min=33.2km az=178.0*

*NEIC **14** 19:19:58.5±1.3, 55°.6N±0°.1×149°.1W±0°.1, h7km±7km, mb3.8/2, ML3.8/42, ML3.6(AEIC), Error ellipse: s-maj=16.2km s-min=8.7km az=152.0*

*AEIC **14** 19:20:03.5±1.3, 55°.6N±0°.1×149°.0W±0°.1, h12km±7km, Error ellipse: s-maj=17.0km s-min=3.1km az=150.0*

ISC 14 19:19:58.9±1.1, 55°.64N±0°.08×149°.03W±0°.05, h10km, n184, σ1°20/193, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.85**	**306**	Pn	**Pn**	**19 20 44.3**	**-0.1**
OHAK				IAML		19 21 17.5	
	comp=E,231nm,0.6s						
OHAK				IAML		19 21 17.7	
	comp=N,266nm,0.7s						
OHAK	**Old Harbor**	**2.85**	**306**		**Sn**	**19 21 16.7**	**-1.9**
OHAK	**Old Harbor**	**2.85**	**306**	P	**Pn**	**19 20 44.7**	**+0.4**
OHAK	**Old Harbor**	**2.85**	**306**	P	**Pn**	**19 20 44.4**	**+0.1**
	baz=123						
OHAK				S	**Sn**	**19 21 16.7**	**-1.9**
	baz=123						
KDAK	**Kodiak Island**	**2.91**	**319**		**Pn**	**19 20 45.4**	**+0.2**
KDAK				IAML		19 21 20.3	
	comp=N,185nm,0.4s						
KDAK	**Kodiak Island**	**2.91**	**319**	Pn	**Pn**	**19 20 45.6**	**+0.5**
	comp=N,5.1nm,0.3s,baz=148,slow=6.7,SNR=218						
KDAK				Sn	**Sn**	**19 21 17.6**	**-2.6**
	comp=N,50nm,0.3s,baz=34,slow=22,SNR=42						
	comp=N,10nm,0.3s						
SII	**Sitkinak Islan**	**3.03**	**290**		**Pn**	**19 20 46.5**	**-0.4**
SII					**Sn**	**19 21 20.9**	**-2.3**
SII	**Sitkinak Islan**	**3.03**	**290**	P	**Pn**	**19 20 47.0**	**+0.1**
SII	**Sitkinak Islan**	**3.03**	**290**	P	**Pn**	**19 20 47.0**	**+0.1**
	baz=107						
SII				S	**Sn**	**19 21 21.5**	**-1.7**
	baz=107						
SYI	**Shuyak Island**	**3.50**	**330**		**Sn**	**19 21 34.3**	**-0.3**
SYI	**Shuyak Island**	**3.50**	**330**	Pn	**Pn**	**19 20 54.0**	**+0.7**
SYI	**Shuyak Island**	**3.50**	**330**	IAML		19 21 35.8	
	comp=N,123nm,0.6s						
SYI				IAML		19 21 36.7	
	comp=E,134nm,0.5s						
Q20K	**Shuyak Island**	**3.50**	**330**	P	**Pn**	**19 20 54.2**	**+0.9**
	baz=148						
Q20K				S	**Sn**	**19 21 34.3**	**-0.4**
	baz=148						
R18K	**Karluk**	**3.57**	**305**		**Pn**	**19 20 55.2**	**+1.0**
R18K					**Sn**	**19 21 35.3**	**-1.1**
R18K	**Karluk**	**3.57**	**305**	IAML		19 21 37.3	
	comp=E,271nm,0.4s						
R18K	**Karluk**	**3.57**	**305**	P	**Pn**	**19 20 55.2**	**+1.0**
	baz=122						
R18K				S	**Sn**	**19 21 35.3**	**-1.1**
	baz=122						
CHIR	**Chirikof Islan**	**3.73**	**276**	Pn	**Pn**	**19 20 56.2**	**-0.3**
CHIR	**Chirikof Islan**	**3.73**	**276**	P	**Pn**	**19 20 56.2**	**-0.3**
	baz=91						
Q23K	**Middleton Isla**	**4.07**	**20**	Pn	**Pn**	**19 21 01.0**	**-0.1**
Q23K				IAML		19 21 35.9	
	comp=N,112nm,1.4s						
Q23K				IAML		19 22 38.2	
	comp=E,103nm,1.4s						
Q23K	**Middleton Isla**	**4.07**	**20**	P	**Pn**	**19 21 01.2**	**+0.1**
	baz=202						
MID	**Middleton Isla**	**4.07**	**20**	Pn	**Pn**	**19 21 01.1**	**0.0**
MID				IAML		19 21 35.8	
	comp=N,132nm,1.4s						
MID				IAML		19 22 27.6	
	comp=E,128nm,1.5s						
MID	**Middleton Isla**	**4.07**	**20**	P	**Pn**	**19 21 01.3**	**+0.2**
CNPM	**China Poot**	**4.08**	**344**		**Pn**	**19 21 01.4**	**+0.2**
CNPM				IAML		19 21 50.0	
	comp=E,98nm,0.5s						
CNPM				IAML		19 21 50.4	
	comp=N,75nm,0.4s						
CNPM	**China Poot**	**4.08**	**344**		**Sn**	**19 21 47.8**	**-1.1**
Q19K	**Cape Douglas,**	**4.14**	**325**		**Pn**	**19 21 02.7**	**+0.6**
Q19K	**Cape Douglas,**	**4.14**	**325**	P	**Pn**	**19 21 03.1**	**+1.0**
	baz=142						
BRSE	**Bradley Lake S**	**4.22**	**348**		**Pn**	**19 21 03.5**	**+0.4**
BRSE					**Sn**	**19 21 50.5**	**-1.9**
BRSE	**Bradley Lake S**	**4.22**	**348**	P	**Pn**	**19 21 03.5**	**+0.4**
	baz=167						
BRSE				S	**Sn**	**19 21 50.5**	**-1.9**
	baz=167						
BRLK	**Bradley Lake**	**4.25**	**347**	Pn	**Pn**	**19 21 03.8**	**+0.1**
BRLK	**Bradley Lake**	**4.25**	**347**		**Sn**	**19 21 51.9**	**-1.6**
HOM	**Homer**	**4.27**	**342**	Pn	**Pn**	**19 21 04.6**	**+0.8**
AUL	**Augustine Lava**	**4.44**	**330**		**Pn**	**19 21 07.9**	**+1.7**
P23K	**Montague Islan**	**4.46**	**11**		**Pn**	**19 21 06.9**	**+0.4**
P23K					**Sn**	**19 21 55.1**	**-3.2**
P23K	**Montague Islan**	**4.46**	**11**	P	**Pn**	**19 21 06.9**	**+0.4**
	baz=192						
P23K				S	**Sn**	**19 21 55.1**	**-3.2**
	baz=192						
SEW	**Seward**	**4.49**	**357**		**Sn**	**19 21 56.8**	**-2.1**
SEW	**Seward**	**4.49**	**357**	P	**Pn**	**19 21 07.0**	**+0.2**
	baz=177						
SEW				S	**Sn**	**19 21 56.8**	**-2.1**
	baz=177						
PLK3	**Peulik 3**	**4.49**	**300**		**Pn**	**19 21 08.5**	**+1.5**
Q17K	**Contact Creek**	**4.58**	**308**	P	**Pn**	**19 21 09.6**	**+1.3**
	baz=123						
P19K	**Oil Pt**	**4.61**	**332**	Pn	**Pn**	**19 21 11.1**	**+2.4**
P19K	**Oil Pt**	**4.61**	**332**	P	**Pn**	**19 21 09.9**	**+1.2**
	baz=149						
O20K	**Slope Mountain**	**4.85**	**338**		**Pn**	**19 21 13.1**	**+1.2**
O20K	**Slope Mountain**	**4.85**	**338**	P	**Pn**	**19 21 13.1**	**+1.2**
	baz=156						
HIN	**Hinchinbrook I**	**4.96**	**15**		**Pn**	**19 21 13.6**	**+0.2**
HIN				IAML		19 22 16.6	
	comp=N,64nm,0.9s						
HIN				IAML		19 22 18.1	
	comp=E,59nm,1.4s						
KAIM	**Kayak Island**	**4.96**	**28**	Pn	**Pn**	**19 21 13.8**	**+0.5**
KAIM				IAML		19 22 10.3	
	comp=N,71nm,0.7s						
KAIM				IAML		19 22 15.2	
	comp=E,77nm,1.3s						
KAIM	**Kayak Island**	**4.96**	**28**	P	**Pn**	**19 21 13.8**	**+0.5**
	baz=211						
P18K	**Big Mountain,**	**5.03**	**321**	Pn	**Pn**	**19 21 15.2**	**+0.8**
P18K	**Big Mountain,**	**5.03**	**321**	P	**Pn**	**19 21 14.7**	**+0.3**
	baz=136						
ANNE	**Aniakchak Nort**	**5.19**	**288**		**Pn**	**19 21 16.1**	**-0.5**
EYAK	**Cordova Ski Ar**	**5.22**	**18**	P	**Pn**	**19 21 17.9**	**+1.0**
EYAK	**Cordova Ski Ar**	**5.22**	**18**	P	**Pn**	**19 21 17.8**	**+0.9**
	baz=200						
RSO	**Redoubt South**	**5.22**	**339**		**Pn**	**19 21 16.2**	**-0.9**
SUCK	**Suckling Hills**	**5.26**	**30**		**Pn**	**19 21 18.0**	**+0.6**
SUCK				IAML		19 22 16.8	
	comp=N,88nm,0.7s						
SUCK				IAML		19 22 28.6	
	comp=E,53nm,1.3s						
CAPN	**Captain Cook N**	**5.27**	**349**	Pn	**Pn**	**19 21 19.1**	**+1.6**
RAGM	**Ragged Mountai**	**5.29**	**24**		**Pn**	**19 21 18.5**	**+0.5**
RAGM				IAML		19 22 20.2	
	comp=E,56nm,0.3s						
CHGN	**Chignik**	**5.31**	**281**	Pn	**Pn**	**19 21 18.1**	**-0.1**
CHGN				IAML		19 22 20.0	
	comp=N,38nm,0.6s						
NICHA	**Nichawak Mount**	**5.34**	**28**		**Pn**	**19 21 19.6**	**+1.0**
P17K	**Kvichak River**	**5.36**	**315**	P	**Pn**	**19 21 20.3**	**+1.5**
	baz=129						
O18K	**Koktuh Hills**	**5.37**	**325**		**Pn**	**19 21 19.1**	**+0.2**
O18K				IAML		19 22 23.2	
	comp=N,38nm,0.6s						
O18K				IAML		19 22 35.6	
	comp=E,30nm,1.0s						
O18K	**Koktuh Hills**	**5.37**	**325**	P	**Pn**	**19 21 19.7**	**+0.7**
	baz=140						
O19K	**Port Alsworth**	**5.37**	**331**		**Pn**	**19 21 18.8**	**-0.2**
RC01	**Rabbit Creek A**	**5.48**	**356**		**Pn**	**19 21 20.6**	**+0.1**
RC01	**Rabbit Creek A**	**5.48**	**356**	P	**Pn**	**19 21 21.2**	**+0.7**
	baz=176						
BERG	**Berg Lake**	**5.54**	**29**		**Pn**	**19 21 22.0**	**+0.6**
KHIT	**Khitrov Hills**	**5.71**	**30**		**Pn**	**19 21 24.4**	**+0.6**
DIV	**Divide**	**5.77**	**16**		**Pn**	**19 21 25.4**	**+0.9**
N20K	**Mount Spurr**	**5.82**	**345**	P	**Pn**	**19 21 25.1**	**-0.2**
	baz=182						
SPCR	**Spurr Chakacha**	**5.82**	**345**		**Pn**	**19 21 25.1**	**-0.2**
BMRM	**Bremner River**	**5.83**	**22**	P	**Pn**	**19 21 26.2**	**+0.8**
	baz=205						
WAX	**Waxell Ridge**	**5.83**	**32**		**Pn**	**19 21 26.1**	**+0.6**
BARK	**Barkley Ridge**	**5.91**	**33**		**Pn**	**19 21 27.2**	**+0.7**
SUA	**Susitna One**	**5.91**	**352**		**Pn**	**19 21 26.9**	**+0.4**
SUA	**Susitna One**	**5.91**	**352**	P	**Pn**	**19 21 26.9**	**+0.4**
	baz=171						
MESA	**MESA**	**5.91**	**37**		**Pn**	**19 21 27.3**	**+0.7**
MESA	**MESA**	**5.91**	**37**	P	**Pn**	**19 21 27.3**	**+0.7**
	baz=222						
P16K	**Nushagak River**	**5.92**	**309**		**Pn**	**19 21 28.0**	**+1.4**
P16K	**Nushagak River**	**5.92**	**309**	P	**Pn**	**19 21 28.0**	**+1.4**
	baz=122						
N19K	**Bonanza Creek**	**5.93**	**333**		**Pn**	**19 21 27.1**	**+0.3**
N19K	**Bonanza Creek**	**5.93**	**333**	P	**Pn**	**19 21 27.1**	**+0.3**
	baz=149						
PMR	**Palmer**	**5.97**	**360**		**Pn**	**19 21 28.1**	**+0.9**
PMR	**Palmer**	**5.97**	**360**	P	**Pn**	**19 21 29.2**	**+2.0**
O17K	**Koliganek Bris**	**5.99**	**317**		**Pn**	**19 21 28.4**	**+1.0**
O17K	**Koliganek Bris**	**5.99**	**317**	P	**Pn**	**19 21 28.4**	**+1.0**
	baz=131						
CRQM	**Cirque**	**6.00**	**29**		**Pn**	**19 21 28.5**	**+0.6**
CRQE	**Cirque**	**6.01**	**29**	P	**Pn**	**19 21 28.5**	**+0.5**
	baz=214						
STLK	**Strandline Lak**	**6.06**	**347**		**Pn**	**19 21 29.1**	**+0.6**
KLU	**Klutina**	**6.09**	**14**	P	**Pn**	**19 21 30.1**	**+1.2**
	baz=197						
CHNA	**Chernabura Isl**	**6.09**	**267**	P	**Pn**	**19 21 27.7**	**-1.2**
	baz=79						
CNBA	**Chernabura Isl**	**6.10**	**267**		**Pn**	**19 21 27.7**	**-1.2**
GHO	**Glory Hole Cre**	**6.15**	**0**		**Pn**	**19 21 31.1**	**+1.3**
SML	**Sawmill**	**6.20**	**3**		**Pn**	**19 21 31.5**	**+1.1**
SML	**Sawmill**	**6.20**	**3**	P	**Pn**	**19 21 31.5**	**+1.1**
	baz=184						
SML				S	**Sn**	**19 22 39.3**	**-1.9**
	baz=184						
N18K	**Kilae Creek**	**6.22**	**327**		**Pn**	**19 21 31.2**	**+0.6**
N18K	**Kilae Creek**	**6.22**	**327**	P	**Pn**	**19 21 31.2**	**+0.6**
	baz=142						
O16K	**Kokwok River B**	**6.28**	**313**		**Pn**	**19 21 32.2**	**+0.8**
O16K	**Kokwok River B**	**6.28**	**313**	P	**Pn**	**19 21 32.6**	**+1.2**
	baz=126						
SCM	**Sheep Creek Mo**	**6.28**	**7**		**Pn**	**19 21 32.9**	**+1.4**
SCM	**Sheep Creek Mo**	**6.28**	**7**	P	**Pn**	**19 21 32.9**	**+1.4**
	baz=189						
SCM				S	**Sn**	**19 22 42.5**	**-0.7**
	baz=189						
SAMH	**Samovar Hills**	**6.29**	**41**		**Pn**	**19 21 33.1**	**+1.3**
VRDI	**Verde Repeater**	**6.32**	**25**		**Pn**	**19 21 32.9**	**+0.7**
TABL	**Table Mountain**	**6.38**	**38**		**Pn**	**19 21 33.8**	**+0.7**
N25K	**Chitina, Valde**	**6.42**	**19**		**Pn**	**19 21 34.3**	**+0.8**
N25K	**Chitina, Valde**	**6.42**	**19**	P	**Pn**	**19 21 34.5**	**+1.1**
	baz=203						
SVW2	**Sparrevohn**	**6.47**	**331**	P	**Pn**	**19 21 34.4**	**+0.4**
PCA	**Pinnacle**	**6.47**	**43**		**Pn**	**19 21 34.8**	**+0.6**
PINM	**Pinnacle**	**6.47**	**43**	P	**Pn**	**19 21 34.8**	**+0.6**
	baz=230						
SKT	**Skwentna**	**6.49**	**350**	Pn	**Pn**	**19 21 34.1**	**-0.2**
SKT	**Skwentna**	**6.49**	**350**	P	**Pn**	**19 21 34.2**	**-0.2**
	baz=167						
SDPT	**Sand Point**	**6.51**	**272**	P	**Pn**	**19 21 34.5**	**-0.2**
SDPT	**Sand Point**	**6.51**	**272**	P	**Pn**	**19 21 34.4**	**-0.2**
	baz=84						
PNL	**Peninsula**	**6.56**	**48**		**Pn**	**19 21 35.9**	**+0.6**
PNL	**Peninsula**	**6.56**	**48**	P	**Pn**	**19 21 36.6**	**+1.3**
PNL	**Peninsula**	**6.56**	**48**	P	**Pn**	**19 21 35.9**	**+0.6**
	baz=236						
MCARA	**McCarthy VSAT**	**6.56**	**26**		**Pn**	**19 21 36.0**	**+0.7**
MCARA	**McCarthy VSAT**	**6.56**	**26**	P	**Pn**	**19 21 36.3**	**+0.9**
	baz=211						
M20K	**Styx River**	**6.62**	**343**		**Pn**	**19 21 36.4**	**+0.3**
M20K	**Styx River**	**6.62**	**343**	P	**Pn**	**19 21 36.4**	**+0.3**
	baz=160						
BCPM	**Bancas Point**	**6.63**	**45**		**Pn**	**19 21 37.0**	**+0.8**
M24K	**Tolsona, Glenn**	**6.65**	**12**		**Pn**	**19 21 38.1**	**+1.5**
M24K	**Tolsona, Glenn**	**6.65**	**12**	P	**Pn**	**19 21 38.2**	**+1.6**
	baz=194						
CTG	**Chitna Glacier**	**6.70**	**34**	P	**Pn**	**19 21 38.3**	**+0.9**
	baz=220						
WACK	**Wrangell Chich**	**6.82**	**19**		**Pn**	**19 21 40.3**	**+1.2**
O15K	**Ungalikthiuk R**	**6.82**	**306**	P	**Pn**	**19 21 40.3**	**+1.4**
	baz=117						
M18K	**Stony River**	**6.86**	**332**		**Pn**	**19 21 39.6**	**+0.2**
M18K	**Stony River**	**6.86**	**332**	P	**Pn**	**19 21 39.6**	**+0.2**
	baz=146						
WAT7	**Susitna Watana**	**7.22**	**1**		**Pn**	**19 21 46.1**	**+1.6**
PS1A	**Pavlof South-1**	**7.22**	**274**		**Pn**	**19 21 44.2**	**-0.2**
O29M	**Mount Kennedy**	**7.26**	**46**		**Pn**	**19 21 46.1**	**+1.0**
	baz=234						
P29M	**Windy Craggy**	**7.26**	**52**		**Pn**	**19 21 45.3**	**+0.4**
P29M	**Windy Craggy**	**7.26**	**52**	P	**Pn**	**19 21 45.4**	**+0.4**
	baz=241						
S31K	**Pelican**	**7.40**	**66**		**Pn**	**19 21 45.3**	**-1.5**
S31K	**Pelican**	**7.40**	**66**	P	**Pn**	**19 21 45.3**	**-1.5**
	baz=256						
YUK2	**White River**	**7.49**	**31**		**Pn**	**19 21 49.8**	**+1.6**
DHY	**Denali Highway**	**7.51**	**6**	P	**Pn**	**19 21 50.3**	**+1.8**
	baz=187						
M16K	**Timber Creek**	**7.51**	**320**		**Pn**	**19 21 49.6**	**+1.3**
M16K	**Timber Creek**	**7.51**	**320**	P	**Pn**	**19 21 49.6**	**+1.3**
	baz=132						
O14K	**Tigyukauivet M**	**7.53**	**304**		**Pn**	**19 21 49.9**	**+1.4**
O14K	**Tigyukauivet M**	**7.53**	**304**	P	**Pn**	**19 21 49.9**	**+1.4**
	baz=114						
PAX	**Paxson**	**7.58**	**12**		**Pn**	**19 21 51.1**	**+1.7**
PAX	**Paxson**	**7.58**	**12**	P	**Pn**	**19 21 51.1**	**+1.7**
	baz=195						
YUK3	**Moose Creek**	**7.60**	**32**		**Pn**	**19 21 51.1**	**+1.4**
YUK3	**Moose Creek**	**7.60**	**32**	P	**Pn**	**19 21 51.1**	**+1.4**
	baz=219						
YUK6	**Outpost Mounta**	**7.73**	**42**		**Pn**	**19 21 53.6**	**+2.0**
YUK6	**Outpost Mounta**	**7.73**	**42**	P	**Pn**	**19 21 53.6**	**+2.0**
	baz=231						
SIT	**Sitka**	**7.75**	**74**	P	**Pn**	**19 21 49.2**	**-2.4**
RND	**Reindeer**	**7.79**	**1**		**Pn**	**19 21 53.9**	**+1.6**
P30M	**Million Dollar**	**7.84**	**50**		**Pn**	**19 21 53.9**	**+0.9**
P30M	**Million Dollar**	**7.84**	**50**	P	**Pn**	**19 21 53.9**	**+0.9**
	baz=240						
TRF	**Thorofare Moun**	**7.86**	**356**		**Pn**	**19 21 54.8**	**+1.5**
TRF	**Thorofare Moun**	**7.86**	**356**	P	**Pn**	**19 21 54.8**	**+1.5**
	baz=175						
HYT	**Haines Junctio**	**8.00**	**45**	Pn	**Pn**	**19 21 56.4**	**+1.3**
HYT	**Haines Junctio**	**8.00**	**45**	P	**Pn**	**19 21 56.5**	**+1.4**
	baz=234						
S32K	**Killisnoo**	**8.20**	**71**		**Pn**	**19 21 56.2**	**-1.5**
S32K	**Killisnoo**	**8.20**	**71**	P	**Pn**	**19 21 56.2**	**-1.5**
	baz=263						
BESE	**Bessie Mountai**	**8.26**	**63**		**Pn**	**19 21 58.3**	**-0.3**
FALS	**False Pass**	**8.26**	**271**		**Pn**	**19 21 57.9**	**-0.7**
FALS	**False Pass**	**8.26**	**271**	P	**Pn**	**19 21 58.4**	**-0.2**
FALS	**False Pass**	**8.26**	**271**	P	**Pn**	**19 21 57.9**	**-0.7**
	baz=79						
SKAG	**Skagway**	**8.30**	**57**	P	**Pn**	**19 22 00.5**	**+1.3**
K24K	**Donnelly Dome**	**8.35**	**10**		**Pn**	**19 22 02.4**	**+2.5**
K24K	**Donnelly Dome**	**8.35**	**10**	P	**Pn**	**19 22 02.4**	**+2.5**
	baz=193						
ISLZ	**Isanotski Laza**	**8.45**	**270**		**Pn**	**19 22 01.0**	**-0.3**
M29M	**Somme Creek**	**8.72**	**34**		**Pn**	**19 22 06.4**	**+1.3**
M29M	**Somme Creek**	**8.72**	**34**	P	**Pn**	**19 22 06.4**	**+1.3**
	baz=223						
WRH	**Wood River Hil**	**8.88**	**3**		**Pn**	**19 22 08.4**	**+1.4**
WHY	**Whitehorse**	**9.01**	**50**	Pn	**Pn**	**19 22 10.2**	**+1.2**
CRAG	**Craig**	**9.02**	**85**	P	**Pn**	**19 22 06.8**	**-2.2**
CCB	**Clear Creek Bu**	**9.06**	**3**		**Pn**	**19 22 11.2**	**+1.7**
ILAR	**Eielson Array**	**9.22**	**6**	Pn	**Pn**	**19 22 12.8**	**+0.9**
	comp=E,0.5nm,0.3s,baz=190,slow=14,SNR=20						
ILAR				Sn	**Sn**	**19 23 51.9**	**-3.7**
	comp=E,0.4nm,0.3s,baz=188,slow=24,SNR=2.6						
	comp=E,0.9nm,0.3s						
M30M	**Minto, Yukon**	**9.37**	**37**		**Pn**	**19 22 14.7**	**+0.8**
M30M	**Minto, Yukon**	**9.37**	**37**	P	**Pn**	**19 22 14.7**	**+0.8**
	baz=227						
M31M	**Drury Creek, Y**	**10.01**	**43**		**Pn**	**19 22 23.1**	**+0.5**
H21K	**Melozitna River**	**10.22**	**351**		**Pn**	**19 22 26.0**	**+0.5**
UNV	**Unalaska Valle**	**10.26**	**267**	P	**Pn**	**19 22 25.4**	**-0.6**
J29N	**Klondike Camp**	**10.35**	**27**	Pn	**Pn**	**19 22 27.3**	**+0.1**
INK	**Inuvik**	**14.58**	**23**	Pn	**Pn**	**19 23 26.0**	**+1.1**
INK	**Inuvik**	**14.58**	**23**	Pn	**Pn**	**19 23 25.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=205,slow=10,SNR=7.5						
	comp=E,2.6nm,0.8s						
C36M	**Paulatuk**	**17.73**	**29**	IAmb	IAmb	19 24 12.3	
	comp=Z,9.8nm,1.5s						
YKA	**Yellowknife Ar**	**18.79**	**55**	P	**Pn**	**19 24 20.3**	**+1.8**
	baz=264,slow=10.0,SNR=1.9						
	comp=Z,0.2nm,0.6s						
A36M	**Sachs Harbour**	**19.22**	**22**		**Pn**	**19 24 24.8**	**+1.2**
A36M				IAmb	IAmb	19 24 27.0	
	comp=Z,5.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**48.69**	**241**	T	T	20 21 15.0	
	baz=29						
H11N3	**WAKE ISLAND Hy**	**48.69**	**241**	T	T	20 21 13.4	
	baz=29						
H11N1	**WAKE ISLAND Hy**	**48.70**	**241**	T	T	20 21 16.2	
	baz=29						
MKAR	**Makanchi Array**	**69.20**	**325**	P	**P**	**19 31 06.9**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=33,slow=5.5,SNR=4.0						
	comp=Z,0.4nm,0.8s						

*IDC **14** 19:26:56.5±1.5, 56°.10N×149°.41W, h0km, mb3.4/4, mbtmp3.5/9, ML3.3/5, MS3.0/7, Error ellipse: s-maj=30.7km s-min=19.9km az=45.0*

*NEIC **14** 19:26:56.2±1.6, 56°.21N±0°.08×149°.4W±0°.1, h10km±2km, mb4.0/1, ML3.8/60, ML3.6(AEIC), Error ellipse: s-maj=13.4km s-min=9.5km az=170.0*

*AEIC **14** 19:27:01.3±1.6, 56°.20N±0°.08×149°.37W±0°.10, h12km±7km, Error ellipse: s-maj=12.4km s-min=7.8km az=172.0*

ISC 14 19:26:57.5±0.8, 56°.29N±0°.07×149°.46W±0°.05, h10km, n259, σ0°.95/257, mb3.4/4, MS3.0/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.27**	**313**	Pn	**Pn**	**19 27 34.5**	**-0.5**
KDAK	**Kodiak Island**	**2.27**	**313**		**Sn**	**19 28 01.5**

KAHG	Katmai Hook Gl	3.53	311			Pn	19 27 54.0	+1.6	
Q23K	Middleton Isla	3.56	26	Pn		Pn	19 27 51.5	-1.2	
Q23K	comp=E,152nm,1.4s			IAML			19 28 26.9		
Q23K	comp=N,203nm,1.2s			IAML			19 28 31.7		
Q23K	Middleton Isla baz=208	3.56	26	P		Pn	19 27 52.0	-0.8	
MID	Middleton Isla	3.57	27	Pn		Pn	19 27 51.5	-1.3	
MID	comp=N,204nm,1.2s			IAML			19 28 31.6		
MID	comp=E,161nm,1.5s			IAML			19 28 48.8		
MID	Middleton Isla	3.57	27	P		Pn	19 27 52.2	-0.5	
BRLK	Bradley Lake	3.57	348	Pn		Pn	19 27 51.5	-1.4	
BRLK	comp=N,86nm,0.6s			IAML			19 28 36.9		
BRLK	comp=E,110nm,0.5s			IAML			19 28 38.8		
AUL	Augustine Lava	3.76	327			Pn	19 27 56.7	+1.2	
SEW	Seward baz=179	3.83	0	P		Pn	19 27 55.8	-0.6	
P23K	Montague Islan	3.88	15			Pn	19 27 56.7	-0.4	
P23K						Sn	19 28 39.3	-3.3	
P23K	Montague Islan baz=196	3.88	15	P		Pn	19 27 56.7	-0.4	
P23K	baz=196			S		Sn	19 28 39.3	-3.3	
P19K	Oil Pt	3.93	331	Pn		Pn	19 27 57.7	-0.1	
P19K	comp=E,185nm,0.4s			IAML			19 28 48.8		
P19K	comp=N,270nm,0.5s			IAML			19 28 48.8		
P19K	Oil Pt baz=148	3.93	331	P		Pn	19 27 58.3	+0.5	
CNTC	Contact Creek	4.01	302			Pn	19 27 60.0	+1.0	
Q17K	Contact Creek baz=118	4.01	302	P		Pn	19 27 60.0	+1.0	
O20K	Slope Mountain	4.16	338			Pn	19 28 01.1	+0.1	
O20K	Slope Mountain baz=155	4.16	338	P		Pn	19 28 01.1	+0.1	
PLK1	Peulik 1	4.19	294			Pn	19 28 02.2	+0.9	
O22K	Cooper Landing	4.21	358			Pn	19 28 01.2	-0.4	
O22K	Cooper Landing baz=177	4.21	358	P		Pn	19 28 00.9	-0.7	
P18K	Big Mountain,	4.38	318	Pn		Pn	19 28 03.5	-0.5	
P18K	Big Mountain, baz=133	4.38	318	P		Pn	19 28 04.3	+0.3	
HIN	Hinchinbrook I	4.41	19	Pn		Pn	19 28 03.3	-1.1	
HIN	comp=E,201nm,0.6s			IAML			19 28 55.9		
HIN	comp=N,146nm,0.5s			IAML			19 29 02.2		
RED	Redoubt Volcan	4.50	339			Pn	19 28 04.9	-0.8	
RDSO	Redoubt South	4.52	339			Pn	19 28 05.3	-0.7	
KAIM	Kayak Island	4.53	34	Pn		Pn	19 28 05.0	-0.9	
KAIM	Kayak Island baz=217	4.53	34	P		Pn	19 28 05.2	-0.7	
RSO	Redoubt South	4.53	339			Pn	19 28 05.2	-1.0	
CAPN	Captain Cook N	4.58	350	Pn		Pn	19 28 06.7	0.0	
DFR	Drift River	4.64	340			Pn	19 28 07.2	-0.4	
NCT	North Crescent	4.66	338			Pn	19 28 07.2	-0.7	
O19K	Port Alsworth	4.69	329	Pn		Pn	19 28 07.4	-0.7	
EYAK	Cordova Ski Ar	4.70	23			Pn	19 28 08.0	-0.4	
EYAK	Cordova Ski Ar	4.70	23	P		Pn	19 28 08.4	+0.1	
EYAK	Cordova Ski Ar baz=205	4.70	23	P		Pn	19 28 08.0	-0.4	
O18K	Koktuh Hills	4.70	322			Pn	19 28 08.3	-0.1	
O18K	comp=E,40nm,0.5s			IAML			19 29 16.8		
O18K	comp=N,40nm,0.8s			IAML			19 29 21.1		
O18K	Koktuh Hills baz=137	4.70	322	P		Pn	19 28 08.6	+0.2	
P17K	Kvichak River baz=125	4.74	311	P		Pn	19 28 10.1	+1.1	
RC01	Rabbit Creek A	4.82	358	Pn		Pn	19 28 09.8	-0.3	
RC01	comp=E,78nm,0.6s			IAML			19 29 05.5		
RC01	comp=N,64nm,0.4s			IAML			19 29 09.6		
RC01	Rabbit Creek A baz=178	4.82	358	P		Pn	19 28 09.8	-0.3	
RAGM	Ragged Mountai	4.82	30			Pn	19 28 10.0	-0.1	
SUCK	Suckling Hills	4.84	36			Pn	19 28 09.4	-1.0	
SUCK	comp=N,119nm,0.9s			IAML			19 29 05.8		
SUCK	comp=E,108nm,1.0s			IAML			19 29 17.7		
FIS	Fire Island	4.89	356			Pn	19 28 11.7	+0.8	
FIS	Fire Island comp=N,104nm,0.6s	4.89	356	IAML			19 29 19.3		
FIS	comp=E,114nm,1.3s			IAML			19 29 19.6		
HMT	Hamilton	4.90	32			Pn	19 28 11.3	+0.2	
GOAT	Goat Mountain	4.97	28			Pn	19 28 12.1	-0.1	
CHGN	Chignik	4.99	274	Pn		Pn	19 28 12.4	+0.1	
CHGN	comp=E,124nm,0.1s			IAML			19 30 01.6		
BGLC	Bering Glacier	5.04	38			Pn	19 28 13.2	+0.1	
BGLC	Bering Glacier baz=222	5.04	38	P		Pn	19 28 13.2	+0.1	
BERG	Berg Lake	5.12	34	Pn		Pn	19 28 13.9	-0.2	
N20K	Mount Spurr baz=162	5.13	345	P		Pn	19 28 13.7	-0.7	
SPCR	Spurr Chakacha	5.13	345			Pn	19 28 13.7	-0.7	
GRIN	Grindle Hills	5.15	36			Pn	19 28 14.8	+0.2	
KNK	Knik Glacier	5.17	5			Pn	19 28 14.5	-0.4	
KNK	comp=E,42nm,0.8s			IAML			19 29 12.6		
KNK	comp=N,40nm,0.5s			IAML			19 29 23.0		
SPCP	Crater Peak Br	5.19	345			Pn	19 28 15.0	-0.2	
SPCG	Spurr Capps Gl	5.20	346			Pn	19 28 15.2	-0.1	
DIV	Divide	5.22	20			Pn	19 28 15.5	-0.2	
SUA	Susitna One	5.24	353	Pn		Pn	19 28 14.7	-1.1	
SUA	comp=N,26nm,1.3s			IAML			19 29 17.0		
SUA	Susitna One baz=172	5.24	353	P		Pn	19 28 15.5	-0.3	
SNH	Sunshine Point	5.24	39			Pn	19 28 15.7	-0.1	
SNH	Sunshine Point comp=E,89nm,1.2s	5.24	39	IAML			19 29 19.6		
SNH	comp=N,68nm,1.0s			IAML			19 29 36.8		
N19K	Bonanza Creek	5.25	332			Pn	19 28 15.6	-0.3	
N19K	Bonanza Creek baz=148	5.25	332	P		Pn	19 28 15.6	-0.3	
PMR	Palmer	5.33	2	Pn		Pn	19 28 16.3	-0.6	
PMR	Palmer	5.33	2	P		Pn	19 28 17.3	+0.3	
PMR	Palmer baz=181	5.33	2	P		Pn	19 28 17.2	+0.3	
BMRM	Bremner River baz=210	5.34	26	P		Pn	19 28 17.5	+0.3	
P16K	Nushagak River	5.34	305			Pn	19 28 18.3	+1.1	
P16K	Nushagak River baz=118	5.34	305	P		Pn	19 28 18.3	+1.1	
SPNN	North Nagishla	5.37	343			Pn	19 28 17.7	+0.1	
WAX	Waxell Ridge	5.43	37			Pn	19 28 18.4	-0.1	
M22K	Willow	5.50	357	Pn		Pn	19 28 18.8	-0.5	
GHO	Glory Hole Cre	5.51	3			Pn	19 28 19.8	+0.2	
BARK	Barkley Ridge	5.52	39			Pn	19 28 19.8	0.0	
KLU	Klutina	5.54	18			Pn	19 28 20.1	+0.2	
KLU	Klutina baz=200	5.54	18	P		Pn	19 28 20.1	+0.2	
N18K	Kilae Creek	5.55	325	Pn		Pn	19 28 20.1	+0.1	
N18K	Kilae Creek baz=140	5.55	325	P		Pn	19 28 19.8	-0.2	
MESA	MESA	5.56	42			Pn	19 28 20.4	0.0	
MESA	MESA baz=228	5.56	42	P		Pn	19 28 20.4	0.0	
SML	Sawmill	5.57	6			Pn	19 28 20.8	+0.5	
SML	Sawmill baz=186	5.57	6	P		Pn	19 28 20.8	+0.5	
CRQM	Cirque	5.57	34			Pn	19 28 20.5	0.0	
O16K	Kokwok River B	5.67	309			Pn	19 28 22.8	+1.2	
O16K	Kokwok River B baz=122	5.67	309	P		Pn	19 28 22.8	+1.2	
SCM	Sheep Creek Mo	5.67	10			Pn	19 28 22.6	+0.8	
SCM	Sheep Creek Mo baz=191	5.67	10	P		Pn	19 28 22.5	+0.8	
ISLE	Juniper Island	5.72	38			Pn	19 28 22.0	-0.5	
SVW2	Sparrevohn	5.78	329			Pn	19 28 23.0	-0.3	
SVW2	Sparrevohn	5.78	329	P		Pn	19 28 23.1	-0.1	
SKT	Skwentna	5.81	350			Pn	19 28 23.4	-0.3	
SKT	Skwentna baz=168	5.81	350	P		Pn	19 28 24.1	+0.5	
VRDI	Verde Repeater	5.86	30	Pn		Pn	19 28 24.1	-0.3	
N17K	Nushagak Hills	5.88	320	Pn		Pn	19 28 25.9	+1.4	
N25K	Chitina, Valde	5.90	23			Pn	19 28 24.5	-0.4	
N25K	Chitina, Valde baz=207	5.90	23	P		Pn	19 28 25.1	+0.2	
M20K	Styx River	5.92	343			Pn	19 28 24.8	-0.4	
M20K	Styx River baz=160	5.92	343	P		Pn	19 28 24.8	-0.4	
CHNA	Chernabura Isl baz=72	5.93	260	P		Pn	19 28 25.1	-0.1	
CNBA	Chernabura Isl	5.93	260			Pn	19 28 25.1	-0.1	
GLB	Gilahina Butte	5.94	27			Pn	19 28 25.9	+0.4	
SAMH	Samovar Hills	5.99	46			Pn	19 28 26.2	+0.1	
TABL	Table Mountain	6.04	43			Pn	19 28 27.1	+0.1	
M24K	Tolsona, Glenn	6.08	15			Pn	19 28 27.8	+0.4	
M24K	Tolsona, Glenn baz=197	6.08	15	P		Pn	19 28 28.1	+0.7	
MCARA	McCarthy VSAT	6.11	30	Pn		Pn	19 28 28.3	+0.6	
MCARA	McCarthy VSAT baz=215	6.11	30	P		Pn	19 28 28.1	+0.4	
PTPK	Patty Peak	6.12	34			Pn	19 28 28.3	+0.4	
CUT	Chulitna	6.15	356	Pn		Pn	19 28 28.2	0.0	
M18K	Stony River	6.17	330			Pn	19 28 28.2	-0.4	
M18K	Stony River baz=145	6.17	330	P		Pn	19 28 28.2	-0.4	
M19K	Big River Lodg	6.18	338			Pn	19 28 28.6	-0.1	
M19K	Big River Lodg baz=154	6.18	338	P		Pn	19 28 28.6	-0.1	
PCA	Pinnacle	6.19	48			Pn	19 28 29.4	+0.6	
PINM	Pinnacle baz=235	6.19	48	P		Pn	19 28 29.4	+0.6	
O15K	Ungalikthiuk R	6.26	302			Pn	19 28 30.8	+1.0	
O15K	Ungalikthiuk R baz=114	6.26	302	P		Pn	19 28 30.8	+1.0	
WASW	Wrangell South	6.28	23			Pn	19 28 30.6	+0.4	
BARN	Barnard Glacie	6.28	37			Pn	19 28 30.5	+0.2	
SDPT	Sand Point	6.28	266			Pn	19 28 30.6	+0.6	
SDPT	Sand Point	6.28	266	P		Pn	19 28 30.8	+0.8	
SDPT	Sand Point baz=78	6.28	266	P		Pn	19 28 30.6	+0.6	
CTG	Chitna Glacier baz=225	6.32	39	P		Pn	19 28 31.0	+0.2	
PNL	Peninsula	6.34	53			Pn	19 28 30.9	+0.1	
PNL	Peninsula	6.34	53	P		Pn	19 28 31.4	+0.6	
PNL	Peninsula baz=241	6.34	53	P		Pn	19 28 30.9	+0.1	
LOGN	Logan Glacier	6.35	41			Pn	19 28 30.9	-0.1	
BCPM	Bancas Point	6.37	51			Pn	19 28 31.5	+0.2	
WAT6	Susitna Watana	6.38	7			Pn	19 28 31.6	+0.1	
WAT6	Susitna Watana baz=188	6.38	7	P		Pn	19 28 31.6	+0.1	
N16K	Nishlik Lake	6.45	314			Pn	19 28 33.2	+0.8	
N16K	Nishlik Lake baz=127	6.45	314	P		Pn	19 28 33.2	+0.8	
L19K	White Mountain	6.53	337			Pn	19 28 33.2	-0.2	
L19K	White Mountain baz=152	6.53	337	P		Pn	19 28 33.2	-0.2	
WAT7	Susitna Watana	6.58	2			Pn	19 28 34.8	+0.6	
WAT1	Susitna Watana	6.58	4			Pn	19 28 34.5	+0.3	
WAT1	Susitna Watana baz=184	6.58	4	P		Pn	19 28 34.5	+0.3	
L20K	Farewell, AK	6.61	342			Pn	19 28 33.9	-0.7	
L20K	Farewell, AK baz=158	6.61	342	P		Pn	19 28 33.9	-0.7	
M16K	Timber Creek	6.86	318			Pn	19 28 38.9	+0.9	
M16K	Timber Creek baz=130	6.86	318	P		Pn	19 28 38.9	+0.9	
DHY	Denali Highway	6.89	8			Pn	19 28 38.3	-0.3	
DHY	Denali Highway baz=189	6.89	8	P		Pn	19 28 39.2	+0.6	
PS1A	Pavlof South-1	6.97	268			Pn	19 28 39.6	0.0	
PAX	Paxson	7.00	15			Pn	19 28 40.5	+0.5	
PAX	Paxson baz=198	7.00	15	P		Pn	19 28 40.5	+0.5	
O29M	Mount Kennedy	7.01	50			Pn	19 28 40.4	+0.2	
O29M	Mount Kennedy baz=239	7.01	50	P		Pn	19 28 40.4	+0.2	
PVV	Pavlof Volcano	7.01	268			Pn	19 28 40.4	+0.4	
P29M	Windy Craggy	7.08	57			Pn	19 28 41.2	+0.1	
P29M	Windy Craggy baz=246	7.08	57	P		Pn	19 28 41.2	+0.1	
RND	Reindeer	7.15	2			Pn	19 28 42.1	+0.1	
TRF	Thorofare Moun	7.20	357			Pn	19 28 43.2	+0.4	
TRF	Thorofare Moun baz=176	7.20	357	P		Pn	19 28 43.3	+0.5	
M27K	Edge Creek, AK	7.22	29			Pn	19 28 43.5	+0.5	
M27K	Edge Creek, AK baz=215	7.22	29	P		Pn	19 28 43.5	+0.5	
CAST	Castle Rocks	7.28	351			Pn	19 28 43.4	-0.3	
CAST	Castle Rocks baz=168	7.28	351	P		Pn	19 28 44.4	+0.7	
MENT	Mentasta	7.28	21	P		Pn	19 28 45.3	+1.5	
KTH	Kantishna Hill	7.33	355			Pn	19 28 44.8	+0.3	
M15K	Kasigluk River	7.36	312			Pn	19 28 45.3	+0.5	
M15K	Kasigluk River baz=122	7.36	312	P		Pn	19 28 45.3	+0.5	
S31K	Pelican	7.39	71			Pn	19 28 43.6	-1.7	
S31K	Pelican baz=262	7.39	71	P		Pn	19 28 43.6	-1.7	
L17K	Donlin	7.41	326			Pn	19 28 45.6	0.0	
L17K	Donlin baz=138	7.41	326	P		Pn	19 28 45.6	0.0	
TTA	Tatalina	7.44	336	P		Pn	19 28 47.7	+1.6	
MCK	McKinley	7.48	2			Pn	19 28 47.5	+1.1	
MCK	McKinley baz=182	7.48	2	P		Pn	19 28 47.5	+1.1	
P30M	Million Dollar	7.64	55			Pn	19 28 49.7	+0.9	
P30M	Million Dollar baz=244	7.64	55	P		Pn	19 28 49.7	+0.9	
L27K	Beaver Creek,	7.81	26			Pn	19 28 51.4	+0.3	
L27K	Beaver Creek, baz=212	7.81	26	P		Pn	19 28 51.4	+0.3	
BPAW	Bear Paw Mtn.	7.88	355			Pn	19 28 51.2	-0.7	
BPAW	Bear Paw Mtn. baz=174	7.88	355	P		Pn	19 28 51.2	-0.7	
FALS	False Pass	8.04	266			Pn	19 28 54.4	+0.3	
FALS	False Pass	8.04	266	P		Pn	19 28 54.6	+0.4	
FALS	False Pass baz=75	8.04	266	P		Pn	19 28 54.4	+0.3	
SKAG	Skagway	8.18	61	P		Pn	19 28 56.9	+0.9	
BESE	Bessie Mountai	8.21	68			Pn	19 28 55.9	-0.7	
N30M	Aishikik Lake	8.24	46			Pn	19 28 57.3	+0.4	
N30M	Aishikik Lake baz=236	8.24	46	P		Pn	19 28 57.3	+0.4	
S32K	Killisnoo	8.24	76			Pn	19 28 54.6	-2.3	
S32K	Killisnoo baz=267	8.24	76	P		Pn	19 28 54.6	-2.3	
ISLZ	Isanotski Laza	8.24	265			Pn	19 28 56.9	-0.1	
WRH	Wood River Hil	8.24	4			Pn	19 28 57.2	+0.3	
M29M	Somme Creek	8.34	38			Pn	19 28 59.2	+0.8	
M29M	Somme Creek baz=226	8.34	38	P		Pn	19 28 59.2	+0.8	
SSLS	Shishaldin Sou	8.40	265			Pn	19 28 59.8	+0.6	
CCB	Clear Creek Bu	8.43	5			Pn	19 28 59.8	+0.3	
J25K	Salcha River,	8.60	12			Pn	19 29 01.7	-0.1	
J25K	Salcha River, baz=195	8.60	12	P		Pn	19 29 01.7	-0.1	
IL31		8.61	7			Pn	19 29 02.2	+0.3	
ILAR	Eielson Array comp=N,0.6nm,0.3s,baz=192,slow=13,SNR=21	8.61	7	Pn		Pn	19 29 02.9	+0.9	
ILAR	comp=N,0.7nm,0.3s,baz=200,slow=20,SNR=7.4			Sn		Sn	19 30 37.6	-1.4	
ILAR	comp=N,64nm,20.2s,baz=135,slow=37 comp=N,1.0nm,0.3s			LR		LR	19 32 21.8		
COLA	College	8.65	5			Pn	19 29 01.7	-0.8	
COLA	College	8.65	5	P		Pn	19 29 03.4	+0.9	
MLY	Manley	8.80	356			Pn	19 29 03.8	-0.8	
MLY	Manley baz=175	8.80	356	P		Pn	19 29 03.8	-0.8	
WHY	Whitehorse	8.80	54	Pn		Pn	19 29 05.3	+0.6	
WESE	West Dahl East	8.80	264			Pn	19 29 05.0	+0.3	
WECS	Westdahl Cape	8.89	265			Pn	19 29 06.5	+0.6	
L29M	L29M	8.91	35			Pn	19 29 06.7	+0.5	
L29M	L29M baz=224	8.91	35	P		Pn	19 29 06.7	+0.5	
P32M	Atlin	9.00	62			Pn	19 29 07.0	-0.4	
P32M	Atlin baz=255	9.00	62	P		Pn	19 29 07.0	-0.4	
M30M	Minto, Yukon	9.01	40	Pn		Pn	19 29 06.1	-1.4	
U33K	Whale Pass	9.11	84	Pn		Pn	19 29 05.7	-3.1	
U33K	Whale Pass	9.11	84	P		Pn	19 29 06.0	-2.9	
	baz=277								
CRAG	Craig	9.22	88			Pn	19 29 07.4	-2.9	
CRAG	Craig baz=281	9.22	88	P		Pn	19 29 07.4	-2.9	
PRP	Porcupine Dome	9.46	10			Pn	19 29 13.2	-0.5	
PRP	Porcupine Dome baz=193	9.46	10	P		Pn	19 29 13.2	-0.5	
H21K	Melozitna Rive	9.54	352			Pn	19 29 14.0	-0.8	
H21K	Melozitna Rive baz=168	9.54	352	P		Pn	19 29 14.0	-0.8	
UNV	Unalaska Valle	10.08	263	P		Pn	19 29 21.2	-0.8	
R33M	Jennings River	10.33	65			Pn	19 29 25.6	-0.1	
G23K	Bananza Creek	10.47	359			Pn	19 29 27.2	-0.2	
FYU	Fort Yukon	10.51	9	Pn		Pn	19 29 27.0	-1.0	
DLBC	Dease Lake comp=N,0.7nm,0.3s,baz=221,slow=16,SNR=2.6	10.71	70	Pn		Pn	19 29 29.8	-1.0	
DLBC	comp=N,74nm,19.3s,baz=282,slow=33 comp=N,1.6nm,0.3s			LR		LR	19 32 53.7		
INK	Inuvik baz=221,slow=19,SNR=3.2 comp=N,0.8nm,0.8s	14.09	25	Pn		Pn	19 30 18.2	+1.5	
YKA	Yellowknife Ar baz=266,slow=10,SNR=4.7 comp=N,0.2nm,0.5s	18.62	56	P		Pn	19 31 16.1	+1.0	
A36M	Sachs Harbour	18.72	23	P		Pn	19 31 15.4	-0.6	
A36M	comp=Z,8.6nm,0.8s			IAmb		IAmb	19 31 20.2		
SHEM	Shemya Is, Ala comp=Z,31nm,18.9s,baz=43,slow=36	21.29	276	LR		LR	19 39 40.6		
NVAR	Mina Array Bea comp=Z,0.2nm,0.5s,baz=291,slow=8.2,SNR=3.1	27.30	118	P		P	19 32 41.3	-1.0	
NVAR	comp=Z,48nm,18.8s,baz=96,slow=32 comp=Z,0.2nm,0.5s			LR		LR	19 41 23.0		
MA2	Magadan comp=Z,30nm,18.9s,baz=106,slow=35	30.97	301	LR		LR	19 45 13.7		
TXAR	Lajitas Array comp=Z,0.4nm,0.9s,baz=305,slow=5.4,SNR=3.8 comp=Z,0.4nm,0.9s	41.92	110	P		P	19 34 49.2	+1.1	
H11N2	WAKE ISLAND Hy baz=30,slow=76	48.80	240	T		T	20 29 01.1		
H11N3	WAKE ISLAND Hy baz=30,slow=76	48.80	240	T		T	20 29 02.1		
H11N1	WAKE ISLAND Hy baz=30,slow=76	48.82	240	T		T	20 29 01.0		
H11S1	WAKE ISLAND Hy baz=29	49.94	239	T		T	20 30 28.8		
H11S2	WAKE ISLAND Hy baz=29,slow=74	49.95	239	T		T	20 30 35.7		
H11S3	WAKE ISLAND Hy baz=29,slow=74	49.96	239	T		T	20 30 31.7		
FINES	FINESS Array B comp=Z,0.8nm,0.8s,baz=9.6,slow=9.2,SNR=4.3 comp=Z,0.8nm,0.8s	62.56	2	P		P	19 37 23.9	+3.1	
KIRV	Kirov comp=Z,30nm,18.2s,baz=305,slow=40	64.49	349	LR		LR	20 10 30.2		
MKAR	Makanchi Array comp=Z,0.2nm,0.4s,baz=22,slow=6.0,SNR=6.8 comp=Z,0.2nm,0.4s	68.53	325	P		P	19 38 00.7	+0.9	

*JMA **14** 19:32:37.2±0.4, 46°N±1″×14°2E±″, h5km, MV2.6/19, SOUTH SAKHALIN*

*SKHL **14** 19:32:37.6±0.5, 46.10N×142.10E, h7km±2km, mb3.3/2*

ISC 14 19:32:38.0±1.7, **46.16N**±0.05×**142.07E**±0.08, **h5**km±14km, **n6**, σ0°**38**/11, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	Keihoku	0.85	188	eP	Pb	19 32 55.0	-0.2
JWK2				eS	Sb	19 33 07.4	+0.4
KHLM	Kholmsk	0.90	359	ePg	Pn	19 32 57.1	-0.1
KHLM				eSg	Sn	19 33 10.9	+0.4
YSS	Yuzh-Sakhalins	0.92	30	ePg	Pn	19 32 57.5	-0.1
YSS				AMB	AMB	19 32 57.8	
	10.0nm,0.4s						
YSS				eSg	Sn	19 33 11.0	-0.2
YSS				A	A	19 33 11.8	
	40nm,0.2s						
YSS				A	A	19 33 11.8	
	30nm,0.2s						
JRBN	Rebuntou	1.02	224	eP	Pg	19 32 57.3	-0.2
JRBN				eS	Sg	19 33 11.3	+0.5
JRR	Rishiri	1.15	208	eP	Pn	19 33 00.3	-0.5
JRR				eS	Sn	19 33 17.1	+0.3
JSE	Soyaes	1.25	163	eP	Pg	19 33 02.1	0.0

*SKHL **14** 19:39:49.9±0.2, 44.80N×145.20E, h207km±2km, mb4.7/3, msha4.8/3*

*IDC **14** 19:39:50.4±6.3, 45.08N×145.21E, h218km±24km, mb3.1/4, mbtmp3.7/7, Error ellipse: s-maj=92.1km s-min=46.7km az=96.0*

*JMA **14** 19:39:51.0±0.4, 45°N±2″×14°5E±″, h226km±3km, MV2.9/25, NE OFF HOKKAIDO*

ISC 14 19:39:50.9±0.9, **44.74N**±0.06×**145.21E**±0.07, **h227**km±7km, **n33**, σ0°**82**/37, **mb3.2**/4, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRA	Rausu	0.80	185	eP	Pn	19 40 22.9	+0.4
YUK	Yuzh-Kuril'sk	0.84	146	eP	Pn	19 40 22.6	0.0
YUK				AMB	AMB	19 40 25.5	
	60nm,0.2s						
YUK				eS	S	19 40 48.0	+0.7
YUK				A	A	19 40 51.7	
	2μm,2.0s						
YUK				A	A	19 40 51.7	
	3μm,2.0s						
YUK				A	A	19 40 55.3	
	180nm,0.5s						
YUK				A	A	19 40 55.3	
	290nm,0.5s						
JNK	Nakash	1.20	197	eP	Pn	19 40 25.7	+0.8
JTKR	Abashiri--Toko	1.21	231	eP	Pn	19 40 25.0	+0.1
JTKR				eS	S	19 40 51.3	0.0
NMR	Nemuro--Hokkai	1.42	165	eP	Pn	19 40 26.3	-0.1
NMR				eS	S	19 40 53.3	-0.8
NEM2	Nemuro 2	1.42	164	eP	Pn	19 40 26.0	-0.5
NEM2				eS	S	19 40 53.2	-0.9
JMP	Maruseppu	1.52	242	eP	Pn	19 40 27.2	-0.1
JMP				eS	S	19 40 55.0	-0.5
JKHN	Kushirohamanak	1.65	181	eS	S	19 40 56.8	-0.7
AKK	Akkeshi	1.74	189	eP	Pn	19 40 29.1	0.0
JAR	Ashorobuto	1.78	216	eP	Pn	19 40 30.2	+0.7
JAK	Akkeshi	1.78	192	eP	Pn	19 40 29.6	+0.1
JAK				eS	S	19 40 58.6	-0.9
JSE	Soyaes	1.88	278	eP	Pn	19 40 29.5	-0.9
KUR	Kuril'sk	1.95	74	eP	Pn	19 40 30.6	-0.3
KUR				AMB	AMB	19 40 31.0	
	160nm,0.4s						
KUR				eS	S	19 41 02.3	+0.1
KUR				A	A	19 41 05.9	
	40nm,0.3s						
KUR				A	A	19 41 05.9	
	90nm,0.3s						
JKK2	Kamakawa 2	1.97	245	eP	Pn	19 40 31.5	+0.3
JKK2				eS	S	19 41 02.6	0.0
ASAJ	Asahikawa	1.97	253	eP	Pn	19 40 31.5	+0.3
ASAJ	Asahikawa	1.97	253	P	Pn	19 40 31.4	+0.1
	29nm,0.5s,baz=62,slow=6.4,SNR=12						
JWK2	Keihoku	2.42	285	eP	Pn	19 40 35.4	-0.3
JCH	Churui	2.51	213	eP	Pn	19 40 36.7	0.0
JCH				eS	S	19

baz=330
H11N3 WAKE ISLAND Hy 30.78 137 T T 20 17 29.0
baz=330
H11S1 WAKE ISLAND Hy 31.72 139 T T 20 18 38.9
baz=329,slow=76,SNR=9.4
H11S3 WAKE ISLAND Hy 31.73 139 T T 20 18 39.3
baz=329,slow=76,SNR=7.4
H11S2 WAKE ISLAND Hy 31.74 139 T T 20 18 43.2
baz=329,slow=76,SNR=6.2
MKAR Makanchi Array 42.90 296 P **P** **19 47 26.2 -0.8**
0.5nm,0.5s,baz=75,slow=8.5,SNR=10
0.5nm,0.5s
KURBB Kurchatov Arra 43.91 302 P **P** **19 47 33.4 -1.6**
0.5nm,0.4s,baz=71,slow=8.5,SNR=5.2
0.5nm,0.4s
CMAR Chiang Mai Arr 46.50 251 P **P** **19 47 56.6 +1.0**
0.4nm,0.4s,baz=39,slow=5.8,SNR=1.8
0.4nm,0.4s

*IDC **14** 19:54:45.4±1.2,2.°87N×124.°08E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=164.1km s-min=20.9km az=67.0*
*DJA **14** 19:55:19.9±1.2,2.°N±9.°×12.°4E±.°, h297km±8km, M3.3/7, MLv3.3/7*
ISC 14 19:55:23.3±2.1,1.°6N±0.°2×124.°35E±0.°09, h300km, n11, σ2§70/11, mb3.0/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMSI	**Cibinong**	**1.08**	**200**	P		**Pn**	**19 56 03.1**	**-1.0**
SGSI	**Sangihe**	**2.38**	**29**	P		Pn	19 56 02.1	-11
MRSI	**Marisa**	**2.66**	**245**	P		**Pn**	**19 56 13.8**	**-2.0**
LUWI	**Luwuk**	**3.06**	**211**	P		**Pn**	**19 56 19.7**	**0.0**
LUWI				S		**S**	**19 57 00.4**	**-4.4**
LBMI	**Labuha**	**3.85**	**125**	P		**Pn**	**19 56 24.1**	**-3.8**
LBMI				S		**S**	**19 57 18.7**	**-1.0**
SANI	**Sanana**	**3.97**	**156**	P		**Pn**	**19 56 28.2**	**-1.1**
SANI				S		**S**	**19 57 21.3**	**-0.8**
WRA	**Warramunga Arr**	**23.54**	**156**	P		**P**	**20 00 09.3**	**+1.8**
	0.8nm,0.5s,baz=335,slow=10,SNR=24							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**26.77**	**160**	P		**P**	**20 00 38.9**	**+2.4**
	0.2nm,0.3s,baz=336,slow=7.5,SNR=13							
	0.2nm,0.3s							
STKA	**Stephens Creek**	**37.09**	**155**	P		**P**	**20 02 08.4**	**+2.7**
	0.6nm,0.3s,baz=322,slow=14,SNR=4.4							
	0.6nm,0.3s							
SONM	**Songino Array**	**48.61**	**344**	P		P	20 03 21.0	-16
	0.3nm,0.6s,baz=168,slow=7.4,SNR=3.8							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**62.29**	**329**	P		P	20 05 00.9	-13
	0.1nm,0.4s,baz=111,slow=7.2,SNR=1.7							
	0.1nm,0.4s							

*NEIC **14** 20:04:05.5±1.7,9.°76N±0.°07×126.°15E±0.°09, h70km±7km, mb4.5/81, Error ellipse: s-maj=13.3km s-min=10.7km az=77.0*
*IDC **14** 20:04:06.7±1.9,9.°81N×126.°19E, h87km±18km, mb3.9/23, mbtmp4.2/24, MS3.2/11, Error ellipse: s-maj=22.6km s-min=10.3km az=75.0*
ISC 14 20:04:03.1±0.4,9.°81N±0.°05×126.°24E±0.°09, h54km, n130, σ1§33/127, mb4.5/63, MS3.1/10, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**2.80**	**193**	Pn		**Pn**	**20 04 46.3**	**+0.9**
DAV	**Davao City (W)**	**2.80**	**193**	P		**Pn**	**20 04 47.8**	**+2.4**
	170nm,0.3s,baz=26,slow=5.4,SNR=2.0							
DAV				S		**Sn**	**20 05 23.5**	**+5.5**
	643nm,0.5s,baz=331,slow=23,SNR=5.4							
TGY	**Tagaytay City**	**6.71**	**310**	P		**Pn**	**20 05 42.1**	**+2.9**
	128nm,0.3s,baz=35,slow=2.0,SNR=3.5							
TPUB	**Ta-pu**	**14.45**	**339**	Pn		**Pn**	**20 07 28.1**	**+3.4**
SSLB	**Suanglung**	**14.79**	**341**	Pn		**Pn**	**20 07 30.7**	**+1.6**
SBUM	**Sibu**	**15.73**	**243**	Pn		**Pn**	**20 07 40.1**	**-1.2**
TATO	**Taipei**	**15.75**	**344**	Pn		**Pn**	**20 07 40.8**	**-0.6**
TATO				IAmb		IAmb	20 07 45.6	
	comp=Z,69nm,1.4s							
JOW	**Kunigami**	**17.04**	**6**	LR		LR	20 13 24.1	
	comp=Z,130nm,20.8s,baz=123,slow=33							
QIZ	**Qiongzhong**	**18.32**	**302**	P		**Pn**	**20 08 13.5**	**+0.1**
JCJ	**Chichijima**	**22.86**	**39**	LR		LR	20 15 57.5	
	comp=Z,49nm,21.7s,baz=279,slow=31							
JNU	**Nakatsue**	**23.59**	**10**	LR		LR	20 18 17.0	
	comp=Z,41nm,21.1s,baz=180,slow=36							
IPM	**Ipoh**	**25.56**	**260**	P		**P**	**20 09 28.9**	**+1.7**
IPM				IAmb		IAmb	20 09 31.2	
	comp=Z,15nm,0.9s							
KSRS	**Korea Array**	**27.57**	**3**	P		**P**	**20 09 45.5**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=184,slow=10.0,SNR=4.4							
KSRS				LR		LR	20 23 09.9	
	comp=Z,43nm,18.2s,baz=165,slow=42							
	comp=Z,2.6nm,1.0s							
CMAR	**Chiang Mai Arr**	**27.80**	**291**	P		**P**	**20 09 47.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**27.80**	**291**	P		**P**	**20 09 48.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=100,slow=7.2,SNR=9.2							
CMAR				LR		LR	20 21 39.3	
	comp=Z,38nm,18.3s,baz=95,slow=38							
	comp=Z,1.2nm,0.8s							
MJAR	**Matsushiro Arr**	**28.74**	**20**	LR		LR	20 21 23.0	
	comp=Z,65nm,19.1s,baz=190,slow=36							
WB0	**Warramunga Arr**	**30.47**	**165**	P		**P**	**20 10 08.3**	**-2.7**
WB0				IAmb		IAmb	20 10 42.9	
	comp=Z,9.7nm,1.2s							
WRAB	**Tennant Creek**	**30.62**	**165**	P		**P**	**20 10 09.7**	**-2.6**
WRA	**Warramunga Arr**	**30.62**	**165**	P		**P**	**20 10 11.8**	**-0.5**
WRA	**Warramunga Arr**	**30.62**	**165**	P		**P**	**20 10 11.4**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=346,slow=9.4,SNR=3.4							
WRA				PcP		**PcP**	**20 13 09.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=322,slow=3.2,SNR=2.3							
	comp=Z,0.7nm,0.6s							
WB2	**Warramunga Arr**	**30.62**	**165**	P		**P**	**20 10 10.4**	**-1.9**
WR0	**Warramunga Arr**	**30.69**	**165**	P		**P**	**20 10 10.8**	**-2.1**
WR0				IAmb		IAmb	20 10 24.5	
	comp=Z,9.0nm,1.2s							
BJT	**Baijiatuan**	**31.39**	**345**	P		**P**	**20 10 18.7**	**-0.2**
BJT				IAmb		IAmb	20 10 20.4	
	comp=Z,14nm,1.5s							
MBWA	**Marble Bar**	**31.43**	**192**	P		**P**	**20 10 18.5**	**-0.9**
MBWA				IAmb		IAmb	20 10 31.8	
	comp=Z,17nm,1.3s							
PSA00	**Pilbara Seismi**	**31.81**	**191**	P		**P**	**20 10 20.9**	**-1.8**
AS31	**Alice Springs**	**34.10**	**167**	P		**P**	**20 10 42.7**	**-0.1**
ASAR	**Alice Springs**	**34.10**	**167**	P		**P**	**20 10 41.5**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=350,slow=7.1,SNR=16							
ASAR				PcP		**PcP**	**20 13 19.2**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=336,slow=2.0,SNR=5.5							
	comp=Z,0.6nm,0.5s							
USRK	**Ussuriysk Ar.**	**34.62**	**7**	P		**P**	**20 10 47.5**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=145,slow=7.0,SNR=5.5							
	comp=Z,4.8nm,0.9s							
CTAO	**Charters Tower**	**35.65**	**146**	P		**P**	**20 10 56.8**	**+0.6**
SHL	**Shillong**	**36.14**	**300**	P		**P**	**20 10 58.6**	**-2.0**
ASAJ	**Asahikawa**	**37.01**	**20**	LR		LR	20 26 30.4	
	comp=Z,34nm,19.6s,baz=184,slow=36							
KLR	**Kul'dur**	**39.56**	**6**	P		**P**	**20 11 29.8**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=168,slow=7.6,SNR=9.0							
KLR				LR		LR	20 26 32.4	
	comp=Z,20nm,21.4s,baz=203,slow=34							
	comp=Z,1.5nm,0.6s							
HIA	**Hailar**	**39.70**	**353**	P		**P**	**20 11 31.0**	**+0.9**
HIA				IAmb		IAmb	20 12 00.7	
	comp=Z,4.8nm,0.7s							
FORT	**Forrest**	**40.39**	**178**	P		**P**	**20 11 35.5**	**-0.5**
ULN	**Ulaanbaatar**	**41.24**	**340**	P		**P**	**20 11 41.7**	**-1.3**
SONM	**Songino Array**	**41.44**	**340**	P		**P**	**20 11 44.4**	**-0.2**
SONM	**Songino Array**	**41.44**	**340**	P		**P**	**20 11 45.5**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=157,slow=7.8,SNR=9.4							
	comp=Z,1.2nm,0.8s							
NWAO	**Narrogin (SRO)**	**43.35**	**191**	P		**P**	**20 11 59.6**	**-0.5**
NWAO	**Narrogin (SRO)**	**43.35**	**191**	P		**P**	**20 11 59.0**	**-1.1**
NWAO				IAmb		IAmb	20 12 32.8	
	comp=Z,155nm,1.5s							
BBOO	**Buckleboo**	**43.40**	**168**	P		**P**	**20 11 59.8**	**-0.7**
STKA	**Stephens Creek**	**43.98**	**161**	P		**P**	**20 12 06.3**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=336,slow=11,SNR=6.6							
	comp=Z,1.8nm,0.5s							
PETK	**Petropavlovsk-**	**50.07**	**24**	P		**P**	**20 12 53.6**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=85,slow=34,SNR=1.5							
	comp=Z,1.9nm,0.8s							
YAK	**Yakutsk**	**52.19**	**2**	P		**P**	**20 13 07.6**	**-0.5**
YAK	**Yakutsk**	**52.19**	**2**	LR		LR	20 38 12.2	
	comp=Z,25nm,18.4s,baz=358,slow=39							
MK31	**Makanchi Array**	**52.37**	**323**	P		**P**	**20 13 08.4**	**-1.4**
MK31				IAmb		IAmb	20 13 10.4	
	comp=Z,2.7nm,0.8s							
MKAR	**Makanchi Array**	**52.37**	**323**	P		**P**	**20 13 09.3**	**-0.5**
MKAR	**Makanchi Array**	**52.37**	**323**	P		**P**	**20 13 09.6**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=120,slow=8.2,SNR=43							
MKAR				PcP		**PcP**	**20 14 20.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=100,slow=5.8,SNR=1.8							
	comp=Z,2.8nm,0.7s							
MAKZ	**Makanchi**	**52.56**	**323**	P		**P**	**20 13 10.4**	**-0.9**
NRN	**Naryn**	**54.15**	**315**	P		**P**	**20 13 22.6**	**-0.8**
ZAA0	**Zalesovo Array**	**55.01**	**331**	P		**P**	**20 13 27.4**	**-1.5**
ZALV	**Zalesovo Beam**	**55.01**	**331**	P		**P**	**20 13 27.8**	**-1.2**
ZALV	**Zalesovo Beam**	**55.01**	**331**	P		**P**	**20 13 28.1**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=107,slow=8.3,SNR=7.4							
	comp=Z,1.5nm,0.7s							
AAK	**Ala-Archa**	**55.63**	**315**	LR		LR	20 38 56.8	
	comp=Z,58nm,21.4s,baz=86,slow=38							
KURK	**Kurchatov**	**56.43**	**326**	P		**P**	**20 13 38.0**	**-1.1**
KURK				IAmb		IAmb	20 13 39.6	
	comp=Z,4.3nm,0.8s							
KURBB	**Kurchatov Arra**	**56.43**	**326**	P		**P**	**20 13 38.6**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=127,slow=6.8,SNR=27							
	comp=Z,2.4nm,0.7s							
KBL	**Kabul**	**57.56**	**305**	P		**P**	**20 13 46.6**	**-1.2**
KBL				IAmb		IAmb	20 13 48.2	
	comp=Z,3.2nm,1.0s							
KK31	**Karatay Array**	**58.55**	**315**	P		**P**	**20 13 52.6**	**-1.7**
KKAR	**Karatay Array**	**58.55**	**315**	P		**P**	**20 13 52.8**	**-1.5**
KKAR	**Karatay Array**	**58.55**	**315**	P		**P**	**20 13 52.4**	**-1.9**
KKAR				IAmb		IAmb	20 13 55.2	
	comp=Z,2.6nm,1.1s							
TIXI	**Tiksi**	**61.81**	**1**	P		**P**	**20 14 16.4**	**+0.4**
BVAR	**Borovoye Array**	**62.02**	**326**	P		**P**	**20 14 17.5**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=127,slow=7.2,SNR=11							
BVAR				PcP		**PcP**	**20 14 58.0**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=107,slow=6.6,SNR=4.1							
	comp=Z,1.7nm,0.8s							
BRVK	**Borovoye**	**62.09**	**326**	P		**P**	**20 14 17.3**	**-1.0**
BRVK				IAmb		IAmb	20 14 21.2	
	comp=Z,4.3nm,1.1s							
NRIK	**Noril'sk**	**64.45**	**346**	P		**P**	**20 14 33.7**	**+0.2**
NRIK	**Noril'sk**	**64.45**	**346**	P		**P**	**20 14 33.2**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=136,slow=8.1,SNR=4.2							
	comp=Z,1.0nm,0.4s							
GEYT	**Alibeck**	**66.79**	**307**	P		**P**	**20 14 47.7**	**-1.6**
GEYT	**Alibeck**	**66.79**	**307**	P		**P**	**20 14 49.4**	**0.0**
	comp=Z,1.2nm,0.3s,baz=280,slow=41,SNR=3.6							
	comp=Z,1.2nm,0.3s							
ABKAR	**Akbulak array**	**67.20**	**319**	P		**P**	**20 14 50.6**	**-1.0**
ABKAR	**Akbulak array**	**67.20**	**319**	P		**P**	**20 14 50.3**	**-1.4**
ARU	**Arti**	**69.59**	**327**	P		**P**	**20 15 04.7**	**-1.7**
ARU				IAmb		IAmb	20 15 06.2	
	comp=Z,3.3nm,0.7s							
C16K	**Lisburne Hills**	**73.02**	**21**	P		**P**	**20 15 27.9**	**+1.1**
C16K				IAmb		IAmb	20 15 29.2	
	comp=Z,7.1nm,1.1s							
E18K	**Tukpahlearik C**	**74.55**	**23**	P		**P**	**20 15 37.3**	**+1.4**
E18K				IAmb		IAmb	20 15 38.6	
	comp=Z,8.6nm,1.1s							
C18K	**Utukok River**	**74.60**	**21**	P		**P**	**20 15 37.1**	**+0.9**
C18K				IAmb		IAmb	20 15 40.4	
	comp=Z,3.5nm,0.8s							
C19K	**Lookout Ridge**	**75.26**	**21**	P		**P**	**20 15 41.9**	**+1.9**
C19K				IAmb		IAmb	20 15 43.0	
	comp=Z,8.9nm,0.9s							
D19K	**Kuna River**	**75.68**	**22**	P		**P**	**20 15 43.4**	**+1.0**
D19K				IAmb		IAmb	20 15 44.9	
	comp=Z,11nm,1.2s							
E19K	**Redstone River**	**75.84**	**23**	P		**P**	**20 15 44.5**	**+1.2**
E19K				IAmb		IAmb	20 15 45.9	
	comp=Z,11nm,1.3s							
H19K	**Roundabout Mou**	**75.88**	**25**	P		**P**	**20 15 44.9**	**+1.4**
H19K				IAmb		IAmb	20 15 46.1	
	comp=Z,5.9nm,0.9s							
B20K	**Meade River**	**76.26**	**20**	P		**P**	**20 15 46.7**	**+1.1**
B20K				IAmb		IAmb	20 15 48.3	
	comp=Z,10nm,1.1s							
F20K	**Avaraart Lake**	**76.36**	**23**	P		**P**	**20 15 47.8**	**+1.6**
F20K				IAmb		IAmb	20 15 48.7	
	comp=Z,6.0nm,1.1s							
IMAR	**Indian Mountai**	**77.03**	**24**	P		**P**	**20 15 51.0**	**+1.0**
B21K	**Ikpikpuk River**	**77.08**	**21**	P		**P**	**20 15 51.5**	**+1.2**
G21K	**Allakaket**	**77.18**	**24**	P		**P**	**20 15 52.0**	**+1.1**
G21K				IAmb		IAmb	20 15 54.3	
	comp=Z,5.8nm,1.1s							
GNI	**Garni**	**77.27**	**309**	LR		LR	20 54 18.7	
	comp=Z,35nm,20.5s,baz=284,slow=39							
CAST	**Castle Rocks**	**77.57**	**27**	P		**P**	**20 15 54.6**	**+1.5**
I21K	**Tanana**	**77.71**	**25**	P		**P**	**20 15 55.2**	**+1.4**
I21K				IAmb		IAmb	20 15 56.0	
	comp=Z,4.2nm,0.9s							
BRLK	**Bradley Lake**	**78.01**	**31**	P		**P**	**20 15 56.0**	**+0.4**
BPAW	**Bear Paw Mtn.**	**78.08**	**26**	P		**P**	**20 15 56.9**	**+0.9**
BPAW				IAmb		IAmb	20 15 58.1	
	comp=Z,5.7nm,0.9s							
SUA	**Susitna One**	**78.11**	**29**	P		**P**	**20 15 57.1**	**+0.8**
SUA				IAmb		IAmb	20 15 58.7	
	comp=Z,11nm,1.2s							
AKH	**Akhalkalaki**	**78.16**	**310**	P		**P**	**20 15 55.7**	**-1.4**
MLY	**Manley**	**78.23**	**25**	P		**P**	**20 15 57.5**	**+0.7**
TOLK	**Toolik Lake Re**	**78.81**	**22**	P		**P**	**20 16 01.1**	**+1.1**
TOLK				IAmb		IAmb	20 16 02.6	
	comp=Z,4.9nm,0.9s							
I23K	**Minto, Yukon-K**	**78.81**	**25**	P		**P**	**20 16 01.1**	**+1.1**
I23K				IAmb		IAmb	20 16 02.1	
	comp=Z,2.8nm,0.7s							
D24K	**Happy Valley**	**79.10**	**21**	P		**P**	**20 16 02.6**	**+1.2**
D24K				IAmb		IAmb	20 16 03.7	
	comp=Z,5.3nm,0.7s							
F24K	**Squaw Lake**	**79.43**	**23**	P		**P**	**20 16 05.0**	**+1.7**
F24K				IAmb		IAmb	20 16 06.1	
	comp=Z,4.3nm,0.8s							
H24K	**Noodor Dome**	**79.44**	**25**	P		**P**	**20 16 04.1**	**+0.7**
GURO	**Guroymak-BITLI**	**79.45**	**307**	P		**P**	**20 16 04.5**	**+0.3**
GURO				IAmb		IAmb	20 16 06.0	
	comp=Z,5.7nm,0.8s							
ILAR	**Eielson Array**	**79.87**	**26**	P		**P**	**20 16 04.8**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=240,slow=4.8,SNR=12							
	comp=Z,0.9nm,0.8s							
D25K	**Kavik River**	**79.97**	**21**	P		**P**	**20 16 07.2**	**+0.9**
D25K				IAmb		IAmb	20 16 08.6	
	comp=Z,4.0nm,0.8s							
E25K	**Arctic Village**	**80.30**	**22**	P		**P**	**20 16 09.1**	**+1.1**
E25K				IAmb		IAmb	20 16 10.9	
	comp=Z,5.0nm,1.1s							
BMAR	**Burnt Mountain**	**80.70**	**23**	P		**P**	**20 16 11.7**	**+1.4**
D27M	**Malcolm River**	**81.90**	**21**	P		**P**	**20 16 17.9**	**+1.4**
D27M				IAmb		IAmb	20 16 19.2	
	comp=Z,5.0nm,0.9s							
K27K	**Chicken**	**82.00**	**26**	P		**P**	**20 16 18.9**	**+1.8**
K27K				IAmb		IAmb	20 16 21.9	
	comp=Z,7.3nm,1.1s							
L27K	**Beaver Creek,**	**82.21**	**27**	P		**P**	**20 16 19.7**	**+1.4**
L27K				IAmb		IAmb	20 16 22.0	
	comp=Z,4.4nm,1.0s							
BCAR	**Beaver Creek A**	**82.23**	**27**	P		**P**	**20 16 19.8**	**+1.4**
E28M	**Babbage River**	**82.49**	**22**	P		**P**	**20 16 20.8**	**+1.3**
E28M				IAmb		IAmb	20 16 22.2	
	comp=Z,5.0nm,1.1s							
F28M	**Old Crow**	**82.49**	**23**	P		**P**	**20 16 20.7**	**+1.1**
F28M				IAmb		IAmb	20 16 22.0	
	comp=Z,3.9nm,0.8s							
CTGM	**Chitina Glacie**	**82.68**	**29**	P		**P**	**20 16 23.1**	**+2.2**
I28M	**Miner Creek**	**82.75**	**25**	P		**P**	**20 16 22.4**	**+1.3**
I28M				IAmb		IAmb	20 16 23.9	
	comp=Z,6.0nm,0.8s							
M29M	**Somme Creek**	**83.83**	**28**	P		**P**	**20 16 28.6**	**+1.8**
M29M				IAmb		IAmb	20 16 32.1	
	comp=Z,11nm,1.5s							
L29M	**L29M**	**83.87**	**27**	P		**P**	**20 16 29.0**	**+2.1**
K29M	**Barlow Dome**	**84.02**	**26**	P		**P**	**20 16 28.9**	**+1.2**
K29M				IAmb		IAmb	20 16 30.5	
	comp=Z,7.0nm,1.1s							
I30M	**Mount Dempster**	**84.26**	**25**	P		**P**	**20 16 29.6**	**+0.7**
I30M				IAmb		IAmb	20 16 31.1	
	comp=Z,4.6nm,0.8s							
J30M	**Hart River**	**84.40**	**25**	P		**P**	**20 16 31.2**	**+1.6**
SPITS	**Spitsbergen Ar**	**84.46**	**349**	P		**P**	**20 16 29.2**	**-0.3**
	comp=Z,11nm,0.9s,baz=148,slow=4.8,SNR=2.3							
	comp=Z,11nm,0.9s							
HYT	**Haines Junctio**	**84.56**	**29**	P		**P**	**20 16 31.9**	**+1.4**
ARCES	**ARCESS Array B**	**84.61**	**340**	P		**P**	**20 16 30.2**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=78,slow=7.2,SNR=12							
	comp=Z,1.9nm,0.5s							
G31M	**Satah River**	**84.75**	**23**	P		**P**	**20 16 31.7**	**+0.5**
H31M	**Peel River**	**84.97**	**24**	P		**P**	**20 16 32.8**	**+0.4**
BRTR	**Keskin Array B**	**85.80**	**309**	P		**P**	**20 16 35.8**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=127,slow=3.3,SNR=4.8							
	comp=Z,0.8nm,0.8s							
FARO	**Faro, Yukon**	**86.21**	**27**	P		**P**	**20 16 39.3**	**+0.7**
FINES	**FINESS Array B**	**86.28**	**332**	P		**P**	**20 16 38.6**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=78,slow=4.4,SNR=23							
	comp=Z,2.3nm,0.6s							
A36M	**Sachs Harbour**	**86.36**	**17**	P		**P**	**20 16 39.6**	**+0.5**
N32M	**Quiet Lake**	**86.59**	**29**	P		**P**	**20 16 42.2**	**+1.6**
HFS	**Hagfors**	**92.44**	**332**	P		**P**	**20 17 07.3**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=100,slow=7.7,SNR=5.6							
	comp=Z,2.2nm,0.8s							
NOA	**NORSAR Array B**	**93.15**	**334**	P		**P**	**20 17 10.2**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=22,slow=15,SNR=2.1							
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**94.19**	**24**	P		**P**	**20 17 16.1**	**+0.2**
YKA	**Yellowknife Ar**	**94.19**	**24**	P		**P**	**20 17 16.9**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=299,slow=4.8,SNR=24							
	comp=Z,1.5nm,0.7s							
YKAB2	**New Yellowknif**	**94.22**	**24**	P		**P**	**20 17 15.3**	**-0.8**
TXAR	**Lajitas Array**	**118.15**	**49**	PKP		**PKPdf**	**20 22 45.5**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=219,slow=2.3,SNR=1.9							
PLCA	**Paso Flores**	**145.80**	**157**	PKPbc		**PKPdf**	**20 23 36.9**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=236,slow=5.8,SNR=4.7							
GO06	**Curarrehue**	**146.41**	**155**	PKPbc		**PKPdf**	**20 23 38.1**	**+0.8**

*IDC **14** 20:10:56.2±7.2,5.°31S×106.°36E, h73km±44km, mb3.2/3, mbtmp3.5/3, Error ellipse: s-maj=63.1km s-min=54.9km az=48.0*
*DJA **14** 20:10:59.4±0.4,7.°S±2.°×10.°6E±.°, h33km±6km, M3.7/12, mB5.4/1, MLv3.7/12, Mw(mB)4.8/1*
ISC 14 20:11:00.2±1.1,7.°21S±0.°07×106.°05E±0.°05, h35km, n18, σ1§67/23, mb3.5/3, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKJI	**Sukabumi**	**0.54**	**68**	P		**Pn**	**20 11 10.8**	**-0.6**
SKJI				S		**Sn**	**20 11 20.0**	**+0.7**
DBJI	**Dramaga**	**0.95**	**47**	P		**Pn**	**20 11 17.2**	**+0.1**
DBJI				S		**Sn**	**20 11 29.9**	**+0.4**
CNJI	**Cibinong**	**1.07**	**95**	P		**Pn**	**20 11 18.4**	**-0.3**
CNJI				S		**Sn**	**20 11 31.6**	**-0.8**
SBJI	**Serang**	**1.09**	**4**	P		**Pn**	**20 11 19.0**	**+0.1**
SBJI				S		**Sn**	**20 11 32.7**	**0.0**
CBJI	**Citeko**	**1.12**	**45**	P		**Pn**	**20 11 17.9**	**-1.4**
CBJI				S		**Sn**	**20 11 31.2**	**-2.3**
LEM	**Lembang**	**1.60**	**76**	P		**Pn**	**20 11 27.6**	**+1.5**
	46nm,0.3s,baz=342,slow=20,SNR=11							
LEM				S		**Sn**	**20 11 51.9**	**+6.2**
	146nm,0.6s,baz=321,slow=22,SNR=10.0							
LEM	**Lembang**	**1.60**	**76**	P		**Pn**	**20 11 25.7**	**-0.4**
KASI	**Kota Agung**	**2.28**	**317**	P		**Pn**	**20 11 35.7**	**+0.4**
KASI				S		**Sn**	**20 12 03.6**	**+1.4**
CMJI	**Cimerak**	**2.44**	**104**	P		**Pn**	**20 11 38.2**	**+0.6**
CMJI				S		**Sn**	**20 12 04.8**	**-1.5**
KPJI	**Karang Pucung**	**2.86**	**93**	P		**Pn**	**20 11 44.2**	**+0.9**
LWLI	**Liwa**	**2.94**	**318**	P		**Pn**	**20 11 44.2**	**-0.4**
PPBI	**Pangkal Pinang**	**5.02**	**1**	P		**Pn**	**20 12 13.6**	**+0.6**
WRA	**Warramunga Arr**	**30.21**	**118**	P		**P**	**20 17 06.9**	**-0.7**
	0.6nm,0.8s,baz=296,slow=11,SNR=5.7							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**31.34**	**125**	P		**P**	**20 17 17.2**	**-0.4**
	0.1nm,0.4s,baz=300,slow=7.6,SNR=5.0							
	0.1nm,0.4s							
STKA	**Stephens Creek**	**41.20**	**131**	P		**P**	**20 18 41.5**	**-0.2**
	1.1nm,0.7s,baz=320,slow=18,SNR=4.2							
	1.1nm,0.7s							
H04N2	**CROZET ISLANDS**	**60.49**	**220**	T		T	21 26 50.3	
	baz=66,slow=75,SNR=46							
H04N1	**CROZET ISLANDS**	**60.50**	**220**	T		T	21 26 50.7	
	baz=66,slow=75,SNR=38							
H04N3	**CROZET ISLANDS**	**60.51**	**220**	T		T	21 26 49.

AS01	**Alice Springs**	**29.72**	**239**	P	P	20 25 37.3	+5.4
AS31	**Alice Springs**	**29.76**	**239**	P	**P**	**20 25 30.2**	**-2.1**
ASAR	**Alice Springs**	**29.76**	**239**	P	P	20 25 28.1	-4.2
ASAR	**Alice Springs**	**29.76**	**239**	P	P	20 25 25.9	-6.4
	comp=Z,0.9nm,0.7s,baz=64,slow=9.5,SNR=17						
ASAR				LR	LR	20 37 11.2	
	comp=Z,566nm,18.3s,baz=70,slow=36						
	comp=Z,0.9nm,0.7s						
MTN	**Manton Dam**	**29.96**	**261**	P	**P**	**20 25 30.9**	**-3.2**
TOO	**Toolangi**	**31.20**	**205**		**P**	**20 25 45.6**	**+0.8**
URZ	**Urewera**	**31.59**	**156**	LR	LR	20 36 42.2	
	comp=Z,103nm,18.7s,baz=119,slow=33						
RTZ	**Ruatahuna**	**31.85**	**157**	P	**P**	**20 25 50.9**	**+0.3**
BKZ	**Black Stump Fm**	**32.14**	**158**		**P**	**20 25 53.6**	**+0.6**
BKZ				IAmb	IAmb	20 26 00.1	
	comp=Z,21nm,1.3s						
BBOO	**Buckleboo**	**32.81**	**222**	P	P	20 26 04.1	+5.2
MRZ	**Mangatainoka R**	**33.15**	**160**	P	**P**	**20 26 01.1**	**-0.7**
TCW	**Tory Channel**	**33.24**	**162**	P	**P**	**20 26 02.3**	**-0.3**
TUWZ	**Tuamarina**	**33.34**	**163**	P	**P**	**20 26 04.3**	**+0.9**
THZ	**Tophouse**	**33.36**	**164**	P	**P**	**20 26 04.5**	**+0.8**
WRKA	**Warakurna**	**35.02**	**240**	P	P	20 26 23.9	+5.6
SANI	**Sanana**	**36.16**	**280**	P	P	20 26 37.9	+10
	comp=Z,25nm,1.4s						
DAV	**Davao City (W)**	**39.55**	**294**	LR	LR	20 44 07.4	
	comp=Z,37nm,18.3s,baz=120,slow=37						
JCJ	**Chichijima**	**41.21**	**333**	LR	LR	20 44 21.2	
	comp=Z,75nm,20.4s,baz=150,slow=36						
MBWA	**Marble Bar**	**41.72**	**249**	P	**P**	**20 27 15.7**	**+1.1**
MBWA				IAmb	IAmb	20 27 22.5	
	comp=Z,24nm,0.9s						
MBWA	**Marble Bar**	**41.72**	**249**	P	**P**	**20 27 18.8**	**+4.2**
MORW	**Morawa**	**46.65**	**239**	P	**P**	**20 27 52.6**	**-1.4**
NWAO	**Narrogin (SRO)**	**46.79**	**234**	LR	LR	20 47 30.6	
	comp=Z,117nm,18.4s,baz=136,slow=36						
TBI	**Tubuai**	**48.62**	**112**	*e*LR	LR	20 42 01.6	
	comp=Z,1μm,33.2s						
MJAR	**Matsushiro Arr**	**51.06**	**336**	P	**P**	**20 28 29.1**	**+1.5**
	comp=Z,2.5nm,0.7s,baz=183,slow=8.9,SNR=6.3						
MJAR				LR	LR	20 49 42.8	
	comp=Z,50nm,20.6s,baz=179,slow=35						
	comp=Z,2.5nm,0.7s						
JNU	**Nakatsue**	**51.73**	**327**	LR	LR	20 50 35.4	
	comp=Z,21nm,18.4s,baz=159,slow=36						
YHNB	**Yeheng**	**52.05**	**312**	P	**P**	**20 28 34.1**	**-1.2**
LEM	**Lembang**	**53.40**	**269**	P	**P**	**20 28 43.0**	**-2.6**
	comp=Z,8.5nm,0.3s,baz=160,slow=23,SNR=1.7						
	comp=Z,8.5nm,0.3s						
ASAJ	**Asahikawa**	**56.36**	**344**	LR	LR	20 53 45.7	
	comp=Z,83nm,19.3s,baz=184,slow=36						
KSRS	**Korea Array**	**56.59**	**328**	P	**P**	**20 29 08.1**	**+0.2**
	comp=Z,3.7nm,1.0s,baz=142,slow=6.3,SNR=6.0						
KSRS				LR	LR	20 52 02.1	
	comp=Z,45nm,20.3s,baz=130,slow=34						
	comp=Z,3.7nm,1.0s						
TAOE	**Nuku Hiva Isla**	**57.48**	**94**	*e*LR	LR	20 46 09.2	
	comp=Z,70nm,23.2s						
NJ2	**Nanjing**	**58.28**	**317**	*e*P	**P**	**20 29 22.5**	**+2.5**
NJ2				sP	**sP**	**20 29 37.6**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**60.06**	**336**	P	**P**	**20 29 32.8**	**+0.7**
	comp=Z,5.7nm,0.9s,baz=140,slow=6.2,SNR=6.7						
	comp=Z,5.7nm,0.9s						
MDJ	**Mudanjiang**	**61.40**	**335**	P	**P**	**20 29 42.3**	**+1.2**
MDJ				pP	pP	20 29 55.8	+0.7
MDJ				sP	sP	20 30 02.0	+1.2
MDJ				ScP	**ScP**	**20 34 21.0**	**+0.4**
MDJ				PcS	**PcS**	**20 34 26.6**	**+0.9**
MDJ				S	**S**	**20 38 00.0**	**+1.6**
MDJ				sS	sS	20 38 22.6	+0.9
MDJ	**Mudanjiang**	**61.40**	**335**	SS	SS	20 41 59.9	-0.2
MDJ				pmax	pmax		
	comp=Z,19nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,280nm,3.7s						
MDJ				LR	LR		
	comp=N,570nm,14.3s						
MDJ				LR	LR		
	comp=E,490nm,13.7s						
MDJ				LR	LR		
	comp=Z,340nm,15.0s						
MDJ	**Mudanjiang**	**61.40**	**335**	P	**P**	**20 29 41.7**	**+0.6**
MDJ				pP	**pP**	**20 29 55.9**	**+0.8**
CN2	**Changchun**	**62.62**	**331**	*e*P	P	20 29 53.9	+4.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PETK	**Petropavlovsk-**	**62.76**	**357**	P	**P**	**20 29 50.9**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=180,slow=8.3,SNR=3.5						
PETK				LR	LR	20 52 52.2	
	comp=Z,42nm,21.5s,baz=155,slow=32						
	comp=Z,5.1nm,0.9s						
BNX	**BinXian**	**63.23**	**334**	⇓P	**P**	**20 29 53.3**	**-0.1**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BNX				pmax	pmax		
	comp=Z,170nm,4.7s						
KLR	**Kul'dur**	**64.35**	**339**	LR	LR	20 56 14.6	
	comp=Z,50nm,20.9s,baz=201,slow=34						
XAN	**Xi'an**	**66.27**	**314**	⇑P	**P**	**20 30 17.4**	**+3.9**
XAN				pP	pP	20 30 29.9	+2.8
XAN				sP	sP	20 30 35.6	+3.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	**Xi'an**	**66.27**	**314**	P	**P**	**20 30 15.2**	**+1.7**
XAN				pP	**pP**	**20 30 29.2**	**+2.1**
HEH	**HeiHe**	**66.80**	**337**	*e*P	**P**	**20 30 16.3**	**-0.2**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HEH				pmax	pmax		
	comp=Z,200nm,5.8s						
CRAI	**Chiangrai**	**67.16**	**297**	P	**P**	**20 30 19.7**	**+0.2**
XLT	**XiLinHaoTe**	**67.50**	**326**	*e*P	**P**	**20 30 21.5**	**+0.3**
XLT				pP	pP	20 30 31.6	-3.7
XLT				sP	sP	20 30 37.8	-3.2
XLT				PcP	**PcP**	**20 30 48.0**	**-0.2**
XLT				pmax	pmax		
	comp=Z,11nm,1.1s						
XLT				pmax	pmax		
	comp=Z,120nm,4.7s						
VNDA	**Vanda**	**67.69**	**180**	P	**P**	**20 30 23.2**	**+1.4**
VNDA	**Vanda**	**67.69**	**180**	P	**P**	**20 30 25.5**	**+3.8**
CMAR	**Chiang Mai Arr**	**67.84**	**295**	P	**P**	**20 30 22.9**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=124,slow=6.2,SNR=4.9						
CMAR				LR	LR	21 02 58.9	
	comp=Z,13nm,18.0s,baz=185,slow=38						
	comp=Z,1.1nm,0.9s						
PZH	**PanZhiHua**	**68.34**	**304**	P	**P**	**20 30 28.3**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
CD2	**Chengdu**	**68.59**	**309**	P	**P**	**20 30 28.0**	**-0.3**
CCD	**Concordia, Ant**	**68.67**	**190**	P	**P**	**20 30 30.8**	**+2.4**
ULN	**Ulaanbaatar**	**74.91**	**325**	P	**P**	**20 31 05.5**	**-0.5**
GTA	**Gaotai**	**75.25**	**315**	P	P	20 31 12.8	+4.7
SONM	**Songino Array**	**75.26**	**325**	P	**P**	**20 31 07.2**	**-0.8**
SONM	**Songino Array**	**75.26**	**325**	P	**P**	**20 31 07.8**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=137,slow=4.8,SNR=22						
SONM				LR	LR	21 03 25.5	
	comp=Z,49nm,21.6s,baz=116,slow=35						
	comp=Z,2.9nm,0.8s						
YAK	**Yakutsk**	**75.80**	**345**	P	**P**	**20 31 10.1**	**-0.4**
YAK				IAmb	IAmb	20 31 26.2	
	comp=Z,11nm,0.8s						
YAK	**Yakutsk**	**75.80**	**345**	LR	LR	21 01 39.9	
	comp=Z,17nm,21.9s,baz=88,slow=33						
KDAK	**Kodiak Island**	**77.02**	**23**	LR	LR	21 02 11.5	
	comp=Z,59nm,18.6s,baz=228,slow=33						
BILL	**Bilibino**	**77.72**	**2**	P	**P**	**20 31 21.7**	**+0.4**
BILL				IAmb	IAmb	20 31 22.8	
	comp=Z,8.4nm,1.0s						
SVW2	**Sparrevohn**	**78.29**	**20**	P	**P**	**20 31 25.3**	**+0.6**
SVW2				IAmb	IAmb	20 31 36.8	
	comp=Z,8.9nm,0.7s						
J16K	**Anvik River**	**78.42**	**16**	P	**P**	**20 31 25.3**	**0.0**
J16K				IAmb	IAmb	20 31 27.5	
	comp=Z,16nm,1.2s						
L18K	**Granite Mounta**	**78.76**	**19**	P	**P**	**20 31 28.2**	**+1.0**
J17K	**VABM Dome**	**78.94**	**17**	P	**P**	**20 31 27.9**	**-0.2**
M19K	**Big River Lodg**	**79.27**	**20**	P	**P**	**20 31 30.6**	**+0.7**
M19K				IAmb	IAmb	20 31 42.5	
	comp=Z,11nm,0.8s						
L19K	**White Mountain**	**79.32**	**19**	P	**P**	**20 31 30.7**	**+0.4**
L19K				IAmb	IAmb	20 31 43.5	
	comp=Z,8.3nm,1.0s						

TTA	**Tatalina**	**79.50**	**18**	P	**P**	**20 31 31.4**	**+0.1**
H17K	**Granite Mounta**	**79.91**	**16**	P	**P**	**20 31 33.4**	**0.0**
H17K				IAmb	IAmb	20 33 02.7	
	comp=Z,13nm,1.6s						
SUA	**Susitna One**	**80.21**	**21**	P	**P**	**20 31 35.7**	**+0.5**
SUA				IAmb	IAmb	20 31 36.4	
	comp=Z,17nm,1.3s						
H18K	**Honhosa River**	**80.49**	**16**	P	**P**	**20 31 36.1**	**-0.5**
H18K				IAmb	IAmb	20 32 55.1	
	comp=Z,32nm,1.9s						
G18K	**Tagagawik**	**80.99**	**15**	P	**P**	**20 31 39.2**	**0.0**
CAST	**Castle Rocks**	**81.10**	**19**	P	**P**	**20 31 39.3**	**-0.5**
CAST				IAmb	IAmb	20 31 50.7	
	comp=Z,6.6nm,0.8s						
KTH	**Kantishna Hill**	**81.57**	**20**	P	**P**	**20 31 41.4**	**-0.9**
KTH				IAmb	IAmb	20 33 03.1	
	comp=Z,22nm,1.6s						
G19K	**Purcell Mounta**	**81.59**	**16**	P	**P**	**20 31 41.6**	**-0.8**
G19K				IAmb	IAmb	20 31 44.0	
	comp=Z,11nm,1.3s						
SCM	**Sheep Creek Mo**	**81.69**	**22**	P	**P**	**20 31 43.0**	**-0.1**
SCM				IAmb	IAmb	20 32 23.0	
	comp=Z,23nm,1.4s						
TRF	**Thorofare Moun**	**81.71**	**20**	P	**P**	**20 31 42.5**	**-0.7**
RND	**Reindeer**	**82.17**	**20**	P	**P**	**20 31 45.0**	**-0.5**
RND				IAmb	IAmb	20 33 20.8	
	comp=Z,22nm,1.6s						
M24K	**Tolsona, Glenn**	**82.29**	**22**	P	**P**	**20 31 46.0**	**-0.2**
IMAR	**Indian Mountai**	**82.40**	**17**	P	**P**	**20 31 46.5**	**-0.1**
H21K	**Melozitna Rive**	**82.44**	**17**	P	**P**	**20 31 47.1**	**+0.3**
H21K				IAmb	IAmb	20 31 49.1	
	comp=Z,10nm,1.4s						
MLY	**Manley**	**82.64**	**18**	P	**P**	**20 31 47.6**	**-0.3**
MLY				IAmb	IAmb	20 31 48.9	
	comp=Z,6.3nm,1.0s						
IL31		**83.71**	**20**	P	**P**	**20 31 52.3**	**-1.0**
IL31				IAmb	IAmb	20 32 25.2	
	comp=Z,12nm,1.5s						
ILAR	**Eielson Array**	**83.71**	**20**	P	**P**	**20 31 52.6**	**-0.8**
ILAR	**Eielson Array**	**83.71**	**20**	P	**P**	**20 31 52.0**	**-1.4**
	comp=Z,2.8nm,1.1s,baz=257,slow=3.9,SNR=14						
	comp=Z,2.8nm,1.1s						
J25K	**Salcha River,**	**84.12**	**20**	P	**P**	**20 31 55.0**	**-0.6**
TIXI	**Tiksi**	**84.13**	**350**	LR	LR	21 08 08.4	
	comp=Z,19nm,21.7s,baz=207,slow=34						
SCRK	**Sand Creek**	**84.22**	**21**	P	**P**	**20 31 56.0**	**-0.1**
D22K	**Ayikyak River**	**84.76**	**15**	P	**P**	**20 31 58.4**	**-0.3**
D22K				IAmb	IAmb	20 33 41.1	
	comp=Z,21nm,1.9s						
B21K	**Ikpikpuk River**	**84.81**	**14**	P	**P**	**20 31 58.6**	**-0.2**
WMQ	**Urumqi**	**85.32**	**316**	*e*P	**P**	**20 32 03.5**	**+1.4**
TOLK	**Toolik Lake Re**	**85.42**	**16**		**P**	**20 32 02.2**	**+0.3**
TOLK				IAmb	IAmb	20 32 59.7	
	comp=Z,20nm,2.0s						
BMAR	**Burnt Mountain**	**86.09**	**18**	P	**P**	**20 32 05.8**	**+0.4**
I28M	**Miner Creek**	**86.49**	**21**	P	**P**	**20 32 07.3**	**-0.1**
I28M				IAmb	IAmb	20 35 02.9	
	comp=Z,18nm,2.0s						
I30M	**Mount Dempster**	**87.65**	**22**	P	**P**	**20 32 13.0**	**-0.1**
I30M				IAmb	IAmb	20 32 35.5	
	comp=Z,15nm,1.8s						
EPYK	**Eagle Plains**	**88.10**	**21**	P	**P**	**20 32 15.2**	**+0.1**
NVAR	**Mina Array Bea**	**88.42**	**51**	LR	LR	21 06 11.0	
	comp=Z,32nm,18.8s,baz=170,slow=32						
PFO	**Pinyon Flats O**	**88.78**	**56**	LR	LR	21 04 58.9	
	comp=Z,68nm,19.1s,baz=308,slow=31						
MKAR	**Makanchi Array**	**89.81**	**318**	P	**P**	**20 32 20.8**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=94,slow=7.3,SNR=4.8						
	comp=Z,0.4nm,0.7s						
INK	**Inuvik**	**90.11**	**20**	LR	LR	21 11 01.1	
	comp=Z,50nm,18.5s,baz=56,slow=34						
ZALV	**Zalesovo Beam**	**90.16**	**325**	LR	LR	21 13 59.5	
	comp=Z,32nm,19.3s,baz=247,slow=36						
KSH	**Kashi**	**92.77**	**309**	P	**P**	**20 32 41.3**	**+3.7**
KSH				pmax	pmax		
	comp=Z,2.0nm,2.8s						
KURBB	**Kurchatov Arra**	**93.10**	**321**	P	**P**	**20 32 35.8**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=105,slow=3.4,SNR=5.6						
	comp=Z,0.3nm,0.3s						
NRIK	**Noril'sk**	**93.54**	**340**	LR	LR	21 14 41.1	
	comp=Z,54nm,20.7s,baz=77,slow=35						
YKA	**Yellowknife Ar**	**95.79**	**28**	P	**P**	**20 32 48.0**	**-2.7**
	comp=Z,0.2nm,0.4s,baz=254,slow=5.4,SNR=5.1						
	comp=Z,0.2nm,0.4s						
PHWY	**Pilot Hill**	**98.64**	**50**	P	**P**	**20 33 02.4**	**-2.1**

SOME ***14*** *20:20:48.9,44˚.18N×83˚.62E,h10km*
NNC ***14*** *20:20:49.5±1.3,44˚.22N×83˚.60E,h0km,mb3.4,mpv3.3,*
Error ellipse: s-maj=11.3km s-min=4.6km az=129.0
ISC 14 20:20:48.9±1.7,44˚.16N±0˚.07×83˚.61E±0˚.08,h10km,n36,
α2ˢ45/53,4C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.46**	**254**	*e*P	**Pb**	**20 21 34.9**	**+1.6**
	8.2nm,0.3s						
KTMS				*e*S	**Sg**	**20 22 08.2**	**+0.2**
	30nm,0.2s						
DJR	**Jarkent**	**2.75**	**275**	Pg	**Pg**	**20 21 40.3**	**-1.3**
	2.7nm,0.1s						
DJR				Lg	Lg	20 22 17.2	
	43nm,0.3s						
DJR	**Jarkent**	**2.75**	**275**	*e*P	**Pg**	**20 21 40.3**	**-1.3**
	2.7nm,0.1s						
DJR				*e*S	**Sg**	**20 22 17.2**	**0.0**
	43nm,0.3s						
MK31	**Makanchi Array**	**2.80**	**341**	⇑Pn	**Pn**	**20 21 34.0**	**+0.2**
	0.1nm,0.2s,baz=158,slow=14,SNR=152						
MK31				Pg	**Pb**	**20 21 39.9**	**+0.9**
	2.4nm,0.3s,baz=161,slow=17,SNR=21						
MK31				⇓Lg	Lg	20 22 15.2	
	20nm,0.3s,baz=150,slow=29,SNR=21						
MAKZ	**Makanchi**	**2.89**	**337**	⇓Pg	**Pb**	**20 21 41.8**	**+1.3**
MAKZ				⇑Lg	Lg	20 22 17.6	
	14nm,0.3s						
PDGK	**Podgornoye**	**3.10**	**256**	Pg	**Pb**	**20 21 45.1**	**+1.0**
	1.8nm,0.3s						
PDGK				Lg	Lg	20 22 25.5	
	14nm,0.5s						
PDGK	**Podgornoye**	**3.10**	**256**	⇑Pg	**Pb**	**20 21 44.7**	**+0.5**
	3.8nm,0.7s						
PDGK				⇑Lg	Lg	20 22 25.6	
	22nm,0.6s						
SHLS	**Shalkode**	**3.17**	**253**	*e*P	**Pn**	**20 21 42.4**	**+3.4**
	13nm,0.3s						
SHLS				*e*S	**Sb**	**20 22 21.3**	**-2.8**
	95nm,0.4s						
KNOS	**Konyrlen**	**3.19**	**275**	Pg	**Pg**	**20 21 48.8**	**-1.2**
	7.5nm,0.2s						
KNOS				Lg	Lg	20 22 32.3	
	26nm,0.4s						
KAPS	**Kapalarasan**	**3.23**	**292**	*e*P	**Pg**	**20 21 48.7**	**-2.1**
	2.4nm,0.2s						
KAPS				*e*S	**Sg**	**20 22 32.0**	**-0.8**
	18nm,0.2s						
ZSN	**Zaisan**	**3.41**	**14**	*e*P	**Pb**	**20 21 49.4**	**0.0**
	13nm,0.2s						
ZSN				*e*S	**Sb**	**20 22 32.9**	**+2.0**
	25nm,0.4s						
UZB	**Uzynbulak**	**3.48**	**255**	*e*P	**Pb**	**20 21 51.2**	**+0.5**
	3.7nm,0.2s						
UZB				*e*S	**Sb**	**20 22 35.8**	**+2.8**
	6.3nm,0.2s						
KPKS	**Kokpek**	**3.63**	**261**	*e*P	**Pb**	**20 21 55.2**	**+2.0**
	3.1nm,0.1s						
KPKS				*e*S	**Sg**	**20 22 42.6**	**-2.9**
	22nm,0.4s						
BLB	**Baldybastay**	**3.69**	**271**	Pg	**Pg**	**20 21 57.2**	**-2.4**
	6.7nm,0.1s						
BLB				Lg	Lg	20 22 46.8	
	17nm,0.2s						
TDK	**Taldyqorghan**	**3.81**	**285**	Pg	**Pg**	**20 22 00.4**	**-1.5**
	4.7nm,0.1s						
TDK				Lg	Lg	20 22 52.0	
	66nm,0.3s						
TDK	**Taldyqorghan**	**3.81**	**285**	*e*P	**Pg**	**20 22 00.4**	**-1.5**
	4.6nm,0.1s						
TDK				*e*S	**Sg**	**20 22 52.0**	**+0.7**
	66nm,0.3s						
SATY	**Saty**	**3.94**	**256**	Pg	**Pb**	**20 22 01.4**	**+3.0**
	2.5nm,0.1s						
SATY				Lg	Lg	20 22 53.9	
	27nm,0.1s						
SATY	**Saty**	**3.94**	**256**	*e*P	**Pb**	**20 22 01.4**	**+3.0**
	2.5nm,0.1s						
SATY				*e*S	**Sg**	**20 22 53.9**	**-1.3**
	27nm,0.1s						
KURS	**Kuram**	**3.99**	**262**	Pg	**Pg**	**20 22 02.8**	**-2.6**
	2.2nm,0.4s						
KURS				Lg	Lg	20 22 55.9	
	9.2nm,0.7s						
KURS	**Kuram**	**3.99**	**262**	*e*P	**Pg**	**20 22 02.8**	**-2.6**
	2.2nm,0.4s						
KURS				*e*S	**Sg**	**20 22 55.9**	**-1.2**
	9.2nm,0.7s						
ARXS	**Arharly**	**4.16**	**273**	Pg	**Pg**	**20 22 06.1**	**-2.4**
	1.0nm,0.1s						
ARXS				Lg	Lg	20 23 02.3	
	19nm,0.3s						
ARXS	**Arharly**	**4.16**	**273**	*e*P	**Pg**	**20 22 06.1**	**-2.4**
	1.0nm,0.1s						
ARXS				*e*S	**Sg**	**20 23 02.3**	**-0.2**
	19nm,0.3s						
CHKK	**Chushkaly**	**4.79**	**269**	Pg	**Pb**	**20 22 16.5**	**+3.7**
	1.2nm,0.2s						
CHKK				Lg	Lg	20 23 19.7	
	9.7nm,0.2s						
CHKK	**Chushkaly**	**4.79**	**269**	*e*P	**Pb**	**20 22 16.5**	**+3.7**
	1.2nm,0.2s						
CHKK				*e*S	**Sg**	**20 23 19.7**	**-2.8**
	9.7nm,0.2s						
KOTS	**Kotyrbulak**	**4.80**	**261**	Pg	**Pg**	**20 22 18.2**	**-2.6**
	3.8nm,0.3s						
KOTS				Lg	Lg	20 23 22.8	
	11nm,0.3s						
KOTS	**Kotyrbulak**	**4.80**	**261**	*e*P	**Pg**	**20 22 18.2**	**-2.6**
	3.8nm,0.3s						
KOTS				*e*S	**Sg**	**20 23 22.8**	**-0.3**
	11nm,0.3s						
TNSS	**Tian-Shan**	**4.97**	**259**	Pg	**Pg**	**20 22 21.4**	**-2.6**
	1.3nm,0.2s						
TNSS				Lg	Lg	20 23 28.0	
	2.3nm,0.8s						
TNSS	**Tian-Shan**	**4.97**	**259**	*e*P	**Pg**	**20 22 21.4**	**-2.6**
	1.3nm,0.2s						
TNSS				*e*S	**Sg**	**20 23 28.0**	**-0.4**
	2.3nm,0.8s						
KTBS	**Karatobe**	**5.02**	**267**	Pg	**Pg**	**20 22 21.7**	**-3.4**
	0.9nm,0.5s						
KTBS				Lg	Lg	20 23 28.6	
	7.9nm,0.4s						
KTBS	**Karatobe**	**5.02**	**267**	*e*P	**Pg**	**20 22 21.7**	**-3.4**
	0.9nm,0.5s						
KTBS				*e*S	**Sg**	**20 23 28.6**	**-1.6**
	7.9nm,0.4s						
KUU	**Kurty**	**5.25**	**270**	Pg	**Pb**	**20 22 24.4**	**+3.7**
	0.9nm,0.3s						
KUU				Lg	Lg	20 23 33.2	
	10nm,0.4s						
KUU	**Kurty**	**5.25**	**270**	*e*P	**Pb**	**20 22 24.4**	**+3.7**
	0.9nm,0.3s						
KUU				*e*S	**Sg**	**20 23 33.2**	**-4.2**
	10nm,0.4s						
KST	**Kastek**	**5.66**	**261**	Pg	**Pg**	**20 22 33.3**	**-4.0**
	1.1nm,0.2s						
KST				Lg	Lg	20 23 48.1	
	5.5nm,0.6s						
KST	**Kastek**	**5.66**	**261**	*e*P	**Pg**	**20 22 33.3**	**-4.0**
	1.1nm,0.2s						
KST				*e*S	**Sg**	**20 23 48.1**	**-2.6**
	5.5nm,0.6s						
DGS	**Degeres**	**5.75**	**264**	Pg	Pg	20 22 34.4	-4.7
	1.0nm,0.3s						
DGS				Lg	Lg	20 23 50.4	
	4.6nm,0.4s						
DGS	**Degeres**	**5.75**	**264**	*e*P	Pg	20 22 34.4	-4.7
	1.0nm,0.3s						
DGS				*e*S	**Sg**	**20 23 50.4**	**-3.3**
	4.6nm,0.4s						

DJA 14 20:20:50.1±0.7,5˚S×8˚×10˚3E±˚,h190km±8km,M3.8/7,
mb3.7/1,MLv3.8/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.44**	**6**	P	Pn	20 21 19.4	+3.5
MNAI				S	Sn	20 21 30.4	-5.5
LWLI	**Liwa**	**1.17**	**101**	P	Pn	20 21 22.1	+1.9
KASI	**Kota Agung**	**1.74**	**115**	P	Pn	20 21 25.9	+0.7
PPSI	**Pulau Pagai**	**3.53**	**305**	P	Pn	20 21 45.2	-0.5
PPBI	**Pangkal Pinang**	**4.15**	**51**	P	Pn	20 21 52.3	-1.2
SKJI	**Sukabumi**	**4.24**	**121**	P	Pn	20 21 53.3	-1.3
CBJI	**Citeko**	**4.24**	**112**	P	Pn	20 21 56.5	+1.9
SISI	**Saibi**	**5.14**	**312**	P	Pn	20 22 06.4	+0.2

NEIC ***14*** *20:28:10.3±1.5,3˚.76N±0˚.06×96˚.37E±0˚.10,h61km±8km,*
mb4.1/32,Error ellipse: s-maj=13.8km s-min=9.0km
az=82.0
DJA ***14*** *20:28:12.2±0.4,4˚.7N±2˚×9˚.7E±˚,h33km±9km,M4.6/10,*
mb4.9/3,MLv4.5/10
IDC ***14*** *20:28:14.6±4.8,3˚.96N×96˚.59E,h99km±42km,mb3.8/17,*
mbtmp4.1/19,MS3.0/2,Error ellipse: s-maj=30.8km
s-min=13.2km az=51.0
ISC 14 20:28:11.5±0.8,3˚.76N±0˚.04×96˚.46E±0˚.06,h77km±7km,
n77,σ0ˢ96/86,mb4.1/32,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**0.51**	**354**	P	**Pn**	**20 28 24.3**	**-0.8**
MLSI				S	**Sn**	**20 28 34.0**	**-1.1**
KCSI	**Kotacane, Aceh**	**1.33**	**100**	P	**Pn**	**20 28 34.5**	**-0.1**
KCSI				S	**Sn**	**20 28 52.5**	**+0.6**
SNSI	**Sinabang, Aceh**	**1.35**	**186**	P	**Pn**	**20 28 35.5**	**+0.7**
SNSI				S	**Sn**	**20 28 52.8**	**+0.6**
LHMI	**Lhok Sumawe**	**1.54**	**18**		**Pn**	**20 28 37.1**	**-0.2**
LHMI	**Lhok Sumawe**	**1.54**	**18**	P	**Pn**	**20 28 37.7**	**+0.4**
LHMI	**Lhok Sumawe**	**1.54**	**18**	P	**Pn**	**20 28 37.7**	**+0.

BJT				IAmb	IAmb	20 35 58.5		
	comp=Z,4.8nm,1.2s							
NRN	**Naryn**	**41.76**	**337**	P	**P**	**20 35 52.9**	**-0.8**	
NRN				IAmb	IAmb	20 36 33.8		
	comp=Z,4.6nm,1.4s							
SIMJ	**Simiganj**	**42.79**	**328**	P	**P**	**20 36 00.7**	**-1.2**	
SIMJ				IAmb	IAmb	20 36 06.2		
	comp=Z,2.6nm,0.8s							
BTK	**Batken**	**42.93**	**331**	P	**P**	**20 36 02.7**	**-0.2**	
BTK				IAmb	IAmb	20 36 37.0		
	comp=Z,2.9nm,0.8s							
ARSB	**Arslanbob**	**42.93**	**334**	P	**P**	**20 36 02.9**	**0.0**	
AAK	**Ala-Archa**	**43.38**	**336**	P	**P**	**20 36 05.6**	**-1.0**	
AAK	**Ala-Archa**	**43.38**	**336**	P	**P**	**20 36 06.6**	**0.0**	
	comp=Z,0.8nm,0.6s,baz=207,slow=13,SNR=4.4							
	comp=Z,0.8nm,0.6s							
WB0	**Warramunga Arr**	**44.00**	**124**	P	**P**	**20 36 11.6**	**-0.2**	
WRA	**Warramunga AR**	**44.04**	**124**	P	**P**	**20 36 12.6**	**+0.6**	
	comp=Z,3.6nm,0.8s,baz=302,slow=9.2,SNR=33							
WRA				PcP	**PcP**	**20 37 57.0**	**+0.6**	
	comp=Z,0.3nm,0.6s,baz=314,slow=2.6,SNR=1.3							
	comp=Z,3.6nm,0.8s							
WRAB	**Tennant Creek**	**44.04**	**124**	P	**P**	**20 36 12.4**	**+0.3**	
WB2	**Warramunga Arr**	**44.05**	**124**	P	**P**	**20 36 12.2**	**0.0**	
WR0	**Warramunga AR**	**44.21**	**124**	P	**P**	**20 36 13.6**	**+0.2**	
MK31	**Makanchi Array**	**44.60**	**346**	P	**P**	**20 36 14.6**	**-1.6**	
MK31				IAmb	IAmb	20 36 17.2		
	comp=Z,1.9nm,1.1s							
MKAR	**Makanchi Array**	**44.60**	**346**	P	**P**	**20 36 14.6**	**-1.6**	
MKAR	**Makanchi Array**	**44.60**	**346**	P	**P**	**20 36 14.8**	**-1.3**	
	comp=Z,1.0nm,0.4s,baz=155,slow=8.9,SNR=31							
	comp=Z,1.0nm,0.4s							
MAKZ	**Makanchi**	**44.69**	**346**	P	**P**	**20 36 14.9**	**-2.0**	
MAKZ				IAmb	IAmb	20 36 38.9		
	comp=Z,5.0nm,1.4s							
SONM	**Songino Array**	**44.74**	**10**	P	**P**	**20 36 16.5**	**-0.8**	
SONM				IAmb	IAmb	20 36 19.5		
	comp=Z,1.7nm,0.9s							
SONM	**Songino Array**	**44.74**	**10**	P	**P**	**20 36 17.6**	**+0.3**	
	comp=Z,1.6nm,0.8s,baz=189,slow=8.7,SNR=10							
SONM				PcP	**PcP**	**20 37 59.3**	**+0.8**	
	comp=Z,0.3nm,0.4s,baz=187,slow=3.6,SNR=5.6							
	comp=Z,1.6nm,0.8s							
ULN	**Ulaanbaatar**	**44.88**	**10**	P	**P**	**20 36 17.8**	**-0.7**	
KK31	**Karatay Array**	**45.45**	**333**	P	**P**	**20 36 22.2**	**-0.8**	
KKAR	**Karatay Array**	**45.45**	**333**	P	**P**	**20 36 22.0**	**-1.0**	
ASAR	**Alice Springs**	**45.54**	**129**	P	**P**	**20 36 24.3**	**+0.3**	
	comp=Z,0.8nm,0.8s,baz=298,slow=7.4,SNR=8.4							
ASAR				PcP	**PcP**	**20 38 02.9**	**+1.3**	
	comp=Z,0.9nm,0.7s,baz=307,slow=3.6,SNR=6.0							
	comp=Z,0.8nm,0.8s							
GEYT	**Alibeck**	**48.80**	**319**	P	**P**	**20 36 49.8**	**+0.7**	
GEYT	**Alibeck**	**48.80**	**319**	P	**P**	**20 36 50.2**	**+1.2**	
	comp=Z,3.3nm,0.6s,baz=154,slow=7.6,SNR=12							
	comp=Z,3.3nm,0.6s							
KURBB	**Kurchatov Arra**	**49.09**	**345**	P	**P**	**20 36 49.6**	**-1.4**	
	comp=Z,0.5nm,0.3s,baz=164,slow=6.8,SNR=9.2							
	comp=Z,0.5nm,0.3s							
KURK	**Kurchatov**	**49.15**	**345**	P	**P**	**20 36 50.0**	**-1.4**	
KURK				IAmb	IAmb	20 36 50.7		
	comp=Z,5.6nm,1.5s							
ZAA0	**Zalesovo Array**	**50.93**	**351**	P	**P**	**20 37 05.2**	**+0.3**	
ZAA0				IAmb	IAmb	20 37 06.4		
	comp=Z,2.6nm,1.1s							
ZALV	**Zalesovo Beam**	**50.93**	**351**	P	**P**	**20 37 04.8**	**-0.1**	
ZALV	**Zalesovo Beam**	**50.93**	**351**	P	**P**	**20 37 03.2**	**-1.7**	
	comp=Z,1.4nm,0.4s,baz=173,slow=7.0,SNR=9.4							
	comp=Z,1.4nm,0.4s							
BVAR	**Borovoye Array**	**53.61**	**341**	P	**P**	**20 37 24.3**	**-0.5**	
	comp=Z,3.5nm,0.7s,baz=140,slow=9.3,SNR=19							
	comp=Z,3.5nm,0.7s							
BRVK	**Borovoye**	**53.67**	**341**	P	**P**	**20 37 25.2**	**-0.1**	
ABKAR	**Akbulak array**	**54.92**	**332**	P	**P**	**20 37 34.2**	**-0.2**	
ABKAR				IAmb	IAmb	20 37 35.7		
	comp=Z,3.5nm,1.1s							
ABKAR	**Akbulak array**	**54.92**	**332**	P	**P**	**20 37 34.4**	**0.0**	
KBZ	**Khabaz**	**61.67**	**319**	P	**P**	**20 38 22.8**	**+1.2**	
	comp=Z,1.8nm,0.9s,baz=179,slow=6.3,SNR=4.1							
	comp=Z,1.8nm,0.9s							
BRTR	**Keskin Array B**	**66.86**	**312**	P	**P**	**20 38 55.6**	**-0.1**	
	comp=Z,1.2nm,0.8s,baz=120,slow=5.5,SNR=6.1							
	comp=Z,1.2nm,0.8s							
POGA	**Pongola**	**69.58**	**239**	P	**P**	**20 39 11.8**	**-1.0**	
FINES	**FINESS Array B**	**77.40**	**332**	P	**P**	**20 39 57.5**	**-0.5**	
	comp=Z,1.3nm,0.8s,baz=106,slow=4.6,SNR=5.6							
	comp=Z,1.3nm,0.8s							
ARCES	**ARCESS Array B**	**79.89**	**340**	P	**P**	**20 40 11.3**	**-0.3**	
	comp=Z,1.1nm,0.5s,baz=97,slow=6.7,SNR=12							
	comp=Z,1.1nm,0.5s							
GERES	**GERESS Array B**	**82.42**	**319**	P	**P**	**20 40 26.1**	**+0.6**	
	comp=Z,0.7nm,0.4s,baz=111,slow=6.0,SNR=4.5							
	comp=Z,0.7nm,0.4s							
HFS	**Hagfors**	**83.15**	**330**	P	**P**	**20 40 29.1**	**+0.2**	
	comp=Z,1.4nm,0.7s,baz=116,slow=4.5,SNR=6.3							
	comp=Z,1.4nm,0.7s							
SPITS	**Spitsbergen AR**	**84.31**	**348**	P	**P**	**20 40 34.1**	**-0.5**	
	comp=Z,14nm,1.0s,baz=99,slow=9.4,SNR=4.2							
	comp=Z,14nm,1.0s							
NOA	**NORSAR Array B**	**84.43**	**331**	P	**P**	**20 40 34.8**	**-0.7**	
	comp=Z,0.8nm,0.6s,baz=44,slow=7.8,SNR=1.5							
	comp=Z,0.8nm,0.6s							
ULM	**Lac du Bonnet**	**125.17**	**10**	PKP	**PKPdf**	**20 47 02.3**	**-1.1**	
	comp=Z,1.4nm,0.7s,baz=120,slow=3.9,SNR=3.4							
TXAR	**Lajitas Array**	**141.85**	**29**	PKP	**PKPdf**	**20 47 35.6**	**+0.2**	
	comp=Z,0.2nm,0.5s,baz=222,slow=1.2,SNR=3.4							
CPUP	**Villa Florida**	**146.32**	**226**	PKPbc	**PKPbc**	**20 47 44.8**	**+0.5**	
	comp=Z,1.9nm,0.8s,baz=55,slow=3.2,SNR=4.2							

IDC ***14*** *20:28:48.2±2.9, 48.˚63S×124.˚09E, h0km, mb3.8/4, mbtmp3.9/5, ML1.8/1, MS3.3/4, Error ellipse: s-maj=61.4km s-min=49.8km az=167.0*

ISC 14 20:28:49.8±3.3, 48.˚6S±0.˚4×124.˚0E±0.˚3, h10km, n12, σ0°53/6, mb3.7/4, MS3.3/3, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.48**	**328**	T		T	20 48 37.5	
	baz=152,slow=74,SNR=24							
H01W2	**Cape Leeuwin H**	**15.48**	**328**	T		T	20 48 40.8	
	baz=152,slow=74,SNR=19							
H01W3	**Cape Leeuwin H**	**15.49**	**328**	T		T	20 48 38.5	
	baz=152,slow=74,SNR=19							
NWAO	**Narrogin (SRO)**	**16.42**	**339**	Pn		**P**	**20 32 42.6**	**-0.3**
	0.2nm,0.3s,baz=141,slow=22,SNR=2.3							
NWAO				LR		LR	20 37 39.4	
	comp=Z,70nm,19.0s,baz=38,slow=32							
	6.8nm,0.8s							
STKA	**Stephens Creek**	**21.32**	**45**	P		**P**	**20 33 36.7**	**+0.1**
	2.5nm,0.8s,baz=214,slow=15,SNR=3.3							
	2.5nm,0.8s							
ASAR	**Alice Springs**	**26.05**	**21**	P		**P**	**20 34 23.9**	**+0.6**
	2.6nm,0.8s,baz=196,slow=8.5,SNR=26							
	2.6nm,0.8s							
WRA	**Warramunga Arr**	**29.74**	**20**	P		**P**	**20 34 55.9**	**-0.3**
	1.1nm,1.0s,baz=195,slow=8.1,SNR=3.0							
	1.1nm,1.0s							
CTA	**Charters Tower**	**33.58**	**40**	LR		LR	20 48 57.6	
	comp=Z,46nm,19.4s,baz=246,slow=36							
QSPA	**South Pole Qui**	**41.57**	**180**	LR		LR	20 53 54.1	
	comp=Z,78nm,18.2s,baz=294,slow=36							
PMG	**Port Moresby**	**43.60**	**34**	LR		LR	20 55 22.0	
	comp=Z,32nm,18.1s,baz=105,slow=36							
CMAR	**Chiang Mai Arr**	**70.36**	**335**	P		**P**	**20 40 04.0**	**+0.3**
	0.5nm,0.6s,baz=179,slow=5.6,SNR=4.2							
	0.5nm,0.6s							
YKA	**Yellowknife Ar**	**145.35**	**44**	PKPbc		**PKPbc**	**20 48 26.1**	**-0.4**
	1.9nm,1.0s,baz=270,slow=3.1,SNR=15							

ASIES ***14*** *20:36:16.1,24.˚18N×121.˚78E, h15km, ML3.9, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr1.21; Mθθ-0.68; Mφφ-0.60; Mrθ1.32; Mθφ-0.70; Mφr1.73; Fault plane solution: M0 2.52058×10^21 NP1:φs38.56000°, δ74.96000°, λ85.38000°. NP2:φs235.87000°, δ15.72000°, λ106.70000°. Principal axes: T Plg59.7870°, Azm302.0550°; N Plg4.4650°, Azm39.7620°; P Plg29.8120°, Azm132.3260°;*

JMA ***14*** *20:36:16.2±0.1,24.˚1N±0.˚3×121.˚8E±0.˚4, h17km, MV3.0/15, TAIWAN REGION*

TAP ***14*** *20:36:16.1,24.˚18N×121.˚78E, h15km, ML3.9, B*

ISC 14 20:36:16.2±0.8, 24.˚16N±0.˚01×121.˚78E±0.˚02, h15km±5km, n140, σ0°69/237, 12C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**268**	⇓*i*P		**Pg**	**20 36 20.0**	**0.0**
	baz=264							
ETL				S		**Sg**	**20 36 22.8**	**+0.3**
	baz=264							
EHP	**Heping Village**	**0.15**	**346**	P		**Pg**	**20 36 19.9**	**-0.1**
	baz=348							
EHP				S		**Sb**	**20 36 22.9**	**-0.9**
	baz=348							
EAHA	**Aohua**	**0.17**	**347**	⇓*i*P		**Pg**	**20 36 20.2**	**-0.2**
	baz=347							
EAHA				S		**Sg**	**20 36 22.9**	**-0.2**
	baz=347							
NACB	**Ninganchiao**	**0.17**	**273**	P		**Pg**	**20 36 20.3**	**-0.1**
NACB	**Ninganchiao**	**0.17**	**273**	⇓*i*P		**Pg**	**20 36 20.2**	**-0.1**
	baz=271							
NACB				*i* S		**Sg**	**20 36 23.3**	**+0.2**
	baz=271							
TWD	**Chiawan**	**0.19**	**244**	⇓*i*P		**Pg**	**20 36 20.7**	**+0.1**
	baz=247							
TWD				S		**Sg**	**20 36 24.0**	**+0.5**
	baz=247							
HWA	**Hwalien**	**0.25**	**221**	*e*P		**Pb**	**20 36 22.8**	**+0.4**
	baz=227							
HWA				*e*S		**Sb**	**20 36 26.8**	**+0.3**
	baz=227							
ENA	**Nanau**	**0.27**	**352**	⇓*i*P		**Pg**	**20 36 21.7**	**-0.1**
	baz=353							
ENA				*i* S		**Sg**	**20 36 25.7**	**0.0**
	baz=353							
ETLH	**Xiulin Townshi**	**0.28**	**279**	⇓*i*P		**Pg**	**20 36 22.1**	**0.0**
	baz=277							
ETLH				*e*S		**Sg**	**20 36 26.4**	**+0.2**
	baz=277							
EWUT	**Wuta**	**0.28**	**360**	⇓*i*P		**Pg**	**20 36 22.1**	**0.0**
	baz=359							
EWUT				*e*S		**Sg**	**20 36 26.4**	**+0.2**
	baz=359							
ETM	**Tongmen**	**0.33**	**233**	⇑*i*P		**Pg**	**20 36 23.3**	**+0.3**
	baz=232							
ETM				*e*S		**Sg**	**20 36 28.0**	**+0.4**
	baz=232							
LXIB	**Xiulin Townshi**	**0.36**	**247**	⇓*i*P		**Pg**	**20 36 23.6**	**0.0**
	baz=246							
LXIB				*e*S		**Sb**	**20 36 29.4**	**-0.7**
	baz=246							
ESAO	**Su ao**	**0.41**	**8**	⇓P		**Pg**	**20 36 24.4**	**-0.1**
	baz=4.0							
ESAO				S		**Sg**	**20 36 30.0**	**-0.1**
	baz=4.0							
SHUL	**Shoufeng**	**0.42**	**208**	*e*P		**Pb**	**20 36 25.9**	**+0.5**
	baz=197							
LATG	**Datong**	**0.44**	**328**	⇓*i*P		**Pg**	**20 36 24.9**	**0.0**
	baz=327							
LATG				S		**Sb**	**20 36 31.2**	**-0.9**
	baz=327							
TWC	**Suao**	**0.45**	**8**	⇓*i*P		**Pg**	**20 36 25.1**	**0.0**
	baz=5.0							
TWC				*e*S		**Sg**	**20 36 31.2**	**0.0**
	baz=5.0							
NNSB	**Datong**	**0.45**	**306**	⇓*i*P		**Pg**	**20 36 25.2**	**0.0**
	baz=305							
NNSB				S		**Sg**	**20 36 31.5**	**+0.2**
	baz=305							
NNS	**Nan Shan**	**0.46**	**307**	⇓*i*P		**Pg**	**20 36 25.4**	**0.0**
	baz=306							
NNS				*i* S		**Sb**	**20 36 32.1**	**-0.8**
	baz=306							
NDS	**Dongshan**	**0.47**	**353**	⇓*i*P		**Pb**	**20 36 25.7**	**-0.5**
	baz=351							
NDS				*e*S		**Sb**	**20 36 32.3**	**-0.7**
	baz=351							
ESL	**Shilin**	**0.47**	**222**	⇑*i*P		**Pb**	**20 36 25.9**	**-0.3**
	baz=228							
ESL				*e*S		**Sg**	**20 36 32.3**	**+0.4**
	baz=228							
WHF	**Hehuan Shan**	**0.47**	**268**	*e*P		**Pg**	**20 36 25.9**	**+0.2**
	baz=267							
WHF				*e*S		**Sg**	**20 36 32.5**	**+0.3**
	baz=267							
EOS2	**EOS2**	**0.48**	**58**	*e*P		**Pb**	**20 36 26.9**	**+0.5**
	baz=45							
EOS4	**EOS4**	**0.49**	**95**	*e*P		**Pb**	**20 36 27.3**	**+1.0**
	baz=97							
FUSS	**Fushou**	**0.50**	**280**	⇓P		**Pb**	**20 36 26.5**	**-0.3**
	baz=279							
FUSS				*i* S		**Sb**	**20 36 33.7**	**-0.3**
	baz=279							
NDT	**Datong Townshi**	**0.50**	**331**	⇓*i*P		**Pb**	**20 36 26.3**	**-0.4**
	baz=329							
NDT				*e*S		**Sg**	**20 36 32.4**	**-0.4**
	baz=329							
TEGC	**Jichi Village**	**0.50**	**206**	*e*P		**Pb**	**20 36 27.1**	**+0.4**
	baz=198							
TEGC				*e*S		**Sb**	**20 36 34.5**	**+0.7**
	baz=198							
ENTT	**Nioudou**	**0.51**	**338**	⇓*i*P		**Pb**	**20 36 26.4**	**-0.5**
	baz=336							
ENTT				*i* S		**Sb**	**20 36 33.7**	**-0.5**
	baz=336							
TWT	**Tachien**	**0.56**	**279**	⇓*i*P		**Pb**	**20 36 27.9**	**+0.1**
	baz=278							
TWT				*i* S		**Sb**	**20 36 35.7**	**0.0**
	baz=278							
CHGB	**Renai**	**0.56**	**260**	⇓*i*P		**Pb**	**20 36 27.7**	**-0.2**
	baz=254							
CHGB				S		**Sg**	**20 36 35.1**	**+0.2**
	baz=254							
TWE	**Neicheng**	**0.56**	**349**	⇓*i*P		**Pg**	**20 36 27.2**	**-0.1**
	baz=349							
TWE				*e*S		**Sb**	**20 36 34.9**	**-0.7**
	baz=349							
WARBT	**Fenglin Townsh**	**0.57**	**219**	⇑*i*P		**Pg**	**20 36 27.4**	**0.0**
	baz=224							
WARBT				*e*S		**Sb**	**20 36 35.9**	**0.0**
	baz=224							
TDCB	**Techi**	**0.57**	**279**	⇓*i*P		**Pb**	**20 36 28.0**	**-0.1**
	baz=278							
TDCB				*i* S		**Sb**	**20 36 35.5**	**-0.6**
	baz=278							
ILA	**Ilan**	**0.60**	**357**	*e*P		**Pb**	**20 36 28.2**	**-0.1**
	baz=352							
ILA				*e*S		**Sb**	**20 36 36.8**	**+0.1**
	baz=352							
FUSB	**Fushanzhiwuyua**	**0.62**	**343**	⇓*i*P		**Pb**	**20 36 28.2**	**-0.5**
	baz=335							
FUSB				S		**Sb**	**20 36 36.6**	**-0.7**
	baz=335							
YHNB	**Yeheng**	**0.62**	**324**	P		**Pb**	**20 36 28.6**	**-0.3**
YHNB	**Yeheng**	**0.62**	**324**	⇓*i*P		**Pb**	**20 36 28.5**	**-0.4**
	baz=322							
YHNB				*e*S		**Sb**	**20 36 36.9**	**-0.6**
	baz=322							
WUSB	**Renai**	**0.63**	**254**	⇓P		**Pb**	**20 36 28.9**	**0.0**
	baz=249							
WUSB				*e*S		**Sb**	**20 36 37.3**	**-0.4**
	baz=249							
NSK	**Sanguang**	**0.64**	**323**	⇓*i*P		**Pb**	**20 36 28.7**	**-0.4**
	baz=322							
NSK				*e*S		**Sb**	**20 36 37.3**	**-0.6**
	baz=322							
NWLT	**Wulai**	**0.66**	**337**	⇓*e*P		**Pb**	**20 36 29.1**	**-0.3**
	baz=336							
NWLT				*i* S		**Sb**	**20 36 37.9**	**-0.6**
	baz=336							
EGS		**0.69**	**11**	*e*P		**Pb**	**20 36 30.0**	**0.0**
	baz=16							
VWDT	**VWDT**	**0.71**	**235**	⇑*i*P		**Pb**	**20 36 30.4**	**+0.1**
	baz=242							
VWDT				*e*S		**Sb**	**20 36 40.0**	**+0.1**
	baz=242							
HGSD	**Ruisui**	**0.74**	**206**	P		**Pb**	**20 36 31.5**	**+0.7**
	baz=197							
HGSD				*e*S		**Sn**	**20 36 42.8**	**-0.4**
	baz=197							
NFF	**Wufeng Townshi**	**0.76**	**308**	*e*P		**Pb**	**20 36 31.3**	**+0.1**
	baz=307							
NFF				*e*S		**Sb**	**20 36 41.2**	**-0.3**
	baz=307							
EHY	**Hungye**	**0.78**	**213**	*e*P		**Pg**	**20 36 30.5**	**-0.8**
	baz=212							
WCS	**Beigang Elemen**	**0.80**	**263**	⇑*e*P		**Pb**	**20 36 31.9**	**+0.1**
	baz=262							
WCS				*e*S		**Sb**	**20 36 42.5**	**0.0**
	baz=262							
NHDH	**Xindian Distri**	**0.83**	**344**	⇑*e*P		**Pn**	**20 36 32.8**	**-0.6**
	baz=342							
NHDH				*i* S		**Sb**	**20 36 43.4**	**+0.1**
	baz=342							
TWA	**Mucha**	**0.83**	**348**	*e*P		**Pn**	**20 36 32.9**	**-0.5**
	baz=337							
TWA				S		**Sb**	**20 36 44.0**	**+0.6**
	baz=337							
SSLB	**Suanglung**	**0.84**	**244**	P		**Pb**	**20 36 32.5**	**-0.1**
SSLB	**Suanglung**	**0.84**	**244**	⇑*i*P		**Pg**	**20 36 32.4**	**-0.2**
	baz=253							
SSLB				*e*S		**Sg**	**20 36 42.9**	**-0.8**
	baz=253							
LIOB	**Emei**	**0.85**	**305**	⇑*e*P		**Pn**	**20 36 33.2**	**-0.4**
	baz=304							
LIOB				*e*S		**Sb**	**20 36 44.2**	**+0.4**
	baz=304							
NSTT	**Nanjuang**	**0.85**	**303**	⇑P		**Pn**	**20 36 33.0**	**-0.6**
	baz=302							
NSTT				S		**Sn**	**20 36 44.6**	**-1.2**
	baz=302							
TATO	**Taipei**	**0.85**	**342**	P		**Pn**	**20 36 33.4**	**-0.2**
SMLT	**Sun Moon Lake**	**0.85**	**251**	⇑*i*P		**Pb**	**20 36 32.7**	**-0.1**
	baz=251							
SMLT				*e*S		**Sg**	**20 36 43.6**	**-0.4**
	baz=251							
TWB1	**Santiao Chiao**	**0.86**	**13**	*e*P		**Pg**	**20 36 32.7**	**-0.2**
	baz=6.0							
TWB1				*e*S		**Sb**	**20 36 44.3**	**+0.1**
	baz=6.0							
TYC	**Yuchr**	**0.88**	**253**	⇑*i*P		**Pb**	**20 36 33.1**	**-0.1**
	baz=253							
TYC				*e*S		**Sb**	**20 36 44.2**	**-0.6**
	baz=253							
YULB	**Yu-li**	**0.89**	**210**	P		**Pn**	**20 36 34.3**	**+0.1**
YULB	**Yu-li**	**0.89**	**210**	*e*P		**Pb**	**20 36 31.9**	**-1.4**
	baz=221							
YULB				*e*S		**Sb**	**20 36 44.5**	**-0.5**
	baz=221							
NHY	**Taipei**	**0.89**	**348**	*e*P		**Pn**	**20 36 33.9**	**-0.3**
	baz=346							
ECBN	**Changbin**	**0.90**	**200**	*e*P		**Pb**	**20 36 33.0**	**-0.4**
	baz=201							
ECBN				*e*S		**Sn**	**20 36 46.6**	**-0.4**
	baz=201							
NWF	**Wu-fen Shan**	**0.90**	**0**	⇑*e*P		**Pn**	**20 36 34.1**	**-0.3**
	baz=351							
NWF				*e*S		**Sg**	**20 36 45.2**	**-0.4**
	baz=351							
WFSB	**Wu-fen Shan**	**0.90**	**0**	*e*P		**Pn**	**20 36 34.0**	**-0.3**
	baz=351							
WFSB				*e*S		**Sg**	**20 36 45.2**	**-0.3**
	baz=351							
TAP	**Taipei**	**0.91**	**344**	*e*P		**Pn**	**20 36 34.9**	**+0.5**
	baz=343							
TAP				*e*S		**Sb**	**20 36 44.9**	**-0.7**
	baz=343							
EYUL	**Yuli**	**0.92**	**208**	*e*P		**Pb**	**20 36 32.7**	**-1.1**
	baz=223							
TWF1	**Yuli**	**0.92**	**209**	*e*P		**Pb**	**20 36 32.4**	**-1.5**
	baz=223							
SXI1	**Grass Mountain**	**0.93**	**5**	*i* P		**Pn**	**20 36 34.5**	**-0.3**
	baz=358							
SXI1				*e*S		**Sn**	**20 36 46.9**	**-1.0**
	baz=358							
TWQ1	**Liyutan**	**0.94**	**281**	P		**Pn**	**20 36 35.3**	**+0.4**
	baz=281							
TWQ1				*e*S		**Sn**	**20 36 47.7**	**-0.4**
	baz=281							
SBCB	**Hsinchu**	**0.96**	**311**	*e*P		**Pn**	**20 36 35.6**	**+0.5**
	baz=310							
SBCB				*e*S		**Sn**	**20 36 48.8**	**+0.2**
	baz=310							
NSY	**Sanyi**	**0.96**	**285**	*i* P		**Pn**	**20 36 36.2**	**+0.9**
	baz=285							
NSY				S		**Sn**	**20 36 49.2**	**+0.6**
	baz=285							
NCUH	**Zhongli**	**0.97**	**326**	*e*P		**Pn**	**20 36 35.8**	**+0.5**
	baz=323							
NCUH				*e*S		**Sn**	**20 36 49.4**	**+0.7**
	baz=323							
HSN	**Hsinchu**	**0.97**	**311**	*e*P		**Pn**	**20 36 36.1**	**+0.8**
	baz=303							
NMLH	**Miaoli**	**0.98**	**293**	*e*P		**Pn**	**20 36 36.2**	**+0.8**
	baz=292							
NMLH				S		**Sn**	**20 36 49.4**	**+0.4**
	baz=292							
TNOU	**National Taiwa**	**0.98**	**360**	*e*P		**Pn**	**20 36 35.4**	**-0.1**
	baz=358							
TWS1	**Kuangyinshan**	**0.99**	**341**	*e*P		**Pn**	**20 36 35.9**	**+0.4**
	baz=339							
TWS1				*e*S		**Sn**	**20 36 49.9**	**+0.6**
	baz=339							
YM01	**YM01**	**1.00**	**349**	*e*P		**Pn**	**20 36 35.8**	**+0.1**
	baz=330							
YM01				*e*S		**Sn**	**20 36 49.2**	**-0.3**
	baz=330							
WJS	**Zhushan**	**1.02**	**251**	*i* P		**Pn**	**20 36 36.7**	**+0.8**
	baz=251							
WJS				*e*S		**Sn**	**20 36 51.4**	**+1.3**
	baz=251							
CHKH	**Chenggong**	**1.03**	**200**	*e*P		**Pb**	**20 36 35.7**	**-0.1**
	baz=188							
YM08	**YM08**	**1.03**	**350**	*e*P		**Pn**	**20 36 36.5**	**+0.3**
	baz=333							
NTST	**Danshui**	**1.04**	**343**	*e*P		**Pn**	**20 36 37.0**	**+0.7**
	baz=340							
WNT	**Mingjian**	**1.04**	**254**	*e*P		**Pg**	**20 36 37.4**	**+1.0**
	baz=252							
WNT				*e*S		**Sn**	**20 36 51.9**	**+1.3**
	baz=252							
ANP	**Anpu**	**1.04**	**347**	*e*P		**Pg**	**20 36 36.1**	**-0.3**
	baz=345							
JYNG	**Yonagunijimaku**	**1.10**	**75**	P		**Pn**	**20 36 37.1**	**+0.1**
JYNG						S	**Sg**	**20 36 51.6**	**-0.2**
ALS	**Alishan**	**1.10**	**234**	P		**Pn**	**20 36 37.4**	**0.0**
	baz=225							
WCHH	**Zhanghua**	**1.12**	**266**	*e*P		**Pg**	**20 36 38.6**	**+0.8**
	baz=265							
CHKT	**Chengkung**	**1.13**	**200**	*e*P		**

	baz=229							
PCYT	**Pengchaiyu**	**1.48**	**10**	*e*P		**Pb**	**20 36 43.1**	**-0.3**
	baz=6.0							
TWK	**Hsinying**	**1.48**	**233**	*e*P		**Pb**	**20 36 44.0**	**+0.5**
	baz=231							
TWK				*e*S		**Sg**	**20 37 04.8**	**+0.8**
	baz=231							
TWG	**Pinlang**	**1.49**	**206**	*e*P		**Pa**	**20 36 40.6**	**-1.8**
	baz=192							
TWGBT	**Beinan**	**1.49**	**206**	P		**Pb**	**20 36 43.6**	**+0.1**
TWGBT	**Beinan**	**1.49**	**206**	*e*P		**Pn**	**20 36 41.0**	**-1.4**
	baz=192							
CHN1	**Nanshi**	**1.51**	**230**	*e*P		**Pb**	**20 36 44.4**	**+0.6**
	baz=229							
CHN1				S		**Sg**	**20 37 05.3**	**+0.5**
	baz=229							
SNST	**Tainan City**	**1.51**	**232**	*e*P		**Pb**	**20 36 44.3**	**+0.4**
	baz=231							
SNST				S		**Sg**	**20 37 05.5**	**+0.7**
	baz=231							
LDUT	**Ludao**	**1.51**	**191**	*e*P		**Pn**	**20 36 40.5**	**-2.2**
	baz=180							
LDUT				S		**Sn**	**20 37 00.5**	**-1.6**
	baz=180							
WSF	**Szhu**	**1.52**	**250**	P		**Pb**	**20 36 44.3**	**+0.3**
	baz=249							
WSF				*i* S		**Sg**	**20 37 06.0**	**+0.8**
	baz=249							
SGST	**Jiashian**	**1.54**	**226**	*e*P		**Pn**	**20 36 43.6**	**+0.5**
	baz=226							
SGST				S		**Sg**	**20 37 05.1**	**-0.6**
	baz=226							
WSL	**Shuilin Townsh**	**1.56**	**246**	*e*P		**Pb**	**20 36 45.2**	**+0.5**
	baz=245							
WSL				*e*S		**Sg**	**20 37 07.4**	**+1.0**
	baz=245							
ICHU	**Yijhu**	**1.59**	**240**	*i* P		**Pb**	**20 36 45.5**	**+0.2**
	baz=239							
ICHU				S		**Sg**	**20 37 07.9**	**+0.4**
	baz=239							
CHN8	**Yiju**	**1.65**	**241**	*e*P		**Pb**	**20 36 46.4**	**+0.1**
	baz=239							
CHN8				S		**Sg**	**20 37 09.7**	**+0.3**
	baz=239							
CHN3	**Shinhua**	**1.69**	**230**	*e*P		**Pg**	**20 36 48.0**	**-0.7**
	baz=228							
CHN3				*e*S		**Sg**	**20 37 10.3**	**-0.3**
	baz=228							
SSHA	**Shanhua**	**1.71**	**234**	*e*P		**Pb**	**20 36 47.4**	**+0.1**
	baz=231							
SSHA				*e*S		**Sg**	**20 37 11.5**	**+0.2**
	baz=231							
SCST	**Cishan**	**1.74**	**223**	*i* P		**Pb**	**20 36 48.0**	**+0.2**
	baz=221							
SCST				S		**Sg**	**20 37 13.0**	**+0.9**
	baz=221							
SHHT	**Tainan City**	**1.74**	**229**	*e*P		**Pb**	**20 36 48.1**	**+0.3**
	baz=227							
SCLT	**Jiali**	**1.76**	**236**	*e*P		**Pb**	**20 36 48.2**	**+0.1**
	baz=234							
SCLT				*e*S		**Sg**	**20 37 12.5**	**-0.2**
	baz=234							
TSMG	**Majia**	**1.79**	**216**	*e*P		**Pb**	**20 36 48.1**	**-0.5**
	baz=215							
TWM1	**Shoushan**	**1.83**	**223**	*e*P		**Pb**	**20 36 50.2**	**+0.8**
	baz=221							
TWM1				*e*S		**Sg**	**20 37 14.1**	**-0.9**
	baz=221							
HATJ	**Hateruma jima**	**1.85**	**93**	P		**Pn**	**20 36 48.4**	**+1.0**
HATJ				S		**Sb**	**20 37 12.0**	**-0.8**
TSCK	**Chigu Township**	**1.85**	**237**	*i* P		**Pb**	**20 36 49.1**	**-0.7**
	baz=234							
TSCK				*i* S		**Sb**	**20 37 13.2**	**+0.4**
	baz=234							
MASBT	**Mashibuluo**	**1.87**	**215**	P		**Pb**	**20 36 49.1**	**-1.0**
	baz=212							
MASBT				*e*S		**Sb**	**20 37 14.6**	**+1.4**
	baz=212							
EAST	**Anshuo**	**1.97**	**206**	*e*P		**Pn**	**20 36 47.9**	**-1.2**
	baz=196							
JKRS	**Kuro-shima**	**2.04**	**87**	P		**Pn**	**20 36 50.9**	**+1.0**
JKRS				*e*S		**Sb**	**20 37 16.6**	**-1.4**
SCZT	**Fangliau**	**2.08**	**211**	*e*P		**Pb**	**20 36 52.5**	**-1.1**
	baz=198							
PNG	**Penghu**	**2.12**	**254**	*e*P		**Pn**	**20 36 51.3**	**+0.1**
	baz=253							
PNG				*e*S		**Sb**	**20 37 19.8**	**-0.7**
	baz=253							
PHUB	**P'eng-hu**	**2.12**	**253**	*e*P		**Pn**	**20 36 51.8**	**+0.7**
	baz=252							
PHUB				S		**Sb**	**20 37 19.6**	**-0.9**
	baz=252							
LAY	**Lan-yu**	**2.13**	**186**	*e*P		**Pn**	**20 36 49.8**	**-1.4**
	baz=188							
SLIU	**Shizi**	**2.14**	**205**	*e*P		**Pb**	**20 36 53.7**	**-1.0**
	baz=197							
WDGT	**Dungji**	**2.14**	**246**	*e*P		**Pn**	**20 36 52.6**	**+1.2**
	baz=243							
WDGT				S		**Sb**	**20 37 20.4**	**-0.6**
	baz=243							
JIJ	**Ishigaki jima**	**2.17**	**84**	P		**Pn**	**20 36 51.8**	**+0.1**
JIJ				S		**Sn**	**20 37 18.6**	**+0.3**
VWUC	**VWUC**	**2.28**	**292**	*e*P		**Pn**	**20 36 52.7**	**-0.6**
	baz=290							
JISG	**Ishigakijimahi**	**2.34**	**79**	P		**Pn**	**20 36 54.3**	**+0.1**
JISG				S		**Sn**	**20 37 23.1**	**+0.4**
VCHM	**Qimei**	**2.36**	**247**	*e*P		**Pn**	**20 36 54.8**	**+0.4**
	baz=230							
PTMZ	**Houxiangcun**	**2.57**	**290**	*e*P		**Pn**	**20 36 56.8**	**-0.5**
	baz=289							
JTJ	**Tarama**	**2.71**	**79**	*e*P		**Pn**	**20 37 00.7**	**+1.5**
JTJ				S		**Sn**	**20 37 33.6**	**+2.0**
JIRB	**Irabujima**	**3.16**	**77**	P		**Pn**	**20 37 07.4**	**+2.0**
JIRB				*e*S		**Sn**	**20 37 45.0**	**+2.2**
AXDP	**Jialang**	**3.55**	**283**	*e*P		**Pn**	**20 37 10.3**	**-0.4**
	baz=282							

*TEH **14** 20:52:58.3,37.32N×56.49E,h6km±48km,ML3.6*
*IDC **14** 20:52:59.0±1.4,37.30N×56.21E,h0km,mb3.3/7,*
mbtmp3.6/16,ML3.2/9,Error ellipse: s-maj=22.5km
s-min=10.4km az=4.0
*NNC **14** 20:53:09.6±3.8,38.08N×57.02E,h0km,mb3.8,Error*
ellipse: s-maj=34.1km s-min=20.1km az=36.0

ISC 14 20:53:01.4±0.6,37.45N±0.05×56.44E±0.03,h20km,n55,
σ1.96/65,mb3.3/6,4C-1D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.35**	**307**	Pg	**Pb**	**20 53 08.4**	**-0.6**
MRVT				Sg	**Sb**	**20 53 15.5**	**+1.3**
IMND	**Minoodasht**	**0.85**	**257**	Pg	**Pb**	**20 53 15.1**	**-2.3**
GEYT	**Alibeck**	**1.41**	**70**	Pn	**Pb**	**20 53 27.5**	**+0.4**
	87nm,0.3s,baz=248,slow=11,SNR=340						
GEYT				Sn	Sb	20 53 51.3	+6.5
	87nm,0.3s,baz=259,slow=22,SNR=3.5						
SBZV	**Sabzevar**	**1.41**	**138**	Pg	**Pn**	**20 53 24.3**	**-1.9**
SBZV				Sg	**Sn**	**20 53 42.0**	**-2.3**
IEMG	**Emamgholi**	**1.76**	**90**	Pg	**Pb**	**20 53 32.2**	**-1.0**
IAKL	**Akhelmad**	**2.04**	**114**	Pn	**Pb**	**20 53 35.9**	**-2.0**
IGLO	**Ghaloghah**	**2.29**	**246**	Pn	**Pn**	**20 53 39.5**	**+1.2**
IMOG	**Moghan**	**2.68**	**119**	Pn	**Pn**	**20 53 43.8**	**+0.1**
IANJ	**Anjilo**	**2.84**	**227**	Pn	**Pn**	**20 53 46.7**	**+0.8**
TBHD	**Torbat heydari**	**3.03**	**131**	Pn	**Pn**	**20 53 49.0**	**+0.5**
IMYA	**Miami**	**3.13**	**110**	Pn	**Pn**	**20 53 51.2**	**+1.3**
IALA	**Alasht**	**3.22**	**246**	Pn	**Pn**	**20 53 52.9**	**+1.7**
IFIR	**Firoozkooh**	**3.48**	**240**	Pn	**Pn**	**20 53 56.0**	**+1.3**
ILAS	**Lasjerd**	**3.49**	**235**	Pn	**Pn**	**20 53 56.2**	**+1.5**
IPRN	**Peran**	**3.51**	**251**	Pn	**Pn**	**20 53 55.9**	**+1.0**
TKDS	**Koohdasht(Taba**	**3.87**	**172**	Pn	**Pn**	**20 54 00.2**	**+0.3**
IDMV	**Damavand**	**4.01**	**244**	Pn	**Pn**	**20 54 03.7**	**+1.6**
MZPU	**Pul - Mazandar**	**4.03**	**257**	Pn	**Pn**	**20 54 04.1**	**+1.9**
KLST	**Kelardasht - M**	**4.41**	**259**	Pn	**Pn**	**20 54 08.2**	**+0.7**
TPRV	**Parvadeh(Tabas**	**4.42**	**177**	Pn	**Pn**	**20 54 07.7**	**+0.2**
AFRZ	**Afriz**	**4.53**	**152**	Pn	**Pn**	**20 54 09.2**	**+0.1**
ISFB	**Sefidab**	**4.60**	**229**	Pn	**Pn**	**20 54 10.6**	**+0.6**
ANAR	**Anarak**	**4.79**	**208**	Pn	**Pn**	**20 54 12.5**	**-0.1**
ITEG	**Tejag**	**4.92**	**157**	Pn	**Pn**	**20 54 14.3**	**-0.1**
KRSH	**Karshahi**	**4.93**	**227**	Pn	**Pn**	**20 54 15.2**	**+0.7**
IKOO	**Kooshah**	**5.44**	**156**	Pn	**Pn**	**20 54 21.2**	**-0.4**
QAMS	**Qamsar**	**5.53**	**229**	Pn	**Pn**	**20 54 23.8**	**+0.8**
IZEF	**Zefreh**	**5.66**	**218**	Pn	**Pn**	**20 54 25.1**	**+0.5**
IKLH	**Kolahrood**	**5.72**	**225**	Pn	**Pn**	**20 54 26.7**	**+1.1**
IBAF	**Bafgh**	**5.89**	**187**	Pn	**Pn**	**20 54 28.1**	**+0.4**
IMEH	**Mehriz**	**6.23**	**195**	Pn	**Pn**	**20 54 33.1**	**+0.6**
ISRB	**Sarab**	**6.97**	**276**	Pn	**Pn**	**20 54 43.7**	**+1.1**
ZNGN	**Zangian**	**7.03**	**222**	Pn	**Pn**	**20 54 44.9**	**+1.4**
KLNJ	**Kolanjah**	**7.58**	**213**	Pn	**Pn**	**20 54 52.1**	**+1.0**
IMRD	**Marand**	**8.56**	**282**	Pn	**Pn**	**20 55 06.1**	**+1.7**
ISHB	**Shabestar**	**8.60**	**279**	Pn	**Pn**	**20 55 06.6**	**+1.6**
GNI	**Garni**	**9.52**	**290**	Pn	**Pn**	**20 55 17.8**	**+0.3**
	0.2nm,0.3s,baz=329,slow=23,SNR=2.5						
GNI				Sn	**Sn**	**20 57 01.7**	**-2.3**
	0.2nm,0.3s,baz=209,slow=22,SNR=1.2						
	4.8nm,0.9s						
KBZ	**Khabaz**	**12.05**	**306**	Pn	**Pn**	**20 55 51.2**	**-0.7**
	0.3nm,0.3s,baz=129,slow=3.5,SNR=9.7						
KBZ				Sn	**Sn**	**20 58 02.2**	**-3.4**
	0.1nm,0.3s,baz=309,slow=16,SNR=2.1						
	0.8nm,0.3s						
AB31	**Akbulak array**	**12.07**	**11**	⇑P	**Pn**	**20 55 53.7**	**+1.5**
	0.4nm,0.4s,baz=188,slow=12,SNR=4.3						
AB31				⇓S	**Sn**	**20 58 01.0**	**-5.1**
	2.3nm,0.7s,baz=198,slow=24,SNR=10.0						
KK31	**Karatay Array**	**12.13**	**58**	P	**Pn**	**20 55 53.1**	**0.0**
	1.5nm,0.8s,baz=241,slow=16,SNR=8.0						
KK31				⇑S	**Sn**	**20 58 04.3**	**-3.5**
	0.7nm,0.6s						
KVAR	**Kislovodsk Arr**	**12.28**	**306**	Pn	**Pn**	**20 55 55.0**	**-0.2**
	baz=271,slow=21						
KVAR				Sn	**Sn**	**20 58 05.0**	**-6.6**
	baz=218,slow=16						
	1.1nm,0.5s						
AKTO	**Aktyubinsk**	**13.03**	**4**	⇑P	**Pn**	**20 56 07.3**	**+2.0**
	3.1nm,1.1s						
AKTO				⇑S	**Sn**	**20 58 27.4**	**-2.2**
	3.0nm,1.2s						
AKTO	**Aktyubinsk**	**13.03**	**4**	Pn	**Pn**	**20 56 04.9**	**-0.4**
	0.5nm,0.3s,baz=180,slow=9.6,SNR=5.4						
AKTO				Sn	**Sn**	**20 58 27.0**	**-2.6**
	0.2nm,0.3s,baz=260,slow=19,SNR=1.8						
	1.3nm,0.3s						
AAK	**Ala-Archa**	**14.76**	**64**	Pn	**Pn**	**20 56 29.7**	**+0.6**
	0.1nm,0.3s,baz=320,slow=5.5,SNR=4.1						
AAK				Sn	**Sn**	**20 59 08.6**	**-3.5**
	baz=346,slow=19,SNR=1.2						
	0.3nm,0.3s						
BELG	**Belogornoye**	**16.18**	**340**	Pn	**Pn**	**20 56 47.5**	**+0.1**
	0.6nm,0.3s,baz=86,slow=2.1,SNR=5.1						
BELG				Sn	**Sn**	**20 59 42.4**	**-3.7**
	0.2nm,0.3s,baz=91,slow=16,SNR=1.8						
	4.0nm,0.5s						
BRTR	**Keskin Array B**	**17.97**	**284**	P	**Pn**	**20 57 09.4**	**-0.7**
	baz=66,slow=10.0,SNR=1.4						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**18.36**	**28**	P	**P**	**20 57 17.9**	**+3.2**
	0.1nm,0.3s,baz=206,slow=9.9,SNR=5.3						
	1.3nm,0.6s						
ARU	**Arti**	**19.04**	**4**	P	**Pn**	**20 57 23.9**	**+1.0**
	0.3nm,0.3s,baz=171,slow=6.0,SNR=6.4						
	3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**20.53**	**43**	P	Pn	20 57 41.6	+1.0
	0.2nm,0.6s,baz=189,slow=28,SNR=1.7						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**21.24**	**56**	P	**P**	**20 57 49.5**	**+3.3**
	0.7nm,0.6s,baz=244,slow=9.5,SNR=13						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**25.54**	**41**	P	**P**	**20 58 30.8**	**+2.3**
	0.4nm,0.4s,baz=238,slow=8.0,SNR=2.0						
	0.4nm,0.4s						
HFS	**Hagfors**	**35.24**	**324**	P	**P**	**20 59 56.1**	**+1.8**
	1.3nm,0.7s,baz=127,slow=9.3,SNR=1.7						
	1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.63**	**105**	P	**P**	**21 00 49.6**	**+1.2**
	0.4nm,0.7s,baz=291,slow=7.6,SNR=1.8						
	0.4nm,0.7s						
ESDC	**Sonseca Array**	**46.50**	**292**	P	**P**	**21 01 28.0**	**+0.7**
	0.5nm,0.8s,baz=284,slow=5.2,SNR=2.2						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**76.47**	**10**	P	**P**	**21 04 52.1**	**+2.8**
	0.1nm,0.5s,baz=293,slow=5.6,SNR=1.5						
	0.1nm,0.5s						

*WEL **14** 20:55:27.0±0.4,43.3S×17.1E±,h5km,M2.9/11,*
ML3.0/13,MLv2.9/11,Error ellipse: s-maj=0.0km
s-min=0.0km az=153.4,confirmed
*NOU **14** 20:55:27.7,43.44S×170.57E,h0km,MLv3.5/7,South*
Island, New Zealand

ISC 14 20:55:27.7±0.9,43.42S±0.02×170.57E±0.02,h10km,n47,
σ0.95/51,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHFS	**Whataroa Fire**	**0.22**	**316**	P	**Pg**	**20 55 32.2**	**0.0**
HAFS	**Harihari Fire**	**0.28**	**358**	P	**Pg**	**20 55 31.9**	**-1.3**
FJDS	**Franz Josef DO**	**0.28**	**277**	P	**Pg**	**20 55 32.2**	**-1.1**
WVZ	**Waitaha Valley**	**0.37**	**19**	P	**Pg**	**20 55 34.5**	**-0.5**
WVZ				S	**Sg**	**20 55 38.9**	**-1.0**
WVAS	**Waitaha Valley**	**0.37**	**19**	P	**Pg**	**20 55 34.7**	**-0.4**
FGPS	**Fox Glacier Pa**	**0.40**	**264**	P	**Pg**	**20 55 34.9**	**-0.7**
RPZ	**Rata Peaks**	**0.46**	**130**	P	**Pg**	**20 55 36.3**	**-0.3**
RPZ	**Rata Peaks**	**0.46**	**130**	P	**Pg**	**20 55 36.4**	**-0.3**
RPZ				S	**Sg**	**20 55 42.3**	**-0.3**
MCNS	**Mount Cook Ann**	**0.46**	**228**	P	**Pg**	**20 55 36.3**	**-0.5**
FOZ	**Fox Glacier**	**0.56**	**259**	P	**Pg**	**20 55 38.4**	**-0.1**
FOZ				S	**Sg**	**20 55 45.4**	**-0.5**
MSMC	**Mount Somers S**	**0.67**	**115**	P	**Pg**	**20 55 39.4**	**-1.2**
KOKS	**Kokatahi**	**0.67**	**38**	P	**Pg**	**20 55 38.8**	**-1.9**
ARCZ	**Arundel**	**0.68**	**140**	P	**Pg**	**20 55 40.4**	**-0.5**
ARCZ				S	**Sg**	**20 55 49.1**	**-0.8**
MHCZ	**Mount Hutt**	**0.73**	**99**	P	**Pg**	**20 55 41.6**	**-0.3**
MTHS	**Methven North**	**0.81**	**100**	P	**Pg**	**20 55 43.3**	**0.0**
LRSC	**Lauriston**	**0.94**	**109**	P	**Pg**	**20 55 44.8**	**-1.0**
INZ	**Inchbonnie**	**0.95**	**43**	P	**Pg**	**20 55 44.9**	**-1.0**
LBZ	**Lake Benmore**	**1.00**	**196**	P	**Pg**	**20 55 46.0**	**-1.0**
TMZ	**Timaru**	**1.01**	**162**	P	**Pg**	**20 55 46.4**	**-0.7**
WACZ	**Wakanui South**	**1.06**	**120**	P	**Pg**	**20 55 47.9**	**-0.1**
OXZ	**Oxford**	**1.07**	**85**	P	**Pg**	**20 55 48.2**	**-0.1**
RACZ	**Rakaia**	**1.18**	**105**	P	**Pb**	**20 55 50.4**	**+0.2**
LTZ	**Lake Taylor**	**1.40**	**63**	P	**Pn**	**20 55 53.6**	**+0.3**
JCZ	**Jackson Bay**	**1.45**	**243**	P	**Pn**	**20 55 54.4**	**+0.4**
AMCZ	**Amberley**	**1.54**	**81**	P	**Pn**	**20 55 55.8**	**+0.7**
MQZ	**McQueen's Vall**	**1.54**	**101**	P	**Pn**	**20 55 55.0**	**-0.2**
ODZ	**Otahua Downs**	**1.62**	**178**	P	**Pn**	**20 55 56.3**	**0.0**
ODZ	**Otahua Downs**	**1.62**	**178**	P	**Pn**	**20 55 56.3**	**0.0**
AKCZ	**Akaroa Harbour**	**1.76**	**106**	P	**Pn**	**20 55 58.0**	**-0.2**
WKZ	**Wanaka**	**1.79**	**218**	P	**Pb**	**20 56 01.2**	**+0.5**
GVZ	**Greta Valley S**	**1.86**	**77**	P	**Pb**	**20 56 01.3**	**-0.5**
DSZ	**Denniston Nort**	**1.91**	**29**	P	**Pn**	**20 55 60.0**	**-0.3**
EAZ	**Earnscleugh**	**2.02**	**206**	P	**Pn**	**20 56 01.0**	**-0.8**
THZ	**Tophouse**	**2.39**	**47**	P	**Pn**	**20 56 08.0**	**+1.0**
KHZ	**Kahutara**	**2.40**	**66**	P	**Pn**	**20 56 09.1**	**+2.1**
KHZ	**Kahutara**	**2.40**	**66**	P	**Pn**	**20 56 08.3**	**+1.2**
MRNZ	**Matariki Terra**	**2.59**	**39**	P	**Pn**	**20 56 11.0**	**+1.3**
TUZ	**Tuapeka**	**2.62**	**194**	P	**Pn**	**20 56 10.4**	**+0.5**
MLZ	**Mavora Lakes**	**2.62**	**221**	P	**Pb**	**20 56 15.9**	**+1.2**
QRZ	**Quartz Range**	**2.98**	**30**	P	**Pn**	**20 56 15.3**	**+0.3**
QRZ	**Quartz Range**	**2.98**	**30**	P	**Pn**	**20 56 15.0**	**+0.1**
NNZ	**Nelson**	**3.03**	**44**	P	**Pn**	**20 56 17.4**	**+1.7**
SYZ	**Scrubby Hill**	**3.27**	**198**	P	**Pn**	**20 56 19.8**	**+0.8**
DUWZ	**D'Urville Isla**	**3.62**	**45**	P	**Pn**	**20 56 26.3**	**+2.5**
KHEZ	**Kahui Hut**	**4.87**	**33**	P	**Pn**	**20 56 42.5**	**+1.4**
KHEZ	**Kahui Hut**	**4.87**	**33**	P	**Pn**	**20 56 42.5**	**+1.4**
PKE	**Pukeiti**	**4.95**	**32**	P	**Pn**	**20 56 43.3**	**+1.3**

*WEL **14** 21:08:47.7±0.4,43.57S×170.61E,h7km,MLv3.7/7,South*
Island, New Zealand

ISC 14 21:08:48.0±1.1,43.44S±0.03×170.56E±0.02,h6km±12km,
n53,σ0.79/58,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHFS	**Whataroa Fire**	**0.23**	**322**	P	**Pg**	**21 08 52.9**	**+0.4**
FJDS	**Franz Josef DO**	**0.28**	**281**	P	**Pg**	**21 08 53.0**	**-0.4**
FGPS	**Fox Glacier Pa**	**0.39**	**267**	P	**Pg**	**21 08 55.3**	**-0.3**
FGPS				S	**Sg**	**21 09 00.4**	**-0.2**
WVZ	**Waitaha Valley**	**0.39**	**20**	P	**Pg**	**21 08 55.3**	**-0.3**
WVZ				S	**Sg**	**21 08 59.8**	**-0.9**
MCNS	**Mount Cook Ann**	**0.44**	**228**	P	**Pg**	**21 08 57.0**	**+0.4**
RPZ	**Rata Peaks**	**0.45**	**127**	P	**Pg**	**21 08 57.0**	**+0.2**
RPZ	**Rata Peaks**	**0.45**	**127**	P	**Pg**	**21 08 57.2**	**+0.5**
RPZ				S	**Sg**	**21 09 03.4**	**+0.7**
FOZ	**Fox Glacier**	**0.55**	**260**	P	**Pg**	**21 08 59.2**	**+0.7**
FOZ				S	**Sg**	**21 09 06.0**	**+0.4**
MSMC	**Mount Somers S**	**0.67**	**113**	P	**Pg**	**21 09 00.3**	**-0.6**
ARCZ	**Arundel**	**0.68**	**138**	P	**Pg**	**21 09 01.3**	**+0.3**
MAYC	**Mayfield Schoo**	**0.73**	**121**	P	**Pb**	**21 09 03.0**	**-0.2**
MAYC				S	**Sb**	**21 09 13.0**	**-0.5**
MHCZ	**Mount Hutt**	**0.74**	**97**	P	**Pg**	**21 09 02.4**	**+0.1**
MTHS	**Methven North**	**0.82**	**99**	P	**Pb**	**21 09 04.3**	**-0.3**
TWAS	**Twizel Area Sc**	**0.88**	**202**	P	**Pg**	**21 09 05.3**	**+0.4**
INZ	**Inchbonnie**	**0.97**	**43**	P	**Pg**	**21 09 05.7**	**-0.9**
LBZ	**Lake Benmore**	**0.98**	**196**	P	**Pg**	**21 09 06.7**	**-0.1**
TMZ	**Timaru**	**0.99**	**161**	P	**Pg**	**21 09 07.1**	**0.0**
WACZ	**Wakanui South**	**1.06**	**119**	P	**Pb**	**21 09 08.7**	**+0.1**
OXZ	**Oxford**	**1.09**	**84**	P	**Pb**	**21 09 09.0**	**-0.2**
RACZ	**Rakaia**	**1.19**	**104**	P	**Pb**	**21 09 10.9**	**+0.1**
LTZ	**Lake Taylor**	**1.42**	**63**	P	**Pn**	**21 09 14.3**	**0.0**
JCZ	**Jackson Bay**	**1.43**	**243**	P	**Pn**	**21 09 14.9**	**+0.4**
JCZ	**Jackson Bay**	**1.43**	**243**	P	**Pn**	**21 09 13.8**	**-0.7**
MQZ	**McQueen's Vall**	**1.55**	**100**	P	**Pn**	**21 09 15.7**	**-0.4**
ODZ	**Otahua Downs**	**1.60**	**178**	P	**Pn**	**21 09 16.8**	**0.0**
ODZ	**Otahua Downs**	**1.60**	**178**	P	**Pn**	**21 09 16.7**	**0.0**
AKCZ	**Akaroa Harbour**	**1.76**	**105**	P	**Pn**	**21 09 18.6**	**-0.4**
WKZ	**Wanaka**	**1.77**	**218**	P	**Pn**	**21 09 19.6**	**+0.5**
GVZ	**Greta Valley S**	**1.88**	**76**	P	**Pn**	**21 09 20.6**	**0.0**
DSZ	**Denniston Nort**	**1.93**	**29**	P	**Pn**	**21 09 20.8**	**-0.6**
EAZ	**Earnscleugh**	**2.00**	**206**	P	**Pn**	**21 09 21.7**	**-0.6**
THZ	**Tophouse**	**2.42**	**47**	P	**Pn**	**21 09 28.6**	**+0.6**
HHSZ	**Highcliff Hill**	**2.44**	**179**	P	**Pg**	**21 09 34.1**	**-0.7**
TUZ	**Tuapeka**	**2.60**	**194**	P	**Pn**	**21 09 31.1**	**+0.7**
MLZ	**Mavora Lakes**	**2.60**	**221**	P	**Pn**	**21 09 31.0**	**+0.5**
MRNZ	**Matariki Terra**	**2.61**	**39**	P	**Pn**	**21 09 31.6**	**+0.9**
TKNZ	**Takaka Hill**	**3.00**	**37**	P	**Pn**	**21 09 36.3**	**+0.3**
QRZ	**Quartz Range**	**3.00**	**30**	P	**Pn**	**21 09 35.9**	**-0.1**
QRZ	**Quartz Range**	**3.00**	**30**	P	**Pn**	**21 09 35.4**	**-0.6**
WHZ	**Wether Hill Ro**	**3.08**	**216**	P	**Pb**	**21 09 42.5**	**-0.6**
SYZ	**Scrubby Hill**	**3.25**	**197**	P	**Pn**	**21 09 39.5**	**0.0**
SYZ	**Scrubby Hill**	**3.25**	**197**	P	**Pn**	**21 09 38.5**	**-1.0**
DUWZ	**D'Urville Isla**	**3.64**	**45**	P	**Pn**	**21 09 45.8**	**+1.0**
NBEZ	**Newall Road No**	**4.86**	**32**	P	**Pn**	**21 10 01.8**	**+0.2**
KHEZ	**Kahui Hut**	**4.89**	**33**	P	**Pn**	**21 10 02.9**	**+0.8**
KHEZ	**Kahui Hut**	**4.89**	**33**	P	**Pn**	**21 10 03.4**	**+1.3**
PREZ	**Palmer Road**	**4.91**	**35**	P	**Pn**	**21 10 03.4**	**+1.1**
NEZ	**North Egmont**	**4.95**	**34**	P	**Pn**	**21 10 04.4**	**+1.5**
PKE	**Pukeiti**	**4.97**	**32**	P	**Pn**	**21 10 04.7**	**+1.6**
BFZ	**Birch Farm**	**5.06**	**59**	P	**Pn**	**21 10 04.6**	**+0.3**
BFZ	**Birch Farm**	**5.06**	**59**	P	**Pn**	**21 10 04.3**	**0.0**
VRZ	**Vera Road**	**5.35**	**38**	P	**Pn**	**21 10 08.7**	**+0.4**
KWHZ	**Kaweka Forest**	**5.96**	**50**	P	**Pn**	**21 10 20.6**	**+3.8**

*BJI **14** 21:28:53.0±0.0,1.20S×120.60E,h5km,mb4.7/62,*
mB5.1/28,Ms4.4/5,Ms7 4.2/7
*DJA **14** 21:28:54.7±0.1,1.15S×12.15E±,h10km,M5.0/36,*
mb4.9/36,mB5.5/13,MLv5.0/18,Mw(mB)4.9/13,
MwMwp5.1/2,Mwp5.3/2
*GCMT **14** 21:28:55.1±0.4,1.34S±0.02×120.48E±0.04,h27km±1km,*
MW4.8/68,Moment Tensor Solution. s23,c25; s68,c88;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.92±.17;
$M_{\theta\theta}$1.96±.10; $M_{\phi\phi}$-0.03±.11; $M_{r\theta}$-0.48±.14; $M_{r\phi}$-0.34±.08;
$M_{\theta\phi}$0.23±.22; Best double couple: M_o2.04000×10^{16}
NP1:φs104.00000°,δ53.00000°,λ-85.00000°. NP2:
φs275.00000°,δ38.00000°,λ-97.00000°. Principal axes:
T 2.0830, Plg7.0000°, Azm190.0000°; N -0.0800,
Plg4.0000°, Azm280.0000°; P -1.9980, Plg81.0000°,
Azm41.0000°; nsta1 refers to body waves, cutoff=40s.
*nsta2 refers to surface waves, cutoff=50s.

IPM	**Ipoh**	**20.38**	**286**	P	Pn	21 33 32.2	-1.0
IPM				IAmb	IAmb	21 33 38.3	
comp=Z,85nm,1.1s							
IPM	**Ipoh**	**20.38**	**286**	P	Pn	21 33 33.8	+0.6
KULM	**Kulim**	**20.97**	**288**	P	**P**	**21 33 38.3**	**+0.9**
KULM				IAmb	IAmb	21 33 44.2	
comp=Z,157nm,1.5s							
RPSI	**Rantau Prapat**	**22.03**	**280**	P	**P**	**21 33 49.6**	**+0.8**
RPSI				IAmb	IAmb	21 33 54.8	
comp=Z,30nm,0.9s							
PSI	**Prapat**	**22.05**	**281**	P	**P**	**21 33 49.6**	**+0.5**
PSI				pmax	pmax		
comp=Z,30nm,0.9s							
UBPT	**Khong Chiam**	**22.25**	**318**	P	**P**	**21 33 51.1**	**0.0**
UBPT				IAmb	IAmb	21 34 03.0	
comp=Z,46nm,1.1s							
QIZ	**Qiongzhong**	**22.79**	**333**	P	**P**	**21 33 56.9**	**+0.1**
QIZ				sP	**pP**	**21 34 02.0**	**-1.9**
QIZ				PP	**PnPn**	**21 34 25.1**	**+3.6**
QIZ				S	**S**	**21 38 08.8**	**+4.2**
QIZ				pmax	pmax		
comp=Z,22nm,1.0s							
QIZ				LR	LR		
comp=Z,260nm,12.6s							
QIZ				LR	LR		
comp=Z,190nm,10.9s							
QIZ				LR	LR		
comp=Z,260nm,16.8s							
QIZ	**Qiongzhong**	**22.79**	**333**	P	**P**	**21 33 56.5**	**-0.3**
QIZ				IAmb	IAmb	21 34 05.2	
comp=Z,60nm,1.3s							
WRA	**Warramunga Arr**	**22.90**	**145**	P	**P**	**21 33 57.2**	**-0.8**
WRA	**Warramunga Arr**	**22.90**	**145**	P	**P**	**21 33 57.7**	**-0.2**
comp=Z,15nm,0.8s,baz=310,slow=13,SNR=28							
WRA				PcP	**PcP**	**21 37 48.4**	**+0.1**
comp=Z,0.3nm,0.4s,baz=323,slow=2.3,SNR=1.3							
comp=Z,15nm,0.8s							
WR0	**Warramunga Arr**	**23.03**	**145**	P	**P**	**21 33 58.8**	**-0.5**
WR0				IAmb	IAmb	21 34 03.7	
comp=Z,35nm,0.9s							
SRIT	**Nakonsritamara**	**23.12**	**296**	P	**P**	**21 34 00.1**	**-0.1**
GSI	**Gunungsitoli**	**23.17**	**276**	P	**P**	**21 34 00.9**	**+0.1**
GSI				IAmb	IAmb	21 34 11.1	
comp=Z,26nm,0.8s							
GSI	**Gunungsitoli**	**23.17**	**276**	P	**P**	**21 33 59.5**	**-1.3**
comp=Z,35nm,0.8s							
KCSI	**Kotacane, Aceh**	**23.31**	**282**	P	**P**	**21 34 01.6**	**-0.7**
comp=Z,42nm,0.8s							
TWG	**Pinlang**	**23.97**	**1**	P	**P**	**21 34 08.0**	**-0.4**
TWG				IAmb	IAmb	21 34 12.9	
comp=Z,64nm,1.3s							
TPUB	**Ta-pu**	**24.44**	**0**	P	**P**	**21 34 13.1**	**+0.3**
TPUB				IAmb	IAmb	21 34 19.6	
comp=Z,74nm,1.0s							
TPUB	**Ta-pu**	**24.44**	**0**	P	**P**	**21 34 14.4**	**+1.6**
LHMI	**Lhok Sumawe**	**24.50**	**286**	P	**P**	**21 34 13.2**	**-0.2**
LHMI	**Lhok Sumawe**	**24.50**	**286**	P	**P**	**21 34 14.3**	**+0.9**
comp=Z,193nm,1.1s,comp=Z,2µm							
SNSI	**Sinabang, Aceh**	**24.54**	**279**	P	**P**	**21 34 14.4**	**+0.5**
comp=Z,147nm,1.5s							
YULB	**Yu-li**	**24.54**	**2**	P	**P**	**21 34 15.3**	**+1.6**
WRKA	**Warakurna**	**24.75**	**163**	P	**P**	**21 34 15.7**	**0.0**
baz=25,SNR=6.5							
MLSI	**Meulaboh, Aceh**	**24.80**	**283**	P	**P**	**21 34 16.8**	**+0.6**
comp=Z,104nm,0.9s							
SSLB	**Suanglung**	**24.93**	**1**	P	**P**	**21 34 16.9**	**-0.4**
SSLB	**Suanglung**	**24.93**	**1**	P	**P**	**21 34 19.1**	**+1.9**
MEEK	**Meekatharra**	**25.27**	**184**	P	**P**	**21 34 19.6**	**-0.7**
baz=25,SNR=21							
MEEK	**Meekatharra**	**25.27**	**184**	P	**P**	**21 34 21.5**	**+1.2**
COEN	**Coen**	**25.63**	**121**	P	**P**	**21 34 23.4**	**-0.3**
COEN	**Coen**	**25.63**	**121**	P	**P**	**21 34 24.7**	**+1.0**
KNMB	**Chin-men Tao**	**25.69**	**355**	P	**P**	**21 34 24.1**	**+0.1**
KNMB				IAmb	IAmb	21 34 51.0	
comp=Z,93nm,1.9s							
AS31	**Alice Springs**	**25.71**	**151**	P	**P**	**21 34 23.1**	**-1.2**
ASAR	**Alice Springs**	**25.71**	**151**	P	**P**	**21 34 25.2**	**+0.8**
ASAR	**Alice Springs**	**25.71**	**151**	P	**P**	**21 34 24.1**	**-0.3**
comp=Z,5.8nm,0.8s,baz=328,slow=7.9,SNR=29							
ASAR				PcP	**PcP**	**21 37 54.5**	**+0.1**
comp=Z,1.6nm,0.5s,baz=343,slow=2.0,SNR=14							
ASAR				LR	LR	21 44 21.6	
comp=Z,114nm,20.4s,baz=281,slow=36							
comp=Z,5.8nm,0.8s							
AS01	**Alice Springs**	**25.73**	**151**	P	**P**	**21 34 25.4**	**+0.8**
YHNB	**Yeheng**	**25.82**	**2**	P	**P**	**21 34 25.2**	**-0.1**
YHNB				IAmb	IAmb	21 34 31.9	
comp=Z,43nm,1.0s							
YHNB	**Yeheng**	**25.82**	**2**	P	**P**	**21 34 26.3**	**+1.0**
TATO	**Taipei**	**26.12**	**2**	P	**P**	**21 34 27.1**	**-0.9**
TATO				IAmb	IAmb	21 34 32.2	
comp=Z,104nm,1.2s							
QZH	**Quanzhou**	**26.15**	**356**	⇓*i*P	**P**	**21 34 28.9**	**+0.7**
QIS	**Mount Isa**	**26.67**	**137**	P	**P**	**21 34 32.5**	**-0.6**
baz=27,SNR=3.5							
QIS	**Mount Isa**	**26.67**	**137**	P	**P**	**21 34 32.9**	**-0.2**
SLVN	**Son La**	**27.79**	**325**	P	**P**	**21 34 43.1**	**0.0**
MORW	**Morawa**	**27.96**	**189**	P	**P**	**21 34 44.8**	**+0.3**
baz=28,SNR=6.5							
MORW				S	S	21 39 04.7	-23
baz=28,SNR=4.1							
MORW	**Morawa**	**27.96**	**189**	P	**P**	**21 34 44.4**	**-0.2**
MORW				IAmb	IAmb	21 34 47.9	
comp=Z,34nm,1.2s							
MORW	**Morawa**	**27.96**	**189**	P	**P**	**21 34 45.6**	**+1.1**
GUMO	**Guam**	**28.24**	**58**	LR	LR	21 45 30.0	
comp=Z,51nm,21.1s,baz=90,slow=35							
JOW	**Kunigami**	**28.92**	**14**	LR	LR	21 46 23.0	
comp=Z,140nm,21.7s,baz=286,slow=36							
CM31	**Chiang Mai Arr**	**28.96**	**314**	P	**P**	**21 34 53.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**28.96**	**314**	P	**P**	**21 34 53.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**28.96**	**314**	*i* P	**P**	**21 34 54.9**	**+1.3**
CMAR				pmax	pmax		
comp=Z,7.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**28.96**	**314**	P	**P**	**21 34 54.5**	**+0.9**
comp=Z,6.0nm,0.7s,baz=139,slow=7.3,SNR=58							
CMAR				LR	LR	21 48 46.0	
comp=Z,83nm,21.3s,baz=125,slow=41							
comp=Z,6.0nm,0.7s							
CRAI	**Chiangrai**	**29.16**	**318**	P	**P**	**21 34 55.5**	**+0.1**
CHTO	**Chiang Mai**	**29.19**	**314**	P	**P**	**21 34 55.8**	**+0.2**
CHTO	**Chiang Mai**	**29.19**	**314**	P	**P**	**21 34 57.1**	**+1.5**
CHTO	**Chiang Mai**	**29.19**	**314**	P	**P**	**21 34 55.8**	**+0.2**
CHTO				pmax	pmax		
comp=Z,7.0nm,0.8s							
BLDU	**Ballidu**	**29.40**	**187**	P	**P**	**21 34 58.4**	**+1.1**
OOD	**Oodnadatta**	**30.06**	**153**	P	**P**	**21 35 04.2**	**+1.1**
FORT	**Forrest**	**30.17**	**167**	P	**P**	**21 35 02.8**	**-1.3**
FORT	**Forrest**	**30.17**	**167**	P	**P**	**21 35 04.2**	**+0.1**
KLBR	**Kellerberrin**	**30.26**	**185**	P	**P**	**21 35 05.7**	**+0.8**
baz=30,SNR=5.0							
GYA	**Guiyang**	**30.69**	**335**	P	**P**	**21 35 13.3**	**+4.4**
GYA				pmax	pmax		
comp=Z,16nm,1.2s							
GYA				pmax	pmax		
comp=Z,200nm,4.8s							
CTA	**Charters Tower**	**31.28**	**128**	LR	LR	21 48 53.1	
comp=Z,93nm,18.2s,baz=288,slow=38							
KMI	**Kunming**	**31.45**	**328**	⇓P	**P**	**21 35 17.8**	**+2.1**
KMI				sP	pP	21 35 22.5	-0.9
KMI				pmax	pmax		
comp=Z,27nm,1.4s							
KMI	**Kunming**	**31.45**	**328**	P	**P**	**21 35 17.9**	**+2.2**
MULG	**Mulgathing**	**31.54**	**157**	P	**P**	**21 35 16.4**	**+0.2**
NWAO	**Narrogin (SRO)**	**31.63**	**185**	P	**P**	**21 35 18.2**	**+1.2**
baz=32,SNR=4.7							
NWAO				P	**P**	**21 35 18.2**	**+1.2**
baz=32,SNR=4.7							
NWAO	**Narrogin (SRO)**	**31.63**	**185**	P	**P**	**21 35 16.4**	**-0.5**
NWAO				IAmb	IAmb	21 35 20.0	
comp=Z,20nm,0.8s							
NWAO	**Narrogin (SRO)**	**31.63**	**185**	P	**P**	**21 35 18.8**	**+1.8**
NWAO	**Narrogin (SRO)**	**31.63**	**185**	P	**P**	**21 35 16.5**	**-0.5**
NWAO				pmax	pmax		
comp=Z,20nm,0.8s							
NWAO	**Narrogin (SRO)**	**31.63**	**185**	LR	LR	21 47 38.7	
comp=Z,107nm,21.5s,baz=13,slow=35							
WHN	**Wuhan**	**32.21**	**350**	⇑P	**P**	**21 35 24.5**	**+2.4**
WHN				pP	**pP**	**21 35 27.6**	**-2.3**
WHN				pmax	pmax		
comp=Z,40nm,1.0s							
PZH	**PanZhiHua**	**33.09**	**328**	P	**P**	**21 35 31.1**	**+1.1**
PZH				pmax	pmax		
comp=Z,40nm,1.3s							
PZH				pmax	pmax		
comp=Z,210nm,4.7s							
ENH	**Enshi**	**33.13**	**342**	P	**P**	**21 35 30.6**	**+0.4**
ENH				IAmb	IAmb	21 35 38.8	
comp=Z,28nm,1.2s							
ENH	**Enshi**	**33.13**	**342**	P	**P**	**21 35 31.3**	**+1.1**
ENH				PcP	**PcP**	**21 38 12.8**	**-0.3**
NJ2	**Nanjing**	**33.20**	**357**	*e*P	**P**	**21 35 33.1**	**+2.4**
NJ2				sP	**pP**	**21 35 38.4**	**+0.1**
NJ2				pmax	pmax		
comp=Z,8.0nm,0.7s							
NJ2				pmax	pmax		
comp=Z,160nm,3.6s							
RKGY	**Rocky Gully**	**33.32**	**185**	P	**P**	**21 35 33.1**	**+1.3**
baz=34,SNR=6.6							
LCRK	**Leigh Creek**	**33.47**	**152**	P	**P**	**21 35 33.3**	**+0.1**
TNCH	**TengChong**	**33.80**	**322**	⇓P	**P**	**21 35 37.6**	**+1.3**
TNCH				pP	pP	21 35 41.8	-2.1
TNCH				sP	sP	21 35 44.1	-3.0
TNCH				S	**S**	**21 40 59.0**	**+0.1**
TNCH				sS	sS	21 41 09.1	-2.6
TNCH				SS	**SnSn**	**21 42 59.9**	**-5.0**
TNCH				pmax	pmax		
comp=Z,17nm,1.0s							
TNCH				pmax	pmax		
comp=Z,110nm,3.5s							
TNCH				LR	LR		
comp=Z,120nm,5.3s							
TNCH				LR	LR		
comp=Z,88nm,5.1s							
TNCH				LR	LR		
comp=Z,130nm,5.1s							
BBOO	**Buckleboo**	**34.56**	**157**	P	**P**	**21 35 42.4**	**-0.2**
baz=35,SNR=9.4							
BBOO	**Buckleboo**	**34.56**	**157**	P	**P**	**21 35 42.1**	**-0.5**
BBOO	**Buckleboo**	**34.56**	**157**	P	**P**	**21 35 42.4**	**-0.2**
JCJ	**Chichijima**	**35.05**	**35**	P	**P**	**21 35 46.2**	**-0.7**
JCJ	**Chichijima**	**35.05**	**35**	P	**P**	**21 35 46.7**	**-0.2**
JCJ	**Chichijima**	**35.05**	**35**	P	**P**	**21 35 42.3**	**-4.6**
comp=Z,78nm,0.6s,baz=260,slow=7.5,SNR=5.6							
JCJ				LR	LR	21 48 58.9	
comp=Z,69nm,21.9s,baz=254,slow=34							
JNU	**Nakatsue**	**35.58**	**15**	LR	LR	21 49 41.3	
comp=Z,41nm,21.4s,baz=166,slow=35							
CD2	**Chengdu**	**35.81**	**335**	P	**P**	**21 35 53.9**	**+0.5**
CD2				pP	pP	21 35 56.8	-4.4
CD2				sP	sP	21 35 59.3	-5.0
CD2				S	**S**	**21 41 33.8**	**+4.3**
CD2				pmax	pmax		
comp=Z,20nm,0.8s							
CD2				LR	LR		
comp=Z,290nm,18.9s							
CD2				LR	LR		
comp=Z,210nm,15.4s							
CD2				LR	LR		
comp=Z,210nm,22.2s							
HTT	**Hallett**	**36.30**	**154**	P	**P**	**21 35 58.3**	**+0.7**
baz=36,SNR=7.5							
HTT	**Hallett**	**36.30**	**154**	P	**P**	**21 35 58.5**	**+0.9**
STKA	**Stephens Creek**	**36.31**	**149**	P	**P**	**21 35 58.2**	**+0.6**
baz=36,SNR=7.5							
STKA	**Stephens Creek**	**36.31**	**149**	P	**P**	**21 35 57.6**	**-0.1**
STKA	**Stephens Creek**	**36.31**	**149**	P	**P**	**21 35 58.6**	**+1.0**
STKA	**Stephens Creek**	**36.31**	**149**	P	**P**	**21 35 57.6**	**-0.1**
STKA				pmax	pmax		
comp=Z,3.0nm,0.8s							
STKA	**Stephens Creek**	**36.31**	**149**	P	**P**	**21 35 56.8**	**-0.8**
comp=Z,7.9nm,0.6s,baz=321,slow=9.6,SNR=21							
STKA				LR	LR	21 51 51.7	
comp=Z,89nm,18.8s,baz=359,slow=38							
comp=Z,7.9nm,0.6s							
LYN	**LuoYang**	**36.46**	**349**	*e*P	P	21 36 05.8	+6.9
LYN				pmax	pmax		
comp=Z,23nm,1.0s							
LYN				pmax	pmax		
comp=Z,160nm,6.4s							
XAN	**Xi'an**	**36.82**	**344**	⇓P	**P**	**21 36 01.8**	**-0.2**
XAN				sP	pP	21 36 08.6	-1.2
XAN				PcP	**PcP**	**21 38 23.4**	**-0.4**
XAN				pmax	pmax		
comp=Z,7.0nm,1.4s							
TJN	**Taejon**	**38.00**	**9**⇑	*e*P	**P**	**21 36 09.4**	**-2.5**
CMSA	**Cobar Meteorol**	**38.30**	**144**	P	**P**	**21 36 15.6**	**+1.0**
baz=38,SNR=7.3							
SHL	**Shillong**	**38.53**	**316**	P	**P**	**21 36 16.4**	**-0.4**
SHL				IAmb	IAmb	21 36 23.7	
comp=Z,28nm,0.9s							
SHL	**Shillong**	**38.53**	**316**	P	**P**	**21 36 16.4**	**-0.4**
SHL				pmax	pmax		
comp=Z,28nm,0.9s							
KSRS	**Korea Array**	**39.14**	**9**	P	**P**	**21 36 20.8**	**-0.7**
comp=Z,3.6nm,0.6s,baz=189,slow=9.0,SNR=8.7							
KSRS				LR	LR	21 52 40.1	
comp=Z,73nm,20.7s,baz=195,slow=36							
comp=Z,3.6nm,0.6s							
LZH	**Lanzhou**	**40.33**	**339**	*e*P	P	21 36 38.1	+6.5
LZH				pmax	pmax		
comp=Z,8.0nm,1.4s							
PALK	**Pallekele**	**40.70**	**283**	LR	LR	21 55 10.2	
comp=Z,73nm,18.8s,baz=202,slow=39							
MJAR	**Matsushiro Arr**	**41.05**	**22**	P	**P**	**21 36 36.0**	**-1.3**
comp=Z,4.7nm,0.8s,baz=189,slow=7.8,SNR=7.2							
MJAR				LR	LR	21 51 43.8	
comp=Z,54nm,19.6s,baz=207,slow=33							
comp=Z,4.7nm,0.8s							
BJT	**Baijiatuau**	**41.31**	**355**	P	**P**	**21 36 39.4**	**0.0**
BJT				IAmb	IAmb	21 36 45.0	
comp=Z,27nm,1.5s							
BJT	**Baijiatuau**	**41.31**	**355**	P	**P**	**21 36 40.9**	**+1.5**
BJT	**Baijiatuau**	**41.31**	**355**	P	**P**	**21 36 39.4**	**0.0**
BJT				pmax	pmax		
comp=Z,27nm,1.5s							
BJT	**Baijiatuau**	**41.31**	**355**	P	**P**	**21 36 39.9**	**+0.4**
BJT				pP	**sP**	**21 36 51.0**	**+0.7**
BJI	**Beijing**	**41.33**	**355**	P	**P**	**21 36 40.1**	**+0.5**
BJI				pmax	pmax		
comp=Z,3.0nm,0.9s							
LSA	**Lhasa**	**41.72**	**320**	P	**P**	**21 36 44.1**	**+0.7**
LSA				IAmb	IAmb	21 36 49.9	
comp=Z,43nm,1.6s							
LSA	**Lhasa**	**41.72**	**320**	P	**P**	**21 36 44.2**	**+0.7**
LSA				pmax	pmax		
comp=Z,43nm,1.6s							
LSA	**Lhasa**	**41.72**	**320**	P	**P**	**21 36 45.2**	**+1.7**
LSA				pP	**sP**	**21 36 56.8**	**+2.4**
HHC	**Hu-ho-hao-te**	**42.74**	**350**	*e*P	**P**	**21 36 54.0**	**+2.7**
HHC				pmax	pmax		
comp=Z,6.0nm,0.7s							
HHC				pmax	pmax		
comp=Z,130nm,4.6s							
BTO	**Baotou**	**42.80**	**348**	*e*P	**P**	**21 36 54.9**	**+3.2**
BTO				pP	**pP**	**21 36 59.6**	**0.0**
BTO				sP	**sP**	**21 37 02.0**	**-0.8**
BTO				PP	**PP**	**21 38 37.4**	**+6.0**
BTO				pmax	pmax		
comp=Z,18nm,1.3s							
BTO				pmax	pmax		
comp=Z,360nm,5.3s							
CAN	**Canberra**	**42.94**	**145**	P	**P**	**21 36 53.6**	**+0.7**
CAN				IAmb	IAmb	21 36 57.9	
comp=Z,23nm,0.9s							
CAN	**Canberra**	**42.94**	**145**	P	**P**	**21 36 53.6**	**+0.7**
CAN				pmax	pmax		
comp=Z,23nm,0.9s							
CAN	**Canberra**	**42.94**	**145**	P	**P**	**21 36 54.4**	**+1.5**
JMM	**Marumori**	**43.20**	**24**	P	**P**	**21 36 54.1**	**-0.8**
GTA	**Gaotai**	**44.77**	**337**	*e*P	**P**	**21 37 08.8**	**+1.2**
GTA				pmax	pmax		
comp=Z,7.0nm,0.9s							
XLT	**XiLinHaoTe**	**45.17**	**355**	*e*P	**P**	**21 37 10.9**	**+0.2**
XLT				pP	sP	21 37 22.6	+1.1
XLT				PP	**PP**	**21 38 58.3**	**+1.7**
XLT				pmax	pmax		
comp=Z,9.0nm,1.0s							
XLT				pmax	pmax		
comp=Z,99nm,4.2s							
HYB	**Hyderabad**	**45.40**	**296**	*e*P	**P**	**21 37 13.7**	**+0.8**
HYB				*e*S	S	21 44 11.1	+18
JTM	**Tenmabayashi**	**45.84**	**22**	P	**P**	**21 37 15.5**	**-0.4**
MDJ	**Mudanjiang**	**46.40**	**9**	P	**P**	**21 37 19.6**	**-0.7**
MDJ				S	**S**	**21 44 12.0**	**+5.5**
MDJ				sS	sS	21 44 17.9	-1.4
MDJ				pmax	pmax		
comp=Z,16nm,1.1s							
MDJ				pmax	pmax		
comp=Z,510nm,4.2s							
MDJ				LR	LR		
comp=Z,500nm,14.3s							
MDJ				LR	LR		
comp=Z,390nm,14.6s							
MDJ				LR	LR		
comp=Z,490nm,14.3s							
MDJ	**Mudanjiang**	**46.40**	**9**	P	**P**	**21 37 19.5**	**-0.8**
MDJ				IAmb	IAmb	21 37 29.0	
comp=Z,19nm,1.0s							
MDJ	**Mudanjiang**	**46.40**	**9**	P	**P**	**21 37 20.2**	**-0.1**
USA0B	**Ussuriysk Arra**	**46.42**	**11**	P	**P**	**21 37 20.0**	**-0.4**
USA0B	**Ussuriysk Arra**	**46.42**	**11**	P	**P**	**21 37 20.0**	**-0.4**
USA0B				pmax	pmax		
comp=Z,83nm,1.9s							
USRK	**Ussuriysk Ar.**	**46.42**	**11**	P	**P**	**21 37 19.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**46.42**	**11**	P	**P**	**21 37 20.2**	**-0.2**
comp=Z,4.4nm,0.5s,baz=190,slow=6.9,SNR=18							
USRK				LR	LR	21 54 01.9	
comp=Z,30nm,21.7s,baz=199,slow=32							
comp=Z,4.4nm,0.5s							
BNX	**BinXian**	**47.22**	**6**	⇓P	**P**	**21 37 26.3**	**-0.3**
BNX				pmax	pmax		
comp=Z,7.0nm,1.3s							
BNX				pmax	pmax		
comp=Z,140nm,4.7s							
DZM	**Mont Dzumac**	**49.13**	**118**	*e*LR	LR	21 51 42.1	
comp=Z,50nm,25.1s							
ASAJ	**Asahikawa**	**49.30**	**21**	P	**P**	**21 37 42.0**	**-0.8**
ASAJ				pmax	pmax		
comp=Z,47nm,1.1s							
ASAJ	**Asahikawa**	**49.30**	**21**	P	**P**	**21 37 41.9**	**-0.8**
comp=Z,15nm,0.7s,baz=207,slow=8.8,SNR=6.6							
ASAJ				LR	LR	21 56 45.4	
comp=Z,39nm,21.5s,baz=213,slow=34							
comp=Z,15nm,0.7s							
JKA	**Kamikawa-asahi**	**49.30**	**21**	P	**P**	**21 37 42.0**	**-0.7**
ULN	**Ulaanbaatar**	**50.36**	**348**	P	**P**	**21 37 50.9**	**-0.1**
ULN				IAmb	IAmb	21 37 59.2	
comp=Z,10nm,0.9s							
ULN	**Ulaanbaatar**	**50.36**	**348**	P	**P**	**21 37 50.9**	**-0.1**
ULN				pmax	pmax		
comp=Z,10.0nm,0.9s							
ULN	**Ulaanbaatar**	**50.36**	**348**	P	**P**	**21 37 51.4**	**+0.4**
SONM	**Songino Array**	**50.47**	**348**	P	**P**	**21 37 51.6**	**-0.2**
SONM	**Songino Array**	**50.47**	**348**	P	**P**	**21 37 51.6**	**-0.2**
SONM				pmax	pmax		
comp=Z,8.0nm,0.9s							
SONM	**Songino Array**	**50.47**	**348**	P	**P**	**21 37 51.9**	**+0.1**
comp=Z,3.0nm,0.6s,baz=166,slow=7.8,SNR=29							
SONM				PcP	**PcP**	**21 39 09.1**	**-0.6**
comp=Z,0.4nm,0.6s,baz=155,slow=5.1,SNR=0.7							
comp=Z,3.0nm,0.6s							
KLR	**Kul'dur**	**51.24**	**9**⇑	*e*P	**P**	**21 37 57.8**	**+0.5**
KLR				pmax	pmax		
comp=Z,11nm,1.7s							
KLR	**Kul'dur**	**51.24**	**9**	P	**P**	**21 37 56.3**	**-1.0**
comp=Z,0.7nm,0.5s,baz=215,slow=3.9,SNR=3.9							
KLR				LR	LR	22 01 35.6	
comp=Z,39nm,18.7s,baz=231,slow=38							
comp=Z,0.7nm,0.5s							
HEH	**HeiHe**	**51.68**	**6**	*e*P	**P**	**21 38 00.1**	**-0.5**
HEH				pmax	pmax		
comp=Z,26nm,0.9s							
HEH				pmax	pmax		
comp=Z,370nm,4.6s							
YSS	**Yuzh-Sakhalins**	**51.83**	**19**	*e*P	**P**	**21 38 01.1**	**-0.7**
YSS				*e*S	**S**	**21 45 23.0**	**+0.4**
YSS				pmax	pmax		
comp=Z,20nm,0.7s							
YSS				pmax	pmax		
comp=Z,100nm,4.5s							
YSS				MLR	MLR		
comp=Z,100nm,17.0s							
TARA	**Tarawa**	**52.38**	**87**	P	**P**	**21 38 06.0**	**-0.6**
ZAK	**Zakamensk**	**53.57**	**346**	*e*P	**P**	**21 38 13.8**	**-1.0**
ZAK				pmax	pmax		
comp=Z,3.0nm,1.3s							
WMQ	**Urumqi**	**53.69**	**331**	*e*P	**P**	**21 38 17.1**	**+1.3**
WMQ				pP	pP	21 38 23.8	0.0
WMQ				pmax	pmax		
comp=Z,21nm,1.1s							
ZEA	**Zeya**	**55.12**	**5**	*e*P	**P**	**21 38 25.9**	**+0.1**
MOY	**Mondy**	**55.32**	**345**	*e*P	**P**	**21 38 27.8**	**+0.3**
MOY				pmax	pmax		
comp=Z,15nm,1.8s							
NIL	**Nilore**	**56.45**	**313**	P	**P**	**21 38 35.3**	**-0.5**
NIL	**Nilore**	**56.45**	**313**	P	**P**	**21 38 35.3**	**-0.5**
NIL				pmax	pmax		
comp=Z,17nm,0.5s							
NIL	**Nilore**	**56.45**	**313**	P	**P**	**21 38 35.4**	**-0.5**
NIL				pP	**sP**	**21 38 47.3**	**+0.3**
NIL				sP	pP	21 38 51.7	+7.9
WUS	**Wushi**	**56.54**	**323**	P	**P**	**21 38 37.4**	**+0.9**
KSH	**Kashi**	**57.57**	**320**	P	**P**	**21 38 44.6**	**+0.8**
KSH				pmax	pmax		
comp=Z,22nm,0.8s							
SHLS	**Shalkode**	**57.61**	**325**	*e*P	**P**	**21 38 43.2**	**-0.8**
SHLS				pmax	pmax		
comp=Z,11nm,1.0s							
PDGK	**Podgornoye**	**57.70**	**325**	*i* P	**P**	**21 38 44.5**	**-0.1**
PDGK				pmax	pmax		
comp=Z,12nm,0.6s							
TARG	**Taragay, Kyrgy**	**57.70**	**323**	P	**P**	**21 38 45.4**	**+0.4**
TARG	**Taragay, Kyrgy**	**57.70**	**323**	P	**P**	**21 38 45.4**	**+0.4**
TARG				pmax	pmax		
comp=Z,5.0nm,0.7s							
PRZ	**Przheval'sk**	**57.80**	**324**	P	**P**	**21 38 45.6**	**+0.1**
PRZ				IAmb	IAmb	21 38 47.7	
comp=Z,17nm,0.6s							
PRZ	**Przheval'sk**	**57.80**	**324**	P	**P**	**21 38 45.6**	**+0.1**
PRZ				pmax	pmax		
comp=Z,17nm,0.6s							
DGZ	**Jazzator, Alta**	**58.24**	**335**	*de*P	**P**	**21 38 48.6**	**+0.3**
DGZ				pmax	pmax		
comp=Z,10.0nm,0.9s							
KPKS	**Kokpek**	**58.24**	**325**	*e*P	**P**	**21 38 49.0**	**+0.6**
KPKS				pmax	pmax		
comp=Z,5.0nm,0.7s							
MK31	**Makanchi Array**	**58.48**	**330**	P	**P**	**21 38 50.0**	**+0.1**
MK31				IAmb	IAmb	21 38 51.3	
comp=Z,7.9nm,0.8s							
MK31	**Makanchi Array**	**58.48**	**

AAK	**Ala-Archa**	**60.24**	**322**	LR	LR	22 07 40.0		
	comp=Z,45nm,18.0s,baz=108,slow=38							
AAK	**Ala-Archa**	**60.24**	**322**	P	**P**	**21 39 03.1**	**+0.7**	
FRU1	**Bishkek**	**60.25**	**322**	P	**P**	**21 39 02.4**	**+0.1**	
FRU1				IAmb	IAmb	21 39 27.4		
	comp=Z,10nm,1.1s							
FRU1	**Bishkek**	**60.25**	**322**	P	**P**	**21 39 02.4**	**+0.1**	
FRU1				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ARSB	**Arslanbob**	**60.47**	**320**	P	**P**	**21 39 04.0**	**+0.1**	
ARSB				IAmb	IAmb	21 39 05.3		
	comp=Z,5.8nm,0.8s							
ARSB	**Arslanbob**	**60.47**	**320**	P	**P**	**21 39 04.0**	**+0.1**	
ARSB				pmax	pmax			
	comp=Z,6.0nm,0.8s							
USP	**Ospenovka**	**60.59**	**323**	P	**P**	**21 39 05.0**	**+0.5**	
	SNR=11							
SGDS	**Sogindy**	**60.61**	**323**	*e*P	**P**	**21 39 04.7**	**0.0**	
SGDS				pmax	pmax			
	comp=Z,6.0nm,1.1s							
EKS2	**Erkin-Say**	**60.69**	**322**	P	**P**	**21 39 06.0**	**+0.6**	
	SNR=14							
BTK	**Batken**	**61.24**	**318**	P	**P**	**21 39 09.2**	**+0.1**	
BTK	**Batken**	**61.24**	**318**	P	**P**	**21 39 09.2**	**+0.1**	
BTK				pmax	pmax			
	comp=Z,37nm,1.5s							
MCQ	**Macquarie Isla**	**61.61**	**156**	P	**P**	**21 39 10.5**	**-0.6**	
	baz=62,SNR=3.2							
SIMJ	**Simiganj**	**61.81**	**316**	P	**P**	**21 39 12.3**	**-0.7**	
SIMJ				IAmb	IAmb	21 39 13.7		
	comp=Z,25nm,1.1s							
BTLS	**Baital**	**61.86**	**324**	*e*P	**P**	**21 39 12.9**	**-0.1**	
BTLS				pmax	pmax			
	comp=Z,6.0nm,1.0s							
PETK	**Petropavlovsk-**	**62.43**	**24**	P	**P**	**21 39 16.8**	**+0.1**	
PETK	**Petropavlovsk-**	**62.43**	**24**	P	**P**	**21 39 17.7**	**+1.0**	
	comp=Z,1.8nm,0.6s,baz=198,slow=3.9,SNR=4.1							
	comp=Z,1.8nm,0.6s							
ZAA0	**Zalesovo Array**	**62.52**	**337**	P	**P**	**21 39 16.1**	**-1.2**	
ZAA0				IAmb	IAmb	21 39 24.4		
	comp=Z,20nm,1.1s							
ZALV	**Zalesovo Beam**	**62.52**	**337**	P	**P**	**21 39 16.1**	**-1.2**	
ZALV	**Zalesovo Beam**	**62.52**	**337**	*i* P	**P**	**21 39 16.2**	**-1.1**	
ZALV				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ZALV	**Zalesovo Beam**	**62.52**	**337**	P	**P**	**21 39 16.3**	**-1.0**	
	comp=Z,6.7nm,0.8s,baz=131,slow=5.9,SNR=31							
	comp=Z,6.7nm,0.8s							
KURBB	**Kurchatov Arra**	**62.90**	**331**	P	**P**	**21 39 19.7**	**-0.2**	
	comp=Z,7.0nm,0.6s,baz=142,slow=6.0,SNR=76							
	comp=Z,7.0nm,0.6s							
KURK	**Kurchatov**	**62.92**	**331**	P	**P**	**21 39 19.7**	**-0.2**	
KURK	**Kurchatov**	**62.92**	**331**	*de*P	**P**	**21 39 19.8**	**-0.2**	
KURK				pmax	pmax			
	comp=Z,42nm,1.3s							
KURK	**Kurchatov**	**62.92**	**331**	P	**P**	**21 39 20.0**	**0.0**	
KK31	**Karatay Array**	**62.96**	**321**	P	**P**	**21 39 19.8**	**-0.7**	
KK31				IAmb	IAmb	21 39 21.4		
	comp=Z,8.3nm,0.9s							
KK31	**Karatay Array**	**62.96**	**321**	P	**P**	**21 39 19.8**	**-0.7**	
KK31				pmax	pmax			
	comp=Z,8.0nm,0.9s							
KKAR	**Karatay Array**	**62.96**	**321**	P	**P**	**21 39 19.9**	**-0.6**	
KKAR	**Karatay Array**	**62.96**	**321**	P	**P**	**21 39 19.9**	**-0.6**	
URZ	**Urewera**	**63.38**	**133**	LR	LR	22 08 54.5		
	comp=Z,43nm,18.2s,baz=302,slow=38							
RTZ	**Ruatahuna**	**63.41**	**133**	P	**P**	**21 39 23.5**	**-0.1**	
RTZ				IAmb	IAmb	21 39 27.4		
	comp=Z,29nm,1.3s							
YAK	**Yakutsk**	**63.53**	**5**	P	**P**	**21 39 22.9**	**-0.9**	
YAK	**Yakutsk**	**63.53**	**5**	*e*P	**P**	**21 39 22.3**	**-1.5**	
YAK				*e**PP	**pP**	**21 39 30.6**	**-1.2**	
YAK				*e*		21 41 39.1		
YAK				*e*S	**S**	**21 41 55.4**	**-0.1**	
YAK				*e**SS	sS	21 48 21.1	+12	
YAK				pmax	pmax			
	comp=Z,38nm,1.5s							
YAK				pmax	pmax			
	comp=N,6.0nm,1.0s							
YAK				pmax	pmax			
	comp=E,2.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,101nm,4.5s							
YAK				pmax	pmax			
	comp=N,71nm,5.3s							
YAK				pmax	pmax			
	comp=E,158nm,6.8s							
YAK				smax	smax			
	comp=N,180nm,7.2s							
YAK				smax	smax			
	comp=E,86nm,3.8s							
YAK	**Yakutsk**	**63.53**	**5**	LR	LR	22 06 29.0		
	comp=E,29nm,21.5s,baz=176,slow=35							
MA2	**Magadan**	**65.12**	**16**	*ce*P	**P**	**21 39 34.6**	**+0.3**	
MA2				pmax	pmax			
	comp=Z,22nm,1.7s							
BRZS	**Berezniki**	**65.45**	**328**	*e*P	**P**	**21 39 36.4**	**-0.3**	
BRZS				pmax	pmax			
	comp=Z,3.0nm,0.5s							
BVAR	**Borovoye Array**	**68.37**	**330**	P	**P**	**21 39 54.6**	**-0.6**	
	comp=Z,9.1nm,0.9s,baz=134,slow=9.7,SNR=37							
	comp=Z,9.1nm,0.9s							
BRVK	**Borovoye**	**68.44**	**330**	P	**P**	**21 39 55.0**	**-0.6**	
BRVK				IAmb	IAmb	21 39 56.2		
	comp=Z,21nm,1.3s							
BRVK	**Borovoye**	**68.44**	**330**	*ce*P	**P**	**21 39 55.2**	**-0.4**	
BRVK				pmax	pmax			
	comp=Z,23nm,1.7s							
BRVK	**Borovoye**	**68.44**	**330**	P	**P**	**21 39 55.1**	**-0.6**	
GEYT	**Alibeck**	**69.42**	**311**	P	**P**	**21 40 01.8**	**-0.3**	
GEYT				IAmb	IAmb	21 40 08.7		
	comp=Z,37nm,1.7s							
GEYT	**Alibeck**	**69.42**	**311**	P	**P**	**21 40 01.8**	**-0.3**	
GEYT				pmax	pmax			
	comp=Z,37nm,1.7s							
GEYT	**Alibeck**	**69.42**	**311**	P	**P**	**21 40 02.0**	**0.0**	
	comp=Z,4.3nm,0.8s,baz=104,slow=6.3,SNR=8.7							
	comp=Z,4.3nm,0.8s							
SHEM	**Shemya Is, Ala**	**69.89**	**31**	LR	LR	22 12 05.9		
	comp=Z,22nm,19.5s,baz=312,slow=37							
ABKAR	**Akbulak array**	**72.30**	**323**	P	**P**	**21 40 18.4**	**-0.9**	
ABKAR	**Akbulak array**	**72.30**	**323**	P	**P**	**21 40 18.3**	**-0.9**	
TIXI	**Tiksi**	**73.01**	**3**	P	**P**	**21 40 21.3**	**-1.7**	
TIXI				IAmb	IAmb	21 40 29.9		
	comp=Z,11nm,1.1s							
TIXI	**Tiksi**	**73.01**	**3**	P	**P**	**21 40 21.3**	**-1.7**	
TIXI				pmax	pmax			
	comp=Z,11nm,1.1s							
TIXI	**Tiksi**	**73.01**	**3**	LR	LR	22 14 03.6		
	comp=Z,65nm,21.3s,baz=200,slow=37							
NRIK	**Noril'sk**	**73.95**	**348**	P	**P**	**21 40 27.1**	**-1.5**	
NRIK	**Noril'sk**	**73.95**	**348**	*ce*P	**P**	**21 40 27.8**	**-0.8**	
NRIK				pmax	pmax			
	comp=Z,11nm,1.4s							
NRIK	**Noril'sk**	**73.95**	**348**	P	**P**	**21 40 27.6**	**-1.1**	
	comp=Z,2.8nm,0.5s,baz=127,slow=5.8,SNR=5.2							
	comp=Z,2.8nm,0.5s							
SVE	**Sverdlovsk**	**75.14**	**331**	*e*P	**P**	**21 40 34.9**	**-0.9**	
SVE				pmax	pmax			
	comp=Z,12nm,1.1s							
BILL	**Bilibino**	**75.99**	**16**	*e*P	**P**	**21 40 39.3**	**-1.2**	
BILL				pmax	pmax			
	comp=Z,12nm,2.5s							
ARU	**Arti**	**76.01**	**330**	*c i*P	**P**	**21 40 38.7**	**-2.1**	
ARU				S	**S**	**21 50 25.0**	**+2.7**	
ARU				SS	**SS**	**21 55 16.2**	**+0.8**	
ARU				pmax	pmax			
	comp=Z,6.0nm,1.0s							
RAYN	**Ar Rayn**	**76.87**	**294**	P	**P**	**21 40 46.4**	**-0.1**	
RAYN				IAmb	IAmb	21 40 52.8		
	comp=Z,29nm,1.8s							
RAYN	**Ar Rayn**	**76.87**	**294**	P	**P**	**21 40 46.4**	**-0.1**	
RAYN				pmax	pmax			
	comp=Z,29nm,1.8s							
VNDA	**Vanda**	**79.32**	**172**	P	**P**	**21 40 59.0**	**+0.1**	
	comp=Z,3.6nm,1.0s,baz=112,slow=15,SNR=2.0							
	comp=Z,3.6nm,1.0s							
ZEI	**Tsey**	**81.13**	**314**	*e*P	**P**	**21 41 08.2**	**-1.4**	
ZEI				pmax	pmax			
	comp=Z,11nm,1.4s							
AKH	**Akhalkalaki**	**81.20**	**312**	P	**P**	**21 41 09.4**	**-0.6**	
AKH	**Akhalkalaki**	**81.20**	**312**	P	**P**	**21 41 09.4**	**-0.6**	
AKH				pmax	pmax			
	comp=Z,39nm,1.1s							
AKUT	**Akutan**	**81.50**	**35**	P	**P**	**21 41 10.5**	**-0.5**	
GURO	**Guroymak-BITLI**	**81.86**	**309**	P	**P**	**21 41 12.5**	**-1.0**	
GURO				IAmb	IAmb	21 41 19.7		
	comp=Z,16nm,1.3s							
KBZ	**Khabaz**	**82.01**	**314**	ǁ *e*P	**P**	**21 41 15.9**	**+2.0**	
KBZ				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KBZ	**Khabaz**	**82.01**	**314**	P	**P**	**21 41 13.2**	**-0.7**	
	comp=Z,1.9nm,1.0s,baz=212,slow=9.0,SNR=3.8							
	comp=Z,1.9nm,1.0s							
VRH	**Novokhopyorsk**	**84.03**	**322**	*e*P	**P**	**21 41 21.0**	**-3.2**	
VRH				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ANM	**Nome**	**84.34**	**25**	P	**P**	**21 41 25.6**	**0.0**	
ANM				IAmb	IAmb	21 41 27.4		
	comp=Z,7.8nm,0.9s							
ANM	**Nome**	**84.34**	**25**	P	**P**	**21 41 25.6**	**0.0**	
ANM				pmax	pmax			
	comp=Z,8.0nm,0.9s							
SDPT	**Sand Point**	**84.76**	**34**	P	**P**	**21 41 27.1**	**-0.7**	
C16K	**Lisburne Hills**	**85.33**	**21**	P	**P**	**21 41 30.6**	**+0.2**	
C16K				IAmb	IAmb	21 41 31.9		
	comp=Z,20nm,1.1s							
K15K	**Wolf Creek Mou**	**85.50**	**27**	P	**P**	**21 41 32.0**	**+0.6**	
VORD	**Divnogorie**	**85.51**	**321**	*e*P	**P**	**21 41 27.9**	**-3.8**	
VORD				pmax	pmax			
	comp=Z,9.0nm,0.9s							
VSR	**Storozhevoye**	**85.63**	**321**	*e*P	**P**	**21 41 28.3**	**-4.0**	
VSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
VORR	**Voronezh**	**85.66**	**322**	*e*P	**P**	**21 41 29.2**	**-3.2**	
F17K	**Baldwin Pennin**	**86.44**	**23**	P	**P**	**21 41 36.1**	**+0.2**	
F17K				IAmb	IAmb	21 43 52.6		
	comp=Z,29nm,1.8s							
MMAI	**Mount Meron Ar**	**86.66**	**303**	P	**P**	**21 41 38.0**	**+0.1**	
	comp=Z,0.4nm,0.3s,baz=58,slow=6.2,SNR=5.9							
	comp=Z,0.4nm,0.3s							
KLMR	**Klimovskoe**	**86.77**	**331**	*e*P	**P**	**21 41 34.5**	**-3.2**	
KLMR				pmax	pmax			
	comp=Z,39nm,2.1s							
E18K	**Tukpahlearik C**	**86.88**	**22**	P	**P**	**21 41 38.1**	**-0.1**	
G19K	**Purcell Mounta**	**88.05**	**24**	P	**P**	**21 41 43.4**	**-0.4**	
G19K				IAmb	IAmb	21 44 17.9		
	comp=Z,16nm,1.8s							
O18K	**Koktuh Hills**	**88.18**	**30**	P	**P**	**21 41 44.5**	**0.0**	
H19K	**Roundabout Mou**	**88.24**	**24**	P	**P**	**21 41 44.3**	**-0.3**	
H19K				IAmb	IAmb	21 41 51.9		
	comp=Z,20nm,1.7s							
SII	**Sitkinak Islan**	**88.42**	**34**	P	**P**	**21 41 46.1**	**+0.4**	
BR131	**Keskin Array S**	**88.47**	**310**	ǁ *e*P	**P**	**21 41 45.2**	**-1.4**	
BRTR	**Keskin Array B**	**88.47**	**310**	P	**P**	**21 41 44.7**	**-1.9**	
BRTR	**Keskin Array B**	**88.47**	**310**	P	**P**	**21 41 44.7**	**-1.9**	
BRTR	**Keskin Array B**	**88.47**	**310**	P	**P**	**21 41 44.5**	**-2.1**	
	comp=Z,2.2nm,1.1s,baz=108,slow=4.8,SNR=4.5							
	comp=Z,2.2nm,1.1s							
QSPA	**South Pole Qui**	**88.65**	**180**	P	**P**	**21 41 46.1**	**-0.7**	
QSPA				IAmb	IAmb	21 44 00.9		
	comp=Z,19nm,1.6s							
QSPA	**South Pole Qui**	**88.65**	**180**	P	**P**	**21 41 44.8**	**-2.0**	
	comp=Z,2.0nm,0.8s,baz=281,slow=2.0,SNR=6.2							
	comp=Z,2.0nm,0.8s							
B21K	**Ikpikpuk River**	**89.38**	**20**	P	**P**	**21 41 49.7**	**-0.2**	
B21K				IAmb	IAmb	21 41 55.1		
	comp=Z,7.3nm,1.2s							
KDAK	**Kodiak Island**	**89.38**	**32**	LR	LR	22 17 53.0		
	comp=Z,44nm,20.1s,baz=233,slow=33							
IMAR	**Indian Mountai**	**89.39**	**24**	P	**P**	**21 41 49.8**	**-0.3**	
TBI	**Tubuai**	**89.44**	**113**	*e*LR	LR	22 10 25.7		
	comp=Z,1μm,37.5s							
PPT2	**Papeete2**	**89.45**	**107**	*e*LR	LR	22 10 12.9		
	comp=Z,146nm,25.0s							
PPT2				*e*LR	LR	22 10 18.3		
	comp=Z,146nm,30.5s							
ILAR	**Eielson Array**	**92.23**	**25**	P	**P**	**21 42 01.8**	**-1.6**	
	comp=Z,0.3nm,0.6s,baz=247,slow=4.8,SNR=5.9							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**92.99**	**339**	P	**P**	**21 42 06.3**	**-0.4**	
	comp=Z,1.5nm,0.8s,baz=28,slow=5.5,SNR=1.6							
	comp=Z,1.5nm,0.8s							
BOSA	**Boshof**	**94.08**	**241**	LR	LR	22 19 36.5		
	comp=Z,42nm,20.0s,baz=22,slow=32							
SPITS	**Spitsbergen Ar**	**94.16**	**348**	P	**P**	**21 42 10.3**	**-1.7**	
	comp=Z,8.2nm,1.0s,baz=88,slow=3.5,SNR=1.5							
	comp=Z,8.2nm,1.0s							
MLR	**Muntele Rosu**	**94.18**	**315**	LR	LR	22 32 26.2		
	comp=Z,101nm,18.8s,baz=284,slow=40							
SUR	**Sutherland**	**97.58**	**237**	LR	LR	22 22 16.1		
	comp=Z,30nm,18.2s,baz=38,slow=33							
TAOE	**Nuku Hiva Isla**	**98.94**	**99**	*e*LR	LR	22 14 41.5		
	comp=Z,108nm,25.0s							
TORD	**Torodi Ar. Bea**	**118.41**	**284**	PKP	**PKPdf**	**21 47 40.3**	**-2.0**	
	comp=Z,0.3nm,1.0s,baz=124,slow=3.4,SNR=2.2							
TXAR	**Lajitas Array**	**129.50**	**52**	PKP	**PKPdf**	**21 48 02.1**	**-1.2**	
	comp=Z,0.3nm,0.6s,baz=267,slow=1.8,SNR=2.9							
CPUP	**Villa Florida**	**152.47**	**184**	PKPbc	**PKPbc**	**21 48 49.9**	**-0.8**	
	comp=Z,2.7nm,0.7s,baz=131,slow=3.7,SNR=4.6							
BDFB	**Brasilia**	**159.76**	**213**	PKPab	**PKPab**	**21 49 33.1**	**+0.7**	
	comp=Z,2.0nm,0.5s,baz=153,slow=4.5,SNR=3.4							

*IDC **14** 21:51:56.9±0.8, 46.°49N×155.°35E, h0km, mb3.9/21, mbtmp3.9/25, ML3.3/4, MS2.9/2, Error ellipse: s-maj=24.0km s-min=13.8km az=166.0*
*NEIC **14** 21:51:59.1±2.1, 46.°59N±0.°06×155.°2E±0.°2, h10km±1km, mb4.3/10, Error ellipse: s-maj=18.7km s-min=8.4km az=286.0*
*SKHL **14** 21:52:00.7±0.2, 46.°60N×154.°90E, h30km±5km, mb4.8/3*
*MOS **14** 21:52:00.2±1.9, 46.°48N×155.°15E, h34km, mb4.3/13, Error ellipse: s-maj=9.3km s-min=7.6km az=72.7*

ISC 14 21:51:59.6±0.7, 46.°44N±0.°10×155.°13E±0.°07, h18km, n91, σ1s63/91, mb4.1/34, 4C-4D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.30**		**8**ǁ	*e*PN	**Pn**		**21 53 03.1**	**-0.9**
SKR	**Severo-Kuril's**	**4.30**		**8**	*e*P	**Pn**		**21 53 03.1**	**-0.9**
KUR	**Kuril'sk**	**5.22**	**259**		*e*PN	**Pn**		**21 53 18.5**	**+1.8**
KUR					pmax	pmax			
	comp=Z,83nm,0.5s								
KUR	**Kuril'sk**	**5.22**	**259**		*e*P	**Pn**		**21 53 16.7**	**0.0**
KUR					AMB	AMB		21 53 19.3	
	comp=Z,70nm,0.5s								
KUR					*e*S	**Sn**		**21 54 13.6**	**-2.8**
KUR					A	A		21 54 25.5	
	comp=Z,160nm,0.5s								
KUR					A	A		21 54 25.5	
	comp=Z,60nm,0.5s								
SHO	**Shikotan**	**6.41**	**249**		PN	**Pn**		**21 53 32.3**	**-0.8**
SHO	**Shikotan**	**6.41**	**249**		*e*P	**Pn**		**21 53 32.5**	**-0.6**
SHO					*e*S	**Sn**		**21 54 41.4**	**-4.3**
SHO					A	A		21 54 45.8	
	comp=Z,60nm,0.2s								
SHO					A	A		21 54 45.8	
	comp=Z,40nm,0.2s								
PEA0B	**Petropavlovsk-**	**6.88**	**13**		Pn	**Pn**		**21 53 36.1**	**-3.4**
PEA0B	**Petropavlovsk-**	**6.88**	**13**		PN	**Pn**		**21 53 36.1**	**-3.4**
PETK	**Petropavlovsk-**	**6.88**	**13**		Pn	**Pn**		**21 53 36.3**	**-3.2**
PETK	**Petropavlovsk-**	**6.88**	**13**		PN	**Pn**		**21 53 36.3**	**-3.2**
PETK	**Petropavlovsk-**	**6.88**	**13**		Pn	**Pn**		**21 53 36.0**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=181,slow=12,SNR=3.3								
	comp=Z,4.7nm,0.8s								
YUK	**Yuzh-Kuril'sk**	**6.97**	**253**		*e*PN	**Pn**		**21 53 41.4**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**6.97**	**253**		*e*P	**Pn**		**21 53 41.4**	**+0.6**
YUK					AMB	AMB		21 53 43.9	
	comp=Z,70nm,0.6s								
YUK					*e*S	**Sn**		**21 54 56.8**	**-2.8**
YUK					A	A		21 55 07.5	
	comp=Z,240nm,0.4s								
YUK					A	A		21 55 07.5	
	comp=Z,240nm,0.4s								
NMR	**Nemuro--Hokkai**	**7.35**	**249**		*e*PN	**Pn**		**21 53 44.6**	**-1.4**
NMR	**Nemuro--Hokkai**	**7.35**	**249**		*e*P	**Pn**		**21 53 45.4**	**-0.6**
NMR					*e*S	**Sn**		**21 55 04.1**	**-4.8**
RUSJ	**Misakicho**	**7.36**	**255**		*e*PN	**Pn**		**21 53 47.2**	**+1.2**
AKK	**Akkeshi**	**8.09**	**249**		*e*S	**Sn**		**21 55 24.0**	**-3.0**
ASAJ	**Asahikawa**	**9.14**	**260**		Pn	**Pn**		**21 54 11.0**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=76,slow=16,SNR=2.0								
	comp=Z,5.5nm,0.5s								
ERM	**Erimo**	**9.67**	**247**		Pn	**Pn**		**21 54 18.1**	**+0.4**
ERM	**Erimo**	**9.67**	**247**		PN	**Pn**		**21 54 18.1**	**+0.4**
JTM	**Tenmabayashi**	**11.65**	**246**		Pn	**Pn**		**21 54 43.7**	**-1.2**
MA2	**Magadan**	**13.41**	**350**		LR	LR		22 00 44.0	
	comp=Z,40nm,18.3s,baz=188,slow=39								
KLR	**Kul'dur**	**15.93**	**289**		Pn	**P**		**21 55 45.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=111,slow=11,SNR=6.0								
	comp=Z,1.4nm,0.8s								
USRK	**Ussuriysk Ar.**	**16.42**	**271**		Pn	**Pn**		**21 55 48.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**16.42**	**271**		Pn	**Pn**		**21 55 49.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=94,slow=7.9,SNR=5.1								
	comp=Z,4.0nm,0.8s								
HEH	**HeiHe**	**18.77**	**292**		*e*P	**Pn**		**21 56 18.0**	**0.0**
HEH					pmax	pmax			
	comp=Z,5.0nm,0.8s								
HEH					pmax	pmax			
	comp=Z,140nm,5.3s								
YAK	**Yakutsk**	**21.34**	**326**	ǁ	*e*P	**P**		**21 56 48.1**	**+2.7**
YAK					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KSRS	**Korea Array**	**22.05**	**256**		P	**P**		**21 56 54.8**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=55,slow=11,SNR=1.5								
	comp=Z,0.9nm,0.8s								
BILL	**Bilibino**	**22.41**	**11**		P	**P**		**21 56 56.3**	**-0.5**
BILL	**Bilibino**	**22.41**	**11**		*e*P	**P**		**21 56 57.3**	**+0.5**
BILL					pmax	pmax			
	comp=Z,10.0nm,1.7s								
BILL	**Bilibino**	**22.41**	**11**		*e*P	**P**		**21 56 57.3**	**+0.5**
TIXI	**Tiksi**	**28.17**	**343**		P	**P**		**21 57 48.4**	**-2.0**
TIXI					IAmb	IAmb		21 57 53.6	
	comp=Z,7.5nm,1.4s								
TIXI	**Tiksi**	**28.17**	**343**	ǁ	*e*P	**P**		**21 57 50.7**	**+0.3**
TIXI					pmax	pmax			
	comp=Z,5.0nm,1.3s								
H11S1	**WAKE ISLAND Hy**	**29.45**	**157**		T	T		22 28 49.2	
	baz=344,slow=76								
H11S3	**WAKE ISLAND Hy**	**29.46**	**157**		T	T		22 28 50.3	
	baz=344,slow=76								
H11S2	**WAKE ISLAND Hy**	**29.47**	**157**		T	T		22 28 53.3	
	baz=344,slow=76								
ILAR	**Eielson Array**	**35.92**	**38**		*e*P	**P**		**21 58 57.9**	**-0.6**
ILAR	**Eielson Array**	**35.92**	**38**		P	**P**		**21 58 55.9**	**-2.6**
	comp=Z,0.3nm,0.6s,baz=248,slow=7.5,SNR=5.1								
	comp=Z,0.3nm,0.6s								
BMAR	**Burnt Mountain**	**37.00**	**34**		P	**P**		**21 59 06.7**	**-0.9**
NRIK	**Noril'sk**	**39.74**	**329**	ǁ	*e*P	**P**		**21 59 31.8**	**+1.2**
NRIK					pmax	pmax			
	comp=Z,2.0nm,1.1s								
HYT	**Haines Junctio**	**40.53**	**44**		P	**P**		**21 59 37.3**	**-0.1**
HYT					IAmb	IAmb		22 00 01.6	
	comp=Z,4.6nm,1.1s								
ZALV	**Zalesovo Beam**	**43.92**	**307**		P	**P**		**22 00 04.0**	**-1.0**
ZALV	**Zalesovo Beam**	**43.92**	**307**		P	**P**		**22 00 04.0**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=23,slow=7.8,SNR=2.4								
	comp=Z,0.5nm,0.5s								
MK31	**Makanchi Array**	**48.32**	**298**		P	**P**		**22 00 39.8**	**+0.1**
MK31	**Makanchi Array**	**48.32**	**298**		P	**P**		**22 00 39.8**	**+0.1**
MK31					pmax	pmax			
	comp=Z,1.0nm,1.1s								
MKAR	**Makanchi Array**	**48.32**	**298**		P	**P**		**22 00 39.6**	**-0.1**
MKAR	**Makanchi Array**	**48.32**	**298**		P	**P**		**22 00 41.0**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=68,slow=7.9,SNR=11								
MKAR					PcP	**PcP**		**22 02 06.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=70,slow=4.4,SNR=2.4								
	comp=Z,0.6nm,0.7s								
MKAR	**Makanchi Array**	**48.32**	**298**		*e*P	**P**		**22 00 41.0**	**+1.2**
KURK	**Kurchatov**	**48.69**	**305**			**P**		**22 00 42.7**	**+0.2**
KURK						IAmb	IAmb	22 00 44.7	
	comp=Z,2.5nm,0.8s								
KURK	**Kurchatov**	**48.69**	**305**		*de*P	**P**		**22 00 43.8**	**+1.3**
KURK					pmax	pmax			
	comp=Z,8.0nm,2.5s								
KURK	**Kurchatov**	**48.69**	**305**		*e*P	**P**		**22 00 43.8**	**+1.3**
KURBB	**Kurchatov Arra**	**48.78**	**305**		P	**P**		**22 00 44.1**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=68,slow=8.3,SNR=12								
	comp=Z,2.0nm,0.7s								
YKA	**Yellowknife Ar**	**50.33**	**37**		P	**P**		**22 00 54.9**	**0.0**
	comp=Z,1.0nm,0.9s,baz=295,slow=7.5,SNR=8.0								
	comp=Z,1.0nm,0.9s								
BVAR	**Borovoye Array**	**52.13**	**310**		P	**P**		**22 01 09.8**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=61,slow=7.8,SNR=15								
	comp=Z,2.0nm,0.7s								
BRVK	**Borovoye**	**52.17**	**310**		P	**P**		**22 01 07.7**	**-1.0**
BRVK					IAmb	IAmb		22 01 10.8	
	comp=Z,2.2nm,0.8s								
BRVK	**Borovoye**	**52.17**	**310**		P	**P**		**22 01 07.7**	**-1.0**
BRVK					pmax	pmax			
	comp=Z,2.0nm,0.8s								
BRVK	**Borovoye**	**52.17**	**310**		*e*P	**P**		**22 01 07.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**53.66**	**258**		*e*P	**P**		**22 01 22.9**	**+2.7**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**53.66**	**258**		P	**P**		**22 01 22.0**	**+1.8**
	comp=Z,1.2nm,0.3s,baz=32,slow=7.8,SNR=5.4								
CMAR					LR	LR		22 27 56.5	
	comp=Z,12nm,18.3s,baz=185,slow=40								
	comp=

TAP 14 22:08:24.6, 24˚24N×121˚75E, h12km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.09**	**356**	*eP*	Pg	22 08 27.8	+0.4
	baz=356						
EAHA				*eS*	Sg	22 08 30.1	+0.7
	baz=356						
ETL	**Fush Village**	**0.14**	**235**	*eP*	Pg	22 08 28.5	+0.4
	baz=234						
ETL				*eS*	Sg	22 08 31.1	+0.7
	baz=234						
NACB	**Ninganchiao**	**0.15**	**245**	*eP*	Pg	22 08 28.7	+0.4
	baz=245						
NACB				*eS*	Sg	22 08 31.6	+0.9
	baz=245						
ENA	**Nanau**	**0.19**	**359**	*eP*	Pb	22 08 29.4	-0.6
ENA				*eS*	Sg	22 08 32.7	+1.0
EWUT	**Wuta**	**0.21**	**8**	P	Pg	22 08 29.7	+0.5
	baz=8.0						
EWUT				*eS*	Sg	22 08 33.0	+0.7
	baz=8.0						
TWD	**Chiawan**	**0.21**	**221**	*eP*	Pg	22 08 29.5	+0.4
	baz=219						
TWD				*eS*	Sg	22 08 33.2	+1.0
	baz=219						
ETLH	**Xiulin Townshi**	**0.24**	**263**	*eP*	Pb	22 08 30.6	-0.4
	baz=262						
ETLH				*eS*	Sg	22 08 34.6	+1.3
	baz=262						
ETM	**Tongmen**	**0.36**	**221**	*eP*	Pg	22 08 32.2	+0.4
	baz=220						
ETM				*eS*	Sb	22 08 38.1	-0.3
	baz=220						
LATG	**Datong**	**0.36**	**326**	*eP*	Pb	22 08 32.9	-0.1
	baz=325						
LATG				*eS*	Sb	22 08 38.4	-0.2
	baz=325						
LXIB	**Xiulin Townshi**	**0.37**	**235**	*eP*	Pg	22 08 32.6	+0.5
	baz=234						
LXIB				*eS*	Sb	22 08 39.2	+0.2
	baz=234						
TWC	**Suao**	**0.38**	**14**	*eP*	Pb	22 08 32.8	-0.5
	baz=15						
TWC				*eS*	Sb	22 08 38.6	-0.5
	baz=15						
NNSB	**Datong**	**0.38**	**300**	*eP*	Pb	22 08 33.5	+0.1
	baz=299						
NNSB				*eS*	Sb	22 08 39.2	-0.1
	baz=299						
NDS	**Dongshan**	**0.40**	**356**	*eP*	Pb	22 08 33.3	-0.2
	baz=356						
NDS				*eS*	Sb	22 08 39.6	+0.1
	baz=356						
NNS	**Nan Shan**	**0.40**	**301**	*eP*	Pb	22 08 34.0	+0.4
	baz=300						
NNS				*eS*	Sb	22 08 39.6	-0.1
	baz=300						
NDT	**Datong Townshi**	**0.42**	**330**	*eP*	Pb	22 08 34.2	+0.3
	baz=329						
NDT				*eS*	Sb	22 08 41.2	+1.0
	baz=329						
ENTT	**Nioudou**	**0.43**	**338**	*eP*	Pb	22 08 34.4	+0.2
	baz=338						
ENTT				*eS*	Sb	22 08 41.0	+0.4
	baz=338						
WHF	**Hehuan Shan**	**0.45**	**258**	*eP*	Pb	22 08 34.6	-0.1
	baz=257						
WHF				*eS*	Sb	22 08 41.1	-0.3
	baz=257						
FUSS	**Fushou**	**0.46**	**271**	*eP*	Pb	22 08 34.8	+0.1
	baz=271						
FUSS				*eS*	Sb	22 08 41.5	-0.1
	baz=271						
TWE	**Neicheng**	**0.49**	**352**	*eP*	Pb	22 08 35.3	+0.2
	baz=353						
TWE				*eS*	Sb	22 08 42.5	+0.4
	baz=353						
FUSB	**Fushanzhiwuyua**	**0.54**	**344**	*eP*	Pb	22 08 36.4	+0.4
	baz=344						
FUSB				*eS*	Sb	22 08 44.1	+0.4
	baz=344						
NSK	**Sanguang**	**0.56**	**321**	*eP*	Pb	22 08 37.0	+0.6
	baz=321						
NSK				*eS*	Sb	22 08 45.2	+0.8
	baz=321						
NWLT	**Wulai**	**0.58**	**338**	*eP*	Pb	22 08 37.2	+0.5
	baz=337						
NWLT				*eS*	Sb	22 08 45.3	+0.4
	baz=337						

JMA 14 22:08:45.9±0.4, 25˚N±4˚×123˚2E±0˚8, h140km±3km, MV1.8/13, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**202**	P	Pn	22 09 06.0	+0.1
JYNG	**Yonagunijimaku**	**0.48**	**208**	P	Pn	22 09 06.2	+0.2
JKRS	**Kuro-shima**	**0.98**	**131**	P	Pn	22 09 10.3	+0.7
JKRS				S	Sn	22 09 27.9	+0.4
HATJ	**Hateruma jima**	**0.99**	**146**	S	Sn	22 09 28.8	+1.1
JIJ	**Ishigaki jima**	**1.01**	**121**	P	Pn	22 09 09.8	0.0
JIJ				S	Sn	22 09 27.0	-0.9
JISG	**Ishigakijimahi**	**1.06**	**106**	P	Pn	22 09 10.3	+0.1
JISG				*eS*	Sn	22 09 28.3	-0.5
JTJ	**Tarama**	**1.39**	**100**	*eP*	Pn	22 09 14.0	+0.4
JTJ				S	Sn	22 09 34.5	-0.1
JIRB	**Irabujima**	**1.80**	**91**	S	Sn	22 09 42.4	-0.3

IDC 14 22:10:06.1±1.3, 46˚36N×155˚19E, h0km, mb3.6/5, mbtmp3.6/6, MS2.6/1, Error ellipse: s-maj=33.3km s-min=32.7km az=49.0

ISC 14 22:10:09.0±1.2, 46˚5N±0˚2×155˚2E±0˚2, h18km, n7, σ1§41/6, mb3.6/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.85**	**13**	Pn	**Pn**	**22 11 47.7**	**-0.7**
	1.9nm,0.7s,baz=185,slon=12,SNR=1.4						
MA2	**Magadan**	**13.41**	**350**	LR	LR	22 17 46.7	
	comp=Z,24nm,19.4s,baz=34,slow=34						
MKAR	**Makanchi Array**	**48.36**	**298**	P	**P**	**22 18 49.7**	**+0.3**
	0.2nm,0.5s,baz=81,slow=9.5,SNR=2.2						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**52.16**	**310**	P	**P**	**22 19 16.8**	**-1.3**
	0.7nm,0.8s,baz=57,slow=11,SNR=4.5						
	0.7nm,0.8s						
FINES	**FINESS Array B**	**64.91**	**336**	P	**P**	**22 20 48.6**	**+1.9**
	0.4nm,0.4s,baz=44,slow=6.9,SNR=9.7						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**72.41**	**200**	P	**P**	**22 21 33.5**	**-0.5**
	0.2nm,0.7s,baz=33,slow=5.6,SNR=1.6						
	0.2nm,0.7s						
TXAR	**Lajitas Array**	**76.37**	**62**	P	**P**	**22 21 57.5**	**+0.3**
	0.7nm,0.6s,baz=312,slow=4.6,SNR=10						
	0.7nm,0.6s						

SCB 14 22:28:42.4±0.9, 21˚49S×66˚91W, h210km±6km, ML3.5/7, MW3.6, Error ellipse: s-maj=3.8km s-min=2.3km az=0.0

ISC 14 22:28:41.3±2.8, 21˚52S±0˚8×66˚88W±0˚6, h220km±22km, n20, σ1§06/33, 1C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.19**	**77**	Pg	**Pn**	**22 29 15.5**	**+0.5**
MOCB				Sg	**Sn**	**22 29 40.2**	**-0.9**
MOCB				IAML		22 29 40.5	
	282nm,0.7s						
LVC	**Limon Verde**	**2.18**	**240**	Pg	**Pn**	**22 29 24.5**	**+1.0**
PB09	**IPOC Station P**	**2.22**	**262**	⇑*eP*	**Pn**	**22 29 24.9**	**+1.1**
PB09				*eS*	**Sn**	**22 29 58.4**	**+1.5**
PB09				IAML		22 30 00.3	
	comp=N,74nm,0.1s						
PB09	**IPOC Station P**	**2.22**	**262**	Pg	**Pn**	**22 29 24.6**	**+0.9**
PB01	**IPOC Station P**	**2.48**	**280**	*eP*	**Pn**	**22 29 26.8**	**+0.4**
PB01				*eS*	**Sn**	**22 30 01.3**	**-0.4**
PB01				IAML		22 30 02.5	
	comp=N,150nm,0.2s						
PB01	**IPOC Station P**	**2.48**	**280**	Pg	**Pn**	**22 29 27.3**	**+0.9**
PB01				Sg	**Sn**	**22 30 00.9**	**-0.8**
PB01				IAML		22 30 02.5	
	comp=N,140nm,0.2s						
PB08	**IPOC Station P**	**2.53**	**302**	*eP*	**Pn**	**22 29 28.6**	**+1.3**
PB08				*eS*	**Sn**	**22 30 04.0**	**+0.7**
PB08				IAML		22 30 06.0	
	comp=E,40nm,0.3s						
PB08	**IPOC Station P**	**2.53**	**302**	Pg	**Pn**	**22 29 28.0**	**+0.7**
PB08				Sg	**Sn**	**22 30 02.1**	**-1.1**
PB08				IAML		22 30 05.7	
	comp=E,57nm,0.5s						
PB06	**IPOC Station P**	**2.76**	**244**	*eP*	**Pn**	**22 29 28.3**	**-1.2**
PB06				*eS*	**Sn**	**22 30 07.2**	**-0.2**
PB06				IAML		22 30 08.5	
	comp=E,80nm,0.1s						
PB06	**IPOC Station P**	**2.76**	**244**	Pg	**Pn**	**22 29 30.7**	**+1.1**
PB07	**IPOC Station P**	**2.81**	**265**	Pg	**Pn**	**22 29 31.0**	**+0.9**
PB07				Sg	**Sn**	**22 30 07.1**	**-1.2**
PB07				IAML		22 30 07.7	
	comp=E,110nm,0.4s						
PB02	**IPOC Station P**	**2.82**	**273**	Pg	**Pn**	**22 29 31.0**	**+0.9**
PB02				Sg	**Sn**	**22 30 07.1**	**-1.3**
PB02				Sg	**Sn**	**22 30 07.1**	**-1.3**
PB02				IAML		22 30 07.7	
	comp=E,293nm,0.5s						
GO01	**Chusmiza**	**2.84**	**310**	Pg	**Pn**	**22 29 31.6**	**+0.7**
HMBC	**Humberstone**	**3.07**	**293**	Pg	**Pn**	**22 29 33.2**	**+0.2**
HMBC				Sg	**Sn**	**22 30 11.6**	**-2.0**
HMBC				IAML		22 30 13.5	
	comp=E,78nm,0.7s						
SOEO	**Opoqueri**	**3.09**	**342**	Pg	**Pn**	**22 29 34.5**	**+0.9**
PB11	**IPOC Station P**	**3.13**	**303**	Pg	**Pn**	**22 29 34.2**	**+0.4**
PB04	**IPOC Station P**	**3.15**	**254**	Pg	**Pn**	**22 29 34.7**	**+0.8**
PB04				Sg	**Sn**	**22 30 13.6**	**-1.6**
PB04				IAML		22 30 16.4	
	comp=E,69nm,0.2s						
TA01	**Diego Aracena**	**3.23**	**286**	Pg	**Pn**	**22 29 35.0**	**+0.3**
SOET	**ToroToro**	**3.53**	**17**	Pg	**Pn**	**22 29 39.2**	**+0.5**
SOET				Sg	**Sn**	**22 30 22.6**	**-1.1**
PB16	**IPOC Station P**	**4.02**	**322**	Pg	**Pn**	**22 29 45.8**	**+1.1**

IDC 14 22:29:03.3±1.4, 8˚99S×125˚29E, h0km, mb4.1/6, mbtmp4.1/8, ML4.2/2, MS3.2/2, Error ellipse: s-maj=46.7km s-min=22.9km az=50.0

DJA 14 22:29:06.7±0.6, 9˚S±5˚×12˚5E±˚, h10km, M4.5/8, mb4.8/4, mB5.2/1, MLv4.3/8, Mw(mB)4.5/1

ISC 14 22:29:08.3±0.7, 8˚87S±0˚08×125˚65E±0˚08, h35km, n16, σ2§55/18, mb4.2/6, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.62**	**237**	P	**Pn**	**22 29 36.4**	**+1.8**
SOEI				S	**Sn**	**22 29 57.3**	**+3.0**
MMRI	**Maumere**	**3.38**	**274**	P	**Pn**	**22 29 55.7**	**-2.9**
EDFI	**Ende, Flores**	**3.92**	**271**	P	**Pn**	**22 30 01.8**	**-4.3**
BASI	**Baing, Sumba**	**5.18**	**255**	P	**Pn**	**22 30 22.8**	**-0.6**
	109nm,1.0s,2µm0.6nm						
PLAI	**Plampang**	**7.78**	**270**	P	**Pn**	**22 30 58.5**	**-0.6**
	38nm,0.7s,0.2nm						
TWSI	**Taliwang, Sumb**	**8.67**	**270**	P	**Pn**	**22 31 10.2**	**-1.1**
WRA	**Warramunga Arr**	**13.85**	**144**	Pn	**Pn**	**22 32 21.9**	**-0.3**
	1.4nm,0.3s,baz=316,slow=15,SNR=43						
WRA				Sn	**Sn**	**22 34 51.0**	**-3.9**
	0.6nm,0.3s,baz=319,slow=25,SNR=3.5						
	4.1nm,0.7s						
ASAR	**Alice Springs**	**16.70**	**153**	Pn	**Pn**	**22 32 59.6**	**-0.1**
	0.6nm,0.3s,baz=317,slow=11,SNR=23						
ASAR				Sn	**Sn**	**22 35 59.8**	**-4.4**
	0.3nm,0.3s,baz=315,slow=19,SNR=6.2						
	2.2nm,0.5s						
PMG	**Port Moresby**	**21.24**	**93**	P	**P**	**22 33 55.4**	**+3.9**
	3.7nm,0.3s,baz=244,slow=15,SNR=1.5						
PMG				LR	LR	22 42 59.4	
	comp=Z,51nm,18.5s,baz=181,slow=39						
	3.7nm,0.3s						
TGY	**Tagaytay City**	**23.30**	**348**	LR	LR	22 45 06.7	
	comp=Z,58nm,19.5s,baz=98,slow=41						
CMAR	**Chiang Mai Arr**	**37.84**	**316**	P	**P**	**22 36 20.6**	**-1.4**
	0.7nm,0.3s,baz=138,slow=5.8,SNR=5.8						
	0.7nm,0.3s						
KSRS	**Korea Array**	**46.13**	**3**	P	**P**	**22 37 31.4**	**+2.1**
	1.5nm,0.6s,baz=180,slow=9.6,SNR=4.2						
	1.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**53.13**	**6**	P	**P**	**22 38 22.9**	**+0.4**
	1.6nm,0.5s,baz=194,slow=6.8,SNR=8.9						
	1.6nm,0.5s						
SONM	**Songino Array**	**58.98**	**345**	P	**P**	**22 39 04.9**	**+0.4**
	1.3nm,0.8s,baz=163,slow=11,SNR=8.3						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**67.52**	**329**	P	**P**	**22 40 01.0**	**0.0**
	1.5nm,0.6s,baz=123,slow=7.0,SNR=10.0						
	1.5nm,0.6s						
CPUP	**Villa Florida**	**144.89**	**175**	PKP	**PKPdf**	**22 48 43.1**	**+0.6**
	1.3nm,0.5s,baz=101,slow=3.4,SNR=3.0						

IDC 14 22:30:50.0±0.9, 39˚23N×73˚66E, h0km, mb3.7/16, mbtmp3.7/24, ML3.1/8, MS3.2/2, Error ellipse: s-maj=17.2km s-min=13.8km az=167.0

KRNET 14 22:30:50.3±0.1, 39˚35N×73˚40E, h5km, mb4.0

MOS 14 22:30:52.3±1.4, 39˚41N×73˚40E, h11km, mb4.0/8, Error ellipse: s-maj=7.0km s-min=3.9km az=83.2

NNC 14 22:30:53.8±1.4, 39˚50N×73˚53E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=12.5km s-min=7.2km az=160.0

NEIC 14 22:30:55.6±1.7, 39˚47N±0˚06×73˚39E±0˚07, h10km±1km, mb4.1/9, Error ellipse: s-maj=10.4km s-min=8.0km az=139.0

ISC 14 22:30:51.7±1.4, 39˚36N±0˚03×73˚44E±0˚03, h2km±9km, n167, σ1§90/215, mb3.9/25, 34C-29D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.65**	**4**	⇓*eP*	**Pg**	**22 31 03.1**	**-1.2**
	baz=7.0						
SFK				⇓*eS*	**Sg**	**22 31 12.8**	**0.0**
	baz=7.0						
OHH	**Osh**	**1.27**	**337**	*i* PG	Pn	**22 31 14.7**	**-1.9**
OHH				*i* S	**Sn**	**22 31 33.1**	**-1.1**
OHH	**Osh**	**1.27**	**337**	⇓*iP*	**Pn**	**22 31 14.5**	**-2.1**
	baz=38						
OHH				⇓*iS*	**Sb**	**22 31 32.4**	**-0.8**
	baz=38						
DRK	**Karamyk**	**1.27**	**276**	⇓*iP*	**Pn**	**22 31 14.1**	**-2.8**
	baz=77						
DRK				⇓*iS*	**Sb**	**22 31 31.1**	**-2.5**
	baz=77						
KSH	**Kashi**	**1.97**	**85**	Pn	Pn	22 31 21.6	-4.7
KSH				sP	Pb	22 31 29.4	+1.0
KSH				Sn	**Sn**	**22 31 49.0**	**-2.6**
KSH				pmax	pmax		
	comp=Z,94nm,0.8s						
KSH				smax	smax		
	comp=N,3µm,0.7s						
KSH				smax	smax		
	comp=E,1µm,0.9s						
ARSB	**Arslanbob**	**1.99**	**350**		**Pn**	**22 31 27.3**	**+0.7**
ARSB				Sn	**Sg**	**22 31 56.2**	**+0.4**
ARSB	**Arslanbob**	**1.99**	**350**	*i* PN	**Pn**	**22 31 27.6**	**+1.0**
ARSB				*i* S	**Sg**	**22 31 55.3**	**-0.5**
ARSB	**Arslanbob**	**1.99**	**350**	⇓*iP*	**Pn**	**22 31 27.6**	**+1.0**
	baz=51						
ARSB				⇓*iS*	**Sb**	**22 31 54.3**	**+0.1**
	baz=51						
BTK	**Batken**	**2.14**	**290**	Pn	**Pn**	**22 31 29.6**	**+1.1**
BTK	**Batken**	**2.14**	**290**	*i* PN	**Pn**	**22 31 28.9**	**+0.4**
BTK				*i* S	**Sb**	**22 31 57.1**	**-1.1**
BTK	**Batken**	**2.14**	**290**	⇑*iP*	**Pn**	**22 31 28.9**	**+0.4**
	baz=90						
BTK				⇑*iS*	**Sb**	**22 31 57.1**	**-1.1**
	baz=90						
ARLS	**Aral**	**2.59**	**15**	*i* PN	**Pn**	**22 31 36.1**	**+1.3**
ARLS				*i* S	**Sb**	**22 32 09.8**	**-1.5**
ARLS	**Aral**	**2.59**	**15**	⇑*iP*	**Pn**	**22 31 36.1**	**+1.3**
	baz=16						
ARLS				⇑*iS*	**Sb**	**22 32 08.8**	**-2.5**
	baz=16						
ARK	**Arkit**	**2.68**	**336**	*i* PN	**Pn**	**22 31 37.4**	**+1.3**
ARK				*i* S	**Sb**	**22 32 11.6**	**-2.4**
ARK	**Arkit**	**2.68**	**336**	⇑*iP*	**Pn**	**22 31 36.7**	**+0.6**
	baz=36						
ARK				⇑*iS*	**Sb**	**22 32 10.8**	**-3.2**
	baz=36						
TRKS	**Terek-Say**	**2.79**	**322**	*i* PN	**Pn**	**22 31 37.6**	**0.0**
TRKS				*eS*	**Sn**	**22 32 12.3**	**+0.4**
TRKS	**Terek-Say**	**2.79**	**322**	⇑*iP*	**Pn**	**22 31 37.6**	**0.0**
	baz=22						
TRKS				⇑*eS*	**Sn**	**22 32 11.9**	**0.0**
	baz=22						
NRN	**Naryn**	**2.85**	**43**	Pn	**Pn**	**22 31 39.9**	**+1.3**
NRN	**Naryn**	**2.85**	**43**	*i* PN	**Pn**	**22 31 39.9**	**+1.3**
NRN				*i* S	**Sn**	**22 32 16.1**	**+2.5**
NRN	**Naryn**	**2.85**	**43**	⇓*iP*	**Pn**	**22 31 39.9**	**+1.3**
	baz=43						
NRN				⇓*iS*	**Sn**	**22 32 15.0**	**+1.4**
	baz=43						
UCH	**Uchtor**	**2.98**	**16**	P	**Pn**	**22 31 42.8**	**+2.3**
	SNR=54						
UCH	**Uchtor**	**2.98**	**16**	*i* PN	**Pn**	**22 31 41.8**	**+1.3**
UCH				*i* S	**Sb**	**22 32 19.8**	**-3.0**
UCH	**Uchtor**	**2.98**	**16**	⇑*iP*	**Pn**	**22 31 41.8**	**+1.3**
	baz=16						
UCH				⇑*iS*	**Sn**	**22 32 18.9**	**+1.9**
	baz=16						
MNAS	**Manas**	**3.20**	**348**	*i* PN	**Pn**	**22 31 44.7**	**+1.4**
MNAS				*i* S	**Sn**	**22 32 24.3**	**+2.2**
MNAS	**Manas**	**3.20**	**348**	⇑*iP*	**Pn**	**22 31 44.7**	**+1.4**
	baz=48						
MNAS				⇑*iS*	**Sn**	**22 32 23.6**	**+1.5**
	baz=48						
EKS2	**Erkin-Say**	**3.31**	**4**	P	**Pn**	**22 31 47.4**	**+2.7**
	SNR=54						
EKS2	**Erkin-Say**	**3.31**	**4**	*i* PN	**Pn**	**22 31 46.1**	**+1.4**
EKS2				*i* S	**Sn**	**22 32 27.1**	**+2.4**
EKS2	**Erkin-Say**	**3.31**	**4**	⇓*iP*	**Pn**	**22 31 46.1**	**+1.4**
	baz=5.0						
EKS2				⇓*iS*	**Sn**	**22 32 26.2**	**+1.5**
	baz=5.0						
AAK	**Ala-Archa**	**3.37**	**13**	P	**Pn**	**22 31 48.6**	**+3.0**
	SNR=42						
AAK	**Ala-Archa**	**3.37**	**13**	Pn	**Pn**	**22 31 47.9**	**+2.3**
AAK	**Ala-Archa**	**3.37**	**13**	*i* PN	**Pn**	**22 31 47.3**	**+1.7**
AAK				*i* S	**Sn**	**22 32 28.9**	**+2.7**
AAK	**Ala-Archa**	**3.37**	**13**	Pn	**Pn**	**22 31 49.0**	**+3.4**
	comp=E,9.7nm,0.3s,baz=188,slow=6.0,SNR=138						
AAK				Lg	Lg	22 32 35.8	
	comp=E,25nm,0.3s,baz=277,slow=20,SNR=11						
	comp=E,22nm,0.3s						
AAK	**Ala-Archa**	**3.37**	**13**	⇑*iP*	**Pn**	**22 31 47.3**	**+1.7**
	baz=14						
AAK				⇑*iS*	**Sn**	**22 32 27.9**	**+1.7**
	baz=14						
KBK	**Karagaybulak**	**3.49**	**19**	P	**Pn**	**22 31 50.7**	**+3.6**
	SNR=27						
KBK	**Karagaybulak**	**3.49**	**19**	*i* PN	**Pn**	**22 31 48.8**	**+1.6**
KBK				*eS*	**Sn**	**22 32 31.5**	**+2.4**
KBK	**Karagaybulak**	**3.49**	**19**	⇑*iP*	**Pn**	**22 31 48.8**	**+1.6**
	baz=19						
KBK				⇑*eS*	**Sn**	**22 32 30.8**	**+1.7**
	baz=19						
SIMJ	**Simiganj**	**3.52**	**260**		**Pn**	**22 31 49.1**	**+1.5**
FRU1	**Bishkek**	**3.56**	**14**		**Pn**	**22 31 50.2**	**+2.1**
FRU1	**Bishkek**	**3.56**	**14**	*i* PN	**Pn**	**22 31 49.9**	**+1.8**
FRU1				*i* S	**Sn**	**22 32 33.7**	**+2.8**
FRU1	**Bishkek**	**3.56**	**14**	⇓*iP*	**Pn**	**22 31 49.9**	**+1.8**
	baz=15						
FRU1				⇓*iS*	**Sn**	**22 32 32.2**	**+1.3**
	baz=15						
ULHL	**Ulahol**	**3.58**	**36**	P	**Pn**	**22 31 50.5**	**+1.9**
	SNR=14						
ULHL	**Ulahol**	**3.58**	**36**	*i* PN	**Pn**	**22 31 50.4**	**+1.9**
ULHL				*eS*	**Sn**	**22 32 34.1**	**+2.5**
ULHL	**Ulahol**	**3.58**	**36**	⇑*iP*	**Pn**	**22 31 50.4**	**+1.9**
	baz=36						
ULHL				⇑*eS*	**Sn**	**22 32 33.3**	**+1.7**
	baz=36						
TKM2	**Tokmak 2**	**3.91**	**24**	P	**Pn**	**22 31 55.7**	**+2.6**
	SNR=23						
TKM2	**Tokmak 2**	**3.91**	**24**	*i* PN	**Pn**	**22 31 54.8**	**+1.7**
TKM2				*i* S	**Sn**	**22 32 41.9**	**+2.2**
TKM2	**Tokmak 2**	**3.91**	**24**	⇓*iP*	**Pn**	**22 31 54.8**	**+1.7**
	baz=24						
TKM2				⇓*iS*	**Sn**	**22 32 41.1**	**+1.4**
	baz=24						
KDJ	**Kajisay**	**3.97**	**45**	*i* PN	**Pn**	**22 31 55.5**	**+1.7**
KDJ				*i* S	**Sn**	**22 32 43.5**	**+2.5**
KDJ	**Kajisay**	**3.97**	**45**	⇑*iP*	**Pn**	**22 31 55.5**	**+1.7**
	baz=45						
KDJ				⇑*iS*	**Sn**	**22 32 42.7**	**+1.7**
	baz=45						
USP	**Ospenovka**	**3.98**	**11**	P	**Pn**	**22 31 57.9**	**+4.0**
	SNR=11						
USP	**Ospenovka**	**3.98**	**11**	*i* PN	**Pn**	**22 31 55.5**	**+1.6**
USP				*i* S	**Sn**	**22 32 43.3**	**+2.1**
USP	**Ospenovka**	**3.98**	**11**	⇑*iP*	**Pn**	**22 31 55.1**	**+1.2**
	baz=12						
USP				⇑*iS*	**Sn**	**22 32 42.4**	**+1.2**
	baz=12						
TARG	**Taragay, Kyrgy**	**4.08**	**53**		**Pn**	**22 31 57.8**	**+2.2**
TARG	**Taragay, Kyrgy**	**4.08**	**53**	PN	**Pn**	**22 31 57.8**	**+2.2**
KST	**Kastek**	**4.14**	**27**	Pg	**Pb**	**22 32 05.1**	**-0.4**
	comp=E,24nm,0.4s						
KST				Lg	Lg	22 33 01.3	
	comp=E,331nm,0.7s						
SGDS	**Sogindy**	**4.18**	**12**	Pg	**Pb**	**22 32 05.5**	**-0.6**
	comp=E,10.0nm,0.3s						
SGDS				Lg	Lg	22 33 02.2	
	comp=E,114nm,0.7s						
DGS	**Degeres**	**4.26**	**24**	Pg	**Pb**	**22 32 07.4**	**0.0**
	comp=E,51nm,0.7s						
DGS				Lg	Lg	22 33 05.4	
	comp=E,207nm,0.8s						
KK31	**Karatay Array**	**4.34**	**330**	⇓Pn	**Pn**	**22 32 00.2**	**+1.5**
	comp=E,2.6nm,0.3s,baz=129,slow=12,SNR=247						
KK31				⇑Pg	**Pb**	**22 32 11.8**	**+3.0**
	comp=E,62nm,0.6s,baz=150,slow=16,SNR=13						
KK31				⇑Lg	Lg	22 33 08.6	
	comp=E,73nm,0.5s,baz=143,slow=27						
KK31	**Karatay Array**	**4.34**	**330**		**Pn**	**22 32 00.3**	**+1.5**
KK31	**Karatay Array**	**4.34**	**330**	PN	**Pn**	**22 32 00.3**	**+1.5**
KKAR	**Karatay Array**	**4.34**	**330**		**Pn**	**22 32 00.1**	**+1.2**
KKAR	**Karatay Array**	**4.34**	**330**		**Pn**	**22 32 00.2**	**+1.4**
KKAR	**Karatay Array**	**4.34**	**330**	*i* PN	**Pn**	**22 32 00.0**	**+1.2**
KKAR				*i* S	**Sn**	**22 32 50.9**	**+0.9**
KKAR	**Karatay Array**	**4.34**	**330**	⇓*iP*	**Pn**	**22 32 00.0**	**+1.2**
	baz=31						
KKAR				⇓*iS*	**Sn**	**22 32 50.4**	**+0.4**
	baz=31						
IZV	**Izvestkoviy**	**4.38**	**32**	Pg	**Pb**	**22 32 10.2**	**+0.6**
	comp=E,17nm,0.5s						
IZV				Lg	Lg	22 33 10.0	
	comp=E,289nm,0.8s						
MTBS	**Maitube**	**4.39**	**30**	Pg	**Pb**

KUU Kurty 5.02 25 Pg **Pb** **22 32 21.2 +0.8**
comp=E,10.0nm,0.4s
KUU Lg Lg 22 33 28.9
comp=E,143nm,0.6s
CHKK Chushkaly 5.22 30 Pg **Pb** **22 32 24.4 +0.7**
comp=E,6.5nm,0.3s
CHKK Lg Lg 22 33 34.6
comp=E,94nm,0.6s
SATY Saty 5.26 44 Pg **Pb** **22 32 25.8 +1.3**
comp=E,23nm,0.7s
SATY Lg Lg 22 33 37.0
comp=E,88nm,0.9s
KPKS Kokpek 5.69 42 Pg **Pb** **22 32 33.5 +1.8**
comp=E,12nm,0.5s
KPKS Lg Lg 22 33 50.2
comp=E,69nm,0.6s
BTLS Baital 5.70 4 Pg **Pb** **22 32 32.8 +1.0**
comp=E,3.9nm,0.6s
BTLS Lg Lg 22 33 49.4
comp=E,28nm,0.6s
NIL Nilore 5.70 182 **Pn** **22 32 21.8 +4.3**
NIL Nilore 5.70 182 PN **Pn** **22 32 21.8 +4.3**
ARXS Arharly 5.85 33 Pg **Pb** **22 32 37.8 +3.2**
comp=E,11nm,0.4s
ARXS Lg Lg 22 33 57.5
comp=E,107nm,0.8s
KBL Kabul 5.96 218 Pn **Pn** **22 32 25.5 +4.3**
KBL Kabul 5.96 218 PN **Pn** **22 32 25.5 +4.3**
PDGK Podgornoye 6.04 47 ⇓Pn **Pn** **22 32 23.1 +0.9**
comp=E,19nm,0.8s
PDGK ⇓Lg Lg 22 34 02.4
comp=E,66nm,0.9s
PDGK Podgornoye 6.04 47 PN **Pn** **22 32 23.6 +1.4**
KNOS Konyrlen 6.58 39 Pg **Pb** **22 32 49.8 +2.8**
comp=E,17nm,0.7s
KNOS Lg Lg 22 34 18.6
comp=E,38nm,0.8s
THN Thein Dam 7.16 164 *e*P **Pn** **22 32 39.1 +1.7**
THN *e*S **Sn** **22 34 00.1 +0.9**
THN IAML 22 34 15.7
comp=E,115nm,0.6s
DHRM DHARAMSHALA 7.47 161 *e*P **Pn** **22 32 42.7 +0.8**
DHRM *e*S **Sn** **22 34 09.4 +2.1**
DHRM IAML 22 34 22.6
comp=E,125nm,0.6s
DHRM IAML 22 34 29.6
comp=E,111nm,0.7s
BHK Bhakra 8.29 162 *e*P **Pn** **22 32 52.6 -0.4**
BHK *e*S **Sn** **22 34 29.9 +2.6**
BHK IAML 22 34 41.0
comp=E,48nm,0.7s
BHK IAML 22 34 42.4
comp=E,80nm,0.6s
KLP Kalpa 8.74 152 *e*P **Pn** **22 32 58.4 -1.1**
KLP *e*S **Sn** **22 34 37.4 -1.3**
SMLA Simla 8.76 159 *e*P **Pn** **22 32 58.8 -0.7**
SMLA *e*S **Sn** **22 34 37.3 -1.5**
SMLA IAML 22 34 48.9
comp=E,61nm,0.5s
SMLA IAML 22 34 53.7
comp=E,76nm,0.5s
OTUK Ortayu 8.92 355 ⇓Pn **Pn** **22 33 01.9 +0.3**
comp=E,4.9nm,0.7s
OTUK ⇓Lg Lg 22 35 32.0
comp=E,92nm,1.4s
OTUK Ortayu 8.92 355 P **Pn** **22 33 01.9 +0.3**
MAKZ Makanchi 9.71 37 ⇑Pn **Pn** **22 33 14.8 +2.4**
comp=E,3.6nm,1.1s
MAKZ ⇑Lg Lg 22 35 54.6
comp=E,18nm,1.3s
MAKZ Makanchi 9.71 37 Pn **Pn** **22 33 14.3 +1.8**
MAKZ Makanchi 9.71 37 P **Pn** **22 33 14.3 +1.8**
DDI Dehra Dun 9.78 156 *e*S **Sn** **22 35 02.9 -1.1**
MK31 Makanchi Array 9.85 38 Pn **Pn** **22 33 16.8 +2.4**
comp=E,1.2nm,0.5s,baz=216,slow=12,SNR=7.0
MK31 ⇓Lg Lg 22 36 02.3
comp=E,4.2nm,0.8s,baz=226,slow=27,SNR=4.6
MK31 Makanchi Array 9.85 38 **Pn** **22 33 15.7 +1.3**
MK31 Makanchi Array 9.85 38 P **Pn** **22 33 15.7 +1.3**
MKAR Makanchi Array 9.85 38 Pn **Pn** **22 33 16.0 +1.6**
MKAR Makanchi Array 9.85 38 Pn **Pn** **22 33 13.5 -0.9**
comp=E,0.1nm,0.3s,baz=220,slow=13,SNR=7.0
MKAR Lg Lg 22 35 55.8
comp=E,0.1nm,0.3s,baz=231,slow=28,SNR=1.6
comp=E,0.6nm,0.8s
HRA Herat 10.25 244 Pn **Pn** **22 33 22.2 +2.2**
KUDL Kundal 11.47 166 *e*P **Pn** **22 33 37.2 +0.6**
KUDL *e*S **Sn** **22 35 41.4 -3.8**
KUDL IAML 22 35 53.4
comp=E,12nm,0.5s
KUDL IAML 22 35 58.0
comp=E,9.8nm,0.6s
WMQ Urumqi 11.57 63 *e*P Pn 22 33 43.8 +5.9
WMQ smax smax
comp=N,23nm,0.7s
WMQ smax smax
comp=E,29nm,0.9s
KURBB Kurchatov Arra 11.82 16 Pn **Pn** **22 33 39.7 -1.5**
comp=E,0.1nm,0.3s,baz=211,slow=11,SNR=1.9
KURBB Lg Lg 22 37 04.7
comp=E,0.1nm,0.3s,baz=205,slow=28,SNR=8.6
comp=E,1.5nm,0.2s
KURK Kurchatov 11.93 16⇑*e*P **Pn** **22 33 42.4 -0.3**
GEYT Alibeck 12.07 268 **Pn** **22 33 45.6 +0.9**
GEYT Alibeck 12.07 268 P **Pn** **22 33 45.6 +0.9**
GEYT Alibeck 12.07 268 Pn **Pn** **22 33 43.9 -0.8**
comp=E,0.2nm,0.3s,baz=98,slow=10,SNR=2.2
comp=E,0.9nm,0.5s
AB31 Akbulak array 13.81 320 Pn **Pn** **22 34 10.4 +2.0**
comp=E,2.3nm,0.6s,baz=137,slow=11,SNR=35
AB31 ⇓Sn **Sn** **22 36 45.4 +3.2**
comp=E,1.5nm,0.5s
AB31 Akbulak array 13.81 320 P **Pn** **22 34 10.4 +2.0**
AB31 SN **Sn** **22 36 45.4 +3.2**
ABKAR Akbulak array 13.81 320 Pn **Pn** **22 34 05.8 -2.6**
ABKAR Akbulak array 13.81 320 Pn **Pn** **22 34 05.7 -2.7**
BVAR Borovoye Array 13.83 352 Pn **Pn** **22 34 07.0 -1.6**
baz=163,slow=12,SNR=8.8
BVAR Lg Lg 22 38 10.2
baz=155,slow=21,SNR=2.6
comp=E,1.4nm,0.6s
BRVK Borovoye 13.87 352 **Pn** **22 34 09.9 +0.6**
BRVK Borovoye 13.87 352 P **Pn** **22 34 09.9 +0.6**
DGZ Jazzator, Alta 14.35 39⇑*e*P **Pn** **22 34 14.2 -1.7**
DGZ pmax pmax
comp=E,3.0nm,1.1s
AKTO Aktyubinsk 15.52 321 Pn **Pn** **22 34 31.2 -0.4**
comp=E,0.4nm,0.3s,baz=106,slow=16,SNR=4.2
comp=E,1.9nm,0.7s
ZAA0 Zalesovo Array 16.52 24 Pn **Pn** **22 34 44.1 -0.3**
ZALV Zalesovo Beam 16.52 24 Pn **Pn** **22 34 44.5 +0.1**
ZALV Zalesovo Beam 16.52 24 Pn **Pn** **22 34 43.4 -1.1**
comp=E,2.0nm,0.3s,baz=203,slow=11,SNR=7.4
comp=E,1.1nm,0.5s
ARU Arti 19.70 335 **P** **22 35 22.2 +0.1**
ARU IAmb IAmb 22 35 36.3
comp=E,8.9nm,1.1s
ARU Arti 19.70 335*d* *i*P **P** **22 35 19.6 -2.6**
ARU S **S** **22 39 02.9 -1.9**
ARU pmax pmax
comp=E,4.0nm,1.4s
ARU Arti 19.70 335 P **Pn** **22 35 22.9 -0.7**
comp=E,0.2nm,0.3s,baz=109,slow=1.0,SNR=4.7
comp=E,1.4nm,0.4s
SEKA Sheki 20.08 284 P **P** **22 35 22.8 -3.7**
GTA Gaotai 20.37 81 *e*P **P** **22 35 30.3 +0.6**
GTA sP sP 22 35 37.5 +5.1
GTA pmax pmax
comp=E,3.0nm,0.8s
BELG Belogornoye 22.05 315⇑*e*P **P** **22 35 45.1 -2.5**
BELG pmax pmax
comp=E,2.0nm,0.9s
BELG Belogornoye 22.05 315 P **P** **22 35 48.6 +1.1**
comp=E,12nm,1.0s,baz=90,slow=2.0,SNR=5.3
comp=E,12nm,1.0s
ONI Oni 22.81 288 P **P** **22 35 56.6 +0.7**
ONI IAmb IAmb 22 36 13.6
comp=E,5.6nm,0.8s
ONI Oni 22.81 288 P **P** **22 35 56.6 +0.7**
ONI pmax pmax
comp=E,6.0nm,0.8s
KBZ Khabaz 23.20 291 P **P** **22 36 00.4 +0.6**
comp=E,0.6nm,0.7s,baz=132,slow=16,SNR=1.4
comp=E,2.6nm,0.7s
KIV Kislovodsk 23.35 291 *e*P **P** **22 35 58.4 -3.1**
KIV pmax pmax
comp=E,4.0nm,1.1s
LZH Lanzhou 24.22 88 *e*P **P** **22 36 12.8 +2.8**
LZH pP sP 22 36 24.0 +11
LZH pmax pmax
comp=E,18nm,1.6s
SONM Songino Array 25.17 60 *e*P **P** **22 36 19.5 +1.0**
SONM pmax pmax
comp=E,1.0nm,0.9s
SONM Songino Array 25.17 60 P **P** **22 36 16.7 -1.8**
comp=E,0.7nm,0.8s,baz=267,slow=9.8,SNR=6.7
SONM LR LR 22 46 02.5
comp=E,40nm,18.2s,baz=80,slow=36
comp=E,0.7nm,0.8s
ULN Ulaanbaatar 25.62 60⇑*e*P **P** **22 36 21.9 -0.7**
ULN pmax pmax
comp=E,1.0nm,0.9s
RAYN Ar Rayn 28.43 245 P **P** **22 36 50.3 +2.3**
RAYN IAmb IAmb 22 37 18.2
comp=E,7.5nm,1.4s
RAYN Ar Rayn 28.43 245 P **P** **22 36 50.3 +2.3**
BRTR Keskin Array B 30.52 284 P **P** **22 37 08.1 +1.6**
BRTR Keskin Array B 30.52 284 P **P** **22 37 08.1 +1.6**
BRTR Keskin Array B 30.52 284 P **P** **22 37 07.2 +0.7**
comp=E,0.6nm,0.8s,baz=81,slow=7.3,SNR=2.3
comp=E,0.6nm,0.8s
AKASG Malin Array Be 32.77 305 P **P** **22 37 26.4 +0.4**
comp=E,0.3nm,0.4s,baz=77,slow=6.7,SNR=2.2
comp=E,0.3nm,0.4s
MLR Muntele Rosu 35.17 296 P **P** **22 37 49.8 +2.7**
MLR Muntele Rosu 35.17 296 P **P** **22 37 49.8 +2.7**
MLR pmax pmax
comp=E,14nm,1.2s
BURAR Bucovina Array 35.45 300 P **P** **22 37 51.4 +2.0**
FINES FINESS Array B 36.27 323 P **P** **22 37 55.9 -0.2**
comp=E,1.2nm,0.6s,baz=111,slow=9.8,SNR=12
comp=E,1.2nm,0.6s
HEH HeiHe 39.01 56 *e*P P 22 38 25.5 +6.0
HEH pmax pmax
comp=E,6.0nm,0.7s
KLR Kul'dur 41.93 57⇑*e*P **P** **22 38 39.4 -4.3**
KLR pmax pmax
comp=E,1.0nm,1.1s
HFS Hagfors 42.07 320 P **P** **22 38 45.2 +0.6**
comp=E,1.7nm,0.6s,baz=104,slow=12,SNR=8.5
comp=E,1.7nm,0.6s
KSRS Korea Array 42.19 75 P **P** **22 38 44.0 -1.9**
KSRS Korea Array 42.19 75 P **P** **22 38 44.0 -1.9**
comp=E,0.7nm,0.5s,baz=261,slow=5.0,SNR=1.7
comp=E,0.7nm,0.5s
TIXI Tiksi 42.40 23 P **P** **22 38 49.8 +2.6**
TIXI IAmb IAmb 22 38 53.2
comp=E,2.3nm,0.8s
TIXI Tiksi 42.40 23 P **P** **22 38 49.8 +2.6**
TIXI pmax pmax
comp=E,2.0nm,0.8s
TIXI Tiksi 42.40 23 LR LR 22 57 39.0
comp=E,46nm,20.0s,baz=8.0,slow=38
GERES GERESS Array B 42.92 303 P **P** **22 38 53.1 +1.3**
comp=E,0.2nm,0.3s,baz=68,slow=11,SNR=1.6
comp=E,0.2nm,0.3s
NB2 NORSAR Subarra 43.31 321 P **P** **22 38 55.7 +0.9**
comp=E,1.7nm,0.7s,baz=92,slow=8.6
NOA NORSAR Array B 43.31 321 P **P** **22 38 54.7 0.0**
comp=E,2.6nm,1.0s,baz=93,slow=7.6,SNR=1.8
comp=E,2.6nm,1.0s
SPITS Spitsbergen Ar 45.17 346 P **P** **22 39 10.2 +0.7**
comp=E,1.4nm,1.1s,baz=108,slow=18,SNR=1.4
comp=E,1.4nm,1.1s
ESDC Sonseca Array 57.85 297 P **P** **22 40 44.3 -0.6**
comp=E,0.3nm,0.7s,baz=54,slow=7.0,SNR=1.3
comp=E,0.3nm,0.7s
TORD Torodi Ar. Bea 67.71 269 P **P** **22 41 50.1 -0.8**
comp=E,0.4nm,0.5s,baz=46,slow=5.9,SNR=2.2
YKA Yellowknife Ar 78.29 4 P **P** **22 42 50.5 -2.3**
comp=E,1.0nm,0.3s,baz=350,slow=6.2,SNR=1.6
comp=E,0.1nm,0.3s
WRA Warramunga Arr 81.92 124 P **P** **22 43 09.9 -3.1**
comp=E,0.3nm,0.6s,baz=323,slow=5.0,SNR=1.7
comp=E,0.3nm,0.6s
ASAR Alice Springs 84.36 127 P **P** **22 43 23.5 -2.1**
comp=E,0.2nm,0.7s,baz=312,slow=5.1,SNR=1.5
comp=E,0.2nm,0.7s
ULM Lac du Bonnet 90.27 353 P **P** **22 43 54.3 +0.4**
comp=E,0.5nm,0.4s,baz=345,slow=20,SNR=1.8
comp=E,0.5nm,0.4s

IDC ***14*** *22:33:49.1±0.6, 1°.29S×120°.59E, h0km, mb4.3/21, mbtmp4.3/21, MS3.3/5, Error ellipse: s-maj=28.0km s-min=13.3km az=64.0*
DJA ***14*** *22:33:51.9±0.3, 1°.S±2°×12°.0E±°, h10km, M4.4/8, mb4.4/1, MLv4.5/8*
NEIC ***14*** *22:33:52.5±1.3, 1°.31S±0°.06×120°.58E±0°.06, h18km±5km, mb4.6/50, Error ellipse: s-maj=8.7km s-min=8.1km az=215.0*

ISC 14 22:33:53.2±0.4, 1°.34S±0°.04×120°.59E±0°.04, h23km, n108, σ1§54/115, mb4.5/56, MS3.2/6, 2C-3D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.80**	**338**	P	**Pn**	**22 34 19.4**	**-3.5**
MPSI				S	**Sn**	**22 34 45.3**	**+0.2**
TTSI	**Tana Toraja**	**1.86**	**204**	P	**Pn**	**22 34 23.7**	**0.0**
TTSI				S	**Sn**	**22 34 50.0**	**+3.5**
LUWI	**Luwuk**	**2.21**	**82**		**Pn**	**22 34 27.9**	**-0.5**
LUWI	**Luwuk**	**2.21**	**82**	P	**Pn**	**22 34 28.7**	**+0.2**
LUWI				S	**Sb**	**22 35 02.4**	**+3.0**
MRSI	**Marisa**	**2.26**	**37**	P	**Pn**	**22 34 28.8**	**-0.4**
MRSI				S	**Sn**	**22 34 58.7**	**+2.4**
TOLI2	**Tolitoli**	**2.44**	**5**	Pn	**Pn**	**22 34 30.0**	**-1.7**
BKB	**Balikpapan**	**3.69**	**271**		**Pn**	**22 34 48.4**	**-0.5**
KAPI	**Kappang**	**3.74**	**193**	Pn	**Pn**	**22 34 49.7**	**0.0**
KMSI	**Cibinong**	**3.89**	**61**	P	**Pb**	**22 34 58.0**	**-3.2**
BKSI	**Bulukumba**	**3.98**	**187**	P	**Pn**	**22 34 53.1**	**+0.2**
BKSI				S	**Sn**	**22 35 38.8**	**-0.1**
SANI	**Sanana**	**5.45**	**98**	P	**Pn**	**22 35 13.3**	**+0.2**
KKM	**Kota Kinabalu**	**8.54**	**329**	Pn	**Pn**	**22 35 56.3**	**+0.7**
SBUM	**Sibu**	**9.17**	**294**	Pn	**Pn**	**22 36 04.2**	**0.0**
FAKI	**Fak Fak**	**11.76**	**98**	Pn	**Pn**	**22 36 40.2**	**+0.4**
MTN	**Manton Dam**	**15.49**	**138**	Pn	**Pn**	**22 37 30.1**	**-0.2**
MTN				IAmb	IAmb	22 37 46.9	
	comp=E,58nm,1.4s						
PSA00	**Pilbara Seismi**	**20.12**	**182**	P	**P**	**22 38 24.6**	**-1.2**
PSA00	**Pilbara Seismi**	**20.12**	**182**	P	**P**	**22 38 25.0**	**-0.7**
PSA00				IAmb	IAmb	22 38 28.3	
	comp=E,5.2nm,0.9s						
IPM	**Ipoh**	**20.38**	**287**	P	**P**	**22 38 28.8**	**+0.2**
IPM				IAmb	IAmb	22 38 33.7	
	comp=E,31nm,0.8s						
KULM	**Kulim**	**20.97**	**288**	P	**P**	**22 38 33.6**	**-1.4**
KULM				IAmb	IAmb	22 38 39.1	
	comp=E,22nm,0.9s						
RPSI	**Rantau Prapat**	**22.02**	**280**	P	**P**	**22 38 45.8**	**-0.5**
UBPT	**Khong Chiam**	**22.27**	**318**	P	**P**	**22 38 49.1**	**+0.2**
UBPT				IAmb	IAmb	22 38 58.5	
	comp=E,19nm,1.1s						
WB0	**Warramunga Arr**	**22.76**	**144**	P	**P**	**22 38 53.0**	**-1.1**
QIZ	**Qiongzhong**	**22.83**	**333**	P	**P**	**22 38 53.5**	**-1.4**
QIZ				IAmb	IAmb	22 38 58.4	
	comp=E,42nm,1.3s						
WRA	**Warramunga Arr**	**22.87**	**145**	P	**P**	**22 38 54.3**	**-1.0**
WRA	**Warramunga Arr**	**22.87**	**145**	P	**P**	**22 38 53.4**	**-1.8**
	comp=E,3.2nm,0.9s,baz=309,slow=14,SNR=13						
	comp=E,3.2nm,0.9s						
WR0	**Warramunga Arr**	**23.00**	**144**	P	**P**	**22 38 55.3**	**-1.3**
WR0				IAmb	IAmb	22 38 59.2	
	comp=E,12nm,0.8s						
SRIT	**Nakonsritamara**	**23.13**	**296**	P	**P**	**22 38 57.0**	**-1.0**
SRIT				IAmb	IAmb	22 39 03.3	
	comp=E,20nm,1.3s						
YULB	**Yu-li**	**24.59**	**2**	P	**P**	**22 39 11.4**	**-0.4**
YULB				IAmb	IAmb	22 39 15.2	
	comp=E,18nm,0.7s						
AS31	**Alice Springs**	**25.68**	**151**	P	**P**	**22 39 22.7**	**+1.0**
ASAR	**Alice Springs**	**25.68**	**151**	P	**P**	**22 39 22.0**	**+0.3**
ASAR	**Alice Springs**	**25.68**	**151**	P	**P**	**22 39 22.9**	**+1.3**
	comp=E,3.5nm,0.8s,baz=338,slow=13,SNR=15						
ASAR				PcP	**PcP**	**22 42 49.8**	**-2.3**
	comp=E,0.5nm,0.6s,baz=346,slow=1.7,SNR=5.3						
	comp=E,3.5nm,0.8s						
QZH	**Quanzhou**	**26.20**	**356**	⇓*i*P	**P**	**22 39 29.1**	**+2.8**
SLVN	**Son La**	**27.82**	**325**	P	**P**	**22 39 40.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**28.99**	**314**	P	**P**	**22 39 51.5**	**0.0**
	comp=E,3.3nm,0.7s,baz=140,slow=7.1,SNR=19						
CMAR				LR	LR	22 52 39.9	
	comp=E,29nm,18.1s,baz=125,slow=39						
	comp=E,3.3nm,0.7s						
CRAI	**Chiangrai**	**29.19**	**318**	P	**P**	**22 39 52.0**	**-1.2**
CRAI				IAmb	IAmb	22 40 02.7	
	comp=E,8.6nm,1.2s						
CHTO	**Chiang Mai**	**29.22**	**314**	P	**P**	**22 39 52.3**	**-1.2**
GYA	**Guiyang**	**30.73**	**335**	⇑*i*P	**P**	**22 40 10.4**	**+3.5**
GYA				pmax	pmax		
	comp=E,9.0nm,1.3s						
GYA				pmax	pmax		
	comp=E,98nm,5.5s						
CTA	**Charters Tower**	**31.26**	**128**	LR	LR	22 54 01.4	
	comp=E,42nm,18.7s,baz=288,slow=39						
KMI	**Kunming**	**31.48**	**328**	⇓P	**P**	**22 40 12.9**	**-0.7**
KMI				pmax	pmax		
	comp=E,14nm,1.1s						
WHN	**Wuhan**	**32.26**	**350**	⇑P	**P**	**22 40 23.3**	**+3.2**
WHN				pP	**pP**	**22 40 27.5**	**+0.4**
WHN				pmax	pmax		
	comp=E,80nm,1.3s						
PZH	**PanZhiHua**	**33.12**	**328**	P	**P**	**22 40 27.8**	**-0.1**
PZH				pmax	pmax		
	comp=E,30nm,1.2s						
PZH				pmax	pmax		
	comp=E,180nm,4.8s						
ENH	**Enshi**	**33.17**	**342**		**P**	**22 40 27.3**	**-0.9**
ENH				IAmb	IAmb	22 40 33.8	
	comp=E,9.1nm,0.7s						
NJ2	**Nanjing**	**33.25**	**357**	*e*P	**P**	**22 40 31.4**	**+2.6**
NJ2				sP	**pP**	**22 40 38.1**	**+2.3**
NJ2				pmax	pmax		
	comp=E,8.0nm,0.7s						
NJ2				pmax	pmax		
	comp=E,220nm,5.7s						
TNCH	**TengChong**	**33.83**	**322**	P	**P**	**22 40 36.8**	**+2.6**
TNCH				pP	sP	22 40 44.1	-0.2
TNCH				sP	pP	22 40 48.0	+6.7
TNCH				pmax	pmax		
	comp=E,17nm,0.9s						
TNCH				pmax	pmax		
	comp=E,78nm,3.8s						
BBOO	**Buckleboo**	**34.52**	**157**	P	**P**	**22 40 39.2**	**-0.7**
JCJ	**Chichijima**	**35.10**	**35**	P	**P**	**22 40 44.1**	**-0.9**
JNU	**Nakatsue**	**35.63**	**15**	LR	LR	22 55 05.5	
	comp=E,23nm,19.6s,baz=356,slow=36						
STKA	**Stephens Creek**	**36.27**	**149**	P	**P**	**22 40 54.6**	**-0.4**
STKA	**Stephens Creek**	**36.27**	**149**	P	**P**	**22 40 53.9**	**-1.1**
	comp=E,3.5nm,0.7s,baz=320,slow=9.4,SNR=5.7						
	comp=E,3.5nm,0.7s						
LYN	**LuoYang**	**36.51**	**349**	⇓P	**P**	**22 40 59.3**	**+2.4**
LYN				sP	sP	22 41 17.1	+10
LYN				pmax	pmax		
	comp=E,19nm,1.0s						
LYN				pmax	pmax		
	comp=E,280nm,5.4s						
XAN	**Xi'an**	**36.86**	**344**	P	**P**	**22 41 04.6**	**+4.6**
JMN	**Monobe**	**37.06**	**19**	P	**P**	**22 41 01.6**	**-0.1**
SHL	**Shillong**	**38.55**	**316**	P	**P**	**22 41 14.5**	**-0.1**
KSAR	**Wonju Array Be**	**39.18**	**9**	P	**P**	**22 41 18.8**	**-0.6**
KSRS	**Korea Array**	**39.19**	**9**	P	**P**	**22 41 18.6**	**-0.9**
	comp=E,2.4nm,0.6s,baz=188,slow=9.0,SNR=8.4						
	comp=E,2.4nm,0.6s						
LZH	**Lanzhou**	**40.37**	**339**	*e*P	P	22 41 34.8	+5.2
LZH				pP	sP	22 41 40.8	+0.9
LZH				pmax	pmax		
	comp=E,17nm,1.5s						
MJAR	**Matsushiro Arr**	**41.10**	**22**	P	**P**	**22 41 34.3**	**-1.1**
	comp=E,4.1nm,0.9s,baz=196,slow=8.5,SNR=6.9						
	comp=E,4.1nm,0.9s						
BJT	**Baijiatuau**	**41.36**	**355**		**P**	**22 41 37.3**	**-0.2**
BJT				IAmb	IAmb	22 41 43.8	
	comp=E,14nm,1.4s						
BJI	**Beijing**	**41.38**	**355**	P	**P**	**22 41 38.8**	**+1.2**
BJI				pmax	pmax		
	comp=E,2.0nm,1.1s						
LSA	**Lhasa**	**41.75**	**320**	P	**P**	**22 41 41.0**	**-0.4**
HHC	**Hu-ho-hao-te**	**42.79**	**350**	*e*P	**P**	**22 41 51.3**	**+2.0**
HHC				pmax	pmax		
	comp=E,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=E,120nm,5.1s						
GTA	**Gaotai**	**44.81**	**337**	*e*P	**P**	**22 42 09.3**	**+3.7**
GTA				pmax	pmax		
	comp=E,4.0nm,1.2s						
XLT	**XiLinHaoTe**	**45.22**	**355**	*e*P	**P**	**22 42 09.5**	**+0.8**
XLT				pP	sP	22 42 18.8	-0.4
XLT				sP	pP	22 42 28.3	+12
XLT				PcP	**PcP**	**22 43 51.6**	**+3.0**
XLT				pmax	pmax		
	comp=E,3.0nm,1.0s						
XLT				pmax	pmax		
	comp=E,180nm,4.4s						
MDJ	**Mudanjiang**	**46.45**	**9**	P	**P**	**22 42 19.1**	**+0.8**
MDJ				sP	sP	22 42 28.3	0.0
MDJ				ScP	**ScP**	**22 47 44.5**	**-0.6**
MDJ				PcS	**PcS**	**22 47 47.4**	**+0.1**
MDJ				S	**S**	**22 49 05.4**	**+0.3**
MDJ				sS	pS	22 49 14.8	+1.3
MDJ				pmax	pmax		
	comp=E,18nm,1.4s						
MDJ				pmax	pmax		
	comp=E,180nm,4.1s						
MDJ				LR	LR		
	comp=N,700nm,14.6s						
MDJ				LR	LR		
	comp=E,310nm,14.5s						
MDJ				LR	LR		
	comp=E,340nm,14.6s						
MDJ	**Mudanjiang**	**46.45**	**9**	P	**P**	**22 42 18.4**	**0.0**
USA0B	**Ussuriysk Arra**	**46.47**	**11**	P	**P**	**22 42 17.9**	**-0.6**
USA0B				IAmb	IAmb	22 42 20.7	
	comp=E,10.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**46.47**	**11**	P	**P**	**22 42 18.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**46.47**	**11**	P	**P**	**22 42 18.6**	**+0.1**
	comp=E,3.5nm,0.5s,baz=195,slow=7.5,SNR=14						
	comp=E,3.5nm,0.5s						
ULN	**Ulaanbaatar**	**50.41**	**348**	P	**P**	**22 42 49.3**	**+0.3**
ULN				IAmb	IAmb	22 42 55.2	
	comp=E,9.4nm,1.2s						
SONM	**Songino Array**	**50.52**	**348**	P	**P**	**22 42 49.5**	**-0.2**
SONM	**Songino Array**	**50.52**	**348**	P	**P**	**22 42 48.6**	**-1.2**
	comp=E,0.9nm,0.7s,baz=165,slow=8.2,SNR=14						
	comp=E,0.9nm,0.7s						
KLR	**Kul'dur**	**51.29**	**9**	LR	LR	23 07 12.0	
	comp=E,23nm,18.2s,baz=306,slow=39						
HEH	**HeiHe**	**51.73**	**6**	*e*P	**P**	**22 42 56.5**	**-2.1**
HEH				pmax	pmax		
	comp=E,20nm,1.2s						
HEH				pmax	pmax		
	comp=E,260nm,4.2s						
WMQ	**Urumqi**	**53.73**	**331**	*e*P	**P**	**22 43 17.1**	**+3.4**
WMQ				pmax	pmax		
	comp=E,12nm,1.1s						
KSH	**Kashi**	**57.60**	**320**	P	**P**	**22 43 41.1**	**-0.6**
KSH				pmax	pmax		
	comp=E,10.0nm,0.9s						
PRZ	**Przheval'sk**	**57.84**	**324**	P	**P**	**22 43 42.2**	**-1.1**
MK31	**Makanchi Array**	**58.52**	**330**	P	**P**	**22 43 46.9**	**-0.9**
MK31				IAmb	IAmb	22 43 51.1	
	comp=E,3.8nm,0.8s						
MKAR	**Makanchi Array**	**58.52**	**330**	P	**P**	**22 43 46.1**	**-1.7**
MKAR	**Makanchi Array**	**58.52**	**330**	P	**P**	**22 43 47.0**	**-0.9**
	comp=E,4.0nm,0.7s,baz=132,slow=7.8,SNR=28						
	comp=E,4.0nm,0.7s						
KBL	**Kabul**	**59.99**	**312**	P	**P**	**22 43 56.5**	**-2.0**
AAK	**Ala-Archa**	**60.27**	**322**	P	**P**	**22 43 59.1**	**-1.0**
AAK				IAmb	IAmb	22 44 03.9	
	comp=E,6.9nm,0.9s						
ARSB	**Arslanbob**	**60.50**	**320**	P	**P**	**22 44 00.2**	**-1.6**
ARSB				IAmb	IAmb	22 44 05.1	
	comp=E,3.6nm,0.9s						
BTK	**Batken**	**61.27**	**318**	P	**P**	**22 44 06.0**	**-0.9**
BTK				IAmb	IAmb	22 44 10.9	
	comp=E,6.6nm,1.0s						
SIMJ	**Simiganj**	**61.84**	**316**	P	**P**	**22 44 09.1**	**-1.8**
PETK	**Petropavlovsk-**	**62.48**	**24**	P	**P**	**22 44 14.8**	**+0.1**
	comp=E,3.6nm,0.9s,baz=248,slow=1.6,SNR=2.2						
	comp=E,3.6nm,0.9s						
ZAA0	**Zalesovo Array**	**62.56**	**337**	P	**P**	**22 44 13.1**	**-2.2**
ZAA0				IAmb	IAmb	22 44 17.0	
	comp=E,5.7nm,0.9s						
ZALV	**Zalesovo Beam**	**62.56**	**337**	P	**P**	**22 44 12.9**	**-2.3**
ZALV	**Zalesovo Beam**	**62.56**	**337**	P	**P**	**22 44 12.8**	**-2.5**
	comp=E,3.6nm,0.8s,baz=122,slow=6.5,SNR=14						
	comp=E,3.6nm,0.8s						
KURBB	**Kurchatov Arra**	**62.94**	**331**	P	**P**	**22 44 16.0**	**-1.8**

comp=Z,5.9nm,1.0s,baz=145,slow=5.8,SNR=23
comp=Z,5.9nm,1.0s

KURK	**Kurchatov**	**62.96**	**331**	P		**P**	**22 44 16.2**	**-1.8**
KK31	**Karatay Array**	**62.99**	**321**	P		**P**	**22 44 16.6**	**-1.7**
KK31				IAmb		IAmb	22 44 21.8	
	comp=Z,6.9nm,1.0s							
KKAR	**Karatay Array**	**62.99**	**321**	P		**P**	**22 44 17.3**	**-1.1**
RAO	**Raoul Island**	**64.65**	**122**	LR		LR	23 14 21.7	
	comp=Z,99nm,18.2s,baz=62,slow=38							
BVAR	**Borovoye Array**	**68.40**	**330**	P		**P**	**22 44 51.0**	**-2.0**
	comp=Z,3.7nm,0.8s,baz=139,slow=9.8,SNR=14							
	comp=Z,3.7nm,0.8s							
BRVK	**Borovoye**	**68.47**	**330**	P		**P**	**22 44 52.9**	**-0.6**
BRVK				IAmb		IAmb	22 44 55.9	
	comp=Z,6.9nm,1.1s							
GEYT	**Alibeck**	**69.44**	**312**	P		**P**	**22 44 58.9**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=155,slow=4.9,SNR=7.2							
	comp=Z,1.8nm,0.8s							
ABKAR	**Akbulak array**	**72.33**	**323**	P		**P**	**22 45 16.5**	**-0.6**
AKTO	**Aktyubinsk**	**73.94**	**324**	P		**P**	**22 45 27.7**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=98,slow=9.0,SNR=6.6							
	comp=Z,1.7nm,0.7s							
NRIK	**Noril'sk**	**73.99**	**348**	P		**P**	**22 45 25.8**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=121,slow=5.4,SNR=5.5							
	comp=Z,1.9nm,0.6s							
ARU	**Arti**	**76.04**	**330**	P		**P**	**22 45 38.6**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=340,slow=5.5,SNR=3.6							
	comp=Z,1.8nm,0.6s							
AKH	**Akhalkalaki**	**81.22**	**312**	P		**P**	**22 46 07.4**	**-0.4**
GURO	**Guroymak-BITLI**	**81.89**	**309**	P		**P**	**22 46 10.7**	**-0.5**
GURO				IAmb		IAmb	22 46 16.0	
	comp=Z,5.7nm,1.1s							
KBZ	**Khabaz**	**82.04**	**314**	P		**P**	**22 46 12.3**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=75,slow=16,SNR=2.1							
	comp=Z,1.4nm,0.8s							
C16K	**Lisburne Hills**	**85.38**	**21**	P		**P**	**22 46 28.3**	**0.0**
MMAI	**Mount Meron Ar**	**86.68**	**303**	P		**P**	**22 46 36.0**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=90,slow=6.7,SNR=4.6							
	comp=Z,2.5nm,0.8s							
C18K	**Utukok River**	**86.95**	**21**	P		**P**	**22 46 36.9**	**+0.6**
C18K				IAmb		IAmb	22 46 54.8	
	comp=Z,5.1nm,1.3s							
BRTR	**Keskin Array B**	**88.49**	**310**	P		**P**	**22 46 45.3**	**+0.9**
	comp=Z,1.2nm,1.0s,baz=52,slow=6.7,SNR=3.6							
	comp=Z,1.2nm,1.0s							
QSPA	**South Pole Qui**	**88.60**	**180**	P		**P**	**22 46 44.9**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=247,slow=3.2,SNR=3.6							
	comp=Z,1.3nm,0.6s							

*IDC **14** 23:21:27.0±1.8,37.°70N×73.°55E,h0km,mb4.0/9, mbtmp4.1/15,ML3.7/6,Error ellipse: s-maj=32.6km s-min=19.0km az=145.0*

*NEIC **14** 23:21:45.0±1.5,38.°38N±0.°05×73.°78E±0.°08,h136km±8km, mb4.2/20,Error ellipse: s-maj=9.6km s-min=5.9km az=61.0*

*BJI **14** 23:21:44.8±0.0,38.°38N×73.°81E,h139km,mb4.4/3, mB4.5/1*

*NNC **14** 23:21:49.6±2.5,38.°41N×71.°37E,h0km,mb4.5,mpv4.3, Error ellipse: s-maj=28.4km s-min=17.8km az=92.0*

ISC 14 23:21:43.9±0.5,38.°30N±0.°05×73.°71E±0.°07,h136km,n75,
σ1§64/81,mb4.2/17,1C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BTK	**Batken**	**2.85**	**309**			**Pn**	**23 22 30.1**	**+1.2**
ARSB	**Arslanbob**	**3.07**	**350**			**Pn**	**23 22 31.5**	**-0.3**
NRN	**Naryn**	**3.59**	**29**	Pn		**Pn**	**23 22 37.4**	**-1.3**
SIMJ	**Simiganj**	**3.70**	**277**			**Pn**	**23 22 39.9**	**-0.2**
SRNI	**Srinagar**	**4.29**	**167**	*eP*		**Pn**	**23 22 49.7**	**+2.0**
SRNI				*eS*		**Sn**	**23 23 37.1**	**-0.1**
AAK	**Ala-Archa**	**4.38**	**8**	Pn		**Pn**	**23 22 48.9**	**0.0**
AAK	**Ala-Archa**	**4.38**	**8**	Pn		**Pn**	**23 22 49.1**	**+0.2**
	6.5nm,0.3s,baz=161,slow=7.3,SNR=62							
AAK				Sn		**Sn**	**23 23 37.6**	**-1.8**
	7.7nm,0.3s,baz=354,slow=19,SNR=11							
	10.0nm,0.3s							
FRU1	**Bishkek**	**4.56**	**9**			**Pn**	**23 22 51.4**	**+0.1**
TARG	**Taragay, Kyrgy**	**4.65**	**41**			**Pn**	**23 22 52.4**	**-0.4**
NIL	**Nilore**	**4.65**	**185**			**Pn**	**23 22 55.2**	**+2.6**
KBL	**Kabul**	**5.31**	**226**	Pn		**Pn**	**23 23 03.2**	**+1.7**
KK31	**Karatay Array**	**5.38**	**334**	||P		**Pn**	**23 23 02.2**	**0.0**
	16nm,0.3s,baz=130,slow=12,SNR=1179							
KK31				S		**Sn**	**23 23 59.1**	**-4.0**
	35nm,0.3s,baz=152,slow=25,SNR=14							
KK31	**Karatay Array**	**5.38**	**334**	Pn		**Pn**	**23 23 02.3**	**+0.2**
KKAR	**Karatay Array**	**5.38**	**334**	Pn		**Pn**	**23 23 02.3**	**+0.1**
KKAR	**Karatay Array**	**5.38**	**334**			**Pn**	**23 23 02.2**	**+0.1**
PRZ	**Przheval'sk**	**5.50**	**39**			**Pn**	**23 23 03.7**	**-0.3**
THN	**Thein Dam**	**6.08**	**164**	*eP*		**Pn**	**23 23 12.0**	**+0.4**
THN				*eS*		**Sn**	**23 24 16.2**	**-3.7**
THN				IAML			23 24 19.9	
	comp=N,118nm,0.4s							
THN				IAML			23 24 22.4	
	comp=E,148nm,0.3s							
DHRM	**DHARAMSHALA**	**6.40**	**160**	*eP*		**Pn**	**23 23 16.3**	**+0.2**
DHRM				*eS*		**Sn**	**23 24 25.1**	**-2.9**
DHRM				IAML			23 24 30.6	
	comp=N,272nm,0.2s							
DHRM				IAML			23 24 33.1	
	comp=E,290nm,0.4s							
BHK	**Bhakra**	**7.22**	**161**	*eP*		**Pn**	**23 23 28.0**	**+1.1**
BHK				*eS*		**Sn**	**23 24 42.1**	**-5.4**
BHK				IAML			23 24 50.1	
	comp=E,89nm,0.3s							
BHK				IAML			23 24 52.1	
	comp=N,121nm,0.2s							
SMLA	**Simla**	**7.70**	**157**	*eP*		**Pn**	**23 23 31.9**	**-1.4**
SMLA				*ex*		x	23 24 55.9	
SMLA				IAML			23 24 56.8	
	comp=N,166nm,0.5s							
SMLA				IAML			23 24 59.0	
	comp=E,160nm,0.3s							
KLP	**Kalpa**	**7.71**	**150**	*eP*		**Pn**	**23 23 32.5**	**-1.3**
KLP				*eS*		**Sn**	**23 24 58.8**	**-1.1**
NDI	**New Delhi**	**10.03**	**162**	*eP*		**Pn**	**23 24 02.4**	**-2.2**
NDI				*eS*		Sn	23 25 46.3	-9.1
NDI				IAML			23 25 50.3	
	comp=N,30nm,0.3s							
NDI				IAML			23 25 55.2	
	comp=E,45nm,0.6s							
KUDL	**Kundal**	**10.39**	**166**	*eP*		**Pn**	**23 24 07.8**	**-1.6**
KUDL				*ex*		x	23 25 59.2	
KUDL				IAML			23 26 01.4	
	comp=E,47nm,0.6s							
KUDL				IAML			23 26 04.7	
	comp=N,24nm,0.3s							
MAKZ	**Makanchi**	**10.46**	**33**	Pn		**Pn**	**23 24 09.2**	**-1.0**
MK31	**Makanchi Array**	**10.58**	**34**			**Pn**	**23 24 11.3**	**-0.6**
MKAR	**Makanchi Array**	**10.58**	**34**	Pn		**Pn**	**23 24 10.7**	**-1.2**
MKAR	**Makanchi Array**	**10.58**	**34**	Pn		**Pn**	**23 24 10.4**	**-1.5**
	comp=N,0.2nm,0.3s,baz=201,slow=13,SNR=31							
	comp=N,1.9nm,0.7s							
AJM	**Ajmer**	**11.81**	**176**	*eS*		Sn	23 26 26.1	-12
WMQ	**Urumqi**	**11.91**	**58**	*eP*		**Pn**	**23 24 32.9**	**+3.5**
KURBB	**Kurchatov Arra**	**12.79**	**14**	Pn		**Pn**	**23 24 37.4**	**-3.3**
	comp=N,0.2nm,0.3s,baz=199,slow=12,SNR=4.3							
	comp=N,2.2nm,0.2s							
KURK	**Kurchatov**	**12.90**	**14**	Pn		**Pn**	**23 24 39.4**	**-2.7**
AB31	**Akbulak array**	**14.77**	**322**	P		**Pn**	**23 25 04.5**	**-1.3**
	comp=N,3.3nm,0.5s,baz=133,slow=12,SNR=113							
AB31				S		Sn	23 27 35.3	-14
	comp=N,3.8nm,0.8s,baz=138,slow=23,SNR=12							
ABKAR	**Akbulak array**	**14.77**	**322**			**Pn**	**23 25 04.6**	**-1.3**
ABKAR	**Akbulak array**	**14.77**	**322**	Pn		**Pn**	**23 25 04.2**	**-1.6**
BVAR	**Borovoye Array**	**14.91**	**352**	Pn		**Pn**	**23 25 05.5**	**-2.1**
	comp=N,0.1nm,0.3s,baz=172,slow=11,SNR=11							
	comp=N,1.0nm,0.3s							
BRVK	**Borovoye**	**14.95**	**352**	Pn		**Pn**	**23 25 06.5**	**-1.7**
AKTO	**Aktyubinsk**	**16.48**	**322**	⇑P		**Pn**	**23 25 26.4**	**-0.6**
	comp=N,1.4nm,0.3s							
AKTO				⇓S		Sn	23 28 19.8	-11
	comp=N,2.2nm,0.9s							
AKTO	**Aktyubinsk**	**16.48**	**322**	Pn		**Pn**	**23 25 23.6**	**-3.5**
	comp=N,2.0nm,0.3s,baz=113,slow=5.1,SNR=22							
	comp=N,3.6nm,0.3s							
ZAA0	**Zalesovo Array**	**17.41**	**22**			**P**	**23 25 36.9**	**-0.6**
ZALV	**Zalesovo Beam**	**17.41**	**22**			**P**	**23 25 36.9**	**-0.6**
ZALV	**Zalesovo Beam**	**17.41**	**22**	P		**P**	**23 25 36.8**	**-0.7**
	comp=N,2.5nm,0.3s,baz=213,slow=9.5,SNR=38							
	comp=N,4.2nm,0.3s							
SHL	**Shillong**	**19.93**	**124**	P		**P**	**23 26 05.6**	**+0.2**
SHL				IAmb		IAmb	23 26 07.5	
	comp=Z,7.5nm,0.9s							

ZIRO	**ZIRO**	**19.99**	**117**	*eP*		**P**	**23 26 07.5**	**+1.5**
ARU	**Arti**	**20.75**	**336**	P		**P**	**23 26 14.1**	**+0.4**
ARU	**Arti**	**20.75**	**336**	P		**P**	**23 26 13.6**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=101,slow=10,SNR=9.6							
	comp=Z,2.3nm,0.3s							
KOHI	**KOHIMA**	**21.31**	**120**	*eP*		**P**	**23 26 21.6**	**+1.4**
IMP	**Imphal**	**21.80**	**122**	*eP*		**P**	**23 26 26.0**	**+0.8**
SAIH	**SAIHA**	**22.84**	**128**	*eP*		**P**	**23 26 37.2**	**+1.6**
ONI	**Oni**	**23.36**	**290**	P		**P**	**23 26 41.6**	**+1.5**
ONI				IAmb		IAmb	23 26 53.2	
	comp=Z,3.9nm,0.7s							
TNCH	**TengChong**	**24.83**	**115**	P		**P**	**23 26 57.8**	**+4.0**
TNCH				pmax		pmax		
	comp=Z,87nm,5.1s							
SONM	**Songino Array**	**25.55**	**58**	P		**P**	**23 26 59.9**	**-0.1**
SONM	**Songino Array**	**25.55**	**58**	P		**P**	**23 27 01.1**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=262,slow=8.6,SNR=4.9							
	comp=Z,0.3nm,0.4s							
FIA1	**FINESS Array S**	**37.24**	**324**	P		**P**	**23 28 43.0**	**+1.1**
FINES	**FINESS Array B**	**37.24**	**324**	P		**P**	**23 28 43.0**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=118,slow=9.8,SNR=48							
	comp=Z,1.7nm,0.3s							
ARCES	**ARCESS Array B**	**40.34**	**336**	P		**P**	**23 29 08.3**	**+0.6**
ARCES				IAmb		IAmb	23 29 28.2	
	comp=Z,7.7nm,1.1s							
ARCES	**ARCESS Array B**	**40.34**	**336**	P		**P**	**23 29 08.8**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=109,slow=8.4,SNR=26							
	comp=Z,1.1nm,0.3s							
HFS	**Hagfors**	**43.02**	**321**	P		**P**	**23 29 30.7**	**+1.1**
	comp=Z,2.9nm,0.4s,baz=98,slow=11,SNR=32							
	comp=Z,2.9nm,0.4s							
TIXI	**Tiksi**	**43.30**	**22**	P		**P**	**23 29 31.2**	**-0.4**
TIXI				IAmb		IAmb	23 29 33.0	
	comp=Z,2.4nm,0.5s							
NC303	**NORSAR Array S**	**44.20**	**322**	P		**P**	**23 29 40.1**	**+1.1**
NB2	**NORSAR Subarra**	**44.27**	**322**	P		**P**	**23 29 40.5**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**44.27**	**322**	P		**P**	**23 29 40.2**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=103,slow=7.3,SNR=6.1							
	comp=Z,0.5nm,0.3s							
SPITS	**Spitsbergen Ar**	**46.25**	**346**	P		**P**	**23 29 56.6**	**+1.6**
	comp=Z,12nm,1.1s,baz=124,slow=12,SNR=6.9							
	comp=Z,12nm,1.1s							
EKA	**Eskdalemuir Ar**	**52.51**	**315**	P		**P**	**23 30 43.1**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=74,slow=7.5,SNR=1.5							
	comp=Z,0.4nm,0.4s							
ESDC	**Sonseca Array**	**58.52**	**298**	P		**P**	**23 31 26.5**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=49,slow=6.3,SNR=1.6							
	comp=Z,0.2nm,0.5s							
TOA0	**Torodi Ar. Sit**	**67.90**	**270**	P		**P**	**23 32 28.6**	**+0.5**
TOA0				IAmb		IAmb	23 32 30.7	
	comp=Z,3.2nm,1.2s							
TORD	**Torodi Ar. Bea**	**67.90**	**270**	P		**P**	**23 32 28.5**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=46,slow=6.6,SNR=7.7							
IMAR	**Indian Mountai**	**69.80**	**19**	P		**P**	**23 32 39.2**	**+0.2**
J16K	**Anvik River**	**69.94**	**23**	P		**P**	**23 32 41.0**	**+1.1**
J16K				IAmb		IAmb	23 32 46.0	
	comp=Z,7.0nm,1.1s							
BMAR	**Burnt Mountain**	**70.67**	**15**	P		**P**	**23 32 45.8**	**+1.4**
J19K	**Poorman**	**70.86**	**21**	P		**P**	**23 32 46.5**	**+1.0**
J19K				IAmb		IAmb	23 32 49.4	
	comp=Z,5.8nm,1.4s							
K17K	**Iditarod**	**71.06**	**23**	P		**P**	**23 32 48.0**	**+1.3**
K17K				IAmb		IAmb	23 32 48.2	
	comp=Z,7.3nm,1.4s							
INK	**Inuvik**	**71.77**	**10**	P		**P**	**23 32 51.5**	**+0.6**
C36M	**Paulatuk**	**71.87**	**7**	P		**P**	**23 32 51.6**	**+0.2**
C36M				IAmb		IAmb	23 32 52.2	
	comp=Z,2.9nm,0.4s							
H29M	**Whitestone**	**72.91**	**13**	P		**P**	**23 32 58.6**	**+0.9**
H29M				IAmb		IAmb	23 33 09.6	
	comp=Z,6.0nm,1.4s							
SKT	**Skwentna**	**73.60**	**20**	P		**P**	**23 33 01.9**	**0.0**

WEL 14 23:48:02.0±0.4,39.°3S×17.°7E±.°,h32km±3km,M3.2/24, ML3.5/24,MLv3.2/24,Error ellipse: s-maj=0.0km s-min=0.0km az=135.1,confirmed,North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NMHZ	**Naumai**	**0.12**	**247**	P		Pb	23 48 09.2	+1.4
NMHZ				S		Sb	23 48 14.6	+2.9
RAHZ	**Arahi**	**0.17**	**40**	P		Pn	23 48 09.4	+0.9
RAHZ				S		Sn	23 48 15.5	+3.0
MTHZ	**Maungataniwha**	**0.21**	**338**	P		Pn	23 48 09.6	+0.5
MTHZ				S		Sn	23 48 15.5	+2.0
ARHZ	**Aropaoanui**	**0.22**	**169**	P		Pn	23 48 09.8	+0.8
ARHZ				S		Sn	23 48 16.2	+2.7
WHHZ	**Waihua**	**0.23**	**97**	P		Pn	23 48 10.2	+1.0
WHHZ				S		Sn	23 48 16.5	+2.7
BKZ	**Black Stump Fm**	**0.37**	**252**	P		Pn	23 48 11.3	+0.1
BKZ				S		Sn	23 48 18.3	+0.9
SNGZ	**Shannon Statio**	**0.41**	**49**	P		Pn	23 48 12.2	+0.4
SNGZ				S		Sn	23 48 20.2	+1.9
RTZ	**Ruatahuna**	**0.44**	**4**	P		Pn	23 48 12.4	+0.2
MCHZ	**McNeill Hill**	**0.44**	**206**	P		Pn	23 48 12.7	+0.6
MRHZ	**Matea Rd**	**0.46**	**298**	P		Pn	23 48 12.8	+0.3
KWHZ	**Kaweka Forest**	**0.55**	**227**	P		Pn	23 48 13.9	+0.2
KWHZ				S		Sn	23 48 23.0	+1.2
KNZ	**Kokohu**	**0.57**	**87**	P		Pn	23 48 13.9	0.0
MUGZ	**Murupara**	**0.59**	**347**	P		Pn	23 48 14.5	+0.3
MUGZ				S		Sn	23 48 23.8	+1.1
CKHZ	**Cape Kidnapper**	**0.61**	**170**	P		Pn	23 48 14.8	+0.3
RAGZ	**Rawiri**	**0.67**	**34**	P		Pn	23 48 16.0	+0.7
ALRZ	**Allen Road**	**0.68**	**316**	P		Pb	23 48 16.1	+0.7
HATZ	**Hinemaiaia**	**0.68**	**283**	P		Pb	23 48 16.0	+0.5
PRRZ	**Plateau Road**	**0.70**	**322**	P		Pb	23 48 16.2	+0.5
RIGZ	**Rimuhau**	**0.73**	**62**	P		Pb	23 48 16.4	+0.2
KRHZ	**Kereru**	**0.74**	**217**	P		Pb	23 48 16.5	0.0
KAHZ	**Kahuranaki**	**0.74**	**184**	P		Pb	23 48 16.8	+0.3
PRGZ	**Paritu Road**	**0.74**	**80**	P		Pn	23 48 16.4	+0.1
MHGZ	**Mahia Peninsul**	**0.76**	**98**	P		Pn	23 48 16.3	-0.1
RRRZ	**Republican Roa**	**0.79**	**335**	P		Pb	23 48 17.6	+0.4
URZ	**Urewera**	**0.80**	**9**	P		Pb	23 48 17.3	-0.2
WPRZ	**Whakapapatarin**	**0.81**	**311**	P		Pb	23 48 17.6	0.0
BHHZ	**Black Hill Sta**	**0.81**	**237**	P		Pb	23 48 17.8	+0.1
HRRZ	**Handcock Road**	**0.84**	**322**	P		Pb	23 48 18.2	+0.1
RITZ	**Rihia Road**	**0.85**	**275**	P		Pb	23 48 18.6	+0.3
MWZ	**Matawai**	**0.85**	**33**	P		Pb	23 48 18.4	0.0
WHTZ	**Whakaora**	**0.86**	**296**	P		Pb	23 48 19.1	+0.6
TARZ	**Mount Tarawera**	**0.88**	**337**	P		Pb	23 48 18.8	-0.1
HSRZ	**Hossack Road**	**0.92**	**323**	P		Pb	23 48 19.7	+0.2
HLRZ	**Highlands Stat**	**0.92**	**330**	P		Pb	23 48 19.9	+0.3
RATZ	**Rangitukua**	**0.93**	**281**	P		Pb	23 48 19.6	-0.1
TKGZ	**Te Karaka**	**0.94**	**49**	P		Pn	23 48 19.2	+0.3
EDRZ	**Edgecumbe**	**0.96**	**350**	P		Pb	23 48 19.8	-0.3
GRRZ	**Galatos Road**	**0.96**	**317**	P		Pb	23 48 20.6	+0.5
ETVZ	**East Tongariro**	**0.96**	**265**	P		Pb	23 48 20.0	-0.2
TMVZ	**Te Maari**	**0.97**	**266**	P		Pb	23 48 20.1	-0.2
KATZ	**Kakaramea**	**0.98**	**274**	P		Pb	23 48 20.2	-0.2
PXZ	**Pawanui**	**0.98**	**184**	P		Pn	23 48 19.0	-0.6
MKRZ	**Makatiti**	**0.98**	**338**	P		Pb	23 48 21.3	+0.7
NTVZ	**North Tongarir**	**0.99**	**267**	P		Pb	23 48 20.4	-0.3
MOVZ	**Moawhango**	**0.99**	**249**	P		Pb	23 48 20.5	-0.2
OTVZ	**Oturere**	**1.00**	**263**	P		Pb	23 48 20.6	-0.3
WATZ	**Wairara**	**1.00**	**290**	P		Pn	23 48 20.3	+0.4
KRVZ	**Karewarewa**	**1.01**	**267**	P		Pb	23 48 20.6	-0.5
SNVZ	**South Ngauruho**	**1.02**	**262**	P		Pb	23 48 21.0	-0.3
TUVZ	**Tukino**	**1.02**	**257**	P		Pb	23 48 21.2	-0.1
PNHZ	**Pukenui**	**1.04**	**214**	P		Pn	23 48 20.1	-0.2
NNVZ	**North Ngauruho**	**1.04**	**265**	P		Pb	23 48 21.2	-0.3
KUTZ	**Kaahu Road**	**1.04**	**302**	P		Pb	23 48 21.0	-0.4
NGZ	**Ngauruhoe**	**1.05**	**263**	P		Pb	23 48 21.4	-0.4
WTVZ	**West Tongariro**	**1.06**	**266**	P		Pb	23 48 21.4	-0.4
WHVZ	**Whangaehu Hut**	**1.08**	**257**	P		Pb	23 48 21.9	-0.4
WNVZ	**Wahianoa**	**1.08**	**255**	P		Pb	23 48 21.8	-0.4
WPHZ	**Waipukurau**	**1.08**	**201**	P		Pb	23 48 24.2	+1.9
MAVZ	**Matarangi**	**1.10**	**258**	P		Pb	23 48 22.1	-0.5
COVZ	**Chateau Observ**	**1.10**	**262**	P		Pb	23 48 22.0	-0.5
FWVZ	**Far West T-bar**	**1.10**	**259**	P		Pn	23 48 22.0	+0.6
TRVZ	**Turoa**	**1.11**	**257**	P		Pb	23 48 22.3	-0.5
CNGZ	**Carnagh Statio**	**1.14**	**61**	P		Pb	23 48 25.1	+2.0
TWVZ	**Taurewa**	**1.17**	**269**	P		Pn	23 48 22.6	+0.3
MTVZ	**Mangateitei**	**1.19**	**253**	P		Pb	23 48 23.4	-0.7
TWGZ	**Tauwhareparae**	**1.19**	**43**	P		Pb	23 48 23.9	-0.1
RUGZ	**Raukumara Rang**	**1.23**	**28**	P		Pn	23 48 23.6	+0.6
PRHZ	**Porangahau**	**1.24**	**191**	P		Pn	23 48 22.2	-0.9
TSZ	**Takapari Road**	**1.26**	**217**	P		Pn	23 48 23.2	-0.3
PKVZ	**Pokaka**	**1.26**	**259**	P		Pn	23 48 24.2	+0.7
TLZ	**Tolley Road**	**1.31**	**303**	P		Pn	23 48 24.4	+0.3
DVHZ	**Dannevirke**	**1.38**	**205**	P		Pb	23 48 30.6	+3.3
PUZ	**Puketiti**	**1.42**	**47**	P		Pb	23 48 29.8	+1.9
HAZ	**Te Kaha**	**1.45**	**27**	P		Pn	23 48 26.1	+0.1
PKGZ	**Pakihiroa**	**1.46**	**38**	P		Pb	23 48 28.4	-0.2
WAZ	**Wanganui**	**1.67**	**245**	P		Pb	23 48 35.2	+3.1
VRZ	**Vera Road**	**1.70**	**267**	P		Pn	23 48 30.5	+1.1
BFZ	**Birch Farm**	**1.71**	**198**	P		Pn	23 48 30.1	+0.5
MRZ	**Mangatainoka R**	**1.92**	**213**	P		Pb	23 48 35.3	-1.1
NEZ	**North Egmont**	**2.23**	**263**	P		Pb	23 48 39.5	-2.1
KHEZ	**Kahui Hut**	**2.29**	**263**	P		Pn	23 48 39.6	+2.0
PKE	**Pukeiti**	**2.30**	**266**	P		Pn	23 48 39.8	+2.1
OUZ	**Omahuta**	**4.67**	**324**	P		Pn	23 49 12.2	+2.0

IDC 14 23:50:04.2±6.2,48.°83S×125.°10E,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=337.1km s-min=74.6km az=95.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.11**	**326**	T		T	00 09 54.0	
	baz=153,slow=74,SNR=18							
H01W2	**Cape Leeuwin H**	**16.12**	**326**	T		T	00 09 52.3	
	baz=153,slow=74,SNR=18							
H01W3	**Cape Leeuwin H**	**16.13**	**326**	T		T	00 09 55.1	
	baz=153,slow=74,SNR=17							
ASAR	**Alice Springs**	**26.06**	**19**	P		P	23 55 39.4	0.0
	2.3nm,0.9s,baz=191,slow=9.6,SNR=13							
	2.3nm,0.9s							
WRA	**Warramunga Arr**	**29.77**	**18**	P		P	23 56 12.6	+0.1
	0.8nm,0.9s,baz=187,slow=8.9,SNR=2.8							
	0.8nm,0.9s							
YKA	**Yellowknife Ar**	**145.04**	**44**	PKPbc		PKPbc	00 09 40.7	-0.9
	0.2nm,0.3s,baz=265,slow=3.2,SNR=4.7							

IDC 14 23:51:04.6±8.0,17.°97S×177.°08W,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=347.2km s-min=41.1km az=142.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.86**	**259**	P		P	23 59 28.4	-0.7
	0.3nm,0.4s,baz=96,slow=7.1,SNR=7.5							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**45.99**	**254**	P		P	23 59 30.4	+0.4
	1.0nm,0.6s,baz=89,slow=8.9,SNR=13							
	1.0nm,0.6s							
ILAR	**Eielson Array**	**85.67**	**12**	P		P	00 03 44.9	0.0
	0.1nm,0.5s,baz=208,slow=3.6,SNR=1.6							
	0.1nm,0.5s							

*IDC **14** 23:58:51.5±0.5,34.°83N×87.°00E,h0km,mb4.5/25, mbtmp4.4/31,ML3.6/5,MS4.1/57,Error ellipse: s-maj=15.5km s-min=11.9km az=39.0*

*BJI **14** 23:58:52.4±0.0,34.°95N×86.°90E,h10km,mb4.3/50, mB5.0/35,ML4.3/3,Ms4.7/58,Ms7 4.4/53*

*MOS **14** 23:58:52.5±1.0,34.°85N×86.°91E,h18km,mb4.9/41, MS4.4/8,Error ellipse: s-maj=7.2km s-min=3.8km az=121.5*

*NEIC **14** 23:58:53.7±0.9,34.°88N±0.°07×86.°94E±0.°10,h10km±1km, mb4.7/

NIL	**Nilore**	**11.31**	**268**	P		**Pn**	**00 01 36.5**	**+1.1**
IMP	**Imphal**	**11.76**	**147**	*e*P		**Pn**	**00 01 42.1**	**+0.6**
ARLS	**Aral**	**12.04**	**309**	P		**Pn**	**00 01 47.0**	**+1.6**
AAK	**Ala-Archa**	**12.35**	**312**	Pn		**Pn**	**00 01 50.5**	**+0.8**
AAK	**Ala-Archa**	**12.35**	**312**⇓	*e*P		**Pn**	**00 01 51.4**	**+1.7**
AAK	**Ala-Archa**	**12.35**	**312**	Pn		**Pn**	**00 01 51.1**	**+1.4**
	comp=N,0.3nm,0.3s,baz=125,slow=14,SNR=8.7								
AAK				LR		LR	00 06 18.7		
	comp=N,414nm,19.9s,baz=178,slow=36								
	comp=N,2.6nm,0.7s								
FRU1	**Bishkek**	**12.37**	**313**	Pn		**Pn**	**00 01 49.9**	**+0.1**
FRU1	**Bishkek**	**12.37**	**313**	P		**Pn**	**00 01 49.9**	**+0.1**
MK31	**Makanchi Array**	**12.39**	**345**			**Pn**	**00 01 49.7**	**-0.3**
MK31	**Makanchi Array**	**12.39**	**345***c*	*i*P		**Pn**	**00 01 50.4**	**+0.4**
MKAR	**Makanchi Array**	**12.39**	**345**	Pn		**Pn**	**00 01 50.0**	**0.0**
MKAR	**Makanchi Array**	**12.39**	**345**	Pn		**Pn**	**00 01 50.5**	**+0.4**
	comp=N,1.1nm,0.3s,baz=148,slow=14,SNR=80								
	comp=N,26nm,0.9s								
MAKZ	**Makanchi**	**12.47**	**344**			**Pn**	**00 01 51.0**	**-0.1**
MAKZ	**Makanchi**	**12.47**	**344**	P		**Pn**	**00 01 51.0**	**-0.1**
ARSB	**Arslanbob**	**12.66**	**305**			**Pn**	**00 01 53.1**	**-0.8**
ARSB	**Arslanbob**	**12.66**	**305**	P		**Pn**	**00 01 53.1**	**-0.8**
SAIH	**SAIHA**	**13.47**	**155**	*e*P		**Pn**	**00 02 04.1**	**-0.9**
ARK	**Arkit**	**13.56**	**305**	P		**Pn**	**00 02 03.6**	**-2.5**
BTK	**Batken**	**13.73**	**297**			**Pn**	**00 02 07.3**	**-1.1**
BTK	**Batken**	**13.73**	**297**	P		**Pn**	**00 02 07.3**	**-1.1**
LZH	**Lanzhou**	**13.91**	**80**	⇑P		**Pn**	**00 02 12.6**	**+1.6**
LZH				sP		P	00 02 20.4	+1.1
LZH				pmax		pmax			
	comp=N,10.0nm,1.4s								
LZH				LR		LR			
	comp=N,1μm,9.3s								
LZH				LR		LR			
	comp=N,860nm,9.0s								
LZH				LR		LR			
	comp=N,720nm,9.6s								
TRKS	**Terek-Say**	**14.01**	**303**	P		**Pn**	**00 02 16.0**	**+3.7**
TNCH	**TengChong**	**14.09**	**131**	P		**Pn**	**00 02 13.8**	**+0.3**
TNCH				pP		P	00 02 16.8	-4.5
TNCH				PP		**PnPn**	**00 02 24.0**	**+2.5**
TNCH				pmax		pmax			
	comp=N,9.0nm,1.4s								
TNCH				pmax		pmax			
	comp=N,90nm,3.4s								
TNCH				LR		LR			
	comp=N,1μm,10.7s								
TNCH				LR		LR			
	comp=N,1μm,10.0s								
TNCH				LR		LR			
	comp=N,740nm,15.0s								
KBL	**Kabul**	**14.64**	**274**	Pn		**Pn**	**00 02 20.0**	**-1.1**
KBL	**Kabul**	**14.64**	**274**	P		**Pn**	**00 02 20.0**	**-1.1**
CD2	**Chengdu**	**14.75**	**101**	P		**Pn**	**00 02 22.0**	**-0.5**
CD2				PP		**PnPn**	**00 02 33.8**	**+3.5**
CD2				S		**Sn**	**00 05 05.3**	**-0.7**
CD2				SS		**S**	**00 05 24.0**	**-0.8**
CD2				pmax		pmax			
	comp=N,280nm,5.6s								
CD2				LR		LR			
	comp=N,2μm,9.2s								
CD2				LR		LR			
	comp=N,1μm,7.9s								
CD2				LR		LR			
	comp=N,1μm,9.5s								
SIMJ	**Simiganj**	**14.78**	**290**			**Pn**	**00 02 20.4**	**-2.5**
DGZ	**Jazzator, Alta**	**14.82**	**2***ce*	P		**Pn**	**00 02 22.7**	**-0.6**
KK31	**Karatay Array**	**15.10**	**308**			**Pn**	**00 02 27.6**	**+0.5**
KK31	**Karatay Array**	**15.10**	**308**	P		**Pn**	**00 02 27.6**	**+0.5**
KK31				pmax		pmax			
	comp=Z,20nm,1.2s								
KKAR	**Karatay Array**	**15.10**	**308**			**Pn**	**00 02 27.4**	**+0.4**
KKAR	**Karatay Array**	**15.10**	**308**			**Pn**	**00 02 27.6**	**+0.5**
KKAR				IAmb		IAmb	00 02 40.1		
	comp=Z,20nm,1.2s								
KKAR	**Karatay Array**	**15.10**	**308**	P		**Pn**	**00 02 27.6**	**+0.5**
KKAR				pmax		pmax			
	comp=Z,20nm,1.2s								
PZH	**PanZhiHua**	**15.29**	**119**	P		**Pn**	**00 02 29.6**	**-0.1**
PZH				S		**Sn**	**00 05 16.1**	**-3.1**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.8s								
PZH				pmax		pmax			
	comp=Z,80nm,3.9s								
PZH				LR		LR			
	comp=Z,840nm,7.8s								
PZH				LR		LR			
	comp=Z,2μm,9.2s								
PZH				LR		LR			
	comp=Z,2μm,8.0s								
KMI	**Kunming**	**16.84**	**121**	⇓P		**Pn**	**00 02 48.8**	**-1.0**
KMI				S		**Sn**	**00 05 59.5**	**+2.4**
KMI				pmax		pmax			
	comp=Z,15nm,1.0s								
KMI				pmax		pmax			
	comp=Z,260nm,5.4s								
KMI				LR		LR			
	comp=Z,3μm,13.1s								
KMI				LR		LR			
	comp=Z,2μm,14.0s								
KMI				LR		LR			
	comp=Z,970nm,8.4s								
KURBB	**Kurchatov Arra**	**16.86**	**341**	Pn		**Pn**	**00 02 48.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=154,slow=11,SNR=20								
KURBB				LR		LR	00 10 17.7		
	comp=Z,886nm,18.7s,baz=193,slow=40								
	comp=Z,7.5nm,0.9s								
KURK	**Kurchatov**	**16.92**	**342**	Pn		**Pn**	**00 02 48.7**	**-1.7**
KURK				IAmb		IAmb	00 02 57.4		
	comp=Z,76nm,1.4s								
KURK	**Kurchatov**	**16.92**	**342***ce*	P		**Pn**	**00 02 49.0**	**-1.4**
KURK				pmax		pmax			
	comp=Z,21nm,1.7s								
XAN	**Xi'an**	**18.23**	**86**	⇑P		**P**	**00 03 07.1**	**+0.1**
XAN				S		**S**	**00 06 32.3**	**-3.4**
XAN				pmax		pmax			
	comp=Z,13nm,0.9s								
XAN				pmax		pmax			
	comp=Z,540nm,7.1s								
XAN				LR		LR			
	comp=Z,2μm,17.4s								
XAN				LR		LR			
	comp=Z,890nm,19.6s								
XAN				LR		LR			
	comp=Z,680nm,13.7s								
CRAI	**Chiangrai**	**18.86**	**137**	P		**P**	**00 03 13.7**	**-0.4**
HYB	**Hyderabad**	**18.90**	**205**	*e*P		**P**	**00 03 15.0**	**+0.6**
HYB				*e*S		**S**	**00 06 50.7**	**+1.4**
HYB				IVMs_BB		IVMs_BB	00 12 45.0		
	comp=Z,578nm,6.2s								
GYA	**Guiyang**	**18.98**	**111**	⇑*i*P		**Pn**	**00 03 15.3**	**-0.8**
GYA				pP		pP	00 03 18.5	-1.2
GYA				S		**Sn**	**00 06 44.8**	**-4.0**
GYA				pmax		pmax			
	comp=Z,18nm,1.2s								
GYA				pmax		pmax			
	comp=Z,590nm,5.0s								
GYA				LR		LR			
	comp=Z,1μm,9.5s								
GYA				LR		LR			
	comp=Z,830nm,11.5s								
GYA				LR		LR			
	comp=Z,1μm,12.1s								
ZAA0	**Zalesovo Array**	**19.12**	**356**	P		**P**	**00 03 15.2**	**-1.4**
ZAA0				IAmb		IAmb	00 03 23.6		
	comp=Z,45nm,1.4s								
ZALV	**Zalesovo Beam**	**19.12**	**356**	P		**P**	**00 03 15.2**	**-1.4**
ZALV	**Zalesovo Beam**	**19.12**	**356**	*i* P		**P**	**00 03 16.2**	**-0.4**
ZALV				pmax		pmax			
	comp=Z,5.0nm,0.5s								
ZALV	**Zalesovo Beam**	**19.12**	**356**	P		**P**	**00 03 15.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=18								
	comp=Z,5.0nm,0.5s								
BTO	**Baotou**	**19.18**	**66**	*e*P		**P**	**00 03 15.3**	**-2.2**
BTO				pP		**Pn**	**00 03 18.9**	**+0.5**
BTO				sP		**sP**	**00 03 22.4**	**-1.3**
BTO				PP		**PnPn**	**00 03 31.8**	**+0.7**
BTO				S		**Sn**	**00 06 46.4**	**-7.0**
BTO				SS		**SnSn**	**00 07 08.3**	**+0.9**
BTO				pmax		pmax			
	comp=Z,14nm,1.9s								
BTO				pmax		pmax			
	comp=Z,670nm,8.2s								
BTO				LR		LR			
	comp=Z,13μm,17.9s								
BTO				LR		LR			
	comp=Z,1μm,18.4s								
BTO				LR		LR			
	comp=Z,3μm,14.0s								
CHTO	**Chiang Mai**	**19.28**	**143**	P		**P**	**00 03 17.7**	**-0.9**
CHTO	**Chiang Mai**	**19.28**	**143**	P		**P**	**00 03 17.7**	**-0.9**
CHTO				pmax		pmax			
	comp=Z,9.0nm,1.0s								
SONM	**Songino Array**	**19.50**	**42**	P		**P**	**00 03 19.6**	**-1.4**
SONM	**Songino Array**	**19.50**	**42**	P		**P**	**00 03 20.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=232,slow=8.8,SNR=28								
SONM				PcP		**PcP**	**00 07 40.8**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=175,slow=2.2,SNR=7.5								
SONM				LR		LR	00 11 26.0		
	comp=Z,548nm,21.5s,baz=224,slow=39								
	comp=Z,6.0nm,1.1s								
CM31	**Chiang Mai Arr**	**19.58**	**144**	P		**P**	**00 03 20.6**	**-1.3**
CMAR	**Chiang Mai Arr**	**19.58**	**144**	P		**P**	**00 03 20.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**19.58**	**144**	*i* P		**Pn**	**00 03 23.0**	**-0.2**
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**19.58**	**144**	P		**P**	**00 03 21.9**	**0.0**
	comp=Z,3.8nm,0.9s,baz=327,slow=10,SNR=29								
CMAR				LR		LR	00 11 19.7		
	comp=Z,335nm,20.5s,baz=315,slow=38								
ZAK	**Zakamensk**	**19.59**	**33**	*e*P		**P**	**00 03 22.0**	**+0.1**
ZAK				pmax		pmax			
	comp=Z,17nm,1.4s								
ENH	**Enshi**	**19.62**	**97**	P		**P**	**00 03 21.3**	**-1.0**
MOY	**Mondy**	**19.63**	**27**	*e*P		**Pn**	**00 03 24.0**	**+0.3**
MOY				pmax		pmax			
	comp=Z,58nm,1.7s								
ULN	**Ulaanbaatar**	**19.89**	**43**	P		**P**	**00 03 24.2**	**-1.0**
ULN	**Ulaanbaatar**	**19.89**	**43**	P		**P**	**00 03 24.2**	**-1.0**
ULN				pmax		pmax			
	comp=Z,13nm,1.3s								
SLVN	**Son La**	**20.18**	**128**	P		**P**	**00 03 27.1**	**-1.4**
HRA	**Herat**	**20.24**	**276**	P		**P**	**00 03 29.9**	**+0.7**
HRA				IAmb		IAmb	00 03 35.9		
	comp=Z,25nm,1.1s								
LYN	**LuoYang**	**21.06**	**84**	⇑P			00 03 38.8		
LYN				pP		sP	00 03 43.0	-1.1
LYN				sP		pP	00 03 45.8	+3.7
LYN				S		**S**	**00 07 31.6**	**-0.7**
LYN				sS		sS	00 07 38.8	-0.3
LYN				SS		**SnSn**	**00 07 56.8**	**+3.5**
LYN				pmax		pmax			
	comp=Z,24nm,1.4s								
LYN				pmax		pmax			
	comp=Z,520nm,4.3s								
LYN				LR		LR			
	comp=Z,1μm,11.8s								
LYN				LR		LR			
	comp=Z,510nm,16.7s								
LYN				LR		LR			
	comp=Z,360nm,8.3s								
BVAR	**Borovoye Array**	**21.57**	**332**	P		**P**	**00 03 44.5**	**+1.2**
	comp=Z,5.0nm,0.7s,baz=140,slow=12,SNR=14								
	comp=Z,5.0nm,0.7s								
BRVK	**Borovoye**	**21.64**	**332**	P		**P**	**00 03 44.0**	**+0.1**
BRVK				IAmb		IAmb	00 03 50.0		
	comp=Z,52nm,1.4s								
BRVK	**Borovoye**	**21.64**	**332***ce*	P		**P**	**00 03 45.3**	**+1.4**
BRVK				pmax		pmax			
	comp=Z,58nm,1.7s								
HNS	**HongShan**	**22.62**	**75**	⇑P		**P**	**00 03 55.1**	**+0.5**
HNS				pmax		pmax			
	comp=Z,16nm,1.1s								
HNS				LR		LR			
	comp=Z,1μm,15.5s								
HNS				LR		LR			
	comp=Z,310nm,12.7s								
HNS				LR		LR			
	comp=Z,430nm,11.5s								
GEYT	**Alibeck**	**23.28**	**286**	P		**P**	**00 04 01.6**	**+0.1**
GEYT	**Alibeck**	**23.28**	**286**	P		**P**	**00 04 01.6**	**+0.1**
GEYT				pmax		pmax			
	comp=Z,14nm,1.1s								
GEYT	**Alibeck**	**23.28**	**286**	P		**P**	**00 04 03.8**	**+2.3**
	comp=Z,6.5nm,0.9s,baz=96,slow=9.1,SNR=10								
	comp=Z,6.5nm,0.9s								
WHN	**Wuhan**	**23.52**	**93**	⇑P		**P**	**00 04 04.8**	**+0.9**
WHN				pP		**pP**	**00 04 07.9**	**-0.4**
WHN				S		**S**	**00 08 17.5**	**-0.2**
WHN				LR		LR			
	comp=Z,2μm,10.9s								
WHN				LR		LR			
	comp=Z,1μm,11.5s								
WHN				LR		LR			
	comp=Z,2μm,10.3s								
BJT	**Baijiatuau**	**23.79**	**69**	P		**P**	**00 04 05.4**	**-1.0**
BJT	**Baijiatuau**	**23.79**	**69**	P		**P**	**00 04 05.4**	**-1.0**
BJT				pmax		pmax			
	comp=Z,10.0nm,1.1s								
BJI	**Beijing**	**23.79**	**69**	P		**P**	**00 04 08.4**	**+1.9**
BJI				S		**S**	**00 08 26.4**	**+4.4**
BJI				pmax		pmax			
	comp=Z,5.0nm,1.0s								
BJI				LR		LR			
	comp=Z,980nm,17.4s								
BJI				LR		LR			
	comp=Z,240nm,16.8s								
BJI				LR		LR			
	comp=Z,380nm,13.5s								
XLT	**XiLinHaoTe**	**24.23**	**59**	*e*P		**P**	**00 04 11.6**	**+0.9**
XLT				pP		pP	00 04 15.4	+0.2
XLT				sP		sP	00 04 19.3	+2.2
XLT				pmax		pmax			
	comp=Z,13nm,1.4s								
XLT				pmax		pmax			
	comp=Z,240nm,6.0s								
XLT	**XiLinHaoTe**	**24.23**	**59**	*e*P		**P**	**00 04 11.8**	**+1.1**
XLT				pP		sP	00 04 15.8	-1.3
XLT				sP		pP	00 04 19.6	+4.4
XLT				PP		**PnPn**	**00 04 46.4**	**+6.3**
XLT				PcP		**PcP**	**00 07 56.1**	**+5.3**
XLT				S		**S**	**00 08 31.9**	**+2.8**
XLT				sS		sS	00 08 38.3	+1.8
XLT				pmax		pmax			
	comp=Z,7.0nm,1.0s								
XLT				pmax		pmax			
	comp=Z,240nm,6.4s								
XLT				LR		LR			
	comp=Z,140nm,15.3s								
XLT				LR		LR			
	comp=Z,860nm,10.2s								
XLT				LR		LR			
	comp=Z,920nm,10.6s								
ABKAR	**Akbulak array**	**24.43**	**314**	P		**P**	**00 04 12.7**	**+0.3**
ABKAR	**Akbulak array**	**24.43**	**314**	P		**P**	**00 04 12.3**	**-0.1**
TIA	**Tai'an**	**24.63**	**78**	P		**P**	**00 04 15.3**	**+1.0**
TIA				pmax		pmax			
	comp=Z,6.0nm,0.9s								
TIA				pmax		pmax			
	comp=Z,53nm,3.7s								
TIA				LR		LR			
	comp=Z,310nm,16.5s								
TIA				LR		LR			
	comp=Z,190nm,13.7s								
TIA				LR		LR			
	comp=Z,98nm,12.2s								
UBPT	**Khong Chiam**	**25.71**	**135**	P		**P**	**00 04 23.1**	**-1.1**
UBPT				IAmb		IAmb	00 04 24.9		
	comp=Z,26nm,1.1s								
QIZ	**Qiongzhong**	**25.79**	**122**	P		**P**	**00 04 26.8**	**+1.9**
QIZ				S		**S**	**00 08 53.4**	**-0.8**
QIZ				LR		LR			
	comp=Z,860nm,13.5s								
QIZ				LR		LR			
	comp=Z,640nm,16.0s								
QIZ				LR		LR			
	comp=Z,820nm,13.2s								
GZH	**Guangzhou**	**25.91**	**110**	P		**P**	**00 04 27.0**	**+1.0**
GZH				S		**S**	**00 08 57.8**	**+1.7**
GZH				SS		**SnSn**	**00 09 59.1**	**+6.7**
GZH				pmax		pmax			
	comp=Z,9.0nm,1.0s								
GZH				LR		LR			
	comp=Z,660nm,8.5s								
GZH				LR		LR			
	comp=Z,430nm,8.1s								
AKTO	**Aktyubinsk**	**26.07**	**315**	LR		LR	00 15 45.2		
	comp=Z,254nm,18.7s,baz=214,slow=39								
NJ2	**Nanjing**	**26.80**	**87**	*e*P		**P**	**00 04 32.1**	**-1.8**
NJ2				pmax		pmax			
	comp=Z,5.0nm,0.6s								
NJ2				LR		LR			
	comp=Z,360nm,10.4s								
NJ2				LR		LR			
	comp=Z,710nm,16.1s								
NJ2				LR		LR			
	comp=Z,400nm,10.9s								
PALK	**Pallekele**	**28.05**	**193**	LR		LR	00 16 28.2		
	comp=Z,164nm,21.3s,baz=119,slow=38								
SVE	**Sverdlovsk**	**28.23**	**329**	*e*P		**P**	**00 04 48.0**	**+1.5**
SVE				pmax		pmax			
	comp=Z,20nm,1.1s								
SVE				MLR		MLR			
	comp=Z,879nm,15.0s								
ARU	**Arti**	**28.89**	**327**	P		**P**	**00 04 52.5**	**+0.1**
ARU				IAmb		IAmb	00 04 57.4		
	comp=Z,11nm,1.1s								
ARU	**Arti**	**28.89**	**327***c*	*i*P		**P**	**00 04 52.3**	**-0.1**
ARU							00 05 39.7		
ARU				S		**S**	**00 09 43.5**	**+1.0**
ARU				pmax		pmax			
	comp=Z,8.0nm,1.1s								
ARU				MLR		MLR			
	comp=Z,1μm,16.0s								
ARU	**Arti**	**28.89**	**327**	LR		LR	00 17 24.0		
	comp=Z,532nm,18.7s,baz=121,slow=38								
LHMI	**Lhok Sumawe**	**30.95**	**160**	P		**P**	**00 05 10.9**	**-0.1**
MAK	**Makhachkala**	**31.42**	**297**	*e*P		P	00 05 09.9	-5.0
MAK				*e*S		**S**	**00 10 15.8**	**-6.6**
MAK				pmax		pmax			
	comp=Z,98nm,1.2s								
MAK				MLR		MLR			
	comp=Z,226nm,14.0s								
KULM	**Kulim**	**32.09**	**153**	P		**P**	**00 05 20.4**	**-0.6**
KULM				IAmb		IAmb	00 05 22.6		
	comp=Z,17nm,1.1s								
BNX	**BinXian**	**32.46**	**58**	⇑P		**P**	**00 05 22.3**	**-1.8**
BNX				pmax		pmax			
	comp=Z,8.0nm,1.0s								
BNX				pmax		pmax			
	comp=Z,160nm,3.4s								
BELG	**Belogornoye**	**32.84**	**314**	LR		LR	00 20 39.0		
	comp=Z,356nm,19.2s,baz=132,slow=40								
KSRS	**Korea Array**	**33.08**	**73**	LR		LR	00 19 28.1		
	comp=Z,188nm,18.4s,baz=275,slow=38								
HEH	**HeiHe**	**33.14**	**50**	*e*P		**P**	**00 05 30.3**	**+0.4**
HEH				pmax		pmax			
	comp=Z,4.0nm,0.9s								
HEH				pmax		pmax			
	comp=Z,270nm,4.7s								
HEH				LR		LR			
	comp=Z,560nm,9.4s								
HEH				LR		LR			
	comp=Z,2μm,10.2s								
HEH				LR		LR			
	comp=Z,2μm,10.1s								
PSI	**Prapat**	**33.84**	**158**	P		**P**	**00 05 35.4**	**-1.0**
PSI				pmax		pmax			
	comp=Z,18nm,1.2s								
ZEA	**Zeya**	**33.92**	**44**	*e*P		**P**	**00 05 38.6**	**+1.9**
ZEA				MLR		MLR			
	comp=E,600nm,9.0s								
ZEA				MLR		MLR			
	comp=Z,600nm,10.0s								
RPSI	**Rantau Prapat**	**33.94**	**158**	P		**P**	**00 05 35.4**	**-1.7**
RPSI				IAmb		IAmb	00 05 37.3		
	comp=Z,18nm,1.2s								
KIRV	**Kirov**	**34.22**	**326**⇑	*e*P		**P**	**00 05 40.0**	**+0.9**
KIRV	**Kirov**	**34.22**	**326**	LR		LR	00 20 40.8		
	comp=Z,364nm,18.9s,baz=122,slow=38								
ONI	**Oni**	**34.40**	**296**	P		**P**	**00 05 41.4**	**+0.3**
ONI				IAmb		IAmb	00 05 48.7		
	comp=Z,10nm,0.8s								
ONI	**Oni**	**34.40**	**296**	P		**P**	**00 05 41.4**	**+0.3**
ONI				pmax		pmax			
	comp=Z,11nm,0.8s								
AKH	**Akhalkalaki**	**34.43**	**294**	P		**P**	**00 05 41.5**	**+0.1**
AKH				IAmb		IAmb	00 05 48.5		
	comp=Z,18nm,1.1s								
AKH	**Akhalkalaki**	**34.43**	**294**	P		**P**	**00 05 41.5**	**+0.1**
AKH				pmax		pmax			
	comp=Z,18nm,1.1s								
NRIK	**Noril'sk**	**34.52**	**0**	P		**P**	**00 05 41.1**	**-0.6**
NRIK	**Noril'sk**	**34.52**	**0***de*	P		**P**	**00 05 41.9**	**+0.3**
NRIK				pmax		pmax			
	comp=Z,30nm,1.4s								
NRIK	**Noril'sk**	**34.52**	**0**	P		**P**	**00 05 41.2**	**-0.4**
	comp=Z,3.8nm,0.3s,baz=153,slow=6.5,SNR=16								
NRIK				LR		LR	00 21 12.9		
	comp=Z,619nm,20.3s,baz=188,slow=39								
	comp=Z,3.8nm,0.3s								
USA0B	**Ussuriysk Arra**	**35.66**	**61**⇑	*e*P		**P**	**00 05 50.2**	**-1.6**
USRK	**Ussuriysk Ar.**	**35.66**	**61**	P		**P**	**00 05 50.5**	**-1.3**
USRK	**Ussuriysk Ar.**	**35.66**	**61**	P		**P**	**00 05 51.2**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=258,slow=9.2,SNR=4.6								
USRK				LR		LR	00 21 12.0		
	comp=Z,321nm,20.6s,baz=270,slow=38								
	comp=Z,2.5nm,0.9s								
KLR	**Kul'dur**	**35.75**	**52***ce*	P		**P**	**00 05 53.3**	**+0.8**
KLR				pmax		pmax			
	comp=Z,8.0nm,1.3s								
KLR	**Kul'dur**	**35.75**	**52**	P		**P**	**00 05 51.7**	**-0.9**
	comp=Z,3.7nm,0.8s,baz=263,slow=10,SNR=12								
KLR				LR		LR	00 22 18.2		
	comp=Z,222nm,18.4s,baz=264,slow=39								
	comp=Z,3.7nm,0.8s								
JOW	**Kunigami**	**36.26**	**91**	LR		LR	00 21 28.9		
	comp=Z,278nm,20.5s,baz=348,slow=38								
JNU	**Nakatsue**	**36.34**	**80**	LR		LR	00 21 04.2		
	comp=Z,164nm,18.2s,baz=303,slow=37								
VORD	**Divnogorie**	**37.63**	**310**	*e*P		**P**	**00 06 06.0**	**-2.5**
VORD				pmax		pmax			
	comp=Z,10.0nm,1.2s								
VSR	**Storozhevoye**	**37.74**	**311**	*e*P		**P**	**00 06 07.1**	**-2.4**
VSR				pmax		pmax			
	comp=Z,9.0nm,1.5s								
LPSR	**Galich'ya Gora**	**38.07**	**313**	*e*P		**P**	**00 06 11.6**	**-0.6**
LPSR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
YAK	**Yakutsk**	**38.17**	**31**	P		**P**	**00 06 12.4**	**-0.5**
YAK				IAmb		IAmb	00 06 18.7		
	comp=Z,28nm,1.2s								
YAK	**Yakutsk**	**38.17**	**31**	P		**P**	**00 06 12.4**	**-0.5**
YAK				pmax		pmax			
	comp=Z,28nm,1.2s								
YAK	**Yakutsk**	**38.17**	**31**	LR		LR	00 21 23.1		
	comp=Z,263nm,18.0s,baz=249,slow=35								
MOS	**Moscow**	**39.36**	**318**	*e*P		**P**	**00 06 21.8**	**-1.2**
MOS				pmax		pmax			
	comp=Z,57nm,1.4s								
KLMR	**Klimovskoe**	**39.72**	**326**	*e*P		**P**	**00 06 24.7**	**-1.2**
KLMR				*e*			00 07 55.0		
KLMR				pmax		pmax			
	comp=Z,30nm,0.9s								
KLMR				MLR		MLR			
	comp=Z,1μm,17.0s								
OBN	**Obninsk**	**39.84**	**316**	*e*P		**P**	**00 06 26.8**	**-0.2**
OBN				*i*			00 06 38.1		
OBN				pmax		pmax			
	comp=Z,11nm,0.8s								
OBN				MLR		MLR			
	comp=Z,300nm,18.0s								
OBN	**Obninsk**	**39.84**	**316**	LR		LR	00 24 31.9		
	comp=Z,326nm,19.0s,baz=80,slow=38								
BR131	**Keskin Array S**	**

TIXI LR LR 00 25 18.1
comp=Z,368nm,19.7s,baz=237,slow=37
comp=Z,3.9nm,0.7s
YSS Yuzh-Sakhalins 43.09 56 *e*P **P 00 06 53.1 -0.6**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,500nm,12.0s
YSS MLR MLR
comp=E,300nm,17.0s
ASAJ Asahikawa 43.27 60 LR LR 00 26 28.0
comp=E,217nm,20.7s,baz=299,slow=38
EIL Elat 43.78 278 LR LR 00 29 09.4
comp=E,214nm,18.3s,baz=69,slow=41
AKASG Malin Array Be 44.00 309 *i* P **P 00 07 01.1 +0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 44.00 309 P **P 00 07 00.9 -0.2**
comp=Z,3.8nm,0.9s,baz=78,slow=6.4,SNR=5.4
AKASG LR LR 00 26 05.8
comp=Z,304nm,18.3s,baz=36,slow=37
comp=Z,3.8nm,0.9s
AKBB Malin Array Si 44.00 309 P **P 00 07 00.9 -0.2**
AKBB IAmb IAmb 00 07 06.2
comp=Z,13nm,1.1s
AKBB Malin Array Si 44.00 309 P **P 00 07 00.9 -0.2**
AKBB pmax pmax
comp=Z,13nm,1.1s
KIEV Kiev 44.01 309 ⇓P **P 00 07 01.7 +0.6**
KIEV Kiev 44.01 309 P **P 00 07 01.0 -0.1**
KIEV IAmb IAmb 00 07 06.1
comp=Z,12nm,1.1s
KIEV Kiev 44.01 309 P **P 00 07 01.0 -0.1**
KIEV pmax pmax
comp=Z,12nm,1.1s
LVZ Lovozero 44.14 335 P **P 00 07 02.8 +0.8**
LVZ Lovozero 44.14 335 P **P 00 07 02.8 +0.8**
LVZ pmax pmax
comp=Z,25nm,1.1s
SORM Soroca 44.72 306 ⇓P **P 00 07 07.0 +0.2**
MNK Minsk 44.79 315 *i* P **P 00 07 07.0 -0.3**
MNK *i* 00 08 48.6
MNK *i* 00 08 51.8
MNK *i* PPP PPP 00 09 29.2
MNK *i* S **S 00 13 45.2 +0.9**
MNK pmax pmax
comp=Z,11nm,0.8s
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK MLR MLR
comp=Z,200nm,16.0s
MNK MLR MLR
comp=E,55nm,16.0s
MNK MLR MLR
comp=N,164nm,16.0s
DAV Davao City (W) 45.08 119 LR LR 00 26 24.6
comp=N,193nm,18.8s,baz=341,slow=37
IDID Didziasalis 45.46 316 *e*P **P 00 07 13.5 +0.8**
VSU Vasula 45.60 320 *de*P **P 00 07 13.9 +0.2**
VSU pmax pmax
comp=Z,13nm,1.0s
VSU Vasula 45.60 320 *e*P **P 00 07 14.2 +0.5**
IIGN Ignalina 45.76 316 *e*P **P 00 07 18.6 +3.5**
ISAL Salakas 45.82 316 *e*P **P 00 07 18.8 +3.3**
LEM Lembang 45.89 151 LR LR 00 30 02.8
comp=Z,151nm,19.1s,baz=286,slow=41
PLOR Plostina 46.15 303 ⇑P **P 00 07 19.9 +1.6**
PLOR Plostina 46.15 303 P **P 00 07 19.9 +1.6**
FIA1 FINESS Array S 46.20 324 P **P 00 07 18.5 +0.1**
FINES FINESS Array B 46.20 324 P **P 00 07 18.2 -0.1**
FINES FINESS Array B 46.20 324 P **P 00 07 18.5 +0.1**
comp=Z,8.0nm,0.9s,baz=99,slow=8.3,SNR=25
FINES LR LR 00 28 10.2
comp=Z,478nm,18.0s,baz=159,slow=38
comp=Z,8.0nm,0.9s
TURR Turia 46.55 303 ⇓P **P 00 07 22.4 +0.9**
MLR Muntele Rosu 46.69 302 ⇑P **P 00 07 24.8 +2.1**
MLR Muntele Rosu 46.69 302 P **P 00 07 23.9 +1.2**
MLR Muntele Rosu 46.69 302 P **P 00 07 23.9 +1.2**
MLR pmax pmax
comp=Z,31nm,1.0s
MLR Muntele Rosu 46.69 302 LR LR 00 29 28.4
comp=Z,258nm,20.9s,baz=24,slow=39
BURAR Bucovina Array 46.88 305 ⇑P **P 00 07 24.1 0.0**
BURAR Bucovina Array 46.88 305 P **P 00 07 24.1 0.0**
BURAR IAmb IAmb 00 07 29.4
comp=Z,4.3nm,0.8s
BURAR Bucovina Array 46.88 305 P **P 00 07 24.1 0.0**
BURAR pmax pmax
comp=Z,4.0nm,0.9s
BUR08 Bucovina Ar. S 46.88 305 P **P 00 07 24.4 +0.2**
BUR08 IAmb IAmb 00 07 35.4
comp=Z,8.4nm,1.2s
MEF Metsahovi 46.91 323 *e*P **P 00 07 25.0 +1.1**
DOPR Dopca 47.00 303 ⇑P **P 00 07 26.5 +1.6**
PABE Paberze 47.04 316 P **P 00 07 25.1 0.0**
PABE Paberze 47.04 316 *e*P **P 00 07 26.1 +1.1**
VSVD Vaisvydziai 47.06 317 *e*P **P 00 07 25.9 +0.7**
MTSE Matsula 47.14 321 *e*P **P 00 07 26.9 +1.1**
ELND Elena 47.20 299 ⇑P **P 00 07 28.4 +1.9**
VOIR 47.32 302 ⇑P **P 00 07 28.5 +0.9**
VOIR 47.32 302 P **P 00 07 28.4 +0.9**
ARCR ARCALIA 47.53 305 ⇑P **P 00 07 30.6 +1.5**
SUW Suwalki 47.56 314 P **P 00 07 28.4 -0.7**
SUW Suwalki 47.56 314 *e*P **P 00 07 29.7 +0.6**
ARR Arges 47.62 302 ⇓P **P 00 07 31.4 +1.5**
MA2 Magadan 47.63 38 ⇓*e*P **P 00 07 29.2 -0.4**
MA2 pmax pmax
comp=Z,34nm,2.5s
MA2 Magadan 47.63 38 LR LR 00 28 36.0
comp=Z,245nm,19.2s,baz=274,slow=38
ARCES ARCESS Array B 47.81 335 P **P 00 07 31.4 +0.5**
comp=Z,7.9nm,1.0s,baz=142,slow=6.1,SNR=5.7
ARCES LR LR 00 29 15.6
comp=Z,304nm,18.6s,baz=162,slow=38
comp=Z,7.9nm,1.0s
KWP Kalwaria Pacla 48.26 308 P **P 00 07 35.2 +0.6**
KWP Kalwaria Pacla 48.26 308 P **P 00 07 35.3 +0.6**
KWP pmax pmax
comp=Z,33nm,1.1s
MARR Marisel-Cluj 48.44 304 ⇑P **P 00 07 37.6 +1.5**
SEY Seymchan 48.55 34 P **P 00 07 35.0 -1.7**
SEY Seymchan 48.55 34 P **P 00 07 35.0 -1.7**
comp=Z,1.1nm,0.6s,baz=259,slow=10,SNR=4.5
comp=Z,1.1nm,0.6s
DRGR 48.69 305 ⇑P **P 00 07 39.5 +1.3**
DRGR 48.69 305 P **P 00 07 39.6 +1.5**
DRGR pmax pmax
comp=Z,18nm,1.1s
GZR Gura Zlata 48.90 303 ⇓P **P 00 07 41.9 +2.1**
SURR Surduc 49.28 303 ⇑P **P 00 07 44.3 +1.8**
SIRR Siria 49.50 304 ⇑P **P 00 07 45.8 +1.5**
BZS Buzias 49.66 303 ⇑P **P 00 07 46.3 +0.8**
MDVR Moldovita 49.77 302 ⇑P **P 00 07 46.9 +0.5**
OJC Ojcow 50.04 309 P **P 00 07 48.6 +0.3**
OJC IAmb IAmb 00 07 53.8
comp=Z,9.0nm,0.8s
OJC Ojcow 50.04 309 P **P 00 07 48.6 +0.3**
OJC pmax pmax
comp=Z,9.0nm,0.8s
FRGS Fruska Gora 51.00 303 ⇓P **P 00 07 56.9 +1.2**
MORC Moravsky Berou 51.55 309 ⇑P **P 00 08 00.8 +1.1**
MORC Moravsky Berou 51.55 309 P **P 00 07 59.9 +0.2**
MORC IAmb IAmb 00 08 05.6
comp=Z,11nm,1.1s
MORC Moravsky Berou 51.55 309 *e*P **P 00 08 00.6 +0.9**
MORC *e* 00 08 04.2
MORC Moravsky Berou 51.55 309 P **P 00 07 59.9 +0.2**
MORC pmax pmax
comp=Z,11nm,1.1s
MORH Mrgy, Hungar 51.56 305 ⇑P **P 00 08 00.4 +0.6**
JAVC Velka Javorina 51.64 308 *e*P **P 00 08 02.3 +1.8**
PETK Petropavlovsk- 51.93 46 P **P 00 08 01.2 -1.2**
comp=Z,3.9nm,0.8s,baz=256,slow=8.6,SNR=2.5
comp=Z,3.9nm,0.8s
KRLC Kraliky 51.97 310 *e*P **P 00 08 03.9 +1.0**
KRLC Kraliky 51.97 310 *e*P **P 00 08 03.9 +1.0**
KSP Ksiaz 52.13 311 P P 00 08 09.0 +5.0
SPITS Spitsbergen Ar 52.14 346 P **P 00 08 03.9 +0.2**
comp=Z,16nm,1.1s,baz=101,slow=6.0,SNR=1.8
SPITS LR LR 00 33 23.9
comp=Z,221nm,18.5s,baz=128,slow=40
comp=Z,16nm,1.1s

DPC Dobruska-Polom 52.21 310 *e*P **P 00 08 05.6 +1.0**
DPC *ex* x 00 08 09.5
DPC Dobruska-Polom 52.21 310 *e*P **P 00 08 05.6 +1.0**
DPC *e* 00 08 09.5
OSTC Ostas 52.24 310 *e*P **P 00 08 05.6 +0.8**
OSTC *ex* x 00 08 09.6
OSTC Ostas 52.24 310 *e*P **P 00 08 05.6 +0.8**
OSTC *e* 00 08 09.6
VRAC Vranov 52.25 309 *e*P **P 00 08 05.8 +0.9**
VRAC *e* 00 08 09.5
VRAC Vranov 52.25 309 LR LR 00 31 36.4
comp=Z,272nm,19.2s,baz=296,slow=38
HFS Hagfors 52.26 323 P **P 00 08 04.8 +0.1**
comp=Z,8.0nm,0.7s,baz=82,slow=11,SNR=8.8
HFS LR LR 00 31 55.9
comp=Z,590nm,18.5s,baz=60,slow=38
comp=Z,8.0nm,0.7s
CHVC Chvalec 52.33 310 *e*P **P 00 08 06.3 +0.8**
CHVC Chvalec 52.33 310 *e*P **P 00 08 06.3 +0.8**
KRUC Moravsky 52.42 309 *e*P **P 00 08 07.2 +1.0**
KRUC *e* 00 08 10.7
RONA Rosalia, Austr 52.79 307 pP pP 00 08 12.8 -0.9
comp=Z,14nm,1.2s
CONA Conrad Observa 53.02 307 *e*P **P 00 08 10.3 -0.5**
comp=Z,16nm,1.0s
NB2 NORSAR Subarra 53.37 324 P **P 00 08 12.5 -0.5**
comp=Z,2.9nm,0.6s,baz=83,slow=7.4
NOA NORSAR Array B 53.37 324 P **P 00 08 12.7 -0.4**
comp=Z,6.5nm,0.8s,baz=79,slow=8.6,SNR=7.9
NOA LR LR 00 31 10.0
comp=Z,192nm,20.0s,baz=75,slow=36
comp=Z,6.5nm,0.8s
ARSA Arzberg 53.41 307 *e*pP **P 00 08 15.1 +1.6**
comp=Z,3.8nm,0.9s
PRU Pruhonice 53.41 310 *e*P **P 00 08 14.5 +1.1**
PRU *ex* x 00 08 18.1
PRU Pruhonice 53.41 310 *e*P **P 00 08 14.5 +1.1**
PRU *e* 00 08 18.1
BRG Berggiesshubel 53.59 311 *e*P **P 00 08 16.0 +1.2**
BRG Amp 00 08 20.3
comp=Z,5.8nm,1.0s
BRG Berggiesshubel 53.59 311 *e*P **P 00 08 15.9 +1.2**
BRG pmax pmax
comp=Z,6.0nm,1.0s
ZVC Zvikov 53.75 309 *e*P **P 00 08 17.0 +1.0**
ZVC *ex* x 00 08 20.7
CKRC Cesky Krumlov 53.82 309 *e*P **P 00 08 17.6 +1.1**
CKRC *ex* x 00 08 21.4
CKRC Cesky Krumlov 53.82 309 *e*P **P 00 08 17.6 +1.1**
CKRC *e* 00 08 21.4
SOKA Soboth 53.87 306 *e*P **P 00 08 17.4 +0.4**
comp=Z,14nm,0.9s
CLL Collm 54.07 312 *e*P **P 00 08 19.0 +0.8**
CLL *e**PP **pP 00 08 22.0 -1.0**
CLL Collm 54.07 312 *e*P **P 00 08 19.0 +0.8**
CLL *e*pP **pP 00 08 22.0 -1.0**
CLL *ex* x 00 08 39.0
MOA Molln 54.08 307 P **P 00 08 18.7 +0.3**
comp=Z,11nm,1.2s
GEC2 GERESS Array S 54.20 309 P **P 00 08 19.8 +0.4**
GERES GERESS Array B 54.20 309 P **P 00 08 20.2 +0.8**
comp=Z,8.5nm,0.9s,baz=68,slow=7.7,SNR=10
GERES LR LR 00 33 01.8
comp=Z,243nm,18.6s,baz=337,slow=38
comp=Z,8.5nm,0.9s
KHC Kasperske Hory 54.21 309 *e*P **P 00 08 19.4 0.0**
KHC *ex* x 00 08 24.0
KHC Kasperske Hory 54.21 309 *e*P **P 00 08 19.4 0.0**
KHC *e* 00 08 24.0
OBKA Obir 54.24 306 P **P 00 08 19.6 -0.1**
comp=Z,19nm,1.6s
BILL Bilibino 54.26 27 *e*P **P 00 08 20.3 +0.9**
BILL pmax pmax
comp=Z,6.0nm,1.3s
BIOA Bad Ischl, Aus 54.53 307 P **P 00 08 21.7 0.0**
comp=Z,9.0nm,1.2s
KBA Koelnbreinsper 54.89 307 P **P 00 08 23.0 -1.4**
comp=Z,4.6nm,1.0s
LESA Schwarzleotal 55.23 307 *e*pP pP 00 08 29.9 -1.8
comp=Z,16nm,1.2s
ABTA Abfaltersbach 55.53 307 P **P 00 08 27.7 -1.3**
comp=Z,9.0nm,1.2s
GRF Grafenberg Arr 55.56 310 *e*P **P 00 08 32.5 +3.3**
comp=Z,15nm,1.2s,baz=75,slow=6.0
WTTA Wattenberg 55.96 307 *e*pP **P 00 08 34.2 +2.0**
comp=Z,11nm,1.1s
SQTA Sankt Quirin 56.25 307 *e*P **P 00 08 33.9 -0.3**
comp=Z,6.2nm,0.7s
MOTA Mosalm 56.28 308 pP **P 00 08 37.3 +2.8**
comp=Z,13nm,1.1s
RETA Reutte 56.46 308 P **P 00 08 35.7 +0.1**
comp=Z,9.5nm,1.2s
FETA Feichten 56.62 307 *e*P **P 00 08 35.9 -1.0**
comp=Z,12nm,1.0s
DAVA Damuels 57.09 308 P **P 00 08 39.3 -0.9**
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 57.25 307 LR LR 00 36 20.1
comp=Z,363nm,19.5s,baz=76,slow=39
KMBO Kilima Mbogo 58.55 243 P **P 00 08 49.8 -1.2**
KMBO Kilima Mbogo 58.55 243 P **P 00 08 49.8 -1.2**
KMBO pmax pmax
comp=Z,4.0nm,1.2s
KEST Kesra 61.59 295 LR LR 00 41 25.9
comp=Z,188nm,18.1s,baz=301,slow=41
MBAR Mbarara 63.09 249 P **P 00 09 21.2 -0.6**
MBAR IAmb IAmb 00 09 22.6
comp=Z,4.0nm,0.8s
MBAR Mbarara 63.09 249 *ce*P **P 00 09 22.2 +0.4**
MBAR pmax pmax
comp=Z,9.0nm,1.7s
MBAR Mbarara 63.09 249 LR LR 00 37 49.2
comp=Z,63nm,18.8s,baz=39,slow=37
C16K Lisburne Hills 64.24 23 P **P 00 09 28.0 -0.4**
C16K IAmb IAmb 00 09 34.0
comp=Z,7.2nm,1.1s
NEEM North Greenlan 65.04 351 *i* P **P 00 09 32.2 -1.7**
NEEM IAmb IAmb 00 09 34.3
comp=Z,16nm,1.1s
E18K Tukpahlearik C 66.22 23 P **P 00 09 41.5 +0.3**
E18K IAmb IAmb 00 09 46.4
comp=Z,12nm,1.3s
D19K Kuna River 66.37 21 P **P 00 09 42.4 +0.1**
D19K IAmb IAmb 00 09 47.6
comp=Z,5.3nm,1.0s
SUMG Summit 66.44 344 *i* P **P 00 09 43.0 -0.1**
SUMG IAmb IAmb 00 09 48.0
comp=Z,2.9nm,0.7s
F17K Baldwin Pennin 66.55 24 P **P 00 09 44.4 +1.0**
H17K Granite Mounta 67.86 25 P **P 00 09 51.9 +0.1**
H17K IAmb IAmb 00 09 53.7
comp=Z,9.7nm,1.1s
ICESG Greenland Ices 69.16 342 *i* P **P 00 10 01.9 +1.7**
ICESG IAmb IAmb 00 10 05.0
comp=Z,8.7nm,0.8s
IMAR Indian Mountai 69.26 22 P **P 00 09 59.6 -0.9**
ESDC Sonseca Array 69.32 304 P **P 00 10 01.1 -0.4**
comp=Z,2.2nm,1.1s,baz=66,slow=4.8,SNR=4.5
ESDC LR LR 00 42 45.4
comp=Z,186nm,18.2s,baz=336,slow=38
comp=Z,2.2nm,1.1s
D27M Malcolm River 70.43 16 P **P 00 10 07.8 +0.1**
D27M IAmb IAmb 00 10 11.4
comp=Z,5.7nm,1.2s
WB0 Warramunga Arr 70.66 133 P **P 00 10 08.6 -1.1**
RES Resolute Bay 70.71 0 LR LR 00 44 45.2
comp=Z,162nm,18.7s,baz=14,slow=39
WRAB Tennant Creek 70.76 133 P **P 00 10 09.0 -1.3**
WRAB Tennant Creek 70.76 133 P **P 00 10 09.0 -1.3**
WRAB pmax pmax
comp=Z,20nm,1.2s
WRA Warramunga Arr 70.76 133 *i* P **P 00 10 09.6 -0.7**
WRA pmax pmax
comp=Z,10.0nm,1.2s
WRA Warramunga Arr 70.76 133 P **P 00 10 09.3 -1.0**
comp=Z,5.4nm,0.9s,baz=329,slow=5.9,SNR=18
comp=Z,5.4nm,0.9s
BMAR Burnt Mountain 70.90 19 P **P 00 10 11.1 +0.5**
A36M Sachs Harbour 71.08 10 P **P 00 10 11.1 -0.4**
CAST Castle Rocks 71.49 24 P **P 00 10 14.4 +0.2**
CAST IAmb IAmb 00 10 15.9
comp=Z,11nm,1.3s
NEA2 Nenana 71.65 22 P **P 00 10 14.8 -0.4**
E29M Blow River 71.80 16 P **P 00 10 16.2 +0.3**
E29M IAmb IAmb 00 10 20.8
comp=Z,6.7nm,0.9s

IL31 72.19 21 P **P 00 10 17.9 -0.4**
IL31 IAmb IAmb 00 10 18.4
comp=Z,9.9nm,1.3s
ILAR Eielson Array 72.19 21 P **P 00 10 17.7 -0.6**
ILAR Eielson Array 72.19 21 P **P 00 10 17.7 -0.6**
ILAR Eielson Array 72.19 21 P **P 00 10 17.3 -1.1**
comp=Z,2.4nm,1.0s,baz=306,slow=5.2,SNR=14
comp=Z,2.4nm,1.0s
SKT Skwentna 72.65 25 P **P 00 10 21.4 +0.2**
INK Inuvik 72.81 15 LR LR 00 46 06.7
comp=Z,90nm,19.1s,baz=350,slow=39
MDT Midelt 73.17 298 LR LR 00 50 21.9
comp=Z,113nm,18.1s,baz=353,slow=42
NWAO Narrogin (SRO) 73.23 154 LR LR 00 44 54.8
comp=Z,77nm,20.1s,baz=145,slow=38
AS31 Alice Springs 73.37 136 P **P 00 10 24.8 -1.1**
ASAR Alice Springs 73.37 136 P **P 00 10 24.8 -1.1**
comp=Z,4.6nm,0.9s,baz=319,slow=5.5,SNR=28
ASAR LR LR 00 45 43.8
comp=Z,53nm,19.6s,baz=318,slow=38
comp=Z,4.6nm,0.9s
C36M Paulatuk 73.62 11 P **P 00 10 25.9 -0.9**
SCRK Sand Creek 73.63 21 P **P 00 10 26.6 -0.5**
SCRK IAmb IAmb 00 10 31.3
comp=Z,7.0nm,1.1s
K27K Chicken 74.14 20 P **P 00 10 29.9 0.0**
K27K IAmb IAmb 00 10 35.6
comp=Z,11nm,1.2s
LSZ Lusaka 74.71 239 LR LR 00 43 57.4
comp=Z,67nm,19.0s,baz=358,slow=36
I30M Mount Dempster 74.71 17 P **P 00 10 32.7 -0.6**
I30M IAmb IAmb 00 10 33.7
comp=Z,5.9nm,0.8s
DAWY Dawson 74.86 19 P **P 00 10 33.5 -0.6**
DAWY IAmb IAmb 00 10 34.8
comp=Z,9.5nm,1.2s
BCAR Beaver Creek A 74.97 21 P **P 00 10 34.9 +0.1**
KDAK Kodiak Island 75.13 29 LR LR 00 46 57.6
comp=Z,282nm,21.1s,baz=331,slow=38
J30M Hart River 75.25 18 P **P 00 10 36.3 -0.2**
J30M IAmb IAmb 00 10 37.2
comp=Z,5.6nm,1.1s
BARN Barnard Glacie 76.56 22 P **P 00 10 44.6 +0.5**
BARN IAmb IAmb 00 11 11.8
comp=Z,13nm,1.4s
M31M Drury Creek, Y 77.70 18 P **P 00 10 49.9 -0.4**
M31M IAmb IAmb 00 10 54.9
comp=Z,12nm,1.2s
HYT Haines Junctio 77.99 20 P **P 00 10 51.6 -0.4**
HYT IAmb IAmb 00 10 57.6
comp=Z,8.2nm,1.0s
CTA Charters Tower 78.53 124 LR LR 00 48 14.8
comp=Z,29nm,20.7s,baz=268,slow=38
TOA0 Torodi Ar. Sit 78.67 278 P **P 00 10 55.5 -0.8**
TOA0 IAmb IAmb 00 11 09.3
comp=Z,7.3nm,1.4s
TORD Torodi Ar. Bea 78.67 278 P **P 00 10 55.9 -0.5**
comp=Z,14nm,0.4s,baz=49,slow=6.1,SNR=6.3
TORD LR LR 00 49 02.1
comp=Z,84nm,19.6s,baz=64,slow=38
comp=Z,14nm,0.4s
FRB Frobisher Bay 79.78 349 LR LR 00 49 54.7
comp=Z,160nm,20.8s,baz=15,slow=38
YKA Yellowknife Ar 81.44 10 *i* P **P 00 11 09.8 -0.7**
YKA pmax pmax
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 81.44 10 P **P 00 11 09.7 -0.9**
comp=Z,3.3nm,1.0s,baz=339,slow=5.2,SNR=19
YKA LR LR 00 51 22.1
comp=Z,88nm,19.9s,baz=21,slow=39
comp=Z,3.3nm,1.0s
DLBC Dease Lake 82.06 19 LR LR 00 50 22.4
comp=Z,133nm,19.6s,baz=312,slow=38
STKA Stephens Creek 84.00 136 P **P 00 11 21.8 -2.5**
comp=Z,4.0nm,0.8s,baz=278,slow=2.5,SNR=5.0
STKA LR LR 00 53 07.2
comp=Z,42nm,19.7s,baz=345,slow=39
comp=Z,4.0nm,0.8s
BOSA Boshof 85.83 231 P **P 00 11 32.9 -0.7**
BOSA Boshof 85.83 231 P **P 00 11 32.9 -0.7**
BOSA pmax pmax
comp=Z,13nm,1.3s
BOSA Boshof 85.83 231 P **P 00 11 33.1 -0.5**
comp=Z,3.9nm,0.9s,baz=0.0,slow=2.0,SNR=2.0
BOSA LR LR 00 46 58.8
comp=Z,72nm,21.0s,baz=18,slow=34
comp=Z,3.9nm,0.9s
DBIC Dimbokro 87.62 276 P **P 00 11 42.1 -0.5**
DBIC Dimbokro 87.62 276 P **P 00 11 42.1 -0.5**
DBIC pmax pmax
comp=Z,21nm,1.4s
DBIC Dimbokro 87.62 276 P **P 00 11 42.5 -0.1**
comp=Z,4.5nm,0.8s,baz=344,slow=4.5,SNR=4.3
DBIC LR LR 00 53 35.7
comp=Z,86nm,20.0s,baz=44,slow=37
comp=Z,4.5nm,0.8s
SCHQ Schefferville 87.82 345 LR LR 00 54 45.8
comp=Z,148nm,21.1s,baz=80,slow=38
SUR Sutherland 91.19 231 LR LR 00 51 44.2
comp=Z,71nm,19.5s,baz=26,slow=35
NEW Newport 94.50 16 LR LR 01 01 27.3
comp=Z,111nm,18.3s,baz=10,slow=40
ULM Lac du Bonnet 95.21 2 LR LR 00 59 43.3
comp=Z,124nm,18.0s,baz=28,slow=38
SADO Sadowa 99.71 350 LR LR 01 02 30.7
comp=Z,96nm,20.5s,baz=27,slow=38
CPUP Villa Florida 148.14 276 PKPbc **PKPbc 00 18 38.9 -1.1**
comp=Z,2.4nm,0.9s,baz=34,slow=5.0,SNR=3.3

IDC ***15*** *00:13:40.0±2.8,28°.18N×60°.93E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=80.0km s-min=26.0km az=152.0*
TEH ***15*** *00:13:45.8,28°.06N×61°.00E,h9km,ML3.6*
DSN ***15*** *00:13:54.5±1.2,27°.40N×60°.81E,h10km,ML3.2/9,Error ellipse: s-maj=30.1km s-min=11.6km az=155.0*
OMAN ***15*** *00:13:56.0±1.5,27°.37N×60°.75E,h10km,mb4.5/6, ml3.5/14,Error ellipse: s-maj=10.5km s-min=7.7km az=51.0*

ISC 15 00:13:44.6±0.7,27°.99N±0°.03×61°.00E±0°.04,h10km,n53, σ3s14/60,mb3.6/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRVN	**Saravan**	**1.37**	**115**	Pg	**Pg**	**00 14 14.2**	**+3.2**
CHBR	**Chabahar**	**2.43**	**191**	Pn	**Pb**	**00 14 28.7**	**+0.2**
KBAM	**BAM**	**2.52**	**298**	Pn	**Pb**	**00 14 29.4**	**-0.6**
NGCH	**Negor - Chabah**	**2.63**	**177**	Pn	**Pn**	**00 14 31.0**	**+3.9**
NGCH	**Negor - Chabah** SNR=89	**2.63**	**177**	P	**Pn**	**00 14 31.0**	**+3.9**
KHNJ	**Kahnooj**	**2.92**	**270**	Pn	**Pb**	**00 14 35.7**	**-1.1**
NHDN	**Nehbandan**	**3.49**	**346**	Pn	**Pn**	**00 14 41.9**	**+2.8**
JASK	**Jask - Hormozg**	**3.51**	**234**	Pn	Pn	00 14 44.4	+5.1
JASK	**Jask - Hormozg** SNR=121	**3.51**	**234**	P	Pn	00 14 44.8	+5.5
JASK				S	**Sn**	**00 15 23.4**	**+2.5**
KRM1	**Kerman Provinc**	**4.11**	**308**	Pn	**Pn**	**00 14 51.5**	**+3.8**
BANOM	**Banah**	**4.68**	**245**	P	**Pn**	**00 15 00.0**	**+4.7**
BANOM				S	**Sn**	**00 15 50.9**	**+1.1**
IKOO	**Kooshah**	**4.74**	**339**	Pn	**Pn**	**00 14 59.1**	**+2.7**
SHME	**Shamm** SNR=8.4	**4.75**	**247**	*i* P	Pn	00 15 01.1	+4.8
SHME	**Shamm** SNR=8.5	**4.75**	**247**	P	Pn	00 15 01.1	+4.8
SHME				S	**Sn**	**00 15 52.4**	**+1.0**
MDH	**Madha** SNR=26	**4.99**	**239**	*i* P	**Pn**	**00 15 02.7**	**+3.1**
MDH	**Madha** SNR=26	**4.99**	**239**	P	**Pn**	**00 15 02.8**	**+3.1**
MDH				S	**Sn**	**00 15 54.8**	**-2.6**
MASF	**Masafi** SNR=5.6	**5.06**	**240**	P	**Pn**	**00 15 03.7**	**+3.1**
MASF				S	**Sn**	**00 15 56.7**	**-2.5**
MSFE	**Esma-Masafi** SNR=8.5	**5.07**	**240**	*i* P	**Pn**	**00 15 03.9**	**+3.2**
BIDO	**Bidbid** SNR=7.1	**5.15**	**211**	P	**Pn**	**00 15 04.6**	**+2.7**
BIDO				S	**Sn**	**00 15 57.8**	**-3.6**
UOSS	**Minazif** SNR=14	**5.26**	**236**	*i* P	**Pn**	**00 15 05.9**	**+2.5**
UOSS	**Minazif**	**5.26**	**236**	P	**Pn**	**00 15 05.9**	**+2.5**
UOSS				S	**Sn**	**00 16 00.7**	**-3.5**
HATD	**Hatta, Dubai**	**5.39**	**235**	P	**Pn**	**00 15 07.9**	**+2.8**
HATD	**Hatta, Dubai**	**5.39**	**235**	P	**Pn**	**00 15 07.8**	**+2.8**
HATD				S	**Sn**	**00 16 03.5**	**-3.7**

SNR=7.4
HOQ Hoqain 5.51 218 P **Pn** **00 15 09.1 +2.3**
SNR=22
HOQ S **Sn** **00 16 06.6 -3.7**
ASHO Ashiyiah 5.53 235 *i* P **Pn** **00 15 10.9 +3.8**
SNR=20
ASHO Ashiyiah 5.53 235 P **Pn** **00 15 10.3 +3.3**
SNR=20
SOHO SOHO 5.56 227 P **Pn** **00 15 10.0 +2.5**
SOHO SOHO 5.56 227 P **Pn** **00 15 10.0 +2.5**
SOHO S **Sn** **00 16 08.0 -3.5**
SMDO Samad 5.59 209 P **Pn** **00 15 11.5 +3.5**
SNR=10
SMDO S **Sn** **00 16 09.9 -2.5**
NAZ Nazwa, Dubai 5.64 239 P **Pn** **00 15 13.3 +4.7**
NAZ Nazwa, Dubai 5.64 239 P Pn 00 15 14.7 +6.1
NAZ S **Sn** **00 16 14.2 +0.7**
WBK Wadi Bani Khal 5.67 199 P **Pn** **00 15 10.7 +1.8**
SNR=10.0
WBK S **Sn** **00 16 10.4 -3.7**
FAQ Al Faqa, Dubai 5.83 238 *i* P **Pn** **00 15 14.8 +3.6**
SNR=13
FAQ Al Faqa, Dubai 5.83 238 P Pn 00 15 16.9 +5.7
SNR=13
FAQ S **Sn** **00 16 19.5 +1.4**
JLN Jalan Bani Buh 5.99 194 S **Sn** **00 16 18.6 -3.6**
ASUD Al Ashush, Dub 6.10 238 *i* P Pn 00 15 19.9 +5.1
SNR=42
ASUD S **Sn** **00 16 24.5 -0.1**
ASUD Al Ashush, Dub 6.10 238 P Pn 00 15 20.8 +6.0
SNR=42
ASUD S **Sn** **00 16 25.2 +0.6**
ALNE Al Ain 6.14 231 *i* P **Pn** **00 15 19.1 +3.7**
SNR=9.8
ALNE Al Ain 6.14 231 P Pn 00 15 20.8 +5.4
SNR=9.8
ALNE S **Sn** **00 16 26.5 +0.7**
ARQ Araqi 6.15 222 P Pn 00 15 21.0 +5.3
SNR=68
JMDO Jabal Madar 6.18 206 P **Pn** **00 15 20.0 +4.0**
SNR=32
TPRV Parvadeh(Tabas 6.25 324 Pn **Pn** **00 15 20.5 +3.5**
BSY Bisya 6.26 214 P Pn 00 15 21.9 +4.8
SNR=23
TKDS Koohdasht(Taba 6.52 330 Pn **Pn** **00 15 24.2 +3.4**
UMZA Um Al Zommool 7.45 226 P **Pn** **00 15 37.1 +3.7**
UMZA S **Sn** **00 16 56.4 -1.7**
MHTO MHTO 7.50 202 P **Pn** **00 15 37.7 +3.5**
MHTO S **Sn** **00 16 56.1 -3.3**
MZWR Madinat Zayed 7.67 238 P **Pn** **00 15 41.0 +4.5**
MZWR S **Sn** **00 17 00.6 -2.9**
MKAR Makanchi Array 25.13 36 P **P** **00 19 05.6 -4.1**
0.2nm,0.3s,baz=217,slow=8.8,SNR=11
0.2nm,0.3s
KURBB Kurchatov Arra 26.23 26 P **P** **00 19 15.6 -4.0**
0.5nm,0.8s,baz=221,slow=8.6,SNR=8.3
0.5nm,0.8s
ZALV Zalesovo Beam 31.26 27 P P 00 19 59.7 -4.7
1.1nm,0.4s,baz=239,slow=9.5,SNR=8.7
1.1nm,0.4s
SONM Songino Array 40.23 48 P **P** **00 21 18.1 -3.5**
0.2nm,0.4s,baz=263,slow=8.8,SNR=2.0
0.2nm,0.4s
FINES FINESS Array B 40.72 335 P P 00 21 20.6 -4.7
6.2nm,1.3s,baz=143,slow=8.3,SNR=2.0
6.2nm,1.3s
TORD Torodi Ar. Bea 56.96 268 P **P** **00 23 27.1 -3.5**
0.6nm,0.4s,baz=46,slow=6.3,SNR=6.1

*CNRM **15** 00:23:18.1,35˚.21N×5˚.02W, h82km, ML1.7*
*SFS **15** 00:23:18.9,35˚.40N×5˚.01W, h82km, ML3.2/12, MLv3.2/12*
*MDD **15** 00:23:19.9±0.5,35˚.42N×5˚.05W, h74km±10km, Mb3.3/5, Error ellipse: s-maj=4.7km s-min=3.0km az=164.0*
*INMG **15** 00:23:20.5±1.4,35˚.48N×5˚.08W, h62km±7km, ML1.9, Error ellipse: s-maj=4.0km s-min=3.2km az=146.0*
*IGIL **15** 00:23:20.4,35˚.42N×5˚.05W, h57km, ML1.4*
ISC 15 00:23:16.3±1.3, 35˚33N±0˚.03×5˚02W±0˚.03, h97km±8km, n67, σ1°68/114, 5C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SMIR	**Smir Dam**	**0.46**	**320**	P			**Pn**	**00 23 33.2**	**+1.7**
SMIR	**Smir Dam**	**0.46**	**320**	S			**Sn**	**00 23 44.4**	**+1.7**
CEU	**Ceuta**	**0.64**	**333**	P			**Pn**	**00 23 34.3**	**+1.5**
RSA	**Sarsar**	**0.79**	**236**	P			**Pn**	**00 23 34.4**	**0.0**
RSA	**Sarsar**	**0.79**	**236**	S			**Sn**	**00 23 46.5**	**-1.4**
PALE	**Palemas**	**0.89**	**97**	P			**Pn**	**00 23 36.3**	**+0.9**
PALE	**Palemas**	**0.89**	**97**	S			**Sn**	**00 23 48.9**	**-0.8**
EJIF	**Jimena Fronter**	**1.18**	**342**	P			**Pn**	**00 23 41.0**	**+2.5**
EJIF				S			**Sn**	**00 23 51.7**	**-3.5**
EMIJ	**Mijas**	**1.25**	**9**	P			**Pn**	**00 23 39.2**	**-0.1**
EMIJ				S			**Sn**	**00 23 54.8**	**-2.0**
EMIJ	**Mijas**	**1.25**	**9**	P			**Pn**	**00 23 39.5**	**+0.1**
EMIJ				S			**Sn**	**00 23 54.7**	**-2.1**
EMAL	**Malaga-Limoner**	**1.51**	**18**	S			**Sn**	**00 24 00.0**	**-2.2**
EMAL				P			**Pn**	**00 23 43.6**	**+1.1**
LCRM	**LCR**	**1.65**	**175**	P			**Pn**	**00 23 45.3**	**+1.0**
GOG	**Mont Gurugu**	**1.66**	**93**	P			**Pn**	**00 23 45.8**	**+1.3**
ESPR	**Espera**	**1.68**	**337**	P			**Pn**	**00 23 44.9**	**+0.4**
ESPR				S			**Sn**	**00 24 05.7**	**-0.4**
ESPR	**Espera**	**1.68**	**337**	P			**Pn**	**00 23 45.2**	**+0.6**
ESPR				S			**Sn**	**00 24 04.8**	**-1.3**
ELGU	**Los Guajares,**	**1.91**	**36**	P			**Pn**	**00 23 47.9**	**+0.4**
ELGU				S			**Sn**	**00 24 09.1**	**-2.3**
ELGU	**Los Guajares,**	**1.91**	**36**	P			**Pn**	**00 23 48.3**	**+0.8**
ELGU				S			**Sn**	**00 24 10.5**	**-1.0**
EGOR	**Sierra Gorda,**	**1.92**	**22**	S			**Sn**	**00 24 09.4**	**-2.5**
EGOR	**Sierra Gorda,**	**1.92**	**22**	P			**Pn**	**00 23 49.3**	**+1.5**
EGOR				S			**Sn**	**00 24 10.7**	**-1.2**
JBK	**JBK**	**2.25**	**115**	P			**Pn**	**00 23 52.0**	**-0.2**
ZHG	**ZHG**	**2.31**	**216**	P			**Pn**	**00 23 54.8**	**+2.0**
EBER	**Berja**	**2.33**	**47**	P			**Pn**	**00 23 54.8**	**+1.6**
EBER				S			**Sn**	**00 24 21.2**	**-0.3**
MD31	**MD31**	**2.47**	**175**	P			**Pn**	**00 23 56.1**	**+1.1**
MDT	**Midelt**	**2.53**	**172**	P			**Pn**	**00 23 56.3**	**+0.5**
MDT	**Midelt**	**2.53**	**172**	S			**Sn**	**00 24 24.6**	**-1.6**
ECAB	**El Cabril**	**2.76**	**353**	S			**Sn**	**00 24 29.1**	**-2.3**
ECAB				P			**Pn**	**00 24 00.7**	**+2.0**
ECAB	**El Cabril**	**2.76**	**353**	P			**Pn**	**00 23 59.7**	**+1.0**
ECAB				⇑*i*Vmb_V				00 24 01.5	
	107nm,SNR=1.5								
ECAB				S			**Sn**	**00 24 29.0**	**-2.3**
EADA	**Adamuz**	**2.85**	**7**	P			**Pn**	**00 24 00.9**	**+0.9**
EADA				S			**Sn**	**00 24 32.6**	**-1.1**
EADA	**Adamuz**	**2.85**	**7**	P			**Pn**	**00 24 01.4**	**+1.4**
EADA				⇑*i*Vmb_V				00 24 04.3	
	106nm,SNR=1.0								
EADA				S			**Sn**	**00 24 32.5**	**-1.1**
EQES	**Quesada**	**2.93**	**32**	P			**Pn**	**00 24 04.5**	**+3.5**
EQES				S			**Sn**	**00 24 35.8**	**+0.3**
EGRO	**El Granado**	**2.96**	**319**	P			**Pn**	**00 24 02.3**	**+0.9**
EGRO				S			**Sn**	**00 24 34.3**	**-1.9**
EGRO	**El Granado**	**2.96**	**319**	P			**Pn**	**00 24 02.7**	**+1.3**
EGRO				⇑*i*Vmb_V				00 24 03.4	
	500nm,SNR=6.2								
EGRO				S			**Sn**	**00 24 34.8**	**-1.3**
PVAQ	**Vaqueiros**	**3.00**	**314**	*e*P			**Pn**	**00 24 03.3**	**+1.4**
PVAQ				*e*S			**Sn**	**00 24 35.7**	**-1.4**
PBDV	**Barranco-do-Ve**	**3.03**	**310**	*e*P			**Pn**	**00 24 03.6**	**+1.3**
PBDV				*e*S			**Sn**	**00 24 36.5**	**-1.3**
PBDV				A			A	00 24 42.3	
	1.7nm,0.9s								
PBDV	**Barranco-do-Ve**	**3.03**	**310**	P			**Pn**	**00 24 03.0**	**+0.7**
PBDV				S			**Sn**	**00 24 36.0**	**-1.8**
PBAR	**Barrancos**	**3.27**	**331**	*e*P			**Pn**	**00 24 06.8**	**+1.3**
PBAR				*e*S			**Sn**	**00 24 42.1**	**-1.4**
PBAR				A			A	00 24 44.4	
	2.4nm,0.2s								
PBAR	**Barrancos**	**3.27**	**331**	P			**Pn**	**00 24 06.3**	**+0.8**
PBAR				S			**Sn**	**00 24 41.2**	**-2.3**
PCVE	**Castro Verde**	**3.34**	**314**	*e*P			**Pn**	**00 24 07.8**	**+1.2**
PCVE				*e*S			**Sn**	**00 24 44.3**	**-1.1**
PCVE				A			A	00 24 47.0	
	2.1nm,0.5s								
PCVE	**Castro Verde**	**3.34**	**314**	P			**Pn**	**00 24 07.7**	**+1.2**
PCVE				S			**Sn**	**00 24 43.7**	**-1.7**
PBEJ	**Beja**	**3.53**	**320**	*e*P			**Pn**	**00 24 10.6**	**+1.6**
PBEJ				*e*S			**Sn**	**00 24 48.2**	**-1.7**
PBEJ				A			A	00 24 50.9	
	2.3nm,0.7s								
MORF	**Marmelete**	**3.53**	**305**	*e*P			**Pn**	**00 24 10.9**	**+1.8**
MORF				*e*S			**Sn**	**00 24 49.0**	**-1.0**
MORF				A			A	00 24 50.4	
	2.4nm,0.4s								
MORF	**Marmelete**	**3.53**	**305**	*e*P			**Pn**	**00 24 10.5**	**+1.4**
PFVI	**Vila Bisbo**	**3.56**	**301**	*e*P			**Pn**	**00 24 11.0**	**+1.5**
PFVI				*e*S			**Sn**	**00 24 49.0**	**-1.6**
PFVI				A			A	00 24 53.6	
	5.3nm,1.0s								
PFVI	**Vila Bisbo**	**3.56**	**301**	P			**Pn**	**00 24 10.4**	**+0.9**
PFVI				S			**Sn**	**00 24 48.3**	**-2.3**
PFVI	**Vila Bisbo**	**3.56**	**301**	P			**Pn**	**00 24 10.7**	**+1.3**
MESJ	**Messejana**	**3.59**	**315**	*e*P			**Pn**	**00 24 11.3**	**+1.4**
MESJ				*e*S			**Sn**	**00 24 49.9**	**-1.4**
MESJ				A			A	00 24 53.4	
	3.9nm,0.7s								
MESJ	**Messejana**	**3.59**	**315**	*e*P			**Pn**	**00 24 11.2**	**+1.4**
MESJ				*e*S			**Sn**	**00 24 48.0**	**-3.3**
MESJ				IAML				00 24 50.6	
	comp=N,1.0nm,0.1s								
PSIM	**Granatula de C**	**3.63**	**16**	P			**Pn**	**00 24 12.0**	**+1.6**
PSIM				S			**Sn**	**00 24 50.6**	**-1.6**
PTEO	**Sao Teotonio**	**3.71**	**308**	*e*P			**Pn**	**00 24 13.1**	**+1.6**
PTEO				*e*S			**Sn**	**00 24 53.0**	**-1.3**
EBAD	**Badajoz**	**3.77**	**336**	P			**Pn**	**00 24 14.0**	**+1.7**
EBAD				S			**Sn**	**00 24 54.0**	**-1.6**
EBAD	**Badajoz**	**3.77**	**336**	P			**Pn**	**00 24 14.0**	**+1.7**
EBAD				⇑*i*Vmb_V				00 24 14.5	
	comp=N,750nm,SNR=6.9								
EBAD				S			**Sn**	**00 24 54.1**	**-1.6**
PNCL	**Nicolau / Gran**	**3.96**	**316**	*e*P			**Pn**	**00 24 16.2**	**+1.5**
PNCL				*e*S			**Sn**	**00 24 58.6**	**-1.5**
PNCL				A			A	00 25 01.0	
	comp=N,1.7nm,0.3s								
PNCL	**Nicolau / Gran**	**3.96**	**316**	P			**Pn**	**00 24 15.8**	**+1.1**
PNCL				S			**Sn**	**00 24 58.4**	**-1.7**
EVO	**Evora**	**3.99**	**324**	*e*P			**Pn**	**00 24 17.1**	**+1.8**
EVO				*e*S			**Sn**	**00 24 59.7**	**-1.3**
EVO				A			A	00 25 00.8	
	comp=N,2.1nm,0.3s								
EVO	**Evora**	**3.99**	**324**	P			**Pn**	**00 24 16.7**	**+1.4**
EVO				S			**Sn**	**00 24 59.2**	**-1.9**
PESTR	**Estremoz**	**4.08**	**331**	*e*P			**Pn**	**00 24 18.4**	**+1.9**
PESTR				*e*S			**Sn**	**00 25 01.0**	**-2.2**
PESTR	**Estremoz**	**4.08**	**331**	P			**Pn**	**00 24 18.0**	**+1.4**
PESTR				S			**Sn**	**00 25 00.6**	**-2.7**
PAB	**San Pablo**	**4.24**	**7**	P			**Pn**	**00 24 19.8**	**+1.1**
PAB				S			**Sn**	**00 25 04.3**	**-2.8**
PMRV	**Marv??o**	**4.50**	**336**	*e*P			**Pn**	**00 24 24.1**	**+1.9**
PMRV				*e*S			**Sn**	**00 25 12.0**	**-1.4**
EPLA	**Plasencia**	**4.80**	**350**	P			**Pn**	**00 24 27.8**	**+1.6**
EPLA				⇑*i*Vmb_V				00 24 30.2	
	comp=N,130nm,SNR=1.2								
EPLA				S			**Sn**	**00 25 18.6**	**-2.0**
PCBR	**Castelo Branco**	**4.91**	**337**	*e*P			**Pn**	**00 24 29.8**	**+2.2**
PCBR				*e*S			**Sn**	**00 25 20.9**	**-2.2**
PSBE	**So Bento**	**5.14**	**325**	*e*P			**Pn**	**00 24 33.4**	**+2.5**
MTE	**Manteigas**	**5.44**	**339**	*e*P			**Pn**	**00 24 37.0**	**+2.1**
PCAS	**Casmilo, Conde**	**5.46**	**331**	*e*P			**Pn**	**00 24 37.3**	**+2.1**
PVIS	**Viseu**	**5.83**	**338**	*e*P			**Pn**	**00 24 43.0**	**+2.7**
PVIS				*e*S			**Sn**	**00 25 44.7**	**-1.1**
MVO	**Moncorvo**	**6.04**	**345**	*e*P			**Pn**	**00 24 45.2**	**+2.2**
MVO				*e*S			**Sn**	**00 25 49.4**	**-1.3**
PVRL	**Vila Real**	**6.30**	**341**	*e*P			**Pn**	**00 24 48.7**	**+2.1**
PVRL				*e*S			**Sn**	**00 25 55.8**	**-1.4**

*IDC **15** 00:29:37.4±1.5, 68˚.26N×18˚.84W, h0km, mb3.5/3, mbtmp3.6/4, ML2.9/1, MS3.7/7, Error ellipse: s-maj=82.9km s-min=23.5km az=23.0*
ISC 15 00:29:38.2±1.8, 68˚.3N±0˚.3×18˚.9W±0˚.2, h10km, n10, σ0°28/4, MS3.6/6, Iceland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.44**	**335**	*i* P			**Pb**	**00 30 22.0**	**-0.1**
FINES	**FINESS Array B**	**19.87**	**88**	P			**Pn**	**00 34 10.8**	**+0.1**
	0.1nm,0.3s,baz=312,slow=9.2,SNR=2.8								
FINES				LR			LR	00 41 04.9	
	comp=Z,318nm,18.2s,baz=274,slow=35								
	2.7nm,0.9s								
FRB	**Frobisher Bay**	**20.19**	**281**	P			Pn	00 34 15.0	+0.6
	2.2nm,0.8s,baz=74,slow=12,SNR=5.0								
	2.2nm,0.8s								
GERES	**GERESS Array B**	**25.34**	**124**	P			**P**	**00 35 04.7**	**-0.2**
	2.4nm,0.9s,baz=345,slow=7.1,SNR=6.8								
GERES				LR			LR	00 46 46.7	
	comp=Z,171nm,18.1s,baz=318,slow=41								
	2.4nm,0.9s								
VRAC	**Vranov**	**25.85**	**119**	LR			LR	00 45 03.3	
	comp=Z,178nm,18.5s,baz=309,slow=36								
AKASG	**Malin Array Be**	**29.05**	**103**	LR			LR	00 46 27.4	
	comp=Z,165nm,18.4s,baz=303,slow=35								
ARU	**Arti**	**35.25**	**70**	LR			LR	00 51 37.4	
	comp=Z,103nm,18.7s,baz=296,slow=38								
YKA	**Yellowknife Ar**	**36.39**	**309**	P			**P**	**00 36 42.1**	**+0.1**
	0.3nm,1.0s,baz=44,slow=7.4,SNR=3.6								
	0.3nm,1.0s								
EIL	**Elat**	**49.61**	**113**	LR			LR	01 03 27.8	
	comp=Z,37nm,18.2s,baz=242,slow=41								
ELK	**Elko**	**55.08**	**293**	LR			LR	01 04 20.3	
	comp=Z,82nm,19.3s,baz=2.0,slow=38								

*CATAC **15** 00:59:57.5±0.7, 8˚.86N×83˚.14W, h40km±6km, ML2.5*
*UPA **15** 00:59:58.3±1.5, 8˚.92N×83˚.15W, h18km±5km, MW2.4*
ISC 15 00:59:58.1±1.4, 8˚91N±0˚.04×83˚13W±0˚.04, h50km±11km, n16, σ0°68/27, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
POTG	**Potrero Grande**	**0.14**	**4**	*i* P			**Pn**	**01 00 06.2**	**0.0**
POTG				*i* S			**Sn**	**01 00 12.9**	**+1.0**
POTG				IAML				01 00 15.9	
	comp=Z,1μm,1.0s								
CDITO	**Canoas**	**0.42**	**143**	*e*P			**Pn**	**01 00 07.6**	**-0.9**
CDITO				*e*S			**Sn**	**01 00 15.2**	**-0.7**
CDITO	**Canoas**	**0.42**	**143**	*i* P			**Pn**	**01 00 07.5**	**-1.0**
CDITO				*i* S			**Sn**	**01 00 16.0**	**+0.1**
PIRO	**Carate, Puerto**	**0.55**	**202**	*i* P			**Pn**	**01 00 18.5**	**+0.1**
PLAN	**Los Planes de**	**0.60**	**246**	*i* P			**Pn**	**01 00 10.7**	**+0.1**
PLAN				*i* S			**Sn**	**01 00 20.2**	**+0.7**
PLAN				IAML				01 00 22.6	
	comp=Z,460nm,1.0s								
BCO2	**Palmira**	**0.62**	**108**	*i* P			**Pn**	**01 00 10.7**	**-0.4**
BCO2				*e*S			**Sn**	**01 00 20.9**	**+0.5**
PEZE	**Perez Zeledon,**	**0.71**	**311**	*i* P			**Pn**	**01 00 11.3**	**-0.9**
PEZE				*i* S			**Sn**	**01 00 22.3**	**0.0**
PEZE				IAML				01 00 24.2	
	comp=Z,140nm,1.0s								
PTPM	**Petroterminale**	**0.75**	**161**	*e*P			**Pn**	**01 00 12.1**	**-0.4**
PTPM				*e*S			**Sn**	**01 00 24.7**	**+1.8**
DVD	**David**	**0.82**	**125**	*e*S			**Sn**	**01 00 25.2**	**+0.6**
CNI2	**El Empalme, Bo**	**0.82**	**52**	*e*P			**Pn**	**01 00 13.0**	**-0.5**
CNI2				*e*S			**Sn**	**01 00 24.9**	**+0.2**
LIMO3	**Limones**	**0.85**	**162**	*e*S			**Sn**	**01 00 25.6**	**+0.4**
CDM	**Cerro de Muert**	**0.89**	**315**	*i* P			**Pn**	**01 00 14.4**	**-0.5**
CDM				*i* S			**Sn**	**01 00 26.8**	**-0.2**
CDM				IAML				01 00 28.1	
	comp=Z,98nm,1.0s								
CHGR2	**Aguacate**	**0.97**	**89**	*e*P			**Pn**	**01 00 15.2**	**-0.3**
CHGR2				*e*S			**Sn**	**01 00 29.2**	**+0.9**
LCR2	**La Lucha 2**	**1.19**	**314**	*i* P			**Pn**	**01 00 18.2**	**-0.5**
LCR2				IAML				01 00 18.4	
	comp=Z,53nm,1.0s								
LCR2				*i* S			**Sn**	**01 00 33.9**	**0.0**
VTCV	**VTCV, Calle Va**	**1.22**	**331**	*i* P			**Pn**	**01 00 19.6**	**+0.6**
VTCV				IAML				01 00 41.2	
	comp=Z,90nm,1.0s								
JACO	**JACO, Garabito**	**1.69**	**296**	*i* P			**Pn**	**01 00 25.0**	**-0.2**

*NEIC **15** 01:47:35.0±0.8, 34˚.053N±0˚.009×117˚.125W±0˚.003, h16km±2km, Error ellipse: s-maj=1.3km s-min=0.3km az=165.0*
*ANF **15** 01:47:34.5±0.1, 34˚.03N×117˚.14W, h15km±1km, ML3.3/30, Error ellipse: s-maj=0.9km s-min=0.8km az=34.0*
*PAS **15** 01:47:35.6±0.7, 34˚.045N±0˚.009×117˚.14W±0˚.01, h13km±2km, ML3.3, ML3.2/54(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=216.0*
ISC 15 01:47:34.7±0.8, 34˚05N±0˚.01×117˚12W±0˚.01, h14km±4km, n108, σ0°71/173, Southern California

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CFT	**Crafton Hills**	**0.02**	**148**				**Pg**	**01 47 36.0**	**-1.2**
CFT							**Sg**	**01 47 39.9**	**+1.0**
SVD	**Seven Oaks Dam**	**0.06**	**20**				**Pg**	**01 47 36.4**	**-1.1**
SVD							**Sg**	**01 47 40.1**	**+0.8**
HLNC	**Highland**	**0.11**	**311**				**Pb**	**01 47 38.6**	**0.0**
HLNC							**Sb**	**01 47 41.0**	**-0.1**
CFSC	**Central Fire S**	**0.14**	**292**				**Pg**	**01 47 39.0**	**+0.6**
CFSC							**Sg**	**01 47 41.7**	**+0.8**
CLTC	**Calectric**	**0.17**	**285**				**Pb**	**01 47 39.6**	**+0.1**
RVR	**Riverside**	**0.22**	**255**				**Pb**	**01 47 43.1**	**+2.6**
FON	**Fontana**	**0.27**	**281**				**Pg**	**01 47 40.8**	**+0.4**
FON							**Sg**	**01 47 44.6**	**+0.4**
BBRC	**Big Bear Solar**	**0.27**	**38**	P			**Pg**	**01 47 41.3**	**+0.7**
	baz=220,SNR=526								
BBRC				S			**Sb**	**01 47 45.6**	**-0.5**
	baz=220								
SS2	**San Sevaine**	**0.35**	**297**				**Pg**	**01 47 42.4**	**+0.6**
HMTC	**Hemet**	**0.36**	**164**				**Pg**	**01 47 42.4**	**+0.5**
MLSC	**Mira Loma**	**0.37**	**263**				**Pg**	**01 47 42.3**	**+0.2**
MLSC							**Sg**	**01 47 47.2**	**+0.1**
POB	**Polly Butte**	**0.40**	**155**				**Pg**	**01 47 43.3**	**+0.5**
CRNC	**Corona**	**0.40**	**244**				**Pg**	**01 47 42.9**	**+0.2**
CRNC							**Sg**	**01 47 48.4**	**+0.1**
BACC	**Bachelor Mtn.**	**0.44**	**171**				**Pn**	**01 47 49.6**	**+2.9**
MURC	**Murrieta**	**0.45**	**188**				**Pg**	**01 47 44.0**	**+0.3**
MURC							**Sg**	**01 47 50.1**	**+0.3**
MURC	**Murrieta**	**0.45**	**188**	P			**Pg**	**01 47 44.0**	**+0.3**
	baz=5.8,SNR=148								
MURC				S			**Sg**	**01 47 50.1**	**+0.3**
	baz=5.8								
CHNC	**Chino**	**0.47**	**264**				**Pg**	**01 47 44.0**	**+0.1**
DEVC	**Devers**	**0.47**	**104**				**Pb**	**01 47 44.8**	**+0.1**
DEVC							**Sb**	**01 47 51.4**	**-0.1**
BFSC	**Mount Baldy Ra**	**0.48**	**293**	P			**Pg**	**01 47 44.3**	**+0.1**
	baz=114								
BFSC				S			**Sg**	**01 47 50.8**	**0.0**
	baz=114								
SSK	**Sunset Peak**	**0.50**	**289**				**Pg**	**01 47 44.8**	**+0.2**
GVDA	**Garner Valley**	**0.53**	**135**				**Pg**	**01 47 45.5**	**+0.3**
GVDA							**Sg**	**01 47 52.5**	**+0.1**
VTV	**Victorville**	**0.54**	**341**				**Pg**	**01 47 45.5**	**+0.2**
VTV							**Sg**	**01 47 52.7**	**+0.2**
ADO	**Adelanto Recei**	**0.56**	**333**				**Pg**	**01 47 46.2**	**+0.5**
ADO							**Sb**	**01 47 54.0**	**-0.3**
PSRC	**Puddingstone R**	**0.57**	**274**				**Pg**	**01 47 45.9**	**0.0**
PSRC							**Sg**	**01 47 53.7**	**+0.2**
CRY	**Cary Ranch**	**0.58**	**146**				**Pg**	**01 47 46.5**	**+0.3**
CRY							**Sg**	**01 47 54.6**	**+0.7**
EW2	**E Wide Canyon**	**0.60**	**100**				**Sb**	**01 47 55.8**	**+0.3**
BLAC	**Blackrock camp**	**0.61**	**88**				**Pg**	**01 47 47.2**	**+0.5**
BLAC							**Sb**	**01 47 55.6**	**-0.2**
PEM	**Pine Mountain**	**0.63**	**281**				**Pg**	**01 47 47.0**	**0.0**
DNR	**Dunn Ranch,Anz**	**0.63**	**140**				**Pg**	**01 47 47.6**	**+0.5**
DNR							**Sb**	**01 47 56.7**	**+0.2**
SNDA	**J Saunders Pla**	**0.66**	**139**				**Pg**	**01 47 48.0**	**+0.5**
SNDA							**Sb**	**01 47 57.0**	**-0.1**
BZNA	**Buzz No.'s Pla**	**0.68**	**146**				**Pg**	**01 47 48.2**	**+0.4**
BZNA							**Sg**	**01 47 57.4**	**+0.5**
GTM	**Goat Mountain**	**0.68**	**69**				**Pg**	**01 47 48.1**	**+0.1**
GTM							**Sg**	**01 47 57.2**	**+0.2**
FULC	**Fullerton**	**0.69**	**255**				**Pb**	**01 47 48.9**	**+0.4**
FULC							**Sn**	**01 47 59.2**	**-1.3**
FRD	**Ford Ranch, An**	**0.70**	**142**				**Pg**	**01 47 48.8**	**+0.3**
FRD							**Sg**	**01 47 58.1**	**+0.3**
FRD	**Ford Ranch, An**	**0.70**	**142**				**Pg**	**01 47 48.7**	**+0.3**
FRD							**Sg**	**01 47 58.0**	**+0.3**
PFO	**Pinyon Flats O**	**0.70**	**128**				**Pg**	**01 47 48.6**	**+0.1**
PFO							**Sg**	**01 47 57.8**	**0.0**
PFO	**Pinyon Flats O**	**0.70**	**128**	Pg			**Pg**	**01 47 48.5**	**+0.1**
PFO				IAML				01 47 58.6	
	830nm,0.1s								
PFO				IAML				01 47 59.5	
	942nm,0.2s								
PFO	**Pinyon Flats O**	**0.70**	**128**	P			**Pg**	**01 47 48.7**	**+0.3**
	baz=308,SNR=84								
PFO				S			**Sg**	**01 47 57.8**	**0.0**
	baz=308								
XPFO	**Pion Flat**	**0.71**	**128**				**Pg**	**01 47 48.7**	**+0.2**
XPFO							**Sg**	**01 47 57.9**	**0.0**
SANC	**Santa Ana**	**0.72**	**242**				**Sg**	**01 47 58.3**	**+0.1**
PLM	**Palomar**	**0.73**	**163**				**Sg**	**01 47 58.9**	**+0.4**
PMD	**Palm Desert**	**0.74**	**123**				**Pg**	**01 47 49.2**	**+0.2**
PMD							**Sg**	**01 47 58.7**	**-0.1**
PMD	**Palm Desert**	**0.74**	**123**	IAML				01 47 59.5	
	comp=E,950nm,0.2s								
PMD				IAML				01 48 00.8	
	comp=N,761nm,0.2s								
RHC	**Rose Hills Cem**	**0.

GMRC				Sb	Sg	01 48 20.2	-0.1	
	baz=239							
OSI	**Osito Audit: C**	**1.44**	**293**	S	**Sb**	**01 48 19.5**	**0.0**	
	baz=113							
BC3	**Big Chuckawall**	**1.44**	**105**	P	**Pn**	**01 48 00.2**	**-0.3**	
	baz=286,SNR=171							
BC3				Sb	**Sg**	**01 48 20.8**	**-0.5**	
	baz=286							
LRMC	**Laurel Mtn Rad**	**1.50**	**342**	P	**Pn**	**01 48 01.6**	**+0.3**	
	baz=163,SNR=86							
LRMC				Sb	**Sg**	**01 48 23.0**	**0.0**	
	baz=163							
TJX	**Tijuana**	**1.54**	**178**		**Pn**	**01 48 02.3**	**+0.6**	
TJX				IAML		01 48 28.7		
	comp=N,423nm,0.6s							
SWSC	**Sam W. Stewart**	**1.56**	**135**	P	**Pn**	**01 48 01.5**	**-0.5**	
	baz=315,SNR=14							
SWSC				Sb	**Sb**	**01 48 24.2**	**+1.2**	
	baz=315							
SCI2	**San Clemente I**	**1.60**	**228**	P	**Pn**	**01 48 02.1**	**-0.4**	
	baz=47,SNR=7.6							
SCI2				S	**Sn**	**01 48 22.9**	**-0.1**	
	baz=47							
IKP	**In-Ko-Pah, Jac**	**1.64**	**148**	P	**Pn**	**01 48 03.1**	**0.0**	
	baz=329,SNR=50							
IKP				Sb	**Sb**	**01 48 26.1**	**+0.9**	
	baz=329							
IRM	**Iron Mountain**	**1.65**	**86**	P	**Pn**	**01 48 02.9**	**-0.3**	
	baz=267,SNR=112							
IRM				Sb	**Sg**	**01 48 27.2**	**-0.4**	
	baz=267							
TJIG	**Tijuana**	**1.66**	**167**	*e*P	**Pn**	**01 48 03.6**	**+0.3**	
TJIG				*e*S	**Sn**	**01 48 22.8**	**-1.6**	
TUQ	**Turquoise Moun**	**1.70**	**35**	P	**Pn**	**01 48 04.2**	**+0.2**	
	baz=216,SNR=13							
TUQ				Sb	**Sg**	**01 48 28.9**	**-0.4**	
	baz=216							
ARVC	**Arvin**	**1.77**	**308**	P	**Pn**	**01 48 05.3**	**+0.3**	
	baz=127,SNR=12							
ARVC				Sb	**Sb**	**01 48 30.3**	**+1.3**	
	baz=127							
CBX	**Cerro Bola**	**1.78**	**167**	*e*P	**Pn**	**01 48 05.8**	**+0.7**	
CBX				*e*S	**Sn**	**01 48 23.7**	**-3.8**	
QSM	**Queen of Sheba**	**1.92**	**6**	Pn	**Pn**	**01 48 07.5**	**+0.5**	
QSM				IAML		01 48 38.4		
	comp=N,211nm,0.4s							
QSM				IAML		01 48 39.5		
	comp=E,195nm,0.2s							
ISA	**Isabella, Lake**	**1.95**	**326**	Pn	**Pn**	**01 48 08.1**	**+0.5**	
ISA	**Isabella, Lake**	**1.95**	**326**	P	**Pn**	**01 48 08.0**	**+0.5**	
	baz=146,SNR=24							
ISA				Sb	**Sb**	**01 48 35.9**	**+1.5**	
	baz=146							
SHOC	**Shoshone, Teco**	**1.97**	**20**	P	**Pn**	**01 48 08.3**	**+0.6**	
	baz=201,SNR=77							
SHOC				Sb	**Sg**	**01 48 37.6**	**-0.5**	
	baz=201							
MPMC	**Manual Prospec**	**2.02**	**352**	P	**Pn**	**01 48 09.0**	**+0.4**	
	baz=172,SNR=61							
MPMC				Sb	**Sg**	**01 48 39.1**	**-0.7**	
	baz=172							
SNCC	**San Nicolas Is**	**2.16**	**249**	P	**Pn**	**01 48 10.1**	**-0.1**	
	baz=67							
SNCC				Sb	**Sb**	**01 48 41.6**	**+1.4**	
	baz=67							
GLA	**Glamis**	**2.16**	**117**	P	**Pn**	**01 48 10.0**	**-0.3**	
	baz=298							
GWY	**Greenwater Val**	**2.16**	**10**	Pn	**Pn**	**01 48 11.2**	**+0.7**	
GWY				IAML		01 48 45.9		
	comp=N,206nm,0.4s							
GWY				IAML		01 48 46.3		
	comp=E,186nm,0.5s							
NEE2	**Needles Airpor**	**2.19**	**70**	P	**Pn**	**01 48 10.6**	**-0.1**	
	baz=252							
NEE2				Sb	**Sg**	**01 48 44.0**	**-1.1**	
	baz=252							
ESJX	**Sierra Juarez**	**2.27**	**154**		**Pn**	**01 48 12.5**	**+0.6**	
ESJX				IAML		01 48 45.7		
	comp=N,64nm,0.3s							
ESJX				IAML		01 48 46.7		
	comp=E,88nm,0.2s							
PDMCI	**Parker Dam,Lak**	**2.48**	**83**	S	**Sn**	**01 48 45.3**	**+0.5**	
	baz=265							
V12A	**Nelson**	**2.51**	**48**	Pn	**Pn**	**01 48 15.6**	**+0.5**	
V12A				IAML		01 48 56.4		
	comp=N,94nm,0.3s							
V12A				IAML		01 48 56.6		
	comp=E,114nm,0.6s							
W13A	**Hualapai Mount**	**2.87**	**68**		**Pn**	**01 48 20.8**	**+0.6**	
SHPR	**Sheep Range**	**2.93**	**33**	Pn	**Pn**	**01 48 22.0**	**+1.0**	
TPNV	**Topopah Spring**	**2.98**	**14**		**Pn**	**01 48 22.5**	**+0.8**	
113A	**Mohawk Valley,**	**3.08**	**114**	Pn	**Pn**	**01 48 22.6**	**-0.4**	
SPIG	**San Pedro Mart**	**3.31**	**155**	*e*P	**Pn**	**01 48 28.4**	**+2.0**	
SPIG				*e*S	**Sn**	**01 49 05.2**	**-0.5**	
DSP	**Deep Springs**	**3.38**	**348**		**Pn**	**01 48 28.0**	**+1.0**	
Y14A	**Wickenburg**	**3.42**	**91**	Pn	**Pn**	**01 48 27.8**	**0.0**	
Y14A				IAML		01 49 27.3		
	comp=N,36nm,0.2s							
Y14A				IAML		01 49 29.0		
	comp=E,30nm,0.3s							
PRN	**Pahroc Range**	**3.75**	**26**	Pn	**Pn**	**01 48 33.4**	**+1.1**	
PRN				IAML		01 49 41.8		
	comp=N,52nm,0.5s							
PRN				IAML		01 49 42.1		
	comp=E,46nm,0.7s							
LCMT	**Little Creek M**	**4.33**	**46**		**Pn**	**01 48 40.8**	**+0.6**	
LCMT				IAML		01 49 54.9		
	comp=E,12nm,1.2s							
KNB	**Kanab**	**4.59**	**49**	Pn	**Pn**	**01 48 44.7**	**+0.8**	
KNB				IAML		01 50 07.8		
	comp=N,20nm,0.9s							
U15A	**North Rim**	**4.61**	**58**	Pn	**Pn**	**01 48 44.9**	**+0.7**	
U15A				IAML		01 50 06.6		
	comp=N,18nm,0.7s							
U15A				IAML		01 50 07.4		
	comp=E,15nm,0.6s							
X16A	**Lo Mia Camp, P**	**4.72**	**84**	Pn	**Pn**	**01 48 46.4**	**+0.7**	

IDC ***15*** *01:52:18.4±2.5,36°.27N×141°.34E,h0km,mb3.6/3, mbtmp3.6/4,ML3.2/1,Error ellipse: s-maj=70.3km s-min=27.7km az=59.0*
JMA ***15*** *01:52:34.2±0.1,36°.0N±0°.4×140°.1E±0°.5,h83km,MV3.2/38, SOUTHERN IBARAKI PREF*
ISC 15 01:52:33.5±1.0,35°.97N±0°.05×140°.16E±0°.05,h91km±8km, n22,σ0°78/25,mb3.7/3,4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.26**	**6**	⇓*i*P	**Pn**	**01 52 46.6**	**-0.2**
JYT				⇓S	**Sn**	**01 52 56.0**	**-0.6**
JIHU	**Itakohorinouch**	**0.29**	**91**	P	**Pn**	**01 52 47.6**	**+0.7**
JAG	**Ashikaga**	**0.73**	**309**	⇓*i*P	**Pn**	**01 52 50.3**	**-0.1**
JAG				⇓S	**Sn**	**01 53 02.5**	**-0.5**
JRY	**Ryogami san**	**1.02**	**273**	*i*P	**Pn**	**01 52 54.0**	**+0.5**
JRY				S	**Sn**	**01 53 09.0**	**+0.5**
JKT	**Katashina**	**1.08**	**317**	*i*P	**Pn**	**01 52 54.3**	**0.0**
JKT				S	**Sn**	**01 53 10.1**	**+0.2**
JOD2	**Odawara 2**	**1.12**	**231**	*i*P	**Pn**	**01 52 54.6**	**-0.1**
JOD2				S	**Sn**	**01 53 10.0**	**-0.6**
BSO3	**Boso 3**	**1.20**	**166**	P	**Pn**	**01 52 55.6**	**+0.3**
JYN	**Shimob**	**1.40**	**251**	*i*P	**Pn**	**01 52 58.5**	**+0.4**
JYN				S	**Sn**	**01 53 17.0**	**+0.4**
JFNN	**Fujinakano**	**1.43**	**238**	S	**Sn**	**01 53 17.5**	**+0.3**
BSO1	**Boso 1**	**1.47**	**153**	P	**Pn**	**01 52 58.6**	**+0.2**
BSO1				S	**Sn**	**01 53 18.8**	**+1.5**
JOTO	**OTAMA OYAMA**	**1.59**	**5**	*i*P	**Pn**	**01 53 00.8**	**+0.3**
JOTO				S	**Sn**	**01 53 21.7**	**+0.8**
MJAR	**Matsushiro Arr**	**1.68**	**290**	Pn	**Pn**	**01 53 01.9**	**+0.3**
	4.8nm,0.3s,baz=97,slow=12,SNR=131						
MJAR				Sn	**Sn**	**01 53 25.1**	**+2.2**
	1.6nm,0.3s,baz=58,slow=26,SNR=2.4						
	62nm,0.3s						
MAT	**Matsushiro**	**1.68**	**290**	*i*P	**Pn**	**01 53 02.1**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**28.51**	**117**	T	T	02 28 40.3	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**28.52**	**117**	T	T	02 28 35.3	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**28.53**	**117**	T	T	02 28 45.5	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**29.17**	**120**	T	T	02 29 33.1	
	baz=312						
H11S3	**WAKE ISLAND Hy**	**29.17**	**120**	T	T	02 29 30.7	
	baz=312						
H11S2	**WAKE ISLAND Hy**	**29.19**	**120**	T	T	02 29 30.2	
	baz=312						
MKAR	**Makanchi Array**	**43.84**	**303**	P	**P**	**02 00 29.8**	**-0.8**
	0.2nm,0.5s,baz=86,slow=9.4,SNR=4.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.87**	**309**	P	**P**	**02 00 47.2**	**+0.7**
	1.0nm,0.8s,baz=86,slow=8.1,SNR=8.0						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**55.88**	**187**	P	**P**	**02 02 00.8**	**-1.1**
	0.6nm,0.4s,baz=1.4,slow=7.5,SNR=24						
	0.6nm,0.4s						

IDC ***15*** *02:22:49.4±0.4,13°.57N×144°.85E,h114km±3km,mb3.7/16, mbtmp4.0/16,MS3.3/2,Error ellipse: s-maj=16.3km s-min=11.5km az=90.0*
NEIC ***15*** *02:22:49.5±1.1,13°.55N±0°.10×144°.6E±0°.2,h112km±5km, mb4.4/56,Error ellipse: s-maj=22.8km s-min=13.2km az=104.0*
ISC 15 02:22:49.5±0.5,13°.52N±0°.08×144°.8E±0°.1,h114km±4km, n87,σ0°63/89,mb4.3/44,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.12**	**57**	P	**Pn**	**02 23 05.8**	**+0.6**
	3μm,0.3s,baz=240,slow=3.4,SNR=531						
GUMO				S	**Sn**	**02 23 17.2**	**+0.2**
	8μm,0.4s,baz=12,slow=23,SNR=15						
JHJ	**Hachijo jima 2**	**20.03**	**348**	LR	LR	02 34 26.1	
	comp=Z,186nm,20.8s,baz=350,slow=35						
H11S3	**WAKE ISLAND Hy**	**21.64**	**74**	T	T	02 49 17.7	
	baz=261,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**21.65**	**74**	T	T	02 49 38.4	
	baz=261,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**21.65**	**74**	T	T	02 49 43.2	
	baz=261,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**22.07**	**71**	T	T	02 50 36.1	
	baz=258,slow=75,SNR=25						
H11N2	**WAKE ISLAND Hy**	**22.07**	**71**	T	T	02 50 27.0	
	baz=258,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**22.08**	**71**	T	T	02 50 27.6	
	baz=258,slow=75,SNR=19						
JNU	**Nakatsue**	**23.26**	**329**	P	**P**	**02 27 46.6**	**-0.4**
	5.7nm,0.9s,baz=131,slow=9.3,SNR=2.1						
	5.7nm,0.9s						
COEN	**Coen**	**27.35**	**183**	P	**P**	**02 28 24.0**	**0.0**
KSRS	**Korea Array**	**28.17**	**331**	P	**P**	**02 28 31.7**	**+0.5**
	0.8nm,0.5s,baz=138,slow=9.3,SNR=3.0						
	0.8nm,0.5s						
WB0	**Warramunga Arr**	**34.62**	**197**	P	**P**	**02 29 27.3**	**-0.5**
WB0				IAmb	IAmb	02 29 28.0	
	comp=Z,5.0nm,0.7s						
WB2	**Warramunga Arr**	**34.80**	**197**	P	**P**	**02 29 29.1**	**-0.3**
WB2				IAmb	IAmb	02 29 30.1	
	comp=Z,6.4nm,1.0s						
WRA	**Warramunga Arr**	**34.80**	**197**	P	**P**	**02 29 29.2**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=20,slow=9.4,SNR=17						
WRA				pP	**pwP**	**02 29 56.6**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=17,slow=9.5,SNR=2.3						
WRA				PcP	**PcP**	**02 32 01.2**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=22,slow=3.5,SNR=2.4						
	comp=Z,2.9nm,0.6s						
AS31	**Alice Springs**	**38.46**	**196**	P	**P**	**02 30 00.7**	**+0.3**
ASAR	**Alice Springs**	**38.46**	**196**	P	**P**	**02 30 00.3**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=21,slow=11,SNR=31						
ASAR				PcP	**PcP**	**02 32 12.3**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=40,slow=2.5,SNR=4.6						
	comp=Z,1.8nm,0.6s						
DZM	**Mont Dzumac**	**41.27**	**149**	P	**P**	**02 30 24.8**	**+1.0**
MBWA	**Marble Bar**	**42.34**	**216**	P	**P**	**02 30 32.4**	**-0.1**
ARMA	**Armidale**	**44.18**	**171**	P	**P**	**02 30 46.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**44.23**	**283**	P	**P**	**02 30 48.5**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=92,slow=5.3,SNR=2.7						
CMAR				LR	LR	02 49 36.1	
	comp=Z,16nm,18.8s,baz=60,slow=36						
	comp=Z,1.0nm,0.3s						
STKA	**Stephens Creek**	**45.24**	**184**	P	**P**	**02 30 55.2**	**-0.3**
STKA	**Stephens Creek**	**45.24**	**184**	P	**P**	**02 30 55.0**	**-0.5**
	comp=Z,5.1nm,0.4s,baz=359,slow=6.9,SNR=14						
	comp=Z,5.1nm,0.4s						
SONM	**Songino Array**	**46.73**	**325**	P	**P**	**02 31 07.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.0,SNR=4.2						
	comp=Z,0.5nm,0.6s						
BBOO	**Buckleboo**	**46.82**	**190**	P	**P**	**02 31 07.8**	**-0.1**
CAN	**Canberra**	**48.74**	**175**	P	**P**	**02 31 23.3**	**+0.6**
MORW	**Morawa**	**50.63**	**213**	P	**P**	**02 31 36.5**	**-0.6**
MORW				IAmb	IAmb	02 31 42.0	
	comp=Z,9.3nm,1.1s						
TOO	**Toolangi**	**50.83**	**179**	P	**P**	**02 31 39.6**	**+1.2**
RTZ	**Rutaihuna**	**59.98**	**151**	P	**P**	**02 32 44.0**	**-0.1**
MK31	**Makanchi Array**	**61.47**	**316**	P	**P**	**02 32 54.6**	**+0.5**
MKAR	**Makanchi Array**	**61.47**	**316**	P	**P**	**02 32 54.3**	**+0.2**
MKAR	**Makanchi Array**	**61.47**	**316**	P	**P**	**02 32 54.7**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=98,slow=7.9,SNR=12						
MKAR				pP	**pP**	**02 33 21.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=93,slow=8.6,SNR=4.0						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**61.62**	**324**	P	**P**	**02 32 55.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=76,slow=6.1,SNR=2.2						
ZALV				pP	**pP**	**02 33 22.2**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=114,slow=6.5,SNR=2.7						
	comp=Z,0.6nm,0.5s						
E18K	**Tukpahlearik C**	**64.42**	**20**	P	**P**	**02 33 13.5**	**+0.3**
KURK	**Kurchatov**	**64.57**	**320**	P	**P**	**02 33 13.1**	**-1.4**
KURK				IAmb	IAmb	02 33 47.2	
	comp=Z,6.3nm,0.9s						
KURBB	**Kurchatov Arra**	**64.61**	**320**	P	**P**	**02 33 14.5**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=102,slow=6.6,SNR=11						
KURBB				pP	**pP**	**02 33 41.7**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=102,slow=6.6,SNR=4.6						
	comp=Z,0.9nm,0.5s						
BRLK	**Bradley Lake**	**65.58**	**30**	P	**P**	**02 33 20.6**	**-0.3**
CAST	**Castle Rocks**	**66.10**	**26**	P	**P**	**02 33 24.3**	**+0.1**
CAST				IAmb	IAmb	02 34 08.1	
	comp=Z,5.3nm,1.2s						
RC01	**Rabbit Creek A**	**66.48**	**29**	P	**P**	**02 33 26.2**	**-0.3**
RC01				IAmb	IAmb	02 33 58.6	
	comp=Z,9.2nm,1.2s						
BPAW	**Bear Paw Mtn.**	**66.78**	**25**	P	**P**	**02 33 28.4**	**0.0**
BPAW				IAmb	IAmb	02 33 33.4	
	comp=Z,5.8nm,1.4s						
MLY	**Manley**	**67.16**	**25**	P	**P**	**02 33 30.9**	**0.0**
MLY				IAmb	IAmb	02 33 49.3	
	comp=Z,4.0nm,1.3s						
B21K	**Ikpikpuk River**	**67.37**	**19**	P	**P**	**02 33 32.4**	**+0.3**
D22K	**Ayikyak River**	**67.73**	**20**	P	**P**	**02 33 35.4**	**+1.1**
D22K				IAmb	IAmb	02 34 13.1	
	comp=Z,4.9nm,1.2s						
WRH	**Wood River Hil**	**68.09**	**25**	P	**P**	**02 33 36.2**	**-0.5**
WRH				IAmb	IAmb	02 34 06.8	
	comp=Z,7.8nm,1.4s						
KLU	**Klutina**	**68.36**	**29**	P	**P**	**02 33 38.9**	**+0.4**
KLU				IAmb	IAmb	02 34 07.1	
	comp=Z,9.7nm,1.3s						
M24K	**Tolsona, Glenn**	**68.38**	**28**	P	**P**	**02 33 38.8**	**+0.2**
IL31		**68.67**	**25**	P	**P**	**02 33 39.3**	**-0.9**
ILAR	**Eielson Array**	**68.67**	**25**	P	**P**	**02 33 38.9**	**-1.3**
ILAR	**Eielson Array**	**68.67**	**25**	P	**P**	**02 33 39.0**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=251,slow=6.0,SNR=26						
ILAR				pP	**pP**	**02 34 07.3**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=249,slow=5.9,SNR=2.7						
	comp=Z,1.3nm,0.6s						
TOLK	**Toolik Lake Re**	**68.71**	**21**	P	**P**	**02 33 40.5**	**0.0**
TOLK				IAmb	IAmb	02 33 55.8	
	comp=Z,5.5nm,1.4s						
D24K	**Happy Valley**	**69.13**	**21**	P	**P**	**02 33 43.0**	**-0.1**
D24K				IAmb	IAmb	02 34 26.1	
	comp=Z,7.3nm,1.4s						
J25K	**Salcha River,**	**69.27**	**26**	P	**P**	**02 33 43.1**	**-1.0**
VRDI	**Verde Repeater**	**69.48**	**29**	P	**P**	**02 33 45.5**	**-0.2**
VRDI				IAmb	IAmb	02 34 06.8	
	comp=Z,10nm,1.3s						
WAX	**Waxell Ridge**	**69.65**	**30**	P	**P**	**02 33 46.6**	**+0.1**
BVAR	**Borovoye Array**	**69.92**	**322**	P	**P**	**02 33 48.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=94,slow=8.3,SNR=5.8						
BVAR				pP	**pP**	**02 34 16.9**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=107,slow=7.9,SNR=5.4						
	comp=Z,1.2nm,0.6s						
ISLE	**Juniper Island**	**69.93**	**30**	P	**P**	**02 33 48.0**	**-0.2**
J26L	**Joseph Creek**	**70.01**	**26**	P	**P**	**02 33 48.3**	**-0.4**
BMAR	**Burnt Mountain**	**70.20**	**23**	P	**P**	**02 33 50.3**	**+0.6**
GRNC	**Granite Creek**	**70.23**	**30**	P	**P**	**02 33 50.0**	**-0.2**
GRNC				IAmb	IAmb	02 34 27.6	
	comp=Z,15nm,1.4s						
BARN	**Barnard Glacie**	**70.32**	**30**	P	**P**	**02 33 50.8**	**+0.1**
BARN				IAmb	IAmb	02 33 53.8	
	comp=Z,12nm,1.2s						
M27K	**Edge Creek, AK**	**70.40**	**28**	P	**P**	**02 33 51.0**	**-0.1**
M27K				IAmb	IAmb	02 34 20.9	
	comp=Z,10.0nm,1.5s						
TABL	**Table Mountain**	**70.49**	**30**	P	**P**	**02 33 52.4**	**+0.6**
BCAR	**Beaver Creek A**	**70.55**	**28**	P	**P**	**02 33 52.2**	**+0.2**
LOGN	**Logan Glacier**	**70.61**	**30**	P	**P**	**02 33 52.6**	**+0.1**
I28M	**Miner Creek**	**71.69**	**25**	P	**P**	**02 33 59.2**	**+0.4**
O29M	**Mount Kennedy**	**71.75**	**31**	P	**P**	**02 33 59.9**	**+0.6**
O29M				IAmb	IAmb	02 34 29.4	
	comp=Z,10nm,1.2s						
M29M	**Somme Creek**	**71.99**	**28**	P	**P**	**02 34 01.0**	**+0.3**
M29M				IAmb	IAmb	02 34 02.3	
	comp=Z,3.2nm,0.8s						
L29M	**L29M**	**72.20**	**28**	P	**P**	**02 34 02.4**	**+0.5**
L29M				IAmb	IAmb	02 34 03.7	
	comp=Z,3.9nm,0.9s						
HYT	**Haines Junctio**	**72.31**	**30**	P	**P**	**02 34 03.2**	**+0.6**
HYT				IAmb	IAmb	02 34 40.7	
	comp=Z,11nm,1.4s						
K29M	**Barlow Dome**	**72.54**	**27**	P	**P**	**02 34 04.0**	**0.0**
N30M	**Aishikik Lake**	**72.56**	**30**	P	**P**	**02 34 03.9**	**-0.2**
N30M				IAmb	IAmb	02 34 24.3	
	comp=Z,8.5nm,1.4s						
M30M	**Minto, Yukon**	**72.77**	**28**	P	**P**	**02 34 05.2**	**0.0**
J30M	**Hart River**	**73.12**	**26**	P	**P**	**02 34 07.1**	**-0.3**
J30M				IAmb	IAmb	02 34 33.7	
	comp=Z,7.2nm,1.5s						
MAYO	**Mayo, Yukon**	**73.25**	**27**	P	**P**	**02 34 08.1**	**+0.1**
WHY	**Whitehorse**	**73.59**	**30**	P	**P**	**02 34 09.8**	**-0.4**
WHY				IAmb	IAmb	02 34 23.3	
	comp=Z,9.1nm,1.4s						
P32M	**Atlin**	**74.16**	**32**	P	**P**	**02 34 13.7**	**+0.3**
P32M				IAmb	IAmb	02 34 33.0	
	comp=Z,14nm,1.4s						
P33M	**Teslin, Yukon**	**74.61**	**31**	P	**P**	**02 34 15.8**	**-0.3**
S34M	**Telegraph Cree**	**75.53**	**33**	P	**P**	**02 34 21.7**	**+0.4**
S34M				IAmb	IAmb	02 34 23.1	
	comp=Z,8.0nm,1.1s						
R33M	**Jennings River**	**75.56**	**32**	P	**P**	**02 34 22.2**	**+0.6**
R33M				IAmb	IAmb	02 34 23.6	
	comp=Z,3.1nm,0.8s						
DLBC	**Dease Lake**	**76.09**	**33**	P	**P**	**02 34 25.4**	**+0.9**
DLBC				IAmb	IAmb	02 35 06.1	
	comp=Z,6.4nm,1.4s						
ABKAR	**Akbulak array**	**76.52**	**318**	P	**P**	**02 34 25.4**	**-1.7**
ABKAR	**Akbulak array**	**76.52**	**318**	P	**P**	**02 34 25.6**	**-1.5**
ABKAR				IAmb	IAmb	02 34 59.5	
	comp=Z,2.6nm,0.8s						
YKA	**Yellowknife Ar**	**82.96**	**27**	P	**P**	**02 35 01.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=289,slow=5.5,SNR=8.1						
	comp=Z,0.4nm,0.4s						
NVAR	**Mina Array Bea**	**87.04**	**51**	P	**P**	**02 35 23.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=287,slow=4.6,SNR=1.8						
NVAR				pP	**pP**	**02 35 51.1**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=283,slow=4.5,SNR=1.5						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**91.18**	**335**	P	**P**	**02 35 40.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=60,slow=4.6,SNR=9.3						
	comp=Z,0.4nm,0.4s						
PDAR	**Pinedale Array**	**92.08**	**45**	P	**P**	**02 35 45.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=205,slow=4.0,SNR=3.2						
	comp=Z,0.3nm,0.6s						
PLCA	**Paso Flores**	**138.95**	**138**	PKP	**PKPdf**	**02 42 03.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=281,slow=1.6,SNR=8.1						
DBIC	**Dimbokro**	**143.77**	**302**	PKP	PKPbc	02 42 10.5	+0.4
	comp=Z,3.0nm,0.3s,baz=69,slow=2.8,SNR=12						

IDC ***15*** *02:45:54.4±2.0,14°.52S×74°.60W,h71km±18km,mb3.6/5, mbtmp3.7/9,Error ellipse: s-maj=41.6km s-min=14.3km az=52.0*
ISC 15 02:45:52.5±0.8,14°.6S±0°.1×74°.7W±0°.2,h50km,n11, σ1°78/12,mb3.8/5,Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.36**	**321**	P	**Pn**	**02 46 42.8**	**+0.2**
	6.0nm,0.3s,baz=162,slow=6.4,SNR=3.1						
NNA				S	**Sn**	**02 47 23.9**	**+2.6**
	70nm,0.3s,baz=266,slow=15,SNR=6.4						
ATAH	**Atahualpa**	**8.29**	**334**	P	**Pn**	**02 47 52.0**	**+1.5**
	1.9nm,0.6s,baz=113,slow=23,SNR=1.8						
LVC	**Limon Verde**	**9.64**	**146**	P	**Pn**	**02 48 09.4**	**+0.5**
	1.0nm,0.4s,baz=279,slow=16,SNR=1.9						
LVC				S	Sn	02 49 48.9	-7.2
	2.6nm,0.4s,baz=108,slow=22,SNR=2.5						
SIV	**San Ignacio**	**13.20**	**98**	P	**Pn**	**02 48 58.0**	**+0.7**
	0.2nm,0.3s,baz=276,slow=14,SNR=2.1						
PLCA	**Paso Flores**	**26.26**	**173**	P	**P**	**02 51 25.1**	**+2.0**
	0.8nm,0.9s,baz=321,slow=12,SNR=2.9						
	0.8nm,0.9s						
TXAR	**Lajitas Array**	**51.90**	**327**	P	**P**	**02 54 54.9**	**-1.4**
	0.6nm,0.7s,baz=144,slow=8.5,SNR=7.5						
	0.6nm,0.

comp=N,412nm,0.6s
KOHI KOHIMA 5.79 255 *e*P **Pn 03 29 06.7 -2.0**
KOHI *e*S Sn 03 30 00.4 -15
IMP Imphal 6.25 248 *e*P **Pn 03 29 18.7 +3.8**
MND Mandalay 6.52 217 Pb 03 29 39.6 +3.5
SHL Shillong 7.77 259 Pn **Pn 03 29 31.6 -4.3**
SHL Shillong 7.77 259 *e*P **Pn 03 29 33.1 -2.7**
SHL *e*S Sn 03 30 42.8 -21
SHL IAML 03 30 57.6
comp=N,109nm,0.6s
SHL IAML 03 31 07.3
comp=E,60nm,0.6s
SAIH SAIHA 8.21 236 *e*S **Sn 03 31 10.0 -4.9**
CHTO Chiang Mai 8.56 189 Pn **Pg 03 30 24.7 -1.7**
CMAR Chiang Mai Arr 8.91 189 Pn **Pn 03 29 52.9 +1.5**
comp=E,0.2nm,0.3s,baz=11,slow=10,SNR=1.1
CMAR Pg Pg 03 30 24.6 -8.5
comp=E,0.6nm,0.3s,baz=52,slow=18,SNR=7.0
CMAR Lg Lg 03 32 24.4
comp=E,0.9nm,0.3s,baz=360,slow=28,SNR=3.8
comp=E,1.4nm,0.3s
SONM Songino Array 21.03 11 P **P 03 32 27.3 +0.8**
comp=E,1.4nm,0.8s,baz=192,slow=11,SNR=11
comp=E,1.4nm,0.8s
MK31 Makanchi Array 24.09 329 P **P 03 32 57.8 -0.4**
MKAR Makanchi Array 24.09 329 P **P 03 32 57.6 -0.6**
MKAR Makanchi Array 24.09 329 P **P 03 32 57.8 -0.4**
comp=E,0.9nm,0.5s,baz=134,slow=9.7,SNR=13
MKAR PcP **PcP 03 36 38.4 -1.0**
comp=E,0.2nm,0.7s,baz=164,slow=1.0,SNR=2.8
comp=E,0.9nm,0.5s
RPSI Rantau Prapat 24.52 183 IAmb IAmb 03 33 36.3
comp=Z,5.1nm,1.1s
JOW Kunigami 24.87 85 LR LR 03 44 08.0
comp=Z,121nm,18.3s,baz=224,slow=40
BOOM Boomskoye usch 24.96 314 P **P 03 33 06.4 0.0**
BOOM IAmb IAmb 03 33 10.6
comp=Z,4.8nm,0.8s
KSRS Korea Array 25.32 60 P **P 03 33 09.3 -0.2**
comp=Z,1.9nm,0.9s,baz=238,slow=9.0,SNR=2.3
KSRS LR LR 03 44 22.9
comp=Z,62nm,18.6s,baz=245,slow=40
comp=Z,1.9nm,0.9s
AAK Ala-Archa 25.97 313 P **P 03 33 16.1 +0.6**
JNU Nakatsue 26.97 70 LR LR 03 45 33.2
comp=Z,85nm,21.7s,baz=332,slow=40
PALK Pallekele 27.28 227 LR LR 03 46 06.7
comp=Z,48nm,20.1s,baz=120,slow=40
BTK Batken 27.51 305 P **P 03 33 27.6 -1.7**
BTK IAmb IAmb 03 33 36.5
comp=Z,4.0nm,0.8s
KBL Kabul 27.71 293 P **P 03 33 30.8 -0.5**
KBL IAmb IAmb 03 33 36.1
comp=Z,13nm,1.0s
SIMJ Simiganj 28.47 301 P **P 03 33 37.3 -0.7**
SIMJ IAmb IAmb 03 33 39.5
comp=Z,6.2nm,0.9s
KURBB Kurchatov Arra 28.59 330 P **P 03 33 37.5 -1.1**
comp=Z,0.4nm,0.7s,baz=140,slow=9.6,SNR=5.6
comp=Z,0.4nm,0.7s
ZALV Zalesovo Beam 28.96 341 P **P 03 33 41.6 -0.4**
comp=Z,0.7nm,0.4s,baz=161,slow=10,SNR=4.1
comp=Z,0.7nm,0.4s
USRK Ussuriysk Ar. 30.48 48 P **P 03 33 53.8 -1.7**
comp=Z,1.6nm,0.7s,baz=263,slow=9.4,SNR=3.1
comp=Z,1.6nm,0.7s
MJAR Matsushiro Arr 33.26 64 P **P 03 34 18.5 -1.7**
comp=Z,0.9nm,0.5s,baz=272,slow=9.2,SNR=1.6
MJAR LR LR 03 47 20.4
comp=Z,52nm,18.4s,baz=307,slow=36
comp=Z,0.9nm,0.5s
BVAR Borovoye Array 33.95 327 P **P 03 34 26.0 +0.1**
comp=Z,0.8nm,0.7s,baz=119,slow=9.3,SNR=4.5
comp=Z,0.8nm,0.7s
GEYT Alibeck 36.82 298 P **P 03 34 51.0 +0.2**
GEYT IAmb IAmb 03 34 56.3
comp=Z,5.4nm,0.8s
GEYT Alibeck 36.82 298 P **P 03 34 51.7 +0.8**
comp=Z,4.2nm,0.7s,baz=106,slow=3.2,SNR=7.2
comp=Z,4.2nm,0.7s
ABKAR Akbulak array 37.92 316 P **P 03 35 03.2 +3.2**
ABKAR IAmb IAmb 03 35 20.5
comp=Z,2.9nm,1.2s
ABKAR Akbulak array 37.92 316 P **P 03 35 01.3 +1.3**
AKH Akhalkalaki 48.17 302 P **P 03 36 25.6 +2.3**
ONI Oni 48.18 304 P **P** 03 36 26.7 +3.5
ONI IAmb IAmb 03 36 31.1
comp=Z,3.3nm,0.9s
GURO Guroymak-BITLI 49.46 299 P **P 03 36 36.1 +2.9**
BRTR Keskin Array B 55.80 301 P **P 03 37 20.1 -0.1**
comp=Z,1.0nm,0.8s,baz=111,slow=6.9,SNR=3.0
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 57.38 141 P **P 03 37 31.5 +0.2**
comp=Z,3.1nm,0.6s,baz=329,slow=7.7,SNR=33
comp=Z,3.1nm,0.6s
ASAR Alice Springs 60.17 144 P **P 03 37 51.0 +0.3**
comp=Z,1.9nm,0.5s,baz=326,slow=6.8,SNR=30
comp=Z,1.9nm,0.5s
BURAR Bucovina Array 60.61 311 P P 03 37 59.2 +5.6
HFS Hagfors 65.08 327 P **P 03 38 24.1 +1.1**
comp=Z,1.4nm,0.7s,baz=73,slow=5.0,SNR=1.7
comp=Z,1.4nm,0.7s
NOA NORSAR Array B 66.08 328 P **P 03 38 29.8 +0.2**
comp=Z,0.9nm,0.7s,baz=78,slow=6.5,SNR=2.0
comp=Z,0.9nm,0.7s
CONA Conrad Observa 66.70 313 *e*P **P 03 38 36.8 +3.0**
comp=Z,2.0nm,0.7s
ARSA Arzberg 67.11 313 *e*P **P 03 38 36.6 +2.3**
comp=Z,1.4nm,0.6s
SOKA Soboth 67.59 312 *e*P P 03 38 43.6 +4.1
comp=Z,1.0nm,0.5s
MOA Molln 67.76 313 *e*P P 03 38 44.2 +3.8
comp=Z,0.8nm,0.4s
GERES GERESS Array B 67.83 315 P **P 03 38 40.4 -0.7**
comp=Z,0.7nm,0.7s,baz=63,slow=7.0,SNR=2.7
comp=Z,0.7nm,0.7s
KBA Koelnbreinsper 68.58 313 *e*P **P 03 38 48.2 +2.4**
comp=Z,0.2nm,0.2s
SQTA Sankt Quirin 69.92 313 *e*P **P 03 38 55.1 +1.0**
comp=Z,1.3nm,0.5s
STKA Stephens Creek 70.79 144 P **P 03 38 58.1 -1.1**
comp=Z,1.2nm,0.5s,baz=319,slow=7.0,SNR=3.9
comp=Z,1.2nm,0.5s
ILAR Eielson Array 74.65 24 P **P 03 39 21.6 -0.2**
comp=Z,0.5nm,1.1s,baz=297,slow=5.9,SNR=2.3
comp=Z,0.5nm,1.1s
YKA Yellowknife Ar 86.24 15 P **P 03 40 23.4 -0.7**
comp=Z,0.3nm,0.7s,baz=328,slow=4.7,SNR=6.1
comp=Z,0.3nm,0.7s

*SJA **15** 03:35:05.9±0.6,34˚.88S×71˚.71W,h34km±4km, ML4.0, MW3.8*
*GUC **15** 03:35:06.9±0.9,34˚.93S×71˚.73W,h46km±3km, ML3.9*
ISC 15 03:35:07.3±1.4,**34˚.95S**±0˚.03×**71˚.73W**±0˚.06,**h42**km±13km, **n42**,σ1°**35/63**,**6D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**0.17**	**249**	*e*P	**Pn**	**03 35 14.7**	**+0.1**
GO05				*e*S	**Sn**	**03 35 20.6**	**+0.9**
GO05				IAML		03 35 21.8	
	comp=N,13μm,0.3s						
BO03	**Pichilemu**	**0.49**	**337**	*e*P	**Pn**	**03 35 17.0**	**-1.0**
BO03				*e*S	**Sn**	**03 35 24.7**	**-0.8**
BO01	**Tunca**	**0.77**	**44**	*e*P	**Pn**	**03 35 20.8**	**-1.0**
BO01				*e*S	**Sn**	**03 35 31.6**	**-0.6**
BO01	**Tunca**	**0.77**	**44**	*i*P	**Pn**	**03 35 20.9**	**-0.8**
BO01				*e*S	**Sn**	**03 35 31.2**	**-1.0**
BO02	**Sierra Bellavi**	**0.80**	**79**	*e*P	**Pn**	**03 35 21.5**	**-0.7**
BO02				*e*S	**Sn**	**03 35 33.0**	**0.0**
BO02				IAML		03 35 34.0	
	comp=Z,10μm,0.1s						
BO02	**Sierra Bellavi**	**0.80**	**79**	*i*P	**Pn**	**03 35 21.6**	**-0.7**
BO02				*e*S	**Sn**	**03 35 32.5**	**-0.4**
ML02	**Panimavida**	**0.85**	**163**	*e*P	**Pn**	**03 35 22.6**	**-0.3**
ML02				*e*S	**Sn**	**03 35 34.9**	**+0.7**
MT01	**Popeta**	**1.15**	**20**	*i*P	**Pn**	**03 35 26.3**	**-0.7**
MT01				*e*S	**Sn**	**03 35 41.1**	**-0.5**
MT01				IAML		03 35 44.7	
	comp=E,4μm,0.2s						
VA05	**Santo Domingo**	**1.29**	**4**	*e*P	**Pn**	**03 35 27.9**	**-1.0**
VA05				*e*S	**Sn**	**03 35 44.2**	**-0.8**
VA05				IAML		03 35 46.2	
	comp=N,3μm,0.3s						
MT09	**Talagante**	**1.32**	**28**	*i*P	**Pn**	**03 35 28.9**	**-0.5**
MT09				*e*S	**Sn**	**03 35 45.9**	**0.0**
MT09				IAML		03 35 49.1	
	comp=N,5μm,0.2s						
BO04	**La Punta**	**1.33**	**44**	*i*P	**Pn**	**03 35 28.6**	**-0.9**
BO04				*e*S	**Sn**	**03 35 45.7**	**-0.3**
MT12	**Pirque**	**1.56**	**39**	*i*P	**Pn**	**03 35 32.0**	**-0.6**
MT12				*e*S	**Sn**	**03 35 51.4**	**-0.2**
MT12				IAML		03 35 56.2	
	comp=E,4μm,0.3s						
LMEL	**Las Melosas**	**1.67**	**49**	*e*P	**Pn**	**03 35 33.9**	**-0.4**
LMEL				*e*S	**Sn**	**03 35 55.6**	**+1.0**
LMEL				IAML		03 35 58.8	
	comp=N,4μm,0.1s						
MT15	**Las Vizcachas**	**1.69**	**37**	*e*P	**Pn**	**03 35 33.8**	**-0.5**
MT15				*e*S	**Sn**	**03 35 54.6**	**-0.2**
MT13	**San Alfonso**	**1.69**	**45**	*e*P	**Pn**	**03 35 34.0**	**-0.5**
MT13				*e*S	**Sn**	**03 35 56.2**	**+1.1**
BI02	**San Fabin de**	**1.75**	**168**	*i*P	**Pn**	**03 35 35.7**	**+0.4**
BI02				IAML		03 36 00.3	
	comp=E,816nm,0.2s						
MT02	**Curacav**	**1.75**	**16**	*e*P	**Pn**	**03 35 34.7**	**-0.6**
MT02				*e*S	**Sn**	**03 35 56.8**	**+0.4**
MT05	**Renca**	**1.76**	**28**	*e*P	**Pn**	**03 35 35.3**	**-0.1**
MT05				IAML		03 36 02.9	
	comp=Z,1μm,0.3s						
MT05	**Renca**	**1.76**	**28**	*e*P	**Pn**	**03 35 34.8**	**-0.6**
MT05				*e*S	**Sn**	**03 35 56.6**	**+0.1**
MT05				IAML		03 36 00.6	
	comp=E,3μm,0.2s						
MT03	**Universidad Ad**	**1.77**	**35**	*e*P	**Pn**	**03 35 35.6**	**+0.1**
MT03				*e*S	**Sn**	**03 36 00.5**	**+3.6**
MT03				IAML		03 36 02.8	
	comp=Z,2μm,0.1s						
MT03	**Universidad Ad**	**1.77**	**35**	*e*P	**Pn**	**03 35 35.0**	**-0.6**
MT03				IAML		03 36 01.8	
	comp=N,4μm,0.2s						
MT16	**CCHEN**	**1.82**	**34**	*i*P	**Pn**	**03 35 35.7**	**-0.5**
MT16				*e*S	**Sn**	**03 35 57.9**	**-0.2**
MT16				IAML		03 36 05.2	
	comp=N,771nm,0.5s						
MT14	**Cerro Cal¡n**	**1.84**	**33**	*e*P	**Pn**	**03 35 36.1**	**-0.4**
MT14				*e*S	**Sn**	**03 35 59.1**	**+0.6**
MT10	**Hacienda Santa**	**1.94**	**31**	*e*P	**Pn**	**03 35 37.5**	**-0.4**
MT10				IAML		03 36 09.4	
	comp=E,3μm,0.5s						
PEL	**Peldehue**	**2.00**	**26**	*e*P	**Pn**	**03 35 38.6**	**-0.1**
PEL	**Peldehue**	**2.00**	**26**	*e*P	**Pn**	**03 35 38.5**	**-0.1**
PEL				IAML		03 36 07.2	
	comp=N,1μm,0.5s						
FCH	**Farellones**	**2.01**	**37**	*e*P	**Pn**	**03 35 38.5**	**-0.6**
FCH				*e*S	**Sn**	**03 36 03.9**	**+0.8**
FCH				IAML		03 36 10.8	
	comp=N,1μm,0.2s						
MT04	**Ro Olivares**	**2.03**	**41**	*e*P	**Pn**	**03 35 39.1**	**-0.2**
MT04				IAML		03 36 12.7	
	comp=E,832nm,0.3s						
ROC1	**El Roble**	**2.06**	**17**	*e*P	**Pn**	**03 35 39.6**	**0.0**
EDS3	**Malargue**	**2.08**	**114**	*e*P	**Pn**	**03 35 42.0**	**+2.2**
EDS3				*e*S	**Sn**	**03 35 56.9**	**-7.6**
BI05	**Punta Hualpn**	**2.15**	**213**	*e*P	**Pn**	**03 35 40.4**	**-0.3**
BI05				IAML		03 36 15.5	
	comp=E,647nm,0.2s						
VA03	**San Esteban**	**2.39**	**25**	*e*P	**Pn**	**03 35 44.2**	**+0.1**
VA03				IAML		03 36 24.4	
	comp=Z,546nm,0.7s						
VA03	**San Esteban**	**2.39**	**25**	*e*P	**Pn**	**03 35 44.0**	**-0.1**
VA03				IAML		03 36 25.3	
	comp=E,931nm,0.3s						
VA06	**Catapilco**	**2.41**	**9**	*e*P	**Pn**	**03 35 43.2**	**-1.0**
VA06				IAML		03 36 20.2	
	comp=E,753nm,0.4s						
RFA	**San Rafael**	**2.69**	**87**	*e*P	**Pn**	**03 35 49.5**	**+1.3**
AAGR	**Agrelo**	**3.04**	**53**	*e*P	**Pn**	**03 35 55.2**	**+2.1**
ARCO	**CERRO ARCO**	**3.14**	**49**	*e*P	Pn	03 35 58.3	+3.9
AUSP	**Uspallata**	**3.35**	**36**	*e*P	**Pn**	**03 35 59.5**	**+2.0**
RTLS	**Leoncito**	**3.74**	**34**	*e*P	**Pn**	**03 36 04.4**	**+1.5**
RTLS				IAML		03 37 05.2	
	comp=Z,218nm,0.5s						
AROD	**Rodeo**	**5.13**	**22**	*e*P	**Pn**	**03 36 22.8**	**+0.8**
AROD				*e*S	Sn	03 37 37.4	+17
AVFE	**Valle Fertil**	**5.59**	**41**	*e*P	**Pn**	**03 36 28.0**	**0.0**
VCA	**Vinchina**	**6.88**	**27**	*e*P	**Pn**	**03 36 46.5**	**+0.7**
VCA				IAML		03 38 47.2	
	comp=Z,28nm,1.1s						

*IDC **15** 03:40:58.9±3.0,5˚.40S×131˚.87E,h0km,mb3.6/3, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=231.3km s-min=28.0km az=76.0*
ISC 15 03:41:00.8±1.0,**5˚.6S**±0˚.1×**131˚.7E**±0˚.2,**h10**km,**n11**, σ2°**76**/**11**,**mb3.6/3**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.04**	**300**	P	**Pn**	**03 41 36.0**	**+0.7**
FAKI	**Fak Fak**	**2.67**	**12**	P	Pg	03 41 53.2	+1.1
MTN	**Manton Dam**	**7.27**	**184**	P	**Pn**	**03 42 50.8**	**+3.6**
COEN	**Coen**	**14.07**	**127**	P	**P**	**03 44 28.5**	**+0.3**
WRA	**Warramunga Arr**	**14.54**	**170**	Pn	**Pn**	**03 44 26.4**	**-0.5**
	0.3nm,0.3s,baz=356,slow=13,SNR=6.5						
WRA				Sn	**Sn**	**03 47 01.9**	**-6.4**
	0.9nm,0.3s,baz=334,slow=25,SNR=8.6						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**18.14**	**173**	P	**P**	**03 45 14.6**	**+1.1**
	0.3nm,0.3s,baz=349,slow=10.0,SNR=17						
ASAR				S	Sn	03 48 25.7	-10
	0.3nm,0.4s,baz=354,slow=28,SNR=2.5						
	1.6nm,0.7s						
AS01	**Alice Springs**	**18.15**	**173**	P	**P**	**03 45 15.2**	**+1.7**
WRKA	**Warakurna**	**19.65**	**189**	P	**Pn**	**03 45 31.8**	**+0.4**
SONM	**Songino Array**	**57.63**	**340**	P	**P**	**03 50 51.6**	**+0.3**
	0.2nm,0.4s,baz=145,slow=5.3,SNR=1.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**67.95**	**326**	P	**P**	**03 51 59.2**	**-0.8**
	0.6nm,0.4s,baz=115,slow=7.5,SNR=7.5						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.17**	**328**	P	**P**	**03 52 24.7**	**-1.1**
	0.3nm,0.6s,baz=113,slow=6.1,SNR=1.9						
	0.3nm,0.6s						

*TEH **15** 03:42:42.4,33˚.62N×45˚.79E,h10km±47km, ML2.5*
*ISN **15** 03:42:42.9±0.6,33˚.57N×45˚.81E,h17km±234km, ML2.5*
ISC 15 03:42:42.9±1.0,**33˚.58N**±0˚.06×**45˚.82E**±0˚.05,**h19**km,**n10**, σ0°**89**/**12**,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.32**	**82**	Pg	**Pg**	**03 42 49.4**	**-0.5**
IBDR	**Badra**	**0.48**	**169**	*e*Pg	**Pg**	**03 42 52.0**	**-0.6**
	baz=347						
IBDR				*e*Sg	**Sg**	**03 42 59.0**	**-0.1**
IGHG	**Ghaleghazi**	**0.97**	**39**	Pg	**Pb**	**03 43 01.1**	**-0.1**
IDHR	**Dehrash**	**1.21**	**23**	Pg	**Pn**	**03 43 04.9**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.23**	**55**	Pg	**Pb**	**03 43 06.4**	**+0.9**
BHD	**Baghdad**	**1.25**	**256**	*e*Pg	**Pb**	**03 43 06.0**	**+0.2**
BHD				*e*Sg	**Sn**	**03 43 22.0**	**+0.5**
ILIN	**Lien**	**1.63**	**35**	Pg	**Pb**	**03 43 13.1**	**+0.6**
IKFM	**Kafar-mosalman**	**1.69**	**91**	Pg	**Pb**	**03 43 14.9**	**+1.6**
IBZA	**Bozab**	**1.91**	**62**	Pn	**Pb**	**03 43 17.9**	**+0.6**
HSAM	**Samen**	**2.40**	**74**	Pn	**Pb**	**03 43 24.1**	**-1.4**

*IDC **15** 04:13:52.2±3.2,55˚.95N×149˚.44W,h0km,mb3.1/1, mbtmp3.3/6, ML3.0/5, MS3.1/2, Error ellipse: s-maj=48.6km s-min=28.1km az=179.0*
*NEIC **15** 04:13:54.8±1.4,56˚.17N±0˚.08×149˚.4W±0˚.1,h21km±10km, ML3.4/26, ML3.2(AEIC), Error ellipse: s-maj=13.3km s-min=8.1km az=152.0*
*AEIC **15** 04:13:58.8±1.2,56˚.23N±0˚.09×149˚.4W±0˚.1,h12km±8km, Error ellipse: s-maj=13.3km s-min=9.4km az=155.0*
ISC 15 04:13:54.1±1.0,**56˚.25N**±0˚.07×**149˚.46W**±0˚.05,**h10**km, **n160**,σ1°**12**/161,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.30**	**313**		**Pn**	**04 14 32.1**	**+0.1**
KDAK	**Kodiak Island**	**2.30**	**313**		**Sn**	**04 14 58.2**	**-2.0**
KDAK	**Kodiak Island**	**2.30**	**313**	S	**Sn**	**04 14 58.7**	**-1.6**
	baz=130						
KDAK	**Kodiak Island**	**2.30**	**313**	Pn	**Pn**	**04 14 32.1**	**+0.1**
	3.1nm,0.3s,baz=105,slow=5.4,SNR=64						
KDAK				Sn	**Sn**	**04 14 58.5**	**-1.8**
	4.3nm,0.3s,baz=32,slow=20,SNR=16						
KDAK				LR	LR	04 15 43.7	
	comp=Z,227nm,19.6s,baz=144,slow=44						
	13nm,0.2s						
OHAK	**Old Harbor**	**2.32**	**296**		**Pn**	**04 14 32.0**	**-0.3**
OHAK					**Sn**	**04 14 58.4**	**-2.5**
OHAK	**Old Harbor**	**2.32**	**296**	P	**Pn**	**04 14 32.1**	**-0.3**
OHAK	**Old Harbor**	**2.32**	**296**	P	**Pn**	**04 14 32.0**	**-0.3**
	baz=113						
OHAK				S	**Sn**	**04 14 58.4**	**-2.5**
	baz=113						
SII	**Sitkinak Islan**	**2.64**	**279**		**Pn**	**04 14 36.8**	**0.0**
SII					**Sn**	**04 15 06.2**	**-2.7**
SII	**Sitkinak Islan**	**2.64**	**279**	IAML		04 15 10.7	
	comp=E,225nm,0.8s						
SII				IAML		04 15 13.3	
	comp=N,181nm,0.8s						
SII	**Sitkinak Islan**	**2.64**	**279**	P	**Pn**	**04 14 36.8**	**0.0**
SII	**Sitkinak Islan**	**2.64**	**279**	P	**Pn**	**04 14 36.8**	**0.0**
	baz=95						
SII				S	**Sn**	**04 15 06.6**	**-2.3**
	baz=95						
SYI	**Shuyak Island**	**2.85**	**327**		**Pn**	**04 14 39.7**	**+0.2**
SYI					**Sn**	**04 15 12.9**	**-0.9**
Q20K	**Shuyak Island**	**2.85**	**327**	P	**Pn**	**04 14 39.7**	**+0.2**
	baz=144						
Q20K				S	**Sn**	**04 15 12.9**	**-1.0**
	baz=144						
CNPM	**China Poot**	**3.42**	**345**		**Pn**	**04 14 47.2**	**-0.2**
CNPM				IAML		04 15 28.6	
	comp=E,42nm,0.8s						
CNPM	**China Poot**	**3.42**	**345**		**Sn**	**04 15 26.3**	**-1.7**
CNPM	**China Poot**	**3.42**	**345**	IAML		04 15 26.2	
	comp=N,41nm,2.3s						
CHIR	**Chirikof Islan**	**3.48**	**265**		**Pn**	**04 14 47.8**	**-0.5**
CHIR					**Sn**	**04 15 26.5**	**-3.0**
CHIR	**Chirikof Islan**	**3.48**	**265**	IAML		04 15 32.1	
	comp=E,85nm,1.5s						
CHIR				IAML		04 15 36.2	
	comp=N,110nm,1.6s						
CHIR	**Chirikof Islan**	**3.48**	**265**	P	**Pn**	**04 14 47.8**	**-0.5**
	baz=81						
CHIR				S	**Sn**	**04 15 26.5**	**-3.0**
	baz=81						
Q19K	**Cape Douglas,**	**3.50**	**322**		**Pn**	**04 14 49.1**	**+0.5**
Q19K	**Cape Douglas,**	**3.50**	**322**	IAML		04 15 45.5	
	comp=N,162nm,0.8s						
Q19K	**Cape Douglas,**	**3.50**	**322**	P	**Pn**	**04 14 49.1**	**+0.5**
	baz=138						
KAPH	**Katmai Pasha**	**3.54**	**314**		**Pn**	**04 14 50.6**	**+1.5**
KAHG	**Katmai Hook Gl**	**3.55**	**311**		**Pn**	**04 14 51.0**	**+1.6**
BRSE	**Bradley Lake S**	**3.57**	**350**		**Pn**	**04 14 49.1**	**-0.4**
BRSE					**Sn**	**04 15 29.6**	**-2.0**
BRSE	**Bradley Lake S**	**3.57**	**350**	P	**Pn**	**04 14 49.1**	**-0.4**
	baz=168						
BRSE				S	**Sn**	**04 15 29.6**	**-2.0**
	baz=168						
Q23K	**Middleton Isla**	**3.59**	**26**		**Pn**	**04 14 49.0**	**-0.8**
Q23K	**Middleton Isla**	**3.59**	**26**	P	**Pn**	**04 14 49.0**	**-0.8**
	baz=208						
MID	**Middleton Isla**	**3.60**	**26**		**Pn**	**04 14 49.1**	**-0.7**
MID	**Middleton Isla**	**3.60**	**26**	IAML		04 15 58.4	
	comp=N,163nm,1.7s						
MID	**Middleton Isla**	**3.60**	**26**	P	**Pn**	**04 14 49.2**	**-0.6**
BRLK	**Bradley Lake**	**3.60**	**348**	Pn	**Pn**	**04 14 49.4**	**-0.6**
BRLK				IAML		04 15 34.8	
	comp=E,66nm,0.5s						
BRLK				IAML		04 15 37.7	
	comp=N,38nm,0.6s						
KCE	**Katmai Mt Cerb**	**3.69**	**305**		**Pn**	**04 14 52.9**	**+1.7**
ACHA	**Angle Creek He**	**3.74**	**304**		**Pn**	**04 14 53.7**	**+1.7**
ANCK	**Angle Creek**	**3.82**	**303**		**Pn**	**04 14 54.4**	**+1.4**
KVTA	**Katmai Vly 10**	**3.82**	**306**		**Pn**	**04 14 54.7**	**+1.8**
KAHC	**Katmai Hardscr**	**3.84**	**311**		**Pn**	**04 14 54.7**	**+1.4**
KAHC	**Katmai Hardscr**	**3.84**	**311**	P	**Pn**	**04 14 54.7**	**+1.4**
	baz=126						
SEW	**Seward**	**3.87**	**0**		**Pn**	**04 14 53.0**	**-0.5**
SEW	**Seward**	**3.87**	**0**	P	**Pn**	**04 14 53.1**	**-0.5**
	baz=180						
P23K	**Montague Islan**	**3.91**	**15**		**Pn**	**04 14 53.9**	**-0.3**
P23K	**Montague Islan**	**3.91**	**15**	P	**Pn**	**04 14 53.9**	**-0.3**
	baz=196						
P19K	**Oil Pt**	**3.96**	**331**		**Pn**	**04 14 55.5**	**+0.6**
P19K	**Oil Pt**	**3.96**	**331**	IAML		04 15 45.7	
	comp=E,77nm,0.6s						
P19K				IAML		04 15 46.0	
	comp=N,89nm,0.6s						
P19K	**Oil Pt**	**3.96**	**331**	P	**Pn**	**04 14 55.5**	**+0.6**
	baz=148						
PLK3	**Peulik 3**	**3.99**	**294**		**Pn**	**04 14 56.4**	**+1.0**
CNTC	**Contact Creek**	**4.03**	**303**		**Pn**	**04 14 57.1**	**+1.2**
Q17K	**Contact Creek**	**4.03**	**303**	P	**Pn**	**04 14 57.1**	**+1.2**
	baz=117						
O20K	**Slope Mountain**	**4.19**	**338**		**Pn**	**04 14 58.2**	**+0.1**
IVE	**Iliamna Volcan**	**4.22**	**335**		**Pn**	**04 14 58.3**	**-0.2**
O22K	**Cooper Landing**	**4.25**	**358**		**Pn**	**04 14 58.6**	**-0.1**
SLKM	**Skilak Lake**	**4.29**	**355**		**Pn**	**04 14 58.9**	**-0.5**
P18K	**Big Mountain,**	**4.41**	**318**		**Pn**	**04 15 01.2**	**+0.2**
P18K	**Big Mountain,**	**4.41**	**318**	IAML		04 15 55.1	
	comp=N,16nm,2.8s						
P18K				IAML		04 17 02.0	
	comp=E,15nm,4.2s						
P18K	**Big Mountain,**	**4.41**	**318**	P	**Pn**	**04 15 01.3**	**+0.3**
	baz=133						
HIN	**Hinchinbrook I**	**4.44**	**19**		**Pn**	**04 15 01.3**	**-0.2**
KAIM	**Kayak Island**	**4.55**	**34**		**Pn**	**04 15 02.5**	**-0.5**
RSO	**Redoubt South**	**4.56**	**339**		**Pn**	**04 15 02.8**	**-0.5**
Q16K	**King Salmon**	**4.58**	**305**		**Pn**	**04 15 04.7**	**+1.4**
Q16K	**King Salmon**	**4.58**	**305**	P	**Pn**	**04 15 04.7**	**+1.4**
	baz=119						
RDWB	**Redoubt West**	**4.61**	**339**		**Pn**	**04 15 02.9**	**-1.0**
O19K	**Port Alsworth**	**4.71**	**329**		**Pn**	**04 15 04.9**	**-0.3**
O19K	**Port Alsworth**	**4.71**	**329**	P	**Pn**	**04 15 05.0**	**-0.2**
	baz=145						
O18K	**Koktuh Hills**	**4.73**	**322**		**Pn**	**04 15 05.3**	**-0.1**
O18K	**Koktuh Hills**	**4.73**	**322**	P	**Pn**	**04 15 05.8**	**+0.3**
	baz=137						
EYAK	**Cordova Ski Ar**	**4.73**	**23**		**Pn**	**04 15 05.2**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.73**	**23**	P	**Pn**	**04 15 05.6**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.73**	**23**	P	**Pn**	**04 15 05.5**	**+0.1**
	baz=205						
P17K	**Kvichak River**	**4.76**	**311**		**Pn**	**04 15 07.1**	**+1.2**
P17K	**Kvichak River**	**4.76**	**311**	P	**Pn**	**04 15 07.1**	**+1.2**
	baz=125						
RC01	**Rabbit Creek A**	**4.86**	**358**	Pn	**Pn**	**04 15 07.0**	**-0.1**

CNBA	Chernabura Isl	5.93	260			Pn		04 15 22.4	+0.5
N25K	Chitina, Valde	5.93	23			Pn		04 15 22.2	+0.2
N25K	Chitina, Valde baz=207	5.93	23	P		Pn		04 15 22.5	+0.5
GLB	Gilahina Butte	5.97	27			Pn		04 15 22.6	+0.1
KIAG	Kiagna River	5.98	35			Pn		04 15 22.6	-0.1
GRNC	Granite Creek	6.04	39			Pn		04 15 23.4	-0.2
TABL	Table Mountain	6.07	43			Pn		04 15 23.8	-0.2
MCARA	McCarthy VSAT	6.14	30			Pn		04 15 24.9	+0.1
MCARA	McCarthy VSAT baz=215	6.14	30	P		Pn		04 15 25.6	+0.9
PTPK	Patty Peak	6.14	33			Pn		04 15 25.1	+0.1
M18K	Stony River	6.20	331			Pn		04 15 25.0	-0.7
PCA	Pinnacle	6.21	48			Pn		04 15 25.8	0.0
PINM	Pinnacle baz=235	6.21	48	P		Pn		04 15 26.5	+0.7
SDPT	Sand Point	6.28	266	P		Pn		04 15 28.1	+1.4
O15K	Ungalikthiuk R	6.28	302			Pn		04 15 27.9	+1.3
BARN	Barnard Glacie	6.31	37			Pn		04 15 27.4	+0.2
CTG	Chitna Glacier baz=225	6.35	39	P		Pn		04 15 27.9	+0.1
CTGM	Chitina Glacie	6.35	39			Pn		04 15 27.6	-0.2
PNL	Peninsula	6.36	53			Pn		04 15 28.0	+0.2
PNL	Peninsula	6.36	53	P		Pn		04 15 28.2	+0.4
PNL	Peninsula baz=241	6.36	53	P		Pn		04 15 28.0	+0.2
LOGN	Logan Glacier	6.37	40			Pn		04 15 28.1	-0.1
BCPM	Bancas Point	6.39	50			Pn		04 15 28.5	+0.3
N16K	Nishlik Lake	6.47	315			Pn		04 15 30.2	+0.8
HARP	HAARP	6.55	18			Pn		04 15 31.1	+0.7
HARP	HAARP baz=201	6.55	18	P		Pn		04 15 31.1	+0.7
L19K	White Mountain	6.56	337			Pn		04 15 30.4	-0.1
M17K	Holitna River	6.62	325			Pn		04 15 31.5	+0.2
M17K	Holitna River baz=138	6.62	325	P		Pn		04 15 31.5	+0.2
M16K	Timber Creek	6.88	318			Pn		04 15 35.6	+0.7
M16K	Timber Creek baz=130	6.88	318	P		Pn		04 15 36.3	+1.3
PS1A	Pavlof South-1	6.97	268			Pn		04 15 37.3	+1.2
O29M	Mount Kennedy	7.03	50			Pn		04 15 37.2	+0.1
O29M	Mount Kennedy baz=239	7.03	50	P		Pn		04 15 37.2	+0.1
P29M	Windy Craggy	7.10	57			Pn		04 15 37.7	-0.3
YUK6	Outpost Mounta	7.46	46			Pn		04 15 44.2	+1.1
YUK6	Outpost Mounta baz=236	7.46	46	P		Pn		04 15 44.3	+1.1
SKAG	Skagway	8.19	61	P		Pn		04 15 53.8	+0.9
ISLZ	Isanotski Laza	8.24	265			Pn		04 15 54.0	+0.4
N30M	Aishikik Lake	8.26	46			Pn		04 15 54.3	+0.4
N30M	Aishikik Lake baz=236	8.26	46	P		Pn		04 15 54.3	+0.4
M29M	Somme Creek	8.37	38			Pn		04 15 56.1	+0.7
M29M	Somme Creek baz=227	8.37	38	P		Pn		04 15 56.1	+0.7
JIS	Juneau Island	8.42	70	P		Pn		04 15 55.8	-0.2
ILAR	Eielson Array comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=9.0	8.64	7	Pn		Pn		04 15 59.8	+0.7
ILAR				Sn		Sn		04 17 31.3	-5.1
	comp=E,0.1nm,0.3s,baz=205,slow=15,SNR=1.6 comp=E,0.2nm,0.3s								
DLBC	Dease Lake comp=E,0.1nm,0.3s,baz=262,slow=14,SNR=1.6	10.72	70	Pn		Pn		04 16 28.2	+0.6
DLBC				Sn		Sn		04 18 23.7	-3.9
	baz=114,slow=21,SNR=0.9 comp=E,1.0nm,0.7s								
INK	Inuvik baz=197,slow=11,SNR=2.6	14.12	25	Pn		Pn		04 17 15.9	+2.1
INK				Sn		Sn		04 19 54.2	+4.0
	comp=E,0.2nm,0.3s,baz=112,slow=24,SNR=5.2								
INK				LR		LR		04 22 10.2	
	comp=E,102nm,19.1s,baz=188,slow=35 comp=E,1.2nm,0.9s								
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=266,slow=11,SNR=8.5 comp=E,0.8nm,1.0s	18.64	56	P		Pn		04 18 13.6	+1.7
H11N2	WAKE ISLAND Hy	48.78	240	T		T		05 15 19.0	
	baz=30								
H11N3	WAKE ISLAND Hy baz=30	48.78	240	T		T		05 15 16.6	
H11N1	WAKE ISLAND Hy	48.80	240	T		T		05 15 17.5	
	baz=30								
H11S1	WAKE ISLAND Hy	49.92	239	T		T		05 16 46.6	
	baz=30								
H11S2	WAKE ISLAND Hy	49.94	239	T		T		05 16 42.2	
	baz=30								
H11S3	WAKE ISLAND Hy baz=30	49.94	239	T		T		05 16 41.6	
MKAR	Makanchi Array comp=E,0.1nm,0.5s,baz=45,slow=5.9,SNR=1.8 comp=E,0.1nm,0.5s	68.56	325	P		P		04 24 57.8	+1.2

TAP ***15*** *04:16:59.5,24.14N×121.69E,h14km,ML2.7,D*
ISC 15 04:16:59.8±0.9,24.14N±0.02×121.68E±0.04,h13km±5km**,**
n46,σ0s52/63,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=286	**0.06**	**286**	*i* P	**Pg**	**04 17 02.4**	**0.0**
ETL				*i* S	**Sg**	**04 17 04.1**	**-0.1**
	baz=286						
NACB	**Ninganchiao**	**0.08**	**291**	P	**Pg**	**04 17 02.6**	**+0.1**
NACB	**Ninganchiao** baz=291	**0.08**	**291**	*i* P	**Pg**	**04 17 02.7**	**+0.1**
NACB				*i* S	**Sg**	**04 17 04.7**	**+0.1**
	baz=291						
TWD	**Chiawan** baz=235	**0.10**	**231**	*i* P	**Pg**	**04 17 02.7**	**0.0**
TWD				S	**Sg**	**04 17 04.9**	**+0.1**
	baz=235						
EAHA	**Aohua** baz=10.0	**0.19**	**16**	P	**Pg**	**04 17 04.0**	**-0.1**
EAHA				S	**Sg**	**04 17 07.2**	**+0.1**
	baz=10.0						
ETLH	**Xiulin Townshi** baz=289	**0.19**	**289**	*i* P	**Pb**	**04 17 04.7**	**-0.6**
ETLH				S	**Sb**	**04 17 08.2**	**-0.8**
	baz=289						
ETM	**Tongmen** baz=228	**0.25**	**224**	P	**Pg**	**04 17 05.3**	**+0.2**
ETM				*e*S	**Sg**	**04 17 09.0**	**+0.4**
	baz=228						
LXIB	**Xiulin Townshi** baz=246	**0.27**	**243**	*i* P	**Pg**	**04 17 05.8**	**+0.2**
LXIB				S	**Sg**	**04 17 10.3**	**+0.8**
	baz=246						
ENA	**Nanau** baz=9.0	**0.29**	**11**	*e*P	**Pg**	**04 17 05.9**	**+0.1**
ENA				S	**Sg**	**04 17 09.9**	**+0.1**
	baz=9.0						
EWUT	**Wuta** baz=13	**0.31**	**16**	*e*P	**Pg**	**04 17 06.4**	**+0.1**
EWUT				*e*S	**Sg**	**04 17 10.0**	**-0.5**
	baz=13						
SHUL	**Shoufeng** baz=204	**0.37**	**197**	*e*P	**Pb**	**04 17 08.9**	**+0.6**
WHF	**Hehuan Shan** baz=271	**0.38**	**270**	*e*P	**Pb**	**04 17 08.2**	**-0.5**
NNSB	**Datong** baz=315	**0.39**	**316**	*e*P	**Pb**	**04 17 08.4**	**-0.3**
ESL	**Shilin** baz=223	**0.40**	**215**	*e*P	**Pg**	**04 17 08.0**	**+0.2**
NNS	**Nan Shan** baz=316	**0.41**	**316**	*e*P	**Pb**	**04 17 08.8**	**-0.2**
FUSS	**Fushou** baz=285	**0.41**	**285**	P	**Pb**	**04 17 09.2**	**0.0**
CHGB	**Renai** baz=256	**0.47**	**260**	*e*P	**Pb**	**04 17 10.0**	**-0.2**
TWT	**Tachien** baz=286	**0.47**	**283**	*e*P	**Pb**	**04 17 10.6**	**+0.4**
NDT	**Datong Townshi** baz=340	**0.48**	**341**	P	**Pb**	**04 17 10.1**	**-0.1**
NDS	**Dongshan** baz=6.0	**0.49**	**4**	*e*P	**Pb**	**04 17 10.4**	**+0.1**
TWC	**Suao** baz=14	**0.49**	**18**	*e*P	**Pb**	**04 17 09.7**	**-0.6**
TDCB	**Techi** baz=286	**0.49**	**283**	*e*P	**Pb**	**04 17 10.7**	**+0.3**
WARBT	**Fenglin Townsh** baz=218	**0.50**	**213**	*e*P	**Pb**	**04 17 09.9**	**-0.6**
ENTT	**Nioudou** baz=346	**0.51**	**348**	*e*P	**Pb**	**04 17 10.4**	**-0.2**
ENTT				*e*S	**Sb**	**04 17 18.4**	**+0.5**
	baz=346						
WUSB	**Renai**	**0.54**	**254**	*e*P	**Pb**	**04 17 11.1**	**-0.1**
	baz=250						
TWE	**Neicheng**	**0.57**	**359**	*e*P	**Pb**	**04 17 11.6**	**-0.1**
	baz=358						
TWE				*e*S	**Sb**	**04 17 20.7**	**+0.9**
	baz=358						
YHNB	**Yeheng**	**0.59**	**332**	P	**Pb**	**04 17 12.5**	**+0.4**
YHNB	**Yeheng** baz=331	**0.59**	**332**	*e*P	**Pb**	**04 17 12.3**	**+0.2**
NSK	**Sanguang** baz=330	**0.61**	**331**	*e*P	**Pb**	**04 17 12.5**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=350	**0.62**	**352**	*e*P	**Pb**	**04 17 12.6**	**0.0**
FUSB				*e*S	**Sn**	**04 17 22.5**	**-1.8**
	baz=350						
VWDT	**VWDT** baz=241	**0.63**	**232**	*e*P	**Pb**	**04 17 12.6**	**-0.1**
NWLT	**Wulai** baz=349	**0.65**	**346**	*e*P	**Pb**	**04 17 13.4**	**+0.3**
HGSD	**Ruisui** baz=215	**0.69**	**200**	*e*P	**Pn**	**04 17 14.3**	**-1.0**
SSLB	**Suanglung**	**0.75**	**242**	P	**Pb**	**04 17 15.0**	**+0.2**
SSLB	**Suanglung** baz=252	**0.75**	**242**	*e*P	**Pb**	**04 17 14.9**	**0.0**
SSLB				*e*S	**Sg**	**04 17 23.8**	**-0.5**
	baz=252						
LIOB	**Emei** baz=309	**0.79**	**310**	*e*P	**Pn**	**04 17 16.8**	**+0.1**
LIOB				*e*S	**Sb**	**04 17 26.6**	**+0.7**
	baz=309						
NSTT	**Nanjuang** baz=307	**0.79**	**308**	*e*P	**Pn**	**04 17 16.6**	**-0.1**
NSTT				*e*S	**Sb**	**04 17 26.4**	**+0.4**
	baz=307						
YULB	**Yu-li**	**0.83**	**205**	P	**Pn**	**04 17 17.5**	**+0.3**
YULB	**Yu-li** baz=217	**0.83**	**205**	*e*P	**Pg**	**04 17 15.6**	**-0.2**
TATO	**Taipei**	**0.85**	**348**	P	**Pn**	**04 17 17.6**	**+0.1**
ALS	**Alishan** baz=224	**1.02**	**232**	*e*P	**Pn**	**04 17 20.7**	**+0.5**
ALS				*e*S	**Sg**	**04 17 33.3**	**+0.4**
	baz=224						
CHN5	**Tsauling** baz=235	**1.07**	**240**	*e*P	**Pn**	**04 17 22.1**	**+1.5**
ELDTW	**Lidau** baz=225	**1.13**	**213**	*e*P	**Pg**	**04 17 21.3**	**-0.2**
ELDTW				*e*S	**Sb**	**04 17 35.0**	**-0.9**
	baz=225						
YOJ	**Yonaguni jima**	**1.25**	**75**	P	**Pg**	**04 17 24.9**	**+1.0**
TPUB	**Ta-pu**	**1.28**	**229**	P	**Pg**	**04 17 25.4**	**+1.0**
TWGBT	**Beinan**	**1.43**	**203**	P	**Pg**	**04 17 27.5**	**+0.2**

JMA ***15*** *04:17:06.8±0.1,24.2N±0.3×121.7E±0.3,h0km, TAIWAN REGION*
TAP ***15*** *04:17:06.3,24.15N×121.69E,h11km,ML3.2,C*
ISC 15 04:17:06.8±0.8,24.15N±0.01×121.71E±0.02,h9km±5km**,**
n89,σ0s66/174,1C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=280	**0.07**	**278**	⇓*i* P	**Pg**	**04 17 08.8**	**-0.1**
ETL				*i* S	**Sg**	**04 17 10.6**	**0.0**
	baz=280						
NACB	**Ninganchiao** baz=287	**0.10**	**284**	⇓*i* P	**Pg**	**04 17 09.2**	**-0.1**
NACB				*i* S	**Sg**	**04 17 11.1**	**0.0**
	baz=287						
TWD	**Chiawan** baz=230	**0.12**	**235**	⇓*i* P	**Pg**	**04 17 09.2**	**-0.3**
TWD				*i* S	**Sg**	**04 17 11.3**	**-0.1**
	baz=230						
EHP	**Heping Village** baz=17	**0.16**	**12**	P	**Pg**	**04 17 10.2**	**-0.1**
EHP				*e*S	**Sg**	**04 17 13.2**	**+0.5**
	baz=17						
EAHA	**Aohua** baz=18	**0.18**	**10**	P	**Pg**	**04 17 10.5**	**-0.1**
EAHA				S	**Sg**	**04 17 13.8**	**+0.6**
	baz=18						
HWA	**Hwalien** baz=205	**0.19**	**208**	*e*P	**Pg**	**04 17 11.4**	**+0.6**
HWA				*e*S	**Sg**	**04 17 15.1**	**+1.6**
	baz=205						
ETLH	**Xiulin Townshi** baz=287	**0.21**	**286**	⇓*e*P	**Pg**	**04 17 11.2**	**0.0**
ETLH				*i* S	**Sg**	**04 17 14.7**	**+0.5**
	baz=287						
ETM	**Tongmen** baz=226	**0.27**	**227**	*e*P	**Pg**	**04 17 11.8**	**-0.4**
ETM				*e*S	**Sg**	**04 17 15.6**	**-0.2**
	baz=226						
ENA	**Nanau** baz=9.0	**0.28**	**7**	⇑*e*P	**Pg**	**04 17 12.4**	**0.0**
ENA				*e*S	**Sg**	**04 17 16.4**	**+0.3**
	baz=9.0						
LXIB	**Xiulin Townshi** baz=244	**0.29**	**245**	*e*P	**Pg**	**04 17 12.4**	**-0.4**
LXIB				*e*S	**Sg**	**04 17 16.8**	**+0.1**
	baz=244						
EWUT	**Wuta** baz=13	**0.30**	**13**	*e*P	**Pg**	**04 17 12.8**	**0.0**
EWUT				*e*S	**Sg**	**04 17 17.1**	**+0.3**
	baz=13						
SHUL	**Shoufeng** baz=204	**0.38**	**200**	*e*P	**Pg**	**04 17 14.7**	**+0.4**
SHUL				*e*S	**Sb**	**04 17 21.2**	**-0.6**
	baz=204						
WHF	**Hehuan Shan** baz=269	**0.40**	**270**	*e*P	**Pg**	**04 17 14.5**	**-0.3**
WHF				*e*S	**Sg**	**04 17 20.7**	**+0.6**
	baz=269						
NNSB	**Datong** baz=315	**0.41**	**314**	P	**Pg**	**04 17 14.5**	**-0.2**
NNSB				S	**Sg**	**04 17 20.4**	**+0.2**
	baz=315						
ESL	**Shilin** baz=222	**0.42**	**217**	*e*P	**Pg**	**04 17 15.2**	**+0.3**
ESL				*e*S	**Sg**	**04 17 19.9**	**-0.5**
	baz=222						
NNS	**Nan Shan** baz=315	**0.42**	**314**	*e*P	**Pb**	**04 17 15.8**	**-0.7**
NNS				*e*S	**Sg**	**04 17 21.1**	**+0.5**
	baz=315						
FUSS	**Fushou** baz=284	**0.43**	**283**	*e*P	**Pg**	**04 17 15.6**	**+0.3**
FUSS				*e*S	**Sb**	**04 17 22.2**	**-1.3**
	baz=284						
ESAO	**Su ao** baz=17	**0.44**	**17**	*e*P	**Pg**	**04 17 15.8**	**+0.3**
ESAO				*e*S	**Sg**	**04 17 22.0**	**+0.7**
	baz=17						
TWC	**Suao** baz=11	**0.48**	**16**	*e*P	**Pb**	**04 17 16.6**	**-0.8**
TWC				*e*S	**Sg**	**04 17 22.8**	**+0.4**
	baz=11						
NDS	**Dongshan** baz=1.0	**0.48**	**1**	P	**Pg**	**04 17 15.8**	**-0.4**
NDS				*e*S	**Sg**	**04 17 22.1**	**-0.5**
	baz=1.0						
NDT	**Datong Townshi** baz=340	**0.48**	**339**	*e*P	**Pg**	**04 17 16.6**	**+0.4**
NDT				*e*S	**Sb**	**04 17 23.7**	**-1.0**
	baz=340						
CHGB	**Renai** baz=251	**0.49**	**260**	*e*P	**Pg**	**04 17 16.7**	**+0.3**
CHGB				*e*S	**Sg**	**04 17 23.3**	**+0.3**
	baz=251						
TWT	**Tachien** baz=282	**0.49**	**282**	*e*P	**Pb**	**04 17 17.0**	**-0.7**
TWT				*e*S	**Sb**	**04 17 24.3**	**-0.9**
	baz=282						
ENTT	**Nioudou** baz=347	**0.51**	**346**	*e*P	**Pg**	**04 17 17.0**	**+0.4**
ENTT				*e*S	**Sg**	**04 17 23.9**	**+0.6**
	baz=347						
TDCB	**Techi** baz=282	**0.51**	**282**	*e*P	**Pb**	**04 17 17.2**	**-0.8**
TDCB				*e*S	**Sg**	**04 17 23.8**	**+0.4**
	baz=282						
WARBT	**Fenglin Townsh** baz=220	**0.52**	**214**	*e*P	**Pg**	**04 17 16.4**	**-0.4**
WARBT				*e*S	**Sg**	**04 17 23.5**	**-0.2**
	baz=220						
WUSB	**Renai** baz=246	**0.56**	**254**	*e*P	**Pg**	**04 17 17.8**	**+0.1**
WUSB				*e*S	**Sg**	**04 17 25.8**	**+0.7**
	baz=246						
TWE	**Neicheng**	**0.57**	**357**	*e*P	**Pb**	**04 17 18.3**	**-0.7**
	baz=358						
TWE				*e*S	**Sg**	**04 17 26.1**	**+0.7**
	baz=358						
YHNB	**Yeheng**	**0.60**	**330**	P	**Pb**	**04 17 18.9**	**-0.6**
	baz=330						
YHNB				*e*S	**Sg**	**04 17 26.8**	**+0.5**
	baz=330						
NSK	**Sanguang**	**0.61**	**329**	*e*P	**Pb**	**04 17 19.1**	**-0.6**
	baz=330						
NSK				*e*S	**Sg**	**04 17 27.1**	**+0.4**
	baz=330						
FUSB	**Fushanzhiwuyua** baz=350	**0.62**	**350**	*e*P	**Pb**	**04 17 19.2**	**-0.6**
FUSB				*e*S	**Sg**	**04 17 27.1**	**+0.3**
	baz=350						
VWDT	**VWDT**	**0.65**	**233**	*e*P	**Pb**	**04 17 20.2**	**-0.1**
	baz=233						
VWDT				*e*S	**Sb**	**04 17 29.4**	**0.0**
	baz=233						
NWLT	**Wulai**	**0.65**	**344**	P	**Pg**	**04 17 19.6**	**+0.2**
	baz=332						
NWLT				*e*S	**Sg**	**04 17 28.3**	**+0.4**
	baz=332						
NFF	**Wufeng Townshi**	**0.72**	**312**	*e*P	**Pb**	**04 17 21.3**	**-0.2**
	baz=312						
NFF				*e*S	**Sb**	**04 17 31.0**	**-0.6**
	baz=312						
EHY	**Hungye**	**0.73**	**209**	*e*P	**Pg**	**04 17 20.5**	**-0.4**
	baz=219						
EHY				*e*S	**Sg**	**04 17 30.9**	**+0.5**
	baz=219						
SSLB	**Suanglung**	**0.78**	**243**	*e*P	**Pg**	**04 17 21.4**	**-0.3**
	baz=252						
SSLB				S	**Sg**	**04 17 31.7**	**-0.1**
	baz=252						
SMLT	**Sun Moon Lake**	**0.78**	**250**	*e*P	**Pb**	**04 17 22.2**	**-0.4**
	baz=250						
SMLT				S	**Sg**	**04 17 32.5**	**+0.4**
	baz=250						
LIOB	**Emei**	**0.80**	**308**	*e*P	**Pb**	**04 17 23.3**	**+0.4**
	baz=309						
LIOB				*e*S	**Sb**	**04 17 33.3**	**-0.5**
	baz=309						
NSTT	**Nanjuang**	**0.80**	**307**	*e*P	**Pb**	**04 17 23.1**	**+0.2**
	baz=307						
NSTT				S	**Sb**	**04 17 33.6**	**-0.3**
	baz=307						
TYC	**Yuchr**	**0.81**	**253**	*e*P	**Pb**	**04 17 22.6**	**-0.5**
	baz=245						
TYC				*e*S	**Sg**	**04 17 32.5**	**-0.5**
	baz=245						
TWA	**Mucha**	**0.83**	**352**	*e*P	**Pb**	**04 17 23.5**	**0.0**
	baz=352						
TWA				*e*S	**Sg**	**04 17 34.1**	**+0.3**
	baz=352						
YULB	**Yu-li**	**0.84**	**206**	*e*P	**Pg**	**04 17 22.5**	**-0.5**
	baz=217						
YULB				*e*S	**Sg**	**04 17 33.8**	**-0.2**
	baz=217						
TWQ1	**Liyutan**	**0.87**	**283**	*e*P	**Pn**	**04 17 25.6**	**+0.3**
	baz=294						
TWQ1				*e*S	**Sb**	**04 17 35.8**	**-0.2**
	baz=294						
TWF1	**Yuli**	**0.88**	**205**	*e*P	**Pg**	**04 17 23.6**	**0.0**
	baz=216						
TWF1				*e*S	**Sb**	**04 17 35.8**	**-0.2**
	baz=216						
TWB1	**Santiao Chiao**	**0.89**	**17**	*e*P	**Pg**	**04 17 24.0**	**0.0**
	baz=9.0						
TWB1				*e*S	**Sb**	**04 17 36.6**	**0.0**
	baz=9.0						
SBCB	**Hsinchu**	**0.92**	**314**	*e*P	**Pn**	**04 17 26.1**	**+0.3**
	baz=314						
SBCB				*e*S	**Sn**	**04 17 39.1**	**-0.1**
	baz=314						
NMLH	**Miaoli**	**0.92**	**295**	*e*P	**Pn**	**04 17 26.1**	**+0.2**
	baz=295						
NMLH				*e*S	**Sb**	**04 17 37.7**	**+0.5**
	baz=295						
NWF	**Wu-fen Shan**	**0.92**	**4**	*e*P	**Pb**	**04 17 25.2**	**+0.2**
	baz=355						
NWF				*e*S	**Sg**	**04 17 36.8**	**+0.3**
	baz=355						
WFSB	**Wu-fen Shan**	**0.92**	**4**	*e*P	**Pb**	**04 17 24.9**	**-0.1**
	baz=355						
WFSB				*e*S	**Sb**	**04 17 36.9**	**-0.4**
	baz=355						
TCU	**Taichung**	**0.94**	**270**	*e*P	**Pn**	**04 17 27.0**	**+0.9**
	baz=262						
TCU				*e*S	**Sn**	**04 17 39.8**	**+0.1**
	baz=262						
NCUH	**Zhongli**	**0.94**	**330**	*e*P	**Pn**	**04 17 26.0**	**-0.3**
	baz=330						
NCUH				*e*S	**Sn**	**04 17 40.5**	**+0.6**
	baz=330						
WJS	**Zhushan**	**0.95**	**250**	*e*P	**Pn**	**04 17 26.7**	**+0.3**
	baz=245						
WJS				*e*S	**Sn**	**04 17 39.5**	**-0.5**
	baz=245						
SXI1	**Grass Mountain**	**0.95**	**9**	*e*P	**Pb**	**04 17 25.6**	**+0.1**
	baz=2.0						
SXI1				*e*S	**Sb**	**04 17 39.1**	**+0.7**
	baz=2.0						
TWS1	**Kuangyinshan**	**0.98**	**345**	*e*P	**Pn**	**04 17 26.9**	**+0.1**
	baz=345						
TWS1				*e*S	**Sn**	**04 17 40.9**	**+0.1**
	baz=345						
CHKH	**Chenggong**	**0.99**	**197**	*e*P	**Pg**	**04 17 25.1**	**-0.8**
	baz=190						
CHKH				*e*S	**Sb**	**04 17 39.6**	**+0.3**
	baz=190						
TNOU	**National Taiwa**	**1.00**	**4**	*e*P	**Pb**	**04 17 26.6**	**+0.4**
	baz=3.0						
YM01	**YM01**	**1.00**	**353**	*e*P	**Pn**	**04 17 27.1**	**0.0**
	baz=1.0						
YM01				*e*S	**Sb**	**04 17 40.7**	**+1.0**
	baz=1.0						
NTST	**Danshui**	**1.04**	**347**	*e*P	**Pn**	**04 17 28.0**	**+0.4**
	baz=355						
NTST				*e*S	**Sn**	**04 17 43.0**	**+0.8**
	baz=355						
YM08	**YM08**	**1.04**	**354**	*e*P	**Pb**	**04 17 27.1**	**+0.1**
	baz=353						
YM08				*e*S	**Sb**	**04 17 41.1**	**+0.3**
	baz=353						
ALS	**Alishan**	**1.04**	**233**	*e*P	**Pb**	**04 17 27.2**	**0.0**
	baz=223						
ALS				*e*S	**Sb**	**04 17 42.0**	**+1.0**
	baz=223						
WCHH	**Zhanghua**	**1.05**	**266**	*e*P	**Pn**	**04 17 28.1**	**+0.4**
	baz=266						
WCHH				*e*S	**Sn**	**04 17 42.6**	**+0.1**
	baz=266						
CHN5	**Tsauling**	**1.09**	**240**	*e*P	**Pn**	**04 17 28.6**	**+0.3**
	baz=240						
CHN5				*e*S	**Sn**	**04 17 43.8**	**+0.3**
	baz=240						
CHKT	**Chengkung**	**1.09**	**197**	*e*P	**Pg**	**04 17 26.3**	**-1.4**
	baz=191						
CHKT				*e*S	**Sb**	**04 17 42.4**	**+0.3**
	baz=191						
TWY	**Chenhua**	**1.13**	**355**	*e*P	**Pn**	**04 17 29.6**	**+0.9**
	baz=354						
TWY				*e*S	**Sn**	**04 17 44.1**	**-0.2**
	baz=354						
ELDTW	**Lidau**	**1.15**	**214**	*e*P	**Pg**	**04 17 27.7**	**-1.1**
	baz=224						
ELDTW				*e*S	**Sg**	**04 17 43.4**	**-0.3**
	baz=224						
JYNG	**Yonagunijimaku**	**1.17**	**75**	*e*P	**Pn**	**04 17 29.8**	**+0.5**
YOJ	**Yonaguni jima**	**1.23**	**75**	P	**Pn**	**04 17 30.9**	**+0.7**
TPUB	**Ta-pu**	**1.30**	**230**	*e*P	**Pg**	**04 17 31.8**	**+0.1**
	baz=219						
TPUB				*e*S	**Sn**	**04 17 50.3**	**+1.7**
	baz=219						
WTP	**Ta-pu**	**1.34**	**228**	*e*P	**Pg**	**04 17 32.9**	**+0.3**
	baz=228						
WTP				*e*S	**Sn**	**04 17 51.7**	**+1.9**
	baz=228						
TWK	**Hsinying**	**1.42**	**232**	*e*P	**Pg**	**04 17 33.8**	**-0.2**
	baz=233						
TWK				*e*S	**Sg**	**04 17 54.0**	**+1.5**
	baz=233						
SNST	**Tainan City**	**1.44**	**230**	*e*P	**Pg**	**04 17 34.2**	**-0.3**
	baz=232						
SNST				*e*S	**Sg**	**04 17 55.3**	**+2.1**
	baz=232						

CHN1	**Nanshi**	**1.44**	**229**	*e*P	**Pg**	**04 17 34.5**	**0.0**
	baz=222						
CHN1				*e*S	**Sg**	**04 17 55.3**	**+2.0**
	baz=222						
WSF	**Szhu**	**1.45**	**250**	*e*P	**Pb**	**04 17 33.8**	**-0.1**
	baz=250						
WSF				*e*S	**Sg**	**04 17 54.1**	**+0.7**
	baz=250						
SGST	**Jiashian**	**1.48**	**224**	*e*P	**Pn**	**04 17 33.9**	**+0.3**
	baz=219						
SGST				*e*S	**Sg**	**04 17 54.1**	**-0.3**
	baz=219						
MASBT	**Mashibuluo**	**1.82**	**213**	*e*P	**Pn**	**04 17 39.3**	**+1.0**
	baz=227						
MASBT				*e*S	**Sb**	**04 18 03.7**	**+0.5**
	baz=227						
EAST	**Anshuo**	**1.93**	**204**	*e*P	**Pn**	**04 17 38.2**	**-1.6**
	baz=195						
EAST				*e*S	**Sn**	**04 18 03.8**	**-0.4**
	baz=195						
PNG	**Penghu**	**2.05**	**254**	*e*P	**Pn**	**04 17 42.0**	**+0.5**
	baz=247						
PNG				*e*S	**Sn**	**04 18 07.9**	**+0.7**
	baz=247						
PHUB	**P'eng-hu**	**2.05**	**252**	*e*P	**Pn**	**04 17 40.5**	**-1.0**
	baz=245						
PHUB				*e*S	**Sb**	**04 18 08.8**	**-1.1**
	baz=245						
WDGT	**Dungji**	**2.07**	**245**	*e*P	**Pn**	**04 17 42.1**	**+0.3**
	baz=246						
WDGT				*e*S	**Sn**	**04 18 08.9**	**+1.2**
	baz=246						
JKRS	**Kuro-shima**	**2.11**	**87**	*e*S	**Sn**	**04 18 09.7**	**+1.2**
VWUC	**VWUC**	**2.22**	**293**	P	**Pn**	**04 17 43.5**	**-0.3**
	baz=291						
VWUC				*e*S	**Sn**	**04 18 10.4**	**-0.9**
	baz=291						
JIJ	**Ishigaki jima**	**2.24**	**84**	P	**Pn**	**04 17 43.3**	**-0.7**
JIJ				*e*S	**Sn**	**04 18 10.6**	**-1.2**
VCHM	**Qimei**	**2.29**	**246**	*e*P	**Pn**	**04 17 45.4**	**+0.7**
	baz=234						
VCHM				*e*S	**Sn**	**04 18 14.2**	**+1.3**
	baz=234						
JISG	**Ishigakijimahi**	**2.42**	**79**	*e*P	**Pn**	**04 17 45.7**	**-0.8**
JISG				*e*S	**Sn**	**04 18 15.7**	**-0.5**
PTMZ	**Houxiangcun**	**2.52**	**291**	*e*P	**Pn**	**04 17 47.7**	**-0.1**
	baz=290						
PTMZ				*e*S	**Sn**	**04 18 17.3**	**-1.3**
	baz=290						
MATB	**Ma-tsu**	**2.55**	**322**	*e*P	**Pn**	**04 17 48.5**	**+0.2**
	baz=318						
MATB				*e*S	**Sn**	**04 18 19.1**	**-0.5**
	baz=318						
MHZQ	**Yeshan**	**3.11**	**309**	*e*P	**Pn**	**04 17 56.8**	**+0.9**
	baz=307						
MHZQ				*e*S	**Sn**	**04 18 31.3**	**-2.0**
	baz=307						
AXDP	**Jialang**	**3.48**	**283**	*e*P	**Pn**	**04 18 01.1**	**0.0**
	baz=281						
AXDP				*e*S	**Sn**	**04 18 41.6**	**-0.9**
	baz=281						
ZPLA	**Ao Xicun**	**3.62**	**267**	*e*P	**Pn**	**04 18 03.0**	**-0.1**
	baz=268						
ZPLA				*e*S	**Sn**	**04 18 46.3**	**+0.4**
	baz=268						

NEIC ***15*** *04:35:15.5±0.3, 19°.2N±0°.3×155°.4W±0°.2, h34km±13km, Error ellipse: s-maj=46.2km s-min=10.3km az=148.0*

HVO 15 04:35:15.4±0.4, 19°.11N±0°.07×155°.42W±0°.04, h39km±3km, ML2.8/1, ML2.5/12(NEIC), Error ellipse: s-maj=10.6km s-min=5.5km az=162.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.13**	**10**		Pn	04 35 21.6	-3.1
HLP	**Hilina Pali**	**0.21**	**30**		Pn	04 35 22.4	-1.3
HLP	**Hilina Pali**	**0.21**	**30**	IAML		04 35 31.8	
	comp=E,486nm,1.6s						
HLP				IAML		04 35 37.3	
	comp=N,484nm,2.4s						
KHU	**Kahuku**	**0.23**	**306**		Pn	04 35 22.1	-1.8
KHU	**Kahuku**	**0.23**	**306**	IAML		04 35 27.6	
	comp=E,283nm,1.5s						
KHU				IAML		04 35 34.3	
	comp=N,319nm,2.9s						
KKO	**Keanakako`i**	**0.32**	**27**		Pn	04 35 22.8	-1.1
MLH	**Mauna Loa**	**0.38**	**5**		Pn	04 35 23.6	-1.1
MLH	**Mauna Loa**	**0.38**	**5**	IAML		04 35 41.0	
	comp=E,334nm,1.3s						
MLH				IAML		04 35 42.2	
	comp=N,360nm,2.7s						
MWH	**Moku'aweowe**	**0.41**	**336**		Pn	04 35 23.9	-1.5
MWH	**Moku'aweowe**	**0.41**	**336**	IAML		04 35 31.2	
	comp=N,348nm,1.8s						
MWH				IAML		04 35 39.3	
	comp=E,509nm,1.3s						
HMH	**Humu'ula Sheep**	**0.49**	**353**		Pn	04 35 25.3	-1.0
HMH	**Humu'ula Sheep**	**0.49**	**353**	IAML		04 35 32.7	
	comp=N,247nm,0.5s						
HMH				IAML		04 35 38.3	
	comp=E,271nm,3.5s						
JOKA	**Jonika Flow**	**0.51**	**51**		Pn	04 35 24.9	-1.3

IDC 15 04:51:39.2±4.4, 33°.50N×84°.61E, h0km, mb3.0/2, mbtmp3.3/4, ML4.5/1, Error ellipse: s-maj=99.0km s-min=31.1km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.39**	**353**	Pn	Pn	04 54 50.9	+0.4
	0.1nm,0.6s,baz=175,slow=13,SNR=2.1						
CMAR	**Chiang Mai Arr**	**19.72**	**136**	P	P	04 56 10.4	-0.1
	0.6nm,0.3s,baz=324,slow=12,SNR=5.4						
	1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**20.44**	**0**	P	P	04 56 17.3	-0.7
	0.4nm,0.5s,baz=186,slow=10,SNR=1.8						
	0.4nm,0.5s						
SONM	**Songino Array**	**21.76**	**42**	P	P	04 56 32.8	+0.4
	0.6nm,0.8s,baz=227,slow=11,SNR=4.3						
	0.6nm,0.8s						

IDC ***15*** *04:55:05.4±7.7, 35°.75N×71°.36E, h0km, mb3.7/2, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=233.6km s-min=36.0km az=95.0*

ISC 15 04:55:09.4±1.9, 35°.8N±0°.1×71°.7E±0°.2, h10km, n5, σ3°06/6, 1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**7.35**	**353**	P	**Pn**	**04 56 60.0**	**+3.2**
	0.9nm,0.2s,baz=177,slow=12,SNR=55						
KK31				S	**Sn**	**04 58 16.4**	**-3.8**
	1.4nm,0.4s,baz=165,slow=18,SNR=6.1						
MKAR	**Makanchi Array**	**13.55**	**33**	Pn	**Pn**	**04 58 22.6**	**+1.0**
	baz=215,slow=12,SNR=3.5						
	0.3nm,0.8s						
AB31	**Akbulak array**	**15.96**	**331**	⇓P	**P**	**04 58 57.4**	**-0.2**
	0.3nm,0.6s,baz=142,slow=12,SNR=7.2						
ZALV	**Zalesovo Beam**	**20.33**	**23**	P	**P**	**04 59 44.5**	**-1.0**
	2.0nm,0.5s,baz=222,slow=9.8,SNR=11						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**81.15**	**122**	P	**P**	**05 07 24.1**	**-1.3**
	0.3nm,0.5s,baz=323,slow=5.0,SNR=7.5						
	0.3nm,0.5s						

IDC ***15*** *05:04:26.2±7.1, 27°.43S×22°.95E, h0km, mbtmp2.2/1, ML2.1/1, Error ellipse: s-maj=46.7km s-min=44.2km az=28.0*

ISC 15 05:04:11.3±1.8, 26°.3S±0°.1×23°.4E±0°.1, h10km, n6, σ2°79/7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.82**	**144**	I	I	05 17 10.0	
	baz=302,slow=316,SNR=1.0						
BOSA	**Boshof**	**2.82**	**144**	Pn	**Pg**	**05 05 06.3**	**+0.9**
	0.3nm,0.3s,baz=296,slow=16,SNR=7.2						
BOSA				Sn	**Sb**	**05 05 36.1**	**-0.4**
	0.9nm,0.3s,baz=207,slow=22,SNR=14						
BOSA				Lg	Lg	05 05 41.7	
	1.3nm,0.3s,baz=39,slow=19,SNR=4.1						
BOSA				Rg	Rg	05 05 48.6	
	3.8nm,0.4s,baz=37,slow=20,SNR=7.4						
	2.6nm,0.9s						
ARMS	**Ukamas**	**3.65**	**241**	*i* P	**Pn**	**05 05 07.4**	**-0.5**
ARMS				*i* S	**Sn**	**05 05 50.4**	**-0.6**
ARMS				IAML		05 06 08.7	
	comp=Z,7.3nm,0.4s						
AUSN	**Aus**	**6.38**	**265**	*i* P	**Pn**	**05 05 41.5**	**-3.9**
AUSN				*i* S	**Sn**	**05 07 02.1**	**+3.6**
AUSN				IAML		05 07 38.0	
	comp=Z,2.1nm,0.5s						
WIN	**Windhoek**	**6.83**	**302**	*i* P	**Pg**	**05 06 23.1**	**+1.0**
I35NA	**TSUMEB INFRASO**	**8.89**	**322**	I	I	06 01 20.0	
	baz=154,slow=317,SNR=1.9						

KRSC 15 05:07:44.4±1.1, 55°.85N×162°.95E, h6km±17km, MI3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.43**	**341**	*e*P	Pb	05 07 54.1	-0.2
KBG				*e*S	Sb	05 08 00.9	-0.2
SMKR	**Semkarok**	**1.11**	**312**	*e*P	Pg	05 08 05.4	-0.2
BDR	**Baidarnaya**	**1.21**	**307**	*e*P	Pg	05 08 07.4	-0.2
ZLN	**Zelenaya**	**1.22**	**279**	*e*P	Pb	05 08 08.0	+0.1
BZGR	**Bezymyannyi-Gr**	**1.27**	**275**	*e*P	Pg	05 08 08.0	-0.8
KLY	**Klyuchi**	**1.37**	**291**	*e*P	Pn	05 08 07.9	-2.1
KLY				*e*S	Sb	05 08 25.1	-3.0
BZWR	**Bezymyannyi-We**	**1.39**	**276**	*e*P	Pn	05 08 10.5	0.0
BZMR	**Bezymyannaya**	**1.39**	**275**	*e*P	Pn	05 08 10.2	-0.2
KIRR	**Kirishev**	**1.47**	**275**	*e*P	Pn	05 08 11.4	-0.2
KMNR	**Kamenistaya**	**1.54**	**268**	*e*P	Pb	05 08 13.0	-0.3
KPT	**Kopyto**	**1.54**	**275**	*e*P	Pn	05 08 12.5	0.0
TUMD	**Tumrok D**	**1.59**	**247**	*e*P	Pn	05 08 13.5	+0.4
TUMD				*e*S	Sn	05 08 33.3	-0.6
TUMR	**Tumrok**	**1.69**	**252**	*e*P	Pb	05 08 15.9	-0.1
KOZ	**Kozyrevsk**	**1.74**	**278**	*e*P	Pb	05 08 16.2	-0.5
BKI	**Bering**	**1.83**	**109**	*e*S	Sb	05 08 41.7	+0.2
SRDR	**Sredinnyy**	**1.87**	**286**	*e*P	Pn	05 08 17.8	+0.7
ESO	**Esso**	**2.40**	**274**	*e*P	Pn	05 08 26.0	+1.8
KII	**Karymskiy**	**2.72**	**229**	*e*P	Pn	05 08 30.3	+1.7
SPN	**Mys Shipunski**	**3.24**	**213**	*e*P	Pn	05 08 39.0	+3.2
KRX	**Arik**	**3.54**	**227**	*e*P	Pn	05 08 43.0	+3.1
SMAR	**Somma**	**3.54**	**225**	*e*P	Pn	05 08 42.1	+2.0
AVH	**Avacha**	**3.57**	**225**	*e*P	Pn	05 08 43.4	+3.1
KOK	**Koryaka**	**3.59**	**226**	*e*P	Pb	05 08 44.8	-3.5
GNL	**Ganaly**	**3.62**	**235**	*e*P	Pn	05 08 43.4	+2.4
KRMR	**Karymshinskiy**	**4.14**	**225**	*e*P	Pn	05 08 51.4	+3.4
GRL	**Gorelyy**	**4.37**	**223**	*e*P	Pn	05 08 55.6	+4.1
ASAK	**Asacha**	**4.57**	**223**	*e*P	Pn	05 08 58.1	+4.0

TIF ***15*** *05:14:02.6, 41°.87N×46°.62E, h21km±1km*
MOS ***15*** *05:14:03.4, 41°.90N×46°.71E, h24km, MPVA3.9*
NORS ***15*** *05:14:05.1, 42°.00N×46°.61E, h9km, MPVA3.8*
DRS ***15*** *05:14:05.2, 41°.87N×46°.62E, h16km*

ISC 15 05:14:04.7±1.0, 41°.87N±0°.02×46°.65E±0°.02, h14km±8km, n92, σ1°04/168, 3C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMKR	**Kumukh**	**0.43**	**52**	*i* Pg	**Pg**	**05 14 13.1**	**-0.2**
KMKR				*e*Sg	**Sg**	**05 14 19.5**	**+0.3**
KMKR	**Kumukh**	**0.43**	**52**	⇓*i* PG	**Pg**	**05 14 13.1**	**-0.2**
KMKR				*i* S	**Sb**	**05 14 21.0**	**+0.5**
KMKR				pmax	pmax		
	comp=Z,249nm,0.3s						
KMKR				smax	smax		
	comp=N,2μm,0.5s						
GNBR	**Gunib**	**0.57**	**25**	*i* Pg	**Pb**	**05 14 15.6**	**-0.9**
GNBR				*e*Sg	**Sb**	**05 14 24.3**	**-0.2**
GNBR	**Gunib**	**0.57**	**25**	*i* PG	**Pb**	**05 14 15.6**	**-0.9**
GNBR				*e*S	**Sb**	**05 14 24.3**	**-0.2**
VSHL	**Vashlovani**	**0.67**	**196**	P	**Pb**	**05 14 17.4**	**-0.6**
XNZR	**Khunzakh**	**0.67**	**4**	*i* Pg	**Pb**	**05 14 17.7**	**-0.6**
XNZR				*e*Sg	**Sb**	**05 14 27.3**	**-0.2**
HNZR	**Khunzah**	**0.69**	**4**	*i* PG	**Pb**	**05 14 17.7**	**-0.9**
HNZR				*e*S	**Sb**	**05 14 27.3**	**-0.7**
ARKR	**Arakani**	**0.78**	**19**	*e*Pg	**Pb**	**05 14 19.3**	**-0.7**
ARKR				*e*Sg	**Sb**	**05 14 29.7**	**-0.7**
ARKR	**Arakani**	**0.78**	**19**	*e*PG	**Pb**	**05 14 19.3**	**-0.7**
ARKR				*e*S	**Sb**	**05 14 29.7**	**-0.7**
URKR	**Urkarakh**	**0.79**	**68**	*e*Pg	**Pb**	**05 14 19.3**	**-1.0**
URKR				*e*Sg	**Sb**	**05 14 30.1**	**-0.9**
URKR	**Urkarakh**	**0.79**	**68**	*e*PG	**Pb**	**05 14 19.3**	**-1.0**
URKR				*e*S	**Sb**	**05 14 30.1**	**-0.9**
UNCR	**Uncukul**	**0.85**	**7**	*i* Pg	**Pb**	**05 14 20.3**	**-0.9**
UNCR				*e*Sg	**Sb**	**05 14 32.0**	**-0.5**
UNCR	**Uncukul**	**0.85**	**7**	⇑*i* PG	**Pb**	**05 14 20.3**	**-0.9**
UNCR				*e*S	**Sb**	**05 14 32.4**	**-0.1**
UNCR				pmax	pmax		
	comp=Z,86nm,0.2s						
UNCR				smax	smax		
	comp=N,803nm,0.7s						
BTLR	**Botlikh**	**0.85**	**339**	*e*Pg	**Pb**	**05 14 20.3**	**-1.0**
BTLR				*e*Sg	**Sg**	**05 14 33.3**	**+0.8**
BTLR	**Botlikh**	**0.85**	**339**	*e*PG	**Pb**	**05 14 20.3**	**-1.0**
BTLR				*e*S	**Sg**	**05 14 33.3**	**+0.8**
AKT	**Akhty**	**0.90**	**115**	*i* Pg	**Pb**	**05 14 21.0**	**-1.1**
AKT				*e*Sg	**Sb**	**05 14 34.7**	**+0.7**
AKT	**Akhty**	**0.90**	**115**	⇑*i* PG	**Pb**	**05 14 21.0**	**-1.1**
AKT				*e*S	**Sb**	**05 14 33.1**	**-0.9**
AKT				pmax	pmax		
	comp=Z,54nm,0.2s						
AKT				smax	smax		
	comp=E,477nm,0.3s						
SGKR	**Sergokala**	**0.96**	**52**	*e*Pg	**Pb**	**05 14 22.5**	**-0.5**
SGKR				*e*Sg	**Sb**	**05 14 35.5**	**0.0**
SGKR	**Sergokala**	**0.96**	**52**	*e*PG	**Pb**	**05 14 22.5**	**-0.5**
SGKR				*e*S	**Sb**	**05 14 36.0**	**+0.5**
SGKR				pmax	pmax		
	comp=Z,72nm,0.4s						
SGKR				smax	smax		
	comp=E,210nm,0.4s						
KRNR	**Karanay**	**0.97**	**11**	*e*Pg	**Pb**	**05 14 22.6**	**-0.8**
KRNR				*e*Sg	**Sb**	**05 14 35.4**	**-0.8**
KRNR	**Karanay**	**0.97**	**11**	*e*PG	**Pb**	**05 14 22.6**	**-0.8**
KRNR				*e*S	**Sb**	**05 14 35.4**	**-0.8**
BUJR	**Buynaksk**	**1.01**	**20**	*e*Pg	**Pb**	**05 14 23.5**	**-0.5**
BUJR				*e*Sg	**Sb**	**05 14 37.3**	**+0.1**
BUJR	**Buynaksk**	**1.01**	**20**	*e*PG	**Pb**	**05 14 23.5**	**-0.5**
BUJR				*e*S	**Sb**	**05 14 37.3**	**+0.1**
KSMR	**Kasumkent**	**1.14**	**103**	*e*Pg	**Pn**	**05 14 25.4**	**-0.9**
KSMR				*e*Sg	**Sb**	**05 14 40.6**	**-0.3**
KSMR	**Kasumkent**	**1.14**	**103**	*e*PG	**Pn**	**05 14 25.4**	**-0.9**
KSMR				*e*S	**Sb**	**05 14 40.9**	**0.0**
KSMR				pmax	pmax		
	comp=Z,37nm,0.2s						
KSMR				smax	smax		
	comp=N,170nm,0.4s						
DVE	**Vedeno**	**1.15**	**341**	*e*Pg	**Pn**	**05 14 25.4**	**-0.9**
DVE				*e*Sg	**Sb**	**05 14 40.9**	**-0.3**
DVE	**Vedeno**	**1.15**	**341**	*e*PG	**Pn**	**05 14 25.5**	**-0.9**
DVE				*e*S	**Sb**	**05 14 40.9**	**-0.3**
DBC	**Dubki**	**1.16**	**7**	*e*Pg	**Pn**	**05 14 25.9**	**-0.6**
DBC				*e*Sg	**Sn**	**05 14 42.0**	**-0.1**
DBC	**Dubki**	**1.16**	**7**	*e*PG	**Pg**	**05 14 27.9**	**+0.9**
DBC				*e*S	**Sn**	**05 14 42.4**	**+0.3**
DBC				pmax	pmax		
	comp=Z,47nm,0.4s						
DLMR	**Dylym**	**1.20**	**359**	*e*Pg	**Pn**	**05 14 26.8**	**-0.2**
DLMR				*e*Sg	**Sb**	**05 14 42.5**	**0.0**
DLMR	**Dylym**	**1.20**	**359**	*e*PG	**Pn**	**05 14 26.8**	**-0.2**
DLMR				*e*S	**Sb**	**05 14 42.5**	**0.0**
MAK	**Makhachkala**	**1.26**	**30**	*e*PG	**Pn**	**05 14 28.0**	**+0.2**
MAK				*e*		05 14 46.3	
MAK				pmax	pmax		
	comp=Z,157nm,0.7s						
MAK				smax	smax		
	comp=E,348nm,0.4s						
MAK				smax	smax		
	comp=E,446nm,0.6s						
DRN	**Derbent**	**1.27**	**82**	*e*Pg	**Pg**	**05 14 30.1**	**+1.0**
DRN				*e*Sg	**Sn**	**05 14 44.4**	**-0.3**
DRN	**Derbent**	**1.27**	**82**	*e*PG	**Pg**	**05 14 30.1**	**+1.0**
DRN				*e*S	**Sn**	**05 14 44.4**	**-0.3**
SHTL	**Shatili**	**1.36**	**306**	P	**Pn**	**05 14 27.4**	**-2.0**
SHTL				S	**Sn**	**05 14 45.0**	**-2.2**
SHTL	**Shatili**	**1.36**	**306**	*e*PG	**Pn**	**05 14 27.3**	**-2.0**
CHRG	**Chargali**	**1.36**	**290**	P	**Pn**	**05 14 27.1**	**-2.2**
CHRG				S	**Sn**	**05 14 44.8**	**-2.3**
SEAG	**Tbilisi Sea**	**1.38**	**266**	P	**Pn**	**05 14 27.9**	**-1.6**
SEAG				S	**Sn**	**05 14 46.8**	**-0.8**
SEAG	**Tbilisi Sea**	**1.38**	**266**	*e*PG	**Pn**	**05 14 27.9**	**-1.6**
SEAG				*e*S	**Sn**	**05 14 46.7**	**-0.8**
KANR	**Karaman**	**1.46**	**25**	*e*Pg	**Pn**	**05 14 30.6**	**0.0**
KANR				*e*Sg	**Sb**	**05 14 50.0**	**-0.1**
KANR	**Karaman**	**1.46**	**25**	*e*PG	**Pn**	**05 14 30.6**	**0.0**
KANR				*e*S	**Sb**	**05 14 50.0**	**-0.1**
GROC	**Groznyy**	**1.47**	**335**	*e*Pg	**Pg**	**05 14 33.3**	**+0.3**
GROC				*e*Sg	**Sg**	**05 14 51.8**	**-0.3**
GROC	**Groznyy**	**1.47**	**335**	*e*PG	**Pg**	**05 14 33.3**	**+0.3**
GROC				*e*S	**Sg**	**05 14 51.8**	**-0.3**
MTEO	**Meteo**	**1.76**	**298**	P	**Pn**	**05 14 35.0**	**-0.1**
MTEO				S	**Sb**	**05 14 58.6**	**-0.6**
MTEO	**Meteo**	**1.76**	**298**	*e*PN	**Pn**	**05 14 35.0**	**-0.1**
MTEO				*e*S	**Sb**	**05 14 58.5**	**-0.6**
KMGR	**Komgaron**	**1.77**	**313**	*e*Pg	**Pn**	**05 14 35.4**	**+0.5**
KMGR				*e*Sg	**Sb**	**05 15 00.3**	**+1.3**
KMGR	**Komgaron**	**1.77**	**313**	*e*PN	**Pn**	**05 14 35.4**	**+0.5**
KMGR				*e*S	**Sb**	**05 15 00.3**	**+1.3**
DMNI	**Dmanisi**	**1.92**	**254**	P	**Pn**	**05 14 35.0**	**-2.0**
DMNI				S	**Sn**	**05 14 59.5**	**-1.4**
DMNI	**Dmanisi**	**1.92**	**254**	*e*PN	**Pn**	**05 14 35.0**	**-2.0**
TRLG	**Trialeti**	**1.93**	**261**	P	**Pn**	**05 14 35.5**	**-1.7**
TRLG				S	**Sn**	**05 15 00.6**	**-0.8**
TRLG	**Trialeti**	**1.93**	**261**	*e*PN	**Pn**	**05 14 35.5**	**-1.7**
LACR	**Lac**	**1.98**	**300**	*e*Pg	**Pb**	**05 14 39.6**	**-1.0**
LACR				*e*Sg	**Sb**	**05 15 04.9**	**-0.3**
LACR	**Lac**	**1.98**	**300**	*e*PN	**Pb**	**05 14 39.6**	**-1.0**
BRNG	**Burnasheti**	**2.12**	**264**	P	**Pn**	**05 14 39.0**	**-0.8**
BRNG				S	**Sn**	**05 15 06.7**	**+0.6**
BRNG	**Burnasheti**	**2.12**	**264**	*e*PN	**Pn**	**05 14 39.0**	**-0.8**
BTKR	**Batakoyurt**	**2.16**	**315**	*e*Pg	**Pn**	**05 14 41.9**	**+1.6**
BTKR				*e*Sg	**Sb**	**05 15 09.6**	**-0.6**
BTKR	**Batakoyurt**	**2.16**	**315**	*e*PN	**Pn**	**05 14 41.8**	**+1.6**
BTKR				*e*S	**Sb**	**05 15 09.6**	**-0.6**
ARNR	**Ardon**	**2.18**	**308**	*e*Pg	**Pn**	**05 14 39.9**	**-0.6**
ARNR				*e*Sg	**Sb**	**05 15 10.7**	**-0.1**
ARNR	**Ardon**	**2.18**	**308**	*e*PN	**Pn**	**05 14 39.9**	**-0.6**
ARNR				*e*S	**Sb**	**05 15 10.7**	**-0.1**
ZEI	**Tsey**	**2.23**	**295**	*e*Pn	**Pn**	**05 14 42.6**	**+1.2**
ZEI				*e*Sn	**Sn**	**05 15 10.3**	**+1.5**
ZEI	**Tsey**	**2.23**	**295**	*e*PN	**Pn**	**05 14 42.6**	**+1.2**
ZEI				*e*S	**Sn**	**05 15 10.3**	**+1.5**
GNI	**Garni**	**2.24**	**221**	*i* Pn	**Pn**	**05 14 42.4**	**+0.9**
GNI				*e*Sn	**Sb**	**05 15 13.2**	**+0.5**
GNI	**Garni**	**2.24**	**221**	*i* PN	**Pn**	**05 14 42.4**	**+0.9**
GNI				*e*S	**Sb**	**05 15 13.2**	**+0.5**
ALIG	**Mtskhetisjvari**	**2.25**	**277**	P	**Pn**	**05 14 41.2**	**-0.2**
ALIG				S	**Sn**	**05 15 09.4**	**+0.4**
ALIG	**Mtskhetisjvari**	**2.25**	**277**	*e*PN	**Pn**	**05 14 41.2**	**-0.2**
ALIG				*e*S	**Sn**	**05 15 09.4**	**+0.4**
KORR	**Kora**	**2.26**	**303**	*e*Pn	**Pb**	**05 14 44.2**	**-1.1**
KORR				*e*Sn	**Sb**	**05 15 11.6**	**-1.5**
KORR	**Kora**	**2.26**	**303**	*e*PN	**Pb**	**05 14 44.2**	**-1.1**
KORR				*e*S	**Sb**	**05 15 11.6**	**-1.5**
BGD	**Bogdanovka**	**2.36**	**256**	P	**Pn**	**05 14 44.5**	**+1.3**
BGD				S	**Sn**	**05 15 13.7**	**+1.6**
BGD	**Bogdanovka**	**2.36**	**256**	*e*Pn	**Pn**	**05 14 44.5**	**+1.3**
BGD				*e*Sn	**Sn**	**05 15 13.7**	**+1.6**
BGD	**Bogdanovka**	**2.36**	**256**	*e*PN	**Pn**	**05 14 44.5**	**+1.3**
BGD				*e*S	**Sn**	**05 15 13.7**	**+1.6**
AKH	**Akhalkalaki**	**2.41**	**260**	P	**Pn**	**05 14 44.7**	**+0.9**
AKH				S	**Sn**	**05 15 14.1**	**+1.0**
AKH	**Akhalkalaki**	**2.41**	**260**	*e*Pn	**Pn**	**05 14 44.7**	**+0.9**
AKH				*e*Sn	**Sn**	**05 15 14.1**	**+1.0**
AKH	**Akhalkalaki**	**2.41**	**260**	*e*PN	**Pn**	**05 14 44.7**	**+0.9**
AKH				*e*S	**Sn**	**05 15 14.1**	**+1.0**
ONI	**Oni**	**2.48**	**288**	P	**Pb**	**05 14 47.2**	**-1.7**
ONI	**Oni**	**2.48**	**288**	*e*PN	**Pb**	**05 14 47.2**	**-1.7**
DIGR	**Digorskoe uzhe**	**2.49**	**295**	*e*PN	**Pb**	**05 14 48.6**	**-0.7**
DIGR				*e*S	**Sb**	**05 15 19.7**	**-0.2**
LSNR	**Lesken**	**2.51**	**305**	*i* Pn	**Pn**	**05 14 45.6**	**+0.5**
LSNR				*e*Sn	**Sn**	**05 15 17.3**	**+1.8**
LSNR	**Lesken**	**2.51**	**305**	*i* PN	**Pn**	**05 14 45.6**	**+0.5**
LSNR				*e*S	**Sn**	**05 15 17.3**	**+1.8**
KBZ	**Khabaz**	**3.32**	**305**	*e*Pn	**Pn**	**05 14 57.1**	**+0.9**
KBZ				*e*Sn	**Sn**	**05 15 34.8**	**-0.6**
KBZ	**Khabaz**	**3.32**	**305**	*e*PN	**Pn**	**05 14 57.1**	**+0.9**
KBZ				*e*S	**Sn**	**05 15 34.8**	**-0.6**
SHA1	**Shidzhatmaz**	**3.48**	**304**	*e*Pn	**Pn**	**05 15 00.9**	**+2.4**
SHA1				*e*Sn	**Sn**	**05 15 41.7**	**+2.1**
SHA1	**Shidzhatmaz**	**3.48**	**304**	*e*PN	**Pn**	**05 15 00.9**	**+2.4**
SHA1				*e*S	**Sn**	**05 15 41.7**	**+2.1**
BEYR	**Belyy Ugol+**	**3.53**	**309**	*e*Pn	**Pn**	**05 14 59.6**	**+0.6**
BEYR				*e*Sn	**Sn**	**05 15 39.5**	**-1.1**
BEYR	**Belyy Ugol+**	**3.53**	**309**	*e*PN	**Pn**	**05 14 59.7**	**+0.6**
BEYR				*e*S	**Sn**	**05 15 39.5**	**-1.1**
KIV	**Kislovodsk**	**3.58**	**307**	*i* PN	**Pn**	**05

NVAR	**Mina Array Bea**	**88.61**	**51**	P		**P**	**05 51 08.3**	**+0.9**	
	0.6nm,0.7s,baz=280,slow=5.4,SNR=5.4								
	0.6nm,0.7s								
FINES	**FINESS Array B**	**92.00**	**335**	P		**P**	**05 51 21.2**	**-1.2**	
	0.8nm,0.5s,baz=76,slow=5.9,SNR=5.1								
	0.8nm,0.5s								
PDAR	**Pinedale Array**	**93.70**	**45**	P		**P**	**05 51 31.3**	**+0.3**	
	0.3nm,0.7s,baz=297,slow=6.0,SNR=2.4								
	0.3nm,0.7s								

CRAAG ***15*** *06:13:59.3,36°.71N×3°.71E, Ml2.6, Algerie 04km SW Bordj-Menail*

MDD ***15*** *06:14:02.3±1.1,36°.99N×3°.88E,h45km±4km, Mb4.1/7, M_mb3.5/7, Error ellipse: s-maj=11.5km s-min=6.4km az=134.0*

ISC 15 06:13:57.6±1.0, 36°.85N±0°.05×3°.90E±0°.05, h13km, n14, σ1§27/23, 5C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATKB	**Taksebt**	**0.25**	**136**	P		**Pg**		**06 14 02.0**	**-0.9**
AKED	**El Kharrouba**	**0.44**	**243**	P		**Pg**		**06 14 05.3**	**-1.1**
ABA	**Alger-Bouzarea**	**0.70**	**266**	P		**Pb**		**06 14 11.2**	**-0.5**
ADJB	**Djebel Djouab**	**0.79**	**209**	P		**Pg**		**06 14 12.1**	**-0.8**
AKET	**Djebel Ketaf**	**0.80**	**181**	P		**Pb**		**06 14 13.5**	**-0.1**
EIBI	**Ibiza**	**2.97**	**318**	S		**Sn**		**06 15 20.2**	**+0.4**
EIBI				P		**Pn**		**06 14 45.6**	**+1.2**
EIBI	**Ibiza**	**2.97**	**318**	Pn		**Pn**		**06 14 45.8**	**+1.4**
EIBI				⇑*i*Vmb_V				06 14 47.7	
	363nm,SNR=0.9								
EIBI				Sn		**Sn**		**06 15 18.7**	**-1.2**
ETOS	**Mallorca**	**3.03**	**344**	P		**Pn**		**06 14 46.3**	**+1.0**
ETOS				S		**Sn**		**06 15 21.0**	**-0.6**
ETOS	**Mallorca**	**3.03**	**344**	Pn		**Pn**		**06 14 46.4**	**+1.0**
ETOS				⇑*i*Vmb_V				06 14 47.2	
	337nm,SNR=1.3								
ETOS				Sn		**Sn**		**06 15 19.4**	**-2.1**
ETOB	**Tobarra**	**4.67**	**294**	P		**Pn**		**06 15 09.6**	**+1.6**
ETOB				S		**Sn**		**06 16 00.7**	**-1.4**
EMOS	**Mosqueruela**	**4.90**	**317**	Pn		**Pn**		**06 15 12.6**	**+1.4**
EMOS				⇑*i*Vmb_V				06 15 17.9	
	88nm,SNR=0.6								
EMOS				Sn		**Sn**		**06 16 06.2**	**-1.6**
EPOB	**Poblet**	**5.00**	**335**	Pn		**Pn**		**06 15 13.4**	**+0.9**
EPOB				⇑*i*Vmb_V				06 15 16.7	
	143nm,SNR=1.2								
EPOB				Sn		**Sn**		**06 16 10.1**	**-0.1**
EQES	**Quesada**	**5.64**	**282**	Pn		**Pn**		**06 15 23.0**	**+1.8**
EQES				⇑*i*Vmb_V				06 15 24.6	
	136nm,SNR=1.6								
EQES				Sn		**Sn**		**06 16 26.9**	**+1.0**
EJON	**La Jonquera**	**5.64**	**352**	P		**Pn**		**06 15 23.1**	**+1.9**
EJON				S		**Sn**		**06 16 26.1**	**+0.2**

IDC 15 06:19:07.4±2.6, 53°.76N×86°.83E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=23.5km s-min=13.1km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**280**	I		I		06 26 40.7	
	baz=98,slow=337,SNR=3.6								
ZALV	**Zalesovo Beam**	**1.21**	**280**	Pg		Pg		06 19 30.6	+0.1
	1.3nm,0.3s,baz=98,slow=17,SNR=11								
ZALV				Lg		Lg		06 19 46.4	
	1.1nm,0.3s,baz=103,slow=28,SNR=4.7								
KURBB	**Kurchatov Arra**	**6.00**	**242**	Pn		Pn		06 20 37.5	+0.2
	0.1nm,0.3s,baz=59,slow=14,SNR=4.9								
KURBB				Lg		Lg		06 22 17.7	
	0.1nm,0.3s,baz=62,slow=36,SNR=2.1								
	0.8nm,0.7s								
MKAR	**Makanchi Array**	**7.56**	**204**	Pn		Pn		06 20 60.0	+1.2
	0.2nm,0.3s,baz=25,slow=13,SNR=9.2								
MKAR				Sn		Sn		06 22 26.4	+1.3
	baz=26,slow=26,SNR=2.4								
MKAR				Lg		Lg		06 23 06.5	
	baz=32,slow=30,SNR=3.4								
	0.2nm,0.3s								

NNC ***15*** *06:25:09.6±2.2,54°.55N×86°.50E, h0km, mb2.5, mpv2.4, Error ellipse: s-maj=28.1km s-min=15.0km az=157.0, Suspected Mining explosion.*

IDC ***15*** *06:25:11.6±2.6,54°.56N×86°.31E, h0km, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=21.0km s-min=12.7km az=55.0*

ISC 15 06:25:08.6±2.7, 54°.6N±0°.1×86°.5E±0°.1, h0km, n8, σ1§55/12, 4C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**235**	I		I		06 32 21.0	
	baz=53,slow=338,SNR=4.2								
ZAA0	**Zalesovo Array**	**1.20**	**235**	⇓P		**Pb**		**06 25 31.1**	**-1.1**
	0.2nm,0.2s								
ZAA0				⇑S		**Sg**		**06 25 47.6**	**+0.5**
	0.6nm,0.3s								
ZALV	**Zalesovo Beam**	**1.20**	**235**	Pg		**Pg**		**06 25 31.0**	**-0.6**
	1.6nm,0.3s,baz=55,slow=17,SNR=24								
ZALV				Lg		Lg		06 25 47.7	
	3.8nm,0.3s,baz=55,slow=28,SNR=18								
KURBB	**Kurchatov Arra**	**6.30**	**234**	⇑Pn		**Pn**		**06 26 44.9**	**+2.3**
	0.5nm,0.3s								
KURBB				⇓Sn		**Sn**		**06 27 56.3**	**+1.1**
	2.0nm,0.7s								
KURBB				⇑Lg		Lg		06 28 27.6	
	5.1nm,0.8s								
KURBB	**Kurchatov Arra**	**6.30**	**234**	Pn		**Pn**		**06 26 44.8**	**+2.1**
	0.1nm,0.3s,baz=50,slow=14,SNR=5.6								
KURBB				Sn		**Sn**		**06 27 53.8**	**-1.4**
	baz=58,slow=24,SNR=1.6								
	0.4nm,0.4s								
MK31	**Makanchi Array**	**8.29**	**200**	Pn		**Pn**		**06 27 10.5**	**+0.4**
	0.1nm,0.4s,baz=24,slow=13,SNR=7.8								
MK31				⇑Sn		**Sn**		**06 28 43.8**	**-0.6**
	0.3nm,0.5s,baz=11,slow=28,SNR=4.1								
MKAR	**Makanchi Array**	**8.29**	**200**	Pn		**Pn**		**06 27 12.5**	**+2.4**
	0.1nm,0.3s,baz=20,slow=12,SNR=9.4								
MKAR				Sn		**Sn**		**06 28 43.7**	**-0.7**
	0.1nm,0.3s,baz=28,slow=29,SNR=5.2								
MKAR				Lg		Lg		06 29 31.0	
	baz=27,slow=28,SNR=2.7								
	0.2nm,0.3s								
BVAR	**Borovoye Array**	**9.66**	**267**	Pn		**Pn**		**06 27 29.0**	**+0.3**
	baz=63,slow=15,SNR=1.7								
	0.3nm,0.4s								

NEIC ***15*** *06:38:00.3±0.3,35°.771N±0°.008×98°.57W±0°.02, h9km±8km, Error ellipse: s-maj=2.8km s-min=1.1km az=89.0*

TUL 15 06:38:00.3±0.7, 35°.77N±0°.01×98°.59W±0°.03, h12km±5km, ML2.3, mb_Lg2.4/30(NEIC), ML2.5/34(NEIC), Error ellipse: s-maj=3.2km s-min=1.7km az=68.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CSTR	**Hydro, Custer**	**0.15**	**212**	Pg		Pg		06 38 04.0	+0.1
CSTR				Sg		Sg		06 38 07.0	+0.5
U32A	**Winter Ranch,**	**0.69**	**331**	Pg		Pg		06 38 13.6	-0.1
U32A				Sg		Sg		06 38 22.8	-0.1
U32A				IAML				06 38 37.9	
	comp=E,193nm,0.7s								
OK038	**West end E0370**	**0.71**	**350**	Pg		Pg		06 38 13.8	-0.3
OK038				IAML				06 38 31.8	
	comp=E,266nm,0.2s								
OK038				IAML				06 38 41.9	
	comp=E,327nm,0.3s								
ELIS	**Ellis County**	**0.73**	**294**	Pg		Pg		06 38 14.6	+0.1
ELIS				Sg		Sb		06 38 25.1	+0.1
ELIS				IAML				06 38 36.4	
	comp=N,287nm,0.2s								
ELIS				IAML				06 38 37.8	
	comp=E,148nm,0.5s								
CROK	**Carrier**	**0.88**	**34**	Pg		Pg		06 38 16.5	-0.8
OK029	**Liberty Lake**	**0.92**	**88**			Pg		06 38 17.3	-0.8
OK035	**E0210 Rd and N**	**0.94**	**354**	Pg		Pg		06 38 18.0	-0.4
OK035				IAML				06 38 36.4	
	comp=E,145nm,0.3s								
OK035				IAML				06 38 39.8	
	comp=E,155nm,0.2s								
ADOK	**Arcadia Dam**	**1.00**	**97**	Pg		Pb		06 38 18.5	-1.0
OKCSW	**OKLAHOMA CITY**	**1.01**	**111**	Pg		Pb		06 38 18.9	-0.7
OKCSW				IAML				06 38 41.5	
	comp=E,105nm,0.2s								
OKCSW				IAML				06 38 48.0	
	comp=N,90nm,0.4s								
WMOK	**Wichita Mounta**	**1.04**	**189**	Pg		Pb		06 38 19.6	-0.7
OK032	**Salt Plains WL**	**1.07**	**17**			Pb		06 38 20.2	-0.6
FNO	**Franklin**	**1.10**	**118**	Pg		Pb		06 38 20.9	-0.3
FNO				IAML				06 38 36.0	
	comp=E,104nm,0.3s								
GC02	**Grant County #**	**1.23**	**29**	Pg		Pn		06 38 23.0	-0.3
KAN14	**Manchester OK**	**1.28**	**23**	Pg		Pn		06 38 24.0	0.0
X34A	**Smith Ranch, M**	**1.32**	**152**	Pn		Pb		06 38 25.2	+0.2
X34A				IAML				06 38 44.7	
	comp=E,67nm,0.3s								
X34A				IAmb_Lg				06 38 45.2	
	comp=Z,19nm,0.9s								
X34A				IAML				06 38 46.2	
	comp=N,58nm,0.4s								
OK033	**Mehan**	**1.37**	**78**	Pn		Pn		06 38 25.2	+0.1
OK052	**Battle Ridge R**	**1.47**	**81**	Pn		Pn		06 38 26.8	+0.2
OK048	**Pawnee Station**	**1.48**	**64**	Pn		Pn		06 38 27.0	+0.3
W35A	**Tecumseh**	**1.53**	**113**	Pn		Pn		06 38 27.9	+0.4
KAN01	**Argonia South**	**1.53**	**26**	IAmb_Lg				06 38 51.5	
	comp=Z,27nm,0.7s								
QUOK	**Quay**	**1.58**	**75**			Pn		06 38 28.3	+0.2
OK051	**E0350 and S346**	**1.60**	**62**	Pn		Pn		06 38 29.0	+0.7
OK051				IAmb_Lg				06 38 50.3	
	comp=Z,30nm,1.0s								
DEOK	**Depew**	**1.70**	**87**	Pn		Pn		06 38 30.2	+0.5
WTFS	**Witchita Falls**	**2.00**	**177**			Pn		06 38 35.0	+1.1
LOOK	**Love County**	**2.12**	**146**	IAmb_Lg				06 39 11.0	
	comp=Z,10nm,0.8s								
R32A	**Long Quarter,**	**2.65**	**358**	IAmb_Lg				06 39 27.7	
	comp=Z,8.2nm,0.8s								
AMTX	**Amarillo**	**2.68**	**252**	IAmb_Lg				06 39 25.8	
	comp=Z,11nm,0.8s								
FW03	**Perrin-Whitt E**	**2.76**	**171**	IAmb_Lg				06 39 31.4	
	comp=Z,8.7nm,0.9s								
U38A	**Gravette**	**3.47**	**78**	Pn		Pn		06 38 54.1	0.0
FW13	**Cleburne**	**3.55**	**164**	IAmb_Lg				06 39 58.2	
	comp=Z,11nm,1.2s								
POST	**Post**	**3.62**	**223**	IAmb_Lg				06 40 02.2	
	comp=Z,7.2nm,0.8s								
KSU1	**Kansas State U**	**3.68**	**25**	IAmb_Lg				06 40 00.1	
	comp=Z,17nm,0.9s								
Z38A	**Mt. Pleasant**	**3.89**	**129**	IAmb_Lg				06 40 09.0	
	comp=Z,12nm,0.9s								
MIAR	**Mount Ida**	**4.29**	**105**	IAmb_Lg				06 40 26.6	
	comp=Z,13nm,1.2s								
KSCO	**Kaye Shedlock'**	**4.56**	**316**	IAmb_Lg				06 40 36.7	
	comp=Z,9.7nm,0.9s								
X40A	**Basin Creek Fa**	**4.89**	**104**	IAmb_Lg				06 40 44.7	
	comp=Z,5.0nm,0.9s								
JCT	**Junction City**	**5.38**	**191**	IAmb_Lg				06 40 49.7	
	comp=Z,8.6nm,1.0s								
CCM	**Cathedral Cave**	**6.31**	**67**	IAmb_Lg				06 41 22.4	
	comp=Z,7.6nm,1.1s								

SJA 15 06:39:00.2±0.7, 27°.96S×66°.64W, h193km±4km, ML3.6, MW3.5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.82**	**262**	*e*P		Pn		06 39 28.2	0.0
ACLC	**CERRO LA CRUZ**	**1.49**	**190**	*e*P		Pn		06 39 34.0	+0.6
ACLC				*e*S		Sn		06 39 58.4	-0.9
ACLC				IAML				06 39 58.8	
	comp=Z,194nm,0.7s								
VCA	**Vinchina**	**1.58**	**240**	*e*P		Pn		06 39 34.6	+0.4
VCA				*e*S		Sn		06 40 00.7	0.0
GUSE	**Guasayan**	**1.59**	**88**	*e*P		Pn		06 39 45.6	+11
AHML	**Horco Molle**	**1.65**	**45**	*e*P		Pn		06 39 35.2	+0.3
AHML				*e*S		Sn		06 39 48.8	-13
FSA	**Cafayete**	**1.93**	**18**	*e*P		Pn		06 39 38.8	+1.0
AGUA	**GUANDACOL**	**2.23**	**226**	*e*P		Pn		06 39 41.4	+0.7
AGUA				*e*S		Sn		06 40 12.2	-0.2
AGUA				IAML				06 40 12.8	
	comp=Z,301nm,0.2s								
AC02	**Maricunga**	**2.48**	**296**	*e*P		Pn		06 39 45.0	+1.0
AVFE	**Valle Fertil**	**2.78**	**195**	*e*P		Pn		06 39 47.7	+0.7
AVFE				*e*S		Sn		06 40 22.1	-1.6
AVFE				IAML				06 40 25.3	
	comp=Z,85nm,0.2s								
ACDV	**Cuesta del Vie**	**3.09**	**224**	*e*P		Pn		06 39 51.9	+1.2
ACDV				IAML				06 40 32.1	
	comp=Z,66nm,0.2s								
ACHE	**Chepes**	**3.19**	**180**	*e*P		Pn		06 39 53.7	+1.8
ACHE				*e*S		Sn		06 40 31.1	-1.4
GO03	**Copiap**	**3.20**	**276**	*e*P		Pn		06 39 52.3	+0.3
GO03				*e*S		Sn		06 40 29.6	-2.8
AROD	**Rodeo**	**3.31**	**228**	*e*P		Pn		06 39 54.8	+1.2
AROD				*e*S		Sn		06 40 36.2	+0.8
AC05	**El Transito**	**3.31**	**254**	*e*P		Pn		06 39 54.2	+0.8
AC05				*e*S		Sn		06 40 33.9	-1.1
AC05				IAML				06 40 36.3	
	comp=Z,89nm,0.6s								
ACCO	**Cerro Coronel**	**3.37**	**218**	*e*P		Pn		06 39 55.1	+0.8
ACCO				IAML				06 40 38.3	
	comp=Z,117nm,0.2s								
SLA	**San Lorenzo**	**3.38**	**18**	*e*P		Pn		06 39 57.2	+2.9
CO01	**Juntas del Tor**	**3.63**	**236**	*e*P		Pn		06 39 59.0	+1.6
DOCA	**Reserva Natura**	**3.66**	**215**	*e*P		Pn		06 39 58.6	+0.7
DOCA				*e*S		Sn		06 40 42.0	-1.2
RTLL	**Cerro Villicun**	**3.72**	**205**	*e*P		Pn		06 39 59.0	+0.7
RTLL				*e*S		Sn		06 40 42.9	-1.0
RTLL				IAML				06 40 45.5	
	comp=Z,84nm,0.3s								
LCO	**Las Campanas**	**3.72**	**253**	*e*P		Pn		06 39 58.9	+0.3
LCO				*e*S		Sn		06 40 42.8	-1.4
GO02	**Mina Guanaco**	**3.84**	**316**	*e*P		Pn		06 40 01.0	+0.9
AC04	**Llanos de Chal**	**3.92**	**265**	*e*P		Pn		06 40 00.5	-0.2
AC04				*e*S		Sn		06 40 44.6	-3.6
AC04				IAML				06 40 48.9	
	comp=Z,46nm,0.5s								
AC01	**Pan de Azucar**	**3.96**	**296**	*e*P		Pn		06 40 01.3	0.0
AC01				IAML				06 40 51.7	
	comp=Z,32nm,0.8s								
RTCV	**Cerro Valdivia**	**4.22**	**202**	*e*P		Pn		06 40 05.6	+1.0
GO04	**Tololo Observa**	**4.25**	**238**	*e*P		Pn		06 40 04.8	-0.3
RTLS	**Leoncito**	**4.47**	**210**	*e*P		Pn		06 40 08.9	+1.0
RTLS				IAML				06 41 05.3	
	comp=Z,102nm,0.5s								
CO03	**El Pedregal**	**4.55**	**230**	*e*P		Pn		06 40 09.5	+0.8
CO03				*e*S		Sn		06 41 02.7	0.0
CO03				IAML				06 41 04.1	
	comp=Z,60nm,0.2s								
CO02	**Combarbal**	**4.99**	**229**	*e*P		Pn		06 40 14.6	+0.2
CO02				*e*S		Sn		06 41 12.2	-0.6
CO02				IAML				06 41 14.1	
	comp=Z,59nm,0.2s								
ASAL	**Salagasta**	**4.99**	**202**	*e*P		Pn		06 40 15.7	+1.3
ASAL				IAML				06 41 14.2	
	comp=Z,26nm,2.7s								
ARCO	**CERRO ARCO**	**5.25**	**202**	*e*P		Pn		06 40 19.0	+1.2
ARCO				IAML				06 41 22.9	
	comp=Z,28nm,0.2s								
AAGR	**Agrelo**	**5.45**	**200**	*e*P		Pn		06 40 21.8	+1.5
AAGR				IAML				06 41 26.4	
	comp=Z,24nm,0.3s								

KRNET ***15*** *06:40:26.3±0.1, 39°.63N×71°.79E, h15km, mb2.8*

SOME ***15*** *06:40:31.8, 39°.90N×71°.88E, h5km*

ISU ***15*** *06:40:32.9, 39°.64N×71°.79E, h23km*

NNC ***15*** *06:40:34.0±2.6, 39°.90N×71°.99E, h11km±17km, mb3.5, mpv3.3, Error ellipse: s-maj=19.5km s-min=8.6km az=5.0*

ISC 15 06:40:28.1±1.1, 39°.50N±0°.05×71°.70E±0°.03, h9km±7km, n53, σ2§23/92, 21C-23D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.08**	**104**	⇓*i*P		**Pg**		**06 40 29.5**	**-1.1**
	baz=76								
DRK				⇓*i*S		**Sg**		**06 40 31.5**	**-0.9**
	baz=76								
CHMI	**Chimion**	**0.78**	**350**	P		**Pn**		**06 40 46.1**	**+0.7**
CHMI				S		**Sg**		**06 40 55.8**	**+2.5**
BTK	**Batken**	**0.88**	**310**	⇑*i*P		**Pb**		**06 40 42.8**	**-2.7**
	baz=0.0								
BTK				⇑*i*S		**Sb**		**06 40 54.7**	**-2.7**
	baz=0.0								
FRG	**Fergana**	**0.88**	**4**	P		**Pn**		**06 40 47.4**	**+0.7**
FRG				S		**Sb**		**06 40 58.0**	**+0.6**
OHH	**Osh**	**1.32**	**39**	⇓*i*P		**Pn**		**06 40 48.5**	**-4.3**
	baz=40								
OHH				⇓*i*S		**Sn**		**06 41 04.6**	**-6.1**
	baz=40								
SFK	**Sufi-Kurgan**	**1.48**	**69**	⇓*e*P		**Pn**		**06 40 52.2**	**-3.0**
	baz=73								
SFK				⇓*e*S		**Sn**		**06 41 11.2**	**-3.7**
	baz=73								
KSNS	**Kasansay**	**1.66**	**355**	P		**Pg**		**06 41 01.2**	**+1.2**
KSNS				S		**Sg**		**06 41 22.7**	**+1.2**
ARSB	**Arslanbob**	**2.07**	**28**	⇓*i*P		**Pn**		**06 41 01.9**	**-1.3**
	baz=28								
ARSB				⇓*i*S		**Sn**		**06 41 27.8**	**-1.4**
	baz=28								
TRKS	**Terek-Say**	**2.07**	**348**	⇑*i*P		**Pn**		**06 41 01.7**	**-1.5**
	baz=46								
TRKS				⇑*i*S		**Sn**		**06 41 26.8**	**-2.5**
	baz=46								
ARK	**Arkit**	**2.30**	**5**	⇑*i*P		**Pn**		**06 41 05.5**	**-0.9**
	baz=3.0								
ARK				⇑*i*S		**Sn**		**06 41 34.0**	**-0.9**
	baz=3.0								
CHRV	**Charvak**	**2.52**	**329**	P		**Pg**		**06 41 15.2**	**-1.1**
CHRV				S		**Sg**		**06 41 48.2**	**-0.7**
BXML	**Bakhmal**	**2.84**	**275**	P		**Pg**		**06 41 24.7**	**+2.3**
BXML				S		**Sg**		**06 42 06.1**	**+6.9**
IUG	**Iuzhnay**	**2.93**	**335**	Pg		**Pb**		**06 41 20.9**	**+0.4**
	15nm,0.2s								
IUG				Lg		Lg		06 41 56.7	
	86nm,0.5s								
IUG	**Iuzhnay**	**2.93**	**335**	*e*P		**Pb**		**06 41 20.9**	**+0.4**
	15nm,0.2s								
IUG				*e*S		**Sb**		**06 41 56.7**	**+0.2**
	140nm,0.2s								
MNAS	**Manas**	**3.05**	**11**	⇑*i*P		**Pn**		**06 41 16.1**	**-0.5**
	baz=10.0								
MNAS				⇑*i*S		**Sn**		**06 41 51.8**	**-1.5**
	baz=10.0								
ARLS	**Aral**	**3.09**	**39**	⇑*e*P		**Pn**		**06 41 16.4**	**-0.8**
	baz=40								
ARLS				⇑*i*S		**Sn**		**06 41 52.8**	**-1.6**
	baz=40								
CHM	**Chimkent**	**3.23**	**331**	*e*P		**Pb**		**06 41 25.9**	**+0.3**
	126nm,0.1s								
CHM				*e*S		**Sb**		**06 42 05.0**	**-0.1**
	326nm,0.2s								
DZA	**Taraz**	**3.40**	**355**	Pg		**Pb**		**06 41 27.5**	**-1.1**
	88nm,0.1s								
DZA				Lg		Lg		06 42 07.6	
	82nm,0.2s								
DZA	**Taraz**	**3.40**	**355**	*e*P		**Pb**		**06 41 27.5**	**-1.1**
	88nm,0.1s								
DZA				*e*S		**Sb**		**06 42 07.6**	**-2.4**
	82nm,0.2s								
MRKS	**Merke**	**3.44**	**19**	Pg		**Pb**		**06 41 28.0**	**-1.3**
	3.6nm,0.4s								
MRKS				Lg		Lg		06 42 08.7	
	12nm,0.2s								
MRKS	**Merke**	**3.44**	**19**	*e*P		**Pb**		**06 41 28.0**	**-1.3**
	2.3nm,0.1s								
MRKS				*e*S		**Sb**		**06 42 08.7**	**-2.5**
	12nm,0.2s								
UCH	**Uchtor**	**3.46**	**37**	⇓*i*P		**Pn**		**06 41 21.8**	**-0.8**
	baz=38								
UCH				⇓*i*S		**Sn**		**06 42 02.0**	**-2.0**
	baz=38								
EKS2	**Erkin-Say**	**3.53**	**26**	⇑*i*P		**Pn**		**06 41 22.4**	**-0.8**
	baz=26								
EKS2				⇑*i*S		**Sn**		**06 42 03.1**	**-2.1**
	baz=26								
KK31	**Karatay Array**	**3.71**	**346**	Pn		**Pn**		**06 41 26.8**	**+1.2**
	0.8nm,0.3s,baz=156,slow=12,SNR=33								
KK31				⇓Pg		**Pb**		**06 41 34.9**	**+1.1**
	3.8nm,0.6s,baz=169,slow=16,SNR=15								
KK31				⇓Lg		Lg		06 42 17.7	
	7.3nm,0.8s,baz=163,slow=32,SNR=8.0								
KKAR	**Karatay Array**	**3.71**	**346**	⇑*i*P		**Pn**		**06 41 25.2**	**-0.4**
	baz=45								
KKAR				⇑*i*S		**Sn**		**06 42 08.3**	**-1.1**
	baz=45								
AAK	**Ala-Archa**	**3.78**	**33**	⇓*i*P		**Pn**		**06 41 25.8**	**-0.9**
	baz=33								
AAK				⇓*i*S		**Sn**		**06 42 09.2**	**-2.2**
	baz=33								
BRLS	**Borolday**	**3.79**	**339**	*e*P		**Pb**		**06 41 34.4**	**-0.9**
	1.6nm,0.1s								
BRLS				*e*S		**Sb**		**06 42 19.5**	**-1.8**
	17nm,0.2s								
NRN	**Naryn**	**3.81**	**58**	⇓*i*P		**Pn**		**06 41 26.4**	**-0.9**
	baz=59								
NRN				⇓*i*S		**Sn**		**06 42 09.9**	**-2.5**
	baz=59								
KBK	**Karagaybulak**	**4.00**	**37**	⇑*i*P		**Pn**		**06 41 28.9**	**-0.8**
	baz=37								
KBK				⇑*i*S		**Sn**		**06 42 14.5**	**-2.3**
	baz=37								
CHMS	**Chumysh**	**4.19**	**32**	⇓Pg		**Pb**		**06 41 42.6**	**+0.7**
	1.8nm,0.3s								
CHMS				⇓Lg		Lg		06 42 30.5	
	5.4nm,0.6s								
CHMS	**Chumysh**	**4.19**	**32**	⇑*i*P		**Pn**		**06 41 31.4**	**-0.8**
	baz=33								
CHMS				⇑*i*S		**Sn**		**06 42 18.7**	**-2.5**
	baz=33								
USP	**Ospenovka**	**4.31**	**28**	⇓*i*P		**Pn**		**06 41 33.2**	**-0.7**
	baz=28								
USP				⇓*i*S		**Sn**		**

	2.1nm,0.5s								
KOTS					Lg		Lg	06 43 15.2	
	5.6nm,0.5s								
KOTS	**Kotyrbulak**	**5.52**	**46**	*e*P		**Pb**		**06 42 06.7**	**+1.9**
	2.1nm,0.5s								
KOTS					*e*S		**Sb**	**06 43 15.2**	**+4.0**
	5.6nm,0.5s								
KUU	**Kurty**	**5.60**	**37**	Pg		**Pb**		**06 42 07.7**	**+1.7**
	2.1nm,0.7s								
KUU					Lg		Lg	06 43 17.0	
	6.4nm,0.3s								
KUU	**Kurty**	**5.60**	**37**	*e*P		**Pb**		**06 42 07.7**	**+1.7**
	2.1nm,0.7s								
KUU					*e*S		**Sb**	**06 43 17.0**	**+3.8**
	6.4nm,0.3s								
KTBS	**Karatobe**	**5.63**	**40**	Pg		**Pb**		**06 42 09.1**	**+2.6**
	1.0nm,0.5s								
KTBS					Lg		Lg	06 43 18.9	
	6.8nm,0.5s								
KTBS	**Karatobe**	**5.63**	**40**	*e*P		**Pb**		**06 42 09.1**	**+2.6**
	1.0nm,0.5s								
KTBS					*e*S		**Sb**	**06 43 18.9**	**+4.8**
	6.8nm,0.5s								

IDC ***15*** *06:45:45.5±1.5, 14°.42N×55°.75E, h0km, mb3.8/8, mbtmp3.8/9, ML3.2/1, MS3.8/29, Error ellipse: s-maj=35.1km s-min=26.5km az=149.0*

GCMT ***15*** *06:45:47.4±0.6, 14°.64N±0°.03×55°.43E±0°.05, h27km±1km, MW4.8/65, Moment Tensor Solution. s18,c18; s65,c88; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~2.14±.21; Mθθ 1.98±.12; Mφφ 0.16±.12; Mrθ 0.22±.16; Mφθ 0.03±.06; Mφr~0.14±.21; Best double couple: M◎2.07600×10^16 NP1:φs273.00000°, δ48.00000°, λ-85.00000°. NP2: φs86.00000°, δ42.00000°, λ-95.00000°. Principal axes: T 1.9920, Plg3.0000°, Azm359.0000°; N 0.1680, Plg3.0000°, Azm90.0000°; P -2.1600, Plg85.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *06:45:48.4±1.5, 14°.78N±0°.10×55°.7E±0°.1, h10km±2km, mb4.4/19 Error ellipse: s-maj=19.6km s-min=16.6km az=107.0*

ISC 15 06:45:49.8±0.8, 14°.7N±0°.1×55°.7E±0°.1, h22km, n70, σ1ş76/39, mb4.3/24, MS3.8/28, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.90**	**18**	Pn	**Pn**	**06 47 58.0**	**+0.8**
	0.2nm,0.3s,baz=234,slow=16,SNR=1.6						
WSAR				LR	LR	06 51 25.2	
	comp=Z,612nm,18.3s,baz=210,slow=37						
	2.4nm,0.6s						
UOSS	**Minazif**	**10.17**	**2**	Pn	**Pn**	**06 48 12.6**	**-2.1**
ATD	**Arta Tunnel**	**12.93**	**257**	LR	LR	06 52 35.1	
	comp=Z,7.9nm,19.6s,baz=68,slow=32						
RAYN	**Ar Rayn**	**13.02**	**314**		**Pn**	**06 48 52.1**	**-1.6**
KBL	**Kabul**	**23.10**	**29**	P	**P**	**06 50 53.4**	**-1.1**
KBL				IAmb	IAmb	06 51 06.0	
	comp=Z,16nm,1.5s						
GEYT	**Alibeck**	**23.20**	**5**		**P**	**06 50 54.2**	**-1.1**
GEYT				IAmb	IAmb	06 51 04.0	
	comp=Z,6.5nm,0.9s						
GEYT	**Alibeck**	**23.20**	**5**	P	**P**	**06 50 57.6**	**+2.3**
	comp=Z,1.4nm,0.5s,baz=203,slow=10,SNR=2.6						
GEYT				LR	LR	07 00 26.1	
	comp=Z,254nm,18.1s,baz=186,slow=38						
	comp=Z,1.4nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**23.20**	**5**	P	**P**	**06 50 55.3**	**0.0**
GYA0B				IAmb	IAmb	06 51 03.9	
	comp=Z,5.8nm,0.8s						
EIL	**Elat**	**24.25**	**311**	LR	LR	06 59 55.7	
	comp=Z,126nm,18.5s,baz=65,slow=35						
KIBK	**Kibwezi**	**24.37**	**227**	P	**P**	**06 51 06.1**	**-0.6**
KIBK				IAmb	IAmb	06 51 15.0	
	comp=Z,15nm,1.5s						
PALK	**Pallekele**	**25.60**	**104**	LR	LR	06 59 09.4	
	comp=Z,116nm,20.6s,baz=54,slow=32						
MMAI	**Mount Meron Ar**	**25.92**	**318**	LR	LR	07 02 29.5	
	comp=Z,67nm,20.1s,baz=78,slow=38						
SIMJ	**Simiganj**	**26.57**	**24**	P	**P**	**06 51 25.6**	**-0.9**
GNI	**Garni**	**27.09**	**341**	P	**P**	**06 51 30.3**	**-0.8**
GNI	**Garni**	**27.09**	**341**	LR	LR	07 03 13.1	
	comp=Z,138nm,22.0s,baz=126,slow=38						
DGAR	**Diego Garcia**	**27.56**	**142**	P	**P**	**06 51 36.0**	**+0.7**
BTK	**Batken**	**28.48**	**25**	P	**P**	**06 51 42.4**	**-1.1**
BTK				IAmb	IAmb	06 51 55.4	
	comp=Z,9.4nm,1.4s						
ARPR	**Arapgir-MALATY**	**28.69**	**331**	P	**P**	**06 51 44.3**	**-1.2**
ARPR				IAmb	IAmb	06 51 57.5	
	comp=Z,11nm,1.2s						
KBZ	**Khabaz**	**30.91**	**342**	LR	LR	07 04 55.6	
	comp=Z,143nm,21.1s,baz=254,slow=37						
KKAR	**Karatay Array**	**31.00**	**21**	P	**P**	**06 52 04.7**	**-1.0**
BRTR	**Keskin Array B**	**31.54**	**326**	LR	LR	07 06 29.0	
	comp=Z,253nm,18.3s,baz=324,slow=39						
AAK	**Ala-Archa**	**32.17**	**26**	LR	LR	07 06 06.3	
	comp=Z,194nm,18.8s,baz=314,slow=38						
TARG	**Taragay, Kyrgy**	**33.00**	**31**	P	**P**	**06 52 23.1**	**-0.8**
TARG				IAmb	IAmb	06 52 27.0	
	comp=Z,4.1nm,0.9s						
ABKAR	**Akbulak array**	**34.60**	**5**	P	**P**	**06 52 36.7**	**-0.4**
AKTO	**Aktyubinsk**	**35.66**	**3**	LR	LR	07 07 55.5	
	comp=Z,142nm,21.8s,baz=59,slow=37						
ALN	**Alexandroupoli**	**36.67**	**321**	P	**P**	**06 52 54.5**	**-0.5**
BELG	**Belogornoye**	**38.12**	**352**	LR	LR	07 11 23.0	
	comp=Z,119nm,18.9s,baz=121,slow=40						
MK31	**Makanchi Array**	**38.91**	**29**	P	**P**	**06 53 13.0**	**-0.8**
MKAR	**Makanchi Array**	**38.91**	**29**	P	**P**	**06 53 12.5**	**-1.4**
MKAR	**Makanchi Array**	**38.91**	**29**	P	**P**	**06 53 16.0**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=217,slow=10.0,SNR=7.8						
MKAR				LR	LR	07 09 45.4	
	comp=Z,151nm,20.4s,baz=301,slow=37						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**39.94**	**14**	LR	LR	07 12 18.0	
	comp=Z,126nm,19.8s,baz=302,slow=40						
KURBB	**Kurchatov Arra**	**40.28**	**22**	P	**P**	**06 53 26.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=208,slow=9.3,SNR=2.5						
	comp=Z,0.4nm,0.5s						
LSZ	**Lusaka**	**40.37**	**224**	LR	LR	07 09 13.7	
	comp=Z,181nm,20.8s,baz=352,slow=35						
CMAR	**Chiang Mai Arr**	**41.52**	**79**	LR	LR	07 11 38.1	
	comp=Z,33nm,18.9s,baz=330,slow=37						
AKASG	**Malin Array Be**	**41.78**	**335**	LR	LR	07 16 03.6	
	comp=Z,199nm,18.2s,baz=286,slow=43						
KIRV	**Kirov**	**44.03**	**355**	LR	LR	07 15 59.7	
	comp=Z,197nm,20.4s,baz=288,slow=41						
ZAA0	**Zalesovo Array**	**45.29**	**24**	P	**P**	**06 54 06.6**	**+0.9**
ZALV	**Zalesovo Beam**	**45.29**	**24**	P	**P**	**06 54 05.5**	**-0.2**
ZALV	**Zalesovo Beam**	**45.29**	**24**	P	**P**	**06 54 05.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=218,slow=8.2,SNR=5.0						
ZALV				LR	LR	07 15 32.1	
	comp=Z,108nm,18.5s,baz=274,slow=39						
	comp=Z,1.2nm,0.7s						
ARSA	**Arzberg**	**46.49**	**323**	*e*P	**P**	**06 54 19.2**	**+3.8**
	comp=Z,1.9nm,0.6s						
SOKA	**Soboth**	**46.50**	**322**	*e*P	**P**	**06 54 19.3**	**+3.7**
	comp=Z,6.0nm,1.2s						
VRAC	**Vranov**	**46.98**	**326**	LR	LR	07 15 52.2	
	comp=Z,262nm,19.2s,baz=310,slow=38						
MYKA	**Terra Mystica**	**47.31**	**321**	*e*P	**P**	**06 54 25.0**	**+3.1**
	comp=Z,8.4nm,0.9s						
MOA	**Molln**	**47.53**	**323**	*e*P	**P**	**06 54 27.1**	**+3.5**
	comp=Z,9.7nm,1.6s						
BIOA	**Bad Ischl, Aus**	**47.82**	**322**	*e*P	**P**	**06 54 28.3**	**+2.5**
	comp=Z,8.4nm,1.1s						
CIMO	**Cimolais**	**47.90**	**320**	P	**P**	**06 54 26.6**	**+0.1**
CIMO				IAmb	IAmb	06 54 29.4	
	comp=Z,10nm,1.2s						
WTTA	**Wattenberg**	**48.82**	**321**	*e*P	**P**	**06 54 36.4**	**+2.7**
	comp=Z,6.6nm,1.0s						
LBTB	**Lobatse**	**49.23**	**217**	LR	LR	07 13 32.8	
	comp=Z,104nm,20.5s,baz=359,slow=34						
FETA	**Feichten**	**49.27**	**320**	*e*P	**P**	**06 54 39.8**	**+2.6**
	comp=Z,9.0nm,1.0s						
DAVA	**Damuels**	**49.91**	**320**	*e*P	**P**	**06 54 43.4**	**+1.4**
	comp=Z,8.8nm,1.2s						
TSUM	**Tsumeb**	**50.46**	**229**	LR	LR	07 16 21.1	
	comp=Z,167nm,19.3s,baz=346,slow=36						
FINES	**FINESS Array B**	**51.27**	**342**	P	**P**	**06 54 54.2**	**+2.4**
	comp=Z,3.8nm,1.1s,baz=134,slow=7.9,SNR=2.5						
FINES				LR	LR	07 18 37.3	
	comp=Z,199nm,19.3s,baz=270,slow=38						
	comp=Z,3.8nm,1.1s						

BOSA	**Boshof**	**52.20**	**214**	LR	LR	07 17 57.3			
	comp=Z,86nm,18.0s,baz=359,slow=37								
TOA0	**Torodi Ar. Sit**	**52.35**	**275**	P	**P**	**06 55 00.5**	**-0.1**		
TOA0				IAmb	IAmb	06 55 12.1			
	comp=Z,5.8nm,1.4s								
TORD	**Torodi Ar. Bea**	**52.35**	**275**	P	**P**	**06 55 00.0**	**-0.7**		
	comp=Z,1.3nm,0.4s,baz=96,slow=7.3,SNR=4.8								
	comp=Z,1.3nm,0.4s								
NOA	**NORSAR Array B**	**56.18**	**336**	LR	LR	07 24 37.2			
	comp=Z,85nm,19.4s,baz=245,slow=41								
ESDC	**Sonseca Array**	**57.48**	**308**	P	**P**	**06 55 37.9**	**+0.4**		
ESDC				IAmb	IAmb	06 55 44.9			
	comp=Z,10nm,1.4s								
ESDC	**Sonseca Array**	**57.48**	**308**	P	**P**	**06 55 37.8**	**+0.3**		
	comp=Z,2.5nm,1.0s,baz=84,slow=5.6,SNR=8.5								
	comp=Z,2.5nm,1.0s								
SUR	**Sutherland**	**57.54**	**215**	LR	LR	07 17 59.4			
	comp=Z,108nm,21.5s,baz=3.5,slow=34								
ARCES	**ARCESS Array B**	**57.95**	**348**	LR	LR	07 25 38.5			
	comp=Z,177nm,19.3s,baz=266,slow=41								
H04N1	**CROZET ISLANDS**	**60.71**	**183**	T	T	08 01 38.7			
	baz=3.5,slow=75,SNR=11								
H04N2	**CROZET ISLANDS**	**60.71**	**183**	T	T	08 01 34.3			
	baz=3.5,slow=75,SNR=10.0								
H04N3	**CROZET ISLANDS**	**60.73**	**183**	T	T	08 01 37.7			
	baz=3.5,slow=75,SNR=12								
SPITS	**Spitsbergen Ar**	**66.33**	**352**	LR	LR	07 31 13.7			
	comp=Z,156nm,18.1s,baz=179,slow=41								
TIXI	**Tiksi**	**70.82**	**19**	LR	LR	07 31 53.7			
	comp=Z,90nm,18.8s,baz=18,slow=39								
H01W3	**Cape Leeuwin H**	**74.17**	**133**	T	T	08 18 15.3			
	baz=302,slow=75,SNR=8.7								
H01W2	**Cape Leeuwin H**	**74.18**	**133**	T	T	08 18 16.6			
	baz=302,slow=75,SNR=8.3								
H01W1	**Cape Leeuwin H**	**74.19**	**133**	T	T	08 18 17.7			
	baz=302,slow=75,SNR=9.3								
MJAR	**Matsushiro Arr**	**75.43**	**56**	LR	LR	07 29 34.7			
	comp=Z,37nm,20.9s,baz=338,slow=35								
ASAR	**Alice Springs**	**85.37**	**116**	P	**P**	**06 58 24.5**	**-1.5**		
	comp=Z,0.3nm,0.6s,baz=289,slow=4.4,SNR=4.8								
	comp=Z,0.3nm,0.6s								

IDC ***15*** *07:13:22.1±3.3, 36°.13N×71°.37E, h81km±28km, mb3.7/15, mbtmp4.1/18, Error ellipse: s-maj=24.2km s-min=16.2km az=14.0*

NEIC ***15*** *07:13:25.8±1.5, 36°.45N±0°.05×71°.34E±0°.08, h106km±5km, mb4.2/18, Error ellipse: s-maj=9.7km s-min=7.9km az=99.0*

NNC ***15*** *07:13:27.8±1.8, 36°.65N×71°.18E, h105km±27km, mb3.8, mpv4.5, Error ellipse: s-maj=13.6km s-min=10.8km az=18.0*

ISC 15 07:13:23.8±0.5, 36°.34N±0°.05×71°.27E±0°.05, h100km, n92, σ2ş26/107, mb4.1/25, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.56**	**226**	Pn	**Pn**	**07 14 07.4**	**+3.6**
SIMJ	**Simiganj**	**2.94**	**323**		**Pn**	**07 14 09.6**	**+0.9**
NIL	**Nilore**	**3.13**	**148**		**Pn**	**07 14 15.1**	**+3.7**
BTK	**Batken**	**3.73**	**355**	Pn	**Pn**	**07 14 21.3**	**+1.9**
JMU	**Jammu**	**4.69**	**139**	*e*P	**Pn**	**07 14 34.6**	**+2.3**
JMU				*e*S	**Sn**	**07 15 23.2**	**-2.3**
JMU				IAML		07 15 28.4	
	comp=N,1μm,0.7s						
JMU				IAML		07 15 33.7	
	comp=E,524nm,0.8s						
KSH	**Kashi**	**4.89**	**48**	Pn	**Pn**	**07 14 32.3**	**-2.7**
KSH				Sn	Sn	07 15 18.6	-12
KSH				pmax	pmax		
	comp=Z,73nm,0.6s						
KSH				smax	smax		
	comp=N,430nm,0.7s						
KSH				smax	smax		
	comp=E,300nm,0.7s						
ARSB	**Arslanbob**	**5.16**	**14**		**Pn**	**07 14 39.1**	**+0.4**
THN	**Thein Dam**	**5.35**	**135**	*e*P	**Pn**	**07 14 43.4**	**+2.2**
THN				*e*S	**Sn**	**07 15 40.2**	**-1.4**
THN				IAML		07 15 44.9	
	comp=N,181nm,0.3s						
THN				IAML		07 15 45.5	
	comp=E,282nm,0.3s						
DHRM	**DHARAMSHALA**	**5.82**	**133**	*e*P	**Pn**	**07 14 49.2**	**+1.3**
DHRM				*e*S	**Sn**	**07 15 50.2**	**-3.3**
DHRM				IAML		07 15 54.8	
	comp=E,494nm,0.2s						
DHRM				IAML		07 15 54.8	
	comp=E,445nm,0.3s						
NRN	**Naryn**	**6.28**	**34**	Pn	**Pn**	**07 14 54.1**	**-0.1**
UCH	**Uchtur**	**6.40**	**22**	P	**Pn**	**07 14 57.0**	**+1.2**
	SNR=9.9						
BHK	**Bhakra**	**6.51**	**137**	*e*P	**Pn**	**07 14 59.3**	**+2.3**
BHK				*e*S	**Sn**	**07 16 07.2**	**-2.7**
BHK				IAML		07 16 13.3	
	comp=N,154nm,0.2s						
BHK				IAML		07 16 14.2	
	comp=E,174nm,0.3s						
EKS2	**Erkin-Say**	**6.61**	**16**	P	**Pn**	**07 14 59.5**	**+1.1**
	SNR=38						
AAK	**Ala-Archa**	**6.77**	**21**	P	**Pn**	**07 15 01.5**	**+0.9**
	SNR=32						
AAK	**Ala-Archa**	**6.77**	**21**	Pn	**Pn**	**07 15 01.8**	**+1.2**
AAK	**Ala-Archa**	**6.77**	**21**	P	**Pn**	**07 15 02.0**	**+1.4**
	comp=E,19nm,0.4s,baz=192,slow=6.9,SNR=80						
AAK				S	**Sn**	**07 16 13.1**	**-3.0**
	comp=E,9.2nm,0.3s,baz=143,slow=22,SNR=10.0						
KK31	**Karatay Array**	**6.78**	**355**	⇓P	**Pn**	**07 15 01.0**	**+0.3**
	comp=E,57nm,0.4s,baz=180,slow=13,SNR=1187						
KK31				⇑S	**Sn**	**07 16 13.2**	**-3.2**
	comp=E,12nm,0.4s,baz=187,slow=26,SNR=7.2						
KK31	**Karatay Array**	**6.78**	**355**		**Pn**	**07 15 01.2**	**+0.6**
KKAR	**Karatay Array**	**6.78**	**355**		**Pn**	**07 15 01.1**	**+0.4**
KBK	**Karagaybulak**	**6.92**	**23**	P	**Pn**	**07 15 03.8**	**+1.1**
	SNR=8.0						
BOOM	**Boomskoye usch**	**7.13**	**29**		**Pn**	**07 15 06.2**	**+0.7**
SMLA	**Simla**	**7.15**	**135**	*e*P	**Pn**	**07 15 06.3**	**+0.7**
SMLA				*e*S	**Sn**	**07 16 18.8**	**-6.5**
SMLA				IAML		07 16 24.3	
	comp=E,193nm,0.2s						
SMLA				IAML		07 16 25.5	
	comp=N,227nm,0.4s						
SMLA				IAML		07 16 27.6	
	comp=N,233nm,0.3s						
CHMS	**Chumysh**	**7.17**	**21**	P	**Pn**	**07 15 07.1**	**+1.1**
	SNR=11						
CHMS	**Chumysh**	**7.17**	**21**	⇑P	**Pn**	**07 15 06.3**	**+0.3**
	comp=N,16nm,0.6s						
CHMS				⇓S	**Sn**	**07 16 24.4**	**-1.5**
	comp=N,25nm,0.5s						
USP	**Ospenovka**	**7.35**	**19**	P	**Pn**	**07 15 09.1**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**7.37**	**26**	P	**Pn**	**07 15 10.2**	**+1.3**
	SNR=16						
TKM2	**Tokmak 2**	**7.37**	**26**	⇓P	**Pn**	**07 15 09.5**	**+0.6**
	comp=N,11nm,0.7s						
TKM2				⇑P	**Sn**	**07 16 29.9**	**-1.1**
	comp=N,9.6nm,0.6s						
TARG	**Taragay, Kyrgy**	**7.40**	**41**		**Pn**	**07 15 09.3**	**-0.2**
KLP	**Kalpa**	**7.52**	**128**	*e*P	**Pn**	**07 15 11.6**	**+0.6**
KLP				*e*S	**Sn**	**07 16 27.6**	**-7.3**
DDI	**Dehra Dun**	**8.26**	**135**	*e*S	**Sn**	**07 16 48.0**	**-4.4**
KHET	**Khetri**	**9.09**	**154**	*e*P	**Pn**	**07 15 30.9**	**-1.1**
KHET				*e*S	**Sn**	**07 17 04.1**	**-8.5**
KUDL	**Kundal**	**9.28**	**150**	*e*P	**Pn**	**07 15 33.9**	**-0.8**
KUDL				*e*S	Sn	**07 17 09.2**	**-8.2**
KUDL				IAML		07 17 13.3	
	comp=E,24nm,0.5s						
KUDL				IAML		07 17 14.2	
	comp=N,18nm,0.2s						
PTH	**Pithoragarh**	**10.11**	**129**	*e*P	**Pn**	**07 15 45.8**	**-0.3**
LGTI	**Lohaghat**	**10.20**	**130**	*e*P	**Pn**	**07 15 45.7**	**-1.4**
AJM	**Ajmer**	**10.24**	**163**	*e*P	**Pn**	**07 15 47.9**	**+0.1**
AJM				*e*S	**Sn**	**07 17 35.3**	**-5.4**
AJM				IAML		07 17 46.9	
	comp=N,8.4nm,0.5s						
AJM				IAML		07 17 50.4	
	comp=E,13nm,0.5s						
GEYT	**Alibeck**	**10.62**	**283**	Pn	**Pn**	**07 15 52.2**	**-0.8**
GEYT	**Alibeck**	**10.62**	**283**	P	**Pn**	**07 15 51.7**	**-1.3**
	comp=E,1.6nm,0.3s,baz=140,slow=11,SNR=8.6						
GEYT				S	**Sn**	**07 17 42.8**	**-7.2**
	comp=E,3.7nm,0.3s,baz=196,slow=37,SNR=2.8						
GYA0B	**ALIBECK ARRAY**	**10.62**	**283**	Pn	**Pn**	**07 15 52.8**	**-0.1**
MAKZ	**Makanchi**	**13.16**	**34**		**Pn**	**07 16 25.4**	**-1.3**

MK31	**Makanchi Array**	**13.30**	**35**	⇓P	**Pn**	**07 16 28.3**	**-0.1**		
	comp=E,0.6nm,0.5s,baz=201,slow=10.0,SNR=18								
MK31	**Makanchi Array**	**13.30**	**35**		**Pn**	**07 16 27.4**	**-1.0**		
MKAR	**Makanchi Array**	**13.30**	**35**	Pn	**Pn**	**07 16 27.1**	**-1.3**		
MKAR	**Makanchi Array**	**13.30**	**35**	P	**Pn**	**07 16 26.4**	**-2.0**		
	comp=E,0.6nm,0.7s,baz=196,slow=12,SNR=5.6								
WMQ	**Urumqi**	**14.61**	**54**	*e*P	**Pn**	**07 16 46.9**	**+1.4**		
KURBB	**Kurchatov Arra**	**15.21**	**18**	P	**Pn**	**07 16 50.8**	**-2.1**		
	comp=E,1.1nm,0.5s,baz=206,slow=11,SNR=2.3								
KURK	**Kurchatov**	**15.32**	**18**	Pn	**Pn**	**07 16 53.5**	**-0.7**		
AB31	**Akbulak array**	**15.33**	**331**	P	**Pn**	**07 16 53.2**	**-1.3**		
	comp=E,3.7nm,0.3s,baz=140,slow=12,SNR=322								
AB31				S	**Sn**	**07 19 40.8**	**-3.0**		
	comp=E,3.7nm,0.8s,baz=154,slow=23,SNR=4.8								
ABKAR	**Akbulak array**	**15.33**	**331**	Pn	**Pn**	**07 16 53.5**	**-1.1**		
BVA0	**Borovoye Array**	**16.70**	**358**	P	**P**	**07 17 12.7**	**+0.5**		
	comp=E,3.8nm,1.0s,baz=158,slow=11,SNR=11								
BVAR	**Borovoye Array**	**16.70**	**358**	P	**Pn**	**07 17 10.2**	**-1.3**		
	comp=E,1.4nm,0.3s,baz=159,slow=9.3,SNR=11								
BRVK	**Borovoye**	**16.73**	**358**	P	**Pn**	**07 17 11.2**	**-0.7**		
AKTO	**Aktyubinsk**	**17.03**	**330**	⇓P	**P**	**07 17 16.8**	**+1.0**		
	comp=E,3.2nm,0.5s								
AKTO				⇑S	**Sn**	**07 20 20.9**	**-3.7**		
	comp=E,3.2nm,1.1s								
AKTO	**Aktyubinsk**	**17.03**	**330**	P	**Pn**	**07 17 16.1**	**+0.5**		
	comp=E,7.3nm,0.3s,baz=147,slow=7.7,SNR=29								
AKTO				S	**Sn**	**07 20 15.4**	**-9.2**		
	comp=E,1.0nm,0.6s,baz=99,slow=6.7,SNR=1.6								
ZAA0	**Zalesovo Array**	**19.97**	**24**	P	**P**	**07 17 48.2**	**+0.3**		
ZAA0				IAmb	IAmb	07 17 49.2			
	comp=Z,9.4nm,0.6s								
ZALV	**Zalesovo Beam**	**19.97**	**24**	P	**P**	**07 17 48.1**	**+0.2**		
ZALV	**Zalesovo Beam**	**19.97**	**24**	P	**P**	**07 17 48.2**	**+0.3**		
	comp=Z,9.6nm,0.3s,baz=203,slow=10,SNR=27								
	comp=Z,9.6nm,0.3s								
ARU	**Arti**	**21.86**	**341**	P	**P**	**07 18 10.7**	**+2.7**		
	comp=Z,2.7nm,0.4s,baz=139,slow=11,SNR=6.0								
	comp=Z,2.7nm,0.4s								
GTA	**Gaotai**	**22.70**	**74**	*e*P	**P**	**07 18 20.0**	**+2.8**		
GTA				pmax	pmax				
	comp=Z,8.0nm,0.8s								
PZH	**PanZhiHua**	**27.69**	**102**	P	**P**	**07 19 04.0**	**+1.3**		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
PZH				pmax	pmax				
	comp=Z,100nm,4.5s								
SONM	**Songino Array**	**28.25**	**55**	P	**P**	**07 19 08.7**	**+1.3**		
	comp=Z,0.4nm,0.7s,baz=261,slow=8.2,SNR=2.9								
	comp=Z,0.4nm,0.7s								
HHC	**Hu-ho-hao-te**	**31.61**	**69**	*e*P	**P**	**07 19 37.0**	**-0.2**		
HHC				pmax	pmax				
	comp=Z,6.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,73nm,5.4s								
AKASG	**Malin Array Be**	**33.22**	**309**	P	**P**	**07 19 54.5**	**+3.5**		
	comp=Z,1.2nm,0.7s,baz=82,slow=7.0,SNR=5.4								
	comp=Z,1.2nm,0.7s								
FIA1	**FINESS Array S**	**37.74**	**326**	P	**P**	**07 20 32.1**	**+2.6**		
FINES	**FINESS Array B**	**37.74**	**326**	P	**P**	**07 20 31.8**	**+2.3**		
FINES	**FINESS Array B**	**37.74**	**326**	P	**P**	**07 20 32.1**	**+2.6**		
	comp=Z,1.3nm,0.4s,baz=121,slow=9.5,SNR=20								
	comp=Z,1.3nm,0.4s								
ARCES	**ARCESS Array B**	**41.38**	**338**	P	**P**	**07 21 01.6**	**+2.0**		
ARCES				IAmb	IAmb	07 21 18.1			
	comp=Z,11nm,1.2s								
ARCES	**ARCESS Array B**	**41.38**	**338**	P	**P**	**07 21 00.9**	**+1.3**		
	comp=Z,1.4nm,0.5s,baz=114,slow=8.6,SNR=14								
	comp=Z,1.4nm,0.5s								
HFS	**Hagfors**	**43.33**	**322**	P	**P**	**07 21 17.7**	**+2.2**		
	comp=Z,2.8nm,0.4s,baz=101,slow=11,SNR=17								
	comp=Z,2.8nm,0.4s								
NC405	**NORSAR Array S**	**44.41**	**323**	P	**P**	**07 21 26.4**	**+2.2**		
NB2	**NORSAR Subarra**	**44.64**	**323**	P	**P**	**07 21 28.1**	**+2.0**		
	comp=Z,0.7nm,0.4s,baz=93,slow=7.9								
NOA	**NORSAR Array B**	**44.64**	**323**	P	**P**	**07 21 28.4**	**+2.3**		
	comp=Z,1.3nm,0.6s,baz=104,slow=7.1,SNR=5.7								
	comp=Z,1.3nm,0.6s								
KSRS	**Korea Array**	**44.73**	**71**	P	**P**	**07 21 27.1**	**+0.2**		
	comp=Z,1.0nm,0.8s,baz=305,slow=6.5,SNR=4.5								
	comp=Z,1.0nm,0.8s								
GRA1	**Grafenberg Arr**	**44.73**	**307**	P	**P**	**07 21 27.4**	**+0.4**		
TIXI	**Tiksi**	**45.84**	**22**	P	**P**	**07 21 35.1**	**-0.2**		
SPITS	**Spitsbergen Ar**	**47.70**	**347**	P	**P**	**07 21 50.8**	**+1.0**		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV				Lg	Lg	07 35 26.9	
	1.1nm,0.3s,baz=93,slow=29,SNR=3.8						
KURBB	**Kurchatov Arra**	**5.95**	**239**	Pn	Pn	07 36 23.1	+1.2
	baz=56,slow=14,SNR=2.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.68**	**202**	Pn	Pn	07 36 46.7	+1.1
	0.1nm,0.3s,baz=26,slow=13,SNR=6.0						
	0.1nm,0.3s						

NNC ***15*** *07:37:10.6±0.5,50.00N×78.67E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=4.5km s-min=2.4km az=73.0, Suspected Mining explosion.*

IDC ***15*** *07:37:12.1±0.8,50.07N×78.79E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=14.9km s-min=6.1km az=60.0*

ISC 15 07:37:11.1±0.8, 49.99N±0.03×78.79E±0.04, h0km, n26, σ0.92/42, 18C-16D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.61**	**344**	⇑P	**Pg**	**07 37 22.1**	**-0.7**
KUR07				⇓S	**Sg**	**07 37 31.3**	**+0.4**
KUR06	**Kurchatov Arra**	**0.63**	**344**	⇑P	**Pg**	**07 37 22.5**	**-0.8**
KUR06				⇓S	**Sg**	**07 37 31.9**	**+0.4**
KUR14	**Kurchatov Arra**	**0.63**	**349**	⇑P	**Pg**	**07 37 22.6**	**-0.7**
KUR14				⇓S	**Sg**	**07 37 31.1**	**-0.4**
KUR15	**Kurchatov Arra**	**0.64**	**347**	⇑P	**Pg**	**07 37 22.6**	**-0.9**
KUR15				⇑S	**Sg**	**07 37 31.5**	**-0.2**
KURBB	**Kurchatov Arra**	**0.65**	**345**	⇑P	**Pg**	**07 37 22.8**	**-0.8**
	27nm,0.3s						
KURBB				⇑S	**Sg**	**07 37 32.0**	**0.0**
	61nm,0.5s						
KURBB	**Kurchatov Arra**	**0.65**	**345**	Pg	**Pg**	**07 37 22.9**	**-0.6**
	4.1nm,0.3s,baz=166,slow=17,SNR=118						
KURBB				Lg	Lg	07 37 32.0	
	3.6nm,0.3s,baz=177,slow=33,SNR=8.2						
KUR16	**Kurchatov Arra**	**0.66**	**344**	⇑P	**Pg**	**07 37 22.9**	**-0.9**
KUR16				⇑S	**Sg**	**07 37 31.8**	**-0.5**
KUR05	**Kurchatov Arra**	**0.67**	**346**	⇑P	**Pg**	**07 37 23.0**	**-0.9**
KUR05				⇓S	**Sg**	**07 37 32.1**	**-0.5**
KUR17	**Kurchatov Arra**	**0.67**	**342**	⇓P	**Pg**	**07 37 23.2**	**-0.7**
KUR17				⇑S	**Sg**	**07 37 32.5**	**-0.1**
KUR04	**Kurchatov Arra**	**0.69**	**347**	⇓P	**Pg**	**07 37 23.4**	**-0.9**
KUR04				⇑S	**Sg**	**07 37 32.7**	**-0.5**
KURK	**Kurchatov**	**0.73**	**352**	⇑P	**Pg**	**07 37 23.8**	**-1.3**
	13nm,0.4s						
KURK				⇓S	**Sg**	**07 37 33.7**	**-0.9**
	32nm,0.5s						
SEM	**Semipalatinsk**	**1.03**	**66**	P	**Pn**	**07 37 33.4**	**+0.5**
	18nm,0.1s						
SEM				S	**Sn**	**07 37 47.6**	**-0.6**
	87nm,0.2s						
MAKZ	**Makanchi**	**3.83**	**145**	⇓Pn	**Pn**	**07 38 10.8**	**-0.5**
	0.2nm,0.2s						
MAKZ				⇓Pg	**Pb**	**07 38 19.6**	**0.0**
	3.1nm,1.1s						
MAKZ				⇑Lg	Lg	07 39 12.9	
	14nm,0.7s						
BRZS	**Berezniki**	**3.94**	**272**	Pg	**Pb**	**07 38 22.6**	**+1.1**
	2.5nm,0.1s						
BRZS				Lg	Lg	07 39 12.1	
	7.6nm,0.2s						
MK31	**Makanchi Array**	**3.96**	**143**	⇓Pn	**Pn**	**07 38 13.3**	**+0.2**
	0.1nm,0.1s,baz=324,slow=10,SNR=70						
MK31				⇑Pg	**Pb**	**07 38 21.8**	**0.0**
	0.3nm,0.2s,baz=320,slow=15,SNR=20						
MK31				⇑Lg	Lg	07 39 17.3	
	11nm,0.6s,baz=324,slow=27,SNR=17						
MKAR	**Makanchi Array**	**3.96**	**143**	Pn	**Pn**	**07 38 15.1**	**+1.9**
	0.5nm,0.3s,baz=322,slow=10,SNR=111						
MKAR				Pg	**Pb**	**07 38 22.4**	**+0.6**
	0.8nm,0.3s,baz=332,slow=16,SNR=13						
MKAR				Sn	**Sn**	**07 39 02.1**	**+1.8**
	0.5nm,0.3s,baz=310,slow=14,SNR=1.5						
MKAR				Lg	Lg	07 39 16.4	
	1.9nm,0.3s,baz=323,slow=27,SNR=5.6						
	0.5nm,0.3s						
OTUK	**Ortayu**	**4.58**	**250**	⇑Pn	**Pn**	**07 38 22.2**	**+0.5**
	0.6nm,0.1s						
OTUK				⇓Pg	**Pb**	**07 38 33.7**	**+1.3**
	0.9nm,0.4s						
OTUK				⇓Lg	Lg	07 39 35.5	
	4.2nm,0.5s						
KAPS	**Kapalarasan**	**4.73**	**175**	Pg	**Pg**	**07 38 39.9**	**-1.8**
	1.5nm,0.2s						
KAPS				Lg	Lg	07 39 41.8	
	10nm,0.4s						
ZSN	**Zaisan**	**4.76**	**120**	Pg	**Pg**	**07 38 41.5**	**-0.7**
	1.9nm,0.2s						
ZSN				Lg	Lg	07 39 44.8	
	4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**5.44**	**41**	Pn	**Pn**	**07 38 34.4**	**+1.1**
	1.0nm,0.3s,baz=232,slow=13,SNR=7.3						
ZALV				Sn	**Sn**	**07 39 37.5**	**+0.9**
	0.5nm,0.3s,baz=209,slow=23,SNR=1.7						
ZALV				Lg	Lg	07 39 59.5	
	baz=228,slow=21						
	1.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.44**	**41**	I	I	08 07 48.8	
	baz=226,slow=334,SNR=6.7						
BVA0	**Borovoye Array**	**6.06**	**303**	⇓Pn	**Pn**	**07 38 41.6**	**-0.3**
	2.4nm,1.2s,baz=110,slow=14,SNR=3.7						
BVA0				⇓Sn	**Sn**	**07 39 50.9**	**-1.0**
	0.9nm,0.4s,baz=109,slow=22,SNR=4.2						
BVA0				⇑Lg	Lg	07 40 20.7	
	2.8nm,1.0s,baz=112,slow=24,SNR=4.3						
BVAR	**Borovoye Array**	**6.06**	**303**	Pn	**Pn**	**07 38 42.0**	**+0.1**
	baz=120,slow=14,SNR=2.7						
BVAR				Sn	**Sn**	**07 39 49.8**	**-2.1**
	0.1nm,0.3s,baz=102,slow=26,SNR=4.3						
BVAR				Lg	Lg	07 40 17.9	
	0.1nm,0.3s,baz=122,slow=28,SNR=1.8						
	0.3nm,0.4s						
BRVK	**Borovoye**	**6.13**	**303**	⇓Sn	**Sn**	**07 39 53.1**	**-0.5**
	1.7nm,0.6s						
BRVK				⇓Lg	Lg	07 40 23.2	
	2.9nm,0.9s						
AAK	**Ala-Archa**	**7.94**	**204**	Lg	Lg	07 41 16.2	
	0.2nm,0.3s,baz=217,slow=19,SNR=2.0						
I31KZ	**AKTYUBINSK INF**	**13.30**	**280**	I	I	09 03 24.1	
	baz=82,slow=336,SNR=0.9						

CATAC 15 07:54:21.4±0.7, 16.09N×88.77W, h0km, ML4.2, Belize

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETF	**Flores**	**1.34**	**308**	*i* P	Pg	07 54 46.0	-1.1
PETF				IAML		07 54 48.0	
	comp=Z,90nm,1.0s						
UDBS	**Universidad Do**	**2.38**	**189**	*i* P	Pn	07 55 03.0	+1.2
UDBS				IAML		07 55 12.8	
	comp=Z,440nm,1.0s						
CNRM	**Centro Naciona**	**2.66**	**167**	*i* P	Pn	07 54 53.5	-12
HUEH	**Huehuetenango**	**2.74**	**254**	*i* P	Pn	07 54 59.7	-7.1
LIMN	**Finca el Limon**	**3.80**	**142**	*i* P	Pn	07 55 24.1	+2.7
LIMN				IAML		07 55 52.9	
	comp=Z,40nm,1.0s						
HERN	**Volcan Telica**	**3.93**	**151**	*i* P	Pn	07 55 22.9	-0.3
HERN				IAML		07 55 24.7	
	comp=Z,500nm,1.0s						
TELN	**Telica**	**3.94**	**151**	*i* P	Pn	07 55 21.8	-1.4
TELN				IAML		07 55 24.2	
	comp=Z,150nm,1.0s						
QUEN	**Al S del Volca**	**3.94**	**152**	*i* P	Pn	07 55 22.4	-0.8
QUEN				IAML		07 55 29.2	
	comp=Z,400nm,1.0s						
TEL3	**Telica 3**	**3.96**	**152**	*i* P	Pn	07 55 18.6	-4.9
TEL3				IAML		07 55 33.9	
	comp=Z,560nm,1.0s						
WILN	**Americas 2**	**4.64**	**147**	*i* P	Pn	07 55 35.6	+2.8
WILN				IAML		07 57 29.6	
	comp=Z,120nm,1.0s						

NEIC ***15*** *07:57:39.8±2.6,28.1S±0.1×176.3W±0.2, h10km±1km, mb4.4/11, Error ellipse: s-maj=30.5km s-min=16.7km az=136.0*

IDC ***15*** *07:57:48.7±3.1,27.66S×176.65W, h68km±26km, mb3.9/13, mbtmp4.2/14, MS3.6/4, Error ellipse: s-maj=22.6km s-min=22.3km az=124.0*

ISC 15 07:57:39.9±0.6, 27.97S±0.08×176.3W±0.1, h10km, n56, σ1.75/55, mb4.4/19, 4D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.89**	**227**		**Pn**	**07 58 10.3**	**-1.9**
RAO	**Raoul Island**	**1.89**	**227**	P	**Pg**	**07 58 19.2**	**+3.1**
	1µm,0.3s,baz=82,slow=7.8,SNR=12						
RAO				S	**Sg**	**07 58 43.6**	**+3.0**
	2µm,0.3s,baz=246,slow=23,SNR=4.3						
URZ	**Urewera**	**11.63**	**206**	S	**Sn**	**08 02 33.3**	**-2.5**
	7.5nm,0.4s,baz=147,slow=22,SNR=13						
URZ				LR	LR	08 04 59.3	
	comp=Z,228nm,19.2s,baz=122,slow=36						
RTZ	**Ruatahuna**	**11.99**	**206**	Pn	**Pn**	**08 00 27.3**	**-3.6**
MRZ	**Mangatainoka R**	**14.30**	**206**	Pn	**Pn**	**08 00 58.6**	**-3.8**
TCW	**Tory Channel**	**15.29**	**208**	Pn	**Pn**	**08 01 12.2**	**-3.5**
MRNZ	**Matariki Terra**	**16.10**	**211**	Pn	**Pn**	**08 01 22.7**	**-3.6**
THZ	**Tophouse**	**16.33**	**210**		**Pn**	**08 01 25.8**	**-3.5**
THZ				IAmb	IAmb	08 01 50.6	
	comp=Z,34nm,1.2s						
RAR	**Rarotonga**	**16.49**	**70**	LR	LR	08 06 57.7	
	comp=Z,122nm,19.4s,baz=230,slow=33						
DZM	**Mont Dzumac**	**16.67**	**287**	P	**P**	**08 01 37.6**	**+1.4**
	comp=Z,10nm,0.9s,baz=114,slow=17,SNR=2.5						
DZM				LR	LR	08 06 56.0	
	comp=Z,780nm,18.2s,baz=157,slow=34						
RPZ	**Rata Peaks**	**18.71**	**210**	P	**Pn**	**08 02 01.9**	**+3.1**
	comp=Z,10nm,0.7s,baz=5.0,slow=19,SNR=1.3						
PPT	**Papeete**	**26.70**	**73**	LR	LR	08 13 32.6	
	comp=Z,67nm,18.6s,baz=234,slow=35						
HNR	**Honiara**	**28.96**	**305**	P	**P**	**08 03 39.2**	**-0.5**
CTAO	**Charters Tower**	**34.95**	**275**	P	**P**	**08 04 32.3**	**0.0**
CTAO				IAmb	IAmb	08 04 38.3	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**36.51**	**253**	P	**P**	**08 04 45.7**	**+0.2**
STKA	**Stephens Creek**	**36.51**	**253**	P	**P**	**08 04 46.5**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=97,slow=11,SNR=12						
	comp=Z,2.4nm,0.5s						
COEN	**Coen**	**40.10**	**282**	P	**P**	**08 05 15.8**	**-0.2**
COEN				IAmb	IAmb	08 05 33.7	
	comp=Z,12nm,1.3s						
AS31	**Alice Springs**	**44.76**	**264**	P	**P**	**08 05 52.6**	**-1.2**
AS31				IAmb	IAmb	08 05 59.7	
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	**44.76**	**264**	P	**P**	**08 05 52.8**	**-1.1**
ASAR	**Alice Springs**	**44.76**	**264**	P	**P**	**08 05 53.2**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=91,slow=7.3,SNR=21						
ASAR				PcP	**PcP**	**08 07 35.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=118,slow=4.0,SNR=2.2						
	comp=Z,1.1nm,0.5s						
WR0	**Warramunga Arr**	**45.35**	**269**	P	**P**	**08 05 56.9**	**-1.7**
WR0				IAmb	IAmb	08 06 24.9	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.53**	**269**	P	**P**	**08 05 58.3**	**-1.7**
WRA	**Warramunga Arr**	**45.53**	**269**	P	**P**	**08 05 58.7**	**-1.3**
	comp=Z,3.1nm,0.6s,baz=108,slow=7.5,SNR=24						
WRA				PcP	**PcP**	**08 07 38.8**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=114,slow=3.2,SNR=2.0						
	comp=Z,3.1nm,0.6s						
FORT	**Forrest**	**48.12**	**253**	P	**P**	**08 06 18.6**	**-1.6**
FITZ	**Fitzroy Crossi**	**53.88**	**267**	P	**P**	**08 07 02.7**	**-0.9**
FITZ				IAmb	IAmb	08 07 41.9	
	comp=Z,2.5nm,1.2s						
CASY	**Casey**	**57.96**	**207**	P	**P**	**08 07 34.4**	**+2.3**
CASY				IAmb	IAmb	08 08 10.8	
	comp=Z,28nm,1.2s						
QSPA	**South Pole Qui**	**62.13**	**180**	P	P	08 08 05.1	+4.1
	comp=Z,1.6nm,1.0s,baz=37,slow=11,SNR=2.0						
	comp=Z,1.6nm,1.0s						
MJAR	**Matsushiro Arr**	**77.11**	**324**	P	**P**	**08 09 32.3**	**-1.2**
	comp=Z,4.7nm,0.7s,baz=154,slow=4.9,SNR=9.6						
	comp=Z,4.7nm,0.7s						
TROLL	**Troll, Antarti**	**80.29**	**180**	⇓P	**P**	**08 09 52.3**	**+1.6**
	comp=Z,278nm,1.0s						
SNAA	**Sanae**	**80.53**	**178**	⇓P	**P**	**08 09 49.9**	**-2.0**
SNAA	**Sanae**	**80.53**	**178**	P	**P**	**08 09 54.6**	**+2.7**
	comp=Z,6.1nm,1.0s,baz=255,slow=2.6,SNR=4.3						
	comp=Z,6.1nm,1.0s						
VNA3	**Neumayer Olymp**	**80.61**	**176**	⇓P	**P**	**08 09 52.8**	**+0.4**
VNA2	**Neumayer--Watz**	**81.07**	**176**	⇓P	**P**	**08 09 55.8**	**+1.0**
	baz=351,slow=25						
KSRS	**Korea Array**	**83.47**	**319**	P	**P**	**08 10 07.3**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=142,slow=6.2,SNR=6.7						
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	**85.47**	**42**	P	**P**	**08 10 18.5**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=221,slow=8.0,SNR=3.9						
	comp=Z,0.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**85.97**	**326**	P	**P**	**08 10 20.1**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=146,slow=6.2,SNR=3.2						
	comp=Z,2.1nm,0.8s						
KLR	**Kul'dur**	**89.70**	**329**	P	**P**	**08 10 38.0**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=301,slow=4.7,SNR=8.1						
	comp=Z,1.8nm,0.8s						
TXAR	**Lajitas Array**	**89.85**	**56**	P	**P**	**08 10 40.5**	**+1.3**
	comp=Z,0.6nm,1.1s,baz=215,slow=7.7,SNR=4.2						
	comp=Z,0.6nm,1.1s						
PDAR	**Pinedale Array**	**93.37**	**43**	P	**P**	**08 10 56.3**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=225,slow=5.0,SNR=2.2						
	comp=Z,0.1nm,0.4s						
ILAR	**Eielson Array**	**95.25**	**12**	P	**P**	**08 11 02.5**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=230,slow=6.4,SNR=5.3						
	comp=Z,0.2nm,0.7s						
BMAR	**Burnt Mountain**	**98.05**	**12**	P	**P**	**08 11 15.6**	**-0.4**
MKAR	**Makanchi Array**	**117.31**	**311**	PKP	**PKPdf**	**08 16 24.9**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=50,slow=1.9,SNR=4.4						
KURBB	**Kurchatov Arra**	**120.45**	**314**	PKP	**PKPdf**	**08 16 29.9**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=85,slow=2.0,SNR=7.0						
BVAR	**Borovoye Array**	**125.66**	**317**	PKP	**PKPdf**	**08 16 40.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=48,slow=2.1,SNR=4.3						
ARCES	**ARCESS Array B**	**136.51**	**349**	PKP	**PKPdf**	**08 17 01.4**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=282,slow=1.1,SNR=3.7						
FINES	**FINESS Array B**	**143.33**	**342**	PKhKP	PKPpre	08 17 09.5	
	comp=Z,0.4nm,0.5s,baz=45,slow=4.5,SNR=1.2						
ONI	**Oni**	**144.74**	**305**		**PKPab**	**08 17 15.9**	**+0.1**
KBZ	**Khabaz**	**144.89**	**307**	PKP	**PKPdf**	**08 17 17.2**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=250,slow=4.0,SNR=4.2						
AKH	**Akkalkalaki**	**144.92**	**303**		PKPbc	08 17 17.0	+0.3
NC303	**NORSAR Array S**	**146.35**	**353**	PKPdf	**PKPdf**	**08 17 19.5**	**+0.4**
NB2	**NORSAR Subarra**	**146.55**	**353**	PKP	**PKPdf**	**08 17 20.3**	**+0.8**
	comp=Z,4.8nm,0.8s,baz=10,slow=2.0						
NOA	**NORSAR Array B**	**146.55**	**353**	PKPbc	**PKPdf**	**08 17 20.1**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=12,slow=2.4,SNR=4.0						
HFS	**Hagfors**	**147.12**	**351**	PKPbc	**PKPdf**	**08 17 21.3**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=315,slow=0.4,SNR=6.4						
AKASG	**Malin Array Be**	**150.17**	**327**	PKPbc	**PKPbc**	**08 17 30.0**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=44,slow=3.3,SNR=4.3						
BRTR	**Keskin Array B**	**152.61**	**303**	PKPbc	**PKPbc**	**08 17 36.6**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=98,slow=2.9,SNR=2.3						
BRTR				PKPab	**PKPab**	**08 17 47.2**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=106,slow=3.4,SNR=8.0						
TORD	**Torodi Ar. Bea**	**165.14**	**172**	PKPab	**PKPab**	**08 18 44.8**	**+2.9**
	comp=Z,1.8nm,0.3s,baz=197,slow=4.5,SNR=2.7						

IDC 15 08:06:18.1±3.1, 54.24N×86.38E, h0km, mbtmp2.8/1, ML2.6/1, Error ellipse: s-maj=23.1km s-min=13.0km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**253**	I	I	08 12 41.1	
	baz=72,slow=336,SNR=2.6						
ZALV	**Zalesovo Beam**	**0.96**	**253**	Pg	Pg	08 06 35.5	-1.0
	2.8nm,0.3s,baz=73,slow=17,SNR=20						
ZALV				Lg	Lg	08 06 50.9	
	2.2nm,0.3s,baz=73,slow=31,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.01**	**236**	Sn	Sn	08 09 00.3	+2.6
	baz=55,slow=23						
KURBB				Lg	Lg	08 09 29.7	
	baz=122,slow=43,SNR=1.3						
MKAR	**Makanchi Array**	**7.89**	**201**	Pn	Pn	08 08 15.6	+1.5
	0.1nm,0.3s,baz=25,slow=13,SNR=9.1						
MKAR				Sn	Sn	08 09 43.3	-0.7
	baz=357,slow=26,SNR=1.7						
MKAR				Lg	Lg	08 10 27.0	
	baz=19,slow=26,SNR=5.8						
	0.2nm,0.3s						

IDC ***15*** *08:08:51.9±0.6,3.24S×148.53E, h0km, mb4.7/26, mbtmp4.7/28, ML3.1/2, MS4.4/30, Error ellipse: s-maj=23.3km s-min=9.9km az=96.0*

BJI ***15*** *08:08:52.3±0.0,2.97S×148.74E, h11km, mb4.9/83, mB5.3/41, Ms4.9/65, Ms7 4.8/64*

MOS ***15*** *08:08:52.7±0.9,3.21S×148.48E, h12km, mb5.3/45, Error ellipse: s-maj=10.9km s-min=5.4km az=104.9*

NEIC ***15*** *08:08:55.1,3.09S×148.20E, h18km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^16 Nm; Mrr=0.80; Mθθ 6.30; Mφφ -5.50; Mrθ -0.03; Mrφ 6.26; Mθφ 5.12; Fault plane solution: Mo 9.99000×10^16 NP1: φs 203.58000°, δ 80.80000°, λ -151.80000°. NP2: φs 108.68000°, δ 62.20000°, λ -10.41000°. Principal axes: T 9.4473, Plg 13.0000°, Azm 333.0000°; N 1.0895, Plg 60.0000°, Azm 220.0000°; P -10.5367, Plg 26.0000°, Azm 70.0000°;*

NEIC ***15*** *08:08:55.1±2.0,3.09S±0.05×148.33E±0.07, h10km±1km, mb5.2/97, Mww5.3/20 Error ellipse: s-maj=14.1km s-min=3.3km az=232.0*

NEIC ***15*** *08:08:55.1,3.09S×148.30E, h18km*

DJA ***15*** *08:08:56.4±1.1,3.3S±3.1×148.8E±1.1, h28km±9km, M5.2/52, mb5.2/52, mB5.7/22, MLv5.0/2, Mw(mB) 5.2/22, MwMwp4.8/2, Mwp5.2/2*

GCMT ***15*** *08:08:57.1±0.1,3.09S±0.01×148.39E±0.01, h13km, MW5.2/134, Moment Tensor Solution. s65, cy91; s134, c250; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.04±.01; Mθθ 0.56±.01; Mφφ -0.51±.01; Mrθ 0.22±.04; Mθφ 0.66±.01; Mrr=0.03±.03; Best double couple: Mo 0.87700×10^17 NP1: φs 110.00000°, δ 88.00000°, λ 14.00000°. NP2: φs 19.00000°, δ 76.00000°, λ 178.00000°. Principal axes: T 0.9070, Plg 11.0000°, Azm 335.0000°; N -0.0600, Plg 76.0000°, Azm 117.0000°; P -0.8470, Plg 8.0000°, Azm 244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 08:08:55.6±0.5, 3.28S±0.04×148.47E±0.05, h19km±1km, h20km: pP-P, n412, σ1.38/442, mb5.1/140, MS4.6/56, 12C-17D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.65**	**318**		Pn	08 09 17.0	-6.5
RABL	**Rabaul**	**3.80**	**104**		**Pn**	**08 09 52.9**	**-0.3**
RABL	**Rabaul**	**3.80**	**104**	P	**Pn**	**08 09 52.8**	**-0.3**
PMG	**Port Moresby**	**6.22**	**192**		**Pn**	**08 10 28.3**	**+1.8**
PMG	**Port Moresby**	**6.22**	**192**	Pn	**Pn**	**08 10 27.4**	**+0.9**
	2.6nm,0.3s,baz=343,slow=8.0,SNR=15						
PMG				Sn	**Sn**	**08 11 40.7**	**+3.6**
	2.9nm,0.3s,baz=163,slow=6.6,SNR=1.5						
PMG				LR	LR	08 12 33.9	
	comp=Z,2µm,19.1s,baz=22,slow=35						
	30nm,0.7s						
TABU	**Tabubil**	**7.49**	**254**	P	**Pn**	**08 10 45.3**	**+1.4**
GENI	**Genyem**	**8.32**	**274**	P	**Pn**	**08 10 56.6**	**+1.4**
GENI	**Genyem**	**8.32**	**274**	P	**Pn**	**08 10 56.0**	**+0.8**
	599nm,1.3s,11µm4µm						
SMPI	**Sarmi**	**9.83**	**277**	P	**Pn**	**08 11 16.2**	**+0.2**
	396nm,1.6s,7µm						
COEN	**Coen**	**11.83**	**206**	P	**Pn**	**08 11 45.5**	**+2.2**
	baz=12,SNR=7.7						
COEN	**Coen**	**11.83**	**206**	Pn	**Pn**	**08 11 45.6**	**+2.2**
COEN	**Coen**	**11.83**	**206**	P	**Pn**	**08 11 45.8**	**+2.4**
HNR	**Honiara**	**12.94**	**119**	LR	LR	08 16 60.0	
	comp=Z,32µm,18.5s,baz=289,slow=38						
KMPI	**Kaimana, Papua**	**14.74**	**268**	P	**Pn**	**08 12 23.8**	**+0.6**
	184nm,0.6s						
MTSU	**Mount Surprise**	**15.31**	**195**	P	**Pn**	**08 12 32.7**	**+1.9**
	baz=15,SNR=12						
MTSU	**Mount Surprise**	**15.31**	**195**	P	**Pn**	**08 12 32.5**	**+1.6**
TV1H	**Townsville Har**	**15.97**	**186**	P	**P**	**08 12 41.6**	**-1.1**
FAKI	**Fak Fak**	**16.20**	**271**		**Pn**	**08 12 39.2**	**-3.1**
FAKI	**Fak Fak**	**16.20**	**271**	P	**Pn**	**08 12 43.5**	**+1.2**
FAKI	**Fak Fak**	**16.20**	**271**	P	**Pn**	**08 12 39.3**	**-3.0**
	93nm,1.5s,2µm						
CTA	**Charters Tower**	**16.85**	**187**	P	**P**	**08 12 52.8**	**+0.3**
CTA	**Charters Tower**	**16.85**	**187**	Pn	**Pn**	**08 12 51.4**	**+0.8**
	0.4nm,0.3s,baz=8.2,slow=13,SNR=17						
CTA				Sn	**Sn**	**08 15 58.7**	**+1.4**
	0.2nm,0.3s,baz=348,slow=18,SNR=1.6						
CTA				LR	LR	08 19 21.0	
	comp=Z,2µm,20.5s,baz=5.0,slow=37						
	24nm,0.9s						
CTAO	**Charters Tower**	**16.85**	**187**		**P**	**08 12 52.2**	**-0.3**
CTAO	**Charters Tower**	**16.85**	**187**	P	**P**	**08 12 52.9**	**+0.4**
CTAO	**Charters Tower**	**16.85**	**187**	P	**P**	**08 12 52.2**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,124nm,1.4s						
GUMO	**Guam**	**17.14**	**348**	LR	LR	08 19 16.2	
	comp=Z,1µm,18.4s,baz=140,slow=36						
SWI	**Sorong**	**17.36**	**278**	P	**Pn**	**08 12 57.3**	**+0.3**
	comp=Z,76nm,0.9s,comp=Z,1µm						
SAUI	**Saumlaki**	**17.71**	**254**	P	**Pn**	**08 12 59.1**	**-2.2**
SAUI	**Saumlaki**	**17.71**	**254**	P	**P**	**08 13 02.7**	**+0.6**
SAUI	**Saumlaki**	**17.71**	**254**	P	**Pn**	**08 12 58.8**	**-2.5**
	comp=Z,325nm,1.6s						
KDU	**Kakadu**	**18.38**	**239**	P	**Pn**	**08 13 09.7**	**+0.2**
	baz=18,SNR=14						
KDU	**Kakadu**	**18.38**	**239**	P	**Pn**	**08 13 09.7**	**+0.2**
BNDI	**Bandanaira**	**18.56**	**266**	P	**Pn**	**08 13 12.2**

DAV Davao City (W) 25.05 294 LR LR 08 23 56.0
comp=Z,714nm,18.7s,baz=117,slow=36
GC1S Gold Coast 1 S 25.21 170 P P 08 14 22.5 +2.4
INKA Innaminka 25.42 196 P P 08 14 22.9 +0.8
DZM Mont Dzumac 25.56 138 P P 08 14 26.3 +2.7
DZM IAmb IAmb 08 14 45.1
comp=Z,50nm,1.3s
DZM Mont Dzumac 25.56 138 LR LR 08 23 02.2
comp=Z,3μm,20.5s,baz=316,slow=33
LUWI Luwuk 25.77 274 P P 08 14 24.7 -0.8
LUWI Luwuk 25.77 274 P P 08 14 24.7 -0.8
LUWI Luwuk 25.77 274 P P 08 14 26.5 +1.0
comp=Z,236nm,1.1s,comp=Z,3μm
AULRC Lightning Ridg 26.01 181 P P 08 14 27.6 +0.1
PINNC Pines Island, 26.61 138 P P 08 14 35.1 +2.2
MMRI Maumere 26.62 257 P P 08 14 33.7 +0.6
comp=Z,106nm,1.1s
FITZ Fitzroy Crossi 26.78 235 P P 08 14 34.5 -0.1
baz=27,SNR=19
FITZ Fitzroy Crossi 26.78 235 P P 08 14 34.2 -0.3
FITZ Fitzroy Crossi 26.78 235 P P 08 14 36.2 +1.7
ARMA Armidale 27.16 174 P P 08 14 39.6 +1.6
baz=27,SNR=9.0
ARMA Armidale 27.16 174 P P 08 14 38.5 +0.6
ARMA IAmb IAmb 08 14 40.2
comp=Z,42nm,1.1s
ARMA Armidale 27.16 174 P P 08 14 39.6 +1.6
EDFI Ende, Flores 27.17 257 P P 08 14 36.3 -1.9
comp=Z,33nm,1.0s
OOD Oodnadatta 27.26 205 P P 08 14 39.0 +0.2
AUPHS Peel High Scho 27.77 176 P P 08 14 44.7 +1.4
TOLI2 Tolitoli 28.02 279 P P 08 14 44.3 -1.4
TOLI2 IAmb IAmb 08 15 15.2
comp=Z,36nm,1.1s
H11S3 WAKE ISLAND Hy 28.11 39 T T 08 44 10.8
baz=222,slow=75,SNR=390
H11S2 WAKE ISLAND Hy 28.12 39 T T 08 44 12.6
baz=222,slow=75,SNR=413
H11S1 WAKE ISLAND Hy 28.13 39 T T 08 44 10.8
baz=222,slow=75,SNR=452
CMSA Cobar Meteorol 28.23 185 P P 08 14 47.0 -0.4
baz=28,SNR=7.5
CMSA Cobar Meteorol 28.23 185 P P 08 14 48.4 +1.0
BKSI Bulukumba 28.34 265 P P 08 14 49.5 +0.9
comp=Z,52nm,1.3s
BASI Baing, Sumba 28.52 255 P P 08 14 51.7 +1.5
comp=Z,367nm,1.4s,comp=Z,4μm
LCRK Leigh Creek 28.71 199 P P 08 14 51.7 0.0
MPSI Mapaga 28.78 277 P P 08 14 50.8 -1.7
comp=Z,11nm,0.6s,comp=Z,2μm
AUDCS Dubbo College 28.80 180 P P 08 14 52.7 +0.2
WRKA Warakurna 29.07 220 P P 08 14 54.2 -0.8
baz=29,SNR=12
WRKA Warakurna 29.07 220 P P 08 14 54.5 -0.5
H11N1 WAKE ISLAND Hy 29.15 38 T T 08 45 29.2
baz=221,slow=76,SNR=174
H11N3 WAKE ISLAND Hy 29.17 38 T T 08 45 25.8
baz=221,slow=76,SNR=292
H11N2 WAKE ISLAND Hy 29.17 38 T T 08 45 31.1
baz=221,slow=76,SNR=286
STKA Stephens Creek 29.17 192 P P 08 14 55.3 -0.5
baz=29,SNR=4.6
STKA Stephens Creek 29.17 192 P P 08 14 55.1 -0.7
STKA Stephens Creek 29.17 192 P P 08 14 55.5 -0.3
STKA Stephens Creek 29.17 192 P P 08 14 55.1 -0.7
STKA pmax pmax 08 15 01.9
comp=Z,15nm,1.9s
STKA Stephens Creek 29.17 192 P P 08 14 55.1 -0.7
comp=Z,5.8nm,0.6s,baz=355,slow=7.7,SNR=23
STKA LR LR 08 27 31.8
comp=Z,2μm,19.5s,baz=7.7,slow=38
comp=Z,5.8nm,0.6s
WBSI Waikabubak, Su 29.56 256 P P 08 14 59.8 +0.3
comp=Z,0.1nm,0.7s
MULG Mulgathing 30.12 205 P P 08 15 03.8 -0.4
JCJ Chichijima 30.80 349 LR LR 08 25 45.1
comp=Z,652nm,20.0s,baz=141,slow=33
YNG Young 30.86 180 P P 08 15 11.4 +0.6
baz=31,SNR=9.0
YNG Young 30.86 180 P P 08 15 11.5 +0.8
HTT Hallett 31.30 195 P P 08 15 14.8 +0.2
baz=31,SNR=3.7
HTT Hallett 31.30 195 P P 08 15 14.9 +0.3
WHYH Whyalla 31.31 198 P P 08 15 14.3 -0.3
BBOO Buckleboo 31.60 200 P P 08 15 17.0 -0.2
baz=32,SNR=5.0
BBOO Buckleboo 31.60 200 P P 08 15 16.7 -0.5
BBOO Buckleboo 31.60 200 P P 08 15 17.2 0.0
CAN Canberra 31.89 179 P P 08 15 20.2 +0.4
CAN IAmb IAmb 08 15 21.8
comp=Z,73nm,1.5s
CAN Canberra 31.89 179 P P 08 15 20.2 +0.4
CAN pmax pmax 08 15 01.5
comp=Z,73nm,1.5s
TGY Tagaytay City 32.30 303 LR LR 08 29 01.5
comp=Z,424nm,18.7s,baz=129,slow=37
MBWA Marble Bar 33.12 235 P P 08 15 29.3 -1.4
MBWA IAmb IAmb 08 16 18.1
comp=Z,34nm,1.3s
PSA00 Pilbara Seismi 33.23 234 P P 08 15 30.1 -1.6
FORT Forrest 33.46 213 P P 08 15 33.3 -0.2
baz=34,SNR=9.4
FORT Forrest 33.46 213 P P 08 15 33.0 -0.6
FORT IAmb IAmb 08 15 38.3
comp=Z,45nm,0.9s
FORT Forrest 33.46 213 P P 08 15 33.2 -0.4
KKM Kota Kinabalu 33.51 286 P P 08 15 33.9 -0.5
KKM Kota Kinabalu 33.51 286 P P 08 15 35.9 +1.5
ARPS Mount Arapiles 33.88 190 P P 08 15 37.2 0.0
baz=34,SNR=5.4
ARPS Mount Arapiles 33.88 190 P P 08 15 37.7 +0.5
TOO Toolangi 34.24 184 P P 08 15 41.3 +1.0
baz=34,SNR=6.2
TOO Toolangi 34.24 184 P P 08 15 40.5 +0.2
TOO IAmb IAmb 08 15 42.0
comp=Z,46nm,1.1s
TOO Toolangi 34.24 184 P P 08 15 41.3 +1.0
TOO Toolangi 34.24 184 P P 08 15 40.5 +0.2
TOO pmax pmax 08 15 01.5
comp=Z,46nm,1.1s
JOW Kunigami 35.73 328 LR LR 08 27 01.6
comp=Z,1μm,21.7s,baz=148,slow=30
SBUM Sibu 36.68 278 P P 08 16 00.5 -1.1
SBUM IAmb IAmb 08 16 54.6
comp=Z,16nm,0.5s
MEEK Meekatharra 36.84 228 P P 08 16 02.1 -0.7
baz=37,SNR=4.8
MEEK Meekatharra 36.84 228 P P 08 16 02.1 -0.7
YOJ Yonaguni jima 37.05 319 P P 08 16 04.4 -0.1
YOJ Yonaguni jima 37.05 319 P P 08 16 05.8 +1.2
YOJ Yonaguni jima 37.05 319 P P 08 16 04.4 -0.1
YOJ pmax pmax 08 15 59.9
comp=Z,171nm,0.9s
JHJ Hachijo jima 2 37.12 348 LR LR 08 29 17.2
comp=Z,636nm,21.0s,baz=108,slow=33
YULB Yu-li 37.47 316 P P 08 16 06.5 -1.7
YULB IAmb IAmb 08 16 10.3
comp=Z,64nm,0.9s
YULB Yu-li 37.47 316 P P 08 16 08.4 +0.2
KMBL Kambalda 37.52 219 P P 08 16 07.8 -0.6
baz=38,SNR=4.8
KMBL Kambalda 37.52 219 P P 08 16 07.9 -0.6
NACB Ninganchiao 37.79 318 P P 08 16 09.7 -1.1
NACB Ninganchiao 37.79 318 P P 08 16 10.2 -0.6
TPUB Ta-pu 37.88 316 P P 08 16 09.5 -2.1
TPUB IAmb IAmb 08 16 12.0
comp=Z,57nm,1.1s
TPUB Ta-pu 37.88 316 P P 08 16 11.0 -0.6
SSLB Suanglung 37.97 317 P P 08 16 11.1 -1.3
SSLB Suanglung 37.97 317 P P 08 16 12.5 +0.1
YHNB Yeheng 38.27 318 P P 08 16 13.6 -1.4
YHNB Yeheng 38.27 318 P P 08 16 14.6 -0.4
TATO Taipei 38.41 318 P P 08 16 15.2 -0.7
TATO Taipei 38.41 318 P P 08 16 16.3 +0.3
KSM Kuching 38.44 276 P P 08 16 14.5 -2.0
KSM IAmb IAmb 08 16 19.3
comp=Z,61nm,1.2s
KSM Kuching 38.44 276 P P 08 16 16.1 -0.4
JMN Monobe 39.30 341 P P 08 16 22.1 -1.4
JMN IAmb IAmb 08 16 24.9
comp=Z,74nm,1.1s
JMN Monobe 39.30 341 P P 08 16 23.7 +0.3
JNU Nakatsue 39.85 337 P P 08 16 25.8 -2.2
JNU Nakatsue 39.85 337 P P 08 16 27.0 -1.0
JNU Nakatsue 39.85 337 P P 08 16 26.2 -1.8
comp=Z,86nm,0.9s,baz=147,slow=5.2,SNR=33
JNU LR LR 08 31 49.9
comp=Z,284nm,18.6s,baz=152,slow=35
comp=Z,86nm,0.9s
INU Inuyama 39.90 345 P P 08 16 28.4 +0.1
MORW Morawa 40.08 227 P P 08 16 30.8 +0.8
KNMB Chin-men Tao 40.19 315 P P 08 16 30.1 -0.9
KNMB IAmb IAmb 08 16 32.3
comp=Z,52nm,0.9s
KLBR Kellerberrin 40.35 222 P P 08 16 31.0 -1.2
QZH Quanzhou 40.35 316 ⇓*i*P P 08 16 31.9 -0.4
QZH S S 08 22 37.8 -1.7
QZH pmax pmax 08 15 59.9
comp=Z,73nm,1.2s
QZH LR LR 08 16 00.1
comp=Z,670nm,18.2s
QZH LR LR 08 16 00.1
comp=Z,840nm,16.8s
QZH LR LR 08 16 00.1
comp=Z,690nm,19.4s
MJAR Matsushiro Arr 40.76 347 P P 08 16 33.4 -2.1
comp=Z,4.0nm,0.9s,baz=167,slow=6.9,SNR=6.6
MJAR LR LR 08 33 07.5
comp=Z,719nm,18.1s,baz=162,slow=36
comp=Z,4.0nm,0.9s
MAJO Matsushiro 40.76 347 P P 08 16 35.7 +0.2
MAJO Matsushiro 40.76 347 *d* *i*P P 08 16 34.3 -1.2
MAJO pmax pmax 08 16 00.1
comp=Z,22nm,1.1s
MJB9 Matsu-Tunnel 40.76 347 P P 08 16 33.9 -1.7
LEM Lembang 40.83 263 LR LR 08 36 19.6
comp=Z,164nm,18.3s,baz=74,slow=40
BBJI Bungbulang 40.84 262 P P 08 16 36.0 -0.6
RAO Raoul Island 41.05 133 LR LR 08 30 20.5
comp=Z,394nm,18.4s,baz=81,slow=31
NWAO Narrogin (SRO) 41.52 221 LR LR 08 34 59.0
comp=Z,2μm,18.6s,baz=39,slow=38
TOZ Tahuroa Road 42.29 148 P P 08 16 48.5 +0.5
DLV T Lat 42.52 292 P P 08 16 50.5 0.0
DLV IAmb IAmb 08 16 53.6
comp=Z,70nm,1.3s
DLV T Lat 42.52 292 P P 08 16 52.4 +1.9
SSE Sheshan 42.95 325 P P 08 16 53.3 -0.1
SSE S S 08 23 18.4 +0.7
SSE pmax pmax 08 16 00.1
comp=Z,34nm,1.6s
SSE pmax pmax 08 16 00.1
comp=Z,250nm,3.6s
SSE LR LR 08 16 00.1
comp=Z,400nm,21.3s
SSE LR LR 08 16 00.1
comp=Z,490nm,21.4s
XMI Christmas Isla 43.03 258 P P 08 16 55.3 +0.9
XMIS Christmas Isla 43.07 258 P P 08 16 56.5 +1.8
URZ Urewera 43.55 147 LR LR 08 32 40.8
comp=Z,1μm,21.4s,baz=6.5,slow=33
RTZ Ruatahuna 43.73 147 P P 08 17 00.2 +0.4
RTZ IAmb IAmb 08 17 02.4
comp=Z,50nm,1.5s
QIZ Qiongzhong 43.99 302 P P 08 17 00.8 -1.3
QIZ pP pP 08 17 03.5 -4.2
QIZ S S 08 23 34.3 +0.9
QIZ pmax pmax 08 16 00.1
comp=Z,34nm,0.9s
QIZ LR LR 08 16 00.1
comp=Z,390nm,16.8s
QIZ LR LR 08 16 00.1
comp=Z,470nm,18.5s
QIZ LR LR 08 16 00.1
comp=Z,910nm,20.2s
QIZ Qiongzhong 43.99 302 P P 08 17 03.1 +1.0
TJN Taejon 44.10 335 ⇑*e*P P 08 17 02.6 0.0
KSRS Korea Array 44.80 337 P P 08 17 07.3 -0.9
comp=Z,6.8nm,1.0s,baz=152,slow=9.5,SNR=18
KSRS LR LR 08 34 53.4
comp=Z,472nm,19.9s,baz=150,slow=35
comp=Z,6.8nm,1.0s
KSAR Wonju Array Be 44.80 337 P P 08 17 06.8 -1.4
KSAR Wonju Array Be 44.80 337 P P 08 17 06.8 -1.4
RPZ Rata Peaks 44.97 157 LR LR 08 34 58.7
comp=Z,884nm,18.1s,baz=328,slow=35
NJ2 Nanjing 45.01 324 *e*P P 08 17 10.6 +0.7
NJ2 pP pP 08 17 15.5 -0.1
NJ2 PcP PcP 08 18 51.6 +0.7
NJ2 S S 08 23 48.5 +0.8
NJ2 sS sS 08 23 55.8 -1.1
NJ2 pmax pmax 08 16 00.1
comp=Z,12nm,0.7s
NJ2 LR LR 08 16 00.1
comp=Z,840nm,21.8s
NJ2 LR LR 08 16 00.1
comp=Z,950nm,21.3s
NJ2 LR LR 08 16 00.1
comp=Z,1μm,22.9s
INCN Inchon 45.35 335 P P 08 17 11.9 -0.7
INCN Inchon 45.35 335 P P 08 17 11.9 -0.7
INCN pmax pmax 08 16 00.1
comp=Z,148nm,1.6s
UBPT Khong Chiam 46.38 295 P P 08 17 22.4 +1.3
WHN Wuhan 46.81 318 ⇑P P 08 17 25.1 +0.8
WHN sP sP 08 17 33.3 +1.3
WHN PP PP 08 19 15.0 +0.4
WHN S S 08 24 14.9 +1.1
WHN pmax pmax 08 16 00.1
comp=Z,150nm,1.3s
WHN LR LR 08 16 00.1
comp=Z,1μm,13.9s
WHN LR LR 08 16 00.1
comp=Z,3μm,18.6s
WHN LR LR 08 16 00.1
comp=Z,3μm,19.8s
ASAJ Asahikawa 47.48 354 LR LR 08 35 58.3
comp=Z,587nm,21.9s,baz=188,slow=34
BKNI Bangkinang 47.54 273 P P 08 17 31.4 +1.2
TIA Tai'an 48.99 326 ⇑P P 08 17 40.9 -0.2
TIA S S 08 24 32.4 -12
TIA pmax pmax 08 16 00.1
comp=Z,9.0nm,1.2s
TIA pmax pmax 08 16 00.1
comp=Z,110nm,4.3s
TIA LR LR 08 16 00.1
comp=Z,310nm,16.5s
TIA LR LR 08 16 00.1
comp=Z,280nm,18.0s
TIA LR LR 08 16 00.1
comp=Z,590nm,19.4s
NONG Nongkai 49.44 297 P P 08 17 45.9 +1.1
USRK Ussuriysk Ar. 49.52 344 P P 08 17 44.4 -0.6
USRK Ussuriysk Ar. 49.52 344 P P 08 17 44.4 -0.6
USRK Ussuriysk Ar. 49.52 344 P P 08 17 44.1 -0.8
comp=Z,8.4nm,0.9s,baz=156,slow=8.6,SNR=12
USRK LR LR 08 36 23.6
comp=Z,578nm,20.9s,baz=148,slow=33
comp=Z,8.4nm,0.9s
USA0B Ussuriysk Arra 49.52 344 P P 08 17 43.8 -1.2
USA0B IAmb IAmb 08 17 46.3
comp=Z,23nm,1.1s
USA0B Ussuriysk Arra 49.52 344 P P 08 17 43.8 -1.2
USA0B pmax pmax 08 16 00.1
comp=Z,23nm,1.2s
PSI Prapat 49.89 276 P P 08 17 49.8 +1.3
comp=Z,13nm,1.6s
NAYO Nakonayok 49.89 292 P P 08 17 49.9 +1.6
ENH Enshi 49.99 315 P P 08 17 48.4 -0.4
SLVN Son La 50.01 301 P P 08 17 48.9 -0.3
SLVN IAmb IAmb 08 17 53.6
comp=Z,40nm,1.1s
GYA Guiyang 50.06 309 ⇑*i*P P 08 17 51.0 +1.4
GYA S S 08 25 03.5 +3.4
GYA pmax pmax 08 16 00.1
comp=Z,21nm,1.7s
GYA pmax pmax 08 16 00.1
comp=Z,300nm,4.4s
GYA LR LR 08 16 00.1
comp=Z,280nm,15.7s
GYA LR LR 08 16 00.1
comp=Z,340nm,18.0s
GYA LR LR 08 16 00.1
comp=Z,360nm,18.2s
SRIT Nakonsritamara 50.13 284 P P 08 17 48.8 -1.3
SRIT IAmb IAmb 08 17 52.6
comp=Z,55nm,1.6s
SRIT Nakonsritamara 50.13 284 P P 08 17 52.3 +2.2
SURA Surathani 50.22 285 P P 08 17 53.2 +2.4
comp=Z,12nm,1.8s
YSS Yuzh-Sakhalins 50.27 355 P P 08 17 49.4 -1.2
YSS IAmb IAmb 08 17 51.4
comp=Z,49nm,1.4s
YSS Yuzh-Sakhalins 50.27 355 ⇑*e*P P 08 17 50.4 -0.2
YSS *e*S S 08 25 02.0 -0.1
YSS pmax pmax 08 16 00.1
comp=Z,20nm,0.9s
YSS pmax pmax 08 16 00.1
comp=Z,100nm,5.8s
SNY Shenyang 50.27 336 ⇓P P 08 17 49.8 -0.9
SNY S S 08 25 05.4 +3.1
SNY pmax pmax 08 16 00.1
comp=Z,12nm,2.1s
SNY pmax pmax 08 16 00.1
comp=Z,190nm,4.9s
SNY LR LR 08 16 00.1
comp=Z,310nm,18.8s
SNY LR LR 08 16 00.1
comp=Z,190nm,17.3s
SNY LR LR 08 16 00.1
comp=Z,550nm,19.9s
MDJ Mudanjiang 50.59 343 P P 08 17 49.5 -3.5
MDJ PcS PcS 08 23 01.3 -6.5
MDJ S S 08 25 10.3 +3.7
MDJ pmax pmax 08 16 00.1
comp=Z,11nm,1.7s
MDJ LR LR 08 16 00.1
comp=Z,620nm,17.2s
MDJ LR LR 08 16 00.1
comp=Z,610nm,17.4s
MDJ LR LR 08 16 00.1
comp=Z,550nm,21.9s
MDJ Mudanjiang 50.59 343 P P 08 17 54.1 +1.1
LYN LuoYang 50.61 321 ⇑*i*P P 08 17 53.3 -0.1
LYN PP PP 08 19 48.1 -1.4
LYN S S 08 25 11.0 +3.8
LYN sS sS 08 25 15.6 -0.9
LYN pmax pmax 08 16 00.1
comp=Z,27nm,1.7s
LYN LR LR 08 16 00.1
comp=Z,1μm,19.3s
LYN LR LR 08 16 00.1
comp=Z,780nm,21.9s
LYN LR LR 08 16 00.1
comp=Z,2μm,23.5s
GSI Gunungsitoli 51.08 274 P P 08 17 55.9 -1.4
GSI Gunungsitoli 51.08 274 P P 08 17 58.2 +0.9
HNS HongShan 51.20 325 ⇑P P 08 17 57.9 +0.2
HNS S S 08 25 14.3 -0.9
HNS pmax pmax 08 16 00.1
comp=Z,33nm,1.7s
HNS LR LR 08 16 00.1
comp=Z,740nm,20.3s
HNS LR LR 08 16 00.1
comp=Z,490nm,19.6s
HNS LR LR 08 16 00.1
comp=Z,1μm,20.0s
CN2 Changchun 51.23 339 *e*P P 08 17 57.3 -0.6
CN2 *es*P pwP 08 18 06.1 +0.4
CN2 *e*S S 08 25 14.4 -1.2
CN2 *es*S sS 08 25 24.5 -0.4
CN2 pmax pmax 08 16 00.1
comp=Z,10.0nm,1.6s
CN2 LR LR 08 16 00.1
comp=Z,270nm,10.0s
CN2 LR LR 08 16 00.1
comp=Z,180nm,10.0s
SRDT SRDT 51.95 291 P P 08 18 06.2 +2.4
BNX BinXian 52.27 341 ⇓P P 08 18 04.6 -1.0
BNX pP pP 08 18 09.6 -1.8
BNX S S 08 25 31.3 +1.5
BNX sS pS 08 25 36.8 +0.2
BNX pmax pmax 08 16 00.1
comp=Z,31nm,1.6s
BNX pmax pmax 08 16 00.1
comp=Z,120nm,5.0s
BNX LR LR 08 16 00.1
comp=Z,280nm,13.2s
BNX LR LR 08 16 00.1
comp=Z,340nm,12.5s
BNX LR LR 08 16 00.1
comp=Z,410nm,9.5s
BJT Baijiatuan 52.29 329 P P 08 18 06.2 +0.3
BJI Beijing 52.30 329 P P 08 18 05.8 -0.1
BJI sP pwP 08 18 15.6 +1.9
BJI pmax pmax 08 16 00.1
comp=Z,6.0nm,1.4s
BJI LR LR 08 16 00.1
comp=Z,250nm,17.5s
BJI LR LR 08 16 00.1
comp=Z,140nm,15.7s
BJI LR LR 08 16 00.1
comp=Z,330nm,19.1s
KMI Kunming 52.57 305 ⇑P P 08 18 09.9 +1.4
KMI S S 08 25 41.4 +6.3
KMI pmax pmax 08 16 00.1
comp=Z,20nm,1.5s
KMI LR LR 08 16 00.1
comp=Z,400nm,19.0s
KMI LR LR 08 16 00.1
comp=Z,240nm,19.2s
KMI LR LR 08 16 00.1
comp=Z,640nm,29.8s
XAN Xi'an 52.58 318 ⇓P P 08 18 07.3 -0.9
XAN sP sP 08 18 14.3 -1.8
XAN pmax pmax 08 16 00.1
comp=Z,51nm,1.6s
XAN LR LR 08 16 00.1
comp=Z,820nm,17.5s
XAN LR LR 08 16 00.1
comp=Z,680nm,16.1s
XAN LR LR 08 16 00.1
comp=Z,1μm,21.3s
CRAI Chiangrai 52.65 298 P P 08 18 08.5 -0.5
TIY Taiyuan 52.72 324 *e*P P 08 18 09.1 -0.1
TIY S S 08 25 33.4 -3.0
TIY pmax pmax 08 16 00.1
comp=Z,8.0nm,0.7s
TIY LR LR 08 16 00.1
comp=Z,530nm,17.7s
TIY LR LR 08 16 00.1
comp=Z,400nm,14.7s
TIY LR LR 08 16 00.1
comp=Z,650nm,25.3s
CM31 Chiang Mai Arr 53.33 296 P P 08 18 13.8 -0.2
CM31 IAmb IAmb 08 18 18.2
comp=Z,45nm,1.1s
CMAR Chiang Mai Arr 53.33 296 P P 08 18 13.1 -0.9
CMAR Chiang Mai Arr 53.33 296 *i* P P 08 18 14.6 +0.6
CMAR pmax pmax 08 16 00.1
comp=Z,18nm,1.0s
CMAR Chiang Mai Arr 53.33 296 P P 08 18 14.7 +0.7
comp=Z,17nm,1.0s,baz=116,slow=5.6,SNR=27
CMAR LR LR 08 41 11.8
comp=Z,162nm,18.8s,baz=125,slow=36
comp=Z,17nm,1.0s
RAR Rarotonga 53.34 114 LR LR 08 37 59.6
comp=Z,110nm,21.1s,baz=288,slow=33
CHTO Chiang Mai 53.44 296 P P 08 18 14.6 -0.2
CHTO IAmb IAmb 08 18 19.3
comp=Z,44nm,1.2s
CHTO Chiang Mai 53.44 296 P P 08 18 16.8 +2.0
CHTO Chiang Mai 53.44 296 P P 08 18 14.6 -0.2
CHTO pmax pmax 08 16 00.1
comp=Z,44nm,1.3s
PZH PanZhiHua 53.98 306 P P 08 18 19.3 +0.5
PZH PP PP 08 20 23.8 +3.5
PZH S S 08 25 54.6 +0.6
PZH pmax pmax 08 16 00.1
comp=Z,10.0nm,1.3s
PZH pmax pmax 08 16 00.1
comp=Z,180nm,5.1s
PZH LR LR 08 16 00.1
comp=Z,310nm,19.2s
PZH LR LR 08 16 00.1
comp=Z,320nm,22.4s
PZH LR LR 08 16 00.1
comp=Z,470nm,24.0s
TYV Tymovskoe 54.16 355 *e*P P 08 18 18.8 -0.6
TYV *e*S S 08 25 56.6 +1.3
TYV pmax pmax 08 16 00.1
comp=Z,12nm,1.4s
TYV pmax pmax 08 16 00.1
comp=Z,100nm,4.0s
TYV smax smax 08 16 00.1
comp=N,100nm,4.8s
TYV smax smax 08 16 00.1

comp=E,100nm,4.8s
KLR **Kulʲdur** **54.27 347**⇓ *i*P **P** **08 18 19.8 -0.5**
KLR pmax pmax
comp=Z,25nm,1.2s
KLR **Kulʲdur** **54.27 347** P **P** **08 18 19.9 -0.4**
comp=Z,9.8nm,0.9s,baz=166,slow=3.9,SNR=21
KLR LR LR 08 39 49.3
comp=Z,429nm,19.7s,baz=155,slow=34
comp=Z,9.8nm,0.9s
CD2 **Chengdu** **54.49 312** P **P** **08 18 22.1 -0.2**
CD2 pP pP 08 18 24.0 -4.1
CD2 S **S** **08 26 00.3 -0.3**
CD2 SS **SS** **08 29 42.9 -0.6**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,190nm,5.4s
CD2 LR LR
comp=Z,660nm,19.8s
CD2 LR LR
comp=Z,840nm,20.4s
CD2 LR LR
comp=Z,810nm,21.4s
XLT **XiLinHaoTe** **55.24 332** *e*P **P** **08 18 26.8 -0.7**
XLT pP pP 08 18 32.5 -0.8
XLT sP pwP 08 18 34.5 -0.8
XLT PcP **PcP** **08 19 24.6 -3.7**
XLT pmax pmax
comp=Z,22nm,1.2s
XLT pmax pmax
comp=Z,300nm,4.6s
XLT LR LR
comp=Z,60nm,19.6s
XLT LR LR
comp=Z,500nm,19.6s
XLT LR LR
comp=Z,840nm,25.5s
HHC **Hu-ho-hao-te** **55.35 326** *e*P **P** **08 18 27.0 -1.4**
HHC S **S** **08 26 14.8 +2.9**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,200nm,5.8s
HHC LR LR
comp=Z,650nm,17.6s
HHC LR LR
comp=Z,340nm,16.0s
HHC LR LR
comp=Z,930nm,17.6s
TNCH **TengChong** **56.02 303** ⇑P **P** **08 18 35.1 +1.5**
TNCH pP pP 08 18 37.8 -1.6
TNCH sP sP 08 18 39.3 -2.1
TNCH pmax pmax
comp=Z,28nm,1.8s
TNCH pmax pmax
comp=Z,170nm,4.5s
BTO **Baotou** **56.05 325** *e*P **P** **08 18 34.9 +1.4**
BTO pP **sP** **08 18 39.6 -1.7**
BTO sP **pwP** **08 18 42.0 +0.8**
BTO PP **PP** **08 20 41.5 +2.9**
BTO S **S** **08 26 24.3 +3.0**
BTO sS **sS** **08 26 31.8 +1.1**
BTO SS **SS** **08 30 09.5 +1.7**
BTO pmax pmax
comp=Z,32nm,1.8s
BTO pmax pmax
comp=Z,470nm,6.4s
BTO LR LR
comp=Z,1μm,22.6s
BTO LR LR
comp=Z,2μm,18.5s
BTO LR LR
comp=Z,2μm,24.9s
HEH **HeiHe** **56.32 344** *e*P **P** **08 18 34.3 -0.7**
HEH pmax pmax
comp=Z,29nm,1.5s
HEH pmax pmax
comp=Z,260nm,5.2s
PEA0B **Petropavlovsk-** **56.72** 7⇓ *e*P **P** **08 18 39.0 +1.2**
PETK **Petropavlovsk-** **56.72** 7 P **P** **08 18 37.2 -0.6**
comp=Z,4.6nm,0.7s,baz=150,slow=6.2,SNR=8.5
comp=Z,4.6nm,0.7s
PET **Petropavlovsk** **56.75** 7 *e*P **P** **08 18 41.9 +3.9**
PET *e*S **S** **08 26 34.6 +4.8**
PET MLR MLR
comp=Z,400nm,15.0s
PET MLR MLR
comp=Z,500nm,17.0s
MND **Mandalay** **57.00 299** P **P** **08 18 42.3 +1.9**
LZH **Lanzhou** **57.16 317** ⇓P **P** **08 18 41.9 +0.4**
LZH sP sP 08 18 50.3 +0.9
LZH PcP **PcP** **08 19 38.3 +2.2**
LZH pmax pmax
comp=Z,23nm,1.5s
LZH LR LR
comp=Z,360nm,9.3s
LZH LR LR
comp=Z,290nm,11.0s
LZH LR LR
comp=Z,490nm,10.7s
HIA **Hailar** **57.95 338** P **P** **08 18 47.6 +0.9**
ZEA **Zeya** **59.52 346** *e*P **P** **08 18 57.4 -0.1**
ZEA pmax pmax
comp=N,100nm,3.0s
ZEA pmax pmax
comp=Z,200nm,2.1s
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.4s
ZEA MLR MLR
comp=Z,200nm,15.0s
GTA **Gaotai** **61.64 319** *e*P **P** **08 19 12.5 +0.1**
GTA pmax pmax
comp=Z,17nm,1.5s
GTA LR LR
comp=Z,240nm,16.0s
GTA LR LR
comp=Z,310nm,16.4s
GTA LR LR
comp=Z,450nm,16.0s
SHL **Shillong** **61.82 301** P **P** **08 19 13.3 -0.6**
SHL **Shillong** **61.82 301** P **P** **08 19 13.3 -0.6**
SHL pmax pmax
comp=Z,45nm,1.3s
PPT **Papeete** **62.30 108** LR LR 08 41 43.8
comp=Z,108nm,20.4s,baz=241,slow=32
ULN **Ulaanbaatar** **62.47 330** P **P** **08 19 17.7 -0.1**
ULN IAmb IAmb 08 19 20.0
comp=Z,27nm,1.1s
ULN **Ulaanbaatar** **62.47 330** P **P** **08 19 17.7 -0.1**
ULN pmax pmax
comp=Z,27nm,1.1s
MA2 **Magadan** **62.69 1** P **P** **08 19 18.6 -0.3**
MA2 IAmb IAmb 08 19 20.1
comp=Z,34nm,1.4s
MA2 **Magadan** **62.69 1** P **P** **08 19 19.5 +0.7**
MA2 **Magadan** **62.69 1***d* *i*P **P** **08 19 18.4 -0.4**
MA2 pmax pmax
comp=Z,35nm,1.7s
MA2 **Magadan** **62.69 1** LR LR 08 48 48.3
comp=Z,213nm,18.1s,baz=152,slow=38
SONM **Songino Array** **62.78 329** P **P** **08 19 19.7 -0.2**
SONM IAmb IAmb 08 19 21.8
comp=Z,16nm,1.0s
SONM **Songino Array** **62.78 329** P **P** **08 19 19.7 -0.2**
SONM pmax pmax
comp=Z,16nm,1.0s
SONM **Songino Array** **62.78 329** P **P** **08 19 20.0 +0.1**
comp=Z,7.7nm,0.8s,baz=147,slow=6.6,SNR=43
SONM LR LR 08 46 50.7
comp=Z,585nm,19.5s,baz=138,slow=36
comp=Z,7.7nm,0.8s
GOMU **GeErMu** **63.56 313** P **P** **08 19 26.9 +1.3**
GOMU pP pP 08 19 30.1 -1.3
GOMU pmax pmax
comp=Z,9.0nm,1.0s
GOMU LR LR
comp=Z,390nm,19.9s
GOMU LR LR
comp=Z,530nm,20.2s
GOMU LR LR
comp=Z,1μm,19.9s
ZAK **Zakamensk** **65.99 330** *e*P **P** **08 19 40.3 -0.5**
ZAK pmax pmax
comp=Z,33nm,1.5s
SEY **Seymchan** **66.10** 2⇓ *i*P **P** **08 19 40.9 -0.2**
SEY pmax pmax
comp=Z,33nm,2.0s
SEY **Seymchan** **66.10** 2 P **P** **08 19 40.6 -0.5**
comp=Z,5.6nm,1.0s,baz=169,slow=4.9,SNR=15
comp=Z,5.6nm,1.0s
YAK **Yakutsk** **66.70 350** P **P** **08 19 44.5 -0.5**
YAK **Yakutsk** **66.70 350** *e*P **P** **08 19 44.4 -0.5**
YAK *e* 08 20 12.5
YAK *e*PPP PPP 08 23 46.9
YAK *e*S **S** **08 28 34.2 -1.3**
YAK *e**SS **sS** **08 28 51.4 +6.2**
YAK pmax pmax
comp=Z,38nm,1.5s
YAK pmax pmax
comp=N,26nm,1.7s
YAK pmax pmax
comp=E,7.0nm,1.7s
YAK smax smax
comp=E,148nm,4.3s
YAK smax smax
comp=N,43nm,3.4s
YAK MLR MLR
comp=Z,305nm,22.0s
YAK MLR MLR
comp=N,140nm,19.0s
YAK MLR MLR
comp=E,159nm,19.0s
YAK **Yakutsk** **66.70 350** P **P** **08 19 44.7 -0.2**
comp=E,7.8nm,0.5s,baz=165,slow=2.6,SNR=12
YAK LR LR 08 49 42.6
comp=E,101nm,20.5s,baz=134,slow=37
comp=E,7.8nm,0.5s
BOD **Bodaibo** **66.89 341** *e*P **P** **08 19 44.9 -1.3**
BOD pmax pmax
comp=Z,39nm,1.7s
MOY **Mondy** **67.92 330** *e*P **P** **08 19 53.2 +0.1**
MOY pmax pmax
comp=Z,89nm,1.9s
WMQ **Urumqi** **71.72 318** *e*P **P** **08 20 17.6 +1.0**
WMQ PcP **PcP** **08 20 32.8 -2.8**
WMQ pmax pmax
comp=Z,39nm,1.7s
WMQ LR LR
comp=Z,330nm,18.5s
HYB **Hyderabad** **71.92 289** *e*P **P** **08 20 17.4 -0.8**
HYB *e*S **S** **08 29 38.6 -0.3**
BILL **Bilibino** **72.25 7** P **P** **08 20 18.9 -0.3**
BILL **Bilibino** **72.25 7** *i*P **P** **08 20 19.1 0.0**
BILL pmax pmax
comp=Z,23nm,2.5s
DGZ **Jazzator, Alta** **74.29 324**⇓ *e*P **P** **08 20 31.6 -0.2**
DGZ pmax pmax
comp=Z,26nm,1.2s
M14K **Bethel** **74.43 23** P **P** **08 20 32.2 +0.1**
M14K IAmb IAmb 08 20 36.1
comp=Z,17nm,0.9s
L14K **Kuka Creek** **74.52 22** P **P** **08 20 33.4 +0.8**
L14K IAmb IAmb 08 20 36.7
comp=Z,16nm,0.9s
VNDA **Vanda** **74.53 177** P **P** **08 20 32.2 -0.3**
comp=Z,5.6nm,0.8s,baz=337,slow=6.8,SNR=5.1
comp=Z,5.6nm,0.8s
ZSN **Zaisan** **74.96 321** *e*P **P** **08 20 36.0 +0.4**
baz=321
ZSN **Zaisan** **74.96 321** *e*P **P** **08 20 35.9 +0.4**
ANM **Nome** **75.68 19** P **P** **08 20 39.1 -0.2**
ANM **Nome** **75.68 19** P **P** **08 20 39.1 -0.2**
ANM pmax pmax
comp=Z,12nm,1.2s
DGAR **Diego Garcia** **75.73 263**⇓ *e*P **P** **08 20 40.3 -0.3**
DGAR pmax pmax
comp=Z,60nm,1.3s
TIXI **Tiksi** **75.88 354** P **P** **08 20 40.0 -0.3**
TIXI **Tiksi** **75.88 354**⇑ *i*P **P** **08 20 41.5 +1.2**
TIXI pmax pmax
comp=Z,9.0nm,1.7s
MK31 **Makanchi Array** **76.36 320** P **P** **08 20 42.9 -0.7**
MK31 IAmb IAmb 08 20 45.4
comp=Z,20nm,1.3s
MK31 **Makanchi Array** **76.36 320** P **P** **08 20 42.9 -0.7**
MK31 pmax pmax
comp=Z,20nm,1.3s
MKAR **Makanchi Array** **76.36 320** P **P** **08 20 42.2 -1.4**
MKAR **Makanchi Array** **76.36 320** *i*P **P** **08 20 43.2 -0.4**
MKAR pmax pmax
comp=Z,7.0nm,1.0s
MKAR **Makanchi Array** **76.36 320** P **P** **08 20 42.4 -1.2**
comp=Z,6.7nm,1.0s,baz=101,slow=6.3,SNR=48
MKAR PP **PP** **08 23 32.7 -2.7**
comp=Z,1.9nm,0.9s,baz=113,slow=9.3,SNR=4.4
MKAR LR LR 08 53 12.5
comp=Z,416nm,20.4s,baz=106,slow=35
comp=Z,6.7nm,1.0s
MAKZ **Makanchi** **76.57 320** P **P** **08 20 44.3 -0.5**
MAKZ IAmb IAmb 08 20 48.9
comp=Z,37nm,1.4s
MAKZ **Makanchi** **76.57 320** P **P** **08 20 44.3 -0.5**
MAKZ pmax pmax
comp=Z,37nm,1.4s
K17K **Iditarod** **77.00 22** P **P** **08 20 46.5 -0.3**
K17K IAmb IAmb 08 20 48.7
comp=Z,18nm,1.2s
SHLS **Shalkode** **77.11 316** *e*P **P** **08 20 47.2 -0.9**
comp=Z,32nm,1.4s,baz=316
SHLS **Shalkode** **77.11 316** *e*P **P** **08 20 47.1 -0.9**
SHLS pmax pmax
comp=Z,32nm,1.4s
UZB **Uzynbulak** **77.42 315** *e*P **P** **08 20 50.2 +0.4**
comp=Z,38nm,1.9s,baz=315
UZB **Uzynbulak** **77.42 315** *e*P **P** **08 20 50.2 +0.4**
UZB pmax pmax
comp=Z,38nm,1.9s
ZAA0 **Zalesovo Array** **77.52 327** P **P** **08 20 48.7 -1.2**
ZALV **Zalesovo Beam** **77.52 327** P **P** **08 20 48.7 -1.2**
ZALV **Zalesovo Beam** **77.52 327** *i*P **P** **08 20 50.0 +0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZALV **Zalesovo Beam** **77.52 327** P **P** **08 20 48.9 -1.0**
comp=Z,4.7nm,0.8s,baz=107,slow=5.0,SNR=18
ZALV PP **PP** **08 23 45.0 +0.1**
comp=Z,0.7nm,0.7s,baz=105,slow=9.4,SNR=2.4
comp=Z,4.7nm,0.8s
PRZ **Przheval'sk** **77.67 315** P **P** **08 20 52.0 +0.7**
PRZ **Przheval'sk** **77.67 315** P **P** **08 20 52.0 +0.7**
PRZ pmax pmax
comp=Z,69nm,1.2s
KPKS **Kokpek** **77.75 316** *e*P **P** **08 20 52.4 +0.8**
comp=Z,36nm,1.8s,baz=316
KPKS **Kokpek** **77.75 316** *e*P **P** **08 20 52.4 +0.8**
KPKS pmax pmax
comp=Z,36nm,1.8s
SATY **Saty** **77.83 315** *e*P **P** **08 20 52.9 +0.8**
baz=315
SATY **Saty** **77.83 315** *e*P **P** **08 20 52.8 +0.7**
ZHN **Zhinishke** **77.84 315** *e*P **P** **08 20 52.7 +0.5**
baz=315
ZHN **Zhinishke** **77.84 315** *e*P **P** **08 20 52.6 +0.5**
TTA **Tatalina** **77.99 23** P **P** **08 20 52.2 -0.3**
TTA **Tatalina** **77.99 23** P **P** **08 20 52.2 -0.3**
TTA pmax pmax
comp=Z,6.0nm,0.9s
J18K **Innoko River** **78.02 22** P **P** **08 20 52.3 -0.2**
L19K **White Mountain** **78.05 24** P **P** **08 20 53.0 +0.3**
L19K IAmb IAmb 08 20 57.0
comp=Z,15nm,0.9s
CNPM **China Poot** **78.27 27** P **P** **08 20 53.7 -0.3**
TDK **Taldyqorghan** **78.38 317** *e*P **P** **08 20 55.8 +0.8**
baz=317
TDK **Taldyqorghan** **78.38 317** *e*P **P** **08 20 55.7 +0.8**
KSH **Kashi** **78.68 311** P **P** **08 20 59.9 +3.0**
KSH pmax pmax
comp=Z,14nm,1.3s
MDOK **Medeo** **78.81 315** *e*P **P** **08 20 58.2 +0.6**
baz=315
MDOK **Medeo** **78.81 315** *e*P **P** **08 20 58.1 +0.5**
NRN **Naryn** **79.12 313** P **P** **08 20 59.3 -0.2**
NRN **Naryn** **79.12 313** P **P** **08 20 59.3 -0.2**
NRN pmax pmax
comp=Z,9.0nm,1.0s
KUU **Kurty** **79.50 316** *e*P **P** **08 21 01.4 +0.2**
baz=316
KUU **Kurty** **79.50 316** *e*P **P** **08 21 01.3 +0.2**
NIL **Nilore** **79.56 305** P **P** **08 21 00.9 -0.8**
NIL **Nilore** **79.56 305** P **P** **08 21 00.9 -0.8**
NIL pmax pmax
comp=Z,67nm,1.5s
CAST **Castle Rocks** **79.77 23** P **P** **08 21 01.9 -0.3**
CAST IAmb IAmb 08 21 27.7
comp=Z,34nm,1.5s
TKM2 **Tokmak 2** **79.78 314** P **P** **08 21 04.7 +1.7**
SNR=7.4
KURK **Kurchatov** **79.93 323** P **P** **08 21 02.9 -0.3**
KURK IAmb IAmb 08 21 06.4
comp=Z,56nm,1.3s
KURK **Kurchatov** **79.93 323***d* *i*P **P** **08 21 03.0 -0.3**
KURK pmax pmax
comp=Z,71nm,1.7s
KURBB **Kurchatov Arra** **79.96 323** P **P** **08 21 02.6 -0.8**
comp=Z,6.9nm,1.0s,baz=106,slow=5.1,SNR=44
comp=Z,6.9nm,1.0s
UCH **Uchtor** **80.39 314** P **P** **08 21 09.0 +2.4**
SNR=12
CHMS **Chumysh** **80.40 314** P **P** **08 21 07.6 +1.6**
SNR=7.5
D19K **Kuna River** **80.41 17** P **P** **08 21 05.5 0.0**
IMAR **Indian Mountai** **80.44 21** P **P** **08 21 04.8 -0.9**
AAK **Ala-Archa** **80.50 314** P **P** **08 21 08.3 +1.6**
SNR=6.3
AAK **Ala-Archa** **80.50 314***c* *i*P **P** **08 21 08.0 +1.2**
AAK pmax pmax
comp=Z,17nm,1.3s
AAK **Ala-Archa** **80.50 314** P **P** **08 21 07.5 +0.7**
comp=Z,6.7nm,0.9s,baz=117,slow=3.5,SNR=15
comp=Z,6.7nm,0.9s
USP **Ospenovka** **80.64 315** P **P** **08 21 09.0 +1.7**
SNR=12
EKS2 **Erkin-Say** **81.02 314** P **P** **08 21 10.8 +1.3**
SNR=9.7
RND **Reindeer** **81.05 24** P **P** **08 21 08.7 -0.5**
RND **Reindeer** **81.05 24** P **P** **08 21 08.7 -0.5**
RND pmax pmax
comp=Z,17nm,1.1s
BTLS **Baital** **81.37 316** *e*P **P** **08 21 11.7 +0.5**
baz=316
BTLS **Baital** **81.37 316** *e*P **P** **08 21 11.6 +0.5**
DHY **Denali Highway** **81.52 24** P **P** **08 21 11.0 -0.7**
CCB **Clear Creek Bu** **82.01 23** P **P** **08 21 14.1 +0.1**
D22K **Ayikyak River** **82.28 18** P **P** **08 21 15.3 -0.2**
D22K IAmb IAmb 08 21 36.3
comp=Z,50nm,1.9s
ILAR **Eielson Array** **82.42 23** P **P** **08 21 14.6 -1.6**
ILAR **Eielson Array** **82.42 23** P **P** **08 21 14.6 -1.6**
ILAR **Eielson Array** **82.42 23** P **P** **08 21 14.3 -1.9**
comp=Z,3.4nm,0.8s,baz=247,slow=4.0,SNR=22
comp=Z,3.4nm,0.8s
BTK **Batken** **82.68 311** P **P** **08 21 17.7 -0.5**
BTK IAmb IAmb 08 21 22.0
comp=Z,51nm,1.6s
BTK **Batken** **82.68 311** P **P** **08 21 17.7 -0.5**
BTK pmax pmax
comp=Z,51nm,1.7s
DZA **Taraz** **82.83 314** *e*P **P** **08 21 19.6 +0.6**
baz=314
DZA **Taraz** **82.83 314** *e*P **P** **08 21 19.5 +0.6**
NRIK **Noril'sk** **83.16 342** P **P** **08 21 20.1 +0.1**
NRIK IAmb IAmb 08 21 21.8
comp=Z,24nm,1.0s
NRIK **Noril'sk** **83.16 342** P **P** **08 21 20.1 +0.1**
NRIK pmax pmax
comp=Z,25nm,1.0s
NRIK **Noril'sk** **83.16 342** P **P** **08 21 19.7 -0.2**
comp=Z,12nm,0.8s,baz=126,slow=6.0,SNR=22
comp=Z,12nm,0.8s
L26K **Log Cabin Wild** **83.19 25** P **P** **08 21 20.2 -0.1**
L26K IAmb IAmb 08 22 13.6
comp=Z,35nm,1.9s
BARN **Barnard Glacie** **83.25 27** P **P** **08 21 21.1 +0.2**
BARN IAmb IAmb 08 21 25.4
comp=Z,12nm,0.9s
SCRK **Sand Creek** **83.27 24** P **P** **08 21 21.1 +0.3**
BRZS **Berezniki** **83.41 321** *e*P **P** **08 21 22.3 +0.6**
comp=Z,41nm,1.8s,baz=321
BRZS **Berezniki** **83.41 321** *e*P **P** **08 21 22.3 +0.6**
BRZS pmax pmax
comp=Z,41nm,1.8s
KK31 **Karatay Array** **83.46 314** P **P** **08 21 22.4 +0.3**
KK31 IAmb IAmb 08 21 26.0
comp=Z,29nm,1.3s
KK31 **Karatay Array** **83.46 314** P **P** **08 21 22.4 +0.3**
KK31 pmax pmax
comp=Z,29nm,1.3s
KKAR **Karatay Array** **83.46 314** P **P** **08 21 22.0 -0.1**
KKAR **Karatay Array** **83.46 314** P **P** **08 21 22.0 -0.1**
IUG **Iuzhnay** **83.64 313** *e*P **P** **08 21 24.0 +0.8**
comp=Z,37nm,2.2s,baz=313
IUG **Iuzhnay** **83.64 313** *e*P **P** **08 21 23.9 +0.8**
IUG pmax pmax
comp=Z,37nm,2.2s
D24K **Happy Valley** **83.64 19** P **P** **08 21 22.4 0.0**
BRLS **Borolday** **83.93 314** *e*P **P** **08 21 25.0 +0.4**
baz=314
BRLS **Borolday** **83.93 314** *e*P **P** **08 21 24.9 +0.4**
CHM **Chimkent** **83.98 313** *e*P **P** **08 21 26.0 +1.1**
baz=313
CHM **Chimkent** **83.98 313** *e*P **P** **08 21 25.9 +1.1**
BMAR **Burnt Mountain** **84.35 21** P **P** **08 21 26.2 0.0**
HYT **Haines Junctio** **85.12 28** P **P** **08 21 30.6 +0.4**
HYT IAmb IAmb 08 21 34.5
comp=Z,27nm,1.5s
BVAR **Borovoye Array** **85.45 324** P **P** **08 21 30.8 -1.2**
comp=Z,2.2nm,0.6s,baz=104,slow=6.3,SNR=17
BVAR PP **PP** **08 24 47.3 -3.1**
comp=Z,0.3nm,0.4s,baz=132,slow=8.7,SNR=2.2
comp=Z,2.2nm,0.6s
BRVK **Borovoye** **85.52 324** P **P** **08 21 32.2 -0.1**
BRVK IAmb IAmb 08 21 34.8
comp=Z,30nm,1.4s
BRVK **Borovoye** **85.52 324***c* *i*P **P** **08 21 32.6 +0.3**
BRVK pmax pmax
comp=Z,27nm,1.7s
F28M **Old Crow** **86.11 21** P **P** **08 21 34.1 -0.9**
QSPA **South Pole Qui** **86.67 180** P **P** **08 21 36.8 -1.1**
comp=Z,7.8nm,1.0s,baz=341,slow=3.9,SNR=7.5
comp=Z,7.8nm,1.0s
FARO **Faro, Yukon** **87.39 27** P **P** **08 21 41.1 -0.2**
FARO IAmb IAmb 08 21 52.6
comp=Z,34nm,1.8s
G31M **Satah River** **88.02 23** P **P** **08 21 43.5 -0.6**
G31M IAmb IAmb 08 21 47.5
comp=Z,13nm,0.9s
ABKAR **Akbulak array** **91.50 319** P **P** **08 21 59.5 -1.4**
A36M **Sachs Harbour** **91.94 18** P **P** **08 22 01.8 -0.6**
A36M IAmb IAmb 08 22 05.7
comp=Z,6.9nm,0.8s
GEYT **Alibeck** **92.27 308** P **P** **08 22 05.8 +1.0**
comp=Z,1.2nm,0.5s,baz=235,slow=25,SNR=4.8
comp=Z,1.2nm,0.5s
ARU **Arti** **92.66 326***d* *i*P **P** **08 22 06.1 +0.1**
ARU 08 25 42.9
ARU S **SKSac** **08 32 39.2 +0.6**
ARU pmax pmax
comp=Z,14nm,1.4s
ARU MLR MLR
comp=Z,1μm,23.0s
ARU **Arti** **92.66 326** P **P** **08 22 04.6 -1.4**
comp=Z,7.7nm,0.2s,baz=110,slow=5.0,SNR=4.5
AKTO **Aktyubinsk** **92.79 320** P **P** **08 22 05.2 -1.6**
comp=Z,2.3nm,0.8s,baz=134,slow=3.3,SNR=4.1
comp=Z,2.3nm,0.8s
NVAR **Mina Array Bea** **94.55 52** P **P** **08 22 15.4 -0.1**
comp=Z,0.6nm,0.6s,baz=252,slow=4.5,SNR=5.2
comp=Z,0.6nm,0.6s
YKA **Yellowknife Ar** **96.10 28** *i*P **P** **08 22 21.5 -0.2**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA **Yellowknife Ar** **96.10 28** P **P** **08 22 20.8 -0.9**
comp=Z,3.1nm,0.7s,baz=275,slow=4.6,SNR=34
YKA PKKPbc **PKKPbc** **08 39 07.8 -3.8**
comp=Z,0.7nm,1.1s,baz=70,slow=3.6,SNR=3.9
comp=Z,3.1nm,0.7s
ELIB **Princess Elisa** **97.19 195** *d*P **P** **08 22 25.9 -0.8**
BELG **Belogornoye** **99.21 322***de*P **Pdif** **08 22 35.3 -0.6**
BELG pmax pmax
comp=Z,3.0nm,1.3s
MAK **Makhachkala** **100.25 313** *e*P **Pdif** **08 22 34.8 -6.0**
MAK *e* 08 33 10.7
MAK *e*SS SS 08 41 04.8 -5.4
MAK pmax pmax
comp=Z,155nm,1.0s
APA **Apatity** **102.40 339**⇓ *i*P **Pdif** **08 22 48.5 -1.3**
APA pmax pmax

comp=Z,6.0nm,1.0s
CLL Collm 119.40 330 *e*PKPdf **PKPdf 08 27 43.0 -0.8**
PLCA Paso Flores 123.54 145 PKP **PKiKP 08 27 52.5 0.0**
comp=Z,4.0nm,1.1s,baz=232,slow=4.4,SNR=8.9
ESDC Sonseca Array 135.99 329 PP **PP 08 30 54.5 +0.4**
comp=Z,0.8nm,0.8s,baz=20,slow=4.7,SNR=5.1
CPUP Villa Florida 141.41 141 PKhKP PKPpre 08 28 19.4
comp=Z,1.1nm,0.7s,baz=140,slow=4.2,SNR=2.2
TORD Torodi Ar. Bea 145.73 289 PKPbc **PKPdf 08 28 33.2 -0.7**
comp=Z,19nm,0.8s,baz=52,slow=7.7,SNR=13
SAML Samuel 146.19 111 PKPdf 08 28 35.4 +0.6
SAML Samuel 146.19 111 PKP2 **PKPdf 08 28 35.4 +0.6**
AQDB Aquidauana 146.54 136 PKPdf 08 28 36.0 +0.8
PTLB Pontes e Lacer 146.94 125 PKPdf 08 28 36.7 +0.7
VILB Vilhena 147.28 120 PKPdf 08 28 37.6 +1.0
DBIC Dimbokro 153.22 278 PKPab **PKPab 08 29 05.7 +0.6**
comp=Z,15nm,1.0s,baz=59,slow=4.4,SNR=3.9
BDFB Brasilia 155.11 139 PKP **PKPdf 08 28 46.8 -1.8**
comp=Z,1.7nm,0.5s,baz=102,slow=3.0,SNR=3.1

IDC 15 08:10:04.6±3.2, 54°49N×86°78E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.4km s-min=19.2km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**246**	I		I		08 17 56.8	
	0.1nm,0.8s,baz=64,slow=328,SNR=3.3								
ZALV	**Zalesovo Beam**	**1.27**	**246**	Pg		Pg		08 10 27.4	-1.5
	0.8nm,0.3s,baz=63,slow=12,SNR=5.4								
ZALV				Lg		Lg		08 10 46.1	
	1.0nm,0.3s,baz=64,slow=29,SNR=5.3								
KURBB	**Kurchatov Arra**	**6.34**	**236**	Pn		Pn		08 11 40.4	+1.1
	0.1nm,0.3s,baz=53,slow=13,SNR=4.3								
KURBB				Lg		Lg		08 13 24.1	
	baz=61,slow=34,SNR=1.6								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**8.21**	**202**	Pn		Pn		08 12 05.9	+1.0
	0.1nm,0.3s,baz=23,slow=13,SNR=7.3								
MKAR				Lg		Lg		08 14 25.6	
	baz=29,slow=35,SNR=1.1								
	0.2nm,0.4s								

IDC 15 08:23:15.2±1.3, 0.°04N×17.°75W, h0km, mb3.9/6, mbtmp4.1/9, ML4.6/3, Error ellipse: s-maj=49.7km s-min=23.5km az=153.0

ISC 15 08:23:15.7±1.0, 0.°1S±0.°2×17.°5W±0.°1, h10km, n19, σ2ˢ48/15, mb3.9/6, 3C, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.25**	**159**	T		T		08 33 52.7	
	baz=337,slow=73,SNR=45								
H10N3	**ASCENSION HYDR**	**8.26**	**159**	T		T		08 33 53.2	
	baz=337,slow=73,SNR=64								
H10N1	**ASCENSION HYDR**	**8.27**	**159**	T		T		08 33 54.2	
	baz=337,slow=73,SNR=59								
H10S3	**ASCENSION HYDR**	**9.25**	**162**	T		T		08 35 13.6	
	baz=340,slow=74,SNR=45								
H10S2	**ASCENSION HYDR**	**9.26**	**162**	T		T		08 35 14.4	
	baz=240,slow=74,SNR=31								
LIC	**Lamto**	**13.94**	**63**	*e*P		**P**		**08 26 39.2**	**-2.5**
	9.0nm,0.6s								
TIC	**Toumodi**	**14.13**	**62**	*e*P		**Pn**		**08 26 39.1**	**+2.9**
	6.8nm,0.3s								
KIC	**Kosan Boka**	**14.25**	**63**	*e*P		**Pn**		**08 26 41.1**	**+3.3**
	8.4nm,0.3s								
DBIC	**Dimbokro**	**14.29**	**62**	Pn		**Pn**		**08 26 39.3**	**+1.0**
	1.7nm,0.3s,baz=243,slow=12,SNR=16								
DBIC				Sn		**Sn**		**08 29 11.9**	**-5.1**
	1.0nm,0.3s,baz=91,slow=3.7,SNR=2.0								
	4.1nm,0.3s								
BBTS	**Babate**	**14.69**	**4**	Pn		**Pn**		**08 26 42.6**	**-1.1**
	5.9nm,0.3s,baz=314,slow=0.1,SNR=2.4								
BBTS				Sn		Sn		08 29 10.0	-17
	2.6nm,0.3s,baz=153,slow=2.3,SNR=1.5								
	6.8nm,0.3s								
RCBR	**Riachuelo**	**19.24**	**252**	P		**P**		**08 27 37.2**	**-3.2**
	1.5nm,0.3s,baz=80,slow=13,SNR=16								
	4.6nm,0.4s								
TORD	**Torodi Ar. Bea**	**23.13**	**55**	P		**P**		**08 28 23.7**	**+1.4**
	2.3nm,0.4s,baz=238,slow=9.5,SNR=17								
	2.3nm,0.4s								
BRTR	**Keskin Array B**	**61.12**	**43**	P		**P**		**08 33 32.1**	**+1.5**
	0.3nm,0.3s,baz=283,slow=11,SNR=1.9								
	0.3nm,0.3s								
AKASG	**Malin Array Be**	**64.23**	**31**	P		**P**		**08 33 51.5**	**+0.6**
	0.1nm,0.3s,baz=236,slow=6.6,SNR=1.2								
	0.1nm,0.3s								
FINES	**FINESS Array B**	**69.71**	**21**	P		**P**		**08 34 27.5**	**+1.9**
	3.1nm,0.9s,baz=172,slow=31,SNR=2.9								
	3.1nm,0.9s								
TXAR	**Lajitas Array**	**86.70**	**299**	P		**P**		**08 36 00.5**	**0.0**
	0.5nm,0.7s,baz=108,slow=5.8,SNR=5.1								
	0.5nm,0.7s								
YKA	**Yellowknife Ar**	**93.37**	**333**	P		**P**		**08 36 31.5**	**+0.6**
	0.4nm,0.8s,baz=87,slow=5.8,SNR=3.9								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**143.55**	**132**	PKP		**PKPdf**		**08 42 52.4**	**+0.5**
	0.3nm,0.9s,baz=224,slow=5.2,SNR=3.3								
WRA	**Warramunga Arr**	**145.98**	**127**	PKPbc		**PKiKP**		**08 42 59.2**	**-1.0**
	0.7nm,0.9s,baz=231,slow=2.0,SNR=2.8								

MOS 15 08:27:19.4±0.9, 0.°05S×17.°88W, h10km, mb5.4/65, MS5.1/9, Error ellipse: s-maj=9.3km s-min=4.5km az=55.7
IDC 15 08:27:19.6±0.4, 0.°01S×17.°82W, h0km, mb4.7/37, mbtmp4.7/40, ML5.4/3, MS5.0/80, Error ellipse: s-maj=16.8km s-min=10.4km az=132.0
NEIC 15 08:27:22.0±1.2, 0.°07S±0.°08×17.°84W±0.°08, h10km±1km, mb5.4/158, Ms_20 5.2/613, Mwb5.5/45, Mww5.6/23, Error ellipse: s-maj=14.4km s-min=13.0km az=253.0, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.19; Mθθ=1.63; Mφφ=-1.44; Mrθ=0.18; Mθφ=-1.77; Mφr=0.15; Fault plane solution: M0=2.36000×10^17 NP1: φs=339.62000°, δ87.85000°, λ4.66000°. NP2: φs=249.44000°, δ85.34000°, λ177.84000°. Principal axes: T 2.4604, Plg5.0000°, Azm205.0000°; N -0.2118, Plg85.0000°, Azm4.0000°; P -2.2486, Plg2.0000°, Azm114.0000°;
NEIC 15 08:27:22.2, 0.°06S×17.°86W, h10km
NEIC 15 08:27:22.2, 0.°06S×17.°86W, h18km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10^17 Nm; Mrr=0.38; Mθθ=1.26; Mφφ=-0.88; Mrθ=1.45; Mθφ=-2.60; Mφr=-1.17; Fault plane solution: M0=3.23000×10^17 NP1: φs=170.57000°, δ77.38000°, λ21.27000°. NP2: φs=75.71000°, δ69.27000°, λ166.49000°. Principal axes: T 3.8238, Plg24.0000°, Azm34.0000°; N -1.1819, Plg65.0000°, Azm200.0000°; P -2.6420, Plg5.0000°, Azm302.0000°;
NEIC 15 08:27:22.2, 0.°06S×17.°86W, h18km
BGR 15 08:27:24.5, 1.°14S×14.°85W, h33km, mb5.2
GCMT 15 08:27:24.0±0.1, 0.°18N±0.°01×17.°84W±0.°01, h12km, MW5.6/159, Moment Tensor Solution. s129,c216; s159,c330; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr=0.49±.03; Mθθ=1.56±.03; Mφφ=-1.07±.03; Mrθ=0.47±.08; Mφφ=-2.46±.02; Mφr=0.10±.08; Best double couple: M0=2.83200×10^17 NP1: φs=256.00000°, δ88.00000°, λ-170.00000°. NP2: φs=166.00000°, δ80.00000°, λ-2.00000°. Principal axes: T 3.0690, Plg6.0000°, Azm31.0000°; N -0.4770, Plg79.0000°, Azm269.0000°; P -2.5950, Plg9.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 15 08:27:23.1±0.3, 0.°03S±0.°05×17.°81W±0.°05, h23km, n954, σ1ˢ13/642, mb5.2/228, MS5.2/369, 36C-25D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.42**	**157**	T		T		08 38 16.0	
	baz=338,slow=74,SNR=230								
H10N3	**ASCENSION HYDR**	**8.43**	**157**	T		T		08 38 16.6	
	baz=338,slow=74,SNR=229								
H10N1	**ASCENSION HYDR**	**8.44**	**157**	T		T		08 38 18.5	
	baz=338,slow=74,SNR=233								
ASCN	**Ascension**	**8.57**	**156**			**Pn**		**08 29 24.7**	**-1.2**
H10S3	**ASCENSION HYDR**	**9.40**	**161**	T		T		08 39 30.9	
	baz=240,slow=74,SNR=83								
H10S2	**ASCENSION HYDR**	**9.41**	**161**	T		T		08 39 31.5	
	baz=340,slow=74,SNR=208								
LIC	**Lamto**	**14.19**	**64**	*e*P		**Pn**		**08 30 41.2**	**-1.7**
	36nm,0.4s								
MBO	**M'Bour**	**14.36**	**3**	Pn		**Pn**		**08 30 41.8**	**-3.3**
TIC	**Toumodi**	**14.38**	**62**	*e*P		**Pn**		**08 30 43.2**	**-2.3**
	40nm,0.5s								
KIC	**Kosan Boka**	**14.51**	**64**	*e*P		**Pn**		**08 30 44.9**	**-2.3**
	49nm,0.3s								
DBIC	**Dimbokro**	**14.54**	**62**	*e*P		**Pn**		**08 30 46.1**	**-1.5**
DBIC	**Dimbokro**	**14.54**	**62**	Pn		**Pn**		**08 30 45.2**	**-2.4**
	31nm,0.3s,baz=243,slow=14,SNR=55								
DBIC				Sn		Sn		08 33 11.2	-17
	3.0nm,0.3s,baz=91,slow=18,SNR=1.4								
DBIC				LR		LR		08 35 12.8	
	comp=Z,7μm,20.6s,baz=223,slow=32								
	69nm,0.4s								
BBTS	**Babate**	**14.66**	**5**	Pn		**Pn**		**08 30 46.6**	**-2.6**
	15nm,0.3s,baz=155,slow=2.1,SNR=16								
BBTS				Sn		Sn		08 33 13.8	-17
	9.9nm,0.3s,baz=134,slow=14,SNR=1.5								
BBTS				LR		LR		08 35 55.9	
	comp=Z,10μm,18.4s,baz=152,slow=35								
	75nm,0.5s								
SACV	**Santiago Islan**	**15.97**	**339**	Pn		**Pn**		**08 31 04.3**	**-2.2**
RCBR	**Riachuelo**	**18.96**	**252**	P		**P**		**08 31 41.8**	**-1.2**
RCBR				IAmb		IAmb		08 31 47.2	
	comp=Z,239nm,1.4s								
RCBR	**Riachuelo**	**18.96**	**252**	P		**P**		**08 31 42.5**	**-0.5**
	comp=Z,8.8nm,0.3s,baz=84,slow=16,SNR=47								
RCBR				S		Sn		08 34 56.6	-19
	comp=Z,6.6nm,0.5s,baz=183,slow=18,SNR=2.7								
RCBR				LR		LR		08 36 51.6	
	comp=Z,2μm,21.7s,baz=78,slow=30								
	comp=Z,40nm,0.5s								
RCBR	**Riachuelo**	**18.96**	**252**	*e*P		**P**		**08 31 41.7**	**-1.3**
SHEL	**Horse Pasture**	**19.80**	**144**	P		**P**		**08 31 51.3**	**-0.9**
SHEL	**Horse Pasture**	**19.80**	**144**	P		**P**		**08 31 51.3**	**-0.9**
SHEL				pmax		pmax			
	comp=Z,145nm,1.3s								
TOC6	**Torodi Ar. Sit**	**23.33**	**55**	IAMs_20		IAMs_20		08 40 30.4	
	comp=Z,9μm,20.0s								
TOB4	**Torodi Ar. Sit**	**23.34**	**55**	IAMs_20		IAMs_20		08 40 30.7	
	comp=Z,8μm,20.0s								
TOC4	**Torodi Ar. Sit**	**23.34**	**55**	IAMs_20		IAMs_20		08 40 30.8	
	comp=Z,8μm,20.0s								
TOB5	**Torodi Ar. Sit**	**23.34**	**55**	IAMs_20		IAMs_20		08 40 30.8	
	comp=Z,9μm,20.0s								
TOA3	**Torodi Ar. Sit**	**23.35**	**55**	IAMs_20		IAMs_20		08 40 30.9	
	comp=Z,8μm,20.0s								
TOC7	**Torodi Ar. Sit**	**23.35**	**55**	IAMs_20		IAMs_20		08 40 30.9	
	comp=Z,9μm,20.0s								
TOA0	**Torodi Ar. Sit**	**23.35**	**55**	P		**P**		**08 32 29.2**	**-1.0**
TOA0				IAMs_20		IAMs_20		08 40 31.0	
	comp=Z,8μm,20.0s								
TORD	**Torodi Ar. Bea**	**23.35**	**55**	P		**P**		**08 32 28.4**	**-1.8**
TORD				IAmb		IAmb		08 32 43.1	
	comp=Z,232nm,1.3s								
TORD	**Torodi Ar. Bea**	**23.35**	**55**	P		**P**		**08 32 29.4**	**-0.8**
	comp=Z,43nm,0.8s,baz=244,slow=7.0,SNR=22								
TORD				S		**S**		**08 36 39.2**	**-2.6**
	comp=Z,4.4nm,0.5s,baz=108,slow=24,SNR=1.1								
TORD				LR		LR		08 40 40.4	
	comp=Z,8μm,19.6s,baz=240,slow=34								
	comp=Z,43nm,0.8s								
TOB3	**Torodi Ar. Sit**	**23.35**	**55**	IAMs_20		IAMs_20		08 40 31.1	
	comp=Z,8μm,20.0s								
TOA2	**Torodi Ar. Sit**	**23.36**	**55**	IAMs_20		IAMs_20		08 40 31.2	
	comp=Z,9μm,21.0s								
TOB1	**Torodi Ar. Sit**	**23.36**	**55**	IAMs_20		IAMs_20		08 40 30.2	
	comp=Z,9μm,20.0s								
TOB2	**Torodi Ar. Sit**	**23.36**	**55**	IAMs_20		IAMs_20		08 40 28.4	
	comp=Z,8μm,20.0s								
TOC3	**Torodi Ar. Sit**	**23.37**	**55**	IAMs_20		IAMs_20		08 40 30.4	
	comp=Z,8μm,20.0s								
MACI	**Morro de la Ar**	**28.15**	**2**	P		**P**		**08 33 14.4**	**+0.5**
SDBA	**SAO DESIDERIO**	**29.56**	**244**	*e*P		**P**		**08 33 25.6**	**-0.9**
JANB	**Januaria**	**30.15**	**239**	*e*P		**P**		**08 33 30.4**	**-1.4**
TMAB	**Tom-Au,PA,Br**	**30.37**	**265**	*e*P		**P**		**08 33 33.0**	**-0.7**
DIAM	**Diamantina, MG**	**31.23**	**233**	*e*P		**P**		**08 33 40.5**	**-0.9**
TAM	**Tamanrasset**	**32.10**	**43**	P		**P**		**08 33 49.3**	**+0.4**
TAM				IAmb		IAmb		08 33 55.3	
	comp=Z,63nm,1.4s								
TAM				IAMs_20		IAMs_20		08 45 57.9	
	comp=Z,6μm,19.0s								
TAM	**Tamanrasset**	**32.10**	**43**	P		**P**		**08 33 49.3**	**+0.4**
TAM				pmax		pmax			
	comp=Z,63nm,1.4s								
TAM				MLR		MLR			
	comp=Z,6μm,19.0s								
BDFB	**Brasilia**	**33.61**	**241**	P		**P**		**08 34 01.4**	**-0.9**
BDFB				IAmb		IAmb		08 34 04.8	
	comp=Z,52nm,1.0s								
BDFB	**Brasilia**	**33.61**	**241**	P		**P**		**08 34 01.4**	**-0.9**
BDFB				pmax		pmax			
	comp=Z,52nm,1.0s								
BDFB				MLR		MLR			
	comp=Z,3μm,19.0s								
BDFB	**Brasilia**	**33.61**	**241**	P		**P**		**08 34 02.1**	**-0.2**
	comp=Z,38nm,0.9s,baz=64,slow=8.5,SNR=40								
BDFB				S		**S**		**08 39 26.4**	**+2.4**
	comp=Z,2.2nm,0.4s,baz=151,slow=14,SNR=0.6								
BDFB				LR		LR		08 45 43.7	
	comp=Z,2μm,19.2s,baz=77,slow=33								
	comp=Z,38nm,0.9s								
MCPB	**Macapa, AP**	**34.25**	**269**	*e*P		**P**		**08 34 07.8**	**0.0**
AVE	**Averroes**	**34.57**	**15**	P		**P**		**08 34 11.0**	**+0.8**
AVE				IAMs_20		IAMs_20		08 47 16.1	
	comp=Z,4μm,19.0s								
IPMB	**Ipameri, GO**	**34.81**	**238**	*e*P		**P**		**08 34 11.4**	**-1.2**
MDT	**Midelt**	**34.96**	**20**	LR		LR		08 48 04.6	
	comp=Z,6μm,20.7s,baz=220,slow=36								
MDP	**Montagnes des**	**35.16**	**279**	LR		LR		08 46 21.9	
	comp=Z,949nm,21.4s,baz=110,slow=32								
SNDB	**Serra Nova Dou**	**35.29**	**249**	*e*P		**P**		**08 34 16.2**	**-0.5**
MALB	**Monte Alegre**	**36.49**	**267**	*e*P		**P**		**08 34 26.1**	**-1.0**
BB19B	**Bebedouro**	**36.57**	**233**	*e*P		**P**		**08 34 26.6**	**-1.0**
SPB	**Sao Paulo**	**37.09**	**229**	IAMs_20		IAMs_20		08 46 25.4	
	comp=Z,4μm,22.0s								
ITRB	**Iturama**	**37.41**	**237**	*e*P		**P**		**08 34 33.7**	**-1.1**
PFVI	**Vila Bisbo**	**37.91**	**12**	*e*P		**P**		**08 34 41.7**	**+3.0**
	comp=Z,94nm,1.5s								
PFVI	**Vila Bisbo**	**37.91**	**12**	P		**P**		**08 34 39.5**	**+0.9**
PFVI				IAmb		IAmb		08 35 48.2	
	comp=Z,180nm,1.9s								
NPGB	**Novo Progresso**	**38.09**	**259**	*e*P		**P**		**08 34 39.2**	**-1.5**
MORF	**Marmelete**	**38.11**	**12**	*e*P		**P**		**08 34 42.0**	**+1.6**
	comp=Z,44nm,1.8s								
MORF	**Marmelete**	**38.11**	**12**	P		**P**		**08 34 41.5**	**+1.1**
MORF	**Marmelete**	**38.11**	**12**	*e*P		**P**		**08 34 41.7**	**+1.3**
MORF				IAmb		IAmb		08 34 53.3	
	comp=Z,52nm,1.2s								
MORF	**Marmelete**	**38.11**	**12**	P		**P**		**08 34 41.5**	**+1.1**
MORF				pmax		pmax			
	comp=Z,57nm,1.3s								
ITTB	**Itaituba**	**38.13**	**263**	*e*P		**P**		**08 34 39.8**	**-1.2**
PBDV	**Barranco-do-Ve**	**38.20**	**13**	*e*P		**P**		**08 34 43.1**	**+1.9**
	comp=Z,90nm,1.4s								
PVAQ	**Vaqueiros**	**38.40**	**13**	*e*P		**P**		**08 34 45.0**	**+2.1**
	comp=Z,9.5nm,1.6s								
PVAQ	**Vaqueiros**	**38.40**	**13**	P		**P**		**08 34 44.0**	**+1.1**
PCVE	**Castro Verde**	**38.55**	**12**	*e*P		**P**		**08 34 46.0**	**+1.9**
	comp=Z,65nm,1.7s								
MESJ	**Messejana**	**38.71**	**12**	*e*P		**P**		**08 34 47.2**	**+1.7**
	comp=Z,40nm,1.5s								
MESJ	**Messejana**	**38.71**	**12**	P		**P**		**08 34 46.3**	**+0.9**
MESJ	**Messejana**	**38.71**	**12**	*e*P		**P**		**08 34 46.8**	**+1.3**
MESJ				IAmb		IAmb		08 34 59.5	
	comp=Z,129nm,1.6s								
MESJ	**Messejana**	**38.71**	**12**	P		**P**		**08 34 46.3**	**+0.9**
MESJ				pmax		pmax			
	comp=Z,56nm,1.2s								
PNCL	**Nicolau / Gran**	**38.91**	**12**	*e*P		**P**		**08 34 49.0**	**+1.9**
	comp=Z,57nm,1.5s								
PBEJ	**Beja**	**38.97**	**13**	*e*P		**P**		**08 34 49.5**	**+1.9**
	comp=Z,69nm,1.5s								
PBAR	**Barrancos**	**39.30**	**13**	*e*P		**P**		**08 34 51.9**	**+1.6**
	comp=Z,33nm,1.8s								
EVO	**Evora**	**39.42**	**12**	*e*P		**P**		**08 34 53.0**	**+1.6**
	comp=Z,94nm,1.6s								
PMAFR	**Mafra**	**39.58**	**10**	*e*P		**P**		**08 34 55.2**	**+2.5**
TSUM	**Tsumeb**	**39.59**	**121**	P		**P**		**08 34 53.8**	**+0.5**
LDASE	**Londrina, Braz**	**39.82**	**232**	*e*P		**P**		**08 34 54.7**	**-0.3**
PESTR	**Estremoz**	**39.83**	**12**	*e*P		**P**		**08 34 57.2**	**+2.4**
	comp=Z,56nm,1.5s								
PESTR	**Estremoz**	**39.83**	**12**	P		**P**		**08 34 55.7**	**+0.8**
PDRB	**Porto dos Gac**	**40.32**	**252**	*e*P		**P**		**08 34 58.6**	**-0.7**
PMRV	**Marv??o**	**40.41**	**12**	*e*P		**P**		**08 35 01.9**	**+2.2**
	comp=Z,64nm,1.5s								
PMRV				*e*S		S		08 41 23.2	+16
PMRV				*e*LR		LR		08 48 12.6	
	comp=Z,1μm,20.0s								
CART	**Cartagena**	**40.53**	**21**	IAMs_20		IAMs_20		08 51 02.8	
	comp=Z,4μm,21.0s								
SALV	**Santo Antonio**	**40.57**	**245**	*e*P		**P**		**08 35 01.4**	**+0.1**
WIN	**Windhoek**	**40.69**	**126**	P		**P**		**08 35 02.8**	**+0.4**
WIN	**Windhoek**	**40.69**	**126**	P		**P**		**08 35 02.8**	**+0.4**
WIN				pmax		pmax			
	comp=Z,32nm,1.3s								
TRCB	**Terra Rica**	**40.73**	**234**	P		**P**		**08 35 02.7**	**+0.1**
TRCB				IAmb		IAmb		08 35 15.7	
	comp=Z,114nm,1.6s								
PCAS	**Casmilo, Conde**	**40.79**	**11**	*e*P		**P**		**08 35 04.8**	**+2.0**
	comp=Z,188nm,1.6s								
PCBR	**Castelo Branco**	**40.79**	**12**	*e*P		**P**		**08 35 04.5**	**+1.8**
	comp=Z,23nm,1.7s								
COI	**Coimbra**	**40.96**	**11**	P		**P**		**08 35 04.1**	**0.0**
COI	**Coimbra**	**40.96**	**11**	P		**P**		**08 35 04.1**	**0.0**
COI				pmax		pmax			
	comp=Z,360nm,2.0s								
RVDE	**Rio Verde (Bra**	**41.02**	**240**	*e*P		**P**		**08 35 04.9**	**-0.1**
H07S1	**FLORES T-PHASE**	**41.10**	**344**	T		T		09 19 37.7	
	SNR=11								
PTGB	**Pitanga**	**41.24**	**231**	*e*P		**P**		**08 35 07.2**	**+0.4**
PAB	**San Pablo**	**41.27**	**16**	P		**P**		**08 35 07.8**	**+1.0**
PAB	**San Pablo**	**41.27**	**16**	P		**P**		**08 35 07.8**	**+1.0**
PAB				pmax		pmax			
	comp=Z,41nm,1.2s								
MTE	**Manteigas**	**41.32**	**12**	*e*P		**P**		**08 35 09.0**	**+1.9**
	comp=Z,82nm,1.4s								
MTE				*e*S		**S**		**08 41 22.6**	**+2.3**
MTE				*e*LR		LR		08 48 57.6	
	comp=Z,2μm,16.0s								
MTE	**Manteigas**	**41.32**	**12**	P		**P**		**08 35 08.0**	**+0.8**
MTE				IAMs_20		IAMs_20		08 54 44.6	
	comp=Z,3μm,18.0s								
ESDC	**Sonseca Array**	**41.50**	**16**	P		**P**		**08 35 10.1**	**+1.5**
ESDC	**Sonseca Array**	**41.50**	**16**	P		**P**		**08 35 08.9**	**+0.2**
	comp=Z,5.6nm,1.1s,baz=207,slow=8.4,SNR=19								
ESDC				PP		**PP**		**08 36 42.7**	**-2.1**
	comp=Z,2.8nm,1.0s,baz=210,slow=15,SNR=1.5								
ESDC				LR		LR		08 52 51.7	
	comp=Z,2μm,19.7s,baz=194,slow=37								
	comp=Z,5.6nm,1.1s								
ESBB	**Sonseca Array**	**41.50**	**16**	P		**P**		**08 35 10.0**	**+1.4**
ESBB				IAmb		IAmb		08 35 23.3	
	comp=Z,94nm,1.7s								
ES09	**SONSECA Array**	**41.52**	**16**	IAMs_20		IAMs_20		08 52 42.1	
	comp=Z,3μm,19.0s								
PVIS	**Viseu**	**41.55**	**11**	*e*P		**P**		**08 35 10.8**	**+1.8**
TATN	**Tataouine**	**42.03**	**37**	P		**P**		**08 35 15.0**	**+1.9**
TATN				IAmb		IAmb		08 35 17.1	
	comp=Z,77nm,0.7s								
MVO	**Moncorvo**	**42.16**	**12**	*e*P		**P**		**08 35 15.8**	**+1.8**
	comp=Z,90nm,1.6s								
AQDB	**Aquidauana**	**42.26**	**239**	P		**P**		**08 35 14.5**	**-0.6**
AQDB				IAMs_20		IAMs_20		08 51 44.8	
	comp=Z,4μm,19.0s								
AQDB	**Aquidauana**	**42.26**	**239**	*e*P		**P**		**08 35 14.9**	**-0.2**
ITAB	**Concordia**	**42.64**	**228**	P		**P**		**08 35 18.4**	**+0.3**
ITAB				IAMs_20		IAMs_20		08 49 57.8	
	comp=Z,3μm,21.0s								
ITAB	**Concordia**	**42.64**	**228**	*e*P		**P**		**08 35 19.0**	**+0.9**
MCR1	**Marechal Candi**	**42.66**	**233**	*e*P		**P**		**08 35 18.7**	**+0.3**
FRBT	**Francisco Belt**	**42.67**	**230**	*e*P		**P**		**08 35 19.6**	**+1.2**
BOAV	**Boa Vista**	**42.77**	**274**	P		**P**		**08 35 18.5**	**-0.9**
BOAV				IAmb		IAmb		08 35 21.8	
	comp=Z,131nm,1.5s								
BOAV	**Boa Vista**	**42.77**	**274**	*e*P		**P**		**08 35 19.9**	**+0.5**
PBRG	**Braganca**	**42.83**	**12**	*e*P		**P**		**08 35 20.9**	**+1.4**
	comp=Z,69nm,1.6s								
MACA	**Manacapuru-AM**	**42.97**	**265**	P		**P**		**08 35 20.2**	**-0.8**
MACA	**Manacapuru-AM**	**42.97**	**265**	*e*P		**P**		**08 35 21.1**	**+0.1**
ANTJ	**Antonio Joao (**	**43.15**	**237**	*e*P		**P**		**08 35 22.5**	**+0.1**
PTLB	**Pontes e Lacer**	**43.59**	**247**	P		**P**		**08 35 25.9**	**0.0**
PTLB	**Pontes e Lacer**	**43.59**	**247**	*e*P		**P**		**08 35 26.3**	**+0.3**
KEST	**Kesra**	**43.65**	**33**	P		**P**		**08 35 26.2**	**0.0**
	comp=Z,18nm,1.0s,baz=282,slow=1.6,SNR=6.8								
KEST

LBTB Lobatse 48.75 124 *e*P **P 08 36 06.9 +0.4**
LBTB IAmb IAmb 08 36 25.0
comp=Z,25nm,1.1s
LBTB Lobatse 48.75 124 P **P 08 36 06.7 +0.1**
LBTB pmax pmax
comp=Z,28nm,1.2s
LBTB Lobatse 48.75 124 LR LR 08 53 12.3
comp=Z,2µm,21.8s,baz=280,slow=32
FRAZ Fraserburg 48.77 134 *e*P **P 08 36 06.3 -0.4**
MFF Saint Martin d 48.96 16 *e*P **P 08 36 08.7 +1.0**
MFF pmax pmax
comp=Z,63nm,1.4s
ETMB Extrema 49.13 257 P **P 08 36 08.8 -0.7**
ETMB IAMs_20 IAMs_20 08 53 43.2
comp=Z,3µm,22.0s
ETMB Extrema 49.13 257 *e*P **P 08 36 08.8 -0.7**
MERW Merweville 49.26 135 *e*P P 08 36 15.5 +5.2
MERW IAmb IAmb 08 36 21.5
comp=Z,234nm,2.4s
SWZ Schweizer 49.44 127 *e*P **P 08 36 11.7 -0.2**
SWZ IAmb IAmb 08 36 23.8
comp=Z,17nm,0.7s
GRAN Grantham 49.52 134 *e*P **P 08 36 12.9 +0.6**
GRAN IAmb IAmb 08 37 27.4
comp=Z,5.0nm,0.8s
KRI Karoi 49.60 112 *e*P **P 08 36 11.7 -1.6**
BRAK Brakfontein 49.76 133 *e*P **P 08 36 16.1 +1.8**
BRAK IAmb IAmb 08 36 16.4
comp=Z,316nm,2.4s
CASP Castiglione de 49.80 28 P **P 08 36 14.9 +0.7**
BNI Bardonecchia 49.86 23 P **P 08 36 16.5 +1.7**
BNI Bardonecchia 49.86 23 P **P 08 36 16.5 +1.7**
BNI pmax pmax
comp=Z,18nm,1.0s
BOSA Boshof 50.01 128 P **P 08 36 15.7 -0.5**
BOSA IAmb IAmb 08 36 55.5
comp=Z,44nm,1.4s
BOSA Boshof 50.01 128⇑ *i*P **P 08 36 16.3 0.0**
BOSA IAmb IAmb 08 36 29.7
comp=Z,55nm,1.6s
BOSA Boshof 50.01 128 P **P 08 36 15.7 -0.5**
BOSA pmax pmax
comp=Z,44nm,1.4s
BOSA Boshof 50.01 128 P **P 08 36 16.2 0.0**
comp=Z,7.0nm,0.5s,baz=307,slow=7.4,SNR=42
BOSA LR LR 08 54 34.7
comp=Z,859nm,18.8s,baz=284,slow=33
comp=Z,7.0nm,0.5s
NHAM Northam, North 50.14 123 *e*P **P 08 36 17.9 +0.7**
NHAM IAmb IAmb 08 36 37.3
comp=Z,88nm,1.9s
LEPH Lephalale, Lim 50.15 122 *e*P **P 08 36 16.6 -0.7**
LEPH IAmb IAmb 08 36 38.1
comp=Z,30nm,1.2s
TIP Timpagrande 50.23 35 P **P 08 36 18.3 +0.7**
LPL La Plagne 50.27 22 *e*P **P 08 36 19.8 +1.8**
LPL pmax pmax
comp=Z,12nm,0.8s
BFON Badsfontein, M 50.35 133 *e*P **P 08 36 17.6 -1.1**
BFON IAmb IAmb 08 36 32.3
comp=Z,394nm,2.7s
NYAT Nyati, Northwe 50.52 123 *e*P **P 08 36 20.8 +0.6**
NYAT IAmb IAmb 08 36 40.2
comp=Z,90nm,2.0s
HUMP Col San Antoni 50.54 294 P **P 08 36 21.0 +0.8**
HUMP IAmb IAmb 08 36 21.6
comp=Z,74nm,1.1s
OSSC Osservatorio P 50.55 27 IAMs_20 IAMs_20 08 55 00.1
comp=Z,3µm,19.0s
IGPR InterUniversit 50.73 293 P **P 08 36 21.5 -0.1**
SJG San Juan 50.80 294 LR LR 08 52 55.8
comp=Z,2µm,21.3s,baz=101,slow=30
BAUV El Baul 50.81 282 P **P 08 36 22.4 +0.1**
TSWA Tswaing Meteor 50.97 123 *e*P **P 08 36 24.1 +0.5**
TSWA IAmb IAmb 08 36 24.8
comp=Z,44nm,1.4s
HVD Gariep Dam 51.12 131 *e*P **P 08 36 24.9 +0.3**
HVD IAmb IAmb 08 36 48.8
comp=Z,95nm,1.7s
GUMA Gualdo di Mace 51.18 29 IAMs_20 IAMs_20 08 57 39.0
comp=Z,4µm,20.0s
GRAF Camdeboo Natio 51.18 133 *e*P **P 08 36 25.5 +0.6**
GRAF IAmb IAmb 08 36 25.7
comp=Z,31nm,1.0s
SENIN Lac Senin/Sane 51.20 22 P **P 08 36 25.6 +0.7**
RUST Rust De Winter 51.28 123 *e*P **P 08 36 25.5 -0.3**
RUST IAmb IAmb 08 36 45.6
comp=Z,125nm,2.2s
MUSN Musina, Limpop 51.40 119 *e*P **P 08 36 27.2 +0.5**
MUSN IAmb IAmb 08 36 44.9
comp=Z,57nm,1.6s
SGRT San Giovanni R 51.45 32 IAMs_20 IAMs_20 08 58 00.2
comp=Z,3µm,22.0s
SCTE Santa Cesarea 51.81 35 IAMs_20 IAMs_20 08 57 38.8
comp=Z,2µm,20.0s
MPHEP Siloam, Limpop 51.88 119 *e*P **P 08 36 30.0 -0.3**
MPHEP IAmb IAmb 08 36 41.0
comp=Z,9.7nm,0.9s
TUE Stuetta 52.08 24 P **P 08 36 31.9 +0.4**
TEOL Teolo 52.17 26 IAMs_20 IAMs_20 09 00 04.1
comp=Z,2µm,19.0s
DAVOX Davos/Dischmat 52.55 24 P **P 08 36 34.6 -0.4**
comp=Z,8.1nm,1.0s,baz=213,slow=7.4,SNR=4.9
DAVOX LR LR 08 58 23.1
comp=Z,2µm,21.9s,baz=230,slow=36
comp=Z,8.1nm,1.0s
CTI Castel Tesino 52.70 26 P **P 08 36 36.2 +0.2**
CTI Castel Tesino 52.70 26 P **P 08 36 36.2 +0.2**
CTI pmax pmax
comp=Z,22nm,1.0s
ECH Echery 52.71 21 IAMs_20 IAMs_20 09 00 08.6
comp=Z,2µm,18.0s
PCDR Punta Cana, DR 52.95 293 IAMs_20 IAMs_20 08 52 21.5
comp=Z,2µm,19.0s
DAVA Damuels 52.96 23 *i*P **P 08 36 38.5 +0.5**
comp=Z,52nm,1.4s,SNR=7.1
PILG Pilgrimsrest, 53.01 122 *e*P **P 08 36 38.2 -0.6**
PILG IAmb IAmb 08 36 56.8
comp=Z,67nm,1.6s
HOED Hoedspruit, Li 53.03 121 *e*P **P 08 36 37.7 -1.1**
HOED IAmb IAmb 08 36 56.4
comp=Z,22nm,1.1s
GRHM Grahamstown, E 53.05 133 IAMs_20 IAMs_20 08 54 29.3
comp=Z,2µm,19.0s
IDI Anoyia 53.07 44 LR LR 09 01 35.4
comp=Z,721nm,18.2s,baz=238,slow=39
FETA Feichten 53.09 24 *i*P **P 08 36 39.4 +0.4**
comp=Z,27nm,1.5s,SNR=5.0
MOPA Mopani 53.13 120 *e*P P 08 36 45.5 +6.0
BFO Black Forest 53.23 22 P **P 08 36 39.9 +0.1**
BFO Black Forest 53.23 22 P **P 08 36 39.9 +0.1**
BFO pmax pmax
comp=Z,35nm,1.3s
BFO Black Forest 53.23 22 *e*P **P 08 36 40.6 +0.9**
comp=Z,73nm,1.7s,baz=212,slow=7.2
SDV Santo Domingo 53.34 281 P **P 08 36 40.9 -0.6**
SDV Santo Domingo 53.34 281 LR LR 08 58 24.9
comp=Z,790nm,19.2s,baz=112,slow=35
SDV Santo Domingo 53.34 281 *e*P **P 08 36 41.1 -0.3**
SDV Santo Domingo 53.34 281 *e*P **P 08 36 40.9 -0.6**
UBR Ueberruh 53.37 23 *e*P **P 08 36 42.0 +1.1**
comp=Z,132nm,1.7s,baz=212,slow=7.2
SQTA Sankt Quirin 53.44 24 *i*P **P 08 36 41.9 +0.4**
comp=Z,41nm,1.6s,SNR=6.4
TIR Tirane 53.45 35 IAMs_20 IAMs_20 09 01 44.5
comp=Z,2µm,20.0s
RETA Reutte 53.47 24 *e*P **P 08 36 41.9 +0.2**
comp=Z,29nm,1.7s
MOTA Moosalm 53.50 24 *e*P **P 08 36 42.0 0.0**
comp=Z,25nm,1.6s
ABTA Abfaltersbach 53.62 26 *i*P **P 08 36 44.2 +1.4**
comp=Z,35nm,1.6s,SNR=8.7
WTTA Wattenberg 53.65 25 *i*P **P 08 36 43.3 +0.2**
comp=Z,33nm,1.5s,SNR=6.5
ROBS Robic 53.67 27 *e*P **P 08 36 43.5 +0.4**
WATA Walderalm 53.69 24 *e*P **P 08 36 43.9 +0.5**
comp=Z,19nm,1.5s
OHR Ohrid 53.84 36 *i*P P 08 36 53.1 +8.6
PRED Cave del Predi 53.84 26 P **P 08 36 45.6 +1.2**
PRED IAmb IAmb 08 36 58.9
comp=Z,35nm,1.1s
PB16 IPOC Station P 53.92 247 P **P 08 36 44.7 -1.4**
PB16 IAMs_20 IAMs_20 08 58 04.4
comp=Z,2µm,22.0s
GO01 Chusmiza 53.96 246 P **P 08 36 44.4 -1.8**
FNA Florina 53.97 36 P **P 08 36 46.1 +0.7**

FNA Florina 53.97 36 P **P 08 36 46.1 +0.7**
FNA pmax pmax
comp=Z,18nm,0.9s
MYKA Terra Mystica 54.02 26 *i*P **P 08 36 47.0 +1.3**
comp=Z,38nm,1.6s,SNR=8.5
PB08 IPOC Station P 54.05 245 P **P 08 36 45.2 -1.6**
PB08 IAMs_20 IAMs_20 08 58 23.7
comp=Z,2µm,22.0s
LESA Schwarzleotal 54.22 25 *e*P **P 08 36 47.4 +0.3**
comp=Z,17nm,1.1s
KBA Koelnbreinsper 54.23 26 *e*P **P 08 36 48.2 +0.8**
comp=Z,22nm,1.4s
TAMC Tame, Arauca 54.25 278 *e*P **P 08 36 49.0 +1.1**
PB11 IPOC Station P 54.41 246 P **P 08 36 48.3 -0.8**
PB11 IAmb IAmb 08 37 14.9
comp=Z,24nm,0.9s
LVC Limon Verde 54.52 242 P **P 08 36 50.4 +0.3**
LVC Limon Verde 54.52 242 P **P 08 36 50.4 +0.3**
LVC pmax pmax
comp=Z,17nm,0.9s
LVC Limon Verde 54.52 242 LR LR 09 00 41.4
comp=Z,463nm,19.2s,baz=68,slow=37
LVC Limon Verde 54.52 242 *e*P **P 08 36 48.2 -1.8**
PB09 IPOC Station P 54.58 243 P **P 08 36 50.4 +0.1**
PB09 IAmb IAmb 08 37 13.4
comp=Z,60nm,1.1s
AHRW Bad Neuenahr-A 54.66 19 *e*P **P 08 36 52.4 +2.2**
comp=Z,65nm,1.5s,baz=212,slow=7.2
SOKA Soboth 54.69 27 *i*P **P 08 36 50.5 -0.1**
comp=Z,27nm,1.4s,SNR=8.4
BBSR BB Station 54.69 311 IAMs_20 IAMs_20 08 55 53.6
comp=Z,2µm,19.0s
AP01 Chacalluta 54.70 247 IAMs_20 IAMs_20 08 59 11.0
comp=Z,2µm,19.0s
GROS Grobnik 54.74 28 *i*P **P 08 36 51.3 +0.4**
PB12 IPOC Station P 54.74 247 P **P 08 36 50.4 -1.1**
PB12 IAmb IAmb 08 36 53.1
comp=Z,51nm,1.2s
PB12 IAMs_20 IAMs_20 08 59 13.2
comp=Z,2µm,19.0s
SKO Skopje 54.75 35 *i*P **P 08 36 52.6 +1.6**
TNS Taunus Mts 54.86 20 *e*P **P 08 36 53.1 +1.4**
comp=Z,49nm,1.5s,baz=212,slow=7.2
VAY Valandovo 55.01 37 *i*P P 08 37 02.8 +10
STIP Stip 55.02 36 *i*P **P 08 36 55.6 +2.7**
PB02 IPOC Station P 55.03 244 P **P 08 36 53.7 +0.1**
PB02 IAmb IAmb 08 37 09.6
comp=Z,17nm,0.7s
KMBO Kilima Mbogo 55.07 91 P **P 08 36 55.5 +1.4**
KMBO Kilima Mbogo 55.07 91 P **P 08 36 55.5 +1.4**
KMBO pmax pmax
comp=Z,21nm,1.4s
PB06 IPOC Station P 55.13 242 P **P 08 36 53.4 -0.9**
PATCX Punta Patache 55.13 245 P **P 08 36 53.2 -1.1**
PATCX IAmb IAmb 08 37 18.2
comp=Z,62nm,1.2s
PB07 IPOC Station P 55.13 243 P **P 08 36 53.3 -1.0**
PB07 IAmb IAmb 08 37 10.5
comp=Z,42nm,0.9s
PAMC Pamplona, Colo 55.22 279 *e*P **P 08 36 56.5 +1.0**
MOA Molln 55.23 26 *e*P **P 08 36 54.6 +0.3**
comp=Z,21nm,1.4s
CZSB Cruzeiro do Su 55.25 261 *e*P **P 08 36 54.1 -1.0**
ARSA Arzberg 55.34 27 *e*P **P 08 36 55.7 +0.6**
comp=Z,22nm,1.6s
TRQA Tornquist 55.49 222 IAMs_20 IAMs_20 08 56 29.4
comp=Z,2µm,22.0s
PB04 IPOC Station P 55.53 243 P **P 08 36 57.2 -0.1**
PB04 IAmb IAmb 08 37 22.3
comp=Z,42nm,1.0s
BARC Barichara 55.64 278 *e*P **P 08 36 58.6 +0.4**
WET Wettzell 55.65 24 *e*P **P 08 36 57.1 -0.3**
comp=Z,70nm,1.6s,baz=212,slow=7.2
SDDR Presa de Saban 55.74 293 P **P 08 36 59.1 +0.5**
SDDR Presa de Saban 55.74 293 *e*P **P 08 36 58.9 +0.3**
GEC2 GERESS Array S 55.75 25 *e*P **P 08 36 57.6 -0.6**
comp=Z,73nm,1.8s,baz=212,slow=7.2
GERES GERESS Array B 55.75 25 P **P 08 36 58.5 +0.2**
GERES GERESS Array B 55.75 25 P **P 08 36 58.7 +0.5**
comp=Z,1.7nm,0.6s,baz=203,slow=5.8,SNR=9.7
GERES PP **PP 08 38 58.2 -4.6**
comp=Z,2.2nm,0.7s,baz=194,slow=7.9,SNR=2.1
GERES LR LR 09 01 38.6
comp=Z,939nm,18.1s,baz=257,slow=37
comp=Z,1.7nm,0.6s
CRJC Cerrejon, Guaj 55.81 283 *e*P **P 08 36 56.8 -2.4**
ROTZ Rotzenmuhle 55.87 23 *e*P **P 08 36 59.8 +0.8**
comp=Z,7.8nm,1.5s,baz=212,slow=7.2
GO02 Mina Guanaco 55.88 239 P **P 08 36 59.7 -0.2**
GO02 IAMs_20 IAMs_20 09 00 03.2
comp=Z,2µm,20.0s
UBBA Unterbreizbach 55.90 21 *e*P **P 08 37 00.9 +1.9**
comp=Z,47nm,1.6s,baz=212,slow=7.2
KHC Kasperske Hory 55.92 24 *e*P **P 08 37 00.5 +1.1**
KHC Kasperske Hory 55.92 24⇑ *e*P **P 08 37 00.3 +0.9**
KHC pmax pmax
comp=Z,57nm,1.7s
CKRC Cesky Krumlov 55.99 25 *e*P **P 08 37 00.8 +1.0**
CKRC Cesky Krumlov 55.99 25 *e*P **P 08 37 00.8 +1.0**
CONA Conrad Observa 55.99 27 *i*P **P 08 37 00.7 +0.7**
comp=Z,24nm,1.4s,SNR=6.5
MANZ Manzenberg 56.01 23 *e*P **P 08 37 01.0 +1.0**
comp=Z,9.0nm,1.5s,baz=212,slow=7.2
RONA Rosalia, Austr 56.02 27 *i*P **P 08 37 01.4 +1.3**
comp=Z,40nm,1.5s,SNR=8.7
AC02 Maricunga 56.03 237 P **P 08 37 01.6 +0.4**
AC02 IAmb IAmb 08 37 05.6
comp=Z,43nm,0.9s
MORH Mrgy, Hungar 56.08 30 ⇓P **P 08 37 01.2 +0.8**
MOX Moxa 56.35 22 P **P 08 37 02.9 +0.5**
MOX pmax pmax
comp=Z,16nm,1.6s
MOX Moxa 56.35 22 *e*P **P 08 37 02.5 +0.2**
comp=Z,14nm,1.1s,baz=212,slow=7.2
ZVC Zvikov 56.42 25 *e*P **P 08 37 03.2 +0.4**
EKA Eskdalemuir Ar 56.47 10 P **P 08 37 03.5 +0.4**
comp=Z,8.8nm,0.7s,baz=192,slow=7.3,SNR=7.2
comp=Z,2.8nm,0.7s
TANN Tannenbergstha 56.49 23 *e*P **P 08 37 04.3 +0.9**
comp=Z,38nm,1.6s,baz=212,slow=7.2
ROSC El Rosal 56.65 276 IAMs_20 IAMs_20 08 58 04.2
comp=Z,2µm,21.0s
ROSC El Rosal 56.65 276 P **P 08 37 05.4 -0.2**
comp=Z,13nm,0.8s,baz=113,slow=8.4,SNR=20
ROSC LR LR 09 00 01.2
comp=Z,2µm,18.8s,baz=122,slow=35
comp=Z,13nm,0.8s
ROSC El Rosal 56.65 276 *e*P **P 08 37 05.5 0.0**
MDVR Moldovita 56.71 33 ⇓P **P 08 37 06.8 +1.8**
ZST Bratislava 56.76 27 *e*P **P 08 37 06.3 +1.1**
ZST pmax pmax
comp=Z,147nm,1.7s
ZST Bratislava 56.76 27 *e*P **P 08 37 06.3 +1.1**
ALN Alexandroupoli 56.89 39 IAMs_20 IAMs_20 09 01 09.7
comp=Z,2µm,21.0s
PTBC PUERTO BERRIO, 56.89 278 *e*P **P 08 37 05.6 -1.3**
MODS Modra-Piesok 56.96 27 *e*P **P 08 37 07.5 +0.7**
MODS pmax pmax
comp=Z,86nm,1.5s
MODS Modra-Piesok 56.96 27 *e*P **P 08 37 07.5 +0.7**
PTLC Puerto Leguiza 56.99 270 *e*P **P 08 37 06.6 -1.0**
SRO Srobarova 57.04 28 *e*P **P 08 37 08.4 +1.1**
SRO pmax pmax
comp=Z,22nm,1.1s
SRO Srobarova 57.04 28 *e*P **P 08 37 08.4 +1.1**
DJES Djerdap 57.07 33 P **P 08 37 08.5 +0.9**
KRUC Moravsky 57.08 26 *e*P **P 08 37 06.6 -0.9**
HERR Herculane 57.15 33 ⇑P **P 08 37 10.2 +2.0**
BZS Buzias 57.20 32 ⇑P **P 08 37 09.3 +0.9**
BZS Buzias 57.20 32 ⇑P **P 08 37 09.3 +0.9**
ELL Elmali 57.31 45 P **P 08 37 10.5 +0.9**
ELL Elmali 57.31 45 P **P 08 37 10.5 +0.9**
ELL pmax pmax
comp=Z,82nm,0.7s
ELL MLR MLR
comp=Z,8µm,21.0s
VRAC Vranov 57.34 26 *e*P **P 08 37 08.1 -1.3**
VRAC Vranov 57.34 26 P **P 08 37 08.9 -0.5**
comp=Z,2.8nm,0.7s,baz=224,slow=5.6,SNR=5.9
VRAC LR LR 09 04 11.6
comp=Z,1µm,18.2s,baz=206,slow=39
comp=Z,2.8nm,0.7s
CLL Collm 57.41 22 *i*P **P 08 37 10.4 +0.6**
CLL *e*S **S 08 45 09.0 +3.6**
CLL pmax pmax

comp=Z,61nm,1.9s
BRG Berggiesshubel 57.43 23 *e*P **P 08 37 11.0 +1.0**
BRG Amp 08 37 13.7
comp=Z,19nm,1.3s
BRG Berggiesshubel 57.43 23 *e*P **P 08 37 11.0 +1.0**
BRG pmax pmax
comp=Z,19nm,1.3s
BRG Berggiesshubel 57.43 23 *e*P **P 08 37 11.0 +1.0**
comp=Z,36nm,1.7s,baz=212,slow=7.2
JAVC Velka Javorina 57.50 27 *e*P **P 08 37 11.4 +0.8**
ORTC Ortega, Tolima 57.52 275 *e*P **P 08 37 10.1 -1.3**
SURR Surduc 57.56 32 ⇓P **P 08 37 12.2 +1.3**
SIRR Siria 57.65 31 ⇓P **P 08 37 13.1 +1.4**
GZR Gura Zlata 57.68 33 ⇓P **P 08 37 13.5 +1.6**
GZR Gura Zlata 57.68 33 ⇓P **P 08 37 13.5 +1.6**
GUY2C Guyana, Caldas 57.71 276 *e*P **P 08 37 11.2 -2.0**
PSZ Piszkesteto 57.88 29 P **P 08 37 14.1 +0.8**
PSZ Piszkesteto 57.88 29 P **P 08 37 14.1 +0.8**
PSZ pmax pmax
comp=Z,121nm,1.8s
SJCC San Jacinto, C 57.91 282 *e*P **P 08 37 13.1 -1.1**
CO01 Juntas del Tor 57.92 234 IAMs_20 IAMs_20 08 59 50.2
comp=Z,2µm,20.0s
KRLC Kraliky 58.00 26 *e*P **P 08 37 14.8 +0.7**
KRLC Kraliky 58.00 26 *e*P **P 08 37 14.8 +0.7**
UREC San Jos de Ur 58.05 279 *e*P **P 08 37 13.9 -1.2**
MORC Moravsky Berou 58.11 26 ⇑P **P 08 37 14.7 -0.1**
MORC Moravsky Berou 58.11 26 *e*P **P 08 37 14.3 -0.5**
MORC Moravsky Berou 58.11 26 ⇑P **P 08 37 14.7 -0.1**
AC04 Llanos de Chal 58.12 236 P **P 08 37 14.8 -0.5**
AC04 IAmb IAmb 08 37 18.1
comp=Z,24nm,0.9s
EIL Elat 58.24 55 LR LR 09 03 44.6
comp=Z,1µm,18.4s,baz=256,slow=38
LOT Lotru 58.25 33 ⇑P **P 08 37 17.0 +1.0**
ISP Isparta 58.26 44 IAMs_20 IAMs_20 09 07 07.1
comp=Z,2µm,19.0s
COPA Copaceanca 58.27 35 ⇑P **P 08 37 17.7 +1.7**
KSP Ksiaz 58.36 25 P **P 08 37 17.4 +0.9**
KSP pmax pmax
comp=Z,8.0nm,1.6s
CBOC Ciudad Bolivar 58.39 277 *e*P **P 08 37 15.6 -2.0**
LANS Liptovska Anna 58.53 28 *e*P **P 08 37 19.7 +1.9**
LANS pmax pmax
comp=Z,6.0nm,1.4s
LANS Liptovska Anna 58.53 28 *e*P **P 08 37 19.7 +1.9**
DRGR 58.54 32 P **P 08 37 18.9 +0.9**
DRGR pmax pmax
comp=Z,18nm,1.1s
PLMC San Jos del P 58.60 276 *e*P **P 08 37 17.4 -1.6**
YOTC Yotoco, Valle 58.62 275 *e*P **P 08 37 16.5 -2.7**
DBBC Dabeiba 58.67 278 *e*P **P 08 37 20.6 +1.2**
ARR Arges 58.68 34 ⇑P **P 08 37 20.8 +1.8**
MARR Marisel-Cluj 58.68 32 ⇑P **P 08 37 19.3 +0.3**
CO03 El Pedregal 58.71 233 IAMs_20 IAMs_20 08 59 34.1
comp=Z,2µm,18.0s
CO05 La Serena 58.83 235 IAMs_20 IAMs_20 09 01 23.3
comp=Z,2µm,19.0s
POPC Popayan, Colom 58.90 273 *e*P **P 08 37 20.0 -1.3**
JAMC Jamundi, Valle 58.92 274 *e*P **P 08 37 19.1 -2.3**
VOIR 58.96 34 ⇑P **P 08 37 21.6 +0.7**
VOIR 58.96 34 ⇑P **P 08 37 21.6 +0.7**
CJR Cluj-Napoca 58.96 32 ⇑P **P 08 37 22.1 +1.3**
CJR Cluj-Napoca 58.96 32 ⇑P **P 08 37 22.1 +1.3**
CSS Mathiatis 59.00 48 IAMs_20 IAMs_20 09 01 59.0
comp=Z,2µm,22.0s
CO02 Combarbal 59.09 233 P **P 08 37 21.0 -1.1**
CO02 IAmb IAmb 08 37 42.9
comp=Z,55nm,1.2s
CRVS Cervenica-Dubn 59.31 29 *e*P **P 08 37 24.4 +1.2**
CRVS pmax pmax
comp=Z,78nm,1.7s
CRVS Cervenica-Dubn 59.31 29 *e*P **P 08 37 24.4 +1.2**
GHAJ Ghor Haditha 59.31 53 IAMs_20 IAMs_20 09 00 55.3
comp=Z,2µm,20.0s
BBAC Balboa, Cauca 59.46 272 *e*P **P 08 37 23.9 -1.3**
DOPR Dopca 59.47 34 ⇓P **P 08 37 24.9 +0.6**
MLR Muntele Rosu 59.49 34 ⇓P **P 08 37 24.9 +0.3**
MLR Muntele Rosu 59.49 34 ⇓P **P 08 37 24.9 +0.3**
MLR Muntele Rosu 59.49 34 P **P 08 37 24.2 -0.5**
comp=Z,18nm,0.9s,baz=177,slow=5.6,SNR=10
MLR LR LR 09 04 13.4
comp=Z,2µm,21.9s,baz=213,slow=37
comp=Z,18nm,0.9s
GCUF Volcan Galeras 59.55 271 *e*P **P 08 37 26.1 0.0**
PEL Peldehue 59.56 231 P **P 08 37 24.5 -0.8**
PEL Peldehue 59.56 231 P **P 08 37 24.5 -0.8**
PEL pmax pmax
comp=Z,69nm,1.4s
ISR Istrita 59.61 35 ⇑P **P 08 37 26.4 +1.0**
ISR Istrita 59.61 35 ⇑P **P 08 37 26.4 +1.0**
BALJ Balqa 59.66 52 IAMs_20 IAMs_20 09 04 19.3
comp=Z,1µm,19.0s
KOLS Kolonicke sedl 59.73 29 *e*P **P 08 37 27.6 +1.5**
KOLS pmax pmax
comp=Z,20nm,1.7s
KOLS Kolonicke sedl 59.73 29 *e*P **P 08 37 27.6 +1.5**
NNA Nana 59.76 256 IAMs_20 IAMs_20 09 01 22.4
comp=Z,2µm,20.0s
NNA Nana 59.76 256⇑ *i*P **P 08 37 27.0 0.0**
NNA pmax pmax
comp=Z,69nm,1.6s
NNA Nana 59.76 256 LR LR 09 01 32.4
comp=Z,2µm,21.6s,baz=73,slow=34
OZUR 59.77 34 ⇓P **P 08 37 27.9 +1.4**
MMAI Mount Meron Ar 59.81 51 P **P 08 37 26.7 -0.3**
comp=Z,0.9nm,0.3s,baz=239,slow=14,SNR=4.7
MMAI LR LR 09 05 14.9
comp=Z,2µm,19.1s,baz=242,slow=38
comp=Z,0.9nm,0.3s
BO04 La Punta 59.82 230 P **P 08 37 26.3 -0.7**
TURR Turia 59.87 34 ⇓P **P 08 37 28.3 +1.2**
MDUB Mudurnu 60.00 42 P **P 08 37 29.1 +0.8**
MT09 Talagante 60.03 230 IAMs_20 IAMs_20 09 01 33.0
comp=Z,2µm,20.0s
PLOR Plostina 60.10 34 ⇓P **P 08 37 28.5 -0.2**
PLOR Plostina 60.10 34 ⇓P **P 08 37 28.5 -0.2**
VRI Vrincioaia 60.16 34 ⇑P **P 08 37 29.2 +0.1**
VRI Vrincioaia 60.16 34 ⇑P **P 08 37 29.2 +0.1**
HAL Halifax 60.17 324 IAMs_20 IAMs_20 08 57 13.6
comp=Z,2µm,20.0s
VA01 Torpederas 60.26 231 P **P 08 37 29.6 -0.4**
VA01 IAmb IAmb 08 37 35.2
comp=Z,43nm,1.1s
BO02 Sierra Bellavi 60.27 229 P **P 08 37 29.5 -0.6**
BO02 IAmb IAmb 08 37 43.4
comp=Z,67nm,1.6s
MT01 Popeta 60.27 230 IAMs_20 IAMs_20 09 01 06.2
comp=Z,2µm,21.0s
BO01 Tunca 60.34 230 P **P 08 37 29.4 -1.2**
BO01 IAmb IAmb 08 37 30.6
comp=Z,25nm,0.9s
BO01 IAMs_20 IAMs_20 09 00 31.2
comp=Z,2µm,21.0s
BURAR Bucovina Array 60.38 32 ⇑P **P 08 37 32.4 +1.7**
BURAR Bucovina Array 60.38 32 P **P 08 37 31.4 +0.7**
BURAR Bucovina Array 60.38 32 ⇑P **P 08 37 32.4 +1.7**
IMBA Imbabura, San 60.39 270 IAMs_20 IAMs_20 08 59 58.3
comp=Z,2µm,22.0s
PANC Panciu 60.40 35 ⇓P **P 08 37 31.0 +0.3**
KWP Kalwaria Pacla 60.41 29 P **P 08 37 34.6 +3.9**
OTAV Otavalo 60.64 270 P **P 08 37 32.0 -1.5**
OTAV IAmb IAmb 08 37 39.2
comp=Z,34nm,1.5s
OTAV Otavalo 60.64 270 P **P 08 37 32.0 -1.5**
OTAV pmax pmax
comp=Z,33nm,1.5s
OTAV Otavalo 60.64 270 *e*P **P 08 37 32.4 -1.2**
GHRR 60.65 35 ⇑P **P 08 37 32.7 +0.2**
ANTO Ankara 60.78 43 ⇑P **P 08 37 34.9 +1.4**
ANTO Ankara 60.78 43 P **P 08 37 34.3 +0.7**
ANTO Ankara 60.78 43 IAMs_20 IAMs_20 09 08 28.9
comp=Z,1µm,19.0s
ANTO Ankara 60.78 43 P **P 08 37 34.3 +0.7**
ANTO pmax pmax
comp=Z,110nm,1.6s
ANTO MLR MLR
comp=Z,1µm,19.0s
ATAH Atahualpa 60.83 262 LR LR 09 03 12.7
comp=Z,2µm,18.6s,baz=93,slow=35
CHSH Refugio Sur-Vo 61.07 268 IAMs_20 IAMs_20 09 01 01.3
comp=Z,2µm,21.0s
ML02 Panimavida 61.13 228 P **P 08 37 35.0 -0.9**
LVV L'vov 61.18 30 *e*P **P 08 37 36.4 +0.5**

GO05 **Huala** 61.22 229 P **P** 08 37 35.6 -0.9
GO05 IAmb IAmb 08 37 42.5
comp=Z,51nm,1.1s
BRTR Keskin Array B 61.30 43 P **P** 08 37 37.8 +0.6
BRTR Keskin Array B 61.30 43 *i* P **P** 08 37 38.4 +1.3
BRTR pmax pmax
comp=Z,8.0nm,0.7s
BRTR Keskin Array B 61.30 43 P **P** 08 37 37.4 +0.2
comp=Z,8.0nm,0.7s,baz=238,slow=6.6,SNR=33
BRTR LR LR 09 07 05.1
comp=Z,1μm,19.4s,baz=225,slow=39
comp=Z,8.0nm,0.7s
BR131 Keskin Array S 61.30 43 P **P** 08 37 38.0 +0.9
BR131 Keskin Array S 61.30 43 P **P** 08 37 38.0 +0.9
BR131 pmax pmax
comp=Z,69nm,1.4s
COHC Cochancay 61.47 267 P **P** 08 37 38.2 -0.5
COHC Cochancay 61.47 267 *e*P **P** 08 37 38.4 -0.2
LMN Caledonia Moun 61.56 324 IAMs_20 IAMs_20 08 57 45.4
comp=Z,2μm,22.0s
MCRA Macar, Loja 62.23 265 P **P** 08 37 42.7 -1.1
MCRA Macar, Loja 62.23 265 *e*P **P** 08 37 42.5 -1.2
ARNL Arenillas 62.31 266 IAMs_20 IAMs_20 09 03 55.2
comp=Z,1μm,19.0s
GGN Saint George 62.37 323 IAMs_20 IAMs_20 09 00 43.8
comp=Z,2μm,20.0s
SORM Soroca 62.38 33 ⇑P **P** 08 37 42.7 -1.4
SORM Soroca 62.38 33 ⇑P **P** 08 37 42.7 -1.4
EMMW East Machias 62.53 322 IAMs_20 IAMs_20 08 57 53.1
comp=Z,1μm,22.0s
PLCA Paso Flores 62.59 223 P **P** 08 37 44.6 -1.1
PLCA IAmb IAmb 08 37 57.0
comp=Z,30nm,1.5s
PLCA IAMs_20 IAMs_20 09 00 49.4
comp=Z,2μm,21.0s
PLCA Paso Flores 62.59 223 P **P** 08 37 44.6 -1.1
PLCA pmax pmax
comp=Z,30nm,1.5s
PLCA Paso Flores 62.59 223 P **P** 08 37 44.3 -1.4
comp=Z,3.5nm,1.0s,baz=84,slow=7.0,SNR=8.1
PLCA LR LR 09 01 01.5
comp=Z,2μm,21.7s,baz=70,slow=32
comp=Z,3.5nm,1.0s
PLCA Paso Flores 62.59 223 *e*P **P** 08 37 44.5 -1.2
GO06 Curarrehue 62.72 224 IAMs_20 IAMs_20 09 04 53.1
comp=Z,1μm,18.0s
BI05 Punta Hualpn 62.83 228 IAMs_20 IAMs_20 09 01 55.0
comp=Z,1μm,21.0s
G65A Princeton 62.85 323 IAMs_20 IAMs_20 09 00 03.5
comp=Z,2μm,19.0s
BATG Bathurst New B 63.07 325 P **P** 08 37 48.7 0.0
BATG IAMs_20 IAMs_20 08 58 55.3
comp=Z,2μm,21.0s
M65A Busby, Falmout 63.07 318 IAMs_20 IAMs_20 08 58 48.3
comp=Z,1μm,19.0s
M65A Busby, Falmout 63.07 318 P **P** 08 37 48.6 -0.1
baz=117
L64A Middleborough 63.36 318 IAMs_20 IAMs_20 09 07 09.2
comp=Z,1μm,18.0s
F64A Sherman 63.66 323 IAMs_20 IAMs_20 09 01 43.0
comp=Z,2μm,18.0s
WES Weston 63.89 318 IAMs_20 IAMs_20 09 06 12.0
comp=Z,1μm,18.0s
PKME Peaks-Kenny Pk 63.94 322 P **P** 08 37 55.8 +1.3
baz=120
F63A Nahmakanta, Br 64.04 323 IAMs_20 IAMs_20 09 00 36.0
comp=Z,1μm,19.0s
HRV Adam Dziewonsk 64.10 318 P **P** 08 37 56.9 +1.3
baz=116
I63A Otisfield 64.16 320 IAMs_20 IAMs_20 09 00 11.3
comp=Z,1μm,19.0s
UCCT U. Connecticut 64.23 318 IAMs_20 IAMs_20 08 59 13.1
comp=Z,1μm,20.0s
ARPR Arapgir-MALATY 64.33 46 P **P** 08 37 57.5 +0.2
KIEV Kiev 64.33 31 ⇓P **P** 08 37 56.8 -0.1
KIEV Kiev 64.33 31 P **P** 08 37 56.8 -0.1
KIEV Kiev 64.33 31 P **P** 08 37 56.8 -0.1
KIEV pmax pmax
comp=Z,93nm,1.5s
AKASG Malin Array Be 64.34 31 P **P** 08 37 56.1 -0.8
comp=Z,2.8nm,0.6s,baz=236,slow=6.9,SNR=23
AKASG LR LR 09 08 04.2
comp=Z,1μm,18.2s,baz=231,slow=38
comp=Z,2.8nm,0.6s
AKBB Malin Array Si 64.34 31 P **P** 08 37 56.9 -0.1
AKBB Malin Array Si 64.34 31 P **P** 08 37 56.9 -0.1
AKBB pmax pmax
comp=Z,114nm,1.6s
QUA2 Belchertown 64.53 318 IAMs_20 IAMs_20 08 59 21.9
comp=Z,1μm,20.0s
LL02 Futaleuf 64.54 221 IAMs_20 IAMs_20 09 04 37.1
comp=Z,2μm,19.0s
LL01 San Ignacio de 64.56 222 IAMs_20 IAMs_20 09 02 16.7
comp=Z,2μm,20.0s
I62A Tamworth 64.56 320 IAMs_20 IAMs_20 08 59 28.9
comp=Z,2μm,20.0s
G62A West of Eustis 64.68 322 IAMs_20 IAMs_20 08 59 40.0
comp=Z,1μm,20.0s
BORG Borgarnes 64.68 358 LR LR 08 59 46.2
comp=Z,1μm,18.7s,baz=169,slow=30
D62A Allapoint, All 64.70 324 P **P** 08 37 59.3 -0.1
WSPT Westport, CT 64.72 317 P **P** 08 38 00.1 +0.4
E62A Clayton Lake 64.75 323 IAMs_20 IAMs_20 09 00 30.7
comp=Z,2μm,20.0s
HFS Hagfors 64.77 17 P **P** 08 37 58.8 -0.9
comp=Z,4.1nm,0.6s,baz=184,slow=8.9,SNR=10
HFS LR LR 09 08 13.5
comp=Z,1μm,18.9s,baz=219,slow=38
comp=Z,4.1nm,0.6s
L61B Northampton 64.82 318 P **P** 08 38 00.9 +0.6
baz=116,SNR=5.4
NB2 NORSAR Subarra 64.84 15 P **P** 08 38 00.7 +0.6
comp=Z,12nm,1.1s,baz=208,slow=6.9
NOA NORSAR Array B 64.84 15 P **P** 08 38 00.5 +0.3
comp=Z,2.5nm,0.8s,baz=328,slow=22,SNR=4.3
NOA LR LR 09 06 33.4
comp=Z,1μm,21.8s,baz=205,slow=36
comp=Z,2.5nm,0.8s
R61A Willards 65.05 313 IAMs_20 IAMs_20 09 01 52.8
comp=Z,1μm,19.0s
PAL Palisades 65.06 316 P **P** 08 38 03.1 +1.3
baz=114
S61A Accomac 65.06 312 IAMs_20 IAMs_20 08 59 18.1
comp=Z,2μm,20.0s
V61A Roper 65.09 310 IAMs_20 IAMs_20 08 59 56.9
comp=Z,2μm,20.0s
HNH Hanover 65.10 319 IAMs_20 IAMs_20 09 01 43.2
comp=Z,1μm,19.0s
LBNH Lisbon 65.11 320 IAMs_20 IAMs_20 09 00 38.4
comp=Z,2μm,20.0s
LBNH Lisbon 65.11 320 P **P** 08 38 03.7 +1.5
baz=117
J61A Chester 65.12 319 IAMs_20 IAMs_20 09 08 13.7
comp=Z,1μm,18.0s
BRNJ Basking Ridge 65.39 316 IAMs_20 IAMs_20 08 59 39.7
comp=Z,2μm,20.0s
TRY Troy 65.60 318 IAMs_20 IAMs_20 09 00 17.3
comp=Z,1μm,20.0s
T60A Surry 65.66 311 IAMs_20 IAMs_20 08 59 02.0
comp=Z,2μm,22.0s
RAYN Ar Rayn 65.67 64 P **P** 08 38 07.2 +0.9
RAYN IAmb IAmb 08 38 20.7
comp=Z,31nm,1.4s
RAYN Ar Rayn 65.67 64 IAMs_20 IAMs_20 09 03 03.0
comp=Z,1μm,19.0s
RAYN Ar Rayn 65.67 64 P **P** 08 38 07.2 +0.9
RAYN pmax pmax
comp=Z,31nm,1.4s
LMQ La Malbaie 65.68 324 P **P** 08 38 05.7 -0.1
LMQ IAmb IAmb 08 38 19.0
comp=Z,25nm,1.2s
LMQ IAMs_20 IAMs_20 09 02 02.5
comp=Z,2μm,20.0s
VT1 Waterbury 65.68 320 IAMs_20 IAMs_20 09 01 53.4
comp=Z,1μm,19.0s
060A Indiantown 65.74 300 IAMs_20 IAMs_20 09 00 19.2
comp=Z,2μm,20.0s
Y60A Bolivia 65.80 308 IAMs_20 IAMs_20 09 00 14.7
comp=Z,1μm,19.0s
WUPA West Chester U 65.83 315 P **P** 08 38 07.8 +0.9
WUPA IAmb IAmb 08 38 18.2
comp=Z,25nm,1.4s
CNNC Cliffs of the 65.92 309 IAMs_20 IAMs_20 08 59 39.0
comp=Z,2μm,22.0s
061Z Ochoppi 65.96 298 IAMs_20 IAMs_20 09 00 58.0
comp=Z,1μm,20.0s
MNK Minsk 65.99 27 *i* P **P** 08 38 07.2 -0.4
MNK *i* 08 40 32.6
MNK *i* S **S** 08 46 56.3 +2.4
MNK pmax pmax
comp=Z,16nm,0.9s
MNK pmax pmax
comp=N,10.0nm,0.6s
MNK pmax pmax
comp=E,12nm,0.9s
MNK MLR MLR
comp=N,882nm,18.0s
MNK MLR MLR
comp=Z,1μm,18.0s
MNK MLR MLR
comp=E,372nm,20.0s
U59A Littleton 66.20 310 P **P** 08 38 09.4 0.0
U59A IAmb IAmb 08 38 11.2
comp=Z,30nm,1.2s
U59A IAMs_20 IAMs_20 09 00 42.4
comp=Z,2μm,20.0s
T59A Double "B" Far 66.22 311 P **P** 08 38 10.1 +0.6
T59A IAmb IAmb 08 38 11.3
comp=Z,44nm,1.2s
T59A IAMs_20 IAMs_20 08 59 51.9
comp=Z,2μm,21.0s
W59A Clinton 66.33 309 IAMs_20 IAMs_20 09 00 11.8
comp=Z,2μm,20.0s
MVL Millersville 66.39 314 P **P** 08 38 10.7 +0.2
MVL IAmb IAmb 08 38 22.5
comp=Z,45nm,1.7s
LDAQ Lac Daran 66.43 324 IAMs_20 IAMs_20 09 02 17.1
comp=Z,2μm,19.0s
FRNY Flat Rock 66.44 320 IAMs_20 IAMs_20 09 01 46.5
comp=Z,2μm,19.0s
NCB Newcomb 66.48 319 IAMs_20 IAMs_20 09 00 44.8
comp=Z,1μm,21.0s
CBN Corbin Frederi 66.50 312 IAMs_20 IAMs_20 08 59 28.2
comp=Z,2μm,21.0s
CBN Corbin Frederi 66.50 312 P **P** 08 38 12.0 +0.8
baz=110
VOI Vohitsoka 66.51 114 IAMs_20 IAMs_20 09 03 53.8
comp=Z,2μm,20.0s
SDMD Soldier's Deli 66.53 314 P **P** 08 38 11.8 +0.3
MNTQ Montreal, Queb 66.75 321 IAMs_20 IAMs_20 09 01 31.7
comp=Z,2μm,19.0s
R58B Mineral 66.80 312 IAMs_20 IAMs_20 08 59 59.0
comp=Z,2μm,22.0s
GURO Guroymak-BITLI 66.82 48 P **P** 08 38 14.3 +0.8
GURO IAmb IAmb 08 38 15.6
comp=Z,24nm,0.8s
DWPF Disney Wildern 66.91 301 IAMs_20 IAMs_20 09 00 14.2
comp=Z,1μm,20.0s
DWPF Disney Wildern 66.91 301 P **P** 08 38 14.6 +0.6
baz=103
J58A Remsen 66.94 318 IAMs_20 IAMs_20 09 07 36.7
comp=Z,1μm,18.0s
N58A Sunbury 66.96 315 P **P** 08 38 14.8 +0.7
N58A IAmb IAmb 08 38 28.5
comp=Z,24nm,1.1s
BINY Binghamton 66.96 317 P **P** 08 38 14.9 +0.8
baz=113,SNR=9.3
LONY Lake Ozonia 66.99 320 P **P** 08 38 14.1 -0.1
baz=115
V58A Windy Hill, Pi 67.05 309 IAMs_20 IAMs_20 09 02 12.7
comp=Z,1μm,20.0s
NHSC New Hope 67.11 306 IAMs_20 IAMs_20 09 00 06.4
comp=Z,2μm,22.0s
NHSC New Hope 67.11 306 P **P** 08 38 15.6 +0.4
baz=106,SNR=6.1
SOR Soroa 67.24 295 IAMs_20 IAMs_20 09 01 31.9
comp=Z,1μm,22.0s
P57A Homestead Farm 67.41 313 IAMs_20 IAMs_20 09 05 03.2
comp=Z,1μm,19.0s
257A Skidaway Islan 67.50 305 IAMs_20 IAMs_20 09 00 25.8
comp=Z,2μm,22.0s
T57A Hurt 67.52 310 IAMs_20 IAMs_20 09 03 26.3
comp=Z,2μm,19.0s
K57A Scipio Center 67.52 317 IAMs_20 IAMs_20 09 01 12.2
comp=Z,1μm,20.0s
JTS Las Juntas de 67.53 281 LR LR 09 05 33.1
comp=Z,281nm,21.9s,baz=107,slow=34
S57A Dark Hollow, R 67.53 311 IAMs_20 IAMs_20 09 00 42.6
comp=Z,2μm,21.0s
W57A Gilead 67.54 308 IAMs_20 IAMs_20 09 01 18.8
comp=Z,1μm,20.0s
TRQ Mont Tremblant 67.65 321 IAMs_20 IAMs_20 09 00 44.4
comp=Z,1μm,22.0s
SSPA Standing Stone 67.72 315 P **P** 08 38 19.6 +0.6
SSPA IAmb IAmb 08 38 20.8
comp=Z,39nm,1.3s
SSPA Standing Stone 67.72 315 P **P** 08 38 19.4 +0.5
baz=111
SCHQ Schefferville 67.73 332 P **P** 08 38 19.1 +0.3
comp=Z,8.4nm,1.0s,baz=118,slow=5.9,SNR=8.0
SCHQ LR LR 09 03 07.4
comp=Z,823nm,20.9s,baz=138,slow=32
comp=Z,8.4nm,1.0s
U56A King 68.19 309 IAMs_20 IAMs_20 09 01 09.0
comp=Z,2μm,21.0s
BLA Blacksburg 68.47 310 IAMs_20 IAMs_20 09 01 10.5
comp=Z,2μm,21.0s
BLA Blacksburg 68.47 310 P **P** 08 38 24.2 +0.4
baz=108
R55A Marlinton 68.57 312 IAMs_20 IAMs_20 09 01 05.1
comp=Z,2μm,22.0s
KMSC Kings Mountain 68.59 308 P **P** 08 38 25.4 +0.9
baz=106
J55A Hilton 68.61 317 IAMs_20 IAMs_20 09 02 15.9
comp=Z,1μm,20.0s
M55A Ridgway 68.63 315 P **P** 08 38 24.6 -0.1
M55A IAmb IAmb 08 38 27.1
comp=Z,51nm,1.2s
255A Hazlehurst 68.68 304 IAMs_20 IAMs_20 09 00 59.1
comp=Z,1μm,21.0s
V55A Taylorsville 68.69 309 IAMs_20 IAMs_20 09 01 43.3
comp=Z,1μm,20.0s
MATN Matagalpa 68.70 284 P **P** 08 38 25.0 -0.7
MATN IAmb IAmb 08 38 30.5
comp=Z,35nm,1.3s
SOEG Soedalen 68.75 355 *i* P **P** 08 38 25.6 +0.8
SOEG IAmb IAmb 08 38 50.5
comp=Z,15nm,1.0s
MCWV Mont Chateau 68.80 313 P **P** 08 38 25.8 +0.1
baz=109
AKH Akhalkalaki 68.85 45 P **P** 08 38 25.3 -0.9
PAULI Pauline 68.89 308 P **P** 08 38 26.6 +0.2
DELO Deloro Mine 68.94 319 IAMs_20 IAMs_20 09 11 42.7
comp=Z,1μm,19.0s
HODGE Hodges 69.08 307 IAMs_20 IAMs_20 09 01 46.6
comp=Z,1μm,19.0s
KIV Kislovodsk 69.19 42 *e*P **P** 08 38 29.1 +0.9
KIV *e*S **S** 08 47 36.6 +3.6
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,497nm,17.0s
KBZ Khabaz 69.25 43 P **P** 08 38 29.2 +0.8
comp=Z,13nm,0.8s,baz=233,slow=6.0,SNR=16
KBZ LR LR 09 11 17.2
comp=Z,432nm,19.0s,baz=260,slow=38
comp=Z,13nm,0.8s
S54A Dingess, Beckl 69.33 311 IAMs_20 IAMs_20 09 02 28.0
comp=Z,2μm,20.0s
GNI Garni 69.33 47*c* *i* P **P** 08 38 30.1 +0.8
GNI pmax pmax
comp=Z,57nm,1.4s
GNI Garni 69.33 47 P **P** 08 38 29.7 +0.5
comp=Z,7.0nm,0.6s,baz=308,slow=4.3,SNR=4.5
GNI LR LR 09 11 36.0
comp=Z,465nm,19.7s,baz=268,slow=38
comp=Z,7.0nm,0.6s
U54A Nelsons Funny 69.35 309 IAMs_20 IAMs_20 09 01 45.7
comp=Z,1μm,21.0s
O54A Avella 69.36 313 IAMs_20 IAMs_20 09 04 17.8
comp=Z,1μm,18.0s
154A Montrose 69.37 305 IAMs_20 IAMs_20 09 01 34.2
comp=Z,1μm,21.0s
DY2G Dye2 69.37 348 *i* P **P** 08 38 28.9 -0.1
DY2G IAmb IAmb 08 38 33.0
comp=Z,12nm,0.9s
TIGA Tifton 69.49 304 P **P** 08 38 30.9 +0.8
baz=103,SNR=5.5
NAX Nakhchivan 69.58 48 P **P** 08 38 31.8 +1.1
ERPA Erie 69.71 315 IAMs_20 IAMs_20 09 03 05.0
comp=Z,1μm,20.0s
ERPA Erie 69.71 315 P **P** 08 38 31.6 +0.3
baz=110,SNR=5.6
FINES FINESS Array B 69.77 21 P **P** 08 38 31.3 0.0
FINES FINESS Array B 69.77 21 P **P** 08 38 31.4 +0.2
comp=Z,10nm,0.5s,baz=208,slow=4.8,SNR=66
FINES LR LR 09 08 59.0
comp=Z,2μm,21.2s,baz=226,slow=36
comp=Z,10nm,0.5s
FIA1 FINESS Array S 69.77 21 P **P** 08 38 32.0 +0.7
GOGA Godfrey 69.85 306 P **P** 08 38 32.0 -0.4
GOGA IAmb IAmb 08 38 44.1
comp=Z,27nm,1.4s
GOGA Godfrey 69.85 306 IAMs_20 IAMs_20 09 02 01.0
comp=Z,2μm,21.0s
GOGA Godfrey 69.85 306 P **P** 08 38 32.9 +0.5
baz=104
GOGA Godfrey 69.85 306 P **P** 08 38 32.0 -0.4
GOGA pmax pmax
comp=Z,27nm,1.4s
P53A Whipple 69.88 312 IAMs_20 IAMs_20 09 01 56.7
comp=Z,1μm,21.0s
N53A Lisbon 69.89 314 P **P** 08 38 33.1 +0.6
N53A IAmb IAmb 08 38 35.0
comp=Z,48nm,1.3s
N53A IAMs_20 IAMs_20 09 05 03.8
comp=Z,1μm,19.0s
VORD Divnogorie 69.94 34 *e*P **P** 08 38 29.9 -2.6
VORD pmax pmax
comp=Z,20nm,1.0s
M53A WI Miller and 69.97 315 IAMs_20 IAMs_20 09 03 04.0
comp=Z,1μm,21.0s
M53A WI Miller and 69.97 315 P **P** 08 38 32.8 -0.1
baz=109,SNR=11
VSR Storozhevoye 69.98 34 *e*P **P** 08 38 29.9 -2.9
VSR pmax pmax
comp=Z,20nm,1.0s
O53A New Philadelph 69.98 313 IAMs_20 IAMs_20 09 04 30.4
comp=Z,1μm,19.0s
O53A New Philadelph 69.98 313 P **P** 08 38 33.6 +0.5
baz=108,SNR=9.9
SADO Sadowa 70.05 318 IAMs_20 IAMs_20 09 08 24.9
comp=Z,1μm,19.0s
SADO Sadowa 70.05 318 LR LR 09 06 41.9
comp=Z,828nm,18.0s,baz=112,slow=34
TGUH Tegucigalpa,Un 70.11 285 *e*P **P** 08 38 35.3 +0.9
VORR Voronezh 70.21 34 *e*P **P** 08 38 32.2 -2.0
VORR pmax pmax
comp=Z,20nm,0.9s
VLDQ Val d'Or 70.23 322 P **P** 08 38 35.5 +1.1
VLDQ IAmb IAmb 08 38 37.6
comp=Z,24nm,1.2s
Q52A Bidwell 70.38 312 IAMs_20 IAMs_20 09 02 53.9
comp=Z,2μm,20.0s
O52A Adamsville 70.40 313 P **P** 08 38 36.2 +0.6
O52A IAMs_20 IAMs_20 09 02 25.4
comp=Z,1μm,20.0s
Y52A Lilburn 70.44 306 IAMs_20 IAMs_20 09 02 07.6
comp=Z,1μm,22.0s
SCO Scoresbysund 70.45 359 *i* P **P** 08 38 35.1 -0.1
SCO IAmb IAmb 08 38 52.1
comp=Z,12nm,1.3s
P52A Corning 70.47 312 IAMs_20 IAMs_20 09 02 36.4
comp=Z,1μm,20.0s
P52A Corning 70.47 312 P **P** 08 38 36.4 +0.4
baz=107,SNR=9.6
OBN Obninsk 70.48 30 *e*P **P** 08 38 39.8 +4.1
OBN *i* 08 38 44.3
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,2μm,16.0s
OBN Obninsk 70.48 30 LR LR 09 12 09.6
comp=Z,2μm,18.9s,baz=200,slow=38
LPSR Galich'ya Gora 70.48 33 *e*P **P** 08 38 32.8 -3.0
LPSR pmax pmax
comp=Z,20nm,0.9s
M52A Chesterland 70.49 315 P **P** 08 38 36.4 +0.2
M52A IAMs_20 IAMs_20 09 03 27.7
comp=Z,1μm,20.0s
ICESG Greenland Ices 70.57 352 *i* P **P** 08 38 35.6 -0.8
ICESG IAmb IAmb 08 38 40.8
comp=Z,12nm,0.9s
W52A Murphy 70.63 307 P **P** 08 38 36.9 -0.3
W52A IAmb IAmb 08 38 39.1
comp=Z,36nm,1.2s
GANJ Ganja 70.63 47 P **P** 08 38 37.7 +0.6
TZTN Tazewell 70.70 309 IAMs_20 IAMs_20 09 03 19.4
comp=Z,1μm,19.0s
TZTN Tazewell 70.70 309 P **P** 08 38 38.3 +0.8
baz=105
152A Waverly Hall 70.70 305 IAMs_20 IAMs_20 09 03 06.5
comp=Z,1μm,19.0s
SFJD Kangerlussuaq 70.75 347 *i* P **P** 08 38 36.8 -0.3
SFJD IAmb IAmb 08 38 42.6
comp=Z,14nm,0.8s
SFJD Kangerlussuaq 70.75 347 LR LR 09 01 20.4
comp=Z,684nm,19.8s,baz=150,slow=29
SSFO Shawnee State 71.00 311 P **P** 08 38 40.2 +0.8
S51A Beattyville 71.02 310 IAMs_20 IAMs_20 09 02 38.8
comp=Z,2μm,21.0s
N51A Ashland 71.03 314 P **P** 08 38 39.8 +0.3
N51A IAMs_20 IAMs_20 09 04 52.1
comp=Z,1μm,19.0s
VNA2 Neumayer--Watz 71.10 176 ⇑PKKPbc **P** 08 38 40.3 +1.1
comp=Z,32nm,0.6s,baz=344,slow=6.3
P51A Williamsport 71.12 312 P **P** 08 38 40.0 0.0
P51A IAmb IAmb 08 38 41.7
comp=Z,50nm,1.2s
P51A IAMs_20 IAMs_20 09 03 16.4
comp=Z,1μm,21.0s
V51A Loudon 71.14 308 IAMs_20 IAMs_20 09 01 44.1
comp=Z,1μm,22.0s
ZKTA Zakatala 71.15 46 P **P** 08 38 41.1 +0.9
JMIC Jan Mayen 71.16 3 LR LR 09 06 38.8
comp=Z,447nm,19.5s,baz=238,slow=33
CPCT Cooper Cave 71.19 308 P **P** 08 38 40.5 -0.1
CPCT IAmb IAmb 08 38 42.4
comp=Z,27nm,1.2s
Q51A Peebles 71.20 312 IAMs_20 IAMs_20 09 02 34.7
comp=Z,2μm,22.0s
Z51A Franklin 71.22 305 IAMs_20 IAMs_20 09 02 53.2
comp=Z,2μm,21.0s
X51A Calhoun 71.25 307 IAMs_20 IAMs_20 09 03 24.9
comp=Z,1μm,20.0s
ACSO Alum Creek Sta 71.27 313 IAMs_20 IAMs_20 09 02 51.4
comp=Z,1μm,21.0s
MOS Moscow 71.31 29 *e*P **P** 08 38 40.0 -0.8
MOS pmax pmax
comp=Z,64nm,1.0s
MOS MLR MLR
comp=Z,2μm,19.0s
VRH Novokhopyorsk 71.42 35 *e*P **P** 08 38 41.0 -0.6
VRH pmax pmax
comp=Z,9.0nm,0.4s
M50A Fremont 71.66 314 P **P** 08 38 43.9 +0.7
M50A IAmb IAmb 08 38 45.5
comp=Z,59nm,1.2s
M50A IAMs_20 IAMs_20 09 04 34.6
comp=Z,1μm,20.0s
TEIG Tepich 71.71 291 LR LR 09 04 04.7
comp=Z,4μm,20.6s,baz=202,slow=31
R50A Paris 71.75 311 IAMs_20 IAMs_20 09 05 11.1
comp=Z,2μm,19.0s
K50A Casco 71.76 315 P **P** 08 38 44.1 +0.3
K50A IAmb IAmb 08 38 45.4
comp=Z,53nm,1.1s
T50A Nancy 71.82 309 IAMs_20 IAMs_20 09 04 04.1
comp=Z,1μm,20.0s
250A Grady 71.84 304 P **P** 08 38 44.9 +0.4
SNAA Sanae 72.17 175 *e*P P 08 38 53.0 +7.2
SNAA Sanae 72.17 175 ⇑PKKPbc **P** 08 38 46.7 +0.9
comp=Z,275nm,0.9s
SNAA Sanae 72.17 175*d* *i* P **P** 08 38 46.9 +1.1
SNAA pmax pmax
comp=Z,18nm,1.7s
SNAA Sanae 72.17 175 P **P** 08 38 46.7 +0.9
comp=Z,7.4nm,0.8s,baz=330,slow=6.9,SNR=12
SNAA LR LR 09 03 55.8
comp=Z,491nm,20.2s,baz=9.0,slow=30
comp=Z,7.4nm,0.8s
MAK Makhachkala 72.17 44 *e*P **P** 08 38 43.1 -3.1
MAK *e*S **S** 08 48 03.4 -4.1
MAK pmax pmax
comp=Z,246nm,1.6s
O49A Covington 72.26 312 P **P** 08 38 46.5 -0.4
O49A IAmb IAmb 08 38 49.0
comp=Z,57nm,1.2s
O49A IAMs_20 IAMs_20 09 03 31.6
comp=Z,1μm,21.0s
SWET Sewanee 72.26 307 IAMs_20 IAMs_20 09 03 57.6

comp=Z,1µm,22.0s
BRAL Brewton 72.33 303 P P 08 38 48.4 +0.9
baz=101,SNR=5.4
N49A Columbus Grove 72.34 313 P P 08 38 47.6 +0.2
N49A IAmb IAmb 08 38 48.9
comp=Z,30nm,1.1s
N49A IAMs_20 IAMs_20 09 04 18.9
comp=Z,1µm,20.0s
AAM Ann Arbor 72.35 315 IAMs_20 IAMs_20 09 04 58.1
comp=Z,1µm,20.0s
AAM Ann Arbor 72.35 315 P P 08 38 47.9 +0.6
baz=107
P49A Miami Univ. Ec 72.37 312 P P 08 38 47.5 0.0
P49A IAmb IAmb 08 38 48.9
comp=Z,44nm,1.3s
P49A Miami Univ. Ec 72.37 312 P P 08 38 47.3 -0.2
baz=105,SNR=6.9
R49A Shelbyville 72.39 310 IAMs_20 IAMs_20 09 07 12.2
comp=Z,1µm,19.0s
LRAL Lakeview Retre 72.66 305 IAMs_20 IAMs_20 09 04 57.3
comp=Z,1µm,19.0s
LRAL Lakeview Retre 72.66 305 P P 08 38 49.4 0.0
baz=102,SNR=14
ILULI Ilulissat 72.67 348 *i* P P 08 38 48.2 -0.5
ILULI IAmb IAmb 08 38 53.9
comp=Z,7.6nm,0.8s
PMSA Palmer Station 72.73 199 LR LR 09 02 21.4
comp=Z,1µm,21.2s,baz=40,slow=29
L48A N Adams 72.81 314 IAMs_20 IAMs_20 09 07 40.1
comp=Z,1µm,19.0s
O48B Farmland 72.88 312 IAMs_20 IAMs_20 09 03 50.1
comp=Z,1µm,21.0s
O48B Farmland 72.88 312 P P 08 38 50.3 -0.2
baz=105,SNR=11
X48A Hartselle 72.98 306 IAMs_20 IAMs_20 09 03 36.9
comp=Z,1µm,22.0s
TROLL Troll, Antarti 73.03 174 ⇑PKKPbc P 08 38 52.1 +1.2
comp=Z,419nm,0.7s
V48A Smith Brothers 73.08 307 IAMs_20 IAMs_20 09 04 34.5
comp=Z,1µm,20.0s
NVL N'lazarevskaya 73.23 170 *e*P P 08 38 56.4 +4.5
NVL pmax pmax
comp=Z,23nm,1.1s
WCI Wyandotte Cave 73.23 310 IAMs_20 IAMs_20 09 04 38.5
comp=Z,2µm,20.0s
WCI Wyandotte Cave 73.23 310 P P 08 38 52.8 +0.1
baz=104
N47A Urbana 73.44 313 IAMs_20 IAMs_20 09 04 39.8
comp=Z,1µm,20.0s
J47A Sunmer 73.44 315 IAMs_20 IAMs_20 09 05 43.9
comp=Z,1µm,20.0s
SUMG Summit 73.66 354 *i* P P 08 38 56.0 +1.0
SUMG IAmb IAmb 08 39 00.3
comp=Z,15nm,0.9s
FRB Frobisher Bay 73.68 339 LR LR 09 05 56.9
comp=Z,493nm,18.6s,baz=103,slow=32
GLMI Grayling 73.75 317 P P 08 38 55.8 +0.2
GLMI Grayling 73.75 317 P P 08 38 55.5 -0.1
baz=107
PLAL Pickwick Lake 73.92 306 IAMs_20 IAMs_20 09 04 28.8
comp=Z,1µm,21.0s
WVT Waverly 73.96 308 IAMs_20 IAMs_20 09 09 38.8
comp=Z,1µm,20.0s
WVT Waverly 73.96 308 P P 08 38 56.6 -0.4
baz=102
E46A Sault Ste Mari 74.00 319 IAMs_20 IAMs_20 09 04 41.5
comp=Z,1µm,21.0s
UMMG Uummannaq 74.07 349 *i* P P 08 38 57.7 +0.7
UMMG IAmb IAmb 08 39 09.3
comp=Z,8.8nm,1.2s
L46A Eue Claire 74.16 314 IAMs_20 IAMs_20 09 08 20.0
comp=Z,1µm,19.0s
P46A Rosedale 74.25 311 P P 08 38 58.9 +0.3
P46A IAmb IAmb 08 39 00.3
comp=Z,52nm,0.9s
146A Union 74.28 304 P P 08 38 58.9 0.0
146A IAmb IAmb 08 39 01.2
comp=Z,57nm,1.0s
SFIN Lafayette 74.35 312 IAMs_20 IAMs_20 09 04 33.9
comp=Z,2µm,22.0s
SFIN Lafayette 74.35 312 P P 08 38 58.8 -0.4
baz=104
I45A Fountain 74.65 316 IAMs_20 IAMs_20 09 06 21.7
comp=Z,1µm,19.0s
KLMR Klimovskoe 74.71 25 *e*P P 08 38 59.9 -0.9
KLMR pmax pmax
comp=Z,75nm,1.5s
KLMR MLR MLR
comp=Z,1µm,13.0s
OLIL Olney 74.73 310 P P 08 39 01.1 -0.3
UTMT University of 74.83 308 IAMs_20 IAMs_20 09 05 26.7
comp=Z,1µm,21.0s
OXF Oxford 74.91 306 IAMs_20 IAMs_20 09 05 06.9
comp=Z,2µm,22.0s
OXF Oxford 74.91 306 P P 08 39 01.4 -1.1
baz=101,SNR=6.5
HALT Halls 75.12 307 IAMs_20 IAMs_20 09 05 15.4
comp=Z,1µm,20.0s
GLAT Glass 75.15 308 IAMs_20 IAMs_20 09 12 41.1
comp=Z,1µm,18.0s
ARCES ARCESS Array B 75.21 14 P P 08 39 04.1 +0.6
comp=Z,2.4nm,0.7s,baz=216,slow=6.0,SNR=8.6
ARCES LR LR 09 12 30.0
comp=Z,723nm,20.8s,baz=240,slow=36
comp=Z,2.4nm,0.7s
HQIL Hanson Quary C 75.24 313 IAMs_20 IAMs_20 09 05 13.5
comp=Z,1µm,20.0s
BELG Belogornoye 75.27 35⇓ *e*P P 08 39 04.2 +0.1
BELG pmax pmax
comp=Z,5.0nm,1.1s
BELG Belogornoye 75.27 35 P P 08 39 04.3 +0.1
comp=Z,16nm,0.9s,baz=79,slow=8.2,SNR=5.9
BELG LR LR 09 15 28.5
comp=Z,730nm,20.3s,baz=252,slow=38
comp=Z,16nm,0.9s
LNXT Lenox 75.28 307 IAMs_20 IAMs_20 09 09 15.5
comp=Z,1µm,20.0s
M44A Midewin, Midew 75.28 313 IAMs_20 IAMs_20 09 05 24.6
comp=Z,1µm,20.0s
L44A Lake County Fo 75.37 314 IAMs_20 IAMs_20 09 05 27.9
comp=Z,1µm,21.0s
L44A Lake County Fo 75.37 314 P P 08 39 05.1 0.0
baz=104
SIUC Southern Illin 75.38 309 IAMs_20 IAMs_20 09 08 19.2
comp=Z,995nm,19.0s
S44A Carbondale 75.40 309 P P 08 39 04.6 -0.7
S44A IAmb IAmb 08 39 06.3
comp=Z,41nm,1.1s
S44A IAMs_20 IAMs_20 09 08 19.9
comp=Z,1µm,19.0s
VBMS Vicksburg 75.43 303 P P 08 39 06.0 +0.4
VBMS IAmb IAmb 08 39 07.2
comp=Z,59nm,1.2s
VBMS Vicksburg 75.43 303 P P 08 39 05.8 +0.2
baz=100
MET Memphis--Engin 75.45 306 IAMs_20 IAMs_20 09 05 13.1
comp=Z,1µm,22.0s
PVMO Portageville 75.50 308 IAMs_20 IAMs_20 09 13 52.5
comp=Z,1µm,18.0s
PEBM Pemiscott Bayo 75.57 307 IAMs_20 IAMs_20 09 04 32.4
comp=Z,1µm,22.0s
CGM3 Cape Girardeau 75.64 309 P P 08 39 05.8 -0.8
CGM3 IAmb IAmb 08 39 06.8
comp=Z,32nm,1.2s
GNAR Gosnell 75.67 307 IAMs_20 IAMs_20 09 11 06.0
comp=Z,1µm,19.0s
E43A Lone Tree Farm 75.78 318 IAMs_20 IAMs_20 09 05 34.8
comp=Z,1µm,21.0s
K43A Burlington 75.80 314 IAMs_20 IAMs_20 09 08 44.2
comp=Z,1µm,19.0s
H43A Windswept, Lux 75.82 316 IAMs_20 IAMs_20 09 06 56.9
comp=Z,1µm,20.0s
HDIL Hopedale 76.02 312 P P 08 39 08.5 -0.4
HDIL IAmb IAmb 08 39 09.8
comp=Z,49nm,1.2s
HDIL IAMs_20 IAMs_20 09 06 08.2
comp=Z,1µm,20.0s
HDIL Hopedale 76.02 312 P P 08 39 08.4 -0.4
baz=102
APA Apatity 76.12 18⇓ *i* P P 08 39 09.2 +0.4
APA *i* 08 39 15.7
APA pmax pmax
comp=Z,7.0nm,0.9s
SLM Saint Louis 76.34 310 IAMs_20 IAMs_20 09 06 44.8
comp=Z,1µm,20.0s
FVM French Village 76.37 309 IAMs_20 IAMs_20 09 06 25.4
comp=Z,1µm,20.0s
ELIB Princess Elisa 76.39 168 *d*P P 08 39 11.5 +1.1
ELIB *d*PcP PcP 08 39 23.4 +1.2
I42A Draeger Farm, 76.48 315 IAMs_20 IAMs_20 09 08 13.4
comp=Z,1µm,20.0s
UPNV Upernavik 76.52 349 *i* P P 08 39 11.0 +0.1
UPNV IAmb IAmb 08 39 16.4
comp=Z,7.1nm,1.1s
LCAR Lake Charles 76.59 307 IAMs_20 IAMs_20 09 05 37.5
comp=Z,1µm,22.0s
LVZ Lovozero 76.70 18⇑ *e*P P 08 39 13.6 +1.5
LVZ pmax pmax
comp=Z,26nm,1.1s
D41A Chassel 77.00 319 IAMs_20 IAMs_20 09 13 12.1
comp=Z,1µm,19.0s
CCM Cathedral Cave 77.02 309 IAMs_20 IAMs_20 09 09 01.6
comp=Z,936nm,19.0s
CCM Cathedral Cave 77.02 309 P P 08 39 13.9 -0.6
baz=100
COWI Conover 77.15 317 IAMs_20 IAMs_20 09 06 50.1
comp=Z,1µm,20.0s
JFWS Jewell Farm 77.22 314 IAMs_20 IAMs_20 09 06 47.8
comp=Z,987nm,20.0s
JFWS Jewell Farm 77.22 314 P P 08 39 15.0 -0.6
baz=102,SNR=8.3
FCAR Ozark Folk Cen 77.34 307 IAMs_20 IAMs_20 09 09 27.2
comp=Z,1µm,20.0s
WHAR Wooly Hollow 77.38 306 IAMs_20 IAMs_20 09 06 22.2
comp=Z,1µm,21.0s
WSAR W J Sarin 77.56 66 LR LR 09 14 28.1
comp=Z,578nm,19.4s,baz=291,slow=36
CMIG Matias Romero 77.66 287 LR LR 09 10 59.6
comp=Z,468nm,21.5s,baz=81,slow=34
MGMO Mountain Grove 77.66 308 IAMs_20 IAMs_20 09 14 25.7
comp=Z,993nm,20.0s
I40A Norwalk 77.69 315 IAMs_20 IAMs_20 09 09 46.2
comp=Z,1µm,20.0s
G40A Rib Lake 77.69 316 IAMs_20 IAMs_20 09 07 22.3
comp=Z,1µm,20.0s
X40A Basin Creek Fa 77.70 305 IAMs_20 IAMs_20 09 07 12.7
comp=Z,1µm,20.0s
L40A Anamosa 77.75 313 IAMs_20 IAMs_20 09 07 22.9
comp=Z,1µm,20.0s
WLAR White Oak Lake 77.81 304 IAMs_20 IAMs_20 09 09 04.6
comp=Z,1µm,20.0s
R40A Maddies Statio 77.85 309 IAMs_20 IAMs_20 09 09 26.7
comp=Z,1µm,18.0s
MIAR Mount Ida 78.31 305 P P 08 39 21.3 -0.5
baz=98,SNR=8.2
KIRV Kirov 78.33 30⇓ *i* P P 08 39 20.0 -1.3
KIRV Kirov 78.33 30 P P 08 39 21.1 -0.2
comp=Z,13nm,0.7s,baz=318,slow=6.0,SNR=4.4
KIRV LR LR 09 16 52.7
comp=Z,794nm,18.0s,baz=249,slow=38
comp=Z,13nm,0.7s
S39A Bolivar 78.58 308 P P 08 39 22.6 -0.6
S39A IAmb IAmb 08 39 23.9
comp=Z,50nm,1.1s
S39A IAMs_20 IAMs_20 09 12 32.9
comp=Z,1µm,18.0s
NATX Nacogdoches 78.85 302 P P 08 39 24.4 -0.4
baz=97,SNR=7.9
HHAR Hobbs 78.85 307 IAMs_20 IAMs_20 09 08 29.3
comp=Z,1µm,20.0s
GEYT Alibeck 78.93 51 P P 08 39 24.9 -0.3
comp=Z,3.1nm,0.6s,baz=287,slow=10,SNR=8.1
GEYT LR LR 09 17 16.4
comp=Z,857nm,18.7s,baz=276,slow=38
comp=Z,3.1nm,0.6s
GYA0B ALIBECK ARRAY 78.93 51 IAMs_20 IAMs_20 09 16 55.7
comp=Z,1µm,19.0s
EYMN Ely 79.14 319 IAMs_20 IAMs_20 09 13 54.6
comp=Z,1µm,18.0s
EYMN Ely 79.14 319 P P 08 39 25.6 -0.5
baz=102
SCIA State Center 79.18 313 P P 08 39 25.2 -1.2
baz=100
U38A Gravette 79.23 307 IAMs_20 IAMs_20 09 09 49.3
comp=Z,1µm,20.0s
Z38A Mt. Pleasant 79.30 304 IAMs_20 IAMs_20 09 10 08.2
comp=Z,1µm,19.0s
SPMN Marine on St. 79.48 316 IAMs_20 IAMs_20 09 08 27.7
comp=Z,1µm,20.0s
SPMN Marine on St. 79.48 316 P P 08 39 27.1 -0.9
baz=101
NEEM North Greenlan 79.49 353 *i* P P 08 39 28.7 +0.9
NEEM IAmb IAmb 08 39 33.9
comp=Z,21nm,0.8s
I37A Lemond, Waseca 79.68 315 IAMs_20 IAMs_20 09 11 16.0
comp=Z,1µm,18.0s
F36A Milaca 80.10 317 IAMs_20 IAMs_20 09 09 19.9
comp=Z,972nm,20.0s
SPITS Spitsbergen Ar 80.21 7 P P 08 39 31.1 -0.3
comp=Z,9.6nm,0.8s,baz=166,slow=7.7,SNR=5.9
SPITS LR LR 09 12 46.0
comp=Z,424nm,18.5s,baz=172,slow=34
comp=Z,9.6nm,0.8s
TUL3 Leonard 80.29 306 P P 08 39 31.6 -0.9
TUL3 IAMs_20 IAMs_20 09 08 53.3
comp=Z,972nm,20.0s
TUL3 Leonard 80.29 306 P P 08 39 31.9 -0.7
baz=97,SNR=6.6
KBS Kingsbay 80.37 6 *i* P P 08 39 32.5 +0.4
B35A Bob, Littlefor 80.69 319 IAMs_20 IAMs_20 09 07 39.5
comp=Z,1µm,21.0s
T35A Sooner Cattle 80.99 307 P P 08 39 36.1 -0.3
T35A IAmb IAmb 08 39 37.9
comp=Z,51nm,1.1s
T35A IAMs_20 IAMs_20 09 08 13.8
comp=Z,926nm,21.0s
AKTO Aktyubinsk 81.02 39 LR LR 09 18 39.1
comp=Z,682nm,21.8s,baz=254,slow=38
W35A Tecumseh 81.08 305 IAMs_20 IAMs_20 09 10 00.2
comp=Z,1µm,21.0s
OK052 Battle Ridge R 81.11 306 IAMs_20 IAMs_20 09 09 32.1
comp=Z,1µm,20.0s
Z35A Perchaven, Sea 81.20 304 IAMs_20 IAMs_20 09 11 15.4
comp=Z,1µm,19.0s
OK051 E0350 and S346 81.20 307 IAMs_20 IAMs_20 09 09 58.4
comp=Z,1µm,22.0s
OK033 Mehan 81.23 306 IAMs_20 IAMs_20 09 08 30.2
comp=Z,1µm,21.0s
435B Jarrell 81.23 301 P P 08 39 37.8 0.0
435B IAmb IAmb 08 39 42.2
comp=Z,46nm,1.1s
435B Jarrell 81.23 301 P P 08 39 36.9 -0.8
baz=95
WHTX Lake Whitney, 81.23 302 P P 08 39 36.9 -0.8
baz=96
OK048 Pawnee Station 81.28 307 IAMs_20 IAMs_20 09 08 54.4
comp=Z,987nm,21.0s
KSU1 Kansas State U 81.33 309 IAMs_20 IAMs_20 09 08 57.8
comp=Z,953nm,20.0s
KSU1 Kansas State U 81.33 309 P P 08 39 37.1 -1.0
baz=97
L34A Svendsen Farm, 81.52 312 IAMs_20 IAMs_20 09 08 46.8
comp=Z,1µm,22.0s
OK029 Liberty Lake 81.62 306 IAMs_20 IAMs_20 09 10 17.5
comp=Z,1µm,21.0s
ECSD EROS Data Cent 81.93 314 IAMs_20 IAMs_20 09 11 57.6
comp=Z,1µm,19.0s
F33A 5 Mile Ranch, 82.00 316 IAMs_20 IAMs_20 09 10 57.4
comp=Z,967nm,20.0s
ABKAR Akbulak array 82.04 40 P P 08 39 41.5 0.0
AGMN Agassiz Nation 82.08 319 IAMs_20 IAMs_20 09 09 08.4
comp=Z,1µm,21.0s
AGMN Agassiz Nation 82.08 319 P P 08 39 41.8 -0.1
baz=99,SNR=24
CROK Carrier 82.12 307 IAMs_20 IAMs_20 09 12 14.7
comp=Z,876nm,19.0s
WTFS Witchita Falls 82.25 304 P P 08 39 42.9 -0.2
OK032 Salt Plains WL 82.33 307 IAMs_20 IAMs_20 09 08 29.3
comp=Z,1µm,22.0s
ULM Lac du Bonnet 82.40 321 IAMs_20 IAMs_20 09 10 33.7
comp=Z,1µm,20.0s
ULM Lac du Bonnet 82.40 321 *d* *i* P P 08 39 42.3 -1.1
ULM Lac du Bonnet 82.40 321 P P 08 39 43.0 -0.4
comp=Z,11nm,1.0s,baz=94,slow=6.9,SNR=12
ULM LR LR 09 10 24.7
comp=Z,708nm,19.9s,baz=88,slow=31
comp=Z,11nm,1.0s
ARU Arti 82.51 33 *c* *i* P P 08 39 44.6 +0.7
ARU 08 42 50.0
ARU S S 08 50 02.0 +2.8
ARU pmax pmax
comp=Z,18nm,1.0s
ARU MLR MLR
comp=Z,1µm,20.0s
ARU Arti 82.51 33 LR LR 09 19 03.2
comp=Z,1µm,18.6s,baz=217,slow=38
HNDO Hondo 82.59 300 P P 08 39 44.8 -0.2
HNDO IAmb IAmb 08 39 47.3
comp=Z,42nm,1.3s
WMOK Wichita Mounta 82.59 305 P 08 39 44.6 -0.3
WMOK IAmb IAmb 08 39 45.9
comp=Z,36nm,1.2s
WMOK Wichita Mounta 82.59 305 P P 08 39 44.4 -0.5
baz=95,SNR=26
WMOK Wichita Mounta 82.59 305 P P 08 39 44.6 -0.3
WMOK pmax pmax
comp=Z,36nm,1.3s
833A Chaparral WMA, 82.60 298 P P 08 39 45.2 +0.2
833A IAmb IAmb 08 39 56.3
comp=Z,32nm,1.1s
833A Chaparral WMA, 82.60 298 P P 08 39 45.1 +0.1
baz=94,SNR=7.5
OK035 E0210 Rd and N 82.72 307 IAMs_20 IAMs_20 09 12 43.6
comp=Z,1µm,20.0s
OK038 West end E0370 82.72 307 IAMs_20 IAMs_20 09 13 03.8
comp=Z,1µm,20.0s
BGNE Belgrade 82.77 312 P P 08 39 45.1 -0.6
baz=96
R32A Long Quarter, 82.89 309 IAMs_20 IAMs_20 09 12 42.0
comp=Z,982nm,19.0s
U32A Winter Ranch, 82.92 307 IAMs_20 IAMs_20 09 10 44.0
comp=Z,1µm,20.0s
JCT Junction City 83.11 301 P P 08 39 47.3 -0.4
baz=94,SNR=15
JRQG Juriquilla Cam 83.12 291 P P 08 39 48.5 +0.3
JRQG IAmb IAmb 08 39 53.8
comp=Z,28nm,1.5s
ABTX Abilene, Hawle 83.14 303 P P 08 39 48.1 +0.4
baz=94,SNR=8.8
ELIS Ellis County 83.23 306 P P 08 39 48.8 +0.7
SUSD Miller 83.69 315 P P 08 39 49.5 -0.8
baz=96
CBKS Cedar Bluff 83.72 309 IAMs_20 IAMs_20 09 16 16.2
comp=Z,1µm,19.0s
CBKS Cedar Bluff 83.72 309 P P 08 39 50.3 -0.4
baz=95,SNR=6.4
DKNS Dickens 84.28 304 P P 08 39 53.6 0.0
MDND Maddock 84.51 318 P P 08 39 54.4 0.0
baz=96
AMTX Amarillo 84.98 305 P P 08 39 56.8 -0.4
baz=94
SAND Sanderson 85.08 300 P P 08 39 57.5 -0.2
SAND IAmb IAmb 08 40 02.6
comp=Z,26nm,1.1s
OGNE Ogallala 85.65 311 P P 08 40 00.9 +0.5
baz=94,SNR=10.0
MSTX Muleshoe 85.83 304 P P 08 40 01.2 -0.3
baz=93,SNR=16
KSCO Kaye Shedlock' 85.99 309 IAMs_20 IAMs_20 09 11 15.1
comp=Z,1µm,21.0s
KSCO Kaye Shedlock' 85.99 309 P P 08 40 02.4 +0.3
baz=93,SNR=6.9
TXAR Lajitas Array 86.40 299 P P 08 40 04.6 +0.2
comp=Z,15nm,1.0s,baz=111,slow=6.9,SNR=52
TXAR LR LR 09 15 32.0
comp=Z,228nm,21.1s,baz=39,slow=34
comp=Z,15nm,1.0s
TX31 Lajitas Ar. Si 86.40 299 P P 08 40 04.2 -0.1
TX31 IAmb IAmb 08 40 18.2
comp=Z,51nm,1.4s
RES Resolute Bay 86.63 345 LR LR 09 12 26.9
comp=Z,542nm,18.5s,baz=82,slow=31
T25A Trinidad 87.31 307 P P 08 40 08.7 -0.1
baz=92
RSSD Black Hills 87.31 314 P P 08 40 08.4 -0.2
baz=93
DGMT Dagmar 87.62 318 P P 08 40 10.1 +0.3
baz=93
Q24A Divide 87.95 309 IAMs_20 IAMs_20 09 13 31.0
comp=Z,985nm,20.0s
Q24A Divide 87.95 309 P P 08 40 12.6 +0.6
baz=92,SNR=17
MNTX Cornudas Mount 87.95 302 P P 08 40 11.1 -0.6
baz=91,SNR=6.7
CHM Chimkent 88.10 48 *e*P P 08 40 13.3 +1.0
baz=48
CHM Chimkent 88.10 48 *e*P P 08 40 13.2 +1.0
SDCO Great Sand Dun 88.19 308 P P 08 40 13.4 +0.3
baz=92,SNR=9.2
BRLS Boroldav 88.30 47⇓ *e*P P 08 40 13.0 -0.2
baz=47
BRLS Boroldav 88.30 47 *de*P P 08 40 12.9 -0.2
ISCO Idaho Springs 88.33 310 P P 08 40 14.4 +0.7
baz=92,SNR=16
IUG Iuzhnay 88.42 48 *e*P P 08 40 14.9 +1.0
baz=48
IUG Iuzhnay 88.42 48 *e*P P 08 40 14.8 +1.0
N23A Red Feather La 88.61 311 P P 08 40 15.5 +0.5
N23A IAmb IAmb 08 40 26.7
comp=Z,35nm,1.1s
N23A Red Feather La 88.61 311 P P 08 40 15.5 +0.5
baz=91,SNR=21
KK31 Karatay Array 88.79 47 P P 08 40 16.2 +0.8
KK31 IAmb IAmb 08 40 30.7
comp=Z,23nm,1.5s
KK31 Karatay Array 88.79 47 P P 08 40 16.2 +0.8
KK31 pmax pmax
comp=Z,23nm,1.5s
KKAR Karatay Array 88.79 47 P P 08 40 16.0 +0.5
KKAR Karatay Array 88.79 47 P P 08 40 16.0 +0.5
BRVK Borovoye 88.88 37⇑ *e*P P 08 40 17.4 +1.8
BRVK pmax pmax
comp=Z,20nm,3.1s
ANMO Albuquerque 88.91 305 P P 08 40 16.7 +0.3
baz=91
ANMO Albuquerque 88.91 305 LR LR 09 15 03.4
comp=Z,2µm,20.7s,baz=188,slow=32
LAO LASA Array 88.93 317 P P 08 40 16.8 +0.7
baz=91
BVAR Borovoye Array 88.94 37 P P 08 40 16.0 +0.1
comp=Z,1.4nm,0.6s,baz=336,slow=3.3,SNR=6.6
BVAR LR LR 09 23 49.2
comp=Z,620nm,18.6s,baz=272,slow=38
comp=Z,1.4nm,0.6s
BTK Batken 88.97 50 P P 08 40 17.8 +1.4
BTK pmax pmax
comp=Z,14nm,1.2s
K22A Casper 89.08 312 P P 08 40 17.1 +0.1
baz=91
TRKS Terek-Say 89.23 49 P P 08 40 19.6 +1.9
TRKS pmax pmax
comp=Z,30nm,1.4s
S22A 4UR Ranch, Cre 89.25 308 P P 08 40 18.3 +0.3
baz=91,SNR=10
Y22D IRIS PASSCAL I 89.28 304 IAMs_20 IAMs_20 09 13 24.5
comp=Z,941nm,22.0s
Y22D IRIS PASSCAL I 89.28 304 P P 08 40 18.0 -0.1
baz=91
Y22F Passcal Instru 89.28 304 P P 08 40 18.2 +0.1
baz=91
SMCO Snowmass 89.37 309 IAMs_20 IAMs_20 09 13 27.7
comp=Z,1µm,22.0s
DZA Taraz 89.39 47 *e*P P 08 40 18.7 +0.4
baz=47
DZA Taraz 89.39 47 *e*P P 08 40 18.6 +0.3
ARK Arkit 89.85 48 P P 08 40 21.1 +0.5
ARK pmax pmax
comp=Z,5.0nm,0.6s
121A Cookes Peak, D 90.00 302 P P 08 40 22.2 +0.6
baz=90
QSPA South Pole Qui 90.04 180 P P 08 40 21.4 +0.5
comp=Z,26nm,0.9s,baz=208,slow=3.7,SNR=22
QSPA LR LR 09 16 41.0
comp=Z,494nm,18.0s,baz=198,slow=33
comp=Z,26nm,0.9s
O20A White River Ci 90.35 310 P P 08 40 24.0 +1.0
baz=90
MVCO Mesa Verde 90.57 307 P P 08 40 24.9 +0.7
baz=90,SNR=16
NIL Nilore 90.90 57 P P 08 40 26.1 +0.6
NIL IAmb IAmb 08 40 30.5
comp=Z,14nm,0.9s
NIL Nilore 90.90 57 P P 08 40 26.1 +0.6
NIL pmax pmax
comp=Z,14nm,1.0s
RLMT Red Lodge 91.06 315 P P 08 40 27.3 +1.1
baz=89,SNR=9.2
BW06 Boulder Array 91.31 313 P P 08 40 27.8 +0.3
baz=89
PDAR Pinedale Array 91.31 313 P P 08 40 27.7 +0.2
comp=Z,2.3nm,0.9s,baz=101,slow=5.6,SNR=15
PDAR LR LR 09 15 34.2
comp=Z,1µm,21.6s,baz=98,slow=32

comp=Z,2.3nm,0.9s
EGMT Eagleton 91.33 318 P P 08 40 27.8 +0.5
baz=89
RPN Rapa Nui 91.34 243 LR LR 09 17 55.6
comp=Z,853nm,19.8s,baz=93,slow=33
RDMU Red Mountain 91.36 310 IAms_20 IAms_20 09 15 25.3
comp=Z,1µm,21.0s
W18A Petrified Fore 91.60 305 P P 08 40 29.0 0.0
baz=89
YMP Mirror Lake Pl 91.70 315 IAms_20 IAms_20 09 20 01.9
comp=Z,964nm,18.0s
AAK Ala-Archa 91.72 48 P P 08 40 30.1 +0.8
AAK IAmb IAmb 08 40 52.4
comp=Z,44nm,1.9s
AAK Ala-Archa 91.72 48 *ce*P P **08 40 30.4 +1.1**
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 91.72 48 LR LR 09 27 00.5
comp=Z,761nm,20.9s,baz=296,slow=39
YNR Norris Junctio 92.07 315 IAms_20 IAms_20 09 15 05.8
comp=Z,896nm,20.0s
FLWY Flagg Ranch 92.11 314 IAms_20 IAms_20 09 18 18.8
comp=Z,871nm,20.0s
SRU San Rafael Swe 92.13 309 IAms_20 IAms_20 09 15 17.8
comp=Z,859nm,22.0s
LPIG La Paz 92.30 294 LR LR 09 19 16.2
comp=Z,225nm,20.9s,baz=86,slow=34
HMU Henry Mountain 92.34 308 P P 08 40 32.5 +0.1
HMU IAmb IAmb 08 41 05.9
comp=Z,31nm,1.5s
FXWY Fox Creek 92.36 313 IAms_20 IAms_20 09 15 45.5
comp=Z,1µm,20.0s
TUC Tucson 92.54 302 P P 08 40 33.9 +0.7
baz=88
BOZ Bozeman (W) 92.71 315 P P 08 40 34.4 +0.6
baz=87
NRN Naryn 92.89 49 P P 08 40 35.1 +0.2
NRN IAmb IAmb 08 43 41.5
comp=Z,6.9nm,0.6s
NRN Naryn 92.89 49 P P 08 40 35.1 +0.2
NRN pmax pmax
comp=Z,7.0nm,0.6s
WUAZ Wupatki 92.93 305 P P 08 40 35.6 +0.5
baz=88
KSH Kashi 92.95 51 P P 08 40 35.8 +0.8
KSH pP pP 08 40 38.5 -2.1
KSH sP pwP 08 40 46.1 -2.4
KSH pmax pmax
comp=Z,13nm,0.6s
KSH LR LR
comp=Z,1µm,22.7s
KSH LR LR
comp=Z,610nm,11.7s
KSH LR LR
comp=Z,890nm,21.0s
CTU Camp Tracy 93.02 311 IAms_20 IAms_20 09 16 31.1
comp=Z,1µm,20.0s
KUU Kurty 93.02 46 *e*P **P 08 40 35.7 +0.5**
baz=46
KUU Kurty 93.02 46 *e*P **P 08 40 35.6 +0.5**
X16A Lo Mia Camp, P 93.02 304 IAms_20 IAms_20 09 18 05.5
comp=Z,996nm,19.0s
YKA Yellowknife Ar 93.18 332 P P 08 40 35.4 0.0
comp=Z,5.4nm,0.9s,baz=84,slow=5.4,SNR=29
YKA LR LR 09 18 19.1
comp=Z,708nm,20.0s,baz=100,slow=33
comp=Z,5.4nm,0.9s
DUG Dugway, Tooele 93.85 310 P P 08 40 39.1 -0.1
baz=87
KURBB Kurchatov Arra 94.06 39 P P 08 40 39.9 +0.3
comp=Z,0.9nm,0.9s,baz=282,slow=5.0,SNR=5.4
KURBB LR LR 09 25 50.5
comp=Z,707nm,21.6s,baz=306,slow=37
comp=Z,0.9nm,0.9s
KURK Kurchatov 94.11 39⇓ *e*P **P 08 40 42.7 +2.8**
KURK pmax pmax
comp=Z,5.0nm,1.2s
TARG Taragay, Kyrgy 94.22 48 P P 08 40 41.4 +0.2
TARG Taragay, Kyrgy 94.22 48 P P 08 40 41.4 +0.2
TARG pmax pmax
comp=Z,8.0nm,0.8s
214A Organ Pipe Nat 94.27 302 P P 08 40 41.4 +0.3
214A Organ Pipe Nat 94.27 302 P P 08 40 41.9 +0.7
baz=87
HLID Hailey 94.82 314 IAms_20 IAms_20 09 16 43.6
comp=Z,1µm,22.0s
HLID Hailey 94.82 314 P P 08 40 43.9 +0.3
baz=86
W13A Hualapai Mount 95.00 305 IAms_20 IAms_20 09 18 28.8
comp=Z,747nm,20.0s
113A Mohawk Valley, 95.04 303 IAms_20 IAms_20 09 17 37.9
comp=Z,808nm,22.0s
SPR3 Spring Creek 3 95.10 309 IAms_20 IAms_20 09 18 41.3
comp=Z,961nm,20.0s
PDMCI Parker Dam,Lak 95.26 304 P P 08 40 45.9 +0.3
baz=86
A36M Sachs Harbour 95.38 343 P P 08 40 46.1 +0.9
baz=73,SNR=6.3
NRIK Noril'sk 95.43 20⇑ *e*P **P 08 40 48.1 +2.6**
NRIK pmax pmax
comp=Z,7.0nm,1.5s
NRIK Noril'sk 95.43 20 LR LR 09 26 02.5
comp=Z,656nm,21.5s,baz=292,slow=37
Q12A Willow Creek R 95.48 309 IAms_20 IAms_20 09 19 35.4
comp=Z,1µm,21.0s
ELK Elko 95.66 311 LR LR 09 18 36.6
comp=Z,1µm,20.9s,baz=76,slow=32
IRM Iron Mountain 96.10 304 P P 08 40 49.4 0.0
baz=86
R11B Troy Canyon, C 96.13 308 P P 08 40 50.1 +0.4
baz=85
NEW Newport 96.23 318 P P 08 40 50.1 +0.3
baz=83
NEW Newport 96.23 318 LR LR 09 22 00.4
comp=Z,861nm,18.1s,baz=77,slow=34
UABX UABC, Campus M 96.45 303 IAms_20 IAms_20 09 17 02.5
comp=Z,993nm,22.0s
MKAR Makanchi Array 96.94 43 P P 08 40 53.1 +0.1
comp=Z,0.3nm,0.6s,baz=266,slow=2.5,SNR=5.1
MKAR PP PP 08 44 44.5 -3.9
comp=Z,0.8nm,0.8s,baz=285,slow=6.1,SNR=4.5
MKAR LR LR 09 31 03.7
comp=Z,592nm,18.7s,baz=298,slow=39
comp=Z,0.3nm,0.6s
WRGLY Wrigley 97.05 334 P Pdif 08 40 53.9 +0.8
baz=76
E09A Wood Farm, Sta 97.14 317 IAms_20 IAms_20 09 19 14.9
comp=Z,820nm,20.0s
PFO Pinyon Flats O 97.23 304 LR LR 09 21 17.7
comp=Z,516nm,18.3s,baz=80,slow=33
FURC Furnace Creek, 97.31 307 P Pdif 08 40 55.6 +0.7
baz=85
Q09A Carvers 97.33 309 IAms_20 IAms_20 09 17 02.3
comp=Z,751nm,21.0s
GSC Goldstone, Bar 97.37 305 IAms_20 IAms_20 09 20 13.5
comp=Z,708nm,20.0s
ZALV Zalesovo Beam 97.45 36 PP PP 08 44 45.5 -6.6
comp=Z,1.3nm,1.0s,baz=238,slow=4.6,SNR=1.9
ZALV LR LR 09 29 09.2
comp=Z,992nm,18.6s,baz=288,slow=38
E08A Dider Farm, El 97.77 317 IAms_20 IAms_20 09 19 31.6
comp=Z,884nm,20.0s
J08A Circle Bar Ran 97.78 314 IAms_20 IAms_20 09 22 04.0
comp=Z,885nm,19.0s
TJX Tijuana 97.82 303 IAms_20 IAms_20 09 20 22.6
comp=Z,850nm,20.0s
MPMC Manual Prospec 97.85 306 P Pdif 08 40 57.7 +0.1
baz=84
NVAR Mina Array Bea 98.25 309 P Pdif 08 41 00.7 +1.3
comp=Z,0.4nm,0.6s,baz=100,slow=6.5,SNR=4.3
NVAR LR LR 09 24 45.1
comp=Z,527nm,18.2s,baz=87,slow=35
comp=Z,0.4nm,0.6s
CWC Cottonwood Cre 98.29 307 P P 08 40 59.3 -0.1
baz=84
RYN Ryan 98.39 309 IAms_20 IAms_20 09 18 59.5
comp=Z,807nm,18.0s
PALK Pallekele 98.45 83 LR LR 09 21 53.7
comp=Z,359nm,19.1s,baz=24,slow=33
ZSN Zaisan 98.59 42 *e*P Pdif 08 41 00.9 +0.5
baz=42
ZSN Zaisan 98.59 42 *e*P Pdif 08 41 00.9 +0.5
PASC Pasadena Art C 98.61 304 IAms_20 IAms_20 09 20 50.4
comp=Z,786nm,20.0s
ISA Isabella, Lake 98.69 306 P Pdif 08 41 01.9 +0.7
baz=84
INK Inuvik 99.32 340 P Pdif 08 41 03.8 +0.7
baz=66
INK Inuvik 99.32 340 LR LR 09 20 20.0
comp=Z,470nm,19.0s,baz=6.5,slow=32
F31M Tsiigehtchic 99.75 339 P Pdif 08 41 05.4 +0.4
baz=66
CMB Columbia Colle 99.92 309 IAms_20 IAms_20 09 20 16.0
comp=Z,755nm,19.0s
G31M Satah River 100.15 339 IAms_20 IAms_20 09 17 37.4
comp=Z,733nm,20.0s
G31M Satah River 100.15 339 P Pdif 08 41 06.7 -0.1
baz=66
G30M tAoh Zraii Nji 100.82 339 P Pdif 08 41 09.7 -0.2
baz=64
WMQ Urumqi 101.18 45 *e*P **Pdif 08 41 14.3 +2.2**
WMQ LR LR
comp=Z,480nm,18.3s
R33M Jennings River 101.64 331 P Pdif 08 41 13.6 -0.3
baz=70
O30N Mendenhall 103.48 334 IAms_20 IAms_20 09 24 50.6
comp=Z,743nm,20.0s
M29M Somme Creek 103.75 336 IAms_20 IAms_20 09 27 30.6
comp=Z,803nm,19.0s
I26K Coal Creek Min 104.10 339 IAms_20 IAms_20 09 23 08.7
comp=Z,674nm,20.0s
O29M Mount Kennedy 104.79 334 IAms_20 IAms_20 09 28 57.2
comp=Z,766nm,18.0s
M27K Edge Creek, AK 105.18 336 IAms_20 IAms_20 09 24 16.4
comp=Z,858nm,20.0s
TIXI Tiksi 105.38 10 IAms_20 IAms_20 09 32 07.3
comp=Z,806nm,22.0s
ILAR Eielson Array 105.71 340 Pdiff **Pdif 08 41 33.2 +1.6**
comp=Z,0.5nm,0.9s,baz=56,slow=3.5,SNR=3.1
HDA Harding Lake 105.94 339 IAms_20 IAms_20 09 24 31.5
comp=Z,674nm,20.0s
COLA College 105.97 340 IAms_20 IAms_20 09 24 18.5
comp=Z,851nm,20.0s
CRQM Cirque 106.53 335 IAms_20 IAms_20 09 26 31.7
comp=Z,720nm,20.0s
MLY Manley 106.84 341 IAms_20 IAms_20 09 26 58.2
comp=Z,612nm,19.0s
E19K Redstone River 107.06 345 IAms_20 IAms_20 09 27 55.0
comp=Z,788nm,20.0s
I21K Tanana 107.14 342 IAms_20 IAms_20 09 29 58.0
comp=Z,666nm,18.0s
E18K Tukpahlearik C 107.94 346 IAms_20 IAms_20 09 24 40.3
comp=Z,588nm,21.0s
M22K Willow 108.71 338 IAms_20 IAms_20 09 29 42.7
comp=Z,594nm,20.0s
M20K Styx River 109.72 339 IAms_20 IAms_20 09 29 50.3
comp=Z,698nm,18.0s
L19K White Mountain 110.11 340 IAms_20 IAms_20 09 29 27.7
comp=Z,593nm,20.0s
N19K Bonanza Creek 110.92 339 IAms_20 IAms_20 09 33 46.2
comp=Z,603nm,18.0s
SONM Songino Array 112.28 37 PKiKP PKiKP 08 45 58.2 +0.8
comp=Z,0.2nm,0.6s,baz=236,slow=1.6,SNR=1.7
SONM PP PP 08 46 42.8 +0.6
comp=Z,0.4nm,0.4s,baz=249,slow=2.8,SNR=4.2
YAK Yakutsk 113.46 16 IAms_20 IAms_20 09 40 41.8
comp=Z,574nm,21.0s
CMAR Chiang Mai Arr 115.31 70 PKIKP PKiKP 08 46 06.0 +2.1
CMAR Chiang Mai Arr 115.31 70 PKP PKiKP 08 46 06.0 +2.1
comp=Z,1.1nm,0.3s,baz=273,slow=1.7,SNR=1.9
PZH PanZhiHua 116.25 60 PKP PKPdf 08 46 05.5 -0.2
CD2 Chengdu 116.76 55 PKP PKPdf 08 46 06.4 0.0
CD2 SKS SKSdf 08 53 18.5 +0.9
CD2 LR LR
comp=Z,430nm,21.7s
CD2 LR LR
comp=Z,700nm,20.0s
CD2 LR LR
comp=Z,530nm,16.8s
HHC Hu-ho-hao-te 118.79 42 *e*PKP **PKPdf 08 46 07.4 -2.7**
HHC LR LR
comp=Z,320nm,18.3s
HHC LR LR
comp=Z,380nm,18.3s
HHC LR LR
comp=Z,640nm,20.6s
ENH Enshi 121.63 54 IAms_20 IAms_20 09 43 41.4
comp=Z,659nm,22.0s
TAOE Nuku Hiva Isla 121.91 260 *e*SS SS 09 04 29.7 +1.6
comp=Z,98nm,25.2s
TAOE Nuku Hiva Isla 121.91 260 *e*LR LR 09 23 51.5
comp=Z,308nm,27.0s
KLR Kudur 124.44 24⇑ *i*PKIKP **PKiKP 08 46 21.6 +0.7**
QIZ Qiongzhong 125.31 67 PKP **PKPdf 08 46 21.8 -1.3**
QIZ SS SS 09 05 11.8 +1.2
QIZ LR LR
comp=Z,270nm,13.7s
QIZ LR LR
comp=Z,190nm,11.8s
QIZ LR LR
comp=Z,320nm,21.9s
MDJ Mudanjiang 127.02 29 PKP PKPdf 08 46 25.3 -0.4
MDJ Mudanjiang 127.02 29 IAms_20 IAms_20 09 44 13.7
comp=Z,616nm,21.0s
TBI Tubuai 127.63 240 *e*SS SS 09 05 36.3 -2.8
comp=Z,2µm,29.2s
TBI Tubuai 127.63 240 *e*LR LR 09 26 35.9
comp=Z,2µm,24.0s
NJ2 Nanjing 128.16 48 *e*PKP **PKPdf 08 46 28.4 +0.2**
PPT2 Papeete2 129.43 247 *e*LR LR 09 27 15.5
comp=Z,410nm,24.2s
PPT2 *e*LR LR 09 27 25.4
comp=Z,356nm,37.5s
YSS Yuzh-Sakhalins 130.27 17 *i* PKIKP **PKiKP 08 46 32.6 0.0**
YSS *e* 08 48 43.0
YSS *e*SS SS 09 06 06.8 -2.0
YSS pmax pmax
comp=Z,10.0nm,1.2s
KKM Kota Kinabalu 133.72 82 IAms_20 IAms_20 09 45 39.8
comp=Z,428nm,21.0s
STKA Stephens Creek 142.76 150 PKhKP PKPpre 08 46 51.1
comp=Z,1.5nm,0.7s,baz=182,slow=19,SNR=2.1
ASAR Alice Springs 143.82 133 PKP PKPbc 08 46 55.5 +0.4
comp=Z,2.9nm,0.7s,baz=223,slow=2.6,SNR=26
WRA Warramunga Arr 146.26 128 PKPbc PKPbc 08 47 02.8 0.0
comp=Z,2.3nm,0.6s,baz=239,slow=2.4,SNR=18
DZM Mont Dzumac 157.64 190 *e*SS SS 09 11 23.0 -0.3
comp=Z,227nm,26.2s
DZM Mont Dzumac 157.64 190 *e*LR LR 09 40 14.7
comp=Z,992nm,28.6s

LJU ***15*** *08:27:53.4, 46°.32N×13°.58E, h5km, ML1.9*
ROM 15 08:27:52.9±0.1, 46°.316N±0°.004×13°.560E±0°.006,
h6km, ML1.9/28, 6C-10D, Error ellipse: s-maj=0.5km
s-min=0.2km az=244.0, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROBS	**Robic**	**0.08**	**206**⇓	*i*		Pg	Pg	08 27 55.5	+0.7
ROBS				*i*		Sg	Sg	08 27 57.0	+1.0
ROBS						IAML		08 27 57.1	
comp=Z,422nm,0.1s									
PRED	**Cave del Predi**	**0.13**	**1**⇓	*e*		Pg	Pg	08 27 55.9	+0.4
PRED				*e*		Sg	Sg	08 27 57.9	+0.4
PRED	**Cave del Predi**	**0.13**	**1**	P		Pg	Pg	08 27 55.9	+0.3
CADS	**Cadrg**	**0.15**	**126**⇓	*i*		Pg	Pg	08 27 56.4	+0.4
CADS				*i*		Sg	Sg	08 27 58.8	+0.7
CADS						IAML		08 27 59.0	
comp=Z,238nm,0.1s									
DRE	**Drenchia**	**0.15**	**158**⇓	*e*		Pg	Pg	08 27 56.5	+0.5
DRE				*e*		Sg	Sg	08 27 58.9	+0.8
DRE	**Drenchia**	**0.15**	**158**	⇑P		Pg	Pg	08 27 56.5	+0.5
LSR	**Lussari**	**0.16**	**352**⇓	*e*		Pg	Pg	08 27 56.7	+0.5
LSR				*e*		Sg	Sg	08 27 59.7	+1.2
PTCC	**Patocco-Chiusa**	**0.17**	**302**	P		Pg	Pg	08 27 56.9	+0.6
PTCC				S		Sg	Sg	08 27 59.6	+1.0
PTCC						AML	AML		
comp=E,526µm,0.3s									
PTCC						AML	AML		
comp=N,596µm,0.4s									
PTCC						AML	AML		
comp=E,527µm,0.3s									
PTCC						AML	AML		
comp=N,522µm,0.2s									
VINO	**Villanova**	**0.20**	**253**⇑	*e*		Pg	Pg	08 27 57.8	+0.9
VINO				*e*		Sg	Sg	08 28 01.4	+1.8
VINO	**Villanova**	**0.20**	**253**	⇑P		Pg	Pg	08 27 57.8	+0.9
VINO				S		Sg	Sg	08 28 01.5	+1.9
VINO						AML	AML		
comp=E,1024µm,0.5s									
VINO						AML	AML		
comp=N,2060µm,0.5s									
VINO						AML	AML		
comp=E,932µm,0.1s									
VINO						AML	AML		
comp=N,2054µm,0.3s									
COLI	**Coloredo**	**0.22**	**215**⇓	*e*		Pg	Pg	08 27 58.2	+1.0
COLI				*e*		Sg	Sg	08 28 01.8	+1.7
ACOM	**Acomizza, Ital**	**0.23**	**352**⇓	*e*		Pg	Pg	08 27 58.1	+0.6
ACOM				*e*		Sg	Sg	08 28 02.0	+1.2
ACOM	**Acomizza, Ital**	**0.23**	**352**	P		Pg	Pg	08 27 58.3	+0.7
ACOM				S		Sg	Sg	08 28 02.4	+1.7
ACOM						AML	AML		
comp=E,1315µm,0.3s									
ACOM						AML	AML		
comp=N,864µm,1.1s									
ACOM						AML	AML		
comp=E,1315µm,0.3s									
ACOM						AML	AML		
comp=N,904µm,0.4s									
ACOM						AML	AML		
comp=N,864µm,0.9s									
ACOM						AML	AML		
comp=E,1314µm,0.3s									
ACOM						AML	AML		
comp=N,850µm,0.2s									
ACOM						AML	AML		
comp=N,896µm,0.2s									
ACOM						AML	AML		
comp=E,1316µm,0.3s									
BAD	**Bernadia**	**0.23**	**250**⇑	*e*		Pg	Pg	08 27 58.2	+0.8
BAD				*e*		Sg	Sg	08 28 02.4	+1.8
BAD	**Bernadia**	**0.23**	**250**	P		Pg	Pg	08 27 58.2	+0.8
BAD				S		Sg	Sg	08 28 02.4	+1.8
GEPF	**Gemona**	**0.29**	**262**	P		Pg	Pg	08 27 59.3	+0.7
GEPF				S		Sb	Sb	08 28 04.4	-1.2
GEPF						AML	AML		
comp=E,608µm,0.6s									
GEPF						AML	AML		
comp=N,382µm,0.2s									
GEPF						AML	AML		
comp=E,608µm,1.4s									
GEPF						AML	AML		
comp=E,542µm,0.2s									
GEPF						AML	AML		
comp=N,382µm,0.2s									
GORS	**Gorjuse**	**0.30**	**90**	*i*		Pg	Pg	08 27 59.0	+0.2
GORS				*i*		Sg	Sg	08 28 03.9	+1.1
GORS						IAML		08 28 04.7	
comp=Z,91nm,0.1s									
BUA	**Buia**	**0.32**	**252**⇑	*e*		Pg	Pg	08 27 59.8	+0.7
BUA				*e*		Sg	Sb	08 28 05.4	-0.9
BOO	**Bordano**	**0.32**	**271**⇑	*e*		Pg	Pg	08 27 59.5	+0.4
BOO				*e*		Sg	Sg	08 28 04.4	+1.1
BOO	**Bordano**	**0.32**	**271**	P		Pg	Pg	08 27 59.6	+0.5
BOO				S		Sb	Sb	08 28 04.8	-1.5
MYKA	**Terra Mystica**	**0.32**	**10**	*e*		Pg	Pg	08 27 59.7	+0.5
comp=Z,8.7nm,0.1s,SNR=25									
MYKA				*i*		Sg	Sg	08 28 04.4	+1.0
comp=Z,20nm,0.1s									
SABO	**M.te Sabotino**	**0.34**	**175**⇓	*e*		Pg	Pg	08 28 00.2	+0.7
SABO				*e*		Sg	Sb	08 28 05.9	-1.0
SABO	**M.te Sabotino**	**0.34**	**175**	P		Pg	Pg	08 28 00.2	+0.8
SABO				S		Sb	Sb	08 28 06.3	-0.5
SABO						AML	AML		
comp=E,2900µm,0.6s									
SABO						AML	AML		
comp=E,772µm,0.6s									
SABO						AML	AML		
comp=N,2230µm,0.7s									
SABO						AML	AML		
comp=E,772µm,0.6s									
SABO						AML	AML		
comp=N,608µm,0.7s									
SABO						AML	AML		
comp=E,2900µm,1.4s									
SABO						AML	AML		
comp=E,772µm,1.4s									
SABO						AML	AML		
comp=N,608µm,1.3s									
SABO						AML	AML		
comp=N,2230µm,1.3s									
SABO						AML	AML		
comp=E,2690µm,0.3s									
SABO						AML	AML		
comp=N,418µm,0.2s									
SABO						AML	AML		
comp=E,706µm,0.3s									
SABO						AML	AML		
comp=N,1657µm,0.2s									
VOJS	**Vojsko**	**0.36**	**142**⇓	*i*		Pg	Pg	08 28 00.2	+0.3
VOJS				*i*		Sg	Sg	08 28 06.1	+1.4
VOJS						IAML		08 28 06.9	
comp=Z,26nm,0.1s									
PLRO	**Paularo**	**0.37**	**310**	*e*		Pg	Pg	08 28 00.9	+0.9
PLRO	**Paularo**	**0.37**	**310**	P		Pb	Pb	08 28 01.0	-0.9
FUSE	**Fusea**	**0.40**	**284**	*e*		Pg	Pb	08 28 01.5	-0.8
FUSE	**Fusea**	**0.40**	**284**	P		Pb	Pb	08 28 01.6	-0.7
MPRI	**Monte Prat**	**0.40**	**260**	*e*		Pg	Pg	08 28 01.3	+0.6
MPRI				*e*		Sg	Sb	08 28 07.8	-1.0
MPRI	**Monte Prat**	**0.40**	**260**	P		Pg	Pg	08 28 01.3	+0.6
MPRI				S		Sb	Sb	08 28 08.3	-0.5
MPRI						AML	AML		
comp=E,160µm,0.3s									
MPRI						AML	AML		
comp=N,266µm,1.6s									
MPRI						AML	AML		
comp=E,214µm,1.5s									
MPRI						AML	AML		
comp=N,328µm,0.4s									
MPRI						AML	AML		
comp=E,160µm,0.3s									
MPRI						AML	AML		
comp=N,328µm,0.4s									
MPRI						AML	AML		
comp=E,214µm,0.5s									
MPRI						AML	AML		
comp=N,266µm,0.4s									
MPRI						AML	AML		
comp=E,160µm,1.7s									
MPRI						AML	AML		
comp=N,245µm,0.4s									
MPRI						AML	AML		
comp=E,160µm,0.3s									
MPRI						AML	AML		
comp=N,328µm,0.4s									
MPRI						AML	AML		
comp=E,214µm,0.3s									
ZOU	**Zoufplan**	**0.47**	**301**⇓	*e*		Pg	Pg	08 28 02.8	+0.8
ZOU				*e*		Sg	Sb	08 28 10.5	-0.5
ZOU	**Zoufplan**	**0.47**	**301**	P		Pb	Pb	08 28 03.0	-0.7
ZOU				S		Sb	Sb	08 28 10.7	-0.2
ZOU						AML	AML		
comp=E,142µm,0.8s									
ZOU						AML	AML		
comp=N,165µm,0.8s									
ZOU						AML	AML		
comp=E,132µm,0.9s									
ZOU						AML	AML		
comp=N,152µm,1.3s									
ZOU						AML	AML		
comp=E,132µm,1.1s									
ZOU						AML	AML		
comp=N,165µm,1.2s									
ZOU						AML	AML		
comp=E,117µm,0.3s									
ZOU						AML	AML		
comp=N,120µm,0.5s									
ZOU						AML	AML		
comp=N,165µm,0.8s									
ZOU						AML	AML		
comp=E,138µm,0.5s									
CLUD	**Cludinico**	**0.49**	**287**	*e*		Pg	Pg	08 28 03.1	+0.8
CLUD	**Cludinico**	**0.49**	**287**	P		Pb	Pb	08 28 03.1	-0.8
CLUD						AML	AML		
comp=E,95µm,0.7s									
CLUD						AML	AML		
comp=E,95µm,1.3s									
CLUD						AML	AML		
comp=N,72µm,0.8s									
CRNS	**Crni Vrh**	**0.54**	**116**	*i*		Pg	Pg	08 28 03.5	+0.2
CRNS				*i*		Sg	Sb	08 28 12.1	-0.7
CRNS						IAML		08 28 15.8	
comp=Z,42nm,0.2s									
STAL	**STALIGIAL**	**0.59**	**265**	P		Pg	Pg	08 28 04.3	+0.1
STAL						AML	AML		
comp=N,113µm,0.2s									
STAL						AML	AML		
comp=N,113µm,0.2s									

STAL				AML	AML			
	comp=E,132μm,0.2s							
FVI	**Forni Avoltri**	**0.61**	**298**	P	Pb	08 28 05.5	-0.5	
FVI				S	Sb	08 28 14.9	+0.1	
FVI				AML	AML			
	comp=E,118μm,0.2s							
FVI				AML	AML			
	comp=N,100μm,1.1s							
FVI				AML	AML			
	comp=N,100μm,0.9s							
FVI				AML	AML			
	comp=N,79μm,0.3s							
FVI				AML	AML			
	comp=E,119μm,0.2s							
MOZS	**Mozjanca**	**0.61**	**92**	*i* Pg	Pg	08 28 05.1	+0.4	
MOZS				*i* Sg	Sb	08 28 13.9	-0.9	
MOZS				IAML		08 28 15.8		
	comp=E,17nm,0.1s							
MLNI	**Malnisio**	**0.68**	**256**	*e*Pg	Pg	08 28 06.4	+0.5	
OBKA	**Obir**	**0.71**	**74**	*i* Pg	Pg	08 28 06.7	+0.2	
	comp=E,0.6nm,0.1s							
OBKA				*i* Sg	Sb	08 28 17.0	-0.7	
	comp=E,50nm,0.2s							
GBAS	**Gorenja Brezov**	**0.72**	**122**	*i* Pg	Pg	08 28 06.4	-0.3	
GBAS				*i* Sg	Sb	08 28 17.9	0.0	
GBAS				IAML		08 28 20.7		
	comp=E,20nm,0.2s							
LJU	**Ljubljana**	**0.72**	**112**	*i* Sg	Sb	08 28 18.2	+0.2	
LJU				IAML		08 28 22.3		
	comp=E,12nm,0.1s							
KBA	**Koelnbreinsper**	**0.78**	**349**	*i* Pg	Pb	08 28 08.6	-0.3	
	comp=E,0.6nm,0.1s,SNR=9.6							
KBA				*e*Sg	Sg	08 28 17.5	-0.4	
	comp=E,5.6nm,0.2s							
VNDS	**Vrh nad Dolski**	**0.82**	**105**	*i* Pg	Pg	08 28 08.9	+0.3	
VNDS				*i* Sg	Sb	08 28 20.8	0.0	
VNDS				IAML		08 28 26.4		
	comp=E,28nm,0.2s							
SKDS	**Skadanscina**	**0.83**	**157**	*i* Pg	Pg	08 28 08.1	-0.7	
SKDS				*i* Sg	Sb	08 28 21.6	+0.5	
SKDS				IAML		08 28 28.8		
	comp=E,9.7nm,0.1s							
CEY	**Cerknica**	**0.83**	**133**	*i* Pg	Pg	08 28 08.2	-0.7	
CEY				*i* Sg	Sb	08 28 21.6	+0.4	
CEY				IAML		08 28 26.1		
	comp=E,12nm,0.2s							
ABTA	**Abfaltersbach**	**0.84**	**301**	*i* Pg	Pb	08 28 09.8	-0.2	
	comp=E,0.8nm,0.1s							
ABTA				Sg	Sb	08 28 21.6	+0.1	
	comp=E,15nm,0.2s,SNR=10							
ZAVS	**Zavodnje**	**1.02**	**83**	*i* Pg	Pg	08 28 12.0	-0.4	
ZAVS				*i* Sg	Sb	08 28 26.7	+0.1	
VISS	**Visnje**	**1.03**	**119**	*i* Sg	Sb	08 28 27.6	+0.8	
VISS				IAML		08 28 30.8		
	comp=E,12nm,0.1s							
PDKS	**Podkum**	**1.03**	**104**	*e*Pg	Pg	08 28 12.7	+0.1	
PDKS				IAML		08 28 31.7		
	comp=E,14nm,0.2s							
VARN	**Col Varnada, M**	**1.06**	**253**	AML	AML			
	comp=N,166μm,0.7s							
VARN				AML	AML			
	comp=N,166μm,0.7s							
VARN				AML	AML			
	comp=E,264μm,1.2s							
VARN				AML	AML			
	comp=E,258μm,1.2s							
SOKA	**Soboth**	**1.08**	**70**	*i* Pg	Pg	08 28 13.5	0.0	
	comp=E,0.5nm,0.1s							
SOKA				*e*Sg	Sb	08 28 28.0	-0.3	
	comp=E,10nm,0.3s,SNR=4.9							
PERS	**Pernice**	**1.12**	**73**	*i* Pg	Pg	08 28 14.2	-0.1	
PERS				IAML		08 28 32.3		
	comp=E,15nm,0.2s							
GBRS	**Gornja Briga**	**1.17**	**132**	*i* Sg	Sn	08 28 33.3	+1.2	
GBRS				IAML		08 28 38.1		
	comp=E,11nm,0.1s							
RIY	**Rijeka**	**1.18**	**147**	*e*Pn	Pn	08 28 16.7	+0.8	
LESA	**Schwarzleotal**	**1.26**	**332**	*e*Pg	Pb	08 28 18.1	+1.0	
	comp=E,3.7nm,0.2s							
LESA				*e*Sg	Sn	08 28 34.2	-0.2	
	comp=E,14nm,0.2s							
DOBS	**Dobrina**	**1.33**	**96**	*i* Sg	Sn	08 28 38.8	+2.8	
DOBS				IAML		08 28 43.4		
	comp=E,18nm,0.2s							
SMRN	**Sveta Marina**	**1.35**	**162**	*e*Pn	Pg	08 28 18.9	+0.3	
SMRN				Sn	Sn	08 28 37.9	+1.6	
CTI	**Castel Tesino**	**1.35**	**259**	AML	AML			
	comp=E,130μm,1.1s							
CTI				AML	AML			
	comp=N,126μm,1.3s							
CTI				AML	AML			
	comp=N,126μm,0.7s							
CTI				AML	AML			
	comp=E,130μm,0.9s							
CESS	**Cesta pri Krsk**	**1.37**	**104**	*i* Sg	Sn	08 28 38.8	+2.0	
BIOA	**Bad Ischl, Aus**	**1.38**	**2**	*e*Pg	Pg	08 28 21.8	+2.5	
	comp=E,12nm,0.3s							
BIOA				*e*Sg	Sn	08 28 40.4	+3.3	
	comp=E,18nm,0.4s							
BRJN	**Brijuni**	**1.42**	**175**	*e*Pn	Pb	08 28 19.8	+0.2	
BRJN				Sn	Sg	08 28 39.8	+1.4	
BOJS	**Bojanci**	**1.43**	**124**	*i* Sg	Sg	08 28 39.6	+0.7	
BOJS				IAML		08 28 48.6		
	comp=E,9.6nm,0.2s							
BOJS	**Bojanci**	**1.43**	**124**	AML	AML			
	comp=E,191μm,0.7s							
BOJS				AML	AML			
	comp=N,232μm,0.9s							
BOJS				AML	AML			
	comp=N,232μm,1.1s							
GOLS	**Golise**	**1.47**	**101**	*i* Sg	Sg	08 28 41.5	+1.5	
GOLS				IAML		08 28 46.0		
	comp=E,9.4nm,0.2s							
OZLJ	**Ozalj**	**1.50**	**117**	*e*Pn	Pg	08 28 21.8	+0.1	
GCIS	**Gornji Cirnik**	**1.51**	**107**	*i* Sn	Sg	08 28 43.3	+2.1	
GCIS				IAML		08 28 46.2		
	comp=E,16nm,0.3s							
MOA	**Molln**	**1.61**	**17**	*e*Pg	Pg	08 28 24.7	+1.0	
	comp=E,0.9nm,0.1s							
MOA				*e*Sg	Sg	08 28 47.0	+2.5	
	comp=E,5.7nm,0.3s							
WTTA	**Wattenberg**	**1.63**	**306**	*e*Pg	Pg	08 28 23.8	-0.2	
	comp=E,1.8nm,0.2s,SNR=4.5							
WTTA				*e*Sg	Sg	08 28 47.8	+2.7	
	comp=E,12nm,0.5s							
ARSA	**Arzberg**	**1.64**	**55**	*e*Pg	Pb	08 28 23.9	+0.4	
	comp=E,2.2nm,0.3s							
ARSA				*e*Sg	Sg	08 28 45.7	+0.1	
	comp=E,3.9nm,0.3s,SNR=5.0							
WATA	**Walderalm**	**1.70**	**308**	*i* Pg	Pg	08 28 26.9	+1.4	
	comp=E,3.5nm,0.2s							
WATA				*e*Sg	Sg	08 28 53.0	+5.5	
	comp=E,13nm,0.5s							
PTJ	**Puntijarka**	**1.72**	**103**	*e*Pn	Pg	08 28 25.7	-0.2	
LOBO	**Lobor**	**1.75**	**94**	*e*Pn	Pb	08 28 25.7	+0.4	
RABC	**Rab**	**1.79**	**151**	*e*Pn	Pb	08 28 26.0	+0.1	
SQTA	**Sankt Quirin**	**1.85**	**300**	*e*Pg	Pg	08 28 28.7	+0.3	
	comp=E,1.3nm,0.2s							
SQTA				*e*Sg	Sg	08 28 54.9	+2.5	
	comp=E,5.0nm,0.3s							
VARA	**Varagna**	**1.92**	**256**	AML	AML			
	comp=N,66μm,1.7s							
VARA				AML	AML			
	comp=E,104μm,0.3s							
VARA				AML	AML			
	comp=N,66μm,0.3s							
MOTA	**Moosalm**	**1.98**	**302**	*e*Pg	Pg	08 28 31.7	+1.0	
	comp=N,4.7nm,0.4s							
MOTA				*e*Sg	Sg	08 28 59.5	+3.2	
	comp=N,8.9nm,0.4s							
NVLJ	**Novalja**	**1.98**	**152**	*e*Pn	Pb	08 28 28.9	-0.3	
FETA	**Feichten**	**2.07**	**291**	*e*Pg	Pg	08 28 32.4	-0.2	
	comp=N,1.6nm,0.3s							
FETA				Sg	Sg	08 29 02.2	+2.7	
	comp=N,1.9nm,0.4s							
DUGI	**Dugi Otok**	**2.55**	**155**	*e*Pn	Pb	08 28 37.3	-1.7	

*IDC **15** 08:30:47.3±1.5,36°.90S×17°.75W,h0km,mb4.2/2, mbtmp4.2/2,MS4.3/3,Error ellipse: s-maj=79.4km s-min=26.4km az=6.0*
*NEIC **15** 08:30:49.9±1.7,36°.06S±0°.07×17°.7W±0°.1,h10km±1km, mb5.0/28,Error ellipse: s-maj=17.3km s-min=9.6km az=239.0*
*GCMT **15** 08:30:52.9±0.3,35°.49S±0°.02×17°.39W±0°.02,h25km±1km,*

MW5.1/87,Moment Tensor Solution. s9,c10; s87,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.56±.31; $M_{\theta\theta}$-1.59±.25; $M_{\phi\phi}$2.15±.26; $M_{r\theta}$-2.06±.47; $M_{r\phi}$4.56±.18; $M_{\theta\phi}$2.99±.54; Best double couple: M_W6.07700×10^{16} NP1:ϕs171.00000°,δ80.00000°,λ-147.00000°. NP2: ϕs75.00000°,δ58.00000°,λ-12.00000°. Principal axes: T 5.5650, Plg15.0000°, Azm299.0000°; N 1.0210, Plg56.0000°, Azm186.0000°; P -6.5890, Plg30.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 15 08:30:49.0±0.5,36°.05±0°.1×17°.65W±0°.08,h10km,n56, σ1s20/40,mb4.9/16,MS4.2/3,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H09W1	**TRISTAN DA CUN**	**4.41**	**106**	Pn	**Pn**		**08 31 55.2**	**-0.8**
H09W1				T	T		08 36 29.3	
	SNR=67							
H09N1	**TRISTAN DA CUN**	**4.42**	**105**	Pn	**Pn**		**08 31 54.0**	**-2.1**
H09N1				T	T		08 36 28.6	
	SNR=91							
TRIS	**Tristan da Cun**	**4.42**	**105**	Pn	**Pn**		**08 31 53.2**	**-2.9**
H10S2	**ASCENSION HYDR**	**27.07**	**7**	T	T		09 04 02.7	
	baz=35,slow=74,SNR=99							
H10S3	**ASCENSION HYDR**	**27.07**	**6**	T	T		09 04 03.4	
	baz=185,slow=74,SNR=106							
ASCN	**Ascension**	**28.11**	**7**	P	**P**		**08 36 42.3**	**+1.1**
H10N1	**ASCENSION HYDR**	**28.19**	**7**	T	T		09 05 38.9	
	baz=191,slow=80,SNR=35							
H10N3	**ASCENSION HYDR**	**28.19**	**7**	T	T		09 05 40.6	
	baz=191,slow=80,SNR=99							
H10N2	**ASCENSION HYDR**	**28.20**	**7**	T	T		09 05 41.8	
	baz=191,slow=80,SNR=59							
ITQB	**Itaqui**	**33.19**	**270**	P	**P**		**08 37 26.1**	**+0.2**
ITQB				IAmb	IAmb		08 37 28.1	
	comp=Z,22nm,0.8s							
RCBR	**Riachuelo**	**34.41**	**327**	LR	LR		08 47 35.9	
	comp=Z,351nm,19.8s,baz=150,slow=29							
CPUP	**Villa Florida**	**35.09**	**275**	P	**P**		**08 37 41.9**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=111,slow=7.8,SNR=2.8							
	comp=Z,6.2nm,1.0s							
TRQA	**Tornquist**	**35.20**	**253**	P	**P**		**08 37 42.5**	**-0.8**
AQDB	**Aquidauana**	**36.66**	**285**	P	**P**		**08 37 56.2**	**+0.1**
AQDB				IAmb	IAmb		08 37 57.1	
	comp=Z,16nm,0.8s							
PMSA	**Palmer Station**	**39.78**	**209**	P	**P**		**08 38 22.5**	**+0.8**
PMSA				IAmb	IAmb		08 38 29.3	
	comp=Z,50nm,1.1s							
MG04	**Isla Riesco**	**40.98**	**228**	P	**P**		**08 38 29.6**	**-2.2**
PTLB	**Pontes e Lacer**	**42.22**	**288**	P	**P**		**08 38 42.7**	**+0.4**
PTLB				IAmb	IAmb		08 38 43.8	
	comp=Z,20nm,1.0s							
MT16	**CCHEN**	**43.10**	**257**	P	**P**		**08 38 47.3**	**-2.2**
MT16				IAmb	IAmb		08 38 51.7	
	comp=Z,18nm,0.8s							
MT02	**Curacav**	**43.64**	**257**	P	**P**		**08 38 54.3**	**+0.5**
CO01	**Juntas del Tor**	**43.96**	**262**	P	**P**		**08 38 57.9**	**+1.2**
VA06	**Catapilco**	**44.00**	**258**	P	**P**		**08 38 56.3**	**-0.4**
VILB	**Vilhena**	**44.55**	**290**	P	**P**		**08 39 01.4**	**+0.1**
VILB				IAmb	IAmb		08 39 14.6	
	comp=Z,17nm,0.8s							
LCO	**Las Campanas**	**44.82**	**263**	P	**P**		**08 39 03.4**	**-0.2**
GO01	**Chusmiza**	**47.86**	**276**	P	**P**		**08 39 27.2**	**-0.6**
PB16	**IPOC Station P**	**48.80**	**277**	P	**P**		**08 39 34.9**	**-0.3**
PB12	**IPOC Station P**	**49.32**	**276**	P	**P**		**08 39 38.1**	**-0.6**
PB12				IAmb	IAmb		08 39 49.7	
	comp=Z,15nm,1.0s							
SAML	**Samuel**	**49.34**	**292**	P	**P**		**08 39 38.4**	**-0.3**
SAML				IAmb	IAmb		08 39 39.5	
	comp=Z,19nm,0.8s							
ETMB	**Extrema**	**51.10**	**288**	P	**P**		**08 39 51.8**	**-0.3**
ETMB				IAmb	IAmb		08 39 52.5	
	comp=Z,25nm,0.9s							
H04S2	**CROZET ISLANDS**	**51.66**	**125**	T	T		09 36 07.6	
	baz=259,slow=76,SNR=25							
H04S3	**CROZET ISLANDS**	**51.66**	**125**	T	T		09 36 13.8	
	baz=259,slow=76,SNR=16							
H04S1	**CROZET ISLANDS**	**51.68**	**125**	T	T		09 36 14.6	
	baz=259,slow=76,SNR=21							
TOA0	**Torodi Ar. Sit**	**52.20**	**24**	P	**P**		**08 40 01.2**	**+1.1**
TORD	**Torodi Ar. Bea**	**52.20**	**24**	P	**P**		**08 39 59.5**	**-0.6**
TORD				IAmb	IAmb		08 40 03.1	
	comp=Z,14nm,1.1s							
TORD	**Torodi Ar. Bea**	**52.20**	**24**	LR	LR		08 58 54.6	
	comp=Z,369nm,19.0s,baz=210,slow=32							
MDP	**Montagnes des**	**52.42**	**314**	LR	LR		09 01 46.3	
	comp=Z,211nm,18.3s,baz=110,slow=35							
QSPA	**South Pole Qui**	**54.24**	**180**	P	**P**		**08 40 18.4**	**+3.6**
BOAV	**Boa Vista**	**55.30**	**304**	P	**P**		**08 40 22.3**	**-0.7**
BOAV				IAmb	IAmb		08 40 22.6	
	comp=Z,9.7nm,1.1s							
VOI	**Vohitsoka**	**57.18**	**95**	P	**P**		**08 40 36.9**	**+0.4**
VOI				IAmb	IAmb		08 40 38.4	
	comp=Z,11nm,1.0s							
NNA	**Nana**	**58.19**	**279**	P	**P**		**08 40 43.4**	**-0.2**
NNA				IAmb	IAmb		08 40 51.1	
	comp=Z,12nm,1.0s							
LODK	**Lodwar**	**63.11**	**63**	P	**P**		**08 41 17.3**	**+0.1**
COHC	**Cochancay**	**65.78**	**285**	P	**P**		**08 41 35.1**	**+0.5**
SDV	**Santo Domingo**	**66.89**	**301**	P	**P**		**08 41 40.6**	**-1.3**
SDV				IAmb	IAmb		08 41 41.9	
	comp=Z,14nm,1.1s							
BCIP	**Isla Barro Col**	**73.69**	**294**	P	**P**		**08 42 24.4**	**+1.1**
ESDC	**Sonseca Array**	**76.37**	**11**	P	P		08 42 43.1	+4.9
	comp=Z,1.3nm,1.0s,baz=188,slow=5.8,SNR=4.3							
	comp=Z,1.3nm,1.0s							
H01W2	**CROZET ISLANDS**	**96.35**	**142**	T	T		10 32 35.9	
	baz=218,slow=75,SNR=91							
H01W3	**Cape Leeuwin H**	**96.36**	**142**	T	T		10 32 37.6	
	baz=218,slow=75,SNR=34							
H01W1	**Cape Leeuwin H**	**96.36**	**142**	T	T		10 32 36.0	
	baz=218,slow=75,SNR=128							
KURBB	**Kurchatov Arra**	**120.45**	**47**	PKP	**PKPdf**		**08 49 39.3**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=230,slow=2.8,SNR=2.1							
MKAR	**Makanchi Array**	**121.43**	**52**	PKP	**PKiKP**		**08 49 43.4**	**+1.0**
	comp=Z,0.2nm,0.8s,baz=268,slow=4.3,SNR=1.6							
YKA	**Yellowknife Ar**	**124.34**	**326**	PKP	**PKiKP**		**08 49 49.4**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=97,slow=2.0,SNR=5.6							
SONM	**Songino Array**	**137.59**	**56**	PKhKP	PKPpre		08 50 07.4	
	comp=Z,0.2nm,0.5s,baz=270,slow=1.4,SNR=1.5							
ILAR	**Eielson Array**	**138.48**	**330**	PKP	**PKiKP**		**08 50 15.8**	**-0.2**
	comp=Z,1.0nm,1.0s,baz=334,slow=0.6,SNR=5.8							
P18K	**Big Mountain,**	**144.02**	**324**	PKPdf	**PKPdf**		**08 50 24.1**	**0.0**
J16K	**Anvik River**	**144.56**	**332**	PKPdf	**PKPdf**		**08 50 25.2**	**+0.3**
K15K	**Wolf Creek Mou**	**145.45**	**331**	PKPdf	**PKPdf**		**08 50 25.9**	**-0.5**
ANM	**Nome**	**145.49**	**336**	PKPdf	**PKPdf**		**08 50 25.9**	**-0.5**

*IPEC **15** 08:32:14.4±0.3,50°.12N×19°.18E,h1km,ML2.6/4,Error ellipse: s-maj=2.6km s-min=1.9km az=173.0*
*PRU **15** 08:32:15.1,50°.20N×19°.10E,h0km*

ISC 15 08:32:14.5±0.8,50°.08N±0°.04×19°.09E±0°.02,h0km,n25, σ0s79/43,Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.48**	**73**	*e*Pg	**Pg**		**08 32 23.0**	**-0.7**
OJC				*e*Sg	**Sg**		**08 32 29.1**	**-0.7**
OKC	**Ostrava-Krasne**	**0.66**	**249**	*e*PG	**Pb**		**08 32 29.0**	**+0.2**
OKC				*e*SG	**Sb**		**08 32 38.6**	**+0.2**
	comp=Z,30nm,0.4s							
LANS	**Liptovska Anna**	**0.96**	**165**	*e*PG	**Pb**		**08 32 34.2**	**+0.2**
LANS				*e*SG	**Sb**		**08 32 48.0**	**+0.7**
LANS				*e*LG	Lg		08 32 48.5	
NIE	**Niedzica**	**1.03**	**130**	*e*Pg	**Pg**		**08 32 34.3**	**+0.2**
NIE				*e*Sg	**Sb**		**08 32 48.6**	**-0.6**
MORC	**Moravsky Berou**	**1.04**	**254**	*e*Pg	**Pb**		**08 32 35.7**	**+0.2**
	baz=71							
MORC				*e*Sg	**Sb**		**08 32 49.2**	**-0.5**
	78nm,0.6s,baz=71							
MAUC	**Maruska**	**1.09**	**229**	*e*PG	**Pn**		**08 32 36.9**	**-0.1**
KRLC	**Kraliky**	**1.49**	**271**	*e*SG	**Sg**		**08 33 02.2**	**0.0**
	comp=Z,44nm,0.5s							
JAVC	**Velka Javorina**	**1.53**	**218**	*e*Pn	**Pb**		**08 32 43.6**	**-0.2**
	baz=37							
JAVC	**Velka Javorina**	**1.53**	**218**	*e*PN	**Pb**		**08 32 43.7**	**-0.1**
STHS	**Stebnicka Huta**	**1.55**	**115**	*e*PN	**Pb**		**08 32 43.5**	**-0.5**
STHS				*e*SN	**Sb**		**08 33 06.4**	**+2.3**
STHS				*e*LG	Lg		08 33 15.6	
VRAC	**Vranov**	**1.79**	**246**	*e*Pn	**Pb**		**08 32 47.5**	**-0.7**
	baz=63							
VRAC				*e*Sg	**Sg**		**08 33 12.6**	**+0.5**
	29nm,0.6s,baz=63							
VRAC	**Vranov**	**1.79**	**246**	*e*PN	**Pb**		**08 32 47.6**	**-0.7**
VRAC				*e*SG	**Sg**		**08 33 12.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.80**	**280**	*e*PG	**Pn**		**08 32 47.1**	**+0.3**
DPC				*e*SG	**Sg**		**08 33 12.1**	**-0.1**
	comp=Z,52nm,0.7s							
KECS	**Kecovo**	**1.84**	**150**	*e*PN	**Pn**		**08 32 47.0**	**-0.3**
KECS				*e*SG	**Sg**		**08 33 14.2**	**+0.7**
KECS				*e*LG	Lg		08 33 15.1	
OSTC	**Ostas**	**1.90**	**286**	*e*PG	**Pn**		**08 32 48.3**	**+0.1**
OSTC				*e*SG	**Sg**		**08 33 15.6**	**0.0**
	comp=Z,24nm,0.8s							
CRVS	**Cervenica-Dubn**	**1.94**	**126**	*e*PN	**Pg**		**08 32 51.2**	**-0.5**
KSP	**Ksiaz**	**1.94**	**294**	*e*Pg	**Pg**		**08 32 51.6**	**-0.1**
KSP				*e*Sg	**Sb**		**08 33 16.1**	**+0.5**
KRUC	**Moravsky**	**2.03**	**241**	*e*Pn	**Pn**		**08 32 50.7**	**+0.8**
	baz=59							
KRUC				*e*Sg	**Sg**		**08 33 20.2**	**+0.6**
	31nm,0.8s,baz=59							
MODS	**Modra-Piesok**	**2.08**	**216**	*e*PN	**Pb**		**08 32 52.7**	**-0.4**
MODS				*e*SN	**Sb**		**08 33 18.6**	**-0.9**
KOLS	**Kolonicke sedl**	**2.37**	**118**	*e*PG	**Pb**		**08 32 58.2**	**+0.2**
KOLS				*e*SN	**Sn**		**08 33 24.1**	**-0.3**
KOLS				*e*LG	Lg		08 33 38.8	
PRU	**Pruhonice**	**2.93**	**270**	*e*SG	**Sg**		**08 33 47.9**	**-0.8**
	comp=Z,12nm,0.5s							
CKRC	**Cesky Krumlov**	**3.36**	**250**	*e*SG	**Sg**		**08 34 02.6**	**+0.1**
BRG	**Berggiesshubel**	**3.38**	**286**	Pg	**Pg**		**08 33 18.3**	**-1.0**
BRG				Sg	**Sg**		**08 34 04.2**	**+1.1**
BRG				Amp			08 34 07.3	
	comp=Z,7.5nm,0.5s							
KHC	**Kasperske Hory**	**3.71**	**257**	*e*PN	**Pn**		**08 33 13.0**	**0.0**
KHC				*e*PG	**Pb**		**08 33 20.7**	**-0.2**
KHC				*e*SG	**Sg**		**08 34 13.5**	**-0.1**
	comp=Z,12nm,0.5s							
CLL	**Collm**	**4.06**	**290**	*e*Sg	**Sg**		**08 34 28.0**	**+3.1**

IDC 15 08:54:34.1±2.7,6°.46S×129°.35E,h0km,mb3.3/1, mbtmp3.4/3,ML3.2/2,Error ellipse: s-maj=218.3km s-min=32.1km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.26**	**161**	Pn	Pn		08 57 56.9	-0.6
	0.1nm,0.3s,baz=334,slow=14,SNR=2.4							
WRA				Sn	Sn		09 00 22.5	-14
	0.2nm,0.3s,baz=338,slow=22,SNR=2.4							
	0.7nm,0.8s							
ASAR	**Alice Springs**	**17.66**	**166**	P	Pn		08 58 42.1	+0.3
	0.2nm,0.3s,baz=349,slow=12,SNR=25							
ASAR				S	Sn		09 01 44.1	-15
	0.1nm,0.5s,baz=315,slow=22,SNR=1.6							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**67.42**	**327**	P	P		09 05 31.6	0.0
	0.1nm,0.4s,baz=121,slow=8.1,SNR=4.7							
	0.1nm,0.4s							

*NNC **15** 08:58:19.0±3.9,54°.87N×86°.39E,h0km,mb2.6,mpv2.5, Error ellipse: s-maj=119.4km s-min=25.9km az=138.0, Suspected Mining explosion.*
*IDC **15** 08:58:20.6±2.9,54°.42N×86°.78E,h0km,mbtmp2.8/2, ML2.5/2,Error ellipse: s-maj=23.1km s-min=16.4km az=52.0*

ISC 15 08:58:22.4±4.5,54°.4N±0°.2×86°.6E±0°.2,h0km,n7,σ1s04/10, 5C-1D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.11**	**248**	I	I		09 06 10.0	
	0.1nm,0.9s,baz=67,slow=327,SNR=4.1							
ZAA0	**Zalesovo Array**	**1.11**	**248**	⇑P	**Pb**		**08 58 43.4**	**-0.9**
	0.1nm,0.2s							
ZAA0				⇑S	**Sn**		**08 59 01.4**	**+0.3**
	2.0nm,0.9s							
ZALV	**Zalesovo Beam**	**1.11**	**248**	Pg	**Pg**		**08 58 43.0**	**-0.5**
	1.5nm,0.3s,baz=66,slow=16,SNR=17							
ZALV				Lg	Lg		08 59 01.1	
	0.9nm,0.3s,baz=64,slow=27,SNR=12							
KURBB	**Kurchatov Arra**	**6.17**	**236**	⇑Pn	**Pn**		**08 59 54.9**	**+0.2**
	2.3nm,0.8s							
KURBB				⇓Sn	**Sn**		**09 01 06.0**	**+0.1**
	2.9nm,0.8s							
KURBB				⇑Lg	Lg		09 01 42.1	
	2.7nm,0.6s							
KURBB	**Kurchatov Arra**	**6.17**	**236**	Pn	**Pn**		**08 59 56.0**	**+1.2**
	0.1nm,0.3s,baz=54,slow=14,SNR=10							
KURBB				Sn	**Sn**		**09 01 07.7**	**+1.7**
	baz=48,slow=22,SNR=1.5							
KURBB				Lg	Lg		09 01 40.5	
	baz=58,slow=32,SNR=2.8							
	0.6nm,0.5s							
MK31	**Makanchi Array**	**8.06**	**201**	⇑Pn	**Pn**		**09 00 21.6**	**+0.9**
	0.1nm,0.3s,baz=25,slow=13,SNR=11							
MKAR	**Makanchi Array**	**8.06**	**201**	Pn	**Pn**		**09 00 21.2**	**+0.6**
	0.1nm,0.3s,baz=26,slow=13,SNR=8.5							
MKAR				Sn	**Sn**		**09 01 51.7**	**-0.8**
	baz=32,slow=27,SNR=1.7							
MKAR				Lg	Lg		09 02 39.6	
	baz=29,slow=33,SNR=3.2							
	0.1nm,0.2s							

*IDC **15** 09:00:53.8±1.4,18°.87S×67°.02W,h228km±14km,mb3.0/6, mbtmp3.7/9,Error ellipse: s-maj=22.4km s-min=15.3km az=106.0*
*SJA **15** 09:00:54.1±0.7,18°.87S×67°.17W,h270km±11km,ML3.8

PATCX	**Punta Patache**	**3.45**	**236**	*eP*	**Pn**	**09 01 52.6**	**+0.3**
PATCX				*eS*	**S**	**09 02 36.3**	**-1.4**
PATCX				IAML		09 02 38.9	
	comp=Z,78nm,0.5s						
PB09	**IPOC Station P**	**3.51**	**214**	*eP*	**Pn**	**09 01 55.4**	**+2.3**
PB09				*eS*	**S**	**09 02 39.8**	**+0.7**
PB09				IAML		09 02 42.9	
	comp=Z,48nm,0.7s						
PB09	**IPOC Station P**	**3.51**	**214**	Pg	**Pn**	**09 01 53.7**	**+0.6**
PB02	**IPOC Station P**	**3.56**	**227**	*eP*	**Pn**	**09 01 54.7**	**+1.0**
PB02				*eS*	**S**	**09 02 38.5**	**-1.6**
PB02				IAML		09 02 43.4	
	comp=Z,190nm,0.2s						
PB02	**IPOC Station P**	**3.56**	**227**	Pg	**Pn**	**09 01 54.1**	**+0.5**
YJA	**Yavi**	**3.58**	**156**	*eP*	**Pn**	**09 01 55.6**	**+1.4**
PB07	**IPOC Station P**	**3.84**	**222**	*eP*	**Pn**	**09 01 57.4**	**+0.5**
PB07				*eS*	**S**	**09 02 43.2**	**-2.7**
PB07				IAML		09 02 46.8	
	comp=Z,64nm,0.5s						
PB07	**IPOC Station P**	**3.84**	**222**	Pg	**Pn**	**09 01 57.3**	**+0.4**
LVC	**Limon Verde**	**4.06**	**204**	*eP*	**Pn**	**09 02 00.4**	**+0.7**
LVC	**Limon Verde**	**4.06**	**204**	P	**Pn**	**09 02 00.2**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=69,slow=2.4,SNR=9.6						
LVC				S	**S**	**09 02 48.8**	**-2.2**
	comp=Z,6.4nm,0.2s,baz=94,slow=21,SNR=15						
LVC	**Limon Verde**	**4.06**	**204**	Pg	**Pn**	**09 02 00.0**	**+0.3**
PB06	**IPOC Station P**	**4.43**	**211**	*eP*	**Pn**	**09 02 04.5**	**+0.6**
PB06				*eS*	**S**	**09 02 56.5**	**-2.2**
PB06				IAML		09 03 00.4	
	comp=Z,56nm,0.8s						
PB06	**IPOC Station P**	**4.43**	**211**	Pg	**Pn**	**09 02 04.4**	**+0.4**
PB04	**IPOC Station P**	**4.45**	**219**	*eP*	**Pn**	**09 02 04.4**	**+0.2**
PB04				*eS*	**S**	**09 02 57.8**	**-1.3**
PB04				IAML		09 03 00.1	
	comp=Z,88nm,0.3s						
PB04	**IPOC Station P**	**4.45**	**219**	Pg	**Pn**	**09 02 04.6**	**+0.4**
SIV	**San Ignacio**	**6.44**	**64**	P	**Pn**	**09 02 26.6**	**-2.2**
	comp=Z,3.6nm,0.6s,baz=259,slow=8.5,SNR=35						
GO02	**Mina Guanaco**	**6.64**	**200**	Pg	**Pn**	**09 02 30.9**	**-0.6**
NNA	**Nana**	**11.63**	**305**	P	**Pn**	**09 03 34.2**	**-0.1**
	comp=Z,4.9nm,0.4s,baz=144,slow=13,SNR=2.6						
PLCA	**Paso Flores**	**21.96**	**187**	P	**P**	**09 05 29.8**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=33,slow=6.8,SNR=5.8						
	comp=Z,0.9nm,0.9s						
TXAR	**Lajitas Array**	**59.53**	**323**	P	**P**	**09 10 33.4**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=137,slow=9.4,SNR=3.7						
	comp=Z,0.1nm,0.4s						
QSPA	**South Pole Qui**	**71.28**	**180**	P	**P**	**09 11 49.2**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=82,slow=3.9,SNR=3.6						
	comp=Z,0.4nm,0.3s						
PDAR	**Pinedale Array**	**72.75**	**329**	P	**P**	**09 11 57.8**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=118,slow=9.3,SNR=4.2						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.89**	**70**	P	**P**	**09 12 08.4**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=254,slow=5.6,SNR=2.0						
	comp=Z,1.4nm,0.3s						
YKA	**Yellowknife Ar**	**89.33**	**340**	P	**P**	**09 13 23.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=128,slow=4.5,SNR=5.4						
	comp=Z,0.3nm,0.8s						
ASAR	**Alice Springs**	**132.99**	**207**	PKP	**PKiKP**	**09 19 42.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=137,slow=1.9,SNR=1.5						
WRA	**Warramunga Arr**	**136.04**	**210**	PKP	**PKPdf**	**09 19 47.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=152,slow=1.9,SNR=5.1						
SONM	**Songino Array**	**150.66**	**9**	PKPbc	**PKiKP**	**09 20 18.7**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=298,slow=3.1,SNR=3.6						

IDC 15 09:09:35.5±3.9, 53°.64N×87°.85E, h0km, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=39.0km s-min=17.4km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**281**	I	I	09 20 47.3	
	0.3nm,1.0s,baz=99,slow=330,SNR=12						
ZALV	**Zalesovo Beam**	**1.82**	**281**	Pg	Pn	09 10 08.7	+0.6
	1.2nm,0.3s,baz=97,slow=13,SNR=14						
ZALV				Lg	Lg	09 10 33.3	
	1.0nm,0.3s,baz=95,slow=25,SNR=7.0						
KURBB	**Kurchatov Arra**	**6.48**	**246**	Pn	Pn	09 11 12.6	+0.5
	0.1nm,0.3s,baz=64,slow=14,SNR=3.5						
	1.3nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**210**	Pn	Pn	09 11 30.3	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=9.1						
	0.2nm,0.3s						

IDC 15 09:12:15.4±3.7, 53°.60N×87°.65E, h0km, mbtmp3.4/2, ML3.5/1, Error ellipse: s-maj=36.7km s-min=17.0km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**283**	I	I	09 22 55.0	
	baz=100,slow=329						
ZALV	**Zalesovo Beam**	**1.72**	**283**	Pg	Pn	09 12 46.5	0.0
	1.4nm,0.3s,baz=102,slow=17,SNR=14						
ZALV				Lg	Lg	09 13 10.1	
	1.1nm,0.3s,baz=109,slow=26,SNR=10						
KURBB	**Kurchatov Arra**	**6.36**	**246**	Pn	Pn	09 13 50.4	+0.1
	1.2nm,0.2s,baz=62,slow=14,SNR=0.8						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	Pn	09 14 09.2	+1.5
	0.7nm,0.3s,baz=27,slow=15,SNR=5.2						
	1.0nm,0.4s						

*IDC **15** 09:14:06.4±10.0, 17°.17S×173°.75E, h0km, mb4.1/4, mbtmp4.2/5, ML4.1/1, MS4.2/1, Error ellipse: s-maj=197.3km s-min=89.2km az=99.0*
*NEIC **15** 09:14:12.5±2.3, 17°.2S±0°.2×173°.4E±0°.2, h10km±2km, mb4.2/9, Error ellipse: s-maj=44.3km s-min=20.6km az=142.0*

ISC 15 09:14:17.3±4.1, 17°.1S±0°.3×173°.0E±0°.6, h35km, n20, σ1§00/19, mb4.2/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**7.57**	**223**	Pn	**Pn**	**09 16 05.9**	**+0.8**
OUENC	**Ouen Island, N**	**7.84**	**227**	Pn	**Pn**	**09 16 10.9**	**+1.9**
DZM	**Mont Dzumac**	**7.91**	**231**	Pn	**Pn**	**09 16 10.3**	**+0.3**
DZM	**Mont Dzumac**	**7.91**	**231**	Pn	**Pn**	**09 16 09.8**	**-0.2**
	2.2nm,0.3s,baz=64,slow=14,SNR=19						
	7.7nm,0.4s						
HNR	**Honiara**	**14.85**	**299**	LR	LR	09 22 59.8	
	comp=Z,867nm,21.7s,baz=356,slow=34						
ARMA	**Armidale**	**23.57**	**232**		**P**	**09 19 23.2**	**-1.8**
ARMA				IAmb	IAmb	09 19 59.5	
	comp=Z,11nm,1.2s						
CTA	**Charters Tower**	**25.54**	**259**	P	**P**	**09 19 43.1**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=76,slow=14,SNR=2.1						
	comp=Z,2.1nm,0.8s						
CTAO	**Charters Tower**	**25.54**	**259**	P	**P**	**09 19 43.6**	**+0.7**
CTAO				IAmb	IAmb	09 20 21.5	
	comp=Z,7.0nm,1.2s						
STKA	**Stephens Creek**	**32.01**	**237**	P	**P**	**09 20 39.4**	**-1.0**
STKA	**Stephens Creek**	**32.01**	**237**	P	**P**	**09 20 39.6**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=82,slow=9.3,SNR=5.4						
	comp=Z,1.5nm,0.6s						
WR0	**Warramunga Arr**	**36.55**	**259**	P	**P**	**09 21 20.3**	**+0.4**
WB0	**Warramunga Arr**	**36.69**	**260**	P	**P**	**09 21 19.6**	**-1.6**
WB0				IAmb	IAmb	09 21 51.3	
	comp=Z,5.0nm,1.4s						
WRA	**Warramunga Arr**	**36.74**	**259**	P	**P**	**09 21 21.3**	**-0.3**
WRA	**Warramunga Arr**	**36.74**	**259**	P	**P**	**09 21 21.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=83,slow=6.2,SNR=12						
	comp=Z,0.5nm,0.4s						
AS31	**Alice Springs**	**37.16**	**253**	P	**P**	**09 21 24.9**	**-0.3**
ASAR	**Alice Springs**	**37.16**	**253**	P	**P**	**09 21 24.6**	**-0.6**
ASAR	**Alice Springs**	**37.16**	**253**	P	**P**	**09 21 24.8**	**-0.4**
	comp=Z,4.9nm,0.5s,baz=80,slow=8.7,SNR=135						
	comp=Z,4.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**45.08**	**261**	P	**P**	**09 22 31.9**	**+1.6**
FITZ				IAmb	IAmb	09 22 41.0	
	comp=Z,5.2nm,1.4s						
USA0B	**Ussuriysk Arra**	**71.62**	**330**	P	**P**	**09 25 35.2**	**0.0**
USRK	**Ussuriysk Ar.**	**71.62**	**330**	P	**P**	**09 25 35.7**	**+0.6**

*SJA **15** 09:15:27.2±0.6, 27°.00S×71°.00W, h26km±3km, ML3.8, MW3.9*
*GUC **15** 09:15:31.4±0.7, 27°.07S×70°.77W, h41km±3km, ML3.9*

ISC 15 09:15:29.2±1.4, 27°.03S±0°.03×70°.92W±0°.05, h15km±10km, n37, σ1§83/48, Near coast of northern Chile

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

GO03	**Copiap**	**0.83**	**133**	*eP*	**Pg**	**09 15 45.2**	**-0.3**
GO03				*eS*	**Sg**	**09 15 55.7**	**-0.7**
GO03	**Copiap**	**0.83**	**133**	*i P*	**Pg**	**09 15 45.1**	**-0.3**
GO03				*eS*	**Sg**	**09 15 54.9**	**-1.5**
GO03				IAML		09 15 55.7	
	comp=E,7μm,0.3s						
AC01	**Pan de Azucar**	**0.92**	**19**	*eP*	**Pg**	**09 15 47.7**	**+0.7**
AC01				*eS*	**Sb**	**09 15 58.3**	**-0.6**
AC01				IAML		09 16 01.5	
	comp=Z,2μm,0.3s						
AC01	**Pan de Azucar**	**0.92**	**19**	*i P*	**Pn**	**09 15 48.0**	**+0.4**
AC01				*eS*	**Sn**	**09 16 00.5**	**-0.1**
AC01				IAML		09 16 03.1	
	comp=N,5μm,0.2s						
AC04	**Llanos de Chal**	**1.18**	**186**	*eP*	**Pn**	**09 15 50.3**	**-0.9**
AC04				*eS*	**Sb**	**09 16 01.8**	**-4.7**
AC04				IAML		09 16 10.2	
	comp=Z,850nm,0.3s						
AC04	**Llanos de Chal**	**1.18**	**186**	*i P*	**Pb**	**09 15 51.8**	**+0.4**
AC02	**Maricunga**	**1.61**	**84**	*eP*	**Pn**	**09 15 57.5**	**-0.1**
AC02				*eS*	**Sn**	**09 16 17.1**	**-1.3**
AC02				IAML		09 16 17.9	
	comp=Z,3μm,0.2s						
AC02	**Maricunga**	**1.61**	**84**	*i P*	**Pn**	**09 15 57.6**	**+0.1**
AC02				*eS*	**Sn**	**09 16 16.4**	**-1.9**
AC02				IAML		09 16 17.6	
	comp=N,6μm,0.4s						
AC05	**El Transito**	**1.89**	**162**	*eP*	**Pn**	**09 16 01.3**	**+0.2**
AC05				IAML		09 16 33.6	
	comp=Z,715nm,0.6s						
AC05	**El Transito**	**1.89**	**162**	*i P*	**Pn**	**09 16 01.9**	**+0.8**
AC05				IAML		09 16 31.3	
	comp=E,1μm,0.2s						
LCO	**Las Campanas**	**1.99**	**174**	*eP*	**Pn**	**09 16 02.0**	**-0.5**
LCO				IAML		09 16 32.9	
	comp=Z,2μm,0.3s						
LCO	**Las Campanas**	**1.99**	**174**	*i P*	**Pn**	**09 16 03.5**	**+0.9**
GO02	**Mina Guanaco**	**2.21**	**33**	*eP*	**Pn**	**09 16 05.8**	**+0.2**
GO02	**Mina Guanaco**	**2.21**	**33**	*i P*	**Pn**	**09 16 07.5**	**+1.9**
GO02				IAML		09 16 42.6	
	comp=E,1μm,0.6s						
PB14	**IPOC Station P**	**2.44**	**11**	*eP*	**Pn**	**09 16 08.4**	**-0.4**
PB14				IAML		09 16 46.8	
	comp=Z,373nm,0.8s						
PB14	**IPOC Station P**	**2.44**	**11**	*i P*	**Pn**	**09 16 11.2**	**+2.5**
CO05	**La Serena**	**2.90**	**185**	*i P*	**Pn**	**09 16 15.9**	**+1.2**
CO05				*eS*	**Sn**	**09 16 51.4**	**+2.0**
VCA	**Vinchina**	**2.95**	**126**	*eP*	**Pb**	**09 16 19.1**	**-2.5**
VCA				*eP*	**Pn**	**09 16 19.2**	**+3.5**
VCA				IAML		09 17 10.8	
	comp=Z,164nm,1.1s						
CO01	**Juntas del Tor**	**3.03**	**166**	*eP*	**Pn**	**09 16 17.5**	**+0.7**
CO01				IAML		09 17 05.8	
	comp=Z,218nm,0.3s						
CO01	**Juntas del Tor**	**3.03**	**166**	*i P*	**Pn**	**09 16 18.1**	**+1.2**
CO01				*eS*	**Sn**	**09 16 53.5**	**+0.4**
CO01				IAML		09 17 08.6	
	comp=N,298nm,0.2s						
TINO	**Tinogasta**	**3.15**	**110**	*eP*	Pg	09 16 35.1	+5.4
AGUA	**GUANDACOL**	**3.26**	**139**	*eP*	**Pn**	**09 16 22.7**	**+2.8**
AGUA				*eS*	**Sg**	**09 17 19.2**	**+5.3**
AGUA				IAML		09 17 25.1	
	comp=Z,154nm,0.6s						
AROD	**Rodeo**	**3.38**	**158**	*eP*	**Pn**	**09 16 23.8**	**+2.1**
ACDV	**Cuesta del Vie**	**3.51**	**154**	*eP*	**Pn**	**09 16 25.7**	**+2.3**
ACDV				IAML		09 17 28.2	
	comp=Z,92nm,0.8s						
CO03	**El Pedregal**	**3.81**	**177**	*eP*	**Pn**	**09 16 27.3**	**-0.1**
CO03				IAML		09 17 34.8	
	comp=Z,291nm,0.5s						
CO03	**El Pedregal**	**3.81**	**177**	*i P*	**Pn**	**09 16 29.4**	**+2.0**
ACCO	**Cerro Coronel**	**3.91**	**156**	*eP*	**Pn**	**09 16 31.5**	**+2.5**
ACCO				IAML		09 17 41.0	
	comp=Z,106nm,0.5s						
CO02	**Combarbal**	**4.16**	**181**	*eP*	**Pn**	**09 16 31.6**	**-0.8**
CO02				IAML		09 17 44.2	
	comp=Z,437nm,0.4s						
DOCA	**Reserva Natura**	**4.23**	**158**	*eP*	**Pn**	**09 16 35.5**	**+2.0**
DOCA				*eS*	**Sn**	**09 17 24.7**	**+1.9**
ACLC	**CERRO LA CRUZ**	**4.24**	**125**	*eP*	**Pn**	**09 16 34.6**	**+1.2**
ACLC				IAML		09 17 45.1	
	comp=Z,53nm,0.5s						
PB06	**IPOC Station P**	**4.47**	**16**	*eP*	**Pn**	**09 16 36.8**	**+0.2**
PB06				IAML		09 17 59.0	
	comp=Z,160nm,0.7s						
AVFE	**Valle Fertil**	**4.73**	**141**	*eP*	**Pn**	**09 16 41.2**	**+1.2**
AVFE				IAML		09 18 00.3	
	comp=Z,36nm,0.5s						
LVC	**Limon Verde**	**4.76**	**23**	*eP*	**Pn**	**09 16 41.4**	**+0.6**
LVC				IAML		09 18 00.7	
	comp=Z,171nm,0.3s						
RTLL	**Cerro Villicun**	**4.79**	**154**	*eP*	**Pn**	**09 16 42.5**	**+1.6**
RTLL				IAML		09 18 07.1	
	comp=Z,76nm,0.5s						
RTLS	**Leoncito**	**4.96**	**164**	*eP*	**Pn**	**09 16 45.2**	**+1.7**
RTLS				IAML		09 18 17.9	
	comp=Z,173nm,0.6s						
AHML	**Horco Molle**	**5.00**	**89**	*eP*	**Pn**	**09 16 45.6**	**+1.9**
AHML	**Horco Molle**	**5.00**	**89**	*i P*	**Pn**	**09 16 44.6**	**+0.9**

IDC 15 09:16:22.9±3.1, 54°.20N×87°.15E, h0km, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=26.0km s-min=16.5km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**261**	I	I	09 25 14.2	
	0.2nm,0.8s,baz=77,slow=334,SNR=12						
ZALV	**Zalesovo Beam**	**1.40**	**261**	Pg	Pn	09 16 48.4	-1.2
	0.7nm,0.3s,baz=76,slow=16,SNR=7.7						
ZALV				Lg	Lg	09 17 07.7	
	1.0nm,0.3s,baz=81,slow=26,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.37**	**239**	Pn	Pn	09 17 58.7	+0.7
	0.1nm,0.3s,baz=57,slow=15,SNR=3.1						
KURBB				Lg	Lg	09 19 43.8	
	baz=55,slow=32,SNR=1.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**8.03**	**205**	Pn	Pn	09 18 22.2	+1.3
	baz=24,slow=13,SNR=1.2						
MKAR				Sn	Sn	09 19 52.1	-0.2
	0.1nm,0.3s,baz=25,slow=26,SNR=3.5						
MKAR				Lg	Lg	09 20 36.4	
	baz=25,slow=28,SNR=2.3						
	0.1nm,0.3s						

IDC 15 09:30:41.0±3.1, 54°.28N×87°.09E, h0km, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=26.3km s-min=17.4km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**257**	I	I	09 39 14.8	
	0.2nm,0.8s,baz=74,slow=326,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.38**	**257**	Pg	Pg	09 31 04.9	-2.5
	0.3nm,0.3s,baz=75,slow=17,SNR=4.6						
ZALV				Lg	Lg	09 31 25.5	
	0.5nm,0.3s,baz=77,slow=27,SNR=7.5						
KURBB	**Kurchatov Arra**	**6.39**	**238**	Pn	Pn	09 32 17.1	+0.8
	baz=55,slow=14,SNR=5.1						
KURBB				Lg	Lg	09 34 04.1	
	baz=54,slow=32						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**8.10**	**204**	Pn	Pn	09 32 41.7	+1.9
	baz=26,slow=15,SNR=2.1						
MKAR				Sn	Sn	09 34 10.8	-1.2
	baz=18,slow=27,SNR=2.7						
MKAR				Lg	Lg	09 34 57.0	
	baz=29,slow=28,SNR=3.6						
	0.1nm,0.5s						

*BJI **15** 09:31:14.8±0.0, 22°.27S×176°.01W, h12km, mb4.8/22, mB5.6/6, Ms5.3/6, Ms7 5.1/5*
*MOS **15** 09:31:17.0±3.1, 22°.49S×176°.29W, h10km, mb5.3/17, Error ellipse: s-maj=11.9km s-min=10.1km az=139.9*
*NEIC **15** 09:31:17.9±1.2, 22°.41S±0°.09×176°.09W±0°.09, h18km±3km, mb5.0/136, Error ellipse: s-maj=14.5km s-min=10.4km az=137.0*
*IDC **15** 09:31:23.8±2.4, 22°.36S×176°.29W, h70km±20km, mb4.2/21, mbtmp4.6/22, MS3.8/8, Error ellipse: s-maj=17.1km s-min=13.2km az=126.0*
*GCMT **15** 09:31:28.9±0.3, 22°.46S±0°.02×175°.89W±0°.02, h83km±3km, MW5.1/89, Moment Tensor Solution. s33,c39; s89,c112; Duration: 0 Moment tensor: Scale 10^16^Nm; M~rr~1.40±.23; M~θθ~-1.00±.26; M~φφ~-0.39±.24; M~rθ~-0.87±.16; M~rφ~4.82±.18; M~θφ~-1.77±.11; Best double couple: M~o~5.33900×10^16^ NP1:φ§175.00000°, δ75.00000°, λ157.00000°. NP2: φ§271.00000°, δ67.00000°, λ16.00000°. Principal axes: T 5.1000, Plg27.0000°, Azm132.0000°; N 0.4830, Plg62.0000°, Azm324.0000°; P -5.5770, Plg5.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **15** 09:31:29.1, 22°.07S×175°.36W, h181km, mb5.2/57, Tonga Islands Region*

ISC 15 09:31:16.0±0.3, 22°.38S±0°.05×176°.11W±0°.05, h10km, n431, σ1§58/392, mb5.1/109, MS4.1/10, 25C-10D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.66**	**62**	Pn	**Pn**	**09 32 54.5**	**+0.6**
NIUE				Sn	Sn	09 34 01.5	-8.4
NIUE	**Niue**	**6.66**	**62**	P	**Pn**	**09 32 54.7**	**+0.8**
TAVE	**Taveuni**	**6.68**	**327**	P	Pb	09 33 07.1	-5.2
RAO	**Raoul Island**	**7.03**	**193**	Pn	**Pn**	**09 32 59.5**	**+0.5**
RAO	**Raoul Island**	**7.03**	**193**	P	**Pn**	**09 32 59.5**	**+0.5**
RAO	**Raoul Island**	**7.03**	**193**	P	Pn	09 33 04.7	+5.7
	304nm,0.3s,baz=77,slow=22,SNR=1.8						
RAO				S	**Sn**	**09 34 20.3**	**+1.3**
	546nm,0.5s,baz=82,slow=22,SNR=1.6						
GLKZ	**Green Lake**	**7.04**	**193**	P	Pn	09 33 04.7	+5.6
GLKZ				S	**Sn**	**09 34 19.8**	**+0.6**
DGTI	**Dogotuki**	**7.21**	**326**	P	Pn	09 33 12.7	+11
YSA	**Yasawairara**	**8.21**	**312**	P	Pb	09 33 29.7	-8.6
PINNC	**Pines Island,**	**15.20**	**266**	Pn	**Pn**	**09 34 51.7**	**+0.9**
PINNC	**Pines Island,**	**15.20**	**266**	P	P	09 35 04.4	+8.6
RAR	**Rarotonga**	**15.22**	**89**	Pn	**Pn**	**09 34 51.4**	**+0.3**
RAR	**Rarotonga**	**15.22**	**89**	P	**Pn**	**09 34 47.0**	**-4.1**
RAR	**Rarotonga**	**15.22**	**89**	P	**Pn**	**09 34 51.4**	**+0.3**
RAR				pmax	pmax		
	comp=Z,199nm,1.2s						
RAR	**Rarotonga**	**15.22**	**89**	P	**Pn**	**09 34 52.4**	**+1.4**
	comp=Z,91nm,0.8s,baz=273,slow=7.4,SNR=40						
RAR				S	Sn	09 37 23.5	-16
	comp=Z,96nm,0.7s,baz=93,slow=19,SNR=3.7						
RAR				LR	LR	09 40 46.8	
	comp=Z,245nm,18.4s,baz=180,slow=37						
OUZ	**Omahuta**	**15.64**	**213**	P	**P**	**09 35 02.9**	**+2.2**
YATNC	**Mamie plateau,**	**15.75**	**268**	P	P	09 35 09.6	+7.7
OUENC	**Ouen Island, N**	**15.77**	**267**	Pn	**Pn**	**09 34 58.0**	**-0.2**
OUENC				IAmb	IAmb	09 35 11.7	
	comp=Z,136nm,1.1s						
OUENC	**Ouen Island, N**	**15.77**	**267**	P	P	09 35 09.9	+7.7
MXZ	**Matakaoa Point**	**15.88**	**196**	S	Sn	09 37 43.7	-12
KUZ	**Kuaotunu**	**15.97**	**205**	P	**P**	**09 35 04.6**	**+0.3**
WMGZ	**Waiomatatini S**	**16.09**	**196**	P	**Pn**	**09 34 59.9**	**-2.4**
WMGZ				S	Sn	09 37 47.3	-13
ONTNC	**Ouen Toro**	**16.13**	**267**	P	**P**	**09 35 07.8**	**+1.5**
ONTNC	**Ouen Toro**	**16.13**	**267**	P	P	09 35 13.6	+7.4
DZM	**Mont Dzumac**	**16.16**	**268**	P	**P**	**09 35 07.2**	**+0.6**
DZM				IAmb	IAmb	09 35 16.2	
	comp=Z,90nm,1.0s						
DZM	**Mont Dzumac**	**16.16**	**268**	P	**P**	**09 35 12.1**	**+5.5**
	comp=Z,40nm,0.7s,baz=39,slow=23,SNR=12						
HAZ	**Te Kaha**	**16.20**	**198**	P	**Pn**	**09 35 00.2**	**-3.5**
HAZ				S	Sn	09 37 49.4	-14
NOUC	**Port Laguerre**	**16.29**	**268**	P	P	09 35 16.6	+8.7
PUZ	**Puketiti**	**16.37**	**196**	P	**Pn**	**09 35 04.9**	**-1.0**
RUGZ	**Raukumara Rang**	**16.43**	**198**	P	**Pn**	**09 35 04.6**	**-2.1**
TWGZ	**Tauwhareparae**	**16.54**	**197**	P	**Pn**	**09 35 10.0**	**+1.9**
URZ	**Urewera**	**16.86**	**199**	P	**Pn**	**09 35 13.5**	**+1.4**
	comp=Z,26nm,0.3s,baz=36,slow=1.9,SNR=20						
URZ				S	Sn	09 38 05.1	-14
	comp=Z,28nm,0.6s,baz=208,slow=9.0,SNR=2.6						
TOZ	**Tahuroa Road**	**16.92**	**203**	P	**Pn**	**09 35 15.2**	**+2.4**
TOZ	**Tahuroa Road**	**16.92**	**203**	P	**P**	**09 35 16.7**	**+1.9**
OMRZ	**Omania**	**16.95**	**201**	P	**P**	**09 35 16.4**	**+1.1**
RAGZ	**Rawiri**	**16.99**	**198**	P	**Pn**	**09 35 15.6**	**+1.8**
RRRZ	**Republican Roa**	**17.12**	**200**	P	**P**	**09 35 18.1**	**+1.0**
RTZ	**Ruatahuna**	**17.23**	**199**		**Pn**	**09 35 17.6**	**+0.8**
PRGZ	**Paritu Road**	**17.27**	**196**	P	**P**	**09 35 20.7**	**+2.0**
PRRZ	**Plateau Road**	**17.30**	**200**	P	**Pn**	**09 35 19.8**	**+2.2**
TLZ	**Tolley Road**	**17.44**	**202**	P	**P**	**09 35 22.3**	**+1.7**
MTHZ	**Maungataniwha**	**17.49**	**199**	P	**Pn**	**09 35 20.8**	**+0.8**
HIZ	**Hauiti**	**17.85**	**204**		**Pn**	**09 35 25.7**	**+1.3**
HIZ	**Hauiti**	**17.85**	**204**	P	**P**	**09 35 28.5**	**+3.4**
BKZ	**Black Stump Fm**	**17.88**	**199**		**Pn**	**09 35 25.2**	**+0.3**
BKZ	**Black Stump Fm**	**17.88**	**199**	P	**P**	**09 35 31.1**	**+5.6**
TMVZ	**Te Maari**	**18.09**	**201**	P	**Pn**	**09 35 27.9**	**+0.4**
ETVZ	**East Tongariro**	**18.10**	**201**	P	**Pn**	**09 35 26.9**	**-0.7**
NNVZ	**North Ngauruho**	**18.13**	**201**	P	**Pn**	**09 35 27.5**	**-0.5**
TWVZ	**Taurewa**	**18.14**	**202**	P	**Pn

DSZ Denniston Nort 21.81 205 P **P** 09 36 08.0 -0.3
DSZ IAmb IAmb 09 36 18.4
comp=Z,69nm,1.0s
LTZ Lake Taylor 22.53 203 IAmb IAmb 09 36 23.7
comp=Z,50nm,0.6s
INZ Inchbonnie 22.79 204 IAmb IAmb 09 36 25.9
comp=Z,53nm,0.6s
RPZ Rata Peaks 23.78 204 IAmb IAmb 09 36 33.5
comp=Z,40nm,0.6s
RPZ Rata Peaks 23.78 204 P **P** 09 36 30.1 +1.3
LHI Lord Howe Isla 23.89 242 P **P** 09 36 30.4 +0.6
LHI Lord Howe Isla 23.89 242 P **P** 09 36 33.2 +3.4
FOZ Fox Glacier 24.11 206 P **P** 09 36 31.1 -0.6
JCZ Jackson Bay 24.97 206 P **P** 09 36 40.3 +0.5
PPT Papeete 25.38 84 LR LR 09 46 03.9
comp=Z,98nm,19.5s,baz=201,slow=34
MLZ Mavora Lakes 26.31 206 P **P** 09 36 52.2 +0.5
MLZ IAmb IAmb 09 36 52.9
comp=Z,48nm,1.1s
WHZ Wether Hill Ro 26.81 205 P **P** 09 36 56.3 0.0
ARMA Armidale 29.91 248 P **P** 09 37 25.9 +1.7
baz=30,SNR=23
ARMA Armidale 29.91 248 P **P** 09 37 23.8 -0.5
ARMA IAmb IAmb 09 37 28.0
comp=Z,34nm,0.8s
ARMA Armidale 29.91 248 P **P** 09 37 27.9 +3.7
EIDS Eidsvold 30.11 258 P **P** 09 37 27.3 +1.4
baz=30,SNR=19
EIDS Eidsvold 30.11 258 P **P** 09 37 25.4 -0.5
EIDS IAmb IAmb 09 37 29.2
comp=Z,31nm,1.2s
EIDS Eidsvold 30.11 258 P **P** 09 37 28.9 +3.0
AUPHS Peel High Scho 30.63 246 P **P** 09 37 33.2 +2.7
MGCD Mangrove Creek 30.82 242 P **P** 09 37 33.9 +1.7
baz=31,SNR=18
MGCD Mangrove Creek 30.82 242 P **P** 09 37 34.8 +2.6
SYDH Sydney Hard Ro 31.24 241 P **P** 09 37 38.3 +2.5
WOLH Wollongong Har 31.28 240 P **P** 09 37 38.5 +2.3
CNB Canberra Magne 32.70 239 P **P** 09 37 50.3 +1.5
baz=33,SNR=17
CNB Canberra Magne 32.70 239 P **P** 09 37 50.8 +2.0
AUDCS Dubbo College 32.70 245 P **P** 09 37 50.4 +1.7
AULRC Lightning Ridg 32.96 250 P **P** 09 37 53.0 +2.0
CAN Canberra 32.99 239 P **P** 09 37 51.6 +0.4
CAN Canberra 32.99 239 P **P** 09 37 54.5 +3.2
CAN Canberra 32.99 239 P **P** 09 37 51.7 +0.4
CAN pmax pmax
comp=Z,69nm,1.2s
YNG Young 33.26 241 P **P** 09 37 54.7 +1.1
baz=33,SNR=11
YNG Young 33.26 241 P **P** 09 37 54.7 +1.1
MILA Mila 33.31 236 P **P** 09 37 56.0 +1.9
baz=33,SNR=6.9
TV1H Townsville Har 34.76 268 P **P** 09 38 08.2 +1.5
CTA Charters Tower 35.10 267 P **P** 09 38 11.3 +1.6
CTA Charters Tower 35.10 267 P **P** 09 38 11.0 +1.3
CTA pmax pmax
comp=Z,132nm,0.6s
CTAO Charters Tower 35.10 267 P **P** 09 38 11.3 +1.6
CTAO Charters Tower 35.10 267 P **P** 09 38 11.2 +1.5
CTAO Charters Tower 35.10 267 P **P** 09 38 11.3 +1.6
CTAO pmax pmax
comp=Z,87nm,0.6s
CMSA Cobar Meteorol 35.10 247 P **P** 09 38 09.8 +0.2
baz=35,SNR=70
CMSA Cobar Meteorol 35.10 247 P **P** 09 38 10.1 +0.5
QLP Quilpie 36.23 255 P **P** 09 38 20.1 +0.8
baz=36,SNR=12
QLP Quilpie 36.23 255 P **P** 09 38 20.6 +1.2
TOO Toolangi 36.27 237 P **P** 09 38 20.3 +0.7
baz=36,SNR=6.5
TOO Toolangi 36.27 237 P **P** 09 38 20.1 +0.5
TOO IAmb IAmb 09 38 24.6
comp=Z,27nm,0.8s
TOO Toolangi 36.27 237 P **P** 09 38 21.8 +2.2
TOO Toolangi 36.27 237 P **P** 09 38 20.1 +0.5
TOO pmax pmax
comp=Z,27nm,0.8s
MTSU Mount Surprise 37.29 269 P **P** 09 38 29.4 +0.9
baz=37,SNR=43
MTSU Mount Surprise 37.29 269 P **P** 09 38 30.4 +1.9
GEXS Deakin Univers 37.34 236 P **P** 09 38 31.1 +2.5
BRAT Ballarat 37.47 237 P **P** 09 38 30.8 +1.0
PMG Port Moresby 37.49 284 P **P** 09 38 30.5 +0.3
PMG IAmb IAmb 09 38 33.1
comp=Z,49nm,1.1s
PMG Port Moresby 37.49 284 P **P** 09 38 30.5 +0.3
PMG pmax pmax
comp=Z,49nm,1.1s
STKA Stephens Creek 38.61 247 P **P** 09 38 39.5 +0.1
baz=39,SNR=33
STKA Stephens Creek 38.61 247 P **P** 09 38 39.6 +0.1
STKA Stephens Creek 38.61 247 P **P** 09 38 40.8 +1.3
STKA Stephens Creek 38.61 247 P **P** 09 38 39.6 +0.1
STKA pmax pmax
comp=Z,7.0nm,1.0s
STKA Stephens Creek 38.61 247 P **P** 09 38 39.4 -0.1
comp=Z,21nm,0.8s,baz=94,slow=11,SNR=43
comp=Z,21nm,0.8s
ARPS Mount Arapiles 38.97 239 P **P** 09 38 42.4 0.0
baz=39,SNR=16
ARPS Mount Arapiles 38.97 239 P **P** 09 38 44.8 +2.4
INKA Innaminka 39.30 253 P **P** 09 38 47.6 +2.3
COEN Coen 39.48 275 P **P** 09 38 49.6 +2.7
baz=40,SNR=9.4
COEN Coen 39.48 275 P **P** 09 38 46.3 -0.6
COEN IAmb IAmb 09 38 50.9
comp=Z,25nm,0.9s
COEN Coen 39.48 275 P **P** 09 38 48.5 +1.6
HTT Hallett 40.96 244 P **P** 09 38 58.6 -0.4
baz=41,SNR=22
HTT Hallett 40.96 244 P **P** 09 39 00.2 +1.1
QIS Mount Isa 41.14 264 P **P** 09 39 00.6 -0.1
baz=41,SNR=11
QIS Mount Isa 41.14 264 P **P** 09 39 00.9 +0.2
LCRK Leigh Creek 41.46 249 P **P** 09 39 03.3 +0.1
WHYH Whyalla 42.06 245 P **P** 09 39 09.0 +1.0
BBOO Buckleboo 43.33 245 P **P** 09 39 20.6 +2.2
baz=43,SNR=6.9
BBOO Buckleboo 43.33 245 P **P** 09 39 17.4 -1.0
BBOO IAmb IAmb 09 39 20.3
comp=Z,38nm,0.8s
BBOO Buckleboo 43.33 245 P **P** 09 39 19.1 +0.7
OOD Oodnadatta 45.77 253 P **P** 09 39 22.6 +0.6
MULG Mulgathing 45.06 249 P **P** 09 39 31.5 -0.8
AS01 Alice Springs 45.79 258 P **P** 09 39 38.0 -0.2
AS31 Alice Springs 45.83 258 P **P** 09 39 38.7 +0.1
AS31 IAmb IAmb 09 39 42.5
comp=Z,10.0nm,0.5s
ASAR Alice Springs 45.83 258 P **P** 09 39 38.4 -0.1
ASAR Alice Springs 45.83 258 P **P** 09 39 38.4 -0.1
ASAR Alice Springs 45.83 258 P **P** 09 39 38.0 -0.5
comp=Z,27nm,0.7s,baz=98,slow=6.6,SNR=284
ASAR PcP **PcP** 09 41 14.7 -1.2
comp=Z,5.2nm,0.8s,baz=104,slow=3.9,SNR=5.5
ASAR ScP **ScP** 09 45 02.1 -7.1
comp=Z,1.9nm,0.8s,baz=110,slow=4.5,SNR=6.1
ASAR S S 09 46 09.9 -13
comp=Z,1.2nm,0.8s,baz=94,slow=15,SNR=5.8
comp=Z,27nm,0.7s
WR0 Warramunga Arr 45.92 263 P **P** 09 39 38.6 -0.7
WR0 IAmb IAmb 09 39 40.6
comp=Z,28nm,1.1s
WB0 Warramunga Arr 46.10 264 P **P** 09 39 40.3 -0.3
WB2 Warramunga Arr 46.10 263 P **P** 09 39 39.9 -0.7
WRAB Tennant Creek 46.10 263 P **P** 09 39 40.0 -0.7
WRAB IAmb IAmb 09 39 42.5
comp=Z,25nm,0.8s
WRAB Tennant Creek 46.10 263 P **P** 09 39 40.0 -0.7
WRAB pmax pmax
comp=Z,25nm,0.8s
WRA Warramunga Arr 46.11 263 P **P** 09 39 39.9 -0.9
WRA Warramunga Arr 46.11 263 P **P** 09 39 39.9 -0.9
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 46.11 263 P **P** 09 39 39.8 -1.0
comp=Z,24nm,0.7s,baz=95,slow=8.2,SNR=136
WRA PcP **PcP** 09 41 15.7 -1.3
comp=Z,3.7nm,0.8s,baz=98,slow=2.9,SNR=2.8
WRA ScP **ScP** 09 45 03.5 -6.9
comp=Z,1.0nm,0.8s,baz=94,slow=3.7,SNR=4.5
WRA S S 09 46 10.2 -17
comp=Z,1.0nm,0.8s,baz=98,slow=13,SNR=3.7
comp=Z,24nm,0.7s
KDU Kakadu 49.76 272 P **P** 09 40 08.4 -0.7
baz=50,SNR=9.5
FORT Forrest 50.20 248 P **P** 09 40 12.3 +0.1
baz=50,SNR=25
FORT Forrest 50.20 248 P **P** 09 40 11.1 -1.1
FORT Forrest 50.20 248 P **P** 09 40 12.1 -0.1
WRKA Warakurna 50.67 255 P **P** 09 40 15.1 -0.9
baz=51,SNR=49
WRKA Warakurna 50.67 255 P **P** 09 40 15.2 -0.7
MTN Manton Dam 50.95 271 P **P** 09 40 17.2 -0.9
baz=51,SNR=13
MTN Manton Dam 50.95 271 P **P** 09 40 17.6 -0.5
MTN IAmb IAmb 09 40 46.0
comp=Z,22nm,0.9s
KNRA Kununurra 52.31 267 P **P** 09 40 28.9 +0.7
KNRA IAmb IAmb 09 40 30.3
comp=Z,19nm,0.7s
FAKI Fak Fak 53.64 283 P **P** 09 40 37.9 -0.2
FAKI IAmb IAmb 09 40 51.6
comp=Z,19nm,0.9s
FITZ Fitzroy Crossi 54.54 263 P **P** 09 40 44.8 +0.2
baz=55,SNR=22
FITZ Fitzroy Crossi 54.54 263 P **P** 09 40 44.9 +0.3
SWI Sorong 55.43 285 P **P** 09 40 51.0 -0.1
comp=Z,97nm,0.7s
SBA Scott Base 56.13 184 P **P** 09 40 56.1 +1.0
SBA Scott Base 56.13 184 P **P** 09 40 56.1 +1.0
SBA pmax pmax
comp=Z,41nm,1.2s
VNDA Vanda 56.21 186 P **P** 09 40 56.0 +0.3
VNDA Vanda 56.21 186 P **P** 09 40 56.0 +0.3
VNDA pmax pmax
comp=Z,8.0nm,1.1s
VNDA Vanda 56.21 186 P **P** 09 40 55.8 0.0
comp=Z,3.2nm,0.8s,baz=212,slow=6.5,SNR=2.0
comp=Z,3.2nm,0.8s
SOEI Soe 58.33 272 P **P** 09 41 11.7 -0.1
SOEI Soe 58.33 272 P **P** 09 41 11.5 -0.3
SOEI Soe 58.33 272 P **P** 09 41 12.5 +0.7
comp=Z,116nm,0.8s,comp=Z,1µm
KLBR Kellerberrin 58.87 246 P **P** 09 41 14.1 -1.1
baz=59,SNR=3
KLBR Kellerberrin 58.87 246 P **P** 09 41 14.2 -1.1
PSA00 Pilbara Seismi 58.97 258 P **P** 09 41 15.5 -0.6
PSA00 IAmb IAmb 09 41 18.1
comp=Z,18nm,1.1s
MEEK Meekatharra 58.98 252 P **P** 09 41 15.7 -0.4
baz=59,SNR=5.5
NWAO Narrogin (SRO) 59.12 244 P **P** 09 41 16.1 -0.9
baz=59,SNR=5.7
NWAO P **P** 09 41 16.1 -0.9
baz=59,SNR=5.7
NWAO Narrogin (SRO) 59.12 244 P **P** 09 41 16.3 -0.7
NWAO IAmb IAmb 09 41 21.2
comp=Z,21nm,1.1s
NWAO Narrogin (SRO) 59.12 244 P **P** 09 41 16.3 -0.7
NWAO pmax pmax
comp=Z,21nm,1.2s
NWAO Narrogin (SRO) 59.12 244 LR LR 10 04 35.1
comp=Z,130nm,18.3s,baz=280,slow=34
MBWA Marble Bar 59.17 258 P **P** 09 41 16.6 -0.8
MBWA Marble Bar 59.17 258 P **P** 09 41 16.2 -1.3
SANI Sanana 59.67 281 P **P** 09 41 19.4 -1.6
SANI Sanana 59.67 281 P **P** 09 41 19.9 -1.1
comp=Z,39nm,0.6s
BLDU Ballidu 59.91 247 P **P** 09 41 21.6 -0.9
baz=60,SNR=23
MUN Mundaring 60.12 245 P **P** 09 41 22.5 -1.3
baz=60,SNR=5.1
MORW Morawa 60.76 248 P **P** 09 41 28.6 +0.4
baz=61,SNR=3.3
MORW Morawa 60.76 248 P **P** 09 41 27.8 -0.5
MORW IAmb IAmb 09 41 31.3
comp=Z,9.9nm,0.7s
EDFI Ende, Flores 61.06 272 P **P** 09 41 29.4 -1.2
comp=Z,46nm,0.7s
EDFI pP **pP** 09 41 31.0 -2.6
comp=Z,46nm,0.7s
CASY Casey 63.03 206 P **P** 09 41 41.0 -1.9
CASY IAmb IAmb 09 41 47.3
comp=Z,13nm,0.8s
BKSI Bulukumba 63.75 275 P P 09 41 45.4 -3.1
comp=Z,35nm,0.7s
GIRL Giralia 63.76 255 P **P** 09 41 48.3 -0.1
PLAI Plampang 64.65 271 P **P** 09 41 52.3 -2.1
comp=Z,63nm,0.7s
TWSI Taliwang, Sumb 65.51 270 P **P** 09 41 58.3 -1.7
comp=Z,40nm,0.8s
TOLI2 Tolitoli 65.72 282 P **P** 09 42 01.0 -0.4
TOLI2 Tolitoli 65.72 282 P **P** 09 41 59.3 -2.0
MPSI Mapaga 66.19 281 P **P** 09 42 03.3 -1.1
comp=Z,34nm,0.7s
QSPA South Pole Qui 67.70 180 P **P** 09 42 15.0 +1.6
QSPA IAmb IAmb 09 42 15.6
comp=Z,14nm,0.9s
QSPA South Pole Qui 67.70 180 P **P** 09 42 14.2 +0.9
comp=Z,9.0nm,0.6s,baz=28,slow=1.5,SNR=44
QSPA LR LR 10 07 38.8
comp=Z,98nm,20.4s,baz=232,slow=32
comp=Z,9.0nm,0.6s
JAGI Jajag, Banyuwa 68.13 270 P **P** 09 42 14.9 -1.9
BLJI Banyuglugur 68.90 270 P **P** 09 42 19.7 -1.9
comp=Z,65nm,0.8s
PWJI Pagerwojo 70.46 269 P **P** 09 42 29.0 -2.2
comp=Z,41nm,0.7s
UGM Wanagama 71.69 269 P **P** 09 42 37.8 -0.8
KKM Kota Kinabalu 71.94 285 P **P** 09 42 39.6 -0.7
MJAR Matsushiro Arr 72.76 323 P **P** 09 42 43.8 -0.8
comp=Z,2.3nm,0.6s,baz=162,slow=5.4,SNR=5.4
comp=Z,2.3nm,0.6s
KPJI Karang Pucung 73.37 269 P **P** 09 42 46.8 -1.8
comp=Z,33nm,0.7s
ADK Adak 73.95 360 P **P** 09 42 52.1 +1.0
ADK Adak 73.95 360 P **P** 09 42 52.1 +1.0
ADK pmax pmax
comp=Z,120nm,1.3s
SBUM Sibu 74.05 279 P **P** 09 42 52.3 -0.4
LEM Lembang 74.76 269 P **P** 09 42 55.8 -1.2
comp=Z,58nm,0.8s
KSM Kuching 75.41 278 P **P** 09 43 00.4 -0.2
KSM IAmb IAmb 09 43 01.1
comp=Z,18nm,0.7s
YULB Yu-li 76.00 303 P **P** 09 43 02.5 -1.2
YULB IAmb IAmb 09 43 19.1
comp=Z,25nm,1.4s
TPUB Ta-pu 76.47 302 P **P** 09 43 04.9 -1.5
BELA Belgrano 2 77.47 172 P **P** 09 43 11.6 +0.4
PEA0B Petropavlovsk- 78.54 344 P **P** 09 43 17.4 +0.1
PEA0B IAmb IAmb 09 43 19.6
comp=Z,29nm,1.3s
PEA0B Petropavlovsk- 78.54 344 P **P** 09 43 17.4 +0.1
PEA0B pmax pmax
comp=Z,29nm,1.3s
PETK Petropavlovsk- 78.54 344 P **P** 09 43 16.9 -0.4
comp=Z,8.8nm,1.1s,baz=183,slow=10,SNR=5.9
comp=Z,8.8nm,1.1s
KNMB Chin-men Tao 78.82 302 P **P** 09 43 19.5 +0.1
KNMB IAmb IAmb 09 43 20.2
comp=Z,9.0nm,0.8s
KSRS Korea Array 79.46 318 *e*P **P** 09 43 23.4 +0.8
KSRS Korea Array 79.46 318 P **P** 09 43 22.4 -0.2
comp=Z,0.6nm,0.6s,baz=121,slow=6.1,SNR=4.7
comp=Z,0.6nm,0.6s
YBH Yreka Blue Hor 80.68 38 P **P** 09 43 30.7 +1.4
comp=Z,4.5nm,0.7s,baz=80,slow=1.3,SNR=13
comp=Z,4.5nm,0.7s
NVAR Mina Array Bea 81.20 42 P **P** 09 43 33.3 +1.0
comp=Z,1.1nm,0.8s,baz=227,slow=9.8,SNR=8.7
comp=Z,1.1nm,0.8s
NV11 Mina Array Sit 81.30 42 P **P** 09 43 34.4 +1.6
USA0B Ussuriysk Arra 81.51 325 *i*P **P** 09 43 33.9 +0.4
USRK Ussuriysk Ar. 81.51 325 P **P** 09 43 32.3 -1.2
comp=Z,1.6nm,0.6s,baz=122,slow=3.4,SNR=4.9
comp=Z,1.6nm,0.6s
OHAK Old Harbor 81.58 12 P **P** 09 43 34.0 +0.5
KDAK Kodiak Island 82.25 12 P **P** 09 43 37.6 +0.6
KDAK IAmb IAmb 09 43 39.8
comp=Z,24nm,1.1s
KDAK Kodiak Island 82.25 12 P **P** 09 43 37.6 +0.6
KDAK pmax pmax
comp=Z,24nm,1.2s
KDAK Kodiak Island 82.25 12 P **P** 09 43 37.4 +0.3
comp=Z,6.0nm,0.7s,baz=199,slow=4.6,SNR=7.2
comp=Z,6.0nm,0.7s
O16K Kokwok River B 83.01 9 P **P** 09 43 40.5 -0.5
O16K IAmb IAmb 09 44 07.5
comp=Z,16nm,1.2s
MDJ Mudanjiang 83.06 324 P P 09 43 47.4 +5.7
MDJ pmax pmax
comp=Z,9.0nm,2.3s
MDJ pmax pmax
comp=Z,400nm,11.1s
H03S2 Juan Fernandez 83.48 124 T T 11 15 34.7
baz=246,slow=74,SNR=602
H03S1 Juan Fernandez 83.50 124 T T 11 15 34.1
baz=246,slow=74,SNR=685
H03S3 Juan Fernandez 83.50 124 T T 11 15 37.5
baz=246,slow=74,SNR=723
CCUT Cedar City 83.85 45 IAmb IAmb 09 44 12.6
comp=Z,10nm,1.2s
ELK Elko 84.48 42 P **P** 09 43 49.4 0.0
ELK IAmb IAmb 09 44 14.8
comp=Z,7.6nm,1.1s
ELK Elko 84.48 42 P **P** 09 43 49.4 0.0
ELK pmax pmax
comp=Z,8.0nm,1.2s
ELK Elko 84.48 42 P **P** 09 43 49.9 +0.6
comp=Z,1.2nm,0.8s,baz=254,slow=8.1,SNR=6.8
comp=Z,1.2nm,0.8s
X18A Snowflake 84.54 49 IAmb IAmb 09 44 16.0
comp=Z,11nm,1.4s
N19K Bonanza Creek 84.74 10 IAmb IAmb 09 43 51.1
comp=Z,7.7nm,0.8s
LL02 Futaleuf 84.75 135 P **P** 09 43 50.6 0.0
M17K Holitna River 84.84 9 IAmb IAmb 09 43 53.7
comp=Z,6.7nm,0.8s
CN2 Changchun 84.86 322 *e*P **P** 09 43 50.6 -0.2
CN2 *es*P sP 09 43 59.6 +4.7
CN2 *e*S **S** 09 54 17.3 -1.9
CN2 *e*SS **SS** 09 59 53.4 +1.1
CN2 LR LR
comp=Z,140nm,15.0s
CN2 LR LR
comp=Z,240nm,15.0s
BNX BinXian 84.97 324 ⇑P **P** 09 43 52.0 +0.6
BNX pmax pmax
comp=Z,4.0nm,1.5s
ELIB Princess Elisa 84.97 186 *d*P **P** 09 43 51.3 0.0
comp=Z,19nm,0.6s
KLR Kul'dur 85.04 329 *i*P **P** 09 43 53.0 +1.4
KLR pmax pmax
comp=Z,6.0nm,2.0s
IPM Ipoh 85.11 277 P **P** 09 43 52.2 -0.6
K15K Wolf Creek Mou 85.18 7 IAmb IAmb 09 44 21.2
comp=Z,21nm,1.1s
L18K Granite Mounta 85.73 9 IAmb IAmb 09 44 21.0
comp=Z,7.0nm,0.9s
TROLL Troll, Antarti 85.85 180 P **P** 09 43 55.8 +0.1
comp=Z,263nm,0.6s
LR05 Currie 85.94 132 P **P** 09 43 56.9 +0.4
SUA Susitna One 86.02 12 P **P** 09 43 55.8 -0.5
SUA IAmb IAmb 09 43 58.5
comp=Z,14nm,0.8s
SNAA Sanae 86.08 178 *i*P **P** 09 43 57.7 +1.0
SNAA pmax pmax
comp=Z,32nm,2.6s
SNAA Sanae 86.08 178 P **P** 09 43 57.0 +0.2
comp=Z,2.2nm,0.2s,baz=334,slow=15,SNR=1.9
SNAA LR LR 10 19 04.9
comp=Z,54nm,19.9s,baz=332,slow=33
comp=Z,2.2nm,0.2s
VNA3 Neumayer Olymp 86.15 176 ⇓P **P** 09 43 57.4 +0.4
comp=Z,12nm,0.7s
TMUT Trail Mountain 86.23 45 IAmb IAmb 09 44 24.3
comp=Z,13nm,1.2s
VHRN Van Horn 86.28 55 P **P** 09 43 58.4 -0.1
SKT Skwentna 86.34 11 P **P** 09 43 57.6 -0.2
TTA Tatalina 86.50 9 P **P** 09 43 59.5 +0.8
TTA IAmb IAmb 09 44 28.6
comp=Z,8.7nm,1.2s
TTA Tatalina 86.50 9 P **P** 09 43 59.5 +0.8
TTA pmax pmax
comp=Z,9.0nm,1.2s
SRU San Rafael Swe 86.58 45 IAmb IAmb 09 44 25.2
comp=Z,17nm,1.4s
GO06 Curarrehue 86.59 131 IAmb IAmb 09 44 01.2
comp=Z,11nm,0.9s
TX31 Lajitas Ar. Si 86.60 57 IAmb IAmb 09 44 26.1
comp=Z,13nm,1.4s
TXAR Lajitas Array 86.60 57 P **P** 09 44 00.3 +0.3
comp=Z,1.8nm,0.8s,baz=218,slow=6.7,SNR=23
TXAR PKKPbc **PKKPbc** **10 01 56.4 +0.1**
comp=Z,0.1nm,0.6s,baz=103,slow=2.9,SNR=1.6
comp=Z,1.8nm,0.8s
VNA2 Neumayer--Watz 86.61 176 ⇓P **P** 09 43 59.2 -0.1
comp=Z,12nm,0.6s,baz=190,slow=5.0
GHO Glory Hole Cre 86.66 13 IAmb IAmb 09 44 06.6
comp=Z,12nm,0.8s
PLCA Paso Flores 86.71 133 P **P** 09 44 00.9 +0.5
PLCA IAmb IAmb 09 44 01.5
comp=Z,8.8nm,0.9s
PLCA Paso Flores 86.71 133 P **P** 09 44 00.9 +0.5
PLCA pmax pmax
comp=Z,9.0nm,1.0s
PLCA Paso Flores 86.71 133 P **P** 09 44 00.8 +0.3
comp=Z,6.8nm,1.0s,baz=220,slow=5.0,SNR=12
comp=Z,6.8nm,1.0s
O29M Mount Kennedy 87.87 18 IAmb IAmb 09 44 07.8
comp=Z,6.0nm,0.7s
RND Reindeer 88.15 12 IAmb IAmb 09 44 10.3
comp=Z,9.2nm,0.9s
LYN LuoYang 88.30 308 *e*P **P** 09 44 07.8 -0.1
ENH Enshi 88.55 304 P **P** 09 44 08.9 -0.3
ENH IAmb IAmb 09 44 09.9
comp=Z,7.3nm,0.9s
CMIG Matias Romero 88.60 71 LR LR 10 14 37.5
comp=Z,79nm,21.1s,baz=353,slow=29
DLBC Dease Lake 89.10 22 P **P** 09 44 11.2 0.0
comp=Z,0.9nm,0.6s,baz=238,slow=18,SNR=1.6
comp=Z,0.9nm,0.6s
PDAR Pinedale Array 89.14 43 P **P** 09 44 12.8 +0.8
comp=Z,0.6nm,0.7s,baz=205,slow=2.8,SNR=8.4
PDAR PKKPbc **PKKPbc** **10 01 51.0 +0.1**
comp=Z,0.1nm,0.4s,baz=90,slow=5.0,SNR=1.4
comp=Z,0.6nm,0.7s
WRH Wood River Hil 89.27 12 IAmb IAmb 09 44 40.6
comp=Z,5.9nm,0.8s
BOZ Bozeman (W) 89.41 39 IAmb IAmb 09 44 38.9
comp=Z,10nm,1.4s
HDA Harding Lake 89.43 12 IAmb IAmb 09 44 14.0
comp=Z,5.3nm,0.8s
CCB Clear Creek Bu 89.48 12 IAmb IAmb 09 44 14.0
comp=Z,5.5nm,0.7s
COLA College 89.67 12 P **P** 09 44 13.5 -0.1
COLA IAmb IAmb 09 44 14.9
comp=Z,10nm,0.8s
COLA College 89.67 12 P **P** 09 44 13.5 -0.1
COLA pmax pmax
comp=Z,10.0nm,0.8s
IMAR Indian Mountai 89.72 9 P **P** 09 44 14.3 +0.4
IL31 89.77 12 P **P** 09 44 14.6 +0.6
ILAR Eielson Array 89.77 12 P **P** 09 44 13.6 -0.5
ILAR Eielson Array 89.77 12 *e*P **P** 09 44 13.5 -0.5
ILAR pmax pmax
comp=Z,1.0nm,0.5s
ILAR Eielson Array 89.77 12 P **P** 09 44 13.1 -1.0
comp=Z,1.0nm,0.6s,baz=216,slow=4.9,SNR=15
comp=Z,1.0nm,0.6s
F19K Shaleruckik Mo 90.01 7 IAmb IAmb 09 44 16.0
comp=Z,5.5nm,0.8s
J26L Joseph Creek 90.21 13 IAmb IAmb 09 44 19.0
comp=Z,7.7nm,0.7s
M30M Minto, Yukon 90.23 17 IAmb IAmb 09 44 44.1
comp=Z,12nm,1.5s
XLT XiLinHaoTe 90.51 318 *e*P P 09 44 25.8 +7.6
XLT pP sP 09 44 30.8 +8.5
XLT pmax pmax
comp=Z,2.0nm,1.1s
XLT pmax pmax
comp=Z,390nm,11.2s
XAN Xi'an 90.67 307 ⇓P **P** 09 44 18.9 -0.2
XAN sP sP 09 44 26.6 +3.4
XAN pmax pmax
comp=Z,8.0nm,0.8s
XAN LR LR
comp=Z,890nm,10.3s
XAN LR LR
comp=Z,1µm,13.4s
XAN LR LR
comp=Z,2µm,14.4s
DAWY Dawson 90.79 15 P **P** 09 44 19.8 +0.9
DAWY IAmb IAmb 09 44 20.3
comp=Z,5.2nm,0.8s
K29M Barlow Dome 91.08 16 IAmb IAmb 09 44 47.8

	comp=Z,8.5nm,1.1s							
BILL	**Bilibino**	**91.09 353**		P		**P**	**09 44 21.2**	**+1.1**
BILL				IAmb		IAmb	09 44 25.5	
	comp=Z,11nm,1.5s							
BILL	**Bilibino**	**91.09 353**	*i*	P		**P**	**09 44 20.7**	**+0.5**
APMT	**Aspermont**	**91.11 54**		IAmb		IAmb	09 44 45.8	
	comp=Z,6.8nm,1.0s							
J29N	**Klondike Camp**	**91.40 15**		IAmb		IAmb	09 44 25.1	
	comp=Z,6.8nm,0.7s							
D19K	**Kuna River**	**91.57 7**		IAmb		IAmb	09 44 24.8	
	comp=Z,4.1nm,0.8s							
HHC	**Hu-ho-hao-te**	**91.92 314**	*eP*			**P**	**09 44 25.8**	**+1.0**
HHC				S		**S**	**09 55 22.6**	**-4.0**
HHC				pmax	pmax			
	comp=Z,3.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,210nm,5.5s							
HHC				LR	LR			
	comp=Z,250nm,16.8s							
HHC				LR	LR			
	comp=Z,440nm,16.8s							
HHC				LR	LR			
	comp=Z,500nm,16.0s							
C19K	**Lookout Ridge**	**92.01 6**		IAmb		IAmb	09 44 50.5	
	comp=Z,14nm,1.4s							
AC05	**El Transito**	**92.29 122**		IAmb		IAmb	09 44 28.3	
	comp=Z,7.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**92.39 289**	*eP*			**P**	**09 44 28.3**	**+0.9**
CMAR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**92.39 289**		P		**P**	**09 44 27.5**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=134,slow=2.9,SNR=21							
	comp=Z,4.0nm,0.8s							
CHTO	**Chiang Mai**	**92.53 289**		P		**P**	**09 44 27.8**	**-0.2**
CHTO				IAmb		IAmb	09 44 29.2	
	comp=Z,5.9nm,0.8s							
CHTO	**Chiang Mai**	**92.53 289**		P		**P**	**09 44 27.8**	**-0.2**
CHTO				pmax	pmax			
	comp=Z,6.0nm,0.8s							
PZH	**PanZhiHua**	**93.14 297**		P		**P**	**09 44 30.5**	**-0.3**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
PZH				pmax	pmax			
	comp=Z,160nm,5.9s							
CD2	**Chengdu**	**93.28 302**		P		**P**	**09 44 31.6**	**+0.3**
RSSD	**Black Hills**	**93.30 43**		P		**P**	**09 44 31.5**	**+0.2**
RSSD	**Black Hills**	**93.30 43**		P		**P**	**09 44 31.5**	**+0.2**
RSSD				pmax	pmax			
	comp=Z,17nm,1.4s							
NNA	**Nana**	**93.88 105**		LR		LR	10 17 56.4	
	comp=Z,31nm,18.9s,baz=349,slow=30							
TNCH	**TengChong**	**95.25 295**	*eP*			**P**	**09 44 44.0**	**+3.4**
LVC	**Limon Verde**	**96.21 117**		LR		LR	10 20 48.7	
	comp=Z,40nm,19.0s,baz=355,slow=31							
YKA	**Yellowknife Ar**	**97.49 24**	*eP*			**P**	**09 44 50.2**	**+0.6**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**97.49 24**		P		**P**	**09 44 49.8**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=240,slow=4.6,SNR=15							
	comp=Z,0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**113.06 321**		PKiKP		**PKiKP**	**09 49 50.5**	**-2.7**
	comp=Z,0.4nm,0.5s,baz=110,slow=2.1,SNR=2.4							
MKAR	**Makanchi Array**	**113.76 313**		PKiKP		**PKiKP**	**09 49 53.0**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=75,slow=1.8,SNR=8.2							
MKAR				PKKPbc		**PKKPbc**	**10 00 37.2**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=283,slow=5.3,SNR=3.9							
KURBB	**Kurchatov Arra**	**116.62 317**		PKP		**PKPdf**	**09 49 58.0**	**-2.1**
	comp=Z,0.6nm,0.7s,baz=100,slow=1.8,SNR=8.1							
BVAR	**Borovoye Array**	**121.65 319**		PKP		**PKPdf**	**09 50 08.4**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=100,slow=2.9,SNR=11							
BRVK	**Borovoye**	**121.71 319**	*i*	PKIKP		**PKPdf**	**09 50 10.3**	**+0.4**
SPITS	**Spitsbergen Ar**	**123.84 357**		PKP		**PKPdf**	**09 50 12.4**	**-0.9**
	comp=Z,16nm,1.1s,baz=87,slow=4.3,SNR=8.0							
BOSA	**Boshof**	**125.27 203**		PKP		**PKPdf**	**09 50 16.1**	**-1.7**
	comp=Z,1.6nm,0.8s,baz=68,slow=8.3,SNR=1.7							
ARCES	**ARCESS Array B**	**131.07 350**	*e*	PKIKP		**PKPdf**	**09 50 26.9**	**-0.4**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
ARCES	**ARCESS Array B**	**131.07 350**		PKP		**PKPdf**	**09 50 26.1**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=4.8,slow=2.5,SNR=17							
GEYT	**Alibeck**	**131.27 301**		PKP		**PKPdf**	**09 50 27.7**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=81,slow=8.9,SNR=2.3							
FINES	**FINESS Array B**	**138.06 344**	*e*	PKIKP		**PKPdf**	**09 50 38.0**	**-2.6**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.8s							
FINES	**FINESS Array B**	**138.06 344**		PKhKP		PKPpre	09 50 33.9	
	comp=Z,2.2nm,0.9s,baz=270,slow=3.8,SNR=2.3							
FINES				PKP		**PKPdf**	**09 50 41.1**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=29,slow=4.4,SNR=4.2							
NOA	**NORSAR Array B**	**141.03 354**		PKhKP		PKPpre	09 50 37.9	
	comp=Z,0.8nm,0.7s,baz=68,slow=1.3,SNR=2.0							
HFS	**Hagfors**	**141.65 352**		PKhKP		PKPpre	09 50 39.4	
	comp=Z,2.1nm,0.6s,baz=182,slow=37,SNR=2.0							
GURO	**Guroymak-BITLI**	**143.68 305**		PKPdf		PKPab	09 50 49.0	+0.7
ANN	**Anapa**	**144.59 317**	*i*	PKIKP		PKPbc	09 50 53.5	+2.0
ANN				pmax	pmax			
	comp=Z,100nm,1.1s							
AKASG	**Malin Array Be**	**145.50 331**	*e*	PKP2		**PKPdf**	**09 50 53.4**	**-0.8**
AKASG				pmax	pmax			
	comp=Z,12nm,0.6s							
AKASG	**Malin Array Be**	**145.50 331**		PKPbc		**PKPdf**	**09 50 52.3**	**-1.9**
	comp=Z,12nm,0.6s,baz=42,slow=4.3,SNR=56							
AKBB	**Malin Array Si**	**145.50 331**		PKPdf		**PKPdf**	**09 50 53.0**	**-1.2**
AKBB	**Malin Array Si**	**145.50 331**		PKHKP		PKPpre	09 50 53.0	
KIEV	**Kiev**	**145.52 331**	⇑	P		**PKPdf**	**09 50 53.1**	**-1.0**
KIEV	**Kiev**	**145.52 331**		PKPdf		**PKPdf**	**09 50 53.2**	**-1.0**
KIEV	**Kiev**	**145.52 331**		PKP2		**PKPdf**	**09 50 53.2**	**-1.0**
SIM	**Simferopol'**	**146.56 320**	*e*	PKP2		**PKiKP**	**09 51 01.7**	**+1.1**
SIM				pmax	pmax			
	comp=Z,34nm,0.8s							
EKA	**Eskdalemuir Ar**	**146.68 7**		PKPbc		**PKPdf**	**09 50 56.4**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=334,slow=3.0,SNR=7.1							
SORM	**Soroca**	**147.72 329**	⇑	P		**PKPdf**	**09 50 60.0**	**+2.0**
BNN	**Bunyan**	**148.18 308**		PKPbc		**PKPdf**	**09 51 02.6**	**+3.3**
BR131	**Keskin Array S**	**149.40 311**				**PKPdf**	**09 51 04.7**	**+3.5**
BR131	**Keskin Array S**	**149.40 311**		PKIKP		**PKPdf**	**09 51 04.7**	**+3.5**
BRTR	**Keskin Array B**	**149.40 311**				**PKPdf**	**09 51 05.4**	**+4.2**
BRTR	**Keskin Array B**	**149.40 311**		PKIKP		**PKPdf**	**09 51 05.4**	**+4.2**
BRTR	**Keskin Array B**	**149.40 311**		PKPbc		**PKPdf**	**09 51 04.5**	**+3.3**
	comp=Z,2.7nm,0.7s,baz=142,slow=4.8,SNR=11							
BURAR	**Bucovina Array**	**149.56 331**	⇑	P		**PKPbc**	**09 51 06.6**	**+0.9**
BURAR	**Bucovina Array**	**149.56 331**	⇑	PKP2		**PKPbc**	**09 51 06.6**	**+0.9**
KOLS	**Kolonicke sedl**	**149.75 336**	*e*	PKP2		**PKPab**	**09 51 11.3**	**0.0**
KOLS	**Kolonicke sedl**	**149.75 336**	*e*	PKP		**PKPab**	**09 51 11.3**	**0.0**
CRVS	**Cervenica-Dubn**	**150.08 336**	*e*	PKIKP		**PKPbc**	**09 51 08.1**	**+1.3**
CRVS			*e*				09 51 12.6	
CRVS	**Cervenica-Dubn**	**150.08 336**	*e*			**PKPab**	**09 51 12.6**	**-0.1**
CRVS	**Cervenica-Dubn**	**150.08 336**	*e*	PKP		**PKPbc**	**09 51 08.1**	**+1.3**
VRI	**Vrincioaia**	**150.10 327**	⇑	P		**PKPdf**	**09 50 59.9**	**-2.1**
HARR	**Harsova**	**150.26 324**	⇑	PKIKP		**PKPab**	**09 51 12.9**	**-0.6**
MMAI	**Mount Meron Ar**	**150.26 298**		PKPbc		**PKPdf**	**09 51 07.2**	**+4.4**
	comp=Z,2.5nm,0.4s,baz=90,slow=5.0,SNR=6.9							
OSTC	**Ostas**	**150.27 344**	⇑	*e*PKP		**PKPbc**	**09 51 07.6**	**+0.4**
OSTC	**Ostas**	**150.27 344**		*e*PKIKP		**PKPbc**	**09 51 07.6**	**+0.4**
CLL	**Collm**	**150.27 348**		*e*PKIKP		**PKPdf**	**09 51 04.0**	**+2.0**
CLL				*e*			09 51 07.0	
CLL				*e*			09 51 14.0	
CLL				pmax	pmax			
	comp=Z,8.0nm,0.9s							
CLL	**Collm**	**150.27 348**		*e*PKPdf		**PKPdf**	**09 51 04.0**	**+2.0**
CLL				*e*PKPbc		**pPKPdf**	**09 51 07.0**	**+1.8**
	comp=Z,8.0nm,0.9s							
CLL				*e*PKPab		**sPKPbc**	**09 51 14.0**	**+2.6**
DPC	**Dobruska-Polom**	**150.43 344**	⇑	*e*PKP		**PKPbc**	**09 51 07.6**	**-0.1**
DPC	**Dobruska-Polom**	**150.43 344**		*e*PKIKP		**PKPbc**	**09 51 07.6**	**-0.1**
BRG	**Berggiesshubel**	**150.50 347**		*e*PKP		**PKPbc**	**09 51 07.7**	**0.0**
BRG				Amp			09 51 11.2	
	comp=Z,4.9nm,0.8s							
BRG	**Berggiesshubel**	**150.50 347**		P		**PKPab**	**09 51 16.1**	**+1.8**
BRG				Amp			09 51 19.4	
	comp=Z,7.4nm,0.7s							
BRG	**Berggiesshubel**	**150.50 347**		*e*PKIKP		**PKPbc**	**09 51 07.7**	**0.0**
BRG							09 51 16.0	
BRG				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BRG				pmax	pmax			
	comp=Z,7.0nm,0.7s							
KRLC	**Kraliky**	**150.56 343**	⇑	*e*PKP		**PKPdf**	**09 51 07.1**	**+4.5**
KRLC	**Kraliky**	**150.56 343**		*e*PKIKP		**PKPdf**	**09 51 07.1**	**+4.5**
MORC	**Moravsky Berou**	**150.62 342**	⇑	P		**PKPbc**	**09 51 08.8**	**+0.7**
MORC	**Moravsky Berou**	**150.62 342**	⇑	PKIKP		**PKPbc**	**09 51 08.8**	**+0.7**
DOPR	**Dopca**	**150.69 329**	⇑	P		**PKPbc**	**09 51 08.5**	**+0.1**
MLR	**Muntele Rosu**	**150.75 327**	⇑	P		**PKPdf**	**09 51 04.8**	**+1.6**
MLR	**Muntele Rosu**	**150.75 327**		PKPdf		**PKPdf**	**09 51 04.9**	**+1.7**
MLR	**Muntele Rosu**	**150.75 327**		PKIKP		**PKPdf**	**09 51 04.9**	**+1.7**
MLR	**Muntele Rosu**	**150.75 327**	⇑	P		**PKPbc**	**09 51 10.2**	**+1.5**
RICC	**Richard**	**150.78 347**	⇑	*e*PKP		**PKPbc**	**09 51 08.9**	**+0.5**
MAUC	**Maruska**	**150.90 341**	⇑	*e*PKP		**PKPbc**	**09 51 08.9**	**+0.1**
PRU	**Pruhonice**	**151.20 346**	⇑	*e*PKP		**PKPbc**	**09 51 09.6**	**+0.2**
PRU				*e*	pPKP	**PKPab**	**09 51 18.8**	**+1.6**
PRU	**Pruhonice**	**151.20 346**		*e*PKIKP		**PKPbc**	**09 51 09.6**	**+0.2**
PRU				*e*			09 51 18.8	
GOPC	**GO Pecny, Ondr**	**151.21 345**	⇑	*e*PKP		**PKPbc**	**09 51 09.8**	**+0.3**
GOPC				*e*	pPKP	**PKPab**	**09 51 18.0**	**+0.7**
GOPC	**GO Pecny, Ondr**	**151.21 345**		*e*PKIKP		**PKPbc**	**09 51 09.8**	**+0.3**
GOPC				*e*			09 51 18.0	
VOIR		**151.23 328**	⇑	P		**PKPbc**	**09 51 09.8**	**0.0**
VOIR		**151.23 328**	⇑	PKIKP		**PKPbc**	**09 51 09.8**	**0.0**
ARR	**Arges**	**151.49 328**	⇑	P		**PKPbc**	**09 51 10.8**	**+0.5**
MODS	**Modra-Piesok**	**151.95 341**	*e*	PKIKP		**PKPbc**	**09 51 10.5**	**-0.7**
MODS			*e*				09 51 20.5	
MODS	**Modra-Piesok**	**151.95 341**	*e*	PKP		**PKPbc**	**09 51 10.5**	**-0.7**
MODS			*e*				09 51 20.5	
BGES	**Gesves**	**152.04 358**	*d*	PKPdf		**PKPdf**	**09 51 03.7**	**-1.0**
SIRR	**Siria**	**152.15 333**	⇑	P		**PKPbc**	**09 51 11.5**	**-0.3**
KHC	**Kasperske Hory**	**152.22 346**	⇑	*e*PKP		**PKPbc**	**09 51 11.4**	**-0.5**
KHC	**Kasperske Hory**	**152.22 346**		*e*PKIKP		**PKPbc**	**09 51 11.4**	**-0.5**
GZR	**Gura Zlata**	**152.34 331**	⇓	P		**PKPbc**	**09 51 12.9**	**+0.6**
GZR	**Gura Zlata**	**152.34 331**	⇓	PKIKP		**PKPbc**	**09 51 12.9**	**+0.6**
SURR	**Surduc**	**152.35 332**	⇓	P		**PKPbc**	**09 51 11.7**	**-0.5**
GERES	**GERESS Array B**	**152.46 346**		PKPbc		**PKPdf**	**09 51 10.7**	**+5.1**
	comp=Z,1.1nm,0.5s,baz=27,slow=3.3,SNR=4.3							
BZS	**Buzias**	**152.68 332**	⇓	P		**PKPbc**	**09 51 11.9**	**-1.1**
BZS	**Buzias**	**152.68 332**	⇓	PKIKP		**PKPbc**	**09 51 11.9**	**-1.1**
RONA	**Rosalia, Austr**	**152.84 341**	*e*	PKP		**PKPbc**	**09 51 12.8**	**-0.5**
	comp=Z,4.5nm,0.9s							
HERR	**Herculane**	**152.90 330**	⇑	P		**PKPbc**	**09 51 12.6**	**-0.8**
MOA	**Molln**	**153.26 344**	*e*	PKP		**PKPab**	**09 51 26.1**	**+0.1**
PRED	**Cave del Predi**	**154.75 344**				**PKPab**	**09 51 32.1**	**-0.2**
ESDC	**Sonseca Array**	**161.51 19**		PKPab		**PKPbc**	**09 52 00.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=327,slow=4.2,SNR=2.2							
DBIC	**Dimbokro**	**162.25 150**		PKPab		**PKPab**	**09 52 04.8**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=230,slow=8.8,SNR=3.0							
TORD	**Torodi Ar. Bea**	**170.58 167**		PKPab		**PKPab**	**09 52 41.5**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=179,slow=4.1,SNR=2.8							

PGC 15 09:31:28.1±7.9, 47°.64N×129°.34W, h10km, MLSn2.9/14, Mw3.5/14, 303km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEMO	**NEPTUNE Canada**	**0.32**	**28**	P	Pg	09 31 33.9	-0.5
KEMO				S	Sg	09 31 38.2	-0.5
KEMF	**NEPTUNE Canada**	**0.35**	**27**	P	Pg	09 31 34.3	-0.6
KEMF				S	Sg	09 31 38.7	-0.8
NCHR	**NEPTUNE Canada**	**0.38**	**27**	P	Pg	09 31 35.0	-0.4
NCHR				S	Sg	09 31 39.9	-0.5
NC27	**ODP1027**	**1.07**	**83**	P	Pb	09 31 47.7	-0.8
EDB	**Eliza Dome**	**2.67**	**32**	Pn	Pn	09 32 09.4	-1.7
MAYB	**Maynard**	**3.11**	**26**	Pn	Pn	09 32 16.4	-0.9
WOSB	**Woss**	**3.11**	**35**	Pn	Pn	09 32 16.1	-1.2
SPLB	**Strathcona Par**	**3.32**	**46**	Pn	Pn	09 32 19.2	-0.8
PFB	**Port Renfrew**	**3.41**	**72**	Pn	Pn	09 32 19.4	-2.0
PTRF	**Port Renfrew**	**3.42**	**73**	Pn	Pn	09 32 19.1	-2.3
NCSB	**Newcastle Ridg**	**3.51**	**37**	Pn	Pn	09 32 21.9	-0.8
CLRS	**Cowichan Lake**	**3.67**	**69**	Pn	Pn	09 32 22.9	-2.0
SYMB	**Survey Mountai**	**3.82**	**74**	Pn	Pn	09 32 24.8	-2.2
SHB	**Sechelt**	**4.12**	**60**	Pn	Pn	09 32 29.7	-1.4
BIB	**Bowen Island**	**4.38**	**64**	Pn	Pn	09 32 33.3	-1.3
WPB	**Watts Point**	**4.54**	**61**	Pn	Pn	09 32 36.1	-0.7
BBB	**Bella Bella**	**4.62**	**9**	Pn	Pn	09 32 37.9	+0.1

SOF 15 09:49:24.9, 42°.70N±0°.02×27°.45E±0°.01, h10km±2km, MD1.7/3, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROIA	**ROIAK**	**0.40**	**353**	*eP*	Pg	09 49 32.9	+0.1
ROIA				S	Sb	09 49 39.6	-0.7
AVR	**AVREN**	**0.45**	**21**	*eP*	Pg	09 49 34.4	+0.6
AVR				S	Sg	09 49 40.3	+0.5
PRD	**Provadia**	**0.47**	**357**	*eP*	Pg	09 49 33.9	-0.1
PRD				S	Sg	09 49 40.9	+0.7
NEF	**NEVSHA**	**0.58**	**347**	*i* P	Pb	09 49 36.9	-0.3
NEF				*e*S	Sb	09 49 44.9	-0.7
JMB	**Yambol**	**0.71**	**254**	*eP*	Pb	09 49 39.4	+0.1
JMB				S	Sg	09 49 47.8	0.0
PSN	**Preselentsi**	**1.07**	**28**	*eP*	Pn	09 49 46.1	+0.2
PSN				S	Sb	09 49 59.7	+0.2
SZH	**Strazhitsa**	**1.22**	**298**	*i* P	Pg	09 49 48.8	+0.4
SZH				S	Sn	09 50 04.9	+0.3

IDC 15 09:52:27.9±5.8, 53°.74N×91°.04E, h0km, mbtmp2.8/3, ML2.1/3, Error ellipse: s-maj=66.8km s-min=31.0km az=93.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.69**	**276**	I	I	10 13 50.0	
	0.2nm,0.9s,baz=89,slow=332,SNR=3.5						
ZALV	**Zalesovo Beam**	**3.69**	**276**	Pn	Pn	09 53 28.4	+2.2
	0.3nm,0.3s,baz=94,slow=15,SNR=5.0						
ZALV				Lg	Lg	09 54 22.6	
	0.4nm,0.3s,baz=95,slow=27,SNR=10						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**8.30**	**253**	Pn	Pn	09 54 28.5	-0.9
	baz=64,slow=15,SNR=4.9						
KURBB				Sn	Sn	09 55 59.6	-4.1
	baz=314,slow=55,SNR=1.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**8.92**	**222**	Pn	Pn	09 54 38.6	+0.7
	0.1nm,0.3s,baz=40,slow=14,SNR=5.2						
MKAR				Sn	Sn	09 56 18.3	-0.8
	baz=282,slow=28,SNR=1.7						
MKAR				Lg	Lg	09 57 04.7	
	baz=54,slow=31,SNR=2.3						
	0.3nm,0.6s						
SONM	**Songino Array**	**11.36**	**115**	Lg	Lg	09 58 27.8	
	baz=298,slow=28,SNR=3.7						

*NEIC **15** 09:54:04.6±2.1, 19°.0N±0°.2×68°.68W±0°.08, h43km±33km, ML2.5/16, Md3.3/5(RSPR), Error ellipse: s-maj=26.1km s-min=2.3km az=205.0*
*RSPR **15** 09:54:05.5, 19°.06N×68°.66W, h48km±10km, MD3.3/5*
*SDD **15** 09:54:05.6±1.6, 18°.49N×68°.93W, h40km±31km, MD2.9, ML2.3, MW2.5*

ISC 15 09:54:06.4±1.2, 18°.9N±0°.1×68°.66W±0°.06, h50km, n24, σ1§38/29, 5C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIDR	**Miches**	**0.38**	**285**	⇓ *e*Pg	**Pn**	**09 54 14.5**	**-1.9**
MIDR				IAML	**Sg**	**09 54 23.8**	**+0.3**
	comp=E,26nm,0.4s						
MIDR				⇓ *e*Sg	**Sg**	**09 54 23.8**	**+0.3**
MIDR				IAML		09 54 41.6	
	comp=N,46nm,2.4s						
PCDR	**Punta Cana, DR**	**0.45**	**144**	*eP*	**Pn**	**09 54 15.8**	**-1.4**
PCDR	**Punta Cana, DR**	**0.45**	**144**	*eS*	**Sn**	**09 54 24.9**	**+0.2**
PCDR	**Punta Cana, DR**	**0.45**	**144**		**Pn**	**09 54 15.8**	**-1.4**
PCDR					**Sn**	**09 54 24.9**	**+0.2**
PCDR	**Punta Cana, DR**	**0.45**	**144**	*ePg*	**Pn**	**09 54 16.1**	**-1.0**
PCDR				*eSg*	**Sn**	**09 54 23.1**	**-1.6**
PCDR				IAML		09 54 30.2	
	comp=E,133nm,1.4s						
PCDR				IAML		09 54 51.7	
	comp=N,274nm,1.4s						
CRPR	**Cabo Rojo, PR**	**1.71**	**120**	*eP*	**Pn**	**09 54 33.3**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.71**	**120**	*eS*	**Sn**	**09 54 56.6**	**+2.1**
CRPR	**Cabo Rojo, PR**	**1.71**	**120**		**Pn**	**09 54 33.3**	**-0.5**
CRPR					**Sn**	**09 54 56.6**	**+2.1**
CRPR	**Cabo Rojo, PR**	**1.71**	**120**	IAML		09 55 03.2	
	comp=E,40nm,2.6s						
CRPR				IAML		09 55 04.0	
	comp=N,45nm,2.4s						
CRPR	**Cabo Rojo, PR**	**1.71**	**120**	*ePg*	**Pn**	**09 54 34.4**	**+0.6**
CRPR				IAML		09 55 03.5	
	comp=N,60nm,1.7s						
MLPR	**Magueyes Islan**	**1.78**	**120**	*eP*	**Pn**	**09 54 33.5**	**-1.3**
MLPR	**Magueyes Islan**	**1.78**	**120**	*eS*	**Sn**	**09 54 58.5**	**+2.3**
MLPR	**Magueyes Islan**	**1.78**	**120**		**Pn**	**09 54 33.5**	**-1.3**
MLPR					**Sn**	**09 54 58.5**	**+2.3**
MLPR	**Magueyes Islan**	**1.78**	**120**	*ePg*	**Pn**	**09 54 34.0**	**-0.7**
MLPR				IAML		09 55 21.3	
	comp=N,34nm,1.8s						
AOPR	**Arecibo Observ**	**1.88**	**106**	*eS*	**Sn**	**09 54 59.3**	**+0.5**
AOPR	**Arecibo Observ**	**1.88**	**106**	Pn	**Pn**	**09 54 35.8**	**-0.4**
AOPR					**Sn**	**09 54 58.4**	**-0.4**
AOPR				IAML		09 55 21.9	
	comp=E,53nm,2.4s						
AOPR	**Arecibo Observ**	**1.88**	**106**	*eSg*	**Sn**	**09 55 00.0**	**+1.2**
AOPR				IAML		09 55 14.6	
	comp=N,53nm,2.8s						
EMPR	**Esperanza - Ma**	**2.06**	**101**	Pn	**Pn**	**09 54 37.3**	**-1.3**
OBIP	**Obispado Ponce**	**2.12**	**113**	Pn	**Pn**	**09 54 37.6**	**-1.8**
OBIP				IAML		09 55 07.1	
	comp=E,35nm,3.7s						
OBIP				IAML		09 55 28.9	
	comp=N,30nm,3.9s						
CELP	**Cerrillos**	**2.13**	**112**	⇑ *eP*	**Pn**	**09 54 37.8**	**-1.8**
CELP	**Cerrillos**	**2.13**	**112**		**Pn**	**09 54 37.8**	**-1.8**
CELP	**Cerrillos**	**2.13**	**112**	IAML		09 55 18.4	
	comp=E,29nm,3.1s						
CELP				IAML		09 55 20.8	
	comp=N,29nm,3.6s						
CELP	**Cerrillos**	**2.13**	**112**	*ePg*	**Pn**	**09 54 39.4**	**-0.2**
CELP				IAML		09 55 19.7	
	comp=N,28nm,4.7s						
SDDR	**Presa de Saban**	**2.49**	**273**	Pn	**Pn**	**09 54 45.3**	**+0.7**
SDDR				IAML		09 56 01.5	
	comp=N,28nm,3.1s						

IDC 15 09:55:13.8±2.3, 54°.24N×86°.04E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=18.3km s-min=11.0km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.78**	**249**	I	I	10 00 40.0	
	baz=66,slow=332,SNR=1.6						
ZALV	**Zalesovo Beam**	**0.78**	**249**	Pg	Pg	09 55 27.5	-1.2
	1.8nm,0.3s,baz=68,slow=20,SNR=19						
ZALV				Lg	Lg	09 55 40.0	
	8.4nm,0.3s,baz=70,slow=29,SNR=14						
KURBB	**Kurchatov Arra**	**5.85**	**235**	Pn	Pn	09 56 42.6	+0.9
	0.2nm,0.3s,baz=52,slow=13,SNR=16						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**7.83**	**199**	Pn	Pn	09 57 09.8	+0.9
	0.3nm,0.3s,baz=23,slow=12,SNR=14						
	0.7nm,0.5s						

*HEL **15** 10:00:02.7±0.2, 64°.74N×30°.82E, h0km, ML1.7, Suspected explosion*
*IDC **15** 10:00:03.6±2.7, 64°.70N×30°.93E, h0km, mbtmp2.4/2, ML1.8/2, Error ellipse: s-maj=43.2km s-min=9.4km az=102.0*
*KOLA **15** 10:00:03.1, 64°.69N×30°.65E, h0km, ML2.2, Error ellipse: s-maj=15.9km s-min=15.6km az=10.0, Kostomuksha, Karelia*

ISC 15 10:00:02.2±1.0, 64°.77N±0°.02×31°.02E±0°.05, h0km, n32, σ1§55/55, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.72**	**221**	PG	**Pg**	**10 00 14.6**	**-1.5**
RMF				MSG		10 00 23.2	
	comp=Z,11nm,0.2s						
RMF				SG	**Sg**	**10 00 23.2**	**-

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMO	**NEPTUNE Canada**	**0.40**	**76**		**Pg**	**10 12 26.8**	**+0.4**
KEMO	**NEPTUNE Canada**	**0.40**	**76**	S	**Pg**	**10 12 26.8**	**+0.4**
KEMF	**NEPTUNE Canada**	**0.41**	**73**		**Pg**	**10 12 27.4**	**+0.8**
KEMF	**NEPTUNE Canada**	**0.41**	**73**	S	**Pg**	**10 12 27.4**	**+0.8**
NCHR	**NEPTUNE Canada**	**0.43**	**70**		**Pg**	**10 12 28.1**	**+1.1**
NCHR	**NEPTUNE Canada**	**0.43**	**70**	S	**Pg**	**10 12 28.1**	**+1.1**
OZB	**Mount Ozzard**	**3.02**	**66**	Pn	**Pn**	**10 13 07.6**	**+0.8**
OZB	**Mount Ozzard**	**3.02**	**66**	IAML		10 14 16.1	
OZB	comp=E,59nm,1.5s			IAML		10 14 19.3	
OZB	comp=N,61nm,2.0s **Mount Ozzard**	**3.02**	**66**	Pn	**Pn**	**10 13 07.6**	**+0.8**
MAYB	**Maynard**	**3.06**	**32**	Pn	**Pn**	**10 13 10.6**	**+3.1**
MAYB	**Maynard**	**3.06**	**32**	Pn	**Pn**	**10 13 10.6**	**+3.1**
WOSB	**Woss**	**3.11**	**40**	Pn	**Pb**	**10 13 12.5**	**-1.8**
WOSB	**Woss**	**3.11**	**40**	Pn	**Pb**	**10 13 12.5**	**-1.8**
SPLB	**Strathcona Par**	**3.37**	**51**	Pn	**Pb**	**10 13 15.5**	**-3.2**
SPLB	**Strathcona Par**	**3.37**	**51**	Pn	**Pb**	**10 13 15.5**	**-3.2**
NCSB	**Newcastle Ridg**	**3.51**	**41**	Pn	**Pb**	**10 13 18.6**	**-2.6**
PFB	**Port Renfrew**	**3.59**	**76**	Pn	**Pn**	**10 13 15.4**	**+0.8**
PFB	**Port Renfrew**	**3.59**	**76**	Pn	**Pn**	**10 13 15.4**	**+0.8**
PTRF	**Port Renfrew**	**3.60**	**77**	Pn	**Pn**	**10 13 15.8**	**+1.0**
CBB	**Campbell River**	**3.60**	**51**	Pn	**Pn**	**10 13 17.1**	**+2.3**
B926	**Mesachie Lake**	**3.84**	**73**	Pn	**Pn**	**10 13 19.3**	**+1.3**
B926	**Mesachie Lake**	**3.84**	**73**	Pn	**Pn**	**10 13 19.3**	**+1.3**
CLRS	**Cowichan Lake**	**3.84**	**73**	Pn	**Pn**	**10 13 18.7**	**+0.6**
CLRS	**Cowichan Lake**	**3.84**	**73**	Pn	**Pn**	**10 13 19.0**	**+0.9**
CLRS	comp=N,26nm,4.7s			IAML		10 13 46.1	
CLRS	comp=E,28nm,2.5s			IAML		10 13 58.4	
CLRS	**Cowichan Lake**	**3.84**	**73**	Pn	**Pn**	**10 13 18.7**	**+0.6**
NLWA	**Neilton Lookou**	**3.96**	**94**	Pn	**Pn**	**10 13 21.0**	**+1.2**
NLWA	comp=E,28nm,4.5s			IAML		10 15 15.8	
NLWA	comp=E,30nm,4.3s			IAML		10 15 42.6	
SYMB	**Survey Mountai**	**4.01**	**77**	Pn	**Pn**	**10 13 20.9**	**+0.4**
SYMB	**Survey Mountai**	**4.01**	**77**	Pn	**Pn**	**10 13 20.9**	**+0.4**
NLLB	**Nanaimo Lost L**	**4.04**	**68**	Pn	**Pn**	**10 13 22.7**	**+1.9**
NLLB	**Nanaimo Lost L**	**4.04**	**68**	Pn	**Pn**	**10 13 22.7**	**+1.9**
SHB	**Sechelt**	**4.24**	**63**	Pn	**Pn**	**10 13 25.6**	**+2.0**
SHB	**Sechelt**	**4.24**	**63**	Pn	**Pn**	**10 13 25.6**	**+2.0**
B010	**North Saanich**	**4.25**	**76**	Pn	**Pn**	**10 13 24.8**	**+1.2**
B010	**North Saanich**	**4.25**	**76**	Pn	**Pn**	**10 13 24.8**	**+1.2**
PGC	**Sidney**	**4.25**	**76**	Pn	**Pn**	**10 13 24.4**	**+0.8**
PGC	comp=E,21nm,4.1s			IAML		10 14 10.6	
PGC	comp=N,22nm,3.5s			IAML		10 15 31.2	
PGC	**Sidney**	**4.25**	**76**	Pn	**Pn**	**10 13 25.5**	**+1.9**
B011	**North Saanich**	**4.25**	**77**	Pn	**Pn**	**10 13 24.9**	**+1.3**
B011	**North Saanich**	**4.25**	**77**	Pn	**Pn**	**10 13 24.9**	**+1.3**
BBB	**Bella Bella**	**4.48**	**13**	Pn	**Pn**	**10 13 27.0**	**+0.2**
BBB	comp=N,33nm,2.5s			IAML		10 15 32.5	
BBB	**Bella Bella**	**4.48**	**13**	Pn	**Pb**	**10 13 35.2**	**-2.3**
BIB	**Bowen Island**	**4.52**	**67**	Pn	**Pn**	**10 13 28.8**	**+1.5**
BIB	**Bowen Island**	**4.52**	**67**	Pn	**Pn**	**10 13 28.8**	**+1.5**
D05A	**Enumclaw**	**5.26**	**94**	Pn	**Pn**	**10 13 38.9**	**+1.4**
BUCK	**Buck Mountain**	**5.91**	**125**	Pn	**Pn**	**10 13 47.6**	**+1.0**
LTY	**Liberty**	**6.13**	**92**	Pn	**Pn**	**10 13 52.7**	**+3.1**

*IDC **15** 10:17:21.9±0.5,35.72N×82.15E,h0km,mb4.4/27, mbtmp4.5/32,ML3.7/5,MS4.0/33,Error ellipse: s-maj=15.3km s-min=8.9km az=47.0*

*MOS **15** 10:17:23.9±1.2,35.82N×82.17E,h20km,mb4.9/48,Error ellipse: s-maj=6.1km s-min=2.9km az=116.2*

*BJI **15** 10:17:24.5±0.0,35.87N×82.23E,h8km,mb4.3/53, mB4.8/27,ML4.7/8,Ms4.4/48,Ms7 4.4/45*

*NNC **15** 10:17:24.8±3.3,35.86N×82.29E,h15km±14km,mb4.9, mpv4.9,Error ellipse: s-maj=29.8km s-min=15.3km az=98.0*

*GCMT **15** 10:17:26.7±0.3,35.92N±0.04×82.11E±0.03,h26km, MW4.9/74,Moment Tensor Solution. s25,c25; s74,c106; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-2.48±.19; Mθθ-0.16±.12; Mϕϕ2.64±.12; Mrθ1.10±.31; Mθϕ0.40±.08; Mϕr-0.13±.21; Best double couple: Mo2.81400×1016 NP1:ϕs347.00000°,δ49.00000°,λ-120.00000°. Principal axes: T 2.6960, Plg0.0000°, Azm278.0000°; N 0.2360, Plg22.0000°, Azm8.0000°; P -2.9310, Plg68.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 10:17:27.7±2.7,35.78N±0.07×82.23E±0.09,h34km±4km, mb4.7/82 Error ellipse: s-maj=11.0km s-min=9.1km az=53.0*

ISC 15 10:17:24.4±0.2,35.76N±0.03×82.13E±0.03,h10km,n411, σ2s01/445,mb4.7/113,MS4.0/45,34C-35D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**5.32**	**219**	*e*P	**Pn**	**10 18 47.1**	**+2.9**
JOSI	**Joshimath**	**5.62**	**203**	*e*P	**Pn**	**10 18 49.1**	**+0.8**
JOSI				*e*S	**Sb**	**10 20 03.8**	**-6.5**
DHRM	**DHARAMSHALA**	**5.98**	**236**	*e*P	**Pn**	**10 18 55.2**	**+2.1**
DHRM				*e*S	**Sn**	**10 19 58.7**	**-3.1**
DHRM	comp=E,104nm,1.3s			IAML		10 20 11.9	
DHRM	comp=N,128nm,1.9s			IAML		10 20 24.1	
KSH	**Kashi**	**6.16**	**309**	Pn	**Pn**	**10 18 58.3**	**+2.8**
KSH				Sn	**Sn**	**10 20 14.3**	**+8.2**
KSH	comp=N,890nm,1.1s			smax	smax		
KSH	comp=N,700nm,0.9s			smax	smax		
KSH	comp=N,3μm,10.0s			LR	LR		
SMLA	**Simla**	**6.21**	**223**	*e*P	**Pn**	**10 18 58.0**	**+1.9**
SMLA				*e*S	**Sn**	**10 20 10.7**	**+3.5**
SMLA	comp=N,50nm,1.4s			IAML		10 20 26.0	
SMLA	comp=E,55nm,0.8s			IAML		10 20 30.0	
THN	**Thein Dam**	**6.27**	**240**	*e*P	**Pn**	**10 18 56.1**	**-0.8**
THN	comp=N,90nm,1.1s			IAML		10 19 30.1	
THN	comp=E,72nm,1.1s			IAML		10 19 31.9	
THN				*e*S	**Sn**	**10 20 06.5**	**-2.2**
THN	comp=N,69nm,1.1s			IAML		10 20 08.6	
THN	comp=E,82nm,1.5s			IAML		10 20 12.7	
PTH	**Pithoragarh**	**6.40**	**195**	*e*P	**Pn**	**10 19 00.7**	**+1.8**
LGTI	**Lohaghat**	**6.49**	**195**	*e*P	**Pn**	**10 19 03.1**	**+3.2**
TARG	**Taragay, Kyrgy**	**6.85**	**332**	Pn	**Pn**	**10 19 07.5**	**+2.2**
TARG	**Taragay, Kyrgy**	**6.85**	**332**	P	**Pn**	**10 19 07.5**	**+2.2**
PRZ	**Przheval'sk**	**7.31**	**338**	Pn	**Pn**	**10 19 13.8**	**+2.4**
PRZ	**Przheval'sk**	**7.31**	**338**	P	**Pn**	**10 19 13.8**	**+2.4**
NRN	**Naryn**	**7.42**	**322**		**Pn**	**10 19 16.2**	**+3.1**
NRN	**Naryn**	**7.42**	**322**	P	**Pn**	**10 19 16.2**	**+3.1**
NIL	**Nilore**	**7.61**	**256**	Pn	**Pn**	**10 19 15.6**	**+0.2**
NIL	**Nilore**	**7.61**	**256**	P	**Pn**	**10 19 15.6**	**+0.2**
NIL	**Nilore**	**7.61**	**256**	P	**Pn**	**10 19 17.1**	**+1.7**
SHLS	**Shalkode** baz=347	**7.67**	**345**	*e*P	**Pn**	**10 19 16.1**	**-0.2**
SHLS	**Shalkode**	**7.67**	**345**	*e*P	**Pn**	**10 19 16.0**	**-0.2**
UZB	**Uzynbulak** baz=342	**7.76**	**343**	⇓*i*P	**Pn**	**10 19 18.7**	**+1.2**
UZB	baz=342			*e*S	**Sn**	**10 20 44.3**	**-1.2**
UZB	**Uzynbulak**	**7.76**	**343**	*d i*P	**Pn**	**10 19 18.7**	**+1.2**
UZB				*e*S	**Sn**	**10 20 44.3**	**-1.2**
ANVS	**Anan'yevo**	**7.82**	**335**	P	**Pn**	**10 19 19.9**	**+1.5**
PDGK	**Podgornoye** comp=E,91nm,1.2s	**7.83**	**346**	⇓Pn	**Pn**	**10 19 19.0**	**+0.6**
PDGK	comp=E,156nm,0.8s			⇓Sn	**Sn**	**10 20 47.3**	**+0.1**
PDGK	comp=E,371nm,1.3s			⇑Lg	Lg	10 21 30.3	
PDGK	**Podgornoye**	**7.83**	**346**	P	**Pn**	**10 19 19.4**	**+0.9**
PDGK				SN	**Sn**	**10 20 47.3**	**+0.1**
SATY	**Saty** baz=339	**7.84**	**340**	⇓*i*P	**Pn**	**10 19 19.7**	**+1.1**
SATY	**Saty**	**7.84**	**340**	*d i*P	**Pn**	**10 19 19.7**	**+1.1**
ZHN	**Zhinishke** baz=339	**7.93**	**340**	*e*P	**Pn**	**10 19 21.2**	**+1.4**
ZHN	**Zhinishke**	**7.93**	**340**	*e*P	**Pn**	**10 19 21.2**	**+1.4**
KPKS	**Kokpek** baz=341	**8.14**	**342**	*e*P	**Pn**	**10 19 23.8**	**+1.0**
KPKS	baz=341			*e*S	**Sn**	**10 20 52.9**	**-1.9**
KPKS	**Kokpek**	**8.14**	**342**	*e*P	**Pn**	**10 19 23.7**	**+1.0**
KPKS				*e*S	**Sn**	**10 20 52.9**	**-1.9**
NDI	**New Delhi**	**8.19**	**212**	*e*P	**Pn**	**10 19 25.1**	**+1.8**
BOOM	**Boomskoye usch**	**8.26**	**326**		**Pn**	**10 19 24.1**	**-0.4**
BOOM	**Boomskoye usch**	**8.26**	**326**	P	**Pn**	**10 19 24.1**	**-0.4**
TNSS	**Tian-Shan** baz=332	**8.30**	**333**	*e*P	**Pn**	**10 19 26.3**	**+1.1**
TNSS	**Tian-Shan**	**8.30**	**333**	*e*P	**Pn**	**10 19 26.2**	**+1.1**
MDOK	**Medeo** comp=E,49nm,1.4s	**8.37**	**334**	⇓Pn	**Pn**	**10 19 26.3**	**+0.4**
MDOK	comp=E,89nm,1.2s			⇑Pg	**Pb**	**10 19 53.3**	**+3.9**
MDOK	comp=E,178nm,0.9s			⇓Lg	Lg	10 21 46.0	
MDOK	**Medeo** baz=333	**8.37**	**334**	*e*P	**Pn**	**10 19 27.1**	**+1.1**
MDOK	**Medeo**	**8.37**	**334**	P	**Pn**	**10 19 26.3**	**+0.4**
KNDC	**Almaty** comp=E,158nm,0.8s	**8.45**	**333**	⇓Pg	Pg	10 19 59.2	-6.9
KNDC	comp=E,829nm,1.2s			⇓Lg	Lg	10 21 55.4	
AAA	**Alma-Ata**	**8.46**	**333**	*e*P	**Pn**	**10 19 27.8**	**+0.7**
ARLS	**Aral**	**8.61**	**317**	P	**Pn**	**10 19 30.8**	**+1.5**
TKM2	**Tokmak 2** SNR=12	**8.76**	**327**	P	**Pn**	**10 19 33.5**	**+2.2**
TKM2	**Tokmak 2** comp=E,22nm,1.1s	**8.76**	**327**	⇓Pn	**Pn**	**10 19 33.2**	**+1.9**
TKM2	comp=E,74nm,1.1s			⇓Pg	Pg	10 20 04.4	-7.7
TKM2	comp=E,177nm,1.1s			⇑Lg	Lg	10 21 58.8	
TKM2	**Tokmak 2**	**8.76**	**327**	P	**Pn**	**10 19 33.2**	**+1.9**
OHH	**Och**	**8.76**	**306**	P	**Pn**	**10 19 32.2**	**+1.0**
UCH	**Uchtor** SNR=17	**8.77**	**320**	P	**Pn**	**10 19 33.2**	**+1.6**
KBK	**Karagaybulak** SNR=21	**8.86**	**323**	P	**Pn**	**10 19 35.5**	**+2.9**
KUDL	**Kundal**	**8.98**	**214**	*e*P	**Pn**	**10 19 35.4**	**+1.3**
KUDL				*e*S	**Sn**	**10 21 18.4**	**+3.1**
KUDL	comp=N,11nm,0.9s			IAML		10 21 22.4	
KUDL	comp=E,15nm,1.0s			IAML		10 21 24.0	
CHKK	**Chushkaly** baz=335	**9.00**	**335**	*i* P	**Pn**	**10 19 34.9**	**+0.4**
CHKK	**Chushkaly**	**9.00**	**335**	*i* P	**Pn**	**10 19 34.8**	**+0.4**
ARXS	**Arharly**	**9.06**	**340**	*e*P	**Pn**	**10 19 35.1**	**-0.2**
ARSB	**Arslanbob**	**9.07**	**311**		**Pn**	**10 19 35.1**	**-0.3**
ARSB	**Arslanbob**	**9.07**	**311**	P	**Pn**	**10 19 35.1**	**-0.3**
AAK	**Ala-Archa** SNR=14	**9.07**	**322**	P	**Pn**	**10 19 39.5**	**+4.0**
AAK	**Ala-Archa**	**9.07**	**322**	Pn	**Pn**	**10 19 37.9**	**+2.4**
AAK	**Ala-Archa**	**9.07**	**322**	Pn	**Pn**	**10 19 38.2**	**+2.7**
AAK	comp=E,0.5nm,0.3s,baz=150,slow=13,SNR=26			Pg		10 20 07.9	
AAK	comp=E,1.1nm,0.3s,baz=132,slow=18,SNR=3.0			Sn	**Sn**	**10 21 16.8**	**-0.9**
AAK	comp=E,0.1nm,0.3s,baz=328,slow=15,SNR=1.7			Lg	Lg	10 22 06.7	
AAK	comp=E,2.0nm,0.3s,baz=271,slow=17,SNR=4.2 **Ala-Archa**	**9.07**	**322**	P	**Pn**	**10 19 38.2**	**+2.7**
WMQ	comp=E,14nm,0.8s **Urumqi**	**9.12**	**26**	P	**Pn**	**10 19 35.8**	**-0.2**
WMQ				S	**Sn**	**10 21 16.8**	**-1.9**
WMQ	comp=E,120nm,1.1s			smax	smax		
WMQ	comp=E,130nm,1.1s			smax	smax		
WMQ	comp=E,1μm,11.1s			LR	LR		
WMQ	comp=E,470nm,14.5s			LR	LR		
FRU1	**Bishkek**	**9.13**	**323**	Pn	**Pn**	**10 19 39.2**	**+3.0**
FRU1	**Bishkek**	**9.13**	**323**	P	**Pn**	**10 19 39.2**	**+3.0**
KUU	**Kurty** baz=332	**9.26**	**333**	⇓*i*P	**Pn**	**10 19 38.4**	**+0.4**
KUU	**Kurty**	**9.26**	**333**	*d i*P	**Pn**	**10 19 38.4**	**+0.4**
KHET	**Khetri**	**9.36**	**217**	*e*P	**Pn**	**10 19 38.7**	**-0.6**
EKS2	**Erkin-Say** SNR=11	**9.46**	**319**	P	**Pn**	**10 19 43.6**	**+2.8**
TDK	**Taldyqorghan** baz=344	**9.66**	**344**	*e*P	**Pn**	**10 19 43.6**	**+0.1**
TDK	**Taldyqorghan**	**9.66**	**344**	*e*P	**Pn**	**10 19 43.5**	**+0.1**
BTK	**Batken**	**9.91**	**299**		**Pn**	**10 19 47.4**	**+0.4**
BTK	**Batken**	**9.91**	**299**	P	**Pn**	**10 19 47.4**	**+0.4**
ARK	**Arkit**	**9.96**	**310**	P	**Pn**	**10 19 49.5**	**+1.8**
GOMU	**GeErMu**	**10.29**	**84**	P	**Pn**	**10 19 55.1**	**+2.7**
GOMU	comp=E,4.0nm,0.9s			pmax	pmax		
GOMU	comp=E,950nm,7.6s			LR	LR		
GOMU	comp=E,2μm,7.8s			LR	LR		
TRKS	**Terek-Say**	**10.35**	**307**	P	**Pn**	**10 19 52.8**	**-0.2**
JHNI	**Jhansi**	**10.72**	**198**	*e*P	**Pn**	**10 19 59.4**	**+1.5**
KBL	**Kabul**	**10.79**	**267**	Pn	**Pn**	**10 20 00.9**	**+1.8**
KBL	**Kabul**	**10.79**	**267**	P	**Pn**	**10 20 00.9**	**+1.8**
KBL	**Kabul** SNR=12	**10.79**	**267**	P	**Pn**	**10 19 60.0**	**+0.9**
MK31	**Makanchi Array** comp=E,92nm,0.9s,baz=180,slow=13,SNR=452	**11.02**	**1**	Pn	**Pn**	**10 20 00.9**	**-1.2**
MK31	comp=E,31nm,0.9s,baz=188,slow=25,SNR=4.7			⇓Sn	**Sn**	**10 22 02.7**	**-2.8**
MK31	**Makanchi Array**	**11.02**	**1**	P	**Pn**	**10 20 00.9**	**-1.2**
MK31				SN	**Sn**	**10 22 02.7**	**-2.8**
MKAR	**Makanchi Array**	**11.02**	**1**	Pn	**Pn**	**10 20 01.7**	**-0.4**
MKAR	**Makanchi Array**	**11.02**	**1**	P	**Pn**	**10 20 01.7**	**-0.4**
MKAR	**Makanchi Array**	**11.02**	**1**	Pn	**Pn**	**10 20 00.7**	**-1.5**
MKAR	comp=E,4.8nm,0.3s,baz=183,slow=14,SNR=263			Sn	**Sn**	**10 21 58.7**	**-6.8**
MKAR	baz=186,slow=25			Lg	Lg	10 23 15.6	
MAKZ	baz=173,slow=24 comp=E,46nm,0.6s **Makanchi**	**11.04**	**359**	⇑Pn	**Pn**	**10 20 01.0**	**-1.4**
MAKZ	comp=E,117nm,1.0s			⇓Sn	**Sn**	**10 22 01.6**	**-4.2**
MAKZ	comp=E,60nm,1.4s			⇑Lg	Lg	10 23 13.8	
MAKZ	comp=E,60nm,1.3s **Makanchi**	**11.04**	**359**	Pn	**Pn**	**10 20 01.5**	**-0.8**
MAKZ	**Makanchi**	**11.04**	**359**	P	**Pn**	**10 20 00.9**	**-1.4**
MAKZ				SN	**Sn**	**10 22 01.6**	**-4.2**
BTLS	**Baital**	**11.13**	**329**	*e*P	**Pn**	**10 20 02.8**	**-0.7**
IUG	**luzhnay** baz=307	**11.37**	**308**	*e*P	**Pn**	**10 20 07.3**	**+0.3**
IUG	**luzhnay**	**11.37**	**308**	*e*P	**Pn**	**10 20 07.3**	**+0.3**
KK31	**Karatay Array** comp=E,4.8nm,0.8s,baz=124,slow=12,SNR=20	**11.59**	**313**	⇓Pn	**Pn**	**10 20 09.7**	**-0.2**
KK31	comp=E,18nm,0.8s,baz=134,slow=16,SNR=5.5			Pg		10 21 00.3	
KK31	comp=E,61nm,1.4s			⇑Lg	Lg	10 23 30.9	
KK31	**Karatay Array**	**11.59**	**313**	Pn	**Pn**	**10 20 10.0**	**+0.1**
KK31	**Karatay Array**	**11.59**	**313**	P	**Pn**	**10 20 10.0**	**+0.1**
KKAR	**Karatay Array**	**11.59**	**313**		**Pn**	**10 20 10.0**	**+0.1**
KKAR	**Karatay Array**	**11.59**	**313**	Pn	**Pn**	**10 20 10.0**	**+0.1**
KKAR	**Karatay Array**	**11.59**	**313**	P	**Pn**	**10 20 10.0**	**+0.1**
ZSN	**Zaisan** baz=8.9	**11.86**	**9**	*e*P	**Pn**	**10 20 12.0**	**-1.5**
ZSN	**Zaisan**	**11.86**	**9**	*e*P	**Pn**	**10 20 12.0**	**-1.5**
BRLS	**Borolday** baz=309	**11.96**	**311**	*e*P	**Pn**	**10 20 13.1**	**-1.8**
BRLS	**Borolday**	**11.96**	**311**	*e*P	**Pn**	**10 20 13.9**	**-1.0**
SHL	**Shillong**	**13.17**	**138**	Pn	**Pn**	**10 20 29.2**	**-2.5**
SHL	**Shillong**	**13.17**	**138**	P	**Pn**	**10 20 29.2**	**-2.5**
SHL	**Shillong**	**13.17**	**138**	P	**Pn**	**10 20 29.8**	**-1.9**
MOKO	**MOKOCHONG**	**14.17**	**128**	*e*P	**Pn**	**10 20 44.5**	**-0.9**
MOKO	comp=Z,28nm,0.8s			IAmb	IAmb	10 20 55.7	
KOHI	**KOHIMA** comp=Z,15nm,0.7s	**14.35**	**131**	*e*P	**Pn**	**10 20 46.1**	**-1.7**
KOHI	comp=Z,20nm,1.3s			IAmb	IAmb	10 21 01.1	
OTUK	**Ortayu**	**14.43**	**333**	⇑Pn	**Pn**	**10 20 46.1**	**-2.5**
OTUK	**Ortayu**	**14.43**	**333**	P	**Pn**	**10 20 46.9**	**-1.7**
DGZ	**Jazzator, Alta**	**14.46**	**14**	*c i*P	**Pn**	**10 20 47.3**	**-1.9**
GTA	**Gaotai**	**14.48**	**70**	*e*P	**Pn**	**10 20 51.0**	**+1.4**
GTA				sP	P	10 20 58.8	+2.4
GTA	comp=Z,4.0nm,1.4s			pmax	pmax		
GTA	comp=Z,440nm,12.7s			LR	LR		
GTA	comp=Z,970nm,12.4s			LR	LR		
GTA	comp=Z,1μm,12.0s			LR	LR		
AZL	**Aizawl**	**15.07**	**140**	⇑*e*P	**Pn**	**10 20 56.6**	**-1.0**
AZL				IAmb	IAmb	10 20 58.4	
KURBB	comp=Z,27nm,1.2s **Kurchatov Arra**	**15.08**	**351**	⇑Pn	**Pn**	**10 20 53.5**	**-3.9**
KURBB	comp=Z,18nm,1.2s **Kurchatov Arra**	**15.08**	**351**	P	**Pn**	**10 20 53.3**	**-4.1**
KURBB	**Kurchatov Arra**	**15.08**	**351**	Pn	**Pn**	**10 20 53.9**	**-3.6**
KURBB	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=36			Sn	**Sn**	**10 23 50.8**	**+6.3**
KURBB	baz=180,slow=26,SNR=1.5			Lg	Lg	10 25 34.3	
KURK	baz=178,slow=29,SNR=5.6 comp=Z,7.1nm,1.0s **Kurchatov**	**15.16**	**351**	Pn	**Pn**	**10 20 55.4**	**-3.1**
KURK	**Kurchatov**	**15.16**	**351**	P	**Pn**	**10 20 55.4**	**-3.1**
KURK	comp=Z,23nm,1.2s			pmax	pmax		
KURK	**Kurchatov**	**15.16**	**351**	P	**Pn**	**10 20 55.1**	**-3.4**
SAIH	**SAIHA**	**16.26**	**142**	*e*P	**Pn**	**10 21 12.5**	**-0.5**
SAIH	comp=Z,25nm,0.9s			IAmb	IAmb	10 21 13.0	
LZH	**Lanzhou**	**17.59**	**83**	⇑P	**Pn**	**10 21 27.3**	**-2.5**
LZH				pP	pP	10 21 33.5	-1.6
LZH	comp=Z,11nm,1.4s			pmax	pmax		
TNCH	**TengChong**	**17.70**	**123**	P	**Pn**	**10 21 28.0**	**-3.3**
TNCH				pP	P	10 21 30.8	-1.4
TNCH				sP	pP	10 21 33.6	-2.8
TNCH				PP	**PnPn**	**10 21 44.6**	**+2.8**
TNCH				S	Sn	10 24 37.0	-12
TNCH				sS	S	10 24 45.3	-11
TNCH	comp=Z,8.0nm,0.7s			pmax	pmax		
TNCH	comp=Z,120nm,4.7s			pmax	pmax		
TNCH	comp=N,1μm,12.9s			LR	LR		
TNCH	comp=E,830nm,12.1s			LR	LR		
TNCH	comp=Z,970nm,11.4s			LR	LR		
ZAA0	**Zalesovo Array**	**18.28**	**5**		**Pn**	**10 21 34.7**	**-3.3**
ZALV	**Zalesovo Beam**	**18.28**	**5**	P	**Pn**	**10 21 34.9**	**-3.1**
ZALV	**Zalesovo Beam**	**18.28**	**5**	*i* P	**Pn**	**10 21 35.4**	**-2.6**
ZALV	comp=Z,9.0nm,0.8s			pmax	pmax		
ZALV	**Zalesovo Beam** comp=Z,8.6nm,0.8s,baz=192,slow=12,SNR=25	**18.28**	**5**	P	**Pn**	**10 21 34.8**	**-3.2**
HYB	**Hyderabad**	**18.55**	**191**	*e*P	**P**	**10 21 41.9**	**+0.6**
HYB				*e*S	**S**	**10 25 13.1**	**+0.1**
CD2	**Chengdu**	**18.70**	**99**	P	**Pn**	**10 21 43.8**	**+0.5**
CD2				pP	sP	10 21 50.5	+1.4
CD2				sP	pP	10 21 54.3	+7.1
CD2				S	**S**	**10 25 15.6**	**-0.3**
CD2	comp=Z,10.0nm,1.0s			pmax	pmax		
CD2	comp=Z,1μm,9.8s			LR	LR		
CD2	comp=Z,1μm,12.1s			LR	LR		
CD2	comp=Z,1μm,11.5s			LR	LR		
PZH	**PanZhiHua**	**19.13**	**113**	P	**Pn**	**10 21 49.3**	**+0.7**
PZH				S	**Sn**	**10 25 23.8**	**+0.7**
PZH	comp=Z,10.0nm,1.2s			pmax	pmax		
PZH	comp=Z,150nm,3.5s			pmax	pmax		
PZH	comp=Z,470nm,10.2s			LR	LR		
PZH	comp=Z,520nm,11.0s			LR	LR		
PZH	comp=Z,800nm,9.2s			LR	LR		
BVA0	**Borovoye Array** comp=Z,31nm,1.1s,baz=138,slow=9.1,SNR=125	**19.15**	**338**	P	**P**	**10 21 47.1**	**-0.5**
BVA0	**Borovoye Array**	**19.15**	**338**	P	**P**	**10 21 47.2**	**-0.5**
BVAR	**Borovoye Array** comp=Z,0.1nm,0.3s,baz=137,slow=15,SNR=29	**19.15**	**338**	P	**P**	**10 21 47.4**	**-0.3**
BVAR	comp=Z,1.2nm,0.8s,baz=161,slow=25,SNR=1.5			S	**Sn**	**10 25 22.7**	**-0.2**
BVAR	baz=163,slow=30,SNR=2.5			Lg	Lg	10 27 27.5	
BVAR	comp=Z,445nm,18.4s,baz=157,slow=38			LR	LR	10 29 38.5	
BRVK	comp=Z,8.8nm,0.8s **Borovoye**	**19.21**	**338**	⇓P	**P**	**10 21 48.0**	**-0.3**
BRVK	comp=Z,47nm,1.0s **Borovoye**	**19.21**	**338**	P	**P**	**10 21 47.0**	**-1.4**
BRVK				IAmb	IAmb	10 21 54.1	
BRVK	comp=Z,43nm,0.9s **Borovoye**	**19.21**	**338**	⇑*e*P	**P**	**10 21 48.5**	**+0.1**
BRVK	comp=Z,43nm,0.8s			pmax	pmax		
BRVK	**Borovoye**	**19.21**	**338**	P	**P**	**10 21 48.4**	**+0.1**
BRVK				S	**S**	**10 25 27.1**	**+1.3**
GEYT	**Alibeck** comp=Z,0.5nm,0.3s,baz=102,slow=12,SNR=27	**19.33**	**284**	P	**P**	**10 21 49.8**	**0.0**
GEYT	comp=Z,293nm,18.5s,baz=99,slow=42			LR	LR	10 30 56.5	
GYA0B	comp=Z,16nm,0.9s **ALIBECK ARRAY**	**19.33**	**284**	P	**P**	**10 21 49.7**	**-0.2**
KMI	**Kunming**	**20.65**	**115**	⇓P	**P**	**10 22 05.6**	**+1.1**
KMI				S	**S**	**10 25 54.1**	**-1.3**
KMI	comp=Z,24nm,1.2s			pmax	pmax		
KMI	comp=Z,90nm,5.8s			pmax	pmax		
KMI	comp=Z,610nm,9.5s			LR	LR		
KMI	comp=Z,290nm,14.9s			LR	LR		
KMI	comp=Z,640nm,11.4s			LR	LR		
NGCH	**Negor - Chabah**	**20.80**	**246**	P	Pn	10 22 08.5	+0.2
MOY	**Mondy**	**20.85**	**34**	*e*P	**P**	**10 22 06.2**	**-0.1**
MOY	comp=Z,60nm,2.6s			pmax	pmax		
AB31	**Akbulak array** comp=Z,41nm,0.9s,baz=112,slow=4.4,SNR=258	**21.10**	**317**	P	**P**	**10 22 08.4**	**-0.5**
AB31	**Akbulak array**	**21.10**	**317**	P	**P**	**10 22 08.4**	**-0.5**
ABKAR	**Akbulak array**	**21.10**	**317**	P	**P**	**10 22 08.4**	**-0.6**
ABKAR	comp=Z,43nm,0.9s			IAmb	IAmb	10 22 16.5	
ABKAR	**Akbulak array**	**21.10**	**317**	P	**P**	**10 22 08.3**	**-0.6**
ZAK	**Zakamensk**	**21.16**	**40**	*e*P	**P**	**10 22 09.1**	**-0.6**

BTO Baotou 22.40 69 *e*P **P** **10 22 23.3 +0.2**
BTO pP **pP** **10 22 32.5 +5.1**
BTO sP **sP** **10 22 36.8 +7.5**
BTO PP **PnPn** **10 22 50.3 +4.4**
BTO S **S** **10 26 31.3 +2.0**
BTO sS **sS** **10 26 38.4 +2.0**
BTO SS **SnSn** **10 27 04.8 +7.7**
BTO pmax pmax
comp=Z,50nm,1.4s
BTO pmax pmax
comp=Z,380nm,10.0s
BTO LR LR
comp=Z,1μm,10.1s
BTO LR LR
comp=Z,1μm,13.8s
BTO LR LR
comp=Z,1μm,13.2s
CHTO Chiang Mai 22.48 134 P **P** **10 22 23.0 -1.0**
CHTO IAmb IAmb 10 22 27.2
comp=Z,26nm,1.0s
CHTO Chiang Mai 22.48 134 P **P** **10 22 23.0 -1.0**
CHTO pmax pmax
comp=Z,26nm,1.0s
CHTO Chiang Mai 22.48 134 P **P** **10 22 23.8 -0.2**
CM31 Chiang Mai Arr 22.77 135 P **P** **10 22 26.1 -0.9**
CM31 IAmb IAmb 10 22 46.8
comp=Z,38nm,1.4s
CM31 Chiang Mai Arr 22.77 135 P **P** **10 22 28.5 +1.5**
SNR=8.3
CMAR Chiang Mai Arr 22.77 135 P **P** **10 22 25.1 -1.8**
CMAR Chiang Mai Arr 22.77 135 P **P** **10 22 25.2 -1.8**
CMAR Chiang Mai Arr 22.77 135 P **P** **10 22 24.6 -2.5**
comp=Z,3.0nm,0.8s,baz=324,slow=9.1,SNR=18
comp=Z,3.0nm,0.8s
AKTO Aktyubinsk 22.78 318 ⇑P **P** **10 22 25.6 -1.3**
comp=Z,18nm,1.1s
AKTO Aktyubinsk 22.78 318 P **P** **10 22 25.2 -1.7**
comp=Z,11nm,0.8s,baz=116,slow=7.0,SNR=31
AKTO S **S** **10 26 36.6 +0.8**
comp=Z,0.5nm,0.4s,baz=7.6,slow=21,SNR=1.0
AKTO LR LR 10 32 22.3
comp=Z,323nm,19.4s,baz=264,slow=40
comp=Z,11nm,0.8s
GYA Guiyang 22.91 107 ⇓P **P** **10 22 25.5 -3.1**
GYA S **S** **10 26 32.9 -5.8**
GYA sS sS 10 26 47.4 +1.0
GYA pmax pmax
comp=Z,14nm,1.2s
GYA pmax pmax
comp=Z,160nm,7.4s
GYA LR LR
comp=Z,600nm,10.1s
GYA LR LR
comp=Z,380nm,8.9s
GYA LR LR
comp=Z,770nm,8.8s
JASK Jask - Hormozg 23.00 251 P **P** **10 22 32.1 +2.7**
ENH Enshi 23.54 96 P **P** **10 22 34.8 -0.1**
HHC Hu-ho-hao-te 23.59 69 *e*P **P** **10 22 36.5 +1.1**
HHC S **S** **10 26 44.8 -4.9**
HHC sS sS 10 26 58.0 +0.8
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,220nm,5.3s
HHC LR LR
comp=Z,240nm,18.3s
HHC LR LR
comp=Z,380nm,17.6s
HHC LR LR
comp=Z,400nm,17.1s
SLVN Son La 23.85 121 P **P** **10 22 34.7 -3.3**
WSAR Wadi Sarin 23.89 245 P **P** **10 22 40.5 +2.2**
SNR=7.2
WSAR S **S** **10 27 02.2 +7.6**
JLN Jalan Bani Buh 23.99 242 P **P** **10 22 41.2 +1.9**
SNR=9.7
WBK Wadi Bani Khal 24.02 243 P **P** **10 22 41.5 +1.9**
SNR=5.9
WBK P **P** **10 22 41.5 +1.9**
SNR=5.9
BIDO Bidbid 24.10 246 P **P** **10 22 41.6 +1.3**
SHME Shamm 24.25 254 P **P** **10 22 44.6 +3.0**
SHME P **P** **10 22 44.6 +3.0**
SMDO Samad 24.43 245 P **P** **10 22 45.7 +2.3**
MASF Masafi 24.58 252 P **P** **10 22 47.2 +2.5**
UOSS Minazif 24.77 251 P **P** **10 22 47.7 +1.4**
UOSS Minazif 24.77 251 P **P** **10 22 48.6 +2.3**
UOSS P **P** **10 22 48.6 +2.3**
LYN LuoYang 24.79 84 *e*P **P** **10 22 47.0 +0.5**
LYN PP **PnPn** **10 23 22.8 +4.3**
LYN pmax pmax
comp=Z,49nm,0.8s
LYN LR LR
comp=Z,770nm,9.3s
LYN LR LR
comp=Z,660nm,10.7s
LYN LR LR
comp=Z,1μm,10.8s
JMDO Jabal Madar 24.80 244 P **P** **10 22 49.4 +2.7**
HATD Hatta, Dubai 24.88 251 P **P** **10 22 50.6 +3.2**
ASHO Ashiyiah 25.02 251 P **P** **10 22 50.9 +2.3**
NAZ Nazwa, Dubai 25.16 252 P **P** **10 22 52.0 +2.1**
BSY Bisya 25.24 246 P **P** **10 22 53.1 +2.4**
BSY P **P** **10 22 53.1 +2.4**
FAQ Al Faqa, Dubai 25.34 252 P **P** **10 22 54.9 +3.4**
ARQ Araqi 25.41 248 P **P** **10 22 54.7 +2.6**
SNR=8.5
ARQ P **P** **10 22 54.7 +2.6**
SNR=8.5
SVE Sverdlovsk 25.57 332 *e*P **P** **10 22 53.9 +0.6**
SVE pmax pmax
comp=Z,34nm,1.3s
ALNE Al Ain 25.59 250 P **P** **10 22 56.0 +2.2**
ASUD Al Ashush, Dub 25.61 252 P **P** **10 22 54.9 +1.0**
MHTO MHTO 25.77 242 P **P** **10 22 57.2 +1.8**
MHTO P **P** **10 22 57.2 +1.8**
ARU Arti 26.11 330 P **P** **10 22 58.4 +0.1**
ARU IAmb IAmb 10 22 59.4
comp=Z,16nm,0.9s
ARU Arti 26.11 330*c* *i*P **P** **10 22 58.7 +0.4**
ARU 10 23 36.2
ARU S **S** **10 27 30.9 +1.4**
ARU SS **SnSn** **10 28 28.4 +0.9**
ARU pmax pmax
comp=Z,22nm,1.0s
ARU Arti 26.11 330 P **P** **10 22 58.3 +0.1**
comp=Z,3.5nm,0.3s,baz=124,slow=6.3,SNR=13
ARU LR LR 10 33 57.5
comp=Z,183nm,19.4s,baz=303,slow=38
comp=Z,3.5nm,0.3s
HNS HongShan 26.14 77 ⇑P **P** **10 23 00.3 +1.6**
HNS S **S** **10 27 33.6 +3.3**
HNS pmax pmax
comp=Z,47nm,1.2s
HNS LR LR
comp=Z,280nm,13.7s
HNS LR LR
comp=Z,1μm,13.1s
HNS LR LR
comp=Z,1μm,13.3s
LKRN Lenkeran, Azer 26.64 286 P **P** **10 23 04.9 +1.8**
DQM DQM 26.76 240 P **P** **10 23 06.2 +1.9**
UMZA Um Al Zommool 26.79 248 P **P** **10 23 06.2 +1.5**
UMZA P **P** **10 23 06.2 +1.5**
BJT Baijiatuau 27.09 71 P **P** **10 23 06.6 -0.7**
BJT IAmb IAmb 10 23 11.1
comp=Z,18nm,1.3s
BJT Baijiatuau 27.09 71 P **P** **10 23 06.6 -0.7**
BJT pmax pmax
comp=Z,18nm,1.3s
BJI Beijing 27.10 71 P **P** **10 23 09.3 +2.0**
BJI sS **sS** **10 27 57.4 +4.4**
BJI pmax pmax
comp=Z,6.0nm,1.2s
BJI LR LR
comp=Z,140nm,8.9s
BJI LR LR
comp=Z,200nm,9.6s
BJI LR LR
comp=Z,190nm,9.6s
XLT XiLinHaoTe 27.16 62 *e*P **P** **10 23 10.3 +2.4**
XLT pP pP 10 23 18.4 +5.9
XLT sP sP 10 23 23.5 +9.1
XLT pmax pmax
comp=Z,8.0nm,1.5s
XLT pmax pmax
comp=Z,270nm,5.8s
SEKA Sheki 27.76 292 P **P** **10 23 13.1 -0.2**
TIA Tai'an 28.23 79 P **P** **10 23 18.0 +0.5**
TIA pmax pmax
comp=Z,6.0nm,1.0s
TIA pmax pmax
comp=Z,53nm,4.3s
TIA LR LR
comp=Z,230nm,12.2s
TIA LR LR
comp=Z,250nm,12.9s
TIA LR LR
comp=Z,450nm,12.2s
UBPT Khong Chiam 29.18 128 P **P** **10 23 25.3 -0.8**
UBPT IAmb IAmb 10 23 28.4
comp=Z,17nm,1.1s
BELG Belogornoye 29.48 315⇓ *e*P **P** **10 23 29.1 +0.7**
BELG pmax pmax
comp=Z,3.0nm,1.0s
BELG Belogornoye 29.48 315 LR LR 10 37 06.8
comp=Z,122nm,21.6s,baz=137,slow=40
QIZ Qiongzhong 29.57 117 P **P** **10 23 30.4 +0.9**
QIZ S **S** **10 28 26.5 +1.9**
QIZ LR LR
comp=Z,290nm,7.6s
QIZ LR LR
comp=Z,310nm,10.1s
QIZ LR LR
comp=Z,490nm,12.6s
GNI Garni 29.66 290 P **P** **10 23 31.6 +1.2**
GNI IAmb IAmb 10 23 43.4
comp=Z,22nm,1.1s
GNI Garni 29.66 290 P **P** **10 23 31.6 +1.2**
GNI pmax pmax
comp=Z,22nm,1.1s
HMDM Hanimaadhoo 30.00 198 P **P** **10 23 33.0 -0.2**
ONI Oni 30.55 295 P **P** **10 23 41.0 +2.9**
ONI IAmb IAmb 10 23 41.8
comp=Z,17nm,1.1s
ONI Oni 30.55 295 P **P** **10 23 41.0 +2.9**
ONI pmax pmax
comp=Z,17nm,1.1s
NJ2 Nanjing 30.59 86 *e*P **P** **10 23 37.3 -1.1**
NJ2 pP **sP** **10 23 45.3 +0.5**
NJ2 sP **pP** **10 23 49.8 +6.8**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
KIV Kislovodsk 31.13 297 *e*P **P** **10 23 41.7 -1.5**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,129nm,15.0s
KIRV Kirov 31.35 327*d* *i*P **P** **10 23 44.9 +0.1**
KIRV Kirov 31.35 327 P **P** **10 23 44.6 -0.2**
comp=Z,27nm,0.8s,baz=154,slow=4.9,SNR=8.0
comp=Z,27nm,0.8s
SNY Shenyang 32.63 67 ⇑P P 10 23 44.8 -11
SNY S S 10 28 45.3 -27
SNY pmax pmax
comp=Z,6.0nm,2.2s
SNY pmax pmax
comp=Z,210nm,7.2s
SNY LR LR
comp=N,190nm,8.3s
SNY LR LR
comp=E,350nm,10.8s
SNY LR LR
comp=Z,450nm,12.1s
VRH Novokhopyorsk 32.66 311 *e*P **P** **10 23 54.7 -1.8**
VRH pmax pmax
comp=Z,10.0nm,1.0s
NRIK Noril'sk 33.77 3 P **P** **10 24 06.1 +0.2**
NRIK Noril'sk 33.77 3*d* *i*P **P** **10 24 05.9 0.0**
NRIK pmax pmax
comp=Z,25nm,1.1s
NRIK Noril'sk 33.77 3 P **P** **10 24 06.0 +0.2**
comp=Z,17nm,1.1s,baz=182,slow=8.0,SNR=17
comp=Z,17nm,1.1s
RAYN Ar Rayn 33.90 259 P **P** **10 24 08.0 +0.4**
RAYN Ar Rayn 33.90 259 P **P** **10 24 08.0 +0.4**
RAYN pmax pmax
comp=Z,27nm,1.3s
RAYN Ar Rayn 33.90 259 P **P** **10 24 08.1 +0.4**
CN2 Changchun 33.92 63 *e*P **P** **10 24 05.1 -2.5**
CN2 *e*PP **PnPn** **10 25 18.8 -1.5**
CN2 *e*S **S** **10 29 25.8 -6.4**
CN2 *e*SS **SnSn** **10 31 32.5 -5.4**
CN2 LR LR
comp=Z,240nm,11.0s
CN2 LR LR
comp=Z,110nm,11.0s
VORD Divnogorie 34.12 310 *e*P **P** **10 24 06.9 -2.3**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 34.24 310 *e*P **P** **10 24 07.9 -2.3**
VSR pmax pmax
comp=Z,8.0nm,1.0s
LPSR Galich'ya Gora 34.65 313 *e*P **P** **10 24 11.8 -1.9**
LPSR pmax pmax
comp=Z,20nm,0.9s
ARPR Arapgir-MALATY 34.69 289 P **P** **10 24 16.3 +1.8**
ARPR IAmb IAmb 10 24 28.3
comp=Z,20nm,1.2s
INCN Inchon 35.51 74 P **P** **10 24 23.0 +1.7**
ZEA Zeya 36.00 46 *e*P **P** **10 24 26.5 +1.1**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=E,100nm,11.0s
ZEA MLR MLR
comp=Z,200nm,12.0s
MOS Moscow 36.11 318 *e*P **P** **10 24 24.9 -1.4**
MOS pmax pmax
comp=Z,41nm,0.7s
KSRS Korea Array 36.52 73 P **P** **10 24 29.1 -0.8**
comp=Z,4.9nm,1.0s,baz=274,slow=7.9,SNR=14
KSRS PcP **PcP** **10 26 51.9 -1.6**
comp=Z,0.9nm,0.8s,baz=318,slow=1.6,SNR=3.2
KSRS LR LR 10 40 20.2
comp=Z,147nm,19.9s,baz=275,slow=38
comp=Z,4.9nm,1.0s
OBN Obninsk 36.55 316 *i* P **P** **10 24 29.9 -0.1**
OBN pmax pmax
comp=Z,18nm,1.0s
KLMR Klimovskoe 36.84 326 *e*P **P** **10 24 30.5 -1.9**
KLMR *e* 10 25 54.4
KLMR pmax pmax
comp=Z,30nm,1.4s
MDJ Mudanjiang 36.87 61 P **P** **10 24 32.3 -0.6**
MDJ pmax pmax
comp=Z,12nm,1.7s
MDJ pmax pmax
comp=Z,310nm,5.7s
BR131 Keskin Array S 38.18 291 P **P** **10 24 45.6 +1.3**
BR131 IAmb IAmb 10 24 46.3
comp=Z,11nm,0.9s
BR131 Keskin Array S 38.18 291 P **P** **10 24 45.6 +1.3**
BR131 pmax pmax
comp=Z,11nm,1.0s
BR131 Keskin Array S 38.18 291 P **P** **10 24 45.4 +1.1**
BRTR Keskin Array B 38.18 291 P **P** **10 24 45.5 +1.2**
BRTR Keskin Array B 38.18 291 P **P** **10 24 45.5 +1.2**
BRTR Keskin Array B 38.18 291 P **P** **10 24 45.0 +0.7**
comp=Z,7.0nm,0.9s,baz=92,slow=6.8,SNR=31
BRTR PP **PP** **10 26 18.1 +6.7**
comp=Z,1.2nm,0.6s,baz=88,slow=11,SNR=3.7
comp=Z,7.0nm,0.9s
KLR Kul'dur 38.30 54⇓ *e*P **P** **10 24 43.9 -1.0**
KLR pmax pmax
comp=Z,10.0nm,1.1s
KLR Kul'dur 38.30 54 LR LR 10 41 00.8
comp=Z,237nm,20.0s,baz=273,slow=37
MMAI Mount Meron Ar 38.38 280 LR LR 10 45 01.7
comp=Z,132nm,19.8s,baz=62,slow=43
USRK Ussuriysk Ar. 38.62 62 LR LR 10 42 07.7
comp=Z,278nm,18.0s,baz=295,slow=38
ANTO Ankara 38.80 291 P **P** **10 24 51.3 +1.9**
YAK Yakutsk 39.47 33 *e*P **P** **10 24 54.8 +0.2**
YAK pmax pmax
comp=Z,20nm,1.2s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,12nm,1.4s
YAK Yakutsk 39.47 33 LR LR 10 42 14.3
comp=E,199nm,20.0s,baz=270,slow=38
EIL Elat 39.86 275 LR LR 10 43 54.0
comp=E,189nm,19.7s,baz=68,slow=40
JNU Nakatsue 39.96 79 LR LR 10 43 05.8
comp=E,234nm,21.0s,baz=298,slow=39
JOW Kunigami 40.12 90 LR LR 10 43 12.5
comp=E,225nm,20.8s,baz=314,slow=39
AKASG Malin Array Be 40.45 309 P **P** **10 25 02.5 -0.4**
comp=E,0.6nm,0.4s,baz=83,slow=7.3,SNR=9.9
AKASG LR LR 10 45 36.0
comp=E,217nm,21.7s,baz=65,slow=42
comp=E,0.6nm,0.4s
AKBB Malin Array Si 40.45 309 IAmb IAmb 10 25 04.0
comp=Z,15nm,1.1s
AKBB Malin Array Si 40.45 309⇑ *e*P **P** **10 25 03.0 +0.1**
AKBB pmax pmax
comp=Z,60nm,3.6s
KIEV Kiev 40.46 309 ⇑P **P** **10 25 04.1 +1.1**
KIEV Kiev 40.46 309 P **P** **10 25 03.4 +0.5**
KIEV IAmb IAmb 10 25 04.0
comp=Z,14nm,1.1s
KIEV Kiev 40.46 309 P **P** **10 25 03.4 +0.5**
KIEV pmax pmax
comp=Z,14nm,1.1s
VALR Valaam 40.97 325⇓ *e*P **P** **10 25 07.7 +0.8**
VALR pmax pmax
comp=Z,25nm,1.1s
SORM Soroca 41.07 305 ⇓P **P** **10 25 07.7 -0.3**
SORM Soroca 41.07 305 ⇓P **P** **10 25 07.7 -0.3**
MNK Minsk 41.43 314 *i* P **P** **10 25 11.9 +1.0**
comp=E,5.0nm,0.9s,baz=314
MNK *i* P **P** **10 25 11.9 +1.0**
comp=N,25nm,1.0s,baz=314
MNK *i* P **P** **10 25 11.9 +1.0**
comp=Z,24nm,0.9s,baz=314
MNK *i* PP **PP** **10 26 43.7 -2.7**
baz=314
MNK *i* S **S** **10 31 28.6 +2.9**
baz=314
MNK *i* SS **SS** **10 34 27.0 -2.6**
baz=314
MNK *i* SSS SSS 10 35 03.9
baz=314
MNK *i* LQ LQ 10 39 19.4
baz=314
MNK *i* LR LR 10 42 28.3
baz=314
MNK Minsk 41.43 314 *i* P **P** **10 25 11.8 +1.0**
MNK *i* 10 26 43.6
MNK *i* S **S** **10 31 28.6 +2.9**
MNK *i* SS **SS** **10 34 27.0 -2.6**
MNK *i* SSS SSS 10 35 03.9
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=N,25nm,1.0s
MNK pmax pmax
comp=Z,24nm,0.9s
ELL Elmali 41.69 287 P **P** **10 25 14.4 +1.0**
ELL Elmali 41.69 287 P **P** **10 25 14.4 +1.0**
ELL pmax pmax
comp=Z,91nm,1.0s
NACGM Naroch 42.09 315 *e*P **P** **10 25 16.4 +0.1**
comp=Z,15nm,0.9s,baz=93
VRI Vrincioaia 42.36 301 ⇑P **P** **10 25 20.5 +1.8**
VRI Vrincioaia 42.36 301 ⇑P **P** **10 25 20.5 +1.8**
PLOR Plostina 42.42 301 ⇑P **P** **10 25 20.3 +1.1**
PLOR Plostina 42.42 301 ⇑P **P** **10 25 20.3 +1.1**
VSU Vasula 42.46 320 ⇑ *i*P **P** **10 25 19.8 +0.6**
VSU pmax pmax
comp=Z,56nm,2.5s
ATD Arta Tunnel 42.90 246 LR LR 10 44 36.1
comp=Z,4.6nm,18.9s,baz=60,slow=38
MLR Muntele Rosu 42.95 301 ⇑P **P** **10 25 24.7 +1.0**
MLR Muntele Rosu 42.95 301 P **P** **10 25 22.7 -0.9**
MLR Muntele Rosu 42.95 301 P **P** **10 25 22.7 -0.9**
MLR pmax pmax
comp=Z,37nm,1.3s
MLR Muntele Rosu 42.95 301 LR LR 10 45 35.1
comp=Z,228nm,18.2s,baz=315,slow=39
KKM Kota Kinabalu 43.05 125 P **P** **10 25 24.8 +0.1**
FIA1 FINESS Array S 43.24 324 P **P** **10 25 25.2 -0.3**
FINES FINESS Array B 43.24 324 P **P** **10 25 25.9 +0.3**
comp=Z,4.2nm,0.8s,baz=111,slow=7.9,SNR=8.3
FINES LR LR 10 43 54.9
comp=Z,279nm,21.0s,baz=306,slow=37
comp=Z,4.2nm,0.8s
TIXI Tiksi 43.24 20 P **P** **10 25 24.1 -1.3**
TIXI Tiksi 43.24 20 *i*P **P** **10 25 24.6 -0.8**
TIXI pmax pmax
comp=Z,14nm,1.6s
TIXI Tiksi 43.24 20 LR LR 10 45 18.7
comp=Z,216nm,19.1s,baz=246,slow=39
VOIR 43.59 301 ⇓P **P** **10 25 29.2 +0.5**
VOIR 43.59 301 ⇓P **P** **10 25 29.2 +0.5**
MJAR Matsushiro Arr 44.73 72 P **P** **10 25 38.5 +0.6**
comp=Z,3.7nm,0.8s,baz=294,slow=11,SNR=9.0
MJAR PcP **PcP** **10 27 18.8 -1.3**
comp=Z,0.8nm,0.5s,baz=290,slow=4.1,SNR=2.3
comp=Z,3.7nm,0.8s
MARR Marisel-Cluj 44.75 303 ⇓P **P** **10 25 39.9 +1.9**
GZR Gura Zlata 45.17 301 ⇓P **P** **10 25 42.8 +1.4**
TYV Tymovskoe 45.28 51 *e*P **P** **10 25 43.5 +1.5**
TYV pmax pmax
comp=Z,100nm,4.8s
TYV pmax pmax
comp=Z,5.0nm,1.3s
ARCES ARCESS Array B 45.41 336 P **P** **10 25 43.1 +0.2**
comp=Z,5.3nm,0.9s,baz=90,slow=9.0,SNR=5.6
comp=Z,5.3nm,0.9s
SURR Surduc 45.57 302 ⇑P **P** **10 25 44.7 +0.3**
CRVS Cervenica-Dubn 45.57 306 *e*P **P** **10 25 46.5 +2.1**
CRVS Cervenica-Dubn 45.57 306 *e*P **P** **10 25 46.5 +2.1**
STHS Stebnicka Huta 45.65 307 *e*P **P** **10 25 45.3 +0.3**
STHS Stebnicka Huta 45.65 307 *e*P **P** **10 25 45.3 +0.3**
YSS Yuzh-Sakhalins 45.80 56 *i* P **P** **10 25 45.8 -0.4**
YSS pmax pmax
comp=Z,37nm,2.5s
SIRR Siria 45.80 303 ⇑P **P** **10 25 48.2 +1.9**
KLNR Kaliningrad 45.90 314*d* *i*P **P** **10 25 46.9 +0.1**
KLNR pmax pmax
comp=Z,146nm,2.5s
BZS Buzias 45.94 302 ⇑P **P** **10 25 48.3 +1.0**
BZS Buzias 45.94 302 ⇑P **P** **10 25 48.3 +1.0**
ASAJ Asahikawa 46.18 60 LR LR 10 46 41.9
comp=Z,154nm,19.8s,baz=174,slow=38
BOVS Bovan 46.25 299 ⇑P **P** **10 25 50.3 +0.5**
JHJ Hachijo jima 2 47.03 76 LR LR 10 47 15.3
comp=Z,217nm,18.3s,baz=350,slow=38
FRGS Fruska Gora 47.28 301 ⇓P **P** **10 25 59.3 +1.5**
VYHS Vyhne 47.35 306 *e*P **P** **10 26 00.6 +2.2**
VYHS Vyhne 47.35 306 *e*P **P** **10 26 00.6 +2.2**
MSEY Mahe Island 47.36 217 P **P** **10 25 57.3 -1.5**
MSEY IAmb IAmb 10 25 58.0
comp=Z,18nm,1.3s
MSEY Mahe Island 47.36 217 P **P** **10 25 57.3 -1.5**
MSEY pmax pmax
comp=Z,18nm,1.3s
MORC Moravsky Berou 47.99 308 ⇑P **P** **10 26 03.2 -0.2**
MORC Moravsky Berou 47.99 308 P **P** **10 26 04.0 +0.6**
MORC IAmb IAmb 10 26 05.5
comp=Z,14nm,1.5s
MORC Moravsky Berou 47.99 308 *e*P **P** **10 26 03.9 +0.5**
MORC Moravsky Berou 47.99 308 P **P** **10 26 04.0 +0.6**
MORC pmax pmax
comp=Z,14nm,1.5s
JAVC Velka Javorina 48.05 307 *e*P **P** **10 26 05.6 +1.7**
LEM Lembang 48.67 145 LR LR 10 52 17.2
comp=Z,193nm,18.4s,baz=308,slow=43
VRAC Vranov 48.68 308 *e*P **P** **10 26 09.6 +1.0**
VRAC Vranov 48.68 308 LR LR 10 49 27.4
comp=Z,310nm,22.0s,baz=308,slow=40
DPC Dobruska-Polom 48.68 309 *e*P **P** **10 26 10.0 +1.3**
DPC Dobruska-Polom 48.68 309 *e*P **P** **10 26 10.0 +1.3**
KRUC Moravsky 48.85 307 *e*P **P** **10 26 10.9 +1.0**
DAV Davao City (W) 48.91 115 LR LR 10 49 43.9
comp=Z,203nm,18.8s,baz=344,slow=40
comp=Z,1.9nm,0.6s
HFS Hagfors 49.21 322 P **P** **10 26 12.3 -0.2**
comp=Z,1.9nm,0.6s,baz=78,slow=9.0,SNR=2.1
comp=Z,1.9nm,0.6s
MA2 Magadan 49.34 39 P **P** **10 26 13.9 +0.4**
MA2 Magadan 49.34 39*d* *i*P **P** **10 26 15.8 +2.3**
MA2 pmax pmax
comp=Z,38nm,2.5s

MA2	**Magadan**	**49.34**	**39**	LR	LR	10 47 14.0		
	comp=Z,100nm,18.4s,baz=282,slow=36							
TOLI2	**Tolitoli**	**49.74**	**125**	P	**P**	**10 26 14.5**	**-2.6**	
SEY	**Seymchan**	**49.98**	**34**	*i* P	**P**	**10 26 18.1**	**-0.2**	
SEY				pmax	pmax			
	comp=Z,15nm,1.2s							
BRG	**Berggiesshubel**	**50.09**	**310**	*e*P	**P**	**10 26 18.7**	**-0.7**	
BRG				Amp		10 26 21.9		
	comp=Z,5.1nm,1.0s							
BRG	**Berggiesshubel**	**50.09**	**310**	*e*P	**P**	**10 26 18.6**	**-0.7**	
BRG				pmax	pmax			
	comp=Z,5.0nm,1.0s							
BRG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
CKRC	**Cesky Krumlov**	**50.24**	**307**	*e*P	**P**	**10 26 22.0**	**+1.4**	
CKRC	**Cesky Krumlov**	**50.24**	**307**	*e*P	**P**	**10 26 22.0**	**+1.4**	
NB2	**NORSAR Subarra**	**50.38**	**323**	P	**P**	**10 26 19.0**	**-2.5**	
	comp=Z,3.3nm,0.8s,baz=86,slow=7.9							
NOA	**NORSAR Array B**	**50.38**	**323**	P	**P**	**10 26 20.3**	**-1.2**	
	comp=Z,2.0nm,0.8s,baz=86,slow=7.5,SNR=4.1							
NOA				LR	LR	10 46 46.6		
	comp=Z,176nm,21.5s,baz=230,slow=35							
	comp=Z,2.0nm,0.8s							
CLL	**Collm**	**50.59**	**311**	*e*P	**P**	**10 26 23.0**	**-0.2**	
CLL	**Collm**	**50.59**	**311**	*e*P	**P**	**10 26 23.0**	**-0.2**	
GEC2	**GERESS Array S**	**50.63**	**307**	P	**P**	**10 26 23.8**	**+0.2**	
GEC2				IAmb	IAmb	10 26 25.5		
	comp=Z,9.6nm,1.0s							
GERES	**GERESS Array B**	**50.63**	**307**	P	**P**	**10 26 24.7**	**+1.1**	
GERES	**GERESS Array B**	**50.63**	**307**	P	**P**	**10 26 24.6**	**+0.9**	
	comp=Z,3.9nm,0.8s,baz=75,slow=7.4,SNR=11							
	comp=Z,3.9nm,0.8s							
KHC	**Kasperske Hory**	**50.65**	**308**	*e*P	**P**	**10 26 24.4**	**+0.7**	
KHC	**Kasperske Hory**	**50.65**	**308**	*i* P	**P**	**10 26 24.7**	**+1.0**	
KHC				pmax	pmax			
	comp=Z,31nm,2.5s							
JCJ	**Chichijima**	**51.28**	**82**	LR	LR	10 48 59.6		
	comp=Z,66nm,21.6s,baz=116,slow=37							
TTSI	**Tana Toraja**	**52.26**	**129**	P	**P**	**10 26 34.9**	**-1.2**	
	comp=Z,12nm,0.4s							
DAVOX	**Davos/Dischmat**	**53.63**	**306**	LR	LR	10 51 37.8		
	comp=Z,330nm,19.1s,baz=33,slow=38							
PETK	**Petropavlovsk-**	**54.10**	**46**	LR	LR	10 51 20.5		
	comp=Z,94nm,18.3s,baz=273,slow=38							
BILL	**Bilibino**	**55.23**	**27**	*i* P	**P**	**10 26 57.0**	**-0.1**	
BILL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BNI	**Bardonecchia**	**56.28**	**304**	IAmb	IAmb	10 27 06.7		
	comp=Z,14nm,1.2s							
SSF	**Saint Saulge**	**57.71**	**308**	*e*P	**P**	**10 27 14.2**	**-0.9**	
SSF				pmax	pmax			
	comp=Z,14nm,1.2s							
EKA	**Eskdalemuir Ar**	**58.96**	**318**	P	**P**	**10 27 23.5**	**-0.3**	
	comp=Z,4.1nm,0.9s,baz=88,slow=5.8,SNR=2.9							
	comp=Z,4.1nm,0.9s							
CAF	**Calviac**	**59.39**	**306**	*e*P	**P**	**10 27 26.6**	**-0.4**	
CAF				pmax	pmax			
	comp=Z,46nm,1.8s							
GUMO	**Guam**	**60.12**	**95**	LR	LR	10 54 29.0		
	comp=Z,42nm,19.8s,baz=76,slow=37							
MFF	**Saint Martin d**	**60.22**	**308**	*e*P	**P**	**10 27 35.4**	**+2.9**	
MFF				pmax	pmax			
	comp=Z,72nm,1.7s							
C16K	**Lisburne Hills**	**64.91**	**22**	P	**P**	**10 28 01.9**	**-1.6**	
ESDC	**Sonseca Array**	**65.62**	**302**	P	**P**	**10 28 07.5**	**-1.3**	
	comp=Z,3.1nm,1.1s,baz=59,slow=6.0,SNR=8.9							
ESDC				LR	LR	10 58 19.3		
	comp=Z,195nm,18.6s,baz=346,slow=37							
	comp=Z,3.1nm,1.1s							
C18K	**Utukok River**	**65.94**	**21**	IAmb	IAmb	10 28 13.5		
	comp=Z,11nm,1.3s							
C19K	**Lookout Ridge**	**66.12**	**20**	IAmb	IAmb	10 28 14.9		
	comp=Z,14nm,1.4s							
ANM	**Nome**	**67.02**	**26**	P	**P**	**10 28 16.2**	**-1.0**	
ANM				IAmb	IAmb	10 28 21.0		
	comp=Z,13nm,1.2s							
ANM	**Nome**	**67.02**	**26**	P	**P**	**10 28 16.2**	**-1.0**	
ANM				pmax	pmax			
	comp=Z,13nm,1.2s							
B21K	**Ikpikpuk River**	**67.12**	**19**	IAmb	IAmb	10 28 18.8		
	comp=Z,9.3nm,1.2s							
G19K	**Purcell Mounta**	**68.76**	**22**	IAmb	IAmb	10 28 31.1		
	comp=Z,8.0nm,1.2s							
TOLK	**Toolik Lake Re**	**69.10**	**18**	P	**P**	**10 28 29.4**	**-0.8**	
TOLK				IAmb	IAmb	10 28 33.2		
	comp=Z,9.5nm,1.1s							
IMAR	**Indian Mountai**	**69.87**	**21**	P	**P**	**10 28 34.4**	**-0.6**	
M14K	**Bethel**	**70.59**	**28**	P	**P**	**10 28 39.7**	**+0.3**	
A36M	**Sachs Harbour**	**70.84**	**9**	P	**P**	**10 28 40.1**	**-0.7**	
BMAR	**Burnt Mountain**	**71.25**	**17**	P	**P**	**10 28 43.6**	**+0.1**	
MLY	**Manley**	**71.43**	**21**	IAmb	IAmb	10 28 45.4		
	comp=Z,10nm,1.4s							
SFJD	**Kangerlussuaq**	**71.46**	**342**	P	**P**	**10 28 45.1**	**+0.5**	
SFJD				IAmb	IAmb	10 29 04.0		
	comp=Z,10nm,1.2s							
SFJD	**Kangerlussuaq**	**71.46**	**342**	P	**P**	**10 28 45.1**	**+0.5**	
SFJD				pmax	pmax			
	comp=Z,10.0nm,1.3s							
LSZ	**Lusaka**	**71.96**	**235**	P	**P**	**10 28 48.0**	**-0.5**	
LSZ				IAmb	IAmb	10 28 48.7		
	comp=Z,8.8nm,1.2s							
LSZ	**Lusaka**	**71.96**	**235**	P	**P**	**10 28 48.0**	**-0.5**	
LSZ				pmax	pmax			
	comp=Z,9.0nm,1.2s							
F28M	**Old Crow**	**72.19**	**16**	IAmb	IAmb	10 28 50.4		
	comp=Z,8.0nm,1.2s							
CAST	**Castle Rocks**	**72.20**	**23**	P	**P**	**10 28 48.2**	**-1.0**	
CAST				IAmb	IAmb	10 28 52.5		
	comp=Z,19nm,1.4s							
NEA2	**Nenana**	**72.24**	**21**	P	**P**	**10 28 48.9**	**-0.4**	
NEA2				IAmb	IAmb	10 28 49.8		
	comp=Z,15nm,1.2s							
POKR	**Poker Plat Res**	**72.30**	**20**	P	**P**	**10 28 49.9**	**+0.1**	
POKR				IAmb	IAmb	10 28 50.7		
	comp=Z,9.4nm,1.1s							
ILAR	**Eielson Array**	**72.72**	**20**	P	**P**	**10 28 51.0**	**-1.2**	
ILAR	**Eielson Array**	**72.72**	**20**	P	**P**	**10 28 51.0**	**-1.2**	
ILAR	**Eielson Array**	**72.72**	**20**	P	**P**	**10 28 50.8**	**-1.5**	
	comp=Z,2.1nm,0.9s,baz=308,slow=5.0,SNR=19							
ILAR				PP	**PP**	**10 31 32.5**	**-0.8**	
	comp=Z,1.0nm,1.1s,baz=295,slow=6.8,SNR=4.7							
	comp=Z,2.1nm,0.9s							
INK	**Inuvik**	**72.88**	**13**	P	**P**	**10 28 52.2**	**-0.9**	
INK				IAmb	IAmb	10 28 52.8		
	comp=Z,13nm,1.4s							
INK	**Inuvik**	**72.88**	**13**	P	**P**	**10 28 52.2**	**-0.9**	
INK				pmax	pmax			
	comp=Z,13nm,1.4s							
SKT	**Skwentna**	**73.42**	**23**	P	**P**	**10 28 56.0**	**-0.5**	
SKT				IAmb	IAmb	10 28 56.4		
	comp=Z,13nm,1.3s							
C36M	**Paulatuk**	**73.44**	**9**	P	**P**	**10 28 54.6**	**-1.7**	
C36M				IAmb	IAmb	10 28 55.3		
	comp=Z,9.1nm,1.1s							
SCRK	**Sand Creek**	**74.13**	**19**	P	**P**	**10 28 60.0**	**-0.7**	
SCRK				IAmb	IAmb	10 29 03.4		
	comp=Z,9.4nm,1.3s							
WB0	**Warramunga Arr**	**74.14**	**129**	P	**P**	**10 29 00.3**	**-1.0**	
WB0				IAmb	IAmb	10 29 03.5		
	comp=Z,8.5nm,0.8s							
WRA	**Warramunga Arr**	**74.24**	**129**	P	**P**	**10 29 01.0**	**-0.8**	
WRA	**Warramunga Arr**	**74.24**	**129**	P	**P**	**10 29 01.0**	**-0.8**	
WRA	**Warramunga Arr**	**74.24**	**129**	P	**P**	**10 29 00.7**	**-1.1**	
	comp=Z,5.2nm,0.8s,baz=323,slow=5.9,SNR=21							
	comp=Z,5.2nm,0.8s							
WB2	**Warramunga Arr**	**74.25**	**129**	IAmb	IAmb	10 29 04.3		
	comp=Z,10nm,0.9s							
SML	**Sawmill**	**74.56**	**22**	P	**P**	**10 29 02.6**	**-0.6**	
SML				IAmb	IAmb	10 29 03.3		
	comp=Z,10.0nm,1.0s							
SML	**Sawmill**	**74.56**	**22**	P	**P**	**10 29 02.6**	**-0.6**	
SML				pmax	pmax			
	comp=Z,10.0nm,1.0s							
TOA0	**Torodi Ar. Sit**	**74.75**	**275**	P	**P**	**10 29 04.3**	**-0.6**	
TOA0				IAmb	IAmb	10 29 04.5		
	comp=Z,5.0nm,0.8s							
TOA0	**Torodi Ar. Sit**	**74.75**	**275**	P	**P**	**10 29 04.2**	**-0.7**	
TORD	**Torodi Ar. Bea**	**74.75**	**275**	P	**P**	**10 29 03.9**	**-1.1**	
	comp=Z,2.0nm,0.3s,baz=41,slow=8.6,SNR=3.7							
	comp=Z,2.0nm,0.3s							
DAWY	**Dawson**	**75.24**	**18**	P	**P**	**10 29 06.0**	**-1.1**	
BCAR	**Beaver Creek A**	**75.45**	**19**	P	**P**	**10 29 08.4**	**+0.1**	
N25K	**Chitina, Valde**	**75.84**	**21**	P	**P**	**10 29 11.2**	**+0.6**	
N25K				IAmb	IAmb	10 29 11.6		
	comp=Z,13nm,1.1s							
AS31	**Alice Springs**	**76.75**	**132**	P	**P**	**10 29 14.2**	**-2.0**	
ASAR	**Alice Springs**	**76.75**	**132**	P	**P**	**10 29 14.5**	**-1.7**	
ASAR	**Alice Springs**	**76.75**	**132**	P	**P**	**10 29 14.8**	**-1.3**	
	comp=Z,3.4nm,0.8s,baz=318,slow=5.2,SNR=25							
	comp=Z,3.4nm,0.8s							
HYT	**Haines Junctio**	**78.45**	**19**	P	**P**	**10 29 24.3**	**-1.0**	
HYT				IAmb	IAmb	10 29 26.1		
	comp=Z,6.9nm,1.1s							
WRGLY	**Wrigley**	**79.25**	**11**	IAmb	IAmb	10 29 30.0		
	comp=Z,14nm,1.2s							
YKA	**Yellowknife Ar**	**81.16**	**8**	P	**P**	**10 29 38.5**	**-1.3**	
	comp=Z,3.3nm,0.9s,baz=345,slow=5.0,SNR=40							
	comp=Z,3.3nm,0.9s							
CTA	**Charters Tower**	**82.24**	**121**	P	**P**	**10 29 45.5**	**-0.6**	
CTA				P	**P**	**10 29 47.0**	**+0.9**	
CTA				pmax	pmax			
	comp=Z,26nm,1.0s							
CTA	**Charters Tower**	**82.24**	**121**	LR	LR	11 09 52.1		
	comp=Z,38nm,18.9s,baz=284,slow=38							
CTAO	**Charters Tower**	**82.24**	**121**	P	**P**	**10 29 45.9**	**-0.2**	
CTAO	**Charters Tower**	**82.24**	**121**	P	**P**	**10 29 45.9**	**-0.2**	
CTAO				pmax	pmax			
	comp=Z,21nm,1.0s							
BOSA	**Boshof**	**83.48**	**228**	P	**P**	**10 29 50.9**	**-1.6**	
BOSA	**Boshof**	**83.48**	**228**	P	**P**	**10 29 50.9**	**-1.6**	
BOSA				pmax	pmax			
	comp=Z,11nm,1.0s							
BOSA	**Boshof**	**83.48**	**228**	P	**P**	**10 29 50.5**	**-2.0**	
	comp=Z,7.5nm,0.9s,baz=68,slow=3.8,SNR=7.9							
	comp=Z,7.5nm,0.9s							
DBIC	**Dimokro**	**83.71**	**274**	P	**P**	**10 29 52.7**	**-1.2**	
	comp=Z,6.1nm,0.9s,baz=82,slow=5.3,SNR=5.6							
DBIC				LR	LR	11 09 43.1		
	comp=Z,117nm,20.4s,baz=358,slow=38							
	comp=Z,6.1nm,0.9s							
BBOO	**Buckleboo**	**84.86**	**137**	P	**P**	**10 29 58.0**	**-1.3**	
HNR	**Honiara**	**85.72**	**105**	LR	LR	11 10 08.3		
	comp=Z,530nm,18.1s,baz=158,slow=37							
SCHQ	**Schefferville**	**85.91**	**343**	P	**P**	**10 30 03.0**	**-1.3**	
	comp=Z,5.5nm,1.1s,baz=58,slow=4.6,SNR=3.8							
	comp=Z,5.5nm,1.1s							
STKA	**Stephens Creek**	**87.37**	**133**	P	**P**	**10 30 11.3**	**-0.4**	
	comp=Z,4.3nm,0.9s,baz=321,slow=5.2,SNR=5.6							
	comp=Z,4.3nm,0.9s							
FFC	**Flin Flon**	**89.81**	**2**	P	**P**	**10 30 21.1**	**-1.9**	
FFC	**Flin Flon**	**89.81**	**2**	P	**P**	**10 30 21.1**	**-1.9**	
FFC				pmax	pmax			
	comp=Z,8.0nm,1.1s							
ULM	**Lac du Bonnet**	**94.34**	**359**	P	**P**	**10 30 41.8**	**-2.3**	
	comp=Z,2.5nm,1.0s,baz=21,slow=6.6,SNR=4.2							
	comp=Z,2.5nm,1.0s							
CPUP	**Villa Florida**	**144.23**	**274**	PKPdf	**PKPab**	**10 36 56.6**	**-2.0**	
CPUP	**Villa Florida**	**144.23**	**274**	PKP	**PKPab**	**10 36 57.5**	**-1.2**	
	comp=Z,6.6nm,1.0s,baz=52,slow=6.7,SNR=8.6							
MCRA	**Macar, Loja**	**144.66**	**328**	PKPdf	**PKPab**	**10 36 59.0**	**-1.7**	
ITQB	**Itaqui**	**144.96**	**268**		**PKPab**	**10 36 58.0**	**-3.2**	

*PGC **15** 10:19:28.3±12.0, 47.66N×129.13W, h10km, MLSn3.0/21, Mw3.6/21, 289km Wsw of Tofino, Bc Off Coast Of Washington*
*NEIC **15** 10:19:28.4±1.3, 47.68N±0.04×129.04W±0.09, h14km±5km, ML3.1/18, Mwr3.4(OTT), Error ellipse: s-maj=9.1km s-min=4.5km az=63.0*
ISC 15 10:19:28.5±1.8, 47.71N±0.09×128.97W±0.09, h10km, n64, σ0.69/72, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEMO	**NEPTUNE Canada**	**0.23**	**337**		**Pg**	**10 19 33.1**	**0.0**
KEMO					**Sg**	**10 19 36.8**	**+0.6**
KEMO	**NEPTUNE Canada**	**0.23**	**337**	P	**Pg**	**10 19 33.1**	**0.0**
KEMO				S	**Sg**	**10 19 36.8**	**+0.6**
KEMF	**NEPTUNE Canada**	**0.25**	**340**		**Pg**	**10 19 33.7**	**+0.2**
KEMF					**Sg**	**10 19 37.3**	**+0.5**
KEMF	**NEPTUNE Canada**	**0.25**	**340**	P	**Pg**	**10 19 33.7**	**+0.2**
KEMF				S	**Sg**	**10 19 37.3**	**+0.5**
NCHR	**NEPTUNE Canada**	**0.27**	**344**		**Pb**	**10 19 34.1**	**-1.2**
NCHR					**Sg**	**10 19 38.3**	**+0.8**
NCHR	**NEPTUNE Canada**	**0.27**	**344**	P	**Pb**	**10 19 34.1**	**-1.2**
NCHR				S	**Sg**	**10 19 38.3**	**+0.8**
NC27	**ODP1027**	**0.82**	**86**		**Pn**	**10 19 46.6**	**+0.9**
NC27	**ODP1027**	**0.82**	**86**	P	**Pn**	**10 19 46.6**	**+0.9**
EDB	**Eliza Dome**	**2.49**	**29**	Pn	**Pn**	**10 20 08.6**	**-0.3**
EDB	**Eliza Dome**	**2.49**	**29**	Pn	**Pn**	**10 20 08.6**	**-0.3**
B012	**Ucluelet**	**2.59**	**61**	Pn	**Pn**	**10 20 10.1**	**-0.3**
B012	**Ucluelet**	**2.59**	**61**	Pn	**Pn**	**10 20 10.1**	**-0.3**
OZB	**Mount Ozzard**	**2.64**	**60**	Pn	**Pn**	**10 20 10.5**	**-0.5**
OZB	**Mount Ozzard**	**2.64**	**60**	IAML		10 20 39.7	
	comp=E,65nm,1.7s						
OZB				IAML		10 20 40.1	
	comp=N,68nm,2.5s						
OZB	**Mount Ozzard**	**2.64**	**60**	Pn	**Pn**	**10 20 10.5**	**-0.5**
B928	**Bamfield**	**2.80**	**65**	Pn	**Pn**	**10 20 13.0**	**-0.2**
B928	**Bamfield**	**2.80**	**65**	Pn	**Pn**	**10 20 13.0**	**-0.2**
WOSB	**Woss**	**2.92**	**32**	Pn	**Pn**	**10 20 15.4**	**+0.4**
WOSB				Sn	**Sn**	**10 20 49.8**	**-0.4**
WOSB	**Woss**	**2.92**	**32**	Pn	**Pn**	**10 20 15.4**	**+0.4**
WOSB				Sn	**Sn**	**10 20 49.8**	**-0.4**
MAYB	**Maynard**	**2.94**	**23**	Pn	**Pn**	**10 20 15.6**	**+0.3**
MAYB	**Maynard**	**2.94**	**23**	Pn	**Pn**	**10 20 15.6**	**+0.3**
C03A	**Quillayute Air**	**2.98**	**84**	Pn	**Pn**	**10 20 15.6**	**-0.1**
HOLB	**Holberg**	**2.98**	**10**	Pn	**Pn**	**10 20 15.7**	**-0.2**
HOLB				IAML		10 21 23.8	
	comp=N,63nm,1.9s						
HOLB				IAML		10 21 34.2	
	comp=E,57nm,3.4s						
SPLB	**Strathcona Par**	**3.10**	**44**	Pn	**Pn**	**10 20 17.8**	**+0.5**
SPLB	**Strathcona Par**	**3.10**	**44**	Pn	**Pn**	**10 20 17.8**	**+0.5**
PFB	**Port Renfrew**	**3.15**	**72**	Pn	**Pn**	**10 20 17.8**	**-0.4**
PFB	**Port Renfrew**	**3.15**	**72**	Pn	**Pn**	**10 20 17.8**	**-0.4**
PTRF	**Port Renfrew**	**3.17**	**73**	Pn	**Pn**	**10 20 18.1**	**-0.1**
NCSB	**Newcastle Ridg**	**3.31**	**34**	Pn	**Pn**	**10 20 21.3**	**+0.9**
CBB	**Campbell River**	**3.33**	**44**	Pn	**Pn**	**10 20 20.3**	**-0.2**
CBB	**Campbell River**	**3.33**	**44**	Pn	**Pn**	**10 20 20.3**	**-0.2**
CBB				IAML		10 21 10.1	
	comp=E,21nm,3.0s						
CBB				IAML		10 21 49.6	
	comp=N,22nm,3.3s						
CBB	**Campbell River**	**3.33**	**44**	Pn	**Pn**	**10 20 20.3**	**-0.2**
B926	**Mesachie Lake**	**3.42**	**69**	Pn	**Pn**	**10 20 21.9**	**+0.2**
B926	**Mesachie Lake**	**3.42**	**69**	Pn	**Pn**	**10 20 21.9**	**+0.2**
CLRS	**Cowichan Lake**	**3.42**	**69**	Pn	**Pn**	**10 20 22.0**	**+0.2**
CLRS				IAML		10 21 34.6	
	comp=E,28nm,4.1s						
CLRS	**Cowichan Lake**	**3.42**	**69**	Pn	**Pn**	**10 20 22.0**	**+0.2**
CLRS				Sn	**Sn**	**10 21 01.8**	**-0.5**
OSD	**Olympics--Snow**	**3.56**	**86**	Pn	**Pn**	**10 20 23.8**	**-0.1**
OSD	**Olympics--Snow**	**3.56**	**86**	Pn	**Pn**	**10 20 23.8**	**-0.1**
SYMB	**Survey Mountai**	**3.57**	**74**	Pn	**Pn**	**10 20 23.4**	**-0.5**
SYMB	**Survey Mountai**	**3.57**	**74**	Pn	**Pn**	**10 20 23.4**	**-0.5**
NLLB	**Nanaimo Lost L**	**3.65**	**64**	Pn	**Pn**	**10 20 25.4**	**+0.5**
NLLB	**Nanaimo Lost L**	**3.65**	**64**	Pn	**Pn**	**10 20 25.4**	**+0.5**
PGC	**Sidney**	**3.81**	**74**	Pn	**Pn**	**10 20 25.4**	**-1.7**
PGC				IAML		10 21 15.7	
	comp=E,28nm,4.1s						
PGC				IAML		10 21 46.0	
	comp=N,25nm,4.4s						
VGZ	**Gonzales**	**3.85**	**77**	Pn	**Pn**	**10 20 27.8**	**+0.1**
VGZ	**Gonzales**	**3.85**	**77**	Pn	**Pn**	**10 20 27.8**	**+0.1**
SHB	**Sechelt**	**3.87**	**59**	Pn	**Pn**	**10 20 28.8**	**+0.7**
SHB	**Sechelt**	**3.87**	**59**	Pn	**Pn**	**10 20 28.8**	**+0.7**
E03A	**Lebam**	**3.87**	**106**	Pn	**Pn**	**10 20 27.9**	**0.0**
E03A				IAML		10 21 18.5	
	comp=N,39nm,4.0s						
E03A				IAML		10 22 15.4	
	comp=E,43nm,3.2s						
BIB	**Bowen Island**	**4.13**	**64**	Pn	**Pn**	**10 20 32.6**	**+1.1**
BIB	**Bowen Island**	**4.13**	**64**	Pn	**Pn**	**10 20 32.6**	**+1.1**
GNW	**Green Mountain**	**4.16**	**90**	Pn	**Pn**	**10 20 32.4**	**+0.5**
GNW				IAML		10 21 24.6	
	comp=E,16nm,4.2s						
WPB	**Watts Point**	**4.28**	**61**	Pn	**Pn**	**10 20 34.9**	**+1.2**
WPB	**Watts Point**	**4.28**	**61**	Pn	**Pn**	**10 20 34.9**	**+1.2**
BBB	**Bella Bella**	**4.51**	**7**	Pn	**Pn**	**10 20 37.6**	**+0.8**
BBB	**Bella Bella**	**4.51**	**7**	Pn	**Pn**	**10 20 37.6**	**+0.8**
HNBB	**Haney**	**4.54**	**67**	Pn	**Pn**	**10 20 38.2**	**+1.1**
HNBB	**Haney**	**4.54**	**67**	Pn	**Pn**	**10 20 38.2**	**+1.1**
MBW	**Mount Baker**	**4.84**	**75**	Pn	**Pn**	**10 20 42.4**	**+0.9**
MBW	**Mount Baker**	**4.84**	**75**	Pn	**Pn**	**10 20 42.4**	**+0.9**
BUTB	**Butedale**	**5.37**	**3**	Pn	**Pn**	**10 20 49.3**	**+0.7**
BUTB	**Butedale**	**5.37**	**3**	Pn	**Pn**	**10 20 49.3**	**+0.7**
LLLB	**Lillooet**	**5.48**	**55**	Pn	**Pn**	**10 20 51.5**	**+1.3**
LLLB	**Lillooet**	**5.48**	**55**	Pn	**Pn**	**10 20 51.5**	**+1.3**
LTY	**Liberty**	**5.64**	**92**	Pn	**Pn**	**10 20 53.8**	**+1.4**

*MEX **15** 10:27:21.3±1.3, 16.45N×99.76W, h10km±15km, MD4.1*
*IDC **15** 10:27:26.2±3.6, 17.41N×99.21W, h0km, mb3.4/3, mbtmp3.2/5, ML2.9/2, Error ellipse: s-maj=70.3km s-min=19.0km az=24.0*
ISC 15 10:27:18.3±1.5, 16.38N±0.05×99.74W±0.03, h4km±9km, n38, σ1.79/62, mb3.4/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.51**	**344**	*e*P	**Pg**	**10 27 28.6**	**+0.4**
ACP2				*e*S	**Sg**	**10 27 34.8**	**-0.1**
VNTA	**La Mica**	**0.54**	**352**	*e*P	**Pg**	**10 27 28.9**	**+0.2**
VNTA				*e*S	**Sg**	**10 27 35.7**	**0.0**
DAIG	**Los Arroyos**	**0.64**	**7**	*i* P	**Pg**	**10 27 30.6**	**-0.1**
DAIG				*i* S	**Sg**	**10 27 38.8**	**-0.3**
CRIG	**Cruz Grande**	**0.68**	**59**	*i* P	**Pg**	**10 27 32.3**	**+0.8**
CRIG				*e*S	**Sg**	**10 27 41.6**	**+1.3**
CAIG	**El Cayaco**	**0.84**	**323**	*i* P	**Pg**	**10 27 34.0**	**-0.4**
CAIG				*e*S	**Sg**	**10 27 44.6**	**-0.7**
ATYC	**Atoyac**	**1.06**	**321**	*e*P	**Pg**	**10 27 37.9**	**-0.8**
ATYC				*e*S	**Sg**	**10 27 51.1**	**-1.5**
MGIG	**Malinaltepec**	**1.36**	**51**	*i* P	**Pn**	**10 27 42.9**	**-1.3**
MGIG				*e*S	**Sb**	**10 28 01.2**	**-1.1**
MEIG	**Mezcala**	**1.54**	**4**	*i* P	**Pn**	**10 27 45.1**	**-1.6**
MEIG				*e*S	**Sn**	**10 28 02.5**	**-4.9**
PNIG	**Pinotepa**	**1.55**	**89**	*i* P	**Pn**	**10 27 45.5**	**-1.3**
PNIG				*e*S	**Sn**	**10 28 05.7**	**-1.6**
TLIG	**Tlapa**	**1.63**	**43**	*e*P	**Pn**	**10 27 46.9**	**-1.0**
TLIG				*e*S	**Sn**	**10 28 08.7**	**-0.7**
HMTT	**Tlapaneco**	**1.81**	**38**	*e*P	**Pn**	**10 27 50.2**	**-0.2**
HMTT				*e*S	**Sn**	**10 28 14.6**	**+0.8**
PLIG	**Platanillo**	**2.02**	**6**	*i* P	**Pn**	**10 27 52.8**	**-0.5**
PLIG				*e*S	**Sn**	**10 28 15.9**	**-3.1**
TXIG	**Tlaxiaco**	**2.08**	**65**	*e*P	**Pn**	**10 27 53.6**	**-0.7**
TXIG				*e*S	**Sn**	**10 28 18.9**	**-1.9**
YOIG	**Yosondua**	**2.15**	**77**	*i* P	**Pn**	**10 27 54.8**	**-0.6**
YOIG				*e*S	**Sn**	**10 28 21.4**	**-1.4**
FTIG	**Fresnillo de T**	**2.16**	**45**	*i* P	**Pn**	**10 27 54.6**	**-0.7**
FTIG				*e*S	**Sn**	**10 28 19.5**	**-3.1**
HLIG	**Huajuapan de L**	**2.35**	**52**	*e*P	**Pn**	**10 27 57.0**	**-0.9**
HLIG				*e*S	**Sn**	**10 28 25.2**	**-2.1**
PEIG	**Puerto Escondi**	**2.52**	**98**	*e*P	**Pn**	**10 27 59.8**	**-0.4**
PEIG				*e*S	**Sn**	**10 28 30.8**	**-0.6**
TEJU	**Tejupilco**	**2.54**	**351**	*e*P	**Pn**	**10 28 02.5**	**+1.9**
TEJU				*e*S	**Sb**	**10 28 35.0**	**-1.5**
YAIG	**Yautepec**	**2.55**	**14**	*e*P	**Pn**	**10 28 00.8**	**+0.1**
YAIG				*e*S	**Sn**	**10 28 30.0**	**-2.3**
PPM	**Popocatepetl**	**2.88**	**21**	*e*P	**Pn**	**10 28 08.1**	**+2.6**
PPM				*e*S	**Sn**	**10 28 38.4**	**-2.4**
UNM	**Universidad Na**	**2.98**	**10**	*e*P	**Pb**	**10 28 13.0**	**+0.8**
UNM				*e*S	**Sn**	**10 28 40.5**	**-2.6**
TPIG	**Tehuac#an**	**3.04**	**48**	*e*P	**Pn**	**10 28 07.2**	**-0.3**
TPIG				*e*S	**Sn**	**10 28 43.0**	**-1.5**
TOIG	**Toxpalan**	**3.07**	**56**	*e*P	**Pn**	**10 28 07.3**	**-0.5**
TOIG				*e*S	**Sn**	**10 28 44.6**	**-0.5**
MOIG	**Morelia**	**3.56**	**337**	*i* P	**Pb**	**10 28 21.1**	**-0.9**
MOIG				*e*S	**Sn**	**10 28 59.9**	**+2.5**
MMIG	**Aquila**	**3.93**	**299**	*e*P

baz=314,slow=76,SNR=189
H11S2 WAKE ISLAND Hy 28.83 122 T T 11 03 33.2
baz=314,slow=76,SNR=171
ZALV Zalesovo Beam 42.05 313 P **P** **10 35 16.4 -0.3**
1.5nm,0.6s,baz=82,slow=6.6,SNR=6.6
1.5nm,0.6s
MKAR Makanchi Array 44.16 302 P **P** **10 35 33.5 -0.4**
0.2nm,0.6s,baz=93,slow=4.9,SNR=2.5
0.2nm,0.6s
KURBB Kurchatov Arra 46.10 308 P **P** **10 35 48.8 -0.5**
0.7nm,0.6s,baz=83,slow=8.0,SNR=6.6
0.7nm,0.6s
ILAR Eielson Array 50.03 32 P **P** **10 36 19.6 +0.2**
0.4nm,0.7s,baz=272,slow=7.1,SNR=5.7
0.4nm,0.7s
BVAR Borovoye Array 50.71 313 P **P** **10 36 25.7 +0.9**
0.2nm,0.4s,baz=81,slow=8.9,SNR=1.6
0.2nm,0.4s
INK Inuvik 54.92 27 LR LR 11 01 45.4
comp=Z,56nm,19.3s,baz=3.0,slow=37
WRA Warramunga Arr 56.55 188 P **P** **10 37 06.9 -0.9**
1.4nm,0.5s,baz=3.6,slow=7.3,SNR=21
1.4nm,0.5s
ASAR Alice Springs 60.28 188 P **P** **10 37 32.2 -1.6**
0.6nm,0.7s,baz=15,slow=7.7,SNR=16
0.6nm,0.7s
FINES FINESS Array B 69.12 332 P **P** **10 38 30.8 -0.2**
4.0nm,1.1s,baz=60,slow=8.2,SNR=4.5
4.0nm,1.1s
NVAR Mina Array Bea 75.47 53 P **P** **10 39 11.5 +1.8**
0.1nm,0.3s,baz=299,slow=8.1,SNR=1.3
0.1nm,0.3s
PDAR Pinedale Array 78.18 45 P **P** **10 39 25.6 +0.7**
0.2nm,0.6s,baz=237,slow=3.0,SNR=2.0
0.2nm,0.6s
H03N2 Juan Fernandez 147.22 97 T T 13 31 34.8
baz=291,slow=76,SNR=18
H03N3 Juan Fernandez 147.23 97 T T 13 31 40.0
baz=291,slow=76,SNR=24
H03N1 Juan Fernandez 147.24 97 T T 13 31 36.0
baz=291,slow=76,SNR=33

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*NNC **15** 10:39:41.5±1.1,51°.78N×75°.48E,h0^{km}±16^{km},mb2.8, mpv2.3,Error ellipse: s-maj=24.5km s-min=6.7km az=25.0, Suspected Mining explosion.*
*IDC **15** 10:39:45.0±1.2,51°.59N×75°.53E,h0^{km},mbtmp2.3/4, ML1.7/4,Error ellipse: s-maj=27.8km s-min=10.8km az=27.0*
ISC 15 10:39:41.5±1.1,51°.6N±0°.1×75°.10E±0°.10,h0^{km},n12, σ0^{s}34/8,5C-5D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.38**	**113**	⇓Pg		**Pn**		**10 40 21.7**	**+0.1**
	0.9nm,0.4s								
KURBB				⇓Lg		Lg		10 40 55.6	
	16nm,0.6s								
KURBB	**Kurchatov Arra**	**2.38**	**113**	Pn		**Pn**		**10 40 22.0**	**+0.4**
	0.1nm,0.3s,baz=302,slow=18,SNR=12								
KURBB				Lg		Lg		10 40 51.6	
	0.2nm,0.3s,baz=308,slow=31,SNR=8.6								
	0.7nm,0.4s								
KURK	**Kurchatov**	**2.39**	**111**	⇑Pg		**Pn**		**10 40 21.4**	**-0.4**
	1.2nm,0.6s								
KURK				⇓Lg		Lg		10 40 54.5	
	6.1nm,0.8s								
BVA0	**Borovoye Array**	**3.22**	**298**	⇓Pg		**Pg**		**10 40 42.9**	**-0.3**
	0.9nm,0.6s,baz=110,slow=16,SNR=5.5								
BVA0				Lg		Lg		10 41 29.5	
	4.6nm,0.8s,baz=116,slow=26,SNR=11								
BVAR	**Borovoye Array**	**3.22**	**298**	Pn		**Pb**		**10 40 39.8**	**+0.3**
	baz=112,slow=17,SNR=6.5								
BVAR				Lg		Lg		10 41 27.1	
	0.1nm,0.3s,baz=107,slow=29,SNR=10								
	1.1nm,0.6s								
BRVK	**Borovoye**	**3.29**	**298**	⇑Lg		Lg		10 41 31.6	
	12nm,1.2s								
OTUK	**Ortayu**	**3.81**	**209**	⇑Lg		Lg		10 41 51.1	
	6.6nm,1.4s								
I46RU	**ZALESOVO INFRA**	**6.35**	**65**	I		I		11 17 30.0	
	baz=254,slow=334,SNR=4.1								
ZALV	**Zalesovo Beam**	**6.35**	**65**	Pn		**Pn**		**10 41 16.1**	**-0.1**
	0.1nm,0.3s,baz=256,slow=15,SNR=3.0								
ZALV				Lg		Lg		10 42 59.4	
	0.1nm,0.3s,baz=256,slow=22,SNR=1.1								
	0.5nm,0.5s								
MAKZ	**Makanchi**	**6.58**	**134**	⇓Lg		Lg		10 43 12.0	
	3.0nm,0.9s								
MK31	**Makanchi Array**	**6.74**	**133**	⇑Sn		**Sn**		**10 42 39.1**	**+0.1**
	0.3nm,0.6s,baz=339,slow=26,SNR=4.6								
MK31				⇑Lg		Lg		10 43 12.6	
	3.3nm,1.1s,baz=320,slow=26,SNR=5.4								
MKAR	**Makanchi Array**	**6.74**	**133**	Pn		**Pn**		**10 41 21.4**	**-0.2**
	baz=317,slow=11,SNR=1.9								
MKAR				Lg		Lg		10 43 10.6	
	0.2nm,0.3s,baz=322,slow=26,SNR=7.5								
	0.1nm,0.6s								

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*IDC **15** 10:52:48.9±1.1,56°.42N×148°.86W,h0^{km},mb3.5/8, mbtmp3.5/13,ML3.1/5,MS3.5/7,Error ellipse: s-maj=23.6km s-min=17.6km az=23.0*
*NEIC **15** 10:52:49.6±1.0,56°.39N±0°.09×149°.1W±0°.1,h22^{km}±9^{km}, ML3.8/64,ML3.6(AEIC),Error ellipse: s-maj=13.3km s-min=7.3km az=155.0*
*AEIC **15** 10:52:52.5±1.1,56°.35N±0°.08×149°.0W±0°.1,h11^{km}±7^{km}, Error ellipse: s-maj=13.3km s-min=7.7km az=152.0*
ISC 15 10:52:49.7±0.8,56°.46N±0°.07×149°.06W±0°.05,h10^{km}, n173,σ1^{s}13/170,mb3.5/8,MS3.4/4,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.33**	**306**	Pn		**Pn**		**10 53 27.5**	**-0.6**
KDAK	**Kodiak Island**	**2.33**	**306**	P		**Pn**		**10 53 27.7**	**-0.4**
	baz=125								
KDAK	**Kodiak Island**	**2.33**	**306**	Pn		**Pn**		**10 53 27.9**	**-0.1**
	5.4nm,0.3s,baz=134,slow=7.3,SNR=9.4								
KDAK				Sn		**Sn**		**10 53 53.9**	**-2.9**
	11nm,0.3s,baz=338,slow=21,SNR=5.4								
KDAK				LR		LR		10 54 40.2	
	comp=Z,569nm,19.6s,baz=146,slow=45								
	24nm,0.5s								
OHAK	**Old Harbor**	**2.45**	**290**	Pn		**Pn**		**10 53 28.2**	**-1.4**
OHAK	**Old Harbor**	**2.45**	**290**			**Sn**		**10 53 56.4**	**-3.1**
OHAK	**Old Harbor**	**2.45**	**290**	P		**Pn**		**10 53 28.2**	**-1.4**
	baz=108								
OHAK				S		**Sn**		**10 53 56.8**	**-2.7**
	baz=108								
SYI	**Shuyak Island**	**2.81**	**322**	Pn		**Pn**		**10 53 34.3**	**-0.3**
Q20K	**Shuyak Island**	**2.81**	**322**	P		**Pn**		**10 53 34.1**	**-0.5**
	baz=139								
Q20K				S		**Sn**		**10 54 07.7**	**-0.7**
	baz=139								
SII	**Sitkinak Islan**	**2.84**	**274**			**Sn**		**10 54 05.4**	**-4.0**
SII	**Sitkinak Islan**	**2.84**	**274**			**Pn**		**10 53 33.7**	**-1.4**
SII	**Sitkinak Islan**	**2.84**	**274**	IAML				10 54 06.6	
	comp=N,247nm,1.0s								
SII				IAML				10 54 17.3	
	comp=E,219nm,0.8s								
SII	**Sitkinak Islan**	**2.84**	**274**	S		**Sn**		**10 54 05.8**	**-3.6**
	baz=92								
CNPM	**China Poot**	**3.29**	**340**	Pn		**Pn**		**10 53 41.0**	**-0.1**
CNPM	**China Poot**	**3.29**	**340**			**Sn**		**10 54 19.1**	**-1.1**
CNPM	**China Poot**	**3.29**	**340**	IAML				10 54 23.3	
	comp=E,99nm,0.4s								
CNPM				IAML				10 54 28.7	
	comp=N,118nm,0.5s								
Q23K	**Middleton Isla**	**3.31**	**25**	Pn		**Pn**		**10 53 40.0**	**-1.5**
Q23K				IAML				10 54 28.2	
	comp=N,131nm,1.4s								
Q23K				IAML				10 54 30.9	
	comp=E,163nm,1.2s								
Q23K	**Middleton Isla**	**3.31**	**25**			**Sn**		**10 54 18.5**	**-2.2**
Q23K	**Middleton Isla**	**3.31**	**25**	P		**Pn**		**10 53 40.5**	**-0.9**
	baz=206								
Q23K				S		**Sn**		**10 54 18.5**	**-2.2**
	baz=206								
MID	**Middleton Isla**	**3.31**	**25**	Pn		**Pn**		**10 53 40.1**	**-1.4**
MID				IAML				10 54 19.3	
	comp=N,161nm,1.1s								
MID				IAML				10 54 30.9	
	comp=E,137nm,1.2s								
BRSE	**Bradley Lake S**	**3.41**	**345**			**Pn**		**10 53 42.2**	**-0.7**
BRSE						**Sn**		**10 54 22.1**	**-1.3**
BRSE	**Bradley Lake S**	**3.41**	**345**	P		**Pn**		**10 53 42.5**	**-0.4**
	baz=164								
BRSE						S	**Sn**	**10 54 23.0**	**-0.3**
	baz=164								
BRLK	**Bradley Lake**	**3.45**	**344**	Pn		**Pn**		**10 53 43.1**	**-0.4**
BRLK				IAML				10 54 27.4	
	comp=E,143nm,0.5s								
HOM	**Homer**	**3.49**	**338**	Pn		**Pn**		**10 53 43.4**	**-0.5**
HOM	**Homer**	**3.49**	**338**	P		**Pn**		**10 53 44.7**	**+0.8**
	baz=156								
Q19K	**Cape Douglas,**	**3.49**	**317**			**Pn**		**10 53 44.0**	**0.0**
Q19K	**Cape Douglas,**	**3.49**	**317**	P		**Pn**		**10 53 44.5**	**+0.4**
	baz=134								
KAHG	**Katmai Hook Gl**	**3.60**	**307**			**Pn**		**10 53 45.4**	**-0.1**
P23K	**Montague Islan**	**3.65**	**13**			**Pn**		**10 53 45.2**	**-1.0**
P23K	**Montague Islan**	**3.65**	**13**	P		**Pn**		**10 53 45.2**	**-1.0**
	baz=193								
SEW	**Seward**	**3.66**	**357**	Pn		**Pn**		**10 53 45.6**	**-0.7**
SEW	**Seward**	**3.66**	**357**	P		**Pn**		**10 53 45.3**	**-1.0**
	baz=176								
CHIR	**Chirikof Islan**	**3.73**	**263**	Pn		**Pn**		**10 53 45.4**	**-1.8**
CHIR	**Chirikof Islan**	**3.73**	**263**	P		**Pn**		**10 53 45.4**	**-1.8**
	baz=279								
KAKN	**Katmai Knife C**	**3.73**	**302**			**Pn**		**10 53 48.0**	**+0.5**
AUL	**Augustine Lava**	**3.75**	**323**			**Pn**		**10 53 48.5**	**+1.0**
ACHA	**Angle Creek He**	**3.82**	**300**			**Pn**		**10 53 49.4**	**+0.7**
KAHC	**Katmai Hardscr**	**3.88**	**307**			**Pn**		**10 53 49.5**	**0.0**
KAHC	**Katmai Hardscr**	**3.88**	**307**	P		**Pn**		**10 53 50.1**	**+0.6**
	baz=123								
P19K	**Oil Pt**	**3.89**	**327**			**Pn**		**10 53 48.1**	**-1.5**
P19K				IAML				10 54 43.1	
	comp=N,190nm,0.5s								
ANCK	**Angle Creek**	**3.90**	**299**			**Pn**		**10 53 50.1**	**+0.5**
O22K	**Cooper Landing**	**4.05**	**355**	Pn		**Pn**		**10 53 50.4**	**-1.2**
O20K	**Slope Mountain**	**4.09**	**334**			**Pn**		**10 53 51.6**	**-0.7**
SLKM	**Skilak Lake**	**4.10**	**352**			**Pn**		**10 53 51.4**	**-1.0**
CNTC	**Contact Creek**	**4.12**	**299**			**Pn**		**10 53 52.6**	**0.0**
Q17K	**Contact Creek**	**4.12**	**299**	P		**Pn**		**10 53 53.1**	**+0.5**
	baz=114								
IVE	**Iliamna Volcan**	**4.13**	**331**			**Pn**		**10 53 50.2**	**-2.7**
HIN	**Hinchinbrook I**	**4.17**	**18**	Pn		**Pn**		**10 53 52.9**	**-0.5**
HIN				IAML				10 54 46.6	
	comp=N,128nm,1.4s								
HIN				IAML				10 54 52.2	
	comp=E,138nm,1.1s								
KAIM	**Kayak Island**	**4.25**	**33**	Pn		**Pn**		**10 53 53.3**	**-1.1**
KAIM				IAML				10 55 01.6	
	comp=E,152nm,1.4s								
P18K	**Big Mountain,**	**4.41**	**314**			**Pn**		**10 53 56.0**	**-0.6**
P18K	**Big Mountain,**	**4.41**	**314**	P		**Pn**		**10 53 56.0**	**-0.6**
	baz=130								
RDSO	**Redoubt South**	**4.45**	**336**			**Pn**		**10 53 56.3**	**-0.9**
EYAK	**Cordova Ski Ar**	**4.45**	**22**	Pn		**Pn**		**10 53 56.4**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.45**	**22**	P		**Pn**		**10 53 56.5**	**-0.6**
	baz=203								
RSO	**Redoubt South**	**4.46**	**336**			**Pn**		**10 53 56.9**	**-0.6**
RDT	**Redoubt**	**4.48**	**338**			**Pn**		**10 53 56.0**	**-1.6**
RDWB	**Redoubt West**	**4.50**	**335**			**Pn**		**10 53 56.7**	**-1.2**
RAGM	**Ragged Mountai**	**4.56**	**29**			**Pn**		**10 53 58.4**	**-0.3**
SUCK	**Suckling Hills**	**4.57**	**35**			**Pn**		**10 53 58.2**	**-0.6**
SUCK				IAML				10 54 53.0	
	comp=E,103nm,1.4s								
SUCK				IAML				10 55 07.0	
	comp=N,128nm,1.1s								
NCT	**North Crescent**	**4.59**	**335**			**Pn**		**10 53 58.2**	**-0.9**
HMT	**Hamilton**	**4.63**	**31**	Pn		**Pn**		**10 53 59.5**	**-0.2**
NICHA	**Nichawak Mount**	**4.64**	**33**			**Pn**		**10 53 58.6**	**-1.1**
Q16K	**King Salmon**	**4.66**	**302**			**Pn**		**10 54 00.1**	**+0.2**
Q16K	**King Salmon**	**4.66**	**302**	P		**Pn**		**10 54 00.1**	**+0.2**
	baz=116								
RC01	**Rabbit Creek A**	**4.66**	**356**	Pn		**Pn**		**10 53 59.4**	**-0.6**
RC01				IAML				10 54 57.1	
	comp=E,97nm,0.6s								
RC01				IAML				10 55 00.4	
	comp=N,73nm,0.6s								
O19K	**Port Alsworth**	**4.66**	**326**			**Pn**		**10 53 59.5**	**-0.4**
O18K	**Koktuh Hills**	**4.71**	**319**			**Pn**		**10 54 00.1**	**-0.6**
P17K	**Kvichak River**	**4.80**	**308**	P		**Pn**		**10 54 02.6**	**+0.6**
	baz=122								
BERG	**Berg Lake**	**4.84**	**33**			**Pn**		**10 54 01.5**	**-1.1**
BERG				IAML				10 55 08.0	
	comp=N,111nm,0.9s								
GRIN	**Grindle Hills**	**4.88**	**36**			**Pn**		**10 54 02.3**	**-0.8**
SNH	**Sunshine Point**	**4.96**	**39**	Pn		**Pn**		**10 54 03.4**	**-0.9**
SNH				IAML				10 55 15.2	
	comp=N,70nm,1.5s								
SNH				IAML				10 55 24.5	
	comp=E,88nm,1.4s								
KNK	**Knik Glacier**	**4.98**	**3**			**Pn**		**10 54 03.7**	**-0.7**
KNK				IAML				10 55 08.3	
	comp=E,48nm,0.7s								
KNK				IAML				10 55 08.3	
	comp=N,48nm,0.5s								
N20K	**Mount Spurr**	**5.03**	**342**	P		**Pn**		**10 54 04.2**	**-0.9**
	baz=160								
SPCR	**Spurr Chakacha**	**5.03**	**342**			**Pn**		**10 54 04.2**	**-0.9**
BMRM	**Bremner River**	**5.08**	**25**			**Pn**		**10 54 04.9**	**-1.0**
BMRM	**Bremner River**	**5.08**	**25**	P		**Pn**		**10 54 04.9**	**-1.0**
	baz=208								
SUA	**Susitna One**	**5.09**	**351**			**Pn**		**10 54 05.7**	**-0.4**
SUA				IAML				10 55 12.5	
	comp=N,30nm,0.7s								
SUA				IAML				10 55 22.0	
	comp=E,37nm,0.9s								
BGL	**Barrier Glacie**	**5.12**	**342**			**Pn**		**10 54 06.5**	**0.0**
PMR	**Palmer**	**5.15**	**360**	Pn		**Pn**		**10 54 06.7**	**0.0**
PMR				IAML				10 55 14.3	
	comp=N,37nm,0.7s								
PMR				IAML				10 55 19.9	
	comp=E,34nm,0.7s								
WAX	**Waxell Ridge**	**5.16**	**37**			**Pn**		**10 54 06.1**	**-0.9**
WAX				IAML				10 55 04.6	
	comp=E,80nm,0.4s								
N19K	**Bonanza Creek**	**5.20**	**329**			**Pn**		**10 54 06.8**	**-0.7**
STLK	**Strndline Lak**	**5.25**	**345**			**Pn**		**10 54 07.4**	**-0.8**
SPNN	**North Nagishla**	**5.27**	**341**			**Pn**		**10 54 08.1**	**-0.4**
MESA	**MESA**	**5.28**	**42**			**Pn**		**10 54 07.2**	**-1.5**
MESA				IAML				10 55 32.2	
	comp=N,63nm,1.2s								
MESA				IAML				10 55 38.3	
	comp=E,59nm,1.5s								
KLU	**Klutina**	**5.30**	**16**			**Pn**		**10 54 08.7**	**-0.2**
KLU				IAML				10 55 11.4	
	comp=N,62nm,0.4s								
KLU				IAML				10 55 13.1	
	comp=E,45nm,0.4s								
KLU	**Klutina**	**5.30**	**16**	P		**Pn**		**10 54 08.6**	**-0.2**
	baz=198								
CRQM	**Cirque**	**5.30**	**33**	IAML				10 55 11.3	
CRQM				IAML				10 55 18.5	
	comp=E,54nm,1.1s								
GHO	**Glory Hole Cre**	**5.33**	**1**			**Pn**		**10 54 09.1**	**-0.2**
SML	**Sawmill**	**5.38**	**4**	Pn		**Pn**		**10 54 09.9**	**0.0**
O17K	**Koliganek Bris**	**5.40**	**311**			**Pn**		**10 54 10.0**	**-0.2**
O17K	**Koliganek Bris**	**5.40**	**311**	P		**Pn**		**10 54 10.3**	**+0.1**
	baz=125								
ISLE	**Juniper Island**	**5.44**	**37**			**Pn**		**10 54 09.8**	**-1.1**
SCM	**Sheep Creek Mo**	**5.46**	**9**			**Pn**		**10 54 11.7**	**+0.6**
SCM	**Sheep Creek Mo**	**5.46**	**9**	P		**Pn**		**10 54 11.1**	**0.0**
	baz=190								
VRDI	**Verde Repeater**	**5.59**	**29**	Pn		**Pn**		**10 54 11.8**	**-1.2**
N25K	**Chitina, Valde**	**5.65**	**22**			**Pn**		**10 54 13.6**	**-0.1**
N25K	**Chitina, Valde**	**5.65**	**22**	P		**Pn**		**10 54 13.4**	**-0.3**
	baz=205								
KIAG	**Kiagna River**	**5.67**	**35**			**Pn**		**10 54 13.2**	**-1.0**
SKT	**Skwentna**	**5.68**	**348**	Pn		**Pn**		**10 54 13.6**	**-0.5**
GLB	**Gilahina Butte**	**5.68**	**26**			**Pn**		**10 54 13.4**	**-0.7**
GRNC	**Granite Creek**	**5.74**	**39**			**Pn**		**10 54 13.9**	**-1.1**
SVW2	**Sverdrup Chn**	**5.75**	**327**	Pn		**Pn**		**10 54 14.6**	**-0.5**
TABL	**Table Mountain**	**5.76**	**43**			**Pn**		**10 54 14.6**	**-0.7**
M24K	**Tolsona, Glenn**	**5.85**	**13**			**Pn**		**10 54 16.4**	**-0.1**
M24K	**Tolsona, Glenn**	**5.85**	**13**	P		**Pn**		**10 54 16.4**	**-0.1**
	baz=195								
PCA	**Pinnacle**	**5.90**	**48**			**Pn**		**10 54 16.9**	**-0.2**
PINM	**Pinnacle**	**5.90**	**48**	P		**Pn**		**10 54 16.9**	**-0.2**
	baz=235								
BARN	**Barnard Glacie**	**6.00**	**37**			**Pn**		**10 54 18.2**	**-0.4**
CTG	**Chitna Glacier**	**6.04**	**38**	P		**Pn**		**10 54 18.2**	**-0.9**
	baz=224								
CTGM	**Chitina Glacie**	**6.05**	**38**			**Pn**		**10 54 18.5**	**-0.7**
PNL	**Peninsula**	**6.05**	**54**	P		**Pn**		**10 54 18.5**	**-0.6**
	baz=241								
LOGN	**Logan Glacier**	**6.07**	**41**			**Pn**		**10 54 18.5**	**-0.9**
BCPM	**Bancas Point**	**6.09**	**51**			**Pn**		**10 54 18.9**	**-0.7**
HARP	**HAARP**	**6.28**	**17**			**Pn**		**10 54 22.5**	**+0.2**
HARP	**HAARP**	**6.28**	**17**	P		**Pn**		**10 54 22.5**	**+0.2**
	baz=200								
WAT1	**Susitna Watana**	**6.39**	**2**			**Pn**		**10 54 24.4**	**+0.6**
WAT1	**Susitna Watana**	**6.39**	**2**	P		**Pn**		**10 54 24.4**	**+0.6**
	baz=182								
N16K	**Nishlik Lake**	**6.49**	**312**			**Pn**		**10 54 25.3**	**+0.2**
N16K	**Nishlik Lake**	**6.49**	**312**	P		**Pn**		**10 54 25.3**	**+0.2**
	baz=124								
M17K	**Holitna River**	**6.58**	**322**			**Pn**		**10 54 26.3**	**-0.1**
M17K	**Holitna River**	**6.58**	**322**	P		**Pn**		**10 54 26.3**	**-0.1**
	baz=135								
P29M	**Windy Craggy**	**6.79**	**57**	P		**Pn**		**10 54 28.5**	**-0.8**
	baz=246								
YUK2	**White River**	**6.81**	**35**			**Pn**		**10 54 30.0**	**+0.4**
YUK8	**Steele Glacier**	**6.82**	**41**	P		**Pn**		**10 54 30.6**	**+0.7**
	baz=228								
YUK3	**Moose Creek**	**6.92**	**36**	P		**Pn**		**10 54 31.6**	**+0.3**
	baz=223								
YUK7	**Dusty Glacier**	**7.02**	**50**			**Pn**		**10 54 32.4**	**-0.2**
CAST	**Castle Rocks**	**7.14**	**349**	Pn		**Pn**		**10 54 33.6**	**-0.5**
YUK6	**Outpost Mounta**	**7.15**	**47**			**Pn**		**10 54 34.6**	**+0.1**
YUK6	**Outpost Mounta**	**7.15**	**47**	P		**Pn**		**10 54 34.6**	**+0.1**
	baz=235								
YUK4	**Talbot Arm**	**7.28**	**43**	P		**Pn**		**10 54 38.1**	**+2.0**
	baz=231								
TTA	**Tatalina**	**7.38**	**334**	Pn		**Pn**		**10 54 36.4**	**-1.0**
HYT	**Haines Junctio**	**7.44**	**49**			**Pn**		**10 54 36.5**	**-1.8**
L16K	**Owhat River**	**7.51**	**319**	P		**Pn**		**10 54 38.9**	**-0.2**
	baz=130								
BPAW	**Bear Paw Mtn.**	**7.72**	**354**	Pn		**Pn**		**10 54 41.6**	**-0.4**
SKAG	**Skagway**	**7.89**	**62**			**Pn**		**10 54 43.6**	**-0.7**
N30M	**Aishikik Lake**	**7.95**	**46**			**Pn**		**10 54 45.0**	**-0.3**
N30M	**Aishikik Lake**	**7.95**	**46**	P		**Pn**		**10 54 45.0**	**-0.3**
	baz=235								
O30N	**Mendenhall**	**8.02**	**52**	Pn		**Pn**		**10 54 45.4**	**-0.8**
WRH	**Wood River Hil**	**8.05**	**3**	Pn		**Pn**		**10 54 46.3**	**-0.3**
M29M	**Somme Creek**	**8.06**	**38**			**Pn**		**10 54 46.3**	**-0.5**
M29M	**Somme Creek**	**8.06**	**38**	P		**Pn**		**10 54 46.3**	**-0.5**
	baz=226								
ILAR	**Eielson Array**	**8.41**	**6**	Pn		**Pn**		**10 54 50.3**	**-1.1**
	comp=E,0.3nm,0.3s,baz=188,slow=12,SNR=12								
ILAR				Sn		**Sn**		**10 56 22.2**	**-4.0**
	comp=E,0.6nm,0.3s,baz=187,slow=23,SNR=7.5								
	comp=E,0.6nm,0.3s								
WHY	**Whitehorse**	**8.52**	**55**			**Pn**		**10 54 52.3**	**-0.7**
DAWY	**Dawson**	**9.00**	**28**	Pn		**Pn**		**10 54 58.5**	**-1.1**
EGAK	**Eagle**	**9.19**	**22**			**Pn**		**10 55 02.1**	**0.0**
P33M	**Teslin, Yukon**	**9.32**	**60**			**Pn**		**10 55 02.9**	**-1.2**
K29M	**Barlow Dome**	**9.36**	**33**			**Pn**		**10 55 04.7**	**+0.2**
S34M	**Telegraph Cree**	**9.84**	**74**	Pn		**Pn**		**10 55 09.5**	**-1.5**
J30M	**Hart River**	**10.25**	**32**			**Pn**		**10 55 16.8**	**0.0**
G23K	**Bananza Creek**	**10.30**	**358**			**Pn**		**10 55 16.5**	**-0.8**
G21K	**Allakaket**	**10.31**	**350**			**Pn**		**10 55 18.0**	**+0.6**
DLBC	**Dease Lake**	**10.44**	**71**	Pn		**Pn**		**10 55 17.3**	**-2.0**
DLBC	**Dease Lake**	**10.44**	**71**	Pn		**Pn**		**10 55 17.6**	**-1.7**
	comp=E,0.2nm,0.3s,baz=236,slow=11,SNR=5.7								
DLBC				LR		LR		10 58 40.4	
	comp=E,114nm,18.9s,baz=310,slow=34								
	comp=E,0.5nm,0.3s								
BMAR	**Burnt Mountain**	**11.20**	**9**	Pn		**Pn**		**10 55 29.4**	**-0.3**
E25K	**Arctic Village**	**11.81**	**6**	Pn		**Pn**		**10 55 37.0**	**-1.0**
G30M	**tAoh Zrail Nji**	**12.15**	**25**	Pn		**Pn**		**10 55 41.7**	**-0.8**
INK	**Inuvik**	**13.83**	**25**	Pn		**Pn**		**10 56 06.3**	**+0.9**
	comp=E,0.1nm,0.3s,baz=214,slow=11,SNR=7.6								
	comp=E,2.9nm,0.9s								
C36M	**Paulatuk**	**17.02**	**31**	P		**Pn**		**10 56 46.1**	**-1.3**
YKA	**Yellowknife Ar**	**18.34**	**57**	P		**Pn**		**10 57 02.3**	**-1.5**
	baz=264,slow=11,SNR=9.6								
YKA				LR		LR		11 03 14.0	
	comp=E,154nm,20.0s,baz=356,slow=34								
	comp=E,1.1nm,0.9s								
YBH	**Yreka Blue Hor**	**22.49**	**120**	LR		LR		11 04 18.0	
	comp=E,176nm,19.0s,baz=8.5,slow=31								
NVAR	**Mina Array Bea**	**27.19**	**118**	P		**P**		**10 58 32.4**	**-1.0**
	comp=E,0.5nm,0.8s,baz=318,slow=6.6,SNR=3.2								
	comp=E,0.5nm,0.8s								
SEY	**Seymchan**	**29.30**	**307**	LR		LR		11 11 41.8	
	comp=E,87nm,20.0s,baz=12,slow=38								
MA2	**Magadan**	**31.07**	**301**	LR		LR		11 12 44.9	
	comp=E,71nm,18.0s,baz=96,slow=38								
PFO	**Pinyon Flats O**	**31.95**	**122**	LR		LR		11 09 35.0	
	comp=E,139nm,18.1s,baz=24,slow=32		

KURK				⇓Lg	Lg	11 21 38.6					
	5.9nm,0.6s										
MAKZ	**Makanchi**	**6.72**	**116**	⇑Lg	Lg	11 23 23.3					
	2.7nm,0.6s										
MK31	**Makanchi Array**	**6.91**	**115**	Lg	Lg	11 23 29.8					
	2.3nm,0.7s,baz=314,slow=26,SNR=2.7										
MKAR	**Makanchi Array**	**6.91**	**115**	Pn	Pn	11 21 39.4	+6.2				
	baz=320,slow=15,SNR=1.2										
MKAR				Lg	Lg	11 23 23.3					
	0.2nm,0.3s,baz=313,slow=27,SNR=5.8										
	0.1nm,0.4s										
I46RU	**ZALESOVO INFRA**	**8.13**	**57**	I	I	12 07 00.0					
	baz=252,slow=322,SNR=2.7										
I31KZ	**AKTYUBINSK INF**	**9.71**	**277**	I	I	12 18 50.0					
	baz=84,slow=337,SNR=3.7										

ZUR 15 11:20:28.4, 46°32N×7°33E, h5km±1km, MLh0.2/5, 1D, Error ellipse: s-maj=3177.0km s-min=1131.7km az=77.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENIN	**Lac Senin/Sane**	**0.05**	**331**	⇓Pg	Pg	11 20 30.1	+0.2
SENIN				Sg	Sg	11 20 31.1	+0.2
SAYF2	**Ayent-Fortunoz**	**0.07**	**120**	Sg	Sg	11 20 31.6	+0.4
STSW2	**Zeuzier, Staus**	**0.07**	**72**	Sg	Sg	11 20 31.8	+0.3
GRYON	**Gryon**	**0.17**	**245**	Sg	Sg	11 20 34.6	+0.6
DIX	**Grande Dixence**	**0.25**	**168**	Sg	Sg	11 20 37.1	+0.6

*LDG **15** 11:20:41.1±0.1, 45°43N×6°34E, h2km, Md1.8/2, Ml1.9/7, Error ellipse: s-maj=1.1km s-min=0.9km az=86.0*

STR 15 11:20:41.1±0.3, 45°N±2°×°±°, h6km±4km, MLv2.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=67.9, preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPL	**La Plagne**	**0.28**	**74**	*e*Pg	Pg	11 20 47.0	+0.2
LPL				*e*Sg	Sg	11 20 50.9	+0.3
	24nm,0.3s						
LPG	**La Plagne**	**0.29**	**78**	*e*Pg	Pg	11 20 47.3	+0.3
LPG				*e*Sg	Sg	11 20 51.2	+0.3
	19nm,0.3s						
RSL	**Roselend**	**0.32**	**38**	Pg	Pg	11 20 47.3	-0.2
RSL				Sg	Sg	11 20 51.5	-0.2
OGMO	**Fort Saint-Gob**	**0.33**	**134**	Pg	Pg	11 20 47.9	+0.3
OGMO				Sg	Sg	11 20 52.8	+0.8
OGSM	**Saint Maurice**	**0.49**	**291**	Pg	Pg	11 20 49.8	-0.8
OGSM				Sg	Sg	11 20 57.8	+0.9
LSD	**Lago del Serru**	**0.56**	**87**	Sg	Sg	11 20 59.0	-0.1
RRL	**Rocca Remolon**	**0.60**	**149**	Sg	Sg	11 21 01.0	+0.3
RRL	**Rocca Remolon**	**0.60**	**149**	Pg	Pg	11 20 52.9	0.0
ORIF	**Oris-en-Rattie**	**0.61**	**213**	*e*Pg	Pg	11 20 52.4	-0.6
ORIF				*e*Sg	Sg	11 20 59.9	-1.1
	18nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.61**	**213**	Pg	Pg	11 20 52.4	-0.6
OGSI	**Sixt**	**0.69**	**24**	Pg	Pg	11 20 54.1	-0.3
OGSI				Sg	Sg	11 21 03.0	-0.5
RSP	**Reno Superiore**	**0.71**	**114**	Pg	Pg	11 20 54.2	-0.6
RSP	**Reno Superiore**	**0.71**	**114**	Sg	Sg	11 21 03.8	-0.2
MBDF	**Montbardon**	**0.77**	**157**	*e*Pg	Pg	11 20 55.5	-0.5
MBDF				*e*Sg	Sg	11 21 05.6	-0.4
	4.8nm,0.4s						
OG35	**Corcelles**	**0.81**	**318**	Pg	Pg	11 20 55.9	-0.9
OG35				Pn	Pn	11 20 59.2	0.0
OG35				Sg	Sg	11 21 07.6	+0.3
OG35				Sn	Sn	11 21 11.6	0.0
BHB	**Bricherasio**	**0.88**	**132**	Pg	Pg	11 20 58.1	+0.1
BHB	**Bricherasio**	**0.88**	**132**	Sg	Sg	11 21 09.9	+0.4
CREF	**Crivoux**	**0.91**	**167**	Pg	Pg	11 20 58.2	-0.4
CREF				Sg	Sg	11 21 10.5	+0.1
DIX	**Grande Dixence**	**0.98**	**49**	Pg	Pg	11 20 59.6	-0.4
DIX	**Grande Dixence**	**0.98**	**49**	Sg	Sg	11 21 13.0	+0.2
OGAG	**Argentiere**	**0.99**	**172**	Pg	Pg	11 20 53.8	-6.3
OGAG				Sg	Sg	11 21 02.9	-10
SURF	**Saint Ours**	**1.01**	**161**	Pg	Pg	11 21 00.7	+0.1
SURF				Sg	Sb	11 21 14.4	-0.4
JAUF	**Jausiers**	**1.05**	**164**	Pg	Pg	11 21 00.9	-0.3
PZZ	**Stroppo**	**1.08**	**149**	Pg	Pg	11 21 01.4	-0.4
PZZ	**Stroppo**	**1.08**	**149**	Sg	Sb	11 21 16.7	+0.1
GIMEL	**St. Georges /**	**1.10**	**357**	Pg	Pb	11 21 02.5	-0.1
GIMEL	**St. Georges /**	**1.10**	**357**	Sn	Sn	11 21 19.4	+0.7
CABF	**La Chapelle**	**1.19**	**351**	*e*Pg	Pg	11 21 03.9	0.0
CABF	**La Chapelle**	**1.19**	**351**	*e*P	Pn	11 21 05.2	+0.8
CABF				*e*Sg	Sg	11 21 19.3	-0.1
	1.5nm,0.2s						
SSB	**Saint Sauveur**	**1.28**	**264**	Pg	Pg	11 21 05.8	+0.1
SSB				Sg	Sg	11 21 21.7	-0.6
VIVF	**Saint-Julien-l**	**1.32**	**244**	*e*Pg	Pn	11 21 05.4	-0.7
VIVF				*e*Sg	Sb	11 21 22.4	-1.1
	5.9nm,0.4s						
RIVEL	**MONT RIVEL**	**1.35**	**348**	Pg	Pg	11 21 07.7	+0.6
TORNY	**Torny/Romont**	**1.40**	**17**	Pg	Pg	11 21 09.3	+1.2
SMRF	**Simiane la Rot**	**1.56**	**201**	*e*Pg	Pn	11 21 09.8	+0.4
SMRF				*e*Sg	Sn	11 21 29.8	-0.2
	0.8nm,0.3s						
SMF	**Signal de Mont**	**2.12**	**306**	*e*Pg	Pb	11 21 20.8	+0.8
SMF				*e*Sg	Sb	11 21 47.9	+1.3
	1.9nm,0.3s						
HINF	**Hinteralfeld**	**2.41**	**8**	*e*Pg	Pb	11 21 26.0	+1.2
HINF				*e*Sg	Sg	11 21 57.1	-1.3
	0.8nm,0.2s						
LOR	**Lormes**	**2.51**	**318**	*e*Pg	Pb	11 21 27.9	+1.2
LOR				*e*Sn	Sn	11 21 50.7	-2.8
LOR				*e*Sg	Sg	11 22 00.3	-1.6
	0.9nm,0.2s						
HAU	**Haudompre**	**2.57**	**0**	*e*Pg	Pb	11 21 28.9	+1.3
HAU				*e*Sn	Sn	11 21 52.1	-2.7
HAU				*e*Sg	Sg	11 22 02.3	-1.4
	2.2nm,0.3s						

*NEIC **15** 11:35:23.2±1.0, 36°18N±0°01×117°86W±0°02, h1km±1km, Error ellipse: s-maj=2.5km s-min=1.2km az=138.0*
*ANF **15** 11:35:23.7±0.1, 36°17N×117°86W, h8km±1km, ML3.4/39, Error ellipse: s-maj=1.0km s-min=0.9km az=26.0*
*PAS **15** 11:35:24.1±1.2, 36°180N±0°009×117°85W±0°01, h2km±6km, ML3.3/274, ML3.0/83(NEIC), Error ellipse: s-maj=1.9km s-min=0.4km az=47.0*

ISC 15 11:35:24.1±0.9, 36°17N±0°01×117°84W±0°02, h11km±7km, n105, σ0581/139, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WCSM	**Coso Springs S**	**0.16**	**157**		**Pg**	**11 35 27.6**	**-0.1**
JRC2	**Joshua Ridge**	**0.19**	**172**		**Pg**	**11 35 28.1**	**-0.1**
JRC2					**Sg**	**11 35 31.3**	**+0.1**
WVPM	**Volcano Peak E**	**0.22**	**175**		**Pg**	**11 35 28.7**	**-0.1**
WVPM					**Sg**	**11 35 32.4**	**+0.3**
MPMC	**Manual Prospec**	**0.31**	**112**	P	**Pg**	**11 35 30.2**	**-0.2**
	baz=293,SNR=1000						
MPMC				S	**Sg**	**11 35 34.8**	**+0.2**
	baz=293						
CWC	**Cottonwood Cre**	**0.33**	**324**	P	**Pg**	**11 35 30.3**	**-0.4**
	baz=144						
CWC				S	**Sg**	**11 35 35.0**	**-0.2**
	baz=144						
WNMM	**Nine Mile Cany**	**0.33**	**189**		**Pg**	**11 35 30.6**	**-0.1**
WNMM					**Sg**	**11 35 35.7**	**+0.5**
TOW	**Tower One**	**0.37**	**170**		**Pb**	**11 35 31.9**	**-0.8**
TOW					**Sb**	**11 35 37.9**	**-0.6**
CGO	**Cerro Gordo**	**0.38**	**5**		**Pg**	**11 35 31.2**	**-0.6**
CGO					**Sg**	**11 35 36.5**	**-0.4**
CLC	**China Lake**	**0.41**	**151**		**Pg**	**11 35 32.0**	**-0.1**
CLC					**Sg**	**11 35 38.1**	**+0.6**
SRTC	**Snort**	**0.49**	**171**		**Pb**	**11 35 34.1**	**-0.6**
WORM	**Onyx Ranch**	**0.58**	**214**		**Pg**	**11 35 34.9**	**-0.4**
WORM					**Sg**	**11 35 42.8**	**-0.2**
WHFM	**Hanning Flat**	**0.63**	**221**		**Sg**	**11 35 44.7**	**+0.1**
WBSM	**Bird Springs**	**0.68**	**201**		**Pg**	**11 35 37.0**	**-0.3**
WBSM					**Sg**	**11 35 46.6**	**+0.4**
LRMC	**Laurel Mtn Rad**	**0.70**	**169**		**Pg**	**11 35 37.6**	**-0.2**
LRMC					**Sb**	**11 35 47.8**	**-0.5**
LRMC	**Laurel Mtn Rad**	**0.70**	**169**	P	**Pg**	**11 35 37.7**	**-0.1**
	baz=349,SNR=131						
LRMC				S	**Sg**	**11 35 47.5**	**+0.5**
	baz=349						
ISA	**Isabella, Lake**	**0.72**	**225**		**Pg**	**11 35 37.8**	**-0.3**
ISA				IAML		11 35 48.1	
	comp=N,1μm,0.4s						
ISA					IAML	11 35 48.2	
	comp=E,870nm,0.3s						
ISA	**Isabella, Lake**	**0.72**	**225**		**Sg**	**11 35 47.6**	**+0.1**
ISA	**Isabella, Lake**	**0.72**	**225**	P	**Pg**	**11 35 37.7**	**-0.3**
	baz=44,SNR=115						
ISA				S	**Sg**	**11 35 47.4**	**-0.1**
	baz=44						
WASM	**Alta Sierra Ca**	**0.72**	**233**		**Sg**	**11 35 47.3**	**-0.3**
SPG2	**Springville 2**	**0.75**	**272**		**Pg**	**11 35 38.0**	**-0.6**
SPG2					**Sg**	**11 35 48.1**	**-0.2**
CCCA	**Chr Cany lake**	**0.75**	**149**		**Pb**	**11 35 38.9**	**-0.4**
CCCA					**Sb**	**11 35 50.0**	**+0.4**
QSM	**Queen of Sheba**	**0.82**	**104**		**Pg**	**11 35 39.6**	**-0.2**
QSM					**Sb**	**11 35 51.1**	**-0.3**
QSM	**Queen of Sheba**	**0.82**	**104**	IAML		11 35 54.8	
	comp=E,1μm,0.7s						
FURC	**Furnace Creek,**	**0.84**	**69**		**Pb**	**11 35 40.5**	**-0.3**
FURC					**Sb**	**11 35 52.0**	**-0.1**
FURC	**Furnace Creek,**	**0.84**	**69**	P	**Pb**	**11 35 40.4**	**-0.3**
	baz=250,SNR=276						
FURC				S	**Sb**	**11 35 52.0**	**-0.1**
	baz=250						
DTP	**Desert Tortois**	**0.90**	**180**		**Pg**	**11 35 41.1**	**-0.4**
GRAC	**Grapevine Rang**	**0.91**	**25**		**Pg**	**11 35 41.1**	**-0.5**
GRAC				IAML		11 35 59.2	
	comp=N,873nm,0.7s						
GRAC				IAML		11 36 02.5	
	comp=E,936nm,0.6s						
GRAC	**Grapevine Rang**	**0.91**	**25**		**Pb**	**11 35 41.3**	**-0.6**
GRAC	**Grapevine Rang**	**0.91**	**25**		**Sb**	**11 35 54.2**	**+0.1**
GRAC	**Grapevine Rang**	**0.91**	**25**	P	**Pb**	**11 35 41.2**	**-0.7**
	baz=206,SNR=234						
GRAC				S	**Sb**	**11 35 54.1**	**+0.1**
	baz=206						
TIN	**Tinemaha, Big**	**0.93**	**341**		**Pg**	**11 35 41.5**	**-0.6**
TIN					**Sb**	**11 35 54.9**	**0.0**
TIN	**Tinemaha, Big**	**0.93**	**341**	P	**Pb**	**11 35 41.7**	**-0.7**
	baz=161,SNR=42						
TIN				S	**Sb**	**11 35 54.8**	**-0.1**
	baz=161						
GWY	**Greenwater Val**	**0.95**	**89**		**Pg**	**11 35 42.2**	**-0.2**
GWY				IAML		11 36 00.6	
	comp=N,648nm,0.5s						
GWY				IAML		11 36 07.2	
	comp=E,843nm,0.5s						
CCAC	**Calif City Air**	**1.03**	**188**		**Pg**	**11 35 43.4**	**-0.5**
CCAC				IAML		11 36 04.7	
	comp=N,571nm,0.6s						
VES	**Vestal, Richgr**	**1.06**	**252**		**Pb**	**11 35 44.0**	**-0.5**
VES	**Vestal, Richgr**	**1.06**	**252**	P	**Pb**	**11 35 44.0**	**-0.5**
	baz=71,SNR=156						
VES				S	**Sb**	**11 35 58.5**	**+0.1**
	baz=71						
WCT	**Wildcat Mounta**	**1.16**	**57**		**Pg**	**11 35 45.7**	**-0.7**
WCT				IAML		11 36 04.5	
	comp=E,512nm,0.6s						
WCT				IAML		11 36 05.3	
	comp=N,243nm,0.6s						
DSP	**Deep Springs**	**1.20**	**355**		**Pg**	**11 35 46.1**	**-1.0**
DSP				IAML		11 36 08.5	
	comp=N,202nm,0.8s						
DSP				IAML		11 36 09.8	
	comp=E,157nm,0.7s						
GSC	**Goldstone, Bar**	**1.21**	**136**		**Pg**	**11 35 46.7**	**-0.7**
GSC	**Goldstone, Bar**	**1.21**	**136**	P	**Pg**	**11 35 46.7**	**-0.7**
	baz=316,SNR=204						
GSC				S	**Sb**	**11 36 03.3**	**+0.5**
	baz=316						
GMN	**Gold Mountain**	**1.22**	**22**		**Pb**	**11 35 47.0**	**-0.4**
GMN				IAML		11 36 07.1	
	comp=E,228nm,0.5s						
GMN				IAML		11 36 08.4	
	comp=N,245nm,0.6s						
VOG	**Valley Oaks Go**	**1.25**	**277**		**Pb**	**11 35 47.5**	**-0.2**
VOG	**Valley Oaks Go**	**1.25**	**277**	P	**Pb**	**11 35 47.3**	**-0.4**
	baz=96						
VOG				S	**Sb**	**11 36 04.1**	**+0.2**
	baz=96						
EDW2	**Edwards Air Fo**	**1.29**	**186**	P	**Pg**	**11 35 48.1**	**-0.9**
	baz=5.1,SNR=83						
EDW2				S	**Sg**	**11 36 05.2**	**-0.6**
	baz=5.1						
SHOC	**Shoshone, Teco**	**1.30**	**102**		**Pn**	**11 35 49.1**	**+0.9**
SHOC	**Shoshone, Teco**	**1.30**	**102**	P	**Pg**	**11 35 48.0**	**-1.0**
	baz=283						
SHOC				S	**Sb**	**11 36 06.3**	**+1.0**
	baz=283						
ARVC	**Arvin**	**1.32**	**218**	P	**Pg**	**11 35 48.6**	**-0.8**
	baz=37,SNR=102						
ARVC				S	**Sb**	**11 36 06.3**	**+0.5**
	baz=37						
RRX	**Edison Barstow**	**1.47**	**152**	P	**Pn**	**11 35 50.8**	**+0.3**
	baz=332,SNR=7.6						
RRX				Sg	**Sn**	**11 36 13.1**	**+3.3**
	baz=332						
TPNV	**Topopah Spring**	**1.50**	**58**	IAML		11 36 17.1	
	comp=N,274nm,0.9s						
TPNV				IAML		11 36 21.0	
	comp=N,283nm,0.7s						
TPNV	**Topopah Spring**	**1.50**	**58**	P	**Pn**	**11 35 51.6**	**+0.4**
	baz=240						
KCC	**Kaiser Creek**	**1.65**	**315**		**Pb**	**11 35 54.1**	**-0.5**
MLAC	**Mammoth, Mammo**	**1.66**	**332**	Pb	**Pg**	**11 35 54.7**	**-1.2**
	baz=151,SNR=91						
MLAC				Sb	**Sg**	**11 36 17.3**	**-0.2**
	baz=151						
MCSM	**Casa Diablo Ho**	**1.71**	**330**		**Pg**	**11 35 55.8**	**-1.1**
OSI	**Osito Audit: C**	**1.71**	**205**	Sb	**Sg**	**11 36 18.6**	**-0.5**
	baz=24						
TUQ	**Turquoise Moun**	**1.72**	**115**	P	**Pn**	**11 35 54.1**	**-0.1**
	baz=296,SNR=95						
TUQ				Sg	**Sg**	**11 36 21.2**	**+1.6**
	baz=296						
MDPB	**Devils Postpil**	**1.76**	**326**		**Pb**	**11 35 56.4**	**-0.2**
MDPB				IAML		11 36 20.1	
	comp=E,316nm,0.5s						
BCW	**Bitter Crk WRg**	**1.78**	**227**		**Pb**	**11 35 56.1**	**-0.6**
HEC	**Hector,Ludlow**	**1.82**	**137**	P	**Pn**	**11 35 55.5**	**0.0**
	baz=318,SNR=12						
HEC				Sb	**Sg**	**11 36 22.0**	**-0.6**
	baz=318						
BFSC	**Mount Baldy Ra**	**1.94**	**175**	P	**Pn**	**11 35 57.4**	**+0.3**
	baz=355,SNR=20						
BFSC				Sb	**Sb**	**11 36 24.5**	**+0.8**
	baz=355						
SMMC	**Simmler**	**1.95**	**245**	Pb	**Pb**	**11 35 59.0**	**-0.7**
	baz=63						
SMMC				Sb	**Sg**	**11 36 25.1**	**-1.7**
	baz=63						
DECC	**Green Verdugo**	**1.96**	**192**	Pg	**Pg**	**11 36 01.5**	**-0.2**
	baz=11						
DECC				Sb	**Sg**	**11 36 26.4**	**-0.6**
	baz=11						
TPH	**Tonopah**	**1.96**	**14**		**Pn**	**11 35 58.5**	**+0.9**
PASC	**Pasadena Art C**	**2.02**	**188**		**Pn**	**11 35 58.9**	**+0.8**
BBRC	**Big Bear Solar**	**2.05**	**158**	Pg	**Pg**	**11 36 03.2**	**-0.2**
	baz=339						
BBRC				Sb	**Sg**	**11 36 29.9**	**-0.1**
	baz=339						
PKM	**Mcpherson Peak**	**2.06**	**232**	Pb	**Pb**	**11 36 00.9**	**-0.6**
	baz=50						
PKM				Sb	**Sb**	**11 36 28.0**	**+0.7**
	baz=50						
LHV	**Little Huntoon**	**2.14**	**346**		**Pn**	**11 36 01.2**	**+1.4**
LHV				IAML		11 36 39.7	
	comp=N,74nm,0.9s						
LHV				IAML		11 36 43.8	
	comp=E,108nm,1.1s						
SHPR	**Sheep Range**	**2.19**	**80**		**Pn**	**11 36 01.6**	**+1.0**
S11A	**Rachel**	**2.23**	**48**		**Pn**	**11 36 02.6**	**+1.4**
GMRC	**Granite Mounta**	**2.26**	**127**	P	**Pn**	**11 36 01.0**	**-0.5**
	baz=309,SNR=16						
GMRC				S	**Sn**	**11 36 29.5**	**0.0**
	baz=309						
MBUM	**Mount Bullion**	**2.26**	**308**		**Pb**	**11 36 04.3**	**-0.8**
NVAR	**Mina Array Bea**	**2.28**	**351**		**Pn**	**11 36 03.2**	**+1.2**
WTNK	**Soaring Height**	**2.29**	**89**		**Pn**	**11 36 02.8**	**+0.9**
SBC	**Santa Barbara**	**2.31**	**222**	Sb	**Sg**	**11 36 37.0**	**-1.2**
	baz=41						
PMPB	**Monarch Peak**	**2.39**	**272**		**Pn**	**11 36 05.1**	**+1.8**
V12A	**Nelson**	**2.47**	**100**		**Pn**	**11 36 05.2**	**+0.8**
V12A				IAML		11 36 50.4	
	comp=E,56nm,0.7s						
V12A				IAML		11 36 53.6	
	comp=N,82nm,1.0s						
ELS	**Elsinore Mount**	**2.54**	**172**		**Pn**	**11 36 06.1**	**+0.7**
ELS				IAML		11 36 51.9	
	comp=E,38nm,1.0s						
ELS				IAML		11 36 58.1	
	comp=N,40nm,0.8s						
PRN	**Pahroc Range**	**2.56**	**60**		**Pn**	**11 36 06.5**	**+0.9**
PRN				IAML		11 36 56.1	
	comp=N,120nm,0.7s						
BBGB	**Big Mountain B**	**2.61**	**280**		**Pn**	**11 36 08.4**	**+2.1**
MURC	**Murrieta**	**2.62**	**168**	P	**Pn**	**11 36 07.0**	**+0.5**
	baz=348						
MURC				Sb	**Sg**	**11 36 46.6**	**-1.7**
	baz=348						
BELC	**Belle Mtn. Jos**	**2.64**	**145**	P	**Pn**	**11 36 07.1**	**+0.3**
	baz=326						
BELC				Sb	**Sg**	**11 36 47.7**	**-1.3**
	baz=326						
PMD	**Palm Desert**	**2.79**	**154**	Pn	**Pn**	**11 36 09.7**	**+0.9**
PMD				IAML		11 36 56.2	
	comp=E,34nm,0.6s						
PFO	**Pinyon Flats O**	**2.80**	**156**	Pn	**Pn**	**11 36 09.5**	**+0.5**
PFO				IAML		11 36 57.9	
	comp=E,50nm,0.7s						
PFO				IAML		11 37 01.6	
	comp=E,27nm,1.0s						
PFO	**Pinyon Flats O**	**2.80**	**156**	Pg	**Pg**	**11 36 16.8**	**-0.9**
	baz=336						
TPFO	**Pinon Flats**	**2.80**	**156**	P	**Pn**	**11 36 09.3**	**+0.3**
	baz=336						
CIS	**Catalina Islan**	**2.80**	**190**	Pg	**Pg**	**11 36 16.9**	**-0.9**
	baz=9.3						
R11B	**Troy Canyon, C**	**2.82**	**39**	Pn	**Pn**	**11 36 11.3**	**+1.9**
R11B				IAML		11 36 58.1	
	comp=E,35nm,0.5s						
R11B	**Troy Canyon, C**	**2.82**	**39**	P	**Pn**	**11 36 09.7**	**+0.3**
	baz=220,SNR=17						
SBI	**Santa Barbara**	**2.86**	**200**		**Pb**	**11 36 13.7**	**-1.4**
KVN	**Kaiserville**	**2.88**	**356**		**Pn**	**11 36 11.2**	**+1.0**
SAO	**San Andreas Ge**	**2.96**	**283**		**Pn**	**11 36 11.0**	**-0.2**
NEE2	**Needles Airpor**	**2.98**	**117**	P	**Pn**	**11 36 11.2**	**-0.1**
	baz=299						
IRM	**Iron Mountain**	**2.99**	**132**	P	**Pn**	**11 36 10.8**	**-0.6**
	baz=313						
YERR	**Yerington**	**3.02**	**339**	IAML		11 37 06.4	
	comp=N,24nm,1.0s						
YERR				IAML		11 37 33.3	
	comp=E,45nm,0.5s						
BC3	**Big Chuckawall**	**3.19**	**141**	P	**Pn**	**11 36 13.9**	**-0.4**
	baz=323,SNR=5.5						
MONP2	**Monument Peak**	**3.48**	**160**	P	**Pn**	**11 36 19.6**	**+1.2**
	baz=341						
BAR	**Barrett**	**3.62**	**164**	Pn	**Pn**	**11 36 20.7**	**+0.6**
BAR				IAML		11 37 22.4	
	comp=E,21nm,0.6s						
BAR				IAML		11 37 23.0	
	comp=N,15nm,0.8s						
SWSC	**Sam W. Stewart**	**3.63**	**152**	Pg	**Pg**	**11 36 32.1**	**-1.6**
	baz=333						
Q12A	**Willow Creek R**	**3.73**	**39**	Pn	**Pn**	**11 36 23.2**	**+1.4**
Q12A				IAML		11 37 32.5	
	comp=E,31nm,0.9s						
Q12A				IAML		11 37 37.8	
	comp=N,44nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**3.79**	**157**	Pg	**Pg**	**11 36 36.1**	**-0.7**
	baz=338						
CCUT	**Cedar City**	**3.85**	**68**	IAML		11 37 34.7	
	comp=N,17nm,1.1s						
CCUT				IAML		11 37 36.7	
	comp=E,14nm,1.2s						
U15A	**North Rim**	**4.49**	**85**	IAML		11 37 56.3	
	comp=E,25nm,1.1s						
U15A				IAML		11 38 02.1	
	comp=N,14nm,1.2s						
ELK	**Elko**	**5.00**	**23**		**Pn**	**11 36 40.9**	**+1.5**
ELK				IAML		11 38 09.0	
	comp=N,6.3nm,1.1s						
MSU	**Marysvale**	**5.08**	**61**	Pn	**Pn**	**11 36 41.0**	**+0.6**
WUAZ	**Wupatki**	**5.29**	**95**	Pg	**Pg**	**11 37 04.3**	**-1.2**
	baz=279						
MVCO	**Mesa Verde**	**7.58**	**79**	Pg	**Pg**	**11 37 47.4**	**-1.8**
	baz=265						

HEL 15 11:36:10.7±1.3, 67°92N×20°02E, h0km, ML0.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.76**	**79**	PG	Pg	11 36 23.9	-1.2
LANU				SG	Sg	11 36 33.0	-1.9
HEF	**Hetta**	**1.45**	**68**	MSG		11 36 54.2	
	comp=Z,0.7nm,0.2s						
HEF				SN	Sn	11 36 57.8	+0.1
PAJU	**Pajala**	**1.49**	**126**	PG	Pn	11 36 36.0	-2.7
PAJU				SG	Sg	11 36 54.8	-3.7
KLF	**Kolari**	**1.66**	**113**	PG	Pn	11 36 40.4	-0.7
KLF				MSG		11 37 00.2	
	comp=Z,0.5nm,0.2s						
KLF				SN	Sg	11 37 03.8	-0.1
TOF	**Tornio**	**2.50**	**136**	MSG		11 37 24.6	
	comp=Z,0.3nm,0.2s						
TOF				SN	Sn	11 37 25.2	+1.5
ARA0	**ARCESS Array S**	**2.58**	**48**	PG	Pn	11 36 54.7	+1.1
	baz=231						
ARA0				SG	Sb	11 37 28.9	-1.0
RNF	**Rovaniemi**	**2.67**	**117**	PN	Pn	11 36 55.7	+0.8
RNF				SN	Sn	11 37 29.0	+1.1
KMNF	**Kaamanen**	**2.85**	**61**	SN	Sn	11 37 31.1	-1.2

HEL 15 11:36:44.2±0.3, 61°94N×30°57E, h0km, ML1.4, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOF	**Joensuu**	**1.04**	**19**	PG	Pg	11 37 03.0	-1.2
JOF				SB	Sg	11 37 16.6	-1.1
NIF	**Nilsia**	**1.93**	**320**	PB	Pn	11 37 17.9	-0.4
	baz=131						
NIF				SG	Sn	11 37 43.8	+0.5
KAF	**Kangasniemi**	**2.02**	**277**	PG	Pn	11 37 20.3	+0.9
	baz=88						
KAF				MSG		11 37 44.1	
	comp=Z,1.6nm,0.2s						
KAF				SG	Sb	11 37 46.4	-0.9
VJF	**Virojoki**	**2.02**	**227**	MSG		11 37 44.3	
	comp=Z,1.6nm,0.2s						
VJF				SB	Sn	11 37

-1.0344, Plg41.0000°, Azm111.0000°;
*NEIC **15** 11:40:05.3±1.9, 5.26S±0.07×151.41E±0.07, h120km±4km, mb4.9/194, Mww5.3/25 Error ellipse: s-maj=11.1km s-min=9.9km az=112.0*
*NEIC **15** 11:40:05.9, 5.28S×151.39E, h110km*
*GCMT **15** 11:40:07.3±0.1, 5.38S±0.01×151.41E±0.01, h130km, MW5.3/156, Moment Tensor Solution. s125, c204; s156, c290; Duration: 181 Moment tensor: Scale 10^17 Nm; Mrr0.48±.02; Mθθ-0.49±.02; Mϕϕ0.01±.02; Mrθ0.33±.01; Mθϕ-0.16±.02; Mϕr1.18±.01; Best double couple: Mo1.29700×10^17 NP1:ϕ23.00000°, δ82.00000°, λ76.00000°. NP2:ϕ264.00000°, δ16.00000°, λ150.00000°. Principal axes: T 1.4620, Plg51.0000°, Azm278.0000°; N -0.3300, Plg14.0000°, Azm25.0000°; P -1.1320, Plg36.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 11:40:06.0±0.3, 5.32S±0.04×151.41E±0.04, h134km±2km, h135km: pP-P, n721, σ1921/687, mb4.9/165, 10C-7D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BULU	**Kimbe**	**1.11**	**259**	P	**Pn**		**11 40 29.0**	**-1.3**
RABL	**Rabaul**	**1.35**	**34**		**Pn**		**11 40 31.0**	**-1.7**
RABL	**Rabaul**	**1.35**	**34**	P	**Pn**		**11 40 31.2**	**-1.5**
KAVG	**Kavieng**	**2.79**	**347**	P	**Pn**		**11 40 50.3**	**+0.3**
MANU	**Manus Island**	**5.19**	**309**		**Pn**		**11 41 20.8**	**-0.9**
MANU	**Manus Island**	**5.19**	**309**	P	**Pn**		**11 41 23.6**	**+1.9**
PMG	**Port Moresby**	**5.86**	**226**		**Pn**		**11 41 30.9**	**+0.3**
PMG	**Port Moresby**	**5.86**	**226**	P	**Pn**		**11 41 31.1**	**+0.5**
	872nm,0.5s,baz=44,slow=8.6,SNR=259							
PMG				S	**Sn**		**11 42 36.5**	**-0.2**
	530nm,0.5s,baz=17,slow=22,SNR=5.0							
PMG				LR	LR		11 43 12.2	
	comp=Z,925nm,19.0s,baz=30,slow=32							
HNR	**Honiara**	**9.40**	**116**		**Pn**		**11 42 18.4**	**+0.2**
HNR	**Honiara**	**9.40**	**116**	P	**Pn**		**11 42 21.0**	**+2.8**
HNR	**Honiara**	**9.40**	**116**	P	**Pn**		**11 42 18.9**	**+0.7**
	3μm,0.8s,baz=169,slow=3.4,SNR=8.4							
HNR				LR	LR		11 46 05.0	
	comp=Z,16μm,19.9s,baz=274,slow=38							
TABU	**Tabubil**	**10.15**	**270**	P	**Pn**		**11 42 28.8**	**+0.4**
GENI	**Genyem**	**11.54**	**283**	P	**Pn**		**11 42 46.9**	**+0.1**
GENI	**Genyem**	**11.54**	**283**	P	**Pn**		**11 42 46.6**	**-0.2**
	201nm,1.0s							
COEN	**Coen**	**11.81**	**223**	P	**Pn**		**11 42 49.8**	**-0.6**
	baz=12,SNR=25							
COEN	**Coen**	**11.81**	**223**	Pn	**Pn**		**11 42 51.1**	**+0.7**
COEN	**Coen**	**11.81**	**223**	P	**Pn**		**11 42 51.5**	**+1.1**
SMPI	**Sarmi**	**13.10**	**284**	P	**Pn**		**11 43 07.8**	**+0.7**
	234nm,1.0s,3μm4μm							
MTSU	**Mount Surprise**	**14.50**	**208**	P	**Pn**		**11 43 25.5**	**+0.5**
	baz=15,SNR=70							
MTSU	**Mount Surprise**	**14.50**	**208**	P	**P**		**11 43 27.8**	**-0.1**
TV1H	**Townsville Har**	**14.57**	**198**	P	**P**		**11 43 28.5**	**-0.1**
AUAYR	**Ayr State High**	**14.70**	**195**	P	**P**		**11 43 29.5**	**-0.5**
CTA	**Charters Tower**	**15.52**	**198**	P	**P**		**11 43 38.6**	**-0.5**
	48nm,0.7s,baz=20,slow=12,SNR=96							
CTAO	**Charters Tower**	**15.52**	**198**	Pn	**Pn**		**11 43 37.5**	**0.0**
CTAO	**Charters Tower**	**15.52**	**198**	P	**P**		**11 43 40.2**	**+1.1**
CTAO	**Charters Tower**	**15.52**	**198**	P	**Pn**		**11 43 37.6**	**0.0**
GD1S	**Gladstone Soft**	**18.42**	**181**	P	**Pn**		**11 44 12.8**	**+0.1**
QIS	**Mount Isa**	**19.00**	**216**	P	**P**		**11 44 17.8**	**+0.4**
	baz=19,SNR=73							
QIS	**Mount Isa**	**19.00**	**216**	P	**Pn**		**11 44 19.0**	**-0.6**
FAKI	**Fak Fak**	**19.26**	**276**	P	**P**		**11 44 20.1**	**-0.2**
FAKI	**Fak Fak**	**19.26**	**276**	P	**P**		**11 44 21.3**	**+1.0**
FAKI	**Fak Fak**	**19.26**	**276**	P	**P**		**11 44 20.7**	**+0.4**
	96nm,0.8s,2μm3μm							
KOUNC	**Koumac, New Ca**	**19.64**	**142**	P	**P**		**11 44 25.4**	**+1.1**
GUMO	**Guam**	**19.88**	**341**	P	**P**		**11 44 26.4**	**-0.5**
	128nm,0.9s,baz=153,slow=12,SNR=2.1							
EIDS	**Eidsvold**	**19.94**	**181**	P	**Pn**		**11 44 29.3**	**-1.2**
	baz=20,SNR=12							
EIDS	**Eidsvold**	**19.94**	**181**	P	**P**		**11 44 28.5**	**+1.0**
EIDS	**Eidsvold**	**19.94**	**181**	P	**Pn**		**11 44 29.4**	**-1.1**
KDU	**Kakadu**	**20.08**	**247**	P	**P**		**11 44 28.7**	**-0.3**
	baz=20,SNR=370							
KDU	**Kakadu**	**20.08**	**247**	P	**P**		**11 44 29.0**	**-0.1**
SAUI	**Saumlaki**	**20.15**	**261**	P	**P**		**11 44 29.3**	**-0.6**
SAUI	**Saumlaki**	**20.15**	**261**	P	**P**		**11 44 31.3**	**+1.4**
SAUI	**Saumlaki**	**20.15**	**261**	P	**P**		**11 44 31.1**	**+1.2**
	387nm,0.7s,5μm							
SWI	**Sorong**	**20.60**	**282**	P	**P**		**11 44 35.1**	**+0.4**
	270nm,0.8s,2μm3μm							
MTN	**Manton Dam**	**21.36**	**248**	P	**P**		**11 44 41.9**	**-1.0**
	baz=21,SNR=106							
MTN	**Manton Dam**	**21.36**	**248**	P	**P**		**11 44 42.3**	**-0.6**
MTN	**Manton Dam**	**21.36**	**248**	P	**P**		**11 44 43.3**	**+0.4**
WB0	**Warramunga Arr**	**21.93**	**228**	P	**P**		**11 44 48.3**	**-0.5**
WR0	**Warramunga Arr**	**21.94**	**227**	P	**P**		**11 44 48.6**	**-0.3**
WRAB	**Tennant Creek**	**22.06**	**227**	P	**P**		**11 44 49.9**	**-0.3**
WRAB	**Tennant Creek**	**22.06**	**227**	P	**P**		**11 44 49.9**	**-0.3**
WB2	**Warramunga Arr**	**22.07**	**227**	P	**P**		**11 44 49.9**	**-0.4**
WRA	**Warramunga Arr**	**22.07**	**227**	P	**P**		**11 44 50.1**	**-0.3**
WRA	**Warramunga Arr**	**22.07**	**227**	*i* P	**P**		**11 44 49.7**	**-0.7**
WRA				pmax	pmax			
	comp=Z,109nm,0.6s							
WRA	**Warramunga Arr**	**22.07**	**227**	P	**P**		**11 44 49.8**	**-0.5**
	comp=Z,109nm,0.6s,baz=50,slow=10,SNR=237							
WRA				ScP	**ScP**		**11 52 09.4**	**+1.2**
	comp=Z,9.5nm,0.7s,baz=50,slow=2.7,SNR=12							
	comp=Z,109nm,0.6s							
DZM	**Mont Dzumac**	**22.11**	**140**	P	**P**		**11 44 51.3**	**+0.5**
DZM	**Mont Dzumac**	**22.11**	**140**	P	**P**		**11 44 52.0**	**+1.2**
DZM	**Mont Dzumac**	**22.11**	**140**	*e*P	**P**		**11 44 49.9**	**-0.9**
	comp=Z,116nm,0.8s							
DZM				*e*S	**S**		**11 48 39.5**	**-6.0**
	comp=Z,2μm,33.4s							
QLP	**Quilpie**	**22.23**	**197**	P	**P**		**11 44 53.2**	**+1.4**
	baz=22,SNR=27							
QLP	**Quilpie**	**22.23**	**197**	P	**P**		**11 44 53.5**	**+1.7**
YATNC	**Mamie plateau,**	**22.39**	**139**	P	**P**		**11 44 56.7**	**+3.3**
OUENC	**Ouen Island, N**	**22.61**	**140**	P	**P**		**11 44 57.5**	**+1.9**
GC1S	**Gold Coast 1 S**	**22.80**	**175**	P	**P**		**11 44 59.3**	**+2.0**
AULRC	**Lightning Ridg**	**24.20**	**187**	P	**P**		**11 45 11.3**	**+1.2**
LBMI	**Labuha**	**24.32**	**280**	P	**P**		**11 45 12.6**	**+1.1**
INKA	**Innaminka**	**24.50**	**203**	P	**P**		**11 45 14.8**	**+1.9**
KNRA	**Kununurra**	**24.51**	**243**	P	**P**		**11 45 12.7**	**-0.4**
KNRA	**Kununurra**	**24.51**	**243**	P	**P**		**11 45 13.6**	**+0.5**
AS01	**Alice Springs**	**24.81**	**221**	P	**P**		**11 45 16.7**	**+0.8**
AS31	**Alice Springs**	**24.84**	**221**	P	**P**		**11 45 16.7**	**+0.6**
AS31				IAmb	IAmb		11 45 19.4	
	comp=Z,37nm,0.6s							
ASAR	**Alice Springs**	**24.85**	**221**	P	**P**		**11 45 16.6**	**+0.4**
ASAR	**Alice Springs**	**24.85**	**221**	P	**P**		**11 45 16.4**	**+0.3**
	comp=Z,79nm,0.5s,baz=61,slow=8.2,SNR=604							
ASAR				ScP	**ScP**		**11 52 17.6**	**+2.0**
	comp=Z,4.9nm,0.7s,baz=45,slow=3.4,SNR=9.7							
	comp=Z,79nm,0.5s							
ARMA	**Armidale**	**24.97**	**180**	P	**P**		**11 45 18.6**	**+1.4**
	baz=25,SNR=25							
ARMA	**Armidale**	**24.97**	**180**	P	**P**		**11 45 18.3**	**+1.1**
ARMA				IAmb	IAmb		11 45 22.8	
	comp=Z,54nm,0.9s							
ARMA	**Armidale**	**24.97**	**180**	P	**P**		**11 45 18.7**	**+1.5**
SANI	**Sanana**	**25.58**	**276**	P	**P**		**11 45 23.7**	**+0.9**
SANI	**Sanana**	**25.58**	**276**	P	**P**		**11 45 24.3**	**+1.5**
	comp=Z,163nm,0.8s,comp=Z,1μm							
AUPHS	**Peel High Scho**	**25.65**	**181**	P	**P**		**11 45 26.2**	**+2.9**
CMSA	**Cobar Meteorol**	**26.63**	**191**	P	**P**		**11 45 32.5**	**+0.4**
	baz=27,SNR=14							
CMSA	**Cobar Meteorol**	**26.63**	**191**	P	**P**		**11 45 32.2**	**+0.1**
OOD	**Oodnadatta**	**26.89**	**212**	P	**P**		**11 45 36.0**	**+1.5**
AUDCS	**Dubbo College**	**26.90**	**185**	P	**P**		**11 45 36.3**	**+1.8**
SOEI	**Soe**	**27.26**	**259**	P	**P**		**11 45 38.3**	**+0.3**
SOEI	**Soe**	**27.26**	**259**	P	**P**		**11 45 40.3**	**+2.2**
SOEI	**Soe**	**27.26**	**259**	P	**P**		**11 45 38.4**	**+0.3**
	comp=Z,148nm,0.7s							
LCRK	**Leigh Creek**	**27.92**	**205**	P	**P**		**11 45 44.1**	**+0.5**
STKA	**Stephens Creek**	**27.98**	**198**	P	**P**		**11 45 44.5**	**+0.4**
	baz=28,SNR=18							
STKA	**Stephens Creek**	**27.98**	**198**	P	**P**		**11 45 44.3**	**+0.2**
STKA	**Stephens Creek**	**27.98**	**198**	P	**P**		**11 45 44.8**	**+0.7**
STKA	**Stephens Creek**	**27.98**	**198**	P	**P**		**11 45 44.3**	**+0.2**
STKA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
STKA	**Stephens Creek**	**27.98**	**198**	P	**P**		**11 45 44.4**	**+0.2**
	comp=Z,20nm,0.7s,baz=4.8,slow=9.8,SNR=18							
	comp=Z,20nm,0.7s							
KMSI	**Cibinong**	**28.02**	**281**	P	**P**		**11 45 41.2**	**-3.5**
	comp=Z,218nm,0.7s,comp=Z,2μm							
FITZ	**Fitzroy Crossi**	**28.20**	**241**	P	**P**		**11 45 45.8**	**-0.4**
	baz=28,SNR=92							
FITZ	**Fitzroy Crossi**	**28.20**	**241**	P	**P**		**11 45 45.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**28.20**	**241**	P	**P**		**11 45 45.8**	**-0.4**
LUWI	**Luwuk**	**28.91**	**277**	P	**P**		**11 45 52.1**	**-0.5**
MMRI	**Maumere**	**29.14**	**262**	P	**P**		**11 45 53.9**	**-0.8**
WRKA	**Warakurna**	**29.60**	**226**	P	**P**		**11 45 58.0**	**-0.6**
	baz=30,SNR=25							
WRKA	**Warakurna**	**29.60**	**226**	P	**P**		**11 45 58.1**	**-0.6**
EDFI	**Ende, Flores**	**29.69**	**262**	P	**P**		**11 45 57.2**	**-2.5**
	comp=Z,86nm,0.7s							
MULG	**Mulgathing**	**29.73**	**211**	P	**P**		**11 45 59.4**	**-0.3**
DGTI	**Dogotuki**	**29.84**	**114**	P	**P**		**11 46 02.4**	**+1.6**
CAN	**Canberra**	**29.94**	**184**	P	**P**		**11 46 03.0**	**+1.5**
CAN	**Canberra**	**29.94**	**184**	P	**P**		**11 46 03.0**	**+1.5**
CAN				pmax	pmax			
	comp=Z,79nm,1.5s							
CAN	**Canberra**	**29.94**	**184**	P	**P**		**11 46 02.7**	**+1.2**
MRSI	**Marisa**	**29.99**	**280**	P	**P**		**11 46 01.8**	**-0.4**
	comp=Z,33nm,0.7s,comp=Z,2μm							
HTT	**Hallett**	**30.29**	**201**	P	**P**		**11 46 05.5**	**+0.8**
	baz=30,SNR=28							
HTT	**Hallett**	**30.29**	**201**	P	**P**		**11 46 06.0**	**+1.4**
TAVE	**Taveuni**	**30.29**	**114**	P	**P**		**11 46 06.6**	**+1.8**
WHYH	**Whyalla**	**30.44**	**203**	P	**P**		**11 46 06.9**	**+1.0**
BBOO	**Buckleboo**	**30.88**	**206**	P	**P**		**11 46 09.7**	**0.0**
	baz=31,SNR=20							
BBOO	**Buckleboo**	**30.88**	**206**	P	**P**		**11 46 09.8**	**0.0**
BBOO				IAmb	IAmb		11 46 12.7	
	comp=Z,32nm,1.2s							
BASI	**Baing, Sumba**	**30.93**	**259**	P	**P**		**11 46 09.8**	**-0.6**
	comp=Z,301nm,0.7s,comp=Z,3μm							
TOLI2	**Tolitoli**	**31.26**	**281**	P	**P**		**11 46 14.0**	**+0.6**
TOLI2				IAmb	IAmb		11 46 19.6	
	comp=Z,21nm,0.7s							
TOLI2	**Tolitoli**	**31.26**	**281**	P	**P**		**11 46 15.1**	**+1.8**
KAPI	**Kappang**	**31.53**	**269**	P	**P**		**11 46 16.4**	**+0.6**
KAPI	**Kappang**	**31.53**	**269**	P	**P**		**11 46 16.4**	**+0.6**
KAPI				pmax	pmax			
	comp=Z,53nm,0.7s							
MPSI	**Mapaga**	**31.97**	**279**	P	**P**		**11 46 15.8**	**-3.8**
	comp=Z,31nm,0.7s							
ARPS	**Mount Arapiles**	**32.51**	**194**	P	**P**		**11 46 25.0**	**+1.0**
	baz=33,SNR=14							
ARPS	**Mount Arapiles**	**32.51**	**194**	P	**P**		**11 46 25.5**	**+1.5**
JCJ	**Chichijima**	**33.44**	**345**	LR	LR		11 59 17.5	
	comp=Z,137nm,21.0s,baz=128,slow=35							
FORT	**Forrest**	**33.52**	**218**	P	**P**		**11 46 32.7**	**-0.2**
	baz=34,SNR=11							
FORT	**Forrest**	**33.52**	**218**	P	**P**		**11 46 32.9**	**0.0**
FORT	**Forrest**	**33.52**	**218**	P	**P**		**11 46 34.7**	**+1.8**
PLAI	**Plampang**	**33.55**	**262**	P	**P**		**11 46 33.2**	**-0.2**
PLAI	**Plampang**	**33.55**	**262**	P	**P**		**11 46 30.3**	**-3.1**
	comp=Z,72nm,0.7s,comp=Z,898nm							
MBWA	**Marble Bar**	**34.52**	**240**	P	**P**		**11 46 41.3**	**-0.4**
MBWA	**Marble Bar**	**34.52**	**240**	P	**P**		**11 46 41.1**	**-0.6**
MBWA	**Marble Bar**	**34.52**	**240**	P	**P**		**11 46 41.0**	**-0.6**
PSA00	**Pilbara Seismi**	**34.58**	**239**	P	**P**		**11 46 41.7**	**-0.5**
PSA00	**Pilbara Seismi**	**34.58**	**239**	IAmb	IAmb		11 46 45.7	
	comp=Z,12nm,0.6s							
PSA00	**Pilbara Seismi**	**34.58**	**239**	P	**P**		**11 46 41.6**	**-0.5**
KKM	**Kota Kinabalu**	**36.91**	**287**	P	**P**		**11 47 01.8**	**-0.5**
KKM				IAmb	IAmb		11 47 16.8	
	comp=Z,42nm,1.5s							
JAGI	**Jajag, Banyuwa**	**37.11**	**263**	P	**P**		**11 47 02.3**	**-1.6**
JAGI	**Jajag, Banyuwa**	**37.11**	**263**	P	**P**		**11 47 04.4**	**+0.5**
RAO	**Raoul Island**	**37.51**	**133**	LR	LR		11 58 23.2	
	comp=Z,474nm,21.6s,baz=70,slow=29							
MEEK	**Meekatharra**	**37.79**	**232**	P	**P**		**11 47 09.2**	**-0.3**
	baz=38,SNR=277							
MEEK	**Meekatharra**	**37.79**	**232**	P	**P**		**11 47 09.4**	**-0.1**
KMBL	**Kambalda**	**37.93**	**223**	P	**P**		**11 47 10.0**	**-0.5**
	baz=38,SNR=32							
KMBL	**Kambalda**	**37.93**	**223**	P	**P**		**11 47 10.3**	**-0.2**
TOZ	**Tahuroa Road**	**39.02**	**149**	P	**P**		**11 47 20.3**	**+0.8**
TOZ				IAmb	IAmb		11 47 23.6	
	comp=Z,17nm,0.9s							
JOW	**Kunigami**	**39.03**	**326**	P	**P**		**11 47 20.7**	**+1.0**
JOW	**Kunigami**	**39.03**	**326**	LR	LR		12 02 06.3	
	comp=Z,157nm,19.6s,baz=265,slow=34							
PWJI	**Pagerwojo**	**39.42**	**264**	P	**P**		**11 47 21.5**	**-1.7**
	comp=Z,33nm,0.7s							
JHJ	**Hachijo jima 2**	**39.79**	**345**	LR	LR		12 01 53.4	
	comp=Z,146nm,18.4s,baz=137,slow=33							
GIRL	**Giralia**	**39.81**	**241**	P	**P**		**11 47 26.7**	**+0.4**
	baz=40,SNR=25							
GIRL	**Giralia**	**39.81**	**241**	P	**P**		**11 47 26.8**	**+0.5**
SBUM	**Sibu**	**39.91**	**280**	P	**P**		**11 47 27.3**	**+0.1**
QRZ	**Quartz Range**	**40.10**	**155**	P	**P**		**11 47 29.8**	**+1.4**
URZ	**Urewera**	**40.26**	**148**	LR	LR		12 03 09.6	
	comp=Z,357nm,18.6s,baz=112,slow=34							
RTZ	**Ruatahuna**	**40.45**	**149**	P	**P**		**11 47 32.3**	**+0.8**
YOJ	**Yonaguni jima**	**40.51**	**318**	P	**P**		**11 47 32.4**	**+0.3**
YOJ	**Yonaguni jima**	**40.51**	**318**	P	**P**		**11 47 32.4**	**+0.3**
YOJ				pmax	pmax			
	comp=Z,74nm,0.6s							
MORW	**Morawa**	**40.95**	**231**	P	**P**		**11 47 34.9**	**-0.7**
	baz=41,SNR=32							
MORW	**Morawa**	**40.95**	**231**	P	**P**		**11 47 35.2**	**-0.5**
MORW	**Morawa**	**40.95**	**231**	P	**P**		**11 47 37.2**	**+1.6**
KLBR	**Kellerberrin**	**40.95**	**226**	P	**P**		**11 47 36.8**	**+1.2**
	baz=41,SNR=4.1							
KLBR	**Kellerberrin**	**40.95**	**226**	P	**P**		**11 47 34.8**	**-0.8**
YULB	**Yu-li**	**40.97**	**315**	P	**P**		**11 47 36.6**	**+0.7**
THZ	**Tophouse**	**41.04**	**155**	P	**P**		**11 47 37.0**	**+0.8**
THZ				IAmb	IAmb		11 47 39.3	
	comp=Z,31nm,0.9s							
BLDU	**Ballidu**	**41.20**	**228**	P	**P**		**11 47 36.9**	**-0.8**
	baz=41,SNR=15							
BLDU	**Ballidu**	**41.20**	**228**	P	**P**		**11 47 39.3**	**+1.6**
INZ	**Inchbonnie**	**41.27**	**158**	P	**P**		**11 47 38.8**	**+0.8**
NACB	**Ninganchiao**	**41.28**	**316**	P	**P**		**11 47 38.8**	**+0.5**
NACB	**Ninganchiao**	**41.28**	**316**	P	**P**		**11 47 39.1**	**+0.8**
TPUB	**Ta-pu**	**41.39**	**315**	P	**P**		**11 47 40.4**	**+1.1**
SSLB	**Suanglung**	**41.47**	**315**	P	**P**		**11 47 41.3**	**+1.4**
YHNB	**Yeheng**	**41.75**	**317**	P	**P**		**11 47 43.3**	**+1.0**
TATO	**Taipei**	**41.88**	**317**	P	**P**		**11 47 43.3**	**+0.1**
TATO	**Taipei**	**41.88**	**317**	P	**P**		**11 47 44.2**	**+1.0**
TATO	**Taipei**	**41.88**	**317**	P	**P**		**11 47 43.5**	**+0.2**
RPZ	**Rata Peaks**	**41.98**	**159**	P	**P**		**11 47 44.5**	**+0.7**
RPZ	**Rata Peaks**	**41.98**	**159**	LR	LR		12 04 44.8	
	comp=Z,354nm,18.9s,baz=330,slow=35							
OXZ	**Oxford**	**42.01**	**157**	IAmb	IAmb		11 47 51.0	
	comp=Z,49nm,1.2s							
NWAO	**Narrogin (SRO)**	**42.05**	**225**	P	**P**		**11 47 43.7**	**-0.7**
	baz=42,SNR=8.5							
NWAO				P	**P**		**11 47 43.7**	**-0.7**
	baz=42,SNR=8.5							
NWAO	**Narrogin (SRO)**	**42.05**	**225**	P	**P**		**11 47 43.8**	**-0.7**
NWAO				IAmb	IAmb		11 48 17.4	
	comp=Z,30nm,1.1s							
NWAO	**Narrogin (SRO)**	**42.05**	**225**	P	**P**		**11 47 43.8**	**-0.7**
NWAO				pmax	pmax			
	comp=Z,29nm,1.2s							
NWAO	**Narrogin (SRO)**	**42.05**	**225**	PP	**PP**		**11 49 28.3**	**+3.8**
	comp=Z,14nm,0.8s,baz=47,slow=9.6,SNR=3.7							
NWAO				LR	LR		12 07 09.6	
	comp=Z,220nm,19.0s,baz=24,slow=39							
NWAO	**Narrogin (SRO)**	**42.05**	**225**	P	**P**		**11 47 43.2**	**-1.3**
KPJI	**Karang Pucung**	**42.26**	**265**	P	**P**		**11 47 45.5**	**-1.0**
	comp=Z,51nm,0.6s							
MUN	**Mundaring**	**42.27**	**227**	P	**P**		**11 47 45.8**	**-0.5**
	baz=42,SNR=7.9							
MUN	**Mundaring**	**42.27**	**227**	P	**P**		**11 47 47.2**	**+0.9**
MLZ	**Mavora Lakes**	**42.47**	**163**	P	**P**		**11 47 48.7**	**+0.9**
JNU	**Nakatsue**	**42.91**	**334**	P	**P**		**11 47 51.9**	**+0.4**
JNU				IAmb	IAmb		11 48 26.2	
	comp=Z,19nm,0.8s							
JNU	**Nakatsue**	**42.91**	**334**	P	**P**		**11 47 52.3**	**+0.8**
JNU	**Nakatsue**	**42.91**	**334**	P	**P**		**11 47 51.6**	**+0.2**
	comp=Z,18nm,0.7s,baz=92,slow=1.1,SNR=25							
	comp=Z,18nm,0.7s							
RKGY	**Rocky Gully**	**43.16**	**223**	P	**P**		**11 47 53.6**	**+0.1**
	baz=43,SNR=6.9							
MJAR	**Matsushiro Arr**	**43.44**	**344**	P	**P**		**11 47 54.7**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=187,slow=4.8,SNR=4.9							
MJAR				PcP	**PcP**		**11 49 41.0**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=152,slow=3.4,SNR=6.9							
MJAR				ScP	**ScP**		**11 53 20.5**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=173,slow=4.2,SNR=3.5							
MJAR				LR	LR		12 04 56.9	
	comp=Z,133nm,19.1s,baz=164,slow=34							
	comp=Z,1.6nm,0.6s							
BBJI	**Bungbulang**	**43.53**	**265**	P	**P**		**11 47 55.6**	**-1.2**
LEM	**Lembang**	**43.57**	**266**	LR	LR		12 08 41.4	
	comp=Z,80nm,21.8s,baz=1.0,slow=39							
KNMB	**Chin-men Tao**	**43.71**	**314**	IAmb	IAmb		11 48 01.0	
	comp=Z,29nm,0.7s							
QZH	**Quanzhou**	**43.86**	**315**	⇑*i*P	**P**		**11 47 59.6**	**+0.4**
QZH				sP	**sP**		**11 48 42.6**	**-1.1**
QZH				pmax	pmax			
	comp=Z,56nm,0.7s							
CNJI	**Cibinong**	**44.05**	**265**	P	**P**		**11 48 01.3**	**+0.4**
	comp=Z,45nm,1.1s							
HKPS	**Hong Kong Po S**	**45.63**	**308**	P	**P**		**11 48 13.6**	**+0.3**
HKPS	**Hong Kong Po S**	**45.63**	**308**	P	**P**		**11 48 14.7**	**+1.4**
DLV	**T Lat**	**46.01**	**292**	P	**P**		**11 48 17.7**	**+1.1**
KASI	**Kota Agung**	**46.70**	**267**	P	**P**		**11 48 17.9**	**-3.9**
	comp=Z,49nm,1.0s							
QIZ	**Qiongzhong**	**47.55**	**302**	P	**P**		**11 48 28.5**	**+0.2**
QIZ				pP	**pP**		**11 48 55.3**	**-3.2**
QIZ				sP	**sP**		**11 49 09.0**	**-4.3**
QIZ				S	**S**		**11 55 15.3**	**+1.7**
QIZ				sS	**sS**		**11 56 04.1**	**-3.0**
QIZ				pmax	pmax			
	comp=Z,26nm,0.7s							
QIZ				LR	LR			
	comp=Z,150nm,15.3s							
QIZ				LR	LR			
	comp=Z,210nm,12.5s							
QIZ				LR	LR			
	comp=Z,330nm,19.4s							
QIZ	**Qiongzhong**	**47.55**	**302**	IAmb	IAmb		11 48 31.7	
	comp=Z,20nm,0.7s							
QIZ	**Qiongzhong**	**47.55**	**302**	P	**P**		**11 48 29.6**	**+1.3**
QIZ	**Qiongzhong**	**47.55**	**302**	P	**P**		**11 48 29.3**	**+0.9**
KSRS	**Korea Array**	**47.86**	**335**	P	**P**		**11 48 30.1**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=154,slow=7.8,SNR=25							
KSRS				pP	**pP**		**11 49 00.4**	**0.0**
	comp=Z,2.1nm,0.7s,baz=156,slow=7.7,SNR=3.2							
KSRS				PcP	**PcP**		**11 49 56.6**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=152,slow=4.4,SNR=5.3							
KSRS				ScP	**ScP**		**11 53 40.0**	**+1.0**
	comp=Z,1.0nm,0.9s,baz=126,slow=6.2,SNR=4.1							
	comp=Z,4.5nm,0.8s							
NJ2	**Nanjing**	**48.39**	**322**	*e*P	**P**		**11 48 35.9**	**+1.4**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
ASAJ	**Asahikawa**	**49.85**	**352**	LR	LR		12 09 41.7	
	comp=Z,29nm,19.5s,baz=181,slow=36							
UBPT	**Khong Chiam**	**49.90**	**295**	IAmb	IAmb		11 48 48.6	
	comp=Z,56nm,1.9s							
WHN	**Wuhan**	**50.29**	**317**	P	**P**		**11 48 50.0**	**+1.0**
WHN				sP	**sP**		**11 49 33.8**	**-0.7**
IPM	**Ipoh**	**51.26**	**280**	P	**P**		**11 48 55.9**	**-0.7**
IPM				IAmb	IAmb		11 48 58.5	
	comp=Z,12nm,0.7s							
IPM	**Ipoh**	**51.26**	**280**	P	**P**		**11 48 56.8**	**+0.2**
KULM	**Kulim**	**51.78**	**281**	IAmb	IAmb		11 49 02.6	
	comp=Z,11nm,0.7s							

comp=Z,7.4nm,0.7s
KLR **Kulʻdur** 56.97 345⇑ *e*P P 11 49 36.4 -0.9
KLR pmax pmax
comp=Z,8.0nm,0.8s
KLR **Kulʻdur** 56.97 345 P P 11 49 36.2 -1.0
comp=Z,6.7nm,0.6s,baz=171,slow=4.9,SNR=28
KLR LR LR 12 11 18.7
comp=Z,74nm,21.5s,baz=168,slow=33
comp=Z,6.7nm,0.6s
CHTO **Chiang Mai** 56.97 296 P P 11 49 38.4 +0.5
CHTO **Chiang Mai** 56.97 296 P P 11 49 38.4 +0.5
CHTO **Chiang Mai** 56.97 296 P P 11 49 38.4 +0.5
CHTO pmax pmax
comp=Z,48nm,1.6s
CHTO **Chiang Mai** 56.97 296 P P 11 49 38.2 +0.2
PZH **PanZhiHua** 57.55 306 P P 11 49 41.5 -0.5
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,150nm,4.0s
CD2 **Chengdu** 58.03 312 P P 11 49 45.0 -0.2
CD2 pP pP 11 50 14.3 -2.5
CD2 sP sP 11 50 28.3 -3.1
CD2 PP **PP** 11 52 01.4 +6.0
CD2 S **S** 11 57 35.6 -0.1
CD2 sS sS 11 58 29.3 -0.1
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,390nm,7.4s
CD2 LR LR
comp=Z,210nm,18.6s
CD2 LR LR
comp=Z,230nm,12.7s
CD2 LR LR
comp=Z,260nm,14.7s
XLT **XiLinHaoTe** 58.43 331 *e*P P 11 49 47.5 -0.2
XLT pP pP 11 50 18.8 -0.2
XLT sP PcP 11 50 38.4 +1.4
XLT S **S** 11 57 35.9 -4.6
XLT sS sS 11 58 30.3 -4.3
XLT pmax pmax
comp=Z,22nm,0.7s
XLT pmax pmax
comp=Z,130nm,5.0s
PET **Petropavlovsk** 58.45 5 *e*P P 11 49 46.8 -0.7
PET *e*S **S** 11 57 46.4 +6.3
PET pmax pmax
comp=Z,13nm,0.7s
PET MLR MLR
comp=Z,200nm,14.0s
PETK **Petropavlovsk-** 58.45 4 P P 11 49 45.9 -1.7
comp=Z,7.4nm,0.6s,baz=168,slow=6.2,SNR=48
PETK pP **pP** 11 50 18.2 -0.9
comp=Z,3.0nm,0.6s,baz=161,slow=6.1,SNR=2.4
PETK LR LR 12 12 01.1
comp=Z,64nm,19.6s,baz=187,slow=33
comp=Z,7.4nm,0.6s
HHC **Hu-ho-hao-te** 58.67 325 *e*P P 11 49 49.5 0.0
HHC S **S** 11 57 41.6 -2.2
HHC sS sS 11 58 34.3 -3.5
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,180nm,6.5s
HHC LR LR
comp=Z,170nm,17.6s
HHC LR LR
comp=Z,230nm,16.8s
HHC LR LR
comp=Z,250nm,16.0s
PPT2 **Papeete2** 58.89 107 *e*PKIKP P 11 49 52.6 +1.2
comp=Z,161nm,26.5s
PPT2 *e*S **S** 11 57 41.7 -5.6
comp=Z,275nm,25.0s
PPT2 *e*LR LR 12 07 22.6
comp=Z,451nm,28.0s
PPT2 *e*LR LR 12 07 22.6
comp=Z,601nm,26.2s
HEH **HeiHe** 59.12 342 *e*P P 11 49 50.9 -1.3
HEH pmax pmax
comp=Z,22nm,0.7s
HEH pmax pmax
comp=Z,220nm,6.2s
BTO **Baotou** 59.40 324 *e*P P 11 49 57.1 +2.5
BTO pP **pP** 11 50 30.5 +4.2
BTO sP **sP** 11 50 46.1 +5.1
BTO PP **PP** 11 52 12.3 +4.9
BTO S **S** 11 57 57.9 +4.7
BTO sS **sS** 11 58 51.4 +4.3
BTO SS **SS** 12 01 54.8 +4.2
BTO pmax pmax
comp=Z,18nm,0.9s
BTO pmax pmax
comp=Z,420nm,8.8s
TNCH **TengChong** 59.59 303 ⇑P P 11 49 56.3 +0.1
TNCH pP pP 11 50 27.5 -0.5
TNCH pmax pmax
comp=Z,16nm,0.7s
TNCH pmax pmax
comp=Z,240nm,4.4s
TBI **Tubuai** 59.61 114 *e*P P 11 49 57.2 +1.0
comp=Z,600nm,30.5s
TBI *e*S **S** 11 57 54.3 -1.9
comp=Z,893nm,28.5s
TBI *e*LR LR 12 07 38.8
comp=Z,5μm,41.0s
TBI *e*LR LR 12 07 39.4
comp=Z,1μm,38.5s
MND **Mandalay** 60.55 299 P P 11 50 03.3 +0.7
LZH **Lanzhou** 60.65 317 ⇑P P 11 50 03.8 +0.6
LZH pP pP 11 50 32.4 -2.8
LZH pmax pmax
comp=Z,22nm,1.4s
SHEM **Shemya Is, Ala** 60.95 16 LR LR 12 12 10.5
comp=Z,91nm,20.2s,baz=290,slow=32
HIA **Hailar** 60.95 337 P P 11 50 06.4 +1.6
DRV **Dumont d'Urvil** 61.75 185 P P 11 50 10.5 +0.6
ZEA **Zeya** 62.25 344 *e*P P 11 50 12.9 -0.5
MA2 **Magadan** 64.69 360 P P 11 50 28.5 -0.8
MA2 IAmb IAmb 11 50 36.1
comp=Z,6.7nm,0.6s
MA2 **Magadan** 64.69 360 *ce*P P 11 50 28.7 -0.7
MA2 pmax pmax
comp=Z,6.0nm,0.7s
MA2 **Magadan** 64.69 360 LR LR 12 15 26.9
comp=Z,52nm,21.9s,baz=126,slow=33
GTA **Gaotai** 65.11 318 *e*P P 11 50 32.8 +0.2
GTA pP pP 11 51 05.5 +0.4
GTA pmax pmax
comp=Z,7.0nm,0.6s
SHL **Shillong** 65.39 301 P P 11 50 35.0 +0.2
SHL **Shillong** 65.39 301 P P 11 50 35.0 +0.2
SHL pmax pmax
comp=Z,20nm,0.5s
ULN **Ulaanbaatar** 65.72 329 P P 11 50 37.3 +0.9
ULN IAmb IAmb 11 50 38.8
comp=Z,12nm,0.9s
ULN **Ulaanbaatar** 65.72 329 P P 11 50 37.3 +0.9
ULN pmax pmax
comp=Z,12nm,1.0s
ULN **Ulaanbaatar** 65.72 329 P P 11 50 37.0 +0.6
ULN pP **PcP** 11 51 07.2 +0.6
SONM **Songino Array** 66.04 329 P P 11 50 39.2 +0.8
SONM IAmb IAmb 11 50 40.6
comp=Z,18nm,0.7s
SONM **Songino Array** 66.04 329 P P 11 50 39.2 +0.8
SONM pmax pmax
comp=Z,18nm,0.7s
SONM **Songino Array** 66.04 329 P P 11 50 38.6 +0.2
comp=Z,16nm,0.6s,baz=148,slow=5.5,SNR=123
SONM pP **PcP** 11 51 08.1 +0.2
comp=Z,5.0nm,0.7s,baz=156,slow=2.5,SNR=2.6
SONM LR LR 12 18 17.3
comp=Z,204nm,21.0s,baz=78,slow=35
SONM PKP2bc **P'P'bc** 12 19 17.3 +0.5
comp=Z,0.3nm,0.6s,baz=299,slow=0.8,SNR=3.8
comp=Z,16nm,0.6s
GOMU **GeErMu** 67.09 313 P P 11 50 45.8 +0.1
GOMU pP pP 11 51 18.1 -0.1
GOMU sP sP 11 51 34.3 +1.6
GOMU pmax pmax
comp=Z,5.0nm,0.6s
CASY **Casey** 67.12 197 P P 11 50 46.3 +1.5
CASY IAmb IAmb 11 53 09.0
comp=Z,43nm,1.5s

LSA **Lhasa** 67.40 305 IAmb IAmb 11 50 51.7
comp=Z,12nm,0.6s
LSA **Lhasa** 67.40 305 P P 11 50 48.4 +0.5
TAOE **Nuku Hiva Isla** 67.93 97 *e*PKIKP P 11 50 54.0 +3.0
comp=Z,133nm,26.3s
AKUT **Akutan** 69.18 25 P P 11 50 57.4 -0.4
YAK **Yakutsk** 69.22 349 *e*P P 11 50 57.5 -0.4
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK **Yakutsk** 69.22 349 LR LR 12 19 19.2
comp=E,69nm,22.0s,baz=126,slow=34
ZAK **Zakamensk** 69.22 329 *e*P P 11 50 57.7 -0.7
ZAK *e* 11 51 30.2
ZAK pmax pmax
comp=Z,23nm,0.8s
CCD **Concordia, Ant** 71.57 187 P P 11 51 13.5 +0.9
PALK **Pallekele** 71.66 279 P P 11 51 13.8 0.0
PALK IAmb IAmb 11 51 16.0
comp=Z,18nm,0.7s
PALK **Pallekele** 71.66 279 P P 11 51 13.8 0.0
PALK pmax pmax
comp=Z,18nm,0.7s
PALK **Pallekele** 71.66 279 LR LR 12 29 14.3
comp=Z,41nm,18.0s,baz=206,slow=41
PALK **Pallekele** 71.66 279 P P 11 51 13.5 -0.3
VNDA **Vanda** 72.37 178 P P 11 51 18.1 +1.3
VNDA IAmb IAmb 11 52 50.7
comp=Z,64nm,1.9s
VNDA **Vanda** 72.37 178 P P 11 51 18.1 +1.3
VNDA pmax pmax
comp=Z,64nm,1.9s
VNDA **Vanda** 72.37 178 P P 11 51 18.6 +1.9
comp=Z,6.2nm,0.9s,baz=324,slow=5.8,SNR=4.3
comp=Z,6.2nm,0.9s
CHGN **Chignik** 73.80 26 P P 11 51 24.6 -0.9
BILL **Bilibino** 73.94 6 P P 11 51 26.2 +0.1
BILL **Bilibino** 73.94 6 *e*P P 11 51 25.4 -0.7
BILL pmax pmax
comp=Z,6.0nm,0.6s
M13K **Dall Lake** 74.45 21 P P 11 51 30.3 +1.1
baz=227
O15K **Ungalikthiuk R** 74.99 24 P P 11 51 32.8 +0.4
baz=231
M14K **Bethel** 75.19 22 P P 11 51 33.8 +0.4
M14K IAmb IAmb 11 51 36.3
comp=Z,13nm,0.6s
M14K **Bethel** 75.19 22 P P 11 51 34.4 +1.0
baz=228
WMQ **Urumqi** 75.19 318 *e*P P 11 51 33.8 -0.2
WMQ pmax pmax
comp=Z,13nm,0.7s
L14K **Kuka Creek** 75.32 21 IAmb IAmb 11 51 37.1
comp=Z,16nm,0.8s
L14K **Kuka Creek** 75.32 21 P P 11 51 35.2 +1.0
baz=228
N15K **Kwethluk River** 75.51 23 P P 11 51 36.4 +1.1
baz=230
M15K **Kasigluk River** 75.62 22 P P 11 51 37.0 +1.1
baz=230
O16K **Kokwok River B** 75.94 24 P P 11 51 38.2 +0.4
baz=232
L15K **Ungalak Mounta** 75.98 21 P P 11 51 38.3 +0.4
baz=229
Q16K **King Salmon** 75.98 25 P P 11 51 38.7 +0.7
baz=234
J14K **Nanvaranak Lak** 75.98 20 P P 11 51 38.9 +1.0
baz=227
Q17K **Contact Creek** 76.07 26 P P 11 51 39.3 +0.6
baz=235
N16K **Nishlik Lake** 76.22 23 P P 11 51 40.3 +0.9
baz=232
K15K **Wolf Creek Mou** 76.37 21 IAmb IAmb 11 51 42.8
comp=Z,17nm,0.6s
K15K **Wolf Creek Mou** 76.37 21 P P 11 51 41.0 +0.9
baz=229
P17K **Kvichak River** 76.38 25 P P 11 51 40.0 -0.2
baz=234
O17K **Koliganek Bris** 76.45 24 P P 11 51 41.2 +0.5
baz=233
M16K **Timber Creek** 76.49 22 IAmb IAmb 11 51 44.0
comp=Z,12nm,0.7s
M16K **Timber Creek** 76.49 22 P P 11 51 41.3 +0.5
baz=231
OHAK **Old Harbor** 76.64 27 P P 11 51 41.6 -0.1
baz=237
TNA **Tin City** 76.67 16 P P 11 51 42.7 +0.9
baz=222
ANM **Nome** 76.68 18 P P 11 51 42.7 +0.9
baz=224
L16K **Owhat River** 76.73 22 P P 11 51 42.7 +0.5
baz=231
N17K **Nushagak Hills** 76.87 23 P P 11 51 43.6 +0.6
baz=233
P18K **Big Mountain,** 77.00 25 P P 11 51 44.0 +0.2
baz=235
F14K **Arctic Creek** 77.06 17 P P 11 51 44.6 +0.7
baz=223
KDAK **Kodiak Island** 77.26 27 LR LR 12 19 45.1
comp=Z,122nm,21.7s,baz=247,slow=31
M17K **Holitna River** 77.30 23 P P 11 51 46.2 +0.8
baz=233
J16K **Anvik River** 77.34 20 P P 11 51 46.4 +0.8
baz=229
G15K **Niukluk** 77.39 18 P P 11 51 45.8 0.0
baz=226
Q19K **Cape Douglas,** 77.41 26 P P 11 51 46.0 -0.1
baz=237
L17K **Donlin** 77.43 22 P P 11 51 46.9 +0.8
baz=232
N18K **Kilae Creek** 77.48 24 P P 11 51 47.2 +0.8
baz=234
H16K **Elim** 77.71 19 P P 11 51 48.4 +0.8
baz=228
I17K **Unalakleet** 77.71 20 P P 11 51 48.2 +0.6
baz=229
Q20K **Shuyak Island** 77.79 26 P P 11 51 48.7 +0.6
baz=238
K17K **Iditarod** 77.79 21 P P 11 51 48.8 +0.7
baz=232
O19K **Port Alsworth** 77.83 25 P P 11 51 49.0 +0.6
baz=236
SVW2 **Sparrevohn** 77.84 23 IAmb IAmb 11 52 53.2
comp=Z,31nm,1.6s
M18K **Stony River** 77.98 23 P P 11 51 49.7 +0.6
baz=234
P19K **Oil Pt** 77.99 25 P P 11 51 48.8 -0.5
baz=237
L18K **Granite Mounta** 78.08 22 P P 11 51 49.9 +0.2
baz=233
N19K **Bonanza Creek** 78.12 24 P P 11 51 50.1 +0.1
baz=236
G16K **Koyuk River** 78.18 18 IAmb IAmb 11 52 34.1
comp=Z,28nm,1.9s
G16K **Koyuk River** 78.18 18 P P 11 51 50.6 +0.4
baz=227
TIXI **Tiksi** 78.23 353⇑ *e*P P 11 51 49.1 -1.2
TIXI pmax pmax
comp=Z,9.0nm,1.6s
ZSN **Zaisan** 78.39 321 *e*P P 11 51 50.9 -0.9
baz=320
ZSN **Zaisan** 78.39 321 *e*P P 11 51 50.8 -0.9
O20K **Slope Mountain** 78.48 25 P P 11 51 52.0 0.0
baz=237
H17K **Granite Mounta** 78.65 19 P P 11 51 53.3 +0.5
baz=230
L19K **White Mountain** 78.75 23 IAmb IAmb 11 51 56.2
comp=Z,12nm,0.7s
L19K **White Mountain** 78.75 23 P P 11 51 53.8 +0.3
baz=235
TTA **Tatalina** 78.76 22 P P 11 51 53.6 +0.1
baz=234
M19K **Big River Lodg** 78.78 23 P P 11 51 53.7 +0.2
baz=235
G17K **Kiwalik Mounta** 78.79 18 P P 11 51 53.9 +0.3
baz=229
J18K **Innoko River** 78.82 21 P P 11 51 53.8 0.0
baz=233
BRSE **Bradley Lake S** 79.11 26 P P 11 51 55.4 0.0
baz=239
F17K **Baldwin Pennin** 79.23 18 IAmb IAmb 11 51 58.1
comp=Z,9.0nm,0.7s
F17K **Baldwin Pennin** 79.23 18 P P 11 51 56.2 +0.4
baz=228

N20K **Mount Spurr** 79.26 24 P P 11 51 56.1 -0.1
baz=238
M20K **Styx River** 79.26 23 IAmb IAmb 11 54 14.3
comp=Z,26nm,1.6s
M20K **Styx River** 79.26 23 P P 11 51 55.9 -0.3
baz=237
H18K **Honhosa River** 79.30 19 P P 11 51 56.5 +0.2
baz=231
L20K **Farewell, AK** 79.30 23 P P 11 51 56.3 -0.1
baz=236
C16K **Lisburne Hills** 79.36 15 P P 11 51 56.3 -0.3
baz=224
CAPN **Captain Cook N** 79.46 25 P P 11 51 57.4 +0.1
baz=239
J19K **Poorman** 79.53 21 IAmb IAmb 11 52 32.4
comp=Z,34nm,1.9s
J19K **Poorman** 79.53 21 P P 11 51 57.6 0.0
baz=234
GCSA **Galena City Sc** 79.54 20 P P 11 51 57.8 +0.2
baz=233
D17K **Noatak River** 79.56 16 P P 11 51 57.5 -0.2
baz=226
G18K **Tagagawik** 79.67 19 P P 11 51 58.3 0.0
baz=231,SNR=12
K20K **Telida** 79.72 22 P P 11 51 58.8 +0.1
baz=236
MK31 **Makanchi Array** 79.81 319 IAmb IAmb 11 54 03.6
comp=Z,25nm,0.7s
MKAR **Makanchi Array** 79.81 319 P P 11 51 58.9 -0.7
comp=Z,4.4nm,0.4s,baz=99,slow=7.2,SNR=111
comp=Z,4.4nm,0.4s
F18K **Selawik** 79.81 18 P P 11 51 59.0 0.0
baz=230,SNR=5.5
SEW **Seward** 79.85 26 P P 11 51 58.2 -1.1
baz=240
SKT **Skwentna** 79.95 24 P P 11 51 59.3 -0.6
baz=238
SUA **Susitna One** 80.00 24 P P 11 51 59.9 -0.4
baz=239
MAKZ **Makanchi** 80.02 319 P P 11 52 00.3 -0.3
MAKZ **Makanchi** 80.02 319 P P 11 52 00.3 -0.3
MAKZ pmax pmax
comp=Z,28nm,0.6s
E18K **Tukpahlearik C** 80.07 17 P P 11 52 00.7 +0.3
baz=229,SNR=9.3
C17K **DeLong Mountai** 80.07 15 P P 11 52 00.6 +0.1
baz=226,SNR=5.2
H19K **Roundabout Mou** 80.16 19 P P 11 52 00.9 0.0
baz=233
J20K **Nowinta River** 80.16 21 P P 11 52 01.2 +0.2
baz=235
RC01 **Rabbit Creek A** 80.22 25 P P 11 52 00.9 -0.5
RC01 IAmb IAmb 11 52 44.7
comp=Z,36nm,1.7s
RC01 **Rabbit Creek A** 80.22 25 P P 11 52 01.0 -0.4
baz=240
G19K **Purcell Mounta** 80.33 19 P P 11 52 01.8 0.0
baz=232
M22K **Willow** 80.40 24 P P 11 52 02.0 -0.2
baz=239
I20K **Naaghedeneel** 80.40 21 P P 11 52 02.1 -0.2
baz=235
CAST **Castle Rocks** 80.50 22 P P 11 52 02.3 -0.6
baz=237
F19K **Shaleruckik Mo** 80.54 18 IAmb IAmb 11 52 04.9
comp=Z,11nm,0.7s
F19K **Shaleruckik Mo** 80.54 18 P P 11 52 02.7 -0.2
baz=232
SHLS **Shalkode** 80.62 315 *e*P P 11 52 02.0 -2.1
baz=315
SHLS **Shalkode** 80.62 315 *e*P P 11 52 02.0 -2.1
H20K **Anotleneega Mo** 80.67 20 P P 11 52 03.6 -0.1
baz=234
CHUM **Lake Minchumin** 80.67 22 P P 11 52 03.5 -0.2
baz=237,SNR=7.3
CUT **Chulitna** 80.67 24 P P 11 52 03.5 -0.2
baz=239
C18K **Utukok River** 80.72 16 IAmb IAmb 11 52 16.6
comp=Z,24nm,1.9s
C18K **Utukok River** 80.72 16 P P 11 52 03.4 -0.5
baz=228
PMR **Palmer** 80.73 25 P P 11 52 03.6 -0.4
baz=240
ZAA0 **Zalesovo Array** 80.82 327 P P 11 52 03.5 -1.3
ZALV **Zalesovo Beam** 80.82 327 P P 11 52 03.4 -1.3
ZALV **Zalesovo Beam** 80.82 327 P P 11 52 03.1 -1.6
comp=Z,6.9nm,0.3s,baz=112,slow=6.1,SNR=35
ZALV pP **pP** 11 52 36.4 -2.0
comp=Z,4.4nm,0.7s,baz=100,slow=5.5,SNR=2.0
comp=Z,6.9nm,0.3s
UZB **Uzynbulak** 80.93 315 *e*P P 11 52 05.2 -0.6
baz=315
UZB **Uzynbulak** 80.93 315 *e*P P 11 52 05.1 -0.6
KTH **Kantishna Hill** 81.02 23 IAmb IAmb 11 52 41.1
comp=Z,37nm,1.9s
B18K **Kokolik River** 81.05 15 P P 11 52 05.4 -0.2
baz=227
E19K **Redstone River** 81.09 18 IAmb IAmb 11 52 08.1
comp=Z,15nm,0.7s
E19K **Redstone River** 81.09 18 P P 11 52 05.9 0.0
baz=232,SNR=32
SML **Sawmill** 81.17 25 P P 11 52 06.2 -0.2
SML IAmb IAmb 11 52 46.7
comp=Z,15nm,1.0s
SML **Sawmill** 81.17 25 P P 11 52 05.9 -0.5
baz=241
TRF **Thorofare Moun** 81.21 23 P P 11 52 06.3 -0.5
baz=239
KPKS **Kokpek** 81.25 315 *e*P P 11 52 06.8 -0.6
baz=315
KPKS **Kokpek** 81.25 315 *e*P P 11 52 06.8 -0.6
F20K **Avaraart Lake** 81.31 18 P P 11 52 06.9 -0.1
baz=233
IMAR **Indian Mountai** 81.33 20 P P 11 52 07.0 -0.2
SATY **Saty** 81.34 315 *e*P P 11 52 07.2 -0.7
baz=315
SATY **Saty** 81.34 315 *e*P P 11 52 07.1 -0.7
M23K **Glacier View** 81.41 25 P P 11 52 07.1 -0.6
baz=242
C19K **Lookout Ridge** 81.47 16 P P 11 52 07.7 -0.2
baz=230
H21K **Melozitna Rive** 81.47 20 P P 11 52 07.6 -0.4
baz=236
D19K **Kuna River** 81.48 17 P P 11 52 07.9 -0.1
baz=231
I21K **Tanana** 81.50 21 P P 11 52 08.0 0.0
baz=237
WAT1 **Susitna Watana** 81.58 24 P P 11 52 08.0 -0.6
baz=241
SCM **Sheep Creek Mo** 81.60 25 P P 11 52 08.6 -0.1
baz=242
G21K **Allakaket** 81.72 19 IAmb IAmb 11 53 55.0
comp=Z,32nm,2.0s
G21K **Allakaket** 81.72 19 P P 11 52 09.3 +0.1
baz=236
RND **Reindeer** 81.74 23 IAmb IAmb 11 52 09.9
comp=Z,10nm,0.6s
WAT6 **Susitna Watana** 81.78 24 P P 11 52 09.4 -0.4
baz=242
MLY **Manley** 81.86 21 IAmb IAmb 11 52 11.2
comp=Z,13nm,0.5s
MLY **Manley** 81.86 21 P P 11 52 09.5 -0.5
baz=238,SNR=23
TDK **Taldyqorghan** 81.86 317 *e*P P 11 52 09.8 -0.7
baz=317
TDK **Taldyqorghan** 81.86 317 *e*P P 11 52 09.7 -0.7
MCK **McKinley** 81.87 23 P P 11 52 09.2 -0.9
baz=240,SNR=8.9
E20K **Nigu River** 81.90 17 P P 11 52 10.1 -0.1
baz=233,SNR=11
KAIM **Kayak Island** 82.01 27 P P 11 52 10.5 -0.4
baz=245
KLU **Klutina** 82.03 25 IAmb IAmb 11 52 17.6
comp=Z,30nm,1.5s
KLU **Klutina** 82.03 25 P P 11 52 10.2 -0.9
baz=243
D20K **Etivluk River** 82.05 17 P P 11 52 10.7 -0.2
baz=232
H22K **Ishtalitna Cre** 82.09 20 P P 11 52 11.0 -0.2
baz=238
F21K **Alatna River** 82.13 19 P P 11 52 11.0 -0.4
baz=236
DHY **Denali Highway** 82.17 24 P P 11 52 11.3 -0.5
baz=242
M24K **Tolsona, Glenn** 82.21 25 P P 11 52 11.7 -0.2
baz=243
SEM **Semipalatinsk** 82.25 322 *e*P P 11 52 11.0 -1.6
baz=322

SEM **Semipalatinsk** 82.25 322 *e*P P 11 52 11.0 -1.6
NEA2 **Nenana** 82.25 22 IAmb IAmb 11 52 12.4
comp=Z,7.3nm,0.6s
MDOK **Medeo** 82.32 315 *e*P P 11 52 12.6 -0.5
baz=315
MDOK **Medeo** 82.32 315 *e*P P 11 52 12.6 -0.5
I23K **Minto, Yukon-K** 82.42 21 P P 11 52 12.4 -0.4
baz=240,SNR=7.8
CHKK **Chushkaly** 82.54 315 *e*P P 11 52 13.3 -0.8
baz=315
CHKK **Chushkaly** 82.54 315 *e*P P 11 52 13.2 -0.8
G22K **Bettles** 82.61 19 P P 11 52 13.3 -0.4
baz=237
N25K **Chitina, Valde** 82.65 26 P P 11 52 13.4 -0.9
baz=244
CCB **Clear Creek Bu** 82.75 22 P P 11 52 13.3 -1.3
CCB IAmb IAmb 11 52 14.7
comp=Z,7.1nm,0.6s
HARP **HAARP** 82.76 25 P P 11 52 13.8 -1.0
baz=244
COLA **College** 82.84 22 P P 11 52 13.9 -1.1
COLA IAmb IAmb 11 52 15.9
comp=Z,12nm,0.6s
COLA **College** 82.84 22 P P 11 52 14.0 -1.1
baz=241
COLA **College** 82.84 22 P P 11 52 13.9 -1.1
COLA pmax pmax
comp=Z,12nm,0.6s
C21K **Knifeblade Rid** 82.85 17 P P 11 52 14.4 -0.7
baz=234
PAX **Paxson** 82.89 24 P P 11 52 15.0 -0.5
baz=244
BOOM **Boomskoye usch** 82.95 314 IAmb IAmb 11 52 18.8
comp=Z,21nm,0.7s
CRQE **Cirque** 82.96 27 P P 11 52 15.7 -0.2
baz=246
HDA **Harding Lake** 82.97 23 IAmb IAmb 11 52 15.6
comp=Z,7.9nm,0.4s
HDA **Harding Lake** 82.97 23 P P 11 52 14.9 -0.8
baz=242,SNR=9.8
G23K **Bananza Creek** 82.99 20 P P 11 52 15.7 -0.2
baz=239
KUU **Kurty** 83.00 315 *e*P P 11 52 15.9 -0.6
baz=315
KUU **Kurty** 83.00 315 *e*P P 11 52 15.8 -0.6
POKR **Poker Plat Res** 83.12 22 P P 11 52 15.3 -1.2
baz=242
NIL **Nilore** 83.13 305 P P 11 52 16.6 -0.7
NIL **Nilore** 83.13 305 P P 11 52 16.6 -0.7
NIL pmax pmax
comp=Z,39nm,0.7s
K24K **Donnelly Dome** 83.14 23 P P 11 52 16.0 -0.6
baz=243
IL31 83.16 22 P P 11 52 15.0 -1.6
IL31 IAmb IAmb 11 52 16.9
comp=Z,8.3nm,0.7s
ILAR **Eielson Array** 83.16 22 P P 11 52 14.8 -2.0
comp=Z,6.6nm,0.6s,baz=247,slow=5.3,SNR=129
ILAR pP pP 11 52 48.7 -1.9
comp=Z,2.0nm,0.7s,baz=249,slow=5.1,SNR=2.3
ILAR LR LR 12 27 52.1
comp=Z,65nm,20.5s,baz=264,slow=34
comp=Z,6.6nm,0.6s
E22K **Anaktuvuk Pass** 83.17 18 P P 11 52 16.3 -0.5
baz=237
B21K **Ikpikpuk River** 83.17 17 IAmb IAmb 11 52 41.5
comp=Z,28nm,2.0s
B21K **Ikpikpuk River** 83.17 17 P P 11 52 16.6 -0.1
baz=234
COLD **Coldfoot** 83.20 20 P P 11 52 16.5 -0.4
baz=239,SNR=5.6
TKM2 **Tokmak 2** 83.30 314 P P 11 52 18.1 -0.1
SNR=17
H24K **Noodor Dome** 83.30 21 P P 11 52 17.3 -0.2
baz=241
D22K **Ayikyak River** 83.31 18 IAmb IAmb 11 52 19.4
comp=Z,6.3nm,0.7s
D22K **Ayikyak River** 83.31 18 P P 11 52 17.8 +0.3
baz=236
KURK **Kurchatov** 83.33 322 P P 11 52 17.1 -0.8
KURK IAmb IAmb 11 55 17.3
comp=Z,15nm,0.6s
KURK **Kurchatov** 83.33 322 P P 11 52 17.1 -0.8
KURK pmax pmax
comp=Z,15nm,0.6s
KURBB **Kurchatov Arra** 83.36 322 P P 11 52 17.0 -1.0
comp=Z,3.1nm,0.4s,baz=109,slow=4.3,SNR=26
comp=Z,3.1nm,0.4s
MENT **Mentasta** 83.60 25 P P 11 52 18.6 -0.5
A21K **Barrow** 83.66 15 P P 11 52 18.8 -0.3
baz=232
J25K **Salcha River,** 83.67 23 IAmb IAmb 11 52 20.6
comp=Z,18nm,0.6s
J25K **Salcha River,** 83.67 23 P P 11 52 18.9 -0.5
baz=243
M26K **Nabesna, AK** 83.68 25 P P 11 52 20.5 +1.0
baz=246
KBK **Karagaybulak** 83.70 314 P P 11 52 20.5 +0.3
SNR=8.1
L26K **Log Cabin Wild** 83.79 25 IAmb IAmb 11 52 22.2
comp=Z,7.2nm,0.7s
L26K **Log Cabin Wild** 83.79 25 P P 11 52 19.9 -0.1
baz=245,SNR=11
E23K **Chandalar** 83.83 19 P P 11 52 20.2 +0.1
baz=239
CTG **Chitna Glacier** 83.83 27 P P 11 52 19.8 -0.6
baz=248
G24K **Hadweenzic Riv** 83.86 21 P P 11 52 20.0 -0.3
baz=241
UCH **Uchtor** 83.92 313 P P 11 52 22.5 +0.8
SNR=12
SCRK **Sand Creek** 83.93 24 P P 11 52 20.6 -0.3
baz=245,SNR=6.1
D23K **Nanushuk River** 83.97 18 P P 11 52 21.1 +0.3
baz=238
AAK **Ala-Archa** 84.02 314 P P 11 52 21.5 -0.3
SNR=7.9
AAK **Ala-Archa** 84.02 314 P P 11 52 22.4 +0.5
AAK IAmb IAmb 11 52 22.7
comp=Z,8.3nm,0.6s
AAK **Ala-Archa** 84.02 314 P P 11 52 22.4 +0.5
AAK pmax pmax
comp=Z,8.0nm,0.6s
AAK **Ala-Archa** 84.02 314 P P 11 52 21.7 -0.1
comp=Z,8.4nm,0.7s,baz=138,slow=7.9,SNR=24
AAK LR LR 12 29 49.6
comp=Z,110nm,20.4s,baz=14,slow=36
comp=Z,8.4nm,0.7s
SGDS **Sogindy** 84.11 315 *e*P P 11 52 21.4 -0.8
baz=314
SGDS **Sogindy** 84.11 315 *e*P P 11 52 21.3 -0.8
F24K **Squaw Lake** 84.12 20 IAmb IAmb 11 52 24.0
comp=Z,11nm,0.6s
F24K **Squaw Lake** 84.12 20 P P 11 52 22.0 +0.3
baz=241
M27K **Edge Creek, AK** 84.14 26 IAmb IAmb 11 52 25.1
comp=Z,11nm,0.7s
M27K **Edge Creek, AK** 84.14 26 P P 11 52 22.0 +0.1
baz=247
TOLK **Toolik Lake Re** 84.14 18 P P 11 52 21.6 -0.1
baz=239,SNR=6.8
USP **Ospenovka** 84.16 314 P P 11 52 22.3 -0.1
SNR=16
J26L **Joseph Creek** 84.32 23 P P 11 52 22.5 -0.2
J26L **Joseph Creek** 84.32 23 P P 11 52 23.1 +0.3
baz=245,SNR=8.5
L27K **Beaver Creek,** 84.44 25 P P 11 52 23.5 +0.2
baz=247
EKS2 **Erkin-Say** 84.55 314 P P 11 52 24.7 +0.2
SNR=16
BVCY **Beaver Creek** 84.59 26 P P 11 52 24.3 +0.2
baz=248,SNR=5.1
FYU **Fort Yukon** 84.59 21 IAmb IAmb 11 52 25.6
comp=Z,44nm,1.7s
D24K **Happy Valley** 84.64 18 IAmb IAmb 11 52 26.0
comp=Z,8.7nm,0.7s
D24K **Happy Valley** 84.64 18 P P 11 52 24.3 +0.2
baz=240
QSPA **South Pole Qui** 84.64 180 P P 11 52 25.0 +0.6
QSPA IAmb IAmb 11 52 27.2
comp=Z,11nm,0.9s
QSPA **South Pole Qui** 84.64 180 P P 11 52 24.9 +0.5
comp=Z,11nm,0.8s,baz=315,slow=0.9,SNR=41
comp=Z,11nm,0.8s
YUK8 **Steele Glacier** 84.66 27 P P 11 52 24.6 -0.2
baz=249
K27K **Chicken** 84.72 24 P P 11 52 25.4 +0.8
baz=246

I26K **Coal Creek Min** 84.82 23 P P 11 52 25.3 +0.2
baz=245
BTLS **Baital** 84.87 316 *e*P P 11 52 25.2 -0.6
comp=Z,10nm,0.9s,baz=316
BTLS **Baital** 84.87 316 *e*P P 11 52 25.2 -0.6
BTLS pmax pmax
comp=Z,10.0nm,0.9s
F25K **Christian Rive** 84.92 20 P P 11 52 25.9 +0.3
baz=243
C24K **Franklin Bluff** 84.96 18 P P 11 52 26.0 +0.3
baz=240
YUK6 **Outpost Mounta** 85.18 27 P P 11 52 27.1 -0.2
baz=250
E25K **Arctic Village** 85.18 20 IAmb IAmb 11 53 32.5
comp=Z,18nm,1.8s
E25K **Arctic Village** 85.18 20 P P 11 52 27.2 +0.2
baz=243
YUK4 **Talbot Arm** 85.19 27 P P 11 52 27.8 +0.6
baz=250
BMAR **Burnt Mountain** 85.21 20 P P 11 52 27.4 +0.3
G26K **Porcupine Rive** 85.28 21 P P 11 52 27.9 +0.6
baz=245,SNR=21
EGAK **Eagle** 85.38 23 P P 11 52 27.9 0.0
EGAK **Eagle** 85.38 23 P P 11 52 28.3 +0.4
baz=247
F26K **Sheenjek River** 85.48 20 P P 11 52 28.8 +0.4
baz=244
D25K **Kavik River** 85.48 18 P P 11 52 28.1 -0.3
baz=242
I27K **Kandik River** 85.53 23 P P 11 52 29.0 +0.3
baz=247
HYT **Haines Junctio** 85.53 28 IAmb IAmb 11 52 31.7
comp=Z,10nm,0.6s
HYT **Haines Junctio** 85.53 28 P P 11 52 29.6 +0.6
baz=251,SNR=7.2
P30M **Million Dollar** 85.56 28 P P 11 52 29.6 +0.7
baz=251
M29M **Somme Creek** 85.65 26 P P 11 52 29.9 +0.5
baz=250
H27K **Steamboat Moun** 85.81 22 P P 11 52 30.6 +0.6
baz=247
DAWY **Dawson** 85.83 24 P P 11 52 30.7 +0.5
baz=249,SNR=6.1
N30M **Aishikik Lake** 85.93 27 P P 11 52 31.2 +0.4
baz=251
S32K **Killisnoo** 85.94 31 P P 11 52 31.5 +0.7
baz=254
NRIK **Noril'sk** 86.01 341 IAmb IAmb 11 52 31.9
comp=Z,8.9nm,0.7s
NRIK **Noril'sk** 86.01 341 *d* iP P 11 52 30.8 -0.1
NRIK pmax pmax
comp=Z,8.0nm,0.6s
NRIK **Noril'sk** 86.01 341 P P 11 52 29.5 -1.4
comp=Z,9.5nm,0.6s,baz=117,slow=3.9,SNR=20
comp=Z,9.5nm,0.6s
L29M **L29M** 86.02 25 P P 11 52 31.6 +0.4
baz=250
I28M **Miner Creek** 86.11 23 IAmb IAmb 11 52 33.9
comp=Z,6.2nm,0.7s
I28M **Miner Creek** 86.11 23 P P 11 52 31.7 +0.1
baz=248
C26K **Camden Bay** 86.21 18 P P 11 52 33.0 +1.1
baz=243
DZA **Taraz** 86.36 313 *e*P P 11 52 32.1 -1.2
baz=314
DZA **Taraz** 86.36 313 *e*P P 11 52 32.1 -1.2
M30M **Minto, Yukon** 86.42 26 P P 11 52 33.8 +0.6
baz=251
J29N **Klondike Camp** 86.44 24 IAmb IAmb 11 52 35.7
comp=Z,5.8nm,0.7s
J29N **Klondike Camp** 86.44 24 P P 11 52 34.2 +0.9
baz=250,SNR=5.5
K29M **Barlow Dome** 86.52 25 P P 11 52 34.5 +0.7
baz=251
WHY **Whitehorse** 86.71 28 P P 11 52 34.8 +0.1
baz=253
KBL **Kabul** 86.72 305 P P 11 52 35.4 -0.1
KBL IAmb IAmb 11 52 37.5
comp=Z,6.0nm,0.6s
KBL **Kabul** 86.72 305 P P 11 52 35.4 -0.1
KBL pmax pmax
comp=Z,6.0nm,0.6s
BRZS **Berezniki** 86.83 321 *e*P P 11 52 34.8 -0.7
baz=321
BRZS **Berezniki** 86.83 321 *e*P P 11 52 34.7 -0.7
F28M **Old Crow** 86.94 21 P P 11 52 36.1 +0.6
baz=248
KK31 **Karatay Array** 86.98 314 P P 11 52 35.3 -1.0
KK31 **Karatay Array** 86.98 314 P P 11 52 35.3 -1.0
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KKAR **Karatay Array** 86.98 314 P P 11 52 35.8 -0.5
KKAR **Karatay Array** 86.98 314 P P 11 52 35.8 -0.5
KKAR pmax pmax
comp=Z,6.0nm,1.0s
H29M **Whitestone** 86.99 22 IAmb IAmb 11 54 27.7
comp=Z,14nm,1.6s
H29M **Whitestone** 86.99 22 P P 11 52 35.8 0.0
baz=250
MAYO **Mayo, Yukon** 87.13 25 P P 11 52 37.0 +0.5
baz=252,SNR=8.8
IUG **Iuzhnay** 87.17 313 *e*P P 11 52 36.6 -0.7
baz=313
IUG **Iuzhnay** 87.17 313 *e*P P 11 52 36.6 -0.7
D27M **Malcolm River** 87.19 19 IAmb IAmb 11 52 39.2
comp=Z,10.0nm,0.6s
D27M **Malcolm River** 87.19 19 P P 11 52 37.3 +0.6
baz=247
J30M **Hart River** 87.25 24 IAmb IAmb 11 52 39.9
comp=Z,9.5nm,0.7s
J30M **Hart River** 87.25 24 P P 11 52 37.6 +0.4
baz=252
M31M **Drury Creek, Y** 87.38 27 P P 11 52 38.0 +0.2
baz=254
SIMJ **Simganj** 87.38 309 P P 11 52 37.9 -0.6
E28M **Babbage River** 87.42 20 IAmb IAmb 11 52 39.8
comp=Z,7.6nm,0.7s
E28M **Babbage River** 87.42 20 P P 11 52 38.1 +0.3
baz=249
I30M **Mount Dempster** 87.44 24 IAmb IAmb 11 52 39.7
comp=Z,4.8nm,0.7s
I30M **Mount Dempster** 87.44 24 P P 11 52 38.1 0.0
baz=252
BRLS **Boroday** 87.46 313 *e*P P 11 52 37.9 -0.8
baz=313
BRLS **Boroday** 87.46 313 *e*P P 11 52 37.8 -0.8
CHM **Chimkent** 87.51 313 *e*P P 11 52 37.7 -1.2
baz=313
CHM **Chimkent** 87.51 313 *e*P P 11 52 37.6 -1.2
Q32M **Nakina River** 87.52 30 P P 11 52 38.5 -0.3
baz=256
EPYK **Eagle Plains** 87.67 23 P P 11 52 39.1 0.0
EPYK IAmb IAmb 11 52 41.1
comp=Z,8.4nm,0.7s
EPYK **Eagle Plains** 87.67 23 P P 11 52 39.3 +0.3
baz=251
S34M **Telegraph Cree** 87.85 31 IAmb IAmb 11 53 33.2
comp=Z,39nm,1.9s
S34M **Telegraph Cree** 87.85 31 P P 11 52 40.4 +0.4
baz=257
FARO **Faro, Yukon** 87.85 27 IAmb IAmb 11 52 43.1
comp=Z,19nm,1.6s
FARO **Faro, Yukon** 87.85 27 P P 11 52 40.3 +0.3
baz=254
E29M **Blow River** 87.91 20 IAmb IAmb 11 54 34.5
comp=Z,14nm,1.8s
E29M **Blow River** 87.91 20 P P 11 52 40.4 +0.3
baz=250
G30M **tAoh Zraii Nji** 88.05 22 P P 11 52 40.4 -0.5
baz=252
T35M **Bob Quinn** 88.10 32 P P 11 52 40.9 -0.4
baz=257
R33M **Jennings River** 88.27 30 P P 11 52 42.1 -0.1
baz=257
BBB **Bella Bella** 88.34 37 LR LR 12 29 10.8
comp=Z,56nm,18.1s,baz=323,slow=33
F30M **Barrier River** 88.41 21 P P 11 52 43.1 +0.6
baz=252
H31M **Peel River** 88.42 23 IAmb IAmb 11 53 33.1
comp=Z,36nm,1.9s
H31M **Peel River** 88.42 23 P P 11 52 42.4 -0.2
baz=254
DLBC **Dease Lake** 88.53 31 LR LR 12 31 35.3
comp=Z,93nm,18.0s,baz=285,slow=35
G31M **Satah River** 88.77 22 IAmb IAmb 11 52 52.6
comp=Z,27nm,1.9s
G31M **Satah River** 88.77 22 P P 11 52 44.2 0.0
baz=254

BVAR **Borovoye Array** 88.83 323 P P 11 52 43.1 -1.7
comp=Z,14nm,0.7s,baz=106,slow=5.6,SNR=57
BVAR LR LR 12 34 36.2
comp=Z,100nm,19.4s,baz=320,slow=37
comp=Z,14nm,0.7s
BRVK **Borovoye** 88.90 323 P P 11 52 44.5 -0.6
BRVK IAmb IAmb 11 52 45.2
comp=Z,5.3nm,0.7s
BRVK **Borovoye** 88.90 323 P P 11 52 44.5 -0.6
BRVK pmax pmax
comp=Z,5.0nm,0.7s
INK **Inuvik** 89.43 21 P P 11 52 46.6 -0.6
INK IAmb IAmb 11 55 05.7
comp=Z,20nm,2.0s
INK **Inuvik** 89.43 21 P P 11 52 46.7 -0.5
baz=254
INK **Inuvik** 89.43 21 P P 11 52 46.6 -0.6
INK pmax pmax
comp=Z,20nm,2.0s
HUMO **Hull Mountain** 90.35 47 IAmb IAmb 11 52 55.5
comp=Z,8.9nm,0.8s
YBH **Yreka Blue Hor** 90.43 48 LR LR 12 30 11.9
comp=Z,99nm,18.1s,baz=294,slow=33
AFDM **Forest Hills D** 91.45 51 P P 11 52 57.8 +0.4
J05D **Fort Rock, OR** 91.68 47 P P 11 53 00.3 +1.8
J05D IAmb IAmb 11 53 01.7
comp=Z,7.1nm,0.8s
PNTR **Pine Nut** 92.53 51 P P 11 53 04.0 +1.4
PNTR IAmb IAmb 11 53 08.2
comp=Z,7.2nm,0.8s
VES **Vestal, Richgr** 92.67 54 P P 11 53 01.6 -1.4
baz=265
A36M **Sachs Harbour** 92.96 18 P P 11 53 03.2 -0.3
baz=262
C36M **Paulatuk** 93.00 21 IAmb IAmb 11 53 05.1
comp=Z,5.1nm,0.7s
C36M **Paulatuk** 93.00 21 P P 11 53 03.4 -0.3
baz=263
CIS **Catalina Islan** 93.03 57 P P 11 53 04.6 -0.3
baz=266
LHV **Little Huntoon** 93.32 52 IAmb IAmb 11 53 10.1
comp=Z,5.5nm,0.9s
PNT **Penticton** 93.32 41 P P 11 53 04.1 -1.7
PNT pmax pmax
comp=Z,7.0nm,0.8s
NVAR **Mina Array Bea** 93.49 52 P P 11 53 07.7 +0.6
NVAR **Mina Array Bea** 93.49 52 P P 11 53 08.2 +1.2
comp=Z,3.0nm,0.7s,baz=254,slow=6.4,SNR=24
NVAR pP pP 11 53 40.0 -1.5
comp=Z,1.6nm,0.8s,baz=264,slow=5.1,SNR=3.8
comp=Z,3.0nm,0.7s
EDW2 **Edwards Air Fo** 93.49 55 P P 11 53 08.0 +1.1
baz=266
CWC **Cottonwood Cre** 93.53 54 P P 11 53 08.0 +0.7
baz=266
NV11 **Mina Array Sit** 93.61 52 P P 11 53 08.4 +0.9
DSP **Deep Springs** 93.68 53 IAmb IAmb 11 53 11.7
comp=Z,3.2nm,0.9s
LRMC **Laurel Mtn Rad** 93.79 55 P P 11 53 09.5 +1.1
baz=266
MPMC **Manual Prospec** 93.98 54 P P 11 53 09.9 +0.5
baz=266
MZP **Montezuma Peak** 94.17 53 IAmb IAmb 11 53 13.8
comp=Z,8.8nm,1.1s
QSM **Queen of Sheba** 94.48 54 IAmb IAmb 11 53 14.2
comp=Z,4.0nm,0.9s
GSC **Goldstone, Bar** 94.49 55 P P 11 53 12.6 +1.0
baz=267
FURC **Furnace Creek,** 94.51 54 P P 11 53 12.3 +0.8
baz=267
WSAR **Wadi Sarin** 94.62 293 LR LR 12 35 28.3
comp=Z,17nm,21.8s,baz=60,slow=35
MONP2 **Monument Peak** 94.67 58 P P 11 53 13.0 +0.4
baz=267
PFO **Pinyon Flats O** 94.68 57 P P 11 53 13.1 +0.6
baz=267
PFO **Pinyon Flats O** 94.68 57 LR LR 12 30 26.8
comp=Z,85nm,18.8s,baz=321,slow=32
TPFO **Pinon Flats** 94.68 57 P P 11 53 13.3 +0.8
baz=267
WCT **Wildcat Mounta** 94.72 54 IAmb IAmb 11 53 15.4
comp=Z,3.4nm,0.8s
F10A **Beach Ranch, E** 94.73 44 P P 11 53 13.0 +0.6
NEW **Newport** 94.91 42 P P 11 53 13.4 +0.3
baz=268
NEW **Newport** 94.91 42 LR LR 12 29 56.9
comp=Z,71nm,20.0s,baz=310,slow=32
IKP **In-Ko-Pah, Jac** 94.92 58 P P 11 53 14.0 +0.5
baz=267
ABKAR **Akbulak array** 94.95 319 P P 11 53 11.9 -1.3
SHOC **Shoshone, Teco** 94.95 55 P P 11 53 14.3 +0.7
baz=267
TPNV **Topopah Spring** 95.03 53 IAmb IAmb 11 53 17.3
comp=Z,3.4nm,0.8s
TPNV **Topopah Spring** 95.03 53 P P 11 53 14.7 +0.6
baz=267
BELC **Belle Mtn. Jos** 95.08 56 P P 11 53 14.6 +0.2
baz=267
GMRC **Granite Mounta** 95.40 56 P P 11 53 16.1 +0.3
baz=267
BC3 **Big Chuckawall** 95.52 57 P P 11 53 16.3 -0.1
baz=267
RPN **Rapa Nui** 95.79 118 LR LR 12 28 43.0
comp=Z,62nm,20.8s,baz=260,slow=30
IRM **Iron Mountain** 95.80 56 P P 11 53 18.1 +0.6
baz=268
GEYT **Alibeck** 95.83 307 P P 11 53 15.4 -2.2
comp=Z,1.2nm,0.5s,baz=93,slow=9.5,SNR=2.4
comp=Z,1.2nm,0.5s
ELIB **Princess Elisa** 95.97 194 *d*P P 11 53 17.4 -0.2
ELK **Elko** 95.97 50 LR LR 12 32 44.3
comp=Z,129nm,18.7s,baz=313,slow=33
ARU **Arti** 95.98 326 P P 11 53 15.5 -2.2
ARU **Arti** 95.98 326 *d* iP P 11 53 15.1 -2.6
ARU 11 57 07.9
ARU S SKSac 12 03 36.5 -4.9
ARU pmax pmax
comp=Z,5.0nm,0.6s
ARU **Arti** 95.98 326 P P 11 53 15.3 -2.4
comp=Z,8.5nm,0.2s,baz=123,slow=2.4,SNR=11
ARU LR LR 12 36 29.5
comp=Z,168nm,21.2s,baz=67,slow=35
AKTO **Aktyubinsk** 96.23 320 P P 11 53 17.7 -1.3
comp=Z,1.4nm,0.6s,baz=113,slow=6.4,SNR=5.4
comp=Z,1.4nm,0.6s
Q12A **Willow Creek R** 96.23 51 IAmb IAmb 11 53 24.7
comp=Z,3.1nm,0.7s
YKA **Yellowknife Ar** 96.53 28 P P 11 53 19.9 -0.2
comp=Z,0.9nm,0.7s,baz=273,slow=4.5,SNR=18
YKA LR LR 12 33 31.2
comp=Z,122nm,19.1s,baz=317,slow=33
comp=Z,0.9nm,0.7s
PDMCI **Parker Dam,Lak** 96.64 56 P P 11 53 21.9 +0.7
baz=268
HLID **Hailey** 96.66 47 P P 11 53 21.1 -0.2
baz=269
EDM **Edmonton** 97.37 37 IAmb IAmb 11 53 27.7
comp=Z,4.6nm,0.8s
BOZ **Bozeman (W)** 98.64 45 P P 11 53 29.4 -0.8
baz=271
H17A **Grant Village** 99.42 46 P Pdif 11 53 34.0 +0.2
baz=272
LPIG **La Paz** 99.69 67 LR LR 12 34 17.6
comp=Z,165nm,18.3s,baz=300,slow=33
EGMT **Eagleton** 99.84 42 P Pdif 11 53 35.9 +0.6
baz=273
BW06 **Boulder Array** 100.22 48 P Pdif 11 53 37.4 0.0
baz=272
PDAR **Pinedale Array** 100.22 48 P Pdif 11 53 37.5 +0.2
comp=Z,0.8nm,0.6s,baz=242,slow=1.9,SNR=11
KIRV **Kiruna** 100.77 329 *j* iP Pdif 11 53 38.2 -0.9
LAO **LASA Array** 102.33 43 P Pdif 11 53 45.8 -0.6
baz=275
TXAR **Lajitas Array** 105.59 61 PKKPab PKKPab 12 09 56.0 -0.1
comp=Z,1.7nm,0.7s,baz=108,slow=5.9,SNR=18
ARCES **ARCESS Array B** 106.95 343 PKiKP PKiKP 11 58 15.0 -0.4
comp=Z,1.4nm,0.5s,baz=71,slow=1.2,SNR=18
JCT **Junction City** 108.86 60 P PKiKP 11 58 20.0 -0.1
baz=275
FINES **FINESS Array B** 110.95 335 Pdiff Pdif 11 54 20.2 -4.1
comp=Z,1.5nm,0.8s,baz=58,slow=5.4,SNR=9.5
FINES PKiKP PKiKP 11 58 21.6 -1.4
comp=Z,1.2nm,0.6s,baz=48,slow=2.8,SNR=5.4
JFWS **Jewell Farm** 114.19 45 P PKiKP 11 58 30.2 +0.4
baz=286
CCM **Cathedral Cave** 114.68 51 P PKiKP 11 58 31.0 +0.1
baz=283
HDBT **Hernando Brdge** 116.26 53 PKPdf 11 58 31.6 -2.4

HFS	**Hagfors**	**116.64**	**338**	PKP	**PKPdf**	**11 58 33.1**	**-1.0**		
	comp=Z,1.4nm,0.5s,baz=106,slow=11,SNR=6.6								
SFIN	**Lafayette**	**117.18**	**47**	P	**PKiKP**	**11 58 35.7**	**+0.1**		
	baz=288								
BOSA	**Boshof**	**118.21**	**234**	PKP	**PKPdf**	**11 58 37.8**	**-0.4**		
	comp=Z,2.6nm,0.5s,baz=138,slow=1.7,SNR=9.0								
O48B	**Farmland**	**118.63**	**47**	P	**PKPdf**	**11 58 38.4**	**-0.1**		
	baz=289								
PLCA	**Paso Flores**	**120.18**	**144**	PKP	**PKiKP**	**11 58 41.8**	**+0.1**		
	comp=Z,0.9nm,0.5s,baz=216,slow=1.8,SNR=6.6								
M53A	**WI Miller and**	**121.38**	**44**	P	**PKiKP**	**11 58 43.8**	**0.0**		
	baz=293								
O53A	**New Philadelph**	**121.46**	**45**	P	**PKiKP**	**11 58 44.1**	**0.0**		
	baz=292								
SCHQ	**Schefferville**	**121.84**	**25**	PKP	**PKPdf**	**11 58 43.7**	**-0.5**		
	comp=Z,1.4nm,0.7s,baz=0.0,slow=10,SNR=4.1								
CLL	**Collm**	**122.63**	**330**	*e*PKiKP	**PKiKP**	**11 58 46.0**	**0.0**		
CLL	**Collm**	**122.63**	**330**	*e*PKPdf	**PKiKP**	**11 58 46.0**	**0.0**		
R55A	**Marlinton**	**122.98**	**47**		**PKPdf**	**11 58 46.5**	**-0.5**		
BLA	**Blacksburg**	**123.14**	**49**	P	**PKPdf**	**11 58 47.2**	**-0.1**		
	baz=291								
KMSC	**Kings Mountain**	**123.14**	**51**	P	**PKPdf**	**11 58 46.5**	**-0.8**		
	baz=289								
CKRC	**Cesky Krumlov**	**123.45**	**327**	*e*PKPDF	**PKiKP**	**11 58 47.9**	**+0.1**		
CKRC	**Cesky Krumlov**	**123.45**	**327**	*e*PKiKP	**PKiKP**	**11 58 47.9**	**+0.1**		
SSPA	**Standing Stone**	**123.63**	**44**	P	**PKiKP**	**11 58 48.2**	**-0.1**		
	baz=295								
KHC	**Kasperske Hory**	**123.66**	**328**	*e*PKPDF	**PKiKP**	**11 58 48.8**	**+0.6**		
KHC	**Kasperske Hory**	**123.66**	**328**	*c i*PKiKP	**PKPdf**	**11 58 47.2**	**-0.7**		
KHC				pmax	pmax				
	comp=Z,20nm,1.7s								
GERES	**GERESS Array B**	**123.76**	**328**	PKPdf	**PKPdf**	**11 58 47.5**	**-0.6**		
GERES	**GERESS Array B**	**123.76**	**328**	PKP	**PKPdf**	**11 58 47.8**	**-0.4**		
	comp=Z,2.0nm,0.5s,baz=35,slow=2.4,SNR=9.5								
GERES				pPKP	**pPKPdf**	**11 59 20.9**	**-3.5**		
	comp=Z,1.1nm,0.7s,baz=72,slow=3.2,SNR=1.6								
SOKA	**Soboth**	**124.27**	**325**	PKP	**PKPdf**	**11 58 48.2**	**-1.0**		
	comp=Z,5.1nm,1.2s								
OBKA	**Obir**	**124.64**	**325**	*e*PKP	**PKPdf**	**11 58 48.5**	**-1.5**		
	comp=Z,12nm,1.6s								
LESA	**Schwarzleotal**	**125.16**	**327**	*e*PKP	**PKPdf**	**11 58 50.8**	**-0.1**		
	comp=Z,2.1nm,0.4s								
WTTA	**Wattenberg**	**125.82**	**327**	*e*PKP	**PKPdf**	**11 58 52.1**	**-0.2**		
	comp=Z,6.4nm,1.1s								
STAL	**STALIGIAL**	**125.83**	**326**	PKPdf	**PKPdf**	**11 58 50.9**	**-1.3**		
CIMO	**Cimolais**	**125.95**	**326**		**PKPdf**	**11 58 51.3**	**-1.1**		
MOTA	**Moosalm**	**126.06**	**328**	*e*PKP	**PKPdf**	**11 58 52.9**	**+0.1**		
	comp=Z,3.4nm,0.5s								
EKA	**Eskdalemuir Ar**	**126.12**	**342**	PKP	**PKPdf**	**11 58 52.0**	**-0.4**		
	comp=Z,1.0nm,0.4s,baz=12,slow=3.2,SNR=9.9								
FETA	**Feichten**	**126.46**	**327**	*e*PKP	**PKiKP**	**11 58 54.1**	**+0.1**		
	comp=Z,6.3nm,1.4s								
DAVA	**Damuels**	**126.74**	**328**	*e*PKiKP	**PKiKP**	**11 58 55.2**	**+0.7**		
	comp=Z,8.2nm,1.1s								
PKME	**Peaks-Kenny Pk**	**126.75**	**35**	P	**PKPdf**	**11 58 53.8**	**-0.1**		
	baz=306								
HRV	**Adam Dziewonsk**	**126.92**	**39**	P	**PKPdf**	**11 58 53.3**	**-1.0**		
	baz=302								
KEST	**Kesra**	**133.83**	**316**	PKP	**PKiKP**	**11 59 09.9**	**+0.9**		
	comp=Z,9.1nm,1.0s,baz=56,slow=3.6,SNR=3.5								
LPAZ	**La Paz**	**135.38**	**119**	PKPdf	**PKPdf**	**11 59 11.2**	**-0.5**		
LPAZ	**La Paz**	**135.38**	**119**	PKiKP	**PKPdf**	**11 59 11.3**	**-0.5**		
CPUP	**Villa Florida**	**137.98**	**140**	PKP	**PKPdf**	**11 59 15.8**	**+0.2**		
	comp=Z,1.4nm,0.7s,baz=126,slow=9.1,SNR=2.5								
CPUP				pPKP	**pPKPdf**	**11 59 49.6**	**-2.0**		
	comp=Z,2.5nm,0.8s,baz=40,slow=1.9,SNR=3.5								
CPUP				SKPbc	**SKiKP**	**12 02 40.1**	**-1.4**		
	comp=Z,1.9nm,0.9s,baz=14,slow=3.9,SNR=3.1								
SDV	**Santo Domingo**	**138.14**	**83**	PKPdf	**PKPdf**	**11 59 16.1**	**-0.3**		
ESDC	**Sonseca Array**	**139.22**	**331**	PP	**PP**	**12 02 11.0**	**-0.4**		
	comp=Z,0.6nm,0.8s,baz=33,slow=7.8,SNR=4.9								
SAML	**Samuel**	**142.71**	**112**	PKPdf	**PKPdf**	**11 59 20.9**	**-3.6**		
SAML	**Samuel**	**142.71**	**112**	PKiKP	**PKPdf**	**11 59 20.9**	**-3.6**		
VILB	**Vilhena**	**143.72**	**120**	PKPdf	PKPab	11 59 23.5	+0.2		
BOAV	**Boa Vista**	**148.01**	**94**		**PKPbc**	**11 59 36.7**	**-0.1**		
TORD	**Torodi Ar. Bea**	**149.15**	**287**		**PKPbc**	**11 59 39.1**	**-0.5**		
TORD	**Torodi Ar. Bea**	**149.15**	**287**	PKPbc	**PKPbc**	**11 59 38.6**	**-1.1**		
	comp=Z,8.8nm,0.7s,baz=49,slow=6.6,SNR=7.5								
TORD				pPKPbc	**pPKPdf**	**12 00 12.9**	**+1.2**		
	comp=Z,4.9nm,0.7s,baz=53,slow=6.9,SNR=2.4								
BDFB	**Brasilia**	**151.65**	**138**	PKPbc	**PKPbc**	**11 59 45.8**	**+0.1**		
BDFB	**Brasilia**	**151.65**	**138**	PKPbc	**PKiKP**	**11 59 46.1**	**-0.1**		
	comp=Z,5.1nm,0.6s,baz=185,slow=3.8,SNR=8.0								
BDFB				PKPab	**PKPab**	**11 59 55.5**	**+0.7**		
	comp=Z,9.0nm,0.6s,baz=206,slow=3.5,SNR=7.9								
BDFB				pPKPbc	**pPKPdf**	**12 00 19.4**	**+3.7**		
	comp=Z,8.9nm,0.8s,baz=183,slow=7.6,SNR=3.9								

IDC 15 11:40:13.1±1.1, 52°.46N×62°.67E, h0km, mb3.3/1, mbtmp3.1/4, ML2.5/3, Error ellipse: s-maj=30.1km s-min=9.5km az=161.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKTO	**Aktyubinsk**	**3.55**	**237**	Pn	Pn	11 41 09.5	+0.1
	1.2nm,0.3s,baz=45,slow=12,SNR=11						
AKTO				Pg	Pb	11 41 18.4	+1.7
	1.5nm,0.3s,baz=86,slow=15,SNR=6.9						
AKTO				Lg	Lg	11 42 05.4	
	0.4nm,0.3s,baz=174,slow=17,SNR=1.8						
	6.1nm,0.5s						
I31KZ	**AKTYUBINSK INF**	**3.55**	**237**	I	I	12 01 00.0	
	0.4nm,0.8s,baz=52,slow=338,SNR=18						
ARU	**Arti**	**4.65**	**331**	Lg	Lg	11 42 38.3	
	1.5nm,0.3s,baz=327,slow=22,SNR=15						
BVAR	**Borovoye Array**	**4.72**	**80**	Pn	Pn	11 41 25.6	+0.1
	0.1nm,0.3s,baz=272,slow=12,SNR=6.7						
BVAR				Lg	Lg	11 42 40.2	
	0.1nm,0.3s,baz=278,slow=33,SNR=6.4						
	0.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**13.35**	**75**	I	I	13 07 00.0	
	baz=272,slow=333,SNR=4.1						
MKAR	**Makanchi Array**	**13.90**	**106**	Pn	Pn	11 43 29.2	-2.0
	baz=308,slow=13,SNR=2.6						
	0.2nm,0.7s						
I43RU	**DUBNA INFRASON**	**15.32**	**296**	I	I	13 06 05.0	
	0.1nm,1.0s,baz=93,slow=330,SNR=11						
FINES	**FINESS Array B**	**21.61**	**309**	P	P	11 45 05.7	+1.4
	0.5nm,0.4s,baz=103,slow=11,SNR=6.4						
	0.5nm,0.4s						

*IDC **15** 11:52:07.8±0.8, 50°.04N×90°.00E, h0km, mb4.0/8, mbtmp3.8/14, ML3.1/6, Error ellipse: s-maj=15.0km s-min=10.2km az=177.0*
*MOS **15** 11:52:08.7±2.1, 49°.82N×89°.91E, h10km, mb4.2/3, Error ellipse: s-maj=10.7km s-min=6.8km az=35.4*
*ASRS **15** 11:52:10.1±0.5, 50°.N±2°.×9°.0E±°, h5km, MLh4.2/17, Error ellipse: s-maj=4.8km s-min=2.7km az=134.3, confirmed*
*NNC **15** 11:52:14.4±2.4, 50°.14N×89°.35E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=24.8km s-min=10.8km az=102.0*

ISC 15 11:52:09.7±1.4, 49°.96N±0°.03×89°.67E±0°.04, h1km±8km, n69, σ2§14/98, mb3.9/7, 8C-8D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**0.86**	**280**	PG	**Pg**	**11 52 25.7**	**-0.5**
CUR	**Chagan-Uzun**	**0.86**	**280**	⇑Pg	**Pg**	**11 52 25.7**	**-0.5**
CUR				Sg	**Sg**	**11 52 37.3**	**-0.1**
ULGR	**Ulagan, Altay**	**1.28**	**302**	PG	**Pg**	**11 52 34.7**	**+0.4**
ULGR	**Ulagan, Altay**	**1.28**	**302**	Pg	**Pg**	**11 52 34.6**	**+0.4**
ULGR				Sg	**Sb**	**11 52 50.8**	**-0.8**
AKAR	**Aktash**	**1.37**	**286**	PN	**Pg**	**11 52 34.9**	**-1.0**
AKAR						11 52 53.6	
AKAR	**Aktash**	**1.37**	**286**	Pg	**Pg**	**11 52 34.3**	**-1.5**
AKAR				Sg	**Sg**	**11 52 52.8**	**-0.8**
CHBI	**Chibit, Altay**	**1.44**	**285**	PN	**Pn**	**11 52 36.8**	**-0.1**
CHBI						11 52 55.8	
CHBI	**Chibit, Altay**	**1.44**	**285**	Pg	**Pn**	**11 52 35.6**	**-1.3**
CHBI				Sg	**Sg**	**11 52 55.1**	**-0.8**
DGZ	**Jazzator, Alta**	**1.47**	**261**	PN	**Pb**	**11 52 38.4**	**+0.5**
DGZ						11 52 59.2	
DGZ	**Jazzator, Alta**	**1.47**	**261**	Pg	**Pn**	**11 52 37.9**	**+0.4**
DGZ				Sg	**Sn**	**11 52 57.6**	**+0.1**
YALR	**Yailyu, Altay**	**2.23**	**325**	Pg	**Pn**	**11 52 49.2**	**+1.4**
YALR				Sg	**Sn**	**11 53 16.4**	**+0.4**
ARTR	**Artybash**	**2.38**	**322**	PN	**Pb**	**11 52 53.6**	**+0.3**
ARTR						11 53 20.5	
ARTR	**Artybash**	**2.38**	**322**	Pg	**Pb**	**11 52 53.6**	**+0.3**
ARTR				Sg	**Sb**	**11 53 24.4**	**+1.2**
ELDR	**Elanda**	**2.61**	**300**	PN	**Pb**	**11 52 56.4**	**-0.7**
ELDR						11 53 29.8	
ELDR	**Elanda**	**2.61**	**300**	Pg	**Pb**	**11 52 56.4**	**-0.7**
ELDR				Sg	**Sb**	**11 53 29.9**	**+0.2**
DJO	**Djoy, Khakassi**	**2.99**	**18**	Pg	**Pn**	**11 53 01.7**	**+3.5**
DJO				Sg	**Sb**	**11 53 39.3**	**-1.4**
TASR	**Tashtagol**	**3.02**	**339**	Pg	**Pb**	**11 53 04.7**	**+0.5**
TASR				Sg	**Sb**	**11 53 39.9**	**-1.7**
GALT	**Gorno-Altaysk,**	**3.09**	**312**	PN	**Pb**	**11 53 04.6**	**-0.8**
GALT						11 53 43.8	
GALT	**Gorno-Altaysk,**	**3.09**	**312**	Pg	**Pb**	**11 53 04.6**	**-0.8**
GALT				Sg	**Sb**	**11 53 43.8**	**+0.3**
CERR	**Cheremushki**	**3.10**	**20**	Pg	**Pb**	**11 53 04.2**	**-1.3**
CERR				Sg	**Sb**	**11 53 42.8**	**-1.0**
UKR	**Ust'-Kan**	**3.28**	**289**	PN	**Pb**	**11 53 09.1**	**+0.5**
UKR						11 53 51.0	
UKR	**Ust'-Kan**	**3.28**	**289**	Pg	**Pb**	**11 53 09.1**	**+0.5**
UKR				Sg	**Sb**	**11 53 51.1**	**+2.0**
MALIN	**Malinovka, Kuz**	**3.77**	**338**	Pg	**Pb**	**11 53 17.3**	**+0.3**
MALIN				Sg	**Sb**	**11 54 04.3**	**+1.1**
TAIL	**Tailep, Kuzbas**	**3.82**	**337**	Pg	**Pb**	**11 53 17.4**	**-0.4**
TAIL				Sg	**Sb**	**11 54 07.5**	**+3.0**
ELT	**Eltsovka**	**3.94**	**328**	PN	**Pb**	**11 53 19.8**	**0.0**
ELT						11 54 06.6	
ELT	**Eltsovka**	**3.94**	**328**	Pn	**Pn**	**11 53 09.2**	**-2.0**
ELT				Pg	**Pb**	**11 53 19.8**	**0.0**
ELT				Sg	**Sb**	**11 54 09.6**	**+1.7**
ERU	**Erunakovo, Kuz**	**4.42**	**342**	Pg	**Pb**	**11 53 28.9**	**+0.9**
ERU				Sg	**Sb**	**11 54 25.5**	**+3.8**
VCHU	**Verkh-Chumysh,**	**4.47**	**335**	Pg	**Pb**	**11 53 29.5**	**+0.6**
VCHU				Sg	**Sb**	**11 54 25.3**	**+2.0**
BJR1	**Bachatsky 1, K**	**4.83**	**334**	Pg	**Pb**	**11 53 35.6**	**+0.5**
BJR1				Sg	**Sb**	**11 54 32.1**	**-1.6**
ZAA0	**Zalesovo Array**	**5.00**	**325**	⇑Pn	**Pn**	**11 53 27.8**	**+2.1**
	0.5nm,0.6s						
ZAA0				⇓Pg	**Pb**	**11 53 38.7**	**+0.9**
	2.2nm,0.6s						
ZAA0				⇑Lg	Lg	11 54 43.9	
	52nm,0.9s						
ZALV	**Zalesovo Beam**	**5.00**	**325**	Pn	**Pn**	**11 53 25.6**	**-0.1**
	1.7nm,0.3s,baz=142,slow=12,SNR=12						
ZALV				Pg	**Pb**	**11 53 39.5**	**+1.7**
	3.0nm,0.3s,baz=143,slow=15,SNR=14						
ZALV				Sn	**Sn**	**11 54 24.1**	**+0.1**
	4.4nm,0.3s,baz=130,slow=16,SNR=5.7						
ZALV				Lg	Lg	11 54 43.4	
	15nm,0.3s,baz=141,slow=28,SNR=12						
	4.5nm,0.4s						
SALR	**Pechorkino, Sa**	**5.09**	**333**	Pn	**Pn**	**11 53 29.7**	**+2.7**
SALR				Pg	**Pb**	**11 53 41.9**	**+2.6**
SALR				Sg	**Sb**	**11 54 44.3**	**+3.3**
MK31	**Makanchi Array**	**5.85**	**240**	⇓Pn	**Pn**	**11 53 40.0**	**+2.6**
	1.9nm,0.3s,baz=81,slow=11,SNR=148						
MK31				⇓Pg	**Pg**	**11 54 01.5**	**-0.1**
	16nm,0.5s,baz=57,slow=16,SNR=17						
MK31				⇑Lg	Lg	11 55 18.6	
	77nm,0.6s,baz=57,slow=30,SNR=5.7						
MK31	**Makanchi Array**	**5.85**	**240**	PN	**Pn**	**11 53 40.1**	**+2.6**
MKAR	**Makanchi Array**	**5.85**	**240**	Pn	**Pn**	**11 53 40.5**	**+3.0**
	1.3nm,0.3s,baz=51,slow=17,SNR=42						
MKAR				Pg	**Pg**	**11 53 58.5**	**-3.1**
	5.4nm,0.3s,baz=62,slow=17,SNR=12						
MKAR				Sn	**Sn**	**11 54 49.6**	**+4.5**
	5.5nm,0.3s,baz=61,slow=30,SNR=5.2						
MKAR				Lg	Lg	11 55 18.0	
	5.9nm,0.3s,baz=58,slow=26,SNR=9.5						
	9.2nm,0.9s						
MAKZ	**Makanchi**	**6.01**	**241**	⇓Pn	**Pn**	**11 53 42.0**	**+2.2**
	13nm,0.8s						
MAKZ				⇑Pg	**Pg**	**11 54 01.8**	**-3.1**
	23nm,0.6s						
MAKZ				⇓Lg	Lg	11 55 24.0	
	73nm,0.8s						
MAKZ	**Makanchi**	**6.01**	**241**	PN	**Pn**	**11 53 41.9**	**+2.2**
MAKZ				PG	**Pg**	**11 54 01.8**	**-3.1**
WMQ	**Urumqi**	**6.29**	**193**	Pn	**Pn**	**11 53 46.9**	**+3.4**
WMQ				Sn	**Sn**	**11 54 59.8**	**+3.8**
WMQ				smax	smax		
	comp=N,160nm,1.1s						
WMQ				smax	smax		
	comp=E,140nm,0.9s						
KURK	**Kurchatov**	**7.11**	**280**	⇑Pn	**Pn**	**11 53 57.8**	**+3.0**
	comp=E,8.9nm,0.7s						
KURK				⇓Lg	Lg	11 55 51.7	
	comp=E,118nm,0.7s						
KURK	**Kurchatov**	**7.11**	**280**	P	**Pn**	**11 53 56.0**	**+1.2**
KURBB	**Kurchatov Arra**	**7.17**	**280**	⇑Pn	**Pn**	**11 53 58.0**	**+2.4**
	comp=E,13nm,0.6s						
KURBB	**Kurchatov Arra**	**7.17**	**280**	P	**Pn**	**11 53 57.9**	**+2.4**
KURBB	**Kurchatov Arra**	**7.17**	**280**	Pn	**Pn**	**11 53 56.0**	**+0.5**
	comp=E,0.6nm,0.3s,baz=90,slow=14,SNR=24						
KURBB				Sn	**Sn**	**11 55 14.8**	**-2.7**
	comp=E,0.3nm,0.3s,baz=82,slow=14,SNR=1.6						
KURBB				Lg	Lg	11 55 53.0	
	comp=E,0.6nm,0.3s,baz=82,slow=32,SNR=4.6						
	comp=E,7.1nm,0.5s						
KUR17	**Kurchatov Arra**	**7.21**	**280**	⇓Lg	Lg	11 55 54.2	
	comp=E,61nm,1.1s						
PDGK	**Podgornoye**	**9.64**	**230**	⇑Lg	Lg	11 57 21.2	
	comp=E,64nm,1.0s						
SONM	**Songino Array**	**11.22**	**95**	Pn	Pn	11 54 48.1	-3.1
	comp=E,0.1nm,0.3s,baz=282,slow=14,SNR=1.7						
SONM				Pg		11 55 29.7	
	baz=282,slow=18,SNR=3.1						
SONM				Lg	Lg	11 57 58.4	
	comp=E,0.5nm,0.3s,baz=285,slow=28,SNR=7.0						
	comp=E,0.2nm,0.4s						
OTUK	**Ortayu**	**11.49**	**268**	⇓Lg	Lg	11 58 08.2	
	comp=E,30nm,0.8s						
ULN	**Ulaanbaatar**	**11.63**	**94**	*i* P	**Pn**	**11 54 55.1**	**-1.7**
BVAR	**Borovoye Array**	**12.40**	**292**	Pn	**Pn**	**11 55 07.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=99,slow=14,SNR=4.7						
BVAR				Sn	**Sn**	**11 57 20.8**	**-5.0**
	comp=E,0.1nm,0.3s,baz=101,slow=23,SNR=4.7						
BVAR				Lg	Lg	11 58 39.3	
	baz=70,slow=29						
	comp=E,0.9nm,0.4s						
BRVK	**Borovoye**	**12.46**	**292**	*i* P	**Pn**	**11 55 09.5**	**+1.5**
AAK	**Ala-Archa**	**12.78**	**241**	*i* P	**Pn**	**11 55 15.0**	**+2.4**
AAK	**Ala-Archa**	**12.78**	**241**	Pn	**Pn**	**11 55 12.6**	**0.0**
	comp=E,0.1nm,0.3s,baz=106,slow=7.4,SNR=1.6						
AAK				Lg	Lg	11 58 57.9	
	comp=E,0.2nm,0.3s,baz=286,slow=22,SNR=4.0						
	comp=E,0.5nm,0.4s						
NRIK	**Noril'sk**	**19.47**	**358**	*i* P	**Pn**	**11 56 39.5**	**+0.9**
NRIK				pmax	pmax		
	comp=Z,6.0nm,2.3s						
ARU	**Arti**	**19.61**	**301**	P	**Pn**	**11 56 40.7**	**+0.3**
ARU				S	**S**	**12 00 21.6**	**+0.7**
ARU	**Arti**	**19.61**	**301**	P	**Pn**	**11 56 43.6**	**+3.2**
	comp=Z,5.6nm,0.2s,baz=117,slow=16,SNR=3.6						
ARU				S	**Sn**	**12 00 10.9**	**-10**
	comp=Z,2.6nm,0.2s,baz=286,slow=20,SNR=1.4						
AKTO	**Aktyubinsk**	**20.20**	**284**	P	Pn	11 56 47.9	+0.4
	comp=Z,2.5nm,0.7s,baz=92,slow=12,SNR=7.2						
AKTO				Lg	Lg	12 02 52.7	
	comp=Z,0.1nm,0.3s,baz=210,slow=17,SNR=1.4						
	comp=Z,2.5nm,0.7s						
ZEA	**Zeya**	**23.34**	**66**	*i* P	**P**	**11 57 18.4**	**-0.7**
GEYT	**Alibeck**	**25.50**	**254**	P	**P**	**11 57 41.6**	**+2.2**
	comp=Z,1.7nm,0.6s,baz=56,slow=3.6,SNR=4.3						
	comp=Z,1.7nm,0.6s						
FINES	**FINESS Array B**	**36.14**	**313**	P	**P**	**11 59 13.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=68,slow=12,SNR=1.6						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be**	**37.65**	**295**	*i* P	**P**	**11 59 28.0**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**40.16**	**277**	*e*P	**P**	**11 59 49.7**	**+2.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**40.16**	**277**	P	**P**	**11 59 46.6**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=86,slow=6.0,SNR=4.2						
	comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**66.25**	**12**	*e*P	**P**	**12 02 58.1**	**-0.6**
YKA	**Yellowknife Ar**	**66.25**	**12**	P	P	12 02 54.8	-3.9
	comp=Z,2.0nm,0.5s,baz=340,slow=7.0,SNR=4.9						
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.77**	**277**	P	**P**	**12 04 12.6**	**-1.5**
	comp=Z,2.6nm,0.3s,baz=41,slow=7.1,SNR=1.4						
	comp=Z,2.6nm,0.3s						
WRA	**Warramunga Arr**	**80.02**	**138**	*i* P	**P**	**12 04 18.5**	**-2.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**80.02**	**138**	P	**P**	**12 04 18.2**	**-2.4**
	comp=Z,1.7nm,0.6s,baz=340,slow=5.8,SNR=17						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**83.13**	**140**	P	**P**	**12 04 35.0**	**-2.1**
ASAR	**Alice Springs**	**83.13**	**140**	P	**P**	**12 04 35.0**	**-2.1**
	comp=Z,1.3nm,0.7s,baz=331,slow=4.8,SNR=36						
	comp=Z,1.3nm,0.7s						

*IDC **15** 11:55:24.3±1.7, 23°.98S×115°.05W, h0km, mb3.5/3, mbtmp3.5/3, MS4.0/14, Error ellipse: s-maj=110.8km s-min=55.0km az=105.0*
*GCMT **15** 11:55:26.0±0.3, 24°.49S±0°.02×115°.70W±0°.02, h12km, MW4.9/83, Moment Tensor Solution. s25,c32; s83,c115; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.06±.09; Mθθ-1.91±.08; Mφφ1.85±.08; Mrθ-1.65±.25; Mrφ1.46±.07; Mθφ0.84±.23; Best double couple: Mφ2.89000×10¹⁶ NP1:φs156.00000°, δ77.00000°, λ-153.00000°. NP2: φs59.00000°, δ64.00000°, λ-14.00000°. Principal axes: T 2.3920, Plg9.0000°, Azm285.0000°; N 0.9950, Plg60.0000°, Azm179.0000°; P -3.3890, Plg28.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 15 11:55:24.3±1.9, 24°.2S±0°.4×114°.7W±0°.9, h10km, n31, σ1§12/9, mb3.6/3, MS4.0/13, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**5.61**	**122**	LR	LR	11 58 44.6	
	comp=Z,2μm,20.4s,baz=330,slow=33						
H03N2	**Juan Fernandez**	**32.49**	**115**	T	T	12 37 09.7	
	baz=281,slow=75,SNR=48						
H03N3	**Juan Fernandez**	**32.50**	**115**	T	T	12 37 11.5	
	baz=281,slow=75,SNR=76						
H03N1	**Juan Fernandez**	**32.51**	**115**	T	T	12 37 11.5	
	baz=281,slow=75,SNR=76						
NNA	**Nana**	**37.84**	**78**	LR	LR	12 14 27.7	
	comp=Z,238nm,18.8s,baz=247,slow=30						
ATAH	**Atahualpa**	**38.68**	**70**	LR	LR	12 14 54.1	
	comp=Z,229nm,20.5s,baz=239,slow=30						
PLCA	**Paso Flores**	**40.24**	**125**	LR	LR	12 16 13.0	
	comp=Z,297nm,18.3s,baz=287,slow=31						
RAR	**Rarotonga**	**41.58**	**265**	LR	LR	12 14 52.8	
	comp=Z,233nm,21.7s,baz=108,slow=28						
LVC	**Limon Verde**	**41.88**	**97**	LR	LR	12 16 34.8	
	comp=Z,210nm,19.5s,baz=262,slow=30						
CPUP	**Villa Florida**	**51.52**	**105**	LR	LR	12 22 55.4	
	comp=Z,162nm,18.4s,baz=274,slow=32						
URZ	**Urewera**	**58.77**	**239**	LR	LR	12 24 58.9	
	comp=Z,89nm,21.6s,baz=126,slow=30						
NVAR	**Mina Array Bea**	**62.43**	**357**	P	**P**	**12 05 49.1**	**+1.3**
	0.3nm,0.7s,baz=186,slow=7.3,SNR=1.9						
	0.3nm,0.7s						
RPZ	**Rata Peaks**	**62.58**	**232**	LR	LR	12 27 09.1	
	comp=Z,139nm,19.4s,baz=89,slow=30						
BDFB	**Brasilia**	**62.75**	**96**	LR	LR	12 29 58.5	
	comp=Z,104nm,19.6s,baz=277,slow=33						
VNDA	**Vanda**	**65.10**	**194**	LR	LR	12 27 23.0	
	comp=Z,108nm,19.8s,baz=84,slow=29						
QSPA	**South Pole Qui**	**65.92**	**180**	LR	LR	12 29 02.9	
	comp=Z,81nm,19.4s,baz=72,slow=30						
PDAR	**Pinedale Array**	**66.84**	**4**	P	**P**	**12 06 16.4**	**-0.1**
	0.2nm,0.5s,baz=182,slow=6.2,SNR=4.1						
PDAR				LR	LR	12 31 33.1	
	comp=Z,144nm,18.6s,baz=4.5,slow=33						
	0.2nm,0.5s						
ULM	**Lac du Bonnet**	**76.01**	**12**	LR	LR	12 35 29.1	
	comp=Z,107nm,20.6

ALIN S Sn 12 00 45.2 +0.3
ALIN *i* AML AML 12 00 46.0
comp=E,430nm,0.3s
AKMS Akamas 1.81 164 P Pn 12 00 24.6 +1.2
AKMS S Sn 12 00 46.3 +1.0
AKMS AML AML 12 00 54.0
3.4nm,0.9s
AKMS AML AML 12 00 54.0
3.0nm,0.6s
UCKU Afyonkarahisar 1.88 353 S Sn 12 00 46.5 -0.7
LEF Lefka 1.90 149 P Pn 12 00 25.9 +1.4
LEF S Sn 12 00 48.2 +0.9
CAME Cameli-Denizli 1.94 276 Pn Pn 12 00 25.9 +0.6
KZIL AFYON_Kizioren 1.95 320 P Pn 12 00 25.6 +0.3
KZIL S Sn 12 00 48.1 -0.7
CAEL Denizli, Camel 1.95 281 P Pn 12 00 28.9 +3.4
CAEL S Sn 12 00 55.2 +6.3
CAEL *i* AML AML 12 01 04.0
comp=N,348nm,0.9s
CAEL *i* AML AML 12 01 17.0
comp=E,326nm,1.0s
TROD Troodos 2.04 152 P Pn 12 00 27.0 +0.3
TROD S Sn 12 00 50.3 -0.9
TROD AML AML 12 00 54.2
0.6nm,0.5s
TROD AML AML 12 00 55.9
0.8nm,0.6s
APMY Acipayam-Deniz 2.06 291 Pn Pn 12 00 27.4 +0.6
KURO Afyon-Bolvadin 2.06 343 P Pn 12 00 27.8 +0.9
KURO S Sn 12 00 51.7 +0.1
NATA Nata 2.10 160 P Pn 12 00 29.4 +2.0
NATA AML AML 12 01 05.2
3.7nm,0.9s
NATA AML AML 12 01 06.4
2.9nm,0.9s
CBEY Konya-Cihanbey 2.10 23 P Pn 12 00 28.5 +1.0
CBEY S Sn 12 00 53.2 +0.7
CBEY *i* AML AML 12 00 55.0
comp=E,683nm,0.6s
CBEY *i* AML AML 12 00 56.0
comp=N,691nm,0.5s
ATHAL Athalassa 2.12 139 S Sn 12 00 52.3 -0.4
ATHAL AML AML 12 00 56.2
1.3nm,0.6s
ATHAL AML AML 12 00 59.0
1.3nm,0.5s
FETY Fethiye 2.12 267 Pn Pn 12 00 28.5 +0.9
FETY Fethiye 2.12 267 P Pn 12 00 29.8 +2.2
FETY S Sn 12 00 57.2 +4.3
SABU Mula-Dalaman 2.21 272 P Pn 12 00 30.7 +1.9
SABU S Sn 12 00 56.9 +2.0
DNZT Denizli-Tavas- 2.21 284 P Pn 12 00 32.5 +3.5
DNZT S Sn 12 00 59.6 +4.4
CSS Mathiatis 2.22 143 P Pn 12 00 29.7 +0.7
CSS S Sn 12 00 54.5 -0.9
CSS AML AML 12 01 07.7
0.3nm,0.7s
CSS AML AML 12 01 07.9
0.5nm,0.7s
DNIZ Denizli-Tavas- 2.31 293 P Pn 12 00 32.8 +2.6
DNIZ S Sn 12 00 58.7 +1.3
AFYO Afyonkarahisar 2.31 331 P Pn 12 00 31.8 +1.5
AFYO S Sn 12 00 58.5 +0.8
AFYO *i* AML AML 12 01 00.0
comp=N,204nm,0.6s
AFYO *i* AML AML 12 01 04.0
comp=E,200nm,0.9s
ASGA Asgata 2.33 147 P Pn 12 00 32.7 +2.2
MVOU Mavrovouni 2.34 138 P Pn 12 00 30.6 0.0
MVOU S Sn 12 00 56.5 -1.5
MVOU AML AML 12 01 06.7
0.6nm,0.3s
MVOU AML AML 12 01 08.3
0.5nm,0.7s
TAVA DENIZLI_Tavas 2.35 288 P Pn 12 00 32.8 +2.0
TAVA S Sn 12 01 02.4 +3.9
BNAZ Uak-Banaz 2.40 323 P Pn 12 00 32.0 +0.4
BNAZ S Sn 12 00 57.6 -2.3
BNAZ *i* AML AML 12 01 04.0
comp=N,192nm,0.6s
BNAZ *i* AML AML 12 01 05.0
comp=E,230nm,0.5s
DALY Dalyan (Mula) 2.46 272 Pn Pn 12 00 33.9 +1.7
GULE Gulek 2.50 77 P Pn 12 00 37.1 +4.1
GULE S Sn 12 01 07.2 +4.7
GULE *i* AML AML 12 01 08.0
comp=N,227nm,0.7s
GULE *i* AML AML 12 01 14.0
comp=E,319nm,0.6s
BSIR Belisirma, Guz 2.54 53 P Pn 12 00 35.1 +1.6
BSIR S Sn 12 01 03.8 +0.5
KKUL Konya-Kulu 2.58 21 P Pn 12 00 35.3 +1.3
KKUL S Sn 12 01 05.2 +0.9
KKUL *i* AML AML 12 01 08.0
comp=E,172nm,0.7s
MULA Mugla, Merkez- 2.76 281 P Pn 12 00 42.4 +5.9
MULA S Sn 12 01 10.9 +2.3
YER Yerkesik 2.77 279 Pn Pn 12 00 37.7 +1.1
TURN Turunc 2.79 271 Pn Pn 12 00 37.8 +1.1
SGAZ Eskisehir, Sey 2.85 346 P Pn 12 00 38.2 +0.6
SGAZ S Sn 12 01 08.8 -2.0
ESEN Aydn-Nazilli 2.88 292 P Pn 12 00 39.4 +1.5
ESEN S Sn 12 01 10.6 -0.8
USAK Uak-Merkez 2.89 313 P Pn 12 00 38.8 +0.6
USAK S Sn 12 01 10.2 -1.6
GDZ Gediz 2.92 323 P Pn 12 00 38.4 -0.2
GDZ S Sn 12 01 10.4 -2.1
GEDZ Gediz 2.92 322 Pn Pn 12 00 39.3 +0.7
ARG Arkhangelos 2.94 260 Pn Pn 12 00 40.0 +1.2
KULA Kula-Manisa 2.99 307 Pn Pn 12 00 40.4 +0.9
KIRA zmir-Kiraz 3.00 299 P Pn 12 00 41.2 +1.5
KIRA S Sn 12 01 13.1 -1.5
MANT Manisa 3.04 305 P Pn 12 00 40.5 +0.1
MANT S Sn 12 01 13.6 -2.2
AKO Adana 3.06 76 P Pn 12 00 43.7 +3.2
AKO S Sn 12 01 18.9 +3.0
AKO *i* AML AML 12 01 19.0
comp=N,103nm,0.3s
ANDZ Kutahya, Merke 3.09 333 P Pn 12 00 41.5 +0.5
ANDZ S Sn 12 01 15.8 -1.0
SIMA Simav-Kutahya 3.17 318 Pn Pn 12 00 42.9 +0.9
RFTAA Mazikoy-Bodrum 3.19 275 Pn Pn 12 00 43.7 +1.5
EMET Ktahya-Emet 3.22 325 P Pn 12 00 43.6 +0.8
EMET S Sn 12 01 18.4 -1.5
EMET *i* AML AML 12 01 22.0
comp=E,99nm,0.4s
KESK Krkkale-Ke 3.22 27 P Pn 12 00 43.5 +0.7
KESK S Sn 12 01 18.5 -1.4
MCUR KIREHR 3.27 42 P Pn 12 00 44.5 +1.1
MCUR S Sn 12 01 20.8 -0.3
AKPI Kirsehir/Akpin 3.27 33 P Pn 12 00 44.9 +1.4
AKPI S Sn 12 01 20.2 -1.1
BRTR Keskin Array B 3.32 27 P Pn 12 00 44.6 +0.5
9.3nm,0.3s,baz=195,slow=16,SNR=113
BRTR S Sn 12 01 20.9 -1.6
13nm,0.3s,baz=13,slow=22,SNR=34
DAT Datca 3.32 271 Pn Pn 12 00 45.5 +1.4
DOMA Ktahya-Doman 3.41 333 P Pn 12 00 46.2 +0.9
DOMA S Sn 12 01 23.1 -1.5
CDAG Cicekdag 3.54 35 P Pn 12 00 48.6 +1.5
CDAG S Sn 12 01 28.0 +0.2
KIBS BOLU 3.65 2 P Pn 12 00 49.5 +0.8
KIBS S Sn 12 01 29.9 -0.7
BILE Bilecik/Merkez 3.69 338 P Pn 12 00 49.9 +0.8
BILE S Sn 12 01 30.3 -1.0
SIRC Yozgat 3.73 45 P Pn 12 00 51.8 +2.0
SIRC S Sn 12 01 32.1 -0.4
YOZG Bozok Univ. Me 3.87 38 P Pn 12 00 53.6 +2.0
YOZG S Sn 12 01 34.8 -1.0
SUNG orum-Sungurl 3.96 29 P Pn 12 00 54.1 +1.4
SUNG S Sn 12 01 39.3 +1.4
ELDT Eldivan 3.96 19 P Pn 12 00 53.3 +0.5
ELDT S Sn 12 01 36.8 -1.3
HISA Bilecik-Osmane 3.96 340 P Pn 12 00 53.7 +0.9
HISA S Sn 12 01 36.5 -1.4
MMC7 Mount Meron ar 4.80 140 P Pn 12 01 06.9 +2.5
MMA0B Mount Meron ar 4.81 140 S Sn 12 02 00.5 +1.5
MMA0B Mount Meron ar 4.81 140 P Pn 12 01 07.0 +2.5
MMAI Mount Meron Ar 4.81 140 P Pn 12 01 05.3 +0.8
3.6nm,0.3s,baz=320,slow=12,SNR=8.9
MMAI S Sn 12 01 59.1 +0.2
5.2nm,0.3s,baz=336,slow=30,SNR=5.9

MMLI Mount Malkishu 5.29 144 S Sn 12 02 10.9 +0.3
MMLI Mount Malkishu 5.29 144 P Pn 12 01 13.2 +2.2
HMDT Nahal Hemdat 5.49 144 S Sn 12 02 17.2 +1.7
HMDT Nahal Hemdat 5.49 144 P Pn 12 01 15.8 +2.1
DSI Dead Sea 6.00 149 S Sn 12 02 27.8 -0.4
DSI Dead Sea 6.00 149 P Pn 12 01 22.0 +1.2
MSBI Mazada 6.22 150 P Pn 12 01 24.8 +1.2
MSBI Mazada 6.22 150 S Sn 12 02 33.0 -0.4
KZIT Kziot 6.25 158 P Pn 12 01 23.8 -0.4
KZIT Kziot 6.25 158 S Sn 12 02 31.6 -2.7
ASF Jabal al Asfar 6.27 135 P Pn 12 01 22.9 -1.5
1.7nm,0.5s,baz=332,slow=3.5,SNR=1.7
ASF S Sn 12 02 34.3 -0.4
1.8nm,0.4s,baz=333,slow=18,SNR=1.3
GHAJ Ghor Haditha 6.31 148 P Pn 12 01 26.3 +1.3
GHAJ Ghor Haditha 6.31 148 S Sn 12 02 35.8 +0.1
PRNI Paran 6.96 156 S Sn 12 02 49.7 -1.9
PRNI Paran 6.96 156 P Pn 12 01 34.1 +0.2
KRMI Paran Flat 7.09 158 S Sn 12 02 52.2 -2.6
KRMI Paran Flat 7.09 158 P Pn 12 01 35.5 -0.2
HRFI Mount Harif 7.26 157 S Sn 12 02 57.1 -1.9
HRFI Mount Harif 7.26 157 P Pn 12 01 38.1 +0.1
MBRI Mt Berech 7.45 158 P Pn 12 01 40.5 -0.1
MBRI Mt Berech 7.45 158 S Sn 12 03 01.7 -2.0
EIL Elat 7.57 158 P Pn 12 01 41.2 -1.1
2.1nm,0.4s,baz=357,slow=18,SNR=8.4
EIL S Sn 12 03 02.2 -4.5
5.2nm,0.4s,baz=49,slow=12,SNR=7.2
EIL Elat 7.57 158 P Pn 12 01 42.1 -0.2
EIL Elat 7.57 158 S Sn 12 03 03.4 -3.3
AKASG Malin Array Be 14.05 353 P P 12 03 16.2 -0.3
16nm,0.5s,baz=176,slow=9.3,SNR=21
DAVOX Davos/Dischmat 19.06 308 P P 12 04 12.2 0.0
2.4nm,0.6s,baz=144,slow=19,SNR=5.3
BELG Belogornoye 19.23 31 P P 12 04 13.0 -0.8
7.7nm,0.6s,baz=248,slow=8.8,SNR=5.5
GEYT Ailbeck 21.00 79 P P 12 04 31.9 -1.3
1.3nm,0.5s,baz=268,slow=7.2,SNR=4.2
1.3nm,0.5s
FINES FINESS Array B 24.96 354 P P 12 05 10.1 -2.2
2.3nm,0.5s,baz=156,slow=11,SNR=16
2.3nm,0.5s
ARCES ARCESS Array B 33.01 356 P P 12 06 21.2 -2.5
0.9nm,0.4s,baz=167,slow=8.2,SNR=15
0.9nm,0.4s
TORD Torodi Ar. Bea 35.71 237 P P 12 06 46.5 -1.1
9.3nm,0.4s,baz=34,slow=12,SNR=7.0
9.3nm,0.4s
KURBB Kurchatov Arra 35.96 52 P P 12 06 47.6 -1.8
1.3nm,0.2s,baz=271,slow=9.0,SNR=7.6
1.3nm,0.2s
MKAR Makanchi Array 38.43 59 P P 12 07 08.7 -1.8
1.5nm,0.6s,baz=270,slow=9.4,SNR=22
1.5nm,0.6s
ZALV Zalesovo Beam 40.03 47 P P 12 07 20.2 -3.4
0.6nm,0.4s,baz=250,slow=8.6,SNR=4.5
0.6nm,0.4s
SONM Songino Array 54.32 53 P P 12 09 11.5 -3.5
0.4nm,0.7s,baz=282,slow=9.2,SNR=4.5
0.4nm,0.7s

*PGC **15** 12:06:01.9±6.0, 47°.62N×129°.26W, h10km, MLSn3.1/21, Mw3.7/21, 299km Wsw of Tofino, Bc Off Coast Of Washington*
*IDC **15** 12:06:04.3±4.8, 47°.73N×129°.20W, h0km, mb3.3/3, mbtmp3.4/6, ML3.4/3, MS3.3/5, Error ellipse: s-maj=84.2km s-min=22.3km az=69.0*
*NEIC **15** 12:06:04.3±1.8, 47°.76N±0°.05×129°.0W±0°.1, h13km±4km, ML3.0/12, Mwr3.7(OTT), Error ellipse: s-maj=14.1km s-min=3.5km az=63.0*
ISC 15 12:06:05.7±0.9, 47°.86N±0°.07×128°.88W±0°.05, h13km, n80, σ0s99/79, mb3.3/3, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KEMO	**NEPTUNE Canada**	**0.17**	**293**			**Pg**	**12 06 07.9**	**-1.5**
KEMO						**Sg**	**12 06 11.8**	**-0.1**
KEMO	**NEPTUNE Canada**	**0.17**	**293**	P		**Pg**	**12 06 07.9**	**-1.5**
KEMO				S		**Sg**	**12 06 11.8**	**-0.1**
KEMF	**NEPTUNE Canada**	**0.17**	**301**			**Pg**	**12 06 08.1**	**-1.4**
KEMF						**Sg**	**12 06 12.3**	**+0.2**
KEMF	**NEPTUNE Canada**	**0.17**	**301**	P		**Pg**	**12 06 08.1**	**-1.4**
KEMF				S		**Sg**	**12 06 12.3**	**+0.2**
NCHR	**NEPTUNE Canada**	**0.18**	**310**			**Pg**	**12 06 09.0**	**-0.6**
NCHR						**Sg**	**12 06 13.1**	**+0.9**
NCHR	**NEPTUNE Canada**	**0.18**	**310**	P		**Pg**	**12 06 09.0**	**-0.6**
NCHR				S		**Sg**	**12 06 13.1**	**+0.9**
EDB	**Eliza Dome**	**2.33**	**29**	Pn		**Pn**	**12 06 43.5**	**-0.2**
EDB	**Eliza Dome**	**2.33**	**29**	Pn		**Pn**	**12 06 43.5**	**-0.2**
OZB	**Mount Ozzard**	**2.51**	**63**	Pn		**Pn**	**12 06 45.7**	**-0.5**
OZB				IAML			12 07 35.0	
	comp=E,71nm,2.1s							
OZB				IAML			12 07 38.6	
	comp=N,71nm,2.9s							
OZB	**Mount Ozzard**	**2.51**	**63**	Pn		**Pn**	**12 06 45.6**	**-0.7**
BFSB	**Bamfield**	**2.68**	**67**	Pn		**Pn**	**12 06 48.0**	**-0.5**
BFSB	**Bamfield**	**2.68**	**67**	Pn		**Pn**	**12 06 48.0**	**-0.5**
B928	**Bamfield**	**2.68**	**67**	Pn		**Pn**	**12 06 47.9**	**-0.6**
B928	**Bamfield**	**2.68**	**67**	Pn		**Pn**	**12 06 47.9**	**-0.6**
WOSB	**Woss**	**2.76**	**33**	Pn		**Pn**	**12 06 49.9**	**+0.1**
WOSB	**Woss**	**2.76**	**33**	Pn		**Pn**	**12 06 49.9**	**+0.1**
MAYB	**Maynard**	**2.78**	**23**	Pn		**Pn**	**12 06 50.1**	**+0.1**
MAYB	**Maynard**	**2.78**	**23**	Pn		**Pn**	**12 06 50.1**	**+0.1**
SPLB	**Strathcona Par**	**2.94**	**45**	Pn		**Pn**	**12 06 52.7**	**+0.5**
SPLB	**Strathcona Par**	**2.94**	**45**	Pn		**Pn**	**12 06 52.7**	**+0.5**
PFB	**Port Renfrew**	**3.05**	**75**	Pn		**Pn**	**12 06 53.0**	**-0.8**
PFB	**Port Renfrew**	**3.05**	**75**	Pn		**Pn**	**12 06 53.0**	**-0.8**
PTRF	**Port Renfrew**	**3.06**	**75**	Pn		**Pn**	**12 06 52.9**	**-0.9**
NCSB	**Newcastle Ridg**	**3.15**	**35**	Pn		**Pn**	**12 06 55.8**	**+0.7**
NCSB				Sn		**Sb**	**12 07 35.9**	**-4.1**
CBB	**Campbell River**	**3.18**	**45**	Pn		**Pn**	**12 06 56.1**	**+0.8**
CBB	**Campbell River**	**3.18**	**45**	Pn		**Pn**	**12 06 55.1**	**-0.2**
CBB				IAML			12 07 46.2	
	comp=N,25nm,3.7s							
CBB				IAML			12 07 51.9	
	comp=E,24nm,3.4s							
CBB	**Campbell River**	**3.18**	**45**	Pn		**Pn**	**12 06 56.1**	**+0.8**
OBC	**Olympics--Boni**	**3.23**	**85**	Pn		**Pn**	**12 06 55.3**	**-0.9**
OBC	**Olympics--Boni**	**3.23**	**85**	Pn		**Pn**	**12 06 55.3**	**-0.9**
CLRS	**Cowichan Lake**	**3.31**	**71**	Pn		**Pn**	**12 06 56.9**	**-0.3**
CLRS				IAML			12 07 45.0	
	comp=N,26nm,3.5s							
CLRS	**Cowichan Lake**	**3.31**	**71**	Pn		**Pn**	**12 06 56.8**	**-0.4**
CLRS				Sn		**Sn**	**12 07 37.5**	**+1.1**
CLRS	**Cowichan Lake**	**3.31**	**71**	Pn		**Pn**	**12 06 56.8**	**-0.4**
CLRS				Sn		**Sn**	**12 07 37.5**	**+1.1**
NLWA	**Neilton Lookou**	**3.42**	**96**	Pn		**Pn**	**12 06 59.4**	**+0.6**
NLWA				IAML			12 07 30.5	
	comp=N,28nm,3.5s							
NLWA				IAML			12 09 17.6	
	comp=N,31nm,3.1s							
SYMB	**Survey Mountai**	**3.47**	**76**	Pn		**Pn**	**12 06 58.4**	**-1.1**
SYMB	**Survey Mountai**	**3.47**	**76**	Pn		**Pn**	**12 06 58.4**	**-1.1**
OSD	**Olympics--Snow**	**3.49**	**89**	Pn		**Pn**	**12 06 59.3**	**-0.6**
OSD	**Olympics--Snow**	**3.49**	**89**	Pn		**Pn**	**12 06 59.3**	**-0.6**
NLLB	**Nanaimo Lost L**	**3.53**	**65**	Pn		**Pn**	**12 07 00.6**	**+0.4**
NLLB	**Nanaimo Lost L**	**3.53**	**65**	Pn		**Pn**	**12 07 00.6**	**+0.4**
B009	**North Saanich**	**3.71**	**76**	Pn		**Pn**	**12 07 02.8**	**+0.1**
B009	**North Saanich**	**3.71**	**76**	Pn		**Pn**	**12 07 02.8**	**+0.1**
PGC	**Sidney**	**3.71**	**76**	Pn		**Pn**	**12 07 01.8**	**-0.9**
PGC				IAML			12 08 08.6	
	comp=E,22nm,2.9s							
SHB	**Sechelt**	**3.74**	**60**	Pn		**Pn**	**12 07 03.7**	**+0.4**
SHB	**Sechelt**	**3.74**	**60**	Pn		**Pn**	**12 07 03.7**	**+0.4**
VGZ	**Gonzales**	**3.76**	**79**	Pn		**Pn**	**12 07 02.7**	**-0.7**
VGZ	**Gonzales**	**3.76**	**79**	Pn		**Pn**	**12 07 02.7**	**-0.7**
BIB	**Bowen Island**	**4.01**	**65**	Pn		**Pn**	**12 07 07.5**	**+0.8**
BIB	**Bowen Island**	**4.01**	**65**	Pn		**Pn**	**12 07 07.5**	**+0.8**
WPB	**Watts Point**	**4.16**	**62**	Pn		**Pn**	**12 07 10.1**	**+1.2**
WPB	**Watts Point**	**4.16**	**62**	Pn		**Pn**	**12 07 10.1**	**+1.2**
BBB	**Bella Bella**	**4.36**	**6**	Pn		**Pn**	**12 07 12.3**	**+0.7**
BBB	**Bella Bella**	**4.36**	**6**	Pn		**Pn**	**12 07 12.5**	**+1.0**
	comp=E,2.4nm,0.3s,baz=184,slow=1.4,SNR=75							
	comp=E,10nm,0.4s							
BBB	**Bella Bella**	**4.36**	**6**	Pn		**Pn**	**12 07 12.6**	**+1.0**
HNBB	**Haney**	**4.42**	**69**	Pn		**Pn**	**12 07 13.3**	**+0.7**
HNBB	**Haney**	**4.42**	**69**	Pn		**Pn**	**12 07 13.3**	**+0.7**
MBW	**Mount Baker**	**4.75**	**76**	Pn		**Pn**	**12 07 18.0**	**+0.8**
MBW	**Mount Baker**	**4.75**	**76**	Pn		**Pn**	**12 07 18.0**	**+0.8**
BUTB	**Butedale**	**5.22**	**3**	Pn		**Pn**	**12 07 23.9**	**+0.4**
BUTB	**Butedale**	**5.22**	**3**	Pn		**Pn**	**12 07 23.9**	**+0.4**

LLLB Lillooet 5.35 56 Pn Pn 12 07 26.2 +1.0
LLLB Lillooet 5.35 56 Pn Pn 12 07 26.2 +1.0
H04D Lebanon 5.41 126 Pn Pn 12 07 25.8 -0.3
LTY Liberty 5.59 93 Pn Pn 12 07 27.7 -0.9
LTY Liberty 5.59 93 Pn Pn 12 07 29.6 +1.0
H04A Detroit Lake 5.62 122 Pn Pn 12 07 29.1 +0.1
YBH Yreka Blue Hor 7.53 142 LR LR 12 10 31.1
comp=E,177nm,19.9s,baz=357,slow=35
NEW Newport 7.89 83 LR LR 12 11 01.2
comp=E,220nm,18.9s,baz=318,slow=36
DLBC Dease Lake 10.62 357 LR LR 12 12 37.6
comp=E,145nm,20.8s,baz=43,slow=37
NVAR Mina Array Bea 12.17 137 LR LR 12 13 37.6
comp=E,192nm,18.1s,baz=350,slow=37
PDAR Pinedale Array 14.51 103 Pn P 12 09 36.7 -0.8
comp=E,0.1nm,0.3s,baz=298,slow=15,SNR=3.0
PDAR LR LR 12 14 42.5
comp=E,120nm,18.9s,baz=9.0,slow=35
comp=E,0.3nm,0.6s
YKA Yellowknife Ar 16.71 23 Pn P 12 10 00.4 -1.2
baz=220,slow=11,SNR=4.7
comp=E,0.3nm,0.8s
ANMO Albuquerque 21.10 120 P P 12 10 51.8 +1.7
comp=E,1.2nm,0.8s,baz=36,slow=8.9,SNR=4.9
comp=E,1.2nm,0.8s
ULM Lac du Bonnet 21.66 71 P P 12 10 58.9 +3.1
comp=E,0.9nm,0.4s,baz=290,slow=12,SNR=3.1
comp=E,0.9nm,0.4s
TXAR Lajitas Array 26.83 125 P P 12 11 47.6 +1.8
comp=E,0.3nm,0.9s,baz=328,slow=9.6,SNR=2.7
comp=E,0.3nm,0.9s
H11N2 WAKE ISLAND Hy 58.40 265 T T 13 19 10.7
baz=45,slow=75,SNR=14
H11N3 WAKE ISLAND Hy 58.40 265 T T 13 19 11.3
baz=45,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 58.42 265 T T 13 19 10.4
baz=45,slow=75,SNR=9.0
H11S1 WAKE ISLAND Hy 59.39 264 T T 13 20 24.5
baz=46,slow=74,SNR=3.7
H11S2 WAKE ISLAND Hy 59.40 264 T T 13 20 23.7
baz=46,slow=74,SNR=5.2
H11S3 WAKE ISLAND Hy 59.41 264 T T 13 20 24.8
baz=46

*IDC **15** 12:17:20.9±1.0, 28°.74S×62°.12E, h0km, mb4.0/7, mbtmp4.0/8, ML4.3/1, Error ellipse: s-maj=32.8km s-min=24.5km az=68.0*
ISC 15 12:17:22.7±1.0, 28°.8S±0°.2×62°.1E±0°.2, h10km, n12, σ0s57/9, mb4.0/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.02**	**303**	Pn		**Pn**	**12 21 21.3**	**+0.3**
	0.1nm,0.3s,baz=125,slow=14,SNR=7.3							
	7.0nm,0.7s							
H04N2	**CROZET ISLANDS**	**19.19**	**202**	T		T	12 41 23.0	
	baz=28,slow=74,SNR=86							
H04N1	**CROZET ISLANDS**	**19.19**	**202**	T		T	12 41 25.9	
	baz=28,slow=74,SNR=113							
H04N3	**CROZET ISLANDS**	**19.21**	**202**	T		T	12 41 21.8	
	baz=28,slow=74,SNR=105							
CMAR	**Chiang Mai Arr**	**58.89**	**42**	P		**P**	**12 27 22.7**	**+0.7**
	1.2nm,0.7s,baz=228,slow=6.9,SNR=8.1							
	1.2nm,0.7s							
QSPA	**South Pole Qui**	**61.40**	**180**	P		**P**	**12 27 39.2**	**+0.3**
	5.0nm,0.8s,baz=276,slow=2.6,SNR=22							
	5.0nm,0.8s							
ASAR	**Alice Springs**	**63.72**	**104**	P		**P**	**12 27 54.6**	**-0.3**
	0.8nm,0.7s,baz=245,slow=6.0,SNR=11							
	0.8nm,0.7s							
WRA	**Warramunga Arr**	**65.50**	**100**	P		**P**	**12 28 06.6**	**0.0**
	0.8nm,0.8s,baz=245,slow=6.0,SNR=4.4							
	0.8nm,0.8s							
BRTR	**Keskin Array B**	**73.11**	**337**	P		**P**	**12 28 53.2**	**-0.1**
	0.9nm,0.9s,baz=162,slow=5.9,SNR=3.6							
	0.9nm,0.9s							
ZALV	**Zalesovo Beam**	**84.67**	**13**	P		**P**	**12 29 56.0**	**-0.2**
	0.5nm,0.4s,baz=184,slow=35,SNR=1.8							
	0.5nm,0.4s							
SONM	**Songino Array**	**85.98**	**28**	P		**P**	**12 30 03.0**	**-0.1**
	0.7nm,1.1s,baz=217,slow=6.1,SNR=3.2							
	0.7nm,1.1s							
YKA	**Yellowknife Ar**	**146.19**	**357**	PKPbc		**PKPdf**	**12 37 00.4**	**-1.1**
	0.6nm,0.7s,baz=354,slow=3.2,SNR=13							

*IDC **15** 12:19:19.8±2.5, 14°.69S×170°.47E, h626km±27km, mb3.2/5, mbtmp4.2/6, Error ellipse: s-maj=54.0km s-min=22.4km az=133.0*
ISC 15 12:19:17.9±1.4, 14°.6S±0°.2×170°.6E±0°.2, h600km, n8, σ1s64/8, mb3.9/5, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.47**	**207**	P		**P**	**12 21 23.0**	**+1.2**
	6.5nm,0.9s,baz=108,slow=19,SNR=1.1							
STKA	**Stephens Creek**	**31.61**	**232**	P		**P**	**12 24 52.7**	**-0.7**
	3.5nm,0.3s,baz=64,slow=9.2,SNR=22							
	3.5nm,0.3s							
WRA	**Warramunga Arr**	**35.01**	**256**	P		**P**	**12 25 20.7**	**-1.4**
	2.3nm,0.7s,baz=80,slow=5.8,SNR=18							
	2.3nm,0.7s							
ASAR	**Alice Springs**	**35.77**	**250**	P		**P**	**12 25 27.1**	**-1.3**
	5.0nm,0.6s,baz=76,slow=9.8,SNR=191							
ASAR				ScP		**S**	**12 30 26.1**	**+1.7**
	0.6nm,0.8s,baz=86,slow=3.7,SNR=6.8							
	5.0nm,0.6s							
PETK	**Petropavlovsk-**	**68.29**	**352**	P		**P**	**12 29 21.7**	**+1.7**
	3.1nm,1.0s,baz=128,slow=2.4,SNR=4.1							
	3.1nm,1.0s							
ILAR	**Eielson Array**	**85.38**	**17**	P		**P**	**12 30 52.1**	**-0.4**
	0.3nm,0.7s,baz=234,slow=4.7,SNR=5.4							
	0.3nm,0.7s							
ARCES	**ARCESS Array B**	**120.86**	**346**	PKP		**PKPdf**	**12 37 01.1**	**-1.3**
	2.0nm,0.9s,baz=92,slow=2.7,SNR=7.1							
AKASG	**Malin Array Be**	**132.36**	**328**	PKhKP		PKPpre	12 37 15.0	
	0.6nm,0.3s,baz=68,slow=1.3,SNR=5.4							

IDC 15 12:19:47.1±464.0, 57°.07N×29°.60E, h0km, Error ellipse: s-maj=177.5km s-min=83.3km az=86.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.19**	**92**	I		I	12 46 10.0	
	0.1nm,0.7s,baz=277,slow=340,SNR=5.4							
I37NO	**I37NO**	**13.00**	**342**	I		I	13 34 00.0	
	baz=147,slow=324,SNR=4.0							
I31KZ	**AKTYUBINSK INF**	**18.00**	**100**	I		I	14 12 00.0	
	baz=303,slow=334,SNR=1.5							

*NEIC **15** 12:59:58.1±1.0, 20°.5S±0°.2×178°.4W±0°.1, h546km±16km, mb4.1/10, Error ellipse: s-maj=33.2km s-min=18.5km az=180.0*
*IDC **15** 13:00:06.4±3.7, 20°.48S×178°.81W, h627km±43km, mb3.2/13, mbtmp4.1/14, Error ellipse: s-maj=20.4km s-min=17.9km az=107.0*
ISC 15 12:59:58.9±0.5, 20°.5S±0°.1×178°.5W±0°.1, h550km, n36, σ1s11/34, mb3.7/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.20**	**81**	P		**P**	**13 01 56.3**	**-2.4**
DZM	**Mont Dzumac**	**14.11**	**261**	P		**P**	**13 03 00.1**	**+0.7**
DZM	**Mont Dzumac**	**14.11**	**261**	P		P	13 03 04.7	+5.2
	6.5nm,0.6s,baz=52,slow=18,SNR=5.5							
RTZ	**Ruatahuna**	**18.43**	**191**	P		**P**	**13 03 40.8**	**+0.1**
CTAO	**Charters Tower**	**33.02**	**264**	P		**P**	**13 05 50.0**	**+0.7**
CTAO				IAmb		IAmb	13 06 00.5	
	comp=Z,7.5nm,1.4s							
BBOO	**Buckleboo**	**42.11**	**243**	P		**P**	**13 07 02.7**	**-0.6**
BBOO				IAmb		IAmb	13 07 17.0	
	comp=Z,19nm,1.1s							
AS31	**Alice Springs**	**44.05**	**257**	P		**P**	**13 07 18.4**	**-0.2**
ASAR	**Alice Springs**	**44.05**	**257**	P		**P**	**13 07 18.1**	**-0.5**
ASAR	**Alice Springs**	**44.05**	**257**	P		**P**	**13 07 18.9**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=91,slow=7.8,SNR=44							
ASAR				PcP		**PcP**	**13 08 51.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=96,slow=4.2,SNR=7.4							
	comp=Z,1.5nm,0.6s							
WB0	**Warramunga Arr**	**44.11**	**262**	P

WB2				IAmb	IAmb	13 07 22.3	
	comp=Z,6.3nm,1.3s						
WRA	**Warramunga Arr**	**44.13 262**	P	**P**		**13 07 18.5**	**-0.7**
WRA	**Warramunga Arr**	**44.13 262**	P	**P**		**13 07 19.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=97,slow=7.5,SNR=23						
	comp=Z,0.7nm,0.3s						
PSA00	**Pilbara Seismi**	**57.20 257**	P	**P**		**13 08 53.1**	**-1.2**
PSA00				IAmb	IAmb	13 09 17.9	
	comp=Z,20nm,1.4s						
CASY	**Casey**	**63.73 205**	P	**P**		**13 09 36.5**	**0.0**
QSPA	**South Pole Qui**	**69.53 180**	P	**P**		**13 10 13.9**	**+1.3**
QSPA				IAmb	IAmb	13 10 23.6	
	comp=Z,1.7nm,1.4s						
QSPA	**South Pole Qui**	**69.53 180**	P	**P**		**13 10 14.2**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=225,slow=1.9,SNR=17						
	comp=Z,1.9nm,0.7s						
MJAR	**Matsushiro Arr**	**69.96 324**	P	**P**		**13 10 15.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=146,slow=6.6,SNR=5.1						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlovsk-**	**76.19 345**	P	**P**		**13 10 51.0**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=128,slow=5.3,SNR=9.1						
	comp=Z,3.3nm,0.7s						
KSRS	**Korea Array**	**76.61 319**	P	**P**		**13 10 52.6**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=128,slow=5.5,SNR=4.2						
	comp=Z,0.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**78.73 326**	P	**P**		**13 11 05.5**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=136,slow=3.5,SNR=4.8						
	comp=Z,2.1nm,0.7s						
NVAR	**Mina Array Bea**	**81.38 44**	P	**P**		**13 11 20.9**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=222,slow=8.5,SNR=9.1						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**87.47 58**	P	**P**		**13 11 51.2**	**+2.5**
	comp=Z,1.0nm,0.9s,baz=221,slow=5.0,SNR=9.9						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**88.46 13**	P	**P**		**13 11 51.9**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=218,slow=5.2,SNR=12						
	comp=Z,1.6nm,0.8s						
PDAR	**Pinedale Array**	**89.31 43**	P	**P**		**13 11 58.2**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=215,slow=3.3,SNR=11						
	comp=Z,0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.68 290**	P	**P**		**13 11 59.9**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=112,slow=3.1,SNR=6.3						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**96.74 25**	P	**P**		**13 12 30.5**	**+0.2**
	comp=Z,0.1nm,0.6s,baz=243,slow=4.8,SNR=2.1						
	comp=Z,0.1nm,0.6s						
MKAR	**Makanchi Array**	**110.88 313**	PKiKP		**PKiKP**	**13 17 28.1**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=170,slow=0.9,SNR=4.8						
BVAR	**Borovoye Array**	**118.81 320**	PKP		**PKPdf**	**13 17 43.4**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=120,slow=2.3,SNR=8.2						
ARCES	**ARCESS Array B**	**128.87 349**	PKP		**PKPdf**	**13 18 02.3**	**-1.2**
	comp=Z,3.0nm,1.0s,baz=46,slow=2.6,SNR=5.9						
FINES	**FINESS Array B**	**135.68 343**	PKP		**PKPdf**	**13 18 15.9**	**-0.6**
	comp=Z,2.6nm,1.0s,baz=130,slow=3.0,SNR=3.8						
HFS	**Hagfors**	**139.50 351**	PKhKP		PKPpre	13 18 13.5	
	comp=Z,4.0nm,1.0s,baz=46,slow=4.2,SNR=6.0						
AKASG	**Malin Array Be**	**142.82 331**	PKhKP		PKPpre	13 18 25.9	
	comp=Z,2.9nm,0.4s,baz=42,slow=4.4,SNR=19						
BRTR	**Keskin Array B**	**146.52 312**	PKPbc		**PKPbc**	**13 18 38.1**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=145,slow=5.1,SNR=6.3						
MMAI	**Mount Meron Ar**	**147.42 299**	PKPbc		**PKPbc**	**13 18 41.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=64,slow=6.6,SNR=4.3						
GERES	**GERESS Array B**	**150.11 344**	PKPbc		**PKPbc**	**13 18 47.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=352,slow=2.0,SNR=4.4						

IDC 15 13:35:03.4±382.0, 48°02N×49°94E, h0km, Error ellipse: s-maj=208.3km s-min=109.0km az=52.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**5.82**	**63**	I	I	14 08 20.0	
	baz=250,slow=335,SNR=2.2						
I43RU	**DUBNA INFRASON**	**11.66**	**323**	I	I	14 37 10.0	
	baz=135,slow=325,SNR=1.3						
I37NO	**I37NO**	**26.14**	**335**	I	I	16 20 30.0	
	baz=125,slow=326,SNR=1.8						

*RSPR **15** 13:36:04.2, 19°.08N×67°.53W, h46km±3km, MD2.9/4*
*SDD **15** 13:36:08.6±1.8, 18°.81N×67°.63W, h102km±23km, MD2.6, ML2.7, MW3.6*

ISC 15 13:36:05.1±6.6, 19°1N±0°.1×67°36W±0°.07, h39km±16km, n17, σ2s13/23, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.67**	**159**	⇑*eP*	**Pn**	**13 36 16.6**	**-1.5**
AGPR	**Aguadilla, PR**	**0.67**	**159**	*eS*	**Sn**	**13 36 27.5**	**+0.1**
AOPR	**Arecibo Observ**	**0.94**	**142**	⇓*eP*	**Pn**	**13 36 21.2**	**-0.7**
AOPR	**Arecibo Observ**	**0.94**	**142**	*eS*	**Sn**	**13 36 36.0**	**+1.9**
CRPR	**Cabo Rojo, PR**	**1.11**	**167**	⇓*eP*	**Pn**	**13 36 23.1**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.11**	**167**	*eS*	**Sn**	**13 36 37.2**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.11**	**167**	*ePg*	**Pn**	**13 36 28.4**	**+4.3**
CRPR				*eSg*	**Sn**	**13 36 41.3**	**+3.1**
CRPR				IAML		13 37 14.3	
	comp=N,59nm,3.0s						
PCDR	**Punta Cana, DR**	**1.12**	**239**	*iP*	**Pn**	**13 36 25.8**	**+1.5**
PCDR				*eSg*	**Sn**	**13 36 40.0**	**+1.5**
PCDR				IAML		13 36 41.7	
	comp=N,720nm,1.9s						
MLPR	**Magueyes Islan**	**1.16**	**165**	⇑*eP*	**Pn**	**13 36 23.3**	**-1.5**
MLPR	**Magueyes Islan**	**1.16**	**165**	*eS*	**Sn**	**13 36 38.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.16**	**165**	*ePg*	**Pn**	**13 36 27.7**	**+2.9**
MLPR				*eSg*	**Sn**	**13 36 42.3**	**+2.9**
MLPR				IAML		13 37 02.3	
	comp=N,41nm,3.7s						
CELP	**Cerrillos**	**1.26**	**144**	⇑*eP*	**Pn**	**13 36 25.7**	**-0.5**
CELP	**Cerrillos**	**1.26**	**144**	*eS*	**Sn**	**13 36 42.4**	**+0.5**
OBIP	**Obispado Ponce**	**1.27**	**145**	⇓*eP*	**Pn**	**13 36 25.7**	**-0.6**
MIDR	**Miches**	**1.60**	**266**	*ePg*	**Pn**	**13 36 31.5**	**+0.7**
MIDR				*eSg*	**Sn**	**13 36 48.4**	**-1.8**
MIDR				IAML		13 37 01.8	
	comp=N,39nm,2.4s						
SADR	**Isla Saona**	**1.61**	**236**	*ePg*	**Pn**	**13 36 31.2**	**+0.2**
SADR				*eSg*	**Sn**	**13 36 46.9**	**-3.8**
SADR				IAML		13 36 54.3	
	comp=N,165nm,1.9s						
SMDR	**Samana, DR**	**1.73**	**277**	*ePg*	**Pn**	**13 36 35.2**	**+2.6**
SMDR				*eSg*	**Sn**	**13 36 53.0**	**-0.6**
SMDR				IAML		13 37 18.0	
	comp=N,75nm,1.3s						

*IDC **15** 13:37:55.1±1.2, 21°.96S×169°.15E, h0km, mb4.0/7, mbtmp4.0/8, ML3.8/1, MS3.4/5, Error ellipse: s-maj=36.7km s-min=22.5km az=5.0*
*NEIC **15** 13:37:56.0±2.5, 22°.04S±0°.10×169°.19E±0°.09, h10km±2km, mb4.4/14, Error ellipse: s-maj=16.3km s-min=13.8km az=342.0*

ISC 15 13:37:59.2±0.9, 22°1S±0°.1×169°15E±0°.08, h31km, n31, σ1s38/30, mb4.1/12, MS3.4/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**1.67**	**251**		**Pn**	**13 38 26.7**	**+0.4**
PINNC				Sn	**Sn**	**13 38 48.2**	**+1.6**
OUENC	**Ouen Island N**	**2.17**	**260**		**Pn**	**13 38 33.4**	**+0.2**
ONTNC	**Ouen Toro**	**2.51**	**264**		**Pn**	**13 38 38.5**	**+0.6**
ONTNC				Sn	**Sn**	**13 39 07.5**	**0.0**
DZM	**Mont Dzumac**	**2.51**	**270**	Pn	**Pn**	**13 38 38.3**	**+0.3**
	18nm,0.3s,baz=114,slow=10,SNR=113						
DZM				Sn	**Sn**	**13 39 09.3**	**+1.6**
	49nm,0.3s,baz=202,slow=20,SNR=7.2						
DZM				LR	LR	13 39 14.9	
	comp=Z,238nm,18.2s,baz=316,slow=32						
	42nm,0.4s						
KOUNC	**Koumac, New Ca**	**4.78**	**288**		**Pn**	**13 39 10.2**	**+1.1**
RTZ	**Ruatahuna**	**17.80**	**160**		**P**	**13 42 05.8**	**+0.6**
RTZ				IAmb	IAmb	13 42 11.0	
	comp=Z,18nm,0.9s						
MRZ	**Mangatainoka R**	**19.31**	**165**	P	**P**	**13 42 20.2**	**-1.5**
MRZ				IAmb	IAmb	13 42 21.4	
	comp=Z,29nm,1.2s						
SNZO	**South Karori**	**19.74**	**168**	P	**P**	**13 42 25.1**	**-1.3**
CTA	**Charters Tower**	**21.46**	**271**	P	**P**	**13 42 45.8**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=98,slow=16,SNR=2.5						
	comp=Z,2.4nm,0.8s						
RPZ	**Rata Peaks**	**21.64**	**176**	LR	LR	13 50 09.8	
	comp=Z,119nm,18.6s,baz=254,slow=34						
STKA	**Stephens Creek**	**26.36**	**242**	LR	LR	13 53 01.6	
	comp=Z,64nm,18.1s,baz=31,slow=34						
AS31	**Alice Springs**	**32.47**	**260**	P	**P**	**13 44 25.6**	**-1.5**
ASAR	**Alice Springs**	**32.47**	**260**	P	**P**	**13 44 25.1**	**-2.0**
ASAR	**Alice Springs**	**32.47**	**260**	P	**P**	**13 44 27.5**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=97,slow=9.9,SNR=22						
	comp=Z,1.2nm,0.7s						
WB0	**Warramunga Arr**	**32.51**	**268**	P	**P**	**13 44 26.5**	**-1.0**
WB0				IAmb	IAmb	13 44 28.3	
	comp=Z,2.6nm,1.0s						
WB2	**Warramunga Arr**	**32.52**	**267**	P	**P**	**13 44 26.5**	**-1.0**
WB2				IAmb	IAmb	13 44 38.2	
	comp=Z,1.4nm,1.0s						
WRA	**Warramunga Arr**	**32.53**	**267**	P	**P**	**13 44 25.1**	**-2.5**
WRA	**Warramunga Arr**	**32.53**	**267**	P	**P**	**13 44 27.1**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=96,slow=7.8,SNR=5.5						
	comp=Z,0.7nm,0.6s						
MTN	**Manton Dam**	**37.32**	**278**	P	**P**	**13 45 08.7**	**-0.3**
MTN				IAmb	IAmb	13 45 13.3	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.96**	**267**	P	**P**	**13 45 36.4**	**-2.9**
SOEI	**Soe**	**44.71**	**279**	P	**P**	**13 46 07.7**	**-2.3**
MBWA	**Marble Bar**	**45.79**	**261**	P	**P**	**13 46 17.9**	**-0.5**
MBWA				IAmb	IAmb	13 46 29.7	
	comp=Z,13nm,1.1s						
NWAO	**Narrogin (SRO)**	**46.90**	**245**	LR	LR	14 04 35.8	
	comp=Z,51nm,19.5s,baz=4.0,slow=34						
MORW	**Morawa**	**48.09**	**250**	P	**P**	**13 46 34.8**	**-1.4**
MORW				IAmb	IAmb	13 46 52.8	
	comp=Z,8.7nm,1.1s						
VNDA	**Vanda**	**55.61**	**182**	LR	LR	14 08 38.2	
	comp=Z,72nm,18.3s,baz=228,slow=33						
CASY	**Casey**	**57.51**	**204**	P	**P**	**13 47 46.1**	**+0.9**
QSPA	**South Pole Qui**	**67.99**	**180**	P	**P**	**13 48 56.3**	**+1.0**
QSPA				IAmb	IAmb	13 49 12.6	
	comp=Z,3.5nm,1.1s						
QSPA	**South Pole Qui**	**67.99**	**180**	P	**P**	**13 48 57.7**	**+2.4**
	comp=Z,4.7nm,1.0s,baz=302,slow=1.7,SNR=8.6						
	comp=Z,4.7nm,1.0s						
SNAA	**Sanae**	**86.34**	**183**	P	**P**	**13 50 37.6**	**-0.3**
	comp=Z,4.0nm,1.1s,baz=222,slow=14,SNR=3.0						
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**89.43**	**323**	P	**P**	**13 50 53.7**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=141,slow=4.4,SNR=4.2						
	comp=Z,0.6nm,0.9s						
NVAR	**Mina Array Bea**	**90.73**	**49**	P	**P**	**13 51 00.1**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=225,slow=9.4,SNR=6.1						
	comp=Z,0.6nm,0.7s						

*SJA **15** 13:42:19.1±0.7, 21°.43S×66°.80W, h233km±5km, ML3.9, MW3.6*
*IDC **15** 13:42:20.2±1.2, 21°.32S×66°.86W, h208km±16km, mb4.2/1, mbtmp3.9/4, MS3.5/1, Error ellipse: s-maj=49.0km s-min=18.9km az=131.0*
*SCB **15** 13:42:21.3±1.4, 21°.51S×66°.88W, h211km±9km, ML4.0/4, MW4.0, Error ellipse: s-maj=4.6km s-min=3.8km az=0.0*

ISC 15 13:42:20.7±0.9, 21°51S±0°.04×66°87W±0°.04, h221km±7km, n63, σ1s04/93, 4C-2D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.17**	**78**	Pg	**Pn**	**13 42 54.7**	**+0.3**
MOCB				Sg	**S**	**13 43 19.1**	**-1.4**
MOCB				IAML		13 43 19.8	
	2µm,0.6s						
YJA	**Yavi**	**1.42**	**118**	*eP*	**Pn**	**13 42 56.6**	**+0.4**
YJA				*eS*	**S**	**13 43 24.0**	**+0.3**
LVC	**Limon Verde**	**2.19**	**240**	P	**Pn**	**13 43 03.9**	**+0.8**
	27nm,0.3s,baz=55,slow=7.3,SNR=95						
LVC				S	**S**	**13 43 35.9**	**-0.2**
	20nm,0.3s,baz=238,slow=20,SNR=32						
LVC	**Limon Verde**	**2.19**	**240**	⇓*iP*	**Pn**	**13 43 03.9**	**+0.8**
LVC				*i* S	**S**	**13 43 35.9**	**-0.2**
LVC				IAML		13 43 37.0	
	235nm,0.5s						
LVC	**Limon Verde**	**2.19**	**240**	Pg	**Pn**	**13 43 03.7**	**+0.6**
PB09	**IPOC Station P**	**2.23**	**262**	*eP*	**Pn**	**13 43 03.7**	**+0.4**
PB09				*eS*	**S**	**13 43 38.4**	**+2.0**
PB09	**IPOC Station P**	**2.23**	**262**	*eP*	**Pn**	**13 43 04.3**	**+0.9**
PB09				*i* S	**S**	**13 43 38.2**	**+1.9**
PB09				IAML		13 43 40.8	
	comp=E,99nm,0.3s						
PB09	**IPOC Station P**	**2.23**	**262**	Pg	**Pn**	**13 43 04.0**	**+0.7**
PB01	**IPOC Station P**	**2.49**	**280**	*eP*	**Pn**	**13 43 05.8**	**-0.2**
PB01				*eS*	**S**	**13 43 41.1**	**0.0**
PB01	**IPOC Station P**	**2.49**	**280**	*eP*	**Pn**	**13 43 06.1**	**+0.2**
PB01				*eS*	**S**	**13 43 40.7**	**-0.4**
PB01				IAML		13 43 41.6	
	comp=N,259nm,0.2s						
PB01	**IPOC Station P**	**2.49**	**280**	Pg	**Pn**	**13 43 06.5**	**+0.5**
PB08	**IPOC Station P**	**2.54**	**302**	*eP*	**Pn**	**13 43 07.4**	**+0.6**
PB08				*eS*	**S**	**13 43 40.5**	**-2.1**
PB08	**IPOC Station P**	**2.54**	**302**	⇑*iP*	**Pn**	**13 43 08.0**	**+1.1**
PB08				*eS*	**S**	**13 43 42.8**	**+0.2**
PB08				IAML		13 43 46.4	
	comp=E,116nm,0.2s						
PB08	**IPOC Station P**	**2.54**	**302**	Pg	**Pn**	**13 43 07.8**	**+1.0**
PB08				Sg	**S**	**13 43 42.1**	**-0.5**
PB08				IAML		13 43 45.3	
	comp=E,85nm,0.3s						
PB06	**IPOC Station P**	**2.78**	**244**	*eP*	**Pn**	**13 43 09.7**	**+0.5**
PB06				*eS*	**S**	**13 43 47.4**	**+0.5**
PB06	**IPOC Station P**	**2.78**	**244**	*eP*	**Pn**	**13 43 09.7**	**+0.5**
PB06				*i* S	**S**	**13 43 45.7**	**-1.2**
PB06				IAML		13 43 48.8	
	comp=N,139nm,0.1s						
PB06	**IPOC Station P**	**2.78**	**244**	Pg	**Pn**	**13 43 10.2**	**+1.0**
PB07	**IPOC Station P**	**2.82**	**265**	*eP*	**Pn**	**13 43 09.9**	**+0.2**
PB07				*eS*	**S**	**13 43 46.8**	**-0.9**
PB07				IAML		13 43 47.6	
	comp=Z,604nm,0.3s						
PB07	**IPOC Station P**	**2.82**	**265**	*eP*	**Pn**	**13 43 09.9**	**+0.2**
PB07				*i* S	**S**	**13 43 46.1**	**-1.6**
PB07				IAML		13 43 47.0	
	comp=E,544nm,0.3s						
PB07	**IPOC Station P**	**2.82**	**265**	Pg	**Pn**	**13 43 10.2**	**+0.5**
PB02	**IPOC Station P**	**2.83**	**273**	*eP*	**Pn**	**13 43 10.1**	**+0.4**
PB02				*eS*	**S**	**13 43 46.6**	**-1.3**
PB02				IAML		13 43 46.9	
	comp=Z,383nm,0.4s						
PB02	**IPOC Station P**	**2.83**	**273**	⇓*iP*	**Pn**	**13 43 10.1**	**+0.4**
PB02				*i* S	**S**	**13 43 46.2**	**-1.7**
PB02				IAML		13 43 47.2	
	comp=N,653nm,0.3s						
PB02	**IPOC Station P**	**2.83**	**273**	Pg	**Pn**	**13 43 10.0**	**+0.4**
GO01	**Chusmiza**	**2.85**	**310**	*eP*	**Pn**	**13 43 10.7**	**+0.3**
GO01				*eS*	**S**	**13 43 51.5**	**+2.6**
GO01	**Chusmiza**	**2.85**	**310**	*eP*	**Pn**	**13 43 10.9**	**+0.5**
GO01				*i* S	**S**	**13 43 51.0**	**+2.1**
GO01				IAML		13 43 53.9	
	comp=N,518nm,0.1s						
GO01	**Chusmiza**	**2.85**	**310**	Pg	**Pn**	**13 43 11.1**	**+0.8**
PB15	**IPOC Station P**	**2.94**	**234**	*eP*	**Pn**	**13 43 11.7**	**+0.6**
PB15				*eS*	**S**	**13 43 50.4**	**0.0**
PB15				IAML		13 43 55.6	
	comp=Z,596nm,0.2s						
PB15	**IPOC Station P**	**2.94**	**234**	*eP*	**Pn**	**13 43 11.3**	**+0.2**
PB15				*i* S	**S**	**13 43 50.2**	**-0.2**
PB15	**IPOC Station P**	**2.94**	**234**	Pg	**Pn**	**13 43 11.6**	**+0.5**
HMBC	**Humberstone**	**3.08**	**293**	*eP*	**Pn**	**13 43 12.4**	**-0.2**
HMBC				*eS*	**S**	**13 43 51.6**	**-1.4**
HMBC				IAML		13 43 52.4	
	comp=Z,227nm,0.2s						
HMBC	**Humberstone**	**3.08**	**293**	⇑*iP*	**Pn**	**13 43 12.4**	**-0.2**
HMBC				*i* S	**S**	**13 43 51.2**	**-1.8**
HMBC	**Humberstone**	**3.08**	**293**	Pg	**Pn**	**13 43 12.4**	**-0.2**
HMBC				Sg	**S**	**13 43 51.2**	**-1.8**
HMBC				IAML		13 43 52.3	
	comp=Z,458nm,0.3s						
SOEO	**Opoqueri**	**3.08**	**342**	Pg	**Pn**	**13 43 14.2**	**+1.2**
PB11	**IPOC Station P**	**3.14**	**303**	*eP*	**Pn**	**13 43 12.8**	**-0.5**
PB11				*eS*	**S**	**13 43 53.9**	**-0.4**
PB11				IAML		13 43 56.3	
	comp=Z,174nm,0.2s						
PB11	**IPOC Station P**	**3.14**	**303**	⇑*iP*	**Pn**	**13 43 13.4**	**+0.1**
PB11	**IPOC Station P**	**3.14**	**303**	Pg	**Pn**	**13 43 13.4**	**+0.1**
PB11				Sg	**S**	**13 43 52.7**	**-1.6**
PB11				IAML		13 43 54.7	
	comp=Z,425nm,0.1s						
PATCX	**Punta Patache**	**3.14**	**282**	*eP*	**Pn**	**13 43 13.5**	**+0.3**
PB04	**IPOC Station P**	**3.16**	**254**	*eP*	**Pn**	**13 43 14.0**	**+0.5**
PB04				*eS*	**S**	**13 43 53.0**	**-1.7**
PB04				IAML		13 43 55.2	
	comp=Z,109nm,0.1s						
PB04	**IPOC Station P**	**3.16**	**254**	*eP*	**Pn**	**13 43 13.8**	**+0.4**
PB04				*i* S	**S**	**13 43 52.7**	**-1.9**
PB04	**IPOC Station P**	**3.16**	**254**	Pg	**Pn**	**13 43 13.9**	**+0.4**
TA01	**Diego Aracena**	**3.24**	**286**	*eP*	**Pn**	**13 43 13.9**	**-0.2**
TA01				*eS*	**S**	**13 43 54.4**	**-1.6**
TA01				IAML		13 43 54.9	
	comp=Z,93nm,0.3s						
TA01	**Diego Aracena**	**3.24**	**286**	*eP*	**Pn**	**13 43 14.0**	**-0.2**
TA01	**Diego Aracena**	**3.24**	**286**	Pg	**Pn**	**13 43 14.1**	**-0.1**
TA02	**Huaiquique**	**3.29**	**291**	*eP*	**Pn**	**13 43 15.2**	**+0.3**
TA02	**Huaiquique**	**3.29**	**291**	Pg	**Pn**	**13 43 14.9**	**0.0**
SOTI	**Planta Incahua**	**3.44**	**61**	Pg	**Pn**	**13 43 17.1**	**+0.3**
SOET	**ToroToro**	**3.52**	**17**	Pg	**Pn**	**13 43 18.4**	**+0.4**
AOEA	**Aiquile**	**3.65**	**25**	Pg	**Pn**	**13 43 19.5**	**0.0**
PB16	**IPOC Station P**	**4.02**	**321**	*eP*	**Pn**	**13 43 24.9**	**+0.7**
PB16				*eS*	**S**	**13 44 15.5**	**+1.7**
PB16	**IPOC Station P**	**4.02**	**321**	⇑*iP*	**Pn**	**13 43 25.4**	**+1.2**
PB16	**IPOC Station P**	**4.02**	**321**	Pg	**Pn**	**13 43 25.4**	**+1.2**
PB12	**IPOC Station P**	**4.35**	**311**	*eP*	**Pn**	**13 43 26.9**	**-0.8**
PB12				*eS*	**S**	**13 44 17.2**	**-3.1**
PB12				IAML		13 44 20.0	
	comp=Z,42nm,0.2s						
GO02	**Mina Guanaco**	**4.42**	**214**	Pg	**Pn**	**13 43 29.1**	**+0.4**
SOEJ	**Jacaque**	**4.68**	**344**	Pg	**Pn**	**13 43 33.6**	**+1.3**
BBOE	**La Paz, Chanca**	**4.79**	**347**	Pg	**Pn**	**13 43 35.3**	**+1.6**
BBOD	**La Paz, Gloria**	**5.12**	**341**	Pg	**Pn**	**13 43 38.6**	**+0.9**
LPAZ	**La Paz**	**5.33**	**347**	Pg	**Pn**	**13 43 41.4**	**+0.9**
SIV	**San Ignacio**	**7.76**	**46**	P	**Pn**	**13 44 09.5**	**-1.6**
	comp=Z,3.5nm,0.4s,baz=244,slow=11,SNR=29						
PLCA	**Paso Flores**	**19.42**	**188**	P	**Pn**	**13 46 33.4**	**-1.0**
	comp=Z,1.1nm,1.0s,baz=16,slow=12,SNR=3.2						
SJG	**San Juan**	**39.38**	**1**	LR	LR	14 08 43.3	
	comp=Z,65nm,18.1s,baz=134,slow=40						
TORD	**Torodi Ar. Bea**	**75.57**	**69**	P	**P**	**13 53 41.1**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=257,slow=5.9,SNR=4.8						
	comp=Z,1.9nm,0.3s						
MKAR	**Makanchi Array**	**144.50**	**37**	PKP	**PKPdf**	**14 01 31.2**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=331,slow=3.1,SNR=11						
SONM	**Songino Array**	**153.18**	**10**	PKPbc	**PKiKP**	**14 01 53.8**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=318,slow=0.9,SNR=2.5						

*TIR **15** 13:43:31.8, 40°.10N×19°.91E, h0km±2km, Md2.8, Ml2.2*
*ATH **15** 13:43:31.3, 40°.11N×19°.81E, h6km±2km, ML2.2/7, Manual Solution by G.Panopoulou This location: 2020/05/10 19:09:23 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 15 13:43:32.1±1.1, 40°08N±0°.03×19°83E±0°.04, h7km±11km, n24, σ1s01/34, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.24**	**146**	P	**Pg**	**13 43 37.2**	**+0.4**
	baz=163						
SRN				S	**Sg**	**13 43 42.0**	**+2.0**
	baz=163						
SRN				AMP			
	comp=E,2.4nm,0.1s,baz=163						
KASA	**Kassiopi**	**0.34**	**166**	P	**Pg**	**13 43 39.0**	**+0.2**
KASA				S	**Sg**	**13 43 43.3**	**+0.1**
KEK	**Kerkira**	**0.36**	**183**	P	**Pg**	**13 43 37.8**	**-1.4**
KEK				S	**Sg**	**13 43 43.6**	**-0.4**
KRK1	**kERKIRA**	**0.46**	**171**	P	**Pg**	**13 43 41.0**	**-0.1**
KRK1				S	**Sg**	**13 43 47.8**	**+0.7**
VLO	**Vlora**	**0.47**	**327**	P	**Pb**	**13 43 42.7**	**0.0**
	baz=319						
VLO				S	**Sb**	**13 43 50.2**	**+0.4**
	baz=319						
VLO				AMP			
	comp=E,2.0nm,0.2s,baz=319						
LSK	**Leskovik**	**0.60**	**83**	P	**Pg**	**13 43 42.6**	**-1.0**
	baz=84						
LSK				S	**Sb**	**13 43 51.5**	**-2.2**
	baz=84						
LSK				AMP			
	comp=N,0.5nm,0.1s,baz=84						
IGT	**Igoumenitsa**	**0.67**	**144**	P	**Pg**	**13 43 45.2**	**+0.2**
	baz=150						
IGT				S	**Sb**	**13 43 55.7**	**+0.1**
	baz=150						
IGT				AMP			
	comp=E,0.5nm,0.2s,baz=150						
IGT	**Igoumenitsa**	**0.67**	**144**	P	**Pg**	**13 43 44.8**	**-0.2**
IGT				S	**Sg**	**13 43 54.4**	**+0.7**
JAN	**Janina**	**0.89**	**118**	P	**Pb**	**13 43 49.6**	**-0.4**
NEST	**Nestorio**

	comp=Z,1.0nm,0.2s							
RUF				SG	Sb	14 07 46.0	-0.8	
BURU	**Burvik**	**2.58**	**336**	SG	Sb	14 07 46.2	-1.1	
JOF	**Joensuu**	**3.52**	**76**	SB	Sb	14 08 11.1	-3.1	

*HEL **15** 14:06:34.8±0.2,67°.20N×20°.59E,h0km,ML1.1,Suspected explosion*
*BER **15** 14:06:35.7±1.4,66°.95N×21°.09E,h0km,ML1.4,Suspected explosion*

UPP 15 14:06:34.8±0.0,67°.19N×20°.67E,h0km,ML2.6, Confirmed Induced event,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**208**	P	Pg	14 06 36.7	+0.3
DUNU				S	Sg	14 06 38.0	+0.6
MASU	**Masugnsbyn**	**0.58**	**62**	P	Pg	14 06 45.9	+0.1
MASU				S	Sg	14 06 54.0	+0.7
RATU	**Laukkuluspa**	**0.76**	**327**	P	Pg	14 06 49.1	-0.2
KUA	**Kurravaara**	**0.77**	**351**	P	Pg	14 06 49.3	-0.4
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	14 06 51.0	-0.2
PAJU	**Pajala**	**0.97**	**99**	P	Pg	14 06 52.7	-0.7
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	14 06 52.7	-0.7
PAJU				SB	Sg	14 07 06.7	+0.8
LANU	**Lannavaara**	**1.00**	**30**	P	Pg	14 06 53.2	-0.6
LANU	**Lannavaara**	**1.00**	**30**	PG	Pg	14 06 53.2	-0.7
HARU	**Harads**	**1.04**	**173**	P	Pg	14 06 53.9	-0.8
KLF	**Kolari**	**1.28**	**87**	PG	Pg	14 06 58.2	-1.1
KLF				MSG		14 07 14.5	
	comp=Z,1.1nm,0.2s						
KLF				SB	Sg	14 07 15.9	-0.1
HEF	**Hetta**	**1.67**	**42**	*e*P	Pn	14 07 05.0	-0.2
HEF				*e*S	Sn	14 07 26.6	-0.7
HEF	**Hetta**	**1.67**	**42**	PG	Pn	14 07 04.8	-0.4
	baz=221						
HEF				MSG		14 07 25.1	
	comp=Z,1.2nm,0.2s						
HEF				SG	Sn	14 07 26.6	-0.7
KALU	**Kalix**	**1.72**	**140**	P	Pn	14 07 06.2	+0.3
KALU	**Kalix**	**1.72**	**140**	PB	Sg	14 07 29.7	-0.2
KALU	**Kalix**	**1.72**	**140**	PG	Pn	14 07 06.1	+0.2
	baz=323						
KALU				SN	Sg	14 07 29.7	-0.2
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	14 07 06.2	0.0
TOF	**Tornio**	**1.84**	**126**	PB	Sg	14 07 33.2	-0.5
TOF	**Tornio**	**1.84**	**126**	PG	Pn	14 07 08.3	+0.8
TOF				MSG		14 07 30.5	
	comp=Z,1.5nm,0.2s						
TOF				SG	Sg	14 07 33.2	-0.5
KTK1	**Kautokeino**	**2.06**	**27**	*e*P	Pb	14 07 12.4	-0.7
KTK1				*e*S	Sn	14 07 38.1	+1.0
KTK1				IAML		14 07 40.6	
	comp=Z,4.7nm,0.4s						
KTK1	**Kautokeino**	**2.06**	**27**	PG	Pb	14 07 12.2	-0.9
KTK1				SG	Sb	14 07 39.6	+0.4
FAUS	**Fauske**	**2.10**	**278**	*e*P	Pb	14 07 12.8	-0.8
FAUS				*e*S	Sb	14 07 40.6	+0.4
FAUS				IAML		14 07 42.4	
	comp=Z,5.4nm,0.9s						
RNF	**Rovaniemi**	**2.19**	**103**	PB	Sb	14 07 43.2	+0.4
RNF	**Rovaniemi**	**2.19**	**103**	PG	Pn	14 07 13.5	+1.2
RNF				SG	Sb	14 07 43.2	+0.4
SGF	**Sodankyl**	**2.29**	**81**	PG	Pn	14 07 15.1	+1.5
	baz=267						
SGF				SG	Sb	14 07 45.7	+0.1
BURU	**Burvik**	**2.64**	**173**	SN	Sn	14 07 47.2	-4.0
RANF	**Ranua**	**2.71**	**113**	SG	Sb	14 07 58.6	+0.6
ARA0	**ARCESS Array S**	**2.96**	**35**	*e*P	Pn	14 07 23.7	+0.8
ARA0				*e*S	Sn	14 08 00.3	+1.2
ARA0	**ARCESS Array S**	**2.96**	**35**	PB	Pb	14 07 25.7	-2.6
	baz=216						
ARA0				SG	Sb	14 08 05.7	+0.8
KMNF	**Kaamanen**	**3.07**	**47**	SN	Sn	14 08 03.4	+1.5
RAJF	**Raja-Jooseppi**	**3.17**	**63**	SG	Sb	14 08 13.0	+2.0
OUF	**Merijarvi**	**3.30**	**148**	PG	Pb	14 07 35.1	+1.1
OUF	**Merijarvi**	**3.30**	**148**	SG	Pb	14 07 35.1	+1.1
UMAU	**Umeaa**	**3.33**	**180**	PG	Pb	14 07 34.9	+0.4
UMAU	**Umeaa**	**3.33**	**180**	SG	Pb	14 07 34.9	+0.4
KEV	**Kevo**	**3.48**	**39**	PG	Pb	14 07 38.4	+1.4
KEV				SN	Sn	14 08 12.0	+0.3
OLKF	**Oulanka, Finla**	**3.57**	**100**	PN	Pb	14 07 40.6	+1.9
OLKF	**Oulanka, Finla**	**3.57**	**100**	PG	Pb	14 07 40.6	+1.9
HUSU	**Husum**	**3.92**	**190**	SG	Pb	14 07 41.7	-2.9
HUSU	**Husum**	**3.92**	**190**	PB	Pb	14 07 41.7	-2.9

*IDC **15** 14:10:58.1±4.0,12°.47S×166°.39E,h81km±31km,mb3.7/5, mbtmp4.1/6,MS3.5/3,Error ellipse: s-maj=39.8km s-min=23.9km az=59.0*
*NOU **15** 14:11:15.9,14°.02S×166°.43E,h0km,mb4.5/11,Vanuatu Islands*

ISC 15 14:11:00.2±1.2,12°.5S±0°.1×166°.3E±0°.2,h100km,n17, σ1§19/17,mb3.7/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.98**	**295**	P	**Pn**	**14 12 39.3**	**-0.5**
	366nm,0.3s,baz=178,slow=19,SNR=3.9						
HNR				S	**Sn**	**14 13 55.6**	**-2.1**
	294nm,0.3s,baz=164,slow=20,SNR=1.9						
HNR				LR	LR	14 15 27.5	
	comp=Z,1μm,21.6s,baz=99,slow=38						
KOUNC	**Koumac, New Ca**	**8.22**	**194**	P	**Pn**	**14 12 56.9**	**+0.1**
DZM	**Mont Dzumac**	**9.50**	**179**	P	**Pn**	**14 13 13.2**	**-1.0**
DZM	**Mont Dzumac**	**9.50**	**179**	P	**Pn**	**14 13 12.9**	**-1.3**
	12nm,0.3s,baz=90,slow=3.7,SNR=32						
DZM				LR	LR	14 16 12.2	
	comp=Z,117nm,20.8s,baz=178,slow=33						
YATNC	**Mamie plateau,**	**9.50**	**177**	P	**Pn**	**14 13 13.0**	**-1.2**
NOUC	**Port Laguerre**	**9.53**	**180**	P	**Pn**	**14 13 14.1**	**-0.4**
ONTNC	**Ouen Toro**	**9.74**	**179**	P	**Pn**	**14 13 16.8**	**-0.5**
OUENC	**Ouen Island, N**	**9.86**	**177**	P	**Pn**	**14 13 18.4**	**-0.6**
PINNC	**Pines Island,**	**10.10**	**174**	P	**Pn**	**14 13 22.3**	**+0.1**
PMG	**Port Moresby**	**19.07**	**277**	P	**Pn**	**14 15 19.2**	**+2.4**
	3.8nm,0.3s,baz=73,slow=4.3,SNR=9.5						
STKA	**Stephens Creek**	**29.80**	**226**	LR	LR	14 27 39.9	
	comp=Z,67nm,20.2s,baz=4.2,slow=34						
WRA	**Warramunga Arr**	**31.55**	**252**	P	**P**	**14 17 13.2**	**-0.2**
	0.6nm,0.7s,baz=84,slow=8.4,SNR=3.8 0.6nm,0.7s						
ASAR	**Alice Springs**	**32.67**	**246**	P	**P**	**14 17 23.6**	**+0.5**
	1.5nm,0.7s,baz=69,slow=9.7,SNR=32 1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.22**	**294**	P	**P**	**14 22 22.4**	**+1.4**
	0.9nm,0.8s,baz=118,slow=3.9,SNR=7.4 0.9nm,0.8s						
SONM	**Songino Array**	**80.18**	**324**	P	**P**	**14 22 59.8**	**+0.1**
	0.4nm,0.4s,baz=137,slow=6.1,SNR=11 0.4nm,0.4s						
MKAR	**Makanchi Array**	**94.98**	**317**	P	**P**	**14 24 11.7**	**+0.1**
	0.9nm,0.7s,baz=97,slow=6.4,SNR=11 0.9nm,0.7s						
ARCES	**ARCESS Array B**	**117.89**	**345**	PKP	**PKiKP**	**14 29 33.1**	**-1.4**
	3.1nm,1.0s,baz=101,slow=1.8,SNR=1.3						

*NEIC **15** 14:13:13.2±1.9,6°.0S±0°.1×155°.0E±0°.2,h180km±9km, mb4.6/24,Error ellipse: s-maj=29.3km s-min=9.7km az=47.0*
*IDC **15** 14:13:17.5±7.3,6°.17S×154°.91E,h212km±73km,mb3.5/5, mbtmp4.2/7,MS3.5/1,Error ellipse: s-maj=31.7km s-min=22.5km az=2.0*

ISC 15 14:13:15.0±0.9,6°.1S±0°.1×154°.9E±0°.1,h200km,n36, σ1§16/35,mb4.5/16,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.34**	**304**	Pn	**Pn**	**14 14 05.6**	**-3.2**
COEN	**Coen**	**13.96**	**235**	P	**P**	**14 16 26.9**	**+0.4**
CTA	**Charters Tower**	**16.27**	**210**	P	**Pn**	**14 16 54.4**	**+1.7**
	5.9nm,0.8s,baz=35,slow=11,SNR=9.3						
CTAO	**Charters Tower**	**16.27**	**210**	P	**Pn**	**14 16 53.5**	**+0.9**
KOUNC	**Koumac, New Ca**	**17.00**	**149**	P	**P**	**14 16 58.7**	**-1.3**
KOUNC				IAmb	IAmb	14 17 13.4	
	comp=Z,19nm,1.0s						
DZM	**Mont Dzumac**	**19.40**	**146**	P	**P**	**14 17 26.6**	**+0.5**
DZM	**Mont Dzumac**	**19.40**	**146**	P	**Pn**	**14 17 27.0**	**-2.7**
	comp=Z,23nm,0.5s,baz=263,slow=8.8,SNR=30						
OUENC	**Ouen Island, N**	**19.90**	**146**	P	**P**	**14 17 30.2**	**-1.1**
FAKI	**Fak Fak**	**22.83**	**277**	P	**P**	**14 18 01.4**	**+0.4**
FAKI				IAmb	IAmb	14 18 16.1	
	comp=Z,32nm,1.2s						
WR0	**Warramunga Arr**	**24.14**	**233**	P	**P**	**14 18 14.1**	**+1.3**
WB0	**Warramunga Arr**	**24.15**	**234**	P	**P**	**14 18 14.0**	**+1.0**
WB0				IAmb	IAmb	14 18 16.1	
	comp=Z,10nm,0.6s						
WRAB	**Tennant Creek**	**24.27**	**234**	P	**P**	**14 18 13.7**	**-0.5**
WRAB				IAmb	IAmb	14 18 17.4	
	comp=Z,10nm,0.8s						
WB2	**Warramunga Arr**	**24.28**	**234**	P	**P**	**14 18 15.2**	**+1.0**
WB2				IAmb	IAmb	14 18 17.5	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**24.29**	**234**	P	**P**	**14 18 14.0**	**-0.2**
WRA	**Warramunga Arr**	**24.29**	**234**	P	**P**	**14 18 15.4**	**+1.1**
	comp=Z,7.0nm,0.5s,baz=57,slow=10.0,SNR=61 comp=Z,7.0nm,0.5s						
MTN	**Manton Dam**	**24.40**	**252**	P	**P**	**14 18 15.3**	**+0.1**
MTN				IAmb	IAmb	14 18 56.3	
	comp=Z,24nm,1.2s						
ARMA	**Armidale**	**24.40**	**187**	P	**P**	**14 18 15.2**	**0.0**
ARMA				IAmb	IAmb	14 18 42.7	
	comp=Z,27nm,1.5s						
AS31	**Alice Springs**	**26.73**	**227**	P	**P**	**14 18 35.8**	**-0.4**
ASAR	**Alice Springs**	**26.73**	**227**	P	**P**	**14 18 36.0**	**-0.2**
ASAR	**Alice Springs**	**26.73**	**227**	P	**P**	**14 18 36.6**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=57,slow=9.2,SNR=33 comp=Z,1.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.97**	**245**	P	**P**	**14 19 13.1**	**-0.6**
BBOO	**Buckleboo**	**31.87**	**211**	P	**P**	**14 19 20.6**	**-0.9**
BBOO				IAmb	IAmb	14 19 46.0	
	comp=Z,16nm,1.2s						
TOLI2	**Tolitoli**	**34.84**	**281**	P	**P**	**14 19 47.7**	**+0.3**
TOLI2				IAmb	IAmb	14 20 25.6	
	comp=Z,10nm,1.0s						
HIZ	**Hauiti**	**36.99**	**154**	P	**P**	**14 20 04.7**	**-0.6**
PSA00	**Pilbara Seismi**	**37.26**	**242**	P	**P**	**14 20 07.2**	**-0.6**
URZ	**Urewera**	**37.83**	**151**	LR	LR	14 33 36.3	
	comp=Z,75nm,19.9s,baz=307,slow=32						
RTZ	**Ruatahuna**	**38.05**	**151**	P	**P**	**14 20 15.4**	**+1.2**
RTZ				IAmb	IAmb	14 20 17.6	
	comp=Z,17nm,0.8s						
MRNZ	**Matariki Terra**	**38.59**	**158**	P	**P**	**14 20 20.1**	**+1.5**
THZ	**Tophouse**	**38.96**	**158**	P	**P**	**14 20 22.0**	**+0.2**
THZ				IAmb	IAmb	14 20 23.3	
	comp=Z,13nm,0.8s						
TCW	**Tory Channel**	**39.01**	**157**	P	**P**	**14 20 22.8**	**+0.7**
MRZ	**Mangatainoka R**	**39.08**	**155**	P	**P**	**14 20 22.9**	**+0.2**
LTZ	**Lake Taylor**	**39.63**	**160**	P	**P**	**14 20 28.1**	**+0.8**
LTZ				IAmb	IAmb	14 20 34.1	
	comp=Z,33nm,1.4s						
SONM	**Songino Array**	**68.54**	**327**	P	**P**	**14 23 58.0**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=142,slow=6.8,SNR=4.8 comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**82.69**	**319**	P	**P**	**14 25 17.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=106,slow=4.4,SNR=4.3 comp=Z,0.4nm,0.8s						
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**14 25 23.1**	**+0.9**
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**14 25 23.0**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=138,slow=3.5,SNR=6.2 comp=Z,1.2nm,0.8s						

IDC 15 14:15:01.1±4.6,18°.88S×172°.95W,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=187.8km s-min=38.9km az=140.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.41**	**261**	P	P	14 22 24.6	0.0
	1.0nm,0.6s,baz=90,slow=7.1,SNR=1.5 1.0nm,0.6s						
STKA	**Stephens Creek**	**42.77**	**243**	P	P	14 23 00.4	-0.1
	1.3nm,0.7s,baz=100,slow=6.1,SNR=2.5 1.3nm,0.7s						
ASAR	**Alice Springs**	**49.53**	**255**	P	P	14 23 53.9	-0.1
	0.7nm,0.5s,baz=93,slow=7.9,SNR=22 0.7nm,0.5s						
WRA	**Warramunga Arr**	**49.56**	**260**	P	P	14 23 54.0	-0.2
	0.4nm,0.5s,baz=97,slow=6.8,SNR=6.4 0.4nm,0.5s						
ILAR	**Eielson Array**	**85.76**	**11**	P	P	14 27 41.7	0.0
	0.3nm,0.8s,baz=221,slow=6.3,SNR=2.2 0.3nm,0.8s						

TAP 15 14:21:01.4,23°.16N×120°.65E,h9km,ML2.1,6C-8D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTP	**Ta-pu**	**0.10**	**338**	*i* P	Pg	14 21 04.5	+0.6
	baz=342						
WTP				*i* S	Sg	14 21 06.5	+0.9
	baz=342						
STYT	**Tauyuan**	**0.10**	**87**	⇓*i* P	Pg	14 21 04.7	+0.8
	baz=88						
STYT				*i* S	Sg	14 21 06.9	+1.2
	baz=88						
SGST	**Jiashian**	**0.10**	**220**	⇑*i* P	Pg	14 21 03.7	-0.2
	baz=217						
SGST				*i* S	Sg	14 21 06.2	+0.5
	baz=217						
STYH	**Taoyuan**	**0.11**	**84**	⇓*i* P	Pg	14 21 05.0	+0.9
	baz=82						
STYH				*i* S	Sg	14 21 07.2	+1.2
	baz=82						
CHN1	**Nanshi**	**0.12**	**283**	⇓*i* P	Pg	14 21 05.0	+0.8
	baz=285						
CHN1				*i* S	Sg	14 21 07.6	+1.5
	baz=285						
TPUB	**Ta-pu**	**0.14**	**351**	⇑*i* P	Pg	14 21 05.3	+0.7
	baz=352						
TPUB				*i* S	Sg	14 21 08.1	+1.2
	baz=352						
TPUB	**Ta-pu**	**0.14**	**351**	P	Pg	14 21 05.1	+0.5
SNST	**Tainan City**	**0.16**	**293**	*i* P	Pg	14 21 05.8	+1.0
	baz=295						
SNST				S	Sg	14 21 09.3	+2.2
	baz=295						
TWK	**Hsinying**	**0.19**	**306**	⇑*i* P	Pg	14 21 06.4	+1.1
	baz=308						
TWK				*i* S	Sg	14 21 09.3	+1.3
	baz=308						
CHN4	**Tsaushan**	**0.20**	**344**	⇑*i* P	Pg	14 21 06.5	+1.0
	baz=345						
CHN4				*i* S	Sg	14 21 10.3	+1.9
	baz=345						
WCKO	**Fanlu**	**0.28**	**351**	P	Pb	14 21 08.3	-0.3
	baz=351						
WCKO				*i* S	Sb	14 21 13.1	-0.4
	baz=351						
SCST	**Cishan**	**0.31**	**208**	*i* P	Pb	14 21 09.2	+0.1
	baz=209						
SCST				*e*S	Sb	14 21 16.2	+2.0
	baz=209						
SHHT	**Tainan City**	**0.31**	**244**	*e*P	Pb	14 21 10.4	+1.3
	baz=258						
SHHT				S	Sb	14 21 17.1	+2.8
	baz=258						
ELDTW	**Lidau**	**0.34**	**85**	⇓*i* P	Pb	14 21 09.2	-0.4
	baz=84						
ELDTW				S	Sb	14 21 14.2	-0.9
	baz=84						
ALS	**Alishan**	**0.38**	**22**	*i* P	Pb	14 21 09.8	-0.6
	baz=22						
ALS				*i* S	Sb	14 21 16.3	-0.2
	baz=22						
TWM1	**Shoushan**	**0.40**	**213**	P	Pn	14 21 11.9	-1.3
	baz=202						
CHY	**Chiayi**	**0.40**	**328**	P	Pb	14 21 10.8	+0.2
	baz=330						
CHY				*e*S	Sb	14 21 17.9	+1.1
	baz=330						
ICHU	**Yijhu**	**0.40**	**300**	*e*P	Pb	14 21 10.8	+0.2
	baz=302						
ICHU				*e*S	Sb	14 21 18.4	+1.6
	baz=302						
CHN2	**Minshiung**	**0.41**	**336**	*e*P	Pb	14 21 11.0	+0.2
	baz=337						
CHN2				*e*S	Sb	14 21 18.2	+1.2
	baz=337						
CHN8	**Yiju**	**0.45**	**295**	*e*P	Pb	14 21 11.7	+0.3
	baz=297						
CHN8				*e*S	Sb	14 21 19.6	+1.4
	baz=297						
TSMG	**Majia**	**0.45**	**181**	*e*P	Pb	14 21 11.0	-0.4
	baz=175						
TSMG				*e*S	Sb	14 21 18.1	-0.2
	baz=175						
SGLT	**Jiouru**	**0.46**	**199**	*e*P	Pn	14 21 12.8	-1.2
	baz=191						
LONT	**Longtian**	**0.51**	**120**	*e*P	Pb	14 21 12.7	+0.3
	baz=110						
EHD	**Haiduan**	**0.51**	**91**	⇑P	Pb	14 21 12.3	-0.2
	baz=84						
EHD				S	Sb	14 21 19.9	-0.1
	baz=84						
TWG	**Pinlang**	**0.51**	**131**	⇓*i* P	Pb	14 21 12.7	+0.2
	baz=131						
TWG				S	Sb	14 21 20.7	+0.6
	baz=131						
TWGBT	**Beinan**	**0.52**	**131**	⇓P	Pb	14 21 12.7	0.0
	baz=131						
TWGBT				*e*S	Sb	14 21 20.8	+0.5
	baz=131						
TSCK	**Chigu Township**	**0.52**	**269**	*e*P	Pb	14 21 13.2	+0.6
	baz=283						
ECS	**Chishang**	**0.53**	**97**	*e*P	Pb	14 21 12.8	+0.1
	baz=91						
WGK	**Gukeng**	**0.53**	**351**	*e*P	Pb	14 21 13.5	+0.6
	baz=352						
WGK				*e*S	Sb	14 21 22.1	+1.4
	baz=352						
WDLH	**Douliu**	**0.54**	**349**	P	Pb	14 21 13.4	+0.5
	baz=349						
WDLH				S	Sb	14 21 22.2	+1.3
	baz=349						
MASBT	**Mashibuluo**	**0.54**	**182**	⇑P	Pb	14 21 13.0	-0.1
	baz=177						
MASBT				S	Sb	14 21 20.8	-0.2
	baz=177						
WTK	**Tuku**	**0.58**	**335**	*e*P	Pb	14 21 14.0	+0.3
	baz=336						
WTK				*i* S	Sb	14 21 22.9	+0.9
	baz=336						
WSF	**Szhu**	**0.62**	**320**	*e*P	Pb	14 21 15.2	+0.8
	baz=322						
WSF				*e*S	Sb	14 21 23.9	+0.7
	baz=322						
TWF1	**Yuli**	**0.62**	**72**	⇓*i* P	Pb	14 21 14.4	0.0
	baz=71						
TWF1				*e*S	Sb	14 21 22.8	-0.5
	baz=71						
ECL	**Taimali**	**0.62**	**154**	*e*P	Pb	14 21 14.8	+0.4
	baz=153						
ECL				*e*S	Sb	14 21 23.3	+0.1
	baz=153						
EDH	**Donghe**	**0.63**	**107**	*e*P	Pb	14 21 14.2	-0.3
	baz=106						
EDH				*e*S	Sb	14 21 24.4	+1.1
	baz=106						
WSSB	**Gushan**	**0.63**	**215**	*e*P	Pn	14 21 17.4	+0.9
	baz=232						
YULB	**Yu-li**	**0.64**	**68**	⇓P	Pb	14 21 14.4	-0.3
	baz=67						
YULB				S	Sg	14 21 22.8	+0.7
	baz=67						
EYUL	**Yuli**	**0.64**	**73**	*e*P	Pb	14 21 14.5	-0.2
	baz=72						
EYUL				*e*S	Sb	14 21 23.1	-0.6
	baz=72						
CHKT	**Chengkung**	**0.66**	**95**	*i* P	Pb	14 21 14.8	-0.2
	baz=94						
WJS	**Zhushan**	**0.66**	**6**	*e*P	Pb	14 21 15.5	+0.4
	baz=5.0						
CHKH	**Chenggong**	**0.68**	**87**	*e*P	Pb	14 21 15.7	+0.3
	baz=86						
SSLB	**Suanglung**	**0.69**	**24**	*e*P	Pg	14 21 14.5	-0.2
	baz=31						
EHY	**Hungye**	**0.71**	**60**	*e*P	Pb	14 21 16.1	+0.3
	baz=69						
EHY				*e*S	Sb	14 21 25.5	-0.1
	baz=69						
WNT	**Mingjian**	**0.72**	**2**	P	Pb	14 21 16.7	+0.7
	baz=3.0						
WNT				*e*S	Sn	14 21 27.8	-1.0
	baz=3.0						
VWDT	**VWDT**	**0.74**	**37**	*e*P	Pb	14 21 17.1	+0.7
	baz=46						
SMLT	**Sun Moon Lake**	**0.76**	**17**	P	Pb	14 21 17.1	+0.3
	baz=23						
TYC	**Yuchr**	**0.77**	**14**	*e*P	Pb	14 21 17.1	+0.3
	baz=14						
TYC				*e*S	Sn	14 21 29.5	-0.4
	baz=14						
WRL	**Guolierlin Hig**	**0.78**	**341**	*e*P	Pb	14 21 16.9	-0.3
	baz=330						
WRL				*i* S	Sb	14 21 28.5	+0.7
	baz=330						
HGSD	**Ruisui**	**0.78**	**65**	*e*P	Pb	14 21 17.8	+0.7
	baz=64						
SCZT	**Fangliau**	**0.78**	**182**	*e*P	Pb	14 21 16.9	-0.2
	baz=175						
EAST	**Anshuo**	**0.79**	**167**	*e*P	Pb	14 21 17.9	+0.6
	baz=167						
WARBT	**Fenglin Townsh**	**0.87**	**50**	*e*P	Pb	14 21 19.0	+0.3
	baz=40						
WARBT				S	Sb	14 21 30.8	+0.3
	baz=40						
WDGT	**Dungji**	**0.92**	**277**	*e*P	Pg	14 21 19.2	+0.2
	baz=278						
WCS	**Beigang Elemen**	**0.93**	**15**	P	Pb	14 21 19.9	+0.3
	baz=14						
WCS				*i* S	Sn	14 21 33.1	-0.8
	baz=14						
WUSB	**Renai**	**0.93**	**27**	P	Pb	14 21 19.8	0.0
	baz=26						
WUSB				*e*S	Sn	14 21 33.8	-0.5
	baz=26						
SLIU	**Shizi**	**0.95**	**172**	*e*P	Pn	14 21 20.9	+0.1
	baz=172						
SLIU				*e*S	Sn	14 21 35.3	+0.9
	baz=172						
ESL	**Shilin**	**0.97**	**47**	*e*P	Pb	14 21 20.3	0.0
	baz=54						
CHGB	**Renai**	**1.02**	**28**	*e*P	Pb	14 21 21.5	+0.2
	baz=14						
PNG	**Penghu**	**1.09**	**292**	*e*P	Pg	14 21 21.9	-0.4
	baz=294						
PNG				S	Sb	14 21 36.7	+0.1
	baz=294						
LXIB	**Xiulin Townshi**	**1.11**	**39**	*e*P	Pn	14 21 23.1	0.0
	baz=25						
LXIB				S	Sn	14 21 39.9	+1.3
	baz=25						
WHF	**Hehuan Shan**	**1.13**	**30**	*e*P	Pn	14 21 24.1	+0.4
	baz=16						
TWQ1	**Liyutan**	**1.19**	**5**	*e*P	Pg	14 21 25.1	+0.8
	baz=349						
FUSS	**Fushou**	**1.21**	**26**	*e*P	Pb	14 21 24.3	-0.3
	baz=12						
ETLH	**Xiulin Townshi**	**1.29**	**36**	*e*P	Pg	14 21 26.3	+0.1
	baz=23						
NFF	**Wufeng Townshi**	**1.53**	**16**	*e*P	Pb	14 21 30.2	+0.3
	baz=356						
LATG	**Datong**	**1.59**	**30**	*e*P	Pg	14 21 31.7	-0.2
	baz=14						

*IDC **15** 14:53:28.7±1.2,28°.17S×178°.26W,h171km±11km,mb3.2/4, mbtmp3.7/4,Error ellipse: s-maj=28.9km s-min=26.3km az=5.0*

ISC 15 14:53:27.2±0.9,27°.9S±0°.1×178°.2W±0°.2,h150km,n15, σ1§76/15,mb3.6/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.38**	**168**	P	**Pn**	**14 53 57.5**	**+2.0**
	1μm,0.2s,baz=71,sl

	1.3nm,0.6s							
MKAR	**Makanchi Array**	**115.99**	**311**	PKhKP	PKPpre	15 11 44.3		
	0.1nm,0.7s,baz=59,slow=3.7,SNR=1.7							
MKAR				PKP	**PKPdf**	**15 11 48.9**	**-3.2**	
	0.1nm,0.5s,baz=227,slow=2.2,SNR=4.2							
ARCES	**ARCESS Array B**	**136.10**	**348**	PKP	**PKPdf**	**15 12 29.3**	**-0.4**	
	2.0nm,0.9s,baz=53,slow=4.7,SNR=4.6							
FINES	**FINESS Array B**	**142.72**	**341**	PKhKP	PKPpre	15 12 37.0		
	2.4nm,0.9s,baz=49,slow=5.8,SNR=5.0							
NB2	**NORSAR Subarra**	**146.25**	**352**	PKP	**PKPdf**	**15 12 48.3**	**+0.1**	
	comp=Z,0.4nm,0.4s,baz=15,slow=4.6							
NOA	**NORSAR Array B**	**146.25**	**352**	PKPbc	**PKPdf**	**15 12 47.9**	**-0.2**	
	comp=Z,0.2nm,0.4s,baz=55,slow=1.4,SNR=5.0							
HFS	**Hagfors**	**146.75**	**349**	PKPbc	**PKPdf**	**15 12 49.6**	**+0.6**	
	comp=Z,2.3nm,0.7s,baz=46,slow=4.3,SNR=8.9							
AKASG	**Malin Array Be**	**149.16**	**325**	PKPbc	**PKPdf**	**15 12 55.8**	**+2.6**	
	comp=Z,0.3nm,0.3s,baz=41,slow=2.0,SNR=5.4							
MMAI	**Mount Meron Ar**	**150.64**	**288**	PKPbc	**PKPbc**	**15 13 02.2**	**+0.4**	
	comp=Z,4.7nm,0.6s,baz=101,slow=7.7,SNR=5.8							
BRTR	**Keskin Array B**	**151.16**	**302**	PKPbc	**PKPbc**	**15 13 01.7**	**-1.2**	
	comp=Z,1.0nm,0.8s,baz=120,slow=3.9,SNR=4.9							

*SOME **15** 14:59:22.1,40.68N×73.83E,h5km*
*KRNET **15** 14:59:22.4±0.1,40.63N×73.78E,h15km,mb3.0*
*KNET **15** 14:59:24.1±0.4,40.79N×73.75E,h0km±3km,ml2.6,Error ellipse: s-maj=4.6km s-min=1.9km az=84.0*
*NNC **15** 14:59:24.4±1.4,40.77N×73.75E,h0km,mb3.9,mpv3.9,Error ellipse: s-maj=12.2km s-min=4.9km az=175.0*

ISC 15 14:59:20.7±1.1,40.66N±0.03×73.82E±0.02,h18km±4km, n67,σ1ŝ40/109,32C-28D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.69**	**201**	⇓*e*P	**Pg**	**14 59 34.8**	**+0.6**
	baz=99						
SFK				⇓*e*S	**Sg**	**14 59 43.8**	**+0.4**
	baz=99						
OHH	**Osh**	**0.80**	**261**	⇓*i*P	**Pb**	**14 59 36.9**	**+0.8**
	baz=63						
OHH				⇓*i*S	**Sb**	**14 59 47.5**	**+0.9**
	baz=63						
ARSB	**Arslanbob**	**0.92**	**317**	⇑*i*P	**Pn**	**14 59 40.0**	**+1.1**
	baz=19						
ARSB				⇑*i*S	**Sn**	**14 59 52.8**	**+1.1**
	baz=19						
ARLS	**Aral**	**1.26**	**17**	⇓*i*P	**Pg**	**14 59 46.5**	**+1.4**
	baz=18						
ARLS				⇓*i*S	**Sn**	**15 00 03.9**	**+3.7**
	baz=18						
UCH	**Uchtor**	**1.66**	**18**	⇓P	**Pg**	**14 59 53.7**	**+1.1**
	15nm,0.2s,SNR=17						
UCH				⇑S	**Sg**	**15 00 16.5**	**+2.3**
	50nm,0.3s						
UCH	**Uchtor**	**1.66**	**18**	⇑*i*P	**Pg**	**14 59 53.9**	**+1.3**
	baz=19						
UCH				⇑*i*S	**Sg**	**15 00 16.7**	**+2.5**
	baz=19						
ARK	**Arkit**	**1.81**	**310**	⇑*e*P	**Pg**	**14 59 55.8**	**+0.4**
	baz=11						
ARK				⇑*e*S	**Sg**	**15 00 19.9**	**+0.9**
	baz=11						
NRN	**Naryn**	**1.82**	**64**	⇑*i*P	**Pg**	**14 59 56.3**	**+0.6**
	baz=64						
NRN				⇑*i*S	**Sg**	**15 00 20.8**	**+1.3**
	baz=64						
DRK	**Karamyk**	**1.94**	**234**	⇓*i*P	**Pg**	**14 59 57.4**	**-0.7**
	baz=34						
DRK				⇓*i*S	**Sg**	**15 00 23.0**	**-0.4**
	baz=34						
EKS2	**Erkin-Say**	**2.00**	**359**	⇓P	**Pg**	**14 59 59.4**	**+0.2**
	10nm,0.2s,SNR=46						
EKS2				⇓S	**Sg**	**15 00 27.0**	**+1.8**
	9.9nm,0.2s						
EKS2	**Erkin-Say**	**2.00**	**359**	⇓*i*P	**Pg**	**14 59 59.2**	**0.0**
	baz=60						
EKS2				⇓*i*S	**Sg**	**15 00 25.9**	**+0.6**
	baz=60						
AAK	**Ala-Archa**	**2.04**	**14**	⇑P	**Pg**	**15 00 00.5**	**+0.6**
	15nm,0.2s,SNR=12						
AAK				⇑S	**Sg**	**15 00 28.0**	**+1.5**
	25nm,0.3s						
AAK	**Ala-Archa**	**2.04**	**14**	⇓*i*P	**Pg**	**14 59 59.9**	**0.0**
	baz=15						
AAK				⇓*i*S	**Sg**	**15 00 27.1**	**+0.6**
	baz=15						
MNAS	**Manas**	**2.08**	**332**	⇑*i*P	**Pg**	**15 00 00.1**	**-0.5**
	baz=33						
MNAS				⇑*i*S	**Sg**	**15 00 27.4**	**-0.3**
	baz=33						
MRKS	**Merke**	**2.13**	**348**	Pg	**Pg**	**15 00 01.0**	**-0.7**
	43nm,0.1s						
MRKS				Lg	Lg	15 00 29.2	
	107nm,0.2s						
MRKS	**Merke**	**2.13**	**348**	*e*P	**Pg**	**15 00 01.0**	**-0.7**
	43nm,0.1s						
MRKS				*e*S	**Sg**	**15 00 29.2**	**-0.2**
	107nm,0.2s						
KBK	**Karagaybulak**	**2.17**	**23**	⇓P	**Pg**	**15 00 02.8**	**+0.5**
	14nm,0.1s,SNR=15						
KBK				⇑S	**Sg**	**15 00 33.0**	**+2.4**
	112nm,0.3s						
KBK	**Karagaybulak**	**2.17**	**23**	⇑*i*P	**Pg**	**15 00 01.6**	**-0.8**
	baz=23						
KBK				⇑*i*S	**Sg**	**15 00 30.2**	**-0.4**
	baz=23						
TRKS	**Terek-Say**	**2.21**	**294**	⇑*i*P	**Pb**	**15 00 00.8**	**+0.7**
	baz=94						
TRKS				⇑*i*S	**Sb**	**15 00 28.6**	**+1.4**
	baz=94						
FRU1	**Bishkek**	**2.24**	**15**	⇓*i*P	**Pg**	**15 00 02.9**	**-0.7**
	baz=16						
FRU1				⇓*i*S	**Sg**	**15 00 32.1**	**-0.6**
	baz=16						
BTK	**Batken**	**2.37**	**256**	⇑*i*P	**Pb**	**15 00 03.2**	**+0.3**
	baz=57						
BTK				⇑*i*S	**Sb**	**15 00 33.1**	**+1.3**
	baz=57						
ULHL	**Ulahol**	**2.42**	**48**	⇑P	**Pg**	**15 00 07.2**	**+0.1**
	19nm,0.2s,SNR=60						
ULHL	**Ulahol**	**2.42**	**48**	⇑*i*P	**Pb**	**15 00 05.2**	**+1.5**
	baz=48						
ULHL				⇑*i*S	**Sg**	**15 00 36.1**	**-2.3**
	baz=48						
CHMS	**Chumysh**	**2.44**	**16**	Pg	**Sn**	**15 00 29.0**	**-0.1**
	32nm,0.1s						
CHMS				Lg	Lg	15 01 16.8	
	158nm,0.2s						
TKM2	**Tokmak 2**	**2.62**	**30**	⇑P	**Pg**	**15 00 09.9**	**-1.1**
	5.8nm,0.2s,SNR=9.3						
TKM2	**Tokmak 2**	**2.62**	**30**	⇑Pn	**Pg**	**15 00 11.2**	**+0.2**
	5.0nm,0.5s						
TKM2				⇓Lg	Lg	15 00 46.0	
	26nm,0.6s						
TKM2	**Tokmak 2**	**2.62**	**30**	⇓*i*P	**Pb**	**15 00 08.0**	**+0.7**
	baz=30						
TKM2				⇓*i*S	**Sb**	**15 00 41.2**	**+1.9**
	baz=30						
USP	**Ospenovka**	**2.66**	**11**	⇑P	**Pb**	**15 00 09.2**	**+1.5**
	3.8nm,0.2s						
USP				⇓S	**Sg**	**15 00 44.2**	**-2.0**
	11nm,0.2s						
USP	**Ospenovka**	**2.66**	**11**	⇑*i*P	**Pb**	**15 00 08.2**	**+0.4**
	baz=11						
USP				⇑*i*S	**Sb**	**15 00 41.5**	**+1.4**
	baz=11						
KST	**Kastek**	**2.87**	**33**	Pg	**Pg**	**15 00 15.6**	**-0.1**
	3.6nm,0.2s						
KST				Lg	Lg	15 00 54.3	
	45nm,0.3s						
KST	**Kastek**	**2.87**	**33**	*e*P	**Pg**	**15 00 15.6**	**-0.1**
	3.6nm,0.2s						
KST				*e*S	**Sg**	**15 00 54.3**	**+1.3**
	45nm,0.3s						
DZA	**Taraz**	**2.91**	**321**	Pg	**Pg**	**15 00 16.0**	**-0.5**
	31nm,0.1s						
DZA				Lg	Lg	15 00 54.8	
	68nm,0.3s						
DZA	**Taraz**	**2.91**	**321**	*e*P	**Pg**	**15 00 16.0**	**-0.5**
	31nm,0.1s						
DZA				*e*S	**Sg**	**15 00 54.8**	**+0.7**
	68nm,0.3s						
KDJ	**Kajisay**	**2.93**	**59**	⇑*i*P	**Pb**	**15 00 12.2**	**-0.2**
	baz=59						
KDJ				⇑*i*S	**Sb**	**15 00 48.6**	**+0.7**
	baz=59						
MTBS	**Maitube**	**3.15**	**37**	Pg	**Pg**	**15 00 20.6**	**-0.4**
	5.5nm,0.1s						
MTBS				Lg	Lg	15 01 02.8	
	16nm,0.3s						
MTBS	**Maitube**	**3.15**	**37**	*e*P	**Pg**	**15 00 20.6**	**-0.4**
	5.5nm,0.1s						
MTBS				*e*S	**Sg**	**15 01 02.8**	**+1.0**
	16nm,0.3s						
IZV	**Izvestkoviy**	**3.16**	**40**	Pg	**Pg**	**15 00 21.1**	**-0.2**
	3.4nm,0.1s						
IZV				Lg	Lg	15 01 03.4	
	38nm,0.3s						
IZV	**Izvestkoviy**	**3.16**	**40**	*e*P	**Pg**	**15 00 21.1**	**-0.2**
	3.4nm,0.1s						
IZV				*e*S	**Sg**	**15 01 03.4**	**+1.1**
	38nm,0.3s						
IUG	**Iuzhnay**	**3.22**	**299**	Pg	**Pg**	**15 00 21.1**	**-1.2**
	13nm,0.2s						
IUG				Lg	Lg	15 01 03.6	
	119nm,0.5s						
IUG	**Iuzhnay**	**3.22**	**299**	*e*P	**Pg**	**15 00 21.1**	**-1.2**
	13nm,0.2s						
IUG				*e*S	**Sg**	**15 01 03.6**	**-0.4**
	119nm,0.5s						
TNSS	**Tian-Shan**	**3.33**	**43**	Pg	**Pg**	**15 00 24.1**	**-0.5**
	14nm,0.0s						
TNSS				Lg	Lg	15 01 08.7	
	11nm,0.5s						
TNSS	**Tian-Shan**	**3.33**	**43**	*e*P	**Pg**	**15 00 24.1**	**-0.5**
	14nm,0.0s						
TNSS				*e*S	**Sg**	**15 01 08.7**	**+0.9**
	11nm,0.5s						
MDOK	**Medeo**	**3.48**	**43**	⇓Pg	**Pg**	**15 00 25.0**	**-2.3**
	42nm,1.0s						
MDOK				Pg	**Pg**	**15 00 26.4**	**-0.8**
	23nm,0.6s						
MDOK				Lg	Lg	15 01 12.9	
	29nm,0.3s						
MDOK				Lg	Lg	15 01 12.9	
	27nm,0.6s						
MDOK	**Medeo**	**3.48**	**43**	*e*P	**Pg**	**15 00 26.4**	**-0.8**
	27nm,0.5s						
MDOK				*e*S	**Sg**	**15 01 12.8**	**+0.5**
	29nm,0.3s						
KK31	**Karatay Array**	**3.48**	**316**	⇓Pg	**Pg**	**15 00 24.7**	**-2.6**
	1.5nm,0.3s,baz=132,slow=15,SNR=19						
KK31				⇑Lg	Lg	15 01 11.4	
	5.3nm,0.4s,baz=131,slow=27,SNR=6.8						
KKAR	**Karatay Array**	**3.48**	**316**	⇓*i*P	**Pb**	**15 00 19.2**	**-2.5**
	baz=16						
KKAR				⇓*i*S	**Sb**	**15 01 00.4**	**-3.2**
	baz=16						
CHM	**Chimkent**	**3.58**	**299**	*e*P	**Pg**	**15 00 29.0**	**-0.2**
	32nm,0.1s						
CHM				*e*S	**Sg**	**15 01 16.8**	**+1.2**
	158nm,0.2s						
ANVS	**Anan'yevo**	**3.58**	**52**	⇓*i*P	**Pb**	**15 00 21.4**	**-2.1**
	baz=52						
ANVS				⇓*i*S	**Sb**	**15 01 04.3**	**-2.4**
	baz=52						
KUU	**Kurty**	**3.74**	**29**	Pg	**Pg**	**15 00 30.7**	**-1.5**
	2.6nm,0.1s						
KUU				Lg	Lg	15 01 20.2	
	18nm,0.6s						
KUU	**Kurty**	**3.74**	**29**	*e*P	**Pg**	**15 00 30.7**	**-1.5**
	2.6nm,0.1s						
KUU				*e*S	**Sg**	**15 01 20.2**	**-0.5**
	18nm,0.6s						
BRLS	**Borolday**	**3.81**	**310**	Pg	**Pg**	**15 00 31.2**	**-2.4**
	2.6nm,0.4s						
BRLS				Lg	Lg	15 01 20.7	
	17nm,0.2s						
BRLS	**Borolday**	**3.81**	**310**	*e*P	**Pg**	**15 00 31.2**	**-2.4**
	2.6nm,0.4s						
BRLS				*e*S	**Sg**	**15 01 20.7**	**-2.1**
	17nm,0.2s						
CHKK	**Chushkaly**	**3.97**	**35**	Pg	**Pg**	**15 00 35.2**	**-1.4**
	1.8nm,0.2s						
CHKK				Lg	Lg	15 01 27.5	
	20nm,0.3s						
CHKK	**Chushkaly**	**3.97**	**35**	*e*P	**Pg**	**15 00 35.2**	**-1.4**
	1.8nm,0.2s						
CHKK				*e*S	**Sg**	**15 01 27.5**	**-0.5**
	20nm,0.3s						
SATY	**Saty**	**4.18**	**53**	Pg	**Pg**	**15 00 39.9**	**-0.9**
	11nm,0.6s						
SATY				Lg	Lg	15 01 35.9	
	18nm,0.7s						
SATY	**Saty**	**4.18**	**53**	*e*P	**Pg**	**15 00 39.9**	**-0.9**
	25nm,0.4s						
SATY				*e*S	**Sg**	**15 01 35.9**	**+1.0**
	37nm,0.8s						
BTLS	**Baital**	**4.39**	**2**	Pg	**Pg**	**15 00 43.5**	**-1.2**
	2.7nm,0.1s						
BTLS				Lg	Lg	15 01 41.6	
	7.4nm,0.3s						
BTLS	**Baital**	**4.39**	**2**	*e*P	**Pg**	**15 00 43.5**	**-1.2**
	2.7nm,0.1s						
BTLS				*e*S	**Sg**	**15 01 41.6**	**+0.1**
	7.4nm,0.3s						
KPKS	**Kokpek**	**4.58**	**51**	Pg	**Pg**	**15 00 46.6**	**-1.8**
	6.2nm,0.6s						
KPKS				Lg	Lg	15 01 47.2	
	16nm,0.5s						
KPKS	**Kokpek**	**4.58**	**51**	*e*P	**Pg**	**15 00 46.6**	**-1.8**
	6.2nm,0.6s						
KPKS				*e*S	**Sg**	**15 01 47.2**	**-0.5**
	16nm,0.5s						
UZB	**Uzynbulak**	**4.61**	**56**	Pg	**Pg**	**15 00 47.0**	**-2.0**
	6.6nm,0.2s						
UZB				Lg	Lg	15 01 48.0	
	9.0nm,0.3s						
UZB	**Uzynbulak**	**4.61**	**56**	*e*P	**Pg**	**15 00 47.0**	**-2.0**
	6.6nm,0.2s						
UZB				*e*S	**Sg**	**15 01 48.0**	**-0.7**
	9.0nm,0.3s						
PDGK	**Podgornoye**	**5.00**	**56**	Pg	**Pg**	**15 00 54.1**	**-2.3**
	1.4nm,0.3s						
PDGK				Lg	Lg	15 02 00.3	
	3.5nm,0.4s						
PDGK	**Podgornoye**	**5.00**	**56**	Lg	Lg	15 02 01.1	
	7.8nm,0.8s						
DJR	**Jarkent**	**5.74**	**48**	Pg	**Pg**	**15 01 07.3**	**-3.2**
	0.9nm,0.1s						
DJR				Lg	Lg	15 02 22.8	
	7.7nm,0.4s						
DJR	**Jarkent**	**5.74**	**48**	*e*P	**Pg**	**15 01 07.3**	**-3.2**
	0.9nm,0.1s						
DJR				*e*S	**Sg**	**15 02 22.8**	**-2.1**
	7.7nm,0.4s						
OTUK	**Ortayu**	**7.66**	**353**	⇑Lg	Lg	15 03 23.6	
	8.2nm,0.7s						

IDC 15 15:14:16.1±3.3,22.83N×144.30E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=150.6km s-min=30.2km az=81.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.61**	**194**	P	P	15 22 22.6	+0.3
	0.1nm,0.3s,baz=16,slow=9.4,SNR=1.5						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**47.31**	**193**	P	P	15 22 51.2	-0.5
	0.4nm,1.0s,baz=11,slow=6.5,SNR=2.1						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**54.71**	**312**	P	P	15 23 47.1	-0.1
	0.2nm,0.8s,baz=90,slow=11,SNR=2.0						
	0.2nm,0.8s						
FINES	**FINESS Array B**	**82.61**	**335**	P	P	15 26 41.0	0.0
	7.4nm,1.2s,baz=64,slow=6.3,SNR=5.4						

IDC 15 15:19:26.6±310.0,57.63N×30.86E,h0km,Error ellipse: s-maj=124.4km s-min=86.4km az=101.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.58**	**102**	I	I	15 40 55.4	
	0.1nm,1.4s,baz=283,slow=334,SNR=6.9						
I37NO	**I37NO**	**12.70**	**340**	I	I	16 28 20.0	
	0.1nm,0.6s,baz=146,slow=326,SNR=3.2						
I26DE	**FREYUNG INFRAS**	**13.48**	**237**	I	I	16 46 10.0	
	baz=40,slow=340,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**17.44**	**103**	I	I	17 07 50.0	
	baz=300,slow=336,SNR=1.1						

DJA 15 15:20:22.0±1.6,10°S±7°×11°9E±°,h18km±16km,M3.7/7, mb4.2/1,MLv3.5/7,Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**1.31**	**100**	P	Pn	15 20 45.0	-0.4
PLAI	**Plampang**	**1.87**	**308**	P	Pn	15 20 52.5	-0.7
PLAI				S	Sn	15 21 16.9	+0.5
TWSI	**Taliwang, Sumb**	**2.67**	**298**	P	Pn	15 21 04.4	+0.3
TWSI				S	Sn	15 21 36.8	+0.9
EDFI	**Ende, Flores**	**2.69**	**63**	P	Pn	15 21 04.0	-0.5
EDFI				S	Sn	15 21 33.5	-3.2
BKSI	**Bulukumba**	**4.71**	**10**	P	Pn	15 21 32.6	+0.3
SOEI	**Soe**	**4.93**	**88**	P	Pn	15 21 35.3	-0.1
JAGI	**Jajag, Banyuwa**	**5.27**	**286**	P	Pn	15 21 40.6	+0.6

*DNK **15** 15:28:14.6±2.7,51.93N×17.11E,h0km±201km,ML2.5*
*IPEC **15** 15:28:15.5±0.2,51.51N×16.21E,h1km,ML2.6/4,Error ellipse: s-maj=1.9km s-min=1.1km az=40.0*
*IDC **15** 15:28:16.9±0.9,51.49N×15.96E,h0km,mbtmp3.4/5, ML2.8/5,Error ellipse: s-maj=15.2km s-min=7.7km az=107.0*
*PRU **15** 15:28:17.4,51.45N×16.12E,h0km*
*VIE **15** 15:28:18.2,51.08N×15.35E,h0km,ML2.6/1,Suspected Mining induced.*

ISC 15 15:28:13.5±0.7,51.61N±0.03×16.18E±0.02,h0km,n43, σ1ŝ46/86,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.78**	**175**	*e*Pg	**Pg**	**15 28 28.6**	**+0.3**
KSP				*e*Sg	**Sg**	**15 28 37.6**	**-0.8**
CHVC	**Chvalec**	**1.03**	**185**	*e*PG	**Pg**	**15 28 33.4**	**+0.2**
CHVC				*e*SG	**Sg**	**15 28 45.8**	**-0.8**
	comp=Z,103nm,0.4s						
OSTC	**Ostas**	**1.06**	**179**	*e*PG	**Pg**	**15 28 34.0**	**+0.2**
OSTC				*e*SG	**Sg**	**15 28 46.8**	**-0.7**
	comp=Z,68nm,0.6s						
UPC	**Upice**	**1.11**	**186**	*e*PG	**Pg**	**15 28 34.8**	**0.0**
UPC				*e*SG	**Sg**	**15 28 47.8**	**-1.4**
	comp=Z,136nm,0.3s						
DPC	**Dobruska-Polom**	**1.27**	**176**	*e*PG	**Pg**	**15 28 37.3**	**-0.5**
DPC				*e*SG	**Sg**	**15 28 52.6**	**-1.6**
	comp=Z,60nm,0.4s						
PVCC	**Panska Ves**	**1.49**	**224**	*e*PG	**Pg**	**15 28 42.1**	**+0.1**
PVCC				*e*SG	**Sg**	**15 29 01.0**	**-0.3**
	comp=Z,193nm,0.5s						
KRLC	**Kraliky**	**1.59**	**166**	*e*PG	**Pn**	**15 28 43.1**	**+0.2**
KRLC				*e*SG	**Sn**	**15 29 02.8**	**-1.3**
	comp=Z,84nm,0.4s						
BRG	**Berggiesshubel**	**1.59**	**243**	Pn	**Pn**	**15 28 43.3**	**+0.4**
BRG				Pg	**Pg**	**15 28 44.6**	**+0.6**
BRG				Sg	**Sg**	**15 29 04.7**	**+0.1**
BRG				Amp		15 29 05.3	
	comp=Z,82nm,0.4s						
RICC	**Richard**	**1.70**	**232**	*e*SG	**Sb**	**15 29 07.3**	**-0.1**
	comp=Z,191nm,0.8s						
PRU	**Pruhonice**	**1.93**	**213**	*e*PG	**Pb**	**15 28 49.3**	**-0.3**
PRU				*e*SG	**Sb**	**15 29 14.1**	**-0.1**
	comp=Z,100nm,0.4s						
HSKC	**Hora Svate Kat**	**2.01**	**241**	*e*PG	**Pb**	**15 28 50.9**	**0.0**
HSKC				*e*SG	**Sb**	**15 29 16.1**	**-0.3**
	comp=Z,64nm,0.3s						
CLL	**Collm**	**2.01**	**262**	*e*Pn	**Pn**	**15 28 49.0**	**+0.3**
CLL				*e*Pg	**Pg**	**15 28 52.0**	**-0.1**
CLL				*i* x	x	15 28 55.1	
CLL				*i* x	x	15 28 56.0	
CLL				*e*Sg	**Sg**	**15 29 18.0**	**-0.2**
	comp=Z,30nm,0.6s						
MORC	**Moravsky Berou**	**2.03**	**154**	*e*Pn	**Pn**	**15 28 49.1**	**+0.1**
	baz=334						
MORC				*e*Sg	**Sn**	**15 29 15.9**	**+0.8**
	comp=Z,46nm,0.4s,baz=334						
OKC	**Ostrava-Krasne**	**2.17**	**144**	*e*PG	**Pb**	**15 28 54.3**	**+0.6**
OKC				*e*SG	**Sb**	**15 29 21.1**	**0.0**
VRAC	**Vranov**	**2.32**	**173**	*e*Pn	**Pn**	**15 28 53.5**	**+0.5**
	baz=354						
VRAC				*e*Sg	**Sb**	**15 29 25.1**	**-0.4**
	comp=Z,43nm,0.5s,baz=354						
VRAC	**Vranov**	**2.32**	**173**	Pn	**Pn**	**15 28 54.2**	**+1.2**
	comp=Z,2.9nm,0.3s,baz=344,slow=16,SNR=6.2						
VRAC				Pg	**Pg**	**15 28 57.8**	**-0.2**
	comp=Z,4.1nm,0.3s,baz=344,slow=13,SNR=10.0						
VRAC				Sn	**Sb**	**15 29 24.3**	**-1.2**
	comp=Z,8.3nm,0.3s,baz=272,slow=21,SNR=11						
	comp=Z,7.8nm,0.3s						
KRUC	**Moravsky**	**2.56**	**177**	*e*Pn	**Pn**	**15 28 56.7**	**+0.5**
	baz=357						
KRUC	**Moravsky**	**2.56**	**177**	*e*Pg	**Pb**	**15 29 00.4**	**+0.1**
	baz=357						
KRUC				*e*Sg	**Sb**	**15 29 32.3**	**+0.1**
	comp=Z,28nm,0.5s,baz=357						
OJC	**Ojcow**	**2.68**	**120**	*e*Pg	**Pg**	**15 29 05.3**	**+0.5**
OJC				*e*Sg	**Sg**	**15 29 40.1**	**+0.5**
NKC	**Novy Kostel**	**2.74**	**241**	*e*PN	**Pn**	**15 28 59.7**	**+1.0**
NKC				*e*PG	**Pb**	**15 29 04.8**	**+1.4**
NKC				*e*SG	**Sg**	**15 29 40.4**	**-1.0**
JAVC	**Velka Javorina**	**2.92**	**160**	*e*Pn	**Pn**	**15 29 01.7**	**+0.5**
	baz=341						
JAVC	**Velka Javorina**	**2.92**	**160**	*e*PN	**Pn**	**15 29 01.8**	**+0.5**
KHC	**Kasperske Hory**	**2.99**	**215**	*e*PN	**Pn**	**15 29 02.3**	**+0.1**
KHC				*e*PG	**Pb**	**15 29 08.0**	**+0.3**
KHC				*e*SN	**Sn**	**15 29 35.5**	**-3.3**
KHC				*e*SG	**Sb**	**15 29 46.2**	**+1.4**
	comp=Z,23nm,0.4s						
CKRC	**Cesky Krumlov**	**3.04**	**204**	*e*PN	**Pn**	**15 29 03.8**	**+0.9**
CKRC				*e*PG	**Pb**	**15 29 09.5**	**+0.9**
CKRC				*e*SG	**Sb**	**15 29 47.8**	**+1.5**
	comp=Z,28nm,0.5s						
GERES	**GERESS Array B**	**3.20**	**211**	Pn	**Pn**	**15 29 05.9**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=30,slow=14,SNR=10						
GERES				Pg	**Pb**	**15 29 12.3**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=32,slow=18,SNR=17						
GERES				Lg	Lg	15 29 50.9	
	comp=Z,3.9nm,0.3s,baz=33,slow=32,SNR=10						
	comp=Z,1.1nm,0.3s						
LANS	**Liptovska Anna**	**3.24**	**138**	*e*PN	**Pn**	**15 29 06.6**	**+1.0**
LANS				*e*PG	**Pg**	**15 29 16.1**	**+0.5**
LANS				*e*SG	**Sg**	**15 29 56.2**	**-1.4**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*PN	**Pn**	**15 29 08.2**	**+1.5**
MODS				*e*PG	**Pg**	**15 29 16.1**	**-1.0**
MODS				*e*SG	**Sg**	**15 29 58.8**	**-1.3**
NIE	**Niedzica**	**3.42**	**128**	*e*Pg	**Pg**	**15 29 19.5**	**+0.3**
NIE				*e*Sg	**Sg**	**15 30 03.4**	**-0.1**
VYHS	**Vyhne**	**3.56**	**150**	*e*PN	**Pn**	**15 29 10.3**	**+0.3**
VYHS				*e*PG	**Pg**	**15 29 22.6**	**+0.9**
VYHS			

FINES				Sn	**Sn**	**15 32 58.0**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=206,slow=22,SNR=2.0						
FINES				Lg	Lg	15 34 11.9	
	baz=228,slow=22,SNR=1.9						
	comp=Z,4.6nm,1.1s						

NEIC ***15*** *15:32:07.4±0.7,23°.3S±0°.2×179°.8W±0°.2, h577km±17km, mb4.2/15, Error ellipse: s-maj=33.8km s-min=24.7km az=222.0*

IDC ***15*** *15:32:11.7±17.0,22°.84S×179°.88W, h650km±206km, mb3.0/5, mbtmp4.2/5, Error ellipse: s-maj=165.4km s-min=59.2km az=45.0*

ISC 15 15:32:10.5±3.0, 23°.5S±0°.4×180°.0E±0°.3, h600km, n23, σ0.97/23, mb4.0/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**14.68**	**194**	P	**P**	**15 35 15.9**	**+0.4**
RTZ	**Ruatahuna**	**15.27**	**189**	P	**P**	**15 35 18.1**	**-2.9**
RTZ				IAmb	IAmb	15 35 32.6	
	comp=Z,15nm,1.3s						
TCW	**Tory Channel**	**18.28**	**194**	P	**P**	**15 35 48.2**	**-0.2**
LTZ	**Lake Taylor**	**20.25**	**197**	P	**P**	**15 36 04.6**	**-1.7**
ARMA	**Armidale**	**26.13**	**249**	P	**P**	**15 36 59.5**	**+0.6**
ARMA				IAmb	IAmb	15 37 22.4	
	comp=Z,19nm,1.5s						
EIDS	**Eidsvold**	**26.34**	**260**	P	**P**	**15 37 00.8**	**+0.2**
EIDS				IAmb	IAmb	15 37 22.4	
	comp=Z,4.3nm,1.0s						
CTA	**Charters Tower**	**31.45**	**270**	P	**P**	**15 37 45.2**	**+0.4**
	comp=Z,3.8nm,0.3s,baz=91,slow=11,SNR=22						
	comp=Z,3.8nm,0.3s						
CTAO	**Charters Tower**	**31.45**	**270**	P	**P**	**15 37 45.1**	**+0.3**
CTAO				IAmb	IAmb	15 37 45.8	
	comp=Z,4.5nm,0.6s						
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**15 38 13.7**	**+0.6**
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**15 38 14.0**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=101,slow=9.7,SNR=3.5						
	comp=Z,0.8nm,0.4s						
BBOO	**Buckleboo**	**39.57**	**246**	P	**P**	**15 38 51.5**	**-0.1**
BBOO				IAmb	IAmb	15 38 56.8	
	comp=Z,25nm,1.4s						
AS31	**Alice Springs**	**42.07**	**260**	P	**P**	**15 39 11.4**	**-0.1**
ASAR	**Alice Springs**	**42.07**	**260**	P	**P**	**15 39 11.2**	**-0.3**
ASAR	**Alice Springs**	**42.07**	**260**	P	**P**	**15 39 11.8**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=95,slow=7.4,SNR=53						
	comp=Z,0.9nm,0.4s						
WB2	**Warramunga Arr**	**42.39**	**266**	P	**P**	**15 39 13.6**	**-0.4**
WB2				IAmb	IAmb	15 39 20.2	
	comp=Z,7.1nm,1.3s						
WB0	**Warramunga Arr**	**42.40**	**266**	P	**P**	**15 39 13.5**	**-0.6**
WB0				IAmb	IAmb	15 39 21.1	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**15 39 13.8**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=96,slow=8.4,SNR=31						
	comp=Z,1.6nm,0.6s						
FORT	**Forrest**	**46.42**	**249**	P	**P**	**15 39 44.6**	**-0.1**
MTN	**Manton Dam**	**47.40**	**274**	P	**P**	**15 39 51.0**	**-1.3**
MORW	**Morawa**	**56.98**	**250**	P	**P**	**15 41 00.6**	**+0.1**
MORW				IAmb	IAmb	15 41 40.1	
	comp=Z,8.9nm,1.1s						
QSPA	**South Pole Qui**	**66.56**	**180**	P	**P**	**15 42 02.5**	**+0.5**
QSPA	**South Pole Qui**	**66.56**	**180**	P	**P**	**15 42 03.7**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=30,slow=1.2,SNR=11						
	comp=Z,1.6nm,0.7s						
BELA	**Belgrano 2**	**76.81**	**173**	P	**P**	**15 43 01.1**	**0.0**
BELA				IAmb	IAmb	15 43 21.4	
	comp=Z,11nm,1.1s						

TAP 15 15:35:43.4, 24°.22N×121°.77E, h19km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.11**	**347**	*e*P	Pg	15 35 47.5	+0.3
	baz=344						
EAHA				*e*S	Sg	15 35 50.5	+0.7
	baz=344						
ETL	**Fush Village**	**0.14**	**245**	*i* P	Pg	15 35 47.9	+0.2
	baz=247						
ETL				S	Sg	15 35 51.0	+0.4
	baz=247						
NACB	**Ninganchiao**	**0.16**	**253**	P	Pg	15 35 48.0	+0.1
	baz=255						
NACB				S	Sg	15 35 51.2	+0.3
	baz=255						
ENA	**Nanau**	**0.21**	**353**	*e*P	Pg	15 35 48.9	+0.4
	baz=353						
ENA				*e*S	Sg	15 35 52.5	+0.4
	baz=353						
TWD	**Chiawan**	**0.21**	**228**	*e*P	Pg	15 35 48.6	+0.1
	baz=234						
TWD				*e*S	Sg	15 35 52.7	+0.7
	baz=234						
EWUT	**Wuta**	**0.22**	**3**	*e*P	Pg	15 35 49.2	+0.5
	baz=354						
EWUT				S	Sg	15 35 52.9	+0.4
	baz=354						
ETLH	**Xiulin Townshi**	**0.26**	**267**	*e*P	Pg	15 35 49.5	+0.1
	baz=267						
ETLH				*e*S	Sg	15 35 53.9	+0.4
	baz=267						
ETM	**Tongmen**	**0.36**	**225**	*e*P	Pb	15 35 51.2	0.0
	baz=233						
ESAO	**Su ao**	**0.36**	**11**	*e*S	Sb	15 35 56.7	+0.1
	baz=5.0						
LXIB	**Xiulin Townshi**	**0.38**	**238**	*e*P	Pg	15 35 51.4	0.0
	baz=240						
LXIB				*e*S	Sb	15 35 57.7	+0.4
	baz=240						
LATG	**Datong**	**0.38**	**325**	*i* P	Pb	15 35 51.8	+0.1
	baz=323						
LATG				S	Sb	15 35 57.5	+0.2
	baz=323						
TWC	**Suao**	**0.39**	**11**	*e*S	Sb	15 35 58.6	+1.0
	baz=6.0						
NNSB	**Datong**	**0.41**	**301**	P	Pb	15 35 52.3	+0.1
	baz=300						
NNSB				S	Sb	15 35 58.2	+0.2
	baz=300						
NNS	**Nan Shan**	**0.42**	**301**	*e*P	Pg	15 35 52.2	+0.1
	baz=301						
NNS				*e*S	Sb	15 35 58.6	+0.1
	baz=301						
NDT	**Datong Townshi**	**0.45**	**329**	*e*P	Pb	15 35 53.3	+0.6
	baz=327						
NDT				*e*S	Sb	15 35 59.5	+0.5
	baz=327						
WHF	**Hehuan Shan**	**0.47**	**261**	*e*P	Pb	15 35 53.3	+0.1
	baz=262						
WHF				*e*S	Sb	15 36 00.1	+0.1
	baz=262						
FUSS	**Fushou**	**0.48**	**273**	*e*P	Pb	15 35 53.5	+0.1
	baz=274						
FUSS				*e*S	Sb	15 36 00.2	+0.1
	baz=274						
ESL	**Shilin**	**0.51**	**217**	*e*P	Pb	15 35 54.0	+0.3
	baz=221						
ESL				*e*S	Sb	15 36 01.8	+1.1
	baz=221						
CHGB	**Renai**	**0.56**	**254**	*e*P	Pg	15 35 55.1	+0.3
	baz=247						
CHGB				*e*S	Sg	15 36 03.5	+1.1
	baz=247						
YHNB	**Yeheng**	**0.57**	**321**	*e*P	Pg	15 35 55.4	+0.5
	baz=320						
YHNB				*e*S	Sg	15 36 03.3	+0.7
	baz=320						
NSK	**Sanguang**	**0.59**	**321**	*e*S	Sg	15 36 03.7	+0.7
	baz=320						
NWLT	**Wulai**	**0.60**	**337**	*e*S	Sg	15 36 04.1	+0.5
	baz=340						
WARBT	**Fenglin Townsh**	**0.61**	**215**	*e*P	Pg	15 35 55.5	0.0
	baz=227						
WUSB	**Renai**	**0.64**	**249**	P	Pg	15 35 56.5	+0.5
	baz=250						
WUSB				*e*S	Sg	15 36 05.2	+0.6
	baz=250						

TAP 15 15:35:49.1, 24°.64N×121°.71E, h10km, ML0.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDS	**Dongshan**	**0.01**	**149**	*e*P	Pg	15 35 51.1	+0.3
	baz=355						
NDS	**Dongshan**	**0.01**	**149**	*e*P	Pg	15 35 51.2	+0.4
	baz=146						
NDS				S	Sg	15 35 52.3	+0.3
	baz=146						
TWE	**Neicheng**	**0.09**	**333**	P	Pg	15 35 52.0	+0.5
	baz=342						
TWE				*e*S	Sg	15 35 53.7	+0.4
	baz=342						
TWC	**Suao**	**0.13**	**104**	*e*P	Pg	15 35 52.6	+0.5
	baz=111						
TWC				*e*S	Sg	15 35 54.5	+0.3
	baz=111						
TWC	**Suao**	**0.13**	**104**	*e*P	Pg	15 35 52.6	+0.5
	baz=6.0						
ENTT	**Nioudou**	**0.13**	**270**	*e*P	Pg	15 35 52.9	+0.7
	baz=335						
ENTT	**Nioudou**	**0.13**	**270**	*e*P	Pg	15 35 52.9	+0.7
	baz=268						
ENTT				*e*S	Sg	15 35 54.7	+0.4
	baz=268						
FUSB	**Fushanzhiwuyua**	**0.16**	**316**	P	Pg	15 35 53.4	+0.7
	baz=317						
FUSB				S	Sg	15 35 56.1	+0.9
	baz=317						
NDT	**Datong Townshi**	**0.18**	**258**	*e*S	Sg	15 35 56.5	+0.8
	baz=258						

IDC ***15*** *15:39:50.4±0.8,3°.55S×144°.59E, h0km, mb4.1/14, mbtmp4.1/16, ML4.1/1, MS4.0/39, Error ellipse: s-maj=34.0km s-min=14.3km az=86.0*

NEIC ***15*** *15:39:55.1±1.7,3°.59S±0°.07×144°.55E±0°.09, h32km±3km, mb4.7/73, Error ellipse: s-maj=13.4km s-min=10.1km az=108.0*

GCMT ***15*** *15:39:55.1±0.3,3°.45S±0°.02×144°.48E±0°.02, h13km±2km, MW4.8/82, Moment Tensor Solution. s7,c8; s82,c114; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.26±.10; Mθθ -1.42±.09; Mϕϕ 1.16±.08; Mrθ -0.98±.28; Mϕθ 1.11±.07; Mϕr 0.40±.20; Best double couple: Mo 1.92200×10^16 NP1: ϕs 157.00000°, δ76.00000°, λ-162.00000°. NP2: ϕs 63.00000°, δ73.00000°, λ-15.00000°. Principal axes: T 1.5730, Plg2.0000°, Azm290.0000°; N 0.7010, Plg67.0000°, Azm195.0000°; P -2.2720, Plg23.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***15*** *15:39:57.8±0.4,4°.S±3°.×14°.4E±°, h43km±5km, M4.8/28, mB5.5/9, mb4.6/28, MLv4.6/3, Mw(mB)5.0/9*

ISC 15 15:39:54.3±0.4, 3°.60S±0°.05×144°.55E±0°.06, h26km, n153, σ1.37/125, mb4.6/60, MS4.1/39, 3C, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.21**	**61**		**Pn**	**15 40 43.4**	**+0.3**
GENI	**Genyem**	**4.49**	**283**	P	**Pn**	**15 41 03.3**	**+2.7**
SMPI	**Sarmi**	**6.05**	**285**	P	**Pn**	**15 41 23.2**	**+1.1**
	59nm,1.5s,0.3nm						
PMG	**Port Moresby**	**6.32**	**156**		**Pn**	**15 41 26.4**	**+0.5**
PMG	**Port Moresby**	**6.32**	**156**	Pn	**Pn**	**15 41 27.2**	**+1.4**
	20nm,0.7s,baz=22,slow=2.8,SNR=6.0						
PMG				Sn	**Sn**	**15 42 38.5**	**+1.2**
	baz=317,slow=19						
PMG				LR	LR	15 43 43.4	
	comp=Z,937nm,19.3s,baz=342,slow=37						
MMPI	**Merauke**	**6.37**	**220**	P	**Pb**	**15 41 42.7**	**-1.7**
COEN	**Coen**	**10.38**	**187**	Pn	**Pn**	**15 42 22.5**	**+0.9**
SWI	**Sorong**	**13.55**	**281**	P	**Pn**	**15 43 07.2**	**+2.2**
	27nm,0.9s						
MTN	**Manton Dam**	**16.13**	**235**	Pn	**Pn**	**15 43 37.5**	**-1.9**
HNR	**Honiara**	**16.35**	**111**	P	**Pn**	**15 43 41.2**	**-1.1**
CTA	**Charters Tower**	**16.47**	**174**	Pn	**P**	**15 43 50.4**	**+4.1**
	0.3nm,0.3s,baz=14,slow=12,SNR=4.9						
CTA				LR	LR	15 51 28.6	
	comp=Z,437nm,19.0s,baz=1.5,slow=42						
CTAO	**Charters Tower**	**16.47**	**174**	P	**Pn**	**15 43 43.6**	**-0.2**
GUMO	**Guam**	**17.08**	**1**	LR	LR	15 50 13.7	
	comp=Z,432nm,18.6s,baz=174,slow=37						
LBMI	**Labuha**	**17.29**	**279**	P	**P**	**15 43 57.3**	**+2.0**
	84nm,1.6s						
NLAI	**Namlea**	**17.42**	**271**	P	**Pn**	**15 43 53.4**	**-2.3**
	11nm,0.8s,9μm						
SANI	**Sanana**	**18.60**	**274**	P	**P**	**15 44 09.4**	**-0.4**
	19nm,1.0s						
WB0	**Warramunga Arr**	**18.88**	**211**	P	**P**	**15 44 11.5**	**-1.3**
WR0	**Warramunga Arr**	**18.97**	**210**	P	**P**	**15 44 13.7**	**-0.1**
WRAB	**Tennant Creek**	**19.04**	**211**	P	**P**	**15 44 13.7**	**-0.9**
WB2	**Warramunga Arr**	**19.05**	**211**		**P**	**15 44 15.1**	**+0.4**
WRA	**Warramunga Arr**	**19.05**	**211**	P	**P**	**15 44 14.6**	**-0.1**
WRA	**Warramunga Arr**	**19.05**	**211**	P	**P**	**15 44 14.0**	**-0.7**
	0.6nm,0.3s,baz=30,slow=13,SNR=33						
	11nm,1.0s						
KMSI	**Cibinong**	**20.97**	**281**	P	**P**	**15 44 36.5**	**+0.8**
	201nm,1.1s,2μm						
SOEI	**Soe**	**21.04**	**252**	P	**P**	**15 44 36.2**	**-0.4**
SOEI	**Soe**	**21.04**	**252**	P	**P**	**15 44 33.5**	**-3.1**
	88nm,1.2s,1μm						
DAV	**Davao City (W)**	**21.70**	**299**	LR	LR	15 52 41.2	
	comp=Z,206nm,19.1s,baz=137,slow=36						
LUWI	**Luwuk**	**21.91**	**276**	P	**P**	**15 44 45.1**	**-0.6**
LUWI	**Luwuk**	**21.91**	**276**	P	**P**	**15 44 45.6**	**-0.1**
	84nm,1.1s,1μm						
AS31	**Alice Springs**	**22.44**	**206**	P	**P**	**15 44 51.0**	**-0.5**
ASAR	**Alice Springs**	**22.45**	**206**	P	**P**	**15 44 51.5**	**0.0**
ASAR	**Alice Springs**	**22.45**	**206**	P	**P**	**15 44 51.7**	**+0.2**
	5.4nm,0.7s,baz=36,slow=5.4,SNR=22						
ASAR				LR	LR	15 54 22.7	
	comp=Z,1μm,21.5s,baz=34,slow=39						
	5.4nm,0.7s						
EIDS	**Eidsvold**	**22.54**	**164**	P	**P**	**15 44 51.6**	**-0.8**
MRSI	**Marisa**	**22.95**	**280**	P	**P**	**15 44 59.0**	**+2.1**
	38nm,1.1s,483nm						
FITZ	**Fitzroy Crossi**	**23.46**	**231**	P	**P**	**15 45 00.8**	**-1.2**
TOLI2	**Tolitoli**	**24.21**	**281**	P	**P**	**15 45 07.9**	**-1.2**
TTSI	**Tana Toraja**	**24.69**	**271**	P	**P**	**15 45 13.7**	**+0.2**
	29nm,1.0s						
MPSI	**Mapaga**	**24.94**	**279**	P	**P**	**15 45 13.5**	**-2.3**
	17nm,0.9s						
STKA	**Stephens Creek**	**28.27**	**185**	P	**P**	**15 45 46.3**	**+0.8**
STKA	**Stephens Creek**	**28.27**	**185**	P	**P**	**15 45 47.0**	**+1.4**
	1.5nm,0.6s,baz=329,slow=15,SNR=5.2						
STKA				LR	LR	15 57 21.9	
	comp=Z,442nm,18.9s,baz=1.2,slow=37						
	1.5nm,0.6s						
TGY	**Tagaytay City**	**29.29**	**307**	LR	LR	15 55 16.4	
	comp=Z,170nm,21.8s,baz=136,slow=32						
BBOO	**Buckleboo**	**30.13**	**194**	P	**P**	**15 45 59.8**	**-2.2**
H11S3	**WAKE ISLAND Hy**	**30.95**	**44**	T	T	16 18 33.2	
	baz=227,slow=75,SNR=8.3						
H11S2	**WAKE ISLAND Hy**	**30.96**	**44**	T	T	16 18 36.0	
	baz=227,slow=75,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**30.96**	**44**	T	T	16 18 33.9	
	baz=227,slow=75,SNR=7.6						
FORT	**Forrest**	**31.20**	**208**	P	**P**	**15 46 10.1**	**-1.4**
CAN	**Canberra**	**31.83**	**173**	P	**P**	**15 46 17.2**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**31.92**	**43**	T	T	16 19 49.3	
	baz=225,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**31.94**	**43**	T	T	16 19 50.1	
	baz=225,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**31.94**	**43**	T	T	16 19 49.6	
	baz=225,slow=76,SNR=14						
JOW	**Kunigami**	**34.10**	**333**	LR	LR	15 58 02.7	
	comp=Z,238nm,19.4s,baz=334,slow=32						
LEM	**Lembang**	**36.91**	**263**	LR	LR	16 04 35.2	
	comp=Z,178nm,18.2s,baz=87,slow=40						
JNU	**Nakatsue**	**38.75**	**342**	LR	LR	16 00 40.8	
	comp=Z,83nm,18.3s,baz=146,slow=32						
NWAO	**Narrogin (SRO)**	**38.79**	**218**	LR	LR	16 04 17.0	
	comp=Z,278nm,18.2s,baz=356,slow=38						
MJAR	**Matsushiro Arr**	**40.37**	**352**	LR	LR	16 03 35.0	
	comp=Z,125nm,19.8s,baz=162,slow=35						
QIZ	**Qiongzhong**	**40.89**	**305**	P	**P**	**15 47 33.8**	**-0.8**
QIZ				PP	**PP**	**15 49 07.8**	**-1.4**
QIZ				S	**S**	**15 53 45.0**	**+0.2**
QIZ				SS	**SS**	**15 56 46.8**	**-0.2**
QIZ				LR	LR		
	comp=N,190nm,13.5s						
QIZ				LR	LR		
	comp=E,190nm,18.5s						
QIZ				LR	LR		
	comp=Z,260nm,20.2s						
NJ2	**Nanjing**	**43.05**	**327**	*e*P	**P**	**15 47 53.3**	**+1.3**
NJ2				pP	**sP**	**15 48 02.5**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSRS	**Korea Array**	**43.67**	**341**	P	**P**	**15 47 55.9**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=157,slow=9.3,SNR=9.6						
KSRS				LR	LR	16 05 12.2	
	comp=Z,84nm,20.3s,baz=160,slow=35						
	comp=Z,2.0nm,0.8s						
URZ	**Urewera**	**45.52**	**144**	LR	LR	16 07 40.5	
	comp=Z,245nm,18.6s,baz=249,slow=37						
RPSI	**Rantau Prapat**	**46.03**	**277**	P	**P**	**15 48 15.7**	**-0.5**
RPSI				IAmb	IAmb	15 48 27.1	
	comp=Z,18nm,1.4s						
RPZ	**Rata Peaks**	**46.32**	**153**	LR	LR	16 05 32.6	
	comp=Z,380nm,19.5s,baz=322,slow=33						
SLVN	**Son La**	**46.88**	**304**	P	**P**	**15 48 23.3**	**+0.5**
SLVN				IAmb	IAmb	15 48 33.5	
	comp=Z,6.4nm,1.0s						
USA0B	**Ussuriysk Arra**	**48.90**	**348**	P	**P**	**15 48 35.1**	**-2.9**
USA0B				IAmb	IAmb	15 48 49.5	
	comp=Z,10nm,1.2s						
USRK	**Ussuriysk Ar.**	**48.90**	**348**	P	**P**	**15 48 34.9**	**-3.1**
USRK	**Ussuriysk Ar.**	**48.90**	**348**	P	**P**	**15 48 35.7**	**-2.3**
	comp=Z,1.8nm,0.8s,baz=141,slow=12,SNR=4.1						
USRK				LR	LR	16 06 23.2	
	comp=Z,99nm,20.6s,baz=158,slow=33						
	comp=Z,1.8nm,0.8s						
HNS	**HongShan**	**49.33**	**329**	⇑P	**P**	**15 48 40.8**	**-0.5**
HNS				pmax	pmax		
	comp=Z,15nm,1.0s						
CRAI	**Chiangrai**	**49.40**	**300**	P	**P**	**15 48 41.5**	**-0.8**
CRAI				IAmb	IAmb	15 48 51.0	
	comp=Z,11nm,1.2s						
CMAR	**Chiang Mai Arr**	**49.97**	**298**	P	**P**	**15 48 44.5**	**-2.1**
CMAR	**Chiang Mai Arr**	**49.97**	**298**	P	**P**	**15 48 46.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=109,slow=6.3,SNR=3.2						
CMAR				LR	LR	16 11 16.7	
	comp=Z,45nm,18.7s,baz=105,slow=38						
	comp=Z,1.4nm,0.9s						
CHTO	**Chiang Mai**	**50.10**	**298**	P	**P**	**15 48 45.5**	**-2.1**
CHTO				IAmb	IAmb	15 48 57.8	
	comp=Z,6.5nm,1.0s						
XAN	**Xi'an**	**50.29**	**321**	⇑P	**P**	**15 48 52.5**	**+3.7**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.9s						
XAN				LR	LR		
	comp=N,260nm,8.9s						
XAN				LR	LR		
	comp=E,380nm,9.6s						
XAN				LR	LR		
	comp=Z,280nm,10.7s						
BJT	**Baijiatuau**	**50.62**	**332**	P	**P**	**15 48 49.6**	**-1.6**
BNX	**BinXian**	**51.44**	**345**	⇑P	**P**	**15 48 57.6**	**+0.4**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.8s						
BNX				pmax	pmax		
	comp=Z,190nm,5.3s						
CD2	**Chengdu**	**51.86**	**314**	P	**P**	**15 49 01.9**	**+1.2**
CD2				sP	sP	15 49 14.1	+2.7
CD2				S	**S**	**15 56 23.9**	**+1.9**
CD2				pmax	pmax		
	comp=Z,190nm,5.6s						
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2				LR	LR		
	comp=N,140nm,15.9s						
CD2				LR	LR		
	comp=E,220nm,16.9s						
CD2				LR	LR		
	comp=Z,200nm,14.0s						
HHC	**Hu-ho-hao-te**	**53.53**	**329**	*e*P	**P**	**15 49 15.5**	**+2.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
KLR	**Kul'dur**	**53.78**	**350**	LR	LR	16 10 17.4	
	comp=Z,67nm,21.3s,baz=146,slow=34						
HEH	**HeiHe**	**55.64**	**347**	*e*P	**P**	**15 49 31.8**	**+3.9**
RAR	**Rarotonga**	**56.80**	**113**	LR	LR	16 11 11.1	
	comp=Z,63nm,21.6s,baz=320,slow=33						
HIA	**Hailar**	**56.88**	**341**	P	**P**	**15 49 36.1**	**-0.8**
PEA0B	**Petropavlovsk-**	**57.58**	**9**	P	**P**	**15 49 40.4**	**-1.3**
PETK	**Petropavlovsk-**	**57.58**	**9**	P	**P**	**15 49 41.9**	**+0.2**
	comp=Z,5.0nm,0.8s,baz=160,slow=4.8,SNR=8.6						
PETK				LR	LR	16 13 06.9	
	comp=Z,57nm,19.7s,baz=189,slow=35						
	comp=Z,5.0nm,0.8s						
GTA	**Gaotai**	**59.35**	**321**	*e*P	P	15 50 02.8	+8.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ULN	**Ulaanbaatar**	**60.85**	**332**	P	**P**	**15 50 04.4**	**-0.2**
ULN				IAmb	IAmb	15 50 15.0	
	comp=Z,5.5nm,1.1s						
SONM	**Songino Array**	**61.14**	**332**	P	**P**	**15 50 07.7**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=160,slow=6.9,SNR=7.3						
SONM				LR	LR	16 15 00.5	
	comp=Z,109nm,21.1s,baz=190,slow=34						
	comp=Z,0.8nm,0.8s						
SHEM	**Shemya Is, Ala**	**61.41**	**20**	LR	LR	16 12 45.5	
	comp=Z,219nm,19.5s,baz=238,slow=32						
PALK	**Pallekele**	**64.62**	**280**	LR	LR	16 24 19.8	
	comp=Z,43nm,18.0s,baz=200,slow=41						
PPT	**Papeete**	**65.93**	**108**	LR	LR	16 16 22.6	
	comp=Z,52nm,20.4s,baz=215,slow=33						
YAK	**Yakutsk**	**66.44**	**352**	LR	LR	16 18 57.8	
	comp=Z,72nm,20.2s,baz=160,slow=35						
SEY	**Seymchan**	**66.62**	**4**	LR	LR	16 16 08.5	
	comp=Z,74nm,21.6s,baz=258,slow=33						
MKAR	**Makanchi Array**	**74.11**	**321**	P	**P**	**15 51 29.4**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=100,slow=6.7,SNR=7.4						
	comp=Z,0.5nm,0.6s						
MAKZ	**Makanchi**	**74.31**	**321**	P	**P**	**15 51 28.9**	**-0.6**
VNDA	**Vanda**	**74.44**	**176**	P	**P**	**15 51 29.7**	**0.0**
VNDA	**Vanda**	**74.44**	**176**	LR	LR	16 22 12.1	
	comp=Z,105nm,19.9s,baz=326,slow=34						
ZALV	**Zalesovo Beam**	**75.70**	**328**	P	**P**	**15 51 37.5**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=131,slow=6.5,SNR=2.0						
ZALV				LR	LR	16 24 20.6	
	comp=Z,138nm,19.6s,baz=266,slow=35						
	comp=Z,0.9nm,0.5s						
NIL	**Nilore**	**76.55**	**306**	P	**P**	**15 51 42.8**	**+0.1**
L16K	**Owhat River**	**77.81**	**24**	P	**P**	**15 51 50.8**	**+1.7**
L16K				IAmb	IAmb	15 51 58.0	
	comp=Z,12nm,1.4s						
KURBB	**Kurchatov Arra**	**77.86**	**323**	P	**P**	**15 51 50.3**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=101,slow=6.0,SNR=3.5						
	comp=Z,0.5nm,0.9s						
OHAK	**Old Harbor**	**78.39**	**29**	P	**P**	**15 51 52.9**	**+0.5**
OHAK				IAmb	IAmb	15 52 04.1	
	comp=Z,11nm,1.3s						
K17K	**Iditarod**	**78.81**	**23**	P	**P**	**15 51 54.6**	**0.0**
K17K				IAmb	IAmb	15 52 05.9	
	comp=Z,11nm,1.1s						
KDAK	**Kodiak Island**	**78.98**	**29**	LR	LR	16 19 14.8	
	comp=Z,175nm,21.5s,baz=285,slow=30						
H17K	**

comp=Z,8.7nm,1.4s
SML Sawmill 82.56 26 P **P** 15 52 13.5 -1.4
F21K Alatna River 82.81 20 P **P** 15 52 14.4 -1.5
RND Reindeer 82.95 25 P **P** 15 52 15.7 -1.1
RND IAmb IAmb 15 52 29.7
comp=Z,13nm,1.4s
BVAR Borovoye Array 83.41 324 P **P** 15 52 19.7 +0.4
comp=Z,3.7nm,0.9s,baz=119,slow=6.0,SNR=13
comp=Z,3.7nm,0.9s
DHY Denali Highway 83.45 25 P **P** 15 52 19.1 -0.4
DHY IAmb IAmb 15 52 40.0
comp=Z,6.6nm,1.2s
BRVK Borovoye 83.47 324 P **P** 15 52 19.1 -0.6
E22K Anaktuvuk Pass 83.79 20 P **P** 15 52 20.5 -0.5
E22K IAmb IAmb 15 52 37.2
comp=Z,4.1nm,0.9s
MDM Murphy Dome 83.80 23 P **P** 15 52 20.3 -0.8
MDM IAmb IAmb 15 52 57.7
comp=Z,13nm,1.5s
BMRM Bremner River 83.96 28 P **P** 15 52 20.4 -1.6
BERG Berg Lake 84.20 28 P **P** 15 52 21.4 -1.8
IL31 84.26 24 P **P** 15 52 23.6 +0.3
IL31 IAmb IAmb 15 52 34.5
comp=Z,3.7nm,1.1s
ILAR Eielson Array 84.26 24 P **P** 15 52 22.9 -0.5
comp=Z,0.8nm,0.8s,baz=248,slow=5.4,SNR=10
ILAR LR LR 16 27 25.9
comp=Z,81nm,19.5s,baz=258,slow=34
comp=Z,0.8nm,0.8s
TOLK Toolik Lake Re 84.76 20 P **P** 15 52 25.8 -0.1
TOLK IAmb IAmb 15 52 46.9
comp=Z,5.6nm,1.3s
J25K Salcha River, 84.82 24 P **P** 15 52 26.3 0.0
J25K IAmb IAmb 15 53 02.5
comp=Z,10.0nm,1.5s
F24K Squaw Lake 84.90 21 P **P** 15 52 27.1 +0.4
F24K IAmb IAmb 15 52 36.7
comp=Z,3.1nm,0.8s
ISLE Juniper Island 84.91 28 P **P** 15 52 27.2 +0.2
TABL Table Mountain 85.43 29 P **P** 15 52 29.7 0.0
CTGM Chitina Glacie 85.48 28 P **P** 15 52 30.3 +0.5
CTGM IAmb IAmb 15 53 07.6
comp=Z,8.3nm,1.1s
LOGN Logan Glacier 85.60 28 P **P** 15 52 30.6 +0.2
M27K Edge Creek, AK 85.61 27 P **P** 15 52 31.2 +0.8
K27K Chicken 86.00 25 P **P** 15 52 31.7 -0.4
K27K IAmb IAmb 15 52 47.3
comp=Z,7.7nm,1.2s
QSPA South Pole Qui 86.35 180 P **P** 15 52 33.6 -0.5
comp=Z,4.5nm,0.8s,baz=300,slow=0.9,SNR=13
QSPA LR LR 16 31 30.8
comp=Z,123nm,18.6s,baz=10.0,slow=36
comp=Z,4.5nm,0.8s
M29M Somme Creek 87.17 27 P **P** 15 52 38.0 -0.1
M29M IAmb IAmb 15 52 54.6
comp=Z,8.9nm,1.3s
I28M Miner Creek 87.27 24 P **P** 15 52 38.0 -0.4
I28M IAmb IAmb 15 53 14.9
comp=Z,5.1nm,1.4s
L29M L29M 87.47 26 P **P** 15 52 39.3 -0.1
F28M Old Crow 87.85 22 P **P** 15 52 41.3 +0.3
K29M Barlow Dome 87.90 26 P **P** 15 52 41.5 -0.1
K29M IAmb IAmb 15 53 05.3
comp=Z,3.4nm,1.0s
J30M Hart River 88.56 25 P **P** 15 52 45.7 +1.1
J30M IAmb IAmb 15 53 00.9
comp=Z,9.1nm,1.5s
ABKAR Akbulak array 89.18 319 P **P** 15 52 46.7 -1.0
ABKAR IAmb IAmb 15 52 55.0
comp=Z,2.9nm,0.9s
INK Inuvik 90.33 22 LR LR 16 32 40.5
comp=Z,110nm,18.3s,baz=251,slow=35
DLBC Dease Lake 90.64 32 LR LR 16 25 06.3
comp=Z,82nm,21.4s,baz=304,slow=30
BBB Bella Bella 91.18 38 LR LR 16 29 56.4
comp=Z,90nm,18.3s,baz=314,slow=33
YBH Yreka Blue Hor 94.42 49 LR LR 16 27 21.7
comp=Z,66nm,21.2s,baz=320,slow=30
NVAR Mina Array Bea 97.83 52 LR LR 16 33 51.6
comp=Z,91nm,18.1s,baz=331,slow=33
YKA Yellowknife Ar 98.19 27 LR LR 16 33 38.7
comp=Z,74nm,19.4s,baz=315,slow=33
NEW Newport 98.22 42 LR LR 16 31 04.7
comp=Z,79nm,19.0s,baz=15,slow=31
PFO Pinyon Flats O 99.47 57 LR LR 16 31 18.0
comp=Z,57nm,19.8s,baz=10,slow=31
PLCA Paso Flores 125.45 148 PKP **PKiKP** 15 58 58.5 +4.6
comp=Z,3.1nm,0.9s,baz=186,slow=5.1,SNR=7.6
TORD Torodi Ar. Bea 142.10 287 PKP **PKiKP** 15 59 30.2 +1.9
comp=Z,2.1nm,0.4s,baz=42,slow=2.3,SNR=2.9
CPUP Villa Florida 143.48 146 PKP **PKiKP** 15 59 30.5 -0.2
comp=Z,3.7nm,0.9s,baz=8.1,slow=7.1,SNR=6.0
DBIC Dimbokro 149.38 277 PKPbc **PKPbc** 15 59 42.9 +0.8
comp=Z,3.0nm,0.9s,baz=153,slow=4.5,SNR=2.0

*NEIC **15** 15:43:47.7±1.7, 15°.44N±0°.06×119°.53E±0°.08, h20km±5km, mb4.5/42, Error ellipse: s-maj=11.6km s-min=8.0km az=68.0*

*IDC **15** 15:43:50.9±3.1, 15°.46N×119°.86E, h53km±30km, mb3.8/16, mbtmp4.0/16, MS3.8/3, Error ellipse: s-maj=34.1km s-min=15.5km az=58.0*

ISC 15 15:43:48.7±0.4, 15°.46N±0°.05×119°.53E±0°.07, h31km, n74, σ1§49/76, mb4.4/37, MS3.9/3, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.92**	**134**	P	**Pn**	**15 44 18.1**	**-1.2**
	153nm,0.3s,baz=11,slow=16,SNR=1.6						
TGY				S	**Sb**	**15 44 51.1**	**+4.6**
	362nm,0.3s,baz=15,slow=2.6,SNR=6.0						
TWG	**Pinlang**	**7.47**	**11**	Pn	**Pn**	**15 45 37.1**	**+1.5**
TWG				Sn	**Sn**	**15 46 57.7**	**-1.6**
TPUB	**Ta-pu**	**7.87**	**7**	Pn	**Pn**	**15 45 42.5**	**+1.4**
TPUB				Sn	**Sn**	**15 47 06.9**	**-2.4**
YULB	**Yu-li**	**8.07**	**12**	Pn	**Pn**	**15 45 45.0**	**+1.1**
YULB				Sn	**Sn**	**15 47 14.2**	**+0.1**
HKPS	**Hong Kong Po S**	**8.49**	**324**	Pn	**Pn**	**15 45 48.4**	**-1.1**
NACB	**Ninganchiao**	**8.89**	**12**	Pn	**Pn**	**15 45 52.5**	**-2.6**
KNMB	**Chin-men Tao**	**9.03**	**353**	Pn	**Pn**	**15 45 55.9**	**-1.1**
YHNB	**Yeheng**	**9.33**	**10**	Pn	**Pn**	**15 46 02.4**	**+1.2**
KKM	**Kota Kinabalu**	**9.90**	**200**	Pn	**Pn**	**15 46 07.7**	**-1.3**
QIZ	**Qiongzhong**	**9.91**	**292**	Pn	**Pn**	**15 46 08.3**	**-0.8**
SBUM	**Sibu**	**14.79**	**210**	P	**P**	**15 47 19.3**	**-2.2**
CRAI	**Chiangrai**	**18.84**	**287**	P	**P**	**15 48 06.3**	**+0.1**
PZH	**PanZhiHua**	**19.89**	**306**	P	**Pn**	**15 48 21.3**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,3.5s						
CMAR	**Chiang Mai Arr**	**19.91**	**282**	P	**Pn**	**15 48 22.2**	**+2.5**
	comp=Z,1.9nm,0.9s,baz=84,slow=8.8,SNR=15						
	comp=Z,1.9nm,0.9s						
JNU	**Nakatsue**	**20.38**	**28**	P	**P**	**15 48 21.4**	**-1.6**
JNU				IAmb	IAmb	15 49 02.8	
	comp=Z,24nm,1.3s						
JCJ	**Chichijima**	**24.04**	**57**	LR	LR	15 58 47.2	
	comp=Z,127nm,19.8s,baz=138,slow=38						
LZH	**Lanzhou**	**24.86**	**329**	*eP*	**P**	**15 49 11.3**	**+2.5**
LZH				sP	sP	15 49 27.3	+6.8
LZH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SHL	**Shillong**	**27.72**	**296**	P	**P**	**15 49 35.0**	**+0.2**
SHL				IAmb	IAmb	15 49 36.4	
	comp=Z,8.3nm,0.5s						
XLT	**XiLinHaoTe**	**28.50**	**355**	*eP*	P	15 49 31.9	-9.5
XLT				pP	pP	15 49 37.8	-12
XLT				sP	pwP	15 49 41.1	-12
XLT				PcP	**PnPn**	**15 50 24.9**	**-6.6**
XLT				pmax	pmax		
	comp=Z,2.0nm,0.5s						
XLT				pmax	pmax		
	comp=Z,130nm,6.5s						
SONM	**Songino Array**	**34.07**	**344**	P	**P**	**15 50 30.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=165,slow=10,SNR=6.1						
	comp=Z,1.2nm,0.7s						
MBWA	**Marble Bar**	**36.39**	**180**	P	**P**	**15 50 51.1**	**+0.7**
PSA00	**Pilbara Seismi**	**36.80**	**180**	P	**P**	**15 50 54.7**	**+0.8**
PSA00	**Pilbara Seismi**	**36.80**	**180**	P	**P**	**15 50 54.5**	**+0.6**
PSA00				IAmb	IAmb	15 51 14.8	
	comp=Z,8.7nm,1.3s						
COEN	**Coen**	**37.43**	**140**	P	**P**	**15 50 57.8**	**-1.6**
COEN				IAmb	IAmb	15 51 16.0	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**37.93**	**157**	P	**P**	**15 51 02.0**	**-1.5**
WB0				IAmb	IAmb	15 51 04.6	
	comp=Z,22nm,1.2s						
WRA	**Warramunga Arr**	**38.07**	**157**	P	**P**	**15 51 03.3**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=330,slow=10.0,SNR=6.6						
	comp=Z,1.1nm,0.6s						
WB2	**Warramunga Arr**	**38.08**	**157**	P	**P**	**15 51 02.8**	**-2.0**
AS31	**Alice Springs**	**41.34**	**160**	P	**P**	**15 51 31.2**	**-0.7**
ASAR	**Alice Springs**	**41.34**	**160**	P	**P**	**15 51 30.9**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=335,slow=7.3,SNR=24						
	comp=Z,0.9nm,0.4s						
MK31	**Makanchi Array**	**43.95**	**323**	P	**P**	**15 51 53.7**	**+0.7**
MKAR	**Makanchi Array**	**43.95**	**323**	P	**P**	**15 51 54.3**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=112,slow=8.1,SNR=7.2						
MKAR				PcP	**PcP**	**15 53 39.1**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=107,slow=4.3,SNR=8.2						
	comp=Z,1.6nm,0.7s						
CTAO	**Charters Tower**	**44.02**	**143**	P	**P**	**15 51 52.2**	**-1.5**
CTAO				IAmb	IAmb	15 51 55.0	
	comp=Z,7.3nm,1.3s						
MAKZ	**Makanchi**	**44.14**	**323**	P	**P**	**15 51 55.2**	**+0.8**
MAKZ				IAmb	IAmb	15 52 07.9	
	comp=Z,8.7nm,1.5s						
ARSB	**Arslanbob**	**47.64**	**312**	P	**P**	**15 52 23.8**	**+1.5**
KURBB	**Kurchatov Arra**	**48.11**	**326**	P	**P**	**15 52 26.7**	**+1.2**
	comp=Z,2.5nm,0.7s,baz=119,slow=8.8,SNR=19						
	comp=Z,2.5nm,0.7s						
KURK	**Kurchatov**	**48.11**	**326**	P	**P**	**15 52 26.5**	**+1.0**
KURK				IAmb	IAmb	15 52 27.5	
	comp=Z,6.4nm,0.6s						
KK31	**Karatay Array**	**49.95**	**314**	P	**P**	**15 52 40.3**	**+0.5**
KKAR	**Karatay Array**	**49.95**	**314**	P	**P**	**15 52 40.2**	**+0.4**
BBOO	**Buckleboo**	**50.53**	**162**	P	**P**	**15 52 43.6**	**-0.7**
BVAR	**Borovoye Array**	**53.69**	**325**	P	**P**	**15 53 08.4**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=124,slow=9.9,SNR=6.3						
	comp=Z,1.5nm,0.5s						
BRVK	**Borovoye**	**53.76**	**325**	P	**P**	**15 53 08.7**	**+0.6**
BRVK				IAmb	IAmb	15 53 10.1	
	comp=Z,6.3nm,1.1s						
TIXI	**Tiksi**	**56.46**	**4**	P	**P**	**15 53 26.1**	**-1.1**
TIXI				IAmb	IAmb	15 53 27.9	
	comp=Z,3.7nm,0.9s						
NRIK	**Noril'sk**	**57.46**	**347**	P	**P**	**15 53 34.1**	**-0.2**
NRIK				IAmb	IAmb	15 53 35.5	
	comp=Z,4.2nm,0.7s						
NRIK	**Noril'sk**	**57.46**	**347**	P	**P**	**15 53 34.8**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=143,slow=7.2,SNR=6.9						
	comp=Z,4.0nm,0.6s						
GEYT	**Ailbeck**	**58.20**	**305**	P	**P**	**15 53 42.0**	**+1.9**
	comp=Z,2.4nm,0.9s,baz=212,slow=5.3,SNR=4.6						
	comp=Z,2.4nm,0.9s						
ABKAR	**Akbulak array**	**58.67**	**319**	P	**P**	**15 53 43.9**	**+0.7**
ABKAR				IAmb	IAmb	15 53 45.1	
	comp=Z,3.7nm,0.9s						
BILL	**Bilibino**	**60.40**	**18**	P	**P**	**15 53 54.9**	**+0.2**
ARU	**Arti**	**61.30**	**326**	P	**P**	**15 54 01.4**	**+0.3**
KBZ	**Khabaz**	**69.88**	**311**	P	**P**	**15 54 56.5**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=146,slow=4.6,SNR=4.3						
	comp=Z,2.1nm,0.9s						
KIV	**Kislovodsk**	**70.02**	**312**	P	**P**	**15 54 57.8**	**+0.1**
KIV				IAmb	IAmb	15 55 00.3	
	comp=Z,6.9nm,0.9s						
E18K	**Tukpahlearik C**	**71.95**	**24**	P	**P**	**15 55 10.3**	**+1.5**
E18K				IAmb	IAmb	15 55 13.2	
	comp=Z,4.1nm,1.3s						
H17K	**Granite Mounta**	**72.12**	**26**	P	**P**	**15 55 10.9**	**+1.0**
H17K				IAmb	IAmb	15 55 24.3	
	comp=Z,8.3nm,1.5s						
J17K	**VABM Dome**	**72.46**	**28**	P	**P**	**15 55 12.6**	**+0.7**
J17K				IAmb	IAmb	15 55 34.4	
	comp=Z,6.7nm,1.4s						
D19K	**Kuna River**	**72.94**	**22**	P	**P**	**15 55 15.4**	**+0.6**
L18K	**Granite Mounta**	**73.57**	**29**	P	**P**	**15 55 19.6**	**+1.0**
L18K				IAmb	IAmb	15 55 25.1	
	comp=Z,5.3nm,1.3s						
O18K	**Koktuh Hills**	**74.41**	**31**	P	**P**	**15 55 24.2**	**+0.6**
O18K				IAmb	IAmb	15 55 25.5	
	comp=Z,8.5nm,1.1s						
J20K	**Nowinta River**	**74.62**	**27**	P	**P**	**15 55 25.8**	**+1.0**
J20K				IAmb	IAmb	15 55 29.5	
	comp=Z,8.3nm,1.4s						
CAST	**Castle Rocks**	**75.60**	**28**	P	**P**	**15 55 31.0**	**+0.6**
CAST				IAmb	IAmb	15 55 40.0	
	comp=Z,5.2nm,1.2s						
KDAK	**Kodiak Island**	**75.96**	**33**	P	**P**	**15 55 32.7**	**+0.3**
ARCES	**ARCESS Array B**	**77.05**	**339**	P	**P**	**15 55 39.0**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=77,slow=6.5,SNR=12						
	comp=Z,1.1nm,0.5s						
SPB1	**Spitsbergen Ar**	**77.65**	**348**	P	**P**	**15 55 42.4**	**+0.7**
SPA1	**Spitsbergen Ar**	**77.65**	**348**	P	**P**	**15 55 42.4**	**+0.7**
SPITS	**Spitsbergen Ar**	**77.65**	**348**	P	**P**	**15 55 41.9**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=85,slow=9.3,SNR=14						
	comp=Z,2.9nm,0.5s						
SPB3	**Spitsbergen Ar**	**77.65**	**348**	P	**P**	**15 55 42.4**	**+0.7**
ILAR	**Eielson Array**	**77.68**	**26**	P	**P**	**15 55 40.9**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=272,slow=5.3,SNR=1.9						
	comp=Z,0.2nm,0.7s						
EIL	**Elat**	**77.89**	**298**	LR	LR	16 33 12.6	
	comp=Z,68nm,18.2s,baz=352,slow=38						
FINES	**FINESS Array B**	**78.21**	**331**	P	**P**	**15 55 45.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=46,slow=5.5,SNR=9.0						
	comp=Z,0.5nm,0.4s						
E28M	**Babbage River**	**79.68**	**21**	P	**P**	**15 55 53.7**	**+0.7**
K29M	**Barlow Dome**	**81.86**	**26**	P	**P**	**15 56 05.8**	**+0.9**
K29M				IAmb	IAmb	15 56 24.7	
	comp=Z,4.1nm,1.2s						
M29M	**Somme Creek**	**81.89**	**27**	P	**P**	**15 56 06.5**	**+1.4**
M29M				IAmb	IAmb	15 56 07.5	
	comp=Z,4.0nm,1.1s						
HFS	**Hagfors**	**84.40**	**331**	P	**P**	**15 56 18.6**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=64,slow=3.4,SNR=6.5						
	comp=Z,1.4nm,0.5s						
NC405	**NORSAR Array S**	**84.94**	**332**	P	**P**	**15 56 20.6**	**-0.1**
NOA	**NORSAR Array B**	**85.19**	**332**	P	**P**	**15 56 21.1**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=70,slow=4.6,SNR=1.5						
	comp=Z,0.3nm,0.5s						
RES	**Resolute Bay**	**87.48**	**9**	LR	LR	16 38 06.4	
	comp=Z,53nm,21.8s,baz=8.0,slow=37						

IDC 15 15:53:57.6±8.2, 25°.90S×28°.96E, h0km, mbtmp2.4/1, ML2.2/1, Error ellipse: s-maj=92.2km s-min=56.1km az=140.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**4.26**	**230**	Pn	Pn	15 55 04.3	+0.4
	0.1nm,0.3s,baz=50,slow=16,SNR=0.8						
BOSA				Pg	Pb	15 55 14.1	+0.5
	0.3nm,0.3s,baz=57,slow=15,SNR=2.2						
BOSA				Lg	Lg	15 56 14.1	
	4.0nm,0.3s,baz=320,slow=18,SNR=13						
	0.7nm,0.6s						
I47ZA	**BOSHOF INFRASO**	**4.28**	**230**	I	I	16 18 50.0	
	0.6nm,0.7s,baz=49,slow=309,SNR=3.9						
I35NA	**TSUMEB INFRASO**	**12.45**	**300**	I	I	17 13 30.0	
	0.1nm,1.0s,baz=126,slow=316,SNR=3.6						

IDC 15 16:02:04.4±19.0, 23°.83S×177°.71W, h0km, mb3.4/3, mbtmp3.4/3, ML5.8/1, Error ellipse: s-maj=367.5km s-min=47.7km az=60.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.40**	**182**	Pn	Pn	16 03 26.4	+0.1
	297nm,0.3s,baz=26,slow=22,SNR=4.4						
RAO				Sn	Sn	16 04 35.6	+6.3
	49nm,0.3s,baz=76,slow=19,SNR=1.3						
STKA	**Stephens Creek**	**36.70**	**248**	P	P	16 09 11.2	-2.1
	1.7nm,0.7s,baz=86,slow=16,SNR=3.1						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**44.12**	**260**	P	P	16 10 15.7	+0.8
	0.2nm,0.9s,baz=96,slow=6.8,SNR=4.2						
	0.2nm,0.9s						
WRA	**Warramunga Arr**	**44.51**	**265**	P	P	16 10 18.6	+0.5
	0.5nm,0.9s,baz=99,slow=7.3,SNR=5.9						
	0.5nm,0.9s						

*IDC **15** 16:08:54.2±3.1, 36°.26N×70°.26E, h190km±27km, mb3.2/7, mbtmp3.7/13, MS3.5/1, Error ellipse: s-maj=24.9km s-min=19.6km az=6.0*

*NNC **15** 16:09:03.8±9.1, 36°.93N×70°.59E, h172km±107km, mb2.9, mpv4.0, Error ellipse: s-maj=94.2km s-min=54.2km az=35.0*

ISC 15 16:08:56.2±1.1, 36°.4N±0°.1×70°.2E±0°.1, h200km, n26, σ1§85/27, mb3.2/6, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.69**	**2**	⇑P	**Pn**	**16 10 32.1**	**-0.2**
	3.8nm,0.5s,baz=196,slow=16,SNR=44						
KK31				⇑S	**Sn**	**16 11 43.3**	**-5.3**
	3.2nm,0.5s,baz=56,slow=45,SNR=4.2						
UCH	**Uchtor**	**6.69**	**28**	P	**Pn**	**16 10 33.4**	**+0.6**
	SNR=17						
EKS2	**Erkin-Say**	**6.82**	**23**	P	**Pn**	**16 10 34.9**	**+0.7**
	SNR=44						
AAK	**Ala-Archa**	**7.04**	**27**	P	**Pn**	**16 10 37.7**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**7.04**	**27**	P	**Pn**	**16 10 37.9**	**+0.8**
	8.8nm,0.4s,baz=175,slow=4.8,SNR=60						
AAK				S	**Sn**	**16 11 55.2**	**-1.9**
	8.5nm,0.6s,baz=136,slow=22,SNR=5.9						
KBK	**Karagaybulak**	**7.23**	**29**	P	**Pn**	**16 10 40.4**	**+0.9**
	SNR=8.4						
ULHL	**Ulahol**	**7.46**	**37**	P	**Pn**	**16 10 43.4**	**+0.8**
	SNR=20						
USP	**Ospenovka**	**7.60**	**24**	P	**Pn**	**16 10 44.5**	**+0.4**
	SNR=11						
TKM2	**Tokmak 2**	**7.71**	**31**	P	**Pn**	**16 10 46.9**	**+1.1**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.71**	**31**	⇑P	**Pn**	**16 10 46.4**	**+0.6**
	20nm,0.9s						
GEYT	**Ailbeck**	**9.78**	**283**	P	**Pn**	**16 11 11.5**	**-1.0**
	1.7nm,0.5s,baz=108,slow=14,SNR=5.3						
MK31	**Makanchi Array**	**13.74**	**37**	P	**Pn**	**16 12 02.4**	**-0.3**
	1.3nm,0.7s,baz=217,slow=11,SNR=22						
MKAR	**Makanchi Array**	**13.74**	**37**	P	**Pn**	**16 12 02.5**	**-0.2**
	1.3nm,0.6s,baz=226,slow=13,SNR=7.3						
AB31	**Akbulak array**	**14.87**	**333**	⇓P	**P**	**16 12 22.4**	**+5.0**
	0.5nm,0.3s,baz=156,slow=13,SNR=11						
KURBB	**Kurchatov Arra**	**15.42**	**20**	P	**Pn**	**16 12 22.0**	**-1.3**
	0.6nm,0.4s,baz=210,slow=11,SNR=8.4						
AKTO	**Aktyubinsk**	**16.55**	**332**	P	**Pn**	**16 12 36.6**	**-0.4**
	1.2nm,0.6s,baz=157,slow=9.8,SNR=3.6						
BVA0	**Borovoye Array**	**16.61**	**0**	P	**Pn**	**16 12 40.3**	**+2.6**
	0.1nm,0.3s,baz=166,slow=10,SNR=6.9						
BVAR	**Borovoye Array**	**16.61**	**0**	P	**Pn**	**16 12 38.9**	**+1.2**
	0.9nm,0.4s,baz=164,slow=9.5,SNR=9.1						
ZALV	**Zalesovo Beam**	**20.26**	**25**	P	**P**	**16 13 15.9**	**-0.2**
	1.5nm,0.4s,baz=217,slow=11,SNR=9.1						
	1.5nm,0.4s						
SONM	**Songino Array**	**28.90**	**55**	P	**P**	**16 14 37.6**	**+1.1**
	0.2nm,0.5s,baz=278,slow=10,SNR=2.6						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**37.21**	**326**	P	**P**	**16 15 48.2**	**+0.3**
	1.4nm,0.8s,baz=118,slow=11,SNR=1.8						
	1.4nm,0.8s						
ARCES	**ARCESS Array B**	**40.99**	**338**	P	**P**	**16 16 18.6**	**-0.6**
	1.8nm,0.8s,baz=98,slow=6.6,SNR=4.9						
	1.8nm,0.8s						
TIXI	**Tiksi**	**46.09**	**22**	LR	LR	16 39 10.0	
	comp=Z,50nm,18.1s,baz=357,slow=39						
YKA	**Yellowknife Ar**	**81.36**	**2**	P	**P**	**16 20 49.8**	**-0.3**
	0.3nm,0.7s,baz=350,slow=5.2,SNR=5.2						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**82.48**	**121**	P	**P**	**16 20 54.6**	**-1.9**
	0.5nm,0.7s,baz=318,slow=4.5,SNR=2.0						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**84.72**	**124**	P	**P**	**16 21 06.0**	**-1.8**
	0.3nm,0.7s,baz=314,slow=5.2,SNR=8.7						
	0.3nm,0.7s						

KRSC 15 16:12:20.4±1.2, 49°.75N×156°.92E, h60km±26km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.07**	**332**	*eP*	Pn	16 12 40.1	+0.7
SKR				*eS*	Sn	16 12 53.7	+0.4
PAU	**Pauzhetka**	**1.72**	**358**	*eP*	Pn	16 12 51.0	+2.9
PAU				*eS*	Sn	16 13 12.3	+3.3
KDTR	**Khodutka, Kamc**	**2.19**	**19**	*eP*	Pn	16 12 57.2	+2.7
KDTR				*eS*	Sn	16 13 23.9	+3.5
ASAK	**Asacha**	**2.71**	**13**	*eP*	Pn	16 13 04.6	+3.0
MTVR	**Mutnovka**	**2.85**	**16**	*eP*	Pn	16 13 06.6	+3.0
MTVR				*eS*	Sn	16 13 39.6	+2.8
RUS	**Russkaya**	**2.87**	**20**	*eP*	Pn	16 13 05.9	+2.2
RUS				*eS*	Sn	16 13 39.5	+2.5
GRL	**Gorelyy**	**2.90**	**14**	*eP*	Pn	16 13 07.3	+3.1
GRL				*eS*	Sn	16 13 41.4	+3.4
KRMR	**Karymshinskiy**	**3.18**	**13**	*eP*	Pn	16 13 10.5	+2.6
KRMR				*eS*	Sn	16 13 49.5	+5.0
DALK	**Dalny**	**3.48**	**19**	*eP*	Pn	16 13 14.7	+2.6
DALK				*eS*	Sn	16 13 54.7	+2.7
AVH	**Avacha**	**3.70**	**17**	*eP*	Pn	16 13 18.9	+3.8
KOK	**Koryaka**	**3.71**	**16**	*eP*	Pn	16 13 18.6	+3.3
SMAR	**Somma**	**3.71**	**18**	*eP*	Pn	16 13 18.5	+3.1
KRX	**Arik**	**3.77**	**16**	*eP*	Pn	16 13 19.1	+2.9
SPN	**Mys Shipunski**	**3.88**	**29**	*eP*	Pn	16 13 20.8	+3.4
SPN				*eS*	Sn	16 14 04.8	+3.1

*CATAC **15** 16:14:47.3±0.3, 13°.03N×89°.01W, h31km±3km, mb3.5, ML4.2*

*SNET **15** 16:14:47.4±1.1, 13°.02N×89°.02W, h45km, ML4.2*

*IDC **15** 16:14:50.0±2.7, 13°.23N×88°.85W, h87km±26km, mb3.3/4, mbtmp3.6/6, MS3.0/2, Error ellipse: s-maj=69.5km s-min=25.9km az=44.0*

ISC 15 16:14:46.3±1.0, 13°.00N±0°.05×89°.03W±0°.03, h52km±8km, n111, σ1§41/170, mb3.6/4, 5C-28D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.56**	**54**	*eP*	Pn	16 14 50.0	-8.4
ALJI				*eS*	**Sn**	**16 14 59.3**	**-7.8**
LALI	**Alcalda de L**	**0.56**	**330**	*eP*	**Pn**	**16 14 59.2**	**+0.7**
LALI				*eS*	**Sn**	**16 15 06.7**	**-0.6**
LALI	**Alcalda de L**	**0.56**	**330**	⇓*iP*	**Pn**	**16 14 59.2**	**+0.7**
LALI				*i* S	**Sn**	**16 15 07.8**	**+0.5**
LALI				IAML		16 15 10.4	
	comp=Z,2μm,1.0s						
TECO	**Alcaldia de Te**	**0.59**	**24**	⇓*eP*	**Pn**	**16 14 59.5**	**+0.6**

PAVA	**Las Pavas**	**0.72**	**7**	*eP*	**Pn**	**16 15 01.5**	**+0.9**
PAVA				*eS*	**Sn**	**16 15 11.3**	**+0.4**
PAVA	**Las Pavas**	**0.72**	**7**	*iP*	**Pn**	**16 15 01.4**	**+0.9**
PAVA				*i* S	**Sn**	**16 15 11.7**	**+0.8**
PAVA				IAML		16 15 13.8	
	comp=Z,18μm,1.0s						
UTEC	**Universidad Te**	**0.72**	**347**	*eP*	**Pn**	**16 15 01.1**	**+0.5**
UTEC				*eS*	**Sn**	**16 15 11.5**	**+0.7**
UTEC	**Universidad Te**	**0.72**	**347**	*iP*	**Pn**	**16 15 01.2**	**+0.7**
UTEC				*i* S	**Sn**	**16 15 11.6**	**+0.8**
UTEC				IAML		16 15 13.0	
	comp=Z,6μm,1.0s						
UDBS	**Universidad Do**	**0.72**	**350**	*eP*	**Pn**	**16 15 01.3**	**+0.7**
UDBS				*eS*	**Sn**	**16 15 11.0**	**0.0**
IGN	**Direccin Gen**	**0.72**	**349**	*eP*	**Pn**	**16 15 01.3**	**+0.7**
IGN				*eP*	**Pn**	**16 15 01.4**	**+0.8**
MAGS	**Ministerio de**	**0.73**	**340**	*eP*	**Pn**	**16 15 01.3**	**+0.6**
SEMO	**Seminario San**	**0.73**	**345**	*eP*	**Pn**	**16 15 00.9**	**+0.3**
SEMO				*eS*	**Sn**	**16 15 11.2**	**+0.2**
UESS	**Universidad de**	**0.74**	**347**	*eP*	**Pn**	**16 15 01.7**	**+0.9**
UESS				*eS*	**Sn**	**16 15 11.9**	**+0.6**
UEES	**Universidad Ev**	**0.74**	**344**	*eP*	**Pn**	**16 15 01.6**	**+0.8**
UEES				*eS*	**Sn**	**16 15 11.7**	**+0.2**
UEES	**Universidad Ev**	**0.74**	**344**	*iP*	**Pn**	**16 15 01.6**	**+0.8**
UEES				*i* S	**Sn**	**16 15 11.6**	**+0.2**
UEES				IAML		16 15 20.5	
	comp=Z,6μm,1.0s						
LFU	**La Fuente**	**0.75**	**354**	*eP*	**Pn**	**16 15 01.9**	**+0.9**
LFU				*eS*	**Sn**	**16 15 12.4**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.76**	**23**	*eP*	**Pn**	**16 15 02.1**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.76**	**23**	*iP*	**Pn**	**16 15 02.1**	**+1.1**
SCLA				*i* S	**Sn**	**16 15 12.9**	**+1.2**
SCLA				IAML		16 15 14.0	
	comp=Z,4μm,1.0s						
PMON	**Piamonte**	**0.76**	**339**	*eP*	**Pn**	**16 15 01.9**	**+0.8**
PMON				*eS*	**Sn**	**16 15 12.3**	**+0.5**
PMON	**Piamonte**	**0.76**	**339**	*iP*	**Pn**	**16 15 01.9**	**+0.8**
PMON				*i* S	**Sn**	**16 15 12.5**	**+0.6**
PMON				IAML		16 15 14.5	
	comp=Z,13μm,1.0s						
JAYA	**Jayaque - finc**	**0.77**	**328**	*eP*	**Pn**	**16 15 02.0**	**+0.7**
JAYA				*eS*	**Sn**	**16 15 12.2**	**+0.1**
JAYA	**Jayaque - finc**	**0.77**	**328**	*iP*	**Pn**	**16 15 01.9**	**+0.7**
JAYA				*i* S	**Sn**	**16 15 12.7**	**+0.6**
JAYA				IAML		16 15 14.7	
	comp=Z,35μm,1.0s						
BOQS	**Boqueron**	**0.77**	**342**	*eP*	**Pn**	**16 15 02.3**	**+1.0**
BOQS				*eS*	**Sn**	**16 15 13.6**	**+1.3**
PQSS	**Presa 15 de Se**	**0.77**	**36**	*eP*	**Pn**	**16 15 02.2**	**+1.1**
PQSS	**Presa 15 de Se**	**0.77**	**36**	*iP*	**Pn**	**16 15 02.2**	**+1.1**
PQSS				*i* S	**Sn**	**16 15 13.5**	**+1.6**
PQSS				IAML		16 15 14.9	
	comp=Z,34μm,1.0s						
PIC2	**El Picacho**	**0.78**	**344**	*eP*	**Pn**	**16 15 02.4**	**+1.0**
JUCU	**Jucuarn**	**0.80**	**71**	*eP*	**Pn**	**16 15 02.1**	**+0.4**
JUCU				*eS*	**Sn**	**16 15 13.3**	**+0.6**
LCY	**Lacayo**	**0.83**	**59**	*eP*	**Pn**	**16 15 03.0**	**+1.0**
PACA	**Pacayal**	**0.83**	**56**	*eP*	**Pn**	**16 15 03.3**	**+1.2**
PACA				*eS*	**Sn**	**16 15 15.2**	**+1.6**
PACA	**Pacayal**	**0.83**	**56**	*iP*	**Pn**	**16 15 03.3**	**+1.2**
PACA				*i* S	**Sn**	**16 15 15.1**	**+1.6**
PACA				IAML		16 15 17.2	
	comp=Z,130μm,1.0s						
RANC	**El Ranchito**	**0.84**	**59**	*eP*	**Pn**	**16 15 03.2**	**+1.0**
RANC	**El Ranchito**	**0.84**	**59**	*iP*	**Pn**	**16 15 03.2**	**+1.0**
RANC				*i* S	**Sn**	**16 15 15.4**	**+1.6**
RANC				IAML		16 15 20.7	
	comp=Z,9μm,1.0s						
VSM	**San Miguel**	**0.85**	**60**	*eP*	**Pn**	**16 15 03.5**	**+1.1**
QUEZ	**Alcaldia de Qu**	**0.87**	**344**	*eP*	**Pn**	**16 15 03.5**	**+1.1**
QUEZ	**Alcaldia de Qu**	**0.87**	**344**	*iP*	**Pn**	**16 15 03.6**	**+1.1**
QUEZ				*i* S	**Sn**	**16 15 15.4**	**+1.2**
QUEZ				IAML		16 15 25.1	
	comp=Z,13μm,1.0s						
CEDA	**San Andres**	**0.88**	**336**	*eP*	**Pn**	**16 15 03.7**	**+1.2**
CEDA				*eS*	**Sn**	**16 15 15.3**	**+0.9**
CEDA	**San Andres**	**0.88**	**336**	*iP*	**Pn**	**16 15 03.5**	**+1.0**
CEDA				*i* S	**Sn**	**16 15 15.3**	**+0.9**
CEDA				IAML		16 15 23.1	
	comp=Z,15μm,1.0s						
BLLM	**Bellamira**	**0.89**	**60**	*eP*	**Pn**	**16 15 03.6**	**+0.9**
CNRM	**Centro Naciona**	**0.96**	**60**	*eP*	**Pn**	**16 15 04.3**	**+0.7**
CNRM	**Centro Naciona**	**0.96**	**60**	*iP*	**Pn**	**16 15 04.6**	**+0.9**
CNRM				*i* S	**Sn**	**16 15 18.5**	**+2.1**
CNRM				IAML		16 15 21.6	
	comp=Z,12μm,1.0s						
CEVE	**Cerro Verde**	**1.01**	**325**	*eP*	**Pn**	**16 15 05.7**	**+1.3**
CEVE	**Cerro Verde**	**1.01**	**325**	*iP*	**Pn**	**16 15 05.5**	**+1.0**
CEVE				*i* S	**Sn**	**16 15 19.5**	**+1.7**
CEVE				IAML		16 15 24.6	
	comp=Z,6μm,1.0s						
SBLS	**San Blas**	**1.02**	**326**	*eP*	**Pn**	**16 15 06.0**	**+1.4**
SNJE	**San Jose**	**1.03**	**327**	*eP*	**Pn**	**16 15 05.6**	**+0.9**
RTR	**El Retiro**	**1.08**	**326**	*eP*	**Pn**	**16 15 06.7**	**+1.3**
UNIC	**Universidad Ca**	**1.10**	**333**	*eP*	**Pn**	**16 15 06.7**	**+1.1**
UNIC	**Universidad Ca**	**1.10**	**333**	*iP*	**Pn**	**16 15 06.7**	**+1.1**
UNIC				*i* S	**Sn**	**16 15 21.2**	**+1.4**
UNIC				IAML		16 15 23.0	
	comp=Z,2μm,1.0s						
LCND	**La Caada**	**1.15**	**74**	*eP*	**Pn**	**16 15 07.2**	**+1.0**
LCND				*eP*	**Pn**	**16 15 07.3**	**+1.0**
LCND				*eS*	**Sn**	**16 15 22.9**	**+1.9**
LCND	**La Caada**	**1.15**	**74**	*iP*	**Pn**	**16 15 07.2**	**+1.0**
LCND				*i* P	**Pn**	**16 15 07.6**	**+1.4**
LCND				*i* S	**Sn**	**16 15 22.0**	**+1.0**
LCND				*i* S	**Sn**	**16 15 22.2**	**+1.2**
LCND				IAML		16 15 29.5	
	comp=Z,4μm,1.0s						
LCND				IAML		16 15 38.1	
	comp=Z,16μm,1.0s						
NUBE	**Las Nubes**	**1.16**	**321**	*eP*	**Pn**	**16 15 07.3**	**+1.0**
NUBE				*eS*	**Sn**	**16 15 22.2**	**+1.0**
NUBE	**Las Nubes**	**1.16**	**321**	*iP*	**Pn**	**16 15 07.4**	**+1.0**
NUBE				*i* S	**Sn**	**16 15 22.3**	**+1.0**
NUBE				IAML		16 15 26.0	
	comp=Z,4μm,1.0s						
LLGN	**La Laguna**	**1.16**	**4**	*eP*	**Pn**	**16 15 07.1**	**+0.7**
LLGN	**La Laguna**	**1.16**	**4**	*iP*	**Pn**	**16 15 07.3**	**+0.9**
LLGN				IAML		16 15 23.4	
	comp=Z,1μm,1.0s						
CNCH	**Conchagua**	**1.20**	**76**	*eP*	**Pn**	**16 15 07.7**	**+0.7**
CNCH	**Conchagua**	**1.20**	**76**	*iP*	**Pn**	**16 15 07.8**	**+0.9**
CNCH				*i* S	**Sn**	**16 15 23.7**	**+1.5**
CNCH				IAML		16 15 30.9	
	comp=Z,7μm,1.0s						
LOAL	**Lomas de Alarc**	**1.23**	**324**	*eP*	**Pn**	**16 15 08.8**	**+1.4**
SLOZ	**Alcaldia de Sa**	**1.26**	**325**	*eP*	**Pn**	**16 15 08.9**	**+1.2**
MTO3	**Montecristo**	**1.43**	**347**	*eP*	**Pn**	**16 15 11.0**	**+0.8**
MTO3	**Montecristo**	**1.43**	**347**	*iP*	**Pn**	**16 15 11.0**	**+0.8**
MTO3				IAML		16 15 11.5	
	comp=Z,650nm,1.0s						
CSGN	**Cosiguina Volc**	**1.44**	**91**	*iP*	**Pn**	**16 15 11.2**	**+1.1**
CSGN				IAML		16 15 34.2	
	comp=Z,8μm,1.0s						
ESQI	**Esquipulas**	**1.58**	**349**	*iP*	**Pn**	**16 15 13.5**	**+1.3**
ESQI				*i* S	**Sn**	**16 15 32.3**	**+0.7**
ESQI				IAML		16 15 36.6	
	comp=Z,1μm,1.0s						
CRIN	**San Cristobal**	**1.96**	**98**	*iP*	**Pn**	**16 15 18.8**	**+1.6**
CRIN				*i* S	**Sn**	**16 15 43.2**	**+2.6**
CRIN				IAML		16 15 52.8	
	comp=Z,5μm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.01**	**58**	*iP*	**Pn**	**16 15 18.9**	**+0.9**
TGUH				IAML		16 15 37.1	
	comp=Z,890nm,1.0s						
TEL3	**Telica 3**	**2.17**	**101**	*iP*	**Pn**	**16 15 21.2**	**+1.1**
TEL3				IAML		16 15 52.2	
	comp=Z,1μm,1.0s						
HERN	**Volcan Telica**	**2.18**	**100**	*iP*	**Pn**	**16 15 20.9**	**+0.6**
HERN				*i* S	**Sn**	**16 15 45.6**	**-0.6**
HERN				IAML		16 15 52.3	
	comp=Z,2μm,1.0s						
TELN	**Telica**	**2.18**	**100**	*i* P	**Pn**	**16 15 20.0**	**-0.3**
TELN				*i* S	**Sn**	**16 15 46.2**	**0.0**
TELN				IAML		16 15 56.0	
	comp=Z,130nm,1.0s						
HOYN	**Al Sur del Vol**	**2.19**	**100**	*i* S	**Sn**	**16 15 48.4**	**+2.1**
PACN	**Al O del Volca**	**2.24**	**102**	*i* P	**Pn**	**16 15 22.0**	**+1.0**
PACN				*i* S	**Sn**	**16 15 47.5**	**0.0**
PACN				IAML		16 15 55.8	
	comp=Z,1μm,1.0s						
ILCN	**San Idelfonso**	**2.31**	**100**	*i* P	**Pn**	**16 15 22.9**	**+0.9**
ILCN				*i* S	**Sn**	**16 15 49.7**	**+0.4**
ILCN				IAML		16 16 00.0	
	comp=Z,200nm,1.0s						
CNGA	**Al SSO del Vol**	**2.33**	**102**	*i* S	**Sn**	**16 15 50.2**	**+0.5**
CNGN	**Cerro Negro**	**2.33**	**102**	*i* P	**Pn**	**16 15 23.9**	**+1.6**
CNGN				IAML		16 15 58.4	
	comp=Z,740nm,1.0s						
MACN	**El Madrono**	**2.36**	**103**	*i* S	**Sn**	**16 15 50.2**	**-0.3**
COPN	**Copaltepe**	**2.52**	**109**	*i* P	**Pn**	**16 15 25.7**	**+0.9**
COPN				IAML		16 16 06.5	
	comp=Z,740nm,1.0s						
MOM2	**El Cardon**	**2.55**	**102**	*i* P	**Pn**	**16 15 27.2**	**+2.0**
MOM2				IAML		16 16 02.1	
	comp=Z,310nm,1.0s						
LIMN	**Finca el Limon**	**2.60**	**88**	*iP*	**Pn**	**16 15 26.8**	**+0.8**
LIMN				IAML		16 16 13.4	
	comp=Z,240nm,1.0s						
SAPS	**Ciudad Sandino**	**2.69**	**107**	*i* P	**Pn**	**16 15 31.4**	**+4.2**
SAPS				IAML		16 16 06.5	
	comp=Z,800nm,1.0s						
MATN	**Matagalpa**	**3.03**	**91**	*i* P	**Pn**	**16 15 32.5**	**+0.6**
MATN				IAML		16 15 33.0	
	comp=Z,80nm,1.0s						
BOAB	**BOACO BROADBAN**	**3.33**	**99**	*i* P	**Pn**	**16 15 36.4**	**+0.5**
BOAB				IAML		16 16 25.4	
	comp=Z,79nm,1.0s						
HZTE	**Horizontes, Gu**	**4.06**	**124**	*i* P	**Pn**	**16 15 49.4**	**+3.4**
HZTE				IAML		16 16 56.4	
	comp=Z,160nm,1.0s						
SAJU	**San Juanillo,**	**4.37**	**131**	*i* P	**Pn**	**16 15 52.4**	**+2.2**
SAJU				*i* S	**Sn**	**16 16 37.7**	**-2.1**
SAJU				IAML		16 17 07.9	
	comp=Z,120nm,1.0s						
INDI	**Punta indio, G**	**4.65**	**132**	*i* P	**Pn**	**16 15 57.0**	**+2.9**
INDI				IAML		16 17 16.8	
	comp=Z,230nm,1.0s						
JTS	**Las Juntas de**	**4.82**	**124**	P	**Pn**	**16 16 00.1**	**+3.7**
	comp=Z,5.6nm,0.3s,baz=288,slow=20,SNR=2.6						
JTS				S	**Sn**	**16 16 49.3**	**-1.6**
	comp=Z,6.8nm,0.3s,baz=311,slow=20,SNR=0.9						
LAFE	**Finca La Fe, P**	**5.13**	**128**	*i* P	**Pn**	**16 16 03.7**	**+3.0**
LAFE				IAmb	IAmb	16 16 10.6	
	comp=Z,0.2nm,0.9s						
LAFE				*i* S	**Sn**	**16 16 55.3**	**-3.5**
LAFE				IAML		16 17 25.5	
	comp=Z,0.8nm,1.0s						
JACO	**JACO, Garabito**	**5.42**	**127**	*i* P	**Pn**	**16 16 08.7**	**+4.1**
JACO				IAmb	IAmb	16 16 26.6	
	comp=Z,31nm,0.9s						
JACO				IAML		16 17 19.4	
	comp=Z,59nm,1.0s						
LCR2	**La Lucha 2**	**5.89**	**123**	*i* P	Pn	16 16 16.7	+5.3
LCR2				IAmb	IAmb	16 16 29.1	
	comp=Z,18nm,0.9s						
LCR2				IAML		16 17 41.6	
	comp=Z,56nm,1.0s						
CMIG	**Matias Romero**	**6.97**	**306**	P	**Pn**	**16 16 28.8**	**+2.9**
	comp=Z,1.5nm,0.3s,baz=94,slow=6.5,SNR=5.1						
CMIG				LR	LR	16 19 09.4	
	comp=Z,48nm,21.1s,baz=83,slow=37						
TXAR	**Lajitas Array**	**21.19**	**322**	P	**P**	**16 19 29.1**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=144,slow=9.2,SNR=5.4						
	comp=Z,0.8nm,0.5s						
ANMO	**Albuquerque**	**26.95**	**327**	LR	LR	16 33 31.6	
	comp=Z,80nm,18.2s,baz=68,slow=42						
ULM	**Lac du Bonnet**	**37.57**	**353**	P	**P**	**16 21 54.1**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=174,slow=6.1,SNR=2.2						
	comp=Z,0.7nm,0.4s						
YKA	**Yellowknife Ar**	**52.69**	**345**	P	**P**	**16 23 54.0**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=142,slow=7.4,SNR=15						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**64.90**	**336**	P	**P**	**16 25 17.8**	**-2.3**
	comp=Z,0.3nm,0.9s,baz=154,slow=5.3,SNR=5.3						
	comp=Z,0.3nm,0.9s						
WRA	**Warramunga Arr**	**137.93**	**255**	PKP	**PKPdf**	**16 34 06.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=90,slow=2.2,SNR=1.3						
ASAR	**Alice Springs**	**138.03**	**249**	PKP	**PKPdf**	**16 34 05.8**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=110,slow=2.7,SNR=2.3						
CMAR	**Chiang Mai Arr**	**147.77**	**346**	PKPbc	**PKPdf**	**16 34 24.5**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=347,slow=3.7,SNR=1.7						

*HEL **15** 16:24:25.6±0.1, 67.70N×26.99E, h0km, ML1.7, Explosion*
*KOLA **15** 16:24:25.5, 67.65N×26.63E, h0km, ML2.2, Error ellipse: s-maj=11.5km s-min=5.0km az=40.0, Finland, Lapland*
*IDC **15** 16:24:26.7±1.7, 67.76N×26.85E, h0km, mbtmp2.8/1, ML1.9/1, Error ellipse: s-maj=33.7km s-min=9.4km az=81.0*
*BER **15** 16:24:26.6±1.7, 67.57N×26.91E, h0km, ML1.4, Suspected explosion*

ISC 15 16:24:24.2±0.7, 67.75N±0.02×27.05E±0.02, h0km, n42, σ1900/69, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGF	**Sodankyl**	**0.37**	**213**	PG	**Pg**	**16 24 31.0**	**-0.1**
	baz=31						
SGF				SG	**Sg**	**16 24 35.2**	**-0.7**
RAJF	**Raja-Jooseppi**	**0.87**	**32**	PG	**Pb**	**16 24 42.4**	**+0.2**
RAJF				SG	**Sg**	**16 24 52.1**	**0.0**
VRF	**Varrio**	**0.98**	**89**	PG	**Pb**	**16 24 43.8**	**-0.1**
	baz=264						
VRF				MSG		16 24 56.2	
	comp=Z,6.2nm,0.2s						
VRF				SB	**Sb**	**16 24 57.3**	**-0.1**
RNF	**Rovaniemi**	**1.21**	**200**	PG	**Pg**	**16 24 46.8**	**-0.6**
RNF				SB	**Sg**	**16 25 02.6**	**-0.5**
KLF	**Kolari**	**1.29**	**248**	PG	**Pg**	**16 24 48.2**	**-0.8**
	baz=71						
KLF				MSG		16 25 03.5	
	comp=Z,9.8nm,0.2s						
KLF				SG	**Sg**	**16 25 04.8**	**-0.9**
KMNF	**Kaamanen**	**1.41**	**359**	PG	**Pb**	**16 24 51.5**	**+0.2**
KMNF				SG	**Sn**	**16 25 09.7**	**-0.6**
HEF	**Hetta**	**1.43**	**299**	*eP*	**Pn**	**16 24 51.5**	**0.0**
HEF				*eS*	**Sn**	**16 25 11.1**	**+0.1**
HEF	**Hetta**	**1.43**	**299**	PG	**Pg**	**16 24 51.8**	**+0.1**
HEF				MSG		16 25 08.9	
	comp=Z,13nm,0.2s						
HEF				SG	**Sn**	**16 25 11.4**	**+0.4**
PAJU	**Pajala**	**1.69**	**246**	PG	**Pn**	**16 24 54.9**	**0.0**
	baz=61						
PAJU				SG	**Sn**	**16 25 16.3**	**-0.9**
OLKF	**Oulanka, Finla**	**1.71**	**146**	PN	**Pn**	**16 24 55.8**	**+0.7**
OLKF				MSG		16 25 15.9	
	comp=Z,9.9nm,0.2s						
OLKF				SN	**Sg**	**16 25 19.9**	**+1.0**
RANF	**Ranua**	**1.75**	**183**	PG	**Pn**	**16 24 55.8**	**+0.2**
	baz=3.0						
RANF				SG	**Sn**	**16 25 17.4**	**-1.2**
ARA0	**ARCESS Array S**	**1.88**	**343**	*eP*	**Pg**	**16 24 59.8**	**-0.5**
ARA0				*eS*	**Sg**	**16 25 24.9**	**+0.4**
ARA0				IAML		16 25 27.1	
	comp=Z,4.0nm,0.2s						
ARCES	**ARCESS Array B**	**1.88**	**343**	P	**Pb**	**16 24 59.5**	**+0.1**
ARCES				S	**Sb**	**16 25 23.3**	**-0.2**
ARCES	**ARCESS Array B**	**1.88**	**343**	Pg	**Pb**	**16 24 59.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=163,slow=17,SNR=27						
ARCES				Lg	Lg	16 25 25.1	
	comp=Z,0.8nm,0.3s,baz=165,slow=24,SNR=19						
ARCES				Rg	Rg	16 25 35.1	
	comp=Z,5.5nm,0.9s,baz=155,slow=32,SNR=5.0						
KTK1	**Kautokeino**	**1.90**	**314**	*eP*	**Pb**	**16 24 59.6**	**0.0**
KTK1				*eS*	**Sg**	**16 25 24.5**	**-0.6**
KTK1				IAML		16 25 26.4	
	comp=Z,6.7nm,0.1s						
KTK1	**Kautokeino**	**1.90**	**314**	PG	**Pb**	**16 24 59.6**	**0.0**
KTK1				SG	**Sg**	**16 25 24.6**	**-0.6**
LANU	**Lannavaara**	**1.93**	**281**	PG	**Pn**	**16 24 58.9**	**+0.6**
	baz=98						
LANU				SG	**Sb**	**16 25 25.7**	**+0.7**
TOF	**Tornio**	**1.99**	**214**	PG	**Pn**	**16 25 00.1**	**+1.1**
	baz=34						
TOF				MSG		16 25 23.1	
	comp=Z,4.3nm,0.2s						
TOF				SG	**Sn**	**16 25 24.8**	**+0.2**
MSF	**Maaselka**	**2.01**	**156**	PG	**Pb**	**16 25 00.9**	**-0.6**
MSF				SG	**Sb**	**16 25 26.6**	**-0.4**
KEV	**Kevo**	**2.02**	**360**	*eP*	**Pb**	**16 25 01.4**	**-0.2**
KEV				*eS*	**Sg**	**16 25 28.3**	**-0.6**
KEV	**Kevo**	**2.02**	**360**	PB	**Pb**	**16 25 01.4**	**-0.2**
KEV				MSG		16 25 27.0	
	comp=Z,6.1nm,0.2s						
KEV				SG	**Sg**	**16 25 28.6**	**-0.3**
KU6	**Riekki**	**2.06**	**146**	PG	**Pb**	**16 25 01.9**	**-0.6**
KU6				MSG		16 25 26.0	
	comp=Z,3.0nm,0.2s						
KU6				SG	**Sb**	**16 25 29.0**	**+0.5**
APA0	**Apatity Array**	**2.27**	**91**	P	**Pb**	**16 25 05.9**	**-0.1**
APA0				S	**Sb**	**16 25 34.9**	**+0.2**
KALU	**Kalix**	**2.39**	**219**	PG	**Pn**	**16 25 05.7**	**+1.1**
	baz=34						
KALU				SG	**Sn**	**16 25 36.2**	**+1.7**
VADS	**Vadso**	**2.53**	**18**	P	**Pb**	**16 25 08.8**	**-1.5**
VADS				S	**Sb**	**16 25 42.3**	**+0.4**
VADS	**Vadso**	**2.53**	**18**	*eP*	**Pb**	**16 25 08.8**	**-1.5**
VADS				*eS*	**Sb**	**16 25 42.4**	**+0.5**
VADS				IAML		16 25 44.3	
	comp=Z,5.2nm,0.6s						
KIF	**Kilpisjarvi**	**2.63**	**301**	MSG		16 25 43.9	
	comp=Z,3.6nm,0.2s						
KIF				SG	**Sb**	**16 25 46.2**	**+1.1**
OUL	**Oulu**	**2.71**	**190**	PB	**Pn**	**16 25 10.4**	**+1.5**
	baz=8.0						
OUL				SG	**Sb**	**16 25 45.7**	**-1.6**
PRVG	**Vayda Guba**	**2.74**	**41**	P	**Pb**	**16 25 12.4**	**-1.7**
PRVG				S	**Sb**	**16 25 47.5**	**-0.7**
LVZ	**Lovozero**	**2.89**	**84**	S	**Sb**	**16 25 53.2**	**+0.9**
JETT	**Jettan, Norway**	**3.03**	**310**	*eP*	**Pn**	**16 25 15.6**	**+2.2**
OBF4	**Vikkela, Lumij**	**3.05**	**196**	PB	**Pn**	**16 25 15.0**	**+1.4**
	baz=12						
OBF4				MSG		16 25 53.7	
	comp=Z,1.5nm,0.2s						
HAMF	**Hammerfest**	**3.15**	**339**	*eP*	**Pb**	**16 25 18.7**	**-2.2**
I37NO	**I37NO**	**3.39**	**297**	I	I	16 43 20.0	
	comp=Z,0.2nm,0.7s,baz=110,slow=318,SNR=9.8						
OUF	**Merijarvi**	**3.52**	**197**	PN	**Pn**	**16 25 22.0**	**+1.9**
OUF				SG	**Sb**	**16 26 12.4**	**+1.8**
RMF	**Romuvaara**	**3.74**	**160**	SB	**Sb**	**16 26 14.2**	**-2.5**
BURU	**Burvik**	**3.92**	**219**	PN	**Pn**	**16 25 27.0**	**+1.5**
NIF	**Nilsia**	**4.39**	**176**	PN	**Pn**	**16 25 33.7**	**+1.7**
	baz=359						
STEI	**Steigen**	**4.48**	**278**	*eP*	**Pn**	**16 25 33.7**	**+0.5**
FAUS	**Fauske**	**4.52**	**271**	*eP*	**Pn**	**16 25 34.0**	**+0.2**
UMAU	**Umeaa**	**4.68**	**217**	PN	**Pn**	**16 25 36.7**	**+0.8**
	baz=35						
FINES	**FINESS Array B**	**6.34**	**184**	Pn	**Pn**	**16 26 01.0**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=18,slow=9.5,SNR=1.4						
FINES				Lg	Lg	16 27 39.3	
	comp=Z,0.2nm,0.3s,baz=358,slow=29,SNR=4.0						
	comp=Z,0.8nm,0.8s						

*IDC **15** 16:31:07.8±2.8, 21.67S×168.65E, h0km, mb3.9/3, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=106.6km s-min=35.5km az=156.0*
*NEIC **15** 16:31:08.6±1.7, 21.56S±0.04×168.8E±0.2, h13km±16km, mb4.1/7, Error ellipse: s-maj=27.3km s-min=6.3km az=87.0*
*NOU **15** 16:31:37.5, 22.15S×166.87E, h0km, MLv2.3/5, New Caledonia*

ISC 15 16:31:07.8±1.6, 21.5S±0.1×168.8E±0.1, h10km, n23, σ0978/28, mb4.0/5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**1.62**	**229**		**Pn**	**16 31 36.2**	**-0.3**
PINNC				Sn	**Sn**	**16 31 57.3**	**-0.1**
YATNC	**Mamie plateau,**	**1.82**	**253**	P	**Pn**	**16 31 39.4**	**+0.2**
OUENC	**Ouen Island, N**	**1.99**	**244**		**Pn**	**16 31 41.6**	**+0.1**
OUENC				Sn	**Sn**	**16 32 07.4**	**+0.9**
OUENC	**Ouen Island, N**	**1.99**	**244**	P	**Pn**	**16 31 42.6**	**+1.1**
DZM	**Mont Dzumac**	**2.22**	**256**		**Pn**	**16 31 44.9**	**+0.1**
DZM				Sn	**Sn**	**16 32 12.0**	**-0.4**
DZM	**Mont Dzumac**	**2.22**	**256**	P	**Pn**	**16 31 45.4**	**+0.6**
DZM	**Mont Dzumac**	**2.22**	**256**	Pn	**Pn**	**16 31 45.2**	**+0.4**
	14nm,0.3s,baz=106,slow=11,SNR=116						
DZM				Sn	**Sn**	**16 32 11.8**	**-0.6**
	94nm,0.3s,baz=153,slow=13,SNR=16						
	37nm,0.3s						
ONTNC	**Ouen Toro**	**2.28**	**250**		**Pn**	**16 31 45.5**	**0.0**
ONTNC				Sn	**Sn**	**16 32 13.9**	**+0.2**
ONTNC	**Ouen Toro**	**2.28**	**250**	P	**Pn**	**16 31 45.9**	**+0.4**
NOUC	**Port Laguerre**	**2.35**	**256**	P	**Pn**	**16 31 47.4**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.30**	**282**	Pn	**Pn**	**16 32 13.4**	**+0.1**
ARMA	**Armidale**	**17.75**	**237**		**Pn**	**16 35 14.8**	**-0.3**
ARMA				IAmb	IAmb	16 35 30.6	
	comp=Z,23nm,1.4s						
STKA	**Stephens Creek**	**26.30**	**241**	P	**P**	**16 36 44.0**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=0.0,slow=15,SNR=2.9						
	comp=Z,1.4nm,0.9s						

STKA	**Stephens Creek**	**27.52**	**237**	P	P	17 16 38.9	-0.2
	1.8nm,0.6s,baz=77,slow=11,SNR=6.9						
	1.8nm,0.6s						
WRA	**Warramunga Arr**	**32.27**	**262**	P	P	17 17 20.4	-0.8
	0.9nm,0.8s,baz=88,slow=8.3,SNR=3.8						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**32.61**	**255**	P	P	17 17 24.6	+0.5
	4.1nm,0.6s,baz=85,slow=8.8,SNR=54						
	4.1nm,0.6s						

*NEIC **15** 17:13:12.6±0.7,20°.17N×0°.05×155°.59W±0°.03,h40km±4km, Error ellipse: s-maj=7.5km s-min=2.3km az=207.0*

HVO 15 17:13:14.1±1.1,20°.18N±0°.04×155°.60W±0°.04,h38km±3km, ML2.7/13,ML2.8/44(NEIC),Error ellipse: s-maj=7.4km s-min=3.9km az=215.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPAH	**Hawaii Prepara**	**0.17**	**212**		Pn	17 13 20.1	-3.9
HPAH					Sn	17 13 24.7	-8.9
HPAH	**Hawaii Prepara**	**0.17**	**212**	IAML		17 13 24.8	
	comp=E,2μm,0.1s						
HPAH				IAML		17 13 24.8	
	comp=N,2μm,0.3s						
MHA	**Mahukona**	**0.28**	**272**		Pn	17 13 21.1	-1.2
MHA					Sn	17 13 26.5	-2.9
POHA	**Pohakuloa**	**0.42**	**171**		Pn	17 13 22.7	-1.1
POHA					Sn	17 13 29.1	-1.7
POHA	**Pohakuloa**	**0.42**	**171**	IAML		17 13 29.3	
	comp=N,427nm,0.2s						
POHA				IAML		17 13 29.3	
	comp=N,522nm,0.2s						
HUH	**Hualalai**	**0.54**	**204**	Pn	Pn	17 13 23.8	-1.8
HUH				IAML		17 13 37.8	
	comp=E,365nm,2.4s						
HMH	**Humu'ula Sheep**	**0.58**	**169**		Pn	17 13 24.8	-1.5
HMH	**Humu'ula Sheep**	**0.58**	**169**		Sn	17 13 32.9	-1.8
ALEP	**Alea Permanent**	**0.64**	**184**		Pn	17 13 25.7	-1.4
ALEP					Sn	17 13 34.3	-1.7
MLOA	**Mauna Loa Obse**	**0.64**	**178**	IAML		17 13 30.8	
	comp=E,355nm,3.4s						
MLOA				IAML		17 13 35.4	
	comp=N,312nm,0.2s						
MLOA	**Mauna Loa Obse**	**0.64**	**178**		Pn	17 13 25.9	-1.3
MLOA	**Mauna Loa Obse**	**0.64**	**178**		Sn	17 13 34.5	-1.8
KHLU	**Kahalu`u**	**0.65**	**205**	Pn	Pn	17 13 24.6	-2.4
KHLU	**Kahalu`u**	**0.65**	**205**		Sn	17 13 34.5	-1.5
KHLU	**Kahalu`u**	**0.65**	**205**	IAML		17 13 51.0	
	comp=N,418nm,0.1s						
MWH	**Moku'aweowe**	**0.69**	**180**		Pn	17 13 26.0	-1.9
MWH	**Moku'aweowe**	**0.69**	**180**	IAML		17 13 41.8	
	comp=E,474nm,2.3s						
MWH				IAML		17 13 45.1	
	comp=N,428nm,2.3s						
MLH	**Mauna Loa**	**0.71**	**163**		Pn	17 13 26.3	-1.6
MLH					Sn	17 13 35.4	-2.2
CPH	**Captain Cook**	**0.75**	**204**		Pn	17 13 26.4	-1.7
RSD	**Rainshed**	**0.77**	**157**	Pn	Pn	17 13 26.2	-2.5
RSD				IAML		17 13 33.4	
	comp=N,404nm,2.7s						
RSD				IAML		17 13 37.9	
	comp=E,311nm,1.9s						
UWE	**Uwekahuna**	**0.81**	**159**		Pn	17 13 27.3	-1.8
UWE					Sn	17 13 37.3	-2.6
UWB	**Uwekahuna B**	**0.81**	**158**		Pn	17 13 27.3	-1.8
UWB					Sn	17 13 36.8	-3.2
OBL	**Observatory Le**	**0.81**	**158**		Pn	17 13 27.3	-1.8
OBL	**Observatory Le**	**0.81**	**158**	IAML		17 13 39.0	
	comp=N,493nm,0.4s						
HATHI	**Halema'uma'u T**	**0.82**	**157**		Pn	17 13 27.3	-1.9
HATHI					Sn	17 13 37.0	-3.2
HATHI	**Halema'uma'u T**	**0.82**	**157**	IAML		17 13 39.8	
	comp=E,290nm,1.7s						
WRMHI	**West Rim**	**0.82**	**160**		Sn	17 13 37.6	-2.6
WRMHI	**West Rim**	**0.82**	**160**		Pn	17 13 27.4	-1.9
WRMHI	**West Rim**	**0.82**	**160**	IAML		17 13 43.1	
	comp=E,650nm,0.9s						
WRMHI	**West Rim**	**0.82**	**160**	IAML		17 13 35.8	
	comp=N,570nm,1.5s						
NPH	**North Pit**	**0.82**	**158**	Pn	Pn	17 13 28.0	-1.2
NPH				IAML		17 13 58.9	
	comp=E,277nm,3.6s						
HLK	**Haleakala**	**0.84**	**314**		Pn	17 13 27.5	-2.1
HLK	**Haleakala**	**0.84**	**314**		Sn	17 13 37.5	-3.4
HLK	**Haleakala**	**0.84**	**314**	IAML		17 13 35.1	
	comp=N,275nm,2.6s						
HLK	**Haleakala**	**0.84**	**314**	IAML		17 13 56.0	
	comp=E,438nm,4.2s						
SDHHI	**Sand Hill**	**0.84**	**160**	IAML		17 13 38.7	
	comp=E,323nm,0.8s						
SDHHI				IAML		17 13 47.1	
	comp=N,296nm,2.0s						
SDHHI	**Sand Hill**	**0.84**	**160**		Pn	17 13 27.7	-1.8
SDHHI					Sn	17 13 37.7	-3.0
PUH	**Pauahi**	**0.88**	**156**		Pn	17 13 28.3	-1.8
PUH				IAML		17 13 39.7	
	comp=N,290nm,2.0s						
PUH	**Pauahi**	**0.88**	**156**		Sn	17 13 38.5	-3.2
PUH	**Pauahi**	**0.88**	**156**	IAML		17 13 37.8	
	comp=E,306nm,3.0s						
KNHH	**Kane Nui o Ham**	**0.89**	**153**		Pn	17 13 28.5	-1.7
NPOC	**North of Pu'u**	**0.91**	**149**		Sn	17 13 39.1	-3.3
NPOC	**North of Pu'u**	**0.91**	**149**	IAML		17 13 41.9	
	comp=N,437nm,0.6s						
NPOC				IAML		17 13 58.0	
	comp=E,436nm,0.7s						
STCH	**Steam Cracks**	**0.91**	**150**		Pn	17 13 28.5	-1.9
STCH					Sn	17 13 39.0	-3.3
HLP	**Hilina Pali**	**0.92**	**163**		Pn	17 13 28.8	-1.8
HLP					Sn	17 13 39.9	-2.8
KHU	**Kahuku**	**0.93**	**181**		Pn	17 13 28.8	-2.0
KHU					Sn	17 13 39.9	-3.1
KHU	**Kahuku**	**0.93**	**181**	IAML		17 13 52.0	
	comp=N,318nm,3.3s						
KHU				IAML		17 14 04.9	
	comp=E,396nm,3.8s						
JOKA	**Jonika Flow**	**0.93**	**143**		Pn	17 13 29.0	-1.7
JOKA					Sn	17 13 39.8	-3.1
HTC	**Hot Caves**	**0.96**	**168**		Pn	17 13 29.3	-1.7

*IDC **15** 17:37:40.2±3.3,55°.93N×149°.61W,h0km,mb3.2/1, mbtmp3.1/3,ML3.0/2,MS2.7/1,Error ellipse: s-maj=53.4km s-min=37.9km az=137.0*

*NEIC **15** 17:37:40.5±1.6,56°.10N±0°.08×149°.68W±0°.10,h10km±2km, ML3.3/44,ML3.2(AEIC),Error ellipse: s-maj=14.2km s-min=8.7km az=167.0*

*AEIC **15** 17:37:43.8±2.1,56°.00N±0°.06×149°.6W±0°.1,h9km±7km, Error ellipse: s-maj=11.6km s-min=1.5km az=133.0*

ISC 15 17:37:40.9±1.5,56°.1N±0°.1×149°.67W±0°.06,h10km,n153, σ0s90/155,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.27**	**300**		**Pn**	**17 38 17.6**	**-0.8**
OHAK	**Old Harbor**	**2.27**	**300**		**Sn**	**17 38 44.2**	**-2.3**
OHAK	**Old Harbor**	**2.27**	**300**	IAML		17 38 47.2	
	comp=E,44nm,0.6s						
OHAK				IAML		17 38 50.6	
	comp=N,39nm,1.1s						
OHAK	**Old Harbor**	**2.27**	**300**	P	**Pn**	**17 38 17.9**	**-0.5**
	baz=119						
OHAK				S	**Sn**	**17 38 44.2**	**-2.3**
	baz=119						
KDAK	**Kodiak Island**	**2.29**	**317**		**Pn**	**17 38 18.7**	**0.0**
KDAK	**Kodiak Island**	**2.29**	**317**		**Sn**	**17 38 44.9**	**-2.1**
KDAK	**Kodiak Island**	**2.29**	**317**	LR	LR	17 39 31.5	
	comp=N,150nm,18.6s,baz=235,slow=45						
SII	**Sitkinak Islan**	**2.55**	**281**	Pn	**Pn**	**17 38 21.1**	**-1.1**
SII				IAML		17 38 51.9	
	comp=E,146nm,0.6s						
SII				IAML		17 38 56.9	
	comp=N,98nm,0.6s						
SII	**Sitkinak Islan**	**2.55**	**281**	P	**Pn**	**17 38 21.1**	**-1.1**
	baz=100						
SII				S	**Sn**	**17 38 50.6**	**-2.7**
	baz=100						
Q20K	**Shuyak Island**	**2.88**	**330**	P	**Pn**	**17 38 27.0**	**+0.2**
	baz=148						
Q20K				S	**Sn**	**17 39 01.8**	**+0.3**
	baz=148						
SYI	**Shuyak Island**	**2.88**	**330**	Pn	**Pn**	**17 38 27.2**	**+0.4**
SYI	**Shuyak Island**	**2.88**	**330**		**Sn**	**17 39 01.8**	**+0.3**
R18K	**Karluk**	**2.99**	**301**	IAML		17 39 10.0	
	comp=N,48nm,0.7s						
R18K				IAML		17 39 14.5	
	comp=E,60nm,0.6s						
R18K	**Karluk**	**2.99**	**301**		**Pn**	**17 38 28.7**	**+0.4**
R18K					**Sn**	**17 39 04.7**	**+0.6**
R18K	**Karluk**	**2.99**	**301**	P	**Pn**	**17 38 28.7**	**+0.4**
	baz=118						
R18K				S	**Sn**	**17 39 04.7**	**+0.6**
	baz=118						
CHIR	**Chirikof Islan**	**3.36**	**267**	Pn	**Pn**	**17 38 32.5**	**-0.9**
CHIR				IAML		17 39 09.6	
	comp=N,75nm,0.7s						
CHIR				IAML		17 39 10.0	
	comp=E,118nm,1.1s						
CNPM	**China Poot**	**3.50**	**347**		**Pn**	**17 38 35.2**	**-0.1**
CNPM	**China Poot**	**3.50**	**347**		**Sn**	**17 39 15.6**	**-1.2**
CNPM	**China Poot**	**3.50**	**347**	IAML		17 39 21.9	
	comp=E,38nm,1.0s						
CNPM				IAML		17 39 24.9	
	comp=N,28nm,1.5s						
Q19K	**Cape Douglas,**	**3.52**	**324**		**Pn**	**17 38 36.6**	**+0.9**
Q19K				IAML		17 39 47.1	
	comp=N,117nm,1.1s						
Q19K	**Cape Douglas,**	**3.52**	**324**	P	**Pn**	**17 38 36.5**	**+0.9**
	baz=142						
KAHG	**Katmai Hook Gl**	**3.54**	**314**		**Pn**	**17 38 37.0**	**+1.0**
KAKN	**Katmai Knife C**	**3.64**	**309**		**Pn**	**17 38 38.2**	**+0.8**
BRSE	**Bradley Lake S**	**3.66**	**351**	P	**Pn**	**17 38 37.1**	**-0.4**
	baz=170						
BRLK	**Bradley Lake**	**3.69**	**350**		**Pn**	**17 38 37.6**	**-0.4**
BRLK				IAML		17 39 24.1	
	comp=N,24nm,1.4s						
BRLK				IAML		17 39 25.1	
	comp=E,38nm,0.5s						
ACHA	**Angle Creek He**	**3.71**	**306**		**Pn**	**17 38 39.3**	**+1.0**
Q23K	**Middleton Isla**	**3.75**	**27**	Pn	**Pn**	**17 38 37.4**	**-1.3**
MID	**Middleton Isla**	**3.75**	**27**	Pn	**Pn**	**17 38 37.3**	**-1.4**
ANCK	**Angle Creek**	**3.78**	**305**		**Pn**	**17 38 40.1**	**+0.8**
KAHC	**Katmai Hardscr**	**3.83**	**313**	P	**Pn**	**17 38 41.1**	**+1.2**
	baz=130						
Q17K	**Contact Creek**	**4.00**	**305**	P	**Pn**	**17 38 42.9**	**+0.7**
	baz=121						
P19K	**Oil Pt**	**4.00**	**333**	Pn	**Pn**	**17 38 42.8**	**+0.5**
P19K				IAML		17 39 34.4	
	comp=E,73nm,0.7s						
P19K				IAML		17 39 34.5	
	comp=N,59nm,0.5s						
P19K	**Oil Pt**	**4.00**	**333**	P	**Pn**	**17 38 42.8**	**+0.5**
	baz=150						
P23K	**Montague Islan**	**4.05**	**16**		**Pn**	**17 38 43.1**	**+0.2**
P23K	**Montague Islan**	**4.05**	**16**	P	**Pn**	**17 38 43.1**	**+0.2**
	baz=197						
O20K	**Slope Mountain**	**4.25**	**340**		**Pn**	**17 38 46.1**	**+0.4**
O20K	**Slope Mountain**	**4.25**	**340**	P	**Pn**	**17 38 46.1**	**+0.4**
	baz=157						
IVE	**Iliamna Volcan**	**4.28**	**337**		**Pn**	**17 38 46.0**	**0.0**
P18K	**Big Mountain,**	**4.42**	**320**		**Pn**	**17 38 47.8**	**-0.1**
P18K	**Big Mountain,**	**4.42**	**320**	P	**Pn**	**17 38 48.3**	**+0.4**
	baz=136						
Q16K	**King Salmon**	**4.55**	**307**		**Pn**	**17 38 50.4**	**+0.6**
Q16K	**King Salmon**	**4.55**	**307**	P	**Pn**	**17 38 50.3**	**+0.6**
	baz=122						
RSO	**Redoubt South**	**4.63**	**341**		**Pn**	**17 38 49.9**	**-1.1**
KAIM	**Kayak Island**	**4.71**	**34**	Pn	**Pn**	**17 38 51.6**	**-0.3**
KAIM				IAML		17 39 55.4	
	comp=N,42nm,1.4s						
KAIM	**Kayak Island**	**4.71**	**34**	P	**Pn**	**17 38 51.9**	**-0.1**
	baz=217						
O18K	**Koktuh Hills**	**4.75**	**324**		**Pn**	**17 38 52.6**	**+0.1**
O18K				IAML		17 40 01.8	
	comp=N,16nm,0.8s						
O18K				IAML		17 40 07.2	
	comp=E,13nm,0.8s						
O18K	**Koktuh Hills**	**4.75**	**324**	P	**Pn**	**17 38 52.6**	**+0.1**
	baz=140						
P17K	**Kvichak River**	**4.75**	**313**		**Pn**	**17 38 53.2**	**+0.7**
P17K	**Kvichak River**	**4.75**	**313**	P	**Pn**	**17 38 53.2**	**+0.7**
	baz=128						
EYAK	**Cordova Ski Ar**	**4.88**	**23**		**Pn**	**17 38 54.3**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.88**	**23**	P	**Pn**	**17 38 54.3**	**+0.1**
	baz=205						
CHGN	**Chignik**	**4.88**	**276**	Pn	**Pn**	**17 38 54.2**	**-0.1**
RC01	**Rabbit Creek A**	**4.97**	**360**	Pn	**Pn**	**17 38 55.9**	**+0.4**
RAGM	**Ragged Mountai**	**5.01**	**30**	Pn	**Pn**	**17 38 56.0**	**-0.1**
RAGM				IAML		17 40 01.1	
	comp=E,44nm,1.5s						
SUCK	**Suckling Hills**	**5.03**	**36**	Pn	**Pn**	**17 38 56.0**	**-0.3**
SUCK				IAML		17 39 59.1	
	comp=E,41nm,1.5s						
SUCK				IAML		17 40 06.3	
	comp=N,44nm,1.5s						
HMT	**Hamilton**	**5.09**	**32**	Pn	**Pn**	**17 38 57.2**	**+0.1**
HMT				IAML		17 39 58.5	
	comp=N,36nm,1.1s						
NICHA	**Nichawak Mount**	**5.10**	**34**		**Pn**	**17 38 57.3**	**+0.1**
GOAT	**Goat Mountain**	**5.16**	**28**		**Pn**	**17 38 58.0**	**-0.2**
BERG	**Berg Lake**	**5.30**	**34**	Pn	**Pn**	**17 38 59.6**	**-0.4**
BERG				IAML		17 40 00.4	
	comp=N,38nm,1.2s						
SPCP	**Crater Peak Br**	**5.30**	**347**		**Pn**	**17 39 00.7**	**+0.5**
N19K	**Bonanza Creek**	**5.32**	**334**	Pn	**Pn**	**17 38 58.4**	**-2.1**
KNK	**Knik Glacier**	**5.33**	**6**	Pn	**Pn**	**17 39 00.7**	**+0.2**
KNK				IAML		17 40 06.3	
	comp=E,10nm,1.0s						
KNK				IAML		17 40 15.9	
	comp=N,9.2nm,0.8s						
P16K	**Nushagak River**	**5.33**	**306**	P	**Pn**	**17 39 01.3**	**+0.9**
	baz=120						
SUA	**Susitna One**	**5.37**	**354**	Pn	**Pn**	**17 39 01.9**	**+0.8**
O17K	**Koliganek Bris**	**5.38**	**316**		**Pn**	**17 39 01.7**	**+0.7**
O17K	**Koliganek Bris**	**5.38**	**316**	P	**Pn**	**17 39 01.7**	**+0.7**
	baz=130						
SNH	**Sunshine Point**	**5.43**	**39**	Pn	**Pn**	**17 39 01.4**	**-0.5**
KHIT	**Khitrov Hills**	**5.49**	**35**		**Pn**	**17 39 02.5**	**-0.1**
STLK	**Strandline Lak**	**5.49**	**349**		**Pn**	**17 39 02.8**	**0.0**
BMRM	**Bremner River**	**5.52**	**27**	P	**Pn**	**17 39 03.5**	**+0.4**
	baz=210						
N18K	**Kilae Creek**	**5.60**	**327**	Pn	**Pn**	**17 39 04.1**	**-0.2**
WAX	**Waxell Ridge**	**5.62**	**37**		**Pn**	**17 39 04.3**	**-0.2**
GHO	**Glory Hole Cre**	**5.66**	**4**	Pn	**Pn**	**17 39 05.6**	**+0.5**
O16K	**Kokwok River B**	**5.67**	**311**		**Pn**	**17 39 05.6**	**+0.5**
BARK	**Barkley Ridge**	**5.71**	**39**		**Pn**	**17 39 06.0**	**+0.2**
KLU	**Klutina**	**5.71**	**18**		**Pn**	**17 39 06.1**	**+0.4**
KLU	**Klutina**	**5.71**	**18**	P	**Pn**	**17 39 06.3**	**+0.6**
	baz=200						
SML	**Sawmill**	**5.73**	**6**	Pn	**Pn**	**17 39 06.7**	**+0.8**
MESA	**MESA**	**5.75**	**42**	Pn	**Pn**	**17 39 06.9**	**+0.5**
CRQM	**Cirque**	**5.76**	**34**		**Pn**	**17 39 06.5**	**0.0**
SCM	**Sheep Creek Mo**	**5.84**	**11**	Pn	**Pn**	**17 39 07.0**	**-0.5**
SVW2	**Sparrevohn**	**5.85**	**331**	Pn	**Pn**	**17 39 05.5**	**-2.1**
TGL	**Tana Glacier**	**5.86**	**35**	Pn	**Pn**	**17 39 07.8**	**0.0**
ISLE	**Juniper Island**	**5.91**	**38**		**Pn**	**17 39 08.0**	**-0.5**
N17K	**Nushagak Hills**	**5.92**	**321**	Pn	**Pn**	**17 39 08.1**	**-0.3**
SKT	**Skwentna**	**5.94**	**351**	Pn	**Pn**	**17 39 08.2**	**-0.6**
M20K	**Styx River**	**6.03**	**344**	Pn	**Pn**	**17 39 09.4**	**-0.7**
VRDI	**Verde Repeater**	**6.04**	**30**	Pn	**Pn**	**17 39 09.3**	**-1.2**
N25K	**Chitina, Valde**	**6.08**	**24**		**Pn**	**17 39 10.2**	**-0.6**
N25K	**Chitina, Valde**	**6.08**	**24**	P	**Pn**	**17 39 11.0**	**+0.2**
	baz=207						
GLB	**Gilahina Butte**	**6.13**	**27**	Pn	**Pn**	**17 39 10.8**	**-0.7**
KIAG	**Kiagna River**	**6.14**	**36**		**Pn**	**17 39 11.4**	**-0.3**
GRNC	**Granite Creek**	**6.20**	**39**	Pn	**Pn**	**17 39 12.5**	**-0.1**
TABL	**Table Mountain**	**6.23**	**43**		**Pn**	**17 39 12.6**	**-0.3**
M24K	**Tolsona, Glenn**	**6.25**	**15**	Pn	**Pn**	**17 39 15.2**	**+2.1**
M19K	**Big River Lodg**	**6.27**	**339**	Pn	**Pn**	**17 39 13.2**	**-0.1**
MCARA	**McCarthy VSAT**	**6.29**	**31**		**Pn**	**17 39 13.9**	**+0.3**
PTPK	**Patty Peak**	**6.30**	**34**		**Pn**	**17 39 13.9**	**-0.1**
BARN	**Barnard Glacie**	**6.47**	**37**		**Pn**	**17 39 16.2**	**0.0**
CTGM	**Chitina Glacie**	**6.51**	**39**	Pn	**Pn**	**17 39 16.8**	**-0.6**
LOGN	**Logan Glacier**	**6.53**	**40**	Pn	**Pn**	**17 39 16.8**	**-0.3**
BCPM	**Bancas Point**	**6.55**	**50**	Pn	**Pn**	**17 39 17.0**	**-0.2**
L19K	**White Mountain**	**6.62**	**338**	Pn	**Pn**	**17 39 17.5**	**-0.6**
M17K	**Holitna River**	**6.64**	**326**	Pn	**Pn**	**17 39 18.8**	**+0.3**
M17K	**Holitna River**	**6.64**	**326**	P	**Pn**	**17 39 18.9**	**+0.5**
	baz=140						
N15K	**Kwethluk River**	**6.83**	**311**	Pn	**Pn**	**17 39 22.6**	**+1.5**
M16K	**Timber Creek**	**6.89**	**319**	Pn	**Pn**	**17 39 22.1**	**+0.2**
O14K	**Tigyukauivet M**	**6.95**	**301**	Pn	**Pn**	**17 39 22.0**	**-0.6**
DHY	**Denali Highway**	**7.05**	**9**	Pn	**Pn**	**17 39 22.9**	**-1.3**
L18K	**Granite Mounta**	**7.08**	**332**	Pn	**Pn**	**17 39 24.0**	**-0.5**
M26K	**Nabesna, AK**	**7.15**	**26**	Pn	**Pn**	**17 39 24.7**	**-0.8**
O29M	**Mount Kennedy**	**7.19**	**50**	Pn	**Pn**	**17 39 26.5**	**+0.4**
P29M	**Windy Craggy**	**7.26**	**56**	Pn	**Pn**	**17 39 26.5**	**-0.4**
RND	**Reindeer**	**7.30**	**3**	Pn	**Pn**	**17 39 27.9**	**+0.3**
M27K	**Edge Creek, AK**	**7.40**	**29**	Pn	**Pn**	**17 39 30.2**	**+1.2**
CAST	**Castle Rocks**	**7.40**	**352**	Pn	**Pn**	**17 39 30.1**	**+1.2**
KTH	**Kantishna Hill**	**7.46**	**356**	Pn	**Pn**	**17 39 30.3**	**+0.5**
TTA	**Tatalina**	**7.53**	**337**	Pn	**Pn**	**17 39 30.1**	**-0.6**
L16K	**Owhat River**	**7.54**	**322**	Pn	**Pn**	**17 39 31.4**	**+0.6**
S31K	**Pelican**	**7.55**	**70**	Pn	**Pn**	**17 39 28.8**	**-2.1**
K20K	**Telida**	**7.57**	**345**	Pn	**Pn**	**17 39 30.4**	**-0.8**
HYT	**Haines Junctio**	**7.91**	**49**	Pn	**Pn**	**17 39 36.5**	**+0.5**
K17K	**Iditarod**	**7.92**	**330**	Pn	**Pn**	**17 39 35.4**	**-0.6**
BCAR	**Beaver Creek A**	**8.01**	**27**	Pn	**Pn**	**17 39 38.3**	**+1.1**
J20K	**Nowinta River**	**8.37**	**346**	Pn	**Pn**	**17 39 40.9**	**-1.1**
M13K	**Dall Lake**	**8.38**	**306**	Pn	**Pn**	**17 39 43.5**	**+1.2**
J19K	**Poorman**	**8.42**	**342**	Pn	**Pn**	**17 39 40.9**	**-1.9**
N30M	**Aishikik Lake**	**8.43**	**46**	Pn	**Pn**	**17 39 43.1**	**+0.2**
O30N	**Mendenhall**	**8.49**	**51**	Pn	**Pn**	**17 39 43.9**	**0.0**
M29M	**Somme Creek**	**8.53**	**38**			**17 39 44.8**	**+0.4**
L14K	**Kuka Creek**	**8.54**	**313**	Pn	**Pn**	**17 39 45.2**	**+0.8**
K15K	**Wolf Creek Mou**	**8.65**	**320**	Pn	**Pn**	**17 39 46.7**	**+0.7**
J17K	**VABM Dome**	**8.68**	**331**	Pn	**Pn**	**17 39 45.1**	**-1.3**
J25K	**Salcha River,**	**8.76**	**12**	Pn	**Pn**	**17 39 46.8**	**-0.7**
IL31		**8.77**	**8**	Pn	**Pn**	**17 39 46.9**	**-0.7**
ILAR	**Eielson Array**	**8.77**	**8**	Pn	**Pn**	**17 39 49.0**	**+1.4**
	comp=N,0.1nm,0.3s,baz=190,slow=14,SNR=8.2						
ILAR				Sn	**Sn**	**17 41 22.6**	**-3.7**
	comp=N,0.1nm,0.3s,baz=203,slow=16,SNR=1.8						
	comp=N,0.4nm,0.4s						
K27K	**Chicken**	**8.77**	**22**	Pn	**Pn**	**17 39 47.6**	**0.0**
WHY	**Whitehorse**	**8.98**	**54**	Pn	**Pn**	**17 39 50.8**	**+0.1**
J16K	**Anvik River**	**9.04**	**327**	Pn	**Pn**	**17 39 51.8**	**+0.6**
L29M	**L29M**	**9.10**	**35**	Pn	**Pn**	**17 39 53.0**	**+0.8**
P32M	**Atlin**	**9.18**	**61**	Pn	**Pn**	**17 39 52.4**	**-0.8**
M30M	**Minto, Yukon**	**9.20**	**40**	Pn	**Pn**	**17 39 54.8**	**+1.3**
DAWY	**Dawson**	**9.45**	**29**	Pn	**Pn**	**17 39 57.6**	**+0.6**
H21K	**Melozitna Rive**	**9.67**	**352**	Pn	**Pn**	**17 40 00.5**	**+0.5**
Q32M	**Nakina River**	**9.77**	**66**	Pn	**Pn**	**17 40 00.7**	**-0.7**
P33M	**Teslin, Yukon**	**9.78**	**58**	Pn	**Pn**	**17 40 01.3**	**-0.2**
K29M	**Barlow Dome**	**9.82**	**33**	Pn	**Pn**	**17 40 03.0**	**+0.9**
IMAR	**Indian Mountai**	**10.07**	**350**	Pn	**Pn**	**17 40 05.1**	**-0.3**
R33M	**Jennings River**	**10.50**	**64**	Pn	**Pn**	**17 40 10.7**	**-0.7**
J30M	**Hart River**	**10.71**	**32**	Pn	**Pn**	**17 40 16.5**	**+2.3**
BMAR	**Burnt Mountain**	**11.58**	**10**	Pn	**Pn**	**17 40 26.6**	**+0.6**
YKA	**Yellowknife Ar**	**18.80**	**56**	P	**Pn**	**17 42 01.4**	**+0.8**
	comp=N,0.1nm,0.3s,baz=264,slow=11,SNR=6.5						
	comp=N,0.6nm,0.9s						
SONM	**Songino Array**	**58.56**	**310**	P	**P**	**17 47 39.1**	**+1.7**
	comp=N,0.2nm,0.8s,baz=60,slow=8.5,SNR=1.8						
	comp=N,0.2nm,0.8s						

*IDC **15** 17:44:44.0±6.9,36°.46N×71°.14E,h178km±58km,mb3.3/3, mbtmp3.9/9,Error ellipse: s-maj=58.3km s-min=25.9km az=44.0*

*NNC **15** 17:44:49.8±5.2,36°.97N×70°.48E,h157km±55km,mb3.1, mpv3.8,Error ellipse: s-maj=47.4km s-min=29.1km az=33.0*

ISC 15 17:44:45.6±1.3,36°.7N±0°.1×70°.8E±0°.1,h188km,n14, σ2s19/17,mb3.5/3,1C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.41**	**358**	P	**Pn**	**17 46 18.6**	**+0.6**
	2.6nm,0.3s,baz=190,slow=13,SNR=53						
KK31				S	**Sn**	**17 47 27.8**	**-3.2**
	11nm,0.4s,baz=184,slow=16,SNR=25						
AAK	**Ala-Archa**	**6.59**	**24**	P	**Pn**	**17 46 20.8**	**+0.4**
	2.4nm,0.3s,baz=182,slow=3.3,SNR=25						
AAK				S	**Sn**	**17 47 34.1**	**-1.4**
	3.9nm,0.3s,baz=138,slow=22,SNR=12						
MK31	**Makanchi Array**	**13.23**	**37**	P	**P**	**17 47 49.9**	**+0.4**
	1.1nm,0.7s,baz=215,slow=9.5,SNR=6.7						
MKAR	**Makanchi Array**	**13.23**	**37**	P	**Pn**	**17 47 46.5**	**+0.2**
	0.6nm,0.7s,baz=216,slow=8.7,SNR=8.1						
AB31	**Akbulak array**	**14.84**	**331**	P	**Pn**	**17 48 06.2**	**0.0**
	1.9nm,0.7s,baz=146,slow=12,SNR=26						
AB31				⇓S	**Sn**	**17 50 48.4**	**-3.4**
	0.6nm,0.5s,baz=152,slow=23,SNR=6.1						
KURBB	**Kurchatov Arra**	**15.00**	**19**	P	**P**	**17 48 10.0**	**+1.0**
	0.8nm,0

KAN14	Manchester OK	1.41	326		Pn	17 58 25.5	-0.2
OK032	Salt Plains WL	1.42	316		Pn	17 58 24.6	-1.2
KAN09	Caldwell North	1.44	339		Pn	17 58 25.7	-0.4
KAN01	Argonia South	1.50	336		Pn	17 58 26.4	-0.6
KAN05	Bluff City Nor	1.50	332		Pn	17 58 26.5	-0.5
OK038	West end E0370	1.58	296		Sn	17 58 48.5	-0.2
KAN10	Anthony SW Sta	1.60	326		Pn	17 58 27.8	-0.6
U32A	Winter Ranch,	1.74	290	Pn	Pn	17 58 29.2	-1.1
X37A	Clayton	1.78	132	Pn	Pn	17 58 30.4	-0.4
X37A				IAmb_Lg		17 58 58.0	
	comp=Z,4.7nm,1.0s						
WMOK	Wichita Mounta	1.81	235	Pn	Pn	17 58 31.5	+0.3

IDC 15 17:59:52.5±8.9, 13°.81S×167°.21E, h0km, mb3.7/3, mbtmp3.6/3, MS3.3/1, Error ellipse: s-maj=264.2km s-min=60.3km az=128.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	25.89	162	LR	LR	18 13 48.6	
	comp=Z,59nm,18.5s,baz=98,slow=32						
WRA	Warramunga Arr	32.00	254	P	P	18 06 20.9	+0.1
	0.4nm,0.5s,baz=86,slow=9.4,SNR=5.7						
	0.4nm,0.5s						
ASAR	Alice Springs	32.95	248	P	P	18 06 29.1	-0.1
	0.4nm,0.4s,baz=75,slow=9.6,SNR=20						
	0.4nm,0.4s						
MKAR	Makanchi Array	96.50	316	P	P	18 13 23.7	-0.3
	0.2nm,0.6s,baz=94,slow=5.8,SNR=1.8						
	0.2nm,0.6s						

IDC 15 18:09:34.5±252.0, 23°.06S×69°.37W, h0km, Error ellipse: s-maj=145.0km s-min=84.6km az=162.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.61	43	I	I	18 11 48.5	
	baz=286,slow=10,SNR=21						
I08BO	LAS PENAS INFR	6.86	7	I	I	18 55 30.0	
	baz=187,slow=326,SNR=5.2						
I14CL	ROBINSON CRUSO	13.42	216	I	I	19 30 00.0	
	baz=38,slow=320,SNR=1.9						
I20EC	Galapagos	30.25	315	I	I	21 14 00.0	
	baz=142,slow=318,SNR=1.1						
I13CL	EASTER ISLAND	36.34	255	I	I	21 52 00.0	
	baz=88,slow=314,SNR=0.9						

*SDD **15** 18:10:21.5±1.9, 18°.83N×70°.39W, h112km±10km, MD3.3, ML3.4, MW3.6*
*OSPL **15** 18:10:23.8±1.5, 18°.90N×70°.40W, h92km±10km, ML2.9*
ISC 15 18:10:21.8±1.7, 18°.87N±0°.06×70°.38W±0°.04, h98km±11km, n20, σ0°.80/28, 11C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABDR	Alto Bandera	0.24	256	⇑*e*Pg	Pn	18 10 35.6	-0.8
ABDR				⇑*e*Sg	Sn	18 10 47.4	+0.2
ABDR				IAML		18 10 48.3	
	comp=E,623nm,0.1s						
ABDR				IAML		18 10 49.1	
	comp=N,962nm,0.2s						
DR08	Loma La Naviza	0.35	75	⇓*e*P	Pn	18 10 35.4	-1.1
DR08				IAML		18 10 45.9	
	comp=N,16μm,0.1s						
BANI	BANI	0.48	178	⇓*e*Pg	Pn	18 10 37.6	+0.2
BANI				⇓*e*Sg	Sn	18 10 50.2	+1.2
BANI				IAML		18 10 51.4	
	comp=N,1μm,0.2s						
BANI				IAML		18 10 53.3	
	comp=E,1μm,0.4s						
LOSC1	San Cristbal	0.53	151	*i* P	Pn	18 10 37.7	+0.1
LOSC1				*e*S	Sn	18 10 48.9	-0.5
LOSC1				IAML		18 10 54.5	
	comp=Z,576nm,0.8s						
SDD	Santo Domingo	0.60	133	IAML		18 10 48.8	
	comp=N,137nm,0.6s						
SDD				IAML		18 10 49.2	
	comp=E,72nm,0.7s						
SC01	Santiago de lo	0.64	329	⇑*e*Pg	Pn	18 10 38.6	+0.1
SC01				⇑*e*Sg	Sn	18 10 52.2	+1.1
SC01				IAML		18 10 53.4	
	comp=E,1μm,0.2s						
SC01				IAML		18 10 53.5	
	comp=N,1μm,0.1s						
NADR	Nagua	0.69	46	⇓*e*Pg	Pn	18 10 38.5	-0.4
NADR				⇑*e*Sg	Sn	18 10 52.8	+1.1
NADR				IAML		18 10 53.1	
	comp=E,3μm,0.2s						
NADR				IAML		18 10 54.2	
	comp=N,3μm,0.3s						
SDDR	Presa de Saban	0.87	277	⇓*e*Pg	Pn	18 10 41.0	+0.3
SDDR				⇑*e*Sg	Sn	18 10 54.7	-0.3
SDDR				IAML		18 10 59.2	
	comp=N,274nm,0.9s						
SDDR				IAML		18 11 00.8	
	comp=E,235nm,0.2s						
SDDR	Presa de Saban	0.87	277	*i* P	Pn	18 10 41.0	+0.3
SDDR				*e*S	Sn	18 10 54.6	-0.3
SDDR				IAML		18 10 59.6	
	comp=Z,282nm,0.5s						
MADR	Mao Valverde	0.97	315	⇓*e*Pg	Pn	18 10 41.9	+0.2
MADR				⇑*e*Sg	Sn	18 10 57.9	+1.1
MADR				IAML		18 11 01.1	
	comp=E,947nm,0.6s						
MADR				IAML		18 11 01.4	
	comp=N,914nm,0.6s						
NEDR	Neiba UASD	1.06	249	IAML		18 11 05.3	
	comp=E,116nm,0.6s						
LUDR	Luperon	1.15	332	⇑*e*Pg	Pn	18 10 43.2	-0.6
LUDR				IAML		18 11 06.6	
	comp=E,2μm,0.4s						
LUDR				IAML		18 11 08.8	
	comp=N,2μm,0.3s						
SMDR	Samana, DR	1.20	70	*e*Pg	Pn	18 10 44.6	+0.3
SMDR				IAML		18 11 04.3	
	comp=N,144nm,0.3s						
SMDR				IAML		18 11 05.6	
	comp=E,150nm,0.2s						
MIDR	Miches	1.26	85	⇑*e*Pg	Pn	18 10 44.6	-0.4
MIDR				⇑*e*Sg	Sn	18 11 01.8	-0.8
MIDR				IAML		18 11 03.8	
	comp=N,150nm,0.2s						
MIDR				IAML		18 11 04.0	
	comp=E,160nm,0.1s						
LODA1	ITESIL, Dajabo	1.42	298	*e*S	Sn	18 11 04.5	-1.6
LODA1				IAML		18 11 07.3	
	comp=Z,1μm,1.2s						
SADR	Isla Saona	1.66	114	*e*Pg	Pn	18 10 48.9	-1.0
SADR				IAML		18 11 16.3	
	comp=N,176nm,2.3s						
PAPH	Port-au-Prince	1.86	259	*i* P	Pn	18 10 52.4	-0.1
PCDR	Punta Cana, DR	1.92	100	*i* P	Pn	18 10 53.7	+0.4
PCDR				*e*S	Sn	18 11 17.3	0.0
PCDR				IAML		18 11 23.1	
	comp=Z,24nm,0.1s						
CRPR	Cabo Rojo, PR	3.22	105	*e*Pg	Pn	18 11 09.8	-0.7
CRPR				IAML		18 12 01.8	
	comp=N,54nm,2.7s						
CRPR	Cabo Rojo, PR	3.22	105	*i* P	Pn	18 11 11.8	+1.4
CRPR				IAML		18 11 58.4	
	comp=Z,47nm,1.1s						

*FUNV **15** 18:19:03.1, 10°.57N×62°.44W, h46km, MW3.4*
*TRN **15** 18:19:05.5, 10°.71N×62°.21W, h69km, MD2.7, North of the Paria peninsula.*
ISC 15 18:19:00.3±1.5, 10°.49N±0°.07×62°.50W±0°.04, h77km±16km, n8, σ2°15/15, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.75	284	*e*P	Pn	18 19 17.7	+1.5
CRUV				*e*S	Sn	18 19 27.2	-0.9
TCE	Chacachacare	0.76	74	*e*P	Pn	18 19 17.1	+0.7
TCE				*e*S	Sn	18 19 27.6	-0.9
TRN	Trinidad (W)	1.09	82	*e*P	Pn	18 19 21.2	+0.9
TRN				*e*S	Sn	18 19 33.8	-1.5
GRGR	Grenville	1.83	27	*e*P	Pn	18 19 32.2	+2.3
GRGR				*e*S	Sn	18 19 48.8	-3.6
PCRV	Puerto La Cruz	2.12	262	*e*P	Pn	18 19 35.4	+1.5
PCRV				*e*S	Sn	18 19 59.5	+0.1
LUEV	Luepa	4.73	167	*e*P	Pn	18 20 12.1	+2.7
LUEV				*e*S	Sn	18 21 01.7	-1.4
CACV	CAICARA DEL OR	4.94	234	*e*P	Pn	18 20 09.3	-2.7
CACV				*e*S	Sn	18 20 58.2	-10
BAUV	El Baul	5.67	255	*e*P	Pn	18 20 24.0	+1.9
BAUV				*e*S	Sn	18 21 24.3	-1.7

IDC 15 18:27:59.8±17.0, 28°.69N×141°.17E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=346.0km s-min=328.5km az=41.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	32.95	315	P	P	18 34 36.3	+0.1
	0.2nm,0.4s,baz=123,slow=6.6,SNR=4.4						
	0.2nm,0.4s						
ZALV	Zalesovo Beam	47.70	318	P	P	18 36 37.5	-0.5
	0.4nm,0.4s,baz=99,slow=9.1,SNR=2.7						
	0.4nm,0.4s						
MKAR	Makanchi Array	48.77	309	P	P	18 36 46.3	-0.2
	0.2nm,0.3s,baz=90,slow=8.9,SNR=9.3						
	0.2nm,0.3s						
BVAR	Borovoye Array	56.27	317	P	P	18 37 42.0	+0.1
	0.4nm,0.4s,baz=82,slow=10,SNR=4.6						
	0.4nm,0.4s						

IDC 15 18:33:02.9±11.0, 7°.34S×128°.49E, h108km±110km, mb3.3/2, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=253.6km s-min=42.5km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.75	156	P	Pn	18 36 12.1	-1.3
	0.2nm,0.3s,baz=333,slow=14,SNR=13						
WRA				S	Sn	18 38 32.0	-13
	0.5nm,0.3s,baz=331,slow=24,SNR=2.8						
	0.2nm,0.3s						
ASAR	Alice Springs	17.04	163	P	P	18 36 56.1	+1.3
	0.2nm,0.3s,baz=337,slow=10,SNR=28						
ASAR				S	Sn	18 39 56.0	-8.4
	0.4nm,0.5s,baz=320,slow=16,SNR=6.0						
	1.0nm,0.5s						
STKA	Stephens Creek	27.30	155	P	P	18 38 37.2	-0.3
	1.6nm,0.8s,baz=319,slow=11,SNR=3.0						
	1.6nm,0.8s						
MKAR	Makanchi Array	67.70	328	P	P	18 43 48.7	+0.1
	0.2nm,0.6s,baz=115,slow=7.1,SNR=4.3						
	0.2nm,0.6s						

*IDC **15** 18:35:15.6±1.0, 1°.51N×122°.42E, h0km, mb3.6/6, mbtmp3.6/6, MS2.7/1, Error ellipse: s-maj=189.2km s-min=18.7km az=64.0*
*DJA **15** 18:35:16.3±0.9, 2°.N±4°×12°.2E±°, h10km±5km, M4.0/8, mb4.5/2, mB4.7/1, MLv3.9/8, Mw(mB)4.0/1*
ISC 15 18:35:20.8±0.9, 1°.68N±0°.08×122°.44E±0°.06, h38km, n13, σ1°91/15, mb3.7/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	1.30	203	P	Pn	18 35 40.6	-1.8
MRSI				S	Sn	18 35 57.7	-0.8
KMSI	Cibinong	1.89	125	P	Pn	18 35 49.0	-1.6
KMSI				S	Sn	18 36 12.5	-0.8
LUWI	Luwuk	2.73	173	P	Pn	18 36 03.1	+1.0
LUWI				S	Sn	18 36 37.8	+4.0
MPSI	Mapaga	2.87	242	P	Pn	18 36 01.7	-2.3
SANI	Sanana	5.13	136	P	Pn	18 36 33.5	-1.7
	21nm,0.9s,0.1nm						
TTSI	Tana Toraja	5.38	209	P	Pn	18 36 37.8	-0.7
DAV	Davao City (W)	6.20	30	LR	LR	18 39 06.7	
	comp=Z,75nm,20.6s,baz=318,slow=36						
WRA	Warramunga Arr	24.46	152	P	P	18 40 35.2	-1.1
	1.0nm,0.7s,baz=323,slow=11,SNR=4.9						
	1.0nm,0.7s						
ASAR	Alice Springs	27.55	157	P	P	18 41 02.3	-2.1
	0.2nm,0.5s,baz=346,slow=13,SNR=4.1						
	0.2nm,0.5s						
STKA	Stephens Creek	38.00	153	P	P	18 42 35.2	-0.1
	1.7nm,0.8s,baz=297,slow=14,SNR=3.1						
	1.7nm,0.8s						
SONM	Songino Array	48.03	345	P	P	18 43 57.6	+1.3
	0.1nm,0.4s,baz=164,slow=7.9,SNR=2.0						
	0.1nm,0.4s						
MKAR	Makanchi Array	56.90	328	P	P	18 45 03.7	+1.7
	0.6nm,0.6s,baz=120,slow=8.9,SNR=8.8						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	61.24	330	P	P	18 45 32.9	+0.9
	0.5nm,0.5s,baz=128,slow=6.6,SNR=8.8						
	0.5nm,0.5s						

*IDC **15** 18:45:46.2±2.3, 56°.07N×149°.35W, h0km, mb3.8/8, mbtmp3.8/13, ML3.4/5, MS3.6/28, Error ellipse: s-maj=48.8km s-min=23.4km az=172.0*
*NEIC **15** 18:45:46.2±1.6, 56°.21N±0°.02×149°.41W±0°.10, h10km±1km, mb4.5/7, ML3.9/60, ML3.7(AEIC), Error ellipse: s-maj=9.3km s-min=4.5km az=97.0*
*AEIC **15** 18:45:51.3±1.6, 56°.24N±0°.08×149°.4W±0°.1, h10km±6km, Error ellipse: s-maj=11.7km s-min=8.8km az=177.0*
ISC 15 18:45:47.5±0.7, 56°.30N±0°.07×149°.42W±0°.05, h10km, n284, σ1°15/251, mb4.0/12, MS3.5/23, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.28	312		Pn	18 46 24.8	-0.3
KDAK	Kodiak Island	2.28	312		Sn	18 46 51.0	-2.2
KDAK	Kodiak Island	2.28	312	IAML		18 47 00.6	
	125nm,0.9s						
KDAK				IAML		18 47 00.7	
	139nm,0.8s						
KDAK	Kodiak Island	2.28	312	S	Sn	18 46 51.0	-2.2
	baz=130						
KDAK	Kodiak Island	2.28	312	Pn	Pn	18 46 24.7	-0.4
	4.4nm,0.3s,baz=138,slow=4.5,SNR=29						
KDAK				Sn	Sn	18 46 51.0	-2.2
	14nm,0.3s,baz=319,slow=20,SNR=19						
KDAK				LR	LR	18 47 34.3	
	comp=Z,384nm,18.4s,baz=155,slow=44						
	8.4nm,0.3s						
OHAK	Old Harbor	2.32	295	Pn	Pn	18 46 24.8	-0.9
OHAK	Old Harbor	2.32	295		Sn	18 46 52.1	-2.2
OHAK	Old Harbor	2.32	295	IAML		18 47 00.7	
	comp=E,107nm,1.4s						
OHAK				IAML		18 47 01.9	
	comp=N,161nm,0.8s						
OHAK	Old Harbor	2.32	295	P	Pn	18 46 25.1	-0.6
OHAK	Old Harbor	2.32	295	P	Pn	18 46 24.8	-0.9
	baz=113						
OHAK				S	Sn	18 46 52.1	-2.2
	baz=113						
SII	Sitkinak Islan	2.66	278		Sn	18 46 58.7	-3.9
SII	Sitkinak Islan	2.66	278	Pn	Pn	18 46 29.3	-1.1
SII	Sitkinak Islan	2.66	278	P	Pn	18 46 29.4	-1.0
SII	Sitkinak Islan	2.66	278	P	Pn	18 46 29.6	-0.8
	baz=95						
SII				S	Sn	18 46 58.7	-3.9
	baz=95						
SYI	Shuyak Island	2.81	327		Sn	18 47 04.3	-2.2
SYI	Shuyak Island	2.81	327	Pn	Pn	18 46 32.4	-0.2
SYI	Shuyak Island	2.81	327	IAML		18 47 10.2	
	comp=E,116nm,1.1s						
SYI				IAML		18 47 16.3	
	comp=N,119nm,0.9s						
Q20K	Shuyak Island	2.81	326	P	Pn	18 46 32.6	+0.1
	baz=144						
Q20K				S	Sn	18 47 04.3	-2.2
	baz=144						
R18K	Karluk	3.03	297		Pn	18 46 35.2	-0.3
R18K					Sn	18 47 09.5	-2.3
R18K	Karluk	3.03	297	IAML		18 47 11.5	
	comp=N,289nm,0.5s						
R18K				IAML		18 47 16.9	
	comp=E,248nm,0.4s						
R18K	Karluk	3.03	297	P	Pn	18 46 35.2	-0.3
	baz=113						
R18K				S	Sn	18 47 09.5	-2.3
	baz=113						
CNPM	China Poot	3.37	344		Pn	18 46 39.5	-0.8
CNPM	China Poot	3.37	344		Sn	18 47 18.9	-1.4
Q19K	Cape Douglas,	3.48	321		Pn	18 46 42.0	+0.3
Q19K	Cape Douglas,	3.48	321	P	Pn	18 46 41.5	-0.2
	baz=138						
CHIR	Chirikof Islan	3.51	265	Pn	Pn	18 46 40.4	-1.6
CHIR	Chirikof Islan	3.51	265	P	Pn	18 46 40.7	-1.3
	baz=80						
BRSE	Bradley Lake S	3.52	349	P	Pn	18 46 41.5	-0.7
	baz=168						
KAHG	Katmai Hook Gl	3.54	311		Pn	18 46 42.9	+0.4
Q23K	Middleton Isla	3.54	26	Pn	Pn	18 46 41.0	-1.4
Q23K				IAML		18 47 28.1	
	comp=E,259nm,1.4s						
Q23K				IAML		18 47 43.3	
	comp=N,212nm,1.3s						
Q23K	Middleton Isla	3.54	26	P	Pn	18 46 41.5	-1.0
	baz=208						
MID	Middleton Isla	3.54	26	Pn	Pn	18 46 41.3	-1.1
MID				IAML		18 47 21.3	
	comp=N,250nm,1.3s						
MID				IAML		18 47 28.0	
	comp=E,222nm,1.4s						
MID	Middleton Isla	3.54	26	P	Pn	18 46 41.4	-1.1
BRLK	Bradley Lake	3.56	348		Pn	18 46 41.6	-1.1
BRLK				IAML		18 47 33.7	
	comp=E,118nm,1.4s						
BRLK				IAML		18 47 35.7	
	comp=N,101nm,0.8s						
KAKN	Katmai Knife C	3.65	306		Pn	18 46 44.8	+0.6
ACHA	Angle Creek He	3.73	303		Pn	18 46 45.4	+0.2
AUL	Augustine Lava	3.76	327		Pn	18 46 46.5	+1.0
KVTA	Katmai Vly 10	3.80	306		Pn	18 46 47.0	+0.9
ANCK	Angle Creek	3.81	302		Pn	18 46 47.1	+0.9
KAHC	Katmai Hardscr	3.82	310		Pn	18 46 47.8	+1.3
KAHC	Katmai Hardscr	3.82	310	P	Pn	18 46 47.8	+1.3
	baz=126						
P23K	Montague Islan	3.86	15		Pn	18 46 46.1	-0.8
P23K	Montague Islan	3.86	15	P	Pn	18 46 46.1	-0.8
	baz=196						
P19K	Oil Pt	3.92	330		Pn	18 46 48.3	+0.6
P19K				IAML		18 47 40.6	
	comp=N,157nm,0.6s						
P19K				IAML		18 47 46.4	
	comp=E,144nm,0.7s						
P19K	Oil Pt	3.92	330	P	Pn	18 46 48.4	+0.6
	baz=147						
CNTC	Contact Creek	4.02	302		Pn	18 46 49.7	+0.5
Q17K	Contact Creek	4.02	302	P	Pn	18 46 49.7	+0.5
	baz=117						
O20K	Slope Mountain	4.15	337		Pn	18 46 50.7	-0.3
O20K	Slope Mountain	4.15	337	P	Pn	18 46 51.1	+0.2
	baz=155						
ILSW	Iliamna Southw	4.18	333		Pn	18 46 51.2	-0.2
ILSW				IAML		18 47 47.3	
	comp=E,110nm,1.1s						
ILSW				IAML		18 48 04.2	
	comp=N,72nm,1.1s						
O22K	Cooper Landing	4.19	358		Pn	18 46 50.7	-0.7
P18K	Big Mountain,	4.38	317		Pn	18 46 53.6	-0.5
P18K	Big Mountain,	4.38	317	P	Pn	18 46 53.7	-0.4
	baz=133						
HIN	Hinchinbrook I	4.38	19		Pn	18 46 53.2	-1.0
HIN				IAML		18 47 43.6	
	comp=N,198nm,1.1s						
HIN				IAML		18 47 56.3	
	comp=E,197nm,1.0s						
KAIM	Kayak Island	4.50	34	Pn	Pn	18 46 55.9	+0.2
RSO	Redoubt South	4.52	339		Pn	18 46 55.5	-0.7
RDT	Redoubt	4.56	341		Pn	18 46 55.5	-1.0
RDWB	Redoubt West	4.56	338		Pn	18 46 55.5	-1.1
DFR	Drift River	4.63	340		Pn	18 46 57.0	-0.6
EYAK	Cordova Ski Ar	4.67	23	P	Pn	18 46 57.6	-0.4
EYAK	Cordova Ski Ar	4.67	23	P	Pn	18 46 57.7	-0.4
	baz=205						
O19K	Port Alsworth	4.68	329		Pn	18 46 57.7	-0.4
O19K				IAML		18 47 59.1	
	comp=E,148nm,0.5s						
O19K				IAML		18 48 01.1	
	comp=N,117nm,0.5s						
O19K	Port Alsworth	4.68	329	P	Pn	18 46 57.5	-0.6
	baz=144						
O18K	Koktuh Hills	4.70	322		Pn	18 46 58.1	-0.3
O18K				IAML		18 47 57.5	
	comp=N,72nm,1.1s						
O18K				IAML		18 48 20.3	
	comp=E,65nm,0.9s						
O18K	Koktuh Hills	4.70	322	P	Pn	18 46 58.2	-0.3
	baz=137						
P17K	Kvichak River	4.75	311		Pn	18 46 59.2	+0.2
P17K	Kvichak River	4.75	311	P	Pn	18 46 59.2	+0.2
	baz=125						
RAGM	Ragged Mountai	4.80	29	Pn	Pn	18 46 59.0	-0.8
RC01	Rabbit Creek A	4.80	358	Pn	Pn	18 46 58.9	-1.0
RC01				IAML		18 48 03.4	
	comp=N,52nm,1.0s						
RC01				IAML		18 48 15.9	
	comp=E,65nm,1.0s						
RC01	Rabbit Creek A	4.80	358	P	Pn	18 46 59.1	-0.7
	baz=178						
SUCK	Suckling Hills	4.82	36		Pn	18 46 59.5	-0.5
FIS	Fire Island	4.87	355		Pn	18 47 01.2	+0.4
FIS				IAML		18 48 00.7	
	comp=E,114nm,0.9s						
FIS				IAML		18 48 48.3	
	comp=N,126nm,1.4s						
HMT	Hamilton	4.88	32		Pn	18 47 00.5	-0.4
GOAT	Goat Mountain	4.95	28		Pn	18 47 01.7	-0.2
CHGN	Chignik	5.01	274	Pn	Pn	18 47 00.8	-1.8
CHGN				IAML		18 49 08.1	
	comp=E,78nm,0.2s						
CHGN				IAML		18 50 23.1	
	comp=N,66nm,0.1s						
BERG	Berg Lake	5.09	34		Pn	18 47 03.2	-0.6
N20K	Mount Spurr	5.12	345	P	Pn	18 47 03.5	-0.8
	baz=162						
GRIN	Grindle Hills	5.13	36		Pn	18 47 03.9	-0.4
KNK	Knik Glacier	5.15	5		Pn	18 47 03.4	-1.3
KNK				IAML		18 48 22.8	
	comp=E,53nm,0.7s						
KNK				IAML		18 48 28.4	
	comp=N,36nm,1.1s						
KNK	Knik Glacier	5.15	5	P	Pn	18 47 04.3	-0.4
	baz=186						
SPCP	Crater Peak Br	5.18	345		Pn	18 47 04.9	-0.2
DIV	Divide	5.20	20		Pn	18 47 05.1	-0.3
SNH	Sunshine Point	5.22	39	Pn	Pn	18 47 05.8	+0.3
SNH				IAML		18 48 23.6	
	comp=E,113nm,1.5s						
SUA	Susitna One	5.22	353		Pn	18 47 05.1	-0.6
SUA				IAML		18 48 12.9	
	comp=N,36nm,0.9s						
SUA				IAML		18 49 03.1	
	comp=E,33nm,1.4s						
SUA	Susitna One	5.22	353	P	Pn	18 47 05.5	-0.1
	baz=172						
N19K	Bonanza Creek	5.24	332		Pn	18 47 05.2	-0.8
N19K				IAML		18 48 36.4	
	comp=E,43nm,1.4s						
KHIT	Khitrov Hills	5.27	35		Pn	18 47 05.7	-0.7
PMR	Palmer	5.31	2	Pn	Pn	18 47 06.4	-0.4
PMR	Palmer	5.31	2	P	Pn	18 47 07.4	+0.7
BMRM	Bremner River	5.31	26	P	Pn	18 47 06.5	-0.4
	baz=210						
P16K	Nushagak River	5.35	304		Pn	18 47 06.9	-0.4
P16K	Nushagak River	5.35	304	P	Pn	18 47 06.9	-0.4
	baz=118						
O17K	Koliganek Bris	5.36	314		Pn	18 47 07.5	+0.1
O17K	Koliganek Bris	5.36	314	P	Pn	18 47 07.5	+0.1
	baz=128						
STLK	Strandline Lak	5.36	348		Pn	18 47 07.2	-0.3
WAX	Waxell Ridge	5.41	37		Pn	18 47 07.1	-1.1
GHO	Glory Hole Cre	5.49	2		Pn	18 47 09.3	0.0
BARK	Barkley Ridge	5.50	39		Pn	18 47 09.1	-0.3
KLU	Klutina	5.51	18		Pn	18 47 09.5	-0.2
KLU	Klutina	5.51	18	P	Pn	18 47 09.5	-0.2
	baz=200						
MESA	MESA	5.54	42	Pn	Pn	18 47 10.0	-0.1
N18K	Kilae Creek	5.54	325		Pn	18 47 10.4	+0.4
CRQM	Cirque	5.55	34		Pn	18 47 09.4	-0.8
SML

SVW2 **Sparrevohn** 5.78 329 Pn 18 47 12.7 -0.5
SVW2 **Sparrevohn** 5.78 329 P Pn 18 47 13.1 -0.1
SKT **Skwentna** 5.80 350 Pn 18 47 13.4 -0.1
VRDI **Verde Repeater** 5.83 30 Pn 18 47 13.7 -0.5
N25K **Chitina, Valde** 5.88 23 Pn 18 47 14.3 -0.4
N25K **Chitina, Valde** 5.88 23 P Pn 18 47 14.6 0.0
baz=207
N17K **Nushagak Hills** 5.88 319 Pn 18 47 15.7 +1.1
M20K **Styx River** 5.91 343 Pn 18 47 14.4 -0.8
GLB **Gilahina Butte** 5.92 27 Pn 18 47 14.8 -0.4
KIAG **Kiagna River** 5.92 36 Pn 18 47 15.1 -0.2
GRNC **Granite Creek** 5.99 39 Pn 18 47 15.5 -0.8
TABL **Table Mountain** 6.01 43 Pn 18 47 15.8 -0.9
M24K **Tolsona, Glenn** 6.06 15 Pn 18 47 17.9 +0.8
M24K **Tolsona, Glenn** 6.06 15 P Pn 18 47 17.0 -0.1
baz=197
MCARA **McCarthy VSAT** 6.08 30 Pn Pn 18 47 17.6 +0.2
MCARA **McCarthy VSAT** 6.08 30 P Pn 18 47 17.3 -0.1
baz=215
PTPK **Patty Peak** 6.09 34 Pn 18 47 17.3 -0.4
PCA **Pinnacle** 6.16 48 Pn 18 47 18.3 -0.3
PINM **Pinnacle** 6.16 48 P Pn 18 47 18.3 -0.3
baz=235
M19K **Big River Lodg** 6.17 338 Pn Pn 18 47 18.0 -0.6
BARN **Barnard Glacie** 6.25 37 Pn 18 47 19.7 -0.3
CTGM **Chitina Glacie** 6.30 39 Pn 18 47 19.5 -1.0
SDPT **Sand Point** 6.30 266 Pn Pn 18 47 20.4 0.0
SDPT **Sand Point** 6.30 266 P Pn 18 47 20.8 +0.4
PNL **Peninsula** 6.31 54 Pn 18 47 19.9 -0.7
PNL **Peninsula** 6.31 54 P Pn 18 47 20.5 0.0
PNL **Peninsula** 6.31 54 P Pn 18 47 19.9 -0.7
baz=241
LOGN **Logan Glacier** 6.32 41 Pn 18 47 20.8 0.0
BCPM **Bancas Point** 6.34 51 Pn Pn 18 47 20.4 -0.6
WAT6 **Susitna Watana** 6.36 7 Pn 18 47 21.3 0.0
WAT6 **Susitna Watana** 6.36 7 P Pn 18 47 21.3 0.0
baz=188
HARP **HAARP** 6.49 18 Pn 18 47 23.4 +0.4
HARP **HAARP** 6.49 18 P Pn 18 47 23.5 +0.4
baz=201
L19K **White Mountain** 6.52 337 Pn 18 47 22.4 -1.0
L19K **White Mountain** 6.52 337 P Pn 18 47 23.5 +0.1
baz=152
WAT7 **Susitna Watana** 6.56 2 Pn 18 47 24.1 +0.1
WAT1 **Susitna Watana** 6.56 4 Pn 18 47 24.2 +0.2
WAT1 **Susitna Watana** 6.56 4 P Pn 18 47 24.2 +0.2
baz=184
M17K **Holitna River** 6.59 324 Pn 18 47 24.0 -0.3
N15K **Kwethluk River** 6.83 309 Pn 18 47 29.0 +1.3
M16K **Timber Creek** 6.86 318 Pn Pn 18 47 29.2 +1.1
DHY **Denali Highway** 6.87 8 Pn 18 47 28.6 +0.2
DHY **Denali Highway** 6.87 8 P Pn 18 47 28.7 +0.4
baz=189
M26K **Nabesna, AK** 6.94 26 Pn 18 47 30.6 +1.4
O29M **Mount Kennedy** 6.98 50 Pn 18 47 30.1 +0.3
L18K **Granite Mounta** 7.00 331 Pn Pn 18 47 30.1 +0.2
P29M **Windy Craggy** 7.05 57 Pn 18 47 30.1 -0.7
YUK2 **White River** 7.05 35 Pn 18 47 30.7 -0.1
RND **Reindeer** 7.13 2 Pn 18 47 32.0 +0.1
YUK3 **Moose Creek** 7.17 36 Pn 18 47 32.7 +0.2
YUK3 **Moose Creek** 7.17 36 P Pn 18 47 32.7 +0.2
baz=224
TRF **Thorofare Moun** 7.18 357 Pn 18 47 32.2 -0.5
M27K **Edge Creek, AK** 7.19 29 Pn 18 47 32.8 +0.1
CAST **Castle Rocks** 7.26 350 Pn 18 47 33.8 +0.2
CAST **Castle Rocks** 7.26 350 P Pn 18 47 33.8 +0.2
baz=168
YUK7 **Dusty Glacier** 7.28 50 Pn 18 47 33.9 -0.2
KTH **Kantishna Hill** 7.31 355 Pn 18 47 35.2 +0.9
S31K **Pelican** 7.37 72 Pn 18 47 32.4 -2.6
L26K **Log Cabin Wild** 7.41 22 Pn 18 47 35.6 0.0
YUK6 **Outpost Mounta** 7.41 47 Pn 18 47 35.8 0.0
YUK6 **Outpost Mounta** 7.41 47 P Pn 18 47 35.8 0.0
baz=236
TTA **Tatalina** 7.43 336 Pn Pn 18 47 36.7 +0.7
TTA **Tatalina** 7.43 336 P Pn 18 47 36.1 +0.1
K20K **Telida** 7.45 344 Pn 18 47 34.3 -1.8
MCK **McKinley** 7.46 2 P Pn 18 47 37.5 +1.2
baz=182
L16K **Owhat River** 7.50 320 Pn 18 47 37.3 +0.5
L16K **Owhat River** 7.50 320 P Pn 18 47 37.2 +0.4
baz=132
YUK4 **Talbot Arm** 7.53 43 P Pn 18 47 39.0 +1.5
baz=232
L27K **Beaver Creek,** 7.79 26 Pn 18 47 38.1 -2.7
BCAR **Beaver Creek A** 7.80 26 Pn Pn 18 47 40.4 -0.6
SIT **Sitka** 7.80 79 Pn Pn 18 47 37.1 -3.9
SIT **Sitka** 7.80 79 P Pn 18 47 37.8 -3.2
K17K **Iditarod** 7.85 329 Pn Pn 18 47 40.5 -1.1
BPAW **Bear Paw Mtn.** 7.86 355 Pn 18 47 40.6 -1.2
BPAW **Bear Paw Mtn.** 7.86 355 P Pn 18 47 41.7 -0.1
baz=174
BWN **Browne** 7.89 360 Pn Pn 18 47 39.4 -2.9
J18K **Innoko River** 8.06 336 Pn 18 47 44.2 -0.3
SKAG **Skagway** 8.15 61 Pn Pn 18 47 44.0 -1.7
SKAG **Skagway** 8.15 61 P Pn 18 47 45.4 -0.3
SCRK **Sand Creek** 8.16 17 Pn Pn 18 47 43.9 -2.1
N30M **Aishikik Lake** 8.21 46 Pn Pn 18 47 46.8 +0.1
S32K **Killisnoo** 8.22 76 Pn Pn 18 47 45.7 -1.0
WRH **Wood River Hil** 8.22 4 Pn 18 47 47.0 +0.3
HDA **Harding Lake** 8.22 8 Pn 18 47 46.7 -0.1
J20K **Nowinta River** 8.24 345 Pn 18 47 45.4 -1.5
ISLZ **Isanotski Laza** 8.26 265 Pn 18 47 46.4 -0.9
O30N **Mendenhall** 8.28 52 Pn Pn 18 47 47.6 0.0
J19K **Poorman** 8.31 341 Pn 18 47 46.3 -1.6
M29M **Somme Creek** 8.31 38 Pn 18 47 48.2 +0.1
NEA2 **Nenana** 8.32 1 Pn 18 47 47.2 -0.8
JIS **Juneau Island** 8.38 70 Pn Pn 18 47 47.0 -2.0
CCB **Clear Creek Bu** 8.41 5 Pn 18 47 50.0 +0.7
L14K **Kuka Creek** 8.53 312 Pn Pn 18 47 50.5 -0.3
K27K **Chicken** 8.57 22 Pn Pn 18 47 50.6 -0.8
J25K **Salcha River,** 8.57 12 Pn 18 47 51.2 -0.4
IL31 8.59 7 Pn 18 47 52.0 +0.3
ILAR **Eielson Array** 8.59 7 Pn Pn 18 47 52.8 +1.1
ILAR **Eielson Array** 8.59 7 Pn Pn 18 47 52.9 +1.2
comp=E,0.4nm,0.3s,baz=184,slow=13,SNR=16
ILAR Sn Sn 18 49 24.4 -4.2
comp=E,0.1nm,0.3s,baz=198,slow=20,SNR=2.4
ILAR LR LR 18 51 30.5
comp=E,308nm,18.6s,baz=132,slow=39
comp=E,2.4nm,0.8s
J17K **VABM Dome** 8.61 330 Pn Pn 18 47 51.9 -0.1
J26L **Joseph Creek** 8.72 17 Pn 18 47 52.4 -1.2
WHY **Whitehorse** 8.77 54 Pn Pn 18 47 53.9 -0.5
MLY **Manley** 8.78 356 Pn 18 47 53.8 -0.6
L29M **L29M** 8.89 35 Pn 18 47 54.7 -1.1
POKR **Poker Plat Res** 8.90 5 Pn 18 47 55.5 -0.5
P32M **Atlin** 8.98 62 Pn Pn 18 47 55.9 -1.2
M30M **Minto, Yukon** 8.99 40 Pn Pn 18 47 57.5 +0.3
I21K **Tanana** 8.99 353 Pn 18 47 57.5 +0.2
U33K **Whale Pass** 9.09 84 Pn Pn 18 47 55.7 -2.9
H21K **Melozitna Rive** 9.53 352 Pn 18 48 04.6 0.0
I26K **Coal Creek Min** 9.53 16 Pn 18 48 04.7 0.0
P33M **Teslin, Yukon** 9.58 59 Pn Pn 18 48 04.7 -0.8
K29M **Barlow Dome** 9.61 33 Pn Pn 18 48 05.6 -0.2
R33M **Jennings River** 10.31 65 Pn 18 48 14.7 -0.7
DLBC **Dease Lake** 10.69 70 Pn Pn 18 48 21.2 +0.7
comp=E,0.3nm,0.3s,baz=203,slow=4.3,SNR=3.9
DLBC LR LR 18 51 44.4
comp=E,409nm,20.7s,baz=284,slow=33
comp=E,2.4nm,0.5s
F28M **Old Crow** 12.18 18 Pn 18 48 40.2 -0.7
TOLK **Toolik Lake Re** 12.38 360 Pn 18 48 44.6 +1.0
D22K **Ayikyak River** 12.71 355 Pn Pn 18 48 48.9 +0.8
G31M **Satah River** 12.81 28 Pn 18 48 49.4 -0.1
BBB **Bella Bella** 13.11 99 LR LR 18 52 44.6
comp=E,359nm,19.1s,baz=300,slow=32
D27M **Malcolm River** 13.53 13 Pn Pn 18 48 55.6 -3.7
B21K **Ikpikpuk River** 13.57 352 Pn 18 48 59.3 -0.4
C16K **Lisburne Hills** 14.04 335 Pn 18 49 05.0 -1.2
INK **Inuvik** 14.06 25 Pn Pn 18 49 08.2 +1.8
comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=8.3
comp=E,4.3nm,1.0s
YKA **Yellowknife Ar** 18.59 56 P Pn 18 50 06.2 +1.4
comp=E,0.1nm,0.3s,baz=265,slow=11,SNR=16
YKA LR LR 18 56 59.2
comp=E,146nm,21.4s,baz=336,slow=36
comp=E,2.0nm,1.0s
A36M **Sachs Harbour** 18.69 23 IAmb IAmb 18 50 32.4
comp=Z,18nm,1.0s
EDM **Edmonton** 20.89 83 P P 18 50 28.2 -1.4
EDM IAmb IAmb 18 50 35.4
comp=Z,11nm,1.1s

NEW **Newport** 21.17 99 LR LR 18 57 06.1
comp=Z,208nm,21.3s,baz=292,slow=32
SHEM **Shemya Is, Ala** 21.31 276 LR LR 18 59 23.0
comp=Z,64nm,19.6s,baz=39,slow=38
PINE **Pine Mountain** 21.98 113 IAmb IAmb 18 50 59.9
comp=Z,14nm,1.4s
YBH **Yreka Blue Hor** 22.59 119 LR LR 18 57 21.7
comp=Z,141nm,18.9s,baz=332,slow=31
LYMT **Lyon Mountain** 24.59 97 P P 18 51 07.7 -0.1
ELK **Elko** 27.11 110 LR LR 19 00 05.6
comp=Z,140nm,21.9s,baz=356,slow=32
NVAR **Mina Array Bea** 27.29 118 P P 18 51 34.4 +2.1
comp=Z,1.2nm,0.8s,baz=312,slow=8.5,SNR=6.3
PDAR **Pinedale Array** 28.75 101 LR LR 19 01 36.4
comp=Z,63nm,19.5s,baz=28,slow=33
SEY **Seymchan** 29.23 307 LR LR 19 04 48.0
comp=Z,107nm,19.7s,baz=16,slow=39
PETK **Petropavlovsk-** 30.09 287 LR LR 19 03 22.7
comp=Z,69nm,21.9s,baz=55,slow=35
MA2 **Magadan** 30.98 301 LR LR 19 04 34.9
comp=Z,70nm,21.6s,baz=106,slow=36
ULM **Lac du Bonnet** 31.88 78 LR LR 19 04 49.6
comp=Z,180nm,18.6s,baz=288,slow=36
TIXI **Tiksi** 35.61 327 LR LR 19 09 11.2
comp=Z,69nm,18.5s,baz=24,slow=39
YAK **Yakutsk** 39.30 313 LR LR 19 12 44.2
comp=Z,90nm,18.9s,baz=316,slow=41
TXAR **Lajitas Array** 41.91 111 LR LR 19 09 59.7
comp=Z,57nm,18.0s,baz=14,slow=35
ASAJ **Asahikawa** 43.41 284 LR LR 19 14 08.1
comp=Z,70nm,18.1s,baz=358,slow=39
R49A **Shelbyville** 45.34 85 P P 18 54 02.8 -2.8
R49A IAmb IAmb 18 54 31.3
comp=Z,24nm,1.3s
P51A **Williamsport** 45.67 82 P P 18 54 04.6 -3.5
KLR **Kul'dur** 45.75 296 LR LR 19 14 35.4
comp=Z,56nm,18.8s,baz=332,slow=38
Q54A **Coxs Mills** 47.25 81 P P 18 54 15.5 -5.0
Q54A IAmb IAmb 18 54 22.8
comp=Z,7.5nm,0.6s
H11N2 **WAKE ISLAND Hy** 48.83 240 T T 19 47 11.0
baz=31,slow=76,SNR=11
H11N3 **WAKE ISLAND Hy** 48.83 240 T T 19 47 16.6
baz=31,slow=76,SNR=12
H11N1 **WAKE ISLAND Hy** 48.84 240 T T 19 47 12.5
baz=31,slow=76,SNR=7.6
H11S1 **WAKE ISLAND Hy** 49.97 239 T T 19 48 37.3
baz=32,slow=74,SNR=15
H11S2 **WAKE ISLAND Hy** 49.98 239 T T 19 48 37.6
baz=32,SNR=12
H11S3 **WAKE ISLAND Hy** 49.98 239 T T 19 48 35.1
baz=32,slow=74,SNR=11
MJAR **Matsushiro Arr** 51.09 279 LR LR 19 17 02.7
comp=Z,54nm,19.6s,baz=3.5,slow=37
KSRS **Korea Array** 55.98 288 LR LR 19 19 20.0
comp=Z,99nm,20.2s,baz=35,slow=36
JCJ **Chichijima** 56.00 269 LR LR 19 16 22.7
comp=Z,14nm,21.1s,baz=165,slow=33
TEIG **Tepich** 57.46 103 LR LR 19 21 09.5
comp=Z,323nm,18.1s,baz=181,slow=37
SONM **Songino Array** 58.56 310 P P 18 55 47.0 +2.9
comp=Z,0.9nm,0.9s,baz=38,slow=6.0,SNR=6.5
comp=Z,0.9nm,0.9s
ZALV **Zalesovo Beam** 61.50 327 P P 18 56 06.2 +2.3
comp=Z,0.7nm,0.6s,baz=31,slow=8.8,SNR=4.5
comp=Z,0.7nm,0.6s
NOA **NORSAR Array B** 62.01 11 P P 18 56 08.7 +1.4
comp=Z,1.3nm,0.9s,baz=348,slow=6.6,SNR=1.8
comp=Z,1.3nm,0.9s
FINES **FINESS Array B** 62.54 2 P P 18 56 12.7 +1.9
comp=Z,0.9nm,0.7s,baz=357,slow=8.0,SNR=4.6
comp=Z,0.9nm,0.7s
BVAR **Borovoye Array** 66.23 335 P P 18 56 36.0 +0.9
comp=Z,1.0nm,0.9s,baz=64,slow=6.8,SNR=4.3
comp=Z,1.0nm,0.9s
KURBB **Kurchatov Arra** 66.28 329 P P 18 56 36.6 +1.2
comp=Z,0.3nm,0.7s,baz=30,slow=6.3,SNR=2.5
comp=Z,0.3nm,0.7s
MKAR **Makanchi Array** 68.53 325 P P 18 56 50.9 +1.1
comp=Z,0.4nm,0.7s,baz=27,slow=5.9,SNR=8.9
comp=Z,0.4nm,0.7s
SJG **San Juan** 71.42 85 LR LR 19 28 42.8
comp=Z,43nm,19.9s,baz=134,slow=36
AKASG **Malin Array Be** 73.36 1 P P 18 57 20.8 +1.8
comp=Z,1.0nm,0.6s,baz=1.0,slow=6.3,SNR=3.0
comp=Z,1.0nm,0.6s
PPT **Papeete** 73.58 180 LR LR 19 23 56.9
comp=Z,57nm,19.5s,baz=350,slow=31
PPT2 **Papeete2** 73.60 180 eLR LR 19 19 40.5
comp=Z,59nm,22.8s
SDV **Santo Domingo** 76.44 94 LR LR 19 32 14.7
comp=Z,26nm,20.9s,baz=74,slow=36
TBI **Tubuai** 79.33 180 eLR LR 19 22 28.5
comp=Z,425nm,30.2s
DZM **Mont Dzumac** 86.51 220 eLR LR 19 25 45.4
comp=Z,105nm,27.4s
MDP **Montagnes des** 89.56 82 LR LR 19 38 59.6
comp=Z,38nm,19.6s,baz=304,slow=36
RPN **Rapa Nui** 89.80 145 LR LR 19 30 48.7
comp=Z,68nm,21.1s,baz=208,slow=30

IDC 15 18:49:36.6±9.0, 15°36S×173°65W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=391.8km s-min=67.7km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	38.81	329	T	T	19 39 00.5	
	baz=147,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	38.82	329	T	T	19 39 02.9	
	baz=147,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	38.82	329	T	T	19 39 02.4	
	baz=147,slow=76,SNR=6.0						
WRA	**Warramunga Arr**	49.62	257	P	P	18 58 30.4	+0.1
	0.8nm,1.1s,baz=91,slow=6.9,SNR=6.6						
	0.8nm,1.1s						
ASAR	**Alice Springs**	49.90	252	P	P	18 58 32.0	-0.3
	0.6nm,0.5s,baz=89,slow=8.4,SNR=13						
	0.6nm,0.5s						
BRTR	**Keskin Array B**	145.97	321	PKPbc	PKPdf	19 09 18.0	-0.1
	0.4nm,0.7s,baz=38,slow=5.4,SNR=2.6						

*NEIC **15** 18:54:48.9±1.4, 56°.28N±0°.06×149°.41W±0°.09, h10km±2km, ML3.5/60, ML3.2(AEIC), Error ellipse: s-maj=12.5km s-min=3.0km az=139.0*

*AEIC **15** 18:54:53.5±1.4, 56°.27N±0°.09×149°.4W±0°.1, h10km±7km, Error ellipse: s-maj=13.5km s-min=8.4km az=167.0*

ISC 15 18:54:48.3±1.7, 56°.29N±0°.10×149°.42W±0°.06, h10km, n167, σ1°03/168, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	2.29	312	Pn	Pn	18 55 26.9	+0.8
KDAK	**Kodiak Island**	2.29	312		Sn	18 55 52.6	-1.6
KDAK	**Kodiak Island**	2.29	312	IAML		18 55 55.0	
	56nm,0.5s						
KDAK				IAML		18 56 00.7	
	62nm,0.4s						
KDAK	**Kodiak Island**	2.29	312	S	Sn	18 55 53.8	-0.4
	baz=130						
OHAK	**Old Harbor**	2.33	295	Pn	Pn	18 55 26.8	+0.2
OHAK	**Old Harbor**	2.33	295		Sn	18 55 54.1	-1.1
OHAK	**Old Harbor**	2.33	295	IAML		18 55 54.3	
	comp=N,97nm,0.7s						
OHAK				IAML		18 55 59.6	
	comp=E,64nm,0.5s						
OHAK	**Old Harbor**	2.33	295	P	Pn	18 55 26.9	+0.3
OHAK	**Old Harbor**	2.33	295	P	Pn	18 55 27.0	+0.3
	baz=113						
OHAK				S	Sn	18 55 54.1	-1.1
	baz=113						
SII	**Sitkinak Islan**	2.66	278	Pn	Pn	18 55 31.2	-0.1
SII	**Sitkinak Islan**	2.66	278		Sn	18 56 01.9	-1.6
SII	**Sitkinak Islan**	2.66	278	P	Pn	18 55 31.8	+0.5
SII	**Sitkinak Islan**	2.66	278	P	Pn	18 55 31.6	+0.4
	baz=95						
SII				S	Sn	18 56 02.3	-1.2
	baz=95						
Q20K	**Shuyak Island**	2.83	327	P	Pn	18 55 34.6	+1.1
	baz=144						
Q20K				S	Sn	18 56 07.7	+0.1
	baz=144						
SYI	**Shuyak Island**	2.83	327	Pn	Pn	18 55 34.8	+1.3
SYI	**Shuyak Island**	2.83	327		Sn	18 56 07.2	-0.4
R18K	**Karluk**	3.04	297		Pn	18 55 37.7	+1.3

R18K Sn 18 56 11.6 -1.2
R18K **Karluk** 3.04 297 IAML 18 56 16.3
comp=E,120nm,0.5s
R18K IAML 18 56 20.2
comp=N,110nm,0.5s
R18K **Karluk** 3.04 297 P Pn 18 55 37.7 +1.3
baz=114
R18K S Sn 18 56 11.6 -1.2
baz=114
CNPM **China Poot** 3.38 344 Pn 18 55 41.6 +0.4
CNPM **China Poot** 3.38 344 Sn 18 56 19.4 -2.0
CNPM **China Poot** 3.38 344 IAML 18 56 23.3
comp=E,45nm,0.7s
CNPM IAML 18 56 29.8
comp=N,38nm,0.5s
Q19K **Cape Douglas,** 3.49 321 Pn 18 55 44.4 +1.8
Q19K IAML 18 56 32.2
comp=N,144nm,0.7s
Q19K IAML 18 56 43.9
comp=E,215nm,1.0s
Q19K **Cape Douglas,** 3.49 321 P Pn 18 55 43.9 +1.3
baz=138
CHIR **Chirikof Islan** 3.51 265 Pn Pn 18 55 42.6 -0.3
CHIR IAML 18 56 31.4
comp=E,78nm,2.8s
CHIR IAML 18 57 33.3
comp=N,78nm,1.9s
BRSE **Bradley Lake S** 3.53 349 Pn 18 55 43.7 +0.5
BRSE **Bradley Lake S** 3.53 349 P Pn 18 55 43.7 +0.5
baz=167
KAHG **Katmai Hook Gl** 3.54 311 Pn 18 55 44.4 +0.9
Q23K **Middleton Isla** 3.55 26 Pn Pn 18 55 43.4 0.0
Q23K **Middleton Isla** 3.55 26 P Pn 18 55 43.3 0.0
baz=208
MID **Middleton Isla** 3.55 26 Pn Pn 18 55 43.5 0.0
MID IAML 18 57 40.5
comp=N,204nm,1.8s
MID **Middleton Isla** 3.55 26 P Pn 18 55 43.4 0.0
BRLK **Bradley Lake** 3.57 348 Pn 18 55 43.9 +0.1
ACHA **Angle Creek He** 3.74 303 Pn 18 55 48.1 +2.0
AUL **Augustine Lava** 3.77 327 Pn 18 55 48.7 +2.2
ANCK **Angle Creek** 3.81 303 Pn 18 55 49.4 +2.3
KAHC **Katmai Hardscr** 3.83 310 Pn 18 55 49.3 +1.9
KAHC **Katmai Hardscr** 3.83 310 P Pn 18 55 49.3 +1.9
baz=126
P23K **Montague Islan** 3.87 15 Pn 18 55 48.1 +0.3
P23K **Montague Islan** 3.87 15 P Pn 18 55 48.1 +0.3
baz=196
P19K **Oil Pt** 3.93 331 Pn Pn 18 55 50.1 +1.4
P19K IAML 18 56 40.5
comp=E,65nm,0.6s
P19K IAML 18 56 40.6
comp=N,94nm,0.5s
P19K **Oil Pt** 3.93 331 P Pn 18 55 50.2 +1.5
baz=147
CNTC **Contact Creek** 4.03 302 Pn 18 55 52.0 +1.9
Q17K **Contact Creek** 4.03 302 P Pn 18 55 52.0 +1.9
baz=117
O20K **Slope Mountain** 4.16 337 Pn 18 55 52.9 +1.0
O20K **Slope Mountain** 4.16 337 P Pn 18 55 52.9 +1.0
baz=154
IVE **Iliamna Volcan** 4.19 334 Pn 18 55 53.2 +0.8
ILSW **Iliamna Southw** 4.19 333 Pn Pn 18 55 52.8 +0.4
ILSW IAML 18 56 43.7
comp=N,33nm,0.6s
ILSW IAML 18 56 49.8
comp=E,37nm,0.8s
O22K **Cooper Landing** 4.21 358 Pn 18 55 53.1 +0.7
O22K IAML 18 56 45.6
comp=E,128nm,0.7s
O22K IAML 18 56 56.9
comp=N,130nm,0.7s
O22K **Cooper Landing** 4.21 358 P Pn 18 55 53.7 +1.3
baz=177
P18K **Big Mountain,** 4.39 317 Pn Pn 18 55 55.7 +0.6
P18K **Big Mountain,** 4.39 317 P Pn 18 55 56.1 +1.0
baz=133
HIN **Hinchinbrook I** 4.39 19 Pn Pn 18 55 55.4 +0.3
HIN IAML 18 56 51.0
comp=E,65nm,1.5s
HIN IAML 18 56 53.5
comp=N,77nm,1.1s
RED **Redoubt Volcan** 4.50 338 Pn 18 55 56.6 +0.1
KAIM **Kayak Island** 4.51 34 Pn Pn 18 55 55.6 -1.0
RDSO **Redoubt South** 4.53 339 Pn 18 55 57.0 0.0
RSO **Redoubt South** 4.54 339 Pn 18 55 56.9 -0.2
RDT **Redoubt** 4.57 341 Pn 18 55 57.6 +0.1
CAPN **Captain Cook N** 4.58 349 Pn 18 55 57.1 -0.4
CAPN IAML 18 56 38.3
comp=E,99nm,3.1s
EYAK **Cordova Ski Ar** 4.68 23 Pn 18 55 59.6 +0.6
EYAK **Cordova Ski Ar** 4.68 23 P Pn 18 55 59.6 +0.6
EYAK **Cordova Ski Ar** 4.68 23 P Pn 18 55 59.6 +0.6
baz=205
O18K **Koktuh Hills** 4.71 322 Pn 18 55 60.0 +0.5
O18K IAML 18 58 16.2
comp=N,22nm,4.3s
O18K **Koktuh Hills** 4.71 322 P Pn 18 56 00.5 +1.1
baz=137
P17K **Kvichak River** 4.75 311 Pn 18 56 01.4 +1.4
P17K **Kvichak River** 4.75 311 P Pn 18 56 01.3 +1.4
baz=125
RAGM **Ragged Mountai** 4.81 29 Pn Pn 18 56 01.7 +0.9
RAGM IAML 18 57 04.2
comp=E,78nm,0.8s
RC01 **Rabbit Creek A** 4.81 358 Pn 18 56 01.4 +0.6
RC01 IAML 18 57 00.1
comp=E,25nm,0.7s
RC01 IAML 18 57 00.1
comp=N,25nm,0.6s
RC01 **Rabbit Creek A** 4.81 358 P Pn 18 56 01.4 +0.6
baz=177
SUCK **Suckling Hills** 4.83 36 Pn Pn 18 56 01.2 +0.2
HMT **Hamilton** 4.88 32 Pn Pn 18 56 02.6 +0.8
NICHA **Nichawak Mount** 4.89 34 Pn 18 56 02.7 +0.8
GOAT **Goat Mountain** 4.96 28 Pn 18 56 03.5 +0.7
CHGN **Chignik** 5.01 274 Pn Pn 18 56 03.6 +0.1
CHGN IAML 18 57 27.4
comp=N,73nm,0.1s
BERG **Berg Lake** 5.10 34 Pn Pn 18 56 04.4 -0.3
BERG IAML 18 57 15.4
comp=N,66nm,1.9s
GRIN **Grindle Hills** 5.13 36 Pn 18 56 06.0 +0.8
KNK **Knik Glacier** 5.16 5 Pn Pn 18 56 05.9 +0.3
KNK IAML 18 57 05.3
comp=E,41nm,0.4s
KNK IAML 18 57 08.5
comp=N,28nm,1.2s
KNK **Knik Glacier** 5.16 5 P Pn 18 56 06.3 +0.7
baz=185
DIV **Divide** 5.21 20 Pn 18 56 07.2 +0.9
SNH **Sunshine Point** 5.22 39 Pn Pn 18 56 07.1 +0.6
SUA **Susitna One** 5.23 353 Pn Pn 18 56 06.7 0.0
SUA IAML 18 58 00.0
comp=N,20nm,4.7s
SUA IAML 18 58 03.8
comp=E,19nm,3.7s
N19K **Bonanza Creek** 5.25 332 Pn Pn 18 56 07.3 +0.4
N19K IAML 18 57 26.3
comp=N,17nm,4.5s
N19K IAML 18 58 33.2
comp=E,16nm,4.6s
KHIT **Khitrov Hills** 5.28 35 Pn 18 56 07.6 +0.3
PMR **Palmer** 5.32 1 Pn Pn 18 56 09.0 +1.3
PMR IAML 18 56 59.9
comp=E,18nm,0.3s
PMR IAML 18 57 00.2
comp=N,14nm,0.5s
PMR **Palmer** 5.32 1 P Pn 18 56 09.4 +1.7
BMRM **Bremner River** 5.32 26 Pn 18 56 08.6 +0.8
BMRM **Bremner River** 5.32 26 P Pn 18 56 08.6 +0.8
baz=209
WAX **Waxell Ridge** 5.41 37 Pn Pn 18 56 09.8 +0.7
GHO **Glory Hole Cre** 5.50 2 Pn 18 56 11.3 +0.9
KLU **Klutina** 5.52 18 Pn 18 56 11.2 +0.6
KLU **Klutina** 5.52 18 P Pn 18 56 11.7 +1.1
baz=200
MESA **MESA** 5.54 42 Pn Pn 18 56 12.1 +1.1
CRQM **Cirque** 5.55 34 Pn 18 56 11.5 +0.3
N18K **Kilae Creek** 5.55 325 Pn Pn 18 56 11.6 +0.6
SML **Sawmill** 5.56 5 Pn 18 56 12.2 +1.1
SML **Sawmill** 5.56 5 P Pn 18 56 12.4 +1.3
baz=186
CRQE **Cirque** 5.57 34 P Pn 18 56 11.8 +0.6
baz=218

TGL	Tana Glacier	5.65	35	Pn	Pn	18 56 12.6	+0.2
SCM	Sheep Creek Mo	5.66	10	Pn	Pn	18 56 14.1	+1.6
O16K	Kokwok River B	5.68	309	Pn	Pn	18 56 14.2	+1.5
ISLE	Juniper Island	5.70	38	Pn	Pn	18 56 13.1	0.0
BAGL	Bagley Icefiel	5.71	39		Pn	18 56 14.2	+1.2
SVW2	Sparrevohn	5.79	329	Pn	Pn	18 56 14.9	+0.7
SKT	Skwentna	5.81	350		Pn	18 56 15.2	+0.8
VRDI	Verde Repeater	5.84	30	Pn	Pn	18 56 14.7	-0.4
N25K	Chitina, Valde	5.88	23		Pn	18 56 16.3	+0.7
N25K	Chitina, Valde baz=206	5.88	23	P	Pn	18 56 16.5	+0.9
N17K	Nushagak Hills	5.89	319	Pn	Pn	18 56 15.7	+0.1
M20K	Styx River	5.92	343	Pn	Pn	18 56 16.0	-0.1
GLB	Gilahina Butte	5.93	27	Pn	Pn	18 56 16.7	+0.6
KIAG	Kiagna River	5.93	36		Pn	18 56 17.0	+0.7
GRNC	Granite Creek	5.99	39	Pn	Pn	18 56 17.7	+0.5
TABL	Table Mountain	6.02	43	Pn	Pn	18 56 18.1	+0.5
M24K	Tolsona, Glenn	6.07	15		Pn	18 56 20.6	+2.5
MCARA	McCarthy VSAT	6.09	30	Pn	Pn	18 56 19.0	+0.7
PCA	Pinnacle	6.16	48		Pn	18 56 20.1	+0.7
PINM	Pinnacle baz=235	6.17	48	P	Pn	18 56 20.1	+0.7
M18K	Stony River	6.18	330		Pn	18 56 20.4	+0.9
M18K	Stony River baz=145	6.18	330	P	Pn	18 56 20.4	+0.9
M19K	Big River Lodg	6.18	338	Pn	Pn	18 56 19.2	-0.4
BARN	Barnard Glacie	6.26	37		Pn	18 56 21.2	+0.4
SDPT	Sand Point	6.30	266	Pn	Pn	18 56 22.4	+1.1
CTGM	Chitina Glacie	6.30	39	Pn	Pn	18 56 21.4	0.0
PNL	Peninsula	6.31	53	P	Pn	18 56 22.2	+0.8
LOGN	Logan Glacier	6.33	41	Pn	Pn	18 56 21.7	0.0
BCPM	Bancas Point	6.35	51	Pn	Pn	18 56 23.1	+1.2
WAT6	Susitna Watana baz=188	6.37	7	P	Pn	18 56 23.5	+1.2
HARP	HAARP	6.50	18		Pn	18 56 25.1	+1.1
HARP	HAARP baz=201	6.50	18	P	Pn	18 56 25.1	+1.1
L19K	White Mountain	6.53	337	Pn	Pn	18 56 24.2	-0.2
L19K	White Mountain baz=152	6.53	337	P	Pn	18 56 24.8	+0.4
M17K	Holitna River	6.60	324	Pn	Pn	18 56 26.7	+1.4
N15K	Kwethluk River	6.84	309	Pn	Pn	18 56 29.0	+0.4
M16K	Timber Creek	6.87	318	Pn	Pn	18 56 29.6	+0.6
M26K	Nabesna, AK	6.95	26	Pn	Pn	18 56 30.9	+0.8
O29M	Mount Kennedy	6.98	50	Pn	Pn	18 56 29.8	-0.9
L18K	Granite Mounta	7.01	331	Pn	Pn	18 56 31.5	+0.5
P29M	Windy Craggy	7.06	57		Pn	18 56 32.4	+0.8
M27K	Edge Creek, AK	7.20	29	Pn	Pn	18 56 35.5	+1.8
CAST	Castle Rocks	7.27	350		Pn	18 56 34.3	-0.2
S31K	Pelican	7.37	71	Pn	Pn	18 56 34.3	-1.5
L26K	Log Cabin Wild	7.42	22		Pn	18 56 37.7	+1.2
K20K	Telida	7.46	344	Pn	Pn	18 56 37.7	+0.6
L16K	Owhat River	7.51	320	Pn	Pn	18 56 39.2	+1.4
BCAR	Beaver Creek A	7.81	26	Pn	Pn	18 56 43.2	+1.2
K17K	Iditarod	7.86	329	Pn	Pn	18 56 43.0	+0.4
J18K	Innoko River	8.07	336	Pn	Pn	18 56 46.4	+0.9
N30M	Aishikik Lake	8.22	46	Pn	Pn	18 56 48.1	+0.6
J20K	Nowinta River	8.25	345	Pn	Pn	18 56 48.3	+0.4
O30N	Mendenhall	8.29	52	Pn	Pn	18 56 50.3	+1.8
J19K	Poorman	8.32	341	Pn	Pn	18 56 48.3	-0.5
M29M	Somme Creek	8.32	38		Pn	18 56 50.0	+1.1
K27K	Chicken	8.57	22	Pn	Pn	18 56 54.1	+1.8
J17K	VABM Dome	8.62	330	Pn	Pn	18 56 53.1	+0.2
K15K	Wolf Creek Mou	8.63	319	Pn	Pn	18 56 54.9	+1.8
WHY	Whitehorse	8.78	54	Pn	Pn	18 56 56.3	+1.0
L29M	L29M	8.89	35		Pn	18 56 58.2	+1.4
P32M	Atlin	8.98	62	Pn	Pn	18 56 58.5	+0.5
J16K	Anvik River	8.98	326	Pn	Pn	18 56 59.0	+1.0
I21K	Tanana	9.01	353		Pn	18 56 55.9	-2.4
H21K	Melozitna Rive	9.54	352		Pn	18 57 07.2	+1.7
I26K	Coal Creek Min	9.54	16	Pn	Pn	18 57 03.4	-2.2
K29M	Barlow Dome	9.61	33	Pn	Pn	18 57 08.0	+1.3
H18K	Honhosa River	9.90	338	Pn	Pn	18 57 11.1	+0.6
R33M	Jennings River	10.31	65	Pn	Pn	18 57 17.2	+1.0
J30M	Hart River	10.50	32	Pn	Pn	18 57 19.4	+0.5
H29M	Whitestone	11.27	23	Pn	Pn	18 57 29.6	+0.4

*IDC **15** 19:14:44.2±12.0, 35°.60N×9°.09E, h0km, mb3.7/4, mbtmp3.7/5, ML3.1/1, MS3.9/1, Error ellipse: s-maj=242.3km s-min=54.8km az=38.0*
*ROM **15** 19:16:00.7±0.3, 40°.43N±0°.02×15°.10E±0°.02, h328km±2km, ML3.1/25, Error ellipse: s-maj=2.4km s-min=0.8km az=231.0*

ISC 15 19:16:04.2±1.3, 40°.42N±0°.07×15°.12E±0°.09, h307km±10km, n82, σ0°45/82, mb3.1/4, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CDRU	Civita di Ruta	0.16	63	P	Pn		19 16 43.2	0.0
CMPR	Campora	0.17	126	P	Pn		19 16 43.0	-0.2
SRN3	Sant'Arsenio	0.27	75	P	Pn		19 16 43.6	+0.4
MCRV	Calabrutti - M	0.37	6	P	Pn		19 16 43.3	-0.1
SLCN	Sala Consilina	0.39	94	P	Pn		19 16 43.5	0.0
SLCN	comp=N,100μm,0.4s			AML	AML			
SLCN	comp=E,129μm,0.5s			AML	AML			
NSC3	Nusco	0.43	0	P	Pn		19 16 43.5	-0.1
MGR	Morigerati	0.43	130	P	Pn		19 16 43.5	0.0
MGR	comp=E,66μm,0.3s			AML	AML			
MGR	comp=E,66μm,0.3s			AML	AML			
MGR	comp=N,100μm,0.5s			AML	AML			
MGR	comp=E,66μm,1.7s			AML	AML			
MGR	comp=N,100μm,0.5s			AML	AML			
MGR	comp=E,66μm,0.3s			AML	AML			
MRLC	Muro Lucano	0.44	39	P	Pn		19 16 43.7	+0.2
LIO3	Lioni	0.48	5	P	Pn		19 16 43.5	0.0
MTSN	Montesano sull	0.51	107	P	Pn		19 16 43.7	0.0
MTSN	comp=N,52μm,1.6s			AML	AML			
MTSN	comp=E,65μm,1.5s			AML	AML			
MTSN	comp=N,52μm,1.6s			AML	AML			
MTSN	comp=E,65μm,0.5s			AML	AML			
MTSN	comp=E,57μm,0.4s			AML	AML			
MTSN	comp=N,52μm,0.4s			AML	AML			
SNAL	S. Angelo Dei	0.51	7	P	Pn		19 16 43.7	0.0
MCEL	Monticello	0.53	100	P	Pn		19 16 44.4	+0.6
RSF3	Rocca San Feli	0.55	4	P	Pn		19 16 43.6	-0.1
CAFE	Carife	0.62	8	P	Pn		19 16 44.3	+0.4
SIRI	Monte Sirino -	0.62	112	P	Pn		19 16 45.0	+1.0
CUC	Castrocucco	0.68	128	P	Pn		19 16 44.1	-0.1
MRB1	Monte Rocchett	0.72	351	P	Pn		19 16 44.7	+0.5
PTRP	Pietrapertosa	0.72	81	P	Pn		19 16 44.6	+0.3
PAOL	Paolisi	0.74	326	P	Pn		19 16 44.6	+0.3
PALZ	Palazzo San Ge	0.83	50	P	Pn		19 16 44.9	+0.3
PSB1	Pescosannita	0.84	344	P	Pn		19 16 44.5	-0.2
VITU	Vitulano (BN)	0.85	334	P	Pn		19 16 44.9	+0.2
VITU	comp=E,64μm,0.3s			AML	AML			
VITU	comp=E,64μm,0.3s			AML	AML			
VITU	comp=N,94μm,0.3s			AML	AML			
VITU	comp=N,94μm,0.3s			AML	AML			
VITU	comp=N,94μm,1.7s			AML	AML			
VITU	comp=E,64μm,0.3s			AML	AML			
GRIS	Grisolia	0.88	140	P	Pn		19 16 44.5	-0.4
SACR	S. Croce Del S	1.03	342	P	Pn		19 16 46.6	+1.1
MRVN	Minervino Murg	1.04	51	P	Pn		19 16 45.2	-0.2
PIGN	Pignataro Magg	1.06	318	P	Pn		19 16 45.7	+0.2
CET2	Cetraro	1.09	144	P	Pn		19 16 45.7	-0.2
SGG	Gregorio Mates	1.12	330	P	Pn		19 16 46.0	+0.1
MODR	Mondragone	1.19	308	P	Pn		19 16 46.2	0.0
BSSO	Busso	1.20	341	P	Pn		19 16 47.0	+0.6
TDS	Terranova Siba	1.20	129	P	Pn		19 16 47.1	+0.8
VAGA	Valle Agricola	1.20	326	P	Pn		19 16 46.5	+0.2
AMUR	Altamura	1.23	66	P	Pn		19 16 46.5	+0.1
MATE	Matera	1.23	79	P	Pn		19 16 46.6	+0.2
CIGN	Sant'Elia a Pi	1.25	353	P	Pn		19 16 46.3	-0.2
VENT	Ventotene	1.35	287	P	Pn		19 16 47.2	+0.2
MIDA	Miranda	1.39	332	P	Pn		19 16 47.7	+0.4
SGRT	San Giovanni R	1.42	19	P	Pn		19 16 47.1	-0.5
MSAG	Monte S. Angel	1.42	24	P	Pn		19 16 47.2	-0.3
CAR1	CAROLEI	1.43	144	AML	AML			
CAR1	comp=E,126μm,0.4s			AML	AML			
CAR1	comp=E,126μm,0.4s			AML	AML			
CAR1	comp=N,126μm,1.6s			AML	AML			
CAR1	comp=N,126μm,0.4s			AML	AML			
CAR1	comp=E,126μm,1.6s			AML	AML			
CERA	Filignano	1.45	325	P	Pn		19 16 47.5	-0.1
CELI	Celico	1.47	133	P	Pn		19 16 48.9	+0.8
CELI				S	S		19 17 23.2	+0.2
RNI2	Rionero Sannit	1.48	331	P	Pn		19 16 48.5	+0.6
RNI2	comp=E,92μm,0.3s			AML	AML			
PIPA	Pietrapaola	1.60	125	P	Pn		19 16 49.0	+0.3
POFI	Posta Fibreno	1.68	321	P	Pn		19 16 49.5	+0.3
POFI	comp=E,61μm,0.4s			AML	AML			
POFI	comp=N,38μm,0.6s			AML	AML			
TIP	Timpagrande	1.77	134	P	Pn		19 16 50.2	+0.2
TIP				S	S		19 17 25.8	-0.7
TIP	comp=E,63μm,1.4s			AML	AML			
TIP	comp=N,63μm,1.5s			AML	AML			
TIP	comp=E,63μm,0.6s			AML	AML			
TIP	comp=N,63μm,0.5s			AML	AML			
TIP	comp=N,63μm,1.6s			AML	AML			
TIP	comp=E,57μm,0.8s			AML	AML			
GIUL	Giuliano Di Ro	1.82	309	P	Pn		19 16 50.0	-0.1
LADO	San Nicola del	1.82	128	P	Pn		19 16 51.3	+1.0
SERS	Sersale	1.83	138	P	Pn		19 16 50.6	+0.1
SERS				S	S		19 17 26.6	-0.8
SERS	comp=E,131μm,0.9s			AML	AML			
SERS	comp=N,93μm,1.6s			AML	AML			
SERS	comp=E,79μm,0.3s			AML	AML			
SERS	comp=N,124μm,0.9s			AML	AML			
SERS	comp=N,124μm,1.1s			AML	AML			
SERS	comp=E,131μm,1.1s			AML	AML			
SERS	comp=N,93μm,0.4s			AML	AML			
SERS	comp=E,119μm,0.7s			AML	AML			
SERS	comp=N,120μm,0.7s			AML	AML			
SERS	comp=E,79μm,0.3s			AML	AML			
SERS	comp=N,77μm,0.6s			AML	AML			
INTR	Introdacqua	1.84	330	P	Pn		19 16 50.6	+0.2
GRI	Girifalco	1.88	147	P	Pn		19 16 51.7	+0.9
JOPP	Joppolo	1.90	162	P	Pn		19 16 50.9	-0.1
JOPP				S	S		19 17 28.2	0.0
FAGN	Fagnano	2.18	328	P	Pn		19 16 53.6	+0.6
FAGN	comp=E,190μm,0.4s			AML	AML			
FAGN	comp=N,110μm,0.5s			AML	AML			
FAGN	comp=N,110μm,0.5s			AML	AML			
FAGN	comp=E,189μm,0.4s			AML	AML			
PLAC	Placanica	2.21	152	P	Pn		19 16 53.4	-0.1
PLAC				S	S		19 17 33.0	+0.3
PLAC	comp=N,140μm,0.7s			AML	AML			
PLAC	comp=N,140μm,1.3s			AML	AML			
PLAC	comp=E,104μm,1.3s			AML	AML			
PLAC	comp=E,101μm,0.4s			AML	AML			
PLAC	comp=E,131μm,0.7s			AML	AML			
PLAC	comp=N,141μm,0.7s			AML	AML			
PLAC	comp=N,101μm,0.5s			AML	AML			
CERT	Cerreto	2.23	314	P	Pn		19 16 53.3	0.0
CEL	Celeste	2.24	164	P	Pn		19 16 53.1	-0.5
FIAM	Fiamignano	2.39	321	P	Pn		19 16 55.2	+0.4
SOI	Samo	2.45	163	P	Pn		19 16 55.3	-0.1
CAMP	Campotosto	2.48	329	P	Pn		19 16 56.1	+0.6
RM33	Pellescritta (	2.53	326	P	Pn		19 16 56.3	+0.3
SMA1	SAN MARTINO	2.59	329	P	Pn		19 16 56.8	+0.2
MTRA	Matera	2.67	332	P	Pn		19 16 57.3	+0.1
LSTV	Lastovo	2.70	29	*i* P	Pn		19 16 57.3	-0.2
MMO1	Montemonaco	2.82	332	P	Pn		19 16 58.9	+0.3
NRCA	Norcia	2.84	329	P	Pn		19 16 59.4	+0.5
MF5	Montefalcone A	2.85	335	P	Pn		19 16 59.1	+0.1
CSP1	Cessapalombo	3.03	332	P	Pn		19 17 00.8	+0.1
CESI	CESI - Serrava	3.07	328	P	Pn		19 17 01.2	+0.1
ZIRJ	Zirje	3.26	7	*i* P	Pn		19 17 01.8	-1.1
EL6	Elcito	3.28	333	P	Pn		19 17 02.8	-0.4
RICI	Ricice	3.42	25	*i* P	Pn		19 17 04.8	+0.3
MORI	Morici	3.47	7	*i* P	Pn		19 17 05.1	+0.1
DUGI	Dugi Otok	3.57	359	*i* P	Pn		19 17 06.4	+0.3
VIRC	Vir	3.87	359	*i* P	Pn		19 17 09.5	+0.3
NVLJ	Novalja	4.15	358	*i* P	Pn		19 17 12.3	+0.1
RABC	Rab	4.34	357	*i* P	Pn		19 17 14.6	+0.3
BRTR	Keskin Array B comp=N,0.1nm,0.3s,baz=270,slow=7.2,SNR=3.8 comp=N,0.9nm,0.8s	14.20	87	P	Pn		19 19 18.1	+5.1
FINES	FINESS Array B comp=N,0.7nm,0.7s,baz=224,slow=7.4,SNR=3.8 comp=N,0.7nm,0.7s	22.10	14	P	P		19 20 35.4	+1.3
ARCES	ARCESS Array B comp=N,1.6nm,0.9s,baz=188,slow=11,SNR=1.5 comp=N,1.6nm,0.9s	29.69	7	P	P		19 21 41.1	-0.7
AAK	Ala-Archa comp=N,108nm,18.0s,baz=330,slow=46	43.71	67	LR	LR		19 53 33.9	
ZALV	Zalesovo Beam comp=N,0.3nm,0.4s,baz=289,slow=4.4,SNR=2.2 comp=N,0.3nm,0.4s	47.35	49	P	P		19 24 09.1	+1.5
MKAR	Makanchi Array comp=N,0.4nm,0.4s,baz=279,slow=6.9,SNR=17 comp=N,0.4nm,0.4s	47.72	59	P	P		19 24 12.6	+2.0

IDC 15 19:29:53.7±5.7, 28°.72S×147°.18E, h0km, mb4.6/1, mbtmp3.7/4, ML3.0/3, Error ellipse: s-maj=80.7km s-min=36.2km az=120.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek 0.2nm,0.3s,baz=63,slow=14,SNR=5.3	5.76	236	Pn	Pn		19 31 20.9	+0.4
STKA	0.7nm,0.3s,baz=2.6,slow=18,SNR=9.2			Sn	Sn		19 32 25.6	-1.8
STKA	0.3nm,0.3s,baz=143,slow=20,SNR=1.6 0.8nm,0.4s			Lg	Lg		19 32 57.8	
ASAR	Alice Springs 0.3nm,0.3s,baz=114,slow=14,SNR=33 1.9nm,0.5s	12.93	290	Pn	Pn		19 32 59.5	+0.6
WRA	Warramunga Arr baz=132,slow=13,SNR=1.2 0.3nm,0.8s	14.59	304	Pn	Pn		19 33 20.8	-0.8
NWAO	Narrogin (SRO) 13nm,1.1s,baz=77,slow=4.7,SNR=2.2 13nm,1.1s	26.01	253	P	P		19 35 28.4	-0.1

*NEIC **15** 19:34:32.9±1.6, 55°.98N±0°.07×149°.80W±0°.09, h10km±2km, mb4.1/1, ML4.4/56, ML4.2(AEIC), Error ellipse: s-maj=13.7km s-min=3.6km az=143.0*

*IDC **15** 19:34:32.8±1.3, 55°.88N×149°.83W, h0km, mb3.7/8, mbtmp3.8/13, ML3.8/5, MS4.0/57, Error ellipse: s-maj=30.7km s-min=17.9km az=24.0*
*GCMT **15** 19:34:36.9±0.3, 56°.07N±0°.02×149°.69W±0°.03, h18km±1km, MW4.8/80, Moment Tensor Solution. s20,c22; s80,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.11; $M_{\theta\theta}$-0.26±.09; $M_{\phi\phi}$0.40±.09; $M_{r\theta}$0.87±.22; $M_{r\phi}$2.11±.07; $M_{\theta\phi}$-0.06±.19; Best double couple: M_o2.31000×10^{16} NP1:ϕ_s265.00000°,δ86.00000°,λ-22.00000°. NP2: ϕ_s356.00000°,δ68.00000°,λ-176.00000°. Principal axes: T 2.3230, Plg12.0000°, Azm312.0000°; N -0.0270, Plg68.0000°, Azm75.0000°; P -2.2960, Plg18.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*AEIC **15** 19:34:38.2±1.6, 56°.0N±0°.1×149°.8W±0°.1, h10km±5km Error ellipse: s-maj=15.2km s-min=8.2km az=163.0*

ISC 15 19:34:34.3±0.7, 56°.10N±0°.06×149°.88W±0°.05, h10km, n304, σ0°93/252, mb4.0/11, MS4.1/51, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.20	302		Pn	Pn	19 35 10.3	-0.4
OHAK	Old Harbor	2.20	302			Sn	19 35 36.4	-1.6
OHAK	Old Harbor comp=N,390nm,0.7s	2.20	302	IAML			19 35 37.1	
OHAK	comp=E,402nm,1.0s			IAML			19 35 37.8	
OHAK	Old Harbor	2.20	302	P	Pn		19 35 10.7	-0.1
OHAK	Old Harbor baz=121	2.20	302	P	Pn		19 35 10.7	-0.1
OHAK	baz=121			S	Sn		19 35 36.4	-1.6
KDAK	Kodiak Island	2.25	320		Pn		19 35 11.4	-0.1
KDAK	Kodiak Island comp=E,422nm,0.8s	2.25	320	IAML			19 35 39.1	
KDAK	comp=E,362nm,0.9s			IAML			19 35 39.9	
KDAK	Kodiak Island baz=138	2.25	320	S	Sn		19 35 38.6	-0.6
KDAK	Kodiak Island comp=E,50nm,0.3s,baz=170,slow=6.8,SNR=175	2.25	320	Pn	Pn		19 35 11.6	+0.1
KDAK	comp=E,72nm,0.3s,baz=349,slow=22,SNR=20			Sn	Sn		19 35 38.2	-1.1
KDAK	comp=E,6μm,19.1s,baz=212,slow=46 comp=E,93nm,0.3s			LR	LR		19 36 23.6	
SII	Sitkinak Islan	2.44	283	Pn	Pn		19 35 13.6	-0.6
SII	Sitkinak Islan	2.44	283		Sn		19 35 42.4	-1.7
SII	Sitkinak Islan comp=E,1μm,0.7s	2.44	283	IAML			19 35 44.2	
SII	comp=N,1μm,0.7s			IAML			19 35 46.0	
SII	Sitkinak Islan	2.44	283	P	Pn		19 35 14.0	-0.2
SII	Sitkinak Islan baz=101	2.44	283	P	Pn		19 35 13.6	-0.6
SII	baz=101			S	Sn		19 35 42.8	-1.3
Q20K	Shuyak Island baz=150	2.86	333	P	Pn		19 35 20.4	+0.5
Q20K	baz=150			S	Sn		19 35 54.3	-0.1
SYI	Shuyak Island	2.86	333		Pn		19 35 20.0	+0.1
SYI	Shuyak Island	2.86	333		Sn		19 35 54.3	-0.1
SYI	Shuyak Island comp=N,452nm,1.1s	2.86	333	IAML			19 35 55.6	
SYI	comp=E,470nm,0.9s			IAML			19 36 01.1	
R18K	Karluk	2.91	302		Pn		19 35 21.1	+0.5
R18K					Sn		19 35 56.5	+0.9
R18K	Karluk comp=E,643nm,0.5s	2.91	302	IAML			19 35 59.6	
R18K	Karluk baz=120	2.91	302	P	Pn		19 35 21.4	+0.8
R18K	baz=120			S	Sn		19 35 56.6	+0.9
CHIR	Chirikof Islan	3.24	267		Sn		19 36 01.0	-2.8
CHIR	Chirikof Islan	3.24	267	Pn	Pn		19 35 24.3	-0.9
CHIR	comp=E,769nm,0.8s			IAML			19 36 02.0	
CHIR	Chirikof Islan baz=85	3.24	267	P	Pn		19 35 24.7	-0.5
CHIR	baz=85			S	Sn		19 36 01.0	-2.8
KAPH	Katmai Pasha	3.48	318		Pn		19 35 29.9	+1.3
KAPH					Sn		19 36 10.5	+0.6
Q19K	Cape Douglas,	3.49	326		Pn		19 35 29.1	+0.6
Q19K	Cape Douglas,	3.49	326		Sn		19 36 08.9	-1.1
Q19K	Cape Douglas, comp=E,3μm,1.1s	3.49	326	IAML			19 36 16.8	
Q19K	comp=N,3μm,0.9s			IAML			19 36 16.9	
Q19K	Cape Douglas, baz=143	3.49	326	P	Pn		19 35 29.9	+1.3
Q19K	baz=143			S	Sn		19 36 08.9	-1.1
KAHG	Katmai Hook Gl	3.49	315		Pn		19 35 30.2	+1.6
CNPM	China Poot	3.51	349	Pn	Pn		19 35 28.5	-0.4
CNPM	China Poot	3.51	349		Sn		19 36 09.7	-0.8
CNPM	China Poot comp=E,535nm,0.8s	3.51	349	IAML			19 36 10.6	
CNPM	comp=N,387nm,0.4s			IAML			19 36 11.5	
KAKN	Katmai Knife C	3.58	310		Pn		19 35 31.0	+1.1
KCE	Katmai Mt Cerb	3.60	309		Pn		19 35 31.4	+1.2
ACHA	Angle Creek He	3.65	308		Pn		19 35 31.9	+1.1
BRSE	Bradley Lake S	3.68	353		Pn		19 35 30.8	-0.4
BRSE	Bradley Lake S baz=172	3.68	353	P	Pn		19 35 30.7	-0.4
HOM	Homer	3.69	346	Pn	Pn		19 35 31.9	+0.6
HOM	comp=N,1μm,0.9s			IAML			19 36 20.6	
ANCK	Angle Creek	3.71	307		Pn		19 35 33.2	+1.5
BRLK	Bradley Lake	3.72	352	Pn	Pn		19 35 31.1	-0.6
BRLK	comp=N,647nm,1.0s			IAML			19 36 18.2	
BRLK	comp=E,406nm,1.1s			IAML			19 36 22.7	
AUJK	Augustine Jueg	3.77	331		Pn		19 35 33.7	+1.3
AU22	Augustine Moun	3.77	332		Pn		19 35 33.7	+1.3
KAHC	Katmai Hardscr	3.78	315		Pn		19 35 34.0	+1.4
KAHC	Katmai Hardscr baz=131	3.78	315	P	Pn		19 35 34.1	+1.5
AUCH	Augustine Cone	3.79	331		Pn		19 35 34.1	+1.3
AUL	Augustine Lava	3.81	331		Pn		19 35 34.4	+1.6
Q23K	Middleton Isla	3.84	28		Pn		19 35 32.3	-0.9
Q23K	Middleton Isla comp=E,348nm,0.9s	3.84	28	IAML			19 36 18.2	
Q23K	Middleton Isla baz=209	3.84	28	P	Pn		19 35 32.3	-0.9
MID	Middleton Isla	3.84	28		Pn		19 35 32.3	-1.0
MID	Middleton Isla comp=N,325nm,1.1s	3.84	28	IAML			19 36 17.6	
MID	Middleton Isla	3.84	28	P	Pn		19 35 32.5	-0.8
PLK3	Peulik 3	3.85	297		Pn		19 35 34.6	+1.1
Q17K	Contact Creek baz=122	3.93	306	P	Pn		19 35 35.5	+0.9
P19K	Oil Pt	3.99	335		Pn		19 35 36.2	+0.8
P19K	comp=N,664nm,0.6s			IAML			19 36 29.0	
P19K	comp=E,721nm,0.4s			IAML			19 36 29.2	
P19K	Oil Pt baz=152	3.99	335	P	Pn		19 35 36.5	+1.1
PLK1	Peulik 1	4.06	298		Pn		19 35 37.6	+1.2
P23K	Montague Islan	4.12	18		Pn		19 35 36.6	-0.7
P23K	Montague Islan baz=198	4.12	18	P	Pn		19 35 37.0	-0.2
O20K	Slope Mountain	4.25	341		Pn		19 35 39.1	+0.1
O20K	Slope Mountain baz=158	4.25	341	P	Pn		19 35 39.5	+0.4
ILSW	Iliamna Southw	4.26	337		Pn		19 35 39.4	+0.1
ILSW	comp=E,355nm,0.9s			IAML			19 36 30.7	
ILSW	comp=N,247nm,1.0s			IAML			19 36 36.4	
IVE	Iliamna Volcan	4.27	338		Pn		19 35 39.0	-0.3
P18K	Big Mountain,	4.37	321		Pn		19 35 41.2	+0.5
P18K	Big Mountain, baz=137	4.37	321	P	Pn		19 35 40.9	+0.1
O22K	Cooper Landing	4.40	1		Pn		19 35 41.3	+0.3
SLKM	Skilak Lake	4.43	358		Pn		19 35 40.5	-0.9
R16K	Pilot Point	4.48	292		Pn		19 35 43.4	+1.3

R16K	Pilot Point	4.48	292		IAML			19 36 56.1	
	comp=N,230nm,1.4s								
RED	Redoubt Volcan	4.59	342			Pn	Pn	19 35 43.0	-0.8
RSO	Redoubt South	4.63	342			Pn	Pn	19 35 44.4	0.0
HIN	Hinchinbrook I	4.66	21	Pn		Pn	Pn	19 35 44.3	-0.4
HIN					IAML			19 36 37.7	
	comp=N,407nm,0.9s								
HIN					IAML			19 36 42.8	
	comp=E,432nm,1.0s								
RDWB	Redoubt West	4.67	342			Pn	Pn	19 35 43.6	-1.3
RDT	Redoubt	4.68	345			Pn	Pn	19 35 44.0	-1.0
P17K	Kvichak River	4.70	314	P		Pn	Pn	19 35 46.3	+1.2
	baz=129								
O18K	Koktuh Hills	4.72	325			Pn		19 35 45.6	+0.2
O18K					IAML			19 36 42.1	
	comp=N,314nm,0.9s								
O18K					IAML			19 36 54.7	
	comp=E,199nm,1.1s								
O18K	Koktuh Hills	4.72	325	P		Pn	Pn	19 35 45.6	+0.2
	baz=141								
ANPB	Aniakchak Pben	4.72	282			Pn		19 35 46.2	+0.8
CAPN	Captain Cook N	4.73	352			Pn		19 35 46.4	+0.9
O19K	Port Alsworth	4.74	332			Pn		19 35 45.9	+0.3
O19K	Port Alsworth	4.74	332	P		Pn		19 35 46.0	+0.4
	baz=148								
DFR	Drift River	4.74	343			Pn		19 35 45.3	-0.5
NCT	North Crescent	4.76	341			Pn		19 35 45.3	-0.8
CHGN	Chignik	4.77	276			Pn	Pn	19 35 46.3	+0.2
CHGN					IAML			19 36 45.3	
	comp=E,162nm,0.9s								
KAIM	Kayak Island	4.81	35			Pn		19 35 46.5	-0.2
KAIM					IAML			19 36 42.7	
	comp=E,330nm,0.7s								
KAIM					IAML			19 36 47.8	
	comp=N,349nm,1.0s								
KAIM	Kayak Island	4.81	35	P		Pn	Pn	19 35 46.4	-0.3
	baz=218								
EYAK	Cordova Ski Ar	4.96	24	P		Pn		19 35 48.7	-0.1
EYAK	Cordova Ski Ar	4.96	24	P		Pn		19 35 48.6	-0.2
	baz=206								
RC01	Rabbit Creek A	5.01	1	Pn		Pn	Pn	19 35 49.0	-0.3
RC01					IAML			19 36 47.7	
	comp=N,182nm,0.5s								
RC01					IAML			19 36 49.2	
	comp=E,319nm,0.6s								
RC01	Rabbit Creek A	5.01	1	P		Pn	Pn	19 35 49.4	+0.1
	baz=180								
RAGM	Ragged Mountai	5.10	30			Pn		19 35 49.9	-0.9
SUCK	Suckling Hills	5.13	37			Pn		19 35 50.8	-0.3
SUCK					IAML			19 36 48.8	
	comp=N,322nm,0.5s								
SUCK					IAML			19 36 51.8	
	comp=E,304nm,1.1s								
HMT	Hamilton	5.18	33			Pn		19 35 51.8	0.0
HMT					IAML			19 36 56.0	
	comp=N,386nm,0.6s								
NICHA	Nichawak Mount	5.20	35			Pn		19 35 51.9	-0.1
N20K	Mount Spurr	5.26	348	P		Pn		19 35 52.5	-0.4
	baz=165								
SPCR	Spurr Chakacha	5.26	348			Pn		19 35 52.3	-0.6
P16K	Nushagak River	5.26	307	P		Pn		19 35 54.0	+1.1
	baz=121								
N19K	Bonanza Creek	5.31	335			Pn		19 35 52.8	-0.8
SPCP	Crater Peak Br	5.32	348			Pn		19 35 53.9	+0.1
O17K	Koliganek Bris	5.33	317	P		Pn		19 35 54.3	+0.6
	baz=131								
SPBG	Spurr Blockage	5.34	347			Pn		19 35 54.4	+0.4
KNK	Knik Glacier	5.38	7			Pn		19 35 54.5	0.0
KNK	Knik Glacier	5.38	7	P		Pn		19 35 54.8	+0.3
	baz=188								
BERG	Berg Lake	5.40	35			Pn		19 35 54.3	-0.5
SUA	Susitna One	5.40	356			Pn		19 35 54.2	-0.7
SUA	Susitna One	5.40	356	P		Pn		19 35 54.7	-0.2
	baz=174								
GRIN	Grindle Hills	5.44	37			Pn		19 35 55.2	-0.2
DIV	Divide	5.48	21			Pn		19 35 55.9	-0.1
SPNN	North Nagishla	5.49	346			Pn		19 35 56.1	0.0
PMR	Palmer	5.53	4	Pn		Pn		19 35 56.8	+0.4
PMR	Palmer	5.53	4	P		Pn		19 35 57.8	+1.4
PMR	Palmer	5.53	4	P		Pn		19 35 57.3	+0.9
	baz=184								
SNH	Sunshine Point	5.53	39			Pn		19 35 56.3	-0.3
N18K	Kilae Creek	5.58	328			Pn		19 35 57.2	-0.1
KHIT	Khitrov Hills	5.58	36			Pn		19 35 56.9	-0.5
BMRM	Bremner River	5.61	27	P		Pn		19 35 57.6	-0.1
	baz=210								
O16K	Kokwok River B	5.62	312			Pn		19 35 58.7	+1.0
GHO	Glory Hole Cre	5.71	5			Pn		19 35 59.5	+0.3
WAX	Waxell Ridge	5.72	37			Pn		19 35 58.6	-0.7
SML	Sawmill	5.78	7	Pn		Pn		19 36 00.4	+0.4
SML	Sawmill	5.78	7	P		Pn		19 36 00.9	+0.8
	baz=188								
KLU	Klutina	5.79	19			Pn		19 36 00.2	+0.1
KLU	Klutina	5.79	19	P		Pn		19 36 00.5	+0.3
	baz=201								
BARK	Barkley Ridge	5.81	39			Pn		19 36 00.3	-0.3
M23K	Glacier View	5.82	10			Pn		19 36 00.7	+0.1
M23K	Glacier View	5.82	10	P		Pn		19 36 01.4	+0.8
	baz=191								
SVW2	Sparrevohn	5.83	332	Pn		Pn		19 36 00.4	-0.3
SVW2	Sparrevohn	5.83	332	P		Pn		19 36 01.1	+0.4
MESA	MESA	5.86	42			Pn		19 36 00.6	-0.7
MESA	MESA	5.86	42	P		Pn		19 36 01.1	-0.1
	baz=228								
N17K	Nushagak Hills	5.88	322			Pn		19 36 01.9	+0.5
SCM	Sheep Creek Mo	5.90	12			Pn		19 36 01.9	+0.1
SCM	Sheep Creek Mo	5.90	12	P		Pn		19 36 02.1	+0.4
	baz=193								
TGL	Tana Glacier	5.96	35			Pn		19 36 01.6	-0.9
SKT	Skwentna	5.96	352			Pn		19 36 02.7	+0.2
SKT	Skwentna	5.96	352	P		Pn		19 36 02.8	+0.4
	baz=170								
ISLE	Juniper Island	6.01	38			Pn		19 36 02.8	-0.4
BAGL	Bagley Icefiel	6.02	40			Pn		19 36 02.9	-0.3
SDPT	Sand Point	6.04	267			Pn		19 36 03.4	-0.1
SDPT	Sand Point	6.04	267	P		Pn		19 36 04.1	+0.6
M20K	Styx River	6.04	345			Pn		19 36 02.8	-0.9
VRDI	Verde Repeater	6.14	30			Pn		19 36 04.9	-0.2
N25K	Chitina, Valde	6.16	24			Pn		19 36 05.4	0.0
N25K	Chitina, Valde	6.16	24	P		Pn		19 36 05.6	+0.3
	baz=208								
O15K	Ungalikthiuk R	6.17	304			Pn		19 36 06.1	+0.8
O15K	Ungalikthiuk R	6.17	304	P		Pn		19 36 06.5	+1.2
	baz=116								
GLB	Gilahina Butte	6.22	28			Pn		19 36 06.1	+0.1
M18K	Stony River	6.23	333			Pn		19 36 05.5	-0.6
KIAG	Kiagna River	6.24	36			Pn		19 36 06.0	-0.4
M19K	Big River Lodg	6.27	340			Pn		19 36 05.4	-0.3
SAMH	Samovar Hills	6.29	46			Pn		19 36 07.2	+0.2
GRNC	Granite Creek	6.30	39			Pn		19 36 06.7	-0.7
M24K	Tolsona, Glenn	6.32	16			Pn		19 36 08.5	+1.1
M24K	Tolsona, Glenn	6.32	16	P		Pn		19 36 08.7	+1.2
	baz=198								
TABL	Table Mountain	6.34	43			Pn		19 36 07.3	-0.5
MCARA	McCarthy VSAT	6.39	31			Pn		19 36 08.5	+0.2
MCARA	McCarthy VSAT	6.39	31	P		Pn		19 36 08.9	+0.6
	baz=216								
PTPK	Patty Peak	6.40	34			Pn		19 36 08.8	+0.1
N16K	Nishlik Lake	6.42	317			Pn		19 36 09.7	+0.9
PCA	Pinnacle	6.48	48			Pn		19 36 09.4	-0.3
PINM	Pinnacle	6.49	48	P		Pn		19 36 09.8	+0.1
	baz=235								
BARN	Barnard Glacie	6.57	37			Pn		19 36 10.2	-0.8
WAT6	Susitna Watana	6.59	9			Pn		19 36 11.9	+0.6
WAT6	Susitna Watana	6.59	9	P		Pn		19 36 11.9	+0.6
	baz=190								
M17K	Holitna River	6.61	327			Pn		19 36 12.1	+0.7
CTG	Chitna Glacier	6.61	39	P		Pn		19 36 10.8	-0.8
	baz=225								
CTGM	Chitina Glacie	6.62	39			Pn		19 36 10.8	-0.8
L19K	White Mountain	6.62	339			Pn		19 36 10.9	-0.6
L19K	White Mountain	6.62	339	P		Pn		19 36 11.8	+0.4
	baz=155								
PNL	Peninsula	6.63	53	P		Pn		19 36 11.7	-0.1
PNL	Peninsula	6.63	53	P		Pn		19 36 11.6	-0.1
	baz=241								
LOGN	Logan Glacier	6.64	41			Pn		19 36 11.1	-0.8
BCPM	Bancas Point	6.67	50			Pn		19 36 11.7	-0.4
L20K	Farewell, AK	6.72	344			Pn		19 36 12.2	-0.7
HARP	HAARP	6.76	19	P		Pn		19 36 14.8	+1.2
	baz=202								
N15K	Kwethluk River	6.77	311			Pn		19 36 14.7	+1.1
WAT7	Susitna Watana	6.78	4			Pn		19 36 14.4	+0.7
WAT1	Susitna Watana	6.79	5			Pn		19 36 14.7	+0.9
WAT1	Susitna Watana	6.79	5	P		Pn		19 36 14.7	+0.9
	baz=186								
M16K	Timber Creek	6.85	320			Pn		19 36 15.8	+1.1
O14K	Tigyukauivet M	6.88	302			Pn		19 36 16.6	+1.6
L18K	Granite Mounta	7.07	333			Pn		19 36 17.4	-0.2
DHY	Denali Highway	7.11	9			Pn		19 36 18.9	+0.5
DHY	Denali Highway	7.11	9	P		Pn		19 36 19.3	+0.9
	baz=191								
O29M	Mount Kennedy	7.30	50			Pn		19 36 21.1	+0.1
M15K	Kasigluk River	7.31	314			Pn		19 36 22.1	+1.2
N14K	Kuskokwak Cree	7.35	306			Pn		19 36 22.8	+1.3
RND	Redeer	7.35	4			Pn		19 36 22.2	+0.6
P29M	Windy Craggy	7.38	56			Pn		19 36 20.6	-1.3
L17K	Donlin	7.44	328			Pn		19 36 23.5	+0.8
M27K	Edge Creek, AK	7.49	30			Pn		19 36 23.7	+0.1
L16K	Owhat River	7.50	323	P		Pn		19 36 24.4	+0.8
	baz=134								
TTA	Tatalina	7.53	338	P		Pn		19 36 23.7	-0.3
K20K	Telida	7.58	346			Pn		19 36 24.3	-0.4
YUK7	Dusty Glacier	7.61	49			Pn		19 36 25.5	+0.3
S31K	Pelican	7.67	70			Pn		19 36 23.4	-2.6
S31K	Pelican	7.67	70	P		Pn		19 36 23.6	-2.3
	baz=261								
YUK4	Talbot Arm	7.86	43	P		Pn		19 36 30.2	+1.6
	baz=232								
M14K	Bethel	7.87	311			Pn		19 36 29.3	+0.8
M14K	Bethel	7.87	311	P		Pn		19 36 30.2	+1.6
	baz=121								
K17K	Iditarod	7.90	331			Pn		19 36 28.9	-0.2
K17K	Iditarod	7.90	331	P		Pn		19 36 29.3	+0.3
	baz=143								
P30M	Million Dollar	7.94	54			Pn		19 36 30.1	+0.4
ISLZ	Isanotski Laza	8.00	266			Pn		19 36 30.7	+0.3
ISNN	Isanotski Nort	8.01	267			Pn		19 36 30.8	+0.3
HYT	Haines Junctio	8.03	49			Pn		19 36 31.2	+0.3
BPAW	Bear Paw Mtn.	8.05	357			Pn		19 36 30.9	-0.2
BPAW	Bear Paw Mtn.	8.05	357	P		Pn		19 36 31.6	+0.5
	baz=175								
L15K	Ungalak Mounta	8.21	318			Pn		19 36 34.6	+1.4
M13K	Dall Lake	8.31	307			Pn		19 36 36.0	+1.4
J20K	Nowinta River	8.38	347			Pn		19 36 35.0	-0.6
J20K	Nowinta River	8.38	347	P		Pn		19 36 35.5	0.0
	baz=163								
L14K	Kuka Creek	8.48	314			Pn		19 36 38.6	+1.6
BESE	Bessie Mountai	8.49	67			Pn		19 36 36.5	-0.8
S32K	Killisnoo	8.51	74			Pn		19 36 35.6	-1.8
N30M	Aishikik Lake	8.54	46			Pn		19 36 37.8	-0.1
O30N	Mendenhall	8.61	51			Pn		19 36 39.0	+0.2
K15K	Wolf Creek Mou	8.61	321			Pn		19 36 40.5	+1.6
M29M	Somme Creek	8.63	38			Pn		19 36 39.5	+0.4
WECS	Westmi Cape	8.64	266			Pn		19 36 38.8	-0.6
J17K	VABM Dome	8.66	331			Pn		19 36 39.4	-0.1
JIS	Juneau Island	8.69	69	P		Pn		19 36 39.6	-0.3
ILAR	Eielson Array	8.83	8	Pn		Pn		19 36 43.0	+1.2
	comp=N,0.9nm,0.3s,baz=187,slow=14,SNR=36								
ILAR						Sn	Sn	19 38 16.6	-4.5
	comp=N,1.5nm,0.3s,baz=194,slow=18,SNR=3.0								
ILAR						LR	LR	19 40 19.2	
	comp=N,627nm,19.0s,baz=210,slow=38								
	comp=N,2.7nm,0.4s								
K27K	Chicken	8.85	23				Pn	19 36 42.0	-0.1
COLA	College	8.86	6	P		Pn	Pn	19 36 42.3	+0.1
P32M	Atlin	9.29	61			Pn		19 36 47.0	-1.2
CRAG	Craig	9.46	87	P		Pn		19 36 49.3	-1.1
IMAR	Indian Mountai	10.09	351			Pn		19 36 58.5	-0.5
H17K	Granite Mounta	10.14	335			Pn		19 36 59.2	-0.4
FARO	Faro, Yukon	10.45	47			Pn		19 37 04.8	+0.8
T35M	Bob Quinn	10.87	77			Pn		19 37 09.1	-0.6
DLBC	Dease Lake	10.99	69	Pn		Pn		19 37 12.6	+1.1
	comp=N,1.0nm,0.3s,baz=224,slow=8.3,SNR=4.1								
DLBC						LR	LR	19 40 40.5	
	comp=N,1µm,19.6s,baz=270,slow=33								
	comp=N,2.8nm,0.4s								
ANM	Nome	11.41	324				Pn	19 37 17.8	+0.7
MMPY	Sheldon Lake,	11.50	48				Pn	19 37 18.8	+0.5
E25K	Arctic Village	12.23	8				Pn	19 37 29.0	+0.7
F28M	Old Crow	12.46	18				Pn	19 37 32.6	+1.2
G31M	Satah River	13.11	28				Pn	19 37 41.1	+0.9
BBB	Bella Bella	13.33	98	LR		LR	LR	19 41 36.5	
	comp=N,502nm,21.0s,baz=304,slow=32								
INK	Inuvik	14.35	25	Pn			Pn	19 37 58.6	+1.5
	comp=N,0.1nm,0.3s,baz=205,slow=18,SNR=8.2								
INK						LR	LR	19 43 48.2	
	comp=N,760nm,19.7s,baz=185,slow=38								
	comp=N,5.2nm,1.0s								
C36M	Paulatuk	17.57	31	P			P	19 38 39.4	-0.5
C36M						IAmb	IAmb	19 39 07.7	
	comp=Z,17nm,1.1s								
YKA	Yellowknife Ar	18.92	56	P			Pn	19 38 55.5	+0.1
	comp=Z,0.1nm,0.3s,baz=263,slow=11,SNR=24								
YKA						LR	LR	19 46 05.3	
	comp=Z,654nm,18.2s,baz=284,slow=36								
	comp=Z,5.1nm,1.2s								
SHEM	Shemya Is, Ala	21.08	276	LR		LR		19 47 26.3	
	comp=Z,278nm,20.4s,baz=42,slow=37								
NEW	Newport	21.39	98	LR		LR		19 46 20.2	
	comp=Z,294nm,20.6s,baz=297,slow=33								
YBH	Yreka Blue Hor	22.72	118	LR		LR		19 46 11.6	
	comp=Z,692nm,21.2s,baz=323,slow=31								
ELK	Elko	27.28	110	LR		LR		19 49 08.2	
	comp=Z,321nm,21.6s,baz=317,slow=32								
NVAR	Mina Array Bea	27.42	117	P			P	19 40 19.2	-1.0
	comp=Z,0.4nm,0.6s,baz=309,slow=8.5,SNR=3.8								
NVAR						LR	LR	19 49 28.2	
	comp=Z,662nm,18.2s,baz=300,slow=33								
	comp=Z,0.4nm,0.6s								
PDAR	Pinedale Array	28.96	100	P			P	19 40 34.0	+0.1
	comp=Z,0.3nm,0.5s,baz=317,slow=8.1,SNR=3.6								
PDAR						LR	LR	19 50 15.7	
	comp=Z,125nm,20.6s,baz=338,slow=33								
	comp=Z,0.3nm,0.5s								
SEY	Seymchan	29.15	307	LR		LR		19 53 23.3	
	comp=Z,588nm,20.4s,baz=79,slow=39								
PETK	Petropavlovsk-	29.91	287	LR		LR		19 53 45.3	
	comp=Z,148nm,18.6s,baz=80,slow=38								
MA2	Magadan	30.87	301	LR		LR		19 54 40.7	
	comp=Z,460nm,18.4s,baz=70,slow=39								
PFO	Pinyon Flats O	32.15	120	LR		LR		19 52 25.1	
	comp=Z,343nm,19.1s,baz=346,slow=34								
TIXI	Tiksi	35.65	328	LR		LR		19 58 13.7	
	comp=Z,102nm,21.2s,baz=66,slow=40								
ANMO	Albuquerque	36.23	107	LR		LR		19 55 43.1	
	comp=Z,144nm,18.6s,baz=52,slow=35								
FRB	Frobisher Bay	38.79	45	LR		LR		19 58 05.3	
	comp=Z,799nm,18.8s,baz=322,slow=36								
YAK	Yakutsk	39.26	313	LR		LR		20 00 19.1	
	comp=Z,253nm,18.6s,baz=80,slow=39								
TXAR	Lajitas Array	42.07	110	P			P	19 42 27.8	+1.6
	comp=Z,0.5nm,0.8s,baz=342,slow=12,SNR=5.2								
TXAR						LR	LR	19 58 59.4	
	comp=Z,127nm,18.3s,baz=334,slow=35								
LPIG	La Paz	43.02	121	LR		LR		19 57 43.4	
	comp=Z,180nm,20.2s,baz=6.5,slow=32								
SFJD	Kangerlussuaq	43.43	34	LR		LR		20 00 36.0	
	comp=Z,310nm,18.9s,baz=344,slow=36								
SCHQ	Schefferville	44.37	55	LR		LR		20 01 07.7	
	comp=Z,235nm,18.8s,baz=327,slow=36								
KLR	Kul'dur	45.61	296	LR		LR		20 04 19.1	
	comp=Z,147nm,18.8s,baz=45,slow=39								
NRIK	Noril'sk	48.14	336	LR		LR		20 06 20.4	
	comp=Z,270nm,18.8s,baz=2.0,slow=40								
H11N2	WAKE ISLAND Hy	48.50	239	T			T	20 35 33.5	
	baz=28,slow=74,SNR=23								
H11N3	WAKE ISLAND Hy	48.51	239	T			T	20 35 36.6	
	baz=28,slow=74,SNR=23								
H11N1	WAKE ISLAND Hy	48.52	239	T			T	20 35 37.8	
	baz=28,SNR=19								
USRK	Uesuriysk Ar.	48.83	291	LR		LR		20 03 38.7	
	comp=Z,140nm,20.9s,baz=65,slow=36								
H11S1	WAKE ISLAND Hy	49.65	239	T			T	20 37 28.0	
	baz=29,slow=76,SNR=33								
H11S2	WAKE ISLAND Hy	49.66	239	T			T	20 37 26.9	
	baz=29,slow=76,SNR=29								
H11S3	WAKE ISLAND Hy	49.66	239	T			T	20 37 21.6	
	baz=29,slow=76,SNR=28								
MDJ	Mudanjiang	49.79	293	P			P	19 43 30.9	+4.1
MDJ						pmax	pmax		
	comp=Z,5.0nm,1.9s								
MDJ						pmax	pmax		
	comp=Z,110nm,4.9s								
JMIC	Jan Mayen	50.28	15	LR		LR		20 08 14.7	
	comp=Z,187nm,19.0s,baz=64,slow=40								
MJAR	Matsushiro Arr	50.87	279	LR		LR		20 03 47.3	
	comp=Z,51nm,21.5s,baz=35,slow=34								
BORG	Borgarnes	53.24	25	LR		LR		20 07 30.4	
	comp=Z,236nm,18.6s,baz=62,slow=37								
JCJ	Chichijima	55.75	268	LR		LR		20 04 48.7	
	comp=Z,34nm,21.7s,baz=164,slow=33								
KSRS	Korea Array	55.80	288	LR		LR		20 08 29.0	
	comp=Z,42nm,19.3s,baz=40,slow=36								
CMIG	Matias Romero	56.67	110	LR		LR		20 07 30.1	
	comp=Z,124nm,21.4s,baz=3.5,slow=35								
SONM	Songino Array	58.50	310	P			P	19 44 31.8	+1.4
	comp=Z,0.9nm,0.8s,baz=31,slow=7.3,SNR=7.2								
SONM						LR	LR	20 12 18.3	
	comp=Z,403nm,18.2s,baz=5.0,slow=39								
	comp=Z,0.9nm,0.8s								
ZALV	Zalesovo Beam	61.53	327	P			P	19 44 52.9	+2.0
	comp=Z,0.6nm,0.5s,baz=21,slow=8.6,SNR=4.3								
ZALV						LR	LR	20 16 00.9	
	comp=Z,246nm,19.7s,baz=319,slow=40								
	comp=Z,0.6nm,0.5s								
HHC	Hu-ho-hao-te	61.55	301	eP			P	19 44 49.6	-1.8
NOA	NORSAR Array B	62.26	10	LR		LR		20 13 16.6	
	comp=Z,129nm,20.6s,baz=270,slow=37								
FINES	FINESS Array B	62.76	2	P			P	19 44 58.7	-0.2
	comp=Z,1.1nm,0.8s,baz=305,slow=4.9,SNR=1.4								
	comp=Z,1.1nm,0.8s								
KIRV	Kirov	64.63	349	LR		LR		20 18 10.5	
	comp=Z,173nm,18.2s,baz=294,slow=40								
NJ2	Nanjing	64.73	290	eP			P	19 45 10.1	-2.3
NJ2						pmax	pmax		
	comp=Z,3.0nm,0.6s								
GUMO	Guam	65.08	257	LR		LR		20 09 00.4	
	comp=Z,26nm,20.4s,baz=68,slow=32								
BVAR	Borovoye Array	66.31	335	P			P	19 45 24.3	+1.9
	comp=Z,1.2nm,0.8s,baz=54,slow=7.5,SNR=6.4								
BVAR						LR	LR	20 18 30.1	
	comp=Z,250nm,18.2s,baz=354,slow=40								
	comp=Z,1.2nm,0.8s								
KURBB	Kurchatov Arra	66.33	329	P			P	19 45 24.0	+1.5
	comp=Z,0.3nm,0.5s,baz=29,slow=6.3,SNR=4.6								
KURBB						LR	LR	20 19 17.0	
	comp=Z,283nm,18.6s,baz=159,slow=40								
	comp=Z,0.3nm,0.5s								
JTS	Las Juntas de	67.62	105	LR		LR		20 18 16.4	
	comp=Z,57nm,18.2s,baz=315,slow=39								
MKAR	Makanchi Array	68.55	324	P			P	19 45 37.6	+0.9
	comp=Z,0.5nm,0.5s,baz=27,slow=5.4,SNR=13								
	comp=Z,0.5nm,0.5s								
BELG	Belogornoye	70.91	349	LR		LR		20 19 10.0	
	comp=Z,104nm,20.6s,baz=139,slow=38								
AKTO	Aktyubinsk	71.33	342	LR		LR		20 21 03.7	
	comp=Z,115nm,18.3s,baz=311,slow=39								
VRAC	Vranov	74.36	9	LR		LR		20 22 26.2	
	comp=Z,212nm,18.0s,baz=338,slow=38								
GERES	GERESS Array B	74.53	11	LR		LR		20 23 12.1	
	comp=Z,95nm,18.1s,baz=334,slow=39								
AAK	Ala-Archa	74.73	328	LR		LR		20 21 43.9	
	comp=Z,271nm,19.9s,baz=352,slow=38								
SDV	Santo Domingo	76.67	94	LR		LR		20 23 11.9	
	comp=Z,56nm,18.2s,baz=69,slow=38								
RAR	Rarotonga	77.46	189	LR		LR		20 17 50.7	
	comp=Z,31nm,18.3s,baz=354,slow=34								
MLR	Muntele Rosu	78.72	3	LR		LR		20 24 09.4	
	comp=Z,170nm,18.0s,baz=340,slow=38								
DAV	Davao City (W)	81.13	269	LR		LR		20 15 56.4	
	comp=Z,57nm,21.9s,baz=345,slow=31								
PMG	Port Moresby	83.29	242	LR		LR		20 18 27.7	
	comp=Z,49nm,19.3s,baz=351,slow=32								
GNI	Garni	83.32	349	LR		LR		20 30 03.1	
	comp=Z,88nm,18.3s,baz=354,slow=40								
CMAR	Chiang Mai Arr	86.08	297	LR		LR		20 30 25.8	
	comp=Z,55nm,19.2s,baz=5.0,slow=39								
RPN	Rapa Nui	89.78	145	LR		LR		20 18 30.5	
	comp=Z,71nm,20.3s,baz=222,slow=29								
MDP	Montagnes des	89.83	81	LR		LR		20 25 59.7	
	comp=Z,56nm,21.4s,baz=92,slow=34								
CTA	Charters Tower	92.92

IKRE	**Kreppuhraun**	**1.78**	**159**	P		**Pn**	**19 37 47.6**	**-1.0**
	baz=162							
IKRE				S		**Sg**	**19 38 13.6**	**-0.8**
	baz=162							
IKIS	**Kista**	**1.79**	**176**	P		**Pn**	**19 37 48.2**	**-0.6**
	baz=177							
IKIS				S		**Sg**	**19 38 13.8**	**-0.8**
	baz=177							
ISKR	**Skrokkalda**	**1.91**	**187**	P		**Pn**	**19 37 49.9**	**-0.5**
	baz=188							
ISKR				S		**Sg**	**19 38 16.8**	**-1.7**
	baz=188							
IDJK	**Dyngjujokull**	**1.97**	**172**	P		**Pn**	**19 37 50.6**	**-0.7**
	baz=174							
IGRF	**Grimsfjall**	**2.06**	**173**	P		**Pn**	**19 37 52.7**	**0.0**
	baz=174							
IJOK	**Jokulheimar**	**2.15**	**184**	P		**Pn**	**19 37 53.5**	**-0.2**
	baz=185							
IJOK				S		**Sg**	**19 38 24.9**	**-1.2**
	baz=185							
IHUS	**Husbondi**	**2.16**	**178**	P		**Pn**	**19 37 53.6**	**-0.4**
	baz=179							
IASB	**`sbjarnarst**	**2.23**	**222**	P		**Pn**	**19 37 54.8**	**0.0**
	baz=220							
IASB				S		**Sb**	**19 38 24.6**	**-1.2**
	baz=220							
BORG	**Borgarnes**	**2.23**	**222**			**Pn**	**19 37 54.3**	**-0.5**
BORG	**Borgarnes**	**2.23**	**222**	Pn		**Pn**	**19 37 55.0**	**+0.2**
	35nm,0.3s,baz=46,slow=8.4,SNR=172							
BORG				Sn		**Sb**	**19 38 25.0**	**-0.8**
	39nm,0.3s,baz=96,slow=23,SNR=25							
	375nm,0.6s							
IVAT	**Vatnsfell**	**2.31**	**191**	P		**Pn**	**19 37 56.8**	**+0.8**
	baz=192							
IIEY	**Innrieyrar**	**2.37**	**183**	P		**Pn**	**19 37 57.0**	**+0.3**
	baz=184							
IIEY				S		**Sg**	**19 38 31.3**	**-1.9**
	baz=184							
IKSK	**Karasker**	**2.37**	**165**	P		**Pn**	**19 37 56.8**	**0.0**
	baz=167							
IGYG	**Gygjarholskot**	**2.39**	**205**	P		**Pn**	**19 37 57.2**	**+0.2**
	baz=205							
IKAL	**Kalfafell**	**2.51**	**178**	P		**Pn**	**19 37 59.3**	**+0.6**
	baz=179							
IKAL				S		**Sg**	**19 38 38.2**	**+0.4**
	baz=179							
IHEI	**Heioarbar**	**2.66**	**214**	P		**Pn**	**19 38 02.2**	**+1.4**
	baz=213							
IMOR	**Morastadir**	**2.70**	**219**	P		**Pn**	**19 38 01.0**	**-0.2**
	baz=218							
IMOR				S		**Sb**	**19 38 37.8**	**-1.5**
	baz=218							
SCO	**Scoresbysund**	**4.32**	**341**	*e*		Pn	19 38 18.0	-5.5
	baz=154,slow=10							
SCO				*i*	P	**Pn**	**19 38 20.2**	**-3.3**
SOEG	**Soedalen**	**5.51**	**295**	*i*	P	**Pn**	**19 38 40.4**	**+0.5**
SUMG	**Summit**	**9.43**	**320**	*i*	P	Pn	19 39 30.0	-3.8
SFJD	**Kangerlussuaq**	**12.88**	**287**	LR		LR	19 44 50.2	
	comp=Z,380nm,18.0s,baz=77,slow=35							
EKA	**Eskdalemuir Ar**	**13.20**	**141**	Pn		**P**	**19 40 33.4**	**-1.8**
	baz=330,slow=9.8							
NOA	**NORSAR Array B**	**13.87**	**99**	Pn		**Pn**	**19 40 35.0**	**+0.8**
	baz=312,slow=11,SNR=3.6							
NOA				LR		LR	19 45 42.1	
	comp=Z,276nm,18.9s,baz=285,slow=36							
	0.9nm,0.9s							
SPITS	**Spitsbergen Ar**	**15.30**	**26**	Pn		**Pn**	**19 40 55.6**	**+2.1**
	baz=236,slow=10							
	4.1nm,0.7s							
SPB2	**Spitsbergen Ar**	**15.31**	**26**	Pn		**Pn**	**19 40 56.7**	**+3.2**
HFS	**Hagfors**	**15.39**	**99**	Pn		**P**	**19 40 59.3**	**-0.2**
	0.1nm,0.3s,baz=317,slow=9.8,SNR=3.2							
HFS				LR		LR	19 45 43.4	
	comp=Z,246nm,20.4s,baz=310,slow=33							
ARCES	**ARCESS Array B**	**16.27**	**60**	Pn		**Pn**	**19 41 04.8**	**-1.3**
	0.1nm,0.3s,baz=277,slow=9.0,SNR=4.6							
	3.5nm,0.9s							
FIA1	**FINESS Array S**	**19.59**	**84**	P		**P**	**19 41 45.2**	**-0.6**
FINES	**FINESS Array B**	**19.59**	**84**	P		**P**	**19 41 46.1**	**+0.4**
	0.2nm,0.3s,baz=316,slow=8.0,SNR=8.0							
FINES				LR		LR	19 48 26.0	
	comp=Z,320nm,20.6s,baz=260,slow=34							
	2.8nm,0.6s							
FRB	**Frobisher Bay**	**21.03**	**286**	P		**P**	**19 42 02.2**	**+0.9**
	3.8nm,0.5s,baz=59,slow=12,SNR=10.0							
	3.8nm,0.5s							
CLL	**Collm**	**21.67**	**119**	*i*	P	**P**	**19 42 08.6**	**+0.3**
BRG	**Berggiesshubel**	**22.36**	**119**	*e*	P	**P**	**19 42 16.2**	**+0.5**
BRG					Amp		19 42 22.0	
	comp=Z,5.8nm,1.1s							
ZVC	**Zvikov**	**23.65**	**120**	*e*	P	**P**	**19 42 28.9**	**-0.2**
KHC	**Kasperske Hory**	**23.70**	**122**	*e*	P	**P**	**19 42 31.0**	**+1.4**
GERES	**GERESS Array B**	**23.99**	**122**	P		**P**	**19 42 31.9**	**-0.5**
GERES	**GERESS Array B**	**23.99**	**122**	P		**P**	**19 42 33.4**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=345,slow=9.9,SNR=4.5							
	comp=Z,0.9nm,0.6s							
SENIN	**Lac Senin/Sane**	**24.15**	**134**	P		**P**	**19 42 34.4**	**+0.3**
CKRC	**Cesky Krumlov**	**24.22**	**121**	*e*	P	**P**	**19 42 35.1**	**+0.6**
DAVOX	**Davos/Dischmat**	**24.55**	**130**	LR		LR	19 50 48.7	
	comp=Z,187nm,20.8s,baz=316,slow=33							
MORC	**Moravsky Berou**	**24.56**	**115**	P		**P**	**19 42 37.7**	**+0.1**
SCHQ	**Schefferville**	**25.91**	**267**	P		**P**	**19 42 49.6**	**-0.1**
SCHQ					IAmb	IAmb	19 42 55.8	
	comp=Z,6.6nm,1.0s							
SCHQ	**Schefferville**	**25.91**	**267**	P		**P**	**19 42 49.7**	**-0.1**
	comp=Z,4.8nm,1.0s,baz=43,slow=7.7,SNR=3.1							
	comp=Z,4.8nm,1.0s							
ESDC	**Sonseca Array**	**27.95**	**157**	P		**P**	**19 43 09.2**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=348,slow=11,SNR=4.7							
	comp=Z,0.7nm,0.8s							
AKASG	**Malin Array Be**	**28.27**	**101**	P		**P**	**19 43 10.1**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=327,slow=9.5,SNR=7.9							
AKASG				LR		LR	19 53 38.3	
	comp=Z,314nm,18.1s,baz=314,slow=35							
	comp=Z,2.3nm,0.7s							
BURAR	**Bucovina Array**	**29.21**	**109**	P		**P**	**19 43 20.1**	**+0.6**
YKA	**Yellowknife Ar**	**37.90**	**311**	P		**P**	**19 44 34.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=41,slow=8.3,SNR=18							
YKA					PcP	**PcP**	**19 46 50.8**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=35,slow=3.1,SNR=5.1							
	comp=Z,1.5nm,0.8s							
INK	**Inuvik**	**38.24**	**327**	LR		LR	19 59 03.2	
	comp=Z,85nm,19.3s,baz=187,slow=34							
F31M	**Tsiigehtchic**	**39.00**	**327**	P		**P**	**19 44 45.0**	**+1.2**
E29M	**Blow River**	**39.10**	**329**	P		**P**	**19 44 45.7**	**+1.0**
BR131	**Keskin Array S**	**39.12**	**107**	P		**P**	**19 44 45.5**	**+0.2**
BR131					IAmb	IAmb	19 44 53.1	
	comp=Z,6.3nm,1.3s							
BRTR	**Keskin Array B**	**39.12**	**107**	P		**P**	**19 44 45.5**	**+0.2**
BRTR	**Keskin Array B**	**39.12**	**107**	P		**P**	**19 44 46.8**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=338,slow=5.6,SNR=13							
	comp=Z,2.1nm,0.7s							
E28M	**Babbage River**	**39.25**	**330**	P		**P**	**19 44 46.8**	**+0.8**
KBZ	**Khabaz**	**39.37**	**94**	P		**P**	**19 44 49.4**	**+2.2**
	comp=Z,1.6nm,0.9s,baz=326,slow=15,SNR=2.9							
	comp=Z,1.6nm,0.9s							
G31M	**Satah River**	**39.55**	**326**	P		**P**	**19 44 48.2**	**-0.2**
G31M					IAmb	IAmb	19 44 51.7	
	comp=Z,4.5nm,0.7s							
FFC	**Flin Flon**	**39.66**	**295**	P		**P**	**19 44 49.8**	**+0.2**
FFC					IAmb	IAmb	19 44 51.2	
	comp=Z,4.5nm,0.7s							
D25K	**Kavik River**	**39.90**	**334**	P		**P**	**19 44 52.0**	**+0.5**
D25K					IAmb	IAmb	19 44 53.2	
	comp=Z,4.7nm,0.8s							
G30M	**tAoh Zraii Nji**	**39.93**	**327**	P		**P**	**19 44 51.8**	**+0.1**
F28M	**Old Crow**	**40.16**	**330**	P		**P**	**19 44 53.6**	**0.0**
D24K	**Happy Valley**	**40.47**	**335**	P		**P**	**19 44 56.9**	**+0.8**
D24K					IAmb	IAmb	19 44 59.2	
	comp=Z,4.9nm,0.8s							
H31M	**Peel River**	**40.49**	**325**	P		**P**	**19 44 57.0**	**+0.7**
H31M					IAmb	IAmb	19 45 01.5	
	comp=Z,8.0nm,1.2s							
ULM	**Lac du Bonnet**	**40.91**	**286**	P		**P**	**19 45 00.5**	**+0.5**
ULM	**Lac du Bonnet**	**40.91**	**286**	P		**P**	**19 45 00.9**	**+1.0**
	comp=Z,5.7nm,0.7s,baz=38,slow=7.7,SNR=14							
	comp=Z,5.7nm,0.7s							
TOLK	**Toolik Lake Re**	**41.05**	**335**	P		**P**	**19 45 01.5**	**+0.5**
TOLK					IAmb	IAmb	19 45 02.8	
	comp=Z,3.8nm,0.8s							
BMAR	**Burnt Mountain**	**41.24**	**332**	P		**P**	**19 45 03.5**	**+1.0**
E24K	**Your Creek**	**41.37**	**334**	P		**P**	**19 45 03.7**	**+0.1**
E24K					IAmb	IAmb	19 45 05.5	
	comp=Z,3.2nm,0.8s							
B35A	**Bob, Littlefor**	**41.60**	**283**	P		**P**	**19 45 05.7**	**0.0**
B35A					IAmb	IAmb	19 45 07.2	
	comp=Z,4.0nm,0.7s							

ABKAR	**Akbulak array**	**41.64**	**75**	P		**P**	**19 45 05.0**	**-0.9**
G24K	**Hadweenzic Riv**	**42.42**	**333**	P		**P**	**19 45 13.6**	**+1.5**
G24K					IAmb	IAmb	19 45 15.1	
	comp=Z,4.6nm,0.8s							
AGMN	**Agassiz Nation**	**42.49**	**285**	P		**P**	**19 45 14.4**	**+1.6**
AGMN					IAmb	IAmb	19 45 15.3	
	comp=Z,4.8nm,0.8s							
BVAR	**Borovoye Array**	**42.51**	**63**	P		**P**	**19 45 12.8**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=326,slow=8.9,SNR=7.6							
	comp=Z,0.9nm,0.6s							
I26K	**Coal Creek Min**	**42.82**	**330**	P		**P**	**19 45 17.0**	**+1.6**
I26K					IAmb	IAmb	19 45 18.2	
	comp=Z,4.1nm,0.9s							
G23K	**Bananza Creek**	**42.86**	**334**	P		**P**	**19 45 16.8**	**+1.1**
F20K	**Avaraart Lake**	**43.49**	**338**	P		**P**	**19 45 22.1**	**+1.4**
F20K					IAmb	IAmb	19 45 22.5	
	comp=Z,2.9nm,0.8s							
G21K	**Allakaket**	**43.63**	**336**	P		**P**	**19 45 23.1**	**+1.2**
J25K	**Salcha River,**	**43.88**	**330**	IAmb		IAmb	19 45 26.2	
	comp=Z,3.9nm,0.9s							
ILAR	**Eielson Array**	**44.03**	**331**	P		**P**	**19 45 26.2**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=23,slow=6.7,SNR=14							
	comp=Z,1.7nm,0.9s							
H21K	**Melozitna Rive**	**44.30**	**335**	IAmb		IAmb	19 45 30.2	
	comp=Z,4.7nm,0.8s							
M29M	**Somme Creek**	**44.31**	**325**	P		**P**	**19 45 29.4**	**+1.9**
HDA	**Harding Lake**	**44.37**	**331**	P		**P**	**19 45 28.9**	**+1.0**
BCAR	**Beaver Creek A**	**44.51**	**327**	P		**P**	**19 45 30.7**	**+1.6**
MLY	**Manley**	**44.52**	**334**	P		**P**	**19 45 30.3**	**+1.2**
L27K	**Beaver Creek,**	**44.52**	**327**	P		**P**	**19 45 31.0**	**+1.8**
L27K					IAmb	IAmb	19 45 34.3	
	comp=Z,4.0nm,1.0s							
NEA2	**Nenana**	**44.61**	**332**	P		**P**	**19 45 30.6**	**+0.9**
KURBB	**Kurchatov Arra**	**47.36**	**59**	P		**P**	**19 45 51.1**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=330,slow=7.5,SNR=15							
	comp=Z,2.0nm,0.7s							
BOZ	**Bozeman (W)**	**50.69**	**295**	P		**P**	**19 46 18.7**	**+1.3**
BOZ					IAmb	IAmb	19 46 20.3	
	comp=Z,2.5nm,0.8s							
KK31	**Karatay Array**	**50.82**	**71**	P		**P**	**19 46 18.7**	**+0.5**
KK31					IAmb	IAmb	19 46 44.9	
	comp=Z,3.7nm,1.4s							
KKAR	**Karatay Array**	**50.82**	**71**	P		**P**	**19 46 18.7**	**+0.5**
KKAR					IAmb	IAmb	19 46 44.9	
	comp=Z,3.6nm,1.4s							
MKAR	**Makanchi Array**	**51.93**	**59**	P		**P**	**19 46 26.4**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=341,slow=6.4,SNR=6.6							
	comp=Z,1.6nm,0.8s							
Y45A	**Yeager Farm, C**	**52.19**	**269**	P		**P**	**19 46 26.5**	**-2.1**
T35A	**Sooner Cattle**	**52.33**	**277**	P		**P**	**19 46 28.7**	**-0.9**
PD31	**Pinedale Array**	**52.35**	**292**	P		**P**	**19 46 29.3**	**-0.6**
PDAR	**Pinedale Array**	**52.35**	**292**	P		**P**	**19 46 30.1**	**+0.1**
PDAR	**Pinedale Array**	**52.35**	**292**	P		**P**	**19 46 30.2**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=57,slow=6.2,SNR=14							
	comp=Z,1.3nm,0.7s							
PLID	**Pearl Lake**	**52.70**	**298**	P		**P**	**19 46 33.0**	**+0.5**
PLID					IAmb	IAmb	19 46 36.1	
	comp=Z,3.4nm,1.1s							
BMO	**Blue Mountains**	**53.36**	**299**	P		**P**	**19 46 37.0**	**-0.3**
BMO					IAmb	IAmb	19 47 13.7	
	comp=Z,3.0nm,0.8s							
BTK	**Batken**	**53.55**	**73**	P		**P**	**19 46 38.2**	**-0.4**
SIMJ	**Simiganj**	**54.07**	**75**	P		**P**	**19 46 43.1**	**+0.6**
SIMJ					IAmb	IAmb	19 46 59.5	
	comp=Z,3.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**54.84**	**156**	P		**P**	**19 46 48.5**	**+0.3**
	comp=Z,4.0nm,0.3s,baz=337,slow=8.9,SNR=8.0							
	comp=Z,4.0nm,0.3s							
ELK	**Elko**	**56.21**	**295**	LR		LR	20 10 48.6	
	comp=Z,76nm,18.9s,baz=34,slow=36							
ANMO	**Albuquerque**	**57.98**	**284**	LR		LR	20 11 32.4	
	comp=Z,104nm,18.4s,baz=128,slow=35							
SONM	**Songino Array**	**58.38**	**41**	P		**P**	**19 47 13.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=337,slow=6.9,SNR=2.0							
	comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**59.36**	**296**	LR		LR	20 11 55.8	
	comp=Z,86nm,19.3s,baz=106,slow=35							
TXAR	**Lajitas Array**	**61.84**	**279**	P		**P**	**19 47 37.8**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=52,slow=4.9,SNR=6.2							
TXAR					LR	LR	20 14 24.5	
	comp=Z,88nm,19.4s,baz=18,slow=36							
	comp=Z,0.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**83.33**	**59**	P		**P**	**19 49 44.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=310,slow=5.9,SNR=4.6							
	comp=Z,0.5nm,0.8s							

*IDC **15** 19:47:32.2±1.8, 11°.63S×166°.79E, h0km, mb3.9/7, mbtmp3.8/7, MS3.3/1, Error ellipse: s-maj=47.9km s-min=32.2km az=94.0*

ISC 15 19:47:33.9±1.8, 11°.6S±0°.2×166°.8E±0°.3, h10km, n8, σ0s91/7, mb4.0/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**19.41**	**275**	LR	LR	19 59 05.3	
	comp=Z,76nm,18.6s,baz=280,slow=36						
STKA	**Stephens Creek**	**30.74**	**225**	P	**P**	**19 53 50.4**	**+0.9**
	1.8nm,0.8s,baz=59,slow=12,SNR=4.3						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**32.24**	**251**	P	**P**	**19 54 01.9**	**-0.9**
	0.4nm,0.5s,baz=84,slow=9.1,SNR=5.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**33.45**	**245**	P	**P**	**19 54 12.7**	**-0.7**
	0.5nm,0.6s,baz=77,slow=8.7,SNR=6.0						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.26**	**293**	P	**P**	**19 59 06.9**	**+0.9**
	1.0nm,0.8s,baz=113,slow=4.7,SNR=8.5						
	1.0nm,0.8s						
QSPA	**South Pole Qui**	**78.40**	**180**	P	**P**	**19 59 34.4**	**-0.2**
	1.2nm,0.7s,baz=92,slow=1.1,SNR=5.3						
	1.2nm,0.7s						
SONM	**Songino Array**	**79.71**	**323**	P	**P**	**19 59 42.2**	**0.0**
	0.2nm,0.5s,baz=141,slow=9.3,SNR=2.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**94.62**	**317**	P	**P**	**20 00 54.7**	**-0.5**
	0.8nm,0.5s,baz=89,slow=6.1,SNR=15						
	0.8nm,0.5s						

*RSNC **15** 19:51:18.5±1.4, 8°.32N×71°.93W, h4km±7km, ML2.2*
*FUNV **15** 19:51:18.3, 8°.04N×71°.81W, h1km, MW3.0*

ISC 15 19:51:16.3±1.4, 8°.35N±0°.04×71°.93W±0°.03, h1km±12km, n16, σ1s72/30, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.61**	**219**	*e*P	**Pg**	**19 51 28.5**	**+0.4**
CAPV				*e*S	**Sg**	**19 51 36.3**	**+0.3**
SOCV	**Socops**	**1.06**	**93**	*e*P	**Pg**	**19 51 37.1**	**+0.4**
SOCV				*e*S	**Sg**	**19 51 50.3**	**-0.1**
PAMC	**Pamplona, Colo**	**1.26**	**217**	*e*P	**Pb**	**19 51 40.5**	**-0.6**
PAMC				*e*S	**Sb**	**19 51 56.4**	**-1.6**
PAMC				*i*		19 52 01.8	
	comp=Z,24nm,0.2s						
OCAC	**Ocana**	**1.38**	**266**	*e*P	**Pn**	**19 51 42.1**	**-0.7**
OCAC				*e*S	**Sn**	**19 52 00.8**	**-1.1**
OCAC				*i*		19 52 03.7	
	comp=Z,98nm,0.2s						
SDV	**Santo Domingo**	**1.39**	**67**	*e*P	**Pb**	**19 51 43.2**	**0.0**
SDV				*e*S	**Sn**	**19 52 01.1**	**-0.9**
SDV				*i*		19 52 02.0	
	comp=Z,20nm,0.1s						
TAMC	**Tame, Arauca**	**1.90**	**176**	*e*P	**Pb**	**19 51 50.9**	**-0.9**
TAMC				*e*S	**Sb**	**19 52 15.8**	**-0.4**
TAMC				*i*		19 52 20.8	
	comp=Z,18nm,0.4s						
BARC	**Barichara**	**2.14**	**216**	*e*P	**Pn**	**19 51 53.7**	**+0.3**
BARC				*e*S	**Sb**	**19 52 21.2**	**-1.9**
BARC				*i*		19 52 25.8	
	comp=Z,16nm,0.5s						
CURV	**Curarigua**	**2.55**	**49**	*e*P	**Pb**	**19 52 02.0**	**-1.0**
CURV				*e*S	**Sb**	**19 52 33.8**	**-1.1**
SANV	**Sanarito**	**2.63**	**64**	*e*P	**Pb**	**19 52 02.4**	**-1.8**
SANV				*e*S	**Sb**	**19 52 34.9**	**-2.2**
CRJC	**Cerrejon, Guaj**	**2.82**	**341**	*e*P	**Pn**	**19 52 03.8**	**+1.2**
CRJC				*e*S	**Sn**	**19 52 38.8**	**+1.5**
CRJC				*i*		19 52 47.7	
	comp=Z,8.0nm,0.2s						
PTBC	**PUERTO BERRIO,**	**3.08**	**235**	*e*P	**Pb**	**19 52 12.2**	**+0.2**
PTBC				*e*S	**Sb**	**19 52 51.8**	**+1.7**
PTBC				*i*		19 52 52.7	
	comp=Z,3.7nm,0.4s						
TEPV	**Terepaima**	**3.14**	**59**	*e*P	**Pn**	**19 52 09.0**	**+2.0**
TEPV				*e*S	**Sn**	**19 52 46.6**	**+1.4**
BAUV	**El Baul**	**3.89**	**81**	*e*P	**Pn**	**19 52 17.3**	**+0.1**
BAUV				*e*S	**Sn**	**19 53 01.3**	**-2.3**
TURV	**Turiamo**	**4.54**	**62**	*e*P	**Pn**	**19 52 27.4**	**+1.2**
TURV				*e*S	**Sn**	**19 53 18.1**	**-1.5**
BENV	**Beln**	**4.56**	**69**	*e*P	**Pn**	**19 52 26.9**	**+0.3**
CACV	**CAICARA DEL OR**	**5.39**	**98**	*e*P	Pn	19 52 43.5	+5.6
CACV				*e*S	**Sn**	**19 53 46.5**	**+5.8**

*RSPR **15** 20:04:09.6, 19°.10N×67°.76W, h67km±18km, MD3.1/3*
*SDD **15** 20:04:19.8±2.6, 18°.88N×67°.77W, h34km±343km, MD3.2, ML2.8, MW3.1*

ISC 15 20:04:13.6±2.4, 19°.1N±0°.2×67°.49W±0°.10, h35km, n11, σ2s51/14, 3C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.00**	**238**	*i* P	**Pn**	**20 04 31.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.10**	**161**	*e*P	**Pn**	**20 04 30.6**	**-1.9**
CRPR	**Cabo Rojo, PR**	**1.10**	**161**	*e*S	**Sn**	**20 04 46.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.10**	**161**	*e*Pg	Pn	20 04 37.2	+4.7
CRPR				*e*Sg	**Sn**	**20 04 50.7**	**+4.2**
MLPR	**Magueyes Islan**	**1.16**	**159**	*e*P	**Pn**	**20 04 31.6**	**-1.7**
MLPR	**Magueyes Islan**	**1.16**	**159**	*e*S	**Sn**	**20 04 48.6**	**+0.7**
CELP	**Cerrillos**	**1.30**	**138**	*e*P	**Pn**	**20 04 33.8**	**-1.4**
CELP	**Cerrillos**	**1.30**	**138**	*e*S	**Sn**	**20 04 53.2**	**+1.7**
MIDR	**Miches**	**1.48**	**268**	*e*Pg	**Pn**	**20 04 39.1**	**+1.4**
MIDR				*e*Sg	**Sn**	**20 04 52.4**	**-3.4**
DR08	**Loma La Naviza**	**2.40**	**268**	*e*Pg	**Pn**	**20 04 51.9**	**+1.5**
DR08				*e*Sg	**Sn**	**20 05 15.2**	**-3.4**
ABDR	**Alto Bandera**	**2.98**	**266**	*e*Pg	**Pn**	**20 05 01.8**	**+3.1**
ABDR				*e*Sg	**Sn**	**20 05 32.0**	**-1.4**
ABDR				IAML		20 05 39.1	
	comp=N,38nm,1.1s						

*NEIC **15** 20:05:12.0±2.0, 56°.12N±0°.09×149°.8W±0°.1, h10km±2km, ML2.9/42, ML2.8(AEIC), Error ellipse: s-maj=14.7km s-min=10.1km az=170.0*

AEIC 15 20:05:18.0±2.0, 56°.12N±0°.08×149°.7W±0°.1, h12km±8km, Error ellipse: s-maj=11.8km s-min=9.0km az=202.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.25**	**301**		Pn	20 05 49.3	-5.7
OHAK					Sn	20 06 15.3	-7.4
KDAK	**Kodiak Island**	**2.29**	**318**		Pn	20 05 50.0	-5.4
KDAK					Sn	20 06 16.1	-7.5
SII	**Sitkinak Islan**	**2.52**	**282**		Pn	20 05 52.3	-6.5
SII					Sn	20 06 21.9	-7.5
SII	**Sitkinak Islan**	**2.52**	**282**	IAML		20 06 24.6	
	comp=N,43nm,0.7s						
SII				IAML		20 06 32.8	
	comp=E,47nm,0.9s						
SYI	**Shuyak Island**	**2.88**	**331**		Pn	20 05 58.5	-5.2
SYI					Sn	20 06 31.6	-6.6
R18K	**Karluk**	**2.97**	**301**		Pn	20 06 00.0	-4.9
R18K	**Karluk**	**2.97**	**301**	IAML		20 06 50.1	
	comp=N,25nm,1.4s						
CHIR	**Chirikof Islan**	**3.33**	**267**		Pn	20 06 04.0	-5.9
CHIR	**Chirikof Islan**	**3.33**	**267**	IAML		20 06 41.3	
	comp=N,59nm,1.0s						
CHIR				IAML		20 06 41.3	
	comp=E,62nm,0.9s						
CNPM	**China Poot**	**3.51**	**347**		Pn	20 06 06.6	-5.7
CNPM	**China Poot**	**3.51**	**347**	IAML		20 06 49.4	
	comp=E,14nm,0.9s						
Q19K	**Cape Douglas,**	**3.52**	**325**		Pn	20 06 07.7	-4.7
Q19K					Sn	20 06 48.9	-5.1
KAHG	**Katmai Hook Gl**	**3.54**	**314**		Pn	20 06 08.5	-4.2
KAKN	**Katmai Knife C**	**3.63**	**309**		Pn	20 06 09.6	-4.5
BRSE	**Bradley Lake S**	**3.67**	**352**		Pn	20 06 08.4	-6.1
ACHA	**Angle Creek He**	**3.70**	**307**		Pn	20 06 10.2	-4.8
ACHA					Sn	20 06 52.7	-5.8
BRLK	**Bradley Lake**	**3.70**	**351**		Pn	20 06 08.9	-6.1
BRLK	**Bradley Lake**	**3.70**	**351**	IAML		20 06 54.7	
	comp=E,14nm,1.4s						
ANCK	**Angle Creek**	**3.77**	**306**		Pn	20 06 11.3	-4.6
AUL	**Augustine Lava**	**3.83**	**330**		Pn	20 06 12.8	-3.8
CNTC	**Contact Creek**	**3.98**	**305**		Pn	20 06 14.2	-4.7
P19K	**Oil Pt**	**4.00**	**334**	Pn	Pn	20 06 14.0	-5.2
P19K				IAML

HEL 15 20:05:26.1±0.2, 67°78N×33°65E, h0km, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.40**	**72**	*e*P	Pg	20 05 33.0	-0.7
LVZ				*e*S	Sg	20 05 38.3	-0.5
VRF	**Varrio**	**1.54**	**271**	*e*P	Pn	20 05 53.6	-1.2
VRF				MSG		20 06 08.7	
	comp=Z,3.4nm,0.2s						
VRF				*e*SB	Sn	20 06 14.2	-1.3
RAJF	**Raja-Jooseppi**	**2.12**	**292**	*e*P	Pn	20 06 02.0	-0.7
RAJF				*e*S	Sn	20 06 29.4	-0.3
OLKF	**Oulanka, Finla**	**2.22**	**231**	*e*PB	Pn	20 06 04.8	+0.7
OLKF				MSG		20 06 29.7	
	comp=Z,1.5nm,0.2s						
OLKF				*e*SB	Sn	20 06 33.1	+0.9
KU6	**Riekki**	**2.30**	**222**	*e*P	Pn	20 06 05.2	0.0
KU6				MSG		20 06 32.5	
	comp=Z,1.0nm,0.2s						
KU6				*e*SB	Sn	20 06 35.1	+0.9
MSF	**Maaselka**	**2.61**	**226**	*e*P	Pn	20 06 10.1	+0.6
MSF				*e*SB	Sb	20 06 44.4	-1.9
SGF	**Sodankyl**	**2.75**	**266**	*e*S	Sn	20 06 44.4	-0.8
KMNF	**Kaamanen**	**2.82**	**302**	*e*P	Pn	20 06 12.9	+0.6
KMNF				*e*SB	Sn	20 06 49.5	+2.6
KEV	**Kevo**	**3.13**	**312**	*e*P	Pn	20 06 17.8	+1.2
KEV				MSG		20 06 55.1	
	comp=Z,0.9nm,0.2s						
KEV				*e*S	Sn	20 06 56.5	+1.9
RNF	**Rovaniemi**	**3.20**	**252**	*e*S	Sn	20 06 56.4	+0.1
RANF	**Ranua**	**3.23**	**240**	*e*SB	Sb	20 07 03.8	-0.3

HEL 15 20:06:49.9±0.5, 67°85N×20°40E, h0km, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.64**	**71**	PG	Pg	20 07 01.8	-0.2
LANU				SG	Sg	20 07 09.5	-0.7
KIF	**Kilpisjarvi**	**1.17**	**7**	MSG		20 07 26.5	
	comp=Z,2.4nm,0.2s						
KIF				SN	Sn	20 07 30.9	+0.9
PAJU	**Pajala**	**1.34**	**127**	PG	Pg	20 07 13.8	-1.7
	baz=313						
PAJU				SG	Sg	20 07 31.7	-1.1
HEF	**Hetta**	**1.34**	**64**	*e*S	Pg	20 07 12.1	-3.5
HEF	**Hetta**	**1.34**	**64**	PG	Pg	20 07 12.1	-3.5
HEF				MSG		20 07 30.3	
	comp=Z,1.1nm,0.2s						
KLF	**Kolari**	**1.50**	**113**	*e*SB	Pb	20 07 18.5	-0.1
KLF	**Kolari**	**1.50**	**113**	PN	Pb	20 07 18.5	-0.1
KLF				MSG		20 07 35.0	
	comp=Z,1.0nm,0.2s						
KALU	**Kalix**	**2.32**	**148**	PN	Pn	20 07 29.0	-0.2
KALU				SG	Sb	20 08 00.7	-1.0
TOF	**Tornio**	**2.36**	**137**	PN	Pn	20 07 29.4	-0.4
TOF				MSG		20 07 59.6	
	comp=Z,0.8nm,0.2s						
TOF				SG	Sb	20 08 02.7	-0.1
SGF	**Sodankyl**	**2.38**	**97**	SG	Sg	20 08 05.4	-0.8
RNF	**Rovaniemi**	**2.52**	**117**	SG	Sb	20 08 06.8	-0.5
KMNF	**Kaamanen**	**2.76**	**59**	SG	Sb	20 08 12.1	-2.2
RAJF	**Raja-Jooseppi**	**3.02**	**74**	SG	Sb	20 08 22.7	+0.8

*IDC **15** 20:10:40.6±1.6, 40°63N×108°96W, h0km, mb2.5/1, mbtmp2.6/4, ML3.2/3, Error ellipse: s-maj=14.9km s-min=9.9km az=112.0*
*NEIC **15** 20:10:43.1±1.0, 40°640N±0°004×109°47W±0°05, h0km±1km, ML3.0/114, Error ellipse: s-maj=7.0km s-min=2.6km az=93.0*

ISC 15 20:10:43.4±0.9, 40°64N±0°04×109°48W±0°03, h0km, n66, σ1s36/66, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDMU	**Red Mountain**	**0.09**	**225**	Pg	**Pg**	**20 10 44.9**	**-0.2**
RDMU				IAML		20 10 48.0	
	comp=N,6μm,0.9s						
RDMU				IAML		20 10 48.5	
	comp=E,5μm,0.5s						
BSUT	**Blindstream Ca**	**0.98**	**265**	Pg	**Pg**	**20 11 02.5**	**+0.3**
O20A	**White River Ci**	**1.07**	**117**		**Pg**	**20 11 03.4**	**-0.6**
O20A				IAML		20 11 36.1	
	comp=E,413nm,1.1s						
O20A				IAML		20 11 40.2	
	comp=N,307nm,0.9s						
P18A	**Preston Nutter**	**1.17**	**210**		**Pg**	**20 11 05.2**	**-0.5**
P18A				IAML		20 11 34.0	
	comp=N,202nm,0.3s						
P17A	**Butcher Ranch,**	**1.51**	**220**		**Pn**	**20 11 11.4**	**-0.4**
P17A				IAML		20 11 20.6	
	comp=N,167nm,0.2s						
P17A				IAML		20 11 48.3	
	comp=E,145nm,0.4s						
TCUT	**Toone Canyon**	**1.54**	**289**		**Pn**	**20 11 12.3**	**0.0**
SRU	**San Rafael Swe**	**1.72**	**208**	Pg	**Pn**	**20 11 15.0**	**+0.2**
SRU				IAML		20 11 41.4	
	comp=N,268nm,0.6s						
SRU				IAML		20 11 52.1	
	comp=E,228nm,0.6s						
CTU	**Camp Tracy**	**1.73**	**273**		**Pn**	**20 11 15.6**	**+0.8**
MPU	**Maple Canyon**	**1.76**	**250**		**Pn**	**20 11 15.9**	**+0.6**
MPU				IAML		20 11 51.6	
	comp=N,95nm,0.7s						
MPU				IAML		20 11 53.2	
	comp=E,106nm,0.7s						
HWUT	**Hardware Ranch**	**1.85**	**302**	Pn	**Pn**	**20 11 17.0**	**+0.5**
HWUT				IAML		20 11 57.6	
	comp=E,133nm,0.7s						
HWUT				IAML		20 11 58.4	
	comp=E,121nm,0.6s						
TMUT	**Trail Mountain**	**1.89**	**225**		**Pn**	**20 11 18.0**	**+0.9**
TMUT				IAML		20 11 56.4	
	comp=E,244nm,0.6s						
TMUT				IAML		20 11 59.0	
	comp=N,244nm,0.7s						
RWWY	**Rawlins**	**2.01**	**58**		**Pn**	**20 11 19.3**	**+0.5**
RWWY				IAML		20 11 58.6	
	comp=N,191nm,0.8s						
NLU	**North Lily Min**	**2.10**	**252**		**Pn**	**20 11 21.2**	**+1.3**
NLU				IAML		20 12 03.1	
	comp=E,67nm,0.6s						
BW06	**Boulder Array**	**2.13**	**358**		**Pn**	**20 11 21.2**	**+0.8**
BW06				IAML		20 11 58.8	
	comp=E,74nm,0.7s						
BW06				IAML		20 12 05.2	
	comp=E,81nm,0.6s						
PD31	**Pinedale Array**	**2.13**	**359**		**Pn**	**20 11 19.9**	**-0.6**
PDAR	**Pinedale Array**	**2.13**	**359**		**Pn**	**20 11 20.2**	**-0.3**
PDAR	**Pinedale Array**	**2.13**	**359**	Pn	**Pn**	**20 11 20.4**	**-0.1**
	comp=E,2.8nm,0.3s,baz=159,slow=15,SNR=55						
PDAR				Lg	Lg	20 11 50.3	
	comp=E,9.0nm,0.3s,baz=164,slow=18,SNR=4.2						
	comp=E,5.4nm,0.4s						
Q16A	**Castle Valley**	**2.15**	**218**		**Pn**	**20 11 22.2**	**+1.5**
Q16A				IAML		20 12 00.1	
	comp=E,174nm,0.3s						
Q16A				IAML		20 12 03.2	
	comp=N,104nm,0.5s						
SPUT	**South Promonto**	**2.34**	**288**		**Pn**	**20 11 24.5**	**+1.2**
SPUT				IAML		20 12 07.7	
	comp=N,112nm,0.3s						
SPUT				IAML		20 12 11.7	
	comp=E,63nm,0.8s						
SMCO	**Snowmass**	**2.42**	**126**		**Pn**	**20 11 26.0**	**+1.4**
AHID	**Auburn Hatcher**	**2.45**	**331**		**Pn**	**20 11 27.0**	**+2.2**
DUG	**Dugway, Tooele**	**2.58**	**261**		**Pn**	**20 11 28.2**	**+1.7**
N23A	**Red Feather La**	**2.70**	**83**		**Pn**	**20 11 30.6**	**+2.3**
N23A				IAML		20 12 18.9	
	comp=N,115nm,0.6s						
BGU	**Big Grassy Mou**	**2.71**	**277**		**Pn**	**20 11 29.6**	**+1.3**
HVU	**Hansel Valley**	**2.73**	**296**		**Pn**	**20 11 29.9**	**+1.2**
HVU				IAML		20 12 22.6	
	comp=E,79nm,0.8s						
HVU				IAML		20 12 26.5	
	comp=N,79nm,0.7s						
HMU	**Henry Mountain**	**2.87**	**200**		**Pn**	**20 11 32.6**	**+2.0**
REDW	**Red Top Meadow**	**2.91**	**340**		**Pn**	**20 11 32.9**	**+1.7**
MSU	**Marysvale**	**2.97**	**225**		**Pn**	**20 11 33.8**	**+1.7**
SNOW	**Snow King Moun**	**2.98**	**342**		**Pn**	**20 11 34.0**	**+1.8**
SNOW				IAML		20 12 26.8	
	comp=N,97nm,1.1s						
SNOW				IAML		20 12 45.7	
	comp=N,69nm,0.8s						
K22A	**Casper**	**2.99**	**47**		**Pn**	**20 11 33.7**	**+1.5**
MVU	**Marysvale**	**3.00**	**226**		**Pn**	**20 11 33.6**	**+1.3**
TPAW	**Teton Pass**	**3.05**	**340**		**Pn**	**20 11 35.2**	**+2.0**
TPAW				IAML		20 12 39.4	
	comp=N,69nm,0.8s						
TCRU	**Three Creeks R**	**3.06**	**229**		**Pn**	**20 11 34.0**	**+0.9**
TCRU				IAML		20 12 40.4	
	comp=N,45nm,0.9s						
TCRU				IAML		20 12 42.6	
	comp=E,38nm,0.8s						
ISCO	**Idaho Springs**	**3.08**	**105**		**Pn**	**20 11 35.2**	**+1.6**
LOHW	**Long Hollow**	**3.09**	**345**		**Pn**	**20 11 35.0**	**+1.4**
LOHW				IAML		20 12 30.2	
	comp=E,58nm,0.9s						
LOHW				IAML		20 12 30.6	
	comp=E,74nm,0.5s						
PHWY	**Pilot Hill**	**3.12**	**76**		**Pn**	**20 11 34.9**	**+0.8**
PHWY				IAML		20 12 26.9	
	comp=E,40nm,0.8s						
PHWY				IAML		20 12 31.9	
	comp=E,26nm,0.6s						
FXWY	**Fox Creek**	**3.21**	**340**		**Pn**	**20 11 36.3**	**+1.0**
FXWY				IAML		20 12 49.3	
	comp=E,23nm,1.0s						
MOOW	**Moose Ponds**	**3.25**	**344**		**Pn**	**20 11 36.9**	**+1.1**
MTPU	**Mount Pierson**	**3.33**	**220**		**Pn**	**20 11 38.9**	**+1.8**
MTPU				IAML		20 12 31.9	
	comp=E,24nm,0.7s						
MTPU				IAML		20 12 52.3	
	comp=N,22nm,0.9s						
IMW	**Indian Meadow**	**3.43**	**342**		**Pn**	**20 11 39.6**	**+1.2**
MVCO	**Mesa Verde**	**3.51**	**167**		**Pn**	**20 11 40.5**	**+1.1**
S22A	**4UR Ranch, Cre**	**3.55**	**144**		**Pn**	**20 11 41.0**	**+1.0**
S22A				IAML		20 12 58.2	
	comp=E,16nm,1.1s						
FLWY	**Flagg Ranch**	**3.56**	**346**		**Pn**	**20 11 41.5**	**+1.4**
FLWY				IAML		20 12 51.0	
	comp=E,41nm,0.9s						
FLWY				IAML		20 12 53.6	
	comp=E,42nm,1.2s						
Q24A	**Divide**	**3.73**	**115**		**Pn**	**20 11 43.8**	**+1.3**
Q24A				IAML		20 12 51.7	
	comp=E,18nm,0.5s						
Q24A				IAML		20 12 59.3	
	comp=N,19nm,0.7s						
PKCU	**Pink Cliffs**	**3.88**	**216**		**Pn**	**20 11 45.9**	**+1.4**
PKCU				IAML		20 12 59.5	
	comp=N,40nm,1.3s						
SPR3	**Spring Creek 3**	**4.08**	**248**		**Pn**	**20 11 48.6**	**+1.3**
YMP	**Mirror Lake Pl**	**4.13**	**353**		**Pn**	**20 11 49.7**	**+1.7**
YMP				IAML		20 13 12.8	
	comp=E,22nm,1.0s						
YMP				IAML		20 13 14.8	
	comp=N,15nm,2.4s						
SDCO	**Great Sand Dun**	**4.23**	**132**	Pn	**Pn**	**20 11 50.3**	**+1.0**
YHH	**Holmes Hill**	**4.27**	**347**	Pn	**Pn**	**20 11 51.1**	**+1.2**
CCUT	**Cedar City**	**4.31**	**226**		**Pn**	**20 11 52.0**	**+1.6**
ELK	**Elko**	**4.38**	**273**		**Pn**	**20 11 52.2**	**+0.8**
ELK	**Elko**	**4.38**	**273**	Pn	**Pn**	**20 11 54.3**	**+2.9**
	comp=N,0.1nm,0.3s,baz=96,slow=10,SNR=1.9						
ELK				Sn	**Sb**	**20 12 52.7**	**-2.1**
	comp=N,0.1nm,0.3s,baz=23,slow=18,SNR=1.5						
ELK				Lg	Lg	20 13 08.7	
	comp=N,0.3nm,0.3s,baz=357,slow=19,SNR=4.4						
	comp=N,0.3nm,0.3s						
YHL	**Hebgen Lake**	**4.39**	**344**		**Pn**	**20 11 52.4**	**+0.8**
YHL				IAML		20 13 24.3	
	comp=N,9.0nm,2.2s						
YHL				IAML		20 13 51.5	
	comp=E,10nm,2.7s						
KNB	**Kanab**	**4.46**	**217**		**Pn**	**20 11 53.1**	**+0.7**
KNB				IAML		20 13 19.1	
	comp=N,17nm,1.1s						
KNB				IAML		20 13 26.9	
	comp=E,16nm,0.8s						
RLMT	**Red Lodge**	**4.49**	**2**		**Pn**	**20 11 54.1**	**+1.3**
RLMT				IAML		20 13 14.6	
	comp=E,12nm,1.0s						
RLMT				IAML		20 13 21.2	
	comp=E,15nm,3.4s						
LCMT	**Little Creek M**	**4.66**	**220**		**Pn**	**20 11 56.4**	**+1.2**
LCMT				IAML		20 13 18.8	
	comp=E,11nm,2.7s						
LCMT				IAML		20 13 25.3	
	comp=N,10nm,0.7s						
HLID	**Hailey**	**4.69**	**310**		**Pn**	**20 11 57.5**	**+1.9**
HLID				IAML		20 13 30.5	
	comp=N,7.9nm,0.8s						
U15A	**North Rim**	**4.74**	**209**		**Pn**	**20 11 58.5**	**+2.1**
R11B	**Troy Canyon, C**	**5.25**	**246**		**Pn**	**20 12 05.0**	**+1.8**
R11B				IAML		20 13 52.4	
	comp=N,5.1nm,4.9s						
WUAZ	**Wupatki**	**5.33**	**197**	Pn	**Pn**	**20 12 05.8**	**+1.5**
RSSD	**Black Hills**	**5.33**	**47**	Pn	**Pn**	**20 12 05.8**	**+1.5**
ANMO	**Albuquerque**	**6.17**	**156**	Pg	**Pb**	**20 12 30.9**	**-0.9**
	comp=N,0.1nm,0.3s,baz=258,slow=6.4,SNR=1.6						
ANMO				Lg	Lg	20 13 51.5	
	comp=N,0.2nm,0.3s,baz=342,slow=20,SNR=2.4						
X16A	**Lo Mia Camp, P**	**6.40**	**195**	Pn	**Pn**	**20 12 18.9**	**-0.2**
TPNV	**Topopah Spring**	**6.44**	**237**	Pn	**Pn**	**20 12 21.4**	**+1.8**
NVAR	**Mina Array Bea**	**7.17**	**255**	Pn	Pn	20 12 35.0	+5.4
	comp=N,0.1nm,0.3s,baz=77,slow=11,SNR=2.3						
NVAR				Lg	Lg	20 14 40.1	
	comp=N,0.1nm,0.3s,baz=69,slow=36,SNR=2.1						
	comp=N,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**22.10**	**354**	P	**P**	**20 15 39.6**	**-0.4**
	comp=N,0.1nm,0.7s,baz=168,slow=9.3,SNR=1.5						
	comp=N,0.1nm,0.7s						

*TIR **15** 20:35:18.3, 40°85N×19°78E, h0km±1km, Md2.8, Ml2.4*

ISC 15 20:35:18.7±1.5, 40°86N±0°03×19°72E±0°05, h8km±13km, n10, σ1s24/19, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.43**	**204**	P	**Pg**	**20 35 27.8**	**+0.8**
	baz=210						
VLO				S	**Sb**	**20 35 36.0**	**+1.0**
	baz=210						
VLO				AMP			
	comp=N,2.8nm,0.1s,baz=210						
TIR	**Tirane**	**0.50**	**13**	P	**Pb**	**20 35 29.1**	**-0.6**
	baz=7.0						
TIR				S	**Sb**	**20 35 37.9**	**+0.8**
	baz=7.0						
TIR				AMP			
	comp=E,0.3nm,0.2s,baz=7.0						
KBN	**Korca**	**0.84**	**106**	P	**Pg**	**20 35 34.2**	**-0.7**
	baz=106						
KBN				S	**Sn**	**20 35 48.1**	**-1.4**
	baz=106						
KBN				AMP			
	comp=N,0.5nm,0.6s,baz=106						
LSK	**Leskovik**	**0.98**	**136**	P	**Pb**	**20 35 37.0**	**-0.9**
	baz=137						
LSK				S	**Sn**	**20 35 52.3**	**-0.5**
	baz=137						
PHP	**Peshkopia**	**0.98**	**33**	P	**Pb**	**20 35 38.3**	**+0.3**
	baz=30						
PHP				S	**Sn**	**20 35 53.4**	**+0.4**
	baz=30						
PHP				AMP			
	comp=N,0.2nm,0.4s,baz=30						
SRN	**Sarande**	**1.00**	**168**	P	**Pb**	**20 35 38.4**	**+0.1**
	baz=170						
SRN				S	**Sb**	**20 35 52.4**	**+0.9**
	baz=170						
PUK	**Puka**	**1.19**	**6**	P	**Pn**	**20 35 42.5**	**+0.8**
	baz=4.0						
PUK				S	**Sn**	**20 36 00.0**	**+2.0**
	baz=4.0						
PUK				AMP			
	comp=E,0.3nm,0.5s,baz=4.0						
FNA	**Florina**	**1.26**	**93**	P	**Pb**	**20 35 42.1**	**-0.6**
	baz=92						
FNA				S	**Sn**	**20 36 01.7**	**+2.0**
	baz=92						
FNA				AMP			
	comp=E,0.1nm,0.4s,baz=92						
RICI	**Ricice**	**3.26**	**325**	*e*Pn	**Pn**	**20 36 09.7**	**-0.4**
RICI				Sn	**Sn**	**20 36 46.8**	**-2.2**
MORI	**Morici**	**4.22**	**317**	*e*Pn	**Pn**	**20 36 22.0**	**-1.3**

*IDC **15** 20:37:21.7±0.7, 34°78N×135°90E, h364km±8km, mb3.0/11, mbtmp3.9/17, Error ellipse: s-maj=15.3km s-min=10.7km az=62.0*
*JMA **15** 20:37:21.9±0.2, 35°N±1°×135°9E±0°9, h358km±1km, MV2.9/25, KYOTO OSAKA BORDER REG*

ISC 15 20:37:21.4±0.7, 34°81N±0°08×135°83E±0°07, h360km±6km, n27, σ0s70/36, mb3.1/11, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.59**	**323**	P	**Pn**	**20 38 07.3**	**+0.4**
JWT				*e*S	**S**	**20 38 42.6**	**-0.9**
JWY	**Kouya**	**0.63**	**198**	P	**Pn**	**20 38 07.9**	**+0.6**
JWY				S	**S**	**20 38 43.1**	**-0.9**
JIE	**Ise**	**0.83**	**120**	P	**Pn**	**20 38 08.2**	**+0.5**
JTNC	**Tanabenakahech**	**1.01**	**191**	P	**Pn**	**20 38 08.7**	**+0.2**
JTNC				S	**S**	**20 38 45.3**	**-0.8**
JYTA	**Yamagatataniai**	**1.07**	**43**	*e*P	**Pn**	**20 38 09.0**	**+0.6**
JYTA				*e*S	**S**	**20 38 45.8**	**-0.5**
JKG	**Kaga**	**1.52**	**15**	*e*P	**Pn**	**20 38 10.8**	**+0.3**
JAI	**Aioi**	**1.53**	**229**	*e*P	**Pn**	**20 38 11.3**	**+0.4**
JAI				*e*S	**S**	**20 38 50.6**	**+0.1**
JHS	**Saijyo**	**2.24**	**275**	P	**Pn**	**20 38 16.3**	**+0.9**
JYN	**Shimob**	**2.32**	**72**	P	**Pn**	**20 38 15.7**	**-0.3**
MAT	**Matsushiro**	**2.59**	**48**	P	**Pn**	**20 38 17.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.59**	**48**	P	**Pn**	**20 38 18.1**	**+0.1**
	17nm,0.7s,baz=214,slow=6.2,SNR=41						
MJAR				S	**S**	**20 39 04.5**	**+0.9**
	11nm,1.0s,baz=237,slow=15,SNR=8.0						
JHJ	**Hachijo jima 2**	**3.69**	**116**	P	**Pn**	**20 38 28.2**	**+0.2**
	98nm,0.6s,baz=282,slow=13,SNR=5.2						
JHJ				S	**S**	**20 39 23.6**	**+1.8**
	114nm,0.7s,baz=66,slow=14,SNR=1.9						
KSRS	**Korea Array**	**6.92**	**295**	P	**P**	**20 39 04.8**	**+0.6**
	16nm,0.8s,baz=106,slow=13,SNR=85						
USRK	**Ussuriysk Ar.**	**9.83**	**344**	P	**P**	**20 39 38.3**	**0.0**
	20nm,0.7s,baz=167,slow=11,SNR=38						
ASAJ	**Asahikawa**	**10.65**	**27**	P	**Pn**	**20 39 46.5**	**-0.5**
	10nm,0.4s,baz=220,slow=7.3,SNR=7.4						
KLR	**Kul'dur**	**14.72**	**349**	P	**P**	**20 40 31.1**	**-1.0**
	1.1nm,0.4s,baz=181,slow=8.5,SNR=6.8						
SONM	**Songino Array**	**25.48**	**310**	P	**P**	**20 42 19.5**	**+1.4**
	1.6nm,0.7s,baz=118,slow=9.4,SNR=17						
	1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.54**	**253**	P	**P**	**20 43 53.6**	**-0.5**
	0.2nm,0.4s,baz=53,slow=8.0,SNR=1.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**40.15**	**315**	P	**P**	**20 44 23.1**	**-0.3**
	0.5nm,0.4s,baz=97,slow=7.7,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**41.51**	**304**	P	**P**	**20 44 35.4**	**+0.8**
	2.2nm,0.7s,baz=76,slow=10,SNR=26						
	2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**43.84**	**309**	P	**P**	**20 44 53.1**	**+0.1**
	0.4nm,0.4s,baz=92,slow=5.9,SNR=5.6						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**48.74**	**313**	P	**P**	**20 45 30.8**	**+0.1**
	0.7nm,0.4s,baz=97,slow=8.5,SNR=10						
BVAR				PcP	**PcP**	**20 46 49.4**	**0.0**
	0.4nm,0.7s,baz=67,slow=4.8,SNR=3.8						
BVAR				ScP	**ScP**	**20 50 08.5**	**-0.7**
	0.4nm,0.6s,baz=104,slow=6.1,SNR=2.3						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**53.76**	**31**	P	**P**	**20 46 07.3**	**-0.1**
	0.4nm,0.5s,baz=263,slow=6.2,SNR=8.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**54.47**	**182**	P	**P**	**20 46 12.4**	**-0.6**
	0.4nm,0.3s,baz=0.5,slow=7.7,SNR=15						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**58.19**	**182**	P	**P**	**20 46 38.3**	**-0.7**
	0.6nm,0.8s,baz=16,slow=12,SNR=5.0						
	0.6nm,0.8s						
GEYT	**Alibeck**	**60.90**	**298**	P	**P**	**20 46 57.4**	**+0.2**
	0.7nm,0.5s,baz=41,slow=14,SNR=1.2						
	0.7nm,0.5s						
YKA	**Yellowknife Ar**	**67.95**	**28**	P	**P**	**20 47 42.4**	**+0.4**
	0.3nm,0.9s,baz=63,slow=6.5,SNR=3.8						
	0.3nm,0.9s						

*DJA **15** 20:41:53.1±0.2, 5°S±3°×107°3E±°, h50km±8km, M4.6/23, mB5.1/5, mb4.7/17, MLv4.7/23, Mw(mB)4.4/5*
*NEIC **15** 20:41:53.6±2.1, 4°88S±0°08×102°93E±0°09, h60km±5km, mb4.5/60, Error ellipse: s-maj=15.2km s-min=8.7km az=52.0*
*IDC **15** 20:41:55.0±3.1, 4°77S×103°08E, h75km±27km, mb4.2/25, mbtmp4.5/26, MS3.1/2, Error ellipse: s-maj=23.2km s-min=11.4km az=55.0*

ISC 15 20:41:52.2±0.4, 4°97S±0°06×102°90E±0°05, h59km, n176, σ1s32/176, mb4.5/48, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.60**	**5**	Pn	**Pn**	**20 42 06.3**	**+1.0**
MNAI	**Manna**	**0.60**	**5**	P	**Pn**	**20 42 06.3**	**+1.0**
MNAI	**Manna**	**0.60**	**5**	P	**Pn**	**20 42 06.3**	**+1.0**
LWLI	**Liwa**	**1.15**	**93**	P	**Pn**	**20 42 12.0**	**-0.3**
KASI	**Kota Agung**	**1.68**	**109**	P	**Pn**	**20 42 18.9**	**-0.4**
PMBI	**Palembang**	**2.75**	**43**		**Pn**	**20 42 30.6**	**-3.4**
PMBI	**Palembang**	**2.75**	**43**	P	**Pn**	**20 42 36.7**	**+2.7**
PMBI	**Palembang**	**2.75**	**43**	P	**Pn**	**20 42 36.5**	**+2.5**
KRJI	**Kerinci**	**3.20**	**333**	P	**Pn**	**20 42 43.7**	**+3.5**
SBJI	**Serang**	**3.41**	**110**	P	**Pn**	**20 42 44.6**	**+1.7**
PPSI	**Pulau Pagai**	**3.62**	**307**	P	**Pn**	**20 42 49.0**	**+3.1**
DBJI	**Dramaga**	**4.14**	**113**	P	**Pn**	**20 42 55.5**	**+2.5**
SKJI	**Sukabumi**	**4.16**	**119**	P	**Pn**	**20 42 56.2**	**+3.0**
CBJI	**Citeko**	**4.18**	**110**	P	Pn	20 42 58.5	+4.9
PPBI	**Pangkal Pinang**	**4.26**	**49**	P	**Pn**	**20 42 53.9**	**-0.8**
PDSI	**Padang**	**4.71**	**329**	P	**Pn**	**20 43 03.0**	**+2.2**
DSRI	**Dabo**	**4.76**	**21**	P	**Pn**	**20 43 03.7**	**+2.2**
CNJI	**Cibinong**	**4.80**	**119**	P	**Pn**	**20 43 02.0**	**0.0**
LEM	**Lembang**	**5.04**	**112**	P	**Pn**	**20 43 08.1**	**+2.6**
	61nm,0.8s,baz=293,slow=15,SNR=8.3						
LEM				S	**Sn**	**20 44 04.8**	**+2.4**
	54nm,0.7s,baz=141,slow=23,SNR=1.8						
LEM	**Lembang**	**5.04**	**112**	P	**Pn**	**20 43 08.6**	**+3.2**
	67nm,0.8s,0.3nm						
SISI	**Saibi**	**5.25**	**313**	P	**Pn**	**20 43 10.2**	**+2.0**
	69nm,0.8s,2μm0.5nm						
BBJI	**Bungbulang**	**5.33**	**118**	P	**Pn**	**20 43 09.8**	**+0.5**
TPRI	**Tanjung Pinang**	**6.07**	**16**	P	**Pn**	**20 43 22.1**	**+2.7**
	83nm,0.5s,1μm0.

TOLI2 IAmb IAmb 20 46 10.8
comp=Z,22nm,0.9s
TOLI2 Tolitoli 18.85 72 P **Pn** **20 46 09.7 +0.9**
MRSI Marisa 19.77 75 P **P** **20 46 18.7 +1.0**
LUWI Luwuk 20.22 80 P **P** **20 46 23.1 +0.5**
LUWI IAmb IAmb 20 46 30.8
comp=Z,31nm,0.9s
UBPT Khong Chiam 20.28 7 P **P** **20 46 22.8 -0.4**
SOEI Soe 21.71 104 P **P** **20 46 36.4 -2.3**
SOEI IAmb IAmb 20 46 59.2
comp=Z,43nm,1.1s
SOEI Soe 21.71 104 P **P** **20 46 37.1 -1.6**
CM31 Chiang Mai Arr 23.60 351 P **P** **20 46 55.9 -2.1**
CMAR Chiang Mai Arr 23.60 351 P **P** **20 46 57.7 -0.3**
comp=Z,2.4nm,0.5s,baz=183,slow=8.8,SNR=31
CMAR PcP **PcP** **20 50 42.7 +1.0**
comp=Z,0.5nm,0.3s,baz=188,slow=2.7,SNR=2.4
CMAR LR LR 20 57 23.5
comp=Z,24nm,19.1s,baz=170,slow=40
comp=Z,2.4nm,0.5s
CHTO Chiang Mai 23.95 351 P **P** **20 46 59.7 -1.5**
CRAI Chiangrai 25.16 354 P **P** **20 47 11.7 -0.5**
FITZ Fitzroy Crossi 25.77 122 P **P** **20 47 17.5 -0.2**
SLVN Son La 26.16 2 P **P** **20 47 20.5 -0.8**
MTN Manton Dam 28.94 108 P **P** **20 47 44.4 -1.8**
FAKI Fak Fak 29.34 87 P **P** **20 47 48.4 -1.4**
FAKI IAmb IAmb 20 48 13.5
comp=Z,20nm,1.0s
H01W3 Cape Leeuwin H 31.53 162 T T 21 21 44.9
baz=339,slow=76,SNR=28
H01W2 Cape Leeuwin H 31.55 162 T T 21 22 02.6
baz=339,slow=76,SNR=37
H01W1 Cape Leeuwin H 31.55 162 T T 21 22 03.3
baz=339,slow=76,SNR=31
SHL Shillong 32.18 341 P **P** **20 48 14.2 -0.7**
WB0 Warramunga Arr 34.00 118 P **P** **20 48 30.6 0.0**
WRA Warramunga Arr 34.02 119 P **P** **20 48 30.6 -0.2**
WRA Warramunga Arr 34.02 119 P **P** **20 48 30.6 -0.2**
comp=Z,3.3nm,0.5s,baz=300,slow=9.0,SNR=40
WRA PcP **PcP** **20 51 08.6 +0.8**
comp=Z,1.0nm,0.5s,baz=302,slow=2.0,SNR=4.9
comp=Z,3.3nm,0.5s
WRAB Tennant Creek 34.02 119 P **P** **20 48 30.7 -0.1**
WRAB IAmb IAmb 20 48 31.6
comp=Z,5.5nm,0.8s
WB2 Warramunga Arr 34.03 119 P **P** **20 48 30.9 0.0**
WR0 Warramunga Arr 34.20 119 P **P** **20 48 32.2 -0.2**
ASAR Alice Springs 35.18 125 P **P** **20 48 41.5 +0.6**
comp=Z,4.7nm,0.4s,baz=295,slow=7.3,SNR=87
ASAR PcP **PcP** **20 51 12.2 +1.1**
comp=Z,1.2nm,0.5s,baz=307,slow=2.8,SNR=8.3
ASAR LR LR 21 05 17.9
comp=Z,48nm,18.2s,baz=314,slow=40
comp=Z,4.7nm,0.4s
AS31 Alice Springs 35.18 125 P **P** **20 48 40.7 -0.2**
AS31 IAmb IAmb 20 48 49.2
comp=Z,4.0nm,0.3s
ENH Enshi 35.60 10 P **P** **20 48 43.1 -1.2**
ENH IAmb IAmb 20 48 48.4
comp=Z,9.3nm,1.5s
LSA Lhasa 36.27 343 P **P** **20 48 50.7 +0.2**
LSA IAmb IAmb 20 48 52.2
comp=Z,3.1nm,0.6s
COEN Coen 40.66 106 P **P** **20 49 25.4 -1.7**
COEN IAmb IAmb 20 49 56.7
comp=Z,17nm,1.4s
BBOO Buckleboo 41.51 136 P **P** **20 49 33.2 -0.7**
BBOO IAmb IAmb 20 50 17.0
comp=Z,15nm,1.2s
CTAO Charters Tower 44.74 114 P **P** **20 50 00.4 +0.3**
STKA Stephens Creek 45.02 131 P **P** **20 50 03.3 +1.0**
STKA Stephens Creek 45.02 131 P **P** **20 50 03.0 +0.8**
comp=Z,4.6nm,0.5s,baz=310,slow=6.7,SNR=23
comp=Z,4.6nm,0.5s
JNU Nakatsue 46.24 33 P **P** **20 50 10.9 -1.0**
BJT Baijiatuau 46.40 14 P **P** **20 50 13.0 +0.1**
BJT IAmb IAmb 20 50 13.9
comp=Z,4.6nm,1.0s
NIL Nilore 47.56 326 P **P** **20 50 21.1 -1.0**
KSRS Korea Array 48.21 27 P **P** **20 50 26.6 -0.4**
comp=Z,1.6nm,0.6s,baz=227,slow=7.4,SNR=20
comp=Z,1.6nm,0.6s
KS19 Wonju Array Si 48.23 27 P **P** **20 50 27.1 -0.1**
TARG Taragay, Kyrgy 51.81 336 P **P** **20 50 55.5 +0.7**
NRN Naryn 52.31 335 P **P** **20 50 58.9 +0.5**
NRN IAmb IAmb 20 51 01.8
comp=Z,11nm,1.3s
SONM Songino Array 52.67 3 P **P** **20 51 01.2 +0.5**
SONM IAmb IAmb 20 51 02.0
comp=Z,4.1nm,0.6s
SONM Songino Array 52.67 3 P **P** **20 51 00.9 +0.3**
comp=Z,3.4nm,0.6s,baz=182,slow=9.1,SNR=39
SONM PcP **PcP** **20 52 10.2 +0.3**
comp=Z,1.2nm,0.4s,baz=191,slow=4.1,SNR=17
comp=Z,3.4nm,0.6s
ULN Ulaanbaatar 52.73 4 P **P** **20 51 01.6 +0.4**
ULN IAmb IAmb 20 51 03.0
comp=Z,2.1nm,0.7s
MJAR Matsushiro Arr 52.86 36 P **P** **20 51 00.3 -1.8**
comp=Z,3.6nm,0.9s,baz=216,slow=7.8,SNR=6.1
comp=Z,3.6nm,0.9s
SIMJ Simiganj 53.56 327 P **P** **20 51 06.8 -0.7**
SIMJ IAmb IAmb 20 51 07.6
comp=Z,4.9nm,1.4s
ARSB Arslanbob 53.57 332 P **P** **20 51 07.9 +0.4**
BTK Batken 53.65 330 P **P** **20 51 08.8 +0.8**
BTK IAmb IAmb 20 51 09.8
comp=Z,2.5nm,0.5s
AAK Ala-Archa 53.94 334 P **P** **20 51 11.0 +0.8**
AAK IAmb IAmb 20 51 24.0
comp=Z,5.6nm,1.3s
MKAR Makanchi Array 54.68 343 P **P** **20 51 15.1 -0.1**
comp=Z,4.1nm,0.7s,baz=138,slow=7.5,SNR=53
comp=Z,4.1nm,0.7s
MAKZ Makanchi 54.78 343 P **P** **20 51 15.4 -0.6**
USA0B Ussuriysk Arra 55.50 25 P **P** **20 51 20.6 -0.6**
USA0B IAmb IAmb 20 51 21.5
comp=Z,5.0nm,0.8s
USRK Ussuriysk Ar. 55.50 25 P **P** **20 51 20.9 -0.2**
USRK Ussuriysk Ar. 55.50 25 P **P** **20 51 20.4 -0.8**
comp=Z,3.7nm,0.5s,baz=208,slow=3.5,SNR=18
comp=Z,3.7nm,0.5s
KKAR Karatay Array 56.11 332 P **P** **20 51 25.4 -0.2**
HEH HeiHe 58.94 18 *eP* **P** **20 51 44.8 -0.5**
HEH pmax pmax
comp=Z,7.0nm,0.8s
KURBB Kurchatov Arra 59.22 342 P **P** **20 51 47.4 +0.1**
comp=Z,2.0nm,0.6s,baz=158,slow=6.5,SNR=13
KURBB PcP **PcP** **20 52 35.0 -0.1**
comp=Z,1.0nm,0.2s,baz=157,slow=3.7,SNR=7.0
comp=Z,2.0nm,0.6s
KURK Kurchatov 59.27 342 P **P** **20 51 47.1 -0.5**
KURK IAmb IAmb 20 51 48.4
comp=Z,3.4nm,0.8s
GEYT Alibeck 59.57 320 P **P** **20 51 49.2 -0.8**
GEYT IAmb IAmb 20 51 51.5
comp=Z,4.2nm,0.6s
GEYT Alibeck 59.57 320 P **P** **20 51 50.5 +0.5**
comp=Z,3.1nm,0.5s,baz=164,slow=5.7,SNR=9.9
comp=Z,3.1nm,0.5s
GYA0B ALIBECK ARRAY 59.57 320 P **P** **20 51 49.5 -0.6**
GYA0B IAmb IAmb 20 51 51.4
comp=Z,4.5nm,0.7s
ZAA0 Zalesovo Array 60.63 348 P **P** **20 51 56.3 -0.6**
ZALV Zalesovo Beam 60.63 348 P **P** **20 51 55.5 -1.4**
ZALV Zalesovo Beam 60.63 348 P **P** **20 51 56.7 -0.2**
comp=Z,7.2nm,0.4s,baz=160,slow=5.6,SNR=48
comp=Z,7.2nm,0.4s
BVAR Borovoye Array 63.97 339 P **P** **20 52 18.9 -0.4**
comp=Z,6.8nm,0.6s,baz=143,slow=8.9,SNR=64
BVAR PcP **PcP** **20 52 55.5 +1.2**
comp=Z,1.9nm,0.7s,baz=140,slow=7.7,SNR=3.8
comp=Z,6.8nm,0.6s
BRVK Borovoye 64.03 339 P **P** **20 52 19.1 -0.5**
BRVK IAmb IAmb 20 52 20.0
comp=Z,3.8nm,0.6s
ABKAR Akbulak array 65.62 331 P **P** **20 52 29.7 -0.4**
ABKAR Akbulak array 65.62 331 P **P** **20 52 29.5 -0.6**
ABKAR IAmb IAmb 20 52 31.1
comp=Z,6.0nm,1.0s
KBZ Khabaz 72.43 319 P **P** **20 53 13.7 +1.3**
comp=Z,4.2nm,0.8s,baz=120,slow=6.1,SNR=9.1
comp=Z,4.2nm,0.8s
PETK Petropavlovsk- 73.88 31 P **P** **20 53 19.8 -1.0**
comp=Z,2.7nm,0.8s,baz=151,slow=3.5,SNR=4.2
comp=Z,2.7nm,0.8s

MMAI Mount Meron Ar 74.12 306 P **P** **20 53 25.4 +2.7**
comp=Z,3.0nm,0.7s,baz=90,slow=11,SNR=4.6
comp=Z,3.0nm,0.7s
NRIK Noril'sk 74.90 354 P **P** **20 53 25.5 -0.8**
NRIK IAmb IAmb 20 53 26.1
comp=Z,7.4nm,1.4s
NRIK Noril'sk 74.90 354 P **P** **20 53 26.0 -0.3**
comp=Z,1.6nm,0.4s,baz=150,slow=6.0,SNR=6.0
comp=Z,1.6nm,0.4s
SEY Seymchan 77.31 21 P **P** **20 53 39.5 -0.7**
comp=Z,1.0nm,0.5s,baz=240,slow=8.5,SNR=7.1
comp=Z,1.0nm,0.5s
BR131 Keskin Array S 77.45 312 P **P** **20 53 42.2 +0.5**
BR131 IAmb IAmb 20 53 43.2
comp=Z,2.8nm,0.7s
BRTR Keskin Array B 77.45 312 P **P** **20 53 42.1 +0.5**
comp=Z,2.5nm,0.8s,baz=134,slow=6.8,SNR=16
comp=Z,2.5nm,0.8s
TIXI Tiksi 78.34 8 P **P** **20 53 44.1 -1.6**
KARP Karpathos 81.36 307 P **P** **20 54 05.0 +2.1**
AKASG Malin Array Be 83.59 322 P **P** **20 54 14.6 +0.4**
comp=Z,0.5nm,0.4s,baz=90,slow=4.7,SNR=5.4
comp=Z,0.5nm,0.4s
MLR Muntele Rosu 84.43 316 P **P** **20 54 20.5 +1.8**
MLR IAmb IAmb 20 54 21.3
comp=Z,8.1nm,1.3s
QSPA South Pole Qui 85.01 180 P **P** **20 54 21.7 +0.4**
QSPA IAmb IAmb 20 54 24.1
comp=Z,10.0nm,1.5s
QSPA South Pole Qui 85.01 180 P **P** **20 54 21.9 +0.7**
comp=Z,0.6nm,0.5s,baz=303,slow=15,SNR=1.9
comp=Z,0.6nm,0.5s
BURAR Bucovina Array 85.39 318 P **P** **20 54 25.2 +1.8**
BURAR IAmb IAmb 20 54 26.9
comp=Z,3.0nm,0.8s
BUR08 Bucovina Ar. S 85.41 318 P **P** **20 54 25.4 +1.9**
BUR08 IAmb IAmb 20 54 26.8
comp=Z,2.2nm,0.7s
KOLS Kolonicke sedl 87.58 319 *eP* **P** **20 54 36.8 +2.8**
FIA1 FINESS Array S 88.07 332 P **P** **20 54 37.1 +1.1**
FINES FINESS Array B 88.07 332 P **P** **20 54 36.8 +0.8**
comp=Z,2.5nm,0.4s,baz=111,slow=5.9,SNR=38
comp=Z,2.5nm,0.4s
ARCES ARCESS Array B 90.23 340 P **P** **20 54 46.7 +0.6**
ARCES ARCESS Array B 90.23 340 P **P** **20 54 46.6 +0.6**
comp=Z,0.7nm,0.4s,baz=107,slow=5.3,SNR=15
comp=Z,0.7nm,0.4s
HFS Hagfors 93.88 330 P **P** **20 55 03.0 0.0**
comp=Z,4.3nm,0.9s,baz=45,slow=4.7,SNR=5.5
comp=Z,4.3nm,0.9s
SPITS Spitsbergen Ar 94.11 348 P **P** **20 55 02.8 -1.0**
comp=Z,7.5nm,1.1s,baz=64,slow=5.0,SNR=5.4
comp=Z,7.5nm,1.1s
NVAR Mina Array Bea 129.94 42 PKP **PKiKP** **21 00 57.2 +0.4**
comp=Z,0.4nm,0.5s,baz=321,slow=2.3,SNR=1.5
PDAR Pinedale Array 132.63 32 PKP **PKiKP** **21 01 01.9 -0.2**
comp=Z,0.1nm,0.3s,baz=242,slow=5.7,SNR=3.7
MNHN Monahans 144.38 40 PKPdf **PKPdf** **21 01 21.8 -0.7**
APMT Aspermont 144.56 34 PKPdf **PKPab** **21 01 20.9 -0.4**
CO01 Juntas del Tor 144.61 191 PKPdf **PKPdf** **21 01 22.3 -0.9**
CCM Cathedral Cave 144.63 19 PKPdf **PKPab** **21 01 20.9 -0.4**
BDFB Brasilia 144.67 234 PKP **PKPdf** **21 01 24.7 +1.2**
comp=Z,2.6nm,0.6s,baz=153,slow=2.3,SNR=3.5
O53A New Philadelph 144.68 5 PKPdf **PKPab** **21 01 20.9 -0.6**
O52A Adamsville 144.75 6 PKPdf **PKPab** **21 01 21.4 -0.3**
U38A Gravette 144.88 25 PKPdf **PKPab** **21 01 21.6 -0.7**
OLIL Olney 144.93 15 PKPdf **PKPbc** **21 01 22.2 -0.2**
SGCY Sterling City 144.99 37 **PKPbc** **21 01 22.4 -0.6**
MGMO Mountain Grove 145.08 21 **PKPbc** **21 01 21.8 -1.3**
TX31 Lajitas Ar. Si 145.08 43 PKPdf **PKPbc** **21 01 23.2 -0.1**
TXAR Lajitas Array 145.08 43 PKP **PKPdf** **21 01 24.1 +0.3**
comp=Z,1.9nm,0.4s,baz=271,slow=1.6,SNR=21
HHAR Hobbs 145.20 24 **PKPbc** **21 01 22.6 -0.8**
ABTX Abilene, Hawle 145.35 35 **PKPbc** **21 01 22.7 -1.3**
P53A Whipple 145.42 6 **PKPdf** **21 01 23.7 -0.3**
SIUC Southern Illin 145.58 17 PKPdf **PKPdf** **21 01 23.6 -0.8**
Q51A Peebles 145.62 9 PKPdf **PKPdf** **21 01 23.3 -1.1**
P57A Homestead Farm 145.63 1 PKPdf **PKPbc** **21 01 24.6 -0.1**
SAND Sanderson 145.71 41 PKPdf **PKPab** **21 01 25.7 0.0**
WCI Wyandotte Cave 145.85 13 PKPdf **PKPbc** **21 01 25.3 -0.1**
R49A Shelbyville 146.02 11 PKPdf **PKPbc** **21 01 25.6 -0.3**
LCAR Lake Charles 146.45 21 PKPdf **PKPdf** **21 01 26.4 +0.6**
BRDY Brady 146.70 36 PKPdf **PKPbc** **21 01 27.6 +0.6**
JCT Junction City 146.81 37 PKPdf **PKPbc** **21 01 28.3 -0.2**
MIAR Mount Ida 146.84 25 PKPbc **PKPbc** **21 01 28.5 +0.1**
S51A Beattyville 146.94 9 **PKPbc** **21 01 27.8 -0.8**
WVT Waverly 147.45 16 PKPbc **PKPbc** **21 01 29.9 -0.2**
U49A Red Boiling Sp 147.61 13 PKPbc **PKiKP** **21 01 31.6 -1.0**
V48A Smith Brothers 148.09 15 PKPbc **PKPbc** **21 01 31.7 -0.1**
V52A Sevierville 148.70 10 PKPbc **PKPbc** **21 01 33.2 -0.2**

IDC 15 20:55:35.2±5.0, 2°48S×139°33E, h0km, mb3.0/2, mbtmp3.0/3, ML2.9/1, Error ellipse: s-maj=195.3km s-min=31.6km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.03**	**195**	P	Pn	20 59 47.1	-0.2
	baz=18,slow=13,SNR=1.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**21.71**	**194**	P	P	21 00 28.4	+0.4
	0.3nm,0.9s,baz=16,slow=11,SNR=1.6						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**69.99**	**322**	P	P	21 06 48.6	-0.1
	0.3nm,0.6s,baz=106,slow=6.5,SNR=4.2						
	0.3nm,0.6s						

IDC 15 20:57:52.9±2.3, 3°56N×127°43E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=159.2km s-min=29.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.32**	**164**	P	P	21 03 12.5	0.0
	0.5nm,0.6s,baz=344,slow=10,SNR=9.7						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**27.78**	**167**	P	P	21 03 43.8	0.0
	0.2nm,0.6s,baz=358,slow=7.6,SNR=2.3						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.10**	**325**	P	P	21 07 48.2	-0.1
	0.1nm,0.5s,baz=119,slow=8.9,SNR=2.1						
	0.1nm,0.5s						

*DJA **15** 21:01:22.8±0.4, 8°N±3°×9°4E±°, h10km, M4.6/13, mB5.5/3, mb4.5/13, MLv4.6/9, Mw(mB)5.0/3*
*NEIC **15** 21:01:22.3±1.4, 8°21N±0°08×94°00E±0°08, h33km±6km, mb4.4/24, Error ellipse: s-maj=13.6km s-min=9.7km az=46.0*
*IDC **15** 21:01:23.9±3.5, 8°22N×93°98E, h57km±31km, mb3.7/16, mbtmp4.0/18, ML3.9/2, MS3.6/7, Error ellipse: s-maj=29.4km s-min=13.4km az=52.0*
*NDI **15** 21:01:25.6±3.4, 8°68N×93°94E, h30km, mb4.1, mb4.4(NEIC)*
ISC 15 21:01:22.2±0.5, 8°24N±0°05×93°96E±0°05, h35km, n77, σ1°73/79, mb4.3/27, MS3.6/5, 2C, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**4.21**	**135**	Pn	**Pn**	**21 02 24.8**	**+0.8**
LHMI	**Lhok Sumawe**	**4.21**	**135**	P	**Pn**	**21 02 26.5**	**+2.5**
MLSI	**Meulaboh, Aceh**	**4.63**	**148**	P	**Pn**	**21 02 32.3**	**+2.5**
DGPR	**DIGLIPUR**	**5.01**	**348**	*eP*	**Pn**	**21 02 33.2**	**-1.7**
DGPR				*ex*	x	21 03 43.0	
SRIT	**Nakonsritamara**	**5.59**	**86**		**Pn**	**21 02 43.3**	**+0.3**
SRIT				Sn	**Sn**	**21 03 46.4**	**+0.4**
KCSI	**Kotacane, Aceh**	**6.03**	**141**	P	**Pn**	**21 02 52.9**	**+3.9**
	35nm,0.6s,0.2nm						
KULM	**Kulim**	**7.26**	**113**	Pn	**Pn**	**21 03 05.8**	**0.0**
RPSI	**Rantau Prapat**	**7.40**	**138**	Pn	**Pn**	**21 03 08.4**	**+0.6**
GSI	**Gunungsitoli**	**7.77**	**152**	Pn	**Pn**	**21 03 12.3**	**-0.7**
GSI	**Gunungsitoli**	**7.77**	**152**	P	**Pn**	**21 03 11.7**	**-1.3**
	13nm,0.8s,0.1nm						
IPM	**Ipoh**	**7.95**	**118**	Pn	**Pn**	**21 03 14.8**	**-0.7**
IPM				Sn	**Sn**	**21 04 41.7**	**-2.5**
CM31	**Chiang Mai Arr**	**11.25**	**25**	Pn	**Pn**	**21 04 03.1**	**+2.5**
CMAR	**Chiang Mai Arr**	**11.25**	**25**	Pn	**Pn**	**21 04 00.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**11.25**	**25**	P	**Pn**	**21 04 03.9**	**+3.3**
	0.3nm,0.3s,baz=213,slow=14,SNR=20						
CMAR				LR	LR	21 08 35.9	
	comp=Z,86nm,19.0s,baz=205,slow=38						
	2.3nm,0.6s						
CHTO	**Chiang Mai**	**11.57**	**24**	Pn	**Pn**	**21 04 05.6**	**+0.6**

PALK Pallekele 13.18 267 Pn **Pn** **21 04 27.9 +0.8**
PALK Pallekele 13.18 267 P **Pn** **21 04 27.5 +0.4**
0.3nm,0.3s,baz=52,slow=17,SNR=8.7
PALK LR LR 21 08 57.0
comp=Z,137nm,21.2s,baz=186,slow=34
6.0nm,0.8s
CRAI Chiangrai 13.44 27 Pn **Pn** **21 04 33.4 +2.9**
SALM Salem 15.89 284 *eP* **Pn** **21 05 04.2 +0.8**
SALM IAmb IAmb 21 05 19.9
comp=Z,11nm,0.7s
SALM *ex* x 21 07 49.9
IMP Imphal 16.50 360 *eP* **Pn** **21 05 09.3 -1.8**
IMP IAmb IAmb 21 05 21.4
comp=Z,6.5nm,0.8s
KNTI KHUNTI 16.93 331 *eP* **Pn** **21 05 16.6 +0.1**
KNTI *eS* **Sn** **21 08 18.0 -5.7**
TNCH TengChong 17.25 14 ⇑P **P** **21 05 22.6 +0.7**
TNCH pP pP 21 05 29.4 -0.9
TNCH sP pwP 21 05 34.4 +0.3
TNCH PP **sP** **21 05 38.6 +4.2**
TNCH S **Sn** **21 08 32.3 +0.5**
TNCH sS S 21 08 43.3 +3.4
TNCH pmax pmax
comp=Z,4.0nm,1.3s
TNCH pmax pmax
comp=Z,66nm,4.9s
TNCH LR LR
comp=N,150nm,4.2s
TNCH LR LR
comp=E,140nm,7.0s
TNCH LR LR
comp=Z,96nm,9.7s
SHL Shillong 17.34 354 *eP* **Pn** **21 05 20.1 -1.8**
KOHI KOHIMA 17.38 0 *eP* **Pn** **21 05 19.1 -3.2**
KOHI IAmb IAmb 21 05 24.2
comp=Z,32nm,0.9s
HYB Hyderabad 17.56 303 *eP* **P** **21 05 26.1 +0.8**
KMI Kunming 18.76 25 ⇑P **Pn** **21 05 43.3 +4.0**
KMI pmax pmax
comp=Z,5.0nm,1.3s
KMI LR LR
comp=N,180nm,15.2s
KMI LR LR
comp=E,190nm,15.0s
KMI LR LR
comp=Z,130nm,11.3s
QIZ Qiongzhong 18.77 54 P **P** **21 05 37.8 -0.8**
QIZ S **Sn** **21 09 05.8 -2.6**
QIZ LR LR
comp=N,220nm,9.3s
QIZ LR LR
comp=E,120nm,6.8s
QIZ LR LR
comp=Z,200nm,10.9s
ZIRO ZIRO 19.18 360 *eP* **P** **21 05 41.6 -1.5**
ZIRO IAmb IAmb 21 05 54.4
comp=Z,14nm,1.0s
PZH PanZhiHua 19.61 21 P **Pn** **21 05 53.6 +4.3**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.7s
LEM Lembang 20.23 137 LR LR 21 14 59.9
comp=Z,134nm,19.0s,baz=342,slow=40
LSA Lhasa 21.51 353 P **P** **21 06 08.3 -0.4**
LSA IAmb IAmb 21 06 21.5
comp=Z,8.0nm,0.9s
NRDN NARMADA NAGAR 21.63 314 *eP* **P** **21 06 12.4 +2.8**
KSH Kashi 35.07 335 P P 21 08 19.8 +7.7
KSH pmax pmax
comp=Z,4.0nm,2.0s
WMQ Urumqi 35.86 352 *eP* **P** **21 08 21.5 +2.7**
HHC Hu-ho-hao-te 36.05 23 *eP* **P** **21 08 22.4 +1.9**
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,200nm,5.6s
SIMJ Simiganj 37.70 327 P **P** **21 08 33.4 -1.2**
SIMJ IAmb IAmb 21 08 46.0
comp=Z,2.5nm,0.7s
BTK Batken 37.83 331 P **P** **21 08 36.2 +0.5**
BTK IAmb IAmb 21 08 46.5
comp=Z,7.6nm,1.2s
ARSB Arslanbob 37.84 334 P **P** **21 08 35.5 -0.2**
AAK Ala-Archa 38.30 337 P **P** **21 08 40.0 +0.4**
AAK IAmb IAmb 21 08 52.6
comp=Z,6.3nm,1.2s
MKAR Makanchi Array 39.69 347 P **P** **21 08 50.6 -0.5**
MKAR Makanchi Array 39.69 347 P **P** **21 08 50.0 -1.1**
comp=Z,0.4nm,0.6s,baz=160,slow=7.4,SNR=5.3
comp=Z,0.4nm,0.6s
MAKZ Makanchi 39.78 347 P **P** **21 08 51.4 -0.4**
SONM Songino Array 40.85 13 P **P** **21 09 00.4 -0.4**
comp=Z,0.3nm,0.6s,baz=189,slow=8.4,SNR=2.6
SONM PcP **PcP** **21 10 59.7 -1.5**
comp=Z,0.2nm,0.8s,baz=187,slow=3.3,SNR=1.8
SONM LR LR 21 26 32.6
comp=Z,75nm,18.9s,baz=300,slow=37
comp=Z,0.3nm,0.6s
JNU Nakatsue 42.13 49 LR LR 21 28 50.1
comp=Z,65nm,18.2s,baz=332,slow=39
GEYT Alibeck 43.81 318 P **P** **21 09 24.9 -0.1**
GEYT IAmb IAmb 21 09 41.6
comp=Z,4.7nm,0.7s
GEYT Alibeck 43.81 318 P **P** **21 09 25.3 +0.3**
comp=Z,2.1nm,0.6s,baz=137,slow=9.4,SNR=7.9
GEYT LR LR 21 28 16.4
comp=Z,153nm,20.8s,baz=356,slow=37
comp=Z,2.1nm,0.6s
GYA0B ALIBECK ARRAY 43.81 318 P **P** **21 09 25.0 0.0**
GYA0B IAmb IAmb 21 09 41.5
comp=Z,4.5nm,0.7s
KURBB Kurchatov Arra 44.15 346 P **P** **21 09 27.1 -0.3**
comp=Z,1.3nm,0.2s,baz=167,slow=7.2,SNR=2.0
comp=Z,1.3nm,0.2s
KURK Kurchatov 44.21 346 P **P** **21 09 27.8 -0.1**
KURK IAmb IAmb 21 09 29.9
comp=Z,5.3nm,1.4s
ZAA0 Zalesovo Array 46.17 353 P **P** **21 09 43.2 -0.2**
ZAA0 IAmb IAmb 21 09 52.6
comp=Z,6.3nm,0.8s
ZALV Zalesovo Beam 46.17 353 P **P** **21 09 43.2 -0.1**
comp=Z,1.8nm,0.4s,baz=181,slow=7.9,SNR=18
comp=Z,1.8nm,0.4s
NWAO Narrogin (SRO) 46.55 153 P **P** **21 09 46.9 +0.2**
WB0 Warramunga Arr 48.57 125 P **P** **21 10 01.7 -0.9**
BVAR Borovoye Array 48.59 341 P **P** **21 10 00.8 -1.5**
comp=Z,0.4nm,0.4s,baz=142,slow=6.8,SNR=3.2
comp=Z,0.4nm,0.4s
WRA Warramunga Arr 48.62 126 P **P** **21 10 01.8 -1.1**
WRA Warramunga Arr 48.62 126 P **P** **21 10 01.6 -1.3**
comp=Z,2.4nm,0.7s,baz=304,slow=8.7,SNR=41
WRA PcP **PcP** **21 11 27.0 -1.2**
comp=Z,1.4nm,1.0s,baz=308,slow=3.3,SNR=3.9
comp=Z,2.4nm,0.7s
WB2 Warramunga Arr 48.63 126 P **P** **21 10 02.2 -0.8**
RAYN Ar Rayn 48.78 294 P **P** **21 10 05.3 +1.1**
RAYN IAmb IAmb 21 10 08.5
comp=Z,4.8nm,0.7s
WR0 Warramunga Arr 48.79 126 P **P** **21 10 03.1 -1.2**
ABKAR Akbulak array 49.83 331 P **P** **21 10 11.6 -0.1**
AS31 Alice Springs 50.28 130 P **P** **21 10 14.2 -1.4**
ASAR Alice Springs 50.28 130 P **P** **21 10 14.6 -1.1**
comp=Z,2.2nm,0.7s,baz=307,slow=7.3,SNR=20
ASAR PcP **PcP** **21 11 33.8 -0.5**
comp=Z,1.0nm,0.7s,baz=303,slow=3.3,SNR=7.2
comp=Z,2.2nm,0.7s
FORT Forrest 50.73 141 P **P** **21 10 18.1 -0.8**
BBOO Buckleboo 57.20 138 P **P** **21 11 04.9 -1.2**
STKA Stephens Creek 60.48 134 P **P** **21 11 28.1 -0.8**
comp=Z,2.8nm,1.1s,baz=320,slow=5.5,SNR=3.8
comp=Z,2.8nm,1.1s
BRTR Keskin Array B 62.06 311 P **P** **21 11 40.0 +0.3**
comp=Z,0.6nm,0.7s,baz=109,slow=7.3,SNR=2.8
BRTR LR LR 21 41 23.0
comp=Z,223nm,18.1s,baz=322,slow=39
comp=Z,0.6nm,0.7s
H04N2 CROZET ISLANDS 65.95 211 T T 22 23 51.8
SNR=40
H04N1 CROZET ISLANDS 65.96 211 T T 22 23 05.0
baz=57,slow=75,SNR=44
H04N3 CROZET ISLANDS 65.97 211 T T 22 23 17.5
baz=46,slow=75,SNR=44
TIXI Tiksi 66.91 11 **P** **21 12 10.0 -0.5**
TIXI IAmb IAmb 21 12 20.6
comp=Z,3.1nm,0.9s

FINES	**FINESS Array B**	**72.31**	**332**	P	**P**	**21 12 42.4**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=103,slow=4.4,SNR=5.2						
	comp=Z,1.7nm,0.8s						
GERES	**GERESS Array B**	**77.44**	**318**	P	**P**	**21 13 13.8**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=102,slow=4.5,SNR=2.6						
	comp=Z,0.8nm,0.8s						
HFS	**Hagfors**	**78.05**	**330**	P	**P**	**21 13 16.5**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=101,slow=8.0,SNR=6.3						
	comp=Z,0.8nm,0.4s						
NOA	**NORSAR Array B**	**79.33**	**331**	P	**P**	**21 13 23.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=94,slow=5.1,SNR=1.4						
	comp=Z,0.6nm,0.7s						
SPITS	**Spitsbergen Ar**	**79.44**	**348**	P	**P**	**21 13 23.8**	**-0.8**
	comp=Z,5.8nm,1.0s,baz=125,slow=7.6,SNR=2.1						
	comp=Z,5.8nm,1.0s						
ESDC	**Sonseca Array**	**90.85**	**310**	P	**P**	**21 14 22.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=77,slow=4.2,SNR=3.2						
	comp=Z,0.5nm,0.7s						
PLCA	**Paso Flores**	**144.83**	**201**	PKP	PKPbc	21 20 55.4	+0.3
	comp=Z,2.3nm,0.8s,baz=181,slow=8.1,SNR=5.6						

*NEIC **15** 21:11:33.3±1.3,56°.40N±0°.07×148°.6W±0°.1, h22km±7km, ML3.5/74, ML3.2(AEIC), Error ellipse: s-maj=10.8km s-min=7.5km az=157.0*
*AEIC **15** 21:11:36.7±1.3,56°.43N±0°.09×148°.6W±0°.1, h12km±7km, Error ellipse: s-maj=12.8km s-min=8.1km az=166.0*

ISC 15 21:11:30.9±1.7,56°.4N±0°.1×148°.64W±0°.05, h10km, n171, σ1§46/159, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KDAK	**Kodiak Island**	**2.54**	**304**			**Pn**	**21 12 13.1**	**+0.9**
KDAK	**Kodiak Island**	**2.54**	**304**			**Sn**	**21 12 41.4**	**-1.7**
KDAK	**Kodiak Island**	**2.54**	**304**	IAML			21 12 45.1	
	71nm,0.4s							
KDAK				IAML			21 12 45.8	
	40nm,0.4s							
KDAK	**Kodiak Island**	**2.54**	**304**	P		**Pn**	**21 12 13.1**	**+0.9**
	baz=120							
OHAK	**Old Harbor**	**2.68**	**289**			**Pn**	**21 12 14.8**	**+0.8**
OHAK	**Old Harbor**	**2.68**	**289**			**Sn**	**21 12 44.1**	**-2.3**
OHAK	**Old Harbor**	**2.68**	**289**	P		**Pn**	**21 12 14.5**	**+0.5**
	baz=105							
OHAK				S		**Sn**	**21 12 44.1**	**-2.3**
	baz=105							
SYI	**Shuyak Island**	**2.98**	**319**			**Pn**	**21 12 19.6**	**+1.5**
SYI						**Sn**	**21 12 53.2**	**-0.6**
Q20K	**Shuyak Island**	**2.98**	**319**	P		**Pn**	**21 12 19.6**	**+1.4**
	baz=136							
Q20K				S		**Sn**	**21 12 53.2**	**-0.6**
	baz=136							
SII	**Sitkinak Islan**	**3.08**	**275**			**Pn**	**21 12 20.1**	**+0.5**
SII						**Sn**	**21 12 55.2**	**-1.2**
SII	**Sitkinak Islan**	**3.08**	**275**	IAML			21 12 56.8	
	comp=N,87nm,0.9s							
SII				IAML			21 13 03.8	
	comp=E,84nm,0.8s							
SII	**Sitkinak Islan**	**3.08**	**275**	P		**Pn**	**21 12 20.1**	**+0.5**
	baz=90							
SII				S		**Sn**	**21 12 55.2**	**-1.2**
	baz=90							
Q23K	**Middleton Isla**	**3.24**	**21**			**Pn**	**21 12 22.2**	**+0.4**
Q23K						**Sn**	**21 12 58.2**	**-2.2**
Q23K	**Middleton Isla**	**3.24**	**21**	IAML			21 13 22.3	
	comp=N,120nm,1.5s							
Q23K				IAML			21 14 33.6	
	comp=E,122nm,1.0s							
Q23K	**Middleton Isla**	**3.24**	**21**	P		**Pn**	**21 12 22.2**	**+0.4**
	baz=203							
Q23K				S		**Sn**	**21 12 58.2**	**-2.2**
	baz=203							
MID	**Middleton Isla**	**3.24**	**21**			**Pn**	**21 12 22.2**	**+0.4**
MID						**Sn**	**21 12 58.2**	**-2.1**
MID	**Middleton Isla**	**3.24**	**21**	IAML			21 14 16.8	
	comp=N,107nm,1.4s							
MID				IAML			21 14 33.5	
	comp=E,139nm,1.1s							
R18K	**Karluk**	**3.38**	**292**			**Pn**	**21 12 24.9**	**+1.2**
R18K	**Karluk**	**3.38**	**292**	IAML			21 13 09.0	
	comp=E,124nm,0.4s							
R18K				IAML			21 13 12.2	
	comp=N,142nm,0.5s							
R18K	**Karluk**	**3.38**	**292**	P		**Pn**	**21 12 24.9**	**+1.2**
	baz=107							
CNPM	**China Poot**	**3.39**	**337**			**Pn**	**21 12 25.0**	**+1.1**
BRSE	**Bradley Lake S**	**3.50**	**342**			**Pn**	**21 12 26.1**	**+0.8**
BRSE	**Bradley Lake S**	**3.50**	**342**	P		**Pn**	**21 12 26.1**	**+0.8**
	baz=160							
BRLK	**Bradley Lake**	**3.54**	**341**			**Pn**	**21 12 26.7**	**+0.7**
P23K	**Montague Islan**	**3.63**	**10**	P		**Pn**	**21 12 27.8**	**+0.7**
	baz=191							
Q19K	**Cape Douglas,**	**3.67**	**315**			**Pn**	**21 12 29.6**	**+1.8**
Q19K	**Cape Douglas,**	**3.67**	**315**	IAML			21 13 19.3	
	comp=N,76nm,0.9s							
Q19K				IAML			21 13 24.9	
	comp=E,105nm,0.9s							
Q19K	**Cape Douglas,**	**3.67**	**315**	P		**Pn**	**21 12 29.6**	**+1.8**
	baz=131							
SEW	**Seward**	**3.71**	**354**			**Pn**	**21 12 28.9**	**+0.7**
SEW	**Seward**	**3.71**	**354**	P		**Pn**	**21 12 28.9**	**+0.7**
	baz=173							
KAHG	**Katmai Hook Gl**	**3.80**	**305**			**Pn**	**21 12 29.3**	**-0.2**
AU22	**Augustine Moun**	**3.87**	**321**			**Pn**	**21 12 32.2**	**+1.7**
AUCH	**Augustine Cone**	**3.90**	**321**			**Pn**	**21 12 32.6**	**+1.7**
ACHA	**Angle Creek He**	**4.04**	**299**			**Pn**	**21 12 35.5**	**+2.7**
P19K	**Oil Pt**	**4.05**	**325**			**Pn**	**21 12 34.6**	**+1.7**
P19K	**Oil Pt**	**4.05**	**325**	IAML			21 13 25.8	
	comp=E,66nm,0.5s							
P19K				IAML			21 13 27.2	
	comp=N,72nm,0.4s							
P19K	**Oil Pt**	**4.05**	**325**	P		**Pn**	**21 12 34.6**	**+1.7**
	baz=141							
KAHC	**Katmai Hardscr**	**4.09**	**306**			**Pn**	**21 12 36.0**	**+2.4**
KAHC	**Katmai Hardscr**	**4.09**	**306**	P		**Pn**	**21 12 36.0**	**+2.4**
	baz=120							
O22K	**Cooper Landing**	**4.10**	**352**	Pn		**Pn**	**21 12 34.9**	**+1.4**
ANCK	**Angle Creek**	**4.12**	**298**			**Pn**	**21 12 36.5**	**+2.7**
HIN	**Hinchinbrook I**	**4.13**	**15**	IAML			21 13 23.3	
	comp=E,87nm,1.1s							
KAIM	**Kayak Island**	**4.15**	**31**			**Pn**	**21 12 35.0**	**+0.8**
KAIM	**Kayak Island**	**4.15**	**31**	IAML			21 13 26.5	
	comp=N,87nm,1.0s							
KAIM				IAML			21 13 31.8	
	comp=E,84nm,1.1s							
KAIM	**Kayak Island**	**4.15**	**31**	P		**Pn**	**21 12 35.0**	**+0.8**
	baz=214							
O20K	**Slope Mountain**	**4.22**	**332**			**Pn**	**21 12 36.1**	**+0.8**
O20K	**Slope Mountain**	**4.22**	**332**	P		**Pn**	**21 12 36.1**	**+0.8**
	baz=148							
ILSW	**Iliamna Southw**	**4.28**	**328**	IAML			21 13 29.9	
	comp=N,34nm,0.4s							
ILSW				IAML			21 13 31.3	
	comp=E,33nm,0.6s							
CNTC	**Contact Creek**	**4.33**	**298**			**Pn**	**21 12 39.3**	**+2.4**
Q17K	**Contact Creek**	**4.33**	**298**	P		**Pn**	**21 12 39.3**	**+2.4**
	baz=112							
EYAK	**Cordova Ski Ar**	**4.39**	**19**			**Pn**	**21 12 38.6**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.39**	**19**	P		**Pn**	**21 12 38.6**	**+1.0**
	baz=201							
SUCK	**Suckling Hills**	**4.46**	**33**	IAML			21 13 33.3	
	comp=E,40nm,0.9s							
SUCK				IAML			21 13 36.6	
	comp=N,55nm,1.5s							
FID	**Port Fidalgo**	**4.47**	**14**			**Pn**	**21 12 39.1**	**+0.4**
FID	**Port Fidalgo**	**4.47**	**14**	IAML			21 13 27.4	
	comp=E,42nm,0.5s							
FID				IAML			21 13 30.6	
	comp=N,34nm,0.4s							
RAGM	**Ragged Mountai**	**4.48**	**26**			**Pn**	**21 12 39.0**	**+0.2**
HMT	**Hamilton**	**4.54**	**29**			**Pn**	**21 12 40.7**	**+1.1**
CAPN	**Captain Cook N**	**4.54**	**344**			**Pn**	**21 12 39.6**	**0.0**
P18K	**Big Mountain,**	**4.60**	**313**	Pn		**Pn**	**21 12 41.6**	**+1.1**
P18K	**Big Mountain,**	**4.60**	**313**	P		**Pn**	**21 12 41.5**	**+1.1**
	baz=127							
GOAT	**Goat Mountain**	**4.63**	**25**			**Pn**	**21 12 42.0**	**+1.1**
RC01	**Rabbit Creek A**	**4.70**	**353**			**Pn**	**21 12 43.0**	**+1.1**
RC01	**Rabbit Creek A**	**4.70**	**353**	IAML			21 13 36.8	
	comp=N,34nm,0.6s							
RC01				IAML			21 13 37.1	
	comp=E,55nm,0.4s							
RC01	**Rabbit Creek A**	**4.70**	**353**	P		**Pn**	**21 12 43.0**	**+1.1**
	baz=172							
NCT	**North Crescent**	**4.71**	**333**			**Pn**	**21 12 42.6**	**+0.6**
FIS	**Fire Island**	**4.79**	**351**	Pn		**Pn**	**21 12 44.6**	**+1.5**
O19K	**Port Alsworth**	**4.81**	**324**			**Pn**	**21 12 45.2**	**+1.8**
SNH	**Sunshine Point**	**4.84**	**37**			**Pn**	**21 12 44.6**	**+0.8**
SNH				IAML			21 14 25.1	
	comp=N,44nm,1.4s							
SNH				IAML			21 14 36.2	
	comp=E,40nm,1.5s							
O18K	**Koktuh Hills**	**4.88**	**317**			**Pn**	**21 12 45.5**	**+1.1**
O18K	**Koktuh Hills**	**4.88**	**317**	P		**Pn**	**21 12 45.7**	**+1.3**
	baz=132							
KNK	**Knik Glacier**	**4.99**	**1**			**Pn**	**21 12 47.2**	**+1.4**
KNK	**Knik Glacier**	**4.99**	**1**	IAML			21 13 44.7	
	comp=E,23nm,0.6s							
KNK	**Knik Glacier**	**4.99**	**1**	P		**Pn**	**21 12 47.2**	**+1.4**
	baz=181							
P17K	**Kvichak River**	**5.01**	**307**			**Pn**	**21 12 47.2**	**+1.2**
P17K	**Kvichak River**	**5.01**	**307**	P		**Pn**	**21 12 47.2**	**+1.2**
	baz=120							
BMRM	**Bremner River**	**5.01**	**23**	P		**Pn**	**21 12 47.2**	**+1.1**
	baz=206							
WAX	**Waxell Ridge**	**5.04**	**35**			**Pn**	**21 12 47.5**	**+0.9**
N20K	**Mount Spurr**	**5.13**	**340**	P		**Pn**	**21 12 49.1**	**+1.3**
	baz=157							
SPCR	**Spurr Chakacha**	**5.13**	**340**			**Pn**	**21 12 49.0**	**+1.3**
MESA	**MESA**	**5.15**	**40**			**Pn**	**21 12 49.0**	**+0.8**
MESA	**MESA**	**5.15**	**40**	IAML			21 13 36.9	
	comp=E,26nm,1.2s							
MESA				IAML			21 13 58.3	
	comp=N,39nm,1.3s							
MESA	**MESA**	**5.15**	**40**	P		**Pn**	**21 12 49.0**	**+0.8**
	baz=226							
SUA	**Susitna One**	**5.16**	**349**			**Pn**	**21 12 49.1**	**+0.8**
SUA				IAML			21 13 50.5	
	comp=E,17nm,0.8s							
SUA	**Susitna One**	**5.16**	**349**	P		**Pn**	**21 12 49.0**	**+0.7**
	baz=167							
SPCG	**Spurr Capps Gl**	**5.18**	**342**			**Pn**	**21 12 49.9**	**+1.4**
CRQM	**Cirque**	**5.20**	**31**			**Pn**	**21 12 49.6**	**+0.8**
CRQM	**Cirque**	**5.20**	**31**	IAML			21 13 48.7	
	comp=E,21nm,0.9s							
CRQM				IAML			21 13 53.0	
	comp=N,24nm,0.5s							
CRQE	**Cirque**	**5.21**	**32**	P		**Pn**	**21 12 49.6**	**+0.7**
	baz=216							
KLU	**Klutina**	**5.26**	**14**	IAML			21 13 51.6	
	comp=E,23nm,0.3s							
KLU				IAML			21 13 53.7	
	comp=N,23nm,0.4s							
KLU	**Klutina**	**5.26**	**14**	P		**Pn**	**21 12 50.9**	**+1.3**
	baz=196							
TGL	**Tana Glacier**	**5.29**	**33**	IAML			21 13 49.7	
	comp=E,21nm,0.9s							
TGL				IAML			21 13 51.5	
	comp=N,21nm,1.2s							
BAGL	**Bagley Icefiel**	**5.32**	**37**			**Pn**	**21 12 51.3**	**+0.9**
ISLE	**Juniper Island**	**5.32**	**36**	IAML			21 13 42.1	
	comp=N,20nm,1.5s							
ISLE				IAML			21 14 03.5	
	comp=E,15nm,0.9s							
STLK	**Strandline Lak**	**5.34**	**343**			**Pn**	**21 12 51.7**	**+1.1**
N19K	**Bonanza Creek**	**5.35**	**328**	P		**Pn**	**21 12 51.4**	**+0.6**
	baz=143							
GHO	**Glory Hole Cre**	**5.36**	**359**			**Pn**	**21 12 52.7**	**+1.8**
GHO	**Glory Hole Cre**	**5.36**	**359**	IAML			21 13 55.6	
	comp=E,30nm,0.7s							
SML	**Sawmill**	**5.39**	**2**			**Pn**	**21 12 53.0**	**+1.7**
SML	**Sawmill**	**5.39**	**2**	P		**Pn**	**21 12 53.0**	**+1.7**
	baz=182							
SCM	**Sheep Creek Mo**	**5.46**	**7**			**Pn**	**21 12 53.8**	**+1.6**
SCM	**Sheep Creek Mo**	**5.46**	**7**	P		**Pn**	**21 12 53.8**	**+1.6**
	baz=188							
N25K	**Chitina, Valde**	**5.59**	**20**	P		**Pn**	**21 12 55.5**	**+1.4**
	baz=204							
TABL	**Table Mountain**	**5.62**	**41**			**Pn**	**21 12 56.1**	**+1.5**
N18K	**Kilae Creek**	**5.70**	**321**			**Pn**	**21 12 56.6**	**+1.0**
N18K	**Kilae Creek**	**5.70**	**321**	P		**Pn**	**21 12 56.6**	**+1.0**
	baz=135							
PINM	**Pinnacle**	**5.75**	**47**	P		**Pn**	**21 12 57.5**	**+1.2**
	baz=234							
MCARA	**McCarthy VSAT**	**5.75**	**28**	P		**Pn**	**21 12 57.7**	**+1.5**
	baz=213							
SKT	**Skwentna**	**5.76**	**346**			**Pn**	**21 12 57.6**	**+1.3**
SKT	**Skwentna**	**5.76**	**346**	P		**Pn**	**21 12 57.6**	**+1.3**
	baz=164							
M24K	**Tolsona, Glenn**	**5.83**	**11**			**Pn**	**21 12 58.7**	**+1.4**
M24K	**Tolsona, Glenn**	**5.83**	**11**	P		**Pn**	**21 12 58.7**	**+1.4**
	baz=193							
PNL	**Peninsula**	**5.88**	**53**			**Pn**	**21 12 58.9**	**+0.9**
PNL	**Peninsula**	**5.88**	**53**	P		**Pn**	**21 12 58.9**	**+0.9**
	baz=240							
CTG	**Chitna Glacier**	**5.92**	**37**	P		**Pn**	**21 12 59.6**	**+0.9**
	baz=223							
BCPM	**Bancas Point**	**5.92**	**50**			**Pn**	**21 12 59.8**	**+1.2**
LOGN	**Logan Glacier**	**5.94**	**39**			**Pn**	**21 12 59.7**	**+0.8**
WASW	**Wrangell South**	**5.97**	**21**			**Pn**	**21 13 00.8**	**+1.4**
N17K	**Nushagak Hills**	**6.08**	**316**			**Pn**	**21 13 01.9**	**+1.2**
N17K	**Nushagak Hills**	**6.08**	**316**	P		**Pn**	**21 13 01.9**	**+1.2**
	baz=129							
HARP	**HAARP**	**6.24**	**15**			**Pn**	**21 13 04.7**	**+1.7**
HARP	**HAARP**	**6.24**	**15**	P		**Pn**	**21 13 04.7**	**+1.7**
	baz=198							
WAT1	**Susitna Watana**	**6.42**	**0**			**Pn**	**21 13 07.0**	**+1.6**
WAT1	**Susitna Watana**	**6.42**	**0**	P		**Pn**	**21 13 07.0**	**+1.6**
	baz=180							
O29M	**Mount Rennedy**	**6.56**	**50**	P		**Pn**	**21 13 09.2**	**+1.7**
	baz=238							
P29M	**Windy Craggy**	**6.61**	**57**			**Pn**	**21 13 09.0**	**+0.9**
P29M	**Windy Craggy**	**6.61**	**57**	P		**Pn**	**21 13 09.0**	**+0.9**
	baz=246							
N16K	**Nishlik Lake**	**6.68**	**311**	P		**Pn**	**21 13 10.9**	**+1.9**
	baz=123							
DHY	**Denali Highway**	**6.69**	**5**			**Pn**	**21 13 11.2**	**+1.9**
DHY	**Denali Highway**	**6.69**	**5**	P		**Pn**	**21 13 11.2**	**+1.9**
	baz=186							
YUK2	**White River**	**6.70**	**34**			**Pn**	**21 13 11.1**	**+1.8**
YUK3	**Moose Creek**	**6.81**	**35**	P		**Pn**	**21 13 13.1**	**+2.1**
	baz=222							
YUK7	**Dusty Glacier**	**6.86**	**49**			**Pn**	**21 13 12.9**	**+1.2**
S31K	**Pelican**	**6.91**	**72**	P		**Pn**	**21 13 11.9**	**-0.2**
	baz=262							
RND	**Reindeer**	**6.99**	**359**			**Pn**	**21 13 15.6**	**+2.3**
YUK6	**Outpost Mounta**	**7.00**	**46**	P		**Pn**	**21 13 15.8**	**+2.1**
	baz=234							
YUK4	**Talbot Arm**	**7.14**	**42**	P		**Pn**	**21 13 17.9**	**+2.4**
	baz=230							
N30M	**Aniakik Lake**	**7.80**	**45**			**Pn**	**21 13 26.2**	**+1.7**
K17K	**Iditarod**	**7.98**	**326**	Pn		**Pn**	**21 13 27.4**	**+0.7**
HDA	**Harding Lake**	**8.04**	**5**	Pn		**Pn**	**21 13 28.9**	**+1.2**
WRH	**Wood River Hil**	**8.07**	**2**	Pn		**Pn**	**21 13 30.7**	**+2.8**
J18K	**Innoko River**	**8.13**	**333**	Pn		**Pn**	**21 13 30.0**	**+1.2**
J20K	**Nowinta River**	**8.23**	**343**	Pn		**Pn**	**21 13 31.8**	**+1.6**
CCB	**Clear Creek Bu**	**8.25**	**2**	Pn		**Pn**	**21 13 33.0**	**+2.6**
K27K	**Chicken**	**8.28**	**20**	Pn		**Pn**	**21 13 32.2**	**+1.2**
J19K	**Poorman**	**8.34**	**338**	Pn		**Pn**	**21 13 31.8**	**+0.1**
WHY	**Whitehorse**	**8.34**	**54**	Pn		**Pn**	**21 13 33.2**	**+1.3**
J25K	**Salcha River,**	**8.36**	**10**	Pn		**Pn**	**21 13 34.0**	**+1.9**
IL31		**8.41**	**5**	Pn		**Pn**	**21 13 34.9**	**+2.3**
ILAR	**Eielson Array**	**8.41**	**5**	Pn		**Pn**	**21 13 35.8**	**+3.1**
J26L	**Joseph Creek**	**8.47**	**15**	Pn		**Pn**	**21 13 35.3**	**+1.7**
P32M	**Atlin**	**8.53**	**62**	Pn		**Pn**	**21 13 35.2**	**+0.9**
L29M	**L29M**	**8.53**	**34**			**Pn**	**21 13 35.9**	**+1.6**
MDM	**Murphy Dome**	**8.55**	**1**	Pn		**Pn**	**21 13 36.5**	**+1.8**
M30M	**Minto, Yukon**	**8.60**	**39**	Pn		**Pn**	**21 13 35.9**	**+0.5**
U33K	**Whale Pass**	**8.64**	**86**	Pn		**Pn**	**21 13 34.3**	**-1.5**
MLY	**Manley**	**8.69**	**354**	Pn		**Pn**	**21 13 37.0**	**+0.5**
J17K	**VABM Dome**	**8.72**	**327**	Pn		**Pn**	**21 13 37.9**	**+0.9**
POKR	**Poker Plat Res**	**8.73**	**3**	Pn		**Pn**	**21 13 38.8**	**+1.7**
CRAG	**Craig**	**8.76**	**90**	Pn		**Pn**	**21 13 37.1**	**-0.4**
L14K	**Kuka Creek**	**8.77**	**310**	Pn		**Pn**	**21 13 39.5**	**+1.9**
K15K	**Wolf Creek Mou**	**8.81**	**317**	Pn		**Pn**	**21 13 39.8**	**+1.6**
DAWY	**Dawson**	**8.92**	**27**	Pn		**Pn**	**21 13 40.5**	**+0.8**
I21K	**Tanana**	**8.92**	**351**			**Pn**	**21 13 41.3**	**+1.6**
J16K	**Anvik River**	**9.12**	**324**	Pn		**Pn**	**21 13 44.1**	**+1.7**
Q32M	**Nakina River**	**9.12**	**67**	Pn		**Pn**	**21 13 43.5**	**+0.9**
P33M	**Teslin, Yukon**	**9.14**	**59**	Pn		**Pn**	**21 13 43.9**	**+1.1**
K29M	**Barlow Dome**	**9.26**	**32**	Pn		**Pn**	**21 13 46.5**	**+2.1**
I26K	**Coal Creek Min**	**9.29**	**14**	Pn		**Pn**	**21 13 46.1**	**+1.4**
N32M	**Quiet Lake**	**9.35**	**53**	Pn		**Pn**	**21 13 46.9**	**+1.3**
H24K	**Noodor Dome**	**9.44**	**2**	Pn		**Pn**	**21 13 49.8**	**+2.9**
H21K	**Melozitna Rive**	**9.47**	**349**	Pn		**Pn**	**21 13 47.9**	**+0.7**

*NEIC **15** 21:19:54.4±1.1,56°.43N±0°.10×148°.67W±0°.09, h21km±7km, ML3.9/52, ML3.7(AEIC), Error ellipse: s-maj=13.8km s-min=7.2km az=182.0*
*AEIC **15** 21:19:56.0±1.4,56°.3N±0°.1×148°.6W±0°.1, h8km±7km, Error ellipse: s-maj=15.0km s-min=8.0km az=175.0*

ISC 15 21:19:51.8±1.9,56°.4N±0°.1×148°.67W±0°.06, h10km, n98, σ1§11/104, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KDAK	**Kodiak Island**	**2.56**	**305**			**Pn**	**21 20 33.4**	**+0.1**
KDAK						**Sn**	**21 21 02.3**	**-2.1**
OHAK	**Old Harbor**	**2.68**	**290**			**Pn**	**21 20 35.9**	**+1.0**
OHAK						**Sn**	**21 21 05.5**	**-1.9**
OHAK	**Old Harbor**	**2.68**	**290**	P		**Pn**	**21 20 35.9**	**+1.0**
	baz=107							
OHAK				S		**Sn**	**21 21 05.5**	**-1.9**
	baz=107							
SYI	**Shuyak Island**	**3.01**	**320**			**Pn**	**21 20 40.3**	**+0.8**
SYI						**Sn**	**21 21 14.0**	**-1.5**
Q20K	**Shuyak Island**	**3.01**	**320**	P		**Pn**	**21 20 40.3**	**+0.8**
	baz=137							
Q20K				S		**Sn**	**21 21 14.0**	**-1.5**
	baz=137							
SII	**Sitkinak Islan**	**3.07**	**276**			**Sn**	**21 21 16.4**	**-0.6**
SII	**Sitkinak Islan**	**3.07**	**276**	S		**Sn**	**21 21 16.4**	**-0.6**
	baz=92							
CNPM	**China Poot**	**3.44**	**338**			**Pn**	**21 20 46.4**	**+0.9**
CNPM						**Sn**	**21 21 25.0**	**-1.2**
BRSE	**Bradley Lake S**	**3.55**	**343**			**Pn**	**21 20 47.4**	**+0.5**
BRSE	**Bradley Lake S**	**3.55**	**343**	P		**Pn**	**21 20 47.4**	**+0.5**
	baz=161							
BRLK	**Bradley Lake**	**3.59**	**342**			**Pn**	**21 20 48.0**	**+0.4**
BRLK						**Sn**	**21 21 27.6**	**-2.4**
Q19K	**Cape Douglas,**	**3.70**	**316**			**Pn**	**21 20 51.2**	**+2.2**
Q19K						**Sn**	**21 21 37.6**	**+5.0**
Q19K				IAML			21 21 46.5	
	comp=E,80nm,1.2s							
Q19K	**Cape Douglas,**	**3.70**	**316**	P		**Pn**	**21 20 50.7**	**+1.7**
	baz=132							
KAKN	**Katmai Knife C**	**3.96**	**302**			**Pn**	**21 20 54.2**	**+1.5**
P19K	**Oil Pt**	**4.08**	**325**			**Pn**	**21 20 55.0**	**+0.8**
P19K	**Oil Pt**	**4.08**	**325**	P		**Pn**	**21 20 55.0**	**+0.8**
	baz=142							
HIN	**Hinchinbrook I**	**4.19**	**15**			**Pn**	**21 20 56.1**	**+0.4**
HIN	**Hinchinbrook I**	**4.19**	**15**	IAML			21 21 42.1	
	comp=N,80nm,1.1s							
KAIM	**Kayak Island**	**4.21**	**31**	Pn		**Pn**	**21 20 55.2**	**-0.7**
KAIM				IAML			21 21 56.9	
	comp=N,54nm,1.3s							
KAIM				IAML			21 22 35.4	
	comp=E,53nm,1.3s							
SLKM	**Skilak Lake**	**4.22**	**350**			**Pn**	**21 20 56.6**	**+0.4**
O20K	**Slope Mountain**	**4.26**	**332**			**Pn**	**21 20 57.6**	**+0.9**
O20K	**Slope Mountain**	**4.26**	**332**	P		**Pn**	**21 20 57.6**	**+0.9**
	baz=149							
IVE	**Iliamna Volcan**	**4.31**	**330**			**Pn**	**21 20 57.5**	**0.0**
ILSW	**Iliamna Southw**	**4.32**	**329**			**Pn**	**21 20 58.5**	**+0.9**
SUCK	**Suckling Hills**	**4.52**	**33**	Pn		**Pn**	**21 21 00.8**	**+0.6**
SUCK				IAML			21 22 57.3	
	comp=N,44nm,1.5s							
FID	**Port Fidalgo**	**4.53**	**14**	Pn		**Pn**	**21 21 00.7**	**+0.3**
FID				IAML			21 23 54.0	
	comp=E,56nm,0.1s							
FID				IAML			21 23 57.1	
	comp=N,43nm,0.3s							
RED	**Redoubt Volcan**	**4.59**	**334**			**Pn**	**21 21 01.6**	**+0.4**
HMT	**Hamilton**	**4.60**	**28**	Pn		**Pn**	**21 21 02.1**	**+0.7**
HMT				IAML			21 21 59.7	
	comp=E,72nm,1.1s							
HMT				IAML			21 22 03.7	
	comp=N,52nm,1.2s							
RDSO	**Redoubt South**	**4.62**	**334**			**Pn**	**21 21 02.0**	**+0.3**
RSO	**Redoubt South**	**4.62**	**334**	Pn		**Pn**	**21 21 02.1**	**+0.2**
P18K	**Big Mountain,**	**4.62**	**314**			**Pn**	**21 21 02.5**	**+0.8**
P18K	**Big Mountain,**	**4.62**	**314**	P		**Pn**	**21 21 02.7**	**+1.0**
	baz=128							
RDT	**Redoubt**	**4.64**	**337**			**Pn**	**21 21 02.1**	**+0.2**
NCT	**North Crescent**	**4.75**	**334**			**Pn**	**21 21 03.9**	**+0.4**
RC01	**Rabbit Creek A**	**4.76**	**354**	Pn		**Pn**	**21 21 02.6**	**-0.9**
BERG	**Berg Lake**	**4.80**	**31**			**Pn**	**21

NEIC ***15*** *21:23:03.5±1.4,59.80N±0.03×152.95W±0.05, h106km,4km, Error ellipse: s-maj=5.0km s-min=3.8km az=178.0*

AEIC ***15*** *21:23:04.7±1.6,59.81N±0.03×152.95W±0.05, h103km,4km, ML3.5,ML3.7/175(NEIC), Error ellipse: s-maj=4.8km s-min=3.7km az=178.0*

ISC 15 21:23:03.4±0.6, 59.79N±0.03×152.89W±0.03, h111km±5km, n383, σ0s81/385, mb3.8/8, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
P19K	**Oil Pt**	**0.23**	**231**		**Pn**	**21 23 18.8**	**-0.2**
P19K				Sn	**Sn**	**21 23 30.0**	**-0.7**
P19K	**Oil Pt**	**0.23**	**231**	P	**Pn**	**21 23 18.8**	**-0.2**
	baz=48						
P19K				S	**Sn**	**21 23 30.0**	**-0.7**
	baz=48						
ILSW	**Iliamna Southw**	**0.23**	**326**		**Pn**	**21 23 18.5**	**-0.7**
ILSW					**Sn**	**21 23 30.0**	**-1.0**
ILSW				IAML		21 23 30.7	
	comp=E,2μm,0.7s						
ILSW				IAML		21 23 30.7	
	comp=N,2μm,0.4s						
IVE	**Iliamna Volcan**	**0.23**	**344**		**Pn**	**21 23 18.7**	**-0.5**
IVE					**Sn**	**21 23 30.2**	**-0.7**
O20K	**Slope Mountain**	**0.32**	**25**		**Pn**	**21 23 19.3**	**-0.2**
O20K					**Sn**	**21 23 31.4**	**0.0**
O20K	**Slope Mountain**	**0.32**	**25**	P	**Pn**	**21 23 19.2**	**-0.2**
	baz=207						
O20K				S	**Sn**	**21 23 31.4**	**0.0**
	baz=207						
AU22	**Augustine Moun**	**0.49**	**209**		**Pn**	**21 23 20.1**	**-0.1**
AUL	**Augustine Lava**	**0.50**	**214**		**Pn**	**21 23 20.4**	**+0.1**
AUCH	**Augustine Cone**	**0.52**	**213**		**Pn**	**21 23 20.4**	**-0.2**
AUCH					**Sn**	**21 23 33.1**	**-0.3**
RED	**Redoubt Volcan**	**0.63**	**5**		**Pn**	**21 23 21.0**	**-0.4**
RED					**Sn**	**21 23 33.7**	**-1.2**
HOM	**Homer**	**0.65**	**102**		**Pn**	**21 23 21.7**	**+0.3**
HOM					**Sn**	**21 23 35.5**	**+0.7**
HOM	**Homer**	**0.65**	**102**	P	**Pn**	**21 23 21.7**	**+0.3**
	baz=283						
HOM				S	**Sn**	**21 23 35.5**	**+0.7**
	baz=283						
RDSO	**Redoubt South**	**0.67**	**6**		**Pn**	**21 23 21.4**	**-0.4**
RDSO					**Sn**	**21 23 34.3**	**-1.2**
RSO	**Redoubt South**	**0.67**	**6**		**Pn**	**21 23 21.6**	**-0.2**
RDWB	**Redoubt West**	**0.70**	**2**		**Pn**	**21 23 21.6**	**-0.4**
NCT	**North Crescent**	**0.77**	**358**		**Pn**	**21 23 22.2**	**-0.4**
RDJH	**Redoubt Jeurge**	**0.80**	**3**		**Pn**	**21 23 22.5**	**-0.4**
RDJH					**Sn**	**21 23 36.9**	**-0.6**
DFR	**Drift River**	**0.81**	**7**		**Pn**	**21 23 22.6**	**-0.2**
RDT	**Redoubt**	**0.82**	**17**		**Pn**	**21 23 36.6**	**-1.0**
O19K	**Port Alsworth**	**0.82**	**300**		**Pn**	**21 23 22.6**	**-0.3**
O19K	**Port Alsworth**	**0.82**	**300**	Sn	**Sn**	**21 23 36.5**	**-1.1**
O19K				IAML		21 23 37.3	
	comp=N,3μm,0.4s						
O19K				IAML		21 23 38.0	
	comp=E,2μm,0.4s						
O19K	**Port Alsworth**	**0.82**	**300**	P	**Pn**	**21 23 22.4**	**-0.5**
	baz=119						
CNPM	**China Poot**	**0.88**	**107**		**Pn**	**21 23 23.6**	**+0.1**
CNPM					**Sn**	**21 23 38.2**	**-0.4**
CNPM				IAML		21 23 39.0	
	comp=E,2μm,0.3s						
CNPM				IAML		21 23 40.4	
	comp=N,3μm,0.7s						
Q19K	**Cape Douglas,**	**0.95**	**204**		**Pn**	**21 23 24.0**	**-0.2**
Q19K	**Cape Douglas,**	**0.95**	**204**	Sn	**Sn**	**21 23 38.8**	**-1.1**
Q19K				IAML		21 23 40.9	
	comp=E,1μm,0.6s						
Q19K				IAML		21 23 43.6	
	comp=N,872nm,0.6s						
Q19K	**Cape Douglas,**	**0.95**	**204**	P	**Pn**	**21 23 23.8**	**-0.4**
	baz=23						
BRLK	**Bradley Lake**	**1.01**	**91**		**Pn**	**21 23 24.8**	**0.0**
BRLK				IAML		21 23 42.4	
	comp=N,2μm,0.2s						
BRLK	**Bradley Lake**	**1.01**	**91**		**Sn**	**21 23 40.9**	**-0.1**
BRSE	**Bradley Lake S**	**1.09**	**92**		**Pn**	**21 23 25.6**	**0.0**
BRSE					**Sn**	**21 23 42.0**	**-0.3**
BRSE	**Bradley Lake S**	**1.09**	**92**	P	**Pn**	**21 23 25.6**	**0.0**
	baz=274						
BRSE				S	**Sn**	**21 23 42.2**	**-0.1**
	baz=274						
O18K	**Koktuh Hills**	**1.17**	**274**		**Pn**	**21 23 26.1**	**-0.4**
O18K	**Koktuh Hills**	**1.17**	**274**	IAML		21 23 43.5	
	comp=N,626nm,0.6s						
O18K				IAML		21 23 43.8	
	comp=E,1μm,0.7s						
O18K	**Koktuh Hills**	**1.17**	**274**	P	**Pn**	**21 23 26.1**	**-0.4**
	baz=92						
Q20K	**Shuyak Island**	**1.22**	**168**	P	**Pn**	**21 23 27.1**	**+0.1**
	baz=348						
Q20K				S	**Sn**	**21 23 44.6**	**-0.2**
	baz=348						
SYI	**Shuyak Island**	**1.22**	**168**		**Pn**	**21 23 27.2**	**+0.3**
SYI					**Sn**	**21 23 44.3**	**-0.5**
SYI	**Shuyak Island**	**1.22**	**168**	IAML		21 23 45.4	
	comp=N,2μm,0.5s						
SYI				IAML		21 23 47.0	
	comp=E,1μm,0.4s						
P18K	**Big Mountain,**	**1.26**	**252**		**Pn**	**21 23 26.8**	**-0.7**
P18K	**Big Mountain,**	**1.26**	**252**	Sn	**Sn**	**21 23 44.2**	**-1.5**
P18K				IAML		21 23 44.8	
	comp=E,357nm,0.6s						
P18K	**Big Mountain,**	**1.26**	**252**	P	**Pn**	**21 23 26.8**	**-0.7**
	baz=70						
N19K	**Bonanza Creek**	**1.29**	**323**		**Pn**	**21 23 27.6**	**-0.3**
N19K	**Bonanza Creek**	**1.29**	**323**	IAML		21 23 45.8	
	comp=E,314nm,0.7s						
N19K				IAML		21 23 46.4	
	comp=N,310nm,1.0s						
N19K	**Bonanza Creek**	**1.29**	**323**	P	**Pn**	**21 23 27.6**	**-0.3**
	baz=142						
CAPN	**Captain Cook N**	**1.30**	**41**		**Pn**	**21 23 29.8**	**+1.9**
CAPN	**Captain Cook N**	**1.30**	**41**	Sn	**Sn**	**21 23 48.6**	**+2.1**
CAPN	**Captain Cook N**	**1.30**	**41**	P	**Pn**	**21 23 29.8**	**+1.9**
	baz=223						
KAPH	**Katmai Pasha**	**1.42**	**213**		**Pn**	**21 23 29.7**	**+0.4**
N20K	**Mount Spurr**	**1.45**	**13**	P	**Pn**	**21 23 29.6**	**-0.1**
	baz=194						
N20K				S	**Sn**	**21 23 49.0**	**-0.7**
	baz=194						
SPCR	**Spurr Chakacha**	**1.45**	**13**		**Pn**	**21 23 29.6**	**-0.1**
SPCR					**Sn**	**21 23 49.0**	**-0.7**
SPCN	**Chakachatna No**	**1.48**	**13**		**Pn**	**21 23 30.2**	**+0.2**
SPBG	**Spurr Blockage**	**1.49**	**10**		**Pn**	**21 23 30.4**	**+0.2**
SLKM	**Skilak Lake**	**1.51**	**61**		**Pn**	**21 23 30.1**	**-0.3**
SLKM					**Sn**	**21 23 49.5**	**-1.4**
SPCP	**Crater Peak Br**	**1.52**	**14**		**Pn**	**21 23 30.8**	**+0.2**
SPCP					**Sn**	**21 23 51.6**	**+0.3**
SPCG	**Spurr Capps Gl**	**1.56**	**16**		**Pn**	**21 23 31.1**	**0.0**
KAHC	**Katmai Hardscr**	**1.58**	**224**	P	**Pn**	**21 23 31.5**	**+0.1**
	baz=42						
O22K	**Cooper Landing**	**1.73**	**65**		**Pn**	**21 23 33.1**	**+0.1**
O22K	**Cooper Landing**	**1.73**	**65**	Sn	**Sn**	**21 23 54.9**	**-0.5**
O22K	**Cooper Landing**	**1.73**	**65**	P	**Pn**	**21 23 33.1**	**+0.1**
	baz=248						
O22K				S	**Sn**	**21 23 54.2**	**-1.3**
	baz=248						
N18K	**Kilae Creek**	**1.74**	**302**		**Pn**	**21 23 32.7**	**-0.5**
N18K	**Kilae Creek**	**1.74**	**302**	P	**Pn**	**21 23 32.7**	**-0.5**
	baz=120						
SEW	**Seward**	**1.76**	**78**	P	**Pn**	**21 23 33.0**	**-0.3**
	baz=261						
STLK	**Strandline Lak**	**1.79**	**16**		**Pn**	**21 23 33.8**	**0.0**
SVW2	**Sparrevohn**	**1.87**	**316**		**Pn**	**21 23 34.2**	**-0.6**
SVW2	**Sparrevohn**	**1.87**	**316**	P	**Pn**	**21 23 34.1**	**-0.6**
KAKN	**Katmai Knife C**	**1.88**	**218**		**Pn**	**21 23 35.1**	**+0.2**
KAKN					**Sn**	**21 23 57.6**	**-1.3**
FIS	**Fire Island**	**1.89**	**43**		**Pn**	**21 23 36.1**	**+1.1**
FIS				IAML		21 24 01.9	
	comp=E,817nm,0.3s						
FIS				IAML		21 24 05.0	
	comp=N,874nm,0.3s						
P17K	**Kvichak River**	**1.91**	**253**		**Pn**	**21 23 35.4**	**+0.2**
P17K	**Kvichak River**	**1.91**	**253**	P	**Pn**	**21 23 35.4**	**+0.2**
	baz=70						
SUA	**Susitna One**	**1.98**	**31**	Pn	**Pn**	**21 23 36.6**	**+0.4**
SUA				IAML		21 24 03.5	
	comp=N,996nm,0.8s						
SUA	**Susitna One**	**1.98**	**31**		**Sn**	**21 24 01.2**	**-0.1**
SUA	**Susitna One**	**1.98**	**31**	P	**Pn**	**21 23 36.6**	**+0.4**
	baz=213						
SUA				S	**Sn**	**21 24 01.4**	**+0.1**
	baz=213						
KDAK	**Kodiak Island**	**2.02**	**175**	IAML		21 24 02.2	
	comp=N,715nm,0.3s						
KDAK	**Kodiak Island**	**2.02**	**175**	P	**Pn**	**21 23 36.2**	**-0.5**
	baz=355						
KDAK				S	**Sn**	**21 24 01.2**	**-0.9**
	baz=355						
KDAK	**Kodiak Island**	**2.02**	**175**	P	**Pn**	**21 23 36.0**	**-0.7**
	comp=N,423nm,0.3s,baz=28,slow=8.3,SNR=86						
KDAK				S	**Sn**	**21 24 01.0**	**-1.1**
	comp=N,234nm,0.3s,baz=161,slow=24,SNR=28						
RC01	**Rabbit Creek A**	**2.03**	**49**		**Pn**	**21 23 36.7**	**-0.1**
RC01	**Rabbit Creek A**	**2.03**	**49**	P	**Pn**	**21 23 37.1**	**+0.3**
	baz=232						
M20K	**Styx River**	**2.10**	**357**		**Pn**	**21 23 37.8**	**+0.1**
M20K	**Styx River**	**2.10**	**357**	P	**Pn**	**21 23 37.9**	**+0.1**
	baz=177						
O17K	**Koliganek Bris**	**2.13**	**271**		**Pn**	**21 23 37.8**	**-0.2**
O17K	**Koliganek Bris**	**2.13**	**271**	P	**Pn**	**21 23 37.8**	**-0.2**
	baz=88						
Q17K	**Contact Creek**	**2.18**	**227**	P	**Pn**	**21 23 39.0**	**+0.2**
	baz=44						
M18K	**Stony River**	**2.23**	**321**		**Pn**	**21 23 38.9**	**-0.5**
M18K	**Stony River**	**2.23**	**321**	P	**Pn**	**21 23 38.9**	**-0.5**
	baz=138						
Q16K	**King Salmon**	**2.24**	**242**	P	**Pn**	**21 23 39.5**	**+0.1**
	baz=58						
M19K	**Big River Lodg**	**2.24**	**341**		**Pn**	**21 23 39.4**	**-0.1**
N17K	**Nushagak Hills**	**2.27**	**291**		**Pn**	**21 23 39.5**	**-0.3**
N17K	**Nushagak Hills**	**2.27**	**291**	P	**Pn**	**21 23 39.5**	**-0.3**
	baz=107						
SKT	**Skwentna**	**2.29**	**16**	Pn	**Pn**	**21 23 39.9**	**-0.2**
SKT				IAML		21 24 11.2	
	comp=N,252nm,0.4s						
SKT				IAML		21 24 15.8	
	comp=E,204nm,0.6s						
SKT	**Skwentna**	**2.29**	**16**		**Sn**	**21 24 09.3**	**+1.1**
SKT	**Skwentna**	**2.29**	**16**	P	**Pn**	**21 23 39.9**	**-0.2**
	baz=198						
SKT				S	**Sn**	**21 24 09.4**	**+1.1**
	baz=198						
R18K	**Karluk**	**2.38**	**201**		**Pn**	**21 23 40.5**	**-0.7**
R18K	**Karluk**	**2.38**	**201**	IAML		21 24 11.8	
	comp=N,754nm,0.5s						
R18K	**Karluk**	**2.38**	**201**	P	**Pn**	**21 23 40.7**	**-0.5**
	baz=19						
M22K	**Willow**	**2.39**	**33**		**Pn**	**21 23 41.7**	**+0.4**
M22K	**Willow**	**2.39**	**33**	P	**Pn**	**21 23 41.5**	**+0.2**
	baz=216						
L19K	**White Mountain**	**2.58**	**339**	Pn	**Pn**	**21 23 43.6**	**-0.2**
L19K				IAML		21 24 16.0	
	comp=E,128nm,0.8s						
PMR	**Palmer**	**2.58**	**44**	Pn	**Pn**	**21 23 43.0**	**-0.9**
PMR				IAML		21 24 14.5	
	comp=E,285nm,0.4s						
PMR				IAML		21 24 15.8	
	comp=N,294nm,0.5s						
PMR	**Palmer**	**2.58**	**44**	P	**Pn**	**21 23 43.3**	**-0.5**
PMR	**Palmer**	**2.58**	**44**	P	**Pn**	**21 23 43.0**	**-0.9**
	baz=228						
OHAK	**Old Harbor**	**2.59**	**185**	Pn	**Pn**	**21 23 42.9**	**-1.0**
OHAK				IAML		21 24 14.2	
	comp=N,258nm,0.4s						
OHAK				IAML		21 24 20.1	
	comp=E,256nm,0.6s						
OHAK	**Old Harbor**	**2.59**	**185**	P	**Pn**	**21 23 43.0**	**-1.0**
OHAK	**Old Harbor**	**2.59**	**185**	P	**Pn**	**21 23 43.0**	**-1.0**
	baz=4.3						
O16K	**Kokwok River B**	**2.65**	**268**	Pn	**Pn**	**21 23 44.1**	**-0.6**
O16K				IAML		21 24 32.3	
	comp=N,91nm,0.7s						
P16K	**Nushagak River**	**2.72**	**256**		**Pn**	**21 23 46.2**	**+0.6**
P16K	**Nushagak River**	**2.72**	**256**	P	**Pn**	**21 23 46.2**	**+0.6**
	baz=71						
KNK	**Knik Glacier**	**2.72**	**51**	P	**Pn**	**21 23 45.0**	**-0.8**
	baz=235						
L20K	**Farewell, AK**	**2.74**	**350**		**Pn**	**21 23 46.1**	**+0.2**
L20K	**Farewell, AK**	**2.74**	**350**	P	**Pn**	**21 23 46.1**	**+0.2**
	baz=170						
PLK3	**Peulik 3**	**2.75**	**221**		**Pn**	**21 23 46.7**	**+0.6**
M17K	**Holitna River**	**2.76**	**308**	Pn	**Pn**	**21 23 45.8**	**-0.4**
M17K				IAML		21 24 37.0	
	comp=E,92nm,0.7s						
M17K				IAML		21 24 45.7	
	comp=N,90nm,0.7s						
M17K	**Holitna River**	**2.76**	**308**	P	**Pn**	**21 23 45.9**	**-0.3**
	baz=124						
P23K	**Montague Islan**	**2.77**	**83**	P	**Pn**	**21 23 46.4**	**+0.1**
	baz=268						
GHO	**Glory Hole Cre**	**2.78**	**43**		**Sn**	**21 24 17.5**	**-2.2**
GHO	**Glory Hole Cre**	**2.78**	**43**	IAML		21 24 18.8	
	comp=N,498nm,0.3s						
GHO				IAML		21 24 20.7	
	comp=E,485nm,0.4s						
CUT	**Chulitna**	**2.91**	**25**		**Pn**	**21 23 48.1**	**0.0**
CUT				IAML		21 24 23.4	
	comp=N,323nm,0.4s						
CUT				IAML		21 24 26.9	
	comp=E,478nm,0.4s						
SML	**Sawmill**	**3.01**	**46**	Pn	**Pn**	**21 23 48.9**	**-0.8**
SML				IAML		21 24 24.4	
	comp=E,259nm,0.7s						
SML				IAML		21 24 32.0	
	comp=N,252nm,0.6s						
SML	**Sawmill**	**3.01**	**46**	P	**Pn**	**21 23 48.8**	**-0.8**
	baz=230						
N16K	**Nishlik Lake**	**3.02**	**286**		**Pn**	**21 23 49.9**	**+0.2**
L18K	**Granite Mounta**	**3.06**	**324**	P	**Pn**	**21 23 49.6**	**-0.5**
	baz=141						
PPLA	**Purkeypile**	**3.13**	**6**	P	**Pn**	**21 23 51.8**	**+0.6**
	baz=187						
M23K	**Glacier View**	**3.23**	**49**		**Sn**	**21 24 27.6**	**-2.6**
M23K	**Glacier View**	**3.23**	**49**	P	**Pn**	**21 23 51.8**	**-0.7**
	baz=234						
M23K				S	**Sn**	**21 24 27.7**	**-2.5**
	baz=234						
M16K	**Timber Creek**	**3.25**	**295**	Pn	**Pn**	**21 23 52.8**	**0.0**
M16K	**Timber Creek**	**3.25**	**295**	P	**Pn**	**21 23 52.8**	**0.0**
	baz=110						
HIN	**Hinchinbrook I**	**3.26**	**77**		**Pn**	**21 23 52.2**	**-0.6**
HIN	**Hinchinbrook I**	**3.26**	**77**	IAML		21 24 32.7	
	comp=E,271nm,0.5s						
R16K	**Pilot Point**	**3.31**	**230**		**Pn**	**21 23 54.1**	**+0.7**
R16K	**Pilot Point**	**3.31**	**230**	IAML		21 24 34.5	
	comp=N,155nm,1.0s						
R16K				IAML		21 24 50.5	
	comp=E,142nm,1.4s						
SII	**Sitkinak Islan**	**3.32**	**192**	Pn	**Pn**	**21 23 52.8**	**-0.8**
SII				IAML		21 24 30.3	
	comp=N,230nm,0.7s						
SII	**Sitkinak Islan**	**3.32**	**192**	P	**Pn**	**21 23 52.6**	**-1.0**
SII	**Sitkinak Islan**	**3.32**	**192**	P	**Pn**	**21 23 52.5**	**-1.0**
	baz=11						
FID	**Port Fidalgo**	**3.33**	**71**		**Pn**	**21 23 52.1**	**-1.7**
Q23K	**Middleton Isla**	**3.34**	**93**	Pn	**Pn**	**21 23 53.5**	**-0.4**
Q23K				IAML		21 24 34.2	
	comp=N,195nm,1.3s						
Q23K				IAML		21 25 25.4	
	comp=E,168nm,1.4s						
MID	**Middleton Isla**	**3.35**	**93**		**Pn**	**21 23 53.8**	**-0.2**
MID	**Middleton Isla**	**3.35**	**93**	IAML		21 24 34.2	
	comp=N,193nm,1.1s						
MID				IAML		21 24 40.0	
	comp=E,174nm,1.5s						
SCM	**Sheep Creek Mo**	**3.41**	**51**	IAML		21 24 35.9	
	comp=E,342nm,0.4s						
SCM				IAML		21 24 36.4	
	comp=N,316nm,0.7s						
SCM	**Sheep Creek Mo**	**3.41**	**51**	P	**Pn**	**21 23 54.1**	**-0.8**
	baz=236						
TTA	**Tatalina**	**3.49**	**336**	Pn	**Pn**	**21 23 55.3**	**-0.6**
TTA	**Tatalina**	**3.49**	**336**	P	**Pn**	**21 23 55.3**	**-0.6**
TTA	**Tatalina**	**3.49**	**336**	P	**Pn**	**21 23 55.2**	**-0.6**
	baz=153						
L17K	**Donlin**	**3.53**	**314**	P	**Pn**	**21 23 55.7**	**-0.7**
	baz=129						
O15K	**Ungalikthiuk R**	**3.59**	**263**		**Pn**	**21 23 58.2**	**+0.9**
K20K	**Telida**	**3.62**	**352**		**Pn**	**21 23 57.6**	**0.0**
N15K	**Kwethluk River**	**3.64**	**279**	Pn	**Pn**	**21 23 58.8**	**+0.9**
N15K				IAML		21 24 32.2	
	comp=E,55nm,0.7s						
N15K				IAML		21 24 55.0	
	comp=N,40nm,1.4s						
N15K	**Kwethluk River**	**3.64**	**279**	P	**Pn**	**21 23 58.7**	**+0.9**
	baz=93						
EYAK	**Cordova Ski Ar**	**3.65**	**75**		**Pn**	**21 23 57.1**	**-0.8**
EYAK	**Cordova Ski Ar**	**3.65**	**75**	P	**Pn**	**21 23 57.5**	**-0.4**
	baz=261						
CAST	**Castle Rocks**	**3.66**	**6**	P	**Pn**	**21 23 57.9**	**-0.3**
	baz=186						
WAT1	**Susitna Watana**	**3.69**	**33**		**Pn**	**21 23 58.2**	**-0.4**
WAT1	**Susitna Watana**	**3.69**	**33**	P	**Pn**	**21 23 58.3**	**-0.4**
	baz=216						
WAT6	**Susitna Watana**	**3.75**	**40**		**Pn**	**21 23 58.8**	**-0.7**
WAT6	**Susitna Watana**	**3.75**	**40**	P	**Pn**	**21 23 58.9**	**-0.5**
	baz=224						
L16K	**Owhat River**	**3.76**	**304**		**Pn**	**21 23 59.4**	**-0.1**
L16K	**Owhat River**	**3.76**	**304**	P	**Pn**	**21 23 59.1**	**-0.4**
	baz=118						
DIV	**Divide**	**3.77**	**66**		**Pn**	**21 23 58.8**	**-0.9**
KLU	**Klutina**	**3.83**	**61**		**Pn**	**21 23 59.7**	**-0.8**
KLU	**Klutina**	**3.83**	**61**	IAML		21 24 42.3	
	comp=E,302nm,0.2s						
KLU				IAML		21 24 44.4	
	comp=N,700nm,0.4s						
KLU	**Klutina**	**3.83**	**61**	P	**Pn**	**21 23 59.7**	**-0.8**
	baz=247						
TRF	**Thorofare Moun**	**3.87**	**18**		**Pn**	**21 24 00.3**	**-0.8**
TRF	**Thorofare Moun**	**3.87**	**18**	IAML		21 24 47.3	
	comp=N,66nm,0.5s						
TRF				IAML		21 25 07.1	
	comp=E,61nm,0.7s						
KTH	**Kantishna Hill**	**3.89**	**13**		**Pn**	**21 24 00.5**	**-0.7**
KTH	**Kantishna Hill**	**3.89**	**13**	IAML		21 25 18.6	
	comp=N,51nm,1.0s						
KTH				IAML		21 25 21.7	
	comp=E,56nm,0.8s						
K17K	**Iditarod**	**3.93**	**321**		**Pn**	**21 24 01.3**	**-0.4**
K17K	**Iditarod**	**3.93**	**321**	IAML		21 25 04.2	
	comp=E,50nm,0.9s						
M15K	**Kasigluk River**	**3.99**	**286**		**Pn**	**21 24 02.7**	**+0.1**
M24K	**Tolsona, Glenn**	**4.01**	**52**		**Pn**	**21 24 02.6**	**-0.3**
M24K	**Tolsona, Glenn**	**4.01**	**52**	P	**Pn**	**21 24 02.9**	**-0.1**
	baz=238						
RND	**Reindeer**	**4.11**	**26**	Pn	**Pn**	**21 24 03.9**	**-0.2**
RND				IAML		21 24 51.1	
	comp=E,65nm,0.2s						
RND				IAML		21 25 09.4	
	comp=N,47nm,0.7s						
J18K	**Innoko River**	**4.11**	**335**		**Pn**	**21 24 03.6**	**-0.6**
J18K	**Innoko River**	**4.11**	**335**	P	**Pn**	**21 24 03.7**	**-0.5**
	baz=152						
CHUM	**Lake Minchumin**	**4.11**	**4**		**Pn**	**21 24 03.9**	**-0.3**
GOAT	**Goat Mountain**	**4.15**	**76**		**Pn**	**21 24 04.0**	**-0.8**
RAGM	**Ragged Mountai**	**4.16**	**78**		**Pn**	**21 24 04.7**	**-0.2**
DHY	**Denali Highway**	**4.22**	**36**	IAML		21 24 54.9	
	comp=E,175nm,0.3s						
DHY				IAML		21 24 56.7	
	comp=N,152nm,0.4s						
DHY	**Denali Highway**	**4.22**	**36**	P	**Pn**	**21 24 05.3**	**-0.6**
	baz=221						
CHIR	**Chirikof Islan**	**4.24**	**201**		**Pn**	**21 24 04.7**	**-1.3**
CHIR	**Chirikof Islan**	**4.24**	**201**	IAML		21 24 51.9	
	comp=N,92nm,0.4s						
CHIR				IAML		21 24 54.5	
	comp=E,73nm,1.1s						
KAIM	**Kayak Island**	**4.27**	**85**		**Pn**	**21 24 06.7**	**+0.3**
KAIM	**Kayak Island**	**4.27**	**85**	IAML		21 25 00.3	
	comp=N,144nm,0.6s						
KAIM				IAML		21 25 12.6	
	comp=E,133nm,1.5s						
KAIM	**Kayak Island**	**4.27**	**85**	P	**Pn**	**21 24 06.8**	**+0.5**
	baz=272						
BMRM	**Bremner River**	**4.28**	**70**		**Pn**	**21 24 05.2**	**-1.2**
BMRM	**Bremner River**	**4.28**	**70**	P	**Pn**	**21 24 06.5**	**0.0**
	baz=258						
O14K	**Tigyukauivet M**	**4.30**	**266**		**Pn**	**21 24 07.8**	**+1.1**
O14K	**Tigyukauivet M**	**4.30**	**266**	IAML		21 25 27.7	
	comp=N,34nm,1.1s						
HMT	**Hamilton**	**4.36**	**79**		**Pn**	**21 24 07.5**	**0.0**
MCK	**McKinley**	**4.38**	**24**	P	**Pn**	**21 24 07.7**	**0.0**
	baz=207						
J19K	**Poorman**	**4.41**	**344**		**Pn**	**21 24 07.8**	**-0.3**
J19K	**Poorman**	**4.41**	**344**	P	**Pn**	**21 24 07.9**	**-0.3**
	baz=162						
BPAW	**Bear Paw Mtn.**	**4.41**	**11**	IAML		21 25 10.7	
	comp=N,23nm,1.5s						
BPAW	**Bear Paw Mtn.**	**4.41**	**11**	P	**Pn**	**21 24 07.0**	**-1.2**
	baz=193						
N14K	**Kuskokwak Cree**	**4.44**	**275**		**Pn**	**21 24 09.6**	**+1.1**
J20K	**Nowinta River**	**4.44**	**353**		**Pn**	**21 24 08.7**	**+0.1**
N25K	**Chitina, Valde**	**4.46**	**62**		**Pn**	**21 24 08.2**	**-0.7**
N25K	**Chitina, Valde**	**4.46**	**62**	IAML		21 25 00.5	
	comp=N,120nm,0.5s						
N25K				IAML		21 25 02.1	
	comp=E,106nm,0.6s						
N25K	**Chitina, Valde**	**4.46**	**62**	P	**Pn**	**21 24 08.3**	**-0.7**
	baz=250						
CHGN	**Chignik**	**4.57**	**222**	Pn	**Pn**	**21 24 09.9**	**-0.5**
CHGN				IAML		21 25 01.0	
	comp=N,83nm,0.5s						
HARP	**HAARP**	**4.57**	**52**		**Pn**	**21 24 10.2**	**-0.2**
HARP	**HAARP**	**4.57**	**52**	P	**Pn**	**21 24 10.3**	**-0.1**
	baz=239						
SUCK	**Suckling Hills**	**4.59**	**83**	Pn	**Pn**	**21 24 11.7**	**+1.0**
SUCK				IAML		21 25 03.4	
	comp=N,90nm,1.0s						
SUCK				IAML		21 25 06.9	
	comp=E,90nm,1.4s						
M14K	**Bethel**	**4.62**	**286**	Pn	**Pn**	**21 24 10.8**	**-0.1**
M14K				IAML		21 24 57.7	
	comp=N,30nm,1.4s						
M14K				IAML		21 26 15.0	
	comp=E,21nm,1.4s						
M14K	**Bethel**	**4.62**	**286**	P	**Pn**	**21 24 11.1**	**+0.2**
	baz=98						
L15K	**Ungalak Mounta**	**4.62**	**298**		**Pn**	**21 24 10.9**	**-0.2**
BERG	**Berg Lake**	**4.64**	**79**		**Pn**	**21 24 10.9**	**-0.4**
J17K	**VABM Dome**	**4.67**	**323**		**Pn**	**21 24

baz=202
WRH Wood River Hil 5.21 24 Pn 21 24 17.7 -1.2
WRH Wood River Hil 5.21 24 IAML 21 25 16.3
comp=N,18nm,0.9s
WRH IAML 21 25 19.7
comp=E,20nm,0.5s
BARK Barkley Ridge 5.24 79 Pn 21 24 20.0 +0.5
K24K Donnelly Dome 5.25 37 P **Pn 21 24 20.4 +0.9**
baz=223
M13K Dall Lake 5.27 281 Pn **Pn 21 24 21.1 +1.3**
M13K IAML 21 25 27.7
comp=E,24nm,1.4s
M13K IAML 21 27 42.4
comp=N,25nm,1.3s
ISLE Juniper Island 5.33 77 Pn 21 24 19.9 -0.8
PTPK Patty Peak 5.34 70 Pn 21 24 21.0 +0.1
KIAG Kiagna River 5.35 73 Pn 21 24 20.9 -0.1
MLY Manley 5.35 10 Pn **Pn 21 24 20.5 -0.4**
MLY Manley 5.35 10 P **Pn 21 24 20.4 -0.5**
baz=192
HDA Harding Lake 5.41 29 Pn 21 24 20.7 -0.9
HDA Harding Lake 5.41 29 P **Pn 21 24 20.9 -0.7**
baz=214
I21K Tanana 5.42 4 Pn 21 24 21.3 -0.5
BAGL Bagley Icefiel 5.44 78 Pn 21 24 22.7 +0.6
M26K Nabesna, AK 5.46 57 Pn 21 24 22.0 -0.4
MESA MESA 5.51 81 Pn 21 24 23.8 +0.6
MESA MESA 5.51 81 P **Pn 21 24 23.6 +0.4**
baz=271
I17K Unalakleet 5.52 321 Pn **Pn 21 24 23.0 -0.1**
COLA College 5.61 23 Pn 21 24 23.9 -0.5
COLA College 5.61 23 P **Pn 21 24 23.8 -0.5**
L26K Log Cabin Wild 5.61 51 Pn **Pn 21 24 24.1 -0.3**
I23K Minto, Yukon-K 5.62 15 Pn 21 24 24.3 -0.1
I23K Minto, Yukon-K 5.62 15 P **Pn 21 24 23.9 -0.5**
baz=199
MDM Murphy Dome 5.62 21 Pn 21 24 23.7 -0.8
GRNC Granite Creek 5.62 76 Pn 21 24 25.0 +0.3
BARN Barnard Glacie 5.71 72 Pn 21 24 26.2 +0.3
ILAR Eielson Array 5.72 27 P **Pn 21 24 24.7 -1.2**
comp=N,15nm,0.4s,baz=223,slow=13,SNR=164
ILAR S **Sn 21 25 26.2 -4.0**
comp=N,6.6nm,0.4s,baz=201,slow=28,SNR=7.3
H20K Anotleneega Mo 5.79 352 Pn 21 24 26.8 0.0
CTG Chitna Glacier 5.85 73 P **Pn 21 24 28.3 +0.6**
baz=264
CTGM Chitina Glacie 5.85 73 Pn 21 24 28.3 +0.5
H21K Melozitna Rive 5.89 0 Pn **Pn 21 24 27.5 -0.6**
POKR Poker Plat Res 5.91 23 Pn 21 24 27.9 -0.6
POKR Poker Plat Res 5.91 23 P **Pn 21 24 27.7 -0.7**
baz=208
TABL Table Mountain 5.91 79 Pn 21 24 29.0 +0.4
M27K Edge Creek, AK 5.93 60 Pn 21 24 28.5 -0.3
SCRK Sand Creek 5.94 41 Pn **Pn 21 24 28.0 -0.9**
SCRK Sand Creek 5.94 41 P **Pn 21 24 27.7 -1.2**
baz=229
H18K Honhosa River 5.95 337 Pn 21 24 28.4 -0.5
J25K Salcha River, 5.98 33 P **Pn 21 24 28.6 -0.8**
baz=220
H19K Roundabout Mou 5.98 346 Pn 21 24 29.1 -0.2
LOGN Logan Glacier 6.00 75 Pn 21 24 30.1 +0.3
SDPT Sand Point 6.04 226 Pn **Pn 21 24 29.5 -0.7**
SAMH Samovar Hills 6.09 82 Pn 21 24 31.9 +0.9
H17K Granite Mounta 6.11 331 Pn 21 24 31.2 +0.1
H17K Granite Mounta 6.11 331 P **Pn 21 24 30.9 -0.1**
baz=144
H22K Ishtalitna Cre 6.16 6 Pn 21 24 30.9 -1.0
CNBA Chernabura Isl 6.17 219 Pn **Pn 21 24 29.2 -2.7**
IMAR Indian Mountai 6.23 357 Pn **Pn 21 24 32.8 +0.1**
L27K Beaver Creek, 6.24 54 Pn **Pn 21 24 32.8 -0.1**
BCAR Beaver Creek A 6.25 54 Pn **Pn 21 24 32.8 -0.3**
PCA Pinnacle 6.36 82 Pn 21 24 35.0 +0.4
PINM Pinnacle 6.36 82 P **Pn 21 24 35.0 +0.4**
baz=273
BVCY Beaver Creek 6.39 61 Pn 21 24 35.8 +0.8
BVCY Beaver Creek 6.39 61 P **Pn 21 24 35.8 +0.8**
baz=251
YUK3 Moose Creek 6.40 67 Pn 21 24 35.8 +0.5
YUK3 Moose Creek 6.40 67 P **Pn 21 24 35.8 +0.5**
baz=258
H24K Noodor Dome 6.48 19 Pn **Pn 21 24 35.5 -0.7**
H24K Noodor Dome 6.48 19 P **Pn 21 24 35.3 -0.9**
baz=203
K27K Chicken 6.64 46 Pn 21 24 37.5 -0.8
YUK8 Steele Glacier 6.65 71 Pn 21 24 38.6 0.0
YUK8 Steele Glacier 6.65 71 P **Pn 21 24 38.6 0.0**
baz=263
G19K Purcell Mounta 6.65 345 Pn **Pn 21 24 38.3 -0.2**
G18K Tagagawik 6.67 339 Pn 21 24 38.3 -0.3
PRP Porcupine Dome 6.67 27 Pn 21 24 37.8 -1.0
BCPM Bancas Point 6.68 83 Pn **Pn 21 24 40.0 +1.2**
G21K Allakaket 6.75 358 Pn 21 24 39.4 -0.4
PNL Peninsula 6.82 85 P **Pn 21 24 41.0 +0.2**
PNL Peninsula 6.82 85 P **Pn 21 24 40.8 0.0**
baz=277
G23K Bananza Creek 7.06 9 Pn 21 24 42.7 -1.3
I26K Coal Creek Min 7.12 35 Pn 21 24 43.3 -1.5
O29M Mount Kennedy 7.19 80 Pn 21 24 46.1 +0.2
YUK4 Talbot Arm 7.19 71 P **Pn 21 24 46.6 +0.6**
baz=263
YUK6 Outpost Mounta 7.29 75 Pn 21 24 47.9 +0.5
YUK6 Outpost Mounta 7.29 75 P **Pn 21 24 47.9 +0.5**
baz=267
G24K Hadweenzic Riv 7.35 17 Pn **Pn 21 24 47.1 -0.8**
F20K Avaraart Lake 7.39 351 Pn 21 24 48.5 +0.1
YUK7 Dusty Glacier 7.40 78 Pn 21 24 49.4 +0.7
M29M Somme Creek 7.47 63 Pn 21 24 50.5 +0.8
ANM Nome 7.54 315 Pn **Pn 21 24 50.2 -0.3**
COLD Coldfoot 7.56 8 Pn 21 24 50.3 -0.4
COLD Coldfoot 7.56 8 P **Pn 21 24 50.3 -0.4**
baz=190
P29M Windy Craggy 7.67 85 Pn 21 24 52.6 +0.4
F17K Baldwin Pennin 7.67 334 Pn **Pn 21 24 53.2 +1.1**
HYT Haines Junctio 7.71 76 Pn **Pn 21 24 54.2 +1.3**
HYT Haines Junctio 7.71 76 P **Pn 21 24 53.5 +0.5**
baz=269
ISLZ Isanotski Laza 7.76 234 Pn 21 24 53.7 +0.2
I27K Kandik River 7.79 37 Pn 21 24 52.8 -1.1
I27K Kandik River 7.79 37 P **Pn 21 24 52.8 -1.1**
baz=227
E19K Redstone River 7.93 348 Pn 21 24 56.2 +0.5
N30M Aishikik Lake 7.95 71 Pn 21 24 55.4 -0.7
F15K North Star Dit 8.01 323 Pn **Pn 21 24 57.9 +1.1**
F24K Squaw Lake 8.06 14 Pn 21 24 57.0 -0.6
I28M Miner Creek 8.22 41 P **Pn 21 24 59.2 -0.6**
baz=232
G26K Porcupine Rive 8.25 26 Pn 21 24 58.5 -1.6
M30M Minto, Yukon 8.26 63 Pn 21 25 00.3 +0.1
M30M Minto, Yukon 8.26 63 P **Pn 21 25 00.1 -0.1**
baz=258
H27K Steamboat Moun 8.26 34 Pn 21 24 58.3 -2.0
E18K Tukpahlearik C 8.38 339 Pn 21 25 01.9 0.0
O30N Mendenhall 8.40 76 Pn **Pn 21 25 03.3 +1.0**
O30N Mendenhall 8.40 76 P **Pn 21 25 02.3 +0.1**
baz=271
E23K Chandalar 8.42 8 Pn 21 25 02.3 -0.2
E23K Chandalar 8.42 8 P **Pn 21 25 02.5 +0.1**
baz=191
F25K Christian Rive 8.46 19 Pn 21 25 01.1 -1.9
BMAR Burnt Mountain 8.50 22 Pn **Pn 21 25 02.0 -1.5**
E20K Nigu River 8.62 352 Pn 21 25 05.9 +0.8
F26K Sheenjek River 8.81 22 Pn 21 25 06.2 -1.5
F26K Sheenjek River 8.81 22 P **Pn 21 25 06.7 -1.1**
baz=210
S31K Pelican 8.82 95 Pn **Pn 21 25 08.3 +0.5**
SKAG Skagway 8.90 85 Pn **Pn 21 25 10.5 +1.6**
E25K Arctic Village 8.95 18 Pn **Pn 21 25 09.1 -0.5**
TOLK Toolik Lake Re 9.00 8 Pn **Pn 21 25 10.7 +0.4**
WHY Whitehorse 9.00 77 Pn **Pn 21 25 12.1 +1.7**
H29M Whitestone 9.21 39 Pn **Pn 21 25 11.8 -1.2**
M31M Drury Creek, Y 9.30 67 Pn **Pn 21 25 14.5 +0.2**
I30M Mount Dempster 9.36 47 Pn **Pn 21 25 16.4 +1.2**
SIT Sitka 9.61 99 Pn **Pn 21 25 17.7 -0.8**
JIS Juneau Island 9.66 91 Pn **Pn 21 25 20.9 +1.8**
P32M Atlin 9.69 83 Pn 21 25 21.0 +1.3
F28M Old Crow 9.72 31 Pn **Pn 21 25 18.9 -1.0**
F28M Old Crow 9.72 31 P **Pn 21 25 18.5 -1.5**
baz=222
C19K Lookout Ridge 9.78 346 Pn **Pn 21 25 20.6 -0.1**
FARO Faro, Yukon 9.79 67 Pn **Pn 21 25 21.7 +0.8**
S32K Killisnoo 9.82 96 Pn **Pn 21 25 22.2 +0.8**
P33M Teslin, Yukon 10.05 79 Pn **Pn 21 25 26.1 +1.5**
G30M tAoh Zraii Nji 10.35 39 Pn **Pn 21 25 28.0 -0.6**

H31M Peel River 10.38 47 Pn Pn 21 25 28.9 -0.1
B20K Meade River 10.41 352 Pn Pn 21 25 28.3 -0.9
Q32M Nakina River 10.55 86 Pn Pn 21 25 33.1 +1.7
MMPY Sheldon Lake, 10.79 66 Pn Pn 21 25 35.8 +1.2
G31M Satah River 10.96 41 Pn Pn 21 25 35.5 -1.1
R33M Jennings River 11.11 83 Pn Pn 21 25 40.6 +1.7
U33K Whale Pass 11.12 101 Pn Pn 21 25 38.5 -0.3
WRAK Wrangell Islan 11.37 98 Pn Pn 21 25 42.9 +0.7
F31M Tsiigehtchic 11.41 40 Pn Pn 21 25 41.9 -0.8
S34M Telegraph Cree 11.41 90 Pn Pn 21 25 45.6 +2.8
CRAG Craig 11.43 104 Pn Pn 21 25 43.3 +0.2
DLBC Dease Lake 11.81 87 Pn Pn 21 25 50.2 +2.0
DLBC Dease Lake 11.81 87 P **Pn 21 25 48.6 +0.4**
comp=N,2.5nm,0.3s,baz=269,slow=10,SNR=3.9
DLBC S **Sn 21 27 57.7 -0.3**
comp=N,1.3nm,0.2s,baz=329,slow=25,SNR=1.5
INK Inuvik 11.97 36 Pn Pn 21 25 50.3 +0.2
INK Inuvik 11.97 36 P **Pn 21 25 49.7 -0.4**
comp=N,1.7nm,0.5s,baz=230,slow=17,SNR=9.0
INK S **Sn 21 27 58.6 -2.9**
comp=N,0.6nm,0.6s,baz=264,slow=14,SNR=1.7
V35K Ketchikan 12.24 102 Pn 21 25 54.7 +0.9
DIB Dawson Inlet, 13.03 111 Pn Pn 21 26 05.9 +1.8
YKA Yellowknife Ar 18.49 65 P **P 21 27 11.3 +0.8**
comp=N,1.2nm,0.4s,baz=278,slow=10,SNR=39
SPITS Spitsbergen Ar 42.12 3 P **P 21 30 44.0 +0.1**
comp=N,7.3nm,1.1s,baz=350,slow=5.9,SNR=6.6
comp=N,7.3nm,1.1s
SCHQ Schefferville 43.63 57 P **P 21 30 56.8 +0.4**
comp=N,1.7nm,0.5s,baz=292,slow=9.0,SNR=5.3
comp=N,1.7nm,0.5s
TXAR Lajitas Array 44.86 110 P **P 21 31 06.8 +0.3**
comp=N,0.1nm,0.5s,baz=355,slow=9.4,SNR=1.4
comp=N,0.1nm,0.5s
KSRS Korea Array 53.28 283 P **P 21 32 10.5 0.0**
comp=N,0.6nm,0.7s,baz=33,slow=7.2,SNR=2.7
comp=N,0.6nm,0.7s
SONM Songino Array 54.96 306 P **P 21 32 23.1 +0.4**
comp=N,0.7nm,0.8s,baz=42,slow=6.4,SNR=6.3
comp=N,0.7nm,0.8s
ZALV Zalesovo Beam 57.57 324 P **P 21 32 41.2 +0.2**
comp=N,0.4nm,0.4s,baz=27,slow=7.0,SNR=3.7
comp=N,0.4nm,0.4s
EKA Eskdalemuir Ar 62.71 19 P **P 21 33 15.4 -0.5**
comp=N,0.6nm,0.4s,baz=327,slow=6.0,SNR=4.5
comp=N,0.6nm,0.4s
MKAR Makanchi Array 64.63 321 P **P 21 33 28.0 -0.8**
comp=N,0.4nm,0.6s,baz=36,slow=6.9,SNR=8.1
comp=N,0.4nm,0.6s

*NEIC **15** 21:31:14.4±0.6, 19°.24N±0°.03×155°.52W±0°.05, h35km±10km, Error ellipse: s-maj=7.3km s-min=3.5km az=64.0*
HVO 15 21:31:15.3±0.7, 19°.20N±0°.05×155°.51W±0°.06, h34km±7km, ML2.6/2, ML2.7/46(NEIC), Error ellipse: s-maj=8.3km s-min=7.1km az=141.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.11**	**71**		**Pb**	21 31 20.9	-0.4
KHU	**Kahuku**	**0.11**	**294**		**Pb**	21 31 20.9	-0.7
KHU					Sb	21 31 24.9	-1.0
HPO	**Honuapo**	**0.12**	**202**		**Pb**	21 31 20.8	-0.5
HLP	**Hilina Pali**	**0.21**	**63**		**Pn**	21 31 21.6	+0.4
HLP					Sb	21 31 26.3	-0.6
HLP				IAML		21 31 28.2	
	comp=E,668nm,1.3s						
HLP				IAML		21 31 30.3	
	comp=N,709nm,3.2s						
SDHHI	**Sand Hill**	**0.28**	**47**		**Pn**	21 31 21.9	-0.8
SDHHI					Sn	21 31 27.5	+0.6
SDHHI				IAML		21 31 30.3	
	comp=N,1µm,0.5s						
WRMHI	**West Rim**	**0.28**	**44**		**Pn**	21 31 21.9	-1.0
RIM	**Rim**	**0.29**	**49**		**Pn**	21 31 22.2	-1.0
RIM	**Rim**	**0.29**	**49**	IAML		21 31 33.9	
	comp=E,1µm,1.0s						
MWH	**Moku'aweowe**	**0.29**	**343**		**Pn**	21 31 22.2	-1.1
MWH					Sn	21 31 27.8	-0.5
UWE	**Uwekahuna**	**0.30**	**43**		**Pn**	21 31 22.2	-1.0
UWE	**Uwekahuna**	**0.30**	**43**	IAML		21 31 26.7	
	comp=N,1µm,1.1s						
UWE				IAML		21 31 27.5	
	comp=E,2µm,1.1s						
KKO	**Keanakako'i**	**0.30**	**49**		**Pn**	21 31 22.3	-1.0
KKO	**Keanakako'i**	**0.30**	**49**	IAML		21 31 27.1	
	comp=N,1µm,0.9s						
KKO				IAML		21 31 38.0	
	comp=E,926nm,1.2s						
OBL	**Observatory Le**	**0.30**	**44**		**Pn**	21 31 22.2	-1.1
UWB	**Uwekahuna B**	**0.31**	**44**		**Pn**	21 31 22.1	-1.3
UWB	**Uwekahuna B**	**0.31**	**44**	IAML		21 31 27.0	
	comp=E,335nm,2.6s						
UWB				IAML		21 31 33.0	
	comp=N,407nm,1.6s						
MLH	**Mauna Loa**	**0.31**	**21**		**Sn**	21 31 28.0	-0.5
MLH	**Mauna Loa**	**0.31**	**21**		**Pn**	21 31 22.5	-1.0
MLH				IAML		21 31 34.1	
	comp=N,395nm,1.4s						
MLH				IAML		21 31 35.1	
	comp=E,346nm,2.6s						
BYL	**Byron's Ledge**	**0.31**	**48**		**Pb**	21 31 22.2	-1.3
BYL				IAML		21 31 25.6	
	comp=N,959nm,1.0s						
BYL				IAML		21 31 31.5	
	comp=E,579nm,0.9s						
SBLHI	**Steaming Bluff**	**0.32**	**45**	IAML		21 31 27.7	
	comp=E,691nm,0.6s						
SBLHI				IAML		21 31 27.8	
	comp=N,598nm,0.3s						
SBLHI	**Steaming Bluff**	**0.32**	**45**		**Pb**	21 31 22.2	-1.3
SBLHI					Sn	21 31 27.5	-1.0
HATHI	**Halema'uma'u T**	**0.32**	**46**		**Pb**	21 31 22.3	-1.2
HATHI	**Halema'uma'u T**	**0.32**	**46**	IAML		21 31 34.6	
	comp=N,771nm,1.1s						
PUH	**Pauahi**	**0.33**	**58**		**Pb**	21 31 22.4	-1.2
PUH					Sn	21 31 27.7	-1.0
RSD	**Rainshed**	**0.34**	**40**		**Pb**	21 31 23.2	-0.6
RSD				IAML		21 31 27.8	
	comp=E,402nm,4.6s						
RSD					Sn	21 31 27.8	-1.4
RSD				IAML		21 31 32.4	
	comp=N,437nm,1.5s						
MLOA	**Mauna Loa Obse**	**0.34**	**349**		**Pb**	21 31 22.7	-1.4
MLOA	**Mauna Loa Obse**	**0.34**	**349**	IAML		21 31 28.5	
	comp=N,382nm,0.2s						
MLOA				IAML		21 31 28.7	
	comp=E,280nm,0.6s						
ALEP	**Alea Permanent**	**0.36**	**339**		**Pb**	21 31 22.8	-1.6
KNHH	**Kane Nui o Ham**	**0.36**	**61**		**Pb**	21 31 22.9	-1.2
HMH	**Humu'ula Sheep**	**0.40**	**3**		**Pb**	21 31 23.7	-1.1
HMH	**Humu'ula Sheep**	**0.40**	**3**	IAML		21 31 30.5	
	comp=N,383nm,0.3s						
HMH				IAML		21 31 30.7	
	comp=E,368nm,0.3s						
STCH	**Steam Cracks**	**0.41**	**63**		**Pb**	21 31 23.3	-1.3
STCH	**Steam Cracks**	**0.41**	**63**	IAML		21 31 27.8	
	comp=N,300nm,1.0s						
STCH				IAML		21 31 30.5	
	comp=E,343nm,0.1s						
NPOC	**North of Pu'u**	**0.42**	**63**	Pn	**Pb**	21 31 24.2	-0.7
NPOC				IAML		21 31 29.9	
	comp=N,409nm,0.3s						
NPOC				IAML		21 31 34.2	
	comp=E,341nm,0.8s						
JCUZ	**Jacuzzi**	**0.42**	**64**	IAML		21 31 40.8	
	comp=N,344nm,1.8s						
JCUZ				IAML		21 31 41.2	
	comp=E,446nm,2.8s						
JOKA	**Jonika Flow**	**0.53**	**64**		**Pb**	21 31 24.7	-1.7
KHLU	**Kahalu`u**	**0.53**	**317**		**Pb**	21 31 31.5	+4.9
KHLU	**Kahalu`u**	**0.53**	**317**	IAML		21 31 31.6	
	comp=N,603nm,0.1s						
KHLU				IAML		21 31 32.2	
	comp=E,378nm,0.3s						
HUH	**Hualalai**	**0.57**	**327**	Pn	Pn	21 31 26.1	-1.1
HUH				IAML		21 31 35.3	
	comp=N,410nm,0.7s						
HUH				IAML		21 31 36.9	
	comp=E,338nm,0.6s						
HPAH	**Hawaii Prepara**	**0.84**	**348**		Sn	21 31 38.2	-3.9

*NEIC **15** 22:00:44.5±2.3, 3°.6S±0°.2×152°.0E±0°.1, h275km±9km, mb4.2/18, Error ellipse: s-maj=25.1km s-min=19.3km az=211.0*
*IDC **15** 22:00:48.6±11.0, 3°.80S×151°.95E, h314km±127km, mb3.0/6, mbtmp3.8/7, Error ellipse: s-maj=52.5km s-min=38.7km az=138.0*
ISC 15 22:00:46.6±0.7, 3.74S±0°.09×152°.0E±0°.1, h300km, n41, σ1s39/41, mb4.0/15, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.50**	**155**	Pn	**Pn**	**22 01 20.8**	**-4.5**
RABL	**Rabaul**	**0.50**	**155**	P	**Pn**	**22 01 21.3**	**-4.0**
KAVG	**Kavieng**	**1.62**	**315**	P	**Pn**	**22 01 27.1**	**-3.5**
PMG	**Port Moresby**	**7.38**	**220**	Pn	**Pn**	**22 02 32.6**	**0.0**
COEN	**Coen**	**13.35**	**220**		**Pn**	**22 03 45.8**	**+0.2**
CTA	**Charters Tower**	**17.18**	**198**	P	**P**	**22 04 28.4**	**+0.9**
5.0nm,0.5s,baz=18,slow=11,SNR=11							
CTAO	**Charters Tower**	**17.18**	**198**	P	**Pn**	**22 04 28.6**	**-1.9**
CTAO				IAmb	IAmb	22 04 29.6	
	comp=Z,7.5nm,0.8s						
FAKI	**Fak Fak**	**19.69**	**272**	P	**P**	**22 04 55.5**	**+1.0**
FAKI				IAmb	IAmb	22 05 02.1	
	comp=Z,16nm,0.9s						
QIS	**Mount Isa**	**20.60**	**215**	P	**P**	**22 05 04.2**	**+0.5**
KDU	**Kakadu**	**21.22**	**244**	P	**P**	**22 05 08.4**	**-1.3**
MTN	**Manton Dam**	**22.48**	**245**	P	**P**	**22 05 21.1**	**-0.2**
MTN				IAmb	IAmb	22 05 27.4	
	comp=Z,9.7nm,0.9s						
DZM	**Mont Dzumac**	**23.02**	**144**	P	**P**	**22 05 27.0**	**+1.0**
DZM				IAmb	IAmb	22 05 32.4	
	comp=Z,13nm,1.0s						
DZM	**Mont Dzumac**	**23.02**	**144**	P	**P**	**22 05 27.4**	**+1.3**
WB0	**Warramunga Arr**	**23.40**	**226**	P	**P**	**22 05 30.1**	**+0.6**
WR0	**Warramunga Arr**	**23.42**	**225**	P	**P**	**22 05 30.4**	**+0.7**
WRAB	**Tennant Creek**	**23.54**	**225**	P	**P**	**22 05 31.3**	**+0.5**
WB2	**Warramunga Arr**	**23.54**	**225**	P	**P**	**22 05 31.1**	**+0.3**
WRA	**Warramunga Arr**	**23.55**	**225**	P	**P**	**22 05 30.7**	**-0.7**
WRA	**Warramunga Arr**	**23.55**	**225**	P	**P**	**22 05 31.2**	**+0.3**
comp=Z,53nm,0.3s,baz=48,slow=9.9,SNR=458							
AS01	**Alice Springs**	**26.36**	**220**	P	**P**	**22 05 56.5**	**+0.4**
ASAR	**Alice Springs**	**26.39**	**220**	P	**P**	**22 05 56.5**	**+0.1**
comp=Z,1.2nm,0.5s,baz=52,slow=8.2,SNR=24							
comp=Z,1.2nm,0.5s							
OOD	**Oodnadatta**	**28.52**	**211**	P	**P**	**22 06 15.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**29.45**	**239**	P	**P**	**22 06 22.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**29.45**	**239**	P	**P**	**22 06 23.0**	**-0.5**
STKA	**Stephens Creek**	**29.64**	**198**	P	**P**	**22 06 25.7**	**+0.8**
comp=Z,1.6nm,0.8s,baz=20,slow=11,SNR=3.5							
comp=Z,1.6nm,0.8s							
WRKA	**Warakurna**	**31.09**	**225**	P	**P**	**22 06 37.3**	**-0.5**
MULG	**Mulgathing**	**31.36**	**211**	P	**P**	**22 06 39.9**	**-0.1**
BBOO	**Buckleboo**	**32.53**	**205**	P	**P**	**22 06 49.9**	**-0.2**
BBOO				IAmb	IAmb	22 06 55.9	
	comp=Z,4.8nm,1.0s						
FORT	**Forrest**	**35.10**	**217**	P	**P**	**22 07 11.8**	**-0.3**
FORT				IAmb	IAmb	22 07 27.6	
	comp=Z,11nm,1.0s						
PSA00	**Pilbara Seismi**	**35.86**	**238**	P	**P**	**22 07 18.0**	**-0.8**
PSA00				IAmb	IAmb	22 07 30.7	
	comp=Z,13nm,1.1s						
RTZ	**Ruatahuna**	**41.53**	**150**	P	**P**	**22 08 07.2**	**+1.8**
TCW	**Tory Channel**	**42.35**	**155**	P	**P**	**22 08 12.8**	**+0.8**
MORW	**Morawa**	**42.37**	**230**	P	**P**	**22 08 11.3**	**-1.0**
KHZ	**Kahutara**	**43.06**	**156**	P	**P**	**22 08 17.6**	**+0.1**
KHZ				IAmb	IAmb	22 08 29.5	
	comp=Z,17nm,1.2s						
MLZ	**Mavora Lakes**	**43.81**	**164**	P	**P**	**22 08 23.7**	**+0.2**
MLZ				IAmb	IAmb	22 08 32.6	
	comp=Z,11nm,1.1s						
KULM	**Kulim**	**52.03**	**280**	P	**P**	**22 09 26.1**	**-0.5**
KULM				IAmb	IAmb	22 09 37.1	
	comp=Z,4.3nm,1.0s						
SONM	**Songino Array**	**64.98**	**328**	P	**P**	**22 10 55.7**	**+0.6**
comp=Z,0.2nm,0.9s,baz=108,slow=4.7,SNR=1.6							
comp=Z,0.2nm,0.9s							
MKAR	**Makanchi Array**	**78.98**	**319**	P	**P**	**22 12 19.7**	**+2.1**
comp=Z,0.1nm,0.5s,baz=81,slow=9.2,SNR=1.4							
comp=Z,0.1nm,0.5s							
ILAR	**Eielson Array**	**81.50**	**22**	P	**P**	**22 12 31.1**	**+0.5**
comp=Z,0.5nm,0.7s,baz=250,slow=5.3,SNR=7.8							
comp=Z,0.5nm,0.7s							
QSPA	**South Pole Qui**	**86.22**	**180**	P	**P**	**22 12 54.9**	**+0.5**
BVAR	**Borovoye Array**	**87.89**	**323**	P	**P**	**22 13 02.8**	**+0.3**
comp=Z,0.3nm,0.5s,baz=89,slow=5.9,SNR=2.5							
comp=Z,0.3nm,0.5s							

IDC 15 22:14:27.2±4.1, 13°.60S×167°.40E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=157.7km s-min=34.5km az=139.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.24**	**254**	P	P	22 20 57.9	+0.2
0.3nm,0.8s,baz=86,slow=9.6,SNR=1.4							
0.3nm,0.8s							
ASAR	**Alice Springs**	**33.21**	**248**	P	P	22 21 06.0	-0.2
0.3nm,0.6s,baz=78,slow=8.9,SNR=4.1							
0.3nm,0.6s							
SONM	**Songino Array**	**81.67**	**323**	P	P	22 26 47.6	0.0
0.1nm,0.4s,baz=121,slow=4.3,SNR=2.3							
0.1nm,0.4s							
ILAR	**Eielson Array**	**85.42**	**18**	P	P	22 27 06.3	0.0
0.4nm,0.7s,baz=236,slow=4.7,SNR=6.2							
0.4nm,0.7s							

JMA 15 22:37:37.2±0.1, 24°.2N×0°.7×123°.6E±0°.4, h28km, MV1.5/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.27**	**134**	P	Pb	22 37 44.0	-0.1
HATJ				*e*S	Sb	22 37 48.1	-0.6
JKRS	**Kuro-shima**	**0.38**	**91**	P	Pb	22 37 45.4	-0.3
JKRS				*e*S	Sb	22 37 51.7	+0.3
JIJ	**Ishigaki jima**	**0.52**	**77**	P	Pb	22 37 47.3	-0.6
JIJ				*e*S	Sb	22 37 54.7	-0.3
YOJ	**Yonaguni jima**	**0.57**	**292**	P	Pb	22 37 48.6	-0.2
YOJ				*e*S	Sb	22 37 55.8	-0.8
JYNG	**Yonagunijimaku**	**0.62**	**289**	*e*S	Sb	22 37 57.8	-0.3
JISG	**Ishigakijimahi**	**0.74**	**62**	*e*P	Pn	22 37 52.0	+0.2

TAP 15 22:37:47.2, 24°.02N×121°.64E, h14km, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**212**	*e*P	Pg	22 37 50.6	+0.7
baz=204							
TWD	**Chiawan**	**0.07**	**328**	P	Pg	22 37 50.6	+0.6
baz=334							
TWD				*e*S	Sg	22 37 52.9	+0.9
baz=334							
ETL	**Fush Village**	**0.14**	**355**	*e*S	Sb	22 37 54.5	0.0
baz=354							
ETM	**Tongmen**	**0.14**	**247**	*e*P	Pb	22 37 51.4	-0.3
baz=246							
NACB	**Ninganchiao**	**0.16**	**346**	*e*P	Pb	22 37 51.7	-0.1
baz=345							
NACB				*i* S	Sb	22 37 54.8	-0.1
baz=345							
LXIB	**Xiulin Townshi**	**0.20**	**270**	*e*P	Pg	22 37 52.3	+0.4
baz=269							
LXIB				*e*S	Sb	22 37 56.5	0.0
baz=269							
ETLH	**Xiulin Townshi**	**0.23**	**323**	P	Pb	22 37 53.0	-0.2
baz=322							
SHUL	**Shoufeng**	**0.24**	**196**	*e*S	Sb	22 37 58.4	+0.9
baz=196							
ESL	**Shilin**	**0.28**	**222**	*e*P	Pb	22 37 53.6	-0.4
baz

WUSB eS Sb 22 38 04.5 +0.2
baz=266

SOME ***15*** *22:41:48.8, 39˚.45N× 73˚.98E, h0km*
NNC ***15*** *22:41:51.8±6.9, 38˚.89N× 73˚.86E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=55.3km s-min=33.3km az=167.0*
ISC 15 22:41:43.6±2.7,**39˚.2N**±0˚.1×**74˚.02E**±0˚.08,**h10**km,**n7,** σ1§**54**/**13**,**2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRKS	**Merke**	**3.58**	**351**		*eP*		**Pg**	**22 42 51.7**	**-0.4**
	0.2nm,0.6s								
MRKS					*eS*		**Sg**	**22 43 36.9**	**-1.5**
	41nm,0.2s								
TKM2	**Tokmak 2**	**3.89**	**17**	⇓P			**Pg**	**22 42 58.5**	**+0.4**
	3.8nm,0.9s								
TKM2				⇓S			**Sg**	**22 43 48.8**	**+0.3**
	15nm,0.7s								
KST	**Kastek**	**4.09**	**20**		*eP*		**Pg**	**22 43 02.0**	**-0.1**
	3.1nm,0.5s								
KST					*eS*		**Sg**	**22 43 54.8**	**-0.3**
	18nm,0.4s								
DZA	**Taraz**	**4.20**	**332**		*eP*		**Pg**	**22 43 03.0**	**-0.9**
	18nm,0.1s								
DZA					*eS*		**Sg**	**22 43 56.5**	**-1.9**
	40nm,0.2s								
DGS	**Degeres**	**4.23**	**18**		*eP*		**Pg**	**22 43 03.8**	**-0.9**
	1.5nm,0.3s								
DGS					*eS*		**Sg**	**22 43 57.7**	**-1.8**
	7.9nm,0.2s								
KK31	**Karatay Array**	**4.70**	**327**	P			**Pb**	**22 43 07.3**	**+1.3**
	2.5nm,0.3s,baz=133,slow=13,SNR=39								
KK31				S			**Sb**	**22 44 05.9**	**+3.2**
	1.1nm,0.3s,baz=139,slow=23,SNR=4.8								
AB31	**Akbulak array**	**14.21**	**320**	P			**P**	**22 45 11.3**	**-0.9**
	0.2nm,0.4s,baz=123,slow=13,SNR=9.4								

IDC ***15*** *22:52:32.5±1.2, 35˚.21N× 140˚.43E, h0km, mb3.5/7, mbtmp3.6/9, ML2.3/1, MS2.8/1, Error ellipse: s-maj=24.2km s-min=11.6km az=75.0*
JMA ***15*** *22:52:38.3±0.2, 35˚.4N±0˚.4× 140˚.4E±0˚.8, h29km±2km, MV3.1/20, KUJUKURI COAST BOSO PEN*
JMA Felt II J1 at KUJUKURI COAST BOSO PEN .
ISC 15 22:52:36.9±1.5,**35˚.37N**±0˚.05×**140˚.5E**±0˚.1,**h30**km±8km, **n23,** σ1§**19**/**19**,**mb3.4/7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.27**	**282**		P		**Pb**	**22 52 44.0**	**0.0**
JCN					S		**Sb**	**22 52 48.6**	**-0.1**
KTR	**Katsuura**	**0.28**	**218**		P		**Pn**	**22 52 45.0**	**+0.1**
KTR					*eS*		**Sn**	**22 52 50.0**	**-0.1**
JSMT	**Sammumatsuo**	**0.28**	**348**		P		**Pn**	**22 52 45.2**	**+0.2**
JKUC	**kamogawauchiur**	**0.33**	**232**		*i* P		**Pb**	**22 52 45.2**	**+0.3**
JKUC					S		**Sb**	**22 52 49.9**	**-0.4**
BSO4	**Boso 4**	**0.40**	**202**		P		**Pn**	**22 52 47.9**	**+1.3**
BSO3	**Boso 3**	**0.56**	**181**		P		**Pn**	**22 52 50.6**	**+2.0**
MJAR	**Matsushiro Arr**	**2.21**	**303**		Pn		**Pn**	**22 53 11.4**	**-0.2**
	0.8nm,0.3s,baz=123,slow=14,SNR=25								
MJAR					Lg		Lg	22 53 41.5	
	1.2nm,0.3s,baz=123,slow=13,SNR=3.8								
	6.0nm,0.4s								
JHJ	**Hachijo jima 2**	**2.32**	**195**		Pg		**Pn**	**22 53 13.4**	**+0.3**
	93nm,0.3s,baz=85,slow=3.7,SNR=16								
JHJ					Lg		Lg	22 53 39.5	
	56nm,0.3s,baz=83,slow=19,SNR=13								
JCJ	**Chichijima**	**8.37**	**170**		Pn		**Pn**	**22 54 33.9**	**-2.2**
	35nm,0.5s,baz=274,slow=24,SNR=5.3								
KSRS	**Korea Array**	**10.37**	**285**		LR		LR	22 58 53.0	
	comp=Z,50nm,18.5s,baz=335,slow=37								
H11N2	**WAKE ISLAND Hy**	**27.98**	**117**		T		T	23 27 44.9	
	baz=309,slow=75,SNR=13								
H11N1	**WAKE ISLAND Hy**	**27.98**	**117**		T		T	23 27 44.1	
	baz=309,slow=75,SNR=11								
H11N3	**WAKE ISLAND Hy**	**28.00**	**117**		T		T	23 27 40.4	
	baz=309,slow=75,SNR=11								
SONM	**Songino Array**	**28.16**	**307**		P		**P**	**22 58 26.9**	**+0.3**
	0.2nm,0.6s,baz=102,slow=9.7,SNR=2.8								
	0.2nm,0.6s								
H11S3	**WAKE ISLAND Hy**	**28.62**	**119**		T		T	23 28 33.8	
	baz=311								
H11S1	**WAKE ISLAND Hy**	**28.62**	**119**		T		T	23 28 26.6	
	baz=311								
H11S2	**WAKE ISLAND Hy**	**28.64**	**119**		T		T	23 28 34.6	
	baz=311								
ZALV	**Zalesovo Beam**	**42.52**	**314**		P		**P**	**23 00 29.8**	**+0.3**
	0.4nm,0.4s,baz=80,slow=8.1,SNR=4.0								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**44.41**	**303**		P		**P**	**23 00 45.5**	**+0.7**
	0.3nm,0.5s,baz=76,slow=9.9,SNR=7.1								
	0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**46.48**	**309**		P		**P**	**23 01 01.5**	**+0.5**
	0.9nm,0.5s,baz=87,slow=8.0,SNR=8.7								
	0.9nm,0.5s								
ILAR	**Eielson Array**	**51.29**	**32**		P		**P**	**23 01 38.6**	**+0.9**
	0.2nm,0.5s,baz=289,slow=5.6,SNR=2.5								
	0.2nm,0.5s								
WRA	**Warramunga Arr**	**55.31**	**187**		P		**P**	**23 02 04.8**	**-3.0**
	0.5nm,0.9s,baz=1.3,slow=7.3,SNR=2.4								
	0.5nm,0.9s								
ASAR	**Alice Springs**	**59.04**	**187**		P		**P**	**23 02 34.0**	**-0.2**
	0.1nm,0.3s,baz=23,slow=12,SNR=1.2								
	0.1nm,0.3s								

IDC ***15*** *23:01:42.4±1.0, 23˚.62S× 66˚.58W, h187km±10km, mb3.7/9, mbtmp4.2/13, Error ellipse: s-maj=15.0km s-min=13.7km az=24.0*
SJA ***15*** *23:01:42.6±0.7, 23˚.70S× 66˚.80W, h216km±7km, ML4.4, MW4.1*
NEIC ***15*** *23:01:43.5±1.8, 23˚.72S±0˚.07× 66˚.91W±0˚.08, h217km±9km, mb4.3/10, Error ellipse: s-maj=11.8km s-min=7.8km az=52.0*
VAO ***15*** *23:01:44.2±0.3, 23˚.35S× 66˚.90W, h229km±4km, mb4.3*
ISC 15 23:01:43.0±0.6,**23˚.69S**±0˚.04×**66˚.82W**±0˚.05,**h202**km±6km, **n144,** σ1§**30**/**164**,**mb4.2**/16,**6C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.45**	**300**				**Pn**	**23 02 18.8**	**+2.0**
AF01	**San Pedro de A**	**1.45**	**300**		*eP*		**Pn**	**23 02 18.9**	**+2.1**
AF01					IAML			23 02 49.6	
	comp=E,2μm,1.1s								
SLA	**San Lorenzo**	**1.58**	**131**		*eP*		**Pn**	**23 02 18.8**	**+1.1**
YJA	**Yavi**	**1.93**	**39**		*eP*		**Pn**	**23 02 22.9**	**+1.5**
YJA					*eS*		**Sn**	**23 02 52.4**	**+1.2**
LVC	**Limon Verde**	**2.21**	**299**				**Pn**	**23 02 25.3**	**+1.1**
LVC	**Limon Verde**	**2.21**	**299**		*eP*		**Pn**	**23 02 25.6**	**+1.3**
LVC					*eS*		**Sn**	**23 02 58.7**	**+2.5**
LVC	**Limon Verde**	**2.21**	**299**		P		**Pn**	**23 02 25.5**	**+1.3**
	comp=E,185nm,0.3s,baz=130,slow=7.0,SNR=695								
LVC					S		**Sn**	**23 02 57.0**	**+0.8**
	comp=E,277nm,0.3s,baz=273,slow=21,SNR=46								
LVC	**Limon Verde**	**2.21**	**299**		*eP*		**Pn**	**23 02 25.5**	**+1.3**
LVC					*eS*		**Sn**	**23 02 57.2**	**+1.0**
LVC	**Limon Verde**	**2.21**	**299**	⇑	*i* P		**Pn**	**23 02 25.5**	**+1.3**
LVC					*eS*		**Sn**	**23 02 55.9**	**-0.3**
PB15	**IPOC Station P**	**2.48**	**281**				**Pn**	**23 02 28.3**	**+1.3**
FSA	**Cafayete**	**2.53**	**163**		*eP*		**Pn**	**23 02 28.8**	**+1.3**
PB06	**IPOC Station P**	**2.72**	**291**				**Pn**	**23 02 30.8**	**+1.2**
PB06	**IPOC Station P**	**2.72**	**291**		*eP*		**Pn**	**23 02 30.8**	**+1.2**
PB06					*eS*		**Sn**	**23 03 06.0**	**0.0**
PB06					IAML			23 03 07.8	
	comp=Z,834nm,0.3s								
PB06	**IPOC Station P**	**2.72**	**291**		*eP*		**Pn**	**23 02 30.8**	**+1.2**
PB06					*eS*		**Sn**	**23 03 05.2**	**-0.8**
PB06					IAML			23 03 07.9	
	comp=N,2μm,0.4s								
GO02	**Mina Guanaco**	**2.92**	**239**				**Pn**	**23 02 33.3**	**+1.2**
GO02	**Mina Guanaco**	**2.92**	**239**		*eP*		**Pn**	**23 02 33.5**	**+1.4**
GO02					*eS*		**Sn**	**23 03 11.3**	**+0.9**
GO02	**Mina Guanaco**	**2.92**	**239**		*eP*		**Pn**	**23 02 33.4**	**+1.2**
GO02					*eS*		**Sn**	**23 03 10.5**	**0.0**
PB09	**IPOC Station P**	**2.93**	**310**				**Pn**	**23 02 32.9**	**+0.8**
PB09	**IPOC Station P**	**2.93**	**310**		*eP*		**Pn**	**23 02 33.6**	**+1.5**
PB09					*eS*		**Sn**	**23 03 11.2**	**+0.9**
PB09					IAML			23 03 14.6	
	comp=Z,649nm,0.3s								
PB09	**IPOC Station P**	**2.93**	**310**		*eP*		**Pn**	**23 02 33.5**	**+1.5**
PB09					*eS*		**Sn**	**23 03 10.1**	**-0.3**
PB09					IAML			23 03 13.5	
	comp=N,652nm,0.2s								
PB04	**IPOC Station P**	**3.35**	**293**				**Pn**	**23 02 37.5**	**+0.3**
PB04	**IPOC Station P**	**3.35**	**293**		*eP*		**Pn**	**23 02 38.2**	**+1.1**
PB04					IAML			23 03 23.0	
	comp=Z,916nm,0.6s								
PB04	**IPOC Station P**	**3.35**	**293**		*eP*		**Pn**	**23 02 37.9**	**+0.7**
PB04					*eS*		**Sn**	**23 03 17.6**	**-1.8**
AHML	**Horco Molle**	**3.36**	**157**		*eP*		**Pn**	**23 02 38.1**	**+1.1**
PB14	**IPOC Station P**	**3.41**	**253**		Pn		**Pn**	**23 02 38.4**	**+0.5**
PB14	**IPOC Station P**	**3.41**	**253**		*eP*		**Pn**	**23 02 38.5**	**+0.7**
PB14					*eS*		**Sn**	**23 03 20.1**	**-0.6**
PB14					IAML			23 03 24.8	
	comp=Z,358nm,0.7s								
PB07	**IPOC Station P**	**3.44**	**304**				**Pn**	**23 02 38.8**	**+0.6**
PB07	**IPOC Station P**	**3.44**	**304**		*eP*		**Pn**	**23 02 38.9**	**+0.6**
PB07					IAML			23 03 27.0	
	comp=Z,716nm,0.6s								
PB07	**IPOC Station P**	**3.44**	**304**	⇑	*eP*		**Pn**	**23 02 38.8**	**+0.6**
PB07					*eS*		**Sn**	**23 03 19.2**	**-2.2**
PB01	**IPOC Station P**	**3.61**	**316**				**Pn**	**23 02 39.9**	**-0.3**
PB01	**IPOC Station P**	**3.61**	**316**		*eP*		**Pn**	**23 02 41.0**	**+0.8**
PB01					*eS*		**Sn**	**23 03 24.6**	**-0.4**
PB01					IAML			23 03 26.3	
	comp=Z,472nm,0.3s								
PB01	**IPOC Station P**	**3.61**	**316**		*eP*		**Pn**	**23 02 40.8**	**+0.6**
PB01					*eS*		**Sn**	**23 03 23.6**	**-1.5**
PB02	**IPOC Station P**	**3.70**	**309**				**Pn**	**23 02 41.7**	**+0.4**
PB02	**IPOC Station P**	**3.70**	**309**		*eP*		**Pn**	**23 02 41.9**	**+0.6**
PB02					*eS*		**Sn**	**23 03 25.4**	**-1.4**
PB02					IAML			23 03 28.9	
	comp=Z,1μm,0.4s								
AC02	**Maricunga**	**3.77**	**213**		Pn		**Pn**	**23 02 43.1**	**+0.7**
AC02	**Maricunga**	**3.77**	**213**		*eP*		**Pn**	**23 02 43.2**	**+0.8**
PB08	**IPOC Station P**	**4.15**	**328**				**Pn**	**23 02 47.6**	**+0.5**
PB08	**IPOC Station P**	**4.15**	**328**		*eP*		**Pn**	**23 02 48.3**	**+1.2**
PB08					*eS*		**Sn**	**23 03 36.9**	**-0.5**
PB08					IAML			23 03 39.0	
	comp=Z,254nm,0.3s								
PATCX	**Punta Patache**	**4.21**	**312**				**Pn**	**23 02 46.9**	**-0.7**
PATCX	**Punta Patache**	**4.21**	**312**		*eP*		**Pn**	**23 02 47.9**	**+0.3**
PATCX					IAML			23 03 41.8	
	comp=Z,449nm,0.4s								
AC01	**Pan de Azucar**	**4.22**	**234**				**Pn**	**23 02 47.1**	**-0.4**
AC01	**Pan de Azucar**	**4.22**	**234**		*eP*		**Pn**	**23 02 47.3**	**-0.2**
AC01					*eS*		**Sn**	**23 03 36.9**	**-1.4**
AC01					IAML			23 03 37.9	
	comp=Z,160nm,0.2s								
TA01	**Diego Aracena**	**4.40**	**314**		Pn		**Pn**	**23 02 50.1**	**+0.2**
TA01	**Diego Aracena**	**4.40**	**314**		*eP*		**Pn**	**23 02 50.0**	**+0.2**
TA01					*eS*		**Sn**	**23 03 40.6**	**-1.9**
TA01					IAML			23 03 41.3	
	comp=Z,232nm,0.2s								
GUSE	**Guasayan**	**4.54**	**157**		*eP*		**Pn**	**23 02 52.6**	**+1.0**
GO01	**Chusmiza**	**4.57**	**331**				**Pn**	**23 02 52.8**	**+0.2**
GO01	**Chusmiza**	**4.57**	**331**		*eP*		**Pn**	**23 02 53.4**	**+0.9**
GO01					*eS*		**Sn**	**23 03 46.2**	**-1.0**
TA02	**Huaiquique**	**4.59**	**317**				**Pn**	**23 02 51.3**	**-0.9**
PB11	**IPOC Station P**	**4.72**	**325**		Pn		**Pn**	**23 02 54.0**	**-0.1**
CYA	**Choya**	**4.82**	**169**		*eP*		**Pn**	**23 02 55.0**	**-0.1**
GO03	**Copiap**	**4.96**	**218**				**Pn**	**23 02 56.2**	**-0.7**
GO03	**Copiap**	**4.96**	**218**		*eP*		**Pn**	**23 02 57.0**	**0.0**
GO03					*eS*		**Sn**	**23 03 53.2**	**-2.2**
VCA	**Vinchina**	**5.18**	**194**		*eP*		**Pn**	**23 03 02.1**	**+2.3**
AC04	**Llanos de Chal**	**5.91**	**220**				**Pn**	**23 03 08.7**	**-0.3**
AC05	**El Transito**	**5.99**	**210**				**Pn**	**23 03 09.2**	**-1.1**
LCO	**Las Campanas**	**6.34**	**212**				**Pn**	**23 03 13.5**	**-1.4**
CO01	**Juntas del Tor**	**6.91**	**204**				**Pn**	**23 03 21.2**	**-1.1**
CO05	**La Serena**	**7.35**	**212**		Pn		**Pn**	**23 03 25.1**	**-2.6**
GO04	**Tololo Observa**	**7.37**	**208**				**Pn**	**23 03 26.6**	**-1.6**
LPAZ	**La Paz**	**7.47**	**350**				**Pn**	**23 03 29.9**	**0.0**
CO03	**El Pedregal**	**7.91**	**205**				**Pn**	**23 03 33.3**	**-1.8**
CO06	**Fray Jorge**	**8.17**	**211**		Pn		**Pn**	**23 03 37.4**	**-1.0**
CO02	**Combarbal**	**8.35**	**205**				**Pn**	**23 03 39.2**	**-1.7**
BBSD	**Serra de San D**	**8.70**	**43**		*eP*		**Pn**	**23 03 42.7**	**-2.7**
CPUP	**Villa Florida**	**9.00**	**109**		P		**Pn**	**23 03 44.8**	**-4.4**
	comp=Z,0.6nm,0.4s,baz=13,slow=7.1,SNR=1.8								
SIV	**San Ignacio**	**9.37**	**36**		P		**Pn**	**23 03 51.7**	**-2.5**
	comp=Z,12nm,0.5s,baz=214,slow=12,SNR=80								
VA03	**San Esteban**	**9.62**	**199**				**Pn**	**23 03 57.2**	**-0.1**
MT02	**Curacav**	**10.26**	**201**				**Pn**	**23 04 03.3**	**-2.3**
MT13	**San Alfonso**	**10.47**	**196**				**Pn**	**23 04 07.8**	**-0.5**
LMEL	**Las Melosas**	**10.55**	**196**				**Pn**	**23 04 09.5**	**+0.2**
MT09	**Talagante**	**10.69**	**199**				**Pn**	**23 04 10.5**	**-0.7**
BO04	**La Punta**	**10.78**	**197**				**Pn**	**23 04 11.8**	**-0.5**
AQDB	**Aquidauana**	**10.79**	**75**		*eP*		**Pn**	**23 04 12.3**	**-0.2**
MT01	**Popeta**	**10.86**	**200**				**Pn**	**23 04 11.8**	**-1.3**
PTLB	**Pontes e Lacer**	**10.93**	**43**				**Pn**	**23 04 17.9**	**+3.6**
PTLB	**Pontes e Lacer**	**10.93**	**43**		*eP*		**Pn**	**23 04 12.6**	**-1.7**
BO01	**Tunca**	**11.29**	**198**				**Pn**	**23 04 18.9**	**+0.1**
BO02	**Sierra Bellavi**	**11.59**	**196**				**Pn**	**23 04 22.5**	**-0.1**
UNIS	**Unistalda (Bra**	**11.81**	**119**		*eP*		**P**	**23 04 28.4**	**-1.9**
RVDE	**Rio Verde (Bra**	**12.00**	**70**		*eP*		**Pn**	**23 04 28.3**	**+0.4**
GO05	**Huala**	**12.12**	**200**		Pn		**Pn**	**23 04 29.0**	**-0.4**
CRSM	**Crissiumal (Br**	**12.13**	**111**		*eP*		**P**	**23 04 35.0**	**+1.0**
RODS	**Rosario do Sul**	**12.29**	**125**		*eP*		**P**	**23 04 36.0**	**+0.2**
VILB	**Vilhena**	**12.39**	**32**				**Pn**	**23 04 33.1**	**+0.3**
VILB	**Vilhena**	**12.39**	**32**		*eP*		**Pn**	**23 04 30.3**	**-2.5**
FRBT	**Francisco Belt**	**12.70**	**103**		*eP*		**Pn**	**23 04 39.2**	**-1.1**
SALV	**Santo Antonio**	**13.02**	**55**		*eP*		**Pn**	**23 04 39.3**	**-1.4**
TRCB	**Terra Rica**	**13.07**	**89**		P		**P**	**23 04 45.4**	**+0.9**
TRCB	**Terra Rica**	**13.07**	**89**		*eP*		**Pn**	**23 04 42.9**	**+1.5**
PTGB	**Pitanga**	**13.50**	**97**		*eP*		**P**	**23 04 49.1**	**-0.2**
CPSB	**Cacapava Do Su**	**13.66**	**122**		*eP*		**P**	**23 04 50.5**	**-0.4**
ITAB	**Concordia**	**13.73**	**108**		P		**P**	**23 04 52.3**	**+0.6**
ITAB	**Concordia**	**13.73**	**108**		*eP*		**P**	**23 04 52.0**	**+0.3**
ETMB	**Extrema**	**13.81**	**2**				**Pn**	**23 04 49.6**	**-1.0**
BI05	**Punta Hualpn**	**14.12**	**201**		Pn		**Pn**	**23 04 52.3**	**-2.0**
PLTB	**Pedras Altas**	**14.19**	**127**				**P**	**23 04 56.3**	**-0.5**
PLTB	**Pedras Altas**	**14.19**	**127**		*eP*		**P**	**23 04 56.9**	**+0.1**
LDASE	**Londrina, Braz**	**14.40**	**92**		*eP*		**P**	**23 04 59.9**	**+0.7**
TRQA	**Tornquist**	**14.91**	**165**				**Pn**	**23 05 03.1**	**-0.8**
SAML	**Samuel**	**15.07**	**14**		P		**Pn**	**23 05 05.1**	**-0.9**
SAML					IAmb		IAmb	23 05 06.9	
	comp=Z,5.1nm,0.7s								
GO06	**Curarrehue**	**16.33**	**193**		P		**P**	**23 05 19.0**	**-1.5**
GO06					IAmb		IAmb	23 05 24.0	
	comp=Z,13nm,0.8s								
RCLB	**Rio Claro- Sao**	**17.80**	**90**		*eP*		**P**	**23 05 37.1**	**+0.5**
IPMB	**Ipameri, GO**	**18.29**	**75**		*eP*		**P**	**23 05 41.7**	**-0.3**
SNDB	**Serra Nova Dou**	**18.80**	**54**		*eP*		**P**	**23 05 46.5**	**-1.0**
BDFB	**Brasilia**	**19.42**	**69**		P		**P**	**23 05 54.3**	**0.0**
BDFB	**Brasilia**	**19.42**	**69**		P		**P**	**23 05 53.3**	**-1.0**
	comp=Z,11nm,0.8s,baz=242,slow=11,SNR=16								
PARB	**Paraibuna**	**19.44**	**93**		*eP*		**P**	**23 05 54.2**	**-0.2**
TEFE	**Tefe**	**20.17**	**6**		*eP*		**P**	**23 05 58.1**	**-4.2**
DIAM	**Diamantina, MG**	**22.25**	**85**		*eP*		**P**	**23 06 22.9**	**-0.8**
JANB	**Januaria**	**22.88**	**72**		*eP*		**P**	**23 06 27.7**	**-1.6**
MCRA	**Macae, Loja**	**23.02**	**325**		P		**P**	**23 06 32.1**	**+1.6**
CAM01	**Campos-RJ**	**23.27**	**90**		*eP*		**P**	**23 06 32.1**	**-0.6**
SDBA	**SAO DESIDERIO**	**23.63**	**65**		*eP*		**P**	**23 06 34.7**	**-1.4**
NAN01	**Guarapari, ES**	**25.60**	**82**		*eP*		**P**	**23 06 52.2**	**-1.8**
GUA01	**Guaratinga, BA**	**26.30**	**79**		*eP*		**P**	**23 06 59.1**	**-1.0**
BOAV	**Boa Vista**	**26.64**	**14**		P		**P**	**23 07 02.2**	**-1.0**
BOAV					IAmb		IAmb	23 07 33.0	
	comp=Z,7.5nm,1.3s								
GDU01	**Guandu, BA**	**27.59**	**74**		*eP*		**P**	**23 07 09.8**	**-1.9**
RCBR	**Riachuelo**	**34.64**	**64**		P		**P**	**23 08 12.5**	**-1.0**
VNA3	**Neumayer Olymp**	**57.39**	**161**	⇑	P		**P**	**23 11 11.7**	**+1.7**
	comp=Z,6.5nm,0.7s								
VNA2	**Neumayer--Watz**	**57.95**	**160**	⇑	P		**P**	**23 11 15.1**	**+1.2**
	comp=Z,5.7nm,0.7s,baz=286,slow=9.8								
SNAA	**Sanae**	**59.59**	**161**	⇑	P		**P**	**23 11 26.7**	**+1.5**
	comp=Z,89nm,0.7s								
SNAA	**Sanae**	**59.59**	**161**		P		**P**	**23 11 26.1**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=267,slow=9.7,SNR=10.0								
	comp=Z,2.8nm,0.6s								
TROLL	**Troll, Antarti**	**61.30**	**161**	⇑	P		**P**	**23 11 38.7**	**+1.9**
	comp=Z,253nm,0.7s								
TXAR	**Lajitas Array**	**63.53**	**324**		P		**P**	**23 11 53.4**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=156,slow=12,SNR=2.0								
	comp=Z,0.2nm,0.4s								
S39A	**Bolivar**	**65.95**	**337**		P		**P**	**23 12 07.0**	**-0.5**
S39A					IAmb		IAmb	23 12 09.0	
	comp=Z,4.5nm,0.6s								
QSPA	**South Pole Qui**	**66.51**	**180**		P		**P**	**23 12 12.8**	**+1.9**
	comp=Z,3.6nm,0.5s,baz=212,slow=0.6,SNR=40								
	comp=Z,3.6nm,0.5s								
DBIC	**Dimbokro**	**67.55**	**72**		P		**P**	**23 12 17.1**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=241,slow=7.9,SNR=7.7								
	comp=Z,2.9nm,0.5s								
TOA0	**Torodi Ar. Sit**	**76.30**	**69**		P		**P**	**23 13 09.1**	**-1.0**
TOA0					IAmb		IAmb	23 13 10.8	
	comp=Z,5.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**76.30**	**69**		P		**P**	**23 13 09.4**	**-0.6**
	comp=Z,4.4nm,0.5s,baz=263,slow=4.8,SNR=33								
ULM	**Lac du Bonnet**	**77.99**	**341**		P		**P**	**23 13 19.4**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=169,slow=6.6,SNR=4.2								
	comp=Z,1.2nm,0.6s								
SCHQ	**Schefferville**	**78.20**	**360**		P		**P**	**23 13 19.8**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=228,slow=10.0,SNR=1.8								
	comp=Z,1.6nm,0.8s								
LHV	**Little Huntoon**	**78.40**	**321**		P		**P**	**23 13 19.6**	**-1.6**
LHV					IAmb		IAmb	23 13 27.1	
	comp=Z,5.5nm,1.0s								
BOSA	**Boshof**	**80.72**	**117**		P		**P**	**23 13 34.4**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=267,slow=3.9,SNR=9.0								
	comp=Z,1.8nm,0.6s								
PLID	**Pearl Lake**	**81.81**	**327**		P		**P**	**23 13 40.9**	**+1.3**
ESDC	**Sonseca Array**	**86.06**	**44**		P		**P**	**23 14 02.1**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=253,slow=4.8,SNR=4.3								
	comp=Z,0.5nm,0.7s								
YKA	**Yellowknife Ar**	**93.89**	**340**		P		**P**	**23 14 38.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=131,slow=4.6,SNR=6.3								
	comp=Z,0.5nm,0.7s								
ASAR	**Alice Springs**	**128.81**	**205**		PKP		**PKPdf**	**23 20 27.7**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=157,slow=2.1,SNR=7.8								
WRA	**Warramunga Arr**	**131.98**	**207**		PKP		**PKPdf**	**23 20 34.4**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=161,slow=1.9,SNR=7.9								
BVAR	**Borovoye Array**	**136.45**	**37**		PKP		**PKPdf**	**23 20 41.6**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=245,slow=0.5,SNR=3.5								
KURBB	**Kurchatov Arra**	**142.03**	**36**		PKhKP		PKPpre	23 20 47.7	
	comp=Z,0.8nm,0.7s,baz=313,slow=2.8,SNR=4.3								
ZALV	**Zalesovo Beam**	**143.04**	**28**		PKP		PKPbc	23 20 50.6	+0.8
	comp=Z,1.1nm,0.5s,baz=299,slow=3.1,SNR=6.7								
MKAR	**Makanchi Array**	**146.18**	**39**		PKPbc		**PKPdf**	**23 20 59.5**	**+1.4**
	comp=Z,4.3nm,0.7s,baz=312,slow=3.0,SNR=47								
SONM	**Songino Array**	**155.31**	**11**		PKPbc		PKPdf	23 21 22.5	+10
	comp=Z,0.2nm,0.7s,baz=250,slow=1.2,SNR=5.5								
SONM					PKPab		**PKPab**	**23 21 39.7**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=306,slow=3.3,SNR=6.2								
CMAR	**Chiang Mai Arr**	**165.73**	**109**		PKPab		**PKPab**	**23 22 25.1**	**+0.5**
	comp=Z,0.8nm

FWVZ	**Far West T-bar**	**4.52**	**40**	P	**Pn**	**23 15 03.0**	**+2.3**
COVZ	**Chateau Observ**	**4.56**	**40**	P	**Pb**	**23 15 07.4**	**-4.5**
TUVZ	**Tukino**	**4.56**	**41**	P	**Pn**	**23 15 04.0**	**+2.8**
BHHZ	**Black Hill Sta**	**4.60**	**46**	P	**Pn**	**23 15 01.5**	**-0.2**
NGZ	**Ngauruhoe**	**4.60**	**40**	P	**Pn**	**23 15 03.5**	**+1.7**
TWVZ	**Taurewa**	**4.61**	**38**	P	**Pn**	**23 15 05.0**	**+3.1**
SNVZ	**South Ngauruho**	**4.61**	**40**	P	**Pn**	**23 15 03.9**	**+1.9**
OTVZ	**Oturere**	**4.64**	**40**	P	**Pn**	**23 15 03.2**	**+0.8**
NNVZ	**North Ngauruho**	**4.64**	**40**	P	**Pn**	**23 15 06.1**	**+3.7**
WTVZ	**West Tongariro**	**4.65**	**40**	P	**Pn**	**23 15 04.2**	**+1.8**
KRHZ	**Kereru**	**4.66**	**49**	P	**Pn**	**23 15 01.4**	**-1.0**
KRVZ	**Karewarewa**	**4.69**	**40**	P	Pn	23 15 08.2	+5.3
NTVZ	**North Tongarir**	**4.70**	**40**	P	**Pn**	**23 15 07.6**	**+4.4**
TMVZ	**Te Maari**	**4.70**	**40**	P	**Pn**	**23 15 04.5**	**+1.4**
KATZ	**Kakaramea**	**4.81**	**39**	P	Pn	23 15 10.1	+5.5
KWHZ	**Kaweka Forest**	**4.84**	**48**	P	**Pn**	**23 15 06.4**	**+1.4**
KAHZ	**Kahuranaki**	**4.85**	**54**	P	**Pn**	**23 15 03.9**	**-1.2**
BKZ	**Black Stump Fm**	**5.06**	**46**	P	**Pn**	**23 15 09.0**	**+1.0**
NMHZ	**Naumai**	**5.28**	**48**	P	**Pn**	**23 15 11.1**	**+0.1**
MTHZ	**Maungataniwha**	**5.47**	**46**	P	**Pn**	**23 15 13.4**	**-0.3**
TOZ	**Tahuroa Road**	**5.78**	**31**	P	**Pn**	**23 15 18.4**	**+0.7**
URZ	**Urewera**	**6.06**	**44**	P	**Pn**	**23 15 20.3**	**-1.4**
URZ	**Urewera**	**6.06**	**44**	LR	LR	23 18 05.6	
	comp=Z,183nm,19.1s,baz=301,slow=43						
AWAZ	**Awhitu Peninsu**	**6.10**	**22**	P	**Pn**	**23 15 23.9**	**+1.7**
WTAZ	**Waiatarua**	**6.21**	**21**	P	**Pn**	**23 15 25.0**	**+1.3**
MKAZ	**Moumakai**	**6.22**	**26**	P	**Pn**	**23 15 25.5**	**+1.6**
MWZ	**Matawai**	**6.22**	**47**	P	**Pn**	**23 15 27.8**	**+3.8**
WIAZ	**Waiheke Island**	**6.50**	**24**	P	**Pn**	**23 15 28.5**	**+0.8**
TWGZ	**Tauwhareparae**	**6.58**	**48**	P	**Pn**	**23 15 27.7**	**-1.1**
HAZ	**Te Kaha**	**6.79**	**44**	P	**Pn**	**23 15 30.7**	**-1.0**
WCZ	**Waipu Caves**	**7.10**	**17**	P	**Pn**	**23 15 37.6**	**+1.6**
OUZ	**Omahuta**	**7.67**	**11**	P	**Pn**	**23 15 45.4**	**+1.6**
OUZ	**Omahuta**	**7.67**	**11**	P	**Pn**	**23 15 45.3**	**+1.6**
CTA	**Charters Tower**	**31.18**	**309**	LR	LR	23 31 05.6	
	comp=Z,68nm,18.2s,baz=92,slow=33						
ASAR	**Alice Springs**	**36.59**	**289**	P	**P**	**23 20 57.6**	**-0.9**
	0.4nm,0.6s,baz=127,slow=7.3,SNR=7.4						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**38.80**	**294**	P	**P**	**23 21 16.2**	**-1.0**
	0.5nm,0.6s,baz=131,slow=7.9,SNR=6.9						
	0.5nm,0.6s						
PMG	**Port Moresby**	**39.61**	**320**	LR	LR	23 36 28.3	
	comp=Z,24nm,18.1s,baz=211,slow=34						
ARCES	**ARCESS Array B**	**148.08**	**338**	PKPbc	**PKPdf**	**23 33 35.5**	**+1.8**
	3.6nm,1.0s,baz=47,slow=3.9,SNR=5.6						
BRTR	**Keskin Array B**	**148.62**	**279**	PKPbc	**PKPdf**	**23 33 37.9**	**+2.1**
	0.3nm,0.5s,baz=108,slow=2.6,SNR=2.6						

PGC ***15*** *23:21:47.7±5.8, 47.54N×129.08W, h10km, MLSn2.8/16, Mw3.5/16, 294km Wsw of Tofino, Bc Off Coast Of Washington*

NEIC ***15*** *23:21:49.7±2.0, 47.69N±0.06×128.9W±0.1, h11km±8km, ML2.8/12, Mwr3.5(OTT), Error ellipse: s-maj=14.6km s-min=3.4km az=57.0*

ISC 15 23:21:49.5±1.6, 47.68N±0.09×128.87W±0.07, h10km, n45, σ0s77/51, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEMO	**NEPTUNE Canada**	**0.30**	**327**		**Pg**	**23 21 54.8**	**-0.5**
KEMO					**Sg**	**23 21 58.8**	**-0.5**
KEMO	**NEPTUNE Canada**	**0.30**	**327**	P	**Pg**	**23 21 54.8**	**-0.5**
KEMO				S	**Sg**	**23 21 58.8**	**-0.5**
KEMF	**NEPTUNE Canada**	**0.31**	**331**		**Pg**	**23 21 55.2**	**-0.4**
KEMF					**Sg**	**23 22 00.3**	**+0.5**
KEMF	**NEPTUNE Canada**	**0.31**	**331**	P	**Pg**	**23 21 55.2**	**-0.4**
KEMF				S	**Sg**	**23 22 00.3**	**+0.5**
NCHR	**NEPTUNE Canada**	**0.33**	**335**		**Pg**	**23 21 55.6**	**-0.4**
NCHR					**Sg**	**23 22 00.5**	**+0.1**
NCHR	**NEPTUNE Canada**	**0.33**	**335**	P	**Pg**	**23 21 55.6**	**-0.4**
NCHR				S	**Sg**	**23 22 00.5**	**+0.1**
NC27	**ODP1027**	**0.76**	**83**		**Pg**	**23 22 04.2**	**+0.2**
NC27	**ODP1027**	**0.76**	**83**	P	**Pg**	**23 22 04.2**	**+0.2**
EDB	**Eliza Dome**	**2.49**	**27**	Pn	**Pn**	**23 22 29.7**	**-0.3**
EDB	**Eliza Dome**	**2.49**	**27**	Pn	**Pn**	**23 22 29.7**	**-0.3**
OZB	**Mount Ozzard**	**2.60**	**59**	Pn	**Pn**	**23 22 29.8**	**-1.8**
OZB				IAML		23 23 59.0	
	comp=N,52nm,2.5s						
OZB	**Mount Ozzard**	**2.60**	**59**	Pn	**Pn**	**23 22 30.8**	**-0.8**
BFSB	**Bamfield**	**2.75**	**64**	Pn	**Pn**	**23 22 32.6**	**-1.0**
BFSB	**Bamfield**	**2.75**	**64**	Pn	**Pn**	**23 22 32.6**	**-1.0**
B928	**Bamfield**	**2.75**	**64**	Pn	**Pn**	**23 22 32.7**	**-0.9**
B928	**Bamfield**	**2.75**	**64**	Pn	**Pn**	**23 22 32.7**	**-0.9**
WOSB	**Woss**	**2.91**	**31**	Pn	**Pn**	**23 22 36.4**	**+0.5**
WOSB	**Woss**	**2.91**	**31**	Pn	**Pn**	**23 22 36.4**	**+0.5**
MAYB	**Maynard**	**2.95**	**22**	Pn	**Pn**	**23 22 36.6**	**+0.1**
MAYB	**Maynard**	**2.95**	**22**	Pn	**Pn**	**23 22 36.6**	**+0.1**
PFB	**Port Renfrew**	**3.10**	**72**	Pn	**Pn**	**23 22 37.1**	**-1.4**
PFB	**Port Renfrew**	**3.10**	**72**	Pn	**Pn**	**23 22 37.1**	**-1.4**
PTRF	**Port Renfrew**	**3.11**	**72**	Pn	**Pn**	**23 22 37.4**	**-1.2**
NCSB	**Newcastle Ridg**	**3.30**	**33**	Pn	**Pn**	**23 22 43.3**	**+1.0**
CBB	**Campbell River**	**3.31**	**43**	Pn	**Pn**	**23 22 41.2**	**0.0**
CBB	**Campbell River**	**3.31**	**43**	Pn	**Pn**	**23 22 42.2**	**+0.9**
CBB	**Campbell River**	**3.31**	**43**	Pn	**Pn**	**23 22 42.2**	**+0.9**
CLRS	**Cowichan Lake**	**3.37**	**68**	Pn	**Pn**	**23 22 40.5**	**-1.7**
CLRS				IAML		23 24 41.9	
	comp=E,20nm,2.8s						
NLWA	**Neilton Lookou**	**3.40**	**93**	Pn	**Pn**	**23 22 41.7**	**-1.0**
NLWA				IAML		23 23 40.4	
	comp=E,19nm,3.2s						
NLWA				IAML		23 24 34.0	
	comp=E,26nm,3.8s						
OSD	**Olympics--Snow**	**3.49**	**86**	Pn	**Pn**	**23 22 43.7**	**-0.3**
OSD	**Olympics--Snow**	**3.49**	**86**	Pn	**Pn**	**23 22 43.7**	**-0.3**
SYMB	**Survey Mountai**	**3.51**	**74**	Pn	**Pn**	**23 22 43.1**	**-1.1**
SYMB	**Survey Mountai**	**3.51**	**74**	Pn	**Pn**	**23 22 43.1**	**-1.1**
SHB	**Sechelt**	**3.83**	**58**	Pn	**Pn**	**23 22 49.0**	**+0.4**
SHB	**Sechelt**	**3.83**	**58**	Pn	**Pn**	**23 22 49.0**	**+0.4**
SNB	**Saturna Island**	**3.97**	**72**	Pn	**Pn**	**23 22 50.6**	**+0.2**
SNB	**Saturna Island**	**3.97**	**72**	Pn	**Pn**	**23 22 50.6**	**+0.2**
BIB	**Bowen Island**	**4.08**	**63**	Pn	**Pn**	**23 22 52.2**	**+0.3**
BIB	**Bowen Island**	**4.08**	**63**	Pn	**Pn**	**23 22 52.2**	**+0.3**
BBB	**Bella Bella**	**4.54**	**6**	Pn	**Pn**	**23 22 59.2**	**+1.0**
BBB	**Bella Bella**	**4.54**	**6**	Pn	**Pn**	**23 22 59.2**	**+1.0**
LON	**Longmire**	**4.90**	**98**	Pn	**Pn**	**23 23 03.6**	**+0.4**
LON				IAML		23 24 33.2	
	comp=E,8.8nm,4.2s						
LON				IAML		23 25 22.9	
	comp=N,7.2nm,4.8s						
FMW	**Mount Fremont**	**4.95**	**96**	Pn	**Pn**	**23 23 04.7**	**+0.5**
FMW	**Mount Fremont**	**4.95**	**96**	Pn	**Pn**	**23 23 04.7**	**+0.5**
H04A	**Detroit Lake**	**5.52**	**120**	Pn	**Pn**	**23 23 12.6**	**+0.9**

IDC ***15*** *23:26:12.4±1.6, 4.91N×73.22W, h0km, mb3.3/2, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=38.3km s-min=13.6km az=164.0*

RSNC ***15*** *23:26:19.9±2.3, 5.06N×73.50W, h0km±7km, ML2.9, Mw3.5*

ISC 15 23:26:16.2±1.1, 5.03N±0.02×73.40W±0.03, h6km±9km, n36, σ1s72/58, 1C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIC	**Chingaza**	**0.51**	**220**	⇓*i*P	**Pg**	**23 26 24.4**	**-1.8**
CHIC				*e*S	**Sg**	**23 26 31.1**	**-1.8**
CHIC				*i*		23 26 36.5	
	comp=Z,810nm,0.7s						
CVER	**Cruz Verde, Cu**	**0.84**	**233**	*e*P	**Pg**	**23 26 32.1**	**-0.3**
CVER				*i*		23 26 52.9	
	comp=Z,332nm,0.3s						
SPBC	**San Pablo de B**	**0.91**	**313**	*e*P	**Pg**	**23 26 34.0**	**+0.2**
SPBC				*e*S	**Sg**	**23 26 46.4**	**+0.8**
SPBC				*i*		23 26 58.4	
	comp=Z,214nm,0.2s						
ROSC	**El Rosal**	**0.93**	**259**	Pg	**Pg**	**23 26 34.2**	**0.0**
	comp=Z,64nm,0.3s,baz=112,slow=16,SNR=24						
ROSC				Lg	Lg	23 26 49.2	
	comp=Z,60nm,0.3s,baz=279,slow=21,SNR=6.2						
ROSC	**El Rosal**	**0.93**	**259**	*e*P	**Pb**	**23 26 35.2**	**+0.1**
ROSC				*i*		23 27 02.4	
	comp=Z,186nm,0.4s						
VILC	**Villavicencio,**	**0.95**	**198**	*e*P	**Pg**	**23 26 32.9**	**-1.6**
VILC				*e*S	**Sg**	**23 26 47.1**	**+0.1**
VILC				*i*		23 26 50.0	
	comp=Z,850nm,0.5s						
PTGC	**Puerto Gaitan,**	**1.51**	**123**	*e*P	**Pg**	**23 26 45.3**	**+0.1**
PTGC				*e*S	**Sg**	**23 27 07.0**	**+2.2**
NORC	**Norcasia**	**1.56**	**290**	*e*S	**Sn**	**23 27 06.0**	**+0.9**
BARC	**Barichara**	**1.57**	**8**	*e*P	**Pg**	**23 26 46.2**	**-0.2**
BARC				*e*S	**Sg**	**23 27 08.0**	**+1.1**
BARC				*i*		23 27 13.8	
	comp=Z,244nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.83**	**325**	*e*P	**Pn**	**23 26 48.7**	**+0.4**
PTBC				*e*S	**Sb**	**23 27 14.2**	**+0.6**
PTBC				*i*		23 27 15.3	
	comp=Z,155nm,0.5s						
RECRC	**Villamaria, Ca**	**1.94**	**268**	*e*P	**Pb**	**23 26 52.5**	**0.0**
RECRC				*e*S	**Sb**	**23 27 17.1**	**-0.2**
GUY2C	**Guyana, Caldas**	**1.97**	**276**	⇑*i*P	**Pb**	**23 26 52.4**	**-0.4**
GUY2C				*e*S	**Sb**	**23 27 18.1**	**+0.4**
GUY2C				*i*		23 27 20.9	
	comp=Z,121nm,0.5s						
NIZA	**Niza - Manizal**	**2.06**	**271**	*e*P	**Pb**	**23 26 54.4**	**+0.1**
NIZA				*e*S	**Sb**	**23 27 20.7**	**+0.4**
ANIL	**Santa Ana**	**2.06**	**255**	*e*P	**Pn**	**23 26 53.4**	**+1.6**
ANIL				*e*S	**Sb**	**23 27 20.3**	**-0.1**
TAMC	**Tame, Arauca**	**2.13**	**49**	*e*P	**Pb**	**23 26 55.4**	**+0.1**
TAMC				*e*S	**Sg**	**23 27 28.3**	**+3.6**
TAMC				*i*		23 27 38.2	
	comp=Z,128nm,0.3s						
ORTC	**Ortega, Tolima**	**2.15**	**239**	*e*P	**Pb**	**23 26 54.6**	**-1.0**
ORTC				*e*S	**Sb**	**23 27 22.8**	**+0.2**
ORTC				*i*		23 27 26.7	
	comp=Z,163nm,0.4s						
PAMC	**Pamplona, Colo**	**2.40**	**17**	*e*P	**Pb**	**23 26 59.6**	**-0.6**
PAMC				*e*S	**Sg**	**23 27 33.8**	**+0.2**
PAMC				*i*		23 27 41.0	
	comp=Z,53nm,0.6s						
HELC	**Santa Helena**	**2.41**	**299**	*e*P	**Pn**	**23 26 58.0**	**+1.3**
HELC				*e*S	**Sb**	**23 27 29.4**	**-1.1**
HELC				*i*		23 27 30.7	
	comp=Z,35nm,0.5s						
CBOC	**Ciudad Bolivar**	**2.73**	**288**	*e*P	**Pn**	**23 27 02.9**	**+2.1**
CBOC				*e*S	**Sn**	**23 27 36.8**	**+2.5**
CBOC				*i*		23 27 39.5	
	comp=Z,21nm,0.6s						
PLMC	**San Jos del P**	**2.87**	**268**	*e*P	**Pb**	**23 27 07.1**	**-0.9**
PLMC				*e*S	**Sb**	**23 27 41.8**	**-1.7**
PLMC				*i*		23 27 46.9	
	comp=Z,21nm,0.4s						
BETC	**Betania**	**3.09**	**221**	*e*P	**Pb**	**23 27 10.6**	**-1.1**
BETC				*e*S	**Sb**	**23 27 51.2**	**+1.3**
BETC				*i*		23 27 58.6	
	comp=Z,76nm,0.7s						
YOTC	**Yotoco, Valle**	**3.11**	**251**	*e*P	**Pn**	**23 27 07.8**	**+1.7**
YOTC				*e*S	**Sb**	**23 27 47.8**	**-2.6**
OCAC	**Ocana**	**3.19**	**1**	*e*P	**Pn**	**23 27 09.5**	**+2.3**
DBBC	**Dabeiba**	**3.42**	**305**	*e*P	**Pn**	**23 27 13.3**	**+3.0**
UREC	**San Jos de Ur**	**3.44**	**322**	*e*P	**Pn**	**23 27 11.8**	**+1.3**
UREC				*i*		23 28 00.4	
	comp=Z,19nm,0.5s						
GARC	**Garzon, Huila**	**3.51**	**217**	*e*P	**Pn**	**23 27 14.1**	**+2.5**
GARC				*e*S	**Sb**	**23 28 01.9**	**-0.1**
JAMC	**Jamundi, Valle**	**3.73**	**241**	*e*P	**Pn**	**23 27 16.5**	**+1.9**
JAMC				*i*		23 27 58.5	
	comp=Z,16nm,0.3s						
MALC	**Bahia Malaga**	**4.05**	**256**	*e*P	**Pn**	**23 27 21.3**	**+2.5**
FLOC	**Florencia**	**4.09**	**213**	*e*P	**Pn**	**23 27 22.3**	**+2.8**
FLOC				*i*		23 28 36.2	
	comp=Z,24nm,0.6s						
POPC	**Popayan, Colom**	**4.09**	**233**	*e*P	**Pn**	**23 27 22.6**	**+2.9**
POPC				*e*S	**Sn**	**23 28 13.3**	**+5.2**
SDV	**Santo Domingo**	**4.72**	**35**	Pn	**Pn**	**23 27 27.0**	**-1.3**
	comp=Z,9.2nm,0.3s,baz=227,slow=6.1,SNR=46						
SDV				Sn	**Sn**	**23 28 22.5**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=239,slow=20,SNR=2.2						
	comp=Z,17nm,0.3s						
SDV	**Santo Domingo**	**4.72**	**35**	*e*P	**Pn**	**23 27 29.9**	**+1.7**
SDV				*e*S	**Sn**	**23 28 22.6**	**-0.9**
SDV				*i*		23 28 28.9	
	comp=Z,20nm,0.4s						
PDAR	**Pinedale Array**	**49.37**	**325**	P	**P**	**23 35 04.3**	**-2.7**
	comp=Z,0.2nm,0.7s,baz=138,slow=8.3,SNR=2.3						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**64.84**	**340**	P	**P**	**23 36 53.8**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=123,slow=8.1,SNR=3.2						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**147.82**	**232**	PKPbc	**PKPdf**	**23 45 59.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=122,slow=3.6,SNR=4.1						
WRA	**Warramunga Arr**	**149.20**	**239**	PKPbc	**PKPdf**	**23 46 03.8**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=108,slow=2.8,SNR=8.6						

TAP ***15*** *23:34:56.8, 24.21N×121.71E, h9km, ML4.0, C*

ASIES ***15*** *23:34:56.8, 24.21N×121.71E, h9km, ML4.0, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr0.14; Mθθ-0.41; Mφφ0.28; Mrθ0.92; Mθφ4.98; Mφr0.52; Fault plane solution: M05.10800×10^21 NP1:φ88.53000°, δ84.48000°, λ10.70000°. NP2:φ357.49000°, δ79.35000°, λ174.38000°. Principal axes: T Plg11.4630°, Azm313.3820°; N Plg77.9730°, Azm115.5230°; P Plg3.5910°, Azm222.6530°;*

JMA ***15*** *23:34:57.4±0.1, 24.2N±0.3×121.7E±0.6, h9km, MV3.1/13, TAIWAN REGION*

ISC 15 23:34:57.0±0.8, 24.20N±0.01×121.71E±0.01, h9km±5km, n173, σ0s65/257, 25C-37D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**244**	⇓*i*P	**Pg**	**23 34 59.5**	**+0.1**
	baz=237						
ETL				*i* S	**Sg**	**23 35 01.1**	**0.0**
	baz=237						
EHP	**Heping Village**	**0.11**	**13**	⇓*i*P	**Pg**	**23 34 59.8**	**+0.1**
	baz=22						
EHP				*i* S	**Sg**	**23 35 01.7**	**+0.1**
	baz=22						
NACB	**Ninganchiao**	**0.11**	**257**	P	**Pg**	**23 34 59.7**	**0.0**
NACB	**Ninganchiao**	**0.11**	**257**	⇓*i*P	**Pg**	**23 34 59.7**	**0.0**
	baz=251						
NACB				*i* S	**Sg**	**23 35 01.3**	**-0.2**
	baz=251						
EAHA	**Aohua**	**0.13**	**10**	⇓*i*P	**Pg**	**23 34 60.0**	**0.0**
	baz=23						
EAHA				*i* S	**Sg**	**23 35 01.9**	**-0.1**
	baz=23						
TWD	**Chiawan**	**0.16**	**222**	⇓*i*P	**Pg**	**23 35 00.5**	**+0.1**
	baz=217						
TWD				*i* S	**Sg**	**23 35 02.9**	**+0.1**
	baz=217						
ETLH	**Xiulin Townshi**	**0.21**	**272**	P	**Pg**	**23 35 01.5**	**+0.1**
	baz=271						
ETLH				S	**Sg**	**23 35 04.7**	**+0.3**
	baz=271						
ENA	**Nanau**	**0.23**	**6**	⇓*i*P	**Pg**	**23 35 01.8**	**+0.1**
	baz=10.0						
ENA				*i* S	**Sg**	**23 35 04.8**	**0.0**
	baz=10.0						
HWA	**Hwalien**	**0.24**	**204**	⇓*i*P	**Pg**	**23 35 02.5**	**+0.5**
	baz=200						
EWUT	**Wuta**	**0.25**	**13**	⇓*i*P	**Pg**	**23 35 02.2**	**+0.1**
	baz=15						
EWUT				S	**Sg**	**23 35 05.5**	**+0.1**
	baz=15						
ETM	**Tongmen**	**0.31**	**221**	⇓*i*P	**Pg**	**23 35 03.0**	**-0.1**
	baz=210						
ETM				*e*S	**Sg**	**23 35 07.3**	**0.0**
	baz=210						
LXIB	**Xiulin Townshi**	**0.33**	**237**	⇓*i*P	**Pg**	**23 35 03.4**	**-0.1**
	baz=236						
LXIB				*e*S	**Sg**	**23 35 08.3**	**+0.4**
	baz=236						
LATG	**Datong**	**0.38**	**333**	⇑*i*P	**Pg**	**23 35 04.7**	**+0.3**
	baz=333						
LATG				*i* S	**Sg**	**23 35 09.7**	**+0.3**
	baz=333						
NNSB	**Datong**	**0.38**	**307**	⇑*i*P	**Pg**	**23 35 04.8**	**+0.3**
	baz=307						
NNSB				*i* S	**Sg**	**23 35 09.8**	**+0.3**
	baz=307						
NNSH	**Datong**	**0.38**	**307**	⇑*i*P	**Pg**	**23 35 04.8**	**+0.4**
	baz=307						
NNSH				*i* S	**Sg**	**23 35 09.8**	**+0.3**
	baz=307						
ESAO	**Su ao**	**0.39**	**18**	⇓P	**Pg**	**23 35 04.7**	**0.0**
	baz=19						
ESAO				*e*S	**Sg**	**23 35 09.8**	**-0.1**
	baz=19						
NNS	**Nan Shan**	**0.39**	**308**	⇑*i*P	**Pg**	**23 35 05.0**	**+0.3**
	baz=308						
NNS				*i* S	**Sg**	**23 35 10.2**	**+0.2**
	baz=308						
WHF	**Hehuan Shan**	**0.41**	**262**	P	**Pg**	**23 35 05.3**	**0.0**
	baz=261						
WHF				*i* S	**Sg**	**23 35 10.8**	**+0.1**
	baz=261						
TWC	**Suao**	**0.43**	**17**	⇓*i*P	**Pg**	**23 35 05.4**	**+0.1**
	baz=19						
TWC				*e*S	**Sg**	**23 35 11.3**	**+0.3**
	baz=19						
FUSS	**Fushou**	**0.43**	**276**	⇑P	**Pg**	**23 35 05.9**	**+0.4**
	baz=276						
FUSS				*e*S	**Sg**	**23 35 11.4**	**+0.1**
	baz=276						
NDS	**Dongshan**	**0.43**	**0**	⇓*i*P	**Pg**	**23 35 05.8**	**+0.3**
	baz=1.0						
NDS				*i* S	**Sg**	**23 35 11.5**	**+0.3**
	baz=1.0						
SHUL	**Shoufeng**	**0.43**	**199**	*e*P	**Pb**	**23 35 06.1**	**-0.7**
	baz=204						
NDT	**Datong Townshi**	**0.44**	**335**	⇑*i*P	**Pb**	**23 35 06.2**	**-0.8**
	baz=336						
NDT				*i* S	**Sb**	**23 35 12.2**	**-1.4**
	baz=336						
ENTT	**Nioudou**	**0.46**	**343**	⇑*i*P	**Pb**	**23 35 06.4**	**-0.9**
	baz=344						
ENTT				*i* S	**Sg**	**23 35 12.6**	**+0.5**
	baz=344						
ESL	**Shilin**	**0.46**	**214**	⇓*i*P	**Pg**	**23 35 05.7**	**-0.3**
	baz=211						
ESL				*e*S	**Sg**	**23 35 12.0**	**0.0**
	baz=211						
TWT	**Tachien**	**0.49**	**276**	⇑*i*P	**Pb**	**23 35 07.4**	**-0.6**
	baz=275						
TWT				*i* S	**Sb**	**23 35 14.0**	**-1.4**
	baz=275						
TDCB	**Techi**	**0.51**	**276**	⇑P	**Pb**	**23 35 07.5**	**-0.7**
	baz=276						
TDCB				*i* S	**Sg**	**23 35 13.7**	**0.0**
	baz=276						
CHGB	**Renai**	**0.51**	**254**	⇓*i*P	**Pg**	**23 35 07.3**	**+0.3**
	baz=245						
CHGB				*i* S	**Sg**	**23 35 13.6**	**-0.2**
	baz=245						
TEGC	**Jichi Village**	**0.51**	**198**	*e*P	**Pb**	**23 35 07.9**	**-0.3**
	baz=186						
EOS2	**EOS2**	**0.52**	**65**	*e*P	**Pb**	**23 35 08.2**	**0.0**
	baz=57						
TWE	**Neicheng**	**0.52**	**355**	⇓*i*P	**Pb**	**23 35 07.5**	**-0.8**
	baz=6.0						
TWE				S	**Sg**	**23 35 14.3**	**+0.4**
	baz=6.0						
EOS3	**EOS3**	**0.56**	**81**	*e*P	**Pb**	**23 35 08.9**	**+0.1**
	baz=79						
EOS4	**EOS4**	**0.56**	**98**	*e*P	**Pb**	**23 35 08.6**	**-0.1**
	baz=84						
YHNB	**Yeheng**	**0.56**	**327**	P	**Pb**	**23 35 08.7**	**-0.3**
YHNB	**Yeheng**	**0.56**	**327**	⇑*i*P	**Pb**	**23 35 08.6**	**-0.5**
	baz=327						
YHNB				S	**Sg**	**23 35 15.3**	**0.0**
	baz=327						
ILA	**Ilan**	**0.56**	**3**	*e*P	**Pb**	**23 35 08.3**	**-0.7**
	baz=5.0						
WARBT	**Fenglin Townsh**	**0.57**	**212**	⇓*i*P	**Pb**	**23 35 07.6**	**-0.4**
	baz=219						
FUSB	**Fushanzhiwuyua**	**0.57**	**348**	⇓P	**Pb**	**23 35 08.4**	**-0.7**
	baz=349						
FUSB				*e*S	**Sg**	**23 35 15.4**	**-0.1**
	baz=349						
NSK	**Sanguang**	**0.57**	**326**	⇑*i*P	**Pb**	**23 35 08.7**	**-0.6**
	baz=326						
NSK				*i* S	**Sg**	**23 35 15.8**	**+0.1**
	baz=326						
WUSB	**Renai**	**0.58**	**249**	⇓*i*P	**Pg**	**23 35 08.5**	**+0.2**
	baz=241						
NWLT	**Wulai**	**0.61**	**342**	⇑*i*P	**Pb**	**23 35 09.3**	**-0.5**
	baz=350						
NWLT				S	**Sg**	**23 35 16.6**	**-0.1**
	baz=350						
EGS		**0.67**	**17**	*e*P	**Pb**	**23 35 10.3**	**-0.6**
	baz=28						
VWDT	**VWDT**	**0.69**	**230**	⇓*i*P	**Pg**	**23 35 10.1**	**-0.1**
	baz=229						
VWDT				S	**Sb**	**23 35 20.2**	**-0.5**
	baz=229						
NFF	**Wufeng Townshi**	**0.69**	**308**	⇑*i*P	**Pb**	**23 35 11.0**	**-0.3**
	baz=315						
NFF				*e*S	**Sb**	**23 35 20.0**	**-1.0**
	baz=315						
WPL	**Puli Township**	**0.72**	**255**	⇑*i*P	**Pb**	**23 35 11.2**	**-0.4**
	baz=244						
WPL				*e*S	**Sg**	**23 35 19.9**	**-0.3**
	baz=244						
DPDB	**Guoxing**	**0.74**	**257**	⇓*i*P	**Pb**	**23 35 11.8**	**-0.3**
	baz=257						
DPDB				S	**Sg**	**23 35 21.0**	**+0.1**
	baz=257						
WCS	**Beigang Elemen**	**0.75**	**259**	P	**Pb**	**23 35 11.8**	**-0.4**
	baz=259						
WCS				*e*S	**Sb**	**23 35 21.5**	**-0.9**
	baz=259

YULB	**Yu-li**	**0.89**	**205**	P	**Pg**	**23**	**35**	**13.7**	**-0.4**
YULB	**Yu-li**	**0.89**	**205**	⇓*i*P	**Pg**	**23**	**35**	**13.6**	**-0.6**
	baz=205								
NSY	**Sanyi**	**0.90**	**284**	⇑*e*P	**Pn**	**23**	**35**	**15.7**	**-0.1**
	baz=284								
NSY				*e*S	**Sb**	**23**	**35**	**26.4**	**-0.4**
	baz=284								
SXI1	**Grass Mountain**	**0.90**	**9**	⇓*i*P	**Pb**	**23**	**35**	**14.8**	**-0.1**
	baz=3.0								
SXI1				*e*S	**Sg**	**23**	**35**	**25.1**	**-1.0**
	baz=3.0								
NCU	**National Centr**	**0.90**	**328**	*e*P	**Pn**	**23**	**35**	**15.4**	**-0.5**
	baz=328								
NCU				*e*S	**Sn**	**23**	**35**	**29.0**	**-0.1**
	baz=328								
NCUH	**Zhongli**	**0.90**	**328**	⇑*e*P	**Pn**	**23**	**35**	**15.7**	**-0.2**
	baz=328								
HSN	**Hsinchu**	**0.91**	**312**	*e*P	**Pn**	**23**	**35**	**15.4**	**-0.5**
	baz=315								
HSN				*e*S	**Sn**	**23**	**35**	**29.2**	**+0.1**
	baz=315								
NMLH	**Miaoli**	**0.91**	**292**	⇑*e*P	**Pn**	**23**	**35**	**15.9**	**0.0**
	baz=298								
NJN	**Zhunan**	**0.91**	**302**	*e*P	**Pb**	**23**	**35**	**15.1**	**+0.2**
	baz=295								
ECBN	**Changbin**	**0.91**	**195**	*e*P	**Pg**	**23**	**35**	**14.3**	**-0.2**
	baz=183								
EYUL	**Yuli**	**0.92**	**203**	*e*P	**Pg**	**23**	**35**	**14.5**	**-0.3**
	baz=214								
TWF1	**Yuli**	**0.93**	**204**	*e*P	**Pg**	**23**	**35**	**13.5**	**-1.3**
	baz=213								
TWF1				S	**Sb**	**23**	**35**	**28.4**	**+0.8**
	baz=213								
TWS1	**Kuangyinshan**	**0.94**	**343**	⇑P	**Pn**	**23**	**35**	**16.2**	**-0.1**
	baz=352								
TWS1				*e*S	**Sb**	**23**	**35**	**28.4**	**+0.5**
	baz=352								
WWF	**Wufeng**	**0.94**	**261**	*e*P	**Pn**	**23**	**35**	**16.4**	**0.0**
	baz=255								
WWF				*e*S	**Sn**	**23**	**35**	**31.4**	**+1.4**
	baz=255								
TNOU	**National Taiwa**	**0.95**	**3**	⇓P	**Pb**	**23**	**35**	**15.6**	**0.0**
	baz=4.0								
TNOU				S	**Sg**	**23**	**35**	**26.8**	**-0.7**
	baz=4.0								
TCU	**Taichung**	**0.95**	**267**	P	**Pn**	**23**	**35**	**17.0**	**+0.5**
	baz=267								
TCU				*e*S	**Sn**	**23**	**35**	**29.4**	**-0.7**
	baz=267								
YM01	**YM01**	**0.95**	**352**	⇑*i*P	**Pn**	**23**	**35**	**16.1**	**-0.5**
	baz=2.0								
YM01				S	**Sg**	**23**	**35**	**27.3**	**-0.4**
	baz=2.0								
WJS	**Zhushan**	**0.98**	**248**	P	**Pn**	**23**	**35**	**17.1**	**+0.3**
	baz=240								
WJS				S	**Sn**	**23**	**35**	**30.6**	**-0.3**
	baz=240								
WNT1	**Nantou City**	**0.99**	**253**	*e*P	**Pn**	**23**	**35**	**17.2**	**+0.1**
	baz=242								
NTST	**Danshui**	**0.99**	**346**	*e*P	**Pn**	**23**	**35**	**17.4**	**+0.3**
	baz=346								
YM08	**YM08**	**0.99**	**353**	*e*P	**Pb**	**23**	**35**	**16.3**	**-0.1**
	baz=354								
WNT	**Mingjian**	**0.99**	**251**	*e*P	**Pn**	**23**	**35**	**17.4**	**+0.3**
	baz=246								
WNT				S	**Sn**	**23**	**35**	**31.0**	**-0.3**
	baz=246								
ANP	**Anpu**	**1.00**	**350**	⇑P	**Pb**	**23**	**35**	**16.7**	**+0.1**
	baz=351								
NWRT	**Kuosheng**	**1.00**	**357**	*e*P	**Pg**	**23**	**35**	**16.0**	**-0.2**
	baz=357								
NWRT				*e*S	**Sn**	**23**	**35**	**30.7**	**-0.7**
	baz=357								
NHW	**Xinwu Township**	**1.01**	**323**	*e*P	**Pn**	**23**	**35**	**17.1**	**-0.2**
	baz=323								
NHW				*e*S	**Sn**	**23**	**35**	**32.1**	**+0.5**
	baz=323								
CHKH	**Chenggong**	**1.04**	**196**	*e*P	**Pg**	**23**	**35**	**16.3**	**-0.8**
	baz=186								
WCHH	**Zhanghua**	**1.06**	**264**	*e*P	**Pn**	**23**	**35**	**18.9**	**+0.9**
	baz=263								
WYL	**Yuanlin Townsh**	**1.06**	**257**	*e*P	**Pn**	**23**	**35**	**18.7**	**+0.6**
	baz=257								
WYL				*e*S	**Sn**	**23**	**35**	**33.7**	**+0.8**
	baz=257								
TWY	**Chenhua**	**1.08**	**354**	*e*P	**Pn**	**23**	**35**	**18.4**	**+0.1**
	baz=355								
TWY				*e*S	**Sb**	**23**	**35**	**32.3**	**+0.3**
	baz=355								
ALS	**Alishan**	**1.08**	**231**	⇓*i*P	**Pb**	**23**	**35**	**17.7**	**-0.3**
	baz=215								
CHN5	**Tsauling**	**1.12**	**238**	⇓P	**Pn**	**23**	**35**	**19.3**	**+0.3**
	baz=238								
CHN5				*e*S	**Sn**	**23**	**35**	**35.1**	**+0.6**
	baz=238								
CHKT	**Chengkung**	**1.14**	**196**	*e*P	**Pg**	**23**	**35**	**17.5**	**-1.4**
	baz=183								
EHD	**Haiduan**	**1.15**	**204**	*e*P	**Pg**	**23**	**35**	**18.2**	**-0.7**
	baz=204								
JYNG	**Yonagunijimaku**	**1.15**	**77**	P	**Pn**	**23**	**35**	**19.6**	**+0.4**
JYNG				S	**Sn**	**23**	**35**	**35.5**	**+0.3**
WGK	**Gukeng**	**1.17**	**244**	⇓P	**Pn**	**23**	**35**	**20.1**	**+0.5**
	baz=244								
WGK				*e*S	**Sn**	**23**	**35**	**37.3**	**+1.7**
	baz=244								
ECS	**Chishang**	**1.19**	**203**	*e*P	**Pb**	**23**	**35**	**19.6**	**-0.2**
	baz=214								
WDLH	**Douliu**	**1.19**	**245**	*e*P	**Pn**	**23**	**35**	**20.5**	**+0.7**
	baz=244								
ELDTW	**Lidau**	**1.19**	**213**	*e*P	**Pb**	**23**	**35**	**19.2**	**-0.7**
	baz=201								
YOJ	**Yonaguni jima**	**1.21**	**77**	P	**Pg**	**23**	**35**	**20.6**	**+0.3**
YOJ	**Yonaguni jima**	**1.21**	**77**	*e*P	**Pb**	**23**	**35**	**19.8**	**-0.3**
	baz=64								
YOJ	**Yonaguni jima**	**1.21**	**77**	P	**Pg**	**23**	**35**	**20.5**	**+0.2**
YOJ				*e*S	**Sn**	**23**	**35**	**36.7**	**0.0**
WRL	**Guolierlin Hig**	**1.26**	**257**	*e*P	**Pg**	**23**	**35**	**21.3**	**+0.1**
	baz=257								
WRL				*e*S	**Sn**	**23**	**35**	**39.1**	**+1.4**
	baz=257								
WCKO	**Fanlu**	**1.27**	**233**	⇓*i*P	**Pg**	**23**	**35**	**21.4**	**+0.1**
	baz=233								
WCKO				S	**Sn**	**23**	**35**	**39.6**	**+1.6**
	baz=233								
RLNB	**Erlin**	**1.28**	**256**	*e*P	**Pg**	**23**	**35**	**21.8**	**+0.3**
	baz=256								
RLNB				*e*S	**Sn**	**23**	**35**	**39.9**	**+1.6**
	baz=256								
CHN2	**Minshiung**	**1.31**	**240**	*e*P	**Pg**	**23**	**35**	**22.6**	**+0.3**
	baz=240								
WTK	**Tuku**	**1.32**	**247**	*e*P	**Pg**	**23**	**35**	**21.9**	**-0.3**
	baz=247								
CHN4	**Tsaushan**	**1.33**	**231**	⇓P	**Pg**	**23**	**35**	**22.5**	**0.0**
	baz=231								
STYH	**Taoyuan**	**1.34**	**220**	*e*P	**Pb**	**23**	**35**	**22.3**	**0.0**
	baz=220								
TPUB	**Ta-pu**	**1.34**	**228**	P	**Pg**	**23**	**35**	**22.7**	**0.0**
TPUB	**Ta-pu**	**1.34**	**228**	⇓*i*P	**Pg**	**23**	**35**	**22.5**	**-0.1**
	baz=212								
WTCT	**Ta-ch'eng**	**1.35**	**256**	*e*P	**Pg**	**23**	**35**	**23.3**	**+0.3**
	baz=255								
STYT	**Tauyuan**	**1.35**	**221**	⇑P	**Pb**	**23**	**35**	**22.2**	**-0.3**
	baz=220								
WTP	**Ta-pu**	**1.39**	**227**	⇓P	**Pg**	**23**	**35**	**23.4**	**-0.2**
	baz=214								
WTP				*e*S	**Sg**	**23**	**35**	**42.3**	**+0.7**
	baz=214								
LONT	**Longtian**	**1.40**	**203**	*e*P	**Pn**	**23**	**35**	**20.9**	**-1.7**
	baz=202								
TWK	**Hsinying**	**1.46**	**231**	⇓P	**Pg**	**23**	**35**	**24.5**	**-0.4**
	baz=230								
PCYT	**Pengchaiyu**	**1.46**	**13**	*e*P	**Pn**	**23**	**35**	**23.6**	**+0.1**
	baz=14								
WSF	**Szhu**	**1.48**	**248**	*e*P	**Pn**	**23**	**35**	**23.3**	**-0.4**
	baz=260								
WSF				*e*S	**Sg**	**23**	**35**	**44.7**	**+0.2**
	baz=260								
SNST	**Tainan City**	**1.48**	**229**	*e*P	**Pg**	**23**	**35**	**25.1**	**-0.3**
	baz=229								
CHN1	**Nanshi**	**1.48**	**227**	*e*P	**Pb**	**23**	**35**	**24.8**	**+0.1**
	baz=228								
CHN1				*e*S	**Sg**	**23**	**35**	**46.7**	**+1.9**
	baz=228								
TWG	**Pinlang**	**1.49**	**203**	*e*P	**Pn**	**23**	**35**	**21.9**	**-2.1**
	baz=203								
TWGBT	**Beinan**	**1.49**	**203**	P	**Pn**	**23**	**35**	**22.8**	**-1.2**
TWGBT	**Beinan**	**1.49**	**203**	*e*P	**Pn**	**23**	**35**	**22.3**	**-1.7**
	baz=203								
WSL	**Shuilin Townsh**	**1.52**	**244**	*e*P	**Pg**	**23**	**35**	**25.5**	**-0.6**
	baz=244								
SGST	**Jiashian**	**1.52**	**223**	*e*P	**Pb**	**23**	**35**	**24.8**	**-0.6**
	baz=223								
SGST				*e*S	**Sg**	**23**	**35**	**46.5**	**+0.6**
	baz=223								
LDUT	**Ludao**	**1.54**	**188**	*e*P	**Pn**	**23**	**35**	**22.3**	**-2.3**
	baz=192								
ICHU	**Yijhu**	**1.56**	**238**	*e*P	**Pg**	**23**	**35**	**26.7**	**-0.2**
	baz=238								
CHN8	**Yiju**	**1.62**	**239**	*e*P	**Pb**	**23**	**35**	**27.2**	**+0.2**
	baz=239								
CHN8				*e*S	**Sg**	**23**	**35**	**48.4**	**-0.6**
	baz=239								
CHN3	**Shinhua**	**1.67**	**228**	*e*P	**Pg**	**23**	**35**	**29.4**	**+0.4**
	baz=229								
SHHT	**Tainan City**	**1.72**	**227**	*e*P	**Pg**	**23**	**35**	**29.2**	**-0.7**
	baz=228								
SCST	**Cishan**	**1.72**	**221**	*e*P	**Pb**	**23**	**35**	**28.8**	**0.0**
	baz=221								
SCLT	**Jiali**	**1.73**	**234**	*e*P	**Pn**	**23**	**35**	**27.6**	**+0.4**
	baz=235								
ECL	**Taimali**	**1.74**	**204**	*e*P	**Pn**	**23**	**35**	**27.4**	**0.0**
	baz=192								
SSD	**Sandimen**	**1.75**	**215**	*e*P	**Pn**	**23**	**35**	**27.8**	**+0.2**
	baz=215								
SSD				*e*S	**Sb**	**23**	**35**	**51.7**	**+0.2**
	baz=215								
TSMG	**Majia**	**1.78**	**214**	*e*P	**Pb**	**23**	**35**	**29.2**	**-0.7**
	baz=214								
TWM1	**Shoushan**	**1.81**	**221**	*e*P	**Pg**	**23**	**35**	**31.1**	**-0.6**
	baz=221								
TSCK	**Chigu Township**	**1.82**	**235**	*e*P	**Pn**	**23**	**35**	**29.3**	**+0.8**
	baz=219								
SGLT	**Jiouru**	**1.85**	**218**	*e*P	**Pb**	**23**	**35**	**30.5**	**-0.5**
	baz=219								
MASBT	**Mashibuluo**	**1.87**	**212**	*e*P	**Pn**	**23**	**35**	**29.1**	**-0.1**
	baz=213								
HATJ	**Hateruma jima**	**1.92**	**94**	*e*P	**Pb**	**23**	**35**	**31.2**	**-0.9**
HATJ				*e*S	**Sn**	**23**	**35**	**55.1**	**+1.1**
EAST	**Anshuo**	**1.98**	**204**	*e*P	**Pn**	**23**	**35**	**31.6**	**+1.0**
	baz=193								
TAWH	**Dawu Township**	**2.00**	**202**	*e*P	**Pb**	**23**	**35**	**32.7**	**-0.8**
	baz=194								
PHUB	**P'eng-hu**	**2.08**	**251**	P	**Pn**	**23**	**35**	**33.0**	**+1.0**
	baz=251								
PHUB				S	**Sn**	**23**	**35**	**58.4**	**+0.4**
	baz=251								
SCZT	**Fangliau**	**2.08**	**209**	*e*P	**Pb**	**23**	**35**	**34.1**	**-0.7**
	baz=210								
JKRS	**Kuro-shima**	**2.10**	**89**	P	**Pb**	**23**	**35**	**33.8**	**-1.4**
JKRS				*e*S	**Sn**	**23**	**35**	**59.9**	**+1.4**
WDGT	**Dungji**	**2.10**	**244**	*e*P	**Pn**	**23**	**35**	**33.6**	**+1.2**
	baz=244								
SLIU	**Shizi**	**2.15**	**203**	*e*P	**Pn**	**23**	**35**	**33.9**	**+0.9**
	baz=197								
VWUC	**VWUC**	**2.21**	**291**	*e*P	**Pn**	**23**	**35**	**33.4**	**-0.4**
	baz=291								
JIJ	**Ishigaki jima**	**2.22**	**85**	P	**Pn**	**23**	**35**	**35.4**	**+1.3**
JIJ				*e*S	**Sn**	**23**	**36**	**02.1**	**+0.5**
VCHM	**Qimei**	**2.31**	**245**	*e*P	**Pn**	**23**	**35**	**36.0**	**+0.7**
	baz=230								
HEN	**Hengchun**	**2.36**	**203**	*e*P	**Pb**	**23**	**35**	**38.4**	**-1.4**
	baz=196								
TWK1	**Hengchun**	**2.40**	**201**	*e*P	**Pn**	**23**	**35**	**37.6**	**+1.2**
	baz=194								
TWKBT	**Hengchun**	**2.40**	**200**	*e*P	**Pn**	**23**	**35**	**37.0**	**+0.6**
	baz=194								
JISG	**Ishigakijimahi**	**2.40**	**80**	P	**Pn**	**23**	**35**	**38.2**	**+1.7**
JISG				*e*S	**Sn**	**23**	**36**	**06.7**	**+0.8**
PTMZ	**Houxiangcun**	**2.50**	**290**	*e*P	**Pn**	**23**	**35**	**37.6**	**-0.3**
	baz=290								
MATB	**Ma-tsu**	**2.52**	**321**	*e*P	**Pn**	**23**	**35**	**37.8**	**-0.3**
	baz=320								
LYJJ	**Jianjiangzhen**	**2.93**	**323**	*e*P	**Pn**	**23**	**35**	**43.6**	**-0.2**
	baz=323								
KNM	**Kinmen**	**3.00**	**275**	*e*P	**Pn**	**23**	**35**	**46.9**	**+2.2**
	baz=274								
KNMB	**Chin-men Tao**	**3.04**	**276**	*e*P	**Pn**	**23**	**35**	**45.4**	**+0.1**
	baz=275								
XPSS	**Dashiqiu**	**3.05**	**333**	*e*P	**Pn**	**23**	**35**	**44.6**	**-0.7**
	baz=333								
MHZQ	**Yeshan**	**3.08**	**308**	*e*P	**Pn**	**23**	**35**	**46.1**	**+0.3**
	baz=308								
AXDP	**Jialang**	**3.48**	**282**	*e*P	**Pn**	**23**	**35**	**51.3**	**0.0**
	baz=282								
ZPLA	**Ao Xicun**	**3.63**	**267**	*e*P	**Pn**	**23**	**35**	**54.2**	**+0.7**
	baz=265								
DSXP	**Dongshan**	**3.95**	**264**	*e*P	**Pn**	**23**	**35**	**58.4**	**+0.6**
	baz=262								
SXFK	**Yanhouchang**	**4.28**	**302**	*e*P	**Pn**	**23**	**36**	**03.2**	**+0.8**
	baz=301								

*SJA **15** 23:36:18.1±0.8,27.75S×71.79W,h14km±4km, ML4.5, MW4.7*
*IDC **15** 23:36:19.4±0.6,27.79S×71.45W,h0km,mb4.1/10, mbtmp4.0/14,ML3.7/4,MS4.0/18,Error ellipse: s-maj=22.6km s-min=14.6km az=97.0*
*GUC **15** 23:36:20.7±0.7,27.76S×71.74W,h20km±6km, ML4.2*
*NEIC **15** 23:36:21.2±2.7,27.82S±0.04×71.69W±0.02,h8km±3km, mb4.9/30,Mwr4.6/118,Error ellipse: s-maj=5.7km s-min=2.4km az=186.0,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.56; Mθθ0.07; Mφφ-0.64; Mrθ0.17; Mθφ0.14; Mφr-0.86; Fault plane solution: M0 1.08000×10^16^ NP1:ϕs168.78000°,δ72.55000°, λ89.47000°. NP2:ϕs350.56000°,δ17.46000°,λ91.70000°. Principal axes: T 1.0226, Plg62.0000°, Azm78.0000°; N 0.0994, Plg1.0000°, Azm169.0000°; P -1.1219, Plg28.0000°, Azm259.0000°.*
*NEIC **15** 23:36:21.4,27.82S×71.67W,h6km*
*VAO **15** 23:36:24.2±1.2,27.91S×71.83W,h10km,mb4.4*
ISC 15 23:36:20.0±0.9,27.83S±0.02×71.75W±0.04,h6km±6km, n179,σ1§66/207,mb4.8/21,MS4.1/14,3C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s	ISC
AC04	**Llanos de Chal**	**0.70**	**122**			**Pg**	**23**	**36**	**33.5**	**+0.1**
AC04					Sg	**Sg**	**23**	**36**	**41.5**	**-1.1**
AC04	**Llanos de Chal**	**0.70**	**122**	*e*P		**Pg**	**23**	**36**	**33.2**	**-0.3**
AC04	**Llanos de Chal**	**0.70**	**122**	⇓*i*P		**Pg**	**23**	**36**	**33.6**	**+0.1**
AC04				*e*S		**Sg**	**23**	**36**	**40.5**	**-2.1**
AC04				IAML			23	36	43.6	
	comp=E,17μm,0.1s									
GO03	**Copiap**	**1.36**	**80**	Pn		**Pn**	**23**	**36**	**44.1**	**-1.4**
GO03				Sg		**Sb**	**23**	**37**	**02.5**	**-1.0**
GO03	**Copiap**	**1.36**	**80**	*e*P		**Pn**	**23**	**36**	**44.4**	**-1.1**
GO03	**Copiap**	**1.36**	**80**	⇓*i*P		**Pn**	**23**	**36**	**44.2**	**-1.4**
GO03				*e*S		**Sb**	**23**	**37**	**01.8**	**-1.7**
GO03				IAML			23	37	10.0	
	comp=N,3μm,0.5s									
LCO	**Las Campanas**	**1.50**	**142**	Pn		**Pn**	**23**	**36**	**47.7**	**+0.1**
LCO				Sn		**Sn**	**23**	**37**	**05.9**	**-1.6**
LCO	**Las Campanas**	**1.50**	**142**	*e*P		**Pn**	**23**	**36**	**47.6**	**+0.1**
LCO				*e*S		**Sn**	**23**	**37**	**06.7**	**-0.8**
LCO	**Las Campanas**	**1.50**	**142**	*e*P		**Pn**	**23**	**36**	**47.2**	**-0.4**
LCO				*i* S		**Sn**	**23**	**37**	**05.2**	**-2.3**
LCO				*e*S		**Sb**	**23**	**37**	**06.5**	**-1.2**
AC05	**El Transito**	**1.64**	**128**	Pn		**Pn**	**23**	**36**	**49.9**	**+0.4**
AC05				Sn		**Sn**	**23**	**37**	**09.1**	**-1.9**
AC05	**El Transito**	**1.64**	**128**	*e*P		**Pn**	**23**	**36**	**49.6**	**+0.1**
AC05				*e*S		**Sn**	**23**	**37**	**06.7**	**-4.3**
AC05				*e*S		**Sb**	**23**	**37**	**11.9**	**+0.2**
AC05	**El Transito**	**1.64**	**128**	⇓*i*P		**Pn**	**23**	**36**	**49.5**	**0.0**
AC05				*e*S		**Sn**	**23**	**37**	**09.0**	**-1.9**
AC05				IAML			23	37	20.7	
	comp=N,3μm,0.7s									
AC01	**Pan de Azucar**	**1.96**	**32**			**Pn**	**23**	**36**	**53.3**	**-0.5**
AC01				Sg		**Sg**	**23**	**37**	**23.5**	**+0.5**
AC01	**Pan de Azucar**	**1.96**	**32**	*e*P		**Pn**	**23**	**36**	**52.7**	**-1.0**
AC01				*e*P		**Pn**	**23**	**36**	**52.8**	**-1.0**
AC01	**Pan de Azucar**	**1.96**	**32**	⇑*e*P		**Pn**	**23**	**36**	**52.8**	**-1.0**
AC01				*e*S		**Sg**	**23**	**37**	**22.4**	**-0.6**
CO05	**La Serena**	**2.13**	**168**			**Pn**	**23**	**36**	**56.8**	**+0.7**
CO05				Sn		**Sn**	**23**	**37**	**24.5**	**+1.7**
CO05	**La Serena**	**2.13**	**168**	*e*P		**Pn**	**23**	**36**	**57.9**	**+1.8**
CO05				*e*S		**Sn**	**23**	**37**	**21.2**	**-1.6**
CO05				IAML			23	37	33.9	
	comp=E,3μm,0.4s									
GO04	**Tololo Observa**	**2.48**	**161**			**Pn**	**23**	**37**	**02.2**	**+1.1**
GO04						**Sb**	**23**	**37**	**36.8**	**+0.8**
GO04	**Tololo Observa**	**2.48**	**161**	*e*P		**Pn**	**23**	**37**	**02.2**	**+1.1**
GO04				*e*S		**Sn**	**23**	**37**	**32.5**	**+0.7**
GO04				IAML			23	37	41.8	
	comp=Z,3μm,0.7s									
GO04	**Tololo Observa**	**2.48**	**161**	*e*P		**Pn**	**23**	**37**	**02.1**	**+1.1**
GO04				*i* S		**Sn**	**23**	**37**	**30.6**	**-1.2**
GO04				IAML			23	37	53.5	
	comp=E,4μm,0.2s									
AC02	**Maricunga**	**2.53**	**68**			**Pn**	**23**	**37**	**02.2**	**+0.2**
AC02				Sn		**Sn**	**23**	**37**	**34.1**	**+0.8**
AC02	**Maricunga**	**2.53**	**68**	*e*P		**Pn**	**23**	**37**	**02.4**	**+0.4**
AC02				*e*S		**Sn**	**23**	**37**	**33.2**	**-0.2**
AC02				*e*S		**Sn**	**23**	**37**	**34.2**	**+0.8**
AC02				IAML			23	37	44.5	
	comp=Z,1μm,1.4s									
AC02	**Maricunga**	**2.53**	**68**	*e*P		**Pn**	**23**	**37**	**03.1**	**+1.1**
AC02				*e*S		**Sn**	**23**	**37**	**34.1**	**+0.8**
AC02				IAML			23	37	42.6	
	comp=E,2μm,0.2s									
CO01	**Juntas del Tor**	**2.58**	**146**			**Pn**	**23**	**37**	**03.8**	**+1.2**
CO01	**Juntas del Tor**	**2.58**	**146**	*e*P		**Pn**	**23**	**37**	**03.9**	**+1.2**
CO01				*e*S		**Sn**	**23**	**37**	**35.9**	**+1.5**
CO01				IAML			23	37	45.5	
	comp=Z,2μm,1.2s									
CO01	**Juntas del Tor**	**2.58**	**146**	*e*P		**Pn**	**23**	**37**	**04.4**	**+1.8**
CO01				*e*S		**Sn**	**23**	**37**	**34.6**	**+0.2**
CO01				IAML			23	37	42.9	
	comp=N,1μm,0.3s									
CO06	**Fray Jorge**	**2.84**	**178**			**Pn**	**23**	**37**	**07.3**	**+1.5**
CO06	**Fray Jorge**	**2.84**	**178**	*e*P		**Pn**	**23**	**37**	**06.5**	**+0.7**
CO06				IAML			23	37	57.0	
	comp=E,362nm,0.0s									
AROD	**Rodeo**	**3.06**	**140**	*e*P		**Pn**	**23**	**37**	**12.6**	**+3.3**
AROD				*e*S		**Sn**	**23**	**37**	**50.2**	**+3.8**
CO03	**El Pedregal**	**3.14**	**163**	Pn		**Pn**	**23**	**37**	**11.3**	**+1.2**
CO03	**El Pedregal**	**3.14**	**163**	*e*P		**Pn**	**23**	**37**	**11.2**	**+1.2**
CO03				*e*S		**Sb**	**23**	**37**	**52.8**	**-2.0**
CO03				IAML			23	38	10.6	
	comp=Z,1μm,1.1s									
CO03	**El Pedregal**	**3.14**	**163**	*e*P		**Pn**	**23**	**37**	**11.5**	**+1.4**
CO03				*e*S		**Sn**	**23**	**37**	**46.1**	**-1.8**
VCA	**Vinchina**	**3.25**	**107**	*e*P		**Pn**	**23**	**37**	**11.2**	**-0.4**
VCA				*e*S		**Sn**	**23**	**37**	**53.7**	**+3.0**
VCA				IAML			23	38	07.3	
	comp=Z,1μm,1.8s									
VCA	**Vinchina**	**3.25**	**107**	*e*P		**Pb**	**23**	**37**	**15.5**	**-2.7**
VCA				*e*S		**Sb**	**23**	**38**	**01.0**	**+2.9**
ACDV	**Cuesta del Vie**	**3.28**	**136**	*e*P		**Pb**	**23**	**37**	**16.2**	**-2.4**
ACDV				*e*S		**Sb**	**23**	**38**	**01.2**	**+2.4**
ACDV				IAML			23	38	06.5	
	comp=Z,1μm,1.2s									
GO02	**Mina Guanaco**	**3.28**	**37**	Pn		**Pn**	**23**	**37**	**12.1**	**-0.1**
GO02	**Mina Guanaco**	**3.28**	**37**	*e*P		Pn	23	37	06.7	-5.5
GO02				*e*P		Pb	23	37	11.5	-7.3
GO02				IAML			23	38	13.0	
	comp=Z,1μm,1.4s									
GO02	**Mina Guanaco**	**3.28**	**37**	*e*P		**Pn**	**23**	**37**	**12.5**	**+0.2**
GO02				*e*S		**Sn**	**23**	**37**	**49.8**	**-1.9**
GO02				IAML			23	38	17.4	
	comp=N,1μm,0.3s									
AGUA	**GUANDACOL**	**3.30**	**121**	*e*P		**Pb**	**23**	**37**	**16.5**	**-2.6**
AGUA				*e*S		**Sb**	**23**	**38**	**00.2**	**+0.7**
AGUA				IAML			23	38	10.7	
	comp=Z,2μm,1.8s									
PB14	**IPOC Station P**	**3.41**	**21**	Pn		**Pn**	**23**	**37**	**12.4**	**-1.5**
PB14	**IPOC Station P**	**3.41**	**21**	*e*P		**Pn**	**23**	**37**	**12.7**	**-1.3**
PB14				*e*S		**Sg**	**23**	**38**	**11.7**	**+2.1**
PB14	**IPOC Station P**	**3.41**	**21**	*e*P		**Pn**	**23**	**37**	**12.6**	**-1.4**
CO02	**Combarbal**	**3.43**	**169**			**Pn**	**23**	**37**	**14.6**	**+0.5**
CO02	**Combarbal**	**3.43**	**169**	*e*P		**Pn**	**23**	**37**	**14.2**	**+0.2**
CO02				IAML			23	38	27.2	
	comp=Z,1μm,0.8s									
CO02	**Combarbal**	**3.43**	**169**	*e*P		**Pn**	**23**	**37**	**16.0**	**+2.0**
CO02				*e*S		**Sn**	**23**	**37**	**53.2**	**-1.8**
ACCO	**Cerro Coronel**	**3.61**	**140**	*e*P		**Pn**	**23**	**37**	**20.6**	**+3.8**
ACCO				*e*S		**Sb**	**23**	**38**	**07.4**	**-1.2**
AVFE	**Valle Fertil**	**4.69**	**128**	*e*P		**Pn**	**23**	**37**	**33.7**	**+2.3**
AVFE				*e*P		Pb	23	37	34.2	-8.5
AVFE

MURT	**Porto Murtinho**	**14.23**	**68**	*eP*	**P**	**23 39 46.8**	**-2.8**
TBOT	**Tacuaremb**	**14.26**	**109**	*eP*	**Pn**	**23 39 46.0**	**+3.6**
BBRB	**Robore, Bolivi**	**14.52**	**52**	*eP*	**P**	**23 39 51.2**	**-1.7**
RODS	**Rosario do Sul**	**14.69**	**104**	*eP*	**P**	**23 39 52.1**	**-2.5**
UNIS	**Unistalda (Bra**	**14.72**	**99**	*eP*	**Pn**	**23 39 50.9**	**+2.1**
BBSD	**Serra de San D**	**14.76**	**46**	*eP*	**Pn**	**23 39 51.2**	**+1.9**
SIV	**San Ignacio**	**15.38**	**42**	Pn	**Pn**	**23 39 54.7**	**-2.9**
	baz=261,slow=16,SNR=3.5						
SIV				LR	LR	23 46 20.8	
	comp=Z,347nm,18.8s,baz=265,slow=40						
	comp=Z,1.3nm,0.5s						
CPSB	**Cacapava Do Su**	**16.20**	**103**	*eP*	**P**	**23 40 11.3**	**-0.2**
PLTB	**Pedras Altas**	**16.23**	**108**		**Pn**	**23 40 06.5**	**-2.1**
PLTB	**Pedras Altas**	**16.23**	**108**	*eP*	**P**	**23 40 10.7**	**-1.1**
AQDB	**Aquidauana**	**16.36**	**67**	*eP*	**P**	**23 40 14.6**	**+1.3**
NNA	**Nana**	**16.47**	**342**	LR	LR	23 45 28.1	
	comp=Z,171nm,18.0s,baz=168,slow=33						
ALGR	**Alto Alegre (B**	**16.52**	**98**	*eP*	**P**	**23 40 16.5**	**+1.5**
FRBT	**Francisco Belt**	**16.77**	**88**	*eP*	**P**	**23 40 18.3**	**+0.4**
PTLB	**Pontes e Lacer**	**16.99**	**46**	P	**P**	**23 40 19.5**	**-0.7**
PTLB	**Pontes e Lacer**	**16.99**	**46**	*eP*	**P**	**23 40 20.8**	**+0.6**
ITAB	**Concordia**	**17.41**	**93**	P	**P**	**23 40 25.2**	**+0.3**
COYC	**Coyhaique**	**17.71**	**181**	Pn	**Pn**	**23 40 26.8**	**-0.3**
RVDE	**Rio Verde (Bra**	**17.72**	**64**	*eP*	**P**	**23 40 30.6**	**+2.2**
PTGB	**Pitanga**	**17.92**	**85**	*eP*	**P**	**23 40 31.7**	**+1.1**
TRCB	**Terra Rica**	**17.99**	**78**		**Pn**	**23 40 29.3**	**-1.5**
TRCB				IAmb	IAmb	23 40 42.4	
	comp=Z,62nm,1.4s						
TRCB	**Terra Rica**	**17.99**	**78**	*eP*	**P**	**23 40 33.3**	**+2.0**
VILB	**Vilhena**	**18.31**	**38**		**Pn**	**23 40 33.0**	**-1.8**
CNLB	**Canela**	**18.41**	**100**	*eP*	**Pn**	**23 40 37.0**	**+1.0**
ETMB	**Extrema**	**18.66**	**17**	P	**P**	**23 40 37.5**	**-1.2**
ETMB	**Extrema**	**18.66**	**17**	*eP*	**Pn**	**23 40 42.4**	**+3.4**
CZSB	**Cruzeiro do Su**	**20.01**	**357**	P	**Pn**	**23 40 54.7**	**-0.6**
CZSB				IAmb	IAmb	23 41 10.5	
	comp=Z,82nm,1.2s						
CZSB	**Cruzeiro do Su**	**20.01**	**357**	*eP*	**Pn**	**23 40 57.7**	**+2.4**
SAML	**Samuel**	**20.45**	**25**	P	**P**	**23 40 58.1**	**-0.1**
SAML				IAmb	IAmb	23 41 04.9	
	comp=Z,21nm,1.1s						
ATAH	**Atahualpa**	**21.52**	**342**	P	**P**	**23 41 12.5**	**+2.2**
	comp=Z,3.2nm,0.6s,baz=236,slow=5.5,SNR=2.1						
ATAH				LR	LR	23 48 05.4	
	comp=Z,114nm,19.4s,baz=174,slow=33						
	comp=Z,3.2nm,0.6s						
TBTG	**Tabatinga, AM**	**23.58**	**5**	P	**P**	**23 41 33.3**	**+1.9**
MCRA	**Macar, Loja**	**24.61**	**340**	P	**P**	**23 41 41.3**	**+0.1**
BDFB	**Brasilia**	**25.11**	**66**	P	**P**	**23 41 44.0**	**-1.8**
BDFB				IAmb	IAmb	23 41 47.2	
	comp=Z,25nm,1.2s						
BDFB	**Brasilia**	**25.11**	**66**	P	**P**	**23 41 43.8**	**-2.0**
	comp=Z,8.9nm,1.0s,baz=253,slow=9.5,SNR=9.2						
BDFB				LR	LR	23 51 27.9	
	comp=Z,279nm,21.8s,baz=270,slow=37						
	comp=Z,8.9nm,1.0s						
MACA	**Manacapuru-AM**	**26.71**	**25**	P	**P**	**23 41 59.6**	**-0.6**
MACA				IAmb	IAmb	23 42 17.4	
	comp=Z,25nm,1.1s						
SALI	**Salinas**	**26.99**	**339**	P	**P**	**23 42 02.0**	**-0.7**
RPN	**Rapa Nui**	**33.27**	**262**	LR	LR	23 52 48.4	
	comp=Z,348nm,19.4s,baz=76,slow=30						
SDV	**Santo Domingo**	**36.51**	**2**	LR	LR	00 00 31.9	
	comp=Z,175nm,18.6s,baz=251,slow=40						
BAUV	**El Baul**	**36.73**	**6**	P	**P**	**23 43 28.0**	**-0.2**
PMSA	**Palmer Station**	**37.28**	**175**	LR	LR	23 59 51.6	
	comp=Z,230nm,18.2s,baz=358,slow=38						
MDP	**Montagnes des**	**37.57**	**32**	LR	LR	23 59 30.3	
	comp=Z,216nm,18.2s,baz=222,slow=37						
RCBR	**Riachuelo**	**40.44**	**64**	LR	LR	00 01 51.5	
	comp=Z,228nm,18.1s,baz=240,slow=38						
SNAA	**Sanae**	**57.22**	**159**	⇑P	**P**	**23 46 06.4**	**-1.3**
	comp=Z,110nm,0.7s						
SNAA	**Sanae**	**57.22**	**159**	P	**P**	**23 46 06.4**	**-1.3**
	comp=Z,5.4nm,0.9s,baz=215,slow=15,SNR=4.5						
	comp=Z,5.4nm,0.9s						
TROLL	**Troll, Antarti**	**58.94**	**160**	⇑P	**P**	**23 46 21.6**	**+1.8**
	comp=Z,370nm,1.0s						
QSPA	**South Pole Qui**	**62.39**	**180**	P	**P**	**23 46 45.0**	**+1.6**
QSPA				IAmb	IAmb	23 47 05.8	
	comp=Z,8.7nm,1.1s						
QSPA	**South Pole Qui**	**62.39**	**180**	P	**P**	**23 46 44.3**	**+0.9**
	comp=Z,4.7nm,0.9s,baz=145,slow=2.3,SNR=11						
	comp=Z,4.7nm,0.9s						
TXAR	**Lajitas Array**	**64.53**	**329**	P	**P**	**23 46 58.6**	**+0.7**
	comp=Z,0.7nm,1.0s,baz=151,slow=5.8,SNR=3.4						
	comp=Z,0.7nm,1.0s						
T47A	**Sharon Grove**	**66.07**	**347**	P	**P**	**23 47 08.9**	**+1.3**
T47A				IAmb	IAmb	23 47 19.9	
	comp=Z,9.4nm,0.9s						
LCAR	**Lake Charles**	**66.14**	**343**	P	**P**	**23 47 10.0**	**+2.0**
LCAR				IAmb	IAmb	23 47 20.6	
	comp=Z,9.3nm,1.0s						
FCAR	**Ozark Folk Cen**	**66.23**	**342**	P	**P**	**23 47 09.1**	**+0.4**
FCAR				IAmb	IAmb	23 47 21.2	
	comp=Z,11nm,1.1s						
FVM	**French Village**	**67.77**	**344**	P	**P**	**23 47 19.3**	**+0.8**
FVM				IAmb	IAmb	23 47 31.3	
	comp=Z,12nm,0.9s						
S39A	**Bolivar**	**68.25**	**342**	P	**P**	**23 47 21.9**	**+0.5**
S39A				IAmb	IAmb	23 47 34.4	
	comp=Z,7.2nm,0.8s						
R40A	**Maddies Statio**	**68.52**	**343**	P	**P**	**23 47 25.2**	**+2.0**
P40A	**Paris**	**69.64**	**343**	P	**P**	**23 47 31.2**	**+1.2**
L59A	**Walton**	**69.73**	**357**	P	**P**	**23 47 31.3**	**+0.7**
L59A				IAmb	IAmb	23 47 46.6	
	comp=Z,11nm,0.9s						
N41A	**Harden Midland**	**70.46**	**345**	P	**P**	**23 47 35.9**	**+0.8**
N41A				IAmb	IAmb	23 47 48.0	
	comp=Z,12nm,0.8s						
ANMO	**Albuquerque**	**70.53**	**330**	P	**P**	**23 47 37.7**	**+1.8**
ANMO				IAmb	IAmb	23 47 49.5	
	comp=Z,4.3nm,1.4s						
I49A	**Point Hope**	**72.14**	**352**	P	**P**	**23 47 46.7**	**+1.5**
LONY	**Lake Ozonia**	**72.14**	**358**	P	**P**	**23 47 44.2**	**-1.0**
DBIC	**Dimbokro**	**73.04**	**73**		**P**	**23 47 51.3**	**+0.1**
DBIC				IAmb	IAmb	23 47 53.9	
	comp=Z,15nm,1.1s						
DBIC	**Dimbokro**	**73.04**	**73**	P	**P**	**23 47 50.1**	**-1.1**
	comp=Z,9.0nm,0.8s,baz=234,slow=7.0,SNR=7.0						
DBIC				LR	LR	00 19 28.2	
	comp=Z,98nm,18.8s,baz=330,slow=36						
	comp=Z,9.0nm,0.8s						
SUR	**Sutherland**	**77.64**	**120**	LR	LR	00 17 26.8	
	comp=Z,86nm,19.3s,baz=280,slow=32						
PDAR	**Pinedale Array**	**78.40**	**333**	P	**P**	**23 48 22.9**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=193,slow=7.4,SNR=2.2						
	comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	**80.63**	**345**	P	**P**	**23 48 33.3**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=135,slow=6.0,SNR=3.4						
	comp=Z,1.8nm,0.9s						
TSUM	**Tsumeb**	**80.70**	**107**	LR	LR	00 19 18.5	
	comp=Z,108nm,21.4s,baz=298,slow=32						
TOA0	**Torodi Ar. Sit**	**81.90**	**71**		**P**	**23 48 41.2**	**+0.4**
TOA0				IAmb	IAmb	23 48 42.8	
	comp=Z,12nm,0.9s						
TORD	**Torodi Ar. Bea**	**81.90**	**71**	P	**P**	**23 48 41.0**	**+0.2**
	comp=Z,9.4nm,1.0s,baz=259,slow=3.0,SNR=4.8						
BOSA	**Boshof**	**82.74**	**118**	P	**P**	**23 48 45.6**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=232,slow=5.1,SNR=3.4						
BOSA				LR	LR	00 21 27.0	
	comp=Z,87nm,19.1s,baz=244,slow=33						
	comp=Z,2.5nm,0.9s						
YBH	**Yreka Blue Hor**	**83.71**	**324**	LR	LR	00 19 33.9	
	comp=Z,531nm,21.7s,baz=326,slow=31						
LBTB	**Lobatse**	**84.69**	**115**	LR	LR	00 20 43.5	
	comp=Z,124nm,22.0s,baz=230,slow=32						
LSZ	**Lusaka**	**91.48**	**108**	LR	LR	00 25 53.2	
	comp=Z,104nm,19.9s,baz=292,slow=33						
YKA	**Yellowknife Ar**	**96.31**	**341**	P	**P**	**23 49 49.5**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=171,slow=4.4,SNR=2.2						
	comp=Z,0.1nm,0.4s						
ASAR	**Alice Springs**	**123.14**	**208**	PKP	**PKiKP**	**23 55 19.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=146,slow=2.7,SNR=2.3						
WRA	**Warramunga Arr**	**126.22**	**211**	PKP	**PKPdf**	**23 55 22.6**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=156,slow=1.6,SNR=7.1						
BVAR	**Borovoye Array**	**142.41**	**37**	PKP	**PKiKP**	**23 55 54.9**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=225,slow=1.8,SNR=3.3						
KURBB	**Kurchatov Arra**	**147.98**	**37**	PKPbc	**PKPbc**	**23 56 05.8**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=301,slow=3.2,SNR=14						
ZALV	**Zalesovo Beam**	**148.75**	**27**	PKPbc	**PKPbc**	**23 56 06.5**	**-1.4**
	comp=Z,12nm,0.8s,baz=306,slow=3.5,SNR=34						
MAKZ	**Makanchi**	**152.00**	**40**	PKPbc	**PKiKP**	**23 56 17.7**	**+1.5**
MAKZ				PKPab	**pPKPab**	**23 56 27.3**	**+1.3**
KLR	**Kul'dur**	**152.02**	**326**	PKPbc	**PKPbc**	**23 56 15.9**	**+0.1**
	comp=Z,1.9nm,1.0s,baz=32,slow=4.6,SNR=5.1						
MKAR	**Makanchi Array**	**152.19**	**40**	PKPbc	**PKiKP**	**23 56 17.6**	**+1.3**
MKAR				PKPab	**pPKPab**	**23 56 28.2**	**+1.4**
MKAR	**Makanchi Array**	**152.19**	**40**	PKPbc	**PKiKP**	**23 56 17.6**	**+0.9**
	comp=Z,3.2nm,0.8s,baz=329,slow=2.1,SNR=23						

IDC 15 23:41:35.1±2.4, 20.13S×175.38E, h0km, mb3.7/5, mbtmp3.6/5, Error ellipse: s-maj=117.7km s-min=31.0km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.48**	**263**	P	P	23 48 58.4	-0.9
	0.3nm,0.7s,baz=96,slow=7.6,SNR=5.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**38.55**	**257**	P	P	23 49 00.1	+0.2
	1.0nm,0.5s,baz=89,slow=9.0,SNR=11						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**89.46**	**15**	P	P	23 54 32.8	-0.7
	0.4nm,0.9s,baz=226,slow=4.8,SNR=2.6						
	0.4nm,0.9s						
SONM	**Songino Array**	**91.47**	**321**	P	P	23 54 44.5	+1.0
	0.6nm,1.1s,baz=114,slow=5.1,SNR=1.1						
	0.6nm,1.1s						
TXAR	**Lajitas Array**	**92.16**	**60**	P	P	23 54 47.1	0.0
	0.2nm,0.6s,baz=238,slow=5.2,SNR=1.6						
	0.2nm,0.6s						

*JMA **15** 23:47:50.9±0.3, 28.1N±0.5×128.1E±0.7, h13km±2km, MV3.7/21, NW OFF OKINAWAJIMA IS*
JMA Felt I J1 at NW OFF OKINAWAJIMA IS .
*NIED **15** 23:47:50.9, 28.11N×128.11E, h13km, MW4.1, Moment Tension Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-0.54; Mθθ0.62; Mφφ-0.08; Mrθ-0.45; Mθφ1.41; Mφr-0.14; Fault plane solution: M0 1.52000×10^15 NP1:φ96.00000°, δ87.00000°, λ-18.00000°. NP2:φ187.00000°, δ72.00000°, λ-177.00000°.*
*IDC **15** 23:47:51.2±0.8, 27.97N×127.72E, h0km, mb3.7/8, mbtmp3.7/11, ML3.5/2, MS3.6/5 Error ellipse: s-maj=33.9km s-min=10.0km az=67.0*

ISC 15 23:47:52.0±1.6, 28.01N±0.04×128.16E±0.05, h11km±11km, n31, σ1s29/36, mb3.7/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.73**	**107**	*eP*	**Pg**	**23 48 06.1**	**-0.1**
JTK				*eS*	**Sb**	**23 48 16.9**	**+0.1**
JOKE	**Okinoerabujima**	**0.74**	**150**	*eP*	**Pb**	**23 48 07.1**	**+0.2**
JOKE				*eS*	**Sn**	**23 48 19.1**	**-0.5**
JAMN	**Amaminishikomi**	**0.93**	**75**	P	**Pb**	**23 48 08.9**	**-1.1**
JAMN				*eS*	**Sb**	**23 48 21.6**	**-0.7**
JIH	**Iheya**	**0.99**	**190**	P	**Pb**	**23 48 11.0**	**-0.1**
JIH				*eS*	**Sn**	**23 48 24.8**	**-0.8**
JYRO	**Yoronjima**	**1.01**	**165**	*eP*	**Pn**	**23 48 11.8**	**-0.3**
JYRO				*eS*	**Sn**	**23 48 26.3**	**0.0**
JOW	**Kunigami**	**1.18**	**175**	*eP*	**Pb**	**23 48 14.2**	**-0.2**
JOW				*eS*	**Sg**	**23 48 30.3**	**+0.4**
JOW	**Kunigami**	**1.18**	**175**	Pg	**Pn**	**23 48 13.2**	**-1.2**
	178nm,0.3s,baz=352,slow=14,SNR=231						
JOW				Lg	Lg	23 48 30.9	
	86nm,0.3s,baz=98,slow=29,SNR=7.5						
JAM	**Amami Oshima**	**1.34**	**72**	*eP*	**Pn**	**23 48 15.6**	**-1.0**
JTAJ	**Takarajima**	**1.46**	**39**	*eP*	**Pn**	**23 48 16.3**	**-2.0**
JNTH	**Nagotoyohara**	**1.49**	**185**	*eP*	**Pb**	**23 48 19.0**	**-0.7**
JNTH				*eS*	**Sb**	**23 48 38.5**	**-0.1**
JZK	**Kikaishima**	**1.63**	**79**	*eP*	**Pn**	**23 48 20.9**	**+0.4**
JAGN	**Aguni-jima**	**1.63**	**210**	*eP*	**Pn**	**23 48 19.9**	**-0.7**
JJT3	**Tamagusuku3**	**1.89**	**190**	*eP*	**Pb**	**23 48 25.6**	**-0.8**
JJT3				*eS*	**Sb**	**23 48 50.5**	**+0.5**
JKE	**Kume jima 2**	**2.08**	**216**	*eP*	**Pn**	**23 48 26.2**	**-0.5**
JYAK	**Yakushimahirau**	**3.03**	**42**	*eP*	**Pn**	**23 48 39.4**	**-0.4**
JYAK				*eS*	**Sn**	**23 49 15.8**	**-0.2**
JMTN	**Minamitane**	**3.38**	**45**	*eP*	**Pn**	**23 48 44.9**	**+0.3**
JNU	**Nakatsue**	**5.61**	**24**	Pn	**Pn**	**23 49 19.8**	**+4.5**
	2.1nm,0.3s,baz=201,slow=6.3,SNR=25						
	63nm,0.9s						
KSRS	**Korea Array**	**9.42**	**359**	Pn	**Pn**	**23 50 08.3**	**+0.7**
	0.7nm,0.8s,baz=184,slow=14,SNR=3.1						
KSRS				LR	LR	23 53 46.4	
	comp=Z,108nm,19.3s,baz=200,slow=38						
JHJ	**Hachijo jima 2**	**11.23**	**60**	LR	LR	23 54 35.7	
	comp=Z,85nm,20.1s,baz=100,slow=35						
MJAR	**Matsushiro Arr**	**12.02**	**42**	LR	LR	23 55 42.2	
	comp=Z,70nm,21.5s,baz=217,slow=38						
USRK	**Ussuriysk Ar.**	**16.45**	**10**	Pn	**P**	**23 51 46.1**	**+0.7**
	0.1nm,0.3s,baz=182,slow=11,SNR=5.7						
	2.1nm,0.7s						
KLR	**Kul'dur**	**21.37**	**6**	P	**P**	**23 52 39.9**	**+0.6**
	0.2nm,0.3s,baz=226,slow=21,SNR=1.5						
	0.2nm,0.3s						
SONM	**Songino Array**	**26.04**	**325**	P	**P**	**23 53 24.8**	**-0.5**
	2.0nm,0.8s,baz=139,slow=9.3,SNR=19						
	2.0nm,0.8s						
MKAR	**Makanchi Array**	**40.32**	**310**	P	**P**	**23 55 27.7**	**-1.7**
	0.7nm,0.7s,baz=97,slow=10,SNR=10.0						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**40.81**	**322**	P	**P**	**23 55 31.9**	**-1.4**
	0.5nm,0.4s,baz=96,slow=11,SNR=2.0						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**43.54**	**315**	P	**P**	**23 55 54.1**	**-1.4**
	1.0nm,0.6s,baz=103,slow=9.0,SNR=11						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**48.04**	**172**	P	**P**	**23 56 34.1**	**+2.7**
	1.2nm,0.7s,baz=354,slow=8.3,SNR=8.0						
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**48.92**	**317**	P	**P**	**23 56 36.2**	**-1.7**
	0.9nm,0.7s,baz=82,slow=12,SNR=5.8						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**51.67**	**173**	P	**P**	**23 57 00.8**	**+1.8**
	0.3nm,0.5s,baz=12,slow=9.7,SNR=6.4						
	0.3nm,0.5s						
JMIC	**Jan Mayen**	**76.67**	**347**	LR	LR	00 35 56.3	
	comp=Z,229nm,18.7s,baz=76,slow=38						
PPT	**Papeete**	**91.53**	**109**	LR	LR	00 36 55.2	
	comp=Z,230nm,20.9s,baz=5.0,slow=32						

IDC 15 23:54:39.7±1.5, 5.64N×124.03E, h0km, mb3.7/4, mbtmp3.8/5, ML4.3/1, MS4.5/8, Error ellipse: s-maj=43.4km s-min=23.9km az=86.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.10**	**47**	Pn	Pn	23 55 16.9	+0.8
	107nm,0.3s,baz=222,slow=15,SNR=33						
DAV				Sn	Sn	23 55 33.2	-10
	88nm,0.3s,baz=271,slow=23,SNR=4.5						
	904nm,0.7s						
WRA	**Warramunga Arr**	**27.37**	**159**	P	P	00 00 26.1	-0.8
	0.6nm,0.6s,baz=343,slow=8.9,SNR=6.5						
WRA				LR	LR	00 14 03.6	
	comp=Z,321nm,19.8s,baz=64,slow=42						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**30.68**	**162**	P	P	00 00 57.2	+0.9
	0.6nm,0.4s,baz=339,slow=7.0,SNR=14						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**40.90**	**157**	P	P	00 02 23.3	-0.5
	2.3nm,0.7s,baz=330,slow=9.7,SNR=5.0						
	2.3nm,0.7s						
KLR	**Kul'dur**	**43.93**	**7**	LR	LR	00 19 33.0	
	comp=Z,689nm,21.5s,baz=76,slow=34						
MKAR	**Makanchi Array**	**54.47**	**326**	P	P	00 04 08.7	-0.4
	0.1nm,0.4s,baz=118,slow=8.1,SNR=2.7						
	0.1nm,0.4s						
KIRV	**Kirov**	**77.20**	**329**	LR	LR	00 41 58.9	
	comp=Z,386nm,19.7s,baz=342,slow=37						
BELG	**Belogornoye**	**77.26**	**322**	LR	LR	00 44 51.9	
	comp=Z,442nm,19.4s,baz=342,slow=39						
KBZ	**Khabaz**	**79.72**	**313**	LR	LR	00 45 50.8	
	comp=Z,217nm,21.8s,baz=14,slow=38						
OBN	**Obninsk**	**83.96**	**325**	LR	LR	00 48 37.2	
	comp=Z,249nm,18.1s,baz=5.0,slow=39						
BRTR	**Keskin Array B**	**86.74**	**309**	LR	LR	00 53 33.7	
	comp=Z,102nm,18.3s,baz=16,slow=41						
MLR	**Mumbai Rosu**	**91.67**	**316**	LR	LR	00 52 13.2	
	comp=Z,335nm,20.0s,baz=2.0,slow=38						

*AEIC **16** 00:00:14.0±2.0, 51.51N±0.06×176.71W±0.06, h41km±4km, Error ellipse: s-maj=8.3km s-min=5.6km az=167.0*
*GCMT **16** 00:00:14.4±0.2, 51.61N±0.01×176.65W±0.01, h46km, MW5.2/139, Moment Tension Solution. s120, c196; s139, c244; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.72±.02; Mθθ-0.65±.01; Mφφ-0.07±.01; Mrθ0.29±.01; Mθφ-0.27±.01; Mφr0.32±.01; Best double couple: M0 8.56000×10^17 NP1:φ56.00000°, δ60.00000°, λ77.00000°. NP2:φ260.00000°, δ32.00000°, λ111.00000°. Principal axes: T 0.8600, Plg72.0000°, Azm295.0000°; N -0.0080, Plg11.0000°, Azm62.0000°; P -0.8520, Plg14.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **16** 00:00:14.3±0.0, 51.92N×177.11W, h60km, mb5.0/72, mB5.3/42, Ms4.8/51, Ms7 4.6/53*
*MOS **16** 00:00:14.3±1.0, 51.79N×176.82W, h60km, mb5.1/51, MS4.4/8, Error ellipse: s-maj=7.7km s-min=5.6km az=106.0*
*IDC **16** 00:00:14.5±1.6, 51.72N×176.80W, h48km±14km, mb4.4/36, mbtmp4.6/37, ML4.8/2, MS4.3/75, Error ellipse: s-maj=13.6km s-min=9.4km az=167.0*
*NEIC **16** 00:00:15.5, 51.68N×176.81W, h50km*
*NEIC **16** 00:00:15.4±1.9, 51.69N±0.08×176.78W±0.07, h51km±3km, mb5.2/606, Mww5.2/39, ML5.0(AEIC), Error ellipse: s-maj=11.7km s-min=5.4km az=167.0*
*NEIC **16** 00:00:15.5, 51.28N×176.49W, h50km, Moment Tension Solution. Duration: 2s1 Moment tensor: Scale 10^16Nm; Mrr6.45; Mθθ-7.65; Mφφ1.19; Mrθ2.03; Mθφ-1.79; Mφr2.54; Fault plane solution: M0 8.00000×10^16 NP1:φ61.31000°, δ57.26000°, λ67.99000°. NP2:φ278.08000°, δ38.76000°, λ120.23000°. Principal axes: T 7.5779, Plg69.0000°, Azm283.0000°; N 0.8415, Plg18.0000°, Azm74.0000°; P -8.4195, Plg10.0000°, Azm167.0000°;*

ISC 16 00:00:14.6±0.3, 51.58N±0.04×176.76W±0.02, h54km±2km, h54km:pP-P, n1155, σ1s42/972, mb5.2/362, MS4.5/99, 37C-29D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.31**	**8**		**Pn**	**00 00 23.4**	**-0.9**
ADK				Sn	**Sn**	**00 00 30.1**	**-1.0**
ADK	**Adak**	**0.31**	**8**	P	**Pn**	**00 00 23.6**	**-0.6**
ADK	**Adak**	**0.31**	**8**	P	**Pn**	**00 00 23.4**	**-0.9**
ADK						00 00 30.1	
KIMD	**Kanaga Island**	**0.35**	**302**		**Pn**	**00 00 23.9**	**-0.7**
KIWB	**Kanaga Island**	**0.37**	**319**		**Pn**	**00 00 23.8**	**-1.0**
KIRH	**Kanaga Island**	**0.39**	**327**		**Pn**	**00 00 24.5**	**-0.4**
KINC	**Kanaga Island**	**0.42**	**327**		**Pn**	**00 00 25.0**	**-0.3**
KICM	**Kanaga Island**	**0.44**	**322**		**Pn**	**00 00 25.3**	**-0.1**
GSCK	**Great Sitkin C**	**0.57**	**40**		**Pn**	**00 00 26.6**	**-0.4**
GSSP	**Great Sitkin S**	**0.63**	**35**		**Pn**	**00 00 27.5**	**-0.2**
GSMY	**Great Sitkin M**	**0.64**	**43**		**Pn**	**00 00 27.3**	**-0.5**
GSIG	**Igitkin Island**	**0.66**	**51**		**Pn**	**00 00 27.6**	**-0.5**
GSIG					**Sn**	**00 00 37.4**	**-0.4**
TAPA	**Tanaga Point A**	**0.70**	**290**		**Pn**	**00 00 28.6**	**0.0**
TAFL	**Tanaga Flats**	**0.73**	**285**		**Pn**	**00 00 28.9**	**0.0**
TAFP	**Tanaga Falls P**	**0.83**	**294**		**Pn**	**00 00 30.3**	**+0.1**
TASE	**Tanaga Southea**	**0.84**	**289**		**Pn**	**00 00 30.7**	**+0.3**
GAEA	**Gareloi East**	**1.26**	**280**		**Pn**	**00 00 36.2**	**+0.3**
GANO	**Gareloi North**	**1.30**	**282**		**Pn**	**00 00 36.6**	**+0.2**
ATKA	**Atka Island**	**1.71**	**67**		**Pn**	**00 00 41.5**	**-0.4**
ATKA	**Atka Island**	**1.71**	**67**		**Sn**	**00 01 02.9**	**+0.3**
ATKA	**Atka Island**	**1.71**	**67**	P	**Pn**	**00 00 41.8**	**-0.1**
KOKL	**Mount Kliuchef**	**1.75**	**64**		**Pn**	**00 00 42.7**	**+0.1**
KOFP	**Korovin Flat P**	**1.79**	**66**		**Pn**	**00 00 43.2**	**0.0**
KOSE	**Korovin Southe**	**1.84**	**64**		**Pn**	**00 00 44.6**	**+0.8**
CERB	**Semis' Cerberu**	**2.27**	**280**		**Pn**	**00 00 50.8**	**+1.1**
CERB					**Sn**	**00 01 20.6**	**+4.1**
CESW	**Semis' Southwe**	**2.31**	**280**		**Pn**	**00 00 50.6**	**+0.4**
CEAP	**Semis' Anvil P**	**2.32**	**282**		**Pn**	**00 00 50.6**	**+0.3**
AMKA	**Amchitka**	**2.47**	**267**		**Sn**	**00 01 23.0**	**+1.6**
AMKA					LR	00 01 25.4	
AMKA	**Amchitka**	**2.47**	**267**	Pn	**Pn**	**00 00 52.1**	**-0.3**
LSPA	**Little Sitkin**	**2.93**	**279**		**Sn**	**00 01 33.6**	**+1.0**
LSSE	**Little Sitkin**	**2.93**	**279**		**Pn**	**00 00 59.3**	**+0.7**
NIKH	**Nikolski High**	**5.05**	**71**		**Pn**	**00 01

Q17K	**Contact Creek**	13.71	53	P		Pn	00 03 28.9	+2.9
	baz=250,SNR=14							
O17K	**Koliganek Bris**	13.75	46	P		Pn	00 03 29.4	+2.8
	baz=242							
P17K	**Kvichak River**	13.80	49	P		Pn	00 03 29.6	+2.5
	baz=245,SNR=20							
L16K	**Owhat River**	13.86	36			P	00 03 32.7	-1.9
L16K	**Owhat River**	13.86	36	P		Pn	00 03 30.5	+2.6
	baz=230,SNR=14							
N17K	**Nushagak Hills**	14.09	43	P		Pn	00 03 33.9	+2.9
	baz=239,SNR=11							
SII	**Sitkinak Islan**	14.13	61			P	00 03 39.9	+2.1
SII	**Sitkinak Islan**	14.13	61	P		Pn	00 03 31.4	-0.3
SII	**Sitkinak Islan**	14.13	61	P		Pn	00 03 32.2	+0.5
	baz=259							
R18K	**Karluk**	14.22	56	P		Pn	00 03 34.8	+2.0
	baz=254							
ANM	**Nome**	14.31	20	P		Pn	00 03 36.5	+2.5
ANM	**Nome**	14.31	20	P		Pn	00 03 36.1	+2.1
	baz=210							
ANM	**Nome**	14.31	20	P		Pn	00 03 36.5	+2.5
P18K	**Big Mountain,**	14.44	49			Pn	00 03 38.8	+2.9
P18K	**Big Mountain,**	14.44	49	P		Pn	00 03 37.5	+1.7
	baz=246,SNR=9.2							
M17K	**Holitna River**	14.45	40	P		Pn	00 03 37.9	+2.0
	baz=236,SNR=12							
J16K	**Anvik River**	14.55	30	P		P	00 03 40.0	-2.3
	baz=224,SNR=29							
L17K	**Donlin**	14.56	36	P		Pn	00 03 40.0	+2.7
	baz=232							
O18K	**Koktuh Hills**	14.64	47	P		P	00 03 41.3	-2.1
O18K	**Koktuh Hills**	14.64	47	P		Pn	00 03 41.0	+2.6
	baz=245,SNR=7.4							
N18K	**Kilae Creek**	14.72	44	P		Pn	00 03 42.0	+2.7
	baz=241							
TNA	**Tin City**	14.74	15	P		Pn	00 03 41.9	+2.4
	baz=202,SNR=7.6							
OHAK	**Old Harbor**	14.75	58	Pn		Pn	00 03 38.1	-1.6
OHAK				P		P	00 03 45.4	+0.9
OHAK	**Old Harbor**	14.75	58	P		Pn	00 03 42.1	+2.4
	baz=257,SNR=23							
K17K	**Iditarod**	14.93	34	P		P	00 03 44.8	-1.7
	baz=230							
F14K	**Arctic Creek**	14.93	17	P		Pn	00 03 44.0	+2.0
	baz=206,SNR=13							
I17K	**Unalakleet**	14.96	28	P		P	00 03 45.4	-1.4
I17K	**Unalakleet**	14.96	28	P		Pn	00 03 44.5	+2.0
	baz=222,SNR=11							
G15K	**Niukluk**	14.98	21	P		Pn	00 03 44.6	+2.0
	baz=212,SNR=45							
Q19K	**Cape Douglas,**	15.04	52	P		P	00 03 46.8	-1.0
	baz=250,SNR=7.6							
SVW2	**Sparrevohn**	15.05	43			P	00 03 48.5	+0.6
SVW2	**Sparrevohn**	15.05	43	P		P	00 03 48.9	+0.9
PET	**Petropavlovsk**	15.10	285	P		P	00 03 49.1	+0.7
PET	**Petropavlovsk**	15.10	285	*e*P		P	00 03 49.5	+1.1
PET				*e*S		Sn	00 06 31.0	+0.9
PET				pmax		pmax		
	comp=Z,64nm,1.1s							
PET				pmax		pmax		
	comp=Z,200nm,8.3s							
PET				pmax		pmax		
	comp=Z,1µm,12.1s							
PET				MLR		MLR		
	comp=Z,1µm,19.0s							
PET				MLR		MLR		
	comp=Z,2µm,17.0s							
J17K	**VABM Dome**	15.12	32	P		P	00 03 47.4	-1.2
	baz=226							
H16K	**Elim**	15.12	24	P		P	00 03 47.1	-1.5
	baz=217,SNR=29							
M18K	**Stony River**	15.15	41	P		P	00 03 48.3	-0.7
	baz=238							
O19K	**Port Alsworth**	15.19	47	IAmb		IAmb	00 04 01.1	
	comp=Z,132nm,0.9s							
O19K	**Port Alsworth**	15.19	47	P		P	00 03 48.7	-0.8
	baz=245							
L18K	**Granite Mounta**	15.21	38	IAmb		IAmb	00 04 03.1	
	comp=Z,197nm,1.2s							
L18K	**Granite Mounta**	15.21	38	P		P	00 03 48.9	-0.8
	baz=234							
KDAK	**Kodiak Island**	15.25	57			Pn	00 03 44.3	-1.9
KDAK				P		P	00 03 51.7	+1.6
KDAK				IAmb		IAmb	00 03 52.7	
	comp=Z,115nm,0.4s							
KDAK	**Kodiak Island**	15.25	57	P		P	00 03 48.7	-1.3
	baz=256							
KDAK	**Kodiak Island**	15.25	57	P		Pn	00 03 44.3	-1.9
KDAK				pmax		pmax		
	comp=Z,115nm,0.4s							
KDAK	**Kodiak Island**	15.25	57	P		Pn	00 03 43.7	-2.5
	comp=Z,3.1nm,0.3s,baz=274,slow=10,SNR=28							
KDAK				S		Sn	00 06 35.9	+2.2
	comp=Z,5.3nm,0.4s,baz=311,slow=20,SNR=1.7							
	comp=Z,13nm,0.3s							
N19K	**Bonanza Creek**	15.39	44	IAmb		IAmb	00 04 05.8	
	comp=Z,173nm,0.9s							
N19K	**Bonanza Creek**	15.39	44	P		P	00 03 51.0	-0.8
	baz=243,SNR=19							
F15K	**North Star Dit**	15.46	19	IAmb		IAmb	00 03 57.7	
	comp=Z,178nm,1.4s							
F15K	**North Star Dit**	15.46	19	P		P	00 03 51.5	-0.9
	baz=209							
P19K	**Oil Pt**	15.48	49	P		P	00 03 53.3	+0.5
P19K				IAmb		IAmb	00 04 03.1	
	comp=Z,78nm,0.7s							
P19K	**Oil Pt**	15.48	49	P		P	00 03 52.6	-0.2
	baz=249,SNR=7.0							
Q20K	**Shuyak Island**	15.56	54	P		Pn	00 03 51.9	+1.7
	baz=253							
SYI	**Shuyak Island**	15.56	54			Pn	00 03 50.3	+0.1
SYI				IAmb		IAmb	00 04 11.8	
	comp=Z,191nm,1.1s							
PEA0B	**Petropavlovsk-**	15.66	286			Pn	00 03 52.3	+0.7
PEA0B				IAmb		IAmb	00 04 04.8	
	comp=Z,162nm,1.4s							
PEA0B	**Petropavlovsk-**	15.66	286	*de*P		Pn	00 03 52.9	+1.3
PETK	**Petropavlovsk-**	15.66	286			Pn	00 03 52.2	+0.6
PETK	**Petropavlovsk-**	15.66	286	P		Pn	00 03 52.2	+0.6
PETK	**Petropavlovsk-**	15.66	286	P		Pn	00 03 53.0	+1.4
	comp=Z,23nm,0.6s,baz=86,slow=17,SNR=20							
PETK				LR		LR	00 09 33.5	
	comp=Z,2µm,20.9s,baz=89,slow=36							
G16K	**Koyuk River**	15.70	23	IAmb		IAmb	00 04 14.6	
	comp=Z,116nm,1.1s							
G16K	**Koyuk River**	15.70	23	P		Pn	00 03 53.4	+1.4
	baz=215							
TTA	**Tatalina**	15.88	36	P		P	00 04 00.6	+3.4
TTA	**Tatalina**	15.88	36	P		P	00 03 57.7	+0.4
	baz=234,SNR=35							
L19K	**White Mountain**	15.91	40	P		P	00 03 57.4	0.0
	baz=238,SNR=72							
O20K	**Slope Mountain**	15.93	48	P		P	00 03 58.4	+0.7
	baz=248							
M19K	**Big River Lodg**	15.95	41	P		P	00 03 59.1	+1.2
M19K				IAmb		IAmb	00 04 12.1	
	comp=Z,228nm,0.9s							
M19K	**Big River Lodg**	15.95	41	P		P	00 03 58.6	+0.6
	baz=240,SNR=45							
J18K	**Innoko River**	15.96	34	IAmb		IAmb	00 04 12.3	
	comp=Z,192nm,1.1s							
J18K	**Innoko River**	15.96	34	P		P	00 03 58.3	+0.3
	baz=231,SNR=33							
H17K	**Granite Mounta**	15.98	27	P		P	00 03 58.0	-0.1
H17K	**Granite Mounta**	15.98	27	P		P	00 03 58.9	+0.7
	baz=221,SNR=28							
G17K	**Kiwalik Mounta**	16.21	24	P		P	00 04 01.5	+0.8
	baz=218,SNR=19							
L20K	**Farewell, AK**	16.45	40	P		P	00 04 04.3	+0.9
	baz=239,SNR=17							
M20K	**Styx River**	16.46	42	IAmb		IAmb	00 04 24.9	
	comp=Z,198nm,1.1s							
M20K	**Styx River**	16.46	42	P		P	00 04 03.6	-0.1
	baz=242							
N20K	**Mount Spurr**	16.56	45	P		P	00 04 06.1	+1.4
	baz=245,SNR=22							
H18K	**Honhosa River**	16.58	28	P		P	00 04 05.3	+0.4
	baz=223							
J19K	**Poorman**	16.67	34	IAmb		IAmb	00 04 20.2	
	comp=Z,220nm,1.2s							
J19K	**Poorman**	16.67	34	P		P	00 04 07.0	+1.1
	baz=231,SNR=46							
BRSE	**Bradley Lake S**	16.71	51	P		P	00 04 06.8	+0.5
	baz=252							
GCSA	**Galena City Sc**	16.75	30	P		P	00 04 07.3	+0.7
	baz=227,SNR=9.9							
F17K	**Baldwin Pennin**	16.83	22	IAmb		IAmb	00 04 23.8	
	comp=Z,188nm,1.4s							
F17K	**Baldwin Pennin**	16.83	22	P		P	00 04 07.7	+0.3
	baz=215,SNR=20							
K20K	**Telida**	16.85	37	IAmb		IAmb	00 04 26.0	
	comp=Z,92nm,0.7s							
K20K	**Telida**	16.85	37	P		P	00 04 08.6	+0.7
	baz=236,SNR=26							
CAPN	**Captain Cook N**	16.86	47	P		P	00 04 09.2	+1.3
	baz=248							
G18K	**Tagagawik**	17.05	26	IAmb		IAmb	00 04 26.0	
	comp=Z,146nm,1.3s							
G18K	**Tagagawik**	17.05	26	P		P	00 04 11.8	+1.8
	baz=221,SNR=32							
SKT	**Skwentna**	17.18	43	IAmb		IAmb	00 04 16.9	
	comp=Z,136nm,0.8s							
SKT	**Skwentna**	17.18	43	P		P	00 04 13.0	+1.5
	baz=244,SNR=77							
E17K	**Hotham Inlet**	17.23	20	P		P	00 04 14.3	+2.3
	baz=213							
J20K	**Nowinta River**	17.30	34	P		P	00 04 14.6	+1.8
	baz=234,SNR=19							
SUA	**Susitna One**	17.31	45			P	00 04 14.7	+1.7
SUA	**Susitna One**	17.31	45	P		P	00 04 15.6	+2.6
	baz=247,SNR=8.8							
F18K	**Selawik**	17.34	23	P		P	00 04 15.9	+2.8
	baz=218,SNR=34							
PPLA	**Purkeypile**	17.34	40	P		P	00 04 16.3	+3.0
	baz=240							
H19K	**Roundabout Mou**	17.41	29	P		P	00 04 16.3	+2.3
	baz=226							
FIS	**Fire Island**	17.42	46	P		P	00 04 14.8	+0.7
O22K	**Cooper Landing**	17.42	49	P		Pn	00 04 13.5	0.0
O22K				IAmb		IAmb	00 04 37.9	
	comp=Z,223nm,0.6s							
O22K	**Cooper Landing**	17.42	49	P		P	00 04 16.0	+1.9
	baz=251,SNR=9.4							
SEW	**Seward**	17.43	50	P		P	00 04 14.6	+0.3
	baz=253							
I20K	**Naaghedeneel**	17.56	33	P		P	00 04 17.8	+2.2
	baz=231							
RC01	**Rabbit Creek A**	17.62	47	P		P	00 04 17.6	+1.2
RC01	**Rabbit Creek A**	17.62	47	P		P	00 04 17.6	+1.2
	baz=249							
CAST	**Castle Rocks**	17.64	38	P		P	00 04 18.5	+1.9
	baz=239							
C16K	**Lisburne Hills**	17.64	14	P		P	00 04 18.8	+2.3
	baz=204							
G19K	**Purcell Mounta**	17.67	27	P		P	00 04 18.4	+1.6
	baz=224							
M22K	**Willow**	17.70	45	P		Pn	00 04 17.1	+0.3
M22K				IAmb		IAmb	00 04 36.8	
	comp=Z,237nm,1.0s							
M22K	**Willow**	17.70	45	P		P	00 04 19.6	+2.5
	baz=247							
E18K	**Tukpahlearik C**	17.78	21	P		P	00 04 21.4	+3.4
	baz=214							
CHUM	**Lake Minchumin**	17.80	37	P		P	00 04 20.0	+1.7
	baz=237							
H20K	**Anotleneega Mo**	17.88	30	P		Pn	00 04 20.7	+1.7
	baz=229,SNR=40							
CUT	**Chulitna**	17.90	43	P		Pn	00 04 19.6	+0.2
CUT				IAmb		IAmb	00 04 47.6	
	comp=Z,316nm,1.3s							
CUT	**Chulitna**	17.90	43	P		Pn	00 04 21.4	+2.1
	baz=245,SNR=15							
F19K	**Shaleruckik Mo**	17.99	25			PcP	00 08 54.0	+1.4
F19K	**Shaleruckik Mo**	17.99	25	P		Pn	00 04 22.2	+1.8
	baz=221							
PMR	**Palmer**	18.07	46	P		Pn	00 04 23.4	+2.0
	baz=249							
C17K	**DeLong Mountai**	18.18	16	P		Pn	00 04 23.6	+0.9
	baz=208							
GHO	**Glory Hole Cre**	18.23	45	P		Pn	00 04 23.8	+0.3
KNK	**Knik Glacier**	18.31	47	P		Pn	00 04 24.7	+0.3
	baz=250,SNR=11							
TRF	**Thorofare Moun**	18.36	39	IAmb		IAmb	00 04 44.0	
	comp=Z,335nm,1.1s							
TRF	**Thorofare Moun**	18.36	39	P		Pn	00 04 26.2	+1.1
	baz=242							
P23K	**Montague Islan**	18.40	51	P		Pn	00 04 26.5	+1.1
	baz=256							
BPAW	**Bear Paw Mtn.**	18.41	37			Pn	00 04 26.5	+0.9
BPAW				IAmb		IAmb	00 04 41.4	
	comp=Z,137nm,1.0s							
BPAW	**Bear Paw Mtn.**	18.41	37	P		Pn	00 04 26.5	+0.9
	baz=239,SNR=38							
BILL	**Bilibino**	18.47	340	P		Pn	00 04 26.5	+0.4
BILL				IAmb		IAmb	00 04 45.8	
	comp=Z,230nm,1.2s							
BILL	**Bilibino**	18.47	340	*i* P		Pn	00 04 26.6	+0.4
BILL				pmax		pmax		
	comp=Z,80nm,1.3s							
SML	**Sawmill**	18.51	45	P		Pn	00 04 27.7	+0.9
	baz=249							
E19K	**Redstone River**	18.60	24	P		Pn	00 04 29.2	+1.3
	baz=221							
I21K	**Tanana**	18.64	34	IAmb		IAmb	00 04 55.6	
	comp=Z,135nm,1.1s							
I21K	**Tanana**	18.64	34	P		Pn	00 04 29.2	+0.9
	baz=235							
H21K	**Melozitna Rive**	18.65	32	P		Pn	00 04 29.4	+1.0
	baz=232,SNR=28							
C18K	**Utukok River**	18.69	18	IAmb		IAmb	00 04 47.3	
	comp=Z,166nm,1.4s							
C18K	**Utukok River**	18.69	18	P		Pn	00 04 30.4	+1.4
	baz=211,SNR=44							
F20K	**Avaraart Lake**	18.70	26	P		Pn	00 04 29.7	+0.8
	baz=224,SNR=25							
M23K	**Glacier View**	18.77	46	P		Pn	00 04 30.4	+0.5
	baz=250,SNR=25							
Q23K	**Middleton Isla**	18.79	53	P		Pn	00 04 30.7	+0.6
	baz=258							
WAT1	**Susitna Watana**	18.80	42	P		Pn	00 04 30.1	-0.2
	baz=246							
RND	**Reindeer**	18.92	41	P		P	00 04 30.5	-0.2
RND				IAmb		IAmb	00 04 43.4	
	comp=Z,125nm,0.8s							
RND	**Reindeer**	18.92	41	P		P	00 04 30.5	-0.2
RND				pmax		pmax		
	comp=Z,125nm,0.8s							
HIN	**Hinchinbrook I**	18.93	50			Pn	00 04 31.5	-0.3
SCM	**Sheep Creek Mo**	18.96	46	P		Pn	00 04 32.3	0.0
SCM				IAmb		IAmb	00 04 44.6	
	comp=Z,71nm,0.7s							
SCM	**Sheep Creek Mo**	18.96	46	P		P	00 04 31.9	+0.7
	baz=250,SNR=8.2							
SCM	**Sheep Creek Mo**	18.96	46	P		Pn	00 04 32.3	0.0
SCM				pmax		pmax		
	comp=Z,71nm,0.7s							
G21K	**Allakaket**	18.97	29	IAmb		IAmb	00 04 51.1	
	comp=Z,139nm,1.2s							
G21K	**Allakaket**	18.97	29	P		Pn	00 04 32.7	+0.4
	baz=229							
MLY	**Manley**	19.00	35	IAmb		IAmb	00 04 44.8	
	comp=Z,122nm,1.1s							
MLY	**Manley**	19.00	35	P		Pn	00 04 33.1	+0.4
	baz=237,SNR=54							
MCK	**McKinley**	19.03	40	P		Pn	00 04 32.7	-0.3
	baz=243,SNR=52							
WAT6	**Susitna Watana**	19.05	43	P		Pn	00 04 33.1	-0.3
	baz=248,SNR=25							
B18K	**Kokolik River**	19.20	16	P		Pn	00 04 35.8	+0.8
	baz=209,SNR=46							
D19K	**Kuna River**	19.20	21	P		Pn	00 04 35.3	+0.2
	baz=217							
H22K	**Ishtalitna Cre**	19.26	32	P		Pn	00 04 36.1	+0.4
	baz=234,SNR=48							
EYAK	**Cordova Ski Ar**	19.33	50	P		Pn	00 04 36.2	-0.4
	baz=256							
NEA2	**Nenana**	19.38	37	P		P	00 04 36.0	+0.4
NEA2				IAmb		IAmb	00 04 55.0	
	comp=Z,179nm,1.3s							
NEA2	**Nenana**	19.38	37	P		P	00 04 35.8	+0.2
	baz=241,SNR=17							
C19K	**Lookout Ridge**	19.39	19	P		Pn	00 04 38.0	+0.7
	baz=214							
DHY	**Denali Highway**	19.39	42	IAmb		IAmb	00 04 40.1	
	comp=Z,105nm,0.6s							
DHY	**Denali Highway**	19.39	42	P		P	00 04 36.0	+0.1
	baz=247,SNR=100							
F21K	**Alatna River**	19.45	28	P		Pn	00 04 38.2	+0.3
	baz=228,SNR=28							
E20K	**Nigu River**	19.47	23	P		Pn	00 04 38.3	0.0
	baz=221							
KLU	**Klutina**	19.50	47	P		Pn	00 04 38.3	-0.3
	baz=253,SNR=16							
I23K	**Minto, Yukon-K**	19.55	36	IAmb		IAmb	00 04 55.9	
	comp=Z,126nm,0.9s							
I23K	**Minto, Yukon-K**	19.55	36	P		Pn	00 04 39.0	-0.2
	baz=239,SNR=54							
M24K	**Tolsona, Glenn**	19.57	46	IAmb		IAmb	00 05 01.6	
	comp=Z,145nm,1.0s							
M24K	**Tolsona, Glenn**	19.57	46	P		P	00 04 38.7	+0.9
	baz=251,SNR=17							
WRH	**Wood River Hil**	19.70	38	IAmb		IAmb	00 04 53.4	
	comp=Z,66nm,0.8s							
D20K	**Etivluk River**	19.72	22	P		Pn	00 04 41.0	-0.1
	baz=219							
RAGM	**Ragged Mountai**	19.81	51			pP	00 04 53.4	+1.0
G22K	**Bettles**	19.84	30	P		Pn	00 04 42.0	-0.5
	baz=232							
KAIM	**Kayak Island**	19.85	53	P		Pn	00 04 42.4	-0.3
	baz=259							
MA2	**Magadan**	19.86	306			P	00 04 41.6	+0.8
MA2				IAmb		IAmb	00 05 01.4	
	comp=Z,123nm,1.3s							
MA2	**Magadan**	19.86	306	*i* P		Pn	00 04 43.7	+0.9
MA2				pmax		pmax		
	comp=Z,51nm,1.4s							
MA2	**Magadan**	19.86	306	P		Pn	00 04 43.9	+1.1
	comp=Z,14nm,0.6s,baz=86,slow=12,SNR=8.3							
MA2				LR		LR	00 12 57.0	
	comp=Z,193nm,19.1s,baz=106,slow=39							
CCB	**Clear Creek Bu**	19.89	38	P		P	00 04 40.3	-0.8
CCB				IAmb		IAmb	00 04 55.6	
	comp=Z,96nm,1.0s							
SEY	**Seymchan**	19.97	317⇑	*e*P		P	00 04 43.0	+1.0
SEY				pmax		pmax		
	comp=Z,44nm,1.3s							
SEY	**Seymchan**	19.97	317	P		Pn	00 04 43.7	-0.4
	comp=Z,16nm,0.6s,baz=116,slow=14,SNR=22							
SEY				LR		LR	00 12 08.4	
	comp=Z,3µm,20.6s,baz=112,slow=36							
SEY				ScP		ScP	00 12 30.8	+3.4
	comp=Z,1.9nm,0.2s,baz=72,slow=19,SNR=5.0							
BMRM	**Bremner River**	19.97	49	P		P	00 04 42.9	+0.8
	baz=256,SNR=13							
COLA	**College**	19.98	37	P		Pn	00 04 43.5	-0.6
COLA				IAmb		IAmb	00 04 58.1	
	comp=Z,75nm,0.7s							
COLA	**College**	19.98	37	P		Pn	00 04 43.5	-0.6
COLA				pmax		pmax		
	comp=Z,75nm,0.7s							
HMT	**Hamilton**	20.00	51	P		Pn	00 04 43.9	-0.6
A19K	**Wainwright**	20.06	16	P		Pn	00 04 44.6	-0.5
	baz=209							
HARP	**HAARP**	20.11	45	P		Pn	00 04 45.8	0.0
	baz=252,SNR=17							
HDA	**Harding Lake**	20.11	39	IAmb		IAmb	00 04 57.5	
	comp=Z,80nm,0.7s							
HDA	**Harding Lake**	20.11	39	P		Pn	00 04 45.4	-0.4
	baz=244,SNR=19							
N25K	**Chitina, Valde**	20.14	48	P		Pn	00 04 45.5	-0.7
	baz=255,SNR=15							
PAX	**Paxson**	20.16	44	P		P	00 04 45.2	+1.0
	baz=250,SNR=39							
G23K	**Bananza Creek**	20.19	31	IAmb		IAmb	00 04 58.0	
	comp=Z,119nm,1.3s							
G23K	**Bananza Creek**	20.19	31	P		Pn	00 04 46.1	-0.6
	baz=234,SNR=38							
POKR	**Poker Plat Res**	20.25	37	IAmb		IAmb	00 05 08.2	
	comp=Z,142nm,1.1s							
POKR	**Poker Plat Res**	20.25	37	P		Pn	00 04 46.5	-0.9
	baz=242,SNR=19							
BERG	**Berg Lake**	20.29	51	P		P	00 04 45.8	+0.3
IL31		20.30	38	P		P	00 04 44.5	-1.0
ILAR	**Eielson Array**	20.30	38	P		P	00 04 43.5	-2.0
	comp=Z,1.9nm,0.6s,baz=240,slow=9.6,SNR=25							
ILAR				PcP		PcP	00 08 56.6	-0.1
	comp=Z,3.3nm,0.6s,baz=232,slow=4.4,SNR=7.0							
ILAR				ScP		ScP	00 12 29.4	+1.2
	comp=Z,1.1nm,0.7s,baz=263,slow=1.6,SNR=5.5							
ILAR				LR		LR	00 13 42.5	
	comp=Z,1µm,19.1s,baz=224,slow=40							
	comp=Z,1.9nm,0.6s							
K24K	**Donnelly Dome**	20.34	41	P		P	00 04 46.2	+0.2
	baz=247,SNR=45							
COLD	**Coldfoot**	20.44	30	P		Pn	00 04 48.5	-1.0
	baz=233,SNR=36							
H24K	**Noodor Dome**	20.44	35	IAmb		IAmb	00 05 00.6	
	comp=Z,182nm,1.1s							
H24K	**Noodor Dome**	20.44	35	P		P	00 04 48.3	+1.2
	baz=240,SNR=53							
BGLC	**Bering Glacier**	20.44	52	P		Pn	00 04 49.4	-0.3
	baz=260							
C21K	**Knifeblade Rid**	20.49	22	P		Pn	00 04 49.0	-1.2
	baz=222,SNR=56							
VRDI	**Verde Repeater**	20.58	49	P		Pn	00 04 50.4	-1.2
B20K	**Meade River**	20.62	19	IAmb		IAmb	00 04 53.5	
	comp=Z,66nm,0.9s							
B20K	**Meade River**	20.62	19	P		P	00 04 50.1	+1.1
	baz=216							
CRQE	**Cirque**	20.65	51	P		Pn	00 04 51.2	-1.2
	baz=259							
WAX	**Waxell Ridge**	20.71	51	P		P	00 04 50.5	+0.4
D22K	**Ayikyak River**	20.81	25	IAmb		IAmb	00 05 04.6	
	comp=Z,92nm,1.0s							
D22K	**Ayikyak River**	20.81	25	P		P	00 04 52.5	+1.5
	baz=226,SNR=86							
MCARA	**McCarthy VSAT**	20.82	49	P		Pn	00 04 52.9	-1.2
MCARA				IAmb		IAmb	00 05 06.6	
	comp=Z,94nm,0.8s							
MCARA	**McCarthy VSAT**	20.82	49	P		P	00 04 52.3	+1.1
	baz=257,SNR=9.2							
J25K	**Salcha River,**	20.82	39	IAmb		IAmb	00 05 05.0	
	comp=Z,46nm,0.7s							
J25K	**Salcha River,**	20.82	39	P		P	00 04 51.1	-0.2
	baz=246							
B21K	**Ikpikpuk River**	20.88	22	IAmb		IAmb	00 04 56.0	
	comp=Z,138nm,0.9s							
B21K	**Ikpikpuk River**	20.88	22	P		P	00 04 52.5	+0.7
	baz=221							
MENT	**Mentasta**	20.91	44	P		Pn	00 04 55.0	-0.3
ISLE	**Juniper Island**	20.99	51			P	00 04 53.8	+0.6
ISLE				IAmb		IAmb	00 05 17.9	
	comp=Z,87nm,1.2s							
G24K	**Hadweenzic Riv**	21.02	33	IAmb		IAmb	00 05 16.6	
	comp=Z,157nm,1.2s							
G24K	**Had

A21K	**Barrow**		**21.80**	**17**	P		**P**	**00 05 02.0**	**+0.5**
	baz=215,SNR=21								
PINM	**Pinnacle**		**21.94**	**53**	P		**P**	**00 05 03.5**	**+0.2**
	baz=263								
K27K	**Chicken**		**21.95**	**42**	IAmb		IAmb	00 05 27.0	
	comp=Z,106nm,1.1s								
K27K	**Chicken**		**21.95**	**42**	P		**P**	**00 05 03.8**	**+0.5**
	baz=252,SNR=40								
I26K	**Coal Creek Min**		**21.96**	**38**	P		**P**	**00 05 03.9**	**+0.5**
	baz=247,SNR=13								
D24K	**Happy Valley**		**22.03**	**27**	IAmb		IAmb	00 05 25.2	
	comp=Z,85nm,1.1s								
D24K	**Happy Valley**		**22.03**	**27**	P		**P**	**00 05 05.7**	**+1.5**
	baz=231								
BVCY	**Beaver Creek**		**22.04**	**47**	P		**P**	**00 05 05.5**	**+1.2**
	baz=257								
YUK3	**Moose Creek**		**22.10**	**48**	P		**P**	**00 05 05.7**	**+0.6**
	baz=259,SNR=15								
F25K	**Christian Rive**		**22.10**	**32**	P		**P**	**00 05 05.5**	**+0.6**
	baz=239,SNR=20								
BCPM	**Bancas Point**		**22.23**	**53**	P		**P**	**00 05 05.0**	**-1.4**
BCPM					IAmb		IAmb	00 05 17.7	
	comp=Z,104nm,1.2s								
PNL	**Peninsula**		**22.33**	**54**	P		**P**	**00 05 10.6**	**+3.2**
PNL	**Peninsula**		**22.33**	**54**	P		**P**	**00 05 08.1**	**+0.6**
	baz=265								
YUK8	**Steele Glacier**		**22.34**	**50**	P		**P**	**00 05 08.0**	**+0.1**
	baz=261								
BMAR	**Burnt Mountain**		**22.37**	**33**	P		**P**	**00 05 06.9**	**-1.0**
E25K	**Arctic Village**		**22.40**	**31**	IAmb		IAmb	00 05 22.1	
	comp=Z,146nm,1.5s								
E25K	**Arctic Village**		**22.40**	**31**	P		**P**	**00 05 08.9**	**+0.8**
	baz=238,SNR=25								
G26K	**Porcupine Rive**		**22.42**	**34**	P		**P**	**00 05 08.3**	**0.0**
	baz=243								
C24K	**Franklin Bluff**		**22.43**	**25**	P		**P**	**00 05 09.2**	**+0.9**
	baz=230								
EGAK	**Eagle**		**22.57**	**41**	IAmb		IAmb	00 05 36.2	
	comp=Z,98nm,1.2s								
EGAK	**Eagle**		**22.57**	**41**	P		**P**	**00 05 09.6**	**-0.3**
	baz=251,SNR=31								
F26K	**Sheenjek River**		**22.65**	**32**	P		**P**	**00 05 11.1**	**+0.3**
	baz=241								
I27K	**Kandik River**		**22.67**	**38**	P		**P**	**00 05 11.3**	**+0.2**
	baz=249,SNR=14								
O29M	**Mount Kennedy**		**22.80**	**53**	P		**P**	**00 05 12.2**	**-0.3**
	baz=264								
D25K	**Kavik River**		**22.83**	**28**	P		**P**	**00 05 12.7**	**0.0**
	baz=234								
YUK4	**Talbot Arm**		**22.88**	**50**	P		**P**	**00 05 13.6**	**+0.2**
	baz=262								
H27K	**Steamboat Moun**		**22.94**	**37**	P		**P**	**00 05 13.5**	**-0.3**
	baz=247,SNR=6.6								
YUK6	**Outpost Mounta**		**22.97**	**51**	P		**P**	**00 05 14.0**	**-0.4**
	baz=263								
DAWY	**Dawson**		**23.09**	**43**	P		**P**	**00 05 15.1**	**-0.3**
DAWY					IAmb		IAmb	00 05 41.0	
	comp=Z,120nm,1.2s								
DAWY	**Dawson**		**23.09**	**43**	P		**P**	**00 05 14.8**	**-0.5**
	baz=255,SNR=32								
M29M	**Somme Creek**		**23.14**	**47**	P		**P**	**00 05 16.0**	**0.0**
	baz=260,SNR=14								
P29M	**Windy Craggy**		**23.17**	**54**	P		**P**	**00 05 16.2**	**+0.1**
	baz=267								
I28M	**Miner Creek**		**23.27**	**39**	IAmb		IAmb	00 05 28.1	
	comp=Z,128nm,1.4s								
I28M	**Miner Creek**		**23.27**	**39**	P		**P**	**00 05 17.0**	**-0.1**
	baz=251								
HYT	**Haines Junctio**		**23.37**	**51**	P		**P**	**00 05 19.1**	**+0.9**
HYT	**Haines Junctio**		**23.37**	**51**	P		**P**	**00 05 18.1**	**-0.1**
	baz=264								
L29M	**L29M**		**23.42**	**46**	P		**P**	**00 05 18.8**	**+0.2**
	baz=258,SNR=16								
P30M	**Million Dollar**		**23.59**	**53**	P		**P**	**00 05 20.0**	**-0.1**
	baz=266								
N30M	**Aishikik Lake**		**23.64**	**50**	P		**P**	**00 05 21.1**	**+0.4**
	baz=263								
J29N	**Klondike Camp**		**23.69**	**42**	IAmb		IAmb	00 05 48.6	
	comp=Z,194nm,1.4s								
J29N	**Klondike Camp**		**23.69**	**42**	P		**P**	**00 05 21.2**	**+0.2**
	baz=255								
K29M	**Barlow Dome**		**23.84**	**44**	IAmb		IAmb	00 05 45.6	
	comp=Z,40nm,0.8s								
K29M	**Barlow Dome**		**23.84**	**44**	P		**P**	**00 05 22.1**	**-0.4**
	baz=257,SNR=28								
M30M	**Minto, Yukon**		**23.93**	**47**	P		**P**	**00 05 23.1**	**-0.2**
M30M	**Minto, Yukon**		**23.93**	**47**	P		**P**	**00 05 23.5**	**+0.3**
	baz=261								
O30N	**Mendenhall**		**24.06**	**52**	P		**P**	**00 05 24.8**	**+0.3**
O30N	**Mendenhall**		**24.06**	**52**	P		**P**	**00 05 24.3**	**-0.1**
	baz=266								
F28M	**Old Crow**		**24.08**	**34**	P		**P**	**00 05 23.8**	**-0.7**
	baz=246,SNR=23								
H29M	**Whitestone**		**24.13**	**38**	IAmb		IAmb	00 05 46.1	
	comp=Z,89nm,1.2s								
H29M	**Whitestone**		**24.13**	**38**	P		**P**	**00 05 24.8**	**-0.2**
	baz=251								
KUR	**Kuril'sk**		**24.15**	**269**	*ce*	P	**P**	**00 05 26.2**	**+0.9**
D27M	**Malcolm River**		**24.43**	**30**	IAmb		IAmb	00 05 47.5	
	comp=Z,83nm,1.5s								
D27M	**Malcolm River**		**24.43**	**30**	P		**P**	**00 05 28.7**	**+1.0**
	baz=242								
SIT	**Sitka**		**24.48**	**61**	P		**P**	**00 05 29.0**	**+0.7**
	baz=275								
J30M	**Hart River**		**24.51**	**42**	IAmb		IAmb	00 05 41.3	
	comp=Z,89nm,1.1s								
J30M	**Hart River**		**24.51**	**42**	P		**P**	**00 05 28.2**	**-0.4**
	baz=257,SNR=21								
E28M	**Babbage River**		**24.60**	**32**	P		**P**	**00 05 28.7**	**-0.6**
	baz=245								
I30M	**Mount Dempster**		**24.64**	**41**	IAmb		IAmb	00 05 41.4	
	comp=Z,51nm,1.0s								
I30M	**Mount Dempster**		**24.64**	**41**	P		**P**	**00 05 28.2**	**-1.6**
	baz=256,SNR=64								
EPYK	**Eagle Plains**		**24.81**	**38**	P		**P**	**00 05 30.0**	**-1.3**
EPYK					IAmb		IAmb	00 05 54.7	
	comp=Z,88nm,1.2s								
EPYK	**Eagle Plains**		**24.81**	**38**	P		**P**	**00 05 29.4**	**-1.8**
	baz=253,SNR=11								
R32K	**Eaglecrest**		**24.83**	**58**	P		**P**	**00 05 31.7**	**+0.2**
R32K	**Eaglecrest**		**24.83**	**58**	P		**P**	**00 05 30.7**	**-0.8**
	baz=273								
M31M	**Drury Creek, Y**		**24.99**	**48**	P		**P**	**00 05 32.7**	**-0.2**
E29M	**Blow River**		**25.07**	**33**	P		**P**	**00 05 33.0**	**-0.5**
	baz=247,SNR=13								
G30M	**tAoh Zraii Nji**		**25.18**	**37**	IAmb		IAmb	00 05 59.0	
	comp=Z,86nm,1.5s								
G30M	**tAoh Zraii Nji**		**25.18**	**37**	P		**P**	**00 05 34.1**	**-0.5**
	baz=252								
TYV	**Tymovskoe**		**25.21**	**285**	*e*	P	**P**	**00 05 35.4**	**+0.5**
TYV					*e*	S	**S**	**00 09 58.5**	**+2.3**
TYV						pmax	pmax		
	comp=Z,6.0nm,1.0s								
TYV						pmax	pmax		
	comp=Z,200nm,4.7s								
TYV						smax	smax		
	comp=N,200nm,5.3s								
TYV						smax	smax		
	comp=E,100nm,5.3s								
P32M	**Atlin**		**25.21**	**55**	P		**P**	**00 05 34.7**	**-0.2**
P32M	**Atlin**		**25.21**	**55**	P		**P**	**00 05 34.8**	**-0.2**
	baz=270								
FARO	**Faro, Yukon**		**25.48**	**48**			**PcP**	**00 09 08.7**	**+1.2**
FARO	**Faro, Yukon**		**25.48**	**48**	P		**P**	**00 05 37.1**	**-0.2**
	baz=265								
F30M	**Barrier River**		**25.54**	**36**	P		**P**	**00 05 37.7**	**-0.1**
	baz=252,SNR=11								
N32M	**Quiet Lake**		**25.55**	**51**	P		**P**	**00 05 37.7**	**-0.2**
	baz=268								
P33M	**Teslin, Yukon**		**25.66**	**53**	P		**P**	**00 05 39.2**	**+0.2**
P33M	**Teslin, Yukon**		**25.66**	**53**	P		**P**	**00 05 38.6**	**-0.4**
	baz=270,SNR=5.2								
U33K	**Whale Pass**		**25.80**	**63**	P		**P**	**00 05 39.9**	**-0.3**
	baz=278								
CRAG	**Craig**		**25.90**	**64**	P		**P**	**00 05 42.7**	**+1.5**
CRAG					IAmb		IAmb	00 05 56.1	
	comp=Z,81nm,1.1s								
CRAG	**Craig**		**25.90**	**64**	P		**P**	**00 05 40.0**	**-1.2**
	baz=280								
G31M	**Satah River**		**25.90**	**38**	P		**P**	**00 05 40.2**	**-0.8**
	baz=255								
Q32M	**Nakina River**		**25.97**	**56**	P		**P**	**00 05 42.1**	**+0.1**
	baz=273								
YUK	**Yuzh-Kuril'sk**		**25.99**	**268**	*ce*	P	**P**	**00 05 42.0**	**0.0**
UGL	**Uglegorsk**		**26.16**	**281**	*e*	P	**P**	**00 05 44.4**	**+0.9**
UGL					*e*			00 06 01.3	
UGL						pmax	pmax		
	comp=Z,130nm,1.1s								
WRAK	**Wrangell Islan**		**26.19**	**62**	P		**P**	**00 05 43.4**	**-0.3**
WRAK	**Wrangell Islan**		**26.19**	**62**	P		**P**	**00 05 42.0**	**-1.7**
	baz=278								
F31M	**Tsiigehtchic**		**26.24**	**37**	P		**P**	**00 05 43.0**	**-1.1**
	baz=254,SNR=8.9								
INK	**Inuvik**		**26.57**	**35**	P		**P**	**00 05 46.4**	**-0.6**
	baz=253,SNR=15								
INK	**Inuvik**		**26.57**	**35**	LR		LR	00 17 40.0	
	comp=Z,929nm,20.4s,baz=184,slow=40								
YSS	**Yuzh-Sakhalins**		**26.57**	**276**	P		**P**	**00 05 46.4**	**-0.8**
YSS					IAmb		IAmb	00 05 49.4	
	comp=Z,156nm,1.4s								
YSS	**Yuzh-Sakhalins**		**26.57**	**276**	*ce*	P	**P**	**00 05 48.3**	**+1.0**
YSS						*e**PP	**pP**	**00 05 59.5**	**-1.2**
YSS						*e*		00 06 29.1	
YSS						*e*S	**S**	**00 10 16.5**	**-1.3**
YSS						*e*SS	**SnSn**	**00 11 31.2**	**+7.1**
YSS						pmax	pmax		
	comp=Z,300nm,2.1s								
YSS						pmax	pmax		
	comp=Z,80nm,1.4s								
YSS						MLR	MLR		
	comp=E,400nm,14.0s								
YSS						MLR	MLR		
	comp=Z,700nm,14.0s								
R33M	**Jennings River**		**26.62**	**55**	P		**P**	**00 05 48.1**	**+0.4**
	baz=273								
S34M	**Telegraph Cree**		**26.66**	**58**	P		**P**	**00 05 48.5**	**+0.5**
S34M	**Telegraph Cree**		**26.66**	**58**	P		**P**	**00 05 48.0**	**+0.1**
	baz=276								
DIB	**Dawson Inlet,**		**26.75**	**69**	P		**P**	**00 05 48.9**	**+0.1**
DIB					IAmb		IAmb	00 06 14.6	
	comp=Z,86nm,1.4s								
V35K	**Ketchikan**		**26.78**	**64**			**P**	**00 05 49.2**	**+0.2**
V35K					IAmb		IAmb	00 06 03.0	
	comp=Z,66nm,1.1s								
V35K	**Ketchikan**		**26.78**	**64**	P		**P**	**00 05 49.9**	**+0.9**
	baz=281								
DLBC	**Dease Lake**		**27.18**	**57**			**P**	**00 05 53.0**	**+0.3**
DLBC	**Dease Lake**		**27.18**	**57**	P		**P**	**00 05 53.6**	**+0.9**
	baz=276								
T35M	**Bob Quinn**		**27.25**	**60**	P		**P**	**00 05 54.2**	**+0.9**
T35M	**Bob Quinn**		**27.25**	**60**	P		**P**	**00 05 54.5**	**+1.1**
	baz=278								
U35K	**Hyder**		**27.55**	**62**	P		**P**	**00 05 56.9**	**+1.0**
	baz=281								
WTLY	**Watson Lake, Y**		**27.67**	**53**	P		**P**	**00 05 58.0**	**+0.9**
WTLY	**Watson Lake, Y**		**27.67**	**53**	P		**P**	**00 05 57.5**	**+0.4**
	baz=274								
RUBB	**Prince Rupert**		**27.76**	**66**	P		**P**	**00 05 59.2**	**+1.4**
RUBB					IAmb		IAmb	00 06 27.9	
	comp=Z,76nm,1.4s								
TGTN	**Hyland Airport**		**27.87**	**50**	P		**P**	**00 05 59.6**	**+0.8**
	baz=271								
JKA	**Kamikawa-asahi**		**27.98**	**271**	P		**P**	**00 05 58.5**	**-1.4**
JKA					IAmb		IAmb	00 06 18.3	
	comp=Z,88nm,1.3s								
ASAJ	**Asahikawa**		**27.98**	**271**	P		**P**	**00 05 58.5**	**-1.4**
ASAJ					pmax		pmax		
	comp=Z,88nm,1.3s								
ASAJ	**Asahikawa**		**27.98**	**271**	LR		LR	00 17 21.8	
	comp=Z,262nm,21.0s,baz=48,slow=37								
GRNB	**Grenville Isla**		**28.05**	**67**			**P**	**00 06 00.0**	**-0.4**
GRNB					IAmb		IAmb	00 06 17.7	
	comp=Z,73nm,0.9s								
BBB	**Bella Bella**		**29.59**	**69**	LR		LR	00 16 23.2	
	comp=Z,350nm,20.3s,baz=280,slow=33								
KOTAN	**Kotaneelee Air**		**30.03**	**53**	P		**P**	**00 06 18.1**	**+0.1**
	baz=277								
WRGLY	**Wrigley**		**30.05**	**46**	P		**P**	**00 06 17.7**	**-0.3**
	baz=272								
C36M	**Paulatuk**		**30.14**	**34**	P		**P**	**00 06 18.0**	**-0.8**
	baz=261,SNR=7.7								
YAK	**Yakutsk**		**30.25**	**311**	LR		LR	00 20 38.2	
	comp=Z,581nm,18.0s,baz=88,slow=41								
A36M	**Sachs Harbour**		**30.29**	**29**	IAmb		IAmb	00 06 40.6	
	comp=Z,43nm,0.9s								
A36M	**Sachs Harbour**		**30.29**	**29**	P		**P**	**00 06 20.2**	**+0.1**
	baz=255,SNR=18								
TIXI	**Tiksi**		**31.10**	**330**	P		**P**	**00 06 27.7**	**+0.5**
TIXI							**PcP**	**00 09 20.5**	**-0.6**
TIXI	**Tiksi**		**31.10**	**330**	ǁ *e*	P	**P**	**00 06 28.7**	**+1.5**
TIXI						pmax	pmax		
	comp=Z,11nm,3.1s								
TIXI	**Tiksi**		**31.10**	**330**	P		**P**	**00 06 28.1**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=97,slow=13,SNR=6.8								
TIXI						PcP	**PcP**	**00 09 21.0**	**-0.1**
	comp=Z,8.7nm,0.5s,baz=97,slow=2.9,SNR=13								
TIXI						ScP	**ScP**	**00 12 58.2**	**-1.0**
	comp=Z,4.7nm,0.9s,baz=94,slow=3.9,SNR=4.8								
TIXI						LR	LR	00 20 13.3	
	comp=Z,1μm,18.1s,baz=112,slow=39								
	comp=Z,1.8nm,0.5s								
CBB	**Campbell River**		**31.97**	**72**	P		**P**	**00 06 35.4**	**+0.3**
KLR	**Kul'dur**		**32.35**	**287**	*c i*	P	**P**	**00 06 38.5**	**0.0**
KLR						pmax	pmax		
	comp=Z,35nm,1.3s								
JMM	**Marumori**		**32.64**	**262**	P		**P**	**00 06 40.5**	**-0.7**
JMM					IAmb		IAmb	00 06 42.7	
	comp=Z,77nm,1.2s								
CLRS	**Cowichan Lake**		**33.20**	**74**	P		**P**	**00 06 47.7**	**+1.9**
CLRS					IAmb		IAmb	00 06 59.8	
	comp=Z,41nm,0.9s								
ZEA	**Zeya**		**33.29**	**296**	*e*	P	**P**	**00 06 46.4**	**-0.2**
ZEA					*e*	S	**S**	**00 11 57.3**	**-5.6**
ZEA						pmax	pmax		
	comp=E,10.0nm,0.6s								
ZEA						pmax	pmax		
	comp=Z,10.0nm,0.7s								
ZEA						pmax	pmax		
	comp=Z,100nm,5.3s								
ZEA						smax	smax		
	comp=E,200nm,7.5s								
ZEA						MLR	MLR		
	comp=N,200nm,18.0s								
ZEA						MLR	MLR		
	comp=Z,300nm,16.0s								
NLWA	**Neilton Lookou**		**33.99**	**76**	P		**P**	**00 06 53.4**	**+0.6**
YKA	**Yellowknife Ar**		**34.17**	**47**			**PcP**	**00 09 30.4**	**+0.7**
YKA	**Yellowknife Ar**		**34.17**	**47**	*i*	P	**P**	**00 06 53.9**	**-0.2**
YKA						pmax	pmax		
	comp=Z,5.0nm,0.8s								
YKA	**Yellowknife Ar**		**34.17**	**47**	P		**P**	**00 06 53.7**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=286,slow=8.5,SNR=45								
YKA						PcP	**PcP**	**00 09 31.0**	**+1.2**
	comp=Z,9.1nm,0.8s,baz=292,slow=2.4,SNR=21								
YKA						ScP	**ScP**	**00 13 10.6**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=288,slow=3.5,SNR=8.7								
YKA						LR	LR	00 22 13.6	
	comp=Z,570nm,20.1s,baz=290,slow=39								
	comp=Z,4.0nm,0.8s								
H11N2	**WAKE ISLAND Hy**		**34.28**	**208**	T		T	00 43 21.1	
	baz=18,slow=76								
H11N3	**WAKE ISLAND Hy**		**34.29**	**208**	T		T	00 43 21.8	
	baz=18,slow=76,SNR=9869								
H11N1	**WAKE ISLAND Hy**		**34.30**	**208**	T		T	00 43 22.5	
	baz=18,slow=76								
HEH	**HeiHe**		**34.50**	**290**	*e*	P	**P**	**00 06 54.6**	**-2.5**
HEH						sP	**sP**	**00 07 17.3**	**-0.1**
HEH						PcP	**PcP**	**00 09 30.5**	**-0.5**
HEH						pmax	pmax		
	comp=Z,5.0nm,0.7s								
HEH						LR	LR		
	comp=Z,310nm,19.0s								
HEH						LR	LR		
	comp=Z,750nm,21.1s								
HEH						LR	LR		
	comp=Z,1μm,21.6s								
USA0B	**Ussuriysk Arra**		**34.53**	**278**	P		**P**	**00 06 56.7**	**-0.8**
USA0B					IAmb		IAmb	00 06 57.9	
	comp=Z,16nm,0.8s								
USA0B	**Ussuriysk Arra**		**34.53**	**278**	P		**P**	**00 06 56.7**	**-0.8**
USA0B					pmax		pmax		
	comp=Z,16nm,0.8s								
USRK	**Ussuriysk Ar.**		**34.53**	**278**	P		**P**	**00 06 57.2**	**-0.3**
	comp=Z,16nm,0.6s,baz=58,slow=9.5,SNR=34								
USRK						PcP	**PcP**	**00 09 31.9**	**+0.7**
	comp=Z,4.5nm,0.7s,baz=48,slow=2.1,SNR=4.4								
USRK						LR	LR	00 20 16.7	
	comp=Z,460nm,21.5s,baz=51,slow=35								
	comp=Z,16nm,0.6s								
GNW	**Green Mountain**		**34.54**	**75**	P		**P**	**00 06 58.9**	**+1.4**
GNW					IAmb		IAmb	00 07 11.7	
	comp=Z,45nm,0.8s								
E03A	**Lebam**		**34.56**	**77**			**P**	**00 06 57.0**	**-0.7**
BRLDA	**Berland Lookou**		**35.03**	**62**	P		**P**	**00 07 02.2**	**+0.4**
BRLDA					IAmb		IAmb	00 07 24.1	
	comp=Z,47nm,1.5s								
MAJO	**Matsushiro**		**35.08**	**263**	P		**P**	**00 07 02.0**	**-0.2**
MAJO	**Matsushiro**		**35.08**	**263**	⇑ *i*	P	**P**	**00 07 02.1**	**-0.2**
MAJO						pmax	pmax		
	comp=Z,49nm,0.8s								
MAJO	**Matsushiro**		**35.08**	**263**	P		**P**	**00 07 03.1**	**+0.8**
MAJO						pP	**pP**	**00 07 14.0**	**-1.9**
MJAR	**Matsushiro Arr**		**35.08**	**263**	P		**P**	**00 07 03.0**	**+0.7**
MJAR	**Matsushiro Arr**		**35.08**	**263**	P		**P**	**00 07 03.0**	**+0.7**
	comp=Z,14nm,0.6s,baz=47,slow=7.5,SNR=35								
MJAR						LR	LR	00 19 25.2	
	comp=Z,492nm,21.9s,baz=59,slow=33								
	comp=Z,14nm,0.6s								
MJB9	**Matsu-Tunnel**		**35.08**	**263**	P		**P**	**00 07 03.0**	**+0.7**
D05A	**Enumclaw**		**35.22**	**75**	P		**P**	**00 07 04.3**	**+1.0**
H11S1	**WAKE ISLAND Hy**		**35.49**	**208**	T		T	00 44 52.3	
	baz=18,slow=76,SNR=7269								
H11S2	**WAKE ISLAND Hy**		**35.51**	**208**	T		T	00 44 54.2	
	baz=18,slow=76,SNR=3884								
H11S3	**WAKE ISLAND Hy**		**35.51**	**208**	T		T	00 44 52.7	
	baz=18,slow=76,SNR=3710								
LON	**Longmire**		**35.53**	**76**	P		**P**	**00 07 07.8**	**+1.6**
LON					IAmb		IAmb	00 07 20.5	
	comp=Z,31nm,0.9s								
LON	**Longmire**		**35.53**	**76**	P		**P**	**00 07 07.8**	**+1.6**
LON					pmax		pmax		
	comp=Z,31nm,1.0s								
F04A	**Amboy**		**35.56**	**77**	P		**P**	**00 07 07.7**	**+1.4**
F04A					IAmb		IAmb	00 07 20.7	
	comp=Z,32nm,0.7s								
MDJ	**Mudanjiang**		**35.80**	**280**	P		**P**	**00 07 07.5**	**-0.9**
MDJ					pP		pP	00 07 20.9	-1.2
MDJ					sP		sP	00 07 27.3	-1.1
MDJ					PP		**PnPn**	**00 08 27.4**	**-2.2**
MDJ					PcP		**PcP**	**00 09 34.8**	**-0.1**
MDJ					S		**S**	**00 12 41.5**	**-0.2**
MDJ					PcS		**PcS**	**00 13 21.0**	**-1.1**
MDJ					ScS		**ScS**	**00 17 20.4**	**-0.8**
MDJ					pmax		pmax		
	comp=Z,13nm,1.0s								
MDJ					pmax		pmax		
	comp=Z,220nm,6.6s								
MDJ					LR		LR		
	comp=Z,460nm,16.1s								
MDJ					LR		LR		
	comp=Z,690nm,21.0s								
MDJ					LR		LR		
	comp=Z,1μm,21.3s								
MDJ	**Mudanjiang**		**35.80**	**280**	P		**P**	**00 07 07.7**	**-0.7**
MDJ	**Mudanjiang**		**35.80**	**280**	P		**P**	**00 07 08.1**	**-0.3**
MSHR	**Mys Shultsa**		**35.91**	**276**	*c i*	P	**P**	**00 07 09.5**	**+0.2**
MSHR						pmax	pmax		
	comp=Z,104nm,0.8s								
LTY	**Liberty**		**35.98**	**74**	P		**P**	**00 07 10.9**	**+0.9**
LTY					IAmb		IAmb	00 07 23.3	
	comp=Z,37nm,1.1s								
JGF	**Kuroka**		**36.21**	**262**	P		**P**	**00 07 12.5**	**+0.4**
JGF					IAmb		IAmb	00 07 14.5	
	comp=Z,23nm,0.7s								
B08A	**Colville Reser**		**36.26**	**72**	IAmb		IAmb	00 07 26.2	
	comp=Z,33nm,0.8s								
H04A	**Detroit Lake**		**36.33**	**79**	IAmb		IAmb	00 07 27.7	
	comp=Z,44nm,1.1s								
JHJ	**Hachijo jima 2**		**36.38**	**257**	LR		LR	00 19 59.7	
	comp=Z,210nm,19.6s,baz=79,slow=33								
MXC	**Moxie City**		**36.53**	**75**	P		**P**	**00 07 15.7**	**+1.1**
MXC					IAmb		IAmb	00 07 28.9	
	comp=Z,39nm,1.1s								
BNX	**BinXian**		**36.57**	**283**	⇑ P		**P**	**00 07 12.3**	**-2.6**
BNX					pmax		pmax		
	comp=Z,21nm,1.0s								
BNX					pmax		pmax		
	comp=Z,120nm,5.3s								
G05A	**Wamic**		**36.57**	**78**	P		**P**	**00 07 16.4**	**+1.3**
I04A	**Tendick Farm,**		**36.65**	**80**	P		**P**	**00 07 16.2**	**+0.4**
I04A					IAmb		IAmb	00 07 29.0	
	comp=Z,28nm,0.9s								
E07A	**Sunnyside**		**36.80**	**75**	P		**P**	**00 07 18.1**	**+1.1**
E07A					IAmb		IAmb	00 07 30.6	
	comp=Z,39nm,0.9s								
L02F	**Cave Junction**		**36.84**	**83**	P		**P**	**00 07 18.3**	**+1.0**
HUMO	**Hull Mountain**		**36.95**	**82**	P		**P**	**00 07 19.0**	**+0.7**
G06A	**Carlson Farm,**		**36.99**	**77**	P		**P**	**00 07 19.1**	**+0.5**
G06A					IAmb		IAmb	00 07 32.2	
	comp=Z,47nm,1.3s								
I05D	**Terrebonne, OR**		**37.02**	**79**	P		**P**	**00 07 19.6**	**+0.7**
F07A	**Phinny Hill Vi**		**37.09**	**76**	P		**P**	**00 07 20.4**	**+1.1**
D08A	**Wollman Farm,**		**37.12**	**74**	P		**P**	**00 07 21.0**	**+1.3**
C09A	**Chrisman Ranch**		**37.15**	**72**	P		**P**	**00 07 20.8**	**+0.9**
E08A	**Dider Farm, El**		**37.31**	**74**			**P**	**00 07 22.6**	**+1.4**
E08A					IAmb		IAmb	00 07 35.3	
	comp=Z,61nm,1.1s								
PINE	**Pine Mountain**		**37.55**	**79**	P		**P**	**00 07 25.2**	**+1.6**
PINE					IAmb		IAmb	00 07 39.7	
	comp=Z,62nm

comp=Z,66nm,1.3s
HHU Hamhung 39.66 275 P P 00 07 41.2 +0.3
WVOR Wild Horse Val 39.71 80 IAmb IAmb 00 07 57.1
comp=Z,57nm,1.4s
PLID Pearl Lake 39.87 75 P P 00 07 44.0 +1.0
AFDM Forest Hills D 40.29 86 P P 00 07 47.5 +1.2
MPK Martis Peak 40.66 85 P P 00 07 50.8 +1.1
MPK IAmb IAmb 00 08 19.7
comp=Z,33nm,1.0s
PAHR Pah Rah Range 40.82 84 P P 00 07 52.0 +1.3
MFID Camas Ranch 40.88 77 P P 00 07 51.9 +0.7
MFID IAmb IAmb 00 08 05.2
comp=Z,54nm,1.4s
KSRS Korea Array 40.91 272 P P 00 07 52.2 +0.9
comp=Z,21nm,1.0s,baz=55,slow=7.8,SNR=50
KSRS PcP **PcP 00 09 53.2 +2.3**
comp=Z,3.3nm,1.1s,baz=60,slow=3.8,SNR=1.8
KSRS LR LR 00 26 04.1
comp=Z,50nm,19.6s,baz=50,slow=38
comp=Z,21nm,1.0s
KS19 Wonju Array Si 40.92 272 P P 00 07 51.5 +0.1
KS19 IAmb IAmb 00 07 52.9
comp=Z,28nm,1.1s
PNTR Pine Nut 41.05 85 P P 00 07 53.7 +0.9
PNTR IAmb IAmb 00 08 18.6
comp=Z,33nm,0.7s
CMB Columbia Colle 41.21 86 P P 00 07 55.5 +1.6
CMB Columbia Colle 41.21 86 P P 00 07 55.5 +1.6
CMB pmax pmax
comp=Z,26nm,1.4s
PYAG Pyongyang 41.28 276 P P 00 07 55.0 +0.7
PYAG S **S 00 14 06.1 +1.7**
PYAG AmB
comp=Z,233nm,1.4s
SAO San Andreas Ge 41.33 89 P P 00 07 56.7 +1.8
SAO San Andreas Ge 41.33 89 P P 00 07 56.7 +1.8
SAO pmax pmax
comp=Z,13nm,0.9s
YERR Yerington 41.34 84 P P 00 07 56.6 +1.5
SUJ Sinuiju 41.44 278 P P 00 07 55.7 0.0
SUJ S **S 00 14 08.5 +1.8**
SUJ AmB
comp=Z,142nm,1.0s
WAKR Walker 41.51 85 P P 00 07 57.8 +1.2
HLID Hailey 41.66 76 P P 00 07 58.8 +1.1
HLID IAmb IAmb 00 08 11.7
comp=Z,54nm,1.1s
HLID Hailey 41.66 76 P P 00 07 59.0 +1.4
baz=304,SNR=22
INCN Inchon 41.70 273 P P 00 07 58.0 +0.1
INCN Inchon 41.70 273 P P 00 07 58.0 +0.1
INCN pmax pmax
comp=Z,147nm,1.5s
INCN Inchon 41.70 273 P P 00 07 58.4 +0.6
BBGB Big Mountain B 41.70 89 P P 00 07 58.7 +0.7
BBGB IAmb IAmb 00 08 12.8
comp=Z,41nm,0.9s
BMN Battle Mountai 41.73 81 P P 00 07 58.9 +0.7
BMN Battle Mountai 41.73 81 P P 00 07 58.9 +0.7
BMN pmax pmax
comp=Z,14nm,0.9s
JNU Nakatsue 41.86 265 P P 00 07 59.4 +0.1
JNU IAmb IAmb 00 08 01.4
comp=Z,102nm,1.1s
JNU Nakatsue 41.86 265 P P 00 08 00.2 +1.0
comp=Z,76nm,1.0s,baz=52,slow=7.4,SNR=33
JNU LR LR 00 24 03.1
comp=Z,403nm,21.9s,baz=51,slow=34
comp=Z,76nm,1.0s
HJU Haeju 41.92 274 P P 00 07 59.3 -0.3
HJU S **S 00 14 15.4 +1.6**
HJU AmB
comp=Z,316nm,1.3s
TJN Taejon 41.93 271 P P 00 07 59.7 0.0
TJN Taejon 41.93 271 P P 00 07 59.7 0.0
RYN Ryan 42.00 84 P P 00 08 00.7 +0.1
KVN Kaiserville 42.01 84 P P 00 08 00.8 +0.2
KVN Kaiserville 42.01 84 P P 00 08 00.8 +0.2
KVN pmax pmax
comp=Z,12nm,1.2s
EGMT Eagleton 42.03 67 IAmb IAmb 00 08 12.6
comp=Z,43nm,0.9s
EGMT Eagleton 42.03 67 P P 00 08 00.9 +0.4
baz=301,SNR=20
BOZ Bozeman (W) 42.21 71 IAmb IAmb 00 08 14.7
comp=Z,51nm,0.9s
BOZ Bozeman (W) 42.21 71 P P 00 08 02.9 +0.8
baz=303,SNR=63
LHV Little Huntoon 42.24 85 P P 00 08 03.2 +0.9
NVAR Mina Array Bea 42.26 84 P P 00 08 02.5 -0.2
NVAR Mina Array Bea 42.26 84 P P 00 08 04.6 +1.9
comp=Z,4.8nm,0.8s,baz=297,slow=7.3,SNR=21
NVAR PcP **PcP 00 09 56.7 +1.0**
comp=Z,2.9nm,0.7s,baz=287,slow=1.5,SNR=4.3
NVAR LR LR 00 22 35.3
comp=Z,282nm,20.6s,baz=297,slow=32
comp=Z,4.8nm,0.8s
ELK Elko 42.76 80 LR LR 00 22 59.0
comp=Z,308nm,20.1s,baz=310,slow=32
YHL Hebgen Lake 42.88 72 IAmb IAmb 00 08 21.2
comp=Z,98nm,1.2s
FFC Flin Flon 42.98 55 P P 00 08 07.4 -0.7
FFC Flin Flon 42.98 55 P P 00 08 07.4 -0.7
FFC pmax pmax
comp=Z,7.0nm,0.9s
FFC Flin Flon 42.98 55 PcP PcP 00 09 57.8 +0.3
TPH Tonopah 43.15 84 IAmb IAmb 00 08 25.4
comp=Z,85nm,1.1s
TIN Tinemaha, Big 43.16 86 P P 00 08 10.9 +1.1
baz=309
YNR Norris Junctio 43.25 72 IAmb IAmb 00 08 24.8
comp=Z,84nm,1.1s
YFT Old Faithful 43.31 72 IAmb IAmb 00 08 25.6
comp=Z,41nm,1.0s
VES Vestal, Richgr 43.39 88 P P 00 08 13.4 +1.8
baz=310
H17A Grant Village 43.49 72 IAmb IAmb 00 08 27.6
comp=Z,81nm,1.1s
H17A Grant Village 43.49 72 P P 00 08 14.4 +1.7
baz=304,SNR=39
LKWY Lake 43.50 72 IAmb IAmb 00 08 27.3
comp=Z,37nm,0.8s
YMP Mirror Lake Pl 43.55 72 IAmb IAmb 00 08 26.3
comp=Z,45nm,1.1s
PKM Mcpherson Peak 43.55 90 P P 00 08 14.1 +0.9
baz=311
IMW Indian Meadow 43.56 73 IAmb IAmb 00 08 26.5
comp=Z,32nm,1.0s
FLWY Flagg Ranch 43.59 73 IAmb IAmb 00 08 27.0
comp=Z,63nm,1.1s
CWC Cottonwood Cre 43.64 87 P P 00 08 15.3 +1.5
baz=310
HVU Hansel Valley 43.66 77 IAmb IAmb 00 08 27.4
comp=Z,31nm,1.0s
GRAC Grapevine Rang 43.73 85 pP 00 08 29.7 +1.3
GRAC IAmb IAmb 00 08 44.9
comp=Z,50nm,1.4s
GRAC Grapevine Rang 43.73 85 P P 00 08 15.5 +1.2
baz=309
TPAW Teton Pass 43.78 74 IAmb IAmb 00 08 28.4
comp=Z,45nm,1.4s
RLMT Red Lodge 43.86 71 IAmb IAmb 00 08 29.3
comp=Z,83nm,1.1s
RLMT Red Lodge 43.86 71 P P 00 08 16.7 +1.1
baz=304,SNR=77
ISA Isabella, Lake 43.89 88 P P 00 08 16.9 +1.2
baz=310
SNOW Snow King Moun 43.91 74 pP 00 08 29.4 -0.6
SNOW IAmb IAmb 00 08 29.6
comp=Z,36nm,1.2s
R11B Troy Canyon, C 43.99 83 P P 00 08 17.8 +1.2
baz=308,SNR=21
ARVC Arvin 44.01 89 P P 00 08 17.0 +0.5
baz=310
AHID Auburn Hatcher 44.10 75 IAmb IAmb 00 08 30.8
comp=Z,29nm,1.1s
MPMC Manual Prospec 44.25 87 P P 00 08 19.8 +1.1
baz=310,SNR=9.4
S11A Rachel 44.33 84 IAmb IAmb 00 08 51.0
comp=Z,25nm,0.9s
XLT XiLinHaoTe 44.36 288 *eP* **P 00 08 18.6 -0.7**
XLT pP pP 00 08 31.5 -1.9
XLT sP sP 00 08 42.3 +2.7
XLT PP **PcP 00 10 02.8 +0.3**
XLT S **S 00 14 52.0 +2.3**
XLT sS sS 00 15 09.4 -3.9
XLT pmax pmax
comp=Z,22nm,1.3s
XLT pmax pmax
comp=Z,210nm,5.3s
XLT LR LR
comp=Z,460nm,19.1s
XLT LR LR
comp=Z,500nm,19.6s
FURC Furnace Creek, 44.38 86 P P 00 08 20.4 +1.0
baz=310
OSI Osito Audit: C 44.41 89 P P 00 08 20.6 +0.8
baz=311
TPNV Topopah Spring 44.45 85 IAmb IAmb 00 08 39.2
comp=Z,25nm,0.9s
TPNV Topopah Spring 44.45 85 P P 00 08 20.8 +0.5
baz=309
LRMC Laurel Mtn Rad 44.50 87 P P 00 08 21.8 +1.2
baz=310
DUG Dugway, Tooele 44.58 79 IAmb IAmb 00 08 36.4
comp=Z,55nm,1.4s
DUG Dugway, Tooele 44.58 79 P P 00 08 22.2 +1.0
baz=307,SNR=28
EDW2 Edwards Air Fo 44.69 88 P P 00 08 22.9 +0.9
baz=311
QSM Queen of Sheba 44.69 86 IAmb IAmb 00 08 37.9
comp=Z,29nm,1.2s
LAO LASA Array 44.77 67 IAmb IAmb 00 08 35.3
comp=Z,49nm,0.8s
LAO LASA Array 44.77 67 P P 00 08 23.5 +0.9
baz=303,SNR=35
SNCC San Nicolas Is 44.81 91 P P 00 08 23.9 +1.0
baz=312
NRIK Noril'sk 44.88 330 *ceP* **P 00 08 22.2 -0.9**
NRIK pmax pmax
comp=Z,11nm,1.1s
NRIK Noril'sk 44.88 330 P P 00 08 22.4 -0.6
comp=Z,5.6nm,0.8s,baz=69,slow=6.5,SNR=6.9
NRIK LR LR 00 30 56.9
comp=Z,581nm,18.2s,baz=34,slow=41
comp=Z,5.6nm,0.8s
TCUT Toone Canyon 44.88 77 IAmb IAmb 00 08 40.8
comp=Z,21nm,0.8s
PRN Pahroc Range 44.91 83 IAmb IAmb 00 08 53.8
comp=Z,44nm,1.0s
CTU Camp Tracy 44.93 77 IAmb IAmb 00 08 37.9
comp=Z,25nm,0.9s
DGMT Dagmar 44.95 64 IAmb IAmb 00 08 35.8
comp=Z,52nm,1.1s
DGMT Dagmar 44.95 64 P P 00 08 24.0 +0.1
baz=303
PDAR Pinedale Array 45.03 74 P P 00 08 25.9 +1.1
comp=Z,7.9nm,0.5s,baz=308,slow=4.4,SNR=134
PDAR LR LR 00 24 53.5
comp=Z,359nm,21.1s,baz=322,slow=33
comp=Z,7.9nm,0.5s
SHOC Shoshone, Teco 45.10 86 P P 00 08 26.8 +1.5
baz=310
GSC Goldstone, Bar 45.16 87 IAmb IAmb 00 08 40.0
comp=Z,30nm,0.9s
GSC Goldstone, Bar 45.16 87 P P 00 08 27.7 +1.8
baz=310,SNR=8.2
BFSC Mount Baldy Ra 45.32 89 P P 00 08 28.1 +1.0
baz=311
CIS Catalina Islan 45.40 90 P P 00 08 28.7 +1.0
baz=312
BSUT Blindstream Ca 45.62 77 IAmb IAmb 00 08 52.1
comp=Z,30nm,1.2s
HEC Hector,Ludlow 45.76 87 P P 00 08 31.6 +1.1
baz=311
TCRU Three Creeks R 45.77 80 IAmb IAmb 00 08 56.8
comp=Z,16nm,0.8s
V12A Nelson 46.10 85 IAmb IAmb 00 08 48.4
comp=Z,25nm,1.3s
TMUT Trail Mountain 46.11 79 IAmb IAmb 00 08 49.4
comp=Z,15nm,0.7s
GMRC Granite Mounta 46.21 87 P P 00 08 35.2 +1.1
baz=311,SNR=11
P17A Butcher Ranch, 46.28 78 IAmb IAmb 00 08 54.1
comp=Z,16nm,0.8s
MTPU Mount Pierson 46.28 81 IAmb IAmb 00 08 50.7
comp=Z,19nm,1.0s
PFO Pinyon Flats O 46.48 88 P P 00 08 36.9 +0.6
baz=312
PFO Pinyon Flats O 46.48 88 LR LR 00 24 23.3
comp=Z,439nm,21.3s,baz=298,slow=31
TPFO Pinon Flats 46.49 88 P P 00 08 37.4 +1.0
baz=312
P18A Preston Nutter 46.49 78 IAmb IAmb 00 09 06.9
comp=Z,30nm,1.0s
BELC Belle Mtn. Jos 46.51 88 P P 00 08 37.0 +0.4
baz=311
KNB Kanab 46.54 82 IAmb IAmb 00 09 06.5
comp=Z,19nm,1.0s
109C Camp Elliot, M 46.56 90 P P 00 08 37.7 +0.9
baz=312
BJI Beijing 46.58 283 P P 00 08 37.5 +0.7
BJI sP **pP 00 08 54.3 +3.3**
BJI PP **PP 00 10 22.9 -3.8**
BJI sS **sS 00 15 41.5 -3.8**
BJI pmax pmax
comp=Z,17nm,0.8s
BJI pmax pmax
comp=Z,130nm,5.6s
BJI LR LR
comp=Z,310nm,19.6s
BJI LR LR
comp=Z,250nm,22.2s
BJI LR LR
comp=Z,460nm,19.8s
PKCU Pink Cliffs 46.58 81 IAmb IAmb 00 08 51.3
comp=Z,23nm,1.3s
BJT Baijiatuan 46.59 283 IAmb IAmb 00 08 38.5
comp=Z,27nm,0.8s
BJT Baijiatuan 46.59 283 P P 00 08 37.6 +0.7
BJT sP **pP 00 08 54.2 +3.0**
BJT PcP **PcP 00 10 10.7 +0.6**
SRU San Rafael Swe 46.64 78 IAmb IAmb 00 08 51.9
comp=Z,31nm,1.1s
K22A Casper 46.91 72 IAmb IAmb 00 08 51.8
comp=Z,46nm,1.1s
K22A Casper 46.91 72 P P 00 08 40.3 +0.7
baz=306,SNR=9.4
NEEM North Greenlan 46.94 14 *i* P **P 00 08 38.1 -1.4**
NEEM IAmb IAmb 00 08 42.7
comp=Z,14nm,0.6s
IRM Iron Mountain 46.94 87 P P 00 08 40.9 +1.1
baz=311
MONP2 Monument Peak 46.98 89 P P 00 08 40.8 +0.5
baz=312
RWWY Rawlins 47.07 73 IAmb IAmb 00 08 42.4
comp=Z,22nm,0.9s
BC3 Big Chuckawall 47.08 88 P P 00 08 42.0 +1.0
baz=312
W13A Hualapai Mount 47.11 85 IAmb IAmb 00 08 55.8
comp=Z,24nm,1.4s
U15A North Rim 47.24 82 IAmb IAmb 00 08 55.9
comp=Z,25nm,0.8s
ULN Ulaanbaatar 47.31 297 P P 00 08 41.7 -1.0
ULN Ulaanbaatar 47.31 297 *i* P **P 00 08 41.8 -0.9**
ULN pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 47.31 297 P P 00 08 43.4 +0.7
ULN PcP **PcP 00 10 12.9 +0.1**
SWSC Sam W. Stewart 47.34 89 P P 00 08 44.6 +1.8
baz=312
IKP In-Ko-Pah, Jac 47.34 89 P P 00 08 44.0 +1.0
baz=312
O20A White River Ci 47.40 76 P P 00 08 44.2 +0.8
baz=308,SNR=25
YUH Yuha Desert 47.46 89 pP 00 08 56.9 -0.8
PDMCI Parker Dam,Lak 47.47 86 P P 00 08 44.2 +0.4
baz=311,SNR=7.4
RSSD Black Hills 47.50 69 P P 00 08 44.3 +0.1
RSSD IAmb IAmb 00 08 45.4
comp=Z,71nm,1.4s
RSSD Black Hills 47.50 69 P P 00 08 44.1 -0.2
baz=306
RSSD Black Hills 47.50 69 P P 00 08 44.3 +0.1
RSSD pmax pmax
comp=Z,71nm,1.4s
RSSD Black Hills 47.50 69 P P 00 08 44.3 +0.1
RSSD pP **pP 00 08 55.4 -3.2**
BLYC Blythe 47.60 87 IAmb IAmb 00 08 58.8
comp=Z,20nm,0.9s
SONM Songino Array 47.70 297 P P 00 08 44.9 -0.7
SONM Songino Array 47.70 297 P P 00 08 44.9 -0.7
SONM pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 47.70 297 P P 00 08 44.6 -1.0
comp=Z,3.4nm,0.5s,baz=58,slow=6.0,SNR=40
SONM PcP **PcP 00 10 13.5 -0.7**
comp=Z,14nm,0.7s,baz=59,slow=2.5,SNR=14
SONM ScP **ScP 00 14 03.9 +0.4**
comp=Z,2.8nm,1.0s,baz=60,slow=2.7,SNR=6.4
SONM LR LR 00 30 04.5
comp=Z,619nm,18.9s,baz=48,slow=38
comp=Z,3.4nm,0.5s
MDND Maddock 47.86 62 P P 00 08 46.8 +0.1
baz=305
JOW Kunigami 47.86 261 IAmb IAmb 00 08 47.9
comp=Z,35nm,1.0s
JOW Kunigami 47.86 261 LR LR 00 28 41.4
comp=Z,116nm,19.5s,baz=53,slow=36
GLA Glamis 47.87 88 P P 00 08 48.4 +1.3
baz=312
ZAK Zakamensk 47.94 302 *eP* **P 00 08 46.5 -0.9**
ZAK pmax pmax
comp=Z,24nm,1.1s
N23A Red Feather La 48.31 73 P P 00 08 51.6 +1.0
baz=308,SNR=18
PHWY Pilot Hill 48.35 73 IAmb IAmb 00 09 03.2
comp=Z,17nm,1.1s
WUAZ Wupatki 48.40 83 IAmb IAmb 00 09 12.7
comp=Z,25nm,0.9s
WUAZ Wupatki 48.40 83 P P 00 08 52.7 +1.5
baz=311,SNR=14
TIA Tai'an 48.40 279 ⇑P P 00 08 51.0 0.0
TIA pmax pmax
comp=Z,49nm,1.1s
TIA LR LR
comp=Z,130nm,17.2s
TIA LR LR
comp=Z,170nm,19.1s
TIA LR LR
comp=Z,180nm,18.1s
Y14A Wickenburg 48.42 85 IAmb IAmb 00 09 05.1
comp=Z,15nm,0.9s
ULM Lac du Bonnet 48.50 58 P P 00 08 50.4 -1.2
comp=Z,1.9nm,0.4s,baz=304,slow=5.3,SNR=6.3
ULM LR LR 00 29 59.2
comp=Z,296nm,18.4s,baz=324,slow=37
comp=Z,1.9nm,0.4s
SMCO Snowmass 48.76 76 IAmb IAmb 00 09 07.0
comp=Z,13nm,0.8s
GUMO Guam 48.84 233 LR LR 00 26 51.6
comp=Z,97nm,22.0s,baz=88,slow=33
HHC Hu-ho-hao-te 48.86 287 *eP* **P 00 08 54.3 -0.3**
HHC pP pP 00 09 08.9 +0.2
HHC S **S 00 15 52.4 -1.7**
HHC sS sS 00 16 21.3 +3.3
HHC pmax pmax
comp=Z,16nm,1.0s
HHC LR LR
comp=Z,280nm,19.1s
HHC LR LR
comp=Z,350nm,20.6s
HHC LR LR
comp=Z,490nm,18.1s
MVCO Mesa Verde 49.07 79 IAmb IAmb 00 08 59.4
comp=Z,61nm,1.5s
MVCO Mesa Verde 49.07 79 P P 00 08 57.0 +0.6
baz=310,SNR=16
HNS HongShan 49.12 281 ⇑P P 00 08 57.0 +0.5
HNS S **S 00 16 00.5 +2.9**
HNS pmax pmax
comp=Z,120nm,1.2s
HNS LR LR
comp=Z,330nm,21.6s
HNS LR LR
comp=Z,530nm,20.7s
HNS LR LR
comp=Z,750nm,23.7s
ISCO Idaho Springs 49.19 74 IAmb IAmb 00 09 11.4
comp=Z,20nm,1.1s
ISCO Idaho Springs 49.19 74 P P 00 08 58.6 +1.2
baz=309,SNR=12
SSE Sheshan 49.27 270 P P 00 08 58.5 +0.7
SSE pP **pP 00 09 08.9 -2.9**
UPNV Upernavik 49.36 20 *i* P **P 00 08 56.3 -1.6**
UPNV IAmb IAmb 00 09 25.8
comp=Z,7.8nm,0.7s
W18A Petrified Fore 49.67 82 IAmb IAmb 00 09 31.8
comp=Z,23nm,0.8s
W18A Petrified Fore 49.67 82 P P 00 09 02.1 +1.2
baz=311,SNR=9.3
S22A 4UR Ranch, Cre 49.75 77 IAmb IAmb 00 09 04.7
comp=Z,37nm,1.3s
S22A 4UR Ranch, Cre 49.75 77 P P 00 09 03.1 +1.4
baz=310,SNR=13
214A Organ Pipe Nat 49.87 87 IAmb IAmb 00 09 16.3
comp=Z,17nm,1.1s
214A Organ Pipe Nat 49.87 87 P P 00 09 03.1 +0.7
baz=313,SNR=7.7
X18A Snowflake 49.92 83 IAmb IAmb 00 09 34.3
comp=Z,15nm,1.0s
BTO Baotou 49.93 288 *eP* **P 00 09 02.6 -0.2**
BTO pP **pP 00 09 18.1 +1.2**
BTO sP **sP 00 09 25.1 +2.1**
BTO PcP **PcP 00 10 20.0 -2.3**
BTO PP **PP 00 10 55.8 -1.9**
BTO S **S 00 16 08.5 -0.5**
BTO sS **sS 00 16 32.1 -1.0**
BTO SS **SS 00 19 32.6 -9.3**
BTO pmax pmax
comp=Z,85nm,1.0s
BTO pmax pmax
comp=Z,500nm,4.1s
BTO LR LR
comp=Z,590nm,14.3s
BTO LR LR
comp=Z,1μm,18.0s
BTO LR LR
comp=Z,920nm,21.2s
Q24A Divide 49.99 75 P P 00 09 04.5 +0.9
baz=309
NJ2 Nanjing 50.08 273 ⇑P P 00 09 03.1 -0.8
NJ2 pP **pP 00 09 15.9 -2.3**
NJ2 sP **sP 00 09 24.3 -0.2**
NJ2 pmax pmax
comp=Z,28nm,0.9s
NJ2 pmax pmax
comp=Z,470nm,4.3s
SUSD Miller 50.23 66 P P 00 09 04.3 -0.6
baz=308
SPITS Spitsbergen Ar 50.26 357 P P 00 09 05.5 +0.8
SPITS pmax pmax
comp=Z,44nm,1.2s
SPITS Spitsbergen Ar 50.26 357 P P 00 09 03.9 -0.8
comp=Z,6.3nm,0.6s,baz=33,slow=8.6,SNR=19
SPITS LR LR 00 31 09.3
comp=Z,472nm,19.1s,baz=316,slow=37
comp=Z,6.3nm,0.6s
SPB2 Spitsbergen Ar 50.26 357 P P 00 09 04.3 -0.3
SPB2 IAmb IAmb 00 09 19.5
comp=Z,60nm,1.4s
TIY Taiyuan 50.31 283 P P 00 09 06.8 +1.2
TIY pP **pP 00 09 16.8 -3.1**
TIY sP **sP 00 09 23.6 -2.4**
TIY pmax pmax
comp=Z,42nm,0.7s
TIY LR LR
comp=Z,370nm,18.2s
TIY LR LR
comp=Z,280nm,17.6s
TIY LR LR
comp=Z,440nm,24.7s
SDCO Great Sand Dun 50.56 76 IAmb IAmb 00 09 21.9
comp=Z,18nm,0.8s
SDCO Great Sand Dun 50.56 76 P P 00 09 09.1 +1.2
baz=310,SNR=12
OGNE Ogallala 50.60 71 P P 00 09 08.9 +1.1
baz=309,SNR=5.9
TUC Tucson 50.89 85 P P 00 09 11.2 +1.1
TUC IAmb IAmb 00 09 24.2
comp=Z,40nm,1.4s
TUC Tucson 50.89 85 P P 00 09 11.2 +1.1
baz=313
TUC Tucson 50.89 85 P P 00 09 11.2 +1.1
TUC pmax pmax
comp=Z,40nm,1.4s
TUC Tucson 50.89 85 P P 00 09 11.0 +0.9
KSCO Kaye Shedlock' 51.48 73 pP pP 00 09 27.8 -1.1
KSCO Kaye Shedlock' 51.48 73 P P 00 09 15.4 +0.9
baz=310

T25A Trinidad 51.61 76 P P 00 09 16.8 +1.2
baz=311,SNR=23
DUN6 Lazy B Ranch 51.78 84 IAmb IAmb 00 09 32.5
comp=Z,64nm,1.4s
ANMO Albuquerque 51.80 80 P P 00 09 18.4 +1.4
ANMO IAmb IAmb 00 09 19.4
comp=Z,28nm,1.5s
ANMO Albuquerque 51.80 80 P P 00 09 18.0 +0.9
baz=312
ANMO Albuquerque 51.80 80 P P 00 09 18.4 +1.4
ANMO pmax pmax
comp=Z,28nm,1.5s
ANMO Albuquerque 51.80 80 LR LR 00 28 44.1
comp=Z,249nm,21.8s,baz=40,slow=33
ECSD EROS Data Cent 51.99 65 IAmb IAmb 00 09 29.1
comp=Z,22nm,1.1s
Y22D IRIS PASSCAL I 52.10 81 P P 00 09 19.3 +0.1
baz=312
Y22F Passcal Instru 52.10 81 P P 00 09 19.5 +0.4
baz=312
FRB Frobisher Bay 52.18 32 LR LR 00 32 30.3
comp=Z,500nm,21.8s,baz=293,slow=37
EYMN Ely 52.19 58 P P 00 09 19.6 +0.1
baz=308
LYN LuoYang 52.36 280 ⇑P P 00 09 21.3 +0.4
LYN pP pP 00 09 37.0 +1.8
LYN sP sP 00 09 42.0 +0.6
LYN pmax pmax
comp=Z,580nm,4.7s
LYN LR LR
comp=Z,310nm,19.6s
LYN LR LR
comp=Z,620nm,18.9s
LYN LR LR
comp=Z,550nm,20.6s
319A Douglas 52.46 85 IAmb IAmb 00 09 36.0
comp=Z,22nm,1.0s
BGNE Belgrade 52.58 68 P P 00 09 22.7 +0.1
baz=310,SNR=6.2
121A Cookes Peak, D 52.60 83 IAmb IAmb 00 09 44.1
comp=Z,13nm,0.8s
121A Cookes Peak, D 52.60 83 P P 00 09 23.6 +0.7
baz=313,SNR=7.2
SUMG Summit 52.79 15 *i* P P 00 09 24.2 +0.1
SUMG IAmb IAmb 00 10 00.6
comp=Z,5.1nm,0.8s
E38A The Farm, Brul 52.99 59 IAmb IAmb 00 09 51.2
comp=Z,17nm,0.8s
RTBA Rita Blanca 53.08 76 IAmb IAmb 00 09 39.9
comp=Z,45nm,1.1s
SPMN Marine on St. 53.18 61 P P 00 09 27.0 +0.2
baz=309
CBKS Cedar Bluff 53.32 72 P P 00 09 28.9 +0.8
baz=311,SNR=13
I37A Lemond, Waseca 53.62 63 IAmb IAmb 00 09 41.6
comp=Z,38nm,1.0s
EPT El Paso 53.91 83 IAmb IAmb 00 09 45.9
comp=Z,28nm,0.8s
WHN Wuhan 53.91 275 ⇑P P 00 09 32.3 -0.1
WHN sP pP 00 09 49.4 +2.6
WHN pmax pmax
comp=Z,1μm,3.3s
MNTX Cornudas Mount 54.66 82 P P 00 09 38.4 +0.5
baz=314,SNR=17
MSTX Muleshoe 54.71 78 IAmb IAmb 00 09 40.1
comp=Z,38nm,1.0s
MSTX Muleshoe 54.71 78 P P 00 09 38.5 +0.1
baz=313,SNR=11
AMTX Amarillo 54.76 77 IAmb IAmb 00 09 51.7
comp=Z,26nm,1.1s
AMTX Amarillo 54.76 77 P P 00 09 39.0 +0.4
baz=312
ZALV Zalesovo Beam 54.81 314 *i* P P 00 09 38.2 -0.4
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 54.81 314 P P 00 09 37.3 -1.3
comp=Z,0.8nm,0.5s,baz=44,slow=7.6,SNR=4.7
ZALV PcP PcP 00 10 40.6 +0.3
comp=Z,4.1nm,0.5s,baz=44,slow=2.3,SNR=9.0
ZALV LR LR 00 35 08.5
comp=Z,624nm,19.6s,baz=56,slow=38
comp=Z,0.8nm,0.5s
XAN Xi'an 54.87 282 ⇑P P 00 09 39.3 -0.1
XAN sP sP 00 10 04.3 +4.4
XAN PcP PcP 00 10 41.8 +0.9
XAN pmax pmax
comp=Z,120nm,1.0s
XAN LR LR
comp=Z,460nm,21.0s
XAN LR LR
comp=Z,680nm,22.0s
XAN LR LR
comp=Z,810nm,21.0s
XAN Xi'an 54.87 282 P P 00 09 39.5 +0.1
KSU1 Kansas State U 54.98 69 P P 00 09 39.4 -0.6
baz=311,SNR=9.5
SFJD Kangerlussuaq 54.98 23 *i* P P 00 09 38.9 -0.7
SFJD IAmb IAmb 00 10 16.4
comp=Z,5.6nm,0.7s
SFJD Kangerlussuaq 54.98 23 LR LR 00 36 40.6
comp=Z,277nm,19.8s,baz=345,slow=40
SCIA State Center 55.09 65 P P 00 09 40.0 -0.8
baz=311
QZH Quanzhou 55.23 267 *eP* P 00 09 42.6 +0.6
I40A Norwalk 55.23 61 IAmb IAmb 00 09 53.4
comp=Z,14nm,0.7s
ELIS Ellis County 55.33 74 IAmb IAmb 00 09 55.5
comp=Z,38nm,1.1s
VHRN Van Horn 55.53 83 IAmb IAmb 00 09 58.6
comp=Z,48nm,1.4s
E43A Lone Tree Farm 55.55 57 pP 00 10 01.1 +2.4
E43A IAmb IAmb 00 10 11.3
comp=Z,23nm,0.7s
KAN05 Bluff City Nor 55.56 72 IAmb IAmb 00 09 57.0
comp=Z,27nm,1.1s
OK032 Salt Plains WL 55.56 73 IAmb IAmb 00 09 56.5
comp=Z,38nm,1.2s
ICESG Greenland Ices 55.59 17 *i* P P 00 09 44.7 +0.3
ICESG IAmb IAmb 00 10 06.2
comp=Z,6.8nm,0.8s
KAN17 Caldwell West 55.66 72 IAmb IAmb 00 09 57.0
comp=Z,46nm,1.0s
CROK Carrier 55.89 73 IAmb IAmb 00 09 58.8
comp=Z,37nm,1.0s
DKNS Dickens 56.05 77 IAmb IAmb 00 10 01.6
comp=Z,27nm,1.0s
JFWS Jewell Farm 56.08 62 IAmb IAmb 00 10 12.5
comp=Z,17nm,0.7s
JFWS Jewell Farm 56.08 62 P P 00 09 47.5 -0.4
baz=311
L40A Anamosa 56.10 63 IAmb IAmb 00 09 49.1
comp=Z,54nm,1.5s
POST Post 56.10 78 IAmb IAmb 00 10 01.2
comp=Z,25nm,0.8s
ODSA Odessa 56.11 80 IAmb IAmb 00 09 50.5
comp=Z,24nm,0.8s
DGZ Jazzator, Alta 56.41 309 *i* P P 00 09 50.6 +0.3
DGZ pmax pmax
comp=Z,5.0nm,1.5s
DY2G Dye2 56.43 21 *i* P P 00 09 49.6 -0.7
DY2G IAmb IAmb 00 09 53.8
comp=Z,4.4nm,0.5s
T35A Sooner Cattle 56.49 71 IAmb IAmb 00 10 02.8
comp=Z,38nm,0.9s
MNHN Monahans 56.52 80 IAmb IAmb 00 10 04.0
comp=Z,29nm,0.9s
LZH Lanzhou 56.55 287 ⇓P P 00 09 52.9 +1.4
LZH pP pP 00 10 10.8 +4.8
LZH pmax pmax
comp=Z,39nm,1.4s
LZH LR LR
comp=Z,460nm,14.8s
LZH LR LR
comp=Z,510nm,14.4s
LZH LR LR
comp=Z,650nm,15.5s
OK051 E0350 and S346 56.58 72 IAmb IAmb 00 10 04.2
comp=Z,36nm,1.0s
WMOK Wichita Mounta 56.61 75 IAmb IAmb 00 10 21.3
comp=Z,20nm,0.9s
WMOK Wichita Mounta 56.61 75 P P 00 09 52.5 +0.7
baz=313,SNR=14
ALPN Alpine 56.65 82 IAmb IAmb 00 10 14.1
comp=Z,14nm,0.9s
GTA Gaotai 56.67 293 *eP* P 00 09 52.3 0.0
GTA pP pP 00 10 06.5 -0.5
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA LR LR
comp=Z,360nm,18.5s
GTA LR LR
comp=Z,490nm,19.6s
GTA LR LR
comp=Z,760nm,19.3s
APMT Aspermont 56.77 77 IAmb IAmb 00 10 06.5
comp=Z,32nm,0.9s
QUOK Quay 56.88 72 IAmb IAmb 00 10 05.8
comp=Z,31nm,1.0s
E46A Sault Ste Mari 56.96 56 IAmb IAmb 00 09 54.1
comp=Z,14nm,0.8s
LPIG La Paz 56.96 92 LR LR 00 28 52.1
comp=Z,139nm,20.6s,baz=302,slow=30
L42A Oliver, Polo 57.01 63 IAmb IAmb 00 10 15.7
comp=Z,20nm,0.9s
ENH Enshi 57.12 278 P P 00 09 55.0 -0.4
ENH sP pP 00 10 11.9 +1.9
ENH PcP PcP 00 10 49.5 -0.2
N41A Harden Midland 57.21 64 IAmb IAmb 00 09 56.4
comp=Z,38nm,1.1s
TX31 Lajitas Ar. Si 57.36 83 IAmb IAmb 00 10 11.1
comp=Z,38nm,1.3s
TXAR Lajitas Array 57.36 83 P P 00 09 58.0 +0.8
comp=Z,6.3nm,0.7s,baz=305,slow=5.6,SNR=82
TXAR LR LR 00 31 51.4
comp=Z,138nm,21.8s,baz=325,slow=33
comp=Z,6.3nm,0.7s
WTFS Witchita Falls 57.47 75 IAmb IAmb 00 10 10.7
comp=Z,34nm,1.1s
SLBS Sierra La Lagu 57.49 92 P P 00 09 59.5 +1.2
SLBS IAmb IAmb 00 10 19.9
comp=Z,23nm,1.2s
ABTX Abilene, Hawle 57.54 77 IAmb IAmb 00 10 12.2
comp=Z,34nm,1.1s
ABTX Abilene, Hawle 57.54 77 P P 00 09 58.8 +0.4
baz=314,SNR=7.8
TUL3 Leonard 57.60 72 P P 00 09 58.8 0.0
baz=313,SNR=7.4
OZNA Ozona 57.81 80 IAmb IAmb 00 10 10.4
comp=Z,15nm,0.9s
GLMI Grayling 57.83 57 P P 00 09 59.8 -0.5
baz=313
L44A Lake County Fo 57.85 61 P P 00 09 59.6 -0.8
baz=313
SAND Sanderson 57.88 81 IAmb IAmb 00 10 13.4
comp=Z,14nm,1.2s
RLO Rose Lookout 57.88 71 IAmb IAmb 00 10 12.6
comp=Z,48nm,1.1s
ARCES ARCESS Array B 58.11 351 IAmb IAmb 00 10 03.4
comp=Z,22nm,1.4s
ARCES pP pP 00 10 16.9 +0.3
ARCES ARCESS Array B 58.11 351 P P 00 10 01.6 -0.2
comp=Z,2.5nm,0.5s,baz=29,slow=7.5,SNR=28
ARCES LR LR 00 36 06.0
comp=Z,568nm,20.4s,baz=346,slow=37
comp=Z,2.5nm,0.5s
HDIL Hopedale 58.19 64 P P 00 10 01.7 -1.1
baz=313,SNR=6.2
M44A Midewin, Midew 58.32 62 IAmb IAmb 00 10 15.1
comp=Z,38nm,1.1s
Z35A Perchaven, San 58.50 75 IAmb IAmb 00 10 18.4
comp=Z,37nm,1.0s
FW06 Azle 58.56 75 IAmb IAmb 00 10 07.4
comp=Z,25nm,0.7s
X37A Clayton 58.76 73 IAmb IAmb 00 10 20.1
comp=Z,32nm,0.9s
CCM Cathedral Cave 58.79 67 P P 00 10 05.6 -1.4
baz=313
CCM Cathedral Cave 58.79 67 P P 00 10 05.9 -1.1
CCM pP pP 00 10 16.9 -4.8
BRDY Brady 58.86 78 IAmb IAmb 00 10 21.7
comp=Z,12nm,0.9s
JCT Junction City 58.94 79 IAmb IAmb 00 10 33.7
comp=Z,21nm,1.1s
JCT Junction City 58.94 79 P P 00 10 07.6 -0.6
baz=315
SCHQ Schefferville 59.05 39 P P 00 10 08.3 -0.2
comp=Z,2.7nm,0.6s,baz=310,slow=11,SNR=12
SCHQ LR LR 00 36 49.7
comp=Z,456nm,20.9s,baz=322,slow=37
comp=Z,2.7nm,0.6s
DRIO Del Rio 59.18 81 IAmb IAmb 00 10 22.5
comp=Z,26nm,1.3s
ZSN Zaisan 59.19 309 *eP* P 00 10 09.1 -0.6
baz=309
ZSN Zaisan 59.19 309 *eP* P 00 10 09.1 -0.6
WHTX Lake Whitney, 59.31 76 P P 00 10 11.1 +0.4
baz=315,SNR=5.9
SFIN Lafayette 59.53 62 P P 00 10 11.8 -0.3
baz=314,SNR=14
KURK Kurchatov 59.80 315 *ceP* P 00 10 12.1 -1.7
KURK pmax pmax
comp=Z,10.0nm,0.7s
KURK Kurchatov 59.80 315 P P 00 10 12.9 -0.9
KURK sP pP 00 10 29.5 +1.0
MIAR Mount Ida 59.85 71 P P 00 10 14.8 +0.4
baz=314,SNR=40
L48A N Adams 59.90 59 IAmb IAmb 00 10 26.2
comp=Z,22nm,0.9s
KURBB Kurchatov Arra 59.91 315 P P 00 10 14.1 -0.4
comp=Z,8.6nm,0.5s,baz=42,slow=6.6,SNR=84
KURBB LR LR 00 38 39.7
comp=Z,739nm,18.9s,baz=60,slow=39
comp=Z,8.6nm,0.5s
N47A Urbana 59.96 61 IAmb IAmb 00 10 15.2
comp=Z,49nm,1.3s
AAM Ann Arbor 60.07 59 P P 00 10 15.6 -0.2
baz=314
435B Jarrell 60.08 77 P P 00 10 16.4 +0.4
baz=315
S44A Carbondale 60.17 66 IAmb IAmb 00 10 17.0
comp=Z,30nm,0.8s
CD2 Chengdu 60.18 283 P P 00 10 16.6 -0.2
CD2 pP pP 00 10 30.5 -0.9
CD2 sP sP 00 10 37.4 -0.1
CD2 PP PP 00 12 28.6 -1.0
CD2 S S 00 18 24.9 -1.4
CD2 pmax pmax
comp=Z,90nm,0.8s
CD2 pmax pmax
comp=Z,280nm,5.3s
CD2 LR LR
comp=Z,290nm,22.6s
CD2 LR LR
comp=Z,430nm,22.2s
CD2 LR LR
comp=Z,400nm,23.0s
WMQ Urumqi 60.30 304 *eP* P 00 10 17.8 +0.4
X40A Basin Creek Fa 60.33 71 IAmb IAmb 00 10 28.9
comp=Z,27nm,1.0s
H06N1 SOCORRO T-PHAS 60.42 97 T T 01 16 15.8
SNR=12
O48B Farmland 60.68 61 P P 00 10 18.8 -1.2
baz=314,SNR=7.3
SADO Sadowa 60.69 54 IAmb IAmb 00 10 20.2
comp=Z,22nm,1.4s
SADO Sadowa 60.69 54 LR LR 00 38 15.9
comp=Z,324nm,18.4s,baz=312,slow=38
833A Chaparral WMA, 60.71 81 P P 00 10 20.7 +0.3
baz=316
N49A Columbus Grove 60.75 60 IAmb IAmb 00 10 31.9
comp=Z,33nm,1.1s
MKAR Makanchi Array 60.90 309 P P 00 10 19.9 -1.5
comp=Z,1.6nm,0.5s,baz=43,slow=6.7,SNR=33
comp=Z,1.6nm,0.5s
MAKZ Makanchi 61.04 310 P P 00 10 20.5 -1.9
NATX Nacogdoches 61.16 74 P P 00 10 22.9 -0.4
baz=315
P49A Miami Univ. Ec 61.43 62 IAmb IAmb 00 10 25.3
comp=Z,22nm,0.8s
P49A Miami Univ. Ec 61.43 62 P P 00 10 24.3 -0.8
baz=315,SNR=9.6
WCI Wyandotte Cave 61.47 64 P P 00 10 24.6 -0.8
WCI Wyandotte Cave 61.47 64 P P 00 10 25.1 -0.3
baz=315
WCI Wyandotte Cave 61.47 64 P P 00 10 24.6 -0.8
WCI pmax pmax
comp=Z,35nm,0.9s
WCI Wyandotte Cave 61.47 64 P P 00 10 25.0 -0.3
BVAR Borovoye Array 61.55 321 P P 00 10 26.2 +0.5
comp=Z,18nm,0.7s,baz=50,slow=6.2,SNR=116
BVAR LR LR 00 39 39.7
comp=Z,1μm,19.7s,baz=42,slow=38
comp=Z,18nm,0.7s
GYA Guiyang 61.57 277 ⇑*i* P P 00 10 26.3 0.0
GYA pmax pmax
comp=Z,83nm,1.2s
GYA pmax pmax
comp=Z,280nm,5.1s
BRVK Borovoye 61.57 321 P P 00 10 25.2 -0.6
BRVK IAmb IAmb 00 10 45.8
comp=Z,14nm,0.7s
BRVK Borovoye 61.57 321 *ceP* P 00 10 25.6 -0.2
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 61.57 321 P P 00 10 24.9 -0.9
BRVK pP pP 00 10 37.4 -3.3
BRVK PcP PcP 00 11 06.7 -0.3
HKT Hockley 61.73 77 P P 00 10 28.7 +1.6
HKT IAmb IAmb 00 10 41.5
comp=Z,35nm,1.2s
HKT Hockley 61.73 77 P P 00 10 28.7 +1.6
HKT pmax pmax
comp=Z,35nm,1.2s
HKT Hockley 61.73 77 P P 00 10 28.6 +1.4
GOMU GeErMu 61.75 293 P P 00 10 27.9 +0.2
GOMU pP pP 00 10 39.5 -2.9
GOMU sP sP 00 10 44.5 -3.9
GOMU PcP PcP 00 11 09.3 +0.8
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU LR LR
comp=Z,560nm,18.6s
GOMU LR LR
comp=Z,430nm,18.8s
GOMU LR LR
comp=Z,580nm,18.8s
M52A Chesterland 61.83 58 IAmb IAmb 00 10 39.4
comp=Z,22nm,0.8s
R49A Shelbyville 62.06 63 IAmb IAmb 00 10 44.3
comp=Z,23nm,1.4s
WVT Waverly 62.08 66 P P 00 10 29.2 -0.3
WVT IAmb IAmb 00 10 30.7
comp=Z,51nm,1.4s
WVT Waverly 62.08 66 P P 00 10 29.0 -0.5
baz=315
WVT Waverly 62.08 66 P P 00 10 29.2 -0.3
WVT pmax pmax
comp=Z,51nm,1.4s
WVT Waverly 62.08 66 P P 00 10 29.7 +0.2
SVE Sverdlovsk 62.10 328 *eP* P 00 10 29.1 -0.2
SVE pmax pmax
comp=Z,19nm,1.3s
ERPA Erie 62.13 57 P P 00 10 29.2 -0.6
baz=316
M53A WI Miller and 62.26 58 P P 00 10 30.2 -0.4
baz=316,SNR=8.9
OXF Oxford 62.32 69 P P 00 10 30.9 -0.2
baz=315,SNR=10
P51A Williamsport 62.37 61 IAmb IAmb 00 10 52.3
comp=Z,14nm,0.7s
BORG Borgarnes 62.46 12 LR LR 00 40 54.0
comp=Z,328nm,18.1s,baz=12,slow=39
N53A Lisbon 62.62 58 IAmb IAmb 00 10 44.9
comp=Z,29nm,1.0s
WVNY West Valley, N 62.65 56 IAmb IAmb 00 11 02.3
comp=Z,22nm,0.8s
ZAIG Zacatecas 62.77 87 P P 00 10 35.1 +0.5
ZAIG IAmb IAmb 00 10 56.2
comp=Z,14nm,1.0s
P52A Corning 62.77 60 P P 00 10 33.1 -0.9
baz=316,SNR=5.9
O53A New Philadelph 62.82 59 IAmb IAmb 00 10 56.3
comp=Z,20nm,0.7s
O53A New Philadelph 62.82 59 P P 00 10 33.8 -0.6
baz=316,SNR=5.2
BRZS Berezniki 62.92 317 *eP* P 00 10 33.9 -1.1
baz=317
BRZS Berezniki 62.92 317 *eP* P 00 10 33.8 -1.1
LONY Lake Ozonia 63.06 52 P P 00 10 36.8 +0.9
baz=317
ARU Arti 63.10 329 *c i* P P 00 10 36.4 +0.5
ARU 00 11 07.9
ARU 00 12 56.0
ARU S S 00 19 05.6 +3.2
ARU SS SS 00 23 00.5 -7.4
ARU pmax pmax
comp=Z,8.0nm,0.5s
ARU MLR MLR
comp=Z,722nm,19.0s
ARU Arti 63.10 329 LR LR 00 40 21.6
comp=Z,687nm,21.1s,baz=32,slow=38
ARU Arti 63.10 329 P P 00 10 36.3 +0.4
T50A Nancy 63.14 64 IAmb IAmb 00 10 37.2
comp=Z,31nm,0.8s
Q52A Bidwell 63.17 61 IAmb IAmb 00 10 47.9
comp=Z,24nm,0.8s
VBMS Vicksburg 63.30 71 P P 00 10 37.7 +0.1
baz=316
S51A Beattyville 63.40 62 IAmb IAmb 00 10 39.2
comp=Z,28nm,0.8s
K57A Scipio Center 63.48 54 IAmb IAmb 00 11 07.6
comp=Z,24nm,0.9s
X48A Hartselle 63.73 67 IAmb IAmb 00 10 41.1
comp=Z,63nm,1.4s
D62A Allapoint, All 63.85 46 IAmb IAmb 00 11 04.7
comp=Z,10nm,0.7s
Q54A Coxs Mills 63.94 60 IAmb IAmb 00 10 43.0
comp=Z,61nm,1.4s
KIRV Kirov 63.94 335 *ceP* P 00 10 42.0 +0.6
KIRV Kirov 63.94 335 P P 00 10 42.5 +1.1
comp=Z,11nm,0.5s,baz=42,slow=5.3,SNR=10
comp=Z,11nm,0.5s
MCWV Mont Chateau 63.98 59 IAmb IAmb 00 11 06.8
comp=Z,32nm,0.9s
MCWV Mont Chateau 63.98 59 P P 00 10 41.8 -0.2
baz=316
HNR Honiara 64.00 206 LR LR 00 33 04.0
comp=Z,3μm,20.9s,baz=334,slow=31
BINY Binghamton 64.13 54 IAmb IAmb 00 11 06.1
comp=Z,61nm,1.4s
BINY Binghamton 64.13 54 P P 00 10 41.5 -1.5
baz=317
M57A Sunshine Farm, 64.18 56 IAmb IAmb 00 11 12.4
comp=Z,16nm,0.7s
TZTN Tazewell 64.21 63 P P 00 10 44.0 +0.4
baz=316,SNR=9.5
V51A Loudon 64.29 64 IAmb IAmb 00 10 45.8
comp=Z,71nm,1.5s
SSPA Standing Stone 64.30 57 P P 00 10 44.1 0.0
SSPA IAmb IAmb 00 11 13.4
comp=Z,23nm,0.8s
SSPA Standing Stone 64.30 57 P P 00 10 43.6 -0.5
baz=317
SSPA Standing Stone 64.30 57 P P 00 10 43.7 -0.4
SSPA pP pP 00 10 55.0 -4.0
Y49A Blount Mountai 64.52 67 IAmb IAmb 00 10 45.7
comp=Z,20nm,0.7s
S54A Dingess, Beckl 64.53 61 IAmb IAmb 00 10 47.1
comp=Z,40nm,0.8s
PZH PanZhiHua 64.57 281 P P 00 10 46.5 +0.3
PZH pP pP 00 11 02.5 +1.5
PZH S S 00 19 19.5 -2.2
PZH pmax pmax
comp=Z,220nm,1.0s
PZH pmax pmax
comp=Z,410nm,3.5s
PZH LR LR
comp=Z,210nm,21.3s
PZH LR LR
comp=Z,150nm,20.6s
PZH LR LR
comp=Z,260nm,19.1s
L59A Walton 64.62 54 IAmb IAmb 00 11 11.0
comp=Z,23nm,0.8s
LBNH Lisbon 64.63 50 P P 00 10 45.3 -0.9
baz=318
KSPA Keystone Colle 64.72 55 IAmb IAmb 00 11 15.4
comp=Z,14nm,0.8s
DAV Davao City (W) 64.73 248 LR LR 00 34 33.3
comp=Z,322nm,21.1s,baz=30,slow=32
H62A Milan 64.75 50 IAmb IAmb 00 11 10.4
comp=Z,16nm,0.6s
LRAL Lakeview Retre 64.78 68 IAmb IAmb 00 10 47.9
comp=Z,29nm,1.2s
LRAL Lakeview Retre 64.78 68 P P 00 10 46.5 -0.8
baz=316,SNR=10
R55A Marlinton 64.83 60 IAmb IAmb 00 11 02.7
comp=Z,25nm,1.0s
SHLS Shalkode 64.93 308 *eP* P 00 10 47.2 -1.2
baz=308
SHLS Shalkode 64.93 308 *eP* P 00 10 47.1 -1.2
KMI Kunming 64.96 279 ⇑P P 00 10 49.1 +0.2

KMI pP pP 00 11 06.3 +2.6
KMI S **S** **00 19 29.8 +3.1**
KMI pmax pmax
comp=Z,98nm,0.9s
KMI pmax pmax
comp=Z,320nm,5.1s
KMI LR LR
comp=Z,210nm,28.2s
KMI LR LR
comp=Z,160nm,19.4s
KMI LR LR
comp=Z,490nm,36.8s
KMI Kunming 64.96 279 P **P** **00 10 49.3 +0.4**
KMI sP **pP** **00 11 06.5 +2.8**
QIZ Qiongzhong 65.05 269 P **P** **00 10 50.4 +1.2**
QIZ pP **pP** **00 11 03.1 -0.6**
QIZ S **S** **00 19 27.8 +0.3**
QIZ sS **sS** **00 19 53.3 +1.1**
QIZ pmax pmax
comp=Z,22nm,1.2s
QIZ pmax pmax
comp=Z,250nm,5.0s
QIZ LR LR
comp=Z,150nm,16.8s
QIZ LR LR
comp=Z,220nm,15.1s
QIZ LR LR
comp=Z,220nm,17.7s
P57A Homestead Farm 65.07 58 IAmb IAmb 00 11 11.4
comp=Z,16nm,0.8s
KPKS Kokpek 65.08 309 *e*P **P** **00 10 49.1 -0.1**
baz=309
KPKS Kokpek 65.08 309 *e*P **P** **00 10 49.1 -0.1**
V53A Saluda 65.25 63 IAmb IAmb 00 11 03.1
comp=Z,43nm,1.1s
BLA Blacksburg 65.44 61 IAmb IAmb 00 10 53.1
comp=Z,32nm,0.8s
BLA Blacksburg 65.44 61 P **P** **00 10 51.4 -0.2**
baz=317,SNR=9.2
Z51A Franklin 65.62 67 P **P** **00 10 52.2 -0.6**
LUPA Lehigh Univers 65.62 55 IAmb IAmb 00 11 15.2
comp=Z,23nm,0.6s
ODNJ Ogdensburg 65.65 54 P **P** **00 10 52.5 -0.4**
ODNJ IAmb IAmb 00 11 17.3
comp=Z,20nm,1.0s
S57A Dark Hollow, R 65.84 59 IAmb IAmb 00 11 18.2
comp=Z,16nm,0.9s
FINES FINESS Array B 65.86 348 *i* P **P** **00 10 56.0 +2.1**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 65.86 348 P **P** **00 10 52.4 -1.5**
comp=Z,2.9nm,0.7s,baz=15,slow=5.8,SNR=9.4
FINES LR LR 00 41 26.1
comp=Z,466nm,20.6s,baz=332,slow=38
comp=Z,2.9nm,0.7s
PAL Palisades 66.06 54 P **P** **00 10 55.7 +0.2**
baz=318
BTLS Baital 66.07 313 *e*P **P** **00 10 55.2 -0.3**
baz=313
BTLS Baital 66.07 313 *e*P **P** **00 10 55.2 -0.3**
MDOK Medeo 66.09 310 *e*P **P** **00 10 55.9 0.0**
baz=310
MDOK Medeo 66.09 310 *e*P **P** **00 10 55.8 0.0**
BRAL Brewton 66.10 70 P **P** **00 10 55.4 -0.5**
baz=317
U56A King 66.10 61 IAmb IAmb 00 10 56.8
comp=Z,49nm,1.1s
HRV Adam Dziewonsk 66.11 51 P **P** **00 10 54.8 -1.0**
baz=319
T57A Hurt 66.23 60 IAmb IAmb 00 11 08.2
comp=Z,15nm,0.7s
152A Waverly Hall 66.36 67 IAmb IAmb 00 11 09.0
comp=Z,25nm,0.9s
KMSC Kings Mountain 66.46 63 P **P** **00 10 58.3 +0.1**
baz=317,SNR=23
WUS Wushi 66.51 307 P **P** **00 10 58.6 0.0**
GOGA Godfrey 66.53 66 IAmb IAmb 00 10 59.4
comp=Z,39nm,0.8s
GOGA Godfrey 66.53 66 P **P** **00 10 58.2 -0.4**
baz=317,SNR=23
DRLN Deer Lake 67.01 38 P **P** **00 11 03.3 +1.9**
DRLN IAmb IAmb 00 11 32.3
comp=Z,16nm,1.0s
T59A Double "B" Far 67.17 59 IAmb IAmb 00 11 25.4
comp=Z,34nm,1.1s
W57A Gilead 67.19 62 IAmb IAmb 00 11 03.9
comp=Z,23nm,0.6s
V58A Windy Hill, Pi 67.20 61 IAmb IAmb 00 11 04.2
comp=Z,35nm,0.9s
M65A Busby, Falmout 67.26 51 P **P** **00 11 01.7 -1.4**
baz=320
BIRD Birdtown, Kers 67.31 63 IAmb IAmb 00 11 04.8
comp=Z,34nm,0.8s
FRU1 Bishkek 67.51 311 IAmb IAmb 00 11 27.6
comp=Z,38nm,1.4s
NB2 NORSAR Subarra 67.55 356 P **P** **00 11 04.6 -0.1**
comp=Z,0.9nm,0.5s,baz=7.4,slow=6.9
NOA NORSAR Array B 67.55 356 P **P** **00 11 04.9 +0.2**
comp=Z,1.0nm,0.5s,baz=6.1,slow=6.4,SNR=12
NOA LR LR 00 38 35.6
comp=Z,206nm,21.5s,baz=355,slow=34
comp=Z,1.0nm,0.5s
TNCH TengChong 67.61 282 ⇑P **P** **00 11 06.8 +0.9**
TNCH pP pP 00 11 18.9 -1.8
TNCH sP sP 00 11 23.8 -3.0
TNCH PP **PP** **00 13 36.0 +0.9**
TNCH S **S** **00 20 00.3 +1.4**
TNCH sS pS 00 20 18.3 +1.3
TNCH SS **SS** **00 24 17.9 -2.0**
TNCH pmax pmax
comp=Z,77nm,1.2s
TNCH pmax pmax
comp=Z,310nm,2.6s
TNCH LR LR
comp=Z,140nm,16.6s
TNCH LR LR
comp=Z,160nm,17.8s
TNCH LR LR
comp=Z,350nm,21.1s
AAK Ala-Archa 67.71 311 P **P** **00 11 05.7 -0.5**
AAK Ala-Archa 67.71 311 *d* *i*P **P** **00 11 06.3 +0.1**
AAK pmax pmax
comp=Z,32nm,2.4s
AAK Ala-Archa 67.71 311 LR LR 00 43 59.1
comp=Z,305nm,18.6s,baz=10,slow=39
AAK Ala-Archa 67.71 311 P **P** **00 11 05.7 -0.5**
TIGA Tifton 67.91 67 IAmb IAmb 00 11 08.5
comp=Z,33nm,0.9s
TIGA Tifton 67.91 67 P **P** **00 11 07.0 -0.3**
baz=318
TAOE Nuku Hiva Isla 67.94 141 *e*LR LR 00 31 45.6
comp=Z,654nm,24.1s
X58A Rowland 68.00 62 IAmb IAmb 00 11 09.3
comp=Z,31nm,0.7s
SWI Sorong 68.12 238 P **P** **00 11 09.0 +0.2**
comp=Z,160nm,1.0s
PMG Port Moresby 68.24 219 LR LR 00 35 57.2
comp=Z,180nm,20.8s,baz=51,slow=31
AKTO Aktyubinsk 68.25 326 LR LR 00 43 26.0
comp=Z,656nm,20.4s,baz=48,slow=38
CNNC Cliffs of the 68.28 61 P **P** **00 11 09.8 +0.2**
baz=318
HFS Hagfors 68.33 354 P **P** **00 11 09.2 -0.3**
comp=Z,4.3nm,0.5s,baz=15,slow=6.0,SNR=23
comp=Z,4.3nm,0.5s
LSA Lhasa 68.57 291 IAmb IAmb 00 11 14.5
comp=Z,16nm,0.5s
LSA Lhasa 68.57 291 P **P** **00 11 13.4 +1.2**
LSA PcP **PcP** **00 11 38.5 +1.6**
NHSC New Hope 68.61 64 P **P** **00 11 12.6 +0.9**
baz=318,SNR=10
VSU Vasula 68.66 347 ⇓*e*P **P** **00 11 11.6 0.0**
VSU pmax pmax
comp=Z,59nm,2.7s
MOS Moscow 69.32 340 *e*P P 00 11 23.4 +7.7
MOS *e* 00 11 32.9
FAKI Fak Fak 69.35 236 IAmb IAmb 00 11 18.1
comp=Z,40nm,0.9s
FAKI Fak Fak 69.35 236 P **P** **00 11 16.3 -0.2**
comp=Z,64nm,1.3s
KSH Kashi 69.40 308 P **P** **00 11 19.3 +2.6**
KSH pmax pmax
comp=Z,13nm,0.7s
KSH LR LR
comp=Z,480nm,13.7s
KSH LR LR
comp=Z,430nm,18.9s
KSH LR LR
comp=Z,600nm,20.6s
BELG Belogornoye 69.87 333 *i* P **P** **00 11 18.0 -1.2**
BELG pmax pmax
comp=Z,2.0nm,0.9s
BELG Belogornoye 69.87 333 P **P** **00 11 18.6 -0.5**
comp=Z,15nm,0.9s,baz=34,slow=3.6,SNR=4.4
comp=Z,15nm,0.9s
OBN Obninsk 70.12 340 *e*P **P** **00 11 19.7 -1.0**
OBN *e* 00 11 39.7
OBN *e* 00 13 56.5
OBN *e*PPP PPP 00 15 39.9
OBN pmax pmax
comp=Z,5.0nm,0.9s
IUG Iuzhnay 70.15 313 *e*P **P** **00 11 20.6 -0.7**
comp=Z,9.4nm,0.7s,baz=313
IUG Iuzhnay 70.15 313 *e*P **P** **00 11 20.6 -0.7**
IUG pmax pmax
comp=Z,9.0nm,0.7s
UBPT Khong Chiam 70.60 270 IAmb IAmb 00 11 25.7
comp=Z,40nm,1.3s
KKM Kota Kinabalu 71.10 255 IAmb IAmb 00 11 29.4
comp=Z,62nm,1.5s
DWPF Disney Wildern 71.63 68 P **P** **00 11 31.8 +1.5**
DWPF Disney Wildern 71.63 68 P **P** **00 11 30.8 +0.6**
baz=319
DWPF Disney Wildern 71.63 68 P **P** **00 11 31.4 +1.1**
DWPF pP **pP** **00 11 43.0 -2.3**
DWPF PcP **PcP** **00 11 50.1 +0.9**
CMIG Matias Romero 71.78 85 LR LR 00 38 18.1
comp=Z,226nm,21.9s,baz=295,slow=32
LPSR Galich'ya Gora 71.94 338 *e*P **P** **00 11 29.3 -2.4**
LPSR *e**SP **pP** **00 11 49.3 +2.4**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
SANI Sanana 71.97 242 P **P** **00 11 31.9 -0.5**
comp=Z,48nm,1.4s
CHTO Chiang Mai 71.99 278 P **P** **00 11 32.5 -0.1**
CHTO IAmb IAmb 00 11 33.8
comp=Z,23nm,1.0s
CHTO Chiang Mai 71.99 278 P **P** **00 11 32.5 -0.1**
CHTO pmax pmax
comp=Z,23nm,1.0s
CHTO Chiang Mai 71.99 278 P **P** **00 11 32.7 +0.1**
CHTO pP **pP** **00 11 45.2 -2.5**
CHTO sP **PcP** **00 11 50.0 -0.9**
MRSI Marisa 72.18 247 P **P** **00 11 33.2 -0.5**
comp=Z,126nm,1.2s,comp=Z,1μm
CMAR Chiang Mai Arr 72.26 277 P **P** **00 11 34.5 +0.4**
comp=Z,14nm,0.7s,baz=26,slow=6.9,SNR=74
CMAR LR LR 00 46 09.0
comp=Z,68nm,19.1s,baz=30,slow=38
comp=Z,14nm,0.7s
MNK Minsk 72.31 345 *i* P **P** **00 11 32.0 -1.9**
MNK *i**PP **pP** **00 11 47.8 -1.3**
MNK *i* 00 14 14.8
MNK *i* PPP PPP 00 15 59.2
MNK *i* S **S** **00 20 51.8 -0.8**
MNK *i**SS **sS** **00 21 19.6 +2.1**
MNK *i* SS **SS** **00 25 31.1 +1.1**
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=N,15nm,1.1s
MNK MLR MLR
comp=E,176nm,18.0s
MNK MLR MLR
comp=Z,375nm,12.0s
MNK MLR MLR
comp=N,331nm,11.0s
TOLI2 Tolitoli 72.33 249 IAmb IAmb 00 11 35.5
comp=Z,48nm,1.1s
VRH Novokhopyorsk 72.54 336 *e*P **P** **00 11 33.6 -1.7**
VRH *e**SP **PcP** **00 11 53.0 +0.3**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VORR Voronezh 72.73 337 P **P** **00 11 35.4 -1.1**
VORR pmax pmax
comp=Z,19nm,1.2s
PPT2 Papeete2 72.85 153 *e*S **S** **00 21 01.1 +1.5**
comp=Z,187nm,31.2s
PPT2 *e*SS **SS** **00 25 35.2 -5.9**
comp=Z,168nm,32.0s
PPT2 *e*LR LR 00 33 52.9
comp=Z,474nm,28.8s
PPT2 *e*LR LR 00 33 59.9
comp=Z,572nm,23.5s
LUWI Luwuk 72.94 246 P **P** **00 11 37.6 -0.6**
comp=Z,240nm,0.7s,comp=Z,2μm
VSR Storozhevoye 73.16 337 *e*P **P** **00 11 36.9 -2.1**
VSR *e**SP **pP** **00 11 57.0 +2.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
EKA Eskdalemuir Ar 73.33 4 P **P** **00 11 39.2 -0.8**
comp=Z,0.4nm,0.4s,baz=343,slow=4.4,SNR=5.3
comp=Z,0.4nm,0.4s
VORD Divnogorie 73.36 337 *e*P **P** **00 11 38.5 -1.7**
VORD *e**SP **pP** **00 11 58.1 +2.7**
VORD pmax pmax
comp=Z,5.0nm,0.7s
SIMJ Simiganj 73.41 312 P **P** **00 11 39.9 -1.0**
SIMJ IAmb IAmb 00 12 02.1
comp=Z,15nm,0.8s
MPSI Mapaga 73.47 249 P **P** **00 11 41.2 -0.1**
comp=Z,68nm,1.1s,comp=Z,906nm
RAR Rarotonga 73.99 164 LR LR 00 37 43.6
comp=Z,721nm,20.0s,baz=346,slow=30
DZM Mont Dzumac 74.80 196 *e*S **S** **00 21 22.9 +1.6**
comp=Z,116nm,26.7s
DZM *e*SS **SS** **00 26 10.1 -0.7**
comp=Z,159nm,30.8s
DZM *e*LR LR 00 34 48.8
comp=Z,699nm,26.9s
DZM Mont Dzumac 74.80 196 LR LR 00 36 45.6
comp=Z,430nm,21.2s,baz=120,slow=29
NIL Nilore 75.34 306 P **P** **00 11 52.1 0.0**
NIL Nilore 75.34 306 P **P** **00 11 52.1 0.0**
NIL pmax pmax
comp=Z,15nm,0.9s
AKASG Malin Array Be 75.74 343 P **P** **00 11 53.9 -0.1**
comp=Z,0.9nm,0.3s,baz=18,slow=5.9,SNR=5.2
AKASG LR LR 00 49 00.0
comp=Z,250nm,19.4s,baz=2.0,slow=39
comp=Z,0.9nm,0.3s
AKBB Malin Array Si 75.74 343 ⇑*e*P **P** **00 11 52.0 -2.0**
AKBB pmax pmax
comp=Z,10.0nm,1.4s
TTSI Tana Toraja 76.26 247 P **P** **00 11 57.9 +0.5**
comp=Z,32nm,1.0s
MAK Makhachkala 78.32 328 *e*P **P** **00 12 08.9 +0.3**
MAK *e**PP **pP** **00 12 26.3 +2.4**
MAK *e**SP **sP** **00 12 32.4 +2.4**
MAK *e*S **S** **00 22 00.4 +1.0**
MAK MLR MLR
comp=Z,392nm,18.0s
TBI Tubuai 78.36 155 *e*P **P** **00 12 09.5 +0.6**
comp=Z,285nm,27.0s
TBI *e*S **S** **00 21 54.0 -6.0**
comp=Z,586nm,37.5s
TBI *e*SS **SS** **00 27 03.8 -0.6**
comp=Z,259nm,26.8s
TBI *e*LR LR 00 36 27.8
comp=Z,987nm,26.2s
TBI *e*LR LR 00 36 32.0
comp=Z,3μm,27.2s
CTA Charters Tower 78.36 215 LR LR 00 39 27.9
comp=Z,120nm,21.7s,baz=40,slow=30
CTAO Charters Tower 78.36 215 P **P** **00 12 09.6 +0.6**
CTAO IAmb IAmb 00 12 22.6
comp=Z,22nm,1.0s
CTAO Charters Tower 78.36 215 P **P** **00 12 09.6 +0.6**
CTAO pmax pmax
comp=Z,22nm,1.0s
MTN Manton Dam 78.39 232 P **P** **00 12 08.8 -0.5**
BMRD Maredsous 78.49 359 *d*PcP **PcP** **00 12 18.9 +0.5**
KOLS Kolonicke sedl 78.56 347 P P 00 12 17.5 +7.6
GEYT Alibeck 78.79 319 P **P** **00 12 12.1 +0.7**
comp=Z,5.9nm,1.1s,baz=42,slow=18,SNR=8.2
GEYT LR LR 00 50 27.9
comp=Z,973nm,19.4s,baz=44,slow=38
comp=Z,5.9nm,1.1s
TGUH Tegucigalpa,Un 78.81 82 P **P** **00 12 12.9 +1.1**
TGUH IAmb IAmb 00 12 27.9
comp=Z,40nm,0.8s
VRAC Vranov 78.85 351 LR LR 00 49 34.6
comp=Z,389nm,19.6s,baz=354,slow=38
KIV Kislovodsk 78.91 332 *e*P **P** **00 12 12.1 +0.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,245nm,18.0s
ZVC Zvikov 78.93 353 *e*P P 00 12 06.7 -5.2
KBZ Khabaz 79.05 332 ⇓*e*P **P** **00 12 13.2 +0.6**
KBZ Khabaz 79.05 332 P **P** **00 12 12.0 -0.6**
comp=Z,2.9nm,0.9s,baz=36,slow=1.8,SNR=7.1
comp=Z,2.9nm,0.9s
NCK Nalchik 79.06 331 ⇑*e*P **P** **00 12 13.8 +1.1**
NCK pmax pmax
comp=Z,23nm,1.4s
KHC Kasperske Hory 79.28 353 *e*P **P** **00 12 13.5 -0.4**
KHC Kasperske Hory 79.28 353 ⇓*e*P **P** **00 12 13.3 -0.6**
SOEI Soe 79.31 239 P **P** **00 12 14.0 -0.5**
SOEI IAmb IAmb 00 12 36.4
comp=Z,44nm,1.0s
SOEI Soe 79.31 239 P **P** **00 12 14.7 +0.2**
comp=Z,40nm,1.1s
SRIT Nakonsritamara 79.38 270 IAmb IAmb 00 12 35.2
comp=Z,64nm,1.4s
BURAR Bucovina Array 79.41 345 ⇓P **P** **00 12 13.2 -1.4**
BURAR Bucovina Array 79.41 345 ⇓P **P** **00 12 13.2 -1.4**
GERES GERESS Array B 79.56 353 LR LR 00 45 41.1
comp=Z,125nm,21.4s,baz=0.5,slow=34
ZEI Tsey 79.61 331 *e*P **P** **00 12 15.1 -0.9**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
ZKTA Zakatala 79.79 328 P **P** **00 12 14.5 -2.2**
EDFI Ende, Flores 79.88 242 P **P** **00 12 16.0 -1.6**
comp=Z,51nm,1.3s,comp=Z,801nm
SEKA Sheki 79.99 328 P **P** **00 12 15.4 -2.5**
CRIN San Cristobal 79.99 82 P **P** **00 12 18.5 +0.3**
SOC Sochi 80.09 334 *e*P **P** **00 12 17.4 -0.9**
SOC *e* 00 15 19.4
SOC *e*PPP PPP 00 17 07.8
SOC *e*S **S** **00 22 17.6 -0.6**
SOC *e*SS **SS** **00 27 29.6 +1.7**
SOC *e*SSS SSS 00 30 54.5
MNGR Mingechevir, A 80.42 328 P **P** **00 12 17.9 -2.2**
RAO Raoul Island 80.48 181 LR LR 00 40 46.6
comp=Z,461nm,21.7s,baz=73,slow=30
DRGR 80.59 347 ⇑P **P** **00 12 20.6 -0.4**
DRGR 80.59 347 ⇑P **P** **00 12 20.6 -0.4**
MARR Marisel-Cluj 80.64 346 ⇓P **P** **00 12 21.3 0.0**
GANJ Ganja 80.78 328 P **P** **00 12 19.8 -2.3**
TURR Turia 80.79 344 ⇓P **P** **00 12 22.0 0.0**
VRI Vrincioaia 80.85 344 ⇓P **P** **00 12 25.2 +2.9**
VRI Vrincioaia 80.85 344 ⇓P **P** **00 12 25.2 +2.9**
PLOR Plostina 80.88 344 ⇓P **P** **00 12 21.7 -0.8**
PLOR Plostina 80.88 344 ⇓P **P** **00 12 21.7 -0.8**
COVR Voineasa-Covas 80.96 344 ⇓P **P** **00 12 23.0 +0.1**
CFR Carcaliu 81.26 342 ⇑P **P** **00 12 23.8 -0.7**
CFR Carcaliu 81.26 342 ⇑P **P** **00 12 23.8 -0.7**
KULM Kulim 81.28 267 IAmb IAmb 00 12 27.1
comp=Z,18nm,0.9s
KBA Koelnbreinsper 81.34 353 *e*P **P** **00 12 24.6 -0.6**
comp=Z,2.2nm,0.6s
MLR Muntele Rosu 81.35 344 ⇓P **P** **00 12 26.1 +0.9**
MLR Muntele Rosu 81.35 344 ⇓P **P** **00 12 26.1 +0.9**
TPGR Topolog 81.51 342 ⇓P **P** **00 12 25.5 -0.4**
VOIR 81.55 345 ⇓P **P** **00 12 25.4 -0.8**
VOIR 81.55 345 ⇓P **P** **00 12 25.4 -0.8**
SOKA Soboth 81.60 352 *e*P **P** **00 12 25.9 -0.5**
comp=Z,1.7nm,0.6s
LKRN Lenkeran, Azer 81.68 326 P **P** **00 12 24.8 -2.0**
ARR Arges 81.69 345 ⇓P **P** **00 12 26.5 -0.4**
SURR Surduc 81.69 347 ⇑P **P** **00 12 25.7 -1.1**
BASI Baing, Sumba 81.70 242 P **P** **00 12 27.2 +0.1**
comp=Z,135nm,1.3s
ABTA Abfaltersbach 81.73 354 *e*PcP **PcP** **00 12 32.9 +0.1**
comp=Z,1.0nm,0.5s
GNI Garni 81.74 329 ⇑*e*P **P** **00 12 28.8 +1.4**
GNI pmax pmax
comp=Z,9.0nm,1.6s
GNI Garni 81.74 329 LR LR 00 53 50.4
comp=Z,570nm,19.8s,baz=38,slow=39
MYKA Terra Mystica 81.77 353 *e*PcP **PcP** **00 12 30.5 -2.4**
comp=Z,1.6nm,0.5s
OBKA Obir 81.81 352 *e*P **P** **00 12 27.1 -0.5**
comp=Z,1.9nm,0.5s
DAVOX Davos/Dischmat 81.86 355 LR LR 00 51 22.4
comp=Z,208nm,18.4s,baz=360,slow=38
GZR Gura Zlata 81.95 346 ⇓P **P** **00 12 27.5 -0.7**
GZR Gura Zlata 81.95 346 ⇓P **P** **00 12 27.5 -0.7**
MYKOM Kota Tinggi 82.01 263 IAmb IAmb 00 12 30.1
comp=Z,20nm,1.0s
PLAI Plampang 82.13 245 P **P** **00 12 28.1 -1.3**
comp=Z,53nm,1.6s
NAX Nakhchivan 82.38 328 P **P** **00 12 28.4 -2.2**
FRGS Fruska Gora 82.59 348 ⇑P **P** **00 12 31.0 -0.5**
MDVR Moldovita 82.70 347 ⇓P **P** **00 12 30.8 -1.3**
WB0 Warramunga Arr 82.88 226 IAmb IAmb 00 12 33.5
comp=Z,15nm,0.7s
WR0 Warramunga Arr 82.98 225 IAmb IAmb 00 12 34.0
comp=Z,16nm,0.7s
WB2 Warramunga Arr 83.05 226 IAmb IAmb 00 12 35.2
comp=Z,64nm,1.5s
WRA Warramunga Arr 83.05 226 *i* P **P** **00 12 33.9 -0.2**
WRA pmax pmax
comp=Z,13nm,0.7s
WRA Warramunga Arr 83.05 226 P **P** **00 12 34.2 +0.1**
comp=Z,8.4nm,0.5s,baz=33,slow=5.8,SNR=88
WRA PKKPbc **PKKPbc** **00 30 55.4 +1.1**
comp=Z,0.3nm,0.5s,baz=224,slow=2.2,SNR=6.2
comp=Z,8.4nm,0.5s
JTS Las Juntas de 83.14 82 LR LR 00 49 12.9
comp=Z,85nm,21.6s,baz=338,slow=35
LOZB Loznitsa 83.29 343 ⇑P **P** **00 12 32.1 -3.1**
DSRI Dabo 83.33 261 P **P** **00 12 35.9 +0.2**
comp=Z,24nm,0.5s
PLVB Pleven 83.61 344 ⇑P **P** **00 12 35.1 -1.7**
LHMI Lhok Sumawe 83.63 270 P **P** **00 12 38.1 +0.8**
comp=Z,99nm,1.1s
BOVS Bovan 83.83 347 ⇓P **P** **00 12 37.4 -0.5**
PWJI Pagerwojo 84.93 250 P **P** **00 12 42.0 -1.8**
comp=Z,51nm,1.1s
BR131 Keskin Array S 85.28 337 *d**eP **P** **00 12 44.6 -0.9**
BRTR Keskin Array B 85.28 337 *i* P **P** **00 12 44.7 -0.8**
BRTR pmax pmax
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 85.28 337 P **P** **00 12 45.4 -0.1**
comp=Z,6.8nm,0.8s,baz=34,slow=2.3,SNR=41
comp=Z,6.8nm,0.8s
HYB Hyderabad 85.33 292 *e*P **P** **00 12 46.8 +0.9**
HYB *e*PcP **PcP** **00 12 50.5 +1.5**
BNN Bunyan 85.54 335 IAmb IAmb 00 12 47.6
comp=Z,19nm,0.8s
FITZ Fitzroy Crossi 85.60 234 IAmb IAmb 00 12 48.4
comp=Z,7.9nm,0.7s
KPJI Karang Pucung 86.08 253 P **P** **00 12 47.9 -1.6**
comp=Z,35nm,0.8s
PDSI Padang 86.21 264 P **P** **00 12 47.8 -2.5**
comp=Z,11nm,1.5s,comp=Z,11μm
GSI Gunungsitoli 86.29 267 P **P** **00 12 50.6 0.0**
comp=Z,37nm,1.0s,comp=Z,5μm
LEM Lembang 86.47 255 LR LR 00 48 16.3
comp=Z,69nm,19.7s,baz=16,slow=33
ASAR Alice Springs 86.51 224 P **P** **00 12 52.3 +0.9**
comp=Z,15nm,0.8s,baz=30,slow=4.8,SNR=120
ASAR LR LR 00 49 24.2
comp=Z,143nm,18.9s,baz=48,slow=34
comp=Z,15nm,0.8s
SISI Saibi 87.39 265 P **P** **00 12 55.8 -0.1**
comp=Z,37nm,1.4s
ESDC Sonseca Array 88.91 6 P **P** **00 13 01.1 -1.8**
comp=Z,1.5nm,1.0s,baz=356,slow=5.4,SNR=5.3
ESDC LR LR 00 54 49.9
comp=Z,138nm,18.7s,baz=340,slow=37
comp=Z,1.5nm,1.0s
TOZ Tahuroa Road 89.19 186 P **P** **00 13 05.5 +1.7**
TOZ IAmb IAmb 00 13 19.0
comp=Z,23nm,1.0s
URZ Urewera 89.62 185 LR LR 00 48 01.8
comp=Z,167nm,20.3s,baz=122,slow=32
VAE Valguarnera 90.78 351 LR LR 00 56 28.1
comp=Z,212nm,20.3s,baz=47,slow=37
STKA Stephens Creek 90.80 214 P **P** **00 13 12.8 +1.3**
comp=Z,8.7nm,0.6s,baz=7.2,slow=6.2,SNR=29
STKA LR LR 00 49 47.3
comp=Z,221nm,20.2s,baz=25,slow=33
comp=Z,8.7nm,0.6s
WSAR Wadi Sarin 91.12 311 LR LR 00 57 38.3

comp=Z,205nm,21.5s,baz=58,slow=38
MMAI Mount Meron Ar 91.15 333 LR LR 01 01 15.6
comp=Z,177nm,18.1s,baz=359,slow=40
PSA00 Pilbara Seismi 91.46 236 IAmb IAmb 00 13 15.2
comp=Z,13nm,0.9s
PALK Pallekele 92.07 284 LR LR 00 57 31.3
comp=Z,83nm,21.3s,baz=117,slow=37
SDV Santo Domingo 92.94 72 LR LR 00 55 37.0
comp=Z,69nm,22.0s,baz=345,slow=36
ROSC El Rosal 93.92 77 LR LR 00 57 29.0
comp=Z,88nm,19.8s,baz=349,slow=37
BAUV El Baul 94.42 70 pP pP 00 13 41.2 -3.1
EIL Elat 94.43 333 LR LR 01 02 17.0
comp=Z,167nm,20.1s,baz=33,slow=40
RPZ Rata Peaks 95.50 189 LR LR 00 54 43.1
comp=Z,195nm,18.2s,baz=34,slow=34
MDT Midelt 95.69 7 LR LR 00 58 16.1
comp=Z,94nm,19.2s,baz=17,slow=36
RPN Rapa Nui 98.10 124 LR LR 00 47 53.8
comp=Z,139nm,19.8s,baz=320,slow=29
TORD Torodi Ar. Bea 115.53 2 PKP **PKiKP 00 18 50.1 -0.5**
comp=Z,4.9nm,0.5s,baz=353,slow=3.0,SNR=4.2
H03N2 Juan Fernandez 119.97 107 T T 02 30 19.5
baz=317,slow=77,SNR=1011
H03N1 Juan Fernandez 119.99 107 T T 02 30 20.9
baz=317,slow=77,SNR=1274
H03N3 Juan Fernandez 119.99 107 T T 02 30 20.2
baz=317,slow=77,SNR=966
DBIC Dimbokro 121.57 9 PKIKP **PKPdf 00 19 02.0 -0.3**
DBIC Dimbokro 121.57 9 PKP **PKPdf 00 19 02.0 -0.3**
comp=Z,6.3nm,0.6s,baz=355,slow=2.6,SNR=18
TIC Toumodi 121.58 10↑*i*PKIKP **PKPdf 00 19 01.3 -1.0**
comp=Z,5.2nm,0.2s
KIC Kosan Boka 121.89 9↑*i*PKIKP **PKPdf 00 19 02.0 -0.9**
comp=Z,13nm,0.6s
LIC Lamto 121.99 10↑*i*PKIKP **PKPdf 00 19 02.1 -1.0**
comp=Z,36nm,0.7s
KMBO Kilima Mbogo 122.17 319 PKPdf **PKiKP 00 19 04.3 +0.4**
KMBO Kilima Mbogo 122.17 319 PKIKP **PKiKP 00 19 04.3 +0.4**
BO02 Sierra Bellavi 125.82 103 **PKiKP 00 19 10.4 +0.2**
BDFB Brasilia 125.85 68 PKP **PKiKP 00 19 11.1 +0.3**
comp=Z,1.3nm,0.6s,baz=333,slow=9.0,SNR=4.3
CPUP Villa Florida 128.31 85 PKP **PKiKP 00 19 15.0 -0.3**
comp=Z,0.8nm,0.5s,baz=320,slow=1.7,SNR=3.3
PLCA Paso Flores 129.81 108 PKP **PKPdf 00 19 17.6 +0.3**
comp=Z,6.5nm,1.1s,baz=311,slow=1.5,SNR=7.8
QSPA South Pole Qui 141.33 180 PKPpre 00 19 32.4
QSPA South Pole Qui 141.33 180 PKhKP PKPpre 00 19 32.0
comp=Z,6.8nm,0.9s,baz=214,slow=0.7,SNR=13
QSPA PKP **PKiKP 00 19 40.9 +0.4**
comp=Z,8.7nm,0.7s,baz=329,slow=1.5,SNR=9.0
BLWY Bulawayo 142.87 318 *i* P **PKPdf 00 19 41.7 -0.4**
BLWY Bulawayo 142.87 318 *e*P **PKPdf 00 19 38.5 -3.6**
MUSN Musina, Limpop 144.23 315 *i* P **PKPdf 00 19 43.6 -0.7**
MUSN Musina, Limpop 144.23 315 *e*P **PKPdf 00 19 43.8 -0.5**
MOPA Mopani 144.59 312 *i* P **PKPdf 00 19 45.1 +0.2**
MOPA Mopani 144.59 312 *e*P **PKPdf 00 19 44.8 -0.1**
TSUM Tsumeb 145.78 335 PKPdf **PKPdf 00 19 47.3 +0.2**
LBTB Lobatse 148.46 319 *i* P **PKPbc 00 19 54.1 -1.0**
LBTB Lobatse 148.46 319 *e*P **PKiKP 00 19 55.8 -0.8**
WIN Windhoek 149.11 334 *i* P **PKiKP 00 19 57.7 -0.4**
BOSA Boshof 151.76 316 **PKPbc 00 20 02.7 -0.3**
BOSA Boshof 151.76 316 *i* P **PKPdf 00 19 59.1 +2.6**
BOSA Boshof 151.76 316 PKP **PKPdf 00 19 57.2 +0.7**
comp=Z,52nm,0.7s,baz=148,slow=1.4,SNR=6.1
BOSA PKPbc **PKPbc 00 20 02.9 -0.1**
comp=Z,52nm,0.7s,baz=27,slow=1.9,SNR=183
BOSA Boshof 151.76 316 *e*P **PKiKP 00 20 03.7 +0.4**
AUSN Aus 153.24 333 *i* P **PKPdf 00 19 60.0 +1.1**
ELIB Princess Elisa 157.69 196 *d*PKP PKPab 00 20 20.7 -15
SNAA Sanae 159.65 174 PKPab **PKPab 00 20 43.5 -1.1**
comp=Z,3.7nm,0.8s,baz=207,slow=9.5,SNR=10

GCMT ***16*** *00:18:52.0±0.5, 6°.09S±0°.03×81°.17W±0°.03, h14km, MW4.9/65, Moment Tensor Solution. s18,c18; s65,c82; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.49±.08; Mθθ-0.30±.06; Mϕϕ-1.18±.07; Mrθ0.72±.20; Mϕθ0.16±.05; Mϕr-2.18±.17; Best double couple: M₀2.66200×10¹⁶ NP1:ϕs163.00000°, δ75.00000°, λ87.00000°. NP2: ϕs353.00000°, δ15.00000°, λ100.00000°. Principal axes: T 2.8100, Plg60.0000°, Azm69.0000°; N -0.2910, Plg3.0000°, Azm164.0000°; P -2.5130, Plg30.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *00:18:54.0±1.7, 5°.78S±0°.04×81°.06W±0°.07, h26km±4km, mb4.5/80, Mwr4.5/14 Error ellipse: s-maj=10.0km s-min=5.5km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr3.25; Mθθ-1.36; Mϕϕ-1.90; Mrθ1.05; Mϕθ-4.77; Mϕr-4.06; Fault plane solution: M₀6.95000×10¹⁵ NP1:ϕs188.37000°, δ69.95000°, λ46.59000°. NP2:ϕs78.45000°, δ46.96000°, λ152.03000°. Principal axes: T 6.9438, Plg46.0000°, Azm254.0000°; N 0.0135, Plg40.0000°, Azm206.0000°; P -6.9572, Plg14.0000°, Azm308.0000°;*

NEIC ***16*** *00:18:54, 5°.77S×81°.06W, h24km*

IDC ***16*** *00:18:58.9±2.7, 5°.89S×80°.94W, h80km±23km, mb3.8/15, mbtmp4.1/17, MS4.2/22, Error ellipse: s-maj=24.4km s-min=13.2km az=68.0*

ISC 16 00:18:53.1±0.4, 5°.88S±0°.04×81°.03W±0°.06, h30km, n161, σ1º11/138, mb4.5/48, MS4.2/17, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRA	**Macar, Loja**	**1.84**	**35**	Pn	**Pn**	**00 19 23.2**	**+0.5**
MCRA				Sn	**Sn**	**00 19 45.6**	**+0.5**
MCRA	**Macar, Loja**	**1.84**	**35**	*e*P	**Pn**	**00 19 23.8**	**+1.0**
ARNL	**Arenillas**	**2.51**	**22**		**Pn**	**00 19 32.0**	**+0.2**
ARNL					**Sb**	**00 20 06.2**	**-1.8**
ATAH	**Atahualpa**	**2.90**	**116**	P	**Pn**	**00 19 40.3**	**+2.8**
	143nm,0.4s,baz=304,slow=14,SNR=71						
ATAH				S	**Sb**	**00 20 17.2**	**-2.3**
	344nm,0.6s,baz=336,slow=20,SNR=3.5						
ATAH				LR	LR	00 20 46.2	
	comp=Z,3μm,20.5s,baz=256,slow=38						
SALI	**Salinas**	**3.67**	**1**	Pn	**Pn**	**00 19 47.9**	**+0.1**
COHC	**Cochancay**	**3.83**	**28**	Pn	**Pn**	**00 19 51.0**	**+1.0**
COHC	**Cochancay**	**3.83**	**28**	*e*P	**Pn**	**00 19 51.1**	**+1.1**
PPLP	**Puerto Lpez**	**4.32**	**3**	*e*P	**Pn**	**00 19 56.3**	**-0.4**
CHSH	**Refugio Sur-Vo**	**4.86**	**26**		**Pn**	**00 20 03.8**	**-1.0**
SLOR	**San Lorenzo -**	**5.71**	**26**	Pn	**Pn**	**00 20 16.7**	**+0.4**
PULU	**Pululahua**	**6.38**	**23**	Pn	**Pn**	**00 20 26.1**	**+0.6**
PAC1	**Pacto, Paraso**	**6.50**	**20**	*e*P	**Pn**	**00 20 27.2**	**+0.3**
OTAV	**Otavalo**	**6.60**	**23**	Pn	**Pn**	**00 20 29.1**	**+0.5**
OTAV	**Otavalo**	**6.60**	**23**	*e*P	**Pn**	**00 20 29.8**	**+1.2**
CUSE	**Cuicocha Este**	**6.68**	**23**	*e*P	**Pn**	**00 20 31.5**	**+1.9**
IMBA	**Imbabura, San**	**6.74**	**25**	Pn	**Pn**	**00 20 31.4**	**+1.0**
BONI	**La Bonita**	**7.20**	**29**	*e*P	Pn	00 20 45.4	+8.8
NNA	**Nana**	**7.34**	**146**	Pn	**Pn**	**00 20 42.4**	**+4.1**
NNA	**Nana**	**7.34**	**146**	P	**Pn**	**00 20 38.8**	**+0.5**
	6.9nm,0.5s,baz=318,slow=16,SNR=4.0						
NNA				S	**Sn**	**00 21 56.7**	**-4.0**
	16nm,0.3s,baz=315,slow=17,SNR=1.4						
NNA				LR	LR	00 23 12.0	
	comp=Z,575nm,20.2s,baz=194,slow=35						
CZSB	**Cruzeiro do Su**	**8.46**	**103**	Pn	**Pn**	**00 20 54.9**	**+1.1**
CZSB	**Cruzeiro do Su**	**8.46**	**103**	*e*P	**Pn**	**00 20 54.6**	**+0.9**
PTLC	**Puerto Leguiza**	**8.65**	**46**	*e*P	Pn	00 20 50.3	-6.0
BBAC	**Balboa, Cauca**	**8.71**	**26**	*e*P	**Pn**	**00 20 54.3**	**-3.0**
PAYG	**Puerto Ayora**	**10.59**	**299**	Pn	**Pn**	**00 21 22.9**	**0.0**
TBTG	**Tabatinga, AM**	**11.20**	**82**	Pn	**Pn**	**00 21 33.7**	**+2.4**
ROSC	**El Rosal**	**12.58**	**32**	Pn	**Pn**	**00 21 48.9**	**-1.6**
ROSC	**El Rosal**	**12.58**	**32**	LR	LR	00 27 45.5	
	comp=Z,974nm,19.8s,baz=204,slow=42						
CHIC	**Chingaza**	**12.73**	**35**	*e*P	**Pn**	**00 21 54.0**	**+1.4**
BRU2	**Volcan**	**14.68**	**353**	P	**P**	**00 22 23.0**	**-1.8**
ETMB	**Extrema**	**15.18**	**106**		**P**	**00 22 30.6**	**+0.3**
ETMB				IAmb	IAmb	00 22 31.8	
	comp=Z,42nm,1.1s						
PEZE	**Perez Zeledon,**	**15.39**	**350**	P	**P**	**00 22 31.7**	**-1.0**
PEZE				IAmb	IAmb	00 22 50.7	
	comp=Z,53nm,1.4s						
RIMA	**Rio Macho**	**15.80**	**350**	P	**Pn**	**00 22 35.6**	**+1.9**
RIMA				IAmb	IAmb	00 22 55.4	
	comp=Z,37nm,1.4s						
LPAZ	**La Paz**	**16.33**	**130**	Pn	**Pn**	**00 22 42.6**	**+1.7**
JTS	**Las Juntas de**	**16.54**	**346**	LR	LR	00 27 50.0	
	comp=Z,228nm,18.1s,baz=166,slow=32						
SJCC	**San Jacinto, C**	**16.72**	**20**	*e*P	**P**	**00 22 49.1**	**+1.7**
PB11	**IPOC Station P**	**17.68**	**142**		**P**	**00 22 58.8**	**+0.7**
GO01	**Chusmiza**	**17.89**	**141**	P	**P**	**00 23 01.7**	**+0.9**
SAML	**Samuel**	**17.95**	**101**		**Pn**	**00 23 01.2**	**+0.6**
SAML	**Samuel**	**17.95**	**101**	*e*P	**Pn**	**00 23 00.6**	**-0.1**
SDV	**Santo Domingo**	**17.96**	**35**	P	**Pn**	**00 22 60.0**	**-0.9**
SDV	**Santo Domingo**	**17.96**	**35**	P	**P**	**00 23 02.4**	**+1.1**
	comp=Z,2.6nm,0.5s,baz=207,slow=6.8,SNR=4.3						
SDV				LR	LR	00 31 01.1	
	comp=Z,762nm,19.0s,baz=226,slow=40						
PATCX	**Punta Patache**	**18.21**	**146**	P	**Pn**	**00 23 02.3**	**-1.6**
PB01	**IPOC Station P**	**18.77**	**144**	P	**P**	**00 23 10.6**	**+0.6**
MATN	**Matagalpa**	**19.31**	**345**	Pn	**P**	**00 23 16.8**	**+0.8**
BAUV	**El Baul**	**19.61**	**41**	P	**P**	**00 23 18.9**	**-0.3**
BAUV				IAmb	IAmb	00 23 27.6	
	comp=Z,41nm,1.1s						
LVC	**Limon Verde**	**20.33**	**146**	P	Pn	00 23 29.4	-0.1
LVC	**Limon Verde**	**20.33**	**146**	P	Pn	00 23 29.1	-0.4
	comp=Z,2.4nm,0.5s,baz=326,slow=6.9,SNR=5.9						
LVC				LR	LR	00 30 41.3	
	comp=Z,426nm,21.8s,baz=306,slow=35						
	comp=Z,2.4nm,0.5s						
MACA	**Manacapuru-AM**	**20.46**	**83**	P	**P**	**00 23 28.1**	**-0.3**
PB14	**IPOC Station P**	**21.24**	**152**	P	**P**	**00 23 37.9**	**+0.8**
PB14				IAmb	IAmb	00 23 39.3	
	comp=Z,18nm,0.9s						
VILB	**Vilhena**	**21.70**	**110**	P	**P**	**00 23 42.4**	**+0.5**
VILB				IAmb	IAmb	00 24 00.8	
	comp=Z,39nm,1.2s						
ESQI	**Esquipulas**	**21.92**	**338**	P	**P**	**00 23 43.4**	**-0.8**
SIV	**San Ignacio**	**21.99**	**119**	P	**P**	**00 23 45.5**	**+0.5**
	comp=Z,7.8nm,0.8s,baz=296,slow=10,SNR=23						
SIV				LR	LR	00 33 13.7	
	comp=Z,939nm,18.1s,baz=293,slow=39						
	comp=Z,7.8nm,0.8s						
BOAV	**Boa Vista**	**22.07**	**69**	P	**P**	**00 23 46.3**	**+0.5**
BOAV				IAmb	IAmb	00 23 52.9	
	comp=Z,36nm,1.3s						
GO02	**Mina Guanaco**	**22.08**	**151**	P	**P**	**00 23 47.9**	**+1.7**
GO02				IAmb	IAmb	00 23 49.3	
	comp=Z,21nm,1.1s						
PCRV	**Puerto La Cruz**	**22.83**	**46**	P	**P**	**00 23 55.1**	**+1.2**
	comp=Z,18nm,0.8s,baz=218,slow=6.2,SNR=10.0						
PCRV				LR	LR	00 33 52.6	
	comp=Z,754nm,19.8s,slow=39						
	comp=Z,18nm,0.8s						
PTLB	**Pontes e Lacer**	**23.49**	**116**	P	**P**	**00 24 01.0**	**+0.4**
AC02	**Maricunga**	**23.72**	**153**	P	**P**	**00 24 05.2**	**+2.0**
H03N2	**Juan Fernandez**	**27.49**	**176**	T	T	00 53 07.4	
	baz=355,slow=76,SNR=211						
H03N1	**Juan Fernandez**	**27.49**	**176**	T	T	00 53 07.4	
	baz=355,slow=76,SNR=293						
H03N3	**Juan Fernandez**	**27.50**	**176**	T	T	00 53 06.0	
	baz=355,slow=76,SNR=242						
SJG	**San Juan**	**28.00**	**31**	LR	LR	00 37 43.3	
	comp=Z,314nm,19.0s,baz=198,slow=40						
MDP	**Montagnes des**	**30.37**	**69**	LR	LR	00 37 47.4	
	comp=Z,602nm,21.8s,baz=271,slow=37						
CPUP	**Villa Florida**	**30.41**	**135**	LR	LR	00 38 44.3	
	comp=Z,254nm,20.3s,baz=308,slow=39						
BDFB	**Brasilia**	**33.80**	**109**	P	**P**	**00 25 32.9**	**0.0**
	comp=Z,2.7nm,0.8s,baz=286,slow=9.1,SNR=4.5						
BDFB				LR	LR	00 40 29.4	
	comp=Z,1μm,18.1s,baz=292,slow=38						
	comp=Z,2.7nm,0.8s						
PLCA	**Paso Flores**	**35.95**	**166**	P	**P**	**00 25 51.1**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=341,slow=13,SNR=2.8						
	comp=Z,1.7nm,1.0s						
HNDO	**Hondo**	**39.34**	**334**	P	**P**	**00 26 19.1**	**-0.7**
HNDO				IAmb	IAmb	00 26 24.4	
	comp=Z,4.8nm,0.6s						
TXAR	**Lajitas Array**	**41.23**	**329**	P	**P**	**00 26 36.8**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=145,slow=15,SNR=3.2						
TXAR				PcP	**PcP**	**00 28 34.9**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=150,slow=7.3,SNR=1.7						
	comp=Z,0.2nm,0.6s						
MIAR	**Mount Ida**	**41.92**	**344**	P	**P**	**00 26 41.2**	**+0.2**
X37A	**Clayton**	**42.47**	**342**	P	**P**	**00 26 45.4**	**-0.1**
X37A				IAmb	IAmb	00 26 48.4	
	comp=Z,9.5nm,1.0s						
LCAR	**Lake Charles**	**42.80**	**348**	P	**P**	**00 26 47.5**	**-0.7**
LCAR				IAmb	IAmb	00 26 57.3	
	comp=Z,9.7nm,1.1s						
VHRN	**Van Horn**	**43.07**	**329**	P	**P**	**00 26 51.1**	**+0.4**
U38A	**Gravette**	**43.92**	**344**	P	**P**	**00 26 58.3**	**+1.0**
U38A				IAmb	IAmb	00 27 06.9	
	comp=Z,7.2nm,1.0s						
MGMO	**Mountain Grove**	**44.08**	**347**	P	**P**	**00 26 59.7**	**+1.1**
MGMO				IAmb	IAmb	00 27 08.8	
	comp=Z,13nm,1.2s						
OK029	**Liberty Lake**	**44.24**	**341**	P	**P**	**00 26 59.8**	**0.0**
CSTR	**Hydro, Custer**	**44.52**	**339**	P	**P**	**00 27 03.0**	**+0.9**
SMWD	**Samnorwod**	**44.61**	**337**	P	**P**	**00 27 02.9**	**+0.1**
MSTX	**Muleshoe**	**44.66**	**334**	P	**P**	**00 27 04.7**	**+1.4**
Q51A	**Peebles**	**44.73**	**357**	P	**P**	**00 27 03.9**	**+0.2**
Q51A				IAmb	IAmb	00 27 07.1	
	comp=Z,5.0nm,0.7s						
CCM	**Cathedral Cave**	**44.74**	**349**	P	**P**	**00 27 04.3**	**+0.6**
CCM				IAmb	IAmb	00 27 06.3	
	comp=Z,5.7nm,0.7s						
S39A	**Bolivar**	**44.84**	**346**	P	**P**	**00 27 05.0**	**+0.4**
S39A				IAmb	IAmb	00 27 06.9	
	comp=Z,4.6nm,0.7s						
OLIL	**Olney**	**44.87**	**352**	P	**P**	**00 27 04.6**	**-0.1**
OLIL				IAmb	IAmb	00 27 06.0	
	comp=Z,8.4nm,0.8s						
RCBR	**Riachuelo**	**44.88**	**92**	LR	LR	00 49 00.9	
	comp=Z,249nm,19.3s,baz=270,slow=40						
T35A	**Sooner Cattle**	**44.97**	**342**	P	**P**	**00 27 05.8**	**+0.1**
T35A				IAmb	IAmb	00 27 08.4	
	comp=Z,7.3nm,0.8s						
ELIS	**Ellis County**	**45.16**	**339**	P	**P**	**00 27 08.7**	**+1.5**
S22A	**4UR Ranch, Cre**	**49.62**	**333**		**P**	**00 27 42.2**	**0.0**
W13A	**Hualapai Mount**	**51.18**	**325**	P	**P**	**00 27 54.2**	**+0.3**
W13A				IAmb	IAmb	00 28 05.4	
	comp=Z,6.9nm,1.5s						
PFO	**Pinyon Flats O**	**51.66**	**322**	LR	LR	00 46 27.9	
	comp=Z,99nm,19.2s,baz=42,slow=32						
F36A	**Milaca**	**52.71**	**349**	P	**P**	**00 28 04.2**	**-0.7**
F36A				IAmb	IAmb	00 28 06.3	
	comp=Z,4.1nm,0.8s						
D62A	**Allapoint, All**	**53.79**	**10**	P	**P**	**00 28 13.4**	**+0.6**
HWUT	**Hardware Ranch**	**54.89**	**332**	P	**P**	**00 28 21.0**	**-0.1**
HWUT				IAmb	IAmb	00 28 31.9	
	comp=Z,4.7nm,0.8s						
PDAR	**Pinedale Array**	**54.92**	**335**	P	**P**	**00 28 21.4**	**0.0**
PDAR	**Pinedale Array**	**54.92**	**335**	P	**P**	**00 28 21.9**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=131,slow=9.7,SNR=7.7						
	comp=Z,0.6nm,0.6s						
MZP	**Montezuma Peak**	**55.01**	**325**	P	**P**	**00 28 20.4**	**-1.8**
BGU	**Big Grassy Mou**	**55.06**	**331**	P	**P**	**00 28 21.8**	**-0.5**
BGU				IAmb	IAmb	00 28 33.6	
	comp=Z,6.1nm,1.5s						
B35A	**Bob, Littlefor**	**55.16**	**350**	P	**P**	**00 28 22.4**	**-0.2**
B35A				IAmb	IAmb	00 28 31.4	
	comp=Z,5.3nm,0.8s						
AHID	**Auburn Hatcher**	**55.59**	**333**	P	**P**	**00 28 27.7**	**+1.5**
AHID				IAmb	IAmb	00 28 36.8	
	comp=Z,8.8nm,1.5s						
MDND	**Maddock**	**55.95**	**345**	P	**P**	**00 28 28.5**	**+0.1**
REDW	**Red Top Meadow**	**55.96**	**334**	P	**P**	**00 28 29.6**	**+0.7**
SNOW	**Snow King Moun**	**56.00**	**334**	P	**P**	**00 28 30.0**	**+0.8**
SNOW				IAmb	IAmb	00 28 53.4	
	comp=Z,4.5nm,0.6s						
ELK	**Elko**	**56.02**	**329**	P	**P**	**00 28 29.8**	**+0.4**
ELK	**Elko**	**56.02**	**329**	LR	LR	00 51 05.0	
	comp=Z,186nm,19.6s,baz=110,slow=34						
NVAR	**Mina Array Bea**	**56.04**	**325**	P	**P**	**00 28 31.7**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=128,slow=6.9,SNR=4.7						
	comp=Z,0.7nm,0.6s						
LOHW	**Long Hollow**	**56.05**	**334**	P	**P**	**00 28 29.9**	**+0.3**
LOHW				IAmb	IAmb	00 28 40.1	
	comp=Z,6.1nm,1.4s						
TPAW	**Teton Pass**	**56.11**	**334**	P	**P**	**00 28 30.3**	**+0.3**
TPAW				IAmb	IAmb	00 28 55.2	
	comp=Z,5.5nm,1.2s						
MOOW	**Moose Ponds**	**56.23**	**334**	P	**P**	**00 28 31.2**	**+0.5**
RYN	**Ryan**	**56.30**	**325**	P	**P**	**00 28 31.4**	**+0.1**
YHH	**Holmes Hill**	**57.11**	**335**	P	**P**	**00 28 38.2**	**+1.1**
ULM	**Lac du Bonnet**	**57.37**	**349**	P	**P**	**00 28 38.0**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=168,slow=5.7,SNR=6.1						
	comp=Z,2.5nm,0.7s						
HLID	**Hailey**	**57.73**	**332**	P	**P**	**00 28 41.8**	**+0.4**
BOZ	**Bozeman (W)**	**58.09**	**335**	P	**P**	**00 28 43.8**	**0.0**
BOZ				IAmb	IAmb	00 28 53.9	
	comp=Z,7.1nm,1.3s						
MFID	**Camas Ranch**	**58.30**	**331**	P	**P**	**00 28 46.0**	**+0.7**
WVOR	**Wild Horse Val**	**59.01**	**328**	P	**P**	**00 28 50.6**	**+0.4**
WVOR				IAmb	IAmb	00 29 11.5	
	comp=Z,5.9nm,1.2s						
BPMT	**Black Pine Rid**	**59.52**	**335**	P	**P**	**00 28 54.2**	**+0.3**
F10A	**Beach Ranch, E**	**60.87**	**332**	P	**P**	**00 29 03.6**	**+0.7**
F10A				IAmb	IAmb	00 29 15.5	
	comp=Z,4.6nm,0.9s						
KRPM	**Rodgers**	**61.14**	**324**	P	**P**	**00 29 06.0**	**+1.2**
PINE	**Pine Mountain**	**61.16**	**328**	P	**P**	**00 29 04.5**	**-0.6**
PINE				IAmb	IAmb	00 29 16.7	
	comp=Z,6.0nm,1.1s						
G08A	**Pilot Rock**	**61.20**	**330**	P	**P**	**00 29 05.6**	**+0.3**
G08A				IAmb	IAmb	00 29 07.5	
	comp=Z,3.6nm,0.8s						
SCHQ	**Schefferville**	**61.65**	**9**	P	**P**	**00 29 07.3**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=191,slow=5.2,SNR=2.2						
	comp=Z,2.3nm,0.9s						
PPT	**Papeete**	**67.82**	**254**	LR	LR	00 54 16.6	
	comp=Z,216nm,18.0s,baz=12,slow=31						
YKA	**Yellowknife Ar**	**72.86**	**344**	P	**P**	**00 30 18.3**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=141,slow=5.5,SNR=12						
	comp=Z,0.9nm,0.9s						
RAR	**Rarotonga**	**77.42**	**250**	LR	LR	00 55 39.6	
	comp=Z,97nm,21.8s,baz=160,slow=28						
SNAA	**Sanae**	**80.73**	**162**	P	**P**	**00 31 02.2**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=284,slow=8.3,SNR=8.9						
	comp=Z,1.0nm,0.5s						
RES	**Resolute Bay**	**80.88**	**356**	LR	LR	01 07 26.6	
	comp=Z,116nm,18.1s,baz=16,slow=36						
BCAR	**Beaver Creek A**	**82.49**	**336**	P	**P**	**00 31 14.2**	**+1.6**
INK	**Inuvik**	**82.49**	**343**	P	**P**	**00 31 12.9**	**+0.5**
INK				IAmb	IAmb	00 31 14.2	
	comp=Z,4.5nm,1.1s						
INK	**Inuvik**	**82.49**	**343**	LR	LR	01 10 17.9	
	comp=Z,127nm,20.0s,baz=173,slow=37						
A36M	**Sachs Harbour**	**82.82**	**347**	P	**P**	**00 31 13.6**	**-0.4**
I28M	**Miner Creek**	**82.98**	**339**	P	**P**	**00 31 15.3**	**+0.1**
SCRK	**Sand Creek**	**83.79**	**337**	P	**P**	**00 31 20.5**	**+1.2**
SCRK				IAmb	IAmb	00 32 04.4	
	comp=Z,2.3nm,0.8s						
ESDC	**Sonseca Array**	**83.85**	**49**	P	**P**	**00 31 20.1**	**-0.1**
ESDC				IAmb	IAmb	00 31 21.4	
	comp=Z,4.6nm,1.4s						
ESDC	**Sonseca Array**	**83.85**	**49**	P	**P**	**00 31 21.3**	**+1.2**
	comp=Z,2.2nm,1.1s,baz=265,slow=5.0,SNR=6.1						
	comp=Z,2.2nm,1.1s						
E29M	**Blow River**	**83.87**	**342**	P	**P**	**00 31 19.6**	**+0.1**
E29M				IAmb	IAmb	00 31 20.2	
	comp=Z,5.4nm,1.3s						
QSPA	**South Pole Qui**	**84.21**	**180**	P	**P**	**00 31 22.1**	**+0.6**
QSPA	**South Pole Qui**	**84.21**	**180**	P	**P**	**00 31 21.7**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=111,slow=3.9,SNR=10						
	comp=Z,4.9nm,0.9s						
SCM	**Sheep Creek Mo**	**84.26**	**334**		**P**	**00 31 22.8**	**+1.1**
TOA0	**Torodi Ar. Sit**	**84.27**	**76**	P	**P**	**00 31 22.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**84.27**	**76**	P	**P**	**00 31 20.6**	**-2.1**
	comp=Z,1.4nm,0.6s,baz=288,slow=4.6,SNR=8.6						
J25K	**Salcha River,**	**84.62**	**337**	P	**P**	**00 31 24.3**	**+0.8**
RND	**Reindeer**	**85.52**	**335**	P	**P**	**00 31 27.3**	**-0.7**
BMAR	**Burnt Mountain**	**85.58**	**340**	P	**P**	**00 31 28.9**	**+0.6**
G24K	**Hadweenzic Riv**	**86.29**	**339**	P	**P**	**00 31 33.4**	**+1.6**
G24K				IAmb	IAmb	00 31 43.4	
	comp=Z,4.8nm,1.2s						
CAST	**Castle Rocks**	**86.89**	**335**	P	**P**	**00 31 35.1**	**+0.4**
EKA	**Eskdalemuir Ar**	**87.94**	**34**	P	**P**	**00 31 39.7**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=275,slow=2.6,SNR=3.9						
	comp=Z,3.9nm,0.9s						
J18K	**Innoko River**	**88.89**	**334**	P	**P**	**00 31 44.5**	**+0.2**
VNDA	**Vanda**	**89.96**	**191**	LR	LR	01 05 00.9	
	comp=Z,141nm,20.6s,baz=358,slow=31						
F19K	**Shaleruckik Mo**	**90.19**	**337**	P	**P**	**00 31 49.4**	**-0.8**
F19K				IAmb	IAmb	00 31 53.5	
	comp=Z,3.7nm,1.4s						
URZ	**Urewera**	**95.64**	**231**	LR	LR	01 07 23.9	
	comp=Z,140nm,18.4s,baz=121,slow=30						
TSUM	**Tsumeb**	**96.17**	**110**	LR	LR	01 12 58.7	
	comp=Z,233nm,20.0s,baz=321,slow=34						
H11N3	**WAKE ISLAND Hyl**	**12.72**	**289**	T	T	02 39 48.0	
	baz=92,slow=76,SNR=53						
H11N2	**WAKE ISLAND Hyl**	**12.73**	**289**	T	T	02 39 48.9	
	baz=92,slow=76,SNR=43						
H11N1	**W

RSO	**Redoubt South**	**4.88**	**355**		Pn	00 23 21.9	-3.8
O17K	**Koliganek Bris**	**5.03**	**328**		Pn	00 23 23.4	-4.3
O16K	**Kokwok River B**	**5.21**	**322**		Pn	00 23 25.8	-4.4
O16K	**Kokwok River B**	**5.21**	**322**	IAML		00 26 25.1	
	comp=E,4.7nm,1.4s						
N19K	**Bonanza Creek**	**5.39**	**346**		Pn	00 23 28.0	-4.8
N19K				IAML		00 26 41.4	
	comp=E,4.5nm,1.4s						
N18K	**Kilae Creek**	**5.51**	**339**		Pn	00 23 29.5	-4.8
N18K				IAML		00 26 00.6	
	comp=N,3.4nm,1.1s						

*ISK **16** 00:24:26.8, 41˚.00N×44˚.06E, h5km, ML2.5/10*
*TIF **16** 00:24:27.6, 41˚.01N×44˚.09E, h12km*
*AFAD **16** 00:24:29.2±0.0, 40˚.98N×43˚.94E, h7km±3km, ML2.5*
*DRS **16** 00:24:30.2, 40˚.90N×43˚.72E, h22km*
ISC 16 00:24:27.5±1.1, 40˚.99N±0˚.02×44˚.09E±0˚.02, h5km±12km, n48, σ1§02/76, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMNI	**Dmanisi**	**0.35**	**12**	P	**Pg**	**00 24 35.0**	**+0.6**
DMNI				S	**Sg**	**00 24 39.9**	**+0.9**
BGD	**Bogdanovka**	**0.46**	**307**	P	**Pg**	**00 24 37.5**	**+0.9**
BGD				S	**Sb**	**00 24 44.6**	**-1.1**
EAK	**Akyaka**	**0.48**	**231**	P	**Pg**	**00 24 36.7**	**0.0**
AKH	**Akhalkalaki**	**0.62**	**313**	Pg	**Pg**	**00 24 39.4**	**-0.1**
AKH				Sg	**Sg**	**00 24 48.7**	**+1.2**
AKH	**Akhalkalaki**	**0.62**	**313**	P	**Pg**	**00 24 39.8**	**+0.3**
AKH				S	**Sg**	**00 24 48.4**	**+0.8**
BRNG	**Burnasheti**	**0.67**	**343**	P	**Pg**	**00 24 40.9**	**+0.5**
BRNG				S	**Sb**	**00 24 50.0**	**-1.3**
DIGO	**Kars**	**0.79**	**224**	P	**Pg**	**00 24 43.3**	**+0.6**
DIGO				S	**Sg**	**00 24 53.3**	**+0.3**
DIGO				*i* AML	AML	00 24 54.0	
	comp=N,613nm,0.8s						
DIGO				*i* AML	AML	00 24 56.0	
	comp=E,594nm,0.4s						
KARS	**Kars**	**0.85**	**245**	Pg	**Pg**	**00 24 43.8**	**0.0**
BOZK	**Kars-Merkez-Bo**	**0.94**	**245**	P	**Pg**	**00 24 45.2**	**-0.3**
BOZK				S	**Sg**	**00 24 55.5**	**-2.1**
BOZK				*i* AML	AML	00 24 58.0	
	comp=E,140nm,0.4s						
SEAG	**Tbilisi Sea**	**0.94**	**34**	P	**Pg**	**00 24 45.8**	**+0.2**
SEAG				S	**Sb**	**00 24 58.9**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.01**	**174**	Pg	**Pg**	**00 24 47.4**	**+0.5**
IGDI	**IGDIR**	**1.12**	**181**	P	**Pg**	**00 24 48.3**	**-0.7**
IGDI				S	**Sg**	**00 25 01.8**	**-1.7**
AHAN	**Ardahan-Merkez**	**1.12**	**279**	P	**Pg**	**00 24 49.0**	**-0.1**
AHAN				S	**Sg**	**00 25 03.7**	**0.0**
AHAN				*i* AML	AML	00 25 05.0	
	comp=E,177nm,0.4s						
AHAN				*i* AML	AML	00 25 06.0	
	comp=N,130nm,0.7s						
GOLE	**Ardahan-G¶le**	**1.14**	**263**	P	**Pg**	**00 24 49.9**	**+0.4**
GOLE				S	**Sg**	**00 25 03.9**	**-0.4**
GOLE				*i* AML	AML	00 25 07.0	
	comp=N,122nm,0.7s						
EPOS	**Posof**	**1.15**	**297**	P	**Pg**	**00 24 48.8**	**-0.8**
EPOS				S	**Sg**	**00 25 04.1**	**-0.4**
EPOS				*i* AML	AML	00 25 06.0	
	comp=N,192nm,0.4s						
ALIG	**Mtskhetisjvari**	**1.16**	**344**	P	**Pg**	**00 24 49.4**	**-0.5**
ALIG				S	**Sb**	**00 25 05.2**	**-0.5**
ABS	**Abastumani**	**1.23**	**309**	P	**Pg**	**00 24 50.7**	**-0.4**
ABS				S	**Sb**	**00 25 07.8**	**+0.2**
KOTA	**Agri, Merkez-K**	**1.36**	**210**	P	**Pn**	**00 24 54.2**	**+0.8**
SENK	**Senkaya-Erzuru**	**1.39**	**253**	Pn	**Pn**	**00 24 54.0**	**+0.2**
CHRG	**Chargali**	**1.48**	**25**	P	**Pn**	**00 24 55.1**	**+0.2**
CHRG				S	**Sg**	**00 25 14.8**	**-0.2**
GUDG	**Gudauri**	**1.50**	**11**	P	**Pn**	**00 24 55.6**	**+0.2**
GUDG				S	**Sg**	**00 25 15.9**	**+0.1**
TKB	**Tkibuli**	**1.59**	**329**	P	**Pb**	**00 24 57.3**	**-0.2**
TKB				S	**Sg**	**00 25 18.6**	**-0.1**
AGRB	**Hanur-Agry**	**1.64**	**211**	Pn	**Pn**	**00 24 58.1**	**+0.8**
DAGI	**Agillar**	**1.65**	**274**	P	**Pn**	**00 24 58.5**	**+1.2**
DAGI				S	**Sb**	**00 25 20.2**	**+0.6**
DAGI				*i* AML	AML	00 25 24.0	
	comp=E,46nm,0.9s						
EATA	**Eleskirt**	**1.66**	**228**	P	**Pn**	**00 24 58.9**	**+1.3**
ONI	**Oni**	**1.67**	**344**	Pn	**Pn**	**00 24 58.1**	**+0.6**
ONI	**Oni**	**1.67**	**344**	P	**Pn**	**00 24 58.3**	**+0.8**
ONI				S	**Sg**	**00 25 21.0**	**-0.3**
MTEO	**Meteo**	**1.72**	**11**	P	**Pb**	**00 24 59.9**	**0.0**
MTEO				S	**Sg**	**00 25 22.1**	**-0.8**
VSHL	**Vashlovani**	**1.76**	**81**	P	**Pb**	**00 25 01.0**	**+0.7**
VSHL				S	**Sg**	**00 25 26.9**	**+2.8**
DDEM	**Demirkent**	**1.78**	**268**	P	**Pn**	**00 25 00.4**	**+1.4**
DBAD	**Bademkaya**	**1.81**	**272**	P	**Pn**	**00 25 01.1**	**+1.5**
DBAD				S	**Sb**	**00 25 24.8**	**+0.4**
DBAD				*i* AML	AML	00 25 33.0	
	comp=N,33nm,0.6s						
SHTL	**Shatili**	**1.85**	**25**	P	**Pb**	**00 25 01.8**	**-0.1**
SHTL				S	**Sg**	**00 25 26.1**	**-0.8**
BCA	**Borcka**	**1.92**	**285**	Pn	**Pn**	**00 25 01.7**	**+0.8**
KOPR	**Koprukoy-ERZUR**	**1.98**	**240**	Pn	**Pn**	**00 25 02.6**	**+0.8**
MLAZ	**Malazgirt-MUS**	**2.19**	**213**	Pn	**Pn**	**00 25 05.9**	**+1.1**
BTLR	**Botlikh**	**2.31**	**43**	*e*Pn	**Pb**	**00 25 09.3**	**-0.5**
	7.0nm,0.3s						
BTLR				*e*Sn	**Sg**	**00 25 40.4**	**-1.4**
	4.0nm,0.3s						
XNZR	**Khunzakh**	**2.50**	**51**	*e*Pn	**Pb**	**00 25 12.2**	**-0.7**
	3.0nm,0.3s						
CHOM	**Cayeli-Rize**	**2.52**	**274**	Pn	**Pn**	**00 25 10.3**	**+1.1**
KMKR	**Kumukh**	**2.53**	**62**	*e*Pn	**Pb**	**00 25 12.4**	**-1.2**
	8.0nm,0.3s						
GNBR	**Gunib**	**2.57**	**56**	*e*Pn	**Pb**	**00 25 13.1**	**-1.0**
	4.0nm,0.3s						
GNBR				*e*Sn	**Sg**	**00 25 47.8**	**-2.2**
	8.0nm,0.4s						
UNCR	**Uncukul**	**2.65**	**49**	*e*Pn	**Pb**	**00 25 14.5**	**-1.1**
	4.0nm,0.3s						
UNCR				*e*Sn	**Sb**	**00 25 49.9**	**+1.4**
	4.0nm,0.3s						
IZDR	**Rize**	**2.69**	**267**	P	**Pb**	**00 25 15.6**	**-0.5**
ARKR	**Arakani**	**2.70**	**52**	*e*Pn	**Pb**	**00 25 14.8**	**-1.6**
	4.0nm,0.4s						
AKT	**Akhty**	**2.79**	**79**	*e*Pn	**Pb**	**00 25 16.4**	**-1.5**
	6.0nm,0.3s						
AKT				*e*Sn	**Sb**	**00 25 54.4**	**+2.0**
	4.0nm,0.3s						
KRNR	**Karanay**	**2.79**	**48**	*e*Pn	**Pb**	**00 25 16.6**	**-1.3**
	4.0nm,0.3s						
KRNR				*e*Sn	**Sb**	**00 25 52.9**	**+0.4**
	48nm,0.4s						
DLMR	**Dylym**	**2.81**	**41**	*e*Pn	**Pb**	**00 25 16.7**	**-1.5**
	14nm,0.3s						
DBC	**Dubki**	**2.88**	**44**	*e*Pn	**Pb**	**00 25 17.4**	**-2.0**
	2.0nm,0.3s						
KSMR	**Kasumkent**	**3.10**	**77**	*e*Pn	**Pb**	**00 25 21.5**	**-1.7**
	9.0nm,0.3s						

*PGC **16** 00:40:32.9, 47˚.95N×128˚.86W, h10km, MLSn3.0/32, Mw3.6/32, Mw3.6/32, 254km Wsw of Tofino, Bc Off Coast Of Washington*
*IDC **16** 00:40:44.2±4.3, 48˚.01N×127˚.53W, h0km, mb3.5/1, mbtmp3.4/5, ML3.3/4, MS2.8/1, Error ellipse: s-maj=55.3km s-min=24.7km az=79.0*
ISC 16 00:40:33.0±0.9, 48˚.02N±0˚.06×128˚.81W±0˚.04, h10km, n59, σ1§17/73, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NCHR	**NEPTUNE Canada**	**0.19**	**255**	P	**Pg**	**00 40 35.8**	**-1.0**
KEMF	**NEPTUNE Canada**	**0.21**	**249**	P	**Pg**	**00 40 36.2**	**-1.0**
KEMO	**NEPTUNE Canada**	**0.23**	**244**	P	**Pg**	**00 40 36.5**	**-0.9**
NC27	**ODP1027**	**0.75**	**110**	P	**Pg**	**00 40 46.8**	**-0.7**
NC27				S	**Sb**	**00 40 59.0**	**+0.9**
NC89	**ODP889**	**1.46**	**63**	Pn	**Pn**	**00 40 58.5**	**-0.6**
NCBC	**Barkley Canyon**	**1.81**	**76**	Pn	**Pn**	**00 41 02.8**	**-1.3**
ETB	**Estevan Point**	**2.02**	**47**	Pn	**Pn**	**00 41 06.7**	**-0.4**
EDB	**Eliza Dome**	**2.16**	**30**	Pn	**Pn**	**00 41 07.9**	**-1.1**
B012	**Ucluelet**	**2.35**	**66**	Pn	**Pn**	**00 41 09.9**	**-1.7**
OZB	**Mount Ozzard**	**2.40**	**66**	Pn	**Pn**	**00 41 11.1**	**-1.2**
OZB				Sn	**Sn**	**00 41 39.5**	**-2.2**
BFSB	**Bamfield**	**2.58**	**70**	Pn	**Pn**	**00 41 13.9**	**-0.8**
B928	**Bamfield**	**2.58**	**70**	Pn	**Pn**	**00 41 13.6**	**-1.0**
WOSB	**Woss**	**2.59**	**34**	Pn	**Pn**	**00 41 15.0**	**0.0**
MAYB	**Maynard**	**2.61**	**24**	Pn	**Pn**	**00 41 14.8**	**-0.5**
HOLB	**Holberg**	**2.66**	**9**	Pn	**Pn**	**00 41 15.8**	**-0.1**
SPLB	**Strathcona Par**	**2.80**	**47**	Pn	**Pn**	**00 41 18.0**	**+0.3**
OCP	**Olym-Cheeka Pk**	**2.81**	**83**	Pn	**Pn**	**00 41 17.4**	**-0.6**
PHC	**Port Hardy**	**2.83**	**18**	Pn	**Pn**	**00 41 17.0**	**-1.2**
B927	**Port Alberni**	**2.91**	**64**	Pn	**Pn**	**00 41 18.2**	**-1.0**
PFB	**Port Renfrew**	**2.97**	**78**	Pn	**Pn**	**00 41 18.8**	**-1.3**
NCSB	**Newcastle Ridg**	**2.99**	**36**	Pn	**Pn**	**00 41 20.6**	**+0.1**
NCSB				Sn	**Sn**	**00 41 55.4**	**-1.0**
CBB	**Campbell River**	**3.03**	**47**	Pn	**Pn**	**00 41 21.0**	**+0.1**
OBC	**Olympics--Boni**	**3.17**	**88**	Pn	**Pn**	**00 41 22.0**	**-1.0**
B926	**Mesachie Lake**	**3.22**	**74**	Pn	**Pn**	**00 41 22.9**	**-0.5**
B926				Sn	**Sn**	**00 41 59.7**	**-2.2**
CLRS	**Cowichan Lake**	**3.22**	**74**	Pn	**Pn**	**00 41 22.9**	**-0.6**
CLRS				Sn	**Sn**	**00 42 00.1**	**-1.7**
SYMB	**Survey Mountai**	**3.39**	**79**	Pn	**Pn**	**00 41 24.9**	**-1.1**
SYMB				Sn	**Sn**	**00 42 03.1**	**-3.1**
NLLB	**Nanaimo Lost L**	**3.42**	**68**	Pn	**Pn**	**00 41 25.9**	**-0.4**
STW	**Striped Peak**	**3.45**	**86**	Pn	**Pn**	**00 41 26.3**	**-0.4**
SHB	**Sechelt**	**3.62**	**62**	Pn	**Pn**	**00 41 29.0**	**-0.2**
B009	**North Saanich**	**3.63**	**78**	Pn	**Pn**	**00 41 28.6**	**-0.5**
B009				Sn	**Sn**	**00 42 11.4**	**-0.6**
B010	**North Saanich**	**3.63**	**78**	Pn	**Pn**	**00 41 28.3**	**-0.8**
B010				Sn	**Sn**	**00 42 11.2**	**-0.7**
PGC	**Sidney**	**3.63**	**78**	Pn	**Pn**	**00 41 28.4**	**-0.7**
PGC				Sn	**Sn**	**00 42 11.0**	**-1.0**
B011	**North Saanich**	**3.63**	**78**	Pn	**Pn**	**00 41 28.6**	**-0.6**
B011				Sn	**Sn**	**00 42 11.0**	**-1.0**
PA01	**PA01 North**	**3.63**	**78**	Pn	**Pn**	**00 41 28.0**	**-1.1**
GOBB	**Galiano Island**	**3.64**	**73**	Pn	**Pn**	**00 41 29.4**	**0.0**
VGZ	**Gonzales**	**3.69**	**82**	Pn	**Pn**	**00 41 28.8**	**-1.2**
SNB	**Saturna Island**	**3.83**	**77**	Pn	**Pn**	**00 41 32.0**	**0.0**
SNB				Sn	**Sn**	**00 42 16.4**	**-0.7**
BIB	**Bowen Island**	**3.90**	**67**	Pn	**Pn**	**00 41 32.9**	**+0.1**
BIB				Sn	**Sn**	**00 42 18.8**	**+0.2**
MCW	**Mount Constitu**	**4.04**	**78**	Pn	**Pn**	**00 41 34.8**	**-0.1**
MCW				Sn	**Sn**	**00 42 21.7**	**-0.5**
WPB	**Watts Point**	**4.04**	**64**	Pn	**Pn**	**00 41 35.2**	**+0.3**
BBB	**Bella Bella**	**4.19**	**6**	Pn	**Pn**	**00 41 37.5**	**+0.6**
	11nm,0.3s,baz=153,slow=14,SNR=159						
BBB				Sn	**Sn**	**00 42 25.4**	**-0.3**
	0.4nm,0.3s,baz=229,slow=18,SNR=1.2						
BBB	**Bella Bella**	**4.19**	**6**	Pn	**Pn**	**00 41 37.4**	**+0.6**
BBB				Sn	**Sn**	**00 42 21.9**	**-3.9**
HNBB	**Haney**	**4.32**	**71**	Pn	**Pn**	**00 41 38.7**	**0.0**
JCW	**Jim Creek**	**4.61**	**85**	Pn	**Pn**	**00 41 43.2**	**+0.5**
MBW	**Mount Baker**	**4.66**	**78**	Pn	**Pn**	**00 41 44.3**	**+0.7**
RPW	**Rockport**	**4.89**	**82**	Pn	**Pn**	**00 41 47.2**	**+0.6**
LON	**Longmire**	**4.92**	**102**	Pn	**Pn**	**00 41 48.2**	**+1.2**
FMW	**Mount Fremont**	**4.96**	**100**	Pn	**Pn**	**00 41 48.9**	**+1.2**
BUTB	**Butedale**	**5.05**	**2**	Pn	**Pn**	**00 41 49.6**	**+0.8**
HOPB	**Hope**	**5.08**	**72**	Pn	**Pn**	**00 41 49.5**	**+0.4**
LLLB	**Lillooet**	**5.22**	**58**	Pn	**Pn**	**00 41 51.7**	**+0.7**
GRIB	**Gribbell Islan**	**5.33**	**358**	Pn	**Pn**	**00 41 53.0**	**+0.5**
HWKB	**Hawksbury Isla**	**5.59**	**358**	Pn	**Pn**	**00 41 55.4**	**-0.7**
PNT	**Penticton**	**6.22**	**75**	Pn	**Pn**	**00 42 05.6**	**+0.7**
NEW	**Newport**	**7.82**	**84**	Pn	**Pn**	**00 42 27.5**	**+0.7**
	0.9nm,0.3s,baz=281,slow=15,SNR=9.9						
NEW				LR	LR	00 44 45.9	
	comp=Z,79nm,19.1s,baz=324,slow=35						
	2.3nm,0.3s						
NVAR	**Mina Array Bea**	**12.26**	**138**	Pn	Pn	00 43 35.1	+7.4
	0.1nm,0.3s,baz=319,slow=13,SNR=2.4						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**14.50**	**104**	Pn	**P**	**00 44 03.6**	**-1.4**
	0.1nm,0.3s,baz=301,slow=10,SNR=5.1						
	0.9nm,1.0s						
YKA	**Yellowknife Ar**	**16.54**	**24**	Pn	**P**	**00 44 30.7**	**+3.3**
	baz=214,slow=11,SNR=7.0						
	0.7nm,1.0s						
ULM	**Lac du Bonnet**	**21.57**	**72**	P	**P**	**00 45 25.0**	**+2.6**
	1.9nm,0.8s,baz=291,slow=8.3,SNR=2.9						
	1.9nm,0.8s						

*HEL **16** 00:41:28.9±0.2, 67˚.79N×20˚.07E, h0km, ML2.1, Explosion*
*UPP **16** 00:41:29.4±0.0, 67˚.82N×20˚.20E, h0km, ML2.5, Suspected explosion*
*IDC **16** 00:41:30.4±0.8, 67˚.80N×20˚.61E, h0km, mb3.4/2, mbtmp3.4/7, ML2.4/4, Error ellipse: s-maj=13.1km s-min=6.4km az=112.0*
ISC 16 00:41:29.4±0.6, 67˚.81N±0˚.02×20˚.24E±0˚.03, h0km, n42, σ1§14/61, mb3.5/3, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.15**	**14**	P	**Pg**	**00 41 32.4**	**+0.1**
KUA				S	**Sg**	**00 41 34.7**	**+0.5**
RATU	**Laukkuluspa**	**0.25**	**274**	P	**Pg**	**00 41 34.0**	**-0.1**
KOVU	**Salmi**	**0.42**	**356**	P	**Pg**	**00 41 37.2**	**-0.2**
DUNU	**Dundret**	**0.70**	**169**	P	**Pg**	**00 41 42.8**	**0.0**
LANU	**Lannavaara**	**0.71**	**69**	P	**Pg**	**00 41 42.9**	**0.0**
LANU	**Lannavaara**	**0.71**	**69**	PG	**Pg**	**00 41 42.7**	**-0.2**
LANU				SG	**Sg**	**00 41 52.5**	**+0.4**
MASU	**Masugnsbyn**	**0.76**	**117**	P	**Pg**	**00 41 44.1**	**+0.2**
SALU	**Saltoluokta**	**0.79**	**238**	P	**Pg**	**00 41 44.2**	**-0.2**
KIF	**Kilpisjarvi**	**1.22**	**10**	PG	**Pg**	**00 41 52.2**	**-0.6**
	baz=193						
KIF				MSG		00 42 07.8	
	comp=Z,46nm,0.2s						
KIF				SB	**Sg**	**00 42 08.7**	**+0.2**
PAJU	**Pajala**	**1.36**	**124**	P	**Pg**	**00 41 54.6**	**-0.8**
PAJU	**Pajala**	**1.36**	**124**	PG	**Pg**	**00 41 54.0**	**-1.4**
	baz=303						
PAJU				SB	**Sg**	**00 42 12.9**	**-0.1**
HEF	**Hetta**	**1.42**	**63**	*e*P	**Pn**	**00 41 55.8**	**-0.6**
HEF	**Hetta**	**1.42**	**63**	PG	**Pn**	**00 41 55.2**	**-1.2**
HEF				MSG		00 42 13.5	
	comp=Z,21nm,0.2s						
HEF				SN	**Sg**	**00 42 15.0**	**+0.1**
KLF	**Kolari**	**1.54**	**110**	PG	**Pn**	**00 41 57.4**	**-0.7**
KLF				MSG		00 42 16.9	
	comp=Z,11nm,0.2s						
KLF				SN	**Sg**	**00 42 19.3**	**+0.4**
TRO	**Tromso**	**1.90**	**346**	PG	**Pn**	**00 42 02.6**	**-0.3**
TRO				SG	**Sb**	**00 42 28.7**	**-0.2**
FAUS	**Fauske**	**1.94**	**260**	*e*P	**Pn**	**00 42 04.5**	**+0.9**
KALU	**Kalix**	**2.31**	**146**	PG	**Pn**	**00 42 09.5**	**+0.8**
TOF	**Tornio**	**2.37**	**135**	PG	**Pn**	**00 42 10.6**	**+1.2**
TOF				MSG		00 42 39.9	
	comp=Z,10.0nm,0.2s						
TOF				SG	**Sb**	**00 42 43.1**	**+0.6**
SGF	**Sodankyl**	**2.43**	**96**	PB	**Pn**	**00 42 11.2**	**+0.8**
SGF				SG	**Sb**	**00 42 45.6**	**+1.1**
RNF	**Rovaniemi**	**2.55**	**115**	PB	**Pn**	**00 42 13.7**	**+1.8**
	baz=303						
RNF				SG	**Sb**	**00 42 47.0**	**-0.7**
ARA0	**ARCESS Array S**	**2.59**	**46**	PB	**Pn**	**00 42 13.1**	**+0.6**
	baz=228						
ARA0				SG	**Sb**	**00 42 48.6**	**-0.4**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn	**Pn**	**00 42 13.2**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=227,slow=15,SNR=148						
ARCES				Lg	Lg	00 42 48.0	
	comp=Z,4.5nm,0.3s,baz=230,slow=25,SNR=8.8						
ARCES				Rg	Rg	00 42 56.0	
	comp=Z,7.1nm,0.4s,baz=225,slow=32,SNR=5.7						
	comp=Z,3.3nm,0.3s						
KMNF	**Kaamanen**	**2.83**	**58**	PN	**Pn**	**00 42 16.2**	**+0.4**
KMNF				SN	**Sn**	**00 42 52.3**	**+1.7**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PN	**Pn**	**00 42 18.9**	**-0.5**
RAJF				SB	**Sb**	**00 43 03.7**	**+0.3**
KEV	**Kevo**	**3.15**	**48**	PN	**Pn**	**00 42 20.3**	**+0.3**
KEV				SN	**Sn**	**00 42 59.6**	**+1.3**
RANF	**Ranua**	**3.15**	**122**	PB	**Pn**	**00 42 21.5**	**+1.4**
OUL	**Oulu**	**3.55**	**138**	PB	**Pn**	**00 42 28.0**	**+2.3**
VRF	**Varrio**	**3.56**	**87**	PN	**Pn**	**00 42 26.2**	**+0.4**
OBF4	**Vikkela, Lumij**	**3.59**	**145**	PB	**Pn**	**00 42 29.1**	**+2.9**
OLKF	**Oulanka, Finla**	**3.88**	**108**	PN	**Pn**	**00 42 31.4**	**+1.2**
OUF	**Merijarvi**	**3.91**	**150**	PN	**Pn**	**00 42 31.9**	**+1.4**
	baz=336						
UMAU	**Umeaa**	**3.94**	**177**	PG	**Pb**	**00 42 40.8**	**+1.1**
MSF	**Maaselka**	**3.96**	**115**	PN	**Pn**	**00 42 32.5**	**+1.2**
KU6	**Riekki**	**4.20**	**111**	PN	**Pn**	**00 42 35.4**	**+0.9**
KU6				SG	**Sg**	**00 43 41.4**	**-2.7**
HUSU	**Husum**	**4.50**	**186**	PG	**Pb**	**00 42 50.3**	**+1.1**
FINES	**FINESS Array B**	**6.86**	**156**	Pn	**Pn**	**00 43 12.3**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=17						
FINES				Pg	**Pb**	**00 43 29.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=347,slow=11,SNR=7.9						
FINES				Sn	**Sn**	**00 44 28.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=344,slow=25,SNR=1.9						
FINES				Lg	Lg	00 45 01.7	
	comp=Z,0.5nm,0.3s,baz=342,slow=31,SNR=9.3						
	comp=Z,1.5nm,0.7s						
NOA	**NORSAR Array B**	**7.83**	**214**	Pn	**Pn**	**00 43 24.5**	**+0.2**
	baz=17,slow=12,SNR=5.3						
NOA				Sn	**Sn**	**00 44 54.9**	**+1.3**
	baz=44,slow=25,SNR=1.7						
NOA				Lg	Lg	00 45 39.5	
	comp=Z,0.1nm,0.3s,baz=72,slow=17,SNR=4.8						
	comp=Z,1.1nm,0.9s						
HFS	**Hagfors**	**8.22**	**204**	Pn	**Pn**	**00 43 28.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=14,slow=13,SNR=1.8						
HFS				Sn	**Sn**	**00 44 59.8**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=25,slow=24,SNR=1.8						
HFS				Lg	Lg	00 45 45.1	
	comp=Z,0.3nm,0.3s,baz=358,slow=27,SNR=3.0						
	comp=Z,3.1nm,1.0s						
SPITS	**Spitsbergen Ar**	**10.48**	**356**	Pn	**Pn**	**00 43 59.9**	**-0.8**
	comp=Z,4.9nm,0.9s,baz=164,slow=13,SNR=12						
BVAR	**Borovoye Array**	**27.84**	**97**	P	**P**	**00 47 19.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=317,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**47.39**	**353**	P	**P**	**00 50 05.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=359,slow=6.7,SNR=5.1						
	comp=Z,0.2nm,0.6s						
PDAR	**Pinedale Array**	**63.46**	**321**	P	**P**	**00 51 58.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=38,slow=4.6,SNR=5.9						

*CATAC **16** 01:03:27.7±0.1, 12˚.41N×87˚.70W, h43km±5km, MB5.6, mb5.2, ML4.7*
*IDC **16** 01:03:28.0±0.7, 12˚.79N×87˚.23W, h82km±5km, mb4.0/14, mbtmp4.3/16, MS3.6/9, Error ellipse: s-maj=23.6km s-min=8.3km az=54.0*
*NEIC **16** 01:03:28.5±1.6, 12˚.49N±0˚.06×87˚.63W±0˚.06, h81km±6km, mb4.7/398, Error ellipse: s-maj=9.9km s-min=6.4km az=218.0*
*SNET **16** 01:03:30.6±3.8, 12˚.62N×87˚.74W, h29km, ML4.8*
ISC 16 01:03:27.4±0.4, 12˚.46N±0˚.03×87˚.66W±0˚.02, h83km±3km, h83km:pP-P, n739, σ1§10/745, mb4.7/183, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.52**	**11**	*i* P	**Pn**	**01 03 40.1**	**-1.7**
CSGN				IAML		01 03 40.7	
	comp=Z,320µm,1.0s						
CHNN	**El Viejo**	**0.55**	**73**	*i* P	**Pn**	**01 03 40.6**	**-1.3**
CHNN				IAML		01 03 40.8	
	comp=Z,84µm,1.0s						
CHNN				*i* S	**Sn**	**01 03 50.5**	**-2.1**
POTN	**Potosi Cosigui**	**0.56**	**16**	*i* P	**Pn**	**01 03 40.8**	**-1.2**
POTN				IAML		01 03 41.3	
	comp=Z,35µm,1.0s						
POTN				*i* S	**Sn**	**01 03 51.3**	**-1.4**
CRIN	**San Cristobal**	**0.64**	**68**		**Pn**	**01 03 42.3**	**-0.5**
CRIN				Sn	**Sn**	**01 03 54.3**	**+0.1**
CRIN	**San Cristobal**	**0.64**	**68**	*e*P	**Pn**	**01 03 42.5**	**-0.3**
CRIN	**San Cristobal**	**0.64**	**68**	*i* P	**Pn**	**01 03 42.6**	**-0.2**
CRIN				*i* S	**Sn**	**01 03 54.4**	**+0.1**
CRIN				IAML		01 03 54.9	
	comp=Z,160µm,1.0s						
QUEN	**Al S del Volca**	**0.80**	**81**	*i* P	**Pn**	**01 03 42.6**	**-1.8**
QUEN				*i* S	**Sn**	**01 03 55.4**	**-1.7**
QUEN				IAML		01 03 58.2	
	comp=Z,45µm,1.0s						
TEL3	**Telica 3**	**0.81**	**82**	*i* P	**Pn**	**01 03 43.6**	**-0.9**
TEL3				IAML		01 03 58.1	
	comp=Z,47µm,1.0s						
AMPH	**Amapala**	**0.82**	**0**	¶*i* P	**Pn**	**01 03 43.6**	**-1.0**
AMPH				*e*S	**Sn**	**01 03 56.5**	**-0.8**
AMPH	**Amapala**	**0.82**	**0**	*i* P	**Pn**	**01 03 43.6**	**-1.0**
AMPH				*i* S	**Sn**	**01 03 56.6**	**-0.8**
TELN	**Telica**	**0.82**	**80**	*i* P	**Pn**	**01 03 43.6**	**-1.1**
TELN				*i* S	**Sn**	**01 03 56.0**	**-1.7**
TELN				IAML		01 03 58.7

AESN *i* S **Sn** **01 04 04.0 -0.8**
AESN IAML 01 04 04.9
comp=Z,8µm,1.0s
PACA Pacayal 1.19 327 *e*P **Pn** **01 03 48.7 -0.4**
PACA *e*S **Sn** **01 04 04.7 -0.7**
PACA Pacayal 1.19 327 *i* P **Pn** **01 03 48.8 -0.4**
PACA *i* S **Sn** **01 04 04.6 -0.8**
PACA IAML 01 04 06.7
comp=Z,170µm,1.0s
AMTN Mateare 1.22 100 *i* P **Pn** **01 03 49.1 -0.2**
AMTN *i* S **Sn** **01 04 05.1 -0.7**
AMTN IAML 01 04 11.2
comp=Z,20µm,1.0s
SAPS Ciudad Sandino 1.26 103 *i* P **Pn** **01 03 49.6 -0.2**
SAPS *i* S **Sn** **01 04 06.0 -0.7**
SAPS IAML 01 04 12.5
comp=Z,22µm,1.0s
MSHP Masachapa 1.27 120 *i* P **Pn** **01 03 49.7 -0.2**
MSHP *i* S **Sn** **01 04 07.5 +0.7**
MSHP IAML 01 04 12.5
comp=Z,3µm,1.0s
APYN Apoyeque 1.30 100 *i* P **Pn** **01 03 49.9 -0.4**
APYN *i* S **Sn** **01 04 06.7 -0.9**
APYN IAML 01 04 11.9
comp=Z,11µm,1.0s
BRAN Las Pilas 1.31 78 *i* P **Pn** **01 03 50.6 +0.2**
BRAN *i* S **Sn** **01 04 07.8 +0.1**
BRAN IAML 01 04 13.8
comp=Z,11µm,1.0s
APQ2 Apoyeque 1.33 101 *i* P **Pn** **01 03 50.6 -0.1**
APQ2 *i* S **Sn** **01 04 06.5 -1.8**
APQ2 IAML 01 04 11.3
comp=Z,17µm,1.0s
COEB Comit de Eme 1.33 321 *e*P **Pn** **01 03 50.5 -0.4**
COEB *e*S **Sn** **01 04 07.7 -0.8**
COEB Comit de Eme 1.33 321 *i* P **Pn** **01 03 50.4 -0.5**
COEB *i* S **Sn** **01 04 07.2 -1.3**
COEB IAML 01 04 09.2
comp=Z,7µm,1.0s
BC87 San Francisco 1.34 88 *i* P **Pn** **01 03 50.5 -0.3**
BC87 *i* S **Sn** **01 04 08.1 -0.4**
BC87 IAML 01 04 09.8
comp=Z,9µm,1.0s
APQN BB Volcan Apoy 1.35 100 *i* P **Pn** **01 03 50.6 -0.4**
ABCN Banco Central 1.36 104 *i* P **Pn** **01 03 50.9 -0.2**
ABCN *i* S **Sn** **01 04 08.4 -0.6**
ABCN IAML 01 04 09.5
comp=Z,27µm,1.0s
ALLN Telcor Managua 1.39 102 *i* P **Pn** **01 03 51.3 -0.1**
ALLN *i* S **Sn** **01 04 09.4 -0.2**
ALLN IAML 01 04 13.3
comp=Z,19µm,1.0s
TISN Laguna Tiscapa 1.40 103 *i* P **Pn** **01 03 51.4 -0.1**
TISN IAML 01 04 10.1
comp=Z,880nm,1.0s
LIMN Finca el Limon 1.40 65 *i* P **Pn** **01 03 51.4 -0.2**
LIMN *i* S **Sn** **01 04 09.5 -0.4**
LIMN IAML 01 04 10.4
comp=Z,10µm,1.0s
USIM UNAN 1.40 104 *i* P **Pn** **01 03 51.7 +0.1**
USIM *i* S **Sn** **01 04 09.3 -0.5**
USIM IAML 01 04 12.0
comp=Z,41µm,1.0s
UNAN Cigeo UNAN 1.40 104 *i* P **Pn** **01 03 51.3 -0.3**
UNAN *i* S **Sn** **01 04 09.2 -0.7**
ENAN Enatrel Managu 1.41 104 *i* P **Pn** **01 03 51.8 +0.1**
ENAN *i* S **Sn** **01 04 09.8 -0.3**
ENAN IAML 01 04 14.6
comp=Z,22µm,1.0s
CRUN El Crucero 1.41 109 *i* P **Pn** **01 03 51.9 +0.1**
CRUN IAML 01 04 18.8
comp=Z,41nm,1.0s
MGA1 Managua 1.42 102 *i* P **Pn** **01 03 51.8 0.0**
MGA1 *i* S **Sn** **01 04 09.5 -0.6**
MGA1 IAML 01 04 11.9
comp=Z,11µm,1.0s
R4DEC Barrio San Lui 1.42 102 *i* P **Pn** **01 03 51.6 -0.2**
R4DEC IAML 01 04 10.9
comp=Z,10µm,1.0s
MAFN Magfor 1.44 105 *i* P **Pn** **01 03 52.0 -0.1**
MAFN *i* S **Sn** **01 04 10.6 -0.1**
MAFN IAML 01 04 12.7
comp=Z,22µm,1.0s
PQSS Presa 15 de Se 1.45 323 *e*P **Pn** **01 03 52.0 -0.2**
PQSS *e*S **Sn** **01 04 11.1 +0.1**
PQSS Presa 15 de Se 1.45 323 *i* P **Pn** **01 03 52.2 0.0**
PQSS *i* S **Sn** **01 04 11.1 +0.1**
PQSS IAML 01 04 14.7
comp=Z,4µm,1.0s
HUGN San Franciso L 1.45 96 IAML 01 03 50.7
comp=Z,8µm,1.0s
HUGN *i* P **Pn** **01 03 51.9 -0.3**
HUGN *i* S **Sn** **01 04 11.4 +0.4**
HUEN 1.46 95 *i* P **Pn** **01 03 52.9 +0.6**
WILN Americas 2 1.47 102 *i* P **Pn** **01 03 52.5 0.0**
WILN IAML 01 04 16.8
comp=Z,4µm,1.0s
AERN Aeropuerto Man 1.49 102 *i* P **Pn** **01 03 52.8 0.0**
AERN *i* S **Sn** **01 04 11.8 -0.1**
AERN IAML 01 04 14.0
comp=Z,12µm,1.0s
ADRN Diriamba 1.51 113 *i* P **Pn** **01 03 54.1 +1.0**
ADRN *i* S **Sn** **01 04 11.7 -0.8**
ADRN IAML 01 04 24.9
comp=Z,13µm,1.0s
MAS3 Al N del Volca 1.52 106 *i* P **Pn** **01 03 53.0 -0.1**
MAS3 *i* S **Sn** **01 04 09.5 -3.0**
MAS3 IAML 01 04 14.3
comp=Z,13µm,1.0s
TECO Alcaldia de Te 1.53 315 *i* P **Pn** **01 03 51.6 -1.7**
TECO *i* S **Sn** **01 04 11.1 -1.7**
TECO IAML 01 04 14.4
comp=Z,5µm,1.0s
MASN Masaya 1.55 108 *i* P **Pn** **01 03 53.6 +0.1**
MASN *i* S **Sn** **01 04 11.5 -1.8**
MASN IAML 01 04 19.5
comp=Z,2µm,1.0s
TIPN Tipitapa 1.55 100 *i* P **Pn** **01 03 52.8 -0.7**
TIPN *i* S **Sn** **01 04 13.2 -0.1**
TIPN IAML 01 04 19.9
comp=Z,8µm,1.0s
SBEN San Benito 1.57 95 *i* P **Pn** **01 03 53.8 0.0**
SBEN IAML 01 05 09.4
comp=Z,6µm,1.0s
NANN Nandasmo 1.59 109 *i* P **Pn** **01 03 55.1 +1.0**
NANN *i* S **Sn** **01 04 13.8 -0.5**
NANN IAML 01 04 18.2
comp=Z,110µm,1.0s
AMYN Masaya 1.60 107 *i* P **Pn** **01 03 54.4 +0.3**
AMYN IAML 01 04 13.9
comp=Z,7µm,1.0s
AMYN *i* S **Sn** **01 04 14.0 -0.4**
UESV Universidad de 1.60 317 *i* P **Pn** **01 03 54.1 -0.1**
UESV *i* S **Sn** **01 04 13.9 -0.6**
UESV IAML 01 04 17.6
comp=Z,7µm,1.0s
SCLA Alcaldia de Sa 1.61 320 *i* P **Pn** **01 03 54.2 -0.2**
SCLA *i* S **Sn** **01 04 14.9 +0.1**
SCLA IAML 01 04 22.7
comp=Z,3µm,1.0s
TGUH Tegucigalpa,Un 1.63 13 Pn **Pn** **01 03 55.0 +0.3**
TGUH Sn **Sn** **01 04 14.9 -0.5**
TGUH Tegucigalpa,Un 1.63 13 *i* P **Pn** **01 03 55.1 +0.4**
TGUH IAML 01 03 55.3
comp=Z,23µm,1.0s
TGUH *i* S **Sn** **01 04 15.5 +0.2**
YUSH Yuscaran 1.69 28 *i* P **Pn** **01 03 55.7 +0.3**
YUSH *i* S **Sn** **01 04 12.4 -4.1**
SJTE Alcalda de S 1.74 311 *i* P **Pn** **01 03 56.2 +0.1**
SJTE *i* S **Sn** **01 04 16.2 -1.6**
SJTE IAML 01 04 20.7
comp=Z,7µm,1.0s
NADN Granada 1.74 114 *i* P **Pn** **01 03 55.7 -0.3**
NADN *i* S **Sn** **01 04 16.8 -1.0**
NADN IAML 01 04 19.4
comp=Z,12µm,1.0s
GRNN Granada 1.75 107 *i* P **Pn** **01 03 55.5 -0.6**
GRNN IAML 01 04 30.2
comp=Z,7µm,1.0s
MATN Matagalpa 1.76 74 **Pn** **01 03 56.2 -0.1**
MATN Sn **Sn** **01 04 17.8 -0.5**
MATN Matagalpa 1.76 74 *i* P **Pn** **01 03 56.1 -0.1**
MATN *i* S **Sn** **01 04 18.1 -0.1**

MATN IAML 01 04 23.2
comp=Z,3µm,1.0s
PAVA Las Pavas 1.76 315 *e*P **Pn** **01 03 56.1 -0.3**
PAVA Las Pavas 1.76 315 *i* P **Pn** **01 03 56.2 -0.1**
PAVA *i* S **Sn** **01 04 17.7 -0.6**
PAVA IAML 01 04 18.2
comp=Z,7µm,1.0s
LFRS El Faro 1.79 310 *e*P **Pn** **01 03 56.8 +0.1**
RCPN Sur Rio San Ju 1.86 55 *i* P **Pn** **01 03 57.3 -0.4**
RCPN *i* S **Sn** **01 04 21.1 +0.5**
RCPN IAML 01 04 21.8
comp=Z,31nm,1.0s
PANCS Alcalda de 1.87 308 *i* P **Pn** **01 03 57.6 -0.1**
PANCS *i* S **Sn** **01 04 18.9 -1.9**
PANCS IAML 01 04 22.7
comp=Z,7µm,1.0s
LOMA Loma Larga 1.88 309 *e*P **Pn** **01 03 57.9 -0.1**
LOMA *e*S **Sn** **01 04 20.1 -1.2**
LOMA Loma Larga 1.88 309 *i* P **Pn** **01 03 58.1 +0.1**
LOMA *i* S **Sn** **01 04 19.5 -1.8**
LOMA IAML 01 04 21.3
comp=Z,7µm,1.0s
LALI Alcalda de L 1.91 302 *e*P **Pn** **01 03 57.6 -0.6**
LALI *e*S **Sn** **01 04 18.6 -3.1**
LALI Alcalda de L 1.91 302 *i* P **Pn** **01 03 57.7 -0.6**
LALI *i* S **Sn** **01 04 18.4 -3.3**
LALI IAML 01 04 21.9
comp=Z,1µm,1.0s
UTEC Universidad Te 1.94 310 *i* P **Pn** **01 03 58.5 -0.2**
UTEC *i* S **Sn** **01 04 21.6 -0.9**
UTEC IAML 01 04 26.7
comp=Z,4µm,1.0s
BOAB BOACO BROADBAN.95 90 **Pn** **01 03 58.2 -0.5**
BOAB BOACO BROADBAN.95 90 *i* P **Pn** **01 03 58.5 -0.2**
BOAB *i* S **Sn** **01 04 22.8 +0.2**
BOAB IAML 01 04 35.8
comp=Z,2µm,1.0s
SNET Serv Nac Est T 1.96 309 **Pn** **01 03 58.9 -0.1**
SNET Serv Nac Est T 1.96 309 *i* P **Pn** **01 03 58.7 -0.2**
SNET *i* S **Sn** **01 04 20.5 -2.4**
SNET IAML 01 04 27.0
comp=Z,7µm,1.0s
UEES Universidad Ev 1.98 309 *i* P **Pn** **01 03 59.5 +0.3**
UEES *i* S **Sn** **01 04 22.7 -0.8**
UEES IAML 01 04 28.6
comp=Z,3µm,1.0s
ITCA Escuela Especi 1.98 308 *i* P **Pn** **01 03 58.9 -0.4**
ITCA IAML 01 04 12.0
comp=Z,7µm,1.0s
ITCA *i* S **Sn** **01 04 22.8 -0.8**
BOQS Boqueron 2.02 309 *e*P **Pn** **01 04 00.6 +0.7**
PMON Piamonte 2.04 308 *i* P **Pn** **01 04 00.3 +0.3**
PMON *i* S **Sn** **01 04 24.3 -0.5**
PMON IAML 01 04 32.0
comp=Z,7µm,1.0s
ARIN Rivas 2.05 119 *i* P **Pn** **01 04 01.2 +1.2**
ARIN IAML 01 04 19.8
comp=Z,6µm,1.0s
ARIN *i* S **Sn** **01 04 22.8 -2.1**
QUEZ Alcaldia de Qu 2.08 311 *i* P **Pn** **01 04 01.1 +0.6**
QUEZ *i* S **Sn** **01 04 26.3 +0.5**
QUEZ IAML 01 04 33.2
comp=Z,11µm,1.0s
LLGN La Laguna 2.10 324 *i* P **Pn** **01 04 00.6 -0.3**
LLGN IAML 01 04 39.6
comp=Z,2µm,1.0s
JAYA Jayaque - finc 2.11 304 *e*P **Pn** **01 04 00.6 -0.4**
JAYA *e*S **Sn** **01 04 25.1 -1.5**
JAYA Jayaque - finc 2.11 304 *i* P **Pn** **01 04 00.6 -0.4**
JAYA *i* S **Sn** **01 04 25.1 -1.5**
JAYA IAML 01 04 28.6
comp=Z,12µm,1.0s
JAPN Al SSO del Vol 2.15 115 *i* P **Pn** **01 04 01.1 -0.3**
JAPN IAML 01 04 33.8
comp=Z,3µm,1.0s
CEDA San Andres 2.15 309 *i* P **Pn** **01 04 01.5 0.0**
CEDA *i* S **Sn** **01 04 22.9 -4.6**
CEDA IAML 01 04 31.8
comp=Z,8µm,1.0s
MORN Al O del Volca 2.17 115 *i* P **Pn** **01 04 02.3 +0.6**
MORN IAML 01 04 41.8
comp=Z,5µm,1.0s
CONN Concepcion 2.18 114 *i* P **Pn** **01 04 02.0 +0.2**
CONN IAML 01 04 30.1
comp=Z,13µm,1.0s
OMEN Al SSO del Vol 2.20 115 *i* P **Pn** **01 04 04.9 +2.8**
OMEN IAML 01 04 30.0
comp=Z,4µm,1.0s
CEVE Cerro Verde 2.34 306 *e*P **Pn** **01 04 04.7 +0.5**
CEVE Cerro Verde 2.34 306 *i* P **Pn** **01 04 04.2 0.0**
CEVE *i* S **Sn** **01 04 32.4 0.0**
CEVE IAML 01 04 42.3
comp=Z,3µm,1.0s
UNIC Universidad Ca 2.38 310 *i* P **Pn** **01 04 04.5 0.0**
UNIC IAML 01 04 37.8
comp=Z,730nm,1.0s
ACON Acoyapa 2.48 101 **Pn** **01 04 05.5 -0.3**
ACON Acoyapa 2.48 101 *e*P **Pn** **01 04 04.4 -1.4**
ACON Acoyapa 2.48 101 *i* P **Pn** **01 04 05.9 +0.1**
ACON IAML 01 04 33.9
comp=Z,880nm,1.0s
NUBE Las Nubes 2.51 305 *i* P **Pn** **01 04 07.0 +0.6**
NUBE *i* S **Sn** **01 04 35.6 -0.7**
NUBE IAML 01 04 42.1
comp=Z,3µm,1.0s
MTO3 Montecristo 2.54 320 **Pn** **01 04 06.9 0.0**
MTO3 Montecristo 2.54 320 *i* P **Pn** **01 04 06.7 -0.1**
MTO3 IAML 01 04 21.9
comp=Z,1µm,1.0s
MTO3 *i* S **Sn** **01 04 36.5 -0.5**
ESQI Esquipulas 2.65 322 **Pn** **01 04 08.8 +0.5**
ESQI Esquipulas 2.65 322 *i* P **Pn** **01 04 08.7 +0.5**
ESQI IAML 01 04 55.9
comp=Z,2µm,1.0s
HZTE Horizontes, Gu 2.67 130 **Pn** **01 04 09.6 +1.2**
HZTE Horizontes, Gu 2.67 130 *i* P **Pn** **01 04 09.8 +1.5**
HZTE *i* S **Sn** **01 04 40.9 +1.1**
HZTE IAML 01 04 47.4
comp=Z,1µm,1.0s
ORTG Ortega, Santa 3.00 134 Pn **Pn** **01 04 13.8 +0.9**
ORTG Ortega, Santa 3.00 134 *i* P **Pn** **01 04 14.2 +1.3**
ORTG *i* S **Sn** **01 04 44.4 -3.6**
ORTG IAML 01 04 50.2
comp=Z,560nm,1.0s
SAJU San Juanillo, 3.05 141 *i* P **Pn** **01 04 13.8 +0.3**
SAJU *i* S **Sn** **01 04 46.3 -2.8**
SAJU IAML 01 04 49.3
comp=Z,2µm,1.0s
SIUN Universidad Ur 3.08 66 *i* P **Pn** **01 04 15.0 +1.1**
SIUN IAML 01 05 07.8
comp=Z,510nm,1.0s
DUNO Dulce Nombre, 3.18 138 **Pn** **01 04 16.2 +0.8**
DUNO Dulce Nombre, 3.18 138 *i* P **Pn** **01 04 16.1 +0.8**
DUNO IAML 01 04 54.4
comp=Z,3µm,1.0s
ESPN Las Esperanzas 3.29 94 **Pn** **01 04 17.5 +0.7**
ESPN Las Esperanzas 3.29 94 *i* P **Pn** **01 04 15.9 -0.9**
ESPN *i* S **Sn** **01 04 54.1 -0.9**
ESPN IAML 01 05 32.2
comp=Z,610nm,1.0s
INDI Punta indio, G 3.34 140 *i* P **Pn** **01 04 18.0 +0.6**
INDI *i* S **Sn** **01 04 51.5 -4.5**
INDI IAML 01 04 56.2
comp=Z,790nm,1.0s
GUNB GUNB 3.36 309 *i* P **Pn** **01 04 18.0 0.0**
GUNB IAML 01 05 16.1
comp=Z,560nm,1.0s
IZABA Izabal, Puerto 3.37 345 *i* P **Pn** **01 04 19.0 +1.2**
IZABA IAML 01 06 42.4
comp=Z,15nm,1.0s
JTS Las Juntas de 3.42 129 Pn **Pn** **01 04 18.7 +0.1**
JTS Las Juntas de 3.42 129 P **Pn** **01 04 19.3 +0.7**
comp=Z,37nm,0.3s,baz=314,slow=17,SNR=32
JTS S **Sn** **01 04 57.8 -0.3**
comp=Z,155nm,0.4s,baz=317,slow=18,SNR=5.5
JTS Las Juntas de 3.42 129 *e*P **Pn** **01 04 20.6 +2.0**
ARE1 Arenal 1 3.50 124 **Pn** **01 04 20.3 +0.7**
GUMI Mixco 3.59 307 *i* P **Pn** **01 04 20.9 -0.1**
GUMI IAML 01 05 01.3
comp=Z,4µm,1.0s
SOCE Pocosol 3.63 124 Pn **Pn** **01 04 19.8 -1.6**
SOCE Pocosol 3.63 124 *i* P **Pn** **01 04 23.4 +2.0**
SOCE IAML 01 05 27.9
comp=Z,97nm,1.0s

LAFE Finca La Fe, P 3.77 134 *i* P **Pn** **01 04 23.9 +0.6**
LAFE *i* S **Sn** **01 05 02.9 -3.7**
LAFE IAML 01 05 08.5
comp=Z,10.0nm,1.0s
BLUN Bluefields 3.83 96 *i* P **Pn** **01 04 24.7 +0.7**
BLUN IAML 01 05 25.2
comp=Z,420nm,1.0s
AVCB Coban 4.00 319 *i* P **Pn** **01 04 26.5 -0.1**
AVCB IAML 01 06 24.6
comp=Z,11µm,1.0s
JACO JACO, Garabito 4.05 133 **Pn** **01 04 28.7 +1.6**
JACO JACO, Garabito 4.05 133 *i* P **Pn** **01 04 28.5 +1.4**
JACO IAML 01 05 18.6
comp=Z,300nm,1.0s
HDC Heredia 4.25 125 Pn **Pn** **01 04 30.1 +0.1**
RTAL Retalhuleu 4.43 298 *i* P **Pn** **01 04 34.8 +2.6**
RTAL *i* S **Sn** **01 05 20.9 -1.7**
RTAL IAML 01 05 47.1
comp=Z,1µm,1.0s
OCM Ochomogo 4.44 125 *i* P **Pn** **01 04 36.6 +4.1**
OCM IAML 01 05 29.5
comp=Z,270nm,1.0s
VIRE VIRE 4.45 123 *i* P **Pn** **01 04 34.7 +1.9**
VIRE IAML 01 05 34.4
comp=Z,520nm,1.0s
LCR2 La Lucha 2 4.49 127 Pn **Pn** **01 04 33.9 +0.6**
LCR2 La Lucha 2 4.49 127 *i* P **Pn** **01 04 35.6 +2.3**
LCR2 *i* S **Sn** **01 05 20.4 -4.1**
LCR2 IAML 01 05 30.3
comp=Z,260nm,1.0s
VTCV VTCV, Calle Va 4.58 122 *i* P **Pn** **01 04 34.4 -0.1**
VTCV IAML 01 06 38.9
comp=Z,580nm,1.0s
RIMA Rio Macho 4.59 125 **Pn** **01 04 35.3 +0.7**
RIMA Rio Macho 4.59 125 *i* P **Pn** **01 04 37.5 +2.9**
RIMA IAML 01 04 38.5
comp=Z,320nm,1.0s
RIMA *i* S **Sn** **01 05 26.2 -0.6**
HUEH Huehuetenango 4.69 308 Pn **Pn** **01 04 35.9 -0.1**
CDM Cerro de Muert 4.79 127 *i* P **Pn** **01 04 40.5 +2.9**
CDM *i* S **Sn** **01 05 27.9 -4.3**
CDM IAML 01 05 37.4
comp=Z,300nm,1.0s
PETF Flores 4.92 335 **Pn** **01 04 39.8 +0.9**
PETF Flores 4.92 335 *i* P **Pn** **01 04 41.1 +2.2**
PETF IAML 01 04 41.6
comp=Z,470nm,1.0s
PEZE Perez Zeledon, 4.97 128 **Pn** **01 04 39.8 +0.1**
PEZE Perez Zeledon, 4.97 128 *i* P **Pn** **01 04 42.3 +2.7**
PEZE *i* S **Sn** **01 05 33.4 -2.5**
PEZE IAML 01 05 42.4
comp=Z,240nm,1.0s
DRK0 Durika 5.38 126 **Pn** **01 04 45.8 +0.5**
PLAN Los Planes de 5.43 134 *i* P **Pn** **01 04 48.3 +2.4**
PLAN IAmb IAmb 01 04 48.5
comp=Z,290nm,0.5s
PLAN IVmB_BB 01 04 57.3
comp=Z,6µm,1.0s
PLAN *i* S **Sn** **01 05 43.4 -3.7**
PLAN IAML 01 05 50.0
comp=Z,600nm,1.0s
CCIG Comitan 5.76 312 Pn **Pn** **01 04 50.9 +0.3**
PIRO Carate, Puerto 5.86 133 *i* P **Pn** **01 04 54.3 +2.5**
PIRO IAmb IAmb 01 05 00.1
comp=Z,160nm,0.4s
PIRO IVmB_BB 01 05 00.3
comp=Z,4µm,1.0s
PIRO IAML 01 06 01.4
comp=Z,400nm,1.0s
CDITO Canoas 6.09 129 Pn **Pn** **01 04 55.0 +0.1**
CDITO Canoas 6.09 129 IVmB_BB 01 04 55.5
comp=Z,5µm,1.0s
CDITO *i* P **Pn** **01 04 57.1 +2.2**
CDITO IAmb IAmb 01 05 07.2
comp=Z,57nm,0.7s
CDITO IAML 01 06 18.8
comp=Z,190nm,1.0s
BRU2 Volcan 6.09 126 **Pn** **01 04 54.5 -0.6**
PRVC Isla de Provid 6.21 81 *e*P **Pn** **01 04 58.2 +1.7**
TEIG Tepich 7.74 356 Pn **Pn** **01 05 18.8 +1.4**
TEIG Tepich 7.74 356 *e*P **Pn** **01 05 19.6 +2.2**
CMIG Matias Romero 8.37 304 P **Pn** **01 05 27.8 +1.9**
comp=Z,2.7nm,0.3s,baz=156,slow=12,SNR=12
CMIG S **Sn** **01 06 58.1 -0.7**
comp=Z,5.8nm,0.5s,baz=108,slow=16,SNR=1.1
SOR Soroa 11.19 23 Pn **Pn** **01 06 04.4 0.0**
TLIG Tlapa 11.69 297 **Pn** **01 06 11.0 -0.3**
CBOC Ciudad Bolivar 13.23 119 *e*P **P** **01 06 41.0 +1.9**
GUY2C Guyana, Caldas 14.11 120 *e*P **P** **01 06 49.2 +0.1**
GTBY Guantanamo Bay 14.15 57 Pn **Pn** **01 06 44.6 +0.6**
CRJC Cerrejon, Guaj 14.54 94 *e*P **P** **01 06 53.3 -0.2**
BBAC Balboa, Cauca 14.63 134 *e*P **P** **01 06 57.2 +2.6**
POPC Popayan, Colom 14.68 131 *e*P **Pn** **01 06 52.0 +0.9**
JRQG Juriquilla Cam 14.73 305 P **P** **01 06 58.1 +2.4**
SPBC San Pablo de B 15.02 116 *e*P **Pn** **01 06 49.0 -6.4**
GCUF Volcan Galeras 15.14 137 *e*P **P** **01 07 03.9 +3.4**
OTAV Otavalo 15.20 142 *e*P **P** **01 07 06.2 +5.0**
TULM Tulcn-Chalpat 15.23 139 *e*P **P** **01 07 06.1 +4.5**
IMBA Imbabura, San 15.32 142 P **P** **01 07 04.5 +2.0**
IMBA IAmb IAmb 01 07 32.1
comp=Z,34nm,0.7s
PULU Pululahua 15.34 143 P **P** **01 07 02.9 +0.2**
PULU IAmb IAmb 01 07 09.8
comp=Z,77nm,1.0s
CHIC Chingaza 15.81 118 *e*P **P** **01 07 09.2 +1.2**
SLOR San Lorenzo - 15.95 145 P **P** **01 07 10.8 +1.3**
060A Indiantown 16.04 24 Pn **Pn** **01 07 06.5 -1.5**
DWPF Disney Wildern 16.62 20 P **P** **01 07 16.3 -0.1**
DWPF Disney Wildern 16.62 20 P **P** **01 07 16.3 -0.1**
baz=202
SDDR Presa de Saban 17.04 66 **P** **01 07 22.2 +1.1**
SDV Santo Domingo 17.11 100 **Pn** **01 07 21.5 -0.1**
SDV Santo Domingo 17.11 100 P **Pn** **01 07 21.1 -0.4**
comp=Z,6.6nm,0.6s,baz=281,slow=7.1,SNR=8.9
SDV PcP **PcP** **01 12 02.9 +0.8**
comp=Z,4.9nm,1.0s,baz=297,slow=9.0,SNR=4.7
SDV Santo Domingo 17.11 100 *e*P **Pn** **01 07 19.2 -2.4**
656A Willston 17.49 15 P **P** **01 07 25.9 +0.1**
656A IAmb IAmb 01 07 36.1
comp=Z,23nm,0.6s
ZAIG Zacatecas 17.50 308 **P** **01 07 27.3 +0.8**
PTLC Puerto Leguiza 17.66 133 *e*P **Pn** **01 07 32.5 +4.3**
HBVL Hebbronville 17.83 326 P **P** **01 07 29.4 -0.3**
553A Crawfordville 17.89 9 P **Pn** **01 07 32.0 +1.2**
553A IAmb IAmb 01 07 40.6
comp=Z,41nm,0.7s
BRAL Brewton 18.63 2 P **Pn** **01 07 39.5 -0.1**
baz=182
441A DeRidder 18.91 345 P **Pn** **01 07 43.3 +0.3**
346A Big Creek Wild 18.91 355 P **Pn** **01 07 43.0 0.0**
346A IAmb IAmb 01 08 05.6
comp=Z,31nm,0.8s
456A Hilliard 18.91 15 P **Pn** **01 07 42.6 -0.4**
456A IAmb IAmb 01 07 45.5
comp=Z,23nm,0.8s
HKT Hockley 18.98 338 P **Pn** **01 07 43.8 -0.1**
352A Blakely 19.09 7 IAmb IAmb 01 07 47.4
comp=Z,49nm,0.8s
833A Chaparral WMA, 19.21 327 IAmb IAmb 01 07 46.8
comp=Z,31nm,0.9s
833A Chaparral WMA, 19.21 327 P **P** **01 07 45.5 +0.6**
baz=143,SNR=9.6
TIGA Tifton 19.26 11 P **Pn** **01 07 47.2 +0.1**
TIGA Tifton 19.26 11 P **Pn** **01 07 47.3 +0.2**
baz=192,SNR=8.8
250A Grady 19.47 4 P **P** **01 07 48.4 +0.8**
HNVL Huntsville, TX 19.59 340 P **Pn** **01 07 50.7 -0.3**
HNVL IAmb IAmb 01 07 52.3
comp=Z,36nm,0.8s
BAUV El Baul 19.59 98 P **P** **01 07 48.2 -0.9**
BAUV IAmb IAmb 01 07 50.7
comp=Z,24nm,0.6s
BAUV pP **pP** **01 08 05.5 -0.1**
VBMS Vicksburg 19.84 353 P **Pn** **01 07 53.0 -0.9**
VBMS pP **pP** **01 08 11.2 +3.1**
VBMS Vicksburg 19.84 353 P **Pn** **01 07 52.8 -1.1**
baz=172
255A Hazlehurst 19.95 13 **P** **01 07 52.9 +0.1**
255A **pP** **01 08 09.3 0.0**
255A IAmb IAmb 01 08 19.9
comp=Z,36nm,0.9s
146A Union 20.12 357 P **P** **01 07 55.8 +1.1**
146A IAmb IAmb 01 08 18.1
comp=Z,40nm,0.8s

HNDO **Hondo** 20.13 329 P **P** 01 07 54.5 -0.3
NATX **Nacogdoches** 20.26 343 P Pn 01 07 57.6 -1.3
NATX IAmb IAmb 01 08 22.9
comp=Z,33nm,0.8s
NATX **Nacogdoches** 20.26 343 P **P** **01 07 57.2 +1.0**
baz=160
152A **Waverly Hall** 20.29 7 IAmb IAmb 01 08 02.0
comp=Z,49nm,0.9s
435B **Jarrell** 20.41 335 P Pn 01 07 60.0 -0.7
435B IAmb IAmb 01 08 07.4
comp=Z,19nm,0.6s
435B **Jarrell** 20.41 335 P Pn 01 07 59.9 -0.7
baz=151
143A **Socs Landing,** 20.44 351 P Pn 01 07 59.5 -1.4
143A IAmb IAmb 01 08 21.1
comp=Z,39nm,1.1s
LRAL **Lakeview Retre** 20.49 2 P **P** **01 07 57.8 -0.8**
LRAL IAmb IAmb 01 08 04.1
comp=Z,21nm,0.8s
LRAL **Lakeview Retre** 20.49 2 P Pn 01 08 01.1 -0.4
baz=182,SNR=13
CRPR **Cabo Rojo, PR** 20.57 72 P **P** **01 08 00.3 +0.6**
Z47A **Carrollton** 20.65 359 P **P** **01 08 00.9 +0.6**
Z47A IAmb IAmb 01 08 04.8
comp=Z,22nm,0.8s
DRIO **Del Rio** 20.74 326 P Pn 01 08 03.3 -1.2
DRIO IAmb IAmb 01 08 05.9
comp=Z,31nm,0.7s
237A **Washetta, Mont** 20.84 340 P **P** **01 08 03.2 +0.7**
237A IAmb IAmb 01 08 35.6
comp=Z,22nm,0.8s
Z51A **Franklin** 20.89 6 P Pn 01 08 04.6 -1.6
Z51A IAmb IAmb 01 08 07.5
comp=Z,38nm,0.9s
UUPR **Utuado, UPR, P** 20.99 71 P **P** **01 08 04.2 0.0**
UUPR IAmb IAmb 01 08 07.5
comp=Z,56nm,1.1s
JCT **Junction City** 21.16 330 P **P** **01 08 06.9 +1.0**
JCT **Junction City** 21.16 330 P **P** **01 08 07.3 +1.3**
baz=145
GOGA **Godfrey** 21.20 10 P **P** **01 08 07.0 +0.7**
GOGA **Godfrey** 21.20 10 P **P** **01 08 08.1 +1.8**
baz=191,SNR=30
Z41A **Richland Creek** 21.23 348 P **P** **01 08 07.0 +0.5**
Z41A IAmb IAmb 01 08 08.6
comp=Z,30nm,0.6s
Y49A **Blount Mountai** 21.33 3 P **P** **01 08 08.4 +0.7**
Y45A **Yeager Farm, C** 21.38 356 P **P** **01 08 09.6 +1.4**
Y45A IAmb IAmb 01 08 30.7
comp=Z,68nm,1.4s
WHTX **Lake Whitney,** 21.42 337 P **P** **01 08 10.1 +1.4**
WHTX IAmb IAmb 01 08 45.6
comp=Z,51nm,1.2s
WHTX **Lake Whitney,** 21.42 337 P **P** **01 08 09.9 +1.2**
baz=153
BRDY **Brady** 21.46 333 P **P** **01 08 08.9 -0.1**
SJG **San Juan** 21.49 72 P **P** **01 08 09.7 +0.2**
SJG IAmb IAmb 01 08 11.5
comp=Z,25nm,0.8s
SJG **San Juan** 21.49 72 P **P** **01 08 10.0 +0.5**
comp=Z,23nm,0.7s,baz=315,slow=18,SNR=6.0
SJG LR LR 01 17 30.1
comp=Z,84nm,18.4s,baz=249,slow=40
ATAH **Atahualpa** 21.54 154 LR LR 01 14 32.0
comp=Z,53nm,20.3s,baz=7.1,slow=31
Y52A **Lilburn** 21.56 8 P **P** **01 08 10.9 +0.8**
FW16 **Waxahatchie** 21.66 338 P **P** **01 08 13.2 +2.0**
FW16 IAmb IAmb 01 08 16.3
comp=Z,34nm,0.7s
NHSC **New Hope** 21.66 17 P **P** **01 08 12.0 +0.8**
NHSC IAmb IAmb 01 08 15.9
comp=Z,52nm,1.1s
NHSC **New Hope** 21.66 17 P **P** **01 08 11.6 +0.4**
baz=200
CCAR **Cane Creek** 21.69 351 P **P** **01 08 12.6 +1.2**
CCAR IAmb IAmb 01 08 34.7
comp=Z,25nm,0.9s
FW14 **Alvarado** 21.69 338 P **P** **01 08 13.1 +1.6**
FW14 IAmb IAmb 01 08 14.8
comp=Z,36nm,0.8s
WLAR **White Oak Lake** 21.71 348 P **P** **01 08 12.7 +1.0**
FW13 **Cleburne** 21.74 337 P **P** **01 08 13.9 +1.9**
FW13 IAmb IAmb 01 08 15.1
comp=Z,22nm,0.8s
Z38A **Mt. Pleasant** 21.76 343 P **P** **01 08 13.3 +1.0**
Z38A IAmb IAmb 01 08 16.6
comp=Z,46nm,1.2s
X48A **Hartselle** 21.90 1 P **P** **01 08 13.6 -0.1**
SAND **Sanderson** 21.98 325 P **P** **01 08 14.9 +0.2**
OXF **Oxford** 22.01 356 P **P** **01 08 15.2 +0.3**
OXF **Oxford** 22.01 356 P **P** **01 08 15.2 +0.3**
baz=175,SNR=5.0
FPAL **Fort Paine** 22.06 5 P **P** **01 08 16.1 +0.6**
FPAL IAmb IAmb 01 08 38.4
comp=Z,21nm,1.0s
X51A **Calhoun** 22.15 6 P **P** **01 08 17.0 +0.5**
FW07 **Weatherford** 22.18 337 P **P** **01 08 17.8 +1.0**
OZNA **Ozona** 22.19 328 P **P** **01 08 18.3 +1.3**
HPIG 22.20 313 P **P** **01 08 19.2 +2.0**
HODGE **Hodges** 22.22 12 P **P** **01 08 17.9 +0.7**
HODGE IAmb IAmb 01 08 20.0
comp=Z,26nm,0.8s
FW06 **Azle** 22.34 338 P **P** **01 08 18.6 +0.1**
FW06 IAmb IAmb 01 08 20.9
comp=Z,22nm,0.8s
PLAL **Pickwick Lake** 22.43 359 P **P** **01 08 19.3 0.0**
X40A **Basin Creek Fa** 22.43 349 P **P** **01 08 18.6 -0.7**
TX31 **Lajitas Ar. Si** 22.44 321 P **P** **01 08 20.1 +0.4**
TX31 IAmb IAmb 01 08 22.3
comp=Z,17nm,0.7s
TXAR **Lajitas Array** 22.44 321 P **P** **01 08 19.9 +0.3**
TXAR **Lajitas Array** 22.44 321 P **P** **01 08 20.3 +0.7**
comp=Z,13nm,0.6s,baz=138,slow=8.2,SNR=126
TXAR PcP **PcP** **01 12 13.1 +1.6**
comp=Z,1.0nm,0.6s,baz=152,slow=5.1,SNR=8.3
TXAR ScP **ScP** **01 15 44.0 +2.2**
comp=Z,0.4nm,0.7s,baz=148,slow=4.4,SNR=4.0
comp=Z,13nm,0.6s
Y57A **Sumter** 22.46 16 P **P** **01 08 20.0 +0.3**
Y57A IAmb IAmb 01 08 22.1
comp=Z,55nm,1.3s
PLPT **Palo Pinto** 22.49 336 P **P** **01 08 20.6 +0.5**
PLPT IAmb IAmb 01 08 22.2
comp=Z,24nm,1.0s
JSC **Jenkinsville** 22.49 14 P **P** **01 08 20.0 -0.1**
JSC IAmb IAmb 01 08 43.7
comp=Z,32nm,1.0s
Z35A **Perchaven, San** 22.55 339 P **P** **01 08 20.7 0.0**
Z35A IAmb IAmb 01 08 23.7
comp=Z,28nm,0.8s
FW03 **Perrin-Whitt E** 22.59 337 P **P** **01 08 21.5 +0.4**
FW03 IAmb IAmb 01 08 23.3
comp=Z,22nm,0.9s
UALR **University of** 22.62 350 P **P** **01 08 21.5 +0.1**
UALR IAmb IAmb 01 08 42.7
comp=Z,20nm,0.7s
MIAR **Mount Ida** 22.63 347 P **P** **01 08 21.5 0.0**
MIAR IAmb IAmb 01 08 44.1
comp=Z,29nm,0.8s
MIAR **Mount Ida** 22.63 347 P **P** **01 08 21.8 +0.2**
baz=165,SNR=16
SWET **Sewanee** 22.71 4 P **P** **01 08 22.7 +0.3**
W50A **Signal Mountai** 22.74 5 P **P** **01 08 22.5 -0.2**
W50A IAmb IAmb 01 08 24.7
comp=Z,20nm,0.6s
W52A **Murphy** 22.79 8 P **P** **01 08 23.9 +0.8**
W52A IAmb IAmb 01 08 47.3
comp=Z,24nm,1.0s
BG3 **Lake Jocassee** 22.84 10 P **P** **01 08 24.6 +0.9**
ABTX **Abilene, Hawle** 22.88 333 P **P** **01 08 24.6 +0.4**
ABTX IAmb IAmb 01 08 27.0
comp=Z,13nm,0.6s
ABTX **Abilene, Hawle** 22.88 333 P **P** **01 08 24.8 +0.6**
baz=149,SNR=7.7
PAULI **Pauline** 22.89 12 P **P** **01 08 25.0 +0.8**
PAULI IAmb IAmb 01 08 26.2
comp=Z,36nm,1.1s
SGCY **Sterling City** 22.98 330 P **P** **01 08 25.7 +0.4**
SGCY IAmb IAmb 01 08 27.2
comp=Z,48nm,1.1s
BIRD **Birdtown, Kers** 23.03 15 P **P** **01 08 25.8 +0.2**
BIRD IAmb IAmb 01 08 27.2
comp=Z,27nm,0.6s
CPCT **Cooper Cave** 23.06 7 P **P** **01 08 26.1 +0.3**
Y60A **Bolivia** 23.11 20 P **P** **01 08 24.7 -1.6**

WHAR **Wooly Hollow** 23.11 350 P **P** **01 08 26.1 -0.3**
X37A **Clayton** 23.12 344 P **P** **01 08 27.1 +0.7**
X37A IAmb IAmb 01 08 29.4
comp=Z,20nm,0.8s
LOOK **Love County** 23.12 340 P **P** **01 08 27.1 +0.7**
HBAR **Harrisburg** 23.15 354 P **P** **01 08 26.0 -0.7**
ALPN **Alpine** 23.16 323 P **P** **01 08 28.0 +0.9**
V48A **Smith Brothers** 23.19 2 P **P** **01 08 27.0 -0.1**
X58A **Rowland** 23.26 18 P **P** **01 08 27.5 -0.2**
X58A IAmb IAmb 01 08 29.4
comp=Z,22nm,0.6s
KMSC **Kings Mountain** 23.30 13 P **P** **01 08 28.4 +0.3**
KMSC IAmb IAmb 01 08 30.0
comp=Z,30nm,0.7s
KMSC **Kings Mountain** 23.30 13 P **P** **01 08 28.8 +0.7**
baz=196,SNR=12
MNHN **Monahans** 23.39 326 P **P** **01 08 29.6 +0.6**
WTFS **Witchita Falls** 23.39 337 P **P** **01 08 29.4 +0.5**
WTFS IAmb IAmb 01 08 31.1
comp=Z,26nm,0.8s
V51A **Loudon** 23.43 7 P **P** **01 08 29.6 +0.3**
V51A IAmb IAmb 01 08 32.6
comp=Z,19nm,0.6s
V53A **Saluda** 23.52 10 P **P** **01 08 30.7 +0.5**
CLTN **Cedars of Leba** 23.56 3 IAmb IAmb 01 08 32.1
comp=Z,18nm,0.7s
V52A **Sevierville** 23.57 8 IAmb IAmb 01 08 33.3
comp=Z,26nm,1.1s
WVT **Waverly** 23.57 360 P **P** **01 08 30.0 -0.5**
WVT **Waverly** 23.57 360 P **P** **01 08 30.7 +0.2**
baz=180
W57A **Gilead** 23.64 16 IAmb IAmb 01 08 32.2
comp=Z,24nm,0.6s
FCAR **Ozark Folk Cen** 23.67 351 P **P** **01 08 31.0 -0.5**
LCAR **Lake Charles** 23.72 353 IAmb IAmb 01 08 32.0
comp=Z,15nm,0.6s
ODSA **Odessa** 23.88 327 IAmb IAmb 01 08 36.1
comp=Z,29nm,0.7s
X34A **Smith Ranch, M** 23.90 339 **P** **01 08 33.8 +0.3**
SLBS **Sierra La Lagu** 23.91 301 P **P** **01 08 34.0 +0.2**
SLBS pP **pP** **01 08 54.3 +2.1**
V55A **Taylorsville** 24.01 13 IAmb IAmb 01 08 36.4
comp=Z,14nm,0.7s
W35A **Temseh** 24.09 341 IAmb IAmb 01 08 37.0
comp=Z,20nm,0.6s
POST **Post** 24.11 331 P **P** **01 08 36.0 +0.5**
POST IAmb IAmb 01 08 36.9
comp=Z,26nm,0.7s
TZTN **Tazewell** 24.26 8 P **P** **01 08 37.1 +0.3**
TZTN IAmb IAmb 01 08 40.2
comp=Z,20nm,0.7s
TZTN **Tazewell** 24.26 8 P **P** **01 08 37.2 +0.4**
baz=190,SNR=6.0
VHRN **Van Horn** 24.27 321 P **P** **01 08 37.5 +0.5**
DKNS **Dickens** 24.33 332 P **P** **01 08 38.9 +1.4**
DKNS IAmb IAmb 01 08 41.1
comp=Z,27nm,0.6s
PBMO **Poplar Bluff** 24.34 355 P **P** **01 08 37.4 -0.1**
PBMO IAmb IAmb 01 08 58.2
comp=Z,17nm,0.7s
PBMO **PcP** **01 12 15.2 +0.1**
CNNC **Cliffs of the** 24.34 20 P **P** **01 08 37.9 +0.4**
baz=204
SMRT **St. Maarten** 24.35 74 P **P** **01 08 37.2 -0.5**
WMOK **Wichita Mounta** 24.37 337 P **P** **01 08 37.8 0.0**
baz=153,SNR=21
TUL3 **Leonard** 24.48 344 P **P** **01 08 39.1 +0.4**
baz=160,SNR=12
RLO **Rose Lookout** 24.52 346 IAmb IAmb 01 08 41.3
comp=Z,20nm,0.7s
DEOK **Depew** 24.61 343 IAmb IAmb 01 08 41.8
comp=Z,15nm,0.6s
U56A **King** 24.67 14 IAmb IAmb 01 08 44.5
comp=Z,54nm,1.5s
OK052 **Battle Ridge R** 24.84 342 IAmb IAmb 01 08 42.2
comp=Z,28nm,0.7s
OK033 **Mehan** 24.93 342 IAmb IAmb 01 08 45.3
comp=Z,22nm,0.6s
MGMO **Mountain Grove** 24.93 351 P **P** **01 08 42.7 -0.2**
CZSB **Cruzeiro do Su** 24.97 143 P **P** **01 08 45.0 +1.6**
CZSB IAmb IAmb 01 08 49.5
comp=Z,24nm,1.1s
QUOK **Quay** 24.98 342 **P** **01 08 43.4 +0.1**
QUOK IAmb IAmb 01 08 45.8
comp=Z,27nm,0.8s
MNTX **Cornudas Mount** 25.15 322 P **P** **01 08 45.1 +0.1**
baz=136,SNR=10
SIUC **Southern Illin** 25.19 357 IAmb IAmb 01 08 45.7
comp=Z,19nm,0.8s
OK048 **Pawnee Station** 25.27 342 IAmb IAmb 01 08 48.8
comp=Z,37nm,0.9s
OK051 **E0350 and S346** 25.32 343 IAmb IAmb 01 08 49.4
comp=Z,40nm,1.0s
S51A **Beattyville** 25.34 8 IAmb IAmb 01 08 50.7
comp=Z,15nm,0.6s
MSTX **Muleshoe** 25.46 330 P **P** **01 08 48.4 +0.6**
MSTX **Muleshoe** 25.46 330 P **P** **01 08 47.8 0.0**
baz=144,SNR=23
BLA **Blacksburg** 25.49 14 IAmb IAmb 01 08 49.9
comp=Z,18nm,0.8s
BLA **Blacksburg** 25.49 14 P **P** **01 08 48.6 +0.7**
baz=196,SNR=5.5
T57A **Hurt** 25.57 16 IAmb IAmb 01 08 50.9
comp=Z,30nm,1.2s
T35A **Sooner Cattle** 25.62 343 IAmb IAmb 01 08 52.9
comp=Z,15nm,0.6s
CROK **Carrier** 25.68 341 IAmb IAmb 01 08 49.7
comp=Z,14nm,0.7s
CCM **Cathedral Cave** 25.69 353 P **P** **01 08 49.2 -0.5**
CCM IAmb IAmb 01 09 10.6
comp=Z,17nm,0.8s
CCM **Cathedral Cave** 25.69 353 P **P** **01 08 49.0 -0.7**
baz=172
WCI **Wyandotte Cave** 25.69 2 P **P** **01 08 50.1 +0.4**
WCI IAmb IAmb 01 08 51.0
comp=Z,22nm,0.7s
WCI **pP** **01 09 10.6 +1.9**
WCI **Wyandotte Cave** 25.69 2 P **P** **01 08 49.7 -0.1**
baz=183
AMTX **Amarillo** 25.69 333 P **P** **01 08 50.4 +0.5**
baz=147
R49A **Shelbyville** 25.82 5 IAmb IAmb 01 08 51.3
comp=Z,7.6nm,0.5s
OK038 **Wend E0370** 25.91 339 IAmb IAmb 01 08 54.5
comp=Z,30nm,0.8s
OK032 **Salt Plains WL** 26.03 340 IAmb IAmb 01 08 55.8
comp=Z,17nm,0.8s
R40A **Maddies Statio** 26.05 352 IAmb IAmb 01 08 52.9
comp=Z,14nm,0.6s
KAN17 **Caldwell West** 26.11 341 IAmb IAmb 01 08 53.5
comp=Z,15nm,0.6s
OLIL **Olney** 26.17 359 IAmb IAmb 01 08 54.5
comp=Z,17nm,0.8s
R53A **Hurricane** 26.26 10 IAmb IAmb 01 08 56.5
comp=Z,16nm,0.6s
Q44A **Meyer Farm, Va** 26.36 358 P **P** **01 08 55.1 -0.6**
Q44A IAmb IAmb 01 08 56.0
comp=Z,22nm,0.7s
Q51A **Peebles** 26.73 7 P **P** **01 08 59.7 +0.6**
Q52A **Bidwell** 26.83 9 P **P** **01 09 00.7 +0.8**
Q52A IAmb IAmb 01 09 02.1
comp=Z,24nm,0.8s
P49A **Miami Univ. Ec** 27.09 5 P **P** **01 09 02.0 -0.3**
baz=186
121A **Cookes Peak, D** 27.20 321 P **P** **01 09 03.5 -0.1**
baz=133,SNR=7.3
P51A **Williamsport** 27.22 8 IAmb IAmb 01 09 04.0
comp=Z,12nm,0.5s
CBN **Corbin Frederi** 27.23 18 P **P** **01 09 04.3 +0.7**
baz=202
P53A **Whipple** 27.48 11 P **P** **01 09 06.8 +1.0**
P52A **Corning** 27.50 9 IAmb IAmb 01 09 07.0
comp=Z,20nm,0.7s
P52A **Corning** 27.50 9 P **P** **01 09 06.3 +0.3**
baz=192,SNR=9.7
P38A **Dawn** 27.55 350 P **P** **01 09 06.0 -0.4**
P38A IAmb IAmb 01 09 07.3
comp=Z,18nm,0.7s
O44A **Mansfield** 27.59 359 IAmb IAmb 01 09 06.9
comp=Z,16nm,0.6s
KSU1 **Kansas State U** 27.70 345 IAmb IAmb 01 09 08.2
comp=Z,27nm,1.1s
KSU1 **Kansas State U** 27.70 345 P **P** **01 09 07.5 -0.2**
baz=161,SNR=5.7
O49A **Covington** 27.77 5 IAmb IAmb 01 09 09.2
comp=Z,13nm,0.7s

O48B **Farmland** 27.78 4 IAmb IAmb 01 09 08.3
comp=Z,9.5nm,0.6s
O48B **Farmland** 27.78 4 P **P** **01 09 07.8 -0.6**
baz=185
SFIN **Lafayette** 27.81 1 IAmb IAmb 01 09 08.5
comp=Z,13nm,0.7s
SFIN **Lafayette** 27.81 1 P **P** **01 09 07.6 -1.1**
baz=181,SNR=5.2
MCWV **Mont Chateau** 27.96 13 P **P** **01 09 09.8 -0.2**
baz=196
O52A **Adamsville** 28.02 10 IAmb IAmb 01 09 11.6
comp=Z,23nm,0.8s
HDIL **Hopedale** 28.02 357 P **P** **01 09 10.6 0.0**
baz=176
DUN6 **Lazy B Ranch** 28.03 319 IAmb IAmb 01 09 17.9
comp=Z,24nm,1.0s
ANMO **Albuquerque** 28.13 326 P **P** **01 09 13.3 +1.4**
ANMO **Albuquerque** 28.13 326 P **P** **01 09 12.5 +0.5**
baz=138
P57A **Homestead Farm** 28.24 16 P **P** **01 09 13.6 +1.1**
P57A IAmb IAmb 01 09 14.7
comp=Z,17nm,0.7s
P57A **pP** **01 09 32.7 +0.9**
O53A **New Philadelph** 28.26 10 P **P** **01 09 13.5 +0.7**
O53A **pP** **01 09 31.6 -0.3**
O53A **New Philadelph** 28.26 10 P **P** **01 09 13.4 +0.7**
baz=193,SNR=11
O54A **Avella** 28.35 12 IAmb IAmb 01 09 14.5
comp=Z,13nm,0.6s
CBKS **Cedar Bluff** 28.36 340 P **P** **01 09 13.9 +0.2**
baz=154
N49A **Columbus Grove** 28.52 6 IAmb IAmb 01 09 16.2
comp=Z,18nm,0.6s
T25A **Trinidad** 28.80 331 P **P** **01 09 19.7 +1.9**
baz=144
N53A **Lisbon** 28.87 11 IAmb IAmb 01 09 19.4
comp=Z,14nm,0.7s
TUC **Tucson** 28.99 317 P **P** **01 09 20.5 +1.1**
TUC **Tucson** 28.99 317 P **P** **01 09 20.8 +1.3**
baz=128
M50A **Fremont** 29.11 7 IAmb IAmb 01 09 20.8
comp=Z,14nm,0.6s
N35A **Tabor** 29.15 348 IAmb IAmb 01 09 21.9
comp=Z,24nm,0.9s
MVL **Millersville** 29.19 18 IAmb IAmb 01 09 22.7
comp=Z,20nm,1.3s
SSPA **Standing Stone** 29.35 15 P **P** **01 09 23.1 +0.7**
SSPA IAmb IAmb 01 09 23.8
comp=Z,10.0nm,0.6s
SSPA **Standing Stone** 29.35 15 P **P** **01 09 23.2 +0.8**
baz=200
L48A **N Adams** 29.51 5 IAmb IAmb 01 09 23.4
comp=Z,10nm,0.8s
M53A **WI Miller and** 29.51 11 IAmb IAmb 01 09 43.1
comp=Z,13nm,1.1s
M53A **WI Miller and** 29.51 11 P **P** **01 09 24.3 +0.5**
baz=194
L40A **Anamosa** 29.66 355 P **P** **01 09 24.5 -0.6**
L40A IAmb IAmb 01 09 46.2
comp=Z,15nm,1.0s
SDCO **Great Sand Dun** 29.80 331 P **P** **01 09 27.7 +0.9**
baz=143
N58A **Sunbury** 29.86 17 IAmb IAmb 01 09 28.7
comp=Z,12nm,0.8s
W18A **Petrified Fore** 30.14 322 P **P** **01 09 30.4 +0.7**
baz=133
214A **Organ Pipe Nat** 30.18 314 P **P** **01 09 30.3 +0.4**
baz=124
M57A **Sunshine Farm,** 30.21 16 IAmb IAmb 01 09 31.6
comp=Z,14nm,0.8s
BGNE **Belgrade** 30.26 344 P **P** **01 09 30.9 +0.4**
baz=159
ERPA **Erie** 30.29 11 P **P** **01 09 31.3 +0.6**
baz=195
JFWS **Jewell Farm** 30.43 356 P **P** **01 09 31.4 -0.5**
baz=175
S22A **4UR Ranch, Cre** 30.45 329 IAmb IAmb 01 09 35.0
comp=Z,10.0nm,0.6s
S22A **4UR Ranch, Cre** 30.45 329 P **P** **01 09 33.3 +0.7**
baz=141,SNR=17
Q24A **Divide** 30.62 333 P **P** **01 09 34.8 +0.7**
baz=145
PAL **Palisades** 30.89 21 P **P** **01 09 36.2 +0.2**
baz=207
MVCO **Mesa Verde** 30.92 326 IAmb IAmb 01 09 39.5
comp=Z,8.8nm,0.7s
MVCO **Mesa Verde** 30.92 326 P **P** **01 09 37.0 +0.4**
baz=138,SNR=12
OGNE **Ogallala** 31.05 339 P **P** **01 09 38.5 +1.0**
baz=152
BINY **Binghamton** 31.32 17 IAmb IAmb 01 09 41.2
comp=Z,18nm,0.9s
BINY **Binghamton** 31.32 17 P **P** **01 09 40.6 +0.7**
baz=202
WUAZ **Wupatki** 31.40 321 P **P** **01 09 41.8 +0.9**
baz=131
ISCO **Idaho Springs** 31.51 333 P **P** **01 09 42.9 +1.0**
baz=145
SMCO **Snowmass** 31.64 331 IAmb IAmb 01 09 45.5
comp=Z,8.1nm,0.8s
ECSD **EROS Data Cent** 32.10 348 IAmb IAmb 01 09 47.0
comp=Z,13nm,0.8s
SAML **Samuel** 32.31 130 P **P** **01 09 48.8 0.0**
PDMCI **Parker Dam,Lak** 32.43 317 P **P** **01 09 51.4 +1.7**
baz=126
N23A **Red Feather La** 32.55 334 P **P** **01 09 52.1 +1.1**
baz=145
L61B **Northampton** 32.59 21 P **P** **01 09 51.4 +0.4**
baz=208
SPMN **Marine on St.** 32.95 353 P **P** **01 09 53.1 -0.9**
SPMN **pP** **01 10 13.7 +0.3**
SPMN **Marine on St.** 32.95 353 P **P** **01 09 52.8 -1.2**
baz=171,SNR=7.6
BC3 **Big Chuckawall** 32.97 314 P **P** **01 09 55.0 +0.5**
baz=123
O20A **White River Ci** 33.00 330 P **P** **01 09 55.9 +1.1**
baz=141,SNR=24
SADO **Sadowa** 33.01 11 P **P** **01 09 54.2 -0.4**
SADO pP **pP** **01 10 13.2 -0.7**
IRM **Iron Mountain** 33.03 315 P **P** **01 09 55.7 +0.7**
baz=124
KNB **Kanab** 33.27 322 IAmb IAmb 01 10 00.7
comp=Z,13nm,1.4s
SUSD **Miller** 33.31 345 P **P** **01 09 56.9 -0.3**
baz=160
BELC **Belle Mtn. Jos** 33.53 314 P **P** **01 09 59.8 +0.3**
baz=123
COWI **Conover** 33.55 358 IAmb IAmb 01 09 58.7
comp=Z,7.8nm,0.7s
MTPU **Mount Pierson** 33.57 324 IAmb IAmb 01 10 03.8
comp=Z,8.7nm,0.7s
Q16A **Castle Valley** 33.61 326 IAmb IAmb 01 10 03.3
comp=Z,9.3nm,0.7s
P18A **Preston Nutter** 33.62 328 P **P** **01 10 01.1 +0.8**
P18A IAmb IAmb 01 10 02.5
comp=Z,11nm,0.8s
P18A **PcP** **01 12 40.1 +1.2**
TPFO **Pinon Flats** 33.64 313 P **P** **01 10 00.3 -0.1**
baz=122
PFO **Pinyon Flats O** 33.65 313 P **P** **01 10 01.3 +0.8**
baz=122
F36A **Milaca** 33.66 353 IAmb IAmb 01 09 59.6
comp=Z,8.1nm,0.7s
GMRC **Granite Mounta** 33.73 316 P **P** **01 10 01.9 +0.7**
baz=124
RWWY **Rawlins** 33.75 333 IAmb IAmb 01 10 03.3
comp=Z,17nm,1.1s
SZCU **Shurtz Canyon** 33.80 322 IAmb IAmb 01 10 04.5
comp=Z,6.7nm,0.8s
TMUT **Trail Mountain** 33.90 326 P **P** **01 10 03.4 +0.7**
TMUT IAmb IAmb 01 10 07.2
comp=Z,7.0nm,0.7s
TMUT **PcP** **01 12 40.1 +0.5**
K22A **Casper** 34.24 335 IAmb IAmb 01 10 07.3
comp=Z,9.1nm,1.1s
K22A **Casper** 34.24 335 P **P** **01 10 06.0 +0.4**
baz=146
LBNH **Lisbon** 34.43 20 P **P** **01 10 06.3 -0.6**
baz=208
RSSD **Black Hills** 34.55 339 P **P** **01 10 08.5 +0.4**
RSSD **Black Hills** 34.55 339 P **P** **01 10 08.6 +0.4**
baz=151
CTU **Camp Tracy** 35.19 327 IAmb IAmb 01 10 15.8
comp=Z,11nm,0.8s
MDP **Montagnes des** 35.34 99 LR LR 01 26 16.0
comp=Z,65nm,18.8s,baz=20,slow=39
TPNV **Topopah Spring** 35.37 319 P **P** **01 10 15.9 +0.6**

baz=126
EDW2 Edwards Air Fo 35.40 314 P P 01 10 15.8 +0.4
baz=122
DUG Dugway, Tooele 35.41 326 IAmb IAmb 01 10 18.5
comp=Z,7.0nm,0.8s
DUG Dugway, Tooele 35.41 326 P P 01 10 16.5 +1.0
baz=134,SNR=9.8
SPR3 Spring Creek 3 35.46 323 P P 01 10 17.5 +1.2
SPR3 IAmb IAmb 01 10 18.3
comp=Z,6.9nm,0.8s
SPR3 PcP 01 12 45.0 +0.7
S11A Rachel 35.47 320 IAmb IAmb 01 10 19.4
comp=Z,13nm,0.9s
LRMC Laurel Mtn Rad 35.50 315 P P 01 10 15.6 -0.8
baz=123
EYMN Ely 35.52 356 P P 01 10 15.1 -1.2
baz=174
BW06 Boulder Array 35.67 332 IAmb IAmb 01 10 19.1
comp=Z,6.3nm,0.7s
BW06 Boulder Array 35.67 332 P P 01 10 18.6 +0.7
baz=141,SNR=13
PD31 Pinedale Array 35.67 332 IAmb IAmb 01 10 19.1
comp=Z,5.6nm,0.7s
PDAR Pinedale Array 35.67 332 P P 01 10 18.2 +0.4
comp=Z,5.6nm,0.7s,baz=128,slow=9.9,SNR=63
PDAR pP pP 01 10 37.8 +0.4
comp=Z,2.2nm,0.9s,baz=137,slow=12,SNR=2.6
PDAR PcP PcP 01 12 44.5 -0.2
comp=Z,0.4nm,0.4s,baz=106,slow=4.8,SNR=5.1
comp=Z,5.6nm,0.7s
MPMC Manual Prospec 35.68 316 P P 01 10 17.7 -0.3
baz=124
SNCC San Nicolas Is 35.69 311 P P 01 10 17.9 -0.1
baz=118
HWUT Hardware Ranch 35.76 329 P P 01 10 19.6 +1.0
HWUT PcP 01 12 45.3 +0.4
R11B Troy Canyon, C 35.80 321 P P 01 10 20.3 +1.3
baz=129,SNR=6.4
BGU Big Grassy Mou 36.04 327 IAmb IAmb 01 10 23.2
comp=Z,16nm,1.3s
GRAC Grapevine Rang 36.13 318 P P 01 10 23.5 +1.8
baz=125
B35A Bob, Littlefor 36.15 353 IAmb IAmb 01 10 20.9
comp=Z,4.9nm,0.5s
PKME Peaks-Kenny Pk 36.25 22 P P 01 10 22.5 0.0
baz=211
HVU Hansel Valley 36.51 328 IAmb IAmb 01 10 27.8
comp=Z,8.5nm,0.8s
MDND Maddock 36.67 347 P P 01 10 25.9 -0.1
MDND pP pP 01 10 45.8 +0.3
MDND Maddock 36.67 347 P P 01 10 26.0 -0.1
baz=160,SNR=6.8
GO01 Chusmiza 36.74 150 IAmb IAmb 01 10 36.5
comp=Z,7.6nm,0.6s
FXWY Fox Creek 37.02 331 IAmb IAmb 01 10 31.0
comp=Z,6.5nm,0.8s
ELK Elko 37.14 324 IAmb IAmb 01 10 32.8
comp=Z,8.6nm,0.9s
IMW Indian Meadow 37.18 332 P P 01 10 31.9 +1.1
IMW IAmb IAmb 01 10 32.3
comp=Z,7.7nm,0.7s
IMW PcP 01 12 49.7 +0.4
H17A Grant Village 37.40 333 IAmb IAmb 01 10 57.1
comp=Z,9.1nm,1.1s
H17A Grant Village 37.40 333 P P 01 10 33.4 +0.8
baz=141
RLMT Red Lodge 37.41 335 IAmb IAmb 01 10 33.9
comp=Z,8.2nm,0.7s
RLMT Red Lodge 37.41 335 P P 01 10 33.1 +0.5
baz=144,SNR=13
LKWY Lake 37.45 333 IAmb IAmb 01 10 44.0
comp=Z,9.0nm,1.2s
YMP Mirror Lake Pl 37.48 333 IAmb IAmb 01 11 06.0
comp=Z,9.5nm,0.9s
LAO LASA Array 37.54 339 IAmb IAmb 01 10 34.8
comp=Z,8.4nm,0.9s
LAO LASA Array 37.54 339 P P 01 10 34.3 +0.8
baz=149
NVAR Mina Array Bea 37.56 319 P P 01 10 36.1 +2.1
comp=Z,4.4nm,0.8s,baz=128,slow=7.3,SNR=37
NVAR pP pP 01 10 55.5 +1.9
comp=Z,2.8nm,1.1s,baz=129,slow=7.2,SNR=2.8
NVAR PcP PcP 01 12 51.6 +1.2
comp=Z,1.7nm,0.6s,baz=133,slow=3.8,SNR=10
NVAR ScP ScP 01 16 32.7 +2.2
comp=Z,0.8nm,0.7s,baz=126,slow=4.6,SNR=6.0
comp=Z,4.4nm,0.8s
LHV Little Huntoon 37.59 319 IAmb IAmb 01 10 37.2
comp=Z,8.7nm,0.7s
YNR Norris Junctio 37.70 333 IAmb IAmb 01 10 57.9
comp=Z,12nm,1.3s
KVN Kaiserville 37.79 320 IAmb IAmb 01 10 38.1
comp=Z,5.5nm,0.8s
YHH Holmes Hill 37.83 333 P P 01 10 37.7 +1.4
LMQ La Malbaie 37.88 19 IAmb IAmb 01 10 37.2
comp=Z,11nm,0.7s
YHL Hebgen Lake 38.03 333 IAmb IAmb 01 10 41.4
comp=Z,10.0nm,0.9s
BMN Battle Mountai 38.09 322 IAmb IAmb 01 10 40.8
comp=Z,11nm,1.0s
ULM Lac du Bonnet 38.28 351 P P 01 10 37.9 -1.7
comp=Z,14nm,0.6s,baz=168,slow=9.1,SNR=58
ULM LR LR 01 27 28.2
comp=Z,149nm,18.3s,baz=76,slow=38
comp=Z,14nm,0.6s
DGMT Dagmar 38.45 342 P P 01 10 41.7 +0.6
DGMT pP pP 01 11 01.6 +0.8
DGMT Dagmar 38.45 342 P P 01 10 41.6 +0.6
baz=153,SNR=10
HLID Hailey 38.62 328 IAmb IAmb 01 10 44.6
comp=Z,5.9nm,0.8s
HLID Hailey 38.62 328 P P 01 10 43.9 +1.1
baz=135,SNR=13
BOZ Bozeman (W) 38.80 333 IAmb IAmb 01 10 46.2
comp=Z,9.2nm,0.8s
BOZ Bozeman (W) 38.80 333 P P 01 10 45.3 +1.0
baz=141,SNR=19
PTLB Pontes e Lacer 39.57 134 P P 01 10 50.8 0.0
EGMT Eagleton 39.96 337 P P 01 10 54.5 +0.7
EGMT Eagleton 39.96 337 P P 01 10 54.5 +0.7
baz=145,SNR=8.8
WVOR Wild Horse Val 40.17 324 IAmb IAmb 01 10 57.7
comp=Z,10.0nm,0.8s
ORV Oroville 40.25 318 P P 01 10 58.8 +2.6
PLID Pearl Lake 40.51 329 P P 01 10 58.8 +0.2
PLID IAmb IAmb 01 10 59.4
comp=Z,16nm,1.2s
J08A Circle Bar Ran 40.67 325 P P 01 11 00.5 +0.8
J08A IAmb IAmb 01 11 01.2
comp=Z,8.6nm,1.0s
I07A Izee 41.70 325 P P 01 11 08.6 +0.4
F10A Beach Ranch, E 41.74 329 IAmb IAmb 01 11 11.2
comp=Z,11nm,0.8s
PINE Pine Mountain 42.34 324 IAmb IAmb 01 11 14.5
comp=Z,9.3nm,0.8s
E09A Wood Farm, Sta 42.58 329 IAmb IAmb 01 11 17.4
comp=Z,8.0nm,1.0s
I04A Tendick Farm, 43.20 323 IAmb IAmb 01 11 21.8
comp=Z,10nm,0.9s
HAWA Hanford 43.21 328 IAmb IAmb 01 11 21.3
comp=Z,8.9nm,0.8s
NEW Newport 43.30 331 P P 01 11 20.6 -0.4
baz=136
D08A Wollman Farm, 43.34 329 P P 01 11 21.9 +0.7
H04A Detroit Lake 43.59 324 IAmb IAmb 01 11 26.7
comp=Z,6.7nm,0.8s
FFC Flin Flon 43.64 348 P P 01 11 23.5 0.0
FFC IAmb IAmb 01 11 24.2
comp=Z,11nm,0.7s
HOOD Mount Hood Mea 43.67 325 P P 01 11 23.4 -0.7
HOOD pP 01 11 44.5 +0.3
MXC Moxie City 43.73 327 P P 01 11 23.8 -0.7
MXC pP 01 11 43.2 -1.2
DRLN Deer Lake 44.33 28 P P 01 11 28.7 -0.5
DRLN IAmb IAmb 01 11 29.6
comp=Z,18nm,0.9s
LTY Liberty 44.37 328 IAmb IAmb 01 11 30.6
comp=Z,7.9nm,0.8s
RPN Rapa Nui 44.62 208 LR LR 01 25 03.0
comp=Z,65nm,21.9s,baz=284,slow=29
LON Longmire 44.64 327 P P 01 11 32.0 +0.3
SCHQ Schefferville 45.33 17 P P 01 11 36.0 -1.0
SCHQ Schefferville 45.33 17 P P 01 11 35.9 -1.2
comp=Z,34nm,0.6s,baz=217,slow=6.2,SNR=135
SCHQ LR LR 01 30 27.9
comp=Z,124nm,19.4s,baz=74,slow=36
GNW Green Mountain 45.69 327 IAmb IAmb 01 11 40.2
comp=Z,7.4nm,0.7s
BDFB Brasilia 48.15 124 P P 01 11 59.3 -0.4
comp=Z,1.6nm,0.5s,baz=53,slow=5.1,SNR=3.7
comp=Z,1.6nm,0.5s
CPUP Villa Florida 48.55 143 P P 01 12 02.6 +0.1
CPUP Villa Florida 48.55 143 P P 01 12 02.5 +0.1
comp=Z,4.1nm,0.7s,baz=335,slow=7.4,SNR=12
CPUP PcP PcP 01 13 28.2 +1.1
comp=Z,2.4nm,0.7s,baz=259,slow=4.4,SNR=4.6
comp=Z,4.1nm,0.7s
BBB Bella Bella 51.20 329 LR LR 01 36 26.3
comp=Z,53nm,19.3s,baz=66,slow=39
ITQB Itaqui 51.48 145 P P 01 12 25.2 +0.7
FRB Frobisher Bay 52.95 11 LR LR 01 34 59.2
comp=Z,173nm,18.2s,baz=60,slow=36
YKA Yellowknife Ar 53.55 345 P P 01 12 38.4 -1.0
comp=Z,3.3nm,0.8s,baz=137,slow=7.7,SNR=53
YKA pP pP 01 12 59.2 -0.8
comp=Z,2.0nm,0.8s,baz=139,slow=7.5,SNR=7.6
YKA PcP PcP 01 13 44.2 -0.8
comp=Z,1.0nm,0.6s,baz=142,slow=3.9,SNR=8.8
YKA LR LR 01 38 20.7
comp=Z,105nm,18.7s,baz=136,slow=39
comp=Z,3.3nm,0.8s
KOTAN Kotaneelee Air 54.61 339 P P 01 12 46.8 -0.4
baz=135
PLCA Paso Flores 55.25 164 P P 01 12 54.0 +1.9
comp=Z,2.0nm,0.7s,baz=336,slow=12,SNR=7.4
comp=Z,2.0nm,0.7s
DLBC Dease Lake 55.81 335 P P 01 12 56.3 +0.4
baz=127
U33K Whale Pass 55.85 331 P P 01 12 56.1 0.0
baz=123
TAOE Nuku Hiva Isla 56.29 250 eLR LR 01 29 32.4
comp=Z,111nm,25.9s
WTLY Watson Lake, Y 56.36 337 P P 01 12 60.0 +0.2
baz=130
WRGLY Wrigley 56.64 342 P P 01 13 01.1 -0.5
baz=137
R33M Jennings River 56.78 335 P P 01 13 02.6 -0.3
baz=127
Q32M Nakina River 57.06 334 P P 01 13 04.7 -0.2
baz=125
TGTN Hyland Airport 57.08 338 P P 01 13 04.4 -0.5
baz=131
N32M Quiet Lake 58.67 336 P P 01 13 15.7 -0.3
baz=126
O30N Mendenhall 59.68 335 P P 01 13 22.5 -0.4
baz=122
P30M Million Dollar 59.70 334 P P 01 13 22.9 -0.2
baz=121
P29M Windy Craggy 59.79 333 P P 01 13 24.2 +0.5
baz=120
HYT Haines Junctio 60.30 334 P P 01 13 27.1 -0.2
baz=121
PNL Peninsula 60.55 333 P P 01 13 29.5 +0.6
baz=118
YUK6 Outpost Mounta 60.72 334 P P 01 13 30.5 +0.2
baz=120
YUK4 Talbot Arm 61.04 335 P P 01 13 33.3 +0.9
baz=120
C36M Pastuk 61.36 346 P P 01 13 32.8 -1.3
baz=139
YUK8 Steele Glacier 61.48 334 P P 01 13 35.3 -0.2
baz=119
M29M Somme Creek 61.52 336 IAmb IAmb 01 13 36.3
comp=Z,7.4nm,0.9s
M29M Somme Creek 61.52 336 P P 01 13 35.3 -0.2
baz=120
L29M L29M 61.73 337 P P 01 13 36.8 -0.1
baz=121
I30M Mount Dempster 62.22 339 IAmb IAmb 01 13 41.1
comp=Z,4.9nm,1.1s
I30M Mount Dempster 62.22 339 P P 01 13 40.1 -0.2
baz=124
RES Resolute Bay 62.34 358 IAmb IAmb 01 13 39.7
comp=Z,3.4nm,0.6s
G31M Satah River 62.51 341 IAmb IAmb 01 13 42.5
comp=Z,6.7nm,0.8s
G31M Satah River 62.51 341 P P 01 13 41.5 -0.4
baz=127
F31M Tsiigehtchic 62.66 342 P P 01 13 42.8 -0.1
baz=128
CRQE Cirque 62.68 333 P P 01 13 42.6 -0.7
baz=115
DAWY Dawson 62.70 337 P P 01 13 42.6 -0.8
baz=120
M27K Edge Creek, AK 62.87 335 P P 01 13 44.3 -0.3
baz=117
MCARA McCarthy VSAT 62.92 334 P P 01 13 44.4 -0.4
baz=116
EPYK Eagle Plains 62.99 340 IAmb IAmb 01 14 06.7
comp=Z,7.3nm,1.1s
EPYK Eagle Plains 62.99 340 P P 01 13 44.2 -1.0
baz=124
INK Inuvik 63.13 343 P P 01 13 45.6 -0.4
INK IAmb IAmb 01 13 46.4
comp=Z,6.1nm,1.0s
INK Inuvik 63.13 343 P P 01 13 45.8 -0.2
baz=128,SNR=5.2
G30M tAoh Zraii Nji 63.17 341 P P 01 13 45.7 -0.7
baz=125
L27K Beaver Creek, 63.17 336 IAmb IAmb 01 14 08.1
comp=Z,5.2nm,0.9s
L27K Beaver Creek, 63.17 336 P P 01 13 46.0 -0.5
baz=117
F30M Barrier River 63.40 341 P P 01 13 47.8 0.0
baz=126
BMRM Bremner River 63.45 333 P P 01 13 48.1 -0.2
baz=114
H29M Whitestone 63.46 339 P P 01 13 48.2 0.0
baz=122
A36M Sachs Harbour 63.60 348 IAmb IAmb 01 13 49.3
comp=Z,7.5nm,0.9s
A36M Sachs Harbour 63.60 348 P P 01 13 47.6 -1.5
baz=138,SNR=12
I28M Miner Creek 63.61 338 P P 01 13 48.5 -0.8
baz=125
N25K Chitina, Valde 63.70 333 P P 01 13 49.5 -0.6
baz=114
K27K Chicken 63.72 336 P P 01 13 50.1 +0.1
baz=118
L26K Log Cabin Wild 63.77 335 P P 01 13 49.8 -0.6
baz=116
EYAK Cordova Ski Ar 63.80 332 P P 01 13 50.8 +0.3
baz=112
KLU Klutina 64.24 333 P P 01 13 53.3 -0.2
baz=113
I27K Kandik River 64.29 338 P P 01 13 53.2 -0.6
baz=119
SCRK Sand Creek 64.45 336 P P 01 13 54.7 -0.2
baz=116
E29M Blow River 64.50 342 P P 01 13 54.9 -0.1
baz=124
J26L Joseph Creek 64.51 337 P P 01 13 54.9 -0.4
baz=116
H27K Steamboat Moun 64.57 339 P P 01 13 55.2 -0.3
baz=119
M24K Tolsona, Glenn 64.59 334 P P 01 13 55.3 -0.5
baz=113
PAX Paxson 64.63 335 P P 01 13 55.0 -1.1
baz=114
F28M Old Crow 64.70 340 IAmb IAmb 01 14 18.8
comp=Z,14nm,1.2s
F28M Old Crow 64.70 340 P P 01 13 56.5 0.0
baz=121,SNR=11
I26K Coal Creek Min 64.72 337 P P 01 13 56.5 -0.1
baz=117
SCM Sheep Creek Mo 64.99 333 P P 01 13 58.1 -0.3
baz=112
K24K Donnelly Dome 65.10 335 P P 01 13 58.2 -0.8
baz=114
E28M Babbage River 65.12 341 P P 01 13 58.8 -0.3
baz=122
M23K Glacier View 65.15 333 P P 01 13 58.4 -1.0
baz=111
J25K Salcha River, 65.27 336 P P 01 13 59.5 -0.6
baz=115
KNK Knik Glacier 65.34 332 P P 01 14 00.0 -0.6
baz=110
WAT6 Susitna Watana 65.44 334 P P 01 14 00.8 -0.7
baz=111
O22K Cooper Landing 65.61 331 P P 01 14 01.5 -0.8
baz=109
GHO Glory Hole Cre 65.68 333 IAmb IAmb 01 14 03.4
comp=Z,8.5nm,0.8s
G26K Porcupine Rive 65.70 339 P P 01 14 01.9 -0.9
baz=117
PRP Porcupine Dome 65.71 337 P P 01 14 02.4 -0.7
baz=115
HDA Harding Lake 65.81 336 P P 01 14 03.0 -0.6
baz=113
RC01 Rabbit Creek A 65.82 332 P P 01 14 02.7 -0.9
baz=109
D27M Malcolm River 65.90 342 IAmb IAmb 01 14 04.7
comp=Z,10.0nm,1.2s
D27M Malcolm River 65.90 342 P P 01 14 03.8 -0.3
baz=121
ILAR Eielson Array 65.93 336 P P 01 14 03.4 -1.0
comp=Z,2.1nm,0.7s,baz=161,slow=4.8,SNR=24
ILAR pP pP 01 14 24.1 -1.6
comp=Z,2.9nm,1.0s,baz=114,slow=4.9,SNR=8.4
comp=Z,2.1nm,0.7s
FIS Fire Island 66.06 332 P P 01 14 05.9 +0.8
F26K Sheenjek River 66.17 340 P P 01 14 05.4 -0.4
baz=117
BMAR Burnt Mountain 66.20 339 P P 01 14 06.3 +0.3
RND Reindeer 66.22 334 IAmb IAmb 01 14 06.8
comp=Z,11nm,0.8s
POKR Poker Plat Res 66.28 336 P P 01 14 05.8 -0.8
baz=113
MCK McKinley 66.37 335 P P 01 14 06.5 -0.7
baz=111
SUA Susitna One 66.40 332 P P 01 14 07.0 -0.5
baz=108
F25K Christian Rive 66.64 339 P P 01 14 09.0 +0.1
baz=116
H24K Noodor Dome 66.73 337 P P 01 14 09.5 +0.1
baz=113
TRF Thorofare Moun 66.84 334 IAmb IAmb 01 14 31.1
comp=Z,11nm,1.1s
TRF Thorofare Moun 66.84 334 P P 01 14 10.1 -0.2
baz=109
E25K Arctic Village 66.84 340 P P 01 14 10.5 +0.3
baz=116,SNR=5.8
SKT Skwentna 66.91 333 P P 01 14 10.7 0.0
baz=108
G24K Hadweenzic Riv 66.92 338 P P 01 14 10.6 0.0
baz=113
N20K Mount Spurr 66.99 332 P P 01 14 10.2 -1.1
baz=107
I23K Minto, Yukon-K 67.05 336 P P 01 14 11.1 -0.3
baz=111
Q19K Cape Douglas, 67.08 329 P P 01 14 11.4 -0.4
baz=104
BPAW Bear Paw Mtn. 67.34 335 IAmb IAmb 01 14 33.8
comp=Z,9.0nm,1.1s
BPAW Bear Paw Mtn. 67.34 335 P P 01 14 12.7 -0.7
baz=109,SNR=5.6
F24K Squaw Lake 67.39 339 P P 01 14 13.3 -0.4
baz=113
MLY Manley 67.55 336 IAmb IAmb 01 14 14.7
comp=Z,4.9nm,0.7s
MLY Manley 67.55 336 P P 01 14 13.5 -1.3
baz=110,SNR=6.6
CAST Castle Rocks 67.59 334 P P 01 14 13.6 -1.3
baz=108
M20K Styx River 67.61 332 P P 01 14 14.1 -1.1
baz=106
D25K Kavik River 67.63 341 IAmb IAmb 01 14 16.2
comp=Z,10nm,0.8s
D25K Kavik River 67.63 341 P P 01 14 14.9 -0.3
baz=116
O19K Port Alsworth 67.72 330 P P 01 14 15.0 -0.7
baz=104
E24K Your Creek 67.82 339 P P 01 14 15.8 -0.5
baz=113
CHUM Lake Minchumin 67.83 334 P P 01 14 15.6 -0.8
baz=108
G23K Bananza Creek 67.86 338 P P 01 14 16.7 +0.1
baz=111
PPT2 Papeete2 68.03 245 eLR LR 01 34 45.8
comp=Z,74nm,25.8s
O18K Koktuh Hills 68.08 330 P P 01 14 17.0 -1.1
baz=103
H22K Ishtalitna Cre 68.09 337 P P 01 14 17.1 -1.0
baz=109
I21K Tanana 68.10 336 P P 01 14 17.0 -1.0
baz=108
COLD Coldfoot 68.11 338 P P 01 14 18.9 +0.8
baz=111,SNR=6.2
L20K Farewell, AK 68.11 333 P P 01 14 17.0 -1.3
baz=106
E23K Chandalar 68.21 339 P P 01 14 19.3 +0.5
baz=112
D24K Happy Valley 68.36 340 P P 01 14 19.3 -0.3
baz=113
TOLK Toolik Lake Re 68.41 340 P P 01 14 19.8 -0.3
baz=112
K20K Telida 68.43 334 P P 01 14 18.9 -1.3
baz=106
G22K Bettles 68.48 338 P P 01 14 20.8 +0.4
baz=110
C24K Franklin Bluff 68.54 341 P P 01 14 20.9 +0.2
baz=113
P17K Kvichak River 68.54 329 P P 01 14 20.4 -0.6
baz=102
H21K Melozitna Rive 68.58 336 P P 01 14 19.5 -1.5
baz=108
J20K Nowinta River 68.69 334 P P 01 14 20.7 -1.1
baz=106
R16K Pilot Point 68.81 327 P P 01 14 21.4 -1.3
baz=100
D23K Nanushuk River 68.91 340 P P 01 14 22.9 -0.1
baz=111
O17K Koliganek Bris 68.99 330 P P 01 14 23.1 -0.6
baz=102
G21K Allakaket 69.11 337 P P 01 14 23.8 -0.5
baz=107
TTA Tatalina 69.18 333 P P 01 14 23.8 -1.1
baz=104
N17K Nushagak Hills 69.19 330 P P 01 14 24.0 -0.9
baz=102
J19K Poorman 69.27 334 P P 01 14 24.0 -1.3
baz=104
P16K Nushagak River 69.30 329 P P 01 14 25.1 -0.5
baz=100
F21K Alatna River 69.31 338 IAmb IAmb 01 14 27.1
comp=Z,7.5nm,0.8s
F21K Alatna River 69.31 338 P P 01 14 25.6 -0.1
baz=108,SNR=8.8
H20K Anotleneega Mo 69.35 336 P P 01 14 26.5 +0.6
baz=106
O16K Kokwok River B 69.45 329 P P 01 14 26.5 0.0
baz=101
CNBA Chernabura Isl 69.50 324 P P 01 14 27.9 +0.9
D22K Ayikyak River 69.56 339 P P 01 14 26.8 -0.3
baz=109
H19K Roundabout Mou 69.99 336 IAmb IAmb 01 14 29.9
comp=Z,6.5nm,0.9s
H19K Roundabout Mou 69.99 336 P P 01 14 29.4 -0.4
baz=104
F20K Avaraart Lake 70.10 337 P P 01 14 29.9 -0.5
F20K Avaraart Lake 70.10 337 P P 01 14 30.3 -0.1
baz=106
TBI Tubuai 70.14 239 eLR LR 01 35 52.6
comp=Z,240nm,27.5s
C21K Knifeblade Rid 70.36 340 P P 01 14 31.6 -0.4
baz=107
G19K Purcell Mounta 70.40 336 P P 01 14 32.0 -0.3
baz=104
B21K Ikpikpuk River 70.44 340 IAmb IAmb 01 14 33.5
comp=Z,5.6nm,0.8s
B21K Ikpikpuk River 70.44 340 P P 01 14 32.1 -0.3
baz=108
L16K Owhat River 70.50 331 P P 01 14 33.0 0.0
baz=100
E20K Nigu River 70.60 338 P P 01 14 33.6 +0.1
baz=106
H18K Honhosa River 70.69 335 P P 01 14 34.0 -0.1
baz=102
E19K Redstone River 70.78 338 P P 01 14 33.9 -0.6
baz=104
F19K Shaleruckik Mo 70.83 337 P P 01 14 34.1 -0.7
baz=104
D20K Etivluk River 70.87 339 P P 01 14 35.1 -0.1
baz=105
G18K Tagagawik 70.97 336 P P 01 14 35.4 -0.3
baz=102
H17K Granite Mounta 71.29 335 P P 01 14 37.7 0.0
baz=101
J16K Anvik River 71.29 333 P P 01 14 37.5 -0.2
baz=100
D19K Kuna River 71.35 338 P P 01 14 37.7 -0.3
baz=104
B20K Meade River 71.40 340 IAmb IAmb 01 14 39.2
comp=Z,5.8nm,0.8s

B20K	**Meade River**	**71.40**	**340**	P	**P**	**01 14 38.0**	**-0.2**
	baz=105							
F18K	**Selawik**	**71.51**	**336**	P	**P**	**01 14 39.5**	**+0.5**
	baz=102							
M14K	**Bethel**	**71.54**	**330**	P	**P**	**01 14 39.5**	**+0.2**
	baz=98							
K15K	**Wolf Creek Mou**	**71.56**	**332**	P	**P**	**01 14 39.0**	**-0.4**
	baz=98							
G17K	**Kiwalik Mounta**	**71.70**	**335**	P	**P**	**01 14 40.3**	**+0.1**
	baz=100							
L14K	**Kuka Creek**	**71.97**	**331**	P	**P**	**01 14 41.7**	**-0.1**
	baz=97							
C19K	**Lookout Ridge**	**72.01**	**339**	P	**P**	**01 14 42.1**	**+0.1**
	baz=102							
E18K	**Tukpahlearik C**	**72.04**	**337**	P	**P**	**01 14 41.9**	**-0.2**
	baz=101							
M13K	**Dall Lake**	**72.19**	**330**	P	**P**	**01 14 43.6**	**+0.5**
	baz=96							
G16K	**Koyuk River**	**72.38**	**335**	P	**P**	**01 14 44.3**	**+0.1**
	baz=99							
E17K	**Hotham Inlet**	**72.44**	**337**	P	**P**	**01 14 44.1**	**-0.4**
	baz=100							
C18K	**Utukok River**	**72.49**	**338**	P	**P**	**01 14 44.3**	**-0.6**
C18K	**Utukok River**	**72.49**	**338**	P	**P**	**01 14 44.5**	**-0.4**
	baz=101							
J14K	**Nanvaranak Lak**	**72.55**	**332**	P	**P**	**01 14 45.4**	**+0.2**
	baz=97							
A19K	**Wainwright**	**72.75**	**340**	P	**P**	**01 14 46.1**	**-0.1**
	baz=101							
B18K	**Kokolik River**	**72.84**	**339**	P	**P**	**01 14 47.3**	**+0.5**
	baz=100							
G15K	**Niukluk**	**73.03**	**334**	P	**P**	**01 14 48.5**	**+0.4**
	baz=97							
C17K	**DeLong Mountai**	**73.18**	**338**	P	**P**	**01 14 48.4**	**-0.5**
	baz=99							
F15K	**North Star Dit**	**73.37**	**335**	P	**P**	**01 14 50.3**	**+0.3**
F15K				IAmb	IAmb	01 14 51.1		
	comp=Z,7.6nm,0.8s							
F15K	**North Star Dit**	**73.37**	**335**	P	**P**	**01 14 50.0**	**0.0**
	baz=97							
ANM	**Nome**	**73.55**	**334**	P	**P**	**01 14 51.5**	**+0.4**
ANM				IAmb	IAmb	01 15 32.2		
	comp=Z,16nm,1.4s							
C16K	**Lisburne Hills**	**73.94**	**338**	P	**P**	**01 14 53.3**	**-0.1**
	baz=97							
F14K	**Arctic Creek**	**74.04**	**335**	P	**P**	**01 14 54.3**	**+0.3**
	baz=95							
TNA	**Tin City**	**74.71**	**335**	P	**P**	**01 14 57.9**	**+0.1**
	baz=94							
SPIA	**Saint Paul Isl**	**75.61**	**326**	P	**P**	**01 15 03.1**	**0.0**
	baz=89							
EKA	**Eskdalemuir Ar**	**76.74**	**36**	P	**P**	**01 15 06.3**	**-3.3**
	comp=Z,0.5nm,0.5s,baz=279,slow=7.0,SNR=1.4							
	comp=Z,0.5nm,0.5s							
ESDC	**Sonseca Array**	**77.35**	**52**	P	**P**	**01 15 10.8**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=288,slow=5.1,SNR=8.9							
	comp=Z,0.6nm,0.5s							
NOA	**NORSAR Array B**	**83.46**	**29**	P	**P**	**01 15 44.4**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=287,slow=5.0,SNR=2.0							
	comp=Z,0.8nm,0.7s							
BILL	**Bilibino**	**84.44**	**339**	P	**P**	**01 15 50.3**	**-0.3**
BILL				IAmb	IAmb	01 15 50.8		
	comp=Z,6.1nm,0.6s							
ARCES	**ARCESS Array B**	**86.24**	**19**	P	**P**	**01 15 57.7**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=298,slow=5.4,SNR=6.9							
	comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**86.61**	**77**	P	**P**	**01 16 01.2**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=278,slow=10,SNR=1.8							
	comp=Z,1.5nm,0.3s							
CLL	**Collm**	**86.94**	**38**	*e*sP	sP	01 16 35.0	+0.5	
BOSA	**Boshof**	**115.88**	**116**	PKP	**PKPdf**	**01 22 01.1**	**-0.1**	
	comp=Z,1.4nm,0.6s,baz=301,slow=1.4,SNR=7.2							
SONM	**Songino Array**	**118.68**	**349**	PKP	**PKPdf**	**01 22 05.3**	**-0.9**	
	comp=Z,0.2nm,0.3s,baz=56,slow=0.3,SNR=9.6							
KSRS	**Korea Array**	**120.15**	**328**	PKP	**PKiKP**	**01 22 09.4**	**+0.2**	
	comp=Z,1.3nm,0.6s,baz=12,slow=1.5,SNR=9.0							
MKAR	**Makanchi Array**	**120.33**	**8**	PKP	**PKPdf**	**01 22 07.3**	**-2.0**	
	comp=Z,0.1nm,0.4s,baz=329,slow=1.7,SNR=5.2							
GEYT	**Alibeck**	**120.49**	**31**	PKP	**PKPdf**	**01 22 08.5**	**-1.3**	
	comp=Z,0.9nm,0.5s,baz=310,slow=5.6,SNR=3.6							
HHC	**Hu-ho-hao-te**	**124.05**	**342**	*e*P	**PKPdf**	**01 22 14.4**	**-2.3**	
NJ2	**Nanjing**	**128.97**	**331**	*e*P	**PKPdf**	**01 22 26.3**	**+0.1**	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NJ2				pmax	pmax			
	comp=Z,260nm,7.6s							
STKA	**Stephens Creek**	**130.92**	**239**	PKP	**PKiKP**	**01 22 31.6**	**+0.8**	
	comp=Z,1.6nm,0.6s,baz=91,slow=4.5,SNR=3.9							
WRA	**Warramunga Arr**	**139.07**	**254**	PKhKP	PKPpre	01 22 38.3		
	comp=Z,0.6nm,0.8s,baz=90,slow=3.4,SNR=4.9							
WRA				PKP	**PKiKP**	**01 22 47.0**	**-0.6**	
	comp=Z,2.0nm,0.6s,baz=91,slow=2.3,SNR=18							
ASAR	**Alice Springs**	**139.08**	**248**	PKhKP	PKPpre	01 22 40.0		
	comp=Z,0.5nm,0.5s,baz=104,slow=3.9,SNR=4.5							
ASAR				PKP	**PKPdf**	**01 22 46.6**	**+1.2**	
	comp=Z,1.4nm,0.6s,baz=103,slow=2.0,SNR=12							
PZH	**PanZhiHua**	**140.21**	**347**	PKP	**PKPdf**	**01 22 47.1**	**-0.4**	
CMAR	**Chiang Mai Arr**	**148.59**	**348**	PKPbc	**PKPbc**	**01 23 05.4**	**-0.4**	
	comp=Z,2.4nm,0.3s,baz=345,slow=3.5,SNR=17							

*DJA **16** 01:14:11.0±0.3,8˚S±3˚×10˚6E±˚, h10km, M4.0/13, mb4.4/2, MLv3.8/13*
*IDC **16** 01:14:21.4±2.0,5.78S×105.49E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=80.4km s-min=30.9km az=46.0*
ISC 16 01:14:10.9±1.2, 7.7S±0.1×105.99E±0.07, h10km, n20, σ1s 70/21, mb3.5/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.92**	**37**	P		**Pg**		**01 14 29.7**	**+1.0**
CNJI	**Cibinong**	**1.21**	**69**	P		**Pn**		**01 14 34.1**	**+0.2**
DBJI	**Dramaga**	**1.40**	**32**	P		**Pn**		**01 14 38.1**	**+1.5**
CBJI	**Citeko**	**1.57**	**33**	P		**Pn**		**01 14 37.4**	**-1.4**
SBJI	**Serang**	**1.62**	**5**	P		**Pn**		**01 14 40.5**	**+0.9**
TNG	**Tangerang**	**1.69**	**23**	P		**Pn**		**01 14 41.9**	**+1.4**
TNG				S		**Sn**		**01 15 01.6**	**-0.7**
LEM	**Lembang**	**1.85**	**61**	P		**Pn**		**01 14 43.8**	**+0.9**
CMJI	**Cimerak**	**2.43**	**91**	P		**Pn**		**01 14 51.6**	**+0.8**
CMJI				S		**Sn**		**01 15 18.7**	**-1.9**
KASI	**Kota Agung**	**2.66**	**326**	P		**Pn**		**01 14 54.2**	**+0.3**
KPJI	**Karang Pucung**	**2.94**	**82**	P		**Pn**		**01 15 00.0**	**+2.2**
UGM	**Wanagama**	**4.49**	**92**	P		**Pn**		**01 15 19.8**	**+0.7**
PWJI	**Pagerwojo**	**5.76**	**93**	P		**Pn**		**01 15 37.6**	**+1.0**
	14nm,1.5s,0.1nm								
PPSI	**Pulau Pagai**	**7.74**	**309**	P		**Pn**		**01 16 03.5**	**-0.3**
WRA	**Warramunga Arr**	**30.02**	**117**	P		P		01 20 44.2	+24
	0.4nm,0.8s,baz=287,slow=9.3,SNR=2.3								
	0.4nm,0.8s								
SONM	**Songino Array**	**55.34**	**0**	P		**P**		**01 23 43.7**	**-1.3**
	0.2nm,0.4s,baz=185,slow=6.6,SNR=4.1								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**58.25**	**341**	P		**P**		**01 24 03.4**	**-2.2**
	0.2nm,0.4s,baz=150,slow=7.2,SNR=7.1								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**62.81**	**341**	P		**P**		**01 24 35.5**	**-1.1**
	0.1nm,0.3s,baz=147,slow=6.7,SNR=1.6								
	0.1nm,0.3s								
ZALV	**Zalesovo Beam**	**64.01**	**346**	P		**P**		**01 24 42.4**	**-2.1**
	0.5nm,0.3s,baz=146,slow=5.2,SNR=3.4								
	0.5nm,0.3s								
BVAR	**Borovoye Array**	**67.67**	**338**	P		**P**		**01 25 06.6**	**-1.5**
	0.2nm,0.3s,baz=131,slow=8.3,SNR=2.6								
	0.2nm,0.3s								
MMAI	**Mount Meron Ar**	**78.22**	**306**	P		**P**		**01 26 15.4**	**+4.1**
	0.2nm,0.3s,baz=114,slow=5.1,SNR=1.7								
	0.2nm,0.3s								

*TAP **16** 01:37:03.9,24.85N×122.50E, h17km, ML2.5, D*
*JMA **16** 01:37:04.9±0.1,24.8N±0.8×122.5E±0.3, h17km, MV2.3/7, NW OFF ISHIGAKIJIMA IS*
ISC 16 01:37:04.4±1.1, 24.81N±0.03×122.49E±0.02, h18km±5km, n56, σ0s 56/108, 11C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.46**	**211**	*e*P		**Pb**		**01 37 13.8**	**0.0**
	baz=209								
EOS2				*e*S		**Sb**		**01 37 20.7**	**+0.4**
	baz=209								
TWB1	**Santiao Chiao**	**0.49**	**293**	⇑*i*P		**Pg**		**01 37 14.1**	**-0.3**
	baz=288								
TWB1				*e*S		**Sg**		**01 37 20.6**	**-0.5**
	baz=288								
EGS		**0.51**	**274**	P		**Pg**		**01 37 14.3**	**-0.3**
	baz=259								
EGS				*i* S		**Sb**		**01 37 22.1**	**+0.2**
	baz=259								
EOS3	**EOS3**	**0.55**	**197**	*e*P		**Pg**		**01 37 15.2**	**-0.1**
	baz=202								
EOS3				S		**Sn**		**01 37 24.7**	**-1.1**
	baz=202								
JYNG	**Yonagunijimaku**	**0.55**	**131**	P		**Pg**		**01 37 15.3**	**-0.1**
JYNG				*e*S		**Sg**		**01 37 22.7**	**-0.1**
YOJ	**Yonaguni jima**	**0.59**	**126**	⇑P		**Pg**		**01 37 15.8**	**-0.3**
	baz=120								
YOJ				S		**Sg**		**01 37 23.7**	**-0.2**
	baz=120								
YOJ	**Yonaguni jima**	**0.59**	**126**	P		**Pg**		**01 37 16.1**	**0.0**
YOJ				S		**Sg**		**01 37 23.8**	**-0.2**
NTC	**Toucheng**	**0.60**	**274**	*e*P		**Pg**		**01 37 16.2**	**-0.2**
	baz=285								
NTC				S		**Sb**		**01 37 25.7**	**+1.2**
	baz=285								
TWC	**Suao**	**0.62**	**251**	⇑P		**Pg**		**01 37 16.3**	**-0.3**
	baz=256								
TWC				*e*S		**Sb**		**01 37 26.4**	**+1.4**
	baz=256								
SXI1	**Grass Mountain**	**0.62**	**297**	⇓P		**Pg**		**01 37 16.8**	**0.0**
	baz=293								
SXI1				S		**Sb**		**01 37 25.8**	**+0.5**
	baz=293								
ESAO	**Su ao**	**0.63**	**248**	⇑P		**Pg**		**01 37 16.6**	**-0.3**
	baz=245								
ESAO				*e*S		**Sb**		**01 37 26.6**	**+1.1**
	baz=245								
NWF	**Wu-fen Shan**	**0.69**	**292**	*i* P		**Pg**		**01 37 18.0**	**0.0**
	baz=288								
NWF				*e*S		**Sb**		**01 37 28.1**	**+0.9**
	baz=288								
WFSB	**Wu-fen Shan**	**0.69**	**292**	*i* P		**Pg**		**01 37 17.7**	**-0.3**
	baz=288								
WFSB				S		**Sb**		**01 37 27.6**	**+0.5**
	baz=288								
EOS4	**EOS4**	**0.71**	**193**	*e*P		**Pg**		**01 37 18.7**	**+0.5**
	baz=180								
EOS4				S		**Sg**		**01 37 28.5**	**+0.9**
	baz=180								
TNOU	**National Taiwa**	**0.73**	**297**	P		**Pb**		**01 37 18.5**	**-0.1**
	baz=294								
TNOU				*e*S		**Sg**		**01 37 28.8**	**+0.2**
	baz=294								
EWUT	**Wuta**	**0.74**	**241**	⇓*i*P		**Pb**		**01 37 18.6**	**-0.2**
	baz=238								
EWUT				*e*S		**Sg**		**01 37 29.5**	**+0.6**
	baz=238								
TWE	**Neicheng**	**0.75**	**263**	⇑P		**Pb**		**01 37 18.4**	**-0.6**
	baz=260								
TWE				*e*S		**Sb**		**01 37 29.0**	**0.0**
	baz=260								
ENA	**Nanau**	**0.78**	**241**	⇓P		**Pb**		**01 37 19.0**	**-0.4**
	baz=252								
ENA				*i* S		**Sg**		**01 37 30.1**	**0.0**
	baz=252								
FUSB	**Fushanzhiwuyua**	**0.82**	**266**	⇓*e*P		**Pb**		**01 37 20.0**	**-0.2**
	baz=277								
FUSB				*e*S		**Sb**		**01 37 30.4**	**-0.6**
	baz=277								
EAHA	**Aohua**	**0.84**	**235**	⇑P		**Pb**		**01 37 20.1**	**-0.3**
	baz=246								
EAHA				*e*S		**Sb**		**01 37 30.5**	**-0.8**
	baz=246								
ENTT	**Nioudou**	**0.86**	**259**	*e*P		**Pn**		**01 37 21.5**	**-0.1**
	baz=256								
ENTT				S		**Sg**		**01 37 32.5**	**0.0**
	baz=256								
NHDH	**Xindian Distri**	**0.89**	**280**	⇓*i*P		**Pb**		**01 37 21.2**	**-0.1**
	baz=277								
NHDH				S		**Sb**		**01 37 33.0**	**+0.2**
	baz=277								
PCYT	**Pengchaiyu**	**0.90**	**335**	⇓*e*P		**Pn**		**01 37 23.0**	**+0.8**
	baz=334								
PCYT				*e*S		**Sn**		**01 37 34.5**	**-0.1**
	baz=334								
NWLT	**Wulai**	**0.90**	**268**	⇑P		**Pb**		**01 37 21.6**	**+0.1**
	baz=265								
NWLT				*e*S		**Sb**		**01 37 33.2**	**0.0**
	baz=265								
YM01	**YM01**	**0.90**	**292**	⇓*i*P		**Pb**		**01 37 21.3**	**-0.2**
	baz=289								
YM01				*i* S		**Sb**		**01 37 33.3**	**+0.2**
	baz=289								
NDT	**Datong Townshi**	**0.91**	**257**	*e*P		**Pn**		**01 37 22.8**	**+0.5**
	baz=242								
NDT				*i* S		**Sg**		**01 37 34.5**	**+0.3**
	baz=242								
LATG	**Datong**	**0.92**	**253**	*e*P		**Pb**		**01 37 21.6**	**-0.2**
	baz=250								
LATG				*i* S		**Sg**		**01 37 34.6**	**+0.1**
	baz=250								
YHNB	**Yeheng**	**1.02**	**262**	⇑P		**Pb**		**01 37 23.6**	**-0.1**
	baz=246								
YHNB				*i* S		**Sb**		**01 37 37.1**	**+0.3**
	baz=246								
ETL	**Fush Village**	**1.02**	**231**	P		**Pb**		**01 37 23.6**	**0.0**
	baz=239								
ETL				*e*S		**Sb**		**01 37 37.2**	**+0.4**
	baz=239								
NACB	**Ninganchiao**	**1.03**	**232**	⇑P		**Pb**		**01 37 23.1**	**-0.7**
	baz=240								
NACB				*e*S		**Sb**		**01 37 36.6**	**-0.4**
	baz=240								
NSK	**Sanguang**	**1.04**	**263**	⇓*i*P		**Pb**		**01 37 23.9**	**0.0**
	baz=246								
NSK				*i* S		**Sb**		**01 37 37.5**	**+0.2**
	baz=246								
NNSB	**Datong**	**1.08**	**249**	P		**Pb**		**01 37 24.3**	**-0.3**
	baz=247								
NNSB				*e*S		**Sg**		**01 37 40.0**	**+0.5**
	baz=247								
NNS	**Nan Shan**	**1.08**	**250**	P		**Pb**		**01 37 24.5**	**-0.2**
	baz=248								
NNS				*e*S		**Sn**		**01 37 39.2**	**-0.2**
	baz=248								
TWD	**Chiawan**	**1.09**	**228**	P		**Pb**		**01 37 24.7**	**-0.1**
	baz=233								
TWD				*e*S		**Sb**		**01 37 39.2**	**+0.5**
	baz=233								
ETLH	**Xiulin Townshi**	**1.10**	**237**	⇑*e*P		**Pb**		**01 37 24.8**	**-0.1**
	baz=245								
ETLH				*e*S		**Sb**		**01 37 39.1**	**+0.2**
	baz=245								
LXIB	**Xiulin Townshi**	**1.26**	**231**	*i* P		**Pb**		**01 37 27.7**	**0.0**
	baz=230								
LXIB				*e*S		**Sg**		**01 37 47.5**	**+2.2**
	baz=230								
NFF	**Wufeng Townshi**	**1.26**	**262**	⇑P		**Pn**		**01 37 27.3**	**+0.1**
	baz=261								
NFF				*e*S		**Sb**		**01 37 43.0**	**-0.7**
	baz=261								
FUSS	**Fushou**	**1.27**	**244**	⇓P		**Pb**		**01 37 28.2**	**+0.3**
	baz=242								
FUSS				S		**Sn**		**01 37 44.8**	**+0.6**
	baz=242								
WHF	**Hehuan Shan**	**1.30**	**239**	*e*P		**Pg**		**01 37 29.2**	**-0.4**
	baz=248								
WHF				*e*S		**Sb**		**01 37 44.2**	**-0.9**
	baz=248								
LIOB	**Emei**	**1.35**	**263**	*e*P		**Pg**		**01 37 29.9**	**-0.6**
	baz=262								
LIOB				S		**Sb**		**01 37 46.2**	**0.0**
	baz=262								
NSTT	**Nanjuang**	**1.37**	**263**	*e*P		**Pn**		**01 37 28.0**	**-0.6**
	baz=261								
NSTT				*e*S		**Sn**		**01 37 45.7**	**-0.6**
	baz=261								
CHGB	**Renai**	**1.42**	**238**	*e*P		**Pg**		**01 37 31.1**	**-0.6**
	baz=219								
HATJ	**Hateruma jima**	**1.42**	**122**	*e*S		**Sn**		**01 37 46.8**	**-0.7**
WARBT	**Fenglin Townsh**	**1.48**	**223**	*i* P		**Pn**		**01 37 30.3**	**0.0**
	baz=221								
WARBT				*e*S		**Sn**		**01 37 47.7**	**-1.5**
	baz=221								
WUSB	**Renai**	**1.50**	**237**	P		**Pb**		**01 37 32.0**	**+0.3**
	baz=249								
WUSB				*e*S		**Sg**		**01 37 52.4**	**-0.3**
	baz=249								
VWDT	**VWDT**	**1.62**	**230**	*e*P		**Pb**		**01 37 33.9**	**+0.1**
	baz=211								
VWDT				*e*S		**Sb**		**01 37 54.9**	**+1.0**
	baz=211								
WCS	**Beigang Elemen**	**1.62**	**243**	*e*P		**Pg**		**01 37 35.1**	**-0.6**
	baz=252								
WCS				*e*S		**Sb**		**01 37 54.4**	**+0.4**
	baz=252								
SSLB	**Suanglung**	**1.73**	**234**	*e*P		**Pb**		**01 37 36.8**	**+1.0**
	baz=217								
SSLB				*e*S		**Sg**		**01 37 59.3**	**-1.0**
	baz=217								
TYC	**Yuchr**	**1.74**	**239**	*e*P		**Pb**		**01 37 36.8**	**+0.9**
	baz=248								
TYC				*e*S		**Sg**		**01 38 00.1**	**-0.5**
	baz=248								
YULB	**Yu-li**	**1.79**	**218**	*e*P		**Pn**		**01 37 35.1**	**+0.8**
	baz=216								
YULB				*e*S		**Sn**		**01 37 57.4**	**+0.7**
	baz=216								
EHD	**Haiduan**	**2.03**	**216**	*e*P		**Pn**		**01 37 37.5**	**-0.2**
	baz=214								
EHD				*e*S		**Sn**		**01 38 03.6**	**+0.9**
	baz=214								
TPUB	**Ta-pu**	**2.27**	**229**	*e*P		**Pn**		**01 37 41.4**	**+0.3**
	baz=212								
TPUB				*e*S		**Sn**		**01 38 09.0**	**+0.4**
	baz=212								
LDUT	**Ludao**	**2.33**	**204**	*e*P		**Pn**		**01 37 41.8**	**0.0**
	baz=200								
LDUT				S		**Sn**		**01 38 09.3**	**-0.7**
	baz=200								
TWGBT	**Beinan**	**2.37**	**213**	*e*P		**Pn**		**01 37 42.2**	**-0.2**
	baz=212								
MASBT	**Mashibuluo**	**2.77**	**218**	*e*P		**Pn**		**01 37 47.8**	**-0.1**
	baz=205								
TAWH	**Dawu Township**	**2.87**	**211**	*e*P		**Pn**		**01 37 49.4**	**+0.2**
	baz=210								
TAWH				*i* S		**Sn**		**01 38 22.7**	**-0.6**
	baz=210								

*JMA **16** 01:37:46.4±0.1,24.8N±0.7×122.5E±0.5, h15km±4km, MV2.5/8, NW OFF ISHIGAKIJIMA IS*
*TAP **16** 01:37:46.2,24.83N×122.51E, h11km, ML2.9, D*
ISC 16 01:37:46.0±1.0, 24.82N±0.02×122.49E±0.02, h15km±8km, n72, σ0s 64/131, 8C-28D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.47**	**211**	⇓*i*P		**Pg**		**01 37 55.5**	**+0.2**
	baz=211								
EOS2				*e*S		**Sb**		**01 38 02.5**	**0.0**
	baz=211								
TWB1	**Santiao Chiao**	**0.50**	**292**	⇑*i*P		**Pg**		**01 37 55.8**	**0.0**
	baz=291								
TWB1				*e*S		**Sg**		**01 38 02.3**	**-0.2**
	baz=291								
EGS		**0.51**	**273**	⇓*i*P		**Pg**		**01 37 56.0**	**-0.1**
	baz=271								
EGS				*e*S		**Sg**		**01 38 02.6**	**-0.4**
	baz=271								
JYNG	**Yonagunijimaku**	**0.55**	**132**	P		**Pg**		**01 37 56.8**	**-0.1**
JYNG				S		**Sg**		**01 38 04.3**	**0.0**
EOS3	**EOS3**	**0.56**	**197**	⇓*i*P		**Pg**		**01 37 57.0**	**+0.1**
	baz=197								
EOS3				*e*S		**Sb**		**01 38 04.8**	**-0.2**
	baz=197								
YOJ	**Yonaguni jima**	**0.59**	**127**	⇑P		**Pg**		**01 37 57.7**	**0.0**
	baz=128								
YOJ				*i* S		**Sg**		**01 38 05.3**	**-0.2**
	baz=128								
YOJ	**Yonaguni jima**	**0.59**	**127**	P		**Pg**		**01 37 57.6**	**0.0**
YOJ				S		**Sg**		**01 38 05.4**	**-0.1**
TWC	**Suao**	**0.62**	**250**	⇓*e*P		**Pg**		**01 37 57.4**	**-0.8**
	baz=249								
TWC				*e*S		**Sb**		**01 38 07.9**	**+0.8**
	baz=249								
SXI1	**Grass Mountain**	**0.62**	**296**	⇓P		**Pg**		**01 37 58.6**	**+0.3**
	baz=294								
SXI1				*i* S		**Sg**		**01 38 07.1**	**+0.5**
	baz=294								
ESAO	**Su ao**	**0.64**	**248**	⇓*i*P		**Pg**		**01 37 58.3**	**-0.3**
	baz=247								
ESAO				*i* S		**Sb**		**01 38 07.7**	**+0.1**
	baz=247								
NWF	**Wu-fen Shan**	**0.69**	**291**	⇓P		**Pg**		**01 37 59.7**	**+0.1**
	baz=290								
NWF				*i* S		**Sg**		**01 38 09.3**	**+0.5**
	baz=290								
WFSB	**Wu-fen Shan**	**0.69**	**291**	P		**Pg**		**01 37 59.7**	**+0.1**
	baz=290								
WFSB				S		**Sg**		**01 38 09.4**	**+0.7**
	baz=290								
EOS4	**EOS4**	**0.71**	**193**	⇑P		**Pb**		**01 38 00.1**	**+0.2**
	baz=193								
EOS4				*i* S		**Sb**		**01 38 10.0**	**+0.5**
	baz=193								
NDS	**Dongshan**	**0.73**	**255**	⇑*i*P		**Pg**		**01 38 00.2**	**-0.1**
	baz=254								
NDS				*i* S		**Sb**		**01 38 10.6**	**+0.3**
	baz=254								
TNOU	**National Taiwa**	**0.73**	**297**	⇓*i*P		**Pg**		**01 38 00.0**	**-0.2**
	baz=295								
TNOU				S		**Sg**		**01 38 10.2**	**+0.2**
	baz=295								
EWUT	**Wuta**	**0.75**	**240**	⇓*e*P		**Pg**		**01 38 00.1**	**-0.5**
	baz=240								
EWUT				S		**Sg**		**01 38 10.8**	**+0.2**
	baz=240								
TWE	**Neicheng**	**0.76**	**263**	⇑*e*P		**Pg**		**01 38 00.0**	**-0.8**
	baz=261								
TWE				*i* S		**Sg**		**01 38 10.9**	**+0.1**
	baz=261								
ENA	**Nanau**	**0.79**	**240**	⇓P		**Pg**		**01 38 00.8**	**-0.6**
	baz=239								
ENA				S		**Sg**		**01 38 11.7**	**0.0**
	baz=239								
FUSB	**Fushanzhiwuyua**	**0.83**	**266**	⇓*i*P		**Pg**		**01 38 01.6**	**-0.4**
	baz=265								
FUSB				S		**Sb**		**01 38 13.6**	**+0.5**
	baz=265								
EAHA	**Aohua**	**0.84**	**235**	⇓P		**Pg**		**01 38 01.7**	**-0.7**
	baz=234								
EAHA				S		**Sb**		**01 38 14.0**	**+0.5**
	baz=234								
**EN

YHNB				*e*S		**Sb**	**01 38 18.4**	**-0.5**
	baz=261							
ETL	**Fush Village**	**1.03**	**230**	*i* P		**Pb**	**01 38 05.2**	**-0.4**
	baz=230							
ETL				*e*S		**Sb**	**01 38 18.8**	**-0.2**
	baz=230							
NACB	**Ninganchiao**	**1.04**	**232**	P		**Pb**	**01 38 05.1**	**-0.7**
NACB	**Ninganchiao**	**1.04**	**232**	⇑P		**Pb**	**01 38 05.1**	**-0.7**
	baz=231							
NACB				*e*S		**Sb**	**01 38 18.1**	**-1.2**
	baz=231							
NSK	**Sanguang**	**1.04**	**262**	⇓*i*P		**Pb**	**01 38 05.2**	**-0.6**
	baz=261							
NSK				*e*S		**Sb**	**01 38 18.6**	**-0.7**
	baz=261							
NNSB	**Datong**	**1.08**	**249**	⇓*i*P		**Pb**	**01 38 06.2**	**-0.4**
	baz=248							
NNSB				*i* S		**Sb**	**01 38 20.7**	**+0.1**
	baz=248							
NNS	**Nan Shan**	**1.09**	**250**	⇓P		**Pb**	**01 38 06.5**	**-0.2**
	baz=249							
NNS				*e*S		**Sb**	**01 38 21.1**	**+0.4**
	baz=249							
TWD	**Chiawan**	**1.10**	**228**	⇓*i*P		**Pb**	**01 38 06.3**	**-0.5**
	baz=227							
TWD				*e*S		**Sb**	**01 38 21.1**	**+0.1**
	baz=227							
ETLH	**Xiulin Townshi**	**1.11**	**237**	⇑*i*P		**Pb**	**01 38 06.4**	**-0.5**
	baz=236							
ETLH				*e*S		**Sg**	**01 38 21.8**	**0.0**
	baz=236							
ETM	**Tongmen**	**1.25**	**227**	P		**Pn**	**01 38 08.9**	**0.0**
	baz=227							
ETM				*e*S		**Sn**	**01 38 25.9**	**+0.4**
	baz=227							
NFF	**Wufeng Townshi**	**1.27**	**262**	⇓P		**Pn**	**01 38 08.9**	**-0.3**
	baz=261							
NFF				*e*S		**Sn**	**01 38 26.4**	**+0.4**
	baz=261							
LXIB	**Xiulin Townshi**	**1.27**	**231**	⇓*i*P		**Pn**	**01 38 09.1**	**-0.2**
	baz=231							
LXIB				*e*S		**Sn**	**01 38 26.4**	**+0.2**
	baz=231							
FUSS	**Fushou**	**1.27**	**244**	*e*P		**Pb**	**01 38 10.1**	**+0.2**
	baz=243							
FUSS				S		**Sb**	**01 38 26.6**	**+0.4**
	baz=243							
WHF	**Hehuan Shan**	**1.31**	**239**	⇓*e*P		**Pn**	**01 38 10.4**	**+0.3**
	baz=238							
WHF				*i* S		**Sb**	**01 38 27.0**	**-0.3**
	baz=238							
TDCB	**Techi**	**1.34**	**245**	*e*P		**Pn**	**01 38 10.8**	**+0.4**
	baz=244							
TDCB				S		**Sb**	**01 38 27.8**	**-0.2**
	baz=244							
LIOB	**Emei**	**1.35**	**263**	P		**Pn**	**01 38 10.5**	**0.0**
	baz=262							
LIOB				S		**Sb**	**01 38 28.2**	**-0.1**
	baz=262							
NSTT	**Nanjuang**	**1.37**	**262**	P		**Pn**	**01 38 10.6**	**-0.1**
	baz=261							
NSTT				*i* S		**Sn**	**01 38 28.5**	**0.0**
	baz=261							
ESL	**Shilin**	**1.39**	**224**	*i* P		**Pn**	**01 38 11.2**	**+0.3**
	baz=223							
ESL				*e*S		**Sb**	**01 38 29.9**	**+0.6**
	baz=223							
HATJ	**Hateruma jima**	**1.42**	**122**	*e*S		**Sn**	**01 38 28.1**	**-1.6**
CHGB	**Renai**	**1.42**	**238**	*e*P		**Pb**	**01 38 12.7**	**+0.3**
	baz=237							
CHGB				*i* S		**Sn**	**01 38 30.3**	**+0.2**
	baz=237							
WARBT	**Fenglin Townsh**	**1.49**	**223**	*e*P		**Pb**	**01 38 13.4**	**0.0**
	baz=222							
WARBT				*e*S		**Sb**	**01 38 32.6**	**+0.3**
	baz=222							
WUSB	**Renai**	**1.50**	**237**	*e*P		**Pb**	**01 38 13.5**	**-0.2**
	baz=236							
WUSB				*e*S		**Sb**	**01 38 32.9**	**+0.3**
	baz=236							
JIJ	**Ishigaki jima**	**1.57**	**107**	*e*S		**Sb**	**01 38 34.7**	**+0.3**
VWDT	**VWDT**	**1.63**	**230**	*e*P		**Pn**	**01 38 14.4**	**+0.2**
	baz=229							
VWDT				*e*S		**Sn**	**01 38 34.5**	**-0.4**
	baz=229							
WCS	**Beigang Elemen**	**1.63**	**243**	*e*P		**Pb**	**01 38 16.7**	**+0.9**
	baz=242							
TWQ1	**Liyutan**	**1.64**	**254**	*e*P		**Pb**	**01 38 16.4**	**+0.5**
	baz=253							
HGSD	**Ruisui**	**1.64**	**217**	*e*P		**Pn**	**01 38 14.0**	**-0.4**
	baz=216							
HGSD				*i* S		**Sn**	**01 38 36.2**	**+0.9**
	baz=216							
EHY	**Hungye**	**1.69**	**220**	*e*P		**Pn**	**01 38 15.7**	**+0.7**
	baz=219							
SMLT	**Sun Moon Lake**	**1.73**	**238**	*e*P		**Pb**	**01 38 17.9**	**+0.4**
	baz=237							
SMLT				*e*S		**Sb**	**01 38 39.2**	**+0.1**
	baz=237							
SSLB	**Suanglung**	**1.74**	**234**	P		**Pb**	**01 38 18.5**	**+0.8**
SSLB	**Suanglung**	**1.74**	**234**	⇓*e*P		**Pb**	**01 38 18.3**	**+0.6**
	baz=233							
SSLB				*e*S		**Sg**	**01 38 41.3**	**-0.8**
	baz=233							
TYC	**Yuchr**	**1.75**	**239**	⇓*e*P		**Pb**	**01 38 18.3**	**+0.5**
	baz=238							
YULB	**Yu-li**	**1.79**	**218**	P		**Pg**	**01 38 20.8**	**+0.3**
YULB	**Yu-li**	**1.79**	**218**	*e*P		**Pn**	**01 38 16.1**	**-0.4**
	baz=217							
YULB				*e*S		**Sn**	**01 38 39.2**	**+0.2**
	baz=217							
ALS	**Alishan**	**2.02**	**230**	*e*P		**Pn**	**01 38 19.6**	**-0.3**
	baz=229							
ALS				*e*S		**Sn**	**01 38 44.3**	**-0.6**
	baz=229							
CHN4	**Tsaushan**	**2.27**	**230**	*e*P		**Pn**	**01 38 23.5**	**+0.5**
	baz=229							
CHN4				*e*S		**Sn**	**01 38 50.7**	**-0.1**
	baz=229							
TPUB	**Ta-pu**	**2.28**	**229**	*e*P		**Pn**	**01 38 24.3**	**+1.2**
	baz=228							
TPUB				*e*S		**Sn**	**01 38 50.0**	**-1.0**
	baz=228							
TSMG	**Majia**	**2.70**	**219**	*e*P		**Pn**	**01 38 29.1**	**+0.1**
	baz=218							
VWUC	**VWUC**	**2.77**	**274**	*e*P		**Pn**	**01 38 28.8**	**-1.1**
	baz=273							

AFAD ***16*** *01:38:25.5±0.0, 35.38N×36.87E, h7km±1km, ML2.1*
GRAL ***16*** *01:38:26.6±0.3, 35.33N×36.62E, h17km±3km, MD3.0*

ISC 16 01:38:24.9±1.8, 35.32N±0.04×36.64E±0.09, h14km±18km, n12, σ0s48/17, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BEIL	**Beino**	**0.86**	**206**	*e*P			**Pb**	**01 38 41.7**	**0.0**
BEIL				*e*S			**Sb**	**01 38 52.9**	**-0.3**
RHAN	**Hatay/Reyhanl**	**0.94**	**358**	P			**Pb**	**01 38 42.7**	**-0.3**
RHAN				S			**Sb**	**01 38 55.9**	**+0.7**
RHAN				*i* AML		AML	AML	01 38 59.0	
	comp=N,69nm,0.2s								
RHAN				*i* AML		AML	AML	01 39 02.0	
	comp=E,49nm,0.4s								
HWQ	**Hawqa**	**1.19**	**209**	*e*P			**Pn**	**01 38 47.1**	**-0.1**
HWQ				*e*S			**Sb**	**01 39 02.2**	**-0.3**
HASA	**Hatay-Hassa-Ha**	**1.43**	**355**	P			**Pn**	**01 38 50.3**	**-0.2**
ZAHL	**Zahle**	**1.59**	**203**	*e*P			**Pn**	**01 38 53.1**	**+0.4**
BHL	**Bhannes**	**1.63**	**210**	*e*P			**Pn**	**01 38 53.6**	**+0.3**
DQRL	**Deir Qamar**	**1.84**	**209**	*e*P			**Pn**	**01 38 56.4**	**+0.3**
NZIP	**Nizip/Gaziante**	**1.91**	**26**	P			**Pg**	**01 39 01.9**	**+0.3**
NZIP				S			**Sb**	**01 39 23.6**	**+0.2**
HCB	**Kahramanmara**	**2.03**	**6**	P			**Pb**	**01 39 01.9**	**+0.3**
KHMR	**Kahramanmara**	**2.03**	**6**	P			**Pg**	**01 39 03.4**	**-0.5**
SURC	**SANLIURFA_SURC**	**2.23**	**45**	P			**Pb**	**01 39 05.3**	**+0.2**
SURC				S			**Sb**	**01 39 31.4**	**-1.2**
SURC				*i* AML		AML	AML	01 39 34.0	
	comp=N,21nm,0.3s								
SURC				*i* AML		AML	AML	01 39 41.0	
	comp=E,23nm,0.5s								
ATAB	**Bozova**	**2.53**	**32**	P			**Pg**	**01 39 13.5**	**+0.1**

IDC ***16*** *01:42:08.1±2.3, 15.05N×145.92E, h81km±21km, mb3.6/14, mbtmp3.9/14, MS3.2/1, Error ellipse: s-maj=23.4km s-min=16.2km az=86.0*

NEIC ***16*** *01:42:10.4±1.1, 14.82N±0.07×145.9E±0.2, h107km±6km, mb4.3/51, Error ellipse: s-maj=23.4km s-min=8.3km az=107.0*

ISC 16 01:42:09.7±0.6, 14.90N±0.09×145.9E±0.1, h100km, n83, σ0s80/80, mb4.2/41, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.65**	**218**				**Pn**	**01 42 38.3**	**+0.4**
GUMO					Sn		**Sn**	**01 42 58.3**	**-1.0**
GUMO	**Guam**	**1.65**	**218**	P			**Pn**	**01 42 38.4**	**+0.5**
GUMO	**Guam**	**1.65**	**218**	P			**Pn**	**01 42 38.5**	**+0.5**
	385nm,0.3s,baz=322,slow=1.2,SNR=33								
GUMO					S		**Sn**	**01 42 59.0**	**-0.2**
	2μm,0.3s,baz=186,slow=22,SNR=13								
H11S3	**WAKE ISLAND Hy**	**20.22**	**77**	T		T		02 07 55.5	
	baz=263,slow=75,SNR=32								
H11S1	**WAKE ISLAND Hy**	**20.23**	**77**	T		T		02 07 56.6	
	baz=263,slow=75,SNR=14								
H11S2	**WAKE ISLAND Hy**	**20.23**	**77**	T		T		02 08 00.8	
	baz=263,slow=75,SNR=18								
H11N1	**WAKE ISLAND Hy**	**20.59**	**74**	T		T		02 08 08.6	
	baz=262,slow=75,SNR=20								
H11N2	**WAKE ISLAND Hy**	**20.60**	**74**	T		T		02 08 07.3	
	baz=262,slow=75,SNR=9.6								
H11N3	**WAKE ISLAND Hy**	**20.61**	**74**	T		T		02 08 08.2	
	baz=262,slow=75,SNR=14								
TGY	**Tagaytay City**	**24.19**	**271**	LR		LR		01 57 17.1	
	comp=Z,53nm,18.1s,baz=326,slow=38								
JTM	**Tenmabayashi**	**26.13**	**352**	P			**P**	**01 47 35.6**	**+1.2**
KSRS	**Korea Array**	**27.56**	**328**	P			**P**	**01 47 47.4**	**+0.1**
	1.2nm,0.7s,baz=148,slow=10,SNR=7.2								
	1.2nm,0.7s								
WR0	**Warramunga Arr**	**36.40**	**198**	P			**P**	**01 49 03.8**	**-0.9**
WR0						IAmb	IAmb	01 49 35.2	
	comp=Z,6.8nm,1.4s								
WRA	**Warramunga Arr**	**36.45**	**199**	P			**P**	**01 49 07.3**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=20,slow=9.3,SNR=6.3								
WRA					PcP		**PcP**	**01 51 26.3**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=20,slow=3.5,SNR=4.7								
	comp=Z,0.9nm,0.9s								
ASAR	**Alice Springs**	**40.09**	**197**	P			**P**	**01 49 38.5**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=16,slow=13,SNR=5.7								
ASAR					PcP		**PcP**	**01 51 38.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=28,slow=3.4,SNR=1.9								
	comp=Z,0.5nm,0.7s								
CMAR	**Chiang Mai Arr**	**45.04**	**281**	P			**P**	**01 50 16.6**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=87,slow=6.4,SNR=5.1								
	comp=Z,0.8nm,0.3s								
SONM	**Songino Array**	**46.26**	**324**	P			**P**	**01 50 26.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=132,slow=7.5,SNR=4.3								
	comp=Z,0.4nm,0.6s								
BBOO	**Buckleboo**	**48.37**	**191**	P			**P**	**01 50 40.2**	**-1.4**
ZALV	**Zalesovo Beam**	**61.16**	**324**	P			**P**	**01 52 14.0**	**+0.4**
ZALV	**Zalesovo Beam**	**61.16**	**324**	P			**P**	**01 52 13.0**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=94,slow=5.9,SNR=4.8								
	comp=Z,0.8nm,0.7s								
MKAR	**Makanchi Array**	**61.26**	**315**	P			**P**	**01 52 14.0**	**-0.5**
MKAR	**Makanchi Array**	**61.26**	**315**	P			**P**	**01 52 14.4**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=88,slow=8.8,SNR=15								
	comp=Z,1.0nm,0.6s								
M17K	**Holitna River**	**61.33**	**27**	P			**P**	**01 52 15.3**	**+0.6**
MAKZ	**Makanchi**	**61.47**	**315**	P			**P**	**01 52 16.1**	**+0.1**
MAKZ						IAmb	IAmb	01 52 16.6	
	comp=Z,2.3nm,0.8s								
K17K	**Iditarod**	**61.49**	**26**	P			**P**	**01 52 16.5**	**+0.8**
C18K	**Utukok River**	**63.17**	**19**	P			**P**	**01 52 27.2**	**+0.3**
C18K						IAmb	IAmb	01 52 43.0	
	comp=Z,5.3nm,1.5s								
M20K	**Styx River**	**63.42**	**28**	P			**P**	**01 52 28.7**	**0.0**
K20K	**Telida**	**63.52**	**26**	P			**P**	**01 52 29.9**	**+0.6**
K20K						IAmb	IAmb	01 52 31.1	
	comp=Z,3.6nm,0.8s								
J20K	**Nowinta River**	**63.78**	**25**	P			**P**	**01 52 31.7**	**+0.8**
BRLK	**Bradley Lake**	**63.83**	**30**	P			**P**	**01 52 31.0**	**-0.4**
D19K	**Kuna River**	**64.08**	**20**	P			**P**	**01 52 33.1**	**+0.2**
D19K						IAmb	IAmb	01 52 54.9	
	comp=Z,4.8nm,1.3s								
KURK	**Kurchatov**	**64.24**	**319**	P			**P**	**01 52 33.9**	**-0.3**
KURK						IAmb	IAmb	01 52 34.7	
	comp=Z,4.1nm,1.0s								
F20K	**Avaraart Lake**	**64.28**	**22**	P			**P**	**01 52 34.7**	**+0.6**
KURBB	**Kurchatov Arra**	**64.29**	**319**	P			**P**	**01 52 33.9**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=98,slow=6.8,SNR=34								
	comp=Z,3.5nm,0.7s								
CAST	**Castle Rocks**	**64.38**	**26**	P			**P**	**01 52 35.4**	**+0.5**
CAST						IAmb	IAmb	01 52 36.1	
	comp=Z,2.8nm,0.6s								
H21K	**Melozitna Rive**	**64.84**	**24**	P			**P**	**01 52 39.0**	**+1.2**
H21K						IAmb	IAmb	01 52 58.3	
	comp=Z,4.6nm,1.4s								
BPAW	**Bear Paw Mtn.**	**65.06**	**26**	P			**P**	**01 52 39.5**	**+0.2**
BPAW						IAmb	IAmb	01 52 40.2	
	comp=Z,2.3nm,0.8s								
GHO	**Glory Hole Cre**	**65.30**	**28**	P			**P**	**01 52 41.0**	**+0.1**
SML	**Sawmill**	**65.58**	**28**	P			**P**	**01 52 42.7**	**0.0**
RND	**Reindeer**	**65.76**	**27**	P			**P**	**01 52 43.3**	**-0.6**
RND						IAmb	IAmb	01 52 45.2	
	comp=Z,4.7nm,1.2s								
I23K	**Minto, Yukon-K**	**66.04**	**25**	P			**P**	**01 52 46.2**	**+0.7**
I23K						IAmb	IAmb	01 52 46.9	
	comp=Z,2.1nm,0.7s								
D22K	**Ayikyak River**	**66.05**	**20**	P			**P**	**01 52 46.2**	**+0.6**
WRH	**Wood River Hil**	**66.38**	**26**	P			**P**	**01 52 46.7**	**-0.9**
WRH						IAmb	IAmb	01 53 23.4	
	comp=Z,7.3nm,1.4s								
CCB	**Clear Creek Bu**	**66.54**	**25**	P			**P**	**01 52 48.0**	**-0.7**
IL31		**66.95**	**25**	P			**P**	**01 52 50.1**	**-1.2**
IL31						IAmb	IAmb	01 52 57.4	
	comp=Z,4.7nm,1.3s								
ILAR	**Eielson Array**	**66.95**	**25**	P			**P**	**01 52 49.7**	**-1.6**
ILAR	**Eielson Array**	**66.95**	**25**	P			**P**	**01 52 50.3**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=252,slow=5.9,SNR=27								
	comp=Z,1.4nm,0.6s								
E24K	**Your Creek**	**67.24**	**22**	P			**P**	**01 52 53.7**	**+0.5**
E24K						IAmb	IAmb	01 52 54.3	
	comp=Z,5.7nm,1.5s								
J25K	**Salcha River,**	**67.55**	**26**	P			**P**	**01 52 54.6**	**-0.7**
SCRK	**Sand Creek**	**68.01**	**27**	P			**P**	**01 52 58.0**	**-0.2**
SCRK						IAmb	IAmb	01 52 58.9	
	comp=Z,4.8nm,1.1s								
J26L	**Joseph Creek**	**68.29**	**26**	P			**P**	**01 52 59.6**	**-0.3**
J26L						IAmb	IAmb	01 53 00.1	
	comp=Z,2.1nm,0.7s								
D25K	**Kavik River**	**68.34**	**21**	P			**P**	**01 53 00.2**	**+0.1**
D25K						IAmb	IAmb	01 53 01.8	
	comp=Z,3.3nm,1.1s								
BMAR	**Burnt Mountain**	**68.51**	**23**	P			**P**	**01 53 02.2**	**+1.0**
M27K	**Edge Creek, AK**	**68.66**	**28**	P			**P**	**01 53 02.3**	**0.0**
M27K						IAmb	IAmb	01 53 26.8	
	comp=Z,7.7nm,1.4s								
CTGM	**Chitina Glacie**	**68.72**	**30**	P			**P**	**01 53 02.6**	**-0.1**
BVAR	**Borovoye Array**	**69.53**	**321**	P			**P**	**01 53 06.5**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=103,slow=6.4,SNR=5.3								
	comp=Z,0.7nm,0.5s								
I28M	**Miner Creek**	**69.97**	**25**	P			**P**	**01 53 10.1**	**-0.2**
M29M	**Somme Creek**	**70.25**	**29**	P			**P**	**01 53 13.0**	**+1.0**
M29M						IAmb	IAmb	01 53 14.1	
	comp=Z,3.2nm,0.8s								
L29M	**L29M**	**70.47**	**28**	P			**P**	**01 53 13.3**	**0.0**
L29M						IAmb	IAmb	01 53 15.4	
	comp=Z,4.0nm,0.7s								
HYT	**Haines Junctio**	**70.57**	**30**	P			**P**	**01 53 14.5**	**+0.5**
H29M	**Whitestone**	**70.71**	**25**	P			**P**	**01 53 14.6**	**0.0**
K29M	**Barlow Dome**	**70.81**	**27**	P			**P**	**01 53 15.9**	**+0.4**
E29M	**Blow River**	**71.16**	**22**	P			**P**	**01 53 18.0**	**+0.7**
E29M						IAmb	IAmb	01 53 54.9	
	comp=Z,4.8nm,1.4s								
I30M	**Mount Dempster**	**71.43**	**26**	P			**P**	**01 53 19.3**	**+0.2**
M31M	**Drury Creek, Y**	**72.13**	**29**	P			**P**	**01 53 23.7**	**+0.4**
G31M	**Satah River**	**72.41**	**24**	P			**P**	**01 53 24.8**	**0.0**
G31M						IAmb	IAmb	01 53 25.6	
	comp=Z,3.5nm,0.7s								
F31M	**Tsiigehtchic**	**72.64**	**23**	P			**P**	**01 53 26.3**	**+0.2**
F31M						IAmb	IAmb	01 53 58.9	
	comp=Z,7.3nm,1.4s								
INK	**Inuvik**	**72.77**	**23**	P			**P**	**01 53 27.4**	**+0.5**
A36M	**Sachs Harbour**	**75.58**	**19**	P			**P**	**01 53 42.9**	**-0.3**
C36M	**Paulatuk**	**76.18**	**21**	P			**P**	**01 53 46.3**	**-0.3**
ABKAR	**Akbulak array**	**76.25**	**318**	P			**P**	**01 53 46.0**	**-1.5**
ABKAR	**Akbulak array**	**76.25**	**318**	P			**P**	**01 53 46.4**	**-1.1**
YKA	**Yellowknife Ar**	**81.23**	**28**	P			**P**	**01 54 13.7**	**-0.7**
YKA	**Yellowknife Ar**	**81.23**	**28**	P			**P**	**01 54 14.4**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=287,slow=5.5,SNR=26								
	comp=Z,1.5nm,0.6s								
YKAB2	**New Yellowknif**	**81.25**	**28**	P			**P**	**01 54 14.2**	**-0.3**
J05D	**Fort Rock, OR**	**81.98**	**47**	P			**P**	**01 54 19.6**	**+0.6**
J05D						IAmb	IAmb	01 54 21.4	
	comp=Z,3.8nm,0.9s								
PINE	**Pine Mountain**	**82.08**	**47**	P			**P**	**01 54 20.6**	**+1.1**
PINE						IAmb	IAmb	01 54 41.3	
	comp=Z,7.3nm,1.3s								
K05A	**Summer Lake**	**82.35**	**48**	P			**P**	**01 54 20.7**	**-0.3**
K05A						IAmb	IAmb	01 54 57.0	
	comp=Z,3.9nm,1.2s								
LHV	**Little Huntoon**	**85.21**	**52**	P			**P**	**01 54 34.6**	**-0.8**
LHV						IAmb	IAmb	01 54 37.4	
	comp=Z,6.5nm,1.5s								
NVAR	**Mina Array Bea**	**85.32**	**52**	P			**P**	**01 54 37.3**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=246,slow=7.3,SNR=4.5								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**90.33**	**45**	P			**P**	**01 55 00.0**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=302,slow=7.4,SNR=2.2								
	comp=Z,0.3nm,0.9s								
FINES	**FINESS Array B**	**90.40**	**335**	P			**P**	**01 54 58.1**	**-1.6**
	comp=Z,1.0nm,0.9s,baz=65,slow=6.6,SNR=3.5								
	comp=Z,1.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**134.93**	**306**	PKP			**PKiKP**	**02 01 19.7**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=318,slow=1.9,SNR=1.6								

NEIC ***16*** *01:54:42.1±1.9, 15.63N±0.06×95.02W±0.04, h39km±2km, mb4.7/234, Mwr4.6/10, Md4.9/125(MEX), Error ellipse: s-maj=8.7km s-min=5.6km az=188.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.91; Mθθ-0.68; Mφφ-0.24; Mrθ0.20; Mrφ0.55; Mθφ-0.59; Fault plane solution: M₀1.17000×10¹⁶ NP1:φs143.20000°, δ61.55000°, λ110.71000°. NP2:φs284.77000°, δ34.67000°, λ56.88000°. Principal axes: T 1.1653, Plg67.0000°, Azm92.0000°; N 0.0109, Plg18.0000°, Azm313.0000°; P -1.1762, Plg14.0000°, Azm218.0000°;*
MEX ***16*** *01:54:42.8±0.5, 15.61N×94.99W, h23km±11km, MD4.9*
IDC ***16*** *01:54:43.6±2.0, 15.74N×94.66W, h46km±16km, mb4.3/22, mbtmp4.5/24, ML4.0/1, MS4.0/35, Error ellipse: s-maj=22.7km s-min=12.8km az=62.0*
NEIC ***16*** *01:54:44.8, 15.82N×94.90W, h45km*
GCMT ***16*** *01:54:46.1±0.5, 15.80N±0.03×94.93W±0.03, h42km±1km, MW4.9/61, Moment Tensor Solution. s27,c31; s61,c75; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.52±.20; Mθθ-2.01±.13; Mφφ-0.51±.13; Mrθ0.23±.09; Mrφ1.01±.08; Mθr-1.36±.09; Best double couple: M₀2.85200×10¹⁶ NP1:φs137.00000°, δ57.00000°, λ113.00000°. NP2: φs279.00000°, δ39.00000°, λ59.00000°. Principal axes: T 3.0450, Plg69.0000°, Azm95.0000°; N -0.3880, Plg19.0000°, Azm304.0000°; P -2.6600, Plg10.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
GCG ***16*** *01:54:58.2±0.5, 15.43N×93.84W, h19km±999km, MD4.8*
CATAC ***16*** *01:56:32.0±1.2, 12.36N×87.44W, h33km±16km, mb4.9, ML3.4*

ISC 16 01:54:41.4±0.4, 15.54N±0.04×94.99W±0.03, h37km±1km, h38km:pP-P, n619, σ1s90/614, mb4.7/119, MS4.0/33, 2C-1D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NILT	**Santiago Nilte**	**1.08**	**19**	*e*P			**Pn**	**01 54 58.3**	**-1.8**
NILT				*i* S			**Sn**	**01 55 10.4**	**-3.4**
HUIG	**Huatulco**	**1.10**	**282**				**Pn**	**01 54 59.8**	**-0.5**
HUIG							**Sn**	**01 55 12.5**	**-1.8**
HUIG	**Huatulco**	**1.10**	**282**	*e*P			**Pn**	**01 54 59.8**	**-0.5**
HUIG				*i* S			**Sn**	**01 55 12.5**	**-1.8**
CARR	**Arriaga**	**1.25**	**55**	*e*P			**Pn**	**01 55 00.7**	**-1.7**
CARR				*i* S			**Sn**	**01 55 11.6**	**-6.5**
CMIG	**Matias Romero**	**1.55**	**4**	P			**Pn**	**01 55 05.5**	**-1.0**
	2μm,0.3s,baz=188,slow=11,SNR=4664								
CMIG					S		**Sn**	**01 55 23.1**	**-2.3**
	4μm,0.3s,baz=278,slow=22,SNR=12								
CMIG					LR		LR	01 55 50.9	
	comp=Z,4μm,19.1s,baz=217,slow=49								
CMIG	**Matias Romero**	**1.55**	**4**	*e*P			**Pn**	**01 55 05.5**	**-1.0**
CMIG				*i* S			**Sn**	**01 55 23.1**	**-2.3**
PCIG		**1.71**	**84**				**Pn**	**01 55 08.6**	**-0.1**
PCIG							**Sn**	**01 55 28.5**	**-0.9**
PCIG		**1.71**	**84**	*e*P			**Pn**	**01 55 08.6**	**-0.1**
PCIG				*e*S			**Sn**	**01 55 28.5**	**-0.9**
PEIG	**Puerto Escondi**	**2.13**	**283**				**Pn**	**01 55 14.2**	**-0.2**
PEIG							**Sn**	**01 55 36.7**	**-2.9**
PEIG	**Puerto Escondi**	**2.13**	**283**	*e*P			**Pn**	**01 55 14.2**	**-0.2**
PEIG				*i* S			**Sn**	**01 55 36.7**	**-2.9**
TGIG		**2.18**	**55**				**Pn**	**01 55 15.2**	**0.0**
TGIG							**Sn**	**01 55 39.6**	**-1.3**
TGIG		**2.18**	**55**	*e*P			**Pn**	**01

FTIG *i* S **Sn** **01 56 21.8 +0.1**
MGIG Malinaltepec 3.88 296 **Pn** **01 55 40.6 +1.9**
MGIG **Sn** **01 56 21.6 -1.7**
MGIG Malinaltepec 3.88 296 *e*P **Pn** **01 55 40.6 +1.9**
MGIG *i* S **Sn** **01 56 21.6 -1.7**
TLIG Tlapa 3.98 301 Pn **Pn** **01 55 40.0 0.0**
TLIG Tlapa 3.98 301 *e*P **Pn** **01 55 41.9 +1.9**
TLIG *i* S **Sn** **01 56 23.5 -2.0**
FUG Fuego 3 4.15 105 *e*P **Pn** **01 55 45.8 +3.4**
CRIG Cruz Grande 4.16 287 **Pn** **01 55 43.1 +0.8**
CRIG **Sn** **01 56 24.4 -5.2**
CRIG Cruz Grande 4.16 287 *e*P **Pn** **01 55 43.1 +0.8**
CRIG *e*S **Sn** **01 56 24.4 -5.2**
JAUV Jalcomulco 4.18 336 *e*P **Pn** **01 55 42.0 -0.8**
JAUV *i* S **Sn** **01 56 28.5 -2.0**
LVIG Laguna Verde 4.38 342 *i* P **Pn** **01 55 44.0 -1.4**
LVIG *i* S **Sn** **01 56 31.0 -4.3**
PCG Pacaya 4.38 104 *e*P **Pn** **01 55 49.9 +4.2**
NBG Las Nubes 4.58 101 *e*P **Pn** **01 55 52.3 +3.9**
DAIG Los Arroyos 4.71 289 **Pn** **01 55 51.0 +1.0**
DAIG **Sn** **01 56 37.6 -5.8**
DAIG Los Arroyos 4.71 289 *e*P **Pn** **01 55 51.0 +1.0**
DAIG *e*S **Sn** **01 56 37.6 -5.8**
PPM Popocatepetl 4.94 316 *e*P **Pn** **01 55 57.3 +3.7**
PPM *i* S **Sn** **01 56 51.4 +1.7**
PPIG Popocatepetl 4.94 316 **Pn** **01 55 57.3 +3.7**
PPIG **Sn** **01 56 51.4 +1.6**
SCIG Sabancuy 4.99 46 *e*P **Pn** **01 55 53.1 -0.6**
SCIG *i* S **Sn** **01 56 45.4 -4.7**
MEIG Mezcala 5.03 299 **Pn** **01 55 57.0 +2.5**
MEIG **Sn** **01 56 50.0 -1.5**
MEIG Mezcala 5.03 299 *e*P **Pn** **01 55 57.0 +2.5**
MEIG *i* S **Sn** **01 56 50.0 -1.5**
AMVM AMECAMECA 5.09 315 **Pn** **01 55 52.6 -2.8**
AMVM **Sn** **01 56 47.1 -6.1**
AMVM AMECAMECA 5.09 315 *i* P **Pn** **01 55 52.6 -2.8**
AMVM *i* S **Sn** **01 56 47.1 -6.1**
PETF Flores 5.11 74 **Pn** **01 55 56.6 +0.2**
PETF Flores 5.11 74 *e*P **Pn** **01 55 56.0 +0.6**
PETF *i* S **Sn** **01 56 51.7 -1.4**
YAIG Yautepec 5.11 311 **Pn** **01 55 58.0 +2.4**
YAIG **Sn** **01 56 51.3 -2.2**
YAIG Yautepec 5.11 311 *e*P **Pn** **01 55 58.0 +2.4**
YAIG *i* S **Sn** **01 56 51.3 -2.2**
MRL Marmol 5.14 94 *e*P **Pn** **01 55 59.8 +3.7**
PLIG Platanillo 5.17 304 **Pn** **01 55 59.7 +3.4**
PLIG **Sn** **01 56 51.8 -3.0**
PLIG Platanillo 5.17 304 *e*P **Pn** **01 55 59.7 +3.4**
PLIG *i* S **Sn** **01 56 51.8 -3.0**
CAIG El Cayaco 5.29 287 **Pn** **01 55 59.0 +1.2**
CAIG **Sn** **01 56 51.2 -6.3**
CAIG El Cayaco 5.29 287 *e*P **Pn** **01 55 59.0 +1.2**
CAIG *i* S **Sn** **01 56 51.2 -6.3**
MPVM San Francisco 5.30 314 *i* P **Pn** **01 55 55.0 -3.2**
MPVM *i* S **Sn** **01 57 00.5 +2.4**
TLVM San Miguel Top 5.40 313 *i* P **Pn** **01 56 03.6 +3.9**
TLVM *i* S **Sn** **01 57 00.8 0.0**
XCVM Xochimilco 5.40 314 *i* P **Pn** **01 56 03.9 +4.2**
XCVM *i* S **Sn** **01 57 02.8 +2.0**
COVM Coyoacan 5.50 314 *i* S **Sn** **01 57 07.0 +3.9**
UNM Universidad Na 5.50 314 *i* P **Pn** **01 56 03.5 +2.5**
UNM *i* S **Sn** **01 57 07.6 +4.4**
PBVM Pinon 5.51 315 **Pn** **01 56 04.4 +3.5**
PBVM **Sn** **01 57 02.6 -0.4**
PBVM Pinon 5.51 315 *i* P **Pn** **01 56 04.4 +3.5**
PBVM *i* S **Sn** **01 57 02.6 -0.4**
BJVM Benito Juarez 5.52 314 *i* S **Sn** **01 56 59.2 -4.6**
ESQI Esquipulas 5.54 99 **Pn** **01 56 04.3 +2.9**
MTO3 Montecristo 5.56 101 **Pn** **01 56 03.8 +2.1**
AOVM Tlapan 5.56 313 *i* P **Pn** **01 56 05.8 +3.8**
AOVM *i* S **Sn** **01 57 05.7 +0.8**
INVM La Marquesa 5.62 312 *i* P **Pn** **01 56 06.6 +3.9**
INVM *i* S **Sn** **01 57 06.6 +0.4**
PTVM Pico Tres Padr 5.64 316 **Pn** **01 56 05.9 +3.0**
PTVM **Sn** **01 57 09.0 +2.5**
PTVM Pico Tres Padr 5.64 316 *e*P **Pn** **01 56 05.9 +3.0**
PTVM *e*S **Sn** **01 57 09.0 +2.5**
AZVM Cuida Lopez Ma 5.74 315 **Sn** **01 57 08.2 -1.0**
AZVM Cuida Lopez Ma 5.74 315 *i* S **Sn** **01 57 08.2 -1.0**
ZUVM ZUMPANGO 5.78 318 Pn 01 56 09.9 +5.1
ZUVM **Sn** **01 57 11.9 +1.8**
ZUVM ZUMPANGO 5.78 318 *e*P Pn 01 56 09.9 +5.1
ZUVM *e*S **Sn** **01 57 11.9 +1.8**
ARIG Puente Sto Nin 5.81 299 **Pn** **01 56 08.3 +3.2**
ARIG **Sn** **01 57 06.3 -4.2**
ARIG Puente Sto Nin 5.81 299 *e*P **Pn** **01 56 08.3 +3.2**
ARIG *i* S **Sn** **01 57 06.3 -4.2**
TOVM TOLUCA 5.83 310 **Pn** **01 56 08.1 +2.6**
TOVM **Sn** **01 57 10.3 -0.9**
TOVM TOLUCA 5.83 310 *i* P **Pn** **01 56 08.1 +2.6**
TOVM *i* S **Sn** **01 57 10.3 -0.9**
SNET Serv Nac Est T 5.87 108 **Pn** **01 56 09.5 +3.6**
DHIG Demacu 6.11 321 **Pn** **01 56 13.8 +4.5**
DEIG Demacu 6.11 322 *e*P **Pn** **01 56 13.8 +4.5**
IZABA Izabal, Puerto 6.17 87 *i* P **Pn** **01 56 09.8 -0.3**
IZABA *i* S **Sn** **01 57 17.4 -2.0**
ATVM ATLACOMULCO 6.25 313 **Sn** **01 57 25.1 +3.3**
ATVM ATLACOMULCO 6.25 313 *e*S **Sn** **01 57 25.1 +3.3**
ACIG Acambay 6.42 314 **Pn** **01 56 09.4 -4.3**
ACIG **Sn** **01 57 19.9 -5.9**
ACIG Acambay 6.42 314 *i* P **Pn** **01 56 09.4 -4.3**
ACIG *i* S **Sn** **01 57 19.9 -5.9**
CTUV Llano Grande 6.71 332 *e*P **Pn** **01 56 09.8 -0.5**
CTUV *i* S **Sn** **01 57 33.4 +0.7**
MOIG Morelia 7.21 306 *i* P Pn 01 56 29.5 +5.0
TGUH Tegucigalpa,Un 7.61 100 Pn **Pn** **01 56 31.8 +2.0**
RPIG Rio Verde 7.89 324 **Pn** **01 56 37.1 +3.4**
RPIG **Sn** **01 58 00.7 -1.2**
RPIG Rio Verde 7.89 324 *i* P **Pn** **01 56 37.1 +3.4**
RPIG *i* S **Sn** **01 58 00.7 -1.2**
TEIG Tepich 7.91 53 Pn **Pn** **01 56 32.2 -1.7**
TEIG Tepich 7.91 53 LR LR 02 00 06.9
comp=Z,9µm,19.4s,baz=16,slow=43
CRIN San Cristobal 8.20 109 **Pn** **01 56 40.9 +3.0**
CRIN San Cristobal 8.20 109 *i* P **Pn** **01 56 41.7 +3.7**
CRIN IAML 01 57 18.1
comp=Z,640nm,1.0s
MMIG Aquila 8.45 290 Pn 01 56 35.8 -5.6
MMIG **Sn** **01 58 11.0 -4.6**
MMIG Aquila 8.45 290 *e*P **Pn** **01 56 43.7 +2.4**
MMIG *i* S **Sn** **01 58 11.0 -4.6**
GTIG Gomez Farias 8.47 333 **Pn** **01 56 42.9 +1.4**
GTIG **Sn** **01 58 11.3 -4.6**
GTIG Gomez Farias 8.47 333 *e*P **Pn** **01 56 42.9 +1.4**
GTIG *i* S **Sn** **01 58 11.3 -4.6**
CNGA Al SSO del Vol 8.59 110 *i* P **Pn** **01 56 47.1 +3.8**
CNGA IAML 01 57 42.7
comp=Z,200nm,1.0s
CNGN Cerro Negro 8.59 110 **Pn** **01 56 46.3 +3.0**
CNGN Cerro Negro 8.59 110 *i* P Pn 01 56 49.5 +6.2
CNGN IAML 01 56 57.7
comp=Z,250nm,1.0s
MACN El Madrono 8.63 110 *i* P **Pn** **01 56 46.3 +2.5**
MACN IAML 01 57 01.6
comp=Z,52nm,1.0s
MSHP Masachapa 9.00 113 *i* P **Pn** **01 56 49.6 +0.7**
MSHP IAML 01 57 42.4
comp=Z,2µm,1.0s
MATN Matagalpa 9.16 105 **Pn** **01 56 53.5 +2.4**
MATN Matagalpa 9.16 105 *i* P Pn 01 56 57.3 +6.1
MATN IAML 01 57 06.4
comp=Z,56nm,1.0s
AAIG Aguscalientes 9.48 314 *i* P Pn 01 57 02.7 +7.0
BOAB BOACO BROADBAN 9.55 108 Pn **Pn** **01 56 58.7 +2.2**
ZAIG Zacatecas 10.15 316 **Pn** **01 57 04.8 -0.1**
ACON Acoyapa 10.17 109 **Pn** **01 57 07.2 +2.3**
HZTE Horizontes, Gu 10.33 117 *i* P **Pn** **01 57 10.9 +3.8**
HZTE *i* S 01 57 37.2
HZTE IAML 01 57 50.4
comp=Z,150nm,1.0s
SAJU San Juanillo, 10.55 120 *i* P **Pn** **01 57 13.9 +3.7**
SAJU IAML 01 57 22.8
comp=Z,170nm,1.0s
ORTG Ortega, Santa 10.62 118 Pn **Pn** **01 57 13.2 +2.1**
ORTG Ortega, Santa 10.62 118 *i* P **Pn** **01 57 15.0 +3.9**
ORTG IAML 01 57 22.9
comp=Z,140nm,1.0s
DUNO Dulce Nombre, 10.73 119 **Pn** **01 57 14.8 +2.3**
INDI Punta indio, G 10.83 120 *i* P **Pn** **01 57 17.8 +3.8**
INDI IAML 01 57 27.5
comp=Z,150nm,1.0s
INDI *i* S 01 57 56.5
JTS Las Juntas de 11.08 117 Pn **Pn** **01 57 19.9 +2.5**
JTS Las Juntas de 11.08 117 P **Pn** **01 57 20.6 +3.1**
comp=Z,12nm,0.4s,baz=303,slow=15,SNR=7.1
ARE1 Arenal 1 11.21 116 **Pn** **01 57 20.7 +1.6**
JACO JACO, Garabito 11.65 119 *i* P Pn 01 57 30.0 +4.9
JACO IAML 01 57 43.9
comp=Z,96nm,1.0s
RIMA Rio Macho 12.27 117 **Pn** **01 57 35.7 +1.8**
CDM Cerro de Muert 12.46 117 *i* P **Pn** **01 57 38.5 +1.8**
CDM IAML 01 57 55.3
comp=Z,92nm,1.0s
PEZE Perez Zeledon, 12.62 118 **Pn** **01 57 41.1 +2.6**
PLAN Los Planes de 12.99 120 *i* P **Pn** **01 57 47.3 +3.8**
PLAN IAmb IAmb 01 58 01.2
comp=Z,82nm,0.6s
PLAN IAML 01 59 24.4
comp=Z,180nm,1.0s
DRK0 Durika 13.05 117 **Pn** **01 57 47.3 +2.8**
833A Chaparral WMA, 13.37 343 Pn **Pn** **01 57 48.4 -0.2**
833A Chaparral WMA, 13.37 343 P **Pn** **01 57 48.4 -0.2**
baz=161,SNR=8.9
SOR Soroa 13.42 56 **Pn** **01 57 48.2 -1.1**
735A Kenedy 13.51 349 **Pn** **01 57 49.4 -1.1**
BRU2 Volcan 13.76 118 Pn **Pn** **01 57 56.5 +2.4**
EF01 Eagle Ford 01 13.89 348 **Pn** **01 57 55.6 -0.1**
DRIO Del Rio 14.77 340 Pn **Pn** **01 58 07.0 -0.6**
HPIG 15.08 321 Pn **Pn** **01 58 09.9 -2.1**
435B Jarrell 15.36 352 IAmb IAmb 01 58 18.0
comp=Z,58nm,0.8s
435B Jarrell 15.36 352 P **Pn** **01 58 15.3 -0.2**
baz=170
JCT Junction City 15.52 344 Pn **Pn** **01 58 17.3 -0.3**
JCT Junction City 15.52 344 P **Pn** **01 58 17.4 -0.2**
baz=162
SAND Sanderson 15.78 337 Pn **Pn** **01 58 20.7 -0.2**
TXAR Lajitas Array 15.89 331 P **Pn** **01 58 24.1 +1.6**
comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=28
comp=Z,6.5nm,1.0s
BRDY Brady 16.10 348 IAmb IAmb 01 58 36.8
comp=Z,52nm,1.0s
NATX Nacogdoches 16.16 1 P **Pn** **01 58 25.3 -0.3**
baz=181
OZNA Ozona 16.32 341 IAmb IAmb 01 58 51.7
comp=Z,36nm,0.8s
WHTX Lake Whitney, 16.54 353 IAmb IAmb 01 58 43.4
comp=Z,56nm,0.7s
WHTX Lake Whitney, 16.54 353 P **Pn** **01 58 31.1 +0.6**
baz=171,SNR=7.4
LPIG La Paz 16.73 303 P **P** **01 58 38.2 +3.2**
comp=Z,12nm,0.3s,baz=143,slow=7.5,SNR=1.0
LPIG LR LR 02 04 41.1
comp=Z,646nm,19.4s,baz=136,slow=35
FW13 Cleburne 16.89 353 IAmb IAmb 01 58 48.1
comp=Z,48nm,0.7s
VBMS Vicksburg 17.10 13 P **Pn** **01 58 37.2 -0.3**
baz=195
BRAL Brewton 17.17 24 P **Pn** **01 58 38.0 -0.5**
baz=207
SGCY Sterling City 17.24 342 IAmb IAmb 01 58 45.7
comp=Z,42nm,1.0s
FW07 Weatherford 17.28 352 IAmb IAmb 01 58 53.4
comp=Z,84nm,0.9s
PLPT Palo Pinto 17.46 351 IAmb IAmb 01 58 55.2
comp=Z,70nm,1.0s
FW06 Azle 17.52 353 IAmb IAmb 01 58 55.3
comp=Z,45nm,0.8s
ABTX Abilene, Hawle 17.53 347 IAmb IAmb 01 58 49.3
comp=Z,53nm,0.8s
ABTX Abilene, Hawle 17.53 347 P **Pn** **01 58 42.9 -0.1**
baz=164,SNR=9.2
Z38A Mt. Pleasant 17.65 0 IAmb IAmb 01 59 01.4
comp=Z,45nm,0.8s
FW03 Perrin-Whitt E 17.65 351 IAmb IAmb 01 59 16.2
comp=Z,59nm,1.1s
DWPF Disney Wildern 17.73 43 P **Pn** **01 58 45.0 -0.4**
baz=228
Z41A Richland Creek 17.76 6 IAmb IAmb 01 59 12.3
comp=Z,86nm,1.3s
Z35A Perchaven, San 17.84 354 IAmb IAmb 01 59 04.2
comp=Z,43nm,0.8s
ODSA Odessa 17.89 339 IAmb IAmb 01 58 52.4
comp=Z,40nm,1.1s
656A Willston 17.92 38 IAmb IAmb 01 59 21.3
comp=Z,30nm,0.8s
WLAR White Oak Lake 18.15 5 P **P** **01 58 49.5 -1.1**
WLAR IAmb IAmb 01 59 18.3
comp=Z,30nm,0.8s
APMT Aspermont 18.31 346 IAmb IAmb 01 59 08.8
comp=Z,34nm,1.0s
352A Blakely 18.34 28 IAmb IAmb 01 59 04.4
comp=Z,63nm,0.9s
WTFS Witchita Falls 18.42 351 IAmb IAmb 01 59 07.5
comp=Z,46nm,0.7s
MNTX Cornudas Mount 18.68 331 P **Pn** **01 58 57.7 +0.7**
baz=146,SNR=18
DKNS Dickens 18.83 345 IAmb IAmb 01 59 13.8
comp=Z,34nm,0.9s
LRAL Lakeview Retre 18.87 21 P **P** **01 58 57.8 -0.7**
baz=204
TIGA Tifton 18.95 31 IAmb IAmb 01 59 17.7
comp=Z,20nm,0.6s
TIGA Tifton 18.95 31 P **P** **01 58 58.7 -0.6**
baz=216
X40A Basin Creek Fa 18.97 5 P **P** **01 58 58.5 -1.1**
MIAR Mount Ida 18.97 4 P **P** **01 58 58.5 -1.1**
baz=184,SNR=9.6
X37A Clayton 18.98 359 IAmb IAmb 01 59 18.9
comp=Z,37nm,0.6s
WMOK Wichita Mounta 19.42 351 P **P** **01 59 04.9 +0.3**
baz=168,SNR=13
OXF Oxford 19.55 14 P **P** **01 59 05.1 -0.8**
baz=196
W35A Tecumseh 19.61 355 IAmb IAmb 01 59 19.3
comp=Z,48nm,0.9s
MSTX Muleshoe 19.65 340 IAmb IAmb 01 59 11.8
comp=Z,31nm,1.0s
MSTX Muleshoe 19.65 340 P **Pn** **01 59 08.2 -0.6**
baz=157,SNR=12
WHAR Wooly Hollow 19.82 7 P **P** **01 59 08.2 -0.7**
SMWD Samnorwood 20.05 347 IAmb IAmb 01 59 32.6
comp=Z,39nm,0.7s
154A Montrose 20.14 30 IAmb IAmb 01 59 50.5
comp=Z,52nm,1.1s
AMTX Amarillo 20.18 344 IAmb IAmb 01 59 36.5
comp=Z,24nm,0.7s
AMTX Amarillo 20.18 344 P **P** **01 59 13.4 +0.4**
baz=160
DBBC Dabeiba 20.25 113 *e*P **P** **01 59 14.8 +1.0**
DEOK Depew 20.27 356 IAmb IAmb 01 59 25.1
comp=Z,80nm,1.2s
OK029 Liberty Lake 20.30 354 IAmb IAmb 01 59 24.9
comp=Z,39nm,1.0s
TUL3 Leonard 20.30 358 IAmb IAmb 01 59 34.5
comp=Z,27nm,0.8s
TUL3 Leonard 20.30 358 P **P** **01 59 13.5 -0.6**
baz=177
121A Cookes Peak, D 20.53 328 IAmb IAmb 01 59 39.4
comp=Z,20nm,0.8s
121A Cookes Peak, D 20.53 328 P **P** **01 59 17.8 +1.0**
baz=142,SNR=19
UREC San Jos de Ur 20.55 110 *e*P **P** **01 59 14.3 -2.8**
QUOK Quay 20.61 356 IAmb IAmb 01 59 27.8
comp=Z,61nm,0.9s
GOGA Godfrey 20.63 28 P **P** **01 59 17.1 -0.5**
baz=213
Y52A Lilburn 20.75 26 IAmb IAmb 01 59 52.8
comp=Z,23nm,0.8s
ELIS Ellis County 20.83 350 IAmb IAmb 01 59 32.4
comp=Z,38nm,0.8s
OK048 Pawnee Station 20.87 356 IAmb IAmb 01 59 34.8
comp=Z,53nm,0.9s
OK051 E0350 and S346 20.95 356 IAmb IAmb 01 59 35.1
comp=Z,43nm,0.7s
CBOC Ciudad Bolivar 20.96 115 *e*P Pn 01 59 23.4 -0.9
U32A Winter Ranch, 21.07 351 IAmb IAmb 01 59 35.8
comp=Z,64nm,1.1s
OK038 West end E0370 21.12 352 IAmb IAmb 01 59 40.8
comp=Z,37nm,0.9s
PLMC San Jos del P 21.20 118 *e*P **P** **01 59 25.1 +1.0**
HELC Santa Helena 21.23 114 *e*P **P** **01 59 26.3 +1.6**
BLOK Blackwell 21.23 355 IAmb IAmb 01 59 27.0
comp=Z,42nm,0.8s
T35A Sooner Cattle 21.34 357 IAmb IAmb 01 59 35.5
comp=Z,39nm,0.9s
Y22D IRIS PASSCAL I 21.37 332 P **P** **01 59 25.4 -0.5**
baz=146
Y22F Passcal Instru 21.37 332 P **P** **01 59 25.9 +0.1**
baz=146
W50A Signal Mountai 21.42 22 IAmb IAmb 01 59 40.2
comp=Z,24nm,1.0s
WVT Waverly 21.48 16 P **P** **01 59 25.8 -1.0**
WVT Waverly 21.48 16 P **P** **01 59 26.6 -0.2**
baz=199
YOTC Yotoco, Valle 21.64 120 *e*P **P** **01 59 30.5 +1.7**
KAN06 Argonia West S 21.78 354 IAmb IAmb 01 59 32.9
comp=Z,54nm,1.0s
JAMC Jamundi, Valle 21.80 122 *e*P **P** **01 59 31.7 +1.1**
GUY2C Guyana, Caldas 21.83 116 *e*P **P** **01 59 33.3 +2.1**
ANMO Albuquerque 21.90 334 P **P** **01 59 30.9 -0.7**
ANMO Albuquerque 21.90 334 P **P** **01 59 32.4 +0.8**
baz=149
ANMO Albuquerque 21.90 334 P **P** **01 59 33.7 +2.1**
comp=Z,4.1nm,0.9s,baz=229,slow=13,SNR=12
ANMO LR LR 02 09 10.3
comp=Z,189nm,20.9s,baz=238,slow=40
comp=Z,4.1nm,0.9s
RTBA Rita Blanca 21.93 343 IAmb IAmb 01 59 54.5
comp=Z,15nm,0.8s
PTBC PUERTO BERRIO, 22.03 112 *e*P **P** **01 59 33.4 +0.5**
TUC Tucson 22.03 322 P **P** **01 59 30.4 -2.5**
TUC Tucson 22.03 322 P **P** **01 59 34.2 +1.3**
baz=135
NHSC New Hope 22.05 35 P **P** **01 59 32.7 -0.2**
baz=221
BBAC Balboa, Cauca 22.05 126 *e*P **P** **01 59 36.2 +2.9**
ANIL Santa Ana 22.16 118 *e*P **P** **01 59 38.0 +3.3**
POPC Popayan, Colom 22.19 124 *e*P **P** **01 59 36.9 +2.1**
OTAV Otavalo 22.31 131 P **P** **01 59 35.5 -0.9**
OTAV IAmb IAmb 01 59 58.1
comp=Z,28nm,1.4s
OTAV Otavalo 22.31 131 *e*P **P** **01 59 38.6 +2.2**
U49A Red Boiling Sp 22.45 20 IAmb IAmb 01 59 54.3
comp=Z,19nm,0.8s
TULM Tulcn-Chalpat 22.48 129 IAmb IAmb 01 59 47.5
comp=Z,39nm,1.1s
TULM Tulcn-Chalpat 22.48 129 *e*P **P** **01 59 41.2 +3.0**
GCUF Volcan Galeras 22.48 128 *e*P **P** **01 59 41.8 +3.6**
T47A Sharon Grove 22.49 17 IAmb IAmb 02 00 09.1
comp=Z,20nm,0.8s
CRUC La Cruz 22.56 126 *e*P **P** **01 59 43.4 +4.3**
ORTC Ortega, Tolima 22.60 119 *e*P **P** **01 59 41.4 +2.3**
V52A Sevierville 22.64 25 IAmb IAmb 01 59 56.1
comp=Z,38nm,1.4s
CCM Cathedral Cave 22.68 8 P **P** **01 59 36.9 -2.7**
CCM Cathedral Cave 22.68 8 P **P** **01 59 38.7 -0.9**
baz=189
SIUC Southern Illin 22.68 12 IAmb IAmb 01 59 50.5
comp=Z,27nm,0.8s
SPBC San Pablo de B 22.76 113 *e*P **P** **01 59 39.4 -1.4**
R40A Maddies Statio 22.80 6 IAmb IAmb 01 59 59.6
comp=Z,15nm,0.9s
V53A Saluda 22.82 26 IAmb IAmb 01 59 57.5
comp=Z,15nm,0.8s
BONI La Bonita 22.84 129 *e*P **P** **01 59 45.8 +4.0**
ROSC El Rosal 22.92 115 P **P** **01 59 42.6 -0.3**
ROSC El Rosal 22.92 115 P **P** **01 59 46.5 +3.6**
comp=Z,103nm,0.9s,baz=348,slow=3.3,SNR=43
ROSC LR LR 02 10 19.4
comp=Z,144nm,19.4s,baz=274,slow=41
ROSC El Rosal 22.92 115 *e*P **P** **01 59 46.0 +3.1**
SLOR San Lorenzo - 22.95 133 IAmb IAmb 01 59 49.0
comp=Z,22nm,0.9s
R32A Long Quarter, 23.04 353 IAmb IAmb 01 59 44.5
comp=Z,32nm,1.0s
214A Organ Pipe Nat 23.04 318 P **P** **01 59 43.6 +0.1**
baz=130
KMSC Kings Mountain 23.05 30 IAmb IAmb 02 00 00.6
comp=Z,23nm,0.8s
KMSC Kings Mountain 23.05 30 P **P** **01 59 41.8 -1.8**
baz=216
T25A Trinidad 23.09 341 IAmb IAmb 01 59 47.2
comp=Z,39nm,1.3s
T25A Trinidad 23.09 341 P **P** **01 59 43.6 -0.6**
baz=156,SNR=15
BARC Barichara 23.15 110 *e*P **P** **01 59 47.1 +2.1**
TZTN Tazewell 23.27 24 P **P** **01 59 44.3 -1.4**
baz=209
CVER Cruz Verde, Cu 23.29 116 *e*P **P** **01 59 49.4 +2.7**
PAMC Pamplona, Colo 23.30 108 *e*P **P** **01 59 47.4 +0.7**
GARC Garzon, Huila 23.35 123 *e*P **P** **01 59 49.9 +2.9**
KSU1 Kansas State U 23.52 357 IAmb IAmb 02 00 13.7
comp=Z,26nm,1.1s
KSU1 Kansas State U 23.52 357 P **P** **01 59 47.4 -0.7**
baz=176
CHIC Chingaza 23.54 115 *e*P **P** **01 59 52.2 +3.2**
CBKS Cedar Bluff 23.56 351 P **P** **01 59 47.7 -0.9**
baz=168
W18A Petrified Fore 23.57 329 P **P** **01 59 48.8 -0.1**
baz=142
FLOC Florencia 23.58 124 *e*P **P** **01 59 51.4 +2.4**
VILC Villavicencio, 23.82 116 *e*P **P** **01 59 54.4 +3.0**
Q44A Meyer Farm, Va 23.86 12 IAmb IAmb 02 00 29.4
comp=Z,19nm,0.8s
WCI Wyandotte Cave 23.87 17 P **P** **01 59 49.2 -2.3**
WCI IAmb IAmb 02 00 18.1
comp=Z,15nm,0.8s
WCI Wyandotte Cave 23.87 17 P **P** **01 59 50.5 -0.9**
baz=201
SDCO Great Sand Dun 24.00 339 P **P** **01 59 52.3 -0.7**
baz=154,SNR=14
P40A Paris 24.04 6 IAmb IAmb 02 00 05.8
comp=Z,15nm,0.8s
113A Mohawk Valley, 24.18 319 P **P** **01 59 53.0 -1.4**
KSCO Kaye Shedlock[1] 24.33 345 P **P** **01 59 55.3 -0.6**
baz=162
TAMC Tame, Arauca 24.48 109 *e*P **P** **01 59 58.3 +1.0**
S22A 4UR Ranch, Cre 24.48 337 P **P** **01 59 57.3 -0.2**
baz=151
SDV Santo Domingo 24.69 103 P **P** **01 59 57.6 -1.8**
SDV IAmb IAmb 02 00 02.6
comp=Z,31nm,0.9s
SDV Santo Domingo 24.69 103 LR LR 02 10 35.5
comp=Z,356nm,20.9s,baz=280,slow=39
SDV Santo Domingo 24.69 103 *e*P **P** **02 00 00.4 +0.9**
BLO Bloomington 24.69 16 IAmb IAmb 01 59 57.6
comp=Z,18nm,0.8s
MVCO Mesa Verde 24.69 333 IAmb IAmb 02 00 29.8
comp=Z,10nm,0.8s
MVCO Mesa Verde 24.69 333 P **P** **01 59 59.7 +0.4**
baz=147
BOSC San Juan Bosco 24.72 137 IAmb IAmb 02 00 04.8
comp=Z,16nm,0.9s
WUAZ Wupatki 24.72 327 IAmb IAmb 02 00 34.7
comp=Z,19nm,1.2s
WUAZ Wupatki 24.72 327 P **P** **02 00 01.3 +1.8**
baz=139,SNR=8.0
CNNC Cliffs of the 24.90 35 P **P** **01 59 59.6 -1.2**
baz=222
P46A Rosedale 24.94 14 IAmb IAmb 02 00 00.3
comp=Z,23nm,0.7s
Q24A Divide 24.99 341 P **P** **02 00 01.6 -0.5**
baz=156
PTLC Puerto Leguiza 25.11 126 *e*P **P** **02 00 06.4 +3.4**
PTLC *i* P **pP** **02 00 07.0 -6.3**
BLA Blacksburg 25.16 28 P **P** **02 00 02.4 -1.0**
baz=215
N41A Harden Midland 25.34 7 IAmb IAmb 02 00 35.6
comp=Z,19nm,0.9s
HDIL Hopedale 25.42 10 P **P** **02 00 03.6 -1.9**
baz=193
PDMCI Parker Dam,Lak 25.43 321 P **P** **02 00 06.8 +1.1**
baz=132
P49A Miami Univ. Ec 25.55 19 P **P** **02 00 04.9 -1.8**
baz=203
SFIN Lafayette 25.69 14 P **P** **02 00 07.1 -0.9**
baz=198
SMCO Snowmass 25.80 338 IAmb IAmb 02 00 41.1
comp=Z,19nm,1.1s
BC3 Big Chuckawall 25.83 318 P **P** **02 00 11.2 +1.7**
baz=129
ISCO Idaho Springs 25.90 341 P **P** **02 00 10.3 +0.1**
baz=156,SNR=7.9
IRM Iron Mountain 25.96 319 P **P** **02 00 11.8 +1.3**
baz=130
MONP2 Monument Peak 26.00 315 P **P** **02 00 11.8 +0.7**
baz=126
O48B Farmland 26.08 17 P **P** **02 00 10.0 -1.6**
baz=202
SCIA State Center 26.32 3 P **P** **02 00 12.7 -1.0**
baz=184
BELC Belle Mtn. Jos 26.40 318 P **P** **02 00 15.6 +0.9**
baz=128

PFO Pinyon Flats O 26.46 317 LR LR 02 11 21.8
comp=Z,356nm,19.9s,baz=136,slow=38
GMRC Granite Mounta 26.69 320 P **P** **02 00 18.2 +0.9**
baz=130
L42A Oliver, Polo 26.77 9 IAmb IAmb 02 00 28.4
comp=Z,14nm,0.8s
O20A White River Ci 27.10 337 P **P** **02 00 20.5 -0.5**
baz=151
HEC Hector,Ludlow 27.14 319 P **P** **02 00 22.1 +0.8**
baz=129
SCI2 San Clemente I 27.52 313 P **P** **02 00 25.3 +0.7**
baz=123
JFWS Jewell Farm 27.59 8 IAmb IAmb 02 00 41.1
comp=Z,20nm,0.8s
JFWS Jewell Farm 27.59 8 P **P** **02 00 24.3 -0.8**
baz=190
TCRU Three Creeks R 27.65 330 IAmb IAmb 02 00 34.4
comp=Z,6.4nm,0.4s
SJG San Juan 27.71 81 LR LR 02 10 48.3
comp=Z,152nm,21.3s,baz=234,slow=35
ATAH Atahualpa 27.89 143 LR LR 02 10 27.2
comp=Z,150nm,18.3s,baz=350,slow=34
TPNV Topopah Spring 28.48 322 P **P** **02 00 33.7 +0.3**
baz=132
M53A WI Miller and 28.63 23 P **P** **02 00 34.1 -0.3**
baz=210
MPMC Manual Prospec 28.65 320 P **P** **02 00 36.5 +1.6**
baz=129
K22A Casper 28.78 342 P **P** **02 00 36.9 +1.0**
baz=156
SSPA Standing Stone 29.10 27 P **P** **02 00 37.7 -0.8**
baz=216
TCUT Toone Canyon 29.20 334 IAmb IAmb 02 01 02.8
comp=Z,15nm,1.1s
SPMN Marine on St. 29.65 3 IAmb IAmb 02 00 43.8
comp=Z,34nm,1.2s
SPMN Marine on St. 29.65 3 P **P** **02 00 42.0 -1.4**
baz=184,SNR=6.8
PDAR Pinedale Array 29.88 338 P **P** **02 00 46.1 +0.4**
comp=Z,0.2nm,0.6s,baz=152,slow=9.8,SNR=4.0
PDAR PcP **PcP** **02 03 48.3 0.0**
comp=Z,0.7nm,0.9s,baz=121,slow=5.4,SNR=3.8
PDAR LR LR 02 15 35.9
comp=Z,332nm,19.1s,baz=144,slow=42
PCRV Puerto La Cruz 30.05 97 LR LR 02 15 03.9
comp=Z,182nm,18.4s,slow=41
F36A Milaca 30.26 2 IAmb IAmb 02 00 49.2
comp=Z,8.9nm,1.0s
ELK Elko 30.66 329 LR LR 02 15 14.3
comp=Z,650nm,18.9s,baz=149,slow=40
NVAR Mina Array Bea 30.68 322 P **P** **02 00 55.5 +2.6**
comp=Z,2.6nm,0.8s,baz=134,slow=8.7,SNR=18
NVAR PcP **PcP** **02 03 51.8 +1.4**
comp=Z,1.8nm,0.8s,baz=144,slow=3.4,SNR=5.8
NVAR LR LR 02 14 41.8
comp=Z,769nm,19.1s,baz=120,slow=39
comp=Z,2.6nm,0.8s
SNOW Snow King Moun 30.92 337 IAmb IAmb 02 01 16.0
comp=Z,12nm,1.0s
TPAW Teton Pass 31.02 337 IAmb IAmb 02 01 26.5
comp=Z,12nm,1.2s
RLMT Red Lodge 31.86 341 P **P** **02 01 02.9 -0.3**
baz=153
CZSB Cruzeiro do Su 31.96 135 P **P** **02 01 03.9 -0.2**
SADO Sadowa 32.08 21 LR LR 02 15 54.4
comp=Z,159nm,19.3s,baz=157,slow=40
HLID Hailey 32.48 333 P **P** **02 01 08.4 -0.2**
baz=143
NNA Nana 32.72 146 LR LR 02 12 21.6
comp=Z,111nm,21.0s,baz=333,slow=32
B35A Bob, Littlefor 32.75 2 IAmb IAmb 02 01 21.4
comp=Z,8.0nm,0.9s
BOZ Bozeman (W) 33.08 338 P **P** **02 01 12.7 -1.0**
baz=149
WVOR Wild Horse Val 33.63 328 IAmb IAmb 02 01 22.0
comp=Z,14nm,1.5s
LONY Lake Ozonia 33.75 27 P **P** **02 01 18.6 -0.9**
baz=217
J08A Circle Bar Ran 34.22 329 IAmb IAmb 02 01 26.4
comp=Z,6.7nm,0.8s
PLID Pearl Lake 34.38 333 IAmb IAmb 02 01 27.2
comp=Z,5.9nm,0.9s
EGMT Eagleton 34.62 342 IAmb IAmb 02 01 29.5
comp=Z,22nm,1.4s
EGMT Eagleton 34.62 342 P **P** **02 01 26.3 -0.7**
baz=154,SNR=5.0
ULM Lac du Bonnet 34.63 359 IAmb IAmb 02 01 37.8
comp=Z,8.7nm,1.0s
ULM Lac du Bonnet 34.63 359 P **P** **02 01 25.5 -1.5**
comp=Z,4.0nm,0.7s,baz=178,slow=9.9,SNR=10.0
ULM PcP **PcP** **02 04 00.7 0.0**
comp=Z,5.5nm,1.0s,baz=217,slow=0.7,SNR=4.7
ULM LR LR 02 19 11.7
comp=Z,164nm,18.9s,baz=107,slow=43
comp=Z,4.0nm,0.7s
YBH Yreka Blue Hor 35.40 323 LR LR 02 17 48.7
comp=Z,468nm,18.6s,baz=150,slow=39
F10A Beach Ranch, E 35.61 333 IAmb IAmb 02 01 57.9
comp=Z,9.9nm,0.9s
BOAV Boa Vista 36.38 108 P **P** **02 01 42.0 -0.5**
BOAV IAmb IAmb 02 01 43.7
comp=Z,12nm,1.0s
NEW Newport 37.38 336 P **P** **02 01 51.3 +0.6**
baz=143
NEW Newport 37.38 336 P **P** **02 01 50.8 +0.2**
comp=Z,2.3nm,0.7s,baz=155,slow=5.6,SNR=4.8
NEW LR LR 02 19 34.1
comp=Z,215nm,18.5s,baz=146,slow=40
comp=Z,2.3nm,0.7s
FFC Flin Flon 39.48 354 P **P** **02 02 06.0 -2.1**
SAML Samuel 39.81 126 P **P** **02 02 09.6 -1.7**
SAML IAmb IAmb 02 02 14.9
comp=Z,11nm,0.8s
EDM Edmonton 40.29 343 P **P** **02 02 13.4 -1.5**
EDM IAmb IAmb 02 02 15.5
comp=Z,6.6nm,0.8s
PB11 IPOC Station P 43.02 144 P **P** **02 02 37.2 -0.6**
PB11 IAmb IAmb 02 02 40.6
comp=Z,22nm,0.8s
FCC Fort Churchill 43.16 1 P **P** **02 02 36.6 -1.6**
FCC IAmb IAmb 02 02 38.5
comp=Z,13nm,1.1s
GO01 Chusmiza 43.21 143 P **P** **02 02 38.1 -1.6**
GO01 IAmb IAmb 02 02 43.4
comp=Z,18nm,0.8s
TA01 Diego Aracena 43.37 145 P **P** **02 02 41.0 +0.6**
PB08 IPOC Station P 43.61 144 P **P** **02 02 42.3 -0.4**
PB08 IAmb IAmb 02 02 47.2
comp=Z,9.1nm,0.9s
PB02 IPOC Station P 44.13 145 P **P** **02 02 46.7 0.0**
PB01 IPOC Station P 44.14 145 P **P** **02 02 46.7 +0.1**
PB01 IAmb IAmb 02 02 49.2
comp=Z,8.1nm,0.9s
PB07 IPOC Station P 44.47 146 P **P** **02 02 49.2 -0.2**
PB07 IAmb IAmb 02 02 52.5
comp=Z,16nm,0.8s
VILB Vilhena 44.56 128 P **P** **02 02 50.0 -0.1**
RPN Rapa Nui 44.63 198 LR LR 02 16 43.9
comp=Z,88nm,21.5s,baz=58,slow=29
SCHQ Schefferville 44.86 23 P **P** **02 02 48.8 -3.2**
comp=Z,2.8nm,0.8s,baz=199,slow=4.2,SNR=5.0
SCHQ PcP **PcP** **02 04 33.0 -0.2**
comp=Z,7.0nm,0.9s,baz=214,slow=3.5,SNR=6.0
SCHQ LR LR 02 23 21.2
comp=Z,257nm,20.0s,baz=251,slow=38
comp=Z,2.8nm,0.8s
PB09 IPOC Station P 44.88 145 P **P** **02 02 53.0 +0.4**
BBB Bella Bella 45.03 332 LR LR 02 24 44.1
comp=Z,130nm,20.9s,baz=206,slow=40
LVC Limon Verde 45.71 145 P **P** **02 02 58.7 -0.8**
LVC IAmb IAmb 02 03 03.1
comp=Z,14nm,0.9s
LVC Limon Verde 45.71 145 LR LR 02 21 05.0
comp=Z,76nm,19.0s,baz=349,slow=35
SIV San Ignacio 45.85 132 LR LR 02 21 53.2
comp=Z,113nm,19.0s,baz=282,slow=36
HILA High Level 45.97 344 P **P** **02 03 00.1 -0.6**
PTLB Pontes e Lacer 46.92 129 P **P** **02 03 08.6 -0.1**
GO02 Mina Guanaco 47.43 148 P **P** **02 03 12.7 -0.2**
YKA Yellowknife Ar 48.91 348 P **P** **02 03 22.9 -0.5**
YKA Yellowknife Ar 48.91 348 P **P** **02 03 23.0 -0.4**
comp=Z,5.3nm,0.8s,baz=154,slow=7.2,SNR=71
YKA PcP **PcP** **02 04 47.4 0.0**
comp=Z,0.5nm,0.6s,baz=146,slow=3.6,SNR=3.8
comp=Z,5.3nm,0.8s
AC02 Maricunga 49.04 149 P **P** **02 03 25.9 +0.4**
KOTAN Kotaneelee Air 49.30 341 P **P** **02 03 26.3 -0.2**
baz=142

DLBC Dease Lake 50.10 337 P **P** **02 03 33.9 +1.3**
baz=134
DLBC Dease Lake 50.10 337 P **P** **02 03 34.4 +1.7**
comp=Z,4.1nm,0.8s,baz=141,slow=3.9,SNR=3.4
DLBC LR LR 02 27 58.5
comp=Z,200nm,18.7s,baz=114,slow=40
comp=Z,4.1nm,0.8s
LCO Las Campanas 50.12 152 P **P** **02 03 33.9 +0.5**
S34M Telegraph Cree 50.17 336 P **P** **02 03 34.7 +1.6**
baz=132
AC05 El Transito 50.17 151 P **P** **02 03 34.2 +0.6**
WTLY Watson Lake, Y 50.84 339 P **P** **02 03 37.1 -1.1**
WTLY IAmb IAmb 02 03 40.5
comp=Z,9.1nm,1.0s
WTLY Watson Lake, Y 50.84 339 P **P** **02 03 38.7 +0.5**
baz=136
TAOE Nuku Hiva Isla 50.88 245 *e*LR LR 02 18 18.8
comp=Z,284nm,24.3s
R33M Jennings River 51.11 337 P **P** **02 03 40.0 -0.4**
baz=133
CO01 Juntas del Tor 51.22 152 P **P** **02 03 42.4 +0.7**
CO01 IAmb IAmb 02 03 45.2
comp=Z,7.5nm,0.9s
FRB Frobisher Bay 51.52 15 LR LR 02 26 17.5
comp=Z,138nm,19.9s,baz=18,slow=37
WRGLY Wrigley 51.61 344 P **P** **02 03 44.4 +0.5**
baz=144
CO03 El Dedregal 51.69 153 P **P** **02 03 44.9 -0.1**
TGTN Hyland Airport 51.70 340 P **P** **02 03 45.9 +1.2**
baz=137
CO02 Combarbal 51.87 154 P **P** **02 03 45.7 -0.7**
AQDB Aquidauana 52.63 132 P **P** **02 03 51.3 -0.8**
VA06 Catapilco 52.93 155 P **P** **02 03 54.1 0.0**
N32M Quiet Lake 53.08 338 P **P** **02 03 55.6 +0.7**
baz=132
PLBC Pleasant Camp 53.26 335 P **P** **02 03 57.7 +1.6**
baz=127
VA03 San Esteban 53.41 154 P **P** **02 03 58.0 +0.3**
MT02 Curacav 53.60 155 P **P** **02 03 58.6 -0.4**
MT05 Renca 53.88 155 P **P** **02 04 02.1 +1.0**
FARO Faro Yukon 53.90 339 P **P** **02 04 01.4 +0.5**
baz=132
MT03 Universidad Ad 54.06 155 P **P** **02 04 02.5 0.0**
MT01 Popeta 54.08 156 P **P** **02 04 02.9 +0.4**
MT01 IAmb IAmb 02 04 25.3
comp=Z,5.7nm,0.9s
MT09 Talagante 54.11 155 P **P** **02 04 04.1 +1.2**
MT09 IAmb IAmb 02 04 05.2
comp=Z,9.7nm,0.8s
M31M Drury Creek, Y 54.25 338 P **P** **02 04 05.2 +1.8**
baz=131
MT13 San Alfonso 54.37 155 P **P** **02 04 05.3 +0.5**
MT13 IAmb IAmb 02 04 15.1
comp=Z,12nm,0.9s
BO04 La Punta 54.45 155 P **P** **02 04 06.3 +1.0**
LMEL Las Melosas 54.49 155 P **P** **02 04 06.2 +0.5**
BO01 Tunca 54.61 156 P **P** **02 04 07.7 +1.3**
BO01 IAmb IAmb 02 04 08.8
comp=Z,9.0nm,0.9s
PNL Peninsula 54.63 334 P **P** **02 04 06.3 +0.1**
baz=124
M30M Minto, Yukon 55.35 338 P **P** **02 04 12.4 +1.0**
baz=128
CPUP Villa Florida 55.43 138 P **P** **02 04 12.4 0.0**
CPUP IAmb IAmb 02 04 13.2
comp=Z,12nm,1.1s
CPUP Villa Florida 55.43 138 P **P** **02 04 12.4 0.0**
comp=Z,4.6nm,0.7s,baz=333,slow=8.9,SNR=13
CPUP LR LR 02 26 53.9
comp=Z,100nm,20.6s,baz=11,slow=35
comp=Z,4.6nm,0.7s
MAYO Mayo, Yukon 55.68 339 P **P** **02 04 14.5 +0.7**
baz=130
BDFB Brasilia 55.78 122 P **P** **02 04 16.2 +0.9**
BDFB Brasilia 55.78 122 P **P** **02 04 15.9 +0.6**
comp=Z,21nm,0.7s,baz=297,slow=9.2,SNR=26
comp=Z,21nm,0.7s
M29M Somme Creek 55.88 337 P **P** **02 04 17.0 +1.7**
baz=126
L29M L29M 56.16 338 P **P** **02 04 18.7 +1.5**
baz=127
K29M Barlow Dome 56.40 339 P **P** **02 04 20.1 +1.1**
baz=128
G31M Satah River 57.40 343 P **P** **02 04 26.2 +0.3**
G31M IAmb IAmb 02 04 43.6
comp=Z,10nm,1.1s
G31M Satah River 57.40 343 P **P** **02 04 26.6 +0.8**
baz=133
L27K Beaver Creek, 57.50 337 P **P** **02 04 27.9 +1.2**
baz=123
F31M Tsiigehtchic 57.62 343 P **P** **02 04 26.7 -0.6**
F31M IAmb IAmb 02 04 28.5
comp=Z,12nm,1.2s
F31M Tsiigehtchic 57.62 343 P **P** **02 04 27.4 0.0**
baz=134
EPYK Eagle Plains 57.76 342 P **P** **02 04 28.7 +0.3**
baz=130
INK Inuvik 58.17 344 P **P** **02 04 30.3 -0.9**
INK IAmb IAmb 02 04 32.4
comp=Z,13nm,1.1s
INK Inuvik 58.17 344 P **P** **02 04 31.0 -0.3**
baz=135,SNR=7.4
INK Inuvik 58.17 344 P **P** **02 04 31.6 +0.4**
comp=Z,7.2nm,0.8s,baz=122,slow=6.9,SNR=8.3
comp=Z,7.2nm,0.8s
H29M Whitestone 58.17 341 P **P** **02 04 31.5 +0.2**
baz=129
EGAK Eagle 58.23 339 P **P** **02 04 32.2 +0.5**
baz=125
F30M Barrier River 58.30 343 P **P** **02 04 32.7 +0.5**
baz=132
SFJD Kangerlussuaq 58.97 19 *e*P **P** **02 04 35.0 -1.8**
SFJD IAmb IAmb 02 04 36.2
comp=Z,21nm,1.1s
SFJD Kangerlussuaq 58.97 19 LR LR 02 33 16.3
comp=Z,122nm,18.1s,baz=116,slow=39
RES Resolute Bay 59.15 0 P **P** **02 04 36.6 -1.3**
RES IAmb IAmb 02 04 38.2
comp=Z,8.3nm,0.9s
H27K Steamboat Moun 59.20 340 P **P** **02 04 39.4 +0.9**
baz=125
E29M Blow River 59.42 343 P **P** **02 04 40.2 +0.3**
E29M IAmb IAmb 02 04 41.8
comp=Z,12nm,1.2s
E29M Blow River 59.42 343 P **P** **02 04 40.7 +0.7**
baz=130
ITAB Concordia 59.47 135 P **P** **02 04 40.7 -0.2**
SML Sawmill 59.50 334 P **P** **02 04 41.7 +1.0**
baz=116
F28M Old Crow 59.50 342 P **P** **02 04 40.8 +0.3**
F28M Old Crow 59.50 342 P **P** **02 04 40.9 +0.3**
baz=128,SNR=8.2
WAT6 Susitna Watana 59.60 335 P **P** **02 04 42.2 +0.7**
baz=117
PMR Palmer 59.75 333 P **P** **02 04 43.4 +1.1**
baz=115
RC01 Rabbit Creek A 59.80 333 P **P** **02 04 43.3 +0.6**
baz=114
E28M Babbage River 60.02 343 P **P** **02 04 44.0 -0.1**
baz=126
DY2G Dye2 60.06 20 *e*P **P** **02 04 42.6 -2.1**
DY2G IAmb IAmb 02 04 44.4
comp=Z,59nm,1.7s
OHAK Old Harbor 60.08 328 P **P** **02 04 46.5 +1.9**
baz=109
ILAR Eielson Array 60.30 337 P **P** **02 04 45.8 -0.3**
ILAR Eielson Array 60.30 337 P **P** **02 04 46.5 +0.4**
comp=Z,3.4nm,1.1s,baz=130,slow=4.8,SNR=5.5
comp=Z,3.4nm,1.1s
SII Sitkinak Islan 60.33 327 P **P** **02 04 47.0 +0.6**
baz=107
G26K Porcupine Rive 60.35 340 P **P** **02 04 45.8 -0.5**
baz=123
SUA Susitna One 60.40 333 P **P** **02 04 47.1 +0.1**
baz=113
PLCA Paso Flores 60.40 159 P **P** **02 04 47.2 +0.1**
PLCA Paso Flores 60.40 159 P **P** **02 04 48.8 +1.7**
comp=Z,6.9nm,0.7s,baz=335,slow=8.3,SNR=31
PLCA LR LR 02 26 13.3
comp=Z,62nm,18.1s,baz=20,slow=31
comp=Z,6.9nm,0.7s
D27M Malcolm River 60.83 343 P **P** **02 04 49.7 0.0**
baz=127
BMAR Burnt Mountain 60.87 340 P **P** **02 04 49.3 -0.7**
F26K Sheenjek River 60.88 341 P **P** **02 04 49.7 -0.3**
baz=123
CHIR Chirikof Islan 60.89 326 P **P** **02 04 51.6 +1.4**
baz=106
N20K Mount Spurr 60.95 332 P **P** **02 04 50.3 -0.3**
baz=112
SKT Skwentna 60.95 333 P **P** **02 04 51.2 +0.7**
baz=113
TRF Thorofare Moun 61.03 335 P **P** **02 04 52.1 +0.8**
baz=115
H24K Noodoor Dome 61.19 338 P **P** **02 04 53.3 +1.2**
baz=118
F25K Christian Rive 61.31 340 P **P** **02 04 53.4 +0.4**
baz=122
I23K Minto, Yukon-K 61.41 337 P **P** **02 04 54.1 +0.5**
baz=117
G24K Hadweenzic Riv 61.47 339 P **P** **02 04 54.4 +0.5**
baz=119
E25K Arctic Village 61.56 341 P **P** **02 04 55.0 +0.4**
baz=102
M20K Styx River 61.61 333 P **P** **02 04 55.5 +0.4**
baz=111
TRQA Tornquist 61.66 151 P **P** **02 04 55.3 -0.3**
Q17K Contact Creek 61.72 328 P **P** **02 04 55.1 -0.9**
baz=107
CAST Castle Rocks 61.75 335 P **P** **02 04 56.5 +0.5**
baz=113
N19K Bonanza Creek 61.85 331 P **P** **02 04 57.4 +0.7**
baz=109
MLY Manley 61.88 337 P **P** **02 04 55.7 -1.1**
MLY IAmb IAmb 02 05 14.7
comp=Z,6.4nm,0.9s
MLY Manley 61.88 337 P **P** **02 04 57.0 +0.1**
baz=115,SNR=5.1
L20K Farewell, AK 62.16 333 P **P** **02 04 58.9 +0.2**
baz=111
Q16K King Salmon 62.23 329 P **P** **02 04 59.8 +0.6**
baz=106
RCBR Riachuelo 62.24 105 P **P** **02 05 00.3 +0.3**
RCBR Riachuelo 62.24 105 LR LR 02 33 10.1
comp=Z,138nm,20.7s,baz=308,slow=37
D25K Kavik River 62.45 342 P **P** **02 05 00.9 +0.3**
D25K IAmb IAmb 02 05 02.4
comp=Z,12nm,1.1s
D25K Kavik River 62.45 342 P **P** **02 05 01.0 +0.4**
baz=122
E24K Your Creek 62.48 340 P **P** **02 05 00.7 -0.1**
baz=119
K20K Telida 62.56 334 P **P** **02 05 01.8 +0.5**
baz=111
COLD Coldfoot 62.66 339 P **P** **02 05 02.9 +1.0**
baz=117
CHNA Chernabura Isl 62.85 324 P **P** **02 05 03.8 +0.4**
baz=102
J20K Nowinta River 62.89 335 P **P** **02 05 03.5 0.0**
baz=111
G22K Bettles 62.98 338 P **P** **02 05 04.1 0.0**
baz=115
PPT Papeete 63.06 241 LR LR 02 24 46.9
comp=Z,138nm,21.7s,baz=6.5,slow=28
PPT2 Papeete2 63.08 241 *e*LR LR 02 23 51.3
comp=Z,142nm,25.2s
PPT2 *e*LR LR 02 23 59.6
comp=Z,215nm,24.2s
TOLK Toolik Lake Re 63.11 340 P **P** **02 05 05.6 +0.6**
baz=118
D24K Happy Valley 63.12 341 P **P** **02 05 05.3 +0.3**
D24K IAmb IAmb 02 05 06.6
comp=Z,12nm,1.4s
D24K Happy Valley 63.12 341 P **P** **02 05 05.9 +1.0**
baz=119
C24K Franklin Bluff 63.36 342 P **P** **02 05 06.5 0.0**
baz=119
J19K Poorman 63.43 335 P **P** **02 05 06.8 -0.3**
baz=110
G21K Allakaket 63.54 338 P **P** **02 05 07.5 -0.3**
baz=113
ICESG Greenland Ices 63.56 19 *i* P **P** **02 05 06.0 -2.3**
ICESG IAmb IAmb 02 05 09.0
comp=Z,36nm,1.1s
D23K Nanushuk River 63.62 341 P **P** **02 05 09.2 +1.0**
baz=117
F21K Alatna River 63.81 338 P **P** **02 05 10.6 +0.9**
baz=114
D22K Ayikyak River 64.23 340 P **P** **02 05 11.7 -0.6**
D22K IAmb IAmb 02 05 14.4
comp=Z,7.5nm,0.9s
D22K Ayikyak River 64.23 340 P **P** **02 05 12.0 -0.3**
baz=115
F20K Avaraart Lake 64.56 338 P **P** **02 05 14.7 +0.2**
baz=111
J17K VABM Dome 64.70 333 P **P** **02 05 15.2 -0.3**
baz=106
G19K Purcell Mounta 64.75 337 P **P** **02 05 15.4 -0.4**
baz=109
H18K Honhosa River 64.93 335 P **P** **02 05 16.6 -0.3**
baz=108
C21K Knifeblade Rid 65.03 340 P **P** **02 05 18.2 +0.7**
baz=113
B21K Ikpikpuk River 65.16 341 P **P** **02 05 17.8 -0.5**
B21K Ikpikpuk River 65.16 341 P **P** **02 05 18.6 +0.2**
baz=113
E20K Nigu River 65.17 339 P **P** **02 05 18.1 -0.4**
baz=111
F19K Shaleruckik Mo 65.24 337 P **P** **02 05 18.8 0.0**
F19K IAmb IAmb 02 05 47.7
comp=Z,9.2nm,1.4s
F19K Shaleruckik Mo 65.24 337 P **P** **02 05 18.8 0.0**
baz=109
E19K Redstone River 65.25 338 P **P** **02 05 18.9 -0.1**
baz=110
G18K Tagagawik 65.27 336 P **P** **02 05 19.4 +0.2**
baz=108
J16K Anvik River 65.33 333 P **P** **02 05 17.8 -1.8**
baz=105
D20K Etivluk River 65.48 339 P **P** **02 05 19.3 -1.1**
baz=111
SUMG Summit 65.55 16 *e*P **P** **02 05 20.5 -0.8**
SUMG *e*pP **pP** **02 05 33.0 +0.6**
NEEM North Greenlan 65.69 10 *e*P **P** **02 05 21.4 -0.7**
NEEM IAmb IAmb 02 05 22.9
comp=Z,20nm,0.9s
NEEM *e*pP **pP** **02 05 34.8 +1.6**
TBI Tubuai 65.80 235 *e*LR LR 02 25 14.2
comp=Z,734nm,26.8s
D19K Kuna River 65.92 339 P **P** **02 05 22.9 -0.4**
baz=109
B20K Meade River 66.13 341 P **P** **02 05 25.4 +0.8**
B20K Meade River 66.13 341 P **P** **02 05 24.5 0.0**
baz=111
H16K Elim 66.38 334 P **P** **02 05 26.7 +0.5**
baz=104
A21K Barrow 66.45 342 P **P** **02 05 27.1 +0.5**
baz=112
E18K Tukpahlearik C 66.47 337 P **P** **02 05 27.3 +0.5**
baz=106
J14K Nanvaranak Lak 66.52 332 P **P** **02 05 27.7 +0.5**
baz=102
C19K Lookout Ridge 66.62 339 P **P** **02 05 28.0 +0.1**
baz=108
UNV Unalaska Valle 66.70 322 P **P** **02 05 29.6 +1.1**
baz=95
E17K Hotham Inlet 66.83 337 P **P** **02 05 30.1 +1.0**
baz=105
C18K Utukok River 67.04 339 P **P** **02 05 30.6 +0.1**
baz=106
B18K Kokolik River 67.45 339 P **P** **02 05 32.7 -0.3**
baz=106
C17K DeLong Mountai 67.69 338 P **P** **02 05 34.2 -0.4**
baz=104
F14K Arctic Creek 68.25 335 P **P** **02 05 38.3 +0.2**
baz=100
C16K Lisburne Hills 68.43 338 P **P** **02 05 39.9 +0.7**
baz=102
BORG Borgarnes 69.10 26 LR LR 02 35 04.4
comp=Z,207nm,19.5s,baz=62,slow=35
PGAV Gavieira, Arco 77.38 50 *e*P **P** **02 06 32.8 -0.1**
PSBE So Bento 77.40 52 *e*P **P** **02 06 32.3 -0.6**
PCAS Casmilo, Conde 77.53 52 *e*P **P** **02 06 33.5 -0.1**
COI Coimbra 77.57 52 *e*P **P** **02 06 34.1 +0.3**
PFVI Vila Bisbo 77.79 55 *e*P **P** **02 06 35.3 +0.2**
comp=Z,117nm,1.2s
POLO Lamas de Olo 77.83 50 *e*P **P** **02 06 34.8 -0.6**
PNCL Nicolau / Gran 77.85 54 *e*P **P** **02 06 35.2 -0.2**
PVIS Viseu 77.87 51 *e*P **P** **02 06 35.1 -0.5**
MORF Marmelete 77.89 54 *e*P **P** **02 06 35.9 +0.2**
MORF Marmelete 77.89 54 *e*P **P** **02 06 35.4 -0.3**
PVRL Vila Real 77.91 50 *e*P **P** **02 06 35.4 -0.4**
MESJ Messejana 78.14 54 *e*P **P** **02 06 37.1 +0.1**
MESJ Messejana 78.14 54 *e*P **P** **02 06 36.8 -0.3**

EVO	**Evora**	**78.17**	**53**	*e*P		**P**	**02 06 37.0**	**-0.2**
	comp=Z,25nm,1.3s							
MTE	**Manteigas**	**78.19**	**51**	*e*P		**P**	**02 06 37.0**	**-0.3**
MTE				*e*pP		**pP**	**02 06 49.6**	**+0.9**
MTE	**Manteigas**	**78.19**	**51**	P		**P**	**02 06 37.1**	**-0.3**
PCVE	**Castro Verde**	**78.31**	**54**	*e*P		**P**	**02 06 38.4**	**+0.4**
PCBR	**Castelo Branco**	**78.34**	**52**	*e*P		**P**	**02 06 37.7**	**-0.4**
	comp=Z,39nm,1.4s							
PCBR				*e*pP		**pP**	**02 06 49.5**	**0.0**
PBEJ	**Beja**	**78.38**	**54**	*e*P		**P**	**02 06 38.1**	**-0.3**
	comp=Z,20nm,1.3s							
PBEJ				*e*pP		**pP**	**02 06 52.0**	**+2.3**
EKA	**Eskdalemuir Ar**	**78.41**	**36**	P		**P**	**02 06 37.6**	**-0.6**
	comp=Z,5.8nm,0.8s,baz=286,slow=5.5,SNR=10							
	comp=Z,5.8nm,0.8s							
PESTR	**Estremoz**	**78.44**	**53**	*e*P		**P**	**02 06 38.2**	**-0.5**
MVO	**Moncorvo**	**78.44**	**50**	*e*P		**P**	**02 06 38.6**	**-0.1**
PBDV	**Barranco-do-Ve**	**78.47**	**54**	*e*P		**P**	**02 06 39.4**	**+0.5**
PMRV	**Marv??o**	**78.48**	**52**	*e*P		**P**	**02 06 38.4**	**-0.5**
PMRV				*e*pP		**pP**	**02 06 51.4**	**+1.1**
PBRG	**Braganca**	**78.53**	**50**	*e*P		**P**	**02 06 38.7**	**-0.5**
	comp=Z,50nm,1.7s							
PBRG				*e*pP		**pP**	**02 06 52.0**	**+1.4**
PVAQ	**Vaqueiros**	**78.61**	**54**	*e*P		**P**	**02 06 39.6**	**0.0**
BILL	**Bilibino**	**78.96**	**338**	P		**P**	**02 06 39.6**	**-1.3**
PBAR	**Barrancos**	**78.99**	**53**	*e*P		**P**	**02 06 41.5**	**-0.2**
	comp=Z,34nm,1.8s							
SPITS	**Spitsbergen Ar**	**79.16**	**11**	P		**P**	**02 06 42.2**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=211,slow=2.5,SNR=4.7							
	comp=Z,4.0nm,0.8s							
PAB	**San Pablo**	**80.77**	**52**	P		**P**	**02 06 51.0**	**-0.5**
ESDC	**Sonseca Array**	**81.03**	**51**	P		**P**	**02 06 51.5**	**-1.4**
ESDC	**Sonseca Array**	**81.03**	**51**	P		**P**	**02 06 52.4**	**-0.4**
	comp=Z,17nm,1.0s,baz=292,slow=5.7,SNR=61							
ESDC				LR		LR	02 39 00.8	
	comp=Z,211nm,21.2s,baz=342,slow=33							
	comp=Z,17nm,1.0s							
NB2	**NORSAR Subarra**	**84.17**	**28**	P		**P**	**02 07 08.8**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=292,slow=5.3							
NOA	**NORSAR Array B**	**84.17**	**28**	P		**P**	**02 07 09.2**	**+0.5**
	comp=Z,6.3nm,1.0s,baz=298,slow=5.3,SNR=8.2							
	comp=Z,6.3nm,1.0s							
ARCES	**ARCESS Array B**	**85.58**	**18**	P		**P**	**02 07 15.1**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=302,slow=5.2,SNR=6.5							
	comp=Z,2.6nm,0.8s							
HFS	**Hagfors**	**85.65**	**28**	LR		LR	02 45 22.8	
	comp=Z,393nm,18.6s,baz=342,slow=36							
ECH	**Echery**	**86.43**	**41**	P		**P**	**02 07 19.1**	**-1.2**
SENIN	**Lac Senin/Sane**	**87.14**	**43**	P		**P**	**02 07 23.8**	**-0.1**
BNI	**Bardonecchia**	**87.16**	**44**	P		**P**	**02 07 23.9**	**-0.1**
TIXI	**Tiksi**	**88.15**	**347**	P		**P**	**02 07 27.3**	**-0.7**
TIXI				IAmb		IAmb	02 07 42.0	
	comp=Z,4.6nm,1.1s							
TIC	**Toumodi**	**88.22**	**84**	⇓*e*PKP2		**P**	**02 07 29.5**	**0.0**
	comp=Z,5.1nm,0.3s							
LIC	**Lamto**	**88.32**	**84**	⇑*i*PKP2		**P**	**02 07 29.6**	**-0.4**
	comp=Z,38nm,0.9s							
DBIC	**Dimbokro**	**88.37**	**84**	P		**P**	**02 07 30.0**	**-0.2**
	comp=Z,5.6nm,0.8s,baz=283,slow=6.0,SNR=5.9							
	comp=Z,5.6nm,0.8s							
DAVA	**Damuels**	**88.48**	**41**	*e*PcP		**PcP**	**02 07 31.5**	**-0.4**
	comp=Z,11nm,1.2s							
DAVA				*e*pP		**pP**	**02 07 44.2**	**+2.4**
	comp=Z,16nm,1.0s							
KIC	**Kosan Boka**	**88.56**	**84**	⇑*i*PKP2		**P**	**02 07 30.7**	**-0.4**
	comp=Z,22nm,0.8s							
RETA	**Reutte**	**88.96**	**41**	*e*PcP		**PcP**	**02 07 35.1**	**+1.2**
	comp=Z,7.3nm,1.1s							
RETA				*e*pP		**pP**	**02 07 45.5**	**+1.5**
	comp=Z,9.4nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**88.97**	**42**	P		**P**	**02 07 32.9**	**+0.2**
FUORN				IAmb		IAmb	02 07 35.8	
	comp=Z,5.8nm,0.9s							
SQTA	**Sankt Quirin**	**89.34**	**41**	*e*PcP		**PcP**	**02 07 36.0**	**+0.3**
	comp=Z,7.6nm,1.2s							
KHC	**Kasperske Hory**	**90.05**	**39**	*e*P		**P**	**02 07 37.6**	**+0.1**
KHC				*e*pP		**pP**	**02 07 51.2**	**+2.2**
LESA	**Schwarzleotal**	**90.19**	**40**	*e*pP		pP	02 07 51.8	+2.0
	comp=Z,7.0nm,1.2s							
GERES	**GERESS Array B**	**90.24**	**39**	P		**P**	**02 07 38.3**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=335,slow=4.3,SNR=5.0							
	comp=Z,1.2nm,0.8s							
ZVC	**Zvikov**	**90.29**	**38**	*e*P		**P**	**02 07 38.7**	**+0.2**
ZVC				*e*pP		**pP**	**02 07 51.7**	**+1.6**
FINES	**FINESS Array B**	**90.32**	**24**	P		**P**	**02 07 39.2**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=274,slow=2.2,SNR=1.7							
	comp=Z,1.5nm,0.8s							
ABTA	**Abfaltersbach**	**90.35**	**41**	*e*PcP		**PcP**	**02 07 40.5**	**+0.4**
	comp=Z,4.4nm,1.0s							
ABTA				*e*pP		**pP**	**02 07 52.6**	**+2.1**
	comp=Z,5.4nm,1.0s							
BIOA	**Bad Ischl, Aus**	**90.67**	**40**	*e*pP		pP	02 07 52.8	+0.9
	comp=Z,3.9nm,0.9s							
KBA	**Koelnbreinsper**	**90.74**	**40**	P		**P**	**02 07 40.7**	**-0.2**
	comp=Z,3.5nm,1.0s							
KBA				*e*pP		**pP**	**02 07 54.4**	**+2.0**
	comp=Z,6.5nm,1.2s							
MOA	**Molln**	**91.00**	**39**	*e*pP		pP	02 07 55.4	+2.0
	comp=Z,5.4nm,0.8s							
OSTC	**Ostas**	**91.00**	**36**	*e*P		**P**	**02 07 42.1**	**+0.3**
OSTC				*e*pP		**pP**	**02 07 54.9**	**+1.6**
OBKA	**Obir**	**91.73**	**41**	*e*P		**P**	**02 07 45.4**	**0.0**
	comp=Z,4.9nm,1.0s							
CONA	**Conrad Observa**	**91.94**	**39**	*e*pP		pP	02 08 00.1	+2.3
	comp=Z,5.4nm,1.3s							
SOKA	**Soboth**	**91.96**	**40**	*e*pP		pP	02 07 59.6	+1.6
	comp=Z,6.7nm,1.3s							
KEST	**Kesra**	**92.26**	**52**	P		**P**	**02 07 48.0**	**0.0**
	comp=Z,1.7nm,0.5s,baz=225,slow=3.1,SNR=6.4							
	comp=Z,1.7nm,0.5s							
MODS	**Modra-Piesok**	**92.59**	**38**	*e*P		**P**	**02 07 50.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**92.82**	**76**	P		**P**	**02 07 50.9**	**0.0**
	comp=Z,5.3nm,0.3s,baz=291,slow=5.1,SNR=4.0							
TORD				LR		LR	02 47 59.8	
	comp=Z,93nm,18.0s,baz=332,slow=35							
	comp=Z,5.3nm,0.3s							
YAK	**Yakutsk**	**95.08**	**341**	LR		LR	02 56 55.7	
	comp=Z,106nm,20.5s,baz=276,slow=39							
VAE	**Valguarnera**	**95.36**	**49**	LR		LR	02 48 53.1	
	comp=Z,287nm,18.7s,baz=358,slow=34							
MKAR	**Makanchi Array**	**117.91**	**2**	PKP		**PKPdf**	**02 13 23.5**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=7.6,slow=3.7,SNR=8.2							
GEYT	**Alibeck**	**121.12**	**25**	PKP		**PKiKP**	**02 13 30.9**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=256,slow=6.0,SNR=6.4							
BOSA	**Boshof**	**123.62**	**114**	PKP		**PKiKP**	**02 13 36.1**	**0.0**
	comp=Z,5.1nm,0.8s,baz=278,slow=0.7,SNR=7.9							
STKA	**Stephens Creek**	**126.26**	**242**	PKP		**PKiKP**	**02 13 41.7**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=121,slow=8.6,SNR=4.5							
WRA	**Warramunga Arr**	**132.94**	**257**	PKP		**PKiKP**	**02 13 54.5**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=85,slow=2.3,SNR=9.1							
ASAR	**Alice Springs**	**133.42**	**252**	PKP		**PKiKP**	**02 13 56.2**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=84,slow=2.0,SNR=6.1							
CMAR	**Chiang Mai Arr**	**143.54**	**337**	PKhKP		PKPpre	02 14 10.5	
	comp=Z,1.2nm,0.3s,baz=18,slow=3.1,SNR=5.0							

SOME **16** *01:56:07.9,39.°72N×72.°28E,h20km*
ISU **16** *01:56:08.4,39.°59N×72.°92E,h5km*
KRNET **16** *01:56:09.3±0.1,39.°48N×72.°86E,h20km,mb3.5*
NNC **16** *01:56:15.0±3.7,39.°78N×72.°97E,h16km±13km,mb3.7, mpv3.4, Error ellipse: s-maj=27.2km s-min=15.6km az=173.0*
ISC 16 01:56:09.1±1.5,**39.°48N**±0.°06×**72.76E**±0.°03,**h6**km±10km, **n49,σ1°92/87,40C-12D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.74**	**271**	⇓*e*P	**Pg**	**01 56 24.7**	**+1.2**
	baz=71						
DRK				⇓*e*S	**Sb**	**01 56 35.7**	**+0.5**
	baz=71						
SFK	**Sufi-Kurgan**	**0.78**	**47**	⇑*e*P	**Pg**	**01 56 22.7**	**-1.5**
	baz=42						
SFK				⇑*e*S	**Sg**	**01 56 33.0**	**-1.4**
	baz=42						
OHH	**Osh**	**1.05**	**1**	⇑*e*P	**Pb**	**01 56 28.7**	**-1.0**
	baz=57						
OHH				⇑*e*S	**Sb**	**01 56 42.7**	**-1.0**
	baz=57						
FRG	**Fergana**	**1.17**	**320**	P	**Pn**	**01 56 31.5**	**-0.6**
FRG				S	**Sg**	**01 56 48.5**	**+1.7**
CHMI	**Chimion**	**1.24**	**310**	P	**Pn**	**01 56 33.2**	**+0.2**
CHMI				S	**Sg**	**01 56 51.5**	**+2.5**
ANR	**Andizhan**	**1.31**	**347**	P	**Pn**	**01 56 32.6**	**-1.4**
ANR				S	**Sb**	**01 56 50.6**	**-0.7**
BTK	**Batken**	**1.61**	**292**	⇑*e*P	**Pb**	**01 56 39.6**	**+0.3**
	baz=91						
BTK				⇑*e*S	**Sg**	**01 57 01.7**	**+0.9**
	baz=91						
MINT	**Mingtut**	**1.69**	**306**	P	**Pb**	**01 56 41.5**	**+0.8**
MINT				S	**Sg**	**01 57 05.7**	**+2.2**
ARSB	**Arslanbob**	**1.85**	**5**	⇑*i*P	**Pn**	**01 56 42.3**	**+0.7**
	baz=3.0						
ARSB				⇑*e*S	**Sb**	**01 57 06.7**	**-0.3**
	baz=3.0						
KSNS	**Kasansay**	**1.93**	**331**	P	**Pb**	**01 56 44.6**	**-0.2**
KSNS				S	**Sg**	**01 57 10.9**	**-0.3**
TRKS	**Terek-Say**	**2.40**	**329**	⇓*e*P	**Pn**	**01 56 49.5**	**+0.5**
	baz=27						
TRKS				⇓*e*S	**Sn**	**01 57 18.9**	**+0.1**
	baz=27						
ARK	**Arkit**	**2.40**	**346**	⇑*e*P	**Pn**	**01 56 50.1**	**+1.1**
	baz=44						
ARK				⇑*e*S	**Sn**	**01 57 20.4**	**+1.6**
	baz=44						
ARLS	**Aral**	**2.66**	**26**	⇑*e*P	**Pn**	**01 56 52.9**	**+0.2**
	baz=25						
ARLS				⇑*e*S	**Sn**	**01 57 25.3**	**0.0**
	baz=25						
MNAS	**Manas**	**3.01**	**356**	⇑*e*P	**Pn**	**01 56 58.7**	**+1.2**
	baz=55						
MNAS				⇑*e*S	**Sn**	**01 57 34.8**	**+0.8**
	baz=55						
UCH	**Uchtor**	**3.05**	**25**	P	**Pn**	**01 56 59.2**	**+0.9**
	SNR=9.2						
UCH	**Uchtor**	**3.05**	**25**	⇓*e*P	**Pn**	**01 56 59.1**	**+0.8**
	baz=24						
UCH				⇓*e*S	**Sn**	**01 57 35.4**	**0.0**
	baz=24						
NRN	**Naryn**	**3.15**	**51**	⇑*e*P	**Pn**	**01 56 59.7**	**+0.1**
	baz=50						
NRN				⇑*e*S	**Sn**	**01 57 36.4**	**-1.2**
	baz=50						
TAS	**Tashkent**	**3.23**	**306**	P	**Pb**	**01 57 04.3**	**-2.5**
TAS				S	**Sg**	**01 57 52.0**	**-0.8**
EKS2	**Erkin-Say**	**3.27**	**13**	P	**Pn**	**01 57 03.1**	**+2.1**
	SNR=21						
EKS2	**Erkin-Say**	**3.27**	**13**	⇑*e*P	**Pn**	**01 57 02.1**	**+1.0**
	baz=12						
EKS2				⇑*e*S	**Sn**	**01 57 40.5**	**+0.1**
	baz=12						
MRKS	**Merke**	**3.29**	**6**	*e*P	**Pn**	**01 57 03.4**	**+2.2**
	3.5nm,0.2s						
MRKS				*e*S	**Sn**	**01 57 43.6**	**+3.0**
	33nm,0.4s						
IUG	**Iuzhnay**	**3.38**	**323**	*e*P	**Pn**	**01 57 02.0**	**-0.5**
	2.9nm,0.2s						
IUG				*e*S	**Sn**	**01 57 41.2**	**-1.7**
	74nm,0.5s						
AAK	**Ala-Archa**	**3.42**	**22**	P	**Pn**	**01 57 04.8**	**+1.7**
	SNR=24						
AAK	**Ala-Archa**	**3.42**	**22**	⇑*e*P	**Pn**	**01 57 04.0**	**+0.9**
	baz=21						
AAK				⇑*e*S	**Sn**	**01 57 43.8**	**-0.2**
	baz=21						
KBK	**Karagaybulak**	**3.58**	**27**	P	**Pn**	**01 57 07.0**	**+1.7**
	SNR=7.0						
KBK	**Karagaybulak**	**3.58**	**27**	⇑*e*P	**Pn**	**01 57 06.2**	**+0.9**
	baz=26						
KBK				⇑*e*S	**Sn**	**01 57 47.6**	**-0.4**
	baz=26						
FRU1	**Bishkek**	**3.62**	**22**	⇑*e*P	**Pn**	**01 57 06.9**	**+1.2**
	baz=21						
FRU1				⇑*e*S	**Sn**	**01 57 48.9**	**+0.1**
	baz=21						
ULHL	**Ulahol**	**3.82**	**43**	P	**Pn**	**01 57 09.5**	**+0.8**
	SNR=17						
ULHL	**Ulahol**	**3.82**	**43**	⇑*e*P	**Pn**	**01 57 09.4**	**+0.8**
	baz=42						
ULHL				⇑*e*S	**Sn**	**01 57 53.2**	**-0.9**
	baz=42						
CHMS	**Chumysh**	**3.83**	**22**	P	**Pn**	**01 57 10.3**	**+1.7**
	SNR=15						
CHMS	**Chumysh**	**3.83**	**22**	⇑Pn	**Pn**	**01 57 09.9**	**+1.4**
	11nm,0.5s						
CHMS				⇑Lg	Lg	01 58 07.6	
	7.2nm,0.5s						
CHMS	**Chumysh**	**3.83**	**22**	⇑*e*P	**Pn**	**01 57 09.5**	**+0.9**
	baz=21						
CHMS				⇑*e*S	**Sn**	**01 57 53.5**	**-0.4**
	baz=21						
KK31	**Karatay Array**	**4.00**	**336**	⇓Pn	**Pn**	**01 57 12.5**	**+1.5**
	1.0nm,0.2s,baz=133,slow=13,SNR=64						
KK31				⇑Sn	**Sn**	**01 57 59.0**	**+0.9**
	23nm,0.5s,baz=146,slow=21,SNR=14						
KK31				⇑Lg	Lg	01 58 14.3	
	13nm,0.4s						
KKAR	**Karatay Array**	**4.00**	**336**	⇓*e*P	**Pn**	**01 57 12.5**	**+1.5**
	baz=35						
KKAR				⇓*e*S	**Sn**	**01 57 58.9**	**+0.7**
	baz=35						
USP	**Ospenovka**	**4.01**	**18**	P	**Pn**	**01 57 12.4**	**+1.3**
	SNR=7.7						
USP	**Ospenovka**	**4.01**	**18**	⇓*e*P	**Pn**	**01 57 12.1**	**+1.0**
	baz=17						
USP				⇓*e*S	**Sn**	**01 57 57.9**	**-0.4**
	baz=17						
TKM2	**Tokmak 2**	**4.05**	**31**	P	**Pn**	**01 57 13.2**	**+1.4**
	SNR=6.0						
TKM2	**Tokmak 2**	**4.05**	**31**	⇑Pn	**Pn**	**01 57 12.9**	**+1.1**
	4.0nm,0.5s						
TKM2				⇑Pg	**Pb**	**01 57 22.0**	**+1.0**
	3.5nm,0.3s						
TKM2				⇓Sn	**Sn**	**01 57 54.9**	**-4.8**
	6.3nm,0.5s						
TKM2				⇑Lg	Lg	01 58 14.1	
	11nm,0.7s						
TKM2	**Tokmak 2**	**4.05**	**31**	⇑*e*P	**Pn**	**01 57 12.7**	**+0.9**
	baz=30						
TKM2				⇑*e*S	**Sn**	**01 57 58.9**	**-0.8**
	baz=30						
BRLS	**Borolday**	**4.18**	**329**	*e*P	**Pn**	**01 57 12.8**	**-0.7**
	2.3nm,0.2s						
BRLS				*e*S	**Sn**	**01 57 59.9**	**-2.7**
	11nm,0.4s						
KST	**Kastek**	**4.30**	**33**	*e*P	**Pb**	**01 57 26.2**	**+1.0**
	8.6nm,0.5s						
KST				*e*S	**Sb**	**01 58 22.7**	**+5.3**
	22nm,0.6s						
DGS	**Degeres**	**4.39**	**30**	*e*P	**Pb**	**01 57 27.2**	**+0.5**
	4.6nm,0.7s						
DGS				*e*S	**Sb**	**01 58 24.5**	**+4.5**
	14nm,0.5s						
MTBS	**Maitube**	**4.58**	**36**	*e*P	**Pb**	**01 57 30.9**	**+1.0**
	7.0nm,0.5s						
MTBS				*e*S	**Sb**	**01 58 30.3**	**+5.1**
	12nm,0.3s						
TNSS	**Tian-Shan**	**4.75**	**40**	*e*P	**Pb**	**01 57 34.7**	**+1.6**
	11nm,0.4s						
TNSS				*e*S	**Sb**	**01 58 36.9**	**+6.2**
	5.7nm,0.4s						
MDOK	**Medeo**	**4.90**	**40**	⇑Pg	**Pb**	**01 57 37.4**	**+2.1**
	5.0nm,0.4s						
MDOK				⇑Lg	Lg	01 58 41.0	
	13nm,0.7s						
MDOK	**Medeo**	**4.90**	**40**	*e*P	**Pb**	**01 57 37.4**	**+2.1**
	11nm,0.4s						
MDOK				*e*S	**Sg**	**01 58 41.9**	**-4.4**
	7.7nm,0.5s						
KOTS	**Kotyrbulak**	**4.98**	**40**	*e*P	**Pb**	**01 57 38.9**	**+2.2**
	7.5nm,0.3s						
KOTS				*e*S	**Sg**	**01 58 44.6**	**-4.4**
	19nm,0.7s						
AB31	**Akbulak array**	**13.39**	**321**	P	**Pn**	**01 59 16.9**	**-2.7**
	0.2nm,0.4s,baz=288,slow=74,SNR=12						
AKTO	**Aktyubinsk**	**15.10**	**321**	⇑P	**P**	**01 59 46.9**	**-1.3**
	0.5nm,0.5s						

IDC **16** *01:59:28.1±1.4,56.°37N×149.°20W,h0km,mb3.5/6, mbtmp3.6/10,ML3.7/4,MS3.1/5,Error ellipse: s-maj=28.3km s-min=21.7km az=24.0*
NEIC **16** *01:59:29.8±1.5,56.°44N±0.°07×149.°2W±0.°1,h21km±7km, ML3.8/68,ML3.7(AEIC),Error ellipse: s-maj=11.3km s-min=7.4km az=155.0*
AEIC **16** *01:59:33.6±1.4,56.°51N±0.°08×149.°2W±0.°1,h10km±6km, Error ellipse: s-maj=12.6km s-min=8.6km az=157.0*
ISC 16 01:59:29.5±0.8,**56.°55N**±0.°07×**149.°29W**±0.°05,**h10**km, **n293,σ0°91/280,mb3.6/6,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.18**	**306**		**Pn**	**02 00 05.2**	**-0.6**
KDAK					**Sn**	**02 00 31.4**	**-1.3**
KDAK	**Kodiak Island**	**2.18**	**306**	Pn	**Pn**	**02 00 05.6**	**-0.2**
	10nm,0.3s,baz=130,slow=4.7,SNR=284						
KDAK				Sn	**Sn**	**02 00 31.5**	**-1.3**
	18nm,0.3s,baz=281,slow=23,SNR=11						
KDAK				LR	LR	02 01 16.5	
	comp=Z,540nm,20.2s,baz=118,slow=46						
	20nm,0.2s						
OHAK	**Old Harbor**	**2.29**	**289**		**Pn**	**02 00 06.5**	**-0.9**
OHAK	**Old Harbor**	**2.29**	**289**		**Sn**	**02 00 33.1**	**-2.5**
OHAK	**Old Harbor**	**2.29**	**289**	P	**Pn**	**02 00 06.7**	**-0.7**
OHAK	**Old Harbor**	**2.29**	**289**	P	**Pn**	**02 00 06.5**	**-0.9**
	baz=106						
OHAK				S	**Sn**	**02 00 33.1**	**-2.5**
	baz=106						
SYI	**Shuyak Island**	**2.65**	**322**		**Pn**	**02 00 12.1**	**-0.3**
SYI					**Sn**	**02 00 42.7**	**-1.8**
Q20K	**Shuyak Island**	**2.66**	**322**	P	**Pn**	**02 00 12.1**	**-0.3**
	baz=140						
Q20K				S	**Sn**	**02 00 42.7**	**-1.9**
	baz=140						
SII	**Sitkinak Islan**	**2.71**	**272**		**Pn**	**02 00 12.8**	**-0.3**
SII					**Sn**	**02 00 43.0**	**-3.0**
SII	**Sitkinak Islan**	**2.71**	**272**	IAML		02 00 44.0	
	comp=N,297nm,1.0s						
SII				IAML		02 00 50.7	
	comp=E,276nm,0.8s						
SII	**Sitkinak Islan**	**2.71**	**272**	P	**Pn**	**02 00 14.2**	**+1.1**
R18K	**Karluk**	**3.00**	**292**		**Pn**	**02 00 17.1**	**+0.1**
R18K	**Karluk**	**3.00**	**292**	IAML		02 01 00.4	
	comp=N,270nm,0.5s						
R18K				IAML		02 01 01.4	
	comp=E,244nm,0.5s						
R18K	**Karluk**	**3.00**	**292**	P	**Pn**	**02 00 17.1**	**+0.1**
	baz=108						
CNPM	**China Poot**	**3.16**	**342**		**Pn**	**02 00 19.0**	**-0.3**
CNPM					**Sn**	**02 00 54.4**	**-2.6**
Q23K	**Middleton Isla**	**3.28**	**27**		**Pn**	**02 00 19.9**	**-1.0**
Q23K	**Middleton Isla**	**3.28**	**27**	IAML		02 00 46.4	
	comp=N,222nm,2.1s						
Q23K				IAML		02 01 19.9	
	comp=E,259nm,2.1s						
Q23K	**Middleton Isla**	**3.28**	**27**	P	**Pn**	**02 00 19.9**	**-1.0**
	baz=209						
MID	**Middleton Isla**	**3.28**	**27**		**Pn**	**02 00 20.0**	**-0.9**
MID	**Middleton Isla**	**3.28**	**27**	IAML		02 01 04.0	
	comp=N,234nm,1.2s						
MID				IAML		02 02 05.2	
	comp=E,234nm,1.8s						
MID	**Middleton Isla**	**3.28**	**27**	P	**Pn**	**02 00 20.1**	**-0.9**
BRSE	**Bradley Lake S**	**3.29**	**347**		**Pn**	**02 00 20.8**	**-0.3**
BRSE					**Sn**	**02 00 58.5**	**-1.8**
BRSE	**Bradley Lake S**	**3.29**	**347**	P	**Pn**	**02 00 20.8**	**-0.3**
	baz=166						
BRSE				S	**Sn**	**02 00 58.5**	**-1.8**
	baz=166						
BRLK	**Bradley Lake**	**3.33**	**346**		**Pn**	**02 00 21.2**	**-0.4**
Q19K	**Cape Douglas,**	**3.33**	**317**		**Pn**	**02 00 22.8**	**+1.0**
Q19K	**Cape Douglas,**	**3.33**	**317**	P	**Pn**	**02 00 22.8**	**+1.0**
	baz=134						
KAHG	**Katmai Hook Gl**	**3.44**	**307**		**Pn**	**02 00 24.3**	**+1.1**
SEW	**Seward**	**3.56**	**359**		**Pn**	**02 00 24.1**	**-0.7**
SEW	**Seward**	**3.56**	**359**	P	**Pn**	**02 00 24.1**	**-0.7**
	baz=178						
P23K	**Montague Islan**	**3.60**	**15**		**Pn**	**02 00 24.9**	**-0.3**
P23K					**Sn**	**02 01 05.7**	**-2.0**
P23K	**Montague Islan**	**3.60**	**15**	P	**Pn**	**02 00 24.9**	**-0.3**
	baz=196						
P23K				S	**Sn**	**02 01 05.7**	**-2.0**
	baz=196						
CHIR	**Chirikof Islan**	**3.61**	**261**		**Sn**	**02 01 03.4**	**-4.8**
CHIR	**Chirikof Islan**	**3.61**	**261**	Pn	**Pn**	**02 00 25.0**	**-0.5**
CHIR	**Chirikof Islan**	**3.61**	**261**	IAML		02 01 10.7	
	comp=N,141nm,0.9s						
CHIR				IAML		02 01 11.7	
	comp=E,159nm,0.6s						
ACHA	**Angle Creek He**	**3.67**	**299**		**Pn**	**02 00 27.5**	**+1.2**
KAHC	**Katmai Hardscr**	**3.73**	**307**		**Pn**	**02 00 28.2**	**+1.0**
KAHC	**Katmai Hardscr**	**3.73**	**307**	P	**Pn**	**02 00 28.2**	**+1.0**
	baz=122						
ANCK	**Angle Creek**	**3.74**	**299**		**Pn**	**02 00 28.6**	**+1.3**
P19K	**Oil Pt**	**3.75**	**328**		**Pn**	**02 00 28.1**	**+0.8**
P19K	**Oil Pt**	**3.75**	**328**	IAML		02 01 18.6	
	comp=E,211nm,0.5s						
P19K				IAML		02 01 19.9	
	comp=N,178nm,0.5s						
P19K	**Oil Pt**	**3.75**	**328**	P	**Pn**	**02 00 28.1**	**+0.8**
	baz=144						
O22K	**Cooper Landing**	**3.95**	**357**		**Pn**	**02 00 30.5**	**+0.4**
O20K	**Slope Mountain**	**3.95**	**335**		**Pn**	**02 00 30.2**	**0.0**
O20K	**Slope Mountain**	**3.95**	**335**	P	**Pn**	**02 00 30.2**	**0.0**
	baz=152						
CNTC	**Contact Creek**	**3.96**	**298**		**Pn**	**02 00 31.3**	**+1.0**
Q17K	**Contact Creek**	**3.96**	**298**	P	**Pn**	**02 00 31.3**	**+1.0**
	baz=113						

SPCG	Spurr Capps Gl	4.96	345			Pn	02 00 44.3	+0.2	
SNH	Sunshine Point	4.98	40			Pn	02 00 43.9	-0.3	
SNH	Sunshine Point	4.98	40	IAML			02 01 59.9		
	comp=E,90nm,1.8s								
SNH				IAML			02 02 19.9		
	comp=N,72nm,2.1s								
SUA	Susitna One	4.98	352			Pn	02 00 44.5	+0.1	
SUA	Susitna One	4.98	352	IAML			02 01 45.8		
	comp=E,54nm,0.9s								
SUA				IAML			02 02 04.4		
	comp=N,41nm,2.4s								
SUA	Susitna One	4.98	352	P		Pn	02 00 44.5	+0.1	
	baz=170								
KHIT	Khitrov Hills	5.03	37			Pn	02 00 44.5	-0.5	
BMRM	Bremner River	5.05	27			Pn	02 00 44.8	-0.6	
BMRM	Bremner River	5.05	27	P		Pn	02 00 44.8	-0.6	
	baz=211								
PMR	Palmer	5.06	1	Pn		Pn	02 00 45.4	+0.1	
PMR	Palmer	5.06	1	P		Pn	02 00 45.6	+0.3	
N19K	Bonanza Creek	5.06	330			Pn	02 00 45.1	-0.4	
N19K	Bonanza Creek	5.06	330	P		Pn	02 00 45.1	-0.4	
	baz=145								
STLK	Strandline Lak	5.13	346			Pn	02 00 46.3	-0.1	
SPNN	North Nagishla	5.14	341			Pn	02 00 46.3	-0.4	
WAX	Waxell Ridge	5.16	38			Pn	02 00 46.4	-0.5	
GHO	Glory Hole Cre	5.24	2			Pn	02 00 48.7	+0.7	
GHO	Glory Hole Cre	5.24	2	IAML			02 02 11.7		
	comp=E,74nm,0.9s								
O17K	Koliganek Bris	5.24	311			Pn	02 00 48.5	+0.6	
O17K	Koliganek Bris	5.24	311	P		Pn	02 00 48.5	+0.6	
	baz=125								
KLU	Klutina	5.25	18			Pn	02 00 48.4	+0.3	
KLU	Klutina	5.25	18	IAML			02 01 50.9		
	comp=N,62nm,0.8s								
KLU				IAML			02 01 56.1		
	comp=E,56nm,0.8s								
KLU	Klutina	5.25	18	P		Pn	02 00 48.3	+0.3	
	baz=200								
BARK	Barkley Ridge	5.26	40			Pn	02 00 48.1	-0.1	
P16K	Nushagak River	5.28	302			Pn	02 00 49.4	+1.1	
P16K	Nushagak River	5.28	302	P		Pn	02 00 49.4	+1.1	
	baz=114								
SML	Sawmill	5.29	5			Pn	02 00 49.2	+0.5	
SML	Sawmill	5.29	5	P		Pn	02 00 49.2	+0.5	
	baz=186								
CRQM	Cirque	5.30	35			Pn	02 00 48.3	-0.5	
CRQM	Cirque	5.30	35	IAML			02 01 55.8		
	comp=N,75nm,0.9s								
CRQM				IAML			02 01 56.0		
	comp=E,61nm,1.0s								
MESA	MESA	5.30	44			Pn	02 00 46.5	-2.5	
MESA				IAML			02 01 49.8		
	comp=E,55nm,2.3s								
MESA				IAML			02 02 05.1		
	comp=N,78nm,1.2s								
CRQE	Cirque	5.31	35	P		Pn	02 00 48.3	-0.6	
	baz=220								
M23K	Glacier View	5.32	8			Pn	02 00 49.5	+0.5	
M23K	Glacier View	5.32	8	P		Pn	02 00 49.5	+0.5	
	baz=189								
N18K	Kilae Creek	5.39	323			Pn	02 00 49.9	0.0	
N18K	Kilae Creek	5.39	323	P		Pn	02 00 49.9	0.0	
	baz=137								
SCM	Sheep Creek Mo	5.39	10			Pn	02 00 50.1	+0.1	
SCM	Sheep Creek Mo	5.39	10	P		Pn	02 00 50.2	+0.1	
	baz=191								
TGL	Tana Glacier	5.40	36			Pn	02 00 49.6	-0.5	
ISLE	Juniper Island	5.45	39	Pn		Pn	02 00 50.4	-0.4	
BAGL	Bagley Icefiel	5.46	41			Pn	02 00 50.6	-0.3	
SKT	Skwentna	5.56	349			Pn	02 00 52.8	+0.5	
SKT	Skwentna	5.56	349	P		Pn	02 00 52.8	+0.5	
	baz=167								
O16K	Kokwok River B	5.58	307			Pn	02 00 52.3	-0.2	
O16K	Kokwok River B	5.58	307	P		Pn	02 00 52.3	-0.2	
	baz=119								
VRDI	Verde Repeater	5.58	30			Pn	02 00 52.2	-0.5	
SVW2	Sparrevohn	5.61	327	Pn		Pn	02 00 52.7	-0.1	
SVW2	Sparrevohn	5.61	327	P		Pn	02 00 53.0	+0.1	
N25K	Chitina, Valde	5.62	24			Pn	02 00 53.1	0.0	
N25K	Chitina, Valde	5.62	24	P		Pn	02 00 53.1	0.0	
	baz=207								
GLB	Gilahina Butte	5.66	28			Pn	02 00 53.5	-0.2	
KIAG	Kiagna River	5.68	37			Pn	02 00 53.7	-0.3	
M20K	Styx River	5.70	341			Pn	02 00 54.1	-0.1	
M20K	Styx River	5.70	341	P		Pn	02 00 54.1	-0.1	
	baz=158								
S14K	Fog Glacier	5.70	272	P		Pn	02 00 54.9	+0.6	
	baz=83								
VNFG	Fog Glacier, M	5.70	272			Pn	02 00 54.9	+0.6	
SAMH	Samovar Hills	5.74	48			Pn	02 00 54.6	-0.2	
N17K	Nushagak Hills	5.74	317			Pn	02 00 54.9	+0.2	
N17K	Nushagak Hills	5.74	317	P		Pn	02 00 54.9	+0.2	
	baz=130								
GRNC	Granite Creek	5.75	40			Pn	02 00 54.6	-0.4	
TABL	Table Mountain	5.78	44			Pn	02 00 55.0	-0.5	
M24K	Tolsona, Glenn	5.79	15			Pn	02 00 56.5	+1.0	
M24K	Tolsona, Glenn	5.79	15	P		Pn	02 00 56.5	+1.0	
	baz=197								
MCARA	McCarthy VSAT	5.83	31			Pn	02 00 56.0	+0.1	
MCARA	McCarthy VSAT	5.83	31	P		Pn	02 00 56.0	+0.1	
	baz=216								
PTPK	Patty Peak	5.84	34			Pn	02 00 56.3	0.0	
CUT	Chulitna	5.89	356	Pn		Pn	02 00 57.7	+0.9	
YKU2	Yakutat	5.91	56	P		Pn	02 00 56.2	-0.8	
PCA	Pinnacle	5.94	50			Pn	02 00 57.4	-0.1	
PINM	Pinnacle	5.94	50	P		Pn	02 00 57.4	-0.1	
	baz=237								
M19K	Big River Lodg	5.97	336			Pn	02 00 58.3	+0.4	
M19K	Big River Lodg	5.97	336	P		Pn	02 00 58.3	+0.4	
	baz=152								
M18K	Stony River	5.99	328			Pn	02 00 57.4	-0.7	
M18K	Stony River	5.99	328	P		Pn	02 00 57.4	-0.7	
	baz=143								
WASW	Wrangell South	6.00	24			Pn	02 00 58.7	+0.3	
BARN	Barnard Glacie	6.01	38			Pn	02 00 58.4	-0.2	
CTG	Chitna Glacier	6.05	40	P		Pn	02 00 58.7	-0.5	
	baz=226								
CTGM	Chitina Glacie	6.06	40			Pn	02 00 58.7	-0.5	
CHNA	Chernabura Isl	6.07	258	P		Pn	02 00 58.2	-1.0	
	baz=69								
CNBA	Chernabura Isl	6.08	258			Pn	02 00 58.2	-1.1	
LOGN	Logan Glacier	6.08	42			Pn	02 00 59.0	-0.6	
WAT6	Susitna Watana	6.10	7			Pn	02 01 00.0	+0.2	
WAT6	Susitna Watana	6.10	7	P		Pn	02 01 00.0	+0.2	
	baz=188								
PNL	Peninsula	6.10	55			Pn	02 00 59.5	-0.3	
PNL	Peninsula	6.10	55	P		Pn	02 00 58.8	-0.9	
PNL	Peninsula	6.10	55	P		Pn	02 00 59.4	-0.3	
	baz=243								
BCPM	Bancas Point	6.13	52			Pn	02 00 59.5	-0.6	
WAZA	Wrangell Mount	6.13	23			Pn	02 01 00.9	+0.6	
O15K	Ungalikthiuk R	6.21	299			Pn	02 01 02.2	+1.1	
O15K	Ungalikthiuk R	6.21	299	P		Pn	02 01 02.2	+1.1	
	baz=110								
HARP	HAARP	6.23	18			Pn	02 01 02.5	+1.0	
HARP	HAARP	6.23	18	P		Pn	02 01 02.5	+1.0	
	baz=201								
WAT7	Susitna Watana	6.31	2			Pn	02 01 03.9	+1.4	
L19K	White Mountain	6.32	336			Pn	02 01 02.4	-0.3	
L19K	White Mountain	6.32	336	P		Pn	02 01 02.4	-0.3	
	baz=151								
SDPT	Sand Point	6.40	264	P		Pn	02 01 04.8	+1.1	
M17K	Holitna River	6.43	322			Pn	02 01 04.1	0.0	
M17K	Holitna River	6.43	322	P		Pn	02 01 04.1	0.0	
	baz=135								
DHY	Denali Highway	6.62	8			Pn	02 01 07.7	+0.9	
DHY	Denali Highway	6.62	8	P		Pn	02 01 07.7	+0.9	
	baz=189								
M26K	Nabesna, AK	6.68	26			Pn	02 01 08.1	+0.4	
PAX	Paxson	6.72	15			Pn	02 01 09.0	+0.8	
PAX	Paxson	6.72	15	P		Pn	02 01 09.0	+0.8	
	baz=198								
M16K	Timber Creek	6.73	316			Pn	02 01 08.4	+0.1	
M16K	Timber Creek	6.73	316	P		Pn	02 01 08.4	+0.1	
	baz=127								
N15K	Kwethluk River	6.74	307			Pn	02 01 10.0	+1.6	
N15K	Kwethluk River	6.74	307	P		Pn	02 01 10.0	+1.6	
	baz=118								
O29M	Mount Kennedy	6.76	52			Pn	02 01 08.6	-0.3	
O29M	Mount Kennedy	6.76	52	P		Pn	02 01 08.6	-0.3	
	baz=241								
YUK2	White River	6.81	36			Pn	02 01 10.1	+0.7	
YUK8	Steele Glacier	6.84	42			Pn	02 01 10.4	+0.3	
YUK8	Steele Glacier	6.84	42	P		Pn	02 01 10.4	+0.3	
	baz=230								
P29M	Windy Craggy	6.86	58			Pn	02 01 08.7	-1.3	
P29M	Windy Craggy	6.86	58	P		Pn	02 01 08.7	-1.3	
	baz=248								
RND	Reindeer	6.88	2			Pn	02 01 11.1	+0.7	
O14K	Tigyukauivet M	6.93	298			Pn	02 01 12.7	+1.7	
O14K	Tigyukauivet M	6.93	298	P		Pn	02 01 12.7	+1.7	
	baz=108								
M27K	Edge Creek, AK	6.94	30			Pn	02 01 11.6	+0.3	
M27K	Edge Creek, AK	6.94	30	P		Pn	02 01 11.6	+0.3	
	baz=216								
CAST	Castle Rocks	7.03	350			Pn	02 01 13.2	+0.7	
YUK7	Dusty Glacier	7.07	51			Pn	02 01 13.1	0.0	
KTH	Kantishna Hill	7.07	354			Pn	02 01 13.5	+0.4	
L26K	Log Cabin Wild	7.15	22	Pn		Pn	02 01 15.1	+1.1	
S31K	Pelican	7.22	73	Pn		Pn	02 01 11.8	-3.2	
K20K	Telida	7.23	343			Pn	02 01 15.0	-0.2	
TTA	Tatalina	7.24	335	P		Pn	02 01 15.5	+0.2	
YUK4	Talbot Arm	7.30	44	P		Pn	02 01 17.7	+1.4	
	baz=233								
L16K	Owhat River	7.36	319			Pn	02 01 16.6	-0.3	
L16K	Owhat River	7.36	319	P		Pn	02 01 16.6	-0.3	
	baz=130								
P30M	Million Dollar	7.41	56			Pn	02 01 17.1	-0.6	
P30M	Million Dollar	7.41	56	P		Pn	02 01 17.1	-0.6	
	baz=246								
HYT	Haines Junctio	7.48	50	Pn		Pn	02 01 18.8	0.0	
L27K	Beaver Creek,	7.53	27			Pn	02 01 19.9	+0.6	
BCAR	Beaver Creek A	7.54	27	Pn		Pn	02 01 20.3	+0.8	
BPAW	Bear Paw Mtn.	7.62	354			Pn	02 01 20.2	-0.3	
BPAW	Bear Paw Mtn.	7.62	354	P		Pn	02 01 20.2	-0.3	
	baz=173								
SCRK	Sand Creek	7.90	17	Pn		Pn	02 01 24.0	-0.4	
SKAG	Skagway	7.97	63	Pn		Pn	02 01 24.6	-0.6	
SKAG	Skagway	7.97	63	P		Pn	02 01 25.2	0.0	
N30M	Aiikiik Lake	7.99	47			Pn	02 01 25.5	-0.1	
J20K	Nowinta River	8.02	345			Pn	02 01 26.4	+0.5	
M29M	Somme Creek	8.07	38			Pn	02 01 27.2	+0.4	
O30N	Mendenhall	8.07	53			Pn	02 01 25.9	-0.8	
O30N	Mendenhall	8.07	53	P		Pn	02 01 26.6	-0.2	
	baz=244								
J19K	Poorman	8.10	340	Pn		Pn	02 01 26.1	-0.9	
CCB	Clear Creek Bu	8.15	5			Pn	02 01 29.1	+1.3	
R32K	Eaglecrest	8.16	72			Pn	02 01 26.4	-1.5	
JIS	Juneau Island	8.23	72	P		Pn	02 01 27.4	-1.4	
K27K	Chicken	8.31	23			Pn	02 01 30.8	+0.9	
J25K	Salcha River,	8.31	12			Pn	02 01 30.5	+0.5	
IL31		8.33	7			Pn	02 01 31.0	+0.9	
ILAR	Eielson Array	8.33	7	Pn		Pn	02 01 30.6	+0.4	
	comp=N,0.4nm,0.3s,baz=191,slow=13,SNR=17								
ILAR					Sn	Sn	02 03 01.8	-2.5	
	comp=N,0.5nm,0.3s,baz=191,slow=23,SNR=4.5								
ILAR					LR	LR	02 04 48.0		
	comp=N,60nm,18.7s,baz=324,slow=38								
	comp=N,1.0nm,0.4s								
L14K	Kuka Creek	8.42	310	Pn		Pn	02 01 32.2	+0.8	
MDM	Murphy Dome	8.45	3	Pn		Pn	02 01 33.0	+1.1	
J26L	Joseph Creek	8.46	17			Pn	02 01 33.0	+1.0	
MLY	Manley	8.54	356	Pn		Pn	02 01 33.0	-0.1	
WHY	Whitehorse	8.57	55	Pn		Pn	02 01 33.2	-0.4	
I23K	Minto, Yukon-K	8.63	360			Pn	02 01 35.4	+1.2	
L29M	L29M	8.64	36			Pn	02 01 34.4	-0.1	
L29M	L29M	8.64	36	P		Pn	02 01 35.1	+0.6	
	baz=225								
M30M	Minto, Yukon	8.75	41			Pn	02 01 35.9	-0.1	
I21K	Tanana	8.76	353			Pn	02 01 36.5	+0.5	
P32M	Atlin	8.80	63			Pn	02 01 35.8	-0.8	
P32M	Atlin	8.80	63	P		Pn	02 01 36.2	-0.4	
	baz=256								
DAWY	Dawson	8.98	29	Pn		Pn	02 01 39.3	0.0	
EGAK	Eagle	9.16	22	Pn		Pn	02 01 41.5	0.0	
I26K	Coal Creek Min	9.27	16			Pn	02 01 44.1	+1.0	
H21K	Melozitna Rive	9.29	351			Pn	02 01 43.3	-0.1	
H24K	Noodor Dome	9.34	4			Pn	02 01 45.3	+1.2	
K29M	Barlow Dome	9.36	34			Pn	02 01 44.6	+0.3	
P33M	Teslin, Yukon	9.39	60	Pn		Pn	02 01 44.2	-0.6	
P33M	Teslin, Yukon	9.39	60	P		Pn	02 01 44.2	-0.6	
	baz=254								
M31M	Drury Creek, Y	9.47	47			Pn	02 01 46.5	+0.7	
ZRO	Akutan Zero	9.82	262			Pn	02 01 50.8	+0.1	
FARO	Faro, Yukon	9.91	48	Pn		Pn	02 01 52.5	+0.6	
I28M	Miner Creek	10.00	23			Pn	02 01 55.3	+2.2	
R33M	Jennings River	10.13	66	Pn		Pn	02 01 54.3	-0.8	
G21K	Allakaket	10.20	350			Pn	02 01 55.3	-0.4	
G23K	Bananza Creek	10.20	358	Pn		Pn	02 01 56.8	+0.9	
G24K	Hadweenzic Riv	10.22	4			Pn	02 01 58.0	+1.9	
DLBC	Dease Lake	10.53	72	Pn		Pn	02 01 59.9	-0.5	
	comp=N,0.6nm,0.3s,baz=270,slow=8.2,SNR=12								
	comp=N,1.2nm,0.3s								
I30M	Mount Dempster	10.71	30	Pn		Pn	02 02 04.4	+1.5	
F21K	Alatna River	10.89	351	Pn		Pn	02 02 03.5	-1.7	
F20K	Avaraart Lake	10.96	347			Pn	02 02 06.1	0.0	
BBB	Bella Bella	13.08	101	LR		LR	02 06 24.5		
	comp=N,113nm,21.1s,baz=346,slow=32								
INK	Inuvik	13.80	25	Pn		Pn	02 02 45.9	+1.0	
INK	Inuvik	13.80	25	Pn		Pn	02 02 47.0	+2.1	
	comp=N,0.1nm,0.3s,baz=232,slow=12,SNR=7.5								
INK					LR	LR	02 08 17.0		
	comp=N,84nm,18.1s,baz=184,slow=38								
	comp=N,2.1nm,0.9s								
MA2	Magadan	30.91	301	LR		LR	02 18 30.0		
	comp=N,52nm,20.2s,baz=91,slow=37								
TXAR	Lajitas Array	41.93	111	P		P	02 07 20.5	+0.3	
	comp=N,0.9nm,1.1s,baz=319,slow=3.6,SNR=3.4								
	comp=N,0.9nm,1.1s								
H11N2	WAKE ISLAND Hy	49.01	240	T		T	03 01 06.3		
	baz=30,slow=76,SNR=7.7								
H11N3	WAKE ISLAND Hy	49.02	240	T		T	03 01 07.1		
	baz=30,slow=76,SNR=7.0								
H11N1	WAKE ISLAND Hy	49.03	240	T		T	03 01 07.7		
	baz=30,slow=76								
H11S1	WAKE ISLAND Hy	50.16	239	T		T	03 02 31.1		
	baz=30,slow=76								
H11S2	WAKE ISLAND Hy	50.17	239	T		T	03 02 34.3		
	baz=30,slow=76,SNR=5.3								
H11S3	WAKE ISLAND Hy	50.18	239	T		T	03 02 35.3		
	baz=30,slow=76,SNR=4.6								
SONM	Songino Array	58.46	310	P		P	02 09 27.0	+1.6	
	comp=N,0.4nm,0.8s,baz=27,slow=6.6,SNR=2.3								
	comp=N,0.4nm,0.8s								
ZALV	Zalesovo Beam	61.33	327	P		P	02 09 46.4	+1.6	
	comp=N,0.3nm,0.3s,baz=34,slow=10,SNR=2.2								
	comp=N,0.3nm,0.3s								
MKAR	Makanchi Array	68.37	325	P		P	02 10 29.1	-1.8	
MKAR	Makanchi Array	68.37	325	P		P	02 10 32.0	+1.2	
	comp=N,0.3nm,0.7s,baz=28,slow=9.0,SNR=4.2								
	comp=N,0.3nm,0.7s								
ABKAR	Akbulak array	71.79	340	P		P	02 10 51.1	-0.6	
AKASG	Malin Array Be	73.11	1	P		P	02 10 59.8	+0.3	
	comp=N,0.4nm,0.5s,baz=359,slow=5.7,SNR=2.3								
	comp=N,0.4nm,0.5s								
ESDC	Sonseca Array	79.75	26	P		P	02 11 37.4	-0.1	
	comp=N,0.3nm,0.8s,baz=47,slow=37,SNR=1.9								
	comp=N,0.3nm,0.8s								

*AEIC **16** 02:02:53.8±1.1,56°.1N±0°.1×149°.9W±0°.1, h5km±9km, Error ellipse: s-maj=18.7km s-min=9.8km az=160.0*
NEIC 16 02:02:51.6±1.1, 56°.21N±0°.09×149°.9W±0°.1, h21km±10km, ML3.1/26, ML2.9(AEIC), Error ellipse: s-maj=14.3km s-min=8.3km az=147.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
OHAK	Old Harbor	2.15	300		Pn	02	03	25.6	-0.5
OHAK					Sn	02	03	50.4	-1.8
KDAK	Kodiak Island	2.18	318		Pn	02	03	26.5	0.0
KDAK					Sn	02	03	52.0	-0.8
SII	Sitkinak Islan	2.44	280		Sn	02	03	57.2	-2.1
SYI	Shuyak Island	2.77	331		Pn	02	03	34.8	+0.1
SYI					Sn	02	04	07.2	-0.3
R18K	Karluk	2.87	300		Pn	02	03	36.4	+0.3
CNPM	China Poot	3.41	348		Pn	02	03	43.3	-0.2
CNPM					Sn	02	04	23.7	+0.4
Q19K	Cape Douglas,	3.41	325		Pn	02	03	44.0	+0.5
BRSE	Bradley Lake S	3.58	353		Pn	02	03	45.4	-0.3
BRSE					Sn	02	04	27.7	+0.3
BRLK	Bradley Lake	3.61	352		Pn	02	03	45.7	-0.6
BRLK	Bradley Lake	3.61	352	IAML		02	05	37.6	
	comp=N,23nm,2.9s								
BRLK				IAML		02	05	57.0	
	comp=E,19nm,4.3s								
ANCK	Angle Creek	3.66	305		Pn	02	03	47.2	+0.2
CNTC	Contact Creek	3.87	305		Pn	02	03	50.3	+0.4
P19K	Oil Pt	3.90	334		Pn	02	03	51.1	+0.9
P23K	Montague Islan	4.02	18		Pn	02	03	52.1	+0.3
O20K	Slope Mountain	4.15	340		Pn	02	03	53.8	0.0
ILSW	Iliamna Southw	4.17	337		Pn	02	03	53.9	-0.1
ILSW	Iliamna Southw	4.17	337	IAML		02	05	34.5	
	comp=N,18nm,2.7s								
ILSW				IAML		02	05	55.3	
	comp=E,16nm,4.0s								
SLKM	Skilak Lake	4.32	358		Pn	02	03	55.2	-0.7
RDSO	Redoubt South	4.52	341		Pn	02	03	58.1	-0.8
HIN	Hinchinbrook I	4.56	21		Pn	02	03	59.1	-0.1
O18K	Koktuh Hills	4.63	324		Pn	02	04	00.2	-0.1
O18K	Koktuh Hills	4.63	324	IAML		02	04	43.3	
	comp=E,23nm,3.8s								
O18K				IAML		02	06	57.3	
	comp=N,23nm,4.3s								
KAIM	Kayak Island	4.71	35		Pn	02	04	01.7	+0.3
FID	Port Fidalgo	4.89	20		Pn	02	04	03.6	-0.2
FID	Port Fidalgo	4.89	20	IAML		02	04	45.7	
	comp=E,18nm,2.4s								
FID				IAML		02	04	59.3	
	comp=N,25nm,2.5s								
SUCK	Suckling Hills	5.04	37		Pn	02	04	05.7	-0.1
NICHA	Nichawak Mount	5.10	35		Pn	02	04	06.4	-0.2
N19K	Bonanza Creek	5.22	334		Pn	02	04	07.9	-0.5
BGLC	Bering Glacier	5.24	39		Pn	02	04	09.0	+0.4
GRIN	Grindle Hills	5.34	37		Pn	02	04	10.4	+0.4
KHIT	Khitrov Hills	5.49	37		Pn	02	04	11.7	-0.4
BMRM	Bremner River	5.50	28		Pn	02	04	12.2	0.0
WAX	Waxell Ridge	5.63	38	Pn	Pn	02	04	13.9	-0.1
CRQM	Cirque	5.76	35		Pn	02	04	15.5	-0.4
MESA	MESA	5.77	43		Pn	02	04	15.2	-0.8
TGL	Tana Glacier	5.86	36		Pn	02	04	16.9	-0.3

*AEIC **16** 02:04:05.0±0.8, 55°.66N±0°.09×151°.9W±0°.2, h12km±10km, Error ellipse: s-maj=14.1km s-min=12.9km az=113.0*
NEIC 16 02:04:06.4±0.6, 55°.93N±0°.05×152°.14W±0°.10, h25km±12km, ML2.7/18, ML2.6(AEIC), Error ellipse: s-maj=10.8km s-min=1.2km az=47.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SII	Sitkinak Islan	1.31	300		Pn	02	04	27.5	-1.5
SII					Sb	02	04	46.5	-0.1
SII	Sitkinak Islan	1.31	300	IAML		02	04	49.0	
	comp=E,91nm,1.2s								
OHAK	Old Harbor	1.44	334		Pn	02	04	29.8	-1.1
OHAK	Old Harbor	1.44	334		Sb	02	04	50.4	-0.1
OHAK	Old Harbor	1.44	334	IAML		02	04	51.4	
	comp=E,22nm,1.5s								
OHAK	Old Harbor	1.44	334	IAML		02	04	48.8	
	comp=N,19nm,3.5s								
KDAK	Kodiak Island	1.87	353		Pn	02	04	35.7	-1.1
KDAK					Sn	02	04	59.4	-0.2
R18K	Karluk	2.08	323	IAML		02	05	11.9	
	comp=E,49nm,0.5s								
R18K	Karluk	2.08	323		Pn	02	04	38.9	-0.7
R18K					Sn	02	05	05.8	+1.2
R18K	Karluk	2.08	323	IAML		02	05	08.2	
	comp=N,56nm,0.3s								
R18K				IAML		02	05	11.9	
	comp=E,49nm,0.5s								
R18K	Karluk	2.08	323	IAML		02	05	08.2	
	comp=N,56nm,0.3s								
SYI	Shuyak Island	2.69	357		Pn	02	04	47.4	-0.7
SYI					Sn	02	05	19.5	-0.2
SYI	Shuyak Island	2.69	357	IAML		02	05	22.9	
	comp=N,26nm,0.9s								
SYI				IAML		02	05	23.7	
	comp=E,26nm,0.8s								
ACHA	Angle Creek He	2.87	324		Pn	02	04	50.6	0.0
ANCK	Angle Creek	2.92	323		Pn	02	04	51.4	+0.1
Q19K	Cape Douglas,	3.12	345	IAML		02	05	57.8	
	comp=N,58nm,1.7s								
Q19K	Cape Douglas,	3.12	345		Pn	02	04	54.4	+0

VTCV			*i* S		**Sn**	**02 16 18.1**	**+1.2**
VTCV			IAML			02 16 19.3	
	comp=Z,320nm,1.0s						
OCM	**Ochomogo**	**2.13 323**	*i* P		**Pn**	**02 15 53.3**	**+0.3**
OCM			IAML			02 15 55.2	
	comp=Z,120nm,1.0s						
OCM			*i* S		**Sn**	**02 16 17.5**	**-0.8**
VIRE	**VIRE**	**2.15 325**	*i* P		**Pn**	**02 15 54.6**	**+1.1**
VIRE			*i* S		**Sn**	**02 16 18.2**	**-0.9**
VIRE			IAML			02 16 23.6	
	comp=Z,210nm,1.0s						
JACO	**JACO, Garabito**	**2.46 306**	*i* P		**Pn**	**02 15 57.1**	**-0.3**
JACO			IAML			02 16 29.2	
	comp=Z,75nm,1.0s						

NEIC ***16*** *02:15:48.9±0.9,56.1°N±0.1°×149.3°W±0.1°,h21km±11km, ML3.4/40,ML3.3(AEIC),Error ellipse: s-maj=15.5km s-min=9.8km az=162.0*
AEIC ***16*** *02:15:51.8±1.0,56.1°N±0.1°×149.2°W±0.1°,h9km±8km,Error ellipse: s-maj=16.0km s-min=10.6km az=162.0*
IDC ***16*** *02:16:00.1±2.9,56.63°N×149.81°W,h0km,mb3.6/2, mbtmp3.3/4,ML3.1/2,MS4.0/1,Error ellipse: s-maj=54.2km s-min=34.9km az=130.0*

ISC 16 02:15:47.4±1.9,56.1N±0.1°×149.24W±0.06,h10km,n131, σ1§00/127,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.47 313**			**Pn**	**02 16 28.1**	**+0.5**
KDAK					**Sn**	**02 16 56.2**	**-1.6**
OHAK	**Old Harbor**	**2.49 298**			**Pn**	**02 16 27.7**	**-0.1**
OHAK					**Sn**	**02 16 56.7**	**-1.6**
OHAK	**Old Harbor**	**2.49 298**		P	**Pn**	**02 16 27.8**	**-0.1**
OHAK	**Old Harbor**	**2.49 298**		P	**Pn**	**02 16 27.7**	**-0.1**
	baz=116						
OHAK				S	**Sn**	**02 16 56.7**	**-1.6**
	baz=116						
SII	**Sitkinak Islan**	**2.79 281**		P	**Pn**	**02 16 31.9**	**-0.1**
SYI	**Shuyak Island**	**3.01 327**			**Pn**	**02 16 35.9**	**+0.8**
SYI					**Sn**	**02 17 10.8**	**-0.4**
Q20K	**Shuyak Island**	**3.02 327**		P	**Pn**	**02 16 35.9**	**+0.8**
	baz=145						
Q20K				S	**Sn**	**02 17 10.8**	**-0.5**
	baz=145						
R18K	**Karluk**	**3.20 299**			**Pn**	**02 16 38.7**	**+1.0**
R18K	**Karluk**	**3.20 299**		IAML		02 17 15.3	
	comp=N,87nm,0.6s						
R18K				IAML		02 17 23.5	
	comp=E,89nm,0.5s						
R18K	**Karluk**	**3.20 299**		P	**Pn**	**02 16 38.7**	**+1.0**
	baz=115						
CNPM	**China Poot**	**3.57 343**			**Pn**	**02 16 43.2**	**+0.5**
CNPM					**Sn**	**02 17 24.9**	**0.0**
Q19K	**Cape Douglas,**	**3.67 322**			**Pn**	**02 16 45.6**	**+1.4**
Q19K	**Cape Douglas,**	**3.67 322**		IAML		02 17 46.3	
	comp=N,133nm,0.8s						
Q19K	**Cape Douglas,**	**3.67 322**		P	**Pn**	**02 16 45.6**	**+1.4**
	baz=138						
BRSE	**Bradley Lake S**	**3.71 348**			**Pn**	**02 16 45.1**	**+0.4**
BRSE					**Sn**	**02 17 27.0**	**-1.3**
BRSE	**Bradley Lake S**	**3.71 348**		P	**Pn**	**02 16 45.1**	**+0.4**
	baz=167						
BRSE				S	**Sn**	**02 17 27.0**	**-1.3**
	baz=167						
KAHG	**Katmai Hook Gl**	**3.73 312**			**Pn**	**02 16 46.5**	**+1.5**
BRLK	**Bradley Lake**	**3.75 347**			**Pn**	**02 16 45.3**	**+0.1**
BRLK					**Sn**	**02 17 27.8**	**-1.6**
ACHA	**Angle Creek He**	**3.91 305**			**Pn**	**02 16 49.4**	**+1.8**
AUCH	**Augustine Cone**	**3.94 327**			**Pn**	**02 16 49.9**	**+1.9**
ANCK	**Angle Creek**	**3.99 304**			**Pn**	**02 16 50.4**	**+1.9**
P23K	**Montague Islan**	**4.00 13**			**Pn**	**02 16 49.0**	**+0.3**
P23K	**Montague Islan**	**4.00 13**		P	**Pn**	**02 16 48.9**	**+0.3**
	baz=194						
P19K	**Oil Pt**	**4.12 331**			**Pn**	**02 16 51.4**	**+1.0**
P19K	**Oil Pt**	**4.12 331**		IAML		02 17 49.6	
	comp=E,70nm,0.9s						
P19K				IAML		02 17 51.0	
	comp=N,54nm,0.5s						
P19K	**Oil Pt**	**4.12 331**		P	**Pn**	**02 16 51.4**	**+1.0**
	baz=147						
O20K	**Slope Mountain**	**4.35 337**			**Pn**	**02 16 54.4**	**+0.9**
O20K	**Slope Mountain**	**4.35 337**		P	**Pn**	**02 16 54.4**	**+0.9**
	baz=154						
O22K	**Cooper Landing**	**4.37 357**			**Pn**	**02 16 54.1**	**+0.4**
IVE	**Iliamna Volcan**	**4.38 334**			**Pn**	**02 16 54.7**	**+0.7**
ILSW	**Iliamna Southw**	**4.38 333**			**Pn**	**02 16 54.3**	**+0.3**
ILSW	**Iliamna Southw**	**4.38 333**		IAML		02 17 51.5	
	comp=N,26nm,0.7s						
ILSW				IAML		02 17 53.7	
	comp=E,31nm,0.9s						
SLKM	**Skilak Lake**	**4.42 354**			**Pn**	**02 16 54.5**	**0.0**
HIN	**Hinchinbrook I**	**4.51 18**			**Pn**	**02 16 56.1**	**+0.3**
HIN	**Hinchinbrook I**	**4.51 18**		IAML		02 18 10.6	
	comp=E,47nm,2.3s						
HIN				IAML		02 19 04.5	
	comp=N,57nm,2.2s						
P18K	**Big Mountain,**	**4.58 318**			**Pn**	**02 16 57.4**	**+0.7**
P18K	**Big Mountain,**	**4.58 318**		IAML		02 17 53.7	
	comp=N,20nm,3.0s						
P18K				IAML		02 17 57.5	
	comp=E,23nm,3.7s						
P18K	**Big Mountain,**	**4.58 318**		P	**Pn**	**02 16 57.4**	**+0.7**
	baz=133						
KAIM	**Kayak Island**	**4.58 32**			**Pn**	**02 16 57.6**	**+0.9**
KAIM	**Kayak Island**	**4.58 32**		P	**Pn**	**02 16 57.6**	**+0.9**
	baz=215						
RSO	**Redoubt South**	**4.72 338**			**Pn**	**02 16 59.1**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.79 21**			**Pn**	**02 16 60.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.79 21**		P	**Pn**	**02 17 00.4**	**+0.9**
EYAK	**Cordova Ski Ar**	**4.79 21**		P	**Pn**	**02 16 60.0**	**+0.4**
	baz=204						
FID	**Port Fidalgo**	**4.85 16**			**Pn**	**02 17 00.4**	**0.0**
FID	**Port Fidalgo**	**4.85 16**		IAML		02 17 40.0	
	comp=N,24nm,1.7s						
FID				IAML		02 17 56.3	
	comp=E,26nm,0.9s						
O19K	**Port Alsworth**	**4.88 329**			**Pn**	**02 17 01.2**	**+0.5**
O19K	**Port Alsworth**	**4.88 329**		IAML		02 17 57.9	
	comp=N,54nm,0.4s						
O19K	**Port Alsworth**	**4.88 329**		P	**Pn**	**02 17 01.2**	**+0.5**
	baz=145						
SUCK	**Suckling Hills**	**4.90 34**			**Pn**	**02 17 01.8**	**+0.8**
O18K	**Koktuh Hills**	**4.90 322**			**Pn**	**02 17 01.6**	**+0.5**
O18K	**Koktuh Hills**	**4.90 322**		IAML		02 17 58.0	
	comp=N,28nm,3.1s						
O18K				IAML		02 18 11.8	
	comp=E,25nm,3.0s						
O18K	**Koktuh Hills**	**4.90 322**		P	**Pn**	**02 17 01.6**	**+0.5**
	baz=137						
P17K	**Kvichak River**	**4.94 311**			**Pn**	**02 17 02.5**	**+1.0**
P17K	**Kvichak River**	**4.94 311**		P	**Pn**	**02 17 02.5**	**+1.0**
	baz=126						
HMT	**Hamilton**	**4.97 30**			**Pn**	**02 17 02.7**	**+0.7**
NICHA	**Nichawak Mount**	**4.97 32**			**Pn**	**02 17 02.8**	**+0.7**
RC01	**Rabbit Creek A**	**4.98 357**			**Pn**	**02 17 02.5**	**+0.4**
RC01				IAML		02 18 00.6	
	comp=E,21nm,1.0s						
RC01				IAML		02 18 02.6	
	comp=N,18nm,0.6s						
GOAT	**Goat Mountain**	**5.05 26**			**Pn**	**02 17 04.4**	**+1.2**
BGLC	**Bering Glacier**	**5.09 36**			**Pn**	**02 17 04.7**	**+1.1**
BGLC	**Bering Glacier**	**5.09 36**		P	**Pn**	**02 17 04.7**	**+1.1**
	baz=220						
GRIN	**Grindle Hills**	**5.20 35**			**Pn**	**02 17 06.0**	**+0.8**
KNK	**Knik Glacier**	**5.31 4**			**Pn**	**02 17 07.4**	**+0.7**
KNK	**Knik Glacier**	**5.31 4**		IAML		02 18 03.5	
	comp=E,18nm,3.0s						
KNK				IAML		02 18 13.0	
	comp=N,16nm,2.8s						
KNK	**Knik Glacier**	**5.31 4**		P	**Pn**	**02 17 07.4**	**+0.7**
	baz=184						
DIV	**Divide**	**5.33 18**			**Pn**	**02 17 07.7**	**+0.7**
KHIT	**Khitrov Hills**	**5.35 34**			**Pn**	**02 17 07.7**	**+0.3**
SUA	**Susitna One**	**5.40 352**			**Pn**	**02 17 08.2**	**+0.1**
SUA	**Susitna One**	**5.40 352**		P	**Pn**	**02 17 08.2**	**+0.1**
	baz=171						
BMRM	**Bremner River**	**5.42 25**			**Pn**	**02 17 08.7**	**+0.5**
BMRM	**Bremner River**	**5.42 25**		P	**Pn**	**02 17 08.7**	**+0.5**
	baz=208						
N19K	**Bonanza Creek**	**5.44 332**		Pn	**Pn**	**02 17 09.5**	**+1.0**
P16K	**Nushagak River**	**5.53 305**			**Pn**	**02 17 11.1**	**+1.4**
P16K	**Nushagak River**	**5.53 305**		P	**Pn**	**02 17 11.1**	**+1.4**
	baz=118						
STLK	**Strandline Lak**	**5.55 347**			**Pn**	**02 17 10.6**	**+0.6**
MESA	**MESA**	**5.60 41**			**Pn**	**02 17 11.7**	**+0.9**
MESA	**MESA**	**5.60 41**		P	**Pn**	**02 17 11.7**	**+0.9**
	baz=226						
CRQM	**Cirque**	**5.63 32**			**Pn**	**02 17 11.8**	**+0.6**
CRQE	**Cirque**	**5.64 32**		P	**Pn**	**02 17 11.8**	**+0.5**
	baz=217						
KLU	**Klutina**	**5.64 16**			**Pn**	**02 17 12.2**	**+0.9**
KLU	**Klutina**	**5.64 16**		P	**Pn**	**02 17 12.2**	**+0.9**
	baz=199						
GHO	**Glory Hole Cre**	**5.66 2**			**Pn**	**02 17 12.8**	**+1.3**
SML	**Sawmill**	**5.71 4**			**Pn**	**02 17 13.3**	**+1.1**
SML	**Sawmill**	**5.71 4**		P	**Pn**	**02 17 13.3**	**+1.1**
	baz=185						
TGL	**Tana Glacier**	**5.73 33**			**Pn**	**02 17 13.3**	**+0.8**
M23K	**Glacier View**	**5.73 7**			**Pn**	**02 17 13.5**	**+1.1**
M23K	**Glacier View**	**5.73 7**		P	**Pn**	**02 17 13.5**	**+1.1**
	baz=188						
S14K	**Fog Glacier**	**5.76 276**		P	**Pn**	**02 17 14.1**	**+1.2**
	baz=88						
VNFG	**Fog Glacier, M**	**5.76 276**			**Pn**	**02 17 14.1**	**+1.2**
ISLE	**Juniper Island**	**5.77 36**			**Pn**	**02 17 13.6**	**+0.6**
BAGL	**Bagley Icefiel**	**5.77 38**			**Pn**	**02 17 13.6**	**+0.7**
O16K	**Kokwok River B**	**5.86 310**			**Pn**	**02 17 15.3**	**+1.1**
O16K	**Kokwok River B**	**5.86 310**		P	**Pn**	**02 17 15.3**	**+1.1**
	baz=123						
VRDI	**Verde Repeater**	**5.93 28**		Pn	**Pn**	**02 17 15.6**	**+0.2**
SVW2	**Sparrevohn**	**5.98 329**		P	**Pn**	**02 17 3**	**+1.5**
SKT	**Skwentna**	**5.98 350**			**Pn**	**02 17 16.9**	**+1.0**
N25K	**Chitina, Valde**	**5.99 22**			**Pn**	**02 17 16.9**	**+0.8**
N25K	**Chitina, Valde**	**5.99 22**		P	**Pn**	**02 17 16.9**	**+0.8**
	baz=205						
GLB	**Gilahina Butte**	**6.02 26**			**Pn**	**02 17 17.3**	**+0.8**
TABL	**Table Mountain**	**6.07 41**			**Pn**	**02 17 18.0**	**+0.7**
MCARA	**McCarthy VSAT**	**6.18 29**			**Pn**	**02 17 19.6**	**+1.0**
MCARA	**McCarthy VSAT**	**6.18 29**		P	**Pn**	**02 17 19.6**	**+1.0**
	baz=214						
PCA	**Pinnacle**	**6.20 46**			**Pn**	**02 17 19.6**	**+0.7**
PINM	**Pinnacle**	**6.20 46**		P	**Pn**	**02 17 19.6**	**+0.7**
	baz=234						
BARN	**Barnard Glacie**	**6.33 36**			**Pn**	**02 17 21.5**	**+0.7**
PNL	**Peninsula**	**6.33 52**			**Pn**	**02 17 21.2**	**+0.5**
PNL	**Peninsula**	**6.33 52**		P	**Pn**	**02 17 21.6**	**+0.9**
PNL	**Peninsula**	**6.33 52**		P	**Pn**	**02 17 21.2**	**+0.5**
	baz=240						
CTGM	**Chitina Glacie**	**6.37 37**		Pn	**Pn**	**02 17 21.8**	**+0.5**
BCPM	**Bancas Point**	**6.38 49**			**Pn**	**02 17 22.0**	**+0.8**
LOGN	**Logan Glacier**	**6.38 39**			**Pn**	**02 17 21.6**	**+0.1**
SDPT	**Sand Point**	**6.40 268**			**Pn**	**02 17 21.8**	**+0.2**
SDPT	**Sand Point**	**6.40 268**		P	**Pn**	**02 17 21.8**	**+0.2**
SDPT	**Sand Point**	**6.40 268**		P	**Pn**	**02 17 21.8**	**+0.2**
	baz=79						
WAT6	**Susitna Watana**	**6.51 6**			**Pn**	**02 17 24.1**	**+0.8**
WAT6	**Susitna Watana**	**6.51 6**		P	**Pn**	**02 17 24.1**	**+0.8**
	baz=187						
HARP	**HAARP**	**6.62 17**			**Pn**	**02 17 26.2**	**+1.6**
HARP	**HAARP**	**6.62 17**		P	**Pn**	**02 17 26.2**	**+1.6**
	baz=200						
O29M	**Mount Kennedy**	**7.01 49**			**Pn**	**02 17 30.8**	**+0.7**
O29M	**Mount Kennedy**	**7.01 49**		P	**Pn**	**02 17 30.8**	**+0.7**
	baz=238						
P29M	**Windy Craggy**	**7.06 55**			**Pn**	**02 17 30.9**	**+0.2**
P29M	**Windy Craggy**	**7.06 55**		P	**Pn**	**02 17 30.9**	**+0.2**
	baz=245						
BPAW	**Bear Paw Mtn.**	**8.04 354**			**Pn**	**02 17 45.6**	**+1.5**
BPAW	**Bear Paw Mtn.**	**8.04 354**		P	**Pn**	**02 17 45.6**	**+1.5**
	baz=173						
SKAG	**Skagway**	**8.14 60**		P	**Pn**	**02 17 48.8**	**+3.3**
M29M	**Somme Creek**	**8.38 37**			**Pn**	**02 17 50.2**	**+1.3**
ILAR	**Eielson Array**	**8.74 7**		Pn	**Pn**	**02 17 55.9**	**+2.1**
	comp=N,0.2nm,0.3s,baz=190,slow=14,SNR=13						
ILAR				Sn	**Sn**	**02 19 29.9**	**-2.4**
	baz=191,slow=14,SNR=3.0 comp=N,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**18.60 56**		P	Pn	02 20 18.9	+14
	comp=N,0.1nm,0.3s,baz=268,slow=9.8,SNR=3.6 comp=N,0.2nm,0.7s						
KSRS	**Korea Array**	**56.13 288**		LR	LR	02 49 08.3	
	comp=N,150nm,19.9s,baz=155,slow=36						
ZALV	**Zalesovo Beam**	**61.70 327**		P	P	02 26 16.3	+11
	comp=N,0.3nm,0.4s,baz=20,slow=4.6,SNR=1.8 comp=N,0.3nm,0.4s						
MKAR	**Makanchi Array**	**68.73 325**		P	P	02 27 01.3	+10
	comp=N,0.5nm,0.9s,baz=35,slow=5.3,SNR=3.8 comp=N,0.5nm,0.9s						

NEIC ***16*** *02:22:56.9±1.6,85.2°N±0.1°×8.5E±°,h10km±2km,mb4.2/14, Error ellipse: s-maj=22.7km s-min=21.8km az=358.0*
IDC ***16*** *02:22:58.0±1.2,85.40°N×88.89E,h0km,mb3.4/5, mbtmp3.7/8,ML3.8/3,Error ellipse: s-maj=33.2km s-min=20.5km az=109.0*
FCIAR ***16*** *02:23:01.0,85.07°N×90.45E,h10km,station SVZ has station magnitude of 3.30 station OMEGA has station magnitude of 3.60*

ISC 16 02:22:58.6±0.7,85.18N±0.07×88.41E±0.07,h10km,n30, σ2§36/32,mb4.0/13,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**6.17 156**		*e*P	**Pn**	**02 24 28.8**	**-0.8**
SVZ				*e*S	**Sn**	**02 25 33.5**	**-6.5**
	12nm,0.6s						
OMEGA	**Omega**	**6.42 250**		*e*P	**Pn**	**02 24 35.4**	**+2.4**
OMEGA				*e*S	**Sn**	**02 25 44.3**	**-1.9**
	22nm,3.0s						
KBS	**Kingsbay**	**11.05 281**		Pn	Pn	02 25 30.7	-5.7
KBS	**Kingsbay**	**11.05 281**		*e*P	**Pn**	**02 25 35.9**	**-0.5**
KBS				*e*S	Sn	02 27 30.3	-9.5
SPA0	**Spitsbergen Ar**	**11.37 276**		*e*P	**Pn**	**02 25 40.5**	**-0.2**
SPA0				*e*S	Sn	02 27 38.2	-9.4
SPITS	**Spitsbergen Ar**	**11.37 276**		Pn	**Pn**	**02 25 41.5**	**+0.8**
	baz=53,slow=13						
SPITS				Sn	**Sn**	**02 27 41.7**	**-5.8**
	baz=59,slow=13 8.9nm,1.0s						
TIXI	**Tiksi**	**15.10 128**		Pn	**P**	**02 26 35.2**	**-1.5**
	0.6nm,0.3s,baz=324,slow=12,SNR=5.9 11nm,1.1s						
NRIK	**Noril'sk**	**15.94 181**		Pn	**P**	**02 26 47.5**	**+1.4**
	0.4nm,0.3s,baz=0.6,slow=12,SNR=4.0 1.3nm,0.3s						
ARCES	**ARCESS Array B**	**18.86 256**		P	**Pn**	**02 27 23.7**	**+4.8**
	1.1nm,0.8s,baz=18,slow=12,SNR=0.9						
A36M	**Sachs Harbour**	**22.32 27**		P	**P**	**02 27 56.4**	**+0.7**
A36M				IAmb	IAmb	02 28 05.2	
	comp=Z,9.7nm,1.0s						
B21K	**Ikpikpuk River**	**23.10 53**		P	**P**	**02 28 03.7**	**-0.2**
B21K				IAmb	IAmb	02 28 13.9	
	comp=Z,15nm,1.4s						
C16K	**Lisburne Hills**	**23.66 63**		P	**P**	**02 28 10.1**	**+0.6**
D22K	**Ayikyak River**	**23.96 51**		P	**P**	**02 28 12.0**	**-0.5**
D22K				IAmb	IAmb	02 28 13.3	
	comp=Z,3.9nm,1.1s						
E18K	**Tukpahlearik C**	**24.85 59**		P	**P**	**02 28 20.4**	**-0.2**
E18K				IAmb	IAmb	02 28 28.8	
	comp=Z,7.3nm,1.2s						
C36M	**Paulatuk**	**25.00 27**		P	**P**	**02 28 21.4**	**-0.4**
E29M	**Blow River**	**25.33 39**		P	**P**	**02 28 24.9**	**+0.1**
F20K	**Avaraart Lake**	**25.56 55**		P	**P**	**02 28 26.2**	**-0.8**
F20K				IAmb	IAmb	02 28 34.4	
	comp=Z,3.6nm,0.9s						
INK	**Inuvik**	**25.63 35**		P	**P**	**02 28 26.8**	**-0.8**
INK				IAmb	IAmb	02 28 36.0	
	comp=Z,9.9nm,1.4s						
F17K	**Baldwin Pennin**	**25.77 60**		P	**P**	**02 28 29.8**	**+0.9**
BMAR	**Burnt Mountain**	**25.90 45**		P	**P**	**02 28 30.6**	**+0.4**
ILAR	**Eielson Array**	**28.40 48**		P	**P**	**02 28 52.1**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=350,slow=9.1,SNR=5.1 comp=Z,0.4nm,0.9s						
N17K	**Nushagak Hills**	**31.92 58**		P	**P**	**02 29 22.9**	**-0.8**
N17K				IAmb	IAmb	02 29 31.9	
	comp=Z,8.3nm,1.5s						
YKA	**Yellowknife Ar**	**32.18 20**		P	**P**	**02 29 24.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=352,slow=8.4,SNR=8.3 comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**32.58 200**		P	**P**	**02 29 32.7**	**+3.2**
	comp=Z,0.4nm,0.6s,baz=14,slow=7.4,SNR=2.4 comp=Z,0.4nm,0.6s						
ABKAR	**Akbulak array**	**36.73 211**		P	**P**	**02 30 02.4**	**-3.0**
ABKAR	**Akbulak array**	**36.73 211**		P	**P**	**02 30 02.6**	**-2.8**
ABKAR				IAmb	IAmb	02 30 22.0	
	comp=Z,0.5nm,0.9s						
HIA	**Hailar**	**36.85 145**		P	**P**	**02 30 07.5**	**+1.1**
HIA				IAmb	IAmb	02 30 26.2	
	comp=Z,3.7nm,0.6s						
SONM	**Songino Array**	**37.77 160**		P	**P**	**02 30 17.6**	**+3.3**
	comp=Z,0.4nm,0.7s,baz=354,slow=10,SNR=3.0 comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**38.58 187**		P	**P**	**02 30 22.4**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=352,slow=6.5,SNR=3.6 comp=Z,0.6nm,0.9s						
NACB	**Ninganchiao**	**61.94 145**		P	**P**	**02 33 18.8**	**+0.7**

MOS ***16*** *02:26:55.9±1.8,85.38N×89.17E,h13km,mb4.4/19,Error ellipse: s-maj=89.3km s-min=7.0km az=88.7*
IDC ***16*** *02:26:57.7±0.6,85.39N×89.43E,h0km,mb3.8/16, mbtmp3.8/17,ML3.3/1,MS3.8/30,Error ellipse: s-maj=21.1km s-min=12.5km az=120.0*
NEIC ***16*** *02:26:57.6±1.7,85.59N±0.09×8.4E±°,h10km±1km, mb4.3/38,Error ellipse: s-maj=22.3km s-min=6.2km az=310.0*
FCIAR ***16*** *02:27:02.0,84.84N×88.90E,h10km,station SVZ has station magnitude of 4.30 station OMEGA has station magnitude of 3.90 station PRGR has station magnitude of 4.95 station KLMR has station magnitude of 5.02*

ISC 16 02:26:57.5±0.4,85.32N±0.05×88.03E±0.05,h10km,n119, σ2§04/113,mb4.2/53,MS3.9/29,1C-4D,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**6.31 156**		*e*P	**Pn**	**02 28 27.8**	**-2.7**
SVZ				*e*S	Sn	02 29 32.2	-10
	137nm,0.6s						
OMEGA	**Omega**	**6.44 248**		*e*P	**Pn**	**02 28 34.0**	**+1.8**
OMEGA				*e*S	**Sn**	**02 29 42.9**	**-2.7**
	42nm,3.6s						
KBS	**Kingsbay**	**11.00 280**		*e*P	**Pn**	**02 29 35.7**	**+1.2**
KBS	**Kingsbay**	**11.00 280**		*e*P	**Pn**	**02 29 35.1**	**+0.6**
KBS				*e*S	**Sn**	**02 31 32.7**	**-4.6**
SPA0	**Spitsbergen Ar**	**11.32 275**		*e*P	**Pn**	**02 29 39.9**	**+0.8**
SPA0				*e*S	**Sn**	**02 31 40.6**	**-4.7**
SPITS	**Spitsbergen Ar**	**11.32 275**		Pn	Pn	02 29 32.7	-6.3
	baz=234,slow=39						
SPITS				Sn	**Sn**	**02 31 40.4**	**-5.0**
	baz=55,slow=26						
HOPEN	**Hopen**	**12.17 263**		P	**Pn**	**02 29 50.1**	**-0.5**
HOPEN				*e*S	Sn	02 31 57.0	-9.0
TIXI	**Tiksi**	**15.21 128**		*e*P	**Pn**	**02 30 32.3**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TIXI	**Tiksi**	**15.21 128**		LR	LR	02 35 37.5	
	comp=Z,165nm,21.9s,baz=30,slow=34						
NRIK	**Noril'sk**	**16.08 181**		Pn	**P**	**02 30 46.6**	**0.0**
NRIK	**Noril'sk**	**16.08 181**		P	**P**	**02 30 46.6**	**0.0**
NRIK				pmax	pmax		
	comp=Z,13nm,0.9s						
NRIK	**Noril'sk**	**16.08 181**		Pn	**Pn**	**02 30 38.7**	**-4.5**
	comp=Z,0.4nm,0.3s,baz=14,slow=10,SNR=6.3						
NRIK				LR	LR	02 37 32.3	
	comp=Z,335nm,19.2s,baz=322,slow=39						
AMDE	**Amderma**	**16.27 213**		*e*P	**Pn**	**02 30 44.6**	**-1.1**
	comp=Z,12nm,1.1s						
AMDE				*e*S	Sn	02 33 32.9	-13
ARCES	**ARCESS Array B**	**18.87 255**		P	**Pn**	**02 31 20.2**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=20,slow=11,SNR=6.3						
ARCES				Sn	**Sn**	**02 34 41.5**	**-7.1**
	baz=48,slow=1.8,SNR=1.4						
ARCES				LR	LR	02 38 42.5	
	comp=Z,328nm,19.4s,baz=284,slow=37 comp=Z,2.7nm,0.8s						
LVZ	**Lovozero**	**19.77 244**		*i* P	**P**	**02 31 26.3**	**-1.0**
RES	**Resolute Bay**	**20.12 2**		P	**P**	**02 31 28.1**	**-2.8**
RES	**Resolute Bay**	**20.12 2**		P	**P**	**02 31 28.1**	**-2.8**
RES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RES	**Resolute Bay**	**20.12 2**		LR	LR	02 38 14.0	
	comp=Z,218nm,19.0s,baz=19,slow=34						
BILL	**Bilibino**	**21.61 90**		*e*P	**P**	**02 31 42.6**	**-4.5**
BILL				pmax	pmax		
	comp=Z,15nm,2.1s						
A36M	**Sachs Harbour**	**22.21 27**		P	**P**	**02 31 52.7**	**-0.8**
B20K	**Meade River**	**22.49 55**		P	**P**	**02 31 56.1**	**-0.3**
B20K				IAmb	IAmb	02 32 05.6	
	comp=Z,16nm,1.4s						
B21K	**Ikpikpuk River**	**23.04 53**		P	**P**	**02 32 02.6**	**+0.4**
B21K				IAmb	IAmb	02 32 23.9	
	comp=Z,9.9nm,1.1s						
C18K	**Utukok River**	**23.55 59**		P	**P**	**02 32 13.5**	**+6.0**
C18K				IAmb	IAmb	02 32 14.4	
	comp=Z,10nm,1.2s						
C16K	**Lisburne Hills**	**23.62 63**		P	**P**	**02 32 09.2**	**+1.1**
C16K				IAmb	IAmb	02 32 42.9	
	comp=Z,19nm,1.5s						
D25K	**Kavik River**	**23.84 46**		P	**P**	**02 32 09.6**	**-0.7**
D25K				IAmb	IAmb	02 32 47.0	
	comp=Z,16nm,1.4s						
D24K	**Happy Valley**	**23.86 48**		P	**P**	**02 32 11.5**	**+1.0**
D22K	**Ayikyak River**	**23.89 51**		P	**P**	**02 32 11.6**	**+0.9**
TOLK	**Toolik Lake Re**	**24.33 49**		P	**P**	**02 32 16.0**	**+1.2**
E18K	**Tukpahlearik C**	**24.80 59**		P	**P**	**02 32 19.2**	**+0.2**
E18K				IAmb	IAmb	02 32 22.2	
	comp=Z,10.0nm,1.1s						
C36M	**Paulatuk**	**24.89 27**		P	**P**	**02 32 20.3**

ARU	**Arti**	**29.73**	**213**	*i* P	**P**	**02 33 04.2**	**+0.9**
ARU	**Arti**	**29.73**	**213**	LR	LR	02 47 22.6	
	comp=Z,257nm,18.6s,baz=322,slow=41						
KONO	**Kongsberg**	**29.90**	**266**	*i* P	**P**	**02 33 04.1**	**-0.7**
KONO				pmax	pmax		
	comp=Z,22nm,1.1s						
ZALV	**Zalesovo Beam**	**31.53**	**184**	P	**P**	**02 33 22.5**	**+3.3**
	comp=Z,0.8nm,0.6s,baz=353,slow=10,SNR=4.8						
ZALV				PcP	**PcP**	**02 36 13.4**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=270,slow=1.5,SNR=3.9						
ZALV				LR	LR	02 45 52.5	
	comp=Z,125nm,19.6s,baz=325,slow=36						
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**32.06**	**20**	P	**P**	**02 33 24.0**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=355,slow=8.6,SNR=29						
YKA				PcP	**PcP**	**02 36 14.3**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=334,slow=3.2,SNR=8.6						
YKA				LR	LR	02 46 18.6	
	comp=Z,144nm,19.5s,baz=31,slow=36						
	comp=Z,1.8nm,0.8s						
OBN	**Obninsk**	**32.32**	**237**	*e*P	**P**	**02 33 28.1**	**+2.0**
OBN				*e*		02 34 35.0	
OBN				*e*PPP	PPP	02 34 44.5	
OBN				*e*		02 36 11.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	**Obninsk**	**32.32**	**237**	LR	LR	02 50 34.5	
	comp=Z,366nm,18.4s,baz=352,slow=44						
BRVK	**Borovoye**	**32.67**	**200**	P	**P**	**02 33 30.7**	**+1.5**
BRVK	**Borovoye**	**32.67**	**200**	P	**P**	**02 33 30.7**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,13nm,1.5s						
BVAR	**Borovoye Array**	**32.70**	**200**	P	**P**	**02 33 32.0**	**+2.6**
	comp=Z,1.3nm,0.8s,baz=1.0,slow=8.9,SNR=11						
BVAR				LR	LR	02 49 38.7	
	comp=Z,275nm,18.1s,baz=325,slow=42						
	comp=Z,1.3nm,0.8s						
ZEA	**Zeya**	**32.91**	**136**	*i* P	**P**	**02 33 29.9**	**-1.4**
MNK	**Minsk**	**33.55**	**246**	*i* P	**P**	**02 33 35.8**	**-1.1**
	comp=E,5.0nm,0.8s,baz=247						
MNK				*i* P	**P**	**02 33 35.8**	**-1.1**
	comp=N,12nm,1.0s,baz=247						
MNK				*i* P	**P**	**02 33 35.8**	**-1.1**
	comp=Z,7.0nm,0.8s,baz=247						
MNK				*i* PP	**PnPn**	**02 34 47.1**	**-0.8**
	baz=247						
MNK				*i* PPP	PPP	02 34 59.3	
	baz=247						
MNK				*i* S	**S**	**02 38 58.5**	**0.0**
	baz=247						
MNK				*i* SS	**SnSn**	**02 41 01.9**	**+1.3**
	baz=247						
MNK				*i* SSS	SSS	02 41 18.1	
	baz=247						
MNK				*i* LQ	LQ	02 44 35.1	
	baz=247						
MNK				*i* LR	LR	02 45 40.8	
	baz=247						
MNK				*i* LRM	MLR	02 47 09.8	
	baz=247						
MNK				*i* LRM	MLR	02 47 20.7	
	comp=Z,302nm,9.8s,baz=247						
MNK				*i* LRM	MLR	02 47 29.1	
	comp=N,236nm,9.7s,baz=247						
MNK	**Minsk**	**33.55**	**246**	*i* P	**P**	**02 33 35.8**	**-1.1**
MNK				*i*		02 34 47.1	
MNK				*i* S	**S**	**02 38 58.4**	**0.0**
MNK				*i* SS	**SnSn**	**02 41 01.9**	**+1.3**
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,12nm,1.0s						
MNK				MLR	MLR		
	comp=Z,302nm,10.0s						
MNK				MLR	MLR		
	comp=N,236nm,10.0s						
BELG	**Belogornoye**	**34.32**	**225**	*i* P	**P**	**02 33 44.4**	**+0.8**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KURK	**Kurchatov**	**34.83**	**190**	*e*P	**P**	**02 33 45.7**	**-2.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KDAK	**Kodiak Island**	**34.92**	**55**	*i* P	**P**	**02 33 48.4**	**-0.3**
KDAK	**Kodiak Island**	**34.92**	**55**	LR	LR	02 48 10.0	
	comp=Z,120nm,18.5s,baz=1.4,slow=37						
KURBB	**Kurchatov Arra**	**34.93**	**191**	P	**P**	**02 33 50.5**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=19,slow=7.4,SNR=5.1						
KURBB				PcP	**PcP**	**02 36 22.6**	**+1.6**
	comp=Z,1.5nm,0.2s,baz=344,slow=3.1,SNR=4.7						
KURBB				LR	LR	02 50 09.4	
	comp=Z,164nm,21.0s,baz=164,slow=40						
	comp=Z,0.3nm,0.4s						
DLBC	**Dease Lake**	**35.55**	**34**	LR	LR	02 48 22.0	
	comp=Z,118nm,21.7s,baz=356,slow=36						
PEA0B	**Petropavlovsk-**	**35.68**	**104**	*e*P	**P**	**02 33 53.5**	**-1.8**
AKTO	**Aktyubinsk**	**35.74**	**213**	LR	LR	02 50 36.8	
	comp=Z,198nm,18.7s,baz=1.5,slow=40						
DGZ	**Jazzator, Alta**	**35.78**	**181**	*e*P	**P**	**02 33 54.7**	**-1.7**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ABKAR	**Akbulak array**	**36.83**	**211**	P	**P**	**02 34 05.4**	**+0.2**
AKASG	**Malin Array Be**	**37.23**	**244**	P	**P**	**02 34 10.2**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=8.6,slow=8.7,SNR=3.1						
	comp=Z,1.8nm,0.7s						
KLR	**Kul'dur**	**37.67**	**132**	*e*P	**P**	**02 34 12.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,2.2s						
KLR	**Kul'dur**	**37.67**	**132**	LR	LR	02 50 14.6	
	comp=Z,207nm,18.8s,baz=178,slow=37						
ULN	**Ulaanbaatar**	**37.90**	**159**	*e*P	**P**	**02 34 11.4**	**-3.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.6s						
SONM	**Songino Array**	**37.91**	**160**	P	**P**	**02 34 16.4**	**+1.9**
	comp=Z,1.2nm,0.9s,baz=347,slow=9.4,SNR=7.4						
	comp=Z,1.2nm,0.9s						
MAKZ	**Makanchi**	**38.70**	**187**	P	**P**	**02 34 22.5**	**+1.4**
MAKZ	**Makanchi**	**38.70**	**187**	P	**P**	**02 34 22.5**	**+1.4**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**38.71**	**186**	P	**P**	**02 34 22.4**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=4.8,slow=7.3,SNR=11						
	comp=Z,0.8nm,0.7s						
EDM	**Edmonton**	**41.38**	**19**	P	**P**	**02 34 43.4**	**+0.2**
EDM				IAmb	IAmb	02 34 52.5	
	comp=Z,7.0nm,1.0s						
EDM	**Edmonton**	**41.38**	**19**	P	**P**	**02 34 43.4**	**+0.2**
EDM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BBB	**Bella Bella**	**41.88**	**33**	LR	LR	02 51 59.6	
	comp=Z,106nm,21.4s,baz=334,slow=36						
AAK	**Ala-Archa**	**42.98**	**195**	*e*P	**P**	**02 34 54.7**	**-1.8**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.8s						
AAK	**Ala-Archa**	**42.98**	**195**	LR	LR	02 56 02.0	
	comp=Z,303nm,18.1s,baz=344,slow=40						
KIV	**Kislovodsk**	**43.03**	**229**	*e*P	**P**	**02 34 56.9**	**+0.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,110nm,16.0s						
KBZ	**Khabaz**	**43.24**	**229**	P	**P**	**02 35 01.4**	**+3.0**
	comp=Z,1.9nm,0.9s,baz=0.0,slow=4.0,SNR=3.4						
KBZ				LR	LR	02 57 44.0	
	comp=Z,119nm,19.2s,baz=346,slow=43						
	comp=Z,1.9nm,0.9s						
ULM	**Lac du Bonnet**	**44.64**	**4⇑**	*e*P	**P**	**02 35 10.0**	**+0.5**
ULM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULM	**Lac du Bonnet**	**44.64**	**4**	P	**P**	**02 35 09.4**	**-0.1**
	comp=Z,2.3nm,1.1s,baz=21,slow=6.2,SNR=3.8						
ULM				LR	LR	02 53 17.8	
	comp=Z,129nm,18.5s,baz=40,slow=36						
	comp=Z,2.3nm,1.1s						
NEW	**Newport**	**46.23**	**23**	LR	LR	02 55 39.7	
	comp=Z,135nm,18.0s,baz=14,slow=37						
GNI	**Garni**	**46.69**	**226**	LR	LR	02 58 53.7	
	comp=Z,154nm,18.6s,baz=332,slow=41						
BR131	**Keskin Array S**	**47.83**	**238**	*e*P	**P**	**02 35 34.5**	**-0.4**
BRTR	**Keskin Array B**	**47.83**	**238**	P	**P**	**02 35 38.0**	**+3.0**
BRTR	**Keskin Array B**	**47.83**	**238**	P	**P**	**02 35 38.0**	**+3.0**
	comp=Z,1.2nm,1.0s,baz=352,slow=3.0,SNR=4.6						
	comp=Z,1.2nm,1.0s						
GEYT	**Alibeck**	**48.22**	**212**	P	**P**	**02 35 41.5**	**+3.7**
	comp=Z,1.6nm,0.6s,baz=316,slow=12,SNR=3.5						
GEYT				LR	LR	02 57 48.4	
	comp=Z,155nm,18.0s,baz=357,slow=38						
	comp=Z,1.6nm,0.6s						
ESDC	**Sonseca Array**	**50.84**	**276**	P	**P**	**02 36 01.6**	**+3.8**
	comp=Z,0.5nm,0.8s,baz=15,slow=6.2,SNR=2.9						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**51.93**	**16**	LR	LR	02 58 48.7	
	comp=Z,92nm,18.2s,baz=16,slow=37						
K30B	**Basset**	**52.19**	**7**	P	**P**	**02 36 05.6**	**-2.3**
ELK	**Elko**	**53.80**	**22**	LR	LR	03 02 26.3	
	comp=Z,79nm,18.1s,baz=348,slow=40						
NVAR	**Mina Array Bea**	**56.01**	**25**	P	**P**	**02 36 38.0**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=183,slow=25,SNR=1.4						
	comp=Z,0.1nm,0.5s						
S22A	**4UR Ranch, Cre**	**57.00**	**14**	P	**P**	**02 36 42.2**	**-1.0**
S22A				IAmb	IAmb	02 36 46.2	
	comp=Z,3.8nm,1.1s						
LCMT	**Little Creek M**	**57.58**	**20**	P	**P**	**02 36 46.5**	**-0.6**
LCMT				IAmb	IAmb	02 36 50.4	
	comp=Z,2.4nm,0.9s						
EIL	**Elat**	**57.74**	**235**	LR	LR	03 07 04.9	
	comp=Z,27nm,18.1s,baz=62,slow=42						
ANMO	**Albuquerque**	**59.80**	**14**	P	**P**	**02 37 01.5**	**-1.1**
ANMO				IAmb	IAmb	02 37 04.7	
	comp=Z,3.0nm,1.1s						
ANMO	**Albuquerque**	**59.80**	**14**	P	**P**	**02 37 01.5**	**-1.1**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO	**Albuquerque**	**59.80**	**14**	LR	LR	03 02 43.3	
	comp=Z,137nm,20.7s,baz=106,slow=36						
PFO	**Pinyon Flats O**	**60.87**	**23**	LR	LR	03 05 38.8	
	comp=Z,78nm,18.1s,baz=352,slow=38						
VHRN	**Van Horn**	**63.98**	**12**	P	**P**	**02 37 29.4**	**-1.2**
TXAR	**Lajitas Array**	**65.45**	**11**	P	**P**	**02 37 41.0**	**+0.8**
TXAR	**Lajitas Array**	**65.45**	**11**	P	**P**	**02 37 41.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=3.5,slow=3.4,SNR=6.1						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.68**	**267**	P	**P**	**02 38 50.9**	**+2.6**
	comp=Z,1.8nm,1.0s,baz=10,slow=9.1,SNR=6.8						

BJI ***16*** *02:28:50.9±0.0, 14°.58N×147°.19E, h13km, mb4.7/68, mB5.1/32, Ms4.5/24, Ms7 4.3/24*
IDC ***16*** *02:28:51.6±0.6, 14°.48N×146°.93E, h0km, mb4.5/26, mbtmp4.5/27, ML4.3/1, MS3.9/9, Error ellipse: s-maj=17.2km s-min=13.3km az=103.0*
MOS ***16*** *02:28:53.9±1.0, 14°.51N×146°.82E, h24km, mb5.0/27, Error ellipse: s-maj=12.4km s-min=7.1km az=105.5*
DJA ***16*** *02:28:54.0±0.4, 14°N±5°×14°7E±°, h10km, M4.5/15, mB5.6/2, mb5.0/15, MLv4.3/1, Mw(mB)5.1/2*
NEIC ***16*** *02:28:57.3±1.5, 14°.5N±0°.1×146°.86E±0°.10, h35km±1km, mb4.9/210, Error ellipse: s-maj=17.7km s-min=15.6km az=196.0*
ISC 16 02:28:54.2±0.5, 14°.46N±0°.05×146°.94E±0°.05, h18km±2km, h17km:pP-P, n619, σ1°09/591, mb4.9/168, MS4.2/22, 19C-3D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.19**	**247**	P	**Pn**	**02 29 30.1**	**+0.3**
GUMO	**Guam**	**2.19**	**247**	Pn	**Pn**	**02 29 29.8**	**0.0**
	86nm,0.3s,baz=290,slow=4.3,SNR=17						
GUMO				Sn	**Sb**	**02 29 58.4**	**-1.9**
	112nm,0.3s,baz=63,slow=20,SNR=3.0						
	753nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**19.77**	**72**	T	T	02 53 41.6	
	baz=258						
H11N2	**WAKE ISLAND Hy**	**19.77**	**72**	T	T	02 53 41.0	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**19.78**	**72**	T	T	02 53 42.6	
	baz=258						
JOW	**Kunigami**	**21.34**	**308**	P	**P**	**02 33 41.9**	**+1.4**
	13nm,0.6s,baz=132,slow=13,SNR=4.5						
	13nm,0.6s						
SWI	**Sorong**	**21.74**	**227**	P	**P**	**02 33 47.9**	**+2.9**
DAV	**Davao City (W)**	**22.22**	**253**	LR	LR	02 43 55.7	
	comp=Z,131nm,18.8s,baz=47,slow=41						
FAKI	**Fak Fak**	**22.59**	**221**	P	**P**	**02 33 54.6**	**+0.6**
FAKI	**Fak Fak**	**22.59**	**221**	P	**P**	**02 33 55.2**	**+1.2**
FAKI	**Fak Fak**	**22.59**	**221**	P	**P**	**02 33 55.6**	**+1.6**
	65nm,0.9s						
JGF	**Kuroka**	**22.75**	**339**	P	**P**	**02 33 54.0**	**-1.5**
MJAR	**Matsushiro Arr**	**23.34**	**342**	P	**P**	**02 34 00.1**	**-1.5**
	1.5nm,0.3s,baz=170,slow=9.2,SNR=5.2						
	1.5nm,0.3s						
MAJO	**Matsushiro**	**23.34**	**342**	*i* P	**P**	**02 34 00.9**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,31nm,1.9s						
JNU	**Nakatsue**	**23.63**	**325**	P	**P**	**02 34 02.5**	**-2.1**
JNU				IAmb	IAmb	02 34 21.0	
	comp=Z,38nm,1.2s						
JNU	**Nakatsue**	**23.63**	**325**	P	**P**	**02 34 07.9**	**+3.3**
PMG	**Port Moresby**	**23.71**	**179**	P	**P**	**02 34 04.7**	**-0.7**
PMG				IAmb	IAmb	02 34 25.5	
	comp=Z,52nm,0.9s						
YULB	**Yu-li**	**25.80**	**294**	P	**P**	**02 34 26.7**	**+2.1**
SSLB	**Suanglung**	**26.21**	**295**	P	**P**	**02 34 27.8**	**-0.5**
SSLB	**Suanglung**	**26.21**	**295**	P	**P**	**02 34 30.7**	**+2.4**
KMSI	**Cibinong**	**26.57**	**241**	P	**P**	**02 34 34.0**	**+2.4**
HNR	**Honiara**	**27.01**	**151**	LR	LR	02 44 32.9	
	comp=Z,2μm,19.3s,baz=114,slow=35						
LUWI	**Luwuk**	**28.46**	**239**	P	**P**	**02 34 47.4**	**-1.1**
LUWI	**Luwuk**	**28.46**	**239**	P	**P**	**02 34 47.9**	**-0.6**
LUWI	**Luwuk**	**28.46**	**239**	P	**P**	**02 34 46.0**	**-2.5**
KSRS	**Korea Array**	**28.47**	**327**	P	**P**	**02 34 48.1**	**-0.2**
	comp=Z,5.9nm,0.7s,baz=143,slow=9.0,SNR=18						
	comp=Z,5.9nm,0.7s						
KSAR	**Wonju Array Be**	**28.48**	**327**	P	**P**	**02 34 47.9**	**-0.6**
KS19	**Wonju Array Si**	**28.53**	**327**	P	**P**	**02 34 48.3**	**-0.7**
NJ2	**Nanjing**	**31.05**	**309**	*e*P	**P**	**02 35 12.3**	**+1.0**
NJ2				pP	**pP**	**02 35 15.0**	**+0.3**
NJ2				sP	**sP**	**02 35 17.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.3s						
BBSI	**Bau Bau**	**31.26**	**232**	P	**P**	**02 35 14.6**	**+1.3**
	comp=Z,78nm,0.9s						
USRK	**Ussuriysk Ar.**	**32.27**	**340**	P	**P**	**02 35 21.5**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=158,slow=7.6,SNR=9.5						
USRK				LR	LR	02 49 03.4	
	comp=Z,193nm,18.1s,baz=157,slow=38						
	comp=Z,3.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**32.27**	**340**	*i* P	**P**	**02 35 21.6**	**-0.3**
MTSU	**Mount Surprise**	**32.49**	**185**	P	**P**	**02 35 26.1**	**+2.0**
YSS	**Yuzh-Sakhalins**	**32.59**	**355**	*e*P	**P**	**02 35 27.3**	**+2.7**
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
MDJ	**Mudanjiang**	**33.48**	**337**	P	**P**	**02 35 33.9**	**+1.4**
MDJ				pP	sP	02 35 37.4	+0.5
MDJ				PP	**PnPn**	**02 36 44.1**	**+0.3**
MDJ				S	**S**	**02 40 55.0**	**+1.5**
MDJ				SS	**SnSn**	**02 42 52.3**	**-3.7**
MDJ				ScS	**ScS**	**02 45 59.8**	**+1.7**
MDJ				pmax	pmax		
	comp=N,5.0nm,0.7s						
MDJ				pmax	pmax		
	comp=N,170nm,5.7s						
MDJ				LR	LR		
	comp=N,280nm,16.1s						
MDJ				LR	LR		
	comp=N,310nm,18.9s						
MDJ				LR	LR		
	comp=N,470nm,16.1s						
WHN	**Wuhan**	**33.94**	**304**	P	**P**	**02 35 40.9**	**+4.2**
CN2	**Changchun**	**34.54**	**332**	*e*P	**P**	**02 35 39.5**	**-2.2**
CN2				*e*sP	sP	02 35 48.3	+2.2
CN2				*e*S	**S**	**02 41 06.9**	**-2.9**
CN2				LR	LR		
	comp=N,250nm,15.0s						
CN2				LR	LR		
	comp=N,210nm,15.0s						
BNX	**BinXian**	**35.27**	**336**	⇓P	**P**	**02 35 47.0**	**-0.9**
BNX				pmax	pmax		
	comp=N,6.0nm,1.5s						
BNX				pmax	pmax		
	comp=N,280nm,4.1s						
QIS	**Mount Isa**	**35.54**	**192**	P	**P**	**02 35 52.3**	**+1.8**
QIZ	**Qiongzhong**	**35.77**	**283**	P	**P**	**02 35 51.8**	**-0.8**
QIZ				PP	**PnPn**	**02 37 13.3**	**+0.6**
QIZ				S	**S**	**02 41 28.8**	**-0.6**
QIZ				LR	LR		
	comp=N,160nm,9.4s						
QIZ				LR	LR		
	comp=N,230nm,15.3s						
QIZ				LR	LR		
	comp=N,260nm,16.8s						
WB0	**Warramunga Arr**	**36.18**	**200**	P	**P**	**02 35 55.3**	**-0.7**
WR0	**Warramunga Arr**	**36.31**	**200**	P	**P**	**02 35 55.2**	**-1.9**
WR0				IAmb	IAmb	02 36 19.4	
	comp=Z,20nm,1.1s						
WB2	**Warramunga Arr**	**36.36**	**200**	P	**P**	**02 35 57.0**	**-0.6**
WB2				IAmb	IAmb	02 36 19.4	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**36.36**	**200**	P	**P**	**02 35 56.1**	**-1.5**
WRA	**Warramunga Arr**	**36.36**	**200**	*i* P	**P**	**02 35 57.5**	**-0.1**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRA	**Warramunga Arr**	**36.36**	**200**	P	**P**	**02 35 56.7**	**-0.9**
	comp=Z,6.7nm,0.9s,baz=23,slow=9.6,SNR=17						
WRA				PcP	**PcP**	**02 38 23.6**	**+1.5**
	comp=Z,1.8nm,0.9s,baz=20,slow=3.6,SNR=2.5						
	comp=Z,6.7nm,0.9s						
TYV	**Tymovskoe**	**36.48**	**355**	*e*P	**P**	**02 35 58.6**	**+0.4**
TYV				pmax	pmax		
	comp=Z,100nm,2.8s						
TYV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HNS	**HongShan**	**36.62**	**315**	⇑P	**P**	**02 35 59.8**	**+0.2**
HNS				pmax	pmax		
	comp=Z,17nm,1.0s						
KLR	**Kul'dur**	**36.85**	**343**	*ce*P	**P**	**02 36 00.4**	**-1.1**
KLR				pmax	pmax		
	comp=Z,14nm,2.5s						
LYN	**LuoYang**	**36.94**	**309**	⇓P	**P**	**02 36 02.8**	**+0.3**
LYN				pP	sP	02 36 06.8	-0.4
LYN				sP	pwP	02 36 10.1	-4.1
LYN				PP	**PP**	**02 37 25.0**	**-1.7**
LYN				S	**S**	**02 41 49.3**	**+2.4**
LYN				pmax	pmax		
	comp=Z,28nm,1.2s						
LYN				pmax	pmax		
	comp=Z,230nm,5.8s						
LYN				LR	LR		
	comp=Z,350nm,19.2s						
LYN				LR	LR		
	comp=Z,390nm,19.9s						
LYN				LR	LR		
	comp=Z,410nm,17.5s						
BJT	**Baijiatuan**	**37.05**	**319**	P	**P**	**02 36 02.9**	**-0.4**
BJT				IAmb	IAmb	02 36 04.3	
	comp=Z,30nm,1.4s						
BJT	**Baijiatuan**	**37.05**	**319**	P	**P**	**02 36 03.7**	**+0.4**
BJT				pP	**pwP**	**02 36 14.2**	**-0.7**
BJI	**Beijing**	**37.06**	**319**	P	**P**	**02 36 03.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJI				LR	LR		
	comp=Z,99nm,20.2s						
BJI				LR	LR		
	comp=Z,98nm,20.2s						
BJI				LR	LR		
	comp=Z,190nm,20.2s						
ENH	**Enshi**	**37.84**	**301**	P	**P**	**02 36 09.6**	**-0.6**
ENH				IAmb	IAmb	02 36 22.7	
	comp=Z,13nm,0.8s						
ENH	**Enshi**	**37.84**	**301**	P	**P**	**02 36 10.8**	**+0.6**
ENH				pP	**pwP**	**02 36 21.7**	**-1.0**
TIY	**Taiyuan**	**38.35**	**314**	*e*P	**P**	**02 36 15.3**	**+0.9**
TIY				pmax	pmax		
	comp=Z,13nm,0.7s						
KSM	**Kuching**	**38.42**	**254**	P	**P**	**02 36 14.2**	**-1.0**
KSM				IAmb	IAmb	02 36 15.3	
	comp=Z,12nm,0.8s						
KSM	**Kuching**	**38.42**	**254**	P	**P**	**02 36 14.9**	**-0.3**
HEH	**HeiHe**	**39.08**	**340**	*e*P	**P**	**02 36 18.6**	**-1.6**
HEH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XLT	**XiLinHaoTe**	**39.42**	**324**	*e*P	**P**	**02 36 23.5**	**+0.2**
XLT				pP	sP	02 36 28.9	+1.2
XLT				sP	pwP	02 36 32.3	-2.6
XLT				PP	**PnPn**	**02 38 00.8**	**+4.1**
XLT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA	**Guiyang**	**39.42**	**294**	*e*P	**P**	**02 36 25.1**	**+1.5**
GYA				S	**S**	**02 42 28.3**	**+3.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GYA				pmax	pmax		
	comp=Z,150nm,7.1s						
XAN	**Xi'an**	**39.47**	**306**	⇑P	**P**	**02 36 23.5**	**-0.3**
XAN				pP	sP	02 36 28.6	0.0
XAN				pmax	pmax		
	comp=Z,15nm,1.5s						
XAN	**Xi'an**	**39.47**	**306**	P	**P**	**02 36 23.8**	**0.0**
XAN				pP	**pwP**	**02 36 35.3**	**-0.3**
XAN				sP	sP	02 36 40.4	+12
AS01	**Alice Springs**	**39.96**	**199**	P	**P**	**02 36 27.9**	**0.0**
ASAR	**Alice Springs**	**39.98**	**199**	P	**P**	**02 36 27.4**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=22,slow=6.9,SNR=14						
	comp=Z,1.8nm,0.8s						
HHC	**Hu-ho-hao-te**	**40.46**	**317**	⇑P	**P**	**02 36 31.6**	**-0.5**
HHC				sP	pwP	02 36 40.8	-2.9
HHC				S	**S**	**02 42 41.4**	**+1.3**
HHC				sS	sS	02 42 52.3	+6.3
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.5s						
HHC				LR	LR		
	comp=Z,170nm,11.4s						
HHC				LR	LR		
	comp=Z,200nm,12.0s						
HHC				LR	LR		
	comp=Z,250nm,14.9s						
QLP	**Quilpie**	**40.88**	**184**	P	**P**	**02 36 36.5**	**+1.1**
DZM	**Mont Dzumac**	**41.03**	**152**	*e*LR	LR	02 47 53.0	
	comp=Z,212nm,23.4s						
BTO	**Baotou**	**41.37**	**316**	*e*P	**P**	**02 36 41.1**	**+1.6**
BTO				pP	**sP**	**02 36 45.0**	**+0.7**
BTO				sP	**pwP**	**02 36 47.8**	**-3.4**
BTO				PP	**PnPn**	**02 38 22.9**	**+3.1**
BTO				S	**S**	**02 42 57.6**	**+4.0**
BTO				pmax	pmax		
	comp=Z,39nm,1.0s						
BTO				pmax	pmax		
	comp=Z,420nm,5.5s						
BTO				LR	LR		
	comp=Z,440nm,12.0s						
BTO				LR	LR		
	comp=Z,680nm,12.3s						
BTO				LR	LR		
	comp=Z,550nm,9.6s						
PWJI	**Pagerwojo**	**41.40**	**240**	P	**P**	**02 36 38.6**	**-1.3**
SLVN	**Son La**	**41.42**	**286**	P	**P**	**02 36 40.7**	**+0.5**

PZH LR LR
comp=Z,160nm,11.0s
PZH LR LR
comp=Z,170nm,18.1s
LZH Lanzhou 44.07 307 ⇑P **P 02 37 02.5 +0.9**
LZH pP sP 02 37 07.0 +0.6
LZH pmax pmax
comp=Z,35nm,1.4s
LZH LR LR
comp=Z,290nm,16.1s
LZH LR LR
comp=Z,130nm,18.2s
LZH LR LR
comp=Z,310nm,18.5s
MYKOM **Kota Tinggi 44.38 258** P **P 02 37 03.8 -0.3**
MA2 Magadan 45.13 3 P **P 02 37 11.5 +2.0**
MA2 Magadan 45.13 3*ce*P **P 02 37 10.6 +1.1**
MA2 pmax pmax
comp=Z,33nm,2.5s
MA2 Magadan 45.13 3 LR LR 02 55 37.1
comp=Z,64nm,19.2s,baz=250,slow=36
MA2 Magadan 45.13 3 P **P 02 37 11.2 +1.7**
MA2 pP **pwP 02 37 22.9 +0.8**
LCRK Leigh Creek 45.43 191 P **P 02 37 11.9 -0.3**
CMAR Chiang Mai Arr 46.10 282 P **P 02 37 17.8 0.0**
CMAR Chiang Mai Arr 46.10 282 P **P 02 37 18.4 +0.6**
comp=Z,2.0nm,0.3s,baz=78,slow=6.3,SNR=21
CMAR PcP **PcP 02 38 53.1 -1.0**
comp=Z,1.0nm,0.3s,baz=75,slow=3.8,SNR=1.1
CMAR LR LR 02 57 44.9
comp=Z,62nm,18.1s,baz=85,slow=38
comp=Z,2.0nm,0.3s
MULG Mulgathing 46.18 196 P **P 02 37 18.0 -0.1**
STKA Stephens Creek 46.35 186 P **P 02 37 19.6 +0.1**
comp=Z,3.2nm,0.9s,baz=3.4,slow=14,SNR=4.9
comp=Z,3.2nm,0.9s
KULM Kulim 46.43 264 P **P 02 37 20.1 -0.3**
KULM IAmb IAmb 02 37 24.1
comp=Z,23nm,1.2s
TNCH TengChong 46.56 291 P **P 02 37 21.9 +0.3**
TNCH pP pP 02 37 24.8 -0.1
TNCH sP sP 02 37 27.3 +0.9
TNCH PP **PP 02 39 13.5 +2.4**
TNCH S **S 02 44 10.8 +0.9**
TNCH sS sS 02 44 17.3 +1.9
TNCH pmax pmax
comp=Z,27nm,1.4s
TNCH LR LR
comp=Z,96nm,4.9s
TNCH LR LR
comp=Z,150nm,4.3s
TNCH LR LR
comp=Z,100nm,8.8s
ULN Ulaanbaatar 46.85 324 P **P 02 37 22.4 -1.0**
ULN Ulaanbaatar 46.85 324 *i*P **P 02 37 23.5 +0.1**
ULN pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 46.85 324 P **P 02 37 23.9 +0.4**
ULN pP **pwP 02 37 36.2 +1.2**
ULN sP sP 02 37 41.3 +13
SONM Songino Array 47.21 323 P **P 02 37 25.8 -0.5**
SONM Songino Array 47.21 323 P **P 02 37 26.4 +0.1**
comp=Z,2.9nm,0.6s,baz=138,slow=6.9,SNR=21
comp=Z,2.9nm,0.6s
GTA Gaotai 48.13 310 *e*P **P 02 37 34.0 +0.5**
GTA sP pwP 02 37 45.5 +0.3
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA LR LR
comp=Z,180nm,19.3s
GTA LR LR
comp=Z,230nm,18.2s
GTA LR LR
comp=Z,310nm,18.5s
SEY Seymchan 48.56 3*ce*P **P 02 37 37.8 +1.5**
SEY pmax pmax
comp=Z,34nm,2.6s
MND Mandalay 48.68 287 P **P 02 37 39.6 +1.8**
YAK Yakutsk 49.08 349*ce*P **P 02 37 38.6 -1.7**
YAK pmax pmax
comp=Z,23nm,0.8s
ZAK Zakamensk 50.26 325 *e*P **P 02 37 48.3 -1.3**
ZAK pmax pmax
comp=Z,8.0nm,1.2s
GSI Gunungsitoli 50.48 260 P **P 02 37 52.5 +0.8**
GOMU GeErMu 51.18 305 P **P 02 37 58.4 +1.3**
GOMU sP sP 02 38 04.6 +2.7
GOMU PcP **PcP 02 39 14.3 +1.8**
GOMU pmax pmax
comp=Z,8.0nm,0.8s
TOO Toolangi 51.77 181 P **P 02 38 02.3 +1.4**
NIKH Nikolski High 51.86 32 P **P 02 38 00.4 -1.1**
baz=239
MORW Morawa 52.57 214 P **P 02 38 06.5 -0.5**
SHL Shillong 52.58 291 P **P 02 38 06.5 -1.0**
SHL IAmb IAmb 02 38 07.5
comp=Z,11nm,0.9s
SHL Shillong 52.58 291 P **P 02 38 07.2 -0.3**
SHL pmax pmax
comp=Z,15nm,1.0s
LSA Lhasa 53.41 296 P **P 02 38 12.5 -1.4**
LSA IAmb IAmb 02 38 16.2
comp=Z,15nm,0.8s
LSA Lhasa 53.41 296 P **P 02 38 15.1 +1.2**
P08K Saint George I 53.47 28 P **P 02 38 12.5 -0.7**
baz=236
SPIA Saint Paul Isl 53.48 27 P **P 02 38 13.0 -0.3**
baz=235
UNV Unalaska Valle 53.52 32 P **P 02 38 12.8 -0.8**
baz=241
BILL Bilibino 54.99 9 P **P 02 38 24.6 +0.4**
BILL IAmb IAmb 02 38 49.8
comp=Z,11nm,1.0s
BILL Bilibino 54.99 9 *e*P **P 02 38 24.7 +0.5**
BILL pmax pmax
comp=Z,17nm,1.8s
FALS False Pass 55.59 32 P **P 02 38 28.5 -0.2**
baz=243
GAMB Gambell 56.95 20 P **P 02 38 38.7 +0.5**
baz=230
M11K Mekoryuk 57.02 26 P **P 02 38 38.1 -0.7**
baz=237
SDPT Sand Point 57.33 33 P **P 02 38 40.8 -0.2**
baz=246
CHNA Chernabura Isl 57.59 33 P **P 02 38 43.6 +0.7**
baz=247
WMQ Urumqi 58.01 313 *e*P **P 02 38 47.3 +1.0**
WMQ sP pwP 02 38 59.5 +1.6
WMQ PcP **PcP 02 39 41.9 +3.7**
WMQ pmax pmax
comp=Z,22nm,1.3s
S14K Fog Glacier 58.18 32 P **P 02 38 48.0 +0.8**
baz=246
TIXI Tiksi 58.20 353 P **P 02 38 45.6 -1.3**
TIXI Tiksi 58.20 353*ce*P **P 02 38 47.0 +0.1**
TIXI pmax pmax
comp=Z,13nm,2.5s
TIXI Tiksi 58.20 353 P **P 02 38 46.3 -0.6**
comp=Z,2.2nm,0.3s,baz=156,slow=4.4,SNR=5.7
comp=Z,2.2nm,0.3s
O14K Tigyukauivet M 58.62 28 P **P 02 38 50.9 +0.8**
baz=243
CHGN Chignik 58.77 32 P **P 02 38 51.9 +0.7**
baz=248
L14K Kuka Creek 58.99 26 P **P 02 38 53.1 +0.5**
baz=240
M14K Bethel 59.01 26 P **P 02 38 53.9 +1.1**
baz=242
O15K Ungalikthiuk R 59.25 29 P **P 02 38 55.8 +1.3**
baz=244
TNA Tin City 59.34 20 P **P 02 38 55.4 +0.4**
baz=233
J14K Nanvaranak Lak 59.35 24 P **P 02 38 54.7 -0.3**
baz=239
DGZ Jazzator, Alta 59.48 319 ⇑*i*P **P 02 38 57.3 +0.8**
DGZ pmax pmax
comp=Z,18nm,1.0s
M15K Kasigluk River 59.54 27 P **P 02 38 55.9 -0.5**
baz=243
N15K Kwethluk River 59.56 28 P **P 02 38 55.8 -0.9**
baz=244
URZ Urewera 59.58 153 LR LR 03 03 13.0
comp=Z,102nm,19.0s,baz=120,slow=35
ANM Nome 59.64 22 P **P 02 38 55.8 -1.3**
baz=236

L15K Ungalak Mounta 59.65 26 P **P 02 38 56.5 -0.7**
baz=242
R16K Pilot Point 59.68 31 P **P 02 38 57.7 +0.2**
baz=248
RTZ Ruatahuna 59.82 153 P **P 02 38 58.6 -0.1**
F14K Arctic Creek 59.83 21 P **P 02 38 58.9 +0.5**
baz=235
K15K Wolf Creek Mou 59.93 25 P **P 02 38 59.1 0.0**
baz=241
P16K Nushagak River 60.05 29 P **P 02 39 00.2 +0.2**
baz=246
CHIR Chirikof Islan 60.06 33 P **P 02 39 00.5 +0.4**
baz=250
BKZ Black Stump Fm 60.06 154 P **P 02 39 00.6 +0.2**
BKZ IAmb IAmb 02 39 01.6
comp=Z,13nm,0.9s
O16K Kokwok River B 60.23 29 P **P 02 39 01.9 +0.7**
baz=246
N16K Nishlik Lake 60.29 28 P **P 02 39 01.9 +0.2**
baz=245
G15K Niukluk 60.35 22 P **P 02 39 02.8 +0.8**
baz=237
M16K Timber Creek 60.44 27 P **P 02 39 03.2 +0.6**
baz=244
L16K Owhat River 60.52 26 P **P 02 39 03.7 +0.5**
baz=244
F15K North Star Dit 60.53 21 P **P 02 39 03.3 +0.1**
baz=236
O17K Koliganek Bris 60.77 29 P **P 02 39 05.2 +0.4**
baz=247
Q17K Contact Creek 60.78 31 P **P 02 39 05.7 +0.6**
baz=249
J16K Anvik River 60.78 24 P **P 02 39 06.3 +1.4**
baz=242
H16K Elim 60.82 22 P **P 02 39 05.5 +0.3**
baz=239
N17K Nugak Hills 61.02 28 P **P 02 39 06.5 -0.1**
baz=246
I17K Unalakleet 61.03 24 P **P 02 39 06.9 +0.3**
baz=241
G16K Koyuk River 61.17 22 P **P 02 39 08.1 +0.6**
baz=239
L17K Donlin 61.21 26 P **P 02 39 08.6 +0.8**
baz=244
M17K Holitna River 61.27 27 P **P 02 39 09.1 +0.8**
baz=246
J17K VABM Dome 61.44 24 P **P 02 39 09.3 -0.2**
baz=243
K17K Iditarod 61.46 25 P **P 02 39 10.3 +0.8**
baz=244
P18K Big Mountain, 61.50 30 P **P 02 39 09.8 -0.2**
baz=249
N18K Kilae Creek 61.67 28 P **P 02 39 11.7 +0.6**
baz=248
O18K Koktub Hills 61.68 29 P **P 02 39 11.0 -0.1**
baz=249
OHAK Old Harbor 61.74 32 P **P 02 39 11.9 +0.4**
baz=252
C16K Lisburne Hills 61.77 18 P **P 02 39 12.9 +1.4**
C16K IAmb IAmb 02 39 14.1
comp=Z,11nm,1.0s
C16K Lisburne Hills 61.77 18 P **P 02 39 12.5 +0.9**
baz=234
H17K Granite Mounta 61.84 23 P **P 02 39 12.8 +0.8**
H17K IAmb IAmb 02 39 15.2
comp=Z,7.6nm,0.9s
H17K Granite Mounta 61.84 23 P **P 02 39 12.5 +0.4**
baz=242
G17K Kiwalik Mounta 61.84 22 P **P 02 39 12.8 +0.8**
baz=240
L18K Granite Mounta 61.93 26 P **P 02 39 12.9 +0.2**
baz=246
M18K Stony River 62.02 27 P **P 02 39 13.9 +0.6**
baz=247
F17K Baldwin Pennin 62.10 21 P **P 02 39 15.0 +1.3**
F17K IAmb IAmb 02 39 22.2
comp=Z,9.5nm,0.8s
F17K Baldwin Pennin 62.10 21 P **P 02 39 14.1 +0.4**
baz=240
ZAA0 Zalesovo Array 62.10 324 P **P 02 39 13.3 -0.7**
ZAA0 IAmb IAmb 02 39 20.0
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 62.10 324 P **P 02 39 13.2 -0.8**
ZALV Zalesovo Beam 62.10 324 P **P 02 39 13.3 -0.7**
comp=Z,4.7nm,0.6s,baz=110,slow=6.9,SNR=19
ZALV PcP **PcP 02 39 55.5 +1.2**
comp=Z,2.0nm,0.7s,baz=98,slow=2.9,SNR=3.9
comp=Z,4.7nm,0.6s
Q19K Cape Douglas, 62.11 30 P **P 02 39 14.7 +0.6**
baz=251
E17K Hotham Inlet 62.23 20 P **P 02 39 15.3 +0.6**
baz=239
KDAK Kodiak Island 62.27 32 P **P 02 39 15.5 +0.4**
baz=252
MKAR Makanchi Array 62.28 315 P **P 02 39 16.1 +0.7**
MKAR Makanchi Array 62.28 315 *i*P **P 02 39 15.6 +0.2**
MKAR pmax pmax
comp=Z,9.0nm,0.6s
MKAR Makanchi Array 62.28 315 P **P 02 39 15.7 +0.3**
comp=Z,8.5nm,0.6s,baz=85,slow=8.7,SNR=80
comp=Z,8.5nm,0.6s
N19K Bonanza Creek 62.37 28 P **P 02 39 16.4 +0.7**
baz=249
J18K Innoko River 62.43 25 P **P 02 39 17.4 +1.3**
baz=245
MAKZ Makanchi 62.49 315 P **P 02 39 17.1 +0.3**
MAKZ Makanchi 62.49 315 P **P 02 39 17.2 +0.4**
MAKZ pP **pwP 02 39 28.7 -0.6**
MAKZ sP sP 02 39 34.3 +13
TTA Tatalina 62.50 26 P **P 02 39 17.8 +1.2**
baz=246
H18K Honhosa River 62.52 23 P **P 02 39 17.3 +0.6**
baz=243
P19K Oil Pt 62.55 30 P **P 02 39 18.1 +1.2**
baz=251
C17K DeLong Mountai 62.55 19 P **P 02 39 18.3 +1.5**
baz=237
Q20K Shuyak Island 62.62 31 P **P 02 39 18.6 +1.2**
baz=252
L19K White Mountain 62.70 27 P **P 02 39 18.1 +0.2**
baz=248
F18K Selawik 62.73 21 P **P 02 39 17.7 -0.3**
baz=241
G18K Tagagawik 62.76 22 P **P 02 39 18.3 +0.1**
baz=242
M19K Big River Lodg 62.80 27 P **P 02 39 18.2 -0.4**
baz=248
E18K Tukpahlearik C 62.82 20 P **P 02 39 20.2 +1.7**
E18K IAmb IAmb 02 39 21.7
comp=Z,7.2nm,0.8s
E18K Tukpahlearik C 62.82 20 P **P 02 39 19.5 +0.9**
baz=240
GCSA Galena City Sc 62.91 24 P **P 02 39 18.1 -1.0**
baz=245
O20K Slope Mountain 62.98 29 P **P 02 39 20.5 +0.6**
baz=251
WHZ Wether Hill Ro 63.00 164 P **P 02 39 20.8 +0.9**
J19K Poorman 63.09 25 P **P 02 39 20.4 -0.1**
baz=246
RAR Rarotonga 63.18 123 LR LR 03 01 38.1
comp=Z,66nm,21.5s,baz=214,slow=31
L20K Farewell, AK 63.24 27 P **P 02 39 21.8 +0.3**
baz=249
C18K Utukok River 63.26 19 P **P 02 39 22.4 +0.8**
C18K Utukok River 63.26 19 P **P 02 39 22.3 +0.8**
baz=239
HOM Homer 63.32 30 P **P 02 39 22.3 +0.3**
baz=252
M20K Styx River 63.35 27 P **P 02 39 23.2 +0.9**
baz=250
H19K Roundabout Mou 63.41 23 P **P 02 39 24.0 +1.5**
H19K IAmb IAmb 02 39 25.6
comp=Z,7.5nm,0.8s
H19K Roundabout Mou 63.41 23 P **P 02 39 23.8 +1.4**
baz=245
G19K Purcell Mounta 63.44 22 P **P 02 39 24.3 +1.6**
G19K IAmb IAmb 02 39 25.6
comp=Z,10nm,0.9s
G19K Purcell Mounta 63.44 22 P **P 02 39 24.4 +1.7**
baz=244,SNR=6.4
B18K Kokolik River 63.45 18 P **P 02 39 23.4 +0.6**
baz=238
K20K Telida 63.48 26 P **P 02 39 24.3 +1.3**
baz=248
F19K Shaleruckik Mo 63.50 21 P **P 02 39 24.8 +1.7**
baz=243
N20K Mount Spurr 63.54 28 P **P 02 39 24.9 +1.3**
baz=251

J20K Nowinta River 63.76 25 P **P 02 39 25.1 +0.3**
J20K Nowinta River 63.76 25 P **P 02 39 26.4 +1.5**
baz=248,SNR=6.3
I20K Naaghedeneel 63.87 24 P **P 02 39 26.7 +1.2**
baz=247
CAPN Captain Cook N 63.89 29 P **P 02 39 26.7 +1.0**
baz=252
E19K Redstone River 63.98 21 P **P 02 39 26.5 +0.3**
E19K Redstone River 63.98 21 P **P 02 39 26.8 +0.5**
baz=243
H20K Anotleneega Mo 63.99 23 P **P 02 39 27.2 +0.8**
baz=246
C19K Lookout Ridge 63.99 19 P **P 02 39 26.4 0.0**
C19K IAmb IAmb 02 39 40.3
comp=Z,8.6nm,0.8s
C19K Lookout Ridge 63.99 19 P **P 02 39 27.6 +1.2**
baz=240
SKT Skwentna 64.10 27 P **P 02 39 26.8 -0.4**
baz=251
PPLA Purkeypile 64.11 26 P **P 02 39 27.0 -0.4**
baz=250
D19K Kuna River 64.16 20 P **P 02 39 28.4 +0.9**
D19K Kuna River 64.16 20 P **P 02 39 27.6 0.0**
baz=242
SUA Susitna One 64.29 28 P **P 02 39 28.8 +0.3**
baz=252
F20K Avaraart Lake 64.32 21 P **P 02 39 29.6 +1.1**
F20K Avaraart Lake 64.32 21 P **P 02 39 29.3 +0.8**
baz=245
CAST Castle Rocks 64.34 26 P **P 02 39 30.2 +1.5**
CAST IAmb IAmb 02 39 31.5
comp=Z,12nm,1.0s
CAST Castle Rocks 64.34 26 P **P 02 39 29.0 +0.3**
baz=250
CHUM Lake Minchumin 64.40 25 P **P 02 39 29.6 +0.5**
baz=250
O22K Cooper Landing 64.48 29 P **P 02 39 29.5 -0.1**
baz=254
SEW Seward 64.50 30 P **P 02 39 30.2 +0.4**
baz=254
RC01 Rabbit Creek A 64.65 29 P **P 02 39 31.3 +0.6**
RC01 Rabbit Creek A 64.65 29 P **P 02 39 30.9 +0.1**
baz=253
E20K Nigu River 64.69 20 P **P 02 39 31.6 +0.6**
baz=244
D20K Etivluk River 64.75 20 P **P 02 39 31.1 -0.3**
baz=243
H21K Melozitna Rive 64.85 23 P **P 02 39 32.8 +0.8**
H21K Melozitna Rive 64.85 23 P **P 02 39 32.9 +0.9**
baz=248
KTH Kantishna Hill 64.88 26 P **P 02 39 33.0 +0.7**
KTH IAmb IAmb 02 39 45.8
comp=Z,16nm,1.0s
G21K Allakaket 64.91 22 P **P 02 39 33.2 +0.8**
baz=247
I21K Tanana 65.00 24 P **P 02 39 34.0 +1.0**
I21K IAmb IAmb 02 40 05.0
comp=Z,23nm,1.6s
I21K Tanana 65.00 24 P **P 02 39 33.5 +0.6**
baz=249
BPAW Bear Paw Mtn. 65.03 25 P **P 02 39 34.2 +1.0**
BPAW IAmb IAmb 02 40 19.5
comp=Z,17nm,1.3s
BPAW Bear Paw Mtn. 65.03 25 P **P 02 39 33.5 +0.3**
baz=251
PMR Palmer 65.07 28 P **P 02 39 34.2 +0.7**
baz=254
TRF Thorofare Moun 65.11 26 P **P 02 39 34.7 +0.8**
baz=252
B20K Meade River 65.18 18 IAmb IAmb 02 39 36.5
comp=Z,6.3nm,0.7s
B20K Meade River 65.18 18 P **P 02 39 34.6 +0.6**
baz=242
F21K Alatna River 65.19 22 P **P 02 39 34.6 +0.3**
baz=247
KURK Kurchatov 65.23 319 P **P 02 39 34.7 0.0**
KURK Kurchatov 65.23 319*ce*P **P 02 39 34.5 -0.2**
KURK pmax pmax
comp=Z,37nm,0.9s
KURK Kurchatov 65.23 319 P **P 02 39 34.5 -0.2**
KURK pP **pwP 02 39 46.1 -0.2**
KURBB **Kurchatov Arra 65.27 319** P **P 02 39 34.9 -0.1**
comp=Z,37nm,0.8s,baz=99,slow=6.7,SNR=287
comp=Z,37nm,0.8s
KNK Knik Glacier 65.33 29 P **P 02 39 35.1 -0.1**
baz=254
MLY Manley 65.44 24 IAmb IAmb 02 40 07.5
comp=Z,12nm,1.2s
MLY Manley 65.44 24 P **P 02 39 36.3 +0.4**
baz=251,SNR=8.0
P23K Montague Islan 65.47 30 P **P 02 39 36.5 +0.4**
baz=256
H22K Ishtalitna Cre 65.48 23 P **P 02 39 35.9 -0.2**
baz=250
SML Sawmill 65.50 28 P **P 02 39 35.7 -0.6**
baz=254,SNR=5.6
C21K Knifeblade Rid 65.54 20 P **P 02 39 36.2 -0.3**
baz=245
WAT1 Susitna Watana 65.68 27 P **P 02 39 37.4 -0.1**
baz=254
RND Reindeer 65.71 26 IAmb IAmb 02 40 23.1
comp=Z,20nm,1.4s
M23K Glacier View 65.77 28 P **P 02 39 38.2 +0.1**
baz=255
MCK McKinley 65.78 26 P **P 02 39 38.0 -0.1**
baz=253
B21K Ikpikpuk River 65.80 19 IAmb IAmb 02 40 18.8
comp=Z,12nm,1.2s
B21K Ikpikpuk River 65.80 19 P **P 02 39 38.9 +0.9**
baz=245
G22K Bettles 65.80 22 P **P 02 39 38.9 +0.8**
baz=249
A21K Barrow 65.96 17 P **P 02 39 39.5 +0.5**
baz=242
SCM Sheep Creek Mo 65.96 28 P **P 02 39 38.7 -0.6**
baz=255
WAT6 Susitna Watana 65.97 27 P **P 02 39 39.4 -0.2**
baz=254,SNR=5.6
NEA2 Nenana 65.98 25 P **P 02 39 40.0 +0.7**
baz=252
NRIK Noril'sk 65.98 340 IAmb IAmb 02 40 04.8
comp=Z,10nm,1.1s
NRIK Noril'sk 65.98 340*ce*P **P 02 39 38.8 -0.4**
NRIK pmax pmax
comp=Z,9.0nm,1.0s
NRIK Noril'sk 65.98 340 P **P 02 39 38.1 -1.1**
comp=Z,3.4nm,0.4s,baz=89,slow=7.5,SNR=9.9
comp=Z,3.4nm,0.4s
I23K Minto, Yukon-K 66.03 24 P **P 02 39 39.8 +0.2**
baz=252,SNR=9.0
D22K Ayikyak River 66.12 20 P **P 02 39 40.9 +0.7**
baz=247,SNR=7.1
DHY Denali Highway 66.26 27 P **P 02 39 41.7 +0.3**
baz=255
G23K Bananza Creek 66.28 23 IAmb IAmb 02 40 31.4
comp=Z,14nm,1.4s
G23K Bananza Creek 66.28 23 P **P 02 39 42.1 +0.9**
baz=251
NRN Naryn 66.33 309 IAmb IAmb 02 40 24.4
comp=Z,16nm,1.5s
WRH Wood River Hil 66.34 25 IAmb IAmb 02 39 43.3
comp=Z,7.3nm,0.8s
COLD Coldfoot 66.39 22 P **P 02 39 42.1 +0.2**
baz=250,SNR=5.3
EYAK Cordova Ski Ar 66.40 30 P **P 02 39 41.8 -0.2**
baz=257
MDM Murphy Dome 66.43 25 IAmb IAmb 02 40 26.9
comp=Z,18nm,1.5s
CCB Clear Creek Bu 66.51 25 IAmb IAmb 02 40 25.7
comp=Z,12nm,1.3s
KLU Klutina 66.53 29 P **P 02 39 42.9 -0.1**
baz=257
M24K Tolsona, Glenn 66.56 28 P **P 02 39 43.6 +0.4**
baz=256
COLA College 66.56 25 P **P 02 39 42.4 -0.6**
baz=253
POKR Poker Plat Res 66.80 25 P **P 02 39 45.0 +0.4**
baz=254
HDA Harding Lake 66.80 26 P **P 02 39 45.0 +0.4**
baz=254
D23K Nanushuk River 66.83 20 P **P 02 39 44.9 +0.2**
baz=249
H24K Noodor Dome 66.83 24 IAmb IAmb 02 39 47.8
comp=Z,16nm,1.2s
H24K Noodor Dome 66.83 24 P **P 02 39 45.5 +0.7**
baz=253,SNR=7.3
E23K Chandalar 66.88 21 P **P 02 39 45.7 +0.6**
baz=250

KAIM **Kayak Island** 66.92 31 P P 02 39 46.0 +0.6
baz=259
IL31 66.93 25 IAmb IAmb 02 39 46.7
comp=Z,12nm,1.2s
ILAR **Eielson Array** 66.93 25 P P 02 39 45.2 -0.2
comp=Z,3.3nm,0.9s,baz=249,slow=6.1,SNR=30
comp=Z,3.3nm,0.9s
BMRM **Bremner River** 67.04 30 P P 02 39 46.6 +0.4
baz=258
PAX **Paxson** 67.08 27 P P 02 39 46.6 +0.1
baz=256,SNR=7.2
HARP **HAARP** 67.09 28 P P 02 39 47.0 +0.6
baz=257
TOLK **Toolik Lake Re** 67.09 21 P P 02 39 46.3 -0.2
baz=250
K24K **Donnelly Dome** 67.14 26 P P 02 39 46.9 +0.1
baz=256
N25K **Chitina, Valde** 67.17 29 P P 02 39 47.2 +0.1
baz=258
G24K **Hadweenzic Riv** 67.24 23 IAmb IAmb 02 40 25.5
comp=Z,29nm,1.9s
G24K **Hadweenzic Riv** 67.24 23 P P 02 39 47.9 +0.5
baz=253
E24K **Your Creek** 67.28 22 P P 02 39 48.2 +0.5
baz=252
F24K **Squaw Lake** 67.33 22 IAmb IAmb 02 39 51.4
comp=Z,10nm,1.1s
F24K **Squaw Lake** 67.33 22 P P 02 39 48.6 +0.6
baz=252
J25K **Salcha River,** 67.52 26 IAmb IAmb 02 40 33.8
comp=Z,12nm,1.4s
J25K **Salcha River,** 67.52 26 P P 02 39 49.8 +0.6
baz=256
D24K **Happy Valley** 67.52 20 P P 02 39 49.8 +0.7
baz=251
PRP **Porcupine Dome** 67.68 25 P P 02 39 50.0 -0.3
baz=255
CRQE **Cirque** 67.72 30 P P 02 39 50.8 +0.1
baz=260
C24K **Franklin Bluff** 67.75 20 P P 02 39 51.1 +0.6
baz=251
MCARA **McCarthy VSAT** 67.87 29 P P 02 39 52.4 +1.0
baz=259
SCRK **Sand Creek** 67.96 26 P P 02 39 53.2 +1.1
SCRK IAmb IAmb 02 39 56.9
comp=Z,12nm,1.4s
SCRK **Sand Creek** 67.96 26 P P 02 39 52.6 +0.5
baz=258,SNR=5.7
L26K **Log Cabin Wild** 68.04 27 P P 02 39 52.8 +0.3
baz=258
M26K **Nabesna, AK** 68.07 28 P P 02 39 52.9 +0.1
baz=259
F25K **Christian Rive** 68.17 22 P P 02 39 53.3 0.0
baz=254,SNR=8.7
MESA **MESA** 68.18 31 P P 02 39 53.7 0.0
baz=261
J26L **Joseph Creek** 68.25 26 IAmb IAmb 02 39 57.0
comp=Z,8.5nm,0.8s
J26L **Joseph Creek** 68.25 26 P P 02 39 53.7 -0.2
baz=258,SNR=7.7
E25K **Arctic Village** 68.34 22 IAmb IAmb 02 39 57.8
comp=Z,13nm,1.4s
E25K **Arctic Village** 68.34 22 P P 02 39 54.9 +0.6
baz=254,SNR=6.3
D25K **Kavik River** 68.40 21 IAmb IAmb 02 39 57.7
comp=Z,14nm,1.1s
D25K **Kavik River** 68.40 21 P P 02 39 55.5 +0.8
baz=253
M27K **Edge Creek, AK** 68.58 28 P P 02 39 56.8 +0.8
baz=260
I26K **Coal Creek Min** 68.59 25 P P 02 39 57.1 +1.2
baz=258
CTG **Chitna Glacier** 68.60 30 P P 02 39 57.0 +0.8
baz=261,SNR=6.0
CTGM **Chitina Glacie** 68.61 30 P P 02 39 56.9 +0.6
NIL **Nilore** 68.67 301 P P 02 39 57.2 +0.2
NIL **Nilore** 68.67 301 P P 02 39 57.2 +0.2
NIL pmax pmax
comp=Z,19nm,0.9s
G26K **Porcupine Rive** 68.71 23 P P 02 39 58.1 +1.6
baz=256
L27K **Beaver Creek,** 68.72 28 IAmb IAmb 02 40 51.3
comp=Z,14nm,1.4s
L27K **Beaver Creek,** 68.72 28 P P 02 39 57.1 +0.3
baz=260
F26K **Sheenjek River** 68.75 22 P P 02 39 57.0 +0.1
baz=256
K27K **Chicken** 68.79 27 IAmb IAmb 02 40 44.1
comp=Z,16nm,1.4s
K27K **Chicken** 68.79 27 P P 02 39 57.3 +0.1
baz=259
PINM **Pinnacle** 69.01 31 P P 02 39 56.7 -2.0
baz=262
BVCY **Beaver Creek** 69.06 28 P P 02 39 59.6 +0.7
baz=261
YUK3 **Moose Creek** 69.14 29 P P 02 39 59.9 +0.2
baz=262
I27K **Kandik River** 69.28 25 P P 02 40 00.5 +0.3
baz=259
EGAK **Eagle** 69.32 26 P P 02 40 01.7 +1.3
baz=260,SNR=8.4
PNL **Peninsula** 69.38 31 P P 02 40 01.4 +0.5
baz=263
YUK8 **Steele Glacier** 69.41 30 P P 02 40 01.6 +0.3
baz=262,SNR=5.8
H27K **Steamboat Moun** 69.44 24 P P 02 40 02.6 +1.4
baz=259,SNR=11
O29M **Mount Kennedy** 69.87 31 P P 02 40 04.8 +0.8
baz=264
I28M **Miner Creek** 69.94 25 IAmb IAmb 02 40 50.2
comp=Z,28nm,1.8s
I28M **Miner Creek** 69.94 25 P P 02 40 05.5 +1.1
baz=261
YUK4 **Talbot Arm** 69.95 30 P P 02 40 05.8 +1.2
baz=263,SNR=7.7
DAWY **Dawson** 69.96 27 IAmb IAmb 02 40 08.1
comp=Z,19nm,1.5s
DAWY **Dawson** 69.96 27 P P 02 40 05.9 +1.5
baz=262,SNR=6.4
YUK6 **Outpost Mounta** 70.04 30 P P 02 40 06.5 +1.3
baz=264
M29M **Somme Creek** 70.16 28 IAmb IAmb 02 40 09.2
comp=Z,11nm,0.9s
M29M **Somme Creek** 70.16 28 P P 02 40 07.0 +1.2
baz=263,SNR=9.3
P29M **Windy Craggy** 70.22 31 P P 02 40 07.1 +1.0
baz=265
PPT **Papeete** 70.23 115 LR LR 03 05 26.7
comp=Z,118nm,18.9s,baz=352,slow=31
PPT2 **Papeete2** 70.24 115 *e*S S 02 49 18.4 -0.1
comp=Z,48nm,22.5s
PPT2 **Papeete2** 70.24 115 *e*LR LR 03 01 18.0
comp=Z,155nm,21.2s
PPT2 *e*LR LR 03 01 21.9
comp=Z,182nm,23.0s
D27M **Malcolm River** 70.25 21 P P 02 40 07.2 +1.1
baz=258
F28M **Old Crow** 70.33 23 IAmb IAmb 02 40 10.4
comp=Z,19nm,1.7s
F28M **Old Crow** 70.33 23 P P 02 40 08.5 +1.8
baz=260,SNR=5.1
L29M **L29M** 70.40 28 P P 02 40 09.1 +1.9
baz=263
KK31 **Karatay Array** 70.40 311 IAmb IAmb 02 40 14.2
comp=Z,14nm,1.4s
KKAR **Karatay Array** 70.40 311 IAmb IAmb 02 40 14.2
comp=Z,13nm,1.4s
HYT **Haines Junctio** 70.44 30 P P 02 40 09.1 +1.6
baz=265,SNR=7.6
BVAR **Borovoye Array** 70.50 321 P P 02 40 07.8 -0.1
comp=Z,18nm,0.8s,baz=98,slow=8.1,SNR=73
comp=Z,18nm,0.8s
J29N **Klondike Camp** 70.52 26 P P 02 40 09.2 +1.3
baz=263
BRVK **Borovoye** 70.57 321 P P 02 40 08.1 -0.2
BRVK **Borovoye** 70.57 321 *ce*P P 02 40 08.4 +0.1
BRVK pmax pmax
comp=Z,17nm,0.8s
BRVK **Borovoye** 70.57 321 P P 02 40 08.3 0.0
BRVK pP pwP 02 40 20.1 -0.6
BRVK sP PcP 02 40 25.4 -4.0
E28M **Babbage River** 70.63 22 P P 02 40 09.0 +0.6
baz=260
P30M **Million Dollar** 70.65 31 P P 02 40 10.3 +1.5
baz=265
H29M **Whitestone** 70.70 24 IAmb IAmb 02 40 59.5
comp=Z,11nm,1.1s
H29M **Whitestone** 70.70 24 P P 02 40 10.3 +1.4
baz=262
N30M **Aishikik Lake** 70.71 30 IAmb IAmb 02 40 13.0
comp=Z,14nm,1.2s
N30M **Aishikik Lake** 70.71 30 P P 02 40 09.9 +0.8
baz=265
K29M **Barlow Dome** 70.75 27 IAmb IAmb 02 40 12.7
comp=Z,15nm,1.0s
K29M **Barlow Dome** 70.75 27 P P 02 40 10.2 +0.8
baz=264
PLBC **Pleasant Camp** 70.90 32 P P 02 40 11.8 +1.6
baz=266
M30M **Minto, Yukon** 70.95 28 P P 02 40 10.4 -0.1
baz=265
O30N **Mendenhall** 71.13 30 P P 02 40 12.4 +0.7
baz=266
E29M **Blow River** 71.19 22 IAmb IAmb 02 40 16.7
comp=Z,15nm,1.6s
E29M **Blow River** 71.19 22 P P 02 40 12.4 +0.6
baz=262
SIT **Sitka** 71.32 34 P P 02 40 12.0 -0.7
baz=268
J30M **Hart River** 71.35 26 P P 02 40 13.3 +0.4
baz=264
EPYK **Eagle Plains** 71.38 24 P P 02 40 12.6 -0.4
baz=263
I30M **Mount Dempster** 71.39 26 P P 02 40 14.5 +1.2
baz=264
SKAG **Skagway** 71.43 32 P P 02 40 14.7 +1.3
baz=267
G30M **tAoh Zraii Nji** 71.65 24 IAmb IAmb 02 40 17.9
comp=Z,25nm,1.6s
G30M **tAoh Zraii Nji** 71.65 24 P P 02 40 16.1 +1.5
baz=264,SNR=6.9
WHY **Whitehorse** 71.72 31 P P 02 40 16.0 +0.7
baz=267,SNR=5.1
S32K **Killisnoo** 71.74 34 P P 02 40 15.8 +0.5
baz=268
SIMJ **Simiganj** 71.77 306 P P 02 40 15.3 -0.7
SIMJ **Simiganj** 71.77 306 P P 02 40 16.0 0.0
SIMJ pP pwP 02 40 28.0 -0.5
R32K **Eaglecrest** 71.80 33 P P 02 40 15.3 -0.4
baz=268
F30M **Barrier River** 71.88 23 P P 02 40 17.4 +1.4
baz=264
M31M **Drury Creek, Y** 72.04 29 IAmb IAmb 02 40 20.6
comp=Z,26nm,1.8s
M31M **Drury Creek, Y** 72.04 29 P P 02 40 18.6 +1.5
baz=267
P32M **Atlin** 72.26 32 P P 02 40 20.2 +1.7
baz=268
G31M **Satah River** 72.41 24 IAmb IAmb 02 40 21.7
comp=Z,19nm,1.1s
G31M **Satah River** 72.41 24 P P 02 40 20.5 +1.4
baz=266
CRAG **Craig** 72.52 36 P P 02 40 20.8 +0.8
baz=270
U33K **Whale Pass** 72.52 35 P P 02 40 20.1 +0.2
baz=270
FARO **Faro, Yukon** 72.53 29 P P 02 40 21.0 +1.0
baz=268
N32M **Quiet Lake** 72.62 30 IAmb IAmb 02 40 23.7
comp=Z,14nm,1.0s
N32M **Quiet Lake** 72.62 30 P P 02 40 20.9 +0.4
baz=268
F31M **Tsiigehtchic** 72.65 23 P P 02 40 20.9 +0.4
baz=266
TBI **Tubuai** 72.65 120 *e*LR LR 03 02 22.8
comp=Z,350nm,30.0s
P33M **Teslin, Yukon** 72.72 31 P P 02 40 21.8 +0.5
baz=269
INK **Inuvik** 72.80 23 P P 02 40 21.1 -0.3
baz=266,SNR=7.7
INK **Inuvik** 72.80 23 P P 02 40 22.8 +1.4
INK pmax pmax
comp=Z,11nm,1.2s
WRAK **Wrangell Islan** 72.95 35 P P 02 40 22.2 -0.4
baz=270
Q32M **Nakina River** 72.99 32 P P 02 40 22.7 -0.3
baz=270
V35K **Ketchikan** 73.38 36 P P 02 40 24.7 -0.4
baz=271
S34M **Telegraph Cree** 73.59 33 P P 02 40 26.7 +0.4
baz=271
R33M **Jennings River** 73.66 32 P P 02 40 26.4 -0.5
baz=271
T35M **Bob Quinn** 74.10 34 P P 02 40 29.9 +0.5
baz=272
DLBC **Dease Lake** 74.17 33 IAmb IAmb 02 41 25.5
comp=Z,23nm,1.6s
DLBC **Dease Lake** 74.17 33 P P 02 40 29.6 -0.2
baz=272
U35K **Hyder** 74.26 35 P P 02 40 30.7 +0.4
baz=273
WTLY **Watson Lake, Y** 74.74 31 IAmb IAmb 02 40 36.4
comp=Z,14nm,1.0s
WTLY **Watson Lake, Y** 74.74 31 P P 02 40 33.6 +0.6
baz=272,SNR=7.6
TGTN **Hyland Airport** 74.93 30 P P 02 40 34.1 0.0
baz=272,SNR=5.9
A36M **Sachs Harbour** 75.68 19 IAmb IAmb 02 40 40.5
comp=Z,15nm,0.9s
A36M **Sachs Harbour** 75.68 19 P P 02 40 38.0 -0.1
baz=272
TAOE **Nuku Hiva Isla** 75.91 103 *e*LR LR 03 04 02.5
comp=Z,159nm,22.1s
SVE **Sverdlovsk** 76.02 326 *e*P P 02 40 40.0 -0.4
SVE pmax pmax
comp=Z,20nm,1.3s
C36M **Paulatuk** 76.23 21 IAmb IAmb 02 40 43.4
comp=Z,15nm,1.1s
C36M **Paulatuk** 76.23 21 P P 02 40 41.6 +0.3
baz=274
WRGLY **Wrigley** 77.04 28 P P 02 40 46.0 0.0
baz=276
KOTAN **Kotaneelee Air** 77.10 31 P P 02 40 47.2 +0.8
baz=276,SNR=5.2
ARU **Arti** 77.20 325 P P 02 40 47.3 +0.3
ARU IAmb IAmb 02 40 47.9
comp=Z,26nm,1.5s
ARU **Arti** 77.20 325 *d i*P P 02 40 47.5 +0.4
ARU 02 43 35.2
ARU S S 02 50 39.2 +3.5
ARU SS SS 02 55 29.4 -3.8
ARU pmax pmax
comp=Z,16nm,1.4s
FLDN **Fort Liard** 77.38 31 P P 02 40 48.3 +0.3
baz=277
GNW **Green Mountain** 79.64 44 IAmb IAmb 02 41 04.2
comp=Z,11nm,1.1s
GEYT **Alibeck** 80.35 307 P P 02 41 05.2 +0.3
comp=Z,3.0nm,0.7s,baz=72,slow=4.7,SNR=7.4
comp=Z,3.0nm,0.7s
YBH **Yreka Blue Hor** 80.78 49 LR LR 03 10 17.2
comp=Z,91nm,19.4s,baz=342,slow=31
YKA **Yellowknife Ar** 81.16 28 P P 02 41 09.4 +0.8
comp=Z,3.1nm,0.8s,baz=286,slow=5.5,SNR=35
comp=Z,3.1nm,0.8s
PINE **Pine Mountain** 81.65 47 IAmb IAmb 02 41 15.1
comp=Z,17nm,1.1s
KIRV **Kirov** 81.67 328 *ce*P P 02 41 12.0 +0.7
K05A **Summer Lake** 81.91 48 IAmb IAmb 02 41 30.3
comp=Z,8.5nm,0.9s
ORV **Oroville** 82.12 51 IAmb IAmb 02 41 17.6
comp=Z,36nm,1.9s
RES **Resolute Bay** 83.24 14 IAmb IAmb 02 41 56.7
comp=Z,25nm,2.0s
RES **Resolute Bay** 83.24 14 P P 02 41 20.1 +0.8
comp=Z,2.8nm,1.0s,baz=325,slow=6.2,SNR=7.6
comp=Z,2.8nm,1.0s
NEW **Newport** 83.24 42 IAmb IAmb 02 42 17.8
comp=Z,12nm,1.4s
NEW **Newport** 83.24 42 P P 02 41 20.3 +0.4
baz=284
PNTR **Pine Nut** 83.67 51 IAmb IAmb 02 41 25.5
comp=Z,22nm,1.6s
BMO **Blue Mountains** 83.95 45 IAmb IAmb 02 41 26.2
comp=Z,7.5nm,1.0s
YERR **Yerington** 83.96 51 IAmb IAmb 02 41 27.0
comp=Z,12nm,1.3s
PKM **Mcpherson Peak** 84.48 56 P P 02 41 26.7 +0.1
baz=284
MLAC **Mammoth, Mammo** 84.59 53 P P 02 41 26.8 -0.5
baz=284
NVAR **Mina Array Bea** 84.81 52 P P 02 41 29.4 +1.0
comp=Z,2.9nm,0.8s,baz=260,slow=6.8,SNR=18
comp=Z,2.9nm,0.8s
VES **Vestal, Richgr** 84.83 54 P P 02 41 28.1 -0.1
baz=284
SNCC **San Nicolas Is** 85.10 57 P P 02 41 29.5 -0.1
baz=284
BMN **Battle Mountai** 85.12 50 IAmb IAmb 02 41 50.3
comp=Z,21nm,1.9s
ARVC **Arvin** 85.20 55 P P 02 41 30.1 +0.1
baz=284
DSP **Deep Springs** 85.32 53 IAmb IAmb 02 41 34.6
comp=Z,13nm,1.6s
MFID **Camas Ranch** 85.35 46 IAmb IAmb 02 41 33.6
comp=Z,9.0nm,0.9s
ISA **Isabella, Lake** 85.36 55 P P 02 41 31.1 +0.2
baz=284
OSI **Osito Audit: C** 85.42 56 P P 02 41 30.5 -0.7
baz=284
CWC **Cottonwood Cre** 85.47 54 P P 02 41 32.1 +0.5
baz=285
KLMR **Klimovskoe** 85.74 332 *e*P P 02 41 28.7 -3.5
KLMR pmax pmax
comp=Z,36nm,1.9s
GRAC **Grapevine Rang** 85.89 53 P P 02 41 33.6 +0.1
baz=285
EDW2 **Edwards Air Fo** 85.93 55 P P 02 41 34.9 +1.1
baz=285
SCI2 **San Clemente I** 85.96 57 P P 02 41 34.8 +0.9
baz=285
CIS **Catalina Islan** 85.97 57 P P 02 41 34.3 +0.4
baz=285
FMP **Fort Macarthur** 85.98 56 P P 02 41 34.4 +0.4
baz=285
LRMC **Laurel Mtn Rad** 86.03 55 P P 02 41 34.0 -0.4
baz=285
MPMC **Manual Prospec** 86.03 54 P P 02 41 34.2 -0.2
baz=285,SNR=7.6
HLID **Hailey** 86.30 46 P P 02 41 36.4 +0.8
baz=286,SNR=5.8
BFSC **Mount Baldy Ra** 86.36 56 P P 02 41 34.9 -1.1
baz=285
FURC **Furnace Creek,** 86.41 53 P P 02 41 37.2 +1.2
baz=285
ELK **Elko** 86.49 49 P P 02 41 36.0 -0.6
ELK IAmb IAmb 02 41 39.5
comp=Z,7.9nm,1.0s
WCT **Wildcat Mounta** 86.51 53 IAmb IAmb 02 41 39.4
comp=Z,8.4nm,1.2s
QSM **Queen of Sheba** 86.54 54 P P 02 41 36.3 -0.4
GWY **Greenwater Val** 86.64 54 P P 02 41 36.4 -1.0
GWY IAmb IAmb 02 41 40.0
comp=Z,8.5nm,1.2s
TPNV **Topopah Spring** 86.76 53 P P 02 41 37.1 -0.9
TPNV IAmb IAmb 02 41 40.8
comp=Z,11nm,1.3s
TPNV **Topopah Spring** 86.76 53 P P 02 41 38.3 +0.3
baz=286
GSC **Goldstone, Bar** 86.76 55 P P 02 41 37.4 -0.5
GSC IAmb IAmb 02 41 40.7
comp=Z,13nm,1.2s
GSC **Goldstone, Bar** 86.76 55 P P 02 41 38.9 +0.9
baz=285,SNR=5.4
ARCES **ARCESS Array B** 86.87 343 P P 02 41 37.3 -0.3
comp=Z,1.3nm,0.7s,baz=78,slow=8.7,SNR=4.7
comp=Z,1.3nm,0.7s
R11B **Troy Canyon, C** 86.89 51 P P 02 41 38.0 -0.6
R11B IAmb IAmb 02 41 42.3
comp=Z,19nm,1.8s
R11B **Troy Canyon, C** 86.89 51 P P 02 41 39.6 +1.0
baz=286,SNR=8.2
MURC **Murrieta** 86.90 56 P P 02 41 39.4 +0.9
baz=285
SHOC **Shoshone, Teco** 87.02 54 P P 02 41 39.5 +0.5
baz=286
109C **Camp Elliot, M** 87.16 57 P P 02 41 41.0 +1.2
baz=285
Q12A **Willow Creek R** 87.27 51 P P 02 41 38.9 -1.5
Q12A IAmb IAmb 02 41 43.4
comp=Z,10.0nm,1.0s
TUQ **Turquoise Moun** 87.42 54 P P 02 41 41.0 -0.2
baz=286
PFO **Pinyon Flats O** 87.49 56 P P 02 41 41.8 +0.3
PFO **Pinyon Flats O** 87.49 56 P P 02 41 41.9 +0.4
baz=286
PFO **Pinyon Flats O** 87.49 56 *i* P P 02 41 42.9 +1.4
PFO pmax pmax
comp=Z,15nm,1.6s
TPFO **Pinon Flats** 87.49 56 P P 02 41 41.8 +0.3
baz=286
PMD **Palm Desert** 87.55 56 P P 02 41 41.3 -0.3
PMD IAmb IAmb 02 41 45.6
comp=Z,10nm,1.3s
PRN **Pahroc Range** 87.56 52 P P 02 41 40.9 -0.9
BOZ **Bozeman (W)** 87.60 44 P P 02 41 41.9 +0.1
BOZ **Bozeman (W)** 87.60 44 P P 02 41 42.2 +0.4
baz=288,SNR=6.5
SPR3 **Spring Creek 3** 87.65 50 P P 02 41 40.3 -2.1
SPR3 IAmb IAmb 02 41 45.5
comp=Z,10nm,1.1s
MONP2 **Monument Peak** 87.71 57 P P 02 41 42.9 +0.2
baz=286
SHPR **Sheep Range** 87.72 53 P P 02 41 41.8 -0.9
BELC **Belle Mtn. Jos** 87.75 56 P P 02 41 42.5 -0.3
baz=286
GMRC **Granite Mounta** 87.81 55 P P 02 41 43.1 +0.1
baz=286
HVU **Hansel Valley** 87.97 47 P P 02 41 43.9 +0.1
HVU IAmb IAmb 02 41 48.6
comp=Z,13nm,1.4s
IKP **In-Ko-Pah, Jac** 88.03 57 P P 02 41 44.9 +0.8
baz=286
EGMT **Eagleton** 88.04 41 P P 02 41 44.7 +0.9
baz=290
YHL **Hebgen Lake** 88.13 44 P P 02 41 44.2 -0.4
V12A **Nelson** 88.18 54 P P 02 41 46.0 +1.2
SWSC **Sam W. Stewart** 88.20 57 P P 02 41 46.7 +2.0
baz=286
BC3 **Big Chuckawall** 88.28 56 P P 02 41 47.1 +1.8
baz=286
ESJX **Sierra Juarez** 88.34 58 P P 02 41 44.4 -1.2
IRM **Iron Mountain** 88.39 55 P P 02 41 46.5 +0.8
baz=286
DUG **Dugway, Tooele** 88.42 49 P P 02 41 45.0 -0.8
DUG IAmb IAmb 02 41 48.6
comp=Z,6.8nm,0.9s
DUG **Dugway, Tooele** 88.42 49 P P 02 41 47.2 +1.4
baz=288,SNR=7.4
IMW **Indian Meadow** 88.60 45 P P 02 41 46.3 -0.6
FXWY **Fox Creek** 88.62 45 P P 02 41 46.5 -0.3
NEE2 **Needles Airpor** 88.64 55 P P 02 41 47.9 +1.1
baz=287
H17A **Grant Village** 88.69 44 P P 02 41 47.1 0.0
baz=289
FLWY **Flagg Ranch** 88.70 45 P P 02 41 45.6 -1.6
FLWY IAmb IAmb 02 41 50.7
comp=Z,6.0nm,0.9s
MOOW **Moose Ponds** 88.78 45 P P 02 41 46.4 -1.2
AHID **Auburn Hatcher** 88.85 46 P P 02 41 47.3 -0.6
AHID IAmb IAmb 02 42 04.7
comp=Z,5.1nm,0.8s
YMP **Mirror Lake Pl** 88.86 44 P P 02 41 46.5 -1.6
YMP IAmb IAmb 02 41 52.0
comp=Z,8.4nm,0.9s
HWUT **Hardware Ranch** 88.89 47 P P 02 41 46.6 -1.5
HWUT IAmb IAmb 02 41 50.7
comp=Z,6.6nm,0.9s
GLA **Glamis** 88.96 56 P P 02 41 48.8 +0.4
baz=287
SZCU **Shurtz Canyon** 89.00 51 P P 02 41 47.5 -1.2
SZCU IAmb IAmb 02 42 29.6
comp=Z,18nm,2.0s
NLU **North Lily Min** 89.03 49 P P 02 41 48.4 -0.4
NLU IAmb IAmb 02 41 51.5
comp=Z,5.4nm,1.0s
LCMT **Little Creek M** 89.05 52 P P 02 41 48.2 -0.7
PDMCI **Parker Dam,Lak** 89.15 55 P P 02 41 49.9 +0.7
baz=287
RLMT **Red Lodge** 89.33 43 IAmb IAmb 02 41 53.6
comp=Z,5.6nm,1.0s
RLMT **Red Lodge** 89.33 43 P P 02 41 50.5 +0.3
baz=290,SNR=7.4
KNB **Kanab** 89.37 52 P P 02 41 50.3 -0.1
MVU **Marysvale** 89.38 50 P P 02 41 50.6 +0.1
BSUT **Blindstream Ca** 89.81 48 IAmb IAmb 02 42 45.2
comp=Z,6.7nm,1.2s
BW06 **Boulder Array** 89.92 46 P P 02 41 52.2 -0.7
baz=290
PDAR **Pinedale Array** 89.92 46 P P 02 41 54.0 +1.0
comp=Z,0.7nm,0.8s,baz=279,slow=1.7,SNR=5.5
comp=Z,0.7nm,0.8s
U15A **North Rim** 89.96 52 P P 02 41 52.1 -1.2

U15A					IAmb	IAmb	02 41 56.6	
	comp=Z,6.3nm,0.9s							
KBZ	**Khabaz**	**89.97**	**315**		P	**P**	**02 41 55.1**	**+2.3**
	comp=Z,1.0nm,0.7s,baz=53,slow=10,SNR=2.2							
	comp=Z,1.0nm,0.7s							
ONI	**Oni**	**89.98**	**314**		IAmb	IAmb	02 42 13.6	
	comp=Z,12nm,1.5s							
FFC	**Flin Flon**	**90.00**	**33**		P	**P**	**02 41 53.3**	**+0.5**
FFC	**Flin Flon**	**90.00**	**33**		P	**P**	**02 41 53.3**	**+0.5**
FFC					pmax	pmax		
	comp=Z,25nm,1.2s							
Q16A	**Castle Valley**	**90.02**	**50**		P	**P**	**02 41 53.1**	**-0.4**
KIV	**Kislovodsk**	**90.04**	**316**		*e*P	**P**	**02 41 52.0**	**-1.3**
KIV					pmax	pmax		
	comp=Z,3.0nm,1.0s							
Y14A	**Wickenburg**	**90.16**	**55**		P	**P**	**02 41 54.8**	**+0.8**
Y14A					IAmb	IAmb	02 41 57.5	
	comp=Z,11nm,1.2s							
SRU	**San Rafael Swe**	**90.44**	**49**		P	**P**	**02 41 55.5**	**0.0**
LAO	**LASA Array**	**90.75**	**41**		P	**P**	**02 41 55.4**	**-1.2**
	baz=292							
214A	**Organ Pipe Nat**	**90.91**	**57**		P	**P**	**02 41 56.4**	**-1.1**
214A					IAmb	IAmb	02 42 00.6	
	comp=Z,7.7nm,1.1s							
214A	**Organ Pipe Nat**	**90.91**	**57**		P	**P**	**02 41 56.9**	**-0.6**
	baz=288							
WUAZ	**Wupatki**	**90.95**	**53**		P	**P**	**02 41 56.1**	**-1.8**
WUAZ	**Wupatki**	**90.95**	**53**		P	**P**	**02 41 57.1**	**-0.7**
	baz=288,SNR=5.7							
FINES	**FINESS Array B**	**91.22**	**336**	*i*	P	**P**	**02 41 56.2**	**-2.0**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**91.22**	**336**		P	**P**	**02 41 56.5**	**-1.7**
	comp=Z,1.9nm,0.6s,baz=67,slow=4.7,SNR=7.5							
	comp=Z,1.9nm,0.6s							
X16A	**Lo Mia Camp, P**	**91.24**	**54**		P	**P**	**02 41 58.1**	**-1.1**
X16A					IAmb	IAmb	02 42 03.4	
	comp=Z,14nm,1.7s							
DGMT	**Dagmar**	**91.33**	**39**		P	**P**	**02 41 59.0**	**-0.2**
	baz=294							
O20A	**White River Ci**	**91.75**	**48**		P	**P**	**02 41 59.7**	**-1.8**
O20A	**White River Ci**	**91.75**	**48**		P	**P**	**02 42 02.4**	**+0.9**
	baz=290							
K22A	**Casper**	**92.06**	**45**		P	**P**	**02 42 02.8**	**0.0**
K22A	**Casper**	**92.06**	**45**		P	**P**	**02 42 03.5**	**+0.7**
	baz=292							
SOC	**Sochi**	**92.18**	**316**		*e*P	**P**	**02 41 59.5**	**-3.6**
SOC					*e*		02 45 38.8	
SOC					*e*S	**SKSac**	**02 52 31.8**	**-4.0**
SOC					*e*SS	**SS**	**02 59 14.6**	**+0.2**
SOC					*e*SSS	SSS	03 02 44.4	
W18A	**Petrified Fore**	**92.34**	**53**		P	**P**	**02 42 04.4**	**+0.1**
	baz=290							
X18A	**Snowflake**	**92.37**	**54**		P	**P**	**02 42 02.9**	**-1.5**
GURO	**Guroymak-BITLI**	**92.38**	**311**		P	**P**	**02 42 03.6**	**-0.7**
TUC	**Tucson**	**92.43**	**56**		P	**P**	**02 42 03.6**	**-1.1**
TUC	**Tucson**	**92.43**	**56**		P	**P**	**02 42 05.1**	**+0.5**
	baz=289							
TUC	**Tucson**	**92.43**	**56**		P	**P**	**02 42 03.6**	**-1.1**
TUC					pmax	pmax		
	comp=Z,25nm,1.9s							
MVCO	**Mesa Verde**	**92.58**	**51**		P	**P**	**02 42 05.8**	**+0.3**
	baz=290							
VSU	**Vasula**	**92.59**	**333**	*ce*	P	**P**	**02 42 04.7**	**+0.1**
VSU					pmax	pmax		
	comp=Z,13nm,1.7s							
SMCO	**Snowmass**	**93.01**	**48**		P	**P**	**02 42 06.7**	**-0.9**
SMCO					IAmb	IAmb	02 42 10.9	
	comp=Z,5.5nm,1.1s							
N23A	**Red Feather La**	**93.11**	**47**		P	**P**	**02 42 07.7**	**-0.2**
N23A	**Red Feather La**	**93.11**	**47**		P	**P**	**02 42 08.3**	**+0.5**
	baz=292							
RSSD	**Black Hills**	**93.17**	**43**		P	**P**	**02 42 06.6**	**-1.3**
RSSD					IAmb	IAmb	02 42 10.9	
	comp=Z,9.3nm,1.4s							
RSSD	**Black Hills**	**93.17**	**43**		P	**P**	**02 42 09.3**	**+1.4**
	baz=294							
S22A	**4UR Ranch, Cre**	**93.63**	**50**		P	**P**	**02 42 09.0**	**-1.3**
S22A					IAmb	IAmb	02 42 13.2	
	comp=Z,4.1nm,1.0s							
S22A	**4UR Ranch, Cre**	**93.63**	**50**		P	**P**	**02 42 11.2**	**+0.9**
	baz=291							
DUN6	**Lazy B Ranch**	**93.70**	**55**		P	**P**	**02 42 10.3**	**-0.3**
ISCO	**Idaho Springs**	**93.76**	**47**		P	**P**	**02 42 11.5**	**+0.6**
	baz=292							
MDND	**Maddock**	**94.38**	**38**		P	**P**	**02 42 14.3**	**+1.1**
	baz=297							
Q24A	**Divide**	**94.41**	**48**		P	**P**	**02 42 14.7**	**+0.8**
	baz=292							
SDCO	**Great Sand Dun**	**94.61**	**49**		P	**P**	**02 42 15.3**	**+0.5**
	baz=292							
121A	**Cookes Peak, D**	**94.75**	**55**		P	**P**	**02 42 16.7**	**+1.3**
121A	**Cookes Peak, D**	**94.75**	**55**		P	**P**	**02 42 15.9**	**+0.5**
	baz=290							
Y22D	**IRIS PASSCAL I**	**94.88**	**53**		P	**P**	**02 42 15.7**	**-0.3**
	baz=291							
Y22F	**Passcal Instru**	**94.88**	**53**		P	**P**	**02 42 16.0**	**0.0**
	baz=291							
ANMO	**Albuquerque**	**94.93**	**52**		P	**P**	**02 42 15.6**	**-0.7**
	baz=291							
ULM	**Lac du Bonnet**	**95.39**	**35**		P	**P**	**02 42 17.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=291,slow=4.5,SNR=3.8							
	comp=Z,1.3nm,0.7s							
T25A	**Trinidad**	**95.64**	**50**		P	**P**	**02 42 19.6**	**+0.2**
	baz=293							
MNTX	**Cornudas Mount**	**96.95**	**55**		P	**P**	**02 42 25.0**	**-0.3**
	baz=292							
BRTR	**Keskin Array B**	**97.91**	**314**	*i*	P	Pdif	02 42 29.7	+0.1
BRTR					pmax	pmax		
	comp=Z,1.0nm,1.0s							
MSTX	**Muleshoe**	**98.11**	**52**		P	**P**	**02 42 30.5**	**-0.1**
	baz=294							
CBKS	**Cedar Bluff**	**98.32**	**46**		P	**P**	**02 42 30.8**	**-0.5**
	baz=296							
AMTX	**Amarillo**	**98.57**	**51**		P	**P**	**02 42 31.9**	**-0.7**
	baz=294							
EYMN	**Ely**	**99.05**	**35**		P	**Pdif**	**02 42 33.0**	**-1.3**
	baz=303							
TXAR	**Lajitas Array**	**99.20**	**57**		P	**Pdif**	**02 42 35.2**	**-0.3**
	comp=Z,0.5nm,1.0s,baz=250,slow=1.8,SNR=2.8							
	comp=Z,0.5nm,1.0s							
KSU1	**Kansas State U**	**100.36**	**45**		P	**Pdif**	**02 42 39.1**	**-1.3**
	baz=298							
WMOK	**Wichita Mounta**	**100.79**	**50**		P	**Pdif**	**02 42 40.8**	**-1.6**
	baz=296							
ABTX	**Abilene, Hawle**	**101.05**	**52**		P	**Pdif**	**02 42 42.4**	**-1.2**
	baz=295							
JCT	**Junction City**	**101.83**	**54**		P	**Pdif**	**02 42 45.6**	**-1.5**
	baz=295							
TUL3	**Leonard**	**102.44**	**48**		P	**Pdif**	**02 42 48.2**	**-1.4**
	baz=298							
MODS	**Modra-Piesok**	**103.14**	**328**	*e*PP		**PKiKP**	**02 47 07.7**	**-4.5**
435B	**Jarrell**	**103.43**	**53**		P	**Pdif**	**02 42 53.0**	**-1.2**
	baz=296							
L44A	**Lake County Fo**	**104.39**	**39**		P	**Pdif**	**02 42 57.0**	**-1.2**
	baz=305							
CCM	**Cathedral Cave**	**104.53**	**44**		P	**Pdif**	**02 42 57.5**	**-1.4**
	baz=302							
MIAR	**Mount Ida**	**104.68**	**48**		P	**Pdif**	**02 42 58.7**	**-0.9**
	baz=300							
WVT	**Waverly**	**107.86**	**44**		P	**PKiKP**	**02 47 21.2**	**0.0**
	baz=304							
TORD	**Torodi Ar. Bea**	**135.99**	**307**		PKP	**PKiKP**	**02 48 16.7**	**-0.3**
	comp=Z,3.4nm,0.4s,baz=29,slow=3.0,SNR=1.8							
PLCA	**Paso Flores**	**138.19**	**136**		PKP	**PKiKP**	**02 48 20.1**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=162,slow=3.2,SNR=3.4							
GO02	**Mina Guanaco**	**144.12**	**113**		PKPdf	**PKPab**	**02 48 27.9**	**+0.2**
AC02	**Maricunga**	**144.20**	**116**		PKPdf	PKPbc	02 48 28.6	0.0
DBIC	**Dimbokro**	**145.03**	**305**		PKPdf	**PKPbc**	**02 48 30.3**	**-0.7**
DBIC	**Dimbokro**	**145.03**	**305**		PKPbc	**PKPab**	**02 48 31.1**	**+0.1**
	comp=Z,19nm,0.6s,baz=40,slow=3.2,SNR=28							
KIC	**Kosan Boka**	**145.12**	**304**	⇑*i*	PKP1	**PKPab**	**02 48 31.4**	**+0.1**
	comp=Z,40nm,0.7s							
TIC	**Toumodi**	**145.17**	**305**	⇑*i*	PKP1	**PKPbc**	**02 48 31.4**	**-0.1**
	comp=Z,14nm,0.5s							
LIC	**Lamto**	**145.43**	**305**	⇑*i*	PKP1	**PKPdf**	**02 48 32.4**	**+0.1**
	comp=Z,82nm,0.7s							
ETMB	**Extrema**	**147.28**	**86**			**PKPdf**	**02 48 35.5**	**+0.1**
BOAV	**Boa Vista**	**148.05**	**61**			**PKPdf**	**02 48 37.3**	**+0.5**

*IDC **16** 02:37:02.4±0.9, 9°.05S×115°.22E, h0km, mb3.8/7, mbtmp3.9/7, Error ellipse: s-maj=41.1km s-min=13.8km az=43.0*
*DJA **16** 02:37:13.4±0.3, 9°S±4°×11°5E±°, h55km±9km, M4.5/16, mb4.7/7, MLv4.5/16*

ISC 16 02:37:13.8±0.9, 9°14S±0°.10×115°43E±0°.05, h85km±9km, n27, σ1°49/31, mb3.7/7, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**0.51**	**335**	P	**Pn**	**02 37 28.2**	**+0.2**
DNP				S	**Sn**	**02 37 39.2**	**+0.6**
SRBI	**Singaraja**	**1.07**	**348**	P	**Pn**	**02 37 34.3**	**+0.4**
SRBI				S	**Sn**	**02 37 49.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.43**	**298**	P	**Pn**	**02 37 38.2**	**-0.1**
JAGI				S	**Sn**	**02 37 56.3**	**-0.6**
TWSI	**Taliwang, Sumb**	**1.49**	**75**	P	**Pn**	**02 37 38.9**	**-0.2**
GMJI	**Gumukmas**	**2.14**	**293**	P	**Pn**	**02 37 48.0**	**+0.3**
GMJI				S	**Sn**	**02 38 14.2**	**+0.6**
BLJI	**Banyuglugur**	**2.28**	**307**	P	**Pn**	**02 37 50.7**	**+1.2**
PLAI	**Plampang**	**2.34**	**83**	P	**Pn**	**02 37 50.8**	**+0.5**
PLAI				S	**Sn**	**02 38 18.5**	**+0.1**
GRJI	**Gresik**	**3.66**	**307**	P	**Pn**	**02 38 09.4**	**+1.2**
PWJI	**Pagerwojo**	**3.75**	**287**	P	**Pn**	**02 38 09.6**	**+0.2**
BWJI	**Bawean**	**4.27**	**320**	P	**Pn**	**02 38 17.6**	**+1.2**
UGM	**Wanagama**	**5.00**	**284**	P	**Pn**	**02 38 27.9**	**+1.5**
	167nm,1.6s,0.7nm						
BASI	**Baing, Sumba**	**5.19**	**102**	P	**Pn**	**02 38 27.9**	**-1.1**
	136nm,1.0s,0.6nm						
BKSI	**Bulukumba**	**6.00**	**51**	P	**Pn**	**02 38 40.5**	**+0.4**
	37nm,0.6s,0.1nm						
EDFI	**Ende, Flores**	**6.20**	**87**	P	**Pn**	**02 38 41.5**	**-1.3**
	24nm,0.6s,0.1nm						
KPJI	**Karang Pucung**	**6.68**	**285**	P	**Pn**	**02 38 49.7**	**+0.5**
	21nm,0.5s,0.1nm						
CMJI	**Cimerak**	**7.03**	**280**	P	**Pn**	**02 38 54.4**	**+0.3**
	60nm,1.0s,0.3nm						
WRA	**Warramunga Arr**	**21.20**	**123**	P	**P**	**02 41 52.1**	**-0.6**
	0.8nm,0.4s,baz=295,slow=12,SNR=18						
WRA				S	**S**	**02 45 50.2**	**+6.3**
	0.4nm,0.6s,baz=290,slow=23,SNR=1.8						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**22.82**	**131**	P	**P**	**02 42 09.3**	**-0.6**
	2.0nm,0.6s,baz=306,slow=9.1,SNR=40						
ASAR				PcP	**PcP**	**02 45 58.0**	**-0.5**
	0.2nm,0.3s,baz=324,slow=1.9,SNR=2.1						
ASAR				S	Sn	02 46 25.0	-10
	1.1nm,0.9s,baz=297,slow=22,SNR=4.6						
	2.0nm,0.6s						
STKA	**Stephens Creek**	**33.18**	**137**	P	**P**	**02 43 43.0**	**+0.6**
	0.9nm,0.3s,baz=322,slow=12,SNR=4.9						
	0.9nm,0.3s						
SONM	**Songino Array**	**57.28**	**353**	P	**P**	**02 46 52.4**	**-0.4**
	0.5nm,0.7s,baz=178,slow=8.3,SNR=3.1						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**63.03**	**335**	P	**P**	**02 47 29.6**	**-2.3**
	0.2nm,0.4s,baz=144,slow=5.9,SNR=7.3						
	0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**65.27**	**223**	T	T	03 59 27.4	
	baz=75,slow=75,SNR=4.2						
H04N1	**CROZET ISLANDS**	**65.29**	**223**	T	T	03 59 16.9	
	baz=75,slow=75,SNR=3.7						
H04N3	**CROZET ISLANDS**	**65.29**	**223**	T	T	03 59 22.7	
	baz=75,slow=75,SNR=3.3						
QSPA	**South Pole Qui**	**80.86**	**180**	P	**P**	**02 49 17.6**	**-0.8**
	1.4nm,1.0s,baz=311,slow=2.6,SNR=1.8						
	1.4nm,1.0s						
SNAA	**Sanae**	**89.90**	**196**	P	**P**	**02 50 03.3**	**+0.1**
	1.3nm,0.6s,baz=162,slow=7.6,SNR=1.8						
	1.3nm,0.6s						
BDFB	**Brasilia**	**150.42**	**214**	PKPbc	**PKPbc**	**02 56 57.4**	**+0.7**
	2.2nm,0.6s,baz=162,slow=7.0,SNR=8.1						

*MOS **16** 02:54:57.6±2.2, 85°.19N×90°.57E, h10km, mb4.4/12, Error ellipse: s-maj=93.6km s-min=8.8km az=88.8*
*IDC **16** 02:54:59.7±0.8, 85°.44N×88°.32E, h0km, mb3.7/9, mbtmp3.9/12, ML3.6/3, MS3.6/2, Error ellipse: s-maj=22.9km s-min=15.5km az=127.0*
*FCIAR **16** 02:55:02.0, 85°.09N×89°.37E, h10km, station SVZ has station magnitude of 3.70 station OMEGA has station magnitude of 3.70 station PRGR has station magnitude of 4.85 station KLMR has station magnitude of 4.86*
*NEIC **16** 02:55:04.2±2.0, 86°.0N±0°.2×8°.7E±°, h10km±2km, mb4.4/43, Error ellipse: s-maj=31.6km s-min=18.2km az=136.0*

ISC 16 02:54:59.9±0.5, 85°.40N±0°.07×89°.26E±0°.06, h10km, n95, σ2s10/87, mb4.3/43, 4C, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVZ	**Severnaya Zeml**	**6.34**	**159**	*e*P	Pn	02 56 30.3	-2.9
SVZ				*e*S	Sn	02 57 35.1	-11
	33nm,0.4s						
OMEGA	**Omega**	**6.56**	**249**	*e*P	**Pn**	**02 56 36.6**	**+0.3**
OMEGA				*e*S	**Sn**	**02 57 46.8**	**-4.2**
	28nm,3.3s						
KBS	**Kingsbay**	**11.08**	**281**	*e*P	**Pn**	**02 57 38.1**	**0.0**
KBS	**Kingsbay**	**11.08**	**281**	*e*P	**Pn**	**02 57 37.2**	**-0.9**
KBS				S	**Sn**	**02 59 36.0**	**-5.8**
SPB5	**Spitsbergen Ar**	**11.41**	**275**	Pn	**Pn**	**02 57 42.5**	**-0.1**
SPB1	**Spitsbergen Ar**	**11.41**	**275**	Pn	**Pn**	**02 57 42.5**	**-0.1**
SPA0	**Spitsbergen Ar**	**11.42**	**275**	*e*P	**Pn**	**02 57 41.6**	**-1.1**
SPA0				S	Sn	02 59 42.5	-7.5
SPITS	**Spitsbergen Ar**	**11.42**	**275**	Pn	**Pn**	**02 57 41.4**	**-1.4**
	baz=41,slow=14						
SPITS				Sn	**Sn**	**02 59 45.2**	**-4.8**
	baz=317,slow=5.7						
	19nm,1.2s						
SPA3	**Spitsbergen Ar**	**11.42**	**275**	Pn	**Pn**	**02 57 43.0**	**+0.3**
SPB2	**Spitsbergen Ar**	**11.42**	**275**	Pn	**Pn**	**02 57 43.5**	**+0.8**
TIXI	**Tiksi**	**15.18**	**130**	⇑*i*P	**Pn**	**02 58 29.4**	**-4.5**
TIXI	**Tiksi**	**15.18**	**130**	LR	LR	03 04 03.9	
	comp=Z,111nm,21.0s,baz=28,slow=36						
NRIK	**Noril'sk**	**16.15**	**182**	*e*P	**Pn**	**02 58 43.6**	**-3.0**
NRIK	**Noril'sk**	**16.15**	**182**	Pn	**Pn**	**02 58 50.0**	**+3.4**
	0.8nm,0.3s,baz=3.4,slow=11,SNR=7.1						
	7.3nm,0.6s						
ARCES	**ARCESS Array B**	**18.98**	**256**	P	**P**	**02 59 22.5**	**+1.5**
	baz=15,slow=11,SNR=1.7						
	4.1nm,1.1s						
LVZ	**Lovozero**	**19.89**	**245**	*i*P	**P**	**02 59 33.1**	**+2.1**
LVZ				pmax	pmax		
	comp=Z,30nm,1.6s						
BILL	**Bilibino**	**21.51**	**91**	*i*P	**P**	**02 59 44.7**	**-3.7**
A36M	**Sachs Harbour**	**22.10**	**28**	P	**P**	**02 59 54.4**	**-0.3**
A36M				IAmb	IAmb	03 00 06.6	
	comp=Z,24nm,1.0s						
B20K	**Meade River**	**22.36**	**56**	P	**P**	**02 59 59.6**	**+2.1**
B21K	**Ikpikpuk River**	**22.91**	**54**	P	**P**	**03 00 04.2**	**+0.9**
B21K				IAmb	IAmb	03 00 16.1	
	comp=Z,12nm,1.0s						
C19K	**Lookout Ridge**	**23.09**	**59**	P	**P**	**03 00 08.0**	**+2.8**
C19K				IAmb	IAmb	03 00 16.6	
	comp=Z,15nm,1.4s						
C18K	**Utukok River**	**23.43**	**60**	P	**P**	**03 00 10.2**	**+1.5**
C16K	**Lisburne Hills**	**23.50**	**64**	P	**P**	**03 00 11.8**	**+2.5**
D24K	**Happy Valley**	**23.74**	**49**	P	**P**	**03 00 13.9**	**+2.3**
D24K				IAmb	IAmb	03 00 25.3	
	comp=Z,15nm,1.5s						
D22K	**Ayikyak River**	**23.77**	**53**	P	**P**	**03 00 13.9**	**+1.9**
D22K				IAmb	IAmb	03 00 23.3	
	comp=Z,20nm,1.4s						
D19K	**Kuna River**	**23.79**	**58**	P	**P**	**03 00 13.5**	**+1.3**
D19K				IAmb	IAmb	03 00 46.2	
	comp=Z,13nm,1.4s						
TOLK	**Toolik Lake Re**	**24.20**	**50**	P	**P**	**03 00 16.8**	**+0.7**
E18K	**Tukpahlearik C**	**24.68**	**60**	P	**P**	**03 00 21.9**	**+1.6**
E18K				IAmb	IAmb	03 00 31.4	
	comp=Z,12nm,1.1s						
YAK	**Yakutsk**	**24.77**	**133**	*e*P	**P**	**03 00 16.4**	**-4.8**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
C36M	**Paulatuk**	**24.78**	**28**	P	**P**	**03 00 22.0**	**+0.8**
E28M	**Babbage River**	**24.82**	**41**	P	**P**	**03 00 23.4**	**+1.8**
E24K	**Your Creek**	**24.83**	**49**	P	**P**	**03 00 23.9**	**+2.1**
E24K				IAmb	IAmb	03 00 32.8	
	comp=Z,14nm,1.2s						
E19K	**Redstone River**	**24.88**	**57**	P	**P**	**03 00 23.6**	**+1.5**
E25K	**Arctic Village**	**24.96**	**47**	P	**P**	**03 00 25.6**	**+2.7**
E25K				IAmb	IAmb	03 00 48.0	
	comp=Z,10nm,1.4s						
E29M	**Blow River**	**25.12**	**40**	P	**P**	**03 00 25.5**	**+1.2**
PRGR	**Permogore**	**25.36**	**230**	*e*P	**P**	**03 00 27.9**	**+1.4**
	comp=Z,15nm,0.8s						
F21K	**Alatna River**	**25.36**	**54**	P	**P**	**03 00 29.4**	**+2.9**
F21K				IAmb	IAmb	03 00 38.3	
	comp=Z,8.4nm,1.2s						
F20K	**Avaraart Lake**	**25.38**	**56**	P	**P**	**03 00 28.2**	**+1.6**
F20K				IAmb	IAmb	03 00 36.3	
	comp=Z,7.3nm,1.0s						
INK	**Inuvik**	**25.41**	**36**	P	**P**	**03 00 28.2**	**+1.2**
INK	**Inuvik**	**25.41**	**36**	P	**P**	**03 00 28.2**	**+1.2**
INK				pmax	pmax		
	comp=Z,19nm,1.3s						
F24K	**Squaw Lake**	**25.42**	**49**	P	**P**	**03 00 28.5**	**+1.4**
SEY	**Seymchan**	**25.44**	**108**	⇑*i*P	**P**	**03 00 26.0**	**-1.3**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
F19K	**Shaleruckik Mo**	**25.46**	**58**	P	**P**	**03 00 29.9**	**+2.5**
F19K				IAmb	IAmb	03 00 38.7	
	comp=Z,16nm,1.4s						
COLD	**Coldfoot**	**25.56**	**51**	P	**P**	**03 00 30.2**	**+1.8**
COLD				IAmb	IAmb	03 00 41.4	
	comp=Z,9.7nm,1.4s						
F17K	**Baldwin Pennin**	**25.60**	**61**	P	**P**	**03 00 30.0**	**+1.3**
BMAR	**Burnt Mountain**	**25.70**	**46**	P	**P**	**03 00 31.4**	**+1.7**
F28M	**Old Crow**	**25.78**	**42**	P	**P**	**03 00 30.3**	**-0.1**
F28M				IAmb	IAmb	03 00 41.0	
	comp=Z,14nm,1.4s						
F15K	**North Star Dit**	**26.08**	**65**	P	**P**	**03 00 35.8**	**+2.7**
G23K	**Bananza Creek**	**26.09**	**51**	P	**P**	**03 00 36.3**	**+3.1**
G24K	**Hadweenzic Riv**	**26.25**	**49**	P	**P**	**03 00 36.9**	**+2.3**
G24K				IAmb	IAmb	03 00 44.6	
	comp=Z,8.5nm,1.1s						
F31M	**Tsiigehtchic**	**26.27**	**36**	P	**P**	**03 00 35.7**	**+1.0**
KLMR	**Klimovskoe**	**26.53**	**237**	*e*P	**P**	**03 00 40.5**	**+3.4**
KLMR				pmax	pmax		
	comp=Z,12nm,0.9s						
KLMR	**Klimovskoe**	**26.53**	**237**	*e*P	**P**	**03 00 40.3**	**+3.2**
	comp=Z,20nm,1.2s						
G30M	**tAoh Zraii Nji**	**26.60**	**39**	P	**P**	**03 00 38.8**	**+1.0**
G30M				IAmb	IAmb	03 00 49.4	
	comp=Z,7.9nm,0.9s						
VALR	**Valaam**	**26.64**	**246**	*e*P	**P**	**03 00 38.8**	**+0.7**
G31M	**Satah River**	**26.76**	**37**	P	**P**	**03 00 39.7**	**+0.5**
G31M				IAmb	IAmb	03 00 50.6	
	comp=Z,12nm,1.4s						
H19K	**Roundabout Mou**	**26.84**	**57**	P	**P**	**03 00 41.8**	**+1.9**
FINES	**FINESS Array B**	**26.92**	**251**	P	**P**	**03 00 41.4**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=8.0,slow=14,SNR=3.3						
	comp=Z,1.9nm,0.9s						
H21K	**Melozitna Rive**	**26.95**	**54**	P	**P**	**03 00 43.1**	**+2.2**
H21K				IAmb	IAmb	03 00 51.0	
	comp=Z,14nm,1.4s						
H24K	**Noodor Dome**	**27.09**	**49**	P	**P**	**03 00 44.6**	**+2.4**
H24K				IAmb	IAmb	03 00 52.7	
	comp=Z,8.5nm,1.1s						
H29M	**Whitestone**	**27.25**	**41**	P	**P**	**03 00 44.4**	**+0.8**
H29M				IAmb	IAmb	03 00 56.8	
	comp=Z,18nm,1.4s						
KIRV	**Kirov**	**28.17**	**225**	*e*P	**P**	**03 00 52.6**	**+0.8**
ILAR	**Eielson Array**	**28.21**	**49**	*e*P	**P**	**03 00 54.3**	**+2.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**28.21**	**49**	P	**P**	**03 00 54.1**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=352,slow=8.0,SNR=10.0						
	comp=Z,0.7nm,0.8s						
I30M	**Mount Dempster**	**28.35**	**39**	P	**P**	**03 00 54.4**	**+0.8**
MA2	**Magadan**	**28.64**	**111**	*e*P	**P**	**03 00 54.1**	**-2.0**
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARU	**Arti**	**29.84**	**215**	*c i*P	**P**	**03 01 07.5**	**+0.8**
ARU						03 01 58.1	
ARU				S	**S**	**03 06 05.7**	**+2.6**
ARU				SS	**SnSn**	**03 07 36.1**	**+3.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,2.1s						
WRGLY	**Wrigley**	**30.92**	**28**	P	**P**	**03 01 15.8**	**-0.3**
YKA	**Yellowknife Ar**	**31.95**	**21**	P	**P**	**03 01 25.9**	**+0.6**
YKA	**Yellowknife Ar**	**31.95**	**21**	*e*P	**P**	**03 01 26.4**	**+1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**31.95**	**21**	P	**P**	**03 01 26.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=355,slow=8.6,SNR=20						
YKA				PcP	**PcP**	**03 04 15.6**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=351,slow=3.4,SNR=4.4						
	comp=Z,1.0nm,0.7s						
YKAB2	**New Yellowknif**	**32.02**	**21**	P	**P**	**03 01 25.0**	**-0.9**
OBN	**Obninsk**	**32.44**	**238**	*e*P	P	03 01 45.5	+16
OBN				*e*		03 02 37.3	
OBN				*e*PPP	PPP	03 02 46.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**32.77**	**201**	*i*P	**P**	**03 01 30.4**	**-2.1**
BVAR	**Borovoye Array**	**32.80**	**201**	P	**P**	**03 01 34.3**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=349,slow=11,SNR=6.3						
	comp=Z,1.2nm,0.7s						
BELG	**Belogornoye**

KK31 ⇑Pg **Pb** **02 56 41.0 +0.1**
0.4nm,0.3s,baz=221,slow=18,SNR=5.7
KK31 Lg Lg 02 57 31.8
2.1nm,0.4s,baz=210,slow=28,SNR=6.3
AB31 Akbulak array 10.78 332 ⇑P **Pn** **02 58 07.6 -0.5**
0.1nm,0.2s,baz=18,slow=24,SNR=12

*MOS **16** 02:55:38.9±1.7, 84°.70N×89°.70E, h10km, mb4.2/8, Error ellipse: s-maj=99.9km s-min=10.4km az=89.6*
*IDC **16** 02:55:44.3±1.0, 85°.27N×88°.92E, h0km, mb3.6/7, mbtmp3.8/10, ML3.7/3, MS3.6/3, Error ellipse: s-maj=28.4km s-min=18.9km az=126.0*
*FCIAR **16** 02:55:47.0, 85°.09N×89°.13E, h10km, station SVZ has station magnitude of 3.80 station OMEGA has station magnitude of 3.80*
ISC 16 02:55:44.5±0.7, 85°.18N±0°.08×86°.66E±0°.07, h10km, n35, σ2s37/23, mb3.8/17, MS3.6/3, 2C, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVZ	**Severnaya Zeml**	**6.23**	**153**	P	**Pn**	**02 57 13.1**	**-3.2**
SVZ				*e*S	Sn	02 58 17.5	-10
	43nm,0.3s						
OMEGA	**Omega**	**6.28**	**248**	*e*P	**Pn**	**02 57 19.4**	**+2.4**
OMEGA				*e*S	**Sn**	**02 58 28.3**	**-0.4**
	32nm,2.6s						
KBS	**Kingsbay**	**10.91**	**280**	⇑*i*P	**Pn**	**02 58 20.7**	**+0.4**
KBS	**Kingsbay**	**10.91**	**280**	*e*P	**Pn**	**02 58 19.8**	**-0.5**
KBS				*e*S	Sn	03 00 16.5	-5.7
SPA0	**Spitsbergen Ar**	**11.22**	**274**	*e*P	**Pn**	**02 58 24.5**	**-0.1**
SPA0				*e*S	Sn	03 00 24.6	-5.2
SPITS	**Spitsbergen Ar**	**11.22**	**274**	Pn	**Pn**	**02 58 25.7**	**+1.1**
	baz=69,slow=9.4						
SPITS				Sn	**Sn**	**03 00 25.1**	**-4.7**
	baz=62,slow=23						
	5.3nm,0.8s						
TIXI	**Tiksi**	**15.21**	**126**	⇑*i*P	Pn	02 59 08.2	-11
NRIK	**Noril'sk**	**15.93**	**179**	*e*P	Pn	02 59 20.2	-8.1
NRIK	**Noril'sk**	**15.93**	**179**	Pn	**P**	**02 59 32.5**	**+0.6**
	0.6nm,0.3s,baz=8.1,slow=13,SNR=2.7						
	7.8nm,0.7s						
ARCES	**ARCESS Array B**	**18.72**	**254**	P	**Pn**	**03 00 07.3**	**+4.3**
	0.1nm,0.3s,baz=17,slow=8.9,SNR=1.3						
	1.7nm,0.7s						
LVZ	**Lovozero**	**19.61**	**243**	*e*P	**P**	**03 00 10.2**	**-2.2**
LVZ				pmax	pmax		
	comp=Z,27nm,1.5s						
BILL	**Bilibino**	**21.72**	**88**	*i*P	P	03 00 23.9	-11
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**24.78**	**130**	*i*P	P	03 00 57.6	-8.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SEY	**Seymchan**	**25.58**	**105**	*e*P	P	03 01 04.0	-9.1
SEY				pmax	pmax		
	comp=Z,13nm,2.5s						
FINES	**FINESS Array B**	**26.64**	**249**	P	**P**	**03 01 26.1**	**+3.4**
	comp=Z,1.0nm,0.7s,baz=14,slow=11,SNR=1.5						
	comp=Z,1.0nm,0.7s						
KIRV	**Kirov**	**27.86**	**223**	*e*P	P	03 01 27.6	-6.0
ILAR	**Eielson Array**	**28.51**	**46**	P	**P**	**03 01 39.4**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=355,slow=10,SNR=1.4						
	comp=Z,0.3nm,0.7s						
MA2	**Magadan**	**28.77**	**108**	*i*P	P	03 01 31.2	-11
MA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARU	**Arti**	**29.54**	**212**	P	**P**	**03 01 45.9**	**-2.7**
ARU						03 02 35.9	
ARU				S	**S**	**03 06 43.3**	**+0.4**
ARU				SS	**SnSn**	**03 08 09.3**	**-0.9**
OBN	**Obninsk**	**32.14**	**236**	*e*P	**P**	**03 02 09.3**	**-2.2**
OBN				*e*		03 03 16.1	
OBN				*e*PPP	PPP	03 03 27.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**32.23**	**18**	P	**P**	**03 02 11.4**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=356,slow=9.7,SNR=6.3						
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**32.49**	**198**	*i*P	P	03 02 08.1	-6.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BELG	**Belogornoye**	**34.14**	**223**	*i*P	P	03 02 23.5	-5.4
BELG	**Belogornoye**	**34.14**	**223**	LR	LR	03 17 55.7	
	comp=Z,110nm,20.4s,baz=1.4,slow=39						
KURK	**Kurchatov**	**34.67**	**189**	*i*P	P	03 02 29.5	-4.1
KURK				pmax	pmax		
	comp=Z,3.0nm,1.8s						
DGZ	**Jazzator, Alta**	**35.63**	**179**	*i*P	P	03 02 33.6	-8.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.8s						
AKBB	**Malin Array Si**	**37.06**	**243**	*e*P	**P**	**03 02 51.3**	**-2.8**
ULN	**Ulaanbaatar**	**37.81**	**157**	*i*P	P	03 02 52.2	-8.4
ULN				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	**Songino Array**	**37.82**	**158**	P	**P**	**03 03 01.8**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=341,slow=7.6,SNR=1.9						
	comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**38.56**	**185**	P	**P**	**03 03 08.1**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=13,slow=7.7,SNR=1.3						
	comp=Z,0.9nm,0.8s						
AAK	**Ala-Archa**	**42.82**	**193**	*e*P	P	03 03 34.4	-7.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BRTR	**Keskin Array B**	**47.66**	**236**	P	**P**	**03 04 24.1**	**+3.5**
	comp=Z,0.9nm,0.8s,baz=5.2,slow=4.2,SNR=2.0						
	comp=Z,0.9nm,0.8s						
YBH	**Yreka Blue Hor**	**52.73**	**27**	LR	LR	03 27 47.2	
	comp=Z,92nm,21.1s,baz=358,slow=37						
TXAR	**Lajitas Array**	**65.61**	**10**	P	**P**	**03 06 29.5**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=7.1,slow=3.3,SNR=4.0						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**66.92**	**167**	LR	LR	03 37 37.9	
	comp=Z,34nm,18.9s,baz=285,slow=38						

*IDC **16** 03:04:41.3±0.9, 86°.06N×85°.43E, h0km, mb3.6/8, mbtmp3.6/10, ML3.4/2, Error ellipse: s-maj=28.0km s-min=17.3km az=128.0*
*FCIAR **16** 03:04:43.0, 84°.94N×88°.24E, h10km, station SVZ has station magnitude of 3.50 station OMEGA has station magnitude of 3.60*
ISC 16 03:04:41.1±0.8, 85°.7N±0°.1×86°.13E±0°.08, h10km, n17, σ2s60/18, mb3.5/11, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OMEGA	**Omega**	**6.44**	**243**	*e*P	**Pn**	**03 06 15.4**	**-0.4**
OMEGA				*e*S	**Sn**	**03 07 24.5**	**-4.6**
	24nm,3.8s						
SVZ	**Severnaya Zeml**	**6.67**	**154**	*e*P	Pn	03 06 09.3	-10
SVZ				*e*S	Sn	03 07 14.0	-21
	20nm,0.4s						
KBS	**Kingsbay**	**10.80**	**277**	*e*P	**Pn**	**03 07 16.5**	**+1.0**
KBS				*e*S	**Sn**	**03 09 14.9**	**-1.2**
SPA0	**Spitsbergen Ar**	**11.16**	**271**	*e*P	**Pn**	**03 07 21.5**	**+1.2**
SPA0				*e*S	**Sn**	**03 09 21.1**	**-3.8**
SPITS	**Spitsbergen Ar**	**11.16**	**271**	Pn	**Pn**	**03 07 21.6**	**+1.2**
	baz=38,slow=17						
SPITS				Sn	**Sn**	**03 09 22.0**	**-2.9**
	baz=38,slow=3.2						
	1.4nm,0.6s						
ARCES	**ARCESS Array B**	**18.82**	**252**	P	**Pn**	**03 09 02.6**	**+1.7**
	0.1nm,0.3s,baz=20,slow=11,SNR=5.0						
	3.0nm,1.0s						
ILAR	**Eielson Array**	**28.22**	**46**	P	**P**	**03 10 31.0**	**-2.4**
	0.3nm,0.7s,baz=355,slow=9.1,SNR=4.2						
	0.3nm,0.7s						
YKA	**Yellowknife Ar**	**31.80**	**18**	P	**P**	**03 11 04.9**	**-0.2**
	0.5nm,0.7s,baz=355,slow=8.5,SNR=9.2						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**31.85**	**181**	P	**P**	**03 11 10.0**	**+4.3**
	0.6nm,0.5s,baz=355,slow=7.2,SNR=2.6						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**32.96**	**198**	P	P	03 11 21.0	+5.6
	1.1nm,0.8s,baz=1.4,slow=5.9,SNR=3.0						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**35.23**	**188**	P	P	03 11 42.0	+7.1
	0.6nm,0.2s,baz=16,slow=7.8,SNR=1.4						
	0.6nm,0.2s						
SONM	**Songino Array**	**38.27**	**158**	P	**P**	**03 11 59.9**	**-1.2**
	0.5nm,0.9s,baz=335,slow=5.3,SNR=4.1						
MKAR	**Makanchi Array**	**39.03**	**184**	P	**P**	**03 12 03.9**	**-3.5**
	0.2nm,0.6s,baz=17,slow=8.9,SNR=3.0						

GERES GERESS Array B 40.20 257 P **P** **03 12 20.0 +2.8**
0.4nm,0.7s,baz=336,slow=6.5,SNR=2.0
0.4nm,0.7s
BRTR Keskin Array B 47.89 236 P **P** **03 13 20.4 +1.4**
0.8nm,0.8s,baz=350,slow=7.3,SNR=3.7
0.8nm,0.8s
TXAR Lajitas Array 65.15 9 P **P** **03 15 21.4 -0.5**
0.2nm,0.7s,baz=0.0,slow=2.7,SNR=2.5
0.2nm,0.7s
TORD Torodi Ar. Bea 76.55 265 P **P** **03 16 32.0 +0.8**
0.5nm,0.9s,baz=355,slow=4.9,SNR=2.9

*IDC **16** 03:13:53.2±1.3, 7°.24N×72°.01W, h0km, mb3.5/3, mbtmp3.6/4, ML2.1/1, Error ellipse: s-maj=38.7km s-min=28.2km az=128.0*
*RSNC **16** 03:13:58.2±1.6, 7°.09N×72°.19W, h2km±5km, ML3.1, Mw3.3*
ISC 16 03:13:56.3±1.5, 7°.04N±0°.03×72°.14W±0°.04, h5km±10km, n33, σ1s78/57, mb3.5/3, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.63**	**299**	⇓*i*P	**Pg**	**03 14 08.2**	**-0.2**
PAMC				*e*S	**Sg**	**03 14 15.9**	**-0.7**
PAMC				*i*		03 14 16.4	
	comp=Z,3μm,0.2s						
TAMC	**Tame, Arauca**	**0.69**	**150**	⇓*i*P	**Pb**	**03 14 12.0**	**+1.0**
TAMC				*e*S	**Sb**	**03 14 22.5**	**+1.7**
TAMC				*i*		03 14 23.5	
	comp=Z,889nm,0.2s						
BARC	**Barichara**	**1.12**	**247**	⇓*i*P	**Pg**	**03 14 17.3**	**-0.6**
BARC				*e*S	**Sb**	**03 14 34.7**	**+1.3**
BARC				*i*		03 14 36.9	
	comp=Z,819nm,0.3s						
OCAC	**Ocana**	**1.67**	**316**	*e*P	**Pn**	**03 14 26.8**	**+0.4**
OCAC				*e*S	**Sn**	**03 14 47.6**	**-0.7**
PTBC	**PUERTO BERRIO,**	**2.35**	**258**	*e*P	**Pn**	**03 14 35.4**	**-0.3**
PTBC				*e*S	**Sn**	**03 15 06.8**	**+1.9**
PTBC				*i*		03 15 10.0	
	comp=Z,266nm,0.9s						
SPBC	**San Pablo de B**	**2.36**	**234**	*e*P	**Pn**	**03 14 37.1**	**+1.3**
SPBC				*e*S	**Sn**	**03 15 06.5**	**+1.2**
SPBC				*i*		03 15 13.3	
	comp=Z,105nm,0.4s						
SDV	**Santo Domingo**	**2.37**	**39**	*e*P	**Pn**	**03 14 37.3**	**+1.2**
SDV				*e*S	**Sn**	**03 15 07.3**	**+1.6**
SDV				*i*		03 15 15.0	
	comp=Z,175nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.82**	**180**	*e*P	**Pn**	**03 14 42.0**	**-0.1**
PTGC				*e*S	**Sn**	**03 15 18.2**	**+1.7**
PTGC				*i*		03 15 35.7	
	comp=Z,156nm,0.2s						
CHIC	**Chingaza**	**2.87**	**214**	*e*P	**Pn**	**03 14 43.6**	**+0.5**
CHIC				*e*S	**Sn**	**03 15 20.4**	**+2.1**
CHIC				*i*		03 15 42.7	
	comp=Z,34nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.90**	**338**	*e*P	**Pn**	**03 14 45.2**	**+1.9**
LL6C				*e*S	**Sn**	**03 15 21.5**	**+2.9**
LL6C				*i*		03 15 30.2	
	comp=Z,51nm,0.4s						
ROSC	**El Rosal**	**3.07**	**225**	Pn	**Pn**	**03 14 48.3**	**+2.3**
	comp=Z,4.0nm,0.3s,baz=329,slow=23,SNR=5.3						
ROSC				Sn	**Sb**	**03 15 29.5**	**-0.3**
	comp=Z,7.3nm,0.3s,baz=345,slow=23,SNR=2.4						
ROSC				Lg	Lg	03 15 36.7	
	comp=Z,9.7nm,0.3s,baz=8.7,slow=24,SNR=4.9						
	comp=Z,9.8nm,0.3s						
ROSC	**El Rosal**	**3.07**	**225**	*e*P	**Pn**	**03 14 48.4**	**+2.5**
ROSC				*e*S	**Sn**	**03 15 26.0**	**+2.7**
ROSC				*i*		03 15 45.5	
	comp=Z,31nm,0.3s						
CVER	**Cruz Verde, Cu**	**3.15**	**218**	*e*P	**Pn**	**03 14 49.0**	**+2.0**
CVER				*i*		03 15 45.2	
	comp=Z,24nm,0.4s						
VILC	**Villavicencio,**	**3.29**	**208**	*e*P	**Pn**	**03 14 50.1**	**+1.4**
VILC				*e*S	**Sn**	**03 15 30.2**	**+1.9**
VILC				*i*		03 15 51.7	
	comp=Z,117nm,0.4s						
UREC	**San Jos de Ur**	**3.44**	**282**	*e*P	**Pn**	**03 14 52.0**	**+1.4**
UREC				*e*S	**Sn**	**03 15 33.2**	**+1.5**
UREC				*i*		03 15 35.9	
	comp=Z,46nm,0.3s						
HELC	**Santa Helena**	**3.47**	**256**	*e*P	**Pn**	**03 14 51.9**	**+0.6**
HELC				*e*S	**Sn**	**03 15 33.7**	**+0.7**
HELC				*i*		03 15 48.8	
	comp=Z,27nm,0.4s						
ARGC	**Ariguani, Magd**	**3.49**	**324**	*e*P	**Pn**	**03 14 55.7**	**+4.4**
ARGC				*e*S	**Sn**	**03 15 36.0**	**+2.9**
ARGC				*i*		03 15 58.6	
	comp=Z,15nm,0.4s						
GUY2C	**Guyana, Caldas**	**3.67**	**241**	*e*P	**Pn**	**03 14 55.1**	**+0.8**
GUY2C				*e*S	**Sn**	**03 15 40.2**	**+2.0**
GUY2C				*i*		03 15 44.7	
	comp=Z,38nm,0.7s						
CBOC	**Ciudad Bolivar**	**4.02**	**253**	*e*P	**Pn**	**03 15 01.1**	**+2.3**
CBOC				*i*		03 16 03.0	
	comp=Z,12nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.02**	**350**	*e*P	**Pn**	**03 15 00.5**	**+1.8**
CRJC				*e*P	Pb	03 15 01.1	-6.7
CRJC				*e*S	**Sn**	**03 15 45.4**	**-0.9**
CRJC				*i*		03 16 12.0	
	comp=Z,41nm,0.2s						
DBBC	**Dabeiba**	**4.04**	**270**	*e*P	**Pn**	**03 15 01.0**	**+2.1**
DBBC				*e*S	**Sn**	**03 15 47.2**	**+0.6**
ANIL	**Santa Ana**	**4.11**	**232**	*e*P	**Pn**	**03 15 00.5**	**+0.4**
ANIL				*e*S	**Sn**	**03 15 49.2**	**+0.3**
ANIL				*i*		03 15 57.0	
	comp=Z,30nm,0.3s						
SJCC	**San Jacinto, C**	**4.13**	**314**	*e*P	**Pn**	**03 15 01.3**	**+1.1**
SJCC				*e*S	**Sn**	**03 15 49.7**	**+0.6**
SJCC				*i*		03 16 16.9	
	comp=Z,12nm,0.8s						
ORTC	**Ortega, Tolima**	**4.38**	**225**	*e*P	**Pn**	**03 15 04.6**	**+0.9**
ORTC				*e*S	**Sn**	**03 15 55.1**	**0.0**
ORTC				*i*		03 16 17.8	
	comp=Z,24nm,0.6s						
APAC	**Apartado, Choc**	**4.48**	**281**	*e*P	**Pn**	**03 15 05.9**	**+0.9**
APAC				*e*S	**Sn**	**03 15 59.7**	**+2.2**
APAC				*i*		03 16 21.9	
	comp=Z,13nm,0.5s						
PLMC	**San Jos del P**	**4.63**	**243**	*e*P	**Pn**	**03 15 09.1**	**+2.0**
PLMC				*i*		03 16 11.4	
	comp=Z,6.5nm,0.4s						
GARC	**Garzon, Huila**	**5.86**	**215**	*e*P	**Pn**	**03 15 24.8**	**+0.6**
GARC				*e*S	**Sn**	**03 16 29.8**	**-2.1**
GARC				*i*		03 16 35.3	
	comp=Z,14nm,0.3s						
JAMC	**Jamundi, Valle**	**5.90**	**230**	*e*P	**Pn**	**03 15 26.3**	**+1.7**
TXAR	**Lajitas Array**	**37.05**	**311**	P	**P**	**03 21 05.2**	**-2.4**
	comp=Z,0.2nm,0.6s,baz=123,slow=9.8,SNR=2.4						
	comp=Z,0.2nm,0.6s						
YKA	**Yellowknife Ar**	**63.40**	**339**	P	**P**	**03 24 23.6**	**-3.1**
	comp=Z,0.2nm,0.6s,baz=130,slow=6.5,SNR=6.3						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.75**	**78**	P	**P**	**03 25 24.0**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=274,slow=7.8,SNR=1.6						
	comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**150.02**	**234**	PKPbc	**PKPdf**	**03 33 45.4**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=94,slow=3.1,SNR=2.6						
WRA	**Warramunga Arr**	**151.29**	**241**	PKPbc	**PKPdf**	**03 33 48.8**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=104,slow=3.5,SNR=2.3						

*IDC **16** 03:17:15.0±4.9, 6°.59S×127°.83E, h276km±51km, mb3.1/7, mbtmp3.8/9, Error ellipse: s-maj=52.1km s-min=11.8km az=74.0*
*DJA **16** 03:17:16.5±0.9, 7°.5±4°×12°.8E±°, h384km±16km, M4.4/11, mb4.1/6, mB4.6/3, MLv4.6/11, Mw(mB)3.8/3*
ISC 16 03:17:21.1±0.8, 6°.68S±0°.08×128°.2E±0°.1, h353km, n16, σ2s42/18, mb3.2/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.73**	**39**	P	**Pn**	**03 18 18.6**	**+0.2**
SAUI	**Saumlaki**	**3.34**	**113**	P	**Pn**	**03 18 21.5**	**-2.4**
NLAI	**Namlea**	**3.58**	**342**	P	**Pn**	**03 18 25.9**	**-0.3**
SOEI	**Soe**	**4.95**	**232**	P	**Pn**	**03 18 36.0**	**-4.5**
FAKI	**Fak Fak**	**5.50**	**47**	P	**Pn**	**03 18 43.7**	**-2.8**
	21nm,1.0s,865nm0.4nm						
LBMI	**Labuha**	**6.04**	**353**	P	**Pn**	**03 18 50.8**	**-1.8**
	72nm,0.4s,1μm0.4nm						
KMPI	**Kaimana, Papua**	**6.25**	**62**	P	**Pn**	**03 18 53.7**	**-1.3**
	71nm,0.4s,1.0nm						
WRA	**Warramunga Arr**	**14.47**	**156**	P	**P**	**03 20 29.1**	**-0.9**
	1.6nm,0.5s,baz=331,slow=13,SNR=36						
WRA				S	**S**	**03 23 07.4**	**+0.9**
	2.7nm,0.8s,baz=323,slow=22,SNR=8.0						
ASAR	**Alice Springs**	**17.76**	**163**	P	**P**	**03 21 05.8**	**+0.2**
	1.5nm,0.6s,baz=344,slow=12,SNR=15						
ASAR				S	**S**	**03 24 18.2**	**+6.8**
	2.1nm,0.8s,baz=341,slow=22,SNR=8.5						
KSRS	**Korea Array**	**43.90**	**360**	P	**P**	**03 24 54.6**	**+0.5**
	0.8nm,0.6s,baz=180,slow=9.5,SNR=7.1						
	0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**50.76**	**4**	P	**P**	**03 25 46.2**	**-0.1**
	1.3nm,0.6s,baz=192,slow=7.1,SNR=3.4						
	1.3nm,0.6s						
SONM	**Songino Array**	**57.59**	**343**	P	**P**	**03 26 35.7**	**+0.5**
	0.3nm,0.6s,baz=167,slow=8.9,SNR=2.1						
	0.3nm,0.6s						
PETK	**Petropavlovsk-**	**64.59**	**19**	P	**P**	**03 27 22.7**	**+1.1**
	3.6nm,0.8s,baz=198,slow=4.1,SNR=2.0						
	3.6nm,0.8s						
MKAR	**Makanchi Array**	**66.98**	**328**	P	**P**	**03 27 36.7**	**-0.2**
	0.2nm,0.5s,baz=120,slow=6.9,SNR=5.4						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**70.51**	**334**	P	**P**	**03 27 57.8**	**-0.5**
	0.6nm,0.6s,baz=148,slow=8.4,SNR=1.7						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**71.31**	**329**	P	**P**	**03 28 03.0**	**0.0**
	0.3nm,0.5s,baz=126,slow=4.6,SNR=5.6						
	0.3nm,0.5s						

*IDC **16** 03:23:35.4±1.6, 14°.55N×54°.73E, h0km, mb3.7/9, mbtmp3.7/9, MS3.5/4, Error ellipse: s-maj=41.5km s-min=28.6km az=40.0*
ISC 16 03:23:38.1±1.6, 14°.6N±0°.3×54°.7E±0°.2, h17km, n16, σ0s54/9, mb3.9/9, MS3.6/3, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**9.37**	**23**	LR	LR	03 29 09.5	
	comp=Z,92nm,20.0s,baz=221,slow=36						
MKAR	**Makanchi Array**	**39.51**	**30**	P	**P**	**03 31 08.3**	**+0.3**
	0.3nm,0.5s,baz=215,slow=8.6,SNR=5.2						
	0.3nm,0.5s						
LSZ	**Lusaka**	**39.61**	**223**	LR	LR	03 46 10.6	
	comp=Z,69nm,18.4s,baz=16,slow=34						
KURBB	**Kurchatov Arra**	**40.79**	**23**	P	**P**	**03 31 18.2**	**-0.3**
	0.4nm,0.8s,baz=226,slow=8.7,SNR=3.1						
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**42.48**	**79**	P	**P**	**03 31 33.0**	**+0.2**
	0.9nm,0.3s,baz=277,slow=7.2,SNR=4.4						
	0.9nm,0.3s						
LBTB	**Lobatse**	**48.54**	**216**	LR	LR	03 53 26.3	
	comp=Z,57nm,18.0s,baz=10.0,slow=37						
TORD	**Torodi Ar. Bea**	**51.42**	**275**	LR	LR	03 56 49.4	
	comp=Z,122nm,18.2s,baz=322,slow=39						
SONM	**Songino Array**	**53.88**	**41**	P	**P**	**03 33 01.2**	**+0.6**
	0.5nm,1.0s,baz=227,slow=5.7,SNR=3.6						
	0.5nm,1.0s						
ESDC	**Sonseca Array**	**56.82**	**308**	P	**P**	**03 33 21.9**	**0.0**
	0.6nm,0.8s,baz=92,slow=7.0,SNR=3.0						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	**57.91**	**348**	P	**P**	**03 33 29.1**	**+0.1**
	0.9nm,0.6s,baz=148,slow=6.0,SNR=5.2						
	0.9nm,0.6s						
KSRS	**Korea Array**	**68.01**	**55**	P	**P**	**03 34 35.7**	**-1.1**
	0.7nm,0.8s,baz=274,slow=6.7,SNR=2.6						
	0.7nm,0.8s						
H01W3	**Cape Leeuwin H**	**74.76**	**133**	T	T	04 56 56.8	
	baz=301,slow=75,SNR=10						
H01W2	**Cape Leeuwin H**	**74.77**	**133**	T	T	04 56 56.7	
	baz=301,slow=75,SNR=12						
H01W1	**Cape Leeuwin H**	**74.78**	**133**	T	T	04 56 59.2	
	baz=301,slow=75,SNR=11						
WRA	**Warramunga Arr**	**85.43**	**112**	P	**P**	**03 36 15.6**	**+0.1**
	1.0nm,1.1s,baz=296,slow=4.0,SNR=3.0						
	1.0nm,1.1s						
ASAR	**Alice Springs**	**86.16**	**116**	P	**P**	**03 36 19.1**	**+0.1**
	0.5nm,0.6s,baz=289,slow=4.6,SNR=6.4						
	0.5nm,0.6s						

IDC 16 03:39:32.4±1.7, 7°.00S×129°.39E, h0km, mb3.6/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=104.5km s-min=29.6km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.74**	**160**	Pn	Pn	03 42 47.0	-1.5
	0.2nm,0.3s,baz=338,slow=14,SNR=9.9						
WRA				Sn	Sn	03 45 10.0	-12
	0.7nm,0.3s,baz=330,slow=23,SNR=9.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**17.13**	**166**	Pn	P	03 43 34.6	-0.6
	0.2nm,0.3s,baz=351,slow=10.0,SNR=10						
ASAR				Sn	Sn	03 46 34.1	-11
	0.2nm,0.3s,baz=354,slow=24,SNR=5.3						
	0.7nm,0.8s						
SONM	**Songino Array**	**58.25**	**342**	P	P	03 49 27.7	-1.1
	0.1nm,0.5s,baz=160,slow=5.6,SNR=1.6						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**67.89**	**327**	P	P	03 50 33.4	+0.5
	0.8nm,0.5s,baz=119,slow=7.6,SNR=16						
	0.8nm,0.5s						

*NEIC **16** 04:03:03.1±1.4, 55°.97N±0°.08×149°.3W±0°.1, h11km±7km, ML3.8/24, ML3.7(AEIC), Error ellipse: s-maj=12.8km s-min=8.5km az=154.0*
*IDC **16** 04:03:04.3±1.1, 56°.01N×149°.13W, h0km, mb3.7/8, mbtmp3.7/13, ML3.6/5, MS3.2/7, Error ellipse: s-maj=24.8km s-min=15.8km az=32.0*
*AEIC **16** 04:03:08.0±1.4, 56°.00N±0°.09×149°.3W±0°.1, h12km±7km, Error ellipse: s-maj=13.2km s-min=8.6km az=154.0*
ISC 16 04:03:04.7±0.7, 56°.09N±0°.07×149°.36W±0°.05, h10km, n298, σ0s97/292, mb3.7/9, MS3.3/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.45**	**299

baz=139
Q23K Middleton Isla 3.71 24 Pn 04 04 00.9 -1.2
Q23K Middleton Isla 3.71 24 IAML 04 04 44.6
comp=N,216nm,1.8s
Q23K Middleton Isla 3.71 24 P Pn 04 04 00.9 -1.2
baz=206
MID Middleton Isla 3.72 25 Pn 04 04 00.9 -1.2
MID Middleton Isla 3.72 25 IAML 04 04 49.9
comp=N,226nm,1.8s
MID Middleton Isla 3.72 25 P Pn 04 04 01.2 -0.9
BRSE Bradley Lake S 3.74 349 Pn 04 04 01.6 -0.8
BRSE Bradley Lake S 3.74 349 P Pn 04 04 01.6 -0.8
baz=168
BRLK Bradley Lake 3.77 348 Pn 04 04 01.9 -1.0
BRLK Bradley Lake 3.77 348 IAML 04 04 48.9
comp=E,96nm,0.3s
BRLK IAML 04 04 51.4
comp=N,98nm,0.4s
HOM Homer 3.78 342 Pn 04 04 03.0 +0.1
ACHA Angle Creek He 3.88 306 Pn 04 04 05.3 +0.8
ANCK Angle Creek 3.96 305 Pn 04 04 06.3 +0.8
KVTA Katmai Vly 10 3.96 308 Pn 04 04 06.4 +0.9
SEW Seward 4.03 359 Pn 04 04 05.1 -1.2
SEW Seward 4.03 359 P Pn 04 04 05.1 -1.2
baz=178
P23K Montague Islan 4.05 14 Pn 04 04 05.7 -1.0
P23K Montague Islan 4.05 14 P Pn 04 04 05.7 -1.0
baz=195
P19K Oil Pt 4.13 332 Pn 04 04 07.9 +0.1
P19K Oil Pt 4.13 332 IAML 04 05 09.4
comp=N,197nm,0.6s
P19K IAML 04 05 09.7
comp=E,196nm,0.5s
P19K Oil Pt 4.13 332 P Pn 04 04 07.9 +0.1
baz=148
CNTC Contact Creek 4.17 304 Pn 04 04 09.0 +0.6
Q17K Contact Creek 4.17 304 P Pn 04 04 09.0 +0.6
baz=119
KELA Mount Kelaz 4.19 307 Pn 04 04 09.5 +0.8
PLK1 Peulik 1 4.33 296 Pn 04 04 11.5 +1.0
O20K Slope Mountain 4.36 338 Pn 04 04 10.6 -0.5
O20K Slope Mountain 4.36 338 P Pn 04 04 10.6 -0.5
baz=155
IVE Iliamna Volcan 4.39 335 Pn 04 04 10.9 -0.6
ILSW Iliamna Southw 4.39 334 Pn 04 04 11.3 -0.3
O22K Cooper Landing 4.41 358 Pn 04 04 10.2 -1.4
O22K Cooper Landing 4.41 358 P Pn 04 04 10.8 -0.8
baz=177
SLKM Skilak Lake 4.45 354 Pn 04 04 11.3 -1.0
P18K Big Mountain, 4.57 319 Pn 04 04 13.4 -0.5
P18K Big Mountain, 4.57 319 P Pn 04 04 13.4 -0.5
baz=134
HIN Hinchinbrook I 4.57 18 Pn Pn 04 04 12.9 -1.0
KAIM Kayak Island 4.66 32 Pn 04 04 14.2 -0.9
KAIM Kayak Island 4.66 32 P Pn 04 04 14.2 -0.9
baz=215
RED Redoubt Volcan 4.70 339 Pn 04 04 14.8 -1.0
RDSO Redoubt South 4.73 339 Pn 04 04 15.4 -0.7
RSO Redoubt South 4.74 339 Pn 04 04 14.9 -1.4
R16K Pilot Point 4.75 292 Pn 04 04 15.7 -0.6
R16K Pilot Point 4.75 292 P Pn 04 04 15.7 -0.6
baz=105
RDT Redoubt 4.78 342 Pn 04 04 15.5 -1.3
RDWB Redoubt West 4.78 339 Pn 04 04 15.7 -1.2
EYAK Cordova Ski Ar 4.86 22 Pn 04 04 16.9 -0.8
EYAK Cordova Ski Ar 4.86 22 P Pn 04 04 17.2 -0.6
EYAK Cordova Ski Ar 4.86 22 P Pn 04 04 16.9 -0.8
baz=204
NCT North Crescent 4.86 339 Pn 04 04 17.0 -1.0
O19K Port Alsworth 4.88 329 Pn 04 04 17.7 -0.4
O19K Port Alsworth 4.88 329 P Pn 04 04 17.7 -0.4
baz=145
O18K Koktuh Hills 4.89 323 Pn 04 04 18.2 -0.1
O18K Koktuh Hills 4.89 323 P Pn 04 04 18.2 -0.1
baz=138
FID Port Fidalgo 4.91 17 Pn 04 04 17.3 -1.3
P17K Kvichak River 4.92 312 Pn 04 04 19.6 +1.1
P17K Kvichak River 4.92 312 P Pn 04 04 19.6 +1.1
baz=127
SUCK Suckling Hills 4.97 34 Pn 04 04 18.7 -0.6
RC01 Rabbit Creek A 5.02 358 Pn 04 04 19.3 -0.7
RC01 Rabbit Creek A 5.02 358 P Pn 04 04 19.4 -0.6
baz=177
HMT Hamilton 5.04 30 Pn Pn 04 04 19.7 -0.6
NICHA Nichawak Mount 5.04 32 Pn 04 04 19.7 -0.6
FIS Fire Island 5.09 355 Pn 04 04 20.8 -0.1
GOAT Goat Mountain 5.12 27 Pn 04 04 21.1 -0.4
BERG Bering Lake 5.25 32 Pn 04 04 22.2 -0.9
GRIN Grindle Hills 5.28 35 Pn 04 04 23.0 -0.5
N20K Mount Spurr 5.34 345 P Pn 04 04 23.5 -1.0
baz=162
SPCR Spurr Chakacha 5.34 345 Pn 04 04 23.5 -1.0
SPCN Chakachatna No 5.36 345 Pn 04 04 24.2 -0.5
KNK Knik Glacier 5.36 5 Pn 04 04 24.1 -0.6
KNK Knik Glacier 5.36 5 P Pn 04 04 24.4 -0.3
baz=185
SNH Sunshine Point 5.36 37 Pn 04 04 24.0 -0.7
DIV Divide 5.39 19 Pn 04 04 24.4 -0.7
SPCP Crater Peak Br 5.39 345 Pn 04 04 24.9 -0.4
KHIT Khitrov Hills 5.42 34 Pn 04 04 24.7 -0.9
SUA Susitna One 5.44 353 Pn 04 04 25.1 -0.8
SUA Susitna One 5.44 353 P Pn 04 04 25.1 -0.8
baz=171
N19K Bonanza Creek 5.45 333 Pn 04 04 25.2 -0.8
N19K Bonanza Creek 5.45 333 P Pn 04 04 25.2 -0.8
baz=148
BMRM Bremner River 5.49 25 Pn 04 04 26.0 -0.5
BMRM Bremner River 5.49 25 P Pn 04 04 26.0 -0.5
baz=208
P16K Nushagak River 5.50 306 Pn 04 04 27.3 +0.7
P16K Nushagak River 5.50 306 P Pn 04 04 27.3 +0.7
baz=119
PMR Palmer 5.52 1 Pn 04 04 26.7 -0.1
PMR Palmer 5.52 1 P Pn 04 04 26.6 -0.2
PMR Palmer 5.52 1 P Pn 04 04 26.7 -0.1
baz=181
O17K Koliganek Bris 5.53 315 Pn 04 04 27.1 +0.1
O17K Koliganek Bris 5.53 315 P Pn 04 04 27.1 +0.1
baz=129
WAX Waxell Ridge 5.56 35 Pn Pn 04 04 26.7 -0.8
SPNN North Nagishla 5.57 343 Pn 04 04 27.5 -0.2
STLK Strandline Lak 5.58 348 Pn 04 04 27.2 -0.5
BARK Barkley Ridge 5.64 37 Pn 04 04 28.3 -0.3
MESA MESA 5.67 41 Pn 04 04 28.0 -1.2
MESA MESA 5.67 41 P Pn 04 04 28.0 -1.2
baz=226
GHO Glory Hole Cre 5.70 2 Pn 04 04 29.4 0.0
KLU Klutina 5.70 17 Pn 04 04 29.2 -0.3
KLU Klutina 5.70 17 P Pn 04 04 29.0 -0.5
baz=199
CRQM Cirque 5.71 32 Pn 04 04 29.0 -0.6
CRQE Cirque 5.71 33 P Pn 04 04 29.0 -0.7
baz=217
N18K Kilae Creek 5.74 326 Pn 04 04 29.7 -0.3
N18K Kilae Creek 5.74 326 P Pn 04 04 29.7 -0.3
baz=140
SML Sawmill 5.76 5 Pn 04 04 30.3 0.0
SML Sawmill 5.76 5 P Pn 04 04 30.3 0.0
baz=185
M23K Glacier View 5.78 8 Pn 04 04 30.7 +0.2
M23K Glacier View 5.78 8 P Pn 04 04 30.7 +0.2
baz=188
TGL Tana Glacier 5.80 34 Pn 04 04 30.2 -0.6
ISLE Juniper Island 5.84 36 Pn 04 04 30.9 -0.5
O16K Kokwok River B 5.84 311 Pn 04 04 32.0 +0.8
O16K Kokwok River B 5.84 311 P Pn 04 04 32.0 +0.8
baz=124
BAGL Bagley Icefiel 5.84 38 Pn 04 04 31.0 -0.2
SCM Sheep Creek Mo 5.86 9 Pn 04 04 31.7 +0.2
SCM Sheep Creek Mo 5.86 9 P Pn 04 04 31.7 +0.2
baz=191
CHNA Chernabura Isl 5.96 262 P Pn 04 04 31.9 -1.0
baz=74
CNBA Chernabura Isl 5.96 262 Pn 04 04 31.9 -1.0
SVW2 Sparrevohn 5.98 330 Pn Pn 04 04 32.7 -0.5
SVW2 Sparrevohn 5.98 330 P Pn 04 04 32.7 -0.5
VRDI Verde Repeater 6.00 28 Pn 04 04 32.7 -1.0
SKT Skwentna 6.01 350 Pn 04 04 33.3 -0.4
N25K Chitina, Valde 6.06 22 Pn 04 04 34.0 -0.3
N25K Chitina, Valde 6.06 22 P Pn 04 04 33.9 -0.5
baz=205
N17K Nushagak Hills 6.07 320 Pn Pn 04 04 34.4 +0.1
KIAG Kiagna River 6.08 34 Pn 04 04 33.5 -1.2
SAMH Samovar Hills 6.08 45 Pn 04 04 34.2 -0.5
GLB Gilahina Butte 6.09 26 Pn 04 04 34.1 -0.7
M20K Styx River 6.13 343 Pn 04 04 34.6 -0.7
M20K Styx River 6.13 343 P Pn 04 04 34.6 -0.7
baz=160
GRNC Granite Creek 6.13 37 Pn 04 04 34.4 -1.1
TABL Table Mountain 6.15 41 Pn 04 04 34.4 -1.3
MCARA McCarthy VSAT 6.25 29 Pn 04 04 36.7 -0.2
MCARA McCarthy VSAT 6.25 29 P Pn 04 04 36.7 -0.2
baz=214
PTPK Patty Peak 6.25 32 Pn 04 04 36.6 -0.4
M24K Tolsona, Glenn 6.25 14 Pn 04 04 37.6 +0.7
M24K Tolsona, Glenn 6.25 14 P Pn 04 04 37.7 +0.7
baz=196
PCA Pinnacle 6.28 46 Pn 04 04 36.7 -0.7
PINM Pinnacle 6.28 46 P Pn 04 04 36.7 -0.7
baz=233
SDPT Sand Point 6.33 268 P Pn 04 04 37.8 -0.2
CUT Chulitna 6.35 356 Pn Pn 04 04 38.5 +0.2
M18K Stony River 6.37 331 Pn 04 04 37.9 -0.7
M18K Stony River 6.37 331 P Pn 04 04 37.9 -0.7
baz=145
M19K Big River Lodg 6.38 338 Pn 04 04 38.2 -0.5
M19K Big River Lodg 6.38 338 P Pn 04 04 38.2 -0.5
baz=154
BARN Barnard Glacie 6.40 36 Pn 04 04 38.3 -0.9
PNL Peninsula 6.41 52 Pn 04 04 37.9 -1.2
PNL Peninsula 6.41 52 P Pn 04 04 38.4 -0.7
PNL Peninsula 6.41 52 P Pn 04 04 37.9 -1.2
baz=239
O15K Ungalikthiuk R 6.42 303 Pn 04 04 39.9 +0.7
O15K Ungalikthiuk R 6.42 303 P Pn 04 04 39.9 +0.7
baz=115
CTG Chitna Glacier 6.44 37 P Pn 04 04 38.9 -0.7
baz=223
CTGM Chitina Glacie 6.44 37 Pn 04 04 38.9 -0.8
BCPM Bancas Point 6.45 49 Pn 04 04 38.8 -0.9
LOGN Logan Glacier 6.46 39 Pn 04 04 39.0 -0.9
WAT6 Susitna Watana 6.56 7 Pn 04 04 41.4 0.0
WAT6 Susitna Watana 6.56 7 P Pn 04 04 41.4 0.0
baz=187
N16K Nishlik Lake 6.63 315 Pn 04 04 42.8 +0.7
N16K Nishlik Lake 6.63 315 P Pn 04 04 42.8 +0.7
baz=128
HARP HAARP 6.68 17 Pn 04 04 43.0 +0.1
HARP HAARP 6.68 17 P Pn 04 04 43.0 +0.1
baz=200
L19K White Mountain 6.73 337 Pn 04 04 42.6 -0.9
L19K White Mountain 6.73 337 P Pn 04 04 42.6 -0.9
baz=153
WAT7 Susitna Watana 6.77 2 Pn 04 04 44.0 -0.1
WAT1 Susitna Watana 6.77 3 Pn 04 04 44.3 +0.2
WAT1 Susitna Watana 6.77 3 P Pn 04 04 44.3 +0.2
baz=183
M17K Holitna River 6.78 325 Pn 04 04 44.5 +0.3
M17K Holitna River 6.78 325 P Pn 04 04 44.5 +0.3
baz=138
N15K Kwethluk River 7.00 310 Pn Pn 04 04 48.5 +1.3
DHY Denali Highway 7.08 7 Pn 04 04 48.5 +0.1
DHY Denali Highway 7.08 7 P Pn 04 04 48.5 +0.1
baz=188
O29M Mount Kennedy 7.09 49 Pn 04 04 47.8 -0.8
O29M Mount Kennedy 7.09 49 P Pn 04 04 47.8 -0.8
baz=237
M26K Nabesna, AK 7.12 25 Pn 04 04 49.3 +0.5
P29M Windy Craggy 7.14 55 Pn 04 04 47.6 -1.5
P29M Windy Craggy 7.14 55 P Pn 04 04 47.6 -1.5
baz=244
PN7A Pavlof North-7 7.17 270 Pn 04 04 49.4 -0.2
PAX Paxson 7.18 14 Pn 04 04 50.2 +0.5
PAX Paxson 7.18 14 P Pn 04 04 50.2 +0.5
baz=197
YUK3 Moose Creek 7.32 35 Pn 04 04 52.2 +0.4
YUK3 Moose Creek 7.32 35 P Pn 04 04 52.2 +0.4
baz=222
RND Reindeer 7.34 2 Pn Pn 04 04 52.5 +0.5
M27K Edge Creek, AK 7.36 28 Pn 04 04 52.0 -0.3
M27K Edge Creek, AK 7.36 28 P Pn 04 04 52.0 -0.3
baz=214
YUK7 Dusty Glacier 7.39 48 Pn 04 04 52.4 -0.3
TRF Thorofare Moun 7.40 357 Pn 04 04 52.6 -0.2
TRF Thorofare Moun 7.40 357 P Pn 04 04 52.6 -0.2
baz=176
MENT Mentasta 7.44 20 Pn Pn 04 04 53.7 +0.5
CAST Castle Rocks 7.48 351 Pn 04 04 53.7 -0.1
CAST Castle Rocks 7.48 351 P Pn 04 04 53.7 -0.1
baz=168
KTH Kantishna Hill 7.53 355 Pn 04 04 54.4 -0.1
YUK6 Outpost Mounta 7.53 45 Pn 04 04 54.7 0.0
YUK6 Outpost Mounta 7.53 45 P Pn 04 04 54.7 0.0
baz=234
N14K Kuskokwak Cree 7.59 305 Pn 04 04 56.0 +0.7
N14K Kuskokwak Cree 7.59 305 P Pn 04 04 56.0 +0.7
baz=115
L26K Log Cabin Wild 7.59 21 Pn Pn 04 04 56.6 +1.3
TTA Tatalina 7.65 337 P Pn 04 04 57.0 +0.9
YUK4 Talbot Arm 7.66 42 P Pn 04 04 57.9 +1.4
baz=230
K20K Telida 7.67 344 Pn 04 04 55.2 -1.2
MCK McKinley 7.67 1 Pn 04 04 57.0 +0.6
MCK McKinley 7.67 1 P Pn 04 04 57.0 +0.6
baz=181
L16K Owhat River 7.69 321 Pn 04 04 56.9 +0.3
L16K Owhat River 7.69 321 P Pn 04 04 56.9 +0.3
baz=133
P30M Million Dollar 7.71 53 Pn 04 04 56.3 -0.6
P30M Million Dollar 7.71 53 P Pn 04 04 56.3 -0.6
baz=243
SIT Sitka 7.81 77 P Pn 04 04 54.4 -3.9
K24K Donnelly Dome 7.94 12 Pn 04 05 00.2 0.0
K24K Donnelly Dome 7.94 12 P Pn 04 05 00.2 0.0
baz=194
K17K Iditarod 8.05 329 Pn 04 05 01.1 -0.6
K17K Iditarod 8.05 329 P Pn 04 05 01.1 -0.6
baz=142
BPAW Bear Paw Mtn. 8.08 355 Pn 04 05 01.0 -1.0
BPAW Bear Paw Mtn. 8.08 355 P Pn 04 05 01.0 -1.0
baz=173
FALS False Pass 8.09 267 P Pn 04 05 01.6 -0.5
SKAG Skagway 8.22 60 Pn Pn 04 05 01.8 -2.1
ISLZ Isanotski Laza 8.29 266 Pn 04 05 04.1 -0.8
N30M Aishikik Lake 8.33 45 Pn 04 05 05.0 -0.5
N30M Aishikik Lake 8.33 45 P Pn 04 05 05.0 -0.5
baz=234
HDA Harding Lake 8.43 7 Pn 04 05 06.4 -0.4
WRH Wood River Hil 8.43 4 Pn 04 05 06.5 -0.3
J20K Nowinta River 8.46 346 Pn 04 05 06.3 -0.8
M29M Somme Creek 8.46 37 Pn 04 05 06.7 -0.6
NEA2 Nenana 8.53 1 Pn 04 05 07.7 -0.5
NEA2 Nenana 8.53 1 P Pn 04 05 08.2 0.0
baz=181
CCB Clear Creek Bu 8.62 4 Pn 04 05 09.4 +0.1
J25K Salcha River, 8.77 11 Pn 04 05 11.2 -0.3
IL31 8.79 7 Pn 04 05 11.2 -0.5
ILAR Eielson Array 8.79 7 Pn Pn 04 05 11.6 -0.2
comp=E,1.1nm,0.3s,baz=189,slow=13,SNR=36
ILAR Sn Sn 04 06 47.4 -3.5
comp=E,0.7nm,0.3s,baz=202,slow=24,SNR=5.8
ILAR LR LR 04 08 31.2
comp=E,66nm,20.9s,baz=78,slow=37
comp=E,1.7nm,0.3s
COLA College 8.84 4 Pn 04 05 12.9 +0.5
COLA College 8.84 4 P Pn 04 05 14.2 +1.8
WHY Whitehorse 8.87 53 Pn Pn 04 05 11.1 -1.8
J26L Joseph Creek 8.91 16 Pn 04 05 13.3 -0.2
MDM Murphy Dome 8.92 3 Pn Pn 04 05 12.9 -0.6
MLY Manley 9.00 356 Pn Pn 04 05 13.2 -1.4
MLY Manley 9.00 356 P Pn 04 05 14.6 0.0
baz=175
L29M L29M 9.04 34 Pn 04 05 15.3 +0.1
L29M L29M 9.04 34 P Pn 04 05 15.3 +0.1
baz=223
P32M Atlin 9.04 61 Pn Pn 04 05 13.4 -1.9
P32M Atlin 9.04 61 P Pn 04 05 13.8 -1.4
baz=253
I23K Minto, Yukon-K 9.09 360 Pn 04 05 16.0 +0.3
POKR Poker Plat Res 9.11 5 Pn 04 05 16.7 +0.6
POKR Poker Plat Res 9.11 5 P Pn 04 05 16.7 +0.6
baz=186
CRAG Craig 9.17 87 P Pn 04 05 13.0 -3.9
I21K Tanana 9.21 353 Pn 04 05 16.5 -0.9
PRP Porcupine Dome 9.64 10 Pn Pn 04 05 22.9 -0.6
PRP Porcupine Dome 9.64 10 P Pn 04 05 24.0 +0.6
baz=192
P33M Teslin, Yukon 9.66 58 Pn 04 05 21.4 -2.3
P33M Teslin, Yukon 9.66 58 P Pn 04 05 22.6 -1.1
baz=251
H21K Melozitna Rive 9.74 352 Pn 04 05 24.2 -0.6
K29M Barlow Dome 9.76 32 Pn Pn 04 05 24.6 -0.6
H24K Noodor Dome 9.81 4 Pn 04 05 26.1 +0.5
M31M Drury Creek, Y 9.81 45 Pn 04 05 25.6 -0.2
UNV Unalaska Valle 10.11 264 P Pn 04 05 29.0 -0.8
R33M Jennings River 10.36 64 Pn Pn 04 05 31.2 -2.2
G21K Allakaket 10.65 351 Pn 04 05 37.2 +0.1
G23K Bananza Creek 10.66 359 Pn Pn 04 05 37.3 -0.1
G24K Hadweenzic Riv 10.69 4 Pn 04 05 37.9 +0.2
DLBC Dease Lake 10.72 69 Pn Pn 04 05 37.2 -1.0
comp=E,1.1nm,0.3s,baz=285,slow=6.1,SNR=22
DLBC Sn Sn 04 07 36.8 -1.5
comp=E,0.2nm,0.3s,baz=202,slow=19,SNR=1.2
comp=E,2.1nm,0.3s
F21K Alatna River 11.34 352 Pn Pn 04 05 46.4 -0.2
F20K Avaraart Lake 11.40 347 Pn 04 05 47.7 +0.4
F24K Squaw Lake 11.49 3 Pn 04 05 49.0 +0.3
E24K Your Creek 12.04 2 Pn 04 05 56.8 +0.6
BBB Bella Bella 13.04 99 LR LR 04 09 57.5
comp=E,81nm,18.6s,baz=311,slow=32
E28M Babbage River 13.33 16 Pn 04 06 14.3 +0.5
E29M Blow River 13.41 19 Pn 04 06 14.3 -0.4
INK Inuvik 14.24 24 Pn Pn 04 06 24.9 -1.2
INK Inuvik 14.24 24 Pn Pn 04 06 27.4 +1.3
comp=E,0.1nm,0.3s,baz=213,slow=11,SNR=9.4
comp=E,5.1nm,1.1s
YKA Yellowknife Ar 18.68 56 P Pn 04 07 22.6 -0.4
comp=E,0.1nm,0.3s,baz=264,slow=11,SNR=9.8
comp=E,0.9nm,0.8s
NEW Newport 21.10 98 P P 04 07 51.6 +2.4
comp=E,1.8nm,0.7s,baz=298,slow=6.7,SNR=4.1
NEW LR LR 04 14 03.4
comp=E,108nm,19.1s,baz=359,slow=31
NVAR Mina Array Bea 27.16 117 P P 04 08 48.2 0.0
comp=E,0.6nm,0.7s,baz=318,slow=8.8,SNR=4.4
comp=E,0.6nm,0.7s
PDAR Pinedale Array 28.67 101 P P 04 09 01.2 -0.5
comp=E,0.4nm,0.5s,baz=311,slow=5.8,SNR=4.9
comp=E,0.4nm,0.5s
PETK Petropavlovsk- 30.19 287 LR LR 04 21 22.2
comp=E,49nm,18.4s,baz=25,slow=36
ANMO Albuquerque 35.95 108 LR LR 04 22 47.5
comp=E,66nm,18.6s,baz=126,slow=33
TXAR Lajitas Array 41.80 110 P P 04 10 54.6 +0.2
comp=E,0.5nm,0.8s,baz=327,slow=4.4,SNR=5.1
comp=E,0.5nm,0.8s
ASAJ Asahikawa 43.50 284 LR LR 04 31 06.1
comp=E,59nm,18.4s,baz=74,slow=38
H11N2 WAKE ISLAND Hy 48.75 240 T T 05 04 28.4
baz=31,slow=76,SNR=5.3
H11N3 WAKE ISLAND Hy 48.76 240 T T 05 04 41.1
baz=31,slow=76,SNR=5.1
H11N1 WAKE ISLAND Hy 48.77 240 T T 05 04 27.4
baz=31,slow=76,SNR=4.2
H11S1 WAKE ISLAND Hy 49.89 239 T T 05 06 19.4
baz=34,slow=74
H11S2 WAKE ISLAND Hy 49.90 239 T T 05 06 14.6
baz=34,slow=74
H11S3 WAKE ISLAND Hy 49.91 239 T T 05 06 14.3
baz=34
SONM Songino Array 58.73 310 P P 04 13 05.6 +3.1
comp=E,0.5nm,0.8s,baz=46,slow=6.2,SNR=4.0
comp=E,0.5nm,0.8s
ZALV Zalesovo Beam 61.70 327 P P 04 13 24.8 +2.3
comp=E,0.6nm,0.6s,baz=0.0,slow=6.1,SNR=2.4
comp=E,0.6nm,0.6s
FINES FINESS Array B 62.75 2 P P 04 13 30.2 +0.8
comp=E,2.2nm,0.9s,baz=354,slow=11,SNR=2.8
comp=E,2.2nm,0.9s
KURBB Kurchatov Arra 66.48 329 P P 04 13 55.0 +1.0
comp=E,0.2nm,0.2s,baz=32,slow=5.3,SNR=1.0
comp=E,0.2nm,0.2s
MKAR Makanchi Array 68.73 325 P P 04 14 10.6 +2.3
comp=E,0.3nm,0.5s,baz=41,slow=4.6,SNR=3.7
comp=E,0.3nm,0.5s

IDC 16 04:11:06.2±2.1, 8°87'S×128°00E, h0km, mb3.4/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=149.9km s-min=29.3km az=62.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	12.60	152	Pn	Pn	04 14 06.9	0.0
	0.4nm,0.3s,baz=328,slow=14,SNR=23						
WRA				Sn	Sn	04 16 28.6	+0.6
	0.4nm,0.3s,baz=330,slow=23,SNR=7.6						
	0.5nm,0.4s						
ASAR	Alice Springs	15.76	160	Pn	Pn	04 14 50.1	+0.4
	0.2nm,0.3s,baz=342,slow=11,SNR=7.7						
	0.5nm,0.5s						
MKAR	Makanchi Array	68.73	328	P	P	04 22 11.9	0.0
	0.5nm,1.1s,baz=116,slow=6.6,SNR=2.7						
	0.5nm,1.1s						

IDC 16 04:18:29.7±2.1, 9°59S×112°98E, h0km, mb3.4/6, mbtmp3.5/6, Error ellipse: s-maj=85.6km s-min=23.3km az=49.0

ISC 16 04:18:35.3±2.3, 9°6S±0°4×113°1E±0°4, h36km, n7, σ0s47/7, mb3.6/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.97	119	P	P	04 23 36.5	-0.4
	0.5nm,0.7s,baz=290,slow=12,SNR=2.8						
	0.5nm,0.7s						
ASAR	Alice Springs	24.34	128	P	P	04 23 50.5	+0.5
	0.2nm,0.5s,baz=308,slow=9.5,SNR=2.2						
	0.2nm,0.5s						
MJAR	Matsushiro Arr	51.59	26	P	P	04 27 38.2	0.0
	2.0nm,0.2s,baz=207,slow=7.8,SNR=1.4						
SONM	Songino Array	57.45	355	P	P	04 28 21.1	+0.4
	0.5nm,0.9s,baz=170,slow=9.6,SNR=4.5						
	0.5nm,0.9s						
MKAR	Makanchi Array	62.47	337	P	P	04 28 54.5	-0.5
	0.5nm,0.6s,baz=156,slow=7.3,SNR=11						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	67.03	337	P	P	04 29 24.4	-0.2
	0.3nm,0.6s,baz=146,slow=5.1,SNR=2.8						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	67.65	342	P	P	04 29 28.3	-0.1
	0.6nm,0.4s,baz=162,slow=15,SNR=3.6						
	0.6nm,0.4s						

IDC 16 04:43:37.7±3.9, 53°64N×87°98E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=43.0km s-min=19.6km az=81.0

NNC 16 04:43:40.8±2.7, 53°46N×87°71E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=20.7km s-min=11.5km az=66.0, Suspected Mining explosion.

ISC 16 04:43:38.1±3.2, 53°7N±0°1×87°9E±0°2, h0km, n8, σ1s32/13, 6C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.84	280	I	I	04 54 41.6	
	baz=98,slow=334,SNR=3.4						
ZAA0	Zalesovo Array	1.84	280	⇑P	Pb	04 44 11.7	-0.9
	0.1nm,0.2s						
ZAA0				⇑S	Sg	04 44 37.2	-0.1
	0.4nm,0.3s						
ZALV	Zalesovo Beam	1.84	280	Pn	Pn	04 44 10.9	0.0
	1.7nm,0.3s,baz=105,slow=15,SNR=19						
ZALV				Sn	Sb	04 44 37.1	+0.8
	3.2nm,0.3s,baz=94,slow=24,SNR=15						
KURK	Kurchatov	6.41	246	⇑Pn	Pn	04 45 15.9	+2.2
	0.3nm,0.6s						
KURK				⇑Sn	Sn	04 46 27.3	-0.3
	0.3nm,0.4s						
KURK				⇑Lg	Lg	04 46 55.5	
	0.1nm,0.3s						
KURBB	Kurchatov Arra	6.51	246	⇑Pn	Pn	04 45 15.6	+0.5
	0.3nm,0.2s						
KURBB				⇓Sn	Sn	04 46 30.2	+0.2
	0.8nm,0.4s						
KURBB				⇓Lg	Lg	04 47 01.2	
	0.8nm,0.5s						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	04 45 16.0	+1.0
	0.1nm,0.3s,baz=61,slow=14,SNR=6.3						
	0.4nm,0.4s						
MK31	Makanchi Array	7.75	210	⇓Pn	Pn	04 45 33.3	+1.3
	0.1nm,0.3s,baz=30,slow=15,SNR=12						
MK31				⇓Sn	Sn	04 46 58.4	-2.0
	0.1nm,0.4s						

MK31					⇓Lg	Lg	04 47 34.5			
	0.1nm,0.5s									
MKAR	**Makanchi Array**	**7.75**	**210**		Pn	**Pn**	**04 45 33.2**	**+1.2**		
	0.1nm,0.3s,baz=25,slow=12,SNR=8.4									
MKAR					Sn	**Sn**	**04 46 58.9**	**-1.6**		
	0.1nm,0.3s,baz=30,slow=22,SNR=2.7									
	0.2nm,0.3s									

FUNV **16** *04:43:59.8, 10′.37N×62′.74W, h5km, MW3.0*
TRN **16** *04:44:00.9, 10′.28N×62′.80W, h30km, MD3.4, Venezuela.*
ISC 16 04:43:59.0±1.2, 10°29N±0°.05×62°.81W±0°.03, h15km±10km, n15,σ1§63/26, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
CRUV	**Carupano**	**0.57**	**312**	*eP*		**Pg**	**04 44 08.3**		**-2.0**
CRUV				*eS*		**Sg**	**04 44 15.8**		**-2.1**
TCE	**Chacachacare**	**1.11**	**68**	*eP*		**Pn**	**04 44 20.3**		**+0.2**
TCE				*eS*		**Sn**	**04 44 35.0**		**-0.2**
TPP	**Pointe-a-Pierr**	**1.33**	**89**	*eP*		**Pn**	**04 44 21.1**		**-1.9**
CUMV	**Cumana_UDO**	**1.37**	**276**	*eP*		**Pg**	**04 44 25.7**		**+0.3**
CUMV				*eS*		**Sg**	**04 44 46.4**		**+3.1**
TRN	**Trinidad (W)**	**1.43**	**75**	*eP*		**Pb**	**04 44 25.1**		**-0.2**
TRN				*eS*		**Sb**	**04 44 42.8**		**-0.5**
TBH	**Brigand Hill**	**1.72**	**83**	*eP*		**Pg**	**04 44 33.7**		**+1.6**
PCRV	**Puerto La Cruz**	**1.81**	**267**	*eP*		**Pb**	**04 44 32.4**		**+0.6**
PCRV				*eS*		**Sb**	**04 44 55.0**		**+0.8**
GRGR	**Grenville**	**2.15**	**32**	*eP*		**Pn**	**04 44 35.0**		**+0.6**
GRGR				*eS*		**Sn**	**04 45 01.3**		**+0.4**
GRHS	**Sauteurs**	**2.24**	**31**	*eS*		**Sn**	**04 45 02.2**		**-0.8**
GCMP	**Grenada, Carri**	**2.57**	**32**	*eP*		**Pn**	**04 44 40.9**		**+0.8**
GCMP				*eS*		**Sn**	**04 45 10.3**		**-0.9**
CACV	**CAICARA DEL OR**	**4.57**	**234**	*eP*		**Pn**	**04 45 04.2**		**-3.5**
CACV				*eS*		Sn	04 45 52.9		-7.8
LUEV	**Luepa**	**4.61**	**163**	*eP*		**Pn**	**04 45 08.8**		**+0.4**
LUEV				*eS*		**Sn**	**04 46 00.7**		**-1.1**
BENV	**Beln**	**4.73**	**267**	*eP*		**Pn**	**04 45 11.5**		**+1.6**
BENV				*eS*		**Sn**	**04 46 04.6**		**0.0**
BAUV	**El Baul**	**5.33**	**256**	*eP*		**Pn**	**04 45 19.5**		**+1.4**
BAUV				*eS*		**Sn**	**04 46 18.9**		**-0.5**
BAUV	**El Baul**	**5.33**	**256**	*eP*		**Pn**	**04 45 20.3**		**+2.2**
BAUV				*eS*		**Sn**	**04 46 16.7**		**-2.6**

IDC **16** *04:56:17.0±1.4, 7°.26S×106°.06E, h0km, mb3.8/9, mbtmp3.8/9, MS3.1/1, Error ellipse: s-maj=72.7km s-min=21.0km az=46.0*
DJA **16** *04:56:18.2±0.3, 8°S±3°×10°6E±°, h10km, M4.4/18, mb4.8/3, MLv4.1/18*
ISC 16 04:56:21.1±0.8, 7°57S±0°.07×106°04E±0°.05, h32km, n29, σ1§01/30, mb4.0/9, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SKJI	**Sukabumi**	**0.76**	**42**	P		**Pb**	**04 56 36.2**		**+0.3**
CNJI	**Cibinong**	**1.11**	**76**	P		**Pb**	**04 56 40.7**		**-1.0**
CNJI				S		**Sb**	**04 56 56.1**		**+0.2**
DBJI	**Dramaga**	**1.23**	**35**	P		**Pb**	**04 56 43.8**		**0.0**
CBJI	**Citeko**	**1.40**	**35**	P		**Pn**	**04 56 44.1**		**-0.3**
SBJI	**Serang**	**1.45**	**3**	P		**Pb**	**04 56 46.7**		**-0.7**
TNG	**Tangerang**	**1.51**	**23**	P		**Pb**	**04 56 48.2**		**-0.4**
TNG				S		**Sb**	**04 57 09.1**		**+1.6**
LEM	**Lembang**	**1.73**	**65**	LR		LR	04 57 07.7		
	comp=Z,172nm,20.0s,baz=164,slow=32								
LEM	**Lembang**	**1.73**	**65**	P		**Pn**	**04 56 49.9**		**+0.8**
CMJI	**Cimerak**	**2.39**	**95**	P		**Pn**	**04 56 58.0**		**-0.1**
JCJI	**Jatiwangi**	**2.46**	**64**	P		**Pn**	**04 56 58.5**		**-0.5**
KASI	**Kota Agung**	**2.55**	**323**	P		**Pn**	**04 57 01.7**		**+1.4**
KASI				S		**Sn**	**04 57 30.0**		**+0.4**
KPJI	**Karang Pucung**	**2.87**	**85**	P		**Pn**	**04 57 05.7**		**+1.0**
LWLI	**Liwa**	**3.21**	**322**	P		**Pn**	**04 57 09.4**		**-0.1**
MNAI	**Manna**	**4.43**	**316**	P		**Pn**	**04 57 27.3**		**+1.2**
UGM	**Wanagama**	**4.45**	**95**	P		**Pn**	**04 57 26.7**		**+0.2**
PWJI	**Pagerwojo**	**5.72**	**95**	P		**Pn**	**04 57 44.0**		**+0.1**
	26nm,0.6s,0.2nm								
BWJI	**Bawean**	**6.79**	**76**	P		**Pn**	**04 57 59.3**		**+0.7**
	597nm,1.3s,2.4nm								
CMAR	**Chiang Mai Arr**	**26.80**	**345**	LR		LR	05 13 57.5		
	comp=Z,34nm,18.1s,baz=185,slow=40								
WRA	**Warramunga Arr**	**30.05**	**117**	P		**P**	**05 02 28.9**		**+1.3**
	0.2nm,0.4s,baz=291,slow=10,SNR=4.6								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**31.14**	**124**	P		**P**	**05 02 39.9**		**+2.6**
	0.2nm,0.4s,baz=297,slow=8.5,SNR=1.8								
	0.2nm,0.4s								
SONM	**Songino Array**	**55.17**	**0**	P		**P**	**05 05 49.5**		**-1.2**
	0.4nm,0.4s,baz=181,slow=9.7,SNR=6.8								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**58.11**	**341**	P		**P**	**05 06 09.7**		**-1.9**
	0.9nm,0.6s,baz=150,slow=8.4,SNR=18								
	0.9nm,0.6s								
KURBB	**Kurchatov Arra**	**62.67**	**341**	P		**P**	**05 06 41.7**		**-0.9**
	0.6nm,0.5s,baz=149,slow=6.2,SNR=3.7								
	0.6nm,0.5s								
GEYT	**Alibeck**	**63.56**	**319**	P		**P**	**05 06 49.0**		**+0.1**
	0.8nm,0.3s,baz=142,slow=7.3,SNR=4.5								
	0.8nm,0.3s								
ZALV	**Zalesovo Beam**	**63.85**	**346**	P		**P**	**05 06 49.1**		**-1.2**
	0.8nm,0.4s,baz=156,slow=5.5,SNR=1.9								
	0.8nm,0.4s								
BVAR	**Borovoye Array**	**67.53**	**338**	P		**P**	**05 07 13.2**		**-0.8**
	1.5nm,0.6s,baz=139,slow=8.6,SNR=7.7								
	1.5nm,0.6s								
BRTR	**Keskin Array B**	**81.50**	**312**	P		**P**	**05 08 35.3**		**-0.5**
	0.6nm,0.6s,baz=137,slow=8.7,SNR=5.1								
	0.6nm,0.6s								
NVAR	**Mina Array Bea**	**129.63**	**45**	PKP		**PKPdf**	**05 15 27.7**		**0.0**
	0.2nm,0.6s,baz=296,slow=4.9,SNR=0.6								
TXAR	**Lajitas Array**	**144.65**	**48**	PKP		**PKPdf**	**05 15 55.1**		**-0.3**
	0.2nm,0.6s,baz=309,slow=4.5,SNR=2.5								

DJA **16** *05:13:04.8±0.7, 8°S±2°×10°6E±°, h30km±7km, M5.0/25, mB5.5/10, mb4.8/25, MLv5.1/22, Mw(mB)4.9/10*
MOS **16** *05:13:05.9±1.3, 7°.43S×106°.02E, h51km, mb5.0/31, Error ellipse: s-maj=10.6km s-min=6.5km az=114.0*
NEIC **16** *05:13:05.5±2.1, 7°.63S±0°.05×105°.89E±0°.04, h34km±5km, mb4.8/50, Error ellipse: s-maj=8.2km s-min=5.2km az=154.0*
IDC **16** *05:13:09.1±7.5, 7°.31S×106°.12E, h58km±68km, mb4.2/25, mbtmp4.5/25, MS3.8/34, Error ellipse: s-maj=23.1km s-min=12.2km az=61.0*
ISC 16 05:13:06.1±0.4, 7°67S±0°.04×105°91E±0°.04, h42km±3km, h41km:pP-P, n264, σ1§63/250, mb4.7/77, MS3.9/39, 29C-13D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SKJI	**Sukabumi**	**0.92**	**44**	P		**Pn**	**05 13 20.3**		**-2.3**
CNJI	**Cibinong**	**1.26**	**74**	P		**Pn**	**05 13 25.3**		**-2.0**
DBJI	**Dramaga**	**1.39**	**37**	P		**Pn**	**05 13 28.2**		**-0.8**
DBJI				S		**Sn**	**05 13 45.9**		**-0.2**
CBJI	**Citeko**	**1.55**	**37**	P		**Pn**	**05 13 28.1**		**-3.2**
CBJI				S		**Sn**	**05 13 47.3**		**-2.9**
SBJI	**Serang**	**1.55**	**8**	P		**Pn**	**05 13 31.2**		**-0.1**
SBJI				S		**Sn**	**05 13 51.9**		**+1.7**
TNG	**Tangerang**	**1.66**	**26**	P		**Pn**	**05 13 32.4**		**-0.3**
TNG				S		**Sn**	**05 13 53.5**		**+0.7**
LEM	**Lembang**	**1.89**	**64**	P		**Pn**	**05 13 36.6**		**+0.5**
LEM	**Lembang**	**1.89**	**64**	P		**Pn**	**05 13 37.6**		**+1.6**
	3μm,0.6s,baz=248,slow=17,SNR=170								
LEM				S		**Sn**	**05 14 02.5**		**+3.8**
	10μm,0.8s,baz=315,slow=19,SNR=6.9								
LEM				LR		LR	05 14 22.5		
	comp=Z,3μm,18.1s,baz=244,slow=47								
LEM	**Lembang**	**1.89**	**64**	P		**Pn**	**05 13 35.9**		**-0.2**
LEM				S		**Sn**	**05 14 05.5**		**+6.7**
CMJI	**Cimerak**	**2.52**	**93**	P		**Pn**	**05 13 42.7**		**-1.9**
CMJI				S		**Sn**	**05 14 11.1**		**-3.0**
KASI	**Kota Agung**	**2.55**	**327**	P		**Pn**	**05 13 45.6**		**+0.6**
JCJI	**Jatiwangi**	**2.62**	**64**	P		**Pn**	**05 13 43.6**		**-2.3**
XMIS	**Christmas Isla**	**2.81**	**185**	Pn		**Pn**	**05 13 45.2**		**-3.3**
KPJI	**Karang Pucung**	**3.02**	**84**	P		**Pn**	**05 13 51.2**		**-0.2**
LWLI	**Liwa**	**3.21**	**325**	P		**Pn**	**05 13 54.5**		**+0.3**
MNAI	**Manna**	**4.41**	**318**	Pn		**Pn**	**05 14 10.0**		**-0.6**
MNAI	**Manna**	**4.41**	**318**	P		**Pn**	**05 14 11.3**		**+0.8**
SMRI	**Semarang**	**4.54**	**83**			**Pn**	**05 14 11.7**		**-0.6**
SMRI	**Semarang**	**4.54**	**83**	P		**Pn**	**05 14 11.0**		**-1.3**
UGM	**Wanagama**	**4.58**	**93**	Pn		**Pn**	**05 14 11.6**		**-1.3**
UGM	**Wanagama**	**4.58**	**93**	P		**Pn**	**05 14 11.6**		**-1.3**
PMBI	**Palembang**	**4.84**	**346**	Pn		**Pn**	**05 14 15.9**		**-0.6**
PPBI	**Pangkal Pinang**	**5.47**	**2**	P		**Pn**	**05 14 24.3**		**-0.9**
	190nm,1.0s,26μm1.4nm								
NGJI	**Ngawi**	**5.51**	**87**	P		**Pn**	**05 14 25.5**		**-0.2**
	172nm,1.1s,1.2nm								
PWJI	**Pagerwojo**	**5.85**	**94**	P		**Pn**	**05 14 30.2**		**-0.2**
	194nm,0.8s,2μm2.5nm								
GRJI	**Gresik**	**6.56**	**84**	P		**Pn**	**05 14 39.9**		**-0.2**
	230nm,0.9s,1.2nm								
GMJI	**Gumukmas**	**7.49**	**95**	P		**Pn**	**05 14 51.4**		**-1.5**
BLJI	**Banyuglugur**	**7.62**	**91**	P		**Pn**	**05 14 54.9**		**+0.3**
	63nm,0.5s,2μm0.4nm								
PPSI	**Pulau Pagai**	**7.63**	**309**	P		**Pn**	**05 14 53.8**		**-1.0**
	202nm,0.6s,2μm1.5nm								
JAGI	**Jajag, Banyuwa**	**8.20**	**96**	Pn		**Pn**	**05 15 02.9**		**+0.2**
JAGI	**Jajag, Banyuwa**	**8.20**	**96**	P		**Pn**	**05 15 01.8**		**-0.9**
	137nm,0.8s,3μm								
SRBI	**Singaraja**	**9.23**	**93**	P		**Pn**	**05 15 15.1**		**-1.6**
	134nm,0.8s,2μm								
MYKOM	**Kota Tinggi**	**9.62**	**348**			**Pn**	**05 15 21.5**		**-0.5**
COCO	**West Island**	**10.00**	**243**	Pn		**Pn**	**05 15 26.3**		**-1.1**
COCO	**West Island**	**10.00**	**243**	P		**Pn**	**05 15 26.3**		**-1.1**
PBSI	**Pulau Batu**	**10.72**	**314**	P		**Pn**	**05 15 36.2**		**-1.1**
	63nm,1.2s								
TWSI	**Taliwang, Sumb**	**10.91**	**96**	P		**Pn**	**05 15 38.4**		**-1.4**
	65nm,0.7s,1μm								
PLAI	**Plampang**	**11.80**	**96**	P		**Pn**	**05 15 50.1**		**-1.9**
	54nm,1.2s								
SBUM	**Sibu**	**11.86**	**32**	Pn		**Pn**	**05 15 52.2**		**-0.6**
GSI	**Gunungsitoli**	**12.19**	**317**	Pn		**Pn**	**05 15 53.5**		**-3.8**
BKB	**Balikpapan**	**12.66**	**60**	Pn		**Pn**	**05 16 02.9**		**-0.9**
MMRI	**Maumere**	**16.19**	**95**	Pn		**Pn**	**05 16 49.5**		**-1.3**
GIRL	**Giralia**	**16.91**	**153**	Pn		**Pn**	**05 16 59.2**		**-0.6**
GIRL				IAmb		IAmb	05 17 03.8		
	comp=Z,121nm,1.2s								
KKM	**Kota Kinabalu**	**17.06**	**37**	P		**Pn**	**05 17 01.5**		**-0.4**
TOLI2	**Tolitoli**	**17.21**	**60**			**Pn**	**05 17 01.8**		**-1.8**
MRSI	**Marisa**	**17.92**	**64**	P		**Pn**	**05 17 11.9**		**-0.4**
	comp=Z,39nm,0.6s								
LUWI	**Luwuk**	**18.05**	**69**	P		**Pn**	**05 17 12.4**		**-1.5**
LUWI				IAmb		IAmb	05 17 16.7		
	comp=Z,65nm,0.8s								
SOEI	**Soe**	**18.27**	**98**	P		**P**	**05 17 14.7**		**-1.9**
SOEI				IAmb		IAmb	05 17 27.1		
	comp=Z,84nm,1.0s								
SOEI	**Soe**	**18.27**	**98**	P		**P**	**05 17 16.0**		**-0.5**
	comp=Z,115nm,0.7s								
MBWA	**Marble Bar**	**18.93**	**137**	P		**Pn**	**05 17 24.9**		**+0.3**
MBWA				IAmb		IAmb	05 17 35.1		
	comp=Z,85nm,1.7s								
DLV	**T Lat**	**19.65**	**8**	P		**P**	**05 17 31.0**		**-0.8**
SANI	**Sanana**	**20.76**	**75**	P		**P**	**05 17 42.3**		**-1.4**
	comp=Z,24nm,0.9s								
NLAI	**Namlea**	**21.54**	**79**	P		**P**	**05 17 51.9**		**-0.2**
	comp=Z,27nm,0.8s,comp=Z,3μm								
FITZ	**Fitzroy Crossi**	**21.83**	**120**	P		**P**	**05 17 55.7**		**+0.6**
TNTI	**Ternate**	**22.98**	**70**	P		**P**	**05 18 07.5**		**+0.1**
TNTI				IAmb		IAmb	05 18 24.6		
	comp=Z,53nm,1.0s								
DAV	**Davao City (W)**	**24.48**	**54**	LR		LR	05 28 27.8		
	comp=Z,189nm,19.8s,baz=220,slow=38								
MTN	**Manton Dam**	**25.34**	**104**	P		**P**	**05 18 29.6**		**+0.3**
MTN				IAmb		IAmb	05 18 60.0		
	comp=Z,42nm,1.3s								
TGY	**Tagaytay City**	**26.27**	**35**	LR		LR	05 29 36.4		
	comp=Z,132nm,21.3s,baz=34,slow=38								
FAKI	**Fak Fak**	**26.64**	**81**	P		**P**	**05 18 40.8**		**-0.4**
FAKI				IAmb		IAmb	05 18 46.8		
	comp=Z,22nm,0.9s								
FAKI	**Fak Fak**	**26.64**	**81**	P		**P**	**05 18 40.8**		**-0.4**
	comp=Z,26nm,1.2s								
QIZ	**Qiongzhong**	**26.81**	**8**	P		**P**	**05 18 41.9**		**-0.7**
QIZ				S		**S**	**05 23 20.3**		**+4.2**
QIZ				pmax		pmax			
	comp=Z,120nm,5.9s								
QIZ				LR		LR			
	comp=N,310nm,21.0s								
QIZ				LR		LR			
	comp=E,220nm,16.0s								
QIZ				LR		LR			
	comp=Z,370nm,23.6s								
CMAR	**Chiang Mai Arr**	**26.85**	**345**	*ce*	P	**P**			**+0.7**
CMAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**26.85**	**345**	P		**P**	**05 18 42.4**		**-0.6**
	comp=Z,1.4nm,0.3s,baz=181,slow=8.7,SNR=12								
CMAR				LR		LR	05 30 42.7		
	comp=Z,132nm,19.9s,baz=145,slow=40								
	comp=Z,1.4nm,0.3s								
CHTO	**Chiang Mai**	**27.19**	**345**	P		**P**	**05 18 45.4**		**-0.7**
CHTO	**Chiang Mai**	**27.19**	**345**	P		**P**	**05 18 45.4**		**-0.7**
CHTO				pmax		pmax			
	comp=Z,5.0nm,1.0s								
NWAO	**Narrogin (SRO)**	**27.24**	**159**	LR		LR	05 29 15.7		
	comp=Z,312nm,20.0s,baz=284,slow=35								
H01W3	**Cape Leeuwin H**	**28.12**	**166**	T		T	05 48 42.2		
	baz=345,slow=76,SNR=402								
H01W1	**Cape Leeuwin H**	**28.14**	**166**	T		T	05 48 42.4		
	baz=345,slow=76,SNR=232								
H01W2	**Cape Leeuwin H**	**28.14**	**166**	T		T	05 48 44.5		
	baz=345,slow=76,SNR=363								
PALK	**Pallekele**	**29.19**	**300**	LR		LR	05 29 19.2		
	comp=Z,156nm,21.2s,baz=212,slow=33								
WRA	**Warramunga Arr**	**30.12**	**117**	P		**P**	**05 19 11.8**		**-0.5**
WRA	**Warramunga Arr**	**30.12**	**117**	P		**P**	**05 19 11.8**		**-0.5**
WRA	**Warramunga Arr**	**30.12**	**117**	P		**P**	**05 19 13.2**		**+1.0**
	comp=Z,2.7nm,0.9s,baz=288,slow=12,SNR=22								
	comp=Z,2.7nm,0.9s								
WR0	**Warramunga Arr**	**30.31**	**117**	P		**P**	**05 19 14.7**		**+0.8**
WR0				IAmb		IAmb	05 19 30.5		
	comp=Z,20nm,1.4s								
FORT	**Forrest**	**30.95**	**141**	P		**P**	**05 19 20.7**		**+1.3**
ASAR	**Alice Springs**	**31.20**	**124**	P		**P**	**05 19 22.3**		**+0.6**
ASAR	**Alice Springs**	**31.20**	**124**	P		**P**	**05 19 23.2**		**+1.5**
	comp=Z,2.8nm,0.7s,baz=298,slow=7.8,SNR=24								
ASAR				LR		LR	05 32 11.1		
	comp=Z,137nm,20.9s,baz=296,slow=37								
	comp=Z,2.8nm,0.7s								
AS31	**Alice Springs**	**31.20**	**124**	P		**P**	**05 19 21.6**		**-0.1**
KMI	**Kunming**	**32.74**	**355**	⇑P		**P**	**05 19 34.9**		**-0.4**
KMI				pmax		pmax			
	comp=Z,6.0nm,0.9s								
KMI				LR		LR			
	comp=N,230nm,21.4s								
KMI				LR		LR			
	comp=E,270nm,16.0s								
KMI				LR		LR			
	comp=Z,440nm,12.9s								
PZH	**PanZhiHua**	**34.21**	**353**	P		**P**	**05 19 46.3**		**-1.7**
PZH				S		**S**	**05 25 17.3**		**+5.3**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.8s								
PZH				pmax		pmax			
	comp=Z,120nm,5.5s								
PZH				LR		LR			
	comp=N,300nm,18.8s								
PZH				LR		LR			
	comp=E,180nm,17.0s								
PZH				LR		LR			
	comp=Z,430nm,18.6s								
CD2	**Chengdu**	**38.41**	**357**	P		**P**	**05 20 25.1**		**+1.3**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.9s								
JOW	**Kunigami**	**40.58**	**32**	LR		LR	05 38 04.7		
	comp=Z,91nm,19.1s,baz=340,slow=37								
PMG	**Port Moresby**	**40.81**	**95**	P		P	05 20 49.6		+5.6
	comp=Z,7.4nm,0.3s,baz=265,slow=11,SNR=3.5								
CTA	**Charters Tower**	**40.95**	**112**	P		**P**	**05 20 46.8**		**+1.7**
	comp=Z,8.7nm,0.9s,baz=274,slow=8.2,SNR=8.4								
CTA				LR		LR	05 39 06.6		
	comp=Z,78nm,20.7s,baz=276,slow=38								
	comp=Z,8.7nm,0.9s								
CTAO	**Charters Tower**	**40.95**	**112**	P		**P**	**05 20 44.7**		**-0.4**
CTAO				IAmb		IAmb	05 20 48.9		
	comp=Z,17nm,1.1s								
CTAO	**Charters Tower**	**40.95**	**112**	P		**P**	**05 20 44.7**		**-0.4**
CTAO				pmax		pmax			
	comp=Z,17nm,1.2s								
CTAO	**Charters Tower**	**40.95**	**112**	P		**P**	**05 20 47.4**		**+2.3**
CTAO				pP		**sP**	**05 21 01.6**		**+1.2**
STKA	**Stephens Creek**	**41.01**	**131**	P		**P**	**05 20 45.9**		**+0.4**
STKA	**Stephens Creek**	**41.01**	**131**	P		**P**	**05 20 45.9**		**+0.4**
STKA				pmax		pmax			
	comp=Z,3.0nm,0.9s								
STKA	**Stephens Creek**	**41.01**	**131**	P		**P**	**05 20 47.5**		**+2.0**
	comp=Z,3.7nm,0.5s,baz=302,slow=9.0,SNR=11								
STKA				LR		LR	05 37 43.3		
	comp=Z,111nm,21.3s,baz=300,slow=36								
	comp=Z,3.7nm,0.5s								
NJ2	**Nanjing**	**41.38**	**17**	*eP*		**P**	**05 20 50.1**		**+1.7**
NJ2				pP		**pP**	**05 20 58.9**		**-0.4**
NJ2				sP		**sP**	**05 21 03.3**		**-0.6**
NJ2				pmax		pmax			
	comp=Z,5.0nm,0.5s								
NJ2				pmax		pmax			
	comp=Z,290nm,9.0s								
XAN	**Xi'an**	**41.58**	**4**	⇑P		**P**	**05 20 47.8**		**-2.2**
XAN				pmax		pmax			
	comp=Z,10.0nm,0.7s								
XAN				LR		LR			
	comp=N,440nm,17.2s								
XAN				LR		LR			
	comp=Z,760nm,17.2s								
XAN	**Xi'an**	**41.58**	**4**	P		**P**	**05 20 47.9**		**-2.1**
LYN	**LuoYang**	**42.44**	**8**	⇓P		**P**	**05 20 56.1**		**-0.9**
LYN				pP		pP	05 21 08.5		+0.6
LYN				PP		**PcP**	**05 22 48.5**		**-1.0**
LYN				S		**S**	**05 27 19.9**		**+3.9**
LYN				pmax		pmax			
	comp=Z,16nm,0.8s								
LYN				pmax		pmax			
	comp=Z,290nm,5.8s								
LYN				LR		LR			
	comp=N,200nm,12.0s								
LYN				LR		LR			
	comp=E,240nm,13.7s								
LYN				LR		LR			
	comp=Z,280nm,18.9s								
GTA	**Gaotai**	**47.18**	**354**	*eP*		**P**	**05 21 33.9**		**-0.9**
GTA				sP		sP	05 21 49.8		-0.7
GTA				pmax		pmax			
	comp=Z,8.0nm,1.0s								
BTO	**Baotou**	**48.18**	**4**	*eP*		**P**	**05 21 44.4**		**+1.9**
BTO				pP		**pwP**	**05 21 57.0**		**+0.4**
BTO				sP		**sP**	**05 22 02.3**		**+4.1**
BTO				PP		PP	05 23 26.3		-8.9
BTO				S		**S**	**05 28 42.8**		**+3.9**
HHC	**Hu-ho-hao-te**	**48.55**	**6**	*eP*		**P**	**05 21 49.1**		**+3.7**
HHC				sP		sP	05 22 03.3		+2.2
HHC				PP		**PP**	**05 23 40.4**		**+1.7**
HHC				pmax		pmax			
	comp=Z,4.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,65nm,6.3s								
JCJ	**Chichijima**	**49.28**	**44**	LR		LR	05 44 21.0		
	comp=Z,26nm,20.3s,baz=164,slow=38								
KSRS	**Korea Array**	**49.38**	**23**	P		**P**	**05 21 50.5**		**-1.1**
	comp=Z,3.6nm,0.8s,baz=216,slow=8.5,SNR=18								
KSRS				LR		LR	05 45 27.6		
	comp=Z,20nm,18.8s,baz=205,slow=40								
	comp=Z,3.6nm,0.8s								
NIL	**Nilore**	**51.47**	**325**	P		**P**	**05 22 06.8**		**-0.7**
NIL	**Nilore**	**51.47**	**325**	P		**P**	**05 22 06.8**		**-0.7**
NIL				pmax		pmax			
	comp=Z,32nm,1.2s								
NIL	**Nilore**	**51.47**	**325**	P		**P**	**05 22 07.3**		**-0.2**
NIL				pP		**pwP**	**05 22 22.3**		**+0.7**
XLT	**XiLinHaoTe**	**52.15**	**9**	*eP*		**P**	**05 22 11.0**		**-1.5**
XLT				pP		pP	05 22 23.8		+0.1
XLT				sP		pwP	05 22 27.1		+0.5
XLT				PcP		**PcP**	**05 23 19.0**		**-4.9**
XLT				pmax		pmax			
	comp=Z,4.0nm,0.7s								
XLT				pmax		pmax			
	comp=Z,160nm,4.9s								
MJAR	**Matsushiro Arr**	**53.41**	**32**	P		**P**	**05 22 18.4**		**-3.5**
	comp=Z,2.7nm,0.8s,baz=220,slow=8.9,SNR=4.9								
MJAR				LR		LR	05 47 46.6		
	comp=Z,55nm,18.0s,baz=310,slow=39								
	comp=Z,2.7nm,0.8s								
WMQ	**Urumqi**	**53.84**	**344**	*eP*		**P**	**05 22 26.9**		**+1.9**
CN2	**Changchun**	**54.20**	**17**	*eP*		**P**	**05 22 26.3**		**-1.2**
CN2				*ep*	P	pP	05 22 38.9		+0.1
WUS	**Wushi**	**54.46**	**335**	P		**P**	**05 22 28.9**		**-0.7**
SONM	**Songino Array**	**55.26**	**0**	P		**P**	**05 22 34.3**		**-1.0**
	comp=Z,3.3nm,0.7s,baz=182,slow=9.2,SNR=26								

comp=Z,6.8nm,0.7s
KURK Kurchatov 62.76 341 P **P** **05 23 25.8 -1.2**
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 62.76 341 P **P** **05 23 26.5 -0.6**
KURK pP **pwP** **05 23 41.4 -0.2**
YSS Yuzh-Sakhalins 63.46 27ceP **P** **05 23 30.5 -1.2**
YSS pmax pmax
comp=Z,38nm,1.7s
GEYT Alibeck 63.55 319 P **P** **05 23 31.9 -0.7**
GEYT Alibeck 63.55 319 P **P** **05 23 31.9 -0.7**
GEYT pmax pmax
comp=Z,14nm,1.0s
GEYT Alibeck 63.55 319 P **P** **05 23 33.2 +0.6**
comp=Z,11nm,0.9s,baz=134,slow=8.4,SNR=18
comp=Z,11nm,0.9s
GYA0 ALIBECK ARRAY 63.55 319 P **P** **05 23 32.5 -0.1**
GYA0 pmax pmax
comp=Z,13nm,1.0s
GYA0B ALIBECK ARRAY 63.55 319 P **P** **05 23 32.5 -0.1**
GYA0B lAmb lAmb 05 23 35.7
comp=Z,13nm,1.0s
ZEA Zeya 63.78 14 eP **P** **05 23 34.2 +0.5**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZAA0 Zalesovo Array 63.91 346 P **P** **05 23 32.8 -1.8**
ZALV Zalesovo Beam 63.91 346 P **P** **05 23 33.0 -1.6**
ZALV Zalesovo Beam 63.91 346 P **P** **05 23 33.1 -1.5**
comp=Z,2.5nm,0.3s,baz=152,slow=6.7,SNR=23
comp=Z,2.5nm,0.3s
RAYN Ar Rayn 66.63 300 P **P** **05 23 52.2 -0.7**
RAYN lAmb lAmb 05 24 03.3
comp=Z,22nm,1.8s
RAYN Ar Rayn 66.63 300 P **P** **05 23 52.2 -0.7**
RAYN pmax pmax
comp=Z,22nm,1.8s
RAYN Ar Rayn 66.63 300 P **P** **05 23 53.6 +0.7**
RPZ Rata Peaks 66.84 134 LR LR 05 52 27.2
comp=Z,100nm,20.9s,baz=270,slow=35
BVA0 Borovoye Array 67.56 338 *i* P **P** **05 23 56.7 -1.5**
BVAR Borovoye Array 67.56 338 P **P** **05 23 57.6 -0.6**
comp=Z,5.7nm,0.5s,baz=141,slow=9.2,SNR=34
comp=Z,5.7nm,0.5s
BRVK Borovoye 67.63 338 P **P** **05 23 57.8 -0.8**
BRVK lAmb lAmb 05 23 58.8
comp=Z,4.9nm,0.6s
BRVK Borovoye 67.63 338ceP **P** **05 23 58.0 -0.6**
BRVK pmax pmax
comp=Z,8.0nm,1.3s
BRVK Borovoye 67.63 338 P **P** **05 23 58.0 -0.5**
CCD Concordia, Ant 68.12 175 P **P** **05 24 04.0 +2.2**
CCD pP **sP** **05 24 18.5 +0.7**
AB31 Akbulak array 69.43 330 *i* P **P** **05 24 09.2 -0.7**
ABKAR Akbulak array 69.43 330 P **P** **05 24 09.3 -0.6**
ABKAR Akbulak array 69.43 330 P **P** **05 24 09.0 -0.9**
RTZ Ruatahuna 70.47 128 P **P** **05 24 17.1 +0.3**
RTZ lAmb lAmb 05 24 20.0
comp=Z,17nm,1.1s
URZ Urewera 70.54 128 LR LR 05 55 59.0
comp=Z,97nm,19.5s,baz=300,slow=36
YAK Yakutsk 71.89 12ceP **P** **05 24 23.6 -1.0**
YAK pmax pmax
comp=Z,26nm,0.8s
SVE Sverdlovsk 74.17 336 eP **P** **05 24 39.1 +0.9**
SVE pmax pmax
comp=Z,25nm,1.2s
PETK Petropavlovsk- 74.70 29 P **P** **05 24 39.9 -1.5**
comp=Z,1.8nm,0.9s,baz=214,slow=2.9,SNR=1.4
PETK LR LR 05 58 48.2
comp=Z,36nm,20.4s,baz=292,slow=37
comp=Z,1.8nm,0.9s
ARU Arti 74.76 335 P **P** **05 24 41.2 -0.4**
ARU lAmb lAmb 05 24 43.4
comp=Z,11nm,1.0s
ARU Arti 74.76 335ceP **P** **05 24 41.5 -0.1**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 74.76 335 LR LR 06 00 31.4
comp=Z,176nm,18.5s,baz=308,slow=38
MBAR Mbarara 75.22 271 LR LR 05 53 54.7
comp=Z,65nm,19.8s,baz=76,slow=32
ZEI Tsey 75.36 318 eP **P** **05 24 46.4 +0.7**
ZEI pmax pmax
comp=Z,6.0nm,1.0s
VNDA Vanda 75.52 169 P **P** **05 24 46.9 +1.2**
VNDA lAmb lAmb 05 26 49.7
comp=Z,19nm,1.6s
VNDA Vanda 75.52 169 P **P** **05 24 46.9 +1.2**
VNDA pmax pmax
comp=Z,19nm,1.6s
MA2 Magadan 75.91 22ceP **P** **05 24 47.4 -0.8**
MA2 pmax pmax
comp=Z,9.0nm,0.7s
LSZ Lusaka 76.22 256 P **P** **05 24 49.9 -1.2**
LSZ Lusaka 76.22 256 P **P** **05 24 49.9 -1.2**
LSZ pmax pmax
comp=Z,40nm,1.7s
LSZ Lusaka 76.22 256 LR LR 05 53 51.8
comp=Z,136nm,20.4s,baz=114,slow=32
KBZ Khabaz 76.42 318ceP **P** **05 24 52.7 +1.3**
KBZ pmax pmax
comp=Z,16nm,1.0s
KBZ Khabaz 76.42 318 P **P** **05 24 52.2 +0.8**
comp=Z,12nm,0.9s,baz=146,slow=4.7,SNR=13
comp=Z,12nm,0.9s
KIV Kislovodsk 76.65 318 ⇓P **P** **05 24 55.1 +2.3**
KIV Kislovodsk 76.65 318 eP **P** **05 24 53.4 +0.5**
KIV pmax pmax
comp=Z,9.0nm,1.1s
EIL Elat 77.52 303 LR LR 05 58 57.4
comp=Z,41nm,19.0s,baz=80,slow=36
BELG Belogornoye 77.61 328 *i* P **P** **05 24 57.2 -0.7**
BELG pmax pmax
comp=Z,3.0nm,1.0s
ARPR Arapgir-MALATY 77.82 313 P **P** **05 24 58.4 -1.2**
ARPR lAmb lAmb 05 25 03.1
comp=Z,14nm,1.3s
NRIK Noril'sk 77.88 353 P **P** **05 24 57.9 -1.2**
NRIK lAmb lAmb 05 24 59.7
comp=Z,17nm,1.2s
NRIK Noril'sk 77.88 353ceP **P** **05 24 58.9 -0.2**
NRIK pmax pmax
comp=Z,15nm,1.1s
NRIK Noril'sk 77.88 353 P **P** **05 24 58.2 -0.9**
comp=Z,4.5nm,0.4s,baz=162,slow=5.7,SNR=12
comp=Z,4.5nm,0.4s
LBTB Lobatse 78.05 246 P **P** **05 25 00.9 -0.3**
LBTB Lobatse 78.05 246 P **P** **05 25 00.9 -0.3**
LBTB pmax pmax
comp=Z,61nm,2.0s
LBTB Lobatse 78.05 246 LR LR 05 53 41.6
comp=Z,62nm,18.6s,baz=46,slow=31
MMAI Mount Meron Ar 78.11 306 LR LR 06 01 39.9
comp=Z,80nm,20.1s,baz=53,slow=37
BOSA Boshof 78.19 242 P **P** **05 25 01.4 -0.5**
BOSA Boshof 78.19 242 P **P** **05 25 01.4 -0.5**
BOSA pmax pmax
comp=Z,43nm,1.9s
BOSA Boshof 78.19 242 P **P** **05 25 03.9 +2.0**
comp=Z,2.7nm,0.7s,baz=94,slow=4.4,SNR=5.1
BOSA LR LR 05 55 52.0
comp=Z,45nm,18.3s,baz=7.5,slow=33
comp=Z,2.7nm,0.7s
SEY Seymchan 78.79 20ceP **P** **05 25 03.0 -1.2**
SEY pmax pmax
comp=Z,7.0nm,0.9s
KIRV Kirov 80.00 334ceP **P** **05 25 12.2 +1.4**
VRH Novokhopyorsk 80.30 325 eP **P** **05 25 11.5 -1.2**
VRH pmax pmax
comp=Z,10.0nm,0.7s
TIXI Tiksi 80.60 7 P **P** **05 25 11.6 -2.2**
TIXI lAmb lAmb 05 25 12.9
comp=Z,10nm,0.8s
TIXI Tiksi 80.60 7ceP **P** **05 25 12.2 -1.6**
TIXI pmax pmax
comp=Z,11nm,0.8s
BR131 Keskin Array S 81.46 312 P **P** **05 25 19.1 -0.3**
BR131 lAmb lAmb 05 25 20.8
comp=Z,15nm,1.2s
BR131 Keskin Array S 81.46 312 P **P** **05 25 19.1 -0.3**
BR131 pmax pmax
comp=Z,15nm,1.2s
BRTR Keskin Array B 81.46 312 P **P** **05 25 19.6 +0.2**
BRTR Keskin Array B 81.46 312 P **P** **05 25 20.1 +0.7**
comp=Z,6.8nm,0.8s,baz=126,slow=7.6,SNR=32
comp=Z,6.8nm,0.8s

VORD Divnogorie 81.60 324 eP **P** **05 25 17.4 -2.2**
VORD pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 81.77 324 eP **P** **05 25 18.4 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s
SUR Sutherland 81.82 238 LR LR 05 55 26.3
comp=Z,125nm,20.8s,baz=76,slow=31
QSPA South Pole Qui 82.33 180 P **P** **05 25 24.8 +1.4**
QSPA lAmb lAmb 05 25 47.3
comp=Z,9.4nm,1.2s
QSPA South Pole Qui 82.33 180 P **P** **05 25 26.2 +2.8**
comp=Z,2.1nm,1.1s,baz=127,slow=1.6,SNR=5.6
QSPA LR LR 06 00 29.6
comp=Z,56nm,18.3s,baz=248,slow=34
comp=Z,2.1nm,1.1s
OBN Obninsk 84.70 327 eP **P** **05 25 35.3 -0.2**
OBN ePPP PPP 05 30 42.7
OBN pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 85.48 333 eP **P** **05 25 39.7 +0.4**
KLMR pmax pmax
comp=Z,20nm,1.1s
TSUM Tsumeb 85.94 251 LR LR 05 59 57.7
comp=Z,92nm,18.6s,baz=74,slow=33
BILL Bilibino 86.47 19 P **P** **05 25 42.3 -1.8**
TIRR Tirgusor 86.49 316 ⇓P **P** **05 25 46.0 +1.3**
TIRR Tirgusor 86.49 316 P **P** **05 25 46.0 +1.3**
CFR Carcaliu 86.86 316 ⇑P **P** **05 25 47.3 +0.8**
CFR Carcaliu 86.86 316 ⇑P **P** **05 25 47.3 +0.8**
HARR Harsova 86.88 316 ⇑P **P** **05 25 48.3 +1.7**
HARR Harsova 86.88 316 ⇑P **P** **05 25 48.3 +1.7**
SORM Soroca 87.44 319 ⇑P **P** **05 25 49.4 +0.2**
SORM Soroca 87.44 319 ⇑P **P** **05 25 49.4 +0.2**
AKASG Malin Array Be 87.54 322 *i* P **P** **05 25 52.7 +3.1**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 87.54 322 P **P** **05 25 49.1 -0.6**
comp=Z,2.3nm,0.8s,baz=88,slow=4.6,SNR=5.3
comp=Z,2.3nm,0.8s
ELND Elena 87.93 314 ⇑P **P** **05 25 52.5 +0.8**
VRI Vrincioaia 87.98 317 ⇓P **P** **05 25 53.8 +1.9**
VRI Vrincioaia 87.98 317 ⇓P **P** **05 25 53.8 +1.9**
PLOR Plostina 88.03 317 ⇑P **P** **05 25 54.2 +2.0**
PLOR Plostina 88.03 317 ⇑P **P** **05 25 54.2 +2.0**
TESR Tescani 88.18 317 ⇓P **P** **05 25 54.4 +1.6**
GIRR Girov 88.38 318 ⇓P **P** **05 25 54.6 +0.9**
MLR Muntele Rosu 88.44 316 ⇓P **P** **05 25 55.8 +1.6**
MLR Muntele Rosu 88.44 316 P **P** **05 25 54.8 +0.6**
MLR Muntele Rosu 88.44 316 P **P** **05 25 54.8 +0.6**
MLR pmax pmax
comp=Z,53nm,1.7s
TURR Turia 88.51 317 ⇓P **P** **05 25 55.9 +1.4**
SNAA Sanae 88.57 197 LR LR 05 59 23.5
comp=Z,95nm,19.6s,baz=342,slow=31
DOPR Dopca 88.92 317 ⇑P **P** **05 25 57.8 +1.5**
VOIR 89.04 316 ⇑P **P** **05 25 57.4 +0.4**
VOIR 89.04 316 ⇑P **P** **05 25 57.4 +0.4**
VLAD Vladila 89.20 314 ⇓P **P** **05 25 59.0 +1.3**
ARR Arges 89.31 316 ⇑P **P** **05 25 59.0 +0.8**
BURAR Bucovina Array 89.38 318 ⇓P **P** **05 26 00.3 +1.7**
BURAR Bucovina Array 89.38 318 ⇓P **P** **05 26 00.3 +1.7**
BUR08 Bucovina Ar. S 89.39 318 P **P** **05 25 59.5 +0.9**
MARR Marisel-Cluj 90.60 317 ⇑P **P** **05 26 04.7 +0.4**
RAR Rarotonga 91.26 111 LR LR 06 06 12.2
comp=Z,22nm,21.0s,baz=224,slow=35
KOLS Kolonicke sedl 91.56 319 eP **P** **05 26 12.9 +4.3**
KOLS Kolonicke sedl 91.56 319 eP **P** **05 26 12.9 +4.3**
FINES FINESS Array B 91.84 332 *i* P **P** **05 26 12.3 +2.8**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 91.84 332 P **P** **05 26 09.9 +0.4**
comp=Z,2.1nm,0.8s,baz=108,slow=4.5,SNR=7.3
comp=Z,2.1nm,0.8s
ARCES ARCESS Array B 93.78 340 P **P** **05 26 18.4 +0.1**
comp=Z,3.9nm,1.0s,baz=101,slow=4.7,SNR=5.2
comp=Z,3.9nm,1.0s
MODS Modra-Piesok 94.76 318 eP **P** **05 26 26.9 +3.5**
MODS Modra-Piesok 94.76 318 eP **P** **05 26 26.9 +3.5**
SPITS Spitsbergen Ar 97.36 348 P Pdif 05 26 34.8 +0.2
comp=Z,3.2nm,0.7s,baz=90,slow=5.8,SNR=1.3
comp=Z,3.2nm,0.7s
NOA NORSAR Array B 98.93 331 LR LR 06 18 50.4
comp=Z,44nm,18.6s,baz=350,slow=40
TBI Tubuai 100.25 115 eLR LR 05 59 27.0
comp=Z,929nm,29.5s
TBI eLR LR 05 59 32.1
comp=Z,333nm,29.5s
PPT2 Papeete2 101.37 110 eLR LR 05 59 58.4
comp=Z,99nm,37.0s
PPT2 eLR LR 06 00 05.5
comp=Z,46nm,23.0s
H09N1 TRISTAN DA CUN 107.18 228 T T 07 25 32.0
SNR=13
TXAR Lajitas Array 144.82 48 PKIKP **PKPdf** **05 32 40.0 +0.6**
TXAR Lajitas Array 144.82 48 PKP **PKPdf** **05 32 40.0 +0.6**
comp=Z,1.4nm,0.6s,baz=270,slow=0.9,SNR=24
BDFB Brasilia 145.31 228 PKPbc **PKPdf** **05 32 42.4 +1.8**
comp=Z,3.0nm,0.5s,baz=130,slow=6.1,SNR=5.9

*IDC **16** 05:15:13.3±13.0, 13°.52S×167°.08E, h276km±151km, mb3.0/5, mbtmp3.8/6, Error ellipse: s-maj=151.7km s-min=26.6km az=163.0*
ISC 16 05:15:15.3±1.1, 13°.75±0°.2×167°.1E±0°.2, h300km, n6, σ0s56/6, mb3.3/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.36**	**184**	P	**Pn**	**05 17 13.3**	**-0.1**
	13nm,0.9s,baz=35,slow=23,SNR=1.7						
CTA	**Charters Tower**	**20.94**	**249**	P	**P**	**05 19 36.1**	**+0.3**
	1.3nm,0.4s,baz=81,slow=13,SNR=2.0						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**31.95**	**254**	P	**P**	**05 21 13.4**	**-0.7**
	0.8nm,0.7s,baz=86,slow=9.1,SNR=2.6						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**32.92**	**248**	P	**P**	**05 21 23.0**	**+0.6**
	1.0nm,0.5s,baz=77,slow=9.0,SNR=6.4						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**85.59**	**18**	P	**P**	**05 27 19.6**	**-0.2**
	0.2nm,0.7s,baz=236,slow=6.8,SNR=5.0						
	0.2nm,0.7s						
NVAR	**Mina Array Bea**	**86.71**	**49**	P	**P**	**05 27 26.3**	**+0.2**
	0.2nm,0.6s,baz=214,slow=6.1,SNR=2.3						
	0.2nm,0.6s						

IDC 16 05:27:44.3±3.1, 54°.39N×87°.03E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=25.5km s-min=17.8km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**252**	I	I	05 35 49.7	
	0.1nm,0.9s,baz=66,slow=329,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.38**	**252**	Pg	Pg	05 28 08.5	-2.1
	0.9nm,0.3s,baz=68,slow=19,SNR=11						
ZALV				Lg	Lg	05 28 28.9	
	1.0nm,0.3s,baz=69,slow=21,SNR=6.1						
ZALV				Rg	Rg	05 28 41.6	
	4.8nm,0.9s,baz=58,slow=29,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.42**	**237**	Pn	Pn	05 29 21.3	+1.3
	0.1nm,0.3s,baz=53,slow=14,SNR=11						
KURBB				Sn	Sn	05 30 33.3	-0.5
	baz=219,slow=12,SNR=1.6						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**8.18**	**204**	Pn	Pn	05 29 45.7	+1.5
	baz=17,slow=10,SNR=3.0						
MKAR				Sn	Sn	05 31 14.3	-3.1
	baz=22,slow=27,SNR=3.5						
MKAR				Lg	Lg	05 32 02.9	
	baz=128,slow=30,SNR=2.8						
	0.1nm,0.3s						

IDC 16 05:44:01.1±1.4, 3°.42N×123°.81E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=196.5km s-min=20.2km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.41**	**156**	P	P	05 49 30.6	+0.1
	1.4nm,0.5s,baz=334,slow=11,SNR=13						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**28.66**	**160**	P	P	05 50 00.1	+0.3
	0.2nm,0.3s,baz=344,slow=7.1,SNR=4.3						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**38.96**	**156**	P	P	05 51 28.4	-0.6
	0.6nm,0.3s,baz=15,slow=12,SNR=2.9						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**56.18**	**327**	P	P	05 53 43.2	+0.4
	0.5nm,0.5s,baz=120,slow=7.7,SNR=11						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**60.46**	**329**	P	P	05 54 12.0	-0.6
	0.3nm,0.5s,baz=128,slow=6.2,SNR=3.3						
	0.3nm,0.5s						

*TAP **16** 05:46:04.8, 24°.08N×121°.74E, h4km, ML3.0, D*
ISC 16 05:46:05.3±1.1, 24°.06N±0°.02×121°.79E±0°.04, h8km±7km, n57, σ0s58/96, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.17**	**276**	*i* P	**Pg**	**05 46 08.5**	**-0.4**
	baz=271						
TWD				*i* S	**Sg**	**05 46 11.1**	**-0.3**
	baz=271						
ETL	**Fush Village**	**0.18**	**304**	*i* P	**Pg**	**05 46 08.8**	**-0.2**
	baz=306						
ETL				*i* S	**Sg**	**05 46 11.5**	**-0.1**
	baz=306						
HWA	**Hwalien**	**0.18**	**243**	eP	**Pg**	**05 46 09.5**	**+0.4**
	baz=229						
HWA				eS	**Sg**	**05 46 12.2**	**+0.5**
	baz=229						
NACB	**Ninganchiao**	**0.21**	**303**	P	**Pg**	**05 46 09.2**	**-0.4**
NACB	**Ninganchiao**	**0.21**	**303**	*i* P	**Pg**	**05 46 09.2**	**-0.4**
	baz=305						
NACB				*i* S	**Sg**	**05 46 12.2**	**-0.2**
	baz=305						
EAHA	**Aohua**	**0.27**	**351**	P	**Pg**	**05 46 10.9**	**+0.2**
	baz=359						
ETM	**Tongmen**	**0.28**	**251**	*i* P	**Pg**	**05 46 10.7**	**-0.2**
	baz=243						
ETM				*i* S	**Sg**	**05 46 15.5**	**+0.7**
	baz=243						
ETLH	**Xiulin Townshi**	**0.31**	**298**	*i* P	**Pg**	**05 46 11.1**	**-0.5**
	baz=298						
ETLH				*i* S	**Sg**	**05 46 15.7**	**0.0**
	baz=298						
SHUL	**Shoufeng**	**0.34**	**217**	P	**Pb**	**05 46 13.2**	**-0.4**
	baz=209						
SHUL				eS	**Sb**	**05 46 19.0**	**-0.1**
	baz=209						
LXIB	**Xiulin Townshi**	**0.34**	**263**	P	**Pg**	**05 46 11.7**	**-0.4**
	baz=259						
LXIB				eS	**Sg**	**05 46 17.2**	**+0.5**
	baz=259						
ENA	**Nanau**	**0.37**	**354**	eP	**Pg**	**05 46 12.8**	**+0.2**
	baz=1.0						
ENA				eS	**Sg**	**05 46 17.9**	**+0.5**
	baz=1.0						
EWUT	**Wuta**	**0.38**	**359**	eP	**Pg**	**05 46 13.1**	**+0.2**
	baz=5.0						
ESL	**Shilin**	**0.41**	**233**	*i* P	**Pg**	**05 46 13.2**	**-0.1**
	baz=226						
ESL				*i* S	**Sg**	**05 46 19.7**	**+1.1**
	baz=226						
TEGC	**Jichi Village**	**0.41**	**213**	eP	**Pb**	**05 46 14.6**	**-0.2**
	baz=205						
TEGC				eS	**Sb**	**05 46 21.5**	**+0.2**
	baz=205						
WHF	**Hehuan Shan**	**0.48**	**280**	eP	**Pg**	**05 46 14.6**	**-0.2**
	baz=278						
WHF				eS	**Sg**	**05 46 21.6**	**+0.5**
	baz=278						
WARBT	**Fenglin Townsh**	**0.50**	**227**	P	**Pg**	**05 46 15.0**	**0.0**
	baz=222						
WARBT				eS	**Sb**	**05 46 22.7**	**-1.1**
	baz=222						
ESAO	**Su ao**	**0.52**	**6**	eP	**Pb**	**05 46 15.5**	**-1.1**
	baz=10.0						
ESAO				eS	**Sb**	**05 46 25.0**	**+0.8**
	baz=10.0						
NNSB	**Datong**	**0.52**	**315**	eP	**Pg**	**05 46 15.4**	**0.0**
	baz=316						
NNSB				eS	**Sg**	**05 46 22.6**	**+0.3**
	baz=316						
FUSS	**Fushou**	**0.53**	**291**	eP	**Pg**	**05 46 15.5**	**-0.1**
	baz=290						
FUSS				eS	**Sg**	**05 46 23.6**	**+1.0**
	baz=290						
LATG	**Datong**	**0.53**	**334**	P	**Pg**	**05 46 15.7**	**+0.1**
	baz=336						
LATG				eS	**Sb**	**05 46 24.2**	**-0.5**
	baz=336						
NNS	**Nan Shan**	**0.53**	**315**	eP	**Pg**	**05 46 15.5**	**-0.2**
	baz=317						
NNS				eS	**Sg**	**05 46 23.4**	**+0.7**
	baz=317						
TWC	**Suao**	**0.55**	**6**	eP	**Pb**	**05 46 16.5**	**-0.7**
	baz=11						
CHGB	**Renai**	**0.56**	**270**	*i* P	**Pg**	**05 46 16.1**	**-0.1**
	baz=268						
CHGB				eS	**Sg**	**05 46 24.9**	**+1.4**
	baz=268						
NDS	**Dongshan**	**0.57**	**354**	eP	**Pb**	**05 46 17.5**	**-0.1**
	baz=357						
NDS				eS	**Sb**	**05 46 26.1**	**+0.2**
	baz=357						
TWT	**Tachien**	**0.59**	**289**	eP	**Pg**	**05 46 17.1**	**+0.4**
	baz=287						
NDT	**Datong Townshi**	**0.59**	**335**	*i* P	**Pg**	**05 46 17.2**	**+0.4**
	baz=338						
NDT				eS	**Sg**	**05 46 25.8**	**+1.2**
	baz=338						
TDCB	**Techi**	**0.60**	**289**	eP	**Pg**	**05 46 17.4**	**+0.4**
	baz=288						
TDCB				S	**Sg**	**05 46 25.9**	**+0.9**
	baz=288						
ENTT	**Nioudou**	**0.61**	**341**	eP	**Pb**	**05 46 17.5**	**-0.7**
	baz=344						
ENTT				eS	**Sb**	**05 46 26.7**	**-0.3**
	baz=344						
WUSB	**Renai**	**0.61**	**264**	*i* P	**Pg**	**05 46 17.3**	**+0.1**
	baz=261						
WUSB				S	**Sg**	**05 46 26.9**	**+1.6**
	baz=261						
HGSD	**Ruisui**	**0.66**	**210**	eP	**Pb**	**05 46 19.0**	**0.0**
	baz=206						
HGSD				eS	**Sn**	**05 46 29.6**	**-1.7**
	baz=206						
VWDT	**VWDT**	**0.66**	**243**	eP	**Pg**	**05 46 18.3**	**+0.2**
	baz=239						
VWDT				S	**Sb**	**05 46 28.4**	**-0.1**
	baz=239						
TWE	**Neicheng**	**0.67**	**351**	P	**Pb**	**05 46 18.8**	**-0.3**
	baz=355						
EHY	**Hungye**	**0.70**	**218**	eP	**Pg**	**05 46 18.5**	**-0.3**
	baz=213						
EHY				eS	**Sb**	**05 46 30.2**	**+0.8**
	baz=213						
YHNB	**Yeheng**	**0.71**	**328**	P	**Pb**	**05 46 19.6**	**-0.4**
YHNB	**Yeheng**	**0.71**	**328**	eP	**Pg**	**05 46 19.2**	**+0.1**
	baz=330						
YHNB				eS	**Sb**	**05 46 30.0**	**0.0**
	baz=330						
FUSB	**Fushanzhiwuyua**	**0.72**	**346**	eP	**Pg**	**05 46 19.4**	**+0.2**
	baz=348						
FUSB				S	**Sb**	**05 46 30.2**	**0.0**
	baz=348						
NSK	**Sanguang**	**0.73**	**328**	*i* P	**Pg**	**05 46 19.6**	**+0.3**
	baz=329						
NSK				S	**Sb**	**05 46 30.4**	**+0.1**
	baz=329						
WPL	**Puli Township**	**0.76**	**267**	eP	**Pg**	**05 46 20.2**	**+0.3**
	baz=265						
WPL				S	**Sb**	**05 46 31.5**	**+0.3**
	baz=265						
NWLT	**Wulai**	**0.76**	**340**	P	**Pb**	**05 46 20.2**	**-0.5**
	baz=342						
NWLT				S	**Sb**	**05 46 31.1**	**-0.2**
	baz=342						
DPDB	**Guoxing**	**0.79**	**268**	eP	**Pg**	**05 46 20.6**	**+0.1**
	baz=266						
DPDB				eS	**Sg**	**05 46 31.5**	**+0.8**
	baz=266						
ECBN	**Changbin**	**0.80**	**202**	eS	**Sn**	**05 46 33.9**	**-1.1**
	baz=199						
YULB	**Yu-li**	**0.80**	**214**	P	**Pb**	**05 46 21.4**	**-0.1**
YULB	**Yu-li**	**0.80**	**214**	eP	**Pg**	**05 46 20.0**	**-0.7**
	baz=210						
YULB				eS	**Sn**	**05 46 34.1**	**-0.8**

baz=210
SSLB Suanglung 0.81 250 P **Pg** 05 46 20.8 -0.1
SSLB Suanglung 0.81 250 P **Pg** 05 46 20.7 -0.1
baz=248
SSLB S **Sg** 05 46 32.2 +0.8
baz=248
SMLT Sun Moon Lake 0.83 258 *i* P **Pg** 05 46 21.4 +0.1
baz=255
SMLT *e*S **Sg** 05 46 33.3 +1.2
baz=255
NFF Wufeng Townshi 0.83 313 *e*P **Pb** 05 46 21.8 -0.2
baz=314
TWF1 Yuli 0.83 212 *e*P **Pg** 05 46 20.6 -0.7
baz=208
TWF1 S **Sn** 05 46 35.5 -0.3
baz=208
TYC Yuchr 0.86 260 P **Pg** 05 46 21.8 -0.1
baz=257
TYC *e*S **Sb** 05 46 34.5 +0.4
baz=257
LIOB Emei 0.91 310 P **Pb** 05 46 23.5 +0.2
baz=310
NSTT Nanjuang 0.91 309 *e*P **Pb** 05 46 23.5 +0.2
baz=309
NSTT S **Sg** 05 46 35.6 +0.9
baz=309
CHKH Chenggong 0.94 202 *e*S **Sn** 05 46 37.9 -0.3
baz=199
TATO Taipei 0.95 344 P **Pn** 05 46 24.6 -0.3
TWB1 Santiao Chiao 0.96 11 *e*P **Pn** 05 46 25.5 +0.4
baz=14
TWB1 *e*S **Sn** 05 46 39.0 +0.1
baz=14
YOJ Yonaguni jima 1.19 70 P Pn 05 46 32.3 +4.1
TPUB Ta-pu 1.30 235 P **Pg** 05 46 30.0 -0.3
TWGBT Beinan 1.40 208 P **Pg** 05 46 33.4 +1.3

*TEH **16** 05:56:41.2, 34°.56N×46°.24E, h8km±42km, ML3.5*
*ISN **16** 05:56:42.6±1.0, 34°.61N×46°.22E, h15km±7km, ML3.6*
*IDC **16** 05:56:42.2±2.3, 34°.50N×45°.94E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=50.8km s-min=32.7km az=159.0*
*DSN **16** 05:56:50.6±1.1, 34°.46N×47°.49E, h10km, Error ellipse: s-maj=59.8km s-min=10.3km az=49.0*
ISC 16 05:56:41.6±1.0, **34°.48N**±0°.03×**46°.22E**±0°.03, **h12**km±7km, **n69**, σ2**°29**/85, **mb3.6**/5, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.26**	**31**	Pg	**Pg**	**05 56 45.1**	**-2.1**
IGHG	**Ghaleghazi**	**0.32**	**117**	Pg	**Pg**	**05 56 48.8**	**+0.5**
KGS1	**Ghasr-e-Shirin**	**0.52**	**274**	Pg	**Pb**	**05 56 52.3**	**-0.4**
KCHF	**Cheshme Sefid,**	**0.71**	**106**	Pg	**Pg**	**05 56 54.9**	**-0.4**
KCHF				Sg	**Sg**	**05 57 06.3**	**+1.6**
ILIN	**Lien**	**0.75**	**54**	Pg	**Pg**	**05 56 54.3**	**-2.0**
ILBA	**Ilam Banvizeh**	**0.85**	**181**	Pg	**Pn**	**05 56 59.4**	**0.0**
ILBA				Sg	**Sn**	**05 57 12.2**	**+0.4**
IBZA	**Bozab**	**1.35**	**90**	Pg	**Pn**	**05 57 07.0**	**+0.5**
IBDR	**Badra**	**1.38**	**190**	*e*Pg	**Pg**	**05 57 10.5**	**+2.3**
IBDR				*e*Sg	**Sg**	**05 57 30.0**	**+3.8**
IBDR				AML	AML	05 57 35.6	
	comp=E,1μm,0.5s						
IBDR				AML	AML	05 57 37.1	
	comp=N,878nm,0.6s						
IKFM	**Kafar-mosalman**	**1.65**	**125**	Pg	**Pg**	**05 57 13.5**	**+0.2**
IDOB	**Doab**	**1.76**	**112**	Pg	**Pb**	**05 57 14.3**	**+0.3**
SDS1	**Sardasht. Az.**	**1.77**	**340**	Pg	**Pn**	**05 57 12.8**	**+0.6**
IKRK	**Kirkuk**	**1.80**	**301**	*e*Pg	**Pb**	**05 57 14.0**	**-0.5**
IKRK				*e*Sg	**Sg**	**05 57 37.5**	**-2.0**
IKRK				AML	AML	05 57 42.3	
	comp=N,990nm,0.4s						
IKRK				AML	AML	05 57 43.0	
	comp=E,689nm,0.4s						
HSAM	**Samen**	**1.99**	**97**	Pn	**Pn**	**05 57 17.6**	**+2.3**
MAHB	**Mahabad**	**2.33**	**350**	Pn	**Pn**	**05 57 21.3**	**+1.5**
RAFI	**Al-Rafai**	**2.75**	**182**	*e*Pn	**Pb**	**05 57 29.5**	**-1.1**
RAFI				*e*Sn	**Sg**	**05 58 05.0**	**-4.9**
RAFI				AML	AML	05 58 06.0	
	comp=E,182nm,0.3s						
RAFI				AML	AML	05 58 06.1	
	comp=N,240nm,0.4s						
IHSH	**Hashtrud**	**2.95**	**16**	Pn	**Pn**	**05 57 29.7**	**+1.2**
IAZR	**Azarshahr**	**3.20**	**357**	Pn	**Pn**	**05 57 33.8**	**+1.9**
IPIR	**Pirpir**	**4.29**	**113**	Pn	**Pn**	**05 57 48.9**	**+1.9**
QAMS	**Qamsar**	**4.36**	**98**	Pn	**Pn**	**05 57 50.2**	**+2.4**
GRMI	**Germi**	**4.53**	**17**	Pn	**Pn**	**05 57 52.0**	**+2.0**
KRSH	**Karshahi**	**4.92**	**94**	Pn	**Pn**	**05 57 57.5**	**+1.9**
IBRJ	**Brojen**	**4.94**	**120**	Pn	**Pn**	**05 57 58.1**	**+2.3**
KLNJ	**Kolanjah**	**5.69**	**126**	Pn	**Pn**	**05 58 08.7**	**+2.4**
IRAM	**Ramesheh**	**5.81**	**116**	Pn	**Pn**	**05 58 09.9**	**+2.1**
DSBU	**Dashti - Bushe**	**7.46**	**143**	Pn	**Pn**	**05 58 32.3**	**+2.0**
SHMA	**Al-Shehemyia**	**9.52**	**153**	P	**Pn**	**05 58 59.5**	**+1.1**
SHMA				S	**Sn**	**06 00 45.4**	**+0.1**
SMRA	**Abu-Samra**	**10.49**	**156**	P	**Pn**	**05 59 12.8**	**+1.1**
SMRA				S	**Sn**	**06 01 03.3**	**-5.8**
TRNA	**Turayna**	**10.63**	**155**	P	**Pn**	**05 59 14.5**	**+0.7**
TRNA				S	**Sn**	**06 01 08.1**	**-4.6**
RAYN	**Ar Rayn**	**10.93**	**183**	P	**Pn**	**05 59 17.7**	**-0.2**
RAYN				S	**Sn**	**06 01 15.9**	**-4.2**
JRN	**Qarnain Island**	**11.11**	**147**	P	**Pn**	**05 59 20.3**	**+0.1**
JRN				S	**Sn**	**06 01 20.0**	**-4.3**
SLWR	**Sila**	**11.41**	**154**	P	**Pn**	**05 59 24.6**	**+0.2**
SLWR				S	**Sn**	**06 01 26.9**	**-4.9**
SHME	**Shamm**	**11.99**	**132**	P	**Pn**	**05 59 32.5**	**+0.1**
SHME	**Shamm**	**11.99**	**132**	P	**Pn**	**05 59 33.5**	**+1.1**
BANOM	**Banah**	**12.18**	**132**	P	**Pn**	**05 59 36.1**	**+1.1**
MASF	**Masafi**	**12.51**	**134**	P	**Pn**	**05 59 39.7**	**+0.3**
NAZ	**Nazwa, Dubai**	**12.51**	**137**	P	**Pn**	**05 59 40.2**	**+0.7**
NAZ	**Nazwa, Dubai**	**12.51**	**137**	P	**Pn**	**05 59 40.1**	**+0.7**
	SNR=14						
MSFE	**Esma-Masafi**	**12.52**	**134**	P	**Pn**	**05 59 38.7**	**-0.9**
ASUD	**Al Ashush, Dub**	**12.61**	**139**	P	**Pn**	**05 59 41.3**	**+0.5**
ASUD	**Al Ashush, Dub**	**12.61**	**139**	P	**Pn**	**05 59 42.1**	**+1.4**
ASUD				S	**Sn**	**06 01 58.9**	**-2.2**
MDH	**Madha**	**12.64**	**134**	P	**Pn**	**05 59 40.0**	**-1.3**
MDH	**Madha**	**12.64**	**134**	P	**Pn**	**05 59 41.1**	**-0.2**
MDH				S	**Sn**	**06 01 59.1**	**-2.9**
FAQ	**Al Faqa, Dubai**	**12.66**	**138**	P	**Pn**	**05 59 41.9**	**+0.4**
FAQ	**Al Faqa, Dubai**	**12.66**	**138**	P	**Pn**	**05 59 42.4**	**+0.9**
UOSS	**Minazif**	**12.85**	**135**	P	**Pn**	**05 59 42.8**	**-1.4**
UOSS	**Minazif**	**12.85**	**135**	P	**Pn**	**05 59 44.1**	**-0.1**
UOSS				S	**Sn**	**06 02 02.0**	**-5.1**
HATD	**Hatta, Dubai**	**12.90**	**136**	S	**Sn**	**06 02 02.4**	**-6.0**
HATD	**Hatta, Dubai**	**12.90**	**136**	P	**Pn**	**05 59 45.3**	**+0.5**
ASHO	**Ashiyiah**	**12.97**	**136**	P	**Pn**	**05 59 45.6**	**-0.2**
ASHO				S	**Sn**	**06 02 03.2**	**-6.9**
ASHO	**Ashiyiah**	**12.97**	**136**	P	**Pn**	**05 59 46.0**	**+0.2**
	SNR=23						
ASHO				S	**Sn**	**06 02 07.7**	**-2.4**
SOHO	**SOHO**	**13.67**	**136**	P	**Pn**	**05 59 54.1**	**-1.2**
SOHO	**SOHO**	**13.67**	**136**	P	**Pn**	**05 59 54.8**	**-0.4**
UMZA	**Um Al Zommool**	**14.10**	**144**	P	**Pn**	**05 59 59.9**	**-1.2**
ARQ	**Araqi**	**14.29**	**138**	P	**Pn**	**06 00 03.1**	**-0.7**
	SNR=7.1						
BSY	**Bisya**	**15.14**	**138**	P	**Pn**	**06 00 14.2**	**-1.1**
SMDO	**Samad**	**15.38**	**135**	P	**Pn**	**06 00 17.4**	**-1.1**
WSAR	**Wadi Sarin**	**15.59**	**133**	P	**Pn**	**06 00 20.1**	**-1.1**
	SNR=5.7						
WBK	**Wadi Bani Khal**	**16.27**	**133**	P	**Pn**	**06 00 28.7**	**-1.3**
JLN	**Jalan Bani Buh**	**16.88**	**133**	P	**Pn**	**06 00 37.9**	**+0.2**
MHTO	**MHTO**	**16.97**	**139**	P	**Pn**	**06 00 37.4**	**-1.5**
DOK	**Doka**	**17.29**	**154**	P	**Pn**	**06 00 40.8**	**-2.1**
WHFO	**Wadi Hawf**	**17.81**	**156**	P	**Pn**	**06 00 47.3**	**-2.1**
	SNR=9.9						
ABTO	**Aybut**	**18.19**	**158**	P	**Pn**	**06 00 51.5**	**-2.5**
DMTO	**DMTO**	**18.42**	**153**	P	**Pn**	**06 00 55.0**	**-1.8**
MKAR	**Makanchi Array**	**29.75**	**55**	P	**P**	**06 02 52.0**	**+4.2**
	comp=N,0.2nm,0.5s,baz=253,slow=11,SNR=4.5 comp=N,0.2nm,0.5s						
FINES	**FINESS Array B**	**29.91**	**341**	P	**P**	**06 02 50.3**	**+1.4**
	comp=N,2.7nm,1.0s,baz=141,slow=10.0,SNR=4.8 comp=N,2.7nm,1.0s						
HFS	**Hagfors**	**33.23**	**331**	P	**P**	**06 03 18.1**	**-0.2**
	comp=N,3.9nm,1.0s,baz=133,slow=10.0,SNR=2.3 comp=N,3.9nm,1.0s						
EKA	**Eskdalemuir Ar**	**39.67**	**317**	P	**P**	**06 04 15.6**	**+2.4**
	comp=N,0.7nm,0.5s,baz=105,slow=8.2,SNR=3.9 comp=N,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**45.49**	**253**	P	**P**	**06 05 01.4**	**+0.4**
	comp=N,0.3nm,0.9s,baz=46,slow=6.1,SNR=1.8 comp=N,0.3nm,0.9s						

*NNC **16** 06:00:07.4±2.5, 54°.51N×86°.85E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=27.7km s-min=14.0km az=166.0, Suspected Mining explosion.*
*IDC **16** 06:00:08.7±2.8, 54°.50N×86°.78E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=22.6km s-min=16.0km az=53.0*
ISC 16 06:00:13.1±3.6, **54°.7N**±0°.2×**83°.69E**±0°.08, **h0**km, **n8,** σ0**°91**/13, **9C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**138**	I	I	06 08 10.5	
	baz=63,slow=342,SNR=2.8						
ZAA0	**Zalesovo Array**	**0.99**	**138**	⇑P	**Pg**	**06 00 31.3**	**-0.8**
	0.2nm,0.4s						
ZAA0				⇑S	**Sn**	**06 00 50.3**	**+1.3**
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**0.99**	**138**	Pg	**Pg**	**06 00 31.4**	**-0.8**
	1.0nm,0.3s,baz=64,slow=17,SNR=10						
ZALV				Lg	Lg	06 00 49.5	
	1.1nm,0.3s,baz=64,slow=27,SNR=8.9						
ZALV				Rg	Rg	06 00 55.2	
	5.3nm,0.5s,baz=66,slow=19,SNR=5.8						
KURK	**Kurchatov**	**5.03**	**220**	⇑Pn	**Pb**	**06 01 42.5**	**+0.5**
	0.7nm,0.8s						
KURK				⇑Sn	**Sg**	**06 02 55.6**	**+1.0**
	0.9nm,0.6s						
KURK				⇑Lg	Lg	06 03 31.4	
	2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**5.14**	**220**	⇓Pn	**Pb**	**06 01 43.8**	**-0.1**
	0.9nm,0.5s						
KURBB				⇑Sn	**Sg**	**06 02 56.6**	**-1.6**
	2.4nm,0.6s						
KURBB				⇓Lg	Lg	06 03 32.7	
	3.6nm,0.7s						
KURBB	**Kurchatov Arra**	**5.14**	**220**	Pn	**Pb**	**06 01 44.5**	**+0.7**
	0.1nm,0.3s,baz=52,slow=14,SNR=9.3						
KURBB				Sn	**Sg**	**06 02 57.5**	**-0.6**
	baz=109,slow=8.6						
KURBB				Lg	Lg	06 03 28.9	
	baz=50,slow=34 0.7nm,0.4s						
MK31	**Makanchi Array**	**7.95**	**187**	⇑Pn	**Pn**	**06 02 09.5**	**-0.5**
	0.2nm,0.5s,baz=25,slow=12,SNR=16						
MK31				⇑Sn	**Sn**	**06 03 40.9**	**+0.4**
	0.8nm,0.7s,baz=26,slow=26,SNR=6.3						
MK31				⇑Lg	Lg	06 04 31.9	
	2.0nm,0.8s,baz=26,slow=31,SNR=4.0						
MKAR	**Makanchi Array**	**7.95**	**187**	Pn	**Pn**	**06 02 10.3**	**+0.4**
	0.2nm,0.3s,baz=23,slow=12,SNR=16						
MKAR				Sn	**Sn**	**06 03 41.2**	**+0.6**
	0.1nm,0.3s,baz=23,slow=26,SNR=9.5						
MKAR				Lg	Lg	06 04 31.0	
	0.1nm,0.3s,baz=30,slow=32,SNR=6.3 0.3nm,0.4s						

*IDC **16** 06:02:02.8±0.8, 52°.20N×169°.47W, h0km, mb4.1/23, mbtmp4.1/25, ML3.7/2, MS2.9/1, Error ellipse: s-maj=22.7km s-min=15.7km az=174.0*
*NEIC **16** 06:02:04.2±2.6, 52°.01N±0°.04×169°.31W±0°.10, h10km±1km, mb4.1/29, ML3.8/6, ML3.7(AEIC), Error ellipse: s-maj=11.1km s-min=6.0km az=116.0*
*AEIC **16** 06:02:06.5±3.0, 52°.15N±0°.08×169°.3W±0°.1, h16km±5km, Error ellipse: s-maj=12.3km s-min=7.3km az=48.0*
ISC 16 06:02:07.6±0.6, **52°.04N**±0°.10×**169°.27W**±0°.05, **h36**km±3km, **n126,** σ1**°12**/128, **mb4.1**/31, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.96**	**15**		**Pn**	**06 02 22.8**	**-1.7**
NIKH					**Sn**	**06 02 36.8**	**-0.2**
NIKH	**Nikolski High**	**0.96**	**15**	P	**Pn**	**06 02 22.9**	**-1.6**
OKER	**Okmok East Rim**	**1.59**	**27**		**Pn**	**06 02 33.1**	**-0.2**
OKFG	**Magazine Ridge**	**1.60**	**31**		**Pn**	**06 02 32.8**	**-0.5**
OKFG					**Sn**	**06 02 53.8**	**+1.2**
MAPS	**Pakushin South**	**2.26**	**38**		**Pn**	**06 02 42.2**	**-0.2**
MAPS					**Sn**	**06 03 09.7**	**+0.7**
MGOD	**Makushin Gods**	**2.28**	**39**		**Pn**	**06 02 42.5**	**-0.1**
MGOD					**Sn**	**06 03 09.8**	**+0.3**
MNAT	**Makushin Natee**	**2.42**	**39**		**Pn**	**06 02 44.7**	**+0.1**
MNAT					**Sn**	**06 03 13.8**	**+1.0**
UNV	**Unalaska Valle**	**2.46**	**42**		**Pn**	**06 02 45.2**	**+0.1**
UNV					**Sn**	**06 03 15.1**	**+1.3**
UNV	**Unalaska Valle**	**2.46**	**42**	P	**Pn**	**06 02 45.3**	**+0.2**
AKRB	**Akutan Reef Bi**	**2.85**	**41**		**Pn**	**06 02 51.6**	**+1.2**
ZRO	**Akutan Zero**	**2.86**	**43**		**Pn**	**06 02 51.6**	**+1.0**
LVA	**Lava Point**	**2.88**	**41**		**Pn**	**06 02 52.0**	**+1.1**
LVA					**Sn**	**06 03 27.0**	**+2.7**
AHB	**Akutan Harbor**	**2.94**	**44**		**Pn**	**06 02 52.3**	**+0.6**
AKUT	**Akutan**	**2.97**	**44**	Pn	**Pn**	**06 02 53.0**	**+0.9**
AKUT				IAML		06 03 41.2	
	comp=E,287nm,1.0s						
AKUT				IAML		06 03 42.8	
	comp=N,276nm,0.7s						
AKUT	**Akutan**	**2.97**	**44**		**Sn**	**06 03 27.4**	**+0.9**
AKUT	**Akutan**	**2.97**	**44**	P	**Pn**	**06 02 53.2**	**+1.1**
KOFP	**Korovin Flat P**	**2.98**	**276**		**Pn**	**06 02 52.6**	**+0.3**
ATKA	**Atka Island**	**3.04**	**275**	Pn	**Pn**	**06 02 52.0**	**-1.0**
ATKA				IAML		06 03 45.5	
	comp=N,201nm,1.6s						
ATKA	**Atka Island**	**3.04**	**275**	P	**Pn**	**06 02 52.5**	**-0.5**
GSTR	**Great Sitkin T**	**4.19**	**273**	Pn	**Pn**	**06 03 09.4**	**+0.6**
GSMY	**Great Sitkin M**	**4.19**	**273**		**Pn**	**06 03 09.1**	**+0.3**
GSCK	**Great Sitkin C**	**4.26**	**272**		**Pn**	**06 03 09.9**	**+0.2**
ADK	**Adak**	**4.59**	**271**	Pn	**Pn**	**06 03 14.6**	**+0.3**
ADK				IAML		06 04 20.7	
	comp=N,132nm,1.3s						
ADK	**Adak**	**4.59**	**271**	P	**Pn**	**06 03 14.6**	**+0.3**
SPIA	**Saint Paul Isl**	**5.17**	**354**		**Pn**	**06 03 22.9**	**+0.6**
SPIA	**Saint Paul Isl**	**5.17**	**354**	P	**Pn**	**06 03 24.2**	**+1.9**
SDPT	**Sand Point**	**6.18**	**54**	Pn	**Pn**	**06 03 36.2**	**+0.1**
SDPT	**Sand Point**	**6.18**	**54**	P	**Pn**	**06 03 38.5**	**+2.3**
CNBA	**Chernabura Isl**	**6.42**	**61**	Pn	**Pn**	**06 03 39.5**	**0.0**
CHGN	**Chignik**	**7.66**	**52**	Pn	**Pn**	**06 03 57.2**	**+0.7**
M13K	**Dall Lake**	**9.01**	**19**	Pn	**Pn**	**06 04 14.9**	**0.0**
N15K	**Kwethluk River**	**9.61**	**29**	Pn	**Pn**	**06 04 24.0**	**+0.8**
M14K	**Bethel**	**9.62**	**22**	Pn	**Pn**	**06 04 24.8**	**+1.6**
O16K	**Kokwok River B**	**9.83**	**35**	Pn	**Pn**	**06 04 26.4**	**+0.3**
SII	**Sitkinak Islan**	**9.90**	**57**	Pn	**Pn**	**06 04 27.0**	**-0.2**
L14K	**Kuka Creek**	**9.99**	**19**	Pn	**Pn**	**06 04 29.5**	**+1.1**
SHEM	**Shemya Is, Ala**	**10.19**	**280**	LR	LR	06 08 20.8	
	comp=N,72nm,21.0s,baz=126,slow=38						
OHAK	**Old Harbor**	**10.61**	**54**	Pn	**Pn**	**06 04 35.4**	**-1.3**
P18K	**Big Mountain,**	**10.79**	**42**	Pn	**Pn**	**06 04 41.0**	**+1.6**
N17K	**Nushagak Hills**	**10.82**	**33**	Pn	**Pn**	**06 04 40.8**	**+1.1**
O18K	**Koktuh Hills**	**11.09**	**40**		**Pn**	**06 04 45.0**	**+1.6**
K15K	**Wolf Creek Mou**	**11.09**	**19**	Pn	**Pn**	**06 04 44.9**	**+1.5**
KDAK	**Kodiak Island**	**11.18**	**53**	Pn	**Pn**	**06 04 42.8**	**-1.7**
	comp=N,1.6nm,0.3s,baz=230,slow=18,SNR=4.1						
KDAK				Sn	**Sn**	**06 06 42.2**	**-5.9**
	comp=N,0.3nm,0.3s,baz=91,slow=22,SNR=1.9						
Q19K	**Cape Douglas,**	**11.21**	**46**	Pn	**Pn**	**06 04 45.8**	**+0.7**
N18K	**Kilae Creek**	**11.38**	**35**	Pn	**Pn**	**06 04 48.5**	**+1.2**
M17K	**Holitna River**	**11.39**	**30**	Pn	**Pn**	**06 04 48.3**	**+0.9**
SYI	**Shuyak Island**	**11.63**	**49**	Pn	**Pn**	**06 04 49.8**	**-1.0**
SVW2	**Sparrevohn**	**11.78**	**34**	Pn	**Pn**	**06 04 53.5**	**+0.8**
N19K	**Bonanza Creek**	**11.98**	**37**	Pn	**Pn**	**06 04 53.3**	**-2.3**
ILSW	**Iliamna Southw**	**12.00**	**42**	Pn	**Pn**	**06 04 53.5**	**-2.4**
K17K	**Iditarod**	**12.20**	**25**	Pn	**Pn**	**06 04 58.9**	**+0.3**
RSO	**Redoubt South**	**12.44**	**41**	Pn	**Pn**	**06 05 02.5**	**+0.6**
CNPM	**China Poot**	**12.58**	**46**	Pn	**Pn**	**06 05 03.5**	**-0.3**
TTA	**Tatalina**	**13.00**	**28**	Pn	**Pn**	**06 05 10.0**	**+0.5**
O22K	**Cooper Landing**	**13.71**	**44**		**Pn**	**06 05 17.9**	**-1.2**
SUA	**Susitna One**	**13.81**	**40**	Pn	**Pn**	**06 05 20.3**	**-0.4**
J19K	**Poorman**	**13.95**	**26**	Pn	**Pn**	**06 05 21.4**	**-1.0**
H18K	**Honhosa River**	**14.29**	**19**	Pn	**Pn**	**06 05 26.5**	**-0.5**
CAST	**Castle Rocks**	**14.57**	**32**	Pn	**Pn**	**06 05 30.0**	**-0.9**
M24K	**Tolsona, Glenn**	**16.00**	**42**	Pn	**Pn**	**06 05 48.2**	**-1.5**
M24K				IAmb	IAmb	06 05 48.8	
	comp=Z,10nm,0.5s						
IMAR	**Indian Mountai**	**16.02**	**23**	P	**P**	**06 05 53.1**	**+0.1**
DHY	**Denali Highway**	**16.03**	**38**	Pn	**Pn**	**06 05 48.9**	**-1.1**
MLY	**Manley**	**16.12**	**29**		**P**	**06 05 53.4**	**-0.7**
C16K	**Lisburne Hills**	**16.39**	**5**	P	**P**	**06 05 58.7**	**+1.7**
BERG	**Berg Lake**	**16.40**	**49**	Pn	**Pn**	**06 05 53.1**	**-1.6**
F20K	**Avaraart Lake**	**16.47**	**19**	P	**P**	**06 05 58.3**	**+0.4**
ILAR	**Eielson Array**	**17.19**	**34**	P	**Pn**	**06 06 03.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=220,slow=10,SNR=11 comp=Z,0.4nm,0.6s						
EGAK	**Eagle**	**19.26**	**38**	P	**P**	**06 06 28.0**	**-0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
D24K	**Happy Valley**	**19.69**	**22**	P	**Pn**	**06 06 33.8**	**-1.2**
D24K				IAmb	IAmb	06 06 36.7	
	comp=Z,6.8nm,1.2s						
E25K	**Arctic Village**	**19.76**	**26**	P	**Pn**	**06 06 34.7**	**-1.1**
L29M	**L29M**	**19.81**	**44**	P	**P**	**06 06 34.2**	**-0.4**
L29M				IAmb	IAmb	06 07 12.7	
	comp=Z,12nm,1.2s						
PETK	**Petropavlovsk-**	**20.01**	**286**	P	**P**	**06 06 35.7**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=83,slow=14,SNR=8.7 comp=Z,7.6nm,0.5s						
I28M	**Miner Creek**	**20.03**	**37**		**P**	**06 06 36.0**	**-1.1**
I28M				IAmb	IAmb	06 06 57.3	
	comp=Z,9.2nm,1.4s						
SKAG	**Skagway**	**20.31**	**55**	P	Pn	06 06 41.0	-1.2
SKAG				IAmb	IAmb	06 06 57.1	
	comp=Z,10nm,0.7s						
WHY	**Whitehorse**	**20.69**	**52**		**P**	**06 06 45.0**	**+0.7**
WHY				IAmb	IAmb	06 06 49.9	
	comp=Z,8.2nm,0.7s						
I30M	**Mount Dempster**	**21.29**	**39**		**P**	**06 06 49.5**	**-1.2**
E29M	**Blow River**	**22.20**	**31**		**P**	**06 06 59.6**	**-0.7**
E29M				IAmb	IAmb	06 07 02.0	
	comp=Z,2.5nm,0.5s						
F31M	**Tsiigehtchic**	**23.15**	**35**	P	**P**	**06 07 09.5**	**-0.7**
F31M				IAmb	IAmb	06 07 10.6	
	comp=Z,2.9nm,0.8s						
C36M	**Paulatuk**	**27.16**	**33**	P	**P**	**06 07 46.3**	**-0.7**
C36M				IAmb	IAmb	06 07 48.5	
	comp=Z,3.3nm,1.1s						
YKA	**Yellowknife Ar**	**30.41**	**48**	P	**P**	**06 08 15.5**	**-0.4**
YKA	**Yellowknife Ar**	**30.41**	**48**	P	**P**	**06 08 16.9**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=274,slow=8.4,SNR=15 comp=Z,0.8nm,0.6s						
YKAB2	**New Yellowknif**	**30.42**	**49**	P	**P**	**06 08 17.4**	**+1.4**
TIXI	**Tiksi**	**33.05**	**329**	P	**P**	**06 08 40.1**	**+1.1**
TIXI				IAmb	IAmb	06 09 04.9	
	comp=Z,1.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**37.24**	**219**	T	T	06 48 47.4	
	baz=24,slow=76						
H11N3	**WAKE ISLAND Hy**	**37.24**	**219**	T	T	06 48 51.1	
	baz=24,slow=76						
H11N1	**WAKE ISLAND Hy**	**37.26**	**219**	T	T	06 48 51.5	
	baz=24,slow=76						
H11S1	**WAKE ISLAND Hy**	**38.42**	**218**	T	T	06 51 03.3	
	baz=23,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy**	**38.44**	**218**	T	T	06 51 13.1	
	baz=23,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**38.44**	**218**	T	T	06 50 56.0	
	baz=23,slow=76,SNR=13						
PDAR	**Pinedale Array**	**40.41**	**79**	P	**P**	**06 09 43.7**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=300,slow=4.1,SNR=10 comp=Z,0.7nm,0.6s						
FCC	**Fort Churchill**	**41.10**	**50**	P	**P**	**06 09 48.0**	**+0.6**
FCC				IAmb	IAmb	06 09 48.9	
	comp=Z,3.0nm,0.7s						
KSRS	**Korea Array**	**45.50**	**277**	P	**P**	**06 10 23.4**	**+0.3**
	comp=Z,3.2nm,1.1s,baz=47,slow=9.4,SNR=6.0 comp=Z,3.2nm,1.1s						
TJN	**Taejon**	**46.54**	**276**	P	**P**	**06 10 30.6**	**-0.7**
NRIK	**Noril'sk**	**46.74**	**332**	P	**P**	**06 10 31.8**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=81,slow=9.7,SNR=3.6 comp=Z,1.9nm,0.4s						
ECSD	**EROS Data Cent**	**47.53**	**70**	P	**P**	**06 10 38.8**	**-0.3**
ECSD				IAmb	IAmb	06 10 50.8	
	comp=Z,2.5nm,1.1s						
SPITS	**Spitsbergen Ar**	**50.00**	**358**	P	**P**	**06 10 56.5**	**-1.0**
	comp=Z,14nm,1.1s,baz=13,slow=7.7,SNR=14 comp=Z,14nm,1.1s						
SPB2	**Spitsbergen Ar**	**50.00**	**358**	P	**P**	**06 10 56.6**	**-1.0**
E43A	**Lone Tree Farm**	**51.32**	**62**	P	**P**	**06 11 07.7**	**-0.2**
SONM	**Songino Array**	**51.52**	**301**	P	**P**	**06 11 09.6**	**+0.1**
SONM				IAmb	IAmb	06 11 10.5	
	comp=Z,3.1nm,1.3s						
SONM	**Songino Array**	**51.52**	**301**	P	**P**	**06 11 09.9**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=50,slow=7.1,SNR=8.3						
SONM				PcP	**PcP**	**06 12 24.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=72,slow=1.9,SNR=4.4 comp=Z,0.6nm,0.4s						
TX31	**Lajitas Ar. Si**	**52.69**	**89**	P	**P**	**06 11 19.2**	**+0.7**
TX31				IAmb	IAmb	06 11 55.3	
	comp=Z,2.7nm,1.1s						
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Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.02**	**353**	P	**Pn**	**06 10 00.5**	**-2.3**
FRMA	**Ierapetra Chan**	**1.05**	**330**	P	**Pn**	**06 10 01.1**	**-2.1**
FRMA				AML	AML	06 10 24.4	
	comp=N,5126μm,0.8s						
FRMA				AML	AML	06 10 24.7	
	comp=E,5278μm,0.4s						
KARP	**Karpathos**	**1.58**	**24**	Pn	**Pn**	**06 10 10.5**	**-0.1**
KARP	**Karpathos**	**1.58**	**24**		**Pn**	**06 10 10.3**	**-0.2**
KARP	**Karpathos**	**1.58**	**24**	P	**Pb**	**06 10 11.9**	**-0.8**
KARP	**Karpathos**	**1.58**	**24**	P	**Pb**	**06 10 11.8**	**-0.8**
KSTL	**Kastelli Herak**	**1.61**	**319**	P	**Pn**	**06 10 11.0**	**+0.1**
IDI	**Anoyia**	**1.70**	**315**	P	**Pb**	**06 10 13.8**	**-0.9**
IDI	**Anoyia**	**1.70**	**315**	P	**Pb**	**06 10 13.8**	**-0.9**
IDI				AML	AML	06 10 45.6	
	comp=N,574μm,0.5s						
IDI				AML	AML	06 10 47.1	
	comp=E,742μm,0.7s						
PRNS	**Prines Rethymn**	**1.99**	**310**	P	**Pb**	**06 10 18.8**	**-0.8**
SANT	**Santorini**	**2.38**	**342**	Pn	**Pn**	**06 10 21.0**	**-0.6**
SANT	**Santorini**	**2.38**	**342**	P	**Pn**	**06 10 21.3**	**-0.3**
IMMV	**Iera Moni Meta**	**2.39**	**305**	P	**Pb**	**06 10 23.9**	**-2.5**
IMMV	**Iera Moni Meta**	**2.39**	**305**	P	**Pn**	**06 10 23.7**	**+2.1**
SNTS	**Nea Kammeni, S**	**2.43**	**341**	P	**Pn**	**06 10 22.2**	**0.0**
ARG	**Arkhangelos**	**2.55**	**34**	Pn	**Pn**	**06 10 24.6**	**+0.7**
ARG	**Arkhangelos**	**2.55**	**34**	Pn	**Pn**	**06 10 24.8**	**+0.9**
ARG	**Arkhangelos**	**2.55**	**34**	P	**Pn**	**06 10 25.9**	**+2.0**
ARG	**Arkhangelos**	**2.55**	**34**	P	**Pn**	**06 10 25.9**	**+2.0**
ARG				S	**Sn**	**06 10 51.8**	**-2.3**
ARG	**Arkhangelos**	**2.55**	**34**	P	**Pn**	**06 10 25.8**	**+2.0**
RODP	**Rodopos**	**2.59**	**305**	P	**Pb**	**06 10 27.5**	**-2.4**
YAZI	**Mula-Dat§a-**	**2.72**	**19**	P	**Pn**	**06 10 25.7**	**-0.5**
YAZI				S	**Sn**	**06 10 55.7**	**-2.6**
DAT	**Datca**	**2.80**	**20**	Pn	**Pn**	**06 10 27.3**	**-0.1**
DAT				Sn	**Sn**	**06 10 58.5**	**-1.9**
DAT	**Datca**	**2.80**	**20**	P	**Pn**	**06 10 27.4**	**+0.1**
DAT				S	**Sn**	**06 10 58.6**	**-1.8**
APE	**Apeiranthos**	**3.04**	**347**	P	**Pn**	**06 10 30.2**	**-0.4**
APE	**Apeiranthos**	**3.04**	**347**	*i* P	**Pn**	**06 10 30.3**	**-0.4**
APE	**Apeiranthos**	**3.04**	**347**	P	**Pn**	**06 10 30.1**	**-0.4**
BODT	**Bodrum**	**3.05**	**14**	Pn	**Pn**	**06 10 30.6**	**-0.1**
ANKY	**Antikythira Is**	**3.07**	**306**	P	**Pn**	**06 10 33.7**	**+2.7**
TURN	**Turunc**	**3.08**	**29**	P	**Pn**	**06 10 30.4**	**-0.6**
TURN				S	**Sn**	**06 11 05.0**	**-2.0**
RFTAA	**Mazikoy-Bodrum**	**3.10**	**21**	Pn	**Pn**	**06 10 31.4**	**0.0**
DALY	**Dalyan (Mula)**	**3.29**	**34**	Pn	**Pn**	**06 10 34.8**	**+0.8**
IZZE	**Mula-Seydike**	**3.30**	**44**	P	**Pn**	**06 10 33.8**	**-0.4**
IZZE				S	**Sn**	**06 11 09.1**	**-3.4**
FETY	**Fethiye**	**3.36**	**40**	Pn	**Pn**	**06 10 35.9**	**+0.9**
MLSB	**Milas**	**3.38**	**19**	Pn	**Pn**	**06 10 35.5**	**+0.1**
SABU	**Mula-Dalaman**	**3.44**	**37**	P	**Pn**	**06 10 36.8**	**+0.6**
SABU				S	**Sn**	**06 11 14.2**	**-2.0**
CAME	**Cameli-Denizli**	**3.71**	**39**	Pn	**Pn**	**06 10 40.9**	**+1.0**
KNIK	**Mula-Seydike**	**3.78**	**43**	P	**Pn**	**06 10 42.1**	**+1.2**
KNIK				S	**Sn**	**06 11 24.0**	**-0.7**
VLI	**Veliai**	**3.83**	**314**	P	**Pn**	**06 10 41.3**	**-0.1**
DNZT	**Denizli-Tavas-**	**3.84**	**34**	P	**Pn**	**06 10 42.3**	**+0.7**
DNZT				S	**Sn**	**06 11 24.7**	**-1.2**
CAEL	**Denizli, Camel**	**3.85**	**38**	P	**Pn**	**06 10 43.0**	**+1.1**
CAEL				S	**Sn**	**06 11 25.2**	**-1.2**
ELL	**Elmali**	**3.91**	**47**	Pn	**Pn**	**06 10 44.2**	**+1.5**
ELL	**Elmali**	**3.91**	**47**	Pn	**Pn**	**06 10 43.9**	**+1.2**
ELL	**Elmali**	**3.91**	**47**	P	**Pn**	**06 10 43.9**	**+1.2**
AKUM	**Antalya-Kumluc**	**3.94**	**55**	P	**Pn**	**06 10 43.5**	**+0.6**
AKUM				S	**Sn**	**06 11 24.9**	**-3.3**
TAVA	**DENIZLI_Tavas**	**3.94**	**31**	P	**Pn**	**06 10 43.5**	**+0.5**
TAVA				S	**Sn**	**06 11 25.5**	**-3.0**
ESEN	**Aydn-Nazilli**	**4.02**	**23**	P	**Pn**	**06 10 44.2**	**+0.2**
ESEN				S	**Sn**	**06 11 27.6**	**-2.8**
GOLH	**Golhisar**	**4.07**	**39**	P	**Pn**	**06 10 46.0**	**+1.2**
GOLH				S	**Sn**	**06 11 30.0**	**-1.6**
APMY	**Acipayam-Deniz**	**4.12**	**34**	Pn	**Pn**	**06 10 45.8**	**+0.3**
APMY				Sn	**Sn**	**06 11 31.3**	**-1.7**
KORT	**Korkueli**	**4.35**	**47**	P	**Pn**	**06 10 50.0**	**+1.3**
KORT				S	**Sn**	**06 11 39.7**	**+1.1**
BASM	**Basmaki-Afyon**	**4.84**	**37**	Pn	**Pn**	**06 10 55.7**	**+0.5**
CSS	**Mathiatis**	**5.81**	**80**	Pn	**Pn**	**06 11 08.7**	**0.0**
KZIT	**Kziot**	**7.49**	**113**	P	**Sn**	**06 12 52.1**	**-3.8**
KZIT	**Kziot**	**7.49**	**113**	S	**Sn**	**06 12 52.0**	**-3.8**
KZIT	**Kziot**	**7.49**	**113**	P	**Pn**	**06 11 32.8**	**+1.0**
SLTI	**Sal'it**	**7.50**	**102**	S	**Sn**	**06 12 53.4**	**-2.8**
SLTI	**Sal'it**	**7.50**	**102**	P	**Pn**	**06 11 33.3**	**+1.4**
MMC7	**Mount Meron ar**	**7.61**	**96**	P	**Pn**	**06 11 34.1**	**+0.7**
MMA0B	**Mount Meron ar**	**7.62**	**96**	P	**Pn**	**06 11 35.5**	**+2.0**
MMA0B	**Mount Meron ar**	**7.62**	**96**	S	**Sn**	**06 12 57.1**	**-2.0**
MMAI	**Mount Meron Ar**	**7.62**	**96**	Pn	**Pn**	**06 11 33.9**	**+0.3**
	comp=E,3.5nm,0.3s,baz=274,slow=12,SNR=6.0						
MMAI				Sn	**Sn**	**06 12 59.3**	**+0.2**
	comp=E,5.1nm,0.3s,baz=260,slow=25,SNR=2.8						
	comp=E,2.2nm,0.3s						
AMAZ	**Amatzia**	**7.63**	**107**	P	**Sn**	**06 12 55.9**	**-3.6**
AMAZ	**Amatzia**	**7.63**	**107**	P	**Pn**	**06 11 35.2**	**+1.5**
AMAZ	**Amatzia**	**7.63**	**107**	S	**Sn**	**06 12 56.1**	**-3.3**
SALP	**Salfit**	**7.68**	**103**	P	**Sn**	**06 12 59.2**	**-1.3**
MMLI	**Mount Malkishu**	**7.76**	**100**	P	**Pn**	**06 11 37.1**	**+1.7**
MMLI	**Mount Malkishu**	**7.76**	**100**	S	**Sn**	**06 12 59.5**	**-3.0**
FNA	**Florina**	**7.76**	**331**	Pn	**Pn**	**06 11 36.4**	**+0.9**
FNA	**Florina**	**7.76**	**331**	P	**Pn**	**06 11 36.4**	**+0.9**
YTIR	**Yattir**	**7.86**	**108**	P	**Sn**	**06 13 02.2**	**-2.8**
YTIR	**Yattir**	**7.86**	**108**	S	**Sn**	**06 13 01.7**	**-3.3**
YTIR	**Yattir**	**7.86**	**108**	P	**Pn**	**06 11 37.8**	**+0.9**
DSI	**Dead Sea**	**7.99**	**106**	P	**Sn**	**06 13 05.7**	**-2.5**
DSI	**Dead Sea**	**7.99**	**106**	S	**Sn**	**06 13 05.0**	**-3.2**
DSI	**Dead Sea**	**7.99**	**106**	P	**Pn**	**06 11 39.2**	**+0.6**
BALJ	**Balqa**	**8.03**	**102**	Pn	**Pn**	**06 11 40.2**	**+1.0**
MDBI	**Mazsada**	**8.07**	**108**	P	**Sn**	**06 13 06.3**	**-3.7**
MSBI	**Mazada**	**8.07**	**108**	P	**Sn**	**06 13 07.7**	**-2.3**
MSBI	**Mazada**	**8.07**	**108**	P	**Pn**	**06 11 40.4**	**+0.8**
MSBI	**Mazada**	**8.07**	**108**	S	**Sn**	**06 13 06.6**	**-3.4**
BRTR	**Keskin Array B**	**8.08**	**44**	Pn	**Pn**	**06 11 40.9**	**+0.9**
	comp=E,0.2nm,0.3s,baz=228,slow=13,SNR=3.4						
BRTR				Sn	**Sn**	**06 13 07.7**	**-3.0**
	baz=218,slow=18,SNR=1.3						
	comp=E,0.7nm,0.6s						
KRMI	**Paran Flat**	**8.12**	**117**	S	**Sn**	**06 13 07.6**	**-3.9**
KRMI	**Paran Flat**	**8.12**	**117**	P	**Pn**	**06 11 41.8**	**+1.4**
PRNI	**Paran**	**8.21**	**115**	P	**Sn**	**06 13 10.5**	**-3.2**
PRNI	**Paran**	**8.21**	**115**	S	**Sn**	**06 13 10.0**	**-3.7**
PRNI	**Paran**	**8.21**	**115**	P	**Pn**	**06 11 43.0**	**+1.3**
GHAJ	**Ghor Haditha**	**8.24**	**107**		**Pn**	**06 11 43.4**	**+1.5**
GHAJ	**Ghor Haditha**	**8.24**	**107**	P	**Pn**	**06 11 43.0**	**+1.0**
GHAJ	**Ghor Haditha**	**8.24**	**107**	S	**Sn**	**06 13 10.7**	**-3.5**
ZFRI	**Zfri**	**8.25**	**113**	S	**Sn**	**06 13 10.4**	**-4.1**
ZFRI	**Zfri**	**8.25**	**113**	P	**Pn**	**06 11 42.2**	**+0.1**
MBRI	**Mt Berech**	**8.43**	**118**	P	**Pn**	**06 11 46.1**	**+1.4**
MBRI	**Mt Berech**	**8.43**	**118**	S	**Sn**	**06 13 15.3**	**-3.9**
EIL	**Elat**	**8.53**	**119**	Pn	**Pn**	**06 11 48.0**	**+2.0**
	comp=E,0.7nm,0.3s,baz=325,slow=2.3,SNR=13						
EIL				Sn	**Sn**	**06 13 18.7**	**-2.7**
	comp=E,3.4nm,0.3s,baz=183,slow=0.6,SNR=9.5						
	comp=E,1.8nm,0.3s						
EIL	**Elat**	**8.53**	**119**	S	**Sn**	**06 13 17.6**	**-3.8**
EIL	**Elat**	**8.53**	**119**	P	**Pn**	**06 11 46.7**	**+0.7**
ASF	**Jabal al Asfar**	**9.04**	**99**	Pn	**Pn**	**06 11 53.3**	**+0.3**
	comp=E,0.6nm,0.3s,baz=336,slow=7.0,SNR=5.1						
	comp=E,1.2nm,0.3s						
TIP	**Timpagrande**	**9.23**	**306**	Pn	**Pn**	**06 11 54.0**	**-1.7**
PUK	**Puka**	**9.43**	**329**	Pn	**Pn**	**06 11 55.6**	**-2.7**
CEL	**Celeste**	**9.43**	**299**	Pn	**Pn**	**06 11 57.0**	**-1.4**
RAFF	**Raffo Rosso**	**10.25**	**291**	Pn	**Pn**	**06 12 08.9**	**-0.7**
CUC	**Castrocucco**	**10.28**	**308**	Pn	**Pn**	**06 12 08.6**	**-1.4**
VAE	**Valguarnera**	**10.28**	**293**	Pn	**Pn**	**06 12 11.0**	**+1.0**
	comp=E,1.8nm,0.3s,baz=251,slow=21,SNR=1.9						
VAE				Sn	**Sn**	**06 14 02.8**	**-1.7**
	comp=E,1.8nm,0.3s,baz=338,slow=12,SNR=1.9						
	comp=E,6.4nm,0.4s						
MLR	**Muntele Rosu**	**11.38**	**358**	LR	LR	06 17 30.6	
	comp=E,345nm,18.9s,baz=356,slow=42						
KIV	**Kislovodsk**	**16.02**	**47**	*e*P	**P**	**06 13 29.9**	**-1.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	**Khabaz**	**16.03**	**48**	*ce*P	**P**	**06 13 29.4**	**-1.6**
KBZ	**Khabaz**	**16.03**	**48**	Pn	**P**	**06 13 29.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=214,slow=11,SNR=3.4						
	comp=Z,2.5nm,1.0s						
KIEV	**Kiev**	**16.71**	**6**	P	**Pn**	**06 13 36.4**	**0.0**
KIEV	**Kiev**	**16.71**	**6**	P	**Pn**	**06 13 36.4**	**0.0**
KIEV				pmax	pmax		
	comp=Z,11nm,1.2s						
AKASG	**Malin Array Be**	**16.72**	**6**	*e*P	**P**	**06 13 37.6**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	**Malin Array Be**	**16.72**	**6**	Pn	**Pn**	**06 13 37.2**	**+0.8**
	comp=Z,3.3nm,0.3s,baz=191,slow=10,SNR=8.9						
AKBB	**Malin Array Si**	**16.72**	**6**	Pn	**Pn**	**06 13 35.8**	**-0.6**
AKBB	**Malin Array Si**	**16.72**	**6**	P	**Pn**	**06 13 35.8**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,12nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**17.48**	**320**	P	**Pn**	**06 13 45.5**	**-0.8**
GEC2	**GERESS Array S**	**17.49**	**331**	P	**Pn**	**06 13 45.1**	**-1.1**
GERES	**GERESS Array B**	**17.49**	**331**		**Pn**	**06 13 45.3**	**-0.9**
GERES	**GERESS Array B**	**17.49**	**331**	Pn	**Pn**	**06 13 46.5**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=135,slow=11,SNR=4.4						
	comp=Z,0.8nm,0.4s						
KHC	**Kasperske Hory**	**17.76**	**332**	*i* P	**P**	**06 13 50.0**	**-0.2**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SENIN	**Lac Senin/Sane**	**18.97**	**316**	P	**P**	**06 14 02.1**	**-1.6**
SENIN				IAmb	IAmb	06 14 12.5	
	comp=Z,14nm,0.8s						
CLL	**Collm**	**19.75**	**335**	*es*P	**Pn**	**06 14 16.0**	**+2.5**
SUW	**Suwalki**	**20.03**	**354**	P	**P**	**06 14 14.1**	**-0.8**
SUW				IAmb	IAmb	06 14 24.4	
	comp=Z,18nm,0.8s						
SUW	**Suwalki**	**20.03**	**354**	P	**P**	**06 14 14.1**	**-0.8**
SUW				pmax	pmax		
	comp=Z,18nm,0.8s						
OBN	**Obninsk**	**22.18**	**16**	*e*P	**P**	**06 14 37.8**	**-0.3**
OBN				*e*		06 15 02.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BELG	**Belogornoye**	**23.80**	**33**	*i* P	**P**	**06 14 54.7**	**0.0**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ESBB	**Sonseca Array**	**24.82**	**292**	P	**P**	**06 15 03.4**	**-0.9**
ESBB				IAmb	IAmb	06 15 07.9	
	comp=Z,7.0nm,1.2s						
ESDC	**Sonseca Array**	**24.82**	**292**	P	**P**	**06 15 04.8**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=80,slow=9.4,SNR=8.4						
	comp=Z,1.5nm,0.6s						
GEYT	**Alibeck**	**25.89**	**72**	P	**P**	**06 15 17.2**	**+3.2**
	comp=Z,1.1nm,0.4s,baz=265,slow=17,SNR=4.2						
	comp=Z,2.1nm,0.4s						
HFS	**Hagfors**	**27.33**	**346**	P	**P**	**06 15 25.1**	**-1.6**
	comp=Z,2.9nm,0.8s,baz=165,slow=12,SNR=2.3						
	comp=Z,2.9nm,0.8s						
FINES	**FINESS Array B**	**27.36**	**360**	P	**P**	**06 15 26.9**	**0.0**
FINES	**FINESS Array B**	**27.36**	**360**	*e*P	**P**	**06 15 25.1**	**-1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**27.36**	**360**	P	**P**	**06 15 24.9**	**-2.0**
	comp=Z,1.7nm,0.7s,baz=175,slow=9.6,SNR=4.6						
	comp=Z,1.7nm,0.7s						
NOA	**NORSAR Array B**	**28.68**	**345**	P	**P**	**06 15 36.6**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=152,slow=9.9,SNR=1.2						
	comp=Z,0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**29.48**	**325**	P	**P**	**06 15 45.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=126,slow=11,SNR=4.4						
	comp=Z,0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**30.61**	**233**	P	**P**	**06 15 58.6**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=42,slow=10,SNR=6.4						
	comp=Z,0.9nm,0.6s						
KK31	**Karatay Array**	**35.30**	**62**	P	**P**	**06 16 37.4**	**+0.4**
KK31				IAmb	IAmb	06 16 39.2	
	comp=Z,1.6nm,0.8s						
KK31	**Karatay Array**	**35.30**	**62**	P	**P**	**06 16 37.4**	**+0.4**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**35.30**	**62**	P	**P**	**06 16 37.4**	**+0.4**
KKAR	**Karatay Array**	**35.30**	**62**	P	**P**	**06 16 37.4**	**+0.4**
ARCES	**ARCESS Array B**	**35.49**	**359**	*e*P	**P**	**06 16 39.0**	**+0.7**
ARCES	**ARCESS Array B**	**35.49**	**359**	P	**P**	**06 16 36.7**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=173,slow=8.8,SNR=7.1						
	comp=Z,0.5nm,0.4s						
BRVK	**Borovoye**	**36.31**	**45**	*ce*P	**P**	**06 16 45.2**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BVAR	**Borovoye Array**	**36.37**	**45**	P	**P**	**06 16 47.2**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=251,slow=4.5,SNR=6.0						
	comp=Z,1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**41.02**	**50**	P	**P**	**06 17 26.3**	**+1.3**
	comp=Z,3.8nm,0.5s,baz=276,slow=8.8,SNR=43						
KURBB				PcP	**PcP**	**06 19 26.5**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=300,slow=3.6,SNR=1.7						
	comp=Z,3.8nm,0.5s						
KURK	**Kurchatov**	**41.08**	**50**	P	**P**	**06 17 26.3**	**+0.7**
KURK				IAmb	IAmb	06 17 27.5	
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**41.08**	**50**	P	**P**	**06 17 26.3**	**+0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**43.53**	**56**	P	**P**	**06 17 46.5**	**+0.9**
MK31				IAmb	IAmb	06 17 47.8	
	comp=Z,2.3nm,0.8s						
MK31	**Makanchi Array**	**43.53**	**56**	P	**P**	**06 17 46.5**	**+0.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**43.53**	**56**	P	**P**	**06 17 46.8**	**+1.2**
MKAR	**Makanchi Array**	**43.53**	**56**	*e*P	**P**	**06 17 46.9**	**+1.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**43.53**	**56**	P	**P**	**06 17 46.9**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=278,slow=6.5,SNR=30						
	comp=Z,2.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**44.39**	**357**	P	**P**	**06 17 53.4**	**+1.3**
	comp=Z,4.0nm,0.9s,baz=168,slow=15,SNR=1.3						
	comp=Z,4.0nm,0.9s						
ZAA0	**Zalesovo Array**	**45.02**	**45**	P	**P**	**06 17 57.5**	**+0.2**
ZALV	**Zalesovo Beam**	**45.02**	**45**	P	**P**	**06 17 57.4**	**0.0**
ZALV	**Zalesovo Beam**	**45.02**	**45**	P	**P**	**06 17 58.0**	**+0.6**
	comp=Z,5.3nm,0.4s,baz=268,slow=8.8,SNR=26						
	comp=Z,5.3nm,0.4s						
DGZ	**Jazzator, Alta**	**46.75**	**51**	*i* P	**P**	**06 18 11.8**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**59.39**	**50**	*e*P	**P**	**06 19 45.3**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**59.39**	**50**	P	**P**	**06 19 45.9**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=287,slow=7.4,SNR=7.2						
	comp=Z,0.8nm,0.7s						
SCHQ	**Schefferville**	**64.64**	**320**	P	**P**	**06 20 19.1**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=78,slow=7.0,SNR=12						
	comp=Z,2.9nm,0.5s						
BATG	**Bathurst New B**	**67.37**	**313**	P	**P**	**06 20 37.8**	**+0.8**
E62A	**Clayton Lake**	**69.78**	**313**	P	**P**	**06 20 52.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**76.88**	**45**	P	**P**	**06 21 34.5**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=271,slow=5.0,SNR=3.4						
	comp=Z,1.2nm,0.6s						
E29M	**Blow River**	**77.14**	**354**	P	**P**	**06 21 34.3**	**-0.7**
E29M				IAmb	IAmb	06 21 51.1	
	comp=Z,2.0nm,1.1s						
C18K	**Utukok River**	**77.40**	**3**	P	**P**	**06 21 36.5**	**-0.1**
F28M	**Old Crow**	**78.06**	**355**	P	**P**	**06 21 39.7**	**-0.5**
F28M				IAmb	IAmb	06 21 43.7	
	comp=Z,3.6nm,1.1s						
G31M	**Satah River**	**78.21**	**352**	P	**P**	**06 21 40.3**	**-0.7**
G31M				IAmb	IAmb	06 21 41.4	
	comp=Z,3.6nm,1.2s						
YKA	**Yellowknife Ar**	**78.76**	**343**	*e*P	**P**	**06 21 45.9**	**+1.8**
YKA	**Yellowknife Ar**	**78.76**	**343**	P	**P**	**06 21 44.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=34,slow=5.1,SNR=4.9						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**81.31**	**357**	P	**P**	**06 21 58.5**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=8.7,slow=6.6,SNR=3.0						
	comp=Z,0.3nm,0.8s						
LEM	**Lembang**	**86.59**	**101**	LR	LR	07 05 16.3	
	comp=Z,21nm,18.8s,baz=218,slow=38						

*IDC **16** 06:10:46.1±3.3,25°.58N×125°.33E,h60km±30km, mb3.5/10, mbtmp3.7/11,ML3.1/1,Error ellipse: s-maj=22.2km s-min=17.8km az=63.0*
*JMA **16** 06:10:49.3±0.2,26°.2N×12°.5E±°,h87km±4km,MV3.3/20, NW OF MIYAKOJIMA ISLAND*
ISC 16 06:10:49.7±0.7,25°.56N±0°.08×125°.43E±0°.06,h97km±8km, n32,σ1°.26/46,mb3.6/10,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.66**	**195**	*i* P	**Pn**	**06 11 06.3**	**-0.2**
JIKM				S	**Sn**	**06 11 18.6**	**-0.4**
JIRB	**Irabujima**	**0.77**	**198**	P	**Pn**	**06 11 07.1**	**-0.5**
JIRB				S	**Sn**	**06 11 19.9**	**-0.9**
JOGS	**Gusukube**	**0.80**	**182**	*i* P	**Pn**	**06 11 08.0**	**+0.2**
JOGS				*es*	**Sn**	**06 11 21.6**	**+0.2**
JMJ2	**Miyako jima3**	**0.82**	**187**	*i* P	**Pn**	**06 11 08.1**	**+0.1**
JMJ2				*es*	**Sn**	**06 11 21.8**	**0.0**
JTJ	**Tarama**	**1.13**	**216**	*i* P	**Pn**	**06 11 11.0**	**-0.4**
JTJ				S	**Sn**	**06 11 26.6**	**-1.1**
JISG	**Ishigakijimahi**	**1.41**	**227**	P	**Pn**	**06 11 14.2**	**-0.5**
JISG				S	**Sn**	**06 11 31.9**	**-1.7**
JKE	**Kume jima 2**	**1.44**	**58**	P	**Pn**	**06 11 15.1**	**+0.1**
JKE				S	**Sn**	**06 11 33.8**	**-0.4**
JIJ	**Ishigaki jima**	**1.67**	**225**	*i* P	**Pn**	**06 11 17.0**	**-0.9**
JIJ				S	**Sn**	**06 11 37.4**	**-2.0**
JKRS	**Kuro-shima**	**1.85**	**225**	P	**Pn**	**06 11 19.6**	**-0.6**
JKRS				S	**Sn**	**06 11 42.2**	**-1.2**
JAGN	**Aguni-jima**	**1.92**	**57**	*eP*	**Pn**	**06 11 21.4**	**+0.3**
JAGN				S	**Sn**	**06 11 45.1**	**0.0**
HATJ	**Hateruma jima**	**2.11**	**225**	P	**Pn**	**06 11 23.1**	**-0.4**
HATJ				S	**Sn**	**06 11 48.1**	**-1.3**
YOJ	**Yonaguni jima**	**2.46**	**244**	P	**Pn**	**06 11 28.0**	**-0.1**
YOJ				S	**Sn**	**06 11 56.3**	**-1.3**
JYNG	**Yonagunijimaku**	**2.51**	**244**	*eP*	**Pn**	**06 11 30.0**	**+1.1**
JYNG				*eS*	**Sn**	**06 11 58.1**	**-0.9**
JNTH	**Nagotoyohara**	**2.52**	**67**	*eP*	**Pn**	**06 11 28.1**	**-0.8**
JNTH				*eS*	**Sn**	**06 11 58.5**	**-0.5**
JIH	**Iheya**	**2.71**	**57**	*eS*	**Sn**	**06 12 01.5**	**-2.0**
JOW	**Kunigami**	**2.85**	**63**	P	**Pn**	**06 11 33.4**	**0.0**
JOW				*eS*	**Sn**	**06 12 04.8**	**-2.1**
JOW	**Kunigami**	**2.85**	**63**	P	**Pn**	**06 11 32.2**	**-1.1**
	4.5nm,0.3s,baz=202,slow=13,SNR=5.2						
JOW				S	**Sn**	**06 12 04.1**	**-2.9**
	15nm,0.4s,baz=158,slow=25,SNR=4.9						
	9.4nm,0.3s						
KSRS	**Korea Array**	**12.04**	**10**	P	**Pn**	**06 13 39.2**	**+1.4**
	0.8nm,0.6s,baz=194,slow=14,SNR=5.4						
MJAR	**Matsushiro Arr**	**15.46**	**42**	P	**P**	**06 14 26.5**	**+1.8**
	1.6nm,0.5s,baz=226,slow=9.2,SNR=2.4						
MJAR				S	**S**	**06 17 19.0**	**-3.7**
	0.8nm,0.4s,baz=27,slow=41,SNR=1.5						
SONM	**Songino Array**	**26.83**	**331**	P	**P**	**06 16 22.0**	**+1.0**
	0.4nm,0.4s,baz=136,slow=10,SNR=6.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**40.13**	**313**	P	**P**	**06 18 15.5**	**-0.4**
	0.4nm,0.5s,baz=105,slow=7.7,SNR=7.8						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**41.28**	**324**	P	**P**	**06 18 23.9**	**-1.3**
	1.8nm,0.5s,baz=114,slow=8.8,SNR=8.1						
	1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**43.62**	**318**	P	**P**	**06 18 43.3**	**-1.0**
	0.3nm,0.3s,baz=107,slow=9.0,SNR=5.1						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**46.05**	**168**	P	**P**

KAIM	Kayak Island	4.02	32	P		Pn	06 13 09.0	-0.5
	baz=214							
SLKM	Skilak Lake	4.03	349			Pn	06 13 09.2	-0.5
O20K	Slope Mountain	4.10	331			Pn	06 13 10.4	-0.3
O20K	Slope Mountain	4.10	331	P		Pn	06 13 10.4	-0.3
	baz=148							
IVE	Iliamna Volcan	4.16	328			Pn	06 13 10.6	-0.9
ILSW	Iliamna Southw	4.17	327			Pn	06 13 11.7	+0.1
ILSW					IAML		06 14 09.0	
	comp=E,64nm,0.9s							
EYAK	Cordova Ski Ar	4.25	19			Pn	06 13 12.6	0.0
EYAK	Cordova Ski Ar	4.25	19	P		Pn	06 13 13.3	+0.7
EYAK	Cordova Ski Ar	4.25	19	P		Pn	06 13 12.6	0.0
	baz=201							
FID	Port Fidalgo	4.33	14			Pn	06 13 13.2	-0.5
FID	Port Fidalgo	4.33	14		IAML		06 14 04.4	
	comp=E,53nm,0.7s							
FID					IAML		06 14 11.6	
	comp=N,49nm,0.5s							
SUCK	Suckling Hills	4.33	34			Pn	06 13 14.0	+0.3
SUCK					IAML		06 14 16.5	
	comp=E,62nm,1.5s							
SUCK					IAML		06 14 24.5	
	comp=N,119nm,1.0s							
HMT	Hamilton	4.40	29			Pn	06 13 14.7	-0.1
NICHA	Nichawak Mount	4.40	32			Pn	06 13 15.0	+0.3
RED	Redoubt Volcan	4.43	332			Pn	06 13 15.0	-0.2
RDSO	Redoubt South	4.45	333			Pn	06 13 15.1	-0.4
RSO	Redoubt South	4.46	333			Pn	06 13 15.1	-0.6
RDT	Redoubt	4.47	335			Pn	06 13 15.2	-0.5
GOAT	Goat Mountain	4.50	25			Pn	06 13 16.5	+0.4
RDWB	Redoubt West	4.50	332			Pn	06 13 15.7	-0.6
P18K	Big Mountain,	4.52	311			Pn	06 13 16.0	-0.3
P18K	Big Mountain,	4.52	311	P		Pn	06 13 15.6	-0.8
	baz=127							
BGLC	Bering Glacier	4.52	36			Pn	06 13 16.7	+0.4
BGLC	Bering Glacier	4.52	36	P		Pn	06 13 16.7	+0.4
	baz=220							
RC01	Rabbit Creek A	4.56	353			Pn	06 13 17.4	+0.5
RC01					IAML		06 14 11.4	
	comp=E,79nm,0.5s							
RC01					IAML		06 14 13.5	
	comp=N,44nm,0.8s							
RC01	Rabbit Creek A	4.56	353	P		Pn	06 13 17.0	+0.1
	baz=172							
BERG	Berg Lake	4.61	32			Pn	06 13 16.8	-0.7
GRIN	Grindle Hills	4.63	35			Pn	06 13 17.9	0.0
O19K	Port Alsworth	4.71	323	Pn		Pn	06 13 18.9	0.0
O19K					IAML		06 14 20.0	
	comp=N,101nm,0.5s							
O19K	Port Alsworth	4.71	323	P		Pn	06 13 19.0	+0.1
	baz=139							
SNH	Sunshine Point	4.71	38	Pn		Pn	06 13 18.5	-0.5
SNH					IAML		06 14 22.4	
	comp=N,68nm,2.4s							
SNH					IAML		06 14 39.8	
	comp=E,79nm,1.1s							
KHIT	Khitrov Hills	4.78	34			Pn	06 13 19.7	-0.3
DIV	Divide	4.79	17			Pn	06 13 20.0	-0.2
O18K	Koktuh Hills	4.79	316	Pn		Pn	06 13 20.0	-0.1
O18K					IAML		06 14 46.3	
	comp=N,40nm,2.7s							
O18K	Koktuh Hills	4.79	316	P		Pn	06 13 20.2	+0.1
	baz=131							
KNK	Knik Glacier	4.85	1			Pn	06 13 21.1	+0.3
KNK					IAML		06 14 26.0	
	comp=N,32nm,0.7s							
KNK					IAML		06 14 27.6	
	comp=E,38nm,0.9s							
KNK	Knik Glacier	4.85	1	P		Pn	06 13 21.2	+0.3
	baz=181							
BMRM	Bremner River	4.87	24			Pn	06 13 21.0	-0.2
BMRM	Bremner River	4.87	24	P		Pn	06 13 21.0	-0.2
	baz=206							
WAX	Waxell Ridge	4.91	35			Pn	06 13 21.6	-0.2
BARK	Barkley Ridge	5.00	37			Pn	06 13 23.0	0.0
N20K	Mount Spurr	5.00	340	P		Pn	06 13 22.9	-0.1
	baz=157							
SPCR	Spurr Chakacha	5.00	340			Pn	06 13 22.9	-0.1
SUA	Susitna One	5.02	348	Pn		Pn	06 13 23.7	+0.3
SUA					IAML		06 14 41.9	
	comp=E,39nm,3.8s							
SUA	Susitna One	5.02	348	P		Pn	06 13 23.2	-0.2
	baz=166							
MESA	MESA	5.03	41	Pn		Pn	06 13 23.2	-0.3
PMR	Palmer	5.04	357			Pn	06 13 23.8	+0.4
PMR					IAML		06 14 21.0	
	comp=E,39nm,0.9s							
PMR	Palmer	5.04	357	P		Pn	06 13 24.9	+1.5
PMR	Palmer	5.04	357	P		Pn	06 13 23.8	+0.4
	baz=177							
SPCP	Crater Peak Br	5.05	340			Pn	06 13 24.6	+0.9
CRQM	Cirque	5.07	32			Pn	06 13 23.8	-0.2
CRQM					IAML		06 14 26.5	
	comp=E,65nm,0.7s							
CRQE	Cirque	5.08	32	P		Pn	06 13 23.9	-0.2
	baz=216							
KLU	Klutina	5.12	15			Pn	06 13 24.9	+0.3
KLU					IAML		06 14 25.5	
	comp=E,38nm,0.9s							
KLU					IAML		06 14 29.7	
	comp=N,38nm,1.0s							
KLU	Klutina	5.12	15	P		Pn	06 13 24.7	+0.1
	baz=196							
TGL	Tana Glacier	5.16	33			Pn	06 13 25.2	0.0
TGL					IAML		06 14 26.9	
	comp=N,36nm,0.6s							
TGL					IAML		06 14 33.0	
	comp=E,54nm,0.7s							
ISLE	Juniper Island	5.20	36	Pn		Pn	06 13 25.9	+0.2
ISLE					IAML		06 14 46.2	
	comp=E,34nm,1.2s							
ISLE					IAML		06 14 51.2	
	comp=N,41nm,1.3s							
BAGL	Bagley Icefiel	5.20	38			Pn	06 13 25.5	-0.1
STLK	Strandline Lak	5.21	343			Pn	06 13 26.3	+0.4
GHO	Glory Hole Cre	5.21	358			Pn	06 13 27.1	+1.2
GHO					IAML		06 14 30.0	
	comp=E,59nm,0.6s							
N19K	Bonanza Creek	5.24	327			Pn	06 13 26.3	+0.1
N19K	Bonanza Creek	5.24	327	P		Pn	06 13 26.3	+0.1
	baz=142							
SML	Sawmill	5.25	1			Pn	06 13 26.9	+0.5
SML					IAML		06 14 32.8	
	comp=E,41nm,0.8s							
SML					IAML		06 14 55.0	
	comp=N,37nm,1.1s							
SML	Sawmill	5.25	1	P		Pn	06 13 26.8	+0.4
	baz=182							
SPNN	North Nagishla	5.25	338			Pn	06 13 27.1	+0.7
SCM	Sheep Creek Mo	5.31	7			Pn	06 13 28.9	+1.6
SCM					IAML		06 14 33.6	
	comp=N,63nm,0.9s							
SCM					IAML		06 14 35.1	
	comp=E,54nm,1.5s							
SCM	Sheep Creek Mo	5.31	7	P		Pn	06 13 28.2	+0.9
	baz=187							
VRDI	Verde Repeater	5.37	28	Pn		Pn	06 13 28.4	+0.2
KIAG	Kiagna River	5.43	34			Pn	06 13 28.5	-0.5
SAMH	Samovar Hills	5.44	46			Pn	06 13 29.1	0.0
N25K	Chitina, Valde	5.45	21			Pn	06 13 29.3	+0.2
N25K	Chitina, Valde	5.45	21	P		Pn	06 13 29.1	0.0
	baz=204							
GLB	Gilahina Butte	5.47	25			Pn	06 13 29.0	-0.4
GRNC	Granite Creek	5.49	38			Pn	06 13 29.6	-0.1
TABL	Table Mountain	5.50	42			Pn	06 13 30.1	+0.1
O17K	Koliganek Bris	5.52	309			Pn	06 13 29.6	-0.4
O17K	Koliganek Bris	5.52	309	P		Pn	06 13 29.6	-0.4
	baz=123							
P16K	Nushagak River	5.59	300			Pn	06 13 31.3	+0.3
P16K	Nushagak River	5.59	300	P		Pn	06 13 31.3	+0.3
	baz=113							
PTPK	Patty Peak	5.61	32			Pn	06 13 31.7	+0.2
MCARA	McCarthy VSAT	5.61	29			Pn	06 13 32.0	+0.7
MCARA	McCarthy VSAT	5.61	29	P		Pn	06 13 31.7	+0.4
	baz=213							
SKT	Skwentna	5.62	346			Pn	06 13 32.3	+0.8
PCA	Pinnacle	5.63	48			Pn	06 13 31.6	-0.1
PINM	Pinnacle	5.63	48	P		Pn	06 13 31.6	-0.1
	baz=234							
M24K	Tolsona, Glenn	5.68	12			Pn	06 13 33.4	+1.0
M24K	Tolsona, Glenn	5.68	12	P		Pn	06 13 33.2	+0.9
	baz=193							
BARN	Barnard Glacie	5.76	36			Pn	06 13 33.4	-0.1
PNL	Peninsula	5.78	54			Pn	06 13 33.2	-0.4
PNL	Peninsula	5.78	54	P		Pn	06 13 33.9	+0.3
PNL	Peninsula	5.78	54	P		Pn	06 13 33.2	-0.4
	baz=240							
CTG	Chitna Glacier	5.79	38	P		Pn	06 13 33.8	-0.1
	baz=223							
CTGM	Chitina Glacie	5.80	38	Pn		Pn	06 13 34.0	0.0
SVW2	Sparrevohn	5.80	324			Pn	06 13 33.2	-0.7
SVW2	Sparrevohn	5.80	324	P		Pn	06 13 33.4	-0.5
M20K	Styx River	5.80	338			Pn	06 13 34.4	+0.4
M20K	Styx River	5.80	338	P		Pn	06 13 34.4	+0.4
	baz=155							
LOGN	Logan Glacier	5.81	40			Pn	06 13 34.5	+0.3
BCPM	Bancas Point	5.81	51			Pn	06 13 34.3	+0.2
WASW	Wrangell South	5.83	21			Pn	06 13 34.8	+0.4
WACK	Wrangell Chich	5.85	20			Pn	06 13 35.5	+0.8
O16K	Kokwok River B	5.87	305			Pn	06 13 34.8	-0.1
O16K	Kokwok River B	5.87	305	P		Pn	06 13 34.8	-0.1
	baz=118							
N17K	Nushagak Hills	5.99	315			Pn	06 13 36.3	-0.1
N17K	Nushagak Hills	5.99	315	P		Pn	06 13 36.3	-0.1
	baz=128							
WAT6	Susitna Watana	6.04	4			Pn	06 13 38.0	+0.7
WAT6	Susitna Watana	6.04	4	P		Pn	06 13 38.0	+0.7
	baz=184							
HARP	HAARP	6.09	15			Pn	06 13 38.7	+0.7
HARP	HAARP	6.09	15	P		Pn	06 13 38.7	+0.7
	baz=198							
M19K	Big River Lodg	6.11	333			Pn	06 13 37.9	-0.3
M19K	Big River Lodg	6.11	333	P		Pn	06 13 37.9	-0.3
	baz=149							
M18K	Stony River	6.17	326			Pn	06 13 38.6	-0.4
M18K	Stony River	6.17	326	P		Pn	06 13 38.6	-0.4
	baz=140							
WAT7	Susitna Watana	6.28	359			Pn	06 13 41.0	+0.5
O29M	Mount Kennedy	6.45	50			Pn	06 13 43.6	+0.7
O29M	Mount Kennedy	6.45	50	P		Pn	06 13 43.3	+0.3
	baz=238							
L19K	White Mountain	6.46	333			Pn	06 13 42.5	-0.5
L19K	White Mountain	6.46	333	P		Pn	06 13 42.8	-0.1
	baz=148							
M26K	Nabesna, AK	6.50	24			Pn	06 13 43.9	+0.4
M26K	Nabesna, AK	6.50	24	P		Pn	06 13 44.3	+0.8
	baz=208							
P29M	Windy Craggy	6.52	58			Pn	06 13 43.4	-0.4
P29M	Windy Craggy	6.52	58	P		Pn	06 13 43.4	-0.4
	baz=246							
O15K	Ungalikthiuk R	6.53	298			Pn	06 13 43.9	0.0
O15K	Ungalikthiuk R	6.53	298	P		Pn	06 13 43.9	0.0
	baz=110							
DHY	Denali Highway	6.55	5	Pn		Pn	06 13 45.5	+1.2
DHY	Denali Highway	6.55	5	P		Pn	06 13 45.2	+0.9
	baz=186							
YUK2	White River	6.57	34			Pn	06 13 45.2	+0.7
N16K	Nishlik Lake	6.60	310			Pn	06 13 45.4	+0.5
N16K	Nishlik Lake	6.60	310	P		Pn	06 13 45.4	+0.5
	baz=123							
PAX	Paxson	6.60	13			Pn	06 13 46.2	+1.2
PAX	Paxson	6.60	13	P		Pn	06 13 46.2	+1.2
	baz=195							
M17K	Holitna River	6.65	320	Pn		Pn	06 13 45.7	+0.2
M17K	Holitna River	6.65	320	P		Pn	06 13 45.4	-0.1
	baz=133							
YUK3	Moose Creek	6.68	35			Pn	06 13 47.4	+1.2
YUK3	Moose Creek	6.68	35	P		Pn	06 13 47.4	+1.2
	baz=222							
M27K	Edge Creek, AK	6.73	28			Pn	06 13 47.3	+0.6
M27K	Edge Creek, AK	6.73	28	P		Pn	06 13 47.7	+0.9
	baz=213							
YUK7	Dusty Glacier	6.75	50			Pn	06 13 47.8	+0.6
SDPT	Sand Point	6.78	264	P		Pn	06 13 47.0	-0.3
MENT	Mentasta	6.84	19			Pn	06 13 49.4	+1.2
RND	Reindeer	6.85	359			Pn	06 13 49.2	+0.8
YUK6	Outpost Mounta	6.89	46			Pn	06 13 49.9	+0.8
YUK6	Outpost Mounta	6.89	46	P		Pn	06 13 49.9	+0.8
	baz=234							
M16K	Timber Creek	6.98	314	Pn		Pn	06 13 50.3	+0.2
L26K	Log Cabin Wild	6.99	20			Pn	06 13 52.0	+1.8
P30M	Million Dollar	7.08	55			Pn	06 13 51.9	+0.4
P30M	Million Dollar	7.08	55	P		Pn	06 13 51.9	+0.4
	baz=244							
HYT	Haines Junctio	7.17	49			Pn	06 13 54.1	+1.3
MCK	McKinley	7.18	359			Pn	06 13 54.5	+1.7
MCK	McKinley	7.18	359	P		Pn	06 13 54.5	+1.7
	baz=178							
O14K	Tigyukauivet M	7.26	297	Pn		Pn	06 13 54.6	+0.8
SIT	Sitka	7.30	81	P		Pn	06 13 53.3	-1.2
L27K	Beaver Creek,	7.34	25			Pn	06 13 55.4	+0.4
SKAG	Skagway	7.61	62			Pn	06 13 59.3	+0.5
SKAG	Skagway	7.61	62	P		Pn	06 13 59.2	+0.5
BPAW	Bear Paw Mtn.	7.64	352			Pn	06 13 59.8	+0.6
BESE	Bessie Mountai	7.66	69			Pn	06 13 59.0	-0.4
N30M	Aishikik Lake	7.69	46			Pn	06 13 59.9	0.0
N30M	Aishikik Lake	7.69	46	P		Pn	06 14 00.2	+0.3
	baz=235							
O30N	Mendenhall	7.75	52			Pn	06 14 01.0	+0.3
O30N	Mendenhall	7.75	52	P		Pn	06 14 00.7	0.0
	baz=242							
SCRK	Sand Creek	7.77	15			Pn	06 14 01.7	+0.7
M29M	Somme Creek	7.81	37			Pn	06 14 02.7	+1.1
M29M	Somme Creek	7.81	37	P		Pn	06 14 02.1	+0.5
	baz=225							
JIS	Juneau Island	7.86	72	P		Pn	06 14 01.9	-0.2
HDA	Harding Lake	7.90	5			Pn	06 14 03.3	+0.7
WRH	Wood River Hil	7.92	2			Pn	06 14 05.0	+2.0
NEA2	Nenana	8.04	359			Pn	06 14 04.8	+0.1
CCB	Clear Creek Bu	8.11	2	Pn		Pn	06 14 06.7	+1.2
WHY	Whitehorse	8.24	55			Pn	06 14 07.4	0.0
IL31		8.26	5			Pn	06 14 09.0	+1.4
ILAR	Eielson Array	8.26	5	Pn		Pn	06 14 08.2	+0.6
	comp=E,0.2nm,0.3s,baz=187,slow=14,SNR=12							
ILAR					Sn	Sn	06 15 38.4	-2.5
	comp=E,0.4nm,0.3s,baz=199,slow=21,SNR=9.4							
	comp=E,0.7nm,0.5s							
J26L	Joseph Creek	8.32	15			Pn	06 14 09.5	+0.9
L29M	L29M	8.40	34	P		Pn	06 14 11.2	+1.7
	baz=223							
P32M	Atlin	8.44	63			Pn	06 14 10.7	+0.5
P32M	Atlin	8.44	63	P		Pn	06 14 10.7	+0.5
	baz=255							
M30M	Minto, Yukon	8.48	40	Pn		Pn	06 14 11.5	+0.9
MLY	Manley	8.54	354	Pn		Pn	06 14 11.8	+0.2
I23K	Minto, Yukon-K	8.61	358	Pn		Pn	06 14 13.0	+0.6
K15K	Wolf Creek Mou	8.72	316	Pn		Pn	06 14 14.5	+0.6
DAWY	Dawson	8.78	27	Pn		Pn	06 14 16.1	+1.3
P33M	Teslin, Yukon	9.05	60			Pn	06 14 18.7	+0.2
P33M	Teslin, Yukon	9.05	60	P		Pn	06 14 19.5	+1.1
	baz=252							
K29M	Barlow Dome	9.12	32	Pn		Pn	06 14 20.2	+0.6
K29M	Barlow Dome	9.12	32	P		Pn	06 14 20.6	+1.1
	baz=222							
M31M	Drury Creek, Y	9.17	46			Pn	06 14 21.2	+1.1
H21K	Melozitna Rive	9.33	349			Pn	06 14 22.8	+0.5
J29N	Klondike Camp	9.40	29	Pn		Pn	06 14 24.5	+1.2
FARO	Faro, Yukon	9.61	48	Pn		Pn	06 14 26.9	+0.8
R33M	Jennings River	9.78	66			Pn	06 14 29.4	+0.9
I28M	Miner Creek	9.83	22	Pn		Pn	06 14 30.7	+1.5
DLBC	Dease Lake	10.16	72	Pn		Pn	06 14 34.0	+0.3
DLBC	Dease Lake	10.16	72	Pn		Pn	06 14 33.7	-0.1
	comp=E,0.2nm,0.3s,baz=232,slow=3.9,SNR=5.6							
DLBC					Sn	Sn	06 16 22.7	-5.0
	comp=E,0.1nm,0.3s,baz=34,slow=20,SNR=1.1							
	comp=E,0.6nm,0.3s							
G23K	Bananza Creek	10.19	357	Pn		Pn	06 14 34.9	+0.9
G21K	Allakaket	10.24	349	Pn		Pn	06 14 35.2	+0.5
I30M	Mount Dempster	10.49	29	Pn		Pn	06 14 40.7	+2.4
BMAR	Burnt Mountain	11.05	8	Pn		Pn	06 14 46.1	+0.3
BBB	Bella Bella	12.71	102	LR		LR	06 18 43.3	
	comp=E,141nm,19.1s,baz=306,slow=31							
INK	Inuvik	13.62	24	Pn		Pn	06 15 23.5	+2.7
	baz=191,slow=16,SNR=8.0							
INK					LR	LR	06 20 58.0	
	comp=E,104nm,18.2s,baz=187,slow=39							
	comp=E,2.6nm,1.0s							
C36M	Paulatuk	16.79	31	P		Pn	06 16 02.7	-0.1
C36M					IAmb	IAmb	06 16 08.1	
	comp=Z,2.9nm,0.8s							
YKA	Yellowknife Ar	18.06	57	P		P	06 16 20.4	+1.4
	baz=265,slow=11,SNR=17							
	comp=Z,1.8nm,0.9s							
A36M	Sachs Harbour	18.26	23	P		Pn	06 16 21.9	+1.0
A36M					IAmb	IAmb	06 16 26.1	
	comp=Z,9.0nm,0.8s							
A36M	Sachs Harbour	18.26	23	P		Pn	06 16 22.6	+1.6
	baz=224							
NEW	Newport	20.77	100	LR		LR	06 24 09.2	
	comp=Z,92nm,18.7s,baz=9.5,slow=35							
HUMO	Hull Mountain	21.55	120	P		P	06 16 58.8	+1.6
HUMO				IAmb		IAmb	06 17 32.7	
	comp=Z,7.6nm,1.4s							
PFO	Pinyon Flats O	31.79	123	LR		LR	06 28 51.3	
	comp=Z,83nm,18.1s,baz=358,slow=32							
SFJD	Kangerlussuaq	42.63	35	LR		LR	06 37 44.9	
	comp=Z,132nm,18.9s,baz=56,slow=36							
H11N2	WAKE ISLAND Hy	49.36	240	T		T	07 14 16.6	
	baz=30							
H11N3	WAKE ISLAND Hy	49.36	240	T		T	07 14 16.6	
	baz=30							
H11N1	WAKE ISLAND Hy	49.38	240	T		T	07 14 16.6	
	baz=30							
H11S1	WAKE ISLAND Hy	50.50	240	T		T	07 16 16.9	
	baz=29							
H11S2	WAKE ISLAND Hy	50.51	240	T		T	07 16 20.1	
	baz=29							
H11S3	WAKE ISLAND Hy	50.52	240	T		T	07 16 11.9	
	baz=29							
SONM	Songino Array	58.73	310	P		P	06 22 07.9	+2.3
	comp=Z,0.4nm,0.7s,baz=35,slow=5.3,SNR=3.5							
	comp=Z,0.4nm,0.7s							

IDC ***16*** *06:22:24.1±1.3,22°.19S×88°.94E, h0km, mb3.6/6, mbtmp3.6/6, MS3.8/1, Error ellipse: s-maj=42.8km s-min=27.8km az=70.0*

ISC 16 06:22:25.8±1.3, 22°.2S±0°.2×89°.0E±0°.3, h10km, n13, σ1§10/6, mb3.5/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W3	Cape Leeuwin H	25.39	125	T	T	06 54 20.4	
	baz=294						
H01W2	Cape Leeuwin H	25.39	125	T	T	06 54 20.0	
	baz=294						
H01W1	Cape Leeuwin H	25.40	125	T	T	06 54 23.6	
	baz=294						
H04N2	CROZET ISLANDS	38.44	222	T	T	07 10 55.3	
	baz=64,slow=75,SNR=20						
H04N1	CROZET ISLANDS	38.45	223	T	T	07 10 54.7	
	baz=64,slow=75,SNR=21						
H04N3	CROZET ISLANDS	38.45	222	T	T	07 10 55.2	
	baz=64,slow=75,SNR=17						
ASAR	Alice Springs	41.28	101	P	P	06 30 11.9	+0.2
	0.4nm,0.7s,baz=267,slow=7.5,SNR=4.8						
	0.4nm,0.7s						
WRA	Warramunga Arr	42.28	96	P	P	06 30 19.8	0.0
	0.4nm,0.7s,baz=266,slow=8.3,SNR=2.8						
	0.4nm,0.7s						
LBTB	Lobatse	57.67	254	LR	LR	06 53 50.5	
	comp=Z,75nm,18.5s,baz=310,slow=33						
QSPA	South Pole Qui	67.90	180	P	P	06 33 24.4	0.0
	1.7nm,0.7s,baz=285,slow=2.3,SNR=6.5						
	1.7nm,0.7s						
MKAR	Makanchi Array	68.93	355	P	P	06 33 32.3	+1.5
	0.1nm,0.5s,baz=165,slow=6.0,SNR=1.3						
	0.1nm,0.5s						
SONM	Songino Array	71.44	12	P	P	06 33 45.9	-0.5
	0.7nm,1.1s,baz=193,slow=5.9,SNR=2.6						
	0.7nm,1.1s						
ZALV	Zalesovo Beam	75.91	357	P	P	06 34 11.2	-1.0
	0.9nm,0.5s,baz=173,slow=4.6,SNR=3.6						
	0.9nm,0.5s						

IDC ***16*** *06:30:15.7±3.0,53°.59N×87°.90E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=27.9km s-min=16.2km az=53.0*

NNC ***16*** *06:30:18.0±2.6,53°.46N×87°.65E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=20.1km s-min=11.0km az=65.0, Suspected Mining explosion.*

ISC 16 06:30:16.8±3.7, 53°.6N±0°.1×87°.8E±0°.2, h0km, n8, σ1§13/11, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	283	I	I	06 41 41.2	
	0.2nm,3.0s,baz=99,slow=338,SNR=9.5						
ZAA0	Zalesovo Array	1.78	283	⇑P	Pn	06 30 48.9	+0.1
	0.1nm,0.2s						
ZAA0				⇑S	Sb	06 31 13.1	+0.1
	1.1nm,0.5s						
ZALV	Zalesovo Beam	1.78	283	Pg	Pn	06 30 48.3	-0.5
	0.9nm,0.3s,baz=98,slow=16,SNR=10						
ZALV				Lg	Lg	06 31 14.2	
	2.4nm,0.3s,baz=103,slow=25,SNR=17						
KURK	Kurchatov	6.32	247	⇑Pn	Pn	06 31 51.8	+0.8
	1.7nm,0.9s						
KURK				⇑Sn	Sn	06 33 02.1	-1.7
	0.7nm,0.6s						
KURK				⇓Lg	Lg	06 33 36.0	
	3.8nm,0.8s						
KURBB	Kurchatov Arra	6.41	246	⇓Pn	Pn	06 31 52.4	0.0
	1.2nm,0.4s						
KURBB				⇓Sn	Sn	06 33 07.5	+1.3
	6.2nm,0.8s						
KURBB				⇑Lg	Lg	06 33 40.2	
	9.7nm,1.1s						
KURBB	Kurchatov Arra	6.41	246	Pn	Pn	06 31 54.0	+1.6
	0.1nm,0.3s,baz=63,slow=14,SNR=4.9						
KURBB				Lg	Lg	06 33 43.6	
	0.1nm,0.3s,baz=64,slow=32,SNR=2.9						
	1.2nm,0.2s						
MK31	Makanchi Array	7.65	209	Pn	Pn	06 32 09.8	+0.3
	baz=28,slow=14,SNR=14						
MK31				⇓Sn	Sn	06 33 35.4	-1.4
	1.2nm,0.9s						
MK31				⇑Lg	Lg	06 34 15.4	
	1.6nm,0.9s						
MKAR	Makanchi Array	7.65	209	Pn	Pn	06 32

MSZ	**Milford Sound**	**1.02**	**26**	P	**Pg**	**06 32 41.7**	**-1.1**
MSZ				S	**Sg**	**06 32 55.4**	**-0.6**
GLNY	**Glenorchy**	**1.06**	**47**	P	**Pg**	**06 32 41.9**	**-1.8**
GLNY				S	**Sg**	**06 32 56.5**	**-1.0**
GODC	**Gore District**	**1.25**	**115**	P	**Pn**	**06 32 46.5**	**-0.6**
GODC				S	**Sn**	**06 33 05.2**	**+1.1**
APZ	**The Paps**	**1.33**	**159**	P	**Pn**	**06 32 47.1**	**-1.1**
APZ				S	**Sg**	**06 33 05.2**	**-0.9**
WKZ	**Wanaka**	**1.43**	**58**		**Pn**	**06 32 49.9**	**+0.3**
WKZ				Sn	**Sb**	**06 33 09.1**	**+0.6**
WKZ	**Wanaka**	**1.43**	**58**	P	**Pn**	**06 32 50.1**	**+0.5**
WKZ				S	**Sb**	**06 33 09.7**	**+1.1**
EAZ	**Earnscleugh**	**1.45**	**76**	P	**Pn**	**06 32 50.1**	**+0.3**
EAZ				S	**Sn**	**06 33 10.1**	**+1.0**
WNPS	**Wanaka Nationa**	**1.58**	**56**	P	**Pn**	**06 32 51.7**	**+0.1**
WNPS				S	**Sn**	**06 33 13.0**	**+0.9**
SYZ	**Scrubby Hill**	**1.59**	**127**	P	**Pn**	**06 32 51.7**	**0.0**
SYZ				S	**Sn**	**06 33 12.6**	**+0.3**
TUZ	**Tuapeka**	**1.67**	**103**	P	**Pn**	**06 32 53.5**	**+0.7**
TUZ				S	**Sn**	**06 33 15.8**	**+1.5**
BDCS	**Balclutha Dist**	**1.81**	**112**	P	**Pn**	**06 32 55.9**	**+1.2**
BDCS				S	**Sn**	**06 33 19.5**	**+1.7**
JCZ	**Jackson Bay**	**1.84**	**35**	P	**Pn**	**06 32 56.0**	**+0.7**
JCZ				S	**Sb**	**06 33 21.7**	**+1.1**
NSBS	**Neils Beach**	**1.86**	**32**	P	**Pn**	**06 32 56.8**	**+1.4**
MECS	**Makarora Emerg**	**1.93**	**46**	P	**Pn**	**06 32 57.8**	**+1.4**
HHSZ	**Highcliff Hill**	**2.32**	**98**	P	**Pn**	**06 33 02.8**	**+1.0**
LBZ	**Lake Benmore**	**2.37**	**60**	Pn	**Pn**	**06 33 02.0**	**-0.4**
LBZ	**Lake Benmore**	**2.37**	**60**	P	**Pn**	**06 33 02.4**	**-0.1**
ODZ	**Otahua Downs**	**2.42**	**78**		**Pn**	**06 33 02.8**	**-0.3**
ODZ	**Otahua Downs**	**2.42**	**78**	P	**Pn**	**06 33 03.3**	**+0.2**
FOZ	**Fox Glacier**	**2.73**	**42**	Pn	**Pn**	**06 33 07.9**	**+0.6**
FOZ	**Fox Glacier**	**2.73**	**42**	P	**Pn**	**06 33 07.8**	**+0.4**
TMZ	**Timaru**	**2.89**	**67**	P	**Pn**	**06 33 09.0**	**-0.6**
ARCZ	**Arundel**	**3.21**	**61**	P	**Pn**	**06 33 12.9**	**-1.0**
RPZ	**Rata Peaks**	**3.27**	**56**	Pn	**Pn**	**06 33 13.7**	**-1.1**
RPZ	**Rata Peaks**	**3.27**	**56**	Pn	**Pn**	**06 33 13.8**	**-1.0**
	30nm,0.3s,baz=207,slow=5.1,SNR=39						
RPZ				Sn	**Sn**	**06 33 52.5**	**-1.3**
	26nm,0.3s,baz=69,slow=22,SNR=4.8						
RPZ				LR	LR	06 34 11.8	
	comp=Z,139nm,19.8s,baz=274,slow=35						
	88nm,0.4s						
RPZ	**Rata Peaks**	**3.27**	**56**	P	**Pn**	**06 33 13.8**	**-1.0**
WVZ	**Waitaha Valley**	**3.52**	**46**	P	**Pn**	**06 33 18.5**	**+0.3**
WACZ	**Wakanui South**	**3.62**	**65**	P	**Pn**	**06 33 18.9**	**-0.7**
RACZ	**Rakaia**	**3.92**	**63**	P	**Pn**	**06 33 23.4**	**-0.3**
OXZ	**Oxford**	**4.07**	**58**		**Pn**	**06 33 24.4**	**-1.5**
OXZ	**Oxford**	**4.07**	**58**	P	**Pn**	**06 33 24.3**	**-1.5**
INZ	**Inchbonnie**	**4.13**	**48**	Pn	**Pn**	**06 33 25.6**	**-1.0**
INZ	**Inchbonnie**	**4.13**	**48**	P	**Pn**	**06 33 25.9**	**-0.7**
MQZ	**McQueen's Vall**	**4.25**	**66**	Pn	**Pn**	**06 33 27.1**	**-1.2**
MQZ	**McQueen's Vall**	**4.25**	**66**	P	**Pn**	**06 33 27.1**	**-1.2**
AKCZ	**Akaroa Harbour**	**4.35**	**69**	P	**Pn**	**06 33 29.2**	**-0.4**
AMCZ	**Amberley**	**4.53**	**60**	Pn	**Pn**	**06 33 31.4**	**-0.7**
AMCZ	**Amberley**	**4.53**	**60**	P	**Pn**	**06 33 31.4**	**-0.7**
LTZ	**Lake Taylor**	**4.54**	**54**	Pn	**Pn**	**06 33 30.9**	**-1.4**
LTZ	**Lake Taylor**	**4.54**	**54**	P	**Pn**	**06 33 31.3**	**-1.0**
GVZ	**Greta Valley S**	**4.88**	**60**		**Pn**	**06 33 35.9**	**-1.0**
GVZ	**Greta Valley S**	**4.88**	**60**	P	**Pn**	**06 33 36.1**	**-0.8**
DSZ	**Dennistoun Nort**	**5.04**	**42**	Pn	**Pn**	**06 33 38.1**	**-1.0**
DSZ	**Dennistoun Nort**	**5.04**	**42**	P	**Pn**	**06 33 38.2**	**-1.0**
KHZ	**Kahutara**	**5.50**	**57**		**Pn**	**06 33 44.2**	**-1.2**
KHZ	**Kahutara**	**5.50**	**57**	P	**Pn**	**06 33 43.9**	**-1.5**
THZ	**Tophouse**	**5.58**	**49**	Pn	**Pn**	**06 33 45.6**	**-1.0**
THZ	**Tophouse**	**5.58**	**49**	P	**Pn**	**06 33 45.2**	**-1.3**
MRNZ	**Matariki Terra**	**5.77**	**45**		**Pn**	**06 33 48.6**	**-0.5**
MRNZ	**Matariki Terra**	**5.77**	**45**	P	**Pn**	**06 33 49.7**	**+0.5**
QRZ	**Quartz Range**	**6.10**	**41**		**Pn**	**06 33 53.3**	**-0.4**
QRZ	**Quartz Range**	**6.10**	**41**	P	**Pn**	**06 33 53.9**	**+0.2**
BSWZ	**Blackbirch Sta**	**6.14**	**53**	Pn	**Pn**	**06 33 54.3**	**0.0**
TKNZ	**Takaka Hill**	**6.14**	**44**		**Pn**	**06 33 53.8**	**-0.5**
TKNZ	**Takaka Hill**	**6.14**	**44**	P	**Pn**	**06 33 55.0**	**+0.7**
NNZ	**Nelson**	**6.22**	**47**	Pn	**Pn**	**06 33 57.3**	**+2.0**
NNZ	**Nelson**	**6.22**	**47**	P	**Pn**	**06 33 57.9**	**+2.6**
TCW	**Tory Channel**	**6.70**	**52**		**Pn**	**06 34 04.0**	**+2.1**
TCW	**Tory Channel**	**6.70**	**52**	P	**Pn**	**06 34 06.5**	**+4.6**
DUWZ	**D'Urville Isla**	**6.80**	**48**	P	**Pn**	**06 34 06.4**	**+3.0**
BHW	**Baring Head**	**6.91**	**55**	Pn	**Pn**	**06 34 05.0**	**+0.2**
MRZ	**Mangatainoka R**	**7.80**	**54**	Pn	**Pn**	**06 34 15.8**	**-1.2**
MRZ	**Mangatainoka R**	**7.80**	**54**	P	**Pn**	**06 34 17.3**	**+0.3**
KHEZ	**Kahui Hut**	**8.01**	**41**	P	**Pn**	**06 34 21.3**	**+1.4**
PREZ	**Palmer Road**	**8.04**	**41**	P	**Pn**	**06 34 22.3**	**+2.0**
NEZ	**North Egmont**	**8.06**	**41**	P	**Pn**	**06 34 24.0**	**+3.2**
PKE	**Pukeiti**	**8.08**	**40**	P	**Pn**	**06 34 23.2**	**+2.3**
MHEZ	**Mangahewa**	**8.33**	**41**	P	Pn	06 34 30.0	+5.8
PKVZ	**Pokaka**	**8.65**	**46**	P	**Pn**	**06 34 32.6**	**+3.8**
TRVZ	**Turoa**	**8.75**	**47**	P	**Pn**	**06 34 34.9**	**+4.6**
WNVZ	**Wahianoa**	**8.76**	**47**	P	Pn	06 34 35.3	+5.0
NGZ	**Ngauruhoe**	**8.87**	**47**	P	**Pn**	**06 34 36.2**	**+4.4**
WTVZ	**West Tongariro**	**8.91**	**46**	P	**Pn**	**06 34 37.0**	**+4.6**
OTVZ	**Oturere**	**8.91**	**47**	P	**Pn**	**06 34 34.9**	**+2.5**
ETVZ	**East Tongariro**	**8.96**	**47**	P	Pn	06 34 38.5	+5.5
TMVZ	**Te Maari**	**8.97**	**47**	P	Pn	06 34 40.0	+6.8
HIZ	**Hauiti**	**9.03**	**41**		**Pn**	**06 34 34.4**	**+0.5**
HIZ	**Hauiti**	**9.03**	**41**	P	**Pn**	**06 34 35.2**	**+1.3**
BKZ	**Black Stump Fm**	**9.35**	**50**	P	**Pn**	**06 34 42.2**	**+3.9**
TOZ	**Tahuroa Road**	**9.96**	**41**	Pn	**Pn**	**06 34 45.4**	**-1.2**
RTZ	**Ruatahuna**	**10.01**	**49**		**Pn**	**06 34 48.5**	**+1.1**
MKAZ	**Moumakai**	**10.32**	**38**	P	**Pn**	**06 34 52.9**	**+1.3**
URZ	**Urewera**	**10.34**	**48**	Pn	**Pn**	**06 34 51.8**	**0.0**
	0.4nm,0.3s,baz=205,slow=9.6,SNR=1.8						
URZ				Sn	**Sn**	**06 36 40.6**	**-7.2**
	0.6nm,0.3s,baz=231,slow=21,SNR=1.7						
URZ				LR	LR	06 38 40.0	
	comp=Z,105nm,21.2s,baz=301,slow=37						
	4.9nm,0.7s						
WCZ	**Waipu Caves**	**11.01**	**31**	P	**Pn**	**06 35 02.2**	**+1.1**
PKGZ	**Pakihiroa**	**11.12**	**50**	P	Pn	06 35 09.3	+6.7
OUZ	**Omahuta**	**11.41**	**27**	P	**Pn**	**06 35 08.0**	**+1.6**
TAU	**Tasmania Unive**	**14.57**	**273**	Pn	**Pn**	**06 35 47.8**	**-1.9**
TOO	**Toolangi**	**18.14**	**289**		**Pn**	**06 36 33.3**	**-2.2**
EIDS	**Eidsvold**	**24.03**	**322**	P	**P**	**06 37 39.5**	**+0.9**
EIDS				IAmb	IAmb	06 38 04.5	
	comp=Z,4.8nm,0.8s						
STKA	**Stephens Creek**	**24.16**	**296**	LR	LR	06 46 41.8	
	comp=Z,51nm,18.1s,baz=175,slow=35						
VNDA	**Vanda**	**32.11**	**182**	LR	LR	06 50 04.8	
	comp=Z,45nm,18.4s,baz=48,slow=33						
ASAR	**Alice Springs**	**34.75**	**298**	P	**P**	**06 39 13.9**	**-0.1**
	comp=Z,1.2nm,1.1s,baz=128,slow=7.4,SNR=5.5						
ASAR				PcP	**PcP**	**06 41 46.5**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=136,slow=3.1,SNR=2.3						
ASAR				S	**S**	**06 44 51.3**	**+6.8**
	comp=Z,0.1nm,0.3s,baz=212,slow=39,SNR=1.3						
	comp=Z,1.2nm,1.1s						
WR0	**Warramunga Arr**	**37.15**	**303**	P	**P**	**06 39 32.9**	**-1.7**
WRA	**Warramunga Arr**	**37.29**	**302**	P	**P**	**06 39 35.3**	**-0.5**
	comp=Z,2.3nm,1.1s,baz=136,slow=7.9,SNR=5.9						
	comp=Z,2.3nm,1.1s						
WB0	**Warramunga Arr**	**37.39**	**303**	P	**P**	**06 39 34.2**	**-2.4**
WB0				IAmb	IAmb	06 39 42.5	
	comp=Z,10nm,1.5s						
H01W1	**Cape Leeuwin H**	**41.27**	**266**	T	T	07 23 22.4	
	baz=121,slow=75,SNR=279						
H01W2	**Cape Leeuwin H**	**41.28**	**266**	T	T	07 23 25.8	
	baz=121,slow=75,SNR=262						
H01W3	**Cape Leeuwin H**	**41.29**	**266**	T	T	07 23 26.7	
	baz=121,slow=75,SNR=308						
QSPA	**South Pole Qui**	**44.53**	**180**	P	**P**	**06 40 36.6**	**+1.4**
QSPA				IAmb	IAmb	06 41 02.5	
	comp=Z,6.1nm,1.4s						
QSPA	**South Pole Qui**	**44.53**	**180**	P	**P**	**06 40 36.3**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=256,slow=2.4,SNR=4.4						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**88.76**	**298**	P	**P**	**06 45 19.2**	**+1.7**
	comp=Z,1.3nm,0.3s,baz=159,slow=3.5,SNR=5.0						
	comp=Z,1.3nm,0.3s						
PZH	**PanZhiHua**	**93.19**	**305**	P	**P**	**06 45 38.6**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC	**Hu-ho-hao-te**	**99.44**	**321**	*e*P	**Pdif**	**06 46 06.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,4.3s						
KURBB	**Kurchatov Arra**	**122.64**	**311**	PKP	**PKPdf**	**06 51 16.9**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=104,slow=2.4,SNR=1.7						
FRB	**Frobisher Bay**	**144.39**	**39**	PKP	**PKPab**	**06 51 56.0**	**-0.9**
	comp=Z,2.8nm,1.0s,baz=270,slow=5.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**145.44**	**205**	PKPbc	**PKPbc**	**06 52 01.9**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=93,slow=2.3,SNR=18						
BRTR	**Keskin Array B**	**145.81**	**277**	PKPbc	**PKPdf**	**06 52 02.8**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=128,slow=3.4,SNR=4.1						
ARCES	**ARCESS Array B**	**149.38**	**335**	PKPbc	**PKPbc**	**06 52 10.7**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=70,slow=5.2,SNR=4.3						
AKASG	**Malin Array Be**	**151.85**	**296**	PKPbc	**PKPbc**	**06 52 17.4**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=77,slow=2.3,SNR=4.8						
FINES	**FINESS Array B**	**152.56**	**319**	PKPbc	**PKPbc**	**06 52 18.6**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=82,slow=2.0,SNR=6.3						

CATAC ***16*** *06:51:19.6±0.2, 12°.70N×88°.31W, h40km±5km, ML3.9*
SNET ***16*** *06:51:19.3±1.0, 12°.69N×88°.35W, h35km, ML4.0*
IDC ***16*** *06:51:24.4±6.7, 13°.74N×87°.75W, h57km±9km, mb3.0/5, mbtmp3.3/6, Error ellipse: s-maj=144.9km s-min=31.3km az=9.0*

ISC 16 06:51:19.0±0.7, **12°.69N**±0°.04×**88°.33W**±0°.03, **h49**km±6km, **n99**, σ**0°.95**/176, **mb3.3/5, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUCU	**Jucuarįn**	**0.56**	**8**	*e*P	**Pn**	**06 51 31.2**	**0.0**
JUCU				*e*S	**Sn**	**06 51 40.5**	**+0.6**
JUCU	**Jucuarįn**	**0.56**	**8**	*i* P	**Pn**	**06 51 31.1**	**0.0**
JUCU				*i* S	**Sn**	**06 51 40.4**	**+0.6**
JUCU				IAML		06 51 42.8	
	comp=Z,3µm,1.0s						
RANC	**El Ranchito**	**0.74**	**3**	*i* P	Pn	06 51 44.8	+11
RANC				IAML		06 51 48.7	
	comp=Z,4µm,1.0s						
LCND	**La Caada**	**0.75**	**35**	*e*P	**Pn**	**06 51 33.5**	**0.0**
LCND				*e*S	**Sn**	**06 51 44.7**	**+0.8**
LCND	**La Caada**	**0.75**	**35**	*i* P	**Pn**	**06 51 33.5**	**0.0**
LCND				*i* S	**Sn**	**06 51 46.1**	**+2.2**
LCND				IAML		06 51 47.8	
	comp=Z,6µm,1.0s						
BLLM	**Bellamira**	**0.75**	**7**	*e*P	**Pn**	**06 51 33.9**	**+0.3**
CNCH	**Conchagua**	**0.76**	**40**	*e*P	**Pn**	**06 51 33.9**	**+0.2**
CNCH				*e*S	**Sn**	**06 51 46.6**	**+2.3**
CNCH	**Conchagua**	**0.76**	**40**	*i* P	**Pn**	**06 51 33.6**	**-0.1**
CNCH				*i* S	**Sn**	**06 51 45.2**	**+0.9**
CNCH				IAML		06 51 49.4	
	comp=Z,8µm,1.0s						
PACA	**Pacayal**	**0.77**	**1**	*i* P	**Pn**	**06 51 34.5**	**+0.6**
PACA				*i* S	**Sn**	**06 51 44.6**	**0.0**
PACA				IAML		06 51 50.5	
	comp=Z,24µm,1.0s						
CNRM	**Centro Naciona**	**0.79**	**11**	*i* P	**Pn**	**06 51 34.4**	**+0.4**
CNRM				*i* S	**Sn**	**06 51 46.2**	**+1.3**
CNRM				IAML		06 51 48.6	
	comp=Z,23µm,1.0s						
CSGN	**Cosiguina Volc**	**0.81**	**69**	*i* P	**Pn**	**06 51 33.9**	**-0.3**
CSGN				IAML		06 51 57.9	
	comp=Z,8µm,1.0s						
COEB	**Comit de Eme**	**0.82**	**346**	*e*P	**Pn**	**06 51 34.7**	**+0.2**
COEB				*e*S	**Sn**	**06 51 46.9**	**+1.1**
COEB	**Comit de Eme**	**0.82**	**346**	*i* P	**Pn**	**06 51 34.7**	**+0.2**
COEB				*i* S	**Sn**	**06 51 46.6**	**+0.8**
COEB				IAML		06 51 48.9	
	comp=Z,3µm,1.0s						
POTN	**Potosi Cosigui**	**0.86**	**69**	*i* P	**Pn**	**06 51 34.6**	**-0.3**
POTN				*i* S	**Sn**	**06 51 46.8**	**+0.3**
POTN				IAML		06 51 51.6	
	comp=Z,540nm,1.0s						
AMPH	**Amapala**	**0.88**	**48**	*e*P	**Pn**	**06 51 35.6**	**+0.5**
AMPH				*e*S	**Sn**	**06 51 48.7**	**+1.8**
AMPH	**Amapala**	**0.88**	**48**	*i* P	**Pn**	**06 51 35.9**	**+0.7**
AMPH				*i* S	**Sn**	**06 51 48.8**	**+1.8**
TECO	**Alcaldia de Te**	**0.95**	**333**	*e*P	**Pn**	**06 51 36.1**	**0.0**
TECO				*e*S	**Sn**	**06 51 48.9**	**+0.3**
TECO	**Alcaldia de Te**	**0.95**	**333**	*i* P	**Pn**	**06 51 36.0**	**0.0**
TECO				*i* S	**Sn**	**06 51 48.9**	**+0.3**
TECO				IAML		06 51 56.4	
	comp=Z,2µm,1.0s						
PQSS	**Presa 15 de Se**	**0.95**	**347**	*i* P	**Pn**	**06 51 36.7**	**+0.6**
PQSS				*i* S	**Sn**	**06 51 49.9**	**+1.2**
PQSS				IAML		06 51 51.9	
	comp=Z,3µm,1.0s						
UESV	**Universidad de**	**1.04**	**335**	*i* P	**Pn**	**06 51 37.6**	**+0.3**
UESV				IAML		06 51 38.2	
	comp=Z,2µm,1.0s						
UESV				*i* S	**Sn**	**06 51 51.6**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.08**	**339**	*i* P	**Pn**	**06 51 38.5**	**+0.6**
SCLA				*e*S	**Sn**	**06 51 53.3**	**+1.6**
SCLA	**Alcaldia de Sa**	**1.08**	**339**	*i* P	**Pn**	**06 51 38.5**	**+0.6**
SCLA				IAML		06 51 38.8	
	comp=Z,1µm,1.0s						
SCLA				*i* S	**Sn**	**06 51 53.1**	**+1.4**
SJTE	**Alcalda de S**	**1.13**	**324**	*e*P	**Pn**	**06 51 38.7**	**+0.1**
SJTE				*e*S	**Sn**	**06 51 53.6**	**+0.5**
SJTE	**Alcalda de S**	**1.13**	**324**	*i* P	**Pn**	**06 51 38.9**	**+0.3**
SJTE				*i* S	**Sn**	**06 51 53.9**	**+0.8**
SJTE				IAML		06 51 56.2	
	comp=Z,4µm,1.0s						
PAVA	**Las Pavas**	**1.17**	**330**	*e*P	**Pn**	**06 51 39.8**	**+0.6**
PAVA				*e*S	**Sn**	**06 51 55.5**	**+1.3**
PAVA	**Las Pavas**	**1.17**	**330**	*i* P	**Pn**	**06 51 39.9**	**+0.6**
PAVA				*i* S	**Sn**	**06 51 54.8**	**+0.6**
PAVA				IAML		06 51 59.4	
	comp=Z,5µm,1.0s						
CHNN	**El Viejo**	**1.18**	**93**	*i* P	**Pn**	**06 51 39.6**	**+0.4**
CHNN				*i* S	**Sn**	**06 51 54.0**	**-0.2**
CHNN				IAML		06 51 58.7	
	comp=Z,5µm,1.0s						
PANCS	**Alcalda de**	**1.23**	**318**	*i* P	**Pn**	**06 51 40.0**	**0.0**
PANCS				*i* S	**Sn**	**06 51 55.2**	**-0.3**
PANCS				IAML		06 51 58.6	
	comp=Z,3µm,1.0s						
LALI	**Alcalda de L**	**1.25**	**310**	*e*P	**Pn**	**06 51 40.2**	**+0.1**
LALI				*e*S	**Sn**	**06 51 56.2**	**+0.4**
LALI	**Alcalda de L**	**1.25**	**310**	*i* P	**Pn**	**06 51 40.0**	**-0.1**
LALI				*i* S	**Sn**	**06 51 55.7**	**-0.1**
LALI				IAML		06 51 56.2	
	comp=Z,360nm,1.0s						
CRIN	**San Cristobal**	**1.25**	**89**	*i* P	**Pn**	**06 51 41.0**	**+0.8**
CRIN				*i* S	**Sn**	**06 51 56.9**	**+0.9**
CRIN				IAML		06 51 59.5	
	comp=Z,6µm,1.0s						
LOMA	**Loma Larga**	**1.25**	**319**	*e*P	**Pn**	**06 51 40.5**	**+0.3**
LOMA				*e*S	**Sn**	**06 51 56.6**	**+0.5**
LOMA	**Loma Larga**	**1.25**	**319**	*i* P	**Pn**	**06 51 40.6**	**+0.3**
LOMA				*i* S	**Sn**	**06 51 56.5**	**+0.4**
LOMA				IAML		06 51 59.8	
	comp=Z,3µm,1.0s						
UDBS	**Universidad Do**	**1.29**	**322**	*i* P	**Pn**	**06 51 40.9**	**+0.1**
UDBS				*i* S	**Sn**	**06 51 58.1**	**+1.0**
UDBS				IAML		06 52 05.5	
	comp=Z,2µm,1.0s						
UTEC	**Universidad Te**	**1.31**	**320**	*i* P	**Pn**	**06 51 41.4**	**+0.3**
UTEC				*i* S	**Sn**	**06 51 57.9**	**+0.4**
UTEC				IAML		06 52 04.0	
	comp=Z,2µm,1.0s						
SNET	**Serv Nac Est T**	**1.32**	**319**	*e*P	**Pn**	**06 51 41.5**	**+0.3**
SNET				*e*S	**Sn**	**06 51 57.9**	**+0.2**
SNET	**Serv Nac Est T**	**1.32**	**319**	*i* P	**Pn**	**06 51 41.2**	**0.0**
SNET				*i* S	**Sn**	**06 51 58.3**	**+0.6**
SNET				IAML		06 52 01.0	
	comp=Z,5µm,1.0s						
ITCA	**Escuela Especi**	**1.34**	**317**	*i* P	**Pn**	**06 51 41.2**	**-0.3**
ITCA				*i* S	**Sn**	**06 51 58.6**	**+0.3**
ITCA				IAML		06 52 06.9	
	comp=Z,4µm,1.0s						
UEES	**Universidad Ev**	**1.35**	**319**	*i* P	**Pn**	**06 51 42.0**	**+0.4**
UEES				*i* S	**Sn**	**06 51 59.2**	**+0.8**
UEES				IAML		06 52 05.1	
	comp=Z,1µm,1.0s						
BOQS	**Boqueron**	**1.39**	**318**	*e*P	**Pn**	**06 51 42.8**	**+0.5**
PMON	**Piamonte**	**1.40**	**317**	*i* P	**Pn**	**06 51 42.3**	**+0.1**
PMON				*i* S	**Sn**	**06 52 00.3**	**+0.7**
PMON				IAML		06 52 08.0	
	comp=Z,3µm,1.0s						
QUEN	**Al S del Volca**	**1.45**	**94**	*i* P	**Pn**	**06 51 42.5**	**-0.4**
QUEN				*i* S	**Sn**	**06 52 00.5**	**-0.3**
QUEN				IAML		06 52 02.4	
	comp=Z,3µm,1.0s						
JAYA	**Jayaque - finc**	**1.45**	**311**	*e*P	**Pn**	**06 51 43.3**	**+0.3**
JAYA				*e*S	**Sn**	**06 52 00.9**	**0.0**
JAYA	**Jayaque - finc**	**1.45**	**311**	*i* P	**Pn**	**06 51 42.9**	**-0.1**
JAYA				*i* S	**Sn**	**06 52 00.7**	**-0.3**
JAYA				IAML		06 52 03.0	
	comp=Z,5µm,1.0s						
TEL3	**Telica 3**	**1.46**	**95**	*i* P	**Pn**	**06 51 43.3**	**+0.3**
TEL3				IAML		06 52 04.1	
	comp=Z,2µm,1.0s						
QUEZ	**Alcaldia de Qu**	**1.46**	**321**	*i* P	**Pn**	**06 51 43.9**	**+0.9**
QUEZ				*i* S	**Sn**	**06 52 01.9**	**+0.8**
QUEZ				IAML		06 52 08.7	
	comp=Z,5µm,1.0s						
HERN	**Volcan Telica**	**1.47**	**93**	*i* P	**Pn**	**06 51 43.5**	**+0.3**
HERN				*i* S	**Sn**	**06 52 01.8**	**+0.5**
HERN				IAML		06 52 07.2	
	comp=Z,2µm,1.0s						
TELN	**Telica**	**1.47**	**93**	*i* P	**Pn**	**06 51 43.0**	**-0.2**
TELN				*i* S	**Sn**	**06 52 01.0**	**-0.3**
TELN				IAML		06 52 54.7	
	comp=Z,200nm,1.0s						
HOYN	**Al Sur del Vol**	**1.47**	**93**	*i* P	**Pn**	**06 51 43.7**	**+0.5**
HOYN				*i* S	**Sn**	**06 52 02.1**	**+0.7**
HOYN				IAML		06 52 30.4	
	comp=Z,52nm,1.0s						
POLN	**Al Sur del Vol**	**1.48**	**91**	*i* P	**Pn**	**06 51 43.6**	**+0.3**
POLN				IAML		06 51 54.2	
	comp=Z,5.5nm,1.0s						
POLN				*i* S	**Sn**	**06 52 01.4**	**-0.2**
CEDA	**San Andres**	**1.51**	**317**	*i* P	**Pn**	**06 51 44.3**	**+0.5**
CEDA				*i* S	**Sn**	**06 52 03.3**	**+0.9**
CEDA				IAML		06 52 23.5	
	comp=Z,2µm,1.0s						
PACN	**Al O del Volca**	**1.52**	**97**	*i* P	**Pn**	**06 51 44.0**	**+0.2**
PACN				*i* S	**Sn**	**06 52 02.5**	**+0.1**
PACN				IAML		06 52 05.1	
	comp=Z,2µm,1.0s						
PLRN	**Geotermica Pol**	**1.53**	**94**	*i* P	**Pn**	**06 51 44.3**	**+0.3**
PLRN				*i* S	**Sn**	**06 52 02.4**	**-0.3**
PLRN				IAML		06 52 29.8	
	comp=Z,1µm,1.0s						
ROCN	**Rota Cerro Neg**	**1.56**	**96**	*i* P	**Pn**	**06 51 44.6**	**+0.2**
ROCN				IAML		06 52 10.8	
	comp=Z,1µm,1.0s						
LLGN	**La Laguna**	**1.58**	**338**	*i* P	**Pn**	**06 51 45.1**	**+0.4**
LLGN				*i* S	**Sn**	**06 52 04.7**	**+0.6**
LLGN				IAML		06 52 30.6	
	comp=Z,660nm,1.0s						
ILCN	**San Idelfonso**	**1.60**	**94**	*i* P	**Pn**	**06 51 42.3**	**-2.6**
ILCN				IAML		06 51 50.7	
	comp=Z,400nm,1.0s						
CNGA	**Al SSO del Vol**	**1.60**	**97**	*i* P	**Pn**	**06 51 45.8**	**+0.8**
CNGA				*i* S	**Sn**	**06 52 05.7**	**+1.1**
CNGA				IAML		06 52 13.7	
	comp=Z,2µm,1.0s						
CNGN	**Cerro Negro**	**1.61**	**97**	*i* P	**Pn**	**06 51 45.6**	**+0.6**
CNGN				*i* S	**Sn**	**06 52 05.7**	**+1.0**
CNGN				IAML		06 52 07.9	
	comp=Z,1µm,1.0s						
INTHN	**La Esperanza I**	**1.63**	**8**	*i* P	**Pn**	**06 51 46.4**	**+0.9**
INTHN				*i* S	**Sn**	**06 52 05.7**	**+0.2**
MACN	**El Madrono**	**1.63**	**98**	*i* P	**Pn**	**06 51 45.9**	**+0.5**
MACN				*i* S	**Sn**	**06 52 06.2**	**+0.9**
MACN				IAML		06 52 16.1	
	comp=Z,800nm,1.0s						
CEVE	**Cerro Verde**	**1.69**	**312**	*i* P	**Pn**	**06 51 46.9**	**+0.5**
CEVE				*i* S	**Sn**	**06 52 08.8**	**+1.8**
CE

SAJU IAML 06 53 16.4
comp=Z,110nm,1.0s
DUNO **Dulce Nombre, 3.81 133** *i* P **Pn** **06 52 16.6 +1.4**
DUNO IAML 06 53 01.3
comp=Z,170nm,1.0s
INDI **Punta indio, G 3.95 135** *i* P **Pn** **06 52 18.3 +1.2**
INDI IAML 06 53 31.0
comp=Z,170nm,1.0s
CMIG **Matias Romero 7.70 305** P **Pn** **06 53 11.5 +3.0**
comp=Z,0.9nm,0.3s,baz=110,slow=23,SNR=6.2
CMIG S **Sn** **06 54 38.7 +4.2**
comp=Z,2.8nm,0.4s,baz=112,slow=13,SNR=2.6
TXAR **Lajitas Array 21.85 322** P **P** **06 56 08.0 +0.4**
comp=Z,1.1nm,0.7s,baz=140,slow=11,SNR=11
TXAR pP **sP** **06 56 22.0 -3.4**
comp=Z,0.8nm,0.8s,baz=143,slow=11,SNR=5.6
comp=Z,1.1nm,0.7s
PDAR **Pinedale Array 35.16 332** P **P** **06 58 07.3 -1.0**
comp=Z,0.2nm,0.7s,baz=135,slow=10,SNR=1.9
PDAR sP **sP** **06 58 27.3 +0.1**
comp=Z,0.2nm,0.7s,baz=123,slow=5.8,SNR=1.7
comp=Z,0.2nm,0.7s
NVAR **Mina Array Bea 36.96 319** P **P** **06 58 26.1 +2.3**
comp=Z,0.2nm,0.6s,baz=96,slow=8.3,SNR=2.7
comp=Z,0.2nm,0.6s
YKA **Yellowknife Ar 53.16 345** P **P** **07 00 29.1 -2.5**
comp=Z,0.1nm,0.5s,baz=145,slow=7.2,SNR=3.1
YKA pP **pP** **07 00 46.0 +0.8**
comp=Z,0.3nm,0.6s,baz=135,slow=7.9,SNR=4.0
comp=Z,0.1nm,0.5s
ILAR **Eielson Array 65.45 336** P **P** **07 01 55.7 -0.9**
comp=Z,0.2nm,0.9s,baz=91,slow=4.1,SNR=2.3
ILAR pP **pP** **07 02 12.2 +1.7**
comp=Z,0.2nm,0.6s,baz=165,slow=4.4,SNR=2.1
comp=Z,0.2nm,0.9s

IDC ***16*** *07:02:45.9±0.9,26°.04S×71°.02E,h0km,mb3.8/11, mbtmp3.8/11,MS3.1/3,Error ellipse: s-maj=28.3km s-min=25.3km az=80.0*

ISC 16 07:02:47.8±0.8,26°.1S±0°.2×71°.0E±0°.2,h11km,n18, σ1§03/11,mb3.8/11,MS3.2/3,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**25.23**	**212**	T	T		07 34 22.2	
	baz=44,slow=74,SNR=961							
H04N1	**CROZET ISLANDS**	**25.24**	**213**	T	T		07 34 22.6	
	baz=44,slow=74,SNR=792							
H04N3	**CROZET ISLANDS**	**25.25**	**212**	T	T		07 34 19.3	
	baz=44,slow=74,SNR=681							
H01W2	**Cape Leeuwin H**	**37.93**	**114**	T	T		07 50 32.7	
	baz=272,slow=75,SNR=6.4							
H01W3	**Cape Leeuwin H**	**37.93**	**114**	T	T		07 50 32.3	
	baz=272,slow=75,SNR=6.7							
H01W1	**Cape Leeuwin H**	**37.95**	**114**	T	T		07 50 33.9	
	baz=272,slow=75,SNR=6.4							
BOSA	**Boshof**	**40.55**	**256**	P		**P**	**07 10 27.2**	**-0.3**
	1.2nm,0.9s,baz=90,slow=19,SNR=1.3							
BOSA				LR		LR	07 24 12.8	
	comp=Z,48nm,18.6s,baz=20,slow=32							
	1.2nm,0.9s							
LBTB	**Lobatse**	**40.85**	**261**	LR		LR	07 27 10.4	
	comp=Z,30nm,18.2s,baz=2.5,slow=36							
CMAR	**Chiang Mai Arr**	**51.92**	**34**	P		**P**	**07 11 58.1**	**+1.3**
	1.2nm,0.3s,baz=251,slow=5.6,SNR=1.1							
CMAR				LR		LR	07 32 11.8	
	comp=Z,7.3nm,18.1s,baz=255,slow=34							
	1.2nm,0.3s							
ASAR	**Alice Springs**	**56.60**	**102**	P		**P**	**07 12 31.1**	**0.0**
	0.7nm,0.8s,baz=253,slow=6.6,SNR=7.5							
	0.7nm,0.8s							
WRA	**Warramunga Arr**	**58.11**	**98**	P		**P**	**07 12 41.8**	**+0.1**
	0.8nm,0.9s,baz=256,slow=7.5,SNR=4.5							
	0.8nm,0.9s							
QSPA	**South Pole Qui**	**64.05**	**180**	P		**P**	**07 13 21.8**	**+0.4**
	1.4nm,1.0s,baz=287,slow=9.2,SNR=3.1							
	1.4nm,1.0s							
GEYT	**Alibeck**	**64.82**	**349**	P		**P**	**07 13 27.6**	**+1.0**
	1.1nm,0.5s,baz=193,slow=5.9,SNR=1.9							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**73.25**	**8**	P		**P**	**07 14 16.9**	**-1.9**
	0.7nm,0.8s,baz=195,slow=4.9,SNR=8.4							
	0.7nm,0.8s							
KURBB	**Kurchatov Arra**	**76.65**	**5**	P		**P**	**07 14 38.8**	**+0.5**
	0.3nm,0.3s,baz=188,slow=6.2,SNR=1.9							
	0.3nm,0.3s							
SONM	**Songino Array**	**80.16**	**23**	P		**P**	**07 14 57.4**	**-0.6**
	1.0nm,0.9s,baz=211,slow=1.7,SNR=6.8							
	1.0nm,0.9s							
ZALV	**Zalesovo Beam**	**80.59**	**8**	P		**P**	**07 15 00.1**	**+0.2**
	0.6nm,0.6s,baz=228,slow=3.7,SNR=4.3							
	0.6nm,0.6s							
KSRS	**Korea Array**	**82.76**	**42**	P		**P**	**07 15 10.5**	**-1.2**
	0.2nm,0.6s,baz=295,slow=14,SNR=1.2							
	0.2nm,0.6s							

IDC 16 07:06:17.2±2.7,54°.19N×86°.38E,h0km,mbtmp3.0/2, ML2.7/2,Error ellipse: s-maj=20.8km s-min=11.2km az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**256**	I	I		07 12 10.0	
	baz=73,slow=341,SNR=3.2							
ZALV	**Zalesovo Beam**	**0.95**	**256**	Pg		Pg	07 06 33.5	-1.9
	1.7nm,0.3s,baz=74,slow=22,SNR=18							
ZALV				Lg		Lg	07 06 49.5	
	4.0nm,0.3s,baz=78,slow=31,SNR=28							
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn		Pn	07 07 48.3	+1.4
	0.1nm,0.3s,baz=52,slow=13,SNR=2.4							
	0.7nm,0.2s							
MKAR	**Makanchi Array**	**7.85**	**201**	Pn		Pn	07 08 13.7	+1.2
	0.1nm,0.3s,baz=24,slow=14,SNR=8.2							
MKAR				Sn		Sn	07 09 41.6	-0.4
	0.1nm,0.3s,baz=21,slow=28,SNR=4.9							
	0.2nm,0.3s							

IDC 16 07:10:49.0±14.0,17°.98S×167°.32E,h0km,mb4.3/3, mbtmp4.2/4,ML3.6/1,MS4.1/1,Error ellipse: s-maj=240.4km s-min=39.3km az=71.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.15**	**191**	Pn		Pn	07 11 54.8	+1.1
	3.8nm,0.3s,baz=49,slow=21,SNR=12							
DZM				Sn		Sn	07 12 42.6	-0.5
	2.1nm,0.3s,baz=310,slow=23,SNR=1.7							
	8.9nm,0.3s							
HNR	**Honiara**	**11.11**	**319**	LR		LR	07 17 33.1	
	comp=Z,1μm,20.3s,baz=339,slow=36							
STKA	**Stephens Creek**	**27.04**	**234**	P		P	07 16 32.0	-1.1
	0.7nm,0.5s,baz=30,slow=8.1,SNR=3.1							
	0.7nm,0.5s							
WRA	**Warramunga Arr**	**31.23**	**261**	P		P	07 17 11.3	+0.8
	1.6nm,0.9s,baz=89,slow=8.3,SNR=8.5							
	1.6nm,0.9s							
ASAR	**Alice Springs**	**31.70**	**254**	P		P	07 17 14.3	-0.3
	12nm,0.5s,baz=83,slow=8.8,SNR=237							
	12nm,0.5s							

JMA ***16*** *07:15:40.5±0.2,23°.1N±0°.5×12°.2E±°,h34km±3km, MV3.2/14,TAIWAN REGION*
TAP ***16*** *07:15:41.5,23°.10N×121°.74E,h22km,ML3.3,C*

ISC 16 07:15:39.2±1.2,23°.12N±0°.02×121°.79E±0°.03,h12km±10km, n56,σ0§71/95,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ECBN	**Changbin**	**0.37**	**303**	P		**Pb**	**07 15 48.8**	**+1.0**
	baz=309							
ECBN				*e*S		**Sb**	**07 15 53.8**	**+0.3**
	baz=309							
CHKH	**Chenggong**	**0.37**	**282**	*i* P		**Pb**	**07 15 48.4**	**+0.6**
	baz=286							
CHKH				*i* S		**Sb**	**07 15 53.2**	**-0.3**
	baz=286							
CHKT	**Chengkung**	**0.39**	**268**	*i* P		**Pb**	**07 15 48.5**	**+0.4**
	baz=266							
CHKT				*i* S		**Sb**	**07 15 53.4**	**-0.7**
	baz=266							
EDH	**Donghe**	**0.47**	**252**	P		**Pb**	**07 15 49.9**	**+0.5**
	baz=249							
EDH				S		**Sb**	**07 15 56.1**	**-0.3**
	baz=249							
EYUL	**Yuli**	**0.49**	**298**	*e*P		**Pb**	**07 15 50.4**	**+0.6**
	baz=303							
EYUL				*e*S		**Sb**	**07 15 57.5**	**+0.6**
	baz=303							
HGSD	**Ruisui**	**0.50**	**318**	*e*P		**Pb**	**07 15 50.3**	**+0.3**
	baz=323							
TWF1	**Yuli**	**0.51**	**298**	P		**Pb**	**07 15 50.7**	**+0.6**
	baz=302							
TWF1				*e*S		**Sb**	**07 15 57.1**	**-0.5**
	baz=302							
ECS	**Chishang**	**0.53**	**268**	*i* P		**Pb**	**07 15 51.1**	**+0.7**
	baz=270							
ECS				S		**Sb**	**07 15 58.9**	**+0.9**
	baz=270							
YULB	**Yu-li**	**0.53**	**301**	P		**Pb**	**07 15 51.0**	**+0.5**
YULB	**Yu-li**	**0.53**	**301**	P		**Pb**	**07 15 51.1**	**+0.6**
	baz=306							
YULB				*i* S		**Sb**	**07 15 58.6**	**+0.5**
	baz=306							
LDUT	**Ludao**	**0.53**	**214**	*e*P		**Pb**	**07 15 51.0**	**+0.5**
	baz=211							
LDUT				*e*S		**Sg**	**07 15 57.7**	**+1.1**
	baz=211							
EHD	**Haiduan**	**0.54**	**274**	P		**Pb**	**07 15 50.9**	**+0.2**
	baz=276							
EHD				*e*S		**Sb**	**07 15 58.4**	**+0.1**
	baz=276							
EHY	**Hungye**	**0.58**	**312**	*e*P		**Pb**	**07 15 51.7**	**+0.4**
	baz=317							
EHY				*e*S		**Sb**	**07 15 59.7**	**+0.1**
	baz=317							
TEGC	**Jichi Village**	**0.63**	**339**	*e*P		**Pb**	**07 15 53.0**	**+0.8**
	baz=343							
LONT	**Longtian**	**0.64**	**251**	P		**Pb**	**07 15 52.8**	**+0.3**
	baz=251							
LONT				*e*S		**Sg**	**07 16 01.0**	**+0.8**
	baz=251							
TTN	**Taitung**	**0.69**	**239**	*e*P		**Pb**	**07 15 53.5**	**+0.2**
	baz=238							
TTN				*e*S		**Sg**	**07 16 02.4**	**+0.6**
	baz=238							
SHUL	**Shoufeng**	**0.70**	**343**	*e*P		**Pb**	**07 15 54.1**	**+0.7**
	baz=346							
WARBT	**Fenglin Townsh**	**0.70**	**328**	*e*P		**Pb**	**07 15 54.0**	**+0.5**
	baz=340							
WARBT				*e*S		**Sb**	**07 16 03.0**	**-0.2**
	baz=340							
ELDTW	**Lidau**	**0.71**	**276**	*e*P		**Pg**	**07 15 53.6**	**+0.5**
	baz=278							
ELDTW				*e*S		**Sg**	**07 16 02.6**	**+0.1**
	baz=278							
TWGBT	**Beinan**	**0.72**	**246**	P		**Pg**	**07 15 53.7**	**+0.5**
TWGBT	**Beinan**	**0.72**	**246**	*e*P		**Pg**	**07 15 53.4**	**+0.3**
	baz=246							
TWGBT				*e*S		**Sg**	**07 16 02.7**	**+0.1**
	baz=246							
TWG	**Pinlang**	**0.72**	**246**	P		**Pg**	**07 15 53.8**	**+0.6**
	baz=246							
TWG				S		**Sg**	**07 16 02.6**	**-0.1**
	baz=246							
ESL	**Shilin**	**0.77**	**335**	*e*P		**Pb**	**07 15 54.7**	**+0.1**
	baz=348							
ESL				*e*S		**Sb**	**07 16 04.8**	**-0.2**
	baz=348							
VWDT	**VWDT**	**0.87**	**317**	P		**Pb**	**07 15 56.9**	**+0.6**
	baz=320							
VWDT				*e*S		**Sg**	**07 16 07.5**	**+0.1**
	baz=320							
HWA	**Hwalien**	**0.87**	**349**	*e*P		**Pb**	**07 15 57.0**	**+0.6**
	baz=352							
HWA				*e*S		**Sb**	**07 16 09.0**	**+0.9**
	baz=352							
ETM	**Tongmen**	**0.89**	**342**	*e*P		**Pg**	**07 15 56.6**	**+0.2**
	baz=353							
ETM				*e*S		**Sb**	**07 16 08.9**	**+0.5**
	baz=353							
ECL	**Taimali**	**0.93**	**236**	P		**Pg**	**07 15 56.4**	**-0.7**
	baz=235							
ECL				*e*S		**Sg**	**07 16 08.6**	**-0.6**
	baz=235							
STYH	**Taoyuan**	**0.94**	**274**	P		**Pg**	**07 15 57.4**	**+0.1**
	baz=275							
STYH				*e*S		**Sg**	**07 16 08.0**	**-1.5**
	baz=275							
STYT	**Tauyuan**	**0.95**	**273**	*e*P		**Pg**	**07 15 57.5**	**-0.1**
	baz=274							
STYT				S		**Sg**	**07 16 09.1**	**-0.9**
	baz=274							
LXIB	**Xiulin Townshi**	**0.96**	**339**	P		**Pg**	**07 15 57.9**	**0.0**
	baz=342							
LXIB				*e*S		**Sg**	**07 16 10.6**	**+0.1**
	baz=342							
TWD	**Chiawan**	**0.98**	**350**	*e*P		**Pb**	**07 15 58.3**	**+0.2**
	baz=352							
TWD				*e*S		**Sb**	**07 16 11.5**	**+0.5**
	baz=352							
ALS	**Alishan**	**0.99**	**294**	*e*P		**Pb**	**07 15 59.0**	**+0.5**
	baz=296							
ALS				*e*S		**Sg**	**07 16 11.0**	**-0.2**
	baz=296							
SSLB	**Suanglung**	**1.02**	**311**	P		**Pb**	**07 15 59.1**	**+0.2**
SSLB	**Suanglung**	**1.02**	**311**	*e*P		**Pb**	**07 15 59.0**	**+0.1**
	baz=313							
ETL	**Fush Village**	**1.05**	**352**	*e*P		**Pn**	**07 16 00.1**	**+0.3**
	baz=354							
ETL				*e*S		**Sb**	**07 16 13.4**	**+0.2**
	baz=354							
NACB	**Ninganchiao**	**1.07**	**350**	P		**Pg**	**07 15 59.4**	**-0.4**
NACB	**Ninganchiao**	**1.07**	**350**	*e*P		**Pg**	**07 15 59.1**	**-0.7**
	baz=3.0							
NACB				S		**Sg**	**07 16 13.0**	**-0.7**
	baz=3.0							
WUSB	**Renai**	**1.07**	**325**	P		**Pb**	**07 16 00.0**	**+0.2**
	baz=338							
WUSB				*e*S		**Sg**	**07 16 12.4**	**-1.3**
	baz=338							
TPUB	**Ta-pu**	**1.08**	**280**	P		**Pb**	**07 16 00.5**	**+0.6**
TPUB	**Ta-pu**	**1.08**	**280**	*e*P		**Pb**	**07 16 00.5**	**+0.6**
	baz=289							
TPUB				*e*S		**Sg**	**07 16 14.0**	**-0.2**
	baz=289							
CHGB	**Renai**	**1.10**	**329**	P		**Pg**	**07 16 00.3**	**-0.1**
	baz=331							
CHGB				*e*S		**Sg**	**07 16 13.4**	**-1.3**
	baz=331							
SGST	**Jiashian**	**1.11**	**268**	*e*P		**Pg**	**07 16 00.2**	**-0.4**
	baz=269							
ETLH	**Xiulin Townshi**	**1.12**	**345**	*e*P		**Pg**	**07 15 59.9**	**-1.0**
	baz=348							
LYUB	**Lan-yu**	**1.12**	**190**	*e*S		**Sg**	**07 16 14.5**	**-1.1**
	baz=187							
SSD	**Sandimen**	**1.13**	**251**	*e*P		**Pg**	**07 15 59.2**	**-1.8**
	baz=245							
SSD				*e*S		**Sg**	**07 16 14.1**	**-1.6**
	baz=245							
WHF	**Hehuan Shan**	**1.13**	**335**	*e*P		**Pg**	**07 16 00.6**	**-0.5**
	baz=338							
WHF				*e*S		**Sg**	**07 16 15.0**	**-0.9**
	baz=338							
EAST	**Anshuo**	**1.14**	**230**	*e*S		**Sg**	**07 16 14.5**	**-1.4**
	baz=240							
TAWH	**Dawu Township**	**1.14**	**227**	*e*S		**Sg**	**07 16 14.1**	**-1.8**
	baz=238							
YHNB	**Yeheng**	**1.59**	**346**	P		**Pn**	**07 16 08.0**	**+0.6**
JYNG	**Yonaguni jima**	**1.70**	**38**	*e*S		**Sn**	**07 16 30.2**	**-0.2**
YOJ	**Yonaguni jima**	**1.75**	**40**	S		**Sn**	**07 16 31.3**	**-0.3**
HATJ	**Hateruma jima**	**2.07**	**63**	P		**Pn**	**07 16 14.7**	**+0.8**
HATJ				S		**Sn**	**07 16 38.9**	**-0.8**
JKRS	**Kuro-shima**	**2.32**	**61**	P		**Pn**	**07 16 18.4**	**+1.1**
JKRS				S		**Sn**	**07 16 45.5**	**-0.3**
JIJ	**Ishigaki jima**	**2.49**	**60**	P		**Pn**	**07 16 20.6**	**+1.0**
JIJ				S		**Sn**	**07 16 48.5**	**-1.4**
JISG	**Ishigakijimahi**	**2.73**	**57**	P		**Pn**	**07 16 23.5**	**+0.5**
JISG				S		**Sn**	**07 16 55.0**	**-1.0**
JTJ	**Tarama**	**3.07**	**60**	P		**Pn**	**07 16 28.5**	**+1.0**
JTJ				*e*S		**Sn**	**07 17 03.7**	**-0.5**

NEIC ***16*** *07:16:05.8±0.8,36°.51N±0°.02×98°.97W±0°.02,h5km±2km, Error ellipse: s-maj=3.8km s-min=3.0km az=189.0*
IDC ***16*** *07:16:06.4±1.7,36°.59N×99°.12W,h0km,mbtmp3.3/3, ML3.9/2,Error ellipse: s-maj=29.2km s-min=11.8km az=98.0*
TUL ***16*** *07:16:06.3±1.0,36°.54N±0°.02×98°.97W±0°.05,h7km±6km, ML3.4,mb_Lg3.3/125(NEIC),ML3.4/6(NEIC),Error ellipse: s-maj=5.6km s-min=2.9km az=109.0*

ISC 16 07:16:06.1±1.3,36°.55N±0°.04×98°.95W±0°.04,h11km±12km, n86,σ1§51/39,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.17**	**195**	Pg		**Pg**	**07 16 09.8**	**-0.1**
U32A				IAML			07 16 14.3	
	comp=N,8μm,0.3s							
ELIS	**Ellis County**	**0.61**	**219**	Pg		**Pg**	**07 16 17.9**	**-0.1**
ELIS				IAML			07 16 28.4	
	comp=N,3μm,0.2s							
OK032	**Salt Plains WL**	**0.65**	**66**			**Pg**	**07 16 19.0**	**+0.4**
OK032				IAML			07 16 31.8	
	comp=N,2μm,0.2s							
OK032				IAML			07 16 32.2	
	comp=N,2μm,0.2s							
CROK	**Carrier**	**0.78**	**93**	Pg		**Pg**	**07 16 21.4**	**+0.3**
KAN14	**Manchester OK**	**0.89**	**62**	Pg		**Pg**	**07 16 23.5**	**+0.2**
CSTR	**Hydro, Custer**	**0.92**	**167**	Pg		**Pg**	**07 16 23.6**	**-0.3**
GC02	**Grant County #**	**0.93**	**70**	Pg		**Pg**	**07 16 24.1**	**+0.2**
KAN12	**Harper NE Stat**	**1.07**	**45**			**Pg**	**07 16 26.7**	**+0.1**
KAN17	**Caldwell West**	**1.07**	**62**	Pg		**Pg**	**07 16 26.8**	**+0.1**
KAN06	**Argonia West S**	**1.12**	**51**			**Pg**	**07 16 27.5**	**-0.1**
KAN09	**Caldwell North**	**1.22**	**61**			**Pg**	**07 16 29.4**	**0.0**
KS21	**Milan North St**	**1.27**	**54**			**Pn**	**07 16 30.5**	**+0.8**
OK029	**Liberty Lake**	**1.42**	**121**	Pg		**Pn**	**07 16 32.2**	**+0.5**
OK048	**Pawnee Station**	**1.62**	**94**	Pg		**Pn**	**07 16 35.9**	**+1.4**
OKCSW	**OKLAHOMA CITY**	**1.67**	**132**	Pg		**Pn**	**07 16 36.4**	**+1.2**
OK033	**Mehan**	**1.70**	**107**	Pg		**Pn**	**07 16 37.0**	**+1.4**
OK051	**E0350 and S346**	**1.70**	**91**			**Pn**	**07 16 37.3**	**+1.7**
SMWD	**Samnorwood**	**1.78**	**217**			**Pn**	**07 16 38.1**	**+1.3**
FNO	**Franklin**	**1.79**	**135**			**Pn**	**07 16 38.5**	**+1.6**
WMOK	**Wichita Mounta**	**1.81**	**176**	Pn		**Pn**	**07 16 37.8**	**+0.7**
OK052	**Battle Ridge R**	**1.82**	**107**			**Pn**	**07 16 38.8**	**+1.5**
QUOK	**Quay**	**1.84**	**101**			**Pn**	**07 16 39.2**	**+1.6**
R32A	**Long Quarter,**	**1.88**	**6**			**Pn**	**07 16 39.8**	**+1.6**
R32A				IAmb_Lg			07 17 10.2	
	comp=Z,119nm,0.7s							
T35A	**Sooner Cattle**	**1.99**	**79**			**Pn**	**07 16 40.7**	**+1.1**
T35A				IAmb_Lg			07 17 14.0	
	comp=Z,119nm,0.7s							
DEOK	**Depew**	**2.10**	**109**			**Pn**	**07 16 42.8**	**+1.7**
X34A	**Smith Ranch, M**	**2.14**	**155**			**Pn**	**07 16 44.0**	**+2.3**
X34A				IAmb_Lg			07 17 17.4	
	comp=Z,214nm,0.8s							
W35A	**Tecumseh**	**2.18**	**129**			**Pn**	**07 16 43.3**	**+1.1**
CBKS	**Cedar Bluff**	**2.35**	**345**	Pn		**Pn**	**07 16 47.3**	**+2.7**
CBKS				IAmb_Lg			07 17 24.3	
	comp=Z,171nm,0.8s							
TUL3	**Leonard**	**2.63**	**103**	IAmb_Lg			07 17 34.6	
	comp=Z,92nm,0.9s							
AMTX	**Amarillo**	**2.77**	**234**	IAmb_Lg			07 17 34.8	
	comp=Z,178nm,0.7s							
WTFS	**Witchita Falls**	**2.80**	**172**	Pn		**Pn**	**07 16 52.8**	**+2.0**
LOOK	**Love County**	**2.93**	**150**			**Pn**	**07 16 54.1**	**+1.6**
RTBA	**Rita Blanca**	**3.06**	**269**	Pn		**Pn**	**07 16 55.7**	**+1.3**
RTBA				IAmb_Lg			07 17 50.0	
	comp=Z,73nm,0.9s							
KSU1	**Kansas State U**	**3.15**	**35**	Pn		**Pn**	**07 16 57.1**	**+1.5**
KSU1				IAmb_Lg			07 17 49.4	
	comp=Z,88nm,0.8s							
DKNS	**Dickens**	**3.30**	**210**			**Pn**	**07 16 59.6**	**+1.9**
DKNS				IAmb_Lg			07 17 52.5	
	comp=Z,96nm,0.8s							
U38A	**Gravette**	**3.68**	**90**	IAmb_Lg			07 18 07.1	
	comp=Z,83nm,1.0s							
FW06	**Azle**	**3.74**	**162**	IAmb_Lg			07 18 08.0	
	comp=Z,73nm,0.8s							
KSCO	**Kaye Shedlock'**	**3.82**	**311**	IAmb_Lg			07 18 15.7	
	comp=Z,96nm,0.8s							
SN05	**Snyder 5**	**3.99**	**204**	IAmb_Lg			07 18 14.2	
	comp=Z,94nm,0.9s							
HHAR	**Hobbs**	**4.05**	**92**	IAmb_Lg			07 18 19.5	
	comp=Z,54nm,0.9s							
MSTX	**Muleshoe**	**4.05**	**232**	IAmb_Lg			07 18 25.2	
	comp=Z,70nm,0.8s							
POST	**Post**	**4.06**	**212**	IAmb_Lg			07 18 25.2	
	comp=Z,71nm,0.8s							
N33A	**J Bar K, Exete**	**4.35**	**15**	IAmb_Lg			07 18 27.6	
	comp=Z,57nm,0.8s							
FW14	**Alvarado**	**4.38**	**160**	IAmb_Lg			07 18 26.2	
	comp=Z,60nm,1.0s							
T25A	**Trinidad**	**4.42**	**279**	IAmb_Lg			07 18 32.7	
	comp=Z,2nm,0.7s							
Z38A	**Mt. Pleasant**	**4.62**	**134**	IAmb_Lg			07 18 36.8	
	comp=Z,99nm,1.0s							
S39A	**Bolivar**	**4.64**	**74**	IAmb_Lg			07 18 33.2	
	comp=Z,80nm,0.7s							
SGCY	**Sterling City**	**4.96**	**202**	IAmb_Lg			07 18 56.0	
	comp=Z,62nm,0.8s							
237A	**Washetta, Mont**	**5.22**	**149**			**Pn**	**07 17 25.2**	**+1.2**
237A				IAmb_Lg			07 19 04.3	
	comp=Z,67nm,0.8s							
BRDY	**Brady**	**5.25**	**181**			**Pn**	**07 17 23.9**	**-0.4**
BRDY				IAmb_Lg			07 18 56.5	
	comp=Z,44nm,1.0s							
P38A	**Dawn**	**5.26**	**53**	IAmb_Lg			07 18 51.1	
	comp=Z,50nm,0.9s							
ODSA	**Odessa**	**5.33**	**215**	IAmb_Lg			07 18 54.4	
	comp=Z,54nm,1.1s							
SDCO	**Great Sand Dun**	**5.37**	**285**	IAmb_Lg			07 19 04.4	
	comp=Z,68nm,1.1s							
MGMO	**Mountain Grove**	**5.39**	**82**	IAmb_Lg			07 18 58.9	
	comp=Z,53nm,0.8s							
Q24A	**Divide**	**5.48**	**298**	IAmb_Lg			07 19 00.1	
	comp=Z,50nm,0.8s							
WHAR	**Wooly Hollow**	**5.54**	**101**	IAmb_Lg			07 19 08.7	
	comp=Z,71nm,1.0s							
WLAR	**White Oak Lake**	**5.57**	**119**	IAmb_Lg			07 19 13.6	
	comp=Z,51nm,1.0s							
R40A	**Maddies Statio**	**5.59**	**70**	IAmb_Lg			07 19 03.8	
	comp=Z,38nm,0.8s							
UALR	**University of**	**5.66**	**106**	IAmb_Lg			07 19 11.7	
	comp=Z,38nm,0.9s							
435B	**Jarrell**	**5.86**	**168**	IAmb_Lg			07 19 27.1	
	comp=Z,77nm,1.0s							
OZNA	**Ozona**	**5.89**	**199**	IAmb_Lg			07 19 19.2	
	comp=Z,39nm,0.9s							
NATX	**Nacogdoches**	**5.95**	**142**	IAmb_Lg			07 19 26.5	
	comp=Z,38nm,0.8s							
Z41A	**Richland Creek**	**6.02**	**121**	IAmb_Lg			07 19 31.2	
	comp=Z,63nm,0.9s							
MNHN	**Monahans**	**6.08**	**213**	IAmb_Lg

comp=Z,20nm,1.0s
SPMN Marine on St. 9.84 26 IAmb_Lg 07 21 44.7
comp=Z,20nm,1.1s
PDAR Pinedale Array 10.27 310 Pn **Pn** **07 18 34.6 +1.1**
comp=Z,0.1nm,0.3s,baz=116,slow=16,SNR=3.6
PDAR Lg Lg 07 21 24.4
comp=Z,0.5nm,0.3s,baz=120,slow=27,SNR=5.8
comp=Z,0.3nm,0.5s
ULM Lac du Bonnet 13.88 8 Pn **Pn** **07 19 19.1 -3.4**
comp=Z,0.6nm,0.5s,baz=207,slow=7.9,SNR=2.1
ULM Sn Sn 07 21 45.3 -11
comp=Z,0.3nm,0.3s,baz=308,slow=20,SNR=2.0

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*NEIC **16** 07:19:39.3±0.5, 36°.52N±0°.02×98°.95W±0°.03, h7km±3km, Error ellipse: s-maj=4.5km s-min=0.8km az=136.0*
TUL 16 07:19:39.4±0.5, **36°.54N**±0°.02×**98°.96W**±0°.03, **h6**km±3km, **ML2.8, mb_Lg2.6**/21(NEIC), **ML2.9**/6(NEIC), **Error ellipse: s-maj=3.6km s-min=2.0km az=128.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.16**	**192**	Pg	Pg	07 19 43.0	+0.3
U32A				Sg	Sg	07 19 45.2	+0.4
U32A				IAML		07 19 45.8	
	comp=N,3μm,0.2s						
ELIS	**Ellis County**	**0.60**	**218**	Pg	Pg	07 19 50.9	0.0
ELIS				Sg	Sg	07 19 58.7	+0.1
ELIS				IAML		07 20 01.3	
	comp=N,677nm,0.2s						
ELIS				IAML		07 20 02.3	
	comp=E,654nm,0.3s						
OK032	**Salt Plains WL**	**0.66**	**66**	Pg	Pg	07 19 52.3	+0.1
OK032				Sg	Sg	07 20 00.5	-0.2
OK032				IAML		07 20 04.6	
	comp=E,690nm,0.2s						
CROK	**Carrier**	**0.79**	**92**		Pg	07 19 54.5	0.0
KAN14	**Manchester OK**	**0.91**	**62**		Pg	07 19 56.4	-0.4
CSTR	**Hydro, Custer**	**0.91**	**166**	Pg	Pg	07 19 56.9	0.0
GC02	**Grant County #**	**0.94**	**70**	Pg	Pg	07 19 57.3	-0.1
OK029	**Liberty Lake**	**1.42**	**121**		Pn	07 20 05.5	-0.3
OK048	**Pawnee Station**	**1.63**	**94**		Pn	07 20 09.0	+0.4
OKCSW	**OKLAHOMA CITY**	**1.67**	**132**		Pn	07 20 09.6	+0.4
SMWD	**Samnorwood**	**1.77**	**217**	Pn	Pn	07 20 11.2	+0.7
FNO	**Franklin**	**1.80**	**135**	Pn	Pb	07 20 12.0	-0.7
OK052	**Battle Ridge R**	**1.83**	**107**		Pn	07 20 11.7	+0.4
QUOK	**Quay**	**1.85**	**101**		Pn	07 20 12.4	+0.7
R32A	**Long Quarter,**	**1.90**	**6**	Pn	Pb	07 20 13.4	-1.0
R32A				IAmb_Lg		07 20 42.2	
	comp=Z,44nm,0.9s						
DEOK	**Depew**	**2.11**	**108**	Pn	Pn	07 20 16.0	+0.8
X34A	**Smith Ranch, M**	**2.14**	**154**	IAmb_Lg		07 20 50.7	
	comp=Z,34nm,0.8s						
W35A	**Tecumseh**	**2.19**	**129**	Pn	Pn	07 20 17.0	+0.7
CBKS	**Cedar Bluff**	**2.36**	**345**	IAmb_Lg		07 20 54.9	
	comp=Z,28nm,0.8s						
TUL3	**Leonard**	**2.64**	**103**	IAmb_Lg		07 21 05.9	
	comp=Z,16nm,0.8s						
WTFS	**Witchita Falls**	**2.79**	**171**	Pn	Pn	07 20 25.1	+0.5
U38A	**Gravette**	**3.69**	**90**	IAmb_Lg		07 21 36.5	
	comp=Z,11nm,0.8s						
SN07	**Snyder 07**	**3.79**	**205**	IAmb_Lg		07 21 49.9	
	comp=Z,12nm,0.9s						
KSCO	**Kaye Shedlock'**	**3.81**	**312**	IAmb_Lg		07 21 48.6	
	comp=Z,14nm,0.7s						
SN05	**Snyder 5**	**3.98**	**204**	IAmb_Lg		07 21 47.6	
	comp=Z,16nm,0.9s						
S39A	**Bolivar**	**4.65**	**74**	IAmb_Lg		07 22 04.7	
	comp=Z,16nm,0.8s						

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*SJA **16** 07:20:12.6±0.8, 27°.31S×69°.67W, h109km±4km, ML3.5, MW3.4*
*GUC **16** 07:20:14.4±0.6, 27°.33S×69°.69W, h101km±4km, ML3.5*
ISC 16 07:20:12.4±1.3, **27°.31S**±0°.03×**69°.72W**±0°.04, **h118**km±9km, **n38**,σ1**s09**/57, **4C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.54**	**238**	*e*P	**Pn**	**07 20 30.6**	**+0.1**
GO03				*e*S	**Sn**	**07 20 44.0**	**-0.2**
GO03	**Copiap**	**0.54**	**238**	*e*P	**Pn**	**07 20 30.3**	**-0.2**
GO03				*i* S	**Sn**	**07 20 42.1**	**-2.0**
GO03				IAML		07 20 44.0	
	comp=E,2μm,0.1s						
AC02	**Maricunga**	**0.70**	**48**	*e*P	**Pn**	**07 20 32.4**	**+0.2**
AC02				*e*S	**Sn**	**07 20 46.2**	**-0.8**
AC02				IAML		07 20 46.4	
	comp=Z,882nm,0.2s						
AC02	**Maricunga**	**0.70**	**48**	*e*P	**Pn**	**07 20 32.1**	**-0.1**
AC02				*i* S	**Sn**	**07 20 45.3**	**-1.7**
AC02				IAML		07 20 46.6	
	comp=E,3μm,0.2s						
AC01	**Pan de Azucar**	**1.40**	**325**	*e*P	**Pn**	**07 20 39.6**	**+1.0**
AC01				*e*S	**Sn**	**07 20 59.5**	**+1.0**
AC01				IAML		07 21 00.3	
	comp=Z,320nm,0.3s						
AC01	**Pan de Azucar**	**1.40**	**325**	*e*P	**Pn**	**07 20 39.8**	**+1.3**
AC01				*i* S	**Sn**	**07 20 58.8**	**+0.4**
AC01				IAML		07 20 59.8	
	comp=E,825nm,0.3s						
AC04	**Llanos de Chal**	**1.50**	**233**	*e*P	**Pn**	**07 20 40.4**	**+0.7**
AC04				*e*S	**Sn**	**07 21 02.2**	**+1.7**
AC04				IAML		07 21 03.3	
	comp=Z,413nm,0.3s						
AC04	**Llanos de Chal**	**1.50**	**233**⇑	*e*P	**Pn**	**07 20 40.8**	**+1.1**
AC04				*i* S	**Sn**	**07 21 01.3**	**+0.8**
AC04				IAML		07 21 02.2	
	comp=N,968nm,0.3s						
AC05	**El Transito**	**1.60**	**198**	*e*P	**Pn**	**07 20 41.5**	**+0.4**
AC05				*e*S	**Sn**	**07 21 03.1**	**+0.2**
AC05				IAML		07 21 04.1	
	comp=Z,383nm,0.2s						
AC05	**El Transito**	**1.60**	**198**⇑	*i*P	**Pn**	**07 20 41.5**	**+0.4**
AC05				*i* S	**Sn**	**07 21 02.7**	**-0.2**
AC05				IAML		07 21 04.4	
	comp=N,597nm,0.3s						
LCO	**Las Campanas**	**1.91**	**207**	*e*P	**Pn**	**07 20 45.3**	**+0.4**
LCO				*e*S	**Sn**	**07 21 10.7**	**+1.0**
LCO	**Las Campanas**	**1.91**	**207**	*e*P	**Pn**	**07 20 45.0**	**+0.1**
LCO				*i* S	**Sn**	**07 21 09.3**	**-0.4**
VCA	**Vinchina**	**1.95**	**137**	*e*P	**Pn**	**07 20 46.5**	**+1.1**
VCA				*e*S	**Sn**	**07 21 11.5**	**+1.0**
VCA	**Vinchina**	**1.95**	**137**	*e*P	**Pn**	**07 20 46.4**	**+1.1**
VCA				*i* S	**Sn**	**07 21 10.5**	**0.0**
VCA				IAML		07 21 14.4	
	comp=E,214nm,0.2s						
TINO	**Tinogasta**	**2.05**	**112**	*e*P	**Pn**	**07 20 47.0**	**+0.5**
GO02	**Mina Guanaco**	**2.14**	**3**	*e*P	**Pn**	**07 20 48.7**	**+0.9**
GO02	**Mina Guanaco**	**2.14**	**3**⇑	*e*P	**Pn**	**07 20 48.8**	**+1.0**
GO02				*i* S	**Sn**	**07 21 15.2**	**+0.3**
GO02				IAML		07 21 21.0	
	comp=N,354nm,0.2s						
AGUA	**GUANDACOL**	**2.43**	**154**	*e*P	**Pn**	**07 20 52.5**	**+1.2**
AGUA				IAML		07 21 25.2	
	comp=Z,141nm,0.2s						
CO01	**Juntas del Tor**	**2.68**	**187**	*e*P	**Pn**	**07 20 56.0**	**+1.3**
CO01	**Juntas del Tor**	**2.68**	**187**⇑	*i*P	**Pn**	**07 20 56.0**	**+1.3**
PB14	**IPOC Station P**	**2.74**	**347**	*e*P	**Pn**	**07 20 56.3**	**+0.7**
PB14				IAML		07 21 30.9	
	comp=Z,131nm,0.4s						
PB14	**IPOC Station P**	**2.74**	**347**	*e*P	**Pn**	**07 20 56.3**	**+0.7**
PB14				*i* S	**Sn**	**07 21 26.5**	**-2.2**
PB14				IAML		07 21 34.9	
	comp=E,229nm,0.1s						
AROD	**Rodeo**	**2.86**	**176**	*e*P	**Pn**	**07 20 58.9**	**+1.8**
ACDV	**Cuesta del Vie**	**2.90**	**170**	*e*P	**Pn**	**07 20 59.4**	**+1.8**
GO04	**Tololo Observa**	**3.01**	**198**	*e*P	**Pn**	**07 20 58.2**	**-0.8**
GO04	**Tololo Observa**	**3.01**	**198**	*e*P	**Pn**	**07 20 58.6**	**-0.4**
GO04				*i* S	**Sn**	**07 21 34.0**	**-0.8**
ACLC	**CERRO LA CRUZ**	**3.22**	**132**	*e*P	**Pn**	**07 21 02.2**	**+0.4**
ACLC				*e*S	**Sn**	**07 21 37.8**	**-2.0**
ACLC				IAML		07 21 40.2	
	comp=Z,104nm,0.3s						
ACCO	**Cerro Coronel**	**3.32**	**170**	*e*P	**Pn**	**07 21 04.7**	**+1.6**
CO03	**El Pedregal**	**3.62**	**193**	*e*P	**Pn**	**07 21 06.6**	**-0.4**
CO06	**Fray Jorge**	**3.75**	**206**	*e*P	**Pn**	**07 21 07.3**	**-1.3**
AHML	**Horco Molle**	**3.94**	**83**	*e*P	**Pn**	**07 21 12.2**	**+1.0**
AHML	**Horco Molle**	**3.94**	**83**	*e*P	**Pn**	**07 21 11.4**	**+0.3**
CO02	**Combarbal**	**4.04**	**196**	*e*P	**Pn**	**07 21 11.6**	**-1.0**
CO02				IAML		07 22 24.7	
	comp=Z,60nm,0.3s						
CO02	**Combarbal**	**4.04**	**196**	*e*P	**Pn**	**07 21 11.4**	**-1.1**
CO02				*i* S	**Sn**	**07 21 57.0**	**-2.3**
RTLS	**Leoncito**	**4.49**	**175**	*e*P	**Pn**	**07 21 19.7**	**+0.9**
RTLS				IAML		07 22 13.5	
	comp=Z,43nm,0.5s						
PB06	**IPOC Station P**	**4.58**	**2**	*e*P	**Pn**	**07 21 19.2**	**-0.7**
PB06				IAML		07 22 41.5	
	comp=Z,31nm,0.6s						
LVC	**Limon Verde**	**4.73**	**9**	*e*P	**Pn**	**07 21 22.2**	**+0.1**
PB04	**IPOC Station P**	**4.97**	**355**	*e*P	**Pn**	**07 21 23.8**	**-1.3**
PB04				IAML		07 23 01.3	
	comp=Z,34nm,0.6s						

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*IDC **16** 07:21:28.2±1.1, 3°.47S×128°.57E, h0km, mb3.7/5, mbtmp3.8/6, ML3.6/1, MS3.4/1, Error ellipse: s-maj=88.3km s-min=14.1km az=74.0*
ISC 16 07:21:30.0±1.0, **3°.5S**±0°.2×**128°.5E**±0°.6, **h10**km, **n7**, σ1**s41**/7, **mb3.8**/4, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.34**	**161**	P	**Pn**	**07 25 30.3**	**-1.9**
	0.2nm,0.3s,baz=345,slow=13,SNR=12 3.6nm,0.8s						
ASAR	**Alice Springs**	**20.75**	**166**	P	**P**	**07 26 12.3**	**+1.3**
	4.8nm,0.7s,baz=349,slow=12,SNR=38						
ASAR				S	**S**	**07 30 03.9**	**+1.0**
	0.3nm,0.6s,baz=350,slow=22,SNR=4.5 4.8nm,0.7s						
STKA	**Stephens Creek**	**30.82**	**158**	LR	LR	07 39 39.0	
	comp=Z,62nm,19.1s,baz=19,slow=35						
USRK	**Ussuriysk Ar.**	**47.55**	**3**	P	**P**	**07 30 05.8**	**+0.1**
	1.3nm,0.6s,baz=176,slow=5.8,SNR=2.9 1.3nm,0.6s						
SONM	**Songino Array**	**54.64**	**342**	P	**P**	**07 30 59.8**	**+0.7**
	0.4nm,0.9s,baz=134,slow=8.4,SNR=3.0 0.4nm,0.9s						
MKAR	**Makanchi Array**	**64.48**	**327**	P	**P**	**07 32 06.7**	**-0.2**
	0.4nm,0.6s,baz=124,slow=8.2,SNR=6.1 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**68.74**	**328**	P	**P**	**07 32 33.0**	**-1.0**
	0.4nm,0.5s,baz=132,slow=6.3,SNR=3.2 0.4nm,0.5s						

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*NEIC **16** 07:22:38.8±0.8, 36°.50N±0°.02×98°.96W±0°.05, h5km±2km, Error ellipse: s-maj=6.8km s-min=3.0km az=294.0*
TUL 16 07:22:39.1±0.9, **36°.53N**±0°.02×**98°.97W**±0°.04, **h6**km±5km, **ML2.9, mb_Lg2.6**/53(NEIC), **ML2.8**/6(NEIC), **Error ellipse: s-maj=4.9km s-min=2.3km az=123.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.16**	**191**	Pg	Pg	07 22 42.6	+0.3
U32A				IAML		07 22 46.5	
	comp=N,1μm,0.2s						
ELIS	**Ellis County**	**0.59**	**218**	Pg		07 22 50.8	+0.2
ELIS				IAML		07 23 01.0	
	comp=N,617nm,0.2s						
ELIS				IAML		07 23 02.0	
	comp=E,630nm,0.3s						
OK032	**Salt Plains WL**	**0.67**	**66**		Pg	07 22 51.9	0.0
OK032				IAML		07 23 04.7	
	comp=E,911nm,0.2s						
CROK	**Carrier**	**0.79**	**92**	Pg	Pg	07 22 54.0	-0.3
KAN14	**Manchester OK**	**0.91**	**62**		Pg	07 22 56.4	-0.2
CSTR	**Hydro, Custer**	**0.91**	**166**		Pg	07 22 55.6	-1.1
GC02	**Grant County #**	**0.94**	**70**	Pg	Pg	07 22 57.1	-0.1
KAN17	**Caldwell West**	**1.09**	**62**	Pg	Pg	07 22 59.8	-0.3
KAN06	**Argonia West S**	**1.14**	**51**	Pg	Pg	07 23 00.6	-0.4
KAN09	**Caldwell North**	**1.24**	**60**	Pg	Pg	07 23 02.3	-0.6
BLOK	**Blackwell**	**1.43**	**80**		Pn	07 23 05.2	-0.4
OK029	**Liberty Lake**	**1.43**	**121**	Pg	Pn	07 23 05.1	-0.4
OK048	**Pawnee Station**	**1.63**	**93**		Pn	07 23 08.3	-0.1
OKCSW	**OKLAHOMA CITY**	**1.67**	**132**		Pn	07 23 09.4	+0.5
OK033	**Mehan**	**1.71**	**106**		Pn	07 23 09.8	+0.4
OK051	**E0350 and S346**	**1.72**	**90**		Pn	07 23 09.5	0.0
SMWD	**Samnorwood**	**1.76**	**216**		Pn	07 23 10.7	+0.5
FNO	**Franklin**	**1.80**	**135**		Pn	07 23 10.9	+0.2
OK052	**Battle Ridge R**	**1.83**	**106**	Pn	Pn	07 23 11.7	+0.7
QUOK	**Quay**	**1.86**	**101**	Pn	Pn	07 23 11.9	+0.4
R32A	**Long Quarter,**	**1.90**	**6**		Pn	07 23 13.0	+1.0
T35A	**Sooner Cattle**	**2.01**	**78**		Pn	07 23 14.4	+0.9
X34A	**Smith Ranch, M**	**2.14**	**154**	IAmb_Lg		07 23 46.9	
	comp=Z,29nm,0.8s						
CBKS	**Cedar Bluff**	**2.36**	**345**	IAmb_Lg		07 23 55.0	
	comp=Z,30nm,0.9s						
TUL3	**Leonard**	**2.64**	**103**	IAmb_Lg		07 24 09.1	
	comp=Z,13nm,0.8s						
AMTX	**Amarillo**	**2.75**	**234**	IAmb_Lg		07 24 10.3	
	comp=Z,29nm,0.7s						
KSU1	**Kansas State U**	**3.17**	**35**	IAmb_Lg		07 24 22.1	
	comp=Z,17nm,0.7s						
FW06	**Azle**	**3.74**	**162**	IAmb_Lg		07 24 40.3	
	comp=Z,9.6nm,0.7s						
FW07	**Weatherford**	**3.94**	**165**	IAmb_Lg		07 24 49.7	
	comp=Z,9.7nm,0.7s						
SN05	**Snyder 5**	**3.97**	**204**	IAmb_Lg		07 24 46.9	
	comp=Z,13nm,0.9s						
MSTX	**Muleshoe**	**4.03**	**232**	IAmb_Lg		07 24 58.1	
	comp=Z,12nm,0.7s						
POST	**Post**	**4.04**	**212**	IAmb_Lg		07 24 47.9	
	comp=Z,11nm,0.7s						
FW13	**Cleburne**	**4.36**	**163**	IAmb_Lg		07 25 08.7	
	comp=Z,9.3nm,1.0s						
FW14	**Alvarado**	**4.38**	**160**	IAmb_Lg		07 25 07.5	
	comp=Z,12nm,0.9s						
T25A	**Trinidad**	**4.41**	**280**	IAmb_Lg		07 25 05.4	
	comp=Z,11nm,0.7s						
TREL	**Terrell**	**4.47**	**147**	IAmb_Lg		07 25 07.5	
	comp=Z,17nm,0.8s						
BRDY	**Brady**	**5.23**	**180**	IAmb_Lg		07 25 31.1	
	comp=Z,8.1nm,1.2s						
P38A	**Dawn**	**5.28**	**53**	IAmb_Lg		07 25 31.0	
	comp=Z,9.9nm,0.7s						
SDCO	**Great Sand Dun**	**5.36**	**285**	IAmb_Lg		07 25 37.1	
	comp=Z,11nm,1.2s						
MGMO	**Mountain Grove**	**5.41**	**81**	IAmb_Lg		07 25 30.6	
	comp=Z,12nm,0.8s						
Q24A	**Divide**	**5.47**	**298**	IAmb_Lg		07 25 38.9	
	comp=Z,8.6nm,0.9s						
WHAR	**Wooly Hollow**	**5.56**	**101**	IAmb_Lg		07 25 41.5	
	comp=Z,14nm,1.0s						
R40A	**Maddies Statio**	**5.61**	**70**	IAmb_Lg		07 25 36.6	
	comp=Z,8.4nm,0.7s						
JCT	**Junction City**	**6.08**	**187**	IAmb_Lg		07 26 04.1	
	comp=Z,9.3nm,0.8s						
ISCO	**Idaho Springs**	**6.17**	**304**	IAmb_Lg		07 25 58.2	
	comp=Z,5.1nm,0.7s						
LCAR	**Lake Charles**	**6.33**	**92**	IAmb_Lg		07 25 57.1	
	comp=Z,7.6nm,0.9s						
PBMO	**Poplar Bluff**	**6.87**	**85**	IAmb_Lg		07 26 28.7	
	comp=Z,7.9nm,0.7s						
N23A	**Red Feather La**	**6.98**	**311**	IAmb_Lg		07 26 26.8	
	comp=Z,10nm,0.8s						

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*IDC **16** 07:30:12.7±3.1, 53°.69N×88°.02E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=26.7km s-min=15.8km az=60.0*
*NNC **16** 07:30:13.0±3.3, 53°.50N×88°.03E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=23.6km s-min=13.9km az=67.0, Suspected Mining explosion.*
ISC 16 07:30:12.0±3.3, **53°.7N**±0°.1×**88°.0E**±0°.2, **h0**km, **n8**, σ1**s26**/10, **4C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**278**	I	I	07 41 55.6	
	0.1nm,1.2s,baz=95,slow=334,SNR=5.8						
ZAA0	**Zalesovo Array**	**1.92**	**278**	⇑P	**Pb**	**07 30 46.9**	**-0.9**
	0.1nm,0.3s						
ZAA0				⇓S	**Sg**	**07 31 14.2**	**+0.7**
	2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**1.92**	**278**	Pg	**Pn**	**07 30 45.9**	**+0.1**
	0.6nm,0.3s,baz=94,slow=16,SNR=14						
ZALV				Lg	Lg	07 31 14.1	
	1.7nm,0.3s,baz=96,slow=25,SNR=23						
KURK	**Kurchatov**	**6.51**	**246**	⇓Sn	**Sn**	**07 33 04.0**	**0.0**
	1.2nm,0.7s						
KURK				⇓Lg	Lg	07 33 37.9	
	5.4nm,0.8s						
KURBB	**Kurchatov Arra**	**6.61**	**246**	⇑Sn	**Sn**	**07 33 05.3**	**-1.0**
	4.4nm,0.6s						
KURBB				⇓Lg	Lg	07 33 39.3	
	12nm,1.1s						
KURBB	**Kurchatov Arra**	**6.61**	**246**	Pn	**Pn**	**07 31 52.1**	**+1.8**
	0.1nm,0.3s,baz=61,slow=14,SNR=5.3						
KURBB				Lg	Lg	07 33 41.4	
	baz=62,slow=33,SNR=8.9 0.6nm,0.4s						
MK31	**Makanchi Array**	**7.84**	**210**	⇑Pn	**Pn**	**07 32 07.4**	**+0.1**
	0.6nm,0.8s,baz=31,slow=15,SNR=6.1						
MK31				⇑Sn	**Sn**	**07 33 35.1**	**-1.7**
	0.4nm,0.7s,baz=27,slow=28						
MK31				⇓Lg	Lg	07 34 17.4	
	1.7nm,0.8s,baz=24,slow=29						
MKAR	**Makanchi Array**	**7.84**	**210**	Pn	**Pn**	**07 32 08.8**	**+1.5**
	0.1nm,0.3s,baz=31,slow=14,SNR=6.6						
MKAR				Sn	**Sn**	**07 33 36.2**	**-0.5**
	baz=27,slow=29,SNR=4.8						
MKAR				Lg	Lg	07 34 19.3	
	0.1nm,0.3s,baz=24,slow=31,SNR=5.8 0.3nm,0.7s						

IDC 16 07:44:13.4±3.0, **54°.24N**×**87°.35E, h0**km, **mbtmp2.9**/2, **ML2.6**/2, **Error ellipse: s-maj=24.8km s-min=17.0km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**260**	I	I	07 52 50.0	
	0.1nm,0.8s,baz=75,slow=331,SNR=0.8						
ZALV	**Zalesovo Beam**	**1.52**	**260**	Pg	Pn	07 44 39.7	-2.1
	2.2nm,0.3s,baz=81,slow=15,SNR=23						
ZALV				Lg	Lg	07 45 02.3	
	2.1nm,0.3s,baz=81,slow=28,SNR=9.0						
KURBB	**Kurchatov Arra**	**6.50**	**240**	Pn	Pn	07 45 51.1	+0.9
	0.1nm,0.3s,baz=55,slow=14,SNR=7.0						
KURBB				Sn	Sn	07 47 04.2	-0.7
	baz=135,slow=56 0.6nm,0.4s						
MKAR	**Makanchi Array**	**8.12**	**205**	Pn	Pn	07 46 13.8	+1.3
	0.1nm,0.3s,baz=25,slow=13,SNR=10						
MKAR				Sn	Sn	07 47 44.3	-0.6
	0.1nm,0.3s,baz=24,slow=22,SNR=3.1						
MKAR				Lg	Lg	07 48 28.2	
	baz=27,slow=28,SNR=1.6 0.2nm,0.4s						

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*IDC **16** 07:44:36.7±0.9, 28°.14N×128°.25E, h0km, mb3.8/9, mbtmp3.8/9, MS3.3/10, Error ellipse: s-maj=33.3km s-min=11.2km az=80.0*
*NIED **16** 07:44:38.1, 28°.11N×128°.09E, h15km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr-0.31; Mθθ 0.60; Mφφ-0.29; Mrθ 0.18; Mθφ 1.35; Mφr-0.45; Fault plane solution: M0 1.52000×10^15 NP1: ϕs 11.00000°, δ77.00000°, λ-161.00000°. NP2: ϕs 277.00000°, δ72.00000°, λ-14.00000°.*
*JMA **16** 07:44:38.1±0.2, 28°.1N±0°.4×128°.1E±0°.5, h15km±2km, MV3.6/15, NW OFF OKINAWAJIMA IS*
ISC 16 07:44:38.3±1.4, **28°.08N**±0°.04×**128°.18E**±0°.05, **h10**km±10km, **n31**, σ1**s21**/31, **mb3.8**/9, **MS3.2**/6, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.75**	**113**	*e*P	**Pb**	**07 44 53.7**	**+0.2**
JTK				*e*S	**Sb**	**07 45 04.5**	**+0.8**
JOKE	**Okinoerabujima**	**0.80**	**154**	*e*P	**Pb**	**07 44 54.3**	**-0.1**
JAMN	**Amaminishikomi**	**0.90**	**80**	*e*P	**Pn**	**07 44 56.2**	**-0.8**
JAMN				*e*S	**Sn**	**07 45 09.1**	**-0.9**
JIH	**Iheya**	**1.06**	**190**	*e*P	**Pg**	**07 44 58.0**	**-0.7**
JIH				*e*S	**Sg**	**07 45 11.8**	**-0.8**
JYRO	**Yoronjima**	**1.08**	**167**	*e*P	**Pg**	**07 44 59.0**	**-0.1**
JYRO				*e*S	**Sb**	**07 45 13.8**	**+0.5**
JOW	**Kunigami**	**1.25**	**176**	*e*P	**Pn**	**07 45 01.3**	**-0.6**
JOW				*e*S	**Sb**	**07 45 18.4**	**+0.3**
JOW	**Kunigami**	**1.25**	**176**	Pg	**Pn**	**07 45 01.8**	**-0.1**
	82nm,0.3s,baz=353,slow=14,SNR=97						
JOW				Lg	Lg	07 45 17.8	
	71nm,0.3s,baz=114,slow=19,SNR=7.8						
JOW				LR	LR	07 45 40.0	
	comp=Z,512nm,20.5s,baz=306,slow=49						
JAM	**Amami Oshima**	**1.30**	**75**	*e*P	**Pg**	**07 45 03.2**	**-0.1**
JTAJ	**Takarajima**	**1.40**	**40**	*e*P	**Pb**	**07 45 03.3**	**-1.2**
JNTH	**Nagotoyohara**	**1.56**	**185**	P	**Pn**	**07 45 06.0**	**-0.2**
JNTH				*e*S	**Sn**	**07 45 26.0**	**-0.5**
JZK	**Kikaishima**	**1.60**	**81**	*e*S	**Sg**	**07 45 29.4**	**-0.4**
JAGN	**Aguni-jima**	**1.71**	**209**	*e*P	**Pn**	**07 45 07.1**	**-1.0**
JKE	**Kume jima 2**	**2.14**	**216**	*e*P	**Pn**	**07 45 13.4**	**-0.8**
JNU	**Nakatsue**	**5.54**	**24**	Pn	Pb	07 46 07.7	-7.4
	1.0nm,0.3s,baz=201,slow=5.7,SNR=15						
JNU				LR	LR	07 48 04.6	
	comp=Z,137nm,19.7s,baz=206,slow=38						
KSRS	**Korea Array**	**9.35**	**359**	Pn	**Pn**	**07 46 56.0**	**+3.0**
	0.1nm,0.3s,baz=184,slow=15,SNR=4.5						
KSRS				LR	LR	07 50 34.7	
	comp=Z,87nm,19.1s,baz=330,slow=39						
JHJ	**Hachijo jima 2**	**11.19**	**61**	LR	LR	07 51 12.4	
	comp=Z,102nm,21.5s,baz=274,slow=36						
MJAR	**Matsushiro Arr**	**11.96**	**43**	LR	LR	07 52 27.8	
	comp=Z,110nm,21.4s,baz=226,slow=40						
USRK	**Ussuriysk Ar.**	**16.37**	**10**	Pn	**P**	**07 48 34.1**	**+3.0**
	0.1nm,0.3s,baz=194,slow=11,SNR=8.4						
USRK				Sn	**S**	**07 51 39.5**	**-2.8**
	0.1nm,0.3s,baz=193,slow=18,SNR=2.7						
GUMO	**Guam**	**21.21**	**129**	LR	LR	07 55 53.9	
	comp=Z,89nm,21.2s,baz=44,slow=32						
SONM	**Songino Array**	**25.99**	**325**	P	**P**	**07 50 11.8**	**+0.4**
	2.4nm,0.8s,baz=137,slow=8.5,SNR=16						
SONM				LR	LR	08 02 05.8	
	comp=Z,

baz=189
ETM **Tongmen** 0.15 304 *i* P Pg 07 49 41.8 -0.8
baz=311
ETM S Sg 07 49 43.4 -1.8
baz=311
ESL **Shilin** 0.19 249⇓*i* P Pg 07 49 42.6 -0.7
baz=237
ESL *i* S Sg 07 49 44.7 -1.5
baz=237
TEGC **Jichi Village** 0.19 205 P Pg 07 49 44.4 +1.1
baz=192
TEGC S Sg 07 49 48.9 +2.8
baz=192
TWD **Chiawan** 0.20 352⇓*i* P Pg 07 49 43.2 -0.2
baz=4.0
TWD *i* S Sg 07 49 45.9 -0.5
baz=4.0
LXIB **Xiulin Townshi** 0.24 306⇓*i* P Pg 07 49 43.4 -0.8
baz=309
LXIB *i* S Sg 07 49 46.4 -1.3
baz=309
WARBT **Fenglin Townsh** 0.27 234⇓*i* P Pg 07 49 44.3 -0.5
baz=228
WARBT *i* S Sg 07 49 47.4 -1.2
baz=228
ETL **Fush Village** 0.28 359⇓*i* P Pg 07 49 44.5 -0.3
baz=9.0
ETL *i* S Sg 07 49 48.0 -0.7
baz=9.0
NACB **Ninganchiao** 0.29 354 P Pg 07 49 44.5 -0.6
NACB **Ninganchiao** 0.29 354⇓*i* P Pg 07 49 44.7 -0.4
baz=11
NACB S Sg 07 49 48.2 -0.9
baz=11
ETLH **Xiulin Townshi** 0.35 338⇓*i* P Pg 07 49 45.7 -0.5
baz=344
ETLH S Sg 07 49 49.8 -1.1
baz=344
WHF **Hehuan Shan** 0.42 309⇓*i* P Pg 07 49 46.9 -0.7
baz=311
WHF S Sg 07 49 52.4 -0.9
baz=311
HGSD **Ruisui** 0.43 206 P Pb 07 49 48.8 +0.2
baz=207
CHGB **Renai** 0.45 293⇓*i* P Pg 07 49 47.7 -0.3
baz=293
CHGB S Sg 07 49 53.7 -0.4
baz=293
EAHA **Aohua** 0.46 13 P Pg 07 49 47.9 -0.2
baz=18
EAHA S Sb 07 49 57.8 +2.0
baz=18
VWDT **VWDT** 0.46 254⇓*i* P Pb 07 49 48.2 -1.0
baz=250
VWDT *i* S Sg 07 49 53.7 -0.6
baz=250
EHY **Hungye** 0.47 217 P Pb 07 49 48.2 -1.1
baz=211
WUSB **Renai** 0.48 283⇓*i* P Pg 07 49 48.4 -0.2
baz=282
WUSB S Sg 07 49 54.2 -0.7
baz=282
FUSS **Fushou** 0.51 316 P Pg 07 49 48.7 -0.4
baz=318
FUSS *e*S Sg 07 49 55.0 -0.8
baz=318
ENA **Nanau** 0.55 11 *e*P Pb 07 49 49.7 -1.0
baz=6.0
TWT **Tachien** 0.55 312 P Pg 07 49 49.9 -0.1
baz=304
TWT *e*S Sg 07 49 56.9 -0.5
baz=304
TDCB **Techi** 0.57 311⇓*i* P Pg 07 49 49.9 -0.3
baz=304
TDCB S Sg 07 49 56.9 -0.8
baz=304
YULB **Yu-li** 0.57 212 P Pb 07 49 50.3 -0.8
YULB **Yu-li** 0.57 212 P Pb 07 49 50.2 -0.8
baz=215
YULB *e*S Sb 07 49 58.5 -0.6
baz=215
EWUT **Wuta** 0.58 14 P Pb 07 49 50.3 -0.8
baz=6.0
EWUT S Sn 07 50 01.2 -1.3
baz=6.0
ECBN **Changbin** 0.58 196 *e*P Pb 07 49 51.5 +0.2
baz=182
ECBN *e*S Sn 07 50 01.9 -0.8
baz=182
NNSB **Datong** 0.59 338⇓*i* P Pg 07 49 50.3 -0.3
baz=340
NNSB S Sg 07 49 57.3 -1.1
baz=340
NNSH **Datong** 0.59 338 P Pg 07 49 50.2 -0.4
baz=334
NNSH *e*S Sg 07 49 57.8 -0.7
baz=334
EYUL **Yuli** 0.60 208 *e*P Pb 07 49 51.5 0.0
baz=213
NNS **Nan Shan** 0.60 337⇓*i* P Pg 07 49 50.6 -0.3
baz=340
NNS S Sg 07 49 58.2 -0.6
baz=340
TWF1 **Yuli** 0.61 210 P Pb 07 49 50.9 -0.7
baz=215
TWF1 S Sb 07 50 00.4 +0.3
baz=215
SSLB **Suanglung** 0.62 262 P Pg 07 49 50.2 -1.0
SSLB **Suanglung** 0.62 262⇓*i* P Pg 07 49 50.9 -0.3
baz=260
SSLB S Sg 07 49 58.0 -1.4
baz=260
LATG **Datong** 0.66 352⇓*i* P Pg 07 49 51.6 -0.3
baz=345
LATG S Sb 07 50 02.3 +0.6
baz=345
SMLT **Sun Moon Lake** 0.67 270⇓*i* P Pg 07 49 51.9 -0.2
baz=269
SMLT *i* S Sg 07 50 00.5 -0.3
baz=269
EOS4 **EOS4** 0.68 69 *e*P Pn 07 49 53.8 -0.3
baz=72
WCS **Beigang Elemen** 0.68 285 P Pb 07 49 52.1 -0.7
baz=285
WCS S Sg 07 50 00.4 -0.8
baz=285
TYC **Yuchr** 0.70 272 P Pg 07 49 52.4 -0.4
baz=280
TYC S Sg 07 50 01.2 -0.8
baz=280
CHKH **Chenggong** 0.72 197 *e*P Pb 07 49 53.7 +0.1
baz=182
ESAO **Su ao** 0.72 16 *e*P Pb 07 49 53.1 -0.4
baz=11
NDT **Datong Townshi** 0.72 352 P Pb 07 49 53.1 -0.6
baz=347
NDT S Sb 07 50 03.7 +0.1
baz=347
EOS3 **EOS3** 0.75 57 *e*P Pn 07 49 56.2 +0.9
baz=56
NDS **Dongshan** 0.75 6 P Pb 07 49 53.6 -0.6
baz=8.0
NDS S Sb 07 50 04.7 +0.3
baz=8.0
TWC **Suao** 0.75 16 *e*P Pb 07 49 53.7 -0.5
baz=11
EOS2 **EOS2** 0.77 46 *e*P Pn 07 49 56.8 +1.2
baz=57
CHKT **Chengkung** 0.81 197 P Pb 07 49 55.2 0.0
baz=186
CHKT *e*S Sn 07 50 07.9 -0.5
baz=186
YHNB **Yeheng** 0.82 344 P Pb 07 49 54.9 -0.4
YHNB **Yeheng** 0.82 344 ⇓P Pb 07 49 54.9 -0.4
baz=345
YHNB *e*S Sb 07 50 06.3 -0.1
baz=345
EHD **Haiduan** 0.82 208 *e*P Pn 07 49 55.6 -1.0
baz=206
WJS **Zhushan** 0.82 266 *e*P Pn 07 49 56.2 -0.4
baz=271
WJS *e*S Sn 07 50 08.2 -0.4
baz=271
NSK **Sanguang** 0.83 343⇓*i* P Pb 07 49 55.1 -0.4
baz=344
NSK *e*S Sb 07 50 06.2 -0.5
baz=344
TWE **Neicheng** 0.84 3 P Pb 07 49 55.2 -0.3
baz=5.0
TWE *e*S Sb 07 50 07.5 +0.7
baz=5.0
ALS **Alishan** 0.84 244 *e*P Pb 07 49 55.5 -0.3
baz=242
ALS *e*S Sb 07 50 07.3 +0.2
baz=242
WNT **Mingjian** 0.86 270 P Pn 07 49 56.9 -0.2
baz=269
WNT S Sn 07 50 09.2 -0.4
baz=269
ECS **Chishang** 0.87 206 *e*P Pn 07 49 57.1 -0.1
baz=217
FUSB **Fushanzhiwuyua** 0.88 358 P Pb 07 49 56.0 -0.3
baz=358
FUSB *e*S Sb 07 50 08.1 +0.2
baz=358
NFF **Wufeng Townshi** 0.88 328 *e*P Pb 07 49 56.0 -0.3
baz=329
NFF *e*S Sg 07 50 06.9 -0.7
baz=329
ELDTW **Lidau** 0.89 219 P Pb 07 49 56.1 -0.4
baz=207
NWLT **Wulai** 0.90 353 P Pb 07 49 56.3 -0.3
baz=348
NWLT S Sb 07 50 08.5 -0.1
baz=348
TWQ1 **Liyutan** 0.91 301 *e*P Pb 07 49 56.8 0.0
baz=301
TWQ1 *e*S Sb 07 50 09.5 +0.6
baz=301
TCU **Taichung** 0.91 287 *e*P Pn 07 49 57.8 +0.1
baz=287
CHN5 **Tsauling** 0.91 252 ⇑P Pn 07 49 57.4 -0.4
baz=240
CHN5 *e*S Sn 07 50 10.4 -0.6
baz=240
NSTT **Nanjuang** 0.94 323 P Pb 07 49 57.4 0.0
baz=323
NSTT *e*S Sb 07 50 09.9 +0.2
baz=323
LIOB **Emei** 0.94 324 *e*P Pn 07 49 57.7 -0.5
baz=324
EDH **Donghe** 0.95 198 *e*P Pb 07 49 57.1 -0.4
baz=213
NSY **Sanyi** 0.95 304 *e*P Pn 07 49 58.3 -0.1
baz=305
NSY *e*S Sn 07 50 12.2 +0.3
baz=305
WGK **Gukeng** 0.99 259 *e*P Pn 07 49 59.2 +0.4
baz=259
WGK *e*S Sn 07 50 13.3 +0.5
baz=259
WCHH **Zhanghua** 1.00 282 *e*P Pn 07 49 59.3 +0.4
baz=282
EGS **1.00 16** *e*P Pn 07 49 59.1 +0.2
baz=16
NMLH **Miaoli** 1.00 311 *e*P Pn 07 49 59.4 +0.4
baz=311
WDLH **Douliu** 1.01 259 *e*P Pn 07 49 59.6 +0.4
baz=260
WDLH *e*S Sn 07 50 14.0 +0.6
baz=260
WCKO **Fanlu** 1.03 245 *e*P Pn 07 49 59.9 +0.5
baz=245
STYH **Taoyuan** 1.05 228 *e*P Pn 07 49 59.8 +0.2
baz=215
LONT **Longtian** 1.07 205 *e*P Pn 07 49 59.8 -0.2
baz=205
STYT **Tauyuan** 1.07 228 *e*P Pn 07 49 60.0 0.0
baz=215
SBCB **Hsinchu** 1.08 327 *e*P Pn 07 50 00.9 +0.9
baz=336
SBCB *e*S Sn 07 50 15.8 +0.8
baz=336
NHDH **Xindian Distri** 1.08 355 *e*P Pn 07 50 00.1 0.0
baz=354
TPUB **Ta-pu** 1.08 238 P Pn 07 50 00.5 +0.4
TPUB **Ta-pu** 1.08 238 *e*P Pn 07 50 00.6 +0.5
baz=242
TPUB *e*S Sn 07 50 15.5 +0.5
baz=242
CHN4 **Tsaushan** 1.08 241 ⇑P Pn 07 50 00.7 +0.5
baz=241
CHN4 S Sn 07 50 16.6 +1.6
baz=241
HSN **Hsinchu** 1.09 327 *e*P Pn 07 50 01.3 +1.1
baz=338
HSN *e*S Sn 07 50 17.0 +1.6
baz=338
TWA **Mucha** 1.09 358 *e*P Pn 07 50 00.6 +0.4
baz=357
TATO **Taipei** 1.10 353 P Pn 07 50 00.4 +0.1
CHN2 **Minshiung** 1.11 252 *e*P Pn 07 50 01.5 +1.1
baz=252
WTP **Ta-pu** 1.12 236 *e*P Pn 07 50 01.2 +0.5
baz=236
WTP *e*S Sn 07 50 16.8 +0.7
baz=236
WRL **Guolierlin Hig** 1.14 271 *e*P Pn 07 50 01.5 +0.5
baz=272
WTK **Tuku** 1.15 261 *e*P Pn 07 50 01.9 +0.9
baz=261
WTK *e*S Sn 07 50 17.4 +0.8
baz=261
NCUH **Zhongli** 1.15 340 *e*P Pn 07 50 02.2 +1.1
baz=348
TWB1 **Santiao Chiao** 1.17 16 *e*P Pn 07 50 01.3 0.0
baz=7.0
TWG **Pinlang** 1.17 206 *e*P Pn 07 50 00.9 -0.4
baz=191
TWGBT **Beinan** 1.17 205 P Pn 07 50 01.1 -0.2
TWGBT **Beinan** 1.17 205 *e*P Pn 07 50 01.1 -0.2
baz=191
NWF **Wu-fen Shan** 1.19 7 *e*P Pn 07 50 01.9 +0.2
baz=5.0
WFSB **Wu-fen Shan** 1.19 7 *e*P Pn 07 50 01.9 +0.3
baz=5.0
LDUT **Ludao** 1.21 187 *e*P Pg 07 49 59.8 -2.6
baz=168
TWK **Hsinying** 1.21 240 *e*P Pn 07 50 02.6 +0.7
baz=230
TWK *e*S Sn 07 50 19.6 +1.4
baz=230
CHN1 **Nanshi** 1.22 236 *e*P Pn 07 50 02.9 +0.8
baz=237
CHN1 *e*S Sn 07 50 20.7 +2.2
baz=237
SNST **Tainan City** 1.23 238 *e*P Pn 07 50 03.1 +1.0
baz=239
SNST *e*S Sn 07 50 20.2 +1.6
baz=239
SXI1 **Grass Mountain** 1.23 11 *e*P Pn 07 50 03.0 +0.9
baz=358
TWS1 **Kuangyinshan** 1.23 351 P Pg 07 50 03.5 +0.8
baz=358
TWS1 *e*S Sn 07 50 21.4 +2.8
baz=358
NHW **Xinwu Township** 1.24 335 *e*P Pg 07 50 04.2 +1.3
baz=334
SGST **Jiashian** 1.25 230 P Pg 07 50 03.1 +0.1
baz=231
SGST *e*S Sn 07 50 21.1 +2.0
baz=231
YM01 **YM01** 1.26 358 *e*P Pg 07 50 03.5 +0.2
baz=357
TNOU **National Taiwa** 1.27 6 *e*P Pg 07 50 03.3 -0.2
baz=4.0
NTST **Danshui** 1.29 353 *e*P Pg 07 50 04.3 +0.5
baz=352
JYNG **Yonagunijimaku** 1.33 65 *e*P Pg 07 50 04.6 -0.1
JYNG *e*S Sn 07 50 22.8 +1.7
ICHU **Yijhu** 1.34 248 *e*P Pg 07 50 04.9 0.0
baz=249
ICHU *e*S Sn 07 50 23.7 +2.3
baz=249
TWY **Chenhua** 1.39 359 *e*P Pg 07 50 06.3 +0.5
baz=358
YOJ **Yonaguni jima** 1.39 65 *e*P Pb 07 50 04.2 -0.8
baz=64
YOJ **Yonaguni jima** 1.39 65 *e*P Pg 07 50 05.1 -0.7
CHN8 **Yiju** 1.40 248 *e*S Sg 07 50 25.7 +1.4
baz=250
ECL **Taimali** 1.42 206 *e*P Pn 07 50 04.5 -0.2
baz=191
SCST **Cishan** 1.44 227 *e*P Pg 07 50 07.5 +0.8
baz=214
SHHT **Tainan City** 1.45 234 *e*P Pg 07 50 07.3 +0.2
baz=236
TSMG **Majia** 1.48 218 *e*P Pg 07 50 07.0 -0.4
baz=212
TWM1 **Shoushan** 1.53 227 *e*P Pg 07 50 09.7 +1.2
baz=228
MASBT **Mashibuluo** 1.56 216 *e*P Pn 07 50 06.8 +0.2
baz=211
TSCK **Chigu Township** 1.59 243 *e*P Pb 07 50 07.9 -0.5
baz=246
TSCK *e*S Sg 07 50 29.7 -0.6
baz=246
EAST **Anshuo** 1.66 206 *e*P Pb 07 50 09.0 -0.5
baz=194
SCZT **Fangliau** 1.77 212 *e*P Pg 07 50 11.6 -1.4
baz=214
SLIU **Shizi** 1.82 205 *e*P Pn 07 50 10.6 +0.3
baz=192
WDGT **Dungji** 1.91 251 *e*P Pn 07 50 12.2 +0.8
baz=254
PHUB **P'eng-hu** 1.92 259 *e*P Pn 07 50 12.4 +0.9
baz=261
PHUB *e*S Sb 07 50 37.3 -0.6
baz=261
PNG **Penghu** 1.92 261 *e*P Pn 07 50 12.3 +0.7
baz=263
PNG *e*S Sb 07 50 37.7 -0.4
baz=263
VCHM **Qimei** 2.12 252 *e*P Pn 07 50 15.5 +1.1
baz=255
JKRS **Kuro-shima** 2.21 80 P Pb 07 50 17.4 -1.6
JKRS *e*S Sb 07 50 45.3 -0.9
VWUC **VWUC** 2.27 300 *e*P Pn 07 50 15.7 -0.7
baz=301
JIJ **Ishigaki jima** 2.35 78 P Pn 07 50 17.9 +0.4
JIJ *e*S Sn 07 50 47.0 +0.7
JISG **Ishigakijimahi** 2.55 73 P Pn 07 50 21.1 +0.9
JISG S Sn 07 50 52.4 +1.1
PTMZ **Houxiangcun** 2.56 297 *e*P Pn 07 50 20.6 +0.3
baz=299
MATB **Ma-tsu** 2.73 326 *e*P Pn 07 50 22.8 +0.1
baz=312
KNM **Kinmen** 2.96 281 *e*P Pn 07 50 27.8 +1.8
baz=283
KNMB **Chin-men Tao** 3.01 282 *e*P Pn 07 50 26.8 +0.2
baz=284
LYJJ **Jianjiangzhen** 3.15 328 *e*P Pn 07 50 28.5 0.0
baz=316
MHZQ **Yeshan** 3.23 314 *e*P Pn 07 50 30.0 +0.4
baz=314
XPSS **Dashiqiu** 3.30 337 *e*P Pn 07 50 30.7 +0.1
baz=335
AXDP **Jialang** 3.48 288 *e*P Pn 07 50 33.2 +0.1
baz=290
ZPLA **Ao Xicun** 3.55 272 *e*P Pn 07 50 34.1 +0.1
baz=274

IDC 16 07:50:14.6±3.1, 54°.22N×87°.25E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=25.7km s-min=16.8km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	I	I		07 58 58.3	
	0.1nm,0.9s,baz=79,slow=339,SNR=1.1							
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg		Pn	07 50 40.8	-1.4
	2.5nm,0.3s,baz=78,slow=17,SNR=21							
ZALV				Lg		Lg	07 51 00.5	
	3.2nm,0.3s,baz=79,slow=26,SNR=8.6							
KURBB	**Kurchatov Arra**	**6.43**	**240**	Pn		Pn	07 51 51.3	+0.9
	0.1nm,0.3s,baz=52,slow=13,SNR=5.3							
KURBB				Sn		Sn	07 53 04.4	-0.1
	baz=53,slow=22							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**8.07**	**205**	Pn		Pn	07 52 13.9	+0.9
	0.1nm,0.3s,baz=24,slow=12,SNR=2.9							
MKAR				Sn		Sn	07 53 44.5	-0.4
	0.1nm,0.3s,baz=23,slow=30,SNR=2.9							
	0.2nm,0.6s							

*NEIC **16** 07:52:43.9±1.1, 56°.6N±0°.1×148°.6W±0°.1, h20km±11km, ML2.9/38, ML2.8(AEIC), Error ellipse: s-maj=17.2km s-min=9.2km az=160.0*
*AEIC **16** 07:52:47.1±1.2, **56°.6N**±0°.1×**148°.6W**±0°.1, **h12**km±9km, **Error ellipse: s-maj=19.4km s-min=7.6km az=171.0, Gulf of Alaska***

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.50**	**301**			Pn	07 53 23.0	-4.6
KDAK						Sn	07 53 50.2	-7.8
OHAK	**Old Harbor**	**2.66**	**287**			Pn	07 53 24.6	-5.2
OHAK						Sn	07 53 54.0	-8.0
OHAK	**Old Harbor**	**2.66**	**287**	IAML			07 54 53.0	
	comp=N,40nm,0.4s							
SYI	**Shuyak Island**	**2.91**	**317**			Pn	07 53 28.7	-4.5
SYI						Sn	07 54 02.2	-5.8
BRSE	**Bradley Lake S**	**3.40**	**341**			Pn	07 53 34.6	-5.4
BRSE						Sn	07 54 12.2	-8.0
BRLK	**Bradley Lake**	**3.45**	**340**			Pn	07 53 35.3	-5.4
P23K	**Montague Islan**	**3.52**	**10**			Pn	07 53 36.3	-5.3
Q19K	**Cape Douglas,**	**3.61**	**314**	Pn		Pn	07 53 39.3	-3.6
P19K	**Oil Pt**	**3.97**	**324**	Pn		Pn	07 53 42.6	-5.2
HIN	**Hinchinbrook I**	**4.01**	**15**			Pn	07 53 42.9	-5.5
KAIM	**Kayak Island**	**4.04**	**31**			Pn	07 53 44.0	-4.8
KAIM	**Kayak Island**	**4.04**	**31**	IAML			07 56 05.6	
	comp=N,32nm,1.4s							
O20K	**Slope Mountain**	**4.13**	**331**			Pn	07 53 45.7	-4.4
ILSW	**Iliamna Southw**	**4.20**	**327**	Pn		Pn	07 53 46.8	-4.3
ILSW				IAML			07 54 34.6	
	comp=N,14nm,1.1s							
ILSW				IAML			07 55 55.8	
	comp=E,12nm,1.4s							
EYAK	**Cordova Ski Ar**	**4.28**	**19**			Pn	07 53 47.4	-4.6
FID	**Port Fidalgo**	**4.36**	**14**			Pn	07 53 48.0	-5.2
FID	**Port Fidalgo**	**4.36**	**14**	IAML			07 54 53.5	
	comp=E,12nm,1.4s							
FID				IAML			07 56 31.2	
	comp=N,11nm,1.4s							
NICHA	**Nichawak Mount**	**4.43**	**31**			Pn	07 53 49.7	-4.4
RSO	**Redoubt South**	**4.49**	**333**	Pn		Pn	07 53 49.8	-5.4
GOAT	**Goat Mountain**	**4.53**	**25**			Pn	07 53 51.2	-4.2
BERG	**Berg Lake**	**4.63**	**32**	Pn		Pn	07 53 51.7	-5.2
SNH	**Sunshine Point**	**4.74**	**37**			Pn	07 53 54.2	-4.2
KHIT	**Khitrov Hills**	**4.81**	**33**			Pn	07 53 54.5	-4.9
O18K	**Koktuh Hills**	**4.82**	**316**	Pn		Pn	07 53 53.5	-6.0
CRQM	**Cirque**	**5.09**	**32**			Pn	07 53 58.9	-4.5
CRQM	**Cirque**	**5.09**	**32**	IAML			07 57 11.8	
	comp=N,10nm,1.4s							
CRQM				IAML			07 57 14.2	
	comp=E,10nm,1.4s							
KLU	**Klutina**	**5.15**	**14**			Pn	07 53 59.0	-5.0
KLU	**Klutina**	**5.15**	**14**	IAML			07 56 18.1	
	comp=E,7.3nm,1.3s							
KLU				IAML			07 56 18.7	
	comp=N,6.8nm,0.5s							
TGL	**Tana Glacier**	**5.18**	**33**			Pn	07 53 59.8	-4.8
TGL	**Tana Glacier**	**5.18**	**33**	IAML			07 54 55.2	
	comp=N,8.7nm,1.5s							
TGL				IAML			07 55 19.7	
	comp=E,9.1nm,1.4s							
BAGL	**Bagley Icefiel**	**5.22**	**38**			Pn	07 54 00.2	-4.7
N19K	**Bonanza Creek**	**5.27**	**327**	Pn		Pn	07 54 00.2	-5.5
N19K				IAML			07 56 55.4	
	comp=N,6.5nm,1.2s							
VRDI	**Verde Repeater**	**5.40**	**27**	Pn		Pn	07 54 02.5	-5.1
VRDI				IAML			07 55 20.1	
	comp=N,5.1nm,1.4s							
VRDI				IAML			07 55 38.2	
	comp=E,4.4nm,1.5s							
SAMH	**Samovar Hills**	**5.46**	**46**			Pn	07 54 04.5	-3.9
GLB	**Gilahina Butte**	**5.50**	**25**	Pn		Pn	07 54 04.0	-4.8
GRNC	**Granite Creek**	**5.51**	**38**			Pn	07 54 04.5	-4.7
TABL	**Table Mountain**	**5.52**	**42**	Pn		Pn	07 54 04.7	-4.6

*NEIC **16** 07:53:50.9±1.5, 56°.16N±0°.08×149°.8W±0°.1, h21km±10km, ML3.0/28, ML2.9(AEIC), Error ellipse: s-maj=12.9km s-min=8.8km az=152.0*
*AEIC **16** 07:53:52.2±2.0, 56°.0N±0°.1×149°.7W±0°.1, h12km±8km, Error ellipse: s-maj=17.3km s-min=9.1km az=166.0*
ISC 16 07:53:51.3±2.3, 56°.1N±0°.1×149°.77W±0°.06, h35km, n50, σ0$71/47, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.25**	**302**		**Pn**	**07 54 25.7**	**-0.3**
OHAK					**Sn**	**07 54 51.6**	**-0.9**
KDAK	**Kodiak Island**	**2.29**	**319**		**Pn**	**07 54 26.3**	**-0.2**
KDAK					**Sn**	**07 54 52.8**	**-0.7**
SII	**Sitkinak Islan**	**2.50**	**283**		**Sn**	**07 54 57.5**	**-1.3**
SYI	**Shuyak Island**	**2.90**	**332**		**Pn**	**07 54 35.1**	**+0.3**
SYI					**Sn**	**07 55 09.3**	**+0.9**
SYI	**Shuyak Island**	**2.90**	**332**	IAML		07 55 10.6	
	comp=N,28nm,1.1s						
SYI				IAML		07 55 12.1	
	comp=E,21nm,0.5s						
Q19K	**Cape Douglas,**	**3.53**	**325**		**Pn**	**07 54 44.3**	**+0.7**
CNPM	**China Poot**	**3.53**	**348**		**Pn**	**07 54 43.2**	**-0.4**
CNPM					**Sn**	**07 55 24.6**	**+0.5**
CNPM	**China Poot**	**3.53**	**348**	IAML		07 55 30.8	
	comp=E,24nm,1.5s						
CNPM				IAML		07 56 35.1	
	comp=N,24nm,0.5s						
KAHG	**Katmai Hook Gl**	**3.54**	**315**		**Pn**	**07 54 45.0**	**+1.2**
BRSE	**Bradley Lake S**	**3.70**	**352**		**Pn**	**07 54 44.9**	**-1.0**
BRSE					**Sn**	**07 55 27.8**	**-0.4**
BRLK	**Bradley Lake**	**3.73**	**351**		**Pn**	**07 54 45.5**	**-0.8**
BRLK	**Bradley Lake**	**3.73**	**351**	IAML		07 56 35.5	
	comp=N,14nm,1.1s						
BRLK				IAML		07 56 37.5	
	comp=E,19nm,0.7s						
CNTC	**Contact Creek**	**3.98**	**306**		**Pn**	**07 54 50.0**	**+0.2**
P19K	**Oil Pt**	**4.02**	**334**		**Pn**	**07 54 50.8**	**+0.5**
P19K	**Oil Pt**	**4.02**	**334**	IAML		07 55 19.5	
	comp=E,46nm,1.1s						
SEW	**Seward**	**4.03**	**2**		**Pn**	**07 54 49.4**	**-1.0**
P23K	**Montague Islan**	**4.11**	**17**		**Pn**	**07 54 51.1**	**-0.5**
P18K	**Big Mountain,**	**4.42**	**321**	Pn	**Pn**	**07 54 55.8**	**0.0**
SLKM	**Skilak Lake**	**4.43**	**357**		**Pn**	**07 54 54.6**	**-1.4**
HIN	**Hinchinbrook I**	**4.65**	**20**		**Pn**	**07 54 58.6**	**-0.3**
HIN	**Hinchinbrook I**	**4.65**	**20**	IAML		07 56 06.8	
	comp=N,28nm,1.2s						
HIN				IAML		07 56 13.1	
	comp=E,22nm,1.3s						
O18K	**Koktuh Hills**	**4.76**	**325**		**Pn**	**07 55 00.3**	**-0.1**
O18K	**Koktuh Hills**	**4.76**	**325**	IAML		07 56 44.5	
	comp=E,7.6nm,1.4s						
O18K				IAML		07 56 44.5	
	comp=N,14nm,1.2s						
KAIM	**Kayak Island**	**4.78**	**34**	Pn	**Pn**	**07 55 01.4**	**+0.6**
KAIM				IAML		07 56 35.1	
	comp=N,43nm,1.2s						
KAIM				IAML		07 56 38.9	
	comp=E,42nm,1.4s						
EYAK	**Cordova Ski Ar**	**4.95**	**24**		**Pn**	**07 55 01.8**	**-1.1**
FID	**Port Fidalgo**	**4.98**	**19**		**Pn**	**07 55 03.2**	**-0.3**
FID	**Port Fidalgo**	**4.98**	**19**	IAML		07 56 02.8	
	comp=E,11nm,1.2s						
FID				IAML		07 57 46.9	
	comp=N,13nm,1.4s						
RC01	**Rabbit Creek A**	**5.01**	**0**		**Pn**	**07 55 03.1**	**-0.7**
RC01	**Rabbit Creek A**	**5.01**	**0**	IAML		07 56 02.5	
	comp=N,8.2nm,0.6s						
RC01				IAML		07 57 03.6	
	comp=E,9.5nm,1.5s						
P16K	**Nushagak River**	**5.32**	**307**		**Pn**	**07 55 08.8**	**+0.8**
BERG	**Berg Lake**	**5.37**	**34**	Pn	**Pn**	**07 55 08.3**	**-0.5**
O17K	**Koliganek Bris**	**5.37**	**316**		**Pn**	**07 55 09.5**	**+0.7**
BMRM	**Bremner River**	**5.59**	**27**		**Pn**	**07 55 12.0**	**+0.2**
N18K	**Kilae Creek**	**5.62**	**328**		**Pn**	**07 55 12.2**	**0.0**
O16K	**Kokwok River B**	**5.67**	**312**	Pn	**Pn**	**07 55 13.3**	**+0.5**
CRQM	**Cirque**	**5.83**	**34**		**Pn**	**07 55 15.5**	**+0.2**
SVW2	**Sparrevohn**	**5.87**	**331**	Pn	**Pn**	**07 55 15.2**	**-0.4**
SCM	**Sheep Creek Mo**	**5.89**	**11**		**Pn**	**07 55 16.7**	**+0.7**
TGL	**Tana Glacier**	**5.93**	**35**		**Pn**	**07 55 16.7**	**+0.2**
ISLE	**Juniper Island**	**5.98**	**38**		**Pn**	**07 55 17.5**	**+0.3**
BAGL	**Bagley Icefiel**	**5.98**	**39**		**Pn**	**07 55 17.5**	**+0.3**
GRNC	**Granite Creek**	**6.27**	**39**	Pn	**Pn**	**07 55 21.4**	**+0.1**
M17K	**Holitna River**	**6.65**	**326**	Pn	**Pn**	**07 55 26.5**	**+0.2**
N15K	**Kwethluk River**	**6.82**	**311**	Pn	**Pn**	**07 55 29.6**	**+0.9**
M16K	**Timber Creek**	**6.89**	**320**	Pn	**Pn**	**07 55 29.2**	**-0.4**
P29M	**Windy Craggy**	**7.33**	**56**	Pn	**Pn**	**07 55 35.8**	**+0.1**
L16K	**Owhat River**	**7.54**	**322**	Pn	**Pn**	**07 55 38.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**8.06**	**356**	Pn	**Pn**	**07 55 46.1**	**+0.5**
M29M	**Somme Creek**	**8.60**	**38**	Pn	**Pn**	**07 55 54.4**	**+1.3**
K15K	**Wolf Creek Mou**	**8.66**	**321**	Pn	**Pn**	**07 55 55.5**	**+1.7**

*MOS **16** 07:56:02.1±1.2,22.2°.20S×178.°48W,h290km,mb4.9/12, Error ellipse: s-maj=13.3km s-min=10.5km az=106.9*

*NEIC **16** 07:56:07.5±1.5,22.°5S±0.°1×178.°2W±0.°1, h349km±7km, mb4.8/51, Error ellipse: s-maj=19.1km s-min=14.7km az=107.0*

*IDC **16** 07:56:08.2±1.3,22.°42S×178.°57W, h340km±12km, mb4.0/19, mbtmp4.6/19, Error ellipse: s-maj=12.8km s-min=10.3km az=140.0*

*NOU **16** 07:56:08.9,22.°41S×177.°95W, h390km, mb4.9/61, South of Fiji Islands*

ISC 16 07:56:08.5±0.3,22.°54S±0.°04×178.°33W±0.°05, h350km, n404,σ1°52/441, mb4.7/69, 38C-50D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**5.99**	**345**	P	**Pn**	**07 57 40.8**	**+1.5**
DGTI	**Dogotuki**	**6.47**	**343**	P	**Pn**	**07 57 46.2**	**+1.4**
RAO	**Raoul Island**	**6.69**	**177**		**Pn**	**07 57 45.9**	**-1.3**
RAO	**Raoul Island**	**6.69**	**177**	P	**Pn**	**07 57 46.3**	**-0.8**
	1μm,0.3s,baz=235,slow=22,SNR=10						
RAO				S	**S**	**07 59 08.1**	**+0.7**
	443nm,0.3s,baz=17,slow=19,SNR=3.3						
YSA	**Yasawairara**	**6.98**	**326**	P	**Pn**	**07 57 51.9**	**+1.2**
NIUE	**Niue**	**8.58**	**68**		**Pn**	**07 58 07.3**	**-2.2**
NIUE	**Niue**	**8.58**	**68**	P	**Pn**	**07 58 06.9**	**-2.7**
OUENC	**Ouen Island, N**	**13.71**	**268**	P	**P**	**07 59 09.0**	**-0.1**
ONTNC	**Ouen Toro**	**14.08**	**268**	P	**Pn**	**07 59 14.4**	**-0.3**
DZM	**Mont Dzumac**	**14.10**	**269**	P	**Pn**	**07 59 16.6**	**+1.5**
DZM	**Mont Dzumac**	**14.10**	**269**	*e*Pn	**Pn**	**07 59 15.2**	**+0.1**
	392nm,1.0s						
DZM				*e*S	S	08 01 32.1	-15
	359nm,24.4s						
DZM	**Mont Dzumac**	**14.10**	**269**	P	**Pn**	**07 59 15.4**	**+0.3**
	146nm,0.8s,baz=90,slow=16,SNR=31						
OUZ	**Omahuta**	**14.47**	**207**	P	**Pn**	**07 59 19.3**	**+0.2**
MXZ	**Matakaoa Point**	**15.25**	**190**	P	**P**	**07 59 25.2**	**-0.5**
MXZ	**Matakaoa Point**	**15.25**	**190**	P	**Pn**	**07 59 26.4**	**-1.7**
PKGZ	**Pakihiroa**	**15.61**	**191**	P	**P**	**07 59 30.1**	**+0.5**
PKGZ				S	**S**	**08 02 11.6**	**-4.9**
TWGZ	**Tauwhareparae**	**15.90**	**191**	P	**P**	**07 59 31.9**	**-0.9**
TWGZ				S	**S**	**08 02 17.4**	**-5.0**
TOZ	**Tahuroa Road**	**16.05**	**198**	P	**P**	**07 59 35.1**	**+0.8**
MWZ	**Matawai**	**16.14**	**192**	P	**P**	**07 59 31.9**	**-3.5**
MWZ				S	**S**	**08 02 23.6**	**-3.4**
URZ	**Urewera**	**16.15**	**193**	P	**P**	**07 59 35.6**	**+0.2**
URZ	**Urewera**	**16.15**	**193**	P	**P**	**07 59 33.1**	**-2.4**
	35nm,0.4s,baz=80,slow=1.7,SNR=53						
CNGZ	**Carnagh Statio**	**16.17**	**190**	P	**P**	**07 59 34.6**	**-1.1**
CNGZ				S	**S**	**08 02 20.0**	**-7.4**
TARZ	**Mount Tarawera**	**16.26**	**195**	P	**Pn**	**07 59 39.2**	**-0.7**
KOUNC	**Koumac, New Ca**	**16.30**	**274**	P	**P**	**07 59 38.1**	**+0.8**
KOUNC	**Koumac, New Ca**	**16.30**	**274**	P	**P**	**07 59 39.0**	**+1.7**
RAGZ	**Rawiri**	**16.32**	**192**	P	**P**	**07 59 37.2**	**-0.2**
RAGZ				S	**S**	**08 02 28.7**	**-1.9**
RIGZ	**Rimuhau**	**16.46**	**191**	P	**P**	**07 59 38.3**	**-0.5**
RIGZ				S	**S**	**08 02 27.0**	**-6.2**
RTZ	**Ruatahuna**	**16.52**	**193**	P	**P**	**07 59 38.7**	**-0.9**
RTZ	**Ruatahuna**	**16.52**	**193**	P	**P**	**07 59 38.2**	**-1.3**
RTZ				S	**S**	**08 02 29.9**	**-4.6**
PRRZ	**Plateau Road**	**16.54**	**195**	P	**P**	**07 59 40.1**	**+0.4**
PRRZ				S	**S**	**08 02 38.1**	**+3.3**
SNGZ	**Shannon Statio**	**16.61**	**192**	P	**P**	**07 59 38.9**	**-1.6**
SNGZ				S	**S**	**08 02 33.8**	**-2.4**
PRGZ	**Paritu Road**	**16.65**	**190**	P	**P**	**07 59 39.5**	**-1.3**
MTHZ	**Maungataniwha**	**16.78**	**193**	P	**P**	**07 59 42.6**	**+0.4**
MTHZ				S	**S**	**08 02 33.3**	**-6.2**
KNZ	**Kokohu**	**16.78**	**191**	P	**P**	**07 59 39.1**	**-3.1**
KNZ				S	**S**	**08 02 34.9**	**-4.6**
RAHZ	**Arahi**	**16.79**	**192**	P	**P**	**07 59 41.7**	**-0.6**
RAHZ				S	**S**	**08 02 39.0**	**-0.8**
MRHZ	**Matea Rd**	**16.85**	**194**	P	**P**	**07 59 42.3**	**-0.8**
MRHZ				S	**S**	**08 02 42.1**	**+1.0**
MHGZ	**Mahia Peninsul**	**16.87**	**190**	P	**P**	**07 59 43.0**	**-0.2**
MHGZ				S	**S**	**08 02 38.0**	**-3.3**
HIZ	**Hauiti**	**16.96**	**199**	P	**P**	**07 59 44.0**	**-0.2**
HIZ	**Hauiti**	**16.96**	**199**	P	**P**	**07 59 46.2**	**+2.0**
HIZ	**Hauiti**	**16.96**	**199**	P	**P**	**07 59 46.3**	**+2.1**
ARHZ	**Aropaoanui**	**17.14**	**192**	P	**P**	**07 59 43.0**	**-3.1**
ARHZ				S	**S**	**08 02 45.1**	**-1.5**
BKZ	**Black Stump Fm**	**17.15**	**194**	P	**P**	**07 59 43.3**	**-3.0**
BKZ	**Black Stump Fm**	**17.15**	**194**	P	**P**	**07 59 47.0**	**+0.7**
BKZ	**Black Stump Fm**	**17.15**	**194**	P	**P**	**07 59 44.9**	**-1.4**
BKZ				S	**S**	**08 02 44.6**	**-2.3**
NTVZ	**North Tongarir**	**17.28**	**196**	P	**P**	**07 59 47.6**	**-0.2**
TMVZ	**Te Maari**	**17.29**	**196**	P	**P**	**07 59 47.8**	**0.0**
TMVZ				S	**S**	**08 02 53.6**	**+3.9**
ETVZ	**East Tongariro**	**17.31**	**196**	P	**P**	**07 59 46.9**	**-1.2**
ETVZ				S	**S**	**08 02 51.9**	**+1.8**
TWVZ	**Taurewa**	**17.32**	**196**	P	**P**	**07 59 52.0**	**+3.8**
OTVZ	**Oturere**	**17.34**	**196**	P	**P**	**07 59 46.9**	**-1.6**
NGZ	**Ngauruhoe**	**17.37**	**196**	P	**P**	**07 59 48.4**	**-0.4**
NGZ				S	**S**	**08 02 54.9**	**+3.5**
SNVZ	**South Ngauruho**	**17.37**	**196**	P	**P**	**07 59 48.3**	**-0.5**
COVZ	**Chateau Observ**	**17.41**	**196**	P	**P**	**07 59 50.9**	**+1.8**
TUVZ	**Tukino**	**17.45**	**196**	P	**P**	**07 59 51.1**	**+1.5**
TRVZ	**Turoa**	**17.50**	**196**	P	**P**	**07 59 49.5**	**-0.8**
WNVZ	**Wahianoa**	**17.52**	**196**	P	**P**	**07 59 48.4**	**-1.9**
PKVZ	**Pokaka**	**17.55**	**196**	P	**P**	**07 59 50.5**	**-0.1**
MOVZ	**Moawhango**	**17.55**	**195**	P	**P**	**07 59 50.5**	**-0.1**
BHHZ	**Black Hill Sta**	**17.56**	**195**	P	**P**	**07 59 48.0**	**-2.6**
BHHZ				S	**S**	**08 02 53.1**	**-1.8**
KAHZ	**Kahuranaki**	**17.68**	**192**	P	**P**	**07 59 50.5**	**-1.4**
KAHZ				S	**S**	**08 02 55.7**	**-1.4**
PKE	**Pukeiti**	**17.85**	**200**	P	**P**	**07 59 57.9**	**+4.2**
NEZ	**North Egmont**	**17.89**	**199**	P	**P**	**07 59 58.8**	**+4.6**
PXZ	**Pawanui**	**17.91**	**192**	P	**P**	**07 59 52.0**	**-2.3**
KHEZ	**Kahui Hut**	**17.93**	**200**	P	**P**	**08 00 00.2**	**+5.5**
PNHZ	**Pukenui**	**17.93**	**194**	P	**P**	**07 59 53.1**	**-1.5**
WPHZ	**Waipukurau**	**18.02**	**193**	P	**P**	**07 59 56.2**	**+0.6**
TSZ	**Takapari Road**	**18.12**	**194**	P	**P**	**07 59 56.0**	**-0.7**
PRHZ	**Porangahau**	**18.18**	**192**	P	**P**	**07 59 57.9**	**+0.7**
DVHZ	**Dannevirke**	**18.31**	**194**	P	**P**	**07 59 57.4**	**-1.2**
ANWZ	**Angora Road**	**18.40**	**193**	P	**P**	**08 00 00.5**	**+1.0**
PRWZ	**Pori Road**	**18.60**	**194**	P	**P**	**08 00 00.7**	**-0.9**
BFZ	**Birch Farm**	**18.66**	**193**	P	**P**	**08 00 01.7**	**-0.6**
BFZ	**Birch Farm**	**18.66**	**193**	P	**P**	**08 00 00.6**	**-1.7**
MRZ	**Mangatainoka R**	**18.79**	**195**	P	**P**	**08 00 01.6**	**-2.0**
MRZ				S	**S**	**08 03 12.9**	**-5.7**
HOWZ	**Holdsworth Sta**	**19.03**	**194**	P	**P**	**08 00 04.8**	**-1.4**
OGWZ	**Otaki Gorge**	**19.03**	**195**	P	**P**	**08 00 03.9**	**-2.3**
SNZO	**South Karori**	**19.61**	**196**	P	**P**	**08 00 11.9**	**-0.4**
QRZ	**Quartz Range**	**19.80**	**201**	P	**P**	**08 00 13.7**	**-0.6**
THZ	**Tophouse**	**20.53**	**199**	P	**P**	**08 00 20.6**	**-0.7**
KHZ	**Kahutara**	**20.95**	**197**	P	**P**	**08 00 23.9**	**-1.1**
RPZ	**Rata Peaks**	**22.87**	**200**	P	**P**	**08 00 41.6**	**-0.9**
RPZ				IAmb	IAmb	08 00 47.2	
	comp=Z,27nm,0.7s						
RPZ	**Rata Peaks**	**22.87**	**200**	P	**P**	**08 00 42.7**	**+0.2**
JCZ	**Jackson Bay**	**23.97**	**203**	P	**P**	**08 00 52.8**	**+0.4**
ODZ	**Otahua Downs**	**24.20**	**199**	P	**P**	**08 00 53.8**	**-0.6**
TBI	**Tubuai**	**26.58**	**97**	*es*S	sS	08 07 15.9	-6.2
	comp=Z,1μm,29.2s						
PPT2	**Papeete2**	**27.43**	**85**	*es*S	**sS**	**08 07 34.3**	**-2.2**
	comp=Z,115nm,27.0s						
PPT2				*es*S	**ScP**	**08 07 38.0**	**-1.0**
	comp=Z,127nm,40.2s						
ARMA	**Armidale**	**27.95**	**247**	P	**P**	**08 01 29.2**	**+1.0**
ARMA	**Armidale**	**27.95**	**247**	P	**P**	**08 01 27.5**	**-0.6**
MGCD	**Mangrove Creek**	**28.94**	**242**	P	**P**	**08 01 38.7**	**+2.1**
CNB	**Canberra Magne**	**30.87**	**238**	P	**P**	**08 01 55.1**	**+1.5**
CAN	**Canberra**	**31.16**	**239**	P	**P**	**08 01 57.1**	**+1.0**
CAN	**Canberra**	**31.16**	**239**	P	**P**	**08 01 56.4**	**+0.3**
MILA	**Mila**	**31.53**	**235**	P	**P**	**08 01 59.5**	**+0.1**
TV1H	**Townsville Har**	**32.70**	**269**	P	**P**	**08 02 09.4**	**-0.2**
CTA	**Charters Tower**	**33.04**	**268**	P	**P**	**08 02 12.6**	**+0.1**
CTA	**Charters Tower**	**33.04**	**268**	P	**P**	**08 02 12.4**	**-0.1**
CTA				pmax	pmax		
	comp=Z,122nm,0.7s						
CTAO	**Charters Tower**	**33.04**	**268**	P	**P**	**08 02 12.2**	**-0.4**
CTAO				IAmb	IAmb	08 02 13.1	
	comp=Z,70nm,0.6s						
CTAO	**Charters Tower**	**33.04**	**268**	P	**P**	**08 02 12.6**	**+0.1**
CTAO	**Charters Tower**	**33.04**	**268**	P	**P**	**08 02 12.2**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,70nm,0.6s						
CTAO	**Charters Tower**	**33.04**	**268**	⇑P	**P**	**08 02 12.3**	**-0.3**
CMSA	**Cobar Meteorol**	**33.16**	**247**	P	**P**	**08 02 13.4**	**0.0**
QLP	**Quilpie**	**34.21**	**256**	P	**P**	**08 02 23.4**	**+1.0**
TOO	**Toolangi**	**34.48**	**236**	P	**P**	**08 02 24.1**	**-0.5**
TOO	**Toolangi**	**34.48**	**236**	P	**P**	**08 02 24.8**	**+0.2**
TOO	**Toolangi**	**34.48**	**236**	P	**P**	**08 02 24.1**	**-0.5**
TOO				pmax	pmax		
	comp=Z,14nm,0.8s						
TAU	**Tasmania Unive**	**34.98**	**226**	P	**P**	**08 02 29.9**	**+1.2**
PMG	**Port Moresby**	**35.55**	**286**	P	**P**	**08 02 33.0**	**-0.9**
PMG	**Port Moresby**	**35.55**	**286**	P	**P**	**08 02 33.8**	**-0.2**
PMG	**Port Moresby**	**35.55**	**286**	P	**P**	**08 02 33.7**	**-0.2**
PMG	**Port Moresby**	**35.55**	**286**	P	**P**	**08 02 33.1**	**-0.9**
PMG				pmax	pmax		
	comp=Z,155nm,0.9s						
PMG	**Port Moresby**	**35.55**	**286**	⇑P	**P**	**08 02 33.4**	**-0.6**
STKA	**Stephens Creek**	**36.66**	**247**	P	**P**	**08 02 42.8**	**-0.3**
STKA	**Stephens Creek**	**36.66**	**247**	P	**P**	**08 02 43.0**	**-0.1**
STKA	**Stephens Creek**	**36.66**	**247**	P	**P**	**08 02 42.8**	**-0.3**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**36.66**	**247**	P	**P**	**08 02 42.8**	**-0.3**
	comp=Z,13nm,0.6s,baz=92,slow=9.7,SNR=58						
STKA				PKiKP	**PKiKP**	**08 12 15.7**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=117,slow=4.5,SNR=4.7						
	comp=Z,13nm,0.6s						
ARPS	**Mount Arapiles**	**37.13**	**238**	P	**P**	**08 02 48.0**	**+1.1**
INKA	**Innaminka**	**37.29**	**253**	P	**P**	**08 02 48.6**	**+0.3**
COEN	**Coen**	**37.46**	**276**	P	**P**	**08 02 49.3**	**-0.6**
COEN				IAmb	IAmb	08 02 51.2	
	comp=Z,44nm,1.0s						
COEN	**Coen**	**37.46**	**276**	P	**P**	**08 02 50.4**	**+0.5**
HTT	**Hallett**	**39.04**	**244**	P	**P**	**08 03 02.6**	**-0.2**
QIS	**Mount Isa**	**39.09**	**265**	P	**P**	**08 03 02.1**	**-1.2**
LCRK	**Leigh Creek**	**39.49**	**249**	P	**P**	**08 03 06.0**	**-0.5**
BBOO	**Buckleboo**	**41.40**	**246**	P	**P**	**08 03 20.4**	**-1.5**
BBOO	**Buckleboo**	**41.40**	**246**	P	**P**	**08 03 21.7**	**-0.2**
OOD	**Oodnadatta**	**41.76**	**253**	P	**P**	**08 03 25.1**	**+0.2**
MULG	**Mulgathing**	**43.08**	**249**	P	**P**	**08 03 34.6**	**-0.8**
AS01	**Alice Springs**	**43.75**	**259**	P	**P**	**08 03 40.0**	**-0.8**
AS31	**Alice Springs**	**43.79**	**259**	P	**P**	**08 03 40.0**	**-1.2**
ASAR	**Alice Springs**	**43.79**	**259**	P	**P**	**08 03 40.1**	**-1.0**
	comp=Z,35nm,0.7s,baz=92,slow=8.0,SNR=334						
ASAR				PcP	**PcP**	**08 05 21.7**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=113,slow=3.1,SNR=6.2						
ASAR				ScP	**ScP**	**08 08 38.8**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=103,slow=4.2,SNR=8.4						
ASAR				S	**S**	**08 09 42.4**	**-2.7**
	comp=Z,1.1nm,0.9s,baz=99,slow=16,SNR=6.2						
ASAR				PKiKP	**PKiKP**	**08 12 22.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=85,slow=1.4,SNR=6.3						
	comp=Z,35nm,0.7s						
WB2	**Warramunga Arr**	**44.04**	**264**	P	**P**	**08 03 41.4**	**-1.7**
WB2				IAmb	IAmb	08 03 42.4	
	comp=Z,26nm,0.7s						
WRA	**Warramunga Arr**	**44.05**	**264**	P	**P**	**08 03 41.8**	**-1.5**
WRA	**Warramunga Arr**	**44.05**	**264**	P	**P**	**08 03 41.5**	**-1.8**
	comp=Z,18nm,0.6s,baz=100,slow=8.1,SNR=279						
WRA				PcP	**PcP**	**08 05 22.3**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=105,slow=4.6,SNR=5.2						
WRA				ScP	**ScP**	**08 08 40.2**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=95,slow=4.3,SNR=9.8						
WRA				S	**S**	**08 09 45.2**	**-3.7**
	comp=Z,3.2nm,1.1s,baz=102,slow=14,SNR=4.8						
WRA				PKiKP	**PKiKP**	**08 12 22.3**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=86,slow=0.5,SNR=7.5						
	comp=Z,18nm,0.6s						
KDU	**Kakadu**	**47.72**	**273**	P	**P**	**08 04 10.4**	**-1.2**
FORT	**Forrest**	**48.23**	**248**	P	**P**	**08 04 13.6**	**-1.7**
FORT	**Forrest**	**48.23**	**248**	P	**P**	**08 04 14.6**	**-0.7**
WRKA	**Warakurna**	**48.65**	**256**	P	**P**	**08 04 17.5**	**-1.1**
MTN	**Manton Dam**	**48.91**	**272**	P	**P**	**08 04 18.2**	**-2.4**
MTN				IAmb	IAmb	08 04 19.5	
	comp=Z,22nm,0.6s						
MTN	**Manton Dam**	**48.91**	**272**	P	**P**	**08 04 19.5**	**-1.1**
DRV	**Dumont d'Urvil**	**51.34**	**200**	P	**P**	**08 04 39.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**52.48**	**264**	P	**P**	**08 04 45.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**52.48**	**264**	P	**P**	**08 04 46.4**	**-0.6**
SBA	**Scott Base**	**55.82**	**184**	P	**P**	**08 05 11.8**	**+1.9**
SBA				IAmb	IAmb	08 05 24.4	
	comp=Z,119nm,1.8s						
SBA	**Scott Base**	**55.82**	**184**	P	**P**	**08 05 11.8**	**+1.9**
SBA				pmax	pmax		
	comp=Z,119nm,1.8s						
VNDA	**Vanda**	**55.86**	**185**	P	**P**	**08 05 11.5**	**+1.3**
VNDA	**Vanda**	**55.86**	**185**	P	**P**	**08 05 11.5**	**+1.3**
VNDA				pmax	pmax		
	comp=Z,28nm,1.9s						
VNDA	**Vanda**	**55.86**	**185**	P	**P**	**08 05 12.4**	**+2.2**
	comp=Z,1.9nm,0.7s,baz=18,slow=9.7,SNR=3.2						
	comp=Z,1.9nm,0.7s						
VNDA	**Vanda**	**55.86**	**185**	P	**P**	**08 05 12.1**	**+1.9**
SOEI	**Soe**	**56.28**	**273**	P	**P**	**08 05 13.9**	**-0.4**
SOEI				IAmb	IAmb	08 05 15.7	
	comp=Z,71nm,0.9s						
PSA00	**Pilbara Seismi**	**56.93**	**258**	P	**P**	**08 05 17.4**	**-1.3**
PSA00				IAmb	IAmb	08 07 16.8	
	comp=Z,57nm,1.3s						
PSA00	**Pilbara Seismi**	**56.93**	**258**	P	**P**	**08 05 17.7**	**-0.9**
KLBR	**Kellerberrin**	**56.94**	**246**	P	**P**	**08 05 18.3**	**-0.2**
MEEK	**Meekatharra**	**56.98**	**252**	P	**P**	**08 05 17.9**	**-1.0**
MBWA	**Marble Bar**	**57.13**	**259**	P	**P**	**08 05 18.3**	**-1.7**
MBWA	**Marble Bar**	**57.13**	**259**	P	**P**	**08 05 18.8**	**-1.2**
MBWA	**Marble Bar**	**57.13**	**259**	P	**P**	**08 05 18.5**	**-1.5**
NWAO	**Narrogin (SRO)**	**57.20**	**245**	P	**P**	**08 05 19.6**	**-0.7**
NWAO	**Narrogin (SRO)**	**57.20**	**245**	P	**P**	**08 05 19.8**	**-0.5**
BLDU	**Ballidu**	**57.96**	**247**	P	**P**	**08 05 24.9**	**-0.7**
MUN	**Mundaring**	**58.19**	**245**	P	**P**	**08 05 26.5**	**-0.6**
MORW	**Morawa**	**58.79**	**249**	P	**P**	**08 05 30.0**	**-1.3**
MORW				IAmb	IAmb	08 05 31.2	
	comp=Z,33nm,0.9s						
MORW	**Morawa**	**58.79**	**249**	P	**P**	**08 05 30.6**	**-0.7**
CCD	**Concordia, Ant**	**60.42**	**195**	P	**P**	**08 05 42.5**	**+0.5**
GIRL	**Giralia**	**61.73**	**256**	P	**P**	**08 05 49.4**	**-1.7**
GIRL	**Giralia**	**61.73**	**256**	P	**P**	**08 05 49.7**	**-1.4**
CASY	**Casey**	**62.00**	**206**	P	**P**	**08 05 52.2**	**+0.1**
CASY				IAmb	IAmb	08 05 54.0	
	comp=Z,14nm,0.8s						
CASY	**Casey**	**62.00**	**206**	P	**P**	**08 05 53.2**	**+1.1**
PLAI	**Plampang**	**62.60**	**272**	P	**P**	**08 05 56.2**	**-0.8**
TOLI2	**Tolitoli**	**63.75**	**283**	P	**P**	**08 06 03.3**	**-1.1**
TOLI2				IAmb	IAmb	08 06 05.3	
	comp=Z,17nm,0.9s						
TOLI2	**Tolitoli**	**63.75**	**283**	P	**P**	**08 06 03.1**	**-1.3**
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**08 06 28.4**	**+0.6**
QSPA				IAmb	IAmb	08 06 34.5	
	comp=Z,27nm,1.1s						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**08 06 28.8**	**+1.1**
	comp=Z,13nm,0.8s,baz=27,slow=0.9,SNR=37						
	comp=Z,13nm,0.8s						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**08 06 28.7**	**+1.0**
QSPA				pP	**pwP**	**08 07 48.7**	**+1.7**
UGM	**Wanagama**	**69.63**	**270**	P	**P**	**08 06 40.0**	**-1.4**
JGF	**Kuroka**	**71.45**	**323**	P	**P**	**08 06 50.6**	**-1.1**

	comp=Z,11nm,0.8s								
PMR	**Palmer**	**87.06**	**14**	P	**P**	**08 08 13.4**	**-1.2**
PMR				IAmb	IAmb	08 09 58.8	
	comp=Z,25nm,1.8s						
PMR	**Palmer**	**87.06**	**14**	P	**P**	**08 08 13.4**	**-1.2**
PMR				pmax	pmax		
	comp=Z,25nm,1.8s						
BJI	**Beijing**	**87.13**	**316**	P	**P**	**08 08 16.1**	**+0.6**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GHO	**Glory Hole Cre**	**87.27**	**14**	P	**P**	**08 08 14.8**	**-0.9**
GHO				IAmb	IAmb	08 08 15.7	
	comp=Z,13nm,0.7s						
GYA	**Guiyang**	**87.39**	**300**	*e*P	**P**	**08 08 17.0**	**-0.2**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SCM	**Sheep Creek Mo**	**87.68**	**14**	P	**P**	**08 08 16.2**	**-1.4**
SCM				IAmb	IAmb	08 08 19.9	
	comp=Z,18nm,1.0s						
SCM	**Sheep Creek Mo**	**87.68**	**14**	P	**P**	**08 08 16.2**	**-1.4**
SCM				pmax	pmax		
	comp=Z,18nm,1.0s						
PLCA	**Paso Flores**	**88.09**	**134**	P	**P**	**08 08 21.7**	**+1.3**
	comp=Z,5.4nm,1.0s,baz=346,slow=8.8,SNR=9.3						
	comp=Z,5.4nm,1.0s						
N25K	**Chitina, Valde**	**88.12**	**15**	P	**P**	**08 08 18.7**	**-1.0**
N25K				IAmb	IAmb	08 08 20.0	
	comp=Z,6.3nm,0.8s						
CAST	**Castle Rocks**	**88.13**	**11**	P	**P**	**08 08 17.5**	**-2.2**
CAST				IAmb	IAmb	08 08 18.7	
	comp=Z,6.7nm,0.6s						
SEY	**Seymchan**	**88.28**	**347**	*ce*P	**P**	**08 08 18.5**	**-1.9**
SEY				pmax	pmax		
	comp=Z,21nm,1.3s						
TXAR	**Lajitas Array**	**88.41**	**57**	P	**P**	**08 08 23.4**	**+1.5**
	comp=Z,1.3nm,1.0s,baz=199,slow=6.5,SNR=6.1						
	comp=Z,1.3nm,1.0s						
BARN	**Barnard Glacie**	**88.42**	**17**	P	**P**	**08 08 20.7**	**-0.6**
BARN				IAmb	IAmb	08 08 21.9	
	comp=Z,7.5nm,0.8s						
XAN	**Xi'an**	**89.12**	**308**	⇑P	**P**	**08 08 25.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
ZEA	**Zeya**	**89.26**	**331**	*i* P	**P**	**08 08 24.9**	**-0.2**
XLT	**XiLinHaoTe**	**89.27**	**319**	*e*P	**P**	**08 08 24.9**	**-0.7**
XLT				pP	pP	08 09 43.8	-3.0
XLT				sP	sP	08 10 24.5	+1.6
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,150nm,4.9s						
MLY	**Manley**	**89.85**	**11**	P	**P**	**08 08 25.8**	**-1.9**
MLY				IAmb	IAmb	08 08 49.1	
	comp=Z,24nm,1.9s						
KMI	**Kunming**	**90.00**	**297**	⇑P	**P**	**08 08 30.5**	**+0.9**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DLBC	**Dease Lake**	**90.04**	**23**	P	**P**	**08 08 27.9**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=185,slow=7.2,SNR=4.3						
	comp=Z,2.6nm,0.9s						
MDM	**Murphy Dome**	**90.26**	**12**	P	**P**	**08 08 27.9**	**-1.7**
ILAR	**Eielson Array**	**90.36**	**13**	P	**P**	**08 08 28.6**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=219,slow=5.2,SNR=34						
	comp=Z,2.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**90.51**	**290**	*i* P	**P**	**08 08 33.4**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,17nm,1.0s						
CMAR	**Chiang Mai Arr**	**90.51**	**290**	P	**P**	**08 08 33.0**	**+1.2**
	comp=Z,12nm,0.9s,baz=132,slow=3.2,SNR=64						
	comp=Z,12nm,0.9s						
HHC	**Hu-ho-hao-te**	**90.56**	**314**	⇓*i*P		**08 08 32.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
PDAR	**Pinedale Array**	**90.65**	**43**	P	**P**	**08 08 32.3**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=191,slow=1.5,SNR=6.1						
	comp=Z,1.2nm,0.9s						
PZH	**PanZhiHua**	**91.39**	**298**	P	**P**	**08 08 35.8**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,7.1s						
YAK	**Yakutsk**	**93.88**	**338**	*ce*P	**P**	**08 08 45.5**	**-0.8**
YAK				pmax	pmax		
	comp=Z,15nm,1.0s						
G31M	**Satah River**	**95.07**	**16**	P	**P**	**08 08 50.5**	**-1.0**
INK	**Inuvik**	**96.31**	**15**	P	**P**	**08 08 56.3**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=201,slow=1.8,SNR=5.3						
	comp=Z,1.5nm,0.9s						
ULN	**Ulaanbaatar**	**96.70**	**319**	*i* P	**P**	**08 08 58.5**	**-1.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,2.1s						
YKA	**Yellowknife Ar**	**98.48**	**25**	P	**P**	**08 09 06.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=244,slow=4.1,SNR=2.9						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**112.36**	**313**	PKiKP	**PKiKP**	**08 14 03.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=107,slow=1.5,SNR=17						
KURK	**Kurchatov**	**115.22**	**317**	*i* PKiKP	**PKPdf**	**08 14 07.4**	**-1.1**
KURBB	**Kurchatov Arra**	**115.32**	**317**	PKP	**PKiKP**	**08 14 08.5**	**-0.1**
	comp=Z,2.3nm,1.0s,baz=98,slow=2.1,SNR=8.9						
AAK	**Ala-Archa**	**117.31**	**307**	*i* PKiKP	**PKPdf**	**08 14 11.3**	**-1.6**
BVAR	**Borovoye Array**	**120.43**	**319**	PKP	**PKiKP**	**08 14 18.8**	**+0.3**
	comp=Z,3.6nm,0.3s,baz=99,slow=2.0,SNR=23						
SCHQ	**Schefferville**	**120.45**	**39**	PKP	**PKiKP**	**08 14 20.1**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=282,slow=9.3,SNR=1.6						
BRVK	**Borovoye**	**120.49**	**319**	*i* PKiKP	**PKiKP**	**08 14 18.3**	**-0.3**
SPITS	**Spitsbergen Ar**	**123.87**	**356**	PKP	**PKiKP**	**08 14 25.6**	**+1.0**
	comp=Z,10nm,0.6s,baz=35,slow=3.5,SNR=23						
ARU	**Arti**	**126.69**	**325**	*i* PKiKP	**PKiKP**	**08 14 30.7**	**0.0**
ARU						08 16 32.0	
ARU						08 21 07.5	
ARU	**Arti**	**126.69**	**325**	PKP	**PKiKP**	**08 14 31.3**	**+0.6**
	comp=Z,5.8nm,0.3s,baz=2.1,slow=0.5,SNR=8.4						
AKTO	**Aktyubinsk**	**128.37**	**317**	PKP	**PKiKP**	**08 14 35.5**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=100,slow=3.9,SNR=10						
GEYT	**Alibeck**	**129.60**	**301**	PKP	**PKiKP**	**08 14 38.8**	**+1.6**
	comp=Z,3.1nm,0.7s,baz=95,slow=2.4,SNR=7.8						
KIRV	**Kirov**	**130.56**	**329**	*i* PKiKP	**PKPdf**	**08 14 37.0**	**-0.5**
KIRV	**Kirov**	**130.56**	**329**	SKPab	**SKPab**	**08 17 30.0**	**+1.9**
	comp=Z,6.1nm,0.4s,baz=82,slow=7.3,SNR=3.5						
ARCES	**ARCESS Array B**	**130.86**	**349**	PKP	**PKiKP**	**08 14 38.8**	**0.0**
	comp=Z,4.7nm,0.5s,baz=29,slow=2.1,SNR=25						
ARCES				SKPbc	**SKPab**	**08 17 28.7**	**-0.4**
	comp=Z,7.0nm,1.1s,baz=29,slow=4.1,SNR=4.0						
KLMR	**Klimovskoe**	**133.61**	**335**	*e*PKiKP	**PKiKP**	**08 14 43.6**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,25nm,1.6s						
BELG	**Belogornoye**	**134.03**	**322**	*i* PKiKP	**PKPdf**	**08 14 43.8**	**-0.4**
FINES	**FINESS Array B**	**137.63**	**343**	PKP	**PKiKP**	**08 14 53.6**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=45,slow=4.1,SNR=15						
FINES				SKPbc	**SKPbc**	**08 17 51.0**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=64,slow=3.2,SNR=3.6						
OBN	**Obninsk**	**138.38**	**330**	*e*PKiKP	**PKPdf**	**08 14 51.9**	**-0.3**
OBN				*e*		08 17 46.6	
OBN				*e*PPP	PPP	08 20 50.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZEI	**Tsey**	**139.63**	**310**	*i* PKiKP	**PKiKP**	**08 14 56.5**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GNI	**Garni**	**139.68**	**306**	*i* PKiKP	**PKiKP**	**08 14 55.8**	**-2.0**
NOA	**NORSAR Array B**	**140.96**	**353**	PKhKP	PKPpre	08 14 50.9	
	comp=Z,2.0nm,0.8s,baz=16,slow=4.7,SNR=6.2						
NOA				PKP	**PKiKP**	**08 14 59.6**	**0.0**
	comp=Z,1.5nm,0.5s,baz=16,slow=4.0,SNR=4.9						
HFS	**Hagfors**	**141.49**	**350**	PKhKP	PKPpre	08 14 51.2	
	comp=Z,5.1nm,0.4s,baz=43,slow=3.3,SNR=32						
SUW	**Suwalki**	**144.62**	**338**	*e*PKP	**PKPdf**	**08 15 02.6**	**-0.8**
AKASG	**Malin Array Be**	**144.63**	**329**	PKhKP	PKPpre	08 15 01.2	
	comp=Z,6.1nm,0.4s,baz=41,slow=4.3,SNR=52						
AKASG				PKP	**PKPdf**	**08 15 03.1**	**-0.4**
	comp=Z,6.2nm,0.4s,baz=40,slow=3.8,SNR=16						
AKBB	**Malin Array Si**	**144.63**	**329**	*i* PKHKP	PKPpre	08 15 01.2	
KIEV	**Kiev**	**144.64**	**329**	⇑P	PKPbc	08 15 02.0	-1.2
KIEV	**Kiev**	**144.64**	**329**	⇑PKiKP	PKPbc	08 15 02.0	-1.3
H10N3	**ASCENSION HYDR**	**145.90**	**151**	T	T	11 01 16.0	
	baz=203,slow=75,SNR=18						
H10N1	**ASCENSION HYDR**	**145.91**	**151**	T	T	11 01 14.5	
	baz=203,slow=75,SNR=16						
H10N2	**ASCENSION HYDR**	**145.92**	**151**	T	T	11 01 16.5	
	baz=203,slow=75,SNR=18						
SORM	**Soroca**	**146.76**	**327**	⇓P	**PKPbc**	**08 15 08.3**	**-1.3**
SORM	**Soroca**	**146.76**	**327**	⇓PKiKP	**PKPbc**	**08 15 08.3**	**-1.3**
EKA	**Eskdalemuir Ar**	**147.05**	**5**	PKPbc	**PKPbc**	**08 15 09.1**	**-1.1**
	comp=Z,14nm,0.7s,baz=346,slow=3.0,SNR=20						
GKP	**Gorka Klasztor**	**147.10**	**343**	*e*PKP	**PKiKP**	**08 15 11.7**	**-0.7**
BEL	**Belsk**	**147.24**	**338**	*e*PKP	**PKPab**	**08 15 12.7**	**-0.8**
BR131	**Keskin Array S**	**147.94**	**310**	*i* PKHKP	PKPpre	08 15 07.4	
BRTR	**Keskin Array B**	**147.94**	**310**	PKPbc	**PKPbc**	**08 15 10.9**	**-2.3**
	comp=Z,5.4nm,0.7s,baz=141,slow=4.8,SNR=21						
VASR	**Vaslui**	**148.01**	**325**	⇑P	**PKiKP**	**08 15 13.5**	**-1.0**
KWP	**Kalwaria Pacla**	**148.28**	**334**	*e*PKP	**PKiKP**	**08 15 15.1**	**+0.1**
TLCR		**148.35**	**322**	⇑P	**PKPbc**	**08 15 13.1**	**-0.8**
TLCR		**148.35**	**322**	⇑PKiKP	**PKPbc**	**08 15 13.1**	**-0.8**
MMAI	**Mount Meron Ar**	**148.51**	**297**	PKPbc	**PKiKP**	**08 15 15.0**	**-1.1**
	comp=Z,8.4nm,0.5s,baz=48,slow=2.1,SNR=15						
SCTR	**Scanteiesti**	**148.51**	**323**	⇑P	**PKiKP**	**08 15 14.3**	**-1.3**
GHRR		**148.59**	**325**	⇓P	**PKiKP**	**08 15 15.1**	**-0.6**
BURAR	**Bucovina Array**	**148.66**	**329**	⇓P	**PKiKP**	**08 15 15.2**	**-0.7**
TESR	**Tescani**	**148.70**	**326**	⇑P	**PKPbc**	**08 15 13.4**	**-1.4**
CFR	**Carcaliu**	**148.74**	**323**	⇑P	**PKiKP**	**08 15 16.1**	**+0.1**
CFR	**Carcaliu**	**148.74**	**323**	⇑PKP2	**PKiKP**	**08 15 16.1**	**+0.1**
TPGR	**Topolog**	**148.77**	**322**	⇑P	**PKiKP**	**08 15 14.8**	**-1.4**
OJC	**Ojcow**	**148.93**	**337**	*e*PKP	**PKiKP**	**08 15 16.1**	**-0.1**
KOLS	**Kolonicke sedl**	**149.00**	**333**	*e*PKP2	**PKiKP**	**08 15 17.2**	**+0.7**
KOLS	**Kolonicke sedl**	**149.00**	**333**	*e*PKP	**PKiKP**	**08 15 17.1**	**+0.6**
VRI	**Vrincioaia**	**149.08**	**325**	⇓P	**PKPbc**	**08 15 14.7**	**-1.0**
VRI	**Vrincioaia**	**149.08**	**325**	⇓PKHKP	PKPpre	08 15 14.7	
PLOR	**Plostina**	**149.13**	**325**	⇑P	**PKPbc**	**08 15 15.2**	**-0.6**
PLOR	**Plostina**	**149.13**	**325**	⇑PKHKP	PKPpre	08 15 15.2	
HARR	**Harsova**	**149.15**	**322**	⇑P	**PKiKP**	**08 15 16.2**	**-0.6**
MANR	**Mangalia**	**149.28**	**320**	⇑P	**PKiKP**	**08 15 16.2**	**-0.9**
CRVS	**Cervenica-Dubn**	**149.36**	**334**	*e*PKP2	**PKiKP**	**08 15 17.8**	**+0.6**
CRVS	**Cervenica-Dubn**	**149.36**	**334**	*e*PKP	**PKiKP**	**08 15 17.8**	**+0.6**
NIE	**Niedzica**	**149.40**	**336**	*e*PKP	**PKiKP**	**08 15 18.5**	**+1.2**
BOSR	**Bodos**	**149.50**	**326**	⇓P	**PKiKP**	**08 15 18.1**	**+0.5**
KSP	**Ksiaz**	**149.53**	**342**	*e*PKP	**PKiKP**	**08 15 18.4**	**+0.9**
MLR	**Muntele Rosu**	**149.74**	**325**	⇓P	**PKiKP**	**08 15 18.1**	**-0.2**
MLR	**Muntele Rosu**	**149.74**	**325**	⇓PKP2	**PKiKP**	**08 15 18.1**	**-0.2**
CHVC	**Chvalec**	**149.83**	**342**	⇑*e*PKP	**PKiKP**	**08 15 18.8**	**+0.6**
CHVC	**Chvalec**	**149.83**	**342**	*e*PKP2	**PKiKP**	**08 15 18.8**	**+0.6**
UPC	**Upice**	**149.91**	**342**	⇑*e*PKP	**PKiKP**	**08 15 19.4**	**+1.1**
UPC	**Upice**	**149.91**	**342**	*e*PKP2	**PKiKP**	**08 15 19.4**	**+1.1**
LANS	**Liptovska Anna**	**149.94**	**336**	*e*PKP2	**PKiKP**	**08 15 18.4**	**0.0**
LANS	**Liptovska Anna**	**149.94**	**336**	*e*PKP	**PKiKP**	**08 15 18.4**	**0.0**
DPC	**Dobruska-Polom**	**149.96**	**341**	⇑*e*PKP	**PKiKP**	**08 15 17.3**	**-1.2**
DPC				*e*PKPAB	**PKPbc**	**08 15 19.7**	**+2.0**
DPC	**Dobruska-Polom**	**149.96**	**341**	*e*PKHKP	PKPpre	08 15 17.3	
CLL	**Collm**	**149.96**	**346**	⇓*e*PKHKP	PKPpre	08 15 14.0	
CLL				*i*		08 15 24.3	
CLL				pmax	pmax		
	comp=Z,45nm,0.9s						
CLL				pmax	pmax		
	comp=Z,12nm,0.8s						
CLL	**Collm**	**149.96**	**346**	*e*PKPdf(2)		08 15 14.0	
CLL				*i* PKPbc	**PKPbc**	**08 15 17.0**	**-0.6**
	comp=Z,14nm,1.0s						
CLL				⇓*i*PKPbc(2)		08 15 19.0	
	comp=Z,45nm,0.9s						
CLL				*i* PKPab	**PKPab**	**08 15 24.3**	**-0.3**
	comp=Z,12nm,0.8s						
CBBR	**Cluj-Babes-Bol**	**150.06**	**329**	⇑P	**PKPbc**	**08 15 15.2**	**-2.8**
KRLC	**Kraliky**	**150.06**	**340**	⇑*e*PKP	**PKiKP**	**08 15 17.6**	**-1.1**
KRLC				*ex*	x	08 15 19.5	
KRLC	**Kraliky**	**150.06**	**340**	*e*PKHKP	PKPpre	08 15 17.6	
CJR	**Cluj-Napoca**	**150.08**	**329**	⇓P	**PKiKP**	**08 15 18.8**	**0.0**
CJR	**Cluj-Napoca**	**150.08**	**329**	⇓PKP2	**PKiKP**	**08 15 18.8**	**0.0**
MORC	**Moravsky Berou**	**150.08**	**339**	⇓P	**PKiKP**	**08 15 17.8**	**-1.0**
MORC	**Moravsky Berou**	**150.08**	**339**	*e*PKP	**PKiKP**	**08 15 19.3**	**+0.6**
MORC	**Moravsky Berou**	**150.08**	**339**	⇓PKHKP	PKPpre	08 15 17.8	
BRG	**Berggiesshubel**	**150.14**	**344**	*i* PKP	**PKiKP**	**08 15 17.7**	**-1.1**
BRG				Amp		08 15 18.0	
	comp=Z,6.8nm,0.8s						
BRG	**Berggiesshubel**	**150.14**	**344**	P	**PKiKP**	**08 15 19.7**	**+0.9**
BRG				Amp		08 15 20.3	
	comp=Z,24nm,0.8s						
BRG	**Berggiesshubel**	**150.14**	**344**	*i* PKHKP	PKPpre	08 15 17.6	
BRG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MARR	**Marisel-Cluj**	**150.33**	**329**	⇓P	**PKPbc**	**08 15 17.1**	**-1.7**
MAUC	**Maruska**	**150.34**	**338**	⇓*e*PKP	**PKiKP**	**08 15 18.6**	**-0.7**
MAUC				*ex*	x	08 15 20.8	
LTVH	**Ltavrtes, Hu**	**150.36**	**332**	⇓P	**PKiKP**	**08 15 19.8**	**+0.5**
DRGR		**150.44**	**330**	⇓P	**PKPbc**	**08 15 18.3**	**-0.7**
DRGR		**150.44**	**330**	⇓PKiKP	**PKPbc**	**08 15 18.3**	**-0.7**
ARR	**Arges**	**150.51**	**326**	⇑P	**PKiKP**	**08 15 19.8**	**0.0**
HSKC	**Hora Svate Kat**	**150.51**	**345**	⇑*e*PKP	**PKiKP**	**08 15 18.9**	**-0.7**
HSKC				*ex*	x	08 15 20.6	
VYHS	**Vyhne**	**150.71**	**336**	*e*PKiKP	**PKiKP**	**08 15 20.6**	**+0.6**
VYHS	**Vyhne**	**150.71**	**336**	*e*PKP	**PKiKP**	**08 15 20.6**	**+0.6**
VRAC	**Vranov**	**150.79**	**340**	⇓P	**PKiKP**	**08 15 20.7**	**+0.5**
VRAC	**Vranov**	**150.79**	**340**	*e*PKP	**PKiKP**	**08 15 20.9**	**+0.7**
VRAC	**Vranov**	**150.79**	**340**	⇓PKiKP	**PKiKP**	**08 15 20.7**	**+0.5**
GOPC	**GO Pecny, Ondr**	**150.79**	**343**	⇑*e*PKP	**PKiKP**	**08 15 19.0**	**-1.2**
GOPC	**GO Pecny, Ondr**	**150.79**	**343**	*e*PKiKP	**PKiKP**	**08 15 19.0**	**-1.2**
JAVC	**Velka Javorina**	**150.82**	**338**	*e*PKP	**PKiKP**	**08 15 21.9**	**+1.6**
LOT	**Lotru**	**150.89**	**327**	⇓P	**PKiKP**	**08 15 19.8**	**-0.9**
KRUC	**Moravsky**	**151.07**	**340**	*e*PKP	**PKiKP**	**08 15 21.4**	**+0.7**
SIRR	**Siria**	**151.31**	**330**	⇑P	**PKPbc**	**08 15 20.0**	**-1.0**
MODS	**Modra-Piesok**	**151.37**	**338**	*e*PKiKP	**PKiKP**	**08 15 22.3**	**+0.9**
MODS	**Modra-Piesok**	**151.37**	**338**	*e*PKP	**PKiKP**	**08 15 22.3**	**+0.9**
MODS				*e*		08 15 32.2	
GZR	**Gura Zlata**	**151.43**	**328**	⇓P	**PKiKP**	**08 15 21.8**	**+0.1**
GZR	**Gura Zlata**	**151.43**	**328**	⇓PKiKP	**PKiKP**	**08 15 21.8**	**+0.1**
SRO	**Srobarova**	**151.47**	**336**	*e*PKiKP	**PKiKP**	**08 15 23.2**	**+1.6**
SRO	**Srobarova**	**151.47**	**336**	*e*PKP	**PKiKP**	**08 15 23.2**	**+1.6**
SURR	**Surduc**	**151.48**	**329**	⇓P	**PKPbc**	**08 15 20.2**	**-1.1**
MEM	**Membach**	**151.78**	**354**	*d*PKP	**PKiKP**	**08 15 22.1**	**-0.1**
BTNL	**Ternell**	**151.79**	**354**	*d*PKP	**PKiKP**	**08 15 23.2**	**+1.0**
BZS	**Buzias**	**151.82**	**330**	⇓P	**PKiKP**	**08 15 23.0**	**+0.6**
BZS	**Buzias**	**151.82**	**330**	⇓PKiKP	**PKiKP**	**08 15 23.0**	**+0.6**
PLVB	**Pleven**	**151.83**	**323**	⇑P	**PKiKP**	**08 15 22.7**	**+0.2**
KHC	**Kasperske Hory**	**151.84**	**343**	⇑*e*PKP	**PKiKP**	**08 15 21.6**	**-0.8**
KHC				*ex*	x	08 15 23.6	
KHC	**Kasperske Hory**	**151.84**	**343**	*e*PKiKP	**PKiKP**	**08 15 21.6**	**-0.8**
BSTI	**Sart Tilman**	**151.84**	**355**	*d*PKP	**PKiKP**	**08 15 23.9**	**+1.6**
CKRC	**Cesky Krumlov**	**151.92**	**342**	⇑*e*PKP	**PKiKP**	**08 15 21.9**	**-0.6**
CKRC	**Cesky Krumlov**	**151.92**	**342**	*e*PKiKP	**PKiKP**	**08 15 21.9**	**-0.6**
HERR	**Herculane**	**151.97**	**328**	⇓P	**PKiKP**	**08 15 22.2**	**-0.6**
BCLA	**Clavier**	**152.03**	**355**	*d*PKP	**PKPab**	**08 15 32.0**	**-1.2**
BHOU	**Houvegnez**	**152.03**	**354**	*d*PKP	**PKiKP**	**08 15 24.3**	**+1.6**
GERES	**GERESS Array B**	**152.06**	**343**	PKP	**PKPdf**	**08 15 17.1**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=139,slow=2.1,SNR=3.7						
GERES				PKPbc	**PKiKP**	**08 15 22.1**	**-0.8**
	comp=Z,7.0nm,0.6s,baz=32,slow=3.3,SNR=26						
BGES	**Gesves**	**152.08**	**355**	*d*PKP	**PKiKP**	**08 15 23.4**	**+0.7**
BMRD	**Maredsous**	**152.19**	**356**	*d*PKP	**PKiKP**	**08 15 24.1**	**+1.2**
CONA	**Conrad Observa**	**152.24**	**339**	*i* PKiKP	**PKiKP**	**08 15 24.6**	**+1.3**
	comp=Z,13nm,0.7s,SNR=7.7						
RONA	**Rosalia, Austr**	**152.29**	**338**	*i* PKiKP	**PKiKP**	**08 15 24.5**	**+1.2**
	comp=Z,16nm,0.6s,SNR=11						
RCHB	**Rochefort**	**152.30**	**355**	*d*PKP	**PKiKP**	**08 15 24.5**	**+1.3**
MDVR	**Moldovita**	**152.39**	**328**	⇑P	**PKPbc**	**08 15 21.3**	**-2.2**
DOU	**Dourbes**	**152.40**	**356**	*d*PKP	**PKiKP**	**08 15 24.9**	**+1.4**
MOBH	**Mrgy, Hungar**	**152.66**	**334**	⇓P	**PKPbc**	**08 15 22.9**	**-1.0**
WLF	**Walferdange**	**152.70**	**354**	*d*PKP	**PKiKP**	**08 15 26.0**	**+1.9**
BLKB	**Belogradchik**	**152.72**	**325**	⇑P	**PKiKP**	**08 15 24.5**	**+0.1**
MOA	**Molln**	**152.80**	**341**	*e*PKiKP	**PKiKP**	**08 15 25.3**	**+0.9**
	comp=Z,4.4nm,0.6s						
ARSA	**Arzberg**	**152.94**	**339**	*e*PKiKP	**PKiKP**	**08 15 25.2**	**+0.5**
	comp=Z,9.3nm,1.5s						
FRGS	**Fruska Gora**	**153.00**	**331**	⇓P	**PKiKP**	**08 15 25.4**	**+0.5**
BIOA	**Bad Ischl, Aus**	**153.13**	**342**	*e*PKP	**PKPdf**	**08 15 19.6**	**+2.3**
	comp=Z,1.5nm,0.4s						
BIOA				*e*PKiKP	**PKiKP**	**08 15 26.0**	**+0.9**
	comp=Z,4.3nm,0.6s						
BIOA				*e*PKP	**PKPab**	**08 15 38.8**	**+0.7**
	comp=Z,15nm,1.1s						
BOVS	**Bovan**	**153.22**	**326**	⇓P	**PKiKP**	**08 15 25.2**	**-0.1**
SOKA	**Soboth**	**153.60**	**339**	*e*PKiKP	**PKiKP**	**08 15 26.5**	**+0.4**
	comp=Z,10nm,1.4s						
LESA	**Schwarzleotal**	**153.64**	**343**	*i* PKiKP	**PKiKP**	**08 15 27.2**	**+1.0**
	comp=Z,3.0nm,0.6s						
LESA				*i* PKP	**PKPab**	**08 15 40.4**	**+0.1**
	comp=Z,16nm,1.5s						
KBA	**Koelnbreinsper**	**153.77**	**342**	*e*PKP	**PKPdf**	**08 15 20.3**	**+2.0**
	comp=Z,6.4nm,1.1s						
KBA				*e*PKiKP	**PKiKP**	**08 15 27.4**	**+0.8**
	comp=Z,5.0nm,0.8s						
OBKA	**Obir**	**153.91**	**340**	*e*PKiKP	**PKiKP**	**08 15 26.2**	**-0.6**
	comp=Z,0.9nm,0.5s						
WATA	**Walderalm**	**154.01**	**345**	*e*PKiKP	**PKiKP**	**08 15 28.2**	**+1.2**
	comp=Z,8.9nm,0.8s						
WTTA	**Wattenberg**	**154.06**	**344**	*e*PKP	**PKPdf**	**08 15 20.2**	**+1.4**
	comp=Z,5.3nm,1.0s						
WTTA				*e*PKiKP	**PKiKP**	**08 15 28.3**	**+1.1**
	comp=Z,7.5nm,0.7s						
WTTA				*e*PKP	**PKPab**	**08 15 43.1**	**+0.8**
	comp=Z,20nm,1.2s						
MYKA	**Terra Mystica**	**154.09**	**341**	*e*PKiKP	**PKiKP**	**08 15 27.3**	**+0.1**
	comp=Z,3.8nm,0.5s						
MYKA				*e*PKP	**PKPab**	**08 15 42.3**	**+0.1**
	comp=Z,8.9nm,1.2s						
MOTA	**Moosalm**	**154.11**	**345**	*e*PKiKP	**PKiKP**	**08 15 28.9**	**+1.6**
	comp=Z,7.2nm,0.9s						
SQTA	**Sankt Quirin**	**154.21**	**345**	*e*PKiKP	**PKiKP**	**08 15 28.5**	**+1.1**
	comp=Z,6.1nm,0.7s						
ABTA	**Abfaltersbach**	**154.31**	**343**	*e*PKP	**PKPdf**	**08 15 20.0**	**+1.0**
	comp=Z,6.3nm,0.8s						
ABTA				*e*PKiKP	**PKiKP**	**08 15 28.2**	**+0.6**
	comp=Z,6.6nm,0.6s						
ABTA				*e*PKP	**PKPab**	**08 15 43.5**	**+0.3**
	comp=Z,6.1nm,0.7s						
FETA	**Feichten**	**154.50**	**346**	*e*PKP	**PKPdf**	**08 15 21.0**	**+1.6**
	comp=Z,7.1nm,1.0s						
FETA				*e*PKiKP	**PKiKP**	**08 15 29.6**	**+1.5**
	comp=Z,7.5nm,1.1s						
ESDC	**Sonseca Array**	**162.26**	**14**	PKPab	**PKPab**	**08 16 17.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=333,slow=4.1,SNR=4.6						
DBIC	**Dimbokro**	**163.01**	**157**	PKP	**PKPdf**	**08 15 32.9**	**+2.8**
	comp=Z,6.5nm,0.6s,baz=202,slow=2.6,SNR=7.3						
KEST	**Kesra**	**165.25**	**335**	PKP	**PKPdf**	**08 15 35.3**	**+3.7**
	comp=Z,3.1nm,0.8s,baz=66,slow=17,SNR=1.9

O19K	Port Alsworth	4.67	332	P	Pn	07 59 53.5	-0.7	
	baz=148							
KAIM	Kayak Island	4.75	35	Pn	Pn	07 59 54.0	-1.3	
KAIM	Kayak Island	4.75	35	P	Pn	07 59 53.9	-1.5	
	baz=218							
CHGN	Chignik	4.77	275	Pn	Pn	07 59 55.0	-0.5	
CHGN				IAML		08 00 52.9		
	comp=N,48nm,0.4s							
CHGN				IAML		08 00 55.6		
	comp=E,53nm,0.9s							
EYAK	Cordova Ski Ar	4.90	25		Pn	07 59 55.8	-1.5	
EYAK	Cordova Ski Ar	4.90	25	P	Pn	07 59 56.2	-1.1	
EYAK	Cordova Ski Ar	4.90	25	P	Pn	07 59 55.8	-1.5	
	baz=206							
FID	Port Fidalgo	4.93	20		Pn	07 59 55.8	-1.9	
FID	Port Fidalgo	4.93	20	IAML		08 00 50.5		
	comp=E,29nm,0.7s							
FID				IAML		08 01 06.3		
	comp=N,28nm,1.2s							
RC01	Rabbit Creek A	4.93	1		Pn	07 59 56.6	-1.2	
RC01				IAML		08 00 55.6		
	comp=E,29nm,0.5s							
RC01				IAML		08 00 55.9		
	comp=N,26nm,0.6s							
RC01	Rabbit Creek A	4.93	1	P	Pn	07 59 56.3	-1.5	
	baz=180							
SUCK	Suckling Hills	5.07	37	Pn	Pn	07 59 56.4	-3.4	
SUCK				IAML		08 01 04.7		
	comp=E,46nm,1.6s							
SUCK				IAML		08 01 06.8		
	comp=N,46nm,2.7s							
HMT	Hamilton	5.12	33	Pn	Pn	07 59 57.6	-2.9	
NICHA	Nichawak Mount	5.13	35		Pn	07 59 59.3	-1.3	
GOAT	Goat Mountain	5.18	29		Pn	08 00 00.5	-0.8	
N20K	Mount Spurr	5.19	347	P	Pn	07 59 59.7	-1.7	
	baz=165							
SPCR	Spurr Chakacha	5.19	347		Pn	07 59 59.7	-1.7	
P16K	Nushagak River	5.22	307		Pn	08 00 02.1	+0.4	
P16K	Nushagak River	5.22	307	P	Pn	08 00 02.1	+0.4	
	baz=120							
N19K	Bonanza Creek	5.25	334	Pn	Pn	08 00 01.0	-1.2	
N19K	Bonanza Creek	5.25	334	P	Pn	08 00 01.1	-1.1	
	baz=150							
O17K	Koliganek Bris	5.27	316		Pn	08 00 02.4	-0.1	
O17K	Koliganek Bris	5.27	316	P	Pn	08 00 02.3	-0.1	
	baz=130							
BGLC	Bering Glacier	5.28	39		Pn	08 00 01.4	-1.1	
BGLC	Bering Glacier	5.28	39	P	Pn	08 00 01.4	-1.1	
	baz=222							
KNK	Knik Glacier	5.31	7		Pn	08 00 01.7	-1.3	
SUA	Susitna One	5.33	355	Pn	Pn	08 00 01.5	-1.9	
SUA	Susitna One	5.33	355	P	Pn	08 00 01.6	-1.8	
	baz=174							
BERG	Berg Lake	5.34	35		Pn	08 00 01.5	-1.9	
GRIN	Grindle Hills	5.38	37		Pn	08 00 03.2	-0.8	
STLK	Strandline Lak	5.44	350		Pn	08 00 03.7	-1.1	
PMR	Palmer	5.45	4		Pn	08 00 03.7	-1.2	
PMR	Palmer	5.45	4	P	Pn	08 00 04.1	-0.8	
SNH	Sunshine Point	5.48	40	Pn	Pn	08 00 03.8	-1.6	
N18K	Kilae Creek	5.52	328	Pn	Pn	08 00 05.2	-0.6	
N18K	Kilae Creek	5.52	328	P	Pn	08 00 05.1	-0.8	
	baz=142							
KHIT	Khitrov Hills	5.53	36		Pn	08 00 04.2	-1.8	
BMRM	Bremner River	5.54	28		Pn	08 00 05.0	-1.3	
BMRM	Bremner River	5.54	28	P	Pn	08 00 05.0	-1.3	
	baz=210							
O16K	Kokwok River B	5.57	311		Pn	08 00 06.4	-0.1	
GHO	Glory Hole Cre	5.64	5		Pn	08 00 07.0	-0.6	
WAX	Waxell Ridge	5.66	38	Pn	Pn	08 00 06.6	-1.3	
SML	Sawmill	5.71	7		Pn	08 00 07.9	-0.6	
SML	Sawmill	5.71	7	P	Pn	08 00 07.6	-0.9	
	baz=187							
KLU	Klutina	5.72	19		Pn	08 00 07.8	-0.9	
KLU	Klutina	5.72	19	P	Pn	08 00 07.8	-0.9	
	baz=201							
M23K	Glacier View	5.75	10		Pn	08 00 08.3	-0.7	
M23K	Glacier View	5.75	10	P	Pn	08 00 08.4	-0.7	
	baz=191							
SVW2	Sparrevohn	5.77	331	Pn	Pn	08 00 08.1	-1.1	
SVW2	Sparrevohn	5.77	331	P	Pn	08 00 08.5	-0.8	
CRQM	Cirque	5.80	35		Pn	08 00 08.4	-1.5	
MESA	MESA	5.80	43		Pn	08 00 08.8	-1.2	
MESA	MESA	5.80	43	P	Pn	08 00 08.8	-1.2	
	baz=228							
CRQE	Cirque	5.81	35	P	Pn	08 00 08.4	-1.5	
	baz=219							
N17K	Nushagak Hills	5.82	322	Pn	Pn	08 00 09.2	-0.8	
SCM	Sheep Creek Mo	5.83	12		Pn	08 00 10.1	-0.1	
SKT	Skwentna	5.89	352		Pn	08 00 10.0	-1.0	
TGL	Tana Glacier	5.90	36		Pn	08 00 09.4	-1.7	
ISLE	Juniper Island	5.95	39	Pn	Pn	08 00 11.5	-0.4	
BAGL	Bagley Icefiel	5.96	40		Pn	08 00 10.8	-1.1	
M20K	Styx River	5.97	345	Pn	Pn	08 00 11.1	-1.0	
SDPT	Sand Point	6.04	267		Pn	08 00 12.1	-0.9	
SDPT	Sand Point	6.04	267	P	Pn	08 00 12.2	-0.9	
SDPT	Sand Point	6.04	267	P	Pn	08 00 12.1	-0.9	
	baz=79							
VRDI	Verde Repeater	6.07	31	Pn	Pn	08 00 12.9	-0.8	
N25K	Chitina, Valde	6.10	24		Pn	08 00 13.4	-0.5	
N25K	Chitina, Valde	6.10	24	P	Pn	08 00 13.0	-0.9	
	baz=207							
O15K	Ungalikthiuk R	6.13	304		Pn	08 00 14.3	+0.1	
O15K	Ungalikthiuk R	6.13	304	P	Pn	08 00 14.3	+0.1	
	baz=116							
GLB	Gilahina Butte	6.15	28		Pn	08 00 13.3	-1.3	
M18K	Stony River	6.16	332		Pn	08 00 13.6	-1.1	
M18K	Stony River	6.16	332	P	Pn	08 00 13.6	-1.1	
	baz=147							
KIAG	Kiagna River	6.18	36		Pn	08 00 13.5	-1.6	
SAMH	Samovar Hills	6.24	47		Pn	08 00 14.7	-1.1	
GRNC	Granite Creek	6.25	40		Pn	08 00 14.8	-1.3	
M24K	Tolsona, Glenn	6.25	16		Pn	08 00 15.8	-0.1	
TABL	Table Mountain	6.28	43		Pn	08 00 15.0	-1.5	
MCARA	McCarthy VSAT	6.32	31		Pn	08 00 16.4	-0.5	
MCARA	McCarthy VSAT	6.32	31	P	Pn	08 00 16.3	-0.6	
	baz=216							
PTPK	Patty Peak	6.34	34		Pn	08 00 16.3	-1.0	
N16K	Nishlik Lake	6.37	316		Pn	08 00 17.8	+0.3	
N16K	Nishlik Lake	6.37	316	P	Pn	08 00 17.8	+0.3	
	baz=129							
PCA	Pinnacle	6.43	48		Pn	08 00 16.9	-1.6	
PINM	Pinnacle	6.43	48	P	Pn	08 00 16.9	-1.6	
	baz=235							
WASW	Wrangell South	6.48	25		Pn	08 00 19.1	-0.1	
BARN	Barnard Glacie	6.51	38		Pn	08 00 18.5	-1.1	
L19K	White Mountain	6.55	339		Pn	08 00 18.6	-1.4	
M17K	Holitna River	6.55	326		Pn	08 00 20.0	0.0	
M17K	Holitna River	6.55	326	P	Pn	08 00 19.8	-0.3	
	baz=140							
CTG	Chitna Glacier	6.56	39	P	Pn	08 00 18.8	-1.4	
	baz=225							
CTGM	Chitina Glacie	6.56	39	Pn	Pn	08 00 19.5	-0.7	
LOGN	Logan Glacier	6.58	41		Pn	08 00 19.5	-1.1	
PNL	Peninsula	6.59	54		Pn	08 00 19.0	-1.6	
PNL	Peninsula	6.59	54	P	Pn	08 00 19.0	-1.6	
PNL	Peninsula	6.59	54	P	Pn	08 00 19.0	-1.6	
	baz=241							
BCPM	Bancas Point	6.62	51		Pn	08 00 19.2	-1.8	
HARP	HAARP	6.70	19		Pn	08 00 21.8	-0.2	
HARP	HAARP	6.70	19	P	Pn	08 00 21.8	-0.2	
	baz=202							
N15K	Kwethluk River	6.73	311		Pn	08 00 23.2	+0.7	
N15K	Kwethluk River	6.73	311	P	Pn	08 00 23.1	+0.7	
	baz=122							
M16K	Timber Creek	6.79	319		Pn	08 00 23.5	+0.1	
M16K	Timber Creek	6.79	319	P	Pn	08 00 23.5	+0.1	
	baz=132							
O14K	Tigyukauivet M	6.84	302	Pn	Pn	08 00 24.2	+0.3	
O14K	Tigyukauivet M	6.84	302	P	Pn	08 00 24.3	+0.4	
	baz=112							
PN7A	Pavlof North-7	6.88	269		Pn	08 00 24.1	-0.5	
L18K	Granite Mounta	7.00	333		Pn	08 00 24.9	-1.2	
L18K	Granite Mounta	7.00	333	P	Pn	08 00 24.9	-1.2	
	baz=147							
DHY	Denali Highway	7.04	9		Pn	08 00 26.5	-0.4	
DHY	Denali Highway	7.04	9	P	Pn	08 00 26.8	-0.1	
	baz=190							
O29M	Mount Kennedy	7.26	51		Pn	08 00 28.5	-1.4	
P29M	Windy Craggy	7.33	57		Pn	08 00 28.3	-2.5	
L16K	Owhat River	7.45	322	Pn	Pn	08 00 32.2	0.0	
TTA	Tatalina	7.46	338	P	Pn	08 00 31.8	-0.7	
K17K	Iditarod	7.84	330	Pn	Pn	08 00 36.8	-0.8	
BCAR	Beaver Creek A	8.03	27	Pn	Pn	08 00 40.5	+0.1	
SIT	Sitka	8.08	78	P	Pn	08 00 36.8	-4.1	

M13K	Dall Lake	8.27	306	Pn	Pn	08 00 44.2	+0.7	
L14K	Kuka Creek	8.43	313	Pn	Pn	08 00 46.7	+1.0	
SKAG	Skagway	8.43	61	P	Pn	08 00 43.7	-2.1	
K15K	Wolf Creek Mou	8.56	321	Pn	Pn	08 00 48.5	+1.0	
M29M	Somme Creek	8.57	38		Pn	08 00 47.2	-0.6	
JIS	Juneau Island	8.66	70	P	Pn	08 00 46.2	-2.7	
IL31		8.75	8		Pn	08 00 51.3	+1.2	
ILAR	Eielson Array	8.75	8	Pn	Pn	08 00 49.7	-0.5	
	comp=N,0.2nm,0.3s,baz=190,slow=13,SNR=12							
ILAR				Sn	Sn	08 02 25.6	-3.2	
	comp=N,0.2nm,0.3s,baz=192,slow=17,SNR=5.8							
	comp=N,0.7nm,0.5s							
K27K	Chicken	8.79	23	Pn	Pn	08 00 50.1	-0.5	
COLA	College	8.79	6	P	Pn	08 00 51.2	+0.6	
MDM	Murphy Dome	8.86	5		Pn	08 00 51.9	+0.3	
J26L	Joseph Creek	8.92	18		Pn	08 00 52.1	-0.4	
J16K	Anvik River	8.95	327	Pn	Pn	08 00 51.6	-1.2	
L29M	L29M	9.14	36		Pn	08 00 55.3	-0.2	
P32M	Atlin	9.26	62	Pn	Pn	08 00 54.7	-2.5	
DAWY	Dawson	9.48	29	Pn	Pn	08 00 59.2	-0.9	
J14K	Nanvaranak Lak	9.57	319	Pn	Pn	08 01 02.8	+1.4	
H21K	Melozitna Rive	9.62	353		Pn	08 01 01.9	-0.3	
K29M	Barlow Dome	9.85	34	Pn	Pn	08 01 05.2	-0.2	
IMAR	Indian Mountai	10.02	351	Pn	Pn	08 01 06.8	-0.8	
G23K	Bananza Creek	10.58	360	Pn	Pn	08 01 15.1	-0.1	
R33M	Jennings River	10.59	64	Pn	Pn	08 01 12.8	-2.6	
G24K	Hadweenzic Riv	10.63	5	Pn	Pn	08 01 13.3	+0.4	
FYU	Fort Yukon	10.66	10	Pn	Pn	08 01 16.4	+0.1	
DLBC	Dease Lake	10.97	70	Pn	Pn	08 01 19.5	-1.0	
	comp=N,0.1nm,0.3s,baz=277,slow=7.2,SNR=1.5							
DLBC				Sn	Sn	08 03 25.9	+2.8	
	baz=260,slow=17,SNR=1.5							
BMAR	Burnt Mountain	11.57	10	Pn	Pn	08 01 27.9	-0.7	
E25K	Arctic Village	12.16	8	Pn	Pn	08 01 35.8	-1.0	
BBB	Bella Bella	13.34	98	Pn	Pn	08 01 53.7	+0.9	
	comp=N,0.3nm,0.3s,baz=329,slow=5.9,SNR=1.9							
	comp=N,20nm,1.0s							
C36M	Paulatuk	17.51	31	P	P	08 02 48.3	-0.3	
C36M				IAmb	IAmb	08 02 50.7		
	comp=Z,1.4nm,0.8s							
YKA	Yellowknife Ar	18.88	56	P	Pn	08 03 04.0	-0.3	
	baz=264,slow=9.8,SNR=3.5							
	comp=Z,0.3nm,0.8s							
A36M	Sachs Harbour	18.91	24	P	Pn	08 03 05.0	+0.3	
A36M				IAmb	IAmb	08 03 08.0		
	comp=Z,4.2nm,0.8s							
PDAR	Pinedale Array	28.97	100	P	P	08 04 43.9	+0.5	
	comp=Z,0.1nm,0.4s,baz=297,slow=7.0,SNR=2.2							
	comp=Z,0.1nm,0.4s							
SONM	Songino Array	58.46	310	P	P	08 08 40.7	+1.1	
	comp=Z,0.7nm,0.8s,baz=46,slow=8.6,SNR=5.4							
	comp=Z,0.7nm,0.8s							
ZALV	Zalesovo Beam	61.47	327	P	P	08 09 01.2	+1.2	
	comp=Z,0.4nm,0.3s,baz=20,slow=4.6,SNR=1.2							
	comp=Z,0.4nm,0.3s							
KURBB	Kurchatov Arra	66.26	329	P	P	08 09 32.8	+1.2	
	comp=Z,0.1nm,0.3s,baz=60,slow=5.5,SNR=1.3							
	comp=Z,0.1nm,0.3s							
MKAR	Makanchi Array	68.49	324	P	P	08 09 45.7	-0.1	
	comp=Z,0.2nm,0.5s,baz=45,slow=6.3,SNR=2.3							
	comp=Z,0.2nm,0.5s							
QSPA	South Pole Qui	145.96	180	PKPbc	PKPdf	08 18 20.2	-1.0	
	comp=Z,1.8nm,1.0s,baz=91,slow=2.2,SNR=5.2							

*GCMT **16** 08:01:23.6±0.2,6˚11S±0˚.01×81˚.25W±0˚.01,h21km, MW5.3/121,Moment Tensor Solution. s96,c133; s121,c188; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.71±.02; Mθθ-0.15±.01; Mφφ-0.55±.01; Mrθ0.08±.02; Mθφ0.09±.01; Mφr-0.75±.03; Best double couple: M₀0.98600×10¹⁷ NP1:φs172.00000°,δ70.00000°, λ93.00000°. NP2:φs345.00000°,δ20.00000°,λ83.00000°. Principal axes: T 1.0550, Plg65.0000°, Azm87.0000°; N -0.1380, Plg2.0000°, Azm352.0000°; P -0.9170, Plg25.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **16** 08:01:26.2±0.4,6˚09S×80˚.71W,h10km,mb4.8*

*IGQ **16** 08:01:26±1.3,6˚S±9˚×8˚1W±˚,h30km*

*NEIC **16** 08:01:26.6±2.0,5˚89S±0˚.07×80˚.96W±0˚.09,h25km±6km, mb4.7/54,Error ellipse: s-maj=12.8km s-min=9.3km az=70.0*

*IDC **16** 08:01:28.9±3.0,5˚.96S×81˚.01W,h52km±27km,mb4.0/18, mbtmp4.3/21,ML3.8/3,MS4.5/45,Error ellipse: s-maj=26.8km s-min=13.0km az=66.0*

ISC 16 08:01:25.9±0.4,5˚.89S±0˚.05×81˚.07W±0˚.06,h30km,n233, σt¹s45/188,mb4.6/39,MS4.5/40,2C,Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMCR	Ecuador-Macara	1.87	36	P	Pn	08 01 56.0	0.0
MCRA	Macar, Loja	1.87	36	Pn	Pn	08 01 55.8	-0.1
MCRA	Macar, Loja	1.87	36	eP	Pn	08 01 56.0	0.0
ZUMB	Zumba	2.17	62	P	Pn	08 02 01.0	+0.8
ZUMB				S	Sb	08 02 34.0	+2.8
ARNL	Arenillas	2.53	23	P	Pn	08 02 04.3	-0.7
ARNL	Arenillas	2.53	23	P	Pn	08 02 04.0	-1.0
ATAH	Atahualpa	2.93	115	P	Pn	08 02 13.4	+2.4
	25nm,0.3s,baz=1.5,slow=5.7,SNR=169						
ATAH				S	Sb	08 02 57.8	+4.3
	2µm,0.6s,baz=237,slow=24,SNR=13						
ATAH				LR	LR	08 03 19.2	
	comp=Z,12µm,20.2s,baz=252,slow=39						
	298nm,0.5s						
SALI	Salinas	3.68	1		Pn	08 02 20.0	-0.8
SALI	Salinas	3.68	1	P	Pn	08 02 19.0	-1.8
SALI				S	Sn	08 02 58.0	-5.1
COHC	Cochancay	3.85	28	Pn	Pn	08 02 23.1	0.0
COHC	Cochancay	3.85	28	eP	Pn	08 02 23.7	+0.6
COHC	Cochancay	3.85	28	P	Pn	08 02 23.0	-0.1
MILO	Milagro-Astudi	3.89	23	P	Pn	08 02 24.0	+0.3
AMIL	Milagro (Trans	4.01	22	P	Pn	08 02 25.0	-0.3
PPLP	Puerto Lpez	4.32	4	eP	Pn	08 02 27.8	-1.9
PPLP	Puerto Lpez	4.32	4	P	Pn	08 02 28.0	-1.7
ISPT	Isla de la Pla	4.59	360	P	Pn	08 02 31.0	-2.4
TAMH	Tambohuasha Ch	4.88	28	P	Pn	08 02 37.0	-0.8
CHSH	Refugio Sur-Vo	4.88	27	P	Pn	08 02 37.1	-0.9
CHSH	Refugio Sur-Vo	4.88	27	P	Pn	08 02 37.0	-0.9
PORT	Chimborazo Vol	4.96	28	P	Pn	08 02 39.0	+0.1
TAIS	Taisha	4.98	46	P	Pn	08 02 38.0	-0.8
IGUA	Igualata	5.00	29	P	Pn	08 02 39.0	-0.4
PECV	Mancha de Ca P	5.18	11	P	Pn	08 02 41.0	-0.4
SLOR	San Lorenzo -	5.73	27		Pn	08 02 51.3	+1.9
PULU	Pululahua	6.40	24		Pn	08 02 59.5	+0.8
PAC1	Pacto, Paraso	6.52	20	eP	Pn	08 02 57.9	-2.1
OTAV	Otavalo	6.62	23	Pn	Pn	08 03 01.9	+0.2
OTAV	Otavalo	6.62	23	eP	Pn	08 03 00.4	-1.3
CUSE	Cuicocha Este	6.70	24	eP	Pn	08 03 03.3	+0.5
IMBA	Imbabura, San	6.76	25	Pn	Pn	08 03 05.0	+1.4
BONI	La Bonita	7.22	29	eP	Pn	08 03 13.8	+4.1
TULM	Tulcn-Chalpat	7.33	27		Pn	08 03 12.8	+1.3
NNA	Nana	7.36	146	Pn	Pn	08 03 10.7	-0.8
NNA	Nana	7.36	146	P	Pn	08 03 11.3	-0.2
	4.9nm,0.3s,baz=323,slow=11,SNR=13						
NNA				S	Sb	08 04 47.6	-13
	81nm,0.5s,baz=16,slow=22,SNR=4.7						
NNA				LR	LR	08 05 44.9	
	comp=Z,2µm,20.4s,baz=188,slow=35						
	21nm,0.6s						
NNA	Nana	7.36	146	eP	Pn	08 03 11.9	+0.4
GCUF	Volcan Galeras	7.98	28	eP	Pn	08 03 24.7	+4.3
CZSB	Cruzeiro do Su	8.51	103	Pn	Pn	08 03 26.1	-1.0
CZSB	Cruzeiro do Su	8.51	103	eP	Pn	08 03 25.2	-2.0
CZSB	Cruzeiro do Su	8.51	103	eP	Pn	08 03 26.5	-0.7
FLOC	Florencia	9.18	36	eP	Pn	08 03 37.5	+1.1
POPC	Popayan, Colom	9.45	28	eP	Pn	08 03 46.2	+5.9
GARC	Garzon, Huila	9.76	35	eP	Pn	08 03 48.5	+3.9
PAYG	Puerto Ayora	10.55	299		Pn	08 03 56.5	+1.2
TBTG	Tabatinga, AM	11.24	82	Pn	Pn	08 04 03.2	-1.5
TBTG	Tabatinga, AM	11.24	82	eP	Pn	08 04 03.1	-1.6
TBTG	Tabatinga, AM	11.24	82	eP	Pn	08 04 00.2	-4.6
ANIL	Santa Ana	11.76	29	eP	Pn	08 04 21.0	+9.0
ROSC	El Rosal	12.61	32	LR	LR	08 10 18.9	
	comp=Z,4µm,19.9s,baz=205,slow=42						
CBOC	Ciudad Bolivar	12.72	23	eP	Pn	08 04 18.4	-6.7
URBC	San Jos de Ur	14.63	22	eP	Pn	08 04 46.4	-4.7
ETMB	Extrema	15.22	106	Pn	Pn	08 04 54.7	-4.2
ETMB	Extrema	15.22	106	eP	Pn	08 04 54.7	-4.2
LPAZ	La Paz	16.36	130		Pn	08 05 12.6	-1.5
JTS	Las Juntas de	16.53	346	LR	LR	08 10 23.7	
	comp=Z,861nm,19.2s,baz=164,slow=32						
TEFE	Tefe	16.55	83	eP	Pn	08 05 14.4	-1.6
PB11	IPOC Station P	17.70	142	P	Pn	08 05 28.1	-2.4
GO01	Chusmiza	17.92	141	P	Pn	08 05 33.2	-0.4
GO01				IAmb	IAmb	08 05 43.4	
	comp=Z,64nm,1.3s						
SDV	Santo Domingo	17.99	35	P	Pn	08 05 33.9	-0.3
SDV	Santo Domingo	17.99	35	P	P	08 05 35.3	+0.8
	comp=Z,0.7nm,0.3s,baz=257,slow=9.5,SNR=4.1						
SDV				LR	LR	08 13 34.3	
	comp=Z,3µm,19.1s,baz=224,slow=40						
	comp=Z,4.4nm,0.5s						
SDV	Santo Domingo	17.99	35	eP	P	08 05 35.1	+0.7
SAML	Samuel	18.00	101	P	Pn	08 05 31.9	-2.1
SAML				IAmb	IAmb	08 05 56.7	
	comp=Z,45nm,1.0s						
SAML	Samuel	18.00	101	eP	Pn	08 05 33.2	-0.9
SAML	Samuel	18.00	101	eP	Pn	08 05 32.5	-1.5
TA01	Diego Aracena	18.02	145	P	Pn	08 05 33.0	-1.3
PATCX	Punta Patache	18.24	146	P	Pn	08 05 36.2	-0.8
PATCX				IAmb	IAmb	08 05 39.6	
	comp=Z,63nm,1.3s						
PB08	IPOC Station P	18.30	142	P	P	08 05 36.4	-1.6
PB02	IPOC Station P	18.78	146	P	Pn	08 05 43.1	-0.5
PB01	IPOC Station P	18.79	144	P	P	08 05 43.0	-0.1
PB07	IPOC Station P	19.11	147	P	Pn	08 05 47.6	-0.1
PB07				IAmb	IAmb	08 06 16.7	
	comp=Z,53nm,1.3s						
PB09	IPOC Station P	19.52	145	P	Pn	08 05 52.0	-0.7
PB09				IAmb	IAmb	08 06 18.6	
	comp=Z,101nm,1.5s						
BAUV	El Baul	19.64	42		Pn	08 05 52.8	-1.1
BAUV				IAmb	IAmb	08 06 32.3	
	comp=Z,59nm,1.0s						
LVC	Limon Verde	20.35	146		P	08 06 00.8	+0.3
LVC	Limon Verde	20.35	146	P	P	08 06 01.1	+0.7
	comp=Z,9.2nm,0.8s,baz=311,slow=8.4,SNR=7.9						
LVC				LR	LR	08 13 24.3	
	comp=Z,2µm,20.7s,baz=306,slow=35						
	comp=Z,9.2nm,0.8s						
LVC	Limon Verde	20.35	146	eP	P	08 05 59.3	-1.2
MACA	Manacapuru-AM	20.50	83		P	08 06 00.7	-1.1
AF01	San Pedro de A	21.04	145	P	P	08 06 09.2	+1.4
PB14	IPOC Station P	21.26	152	P	P	08 06 10.1	-0.1
PB14				IAmb	IAmb	08 06 12.0	
	comp=Z,42nm,0.9s						
VILB	Vilhena	21.74	110	P	P	08 06 15.0	-0.2
VILB	Vilhena	21.74	110	eP	P	08 06 14.1	-1.0
SIV	San Ignacio	22.03	119	P	P	08 06 18.1	-0.2
	comp=Z,31nm,1.0s,baz=294,slow=9.0,SNR=68						
SIV				LR	LR	08 14 44.1	
	comp=Z,2µm,20.5s,baz=305,slow=36						
	comp=Z,31nm,1.0s						
GO02	Mina Guanaco	22.10	151	P	P	08 06 20.6	+1.4
BOAV	Boa Vista	22.11	69	P	P	08 06 19.0	-0.2
BOAV	Boa Vista	22.11	69	eP	P	08 06 18.9	-0.2
AC01	Pan de Azucar	22.50	155	P	P	08 06 22.6	-0.5
AC01				IAmb	IAmb	08 06 39.7	
	comp=Z,27nm,0.9s						
PCRV	Puerto La Cruz	22.86	46	LR	LR	08 16 25.7	
	comp=Z,3µm,19.5s,slow=39						
BBSD	Serra de San D	22.95	121	eP	P	08 06 25.4	-2.6
PTLB	Pontes e Lacer	23.53	116	P	P	08 06 33.5	-0.3
PTLB				IAmb	IAmb	08 06 35.9	
	comp=Z,69nm,1.4s						
PTLB	Pontes e Lacer	23.53	116	eP	P	08 06 33.2	-0.6
AC02	Maricunga	23.74	153	P	P	08 06 36.8	+0.5
AC02				IAmb	IAmb	08 06 44.9	
	comp=Z,20nm,0.9s						
GO03	Copiap	23.92	156	P	P	08 06 38.4	+0.9
PDRB	Porto dos Gac	24.71	105	eP	P	08 06 43.5	-1.3
AC05	El Transito	25.01	157	P	P	08 06 48.4	+0.9
AC05				IAmb	IAmb	08 07 05.0	
	comp=Z,43nm,1.2s						
ITTB	Itaituba	25.28	88	eP	P	08 06 49.2	-0.8
CLDB	Colider	25.48	103	eP	P	08 06 52.0	+0.2
NPGB	Novo Progresso	25.57	94	eP	P	08 06 51.7	-1.0
CMIG	Matias Romero	26.60	329	LR	LR	08 15 25.7	
	comp=Z,880nm,20.2s,baz=174,slow=31						
SALV	Santo Antonio	26.80

SDBA SAO DESIDERIO 36.26 103 eP P 08 08 25.3 -1.6
RCLB Rio Claro- Sao 36.30 120 eP P 08 08 26.8 -0.5
PLTB Pedras Altas 36.37 139 eP P 08 08 27.2 -0.4
JANB Januaria 37.22 107 eP P 08 08 34.2 -1.0
PET01 Itanhaem-SP 37.25 123 eP P 08 08 34.2 -1.0
H06E1 SOCORRO T-PHAS 38.30 310 T T 08 49 13.3
SNR=6.9
DIAM Diamantina, MG 38.50 112 eP P 08 08 44.5 -1.5
435B Jarrell 39.74 338 P P 08 08 58.1 +2.1
435B IAmb IAmb 08 09 06.3
comp=Z,9.7nm,1.0s
237A Washetta, Mont 40.21 340 P P 08 09 00.8 +0.9
237A IAmb IAmb 08 09 24.7
comp=Z,13nm,0.7s
FPAL Fort Paine 40.44 354 P P 08 09 01.9 +0.2
TXAR Lajitas Array 41.21 329 P P 08 09 10.1 +1.8
comp=Z,0.1nm,0.5s,baz=150,slow=9.3,SNR=1.4
TXAR LR LR 08 24 41.9
comp=Z,282nm,18.1s,baz=138,slow=34
LPIG La Paz 41.24 317 LR LR 08 22 17.5
comp=Z,273nm,20.7s,baz=136,slow=30
GDU01 Guandu, BA 41.57 104 eP P 08 09 10.2 -1.2
RIB01 Linhares ES 41.75 112 eP P 08 09 11.7 -1.2
PLPT Palo Pinto 41.83 338 P P 08 09 14.6 +1.3
PLPT IAmb IAmb 08 09 38.9
comp=Z,15nm,1.2s
CMC01 Camacan, BA 41.84 106 eP P 08 09 12.9 -0.7
ABTX Abilene, Hawle 42.17 336 P P 08 09 16.8 +0.7
ABTX IAmb IAmb 08 09 25.9
comp=Z,17nm,1.2s
WHAR Wooly Hollow 42.30 346 P P 08 09 19.2 +2.3
LCAR Lake Charles 42.79 348 P P 08 09 21.6 +0.6
LCAR IAmb IAmb 08 09 39.0
comp=Z,8.7nm,0.9s
VHRN Van Horn 43.05 329 P P 08 09 24.3 +0.9
U38A Gravette 43.91 344 P P 08 09 31.6 +1.6
RCBR Riachuelo 44.92 92 LR LR 08 31 34.3
comp=Z,993nm,19.4s,baz=279,slow=40
KSU1 Kansas State U 47.02 343 P P 08 09 55.0 +0.4
KSU1 IAmb IAmb 08 10 04.5
comp=Z,11nm,0.8s
ANMO Albuquerque 47.14 331 LR LR 08 28 28.5
comp=Z,327nm,20.0s,baz=234,slow=34
WUAZ Wupatki 50.08 328 P P 08 10 18.9 +0.4
WUAZ IAmb IAmb 08 10 56.0
comp=Z,8.8nm,1.2s
SADO Sadowa 50.45 2 LR LR 08 31 25.3
comp=Z,336nm,21.6s,baz=212,slow=36
PFO Pinyon Flats O 51.63 322 LR LR 08 29 00.2
comp=Z,360nm,19.3s,baz=134,slow=32
SPR3 Spring Creek 3 54.24 328 P P 08 10 51.9 +2.3
PDAR Pinedale Array 54.90 335 P P 08 10 55.4 +1.2
comp=Z,1.6nm,0.8s,baz=131,slow=11,SNR=5.7
PDAR LR LR 08 34 21.4
comp=Z,546nm,18.0s,baz=137,slow=36
comp=Z,1.6nm,0.8s
REDW Red Top Meadow 55.94 334 P P 08 11 02.9 +1.2
NVAR Mina Array Bea 56.01 325 P P 08 11 04.4 +2.2
comp=Z,1.4nm,0.9s,baz=126,slow=9.1,SNR=6.3
comp=Z,1.4nm,0.9s
ULM Lac du Bonnet 57.36 349 P P 08 11 11.0 -0.3
comp=Z,2.6nm,0.7s,baz=172,slow=7.3,SNR=5.9
comp=Z,2.6nm,0.7s
MFID Camas Ranch 58.28 331 P P 08 11 20.1 +2.1
MFID IAmb IAmb 08 11 38.8
comp=Z,11nm,1.2s
YBH Yreka Blue Hor 60.73 325 LR LR 08 36 58.9
comp=Z,254nm,18.8s,baz=132,slow=35
SCHQ Schefferville 61.65 9 P P 08 11 41.8 +1.0
comp=Z,2.5nm,0.7s,baz=169,slow=10,SNR=3.6
SCHQ LR LR 08 38 45.1
comp=Z,205nm,21.4s,baz=190,slow=36
comp=Z,2.5nm,0.7s
NEW Newport 62.51 334 LR LR 08 38 10.7
comp=Z,156nm,21.9s,baz=133,slow=35
BBTS Babate 67.15 71 LR LR 08 40 15.6
comp=Z,789nm,19.7s,baz=128,slow=35
PPT Papeete 67.77 254 LR LR 08 33 58.5
comp=Z,472nm,18.8s,baz=80,slow=29
FRB Frobisher Bay 70.08 6 LR LR 08 46 42.9
comp=Z,143nm,18.9s,baz=193,slow=39
BBB Bella Bella 70.30 331 LR LR 08 43 59.6
comp=Z,144nm,18.4s,baz=134,slow=36
YKA Yellowknife Ar 72.86 344 P P 08 12 51.0 -0.6
comp=Z,0.4nm,0.7s,baz=142,slow=5.9,SNR=7.7
YKA LR LR 08 46 36.0
comp=Z,179nm,18.4s,baz=67,slow=37
comp=Z,0.4nm,0.7s
DLBC Dease Lake 75.11 336 P P 08 13 05.9 +0.9
comp=Z,1.4nm,0.7s,baz=148,slow=3.7,SNR=4.4
comp=Z,1.4nm,0.7s
SFJD Kangerlussuaq 75.91 12 LR LR 08 49 16.6
comp=Z,121nm,18.2s,baz=184,slow=38
RAR Rarotonga 77.38 250 LR LR 08 38 12.2
comp=Z,308nm,21.8s,baz=122,slow=28
SNAA Sanae 80.75 162 ⇑P P 08 13 35.9 -0.3
SNAA Sanae 80.75 162 P P 08 13 36.1 -0.1
comp=Z,9.2nm,1.2s,baz=336,slow=4.4,SNR=3.8
comp=Z,9.2nm,1.2s
RES Resolute Bay 80.88 356 LR LR 08 49 21.8
comp=Z,368nm,19.9s,baz=178,slow=36
MDT Midelt 81.89 56 LR LR 08 49 44.2
comp=Z,243nm,18.4s,baz=272,slow=35
TROLL Troll, Antarti 82.46 162 ⇑P P 08 13 45.2 -0.1
comp=Z,261nm,0.9s
INK Inuvik 82.48 343 P P 08 13 47.4 +2.2
comp=Z,1.2nm,0.6s,baz=137,slow=1.6,SNR=6.6
INK LR LR 08 53 33.3
comp=Z,268nm,18.6s,baz=155,slow=38
comp=Z,1.2nm,0.6s
A36M Sachs Harbour 82.81 347 P P 08 13 46.5 -0.3
A36M IAmb IAmb 08 13 48.6
comp=Z,8.1nm,0.7s
BORG Borgarnes 82.93 22 P P 08 13 48.3 +0.7
comp=Z,27nm,1.0s,baz=270,slow=11,SNR=1.7
I28M Miner Creek 82.97 339 P P 08 13 48.0 +0.1
I28M IAmb IAmb 08 14 02.9
comp=Z,15nm,1.4s
ESDC Sonseca Array 83.88 49 P P 08 13 53.7 +0.5
comp=Z,2.1nm,1.0s,baz=260,slow=4.0,SNR=7.8
comp=Z,2.1nm,1.0s
QSPA South Pole Qui 84.20 180 P P 08 13 53.9 -0.4
QSPA South Pole Qui 84.20 180 P P 08 13 54.2 -0.2
comp=Z,5.9nm,1.0s,baz=142,slow=3.1,SNR=8.4
comp=Z,5.9nm,1.0s
TORD Torodi Ar. Bea 84.32 76 P P 08 13 55.5 -0.3
comp=Z,0.7nm,0.3s,baz=280,slow=6.4,SNR=3.8
comp=Z,0.7nm,0.3s
ILAR Eielson Array 85.26 337 P P 08 13 59.5 +0.1
comp=Z,0.2nm,0.7s,baz=136,slow=5.8,SNR=5.3
ILAR LR LR 08 52 17.0
comp=Z,207nm,21.5s,baz=106,slow=36
comp=Z,0.2nm,0.7s
EKA Eskdalemuir Ar 87.97 34 P P 08 14 14.7 +1.8
comp=Z,2.6nm,0.8s,baz=270,slow=1.7,SNR=2.1
comp=Z,2.6nm,0.8s
JMIC Jan Mayen 89.92 18 LR LR 08 52 20.9
comp=Z,148nm,21.0s,baz=101,slow=34
RAO Raoul Island 93.10 240 LR LR 08 46 20.2
comp=Z,292nm,21.7s,baz=82,slow=29
KEST Kesra 93.73 55 LR LR 08 59 11.9
comp=Z,261nm,18.1s,baz=200,slow=37
URZ Urewera 95.60 231 LR LR 08 49 47.6
comp=Z,474nm,19.1s,baz=146,slow=30
NB2 NORSAR Subarra 96.22 29 PKP P 08 14 49.5 -1.6
comp=Z,0.4nm,0.4s,baz=16,slow=3.2
NOA NORSAR Array B 96.22 29 LR LR 08 55 30.9
comp=Z,107nm,21.3s,baz=270,slow=34
SUR Sutherland 96.84 123 LR LR 08 58 06.8
comp=Z,385nm,18.0s,baz=264,slow=35
SPITS Spitsbergen Ar 97.25 12 LR LR 09 01 40.9
comp=Z,173nm,18.8s,baz=186,slow=37
HFS Hagfors 97.44 30 LR LR 08 59 52.4
comp=Z,96nm,18.0s,baz=333,slow=36
VAE Valguarnera 97.89 53 LR LR 08 59 28.0
comp=Z,219nm,20.0s,baz=266,slow=36
VRAC Vranov 99.43 41 LR LR 09 01 50.9
comp=Z,183nm,18.1s,baz=326,slow=36
H11N3 WAKE ISLAND Hyl 12.68 289 T T 10 22 10.9
baz=89,slow=75,SNR=32
H11N2 WAKE ISLAND Hyl 12.69 289 T T 10 22 11.9
baz=89,slow=75,SNR=26
H11N1 WAKE ISLAND Hyl 12.69 289 T T 10 22 11.8
baz=89,slow=75,SNR=22
H11S2 WAKE ISLAND Hyl 12.90 288 T T 10 22 29.7
baz=86,slow=71,SNR=189
H11S1 WAKE ISLAND Hyl 12.91 288 T T 10 22 29.2
baz=86,slow=71,SNR=168
H11S3 WAKE ISLAND Hyl 12.92 288 T T 10 22 30.1
baz=86,slow=71,SNR=181
ASAR Alice Springs 134.97 228 PKP PKPdf 08 20 42.5 -0.6
comp=Z,0.7nm,0.8s,baz=148,slow=1.9,SNR=7.5
WRA Warramunga Arr 136.74 233 PKP PKPdf 08 20 45.9 -0.6
comp=Z,1.3nm,0.7s,baz=119,slow=2.0,SNR=10.0
H01W1 Cape Leeuwin H 136.97 198 T T 10 53 29.8
H01W2 Cape Leeuwin H 136.97 198 T T 10 53 29.0
baz=154,slow=76,SNR=22
H01W3 Cape Leeuwin H 136.99 198 T T 10 53 26.9
baz=154,slow=76,SNR=29

IDC 16 08:04:55.5±3.1, 54°23N×86°53E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=25.7km s-min=15.4km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.05	255	I	I	08 10 40.0	
	baz=72,slow=337,SNR=0.9						
ZALV	Zalesovo Beam	1.05	255	Pg	Pg	08 05 14.9	-0.7
	2.1nm,0.3s,baz=72,slow=18,SNR=14						
ZALV				Lg	Lg	08 05 30.3	
	3.2nm,0.3s,baz=77,slow=26,SNR=7.8						
ZALV				Rg	Rg	08 05 39.4	
	3.2nm,0.3s,baz=41,slow=28,SNR=4.6						
KURBB	Kurchatov Arra	6.08	237	Pn	Pn	08 06 28.5	+1.9
	0.1nm,0.3s,baz=50,slow=13,SNR=3.0						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.92	202	Pn	Pn	08 06 52.4	+0.5
	0.1nm,0.3s,baz=24,slow=14,SNR=6.9						
	0.1nm,0.3s						

IDC 16 08:12:11.5±2.2, 54°50N×83°57E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=17.1km s-min=10.2km az=158.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.92	126	I	I	08 17 46.2	
	baz=306,slow=344,SNR=1.6						
ZALV	Zalesovo Beam	0.92	127	Pg	Pg	08 12 28.3	-0.8
	5.7nm,0.3s,baz=307,slow=16,SNR=25						
ZALV				Lg	Lg	08 12 42.3	
	8.3nm,0.3s,baz=307,slow=28,SNR=15						
ZALV				Rg	Rg	08 12 49.0	
	9.8nm,0.3s,baz=310,slow=22,SNR=5.6						
KURBB	Kurchatov Arra	4.95	220	Pn	Pn	08 13 26.9	-0.2
	0.1nm,0.3s,baz=39,slow=13,SNR=3.4						
KURBB				Lg	Lg	08 14 49.9	
	0.1nm,0.3s,baz=344,slow=31,SNR=5.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	7.76	187	Pn	Pn	08 14 05.9	+0.3
	0.2nm,0.3s,baz=14,slow=12,SNR=3.4						
MKAR				Sn	Sn	08 15 34.8	+0.6
	0.2nm,0.3s,baz=28,slow=23,SNR=3.8						
MKAR				Lg	Lg	08 16 15.2	
	0.1nm,0.3s,baz=0.3,slow=27,SNR=3.1						
	0.3nm,0.3s						

BUC 16 08:13:54.3±0.3, 44°40N×28°55E, h5km, ml1.2/4, 5C-4D, Error ellipse: s-maj=2.3km s-min=1.0km az=102.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIRR	Tirgusor	0.11	301	⇑P	Pg	08 13 56.4	-0.2
TIRR				⇑S	Sg	08 13 58.5	+0.3
MFTR	Murfatlar	0.24	202	⇓S	Sg	08 14 02.7	+0.6
TPGR	Topolog	0.47	349	⇓P	Pg	08 14 03.4	+0.1
TPGR				⇑S	Sg	08 14 10.1	+0.7
HARR	Harsova	0.53	304	⇓P	Pg	08 14 04.2	-0.3
TLCR		0.81	14	⇑S	Sg	08 14 21.1	+0.7
CFR	Carcaliu	0.83	340	⇓P	Pg	08 14 10.3	+0.1
CFR				⇑S	Sg	08 14 21.8	+0.7

NNC 16 08:16:45.1±2.6, 43°61N×84°49E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=21.4km s-min=11.2km az=133.0
SOME 16 08:16:50.7, 43°58N×84°08E, h0km
ISC 16 08:16:49.2±3.0, 43°3N±0°1×85°6E±0°1, h10km, n34, σ3§76/27, 8C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	4.21	353	Pg	Pn	08 17 55.1	+1.7
	3.6nm,0.2s						
ZSN				Lg	Lg	08 18 41.7	
	9.0nm,0.6s						
ZSN	Zaisan	4.21	353	eP	Pb	08 18 03.0	-0.3
	4.5nm,0.4s						
ZSN				eS	Sb	08 18 54.9	+0.6
	11nm,0.5s						
MK31	Makanchi Array	4.24	327	⇑Pg	Pn	08 17 48.2	-5.7
	0.5nm,0.2s,baz=149,slow=16,SNR=21						
MK31				⇑Lg	Lg	08 18 37.0	
	5.0nm,0.3s,baz=147,slow=28,SNR=11						
DJR	Jarkent	4.36	286	Pg	Pn	08 17 50.0	-5.6
	6.1nm,0.3s						
DJR				Lg	Lg	08 18 33.1	
	25nm,0.3s						
DJR	Jarkent	4.36	286	eP	Pn	08 17 50.0	-5.6
	6.1nm,0.3s						
DJR				eS	Sn	08 18 33.1	-13
	25nm,0.3s						
MAKZ	Makanchi	4.38	325	⇑Pg	Pn	08 17 54.8	-1.0
	2.1nm,0.5s						
MAKZ				⇑Lg	Lg	08 18 41.4	
	5.9nm,0.3s						
PDGK	Podgornoye	4.49	273	Pg	Pn	08 17 52.4	-4.9
	2.7nm,0.3s						
PDGK				Lg	Lg	08 18 37.5	
	7.5nm,0.4s						
PDGK	Podgornoye	4.49	273	⇑Pg	Pn	08 17 49.3	-8.1
	3.0nm,0.3s						
PDGK				⇑Lg	Lg	08 18 40.1	
	10nm,0.5s						
SHLS	Shalkode	4.51	271	Pg	Pn	08 17 48.1	-10
	22nm,0.2s						
SHLS				Lg	Lg	08 18 30.0	
	32nm,0.3s						
SHLS	Shalkode	4.51	271	eP	Pn	08 17 48.1	-10
	22nm,0.2s						
SHLS				eS	Sn	08 18 30.0	-20
	32nm,0.3s						
KNOS	Konyrlen	4.80	285	Pg	Pn	08 17 57.4	-4.3
	13nm,0.2s						
KNOS				Lg	Lg	08 18 45.9	
	9.6nm,0.4s						
UZB	Uzynbulak	4.84	271	Pg	Pn	08 18 00.0	-2.1
	8.8nm,0.3s						
UZB				Lg	Lg	08 18 49.9	
	9.5nm,0.4s						
UZB	Uzynbulak	4.84	271	eP	Pn	08 18 00.0	-2.1
	8.8nm,0.3s						
UZB				eS	Sn	08 18 49.9	-8.4
	9.5nm,0.4s						
KAPS	Kapalarasan	4.94	296	Pg	Pn	08 18 02.5	-0.9
	4.4nm,0.2s						
KAPS				Lg	Lg	08 18 54.9	
	27nm,0.4s						
KAPS	Kapalarasan	4.94	296	eP	Pn	08 18 02.5	-0.9
	4.4nm,0.2s						
KAPS				eS	Sn	08 18 54.0	-6.6
	27nm,0.4s						
KPKS	Kokpek	5.07	275	Pg	Pn	08 18 03.8	-1.6
	7.1nm,0.2s						
KPKS				Lg	Lg	08 18 56.2	
	21nm,0.5s						
KPKS	Kokpek	5.07	275	eP	Pn	08 18 03.8	-1.6
	7.1nm,0.2s						
KPKS				eS	Sn	08 18 56.2	-7.8
	21nm,0.5s						
ZHN	Zhinishke	5.26	271	Pg	Pn	08 18 07.3	-0.7
	3.8nm,0.3s						
ZHN				Lg	Lg	08 19 02.5	
	14nm,0.3s						
ZHN	Zhinishke	5.26	271	eP	Pn	08 18 07.3	-0.7
	3.8nm,0.3s						
ZHN				eS	Sn	08 19 02.5	-6.3
	14nm,0.3s						
KURS	Kuram	5.45	275	Pg	Pn	08 18 11.6	+1.2
	3.8nm,0.5s						
KURS				Lg	Lg	08 19 11.6	
	5.7nm,0.6s						
KURS	Kuram	5.45	275	eP	Pn	08 18 11.6	+1.2
	3.8nm,0.5s						
KURS				eS	Sn	08 19 09.5	-3.7
	7.0nm,0.4s						
TDK	Taldyqorghan	5.48	291	Pg	Pn	08 18 14.7	+3.7
	39nm,0.2s						
TDK				Lg	Lg	08 19 16.5	
	96nm,0.5s						
TDK	Taldyqorghan	5.48	291	eP	Pn	08 18 11.6	+0.7
	10nm,0.1s						
TDK				eS	Sn	08 19 10.0	-4.0
	33nm,0.2s						
MDOK	Medeo	6.28	272	Pg	Pn	08 18 22.2	+0.2
	3.2nm,0.6s						
MDOK				Pg	Pb	08 18 25.9	-13
	2.2nm,0.5s						
MDOK				Lg	Lg	08 19 34.1	
	5.2nm,0.8s						
MDOK				⇓Lg	Lg	08 19 35.8	
	10nm,0.8s						
MDOK	Medeo	6.28	272	eP	Pn	08 18 25.9	+3.9
	2.2nm,0.5s						
MDOK				eS	Sn	08 19 34.1	+0.3
	5.2nm,0.8s						
KTBS	Karatobe	6.53	277	Pg	Pn	08 18 31.3	+6.0
	3.5nm,0.5s						
KTBS				Lg	Lg	08 19 43.2	
	13nm,0.6s						
KTBS	Karatobe	6.53	277	eP	Pn	08 18 31.3	+6.0
	3.5nm,0.5s						
KTBS				eS	Sn	08 19 43.2	+3.4
	13nm,0.6s						
KUU	Kurty	6.78	278	Pg	Pn	08 18 36.0	+7.3
	2.0nm,0.1s						
KUU				Lg	Lg	08 19 51.4	
	6.1nm,0.6s						
KUU	Kurty	6.78	278	eP	Pn	08 18 36.0	+7.3
	2.0nm,0.1s						
KUU				eS	Sn	08 19 51.4	+5.4
	6.1nm,0.6s						
KRBS	Karabastau	7.26	277	Pg	Pn	08 18 44.9	+10
	1.7nm,0.5s						
KRBS				Lg	Lg	08 20 06.6	
	1.9nm,0.5s						
KRBS	Karabastau	7.26	277	eP	Pn	08 18 44.9	+10
	1.7nm,0.5s						
KRBS				eS	Sb	08 20 06.6	-15
	1.9nm,0.5s						
KURBB	Kurchatov Arra	8.81	329	⇓Lg	Lg	08 21 03.2	
	11nm,0.6s						
KURK	Kurchatov	8.85	330	⇑Lg	Lg	08 21 03.6	
	9.3nm,0.8s						
OTUK	Ortayu	10.53	303	⇑Lg	Lg	08 21 55.2	
	5.2nm,0.9s						

IDC 16 08:28:14.8±3.1, 53°84N×90°89E, h0km, mbtmp3.4/3, ML2.9/3, Error ellipse: s-maj=26.4km s-min=21.8km az=53.0.
NNC 16 08:28:20.7±3.9, 53°53N×90°45E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=28.8km s-min=21.8km az=55.0, Suspected Mining explosion.
ISC 16 08:28:17.7±4.0, 53°8N±0°1×90°5E±0°2, h0km, n9, σ1§09/13, 9C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.38	274	I	I	08 49 50.0	
	0.3nm,1.0s,baz=90,slow=331,SNR=4.7						
ZAA0	Zalesovo Array	3.38	274	⇑Pg	Pg	08 29 22.7	+0.3
	2.4nm,0.7s						
ZAA0				⇑Lg	Lg	08 30 09.7	
	18nm,0.8s						
ZALV	Zalesovo Beam	3.38	274	Pn	Pn	08 29 10.5	-1.2
	1.3nm,0.3s,baz=92,slow=14,SNR=6.3						
ZALV				Pg	Pb	08 29 18.9	+0.5
	1.5nm,0.3s,baz=96,slow=15,SNR=13						
ZALV				Lg	Lg	08 30 09.1	
	3.4nm,0.3s,baz=93,slow=25,SNR=13						
	2.2nm,0.3s						
KURK	Kurchatov	7.94	252	⇑Pn	Pn	08 30 15.9	+1.6
	2.8nm,0.7s						
KURK				⇑Sn	Sn	08 31 43.6	-1.1
	9.9nm,0.7s						
KURK				⇑Lg	Lg	08 32 32.3	
	36nm,0.8s						
KURBB	Kurchatov Arra	8.03	251	⇑Pn	Pn	08 30 16.2	+0.7
	1.8nm,0.3s						
KURBB				⇓Sn	Sn	08 31 45.8	-1.2
	23nm,0.7s						
KURBB				⇑Lg	Lg	08 32 34.5	
	69nm,0.8s						
KURBB	Kurchatov Arra	8.03	251	Pn	Pn	08 30 16.1	+0.5
	0.2nm,0.3s,baz=65,slow=14,SNR=15						
KURBB				Sn	Sn	08 31 46.3	-0.7
	0.1nm,0.3s,baz=68,slow=26,SNR=7.0						
KURBB				Lg	Lg	08 32 36.7	
	0.1nm,0.3s,baz=59,slow=29,SNR=4.8						
	1.3nm,0.3s						
MK31	Makanchi Array	8.79	220	Pn	Pn	08 30 25.2	-0.8
	2.1nm,0.7s,baz=36,slow=12,SNR=18						
MK31				⇑Sn	Sn	08 32 05.2	-0.6
	5.8nm,0.8s						
MK31				⇑Lg	Lg	08 32 57.1	
	17nm,0.9s,baz=53,slow=32,SNR=5.1						
MKAR	Makanchi Array	8.79	220	Pn	Pn	08 30 25.2	-0.8
	0.3nm,0.3s,baz=36,slow=13,SNR=18						
MKAR				Sn	Sn	08 32 07.1	+1.3
	0.2nm,0.3s,baz=40,slow=30,SNR=5.5						
MKAR				Lg	Lg	08 32 56.5	
	0.2nm,0.3s,baz=39,slow=29,SNR=6.0						
	1.0nm,0.6s						
SONM	Songino Array	11.68	114	Lg	Lg	08 34 10.2	
	0.1nm,0.3s,baz=290,slow=27,SNR=8.0						

BJI 16 08:40:17.7±0.0, 4°40S×129°73E, h48km, mb5.1/76, mB5.3/35, Ms4.5/21, Ms7 4.3/21
GCMT 16 08:40:17.5±0.2, 4°13S±0°01×129°45E±0°02, h14km, MW5.0/108, Moment Tensor Solution. s68,c86; s108,c176; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.64±.16; Mθθ-3.90±.10; Mφφ0.26±.10; Mrθ0.79±.18; Mθφ1.03±.07; Mφr0.12±.27; Best double couple: M₀3.97400×10¹⁶ NP1:φ₁98.00000°, δ51.00000°, λ83.00000°. NP2:φ₂289.00000°, δ40.00000°, λ98.00000°. Principal axes: T 3.7370, Plg83.0000°, Azm329.0000°; N 0.4780, Plg5.0000°, Azm102.0000°; P -4.2120, Plg5.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 16 08:40:17.5±1.8, 4°09S±0°06×129°45E±0°06, h10km±1km, mb5.3/99, Mww5.0/16 Error ellipse: s-maj=10.8km s-min=10.1km az=244.0
MOS 16 08:40:18.4±0.8, 4°08S×129°44E, h33km, mb5.5/42, Error ellipse: s-maj=9.6km s-min=4.9km az=116.9
IDC 16 08:40:19.6±2.4, 4°15S×129°45E, h28km±15km, mb5.0/35, mbtmp5.1/37, ML2.8/1, MS4.1/35, Error ellipse: s-maj=17.1km s-min=9.0km az=73.0
NEIC 16 08:40:21.4, 4°10S×129°54E, h18km
NEIC 16 08:40:21.4, 4°10S×129°64E, h18km, Moment Tensor Solution. Duration: 1§5 Moment tensor: Scale 10¹⁶Nm; Mrr3.06; Mθθ-3.23; Mφφ0.16; Mrθ0.38; Mθφ1.07; Mφr1.01; Fault plane solution: M₀3.50000×10¹⁶ NP1:φ₁87.31000°, δ49.07000°, λ63.26000°. NP2:φ₂304.87000°, δ47.57000°, λ117.43000°. Principal axes: T 3.4563, Plg70.0000°, Azm288.0000°; N 0.0821, Plg20.0000°, Azm106.0000°; P -3.5385, Plg1.0000°, Azm196.0000°;
DJA 16 08:40:21.8±0.2, 4°S±2°×13°0E±°, h44km±3km, M5.0/50, mb5.3/50, mB5.5/25, MLv5.3/15, Mw(mB)5.0/25, MwMwp4.7/6, Mwp5.0/6
ISC 16 08:40:22.1±0.4, 4°14S±0°03×129°48E±0°05, h51km±3km, h51km:pP-P, n743, σ1§04/801, mb5.2/134, MS4.2/41, 33C-5D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.57	132	P	Pn	08 40 30.2	-4.0
NLAI	Namlea	2.54	291	P	Pn	08 41 00.1	-0.7
FAKI	Fak Fak	3.02	66	Pn	Pn	08 41 06.5	-0.9
FAKI	Fak Fak	3.02	66	P	Pn	08 41 06.7	-0.7
FAKI	Fak Fak	3.02	66	P	Pn	08 41 06.5	-0.9

SWI	Sorong	3.71	29	P		Pn	08 41 14.8	-2.1
LBMI	Labuha	4.00	330	P		Pn	08 41 19.5	-1.4
LBMI				S		Sn	08 42 05.0	-1.6
SANI	Sanana	4.06	301	P		Pn	08 41 19.6	-2.1
SANI	Sanana	4.06	301	P		Pn	08 41 19.2	-2.5
SAUI	Saumlaki	4.22	155	Pn		Pn	08 41 24.9	+0.9
SAUI	Saumlaki	4.22	155	P		Pn	08 41 27.0	+3.0
SAUI	Saumlaki	4.22	155	P		Pn	08 41 25.3	+1.3
KMPI	Kaimana, Papua	4.24	84	P		Pn	08 41 22.8	-1.4
TNTI	Ternate	5.32	337	Pn		Pn	08 41 37.0	-1.9
TNTI	Ternate	5.32	337	P		Pn	08 41 38.0	-1.0
TNTI	Ternate	5.32	337	P		Pn	08 41 37.9	-1.0
	154nm,0.8s,2μm0.8nm							
BBSI	Bau Bau	7.01	259	P		Pn	08 42 03.1	+0.8
	192nm,1.2s,2μm0.7nm							
KMSI	Cibinong	7.22	310	P		Pn	08 42 04.6	-0.5
	931nm,0.8s,4.6nm							
LUWI	Luwuk	7.37	294	Pn		Pn	08 42 05.8	-1.4
LUWI	Luwuk	7.37	294	P		Pn	08 42 07.2	0.0
LUWI	Luwuk	7.37	294	P		Pn	08 42 07.0	-0.2
	340nm,0.7s,4μm1.4nm							
SOEI	Soe	7.61	223	Pn		Pn	08 42 09.7	-0.8
SOEI	Soe	7.61	223	P		Pn	08 42 11.5	+1.0
SOEI	Soe	7.61	223	P		Pn	08 42 12.6	+2.1
	130nm,0.8s,2μm4μm1.0nm							
MTN	Manton Dam	8.80	169	P		Pn	08 42 27.0	+0.2
	baz=8.9,SNR=42							
MTN	Manton Dam	8.80	169	Pn		Pn	08 42 26.5	-0.3
MTN	Manton Dam	8.80	169	P		Pn	08 42 27.8	+1.0
MRSI	Marisa	8.82	301	P		Pn	08 42 26.9	-0.1
	188nm,0.8s,2μm							
KDU	Kakadu	8.99	161	P		Pn	08 42 27.4	-2.0
	baz=9.0,SNR=40							
BKSI	Bulukumba	9.40	262	P		Pn	08 42 35.7	+0.7
	139nm,0.7s,2μm							
TTSI	Tana Toraja	9.70	276	P		Pn	08 42 39.5	+0.4
	67nm,0.8s,851nm							
KAPI	Kappang	9.74	265	Pn		Pn	08 42 39.5	-0.1
KAPI	Kappang	9.74	265	P		Pn	08 42 39.5	-0.1
TOLI2	Tolitoli	10.14	301	Pn		Pn	08 42 44.3	-0.8
TOLI2	Tolitoli	10.14	301	P		Pn	08 42 44.4	-0.7
MPSI	Mapaga	10.56	295	P		Pn	08 42 51.7	+0.9
	61nm,0.7s,930nm							
KNRA	Kununurra	11.49	183	Pn		Pn	08 43 03.5	0.0
TABU	Tabubil	11.76	96	P		Pn	08 43 09.2	+1.9
DAV	Davao City (W)	11.80	341	LR		LR	08 48 57.2	
	comp=Z,142nm,18.8s,baz=184,slow=44							
PLAI	Plampang	12.52	248	P		Pn	08 43 18.8	+1.1
PLAI	Plampang	12.52	248	P		Pn	08 43 18.9	+1.2
	223nm,0.9s,2μm							
TWSI	Taliwang, Sumb	13.32	249	P		Pn	08 43 29.7	+1.1
	145nm,0.7s,2μm							
FITZ	Fitzroy Crossi	14.37	195	P		Pn	08 43 41.3	-1.5
	baz=14,SNR=22							
FITZ	Fitzroy Crossi	14.37	195			Pn	08 43 41.5	-1.2
SRBI	Singaraja	14.71	254	P		P	08 43 53.9	+1.6
MTKI	Muara Teweh, K	14.91	282	P		P	08 43 56.0	+1.5
JAGI	Jajag, Banyuwa	15.83	253			Pn	08 44 02.7	+1.0
JAGI				IAmb		IAmb	08 44 04.9	
	comp=Z,138nm,1.1s							
JAGI	Jajag, Banyuwa	15.83	253	P		P	08 44 03.5	-1.2
JAGI	Jajag, Banyuwa	15.83	253	P		P	08 44 03.6	-1.2
	comp=Z,119nm,1.5s,comp=Z,2μm							
BLJI	Banyuglugur	16.20	256	P		P	08 44 08.7	-0.1
	comp=Z,240nm,0.6s,comp=Z,4μm							
WB0	Warramunga Arr	16.25	163			Pn	08 44 03.7	-3.5
WRA	Warramunga Arr	16.41	164	P		Pn	08 44 05.6	-3.4
WRA	Warramunga Arr	16.41	164	P		Pn	08 44 05.6	-3.4
WRA				pmax		pmax		
	comp=Z,1.0nm,1.1s							
WRA	Warramunga Arr	16.41	164	Pn		Pn	08 44 03.6	-5.4
	comp=Z,1.8nm,0.3s,baz=344,slow=13,SNR=57							
WRA				Sn		Sn	08 47 09.8	-0.5
	comp=Z,0.9nm,0.3s,baz=212,slow=8.8,SNR=2.4							
WRA				LR		LR	08 51 16.5	
	comp=Z,1μm,21.5s,baz=3.5,slow=40							
COEN	Coen	16.66	127	P		Pn	08 44 09.6	-2.7
	baz=17,SNR=10							
COEN	Coen	16.66	127	P		Pn	08 44 08.6	-3.7
COEN	Coen	16.66	127	P		Pn	08 44 12.6	+0.3
KKM	Kota Kinabalu	16.67	307	P		Pn	08 44 12.0	-0.4
KKM	Kota Kinabalu	16.67	307	P		Pn	08 44 12.2	-0.2
PWJI	Pagerwojo	17.99	257	P		Pn	08 44 29.3	+0.6
	comp=Z,161nm,0.8s,comp=Z,2μm							
NGJI	Ngawi	18.21	259	P		Pn	08 44 34.1	+2.7
	comp=Z,147nm,1.2s							
PMG	Port Moresby	18.31	108	P		Pn	08 44 33.3	+0.7
PMG	Port Moresby	18.31	108	P		Pn	08 44 34.0	+1.4
PMG	Port Moresby	18.31	108	P		Pn	08 44 34.1	+1.4
PMG	Port Moresby	18.31	108	Pn		P	08 44 32.7	+0.5
	comp=Z,0.9nm,0.3s,baz=291,slow=13,SNR=7.1							
PMG				LR		LR	08 53 34.6	
	comp=Z,588nm,18.1s,baz=285,slow=43							
	comp=Z,24nm,1.0s							
SBUM	Sibu	18.45	290	P		Pn	08 44 33.6	-0.6
STKI	Sintang	18.47	283	P		Pn	08 44 34.4	-0.1
	comp=Z,110nm,1.0s							
QIS	Mount Isa	19.07	150	P		P	08 44 40.4	-0.1
	baz=19,SNR=28							
QIS	Mount Isa	19.07	150	P		P	08 44 40.6	+0.2
UGM	Wanagama	19.22	258	P		Pn	08 44 43.1	-0.4
	comp=Z,167nm,1.7s							
MBWA	Marble Bar	19.39	208	P		P	08 44 44.1	+0.1
MBWA	Marble Bar	19.39	208	P		P	08 44 45.0	+1.0
MBWA	Marble Bar	19.39	208	P		P	08 44 44.7	+0.7
PSA00	Pilbara Seismi	19.69	208	P		P	08 44 47.7	+0.4
PSA00				IAmb		IAmb	08 44 58.1	
	comp=Z,99nm,0.8s							
PSA00	Pilbara Seismi	19.69	208	P		P	08 44 48.4	+1.1
AS31	Alice Springs	19.88	168	P		P	08 44 49.2	-0.1
ASAR	Alice Springs	19.88	168	P		P	08 44 49.1	-0.2
ASAR	Alice Springs	19.88	168	P		P	08 44 49.7	+0.4
	comp=Z,46nm,0.8s,baz=347,slow=10,SNR=202							
ASAR				S		S	08 48 31.7	+1.2
	comp=Z,11nm,0.9s,baz=349,slow=20,SNR=4.8							
ASAR				PcP		PcP	08 49 05.6	+0.4
	comp=Z,3.8nm,0.4s,baz=5.5,slow=1.4,SNR=9.2							
ASAR				ScP		ScP	08 52 39.2	+1.8
	comp=Z,2.6nm,1.0s,baz=8.9,slow=2.1,SNR=5.0							
ASAR				LR		LR	08 53 10.0	
	comp=Z,1μm,18.6s,baz=348,slow=39							
ASAR				PKiKP		PKiKP	08 56 53.8	-0.8
	comp=Z,0.7nm,0.7s,baz=24,slow=0.7,SNR=6.9							
AS01	Alice Springs	19.89	168	P		P	08 44 50.0	+0.6
KSM	Kuching	19.95	286	P		P	08 44 50.1	-0.1
TGY	Tagaytay City	20.01	335	P		Pn	08 44 52.9	0.0
	comp=Z,170nm,0.3s,baz=183,slow=15,SNR=3.6							
TGY				LR		LR	08 53 30.8	
	comp=Z,256nm,21.8s,baz=110,slow=40							
MTSU	Mount Surprise	20.11	135	P		P	08 44 52.4	+0.5
	baz=20,SNR=81							
MTSU	Mount Surprise	20.11	135	P		P	08 44 52.3	+0.5
KPJI	Karang Pucung	20.69	260	P		P	08 44 58.3	+0.2
	comp=Z,76nm,0.7s							
WRKA	Warakurna	20.81	183	P		P	08 45 00.3	+0.9
	baz=21,SNR=64							
WRKA	Warakurna	20.81	183	P		P	08 45 00.3	+0.9
LEM	Lembang	21.92	262	P		P	08 45 11.8	+0.2
	comp=Z,18nm,0.5s,baz=167,slow=23,SNR=2.3							
LEM				LR		LR	08 54 04.0	
	comp=Z,640nm,20.1s,baz=85,slow=38							
	comp=Z,18nm,0.5s							
BBJI	Bungbulang	21.96	260	P		P	08 45 10.4	-1.5
TV1H	Townsville Har	22.62	133	P		P	08 45 19.7	+0.9
RABL	Rabaul	22.62	91	P		P	08 45 21.3	+2.3
CTA	Charters Tower	22.77	136	P		P	08 45 20.6	+0.2
CTA	Charters Tower	22.77	136	P		P	08 45 20.3	-0.2
	comp=Z,43nm,0.8s,baz=319,slow=10,SNR=36							
CTA				LR		LR	08 55 32.0	
	comp=Z,472nm,18.4s,baz=320,slow=40							
	comp=Z,43nm,0.8s							
CTAO	Charters Tower	22.77	136	P		P	08 45 20.2	-0.2
CTAO				IAmb		IAmb	08 45 43.0	
	comp=Z,100nm,1.1s							
CTAO	Charters Tower	22.77	136	P		P	08 45 20.7	+0.3
CTAO	Charters Tower	22.77	136	P		P	08 45 20.2	-0.2
CTAO				pmax		pmax		
	comp=Z,100nm,1.1s							
GUMO	Guam	23.31	41	P		P	08 45 28.1	+2.3
	comp=Z,124nm,1.1s,baz=54,slow=20,SNR=1.6							
SZP	Santa	23.32	338	P		P	08 45 26.6	+0.7
GIRL	Giralia	23.58	217	P		P	08 45 29.6	+1.3
	baz=24,SNR=6.2							
GIRL	Giralia	23.58	217	P		P	08 45 28.7	+0.3
OOD	Oodnadatta	24.26	167	P		P	08 45 34.7	+0.2

MEEK	Meekatharra	24.67	204	P		P	08 45 37.9	-0.5
	baz=25,SNR=9.4							
MEEK	Meekatharra	24.67	204	P		P	08 45 37.6	-0.7
DSRI	Dabo	25.14	278	P		P	08 45 43.6	+0.9
	comp=Z,30nm,1.0s							
TPRI	Tanjung Pinang	25.44	281	P		P	08 45 46.3	+0.9
	comp=Z,68nm,0.6s							
INKA	Innaminka	25.81	157	P		P	08 45 49.1	+0.5
MYKOM	Kota Tinggi	26.28	282	P		P	08 45 52.6	-0.5
MYKOM				IAmb		IAmb	08 45 56.5	
	comp=Z,69nm,0.8s							
DLV	T Lat	26.29	308	P		P	08 45 53.0	-0.3
DLV	T Lat	26.29	308	P		P	08 45 53.6	+0.3
MULG	Mulgathing	26.36	171	P		P	08 45 54.5	+0.9
QLP	Quilpie	26.41	149	P		P	08 45 54.8	+0.7
FORT	Forrest	26.53	183	P		P	08 45 55.2	+0.1
	baz=27,SNR=17							
FORT	Forrest	26.53	183	P		P	08 45 55.2	+0.1
FORT				IAmb		IAmb	08 46 36.1	
	comp=Z,78nm,1.0s							
FORT	Forrest	26.53	183	P		P	08 45 55.1	0.0
LCRK	Leigh Creek	27.44	163	P		P	08 46 04.4	+1.1
MORW	Morawa	27.88	206	P		P	08 46 07.3	0.0
MORW				IAmb		IAmb	08 46 35.6	
	comp=Z,72nm,1.9s							
RK1H	Rockhampton Ha	27.90	135	P		P	08 46 08.5	+1.1
KMBL	Kambalda	28.01	194	P		P	08 46 08.5	+0.1
	baz=28,SNR=18							
KMBL	Kambalda	28.01	194	P		P	08 46 08.7	+0.3
TWGBT	Beinan	28.02	343	P		P	08 46 06.2	-2.3
TWG	Pinlang	28.03	343	P		P	08 46 06.1	-2.5
YULB	Yu-li	28.50	344	P		P	08 46 10.4	-2.5
TPUB	Ta-pu	28.61	343	P		P	08 46 12.4	-1.4
TPUB				IAmb		IAmb	08 46 22.0	
	comp=Z,60nm,1.0s							
TPUB	Ta-pu	28.61	343	P		P	08 46 12.8	-1.0
SSLB	Suanglung	28.98	344	P		P	08 46 15.2	-1.8
SSLB				IAmb		IAmb	08 46 26.1	
	comp=Z,58nm,0.9s							
SSLB	Suanglung	28.98	344	P		P	08 46 15.9	-1.2
BBOO	Buckleboo	29.18	169	P		P	08 46 18.5	-0.3
	baz=29,SNR=10							
BBOO	Buckleboo	29.18	169	P		P	08 46 17.8	-0.9
BBOO				IAmb		IAmb	08 46 33.8	
	comp=Z,110nm,1.9s							
BBOO	Buckleboo	29.18	169	P		P	08 46 18.6	-0.2
KLBR	Kellerberrin	29.45	201	P		P	08 46 20.9	-0.3
EIDS	Eidsvold	29.60	138	P		P	08 46 24.4	+1.8
IPM	Ipoh	29.69	286	P		P	08 46 23.4	-0.2
IPM	Ipoh	29.69	286	P		P	08 46 23.5	0.0
YHNB	Yeheng	29.70	345	P		P	08 46 22.5	-1.0
YHNB				IAmb		IAmb	08 46 40.0	
	comp=Z,42nm,1.0s							
STKA	Stephens Creek	29.85	159	P		P	08 46 24.8	+0.1
	baz=30,SNR=12							
STKA	Stephens Creek	29.85	159	P		P	08 46 24.6	-0.1
STKA	Stephens Creek	29.85	159	P		P	08 46 24.6	-0.1
STKA	Stephens Creek	29.85	159	P		P	08 46 24.6	-0.1
STKA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
STKA	Stephens Creek	29.85	159	P		P	08 46 24.4	-0.2
	comp=Z,7.1nm,0.9s,baz=342,slow=9.2,SNR=14							
STKA				LR		LR	08 59 07.3	
	comp=Z,1μm,20.2s,baz=334,slow=38							
	comp=Z,7.1nm,0.9s							
QIZ	Qiongzhong	30.06	321	P		P	08 46 25.0	-1.7
QIZ				pP		pP	08 46 38.4	-0.4
QIZ				S		S	08 51 26.0	+4.2
QIZ				pmax		pmax		
	comp=Z,16nm,1.2s							
QIZ				pmax		pmax		
	comp=Z,99nm,3.9s							
QIZ				LR		LR		
	comp=Z,150nm,10.9s							
QIZ				LR		LR		
	comp=Z,200nm,10.1s							
QIZ				LR		LR		
	comp=Z,200nm,15.1s							
QIZ	Qiongzhong	30.06	321	P		P	08 46 27.0	+0.3
KNMB	Chin-men Tao	30.41	340	P		P	08 46 29.1	-0.6
KNMB				IAmb		IAmb	08 46 30.6	
	comp=Z,47nm,1.0s							
HTT	Hallett	30.45	164	P		P	08 46 31.1	+1.1
	baz=31,SNR=5.9							
UBPT	Khong Chiam	30.62	310	P		P	08 46 32.1	+0.4
AULRC	Lightning Ridg	30.66	147	P		P	08 46 32.2	+0.3
HNR	Honiara	30.69	101	LR		LR	09 00 32.8	
	comp=Z,3μm,19.6s,baz=332,slow=40							
QZH	Quanzhou	30.78	340	⇑iP		P	08 46 32.8	-0.2
QZH				S		S	08 51 33.3	+0.4
JOW	Kunigami	30.81	358	P		P	08 46 33.5	+0.3
JOW				IAmb		IAmb	08 46 42.9	
	comp=Z,62nm,0.8s							
JOW	Kunigami	30.81	358	P		P	08 46 33.6	+0.4
JOW	Kunigami	30.81	358	P		P	08 46 33.9	+0.7
	comp=Z,52nm,0.8s,baz=184,slow=7.5,SNR=14							
JOW				LR		LR	08 56 57.1	
	comp=Z,392nm,20.5s,baz=179,slow=32							
	comp=Z,52nm,0.8s							
NWAO	Narrogin (SRO)	30.84	200	P		P	08 46 33.6	+0.1
NWAO	Narrogin (SRO)	30.84	200	P		P	08 46 33.6	+0.1
NWAO				pmax		pmax		
	comp=Z,97nm,1.1s							
NWAO	Narrogin (SRO)	30.84	200	LR		LR	08 59 02.2	
	comp=Z,314nm,21.9s,baz=20,slow=36							
CMSA	Cobar Meteorol	31.23	153	P		P	08 46 37.3	+0.4
	baz=31,SNR=11							
CMSA	Cobar Meteorol	31.23	153	P		P	08 46 37.6	+0.7
PSI	Prapat	31.30	282	P		P	08 46 36.6	-1.3
GSI	Gunungsitoli	32.34	279	P		P	08 46 44.9	-2.0
GSI				IAmb		IAmb	08 46 48.8	
	comp=Z,23nm,0.7s							
GSI	Gunungsitoli	32.34	279	P		P	08 46 45.6	-1.3
GSI	Gunungsitoli	32.34	279	P		P	08 46 47.8	+0.9
	comp=Z,35nm,1.2s							
SRIT	Nakonsritamara	32.37	293	P		P	08 46 46.9	-0.2
SRIT	Nakonsritamara	32.37	293	P		P	08 46 47.6	+0.5
SURA	Surathani	32.56	294	P		P	08 46 49.4	+0.6
AUDCS	Dubbo College	33.22	149	P		P	08 46 54.7	+0.4
JCJ	Chichijima	33.39	21	LR		LR	08 58 14.1	
	comp=Z,496nm,20.5s,baz=180,slow=32							
NAYO	Nakonayok	33.41	304	P		P	08 46 56.8	+0.7
NONG	Nongkai	34.08	311	P		P	08 47 02.1	+0.2
MLSI	Malahoh, Aceh	34.09	284	P		P	08 47 01.5	-0.6
	comp=Z,39nm,0.9s							
ARPS	Mount Arapiles	34.40	162	P		P	08 47 05.0	+0.4
	baz=35,SNR=12							
ARPS	Mount Arapiles	34.40	162	P		P	08 47 05.0	+0.4
YNG	Young	34.78	152	P		P	08 47 08.8	+0.9
	baz=35,SNR=5.9							
YNG	Young	34.78	152	P		P	08 47 09.1	+1.2
SRDT	SRDT	35.27	302	P		P	08 47 13.2	+0.9
SLVN	Son La	35.62	316	P		P	08 47 15.6	+0.2
SLVN				IAmb		IAmb	08 47 17.6	
	comp=Z,78nm,1.9s							
JNU	Nakatsue	37.08	2	P		P	08 47 26.9	-0.7
JNU				IAmb		IAmb	08 47 36.9	
	comp=Z,76nm,1.0s							
JNU	Nakatsue	37.08	2	P		P	08 47 27.5	-0.1
JNU	Nakatsue	37.08	2	LR		LR	09 03 13.5	
	comp=Z,486nm,18.7s,baz=126,slow=37							
NJ2	Nanjing	37.38	345	⇓P		P	08 47 31.1	+1.0
NJ2				pP		pP	08 47 39.4	-2.9
NJ2				sP		sP	08 47 52.8	+5.0
NJ2				pmax		pmax		
	comp=Z,31nm,0.9s							
NJ2				pmax		pmax		
	comp=Z,140nm,4.7s							
WHN	Wuhan	37.40	338	⇓P		P	08 47 31.3	+1.1
WHN				pP		pP	08 47 39.6	-2.9
WHN				pmax		pmax		
	comp=Z,150nm,1.4s							
CRAI	Chiangrai	37.47	311	P		P	08 47 30.8	-0.2
CM31	Chiang Mai Arr	37.55	308	P		P	08 47 31.7	0.0
CM31				IAmb		IAmb	08 47 33.6	
	comp=Z,48nm,0.9s							
CM31	Chiang Mai Arr	37.55	308	P		P	08 47 32.6	+0.9
	SNR=18							
CMAR	Chiang Mai Arr	37.55	308	P		P	08 47 31.6	-0.1
CMAR	Chiang Mai Arr	37.55	308	P		P	08 47 32.6	+0.9
	comp=Z,30nm,0.7s,baz=140,slow=7.8,SNR=146							
CMAR				PcP		PcP	08 49 50.1	+1.1
	comp=Z,4.0nm,0.6s,baz=158,slow=3.1,SNR=5.8							
CMAR				ScP		ScP	08 53 36.6	+4.3
	comp=Z,2.8nm,0.3s,baz=157,slow=3.6,SNR=5.6							

CMAR				LR		LR	09 04 22.3	
	comp=Z,59nm,21.9s,baz=95,slow=38							
	comp=Z,30nm,0.7s							
CHTO	Chiang Mai	37.74	308	P		P	08 47 34.3	+0.9
CHTO	Chiang Mai	37.74	308	P		P	08 47 34.3	+0.9
JMN	Monobe	37.89	6	P		P	08 47 34.6	+0.2
JMN				IAmb		IAmb	08 47 36.0	
	comp=Z,66nm,0.8s							
JMN	Monobe	37.89	6	P		P	08 47 35.1	+0.7
JHJ	Hachijo jima 2	38.32	14	LR		LR	09 01 42.9	
	comp=Z,646nm,18.4s,baz=170,slow=34							
KMI	Kunming	39.00	320	⇑P		P	08 47 45.1	+1.0
KMI				PcP		PcP	08 49 55.5	+1.8
KMI				pmax		pmax		
	comp=Z,29nm,0.9s							
KMI				LR		LR		
	comp=Z,160nm,14.6s							
KMI				LR		LR		
	comp=Z,180nm,12.4s							
KMI				LR		LR		
	comp=Z,310nm,46.2s							
ENH	Enshi	39.20	332	P		P	08 47 45.1	-0.4
INU	Inuyama	39.91	10	P		P	08 47 50.7	-0.6
INU				IAmb		IAmb	08 48 00.9	
	comp=Z,106nm,1.2s							
INU	Inuyama	39.91	10	P		P	08 47 51.6	+0.3
DZM	Mont Dzumac	40.00	120	eP		P	08 48 02.2	+10
	comp=Z,166nm,1.4s							
JGF	Kuroka	40.22	10	P		P	08 47 53.5	-0.4
JGF	Kuroka	40.22	10	P		P	08 47 53.8	0.0
TJN	Taejon	40.35	357	P		P	08 47 54.5	-0.4
TJN	Taejon	40.35	357	P		P	08 47 55.5	+0.6
TJN	Taejon	40.35	357	P		P	08 47 54.5	-0.4
TJN				pmax		pmax		
	comp=Z,239nm,1.1s							
PZH	PanZhiHua	40.60	320	P		P	08 47 57.1	-0.2
PZH				pmax		pmax		
	comp=Z,30nm,0.8s							
PZH				pmax		pmax		
	comp=Z,210nm,6.1s							
MJAR	Matsushiro Arr	41.28	11	P		P	08 48 01.3	-1.3
	comp=Z,45nm,0.8s,baz=184,slow=9.2,SNR=100							
MJAR				LR		LR	09 02 22.9	
	comp=Z,255nm,21.1s,baz=174,slow=32							
	comp=Z,45nm,0.8s							
MAJO	Matsushiro	41.28	11	P		P	08 48 01.4	-1.1
MAJO				IAmb		IAmb	08 48 03.2	
	comp=Z,75nm,0.8s							
MAJO	Matsushiro	41.28	11	P		P	08 48 01.7	-0.9
MAJO	Matsushiro	41.28	11	P		P	08 48 01.5	-1.1
MAJO				pmax		pmax		
	comp=Z,75nm,0.8s							
MJB9	Matsu-Tunnel	41.29	11	P		P	08 48 02.1	-0.5
MJB9				IAmb		IAmb	08 48 04.2	
	comp=Z,74nm,0.8s							
KSAR	Wonju Array Be	41.40	358	P		P	08 48 03.8	+0.3
KSAR	Wonju Array Be	41.40	358	P		P	08 48 03.8	+0.3
KSRS	Korea Array	41.41	358	P		P	08 48 04.0	+0.5
	comp=Z,17nm,0.7s,baz=173,slow=9.9,SNR=77							
KSRS				LR		LR	09 04 09.3	
	comp=Z,254nm,21.6s,baz=180,slow=34							
	comp=Z,17nm,0.7s							
KS19	Wonju Array Si	41.45	358	P		P	08 48 04.2	+0.3
INCN	Inchon	41.49	357	P		P	08 48 04.4	+0.1
INCN				IAmb		IAmb	08 48 14.4	
	comp=Z,52nm,1.1s							
INCN	Inchon	41.49	357	P		P	08 48 05.3	+1.0
INCN	Inchon	41.49	357	P		P	08 48 04.4	+0.1
INCN				pmax		pmax		
	comp=Z,52nm,1.1s							
MND	Mandalay	41.73	310	P		P	08 48 06.8	+0.3
TNCH	TengChong	41.78	316	⇑P		P	08 48 07.3	+0.3
TNCH				pP		pP	08 48 20.5	+1.2
TNCH				sP		sP	08 48 25.9	+1.1
TNCH				PP		PP	08 49 46.4	+1.9
TNCH				S		S	08 54 21.8	+0.6
TNCH				sS		sS	08 54 42.3	+0.6
TNCH				pmax		pmax		
	comp=Z,24nm,1.7s							
TNCH				pmax		pmax		
	comp=Z,160nm,2.7s							
TNCH				LR		LR		
	comp=Z,97nm,5.2s							
TNCH				LR		LR		
	comp=Z,150nm,6.5s							
TNCH				LR		LR		
	comp=Z,80nm,5.5s							
CD2	Chengdu	42.63	327	P		P	08 48 13.0	-0.8
CD2				pP		pP	08 48 25.0	-0.9
CD2				sP		sP	08 48 31.8	+0.5
CD2				S		S	08 54 35.5	+2.1
CD2				pmax		pmax		
	comp=Z,20nm,0.7s							
CD2				pmax		pmax		
	comp=Z,210nm,5.3s							
CD2				LR		LR		
	comp=Z,210nm,14.7s							
CD2				LR		LR		
	comp=Z,190nm,16.1s							
CD2				LR		LR		
	comp=Z,290nm,15.5s							
XAN	Xi'an	42.65	335	⇑P		P	08 48 12.9	-0.9
XAN				pP		pP	08 48 21.9	-4.3
XAN	

CN2 LR LR
comp=Z,280nm,12.0s
BTO Baotou 47.97 340 *e*P **P** **08 48 59.5 +3.6**
BTO pP **pwP** **08 49 12.3 -0.7**
BTO sP **sP** **08 49 17.4 +3.4**
BTO PP **PP** **08 50 48.3 -0.1**
BTO S **S** **08 55 56.6 +6.3**
BTO SS **SS** **08 59 17.8 -2.0**
BTO pmax pmax
comp=Z,23nm,0.7s
BTO pmax pmax
comp=Z,240nm,7.1s
BTO LR LR
comp=Z,470nm,15.9s
BTO LR LR
comp=Z,480nm,6.6s
BTO LR LR
comp=Z,260nm,6.9s
USA0B Ussuriysk Arra 48.17 2 P **P** **08 48 57.6 +0.3**
USA0B Ussuriysk Arra 48.17 2 P **P** **08 48 57.6 +0.3**
USA0B pmax pmax
comp=Z,80nm,1.4s
USRK Ussuriysk Ar. 48.17 2 P **P** **08 48 57.3 0.0**
USRK Ussuriysk Ar. 48.17 2 P **P** **08 48 57.8 +0.5**
comp=Z,24nm,0.7s,baz=184,slow=6.7,SNR=56
USRK LR LR 09 10 12.7
comp=Z,267nm,19.1s,baz=158,slow=37
comp=Z,24nm,0.7s
MDJ Mudanjiang 48.54 0 P **P** **08 49 00.3 +0.2**
MDJ pP pP 08 49 12.3 -0.4
MDJ PcP **PcP** **08 50 23.3 -2.0**
MDJ PP **PP** **08 50 54.3 +0.9**
MDJ PcS **PcS** **08 54 19.6 -1.7**
MDJ S **S** **08 56 02.6 +4.7**
MDJ pmax pmax
comp=Z,36nm,1.0s
MDJ pmax pmax
comp=Z,300nm,4.5s
MDJ LR LR
comp=Z,200nm,22.0s
MDJ LR LR
comp=Z,280nm,20.3s
MDJ LR LR
comp=Z,470nm,19.4s
MDJ Mudanjiang 48.54 0 P **P** **08 49 00.5 +0.4**
XLT XiLinHaoTe 49.32 347 *e*P **P** **08 49 06.1 -0.1**
XLT pP pP 08 49 15.0 -3.8
XLT sP pwP 08 49 23.4 -0.4
XLT PP **PP** **08 51 06.6 +5.9**
XLT pmax pmax
comp=Z,25nm,1.1s
XLT pmax pmax
comp=Z,180nm,4.4s
ASAJ Asahikawa 49.46 12 LR LR 09 09 03.0
comp=Z,227nm,20.2s,baz=178,slow=35
BNX BinXian 49.69 358 ⇑P **P** **08 49 08.0 -0.9**
BNX pmax pmax
comp=Z,20nm,1.0s
BNX pmax pmax
comp=Z,160nm,4.2s
LSA Lhasa 49.80 315 P **P** **08 49 11.3 +0.6**
GTA Gaotai 51.24 331 *e*P **P** **08 49 20.9 0.0**
GTA pP pP 08 49 30.0 -3.4
GTA sP pwP 08 49 37.6 -1.3
GTA PcP **PcP** **08 50 36.8 +1.2**
GTA pmax pmax
comp=Z,29nm,0.8s
GOMU GeErMu 51.58 324 P **P** **08 49 23.8 0.0**
GOMU pP pP 08 49 33.1 -3.2
GOMU pmax pmax
comp=Z,7.0nm,0.7s
YSS Yuzh-Sakhalins 52.21 11⇑*e*P **P** **08 49 27.8 0.0**
YSS *e* 08 49 36.7
YSS *e**SP **pwP** **08 49 45.1 -0.5**
YSS *e*S **S** **08 56 48.2 -0.6**
YSS pmax pmax
comp=Z,20nm,0.8s
KLR Kul'dur 53.19 2 *i* P **P** **08 49 33.5 -1.5**
KLR pmax pmax
comp=Z,44nm,1.3s
KLR Kul'dur 53.19 2 LR LR 09 09 47.3
comp=Z,202nm,21.8s,baz=76,slow=33
RPZ Rata Peaks 53.81 143 LR LR 09 12 58.1
comp=Z,289nm,19.4s,baz=290,slow=36
HEH HeiHe 54.20 358 *e*P **P** **08 49 42.0 -0.4**
HEH sP **sP** **08 50 00.8 +0.2**
HEH S **S** **08 57 17.3 +1.4**
HEH pmax pmax
comp=Z,31nm,1.1s
HEH pmax pmax
comp=Z,320nm,5.5s
HEH LR LR
comp=Z,200nm,13.9s
HEH LR LR
comp=Z,320nm,12.7s
HEH LR LR
comp=Z,300nm,12.9s
BKZ Black Stump Fm 54.98 136 P **P** **08 49 48.2 -0.3**
URZ Urewera 55.02 135 LR LR 09 17 15.8
comp=Z,129nm,18.2s,baz=118,slow=40
RTZ Ruatahuna 55.08 135 P **P** **08 49 49.0 -0.2**
RTZ IAmb IAmb 08 50 24.9
comp=Z,25nm,1.1s
ULN Ulaanbaatar 55.40 342 P **P** **08 49 51.6 +0.3**
ULN Ulaanbaatar 55.40 342*c* *i*P **P** **08 49 52.0 +0.6**
ULN pmax pmax
comp=Z,72nm,1.8s
ULN Ulaanbaatar 55.40 342 P **P** **08 49 52.1 +0.8**
SONM Songino Array 55.58 341 P **P** **08 49 52.5 -0.1**
SONM IAmb IAmb 08 50 03.5
comp=Z,22nm,1.0s
SONM Songino Array 55.58 341 P **P** **08 49 52.5 -0.1**
SONM pmax pmax
comp=Z,22nm,1.0s
SONM Songino Array 55.58 341 P **P** **08 49 53.0 +0.4**
comp=Z,8.1nm,0.8s,baz=148,slow=8.4,SNR=64
SONM PcP **PcP** **08 50 52.3 +0.4**
comp=Z,5.7nm,0.9s,baz=154,slow=4.5,SNR=4.0
comp=Z,8.1nm,0.8s
TYV Tymovskoe 55.95 10 *e*P **P** **08 49 56.1 +1.1**
TYV *e*S **S** **08 57 42.2 +3.1**
TYV pmax pmax
comp=Z,11nm,0.8s
TYV pmax pmax
comp=Z,100nm,4.4s
TYV smax smax
comp=N,100nm,5.1s
TYV smax smax
comp=E,100nm,5.1s
ZEA Zeya 57.70 358 *e*P **P** **08 50 07.9 +0.6**
ZEA *e* 08 50 17.8
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZAK Zakamensk 58.81 341 *e*P **P** **08 50 15.0 -0.3**
ZAK pmax pmax
comp=Z,14nm,1.4s
IRK Irkutsk 60.11 342 *e*P **P** **08 50 24.3 +0.2**
IRK pmax pmax
comp=Z,58nm,1.7s
MOY Mondy 60.67 340 *e*P **P** **08 50 29.0 +0.9**
MOY pmax pmax
comp=Z,65nm,2.7s
WMQ Urumqi 60.73 326 ⇑P **P** **08 50 29.0 +0.3**
WMQ pP pP 08 50 37.9 -3.6
WMQ pmax pmax
comp=Z,85nm,0.7s
WMQ pmax pmax
comp=Z,370nm,4.9s
PETK Petropavlovsk- 61.79 19 P **P** **08 50 36.2 +0.6**
PETK Petropavlovsk- 61.79 19 P **P** **08 50 36.4 +0.9**
comp=Z,15nm,0.8s,baz=190,slow=6.1,SNR=14
PETK LR LR 09 13 26.4
comp=Z,105nm,21.0s,baz=207,slow=32
PETK PKPPKP **P'P'df** **09 19 43.8 -0.8**
comp=Z,1.3nm,0.5s,baz=259,slow=3.8,SNR=5.5
comp=Z,15nm,0.8s
BOD Bodaibo 63.01 351 *e*P **P** **08 50 44.1 +0.6**
BOD pmax pmax
comp=Z,40nm,1.9s
ZSN Zaisan 64.58 328 *i* P **P** **08 50 54.1 0.0**
baz=328
ZSN Zaisan 64.58 328 *i* P **P** **08 50 54.1 0.0**
DGZ Jazzator, Alta 64.76 331 *i* P **P** **08 50 55.6 +0.1**
DGZ pmax pmax
comp=Z,34nm,0.8s

SHLS Shalkode 65.16 322⇑*i*P **P** **08 50 56.7 -1.4**
comp=Z,22nm,0.7s,baz=322
SHLS Shalkode 65.16 322*c* *i*P **P** **08 50 56.6 -1.5**
SHLS pmax pmax
comp=Z,22nm,0.7s
PDGK Podgornoye 65.23 322 P **P** **08 50 58.1 -0.5**
UZB Uzynbulak 65.42 322 *i* P **P** **08 50 59.9 0.0**
comp=Z,13nm,0.6s,baz=322
UZB Uzynbulak 65.42 322 *i* P **P** **08 50 59.8 -0.1**
UZB pmax pmax
comp=Z,13nm,0.6s
MK31 Makanchi Array 65.57 326 P **P** **08 51 00.3 -0.3**
MK31 Makanchi Array 65.57 326 P **P** **08 51 00.3 -0.3**
MK31 pmax pmax
comp=Z,41nm,0.8s
MKAR Makanchi Array 65.57 326 P **P** **08 50 59.6 -1.0**
MKAR Makanchi Array 65.57 326*ce*P **P** **08 51 00.7 +0.1**
MKAR pmax pmax
comp=Z,56nm,0.6s
MKAR Makanchi Array 65.57 326 P **P** **08 51 00.7 +0.1**
comp=Z,55nm,0.6s,baz=123,slow=8.0,SNR=479
comp=Z,55nm,0.6s
MA2 Magadan 65.72 12 P **P** **08 51 01.6 +0.4**
MA2 IAmb IAmb 08 51 03.3
comp=Z,29nm,0.9s
MA2 Magadan 65.72 12*ce*P **P** **08 51 01.2 0.0**
MA2 pmax pmax
comp=Z,60nm,1.7s
MA2 Magadan 65.72 12 P **P** **08 51 02.6 +1.3**
comp=Z,24nm,0.8s,baz=182,slow=6.9,SNR=20
MA2 LR LR 09 18 07.7
comp=Z,133nm,20.3s,baz=140,slow=34
comp=Z,24nm,0.8s
MAKZ Makanchi 65.75 326 P **P** **08 51 01.3 -0.4**
MAKZ Makanchi 65.75 326 P **P** **08 51 01.3 -0.4**
MAKZ pmax pmax
comp=Z,41nm,0.9s
ZHN Zhinishke 65.80 321⇑*i*P **P** **08 51 02.3 0.0**
comp=Z,13nm,0.7s,baz=321
ZHN Zhinishke 65.80 321*c* *i*P **P** **08 51 02.2 0.0**
ZHN pmax pmax
comp=Z,13nm,0.7s
KPKS Kokpek 65.80 322⇑*i*P **P** **08 51 02.2 -0.1**
comp=Z,22nm,0.6s,baz=322
KPKS Kokpek 65.80 322*c* *i*P **P** **08 51 02.2 -0.1**
KPKS pmax pmax
comp=Z,22nm,0.6s
YAK Yakutsk 65.98 0 P **P** **08 51 03.1 +0.3**
YAK Yakutsk 65.98 0*c* *i*P **P** **08 51 03.3 +0.5**
YAK *e*'PP **pP** **08 51 11.1 -4.6**
YAK *e* 08 51 29.8
YAK *e* 08 53 30.0
YAK *e*PPP PPP 08 55 10.0
YAK *e*S **S** **08 59 49.0 +2.4**
YAK *e*SSS SSS 09 07 01.4
YAK pmax pmax
comp=Z,116nm,0.8s
YAK pmax pmax
comp=N,23nm,1.2s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=Z,8.0nm,0.4s
YAK smax smax
comp=E,139nm,4.2s
YAK smax smax
comp=N,152nm,4.3s
YAK Yakutsk 65.98 0 P **P** **08 51 03.3 +0.5**
comp=N,139nm,0.8s,baz=12,slow=1.1,SNR=35
YAK LR LR 09 19 07.9
comp=N,222nm,20.6s,baz=142,slow=35
comp=N,139nm,0.8s
MDOK Medeo 66.67 321 *i* P **P** **08 51 08.2 +0.3**
baz=321
MDOK Medeo 66.67 321 *i* P **P** **08 51 08.1 +0.3**
TDK Taldyqorghan 66.79 323 *e*P **P** **08 51 08.6 +0.1**
comp=N,19nm,0.8s,baz=323
TDK Taldyqorghan 66.79 323 *e*P **P** **08 51 08.5 +0.1**
TDK pmax pmax
comp=Z,19nm,0.8s
CHKK Chushkaly 67.06 321 *i* P **P** **08 51 09.9 -0.3**
baz=322
CHKK Chushkaly 67.06 321 *i* P **P** **08 51 09.8 -0.3**
TKM2 Tokmak 2 67.47 320 P **P** **08 51 13.3 +0.2**
SNR=24
TKM2 Tokmak 2 67.47 320 P **P** **08 51 12.7 -0.3**
KUU Kurty 67.48 321⇑*i*P **P** **08 51 12.8 0.0**
baz=321
KUU Kurty 67.48 321*c* *i*P **P** **08 51 12.8 0.0**
KBK Karagaybulak 67.76 320 P **P** **08 51 15.4 +0.5**
SNR=8.2
UCH Uchtor 67.84 319 P **P** **08 51 16.3 +0.6**
SNR=20
SHEM Shemya Is, Ala 67.98 27 LR LR 09 17 00.8
comp=Z,212nm,19.4s,baz=294,slow=32
AAK Ala-Archa 68.04 319 P **P** **08 51 17.0 +0.4**
SNR=9.8
AAK Ala-Archa 68.04 319 P **P** **08 51 16.5 0.0**
AAK IAmb IAmb 08 51 18.1
comp=Z,13nm,0.8s
AAK Ala-Archa 68.04 319 *i* P **P** **08 51 16.8 +0.2**
SNR=13
AAK Ala-Archa 68.04 319*ce*P **P** **08 51 16.6 0.0**
AAK pmax pmax
comp=Z,14nm,0.8s
AAK Ala-Archa 68.04 319 P **P** **08 51 16.8 +0.2**
CHMS Chumysh 68.05 320 P **P** **08 51 16.1 -0.4**
SNR=5.4
USP Ospenovka 68.34 320 P **P** **08 51 18.5 +0.2**
SNR=26
SGDS Sogindy 68.34 320⇑*i*P **P** **08 51 18.0 -0.3**
baz=320
SGDS Sogindy 68.34 320*c* *i*P **P** **08 51 18.0 -0.3**
ARSB Arslanbob 68.44 318 P **P** **08 51 18.8 -0.3**
ARSB Arslanbob 68.44 318 P **P** **08 51 18.8 -0.3**
ARSB pmax pmax
comp=Z,7.0nm,0.8s
EKS2 Erkin-Say 68.52 319 P **P** **08 51 20.2 +0.7**
SNR=16
ZAA0 Zalesovo Array 68.81 334 P **P** **08 51 20.2 -0.7**
ZALV Zalesovo Beam 68.81 334 P **P** **08 51 20.2 -0.6**
ZALV Zalesovo Beam 68.81 334 *i* P **P** **08 51 20.3 -0.6**
ZALV pmax pmax
comp=Z,32nm,0.8s
ZALV Zalesovo Beam 68.81 334 P **P** **08 51 20.4 -0.5**
comp=Z,32nm,0.8s,baz=108,slow=4.8,SNR=66
comp=Z,32nm,0.8s
SEY Seymchan 69.11 11*ce*P **P** **08 51 23.5 +0.9**
SEY pmax pmax
comp=Z,93nm,1.3s
SEY Seymchan 69.11 11 LR LR 09 20 26.4
comp=Z,229nm,20.8s,baz=264,slow=35
BTLS Baital 69.47 321 *i* P **P** **08 51 24.9 -0.3**
baz=322
BTLS Baital 69.47 321 *i* P **P** **08 51 24.9 -0.3**
KURBB Kurchatov Arra 69.82 328 P **P** **08 51 27.4 +0.1**
comp=Z,87nm,0.7s,baz=129,slow=5.5,SNR=464
comp=Z,87nm,0.7s
KURK Kurchatov 69.82 328 P **P** **08 51 26.8 -0.4**
KURK Kurchatov 69.82 328 P **P** **08 51 26.8 -0.4**
KURK pmax pmax
comp=Z,130nm,0.8s
KURK Kurchatov 69.82 328 P **P** **08 51 27.6 +0.4**
DZA Taraz 70.23 318 *e*P **P** **08 51 29.9 -0.2**
baz=318
DZA Taraz 70.23 318 *e*P **P** **08 51 29.8 -0.2**
RAR Rarotonga 70.57 111 LR LR 09 21 34.1
comp=Z,26nm,19.9s,baz=227,slow=35
IUG Iuzhnay 70.79 317 *e*P **P** **08 51 33.5 0.0**
baz=317
IUG Iuzhnay 70.79 317 *e*P **P** **08 51 33.5 0.0**
KK31 Karatay Array 70.87 318 P **P** **08 51 33.3 -0.6**
KK31 IAmb IAmb 08 51 34.7
comp=Z,18nm,1.0s
KK31 Karatay Array 70.87 318 P **P** **08 51 33.3 -0.6**
KK31 pmax pmax
comp=Z,18nm,1.0s
KKAR Karatay Array 70.87 318 P **P** **08 51 33.6 -0.3**
KKAR Karatay Array 70.87 318 P **P** **08 51 33.6 -0.3**
BRLS Borolday 71.28 318⇑*i*P **P** **08 51 36.1 -0.3**
baz=318
BRLS Borolday 71.28 318*c* *i*P **P** **08 51 36.1 -0.3**
OTUK Ortayu 72.04 324 P **P** **08 51 40.5 -0.3**
NGCH Negor - Chabah 72.39 298 P **P** **08 51 44.2 +0.8**
BRZS Berezniki 72.67 326 *e*P **P** **08 51 44.7 +0.1**
BRZS pmax pmax
comp=Z,15nm,0.6s
JLN Jalan Bani Buh 73.24 294 P **P** **08 51 47.9 -0.6**
JLN P **P** **08 51 47.9 -0.6**
WBK Wadi Bani Khal 73.73 295 P **P** **08 51 51.4 0.0**
WBK P **P** **08 51 51.4 0.0**
WSAR Wadi Sarin 74.17 295 P **P** **08 51 54.0 +0.1**
comp=Z,11nm,0.9s,baz=125,slow=6.9,SNR=12
comp=Z,11nm,0.9s
WSAR Wadi Sarin 74.17 295 P **P** **08 51 54.2 +0.3**
SNR=5.9
MHTO MHTO 74.33 293 P **P** **08 51 54.2 -0.6**
MHTO P **P** **08 51 54.2 -0.6**
JMDO Jabal Madar 74.47 294 P **P** **08 51 55.2 -0.5**
JMDO P **P** **08 51 55.2 -0.5**
SMDO Samad 74.66 295 P **P** **08 51 56.6 -0.3**
SMDO P **P** **08 51 56.6 -0.3**
BIDO Bidbid 74.68 296 P **P** **08 51 57.0 +0.2**
SNR=9.3
VNDA Vanda 75.33 173 P **P** **08 51 59.4 -0.2**
VNDA IAmb IAmb 08 52 13.8
comp=Z,35nm,1.9s
VNDA Vanda 75.33 173 P **P** **08 51 59.4 -0.2**
VNDA pmax pmax
comp=Z,35nm,1.9s
VNDA Vanda 75.33 173 P **P** **08 51 59.6 +0.1**
comp=Z,2.1nm,0.6s,baz=312,slow=9.5,SNR=5.6
comp=Z,2.1nm,0.6s
BSY Bisya 75.36 295 P **P** **08 52 00.4 -0.5**
BSY P **P** **08 52 00.4 -0.5**
BVA0 Borovoye Array 75.38 328 *i* P **P** **08 52 00.1 -0.2**
BVAR Borovoye Array 75.38 328 P **P** **08 52 00.5 +0.2**
comp=Z,48nm,0.8s,baz=123,slow=7.3,SNR=199
comp=Z,48nm,0.8s
HOQ Hoqain 75.42 296 P **P** **08 52 01.1 -0.1**
SNR=5.8
HOQ P **P** **08 52 01.1 -0.1**
SNR=5.8
BRVK Borovoye 75.46 328 P **P** **08 52 01.6 +0.9**
BRVK Borovoye 75.46 328 P **P** **08 52 01.6 +0.9**
BRVK pmax pmax
comp=Z,62nm,0.9s
BRVK Borovoye 75.46 328 P **P** **08 52 00.9 +0.2**
TIXI Tiksi 75.65 360 P **P** **08 52 01.1 -0.3**
TIXI IAmb IAmb 08 52 02.3
comp=Z,23nm,0.8s
TIXI Tiksi 75.65 360*ce*P **P** **08 52 00.6 -0.8**
TIXI pmax pmax
comp=Z,28nm,0.8s
TIXI Tiksi 75.65 360 LR LR 09 25 32.9
comp=Z,248nm,19.8s,baz=188,slow=36
SHAO Shalim 76.00 290 P **P** **08 52 03.7 -0.8**
SHAO Shalim 76.00 290 P **P** **08 52 04.8 +0.3**
ARQ Araqi 76.09 295 P **P** **08 52 04.7 -0.3**
SNR=6.3
ARQ P **P** **08 52 04.7 -0.3**
SNR=6.3
SOHO SOHO 76.23 296 *i* P **P** **08 52 05.4 -0.4**
SNR=14
SOHO SOHO 76.23 296 P **P** **08 52 05.3 -0.4**
SOHO P **P** **08 52 05.3 -0.4**
BILL Bilibino 76.47 13 *i* P **P** **08 52 04.5 -1.6**
BILL pmax pmax
comp=Z,12nm,1.9s
MDH Madha 76.66 297 P **P** **08 52 07.1 -1.0**
UOSS Minazif 76.67 297 *i* P **P** **08 52 07.3 -1.0**
SNR=7.5
HATD Hatta, Dubai 76.72 297 *i* P **P** **08 52 08.1 -0.4**
SNR=8.2
HATD Hatta, Dubai 76.72 297 P **P** **08 52 08.5 0.0**
HATD P **P** **08 52 08.5 0.0**
ASHO Ashiyiah 76.75 296 *i* P **P** **08 52 08.7 0.0**
SNR=7.0
ASHO Ashiyiah 76.75 296 P **P** **08 52 08.7 0.0**
SNR=6.9
ASHO P **P** **08 52 08.7 0.0**
SNR=6.9
MSFE Esma-Masafi 76.79 297 *i* P **P** **08 52 09.2 +0.2**
SNR=10
MASF Masafi 76.80 297 P **P** **08 52 09.5 +0.5**
SNR=7.5
MASF P **P** **08 52 09.5 +0.5**
SNR=7.5
ALNE Al Ain 76.91 296 *i* P **P** **08 52 09.4 -0.3**
SNR=9.4
ALNE Al Ain 76.91 296 P **P** **08 52 10.1 +0.5**
SNR=8.7
ALNE P **P** **08 52 10.1 +0.5**
SNR=8.7
SHME Shamm 76.94 298 P **P** **08 52 10.4 +0.7**
SNR=7.9
SHME P **P** **08 52 10.4 +0.7**
SNR=7.9
NAZ Nazwa, Dubai 77.17 297 P **P** **08 52 11.5 +0.5**
SNR=5.9
NAZ P **P** **08 52 11.5 +0.5**
SNR=5.9
FAQ Al Faqa, Dubai 77.18 296 *i* P **P** **08 52 10.6 -0.5**
SNR=10
FAQ Al Faqa, Dubai 77.18 296 P **P** **08 52 10.9 -0.2**
SNR=7.0
FAQ P **P** **08 52 10.9 -0.2**
SNR=7.0
UMZA Um Al Zommool 77.21 294 P **P** **08 52 10.6 -0.7**
UMZA P **P** **08 52 10.6 -0.7**
RBK Rabkut 77.26 289 P **P** **08 52 11.7 -0.1**
RBK P **P** **08 52 11.7 -0.1**
ASUD Al Ashush, Dub 77.40 296 *i* P **P** **08 52 12.4 +0.2**
SNR=12
ASUD Al Ashush, Dub 77.40 296 P **P** **08 52 12.8 +0.6**
SNR=6.8
ASUD P **P** **08 52 12.8 +0.6**
SNR=6.8
DOK Doka 77.50 290 P **P** **08 52 12.3 -0.7**
DOK P **P** **08 52 12.3 -0.7**
AJN Ajban 77.69 296 P **P** **08 52 13.9 0.0**
WHFO Wadi Hawf 77.73 289 P **P** **08 52 13.4 -0.9**
WHFO P **P** **08 52 13.4 -0.9**
GEYT Alibeck 77.98 310 P **P** **08 52 15.9 +0.6**
comp=Z,9.6nm,0.8s,baz=177,slow=2.9,SNR=20
comp=Z,9.6nm,0.8s
GYA0 ALIBECK ARRAY 77.98 310 P **P** **08 52 15.4 0.0**
GYA0B ALIBECK ARRAY 77.98 310 P **P** **08 52 15.4 0.0**
GYA0B IAmb IAmb 08 52 25.6
comp=Z,25nm,1.1s
ABTO Aybut 78.10 289 P **P** **08 52 16.1 -0.3**
ABTO P **P** **08 52 16.1 -0.3**
UNV Unalaska Valle 78.39 33 P **P** **08 52 16.7 -0.5**
baz=246
MZWR Madinat Zayed 78.55 295 P **P** **08 52 18.8 +0.1**
MZWR P **P** **08 52 18.8 +0.1**
NRIK Noril'sk 78.68 346 P **P** **08 52 18.8 +0.4**
NRIK IAmb IAmb 08 52 30.8
comp=Z,87nm,1.7s
NRIK Noril'sk 78.68 346*ce*P **P** **08 52 18.6 +0.2**
NRIK pmax pmax
comp=Z,58nm,2.0s
NRIK Noril'sk 78.68 346 P **P** **08 52 19.1 +0.7**
comp=Z,12nm,0.6s,baz=130,slow=6.4,SNR=28
NRIK LR LR 09 28 48.2
comp=Z,189nm,20.7s,baz=354,slow=37
comp=Z,12nm,0.6s
AKUT Akutan 78.91 33 P **P** **08 52 20.1 +0.1**
GHWR Ruwais 79.49 295 P **P** **08 52 23.9 +0.1**
GHWR P **P** **08 52 23.9 +0.1**
JRN Qarnain Island 79.67 296 P **P** **08 52 24.6 -0.2**
JRN P **P** **08 52 24.6 -0.2**
AB31 Akbulak array 79.96 321 *i* P **P** **08 52 25.7 -0.2**
ABKAR Akbulak array 79.96 321 P **P** **08 52 25.8 -0.1**
PPT Papeete 80.14 107 LR LR 09 26 22.2
comp=Z,38nm,20.7s,baz=258,slow=34
PPT2 Papeete2 80.14 107 *e*LR LR 09 17 21.0
comp=Z,80nm,23.5s
TBI Tubuai 80.17 113 *e*LR LR 09 17 47.7
comp=Z,607nm,31.8s
GAMB Gambell 80.49 23 P **P** **08 52 28.2 -0.1**
baz=240
SLWR Sila 80.57 295 P **P** **08 52 29.9 +0.2**
SLWR P **P** **08 52 29.9 +0.2**
TRNA Turayna 81.11 296 P **P** **08 52 32.5 -0.1**
SMRA Abu-Samra 81.46 296 P **P** **08 52 34.5 +0.1**
SNR=5.4
SHMA Al-Shehemyia 81.50 297 P **P** **08 52 34.7 +0.1**
AKTO Aktyubinsk 81.51 322 P **P** **08 52 34.2 0.0**
comp=Z,40nm,0.8s,baz=108,slow=5.5,SNR=86
comp=Z,40nm,0.8s
SAKB Bahrain 81.90 297 P **P** **08 52 37.0 +0.3**

SVE Sverdlovsk 82.07 329 *de* P P 08 52 37.3 +0.4
SVE pmax pmax
comp=Z,67nm,1.0s
CHNA Chernabura Isl 82.53 33 P P 08 52 39.4 +0.1
baz=252
M13K Dall Lake 82.54 27 P P 08 52 39.9 +0.6
baz=248
TNA Tin City 82.77 22 P P 08 52 41.3 +1.0
baz=243
ARU Arti 83.02 328 P P 08 52 41.7 -0.2
ARU IAmb IAmb 08 52 42.7
comp=Z,30nm,0.7s
ARU Arti 83.02 328 *c i* P P 08 52 41.2 -0.7
ARU 08 55 47.7
ARU S S 09 02 58.1 +0.9
ARU SS SS 09 08 19.4 -2.4
ARU pmax pmax
comp=Z,30nm,0.7s
ARU Arti 83.02 328 P P 08 52 42.1 +0.3
comp=Z,26nm,0.6s,baz=112,slow=2.6,SNR=46
comp=Z,26nm,0.6s
O14K Tigyukauivet M 83.11 29 P P 08 52 43.1 +0.9
baz=250
N14K Kuskokwak Cree 83.14 28 P P 08 52 43.2 +0.9
baz=250
L14K Kuka Creek 83.19 27 P P 08 52 43.8 +1.2
L14K IAmb IAmb 08 52 53.3
comp=Z,28nm,0.9s
L14K Kuka Creek 83.19 27 P P 08 52 43.0 +0.4
baz=248
M14K Bethel 83.31 27 P P 08 52 44.3 +1.1
M14K IAmb IAmb 08 52 45.0
comp=Z,36nm,0.9s
M14K Bethel 83.31 27 P P 08 52 43.7 +0.5
baz=249
ANM Nome 83.32 23 P P 08 52 44.1 +0.9
baz=246
F14K Arctic Creek 83.33 22 P P 08 52 43.8 +0.5
baz=245
J14K Nanvaranak Lak 83.34 25 P P 08 52 44.2 +0.9
baz=248
O15K Ungalikthiuk R 83.78 29 P P 08 52 46.3 +0.6
baz=251
L15K Ungalak Mounta 83.85 27 P P 08 52 47.6 +1.6
baz=250
M15K Kasigluk River 83.87 28 P P 08 52 46.8 +0.7
baz=250
N15K Kwethluk River 83.97 28 P P 08 52 47.5 +0.8
baz=251
G15K Niukluk 84.02 23 P P 08 52 48.0 +1.2
baz=247
K15K Wolf Creek Mou 84.04 26 P P 08 52 48.0 +1.0
baz=249
F15K North Star Dit 84.06 22 P P 08 52 48.5 +1.5
baz=246
H16K Elim 84.59 24 P P 08 52 50.6 +0.8
baz=248,SNR=8.2
P16K Nushagak River 84.64 30 P P 08 52 50.8 +0.8
baz=253
N16K Nishlik Lake 84.70 28 P P 08 52 51.1 +0.7
baz=252
O16K Kokwok River B 84.75 29 P P 08 52 51.2 +0.6
O16K Kokwok River B 84.75 29 P P 08 52 51.5 +0.8
baz=253
L16K Owhat River 84.76 27 P P 08 52 51.3 +0.7
L16K Owhat River 84.76 27 P P 08 52 50.6 0.0
baz=251
M16K Timber Creek 84.78 28 P P 08 52 51.0 +0.3
baz=252
J16K Anvik River 84.79 25 P P 08 52 51.5 +0.8
baz=250
G16K Koyuk River 84.82 23 P P 08 52 51.5 +0.6
baz=248
C16K Lisburne Hills 84.87 20 P P 08 52 52.1 +1.0
baz=245
I17K Unalakleet 84.95 25 P P 08 52 52.6 +1.0
I17K Unalakleet 84.95 25 P P 08 52 52.7 +1.2
baz=250
Q16K King Salmon 85.20 30 P P 08 52 54.5 +1.6
baz=254
O17K Koliganek Bris 85.29 29 P P 08 52 54.4 +1.0
baz=254
D17K Noatak River 85.42 21 P P 08 52 55.3 +1.5
baz=248
L17K Donlin 85.42 27 P P 08 52 55.1 +1.2
baz=252
P17K Kvichak River 85.45 30 P P 08 52 54.8 +0.7
baz=254
N17K Nushagak Hills 85.46 28 P P 08 52 54.5 +0.3
baz=253
J17K VABM Dome 85.47 25 P P 08 52 55.2 +1.0
baz=252
Q17K Contact Creek 85.48 31 P P 08 52 55.3 +0.8
baz=255
G17K Kiwalik Mounta 85.53 23 P P 08 52 55.7 +1.3
baz=250
M17K Holitna River 85.60 27 P P 08 52 56.0 +1.1
baz=253
K17K Iditarod 85.60 26 P P 08 52 55.2 +0.4
baz=252
F17K Baldwin Pennin 85.63 22 P P 08 52 55.0 +0.2
baz=249
H17K Granite Mounta 85.63 24 P P 08 52 55.6 +0.7
baz=251
E17K Hotham Inlet 85.64 21 P P 08 52 55.6 +0.7
baz=249
C17K DeLong Mountai 85.69 20 P P 08 52 55.7 +0.5
baz=247
QSPA South Pole Qui 85.82 180 P P 08 52 55.2 -0.9
QSPA IAmb IAmb 08 53 06.9
comp=Z,43nm,1.8s
QSPA South Pole Qui 85.82 180 P P 08 52 55.5 -0.6
comp=Z,4.0nm,0.7s,baz=297,slow=1.0,SNR=18
comp=Z,4.0nm,0.7s
SII Sitkinak Islan 85.94 33 P P 08 52 57.3 +0.6
baz=256
P18K Big Mountain, 86.10 30 P P 08 52 57.6 +0.1
baz=255
N18K Kilae Creek 86.12 28 P P 08 52 58.2 +0.7
baz=254
RAYN Ar Rayn 86.12 294 P P 08 52 58.1 -0.2
RAYN Ar Rayn 86.12 294 *i* P P 08 52 58.5 +0.2
SNR=8.4
RAYN Ar Rayn 86.12 294 P P 08 52 58.1 -0.2
RAYN pmax pmax
comp=Z,50nm,0.8s
RAYN Ar Rayn 86.12 294 P P 08 52 58.9 +0.5
L18K Granite Mounta 86.17 27 P P 08 52 58.7 +1.0
baz=254
E18K Tukpahlearik C 86.21 21 P P 08 52 58.6 +0.9
baz=250
O18K Koktuh Hills 86.23 29 P P 08 52 58.5 +0.5
O18K Koktuh Hills 86.23 29 P P 08 52 58.6 +0.6
baz=255
F18K Selawik 86.28 22 P P 08 52 58.7 +0.7
baz=251
H18K Honhosa River 86.32 24 P P 08 52 59.1 +0.7
baz=252
M18K Stony River 86.36 28 P P 08 52 59.1 +0.5
baz=254
SVW2 Sparrevohn 86.37 28 P P 08 52 59.0 +0.3
SVW2 IAmb IAmb 08 53 00.9
comp=Z,14nm,0.9s
C18K Utukok River 86.43 20 P P 08 52 58.6 -0.3
C18K Utukok River 86.43 20 P P 08 52 59.2 +0.3
baz=249
G18K Tagagawik 86.44 23 P P 08 52 59.2 +0.3
baz=252
B18K Kokolik River 86.49 19 P P 08 52 59.9 +0.9
baz=249
J18K Innoko River 86.51 26 P P 08 52 59.8 +0.5
baz=254
OHAK Old Harbor 86.58 32 P P 08 53 00.4 +0.7
baz=257,SNR=5.2
TTA Tatalina 86.67 26 P P 08 53 01.0 +0.8
baz=254,SNR=6.5
O19K Port Alsworth 86.75 29 P P 08 53 00.7 +0.2
baz=256
GCSA Galena City Sc 86.81 24 P P 08 53 01.1 +0.5
baz=253
N19K Bonanza Creek 86.82 28 P P 08 53 01.6 +0.6
baz=256
SEKA Sheki 86.90 312 P P 08 53 00.9 -0.9
MNGR Mingechevir, A 86.93 311 P P 08 53 01.3 -0.5
L19K White Mountain 86.99 27 P P 08 53 02.0 +0.3
baz=255
F19K Shaleruckik Mo 87.07 22 P P 08 53 02.3 +0.4
baz=252
KDAK Kodiak Island 87.07 32 P P 08 53 02.5 +0.4
baz=258
KDAK Kodiak Island 87.07 32 *i* P P 08 53 02.0 -0.1
KDAK pmax pmax
comp=Z,49nm,0.9s
KDAK Kodiak Island 87.07 32 P P 08 53 02.7 +0.5
comp=Z,22nm,0.8s,baz=269,slow=2.5,SNR=15
comp=Z,22nm,0.8s
J19K Poorman 87.12 25 P P 08 53 02.3 0.0
baz=255
G19K Purcell Mounta 87.12 23 P P 08 53 02.8 +0.6
baz=253
M19K Big River Lodg 87.13 27 P P 08 53 03.1 +0.7
baz=256
C19K Lookout Ridge 87.14 20 P P 08 53 02.6 +0.3
baz=251,SNR=16
H19K Roundabout Mou 87.20 24 P P 08 53 02.9 +0.3
baz=254
ZKTA Zakatala 87.39 312 P P 08 53 03.7 -0.4
D19K Kuna River 87.45 21 P P 08 53 04.4 +0.6
baz=252
E19K Redstone River 87.45 22 P P 08 53 03.9 +0.1
baz=253
GANJ Ganja 87.48 311 P P 08 53 04.1 -0.5
L20K Farewell, AK 87.50 27 P P 08 53 04.3 +0.1
baz=256
O20K Slope Mountain 87.55 29 P P 08 53 04.9 +0.4
baz=257
K20K Telida 87.63 26 P P 08 53 05.3 +0.5
baz=256
M20K Styx River 87.71 28 P P 08 53 05.8 +0.5
baz=257
J20K Nowinta River 87.80 25 P P 08 53 06.3 +0.8
baz=256
I20K Naaghedeneel 87.81 25 P P 08 53 06.4 +0.9
baz=256
H20K Anotleneega Mo 87.82 24 P P 08 53 06.1 +0.5
baz=255
F20K Avaraart Lake 87.90 22 P P 08 53 06.0 +0.1
baz=254
N20K Mount Spurr 87.99 28 P P 08 53 06.6 0.0
baz=258
D20K Etivluk River 88.04 21 P P 08 53 07.2 +0.5
baz=254
E20K Nigu River 88.06 21 P P 08 53 07.0 +0.2
baz=254
BELG Belogornoye 88.28 323 *i* P P 08 53 06.2 -1.8
BELG pmax pmax
comp=Z,8.0nm,0.9s
BELG Belogornoye 88.28 323 P P 08 53 07.2 -0.9
comp=Z,41nm,0.9s,baz=78,slow=2.3,SNR=7.3
comp=Z,41nm,0.9s
KIRV Kirov 88.33 329 P P 08 53 06.6 -1.5
comp=Z,9.3nm,0.6s,baz=0.1,slow=2.9,SNR=4.6
comp=Z,9.3nm,0.6s
PPLA Purkeypile 88.36 27 P P 08 53 08.4 0.0
baz=258
CAPN Captain Cook N 88.40 29 P P 08 53 08.5 +0.1
baz=259
BRSE Bradley Lake S 88.41 30 P P 08 53 08.3 -0.2
baz=259
SKT Skwentna 88.47 28 P P 08 53 08.3 -0.4
baz=258
CHUM Lake Minchumin 88.51 26 P P 08 53 08.9 0.0
baz=258
CAST Castle Rocks 88.52 26 P P 08 53 09.2 +0.3
baz=258
G21K Allakaket 88.62 23 P P 08 53 09.9 +0.5
baz=256
GNI Garni 88.62 310 *i* P P 08 53 08.9 -1.3
GNI pmax pmax
comp=Z,22nm,1.0s
H21K Melozitna Rive 88.70 24 P P 08 53 10.2 +0.5
baz=257
SUA Susitna One 88.73 28 P P 08 53 09.6 -0.6
baz=259,SNR=6.8
A21K Barrow 88.78 18 P P 08 53 10.4 +0.4
baz=253
F21K Alatna River 88.79 22 P P 08 53 10.5 +0.3
baz=256
C21K Knifeblade Rid 88.80 20 P P 08 53 10.3 +0.2
baz=255
I21K Tanana 88.93 24 P P 08 53 10.8 0.0
baz=258
B21K Ikpikpuk River 88.97 20 P P 08 53 11.3 +0.4
baz=255
O22K Cooper Landing 89.04 29 P P 08 53 11.5 0.0
baz=260
KTH Kantishna Hill 89.05 26 P P 08 53 11.9 +0.4
KTH IAmb IAmb 08 54 03.8
comp=Z,38nm,1.8s
M22K Willow 89.08 28 P P 08 53 11.9 +0.3
baz=260
SEW Seward 89.11 30 P P 08 53 11.9 +0.1
baz=260
RC01 Rabbit Creek A 89.14 29 P P 08 53 12.0 0.0
baz=260,SNR=8.4
TRF Thorofare Moun 89.31 26 P P 08 53 12.6 -0.3
baz=259
H22K Ishtalitna Cre 89.33 24 P P 08 53 12.5 -0.3
baz=258
MLY Manley 89.42 25 P P 08 53 13.6 +0.4
baz=259,SNR=8.1
D22K Ayikyak River 89.47 21 P P 08 53 13.3 0.0
baz=257
G22K Bettles 89.48 23 P P 08 53 13.9 +0.5
baz=258
PMR Palmer 89.52 28 P P 08 53 13.6 0.0
baz=260,SNR=6.1
ZEI Tsey 89.54 313 *e* P P 08 53 14.1 -0.4
ZEI pmax pmax
comp=Z,20nm,1.3s
GHO Glory Hole Cre 89.64 28 P P 08 53 14.3 -0.1
GHO IAmb IAmb 08 55 39.3
comp=Z,32nm,1.7s
KNK Knik Glacier 89.81 28 P P 08 53 15.4 +0.4
KNK IAmb IAmb 08 53 26.0
comp=Z,18nm,0.8s
KNK Knik Glacier 89.81 28 P P 08 53 14.9 -0.2
baz=261,SNR=5.2
SML Sawmill 89.93 28 P P 08 53 15.7 +0.1
SML IAmb IAmb 08 53 25.7
comp=Z,16nm,0.8s
SML Sawmill 89.93 28 P P 08 53 15.6 -0.1
baz=261,SNR=9.6
SML Sawmill 89.93 28 P P 08 53 15.7 +0.1
MCK McKinley 89.96 26 P P 08 53 15.4 -0.3
baz=261,SNR=7.0
WAT1 Susitna Watana 89.98 27 P P 08 53 15.7 -0.2
baz=261
I23K Minto, Yukon-K 90.01 25 P P 08 53 16.1 +0.3
I23K IAmb IAmb 08 53 17.1
comp=Z,9.8nm,0.8s
I23K Minto, Yukon-K 90.01 25 P P 08 53 16.3 +0.4
baz=260,SNR=7.9
G23K Bananza Creek 90.02 23 P P 08 53 16.4 +0.4
baz=260
NEA2 Nenana 90.04 25 P P 08 53 15.8 -0.3
baz=260
COLD Coldfoot 90.04 23 P P 08 53 16.2 +0.2
baz=260,SNR=11
P23K Montague Islan 90.11 30 P P 08 53 16.5 0.0
baz=262
D23K Nanushuk River 90.19 21 P P 08 53 17.5 +0.8
baz=259
M23K Glacier View 90.21 28 P P 08 53 17.3 +0.3
baz=262,SNR=7.1
WAT6 Susitna Watana 90.32 27 P P 08 53 17.5 -0.1
baz=262
KBZ Khabaz 90.36 314 *ce* P P 08 53 16.8 -1.2
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 90.36 314 P P 08 53 17.8 -0.2
comp=Z,5.3nm,0.8s,baz=304,slow=2.9,SNR=9.6
comp=Z,5.3nm,0.8s
SCM Sheep Creek Mo 90.40 28 P P 08 53 17.7 -0.2
SCM Sheep Creek Mo 90.40 28 P P 08 53 18.1 +0.2
baz=262
SCM Sheep Creek Mo 90.40 28 P P 08 53 17.7 -0.2
SCM pmax pmax
comp=Z,80nm,2.0s
E23K Chandalar 90.41 22 P P 08 53 17.9 +0.1
baz=260
TOLK Toolik Lake Re 90.53 21 P P 08 53 18.9 +0.5
TOLK Toolik Lake Re 90.53 21 P P 08 53 18.2 -0.1
baz=260
KIV Kislovodsk 90.53 314 *e* P P 08 53 18.5 -0.5
KIV pmax pmax
comp=Z,8.0nm,1.1s
DHY Denali Highway 90.55 27 P P 08 53 18.7 0.0
DHY IAmb IAmb 08 53 32.2
comp=Z,58nm,1.9s
DHY Denali Highway 90.55 27 P P 08 53 18.5 -0.2
baz=262,SNR=6.7
H24K Noodor Dome 90.73 24 P P 08 53 19.2 -0.1
H24K IAmb IAmb 08 53 29.2
comp=Z,10nm,0.9s
H24K Noodor Dome 90.73 24 P P 08 53 19.5 +0.2
baz=262,SNR=8.6
POKR Poker Plat Res 90.81 25 P P 08 53 20.1 +0.5
baz=262
E24K Your Creek 90.83 22 P P 08 53 20.7 +0.9
baz=261
D24K Happy Valley 90.88 21 P P 08 53 20.4 +0.5
baz=261
HDA Harding Lake 90.92 26 P P 08 53 20.2 0.0
baz=262,SNR=8.6
F24K Squaw Lake 90.97 22 P P 08 53 20.9 +0.5
baz=262
M24K Tolsona, Glenn 90.98 28 P P 08 53 21.2 +0.6
M24K Tolsona, Glenn 90.98 28 P P 08 53 20.5 0.0
baz=263
ILAR Eielson Array 91.00 25 P P 08 53 19.2 -1.3
ILAR Eielson Array 91.00 25 P P 08 53 19.2 -1.3
ILAR Eielson Array 91.00 25 P P 08 53 19.1 -1.5
comp=Z,2.4nm,0.8s,baz=276,slow=4.2,SNR=26
ILAR PKKP **PKKPdf** 09 10 44.3 +0.6
comp=Z,0.5nm,0.8s,baz=13,slow=2.3,SNR=5.9
ILAR LR LR 09 29 01.6
comp=Z,87nm,19.9s,baz=266,slow=32
comp=Z,2.4nm,0.8s
C24K Franklin Bluff 91.02 20 P P 08 53 20.7 +0.3
baz=261
G24K Hadweenzic Riv 91.02 23 P P 08 53 20.6 0.0
baz=262
KLU Klutina 91.02 29 P P 08 53 20.6 -0.2
baz=263
ELIB Princess Elisa 91.05 197 *d* P P 08 53 21.8 +1.0
comp=Z,16nm,0.9s
K24K Donnelly Dome 91.36 26 P P 08 53 22.5 +0.3
baz=263
PAX Paxson 91.40 27 P P 08 53 23.0 +0.5
baz=264,SNR=5.6
HARP HAARP 91.48 28 P P 08 53 23.2 +0.4
baz=264
KAIM Kayak Island 91.59 30 P P 08 53 23.6 +0.2
baz=265
BMRM Bremner River 91.60 29 P P 08 53 23.1 -0.4
baz=264
J25K Salcha River, 91.62 25 P P 08 53 22.7 -0.8
baz=264
PRP Porcupine Dome 91.66 25 P P 08 53 22.9 -0.9
baz=264
N25K Chitina, Valde 91.67 28 P P 08 53 23.4 -0.4
baz=264
D25K Kavik River 91.77 21 P P 08 53 23.9 -0.2
baz=263
F25K Christian River 91.84 22 P P 08 53 24.8 +0.3
baz=264
E25K Arctic Village 91.92 22 P P 08 53 25.0 +0.2
E25K IAmb IAmb 08 53 35.9
comp=Z,12nm,1.2s
E25K Arctic Village 91.92 22 P P 08 53 25.0 +0.2
baz=264,SNR=6.6
GLB Gilahina Butte 92.03 29 P P 08 53 25.9 +0.5
SCRK Sand Creek 92.16 26 P P 08 53 26.2 +0.1
baz=265
BMAR Burnt Mountain 92.23 23 P P 08 53 27.4 +1.2
CRQE Cirque 92.32 29 P P 08 53 26.8 -0.1
baz=266
L26K Log Cabin Wild 92.37 27 P P 08 53 27.7 +0.8
baz=266
J26L Joseph Creek 92.39 26 P P 08 53 27.7 +0.6
baz=266
MCARA McCarthy VSAT 92.40 29 P P 08 53 28.1 +1.0
baz=266
F26K Sheenjek River 92.42 22 P P 08 53 28.0 +0.9
baz=265
M26K Nabesna, AK 92.49 28 P P 08 53 28.5 +1.0
baz=266
G26K Porcupine Rive 92.50 23 P P 08 53 28.1 +0.7
baz=265
I26K Coal Creek Min 92.63 25 P P 08 53 29.4 +1.4
baz=266
M27K Edge Creek, AK 93.00 28 P P 08 53 30.1 +0.1
baz=267
K27K Chicken 93.01 26 P P 08 53 30.6 +0.7
K27K IAmb IAmb 08 53 40.6
comp=Z,16nm,1.1s
K27K Chicken 93.01 26 P P 08 53 30.3 +0.5
baz=267,SNR=11
L27K Beaver Creek, 93.06 27 P P 08 53 30.6 +0.5
baz=267
CTG Chitna Glacier 93.19 29 P P 08 53 30.8 -0.1
baz=267
I27K Kandik River 93.28 25 P P 08 53 32.3 +1.1
baz=267
H27K Steamboat Moun 93.35 24 P P 08 53 31.7 +0.2
baz=267
EGAK Eagle 93.44 25 P P 08 53 32.3 +0.5
baz=268
BVCY Beaver Creek 93.48 28 P P 08 53 32.8 +0.7
baz=268
KLMR Klimovskoe 93.56 331 *e* P P 08 53 29.5 -2.9
KLMR pmax pmax
comp=Z,16nm,0.8s
YUK3 Moose Creek 93.65 28 P P 08 53 33.0 -0.1
baz=268
D27M Malcolm River 93.68 21 P P 08 53 33.0 0.0
baz=268
YUK8 Steele Glacier 93.97 29 P P 08 53 34.2 -0.4
baz=269
I28M Miner Creek 93.98 25 P P 08 53 34.6 +0.1
baz=269
F28M Old Crow 94.05 23 P P 08 53 34.7 +0.1
F28M Old Crow 94.05 23 P P 08 53 34.3 -0.2
baz=269
E28M Babbage River 94.19 22 P P 08 53 35.5 +0.3
baz=269
DAWY Dawson 94.19 26 P P 08 53 35.2 -0.1
baz=269,SNR=12
ASF Jabal al Asfar 94.36 302 P P 08 53 37.9 +1.0
comp=Z,7.2nm,0.8s,baz=198,slow=0.7,SNR=9.9
comp=Z,7.2nm,0.8s
O29M Mount Kennedy 94.53 30 P P 08 53 36.6 -0.5
baz=270
M29M Somme Creek 94.60 28 P P 08 53 37.3 0.0
baz=270
H29M Whitestone 94.63 24 P P 08 53 38.0 +0.8
baz=270
J29N Klondike Camp 94.70 26 P P 08 53 38.4 +0.6
baz=270
L29M L29M 94.75 27 P P 08 53 38.8 +0.9
baz=270
E29M Blow River 94.79 22 P P 08 53 38.3 +0.4
baz=271
K29M Barlow Dome 95.02 26 P P 08 53 39.8 +0.5
baz=271
OBN Obninsk 95.04 325 *e* P P 08 53 38.1 -1.2
OBN *e** PP **pP** 08 53 53.7 +1.0
OBN *e* 08 57 28.1
OBN *e* PPP PPP 08 59 31.5
OBN pmax pmax
comp=Z,14nm,0.8s
HYT Haines Junctio 95.06 29 P P 08 53 40.0 +0.5
baz=271
N30M Aishikik Lake 95.25 29 P P 08 53 40.9 +0.6
baz=271
EPYK Eagle Plains 95.29 24 P P 08 53 40.2 -0.1
baz=272,SNR=7.7
M30M Minto, Yukon 95.37 28 P P 08 53 41.5 +0.7
M30M Minto, Yukon 95.37 28 P P 08 53 40.6 -0.2
baz=271
G30M tAoh Zraii Nji 95.47 23 P P 08 53 41.3 +0.2
baz=272
I30M Mount Dempster 95.47 25 P P 08 53 40.8 -0.5
baz=272
J30M Hart River 95.52 26 P P 08 53 41.5 0.0
baz=272
F30M Barrier River 95.61 23 P P 08 53 41.7 0.0
baz=273
MMAI Mount Meron Ar 95.65 303 P P 08 53 43.1 +0.3
comp=Z,0.5nm,0.3s,baz=31,slow=44,SNR=2.7
comp=Z,0.5nm,0.3s
MAYO Mayo, Yukon 95.75 27 P P 08 53 42.3 -0.1

baz=272
O30N Mendenhall 95.75 29 P P 08 53 42.3 -0.2
baz=272
S31K Pelican 95.76 32 P P 08 53 41.9 -0.6
baz=271
EIL Elat 95.96 299 P P 08 53 43.9 -0.3
comp=Z,4.7nm,0.9s,baz=75,slow=21,SNR=3.6
comp=Z,4.7nm,0.9s
APA Apatity 96.13 337 *j* P P 08 53 41.0 -3.0
APA pmax pmax
comp=Z,10.0nm,1.0s
G31M Satah River 96.24 23 P P 08 53 43.8 -0.7
G31M IAmb IAmb 08 53 45.1
comp=Z,11nm,0.8s
G31M Satah River 96.24 23 P P 08 53 44.5 0.0
baz=274,SNR=8.8
WHY Whitehorse 96.35 30 P P 08 53 45.4 0.0
baz=273
F31M Tsiigehtchic 96.41 23 P P 08 53 44.3 -1.0
F31M IAmb IAmb 08 53 45.7
comp=Z,8.9nm,0.9s
F31M Tsiigehtchic 96.41 23 P P 08 53 44.9 -0.4
baz=275,SNR=7.4
INK Inuvik 96.42 22 P P 08 53 44.5 -0.8
INK IAmb IAmb 08 54 04.4
comp=Z,11nm,1.1s
INK Inuvik 96.42 22 P P 08 53 44.9 -0.5
baz=275,SNR=11
INK Inuvik 96.42 22 P P 08 53 44.5 -0.8
INK pmax pmax
comp=Z,11nm,1.1s
INK Inuvik 96.42 22 P P 08 53 44.8 -0.5
comp=Z,4.4nm,0.6s,baz=295,slow=4.0,SNR=28
INK LR LR 09 32 12.3
comp=Z,63nm,20.7s,baz=182,slow=32
comp=Z,4.4nm,0.6s
S32K Killisnoo 96.67 33 P P 08 53 46.3 -0.4
baz=273
FARO Faro, Yukon 96.99 28 P P 08 53 47.9 -0.3
baz=274
BR131 Keskin Array S 97.12 309 *i* P P 08 53 47.7 -1.7
BRTR Keskin Array B 97.12 309 P P 08 53 47.9 -1.5
comp=Z,1.9nm,0.8s,baz=116,slow=7.0,SNR=8.1
comp=Z,1.9nm,0.8s
N32M Quiet Lake 97.20 29 P Pdif 08 53 49.1 -0.1
baz=274
SNAA Sanae 98.31 194 LR LR 09 38 45.2
comp=Z,105nm,18.2s,baz=42,slow=36
S34M Telegraph Cree 98.48 32 P Pdif 08 53 54.6 -0.3
baz=276
A36M Sachs Harbour 98.62 18 P Pdif 08 53 55.3 +0.1
baz=283
ARCES ARCESS Array B 98.73 340 P P 08 53 55.3 -0.5
comp=Z,8.0nm,0.8s,baz=86,slow=6.2,SNR=15
comp=Z,8.0nm,0.8s
DLBC Dease Lake 99.00 32 LR LR 09 37 57.7
comp=Z,60nm,18.7s,baz=294,slow=35
WTLY Watson Lake, Y 99.41 30 P Pdif 08 53 58.6 -0.5
baz=278
C36M Paulatuk 99.63 20 P Pdif 08 53 59.5 -0.2
baz=284
AKASG Malin Array Be 99.69 321 P Pdif 08 54 00.3 -0.1
comp=Z,0.4nm,0.3s,baz=40,slow=36,SNR=2.1
comp=Z,0.4nm,0.3s
FINES FINESS Array B 100.02 332 P Pdif 08 54 00.6 -1.0
comp=Z,3.7nm,0.7s,baz=88,slow=5.9,SNR=9.2
MNK Minsk 100.09 325 *i* P **Pdif 08 54 00.1 -2.0**
MNK *i* 08 58 05.8
MNK *i* PPP PPP 09 00 13.2
MNK *i* S **SKSac 09 04 34.4 -2.2**
MNK *i* SS **SS 09 12 25.6 -1.7**
MNK *i* SSS SSS 09 16 17.6
MNK pmax pmax
comp=Z,4.0nm,0.8s
MNK pmax pmax
comp=N,19nm,0.9s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK MLR MLR
comp=E,90nm,10.0s
MNK MLR MLR
comp=Z,356nm,10.0s
BOSA Boshof 100.45 240 P Pdif 08 54 03.9 -0.7
comp=Z,4.1nm,1.1s,baz=153,slow=3.4,SNR=4.2
RES Resolute Bay 104.98 11 Pdiff **Pdif 08 54 23.9 +0.4**
comp=Z,1.3nm,0.6s,baz=310,slow=2.8,SNR=12
RES PKiKP **PKiKP 08 58 39.0 +1.1**
comp=Z,1.3nm,0.9s,baz=308,slow=5.6,SNR=4.3
YKA Yellowknife Ar 105.42 26 Pdiff **Pdif 08 54 25.2 -0.4**
comp=Z,0.2nm,0.6s,baz=295,slow=5.1,SNR=4.6
YKA PKiKP **PKiKP 08 58 39.2 +0.2**
comp=Z,0.5nm,0.7s,baz=289,slow=2.0,SNR=6.0
YKA PKKPbc **PKKPbc 09 10 04.0 -2.9**
comp=Z,0.6nm,0.8s,baz=110,slow=2.6,SNR=9.4
HFS Hagfors 106.21 332 Pdiff **Pdif 08 54 28.2 -1.1**
comp=Z,5.3nm,1.1s,baz=93,slow=5.9,SNR=6.2
NOA NORSAR Array B 107.01 333 Pdiff **Pdif 08 54 31.9 -0.9**
comp=Z,1.1nm,0.9s,baz=66,slow=4.7,SNR=4.1
GERES GERESS Array B 109.90 321 PKiKP **PKiKP 08 58 47.9 -0.2**
comp=Z,1.3nm,0.8s,baz=46,slow=3.9,SNR=3.6
NVAR Mina Array Bea 109.91 51 Pdiff **Pdif 08 54 44.0 -2.5**
comp=Z,0.2nm,0.7s,baz=99,slow=13,SNR=2.1
NVAR PKiKP **PKiKP 08 58 50.4 +1.9**
comp=Z,0.5nm,0.7s,baz=231,slow=1.9,SNR=4.0
HLID Hailey 111.61 45 P PKiKP 08 58 51.1 -0.4
baz=286
TPNV Topopah Spring 111.80 52 P PKiKP 08 58 51.4 -0.7
baz=282
BELC Belle Mtn. Jos 112.57 55 P PKiKP 08 58 52.8 -0.8
baz=281
GMRC Granite Mounta 112.70 54 P PKiKP 08 58 52.8 -1.0
baz=281
IRM Iron Mountain 113.24 55 P PKiKP 08 58 53.5 -1.2
baz=281
EGMT Eagleton 113.31 39 P PKiKP 08 58 53.9 -0.5
baz=291
BW06 Boulder Array 115.24 44 P PKiKP 08 58 58.3 -0.2
baz=289
PDAR Pinedale Array 115.24 44 PKP **PKiKP 08 58 56.5 -2.0**
comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=6.8
PDAR PKKPbc **PKKPbc 09 09 33.1 -1.6**
comp=Z,0.6nm,0.8s,baz=116,slow=6.9,SNR=5.1
WUAZ Wupatki 115.96 52 P PKPdf 08 58 59.3 -0.8
baz=284
LAO LASA Array 116.03 39 P PKiKP 08 58 59.4 -0.4
baz=294
EKA Eskdalemuir Ar 116.42 332 PKP **PKiKP 08 59 00.9 +0.8**
comp=Z,0.9nm,0.6s,baz=356,slow=1.1,SNR=1.9
O20A White River Ci 117.03 47 P PKiKP 08 59 02.1 0.0
baz=289,SNR=6.1
TUC Tucson 117.20 56 P PKiKP 08 59 03.2 +0.7
baz=283
K22A Casper 117.38 44 P PKiKP 08 59 02.7 +0.1
baz=291
MVCO Mesa Verde 117.74 50 P PKiKP 08 59 04.4 +0.8
baz=287
N23A Red Feather La 118.42 45 P PKiKP 08 59 04.9 0.0
baz=291
RSSD Black Hills 118.48 41 P PKiKP 08 59 05.0 +0.2
baz=294
S22A 4UR Ranch, Cre 118.84 49 P PKiKP 08 59 06.4 +0.6
baz=289,SNR=5.4
121A Cookes Peak, D 119.60 55 P PKiKP 08 59 07.7 +0.5
baz=285
Q24A Divide 119.67 47 P PKiKP 08 59 07.3 -0.1
baz=291
SDCO Great Sand Dun 119.83 48 P PKiKP 08 59 07.8 +0.1
baz=290,SNR=6.3
ANMO Albuquerque 119.99 52 P PKiKP 08 59 08.7 +0.7
baz=288
ULM Lac du Bonnet 120.33 32 PKP **PKPdf 08 59 07.5 -0.3**
comp=Z,0.9nm,0.5s,baz=218,slow=1.4,SNR=3.8
T25A Trinidad 120.85 49 P PKiKP 08 59 10.1 +0.5
baz=290
MNTX Cornudas Mount 121.79 55 P PKiKP 08 59 11.2 -0.1
baz=286
MSTX Muleshoe 123.19 52 P PKPdf 08 59 13.6 -0.3
baz=290
TXAR Lajitas Array 123.87 57 PKP **PKiKP 08 59 16.4 +0.8**
comp=Z,1.5nm,0.8s,baz=230,slow=1.5,SNR=11
EYMN Ely 124.01 32 P PKiKP 08 59 15.0 -0.2
baz=308
KSU1 Kansas State U 125.68 44 P PKPdf 08 59 18.2 -0.2
baz=298
ABTX Abilene, Hawle 126.11 52 P PKPdf 08 59 19.3 -0.2
baz=291
JCT Junction City 126.72 55 P PKiKP 08 59 20.9 -0.3
baz=290,SNR=15

TORD Torodi Ar. Bea 127.70 283 PKP **PKPdf 08 59 23.1 +0.1**
comp=Z,3.4nm,0.6s,baz=53,slow=7.6,SNR=4.6
TUL3 Leonard 127.71 47 P PKPdf 08 59 22.3 -0.1
baz=296
833A Chaparral WMA, 127.75 57 P PKPdf 08 59 21.6 -1.0
baz=288
JFWS Jewell Farm 127.75 36 P PKPdf 08 59 22.1 -0.2
baz=306
SCHQ Schefferville 127.76 12 PKP **PKiKP 08 59 22.8 +0.3**
comp=Z,1.0nm,0.5s,baz=26,slow=7.8,SNR=1.8
WHTX Lake Whitney, 128.06 52 P PKPdf 08 59 23.3 +0.1
baz=292
MDT Midelt 128.54 309 PKP **PKiKP 08 59 25.5 +0.6**
comp=Z,1.5nm,0.6s,baz=95,slow=1.9,SNR=3.7
GLMI Grayling 129.65 31 P PKiKP 08 59 26.1 -0.5
baz=314
HDIL Hopedale 129.71 38 P PKPdf 08 59 26.1 0.0
baz=306
CCM Cathedral Cave 129.85 42 P PKPdf 08 59 26.4 0.0
baz=302
MIAR Mount Ida 129.95 47 P PKPdf 08 59 26.2 -0.5
baz=298
PLCA Paso Flores 131.72 160 PKP **PKiKP 08 59 31.5 +0.5**
comp=Z,1.2nm,0.8s,baz=241,slow=2.2,SNR=5.7
PLCA SKPbc **SKPab 09 02 53.4 +1.1**
comp=Z,1.6nm,0.8s,baz=242,slow=3.5,SNR=4.0
WCI Wyandotte Cave 132.96 39 P PKPdf 08 59 32.4 +0.1
baz=307
OXF Oxford 132.96 45 P PKPdf 08 59 32.8 +0.4
baz=301
WVT Waverly 133.18 42 P PKiKP 08 59 33.3 -0.7
baz=304
P52A Corning 134.55 35 P PKPdf 08 59 35.1 -0.2
baz=313
LRAL Lakeview Retre 135.45 45 P PKiKP 08 59 37.9 -0.7
baz=302
TZTN Tazewell 135.72 39 P PKPdf 08 59 38.2 +0.6
baz=309
BINY Binghamton 135.82 27 P PKiKP 08 59 38.5 -0.6
baz=322
L61B Northampton 137.05 24 P PKiKP 08 59 40.9 -0.7
baz=327
BLA Blacksburg 137.18 36 P PKiKP 08 59 41.6 -0.5
baz=313
HRV Adam Dziewonsk 137.45 23 P PKPdf 08 59 40.1 -0.4
baz=328
GOGA Godfrey 137.68 43 P PKiKP 08 59 42.5 -0.7
baz=306
KMSC Kings Mountain 138.00 39 P PKiKP 08 59 42.8 -1.0
baz=310
CPUP Villa Florida 149.00 168 PKPbc **PKPbc 09 00 05.7 +0.4**
comp=Z,10nm,0.9s,baz=227,slow=1.6,SNR=13

IDC 16 08:49:33.7±2.6, 14°48S×174°30W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=162.0km s-min=24.9km az=148.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.21**	**256**	P	P	08 58 24.1	-0.1
	1.2nm,0.9s,baz=90,slow=7.0,SNR=6.9						
	1.2nm,0.9s						
ASAR	**Alice Springs**	**49.57**	**251**	P	P	08 58 26.8	-0.2
	2.8nm,0.7s,baz=86,slow=8.2,SNR=42						
	2.8nm,0.7s						
NVAR	**Mina Array Bea**	**74.24**	**43**	P	P	09 01 13.1	+0.1
	0.9nm,0.8s,baz=235,slow=8.7,SNR=5.3						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**81.72**	**12**	P	P	09 01 53.9	+0.1
	0.3nm,0.6s,baz=226,slow=7.0,SNR=4.1						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**82.17**	**42**	P	P	09 01 56.8	-0.1
	0.7nm,1.0s,baz=250,slow=2.6,SNR=2.4						
	0.7nm,1.0s						

IDC 16 08:54:53.9±2.7, 54°32N×86°17E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=19.9km s-min=12.3km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**245**	I	I	09 00 20.0	
	baz=64,slow=336,SNR=1.4						
ZALV	**Zalesovo Beam**	**0.88**	**245**	Pg	Pg	08 55 09.1	-1.6
	1.9nm,0.3s,baz=61,slow=17,SNR=9.2						
ZALV				Lg	Lg	08 55 23.9	
	5.9nm,0.3s,baz=67,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**5.96**	**235**	Pn	Pn	08 56 24.5	+1.3
KURBB	0.1nm,0.3s,baz=50,slow=13,SNR=3.1			Sn	Sn	08 57 31.3	-0.9
	baz=90,slow=29						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**7.93**	**200**	Pn	Pn	08 56 51.5	+1.0
	0.2nm,0.3s,baz=30,slow=14,SNR=11						
	0.6nm,0.4s						

IDC 16 09:04:17.8±2.4, 54°03N×86°49E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=20.8km s-min=12.3km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**266**	I	I	09 10 40.0	
	baz=82,slow=341,SNR=3.7						
ZALV	**Zalesovo Beam**	**0.99**	**266**	Pg	Pg	09 04 35.4	-1.3
	0.9nm,0.3s,baz=83,slow=17,SNR=13						
ZALV				Lg	Lg	09 04 50.9	
	2.1nm,0.3s,baz=89,slow=31,SNR=15						
ZALV				Rg	Rg	09 04 54.9	
	17nm,1.1s,baz=83,slow=24,SNR=29						
KURBB	**Kurchatov Arra**	**5.96**	**238**	Pn	Pn	09 05 48.3	+1.2
	0.1nm,0.3s,baz=55,slow=13,SNR=12						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	09 06 12.4	+0.9
	0.3nm,0.3s,baz=26,slow=13,SNR=23						
	0.4nm,0.3s						

*NEIC **16** 09:04:22.1±1.3, 56°10N±0°10×148°7W±0°1, h20km±9km, ML3.3/54, ML3.0(AEIC), Error ellipse: s-maj=14.4km s-min=9.0km az=166.0*
*AEIC **16** 09:04:25.5±1.2, 56°16N±0°09×148°7W±0°1, h2km±8km, Error ellipse: s-maj=13.5km s-min=8.9km az=168.0*
*IDC **16** 09:04:33.6±4.8, 56°69N×148°75W, h0km, mb3.2/1, mbtmp2.8/3, ML2.6/2, MS3.0/1, Error ellipse: s-maj=89.8km s-min=26.7km az=74.0*

ISC 16 09:04:21.6±1.9, 56°2N±0°1×148°65W±0°06, h10km, n163, s0898/172, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.67**	**308**		**Pn**	**09 05 05.5**	**+0.9**
KDAK					**Sn**	**09 05 36.4**	**-0.6**
KDAK	**Kodiak Island**	**2.67**	**308**	P	**Pn**	**09 05 05.4**	**+0.8**
	baz=125						
KDAK				S	**Sn**	**09 05 36.1**	**-0.9**
	baz=125						
OHAK	**Old Harbor**	**2.75**	**294**		**Pn**	**09 05 06.1**	**+0.3**
OHAK					**Sn**	**09 05 37.6**	**-1.4**
OHAK	**Old Harbor**	**2.75**	**294**	P	**Pn**	**09 05 06.0**	**+0.3**
	baz=111						
OHAK				S	**Sn**	**09 05 37.5**	**-1.5**
	baz=111						
SII	**Sitkinak Islan**	**3.10**	**279**	Pn	**Pn**	**09 05 07.1**	**-3.4**
SII				IAML		09 06 31.4	
	comp=N,81nm,1.4s						
SII				IAML		09 07 12.2	
	comp=E,96nm,1.4s						
SYI	**Shuyak Island**	**3.15**	**322**		**Pn**	**09 05 12.4**	**+1.3**
SYI				Sn	**Sn**	**09 05 48.1**	**-0.6**
Q20K	**Shuyak Island**	**3.15**	**321**	P	**Pn**	**09 05 12.2**	**+1.1**
	baz=139						
Q20K				S	**Sn**	**09 05 48.2**	**-0.6**
	baz=139						
Q23K	**Middleton Isla**	**3.46**	**20**		**Pn**	**09 05 15.8**	**+0.4**
Q23K				IAML		09 06 35.1	
	comp=N,92nm,1.5s						
Q23K	**Middleton Isla**	**3.46**	**20**	P	**Pn**	**09 05 16.1**	**+0.7**
	baz=202						
CNPM	**China Poot**	**3.60**	**339**		**Pn**	**09 05 18.5**	**+1.1**
CNPM					**Sn**	**09 05 59.4**	**-0.6**
BRSE	**Bradley Lake S**	**3.72**	**343**		**Pn**	**09 05 19.5**	**+0.5**
BRSE					**Sn**	**09 06 00.9**	**-2.0**
BRSE	**Bradley Lake S**	**3.72**	**343**	P	**Pn**	**09 05 19.5**	**+0.5**
	baz=162						
BRSE				S	**Sn**	**09 06 00.9**	**-2.0**
	baz=162						
BRLK	**Bradley Lake**	**3.76**	**342**		**Pn**	**09 05 20.4**	**+0.8**
BRLK					**Sn**	**09 06 03.2**	**-0.7**
BRLK				IAML		09 06 09.0	
	comp=N,19nm,1.1s						
HOM	**Homer**	**3.81**	**336**	Pn	**Pn**	**09 05 22.2**	**+1.9**
Q19K	**Cape Douglas,**	**3.83**	**317**	Pn	**Pn**	**09 05 21.1**	**+0.5**
Q19K				IAML		09 06 03.4	
	comp=N,69nm,1.1s						
P23K	**Montague Islan**	**3.86**	**9**		**Pn**	**09 05 21.2**	**+0.2**
P23K	**Montague Islan**	**3.86**	**9**	P	**Pn**	**09 05 21.2**	**+0.2**
	baz=190						
SEW	**Seward**	**3.93**	**354**		**Pn**	**09 05 22.5**	**+0.6**
SEW	**Seward**	**3.93**	**354**	P	**Pn**	**09 05 22.1**	**+0.2**
	baz=174						
P19K	**Oil Pt**	**4.23**	**327**	Pn	**Pn**	**09 05 28.1**	**+2.0**
P19K				IAML		09 06 21.8	
	comp=N,51nm,0.6s						
O22K	**Cooper Landing**	**4.33**	**353**		**Pn**	**09 05 27.5**	**+0.2**
O22K					**Sn**	**09 06 18.7**	**+1.0**
O22K	**Cooper Landing**	**4.33**	**353**	P	**Pn**	**09 05 27.6**	**+0.3**
	baz=172						
HIN	**Hinchinbrook I**	**4.35**	**14**		**Pn**	**09 05 28.7**	**+1.0**
HIN				IAML		09 06 25.5	
	comp=E,34nm,1.3s						
KAIM	**Kayak Island**	**4.36**	**29**	Pn	**Pn**	**09 05 28.2**	**+0.5**
KAIM				IAML		09 06 22.2	
	comp=N,46nm,1.5s						
KAIM				IAML		09 07 31.6	
	comp=E,33nm,1.5s						
KAIM	**Kayak Island**	**4.36**	**29**	P	**Pn**	**09 05 28.4**	**+0.7**
	baz=213						
SLKM	**Skilak Lake**	**4.39**	**350**		**Pn**	**09 05 28.8**	**+0.5**
O20K	**Slope Mountain**	**4.42**	**333**		**Pn**	**09 05 29.5**	**+0.8**
O20K	**Slope Mountain**	**4.42**	**333**	P	**Pn**	**09 05 29.5**	**+0.8**
	baz=150						
IVE	**Iliamna Volcan**	**4.47**	**331**		**Pn**	**09 05 30.1**	**+0.8**
ILSW	**Iliamna Southw**	**4.48**	**330**	Pn	**Pn**	**09 05 30.8**	**+1.3**
ILSW				IAML		09 06 34.8	
	comp=E,12nm,1.5s						
EYAK	**Cordova Ski Ar**	**4.62**	**18**	P	**Pn**	**09 05 31.8**	**+0.6**
	baz=200						
SUCK	**Suckling Hills**	**4.66**	**32**	Pn	**Pn**	**09 05 32.7**	**+0.8**
SUCK				IAML		09 06 29.6	
	comp=N,24nm,1.3s						
SUCK				IAML		09 06 35.8	
	comp=E,26nm,1.3s						
RAGM	**Ragged Mountai**	**4.69**	**25**	Pn	**Pn**	**09 05 33.2**	**+0.9**
RAGM				IAML		09 06 42.4	
	comp=E,34nm,0.6s						
FID	**Port Fidalgo**	**4.70**	**13**	Pn	**Pn**	**09 05 33.6**	**+1.2**
FID				IAML		09 06 28.7	
	comp=E,15nm,1.2s						
FID				IAML		09 06 29.3	
	comp=N,15nm,0.9s						
NICHA	**Nichawak Mount**	**4.74**	**30**		**Pn**	**09 05 33.7**	**+0.7**
HMT	**Hamilton**	**4.75**	**27**	Pn	**Pn**	**09 05 34.0**	**+0.9**
RED	**Redoubt Volcan**	**4.75**	**334**		**Pn**	**09 05 33.7**	**+0.4**
P18K	**Big Mountain,**	**4.75**	**315**	Pn	**Pn**	**09 05 33.9**	**+0.7**
RSO	**Redoubt South**	**4.79**	**335**	Pn	**Pn**	**09 05 34.5**	**+0.7**
RDT	**Redoubt**	**4.81**	**337**		**Pn**	**09 05 34.0**	**0.0**
GOAT	**Goat Mountain**	**4.85**	**24**		**Pn**	**09 05 35.3**	**+0.7**
NCT	**North Crescent**	**4.92**	**334**		**Pn**	**09 05 35.6**	**+0.1**
RC01	**Rabbit Creek A**	**4.93**	**354**	Pn	**Pn**	**09 05 37.2**	**+1.6**
RC01				IAML		09 06 33.2	
	comp=E,13nm,0.8s						
RC01				IAML		09 06 33.3	
	comp=N,12nm,1.1s						
BERG	**Berg Lake**	**4.94**	**30**		**Pn**	**09 05 36.5**	**+0.7**
BERG				IAML		09 06 31.9	
	comp=N,29nm,1.0s						
BERG				IAML		09 06 32.0	
	comp=E,30nm,1.1s						
O19K	**Port Alsworth**	**5.00**	**325**	Pn	**Pn**	**09 05 36.4**	**-0.1**
O19K				IAML		09 06 48.0	
	comp=N,28nm,0.6s						
O19K	**Port Alsworth**	**5.00**	**325**	P	**Pn**	**09 05 37.5**	**+0.9**
	baz=141						
FIS	**Fire Island**	**5.02**	**351**	Pn	**Pn**	**09 05 36.5**	**-0.4**
FIS				IAML		09 06 39.0	
	comp=E,24nm,1.2s						
FIS				IAML		09 06 56.3	
	comp=N,24nm,1.4s						
SNH	**Sunshine Point**	**5.03**	**35**	Pn	**Pn**	**09 05 37.5**	**+0.5**
SNH				IAML		09 07 53.0	
	comp=N,27nm,1.4s						
SNH				IAML		09 08 05.2	
	comp=E,18nm,1.2s						
O18K	**Koktuh Hills**	**5.05**	**319**	Pn	**Pn**	**09 05 37.2**	**-0.1**
O18K				IAML		09 06 58.0	
	comp=N,8.2nm,1.4s						
O18K	**Koktuh Hills**	**5.05**	**319**	P	**Pn**	**09 05 37.7**	**+0.4**
	baz=134						
KHIT	**Khitrov Hills**	**5.11**	**32**		**Pn**	**09 05 38.5**	**+0.3**
BMRM	**Bremner River**	**5.22**	**22**	P	**Pn**	**09 05 40.4**	**+0.7**
	baz=205						
KNK	**Knik Glacier**	**5.22**	**1**	Pn	**Pn**	**09 05 41.3**	**+1.6**
KNK				IAML		09 06 50.4	
	comp=E,7.1nm,0.5s						
KNK				IAML		09 07 14.1	
	comp=N,8.5nm,1.4s						
WAX	**Waxell Ridge**	**5.24**	**33**	Pn	**Pn**	**09 05 40.4**	**+0.5**
WAX				IAML		09 06 37.8	
	comp=E,23nm,0.4s						
BARK	**Barkley Ridge**	**5.31**	**35**		**Pn**	**09 05 41.5**	**+0.5**
SUA	**Susitna One**	**5.38**	**349**	Pn	**Pn**	**09 05 43.2**	**+1.2**
CRQM	**Cirque**	**5.40**	**30**		**Pn**	**09 05 42.8**	**+0.5**
PMR	**Palmer**	**5.41**	**358**	Pn	**Pn**	**09 05 42.2**	**+0.1**
CRQE	**Cirque**	**5.41**	**30**	P	**Pn**	**09 05 42.5**	**+0.2**
	baz=215						
CHGN	**Chignik**	**5.45**	**275**	Pn	**Pn**	**09 05 41.9**	**-0.8**
KLU	**Klutina**	**5.49**	**14**		**Pn**	**09 05 43.6**	**+0.3**
KLU	**Klutina**	**5.49**	**14**	P	**Pn**	**09 05 44.1**	**+0.8**
	baz=196						
TGL	**Tana Glacier**	**5.49**	**31**		**Pn**	**09 05 44.0**	**+0.6**
BAGL	**Bagley Icefiel**	**5.51**	**36**		**Pn**	**09 05 44.0**	**+0.4**
ISLE	**Juniper Island**	**5.52**	**34**	Pn	**Pn**	**09 05 44.0**	**+0.2**
N19K	**Bonanza Creek**	**5.54**	**329**	Pn	**Pn**	**09 05 44.8**	**+0.7**
N19K	**Bonanza Creek**	**5.54**	**329**	P	**Pn**	**09 05 44.7**	**+0.6**
	baz=144						
GHO	**Glory Hole Cre**	**5.59**	**359**		**Pn**	**09 05 46.7**	**+2.0**
SML	**Sawmill**	**5.62**	**2**	Pn	**Pn**	**09 05 45.5**	**+0.3**
SML	**Sawmill**	**5.62**	**2**	P	**Pn**	**09 05 46.7**	**+1.5**
	baz=182						
SCM	**Sheep Creek Mo**	**5.69**	**6**	Pn	**Pn**	**09 05 48.0**	**+1.9**
SCM	**Sheep Creek Mo**	**5.69**	**6**	P	**Pn**	**09 05 47.7**	**+1.6**
	baz=187						
VRDI	**Verde Repeater**	**5.72**	**26**	Pn	**Pn**	**09 05 47.1**	**+0.5**
SAMH	**Samovar Hills**	**5.73**	**43**		**Pn**	**09 05 48.1**	**+1.4**
KIAG	**Kiagna River**	**5.76**	**32**		**Pn**	**09 05 47.6**	**+0.4**
TABL	**Table Mountain**	**5.80**	**40**	Pn	**Pn**	**09 05 49.1**	**+1.4**
GRNC	**Granite Creek**	**5.80**	**36**	Pn	**Pn**	**09 05 47.8**	**0.0**
N25K	**Chitina, Valde**	**5.81**	**19**		**Pn**	**09 05 48.0**	**+0.3**
GLB	**Gilahina Butte**	**5.82**	**24**	Pn	**Pn**	**09 05 47.8**	**-0.1**
N18K	**Kilae Creek**	**5.88**	**323**	Pn	**Pn**	**09 05 49.2**	**+0.5**
N18K	**Kilae Creek**	**5.88**	**323**	P	**Pn**	**09 05 49.1**	**+0.4**
	baz=137						
PCA	**Pinnacle**	**5.91**	**45**		**Pn**	**09 05 49.3**	**+0.1**
PINM	**Pinnacle**	**5.91**	**45**	P	**Pn**	**09 05 50.0**	**+0.8**
	baz=232						
PTPK	**Patty Peak**	**5.94**	**30**		**Pn**	**09 05 50.4**	**+0.6**
MCARA	**McCarthy VSAT**	**5.96**	**27**	Pn	**Pn**	**09 05 50.5**	**+0.7**
SKT	**Skwentna**	**5.98**	**347**	Pn	**Pn**	**09 05 50.8**	**+0.8**
PNL	**Peninsula**	**6.03**	**51**		**Pn**	**09 05 51.3**	**+0.6**
PNL	**Peninsula**	**6.03**	**51**	P	**Pn**	**09 05 51.3**	**+0.6**
	baz=238						
M24K	**Tolsona, Glenn**	**6.05**	**11**	Pn	**Pn**	**09 05 51.7**	**+0.6**
O16K	**Kokwok River B**	**6.07**	**308**	Pn	**Pn**	**09 05 52.1**	**+0.8**
BCPM	**Bancas Point**	**6.08**	**48**	Pn	**Pn**	**09 05 51.4**	**0.0**
BARN	**Barnard Glacie**	**6.08**	**34**	Pn	**Pn**	**09 05 52.5**	**+0.9**
SVW2	**Sparrevohn**	**6.09**	**326**	Pn	**Pn**	**09 05 52.2**	**+0.6**
CTG	**Chitna Glacier**	**6.11**	**36**	P	**Pn**	**09 05 52.4**	**+0.4**
	baz=222						
CTGM	**Chitina Glacie**	**6.11**	**36**	Pn	**Pn**	**09 05 52.2**	**+0.2**
LOGN	**Logan Glacier**	**6.12**	**38**	Pn	**Pn**	**09 05 52.6**	**+0.5**
M20K	**Styx River**	**6.14**	**340**	Pn	**Pn**	**09 05 52.8**	**+0.4**
WASW	**Wrangell South**	**6.18**	**20**		**Pn**	**09 05 54.0**	**+0.9**
WACK	**Wrangell Chich**	**6.21**	**19**		**Pn**	**09 05 54.9**	**+1.5**
N17K	**Nushagak Hills**	**6.24**	**317**	Pn	**Pn**	**09 05 54.7**	**+1.1**
CUT	**Chulitna**	**6.27**	**353**	Pn	**Pn**	**09 05 54.2**	**+0.2**
CNBA	**Chernabura Isl**	**6.37**	**262**	Pn	**Pn**	**09 05 55.1**	**-0.2**
M19K	**Big River Lodg**	**6.43**	**335**	Pn	**Pn**	**09 05 57.0**	**+0.7**

M19K	**Big River Lodg**	**6.43**	**335**	P		**Pn**	**09 05 56.5**	**+0.2**
	baz=150							
M18K	**Stony River**	**6.47**	**328**			**Pn**	**09 05 57.4**	**+0.6**
M18K	**Stony River**	**6.47**	**328**			**Pn**	**09 05 57.4**	**+0.6**
	baz=142							
O29M	**Mount Kennedy**	**6.71**	**48**	Pn		**Pn**	**09 06 01.4**	**+1.1**
O29M	**Mount Kennedy**	**6.71**	**48**	P		**Pn**	**09 06 01.1**	**+0.9**
	baz=236							
P29M	**Windy Craggy**	**6.75**	**55**			**Pn**	**09 06 01.0**	**+0.4**
P29M	**Windy Craggy**	**6.75**	**55**	P		**Pn**	**09 06 00.9**	**+0.3**
	baz=244							
L19K	**White Mountain**	**6.79**	**335**	Pn		**Pn**	**09 06 00.8**	**-0.3**
L19K	**White Mountain**	**6.79**	**335**	P		**Pn**	**09 06 01.3**	**+0.2**
	baz=149							
M26K	**Nabesna, AK**	**6.85**	**23**	Pn		**Pn**	**09 06 02.1**	**0.0**
DHY	**Denali Highway**	**6.92**	**5**	Pn		**Pn**	**09 06 04.0**	**+0.9**
M17K	**Holitna River**	**6.92**	**322**	Pn		**Pn**	**09 06 03.7**	**+0.7**
M17K	**Holitna River**	**6.92**	**322**	P		**Pn**	**09 06 04.1**	**+1.1**
	baz=135							
S31K	**Pelican**	**6.99**	**70**	Pn		**Pn**	**09 06 03.4**	**-0.5**
M27K	**Edge Creek, AK**	**7.07**	**27**	Pn		**Pn**	**09 06 05.2**	**+0.1**
MENT	**Mentasta**	**7.20**	**18**	Pn		**Pn**	**09 06 07.6**	**+0.8**
M16K	**Timber Creek**	**7.23**	**316**	Pn		**Pn**	**09 06 08.8**	**+1.6**
N15K	**Kwethluk River**	**7.23**	**308**	Pn		**Pn**	**09 06 07.9**	**+0.6**
L18K	**Granite Mounta**	**7.30**	**329**	Pn		**Pn**	**09 06 08.8**	**+0.7**
TRF	**Thorofare Moun**	**7.32**	**354**	Pn		**Pn**	**09 06 08.8**	**+0.3**
L26K	**Log Cabin Wild**	**7.35**	**19**	Pn		**Pn**	**09 06 10.0**	**+1.2**
CAST	**Castle Rocks**	**7.44**	**348**	Pn		**Pn**	**09 06 10.1**	**+0.1**
HYT	**Haines Junctio**	**7.45**	**47**	Pn		**Pn**	**09 06 10.1**	**-0.2**
KTH	**Kantishna Hill**	**7.46**	**352**	Pn		**Pn**	**09 06 11.3**	**+1.0**
K20K	**Telida**	**7.67**	**341**	Pn		**Pn**	**09 06 14.1**	**+0.8**
L27K	**Beaver Creek,**	**7.69**	**24**	Pn		**Pn**	**09 06 12.1**	**-1.4**
TTA	**Tatalina**	**7.71**	**334**	Pn		**Pn**	**09 06 14.0**	**+0.2**
SKAG	**Skagway**	**7.82**	**60**	Pn		**Pn**	**09 06 14.8**	**-0.4**
L16K	**Owhat River**	**7.85**	**319**	Pn		**Pn**	**09 06 16.0**	**+0.3**
N30M	**Aishikik Lake**	**7.97**	**44**	Pn		**Pn**	**09 06 18.7**	**+1.3**
O30N	**Mendenhall**	**8.01**	**50**	Pn		**Pn**	**09 06 19.1**	**+1.2**
JIS	**Juneau Island**	**8.01**	**69**	Pn		**Pn**	**09 06 17.1**	**-0.7**
M29M	**Somme Creek**	**8.13**	**36**	Pn		**Pn**	**09 06 21.5**	**+1.8**
K17K	**Iditarod**	**8.16**	**327**	Pn		**Pn**	**09 06 20.8**	**+0.9**
HDA	**Harding Lake**	**8.27**	**5**	Pn		**Pn**	**09 06 22.6**	**+1.1**
WRH	**Wood River Hil**	**8.30**	**2**	Pn		**Pn**	**09 06 22.8**	**+1.0**
NEA2	**Nenana**	**8.42**	**359**	Pn		**Pn**	**09 06 24.5**	**+1.0**
J20K	**Nowinta River**	**8.45**	**343**	Pn		**Pn**	**09 06 24.0**	**+0.1**
K27K	**Chicken**	**8.50**	**20**	Pn		**Pn**	**09 06 26.0**	**+1.4**
J19K	**Poorman**	**8.55**	**339**	Pn		**Pn**	**09 06 25.7**	**+0.5**
J25K	**Salcha River,**	**8.59**	**10**	Pn		**Pn**	**09 06 26.6**	**+0.7**
ILAR	**Eielson Array**	**8.64**	**5**	Pn		**Pn**	**09 06 25.8**	**-0.7**
ILAR	**Eielson Array**	**8.64**	**5**	Pn		**Pn**	**09 06 28.9**	**+2.4**
	baz=189,slow=13,SNR=4.8							
ILAR					Sn	**Sn**	**09 08 01.4**	**-2.4**
	comp=E,0.1nm,0.3s,baz=189,slow=23,SNR=6.5							
	comp=E,0.2nm,0.5s							
P32M	**Atlin**	**8.64**	**61**	Pn		**Pn**	**09 06 27.1**	**+0.5**
J26L	**Joseph Creek**	**8.69**	**15**	Pn		**Pn**	**09 06 28.5**	**+1.2**
L29M	**L29M**	**8.72**	**33**	Pn		**Pn**	**09 06 29.6**	**+1.9**
M30M	**Minto, Yukon**	**8.79**	**39**	Pn		**Pn**	**09 06 29.2**	**+0.6**
MDM	**Murphy Dome**	**8.79**	**1**	Pn		**Pn**	**09 06 30.7**	**+2.2**
M31M	**Drury Creek, Y**	**9.45**	**45**	Pn		**Pn**	**09 06 39.4**	**+1.8**
K29M	**Barlow Dome**	**9.46**	**31**	Pn		**Pn**	**09 06 39.0**	**+1.2**
H21K	**Melozitna Rive**	**9.69**	**350**	Pn		**Pn**	**09 06 40.4**	**-0.5**
FARO	**Faro, Yukon**	**9.88**	**46**	Pn		**Pn**	**09 06 45.5**	**+1.9**
R33M	**Jennings River**	**9.96**	**64**	Pn		**Pn**	**09 06 45.4**	**+0.8**
IMAR	**Indian Mountai**	**10.11**	**348**	Pn		**Pn**	**09 06 47.7**	**+1.1**
H18K	**Honhosa River**	**10.15**	**336**	Pn		**Pn**	**09 06 47.1**	**0.0**
G23K	**Bananza Creek**	**10.56**	**357**	Pn		**Pn**	**09 06 53.1**	**+0.3**
G21K	**Allakaket**	**10.60**	**349**	Pn		**Pn**	**09 06 55.8**	**+2.5**
INK	**Inuvik**	**13.97**	**24**	LR		LR	09 12 12.1	
	comp=E,58nm,19.5s,baz=7.0,slow=34							
YKA	**Yellowknife Ar**	**18.29**	**56**	P		P	09 08 43.8	+8.6
	baz=268,slow=2.4,SNR=1.2							
	comp=E,0.1nm,0.7s							
NVAR	**Mina Array Bea**	**26.86**	**119**	P		P	09 10 19.2	+17
	comp=E,0.2nm,0.5s,baz=307,slow=8.9,SNR=1.6							
	comp=E,0.2nm,0.5s							

*NOU **16** 09:08:29.4, 45°.18S×167°.17E, h151km, MLv3.6/5, South Island, New Zealand*
*WEL **16** 09:08:34.8±0.6, 45°.3S×167°.7E±°, h37km±6km, M3.2/7, ML3.4/9, MLv3.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=117.3, confirmed*
ISC 16 09:08:34.2±1.5, 45°.19S±0°.03×167°.39E±0°.05, h66km±10km, n39, σ1§21/59, South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.32**	**211**	P		**Pn**	**09 08 43.7**	**-1.5**
DCZ				S		**Sn**	**09 08 51.5**	**-1.6**
MLZ	**Mavora Lakes**	**0.54**	**109**	P		**Pn**	**09 08 47.2**	**0.0**
MLZ				S		**Sn**	**09 08 57.9**	**+1.2**
MSZ	**Milford Sound**	**0.64**	**37**	P		**Pn**	**09 08 48.0**	**-0.2**
MSZ				S		**Sn**	**09 08 58.7**	**+0.3**
MOSS	**Mossburn Schoo**	**0.77**	**129**	P		**Pn**	**09 08 50.4**	**+0.8**
MOSS				S		**Sn**	**09 09 03.0**	**+1.9**
GLNY	**Glenorchy**	**0.79**	**66**	S		**Sn**	**09 08 59.8**	**-1.7**
WHZ	**Wether Hill Ro**	**0.81**	**151**	P		**Pn**	**09 08 50.3**	**+0.2**
WHZ				S		**Sn**	**09 09 02.3**	**+0.5**
QTPS	**Queenstown Pol**	**0.92**	**81**	P		**Pn**	**09 08 52.0**	**+0.5**
QTPS				S		**Sn**	**09 09 04.0**	**-0.2**
RRKS	**Rarakau**	**0.96**	**177**	P		**Pn**	**09 08 52.8**	**+0.8**
RRKS				S		**Sn**	**09 09 06.4**	**+1.1**
PYZ	**Puysegur Point**	**1.10**	**207**	P		**Pn**	**09 08 54.6**	**+0.8**
PYZ	**Puysegur Point**	**1.10**	**207**	P		**Pn**	**09 08 54.4**	**+0.6**
PYZ				S		**Sn**	**09 09 08.2**	**-0.2**
ORPS	**Orepuki**	**1.13**	**167**	S		**Sn**	**09 09 09.8**	**+0.7**
WKZ	**Wanaka**	**1.21**	**73**	P		**Pn**	**09 08 56.3**	**+1.0**
WKZ				S		**Sn**	**09 09 13.0**	**+2.0**
WNPS	**Wanaka Nationa**	**1.34**	**69**	P		**Pn**	**09 08 57.2**	**+0.3**
EAZ	**Earnscleugh**	**1.36**	**92**	P		**Pn**	**09 08 58.1**	**+0.9**
EAZ				S		**Sn**	**09 09 15.3**	**+0.9**
GODC	**Gore District**	**1.42**	**131**	P		**Pn**	**09 08 57.0**	**-1.0**
JCZ	**Jackson Bay**	**1.50**	**42**	P		**Pn**	**09 09 00.2**	**+1.1**
JCZ	**Jackson Bay**	**1.50**	**42**	P		**Pn**	**09 08 58.7**	**-0.4**
JCZ				S		**Sn**	**09 09 21.4**	**+3.6**
NSBS	**Neils Beach**	**1.50**	**38**	P		**Pn**	**09 09 01.9**	**+2.9**
NSBS				S		**Sn**	**09 09 18.1**	**+0.4**
MECS	**Makarora Emerg**	**1.63**	**55**	P		**Pn**	**09 09 01.9**	**+1.2**
MECS				S		**Sn**	**09 09 23.1**	**+2.3**
APZ	**The Paps**	**1.70**	**166**	P		**Pn**	**09 09 02.2**	**+0.4**
APZ				S		**Sn**	**09 09 22.0**	**-0.5**
TUZ	**Tuapeka**	**1.75**	**117**	P		**Pn**	**09 09 02.9**	**+0.5**
TUZ				S		**Sn**	**09 09 24.3**	**+0.6**
SYZ	**Scrubby Hill**	**1.82**	**138**	P		**Pn**	**09 09 03.9**	**+0.6**
SYZ	**Scrubby Hill**	**1.82**	**138**	P		**Pn**	**09 09 03.9**	**+0.6**
SYZ				S		**Sn**	**09 09 26.1**	**+0.6**
BDCS	**Balclutha Dist**	**1.95**	**124**	P		**Pn**	**09 09 05.1**	**0.0**
LBZ	**Lake Benmore**	**2.15**	**69**	P		**Pn**	**09 09 07.5**	**-0.3**
LBZ				S		**Sn**	**09 09 32.5**	**-0.8**
ODZ	**Otahua Downs**	**2.31**	**88**	P		**Pn**	**09 09 09.9**	**-0.1**
ODZ	**Otahua Downs**	**2.31**	**88**	P		**Pn**	**09 09 10.0**	**+0.1**
ODZ				S		**Sn**	**09 09 35.9**	**-1.4**
HHSZ	**Highcliff Hill**	**2.36**	**108**	P		**Pn**	**09 09 11.4**	**+0.8**
HHSZ				S		**Sn**	**09 09 36.7**	**-1.8**
FOZ	**Fox Glacier**	**2.40**	**47**	P		**Pn**	**09 09 10.5**	**-0.7**
TMZ	**Timaru**	**2.70**	**74**	P		**Pn**	**09 09 14.5**	**-0.8**
TMZ				S		**Sn**	**09 09 44.8**	**-2.0**
ARCZ	**Arundel**	**2.98**	**67**	P		**Pn**	**09 09 17.8**	**-1.3**
RPZ	**Rata Peaks**	**3.01**	**62**	P		**Pn**	**09 09 18.6**	**-0.9**
RPZ	**Rata Peaks**	**3.01**	**62**	P		**Pn**	**09 09 18.5**	**-1.0**
WACZ	**Wakanui South**	**3.42**	**70**	P		**Pn**	**09 09 23.8**	**-1.2**
INZ	**Inchbonnie**	**3.83**	**51**	P		**Pn**	**09 09 30.7**	**+0.1**
MQZ	**McQueen's Vall**	**4.05**	**70**	P		**Pn**	**09 09 32.1**	**-1.5**
LTZ	**Lake Taylor**	**4.26**	**57**	P		**Pn**	**09 09 35.1**	**-1.6**
DSZ	**Denniston Nort**	**4.71**	**45**	P		**Pn**	**09 09 42.1**	**-0.7**
QRZ	**Quartz Range**	**5.76**	**43**	P		**Pn**	**09 09 56.1**	**-1.0**

IDC 16 09:15:07.0±1.9, 54°.45N×83°.69E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=15.8km s-min=9.2km az=164.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**127**	I		I	09 20 20.0	
	baz=306,slow=343,SNR=2.3							
ZALV	**Zalesovo Beam**	**0.83**	**127**	Pg		Pg	09 15 22.6	-0.2
	6.2nm,0.3s,baz=305,slow=18,SNR=45							
ZALV				Lg		Lg	09 15 35.4	
	4.7nm,0.3s,baz=311,slow=28,SNR=14							
ZALV				Rg		Rg	09 15 41.5	
	5.7nm,0.3s,baz=308,slow=24,SNR=4.2							

KURBB	**Kurchatov Arra**	**4.96**	**222**	Pn		Pn	09 16 22.9	+0.3
	0.1nm,0.3s,baz=19,slow=12,SNR=3.8							
KURBB				Pg		Pb	09 16 34.5	0.0
	0.1nm,0.3s,baz=34,slow=15,SNR=4.7							
KURBB				Lg		Lg	09 17 44.2	
	baz=76,slow=23,SNR=1.8							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**7.71**	**187**	Pn		Pn	09 17 00.0	-0.5
	0.2nm,0.3s,baz=13,slow=13,SNR=11							
MKAR				Sn		Sn	09 18 26.9	-1.6
	0.1nm,0.3s,baz=18,slow=28,SNR=2.1							
	0.2nm,0.3s							

*NNC **16** 09:20:20.1±1.8, 53°.56N×87°.99E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=13.1km s-min=8.0km az=64.0, Suspected Mining explosion.*
*IDC **16** 09:20:21.6±2.8, 53°.57N×87°.82E, h0km, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=24.5km s-min=16.1km az=54.0*
ISC 16 09:20:21.0±3.6, 53°.7N±0°.1×87°.9E±0°.2, h0km, n8, σ1§11/12, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**280**	I		I	09 31 51.0	
	0.1nm,1.4s,baz=96,slow=327,SNR=12							
ZAA0	**Zalesovo Array**	**1.82**	**280**	⇑P		**Pn**	**09 20 53.5**	**-0.1**
	1.1nm,0.7s							
ZAA0				⇓S		**Sg**	**09 21 20.0**	**+0.4**
	2.1nm,0.7s							
ZALV	**Zalesovo Beam**	**1.82**	**280**	Pg		**Pn**	**09 20 53.6**	**0.0**
	1.3nm,0.3s,baz=104,slow=12,SNR=35							
ZALV				Lg		Lg	09 21 20.3	
	1.5nm,0.3s,baz=103,slow=26,SNR=15							
KURK	**Kurchatov**	**6.40**	**246**	⇓Pn		**Pn**	**09 21 56.2**	**-0.2**
	1.4nm,0.8s							
KURK				⇑Sn		**Sn**	**09 23 12.1**	**+2.0**
	1.2nm,0.7s							
KURK				⇑Lg		Lg	09 23 42.6	
	5.2nm,1.0s							
KURBB	**Kurchatov Arra**	**6.49**	**246**	⇑Pn		**Pn**	**09 21 57.2**	**-0.6**
	2.0nm,0.6s							
KURBB				⇑Sn		**Sn**	**09 23 12.5**	**0.0**
	3.5nm,0.7s							
KURBB				⇓Lg		Lg	09 23 46.3	
	6.6nm,0.8s							
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn		**Pn**	**09 21 58.3**	**+0.5**
	0.1nm,0.3s,baz=62,slow=14,SNR=9.4							
KURBB				Sn		**Sn**	**09 23 10.1**	**-2.4**
	0.1nm,0.3s,baz=64,slow=24,SNR=2.4							
KURBB				Lg		Lg	09 23 45.5	
	baz=63,slow=32,SNR=4.1							
	1.6nm,0.6s							
MK31	**Makanchi Array**	**7.74**	**210**	⇑Pn		**Pn**	**09 22 14.8**	**-0.2**
	0.3nm,0.6s,baz=30,slow=12,SNR=6.7							
MK31				⇓Sn		**Sn**	**09 23 42.9**	**-0.4**
	0.6nm,0.8s							
MK31				⇑Lg		Lg	09 24 22.1	
	1.6nm,0.8s,baz=36,slow=31,SNR=4.3							
MKAR	**Makanchi Array**	**7.74**	**210**	Pn		**Pn**	**09 22 15.5**	**+0.6**
	0.1nm,0.3s,baz=29,slow=12,SNR=7.6							
MKAR				Lg		Lg	09 24 22.6	
	0.1nm,0.3s,baz=35,slow=32,SNR=5.7							
	0.5nm,0.6s							

IDC 16 09:26:54.4±891.0, 41°.74N×64°.71E, h0km, Error ellipse: s-maj=360.1km s-min=158.3km az=171.0, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**9.83**	**334**	I		I	10 20 40.0	
	0.1nm,0.7s,baz=151,slow=327,SNR=5.7							
I46RU	**ZALESOVO INFRA**	**18.13**	**41**	I		I	11 15 17.3	
	baz=236,slow=334,SNR=0.3							
I43RU	**DUBNA INFRASON**	**23.17**	**320**	I		I	11 51 35.0	
	baz=117,slow=327,SNR=6.2							

*CATAC **16** 09:28:27.9±0.4, 12°.80N×90°.27W, h7km±3km, MB5.5, mb5.2, ML4.1*
*SNET **16** 09:28:28.9±1.2, 12°.82N×90°.36W, h38km, ML4.0*
*IDC **16** 09:28:29.1±1.5, 13°.64N×89°.72W, h0km, mb3.9/9, mbtmp4.0/11, ML3.7/2, MS3.6/4, Error ellipse: s-maj=47.6km s-min=17.4km az=38.0*
*NEIC **16** 09:28:29.0±2.9, 12°.92N±0°.05×90°.25W±0°.02, h10km±1km, mb4.2/52, Error ellipse: s-maj=9.5km s-min=3.1km az=162.0*
ISC 16 09:28:32.9±1.1, 12°.92N±0°.05×90°.19W±0°.05, h53km±10km, n200, σ1§62/229, mb4.1/33, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.02**	**56**	*i* P		**Pn**	**09 28 49.5**	**-1.5**
LALI				IAML			09 29 03.9	
	comp=Z,470nm,1.0s							
LALI				*i* S		**Sn**	**09 29 06.5**	**+2.1**
JAYA	**Jayaque - finc**	**1.03**	**44**	*eP*		**Pn**	**09 28 49.9**	**-1.4**
JAYA				*eS*		**Sn**	**09 29 03.8**	**-1.1**
JAYA	**Jayaque - finc**	**1.03**	**44**	*i* P		**Pn**	**09 28 50.0**	**-1.3**
JAYA				*i* S		**Sn**	**09 29 05.9**	**+1.1**
JAYA				IAML			09 29 07.3	
	comp=Z,6μm,1.0s							
NUBE	**Las Nubes**	**1.06**	**22**	*eP*		**Pn**	**09 28 49.7**	**-2.0**
NUBE				*eS*		**Sn**	**09 29 05.0**	**-0.5**
NUBE	**Las Nubes**	**1.06**	**22**	*i* P		**Pn**	**09 28 49.8**	**-1.9**
NUBE				IAML			09 29 05.9	
	comp=Z,2μm,1.0s							
NUBE				*i* S		**Sn**	**09 29 06.5**	**+1.0**
CEVE	**Cerro Verde**	**1.06**	**31**	*eP*		**Pn**	**09 28 50.4**	**-1.4**
CEVE				*eS*		**Sn**	**09 29 07.3**	**+1.6**
CEVE	**Cerro Verde**	**1.06**	**31**	*i* P		**Pn**	**09 28 50.6**	**-1.2**
CEVE				*i* S		**Sn**	**09 29 07.0**	**+1.3**
CEVE				IAML			09 29 10.4	
	comp=Z,4μm,1.0s							
LOAL	**Lomas de Alarc**	**1.15**	**20**	*eP*		**Pn**	**09 28 51.5**	**-1.3**
LOAL				*eS*		**Sn**	**09 29 08.4**	**+0.9**
ITCA	**Escuela Especi**	**1.16**	**50**	*i* P		**Pn**	**09 28 51.7**	**-1.4**
ITCA				*i* S		**Sn**	**09 29 10.4**	**+2.4**
ITCA				IAML			09 29 27.6	
	comp=Z,6μm,1.0s							
PMON	**Piamonte**	**1.16**	**47**	*i* P		**Pn**	**09 28 51.9**	**-1.2**
PMON				IAML			09 29 16.8	
	comp=Z,3μm,1.0s							
CEDA	**San Andres**	**1.17**	**41**	*i* P		**Pn**	**09 28 51.8**	**-1.3**
CEDA				*i* S		**Sn**	**09 29 09.4**	**+1.3**
CEDA				IAML			09 29 26.4	
	comp=Z,5μm,1.0s							
BOQS	**Boqueron**	**1.20**	**47**	*eP*		**Pn**	**09 28 53.0**	**-0.7**
PANCS	**Alcalda de**	**1.20**	**55**	*i* P		**Pn**	**09 28 51.6**	**-1.9**
PANCS				*i* S		**Sn**	**09 29 09.2**	**+0.3**
PANCS				IAML			09 29 09.7	
	comp=Z,5μm,1.0s							
SNET	**Serv Nac Est T**	**1.21**	**50**	Pn		**Pn**	**09 28 52.2**	**-1.4**
SNET	**Serv Nac Est T**	**1.21**	**50**	*i* P		**Pn**	**09 28 52.4**	**-1.2**
SNET				*i* S		**Sn**	**09 29 11.3**	**+2.3**
SNET				IAML			09 29 12.8	
	comp=Z,3μm,1.0s							
UEES	**Universidad Ev**	**1.22**	**49**	*i* P		**Pn**	**09 28 52.5**	**-1.3**
UEES				IAML			09 29 12.6	
	comp=Z,1μm,1.0s							
LOMA	**Loma Larga**	**1.23**	**54**	*eP*		**Pn**	**09 28 52.8**	**-1.2**
LOMA	**Loma Larga**	**1.23**	**54**	*i* P		**Pn**	**09 28 52.7**	**-1.2**
LOMA				IAML			09 29 10.9	
	comp=Z,2μm,1.0s							
LOMA				*i* S		**Sn**	**09 29 12.5**	**+2.9**
UNIC	**Universidad Ca**	**1.23**	**30**	*i* P		**Pn**	**09 28 52.7**	**-1.2**
UNIC				*i* S		**Sn**	**09 29 11.4**	**+1.9**
UNIC				IAML			09 29 12.5	
	comp=Z,650nm,1.0s							
UTEC	**Universidad Te**	**1.24**	**51**	*i* P		**Pn**	**09 28 53.0**	**-1.0**
UTEC				IAML			09 29 21.1	
	comp=Z,1μm,1.0s							
QUEZ	**Alcaldia de Qu**	**1.28**	**44**	*i* P		**Pn**	**09 28 53.5**	**-1.0**
QUEZ				*i* S		**Sn**	**09 29 13.5**	**+2.9**
QUEZ				IAML			09 29 19.6	
	comp=Z,7μm,1.0s							
UDBS	**Universidad Do**	**1.28**	**52**	*i* P		**Pn**	**09 28 53.6**	**-1.0**
UDBS				*i* S		**Sn**	**09 29 12.1**	**+1.3**
UDBS				IAML			09 29 15.9	
	comp=Z,2μm,1.0s							
LFRS	**El Faro**	**1.30**	**57**	*eP*		**Pn**	**09 28 53.9**	**-1.1**

SJTE	**Alcalda de S**	**1.34**	**59**	*i* P		**Pn**	**09 28 54.1**	**-1.4**
SJTE				*i* S		**Sn**	**09 29 14.0**	**+1.7**
SJTE				IAML			09 29 19.7	
	comp=Z,1μm,1.0s							
PAVA	**Las Pavas**	**1.45**	**57**	*i* P		**Pn**	**09 28 56.4**	**-0.6**
PAVA				IAML			09 28 57.5	
	comp=Z,2μm,1.0s							
TECO	**Alcaldia de Te**	**1.50**	**66**	*i* P		**Pn**	**09 28 55.8**	**-1.8**
TECO				*i* S		**Sn**	**09 29 17.0**	**+0.9**
TECO				IAML			09 29 24.5	
	comp=Z,540nm,1.0s							
UESV	**Universidad de**	**1.54**	**62**	*i* P		**Pn**	**09 28 56.8**	**-1.3**
UESV				IAML			09 28 58.0	
	comp=Z,1μm,1.0s							
UESV				*i* S		**Sn**	**09 29 18.3**	**+1.2**
SCLA	**Alcaldia de Sa**	**1.62**	**61**	*i* P		**Pn**	**09 28 58.7**	**-0.5**
SCLA				*i* S		**Sn**	**09 29 24.2**	**+5.1**
SCLA				IAML			09 29 28.1	
	comp=Z,490nm,1.0s							
GUNB	**GUNB**	**1.68**	**355**	*i* P		**Pn**	**09 28 58.2**	**-2.0**
GUNB				*i* S		**Sn**	**09 29 22.3**	**+1.6**
GUNB				IAML			09 29 33.0	
	comp=Z,1μm,1.0s							
MTO3	**Montecristo**	**1.68**	**29**	Pn		**Pn**	**09 28 59.3**	**-0.9**
MTO3				Sn		**Sn**	**09 29 23.5**	**+2.8**
MTO3	**Montecristo**	**1.68**	**29**	*i* P		**Pn**	**09 28 59.5**	**-0.7**
MTO3				IAML			09 29 00.6	
	comp=Z,1μm,1.0s							
MTO3				*i* S		**Sn**	**09 29 23.9**	**+3.2**
GCG4	**OSOP**	**1.69**	**349**	*i* P		**Pn**	**09 28 59.3**	**-1.1**
GCG4				IAML			09 29 23.0	
	comp=Z,1μm,1.0s							
COEB	**Comit de Eme**	**1.72**	**70**	*eP*		**Pn**	**09 28 59.0**	**-1.6**
COEB				*eS*		**Sn**	**09 29 23.0**	**+1.6**
COEB	**Comit de Eme**	**1.72**	**70**	*i* P		**Pn**	**09 28 59.0**	**-1.6**
COEB				IAML			09 29 22.3	
	comp=Z,420nm,1.0s							
COEB				*i* S		**Sn**	**09 29 24.4**	**+3.0**
LLGN	**La Laguna**	**1.73**	**44**	*i* P		**Pn**	**09 28 59.7**	**-1.1**
LLGN				IAML			09 29 11.2	
	comp=Z,770nm,1.0s							
LLGN				*i* S		**Sn**	**09 29 25.3**	**+3.5**
PQSS	**Presa 15 de Se**	**1.73**	**66**	*i* P		**Pn**	**09 28 59.7**	**-1.0**
PQSS				IAML			09 29 00.5	
	comp=Z,390nm,1.0s							
PQSS				*i* S		**Sn**	**09 29 24.1**	**+2.4**
GUMI	**Mixco**	**1.75**	**346**	*i* P		**Pn**	**09 29 00.8**	**-0.4**
GUMI				IAML			09 29 22.2	
	comp=Z,910nm,1.0s							
ESQI	**Esquipulas**	**1.83**	**27**			**Pn**	**09 29 01.7**	**-0.4**
ESQI	**Esquipulas**	**1.83**	**27**	*i* P		**Pn**	**09 29 02.3**	**+0.2**
ESQI				*i* S		**Sn**	**09 29 28.2**	**+4.0**
ESQI				IAML			09 29 30.2	
	comp=Z,2μm,1.0s							
PACA	**Pacayal**	**1.90**	**73**	*i* P		**Pn**	**09 29 02.5**	**-0.6**
PACA				*i* S		**Sn**	**09 29 28.4**	**+2.5**
PACA				IAML			09 29 38.5	
	comp=Z,4μm,1.0s							
JUCU	**Jucuarįn**	**1.92**	**80**	*eP*		**Pn**	**09 29 01.7**	**-1.7**
JUCU	**Jucuarįn**	**1.92**	**80**	*i* P		**Pn**	**09 29 01.6**	**-1.7**
JUCU				*i* S		**Sn**	**09 29 28.9**	**+2.5**
JUCU				IAML			09 29 35.3	
	comp=Z,400nm,1.0s							
RANC	**El Ranchito**	**1.92**	**74**	*i* P		**Pn**	**09 29 02.3**	**-1.1**
RANC				IAML			09 29 38.8	
	comp=Z,620nm,1.0s							
BLLM	**Bellamira**	**1.97**	**74**	*eP*		**Pn**	**09 29 03.3**	**-0.7**
CNRM	**Centro Naciona**	**2.04**	**74**	*i* P		**Pn**	**09 29 03.7**	**-1.2**
CNRM				IAML			09 30 10.2	
	comp=Z,3μm,1.0s							
RTAL	**Retalhuleu**	**2.17**	**318**	Pn		**Pn**	**09 29 04.0**	**-2.7**
RTAL	**Retalhuleu**	**2.17**	**318**	*i* P		**

UNAN Cigeo UNAN 3.91 101 *i* P Pn 09 29 28.6 -1.9
UNAN IAML 09 30 24.3
comp=Z,950nm,1.0s
PETF Flores 3.99 4 Pn Pn 09 29 31.6 0.0
RCPN Sur Rio San Ju 4.03 81 *i* P Pn 09 29 30.3 -2.0
RCPN IAML 09 29 41.6
comp=Z,0.4nm,1.0s
NANN Nandasmo 4.09 103 *i* P Pn 09 29 32.1 -0.9
NANN IAML 09 30 23.8
comp=Z,2µm,1.0s
MATN Matagalpa 4.16 89 Pn 09 29 32.4 -1.6
MATN Matagalpa 4.16 89 *i* P Pn 09 29 31.9 -2.1
MATN IAML 09 29 32.9
comp=Z,71nm,1.0s
BOAB BOACO BROADBAN 4.44 96 Pn Pn 09 29 36.1 -1.6
BOAB BOACO BROADBAN 4.44 96 *i* P Pn 09 29 35.6 -2.2
BOAB IAML 09 30 15.5
comp=Z,55nm,1.0s
ACON Acoyapa 4.99 100 Pn Pn 09 29 43.1 -2.2
HZTE Horizontes, Gu 5.00 115 Pn 09 29 45.4 -0.1
HZTE Horizontes, Gu 5.00 115 *i* P Pn 09 29 45.4 -0.1
HZTE IAML 09 29 46.0
comp=Z,330nm,1.0s
SAJU San Juanillo, 5.22 122 *i* P Pn 09 29 47.4 -1.1
SAJU San Juanillo, 5.22 122 *i* P Pn 09 29 47.7 -0.8
SAJU IAML 09 29 47.8
comp=Z,200nm,1.0s
SAJU *i* S Sn 09 30 02.4 -45
ORTG Ortega, Santa 5.28 118 Pn Pn 09 29 49.1 -0.3
ORTG Ortega, Santa 5.28 118 *i* P Pn 09 29 49.1 -0.3
ORTG Ortega, Santa 5.28 118 *i* P Pn 09 29 48.9 -0.5
ORTG IAML 09 29 49.5
comp=Z,160nm,1.0s
DUNO Dulce Nombre, 5.40 121 Pn Pn 09 29 50.4 -0.6
DUNO Dulce Nombre, 5.40 121 *i* P Pn 09 29 50.3 -0.6
DUNO Dulce Nombre, 5.40 121 *i* P Pn 09 29 50.5 -0.4
DUNO IAML 09 29 51.0
comp=Z,430nm,1.0s
INDI Punta indio, G 5.50 123 *i* P Pn 09 29 51.7 -0.7
INDI IAML 09 29 52.1
comp=Z,130nm,1.0s
JTS Las Juntas de 5.76 116 Pn Pn 09 29 55.8 -0.1
JTS Las Juntas de 5.76 116 Pn Pn 09 29 55.6 -0.2
comp=Z,8.0nm,0.3s,baz=327,slow=17,SNR=83
JTS Sn Sn 09 30 57.2 -3.5
comp=Z,0.8nm,0.3s,baz=285,slow=15,SNR=1.2
JTS Lg Lg 09 31 34.6
baz=238,slow=18
comp=Z,18nm,0.3s
ESPN Las Esperanzas 5.79 96 Pn Pn 09 29 54.8 -1.6
ARE1 Arenal 1 5.89 114 Pn 09 29 58.1 +0.4
LAFE Finca La Fe, P 6.03 120 *i* P Pn 09 29 58.6 -1.0
LAFE IAML 09 29 59.2
comp=Z,1.4nm,1.0s
CMIG Matias Romero 6.15 313 Pn Pn 09 30 00.5 -0.8
comp=Z,0.4nm,0.3s,baz=123,slow=6.8,SNR=6.0
CMIG Sn Sn 09 31 06.2 -4.1
comp=Z,0.2nm,0.3s,baz=132,slow=16,SNR=1.3
comp=Z,4.2nm,0.6s
JACO JACO, Garabito 6.31 120 Pn 09 30 03.9 +0.4
JACO JACO, Garabito 6.31 120 *i* P Pn 09 30 04.4 +0.9
JACO IAML 09 30 09.8
comp=Z,59nm,1.0s
HDC Heredia 6.62 115 Pn Pn 09 30 07.6 -0.2
HDC3 Heredia 3 6.62 115 *i* P Pn 09 30 08.3 +0.4
HDC3 IAML 09 31 22.9
comp=Z,100nm,1.0s
VIRE VIRE 6.83 115 *i* P Pn 09 30 10.7 -0.2
VIRE IAML 09 30 16.7
comp=Z,230nm,1.0s
LCR2 La Lucha 2 6.83 117 Pn Pn 09 30 11.9 +1.0
LCR2 La Lucha 2 6.83 117 *i* P Pn 09 30 11.3 +0.4
LCR2 IAML 09 30 14.7
comp=Z,79nm,1.0s
RIMA Rio Macho 6.95 116 Pn 09 30 12.6 +0.2
RIMA Rio Macho 6.95 116 *i* P Pn 09 30 12.3 -0.1
RIMA IAML 09 30 16.5
comp=Z,99nm,1.0s
CDM Cerro de Muert 7.13 117 *i* P Pn 09 30 16.1 +0.9
CDM IAML 09 30 22.6
comp=Z,70nm,1.0s
PEZE Perez Zeledon, 7.29 118 Pn 09 30 17.3 +0.3
PEZE Perez Zeledon, 7.29 118 *i* P Pn 09 30 18.2 +1.2
PEZE IAML 09 30 19.2
comp=Z,75nm,1.0s
OCHAL Ojochal 7.46 120 *i* P Pn 09 30 19.8 +0.6
OCHAL IAML 09 30 24.0
comp=Z,1.1nm,1.0s
TEIG Tepich 7.50 14 Pn Pn 09 30 19.9 +0.2
TEIG Tepich 7.50 14 LR LR 09 33 23.9
comp=Z,1µm,18.5s,baz=196,slow=44
PLAN Los Planes de 7.66 123 *i* P Pn 09 30 22.7 +0.7
PLAN IAmb IAmb 09 30 24.0
comp=Z,180nm,0.8s
PLAN IAML 09 30 24.1
comp=Z,320nm,1.0s
PLAN IVmB_BB 09 30 24.3
comp=Z,4µm,1.0s
PLAN Los Planes de 7.66 123 *i* P Pn 09 30 23.4 +1.4
PLAN IAML 09 30 24.1
comp=Z,320nm,1.0s
DRK0 Durika 7.72 117 Pn 09 30 24.0 +1.0
POTG Potrero Grande 7.93 118 *i* P Pn 09 30 27.4 +1.6
POTG IAML 09 30 28.3
comp=Z,240nm,1.0s
POTG IAmb IAmb 09 30 28.3
comp=Z,160nm,0.8s
POTG IVmB_BB 09 31 03.3
comp=Z,3µm,1.0s
POTG Potrero Grande 7.93 118 *i* P Pn 09 30 28.0 +2.2
POTG IAML 09 30 28.3
comp=Z,240nm,1.0s
PIRO Carate, Puerto 8.09 123 *i* P Pn 09 30 29.5 +1.6
PIRO IAmb IAmb 09 30 30.6
comp=Z,110nm,0.8s
PIRO IVmB_BB 09 30 34.7
comp=Z,3µm,1.0s
PIRO Carate, Puerto 8.09 123 *i* P Pn 09 30 29.4 +1.6
PIRO IAML 09 30 30.3
comp=Z,220nm,1.0s
CDITO Canoas 8.38 120 Pn Pn 09 30 33.1 +1.3
CDITO Canoas 8.38 120 *i* P Pn 09 30 33.2 +1.3
CDITO IAmb IAmb 09 30 36.3
comp=Z,47nm,0.7s
CDITO Canoas 8.38 120 *i* P Pn 09 30 32.8 +0.9
CDITO IAML 09 30 37.5
comp=Z,110nm,1.0s
BRU2 Volcan 8.43 118 Pn Pn 09 30 33.8 +1.1
TLIG Tlapa 9.31 301 Pn Pn 09 30 44.7 0.0
ROSC El Rosal 17.60 116 P P 09 32 39.3 +3.8
comp=Z,11nm,0.6s,baz=320,slow=17,SNR=7.7
SLOR San Lorenzo - 17.84 139 P 09 32 39.5 +1.4
SDV Santo Domingo 19.61 100 P P 09 32 58.3 +0.9
comp=Z,4.0nm,0.6s,baz=337,slow=11,SNR=2.2
SDV LR LR 09 41 35.1
comp=Z,67nm,18.0s,baz=265,slow=41
BOSC San Juan Bosco 19.74 143 P Pn 09 33 00.8 +0.3
BRDY Brady 20.00 337 P Pn 09 33 01.0 -0.3
Z47A Carrollton 20.28 5 P 09 33 05.0 +0.7
152A Waverly Hall 20.29 13 P P 09 33 04.7 +0.4
TXAR Lajitas Array 20.58 325 P P 09 33 08.4 +0.8
comp=Z,1.8nm,1.0s,baz=141,slow=12,SNR=8.4
comp=Z,1.8nm,1.0s
TX31 Lajitas Ar. Si 20.58 325 P 09 33 08.2 +0.5
ALPN Alpine 21.37 327 P 09 33 17.4 +1.2
X48A Hartselle 21.63 7 P P 09 33 19.4 +0.7
MNHN Monahans 21.69 330 P P 09 33 19.5 0.0
MNHN IAmb IAmb 09 33 48.6
comp=Z,9.0nm,1.0s
MIAR Mount Ida 21.75 352 P P 09 33 19.6 -0.5
MIAR IAmb IAmb 09 33 50.8
comp=Z,6.7nm,1.1s
HODGE Hodges 22.41 17 P P 09 33 27.1 0.0
VHRN Van Horn 22.42 325 P P 09 33 27.0 -0.5
SWET Sewanee 22.54 9 P P 09 33 27.9 -0.7
SWET IAmb IAmb 09 33 28.4
comp=Z,4.4nm,0.6s
W50A Signal Mountai 22.62 10 P P 09 33 30.2 +0.7
W50A IAmb IAmb 09 33 31.5
comp=Z,10nm,1.3s
FCAR Ozark Folk Cen 22.94 356 P P 09 33 31.5 -1.2
W35A Tecumseh 22.95 346 P P 09 33 30.9 -2.0
W35A IAmb IAmb 09 33 31.2
comp=Z,9.9nm,0.8s
CPCT Cooper Cave 23.01 12 P P 09 33 32.0 -1.4

CLTN Cedars of Leba 23.34 8 P P 09 33 36.2 -0.4
CLTN IAmb IAmb 09 33 46.8
comp=Z,5.4nm,0.7s
MNTX Cornudas Mount 23.34 326 P P 09 33 36.4 -0.2
U49A Red Boiling Sp 23.83 9 P P 09 33 40.3 -0.9
U49A IAmb IAmb 09 33 41.4
comp=Z,11nm,1.1s
MSTX Muleshoe 23.88 333 P P 09 33 41.0 -0.8
MSTX IAmb IAmb 09 34 00.6
comp=Z,5.9nm,1.2s
SMWD Samnorwood 23.89 339 P P 09 33 41.3 -0.5
SMWD IAmb IAmb 09 33 43.1
comp=Z,7.6nm,0.9s
T45A Paducah 24.04 3 P P 09 33 43.6 +0.5
T47A Sharon Grove 24.13 6 P P 09 33 43.4 -0.5
MGMO Mountain Grove 24.21 356 P P 09 33 44.4 -0.2
T50A Nancy 24.48 10 P P 09 33 47.4 +0.3
T50A IAmb IAmb 09 34 16.6
comp=Z,4.4nm,1.0s
S39A Bolivar 24.83 354 P P 09 33 49.5 -0.8
S39A IAmb IAmb 09 33 49.8
comp=Z,4.2nm,0.7s
OK032 Salt Plains WL 24.85 345 P P 09 33 51.2 +0.7
V58A Windy Hill, Pi 24.87 22 P 09 33 49.1 -1.6
V58A IAmb IAmb 09 34 13.7
comp=Z,13nm,1.3s
CCM Cathedral Cave 25.05 358 P P 09 33 51.7 -0.6
CCM IAmb IAmb 09 33 54.0
comp=Z,3.4nm,0.8s
121A Cookes Peak, D 25.32 323 P P 09 33 55.2 +0.3
121A IAmb IAmb 09 34 11.9
comp=Z,4.8nm,0.9s
R40A Maddies Statio 25.34 356 P P 09 33 53.5 -1.4
WCI Wyandotte Cave 25.45 7 P P 09 33 56.4 +0.5
P40A Paris 26.56 357 P P 09 34 04.7 -1.2
P40A IAmb IAmb 09 34 05.4
comp=Z,4.6nm,0.6s
M50A Fremont 29.06 11 P P 09 34 26.3 -2.0
PV03 Paradox Valley 30.21 330 P P 09 34 39.7 +1.0
PV03 IAmb IAmb 09 34 42.5
comp=Z,5.6nm,1.3s
PV12 Saucer Basin, 30.23 330 P P 09 34 39.8 +0.9
PV12 IAmb IAmb 09 34 41.0
comp=Z,3.7nm,0.7s
ECSD EROS Data Cent 31.20 351 P P 09 34 46.0 -1.2
ECSD IAmb IAmb 09 34 46.6
comp=Z,3.2nm,0.8s
H43A Windswept, Lux 31.51 3 P P 09 34 50.0 +0.1
MTPU Mount Pierson 31.78 326 P P 09 34 52.2 -0.5
MTPU IAmb IAmb 09 34 56.1
comp=Z,2.0nm,0.8s
F36A Milaca 32.96 356 P P 09 35 02.4 -0.1
F36A IAmb IAmb 09 35 18.5
comp=Z,3.6nm,1.1s
SAML Samuel 34.52 128 P P 09 35 15.9 -0.5
SAML IAmb IAmb 09 35 16.4
comp=Z,2.8nm,0.8s
EYMN Ely 34.94 358 P P 09 35 17.9 -1.8
EYMN IAmb IAmb 09 35 41.6
comp=Z,8.1nm,1.2s
REDW Red Top Meadow 35.18 333 P P 09 35 22.8 +0.6
B35A Bob, Littlefor 35.46 356 P P 09 35 22.6 -1.5
B35A IAmb IAmb 09 35 24.1
comp=Z,4.4nm,1.1s
AGMN Agassiz Nation 35.59 353 P P 09 35 24.2 -1.1
NVAR Mina Array Bea 35.62 321 P P 09 35 28.3 +2.3
comp=Z,1.3nm,0.7s,baz=130,slow=8.8,SNR=11
comp=Z,1.3nm,0.7s
ULM Lac du Bonnet 37.52 354 P P 09 35 38.8 -2.9
comp=Z,2.2nm,0.6s,baz=170,slow=9.5,SNR=6.3
comp=Z,2.2nm,0.6s
YBH Yreka Blue Hor 40.30 322 LR LR 09 54 38.1
comp=Z,87nm,18.4s,baz=2.5,slow=39
NEW Newport 41.75 333 LR LR 09 56 22.4
comp=Z,81nm,18.2s,baz=18,slow=40
H04A Detroit Lake 41.80 325 P P 09 36 18.6 +1.2
H04A IAmb IAmb 09 36 32.1
comp=Z,9.8nm,1.4s
J01E Myrtle Point 41.87 322 P P 09 36 18.8 +0.8
FFC Flin Flon 42.73 350 P P 09 36 24.1 -0.7
SCHQ Schefferville 45.65 19 P P 09 36 45.9 -2.2
SCHQ IAmb IAmb 09 36 46.1
comp=Z,4.6nm,0.8s
SCHQ Schefferville 45.65 19 P P 09 36 45.9 -2.2
comp=Z,5.4nm,0.7s,baz=217,slow=6.6,SNR=17
comp=Z,5.4nm,0.7s
FCC Fort Churchill 45.85 357 P P 09 36 48.1 -1.5
FCC IAmb IAmb 09 37 07.0
comp=Z,3.8nm,1.2s
YKA Yellowknife Ar 52.49 346 P P 09 37 39.0 -1.3
comp=Z,0.9nm,0.7s,baz=145,slow=7.6,SNR=20
YKA PcP PcP 09 38 50.2 0.0
comp=Z,0.1nm,0.7s,baz=156,slow=3.4,SNR=3.7
comp=Z,0.9nm,0.7s
INK Inuvik 61.98 343 P P 09 38 46.0 -1.1
comp=Z,1.3nm,0.9s,baz=115,slow=4.8,SNR=1.6
comp=Z,1.3nm,0.9s
ILAR Eielson Array 64.53 337 P P 09 39 03.0 -1.1
comp=Z,0.6nm,1.0s,baz=134,slow=2.6,SNR=4.8
comp=Z,0.6nm,1.0s
ESDC Sonseca Array 79.00 52 P P 09 40 31.0 -0.6
comp=Z,0.4nm,0.6s,baz=243,slow=5.5,SNR=2.0
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 88.91 77 P P 09 41 22.5 +0.1
comp=Z,1.5nm,0.3s,baz=277,slow=34,SNR=1.5
comp=Z,1.5nm,0.3s
ASAR Alice Springs 136.95 249 PKP PKiKP 09 47 57.6 +5.1
comp=Z,0.3nm,0.9s,baz=33,slow=3.5,SNR=2.1
CMAR Chiang Mai Arr 147.55 344 PKPbc PKPbc 09 48 13.1 +0.9
comp=Z,1.3nm,0.3s,baz=322,slow=3.5,SNR=7.2

IDC 16 09:29:01.3±2.7, 53°.73N×86°.93E, h0km, mbtmp2.5/2, ML2.5/1, Error ellipse: s-maj=25.4km s-min=14.8km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**281**	I	I		09 37 00.5	
	baz=98,slow=342,SNR=3.8							
ZALV	**Zalesovo Beam**	**1.27**	**281**	Pg	Pg		09 29 24.2	-1.4
	0.6nm,0.3s,baz=103,slow=18,SNR=8.5							
ZALV				Lg	Lg		09 29 42.4	
	0.8nm,0.3s,baz=101,slow=31,SNR=12							
KURBB	**Kurchatov Arra**	**6.03**	**242**	Pn	Pn		09 30 33.2	+1.6
	0.2nm,0.4s,baz=56,slow=14,SNR=1.5							
MKAR	**Makanchi Array**	**7.55**	**205**	Pn	Pn		09 30 53.7	+1.1
	0.1nm,0.3s,baz=19,slow=12,SNR=5.1							
	0.2nm,0.4s							

*NEIC **16** 09:40:10.9±1.5, 56°.34N±0°.07×149°.32W±0°.09, h21km±8km, mb3.9/2, ML3.6/62, ML3.5(AEIC), Error ellipse: s-maj=12.0km s-min=1.9km az=145.0*

*IDC **16** 09:40:11.2±3.0, 56°.52N×149°.24W, h0km, mb3.4/3, mbtmp3.5/7, ML3.0/4, MS2.9/3, Error ellipse: s-maj=66.5km s-min=22.0km az=2.0*

*AEIC **16** 09:40:14.1±1.7, 56°.32N±0°.08×149°.3W±0°.1, h8km±6km, Error ellipse: s-maj=12.1km s-min=7.9km az=158.0*

ISC 16 09:40:10.2±1.0, 56°.43N±0°.08×149°.30W±0°.05, h10km, n151, σ1s11/160, mb3.4/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.25**	**309**	Pn	**Pn**		**09 40 47.8**	**+0.3**
KDAK	**Kodiak Island**	**2.25**	**309**		**Sn**		**09 41 14.1**	**-1.2**
KDAK	**Kodiak Island**	**2.25**	**309**	Pn	**Pn**		**09 40 48.0**	**+0.6**
	3.0nm,0.3s,baz=125,slow=15,SNR=12							
KDAK				Sn	**Sn**		**09 41 14.3**	**-0.9**
	4.9nm,0.3s,baz=119,slow=19,SNR=11							
KDAK				LR	LR		09 41 48.6	
	comp=Z,322nm,21.6s,baz=205,slow=44							
	16nm,0.4s							
OHAK	**Old Harbor**	**2.33**	**292**	Pn	**Pn**		**09 40 48.4**	**-0.2**
OHAK					**Sn**		**09 41 14.6**	**-2.7**
OHAK	**Old Harbor**	**2.33**	**292**	P	**Pn**		**09 40 48.4**	**-0.2**
	baz=110							
OHAK				S	**Sn**		**09 41 14.7**	**-2.7**
	baz=110							
SII	**Sitkinak Islan**	**2.71**	**275**	Pn	**Pn**		**09 40 53.7**	**-0.2**
SII					**Sn**		**09 41 24.4**	**-2.3**
SII				IAML			09 41 27.7	
	comp=E,172nm,1.1s							
SII				IAML			09 41 36.2	
	comp=N,195nm,1.2s							

SII Sitkinak Islan 2.71 275 S Sn 09 41 24.2 -2.6
baz=93
SYI Shuyak Island 2.75 324 Pn Pn 09 40 55.0 +0.6
SYI IAML 09 41 29.2
comp=E,157nm,0.7s
Q20K Shuyak Island 2.75 324 P Pn 09 40 54.9 +0.5
baz=142
Q20K S Sn 09 41 28.2 +0.5
baz=142
CNPM China Poot 3.28 342 Pn Pn 09 41 02.1 +0.6
CNPM Sn 09 41 40.5 -0.1
Q23K Middleton Isla 3.40 26 Pn Pn 09 41 03.2 0.0
Q23K IAML 09 41 56.9
comp=N,100nm,1.1s
Q23K IAML 09 43 09.6
comp=E,154nm,1.4s
Q23K Middleton Isla 3.40 26 P Pn 09 41 03.6 +0.4
baz=208
MID Middleton Isla 3.40 26 Pn Pn 09 41 03.0 -0.2
MID IAML 09 41 56.9
comp=N,108nm,1.1s
MID IAML 09 43 09.6
comp=E,169nm,1.5s
BRSE Bradley Lake S 3.41 348 Pn 09 41 03.9 +0.4
BRSE Sn 09 41 42.8 -1.1
BRSE Bradley Lake S 3.41 348 P Pn 09 41 03.8 +0.4
baz=167
BRSE S Sn 09 41 42.8 -1.1
baz=167
Q19K Cape Douglas, 3.43 319 Pn 09 41 04.3 +0.6
Q19K IAML 09 42 00.6
comp=N,244nm,1.0s
BRLK Bradley Lake 3.45 347 Pn Pn 09 41 04.3 +0.3
HOM Homer 3.47 340 Pn Pn 09 41 04.8 +0.5
HOM IAML 09 42 42.8
comp=N,223nm,1.4s
KAHG Katmai Hook Gl 3.51 308 Pn 09 41 06.1 +1.2
CHIR Chirikof Islan 3.59 263 Pn Pn 09 41 05.3 -0.6
CHIR IAML 09 41 42.2
comp=E,81nm,1.3s
CHIR IAML 09 41 45.7
comp=N,113nm,1.4s
SEW Seward 3.69 359 Pn Pn 09 41 06.8 -0.5
P23K Montague Islan 3.72 15 Pn 09 41 08.0 +0.4
P23K Montague Islan 3.72 15 P Pn 09 41 08.0 +0.4
baz=196
P19K Oil Pt 3.85 329 Pn Pn 09 41 09.2 -0.3
P19K IAML 09 41 57.9
comp=E,161nm,0.6s
P19K IAML 09 42 02.6
comp=N,106nm,0.5s
O22K Cooper Landing 4.07 357 Pn Pn 09 41 12.2 -0.2
IVE Iliamna Volcan 4.10 333 Pn 09 41 13.4 +0.4
ILSW Iliamna Southw 4.11 332 Pn Pn 09 41 13.4 +0.3
ILSW IAML 09 42 03.2
comp=N,66nm,0.6s
ILSW IAML 09 42 07.8
comp=E,48nm,0.8s
HIN Hinchinbrook I 4.24 19 Pn 09 41 15.5 +0.6
HIN IAML 09 42 05.5
comp=E,85nm,1.0s
HIN IAML 09 42 15.4
comp=N,102nm,0.9s
P18K Big Mountain, 4.34 316 Pn 09 41 16.6 +0.4
P18K Big Mountain, 4.34 316 P Pn 09 41 16.5 +0.2
baz=132
KAIM Kayak Island 4.36 34 Pn Pn 09 41 17.1 +0.7
KAIM Kayak Island 4.36 34 P Pn 09 41 17.4 +1.0
baz=218
EYAK Cordova Ski Ar 4.53 23 Pn Pn 09 41 19.4 +0.6
EYAK Cordova Ski Ar 4.53 23 P Pn 09 41 19.3 +0.6
baz=205
FID Port Fidalgo 4.58 18 Pn 09 41 19.9 +0.4
FID IAML 09 42 12.2
comp=N,47nm,0.6s
FID IAML 09 42 12.5
comp=E,49nm,0.6s
O19K Port Alsworth 4.62 327 Pn 09 41 20.1 +0.1
O19K Port Alsworth 4.62 327 P Pn 09 41 20.0 +0.1
baz=143
O18K Koktuh Hills 4.65 320 Pn Pn 09 41 20.8 +0.4
O18K IAML 09 42 31.8
comp=N,46nm,0.8s
O18K Koktuh Hills 4.65 320 P Pn 09 41 20.5 0.0
baz=136
RAGM Ragged Mountai 4.66 30 Pn 09 41 20.3 -0.2
SUCK Suckling Hills 4.67 36 Pn 09 41 21.5 +0.7
SUCK IAML 09 42 24.2
comp=E,78nm,1.3s
SUCK IAML 09 42 31.7
comp=N,70nm,1.1s
RC01 Rabbit Creek A 4.68 357 Pn 09 41 21.3 +0.5
RC01 IAML 09 42 17.3
comp=N,45nm,0.6s
RC01 IAML 09 42 17.9
comp=E,61nm,0.7s
HMT Hamilton 4.73 32 Pn 09 41 22.6 +1.0
NICHA Nichawak Mount 4.74 34 Pn 09 41 22.2 +0.5
BGLC Bering Glacier 4.88 38 Pn 09 41 24.1 +0.6
BGLC Bering Glacier 4.88 38 P Pn 09 41 24.1 +0.6
baz=222
BERG Berg Lake 4.95 34 Pn 09 41 24.7 +0.3
KNK Knik Glacier 5.02 5 Pn Pn 09 41 24.2 -1.3
KNK IAML 09 42 33.2
comp=E,27nm,0.7s
KNK IAML 09 42 36.9
comp=N,23nm,0.8s
CHGN Chignik 5.07 272 Pn Pn 09 41 24.0 -2.2
CHGN IAML 09 42 24.3
comp=E,56nm,1.3s
CHGN IAML 09 42 33.3
comp=N,48nm,0.9s
SUA Susitna One 5.11 352 Pn Pn 09 41 26.2 -0.6
SUA IAML 09 42 27.1
comp=N,23nm,1.5s
SUA IAML 09 42 45.5
comp=E,22nm,1.0s
KHIT Khitrov Hills 5.13 36 Pn 09 41 27.4 +0.3
N19K Bonanza Creek 5.17 331 Pn Pn 09 41 26.5 -1.1
N19K Bonanza Creek 5.17 331 P Pn 09 41 27.5 -0.1
baz=147
BMRM Bremner River 5.17 26 Pn Pn 09 41 26.6 -1.0
BMRM Bremner River 5.17 26 P Pn 09 41 28.1 +0.6
baz=210
PMR Palmer 5.18 1 Pn Pn 09 41 25.2 -2.5
PMR IAML 09 42 29.3
comp=N,22nm,0.6s
WAX Waxell Ridge 5.26 37 Pn 09 41 28.9 0.0
WAX IAML 09 42 42.7
comp=E,54nm,1.0s
M22K Willow 5.36 356 Pn Pn 09 41 28.1 -2.0
GHO Glory Hole Cre 5.37 2 Pn 09 41 30.8 +0.5
KLU Klutina 5.37 18 Pn 09 41 30.8 +0.4
KLU Klutina 5.37 18 P Pn 09 41 30.8 +0.4
baz=200
MESA MESA 5.40 43 Pn 09 41 30.1 -0.8
MESA MESA 5.40 43 P Pn 09 41 31.5 +0.6
baz=228
CRQM Cirque 5.40 34 Pn 09 41 31.3 +0.4
CRQE Cirque 5.42 34 P Pn 09 41 31.4 +0.4
baz=219
SML Sawmill 5.42 5 Pn Pn 09 41 29.7 -1.3
N18K Kilae Creek 5.49 324 Pn Pn 09 41 31.0 -0.9
N18K Kilae Creek 5.49 324 P Pn 09 41 32.0 +0.1
baz=139
TGL Tana Glacier 5.50 35 Pn 09 41 32.7 +0.5
ISLE Juniper Island 5.55 38 Pn Pn 09 41 32.9 0.0
BAGL Bagley Icefiel 5.56 40 Pn 09 41 33.5 +0.7
O16K Kokwok River B 5.65 308 Pn Pn 09 41 34.9 +0.8
SKT Skwentna 5.69 349 Pn 09 41 35.3 +0.6
VRDI Verde Repeater 5.69 30 Pn 09 41 34.6 -0.2
SVW2 Sparrevohn 5.71 328 Pn Pn 09 41 35.4 +0.4
N25K Chitina, Valde 5.73 23 Pn 09 41 35.5 +0.2
N25K Chitina, Valde 5.73 23 P Pn 09 41 35.8 +0.4
baz=207
GLB Gilahina Butte 5.78 27 Pn 09 41 36.2 +0.3
KIAG Kiagna River 5.78 36 Pn 09 41 36.5 +0.5
SAMH Samovar Hills 5.83 47 Pn 09 41 37.5 +0.9
N17K Nushagak Hills 5.83 318 Pn 09 41 36.9 +0.3
GRNC Granite Creek 5.85 39 Pn 09 41 37.8 +0.8
TABL Table Mountain 5.88 43 Pn 09 41 38.0 +0.6
M24K Tolsona, Glenn 5.92 14 Pn Pn 09 41 41.0 +3.1
MCARA McCarthy VSAT 5.94 31 Pn 09 41 38.3 +0.2
MCARA McCarthy VSAT 5.94 31 P Pn 09 41 38.9 +0.8
baz=215

PTPK	**Patty Peak**	**5.95**	**34**			**Pn**	**09 41 39.1**	**+0.8**	
PCA	**Pinnacle**	**6.02**	**49**			**Pn**	**09 41 39.0**	**-0.4**	
PINM	**Pinnacle**	**6.02**	**49**	P		**Pn**	**09 41 39.9**	**+0.5**	
	baz=236								
CNBA	**Chernabura Isl**	**6.05**	**259**	Pn		**Pn**	**09 41 37.2**	**-2.4**	
M18K	**Stony River**	**6.10**	**329**			**Pn**	**09 41 40.3**	**0.0**	
M18K	**Stony River**	**6.10**	**329**	P		**Pn**	**09 41 40.3**	**0.0**	
	baz=144								
BARN	**Barnard Glacie**	**6.11**	**37**			**Pn**	**09 41 41.3**	**+0.6**	
CTG	**Chitna Glacier**	**6.15**	**39**	P		**Pn**	**09 41 41.6**	**+0.4**	
	baz=225								
CTGM	**Chitina Glacie**	**6.16**	**39**			**Pn**	**09 41 41.3**	**+0.1**	
PNL	**Peninsula**	**6.18**	**54**			**Pn**	**09 41 42.0**	**+0.5**	
PNL	**Peninsula**	**6.18**	**54**	P		**Pn**	**09 41 41.9**	**+0.5**	
	baz=242								
LOGN	**Logan Glacier**	**6.18**	**41**	Pn		**Pn**	**09 41 41.2**	**-0.3**	
BCPM	**Bancas Point**	**6.21**	**51**			**Pn**	**09 41 42.3**	**+0.5**	
HARP	**HAARP**	**6.35**	**18**			**Pn**	**09 41 45.0**	**+1.2**	
HARP	**HAARP**	**6.35**	**18**	P		**Pn**	**09 41 45.0**	**+1.2**	
	baz=201								
L19K	**White Mountain**	**6.43**	**336**	Pn		**Pn**	**09 41 45.2**	**+0.2**	
M17K	**Holitna River**	**6.53**	**323**	Pn		**Pn**	**09 41 46.7**	**+0.5**	
DHY	**Denali Highway**	**6.74**	**7**	Pn		**Pn**	**09 41 48.0**	**-1.2**	
O29M	**Mount Kennedy**	**6.84**	**51**			**Pn**	**09 41 51.2**	**+0.5**	
O29M	**Mount Kennedy**	**6.84**	**51**	P		**Pn**	**09 41 51.6**	**+0.9**	
	baz=239								
P29M	**Windy Craggy**	**6.92**	**58**			**Pn**	**09 41 52.3**	**+0.6**	
P29M	**Windy Craggy**	**6.92**	**58**	P		**Pn**	**09 41 52.1**	**+0.4**	
	baz=247								
L18K	**Granite Mounta**	**6.93**	**330**			**Pn**	**09 41 51.3**	**-0.3**	
L18K	**Granite Mounta**	**6.93**	**330**	P		**Pn**	**09 41 51.8**	**+0.1**	
	baz=144								
O14K	**Tigyukauivet M**	**6.99**	**299**	Pn		**Pn**	**09 41 50.8**	**-1.7**	
RND	**Reindeer**	**7.01**	**2**	Pn		**Pn**	**09 41 54.5**	**+1.6**	
M27K	**Edge Creek, AK**	**7.05**	**29**	Pn		**Pn**	**09 41 54.9**	**+1.5**	
MENT	**Mentasta**	**7.11**	**21**	Pn		**Pn**	**09 41 54.4**	**+0.2**	
S31K	**Pelican**	**7.26**	**72**	Pn		**Pn**	**09 41 55.8**	**-0.4**	
L16K	**Owhat River**	**7.45**	**320**	Pn		**Pn**	**09 41 60.0**	**+1.1**	
BCAR	**Beaver Creek A**	**7.66**	**27**	Pn		**Pn**	**09 42 03.5**	**+1.7**	
K17K	**Iditarod**	**7.79**	**328**	Pn		**Pn**	**09 42 03.2**	**-0.2**	
SKAG	**Skagway**	**8.03**	**62**	Pn		**Pn**	**09 42 07.3**	**+0.6**	
N30M	**Aishikik Lake**	**8.07**	**46**			**Pn**	**09 42 08.0**	**+0.5**	
HDA	**Harding Lake**	**8.09**	**7**	Pn		**Pn**	**09 42 09.4**	**+1.8**	
WRH	**Wood River Hil**	**8.09**	**4**	Pn		**Pn**	**09 42 08.9**	**+1.2**	
S32K	**Killisnoo**	**8.12**	**76**	Pn		**Pn**	**09 42 08.4**	**+0.5**	
J20K	**Nowinta River**	**8.14**	**345**	Pn		**Pn**	**09 42 08.7**	**+0.5**	
O30N	**Mendenhall**	**8.15**	**52**	Pn		**Pn**	**09 42 07.7**	**-0.7**	
M29M	**Somme Creek**	**8.17**	**38**			**Pn**	**09 42 10.1**	**+1.3**	
JIS	**Juneau Island**	**8.27**	**71**	Pn		**Pn**	**09 42 11.5**	**+1.4**	
ILAR	**Eielson Array**	**8.46**	**7**	Pn		**Pn**	**09 42 13.9**	**+1.3**	
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=6.9								
ILAR				Sn		**Sn**	**09 43 43.4**	**-4.6**	
	comp=E,0.3nm,0.3s,baz=194,slow=24,SNR=2.5								
ILAR				LR		LR	09 45 42.0		
	comp=E,72nm,18.2s,baz=256,slow=40								
J26L	**Joseph Creek**	**8.58**	**17**	Pn		**Pn**	**09 42 13.5**	**-0.8**	
MDM	**Murphy Dome**	**8.58**	**3**	Pn		**Pn**	**09 42 13.0**	**-1.3**	
WHY	**Whitehorse**	**8.64**	**55**	Pn		**Pn**	**09 42 15.3**	**0.0**	
L29M	**L29M**	**8.74**	**35**	Pn		**Pn**	**09 42 18.5**	**+1.9**	
M30M	**Minto, Yukon**	**8.85**	**41**	Pn		**Pn**	**09 42 17.6**	**-0.4**	
P32M	**Atlin**	**8.86**	**63**	Pn		**Pn**	**09 42 18.6**	**+0.5**	
DAWY	**Dawson**	**9.10**	**29**	Pn		**Pn**	**09 42 22.4**	**+1.0**	
H21K	**Melozitna Rive**	**9.42**	**351**			**Pn**	**09 42 25.6**	**-0.2**	
P33M	**Teslin, Yukon**	**9.46**	**60**	Pn		**Pn**	**09 42 27.1**	**+0.7**	
M31M	**Drury Creek, Y**	**9.55**	**47**			**Pn**	**09 42 29.4**	**+1.7**	
IMAR	**Indian Mountai**	**9.82**	**349**	Pn		**Pn**	**09 42 32.7**	**+1.4**	
DLBC	**Dease Lake**	**10.58**	**71**	Pn		**Pn**	**09 42 42.8**	**+1.1**	
	comp=E,0.1nm,0.3s,baz=261,slow=9.9,SNR=5.9								
DLBC				Sn		**Sn**	**09 44 36.8**	**-3.3**	
	comp=E,0.1nm,0.3s,baz=272,slow=11,SNR=1.5								
	comp=E,4.7nm,1.2s								
INK	**Inuvik**	**13.92**	**25**	Pn		**Pn**	**09 43 27.1**	**-0.1**	
INK	**Inuvik**	**13.92**	**25**	Pn		**Pn**	**09 43 28.9**	**+1.8**	
	baz=220,slow=9.7,SNR=3.4								
INK				LR		LR	09 48 34.9		
	comp=E,42nm,18.6s,baz=174,slow=36								
	comp=E,0.9nm,0.9s								
C36M	**Paulatuk**	**17.12**	**31**	P		**Pn**	**09 44 09.3**	**+0.1**	
C36M				IAmb		IAmb	09 44 28.3		
	comp=Z,7.5nm,1.1s								
YKAB2	**New Yellowknif**	**18.46**	**57**	P		**P**	**09 44 25.4**	**-0.4**	
YKA	**Yellowknife Ar**	**18.47**	**57**	P		**P**	**09 44 25.0**	**-0.8**	
YKA	**Yellowknife Ar**	**18.47**	**57**	P		**Pn**	**09 44 28.1**	**+2.2**	
	baz=266,slow=11,SNR=13								
	comp=Z,2.0nm,1.1s								
A36M	**Sachs Harbour**	**18.55**	**23**	P		**P**	**09 44 24.7**	**-1.9**	
A36M				IAmb		IAmb	09 44 41.0		
	comp=Z,9.3nm,0.8s								
NVAR	**Mina Array Bea**	**27.29**	**118**	P		P	09 46 04.6	+10	
	comp=Z,0.4nm,0.8s,baz=309,slow=12,SNR=2.5								
SONM	**Songino Array**	**58.54**	**310**	P		**P**	**09 50 09.4**	**+2.8**	
	comp=Z,0.4nm,0.7s,baz=53,slow=8.1,SNR=4.3								
	comp=Z,0.4nm,0.7s								
ZALV	**Zelesovo Beam**	**61.44**	**327**	P		**P**	**09 50 28.0**	**+1.8**	
	comp=Z,0.3nm,0.4s,baz=25,slow=8.3,SNR=2.0								
	comp=Z,0.3nm,0.4s								
MKAR	**Makanchi Array**	**68.47**	**325**	P		**P**	**09 51 13.9**	**+1.8**	
	comp=Z,0.1nm,0.5s,baz=42,slow=2.3,SNR=1.7								
	comp=Z,0.1nm,0.5s								

*IDC **16** 09:49:00.4±2.5,5°.55S×130°.78E, h0km, mb3.5/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=137.7km s-min=31.5km az=71.0*

*DJA **16** 09:49:09.5±0.6, 6°.5S×4°×13°.1E±°, h123km±19km, M4.0/8, mb3.7/1, MLv4.2/8*

ISC 16 09:49:09.0±1.1, 5°.64S±0°.06×131°.1E±0°.1, h100km, n8, σ3°60/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.66**	**312**	P	**Pn**	**09 49 38.0**	**+0.7**
SAUI	**Saumlaki**	**2.33**	**176**	P	**Pn**	**09 49 48.7**	**+2.7**
FAKI	**Fak Fak**	**2.92**	**22**	P	**Pn**	**09 49 54.6**	**+0.8**
KMPI	**Kaimana, Papua**	**3.22**	**52**	P	**Pn**	**09 49 59.3**	**+1.5**
SWI	**Sorong**	**4.75**	**1**	P	**Pn**	**09 50 17.3**	**-1.1**
WRA	**Warramunga Arr**	**14.55**	**168**	Pn	**Pn**	**09 52 27.9**	**-2.2**
	0.2nm,0.3s,baz=350,slow=13,SNR=12						
WRA				Sn	Sn	09 55 02.2	-8.4
	0.5nm,0.3s,baz=357,slow=24,SNR=8.1						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**18.12**	**172**	P	**Pn**	**09 53 16.4**	**+2.2**
	0.3nm,0.3s,baz=349,slow=9.5,SNR=20						
ASAR				S	**S**	**09 56 28.7**	**-7.1**
	0.3nm,0.6s,baz=356,slow=29,SNR=4.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**67.73**	**326**	P	**P**	**09 59 58.1**	**+2.2**
	0.2nm,0.4s,baz=115,slow=6.8,SNR=4.8						
	0.2nm,0.4s						

*SOME **16** 09:53:50.6, 43°.42N×69°.45E*

NNC 16 09:53:51.4±2.3, 43°.62N×69°.63E, h0km, mb3.5, mpv3.0, 1D, Error ellipse: s-maj=15.7km s-min=6.2km az=127.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.61**	**165**	P	Pn	09 54 07.0	-0.3
	2.7nm,0.3s						
BRLS				S	Sn	09 54 19.2	+1.3
	20nm,0.3s						
KK31	**Karatay Array**	**0.83**	**128**	⇓P	Pg	09 54 06.8	-0.4
	0.7nm,0.3s,baz=304,slow=17,SNR=203						
KK31				S	Sg	09 54 18.5	+0.6
	20nm,0.5s,baz=304,slow=30,SNR=36						
IUG	**Iuzhnay**	**1.50**	**168**	P	Pb	09 54 20.2	0.0
	23nm,0.3s						
IUG				S	Sn	09 54 42.2	+2.2
	86nm,0.5s						
MRKS	**Merke**	**2.77**	**107**	Pg	Pb	09 54 42.0	+0.1
	1.7nm,0.3s						
MRKS				Lg	Lg	09 55 19.3	
	11nm,0.7s						
BTLS	**Baital**	**3.47**	**64**	Pg	Pb	09 54 54.1	+0.3
	6.5nm,0.4s						
BTLS				Lg	Lg	09 55 39.8	
	4.6nm,0.6s						
KRBS	**Karabastau**	**4.39**	**87**	Pg	Pb	09 55 09.7	+0.3
	1.7nm,0.5s						
KRBS				Lg	Lg	09 56 06.5	
	4.3nm,0.5s						
DGS	**Degeres**	**4.49**	**93**	Pg	Pb	09 55 13.0	+1.8
	1.4nm,0.5s						
DGS				Lg	Lg	09 56 12.2	
	7.6nm,0.7s						
KST	**Kastek**	**4.66**	**95**	Pg	Pb	09 55 16.7	+2.7
	2.3nm,0.7s						
KST				Lg	Lg	09 56 18.3	
	6.4nm,0.7s						
KTBS	**Karatobe**	**5.12**	**87**	Pg	Pb	09 55 23.3	+1.5
	1.6nm,0.7s						
KTBS				Lg	Lg	09 56 29.7	
	5.4nm,0.9s						

*DJA **16** 09:54:52.4±0.6, 8°.5S×107°.6E±°, h64km±19km, M3.8/10, MLv3.8/10*

*IDC **16** 09:55:05.6±1.4, 6°.44S×106°.96E, h0km, mb3.7/5, mbtmp3.7/5, MS3.6/1, Error ellipse: s-maj=58.6km s-min=17.7km az=38.0*

ISC 16 09:55:07.3±1.2, 6°.4S±0°.2×107°.6E±0°.07, h10km, n15, σ1s01°/8, mb3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**0.33**	**249**	P	**Pg**	**09 55 13.3**	**-0.5**
LEM	**Lembang**	**0.68**	**125**	Pg	**Pg**	**09 55 19.7**	**-0.7**
	101nm,0.3s,baz=313,slow=7.4,SNR=28						
LEM				Lg	Lg	09 55 40.3	
	90nm,0.3s,baz=316,slow=21,SNR=11						
LEM	**Lembang**	**0.68**	**125**	P	**Pg**	**09 55 19.5**	**-0.9**
H01W3	**Cape Leeuwin H**	**29.05**	**168**	T	T	10 30 18.6	
	baz=340,slow=79,SNR=6.2						
H01W1	**Cape Leeuwin H**	**29.07**	**168**	T	T	10 30 21.2	
	baz=340,slow=79,SNR=5.2						
H01W2	**Cape Leeuwin H**	**29.07**	**168**	T	T	10 30 18.6	
	baz=340,slow=79,SNR=7.8						
WRA	**Warramunga Arr**	**29.69**	**119**	P	**P**	**10 01 14.8**	**+1.2**
	0.1nm,0.3s,baz=309,slow=8.9,SNR=5.7						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**30.97**	**126**	P	**P**	**10 01 26.2**	**+1.2**
	0.2nm,0.4s,baz=301,slow=8.3,SNR=5.8						
	0.2nm,0.4s						
PMG	**Port Moresby**	**39.81**	**97**	LR	LR	10 21 54.5	
	comp=Z,82nm,18.4s,baz=329,slow=40						
STKA	**Stephens Creek**	**40.97**	**133**	P	**P**	**10 02 51.0**	**+0.4**
	2.8nm,0.7s,baz=303,slow=11,SNR=5.8						
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**57.38**	**340**	P	**P**	**10 04 55.4**	**-0.5**
	0.2nm,0.4s,baz=144,slow=6.6,SNR=5.6						
	0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.73**	**220**	T	T	11 10 50.7	
	baz=66,slow=75,SNR=16						
H04N1	**CROZET ISLANDS**	**61.74**	**220**	T	T	11 10 49.8	
	baz=66,slow=75,SNR=12						
H04N3	**CROZET ISLANDS**	**61.74**	**220**	T	T	11 10 51.7	
	baz=66,slow=75,SNR=14						
QSPA	**South Pole Qui**	**83.55**	**180**	P	**P**	**10 07 34.9**	**-0.5**
	1.6nm,1.1s,baz=323,slow=5.1,SNR=1.9						
	1.6nm,1.1s						

*IDC **16** 10:03:01.5±0.5, 85°.31N×91°.25E, h0km, mb4.0/24, mbtmp4.0/28, ML3.9/4, MS4.1/63, Error ellipse: s-maj=14.4km s-min=10.8km az=116.0*

*MOS **16** 10:03:02.8±1.0, 85°.36N×90°.12E, h10km, mb5.0/65, MS4.2/7, Error ellipse: s-maj=71.6km s-min=4.7km az=88.6*

*GCMT **16** 10:03:03.8±0.2, 85°.36N±0°.01×90°.7E±0°.2, h12km, MW5.0/124, Moment Tensor Solution. s42,c47; s124,c198; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.12±.06; Mθθ 1.81±.06; Mϕϕ 1.31±.07; Mrθ-1.42±.21; Mθϕ-1.65±.05; Mrϕ-0.44±.26; Best double couple: Mo 3.49500×10^16 NP1 ϕs 112.00000°, δ55.00000°, λ-113.00000°. NP2 ϕs 329.00000°, δ41.00000°, λ-60.00000°. Principal axes: T 3.3330, Plg7.0000°, Azm218.0000°; N 0.3260, Plg19.0000°, Azm125.0000°; P -3.6580, Plg70.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 10:03:04.8±1.6, 85°.38N±0°.07×89°.5E±0°.7, h10km±1km, mb5.0/332 Error ellipse: s-maj=13.4km s-min=9.0km az=208.0*

*FCIAR **16** 10:03:06.0, 85°.00N×88°.30E, h10km, station OMEGA has station magnitude of 3.80 station ZFI2 has station magnitude of 3.90 station LSH has station magnitude of 5.54 station PRGR has station magnitude of 5.35 station KLMR has station magnitude of 5.33*

ISC 16 10:03:05.6±0.7, 85°.42N±0°.04×90°.51E±0°.04, h18km±4km, n887, σ1s26°/837, mb5.0/237, MS4.2/77, 10C-3D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVZ	**Severnaya Zeml**	**6.33**	**161**	*e*P	Pn	10 04 33.3	-4.5
SVZ				*e*S	Sn	10 05 38.6	-11
SVZ				*i* tx	tx	10 08 23.9	
ZFI2	**Zemlya Franca-**	**6.65**	**251**	*e*P	**Pn**	**10 04 39.7**	**-2.5**
ZFI2				*e*S	Sn	10 05 48.3	-9.0
	44nm,2.8s						
ZFI2				*i* tx	tx	10 09 13.0	
OMEGA	**Omega**	**6.67**	**251**	*e*P	Pn	10 04 39.4	-3.0
OMEGA				*e*S	Sn	10 05 48.7	-9.1
	33nm,3.2s						
OMEGA				*i* tx	tx	10 09 17.0	
KBS	**Kingsbay**	**11.18**	**282**	Pn	**Pn**	**10 05 42.0**	**-2.1**
KBS	**Kingsbay**	**11.18**	**282**	P	**Pn**	**10 05 42.0**	**-2.1**
KBS	**Kingsbay**	**11.18**	**282**	*e*P	Pn	10 05 41.1	-3.0
KBS				*e*S	Sn	10 07 38.3	-10
SPB5	**Spitsbergen Ar**	**11.51**	**276**	Pn	Pn	10 05 45.7	-3.0
SPB1	**Spitsbergen Ar**	**11.51**	**276**	Pn	Pn	10 05 45.1	-3.6
SPA1	**Spitsbergen Ar**	**11.51**	**276**	Pn	Pn	10 05 45.0	-3.7
SPA0	**Spitsbergen Ar**	**11.52**	**276**	Pn	Pn	10 05 45.9	-2.9
SPA0	**Spitsbergen Ar**	**11.52**	**276**	*e*P	Pn	10 05 45.9	-2.9
SPA0				S	Sn	10 07 45.6	-11
SPITS	**Spitsbergen Ar**	**11.52**	**276**	Pn	**Pn**	**10 05 46.2**	**-2.6**
	baz=45,slow=14						
SPITS				Sn	Sn	10 07 45.0	-12
	baz=63,slow=21						
SPITS				LR	LR	10 09 33.1	
	comp=Z,773nm,20.7s,baz=347,slow=34						
	1.5nm,0.3s						
SPA2	**Spitsbergen Ar**	**11.52**	**276**	Pn	Pn	10 05 45.6	-3.2
SPA3	**Spitsbergen Ar**	**11.52**	**276**	Pn	**Pn**	**10 05 46.8**	**-2.0**
SPB4	**Spitsbergen Ar**	**11.52**	**277**	Pn	Pn	10 05 45.5	-3.3
SPB2	**Spitsbergen Ar**	**11.52**	**276**	Pn	Pn	10 05 45.4	-3.3
SPB3	**Spitsbergen Ar**	**11.52**	**276**	Pn	**Pn**	**10 05 46.4**	**-2.4**
TIXI	**Tiksi**	**15.11**	**131**	Pn	**Pn**	**10 06 38.6**	**+0.9**
TIXI	**Tiksi**	**15.11**	**131**	*ce*P	**Pn**	**10 06 38.1**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	**15.11**	**131**	Pn	**Pn**	**10 06 35.3**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=14,slow=9.8,SNR=11						
TIXI				Sn	Sn	10 09 11.8	-12
	comp=Z,1.4nm,0.3s,baz=17,slow=17,SNR=2.9						
TIXI				LR	LR	10 11 53.9	
	comp=Z,299nm,21.7s,baz=28,slow=36						
	comp=Z,5.7nm,0.4s						
NRIK	**Noril'sk**	**16.18**	**184**	Pn	**Pn**	**10 06 47.8**	**-3.8**
NRIK	**Noril'sk**	**16.18**	**184**	*i* P	**Pn**	**10 06 47.9**	**-3.7**
NRIK	**Noril'sk**	**16.18**	**184**	Pn	**Pn**	**10 06 46.6**	**-5.0**
	comp=Z,1.2nm,0.3s,baz=31,slow=9.3,SNR=9.4						
NRIK				Sn	Sn	10 09 35.8	-15
	comp=Z,0.4nm,0.3s,baz=341,slow=20,SNR=2.1						
NRIK				LR	LR	10 13 36.9	
	comp=Z,2μm,18.8s,baz=7.0,slow=40						
	comp=Z,4.1nm,0.4s						
AMDE	**Amderma**	**16.47**	**216**	*e*P	Pn	10 06 47.7	-7.5
TULEG	**Thule**	**17.94**	**344**	Pn	**Pn**	**10 07 11.5**	**-2.0**
KEV	**Kevo**	**18.75**	**256**	P	**P**	**10 07 20.7**	**-2.3**
KEV	**Kevo**	**18.75**	**256**	P	**P**	**10 07 20.7**	**-2.3**
KEV				pmax	pmax		
	comp=Z,28nm,1.5s						
ARCES	**ARCESS Array B**	**19.09**	**257**	P	**P**	**10 07 25.6**	**-1.1**
ARCES	**ARCESS Array B**	**19.09**	**257**	P	**P**	**10 07 25.6**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,65nm,1.5s						
ARCES	**ARCESS Array B**	**19.09**	**257**	P	**P**	**10 07 25.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=25,slow=9.6,SNR=7.1						
ARCES				LR	LR	10 15 17.1	
	comp=Z,765nm,18.4s,baz=1.0,slow=38						
	comp=Z,4.2nm,0.9s						
LVZ	**Lovozero**	**20.00**	**246**	P	**P**	**10 07 34.5**	**-2.2**
LVZ				IAmb	IAmb	10 07 46.7	
	comp=Z,150nm,1.7s						
LVZ	**Lovozero**	**20.00**	**246**	*ce*P	Pn	10 07 38.4	0.0
LVZ				pmax	pmax		
	comp=Z,90nm,1.7s						
RES	**Resolute Bay**	**20.01**	**4**	P	**P**	**10 07 37.0**	**+0.3**
RES	**Resolute Bay**	**20.01**	**4**	P	**P**	**10 07 37.0**	**+0.3**
RES				pmax	pmax		
	comp=Z,19nm,1.4s						
RES	**Resolute Bay**	**20.01**	**4**	P	**P**	**10 07 37.0**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=1.8,slow=12,SNR=6.2						
RES				LR	LR	10 14 45.5	
	comp=Z,328nm,19.7s,baz=4.5,slow=35						
	comp=Z,1.1nm,1.0s						
JMIC	**Jan Mayen**	**20.35**	**291**	LR	LR	10 14 15.0	
	comp=Z,102nm,20.1s,baz=114,slow=33						
APA	**Apatity**	**20.41**	**247**	⇓*i*P	Pn	10 07 46.0	+2.7
APA				*i* S	Sn	10 11 32.0	-0.4
APA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,2μm,14.0s						
SUMG	**Summit**	**20.74**	**319**	P	**P**	**10 07 43.9**	**-1.2**
SUMG				IAmb	IAmb	10 07 58.8	
	comp=Z,202nm,1.8s						
SUMG	**Summit**	**20.74**	**319**	P	**P**	**10 07 43.9**	**-1.2**
SUMG				pmax	pmax		
	comp=Z,202nm,1.8s						
A21K	**Barrow**	**21.01**	**56**	P	**P**	**10 07 48.3**	**+0.8**
	baz=348,SNR=30						
BILL	**Bilibino**	**21.41**	**93**	P	**P**	**10 07 51.8**	**-0.1**
BILL	**Bilibino**	**21.41**	**93**	*e*P	**P**	**10 07 51.1**	**-0.8**
BILL				pmax	pmax		
	comp=Z,52nm,1.7s						
A36M	**Sachs Harbour**	**22.03**	**29**	P	**P**	**10 07 59.2**	**+0.7**
A36M	**Sachs Harbour**	**22.03**	**29**	P	**P**	**10 07 59.6**	**+1.2**
	baz=352,SNR=39						
LSH	**Leshukonskoye**	**22.22**	**233**	*e*P	**P**	**10 08 04.1**	**+3.5**
	comp=Z,181nm,1.2s						
MSF	**Maaselka**	**22.38**	**251**	P	**P**	**10 08 08.1**	**+5.8**
MSF				pmax	pmax		
	comp=Z,50nm,1.4s						
B18K	**Kokolik River**	**22.58**	**62**	P	**P**	**10 08 04.7**	**+0.3**
	baz=348,SNR=14						
B21K	**Ikpikpuk River**	**22.82**	**55**	P	**P**	**10 08 08.2**	**+1.3**
B21K				IAmb	IAmb	10 08 18.6	
	comp=Z,78nm,1.1s						
B21K	**Ikpikpuk River**	**22.82**	**55**	P	**P**	**10 08 07.7**	**+0.9**
	baz=349						
C19K	**Lookout Ridge**	**22.99**	**60**	P	**P**	**10 08 10.9**	**+2.2**
C19K				IAmb	IAmb	10 08 19.8	
	comp=Z,73nm,1.2s						
C19K	**Lookout Ridge**	**22.99**	**60**	P	**P**	**10 08 09.3**	**+0.5**
	baz=348						
C24K	**Franklin Bluff**	**23.10**	**50**	P	**P**	**10 08 10.3**	**+0.6**
	baz=350						
C21K	**Knifeblade Rid**	**23.26**	**55**	P	**P**	**10 08 12.2**	**+0.7**
	baz=349						
C18K	**Utukok River**	**23.33**	**61**	P	**P**	**10 08 12.9**	**+0.7**
C18K				IAmb	IAmb	10 08 22.8	
	comp=Z,83nm,1.2s						
C18K	**Utukok River**	**23.33**	**61**	P	**P**	**10 08 12.9**	**+0.7**
	baz=348						
C17K	**DeLong Mountai**	**23.36**	**63**	P	**P**	**10 08 13.4**	**+0.9**
	baz=348						
C16K	**Lisburne Hills**	**23.40**	**65**	P	**P**	**10 08 14.9**	**+2.1**
C16K	**Lisburne Hills**	**23.40**	**65**	P	**P**	**10 08 13.4**	**+0.6**
	baz=348						
D20K	**Etivluk River**	**23.58**	**57**	P	**P**	**10 08 15.2**	**+0.5**
	baz=349						
D25K	**Kavik River**	**23.63**	**48**	P	**P**	**10 08 15.5**	**+0.3**
D25K				IAmb	IAmb	10 08 26.5	
	comp=Z,83nm,1.4s						
D25K	**Kavik River**	**23.63**	**48**	P	**P**	**10 08 16.3**	**+1.1**
	baz=350						
D24K	**Happy Valley**	**23.65**	**50**	P	**P**	**10 08 15.6**	**+0.4**
D24K	**Happy Valley**	**23.65**	**50**	P	**P**	**10 08 15.7**	**+0.4**
	baz=350						
D22K	**Ayikyak River**	**23.68**	**54**	P	**P**	**10 08 16.9**	**+1.4**
D22K	**Ayikyak River**	**23.68**	**54**	P	**P**	**10 08 16.1**	**+0.5**
	baz=349						
D19K	**Kuna River**	**23.69**	**59**	P	**P**	**10 08 17.6**	**+1.9**
D19K				IAmb	IAmb	10 08 25.8	
	comp=Z,107nm,1.4s						
D19K	**Kuna River**	**23.69**	**59**	P	**P**	**10 08 16.2**	**+0.5**
	baz=349						
D23K	**Nanushuk River**	**23.72**	**52**	P	**P**	**10 08 16.7**	**+0.7**
	baz=350,SNR=14						
D27M	**Malcolm River**	**24.02**	**43**	P	**P**	**10 08 19.6**	**+0.7**
D27M	**Malcolm River**	**24.02**	**43**	P	**P**	**10 08 19.8**	**+0.9**
	baz=351						
E21K	**Killik River**	**24.02**	**55**	P	**P**	**10 08 18.8**	**-0.1**
E21K	**Killik River**	**24.02**	**55**	P	**P**	**10 08 19.4**	**+0.5**
	baz=349						
E20K	**Nigu River**	**24.06**	**57**	P	**P**	**10 08 20.1**	**+0.9**
	baz=349,SNR=9.9						
TOLK	**Toolik Lake Re**	**24.11**	**51**	P	**P**	**10 08 20.9**	**+1.2**
TOLK	**Toolik Lake Re**	**24.11**	**51**	P	**P**

F24K **Squaw Lake** 25.33 50 P P 10 08 30.8 0.0
F24K IAmb IAmb 10 08 40.9
comp=Z,41nm,1.2s
F24K **Squaw Lake** 25.33 50 P P 10 08 31.2 +0.5
baz=350
INK **Inuvik** 25.34 37 P P 10 08 30.8 0.0
INK **Inuvik** 25.34 37 P P 10 08 31.4 +0.7
baz=352,SNR=20
INK **Inuvik** 25.34 37 P P 10 08 30.8 0.0
INK pmax pmax
comp=Z,135nm,1.4s
INK **Inuvik** 25.34 37 LR LR 10 19 56.1
comp=Z,126nm,18.9s,baz=1.5,slow=40
SEY **Seymchan** 25.35 110 *ce*P P 10 08 30.6 -0.3
SEY pmax pmax
comp=Z,67nm,1.7s
SEY **Seymchan** 25.35 110 LR LR 10 18 20.7
comp=Z,190nm,19.1s,baz=20,slow=36
F19K **Shaleruckik Mo** 25.36 59 P P 10 08 32.0 +1.0
F19K **Shaleruckik Mo** 25.36 59 P P 10 08 31.4 +0.5
baz=350
F26K **Sheenjek River** 25.38 47 P P 10 08 32.0 +0.8
baz=351
F25K **Christian Rive** 25.39 48 P P 10 08 31.2 -0.2
baz=351
PRGR **Permogore** 25.45 232 *e*P P 10 08 31.4 -0.4
comp=Z,60nm,0.9s
F18K **Selawik** 25.46 61 P P 10 08 31.7 -0.1
baz=350,SNR=19
COLD **Coldfoot** 25.47 52 P P 10 08 32.4 +0.4
baz=350,SNR=10.0
F17K **Baldwin Pennin** 25.50 62 P P 10 08 32.8 +0.6
F17K **Baldwin Pennin** 25.50 62 P P 10 08 32.2 0.0
baz=350
BMAR **Burnt Mountain** 25.61 47 P P 10 08 34.4 +1.0
G22K **Bettles** 25.69 53 P P 10 08 33.9 -0.1
baz=350
F28M **Old Crow** 25.70 43 P P 10 08 35.1 +1.0
F28M IAmb IAmb 10 08 51.7
comp=Z,40nm,1.1s
F28M **Old Crow** 25.70 43 P P 10 08 34.2 +0.1
baz=351,SNR=18
TNA **Tin City** 25.88 69 P P 10 08 35.4 -0.3
baz=349
F30M **Barrier River** 25.92 39 P P 10 08 36.1 +0.1
baz=352
G21K **Allakaket** 25.96 55 P P 10 08 36.5 0.0
G21K IAmb IAmb 10 08 46.2
comp=Z,55nm,1.2s
G21K **Allakaket** 25.96 55 P P 10 08 36.4 0.0
baz=350
F15K **North Star Dit** 25.98 66 P P 10 08 37.0 +0.4
F15K **North Star Dit** 25.98 66 P P 10 08 36.4 -0.2
baz=350
G23K **Bananza Creek** 25.99 52 P P 10 08 37.2 +0.4
G23K **Bananza Creek** 25.99 52 P P 10 08 36.9 +0.1
baz=350
F14K **Arctic Creek** 26.09 68 P P 10 08 37.8 +0.2
baz=349
G19K **Purcell Mounta** 26.09 59 P P 10 08 38.3 +0.7
G19K **Purcell Mounta** 26.09 59 P P 10 08 37.6 0.0
baz=350
G26K **Porcupine Rive** 26.14 47 P P 10 08 38.7 +0.7
baz=351
G24K **Hadweenzic Riv** 26.16 50 P P 10 08 39.5 +1.2
G24K IAmb IAmb 10 08 48.4
comp=Z,36nm,1.0s
G24K **Hadweenzic Riv** 26.16 50 P P 10 08 38.7 +0.4
baz=351
F31M **Tsiigehtchic** 26.19 38 P P 10 08 39.0 +0.6
F31M **Tsiigehtchic** 26.19 38 P P 10 08 39.5 +1.1
baz=352,SNR=54
G18K **Tagagawik** 26.23 60 P P 10 08 39.8 +1.0
G18K IAmb IAmb 10 08 54.0
comp=Z,57nm,1.6s
G18K **Tagagawik** 26.23 60 P P 10 08 39.2 +0.3
baz=350
FYU **Fort Yukon** 26.43 48 P P 10 08 42.8 +2.1
G16K **Koyuk River** 26.46 64 P P 10 08 42.1 +1.1
G16K **Koyuk River** 26.46 64 P P 10 08 41.1 +0.1
baz=350
IMAR **Indian Mountai** 26.47 56 P P 10 08 42.1 +1.0
G17K **Kiwalik Mounta** 26.47 62 P P 10 08 41.2 +0.1
baz=350
G30M **tAoh Zraii Nji** 26.52 40 P P 10 08 41.4 -0.2
G30M IAmb IAmb 10 08 51.4
comp=Z,44nm,1.1s
G30M **tAoh Zraii Nji** 26.52 40 P P 10 08 42.4 +0.8
baz=352
KLMR **Klimovskoe** 26.63 238 *e*P P 10 08 44.4 +1.9
KLMR pmax pmax
comp=Z,49nm,1.2s
KLMR **Klimovskoe** 26.63 238 P P 10 08 44.4 +1.9
comp=Z,76nm,1.5s
G31M **Satah River** 26.68 38 P P 10 08 44.0 +1.1
G31M **Satah River** 26.68 38 P P 10 08 43.8 +0.9
baz=352
H22K **Ishtalitna Cre** 26.72 54 P P 10 08 44.2 +0.8
baz=351,SNR=9.1
G15K **Niukluk** 26.73 66 P P 10 08 43.8 +0.4
baz=350
H19K **Roundabout Mou** 26.74 58 P P 10 08 45.2 +1.7
H19K IAmb IAmb 10 08 53.8
comp=Z,66nm,1.5s
H19K **Roundabout Mou** 26.74 58 P P 10 08 43.4 0.0
baz=350
H21K **Melozitna Rive** 26.86 55 P P 10 08 45.7 +1.1
H21K IAmb IAmb 10 08 54.6
comp=Z,63nm,1.2s
H21K **Melozitna Rive** 26.86 55 P P 10 08 45.3 +0.7
baz=350
H20K **Anotleneega Mo** 26.88 57 P P 10 08 45.3 +0.5
baz=350
SFJD **Kangerlussuaq** 26.88 327 LR LR 10 18 48.3
comp=Z,354nm,20.2s,baz=358,slow=35
H18K **Honhosa River** 26.98 60 P P 10 08 46.8 +1.1
H18K IAmb IAmb 10 08 55.7
comp=Z,35nm,1.3s
H18K **Honhosa River** 26.98 60 P P 10 08 46.0 +0.3
baz=350
H27K **Steamboat Moun** 26.98 45 P P 10 08 46.3 +0.6
baz=352
H24K **Noodor Dome** 27.00 51 P P 10 08 47.5 +1.6
H24K IAmb IAmb 10 08 56.4
comp=Z,54nm,1.1s
H24K **Noodor Dome** 27.00 51 P P 10 08 46.4 +0.5
baz=351
FINES **FINESS Array B** 27.02 253 P P 10 08 45.4 -0.7
comp=Z,6.8nm,1.0s,baz=348,slow=17,SNR=2.0
FINES LR LR 10 19 56.5
comp=Z,459nm,19.6s,baz=6.5,slow=38
comp=Z,6.8nm,1.0s
ANM **Nome** 27.06 67 P P 10 08 47.6 +1.3
ANM IAmb IAmb 10 08 57.0
comp=Z,55nm,1.3s
ANM **Nome** 27.06 67 P P 10 08 46.7 +0.3
baz=350
ANM **Nome** 27.06 67 P P 10 08 47.7 +1.3
ANM pmax pmax
comp=Z,55nm,1.3s
H17K **Granite Mounta** 27.09 62 P P 10 08 48.1 +1.5
H17K IAmb IAmb 10 08 56.8
comp=Z,32nm,1.1s
H17K **Granite Mounta** 27.09 62 P P 10 08 46.7 +0.1
baz=350
EPYK **Eagle Plains** 27.11 40 P P 10 08 47.7 +0.9
EPYK **Eagle Plains** 27.11 40 P P 10 08 47.6 +0.7
baz=352,SNR=8.3
H29M **Whitestone** 27.17 42 P P 10 08 48.9 +1.5
H29M IAmb IAmb 10 08 57.9
comp=Z,63nm,1.4s
H29M **Whitestone** 27.17 42 P P 10 08 47.7 +0.3
baz=352,SNR=5.8
H16K **Elim** 27.21 64 P P 10 08 47.6 -0.1
baz=350
GAMB **Gambell** 27.36 73 P P 10 08 48.0 -1.0
baz=350
I21K **Tanana** 27.39 54 P P 10 08 50.6 +1.3
I21K **Tanana** 27.39 54 P P 10 08 48.6 -0.6
baz=351
BORG **Borgarnes** 27.43 300 LR LR 10 17 59.7
comp=Z,134nm,18.2s,baz=30,slow=33
PRP **Porcupine Dome** 27.46 49 P P 10 08 51.0 +0.9
PRP **Porcupine Dome** 27.46 49 P P 10 08 50.3 +0.2
baz=351
GCSA **Galena City Sc** 27.49 59 P P 10 08 50.4 +0.2
baz=350,SNR=5.2

I23K **Minto, Yukon-K** 27.59 52 P P 10 08 53.6 +2.5
I23K IAmb IAmb 10 09 01.9
comp=Z,45nm,1.5s
I23K **Minto, Yukon-K** 27.59 52 P P 10 08 51.6 +0.5
baz=351
I20K **Naaghedeneel** 27.60 57 P P 10 08 51.2 +0.1
baz=351
I27K **Kandik River** 27.60 45 P P 10 08 51.5 +0.2
baz=352
MLY **Manley** 27.61 53 P P 10 08 53.4 +2.0
MLY **Manley** 27.61 53 P P 10 08 51.6 +0.2
baz=351
POKR **Poker Plat Res** 27.74 50 P P 10 08 54.0 +1.5
POKR **Poker Plat Res** 27.74 50 P P 10 08 52.8 +0.3
baz=351
I26K **Coal Creek Min** 27.81 46 P P 10 08 54.2 +1.2
I26K **Coal Creek Min** 27.81 46 P P 10 08 53.5 +0.4
baz=352
MDM **Murphy Dome** 27.85 51 P P 10 08 55.2 +1.8
MDM IAmb IAmb 10 09 04.0
comp=Z,40nm,1.3s
I28M **Miner Creek** 27.85 44 P P 10 08 55.0 +1.5
I28M IAmb IAmb 10 09 03.7
comp=Z,47nm,1.4s
I28M **Miner Creek** 27.85 44 P P 10 08 53.4 -0.2
baz=352
COLA **College** 27.95 51 P P 10 08 56.6 +2.3
COLA IAmb IAmb 10 09 04.9
comp=Z,42nm,1.2s
COLA **College** 27.95 51 P P 10 08 54.1 -0.2
baz=351
COLA **College** 27.95 51 P P 10 08 56.6 +2.3
COLA pmax pmax
comp=Z,42nm,1.2s
I17K **Unalakleet** 28.07 63 P P 10 08 54.3 -1.0
baz=350
IL31 28.12 50 P P 10 08 57.0 +1.2
IL31 IAmb IAmb 10 09 11.7
comp=Z,56nm,1.6s
ILAR **Eielson Array** 28.12 50 P P 10 08 57.7 +1.8
ILAR **Eielson Array** 28.12 50 P P 10 08 54.9 -0.9
comp=Z,2.4nm,0.8s,baz=349,slow=8.5,SNR=26
ILAR PcP PcP 10 12 07.6 -1.6
comp=Z,0.7nm,1.0s,baz=332,slow=3.0,SNR=4.4
ILAR LR LR 10 19 34.6
comp=Z,319nm,20.1s,baz=346,slow=35
comp=Z,2.4nm,0.8s
NEA2 **Nenana** 28.16 52 P P 10 08 57.6 +1.4
NEA2 IAmb IAmb 10 09 21.2
comp=Z,38nm,1.5s
NEA2 **Nenana** 28.16 52 P P 10 08 55.7 -0.5
baz=351
CCB **Clear Creek Bu** 28.18 51 P P 10 08 57.7 +1.3
CCB IAmb IAmb 10 09 11.4
comp=Z,55nm,1.5s
J20K **Nowinta River** 28.24 57 P P 10 08 58.5 +1.5
J20K IAmb IAmb 10 09 05.1
comp=Z,40nm,1.9s
J20K **Nowinta River** 28.24 57 P P 10 08 56.3 -0.6
baz=351
KIRV **Kirov** 28.25 227 *i* P P 10 08 55.5 -1.6
KIRV **Kirov** 28.25 227 LR LR 10 21 34.9
comp=Z,683nm,21.0s,baz=352,slow=39
I30M **Mount Dempster** 28.27 41 P P 10 08 57.8 +0.5
I30M IAmb IAmb 10 09 06.2
comp=Z,32nm,1.2s
I30M **Mount Dempster** 28.27 41 P P 10 08 56.8 -0.5
baz=353
J19K **Poorman** 28.32 58 P P 10 08 58.1 +0.4
J19K IAmb IAmb 10 09 38.4
comp=Z,47nm,1.9s
J19K **Poorman** 28.32 58 P P 10 08 57.2 -0.4
baz=351
WRH **Wood River Hil** 28.34 51 P P 10 08 58.1 +0.3
WRH IAmb IAmb 10 09 13.9
comp=Z,54nm,1.6s
J25K **Salcha River,** 28.37 49 P P 10 08 59.4 +1.2
J25K **Salcha River,** 28.37 49 P P 10 08 57.5 -0.7
baz=352
EGAK **Eagle** 28.45 45 P P 10 09 00.4 +1.6
EGAK **Eagle** 28.45 45 P P 10 08 58.1 -0.7
baz=352
HDA **Harding Lake** 28.47 50 P P 10 09 01.4 +2.4
HDA IAmb IAmb 10 09 26.1
comp=Z,51nm,1.8s
HDA **Harding Lake** 28.47 50 P P 10 08 58.6 -0.4
baz=352
BPAW **Bear Paw Mtn.** 28.52 54 P P 10 09 01.4 +1.9
BPAW IAmb IAmb 10 09 09.8
comp=Z,38nm,1.4s
BPAW **Bear Paw Mtn.** 28.52 54 P P 10 08 58.6 -0.9
baz=351
MA2 **Magadan** 28.56 112 P P 10 09 00.4 +0.6
MA2 **Magadan** 28.56 112 *ce*P P 10 08 58.8 -1.0
MA2 pmax pmax
comp=Z,15nm,1.7s
MA2 **Magadan** 28.56 112 LR LR 10 21 21.2
comp=Z,140nm,18.1s,baz=353,slow=39
NB201 **NORSAR Array S** 28.58 268 P P 10 09 00.5 +0.5
J26L **Joseph Creek** 28.59 47 P P 10 09 01.4 +1.3
J26L **Joseph Creek** 28.59 47 P P 10 09 00.2 +0.1
baz=352
NOA **NORSAR Array B** 28.60 268 P P 10 08 58.4 -1.8
comp=Z,1.3nm,0.9s,baz=6.2,slow=8.6,SNR=1.7
NOA LR LR 10 19 47.0
comp=Z,242nm,20.0s,baz=5.0,slow=35
comp=Z,1.3nm,0.9s
CHUM **Lake Minchumin** 28.65 55 P P 10 09 00.2 -0.3
baz=351
J17K **VABM Dome** 28.67 62 P P 10 09 02.5 +1.8
J17K IAmb IAmb 10 09 10.9
comp=Z,35nm,1.1s
J17K **VABM Dome** 28.67 62 P P 10 09 00.1 -0.7
baz=351
J16K **Anvik River** 28.67 63 P P 10 09 02.3 +1.5
J16K **Anvik River** 28.67 63 P P 10 09 00.8 +0.1
baz=351
J18K **Innoko River** 28.77 59 P P 10 09 02.8 +1.2
J18K IAmb IAmb 10 09 12.0
comp=Z,29nm,1.1s
J18K **Innoko River** 28.77 59 P P 10 09 01.4 -0.3
baz=351
J30M **Hart River** 28.91 41 P P 10 09 03.5 +0.5
J30M IAmb IAmb 10 09 12.6
comp=Z,30nm,1.3s
J30M **Hart River** 28.91 41 P P 10 09 03.1 0.0
baz=353,SNR=6.4
J29N **Klondike Camp** 28.94 42 P P 10 09 05.1 +1.9
J29N IAmb IAmb 10 09 13.1
comp=Z,23nm,1.1s
J29N **Klondike Camp** 28.94 42 P P 10 09 03.1 -0.1
baz=352
J14K **Nanvaranak Lak** 28.99 66 P P 10 09 02.6 -0.9
baz=351
MCK **McKinley** 29.02 52 P P 10 09 03.6 -0.3
baz=352
K20K **Telida** 29.06 57 P P 10 09 03.2 -1.0
baz=351
KTH **Kantishna Hill** 29.07 54 P P 10 09 05.0 +0.6
KTH IAmb IAmb 10 09 15.8
comp=Z,40nm,1.5s
SCRK **Sand Creek** 29.08 48 P P 10 09 04.8 +0.2
SCRK **Sand Creek** 29.08 48 P P 10 09 04.0 -0.5
baz=352
CAST **Castle Rocks** 29.13 55 P P 10 09 06.5 +1.7
CAST IAmb IAmb 10 09 15.1
comp=Z,27nm,1.2s
CAST **Castle Rocks** 29.13 55 P P 10 09 04.8 0.0
baz=351,SNR=5.4
K27K **Chicken** 29.14 46 P P 10 09 06.5 +1.6
K27K **Chicken** 29.14 46 P P 10 09 05.2 +0.2
baz=352
K24K **Donnelly Dome** 29.15 49 P P 10 09 04.6 -0.5
baz=352
TRF **Thorofare Moun** 29.21 53 P P 10 09 08.1 +2.3
TRF **Thorofare Moun** 29.21 53 P P 10 09 05.1 -0.7
baz=351
DAWY **Dawson** 29.26 43 P P 10 09 04.4 -1.6
DAWY **Dawson** 29.26 43 P P 10 09 05.5 -0.5
baz=352
HFS **Hagfors** 29.29 265 LR LR 10 20 02.6
comp=Z,599nm,20.2s,baz=357,slow=35
TTA **Tatalina** 29.35 59 P P 10 09 08.7 +1.8
TTA IAmb IAmb 10 09 17.4
comp=Z,48nm,1.7s
TTA **Tatalina** 29.35 59 P P 10 09 06.5 -0.3
baz=351
TTA **Tatalina** 29.35 59 P P 10 09 08.7 +1.8
TTA pmax pmax
comp=Z,48nm,1.7s
RND **Reindeer** 29.35 52 P P 10 09 08.2 +1.3
RND **Reindeer** 29.35 52 P P 10 09 08.2 +1.3
RND pmax pmax
comp=Z,37nm,1.8s
K17K **Iditarod** 29.40 61 P P 10 09 08.3 +1.1
K17K IAmb IAmb 10 09 17.4
comp=Z,49nm,1.1s
K17K **Iditarod** 29.40 61 P P 10 09 07.9 +0.7
baz=351
SVE **Sverdlovsk** 29.43 214 *e*P P 10 09 16.4 +8.9
SVE pmax pmax
comp=Z,26nm,1.3s
K29M **Barlow Dome** 29.58 42 P P 10 09 09.5 +0.5
K29M **Barlow Dome** 29.58 42 P P 10 09 09.8 +0.8
baz=353
K15K **Wolf Creek Mou** 29.59 64 P P 10 09 09.4 +0.5
baz=351
PPLA **Purkeypile** 29.64 55 P P 10 09 10.0 +0.5
baz=351
DHY **Denali Highway** 29.77 51 P P 10 09 12.8 +2.1
DHY **Denali Highway** 29.77 51 P P 10 09 11.2 +0.4
baz=352
MAYO **Mayo, Yukon** 29.91 40 P P 10 09 14.1 +2.3
MAYO **Mayo, Yukon** 29.91 40 P P 10 09 12.6 +0.8
baz=353
ARU **Arti** 29.92 216 *c i*P P 10 09 12.3 +0.4
ARU 10 10 06.0
ARU S S 10 14 12.4 +4.4
ARU SS ScP 10 15 46.4 -8.1
ARU pmax pmax
comp=Z,14nm,2.1s
ARU MLR MLR
comp=Z,1μm,22.0s
ARU **Arti** 29.92 216 LR LR 10 22 52.2
comp=Z,946nm,19.8s,baz=355,slow=40
L20K **Farewell, AK** 29.94 57 P P 10 09 12.1 0.0
baz=351
WAT1 **Susitna Watana** 29.94 52 P P 10 09 12.2 +0.1
baz=352
L17K **Donlin** 29.98 61 P P 10 09 12.0 -0.4
baz=351
PAX **Paxson** 29.99 49 P P 10 09 12.4 -0.2
baz=352
L18K **Granite Mounta** 30.01 60 P P 10 09 12.2 -0.3
baz=351
L26K **Log Cabin Wild** 30.07 47 P P 10 09 14.8 +1.7
L26K **Log Cabin Wild** 30.07 47 P P 10 09 12.9 -0.2
baz=352
L27K **Beaver Creek,** 30.12 46 P P 10 09 15.4 +1.8
L27K IAmb IAmb 10 09 24.3
comp=Z,35nm,1.8s
L27K **Beaver Creek,** 30.12 46 P P 10 09 14.2 +0.6
baz=352
MENT **Mentasta** 30.13 48 P P 10 09 14.6 +0.9
L19K **White Mountain** 30.17 58 P P 10 09 14.0 -0.1
baz=351
L15K **Ungalak Mounta** 30.20 64 P P 10 09 14.6 +0.3
baz=351
WAT6 **Susitna Watana** 30.24 51 P P 10 09 14.6 -0.3
baz=352
CUT **Chulitna** 30.25 54 P P 10 09 14.5 -0.2
baz=352
L29M **L29M** 30.28 43 P P 10 09 15.9 +0.8
L29M **L29M** 30.28 43 P P 10 09 15.7 +0.6
baz=353
L16K **Owhat River** 30.32 62 P P 10 09 17.0 +1.7
L16K **Owhat River** 30.32 62 P P 10 09 15.0 -0.3
baz=351
L14K **Kuka Creek** 30.45 66 P P 10 09 16.5 0.0
baz=351
M19K **Big River Lodg** 30.48 58 P P 10 09 16.8 0.0
baz=352
HARP **HAARP** 30.58 49 P P 10 09 17.2 -0.5
baz=352
M20K **Styx River** 30.58 57 P P 10 09 16.9 -0.9
baz=352
SKT **Skwentna** 30.59 55 P P 10 09 18.4 +0.6
SKT **Skwentna** 30.59 55 P P 10 09 16.8 -1.0
baz=352
M26K **Nabesna, AK** 30.71 47 P P 10 09 18.6 -0.3
baz=352
FRB **Frobisher Bay** 30.76 342 LR LR 10 20 19.4
comp=Z,227nm,21.3s,baz=15,slow=34
M17K **Holitna River** 30.77 61 P P 10 09 18.6 -0.7
baz=351
M18K **Stony River** 30.79 59 P P 10 09 18.8 -0.7
baz=351
M24K **Tolsona, Glenn** 30.81 50 P P 10 09 19.2 -0.6
baz=352
M27K **Edge Creek, AK** 30.82 46 P P 10 09 19.9 0.0
baz=353
BVCY **Beaver Creek** 30.82 45 P P 10 09 19.4 -0.4
baz=353
WRGLY **Wrigley** 30.85 30 P P 10 09 20.9 +0.9
baz=355
M30M **Minto, Yukon** 30.88 42 P P 10 09 20.6 +0.2
baz=353
M22K **Willow** 30.91 54 P P 10 09 20.9 +0.3
baz=352
M29M **Somme Creek** 30.93 43 IAmb IAmb 10 09 31.7
comp=Z,24nm,1.1s
M29M **Somme Creek** 30.93 43 P P 10 09 21.6 +0.8
baz=353
GHO **Glory Hole Cre** 30.97 53 IAmb IAmb 10 09 30.6
comp=Z,37nm,1.2s
SML **Sawmill** 30.97 52 P P 10 09 21.4 +0.2
baz=352
SCM **Sheep Creek Mo** 31.01 51 P P 10 09 22.9 +1.3
SCM **Sheep Creek Mo** 31.01 51 P P 10 09 22.4 +0.8
baz=352
SCM **Sheep Creek Mo** 31.01 51 P P 10 09 22.9 +1.3
SCM pmax pmax
comp=Z,40nm,0.9s
M23K **Glacier View** 31.02 52 P P 10 09 22.5 +0.9
baz=352
M16K **Timber Creek** 31.04 62 P P 10 09 21.5 -0.2
baz=351
M14K **Bethel** 31.09 65 P P 10 09 21.9 -0.2
baz=351
PMR **Palmer** 31.14 53 IAmb IAmb 10 09 31.6
comp=Z,24nm,1.3s
PMR **Palmer** 31.14 53 P P 10 09 22.0 -0.5
baz=352
M11K **Mekoryuk** 31.14 69 P P 10 09 22.1 -0.5
baz=351
SUA **Susitna One** 31.16 54 IAmb IAmb 10 09 32.3
comp=Z,28nm,1.3s
SUA **Susitna One** 31.16 54 P P 10 09 22.4 -0.5
baz=352
M15K **Kasigluk River** 31.24 64 P P 10 09 23.3 -0.2
baz=351
M13K **Dall Lake** 31.32 66 P P 10 09 23.7 -0.5
baz=351
N20K **Mount Spurr** 31.32 56 P P 10 09 24.0 -0.3
baz=352
KNK **Knik Glacier** 31.36 52 P P 10 09 24.8 +0.3
baz=352
M31M **Drury Creek, Y** 31.38 39 P P 10 09 25.8 +1.1
M31M IAmb IAmb 10 09 35.4
comp=Z,43nm,1.3s
M31M **Drury Creek, Y** 31.38 39 P P 10 09 24.3 -0.5
baz=353,SNR=5.7
N25K **Chitina, Valde** 31.40 49 P P 10 09 24.3 -0.7
baz=352
FARO **Faro, Yukon** 31.41 39 P P 10 09 25.0 0.0
FARO **Faro, Yukon** 31.41 39 P P 10 09 24.1 -0.9
baz=354
KLU **Klutina** 31.44 50 P P 10 09 24.5 -0.8
baz=352
YUK3 **Moose Creek** 31.48 45 P P 10 09 25.0 -0.8
baz=353
N19K **Bonanza Creek** 31.55 58 P P 10 09 26.3 0.0
baz=352
N18K **Kilae Creek** 31.59 59 P P 10 09 26.2 -0.4
baz=352
N16K **Nishlik Lake** 31.59 62 P P 10 09 25.8 -0.8
baz=352
RC01 **Rabbit Creek A** 31.60 54 P P 10 09 27.5 +0.9
RC01 IAmb IAmb 10 09 36.0
comp=Z,40nm,1.2s
RC01 **Rabbit Creek A** 31.60 54 P P 10 09 26.2 -0.4
baz=352,SNR=5.1
ZAA0 **Zalesovo Array** 31.65 186 P 10 09 26.4 -0.7

ZALV **Zalesovo Beam** 31.65 186 P **P** 10 09 26.1 -1.0
ZALV **Zalesovo Beam** 31.65 186 *i* P **P** 10 09 26.1 -1.0
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV **Zalesovo Beam** 31.65 186 P **P** 10 09 23.9 -3.2
comp=Z,0.9nm,0.5s,baz=350,slow=9.9,SNR=6.5
ZALV PcP **PcP** 10 12 17.4 -1.1
comp=Z,0.4nm,0.3s,baz=327,slow=2.4,SNR=2.3
ZALV LR LR 10 23 20.3
comp=Z,579nm,18.5s,baz=9.5,slow=39
comp=Z,0.9nm,0.5s
N17K **Nushagak Hills** 31.65 61 P **P** 10 09 26.4 -0.7
baz=352
MCARA **McCarthy VSAT** 31.72 47 P **P** 10 09 27.1 -0.7
baz=353
N15K **Kwethluk River** 31.80 63 P **P** 10 09 27.1 -1.4
baz=352
CAPN **Captain Cook N** 31.82 55 P **P** 10 09 28.8 +0.2
baz=352
YKA **Yellowknife Ar** 31.90 22 P **P** 10 09 29.4 +0.2
YKA **Yellowknife Ar** 31.90 22 *i* P **P** 10 09 29.2 0.0
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA **Yellowknife Ar** 31.90 22 P **P** 10 09 28.1 -1.1
comp=Z,3.3nm,0.8s,baz=354,slow=8.5,SNR=53
YKA PcP **PcP** 10 12 18.0 -1.0
comp=Z,1.3nm,0.9s,baz=347,slow=3.2,SNR=5.9
YKA LR LR 10 22 24.1
comp=Z,739nm,19.3s,baz=339,slow=36
comp=Z,3.3nm,0.8s
N14K **Kuskokwak Cree** 31.93 65 P **P** 10 09 28.7 -0.8
baz=351
N30M **Aishikik Lake** 31.98 42 P **P** 10 09 30.6 +0.5
baz=353
YUK8 **Steele Glacier** 32.01 44 P **P** 10 09 30.6 0.0
baz=353
YUK4 **Talbot Arm** 32.01 43 P **P** 10 09 29.3 -1.2
baz=353
BMRM **Bremner River** 32.04 49 P **P** 10 09 30.8 +0.2
baz=353
O19K **Port Alsworth** 32.18 58 P **P** 10 09 31.8 +0.1
baz=352
O22K **Cooper Landing** 32.20 54 P **P** 10 09 32.1 +0.2
baz=352
CTG **Chitna Glacier** 32.24 46 P **P** 10 09 32.0 -0.4
baz=353
CRQE **Cirque** 32.34 48 P **P** 10 09 32.9 -0.4
baz=353
TGTN **Hyland Airport** 32.35 34 P **P** 10 09 33.6 +0.3
baz=354
EYAK **Cordova Ski Ar** 32.39 50 P **P** 10 09 33.6 +0.1
baz=353
O17K **Koliganek Bris** 32.41 61 P **P** 10 09 33.6 -0.2
baz=352
O20K **Slope Mountain** 32.41 57 P **P** 10 09 33.2 -0.7
baz=352
YUK6 **Outpost Mounta** 32.43 43 P **P** 10 09 33.5 -0.7
baz=353,SNR=5.4
O18K **Koktuh Hills** 32.46 59 P **P** 10 09 33.8 -0.4
baz=352
N32M **Quiet Lake** 32.50 38 P **P** 10 09 35.0 +0.4
baz=354
O16K **Kokwok River B** 32.52 62 P **P** 10 09 34.3 -0.4
baz=352
OBN **Obninsk** 32.54 240 *e*P **P** 10 09 36.1 +1.2
OBN *e* 10 10 43.7
OBN *e*PPP PPP 10 10 58.9
OBN pmax pmax
comp=Z,3.0nm,0.6s
HYT **Haines Junctio** 32.59 43 IAmb IAmb 10 09 46.2
comp=Z,28nm,1.2s
HYT **Haines Junctio** 32.59 43 P **P** 10 09 35.7 +0.2
baz=353
SEW **Seward** 32.59 54 P **P** 10 09 35.8 +0.4
baz=352
O14K **Tigyukauivet M** 32.63 65 P **P** 10 09 35.4 -0.3
baz=352
O30N **Mendenhall** 32.72 41 P **P** 10 09 35.8 -0.8
baz=354,SNR=6.8
P19K **Oil Pt** 32.79 57 P **P** 10 09 35.5 -1.7
baz=352
O15K **Ungalikthiuk R** 32.81 64 P **P** 10 09 36.6 -0.6
baz=352
BRVK **Borovoye** 32.83 203 P **P** 10 09 38.3 +0.8
BRVK **Borovoye** 32.83 203 P **P** 10 09 38.3 +0.8
BRVK pmax pmax
comp=Z,61nm,1.8s
P23K **Montague Islan** 32.83 52 P **P** 10 09 36.2 -1.3
baz=352
ZEA **Zeya** 32.85 139 *e*P **P** 10 09 39.1 +1.5
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=N,100nm,14.0s
ZEA MLR MLR
comp=Z,200nm,14.0s
BVA0 **Borovoye Array** 32.86 203 *i* P **P** 10 09 38.0 +0.2
BVAR **Borovoye Array** 32.86 203 P **P** 10 09 36.0 -1.7
comp=Z,1.6nm,0.7s,baz=355,slow=7.4,SNR=12
BVAR LR LR 10 25 33.5
comp=Z,565nm,18.6s,baz=359,slow=41
comp=Z,1.6nm,0.7s
BRSE **Bradley Lake S** 32.87 55 P **P** 10 09 36.4 -1.4
baz=352
HOM **Homer** 32.90 56 P **P** 10 09 36.4 -1.6
baz=352
WHY **Whitehorse** 32.90 40 P **P** 10 09 37.5 -0.7
baz=354
P18K **Big Mountain,** 32.92 59 P **P** 10 09 36.5 -1.7
baz=352
MESA **MESA** 32.98 47 P **P** 10 09 37.9 -1.1
baz=353
P17K **Kvichak River** 33.03 60 P **P** 10 09 37.6 -1.5
baz=352
O29M **Mount Kennedy** 33.05 44 IAmb IAmb 10 09 49.9
comp=Z,38nm,1.4s
O29M **Mount Kennedy** 33.05 44 P **P** 10 09 38.4 -1.1
baz=353
P16K **Nushagak River** 33.08 62 P **P** 10 09 38.3 -1.3
baz=352
KAIM **Kayak Island** 33.09 49 P **P** 10 09 38.0 -1.7
baz=353
PINM **Pinnacle** 33.16 45 P **P** 10 09 39.9 -0.6
baz=353
P30M **Million Dollar** 33.32 42 P **P** 10 09 41.3 -0.5
baz=354
P33M **Teslin, Yukon** 33.45 38 P **P** 10 09 43.7 +0.7
P33M **Teslin, Yukon** 33.45 38 P **P** 10 09 42.0 -1.0
baz=354,SNR=6.8
NACGM **Naroch** 33.46 250 *e*P **P** 10 09 44.7 +1.7
comp=N,1μm,1.0s
Q23K **Middleton Isla** 33.46 51 P **P** 10 09 42.2 -0.7
baz=353
Q19K **Cape Douglas,** 33.49 58 P **P** 10 09 41.9 -1.3
baz=352
Q16K **King Salmon** 33.53 61 P **P** 10 09 42.8 -0.7
baz=352
PNL **Peninsula** 33.64 44 P **P** 10 09 43.9 -0.7
baz=353
WTLY **Watson Lake, Y** 33.74 35 P **P** 10 09 45.7 +0.3
WTLY IAmb IAmb 10 09 55.5
comp=Z,18nm,1.1s
WTLY **Watson Lake, Y** 33.74 35 P **P** 10 09 45.5 +0.1
baz=354
P29M **Windy Craggy** 33.77 43 P **P** 10 09 44.6 -1.0
baz=354
MNK **Minsk** 33.77 249 *i* P **P** 10 09 46.1 +0.3
comp=E,6.0nm,0.8s,baz=250
MNK *i* P **P** 10 09 46.1 +0.3
comp=N,25nm,1.0s,baz=250
MNK *i* P **P** 10 09 46.1 +0.3
comp=Z,12nm,0.9s,baz=250
MNK *i* PP **PnPn** 10 10 57.6 -0.3
baz=250
MNK *i* PPP PPP 10 11 09.1
baz=250
MNK *i* S **S** 10 15 10.4 +2.4
baz=250
MNK *i* SS **SnSn** 10 17 18.1 +5.4
baz=250
MNK *i* SSS SSS 10 17 34.2
baz=250
MNK *i* LQ LQ 10 20 58.9
baz=250
MNK *i* LR LR 10 22 42.2
baz=250
MNK *i* LRM MLR 10 23 58.6
comp=E,120nm,13.8s,baz=250
MNK *i* LRM MLR 10 24 18.5
comp=Z,394nm,12.1s,baz=250
MNK *i* LRM MLR 10 25 00.9
comp=N,314nm,11.7s,baz=250
MNK **Minsk** 33.77 249 *i* P **P** 10 09 46.0 +0.3
MNK *i* 10 10 57.5
MNK *i* S **S** 10 15 10.4 +2.4
MNK *i* SS **SnSn** 10 17 18.0 +5.4
MNK *i* SSS SSS 10 17 34.2
MNK pmax pmax
comp=N,25nm,1.0s
MNK pmax pmax
comp=Z,12nm,0.9s
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK MLR MLR
comp=E,120nm,14.0s
MNK MLR MLR
comp=Z,394nm,12.0s
MNK MLR MLR
comp=N,314nm,12.0s
FLDN **Fort Liard** 33.84 30 P **P** 10 09 45.8 -0.4
baz=355
Q20K **Shuyak Island** 33.89 57 P **P** 10 09 45.1 -1.6
baz=352
KOTAN **Kotaneelee Air** 33.93 31 P **P** 10 09 47.8 +0.8
baz=355
MOY **Mondy** 33.99 168 *e*P **P** 10 09 48.6 +0.8
Q17K **Contact Creek** 33.99 60 P **P** 10 09 46.5 -1.2
baz=352
PLBC **Pleasant Camp** 34.02 42 P **P** 10 09 48.5 +0.7
baz=354
P32M **Atlin** 34.02 39 P **P** 10 09 49.1 +1.2
baz=354
SKAG **Skagway** 34.07 41 P **P** 10 09 49.2 +1.0
baz=354
R33M **Jennings River** 34.35 37 IAmb IAmb 10 10 01.1
comp=Z,26nm,1.1s
R33M **Jennings River** 34.35 37 P **P** 10 09 52.0 +1.2
baz=354
BELG **Belogornoye** 34.53 227 *i* P **P** 10 09 53.4 +1.1
BELG pmax pmax
comp=Z,8.0nm,1.0s
BELG **Belogornoye** 34.53 227 LR LR 10 26 09.1
comp=Z,530nm,19.4s,baz=339,slow=40
R16K **Pilot Point** 34.57 62 P **P** 10 09 51.3 -1.2
baz=352
P08K **Saint George I** 34.64 73 P **P** 10 09 53.0 -0.2
baz=352
KDAK **Kodiak Island** 34.70 57 LR LR 10 23 56.7
comp=Z,411nm,20.4s,baz=25,slow=36
Q32M **Nakina River** 34.72 38 P **P** 10 09 54.9 +0.8
baz=354
LPSR **Galich'ya Gora** 34.88 237 *e*P **P** 10 09 54.7 -0.6
LPSR pmax pmax
comp=Z,40nm,1.4s
KURK **Kurchatov** 34.97 193 P **P** 10 09 56.3 +0.2
KURK **Kurchatov** 34.97 193 P **P** 10 09 56.3 +0.2
KURK pmax pmax
comp=Z,7.0nm,1.1s
KURBB **Kurchatov Arra** 35.06 193 P **P** 10 09 54.7 -2.2
comp=Z,0.7nm,0.5s,baz=16,slow=7.0,SNR=7.7
KURBB PcP **PcP** 10 12 27.1 -1.0
comp=Z,1.0nm,0.7s,baz=358,slow=2.7,SNR=4.0
KURBB LR LR 10 26 25.7
comp=Z,788nm,21.2s,baz=18,slow=40
comp=Z,0.7nm,0.5s
OHAK **Old Harbor** 35.21 58 P **P** 10 09 59.2 +1.2
baz=353
R32K **Eaglecrest** 35.29 40 P **P** 10 09 59.0 +0.2
baz=354
DLBC **Dease Lake** 35.36 36 P **P** 10 10 01.0 +1.6
DLBC **Dease Lake** 35.36 36 P **P** 10 09 59.2 -0.2
baz=355,SNR=5.7
DLBC **Dease Lake** 35.36 36 LR LR 10 24 40.0
comp=Z,532nm,22.0s,baz=296,slow=37
PETK **Petropavlovsk-** 35.51 107 LR LR 10 24 30.4
comp=Z,211nm,19.2s,baz=343,slow=36
S31K **Pelican** 35.52 42 P **P** 10 10 00.7 0.0
baz=354
CHGN **Chignik** 35.77 63 P **P** 10 10 02.6 -0.2
baz=352
VORR **Voronezh** 35.78 236 P **P** 10 10 06.8 +3.7
VORR pmax pmax
comp=Z,31nm,1.6s
SII **Sitkinak Islan** 35.80 59 P **P** 10 10 02.6 -0.7
baz=353
S34M **Telegraph Cree** 35.83 37 P **P** 10 10 05.6 +2.2
S34M IAmb IAmb 10 10 13.9
comp=Z,39nm,1.2s
S34M **Telegraph Cree** 35.83 37 P **P** 10 10 03.9 +0.5
baz=354,SNR=5.9
DGZ **Jazzator, Alta** 35.88 183 *i* P **P** 10 10 03.1 -1.0
DGZ pmax pmax
comp=Z,19nm,1.7s
AKTO **Aktyubinsk** 35.93 216 P **P** 10 10 04.1 -0.3
AKTO **Aktyubinsk** 35.93 216 LR LR 10 26 00.2
comp=Z,897nm,21.4s,baz=9.5,slow=38
FCC **Fort Churchill** 36.01 4 P **P** 10 10 05.7 +0.8
FCC IAmb IAmb 10 10 13.9
comp=Z,24nm,1.2s
FCC **Fort Churchill** 36.01 4 P **P** 10 10 05.7 +0.8
FCC pmax pmax
comp=Z,25nm,1.3s
VRH **Novokhopyorsk** 36.09 233 *e*P **P** 10 10 06.0 +0.4
VRH pmax pmax
comp=Z,40nm,1.8s
S32K **Kilisnoo** 36.10 41 P **P** 10 10 05.9 +0.2
baz=354
VSR **Storozhevoye** 36.24 236 *e*P **P** 10 10 06.0 -1.0
VSR pmax pmax
comp=Z,20nm,1.3s
HEH **HeiHe** 36.33 139 *e*P **P** 10 10 06.8 -1.0
HEH PcP **PcP** 10 12 32.5 +0.6
HEH pmax pmax
comp=Z,5.0nm,1.1s
HEH pmax pmax
comp=Z,290nm,5.9s
CHIR **Chirikof Islan** 36.44 60 P **P** 10 10 08.2 -0.4
baz=353
SIT **Sitka** 36.47 41 P **P** 10 10 09.0 +0.2
baz=354
SDPT **Sand Point** 36.56 65 P **P** 10 10 09.6 0.0
baz=352
T35M **Bob Quinn** 36.80 37 P **P** 10 10 11.1 -0.6
baz=355
HIA **Hailar** 36.95 148 *i* P **P** 10 10 10.2 -2.9
HIA pmax pmax
comp=Z,10.0nm,1.6s
AB31 **Akbulak array** 37.02 214 *i* P **P** 10 10 13.1 -0.6
ABKAR **Akbulak array** 37.02 214 **P** 10 10 14.1 +0.4
CHNA **Chernabura Isl** 37.14 64 P **P** 10 10 13.9 -0.7
baz=353
SHEM **Shemya Is, Ala** 37.18 90 LR LR 10 24 17.0
comp=Z,142nm,21.6s,baz=326,slow=34
AKASG **Malin Array Be** 37.45 247 P **P** 10 10 15.4 -1.9
comp=Z,1.2nm,0.5s,baz=6.8,slow=8.8,SNR=4.1
comp=Z,1.2nm,0.5s
AKBB **Malin Array Si** 37.45 247 **P** 10 10 17.9 +0.6
AKBB **Malin Array Si** 37.45 247 P **P** 10 10 17.9 +0.6
AKBB pmax pmax
comp=Z,12nm,1.0s
KIEV **Kiev** 37.46 247 P **P** 10 10 17.4 0.0
KIEV **Kiev** 37.46 247 P **P** 10 10 17.4 0.0
KIEV pmax pmax
comp=Z,10.0nm,1.0s
KLR **Kul'dur** 37.59 135 *i* P **P** 10 10 17.6 -0.9
KLR pmax pmax
comp=Z,9.0nm,1.3s
KLR **Kul'dur** 37.59 135 LR LR 10 26 00.7
comp=Z,181nm,21.1s,baz=13,slow=37
ULN **Ulaanbaatar** 37.92 162 **P** 10 10 21.7 +0.2
ULN **Ulaanbaatar** 37.92 162 P **P** 10 10 21.7 +0.2
ULN pmax pmax
comp=Z,10.0nm,1.3s
SONM **Songino Array** 37.94 163 **P** 10 10 21.9 +0.3
SONM **Songino Array** 37.94 163 P **P** 10 10 21.9 +0.3
SONM pmax pmax
comp=Z,13nm,1.4s
SONM **Songino Array** 37.94 163 P **P** 10 10 19.5 -2.1
comp=Z,3.2nm,0.9s,baz=341,slow=7.0,SNR=20
SONM PcP **PcP** 10 12 35.7 -1.3
comp=Z,0.7nm,0.9s,baz=321,slow=1.8,SNR=1.4
comp=Z,3.2nm,0.9s
CLL **Collm** 38.11 263 *e*Px Px 10 10 25.0
NIKH **Nikolski High** 38.30 74 P **P** 10 10 23.3 -1.0
baz=352
MAKZ **Makanchi** 38.83 189 **P** 10 10 28.9 -0.1
MAKZ **Makanchi** 38.83 189 P **P** 10 10 28.9 -0.1
MAKZ pmax pmax
comp=Z,32nm,1.8s
MK31 **Makanchi Array** 38.84 189 **P** 10 10 28.1 -0.9
MK31 **Makanchi Array** 38.84 189 *i* P **P** 10 10 28.1 -0.9
MKAR **Makanchi Array** 38.84 189 **P** 10 10 28.5 -0.5
MKAR **Makanchi Array** 38.84 189 *i* P **P** 10 10 30.0 +1.0
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR **Makanchi Array** 38.84 189 P **P** 10 10 27.6 -1.4
comp=Z,2.8nm,0.8s,baz=12,slow=6.2,SNR=15
MKAR PcP **PcP** 10 12 38.6 -1.1
comp=Z,2.1nm,1.1s,baz=12,slow=4.1,SNR=1.3
MKAR LR LR 10 27 45.5
comp=Z,411nm,18.7s,baz=356,slow=38
comp=Z,2.8nm,0.8s
KWP **Kalwaria Pacla** 39.01 253 P **P** 10 10 31.0 +0.6
KWP IAmb IAmb 10 10 57.4
comp=Z,32nm,1.1s
KWP **Kalwaria Pacla** 39.01 253 P **P** 10 10 31.0 +0.6
KWP pmax pmax
comp=Z,32nm,1.1s
KRLC **Kraliky** 39.03 259 *e*P **P** 10 10 31.2 +0.5
KRLC **Kraliky** 39.03 259 *e*P **P** 10 10 31.2 +0.5
MORC **Moravsky Berou** 39.27 258 P **P** 10 10 33.2 +0.6
MORC **Moravsky Berou** 39.27 258 *e*P **P** 10 10 32.2 -0.4
MORC **Moravsky Berou** 39.27 258 P **P** 10 10 33.2 +0.6
MORC pmax pmax
comp=Z,16nm,1.3s
SCHQ **Schefferville** 39.64 340 LR LR 10 26 28.2
comp=Z,151nm,20.2s,baz=33,slow=35
VRAC **Vranov** 39.81 259 *e*P **P** 10 10 37.6 +0.5
VRAC **Vranov** 39.81 259 LR LR 10 27 41.3
comp=Z,209nm,19.2s,baz=360,slow=37
ZVC **Zvikov** 39.87 262 *e*P **P** 10 10 40.9 +3.3
BRLDA **Berland Lookou** 40.22 25 P **P** 10 10 41.8 +1.2
BRLDA IAmb IAmb 10 10 50.5
comp=Z,33nm,1.1s
KHC **Kasperske Hory** 40.22 262 *e*P **P** 10 10 44.5 +3.9
KHC *ex* x 10 10 58.0
KHC **Kasperske Hory** 40.22 262 *i* P **P** 10 10 41.7 +1.1
GERES **GERESS Array B** 40.50 262 P **P** 10 10 42.2 -0.7
GERES **GERESS Array B** 40.50 262 P **P** 10 10 42.2 -0.7
GERES **GERESS Array B** 40.50 262 P **P** 10 10 41.2 -1.7
comp=Z,0.5nm,0.6s,baz=87,slow=30,SNR=2.4
GERES LR LR 10 28 44.3
comp=Z,158nm,18.7s,baz=2.5,slow=38
comp=Z,0.5nm,0.6s
SMOL **Smolenice** 40.53 258 *e*P P 10 10 48.1 +5.0
YSS **Yuzh-Sakhalins** 40.55 124 *e*P **P** 10 10 42.3 -0.9
YSS pmax pmax
comp=Z,10.0nm,0.7s
YSS MLR MLR
comp=Z,200nm,16.0s
MODS **Modra-Piesok** 40.68 258 *e*P **P** 10 10 47.9 +3.5
MODS *e* 10 10 55.8
MODS **Modra-Piesok** 40.68 258 *e*P **P** 10 10 47.9 +3.5
MODS *e* 10 10 55.8
BNX **BinXian** 40.84 140 ⇓P **P** 10 10 44.6 -1.0
BNX pmax pmax
comp=Z,14nm,1.3s
BNX pmax pmax
comp=Z,140nm,4.4s
PSZ **Piszkesteto** 40.93 256 P **P** 10 10 46.7 +0.2
PSZ pmax pmax
comp=Z,14nm,1.4s
BBB **Bella Bella** 41.69 35 LR LR 10 28 16.3
comp=Z,417nm,21.8s,baz=350,slow=36
WMQ **Urumqi** 41.76 183 *e*P **P** 10 10 55.5 +2.2
WMQ pmax pmax
comp=Z,16nm,1.5s
WMQ LR LR
comp=Z,740nm,19.9s
WMQ LR LR
comp=Z,560nm,21.9s
MDJ **Mudanjiang** 42.07 138 P **P** 10 10 55.6 -0.2
MDJ PP **PP** 10 12 33.1 +0.2
MDJ S **S** 10 17 13.3 -0.5
MDJ ScS **ScS** 10 21 01.1 +4.6
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,250nm,4.6s
MDJ **Mudanjiang** 42.07 138 **P** 10 10 56.7 +0.9
MDJ IAmb IAmb 10 10 59.8
comp=Z,46nm,1.6s
XLT **XiLinHaoTe** 42.17 152 *e*P **P** 10 10 57.9 +1.3
XLT pP sP 10 11 02.1 -0.4
XLT sP pwP 10 11 05.8 -0.6
XLT pmax pmax
comp=Z,10.0nm,1.2s
XLT pmax pmax
comp=Z,86nm,4.1s
PDGK **Podgornoye** 42.34 192 P **P** 10 10 59.8 +1.7
USRK **Ussuriysk Ar.** 42.62 135 P **P** 10 11 00.3 +0.1
USRK **Ussuriysk Ar.** 42.62 135 P **P** 10 11 00.3 +0.1
USRK **Ussuriysk Ar.** 42.62 135 P **P** 10 10 56.6 -3.6
comp=Z,3.7nm,1.0s,baz=342,slow=5.0,SNR=6.2
comp=Z,3.7nm,1.0s
CN2 **Changchun** 42.67 142 *e*P **P** 10 10 58.5 -2.1
CN2 PcP **PcP** 10 12 50.5 -1.6
CN2 LR LR
comp=Z,180nm,13.0s
CN2 LR LR
comp=Z,210nm,20.0s
KK31 **Karatay Array** 42.77 202 P **P** 10 11 00.7 -0.8
KK31 **Karatay Array** 42.77 202 P **P** 10 11 00.7 -0.8
KK31 pmax pmax
comp=Z,25nm,1.7s
KKAR **Karatay Array** 42.77 202 P **P** 10 11 01.8 +0.3
KKAR **Karatay Array** 42.77 202 P **P** 10 11 01.8 +0.3
KKAR pmax pmax
comp=Z,25nm,1.7s
DAVOX **Davos/Dischmat** 42.85 266 LR LR 10 29 35.9
comp=Z,165nm,18.8s,baz=344,slow=37
MLR **Muntele Rosu** 42.88 249 P **P** 10 11 02.0 -0.5
MLR **Muntele Rosu** 42.88 249 P **P** 10 11 02.0 -0.5
MLR pmax pmax
comp=Z,6.0nm,0.8s
AAK **Ala-Archa** 43.13 197 **P** 10 11 04.5 0.0
AAK **Ala-Archa** 43.13 197 P **P** 10 11 04.6 0.0
AAK pmax pmax
comp=Z,24nm,1.5s
AAK **Ala-Archa** 43.13 197 LR LR 10 31 59.1
comp=Z,1μm,18.5s,baz=3.0,slow=40
KIV **Kislovodsk** 43.24 231 *e*P **P** 10 11 04.8 -0.6
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,207nm,16.0s
KBZ **Khabaz** 43.46 231 *i* P **P** 10 11 08.7 +1.8
KBZ pmax pmax
comp=Z,17nm,1.4s
KBZ **Khabaz** 43.46 231 P **P** 10 11 05.6 -1.3
comp=Z,2.5nm,1.0s,baz=18,slow=16,SNR=3.1
KBZ PcP **PcP** 10 12 51.5 -3.2
comp=Z,5.4nm,1.0s,baz=270,slow=5.1,SNR=4.6
KBZ LR LR 10 31 32.9
comp=Z,430nm,21.4s,baz=353,slow=39
comp=Z,2.5nm,1.0s
ZEI **Tsey** 44.33 230 *e*P **P** 10 11 17.5 +3.2
ZEI *e* 10 13 04.3
ZEI pmax pmax
comp=Z,7.0nm,1.3s
ULM **Lac du Bonnet** 44.53 6 P **P** 10 11 16.4 +0.9
ULM **Lac du Bonnet** 44.53 6 P **P** 10 11 16.4 +0.9
ULM pmax pmax
comp=Z,13nm,1.2s
ULM **Lac du Bonnet** 44.53 6 P **P** 10 11 14.5 -1.0
comp=Z,1.7nm,0.9s,baz=12,slow=11,SNR=3.0
ULM LR LR 10 30 07.2
comp=Z,371nm,18.5s,baz=11,slow=36
comp=Z,1.7nm,0.9s
HHC **Hu-ho-hao-te** 45.06 157 *e*P **P** 10 11 20.3 +0.3
HHC sP pwP 10 11 29.4 -0.4
HHC S **S** 10 18 02.1 +4.4
HHC SS **ScS** 10 21 11.4 -4.2
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,7.7s
HHC LR LR
comp=Z,280nm,16.7s
HHC LR LR

HHC comp=Z,170nm,16.2s LR LR
BTO **Baotou** 45.26 159 *e*P **P** **10 11 20.4 -1.1**
BTO pP **pP** **10 11 25.3 -0.4**
BTO sP **sP** **10 11 29.0 +1.6**
BTO PP **PP** **10 13 09.0 +1.9**
BTO S **S** **10 17 59.3 -1.2**
BTO SS **ScS** **10 21 11.9 -5.0**
BTO pmax pmax
comp=Z,12nm,0.6s
BTO pmax pmax
comp=Z,280nm,6.0s
BTO LR LR
comp=Z,660nm,12.1s
BTO LR LR
comp=Z,430nm,7.3s
BTO LR LR
comp=Z,590nm,11.0s
BJI **Beijing** 46.02 152 P **P** **10 11 28.6 +1.2**
BJI pmax pmax
comp=Z,7.0nm,1.7s
BJI LR LR
comp=Z,160nm,17.1s
BJI LR LR
comp=Z,91nm,17.6s
BJI LR LR
comp=Z,170nm,16.5s
BJT **Baijiatuau** 46.04 152 **P** **10 11 28.8 +1.2**
BJT IAmb IAmb 10 11 29.7
comp=Z,28nm,1.6s
BJT **Baijiatuau** 46.04 152 P **P** **10 11 28.8 +1.2**
BJT pmax pmax
comp=Z,28nm,1.6s
NEW **Newport** 46.06 25 P **P** **10 11 29.1 +1.4**
NEW **Newport** 46.06 25 P **P** **10 11 27.7 0.0**
baz=357,SNR=26
NEW **Newport** 46.06 25 P **P** **10 11 29.1 +1.4**
NEW pmax pmax
comp=Z,51nm,1.2s
NEW **Newport** 46.06 25 LR LR 10 31 25.8
comp=Z,402nm,18.0s,baz=5.0,slow=37
DGMT **Dagmar** 46.20 14 P **P** **10 11 29.4 +0.6**
baz=358
GTA **Gaotai** 46.23 170 P P 10 11 37.8 +8.5
GTA pmax pmax
comp=Z,7.0nm,1.5s
GTA LR LR
comp=N,400nm,20.4s
GTA LR LR
comp=E,340nm,20.0s
GTA LR LR
comp=Z,420nm,20.7s
B35A **Bob, Littlefor** 46.43 4 P **P** **10 11 31.9 +1.2**
B35A IAmb IAmb 10 11 39.7
comp=Z,19nm,1.1s
C09A **Chrisman Ranch** 46.48 27 P **P** **10 11 32.2 +1.2**
C09A IAmb IAmb 10 11 40.5
comp=Z,23nm,1.4s
AGMN **Agassiz Nation** 46.48 6 P **P** **10 11 32.1 +1.1**
baz=359
EGMT **Eagleton** 46.52 19 P **P** **10 11 30.9 -0.5**
EGMT **Eagleton** 46.52 19 P **P** **10 11 31.8 +0.5**
baz=358
GNW **Green Mountain** 46.54 31 P **P** **10 11 32.7 +1.3**
GNW IAmb IAmb 10 11 48.4
comp=Z,16nm,1.2s
NLWA **Neilton Lookou** 46.67 32 P **P** **10 11 32.7 +0.2**
EYMN **Ely** 46.86 2 P **P** **10 11 34.8 +0.9**
baz=360
MDND **Maddock** 46.89 9 P **P** **10 11 35.0 +0.7**
baz=359
GNI **Garni** 46.91 229 *i* P **P** **10 11 36.0 +1.4**
GNI pmax pmax
comp=Z,25nm,1.9s
GNI **Garni** 46.91 229 LR LR 10 34 45.8
comp=Z,223nm,18.6s,baz=346,slow=41
LTY **Liberty** 46.93 29 P **P** **10 11 35.4 +0.8**
D05A **Enumclaw** 46.95 30 P **P** **10 11 36.0 +1.3**
SIMJ **Simiganj** 47.26 203 P **P** **10 11 37.2 -0.2**
SIMJ IAmb IAmb 10 12 52.7
comp=Z,7.3nm,0.6s
LON **Longmire** 47.39 30 P **P** **10 11 39.5 +1.4**
LON **Longmire** 47.39 30 P **P** **10 11 39.6 +1.4**
LON pmax pmax
comp=Z,31nm,1.3s
MXC **Moxie City** 47.62 29 P **P** **10 11 41.5 +1.5**
E07A **Sunnyside** 47.66 28 P **P** **10 11 41.0 +0.7**
E07A IAmb IAmb 10 11 49.9
comp=Z,24nm,1.1s
D41A **Chassel** 47.74 359 P **P** **10 11 43.0 +2.2**
E08A **Dider Farm, El** 47.76 27 P **P** **10 11 42.1 +1.2**
HAWA **Hanford** 47.84 28 P **P** **10 11 42.7 +1.1**
HAWA IAmb IAmb 10 11 51.4
comp=Z,23nm,1.2s
LAO **LASA Array** 47.94 15 P **P** **10 11 43.4 +0.9**
baz=358
BPMT **Black Pine Rid** 48.00 22 P **P** **10 11 43.7 +0.5**
BR131 **Keskin Array S** 48.05 240 P **P** **10 11 44.2 +0.8**
BR131 IAmb IAmb 10 12 22.1
comp=Z,38nm,2.0s
BR131 **Keskin Array S** 48.05 240 P **P** **10 11 44.3 +0.8**
BR131 pmax pmax
comp=Z,38nm,2.0s
BRTR **Keskin Array B** 48.06 240 P **P** **10 11 44.1 +0.6**
BRTR **Keskin Array B** 48.06 240 *i* P **P** **10 11 45.9 +2.4**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR **Keskin Array B** 48.06 240 P **P** **10 11 42.5 -1.1**
comp=Z,0.8nm,0.7s,baz=351,slow=6.4,SNR=5.7
BRTR LR LR 10 37 12.2
comp=Z,226nm,20.3s,baz=1.0,slow=43
comp=Z,0.8nm,0.7s
F04A **Amboy** 48.19 31 P **P** **10 11 46.1 +1.9**
F04A IAmb IAmb 10 11 55.2
comp=Z,27nm,1.3s
F07A **Phinny Hill Vi** 48.32 28 P **P** **10 11 46.6 +1.3**
F10A **Beach Ranch, E** 48.34 26 P **P** **10 11 46.9 +1.3**
GEYT **Alibeck** 48.41 214 P **P** **10 11 45.4 -0.7**
GEYT **Alibeck** 48.41 214 P **P** **10 11 45.4 -0.7**
GEYT pmax pmax
comp=Z,9.0nm,0.9s
GEYT **Alibeck** 48.41 214 P **P** **10 11 44.5 -1.6**
comp=Z,1.5nm,0.6s,baz=358,slow=11,SNR=2.3
comp=Z,1.5nm,0.6s
E46A **Sault Ste Mari** 48.42 355 P **P** **10 11 46.4 +0.4**
HNS **HongShan** 48.60 154 ⇑P **P** **10 11 48.6 +1.1**
HNS pmax pmax
comp=Z,10.0nm,1.5s
COWI **Conover** 48.71 360 P **P** **10 11 48.9 +0.6**
COWI IAmb IAmb 10 11 57.5
comp=Z,16nm,1.1s
HOOD **Mount Hood Mea** 48.83 30 P **P** **10 11 51.0 +1.6**
BOZ **Bozeman (W)** 48.89 21 P **P** **10 11 52.0 +2.0**
BOZ IAmb IAmb 10 11 59.8
comp=Z,21nm,1.1s
BOZ **Bozeman (W)** 48.89 21 P **P** **10 11 50.3 +0.4**
baz=358
BOZ **Bozeman (W)** 48.89 21 P **P** **10 11 52.0 +2.0**
BOZ pmax pmax
comp=Z,21nm,1.2s
G06A **Carlson Farm,** 48.95 29 P **P** **10 11 51.7 +1.5**
G06A IAmb IAmb 10 12 00.6
comp=Z,45nm,1.7s
G08A **Pilot Rock** 48.96 27 P **P** **10 11 52.9 +2.5**
G08A IAmb IAmb 10 12 00.8
comp=Z,26nm,1.2s
PLID **Pearl Lake** 49.27 25 P **P** **10 11 53.2 +0.3**
GOMU **GeErMu** 49.38 175 P **P** **10 11 55.8 +1.8**
GOMU pmax pmax
comp=Z,5.0nm,1.3s
RLMT **Red Lodge** 49.43 18 P **P** **10 11 55.1 +1.0**
H04A **Detroit Lake** 49.44 30 P **P** **10 11 54.9 +0.9**
BMO **Blue Mountains** 49.46 26 P **P** **10 11 55.8 +1.6**
BMO IAmb IAmb 10 12 04.7
comp=Z,40nm,1.7s
BMO **Blue Mountains** 49.46 26 P **P** **10 11 55.8 +1.6**
BMO pmax pmax
comp=Z,40nm,1.7s
G40A **Rib Lake** 49.54 1 P **P** **10 11 56.1 +1.4**
G40A IAmb IAmb 10 12 04.1
comp=Z,17nm,1.1s
SPMN **Marine on St.** 49.58 3 P **P** **10 11 56.0 +1.1**
SPMN **Marine on St.** 49.58 3 P **P** **10 11 56.1 +1.2**
baz=360

H04D **Lebanon** 49.58 31 P **P** **10 11 57.7 +2.8**
LZH **Lanzhou** 49.61 166 *e*P **P** **10 11 56.5 +1.0**
LZH pP pwP 10 12 04.3 -1.1
LZH pmax pmax
comp=Z,12nm,1.5s
LZH LR LR
comp=Z,330nm,12.4s
LZH LR LR
comp=Z,280nm,12.4s
LZH LR LR
comp=Z,220nm,11.7s
YHL **Hebgen Lake** 49.65 20 P **P** **10 11 57.1 +1.2**
YHL IAmb IAmb 10 12 06.3
comp=Z,17nm,1.2s
TIA **Tai'an** 49.88 152 ⇓P **P** **10 11 57.3 0.0**
TIA pmax pmax
comp=Z,10.0nm,1.6s
TIA LR LR
comp=Z,110nm,18.1s
TIA LR LR
comp=Z,110nm,21.1s
TIA LR LR
comp=Z,210nm,17.2s
GLMI **Grayling** 49.97 355 P **P** **10 11 58.4 +0.5**
baz=0.3
SADO **Sadowa** 49.97 350 LR LR 10 33 18.3
comp=Z,157nm,18.1s,baz=32,slow=36
LONY **Lake Ozonia** 50.04 346 P **P** **10 11 59.3 +0.8**
baz=1.4
H17A **Grant Village** 50.12 20 P **P** **10 11 59.3 -0.1**
baz=358
I07A **Izee** 50.15 28 IAmb IAmb 10 12 10.3
comp=Z,17nm,1.2s
SUSD **Miller** 50.31 9 P **P** **10 12 01.0 +0.5**
baz=359
LBNH **Lisbon** 50.37 344 P **P** **10 12 02.5 +1.5**
baz=1.7
PINE **Pine Mountain** 50.38 29 IAmb IAmb 10 12 12.2
comp=Z,33nm,1.2s
RSSD **Black Hills** 50.55 14 P **P** **10 12 03.2 +0.6**
RSSD **Black Hills** 50.55 14 P **P** **10 12 03.6 +1.0**
baz=358
RSSD **Black Hills** 50.55 14 P **P** **10 12 03.2 +0.6**
RSSD pmax pmax
comp=Z,14nm,1.1s
IMW **Indian Meadow** 50.61 20 P **P** **10 12 05.0 +1.9**
MJAR **Matsushiro Arr** 50.62 130 P **P** **10 11 59.9 -3.1**
comp=Z,0.7nm,0.4s,baz=344,slow=8.1,SNR=6.2
MJAR LR LR 10 34 44.0
comp=Z,86nm,19.3s,baz=339,slow=38
comp=Z,0.7nm,0.4s
MOOW **Moose Ponds** 50.77 20 P **P** **10 12 05.5 +1.2**
HLID **Hailey** 50.84 23 P **P** **10 12 05.5 +0.7**
baz=357
FXWY **Fox Creek** 50.87 20 P **P** **10 12 06.1 +1.1**
J05D **Fort Rock, OR** 50.88 30 P **P** **10 12 07.3 +2.3**
J05D IAmb IAmb 10 12 16.0
comp=Z,38nm,1.2s
LOHW **Long Hollow** 50.91 20 P **P** **10 12 07.0 +1.6**
J08A **Circle Bar Ran** 50.91 27 P **P** **10 12 04.5 -0.7**
J08A IAmb IAmb 10 12 15.9
comp=Z,31nm,1.1s
TPAW **Teton Pass** 51.02 20 IAmb IAmb 10 12 15.9
comp=Z,26nm,1.5s
ESDC **Sonseca Array** 51.02 278 P **P** **10 12 05.1 -1.0**
comp=Z,1.1nm,1.0s,baz=18,slow=6.9,SNR=4.7
comp=Z,1.1nm,1.0s
ECSD **EROS Data Cent** 51.04 7 P **P** **10 12 06.6 +0.5**
ECSD IAmb IAmb 10 12 14.9
comp=Z,22nm,1.3s
PAB **San Pablo** 51.18 279 P **P** **10 12 06.3 -0.9**
PAB **San Pablo** 51.18 279 P **P** **10 12 06.3 -0.9**
PAB pmax pmax
comp=Z,21nm,1.4s
K02D **Willamette Mer** 51.36 32 P **P** **10 12 10.7 +2.1**
K02D IAmb IAmb 10 13 25.0
comp=Z,28nm,1.5s
KBL **Kabul** 51.36 203 P **P** **10 12 07.4 -1.4**
KBL **Kabul** 51.36 203 P **P** **10 12 07.4 -1.4**
HUMO **Hull Mountain** 51.48 31 P **P** **10 12 10.8 +1.4**
HUMO IAmb IAmb 10 12 19.9
comp=Z,20nm,1.1s
VAE **Valguarnera** 51.73 260 LR LR 10 35 13.1
comp=Z,202nm,18.4s,baz=344,slow=37
XAN **Xi'an** 51.77 160 ⇑P **P** **10 12 12.0 +0.3**
XAN sP sP 10 12 19.4 +1.8
XAN pmax pmax
comp=Z,9.0nm,1.4s
XAN LR LR
comp=Z,560nm,12.7s
XAN LR LR
comp=Z,430nm,14.1s
BW06 **Boulder Array** 51.78 19 P **P** **10 12 12.4 +0.5**
baz=358
PD31 **Pinedale Array** 51.78 19 P **P** **10 12 12.4 +0.5**
PDAR **Pinedale Array** 51.78 19 P **P** **10 12 12.0 +0.1**
PDAR **Pinedale Array** 51.78 19 P **P** **10 12 10.4 -1.5**
comp=Z,0.1nm,0.3s,baz=352,slow=6.0,SNR=3.9
PDAR LR LR 10 34 54.2
comp=Z,360nm,19.4s,baz=360,slow=37
comp=Z,0.1nm,0.3s
WVOR **Wild Horse Val** 51.83 27 P **P** **10 12 13.9 +1.8**
WVOR IAmb IAmb 10 12 22.7
comp=Z,50nm,1.6s
WVOR **Wild Horse Val** 51.83 27 P **P** **10 12 13.9 +1.8**
WVOR pmax pmax
comp=Z,49nm,1.7s
JHS **Saijyo** 51.85 135 P **P** **10 12 13.2 +1.0**
JFWS **Jewell Farm** 51.89 1 P **P** **10 12 13.0 +0.6**
baz=360
L04D **Klamath Falls** 51.90 31 P **P** **10 12 14.4 +1.8**
K22A **Casper** 51.97 16 P **P** **10 12 13.8 +0.6**
K22A **Casper** 51.97 16 P **P** **10 12 12.5 -0.7**
baz=358
K50A **Casco** 52.00 354 P **P** **10 12 14.9 +1.7**
HRV **Adam Dziewonsk** 52.09 343 P **P** **10 12 14.6 +0.7**
baz=1.7
NIL **Nilore** 52.13 198 P **P** **10 12 14.5 +0.1**
NIL **Nilore** 52.13 198 P **P** **10 12 14.5 +0.1**
NIL pmax pmax
comp=Z,17nm,1.1s
L61B **Northampton** 52.17 344 P **P** **10 12 15.3 +0.8**
baz=1.6
YBH **Yreka Blue Hor** 52.37 31 P **P** **10 12 16.2 +0.2**
YBH IAmb IAmb 10 13 22.7
comp=Z,34nm,2.0s
YBH **Yreka Blue Hor** 52.37 31 P **P** **10 12 16.2 +0.2**
YBH pmax pmax
comp=Z,34nm,2.0s
YBH **Yreka Blue Hor** 52.37 31 LR LR 10 36 10.6
comp=Z,318nm,19.5s,baz=350,slow=38
BINY **Binghamton** 52.49 347 P **P** **10 12 17.3 +0.4**
baz=1.2
HVU **Hansel Valley** 52.67 22 P **P** **10 12 19.6 +1.2**
HVU **Hansel Valley** 52.67 22 P **P** **10 12 19.6 +1.2**
HVU pmax pmax
comp=Z,6.0nm,1.0s
HWUT **Hardware Ranch** 52.88 21 P **P** **10 12 20.7 +0.7**
HWUT IAmb IAmb 10 12 29.9
comp=Z,21nm,1.2s
M65A **Busby, Falmout** 53.01 342 P **P** **10 12 20.7 0.0**
baz=1.7
SPUT **South Promonto** 53.15 22 P **P** **10 12 24.8 +2.8**
SPUT IAmb IAmb 10 12 31.9
comp=Z,38nm,2.0s
M55A **Ridgway** 53.26 350 P **P** **10 12 24.5 +1.9**
M55A IAmb IAmb 10 12 32.8
comp=Z,42nm,1.4s
M53A **WI Miller and** 53.31 352 P **P** **10 12 23.7 +0.8**
baz=0.7
TCUT **Toone Canyon** 53.37 21 P **P** **10 12 23.9 +0.2**
TCUT IAmb IAmb 10 13 43.0
comp=Z,31nm,1.8s
BGU **Big Grassy Mou** 53.52 22 P **P** **10 12 25.6 +0.9**
ELK **Elko** 53.63 24 LR LR 10 35 58.7
comp=Z,366nm,19.1s,baz=353,slow=37
PAL **Palisades** 53.64 345 P **P** **10 12 26.0 +0.7**
baz=1.4
N23A **Red Feather La** 53.73 15 P **P** **10 12 27.5 +1.1**
N23A IAmb IAmb 10 12 35.7
comp=Z,35nm,1.9s
N23A **Red Feather La** 53.73 15 P **P** **10 12 26.6 +0.2**
baz=358
OGNE **Ogallala** 53.76 12 P **P** **10 12 26.0 -0.3**
OGNE **Ogallala** 53.76 12 P **P** **10 12 27.3 +1.0**
baz=359

KEST **Kesra** 53.87 264 P **P** **10 12 28.6 +1.4**
KEST IAmb IAmb 10 12 43.5
comp=Z,31nm,1.1s
KEST **Kesra** 53.87 264 P **P** **10 12 27.4 +0.2**
comp=Z,4.6nm,0.9s,baz=30,slow=8.1,SNR=3.1
KEST LR LR 10 35 47.4
comp=Z,126nm,19.5s,baz=4.5,slow=36
comp=Z,4.6nm,0.9s
RDMU **Red Mountain** 53.97 19 P **P** **10 12 29.1 +1.1**
BRIGG **Briggsdale** 54.08 14 P **P** **10 12 29.9 +1.2**
SSPA **Standing Stone** 54.08 349 P **P** **10 12 29.2 +0.6**
baz=1.0
NJ2 **Nanjing** 54.09 150 *e*P **P** **10 12 28.5 -0.2**
NJ2 pmax pmax
comp=Z,8.0nm,1.0s
HDIL **Hopedale** 54.25 360 P **P** **10 12 30.4 +0.6**
HDIL **Hopedale** 54.25 360 P **P** **10 12 31.1 +1.3**
baz=360
DUG **Dugway, Tooele** 54.25 22 P **P** **10 12 30.8 +0.7**
baz=358
SFIN **Lafayette** 54.42 358 P **P** **10 12 32.1 +1.1**
baz=0.1
O20A **White River Ci** 54.44 18 P **P** **10 12 32.1 +0.7**
O20A IAmb IAmb 10 12 41.0
comp=Z,39nm,1.8s
O20A **White River Ci** 54.44 18 P **P** **10 12 31.7 +0.3**
baz=358
MPU **Maple Canyon** 54.47 21 P **P** **10 12 32.2 +0.5**
MPU IAmb IAmb 10 12 42.6
comp=Z,26nm,1.7s
O53A **New Philadelph** 54.51 352 P **P** **10 12 32.9 +1.2**
baz=0.7
PAHR **Pah Rah Range** 54.52 28 P **P** **10 12 34.5 +2.5**
PAHR IAmb IAmb 10 12 42.3
comp=Z,26nm,1.7s
O48B **Farmland** 54.53 356 P **P** **10 12 33.3 +1.4**
baz=0.3
O49A **Covington** 54.60 355 P **P** **10 12 33.7 +1.4**
O49A IAmb IAmb 10 12 41.7
comp=Z,23nm,1.1s
MMAI **Mount Meron Ar** 54.61 238 LR LR 10 40 54.2
comp=Z,79nm,19.0s,baz=346,slow=42
CD2 **Chengdu** 54.77 166 P **P** **10 12 34.4 +0.6**
CD2 S **S** **10 20 12.8 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=Z,190nm,15.9s
CD2 LR LR
comp=Z,330nm,14.1s
CD2 LR LR
comp=Z,220nm,19.2s
ISCO **Idaho Springs** 54.83 15 P **P** **10 12 35.5 +1.1**
ISCO IAmb IAmb 10 12 44.2
comp=Z,26nm,1.8s
ISCO **Idaho Springs** 54.83 15 P **P** **10 12 35.0 +0.6**
baz=358
ISCO **Idaho Springs** 54.83 15 P **P** **10 12 35.5 +1.1**
ISCO pmax pmax
comp=Z,26nm,1.8s
P18A **Preston Nutter** 54.89 20 P **P** **10 12 36.7 +1.8**
P18A IAmb IAmb 10 12 44.8
comp=Z,38nm,1.7s
MPK **Martis Peak** 54.90 29 P **P** **10 12 36.2 +1.3**
MPK IAmb IAmb 10 12 45.2
comp=Z,28nm,1.3s
MCWV **Mont Chateau** 55.08 351 P **P** **10 12 36.7 +0.8**
baz=0.8
P52A **Corning** 55.13 353 P **P** **10 12 36.8 +0.6**
baz=0.6
P38A **Dawn** 55.17 4 IAmb IAmb 10 12 44.7
comp=Z,28nm,1.2s
AFDM **Forest Hills D** 55.21 30 P **P** **10 12 37.5 +0.7**
AFDM IAmb IAmb 10 12 46.4
comp=Z,20nm,1.4s
EMB **Emerald Bay** 55.22 29 P **P** **10 12 37.1 0.0**
EMB IAmb IAmb 10 12 47.3
comp=Z,26nm,1.2s
KVN **Kaiserville** 55.22 27 P **P** **10 12 38.6 +1.5**
KVN IAmb IAmb 10 12 47.6
comp=Z,26nm,1.5s
KVN **Kaiserville** 55.22 27 P **P** **10 12 38.6 +1.5**
KVN pmax pmax
comp=Z,26nm,1.5s
YERR **Yerington** 55.24 28 P **P** **10 12 38.8 +1.5**
SPR3 **Spring Creek 3** 55.40 23 IAmb IAmb 10 12 49.9
comp=Z,18nm,1.3s
WHN **Wuhan** 55.42 155 P **P** **10 12 38.9 +0.5**
SMCO **Snowmass** 55.42 16 P **P** **10 12 39.9 +1.1**
SMCO IAmb IAmb 10 12 53.5
comp=Z,27nm,2.0s
ENH **Enshi** 55.54 160 P **P** **10 12 39.8 +0.4**
ENH IAmb IAmb 10 12 48.3
comp=Z,19nm,1.1s
Q16A **Castle Valley** 55.58 20 P **P** **10 12 40.5 +0.8**
KSU1 **Kansas State U** 55.67 7 P **P** **10 12 41.0 +0.9**
baz=359
Q24A **Divide** 55.68 15 IAmb IAmb 10 12 50.0
comp=Z,20nm,1.3s
Q24A **Divide** 55.68 15 P **P** **10 12 40.2 -0.4**
baz=358
KSCO **Kaye Shedlock'** 55.68 12 IAmb IAmb 10 12 50.1
comp=Z,30nm,1.3s
KSCO **Kaye Shedlock'** 55.68 12 P **P** **10 12 41.0 +0.7**
baz=359
NVAR **Mina Array Bea** 55.83 27 P **P** **10 12 41.8 +0.2**
NVAR **Mina Array Bea** 55.83 27 P **P** **10 12 41.4 -0.1**
comp=Z,0.8nm,0.8s,baz=4.6,slow=7.4,SNR=6.8
NVAR LR LR 10 37 47.7
comp=Z,223nm,18.1s,baz=3.5,slow=37
comp=Z,0.8nm,0.8s
TCRU **Three Creeks R** 55.85 22 P **P** **10 12 42.9 +1.2**
CBKS **Cedar Bluff** 55.92 10 P **P** **10 12 42.8 +0.8**
baz=359
MSU **Marysvale** 55.95 21 P **P** **10 12 44.0 +1.6**
MSU **Marysvale** 55.95 21 P **P** **10 12 44.0 +1.6**
MVU **Marysvale** 55.96 21 P **P** **10 12 44.3 +1.9**
LHV **Little Huntoon** 56.00 27 P **P** **10 12 43.8 +1.4**
LHV IAmb IAmb 10 12 53.2
comp=Z,19nm,1.4s
R11B **Troy Canyon, C** 56.01 25 IAmb IAmb 10 12 53.0
comp=Z,34nm,1.6s
R11B **Troy Canyon, C** 56.01 25 P **P** **10 12 43.1 +0.4**
baz=357,SNR=6.3
MTPU **Mount Pierson** 56.42 21 IAmb IAmb 10 12 56.7
comp=Z,26nm,1.7s
R49A **Shelbyville** 56.50 356 P **P** **10 12 46.7 +0.7**
CBN **Corbin Frederi** 56.50 349 P **P** **10 12 46.5 +0.5**
baz=1.0
R40A **Maddies Statio** 56.51 3 IAmb IAmb 10 12 54.1
comp=Z,15nm,1.2s
HMU **Henry Mountain** 56.57 20 IAmb IAmb 10 12 56.3
comp=Z,21nm,1.4s
WCI **Wyandotte Cave** 56.57 357 P **P** **10 12 46.5 0.0**
WCI IAmb IAmb 10 13 43.3
comp=Z,38nm,2.0s
WCI **Wyandotte Cave** 56.57 357 P **P** **10 12 47.6 +1.1**
baz=0.1
WCI **Wyandotte Cave** 56.57 357 P **P** **10 12 46.5 0.0**
WCI pmax pmax
comp=Z,38nm,2.0s
MLAC **Mammoth, Mammo** 56.61 28 P **P** **10 12 46.9 -0.2**
baz=357
CCM **Cathedral Cave** 56.74 2 P **P** **10 12 47.6 -0.1**
CCM IAmb IAmb 10 12 56.0
comp=Z,21nm,1.2s
CCM **Cathedral Cave** 56.74 2 P **P** **10 12 48.6 +0.8**
baz=360
CCM **Cathedral Cave** 56.74 2 P **P** **10 12 47.7 -0.1**
CCM pmax pmax
comp=Z,21nm,1.2s
SZCU **Shurtz Canyon** 56.84 22 P **P** **10 12 50.1 +1.3**
S22A **4UR Ranch, Cre** 56.86 16 P **P** **10 12 50.6 +1.6**
S22A IAmb IAmb 10 12 59.2
comp=Z,25nm,1.4s
S22A **4UR Ranch, Cre** 56.86 16 P **P** **10 12 49.6 +0.6**
baz=358,SNR=11
CCUT **Cedar City** 56.88 23 P **P** **10 12 50.6 +1.6**
CCUT IAmb IAmb 10 12 59.4
comp=Z,27nm,1.8s
SDCO **Great Sand Dun** 56.89 15 P **P** **10 12 49.6 +0.5**
baz=358
DSP **Deep Springs** 56.90 27 P **P** **10 12 51.7 +2.9**
DSP IAmb IAmb 10 12 59.7
comp=Z,21nm,1.4s
PRN **Pahroc Range** 56.97 24 P **P** **10 12 50.8 +1.3**

PRN IAmb IAmb 10 13 00.0
comp=Z,38nm,1.9s
GMN Gold Mountain 57.00 26 P P 10 12 51.2 +1.3
PKCU Pink Cliffs 57.01 22 P P 10 12 50.1 0.0
PKCU IAmb IAmb 10 13 06.8
comp=Z,40nm,1.6s
LCH Last Change Ra 57.05 27 P P 10 12 51.3 +1.2
S39A Bolivar 57.10 4 P P 10 12 49.8 -0.5
S39A IAmb IAmb 10 12 58.4
comp=Z,20nm,1.1s
GRAC Grapevine Rang 57.30 26 P P 10 12 52.5 +0.8
baz=357
MVCO Mesa Verde 57.35 18 P P 10 12 53.7 +1.4
MVCO Mesa Verde 57.35 18 P P 10 12 53.3 +0.9
baz=358,SNR=6.1
TPNV Topopah Spring 57.38 25 P P 10 12 53.2 +0.7
TPNV IAmb IAmb 10 13 02.2
comp=Z,29nm,1.9s
TPNV Topopah Spring 57.38 25 P P 10 12 53.0 +0.4
baz=357
TPNV Topopah Spring 57.38 25 P P 10 12 53.2 +0.7
TPNV pmax pmax
comp=Z,29nm,1.9s
LCMT Little Creek M 57.42 22 P P 10 12 54.3 +1.6
T25A Trinidad 57.51 14 P P 10 12 53.8 +0.3
baz=358
WCT Wildcat Mounta 57.52 26 P P 10 12 54.4 +0.9
BLA Blacksburg 57.53 351 P P 10 12 54.0 +0.6
BLA IAmb IAmb 10 12 55.2
comp=Z,24nm,1.1s
BLA Blacksburg 57.53 351 P P 10 12 54.6 +1.2
baz=0.7
BLA Blacksburg 57.53 351 P P 10 12 54.0 +0.6
BLA pmax pmax
comp=Z,24nm,1.2s
T50A Nancy 57.76 356 P P 10 12 55.8 +0.8
T50A IAmb IAmb 10 13 03.9
comp=Z,18nm,1.3s
CWC Cottonwood Cre 57.82 27 P P 10 12 56.6 +1.0
baz=357
FURC Furnace Creek, 57.84 26 P P 10 12 56.2 +0.7
baz=357
SHPR Sheep Range 57.86 24 P P 10 12 56.5 +0.6
VOG Valley Oaks Go 57.89 28 P P 10 12 55.2 -0.7
baz=357
MPMC Manual Prospec 58.23 27 P P 10 12 59.3 +0.8
baz=357
TZTN Tazewell 58.23 354 P P 10 12 58.1 -0.2
baz=0.4
U49A Red Boiling Sp 58.28 356 IAmb IAmb 10 13 07.7
comp=Z,16nm,1.1s
SHOC Shoshone, Teco 58.43 25 P P 10 13 00.1 +0.5
baz=357
HHAR Hobbs 58.50 4 P P 10 13 00.3 +0.1
HHAR IAmb IAmb 10 13 08.0
comp=Z,19nm,1.1s
ISA Isabella, Lake 58.59 28 P P 10 13 01.6 +0.7
baz=357
WVT Waverly 58.67 358 P P 10 13 01.8 +0.5
WVT IAmb IAmb 10 13 10.2
comp=Z,13nm,1.2s
WVT Waverly 58.67 358 P P 10 13 02.2 +0.9
baz=0.0
WVT Waverly 58.67 358 P P 10 13 01.8 +0.5
WVT pmax pmax
comp=Z,13nm,1.2s
OK033 Mehan 58.72 7 P P 10 13 02.1 +0.4
OK033 IAmb IAmb 10 14 01.2
comp=Z,14nm,0.9s
LCAR Lake Charles 58.73 2 P P 10 13 01.6 -0.1
LCAR IAmb IAmb 10 13 10.1
comp=Z,12nm,1.2s
LRMC Laurel Mtn Rad 58.80 27 P P 10 13 03.1 +0.7
baz=357
TUL3 Leonard 58.86 6 P P 10 13 02.4 -0.3
TUL3 IAmb IAmb 10 13 11.1
comp=Z,18nm,1.1s
TUL3 Leonard 58.86 6 P P 10 13 04.0 +1.3
baz=359
SMMC Simmler 58.87 29 P P 10 13 03.2 +0.4
baz=357
TUQ Turquoise Moun 58.90 25 P P 10 13 02.8 -0.3
baz=357
FCAR Ozark Folk Cen 58.90 2 P P 10 13 02.5 -0.4
FCAR IAmb IAmb 10 13 03.3
comp=Z,18nm,1.4s
WUAZ Wupatki 58.96 21 P P 10 13 05.3 +1.7
WUAZ IAmb IAmb 10 13 13.9
comp=Z,20nm,1.4s
WUAZ Wupatki 58.96 21 P P 10 13 04.0 +0.4
baz=358
GSC Goldstone, Bar 59.01 26 P P 10 13 03.6 -0.2
baz=357
ARVC Arvin 59.10 28 P P 10 13 04.2 -0.2
baz=357
PZH PanZhiHua 59.13 168 P P 10 13 05.1 +0.3
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH pmax pmax
comp=Z,80nm,5.4s
GYA Guiyang 59.27 163 ⇑*i*P **P 10 13 06.6 +0.9**
GYA pmax pmax
comp=Z,16nm,1.3s
GYA pmax pmax
comp=Z,140nm,4.4s
PKM Mcpherson Peak 59.30 29 P P 10 13 05.3 -0.6
baz=357
W13A Hualapai Mount 59.30 23 P P 10 13 06.7 +0.7
EDW2 Edwards Air Fo 59.38 27 P P 10 13 06.8 +0.5
baz=357
W18A Petrified Fore 59.41 19 P P 10 13 07.0 +0.4
W18A Petrified Fore 59.41 19 P P 10 13 07.6 +1.0
baz=358
RRX Edison Barstow 59.42 26 P P 10 13 07.3 +0.8
baz=357
CNNC Cliffs of the 59.47 349 P P 10 13 07.7 +0.9
baz=0.9
HEC Hector,Ludlow 59.49 26 P P 10 13 07.9 +0.8
baz=357
WHAR Wooly Hollow 59.50 3 P P 10 13 07.6 +0.6
GMRC Granite Mounta 59.56 25 P P 10 13 08.5 +0.8
baz=358
W35A Tecumseh 59.61 7 P P 10 13 08.0 +0.1
W35A IAmb IAmb 10 13 16.2
comp=Z,23nm,1.3s
KMSC Kings Mountain 59.61 352 P P 10 13 09.6 +1.8
baz=0.6
SMWD Samnorwood 59.61 10 P P 10 13 08.6 +0.6
SMWD IAmb IAmb 10 14 41.9
comp=Z,23nm,1.6s
ANMO Albuquerque 59.66 16 P P 10 13 09.2 +0.8
ANMO IAmb IAmb 10 13 17.8
comp=Z,22nm,1.4s
ANMO Albuquerque 59.66 16 P P 10 13 09.1 +0.6
baz=358
ANMO Albuquerque 59.66 16 P P 10 13 09.2 +0.8
ANMO pmax pmax
comp=Z,22nm,1.5s
ANMO Albuquerque 59.66 16 LR LR 10 39 09.4
comp=Z,539nm,20.1s,baz=90,slow=36
W52A Murphy 59.68 355 P P 10 13 09.2 +0.9
W52A IAmb IAmb 10 13 17.5
comp=Z,19nm,1.1s
SBC Santa Barbara 59.75 29 P P 10 13 10.1 +1.2
baz=357
SHL Shillong 59.97 179 P P 10 13 11.9 +1.3
SHL Shillong 59.97 179 P P 10 13 11.9 +1.3
SHL pmax pmax
comp=Z,43nm,1.8s
X18A Snowflake 59.99 19 P P 10 13 11.7 +1.0
X18A IAmb IAmb 10 13 20.6
comp=Z,16nm,1.2s
WMOK Wichita Mounta 60.00 9 P P 10 13 11.2 +0.7
WMOK IAmb IAmb 10 13 19.6
comp=Z,21nm,1.4s
WMOK Wichita Mounta 60.00 9 P P 10 13 11.8 +1.3
baz=359
WMOK Wichita Mounta 60.00 9 P P 10 13 11.2 +0.7
WMOK pmax pmax
comp=Z,21nm,1.4s
BFSC Mount Baldy Ra 60.03 27 P P 10 13 11.8 +0.8
baz=357
BBRC Big Bear Solar 60.04 26 P P 10 13 11.8 +0.7
baz=357
X16A Lo Mia Camp, P 60.06 21 P P 10 13 12.9 +1.7
PDMCI Parker Dam,Lak 60.09 23 P P 10 13 12.2 +1.1
baz=358
BIRD Birdtown, Kers 60.09 351 P P 10 13 12.1 +0.9
IRM Iron Mountain 60.20 24 P P 10 13 12.7 +0.7
baz=358
MIAR Mount Ida 60.24 4 P P 10 13 12.6 +0.4
MIAR IAmb IAmb 10 13 21.2
comp=Z,27nm,1.4s
MIAR Mount Ida 60.24 4 P P 10 13 13.3 +1.1
baz=360
MIAR Mount Ida 60.24 4 P P 10 13 12.6 +0.4
MIAR pmax pmax
comp=Z,27nm,1.4s
OXF Oxford 60.28 360 P P 10 13 12.3 -0.1
OXF Oxford 60.28 360 P P 10 13 14.2 +1.7
baz=360
OXF Oxford 60.28 360 P P 10 13 12.3 -0.1
OXF pmax pmax
comp=Z,92nm,1.3s
X40A Basin Creek Fa 60.30 3 P P 10 13 12.2 -0.4
X40A IAmb IAmb 10 13 20.4
comp=Z,20nm,1.1s
BELC Belle Mtn. Jos 60.33 25 P P 10 13 13.4 +0.4
baz=358
X48A Hartselle 60.34 358 P P 10 13 13.2 +0.4
X48A IAmb IAmb 10 13 21.6
comp=Z,18nm,1.1s
Y14A Wickenburg 60.49 22 P P 10 13 15.2 +1.2
Y22D IRIS PASSCAL I 60.52 17 P P 10 13 13.1 -1.1
baz=358
Y22F Passel Instru 60.52 17 P P 10 13 13.7 -0.6
baz=358
KMI Kunming 60.52 167 ⇑P **P 10 13 13.0 -1.5**
KMI pmax pmax
comp=Z,8.0nm,1.4s
KMI LR LR
comp=Z,240nm,13.8s
KMI LR LR
comp=Z,140nm,8.8s
KMI LR LR
comp=Z,260nm,20.5s
FMP Fort Macarthur 60.53 27 P P 10 13 14.1 0.0
baz=357
TNCH TengChong 60.55 172 ⇑P **P 10 13 15.8 +1.2**
TNCH PP **PP 10 15 28.4 +0.6**
TNCH pmax pmax
comp=Z,12nm,0.5s
TNCH pmax pmax
comp=Z,56nm,3.2s
TNCH LR LR
comp=Z,260nm,15.5s
TNCH LR LR
comp=Z,450nm,16.3s
TNCH LR LR
comp=Z,300nm,22.0s
MURC Murrieta 60.69 26 P P 10 13 14.8 -0.5
baz=357
BC3 Big Chuckawall 60.69 25 P P 10 13 14.5 -0.9
baz=358
PFO Pinon Flats O 60.70 26 LR LR 10 40 16.3
comp=Z,308nm,21.1s,baz=352,slow=37
Y45A Yeager Farm, C 60.93 0 P P 10 13 17.4 +0.5
SNCC San Nicolas Is 60.95 29 P P 10 13 16.7 -0.3
baz=357
SCI2 San Clemente I 61.26 28 P P 10 13 18.3 -0.8
baz=357
GOGA Godfrey 61.36 354 P P 10 13 19.9 +0.1
GOGA IAmb IAmb 10 13 28.8
comp=Z,18nm,1.2s
GOGA Godfrey 61.36 354 P P 10 13 19.7 0.0
baz=0.4
GOGA Godfrey 61.36 354 P P 10 13 19.9 +0.1
GOGA pmax pmax
comp=Z,18nm,1.2s
APMT Aspermont 61.39 10 P P 10 13 20.7 +0.7
109C Camp Elliot, M 61.40 26 P P 10 13 20.3 +0.2
baz=357
MONP2 Monument Peak 61.42 26 P P 10 13 20.9 +0.4
baz=357
NHSC New Hope 61.63 351 P P 10 13 23.0 +1.4
baz=0.7
IKP In-Ko-Pah, Jac 61.67 25 P P 10 13 22.6 +0.5
baz=358
LRAL Lakeview Retre 61.75 358 P P 10 13 22.9 +0.5
LRAL IAmb IAmb 10 13 31.1
comp=Z,18nm,1.2s
LRAL Lakeview Retre 61.75 358 P P 10 13 22.5 +0.1
baz=0.1
121A Cookes Peak, D 62.03 17 IAmb IAmb 10 13 34.4
comp=Z,16nm,1.2s
121A Cookes Peak, D 62.03 17 P P 10 13 24.1 -0.4
baz=358
ABTX Abilene, Hawle 62.10 10 P P 10 13 24.7 -0.1
baz=359
152A Waverly Hall 62.10 355 IAmb IAmb 10 13 39.2
comp=Z,19nm,1.2s
TUC Tucson 62.18 20 P P 10 13 27.0 +1.6
TUC IAmb IAmb 10 13 35.7
comp=Z,19nm,1.4s
TUC Tucson 62.18 20 P P 10 13 26.5 +1.1
baz=358
TUC Tucson 62.18 20 P P 10 13 27.0 +1.6
TUC pmax pmax
comp=Z,19nm,1.5s
214A Organ Pipe Nat 62.47 22 P P 10 13 28.4 +1.1
baz=358
VBMS Vicksburg 62.57 1 P P 10 13 29.4 +1.5
baz=360
WHTX Lake Whitney, 62.75 8 P P 10 13 30.0 +0.9
baz=359
MNTX Cornudas Mount 62.92 15 P P 10 13 31.3 +1.0
baz=358
WSAR Wadi Sarin 63.01 213 LR LR 10 45 00.8
comp=Z,106nm,19.6s,baz=20,slow=40
NATX Nacogdoches 63.01 5 P P 10 13 32.3 +1.5
baz=359
TIGA Tifton 63.32 354 P P 10 13 33.7 +0.8
baz=0.4
MNHN Monahans 63.33 13 P P 10 13 32.9 -0.2
MNHN IAmb IAmb 10 13 41.7
comp=Z,12nm,1.3s
BRDY Brady 63.44 9 P P 10 13 33.7 0.0
BRDY IAmb IAmb 10 13 42.4
comp=Z,21nm,1.4s
BRAL Brewton 63.61 358 P P 10 13 36.2 +1.3
baz=0.1
VHRN Van Horn 63.84 15 P P 10 13 36.9 +0.3
435B Jarrell 63.96 8 P P 10 13 37.0 -0.2
baz=359
JCT Junction City 64.23 10 P P 10 13 39.1 +0.1
JCT Junction City 64.23 10 P P 10 13 38.6 -0.5
baz=359
JCT Junction City 64.23 10 P P 10 13 39.1 +0.1
JCT pmax pmax
comp=Z,29nm,1.3s
ALPN Alpine 64.27 14 P P 10 13 40.3 +0.9
ALPN IAmb IAmb 10 13 48.3
comp=Z,15nm,1.6s
SLVN Son La 64.31 166 P P 10 13 40.1 +0.4
SLVN IAmb IAmb 10 14 06.1
comp=Z,13nm,1.5s
SAND Sanderson 64.72 12 IAmb IAmb 10 13 50.6
comp=Z,14nm,1.4s
TX31 Lajitas Ar. Si 65.31 14 P P 10 13 46.2 +0.1
TXAR Lajitas Array 65.31 14 P P 10 13 46.8 +0.7
TXAR Lajitas Array 65.31 14 P P 10 13 46.8 +0.7
TXAR Lajitas Array 65.31 14 P P 10 13 45.6 -0.5
comp=Z,4.3nm,1.3s,baz=355,slow=3.1,SNR=10
TXAR LR LR 10 42 56.7
comp=Z,235nm,19.1s,baz=45,slow=37
comp=Z,4.3nm,1.3s
833A Chaparral WMA, 66.39 10 P P 10 13 52.8 -0.1
baz=359
DWPF Disney Wildern 66.62 352 P P 10 13 55.1 +0.7
baz=0.6
CHTO Chiang Mai 66.74 171 P P 10 13 55.0 -0.3
CHTO IAmb IAmb 10 14 28.2
comp=Z,9.6nm,0.9s
CHTO Chiang Mai 66.74 171 P P 10 13 55.0 -0.3
CHTO pmax pmax
comp=Z,10.0nm,0.9s
QIZ Qiongzhong 66.74 160 P P 10 13 54.8 -0.5
QIZ S **S 10 22 47.6 +1.4**
QIZ LR LR
comp=Z,150nm,10.8s
QIZ LR LR
comp=Z,130nm,17.7s
QIZ LR LR
comp=Z,150nm,14.3s
CMAR Chiang Mai Arr 67.09 171 P P 10 13 57.9 +0.3
CMAR Chiang Mai Arr 67.09 171 *i* P **P 10 13 57.7 +0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 67.09 171 P **P 10 13 56.5 -1.1**
comp=Z,0.8nm,0.4s,baz=348,slow=6.5,SNR=9.0
CMAR LR LR 10 44 54.0
comp=Z,127nm,21.3s,baz=350,slow=38
comp=Z,0.8nm,0.4s
HBVL Hebbronville 67.65 9 P P 10 14 01.2 +0.2
HPIG 67.66 16 P P 10 14 01.9 +0.6
HYB Hyderabad 68.18 192 *e*P **P 10 14 05.7 +1.2**
LPIG La Paz 70.36 20 LR LR 10 46 38.4
comp=Z,318nm,19.3s,baz=344,slow=37
GUMO Guam 73.84 125 LR LR 10 46 47.0
comp=Z,33nm,21.0s,baz=39,slow=36
TOA0 Torodi Ar. Sit 76.89 270 P P 10 14 56.4 +0.1
TORD Torodi Ar. Bea 76.89 270 LR LR 10 50 08.4
comp=Z,65nm,20.0s,baz=342,slow=37
PALK Pallekele 78.23 190 LR LR 10 54 02.5
comp=Z,178nm,18.1s,baz=98,slow=39
DAV Davao City (W) 79.21 145 LR LR 10 54 14.4
comp=Z,60nm,18.1s,baz=15,slow=39
MBAR Mbarara 88.28 240 LR LR 11 00 57.9
comp=Z,48nm,20.3s,baz=79,slow=39
LEM Lembang 92.37 163 LR LR 11 01 49.1
comp=Z,65nm,19.9s,baz=278,slow=38
PPT2 Papeete2 109.73 61 *e*SS SS 10 37 24.9 -4.0
comp=Z,108nm,26.8s
PPT2 Papeete2 109.73 61 *e*LR LR 10 53 48.1
comp=Z,190nm,24.2s
PPT2 *e*LR LR 10 53 51.2
comp=Z,151nm,28.5s
TBI Tubuai 115.46 62 *e*LR LR 10 56 33.1
comp=Z,759nm,26.5s
BO02 Sierra Bellavi 128.97 340 PKPdf 10 22 11.4 +0.3
PLCA Paso Flores 134.89 340 PKIKP **PKPdf 10 22 22.0 -0.1**
PLCA Paso Flores 134.89 340 PKP **PKPdf 10 22 21.9 -0.1**
comp=Z,1.2nm,0.9s,baz=0.0,slow=6.1,SNR=3.5

IDC 16 10:05:25.6±3.7, 54°01N×89°93E, h0km, mbtmp2.7/3, ML2.3/3, Error ellipse: s-maj=36.4km s-min=23.4km az=26.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.02**	**271**	I	I	10 23 59.9	
	0.1nm,0.7s,baz=85,slow=325,SNR=0.9						
ZALV	**Zalesovo Beam**	**3.02**	**271**	Pn	Pn	10 06 15.8	+1.1
	0.3nm,0.3s,baz=84,slow=16,SNR=4.1						
ZALV				Lg	Lg	10 07 00.8	
	0.6nm,0.3s,baz=86,slow=27,SNR=8.1						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**7.77**	**249**	Pn	Pn	10 07 19.9	+0.1
	0.1nm,0.3s,baz=63,slow=14,SNR=5.4						
KURBB				Sn	Sn	10 08 46.8	-1.6
	baz=84,slow=30,SNR=1.0						
KURBB				Lg	Lg	10 09 33.7	
	baz=63,slow=36,SNR=2.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**8.71**	**217**	Pn	Pn	10 07 33.4	+0.6
	0.1nm,0.3s,baz=32,slow=12,SNR=9.7						
	0.2nm,0.3s						

*IDC **16** 10:07:08.0±0.6, 4°.14S×129°.52E, h0km, mb4.3/17, mbtmp4.3/19, ML4.3/2, MS3.4/9, Error ellipse: s-maj=33.3km s-min=13.2km az=76.0*
*NEIC **16** 10:07:10.7±1.7, 4°.09S±0°.06×129°.51E±0°.06, h10km±1km, mb4.4/52, Error ellipse: s-maj=10.8km s-min=9.9km az=56.0*
*DJA **16** 10:07:11.8±0.6, 4°.S±3°×13°.0E±°, h11km±6km, M4.6/11, mb4.7/4, mB4.8/1, MLv4.5/11, Mw(mB)4.0/1*

ISC 16 10:07:09.7±0.3, 4°.15S±0°.05×129°.51E±0°.06, h10km, n116, σ1°36/117, mb4.4/40, MS3.3/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.55**	**133**	P	**Pb**	**10 07 23.2**	**+1.8**
NLAI	**Namlea**	**2.56**	**290**	P	**Pn**	**10 07 52.8**	**+1.4**
FAKI	**Fak Fak**	**3.00**	**66**	Pn	**Pn**	**10 07 59.1**	**+1.8**
FAKI	**Fak Fak**	**3.00**	**66**	P	**Pn**	**10 07 58.8**	**+1.5**
SWI	**Sorong**	**3.70**	**28**	P	**Pn**	**10 08 08.2**	**+1.2**
LBMI	**Labuha**	**4.02**	**330**	P	**Pn**	**10 08 12.9**	**+1.5**
LBMI				S	**Sn**	**10 08 58.8**	**+0.2**
SANI	**Sanana**	**4.08**	**301**	P	**Pn**	**10 08 13.2**	**+0.9**
SAUI	**Saumlaki**	**4.21**	**155**	Pn	**Pn**	**10 08 15.4**	**+1.4**
KMPI	**Kaimana, Papua**	**4.22**	**84**	P	**Pn**	**10 08 16.1**	**+2.0**
TNTI	**Ternate**	**5.33**	**336**	Pn	**Pn**	**10 08 28.3**	**-1.1**
LUWI	**Luwuk**	**7.40**	**294**	Pn	**Pn**	**10 08 57.2**	**-0.7**
SOEI	**Soe**	**7.62**	**223**	Pn	**Pn**	**10 09 01.9**	**+0.8**
MMRI	**Maumere**	**8.49**	**238**	Pn	**Pn**	**10 09 15.1**	**+2.3**
MTN	**Manton Dam**	**8.79**	**170**	Pn	**Pn**	**10 09 17.8**	**+0.8**
KAPI	**Kappang**	**9.76**	**265**	Pn	**Pn**	**10 09 31.1**	**+0.8**
TOLI2	**Tolitoli**	**10.16**	**301**	Pn	**Pn**	**10 09 36.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**14.37**	**195**	Pn	**Pn**	**10 10 35.0**	**+1.6**
WB0	**Warramunga Arr**	**16.24**	**163**	Pn	**Pn**	**10 10 57.9**	**-0.2**
WRAB	**Tennant Creek**	**16.39**	**164**	Pn	**Pn**	**10 10 58.1**	**-1.9**
WRA	**Warramunga Arr**	**16.39**	**164**	Pn	**Pn**	**10 10 57.8**	**-2.3**
WRA	**Warramunga Arr**	**16.39**	**164**	Pn	**Pn**	**10 10 58.1**	**-2.0**
	0.6nm,0.3s,baz=348,slow=11,SNR=18						
WRA				Sn	**Sn**	**10 13 55.8**	**-6.4**
	0.3nm,0.3s,baz=336,slow=23,SNR=4.3						
	1.7nm,0.5s						
WB2	**Warramunga Arr**	**16.40**	**164**	Pn	**Pn**	**10 10 59.1**	**-1.0**
WR0	**Warramunga Arr**	**16.47**	**163**	Pn	**Pn**	**10 11 00.3**	**-0.8**
COEN	**Coen**	**16.64**	**127**	Pn	**Pn**	**10 11 03.4**	**+0.2**
COEN	**Coen**	**16.64**	**127**	P	**P**	**10 11 06.4**	**+0.7**
KKM	**Kota Kinabalu**	**16.69**	**307**		**P**	**10 11 06.6**	**+0.3**
PMG	**Port Moresby**	**18.29**	**108**	P	**Pn**	**10 11 23.2**	**-0.6**
PMG				IAmb	IAmb	10 11 33.0	
	comp=Z,17nm,1.0s						
SBUM	**Sibu**	**18.48**	**290**	P	**P**	**10 11 24.1**	**-1.9**
MBWA	**Marble Bar**	**19.40**	**208**	P	**P**	**10 11 37.9**	**+1.8**
MBWA				IAmb	IAmb	10 11 47.5	
	comp=Z,25nm,1.1s						
MBWA	**Marble Bar**	**19.40**	**208**	P	**Pn**	**10 11 38.4**	**+1.2**
PSA00	**Pilbara Seismi**	**19.70**	**208**	P	**P**	**10 11 41.3**	**+1.9**
PSA00	**Pilbara Seismi**	**19.70**	**208**	P	**Pn**	**10 11 41.7**	**+0.9**
AS31	**Alice Springs**	**19.86**	**168**		**P**	**10 11 42.5**	**+1.3**
ASAR	**Alice Springs**	**19.87**	**168**	P	**P**	**10 11 42.6**	**+1.4**
	comp=Z,2.6nm,0.3s,baz=346,slow=10,SNR=155						
ASAR				S	**S**	**10 15 19.9**	**-5.2**
	comp=Z,0.4nm,0.7s,baz=354,slow=24,SNR=1.2						
ASAR				PcP	**PcP**	**10 15 58.2**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=0.1,slow=1.5,SNR=14						
ASAR				LR	LR	10 19 29.3	
	comp=Z,143nm,18.9s,baz=348,slow=37						
ASAR				ScP	**ScP**	**10 19 32.5**	**-2.8**
	comp=Z,0.5nm,0.9s,baz=350,slow=2.3,SNR=4.3						
	comp=Z,5.4nm,0.4s						
KSM	**Kuching**	**19.98**	**286**	P	**P**	**10 11 43.5**	**+1.0**
KSM				IAmb	IAmb	10 11 45.1	
	comp=Z,36nm,1.0s						
MTSU	**Mount Surprise**	**20.08**	**135**	P	**P**	**10 11 45.2**	**+1.6**
LEM	**Lembang**	**21.95**	**262**	LR	LR	10 20 45.5	
	comp=Z,81nm,21.7s,baz=128,slow=37						
CTA	**Charters Tower**	**22.75**	**136**	LR	LR	10 22 06.4	
	comp=Z,51nm,21.2s,baz=300,slow=40						
CTAO	**Charters Tower**	**22.75**	**136**	P	**P**	**10 12 13.2**	**+0.9**
CTAO				IAmb	IAmb	10 12 15.8	
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**22.75**	**136**	P	**P**	**10 12 13.9**	**+1.6**
GUMO	**Guam**	**23.30**	**41**	LR	LR	10 22 25.5	
	comp=Z,30nm,18.6s,baz=196,slow=39						
MYKOM	**Kota Tinggi**	**26.31**	**282**	P	**P**	**10 12 47.0**	**+1.1**
MYKOM				IAmb	IAmb	10 13 13.2	
	comp=Z,13nm,1.1s						
MULG	**Mulgathing**	**26.35**	**171**	P	**P**	**10 12 44.4**	**-1.7**
FORT	**Forrest**	**26.53**	**183**	P	**P**	**10 12 47.9**	**+0.2**
FORT	**Forrest**	**26.53**	**183**	P	**P**	**10 12 48.6**	**+0.9**
LCRK	**Leigh Creek**	**27.42**	**164**	P	**P**	**10 12 57.4**	**+1.6**
BBOO	**Buckleboo**	**29.17**	**169**	P	**P**	**10 13 11.7**	**+0.3**
BBOO				IAmb	IAmb	10 13 40.5	
	comp=Z,4.9nm,1.1s						
BBOO	**Buckleboo**	**29.17**	**169**	P	**P**	**10 13 11.9**	**+0.6**
EIDS	**Eidsvold**	**29.57**	**138**	P	**P**	**10 13 14.5**	**-0.5**
EIDS				IAmb	IAmb	10 13 21.1	
	comp=Z,5.0nm,1.1s						
IPM	**Ipoh**	**29.72**	**286**	P	**P**	**10 13 17.1**	**+0.7**
STKA	**Stephens Creek**	**29.83**	**159**	P	**P**	**10 13 17.8**	**+0.6**
STKA	**Stephens Creek**	**29.83**	**159**	P	**P**	**10 13 17.9**	**+0.6**

STKA Stephens Creek 29.83 159 P P 10 13 17.8 +0.6
comp=Z,1.3nm,0.4s,baz=340,slow=8.2,SNR=9.4
STKA LR LR 10 25 58.9
comp=Z,191nm,18.2s,baz=14,slow=38
comp=Z,1.3nm,0.4s
KULM Kulim 30.31 288 P P **10 13 22.1 +0.4**
KULM IAmb IAmb 10 13 41.6
comp=Z,9.4nm,1.0s
HTT Hallett 30.43 164 P P **10 13 23.7 +1.1**
NWAO Narrogin (SRO) 30.85 200 LR LR 10 25 54.2
comp=Z,68nm,18.2s,baz=238,slow=36
CMSA Cobar Meteorol 31.21 153 P P **10 13 31.1 +1.7**
JNU Nakatsue 37.09 2 P P **10 14 20.0 -0.4**
JNU IAmb IAmb 10 14 48.3
comp=Z,12nm,1.1s
JNU Nakatsue 37.09 2 P P **10 14 20.7 +0.3**
comp=Z,4.0nm,0.8s,baz=214,slow=15,SNR=6.5
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 37.57 308 P P **10 14 25.1 +0.5**
comp=Z,2.7nm,0.7s,baz=139,slow=7.9,SNR=14
comp=Z,2.7nm,0.7s
JMN Monobe 37.90 6 P P **10 14 27.9 +0.7**
PZH PanZhiHua 40.62 320 P P **10 14 52.5 +2.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.8s
MJAR Matsushiro Arr 41.28 11 P P **10 14 54.5 -0.9**
comp=Z,2.5nm,0.5s,baz=192,slow=9.7,SNR=9.5
comp=Z,2.5nm,0.5s
MAJO Matsushiro 41.29 11 P P **10 14 55.1 -0.3**
MAJO IAmb IAmb 10 14 59.4
comp=Z,7.0nm,0.9s
MJB9 Matsu-Tunnel 41.29 11 P P **10 14 55.8 +0.4**
MJB9 IAmb IAmb 10 15 00.3
comp=Z,7.5nm,0.9s
KSRS Korea Array 41.41 358 P P **10 14 56.5 +0.1**
comp=Z,2.1nm,0.9s,baz=186,slow=9.9,SNR=6.5
comp=Z,2.1nm,0.9s
JMM Marumori 43.09 13 P P **10 15 10.8 +0.7**
HHC Hu-ho-hao-te 47.70 342 *eP* P **10 15 48.8 +2.1**
HHC sP pwP 10 16 07.9 +14
HHC *eS* S **10 22 40.1 -2.8**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,87nm,4.9s
HHC LR LR
comp=E,220nm,13.2s
HHC LR LR
comp=Z,200nm,14.0s
USA0B Ussuriysk Arra 48.18 2 P P **10 15 51.0 +0.8**
USA0B IAmb IAmb 10 15 51.8
comp=Z,5.5nm,1.0s
USRK Ussuriysk Ar. 48.18 2 P P **10 15 51.0 +0.8**
USRK Ussuriysk Ar. 48.18 2 P P **10 15 50.9 +0.7**
comp=Z,2.7nm,0.6s,baz=183,slow=6.7,SNR=12
comp=Z,2.7nm,0.6s
XLT XiLinHaoTe 49.33 347 *eP* P **10 15 59.6 +0.4**
XLT pP pwP 10 16 07.3 +0.5
XLT sP sP 10 16 10.3 +8.5
XLT PcP **PcP** **10 17 18.8 -3.1**
XLT PP PP 10 17 40.0 -13
XLT pmax pmax
comp=Z,5.0nm,1.1s
XLT pmax pmax
comp=Z,180nm,4.9s
KLR Kul'dur 53.19 2 P P **10 16 28.6 +0.6**
comp=Z,2.6nm,0.9s,baz=183,slow=6.7,SNR=6.3
comp=Z,2.6nm,0.9s
HEH HeiHe 54.21 358 *eP* P **10 16 35.6 +0.1**
HEH pmax pmax
comp=Z,6.0nm,1.1s
BHW Baring Head 54.94 139 P P **10 16 41.2 +0.3**
ULN Ulaanbaatar 55.42 342 P P **10 16 44.8 +0.3**
ULN IAmb IAmb 10 16 55.3
comp=Z,5.0nm,1.1s
SONM Songino Array 55.60 341 P P **10 16 46.1 +0.4**
SONM IAmb IAmb 10 17 04.5
comp=Z,3.1nm,1.2s
SONM Songino Array 55.60 341 P P **10 16 45.9 +0.2**
comp=Z,2.0nm,1.1s,baz=164,slow=6.3,SNR=8.3
SONM PcP **PcP** **10 17 45.5 +0.1**
comp=Z,0.6nm,0.8s,baz=126,slow=5.0,SNR=1.3
comp=Z,2.0nm,1.1s
PETK Petropavlovsk- 61.79 19 LR LR 10 40 17.3
comp=Z,20nm,21.7s,baz=325,slow=32
CASY Casey 63.43 188 P P **10 17 39.5 +0.2**
MK31 Makanchi Array 65.59 326 P P **10 17 53.9 +0.1**
MKAR Makanchi Array 65.59 326 P P **10 17 54.1 +0.2**
MKAR Makanchi Array 65.59 326 P P **10 17 53.8 -0.1**
comp=Z,4.5nm,0.4s,baz=112,slow=7.6,SNR=214
comp=Z,4.5nm,0.4s
MA2 Magadan 65.72 12 LR LR 10 46 10.6
comp=Z,31nm,19.2s,baz=43,slow=36
MAKZ Makanchi 65.77 326 P P **10 17 55.0 0.0**
ARSB Arslanbob 68.46 318 P P **10 18 12.7 +0.3**
ZAA0 Zalesovo Array 68.82 334 P P **10 18 13.5 -0.7**
ZAA0 IAmb IAmb 10 18 14.5
comp=Z,4.7nm,1.0s
ZALV Zalesovo Beam 68.82 334 P P **10 18 14.6 +0.4**
ZALV Zalesovo Beam 68.82 334 P P **10 18 13.0 -1.1**
comp=Z,2.7nm,0.8s,baz=108,slow=4.8,SNR=12
comp=Z,2.7nm,0.8s
BTK Batken 69.40 316 P P **10 18 18.6 +0.4**
KURBB Kurchatov Arra 69.84 328 P P **10 18 20.6 +0.1**
comp=Z,5.3nm,0.3s,baz=130,slow=5.6,SNR=30
comp=Z,5.3nm,0.3s
KURK Kurchatov 69.84 328 P P **10 18 20.7 +0.2**
SIMJ Simiganj 70.13 314 P P **10 18 22.3 -0.5**
SIMJ IAmb IAmb 10 18 23.1
comp=Z,5.7nm,1.1s
KK31 Karatay Array 70.89 318 P P **10 18 26.2 -1.0**
KK31 IAmb IAmb 10 18 36.1
comp=Z,2.6nm,1.1s
KKAR Karatay Array 70.89 318 P P **10 18 26.9 -0.3**
KKAR Karatay Array 70.89 318 P P **10 18 26.2 -1.0**
KKAR IAmb IAmb 10 18 36.1
comp=Z,2.6nm,1.1s
VNDA Vanda 75.32 173 P P **10 18 52.5 -0.2**
VNDA IAmb IAmb 10 19 10.5
comp=Z,2.4nm,1.1s
VNDA Vanda 75.32 173 P P **10 18 52.5 -0.2**
comp=Z,1.2nm,0.5s,baz=336,slow=11,SNR=2.9
comp=Z,1.2nm,0.5s
BVAR Borovoye Array 75.40 328 P P **10 18 53.5 -0.1**
comp=Z,2.3nm,0.4s,baz=132,slow=6.2,SNR=19
comp=Z,2.3nm,0.4s
BRVK Borovoye 75.47 328 P P **10 18 53.9 -0.2**
TIXI Tiksi 75.65 360 P P **10 18 54.4 -0.3**
TIXI IAmb IAmb 10 19 13.3
comp=Z,3.5nm,0.8s
TIXI Tiksi 75.65 360 LR LR 10 53 20.4
comp=Z,37nm,18.8s,baz=31,slow=37
UOSS Minazif 76.70 297 P P **10 19 00.3 -1.3**
UOSS IAmb IAmb 10 19 01.3
comp=Z,3.8nm,1.1s
GEYT Alibeck 78.01 310 P P **10 19 08.9 +0.1**
comp=Z,1.5nm,0.7s,baz=134,slow=6.2,SNR=2.2
comp=Z,1.5nm,0.7s
ABKAR Akbulak array 79.98 321 P P **10 19 19.0 -0.3**
ABKAR IAmb IAmb 10 19 19.4
comp=Z,5.1nm,0.7s
QSPA South Pole Qui 85.81 180 P P **10 19 48.8 -0.6**
QSPA South Pole Qui 85.81 180 P P **10 19 48.6 -0.7**
comp=Z,1.0nm,0.7s,baz=42,slow=5.9,SNR=8.9
comp=Z,1.0nm,0.7s
P18K Big Mountain, 86.09 30 P P **10 19 49.1 -1.6**
J18K Innoko River 86.50 26 P P **10 19 52.5 -0.1**
J18K IAmb IAmb 10 20 07.9
comp=Z,1.9nm,1.1s
D19K Kuna River 87.44 21 P P **10 19 57.0 -0.2**
D19K IAmb IAmb 10 20 11.1
comp=Z,1.6nm,0.9s
E19K Redstone River 87.45 22 P P **10 19 57.4 +0.2**
E19K IAmb IAmb 10 20 11.4
comp=Z,4.6nm,1.1s
I23K Minto, Yukon-K 90.01 25 P P **10 20 09.8 +0.5**
ILAR Eielson Array 90.99 25 P P **10 20 12.0 -1.9**
comp=Z,0.4nm,0.8s,baz=252,slow=4.6,SNR=4.4
comp=Z,0.4nm,0.8s
ARCES ARCESS Array B 98.75 340 P P **10 20 47.9 -1.4**
comp=Z,2.0nm,0.9s,baz=61,slow=9.4,SNR=1.6
comp=Z,2.0nm,0.9s
TXAR Lajitas Array 123.85 57 PKP **PKPdf** **10 26 08.5 -0.5**
comp=Z,0.2nm,0.8s,baz=290,slow=2.6,SNR=2.0
CPUP Villa Florida 148.99 168 PKPbc **PKPbc** **10 26 58.6 -0.2**
comp=Z,0.9nm,0.3s,baz=215,slow=2.7,SNR=3.6

IDC 16 10:17:02.5±8.5, 26°36S×28°39E, h0km, mbtmp2.4/1, ML2.2/1, Error ellipse: s-maj=80.4km s-min=52.8km az=140.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**3.58**	**230**	Pn	Pn	10 17 59.6	+0.3
	0.1nm,0.3s,baz=39,slow=6.5,SNR=1.3						
BOSA				Sn	Sn	10 18 42.1	-0.3
	0.2nm,0.3s,baz=24,slow=18,SNR=1.7						
BOSA				Lg	Lg	10 18 56.5	
	1.1nm,0.3s,baz=328,slow=21,SNR=14						
	1.2nm,0.8s						
I47ZA	**BOSHOF INFRASO**	**3.59**	**231**	I	I	10 40 40.0	
	baz=50,slow=308,SNR=1.7						
I35NA	**TSUMEB INFRASO**	**12.26**	**303**	I	I	11 35 00.0	
	baz=130,slow=320,SNR=1.9						

IDC 16 10:43:17.0±8.1, 26°52S×28°52E, h0km, mbtmp2.7/1, ML2.7/1, Error ellipse: s-maj=73.5km s-min=51.8km az=143.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**3.57**	**233**	Pn	Pn	10 44 13.8	+0.1
	0.4nm,0.3s,baz=57,slow=14,SNR=7.7						
BOSA				Sn	Sn	10 44 59.0	+2.2
	0.4nm,0.3s,baz=22,slow=11,SNR=1.9						
BOSA				Lg	Lg	10 45 09.9	
	1.7nm,0.3s,baz=339,slow=20,SNR=8.6						
	1.4nm,0.5s						
I47ZA	**BOSHOF INFRASO**	**3.59**	**234**	I	I	11 07 00.0	
	0.1nm,0.5s,baz=54,slow=309,SNR=1.9						
I35NA	**TSUMEB INFRASO**	**12.44**	**304**	I	I	12 00 40.0	
	baz=128,slow=318,SNR=1.7						

IDC 16 10:52:16.1±1.6, 18°37N×94°46E, h0km, mb3.3/4, mbtmp3.3/5, ML3.8/1, Error ellipse: s-maj=30.1km s-min=22.0km az=40.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**4.26**	**88**	Pn	Pn	10 53 24.2	+1.9
	1.4nm,0.3s,baz=272,slow=7.0,SNR=29						
CMAR				Sn	Sn	10 54 11.7	-1.0
	1.7nm,0.3s,baz=269,slow=18,SNR=7.1						
CMAR				Lg	Lg	10 54 30.2	
	0.4nm,0.3s,baz=267,slow=30,SNR=1.0						
	4.8nm,0.5s						
MKAR	**Makanchi Array**	**30.07**	**343**	P	P	10 58 26.7	-0.3
	0.2nm,0.6s,baz=140,slow=7.4,SNR=2.0						
	0.2nm,0.6s						
SONM	**Songino Array**	**30.96**	**16**	P	P	10 58 34.3	-0.8
	0.2nm,0.3s,baz=201,slow=8.1,SNR=2.2						
	0.2nm,0.3s						
WRA	**Warrumunga Arr**	**54.59**	**132**	P	P	11 01 46.8	+0.1
	0.3nm,0.9s,baz=317,slow=7.3,SNR=3.4						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**56.81**	**136**	P	P	11 02 02.9	+0.3
	0.5nm,0.9s,baz=314,slow=6.8,SNR=1.8						
	0.5nm,0.9s						
H04N2	**CROZET ISLANDS**	**74.92**	**209**	T	T	12 25 25.0	
	baz=43,slow=75,SNR=6.5						
H04N1	**CROZET ISLANDS**	**74.93**	**209**	T	T	12 25 25.7	
	baz=43,slow=75,SNR=6.0						
H04N3	**CROZET ISLANDS**	**74.94**	**209**	T	T	12 25 26.7	
	baz=43,slow=75,SNR=4.7						

*IDC **16** 11:01:25.5±0.5, 12°.82N×87°.90W, h57km±3km, mb4.3/19, mbtmp4.6/23, MS4.0/53, Error ellipse: s-maj=18.8km s-min=7.7km az=51.0*
*GCMT **16** 11:01:25.5±0.2, 12°.45N±0°.02×88°.38W±0°.02, h50km, MW5.0/76, Moment Tensor Solution. s72,c95; s76,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.35±.12; $M_{\theta\theta}$-2.65±.08; $M_{\phi\phi}$-0.70±.09; $M_{r\theta}$0.28±.06; $M_{r\phi}$1.49±.07; $M_{\theta\phi}$-0.50±.07; Best double couple: $M_0$3.45200×10^{16} NP1:ϕ_s124.00000°, δ49.00000°, λ97.00000°. NP2: ϕ_s293.00000°, δ41.00000°, λ82.00000°. Principal axes: T 3.4120, Plg83.0000°, Azm81.0000°; N 0.0710, Plg5.0000°, Azm299.0000°; P -3.4910, Plg4.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*CATAC **16** 11:01:26.0±0.2, 12°.67N×88°.14W, h35km±3km, MB5.8, mb5.4, ML5.2*
*NEIC **16** 11:01:27.5±2.3, 12°.74N±0°.06×88°.09W±0°.05, h60km±4km, mb4.9/505, Mwr5.0/14, Error ellipse: s-maj=8.9km s-min=6.5km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.20; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-0.69; $M_{r\theta}$1.68; $M_{\theta\phi}$-4.15; $M_{r\phi}$-1.13; Fault plane solution: M_o4.69000×10^{16} NP1:ϕ_s176.70000°, δ72.97000°, λ12.80000°. NP2:ϕ_s82.90000°, δ77.77000°, λ162.56000°. Principal axes: T 5.0959, Plg21.0000°, Azm39.0000°; N -0.9562, Plg69.0000°, Azm229.0000°; P -4.1397, Plg3.0000°, Azm130.0000°;*
*SNET **16** 11:01:27.0±1.6, 12°.72N×88°.26W, h48km, ML5.2*
*NEIC **16** 11:01:27.6, 12°.78N×88°.10W, h58km*

ISC 16 11:01:25.4±0.4, 12°.65N±0°.03×88°.18W±0°.03, h58km±3km, h58km:pP-P,n1096,σ1°.21/1086, mb4.9/247, MS4.0/51, 3C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUCU	**Jucuarįn**	**0.60**	**354**	*i* P	Pn	**11 01 38.1**	**-0.4**
JUCU				*eS*	Sn	**11 01 48.0**	**-0.1**
JUCU	**Jucuarįn**	**0.60**	**354**	*i* P	Pn	**11 01 38.4**	**-0.1**
JUCU				*i* S	Sn	**11 01 47.9**	**-0.1**
JUCU				IAML		11 01 49.9	
	comp=Z,48μm,1.0s						
CSGN	**Cosiguina Volc**	**0.69**	**62**	*i* P	Pn	**11 01 38.7**	**-0.8**
CSGN				IAML		11 01 55.6	
	comp=Z,300μm,1.0s						
CNCH	**Conchagua**	**0.71**	**29**	*i* P	Pn	**11 01 39.7**	**-0.1**
CNCH				*i* S	Sn	**11 01 49.4**	**-0.9**
CNCH				IAML		11 01 54.9	
	comp=Z,110μm,1.0s						
LCND	**La Caada**	**0.71**	**23**	*i* P	Pn	**11 01 39.9**	**+0.1**
LCND	**La Caada**	**0.71**	**23**	*i* P	Pn	**11 01 39.8**	**0.0**
LCND				*i* P		11 01 39.9	
LCND				*i* S	Sn	**11 01 49.6**	**-0.7**
LCND				IAML		11 01 55.5	
	comp=Z,46μm,1.0s						
LCND				IAML		11 01 55.6	
	comp=Z,50μm,1.0s						
POTN	**Potosi Cosigui**	**0.75**	**62**	*i* P	Pn	**11 01 40.2**	**+0.1**
POTN				*i* S	Sn	**11 01 49.9**	**-1.0**
POTN				IAML		11 01 54.4	
	comp=Z,14μm,1.0s						
RANC	**El Ranchito**	**0.79**	**352**	*i* P	Pn	**11 01 41.0**	**+0.2**
RANC				*i* S	Sn	**11 01 51.8**	**-0.3**
RANC				IAML		11 01 55.3	
	comp=Z,49μm,1.0s						
BLLM	**Bellamira**	**0.79**	**356**	*i* P	Pn	**11 01 41.0**	**+0.2**
AMPH	**Amapala**	**0.81**	**39**	*eP*	Pn	**11 01 41.6**	**+0.6**
AMPH				*eS*	Sn	**11 01 54.3**	**+1.9**
AMPH	**Amapala**	**0.81**	**39**	*i* P	Pn	**11 01 41.8**	**+0.8**
AMPH				*i* S	Sn	**11 01 52.6**	**+0.2**
CNRM	**Centro Naciona**	**0.82**	**1**	*i* P	Pn	**11 01 41.3**	**+0.2**
CNRM				*eS*	Sn	**11 01 54.1**	**+1.5**
CNRM	**Centro Naciona**	**0.82**	**1**	*i* P	Pn	**11 01 41.6**	**+0.5**
CNRM				*i* S	Sn	**11 01 52.3**	**-0.3**
CNRM				IAML		11 01 56.0	
	comp=Z,570μm,1.0s						
PACA	**Pacayal**	**0.83**	**350**	*i* P	Pn	**11 01 41.5**	**+0.2**
PACA				*i* S	Sn	**11 01 52.7**	**-0.2**
PACA				IAML		11 01 54.8	
	comp=Z,370μm,1.0s						
COEB	**Comit de Eme**	**0.91**	**338**	*i* P	Pn	**11 01 42.2**	**-0.1**
COEB				*eS*	Sn	**11 01 55.2**	**+0.4**
COEB	**Comit de Eme**	**0.91**	**338**	*i* P	Pn	**11 01 42.5**	**+0.2**
COEB				*i* S	Sn	**11 01 55.0**	**+0.2**
COEB				IAML		11 01 58.3	
	comp=Z,31nm,1.0s						
CHNN	**El Viejo**	**1.03**	**91**	*i* P	Pn	**11 01 43.2**	**-0.6**
CHNN				*i* S	Sn	**11 01 56.8**	**-0.7**
CHNN				IAML		11 02 00.8	
	comp=Z,61μm,1.0s						
PQSS	**Presa 15 de Se**	**1.04**	**339**	*i* P	Pn	**11 01 44.5**	**+0.6**
PQSS				*i* S	Sn	**11 01 58.7**	**+1.1**
PQSS				IAML		11 02 02.0	
	comp=Z,30μm,1.0s						
TECO	**Alcaldia de Te**	**1.06**	**327**	*i* P	Pn	**11 01 44.0**	**-0.2**
TECO				*i* S	Sn	**11 01 57.7**	**-0.4**
TECO				IAML		11 02 02.8	
	comp=Z,14μm,1.0s						
CRIN	**San Cristobal**	**1.11**	**87**		Pn	**11 01 45.0**	**+0.2**
CRIN					Sn	**11 02 00.9**	**+1.5**
CRIN	**San Cristobal**	**1.11**	**87**	*eP*	Pn	**11 01 45.0**	**+0.2**
CRIN	**San Cristobal**	**1.11**	**87**	*i* P	Pn	**11 01 45.7**	**+0.8**
CRIN				*i* S	Sn	**11 02 00.3**	**+1.0**
CRIN				IAML		11 02 08.3	
	comp=Z,140μm,1.0s						
UESV	**Universidad de**	**1.14**	**329**	*i* P	Pn	**11 01 45.6**	**+0.2**
UESV				*i* S	Sn	**11 02 00.7**	**+0.5**
UESV				IAML		11 02 08.1	
	comp=Z,36μm,1.0s						
SCLA	**Alcaldia de Sa**	**1.17**	**333**	*i* P	Pn	**11 01 46.6**	**+0.8**
SCLA				*i* S	Sn	**11 02 02.0**	**+1.1**
SCLA				IAML		11 02 08.3	
	comp=Z,23μm,1.0s						
SJTE	**Alcalda de S**	**1.25**	**320**	*i* P	Pn	**11 01 46.8**	**0.0**
SJTE				*i* S	Sn	**11 02 02.9**	**+0.1**
SJTE				IAML		11 02 03.6	
	comp=Z,36μm,1.0s						
PAVA	**Las Pavas**	**1.29**	**325**	*i* P	Pn	**11 01 47.7**	**+0.4**
PAVA				*i* S	Sn	**11 02 04.6**	**+0.9**
PAVA				IAML		11 02 07.9	
	comp=Z,42μm,1.0s						
QUEN	**Al S del Volca**	**1.30**	**92**	*i* P	Pn	**11 01 46.5**	**-0.9**
QUEN				*i* S	Sn	**11 02 04.2**	**+0.3**
QUEN				IAML		11 02 09.6	
	comp=Z,72μm,1.0s						
HERN	**Volcan Telica**	**1.32**	**92**	*i* P	Pn	**11 01 47.5**	**-0.2**
HERN				*i* S	Sn	**11 02 04.3**	**-0.1**
HERN				IAML		11 02 10.9	
	comp=Z,63μm,1.0s						
TELN	**Telica**	**1.32**	**92**	*i* P	Pn	**11 01 47.2**	**-0.5**
TELN				*i* S	Sn	**11 02 04.7**	**+0.3**
TELN				IAML		11 02 09.7	
	comp=Z,4μm,1.0s						
HOYN	**Al Sur del Vol**	**1.32**	**92**	*i* P	Pn	**11 01 47.9**	**+0.1**
HOYN				*i* S	Sn	**11 02 04.0**	**-0.5**
HOYN				IAML		11 02 27.7	
	comp=Z,42nm,1.0s						
POLN	**Al Sur del Vol**	**1.34**	**90**	*i* P	Pn	**11 01 47.9**	**0.0**
POLN				*i* S	Sn	**11 02 04.8**	**0.0**
POLN				IAML		11 02 10.2	
	comp=Z,28nm,1.0s						
PANCS	**Alcalda de**	**1.36**	**315**	*i* P	Pn	**11 01 48.0**	**-0.3**
PANCS				*i* S	Sn	**11 02 03.8**	**-1.6**
PANCS				IAML		11 02 07.5	
	comp=Z,36μm,1.0s						
PACN	**Al O del Volca**	**1.37**	**96**	*i* P	Pn	**11 01 47.4**	**-0.9**
PACN				*i* S	Sn	**11 02 04.6**	**-0.8**
PACN				IAML		11 02 06.1	
	comp=Z,47μm,1.0s						
LBRS	**Las Brisas**	**1.37**	**322**	*eP*	Pn	**11 01 49.0**	**+0.6**
LOMA	**Loma Larga**	**1.38**	**316**	*i* P	Pn	**11 01 48.5**	**-0.1**
LOMA				*i* S	Sn	**11 02 06.0**	**0.0**
LOMA				IAML		11 02 09.0	
	comp=Z,30μm,1.0s						
AEIL	**Aeropuerto Ilo**	**1.38**	**319**	*eP*	Pn	**11 01 48.8**	**+0.2**
AEIL				*eS*	Sn	**11 02 06.6**	**+0.7**
PLRN	**Geotermica Pol**	**1.38**	**93**	*i* P	Pn	**11 01 48.2**	**-0.3**
PLRN				IAML		11 02 08.7	
	comp=Z,28μm,1.0s						
LALI	**Alcalda de L**	**1.39**	**307**	*eP*	Pn	**11 01 47.6**	**-1.0**
LALI				*eS*	Sn	**11 02 04.1**	**-1.8**
LALI	**Alcalda de L**	**1.39**	**307**	*i* P	Pn	**11 01 48.1**	**-0.5**
LALI				*i* S	Sn	**11 02 04.5**	**-1.4**
LALI				IAML		11 02 11.6	
	comp=Z,6μm,1.0s						
ROCN	**Rota Cerro Neg**	**1.41**	**95**	*i* P	Pn	**11 01 48.4**	**-0.5**
ROCN				IAML		11 02 13.4	
	comp=Z,20μm,1.0s						
UDBS	**Universidad Do**	**1.42**	**318**	*i* P	Pn	**11 01 49.4**	**+0.3**
UDBS				*i* S	Sn	**11 02 07.5**	**+0.7**
UDBS				IAML		11 02 10.5	
	comp=Z,24μm,1.0s						
IGN	**Direccin Gen**	**1.43**	**318**	*eP*	Pn	**11 01 49.4**	**+0.2**
IGN				*eS*	Sn	**11 02 07.3**	**+0.3**
UTEC	**Universidad Te**	**1.44**	**317**	*i* P	Pn	**11 01 49.4**	**0.0**
UTEC				*i* S	Sn	**11 02 07.5**	**+0.2**
UTEC				IAML		11 02 10.0	
	comp=Z,22μm,1.0s						
ILCN	**San Idelfonso**	**1.45**	**93**	*i* P	Pn	**11 01 49.6**	**+0.2**
ILCN				*i* S	Sn	**11 02 08.2**	**+0.8**
ILCN				IAML		11 02 10.3	
	comp=Z,14μm,1.0s						
SNET	**Serv Nac Est T**	**1.45**	**315**		Pn	**11 01 49.3**	**-0.2**
SNET	**Serv Nac Est T**	**1.45**	**315**	*i* P	Pn	**11 01 49.7**	**+0.2**
SNET				*i* S	Sn	**11 02 07.6**	**0.0**
SNET				IAML		11 02 14.1	
	comp=Z,39μm,1.0s						
CNGA	**Al SSO del Vol**	**1.46**	**96**	*i* P	Pn	**11 01 49.6**	**+0.1**
CNGA				*i* S	Sn	**11 02 08.4**	**+0.8**
CNGA				IAML		11 02 14.7	
	comp=Z,36μm,1.0s						
CNGN	**Cerro Negro**	**1.46**	**96**		Pn	**11 01 49.0**	**-0.6**
CNGN	**Cerro Negro**	**1.46**	**96**	*i*P	Pn	**11 01 49.0**	**-0.6**
CNGN	**Cerro Negro**	**1.46**	**96**	*i* P	Pn	**11 01 49.2**	**-0.3**
CNGN				*i* S	Sn	**11 02 07.6**	**-0.1**
CNGN				IAML		11 02 12.3	
	comp=Z,38μm,1.0s						
ITCA	**Escuela Especi**	**1.48**	**314**	*i* P	Pn	**11 01 49.9**	**+0.1**
ITCA				*i* S	Sn	**11 02 08.7**	**+0.5**
ITCA				IAML		11 02 18.8	
	comp=Z,47μm,1.0s						
UEES	**Universidad Ev**	**1.48**	**316**	*i* P	Pn	**11 01 49.9**	**0.0**
UEES				*i* S	Sn	**11 02 08.9**	**+0.7**
UEES				IAML		11 02 12.4	
	comp=Z,12μm,1.0s						
MACN	**El Madrono**	**1.48**	**97**	*i* P	Pn	**11 01 49.7**	**-0.2**
MACN				*i* S	Sn	**11 02 09.0**	**+0.7**
MACN				IAML		11 02 16.8	
	comp=Z,25μm,1.0s						
BOQS	**Boqueron**	**1.52**	**315**	*eP*	Pn	**11 01 50.8**	**+0.2**
PMON	**Piamonte**	**1.53**	**314**	*i* P	Pn	**11 01 50.8**	**+0.3**
PMON				*i* S	Sn	**11 02 09.8**	**+0.3**
LEVN	**Ruinas Leon Vi**	**1.55**	**99**	*i* P	Pn	**11 01 50.2**	**-0.5**
LEVN				*i* S	Sn	**11 02 09.4**	**-0.4**
LEVN				IAML		11 02 19.4	
	comp=Z,25μm,1.0s						
QUEZ	**Alcaldia de Qu**	**1.59**	**318**	*i* P	Pn	**11 01 51.8**	**+0.5**
QUEZ				*i* S	Sn	**11 02 12.1**	**+1.3**
QUEZ				IAML		11 02 15.1	
	comp=Z,49μm,1.0s						
JAYA	**Jayaque - finc**	**1.59**	**309**	*eP*	Pn	**11 01 51.1**	**-0.3**
JAYA	**Jayaque - finc**	**1.59**	**309**	*i* P	Pn	**11 01 51.1**	**-0.3**
JAYA				IAML		11 02 12.1	
	comp=Z,66μm,1.0s						
AESN	**El Sauce Leon**	**1.62**	**81**	*i* P	Pn	**11 01 51.7**	**0.0**
AESN				*i* S	Sn	**11 02 11.7**	**+0.1**
AESN				IAML		11 02 18.2	
	comp=Z,12μm,1.0s						
MOMN	**Momotombo**	**1.62**	**98**	*i* P	Pn	**11 01 51.3**	**-0.5**
MOMN				*i* S	Sn	**11 02 10.9**	**-0.8**
MOMN				IAML		11 02 16.3	
	comp=Z,1μm,1.0s						
COPN	**Copaltepe**	**1.62**	**107**	*i* P	Pn	**11 01 50.7**	**-1.0**
COPN				IAML		11 02 12.4	
	comp=Z,53μm,1.0s						
BC84	**Volcan Momotom**	**1.62**	**99**	*i* P	Pn	**11 01 51.4**	**-0.3**
BC84				*i* S	Sn	**11 02 11.2**	**-0.4**
BC84				IAML		11 02 14.8	
	comp=Z,49μm,1.0s						
BC86	**Nagarote**	**1.63**	**103**	*i* P	Pn	**11 01 51.3**	**-0.5**
BC86				*i* S	Sn	**11 02 10.7**	**-1.0**
BC86				IAML		11 02 21.2	
	comp=Z,40μm,1.0s						
CEDA	**San Andres**	**1.65**	**314**	*eP*	Pn	**11 01 52.4**	**+0.3**
CEDA				*eS*	Sn	**11 02 13.2**	**+0.9**
CEDA	**San Andres**	**1.65**	**314**	*i* P	Pn	**11 01 52.7**	**+0.6**
CEDA				*i* S	Sn	**11 02 13.4**	**+1.2**
CEDA				IAML		11 02 29.1	
	comp=Z,34μm,1.0s						
INTHN	**La Esperanza I**	**1.66**	**3**	*i* P	Pn	**11 01 53.8**	**+1.4**
INTHN				*i* S	Sn	**11 02 15.9**	**+3.1**
TGUH	**Tegucigalpa,Un**	**1.66**	**32**		Pn	**11 01 53.5**	**+1.2**

TGUH	**Tegucigalpa,Un**	**1.66**	**32**	*i*	P		**Pn**	**11 01 53.6 +1.2**
TGUH				*e*	S		**Sn**	**11 02 14.6 +2.0**
TGUH				*i*				11 02 25.6
	comp=Z,4μm,0.5s							
TGUH	**Tegucigalpa,Un**	**1.66**	**32**	*i*	P		**Pn**	**11 01 53.9 +1.6**
TGUH				*i*	S		**Sn**	**11 02 15.5 +2.9**
TGUH					IAML			11 02 45.9
	comp=Z,21μm,1.0s							
MOM2	**El Cardon**	**1.67**	**97**	*i*	P		**Pn**	**11 01 52.8 +0.4**
MOM2				*i*	S		**Sn**	**11 02 13.2 +0.4**
MOM2					IAML			11 02 14.8
	comp=Z,18μm,1.0s							
LLGN	**La Laguna**	**1.68**	**334**	*i*	P		**Pn**	**11 01 52.9 +0.3**
LLGN				*i*	S		**Sn**	**11 02 16.3 +3.2**
LLGN					IAML			11 02 17.5
	comp=Z,8μm,1.0s							
AMTN	**Mateare**	**1.76**	**103**	*i*	P		**Pn**	**11 01 53.5 -0.1**
AMTN				*i*	S		**Sn**	**11 02 14.5 -0.4**
AMTN					IAML			11 02 21.9
	comp=Z,80μm,1.0s							
BRAN	**Las Pilas**	**1.79**	**88**	*i*	P		**Pn**	**11 01 53.0 -1.0**
BRAN				*i*	S		**Sn**	**11 02 15.3 -0.4**
BRAN					IAML			11 02 23.8
	comp=Z,22μm,1.0s							
SAPS	**Ciudad Sandino**	**1.80**	**105**	*i*	P		**Pn**	**11 01 53.6 -0.6**
SAPS				*i*	S		**Sn**	**11 02 15.5 -0.5**
SAPS					IAML			11 02 20.9
	comp=Z,60μm,1.0s							
MSHP	**Masachapa**	**1.81**	**117**	*i*	P		**Pn**	**11 01 53.4 -0.8**
MSHP				*i*	S		**Sn**	**11 02 17.3 +1.3**
MSHP					IAML			11 02 20.1
	comp=Z,6μm,1.0s							
LIMN	**Finca el Limon**	**1.82**	**77**	*i*	P		**Pn**	**11 01 54.8 +0.3**
LIMN				*i*	S		**Sn**	**11 02 17.7 +1.2**
LIMN					IAML			11 02 25.5
	comp=Z,14μm,1.0s							
CEVE	**Cerro Verde**	**1.83**	**310**	*i*	P		**Pn**	**11 01 55.4 +0.6**
CEVE					IAML			11 02 27.0
	comp=Z,15μm,1.0s							
APYN	**Apoyeque**	**1.84**	**103**	*i*	P		**Pn**	**11 01 54.7 0.0**
APYN				*i*	S		**Sn**	**11 02 16.4 -0.5**
APYN					IAML			11 02 24.8
	comp=Z,24μm,1.0s							
YUSH	**Yuscaran**	**1.84**	**45**	*i*	P		**Pn**	**11 01 56.1 +1.3**
YUSH				*i*	S		**Sn**	**11 02 16.5 -0.5**
BC87	**San Francisco**	**1.85**	**94**	*i*	P		**Pn**	**11 01 54.7 -0.2**
BC87				*i*	S		**Sn**	**11 02 19.2 +2.0**
BC87					IAML			11 02 28.3
	comp=Z,18μm,1.0s							
APQ2	**Apoyeque**	**1.87**	**104**	*i*	P		**Pn**	**11 01 54.7 -0.4**
APQ2				*i*	S		**Sn**	**11 02 17.6 0.0**
APQ2					IAML			11 02 29.0
	comp=Z,26μm,1.0s							
UNIC	**Universidad Ca**	**1.88**	**315**	*i*	P		**Pn**	**11 01 55.8 +0.5**
UNIC				*i*	S		**Sn**	**11 02 18.2 +0.3**
UNIC					IAML			11 02 24.2
	comp=Z,3μm,1.0s							
APQN	**BB Volcan Apoy**	**1.89**	**103**	*i*	P		**Pn**	**11 01 55.5 +0.2**
ABCN	**Banco Central**	**1.90**	**106**	*i*	P		**Pn**	**11 01 55.5 -0.1**
ABCN				*i*	S		**Sn**	**11 02 17.8 -0.7**
ABCN					IAML			11 02 21.5
	comp=Z,85μm,1.0s							
ALLN	**Telcor Managua**	**1.93**	**105**	*i*	P		**Pn**	**11 01 55.6 -0.3**
ALLN				*i*	S		**Sn**	**11 02 18.1 -1.0**
ALLN					IAML			11 02 23.8
	comp=Z,29μm,1.0s							
TISN	**Laguna Tiscapa**	**1.94**	**105**	*i*	P		**Pn**	**11 01 55.8 -0.2**
TISN					IAML			11 02 25.9
	comp=Z,2μm,1.0s							
USIM	**UNAN**	**1.94**	**106**	*i*	P		**Pn**	**11 01 56.0 0.0**
USIM					IAML			11 02 24.9
	comp=Z,47μm,1.0s							
UNAN	**Cigeo UNAN**	**1.94**	**106**	*i*	P		**Pn**	**11 01 56.0 -0.1**
UNAN				*i*	S		**Sn**	**11 02 18.9 -0.5**
UNAN					IAML			11 02 27.8
	comp=Z,160μm,1.0s							
ENAN	**Enatrel Managu**	**1.95**	**106**	*i*	P		**Pn**	**11 01 56.1 -0.1**
ENAN				*i*	S		**Sn**	**11 02 19.1 -0.5**
ENAN					IAML			11 02 26.5
	comp=Z,65μm,1.0s							
MGA1	**Managua**	**1.95**	**105**	*i*	P		**Pn**	**11 01 56.1 -0.1**
MGA1				*i*	S		**Sn**	**11 02 19.3 -0.4**
MGA1					IAML			11 02 25.5
	comp=Z,24μm,1.0s							
R4DEC	**Barrio San Lui**	**1.96**	**105**	*i*	P		**Pn**	**11 01 56.1 -0.1**
R4DEC					IAML			11 02 24.7
	comp=Z,19μm,1.0s							
CRUN	**El Crucero**	**1.96**	**110**	*i*	P		**Pn**	**11 01 56.5 +0.1**
CRUN					IAML			11 02 33.3
	comp=Z,64nm,1.0s							
MAFN	**Magfor**	**1.98**	**106**	*i*	P		**Pn**	**11 01 56.5 -0.1**
MAFN				*i*	S		**Sn**	**11 02 19.9 -0.4**
MAFN					IAML			11 02 25.3
	comp=Z,56μm,1.0s							
HUGN	**San Franciso L**	**1.98**	**100**	*i*	P		**Pn**	**11 01 56.6 0.0**
HUGN				*i*	S		**Sn**	**11 02 21.5 +1.1**
HUGN					IAML			11 02 26.0
	comp=Z,13μm,1.0s							
HUEN		**1.99**	**99**	*i*	P		**Pn**	**11 01 57.7 +1.0**
NUBE	**Las Nubes**	**1.99**	**309**	*i*	P		**Pn**	**11 01 57.0 +0.1**
NUBE				*i*	S		**Sn**	**11 02 20.4 -0.4**
NUBE					IAML			11 02 24.4
	comp=Z,20μm,1.0s							
WILN	**Americas 2**	**2.01**	**104**	*i*	P		**Pn**	**11 01 57.0 0.0**
WILN				*i*	S		**Sn**	**11 02 20.2 -0.8**
WILN					IAML			11 02 24.7
	comp=Z,15μm,1.0s							
AERN	**Aeropuerto Man**	**2.03**	**104**	*i*	P		**Pn**	**11 01 57.5 +0.2**
AERN				*i*	S		**Sn**	**11 02 21.0 -0.6**
AERN					IAML			11 02 29.4
	comp=Z,24μm,1.0s							
ADRN	**Diriamba**	**2.06**	**112**	*i*	P		**Pn**	**11 01 57.7 0.0**
ADRN				*i*	S		**Sn**	**11 02 19.9 -2.4**
ADRN					IAML			11 02 21.0
	comp=Z,25μm,1.0s							
MAS3	**Al N del Volca**	**2.06**	**107**	*i*	P		**Pn**	**11 01 57.1 -0.6**
MAS3				*i*	S		**Sn**	**11 02 20.8 -1.5**
MAS3					IAML			11 02 23.4
	comp=Z,32μm,1.0s							
MTO3	**Montecristo**	**2.08**	**327**				**Pn**	**11 01 58.7 +0.5**
MTO3	**Montecristo**	**2.08**	**327**	*i*	P		**Pn**	**11 01 58.9 +0.7**
MTO3					IAML			11 02 28.3
	comp=Z,5μm,1.0s							
TIPN	**Tipitapa**	**2.09**	**102**	*i*	P		**Pn**	**11 01 58.1 0.0**
TIPN					IAML			11 02 21.2
	comp=Z,12μm,1.0s							
TIPN				*i*	S		**Sn**	**11 02 23.5 +0.5**
MASN	**Masaya**	**2.09**	**108**	*i*	P		**Pn**	**11 01 58.4 +0.2**
MASN				*i*	S		**Sn**	**11 02 24.2 +1.1**
MASN					IAML			11 02 30.2
	comp=Z,7μm,1.0s							
SBEN	**San Benito**	**2.10**	**99**	*i*	P		**Pn**	**11 01 58.3 0.0**
SBEN				*i*	S		**Sn**	**11 02 23.3 0.0**
SBEN					IAML			11 02 32.4
	comp=Z,12μm,1.0s							
NANN	**Nandasmo**	**2.13**	**109**	*i*	P		**Pn**	**11 01 59.5 +0.8**
NANN				*i*	S		**Sn**	**11 02 24.0 -0.2**
NANN					IAML			11 02 26.7
	comp=Z,260μm,1.0s							
AMYN	**Masaya**	**2.14**	**108**	*i*	P		**Pn**	**11 01 58.7 -0.1**
AMYN					IAML			11 02 34.4
	comp=Z,16μm,1.0s							
ESQI	**Esquipulas**	**2.21**	**329**				**Pn**	**11 02 01.0 +1.2**
ESQI	**Esquipulas**	**2.21**	**329**	*i*	P		**Pn**	**11 02 01.3 +1.5**
ESQI					IAML			11 02 30.6
	comp=Z,6μm,1.0s							
RCPN	**Sur Rio San Ju**	**2.21**	**67**	*i*	P		**Pn**	**11 02 00.1 +0.2**
RCPN					IAML			11 02 32.8
	comp=Z,43nm,1.0s							
MATN	**Matagalpa**	**2.22**	**83**				**Pn**	**11 01 59.9 -0.1**
MATN	**Matagalpa**	**2.22**	**83**	*i*	P		**Pn**	**11 02 00.4 +0.4**
MATN					IAML			11 02 29.8
	comp=Z,4μm,1.0s							
NADN	**Granada**	**2.29**	**113**	*i*	P		**Pn**	**11 02 00.1 -0.7**
NADN				*i*	S		**Sn**	**11 02 26.5 -1.3**
NADN					IAML			11 02 35.3
	comp=Z,24μm,1.0s							
GRNN	**Granada**	**2.29**	**108**	*i*	P		**Pn**	**11 02 01.0 +0.1**
GRNN				*i*	S		**Sn**	**11 02 29.9 +1.9**
GRNN					IAML			11 02 36.7
	comp=Z,10μm,1.0s							
BOAB	**BOACO BROADBAN**	**2.46**	**94**		Pn		**Pn**	**11 02 02.7 -0.5**
BOAB	**BOACO BROADBAN**	**2.46**	**94**	*i*	P		**Pn**	**11 02 03.0 -0.2**
BOAB					IAML			11 02 52.9
	comp=Z,3μm,1.0s							
ARIN	**Rivas**	**2.59**	**117**	*i*	P		**Pn**	**11 02 05.6 +0.7**
ARIN					IAML			11 02 16.3
	comp=Z,7μm,1.0s							
ARIN				*i*	S		**Sn**	**11 02 35.1 0.0**
JAPN	**Al SSO del Vol**	**2.69**	**114**	*i*	P		**Pn**	**11 02 06.4 +0.1**
JAPN				*i*	S		**Sn**	**11 02 38.8 +1.0**
JAPN					IAML			11 02 47.3
	comp=Z,7μm,1.0s							
MORN	**Al O del Volca**	**2.71**	**114**	*i*	P		**Pn**	**11 02 06.3 -0.3**
MORN					IAML			11 02 42.6
	comp=Z,13μm,1.0s							
CONN	**Concepcion**	**2.72**	**113**	*i*	P		**Pn**	**11 02 07.2 +0.4**
CONN					IAML			11 02 53.6
	comp=Z,43μm,1.0s							
OMEN	**Al SSO del Vol**	**2.75**	**114**	*i*	P		**Pn**	**11 02 06.4 -0.6**
OMEN					IAML			11 02 43.0
	comp=Z,11μm,1.0s							
GUNB	**GUNB**	**2.86**	**313**	*i*	P		**Pn**	**11 02 09.2 +0.3**
GUNB					IAML			11 03 02.2
	comp=Z,2μm,1.0s							
GCG4	**OSOP**	**2.99**	**310**	*i*	P		**Pn**	**11 02 10.8 +0.3**
GCG4					IAML			11 02 41.2
	comp=Z,2μm,1.0s							
ACON	**Acoyapa**	**3.02**	**103**				**Pn**	**11 02 10.8 0.0**
ACON	**Acoyapa**	**3.02**	**103**	*e*	P		**Pn**	**11 02 09.9 -0.9**
ACON	**Acoyapa**	**3.02**	**103**	*i*	P		**Pn**	**11 02 10.6 -0.2**
ACON					IAML			11 02 59.7
	comp=Z,2μm,1.0s							
GUMI	**Mixco**	**3.08**	**310**	*i*	P		**Pn**	**11 02 12.4 +0.6**
GUMI					IAML			11 03 19.7
	comp=Z,2μm,1.0s							
IZABA	**Izabal, Puerto**	**3.09**	**353**	*i*	P		**Pn**	**11 02 12.7 +1.0**
IZABA					IAML			11 03 11.7
	comp=Z,13nm,1.0s							
HZTE	**Horizontes, Gu**	**3.18**	**127**				**Pn**	**11 02 14.3 +1.2**
HZTE	**Horizontes, Gu**	**3.18**	**127**	*i*	P		**Pn**	**11 02 13.8 +0.8**
HZTE					IAML			11 03 13.8
	comp=Z,5μm,1.0s							
GPS3	**Bodega del ICE**	**3.34**	**124**	*e*	P		Pn	11 02 22.5 +7.3
SIUN	**Universidad Ur**	**3.49**	**72**	*i*	P		**Pn**	**11 02 18.3 +1.1**
SIUN					IAML			11 03 18.3
	comp=Z,860nm,1.0s							
ORTG	**Ortega, Santa**	**3.51**	**130**		Pn		**Pn**	**11 02 18.4 +0.9**
ORTG	**Ortega, Santa**	**3.51**	**130**	*i*	P		**Pn**	**11 02 18.4 +0.9**
ORTG				*i*	S		**Sn**	**11 02 59.4 +1.5**
ORTG					IAML			11 03 18.6
	comp=Z,2μm,1.0s							
SAJU	**San Juanillo,**	**3.53**	**136**	*i*	P		**Pn**	**11 02 17.8 0.0**
SAJU				*i*	S		**Sn**	**11 02 59.2 +0.9**
SAJU					IAML			11 03 27.8
	comp=Z,2μm,1.0s							
AVCB	**Coban**	**3.54**	**323**	*i*	P		**Pn**	**11 02 20.3 +2.3**
AVCB					IAML			11 04 36.0
	comp=Z,20μm,1.0s							
NICO	**Nicoya**	**3.67**	**133**	*e*	P		Pn	11 02 25.9 +6.3
DUNO	**Dulce Nombre,**	**3.67**	**134**				**Pn**	**11 02 20.4 +0.6**
DUNO	**Dulce Nombre,**	**3.67**	**134**	*i*	P		**Pn**	**11 02 20.4 +0.6**
DUNO					IAML			11 03 28.4
	comp=Z,4μm,1.0s							
VERA	**Finca Concepci**	**3.70**	**118**	*e*	P		Pn	11 02 42.3 +22
CNAS	**Canas**	**3.75**	**126**	*e*	P		Pn	11 02 26.4 +5.6
INDI	**Punta indio, G**	**3.82**	**136**	*e*	P		Pn	11 02 30.6 +8.9
INDI	**Punta indio, G**	**3.82**	**136**	*i*	P		**Pn**	**11 02 22.1 +0.4**
INDI				*i*	S		**Sn**	**11 03 05.9 +0.5**
INDI					IAML			11 03 32.2
	comp=Z,4μm,1.0s							
ESPN	**Las Esperanzas**	**3.82**	**96**				**Pn**	**11 02 21.9 +0.1**
ESPN	**Las Esperanzas**	**3.82**	**96**	*i*	P		**Pn**	**11 02 22.2 +0.4**
ESPN					IAML			11 03 51.5
	comp=Z,1μm,1.0s							
RTAL	**Retalhuleu**	**3.89**	**299**		Pn		**Pn**	**11 02 24.0 +1.2**
RTAL	**Retalhuleu**	**3.89**	**299**	*i*	P		**Pn**	**11 02 26.4 +3.7**
RTAL					IAML			11 03 45.2
	comp=Z,2μm,1.0s							
NYURE	**Nandayure**	**3.90**	**132**	*e*	P		**Pn**	**11 02 23.7 +0.8**
JTS	**Las Juntas de**	**3.94**	**126**		Pn		**Pn**	**11 02 23.8 +0.4**
JTS	**Las Juntas de**	**3.94**	**126**		P		**Pn**	**11 02 23.6 +0.2**
	comp=Z,42nm,0.3s,baz=303,slow=17,SNR=50							
JTS					S		**Sn**	**11 03 06.1 -2.3**
	comp=Z,221nm,0.3s,baz=329,slow=22,SNR=4.6							
JTS	**Las Juntas de**	**3.94**	**126**	*e*	P		**Pn**	**11 02 24.1 +0.7**
JTS				*e*	S		Sn	11 03 21.3 +13
JTS	**Las Juntas de**	**3.94**	**126**	*e*	P		Pn	11 02 31.4 +8.0
JUNT	**Juntas**	**3.94**	**126**	*e*	P		Pn	11 02 31.4 +8.0
CEDE	**Laguna Cedeo**	**4.03**	**122**	*e*	P		**Pn**	**11 02 28.4 +3.7**
ARE1	**Arenal 1**	**4.03**	**122**				**Pn**	**11 02 25.6 +0.9**
ARE1	**Arenal 1**	**4.03**	**122**	*e*	P		**Pn**	**11 02 26.5 +1.8**
VACR	**Volcan Arenal**	**4.06**	**122**	*e*	P		**Pn**	**11 02 27.7 +2.6**
TUNA	**La Fortuna**	**4.09**	**122**	*e*	P		Pn	11 02 34.7 +9.3
SOCE	**Pocosol**	**4.16**	**122**				**Pn**	**11 02 27.4 +1.0**
SOCE	**Pocosol**	**4.16**	**122**	*i*	P		**Pn**	**11 02 26.4 0.0**
SOCE					IAML			11 03 36.4
	comp=Z,180nm,1.0s							
HUEH	**Huehuetenango**	**4.17**	**310**	*i*	P		**Pn**	**11 02 27.3 +0.5**
HUEH				*i*	S		**Sn**	**11 03 18.5 +4.0**
HUEH					IAML			11 03 32.7
	comp=Z,1μm,1.0s							
SMSP	**San Marcos**	**4.19**	**304**	*i*	P		**Pn**	**11 02 30.0 +2.9**
SMSP					IAML			11 03 40.4
	comp=Z,3μm,1.0s							
LAFE	**Finca La Fe, P**	**4.28**	**131**	*i*	P		**Pn**	**11 02 29.4 +1.4**
LAFE					IAML			11 03 37.5
	comp=Z,37nm,1.0s							
ARZA	**Esparza**	**4.34**	**127**	*e*	P		**Pn**	**11 02 32.2 +3.2**
BLUN	**Bluefields**	**4.36**	**98**	*i*	P		**Pn**	**11 02 30.3 +1.2**
BLUN					IAML			11 03 39.5
	comp=Z,970nm,1.0s							
CPMI	**Catarata Coope**	**4.41**	**122**	*e*	P		**Pn**	**11 02 32.4 +2.3**
CPMI	**Catarata Coope**	**4.41**	**122**	*i*	P		**Pn**	**11 02 32.3 +2.3**
CPMI					IAML			11 03 39.6
	comp=Z,2μm,1.0s							
RAMO	**San Ramon**	**4.45**	**125**	*e*	P		**Pn**	**11 02 34.0 +3.6**
SARCI	**Sarchi**	**4.54**	**124**	*e*	P		**Pn**	**11 02 34.6 +2.9**
PETF	**Flores**	**4.54**	**339**				**Pn**	**11 02 33.6 +1.9**
PETF	**Flores**	**4.54**	**339**	*i*	P		**Pn**	**11 02 34.4 +2.7**
PETF					IAML			11 03 56.2
	comp=Z,610nm,1.0s							
JACO	**JACO, Garabito**	**4.56**	**130**				**Pn**	**11 02 33.2 +1.3**
JACO	**JACO, Garabito**	**4.56**	**130**	*e*	P		**Pn**	**11 02 33.6 +1.7**
JACO	**JACO, Garabito**	**4.56**	**130**	*i*	P		**Pn**	**11 02 35.0 +3.1**
JACO					IAML			11 03 51.2
	comp=Z,2μm,1.0s							
TRB2	**Turrubares**	**4.56**	**126**	*e*	P		**Pn**	**11 02 33.9 +1.9**
BELE	**Belen**	**4.73**	**124**	*e*	P		**Pn**	**11 02 38.2 +3.8**
SANTA	**Santa Ana**	**4.76**	**124**	*e*	P		**Pn**	**11 02 37.6 +2.8**
RIFO	**Rio Frio, Sara**	**4.78**	**119**	*e*	P		**Pn**	**11 02 38.5 +3.6**
RIFO	**Rio Frio, Sara**	**4.78**	**119**	*i*	P		**Pn**	**11 02 35.4 +0.5**
RIFO					IAML			11 03 45.9
	comp=Z,1μm,1.0s							
HDC	**Heredia**	**4.78**	**123**				**Pn**	**11 02 35.9 +0.9**
HDC	**Heredia**	**4.78**	**123**	*e*	P		**Pn**	**11 02 39.4 +4.4**
HDC3	**Heredia 3**	**4.78**	**123**	*e*	P		**Pn**	**11 02 39.2 +4.1**
HDC3	**Heredia 3**	**4.78**	**123**	*i*	P		**Pn**	**11 02 37.1 +2.0**
HDC3					IAML			11 03 56.8
	comp=Z,2μm,1.0s							
TRT1	**Tortuguero**	**4.84**	**114**	*e*	P		**Pn**	**11 02 36.6 +0.8**
LUJA	**Lujan**	**4.86**	**123**	*e*	P		**Pn**	**11 02 40.1 +4.0**
ACOS	**Acosta**	**4.86**	**125**	*e*	P		**Pn**	**11 02 39.3 +3.2**
ACOS				*e*	S		**Sn**	**11 03 30.0 -1.2**
LUPE	**Guadalupe**	**4.86**	**123**	*e*	P		**Pn**	**11 02 40.4 +4.2**
AMPA	**Desamparados**	**4.88**	**124**	*e*	P		**Pn**	**11 02 40.5 +4.1**
CORON	**Coronado**	**4.89**	**123**	*e*	P		Pn	11 02 42.3 +5.7
RITA	**Parrita**	**4.89**	**129**	*e*	P		**Pn**	**11 02 38.7 +2.2**
CVIMO	**Finca Echandi**	**4.91**	**122**	*e*	P		Pn	11 02 41.7 +4.8
TRIO	**Tres Rios**	**4.93**	**123**	*e*	P		**Pn**	**11 02 39.3 +2.2**
OCM	**Ochomogo**	**4.96**	**123**	*e*	P		**Pn**	**11 02 40.1 +2.5**
OCM	**Ochomogo**	**4.96**	**123**	*i*	P		**Pn**	**11 02 39.9 +2.2**
OCM					IAML			11 02 42.6
	comp=Z,960nm,1.0s							
OCM				*i*	S		**Sn**	**11 03 35.7 +1.8**
VIRE	**VIRE**	**4.98**	**122**	*i*	P		**Pn**	**11 02 40.9 +2.9**
VIRE					IAML			11 02 45.7
	comp=Z,2μm,1.0s							
VIRE				*i*	S		**Sn**	**11 03 37.6 +3.2**
VICA	**Volcano Irazu**	**5.01**	**121**	*e*	P		**Pn**	**11 02 40.3 +1.8**
LCR2	**La Lucha 2**	**5.01**	**125**		Pn		**Pn**	**11 02 40.1 +1.7**
LCR2	**La Lucha 2**	**5.01**	**125**	*e*	P		**Pn**	**11 02 40.5 +2.2**
ICR3	**Volcano Irazu**	**5.03**	**121**	*e*	P		**Pn**	**11 02 42.8 +4.2**
VTRT	**Volcan Turrial**	**5.05**	**121**	*i*	P		**Pn**	**11 02 40.2 +1.3**
VTRT					IVmB_BB			11 02 42.8
	comp=Z,15μm,1.0s							
RAZU	**San Marcos de**	**5.05**	**126**	*e*	P		**Pn**	**11 02 41.3 +2.5**
VTUN	**Crater Central**	**5.06**	**121**	*i*	P		**Pn**	**11 02 39.2 +0.1**
VTUN					IVmB_BB			11 02 50.8
	comp=Z,5μm,1.0s							
VTUN					IAmb	IAmb		11 03 01.9
	comp=Z,440nm,0.8s							
VTUN					IAML			11 04 04.1
	comp=Z,710nm,1.0s							
VTUC	**Crater, Volcan**	**5.06**	**121**	*i*	P		**Pn**	**11 02 39.1 0.0**
VTUC					IVmB_BB			11 02 50.5
	comp=Z,4μm,1.0s							
VTUC					IAmb	IAmb		11 02 51.6
	comp=Z,300nm,0.6s							
VTUC					IAML			11 03 58.3
	comp=Z,500nm,1.0s							
CVTR	**Volcan Turrial**	**5.06**	**121**	*e*	P		Pn	11 02 44.1 +4.9
VTR0	**Volcan Turrial**	**5.07**	**121**	*e*	P		Pn	11 02 44.8 +5.6
PCAYA	**Pacayas**	**5.08**	**122**	*e*	P		**Pn**	**11 02 43.2 +4.0**
REPA	**Paraso**	**5.08**	**123**	*e*	P		Pn	11 02 43.8 +4.7
CVTV	**Tajo**	**5.08**	**121**	*e*	P		Pn	11 02 45.4 +6.0
LLNJ	**Naranjito**	**5.10**	**128**	*e*	P		**Pn**	**11 02 41.8 +2.4**
VTCV	**VTCV, Calle Va**	**5.11**	**121**	*e*	P		Pn	11 02 45.4 +5.7
VTCV	**VTCV, Calle Va**	**5.11**	**121**	*i*	P		**Pn**	**11 02 39.9 +0.2**
VTCV					IVmB_BB			11 02 48.6
	comp=Z,10μm,1.0s							
VTCV					IAML			11 02 53.9
	comp=Z,1μm,1.0s							
VTCV					IAmb	IAmb		11 02 54.2
	comp=Z,840nm,0.7s							
RIMA	**Rio Macho**	**5.12**	**124**				**Pn**	**11 02 41.5 +1.8**
RIMA	**Rio Macho**	**5.12**	**124**	*e*	P		**Pn**	**11 02 42.1 +2.4**
RIMA	**Rio Macho**	**5.12**	**124**	*i*	P		**Pn**	**11 02 42.4 +2.7**
RIMA					IAML			11 02 45.7
	comp=Z,2μm,1.0s							
RIMA					IAmb	IAmb		11 02 45.8
	comp=Z,1μm,0.6s							
RIMA					IVmB_BB			11 02 46.0
	comp=Z,27μm,1.0s							
RIMA				*i*	S		**Sn**	**11 03 36.5 -1.1**
VINA	**Juan Vinas**	**5.14**	**122**	*e*	P		Pn	11 02 45.0 +4.9
VERB	**Verbena**	**5.16**	**121**	*e*	P		Pn	11 02 45.3 +5.1
RVSTA	**Santa Teresita**	**5.18**	**120**	*e*	P		Pn	11 02 45.6 +5.0
LCOCO	**El Coco**	**5.20**	**119**	*e*	P		Pn	11 02 45.4 +4.7
CCIG	**Comitan**	**5.26**	**314**		Pn		**Pn**	**11 02 44.1 +2.4**
CCIG	**Comitan**	**5.26**	**314**	*i*	P		**Pn**	**11 02 45.0 +3.3**
CCIG					IAmb	IAmb		11 02 47.2
	comp=Z,160nm,0.8s							
CCIG					IAML			11 04 31.2
	comp=Z,450nm,1.0s							
CDM	**Cerro de Muert**	**5.32**	**125**	*e*	P		**Pn**	**11 02 45.5 +2.7**
CDM	**Cerro de Muert**	**5.32**	**125**	*i*	P		**Pn**	**11 02 45.4 +2.7**
CDM					IVmB_BB			11 02 47.8
	comp=Z,22μm,1.0s							
CDM					IAML			11 02 47.9
	comp=Z,2μm,1.0s							
CDM				*i*	S		**Sn**	**11 03 42.4 -0.5**
ZELE	**Perez Zeledon**	**5.47**	**126**	*e*	P		**Pn**	**11 02 47.2 +2.7**
PEZE	**Perez Zeledon,**	**5.49**	**126**				**Pn**	**11 02 47.0 +2.3**
PEZE	**Perez Zeledon,**	**5.49**	**126**	*e*	P		**Pn**	**11 02 47.0 +2.3**
PEZE	**Perez Zeledon,**	**5.49**	**126**	*i*	P		**Pn**	**11 02 47.0 +2.3**
PEZE					IVmB_BB			11 02 52.1
	comp=Z,8μm,1.0s							
PEZE					IAmb	IAmb		11 02 52.2
	comp=Z,370nm,0.7s							
PEZE				*i*	S		**Sn**	**11 03 44.8 -1.8**
PEZE					IAML			11 03 50.2
	comp=Z,1μm,1.0s							
OCHAL	**Ojochal**	**5.69**	**128**	*i*	P		**Pn**	**11 02 49.1 +1.8**
OCHAL					IAML			11 02 54.8
	comp=Z,11nm,1.0s							
OCHAL					IVmB_BB			11 02 54.9
	comp=Z,230nm,1.0s							
OCHAL					IAmb	IAmb		11 02 57.9
	comp=Z,4.1nm,0.8s							
BURE	**Buenos Aires**	**5.88**	**126**	*e*	P		**Pn**	**11 02 52.7 +2.7**
DRK0	**Durika**	**5.90**	**124**				**Pn**	**11 02 52.5 +2.0**
DRK0	**Durika**	**5.90**	**124**	*e*	P		**Pn**	**11 02 52.6 +2.1**
EDPN	**Palmar Norte**	**5.91**	**128**	*i

DWPF IAmb IAmb 11 05 22.1
comp=Z,206nm,1.8s
DWPF Disney Wildern 16.62 21 P P 11 05 15.7 -0.5
baz=203
ZAIG Zacatecas 16.99 308 Pn Pn 11 05 18.6 -0.9
HBVL Hebbronville 17.39 327 P 11 05 25.8 +1.2
SDDR Presa de Saban 17.43 67 Pn Pn 11 05 21.8 -2.9
COHC Cochancay 17.44 149 P 11 05 25.6 +0.2
656A Willston 17.45 17 Pn 11 05 24.3 -0.5
SDV Santo Domingo 17.64 100 Pn 11 05 26.9 -0.6
SDV Santo Domingo 17.64 100 P **Pn 11 05 25.8 -1.7**
comp=Z,20nm,0.9s,baz=260,slow=4.2,SNR=16
SDV LR LR 11 14 15.6
comp=Z,224nm,18.6s,baz=275,slow=44
SDV Santo Domingo 17.64 100 *e*P **Pn 11 05 26.9 -0.6**
553A Crawfordville 17.80 11 Pn **Pn 11 05 27.4 -1.7**
553A IAmb IAmb 11 05 36.6
comp=Z,77nm,0.8s
PTLC Puerto Leguiza 18.16 132 *e*P **Pn 11 05 38.0 +4.3**
BOSC San Juan Bosco 18.41 148 P **P 11 05 36.1 -0.1**
735A Kenedy 18.45 332 P **P 11 05 34.8 -1.5**
735A IAmb IAmb 11 05 45.5
comp=Z,45nm,0.8s
BRAL Brewton 18.46 3 P **Pn 11 05 38.2 +1.1**
baz=183
441A DeRidder 18.60 346 P **P 11 05 36.6 -1.3**
441A IAmb IAmb 11 05 50.5
comp=Z,84nm,0.8s
HKT Hockley 18.62 339 Pn **Pn 11 05 41.0 +2.0**
346A Big Creek Wild 18.69 357 P **P 11 05 38.6 -0.4**
833A Chaparral WMA, 18.78 328 P **Pn 11 05 41.6 +0.6**
833A Chaparral WMA, 18.78 328 P **Pn 11 05 41.9 +0.8**
baz=144,SNR=48
456A Hilliard 18.87 17 P **P 11 05 40.6 -0.3**
456A IAmb IAmb 11 05 53.0
comp=Z,87nm,1.1s
EF01 Eagle Ford 01 18.94 332 P **Pn 11 05 43.5 +0.6**
TIGA Tifton 19.17 12 P **Pn 11 05 45.5 -0.2**
TIGA Tifton 19.17 12 P **Pn 11 05 46.1 +0.4**
baz=194,SNR=17
HNVL Huntsville, TX 19.24 341 P **Pn 11 05 48.0 +1.5**
HNVL IAmb IAmb 11 05 58.1
comp=Z,89nm,0.9s
250A Grady 19.32 5 P **P 11 05 45.9 +0.1**
250A IAmb IAmb 11 05 57.8
comp=Z,190nm,1.8s
VBMS Vicksburg 19.59 354 P **P 11 05 49.8 +0.9**
VBMS Vicksburg 19.59 354 P **Pn 11 05 51.0 +0.3**
baz=173,SNR=14
HNDO Hondo 19.71 330 P **Pn 11 05 51.4 -0.6**
HNDO IAmb IAmb 11 05 56.6
comp=Z,40nm,0.6s
255A Hazlehurst 19.89 14 P **P 11 05 52.7 +0.6**
146A Union 19.91 358 IAmb IAmb 11 05 57.4
comp=Z,50nm,0.8s
NATX Nacogdoches 19.93 344 P **P 11 05 53.2 +0.6**
NATX Nacogdoches 19.93 344 P **Pn 11 05 55.1 +0.5**
baz=161
435B Jarrell 20.03 336 P **P 11 05 54.6 +1.0**
435B IAmb IAmb 11 06 08.6
comp=Z,44nm,0.8s
435B Jarrell 20.03 336 P Pn 11 05 56.2 +0.4
baz=152
BAUV El Baul 20.12 99 P **P 11 05 53.1 -1.7**
BAUV IAmb IAmb 11 06 02.9
comp=Z,41nm,0.6s
143A Socs Landing, 20.18 352 IAmb IAmb 11 06 03.1
comp=Z,68nm,1.0s
152A Waverly Hall 20.18 8 Pn Pn 11 05 57.2 -0.4
152A IAmb IAmb 11 06 00.5
comp=Z,58nm,0.7s
DRIO Del Rio 20.30 327 P **P 11 05 57.5 +0.9**
DRIO **PcP 11 10 09.2 +0.9**
LRAL Lakeview Retre 20.32 3 P **P 11 05 58.0 +1.3**
LRAL Lakeview Retre 20.32 3 P Pn 11 05 58.9 -0.3
baz=183,SNR=12
154A Montrose 20.41 12 P **P 11 05 58.3 +0.6**
Z47A Carrollton 20.46 0 IAmb IAmb 11 06 05.9
comp=Z,32nm,0.8s
237A Washetta, Mont 20.50 341 P Pn 11 06 00.2 -1.1
JCT Junction City 20.75 331 P **P 11 06 02.3 +0.9**
JCT IAmb IAmb 11 06 06.9
comp=Z,47nm,0.7s
JCT Junction City 20.75 331 P **P 11 06 02.5 +1.1**
baz=146,SNR=20
Z51A Franklin 20.76 7 IAmb IAmb 11 06 06.9
comp=Z,37nm,0.7s
Z41A Richland Creek 20.94 349 P **P 11 06 03.5 +0.1**
Z41A IAmb IAmb 11 06 22.1
comp=Z,70nm,1.0s
WHTX Lake Whitney, 21.05 338 IAmb IAmb 11 06 23.7
comp=Z,82nm,0.9s
WHTX Lake Whitney, 21.05 338 P **P 11 06 06.4 +1.7**
baz=154
BRDY Brady 21.06 333 P **P 11 06 05.0 +0.2**
BRDY **PcP 11 10 10.5 +0.9**
GOGA Godfrey 21.11 11 P **P 11 06 05.5 +0.3**
GOGA IAmb IAmb 11 06 23.5
comp=Z,37nm,0.9s
GOGA Godfrey 21.11 11 P **P 11 06 07.0 +1.8**
baz=193,SNR=20
Y45A Yeager Farm, C 21.16 357 IAmb IAmb 11 06 25.1
comp=Z,61nm,0.9s
Y49A Blount Mountai 21.17 4 P **P 11 06 07.8 +1.9**
Y49A IAmb IAmb 11 06 25.0
comp=Z,33nm,0.8s
TREL Terrell 21.26 341 P **P 11 06 06.7 -0.1**
FW14 Alvarado 21.32 339 P **P 11 06 09.9 +2.4**
FW14 IAmb IAmb 11 06 27.1
comp=Z,88nm,1.3s
FW13 Cleburne 21.37 338 P **P 11 06 10.3 +2.3**
FW13 IAmb IAmb 11 06 27.9
comp=Z,84nm,1.3s
WLAR White Oak Lake 21.42 349 P **P 11 06 11.3 +2.8**
WLAR IAmb IAmb 11 06 28.9
comp=Z,79nm,1.1s
CCAR Cane Creek 21.42 352 P **P 11 06 09.0 +0.4**
Z38A Mt. Pleasant 21.44 344 IAmb IAmb 11 06 30.2
comp=Z,70nm,1.1s
Y52A Lilburn 21.45 9 P **P 11 06 10.5 +1.6**
Y52A IAmb IAmb 11 06 28.8
comp=Z,42nm,0.8s
NHSC New Hope 21.64 18 P **P 11 06 12.2 +1.3**
baz=201
HPIG 21.70 313 P **P 11 06 11.9 +0.1**
X48A Hartselle 21.73 3 P **P 11 06 12.8 +1.0**
OZNA Ozona 21.76 329 P **P 11 06 13.5 +1.2**
OZNA IAmb IAmb 11 06 17.0
comp=Z,53nm,0.9s
OXF Oxford 21.79 357 IAmb IAmb 11 06 31.4
comp=Z,40nm,0.9s
OXF Oxford 21.79 357 P **P 11 06 14.3 +1.8**
baz=177
FW07 Weatherford 21.81 338 IAmb IAmb 11 06 16.8
comp=Z,34nm,0.7s
SJG San Juan 21.92 73 P **P 11 06 12.2 -1.8**
comp=Z,4.9nm,0.3s,baz=223,slow=2.9,SNR=1.3
SJG LR LR 11 14 59.7
comp=Z,256nm,21.3s,baz=269,slow=38
comp=Z,4.9nm,0.3s
ATAH Atahualpa 21.93 153 P **P 11 06 16.6 +2.0**
comp=Z,5.2nm,0.8s,baz=49,slow=8.9,SNR=4.6
ATAH LR LR 11 13 49.5
comp=Z,426nm,21.2s,baz=336,slow=34
comp=Z,5.2nm,0.8s
TXAR Lajitas Array 21.97 321 P **P 11 06 16.4 +1.7**
TXAR Lajitas Array 21.97 321 P **P 11 06 16.6 +1.9**
comp=Z,18nm,0.7s,baz=141,slow=10,SNR=215
TXAR PcP **PcP 11 10 11.3 -0.3**
comp=Z,2.4nm,0.8s,baz=152,slow=4.1,SNR=6.3
TXAR LR LR 11 14 48.8
comp=Z,103nm,20.6s,baz=68,slow=36
comp=Z,18nm,0.7s
TX31 Lajitas Ar. Si 21.97 321 IAmb IAmb 11 06 19.9
comp=Z,27nm,0.8s
X51A Calhoun 22.03 7 IAmb IAmb 11 06 25.6
comp=Z,46nm,0.9s
HODGE Hodges 22.15 13 P **P 11 06 14.9 -1.5**
Z35A Perchaven, San 22.19 340 IAmb IAmb 11 06 39.1
comp=Z,56nm,1.1s
MIAR Mount Ida 22.34 348 P **P 11 06 19.6 +1.1**
MIAR IAmb IAmb 11 06 41.6
comp=Z,58nm,1.1s
MIAR Mount Ida 22.34 348 P **P 11 06 20.0 +1.5**
baz=166,SNR=27
UALR University of 22.35 351 P **P 11 06 20.1 +1.6**
UALR IAmb IAmb 11 06 22.6
comp=Z,30nm,0.7s
JSC Jenkinsville 22.44 15 IAmb IAmb 11 06 22.9
comp=Z,51nm,0.7s
ABTX Abilene, Hawle 22.49 334 IAmb IAmb 11 06 23.0
comp=Z,27nm,0.8s
ABTX Abilene, Hawle 22.49 334 P **P 11 06 21.4 +1.3**
baz=149,SNR=9.7
SWET Sewanee 22.56 5 P **P 11 06 21.3 +0.5**
SGCY Sterling City 22.57 330 P **P 11 06 22.8 +1.8**
SGCY IAmb IAmb 11 06 38.3
comp=Z,32nm,0.9s
W50A Signal Mountai 22.60 6 IAmb IAmb 11 06 46.0
comp=Z,56nm,1.4s
ALPN Alpine 22.71 323 IAmb IAmb 11 06 25.5
comp=Z,27nm,0.7s
BG3 Lake Jocassee 22.75 11 P **P 11 06 24.4 +1.6**
BG3 IAmb IAmb 11 06 41.0
comp=Z,79nm,1.3s
LOOK Love County 22.77 340 IAmb IAmb 11 06 46.0
comp=Z,57nm,0.9s
X37A Clayton 22.80 345 IAmb IAmb 11 06 46.1
comp=Z,62nm,1.2s
PAULI Pauline 22.82 14 IAmb IAmb 11 06 26.4
comp=Z,48nm,0.7s
WHAR Wooly Hollow 22.85 351 P **P 11 06 24.6 +0.9**
WHAR IAmb IAmb 11 06 40.7
comp=Z,47nm,0.9s
CPCT Cooper Cave 22.94 8 P **P 11 06 25.7 +1.0**
CPCT IAmb IAmb 11 06 50.7
comp=Z,27nm,0.9s
MNHN Monahans 22.95 326 IAmb IAmb 11 06 28.5
comp=Z,58nm,0.8s
BIRD Birdtown, Kers 22.99 16 P **P 11 06 26.9 +1.6**
WTFS Witchita Falls 23.02 338 **P 11 06 27.1 +1.5**
WTFS IAmb IAmb 11 06 30.8
comp=Z,23nm,0.6s
V48A Smith Brothers 23.02 3 IAmb IAmb 11 06 43.1
comp=Z,50nm,1.5s
PCRV Puerto La Cruz 23.21 94 LR LR 11 18 39.5
comp=Z,192nm,18.3s,slow=45
KMSC Kings Mountain 23.24 14 P **P 11 06 27.8 +0.2**
KMSC IAmb IAmb 11 06 30.1
comp=Z,47nm,0.7s
KMSC Kings Mountain 23.24 14 P **P 11 06 28.8 +1.1**
baz=197,SNR=18
X58A Rowland 23.24 19 IAmb IAmb 11 06 29.8
comp=Z,39nm,0.6s
APMT Aspermont 23.29 334 IAmb IAmb 11 06 51.6
comp=Z,42nm,1.0s
V51A Loudon 23.31 8 IAmb IAmb 11 06 50.9
comp=Z,19nm,0.7s
SLBS Sierra La Lagu 23.37 301 P **P 11 06 30.1 +0.9**
WVT Waverly 23.38 1 P **P 11 06 27.9 -1.1**
WVT Waverly 23.38 1 P **P 11 06 29.9 +0.9**
baz=181
CLTN Cedars of Leba 23.40 4 P **P 11 06 29.3 +0.1**
V53A Saluda 23.43 11 P **P 11 06 31.0 +1.5**
V53A IAmb IAmb 11 06 56.1
comp=Z,56nm,1.1s
ODSA Odessa 23.45 328 P **P 11 06 29.2 -0.6**
ODSA IAmb IAmb 11 06 31.5
comp=Z,44nm,0.8s
X34A Smith Ranch, M 23.55 340 **P 11 06 32.1 +1.6**
PECS Pecos 23.58 325 P **P 11 06 30.9 -0.1**
PECS **PcP 11 10 15.5 +0.6**
W57A Gilead 23.60 17 IAmb IAmb 11 06 33.2
comp=Z,44nm,0.7s
POST Post 23.69 331 P **P 11 06 32.6 +0.6**
W35A Tecumseh 23.75 342 **P 11 06 33.1 +0.7**
W35A IAmb IAmb 11 06 59.5
comp=Z,67nm,1.2s
VHRN Van Horn 23.80 322 P **P 11 06 33.3 +0.1**
LPIG La Paz 23.85 302 LR LR 11 14 46.7
comp=Z,133nm,19.6s,baz=115,slow=33
U49A Red Boiling Sp 23.86 5 IAmb IAmb 11 06 55.3
comp=Z,45nm,1.4s
V55A Taylorsville 23.94 14 P **P 11 06 34.5 +0.3**
V55A IAmb IAmb 11 06 38.9
comp=Z,39nm,0.9s
WMOK Wichita Mounta 24.00 338 **P 11 06 35.3 +0.5**
WMOK IAmb IAmb 11 06 52.4
comp=Z,63nm,1.6s
WMOK Wichita Mounta 24.00 338 P **P 11 06 35.3 +0.5**
baz=154,SNR=10
FNO Franklin 24.00 341 **P 11 06 35.1 +0.3**
HHAR Hobbs 24.09 349 P **P 11 06 36.0 +0.4**
HHAR IAmb IAmb 11 06 39.6
comp=Z,29nm,0.7s
PBMO Poplar Bluff 24.11 356 IAmb IAmb 11 06 54.8
comp=Z,53nm,1.1s
TZTN Tazewell 24.16 9 IAmb IAmb 11 06 52.7
comp=Z,38nm,0.9s
TZTN Tazewell 24.16 9 P **P 11 06 36.8 +0.7**
baz=191
TUL3 Leonard 24.16 345 IAmb IAmb 11 07 01.0
comp=Z,32nm,0.9s
TUL3 Leonard 24.16 345 P **P 11 06 37.0 +0.9**
baz=161,SNR=7.9
T47A Sharon Grove 24.25 2 IAmb IAmb 11 06 38.0
comp=Z,36nm,0.7s
T45A Paducah 24.27 359 P **P 11 06 35.7 -1.5**
DEOK Depew 24.28 343 IAmb IAmb 11 06 56.9
comp=Z,38nm,1.0s
U38A Gravette 24.34 348 IAmb IAmb 11 06 56.4
comp=Z,30nm,1.1s
CNNC Cliffs of the 24.34 21 P **P 11 06 38.2 +0.4**
baz=205
T50A Nancy 24.45 6 P **P 11 06 38.8 0.0**
V58A Windy Hill, Pi 24.45 18 P **P 11 06 39.4 +0.6**
OK052 Battle Ridge R 24.51 343 IAmb IAmb 11 06 40.7
comp=Z,35nm,0.6s
CGM3 Cape Girardeau 24.58 357 IAmb IAmb 11 06 42.9
comp=Z,16nm,0.6s
OK033 Mehan 24.59 343 **P 11 06 40.0 -0.1**
OK033 IAmb IAmb 11 07 00.3
comp=Z,68nm,1.5s
U56A King 24.62 15 IAmb IAmb 11 07 01.6
comp=Z,99nm,1.5s
QUOK Quay 24.65 343 **P 11 06 40.8 +0.2**
QUOK IAmb IAmb 11 06 57.4
comp=Z,35nm,0.8s
MGMO Mountain Grove 24.68 352 P **P 11 06 41.6 +0.7**
MGMO IAmb IAmb 11 06 59.9
comp=Z,27nm,1.0s
MNTX Cornudas Mount 24.70 323 P **P 11 06 41.8 +0.6**
baz=136,SNR=33
OK048 Pawnee Station 24.94 343 **P 11 06 42.9 -0.4**
OK048 IAmb IAmb 11 06 47.6
comp=Z,29nm,0.7s
S44A Carbondale 24.96 358 IAmb IAmb 11 06 59.6
comp=Z,62nm,1.3s
SIUC Southern Illin 24.98 358 P **P 11 06 43.6 0.0**
SIUC IAmb IAmb 11 06 59.7
comp=Z,71nm,1.4s
MSTX Muleshoe 25.04 330 P **P 11 06 44.3 -0.1**
MSTX PcP **PcP 11 10 18.6 +0.6**
MSTX Muleshoe 25.04 330 P **P 11 06 44.9 +0.6**
baz=144,SNR=25
USIN University of 25.21 1 IAmb IAmb 11 06 48.6
comp=Z,18nm,0.7s
S51A Beattyville 25.22 9 P **P 11 06 46.5 +0.7**
S51A IAmb IAmb 11 07 06.8
comp=Z,47nm,1.1s
AMTX Amarillo 25.29 333 P **P 11 06 47.2 +0.6**
baz=148
FVM French Village 25.31 356 P **P 11 06 46.2 -0.4**
CZSB Cruzeiro do Su 25.43 142 IAmb IAmb 11 07 09.0
comp=Z,26nm,0.9s
BLA Blacksburg 25.43 15 IAmb IAmb 11 07 05.4
comp=Z,57nm,0.9s
BLA Blacksburg 25.43 15 P **P 11 06 48.2 +0.5**
baz=198,SNR=6.5
CCM Cathedral Cave 25.45 354 P **P 11 06 47.3 -0.5**
CCM IAmb IAmb 11 06 50.7
comp=Z,18nm,0.7s
CCM **PcP 11 10 18.5 -0.2**
CCM Cathedral Cave 25.45 354 P **P 11 06 47.7 -0.2**
baz=173
WCI Wyandotte Cave 25.53 3 P **P 11 06 48.4 -0.2**
WCI IAmb IAmb 11 06 49.4
comp=Z,21nm,0.7s
WCI Wyandotte Cave 25.53 3 P **P 11 06 48.5 -0.1**
baz=184
T57A Hurt 25.54 17 IAmb IAmb 11 07 06.2
comp=Z,41nm,1.0s
R49A Shelbyville 25.68 5 P **P 11 06 50.2 +0.2**
OK032 Salt Plains WL 25.68 341 P **P 11 06 50.2 +0.1**
OK032 IAmb IAmb 11 06 53.8
comp=Z,30nm,0.7s
R50A Paris 25.76 7 P **P 11 06 50.1 -0.5**
R50A IAmb IAmb 11 07 26.4
comp=Z,42nm,1.7s
S54A Dingess, Becki 25.79 13 IAmb IAmb 11 07 15.7
comp=Z,33nm,1.1s
T59A Double "B" Far 26.03 20 P **P 11 06 53.4 +0.3**
T59A IAmb IAmb 11 06 55.1
comp=Z,19nm,0.7s
Q44A Meyer Farm, Va 26.16 359 P **P 11 06 54.5 +0.3**
Q44A IAmb IAmb 11 06 55.0
comp=Z,23nm,0.6s
R53A Hurricane 26.17 11 P **P 11 06 54.5 +0.1**
R53A IAmb IAmb 11 07 11.5
comp=Z,45nm,1.2s
SSFO Shawnee State 26.32 9 P **P 11 06 56.3 +0.5**
Q51A Peebles 26.62 8 IAmb IAmb 11 06 60.0
comp=Z,28nm,0.8s
121A Cookes Peak, D 26.73 321 P **P 11 07 00.4 +0.6**
baz=133,SNR=10
Q52A Bidwell 26.73 10 IAmb IAmb 11 07 22.9
comp=Z,60nm,1.2s
R58B Mineral 26.84 18 P **P 11 07 01.1 +0.7**
319A Douglas 26.93 317 P **P 11 07 02.9 +1.5**
319A PcP **PcP 11 10 24.2 +1.8**
P49A Miami Univ. Ec 26.95 6 P **P 11 07 01.0 -0.4**
baz=187,SNR=6.1
Q54A Coxs Mills 27.03 13 IAmb IAmb 11 07 03.9
comp=Z,29nm,0.6s
RTBA Rita Blanca 27.06 334 P **P 11 07 03.2 +0.6**
RTBA IAmb IAmb 11 07 07.8
comp=Z,19nm,0.8s
RTBA PcP **PcP 11 10 23.2 +0.6**
P51A Williamsport 27.11 9 IAmb IAmb 11 07 44.6
comp=Z,47nm,1.4s
CBN Corbin Frederi 27.21 19 P **P 11 07 04.8 +1.1**
CBN Corbin Frederi 27.21 19 P **P 11 07 03.3 -0.4**
baz=203
P38A Dawn 27.28 351 P **P 11 07 04.7 +0.3**
P38A IAmb IAmb 11 07 07.8
comp=Z,22nm,0.7s
Y22D IRIS PASSCAL I 27.31 324 P **P 11 07 04.8 -0.1**
baz=137
Y22F Passcal Instru 27.31 324 P **P 11 07 04.7 -0.2**
baz=137
R32A Long Quarter, 27.32 342 P **P 11 07 04.0 -0.8**
KSU1 Kansas State U 27.39 346 P **P 11 07 05.9 +0.6**
KSU1 IAmb IAmb 11 07 22.4
comp=Z,21nm,0.8s
KSU1 Kansas State U 27.39 346 P **P 11 07 05.6 +0.2**
baz=162
O44A Mansfield 27.40 360 P **P 11 07 04.5 -0.9**
O44A IAmb IAmb 11 07 05.9
comp=Z,17nm,0.6s
P53A Whipple 27.40 11 IAmb IAmb 11 07 07.3
comp=Z,25nm,0.7s
LENM Lemitar 27.40 325 P **P 11 07 08.1 +2.3**
P52A Corning 27.41 10 IAmb IAmb 11 07 09.1
comp=Z,22nm,0.8s
P52A Corning 27.41 10 P **P 11 07 05.3 -0.2**
baz=193,SNR=8.7
DUN6 Lazy B Ranch 27.56 319 IAmb IAmb 11 07 14.4
comp=Z,64nm,1.3s
O48B Farmland 27.63 5 P **P 11 07 07.2 -0.3**
O48B Farmland 27.63 5 P **P 11 07 07.1 -0.4**
baz=186
SFIN Lafayette 27.64 2 P **P 11 07 07.2 -0.3**
baz=182
O49A Covington 27.64 6 IAmb IAmb 11 07 08.2
comp=Z,14nm,0.7s
ANMO Albuquerque 27.69 326 P **P 11 07 09.0 +0.7**
ANMO PcP **PcP 11 10 25.8 +1.6**
ANMO Albuquerque 27.69 326 P **P 11 07 07.7 -0.7**
baz=139
ANMO Albuquerque 27.69 326 LR LR 11 20 01.5
comp=Z,88nm,19.0s,baz=216,slow=40
HDIL Hopedale 27.82 358 IAmb IAmb 11 07 12.2
comp=Z,18nm,0.8s
HDIL Hopedale 27.82 358 P **P 11 07 08.7 -0.4**
baz=178
ACSO Alum Creek Sta 27.85 9 P **P 11 07 10.0 +0.5**
ACSO IAmb IAmb 11 07 11.1
comp=Z,20nm,0.7s
MCWV Mont Chateau 27.89 14 P **P 11 07 11.1 +1.2**
MCWV IAmb IAmb 11 07 12.1
comp=Z,26nm,0.6s
MCWV Mont Chateau 27.89 14 P **P 11 07 10.2 +0.3**
baz=197,SNR=7.4
O52A Adamsville 27.93 10 IAmb IAmb 11 07 29.1
comp=Z,23nm,0.9s
CBKS Cedar Bluff 28.01 341 IAmb IAmb 11 07 12.6
comp=Z,14nm,0.6s
CBKS Cedar Bluff 28.01 341 P **P 11 07 11.3 +0.3**
baz=155
O53A New Philadelph 28.17 11 P **P 11 07 12.9 +0.6**
O53A IAmb IAmb 11 07 15.1
comp=Z,19nm,0.6s
O53A New Philadelph 28.17 11 P **P 11 07 12.7 +0.4**
baz=194,SNR=7.5
P57A Homestead Farm 28.20 17 P **P 11 07 14.5 +1.9**
O54A Avella 28.27 13 P **P 11 07 13.9 +0.7**
O54A IAmb IAmb 11 07 15.6
comp=Z,21nm,0.7s
N49A Columbus Grove 28.38 6 P **P 11 07 13.9 -0.3**
N49A IAmb IAmb 11 07 15.2
comp=Z,14nm,0.7s
N38A Joes South For 28.38 352 IAmb IAmb 11 07 19.1
comp=Z,22nm,0.6s
T25A Trinidad 28.39 332 P **P 11 07 16.9 +2.2**
T25A IAmb IAmb 11 07 18.2
comp=Z,17nm,0.8s
T25A Trinidad 28.39 332 P **P 11 07 15.2 +0.5**
baz=145,SNR=12
TUC Tucson 28.51 317 P **P 11 07 16.4 +0.9**
TUC **PcP 11 10 27.8 +1.7**
TUC Tucson 28.51 317 P **P 11 07 16.1 +0.6**
baz=128
N51A Ashland 28.62 9 P **P 11 07 16.4 +0.1**
N53A Lisbon 28.78 12 P **P 11 07 18.1 +0.4**
N53A IAmb IAmb 11 07 20.2
comp=Z,18nm,0.6s
N35A Tabor 28.86 348 IAmb IAmb 11 07 34.6
comp=Z,20nm,0.8s
M50A Fremont 29.00 8 IAmb IAmb 11 07 20.5
comp=Z,29nm,0.7s
KSCO Kaye Shedlock' 29.21 337 IAmb IAmb 11 07 25.2
comp=Z,18nm,0.8s
KSCO Kaye Shedlock' 29.21 337 P **P 11 07 22.2 +0.4**
baz=150,SNR=6.0
SSPA Standing Stone 29.31 16 P **P 11 07 23.0 +0.5**
SSPA IAmb IAmb 11 07 24.1
comp=Z,14nm,0.7s
SSPA Standing Stone 29.31 16 P **P 11 07 22.6 +0.2**
baz=201
WUPA West Chester U 29.36 20 P **P 11 07 23.0 +0.2**
L48A N Adams 29.37 6 P **P 11 07 22.4 -0.5**
L48A IAmb IAmb 11 07 24.9
comp=Z,17nm,0.7s
SDCO Great Sand Dun 29.39 331 P **P 11 07 24.1 +0.6**
baz=144,SNR=20
L40A Anamosa 29.42 355 IAmb IAmb 11 07 27.9
comp=Z,13nm,0.7s
M53A WI Miller and 29.42 12 IAmb IAmb 11 07 26.4
comp=Z,19nm,0.6s
M53A WI Miller and 29.42 12 P **P 11 07 24.2 +0.7**
baz=195,SNR=5.4
214A Organ Pipe Nat 29.68 314 P **P 11 07 25.8 0.0**
baz=125
AAM Ann Arbor 29.80 7 P **P 11 07 26.6 -0.2**
baz=189
M55A Ridgway 29.87 14 P **P 11 07 27.5 +0.1**
M55A IAmb IAmb 11 07 28.6
comp=Z,11nm,0.7s
BGNE Belgrade 29.95 345 P **P 11 07 29.0 +0.9**
baz=160
S22A 4UR Ranch, Cre 30.03 330 P **P 11 07 31.0 +1.8**
S22A IAmb IAmb 11 07 33.7
comp=Z,12nm,0.7s
S22A PcP **PcP 11 10 32.0 +1.8**
S22A 4UR Ranch, Cre 30.03 330 P **P 11 07 29.7 +0.4**
baz=141,SNR=27
M57A Sunshine Farm, 30.17 17 P **P 11 07 31.2 +1.2**
JFWS Jewell Farm 30.21 357 P **P 11 07 30.7 +0.3**

baz=176
ERPA Erie 30.21 12 P P 11 07 30.9 +0.5
ERPA IAmb IAmb 11 07 49.7
comp=Z,32nm,1.1s
ERPA Erie 30.21 12 P P 11 07 30.4 -0.1
baz=196
Q24A Divide 30.22 333 P P 11 07 31.6 +0.7
baz=145
X16A Lo Mia Camp, P 30.26 320 P P 11 07 33.0 +1.9
X16A PcP 11 10 32.6 +1.9
BRNJ Basking Ridge 30.38 21 P P 11 07 33.5 +1.6
MVCO Mesa Verde 30.48 327 P P 11 07 34.5 +1.4
MVCO PcP PcP 11 10 32.9 +1.5
MVCO Mesa Verde 30.48 327 P P 11 07 33.8 +0.6
baz=138
J47A Sunmer 30.62 5 IAmb IAmb 11 07 35.7
comp=Z,14nm,0.7s
OGNE Ogallala 30.69 339 P P 11 07 35.8 +1.1
baz=153
ODNJ Ogdensburg 30.72 20 IAmb IAmb 11 07 36.2
comp=Z,12nm,0.6s
WVNY West Valley, N 30.80 14 IAmb IAmb 11 07 37.1
comp=Z,20nm,0.6s
L56A Greenwood 30.80 16 P P 11 07 35.3 -0.3
L56A IAmb IAmb 11 07 44.2
comp=Z,60nm,1.9s
113A Mohawk Valley, 30.80 315 P P 11 07 37.3 +1.6
113A PcP PcP 11 10 33.7 +1.7
PAL Palisades 30.90 21 P P 11 07 37.0 +0.5
PAL IAmb IAmb 11 07 38.3
comp=Z,25nm,0.7s
PAL Palisades 30.90 21 P P 11 07 36.5 +0.1
baz=208,SNR=6.3
WUAZ Wupatki 30.94 321 P P 11 07 38.2 +1.1
WUAZ PcP 11 10 33.7 +1.2
WUAZ Wupatki 30.94 321 P P 11 07 38.3 +1.2
baz=132,SNR=6.1
Y14A Wickenburg 30.97 317 P P 11 07 39.2 +1.9
Y14A PcP PcP 11 10 34.3 +1.9
ISCO Idaho Springs 31.11 333 P P 11 07 39.9 +1.1
baz=145,SNR=11
I42A Draeger Farm, 31.14 359 IAmb IAmb 11 07 40.0
comp=Z,18nm,0.6s
I40A Norwalk 31.20 357 IAmb IAmb 11 07 39.9
comp=Z,10.0nm,0.6s
PV01 Paradox Valley 31.21 328 P P 11 07 41.4 +1.8
ETMB Extrema 31.21 135 P P 11 07 40.1 +0.6
WSPT Westport, CT 31.25 22 P P 11 07 40.5 +0.9
BINY Binghamton 31.30 18 IAmb IAmb 11 07 43.5
comp=Z,17nm,0.9s
BINY Binghamton 31.30 18 P P 11 07 41.0 +1.1
baz=203,SNR=7.1
PV11 David Mesa, Pa 31.49 328 P P 11 07 43.6 +1.6
PV11 IAmb IAmb 11 07 44.5
comp=Z,13nm,0.6s
PV19 Morning Glory 31.56 328 P P 11 07 44.1 +1.6
PV19 IAmb IAmb 11 07 46.3
comp=Z,11nm,0.6s
L59A Walton 31.57 19 IAmb IAmb 11 07 45.0
comp=Z,22nm,0.7s
I37A Lemond, Waseca 31.58 353 IAmb IAmb 11 08 01.2
comp=Z,25nm,0.8s
K57A Scipio Center 31.64 17 P P 11 07 42.8 -0.1
GLA Glamis 31.70 314 P P 11 07 45.2 +1.5
baz=124
ECSD EROS Data Cent 31.82 348 IAmb IAmb 11 08 01.8
comp=Z,14nm,0.8s
PDMCI Parker Dam,Lak 31.95 317 P P 11 07 47.4 +1.6
baz=126
N23A Red Feather La 32.16 334 P P 11 07 49.3 +1.4
N23A Red Feather La 32.16 334 P P 11 07 49.0 +1.0
baz=146,SNR=6.0
UCCT U. Connecticut 32.20 23 P P 11 07 49.4 +1.4
HMU Henry Mountain 32.23 325 P P 11 07 51.0 +2.4
HMU PcP 11 10 37.7 +1.7
PHWY Pilot Hill 32.30 335 P P 11 07 51.0 +1.8
J57A Williamstown 32.41 17 IAmb IAmb 11 08 10.8
comp=Z,20nm,0.9s
BC3 Big Chuckawall 32.47 315 P P 11 07 51.2 +0.6
baz=124
TRY Troy 32.51 20 IAmb IAmb 11 07 52.5
comp=Z,17nm,0.8s
NEE2 Needles Airpor 32.54 317 P P 11 07 52.3 +1.3
baz=126
IRM Iron Mountain 32.54 316 P P 11 07 52.6 +1.5
baz=125
G40A Rib Lake 32.55 357 IAmb IAmb 11 08 10.4
comp=Z,13nm,1.0s
J58A Remsen 32.57 18 P P 11 07 51.3 +0.2
J58A IAmb IAmb 11 07 52.7
comp=Z,9.7nm,0.7s
O20A White River Ci 32.58 331 P P 11 07 53.5 +1.9
O20A PcP PcP 11 10 37.6 +0.7
O20A White River Ci 32.58 331 P P 11 07 52.3 +0.8
baz=142,SNR=32
L61B Northampton 32.60 22 P P 11 07 51.8 +0.4
L61B IAmb IAmb 11 07 52.8
comp=Z,16nm,0.7s
L61B Northampton 32.60 22 P P 11 07 51.4 -0.1
baz=209
SPMN Marine on St. 32.70 354 P P 11 07 51.6 -0.6
SPMN Marine on St. 32.70 354 P P 11 07 51.7 -0.6
baz=172,SNR=7.6
PKCU Pink Cliffs 32.78 323 P P 11 07 56.2 +2.7
PKCU IAmb IAmb 11 08 00.0
comp=Z,36nm,1.8s
SAML Samuel 32.82 130 P P 11 07 52.9 -0.8
SAML IAmb IAmb 11 07 54.1
comp=Z,20nm,0.8s
SAML PcP PcP 11 10 38.5 +0.9
SAML Samuel 32.82 130 P P 11 07 53.1 -0.6
SAML PcP PcP 11 10 38.4 +0.7
J59A Piesco 32.90 18 P P 11 07 53.8 -0.2
J59A IAmb IAmb 11 08 13.2
comp=Z,14nm,1.1s
SADO Sadowa 32.93 12 P P 11 07 53.8 -0.5
SADO IAmb IAmb 11 07 55.0
comp=Z,13nm,0.6s
SADO Sadowa 32.93 12 LR LR 11 21 23.6
comp=Z,218nm,18.9s,baz=230,slow=37
SRU San Rafael Swe 32.96 327 P P 11 07 56.6 +1.8
SRU IAmb IAmb 11 07 58.6
comp=Z,24nm,1.7s
SUSD Miller 33.00 346 P P 11 07 55.3 +0.4
DELO Deloro Mine 33.02 14 IAmb IAmb 11 07 56.7
comp=Z,10nm,0.6s
BELC Belle Mtn. Jos 33.04 315 P P 11 07 56.1 +0.6
baz=123
WES Weston 33.05 23 P P 11 07 55.6 +0.3
LCMT Little Creek M 33.05 322 P P 11 07 57.7 +2.0
HRV Adam Dziewonsk 33.06 23 P P 11 07 55.6 +0.1
baz=211
ACCN Adirondack Com 33.09 20 P P 11 07 55.8 +0.1
ACCN IAmb IAmb 11 08 38.1
comp=Z,34nm,1.7s
MTPU Mount Pierson 33.12 324 P P 11 07 58.9 +2.4
TPFO Pinon Flats 33.15 314 P P 11 07 57.1 +0.7
baz=122
PFO Pinyon Flats O 33.15 314 P P 11 07 57.1 +0.6
baz=122
PFO Pinyon Flats O 33.15 314 LR LR 11 22 26.7
comp=Z,196nm,20.1s,baz=124,slow=38
Q16A Castle Valley 33.17 326 P P 11 07 58.9 +2.2
P18A Preston Nutter 33.19 328 P P 11 07 58.8 +1.8
GMRC Granite Mounta 33.25 316 P P 11 07 57.1 -0.2
baz=125
V12A Nelson 33.26 318 P P 11 07 58.0 +0.6
COWI Conover 33.35 359 P P 11 07 57.2 -0.7
COWI IAmb IAmb 11 07 58.0
comp=Z,14nm,0.6s
RWWY Rawlins 33.36 334 P P 11 07 59.5 +1.1
RWWY IAmb IAmb 11 08 00.1
comp=Z,19nm,0.7s
MVU Marysvale 33.45 325 P P 11 08 00.9 +1.7
MVU IAmb IAmb 11 08 04.0
comp=Z,11nm,0.8s
TMUT Trail Mountain 33.46 327 P P 11 07 59.9 +0.5
TMUT PcP 11 10 40.6 +1.2
CCUT Cedar City 33.48 322 P P 11 07 59.7 +0.3
CCUT PcP PcP 11 10 40.8 +1.3
RDMU Red Mountain 33.56 330 P P 11 08 01.2 +1.0
RDMU IAmb IAmb 11 08 17.2
comp=Z,30nm,1.7s
RDMU PcP 11 10 40.2 +0.6
E43A Lone Tree Farm 33.63 1 P P 11 07 59.7 -0.6
E43A IAmb IAmb 11 08 01.8
comp=Z,14nm,0.7s
WTNK Soaring Height 33.65 319 P P 11 07 59.7 -1.0
MURC Murrieta 33.67 313 P P 11 08 01.2 +0.3
baz=121
HEC Hector,Ludlow 33.73 316 P P 11 08 01.9 +0.4
baz=124
E46A Sault Ste Mari 33.77 5 P P 11 08 00.2 -1.3
E46A IAmb IAmb 11 08 30.1
comp=Z,22nm,1.4s
F33A 5 Mile Ranch, 33.79 350 P P 11 08 01.1 -0.6
K22A Casper 33.86 335 P P 11 08 04.1 +1.5
K22A IAmb IAmb 11 08 19.3
comp=Z,22nm,1.1s
K22A Casper 33.86 335 P P 11 08 03.2 +0.6
baz=146,SNR=6.5
LONY Lake Ozonia 33.92 18 P P 11 08 03.0 +0.1
LONY IAmb IAmb 11 08 22.2
comp=Z,31nm,1.4s
LONY Lake Ozonia 33.92 18 P P 11 08 02.2 -0.7
baz=204,SNR=6.2
E38A The Farm, Brul 33.97 356 P P 11 08 01.7 -1.5
E38A IAmb IAmb 11 08 22.3
comp=Z,26nm,1.3s
WBO Williamsburg 34.07 16 P P 11 08 04.2 0.0
WBO IAmb IAmb 11 09 12.0
comp=Z,46nm,1.9s
BSUT Blindstream Ca 34.13 329 P P 11 08 06.7 +1.4
RSSD Black Hills 34.19 340 P P 11 08 05.9 +0.4
RSSD Black Hills 34.19 340 P P 11 08 06.6 +1.1
baz=152
RSSD Black Hills 34.19 340 P P 11 08 07.1 +1.6
RSSD pP pP 11 08 21.9 +1.7
RSSD PcP PcP 11 10 41.2 -0.1
D41A Chassel 34.30 360 IAmb IAmb 11 08 21.7
comp=Z,15nm,0.9s
GSC Goldstone, Bar 34.31 316 P P 11 08 07.7 +1.2
baz=124
FRNY Flat Rock 34.42 18 P P 11 08 07.0 -0.2
FRNY IAmb IAmb 11 08 26.5
comp=Z,11nm,1.0s
LBNH Lisbon 34.44 21 P P 11 08 09.3 +1.9
LBNH IAmb IAmb 11 08 25.9
comp=Z,34nm,1.4s
LBNH Lisbon 34.44 21 P P 11 08 08.2 +0.8
baz=209
CIS Catalina Islan 34.45 312 P P 11 08 07.9 +0.3
baz=120
CTU Camp Tracy 34.76 328 IAmb IAmb 11 08 27.2
comp=Z,38nm,1.9s
TPNV Topopah Spring 34.90 319 P P 11 08 13.9 +2.3
TPNV IAmb IAmb 11 08 29.1
comp=Z,24nm,1.9s
TPNV PcP 11 10 45.4 +2.0
TPNV Topopah Spring 34.90 319 P P 11 08 12.3 +0.6
baz=126
EDW2 Edwards Air Fo 34.90 314 P P 11 08 12.7 +1.1
baz=122
DUG Dugway, Tooele 34.97 326 P P 11 08 13.6 +1.4
DUG Dugway, Tooele 34.97 326 P P 11 08 12.9 +0.7
baz=135
S11A Rachel 35.00 320 IAmb IAmb 11 08 18.3
comp=Z,29nm,1.5s
MNTQ Montreal, Queb 35.01 18 P P 11 08 12.3 0.0
SPR3 Spring Creek 3 35.01 323 P P 11 08 14.0 +1.3
SPR3 PcP PcP 11 10 45.6 +1.6
LRMC Laurel Mtn Rad 35.01 316 P P 11 08 13.9 +1.3
baz=123
FURC Furnace Creek, 35.01 318 P P 11 08 14.0 +1.6
baz=125
D32A Dogwood Acres, 35.17 350 P P 11 08 13.2 -0.4
SNCC San Nicolas Is 35.19 311 P P 11 08 14.5 +0.5
baz=115
MPMC Manual Prospec 35.20 317 P P 11 08 15.4 +1.1
baz=124
BW06 Boulder Array 35.26 332 P P 11 08 15.5 +0.7
BW06 IAmb IAmb 11 08 16.4
comp=Z,6.6nm,0.7s
BW06 Boulder Array 35.26 332 P P 11 08 15.0 +0.2
baz=142,SNR=13
PD31 Pinedale Array 35.26 332 P P 11 08 15.6 +0.8
PD31 PcP 11 10 44.3 -0.2
PDAR Pinedale Array 35.26 332 P P 11 08 15.5 +0.7
PDAR PcP PcP 11 10 44.3 -0.2
PDAR Pinedale Array 35.26 332 P P 11 08 15.9 +1.1
comp=Z,5.7nm,0.6s,baz=126,slow=10,SNR=87
PDAR PcP PcP 11 10 44.5 -0.1
comp=Z,2.5nm,0.6s,baz=144,slow=5.6,SNR=8.3
PDAR LR LR 11 25 23.3
comp=Z,111nm,21.4s,baz=140,slow=41
comp=Z,5.7nm,0.6s
EYMN Ely 35.30 356 IAmb IAmb 11 08 14.3
comp=Z,8.0nm,0.6s
EYMN Ely 35.30 356 P P 11 08 13.6 -1.1
baz=174
HWUT Hardware Ranch 35.34 329 P P 11 08 16.5 +1.2
HWUT PcP PcP 11 10 45.2 +0.5
R11B Troy Canyon, C 35.34 321 P P 11 08 17.0 +1.6
R11B PcP PcP 11 10 46.8 +2.0
R11B Troy Canyon, C 35.34 321 P P 11 08 15.8 +0.4
baz=129
E28A Huff 35.43 345 P P 11 08 16.2 +0.3
SPUT South Promonto 35.57 328 P P 11 08 19.1 +1.8
BGU Big Grassy Mou 35.60 327 P P 11 08 19.0 +1.3
BGU IAmb IAmb 11 08 20.4
comp=Z,18nm,1.8s
ARVC Arvin 35.62 314 P P 11 08 18.2 +0.5
baz=121
GRAC Grapevine Rang 35.65 318 P P 11 08 18.8 +0.9
baz=125
ISA Isabella, Lake 35.65 315 P P 11 08 19.0 +0.9
baz=122
GMN Gold Mountain 35.76 318 P P 11 08 21.1 +2.0
GMN PcP 11 10 47.9 +1.8
G62A West of Eustis 35.78 22 P P 11 08 19.7 +0.8
G62A IAmb IAmb 11 08 20.2
comp=Z,17nm,0.8s
CWC Cottonwood Cre 35.81 317 P P 11 08 20.3 +0.8
baz=124
MDP Montagnes des 35.87 99 LR LR 11 26 05.8
comp=Z,111nm,19.8s,baz=284,slow=42
B35A Bob, Littlefor 35.90 354 P P 11 08 20.6 +0.7
B35A IAmb IAmb 11 08 37.4
comp=Z,14nm,1.1s
AHID Auburn Hatcher 35.98 331 P P 11 08 21.9 +1.0
AHID PcP 11 10 47.0 +0.4
MZP Montezuma Peak 36.07 319 P P 11 08 23.7 +1.9
HVU Hansel Valley 36.08 328 P P 11 08 22.8 +1.1
HVU IAmb IAmb 11 08 26.2
comp=Z,8.4nm,0.7s
AGMN Agassiz Nation 36.11 351 P P 11 08 21.3 -0.4
AGMN Agassiz Nation 36.11 351 P P 11 08 21.8 +0.1
baz=167
DSP Deep Springs 36.26 318 P P 11 08 24.6 +1.6
PKME Peaks-Kenny Pk 36.27 23 P P 11 08 23.8 +0.7
PKME IAmb IAmb 11 08 24.7
comp=Z,17nm,0.8s
PKME Peaks-Kenny Pk 36.27 23 P P 11 08 23.3 +0.2
baz=212
REDW Red Top Meadow 36.32 332 P P 11 08 25.2 +1.4
SNOW Snow King Moun 36.35 332 P P 11 08 25.6 +1.5
MDND Maddock 36.37 347 P P 11 08 24.1 +0.2
MDND Maddock 36.37 347 P P 11 08 24.4 +0.5
baz=161,SNR=5.1
LOHW Long Hollow 36.40 332 P P 11 08 25.8 +1.3
TPAW Teton Pass 36.46 332 P P 11 08 25.5 +0.4
VLDQ Val d'Or 36.47 12 P P 11 08 24.9 +0.2
SMMC Simmler 36.53 314 P P 11 08 26.0 +0.5
baz=120
MOOW Moose Ponds 36.57 332 P P 11 08 26.9 +1.0
FXWY Fox Creek 36.61 332 P P 11 08 27.5 +1.1
FXWY IAmb IAmb 11 08 29.1
comp=Z,7.6nm,0.7s
ELK Elko 36.69 325 P P 11 08 28.3 +1.3
ELK IAmb IAmb 11 08 44.2
comp=Z,24nm,2.0s
ELK Elko 36.69 325 LR LR 11 24 06.3
comp=Z,102nm,20.5s,baz=138,slow=37
IMW Indian Meadow 36.77 332 P P 11 08 28.8 +1.1
IMW PcP PcP 11 10 48.9 -0.2
FLWY Flagg Ranch 36.81 333 P P 11 08 29.4 +1.4
H17A Grant Village 37.00 333 IAmb IAmb 11 08 34.3
comp=Z,11nm,0.8s
H17A Grant Village 37.00 333 P P 11 08 30.5 +0.8
baz=142
RLMT Red Lodge 37.02 335 P P 11 08 30.3 +0.6
baz=144,SNR=14
LKWY Lake 37.06 333 IAmb IAmb 11 08 33.3
comp=Z,13nm,0.7s
NVAR Mina Array Bea 37.08 319 P P 11 08 32.3 +1.9
NVAR Mina Array Bea 37.08 319 P P 11 08 32.5 +2.1
comp=Z,3.6nm,0.6s,baz=128,slow=7.4,SNR=29
NVAR PcP PcP 11 10 51.3 +1.3
comp=Z,7.9nm,0.6s,baz=156,slow=6.7,SNR=31
NVAR LR LR 11 25 02.2
comp=Z,273nm,21.9s,baz=134,slow=38
comp=Z,3.6nm,0.6s
F64A Sherman 37.13 23 P P 11 08 31.3 +0.9
F64A IAmb IAmb 11 08 31.9
comp=Z,14nm,0.8s
GO01 Chusmiza 37.16 149 IAmb IAmb 11 08 35.1
comp=Z,38nm,1.9s
LAO LASA Array 37.18 339 P P 11 08 31.6 +0.6
baz=150
YNR Norris Junctio 37.30 333 IAmb IAmb 11 08 35.7
comp=Z,17nm,0.7s
KVN Kaiserville 37.32 320 P P 11 08 33.7 +1.4
KVN PcP PcP 11 10 52.0 +1.3
VILB Vilhena 37.64 132 P P 11 08 35.7 +0.5
QLMT Earthquake Lak 37.72 333 P P 11 08 37.7 +2.0
LMQ La Malbaie 37.87 20 P P 11 08 36.8 +0.1
LMQ IAmb IAmb 11 08 37.3
comp=Z,8.4nm,0.7s
D62A Allapoint, All 37.91 21 P P 11 08 37.3 +0.3
D62A IAmb IAmb 11 08 38.1
comp=Z,16nm,0.8s
PQI Presque Isle 37.94 23 P P 11 08 37.7 +0.6
PQI IAmb IAmb 11 08 38.4
comp=Z,11nm,0.8s
YERR Yerington 38.00 319 P P 11 08 40.4 +2.2
ULM Lac du Bonnet 38.02 352 P P 11 08 36.7 -1.1
ULM Lac du Bonnet 38.02 352 P P 11 08 36.8 -1.1
comp=Z,18nm,0.6s,baz=168,slow=9.0,SNR=33
ULM LR LR 11 25 45.3
comp=Z,265nm,20.7s,baz=162,slow=38
comp=Z,18nm,0.6s
DGMT Dagmar 38.12 343 P P 11 08 39.6 +0.8
DGMT Dagmar 38.12 343 P P 11 08 39.3 +0.6
baz=154,SNR=26
PB01 IPOC Station P 38.19 151 IAmb IAmb 11 08 43.6
comp=Z,13nm,1.2s
HLID Hailey 38.20 329 P P 11 08 40.8 +1.0
HLID PcP PcP 11 10 54.4 +1.1
HLID Hailey 38.20 329 P P 11 08 40.5 +0.8
baz=136,SNR=19
PNTR Pine Nut 38.29 319 P P 11 08 40.0 -0.6
BOZ Bozeman (W) 38.41 333 P P 11 08 42.5 +1.2
baz=141,SNR=32
SIV San Ignacio 39.10 136 LR LR 11 24 34.1
comp=Z,198nm,21.4s,baz=4.0,slow=36
BATG Bathurst New B 39.19 24 IAmb IAmb 11 08 49.1
comp=Z,16nm,0.8s
EGMT Eagleton 39.59 337 P P 11 08 52.3 +1.1
EGMT Eagleton 39.59 337 P P 11 08 51.5 +0.4
baz=146,SNR=18
LVC Limon Verde 39.81 152 P P 11 08 54.5 +1.0
comp=Z,3.5nm,0.7s,baz=287,slow=5.6,SNR=4.2
LVC LR LR 11 24 59.1
comp=Z,162nm,19.3s,baz=307,slow=36
comp=Z,3.5nm,0.7s
LVC Limon Verde 39.81 152 P P 11 08 55.8 +2.3
LVC pP pP 11 09 10.8 +2.4
PTLB Pontes e Lacer 40.07 133 P P 11 08 55.1 -0.2
PTLB IAmb IAmb 11 08 56.5
comp=Z,39nm,1.9s
J08A Circle Bar Ran 40.22 325 P P 11 08 57.7 +1.2
J08A PcP PcP 11 11 01.1 +1.5
BMO Blue Mountains 40.59 328 P P 11 09 00.1 +0.6
BMO IAmb IAmb 11 09 00.7
comp=Z,25nm,1.9s
I07A Izee 41.26 325 P P 11 09 05.9 +0.9
I07A PcP PcP 11 11 04.6 +1.7
F10A Beach Ranch, E 41.32 329 P P 11 09 06.1 +0.6
F10A IAmb IAmb 11 09 08.3
comp=Z,32nm,1.4s
YBH Yreka Blue Hor 41.74 320 LR LR 11 28 11.1
comp=Z,272nm,21.6s,baz=138,slow=38
PINE Pine Mountain 41.89 324 P P 11 09 10.1 -0.2
PINE PcP PcP 11 11 06.9 +1.7
NEW Newport 42.89 332 P P 11 09 18.5 +0.3
baz=136,SNR=9.2
NEW Newport 42.89 332 LR LR 11 32 32.3
comp=Z,88nm,18.1s,baz=124,slow=44
D08A Wollman Farm, 42.91 329 P P 11 09 18.2 -0.1
D08A IAmb IAmb 11 09 19.8
comp=Z,11nm,0.7s
E07A Sunnyside 43.06 328 IAmb IAmb 11 09 22.4
comp=Z,9.6nm,0.7s
C09A Chrisman Ranch 43.11 330 IAmb IAmb 11 09 23.2
comp=Z,12nm,0.6s
H04A Detroit Lake 43.14 324 IAmb IAmb 11 09 22.4
comp=Z,25nm,1.5s
HOOD Mount Hood Mea 43.23 325 IAmb IAmb 11 09 38.1
comp=Z,20nm,0.9s
FFC Flin Flon 43.36 348 P P 11 09 21.8 +0.1
FFC IAmb IAmb 11 09 23.7
comp=Z,12nm,0.7s
FFC Flin Flon 43.36 348 P P 11 09 21.9 +0.1
FFC pP pP 11 09 36.9 +0.1
AC02 Maricunga 43.40 155 P P 11 09 25.0 +2.0
AC02 IAmb IAmb 11 09 26.2
comp=Z,33nm,1.7s
LTY Liberty 43.94 328 P P 11 09 26.9 +0.2
LON Longmire 44.21 327 P P 11 09 29.4 +0.5
DRLN Deer Lake 44.41 29 P P 11 09 29.8 -0.5
RPN Rapa Nui 44.55 207 LR LR 11 23 23.1
comp=Z,214nm,21.3s,baz=58,slow=29
AC05 El Transito 44.73 157 P P 11 09 34.9 +1.7
LCO Las Campanas 44.73 158 P P 11 09 34.5 +1.1
LCO IAmb IAmb 11 09 35.7
comp=Z,27nm,1.6s
GNW Green Mountain 45.26 327 P P 11 09 36.7 -0.4
SCHQ Schefferville 45.30 17 P P 11 09 36.4 -0.9
SCHQ Schefferville 45.30 17 P P 11 09 36.0 -1.3
comp=Z,26nm,0.6s,baz=216,slow=6.4,SNR=42
SCHQ pP pP 11 09 51.1 -1.3
comp=Z,24nm,0.9s,baz=207,slow=6.4,SNR=8.0
SCHQ LR LR 11 28 28.2
comp=Z,339nm,21.3s,baz=217,slow=36
comp=Z,26nm,0.6s
CO02 Combarbal 46.62 160 P P 11 09 49.0 +0.9
CO02 IAmb IAmb 11 09 50.3
comp=Z,14nm,0.8s
BRLDA Berland Lookou 47.34 337 P P 11 09 53.8 +0.3
BDFB Brasilia 48.68 124 P P 11 10 03.5 -0.9
comp=Z,4.3nm,0.6s,baz=292,slow=7.8,SNR=6.0
BDFB PcP PcP 11 11 28.4 -0.6
comp=Z,1.6nm,0.4s,baz=256,slow=3.2,SNR=5.8
BDFB LR LR 11 32 38.3
comp=Z,153nm,19.1s,baz=321,slow=39
comp=Z,4.3nm,0.6s
MT09 Talagante 48.99 161 P P 11 10 06.7 +0.3
CPUP Villa Florida 49.01 142 P P 11 10 05.8 -0.7
CPUP Villa Florida 49.01 142 P P 11 10 05.6 -0.9
comp=Z,2.7nm,0.6s,baz=332,slow=10.0,SNR=6.7
CPUP LR LR 11 32 16.9
comp=Z,100nm,20.0s,baz=324,slow=38
comp=Z,2.7nm,0.6s
CPUP Villa Florida 49.01 142 P P 11 10 05.7 -0.7
CPUP pP pP 11 10 20.3 -1.4
LMEL Las Melosas 49.31 160 IAmb IAmb 11 10 11.6
comp=Z,29nm,1.7s
BO01 Tunca 49.52 161 P P 11 10 11.2 +0.8
BO01 IAmb IAmb 11 10 12.6
comp=Z,15nm,1.1s
HILA High Level 50.69 341 P P 11 10 18.5 -0.4
ML02 Panimavida 50.69 162 P P 11 10 20.2 +1.0
BBB Bella Bella 50.78 329 LR LR 11 34 08.0
comp=Z,155nm,18.9s,baz=198,slow=39
ITQB Itaqui 51.93 145 P P 11 10 28.8 +0.3
FRB Frobisher Bay 52.86 11 LR LR 11 33 36.1
comp=Z,297nm,21.0s,baz=190,slow=37
ITAB Concordia 52.87 139 P P 11 10 35.4 -0.2
YKA Yellowknife Ar 53.23 345 P P 11 10 37.3 -0.4
YKA Yellowknife Ar 53.23 345 P P 11 10 37.5 -0.2
comp=Z,6.3nm,0.7s,baz=131,slow=8.4,SNR=134
YKA pP pP 11 10 52.4 -0.8
comp=Z,25nm,1.0s,baz=140,slow=7.6,SNR=25
YKA PcP PcP 11 11 44.2 -0.7
comp=Z,0.8nm,0.5s,baz=142,slow=3.8,SNR=6.4
YKA LR LR 11 35 36.0

comp=Z,124nm,20.0s,baz=88,slow=39
comp=Z,6.3nm,0.7s
FLDN Fort Liard 54.12 339 P **P** **11 10 44.8 +0.5**
baz=136
KOTAN Kotaneelee Air 54.25 339 P **P** **11 10 45.7 +0.5**
baz=135,SNR=5.7
V35K Ketchikan 54.30 331 P **P** **11 10 46.2 +0.7**
baz=124
T35M Bob Quinn 54.63 333 P **P** **11 10 48.4 +0.3**
baz=127,SNR=7.1
LR05 Currie 54.71 165 P **P** **11 10 49.8 +1.0**
CRAG Craig 55.09 331 P **P** **11 10 51.3 0.0**
baz=123
RCBR Riachuelo 55.10 106 LR LR 11 35 46.1
comp=Z,91nm,20.9s,baz=273,slow=38
WRAK Wrangell Islan 55.25 332 P **P** **11 10 52.6 +0.2**
WRAK Wrangell Islan 55.25 332 P **P** **11 10 52.0 -0.5**
baz=124
DLBC Dease Lake 55.42 335 P **P** **11 10 54.2 +0.4**
baz=128,SNR=28
DLBC Dease Lake 55.42 335 P **P** **11 10 54.8 +1.0**
comp=Z,32nm,0.7s,baz=130,slow=6.6,SNR=60
DLBC pP **pP** **11 11 09.9 +0.6**
comp=Z,40nm,0.8s,baz=143,slow=5.5,SNR=18
DLBC LR LR 11 37 43.0
comp=Z,253nm,20.9s,baz=104,slow=39
comp=Z,32nm,0.7s
PLCA Paso Flores 55.57 164 P **P** **11 10 56.3 +1.2**
PLCA IAmb IAmb 11 10 56.6
comp=Z,9.9nm,0.9s
PLCA Paso Flores 55.57 164 P **P** **11 10 56.2 +1.2**
comp=Z,6.3nm,0.8s,baz=335,slow=9.0,SNR=16
PLCA LR LR 11 29 17.4
comp=Z,82nm,20.4s,baz=12,slow=30
comp=Z,6.3nm,0.8s
PLCA Paso Flores 55.57 164 P **P** **11 10 56.2 +1.2**
PLCA PcP **PcP** **11 11 55.4 +1.1**
S34M Telegraph Cree 55.57 334 IAmb IAmb 11 11 11.7
comp=Z,13nm,0.8s
S34M Telegraph Cree 55.57 334 P **P** **11 10 55.2 +0.4**
baz=126,SNR=5.5
T33K Petersburg 55.75 332 P **P** **11 10 56.2 +0.2**
baz=124
WTLY Watson Lake, Y 55.99 337 P **P** **11 10 58.2 +0.5**
baz=130,SNR=12
WRGLY Wrigley 56.30 342 P **P** **11 11 00.6 +0.7**
baz=137
R33M Jennings River 56.40 335 P **P** **11 11 00.9 +0.1**
baz=127
Q32M Nakina River 56.67 334 P **P** **11 11 04.3 +1.4**
baz=126
TGTN Hyland Airport 56.71 338 P **P** **11 11 03.9 +0.9**
baz=131,SNR=6.0
R32K Eaglecrest 57.26 333 P **P** **11 11 07.5 +0.7**
baz=123
NUUK Nuuk 57.36 18 *i* P **P** **11 11 04.8 -2.6**
NUUK IAmb IAmb 11 11 08.7
comp=Z,13nm,0.7s
P33M Teslin, Yukon 57.63 335 P **P** **11 11 10.1 +0.6**
P33M IAmb IAmb 11 11 25.8
comp=Z,6.6nm,0.8s
P33M Teslin, Yukon 57.63 335 P **P** **11 11 09.9 +0.4**
baz=126
P32M Atlin 57.65 335 P **P** **11 11 10.8 +1.2**
baz=124
S31K Pelican 57.87 332 P **P** **11 11 11.9 +0.9**
baz=121
N32M Quiet Lake 58.29 336 P **P** **11 11 14.3 +0.3**
N32M Quiet Lake 58.29 336 P **P** **11 11 15.5 +1.5**
baz=126
FARO Faro, Yukon 59.03 337 IAmb IAmb 11 11 35.1
comp=Z,8.5nm,1.1s
FARO Faro, Yukon 59.03 337 P **P** **11 11 19.6 +0.4**
baz=126
P29M Windy Craggy 59.39 333 P **P** **11 11 23.0 +1.3**
baz=120
M31M Drury Creek, Y 59.41 337 IAmb IAmb 11 11 38.0
comp=Z,10nm,1.1s
M31M Drury Creek, Y 59.41 337 P **P** **11 11 22.4 +0.7**
baz=125
SFJD Kangerlussuaq 59.72 16 *i* P **P** **11 11 21.7 -2.1**
SFJD IAmb IAmb 11 11 24.1
comp=Z,7.2nm,0.7s
SFJD Kangerlussuaq 59.72 16 LR LR 11 36 06.9
comp=Z,206nm,20.8s,baz=178,slow=35
PNL Peninsula 60.15 333 P **P** **11 11 27.9 +1.1**
baz=119
YUK6 Outpost Mounta 60.33 334 P **P** **11 11 28.9 +0.6**
baz=120
M30M Minto, Yukon 60.55 336 P **P** **11 11 29.7 +0.1**
baz=123,SNR=7.4
DY2G Dye2 60.60 18 *i* P **P** **11 11 26.4 -3.7**
DY2G IAmb IAmb 11 11 28.8
comp=Z,5.7nm,0.7s
YUK4 Talbot Arm 60.65 335 P **P** **11 11 31.5 +1.0**
baz=120
PINM Pinnacle 60.73 333 P **P** **11 11 31.3 +0.4**
baz=118
MAYO Mayo, Yukon 60.77 338 P **P** **11 11 31.6 +0.5**
baz=124,SNR=13
C36M Paulatuk 61.05 346 P **P** **11 11 33.8 +1.0**
baz=139
YUK8 Steele Glacier 61.09 334 P **P** **11 11 34.4 +0.9**
baz=119
M29M Somme Creek 61.14 336 P **P** **11 11 34.6 +1.0**
baz=121
L29M L29M 61.35 337 P **P** **11 11 35.2 +0.2**
baz=122,SNR=8.0
J30M Hart River 61.48 339 IAmb IAmb 11 11 52.0
comp=Z,6.2nm,0.9s
J30M Hart River 61.48 339 P **P** **11 11 36.3 +0.3**
baz=124
K29M Barlow Dome 61.52 338 P **P** **11 11 36.1 -0.1**
K29M IAmb IAmb 11 11 51.8
comp=Z,7.9nm,0.9s
K29M Barlow Dome 61.52 338 P **P** **11 11 36.4 +0.2**
baz=122
MESA MESA 61.52 333 P **P** **11 11 35.3 -1.1**
baz=116
CTG Chitna Glacier 61.61 334 P **P** **11 11 37.6 +0.7**
baz=117
YUK3 Moose Creek 61.62 335 P **P** **11 11 37.5 +0.4**
baz=119,SNR=5.9
GRNC Granite Creek 61.69 333 P **P** **11 11 38.4 +0.9**
BARN Barnard Glacie 61.79 334 IAmb IAmb 11 11 54.7
comp=Z,10nm,0.8s
I30M Mount Dempster 61.87 339 P **P** **11 11 38.8 +0.3**
baz=124
BVCY Beaver Creek 62.09 335 P **P** **11 11 39.9 -0.1**
baz=118
BGLC Bering Glacier 62.10 332 P **P** **11 11 40.2 +0.2**
baz=115
J29N Klondike Camp 62.10 338 IAmb IAmb 11 11 56.3
comp=Z,15nm,1.1s
J29N Klondike Camp 62.10 338 P **P** **11 11 40.4 +0.3**
baz=122
RES Resolute Bay 62.14 358 IAmb IAmb 11 11 56.6
comp=Z,8.5nm,0.8s
RES Resolute Bay 62.14 358 LR LR 11 38 53.6
comp=Z,178nm,21.7s,baz=168,slow=36
G31M Satah River 62.17 341 P **P** **11 11 40.4 +0.1**
baz=127
CRQE Cirque 62.28 333 P **P** **11 11 41.7 +0.2**
baz=116
F31M Tsiigehtchic 62.33 342 P **P** **11 11 41.1 -0.3**
baz=128,SNR=7.5
DAWY Dawson 62.34 337 IAmb IAmb 11 11 56.8
comp=Z,8.8nm,1.0s
DAWY Dawson 62.34 337 P **P** **11 11 41.1 -0.5**
baz=121,SNR=5.9
M27K Edge Creek, AK 62.48 335 P **P** **11 11 42.9 +0.1**
baz=117
MCARA McCarthy VSAT 62.53 334 P **P** **11 11 43.6 +0.7**
MCARA McCarthy VSAT 62.53 334 P **P** **11 11 43.6 +0.7**
baz=116
KAIM Kayak Island 62.54 332 P **P** **11 11 43.3 +0.4**
baz=114
EPYK Eagle Plains 62.64 340 P **P** **11 11 43.6 +0.1**
EPYK Eagle Plains 62.64 340 P **P** **11 11 43.4 -0.2**
baz=124,SNR=6.3
VRDI Verde Repeater 62.65 333 P **P** **11 11 43.9 0.0**
VRDI IAmb IAmb 11 12 00.2
comp=Z,9.8nm,0.8s
BCAR Beaver Creek A 62.78 336 P **P** **11 11 44.8 +0.2**
L27K Beaver Creek, 62.79 336 P **P** **11 11 44.6 -0.1**
baz=118
INK Inuvik 62.80 343 P **P** **11 11 44.4 -0.1**
baz=129,SNR=9.3
INK Inuvik 62.80 343 P **P** **11 11 44.1 -0.5**
comp=Z,7.8nm,0.9s,baz=121,slow=7.0,SNR=30
INK pP **pP** **11 11 59.0 -1.3**
comp=Z,20nm,1.0s,baz=122,slow=7.3,SNR=20
INK LR LR 11 42 09.2
comp=Z,123nm,20.7s,baz=174,slow=39
comp=Z,7.8nm,0.9s
G30M tAoh Zrail Nji 62.83 341 P **P** **11 11 44.9 +0.1**
baz=125
ANGG Ammassalik, Gr 62.91 21 *i* P **P** **11 11 41.2 -4.0**
ANGG IAmb IAmb 11 11 45.0
comp=Z,22nm,0.6s
M26K Nabesna, AK 62.97 335 P **P** **11 11 46.0 +0.1**
baz=116
BMRM Bremner River 63.05 333 P **P** **11 11 46.6 +0.2**
baz=114,SNR=5.8
F30M Barrier River 63.06 341 P **P** **11 11 46.6 +0.3**
baz=126
H29M Whitestone 63.11 340 P **P** **11 11 46.9 +0.2**
baz=123
I28M Miner Creek 63.25 338 IAmb IAmb 11 11 52.4
comp=Z,31nm,2.0s
I28M Miner Creek 63.25 338 P **P** **11 11 47.8 +0.1**
baz=121
N25K Chitina, Valde 63.31 334 P **P** **11 11 48.9 +0.7**
baz=114,SNR=10
A36M Sachs Harbour 63.31 348 P **P** **11 11 46.5 -1.4**
A36M IAmb IAmb 11 12 03.5
comp=Z,19nm,1.2s
A36M Sachs Harbour 63.31 348 P **P** **11 11 46.7 -1.2**
baz=139,SNR=9.9
K27K Chicken 63.34 337 P **P** **11 11 48.8 +0.5**
baz=118
EGAK Eagle 63.36 337 P **P** **11 11 47.7 -0.6**
EGAK IAmb IAmb 11 12 03.6
comp=Z,12nm,0.9s
EGAK Eagle 63.36 337 P **P** **11 11 47.9 -0.5**
baz=119,SNR=5.5
L26K Log Cabin Wild 63.39 335 IAmb IAmb 11 12 04.7
comp=Z,9.0nm,0.9s
L26K Log Cabin Wild 63.39 335 P **P** **11 11 49.3 +0.7**
baz=116
EYAK Cordova Ski Ar 63.39 332 P **P** **11 11 49.8 +1.2**
baz=113
MENT Mentasta 63.51 335 IAmb IAmb 11 11 50.4
comp=Z,5.8nm,0.6s
KLU Klutina 63.84 333 IAmb IAmb 11 12 07.8
comp=Z,16nm,0.9s
KLU Klutina 63.84 333 P **P** **11 11 52.5 +0.8**
baz=113,SNR=7.9
HARP HAARP 63.88 334 P **P** **11 11 52.5 +0.7**
baz=114
I27K Kandik River 63.93 338 P **P** **11 11 52.8 +0.7**
baz=119
P23K Montague Islan 63.95 331 P **P** **11 11 52.7 +0.4**
baz=111
SCRK Sand Creek 64.07 336 P **P** **11 11 53.5 +0.3**
SCRK IAmb IAmb 11 12 09.3
comp=Z,15nm,1.4s
SCRK Sand Creek 64.07 336 P **P** **11 11 53.6 +0.4**
baz=116,SNR=6.2
J26L Joseph Creek 64.14 337 P **P** **11 11 54.2 +0.6**
baz=117
E29M Blow River 64.16 342 P **P** **11 11 53.8 +0.2**
baz=124,SNR=10
M24K Tolsona, Glenn 64.19 334 P **P** **11 11 54.1 +0.2**
baz=113
H27K Steamboat Moun 64.21 339 P **P** **11 11 54.1 +0.1**
baz=120
ICESG Greenland Ices 64.21 17 *i* P **P** **11 11 50.5 -3.7**
ICESG IAmb IAmb 11 11 52.4
comp=Z,7.6nm,0.7s
PAX Paxson 64.24 335 P **P** **11 11 54.0 -0.3**
baz=115,SNR=9.9
I26K Coal Creek Min 64.35 338 P **P** **11 11 55.0 +0.2**
baz=118
F28M Old Crow 64.36 341 P **P** **11 11 54.9 0.0**
baz=122,SNR=29
SCM Sheep Creek Mo 64.59 333 P **P** **11 11 56.4 -0.2**
baz=112
K24K Donnelly Dome 64.71 336 P **P** **11 11 57.6 +0.4**
baz=114,SNR=6.6
M23K Glacier View 64.75 333 P **P** **11 11 57.2 -0.3**
baz=113,SNR=5.9
E28M Babbage River 64.78 342 P **P** **11 11 57.4 -0.2**
baz=122
J25K Salcha River, 64.89 336 IAmb IAmb 11 12 15.0
comp=Z,14nm,0.8s
J25K Salcha River, 64.89 336 P **P** **11 11 58.8 +0.3**
baz=115
KNK Knik Glacier 64.94 333 P **P** **11 11 59.1 +0.3**
baz=111,SNR=6.2
SEW Seward 64.95 331 P **P** **11 11 59.2 +0.4**
baz=109
SML Sawmill 65.03 333 P **P** **11 11 59.4 0.0**
SML IAmb IAmb 11 12 15.0
comp=Z,14nm,0.9s
SML Sawmill 65.03 333 P **P** **11 11 59.3 0.0**
baz=111
WAT6 Susitna Watana 65.05 334 P **P** **11 11 59.5 -0.2**
baz=112,SNR=6.6
DHY Denali Highway 65.08 334 P **P** **11 12 00.2 +0.4**
baz=112
O22K Cooper Landing 65.21 331 P **P** **11 12 00.6 +0.1**
baz=109
GHO Glory Hole Cre 65.28 333 P **P** **11 12 01.1 +0.1**
PMR Palmer 65.31 333 P **P** **11 12 01.1 0.0**
PMR IAmb IAmb 11 12 16.6
comp=Z,7.0nm,0.8s
PMR Palmer 65.31 333 P **P** **11 12 00.9 -0.2**
baz=110,SNR=7.6
PRP Porcupine Dome 65.34 337 IAmb IAmb 11 12 17.6
comp=Z,13nm,0.8s
PRP Porcupine Dome 65.34 337 P **P** **11 12 01.5 +0.1**
baz=115,SNR=13
G26K Porcupine Rive 65.35 339 P **P** **11 12 01.1 -0.1**
baz=118
RC01 Rabbit Creek A 65.41 332 P **P** **11 12 02.0 +0.2**
baz=109,SNR=13
HDA Harding Lake 65.43 336 P **P** **11 12 01.5 -0.4**
baz=113,SNR=14
BRSE Bray Lake S 65.45 330 P **P** **11 12 02.2 +0.1**
baz=108
WAT1 Susitna Watana 65.49 334 P **P** **11 12 02.2 -0.2**
baz=111
IL31 65.55 336 P **P** **11 12 02.4 -0.2**
ILAR Eielson Array 65.55 336 P **P** **11 12 01.9 -0.7**
ILAR Eielson Array 65.55 336 P **P** **11 12 02.0 -0.7**
comp=Z,4.7nm,0.8s,baz=164,slow=4.8,SNR=72
ILAR pP **pP** **11 12 17.8 -0.7**
comp=Z,12nm,1.0s,baz=116,slow=5.2,SNR=21
ILAR LR LR 11 43 19.6
comp=Z,192nm,21.6s,baz=102,slow=38
comp=Z,4.7nm,0.8s
D27M Malcolm River 65.56 342 P **P** **11 12 02.9 +0.2**
baz=121
FYU Fort Yukon 65.69 338 IAmb IAmb 11 12 19.5
comp=Z,12nm,0.9s
M22K Willow 65.81 333 P **P** **11 12 04.3 0.0**
baz=109
F26K Sheenjek River 65.82 340 P **P** **11 12 04.8 +0.5**
baz=118
KDAK Kodiak Island 65.82 328 P **P** **11 12 04.9 +0.4**
baz=105
KDAK Kodiak Island 65.82 328 P **P** **11 12 04.7 +0.3**
comp=Z,4.8nm,0.6s,baz=147,slow=6.8,SNR=5.7
KDAK LR LR 11 40 52.3
comp=Z,73nm,21.1s,baz=97,slow=36
comp=Z,4.8nm,0.6s
BMAR Burnt Mountain 65.84 339 P **P** **11 12 04.2 -0.3**
CCB Clear Creek Bu 65.86 336 P **P** **11 12 03.9 -0.7**
POKR Poker Plat Res 65.90 337 P **P** **11 12 04.8 -0.1**
POKR IAmb IAmb 11 12 20.9
comp=Z,11nm,0.8s
POKR Poker Plat Res 65.90 337 P **P** **11 12 04.7 -0.2**
baz=113
WRH Wood River Hil 65.91 336 IAmb IAmb 11 12 20.3
comp=Z,12nm,0.8s
COLA College 65.97 336 P **P** **11 12 04.9 -0.4**
baz=113
COLA College 65.97 336 P **P** **11 12 04.8 -0.5**
COLA pP **pP** **11 12 20.1 -1.1**
COLA PcP **PcP** **11 12 35.3 -0.3**
MCK McKinley 65.98 335 P **P** **11 12 05.3 -0.2**
baz=111,SNR=5.7
SUA Susitna One 66.00 332 IAmb IAmb 11 12 21.4
comp=Z,15nm,0.8s
SUA Susitna One 66.00 332 P **P** **11 12 05.7 0.0**
baz=108,SNR=6.0
OHAK Old Harbor 66.04 327 P **P** **11 12 05.8 -0.1**
baz=104
CUT Chulitna 66.09 333 P **P** **11 12 06.0 -0.1**
baz=109
MDM Murphy Dome 66.15 336 IAmb IAmb 11 12 21.9
comp=Z,10nm,1.1s
F25K Christian Rive 66.28 339 P **P** **11 12 07.9 +0.5**
baz=116
NEA2 Nenana 66.35 336 P **P** **11 12 07.4 -0.4**
NEA2 IAmb IAmb 11 12 23.6
comp=Z,15nm,0.9s
NEA2 Nenana 66.35 336 P **P** **11 12 07.9 +0.1**
baz=111,SNR=5.5
H24K Noodor Dome 66.36 337 P **P** **11 12 07.9 +0.1**
baz=113
TRF Thorofare Moun 66.45 334 P **P** **11 12 08.5 -0.1**
TRF Thorofare Moun 66.45 334 P **P** **11 12 08.6 0.0**
baz=110,SNR=7.4
E25K Arctic Village 66.49 340 IAmb IAmb 11 12 25.2
comp=Z,12nm,0.9s
E25K Arctic Village 66.49 340 P **P** **11 12 09.5 +0.9**
baz=116,SNR=12
SKT Skwentna 66.51 333 IAmb IAmb 11 12 24.4
comp=Z,17nm,0.9s
SKT Skwentna 66.51 333 P **P** **11 12 08.7 -0.2**
baz=108,SNR=6.1
G24K Hadweenzic Riv 66.55 338 P **P** **11 12 09.2 +0.1**
baz=114
SUMG Summit 66.58 15 *i* P **P** **11 12 07.1 -2.4**
SUMG IAmb IAmb 11 12 10.1
comp=Z,1.9nm,0.6s
N20K Mount Spurr 66.59 332 P **P** **11 12 09.1 -0.4**
baz=107
I23K Minto, Yukon-K 66.67 336 P **P** **11 12 09.8 0.0**
baz=111,SNR=7.9
KTH Kantishna Hill 66.75 334 IAmb IAmb 11 12 26.2
comp=Z,17nm,0.9s
BPAW Bear Paw Mtn. 66.96 335 P **P** **11 12 11.4 -0.3**
baz=109
F24K Squaw Lake 67.03 339 P **P** **11 12 12.8 +0.6**
baz=114
PPLA Purkeypile 67.09 333 P **P** **11 12 11.8 -0.9**
baz=108
MLY Manley 67.17 336 P **P** **11 12 13.2 +0.1**
MLY IAmb IAmb 11 12 28.7
comp=Z,19nm,0.9s
MLY Manley 67.17 336 P **P** **11 12 13.0 0.0**
baz=110,SNR=14
CAST Castle Rocks 67.20 334 P **P** **11 12 12.3 -1.0**
CAST IAmb IAmb 11 12 28.2
comp=Z,10nm,0.9s
CAST Castle Rocks 67.20 334 P **P** **11 12 12.4 -0.9**
baz=108,SNR=5.4
M20K Styx River 67.21 332 P **P** **11 12 13.0 -0.4**
M20K IAmb IAmb 11 12 28.8
comp=Z,9.7nm,0.8s
M20K Styx River 67.21 332 P **P** **11 12 13.0 -0.4**
baz=106
D25K Kavik River 67.29 341 P **P** **11 12 13.9 +0.2**
baz=116
O19K Port Alsworth 67.31 330 IAmb IAmb 11 12 29.0
comp=Z,13nm,0.9s
O19K Port Alsworth 67.31 330 P **P** **11 12 13.7 -0.2**
baz=105
CHUM Lake Minchumin 67.44 334 P **P** **11 12 14.0 -0.7**
baz=108
E24K Your Creek 67.47 339 P **P** **11 12 14.9 0.0**
baz=113
G23K Bananza Creek 67.49 338 IAmb IAmb 11 12 31.4
comp=Z,14nm,1.0s
G23K Bananza Creek 67.49 338 P **P** **11 12 15.4 +0.4**
baz=111,SNR=8.6
NEEM North Greenlan 67.51 8 *i* P **P** **11 12 13.1 -2.2**
NEEM IAmb IAmb 11 12 14.6
comp=Z,7.4nm,0.8s
N19K Bonanza Creek 67.55 331 P **P** **11 12 14.9 -0.6**
baz=105
P18K Big Mountain, 67.56 329 P **P** **11 12 15.3 -0.3**
baz=103
PPT Papeete 67.63 245 LR LR 11 33 24.3
comp=Z,336nm,18.9s,baz=32,slow=28
Q17K Contact Creek 67.64 328 P **P** **11 12 16.0 -0.2**
baz=102
O18K Koktuh Hills 67.66 330 P **P** **11 12 15.9 -0.3**
O18K IAmb IAmb 11 12 17.1
comp=Z,16nm,0.8s
O18K Koktuh Hills 67.66 330 P **P** **11 12 15.8 -0.4**
baz=104
L20K Farewell, AK 67.71 333 P **P** **11 12 16.1 -0.4**
baz=106
H22K Ishtalitna Cre 67.72 337 P **P** **11 12 16.2 -0.3**
baz=110
I21K Tanana 67.72 336 P **P** **11 12 16.2 -0.2**
baz=109
COLD Coldfoot 67.75 338 P **P** **11 12 17.4 +0.8**
COLD IAmb IAmb 11 12 34.0
comp=Z,21nm,1.0s
COLD Coldfoot 67.75 338 P **P** **11 12 17.4 +0.8**
baz=111,SNR=9.6
M19K Big River Lodg 67.79 332 P **P** **11 12 16.8 -0.2**
baz=105
E23K Chandalar 67.85 339 P **P** **11 12 18.0 +0.7**
baz=112
D24K Happy Valley 68.01 340 P **P** **11 12 18.6 +0.4**
baz=113
K20K Telida 68.04 334 P **P** **11 12 18.3 -0.2**
baz=106
TOLK Toolik Lake Re 68.06 340 IAmb IAmb 11 12 34.7
comp=Z,13nm,1.1s
TOLK Toolik Lake Re 68.06 340 P **P** **11 12 18.4 -0.2**
baz=112,SNR=5.8
L19K White Mountain 68.07 332 P **P** **11 12 18.5 -0.2**
baz=105
G22K Bettles 68.12 338 P **P** **11 12 18.9 0.0**
baz=110
P17K Kvichak River 68.12 329 P **P** **11 12 19.2 +0.2**
baz=102
Q16K King Salmon 68.12 328 P **P** **11 12 19.2 +0.2**
baz=102
N18K Kilae Creek 68.18 331 P **P** **11 12 19.3 -0.2**
baz=107
C24K Franklin Bluff 68.20 341 P **P** **11 12 19.7 +0.4**
baz=114
H21K Melozitna Rive 68.20 336 P **P** **11 12 18.6 -0.8**
baz=108
J20K Nowinta River 68.30 335 P **P** **11 12 20.1 0.0**
baz=106
M18K Stony River 68.34 331 P **P** **11 12 19.7 -0.7**
baz=104
D23K Nanushuk River 68.55 340 P **P** **11 12 22.2 +0.6**
baz=112
O17K Koliganek Bris 68.57 330 P **P** **11 12 22.0 +0.2**
baz=102
CHGN Chignik 68.61 326 P **P** **11 12 22.2 0.0**
baz=99
I20K Naaghedeneel 68.61 335 P **P** **11 12 21.9 -0.1**
baz=106
E22K Anaktuvuk Pass 68.64 339 P **P** **11 12 22.2 -0.1**
baz=110
G21K Allakaket 68.74 337 P **P** **11 12 22.8 0.0**
baz=108
N17K Nushagak Hills 68.77 330 P **P** **11 12 22.7 -0.4**
baz=102
TTA Tatalina 68.78 333 P **P** **11 12 22.5 -0.7**
baz=104
J19K Poorman 68.88 334 P **P** **11 12 23.2 -0.5**
baz=105
L18K Granite Mounta 68.91 332 P **P** **11 12 24.4 +0.4**
baz=103
F21K Alatna River 68.95 338 P **P** **11 12 24.8 +0.6**
baz=108
H20K Anotleneega Mo 68.97 336 P **P** **11 12 25.5 +1.2**
baz=106
O16K Kokwok River B 69.03 329 P **P** **11 12 24.9 +0.2**
baz=101
CHNA Chernabura Isl 69.05 324 P **P** **11 12 25.6 +0.7**
baz=98
M17K Holitna River 69.08 331 P **P** **11 12 24.7 -0.3**
baz=102
D22K Ayikyak River 69.20 340 P **P** **11 12 25.8 +0.2**
baz=110,SNR=6.0
J18K Innoko River 69.22 333 P **P** **11 12 25.6 -0.2**
baz=104
E21K Killik River 69.50 339 P **P** **11 12 27.3 -0.3**
baz=108
N16K Nishlik Lake 69.53 330 P **P** **11 12 27.5 -0.4**
baz=101

GCSA	**Galena City Sc**	**69.59**	**335**	P		**P**	**11 12 27.4 -0.7**
	baz=104						
H19K	**Roundabout Mou**	**69.61**	**336**	P		**P**	**11 12 27.8 -0.4**
	baz=105						
L17K	**Donlin**	**69.63**	**332**	P		**P**	**11 12 27.8 -0.7**
	baz=102						
M16K	**Timber Creek**	**69.72**	**331**	P		**P**	**11 12 29.4 +0.3**
	baz=101						
F20K	**Avaraart Lake**	**69.73**	**337**	P		**P**	**11 12 28.9 +0.1**
F20K	**Avaraart Lake**	**69.73**	**337**	P		**P**	**11 12 29.0 +0.1**
	baz=106						
K17K	**Iditarod**	**69.75**	**332**	P		**P**	**11 12 29.4 +0.3**
	baz=102						
C21K	**Knifeblade Rid**	**70.01**	**340**	P		**P**	**11 12 30.8 +0.2**
	baz=108						
G19K	**Purcell Mounta**	**70.02**	**336**	P		**P**	**11 12 30.4 -0.3**
G19K	**Purcell Mounta**	**70.02**	**336**	P		**P**	**11 12 30.6 -0.2**
	baz=104						
B21K	**Ikpikpuk River**	**70.09**	**340**	P		**P**	**11 12 30.7 -0.4**
B21K				IAmb		IAmb	11 12 31.5
	comp=Z,8.8nm,0.7s						
B21K	**Ikpikpuk River**	**70.09**	**340**	P		**P**	**11 12 30.7 -0.4**
	baz=108						
L16K	**Owhat River**	**70.09**	**331**	P		**P**	**11 12 31.4 +0.1**
	baz=100						
E20K	**Nigu River**	**70.24**	**338**	P		**P**	**11 12 32.7 +0.5**
	baz=106						
H18K	**Honhosa River**	**70.30**	**335**	P		**P**	**11 12 32.7 +0.2**
	baz=103						
E19K	**Redstone River**	**70.41**	**338**	P		**P**	**11 12 32.9 -0.2**
	baz=104						
F19K	**Shaleruckik Mo**	**70.46**	**337**	P		**P**	**11 12 33.4 +0.1**
	baz=104						
D20K	**Etivluk River**	**70.51**	**339**	P		**P**	**11 12 33.9 +0.1**
	baz=106						
G18K	**Tagagawik**	**70.59**	**336**	P		**P**	**11 12 34.2 0.0**
	baz=103						
J16K	**Anvik River**	**70.89**	**333**	P		**P**	**11 12 36.4 +0.4**
	baz=100						
H17K	**Granite Mounta**	**70.90**	**335**	P		**P**	**11 12 36.3 +0.1**
	baz=101						
D19K	**Kuna River**	**70.99**	**339**	P		**P**	**11 12 36.4 -0.2**
	baz=104						
L15K	**Ungalak Mounta**	**71.04**	**331**	P		**P**	**11 12 37.3 +0.4**
	baz=99						
I17K	**Unalakleet**	**71.04**	**333**	P		**P**	**11 12 37.3 +0.4**
	baz=100						
M14K	**Bethel**	**71.13**	**330**	P		**P**	**11 12 38.0 +0.5**
	baz=98						
F18K	**Selawik**	**71.13**	**336**	P		**P**	**11 12 37.4 0.0**
	baz=102						
K15K	**Wolf Creek Mou**	**71.15**	**332**	P		**P**	**11 12 38.1 +0.4**
	baz=99						
A21K	**Barrow**	**71.24**	**342**	P		**P**	**11 12 37.5 -0.6**
	baz=106						
FALS	**False Pass**	**71.25**	**324**	P		**P**	**11 12 38.6 +0.2**
	baz=95						
G17K	**Kiwalik Mounta**	**71.31**	**335**	P		**P**	**11 12 39.1 +0.5**
	baz=101						
L14K	**Kuka Creek**	**71.56**	**331**	P		**P**	**11 12 40.6 +0.5**
	baz=97						
C19K	**Lookout Ridge**	**71.65**	**339**	P		**P**	**11 12 41.6 +1.0**
	baz=103						
E18K	**Tukpahlearik C**	**71.67**	**337**	P		**P**	**11 12 40.6 -0.1**
	baz=101						
F17K	**Baldwin Pennin**	**71.73**	**336**	P		**P**	**11 12 41.5 +0.4**
	baz=100						
M13K	**Dall Lake**	**71.77**	**330**	P		**P**	**11 12 41.6 +0.2**
	baz=96						
H16K	**Elim**	**71.83**	**334**	P		**P**	**11 12 42.2 +0.5**
	baz=99						
G16K	**Koyuk River**	**72.00**	**335**	P		**P**	**11 12 43.3 +0.6**
	baz=99						
E17K	**Hotham Inlet**	**72.07**	**337**	P		**P**	**11 12 43.2 +0.1**
	baz=100						
C18K	**Utukok River**	**72.13**	**338**	P		**P**	**11 12 43.2 -0.3**
	baz=101						
J14K	**Nanvaranak Lak**	**72.14**	**332**	P		**P**	**11 12 44.2 +0.6**
	baz=97						
B18K	**Kokolik River**	**72.48**	**339**	P		**P**	**11 12 46.1 +0.6**
	baz=101						
G15K	**Niukluk**	**72.64**	**334**	P		**P**	**11 12 47.3 +0.8**
	baz=97						
D17K	**Noatak River**	**72.65**	**337**	P		**P**	**11 12 46.5 -0.1**
	baz=99						
C17K	**DeLong Mountai**	**72.81**	**338**	P		**P**	**11 12 47.2 -0.4**
	baz=99						
F15K	**North Star Dit**	**72.99**	**335**	IAmb		IAmb	11 13 05.2
	comp=Z,20nm,1.1s						
F15K	**North Star Dit**	**72.99**	**335**	P		**P**	**11 12 49.1 +0.5**
	baz=97						
UNV	**Unalaska Valle**	**73.00**	**323**	P		**P**	**11 12 49.4 +0.5**
	baz=92						
C16K	**Lisburne Hills**	**73.58**	**338**	P		**P**	**11 12 52.5 +0.5**
	baz=97						
F14K	**Arctic Creek**	**73.66**	**335**	P		**P**	**11 12 53.1 +0.5**
	baz=95						
TNA	**Tin City**	**74.33**	**335**	P		**P**	**11 12 57.4 +1.0**
	baz=94						
NIKH	**Nikolski High**	**74.40**	**322**	P		**P**	**11 12 58.1 +1.0**
	baz=90						
JMIC	**Jan Mayen**	**74.76**	**20**	LR		LR	11 44 43.6
	comp=Z,198nm,19.3s,baz=94,slow=35						
SPIA	**Saint Paul Isl**	**75.17**	**326**	P		**P**	**11 13 02.9 +1.4**
	baz=90						
GAMB	**Gambell**	**75.89**	**333**	P		**P**	**11 13 06.6 +1.2**
	baz=90						
EKA	**Eskdalemuir Ar**	**76.88**	**36**	P		**P**	**11 13 07.9 -3.3**
	comp=Z,1.1nm,0.6s,baz=264,slow=4.7,SNR=3.8						
EKA				pP		**pP**	**11 13 27.0 -0.5**
	comp=Z,2.3nm,0.7s,baz=282,slow=5.6,SNR=3.0						
	comp=Z,1.1nm,0.6s						
ESDC	**Sonseca Array**	**77.63**	**52**	P		**P**	**11 13 13.4 -2.4**
	comp=Z,0.4nm,0.4s,baz=283,slow=6.3,SNR=2.6						
ESDC				pP		**pP**	**11 13 30.0 -2.1**
	comp=Z,2.9nm,1.0s,baz=286,slow=5.4,SNR=5.3						
ESDC				LR		LR	11 46 34.2
	comp=Z,47nm,18.3s,baz=290,slow=35						
	comp=Z,0.4nm,0.4s						
RAR	**Rarotonga**	**77.92**	**245**	LR		LR	11 39 26.1
	comp=Z,74nm,21.5s,baz=66,slow=29						
MDT	**Midelt**	**77.92**	**59**	LR		LR	11 41 30.2
	comp=Z,171nm,19.6s,baz=308,slow=31						
PMSA	**Palmer Station**	**79.33**	**170**	LR		LR	11 43 34.6
	comp=Z,104nm,18.6s,baz=282,slow=32						
SPITS	**Spitsbergen Ar**	**80.66**	**12**	LR		LR	11 52 42.4
	comp=Z,169nm,19.1s,baz=191,slow=38						
DBIC	**Dimboko**	**82.08**	**85**	LR		LR	11 43 58.3
	comp=Z,85nm,21.5s,baz=307,slow=31						
NOA	**NORSAR Array B**	**83.54**	**29**	LR		LR	11 54 36.4
	comp=Z,49nm,18.1s,baz=285,slow=38						
BILL	**Bilibino**	**84.08**	**339**	P		**P**	**11 13 49.4 -0.1**
BILL				IAmb		IAmb	11 14 05.5
	comp=Z,19nm,1.3s						
ARCES	**ARCESS Array B**	**86.23**	**19**	P		**P**	**11 13 59.4 -0.9**
	comp=Z,2.4nm,0.8s,baz=302,slow=5.2,SNR=6.2						
ARCES				LR		LR	11 51 45.2
	comp=Z,142nm,19.2s,baz=278,slow=35						
	comp=Z,2.4nm,0.8s						
DAVOX	**Davos/Dischmat**	**86.33**	**43**	LR		LR	11 46 49.7
	comp=Z,128nm,20.1s,baz=326,slow=32						
TORD	**Torodi Ar. Bea**	**87.06**	**77**	LR		LR	11 48 11.5
	comp=Z,109nm,19.6s,baz=313,slow=32						
GERES	**GERESS Array B**	**88.25**	**40**	LR		LR	11 49 13.6
	comp=Z,110nm,18.3s,baz=332,slow=33						
KEST	**Kesra**	**88.71**	**54**	LR		LR	11 49 47.5
	comp=Z,62nm,18.9s,baz=262,slow=33						
VRAC	**Vranov**	**89.91**	**39**	LR		LR	11 51 10.6
	comp=Z,150nm,21.1s,baz=345,slow=33						
VAE	**Valguarnera**	**92.15**	**51**	LR		LR	11 51 31.8
	comp=Z,174nm,18.2s,baz=312,slow=33						
TIXI	**Tiksi**	**92.31**	**349**	P		**P**	**11 14 27.9 -1.0**
TIXI				IAmb		IAmb	11 14 28.3
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**92.31**	**349**	LR		LR	11 59 23.0
	comp=Z,42nm,20.0s,baz=30,slow=38						
MA2	**Magadan**	**93.95**	**334**	LR		LR	12 01 41.5
	comp=Z,63nm,18.7s,baz=40,slow=38						
YAK	**Yakutsk**	**99.87**	**343**	LR		LR	12 08 47.5
	comp=Z,42nm,18.6s,baz=336,slow=40						
BOSA	**Boshof**	**116.42**	**116**	PKP		**PKPdf**	**11 20 01.8 -1.6**
	comp=Z,1.8nm,0.7s,baz=262,slow=1.8,SNR=7.6						
BOSA				pPKP		pPKPdf	11 20 19.9 -0.7
	comp=Z,2.4nm,0.8s,baz=66,slow=0.7,SNR=2.4						
SONM	**Songino Array**	**118.40**	**349**	PKP		**PKPdf**	**11 20 06.3 -0.5**
	comp=Z,1.0nm,0.6s,baz=343,slow=1.3,SNR=9.7						
SONM				pPKP		**pPKPdf**	**11 20 22.4 -1.6**
	comp=Z,1.0nm,0.8s,baz=32,slow=0.7,SNR=4.6						

XLT	**XiLinHaoTe**	**119.53**	**340**	*e*PKP		**PKPdf**	**11 20 08.5 -0.5**
XLT				sPKP			11 20 23.5
XLT				PP		PP	11 21 39.3 +8.9
XLT				PKS		PKSdf	11 23 35.8 -10
XLT				AMB		AMB	
	comp=Z,120nm,9.8s						
KSRS	**Korea Array**	**119.72**	**327**	PKP		**PKiKP**	**11 20 09.8 +0.4**
	comp=Z,4.9nm,0.6s,baz=5.8,slow=1.8,SNR=24						
KSRS				pPKP		**pPKPdf**	**11 20 25.8 -0.7**
	comp=Z,3.2nm,0.7s,baz=9.2,slow=2.2,SNR=7.7						
KSAR	**Wonju Array Be**	**119.75**	**327**	PKPdf		**PKPdf**	**11 20 09.7 +0.2**
MKAR	**Makanchi Array**	**120.22**	**8**	PKPdf		**PKPdf**	**11 20 08.7 -1.5**
MKAR	**Makanchi Array**	**120.22**	**8**	PKP		**PKPdf**	**11 20 08.1 -2.0**
	comp=Z,0.3nm,0.7s,baz=48,slow=1.8,SNR=4.5						
WMQ	**Urumqi**	**123.68**	**4**	*e*P		**PKiKP**	**11 20 17.3 +0.1**
HHC	**Hu-ho-hao-te**	**123.72**	**342**	*e*P		**PKiKP**	**11 20 21.6 +4.2**
GTA	**Gaotai**	**127.68**	**352**	PKP		**PKPdf**	**11 20 25.1 +0.3**
GTA				sPKP			11 20 40.8
NJ2	**Nanjing**	**128.56**	**330**	*e*P		**PKiKP**	**11 20 27.4 +0.3**
NJ2				pmax		pmax	
	comp=Z,7.0nm,0.5s						
NJ2				pmax		pmax	
	comp=Z,230nm,9.3s						
STKA	**Stephens Creek**	**130.59**	**239**	PKP		**PKiKP**	**11 20 31.0 -0.2**
	comp=Z,2.5nm,0.7s,baz=58,slow=4.5,SNR=5.1						
XAN	**Xi'an**	**130.80**	**341**	⇑PKP		**PKiKP**	**11 20 32.3 +0.6**
GYA	**Guiyang**	**138.53**	**340**	*e*P		**PKPdf**	**11 20 46.3 +0.8**
GYA				pmax		pmax	
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**138.62**	**254**	PKPdf		**PKPdf**	**11 20 46.3 +0.6**
WRAB	**Tennant Creek**	**138.63**	**254**	PKPdf		**PKPdf**	**11 20 47.0 +1.3**
WRA	**Warramunga Arr**	**138.64**	**254**	PKhKP		PKPpre	11 20 37.5
	comp=Z,0.9nm,0.7s,baz=93,slow=3.3,SNR=8.0						
WRA				PKP		**PKPdf**	**11 20 46.6 +1.0**
	comp=Z,3.9nm,0.6s,baz=90,slow=2.1,SNR=29						
WRA				pPKP		pPKPdf	11 21 03.4 +0.5
	comp=Z,3.5nm,0.8s,baz=89,slow=2.7,SNR=5.0						
AS31	**Alice Springs**	**138.68**	**249**	PKPdf		**PKPdf**	**11 20 45.7 0.0**
ASAR	**Alice Springs**	**138.68**	**249**	PKhKP		PKPpre	11 20 35.3
	comp=Z,1.0nm,0.7s,baz=108,slow=3.2,SNR=7.6						
ASAR				PKP		**PKPdf**	**11 20 45.9 +0.2**
	comp=Z,1.0nm,0.7s,baz=107,slow=3.3,SNR=5.3						
ASAR				pPKP		pPKPdf	11 21 02.1 -0.8
	comp=Z,2.3nm,0.7s,baz=87,slow=2.3,SNR=6.1						
PZH	**PanZhiHua**	**139.90**	**346**	PKP		**PKPdf**	**11 20 47.6 -0.4**
KMI	**Kunming**	**140.97**	**344**	⇑PKP		**PKPdf**	**11 20 50.9 +0.8**
KMI				pPKP		pPKPdf	11 21 06.8 -0.5
KNRA	**Kununurra**	**144.08**	**261**	PKPdf		**PKPdf**	**11 20 56.1 +0.6**
SLVN	**Son La**	**144.20**	**341**	PKPdf		**PKPdf**	**11 20 55.4 -0.3**
RER	**Riviere de l'E**	**144.53**	**109**	PKPdf		**PKPdf**	**11 20 56.5 +0.2**
MND	**Mandalay**	**145.29**	**353**			**PKPbc**	**11 20 55.8 -1.5**
CRAI	**Chiangrai**	**146.26**	**345**			**PKPbc**	**11 21 00.1 -0.3**
LUWI	**Luwuk**	**147.23**	**288**	PKPbc		**PKPbc**	**11 21 04.2 +0.9**
CHTO	**Chiang Mai**	**147.96**	**347**	PKPbc		**PKPbc**	**11 21 04.5 -0.6**
SOEI	**Soe**	**148.05**	**272**			**PKPab**	**11 21 08.4 -0.2**
TOLI2	**Tolitoli**	**148.17**	**293**	PKPbc		**PKPbc**	**11 21 06.5 +0.6**
CM31	**Chiang Mai Arr**	**148.30**	**347**	PKPbc		**PKPbc**	**11 21 05.6 -0.5**
CMAR	**Chiang Mai Arr**	**148.30**	**347**	PKPbc		**PKPbc**	**11 21 06.1 +0.1**
CMAR	**Chiang Mai Arr**	**148.30**	**347**	PKPbc		**PKPdf**	**11 21 03.4 +0.7**
	comp=Z,9.0nm,0.7s,baz=332,slow=2.6,SNR=28						
DLV	**T Lat**	**150.49**	**325**			**PKPbc**	**11 21 12.3 +0.4**
PSA00	**Pilbara Seismi**	**151.82**	**248**	PKPbc		**PKiKP**	**11 21 15.7 +0.8**

NAO ***16*** *11:21:02.1,37.˚26N×18.˚47E,h33km,mb3.6*
ROM ***16*** *11:21:48.5±0.2,39.˚780N±0.˚007×15.˚57E±0.˚02, h294km±1km,ML4.0/148,Error ellipse: s-maj=1.4km s-min=0.7km az=97.0*
LDG ***16*** *11:21:49.0±0.0,39.˚83N×15.˚44E,h283km,Ml3.3/11,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
MOS ***16*** *11:21:50.7±0.9,39.˚87N×15.˚37E,h293km,mb4.4/27,Error ellipse: s-maj=5.8km s-min=3.7km az=65.3*
NEIC ***16*** *11:21:51.2±1.4,39.˚83N±0.˚06×15.˚41E±0.˚07,h282km±5km, mb4.4/102,Error ellipse: s-maj=8.9km s-min=8.4km az=174.0*
IDC ***16*** *11:21:51.4±0.6,39.˚91N×15.˚35E,h285km±8km,mb3.7/28, mbtmp4.3/42,Error ellipse: s-maj=8.2km s-min=7.4km az=180.0*

ISC 16 11:21:50.6±0.5,39.˚86N±0.˚04×15.˚46E±0.˚03,h277km±5km, n598,σ1$14/646,mb4.3/88,50C-68D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h	m	s	Res ISC
MGR	**Morigerati**	**0.29**	**15**	⇓P		**Pn**	**11 22 27.1 +1.0**				
MGR				S		**S**	**11 22 55.1 +0.9**				
MGR				AML		AML					
	comp=E,996μm,0.9s										
MGR				AML		AML					
	comp=N,1100μm,0.5s										
MGR				AML		AML					
	comp=E,924μm,0.8s										
MGR				AML		AML					
	comp=E,924μm,0.8s										
MGR				AML		AML					
	comp=N,994μm,0.5s										
MGR				AML		AML					
	comp=E,924μm,1.2s										
CUC	**Castrocucco**	**0.31**	**63**			**Pn**	**11 22 26.9 +0.7**				
CUC				Sn		**S**	**11 22 54.9 +0.6**				
CUC	**Castrocucco**	**0.31**	**63**	⇓P		**Pn**	**11 22 26.9 +0.7**				
CUC				S		**S**	**11 22 54.7 +0.4**				
CUC				AML		AML					
	comp=N,807μm,0.4s										
CUC				AML		AML					
	comp=E,926μm,0.3s										
CUC				AML		AML					
	comp=E,754μm,0.9s										
CUC				AML		AML					
	comp=N,653μm,0.3s										
CUC				AML		AML					
	comp=N,808μm,0.4s										
CUC				AML		AML					
	comp=E,926μm,1.7s										
GRIS	**Grisolia**	**0.33**	**110**	⇓P		**Pn**	**11 22 26.6 +0.3**				
GRIS				S		**S**	**11 22 55.1 +0.7**				
SIRI	**Monte Sirino -**	**0.46**	**44**	⇓P		**Pn**	**11 22 27.2 +0.7**				
SIRI				AML		AML					
	comp=N,1215μm,1.0s										
SIRI				AML		AML					
	comp=E,1130μm,0.3s										
SIRI				AML		AML					
	comp=N,1230μm,1.0s										
SIRI				AML		AML					
	comp=N,1215μm,1.0s										
SIRI				AML		AML					
	comp=E,1110μm,0.3s										
SIRI				AML		AML					
	comp=N,1230μm,1.0s										
MTSN	**Montesano sull**	**0.47**	**29**	⇓P		**Pn**	**11 22 27.2 +0.7**				
MTSN				AML		AML					
	comp=E,798μm,0.5s										
MTSN				AML		AML					
	comp=N,698μm,0.4s										
CMPR	**Campora**	**0.48**	**346**	⇓P		**Pn**	**11 22 27.6 +1.0**				
CMPR				S		**S**	**11 22 55.8 +0.8**				
CMPR				AML		AML					
	comp=E,384μm,1.3s										
CMPR				AML		AML					
	comp=E,384μm,0.7s										
CMPR				AML		AML					
	comp=N,512μm,1.2s										
CET2	**Cetraro**	**0.50**	**130**	⇓P		**Pn**	**11 22 27.1 +0.4**				
CET2				S		**S**	**11 22 54.6 -0.6**				
CET2				AML		AML					
	comp=N,5035μm,0.9s										
CET2				AML		AML					
	comp=E,4900μm,0.9s										
CET2				AML		AML					
	comp=N,5030μm,0.9s										
CET2				AML		AML					
	comp=E,4900μm,1.1s										
CET2				AML		AML					
	comp=N,5030μm,1.1s										
MCEL	**Monticello**	**0.54**	**29**	P		**Pn**	**11 22 28.0 +1.3**				
MCEL				S		**S**	**11 22 57.0 +1.7**				
MCEL				AML		AML					
	comp=E,1505μm,0.6s										
MCEL				AML		AML					
	comp=E,1510μm,0.6s										
MCEL				AML		AML					
	comp=E,1500μm,0.6s										
MCEL				AML		AML					
	comp=N,1180μm,0.6s										
MCEL				AML		AML					
	comp=N,1210μm,0.6s										
MCEL				AML		AML					
	comp=E,1500μm,1.4s										
MCEL				AML		AML					
	comp=E,1510μm,1.4s										
SLCN	**Sala Consilina**	**0.55**	**14**	⇓P		**Pn**	**11 22 27.8 +1.0**				
SLCN				AML		AML					
	comp=N,1140μm,0.3s										
SLCN				AML		AML					
	comp=E,1545μm,0.3s										
SLCN				AML		AML					
	comp=N,1188μm,0.3s										
SLCN				AML		AML					
	comp=N,1140μm,0.3s										
SLCN				AML		AML					
	comp=E,1545μm,1.7s										
SLCN				AML		AML					
	comp=E,1355μm,0.4s										
VGG3	**Viggiano (Prot**	**0.59**	**35**	P		**Pn**	**11 22 29.0 +2.1**				
MRN3	**Marsico Nuovo**	**0.61**	**20**	P		**Pn**	**11 22 27.8 +0.9**				
SRN3	**Sant'Arsenio**	**0.63**	**0**	⇓P		**Pn**	**11 22 28.3 +1.2**				
CDRU	**Civita di Ruta**	**0.65**	**350**	⇓P		**Pn**	**11 22 28.1 +1.1**				
CDRU				S		**S**	**11 22 57.1 +1.1**				
CDRU				AML		AML					
	comp=E,390μm,0.3s										
CDRU				AML		AML					
	comp=N,229μm,0.4s										
SALB	**San Lorenzo Be**	**0.69**	**88**	⇓P		**Pn**	**11 22 27.8 +0.5**				
SALB				S		**S**	**11 22 56.6 +0.3**				
SALB				AML		AML					
	comp=E,900μm,0.3s										
SALB				AML		AML					
	comp=N,908μm,0.3s										
SALB				AML		AML					
	comp=N,908μm,0.3s										
CAGG	**Caggiano**	**0.70**	**3**	⇓P		**Pn**	**11 22 28.7 +1.4**				
CAGG				S		**S**	**11 22 58.5 +2.1**				
TDS	**Terranova Siba**	**0.71**	**106**	⇓P		**Pn**	**11 22 28.3 +1.1**				
TDS				S		**S**	**11 22 57.4 +1.2**				
TDS				AML		AML					
	comp=N,706μm,1.0s										
TDS				AML		AML					
	comp=E,408μm,1.2s										
VDP3	**Vietri Di Pote**	**0.76**	**7**	P		**Pn**	**11 22 28.9 +1.5**				
ORI	**Oriolo Calabro**	**0.79**	**74**	⇓P		**Pn**	**11 22 28.4 +0.8**				
ORI				S		**S**	**11 22 57.6 +0.9**				
ORI				AML		AML					
	comp=E,3335μm,0.3s										
ORI				AML		AML					
	comp=N,2775μm,1.4s										
ORI				AML		AML					
	comp=N,2775μm,0.6s										
PTRP	**Pietrapertosa**	**0.81**	**35**	⇓P		**Pn**	**11 22 28.4 +0.7**				
PTRP				AML		AML					
	comp=N,366μm,0.8s										
PTRP				AML		AML					
	comp=E,339μm,0.5s										
PZUN	**Potenza**	**0.83**	**19**	P		**Pn**	**11 22 28.4 +0.8**				
CAR1	**CAROLEI**	**0.84**	**136**	⇓P		**Pn**	**11 22 27.7 -0.2**				
CAR1				S		**S**	**11 22 55.7 -1.6**				
CAR1				AML		AML					
	comp=E,5435μm,0.9s										
CAR1				AML		AML					
	comp=E,3820μm,0.9s										
CAR1				AML		AML					
	comp=N,4490μm,0.5s										
CAR1				AML		AML					
	comp=N,5395μm,0.8s										
SCL3	**Muro Lucano (S**	**0.84**	**3**	P		**Pn**	**11 22 29.1 +1.4**				
SPS2	**Spezzano della**	**0.88**	**129**	⇓P		**Pn**	**11 22 28.1 0.0**				
SPS2				S		**S**	**11 22 57.4 -0.3**				
SPS2				AML		AML					
	comp=N,922μm,0.6s										
SPS2				AML		AML					
	comp=E,761μm,0.5s										
SPS2				AML		AML					
	comp=N,922μm,1.4s										
MRLC	**Muro Lucano**	**0.90**	**2**	⇓P		**Pn**	**11 22 29.2 +1.2**				
MRLC				AML		AML					
	comp=E,266μm,0.4s										
MRLC				AML		AML					
	comp=N,364μm,1.0s										
MRLC				AML		AML					
	comp=N,364μm,1.0s										
MRLC				AML		AML					
	comp=E,266μm,1.6s										
SNR3	**Senerchia**	**0.90**	**347**	P		**Pn**	**11 22 29.4 +1.4**				
CRAC	**Craco**	**0.91**	**56**	⇓P		**Pn**	**11 22 28.6 +0.6**				
CRAC				AML		AML					
	comp=E,720μm,0.5s										
CRAC				AML		AML					
	comp=N,721μm,1.1s										
CRAC				AML		AML					
	comp=N,721μm,0.9s										
MCRV	**Calabrutti - M**	**0.95**	**347**	⇓P		**Pn**	**11 22 29.6 +1.3**				
MCRV				AML		AML					
	comp=E,284μm,0.3s										
MCRV				AML		AML					
	comp=N,334μm,0.3s										
CSG3	**Toppo Di Caste**	**0.96**	**0**	P		**Pn**	**11 22 29.7 +1.3**				
ACER	**Acerenza**	**1.00**	**22**	⇓P		**Pn**	**11 22 28.8 +0.3**				
ACER				AML		AML					
	comp=N,394μm,1.1s										
ACER				AML		AML					
	comp=E,559μm,1.0s										
ACER				AML		AML					
	comp=N,356μm,1.1s										
ACER				AML		AML					
	comp=N,394μm,0.9s										
ACER				AML		AML					
	comp=E,528μm,1.0s										
ACER				AML		AML					
	comp=N,356μm,0.9s										
RDM3	**Ruvo Del Monte**	**1.02**	**3**	P		**Pn**	**11 22 30.2 +1.6**				
NSC3	**Nusco**	**1.02**	**346**	⇓P		**Pn**	**11 22 29.9 +1.1**				
LIO3	**Lioni**	**1.06**	**349**	P		**Pn**	**11 22 29.9 +1.1**				
MIGL	**Miglionico**	**1.06**	**45**	P		**Pn**	**11 22 28.9 +0.1**				
MIGL				AML		AML					
	comp=E,1036μm,0.8s										
MIGL				AML		AML					
	comp=N,1545μm,1.6s										
MIGL				AML		AML					
	comp=N,1545μm,0.4s										
MIGL				AML		AML					
	com

PALZ AML AML
comp=E,473µm,0.8s
CAFE Carife 1.18 352 ⇓P **Pn** 11 22 31.1 +1.6
CAFE AML AML
comp=N,240µm,1.6s
CAFE AML AML
comp=E,328µm,0.6s
TIP Timpagrande 1.21 123 ⇓P **Pn** 11 22 30.3 +0.5
TIP Timpagrande 1.21 123 Pn **Pn** 11 22 30.3 +0.5
TIP Sn **S** 11 22 60.0 -0.8
TIP Timpagrande 1.21 123 ⇓P **Pn** 11 22 30.3 +0.5
TIP S **S** 11 23 00.0 -0.8
TIP AML AML
comp=E,896µm,0.6s
TIP AML AML
comp=N,656µm,0.6s
TIP AML AML
comp=E,1092µm,0.6s
TIP AML AML
comp=N,656µm,1.4s
TIP AML AML
comp=E,897µm,0.6s
TIP AML AML
comp=N,797µm,0.6s
MATE Matera 1.24 50 ⇓P **Pn** 11 22 30.1 +0.4
MATE Matera 1.24 50 ⇓P **Pn** 11 22 29.9 +0.2
MATE S **S** 11 23 00.1 -0.6
MATE AML AML
comp=N,1042µm,0.9s
MATE AML AML
comp=E,826µm,0.4s
SERS Sersale 1.26 130 ⇓P **Pn** 11 22 30.5 +0.4
SERS S **S** 11 23 00.1 -1.3
SERS AML AML
comp=E,1870µm,1.4s
SERS AML AML
comp=N,2505µm,0.2s
SERS AML AML
comp=N,2505µm,1.8s
SERS AML AML
comp=N,1820µm,0.4s
SERS AML AML
comp=E,2435µm,0.2s
SERS AML AML
comp=E,1870µm,0.6s
GRI Girifalco 1.27 144 ⇑P **Pn** 11 22 30.7 +0.5
GRI S **S** 11 23 00.6 -0.8
GRI AML AML
comp=E,3585µm,1.5s
GRI AML AML
comp=E,3585µm,0.5s
GRI AML AML
comp=N,3740µm,0.6s
SGTA Sant Agata di 1.28 357 P **Pn** 11 22 31.4 +1.3
SGTA AML AML
comp=N,190µm,0.7s
SGTA AML AML
comp=E,356µm,0.7s
JOPP Joppolo 1.29 165 ⇓P **Pn** 11 22 29.7 -0.5
JOPP S **S** 11 22 59.6 -2.0
JOPP AML AML
comp=N,4015µm,1.0s
JOPP AML AML
comp=N,4015µm,1.0s
JOPP AML AML
comp=E,4205µm,0.4s
LADO San Nicola del 1.31 115 ⇓P **Pn** 11 22 30.6 +0.3
LADO S **S** 11 23 00.9 -0.8
LADO AML AML
comp=N,101µm,0.3s
LADO AML AML
comp=E,208µm,0.3s
LADO AML AML
comp=E,208µm,1.7s
LADO AML AML
comp=N,101µm,1.7s
MRB1 Monte Rocchett 1.32 344 P **Pn** 11 22 31.7 +1.4
MRVN Minervino Murg 1.33 25 ⇓P **Pn** 11 22 30.7 +0.4
MRVN AML AML
comp=E,573µm,1.5s
MRVN AML AML
comp=N,174µm,0.8s
PAOL Paolisi 1.36 330 **Pn** 11 22 32.3 +1.8
PAOL Paolisi 1.36 330 P **Pn** 11 22 32.0 +1.5
AMUR Altamura 1.37 39 ⇓P **Pn** 11 22 31.1 +0.5
AMUR S **S** 11 23 01.8 -0.5
AMUR AML AML
comp=E,740µm,0.6s
AMUR AML AML
comp=N,540µm,0.6s
PSB1 Pescosannita 1.45 340 P **Pn** 11 22 32.4 +1.3
LLI Lipari 1.46 196 P **Pn** 11 22 32.4 +1.1
IFIL Filicudi I Eol 1.46 208 P **Pn** 11 22 31.8 +0.5
VITU Vitulano (BN) 1.47 335 P **Pn** 11 22 32.8 +1.5
IFOR Ischia Forio P 1.49 305 P **Pn** 11 22 32.7 +1.3
IVGP Vulcano Grotta 1.51 195 P **Pn** 11 22 32.5 +0.9
VPL Vulcano Piano 1.52 194 P **Pn** 11 22 32.8 +1.0
VPL AML AML
comp=E,778µm,0.7s
VPL AML AML
comp=N,960µm,0.5s
MOCO Biccari - m.te 1.53 352 P **Pn** 11 22 33.1 +1.4
TAR1 Taranto 1.55 64 ⇓P **Pn** 11 22 31.9 +0.1
TAR1 S **S** 11 23 03.2 -1.2
TAR1 AML AML
comp=E,1086µm,1.2s
TAR1 AML AML
comp=N,909µm,0.6s
TAR1 AML AML
comp=N,909µm,1.4s
IACL Alicudi 1.57 213 ⇑P **Pn** 11 22 32.7 +0.7
MSRU Castanea 1.59 179 P **Pn** 11 22 31.6 -0.6
MSRU S **S** 11 23 03.2 -2.0
MSRU AML AML
comp=E,2915µm,1.1s
MSRU AML AML
comp=N,2610µm,1.3s
MSRU AML AML
comp=E,2915µm,0.9s
MILZ Milazzo 1.59 186 P **Pn** 11 22 32.5 +0.3
MILZ S **S** 11 23 04.5 -0.6
PLAC Placanica 1.60 151 ⇓P **Pn** 11 22 31.9 -0.5
PLAC S **S** 11 23 03.3 -2.1
PLAC AML AML
comp=E,2285µm,0.6s
PLAC AML AML
comp=E,5030µm,0.3s
PLAC AML AML
comp=N,2250µm,1.4s
PLAC AML AML
comp=N,4825µm,0.3s
CEL Celeste 1.63 168 **Pn** 11 22 31.7 -0.8
CEL Sn **S** 11 23 03.1 -2.7
CEL Celeste 1.63 168 P **Pn** 11 22 31.5 -1.0
CEL S **S** 11 23 02.9 -2.9
CEL AML AML
comp=E,1222µm,1.0s
CEL AML AML
comp=E,1500µm,1.0s
CEL AML AML
comp=N,1615µm,0.5s
CEL AML AML
comp=E,1222µm,1.0s
CEL AML AML
comp=N,1320µm,0.5s
CEL AML AML
comp=N,1615µm,1.5s
CEL AML AML
comp=N,1320µm,1.5s
SACR S. Croce Del S 1.64 340 P **Pn** 11 22 34.3 +1.8
PIGN Pignataro Magg 1.66 325 P **Pn** 11 22 34.0 +1.5
PTRJ Pietraroja 1.67 335 P **Pn** 11 22 34.7 +1.9
GATE Gambatesa 1.71 346 P **Pn** 11 22 35.1 +2.1
MPNC Port Mandanici 1.71 183 P **Pn** 11 22 32.3 -0.8
MPNC AML AML
comp=E,3145µm,0.8s
MPNC AML AML
comp=N,3205µm,0.9s
SGG Gregorio Mates 1.74 332 P **Pn** 11 22 34.9 +1.6
MODR Mondragone 1.76 317 P **Pn** 11 22 34.1 +0.7
BSSO Busso 1.81 339 P **Pn** 11 22 35.5 +1.6
VAGA Valle Agricola 1.81 330 P **Pn** 11 22 35.7 +1.9
VAGA AML AML
comp=E,101µm,1.3s
VAGA AML AML
comp=N,148µm,1.4s
VAGA AML AML
comp=N,148µm,0.6s
VENT Ventotene 1.82 302 ⇑P **Pn** 11 22 35.2 +1.5
SOI Samo 1.84 165 P **Pn** 11 22 33.7 -0.4
SOI AML AML
comp=E,996µm,0.5s
SOI AML AML
comp=N,926µm,0.6s
NOV Novara 1.84 188 ⇓P **Pn** 11 22 34.7 +0.5
NOV S **S** 11 23 08.9 +0.2
NOV AML AML
comp=E,2085µm,0.9s
NOV AML AML
comp=N,2495µm,0.7s
NOV AML AML
comp=N,2495µm,1.3s
CIGN Sant'Elia a Pi 1.85 347 P **Pn** 11 22 35.2 +1.2
MTTG Motta San Giov 1.86 174 P **Pn** 11 22 34.1 -0.2
MTTG AML AML
comp=E,1920µm,0.5s
MTTG AML AML
comp=N,2230µm,0.5s
MUCR Ucria 1.86 194 ⇑P **Pn** 11 22 34.7 +0.2
MUCR AML AML
comp=E,980µm,0.7s
MUCR AML AML
comp=N,875µm,0.8s
MUCR AML AML
comp=N,875µm,1.2s
MUCR AML AML
comp=E,980µm,1.3s
MSAG Monte S. Angel 1.89 10 ⇓P **Pn** 11 22 35.0 +0.5
AIO Antillo 1.89 185 P **Pn** 11 22 34.9 +0.3
AIO S **S** 11 23 09.7 +0.3
AIO AML AML
comp=E,1345µm,0.6s
AIO AML AML
comp=N,1230µm,1.6s
AIO AML AML
comp=E,1345µm,1.4s
AIO AML AML
comp=N,1230µm,0.4s
APRC Apricena 1.90 2 P **Pn** 11 22 35.0 +0.5
SGRT San Giovanni R 1.91 6 Pn **Pn** 11 22 34.9 +0.2
SGRT San Giovanni R 1.91 6 P **Pn** 11 22 34.5 -0.2
MSFR San Fratello 1.94 201 ⇑P **Pn** 11 22 35.7 +0.7
MSFR AML AML
comp=E,301µm,1.3s
MSFR AML AML
comp=N,202µm,1.6s
MSFR AML AML
comp=E,301µm,0.7s
MSFR AML AML
comp=N,202µm,0.4s
MESG Mesagne 1.97 67 ⇓P **Pn** 11 22 35.7 +0.6
MESG AML AML
comp=N,1295µm,0.2s
MESG AML AML
comp=E,1390µm,1.1s
MIDA Miranda 2.00 333 P **Pn** 11 22 37.4 +2.0
CERA Filignano 2.06 328 P **Pn** 11 22 37.0 +1.2
EMSG Monte Spagnolo 2.07 191 P **Pn** 11 22 38.1 +1.9
EMSG AML AML
comp=N,2560µm,0.6s
EMSG AML AML
comp=E,1915µm,0.5s
EPZF Pizzo Felice 2.08 193 P **Pn** 11 22 37.4 +1.2
RNI2 Rionero Sannit 2.09 332 P **Pn** 11 22 38.7 +2.6
USI Ustica 2.11 238 ⇑P **Pn** 11 22 36.9 +0.6
PLLN Pollina 2.12 209 ⇑P **Pn** 11 22 37.1 +0.6
PLLN AML AML
comp=E,1135µm,0.6s
PLLN AML AML
comp=N,912µm,0.6s
PLLN AML AML
comp=E,1135µm,1.4s
GIB Gibilmanna 2.17 211 ⇑P **Pn** 11 22 37.5 +0.5
GIB AML AML
comp=N,1330µm,0.7s
GIB AML AML
comp=E,956µm,0.5s
GIB AML AML
comp=N,1330µm,1.3s
CSLB Castelbuono 2.20 210 ⇑P **Pn** 11 22 37.7 +0.4
CSLB AML AML
comp=N,288µm,0.7s
CSLB AML AML
comp=N,288µm,1.3s
CSLB AML AML
comp=E,184µm,0.6s
GALF Gagliano Caste 2.25 198 P **Pn** 11 22 38.6 +0.9
GALF AML AML
comp=N,390µm,0.5s
GALF AML AML
comp=E,402µm,0.7s
PETRA Petralia Sopra 2.27 208 ⇑P **Pn** 11 22 38.9 +0.9
PETRA AML AML
comp=N,724µm,0.5s
PETRA AML AML
comp=E,698µm,0.5s
SOLUN Solunto 2.31 221 ⇑P **Pn** 11 22 38.9 +0.8
SOLUN AML AML
comp=N,339µm,1.0s
SOLUN AML AML
comp=N,339µm,1.0s
SOLUN AML AML
comp=E,286µm,0.9s
SCTE Santa Cesarea 2.33 84 Pn **Pn** 11 22 38.9 +0.7
SCTE Santa Cesarea 2.33 84 ⇓P **Pn** 11 22 38.8 +0.7
SCTE AML AML
comp=E,1475µm,0.7s
SCTE AML AML
comp=N,1290µm,0.4s
SCTE AML AML
comp=E,1475µm,1.3s
SCTE AML AML
comp=N,1290µm,1.6s
MPG Monte Pellegri 2.35 225 ⇑P **Pn** 11 22 39.2 +0.6
MPG AML AML
comp=E,596µm,0.8s
MPG AML AML
comp=N,872µm,0.7s
MPG AML AML
comp=E,596µm,1.2s
INTR Introdacqua 2.45 332 Pn **Pn** 11 22 41.5 +2.1
ALJA Alia 2.49 213 ⇑P **Pn** 11 22 41.2 +1.3
ALJA AML AML
comp=E,519µm,1.4s
ALJA AML AML
comp=E,519µm,0.6s
ALJA AML AML
comp=N,732µm,1.1s
VAE Valguarnera 2.51 199 P **Pn** 11 22 41.5 +1.5
comp=N,45nm,0.5s,baz=21,slow=3.2,SNR=19
VAE S **S** 11 23 22.8 +3.5
comp=N,56nm,0.8s,baz=338,slow=18,SNR=1.6
HLNI Lentini 2.54 191 P **Pn** 11 22 39.9 -0.4
HLNI AML AML
comp=E,452µm,1.5s
HLNI AML AML
comp=E,452µm,0.5s
HLNI AML AML
comp=N,252µm,1.1s
HAGA Augusta 2.58 185 P **Pn** 11 22 40.0 -0.6
CORL Corleone 2.58 221 ⇑P **Pn** 11 22 41.6 +0.9
CORL AML AML
comp=E,569µm,0.9s
CORL AML AML
comp=N,784µm,0.4s
AGST Augusta-Monte 2.60 184 P **Pn** 11 22 40.5 -0.3
SSY Sortino 2.71 186 P **Pn** 11 22 41.5 -0.5
SSY AML AML
comp=E,411µm,0.8s
SSY AML AML
comp=E,411µm,1.2s
SSY AML AML
comp=N,541µm,0.4s
RAFF Raffo Rosso 2.77 198 Pn **Pn** 11 22 43.1 +0.6
RAFF Raffo Rosso 2.77 198 ⇑P **Pn** 11 22 43.0 +0.6
RAFF AML AML
comp=N,487µm,1.0s
RAFF AML AML
comp=E,430µm,1.0s
CRJA Costa Raja 2.81 224 P **Pn** 11 22 44.2 +1.3
CRJA AML AML
comp=E,350µm,1.1s
CRJA AML AML
comp=N,190µm,0.6s
CRJA AML AML
comp=E,350µm,0.9s
CLTB Caltabellotta 2.87 218 **Pn** 11 22 44.1 +0.5
MMGO Monte Magaggia 2.92 222 ⇑P **Pn** 11 22 44.4 +0.3
MMGO AML AML
comp=E,129µm,1.5s
MMGO AML AML
comp=N,184µm,1.1s
CAMP Campotosto 3.09 331 **Pn** 11 22 48.4 +2.6
VLO Vlora 3.15 78 **Pn** 11 22 47.7 +1.4
VLO Vlora 3.15 78 AML AML
comp=N,922µm,1.1s
VLO AML AML
comp=E,814µm,0.3s
VLO AML AML
comp=N,922µm,0.9s
VLO Vlora 3.15 78 P **Pn** 11 22 47.7 +1.4
KEK Kerkira 3.35 91 Pn **Pn** 11 22 46.8 -1.6
KEK Kerkira 3.35 91 P **Pn** 11 22 46.7 -1.7
SRN Sarande 3.50 88 P **Pn** 11 22 50.5 +0.5
CESX Cesi 3.50 323 Pn **Pn** 11 22 52.1 +2.0
GUMA Gualdo di Mace 3.58 334 **Pn** 11 22 51.7 +0.8
TIR Tirane 3.67 65 ⇓P **Pn** 11 22 53.5 +1.6
TIR Tirane 3.67 65 **Pn** 11 22 53.3 +1.4
TIR Tirane 3.67 65 ⇓P **Pn** 11 22 53.5 +1.6
IGT Igoumenitsa 3.78 93 P **Pn** 11 22 53.8 +0.7
ZIRJ Zirje 3.80 2 *i* P **Pn** 11 22 53.5 +0.3
PUK Puka 4.01 56 **Pn** 11 22 57.4 +1.6
MORI Morici 4.01 3 *i* P **Pn** 11 22 55.9 +0.3
MURB Monte Urbino 4.05 328 **Pn** 11 22 57.9 +1.7
WDD Wied Dalam 4.08 191 Pn **Pn** 11 22 56.6 0.0
DRAG Dragano-Lefkad 4.14 105 P **Pn** 11 22 57.7 +0.4
DUGI Dugi Otok 4.14 356 *i* P **Pn** 11 22 57.4 +0.2
KEF3 Kipouria, Keph 4.15 112 P **Pn** 11 22 58.0 +0.6
KBN Korca 4.15 78 **Pn** 11 22 59.1 +1.7
KBN Korca 4.15 78 P **Pn** 11 22 59.1 +1.7
DMLN Damoulianata-K 4.16 111 P **Pn** 11 22 57.8 +0.4
TSLK Tsoukalades, L 4.16 103 P **Pn** 11 22 58.3 +0.8
LKD2 Lefkada island 4.17 103 P **Pn** 11 22 57.4 -0.2
FSK Fiskardo 4.21 108 P **Pn** 11 22 58.5 +0.5
KIJV Kijevo 4.21 9 *i* P **Pn** 11 22 58.6 +0.6
EVGI Lefkada island 4.22 105 P **Pn** 11 22 58.8 +0.6
NYDR Nydri-Lefkada 4.22 104 P **Pn** 11 22 58.6 +0.4
OHR Ohrid 4.26 71 P **Pn** 11 23 00.7 +2.0
OHR Ohrid 4.26 71 ⇓*i* Pn **Pn** 11 23 00.7 +2.0
OHR *e*Sg **S** 11 23 51.0 -2.0
VLS Valsamata 4.33 111 P **Pn** 11 22 59.6 +0.1
PSDA Pessada-Kefalo 4.36 112 P **Pn** 11 23 00.1 +0.4
VIRC Vir 4.45 356 *i* P **Pn** 11 23 01.5 +0.9
DGI Dorgali Grotta 4.51 278 P **Pn** 11 23 01.9 +0.4
CASP Castiglione de 4.53 312 **Pn** 11 23 03.4 +1.6
KPRO Kipouria 4.54 87 P **Pn** 11 23 03.8 +1.8
FNA Florina 4.62 77 Pn **Pn** 11 23 04.0 +1.2
FNA Florina 4.62 77 P **Pn** 11 23 03.8 +1.0
FNA Florina 4.62 77 P **Pn** 11 23 04.0 +1.2
VSL Villasalto 4.70 268 Pn **Pn** 11 23 04.7 +0.9
VSL Villasalto 4.70 268 ⇑P **Pn** 11 23 04.7 +0.9
LTHK Lithakia 4.72 115 P **Pn** 11 23 04.1 +0.2
NVLJ Novalja 4.72 355 *i* P **Pn** 11 23 04.9 +1.0
OSSC Osservatorio P 4.83 321 **Pn** 11 23 07.0 +1.8
RABC Rab 4.92 354 *i* P **Pn** 11 23 07.1 +1.0
PLIT Plitvice 5.02 1 *i* P **Pn** 11 23 08.7 +1.3
THL Klokotos Trika 5.07 91 P **Pn** 11 23 09.6 +1.6
KTI Kastanea 5.13 82 P **Pn** 11 23 10.0 +1.0
ANX Ano Chora 5.18 102 P **Pn** 11 23 11.4 +1.9
EFP Efpalio 5.21 104 P **Pn** 11 23 11.4 +1.6
TYRN Tyrnavos 5.22 89 P **Pn** 11 23 11.0 +1.1
DRO Drossia 5.24 109 P **Pn** 11 23 11.4 +1.3
MAKR Makrakomi, Fth 5.24 97 P **Pn** 11 23 12.2 +2.1
TRIZ Trizonia 5.36 104 P **Pn** 11 23 13.8 +2.3
AGG Agios Georgios 5.39 97 Pn **Pn** 11 23 13.7 +1.8
AGG Agios Georgios 5.39 97 P **Pn** 11 23 13.6 +1.7
AGG Agios Georgios 5.39 97 P **Pn** 11 23 13.7 +1.8
KLV Kalavryta, Ach 5.52 107 P **Pn** 11 23 15.2 +1.6
PGF Pioggiola 5.56 301 *e*P **Pn** 11 23 14.0 -0.1
PGF *e*Sn **S** 11 24 21.3 +0.3
comp=N,10nm,1.0s
VAY Valandovo 5.61 73 ⇓*i* Pn **Pn** 11 23 15.3 +0.7
VAY *e*Sg **S** 11 24 17.9 -4.0
BOJS Bojanci 5.65 359 *e*Pn **Pn** 11 23 15.7 +0.8
GBRS Gornja Briga 5.69 355 ⇑*i* Pn **Pn** 11 23 16.6 +1.1
GBRS *e*S **S** 11 24 22.5 -1.2
GUR Goura 5.70 107 P **Pn** 11 23 17.9 +2.1
KNDS Knezji Dol 5.72 352 ⇑*i* Pn **Pn** 11 23 16.6 +0.7
PYL PYLOS 5.75 119 P **Pn** 11 23 16.5 +0.1
KNT Kendrikon 5.82 75 P **Pn** 11 23 17.9 +0.8
MOSL Moslavina 5.83 9 *i* P **Pn** 11 23 17.0 -0.2
THAL Thalero 5.90 106 P **Pn** 11 23 19.4 +1.3
VISS Visnje 5.96 356 ⇑*i* Pn **Pn** 11 23 19.8 +1.0
BOVS Bovan 6.01 49 ⇑P **Pn** 11 23 20.0 +0.7
TEOL Teolo 6.17 334 Pn **Pn** 11 23 21.0 -0.2
FRGS Fruska Gora 6.20 30 ⇑P **Pn** 11 23 22.5 +0.9
SABO M.te Sabotino 6.27 348 Pn **Pn** 11 23 23.7 +1.1
MSSA Maissana 6.28 317 **Pn** 11 23 23.9 +1.2
KEST Kesra 6.35 232 Pn **Pn** 11 23 25.6 +1.8
KEST Kesra 6.35 232 P **Pn** 11 23 24.7 +0.9
comp=N,24nm,0.9s,baz=82,slow=7.1,SNR=22
KEST S **S** 11 24 40.4 +1.8
comp=N,3.4nm,0.8s,baz=80,slow=22,SNR=0.9
BLKB Belogradchik 6.58 53 ⇓P **Pn** 11 23 28.0 +1.6
KOKK Kokkinochori, 6.60 79 P **Pn** 11 23 27.1 +0.5
VLI Veliai 6.67 116 P **Pn** 11 23 29.1 +1.6
OBKA Obir 6.68 355 *i* Pn **Pn** 11 23 28.8 +1.1
comp=N,4.5nm,0.5s,SNR=9.6
STAL STALIGIAL 6.71 343 **Pn** 11 23 29.8 +1.8
PRED Cave del Predi 6.73 349 **Pn** 11 23 29.4 +1.2
MDVR Moldovita 6.76 41 ⇑P **Pn** 11 23 30.2 +1.5
MORH Mrgy, Hungar 6.77 19 ⇑P **Pn** 11 23 29.1 +0.5
CTI Castel Tesino 6.79 337 **Pn** 11 23 29.0 0.0
CTI Castel Tesino 6.79 337 P **Pn** 11 23 29.0 0.0
SALO Salr 6.81 329 Pn **Pn** 11 23 28.7 -0.5
VLY Voula,Athens 6.81 104 P **Pn** 11 23 29.9 +0.7
CIMO Cimolais 6.82 342 **Pn** 11 23 29.1 -0.2
SOKA Soboth 6.83 358 *i* Pn **Pn** 11 23 30.0 +0.6
comp=N,4.0nm,0.5s,SNR=8.1
MYKA Terra Mystica 6.90 350 *e*Pn **Pn** 11 23 33.2 +2.9
comp=N,2.0nm,0.3s
DJES Djerdap 7.11 45 Pn **Pn** 11 23 34.1 +1.3
SBF Sospel 7.20 306 *e*P **Pn** 11 23 34.2 +0.1
SBF *e*Sn **S** 11 24 57.7 +0.2
comp=N,4.8nm,0.5s
ABTA Abfaltersbach 7.22 344 *e*Pn **Pn** 11 23 35.3 +1.1
comp=N,6.0nm,0.5s,SNR=8.2
BZS Buzias 7.33 36 ⇑P **Pn** 11 23 36.7 +1.2
BZS Buzias 7.33 36 ⇑P **Pn** 11 23 36.7 +1.2
KBA Koelnbreinsper 7.38 349 *e*Pn **Pn** 11 23 39.2 +2.8
comp=N,5.1nm,0.5s,SNR=6.8
ARSA Arzberg 7.39 0 *e*Pn **Pn** 11 23 38.0 +1.6
comp=N,3.7nm,0.6s
LMR La Mourre 7.55 300 *e*P **Pn** 11 23 38.1 -0.3
LMR *e*Sn **S** 11 25 05.3 -0.1
comp=N,2.6nm,0.5s
ISO Isola 7.61 307 P **Pn** 11 23 40.7 +1.6
SURR Surduc 7.67 38 ⇓P **Pn** 11 23 40.6 +0.9
GZR Gura Zlata 7.73 42 ⇓P **Pn** 11 23 42.2 +1.6
FUORN Ofenpass-Fuorn 7.75 332 Pn **Pn** 11 23 42.0 +1.0
SIRR Siria 7.85 33 ⇑P **Pn** 11 23 43.3 +1.3
RONA Rosalia, Austr 7.87 4 *e*Pn **Pn** 11 23 43.2 +1.0
comp=N,24nm,1.5s,SNR=5.3
WTTA Wattenberg 7.91 341 *i* Pn **Pn** 11 23 46.1 +3.2
comp=N,3.5nm,0.5s
FETA Feichten 7.94 336 *e*Pn **Pn** 11 23 46.3 +3.0
comp=N,8.3nm,0.6s,SNR=14
TUE Stuetta 7.98 328 **Pn** 11 23 44.1 +0.3
SQTA Sankt Quirin 7.98 339 *e*Pn **Pn** 11 23 46.1 +2.4
comp=N,7.0nm,0.7s
WATA Walderalm 7.99 341 *e*Pn **Pn** 11 23 47.0 +3.1
comp=N,5.4nm,0.7s
DAVOX Davos/Dischmat 8.03 331 P **Pn** 11 23 45.4 +1.0
comp=N,5.6nm,0.5s,baz=156,slow=20,SNR=8.4
DAVOX S **S** 11 25 16.6 +0.2
comp=N,1.6nm,0.4s,baz=198,slow=20,SNR=1.3
MBDF Montbardon 8.07 310 *e*P **Pn** 11 23 45.6 +0.7
MBDF *e*Sn **S** 11 25 17.7 +0.3
comp=N,3.6nm,0.6s
CONA Conrad Observa 8.08 2 *i* Pn **Pn** 11 23 46.1 +1.2
comp=N,9.1nm,1.2s
MOTA Moosalm 8.12 339 *e*Pn **Pn** 11 23 48.2 +2.6
comp=N,8.2nm,0.7s

TATN	Tataouine	8.28	210		Pn		Pn	11 23 44.9	-2.7		
BNI	Bardonecchia	8.31	312		Pn		Pn	11 23 49.4	+1.5		
BNI	Bardonecchia	8.31	312		P		Pn	11 23 49.4	+1.5		
RETA	Reutte	8.35	338	*e*	Pn		Pn	11 23 49.4	+1.0		
	comp=N,3.2nm,0.7s										
APE	Apeiranthos	8.38	106	*i*	P		Pn	11 23 48.7	-0.1		
SMRF	Simiane la Rot	8.44	302	*e*	P		Pn	11 23 49.3	-0.1		
DAVA	Damuels	8.46	333	*i*	Pn		Pn	11 23 50.8	+1.1		
	comp=N,10.0nm,0.6s										
LPG	La Plagne	8.54	314	*e*	P		Pn	11 23 52.2	+1.3		
LPL	La Plagne	8.56	314	*e*	P		Pn	11 23 51.7	+0.6		
LPL				*e*	Sn		S	11 25 29.1	+0.5		
	comp=N,3.5nm,0.2s										
MODS	Modra-Piesok	8.62	8	*e*	P		Pn	11 23 52.2	+0.6		
MODS	Modra-Piesok	8.62	8	*e*	P		Pn	11 23 52.2	+0.6		
PSZ	Piszkesteto	8.67	20	⇑	P		Pn	11 23 52.8	+0.5		
PSZ	Piszkesteto	8.67	20		Pn		Pn	11 23 52.8	+0.5		
PSZ	Piszkesteto	8.67	20	⇑	P		Pn	11 23 52.8	+0.5		
ORIF	Oris-en-Rattie	8.71	309	*e*	P		Pn	11 23 53.2	+0.4		
ORIF				*e*	Sn		S	11 25 32.1	+0.3		
	comp=N,4.6nm,0.7s										
ARR	Arges	8.72	48	⇑	P		Pn	11 23 55.2	+2.3		
MARR	Marisel-Cluj	8.81	37	⇑	P		Pn	11 23 55.7	+1.6		
SENIN	Lac Senin/Sane	8.82	320		Pn		Pn	11 23 54.1	-0.3		
VYHS	Vyhne	8.97	15	*e*	P		Pn	11 23 56.5	+0.5		
VYHS	Vyhne	8.97	15	*e*	P		Pn	11 23 56.5	+0.5		
VOIR		9.00	49	⇓	P		Pn	11 23 58.2	+1.7		
VOIR		9.00	49	⇓	P		Pn	11 23 58.2	+1.7		
GEC2	GERESS Array S	9.08	353				Pn	11 23 57.6	+0.3		
GERES	GERESS Array B	9.08	353		Pn		Pn	11 23 57.2	-0.1		
GERES	GERESS Array B	9.08	353		P		Pn	11 23 57.5	+0.1		
	comp=N,1.0nm,0.5s,baz=159,slow=11,SNR=6.4										
JAVC	Velka Javorina	9.14	9	*e*	PN		Pn	11 23 59.4	+1.3		
KRUC	Moravsky	9.23	4	*e*	PN		Pn	11 24 00.2	+1.0		
KHC	Kasperske Hory	9.37	352		Pn		Pn	11 23 59.9	-1.0		
KHC	Kasperske Hory	9.37	352	*e*	P		P	11 24 12.2	+5.8		
KHC	Kasperske Hory	9.37	352		P		Pn	11 23 59.9	-1.0		
VIVF	Saint-Julien-l	9.41	306	*e*	P		Pn	11 24 00.9	-0.7		
VRAC	Vranov	9.49	5	⇑	P		Pn	11 24 04.0	+1.6		
VRAC	Vranov	9.49	5	*e*	PN		Pn	11 24 03.1	+0.7		
VRAC	Vranov	9.49	5	⇑	P		Pn	11 24 04.0	+1.6		
VRAC	Vranov	9.49	5		P		Pn	11 24 03.9	+1.6		
	comp=N,14nm,0.6s,baz=189,slow=12,SNR=14										
DOPR	Dopca	9.50	47	⇓	P		Pn	11 24 03.8	+1.1		
MLR	Muntele Rosu	9.56	50	⇑	P		P	11 24 06.7	-1.9		
MLR	Muntele Rosu	9.56	50		Pn		Pn	11 24 03.9	+0.5		
MLR	Muntele Rosu	9.56	50	⇑	P		P	11 24 06.7	-1.9		
MLR	Muntele Rosu	9.56	50		P		Pn	11 24 05.9	+2.5		
	comp=N,18nm,0.5s,baz=276,slow=6.4,SNR=26										
CABF	La Chapelle	9.60	318	*e*	P		Pn	11 24 03.0	-1.0		
LASF	Ste Croix	9.61	300	*e*	P		Pn	11 24 03.1	-0.9		
LASF				*e*	Sn		S	11 25 52.4	-0.1		
	comp=N,2.6nm,0.6s										
SSB	Saint Sauveur	9.70	308		Pn		Pn	11 24 04.8	-0.4		
SSB	Saint Sauveur	9.70	308		P		Pn	11 24 04.8	-0.4		
LANS	Liptovska Anna	9.72	16	*e*	P		Pn	11 24 07.4	+2.0		
LANS	Liptovska Anna	9.72	16	*e*	P		Pn	11 24 07.4	+2.0		
ISR	Istrita	9.73	54	⇑	P		P	11 24 12.1	+1.6		
ISR	Istrita	9.73	54	⇑	P		P	11 24 12.1	+1.6		
OZUR		9.80	47	⇓	P		Pn	11 24 08.0	+1.6		
BFO	Black Forest	9.90	331		Pn		Pn	11 24 07.8	+0.3		
BFO	Black Forest	9.90	331		P		Pn	11 24 07.8	+0.3		
TURR	Turia	9.91	48	⇓	P		P	11 24 14.4	+2.0		
MORC	Moravsky Berou	10.03	8	⇑	P		Pn	11 24 10.5	+1.4		
MORC	Moravsky Berou	10.03	8		Pn		Pn	11 24 10.3	+1.1		
MORC	Moravsky Berou	10.03	8	*e*	PN		Pn	11 24 10.3	+1.1		
MORC	Moravsky Berou	10.03	8	⇑	P		Pn	11 24 10.5	+1.4		
HINF	Hinteralfeld	10.09	325	*e*	P		Pn	11 24 09.0	-0.9		
PRU	Pruhonice	10.15	357	*e*	P		P	11 24 16.2	+1.2		
PRU	Pruhonice	10.15	357	*e*	P		P	11 24 16.2	+1.2		
PLOR	Plostina	10.17	50	⇑	P		Pn	11 24 12.9	+2.0		
PLOR	Plostina	10.17	50	⇑	P		Pn	11 24 12.9	+2.0		
VRI	Vrincioaia	10.22	50	⇑	P		Pn	11 24 13.5	+2.0		
VRI	Vrincioaia	10.22	50	⇑	P		Pn	11 24 13.5	+2.0		
KRLC	Kraliky	10.26	5	*e*	P		Pn	11 24 13.5	+1.5		
KRLC	Kraliky	10.26	5	*e*	P		Pn	11 24 13.5	+1.5		
ECH	Echery	10.27	327		Pn		Pn	11 24 11.8	-0.3		
ECH	Echery	10.27	327		P		Pn	11 24 11.8	-0.3		
KOLS	Kolonicke sedl	10.30	26	*e*	P		Pn	11 24 14.3	+1.8		
KOLS	Kolonicke sedl	10.30	26	*e*	P		Pn	11 24 14.3	+1.8		
CDF	Champ du Feu	10.37	328	*e*	P		Pn	11 24 13.3	-0.2		
HARR	Harsova	10.43	58	⇑	P		Pn	11 24 16.5	+2.4		
HARR	Harsova	10.43	58	⇑	P		Pn	11 24 16.5	+2.4		
TLBR	Topalu	10.45	59	⇓	P		P	11 24 20.2	+1.8		
HAU	Haudompre	10.46	324	*e*	P		Pn	11 24 14.1	-0.4		
BURAR	Bucovina Array	10.48	39	⇓	P		P	11 24 18.5	-0.3		
BURAR	Bucovina Array	10.48	39		Pn		Pn	11 24 16.9	+2.0		
BURAR	Bucovina Array	10.48	39	⇓	P		P	11 24 18.5	-0.3		
BURO8	Bucovina Ar. S	10.49	39		Pn		Pn	11 24 16.5	+1.5		
MTLF	Montolieu	10.51	294	*e*	P		Pn	11 24 13.7	-1.4		
TIRR	Tirgusor	10.66	60	⇑	P		P	11 24 21.7	+1.0		
TIRR	Tirgusor	10.66	60		Pn		Pn	11 24 17.6	+0.6		
TIRR	Tirgusor	10.66	60		P		Pn	11 24 17.6	+0.6		
UPC	Upice	10.66	2	*e*	P		P	11 24 21.6	+1.0		
UPC	Upice	10.66	2	*e*	P		P	11 24 21.6	+1.0		
CFR	Carcaliu	10.76	56	⇓	P		Pn	11 24 19.3	+1.1		
CFR	Carcaliu	10.76	56	⇓	P		Pn	11 24 19.3	+1.1		
OJC	Ojcow	10.81	15		Pn		Pn	11 24 19.7	+1.0		
OJC	Ojcow	10.81	15		P		Pn	11 24 19.7	+1.0		
TPGR	Topolog	10.81	58	⇓	P		P	11 24 23.2	+0.8		
SMF	Signal de Mont	10.85	313	*e*	P		Pn	11 24 17.2	-2.1		
KWP	Kalwaria Pacla	11.04	25				P	11 24 24.1	-0.9		
KWP	Kalwaria Pacla	11.04	25		P		P	11 24 24.1	-0.9		
PAGF	Fort de Pagny	11.14	324	*e*	P		Pn	11 24 23.0	+0.1		
TLCR		11.20	57	⇓	P		P	11 24 28.5	+1.8		
TLCR		11.20	57	⇓	P		P	11 24 28.5	+1.8		
LOR	Lormes	11.20	315	*e*	P		Pn	11 24 23.1	-0.6		
AVF	Avril sur Loir	11.21	312	*e*	P		Pn	11 24 22.4	-1.3		
SFTF	Sexfontaines	11.21	322	*e*	P		Pn	11 24 23.4	-0.4		
SSF	Saint Saulge	11.28	314	*e*	P		Pn	11 24 23.0	-1.5		
BGF	Bois d'Agland	11.38	310	*e*	P		Pn	11 24 25.2	-0.6		
MEZF	Maizieres J'vi	11.41	323	*e*	P		Pn	11 24 26.1	-0.1		
TCF	Toulx Ste Croi	11.62	308	*e*	P		Pn	11 24 27.9	-0.9		
LVV	L'vov	11.67	29	*e*	P		P	11 24 31.9	+0.1		
ELL	Elmali	11.77	101				Pn	11 24 32.1	+1.2		
ELL	Elmali	11.77	101		P		Pn	11 24 32.1	+1.2		
EPF	Esparros	11.78	291	*e*	P		Pn	11 24 29.6	-1.3		
WLF	Walferdange	11.82	329	*d*	P		P	11 24 35.0	+1.5		
HYF	Humbligny	11.88	313	*e*	P		Pn	11 24 31.7	-0.3		
MILM	Milestii Mici	12.00	50	⇓	*i* P		P	11 24 36.6	+1.0		
	comp=N,290nm,0.6s										
MILM	Milestii Mici	12.00	50	*d*	*i* P		P	11 24 36.6	+1.0		
MILM					pmax		pmax				
	comp=Z,290nm,0.6s										
ETSF	Etsaut	12.41	289	*e*	P		Pn	11 24 37.4	-1.2		
BHOU	Houvegnez	12.43	331	*d*	P		P	11 24 42.2	+1.9		
CLF	Chambon-Foret	12.52	315		Pn		Pn	11 24 39.2	-0.6		
BTNL	Ternell	12.57	332	*d*	P		P	11 24 43.6	+1.7		
	comp=Z,13nm,0.7s										
MEM	Membach	12.64	331	*d*	P		P	11 24 43.9	+1.3		
	comp=Z,14nm,0.8s										
GIVF	Givet	12.70	327	*e*	P		Pn	11 24 41.5	-0.4		
DOU	Dourbes	12.79	327	*d*	P		P	11 24 45.2	+0.9		
BMRD	Maredsous	12.88	328	*d*	P		P	11 24 45.2	0.0		
SJPF	Ste Jean	12.93	290	*e*	P		Pn	11 24 43.6	-1.2		
BAIF	Baives	12.93	326	*e*	P		Pn	11 24 44.8	+0.1		
MFF	Saint Martin d	13.21	306	*e*	P		Pn	11 24 48.1	-0.1		
BR131	Keskin Array S	13.99	85		P		Pn	11 25 00.1	+2.3		
BR131	Keskin Array S	13.99	85	*i*	P		Pn	11 24 59.6	+1.8		
BRTR	Keskin Array B	13.99	85		P		Pn	11 24 59.8	+2.0		
BRTR	Keskin Array B	13.99	85		P		Pn	11 24 59.8	+2.0		
BRTR	Keskin Array B	13.99	85		P		Pn	11 25 00.0	+2.2		
	comp=Z,9.2nm,1.0s,baz=270,slow=10,SNR=17										
LDF	La Druitiere	14.16	313	*e*	P		P	11 24 58.5	-1.0		
FLN	La Foliniere	14.45	313	*e*	P		P	11 25 01.2	-1.5		
GRR	Gorron	14.47	311	*e*	P		P	11 25 01.8	-1.1		
KIEV	Kiev	14.51	37	⇑	P		P	11 25 03.0	-0.3		
KIEV	Kiev	14.51	37		P		P	11 25 03.1	-0.1		
KIEV	Kiev	14.51	37		P		P	11 25 03.1	-0.1		
AKASG	Malin Array Be	14.52	37		P		P	11 25 02.9	-0.5		
AKASG	Malin Array Be	14.52	37		P		P	11 25 03.1	-0.3		
	comp=Z,21nm,0.4s,baz=230,slow=10,SNR=88										
AKBB	Malin Array Si	14.52	37		P		P	11 25 03.1	-0.2		
AKBB	Malin Array Si	14.52	37	*ce*	P		P	11 25 03.7	+0.3		
ESBB	Sonseca Array	14.94	276		P		P	11 25 08.4	+0.1		
ESDC	Sonseca Array	14.94	276		P		P	11 25 08.4	+0.1		
ESDC	Sonseca Array	14.94	276		P		P	11 25 08.2	-0.1		
	comp=Z,6.1nm,0.7s,baz=77,slow=11,SNR=22										
SUW	Suwalki	15.10	18		P		P	11 25 10.1	+0.4		
SUW	Suwalki	15.10	18		P		P	11 25 10.1	+0.4		
SUW					pmax		pmax				
	comp=Z,99nm,1.0s										
SUW	Suwalki	15.10	18	*e*	P		Pn	11 25 10.6	-0.2		
PAB	San Pablo	15.25	275		P		P	11 25 11.9	+0.3		
PAB					lAmb		lAmb	11 25 12.4			
	comp=Z,10.0nm,0.8s										
PAB	San Pablo	15.25	275		P		P	11 25 12.0	+0.3		
PAB					pmax		pmax				
	comp=Z,10.0nm,0.8s										
SGMF	Saint Gilles	15.41	309	*e*	P		P	11 25 11.9	-1.3		
QUIF	Quistinic	15.63	307	*e*	P		P	11 25 15.2	-0.5		
BNN	Bunyan	15.81	87		P		P	11 25 17.3	-0.6		
ROSF	Rostrenen	15.87	308	*e*	P		P	11 25 16.6	-1.7		
PABE	Paberze	16.65	17		P		P	11 25 27.2	+0.5		
PABE	Paberze	16.65	17	*e*	P		P	11 25 27.0	+0.3		
NACGM	Naroch	16.86	23	*e*	P		P	11 25 28.5	-0.5		
	comp=E,1μm,1.1s										
MNK	Minsk	16.87	26	*i*	P		P	11 25 26.9	-2.2		
	comp=E,8.0nm,0.9s,baz=26										
MNK				*i*	P		P	11 25 26.9	-2.2		
	comp=N,37nm,0.9s,baz=26										
MNK				*i*	P		P	11 25 26.9	-2.2		
	comp=Z,59nm,0.8s,baz=26										
MNK				*i*	S		S	11 28 29.0	-1.6		
	baz=26										
MNK				*i*	LRM	MLR		11 34 20.9			
	comp=Z,226nm,10.3s,baz=26										
MNK				*i*	LRM	MLR		11 34 25.0			
	comp=N,281nm,13.1s,baz=26										
MNK				*i*	LRM	MLR		11 34 51.7			
	comp=E,135nm,11.4s,baz=26										
MNK	Minsk	16.87	26	*i*	P		P	11 25 26.9	-2.2		
MNK				*i*	S		S	11 28 29.0	-1.6		
MNK					pmax	pmax					
	comp=Z,59nm,0.8s										
MNK					pmax	pmax					
	comp=E,8.0nm,0.9s										
MNK					pmax	pmax					
	comp=N,37nm,0.9s										
MNK					MLR	MLR					
	comp=Z,226nm,10.0s										
MNK					MLR	MLR					
	comp=N,281nm,13.0s										
MNK					MLR	MLR					
	comp=E,135nm,11.0s										
PBRG	Braganca	16.91	284	*e*	P		Pn	11 25 31.1	-1.1		
	comp=E,33nm,1.7s										
VSVD	Vaisvydziai	17.08	16	*e*	P		P	11 25 31.6	+0.3		
IIGN	Ignalina	17.09	21	*e*	P		P	11 25 29.6	-1.8		
MVO	Moncorvo	17.15	282	*e*	P		P	11 25 32.3	-0.1		
	comp=E,35nm,1.9s										
GAZ	Gaziantep	17.23	92		P		P	11 25 35.0	+1.6		
GAZ					lAmb		lAmb	11 25 35.5			
	comp=Z,11nm,0.9s										
ISAL	Salakas	17.25	21	*e*	P		P	11 25 34.5	+1.3		
MMAI	Mount Meron Ar	17.43	107		P		P	11 25 36.9	+1.4		
	comp=Z,6.3nm,0.5s,baz=308,slow=9.4,SNR=12										
IZAR	Zarasai	17.44	21	*e*	P		P	11 25 36.3	+1.1		
PBAR	Barrancos	17.56	272	*e*	P		P	11 25 36.7	-0.1		
	comp=Z,32nm,1.2s										
PMRV	Marv??o	17.60	276	*e*	P		P	11 25 37.0	-0.2		
	comp=Z,57nm,1.9s										
MDT	Midelt	17.61	253		P		P	11 25 37.0	-0.4		
	comp=Z,5.5nm,0.8s,baz=64,slow=3.2,SNR=12										
PCBR	Castelo Branco	17.61	277	*e*	P		Pn	11 25 39.8	-0.5		
	comp=Z,18nm,1.8s										
PVIS	Viseu	17.83	280	*e*	P		P	11 25 39.6	-0.2		
PGAV	Gavieira, Arco	18.05	284	*e*	P		P	11 25 43.0	+0.9		
	comp=Z,80nm,1.9s										
PBEJ	Beja	18.23	272	*e*	P		P	11 25 45.0	+1.0		
	comp=Z,15nm,1.1s										
PVAQ	Vagos	18.26	270	*e*	P		P	11 25 45.4	+1.0		
	comp=Z,6.0nm,1.1s										
PCAS	Casmilo, Conde	18.36	278	*e*	P		P	11 25 44.9	-0.5		
PCVE	Castro Verde	18.45	271	*e*	P		P	11 25 45.6	-0.8		
	comp=Z,30nm,2.0s										
PBDV	Barranco-do-Ve	18.47	269	*e*	P		P	11 25 48.1	+1.5		
	comp=Z,62nm,1.0s										
SOC	Sochi	18.47	70	*e*	P		P	11 25 45.4	-1.1		
SOC					*e*	S		S	11 29 03.1	+0.7		
SOC					pmax	pmax					
	comp=Z,22nm,0.6s										
MESJ	Messejana	18.54	271	*e*	P		P	11 25 45.9	-1.5		
	comp=Z,35nm,2.0s										
EIL	Elat	18.93	116		P		P	11 25 52.7	+1.1		
	comp=Z,2.9nm,0.8s,baz=16,slow=14,SNR=3.0										
ASF	Jabal al Asfar	18.94	107		P		P	11 25 52.3	+0.6		
	comp=Z,2.1nm,0.6s,baz=331,slow=3.3,SNR=1.9										
PTEO	Sao Teotonio	19.00	271	*e*	P		P	11 25 54.0	+1.7		
	comp=Z,45nm,1.6s										
MORF	Marmelete	19.01	270		P		P	11 25 51.5	-0.9		
MORF					lAmb		lAmb	11 26 05.8			
	comp=Z,13nm,0.9s										
MORF	Marmelete	19.01	270		P		P	11 25 51.5	-0.9		
MORF					pmax	pmax					
	comp=Z,13nm,0.9s										
PMAFR	Mafra	19.13	275	*e*	P		P	11 25 52.8	-0.8		
	comp=Z,118nm,1.3s										
EKA	Eskdalemuir Ar	19.83	327		P		P	11 25 58.9	-2.0		
	comp=Z,1.8nm,0.3s,baz=116,slow=7.6,SNR=24										
ESK	Eskdalemuir	19.84	327		P		P	11 25 59.1	-1.9		
ESK					lAmb		lAmb	11 26 22.5			
	comp=Z,26nm,1.2s										
ESK	Eskdalemuir	19.84	327		P		P	11 25 59.1	-1.9		
ESK					pmax	pmax					
	comp=Z,26nm,1.3s										
EKB	Eskdalemuir	19.85	327		P		P	11 25 59.7	-1.4		
VSU	Vasula	19.98	18	*ce*	P		P	11 26 00.5	-1.9		
VSU					pmax	pmax					
	comp=Z,19nm,0.7s										
VSU	Vasula	19.98	18	*e*	P		P	11 26 01.7	-0.6		
VORD	Divnogorie	19.99	48	*e*	P		P	11 26 01.9	-0.7		
VORD					pmax	pmax					
	comp=Z,10.0nm,0.4s										
DSB	Dublin	20.01	319		P		P	11 26 02.2	-0.6		
VSR	Storozhevoye	20.03	48	*e*	P		P	11 26 01.3	-1.7		
VSR					pmax	pmax					
	comp=Z,30nm,0.9s										
KONO	Kongsberg	20.16	351		P		P	11 26 04.0	-0.3		
KONO					lAmb		lAmb	11 26 28.2			
	comp=Z,26nm,1.2s										
KONO	Kongsberg	20.16	351		P		P	11 26 04.0	-0.3		
KONO					pmax	pmax					
	comp=Z,27nm,1.2s										
HFS	Hagfors	20.33	357		P		P	11 26 04.5	-1.6		
	comp=Z,2.9nm,0.5s,baz=168,slow=10,SNR=16										
	comp=Z,2.9nm,0.5s										
LPSR	Galich'ya Gora	20.53	44	*e*	P		P	11 26 05.1	-3.1		
LPSR					pmax	pmax					
	comp=Z,20nm,0.8s										
KIV	Kislovodsk	20.64	70	*e*	P		P	11 26 11.4	+1.8		
KIV					pmax	pmax					
	comp=Z,6.0nm,1.0s										
KVAR	Kislovodsk Arr	20.64	70		P		P	11 26 10.3	+0.7		
	comp=Z,2.1nm,0.5s,baz=270,slow=20,SNR=0.8										
	comp=Z,2.1nm,0.5s										
OBN	Obninsk	20.77	36	*e*	P		P	11 26 08.4	-2.2		
OBN					pmax	pmax					
	comp=Z,12nm,0.9s										
KBZ	Khabaz	20.78	70	*ce*	P		P	11 26 11.1	+0.2		
KBZ					pmax	pmax					
	comp=Z,7.0nm,0.8s										
KBZ	Khabaz	20.78	70		P		P	11 26 11.5	+0.6		
	comp=Z,6.0nm,0.8s,baz=289,slow=8.1,SNR=12										
	comp=Z,6.0nm,0.8s										
NC602	NORSAR Array S	21.05	355		P		P	11 26 12.2	-1.1		
NC602					lAmb		lAmb	11 26 13.1			
	comp=Z,24nm,1.4s										
MEF	Metsahovi	21.14	12	*e*	P		P	11 26 13.1	-1.1		
ONI	Oni	21.20	73		P		P	11 26 15.7	+0.6		
ONI					lAmb		lAmb	11 26 18.0			
	comp=Z,16nm,0.7s										
ONI	Oni	21.20	73		P		P	11 26 15.7	+0.6		
ONI					pmax	pmax					
	comp=Z,16nm,0.7s										
AKH	Akhalkalaki	21.30	77		P		P	11 26 15.2	-1.0		
AKH	Akhalkalaki	21.30	77		P		P	11 26 15.2	-1.0		
AKH					pmax	pmax					
	comp=Z,36nm,1.0s										
NB2	NORSAR Subarra	21.37	354		P		P	11 26 15.0	-1.4		
	comp=Z,0.8nm,0.5s,baz=166,slow=10										
NOA	NORSAR Array B	21.37	354		P		P	11 26 15.2	-1.3		
	comp=Z,0.8nm,0.7s,baz=202,slow=10.0,SNR=5.5										
	comp=Z,0.8nm,0.7s										
NB201	NORSAR Array S	21.38	354		P		P	11 26 15.5	-0.9		
NB201					lAmb		lAmb	11 26 34.9			
	comp=Z,26nm,1.4s										
NC405	NORSAR Array S	21.41	355		P		P	11 26 16.4	-0.4		
NC405					lAmb		lAmb	11 26 41.6			
	comp=Z,16nm,1.3s										
VRH	Novokhopyorsk	21.50	49	*e*	P		P	11 26 16.5	-1.1		
VRH					pmax	pmax					
	comp=Z,30nm,0.6s										
ZEI	Tsey	21.52	73	*e*	P		P	11 26 18.6	+0.4		
ZEI					pmax	pmax					
	comp=Z,8.0nm,0.9s										
RAF	Rauma	21.55	8	*e*	P		P	11 26 17.1	-0.9		
MOS	Moscow	21.63	35	*e*	P		P	11 26 16.6	-2.2		
MOS					pmax	pmax					
	comp=Z,43nm,0.5s										
GNI	Garni	22.39	80		P		P	11 26 26.1	0.0		
GNI					lAmb		lAmb	11 26 29.1			
	comp=Z,12nm,0.8s										
GNI	Garni	22.39	80	*i*	P		P	11 26 25.2	-0.9		
GNI					pmax	pmax					
	comp=Z,14nm,0.8s										
FINES	FINESS Array B	22.58	13		P		P	11 26 27.0	-0.3		
FINES	FINESS Array B	22.58	13		P		P	11 26 27.0	-0.3		
FINES	FINESS Array B	22.58	13		P		P	11 26 26.9	-0.3		
	comp=Z,12nm,0.4s,baz=187,slow=8.3,SNR=110										
	comp=Z,12nm,0.4s										
FIA1	FINESS Array S	22.58	13		P		P	11 26 27.0	-0.3		
GANJ	Ganja	23.52	78		P		P	11 26 37.2	+1.0		
BELG	Belogornoye	25.35	50		P		P	11 26 52.8	+0.3		
	comp=Z,15nm,0.4s,baz=276,slow=3.0,SNR=6.9										
	comp=Z,15nm,0.4s										
KIRV	Kirov	28.58	38	*i*	P		P	11 27 21.0	-0.1		
TOA0	Torodi Ar. Sit	29.24	208		P		P	11 27 26.3	-1.0		
TORD	Torodi Ar. Bea	29.24	208		P		P	11 27 27.0	-0.4		
	comp=Z,1.6nm,0.5s,baz=30,slow=12,SNR=4.1										
	comp=Z,1.6nm,0.5s										
LVZ	Lovozero	30.01	14		P		P	11 27 33.8	+0.2		
LVZ	Lovozero	30.01	14		P		P	11 27 33.8	+0.2		
LVZ					pmax	pmax					
	comp=Z,29nm,1.3s										
ARCES	ARCESS Array B	30.22	7		P		P	11 27 34.8	-0.6		
ARCES	ARCESS Array B	30.22	7		P		P	11 27 34.8	-0.6		
ARCES					pmax	pmax					
	comp=Z,2.0n

comp=Z,4.8nm,0.3s,baz=288,slow=6.9,SNR=28
comp=Z,4.8nm,0.3s
MAKZ Makanchi 47.58 59 P **P** **11 29 59.1 +0.3**
MAKZ Makanchi 47.58 59 P **P** **11 29 59.1 +0.3**
MAKZ pmax pmax
comp=Z,6.0nm,1.4s
MK31 Makanchi Array 47.79 59 P **P** **11 30 00.6 +0.2**
MK31 Makanchi Array 47.79 59 P **P** **11 30 00.6 +0.2**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 47.79 59 P **P** **11 30 00.6 +0.2**
MKAR Makanchi Array 47.79 59 P **P** **11 30 00.6 +0.2**
MKAR Makanchi Array 47.79 59 P **P** **11 30 00.4 0.0**
comp=Z,6.3nm,0.5s,baz=281,slow=7.1,SNR=130
comp=Z,6.3nm,0.5s
DGZ Jazzator, Alta 50.20 53 *i* P **P** **11 30 18.0 -0.7**
DGZ pmax pmax
comp=Z,9.0nm,2.1s
DRLN Deer Lake 50.95 306 P **P** **11 30 22.8 -1.2**
DRLN IAmb IAmb 11 30 23.0
comp=Z,27nm,1.1s
SCHQ Schefferville 54.52 315 P **P** **11 30 49.1 -0.9**
SCHQ Schefferville 54.52 315 P **P** **11 30 48.8 -1.2**
comp=Z,9.0nm,0.3s,baz=70,slow=5.8,SNR=97
comp=Z,9.0nm,0.3s
GBN Guysborough 54.88 303 P **P** **11 30 52.1 -0.6**
GBN IAmb IAmb 11 30 53.6
comp=Z,17nm,1.0s
HAL Halifax 56.54 303 P **P** **11 31 03.5 -0.9**
HAL Halifax 56.54 303 P **P** **11 31 03.5 -0.9**
HAL pmax pmax
comp=Z,37nm,1.3s
BATG Bathurst New B 56.99 307 P **P** **11 31 06.8 -0.7**
PQI Presque Isle 58.46 307 P **P** **11 31 17.2 -0.5**
PQI IAmb IAmb 11 31 33.9
comp=Z,21nm,1.5s
D62A Allapoint, All 58.91 307 P **P** **11 31 20.1 -0.7**
D62A IAmb IAmb 11 31 39.9
comp=Z,14nm,1.4s
EMMW East Machias 58.99 304 P **P** **11 31 21.3 0.0**
E62A Clayton Lake 59.41 307 P **P** **11 31 23.8 -0.4**
E62A IAmb IAmb 11 31 28.6
comp=Z,6.3nm,1.0s
TIXI Tiksi 59.43 20 *i* P **P** **11 31 22.7 -1.2**
TIXI pmax pmax
comp=Z,2.0nm,1.1s
LMQ La Malbaie 59.48 308 P **P** **11 31 23.9 -0.7**
LMQ IAmb IAmb 11 31 24.5
comp=Z,6.3nm,0.8s
SONM Songino Array 62.41 49 P **P** **11 31 44.6 +0.1**
SONM Songino Array 62.41 49 P **P** **11 31 44.6 +0.1**
comp=Z,1.5nm,0.7s,baz=287,slow=7.4,SNR=16
comp=Z,1.5nm,0.7s
TRQ Mont Tremblant 62.66 309 P **P** **11 31 46.0 -0.1**
TRQ IAmb IAmb 11 31 49.9
comp=Z,9.4nm,1.5s
FRNY Flat Rock 62.76 307 P **P** **11 31 46.6 0.0**
FRNY IAmb IAmb 11 31 55.6
comp=Z,7.9nm,1.4s
VLDQ Val d'Or 63.41 312 P **P** **11 31 51.4 +0.6**
J57A Williamstown 64.98 306 P **P** **11 32 01.3 +0.2**
J57A IAmb IAmb 11 32 01.8
comp=Z,15nm,1.2s
L59A Walton 65.03 305 P **P** **11 32 02.5 +1.0**
L59A IAmb IAmb 11 32 23.0
comp=Z,12nm,1.2s
A36M Sachs Harbour 65.08 347 P **P** **11 32 01.8 +0.6**
DELO Deloro Mine 65.39 308 P **P** **11 32 03.5 -0.2**
YAK Yakutsk 65.54 28 *i* P **P** **11 32 05.0 +0.7**
YAK pmax pmax
comp=Z,7.0nm,0.6s
SADO Sadowa 66.17 309 P **P** **11 32 08.1 -0.5**
SADO IAmb IAmb 11 32 31.3
comp=Z,9.5nm,1.1s
L56A Greenwood 66.64 306 P **P** **11 32 11.5 -0.2**
L56A IAmb IAmb 11 32 14.3
comp=Z,8.9nm,1.1s
M57A Sunshine Farm, 66.81 305 P **P** **11 32 12.6 -0.2**
M57A IAmb IAmb 11 32 40.3
comp=Z,4.6nm,0.9s
N58A Sunbury 66.82 304 P **P** **11 32 11.8 -1.0**
MVL Millersville 67.04 304 P **P** **11 32 12.8 -1.3**
MVL IAmb IAmb 11 32 38.2
comp=Z,12nm,1.4s
WVNY West Valley, N 67.14 307 P **P** **11 32 14.9 +0.1**
WVNY IAmb IAmb 11 32 17.9
comp=Z,9.5nm,1.2s
SSPA Standing Stone 67.67 305 P **P** **11 32 17.5 -0.7**
SSPA IAmb IAmb 11 32 29.6
comp=Z,10nm,1.4s
M55A Ridgway 67.76 306 P **P** **11 32 18.3 -0.4**
M55A IAmb IAmb 11 32 41.3
comp=Z,7.0nm,1.1s
E46A Sault Ste Mari 68.28 313 P **P** **11 32 21.2 -0.6**
E46A IAmb IAmb 11 32 34.3
comp=Z,9.9nm,1.1s
BOSA Boshof 68.73 171 P **P** **11 32 25.0 +0.3**
comp=Z,1.3nm,0.5s,baz=266,slow=3.5,SNR=2.3
comp=Z,1.3nm,0.5s
R58B Mineral 69.17 302 P **P** **11 32 26.2 -1.2**
R58B IAmb IAmb 11 32 43.4
comp=Z,7.7nm,1.0s
M52A Chesterland 69.32 307 P **P** **11 32 27.4 -0.9**
E43A Lone Tree Farm 69.78 314 P **P** **11 32 31.0 +0.1**
E43A IAmb IAmb 11 32 31.5
comp=Z,7.3nm,0.8s
D41A Chassel 70.23 315 P **P** **11 32 33.7 +0.1**
E29M Blow River 70.24 350 P **P** **11 32 34.1 +0.7**
E29M IAmb IAmb 11 32 34.4
comp=Z,2.7nm,0.6s
N51A Ashland 70.31 307 P **P** **11 32 33.8 -0.5**
D25K Kavik River 70.31 353 P **P** **11 32 34.0 +0.2**
YKA Yellowknife Ar 70.41 338 P **P** **11 32 34.4 -0.1**
comp=Z,0.7nm,0.8s,baz=35,slow=5.3,SNR=13
comp=Z,0.7nm,0.8s
O52A Adamsville 70.44 306 P **P** **11 32 34.8 -0.3**
YKAB2 New Yellowknif 70.46 338 P **P** **11 32 34.6 -0.1**
Q54A Coxs Mills 70.48 305 P **P** **11 32 35.2 -0.1**
F31M Tsiigehtchic 70.50 348 P **P** **11 32 35.0 0.0**
B21K Ikpikpuk River 70.59 356 P **P** **11 32 36.6 +1.2**
P52A Corning 70.91 306 P **P** **11 32 37.1 -0.8**
P52A IAmb IAmb 11 32 38.2
comp=Z,8.4nm,0.8s
L48A N Adams 70.95 309 P **P** **11 32 38.1 0.0**
G31M Satah River 71.06 348 P **P** **11 32 38.0 -0.2**
ACSO Alum Creek Sta 71.08 307 P **P** **11 32 38.6 -0.4**
ACSO IAmb IAmb 11 32 39.7
comp=Z,9.8nm,1.0s
COWI Conover 71.13 315 P **P** **11 32 39.4 +0.3**
COWI IAmb IAmb 11 32 39.8
comp=Z,6.9nm,0.8s
D22K Ayikyak River 71.22 355 P **P** **11 32 40.5 +1.2**
F28M Old Crow 71.23 350 P **P** **11 32 39.7 +0.3**
EYMN Ely 71.24 317 P **P** **11 32 39.8 0.0**
EYMN IAmb IAmb 11 32 55.4
comp=Z,4.5nm,1.0s
G30M tAoh Zraii Nji 71.31 349 P **P** **11 32 40.5 +0.6**
Q52A Bidwell 71.39 305 P **P** **11 32 40.5 -0.3**
Q52A IAmb IAmb 11 32 41.1
comp=Z,7.1nm,0.7s
E25K Arctic Village 71.40 353 P **P** **11 32 41.4 +1.0**
N49A Columbus Grove 71.41 308 P **P** **11 32 40.1 -0.8**
N49A IAmb IAmb 11 32 41.0
comp=Z,5.8nm,0.8s
R53A Hurricane 71.57 305 P **P** **11 32 40.7 -1.1**
R53A IAmb IAmb 11 32 42.3
comp=Z,8.2nm,0.7s
FFC Flin Flon 71.69 327 P **P** **11 32 42.1 -0.2**
FFC Flin Flon 71.69 327 P **P** **11 32 42.1 -0.2**
FFC pmax pmax
comp=Z,2.0nm,0.8s
E24K Your Creek 71.71 354 P **P** **11 32 43.2 +0.9**
C18K Utukok River 71.79 359 P **P** **11 32 43.1 +0.4**
D19K Kuna River 71.86 358 P **P** **11 32 44.1 +0.9**
D19K IAmb IAmb 11 32 59.4
comp=Z,5.5nm,1.4s
O49A Covington 71.94 307 P **P** **11 32 43.3 -0.7**
O49A IAmb IAmb 11 32 44.0
comp=Z,8.7nm,0.7s
ULM Lac du Bonnet 71.96 321 P **P** **11 32 43.9 -0.1**
ULM IAmb IAmb 11 32 44.0
comp=Z,7.0nm,0.6s
ULM Lac du Bonnet 71.96 321 P **P** **11 32 43.9 -0.1**
ULM pmax pmax
comp=Z,7.0nm,0.6s
ULM Lac du Bonnet 71.96 321 P **P** **11 32 43.6 -0.3**
comp=Z,7.5nm,0.6s,baz=47,slow=6.6,SNR=20
comp=Z,7.5nm,0.6s
CMAR Chiang Mai Arr 73.52 80 P **P** **11 32 53.8 +0.2**
CMAR Chiang Mai Arr 73.52 80 *i* P **P** **11 32 53.2 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 73.52 80 P **P** **11 32 53.2 -0.4**
comp=Z,1.1nm,0.7s,baz=309,slow=8.1,SNR=9.5
comp=Z,1.1nm,0.7s
ILAR Eielson Array 74.79 352 P **P** **11 33 01.1 +1.0**
comp=Z,0.2nm,0.7s,baz=19,slow=3.1,SNR=4.2
comp=Z,0.2nm,0.7s
T47A Sharon Grove 75.62 306 P **P** **11 33 05.0 -0.4**
Y52A Lilburn 75.63 302 P **P** **11 33 05.3 -0.2**
Y52A IAmb IAmb 11 33 05.4
comp=Z,5.7nm,0.6s
KSRS Korea Array 81.23 48 P **P** **11 33 36.1 +0.2**
comp=Z,1.0nm,0.6s,baz=321,slow=3.9,SNR=4.9
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 83.88 323 P **P** **11 33 49.5 -0.2**
comp=Z,0.9nm,0.6s,baz=54,slow=4.8,SNR=12
comp=Z,0.9nm,0.6s
TXAR Lajitas Array 90.92 310 P **P** **11 34 24.2 +0.7**
comp=Z,0.6nm,0.6s,baz=65,slow=4.5,SNR=12
comp=Z,0.6nm,0.6s

IDC ***16*** *11:26:27.6±3.1, 10.96S×118.81E, h0km, mb3.4/2, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=178.8km s-min=27.3km az=51.0*

ISC 16 11:26:26.5±0.8, 11.2S±0.1×118.8E±0.1, h10km, n14, σ3.3 22/13, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
PLAI	**Plampang**	**2.50**	**337**	P		**Pg**	**11**	**27**	**12.2**	**-2.4**
JAGI	**Jajag, Banyuwa**	**5.28**	**300**	P		**Pn**	**11**	**27**	**44.1**	**-1.4**
UGM	**Wanagama**	**8.75**	**291**	P		**Pn**	**11**	**28**	**33.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**9.58**	**137**	P		**Pn**	**11**	**28**	**46.9**	**+2.3**
MBWA	**Marble Bar**	**10.00**	**175**	P		Pn	11	28	47.2	-3.1
PSA00	**Pilbara Seismi**	**10.42**	**174**	P		Pn	11	28	53.1	-3.0
MEEK	**Meekatharra**	**15.41**	**181**	P		**Pn**	**11**	**30**	**02.0**	**-2.2**
WRKA	**Warakurna**	**16.50**	**148**	P		**Pn**	**11**	**30**	**19.5**	**+1.2**
MNAI	**Manna**	**17.05**	**292**	P		**Pn**	**11**	**30**	**26.0**	**+0.7**
WRA	**Warramunga Arr**	**17.35**	**122**	Pn		**Pn**	**11**	**30**	**31.4**	**+2.5**
	0.2nm,0.3s,baz=296,slow=13,SNR=13									
WRA				Sn		**Sn**	**11**	**33**	**34.6**	**-7.5**
	0.2nm,0.3s,baz=303,slow=25,SNR=5.1									
	0.4nm,0.4s									
MORW	**Morawa**	**18.01**	**188**	P		**Pn**	**11**	**30**	**35.3**	**-1.8**
ASAR	**Alice Springs**	**19.04**	**133**	P		**Pn**	**11**	**30**	**53.2**	**+3.5**
	0.3nm,0.3s,baz=317,slow=13,SNR=12									
ASAR				S		Sn	11	34	12.9	-10
	0.7nm,0.7s,baz=303,slow=22,SNR=1.4									
	0.5nm,0.4s									
SONM	**Songino Array**	**59.74**	**350**	P		**P**	**11**	**36**	**33.6**	**+2.0**
	0.3nm,0.9s,baz=168,slow=7.5,SNR=2.8									
	0.3nm,0.9s									
MKAR	**Makanchi Array**	**66.26**	**333**	P		**P**	**11**	**37**	**16.3**	**+1.4**
	0.3nm,0.5s,baz=138,slow=7.3,SNR=6.1									
	0.3nm,0.5s									

NNC 16 11:37:28.6±17.0, 36.83N×69.87E, h0km, mb3.6, mpv3.5, 2C-1D, Error ellipse: s-maj=169.6km s-min=115.4km az=161.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
KK31	**Karatay Array**	**6.28**	**4**	⇑P		Pn	11	39	03.9	+1.4
	1.0nm,0.2s,baz=179,slow=13,SNR=65									
KK31				⇓S		Sn	11	40	15.4	+0.4
	0.6nm,0.3s,baz=185,slow=22,SNR=6.2									
AB31	**Akbulak array**	**14.36**	**333**	P		Pn	11	40	53.5	+0.5
	0.2nm,0.3s,baz=139,slow=12,SNR=6.7									
AKTO	**Aktyubinsk**	**16.05**	**332**	⇑P		Pn	11	41	11.8	-3.6
	0.6nm,0.5s									

CATAC ***16*** *11:43:29.5±0.3, 12.79N×90.42W, h14km±3km, MB5.4, mb5.0, ML4.9*

NEIC ***16*** *11:43:33.3±2.1, 13.06N±0.03×90.19W±0.05, h37km±5km, mb4.8/535, Error ellipse: s-maj=7.8km s-min=3.5km az=107.0*

GCMT ***16*** *11:43:33.3±0.2, 12.85N±0.02×90.71W±0.02, h19km±1km, MW5.0/103, Moment Tensor Solution. s57,c72; s103,c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.85±.15; Mθθ-2.14±.10; Mϕϕ-0.70±.09; Mrθ2.24±.19; Mθϕ1.03±.06; Mϕr-2.46±.24; Best double couple: Mo4.31700×10¹⁶ NP1:ϕs132.00000°, δ70.00000°, λ99.00000°. NP2:ϕs287.00000°, δ22.00000°, λ66.00000°. Principal axes: T 4.4920, Plg63.0000°, Azm57.0000°; N -0.3450, Plg9.0000°, Azm309.0000°; P -4.1430, Plg25.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***16*** *11:43:34.0±1.6, 13.27N×90.00W, h45km±15km, mb4.4/24, mbtmp4.7/28, ML3.5/4, MS4.3/49 Error ellipse: s-maj=22.6km s-min=9.1km az=41.0*

SNET ***16*** *11:43:37.9±7.0, 13.07N×90.07W, h32km, ML4.6*

GCG ***16*** *11:43:40.3±0.5, 13.57N×90.57W, h59km±29km, MD4.3*

ISC 16 11:43:32.3±0.7, 12.89N±0.04×90.36W±0.04, h44km±6km, n1019, σ1.928/941, mb4.8/270, MS4.3/49, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
NUBE	**Las Nubes**	**1.15**	**29**	*i* P		**Pn**	**11**	**43**	**51.5**	**-0.7**
NUBE				*i* S		**Sn**	**11**	**44**	**09.3**	**+2.4**
NUBE				IAML			11	44	09.5	
	comp=Z,15μm,1.0s									
JAYA	**Jayaque - finc**	**1.17**	**50**	*eP*		**Pn**	**11**	**43**	**52.0**	**-0.4**
JAYA	**Jayaque - finc**	**1.17**	**50**	*i* P		**Pn**	**11**	**43**	**52.0**	**-0.4**
JAYA				*i* S		**Sn**	**11**	**44**	**09.9**	**+2.6**
JAYA				IAML			11	44	16.0	
	comp=Z,33μm,1.0s									
CEVE	**Cerro Verde**	**1.18**	**38**	*eP*		**Pn**	**11**	**43**	**52.3**	**-0.3**
CEVE				*eS*		**Sn**	**11**	**44**	**11.8**	**+4.2**
CEVE	**Cerro Verde**	**1.18**	**38**	*i* P		**Pn**	**11**	**43**	**52.2**	**-0.3**
CEVE				*i* S		**Sn**	**11**	**44**	**10.3**	**+2.7**
CEVE				IAML			11	44	14.0	
	comp=Z,19μm,1.0s									
LALI	**Alcalda de L**	**1.18**	**60**	*eP*		**Pn**	**11**	**43**	**52.0**	**-0.3**
LALI	**Alcalda de L**	**1.18**	**60**	*i* P		**Pn**	**11**	**43**	**51.9**	**-0.4**
LALI				IAML			11	44	06.0	
	comp=Z,4μm,1.0s									
LALI				*i* S		**Sn**	**11**	**44**	**09.4**	**+2.2**
CEDA	**San Andres**	**1.31**	**46**	*eP*		**Pn**	**11**	**43**	**54.0**	**-0.1**
CEDA	**San Andres**	**1.31**	**46**	*i* P		**Pn**	**11**	**43**	**54.3**	**+0.1**
CEDA				*i* S		**Sn**	**11**	**44**	**14.8**	**+4.3**
CEDA				IAML			11	44	27.1	
	comp=Z,38μm,1.0s									
PMON	**Piamonte**	**1.31**	**51**	*i* P		**Pn**	**11**	**43**	**54.1**	**-0.1**
PMON				*i* S		**Sn**	**11**	**44**	**14.6**	**+4.0**
PMON				IAML			11	44	20.0	
	comp=Z,23μm,1.0s									
ITCA	**Escuela Especi**	**1.31**	**54**	*i* P		**Pn**	**11**	**43**	**54.2**	**-0.1**
ITCA				*i* S		**Sn**	**11**	**44**	**14.9**	**+4.2**
ITCA				IAML			11	44	18.5	
	comp=Z,44μm,1.0s									
UNIC	**Universidad Ca**	**1.34**	**36**	*i* P		**Pn**	**11**	**43**	**54.6**	**-0.1**
UNIC				IAML			11	43	58.5	
	comp=Z,4μm,1.0s									
UNIC				*i* S		**Sn**	**11**	**44**	**14.1**	**+2.7**
BOQS	**Boqueron**	**1.35**	**51**	*eP*		**Pn**	**11**	**43**	**55.0**	**+0.1**
SNET	**Serv Nac Est T**	**1.35**	**54**			**Pn**	**11**	**43**	**54.4**	**-0.5**
SNET	**Serv Nac Est T**	**1.35**	**54**	*i* P		**Pn**	**11**	**43**	**54.7**	**-0.2**
SNET				*i* S		**Sn**	**11**	**44**	**14.2**	**+2.5**
SNET				IAML			11	44	20.0	
	comp=Z,17μm,1.0s									
PANCS	**Alcalda de**	**1.36**	**58**	*i* P		**Pn**	**11**	**43**	**54.2**	**-0.7**
PANCS				*i* S		**Sn**	**11**	**44**	**14.4**	**+2.7**
PANCS				IAML			11	44	18.9	
	comp=Z,16μm,1.0s									
UEES	**Universidad Ev**	**1.37**	**53**	*i* P		**Pn**	**11**	**43**	**55.2**	**+0.2**
UEES				*i* S		**Sn**	**11**	**44**	**15.8**	**+3.8**
UEES				IAML			11	44	21.5	
	comp=Z,9μm,1.0s									
LOMA	**Loma Larga**	**1.38**	**57**	*i* P		**Pn**	**11**	**43**	**55.1**	**-0.2**
LOMA				*i* S		**Sn**	**11**	**44**	**16.7**	**+4.3**
LOMA				IAML			11	44	21.3	
	comp=Z,10μm,1.0s									
UTEC	**Universidad Te**	**1.39**	**55**	*i* P		**Pn**	**11**	**43**	**55.2**	**-0.1**
UTEC				*i* S		**Sn**	**11**	**44**	**15.2**	**+2.7**
UTEC				IAML			11	44	18.9	
	comp=Z,7μm,1.0s									
QUEZ	**Alcaldia de Qu**	**1.42**	**48**	*i* P		**Pn**	**11**	**43**	**56.0**	**+0.3**
QUEZ				*i* S		**Sn**	**11**	**44**	**16.8**	**+3.6**
QUEZ				IAML			11	44	28.0	
	comp=Z,52μm,1.0s									
UDBS	**Universidad Do**	**1.43**	**55**	*i* P		**Pn**	**11**	**43**	**55.9**	**0.0**
UDBS				*i* S		**Sn**	**11**	**44**	**16.3**	**+2.7**
UDBS				IAML			11	44	22.7	
	comp=Z,12μm,1.0s									
SJTE	**Alcalda de S**	**1.50**	**61**	*i* P		**Pn**	**11**	**43**	**57.0**	**+0.1**
SJTE				*i* S		**Sn**	**11**	**44**	**17.4**	**+2.0**
SJTE				IAML			11	44	27.6	
	comp=Z,5μm,1.0s									
PCG	**Pacaya**	**1.51**	**351**	*eP*		**Pn**	**11**	**43**	**56.7**	**-0.4**
PAVA	**Las Pavas**	**1.61**	**59**	*i* P		**Pn**	**11**	**43**	**58.5**	**+0.1**
PAVA				IAML			11	44	37.5	
	comp=Z,15μm,1.0s									
FUG	**Fuego 3**	**1.61**	**343**	*eP*		**Pn**	**11**	**43**	**57.8**	**-0.7**
TECO	**Alcaldia de Te**	**1.67**	**67**	*i* P		**Pn**	**11**	**43**	**58.6**	**-0.5**
TECO				*i* S		**Sn**	**11**	**44**	**22.5**	**+3.1**
TECO				IAML			11	44	30.2	
	comp=Z,4μm,1.0s									
NBG	**Las Nubes**	**1.68**	**1**	*eP*		**Pn**	**11**	**44**	**00.7**	**+1.1**
GCG4	**OSOP**	**1.69**	**354**	*i* P		**Pn**	**11**	**43**	**59.6**	**0.0**
GCG4				*i* S		**Sn**	**11**	**44**	**23.5**	**+3.3**
GCG4				IAML			11	44	31.2	
	comp=Z,10μm,1.0s									
GUNB	**GUNB**	**1.69**	**1**	*i* P		**Pn**	**11**	**43**	**58.8**	**-0.9**
GUNB				*i* S		**Sn**	**11**	**44**	**23.2**	**+2.9**
GUNB				IAML			11	44	26.9	
	comp=Z,10μm,1.0s									
UESV	**Universidad de**	**1.70**	**64**	*i* P		**Pn**	**11**	**43**	**59.6**	**0.0**
UESV				*i* S		**Sn**	**11**	**44**	**22.6**	**+2.4**
UESV				IAML			11	44	31.1	
	comp=Z,6μm,1.0s									
GUMI	**Mixco**	**1.75**	**352**	*i* P		**Pn**	**11**	**44**	**00.1**	**-0.3**
GUMI				*i* S		**Sn**	**11**	**44**	**24.9**	**+3.4**
GUMI				IAML			11	44	31.5	
	comp=Z,13μm,1.0s									
SCLA	**Alcaldia de Sa**	**1.78**	**63**	*i* P		**Pn**	**11**	**44**	**01.3**	**+0.6**
SCLA				*i* S		**Sn**	**11**	**44**	**25.2**	**+3.0**
SCLA				IAML			11	44	33.0	
	comp=Z,4μm,1.0s									
MTO3	**Montecristo**	**1.79**	**33**			**Pn**	**11**	**44**	**01.1**	**+0.1**
MTO3						Sn	**Sn**	**11**	**44**	**26.1**	**+3.6**
MTO3	**Montecristo**	**1.79**	**33**	*i* P		**Pn**	**11**	**44**	**01.4**	**+0.5**
MTO3				*i* S		**Sn**	**11**	**44**	**27.0**	**+4.5**
MTO3				IAML			11	44	30.9	
	comp=Z,8μm,1.0s									
SULM	**Suchitepequez,**	**1.83**	**320**	*eP*		**Pn**	**11**	**44**	**01.2**	**-0.1**
LLGN	**La Laguna**	**1.87**	**47**	*i* P		**Pn**	**11**	**44**	**02.2**	**+0.2**
LLGN				*i* S		**Sn**	**11**	**44**	**28.4**	**+4.0**
LLGN				IAML			11	44	36.4	
	comp=Z,4μm,1.0s									
COEB	**Comit de Eme**	**1.88**	**71**	*eP*		**Pn**	**11**	**44**	**01.8**	**-0.4**
COEB				*eS*		**Sn**	**11**	**44**	**31.8**	**+7.0**
COEB	**Comit de Eme**	**1.88**	**71**	*i* P		**Pn**	**11**	**44**	**01.9**	**-0.3**
COEB				*i* S		**Sn**	**11**	**44**	**28.2**	**+3.4**
COEB				IAML			11	44	35.7	
	comp=Z,4μm,1.0s									
PQSS	**Presa 15 de Se**	**1.90**	**67**	*i* P		**Pn**	**11**	**44**	**02.6**	**+0.3**
PQSS				*i* S		**Sn**	**11**	**44**	**28.4**	**+3.4**
PQSS				IAML			11	44	42.1	
	comp=Z,2μm,1.0s									
ESQI	**Esquipulas**	**1.93**	**31**			**Pn**	**11**	**44**	**03.3**	**+0.4**
ESQI	**Esquipulas**	**1.93**	**31**	*i* P		**Pn**	**11**	**44**	**03.4**	**+0.6**
ESQI				*i* S		**Sn**	**11**	**44**	**30.5**	**+4.5**
ESQI				IAML			11	45	05.7	
	comp=Z,18μm,1.0s									
PACA	**Pacayal**	**2.07**	**74**	*i* P		**Pn**	**11**	**44**	**05.7**	**+1.0**
PACA				*i* S		**Sn**	**11**	**44**	**31.3**	**+2.0**
PACA				IAML			11	44	49.3	
	comp=Z,34μm,1.0s									
RTAL	**Retalhuleu**	**2.08**	**322**	Pn		**Pn**	**11**	**44**	**03.2**	**-1.5**
RTAL	**Retalhuleu**	**2.08**	**322**	*i* P		**Pn**	**11**	**44**	**03.7**	**-1.0**
RTAL				*i* S		**Sn**	**11**	**44**	**30.8**	**+1.5**
RTAL				IAML			11	44	47.2	
	comp=Z,8μm,1.0s									
RANC	**El Ranchito**	**2.09**	**75**	*i* P		**Pn**	**11**	**44**	**06.0**	**+1.0**
RANC				*i* S		**Sn**	**11**	**44**	**34.0**	**+4.1**
RANC				IAML			11	44	51.0	
	comp=Z,3μm,1.0s									
JUCU	**Jucuarɲn**	**2.09**	**80**	*i* P		**Pn**	**11**	**44**	**04.6**	**-0.4**
JUCU				*i* S		**Sn**	**11**	**44**	**32.1**	**+2.3**
JUCU				IAML			11	44	44.0	
	comp=Z,2μm,1.0s									
BLLM	**Bellamira**	**2.14**	**75**	*eP*		**Pn**	**11**	**44**	**06.0**	**+0.3**
STG3	**Santiaguito 3,**	**2.15**	**327**	*eP*		**Pn**	**11**	**44**	**05.6**	**-0.4**
CNRM	**Centro Naciona**	**2.21**	**75**	*i* P		**Pn**	**11**	**44**	**06.5**	**-0.1**
CNRM				*i* S		**Sn**	**11**	**44**	**35.3**	**+2.6**
CNRM				IAML			11	45	04.6	
	comp=Z,19μm,1.0s									
MRL	**Marmol**	**2.27**	**17**	*eP*		**Pn**	**11**	**44**	**09.0**	**+1.3**
LCND	**La Caada**	**2.44**	**80**	*i* P		**Pn**	**11**	**44**	**10.2**	**+0.4**
LCND				IAML			11	44	52.5	
	comp=Z,3μm,1.0s									
SMSP	**San Marcos**	**2.48**	**327**	*i* P		**Pn**	**11**	**44**	**10.1**	**-0.5**
SMSP				*i* S		**Sn**	**11**	**44**	**41.8**	**+2.0**
SMSP				IAML			11	44	44.1	
	comp=Z,8μm,1.0s									
CNCH	**Conchagua**	**2.49**	**81**	*eP*		**Pn**	**11**	**44**	**11.3**	**+0.7**
CNCH	**Conchagua**	**2.49**	**81**	*i* P		**Pn**	**11**	**44**	**10.3**	**-0.2**
CNCH				*i* S		**Sn**	**11**	**44**	**42.4**	**+2.6**
CNCH				IAML			11	44	54.2	
	comp=Z,7μm,1.0s									
AVCB	**Coban**	**2.56**	**359**	*i* P		**Pn**	**11**	**44**	**12.0**	**+0.5**
AVCB				IAML			11	45	03.3	
	comp=Z,6μm,1.0s									
INTHN	**La Esperanza I**	**2.61**	**57**	*i* P		**Pn**	**11**	**44**	**12.6**	**+0.3**
HUEH	**Huehuetenango**	**2.65**	**336**			**Pn**	**11**	**44**	**13.5**	**+0.7**
HUEH	**Huehuetenango**	**2.65**	**336**	*i* P		**Pn**	**11**	**44**	**13.6**	**+0.8**
HUEH				IAML			11	44	58.5	
	comp=Z,11μm,1.0s									
AMPH	**Amapala**	**2.66**	**81**	*i* P		**Pn**	**11**	**44**	**12.7**	**-0.1**
CSGN	**Cosiguina Volc**	**2.74**	**88**	*i* P		**Pn**	**11**	**44**	**12.6**	**-1.2**
CSGN				IAML			11	44	52.4	
	comp=Z,8μm,1.0s									
POTN	**Potosi Cosigui**	**2.79**	**87**	*i* P		**Pn**	**11**	**44**	**14.2**	**-0.3**
POTN				IAML			11	44	42.8	
	comp=Z,720nm,1.0s									
CHNN	**El Viejo**	**3.17**	**94**	*i* P		**Pn**	**11**	**44**	**19.1**	**-0.6**
CHNN				IAML			11	44	28.8	
	comp=Z,4μm,1.0s									
TGUH	**Tegucigalpa,Un**	**3.22**	**69**	Pn		**Pn**	**11**	**44**	**18.6**	**-1.9**
TGUH	**Tegucigalpa,Un**	**3.22**	**69**	*eP*		**

ILCN *i* S **Sn** **11 45 06.0 -0.6**
ILCN IAML 11 45 10.9
comp=Z,280nm,1.0s
CNGA Al SSO del Vol 3.59 96 *i* P **Pn** **11 44 25.9 +0.3**
CNGA IAML 11 45 14.5
comp=Z,1µm,1.0s
CNGN Cerro Negro 3.60 96 **Pn** **11 44 24.7 -1.0**
CNGN Cerro Negro 3.60 96 *eP* **Pn** **11 44 25.8 +0.1**
LEVN Ruinas Leon Vi 3.69 97 *i* P **Pn** **11 44 27.9 +1.0**
LEVN IAML 11 45 29.3
comp=Z,1µm,1.0s
COPN Copaltepe 3.75 100 *i* P **Pn** **11 44 26.8 -0.9**
COPN IAML 11 45 36.4
comp=Z,2µm,1.0s
MOMN Momotombo 3.76 97 *i* P **Pn** **11 44 27.2 -0.7**
MOMN *i* S **Sn** **11 45 13.1 +2.1**
MOMN IAML 11 45 15.2
comp=Z,37nm,1.0s
CCIG Comitan 3.78 333 Pn **Pn** **11 44 29.6 +1.3**
MOM2 El Cardon 3.81 96 *i* P **Pn** **11 44 28.5 0.0**
MOM2 IAML 11 45 19.5
comp=Z,650nm,1.0s
MSHP Masachapa 3.89 105 *i* P **Pn** **11 44 29.3 -0.3**
MSHP IAML 11 45 18.2
comp=Z,180nm,1.0s
LIMN Finca el Limon 3.90 87 *i* P **Pn** **11 44 29.3 -0.5**
LIMN IAML 11 45 34.1
comp=Z,640nm,1.0s
BRAN Las Pilas 3.92 92 IAML 11 44 26.9
comp=Z,1µm,1.0s
BRAN *i* P **Pn** **11 44 30.6 +0.6**
SAPS Ciudad Sandino 3.93 100 *i* P **Pn** **11 44 30.1 -0.1**
SAPS IAML 11 45 24.0
comp=Z,1µm,1.0s
APYN Apoyeque 3.97 99 *i* P **Pn** **11 44 30.9 +0.1**
APYN IAML 11 45 21.9
comp=Z,1µm,1.0s
APQ2 Apoyeque 4.00 100 *i* P **Pn** **11 44 31.2 0.0**
APQ2 IAML 11 45 29.4
comp=Z,950nm,1.0s
PETF Flores 4.03 7 **Pn** **11 44 32.8 +1.3**
PETF Flores 4.03 7 *i* P **Pn** **11 44 33.3 +1.8**
PETF IAML 11 45 01.6
comp=Z,1µm,1.0s
TISN Laguna Tiscapa 4.07 100 *i* P **Pn** **11 44 31.6 -0.5**
TISN IAML 11 45 20.0
comp=Z,72nm,1.0s
UNAN Cigeo UNAN 4.07 101 *i* P **Pn** **11 44 32.3 +0.2**
UNAN IAML 11 45 19.5
comp=Z,6µm,1.0s
WILN Americas 2 4.14 100 *i* P **Pn** **11 44 31.9 -1.2**
WILN IAML 11 45 49.2
comp=Z,660nm,1.0s
MAS3 Al N del Volca 4.18 101 *i* P **Pn** **11 44 32.8 -0.8**
MAS3 IAML 11 45 21.8
comp=Z,920nm,1.0s
NANN Nandasmo 4.25 102 *i* P **Pn** **11 44 35.9 +1.3**
NANN IAML 11 45 26.6
comp=Z,9µm,1.0s
MATN Matagalpa 4.33 89 **Pn** **11 44 35.2 -0.5**
MATN Matagalpa 4.33 89 *i* P **Pn** **11 44 35.3 -0.5**
MATN IAML 11 44 59.9
comp=Z,250nm,1.0s
BOAB BOACO BROADBAN 4.61 95 Pn **Pn** **11 44 38.5 -1.0**
HZTE Horizontes, Gu 5.15 114 **Pn** **11 44 48.4 +1.5**
ACON Acoyapa 5.15 100 **Pn** **11 44 46.4 -0.6**
ACON Acoyapa 5.15 100 *eP* **Pn** **11 44 47.7 +0.8**
ACON Acoyapa 5.15 100 *i* P **Pn** **11 44 46.5 -0.5**
ACON IAMb IAmb 11 45 14.5
comp=Z,78nm,0.9s
ACON IAML 11 46 08.1
comp=Z,280nm,1.0s
SAJU San Juanillo, 5.36 121 *i* P **Pn** **11 44 50.4 +0.6**
SAJU IAML 11 44 53.1
comp=Z,310nm,1.0s
SAJU IVmB_BB 11 44 53.1
comp=Z,6µm,1.0s
SAJU IAmb IAmb 11 45 01.4
comp=Z,240nm,0.7s
ORTG Ortega, Santa 5.42 117 Pn **Pn** **11 44 52.2 +1.4**
ORTG Ortega, Santa 5.42 117 *i* P **Pn** **11 44 52.0 +1.2**
ORTG IVmB_BB 11 45 01.2
comp=Z,2µm,1.0s
ORTG IAmb IAmb 11 45 02.0
comp=Z,250nm,0.7s
ORTG IAML 11 46 34.4
comp=Z,360nm,1.0s
SIUN Universidad Ur 5.50 81 *i* P **Pn** **11 44 51.7 -0.1**
SIUN IAmb IAmb 11 44 53.9
comp=Z,29nm,0.9s
SIUN IVmB_BB 11 45 51.2
comp=Z,420nm,1.0s
SIUN IAML 11 46 22.4
comp=Z,52nm,1.0s
DUNO Dulce Nombre, 5.53 120 **Pn** **11 44 53.6 +1.4**
DUNO Dulce Nombre, 5.53 120 *i* P **Pn** **11 44 53.7 +1.5**
DUNO IAML 11 44 55.5
comp=Z,510nm,1.0s
DUNO IVmB_BB 11 45 07.0
comp=Z,10µm,1.0s
INDI Punta indio, G 5.64 122 *i* P **Pn** **11 44 54.7 +1.1**
INDI IVmB_BB 11 44 56.9
comp=Z,3µm,1.0s
INDI IAmb IAmb 11 44 58.1
comp=Z,82nm,0.7s
INDI IAML 11 46 46.4
comp=Z,1µm,1.0s
JTS Las Juntas de 5.90 115 Pn **Pn** **11 44 57.8 +0.5**
JTS Las Juntas de 5.90 115 P **Pn** **11 44 58.3 +1.1**
comp=Z,12nm,0.3s,baz=288,slow=20,SNR=36
JTS S **Sn** **11 46 01.3 -2.3**
comp=Z,16nm,0.4s,baz=277,slow=21,SNR=1.0
comp=Z,24nm,0.3s
JTS Las Juntas de 5.90 115 *eP* **Pn** **11 44 59.0 +1.7**
ESPN Las Esperanzas 5.96 96 **Pn** **11 44 56.1 -1.9**
ESPN Las Esperanzas 5.96 96 *i* P **Pn** **11 44 58.3 +0.2**
ESPN IAmb IAmb 11 45 22.3
comp=Z,45nm,0.8s
ESPN IAML 11 45 41.2
comp=Z,120nm,1.0s
ARE1 Arenal 1 6.03 113 **Pn** **11 45 00.6 +1.5**
CMIG Matias Romero 6.04 314 P **Pn** **11 44 59.5 +0.3**
comp=Z,4.7nm,0.3s,baz=106,slow=10,SNR=18
CMIG S **Sn** **11 46 08.6 +1.6**
comp=Z,142nm,0.8s,baz=66,slow=20,SNR=3.5
comp=Z,11nm,0.4s
LAFE Finca La Fe, P 6.16 119 *i* P **Pn** **11 45 00.4 -0.5**
LAFE IAML 11 45 04.0
comp=Z,3.0nm,1.0s
LAFE IVmB_BB 11 45 04.0
comp=Z,59nm,1.0s
LAFE IAmb IAmb 11 45 04.3
comp=Z,0.7nm,0.5s
JACO JACO, Garabito 6.45 119 **Pn** **11 45 05.3 +0.5**
JACO JACO, Garabito 6.45 119 *i* P **Pn** **11 45 04.5 -0.3**
JACO IAmb IAmb 11 45 12.2
comp=Z,85nm,0.6s
JACO IVmB_BB 11 45 24.2
comp=Z,2µm,1.0s
JACO IAML 11 45 28.6
comp=Z,150nm,1.0s
BLUN Bluefields 6.50 97 *i* P **Pn** **11 45 05.6 +0.2**
BLUN IAmb IAmb 11 45 20.2
comp=Z,53nm,1.0s
BLUN IAML 11 45 43.5
comp=Z,130nm,1.0s
HDC3 Heredia 3 6.77 114 *i* P **Pn** **11 45 08.8 -0.5**
HDC3 IAmb IAmb 11 45 25.1
comp=Z,100nm,0.5s
HDC3 IVmB_BB 11 45 40.0
comp=Z,7µm,1.0s
HDC3 IAML 11 47 07.8
comp=Z,240nm,1.0s
RIFO Rio Frio, Sara 6.81 111 *i* P **Pn** **11 45 09.5 -0.2**
RIFO IAmb IAmb 11 45 25.1
comp=Z,93nm,0.9s
RIFO IAML 11 47 05.5
comp=Z,170nm,1.0s
OCM Ochomogo 6.95 115 *i* P **Pn** **11 45 11.4 -0.4**
OCM IVmB_BB 11 45 18.0
comp=Z,3µm,1.0s
OCM IAmb IAmb 11 45 18.7
comp=Z,110nm,0.7s
OCM IAML 11 45 20.9
comp=Z,210nm,1.0s
VIRE VIRE 6.97 114 *i* P **Pn** **11 45 11.7 -0.6**
VIRE IVmB_BB 11 45 21.8
comp=Z,4µm,1.0s
VIRE IAML 11 45 26.4
comp=Z,380nm,1.0s
VIRE IAmb IAmb 11 45 29.4
comp=Z,230nm,0.8s
LCR2 La Lucha 2 6.98 116 Pn **Pn** **11 45 11.8 -0.4**
RIMA Rio Macho 7.09 115 **Pn** **11 45 14.6 +0.8**
RIMA Rio Macho 7.09 115 *i* P **Pn** **11 45 13.4 -0.4**
RIMA IVmB_BB 11 45 19.4
comp=Z,2µm,1.0s
RIMA IAmb IAmb 11 45 20.3
comp=Z,84nm,0.9s
RIMA IAML 11 45 27.4
comp=Z,160nm,1.0s
VTCV VTCV, Calle Va 7.12 113 *i* P **Pn** **11 45 13.7 -0.5**
VTCV IAmb IAmb 11 45 34.3
comp=Z,220nm,0.7s
VTCV IAML 11 45 37.3
comp=Z,300nm,1.0s
CDM Cerro de Muert 7.28 116 *i* P **Pn** **11 45 15.8 -0.7**
CDM IVmB_BB 11 45 22.7
comp=Z,3µm,1.0s
CDM IAmb IAmb 11 45 22.9
comp=Z,75nm,0.6s
CDM IAML 11 46 42.4
comp=Z,160nm,1.0s
PEZE Perez Zeledon, 7.43 117 **Pn** **11 45 20.6 +2.3**
PEZE Perez Zeledon, 7.43 117 *i* P **Pn** **11 45 17.8 -0.5**
PEZE IAmb IAmb 11 45 33.8
comp=Z,130nm,0.8s
PEZE IVmB_BB 11 45 55.5
comp=Z,3µm,1.0s
PEZE IAML 11 47 25.1
comp=Z,360nm,1.0s
TEIG Tepich 7.56 15 Pn **Pn** **11 45 20.8 +0.8**
TEIG Tepich 7.56 15 LR LR 11 48 44.8
comp=Z,40µm,18.2s,baz=316,slow=44
TEIG Tepich 7.56 15 *eP* **Pn** **11 45 20.5 +0.5**
PLAN Los Planes de 7.79 122 *i* P **Pn** **11 45 23.7 +0.5**
PLAN IVmB_BB 11 45 29.6
comp=Z,7µm,1.0s
PLAN IAML 11 45 40.5
comp=Z,560nm,1.0s
DRK0 Durika 7.86 117 **Pn** **11 45 26.7 +2.3**
POTG Potrero Grande 8.07 117 *i* P **Pn** **11 45 26.9 -0.2**
POTG IAML 11 45 33.6
comp=Z,400nm,1.0s
POTG IAmb IAmb 11 45 34.0
comp=Z,340nm,0.6s
PIRO Carate, Puerto 8.22 122 *i* P **Pn** **11 45 28.9 -0.2**
PIRO IVmB_BB 11 45 35.7
comp=Z,4µm,1.0s
PIRO IAmb IAmb 11 45 35.8
comp=Z,240nm,0.8s
CDITO Canoas 8.52 120 **Pn** **11 45 33.1 -0.1**
CDITO Canoas 8.52 120 *i* P **Pn** **11 45 32.8 -0.4**
CDITO IVmB_BB 11 45 44.6
comp=Z,4µm,1.0s
CDITO IAmb IAmb 11 45 46.0
comp=Z,160nm,1.4s
BRU2 Volcan 8.57 118 Pn **Pn** **11 45 34.8 +0.8**
TLIG Tlapa 9.18 301 Pn **Pn** **11 45 44.5 +2.2**
UNM Universidad Na 10.61 308 Pn **Pn** **11 46 02.2 +0.1**
SOR Soroa 12.08 34 Pn **Pn** **11 46 18.8 -3.0**
MOIG Morelia 12.39 304 **Pn** **11 46 27.3 +1.0**
CAMR Camarioca 13.24 39 Pn **Pn** **11 46 34.9 -2.8**
SJCC San Jacinto, C 15.18 100 *eP* **Pn** **11 47 05.6 +1.7**
ZAIG Zacatecas 15.20 312 Pn **Pn** **11 47 05.6 +1.2**
ZAIG IAmb IAmb 11 47 17.6
comp=Z,82nm,1.3s
PLMC San Jos del P 16.01 118 *eP* **P** **11 47 17.0 -0.5**
YOTC Yotoco, Valle 16.44 121 *eP* **P** **11 47 22.4 0.0**
JAMC Jamundi, Valle 16.61 124 *eP* **P** **11 47 27.6 +3.3**
GUY2C Guyana, Caldas 16.65 116 *eP* **P** **11 47 25.7 +0.6**
BBAC Balboa, Cauca 16.89 129 *eP* **P** **11 47 28.5 +1.1**
PTBC PUERTO BERRIO, 16.90 110 *eP* **P** **11 47 30.3 +3.0**
060A Indiantown 16.91 32 Pn **Pn** **11 47 23.3 -2.4**
POPC Popayan, Colom 17.01 126 *eP* **P** **11 47 30.7 +1.9**
DWPF Disney Wildern 17.28 27 P **Pn** **11 47 30.8 +0.3**
baz=210
735A Kenedy 17.33 338 Pn **Pn** **11 47 30.5 -0.5**
TULM Tulcn-Chalpat 17.37 133 **Pn** **11 47 31.8 -0.3**
PULU Pululahua 17.37 137 **Pn** **11 47 32.6 +0.5**
PULU IAmb IAmb 11 47 46.7
comp=Z,140nm,1.0s
IMBA Imbabura, San 17.39 135 Pn **Pn** **11 47 32.6 +0.2**
IMBA IAmb IAmb 11 47 51.7
comp=Z,42nm,0.6s
ORTC Ortega, Tolima 17.40 120 *eP* **P** **11 47 36.8 +3.8**
833A Chaparral WMA, 17.51 333 Pn **Pn** **11 47 32.3 -1.0**
833A Chaparral WMA, 17.51 333 P **P** **11 47 34.5 +0.5**
baz=149
SALI Salinas 17.64 148 **P** **11 47 35.5 0.0**
HKT Hockley 17.71 344 **Pn** **11 47 35.6 -0.1**
HKT Hockley 17.71 344 **Pn** **11 47 34.9 -0.8**
HKT IAmb IAmb 11 48 01.8
comp=Z,16nm,1.1s
ROSC El Rosal 17.75 115 **Pn** **11 47 36.1 -0.6**
ROSC El Rosal 17.75 115 P **Pn** **11 47 35.9 -0.8**
comp=Z,0.4nm,0.3s,baz=300,slow=20,SNR=1.2
comp=Z,6.8nm,0.3s
EF01 Eagle Ford 01 17.79 336 P **Pn** **11 47 35.8 -0.9**
656A Willston 17.93 23 P **Pn** **11 47 36.5 -1.9**
656A IAmb IAmb 11 47 50.0
comp=Z,69nm,0.9s
SLOR San Lorenzo - 17.94 138 **Pn** **11 47 38.0 -1.1**
441A DeRidder 17.96 352 P **Pn** **11 47 38.4 -0.4**
441A IAmb IAmb 11 47 45.4
comp=Z,54nm,0.8s
553A Crawfordville 18.07 17 **P** **11 47 38.1 -2.0**
553A IAmb IAmb 11 47 50.2
comp=Z,63nm,1.1s
CHSH Refugio Sur-Vo 18.29 141 P **P** **11 47 43.3 +0.1**
PIAT Ana Tenorio 18.29 138 *eP* **Pn** **11 47 47.7 +4.3**
CHIC Chingaza 18.36 115 *eP* **Pn** **11 47 46.9 +2.7**
HNVL Huntsville, TX 18.39 346 P **P** **11 47 42.7 -0.9**
346A Big Creek Wild 18.43 2 **P** **11 47 41.1 -2.9**
BRAL Brewton 18.44 9 P **Pn** **11 47 45.6 +0.9**
baz=190
HNDO Hondo 18.51 335 P **P** **11 47 44.5 -0.5**
VILC Villavicencio, 18.64 116 *eP* **Pn** **11 47 52.3 +5.0**
COHC Cochancay 18.83 143 P **P** **11 47 48.8 +0.2**
COHC Cochancay 18.83 143 *eP* **Pn** **11 47 51.6 +2.2**
DRIO Del Rio 19.01 332 P **P** **11 47 50.3 -0.1**
435B Jarrell 19.01 341 P **P** **11 47 49.8 -0.7**
435B Jarrell 19.01 341 P **Pn** **11 47 51.4 -0.1**
baz=158
352A Blakely 19.16 14 P **P** **11 47 51.3 -0.8**
352A IAmb IAmb 11 47 55.6
comp=Z,47nm,0.7s
NATX Nacogdoches 19.19 349 P **P** **11 47 51.6 -0.8**
NATX IAmb IAmb 11 47 55.1
comp=Z,62nm,0.8s
NATX Nacogdoches 19.19 349 P **Pn** **11 47 53.9 +0.3**
baz=167,SNR=6.3
VBMS Vicksburg 19.24 360 P **P** **11 47 52.1 -0.8**
VBMS IAmb IAmb 11 48 22.1
comp=Z,88nm,1.0s
VBMS Vicksburg 19.24 360 P **Pn** **11 47 55.4 +1.2**
baz=179,SNR=7.5
250A Grady 19.36 11 P **P** **11 47 53.6 -0.8**
250A IAmb IAmb 11 48 09.5
comp=Z,114nm,1.4s
TIGA Tifton 19.48 18 P **P** **11 47 54.9 -0.7**
TIGA Tifton 19.48 18 P **Pn** **11 47 56.6 -0.6**
baz=200
JCT Junction City 19.56 335 P **P** **11 47 56.5 0.0**
JCT Junction City 19.56 335 P **Pn** **11 47 57.3 -0.8**
baz=151,SNR=6.2
237A Washetta, Mont 19.67 346 P **P** **11 47 56.2 -1.4**
146A Union 19.69 3 P **P** **11 47 57.9 0.0**
143A Socs Landing, 19.74 357 P **P** **11 47 55.9 -2.5**
143A IAmb IAmb 11 48 27.4
comp=Z,112nm,1.2s
SDV Santo Domingo 19.78 100 P **P** **11 47 57.5 -1.7**
SDV Santo Domingo 19.78 100 P **P** **11 47 59.0 -0.2**
comp=Z,0.9nm,0.3s,baz=293,slow=4.2,SNR=6.4
SDV LR LR 11 57 50.4
comp=Z,557nm,18.9s,baz=272,slow=44
comp=Z,23nm,0.9s
SDV Santo Domingo 19.78 100 *eP* **P** **11 47 58.4 -0.8**
BOSC San Juan Bosco 19.82 143 P **Pn** **11 48 00.8 -0.7**
BRDY Brady 19.96 338 P **P** **11 48 01.0 +0.1**
PTGC Puerto Gaitan, 19.97 114 *eP* **Pn** **11 48 03.2 0.0**
HPIG 20.02 317 P Pn 11 48 03.3 -0.5
HPIG IAmb IAmb 11 48 14.5
comp=Z,34nm,0.9s
MCRA Macar, Loja 20.03 148 P Pn 11 48 03.0 -0.7
MCRA Macar, Loja 20.03 148 *eP* **P** **11 48 01.6 -0.1**
WHTX Lake Whitney, 20.09 342 P **P** **11 48 01.7 -0.6**
WHTX Lake Whitney, 20.09 342 P **P** **11 48 02.8 +0.5**
baz=159,SNR=9.9
SAND Sanderson 20.17 329 P **P** **11 48 04.2 +1.0**
LRAL Lakeview Retre 20.28 8 P **P** **11 48 04.2 -0.2**
LRAL Lakeview Retre 20.28 8 P **P** **11 48 04.1 -0.2**
baz=189,SNR=15
Z47A Carrollton 20.32 6 P **P** **11 48 03.9 -0.8**
Z47A IAmb IAmb 11 48 10.2
comp=Z,63nm,0.8s
152A Waverly Hall 20.35 14 P **P** **11 48 04.7 -0.4**
Z41A Richland Creek 20.39 354 P **P** **11 48 04.5 -1.0**
Z41A IAmb IAmb 11 48 21.2
comp=Z,72nm,1.1s
FW16 Waxahatchie 20.40 344 P **P** **11 48 05.2 -0.4**
FW16 IAmb IAmb 11 48 16.6
comp=Z,42nm,0.9s
FW14 Alvarado 20.40 343 P **P** **11 48 05.6 0.0**
FW14 IAmb IAmb 11 48 34.8
comp=Z,50nm,0.9s
FW13 Cleburne 20.42 343 P **P** **11 48 05.8 -0.1**
TXAR Lajitas Array 20.50 325 P Pn 11 48 08.9 -0.4
TXAR Lajitas Array 20.50 325 P Pn 11 48 09.1 -0.2
comp=Z,17nm,0.7s,baz=154,slow=13,SNR=239
TXAR PcP **PcP** **11 52 19.2 +1.8**
comp=Z,1.3nm,0.8s,baz=140,slow=4.7,SNR=4.6
comp=Z,17nm,0.7s
TX31 Lajitas Ar. Si 20.50 325 P Pn 11 48 09.1 -0.3
OZNA Ozona 20.51 333 P **P** **11 48 07.6 +0.7**
H06E1 SOCORRO T-PHAS 20.62 289 T T 12 09 15.9
SNR=10
Z38A Mt. Pleasant 20.71 349 P **P** **11 48 09.1 +0.2**
Z38A IAmb IAmb 11 48 21.5
comp=Z,37nm,0.8s
154A Montrose 20.72 18 P **P** **11 48 07.2 -1.9**
154A IAmb IAmb 11 48 10.0
comp=Z,69nm,1.0s
257A Skidaway Islan 20.84 23 P **P** **11 48 10.5 +0.2**
WLAR White Oak Lake 20.85 354 P **P** **11 48 10.8 +0.3**
WLAR IAmb IAmb 11 48 16.3
comp=Z,55nm,0.8s
FW07 Weatherford 20.86 342 P **P** **11 48 10.1 -0.5**
FW07 IAmb IAmb 11 48 14.9
comp=Z,32nm,0.7s
Z51A Franklin 20.88 12 P **P** **11 48 11.2 +0.4**
Z51A IAmb IAmb 11 48 14.7
comp=Z,51nm,0.8s
Y45A Yeager Farm, C 20.89 2 P **P** **11 48 11.6 +0.7**
Y45A IAmb IAmb 11 48 19.6
comp=Z,64nm,1.0s
PLPT Palo Pinto 21.12 341 IAmb IAmb 11 48 16.2
comp=Z,32nm,0.8s
Y49A Blount Mountai 21.18 9 IAmb IAmb 11 48 19.7
comp=Z,30nm,0.8s
SGCY Sterling City 21.36 334 P **P** **11 48 16.8 +0.7**
GOGA Godfrey 21.37 16 P **P** **11 48 15.0 -1.0**
baz=198,SNR=5.2
ABTX Abilene, Hawle 21.40 338 P **P** **11 48 16.4 -0.1**
ABTX Abilene, Hawle 21.40 338 P **P** **11 48 16.1 -0.3**
baz=154
SLBS Sierra La Lagu 21.44 303 P **P** **11 48 17.9 +0.9**
OXF Oxford 21.54 2 P **P** **11 48 16.9 -0.9**
OXF Oxford 21.54 2 P **P** **11 48 16.5 -1.3**
baz=182
Y52A Lilburn 21.65 14 P **P** **11 48 18.0 -1.0**
Y52A IAmb IAmb 11 48 19.9
comp=Z,26nm,0.8s
X48A Hartselle 21.67 7 IAmb IAmb 11 48 21.9
comp=Z,36nm,0.7s
MIAR Mount Ida 21.75 353 P **P** **11 48 19.3 -0.8**
MIAR Mount Ida 21.75 353 P **P** **11 48 19.5 -0.7**
baz=171,SNR=17
UALR University of 21.86 356 IAmb IAmb 11 48 24.2
comp=Z,34nm,0.8s
LPIG La Paz 21.92 303 P **P** **11 48 25.1 +3.0**
comp=Z,5.4nm,0.5s,baz=135,slow=7.1,SNR=5.4
LPIG LR LR 11 57 05.7
comp=Z,657nm,18.5s,baz=124,slow=37
comp=Z,5.4nm,0.5s
FPAL Fort Paine 21.98 11 P **P** **11 48 22.5 -0.1**
FPAL IAmb IAmb 11 48 23.3
comp=Z,26nm,0.7s
WTFS Witchita Falls 22.05 342 P **P** **11 48 21.2 -2.2**
X37A Clayton 22.07 349 P **P** **11 48 21.7 -1.8**
X37A IAmb IAmb 11 48 51.5
comp=Z,41nm,1.1s
PLAL Pickwick Lake 22.09 5 P **P** **11 48 21.1 -2.6**
PLAL IAmb IAmb 11 48 25.7
comp=Z,25nm,0.8s
X51A Calhoun 22.15 12 P **P** **11 48 23.1 -1.3**
X51A IAmb IAmb 11 48 41.7
comp=Z,56nm,1.3s
ODSA Odessa 22.17 332 IAmb IAmb 11 48 27.0
comp=Z,33nm,0.9s
NHSC New Hope 22.17 23 P **P** **11 48 24.6 0.0**
NHSC New Hope 22.17 23 P **P** **11 48 22.8 -1.8**
baz=207
PECS Pecos 22.20 328 IAmb IAmb 11 48 29.5
comp=Z,33nm,0.7s
APMT Aspermont 22.20 338 IAmb IAmb 11 48 53.1
comp=Z,42nm,1.0s
BAUV El Baul 22.26 98 P **P** **11 48 25.9 +0.1**
BAUV IAmb IAmb 11 48 31.3
comp=Z,25nm,0.8s
VHRN Van Horn 22.34 325 P **P** **11 48 28.1 +1.4**
WHAR Wooly Hollow 22.37 356 IAmb IAmb 11 48 46.2
comp=Z,51nm,1.2s
POST Post 22.51 335 IAmb IAmb 11 48 36.2
comp=Z,21nm,0.8s
SWET Sewanee 22.58 9 IAmb IAmb 11 48 32.1
comp=Z,40nm,0.8s
X34A Smith Ranch, M 22.65 344 IAmb IAmb 11 48 35.9
comp=Z,44nm,1.1s
DKNS Dickens 22.81 337 P **P** **11 48 31.3 -0.2**
DKNS IAmb IAmb 11 48 34.4
comp=Z,30nm,0.8s
W52A Murphy 22.86 14 P **P** **11 48 31.7 -0.3**
W52A IAmb IAmb 11 48 51.5
comp=Z,35nm,0.9s
V48A Smith Brothers 22.97 7 IAmb IAmb 11 48 34.2
comp=Z,32nm,0.9s
BG3 Lake Jocassee 23.01 16 IAmb IAmb 11 49 02.2
comp=Z,27nm,1.0s
WMOK Wichita Mounta 23.05 342 **P** **11 48 32.4 -1.5**
WMOK Wichita Mounta 23.05 342 P **P** **11 48 32.0 -1.9**
baz=158,SNR=7.5
CPCT Cooper Cave 23.07 12 IAmb IAmb 11 48 34.1
comp=Z,22nm,0.8s
LCAR Lake Charles 23.09 358 P **P** **11 48 33.3 -1.0**
LCAR IAmb IAmb 11 48 55.1
comp=Z,26nm,0.9s
PAULI Pauline 23.17 18 P **P** **11 48 33.4 -1.7**
WVT Waverly 23.25 5 P **P** **11 48 35.1 -0.8**
WVT IAmb IAmb 11 48 36.3
comp=Z,49nm,1.1s
WVT Waverly 23.25 5 P **P** **11 48 34.9 -0.9**
baz=186
MNTX Cornudas Mount 23.26 326 P **P** **11 48 35.7 -0.3**
baz=140,SNR=109
CLTN Cedars of Leba 23.38 8 IAmb IAmb 11 48 38.0
comp=Z,62nm,1.0s
TUL3 Leonard 23.43 349 IAmb IAmb 11 49 05.1
comp=Z,28nm,0.9s
TUL3 Leonard 23.43 349 P **P** **11 48 36.6 -1.1**
baz=166
BIRD Birdtown, Kers 23.45 21 P **P** **11 48 36.7 -1.1**
BIRD IAmb IAmb 11 49 05.6
comp=Z,33nm,1.2s
V51A Loudon 23.45 12 P **P** **11 48 37.2 -0.5**
V51A IAmb IAmb 11 48 38.8
comp=Z,22nm,0.7s
RLO Rose Lookout 23.55 351 IAmb IAmb 11 49 06.7
comp=Z,33nm,0.9s
KMSC Kings Mountain 23.61 19 IAmb IAmb 11 49 07.1
comp=Z,39nm,1.1s
KMSC Kings Mountain 23.61 19 P **P** **11 48 38.0 -1.3**
baz=202,SNR=5.2
V52A Sevierville 23.65 14 IAmb IAmb 11 49 07.9
comp=Z,36nm,1.2s
V53A Saluda 23.68 15 P **P** **11 48 39.2 -0.8**

V53A IAmb IAmb 11 48 41.0
comp=Z,23nm,0.8s
OK029 Liberty Lake 23.68 346 P P 11 48 38.8 -1.3
OK052 Battle Ridge R 23.72 347 IAmb IAmb 11 48 40.6
comp=Z,34nm,0.7s
PBMO Poplar Bluff 23.79 360 IAmb IAmb 11 48 43.0
comp=Z,34nm,1.0s
OK033 Mehan 23.80 347 P P 11 48 39.6 -1.4
OK033 IAmb IAmb 11 48 40.9
comp=Z,21nm,0.7s
MSTX Muleshoe 23.83 334 P P **11 48 41.5 -0.1**
MSTX IAmb IAmb 11 48 42.9
comp=Z,23nm,0.8s
MSTX Muleshoe 23.83 334 P P **11 48 40.7 -0.8**
baz=148,SNR=9.9
QUOK Quay 23.87 347 P P 11 48 40.7 -1.1
QUOK IAmb IAmb 11 48 42.5
comp=Z,36nm,0.8s
U49A Red Boiling Sp 23.88 9 P P **11 48 41.4 -0.4**
W57A Gilead 24.07 21 IAmb IAmb 11 48 44.0
comp=Z,20nm,0.8s
T45A Paducah 24.07 3 P P **11 48 43.0 -0.5**
OK048 Pawnee Station 24.16 347 IAmb IAmb 11 49 12.2
comp=Z,29nm,0.9s
T47A Sharon Grove 24.17 6 P P **11 48 44.0 -0.5**
AMTX Amarillo 24.18 337 IAmb IAmb 11 48 46.7
comp=Z,42nm,1.1s
AMTX Amarillo 24.18 337 P P **11 48 44.5 -0.2**
baz=152
MGMO Mountain Grove 24.22 356 IAmb IAmb 11 48 45.4
comp=Z,20nm,0.8s
OK051 E0350 and S346 24.22 347 P P **11 48 42.9 -2.1**
V55A Taylorsville 24.30 18 P P **11 48 44.9 -0.9**
V55A IAmb IAmb 11 48 46.7
comp=Z,22nm,0.7s
CGM3 Cape Girardeau 24.31 1 P P **11 48 44.4 -1.3**
CGM3 IAmb IAmb 11 49 07.4
comp=Z,20nm,0.7s
TZTN Tazewell 24.33 13 P P **11 48 45.2 -0.8**
TZTN IAmb IAmb 11 48 47.2
comp=Z,37nm,1.1s
TZTN Tazewell 24.33 13 P P **11 48 45.3 -0.7**
baz=196,SNR=9.3
T50A Nancy 24.53 11 IAmb IAmb 11 48 49.4
comp=Z,19nm,0.7s
T35A Sooner Cattle 24.55 348 IAmb IAmb 11 48 47.9
comp=Z,31nm,1.0s
U54A Nelsons Funny 24.75 17 IAmb IAmb 11 48 51.4
comp=Z,38nm,0.9s
S39A Bolivar 24.84 354 P P **11 48 50.0 -0.6**
KAN13 South Haven SW 24.85 346 P P **11 48 48.9 -1.8**
CNNC Cliffs of the 24.95 25 P P **11 48 50.5 -1.0**
baz=210
HSIG 24.97 313 IAmb IAmb 11 49 04.9
comp=Z,47nm,1.5s
U56A King 25.02 19 IAmb IAmb 11 48 54.3
comp=Z,25nm,0.9s
CCM Cathedral Cave 25.07 358 P P **11 48 51.9 -0.7**
CCM IAmb IAmb 11 48 53.9
comp=Z,31nm,0.7s
CCM Cathedral Cave 25.07 358 P P **11 48 52.3 -0.4**
baz=178
121A Cookes Peak, D 25.23 324 P P **11 48 57.1 +2.7**
121A Cookes Peak, D 25.23 324 P P **11 48 56.7 +2.3**
baz=137,SNR=71
319A Douglas 25.33 320 IAmb IAmb 11 48 59.4
comp=Z,26nm,1.1s
PCRV Puerto La Cruz 25.35 93 LR LR 12 00 06.1
comp=Z,275nm,21.2s,slow=40
S51A Beattyville 25.38 13 P P **11 48 54.4 -1.0**
S51A IAmb IAmb 11 49 23.3
comp=Z,31nm,1.1s
WCI Wyandotte Cave 25.49 7 P P **11 48 55.8 -0.7**
WCI Wyandotte Cave 25.49 7 P P **11 48 55.8 -0.7**
baz=189
BLA Blacksburg 25.80 18 IAmb IAmb 11 49 27.1
comp=Z,31nm,1.2s
BLA Blacksburg 25.80 18 P P **11 48 59.1 -0.2**
baz=202
OLIL Olney 25.82 4 IAmb IAmb 11 49 00.3
comp=Z,31nm,0.8s
R50A Paris 25.85 11 P P **11 48 58.8 -0.9**
Y22D IRIS PASSCAL I 25.91 327 P P **11 49 00.3 -0.2**
baz=140
Y22F Passcal Instru 25.91 327 P P **11 48 59.6 -0.9**
baz=140
Q44A Meyer Farm, Va 25.93 2 P P **11 48 59.5 -1.0**
Q44A IAmb IAmb 11 49 02.5
comp=Z,38nm,0.8s
RTBA Rita Blanca 25.95 337 P P **11 49 00.4 -0.4**
RTBA **PcP 11 52 30.4 +1.8**
U59A Littleton 25.95 24 P P **11 48 59.8 -0.9**
U59A IAmb IAmb 11 49 03.8
comp=Z,16nm,0.8s
T57A Hurt 25.99 21 IAmb IAmb 11 49 28.9
comp=Z,33nm,1.1s
DUN6 Lazy B Ranch 26.02 322 P P **11 49 04.5 +3.0**
ANMO Albuquerque 26.35 329 P P **11 49 05.5 +0.9**
ANMO Albuquerque 26.35 329 P P **11 49 04.5 0.0**
baz=142
ANMO Albuquerque 26.35 329 LR LR 12 01 32.4
comp=Z,249nm,18.0s,baz=235,slow=41
BLO Bloomington 26.39 7 P P **11 49 03.8 -0.8**
BLO IAmb IAmb 11 49 04.8
comp=Z,30nm,0.8s
R32A Long Quarter, 26.49 345 P P **11 49 05.4 -0.1**
R32A IAmb IAmb 11 49 07.4
comp=Z,38nm,0.9s
P40A Paris 26.57 357 IAmb IAmb 11 49 06.8
comp=Z,24nm,0.7s
T59A Double "B" Far 26.59 23 IAmb IAmb 11 49 34.9
comp=Z,38nm,0.9s
KSU1 Kansas State U 26.68 349 P P **11 49 06.8 -0.5**
baz=166
Q51A Peebles 26.76 12 P P **11 49 07.2 -0.8**
Q51A IAmb IAmb 11 49 36.2
comp=Z,37nm,0.9s
P46A Rosedale 26.77 5 P P **11 49 07.4 -0.6**
P46A IAmb IAmb 11 49 08.3
comp=Z,29nm,0.8s
P38A Dawn 26.77 355 P P **11 49 07.4 -0.7**
P38A IAmb IAmb 11 49 08.5
comp=Z,34nm,1.1s
P48A Milroy 26.82 8 IAmb IAmb 11 49 08.2
comp=Z,36nm,1.4s
TUC Tucson 26.91 319 P P **11 49 11.2 +1.8**
TUC Tucson 26.91 319 P P **11 49 09.1 -0.4**
baz=131
Q52A Bidwell 26.94 14 IAmb IAmb 11 49 37.1
comp=Z,21nm,1.1s
P49A Miami Univ. Ec 27.00 10 IAmb IAmb 11 49 37.0
comp=Z,40nm,1.3s
P49A Miami Univ. Ec 27.00 10 P P **11 49 09.4 -0.8**
baz=192
CBKS Cedar Bluff 27.12 344 P P **11 49 10.9 -0.4**
baz=159
O44A Mansfield 27.20 3 P P **11 49 11.0 -0.9**
O44A IAmb IAmb 11 49 12.2
comp=Z,32nm,0.8s
T25A Trinidad 27.23 335 P P **11 49 12.2 -0.2**
baz=149,SNR=7.9
P51A Williamsport 27.26 12 IAmb IAmb 11 49 12.4
comp=Z,17nm,0.8s
Q54A Coxs Mills 27.32 16 P P **11 49 12.4 -0.6**
Q54A IAmb IAmb 11 49 40.8
comp=Z,42nm,1.4s
SFIN Lafayette 27.53 5 P P **11 49 13.9 -0.9**
SFIN IAmb IAmb 11 49 14.6
comp=Z,26nm,0.8s
SFIN Lafayette 27.53 5 P P **11 49 13.4 -1.4**
baz=187
HDIL Hopedale 27.57 2 P P **11 49 14.1 -1.1**
HDIL IAmb IAmb 11 49 44.0
comp=Z,17nm,0.7s
HDIL Hopedale 27.57 2 P P **11 49 13.9 -1.3**
baz=182
P52A Corning 27.61 14 IAmb IAmb 11 49 42.9
comp=Z,18nm,1.0s
P52A Corning 27.61 14 P P **11 49 13.9 -1.6**
baz=197
O48B Farmland 27.64 9 IAmb IAmb 11 49 15.4
comp=Z,32nm,1.4s
O48B Farmland 27.64 9 P P **11 49 14.4 -1.4**
baz=191
P53A Whipple 27.65 15 IAmb IAmb 11 49 43.2
comp=Z,28nm,1.2s

CBN Corbin Frederi 27.73 22 P P **11 49 15.0 -1.7**
baz=208
214A Organ Pipe Nat 28.01 316 P P **11 49 19.3 0.0**
baz=127,SNR=7.7
NNA Nana 28.12 151 LR LR 11 58 40.3
comp=Z,199nm,21.1s,baz=293,slow=32
O52A Adamsville 28.14 14 P P **11 49 18.9 -1.4**
O52A IAmb IAmb 11 49 20.9
comp=Z,16nm,0.9s
N47A Urbana 28.18 8 IAmb IAmb 11 49 19.9
comp=Z,34nm,1.1s
KSCO Kaye Shedlock' 28.19 339 IAmb IAmb 11 49 22.7
comp=Z,15nm,0.8s
KSCO Kaye Shedlock' 28.19 339 P P **11 49 20.3 -0.7**
baz=154
SDCO Great Sand Dun 28.20 334 P P **11 49 22.5 +1.3**
SDCO **PcP 11 52 36.2 +2.0**
SDCO Great Sand Dun 28.20 334 P P **11 49 20.3 -0.9**
baz=147,SNR=6.0
W18A Petrified Fore 28.23 325 P P **11 49 23.7 +2.3**
W18A IAmb IAmb 11 49 25.0
comp=Z,26nm,1.1s
W18A Petrified Fore 28.23 325 P P **11 49 20.7 -0.7**
baz=137,SNR=9.1
MCWV Mont Chateau 28.23 17 P P **11 49 20.4 -0.7**
baz=202
P57A Homestead Farm 28.65 20 IAmb IAmb 11 49 25.3
comp=Z,17nm,0.8s
X16A Lo Mia Camp, P 28.73 322 IAmb IAmb 11 49 30.1
comp=Z,12nm,0.7s
S22A 4UR Ranch, Cre 28.78 332 P P **11 49 28.1 +1.7**
S22A **PcP 11 52 38.5 +2.8**
S22A 4UR Ranch, Cre 28.78 332 P P **11 49 25.4 -1.0**
baz=145
SDMD Soldier's Deli 28.99 22 P P **11 49 27.2 -0.7**
L42A Oliver, Polo 29.01 1 P P **11 49 26.7 -1.3**
L42A IAmb IAmb 11 49 27.5
comp=Z,20nm,0.8s
N53A Lisbon 29.04 15 P P **11 49 26.8 -1.4**
L40A Anamosa 29.07 359 IAmb IAmb 11 49 28.4
comp=Z,20nm,0.7s
Q24A Divide 29.09 336 P P **11 49 29.0 -0.2**
baz=149
113A Mohawk Valley, 29.14 317 P P **11 49 30.0 +0.7**
MVCO Mesa Verde 29.15 329 IAmb IAmb 11 49 41.8
comp=Z,13nm,0.8s
MVCO Mesa Verde 29.15 329 P P **11 49 30.1 +0.5**
baz=141,SNR=20
L48A N Adams 29.40 9 P P **11 49 29.2 -2.3**
L48A IAmb IAmb 11 49 31.5
comp=Z,17nm,0.8s
L34A Svendsen Farm, 29.44 351 P P **11 49 31.0 -0.8**
WUAZ Wupatki 29.45 323 P P **11 49 34.0 +1.8**
WUAZ IAmb IAmb 11 49 36.4
comp=Z,20nm,0.9s
WUAZ Wupatki 29.45 323 P P **11 49 31.7 -0.4**
baz=134,SNR=18
M52A Chesterland 29.60 14 P P **11 49 32.6 -0.7**
M52A IAmb IAmb 11 49 38.0
comp=Z,11nm,0.8s
M53A WI Miller and 29.67 15 P P **11 49 32.9 -1.1**
M53A WI Miller and 29.67 15 P P **11 49 32.8 -1.1**
baz=199
MVL Millersville 29.69 22 P P **11 49 33.4 -0.7**
K38A Parkersburg 29.72 356 IAmb IAmb 11 49 34.7
comp=Z,23nm,0.7s
SSPA Standing Stone 29.73 19 P P **11 49 33.3 -1.1**
SSPA Standing Stone 29.73 19 P P **11 49 33.2 -1.1**
baz=205
OGNE Ogallala 29.76 342 P P **11 49 33.7 -1.0**
baz=156
JFWS Jewell Farm 29.91 0 P P **11 49 34.8 -1.3**
JFWS IAmb IAmb 11 49 35.7
comp=Z,19nm,0.8s
JFWS Jewell Farm 29.91 0 P P **11 49 35.2 -0.8**
baz=180
ISCO Idaho Springs 29.99 336 P P **11 49 37.0 0.0**
ISCO Idaho Springs 29.99 336 P P **11 49 37.1 0.0**
baz=149
BLYC Blythe 30.24 317 P P **11 49 42.1 +3.0**
BLYC IAmb IAmb 11 49 59.5
comp=Z,18nm,1.4s
PDMCI Parker Dam,Lak 30.34 319 P P **11 49 40.5 +0.7**
baz=129
ERPA Erie 30.48 15 P P **11 49 39.9 -1.1**
ERPA IAmb IAmb 11 49 40.5
comp=Z,16nm,0.7s
ERPA Erie 30.48 15 P P **11 49 40.8 -0.3**
baz=200
K50A Casco 30.52 11 P P **11 49 40.2 -1.2**
LUPA Lehigh Univers 30.58 23 P P **11 49 41.5 -0.4**
LUPA IAmb IAmb 11 49 42.4
comp=Z,18nm,0.9s
J47A Sunmer 30.61 8 IAmb IAmb 11 49 42.0
comp=Z,31nm,1.1s
U15A North Rim 30.61 324 IAmb IAmb 11 49 46.5
comp=Z,11nm,0.8s
SWSC Sam W. Stewart 30.63 315 P P **11 49 43.0 +0.5**
baz=125,SNR=5.5
IKP In-Ko-Pah, Jac 30.68 314 P P **11 49 44.7 +1.7**
baz=124
K30B Basset 30.74 347 P P **11 49 44.0 +0.7**
BC3 Big Chuckawall 30.81 316 P P **11 49 45.9 +1.8**
baz=126,SNR=14
HMU Henry Mountain 30.85 328 IAmb IAmb 11 49 55.6
comp=Z,22nm,1.1s
IRM Iron Mountain 30.90 317 P P **11 49 46.3 +1.4**
baz=127
NEE2 Needles Airpor 30.93 319 P P **11 49 46.5 +1.3**
baz=129
MONP2 Monument Peak 31.04 314 P P **11 49 46.6 +0.3**
baz=124
N23A Red Feather La 31.06 337 P P **11 49 45.9 -0.6**
baz=149
WVNY West Valley, N 31.13 17 IAmb IAmb 11 49 46.4
comp=Z,14nm,0.9s
L56A Greenwood 31.19 19 IAmb IAmb 11 49 47.2
comp=Z,13nm,0.8s
I45A Fountain 31.24 6 P P **11 49 45.1 -2.6**
KSPA Keystone Colle 31.27 21 P P **11 49 47.1 -1.0**
KNB Kanab 31.33 324 IAmb IAmb 11 50 00.4
comp=Z,19nm,0.9s
O20A White River Ci 31.37 333 P P **11 49 50.6 +1.4**
O20A IAmb IAmb 11 49 51.6
comp=Z,19nm,0.8s
O20A PcP PcP **11 52 44.5 +2.3**
O20A White River Ci 31.37 333 P P **11 49 48.2 -0.9**
baz=145,SNR=16
BELC Belle Mtn. Jos 31.38 316 P P **11 49 48.9 -0.3**
baz=126
TPFO Pinon Flats 31.46 315 P P **11 49 50.4 +0.5**
baz=125
PFO Pinyon Flats O 31.47 315 P P **11 49 52.4 +2.4**
PFO Pinyon Flats O 31.47 315 P P **11 49 49.9 -0.1**
baz=125
PFO Pinyon Flats O 31.47 315 LR LR 12 03 52.6
comp=Z,262nm,18.2s,baz=131,slow=39
PFO Pinyon Flats O 31.47 315 P P **11 49 52.9 +2.9**
PAL Palisades 31.50 24 P P **11 49 49.3 -0.7**
baz=212
109C Camp Elliot, M 31.51 314 P P **11 49 50.3 +0.1**
baz=123
H43A Windswept, Lux 31.55 4 P P **11 49 49.2 -1.2**
LCMT Little Creek M 31.57 324 IAmb IAmb 11 49 54.6
comp=Z,11nm,0.8s
GMRC Granite Mounta 31.62 318 P P **11 49 51.8 +0.5**
baz=127,SNR=9.6
SRU San Rafael Swe 31.63 329 IAmb IAmb 11 49 54.0
comp=Z,12nm,1.0s
BINY Binghamton 31.76 21 IAmb IAmb 11 49 52.0
comp=Z,13nm,0.8s
BINY Binghamton 31.76 21 P P **11 49 51.3 -1.1**
baz=207
Q16A Castle Valley 31.81 328 P P **11 49 54.8 +1.7**
SZCU Shurtz Canyon 31.89 324 P P **11 49 55.8 +2.1**
SZCU IAmb IAmb 11 49 57.5
comp=Z,20nm,0.8s
P18A Preston Nutter 31.89 330 IAmb IAmb 11 50 04.6
comp=Z,10nm,0.8s
MURC Murrieta 31.97 315 P P **11 49 55.3 +1.0**
baz=124
CCUT Cedar City 32.01 324 IAmb IAmb 11 49 59.0
comp=Z,18nm,1.0s
K57A Scipio Center 32.06 19 P P **11 49 53.5 -1.5**
K57A IAmb IAmb 11 49 54.1
comp=Z,17nm,0.8s

HEC Hector,Ludlow 32.09 317 P P **11 49 56.5 +1.1**
baz=126,SNR=8.5
TMUT Trail Mountain 32.12 329 P P **11 49 57.3 +1.4**
BBRC Big Bear Solar 32.15 316 P P **11 49 55.7 -0.4**
baz=125
TUQ Turquoise Moun 32.19 319 P P **11 49 55.5 -0.8**
baz=128
GLMI Grayling 32.20 8 P P **11 49 54.9 -1.2**
baz=190
G40A Rib Lake 32.27 0 P P **11 49 54.9 -1.8**
G40A IAmb IAmb 11 49 56.2
comp=Z,18nm,1.4s
G45A Suttons Bay 32.29 6 P P **11 49 55.1 -1.8**
SPMN Marine on St. 32.29 357 P P **11 49 55.6 -1.3**
baz=175,SNR=17
SUSD Miller 32.29 348 P P **11 49 55.6 -1.3**
baz=164
SHPR Sheep Range 32.38 321 P P **11 49 59.8 +1.7**
SHPR **PcP 11 52 48.0 +3.0**
SCI2 San Clemente I 32.59 313 P P **11 50 00.1 +0.4**
baz=121
BFSC Mount Baldy Ra 32.64 315 P P **11 50 01.2 +0.9**
baz=124
GSC Goldstone, Bar 32.68 318 P P **11 50 01.1 +0.5**
baz=126
CIS Catalina Islan 32.72 313 P P **11 50 01.7 +0.8**
baz=122
K22A Casper 32.79 338 P P **11 50 01.1 -0.5**
baz=150
FMP Fort Macarthur 32.80 314 P P **11 50 02.0 +0.5**
baz=122
F42A Maple Grove Fa 32.81 3 P P **11 49 59.9 -1.6**
J57A Williamstown 32.84 19 P P **11 50 00.2 -1.5**
UCCT U. Connecticut 32.85 25 P P **11 50 00.9 -1.0**
BSUT Blindstream Ca 32.85 331 IAmb IAmb 11 50 04.8
comp=Z,12nm,0.8s
MPU Maple Canyon 32.87 329 IAmb IAmb 11 50 04.9
comp=Z,16nm,0.8s
PRN Pahroc Range 32.90 322 P P **11 50 05.6 +3.0**
ETMB Extrema 32.93 132 P P **11 50 04.0 +1.1**
PASC Pasadena Art C 32.97 315 P P **11 50 04.7 +1.7**
PASC IAmb IAmb 11 50 07.1
comp=Z,14nm,1.1s
F36A Milaca 32.97 356 IAmb IAmb 11 50 05.7
comp=Z,9.4nm,0.8s
J58A Remsen 33.03 20 IAmb IAmb 11 50 03.3
comp=Z,13nm,0.7s
TRY Troy 33.06 23 P P **11 50 03.3 -0.4**
TRY IAmb IAmb 11 50 03.5
comp=Z,13nm,0.8s
DECC Green Verdugo 33.12 315 P P **11 50 04.9 +0.6**
baz=123
SADO Sadowa 33.18 15 P P **11 50 03.5 -1.2**
SADO IAmb IAmb 11 50 04.7
comp=Z,13nm,0.9s
SADO Sadowa 33.18 15 LR LR 12 04 35.8
comp=Z,1µm,18.4s,baz=226,slow=39
L61B Northampton 33.21 24 P P **11 50 04.5 -0.5**
baz=213
EDW2 Edwards Air Fo 33.23 316 P P **11 50 06.0 +0.6**
baz=124
RSSD Black Hills 33.26 342 P P **11 50 06.3 +0.7**
RSSD IAmb IAmb 11 50 08.3
comp=Z,7.7nm,0.7s
RSSD PcP **PcP 11 52 49.1 +1.8**
RSSD Black Hills 33.26 342 P P **11 50 06.0 +0.3**
baz=155
RSSD Black Hills 33.26 342 P P **11 50 06.6 +0.9**
RSSD PcP **PcP 11 52 48.9 +1.6**
TPNV Topopah Spring 33.33 320 IAmb IAmb 11 50 11.0
comp=Z,16nm,1.1s
TPNV Topopah Spring 33.33 320 P P **11 50 08.0 +1.7**
baz=129,SNR=12
DELO Deloro Mine 33.35 17 P P **11 50 04.8 -1.4**
DELO IAmb IAmb 11 50 05.4
comp=Z,11nm,0.8s
LRMC Laurel Mtn Rad 33.36 317 P P **11 50 07.4 +0.8**
baz=125,SNR=7.5
J59A Piesco 33.39 21 P P **11 50 04.6 -2.0**
CCAC Calif City Air 33.40 316 IAmb IAmb 11 50 21.5
comp=Z,16nm,0.9s
FURC Furnace Creek, 33.42 319 P P **11 50 08.1 +1.2**
baz=128,SNR=9.0
CTU Camp Tracy 33.45 330 IAmb IAmb 11 50 10.4
comp=Z,16nm,0.9s
WCT Wildcat Mounta 33.47 320 P P **11 50 07.7 +0.2**
S11A Rachel 33.47 322 P P **11 50 10.6 +3.1**
SPR3 Spring Creek 3 33.56 325 P P **11 50 10.7 +2.1**
SPR3 IAmb IAmb 11 50 11.6
comp=Z,16nm,0.9s
SPR3 PcP **PcP 11 52 50.7 +2.2**
MPMC Manual Prospec 33.58 318 P P **11 50 09.6 +1.0**
baz=126,SNR=11
OSI Osito Audit: C 33.58 315 P P **11 50 09.8 +1.3**
baz=123
DUG Dugway, Tooele 33.61 328 IAmb IAmb 11 50 11.8
comp=Z,13nm,1.3s
DUG Dugway, Tooele 33.61 328 P P **11 50 10.1 +1.4**
baz=138,SNR=9.2
TCUT Toone Canyon 33.61 331 P P **11 50 10.8 +2.0**
TCUT IAmb IAmb 11 50 18.1
comp=Z,19nm,0.8s
E38A The Farm, Brul 33.62 359 P P **11 50 06.9 -1.6**
HRV Adam Dziewonsk 33.71 25 P P **11 50 09.1 -0.3**
baz=214
E46A Sault Ste Mari 33.76 8 IAmb IAmb 11 50 10.1
comp=Z,12nm,0.7s
R11B Troy Canyon, C 33.84 323 IAmb IAmb 11 50 14.9
comp=Z,15nm,1.0s
R11B Troy Canyon, C 33.84 323 P P **11 50 12.4 +1.6**
baz=132,SNR=30
ARVC Arvin 33.94 316 P P **11 50 11.9 +0.5**
baz=124
ISA Isabella, Lake 34.00 317 P P **11 50 14.8 +2.7**
ISA IAmb IAmb 11 50 17.5
comp=Z,13nm,1.1s
ISA Isabella, Lake 34.00 317 P P **11 50 12.4 +0.4**
baz=125
HWUT Hardware Ranch 34.06 331 P P **11 50 13.9 +1.2**
HWUT IAmb IAmb 11 50 16.9
comp=Z,15nm,0.8s
HWUT PcP **PcP 11 52 51.7 +2.1**
GRAC Grapevine Rang 34.06 320 P P **11 50 13.1 +0.5**
baz=128
BW06 Boulder Array 34.09 334 P P **11 50 13.8 +0.8**
baz=145
PDAR Pinedale Array 34.09 334 P P **11 50 13.0 0.0**
PDAR Pinedale Array 34.09 334 P P **11 50 13.2 +0.2**
comp=Z,2.1nm,0.7s,baz=132,slow=10,SNR=18
PDAR PcP **PcP 11 52 50.1 +0.3**
comp=Z,0.8nm,0.7s,baz=144,slow=4.5,SNR=5.2
comp=Z,2.1nm,0.7s
CWC Cottonwood Cre 34.19 318 P P **11 50 14.3 +0.5**
baz=126
SPUT South Promonto 34.26 330 IAmb IAmb 11 50 16.9
comp=Z,11nm,0.9s
BGU Big Grassy Mou 34.26 329 P P **11 50 16.0 +1.6**
BGU IAmb IAmb 11 50 17.1
comp=Z,11nm,0.8s
LONY Lake Ozonia 34.38 20 P P **11 50 13.6 -1.6**
LONY IAmb IAmb 11 50 13.9
comp=Z,8.7nm,0.8s
LONY Lake Ozonia 34.38 20 P P **11 50 13.8 -1.3**
baz=208,SNR=5.1
PKM Mcpherson Peak 34.49 314 P P **11 50 16.4 0.0**
baz=122
WBO Williamsburg 34.49 19 P P **11 50 14.6 -1.4**
WBO IAmb IAmb 11 50 15.1
comp=Z,11nm,0.7s
VES Vestal, Richgr 34.51 316 P P **11 50 17.1 +0.7**
baz=124,SNR=12
SAML Samuel 34.64 127 P P **11 50 18.5 +0.8**
SAML IAmb IAmb 11 50 23.4
comp=Z,14nm,1.1s
SAML Samuel 34.64 127 P P **11 50 17.8 0.0**
TIN Tinemaha, Big 34.65 319 P P **11 50 17.5 -0.2**
baz=127
DSP Deep Springs 34.67 320 IAmb IAmb 11 50 22.3
comp=Z,13nm,1.1s
AHID Auburn Hatcher 34.76 333 IAmb IAmb 11 50 20.4
comp=Z,16nm,1.1s
HVU Hansel Valley 34.77 330 IAmb IAmb 11 50 22.2
comp=Z,14nm,1.0s
SMMC Simmler 34.84 315 P P **11 50 19.6 +0.3**
baz=122
FRNY Flat Rock 34.91 21 P P **11 50 18.2 -1.5**

FRNY IAmb IAmb 11 50 18.4
comp=Z,8.4nm,0.9s
EYMN Ely 34.96 359 P **P** **11 50 18.1 -2.0**
EYMN Ely 34.96 359 P **P** **11 50 18.0 -2.1**
baz=178,SNR=10
LBNH Lisbon 35.01 23 P **P** **11 50 18.5 -2.1**
baz=212
REDW Red Top Meadow 35.13 334 P **P** **11 50 22.5 +0.6**
SNOW Snow King Moun 35.17 334 P **P** **11 50 23.2 +0.9**
LOHW Long Hollow 35.22 334 P **P** **11 50 23.3 +0.6**
LOHW IAmb IAmb 11 50 24.6
comp=Z,14nm,0.9s
ELK Elko 35.28 326 P **P** **11 50 25.4 +2.1**
ELK IAmb IAmb 11 50 27.7
comp=Z,14nm,0.9s
ELK PcP **PcP** **11 52 56.0 +2.8**
ELK Elko 35.28 326 LR LR 12 07 21.5
comp=Z,421nm,18.4s,baz=136,slow=41
MLAC Mammoth, Mammo 35.38 319 P **P** **11 50 22.3 -1.9**
baz=126
FXWY Fox Creek 35.42 334 P **P** **11 50 24.9 +0.5**
B35A Bob, Littlefor 35.47 356 P **P** **11 50 22.6 -1.8**
B35A IAmb IAmb 11 50 23.7
comp=Z,18nm,0.8s
MNTQ Montreal, Queb 35.48 20 IAmb IAmb 11 50 23.9
comp=Z,12nm,0.8s
NVAR Mina Array Bea 35.53 321 P **P** **11 50 27.7 +2.3**
NVAR **PcP** **11 52 56.9 +2.9**
NVAR Mina Array Bea 35.53 321 P **P** **11 50 28.1 +2.6**
comp=Z,19nm,0.7s,baz=134,slow=7.7,SNR=123
NVAR PcP **PcP** **11 52 54.8 +0.8**
comp=Z,3.7nm,0.7s,baz=138,slow=3.4,SNR=7.8
NVAR LR LR 12 06 47.0
comp=Z,570nm,18.4s,baz=130,slow=39
comp=Z,19nm,0.7s
MDPB Devils Postpil 35.53 319 P **P** **11 50 25.8 +0.2**
MDPB IAmb IAmb 11 50 42.0
comp=Z,14nm,0.9s
LHV Little Huntoon 35.54 320 P **P** **11 50 28.7 +3.4**
AGMN Agassiz Nation 35.59 354 P **P** **11 50 24.1 -1.5**
AGMN Agassiz Nation 35.59 354 P **P** **11 50 25.1 -0.5**
baz=171
IMW Indian Meadow 35.60 334 P **P** **11 50 25.7 -0.3**
IMW IAmb IAmb 11 50 28.7
comp=Z,6.2nm,0.6s
IMW **PcP** **11 52 55.8 +1.6**
FLWY Flagg Ranch 35.65 335 IAmb IAmb 11 50 45.8
comp=Z,12nm,1.1s
MDND Maddock 35.69 349 P **P** **11 50 26.1 -0.3**
MDND Maddock 35.69 349 P **P** **11 50 25.8 -0.7**
baz=164,SNR=24
RYN Ryan 35.79 321 IAmb IAmb 11 50 43.9
comp=Z,13nm,1.0s
KVN Kaiserville 35.79 322 P **P** **11 50 29.6 +2.0**
H17A Grant Village 35.85 335 P **P** **11 50 27.4 -0.7**
baz=145
RLMT Red Lodge 35.93 337 P **P** **11 50 29.3 +0.5**
RLMT Red Lodge 35.93 337 P **P** **11 50 28.1 -0.7**
baz=147,SNR=7.3
YFT Old Faithful 36.00 335 IAmb IAmb 11 50 32.5
comp=Z,22nm,1.3s
BMN Battle Mountai 36.17 324 P **P** **11 50 33.1 +2.3**
BMN IAmb IAmb 11 50 34.4
comp=Z,18nm,0.9s
LAO LASA Array 36.24 341 P **P** **11 50 30.4 -0.8**
baz=153
WAKR Walker 36.28 320 IAmb IAmb 11 50 36.5
comp=Z,14nm,0.9s
YHL Hebgen Lake 36.47 335 P **P** **11 50 34.3 +0.9**
YHL IAmb IAmb 11 50 37.0
comp=Z,12nm,1.2s
QLMT Earthquake Lak 36.56 335 P **P** **11 50 35.9 +1.8**
CMB Columbia Colle 36.61 319 P **P** **11 50 35.9 +1.4**
CMB IAmb IAmb 11 50 51.3
comp=Z,9.8nm,1.0s
VLDQ Val d'Or 36.73 14 P **P** **11 50 34.1 -1.1**
HLID Hailey 36.91 330 P **P** **11 50 38.7 +1.6**
HLID Hailey 36.91 330 P **P** **11 50 36.3 -0.9**
baz=138,SNR=9.7
PKME Peaks-Kenny Pk 36.91 25 P **P** **11 50 35.8 -1.1**
baz=216
PAHR Pah Rah Range 36.98 322 IAmb IAmb 11 50 53.9
comp=Z,12nm,0.9s
BOZ Bozeman (W) 37.26 335 P **P** **11 50 40.8 +0.8**
BOZ IAmb IAmb 11 50 44.0
comp=Z,7.5nm,0.7s
BOZ Bozeman (W) 37.26 335 P **P** **11 50 39.5 -0.5**
baz=144,SNR=7.5
DGMT Dagmar 37.29 345 P **P** **11 50 40.3 +0.2**
DGMT Dagmar 37.29 345 P **P** **11 50 39.7 -0.3**
baz=157,SNR=16
AFDM Forest Hills D 37.51 319 P **P** **11 50 44.3 +2.2**
ULM Lac du Bonnet 37.52 354 P **P** **11 50 40.7 -1.3**
ULM Lac du Bonnet 37.52 354 P **P** **11 50 40.0 -2.0**
comp=Z,28nm,0.8s,baz=172,slow=9.2,SNR=64
ULM LR LR 12 09 23.3
comp=Z,405nm,18.2s,baz=171,slow=42
comp=Z,28nm,0.8s
ORV Oroville 38.20 320 P **P** **11 50 50.4 +2.6**
ORV IAmb IAmb 11 50 53.0
comp=Z,18nm,1.1s
WVOR Wild Horse Val 38.30 326 P **P** **11 50 50.5 +1.8**
WVOR IAmb IAmb 11 50 53.8
comp=Z,16nm,0.8s
LMQ La Malbaie 38.40 22 P **P** **11 50 48.1 -1.4**
LMQ IAmb IAmb 11 50 49.1
comp=Z,12nm,0.9s
D62A Allapoint, All 38.49 24 P **P** **11 50 48.7 -1.5**
D62A IAmb IAmb 11 50 50.1
comp=Z,16nm,0.9s
EGMT Eagleton 38.58 339 P **P** **11 50 51.5 +0.5**
EGMT IAmb IAmb 11 50 52.0
comp=Z,19nm,0.8s
EGMT Eagleton 38.58 339 P **P** **11 50 50.6 -0.4**
baz=149,SNR=15
LYMT Lyon Mountain 38.64 336 P **P** **11 50 52.4 +0.7**
BPMT Black Pine Rid 38.69 334 P **P** **11 50 52.2 0.0**
BPMT **PcP** **11 53 06.2 +2.7**
PLID Pearl Lake 38.81 331 P **P** **11 50 53.7 +0.5**
PLID IAmb IAmb 11 50 54.8
comp=Z,22nm,0.9s
J08A Circle Bar Ran 38.83 327 P **P** **11 50 54.9 +1.7**
PB08 IPOC Station P 38.90 147 P **P** **11 50 55.4 +1.0**
BMO Blue Mountains 39.27 329 P **P** **11 50 57.0 +0.1**
LMN Caledonia Moun 39.34 28 P **P** **11 50 57.0 -0.3**
VILB Vilhena 39.42 130 P **P** **11 50 59.4 +1.1**
K05A Summer Lake 39.75 324 P **P** **11 50 02.2 +1.2**
BATG Bathurst New B 39.87 26 P **P** **11 51 00.8 -1.0**
BATG IAmb IAmb 11 51 01.0
comp=Z,16nm,0.9s
I07A Izee 39.87 327 P **P** **11 51 02.7 +0.8**
I07A IAmb IAmb 11 51 04.4
comp=Z,13nm,0.9s
KMRM Mail Ridge 39.98 319 P **P** **11 51 04.9 +2.1**
F10A Beach Ranch, E 40.04 331 P **P** **11 51 03.6 +0.3**
K04D Chiloquin, OR 40.19 323 P **P** **11 51 06.6 +2.0**
YBH Yreka Blue Hor 40.22 322 P **P** **11 51 05.4 +0.6**
YBH Yreka Blue Hor 40.22 322 LR LR 12 09 14.6
comp=Z,284nm,20.5s,baz=148,slow=38
PB09 IPOC Station P 40.23 149 P **P** **11 51 05.2 0.0**
PB09 IAmb IAmb 11 51 16.9
comp=Z,17nm,1.2s
L04D Klamath Falls 40.26 323 P **P** **11 51 06.3 +1.1**
J05D Fort Rock, OR 40.30 325 P **P** **11 51 06.3 +0.8**
KMPM Mount Pierce 40.34 319 P **P** **11 51 08.7 +2.8**
KHMM Horse Mountain 40.35 320 P **P** **11 51 09.0 +3.0**
KHMM IAmb IAmb 11 51 10.2
comp=Z,22nm,0.8s
G08A Pilot Rock 40.41 329 P **P** **11 51 06.2 -0.2**
PINE Pine Mountain 40.46 325 P **P** **11 51 08.2 +1.3**
PINE IAmb IAmb 11 51 09.2
comp=Z,24nm,0.9s
SIV San Ignacio 40.78 134 P **P** **11 51 10.7 +1.1**
comp=Z,13nm,0.7s,baz=305,slow=8.3,SNR=69
SIV LR LR 12 08 37.1
comp=Z,339nm,18.1s,baz=302,slow=37
comp=Z,13nm,0.7s
I05D Terrebonne, OR 41.03 326 P **P** **11 51 13.2 +1.7**
I05D IAmb IAmb 11 51 14.7
comp=Z,14nm,0.9s
LVC Limon Verde 41.07 149 LR LR 12 07 14.2
comp=Z,109nm,18.5s,baz=319,slow=34
I04A Tendick Farm, 41.29 324 P **P** **11 51 14.6 +1.1**
I04A IAmb IAmb 11 51 15.6
comp=Z,18nm,0.9s

G05A Wamic 41.61 327 IAmb IAmb 11 51 19.0
comp=Z,23nm,0.7s
D08A Wollman Farm, 41.64 331 P **P** **11 51 16.4 +0.1**
NEW Newport 41.69 333 P **P** **11 51 16.8 0.0**
NEW Newport 41.69 333 P **P** **11 51 16.1 -0.7**
baz=139
NEW Newport 41.69 333 LR LR 12 12 56.5
comp=Z,389nm,18.4s,baz=138,slow=42
E07A Sunnyside 41.74 329 P **P** **11 51 17.5 +0.4**
E07A IAmb IAmb 11 51 18.9
comp=Z,17nm,0.8s
HOOD Mount Hood Mea 41.84 327 P **P** **11 51 20.3 +2.1**
KEBM Edson Butte 41.86 322 P **P** **11 51 19.9 +1.6**
C09A Chrisman Ranch 41.87 332 P **P** **11 51 19.3 +1.1**
C09A IAmb IAmb 11 51 20.9
comp=Z,12nm,0.6s
H04D Lebanon 41.92 325 IAmb IAmb 11 51 20.4
comp=Z,25nm,0.9s
FFC Flin Flon 42.72 350 P **P** **11 51 24.5 -0.5**
FFC IAmb IAmb 11 51 25.5
comp=Z,18nm,0.6s
FFC Flin Flon 42.72 350 P **P** **11 51 24.5 -0.5**
LON Longmire 42.86 328 P **P** **11 51 27.7 +1.4**
RPN Rapa Nui 43.84 205 LR LR 12 05 11.1
comp=Z,220nm,18.3s,baz=59,slow=29
SCHQ Schefferville 45.73 19 P **P** **11 51 47.0 -2.0**
SCHQ Schefferville 45.73 19 P **P** **11 51 47.1 -2.0**
comp=Z,37nm,0.7s,baz=218,slow=6.5,SNR=97
SCHQ LR LR 12 12 36.8
comp=Z,465nm,18.3s,baz=214,slow=38
comp=Z,37nm,0.7s
FCC Fort Churchill 45.87 357 P **P** **11 51 48.7 -1.4**
FCC IAmb IAmb 11 51 49.6
comp=Z,16nm,0.8s
H03N2 Juan Fernandez 47.35 167 T T 12 43 04.1
baz=346,slow=76,SNR=6.3
H03N1 Juan Fernandez 47.35 167 T T 12 42 51.9
baz=346,slow=76,SNR=6.2
H03N3 Juan Fernandez 47.36 167 T T 12 42 46.1
baz=346,slow=76,SNR=6.1
BBB Bella Bella 49.50 330 LR LR 12 17 46.2
comp=Z,156nm,19.0s,baz=152,slow=42
CPUP Villa Florida 50.52 141 P **P** **11 52 26.6 +0.2**
comp=Z,1.2nm,0.5s,baz=299,slow=11,SNR=3.8
CPUP LR LR 12 15 41.6
comp=Z,126nm,18.2s,baz=324,slow=38
comp=Z,1.2nm,0.5s
BDFB Brasilia 50.59 123 P **P** **11 52 29.5 +2.3**
comp=Z,3.3nm,0.4s,baz=324,slow=6.7,SNR=6.5
BDFB LR LR 12 14 46.4
comp=Z,266nm,21.6s,baz=315,slow=37
comp=Z,3.3nm,0.4s
YKA Yellowknife Ar 52.47 346 P **P** **11 52 39.6 -0.8**
comp=Z,9.6nm,0.7s,baz=147,slow=7.6,SNR=131
YKA PcP **PcP** **11 53 50.8 +0.2**
comp=Z,0.9nm,0.7s,baz=144,slow=4.0,SNR=3.7
comp=Z,9.6nm,0.7s
FRB Frobisher Bay 53.05 12 LR LR 12 16 08.0
comp=Z,688nm,19.3s,baz=203,slow=37
V35K Ketchikan 53.07 332 P **P** **11 52 44.9 -0.1**
baz=126
FLDN Fort Liard 53.16 340 P **P** **11 52 45.3 -0.2**
baz=138
KOTAN Kotaneelee Air 53.27 340 P **P** **11 52 46.9 +0.4**
baz=137
DLBC Dease Lake 54.31 336 IAmb IAmb 11 52 56.6
comp=Z,10nm,0.8s
DLBC Dease Lake 54.31 336 P **P** **11 52 54.0 -0.1**
baz=130,SNR=5.9
DLBC Dease Lake 54.31 336 LR LR 12 20 28.4
comp=Z,420nm,18.4s,baz=124,slow=41
S34M Telegraph Cree 54.43 335 P **P** **11 52 54.7 -0.3**
baz=128
WTLY Watson Lake, Y 54.94 338 IAmb IAmb 11 52 59.6
comp=Z,6.1nm,0.7s
WTLY Watson Lake, Y 54.94 338 P **P** **11 52 58.8 +0.1**
baz=132,SNR=5.4
R33M Jennings River 55.30 336 P **P** **11 53 01.6 +0.2**
baz=129
WRGLY Wrigley 55.42 343 P **P** **11 53 02.2 +0.2**
baz=140
Q32M Nakina River 55.55 335 IAmb IAmb 11 53 05.8
comp=Z,10nm,0.9s
Q32M Nakina River 55.55 335 P **P** **11 53 02.8 -0.5**
baz=128
S32K Killisnoo 55.65 333 P **P** **11 53 03.5 -0.2**
baz=124
TGTN Hyland Airport 55.72 339 P **P** **11 53 04.4 +0.1**
baz=133
PLCA Paso Flores 56.42 162 LR LR 12 12 32.9
comp=Z,115nm,18.1s,baz=349,slow=31
P32M Atlin 56.52 335 P **P** **11 53 09.9 -0.1**
baz=126
P33M Teslin, Yukon 56.54 336 P **P** **11 53 09.6 -0.6**
baz=128
S31K Pelican 56.67 333 P **P** **11 53 10.6 -0.4**
baz=123
SKAG Skagway 57.12 335 P **P** **11 53 14.7 +0.5**
baz=125
RCBR Riachuelo 57.21 106 LR LR 12 20 42.2
comp=Z,227nm,18.0s,baz=292,slow=39
N32M Quiet Lake 57.23 337 IAmb IAmb 11 53 16.5
comp=Z,8.6nm,0.8s
N32M Quiet Lake 57.23 337 P **P** **11 53 14.9 -0.1**
baz=128
WHY Whitehorse 57.63 336 P **P** **11 53 17.2 -0.8**
baz=126
NUUK Nuuk 57.80 19 *i* P **P** **11 53 17.3 -1.6**
NUUK IAmb IAmb 11 53 19.2
comp=Z,16nm,0.9s
FARO Faro, Yukon 57.99 338 P **P** **11 53 20.0 -0.3**
baz=128
P30M Million Dollar 58.17 335 P **P** **11 53 20.9 -0.7**
baz=123
O30N Mendenhall 58.18 336 P **P** **11 53 22.3 +0.6**
O30N IAmb IAmb 11 53 23.4
comp=Z,6.2nm,0.9s
O30N Mendenhall 58.18 336 P **P** **11 53 21.3 -0.4**
baz=125
P29M Windy Craggy 58.23 334 P **P** **11 53 23.7 +1.6**
P29M IAmb IAmb 11 53 24.3
comp=Z,15nm,1.0s
P29M Windy Craggy 58.23 334 P **P** **11 53 20.8 -1.3**
baz=122
M31M Drury Creek, Y 58.36 338 P **P** **11 53 22.0 -0.9**
baz=127
HYT Haines Junctio 58.78 335 P **P** **11 53 25.4 -0.6**
baz=123
N30M Aishikik Lake 58.97 336 IAmb IAmb 11 53 29.3
comp=Z,8.8nm,1.1s
N30M Aishikik Lake 58.97 336 P **P** **11 53 26.1 -1.1**
baz=124
YUK6 Outpost Mounta 59.20 335 P **P** **11 53 28.9 -0.1**
baz=122
M30M Minto, Yukon 59.49 337 P **P** **11 53 30.7 0.0**
baz=125
YUK4 Talbot Arm 59.53 335 P **P** **11 53 30.7 -0.6**
baz=122
PINM Pinnacle 59.56 334 P **P** **11 53 30.4 -0.9**
baz=120
MAYO Mayo, Yukon 59.75 338 P **P** **11 53 31.4 -1.1**
baz=126
YUK8 Steele Glacier 59.96 335 P **P** **11 53 33.5 -0.8**
baz=121
M29M Somme Creek 60.06 336 P **P** **11 53 34.0 -0.8**
baz=123
SFJD Kangerlussuaq 60.09 17 P **P** **11 53 33.0 -1.7**
comp=Z,4.0nm,0.6s,baz=247,slow=17,SNR=2.5
SFJD LR LR 12 20 25.0
comp=Z,446nm,18.9s,baz=204,slow=37
comp=Z,4.0nm,0.6s
L29M L29M 60.30 337 IAmb IAmb 11 53 37.6
comp=Z,14nm,1.2s
L29M L29M 60.30 337 P **P** **11 53 34.6 -1.7**
baz=124
C36M Paulatuk 60.33 347 P **P** **11 53 34.7 -1.6**
baz=141
CTG Chitna Glacier 60.46 334 P **P** **11 53 35.9 -1.6**
baz=119
K29M Barlow Dome 60.49 338 IAmb IAmb 11 53 38.6
comp=Z,8.4nm,1.4s
K29M Barlow Dome 60.49 338 P **P** **11 53 36.6 -1.0**
baz=125
J30M Hart River 60.49 339 P **P** **11 53 36.1 -1.6**
baz=126
YUK3 Moose Creek 60.50 335 P **P** **11 53 37.5 -0.4**
baz=121,SNR=5.2
I30M Mount Dempster 60.89 340 P **P** **11 53 40.2 -0.2**

I30M IAmb IAmb 11 53 41.3
comp=Z,6.2nm,0.8s
I30M Mount Dempster 60.89 340 P **P** **11 53 40.0 -0.5**
baz=126
BVCY Beaver Creek 60.99 336 P **P** **11 53 40.8 -0.3**
baz=120
DY2G Dye2 61.04 19 *i* P **P** **11 53 39.1 -2.5**
DY2G IAmb IAmb 11 53 40.5
comp=Z,7.1nm,0.6s
J29N Klondike Camp 61.09 338 P **P** **11 53 40.6 -1.1**
baz=124
CRQE Cirque 61.11 333 P **P** **11 53 41.1 -0.8**
baz=118
G31M Satah River 61.27 342 P **P** **11 53 42.4 -0.4**
G31M IAmb IAmb 11 53 43.4
comp=Z,9.8nm,0.8s
G31M Satah River 61.27 342 P **P** **11 53 42.5 -0.2**
baz=129
DAWY Dawson 61.30 338 P **P** **11 53 43.5 +0.4**
baz=123
KAIM Kayak Island 61.33 332 P **P** **11 53 43.0 -0.3**
baz=116
M27K Edge Creek, AK 61.37 335 P **P** **11 53 43.8 +0.1**
M27K IAmb IAmb 11 53 45.0
comp=Z,8.3nm,1.1s
M27K Edge Creek, AK 61.37 335 P **P** **11 53 44.0 +0.3**
baz=120
MCARA McCarthy VSAT 61.38 334 P **P** **11 53 44.3 +0.7**
MCARA McCarthy VSAT 61.38 334 P **P** **11 53 43.7 +0.1**
baz=118,SNR=8.0
F31M Tsiigehtchic 61.45 342 P **P** **11 53 43.5 -0.4**
F31M IAmb IAmb 11 53 44.5
comp=Z,13nm,1.0s
F31M Tsiigehtchic 61.45 342 P **P** **11 53 43.5 -0.4**
baz=130,SNR=10
EPYK Eagle Plains 61.69 341 P **P** **11 53 45.3 -0.4**
baz=127
L27K Beaver Creek, 61.70 336 IAmb IAmb 11 53 47.3
comp=Z,8.1nm,0.8s
L27K Beaver Creek, 61.70 336 P **P** **11 53 46.4 +0.5**
baz=120
RES Resolute Bay 61.83 359 LR LR 12 22 27.7
comp=Z,360nm,20.0s,baz=186,slow=38
M26K Nabesna, AK 61.85 335 IAmb IAmb 11 53 48.5
comp=Z,5.1nm,0.9s
M26K Nabesna, AK 61.85 335 P **P** **11 53 47.5 +0.6**
baz=118
BMRM Bremner River 61.87 333 P **P** **11 53 47.2 +0.2**
baz=116
G30M tAoh Zraii Nji 61.91 341 P **P** **11 53 47.0 -0.1**
baz=127
INK Inuvik 61.95 343 P **P** **11 53 47.1 -0.2**
INK Inuvik 61.95 343 P **P** **11 53 47.2 -0.1**
baz=131,SNR=13
INK Inuvik 61.95 343 LR LR 12 24 46.6
comp=Z,239nm,19.2s,baz=182,slow=40
Q23K Middleton Isla 62.01 331 P **P** **11 53 48.2 +0.4**
baz=114
H29M Whitestone 62.15 340 P **P** **11 53 49.0 +0.3**
H29M IAmb IAmb 11 53 49.3
comp=Z,5.2nm,0.9s
H29M Whitestone 62.15 340 P **P** **11 53 48.5 -0.2**
baz=125
N25K Chitina, Valde 62.15 334 P **P** **11 53 49.9 +1.0**
baz=116,SNR=7.2
F30M Barrier River 62.16 342 P **P** **11 53 49.0 +0.3**
baz=128
EYAK Cordova Ski Ar 62.19 333 P **P** **11 53 49.5 +0.4**
baz=115
I28M Miner Creek 62.25 339 P **P** **11 53 50.3 +0.8**
baz=123
K27K Chicken 62.28 337 P **P** **11 53 49.7 0.0**
baz=120
L26K Log Cabin Wild 62.29 336 P **P** **11 53 50.1 +0.3**
baz=118
EGAK Eagle 62.33 338 IAmb IAmb 11 53 50.5
comp=Z,7.7nm,0.9s
EGAK Eagle 62.33 338 P **P** **11 53 49.3 -0.6**
baz=121
UMMG Uummannaq 62.35 13 *i* P **P** **11 53 47.4 -2.6**
UMMG IAmb IAmb 11 53 49.4
comp=Z,9.2nm,0.6s
A36M Sachs Harbour 62.64 348 P **P** **11 53 50.7 -1.1**
A36M Sachs Harbour 62.64 348 P **P** **11 53 50.8 -1.1**
baz=141,SNR=27
KLU Klutina 62.67 334 P **P** **11 53 53.7 +1.3**
KLU IAmb IAmb 11 53 54.3
comp=Z,11nm,0.8s
KLU Klutina 62.67 334 P **P** **11 53 52.6 +0.2**
baz=115,SNR=6.0
HARP HAARP 62.74 335 P **P** **11 53 53.1 +0.3**
baz=116
NUUG Nuugaatsiaq 62.76 13 *i* P **P** **11 53 51.2 -1.4**
NUUG IAmb IAmb 11 53 52.6
comp=Z,101nm,0.6s
I27K Kandik River 62.92 339 P **P** **11 53 54.7 +0.7**
baz=121
SCRK Sand Creek 62.99 337 IAmb IAmb 11 53 56.2
comp=Z,12nm,1.4s
SCRK Sand Creek 62.99 337 P **P** **11 53 55.2 +0.7**
baz=118,SNR=5.7
M24K Tolsona, Glenn 63.04 334 P **P** **11 53 54.6 -0.2**
baz=115
J26L Joseph Creek 63.08 337 IAmb IAmb 11 53 56.8
comp=Z,9.5nm,0.9s
J26L Joseph Creek 63.08 337 P **P** **11 53 55.0 -0.1**
baz=119
PAX Paxson 63.12 335 P **P** **11 53 55.0 -0.3**
baz=116
H27K Steamboat Moun 63.22 339 P **P** **11 53 55.8 -0.2**
baz=122
E29M Blow River 63.27 342 P **P** **11 53 55.9 -0.2**
baz=126
I26K Coal Creek Min 63.33 338 IAmb IAmb 11 53 57.6
comp=Z,15nm,1.5s
I26K Coal Creek Min 63.33 338 P **P** **11 53 56.9 +0.4**
baz=120
SCM Sheep Creek Mo 63.42 334 P **P** **11 53 57.3 -0.1**
baz=114
F28M Old Crow 63.43 341 P **P** **11 53 57.5 +0.2**
F28M Old Crow 63.43 341 P **P** **11 53 56.9 -0.3**
baz=124,SNR=32
M23K Glacier View 63.58 333 P **P** **11 53 58.4 +0.1**
baz=113
K24K Donnelly Dome 63.62 336 P **P** **11 53 59.1 +0.5**
baz=116
SEW Seward 63.72 331 P **P** **11 53 59.6 +0.4**
baz=111
KNK Knik Glacier 63.75 333 P **P** **11 53 59.8 +0.3**
KNK Knik Glacier 63.75 333 P **P** **11 54 00.1 +0.6**
baz=112,SNR=5.0
J25K Salcha River, 63.83 337 IAmb IAmb 11 54 00.9
comp=Z,7.2nm,1.1s
J25K Salcha River, 63.83 337 P **P** **11 54 00.7 +0.7**
baz=117
SML Sawmill 63.85 333 P **P** **11 54 00.9 +0.7**
baz=113
E28M Babbage River 63.88 342 IAmb IAmb 11 54 01.0
comp=Z,8.5nm,0.9s
E28M Babbage River 63.88 342 P **P** **11 54 00.1 -0.1**
baz=125
WAT6 Susitna Watana 63.90 334 P **P** **11 54 01.0 +0.4**
baz=114,SNR=7.5
DHY Denali Highway 63.95 335 P **P** **11 54 00.9 -0.1**
baz=114
GHO Glory Hole Cre 64.10 333 P **P** **11 54 02.6 +0.8**
PMR Palmer 64.12 333 P **P** **11 54 02.0 +0.1**
baz=112
BRSE Bradley Lake S 64.20 331 P **P** **11 54 02.6 +0.2**
baz=110
RC01 Rabbit Creek A 64.20 332 P **P** **11 54 03.4 +1.0**
RC01 Rabbit Creek A 64.20 332 P **P** **11 54 02.9 +0.4**
baz=111,SNR=6.1
BRLK Bradley Lake 64.28 331 P **P** **11 54 03.6 +0.6**
PRP Porcupine Dome 64.30 338 P **P** **11 54 03.4 +0.3**
PRP IAmb IAmb 11 54 04.2
comp=Z,6.6nm,0.9s
PRP Porcupine Dome 64.30 338 P **P** **11 54 03.7 +0.5**
baz=117,SNR=5.9
HDA Harding Lake 64.35 336 IAmb IAmb 11 54 04.3
comp=Z,8.9nm,0.9s
HDA Harding Lake 64.35 336 P **P** **11 54 03.6 +0.3**
baz=115,SNR=7.8
WAT1 Susitna Watana 64.35 334 P **P** **11 54 03.2 -0.2**
baz=113
G26K Porcupine Rive 64.37 339 P **P** **11 54 03.2 -0.2**
baz=120

IL31 64.48 337 P **P** 11 54 04.3 +0.2
IL31 IAmb IAmb 11 54 05.7
comp=Z,12nm,0.9s
ILAR Eielson Array 64.48 337 P **P** **11 54 04.0 -0.2**
ILAR Eielson Array 64.48 337 P **P** **11 54 04.0 -0.2**
comp=Z,7.2nm,1.0s,baz=121,slow=4.3,SNR=49
ILAR LR LR 12 24 43.9
comp=Z,285nm,20.2s,baz=108,slow=38
comp=Z,7.2nm,1.0s
KDAK Kodiak Island 64.49 328 P **P** **11 54 04.9 +0.6**
baz=107
KDAK Kodiak Island 64.49 328 LR LR 12 21 45.8
comp=Z,148nm,20.6s,baz=127,slow=36
KDAK Kodiak Island 64.49 328 P **P** **11 54 05.0 +0.6**
KDAK pP **pP** **11 54 16.1 -0.5**
HOM Homer 64.60 330 P **P** **11 54 05.5 +0.5**
baz=109
M22K Willow 64.62 333 P **P** **11 54 05.4 +0.4**
baz=111
ICESG Greenland Ices 64.62 18 *i* P **P** **11 54 03.2 -2.2**
ICESG IAmb IAmb 11 54 04.7
comp=Z,20nm,0.6s
D27M Malcolm River 64.67 342 P **P** **11 54 05.7 +0.2**
D27M IAmb IAmb 11 54 06.8
comp=Z,7.4nm,1.0s
D27M Malcolm River 64.67 342 P **P** **11 54 05.7 +0.2**
baz=123
OHAK Old Harbor 64.69 328 P **P** **11 54 05.5 -0.1**
baz=106
RND Reindeer 64.70 335 P **P** **11 54 06.1 +0.4**
CAPN Captain Cook N 64.74 332 P **P** **11 54 05.9 0.0**
baz=110
CCB Clear Creek Bu 64.78 336 P **P** **11 54 05.8 -0.4**
CCB IAmb IAmb 11 54 10.4
comp=Z,8.9nm,1.4s
SUA Susitna One 64.79 333 P **P** **11 54 07.4 +1.0**
SUA IAmb IAmb 11 54 07.6
comp=Z,7.9nm,0.9s
SUA Susitna One 64.79 333 P **P** **11 54 06.5 +0.1**
baz=110
POKR Poker Flat Res 64.84 337 P **P** **11 54 06.5 0.0**
baz=115
F26K Sheenjek River 64.86 340 P **P** **11 54 07.5 +0.9**
baz=120
MCK McKinley 64.86 335 P **P** **11 54 07.6 +0.9**
baz=113
COLA College 64.90 337 P **P** **11 54 06.5 -0.3**
COLA IAmb IAmb 11 54 07.5
comp=Z,7.7nm,0.8s
COLA College 64.90 337 P **P** **11 54 07.2 +0.4**
baz=115
COLA College 64.90 337 P **P** **11 54 06.8 0.0**
COLA PcP **PcP** **11 54 40.6 +0.9**
CUT Chulitna 64.92 334 P **P** **11 54 07.1 +0.1**
baz=111
NEA2 Nenana 65.26 336 P **P** **11 54 09.8 +0.6**
NEA2 IAmb IAmb 11 54 10.1
comp=Z,11nm,1.1s
NEA2 Nenana 65.26 336 P **P** **11 54 09.8 +0.6**
baz=113
F25K Christian Rive 65.31 340 P **P** **11 54 10.3 +0.7**
baz=118
TRF Thorofare Moun 65.31 335 P **P** **11 54 10.4 +0.6**
TRF IAmb IAmb 11 54 11.1
comp=Z,12nm,0.9s
TRF Thorofare Moun 65.31 335 P **P** **11 54 09.6 -0.2**
baz=112
H24K Noodor Dome 65.31 338 P **P** **11 54 10.1 +0.4**
H24K IAmb IAmb 11 54 10.9
comp=Z,10nm,1.1s
H24K Noodor Dome 65.31 338 P **P** **11 54 10.2 +0.6**
baz=115,SNR=7.0
SKT Skwentna 65.32 333 P **P** **11 54 09.9 +0.2**
SKT IAmb IAmb 11 54 11.1
comp=Z,10nm,0.9s
SKT Skwentna 65.32 333 P **P** **11 54 10.2 +0.5**
baz=110
Q19K Cape Douglas, 65.36 329 P **P** **11 54 10.8 +0.8**
baz=106
N20K Mount Spurr 65.37 332 P **P** **11 54 09.7 -0.4**
baz=109
E25K Arctic Village 65.54 340 IAmb IAmb 11 54 25.6
comp=Z,10nm,1.3s
E25K Arctic Village 65.54 340 P **P** **11 54 11.3 +0.3**
baz=118,SNR=6.3
G24K Hadweenzic Riv 65.54 338 P **P** **11 54 11.5 +0.4**
baz=116
I23K Minto, Yukon-K 65.59 337 P **P** **11 54 11.8 +0.5**
baz=113,SNR=12
KTH Kantishna Hill 65.61 335 P **P** **11 54 11.7 +0.1**
PPT Papeete 65.82 244 LR LR 12 14 50.6
comp=Z,156nm,19.7s,baz=44,slow=28
BPAW Bear Paw Mtn. 65.84 335 P **P** **11 54 12.8 -0.2**
BPAW IAmb IAmb 11 54 13.9
comp=Z,15nm,1.0s
BPAW Bear Paw Mtn. 65.84 335 P **P** **11 54 13.3 +0.3**
baz=111
PPLA Purkeypile 65.92 334 P **P** **11 54 13.7 0.0**
baz=110
M20K Styx River 66.01 333 P **P** **11 54 13.8 -0.4**
M20K IAmb IAmb 11 54 15.4
comp=Z,5.7nm,0.8s
M20K Styx River 66.01 333 P **P** **11 54 14.6 +0.4**
baz=108
F24K Squaw Lake 66.05 339 P **P** **11 54 15.4 +1.1**
F24K Squaw Lake 66.05 339 P **P** **11 54 14.8 +0.5**
baz=116
O19K Port Alsworth 66.05 331 P **P** **11 54 14.6 +0.2**
baz=106
CAST Castle Rocks 66.06 334 P **P** **11 54 14.3 -0.1**
CAST IAmb IAmb 11 54 15.1
comp=Z,6.2nm,1.0s
CAST Castle Rocks 66.06 334 P **P** **11 54 14.0 -0.4**
baz=110
MLY Manley 66.09 336 P **P** **11 54 14.5 -0.1**
MLY Manley 66.09 336 P **P** **11 54 14.6 -0.1**
baz=112,SNR=15
P18K Big Mountain, 66.27 330 P **P** **11 54 15.2 -0.7**
baz=105
N19K Bonanza Creek 66.31 331 P **P** **11 54 16.3 +0.1**
N19K IAmb IAmb 11 54 17.4
comp=Z,12nm,0.8s
N19K Bonanza Creek 66.31 331 P **P** **11 54 16.2 +0.1**
baz=106
CHUM Lake Minchumin 66.31 335 P **P** **11 54 15.4 -0.6**
baz=110
Q17K Contact Creek 66.31 328 P **P** **11 54 15.5 -0.8**
baz=104
D25K Kavik River 66.37 341 P **P** **11 54 16.7 +0.3**
D25K Kavik River 66.37 341 P **P** **11 54 17.0 +0.6**
baz=118
O18K Koktuh Hills 66.38 330 P **P** **11 54 16.3 -0.3**
baz=105
G23K Bananza Creek 66.47 338 P **P** **11 54 17.5 +0.4**
G23K Bananza Creek 66.47 338 P **P** **11 54 17.6 +0.6**
baz=113
E24K Your Creek 66.49 340 P **P** **11 54 17.7 +0.6**
E24K Your Creek 66.49 340 P **P** **11 54 17.8 +0.6**
baz=115
L20K Farewell, AK 66.53 333 P **P** **11 54 17.6 +0.1**
baz=108
M19K Big River Lodg 66.58 332 P **P** **11 54 18.0 +0.2**
baz=107
I21K Tanana 66.63 336 P **P** **11 54 18.0 0.0**
I21K IAmb IAmb 11 54 19.0
comp=Z,8.7nm,1.1s
I21K Tanana 66.63 336 P **P** **11 54 18.2 +0.2**
baz=111
H22K Ishtalitna Cre 66.66 337 P **P** **11 54 18.3 +0.1**
baz=112
COLD Coldfoot 66.74 339 P **P** **11 54 19.9 +1.2**
COLD IAmb IAmb 11 54 20.9
comp=Z,13nm,1.2s
COLD Coldfoot 66.74 339 P **P** **11 54 19.6 +0.9**
baz=113,SNR=10
Q16K King Salmon 66.80 329 P **P** **11 54 20.1 +0.9**
baz=104
P17K Kvichak River 66.82 329 P **P** **11 54 20.5 +1.2**
baz=104
E23K Chandalar 66.87 339 P **P** **11 54 20.4 +0.8**
baz=114
L19K White Mountain 66.87 333 P **P** **11 54 20.4 +0.7**
baz=107
K20K Telida 66.88 334 P **P** **11 54 19.8 +0.1**
K20K IAmb IAmb 11 54 20.2
comp=Z,7.7nm,0.9s
K20K Telida 66.88 334 P **P** **11 54 19.7 +0.1**
baz=108
SUMG Summit 66.88 15 P **P** **11 54 19.2 -0.8**
SUMG Summit 66.88 15 *i* P **P** **11 54 18.0 -2.0**
SUMG IAmb IAmb 11 54 20.9
comp=Z,11nm,0.6s
SVW2 Sparrevohn 66.90 331 P **P** **11 54 19.9 0.0**
SVW2 IAmb IAmb 11 54 20.2
comp=Z,15nm,1.1s
N18K Kilae Creek 66.93 331 P **P** **11 54 20.1 0.0**
baz=105
D24K Happy Valley 67.07 341 P **P** **11 54 21.3 +0.6**
D24K IAmb IAmb 11 54 22.1
comp=Z,17nm,1.4s
D24K Happy Valley 67.07 341 P **P** **11 54 20.5 -0.2**
baz=115
G22K Bettles 67.09 338 P **P** **11 54 21.5 +0.6**
baz=112
TOLK Toolik Lake Re 67.10 340 P **P** **11 54 21.3 +0.3**
TOLK Toolik Lake Re 67.10 340 P **P** **11 54 21.2 +0.1**
baz=114
M18K Stony River 67.12 332 P **P** **11 54 21.3 +0.1**
baz=106
H21K Melozitna River 67.12 336 P **P** **11 54 20.6 -0.6**
baz=110
J20K Nowinta River 67.17 335 P **P** **11 54 21.1 -0.4**
J20K Nowinta River 67.17 335 P **P** **11 54 21.6 +0.1**
baz=108
CHGN Chignik 67.22 326 P **P** **11 54 21.8 0.0**
baz=101
C24K Franklin Bluff 67.28 341 P **P** **11 54 22.2 +0.1**
baz=116
O17K Koliganek Bris 67.29 330 P **P** **11 54 22.3 +0.1**
baz=104
I20K Naaghedeneel 67.50 335 P **P** **11 54 24.1 +0.6**
I20K Naaghedeneel 67.50 335 P **P** **11 54 23.2 -0.3**
baz=108
N17K Nushagak Hills 67.51 331 P **P** **11 54 23.2 -0.5**
baz=104
P16K Nushagak River 67.56 329 P **P** **11 54 23.5 -0.5**
baz=103
NEEM North Greenlan 67.58 9 *i* P **P** **11 54 22.6 -1.6**
NEEM IAmb IAmb 11 54 24.1
comp=Z,12nm,0.7s
TTA Tatalina 67.60 333 P **P** **11 54 24.3 0.0**
baz=106
D23K Nanushuk River 67.60 340 P **P** **11 54 24.8 +0.7**
baz=114
E22K Anaktuvuk Pass 67.66 339 P **P** **11 54 24.8 +0.2**
E22K IAmb IAmb 11 54 26.0
comp=Z,9.8nm,0.9s
E22K Anaktuvuk Pass 67.66 339 P **P** **11 54 25.0 +0.5**
baz=112
G21K Allakaket 67.69 337 P **P** **11 54 25.4 +0.6**
G21K IAmb IAmb 11 54 26.0
comp=Z,7.2nm,0.8s
G21K Allakaket 67.69 337 P **P** **11 54 25.2 +0.5**
baz=110
L18K Granite Mounta 67.71 332 P **P** **11 54 25.3 +0.4**
baz=105
J19K Poorman 67.73 334 IAmb IAmb 11 54 25.7
comp=Z,6.3nm,0.9s
J19K Poorman 67.73 334 P **P** **11 54 24.8 -0.3**
baz=107
O16K Kokwok River B 67.74 329 P **P** **11 54 25.4 +0.2**
baz=103
S14K Fog Glacier 67.84 326 P **P** **11 54 26.0 0.0**
baz=100
M17K Holitna River 67.84 331 P **P** **11 54 25.8 0.0**
baz=104
H20K Anotleneega Mo 67.88 336 P **P** **11 54 26.8 +0.8**
baz=108
F21K Alatna River 67.92 338 P **P** **11 54 26.8 +0.6**
baz=110
J18K Innoko River 68.05 334 P **P** **11 54 28.0 +0.9**
baz=106
SDPT Sand Point 68.19 325 P **P** **11 54 29.0 +1.0**
baz=99
D22K Ayikyak River 68.23 340 P **P** **11 54 28.6 +0.5**
baz=112
N16K Nishlik Lake 68.26 330 P **P** **11 54 29.5 +1.0**
baz=102
L17K Donlin 68.42 332 P **P** **11 54 30.3 +1.0**
baz=104
H19K Roundabout Mou 68.52 336 IAmb IAmb 11 54 30.5
comp=Z,12nm,1.1s
H19K Roundabout Mou 68.52 336 P **P** **11 54 29.8 -0.1**
baz=106
O15K Ungalikthiuk R 68.52 329 P **P** **11 54 29.9 -0.2**
baz=101
E21K Killik River 68.52 339 P **P** **11 54 30.1 +0.1**
baz=110
K17K Iditarod 68.56 333 P **P** **11 54 29.8 -0.4**
baz=104
F20K Avaraart Lake 68.69 338 P **P** **11 54 31.6 +0.6**
F20K IAmb IAmb 11 54 32.6
comp=Z,6.8nm,0.8s
F20K Avaraart Lake 68.69 338 P **P** **11 54 31.5 +0.6**
baz=108
L16K Owhat River 68.86 331 P **P** **11 54 32.8 +0.6**
baz=102
G19K Purcell Mounta 68.94 336 P **P** **11 54 32.7 +0.1**
G19K Purcell Mounta 68.94 336 P **P** **11 54 32.5 -0.1**
baz=106
C21K Knifeblade Rid 69.04 340 P **P** **11 54 33.0 -0.2**
baz=110
B21K Ikpikpuk River 69.14 340 IAmb IAmb 11 54 34.9
comp=Z,12nm,0.9s
B21K Ikpikpuk River 69.14 340 P **P** **11 54 34.3 +0.6**
baz=110
H18K Honhosa River 69.19 335 P **P** **11 54 34.7 +0.6**
baz=105
E20K Nigu River 69.23 339 P **P** **11 54 35.2 +0.7**
baz=108,SNR=14
E19K Redstone River 69.37 338 P **P** **11 54 35.6 +0.4**
baz=106
F19K Shaleruckik Mo 69.40 337 IAmb IAmb 11 54 36.6
comp=Z,5.6nm,0.8s
F19K Shaleruckik Mo 69.40 337 P **P** **11 54 35.8 +0.4**
baz=106
G18K Tagagawik 69.50 336 P **P** **11 54 36.3 +0.3**
baz=105
BORG Borgarnes 69.52 25 LR LR 12 24 24.4
comp=Z,237nm,18.8s,baz=284,slow=36
D20K Etluk River 69.52 339 P **P** **11 54 36.7 +0.5**
baz=108
J16K Anvik River 69.71 333 P **P** **11 54 39.2 +1.8**
J16K IAmb IAmb 11 54 43.2
comp=Z,19nm,1.3s
J16K Anvik River 69.71 333 P **P** **11 54 38.1 +0.7**
baz=102
H17K Granite Mounta 69.77 335 P **P** **11 54 38.3 +0.6**
baz=103
L15K Ungalak Mounta 69.80 331 P **P** **11 54 38.8 +0.8**
baz=100
FALS False Pass 69.80 324 P **P** **11 54 39.1 +1.0**
FALS False Pass 69.80 324 P **P** **11 54 39.3 +1.3**
baz=96
M14K Bethel 69.86 330 P **P** **11 54 39.8 +1.5**
M14K Bethel 69.86 330 P **P** **11 54 39.7 +1.5**
baz=100
I17K Unalakleet 69.88 334 P **P** **11 54 39.3 +1.0**
baz=102
K15K Wolf Creek Mou 69.93 332 P **P** **11 54 39.7 +0.9**
baz=101
D19K Kuna River 69.99 339 P **P** **11 54 39.7 +0.7**
D19K IAmb IAmb 11 54 40.4
comp=Z,6.4nm,0.8s
D19K Kuna River 69.99 339 P **P** **11 54 39.4 +0.3**
baz=106
F18K Selawik 70.06 337 P **P** **11 54 40.3 +0.9**
baz=104
G17K Kiwalik Mounta 70.20 335 P **P** **11 54 41.1 +0.7**
baz=102
A21K Barrow 70.34 342 P **P** **11 54 41.5 +0.5**
baz=108
M13K Dall Lake 70.48 330 P **P** **11 54 43.1 +1.0**
baz=98
ALE Alert 70.56 4 P **P** **11 54 40.8 -1.5**
ALE pP **pP** **11 54 52.4 -2.4**
E18K Tukpahlearik C 70.62 337 P **P** **11 54 43.1 +0.3**
baz=103
F17K Baldwin Pennin 70.65 336 P **P** **11 54 43.4 +0.4**
baz=102
C19K Lookout Ridge 70.67 339 P **P** **11 54 44.3 +1.1**
C19K IAmb IAmb 11 54 45.4
comp=Z,9.0nm,1.0s
C19K Lookout Ridge 70.67 339 P **P** **11 54 44.5 +1.3**
baz=105,SNR=6.4
H16K Elim 70.69 334 P **P** **11 54 44.3 +1.0**
baz=101
G16K Koyuk River 70.88 335 P **P** **11 54 44.5 +0.1**
baz=101
J14K Nanvaranak Lak 70.94 332 P **P** **11 54 45.8 +1.0**
baz=99
E17K Hotham Inlet 71.01 337 P **P** **11 54 46.2 +1.0**
baz=102
C18K Utukok River 71.12 339 P **P** **11 54 46.4 +0.4**
C18K IAmb IAmb 11 54 47.1
comp=Z,7.6nm,0.9s
C18K Utukok River 71.12 339 P **P** **11 54 46.5 +0.6**
baz=103,SNR=5.7
B18K Kokolik River 71.50 339 P **P** **11 54 49.2 +1.1**
baz=103
G15K Niukluk 71.51 335 P **P** **11 54 49.2 +0.9**
baz=99
C17K DeLong Mountai 71.80 338 P **P** **11 54 50.8 +0.8**
baz=101
F15K North Star Dit 71.87 335 P **P** **11 54 51.6 +1.1**
F15K IAmb IAmb 11 55 08.4
comp=Z,18nm,1.4s
F15K North Star Dit 71.87 335 P **P** **11 54 51.1 +0.6**
baz=99
F14K Arctic Creek 72.53 335 P **P** **11 54 54.6 +0.2**
baz=97
C16K Lisburne Hills 72.55 338 P **P** **11 54 54.9 +0.5**
C16K IAmb IAmb 11 54 55.9
comp=Z,9.8nm,0.9s
C16K Lisburne Hills 72.55 338 P **P** **11 54 54.9 +0.5**
baz=99,SNR=5.5
TNA Tin City 73.20 335 P **P** **11 54 59.1 +0.7**
baz=96
P08K Saint George I 73.39 325 P **P** **11 55 00.2 +0.6**
baz=92
SPIA Saint Paul Isl 73.79 326 P **P** **11 55 01.6 -0.3**
baz=91
JMIC Jan Mayen 75.24 20 LR LR 12 27 12.2
comp=Z,213nm,18.9s,baz=359,slow=35
RAR Rarotonga 76.10 244 LR LR 12 20 41.9
comp=Z,69nm,19.8s,baz=78,slow=29
EKA Eskdalemuir Ar 77.93 36 P **P** **11 55 23.1 -2.5**
comp=Z,7.5nm,0.8s,baz=268,slow=5.8,SNR=14
comp=Z,7.5nm,0.8s
ESDC Sonseca Array 79.15 52 P **P** **11 55 31.3 -1.5**
ESDC Sonseca Array 79.15 52 P **P** **11 55 30.8 -2.0**
comp=Z,3.0nm,0.8s,baz=286,slow=5.8,SNR=19
ESDC LR LR 12 24 48.3
comp=Z,219nm,18.3s,baz=278,slow=32
comp=Z,3.0nm,0.8s
MDT Midelt 79.61 59 LR LR 12 26 25.8
comp=Z,174nm,18.9s,baz=312,slow=32
SPITS Spitsbergen Ar 80.85 12 P **P** **11 55 40.5 -0.6**
comp=Z,7.9nm,0.7s,baz=198,slow=4.8,SNR=11
SPITS LR LR 12 33 41.9
comp=Z,255nm,18.6s,baz=252,slow=37
comp=Z,7.9nm,0.7s
BILL Bilibino 83.07 338 P **P** **11 55 53.7 +0.7**
DBIC Dimbokro 84.18 85 P **P** **11 56 00.5 +0.8**
comp=Z,5.9nm,0.7s,baz=275,slow=7.2,SNR=9.1
comp=Z,5.9nm,0.7s
NB2 NORSAR Subarra 84.35 29 P **P** **11 55 59.4 -0.3**
comp=Z,4.3nm,0.8s,baz=288,slow=5.3
NOA NORSAR Array B 84.35 29 P **P** **11 55 59.0 -0.8**
comp=Z,2.2nm,0.8s,baz=289,slow=5.0,SNR=6.7
NOA LR LR 12 34 21.2
comp=Z,118nm,18.8s,baz=325,slow=36
comp=Z,2.2nm,0.8s
ECH Echery 85.44 42 P **P** **11 56 04.3 -1.2**
ECH IAmb IAmb 11 56 05.0
comp=Z,4.9nm,0.9s
HFS Hagfors 85.79 29 P **P** **11 56 06.0 -0.9**
comp=Z,4.4nm,0.8s,baz=242,slow=6.2,SNR=5.1
HFS LR LR 12 35 07.1
comp=Z,172nm,18.2s,baz=339,slow=36
comp=Z,4.4nm,0.8s
SENIN Lac Senin/Sane 85.99 43 P **P** **11 56 07.9 -0.5**
ARCES ARCESS Array B 86.68 18 P **P** **11 56 10.4 -0.7**
comp=Z,1.9nm,0.6s,baz=307,slow=6.6,SNR=6.1
ARCES LR LR 12 36 13.9
comp=Z,210nm,18.4s,baz=271,slow=37
comp=Z,1.9nm,0.6s
DAVA Damuels 87.46 42 *i* P **P** **11 56 15.0 -0.6**
comp=Z,11nm,1.1s
DAVOX Davos/Dischmat 87.60 43 P **P** **11 56 15.3 -1.0**
comp=Z,4.8nm,0.9s,baz=305,slow=11,SNR=9.2
comp=Z,4.8nm,0.9s
FUORN Ofenpass-Fuorn 87.90 43 P **P** **11 56 16.9 -0.9**
FUORN IAmb IAmb 11 56 18.5
comp=Z,7.1nm,0.8s
RETA Reutte 87.98 42 *e*P **P** **11 56 17.2 -0.7**
comp=Z,5.8nm,0.7s
FETA Feichten 88.09 42 *e*P **P** **11 56 17.8 -0.8**
comp=Z,5.2nm,0.8s
CLL Collm 88.22 38 P **P** **11 56 18.4 -0.5**
CLL Collm 88.22 38 *i* P **P** **11 56 18.0 -0.8**
comp=Z,10.0nm,0.8s
NKC Novy Kostel 88.22 39 *e*P **P** **11 56 18.3 -0.6**
MOTA Moosalm 88.24 42 *e*P **P** **11 56 18.2 -1.0**
comp=Z,5.6nm,1.0s
TORD Torodi Ar. Bea 89.08 77 LR LR 12 34 17.2
comp=Z,114nm,19.3s,baz=319,slow=34
KHC Kasperske Hory 89.26 40 *e*P **P** **11 56 23.6 -0.3**
ABTA Abfaltersbach 89.34 42 *e*P **P** **11 56 23.5 -0.8**
comp=Z,6.8nm,1.0s
CIMO Cimolais 89.43 43 P **P** **11 56 23.7 -1.0**
CIMO IAmb IAmb 11 56 28.6
comp=Z,4.4nm,0.9s
GERES GERESS Array B 89.43 40 P **P** **11 56 24.1 -0.7**
GERES GERESS Array B 89.43 40 P **P** **11 56 23.9 -0.8**
comp=Z,1.7nm,0.7s,baz=316,slow=3.7,SNR=8.7
GERES LR LR 12 31 43.6
comp=Z,154nm,18.6s,baz=332,slow=32
comp=Z,1.7nm,0.7s
STAL STALIGIAL 89.62 43 P **P** **11 56 24.8 -0.8**
STAL IAmb IAmb 11 56 25.8
comp=Z,5.4nm,1.0s
PRED Cave del Predi 90.12 42 P **P** **11 56 27.0 -1.0**
PRED IAmb IAmb 11 56 28.4
comp=Z,6.6nm,0.9s
KEST Kesra 90.28 53 P **P** **11 56 28.5 -0.5**
comp=Z,4.0nm,0.9s,baz=194,slow=5.7,SNR=3.9
comp=Z,4.0nm,0.9s
OSTC Ostas 90.39 38 *e*P **P** **11 56 28.6 -0.5**
DPC Dobruska-Polom 90.52 38 *e*P **P** **11 56 29.2 -0.6**
FINES FINESS Array B 90.81 25 LR LR 12 36 02.1
comp=Z,151nm,18.3s,baz=318,slow=35
VRAC Vranov 91.06 39 P **P** **11 56 31.8 -0.4**
comp=Z,3.6nm,0.8s,baz=293,slow=5.5,SNR=3.5
VRAC LR LR 12 36 41.0
comp=Z,106nm,18.1s,baz=337,slow=35
comp=Z,3.6nm,0.8s
CONA Conrad Observa 91.10 40 *e*P **P** **11 56 32.0 -0.5**
comp=Z,4.0nm,1.0s
RONA Rosalia, Austr 91.45 40 *e*P **P** **11 56 33.0 -1.1**
comp=Z,3.2nm,0.7s
TIXI Tiksi 91.66 348 P **P** **11 56 33.8 -0.7**
TIXI IAmb IAmb 11 56 34.6
comp=Z,4.8nm,1.1s
TIXI Tiksi 91.66 348 LR LR 12 43 12.3
comp=Z,165nm,19.4s,baz=33,slow=39
PETK Petropavlovsk- 92.45 326 P **P** **11 56 40.1 +1.5**
comp=Z,4.2nm,0.8s,baz=65,slow=7.2,SNR=4.6
PETK LR LR 12 41 38.3
comp=Z,30nm,18.3s,baz=54,slow=38
comp=Z,4.2nm,0.8s
MA2 Magadan 92.79 333 LR LR 12 43 36.8
comp=Z,87nm,18.3s,baz=50,slow=39
VAE Valguarnera 93.64 50 LR LR 12 32 39.7
comp=Z,316nm,18.9s,baz=284,slow=32
AKASG Malin Array Be 97.76 34 LR LR 12 43 39.6
comp=Z,126nm,18.1s,baz=326,slow=37
NRIK Noril'sk 97.97 1 LR LR 12 43 17.8
comp=Z,370nm,20.8s,baz=350,slow=37
YAK Yakutsk 99.00 342 LR LR 12 48 18.4
comp=Z,80nm,19.5s,baz=325,slow=39
ZALV Zalesovo Beam 113.30 3 PKiKP **PKiKP** **12 02 06.1 +0.9**
comp=Z,1.0nm,0.5s,baz=305,slow=1.2,SNR=6.8
ZALV PP **PP** **12 02 52.7 -2.2**
comp=Z,2.8nm,0.8s,baz=335,slow=6.6,SNR=9.4
KURBB Kurchatov Arra 116.01 8 PKP **PKPdf** **12 02 11.6 +1.0**
comp=Z,0.8nm,0.7s,baz=350,slow=1.6,SNR=8.1
JMN Monobe 117.36 319 PKPdf **PKPdf** **12 02 12.8 -0.9**
SONM Songino Array 117.73 347 PKPdf **PKiKP** **12 02 15.7 +1.5**
SONM Songino Array 117.73 347 PKP **PKiKP** **12 02 15.4 +1.3**
comp=Z,0.7nm,0.7s,baz=303,slow=0.9,SNR=8.8
SONM PP **PP** **12 03 25.5 -0.8**

comp=Z,0.4nm,0.8s,baz=7.9,slow=4.4,SNR=3.8
KSRS Korea Array 118.35 326 PKP **PKiKP 12 02 16.9 +1.5**
comp=Z,1.9nm,0.7s,baz=9.8,slow=1.8,SNR=7.8
KSAR Wonju Array Be 118.38 326 PKPdf **PKiKP 12 02 16.8 +1.3**
BOSA Boshof 118.45 116 PKP **PKiKP 12 02 18.9 +3.0**
comp=Z,6.1nm,0.8s,baz=293,slow=1.4,SNR=11
XLT XiLinHaoTe 118.55 339 *e*P **PKPdf 12 02 15.4 -0.3**
XLT pmax pmax
comp=Z,3.0nm,1.1s
XLT pmax pmax
comp=Z,120nm,6.1s
MKAR Makanchi Array 120.22 6 PKPdf **PKiKP 12 02 19.8 +0.9**
MKAR Makanchi Array 120.22 6 PKP **PKPdf 12 02 18.6 -0.2**
comp=Z,0.6nm,0.7s,baz=22,slow=2.7,SNR=8.0
GEYT Alibeck 121.44 29 PKP **PKiKP 12 02 21.8 +0.2**
comp=Z,1.2nm,0.6s,baz=274,slow=7.1,SNR=2.4
HHC Hu-ho-hao-te 122.80 340 *e*P **PKiKP 12 02 24.6 +0.4**
WMQ Urumqi 123.53 2 *e*P **PKiKP 12 02 27.8 +2.2**
WMQ LR LR
comp=Z,220nm,18.9s
XAN Xi'an 129.85 339 ⇓P **PKiKP 12 02 39.5 +1.1**
GOMU GeErMu 130.93 354 Pdif **Pdif 11 59 33.9 +2.6**
GOMU PP **PP 12 04 49.9 -5.2**
WB2 Warramunga Arr 136.64 255 PKPdf **PKiKP 12 02 53.0 +0.5**
WRA Warramunga Arr 136.65 255 PKhKP PKPpre 12 02 44.8
comp=Z,0.6nm,0.7s,baz=87,slow=3.6,SNR=3.0
WRA PKP **PKPdf 12 02 50.7 0.0**
comp=Z,0.6nm,0.8s,baz=86,slow=3.4,SNR=5.1
ASAR Alice Springs 136.78 249 PKP **PKPdf 12 02 50.5 -0.4**
comp=Z,0.6nm,0.7s,baz=104,slow=3.3,SNR=10
PZH PanZhiHua 139.11 343 PKP **PKPdf 12 02 55.8 +0.6**
TNCH TengChong 141.32 347 P **PKPdf 12 02 55.9 -3.5**
TNCH pmax pmax
comp=Z,120nm,5.7s
MSEY Mahe Island 145.31 79 PKPbc **PKPbc 12 03 05.8 -0.4**
CRAI Chiangrai 145.43 342 PKPbc **PKPab 12 03 07.9 +1.3**
CHTO Chiang Mai 147.19 344 PKPbc **PKPab 12 03 12.6 -0.7**
CMAR Chiang Mai Arr 147.52 343 PKPbc **PKPab 12 03 13.9 -0.7**
CMAR Chiang Mai Arr 147.52 343 PKPbc **PKPdf 12 03 10.4 +0.4**
comp=Z,15nm,0.8s,baz=335,slow=2.2,SNR=68
PSA00 Pilbara Seismi 149.93 249 PKPbc **PKiKP 12 03 20.1 +0.5**

*HEL **16** 11:50:15.9±0.3,59.°21N×27.°81E, h0km, ML2.1, Suspected explosion*
*EST **16** 11:50:16.1±0.0,59.°23N×27.°79E, h0km, ML1.9(HEL), Explosion*
*LVSN **16** 11:50:18.1±4.3,59.°18N×27.°78E, h0km±38km, ML2.2*
*UPP **16** 11:50:19.2±3.3,59.°37N×27.°53E, h0km, ML1.8*
*IDC **16** 11:50:22.1±2.2,59.°54N×27.°53E, h0km, mbtmp3.4/3, ML2.3/2, Error ellipse: s-maj=18.8km s-min=12.5km az=113.0*
ISC 16 11:50:15.3±0.9,**59.°21N**±0.°02×**27.°75E**±0.°04,**h0km**,**n39**, σ**1**§**21**/**63**,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE03	**Tooma soojaam,**	**0.84**	**247**	*e*P	**Pg**	**11 50 31.1**	**-0.2**
EE03				*e*S	**Sb**	**11 50 42.8**	**-1.7**
VSU	**Vasula**	**0.92**	**216**	*e*P	**Pg**	**11 50 33.4**	**+0.5**
VSU	**Vasula**	**0.92**	**216**	*e*P	**Pg**	**11 50 33.2**	**+0.3**
VSU				*e*S	**Sb**	**11 50 46.2**	**-0.6**
VSU				AML	AML	11 50 52.0	
	comp=N,72nm,0.6s						
VSU				AML	AML	11 51 07.2	
	comp=Z,37nm,0.9s						
VSU				AML	AML	11 51 25.6	
	comp=E,82nm,0.6s						
VSU	**Vasula**	**0.92**	**216**	*e*P	**Pg**	**11 50 33.2**	**+0.3**
VSU				*e*S	**Sb**	**11 50 45.4**	**-1.4**
ARBE	**Arbavere**	**0.94**	**285**	*e*P	**Pg**	**11 50 33.3**	**+0.1**
ARBE				*e*S	**Sg**	**11 50 45.5**	**+0.2**
ARBE				AML	AML	11 51 06.2	
	comp=N,346nm,0.7s						
ARBE				AML	AML	11 51 07.7	
	comp=E,351nm,0.5s						
ARBE				AML	AML	11 51 08.6	
	comp=Z,236nm,0.6s						
ARBE	**Arbavere**	**0.94**	**285**	*e*PB	**Pg**	**11 50 33.5**	**+0.3**
ARBE				*e*S	**Sg**	**11 50 45.3**	**0.0**
VJF	**Virojoki**	**1.34**	**356**	*e*P	**Pg**	**11 50 39.6**	**-1.4**
VJF				*e*SB	**Sg**	**11 50 57.9**	**-0.4**
VJF				MSG		11 51 01.3	
	comp=Z,8.5nm,0.1s						
EE07	**Piusa Caves, O**	**1.38**	**186**	*e*P	**Pg**	**11 50 41.5**	**-0.3**
EE07				*e*PN	**Pb**	**11 50 42.6**	**+0.6**
EE07				*e*S	**Sg**	**11 50 59.0**	**-0.6**
EE08	**Sarghaua, Vand**	**1.42**	**248**	*e*P	**Pg**	**11 50 41.6**	**-0.8**
EE08				*e*S	**Sb**	**11 51 00.4**	**-0.7**
EE02	**Kiisa, Saku**	**1.57**	**271**	*e*P	**Pn**	**11 50 44.5**	**+0.1**
EE02				*e*S	**Sg**	**11 51 04.1**	**-1.7**
PVF	**Pernaja**	**1.64**	**325**	*e*PG	**Pn**	**11 50 45.8**	**+0.3**
PVF				*e*SG	**Sn**	**11 51 06.7**	**-0.6**
PVF				MSG		11 51 11.6	
	comp=Z,5.5nm,0.1s						
HEL1	**Helsinki**	**1.75**	**305**	*e*PN	**Pn**	**11 50 47.8**	**+1.0**
HEL1				*e*SN	**Sb**	**11 51 10.7**	**0.0**
HEL1				MSG		11 51 12.2	
	comp=Z,7.7nm,0.1s						
MEF	**Metsahovi**	**1.98**	**302**	*e*P	**Pg**	**11 50 53.1**	**-0.1**
MEF	**Metsahovi**	**1.98**	**302**	*e*P	**Pb**	**11 50 52.0**	**-0.1**
MEF				*e*S	**Sb**	**11 51 17.2**	**-0.1**
MEF				AML	AML	11 51 18.7	
	comp=E,24nm,0.2s						
MEF				AML	AML	11 51 19.6	
	comp=Z,23nm,0.4s						
MEF				AML	AML	11 51 19.9	
	comp=N,56nm,0.6s						
MEF	**Metsahovi**	**1.98**	**302**	*e*PG	**Pb**	**11 50 51.6**	**-0.6**
MEF				*e*SG	**Sb**	**11 51 17.2**	**-0.1**
MEF				MSG		11 51 18.6	
	comp=Z,7.9nm,0.1s						
NUR	**Nurmijrvi**	**2.04**	**311**	*e*PG	**Pb**	**11 50 52.7**	**-0.5**
NUR				*e*SG	**Sb**	**11 51 18.9**	**-0.1**
NUR				MSG		11 51 21.0	
	comp=Z,8.9nm,0.1s						
MTSE	**Matsula**	**2.10**	**258**	*e*P	**Pb**	**11 50 54.0**	**-0.3**
MTSE	**Matsula**	**2.10**	**258**	*e*P	**Pb**	**11 50 53.9**	**-0.3**
MTSE				*e*S	**Sg**	**11 51 21.3**	**-1.4**
MTSE	**Matsula**	**2.10**	**258**	*e*PG	**Pb**	**11 50 54.0**	**-0.3**
MTSE				*e*SG	**Sg**	**11 51 21.1**	**-1.6**
EE01	**Perakula, Nova**	**2.12**	**272**	*e*PG	**Pb**	**11 50 54.6**	**0.0**
EE01				*e*SG	**Sg**	**11 51 22.8**	**-0.7**
RUF	**Ruokolahti**	**2.30**	**14**	*e*P	**Pn**	**11 50 54.9**	**+0.4**
RUF				*e*PB	**Pb**	**11 50 56.0**	**-1.7**
RUF				MSG		11 51 23.8	
	comp=Z,8.2nm,0.2s						
RUF				*e*SB	**Sn**	**11 51 25.2**	**+1.8**
FIA0	**FINESS Array S**	**2.39**	**340**	*e*P	**Pn**	**11 50 56.2**	**+0.5**
FIA0				MSG		11 51 26.9	
	comp=Z,5.9nm,0.2s						
FINES	**FINESS Array B**	**2.39**	**340**	Pg	**Pn**	**11 50 57.1**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=160,slow=16,SNR=30						
FINES				Lg	Lg	11 51 27.0	
	comp=Z,2.8nm,0.3s,baz=161,slow=24,SNR=17						
FIA1	**FINESS Array S**	**2.39**	**340**	*e*PB	**Pn**	**11 50 57.3**	**+1.6**
KAF	**Kangasniemi**	**3.00**	**347**	*e*PB	**Pn**	**11 51 07.4**	**+3.3**
KAF				*e*SG	**Sb**	**11 51 47.9**	**+1.3**
KAF				MSG		11 51 49.8	
	comp=Z,2.6nm,0.1s						
RAF	**Rauma**	**3.51**	**304**	*e*P	**Pn**	**11 51 13.9**	**+2.9**
RAF	**Rauma**	**3.51**	**304**	*e*P	**Pn**	**11 51 13.9**	**+2.9**
RAF				*e*S	**Sn**	**11 51 55.1**	**+2.0**
RAF				AML	AML	11 52 12.9	
	comp=N,6.3nm,0.8s						
RAF				AML	AML	11 52 13.4	
	comp=Z,6.5nm,0.3s						
RAF				AML	AML	11 52 14.4	
	comp=E,6.7nm,0.3s						
RAF	**Rauma**	**3.51**	**304**	*e*P	**Pn**	**11 51 12.9**	**+1.9**
KPI	**Kankaanpaa**	**3.85**	**316**	*e*P	**Pn**	**11 51 17.4**	**+1.7**
JOF	**Joensuu**	**4.10**	**23**	*e*P	**Pn**	**11 51 20.0**	**+0.8**
NRTU	**Norrtaelje**	**4.68**	**280**	P	**Pn**	**11 51 27.2**	**+0.1**
NRTU				S	**Sn**	**11 52 21.5**	**-0.5**
GRAU	**Graesoe**	**4.79**	**288**	P	**Pn**	**11 51 29.1**	**+0.4**
FLYU	**Flymyra**	**5.09**	**285**	P	**Pn**	**11 51 33.8**	**+1.1**
FIBU	**Brunna**	**5.34**	**282**	P	**Pn**	**11 51 38.1**	**+2.0**
BACU	**Backbrunna**	**5.46**	**281**	P	**Pn**	**11 51 39.8**	**+2.0**
OSTU	**Oestervaala**	**5.47**	**285**	P	**Pn**	**11 51 38.9**	**+1.0**
HFS	**Hagfors**	**7.18**	**283**	Pn	**Pn**	**11 52 02.9**	**+1.4**
	comp=E,1.8nm,0.8s,baz=101,slow=15,SNR=2.0						
HFS				Sn	**Sn**	**11 53 22.0**	**-1.6**
	comp=E,0.2nm,0.3s,baz=110,slow=22,SNR=1.6						
HFS				Lg	Lg	11 53 56.4	
	comp=E,0.6nm,0.3s,baz=100,slow=32,SNR=2.6						
NOA	**NORSAR Array B 8.46**	**290**		Pn	**Pn**	**11 52 19.1**	**+0.2**
	baz=87,slow=18,SNR=2.0						
NOA				Lg	Lg	11 54 39.3	
	baz=93,slow=18,SNR=4.1						
	comp=E,1.3nm,1.0s						
ARCES	**ARCESS Array B 10.41**	**356**		Pn	**Pn**	**11 52 44.8**	**-0.9**
	comp=E,0.1nm,0.3s,baz=174,slow=12,SNR=11						
	comp=E,4.0nm,1.0s						

*VAO **16** 11:50:17.6±0.4,29.°66S×70.°11W, h10km, mb5.1*
*SJA **16** 11:50:32.3±0.7,29.°35S×69.°49W, h129km±3km, ML4.8, MW4.7*
*NEIC **16** 11:50:33.8,29.°36S×69.°42W, h120km*
*NEIC **16** 11:50:33.8,29.°56S×69.°31W, h120km, Moment Tensor Solution. Duration: 1§1 Moment tensor: Scale 10^16^Nm; Mrr0.96; Mθθ-1.11; Mφφ0.16; Mrθ-0.11; Mrφ1.40; Mθφ-0.83; Fault plane solution: M0 1.92000×10^16^ NP1: φs158.22000°, δ66.42000°, λ141.11000°. NP2: φs266.10000°, δ54.87000°, λ29.28000°. Principal axes: T 1.7835, Plg44.0000°, Azm118.0000°; N 0.2758, Plg46.0000°, Azm312.0000°; P -2.0594, Plg7.0000°, Azm215.0000°;*
*GUC **16** 11:50:33.5±0.9,29.°37S×69.°64W, h123km±5km, ML4.9*
*IDC **16** 11:50:34.4±0.6,29.°29S×69.°36W, h122km±5km, mb4.5/17, mbtmp4.8/19, MS3.9/3, Error ellipse: s-maj=16.6km s-min=10.3km az=74.0*
*NEIC **16** 11:50:34.5±2.2,29.°35S±0.°04×69.°46W±0.°09, h119km±5km, mb4.9/362, Mww4.8/16, Error ellipse: s-maj=11.6km s-min=6.2km az=89.0*
ISC 16 11:50:33.9±0.4,**29.°35S**±0.°03×**69.°48W**±0.°03,**h120**km±3km, **h120**km:**pP-P,n662,**σ1§**48**/617,**mb4.9**/183,**12C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AROD	**Rodeo**	**0.81**	**180**	*e*P	**Pn**	**11 50 54.9**	**+0.3**
CO01	**Juntas del Tor**	**0.82**	**221**		**Pn**	**11 50 55.0**	**+0.3**
CO01				Sn	**Sn**	**11 51 11.0**	**+0.8**
CO01	**Juntas del Tor**	**0.82**	**221**	*e*P	**Pn**	**11 50 54.9**	**+0.3**
CO01				*e*S	**Sn**	**11 51 10.6**	**+0.3**
CO01				IAML		11 51 15.1	
	comp=Z,9μm,0.7s						
CO01	**Juntas del Tor**	**0.82**	**221**	⇑*i*P	**Pn**	**11 50 54.9**	**+0.3**
CO01				*e*S	**Sn**	**11 51 10.7**	**+0.5**
CO01				IAML		11 51 12.3	
	comp=E,22μm,0.7s						
AC05	**El Transito**	**0.87**	**306**		**Pn**	**11 50 55.0**	**+0.1**
AC05				Sn	**Sn**	**11 51 10.9**	**+0.2**
AC05	**El Transito**	**0.87**	**306**	*e*P	**Pn**	**11 50 54.9**	**+0.1**
AC05				*e*S	**Sn**	**11 51 11.3**	**+0.6**
AC05				IAML		11 51 11.6	
	comp=Z,16μm,0.6s						
AC05	**El Transito**	**0.87**	**306**	⇑*i*P	**Pn**	**11 50 54.9**	**+0.1**
AC05				*e*S	**Sn**	**11 51 10.7**	**0.0**
AC05				IAML		11 51 11.8	
	comp=N,42μm,0.4s						
AGUA	**GUANDACOL**	**0.87**	**99**	*e*P	**Pn**	**11 50 55.0**	**+0.2**
AGUA				IAML		11 51 17.0	
	comp=Z,28μm,0.3s						
ACDV	**Cuesta del Vie**	**0.87**	**159**	*e*P	**Pn**	**11 50 55.2**	**+0.3**
ACDV				*e*S	**Sn**	**11 51 11.5**	**+0.7**
ACDV				IAML		11 51 13.4	
	comp=Z,16μm,0.4s						
LCO	**Las Campanas**	**1.12**	**287**	Pn	**Pn**	**11 50 57.3**	**-0.2**
LCO	**Las Campanas**	**1.12**	**287**	*e*S	**Pn**	**11 50 57.6**	**+0.1**
LCO	**Las Campanas**	**1.12**	**287**	*i*P	**Pn**	**11 50 57.3**	**-0.2**
LCO				*e*S	**Sn**	**11 51 14.8**	**-0.6**
VCA	**Vinchina**	**1.27**	**61**	*e*P	**Pn**	**11 50 58.8**	**-0.1**
VCA				*e*S	**Sn**	**11 51 19.5**	**+1.6**
VCA				IAML		11 51 20.6	
	comp=Z,32μm,0.5s						
ACCO	**Cerro Coronel**	**1.28**	**164**	*e*P	**Pn**	**11 50 59.4**	**+0.2**
GO04	**Tololo Observa**	**1.41**	**234**		**Pn**	**11 50 00.3**	**-0.3**
GO04	**Tololo Observa**	**1.41**	**234**	*e*P	**Pn**	**11 51 00.1**	**-0.5**
GO04				*e*S	**Sn**	**11 51 21.2**	**+0.4**
GO04	**Tololo Observa**	**1.41**	**234**	*e*P	**Pn**	**11 51 00.2**	**-0.4**
DOCA	**Reserva Natura**	**1.62**	**168**	*e*P	**Pn**	**11 51 03.2**	**0.0**
DOCA				*e*S	**Sn**	**11 51 26.0**	**+0.4**
CO05	**La Serena**	**1.64**	**249**		**Pn**	**11 51 02.0**	**-1.0**
CO05	**La Serena**	**1.64**	**249**	*e*P	**Pn**	**11 51 01.9**	**-1.0**
CO05				*e*S	**Sn**	**11 51 23.4**	**-1.6**
CO05				IAML		11 51 24.9	
	comp=N,24μm,0.4s						
AC04	**Llanos de Chal**	**1.81**	**309**		**Pn**	**11 51 04.7**	**-0.4**
AC04	**Llanos de Chal**	**1.81**	**309**	*e*P	**Pn**	**11 51 04.9**	**-0.2**
AC04				*e*S	**Sn**	**11 51 28.3**	**-0.5**
AC04				IAML		11 51 34.1	
	comp=Z,4μm,0.5s						
AC04	**Llanos de Chal**	**1.81**	**309**	⇑*i*P	**Pn**	**11 51 04.6**	**-0.5**
AC04				*e*S	**Sn**	**11 51 27.6**	**-1.2**
CO03	**El Pedregal**	**1.81**	**215**	Pn	**Pn**	**11 51 04.9**	**-0.3**
CO03	**El Pedregal**	**1.81**	**215**	*e*P	**Pn**	**11 51 05.0**	**-0.2**
CO03				*e*S	**Sn**	**11 51 29.2**	**+0.1**
CO03				IAML		11 51 36.1	
	comp=Z,5μm,0.6s						
CO03	**El Pedregal**	**1.81**	**215**	⇓*i*P	**Pn**	**11 51 04.9**	**-0.3**
CO03				*e*S	**Sn**	**11 51 28.8**	**-0.3**
CO03				IAML		11 51 32.5	
	comp=E,14μm,0.4s						
GO03	**Copiap**	**1.88**	**339**		**Pn**	**11 51 05.8**	**-0.2**
GO03	**Copiap**	**1.88**	**339**	*e*P	**Pn**	**11 51 05.6**	**-0.4**
GO03				*e*S	**Sn**	**11 51 30.3**	**-0.1**
GO03	**Copiap**	**1.88**	**339**	*e*P	**Pn**	**11 51 05.6**	**-0.4**
GO03				*e*S	**Sn**	**11 51 29.4**	**-1.0**
GO03				IAML		11 51 31.0	
	comp=E,12μm,0.2s						
TINO	**Tinogasta**	**2.11**	**53**	*e*P	**Pn**	**11 51 08.9**	**0.0**
AVFE	**Valle Fertil**	**2.18**	**127**	*e*P	**Pn**	**11 51 09.5**	**-0.3**
AVFE				*e*S	**Sn**	**11 51 36.0**	**-1.2**
AVFE				IAML		11 51 37.1	
	comp=Z,15μm,0.4s						
CO02	**Combarbal**	**2.27**	**215**	Pn	**Pn**	**11 51 09.9**	**-0.9**
CO02	**Combarbal**	**2.27**	**215**	*e*P	**Pn**	**11 51 09.2**	**-1.6**
CO02				*e*S	**Sn**	**11 51 38.4**	**-0.8**
CO02				IAML		11 51 42.1	
	comp=Z,6μm,0.3s						
CO02	**Combarbal**	**2.27**	**215**	*e*P	**Pn**	**11 51 09.8**	**-1.0**
CO02				*e*S	**Sn**	**11 51 37.9**	**-1.2**
CO06	**Fray Jorge**	**2.29**	**234**		**Pn**	**11 51 09.2**	**-1.9**
CO06	**Fray Jorge**	**2.29**	**234**	*e*P	**Pn**	**11 51 09.0**	**-2.0**
CO06				*e*S	**Sn**	**11 51 36.4**	**-3.0**
CO06				IAML		11 51 49.8	
	comp=E,5μm,0.3s						
SJA	**San Juan**	**2.31**	**160**	*e*P	**Pn**	**11 51 11.7**	**+0.4**
SJA				*e*S	**Sn**	**11 51 41.6**	**+1.6**
SJA				IAML		11 51 56.4	
	comp=Z,2μm,0.7s						
RTLS	**Leoncito**	**2.44**	**176**	*e*P	**Pn**	**11 51 13.7**	**+0.4**
RTLS				*e*S	**Sn**	**11 51 43.3**	**-0.2**
RTLS				IAML		11 51 45.9	
	comp=Z,7μm,0.6s						
AC02	**Maricunga**	**2.53**	**7**		**Pn**	**11 51 14.9**	**+0.3**
AC02	**Maricunga**	**2.53**	**7**	*e*P	**Pn**	**11 51 15.0**	**+0.4**
AC02				*e*S	**Sn**	**11 51 47.3**	**+1.6**
AC02				IAML		11 51 47.8	
	comp=Z,2μm,0.4s						
AC02	**Maricunga**	**2.53**	**7**	⇓*i*P	**Pn**	**11 51 15.0**	**+0.4**
AC02				*e*S	**Sn**	**11 51 46.1**	**+0.4**
AC02				IAML		11 51 48.1	
	comp=N,6μm,0.4s						
RTCV	**Cerro Valdivia**	**2.63**	**162**	*e*P	**Pn**	**11 51 15.6**	**+0.2**
RTCV				*e*S	**Sn**	**11 51 47.6**	**+0.3**
ACHE	**Chepes**	**3.03**	**127**	*e*P	**Pn**	**11 51 20.4**	**-0.3**
ASAL	**Salagasta**	**3.27**	**170**	*e*P	**Pn**	**11 51 24.3**	**+0.4**
ASAL				*e*S	**Sn**	**11 52 04.7**	**+2.2**
ASAL				IAML		11 52 30.1	
	comp=Z,965nm,0.6s						
AC01	**Pan de Azucar**	**3.35**	**342**		**Pn**	**11 51 24.0**	**-0.8**
AC01	**Pan de Azucar**	**3.35**	**342**	*e*P	**Pn**	**11 51 24.2**	**-0.6**
AC01				IAML		11 52 15.2	
	comp=Z,995nm,0.8s						
AC01	**Pan de Azucar**	**3.35**	**342**	*e*P	**Pn**	**11 51 23.6**	**-1.2**
AC01				*e*S	Sn	11 51 54.8	-9.4
AC01				IAML		11 52 09.1	
	comp=N,3μm,0.8s						
CYA	**Choya**	**3.35**	**75**	*e*P	**Pn**	**11 51 23.9**	**-0.9**
CYA				IAML		11 52 05.9	
	comp=Z,976nm,0.5s						
ARCO	**CERRO ARCO**	**3.51**	**173**	*e*P	**Pn**	**11 51 27.4**	**+0.3**
ARCO				*e*S	**Sn**	**11 52 10.8**	**+2.6**
ARCO				IAML		11 52 12.5	
	comp=Z,1μm,0.8s						
VA03	**San Esteban**	**3.52**	**195**		**Pn**	**11 51 26.4**	**-0.8**
VA03	**San Esteban**	**3.52**	**195**	*e*P	**Pn**	**11 51 27.0**	**-0.2**
VA03				IAML		11 52 39.3	
	comp=Z,2μm,0.8s						
VA03	**San Esteban**	**3.52**	**195**	*e*P	**Pn**	**11 51 26.4**	**-0.8**
VA06	**Catapilco**	**3.56**	**206**	Pn	**Pn**	**11 51 25.5**	**-2.1**
AAGR	**Agrelo**	**3.76**	**172**	*e*P	**Pn**	**11 51 30.4**	**0.0**
AAGR				IAML		11 52 20.4	
	comp=Z,813nm,0.3s						
ROCH	**El Roble**	**3.84**	**200**	*e*P	**Pn**	**11 51 29.0**	**-2.5**
PEL	**Peldehue**	**3.92**	**195**		**Pn**	**11 51 30.8**	**-1.6**
PEL	**Peldehue**	**3.92**	**195**	*e*P	**Pn**	**11 51 29.8**	**-2.6**
MT10	**Hacienda Santa**	**4.01**	**193**	*e*P	**Pn**	**11 51 32.7**	**-1.1**
MT10				*i*S	**Sn**	**11 52 17.9**	**-2.2**
VA01	**Torpederas**	**4.10**	**206**		**Pn**	**11 51 31.8**	**-3.0**
VA01	**Torpederas**	**4.10**	**206**	*e*P	**Pn**	**11 51 31.8**	**-3.0**
VA01				IAML		11 52 34.4	
	comp=Z,582nm,0.7s						
VA01	**Torpederas**	**4.10**	**206**	*e*P	**Pn**	**11 51 31.8**	**-3.0**
MT14	**Cerro Calan**	**4.13**	**192**	*e*P	**Pn**	**11 51 34.0**	**-1.2**
MT02	**Curacav**	**4.14**	**200**		**Pn**	**11 51 32.5**	**-2.8**
MT02	**Curacav**	**4.14**	**200**	*e*P	**Pn**	**11 51 33.0**	**-2.4**
MT02				IAML		11 52 55.4	
	comp=Z,828nm,0.8s						
MT02	**Curacav**	**4.14**	**200**	*e*P	**Pn**	**11 51 32.5**	**-2.8**
MT16	**CCHEN**	**4.16**	**192**		**Pn**	**11 51 34.3**	**-1.3**
MT05	**Renca**	**4.17**	**195**		**Pn**	**11 51 34.0**	**-1.8**
MT05	**Renca**	**4.17**	**195**	*e*P	**Pn**	**11 51 34.0**	**-1.8**
MT05				*i*S	**Sn**	**11 52 21.3**	**-2.4**
GO02	**Mina Guanaco**	**4.18**	**359**		**Pn**	**11 51 35.2**	**-0.9**
GO02	**Mina Guanaco**	**4.18**	**359**	*e*P	**Pn**	**11 51 35.3**	**-0.9**
MT03	**Universidad Ad**	**4.22**	**192**		**Pn**	**11 51 35.3**	**-1.2**
MT15	**Las Vizcachas**	**4.32**	**191**	*e*P	**Pn**	**11 51 36.4**	**-1.4**
MT13	**San Alfonso**	**4.43**	**189**	Pn	**Pn**	**11 51 38.2**	**-1.1**
MT13	**San Alfonso**	**4.43**	**189**	*e*P	**Pn**	**11 51 38.8**	**-0.5**
LMEL	**Las Melosas**	**4.52**	**188**		**Pn**	**11 51 39.6**	**-1.0**
MT09	**Talagante**	**4.59**	**196**		**Pn**	**11 51 38.6**	**-2.9**
VA05	**Santo Domingo**	**4.66**	**203**		**Pn**	**11 51 38.8**	**-3.5**
VA05	**Santo Domingo**	**4.66**	**203**	*e*P	**Pn**	**11 51 38.6**	**-3.7**
BO04	**La Punta**	**4.72**	**192**		**Pn**	**11 51 40.7**	**-2.4**
MT01	**Popeta**	**4.74**	**198**		**Pn**	**11 51 40.3**	**-3.1**
MT01	**Popeta**	**4.74**	**198**	*e*P	**Pn**	**11 51 40.6**	**-2.8**
MT01				IAML		11 53 07.4	
	comp=Z,533nm,0.6s						
PB14	**IPOC Station P**	**4.78**	**350**	Pn	**Pn**	**11 51 42.2**	**-2.1**
BO01	**Tunca**	**5.21**	**195**	Pn	**Pn**	**11 51 46.2**	**-3.4**
BO02	**Sierra Bellavi**	**5.53**	**191**		**Pn**	**11 51 51.3**	**-2.8**
GO05	**Huala**	**6.01**	**200**	Pn	**Pn**	**11 51 56.0**	**-4.5**
PB15	**IPOC Station P**	**6.12**	**0**	Pn	**Pn**	**11 52 00.4**	**-1.9**
AF01	**San Pedro de A**	**6.48**	**11**	Pn	**Pn**	**11 52 05.8**	**-1.4**
ML02	**Panimavida**	**6.60**	**194**		**Pn**	**11 52 04.5**	**-3.9**
PB06	**IPOC Station P**	**6.62**	**359**		**Pn**	**11 52 05.9**	**-3.1**
LVC	**Limon Verde**	**6.74**	**4**	P	**Pn**	**11 52 08.1**	**-2.5**
	comp=Z,28nm,0.3s,baz=166,slow=6.6,SNR=246						
LVC				S	**Sn**	**11 53 21.6**	**-4.6**
	comp=Z,113nm,0.6s,baz=229,slow=19,SNR=6.9						
LVC	**Limon Verde**	**6.74**	**4**	*e*P	Pn	11 52 02.6	-8.0
PB04	**IPOC Station P**	**7.02**	**355**		**Pn**	**11 52 10.3**	**-4.0**
PB09	**IPOC Station P**	**7.53**	**2**		**Pn**	**11 52 18.6**	**-2.7**
PB07	**IPOC Station P**	**7.61**	**357**		**Pn**	**11 52 17.9**	**-4.3**
VACA	**Villa Angela C**	**7.91**	**80**	*e*P	**Pn**	**11 52 21.7**	**-4.5**
PB02	**IPOC Station P**	**8.01**	**357**		**Pn**	**11 52 23.6**	**-4.0**
PB01	**IPOC Station P**	**8.28**	**360**		**Pn**	**11 52 27.1**	**-4.1**
TICA	**Tres Isletas**	**8.57**	**72**	*e*P	**Pn**	**11 52 31.4**	**-3.8**
VA04	**Juan Fernndez**	**9.06**	**239**	Pn	**Pn**	**11 52 39.1**	**-2.5**
PB08	**IPOC Station P**	**9.18**	**2**		**Pn**	**11 52 39.7**	**-4.0**
PB11	**IPOC Station P**	**9.55**	**359**		**Pn**	**11 52 42.8**	**-5.8**
GO01	**Chusmiza**	**9.65**	**2**		**Pn**	**11 52 45.3**	**-4.8**
TRQA	**Tornquist**	**10.69**	**146**	Pn	**Pn**	**11 53 00.8**	**-2.8**
ESFA	**Espinillo Form**	**10.72**	**68**	*e*P	**Pn**	**11 53 01.5**	**-2.6**
LR05	**Currie**	**11.05**	**190**	Pn	**Pn**	**11 53 04.6**	**-3.8**
CPUP	**Villa Florida**	**11.16**	**77**	Pn	**Pn**	**11 53 06.1**	**-3.9**
CPUP	**Villa Florida**	**11.16**	**77**	P	Pn	11 53 05.5	-4.6
	comp=Z,19nm,0.4s,baz=254,slow=12,SNR=23						
CPUP	**Villa Florida**	**11.16**	**77**	*e*P	**Pn**	**11 53 06.2**	**-3.9**
ITQB	**Itaqui**	**11.20**	**95**	Pn	**Pn**	**11 53 06.3**	**-4.3**
ITQB	**Itaqui**	**11.20**	**95**	*e*P	**Pn**	**11 53 06.3**	**-4.3**
PLCA	**Paso Flores**

ATAH	Atahualpa	23.65	337	P		P		11 55 34.4	-0.5	
	comp=Z,2.9nm,0.6s,baz=113,slow=14,SNR=2.0									
	comp=Z,2.9nm,0.6s									
GO10	Punta Arenas	23.81	182	P		P		11 55 36.2	+0.6	
BSCB	Bom Sucesso	23.82	75	eP		P		11 55 35.0	-1.1	
BDFB	Brasilia	24.01	60	P		P		11 55 36.4	-1.5	
BDFB				IAmb		IAmb		11 55 38.6		
	comp=Z,58nm,1.1s									
BDFB	Brasilia	24.01	60	P		P		11 55 36.9	-1.1	
	comp=Z,25nm,0.6s,baz=232,slow=7.6,SNR=28									
	comp=Z,25nm,0.6s									
SNDB	Serra Nova Dou	24.20	48	eP		P		11 55 38.2	-1.2	
VAS01	Vassouras-RJ	24.44	79	eP		P		11 55 41.5	-0.1	
TBTG	Tabatinga, AM	25.04	359	P		P		11 55 46.6	-0.4	
TBTG	Tabatinga, AM	25.04	359	eP		P		11 55 45.2	-1.8	
DUB01	Friburgo-RJ	25.43	80	eP		P		11 55 51.0	+0.4	
NPGB	Novo Progresso	25.87	34	eP		P		11 55 53.7	-0.9	
DIAM	Diamantina, MG	25.99	71	eP		P		11 55 55.6	-0.2	
TEFE	Tefe	26.11	11	eP		P		11 55 56.9	+0.1	
MCRA	Macar, Loja	26.76	336	P		P		11 56 03.1	+0.4	
MCRA	Macar, Loja	26.76	336	eP		P		11 56 03.3	+0.7	
JANB	Januaria	27.22	64	eP		P		11 56 05.5	-1.3	
MACA	Manacapuru-AM	27.36	19	eP		P		11 56 07.6	-0.3	
BOSC	San Juan Bosco	27.43	340	P		P		11 56 08.5	-0.3	
ITTB	Itaituba	28.06	30	eP		P		11 56 13.2	-0.9	
COHC	Cochancay	28.31	339	P		P		11 56 17.0	+0.6	
SDBA	SAO DESIDERIO	28.39	59	eP		P		11 56 16.3	-0.8	
SMTB	Santa Maria do	28.93	50	eP		P		11 56 21.7	-0.2	
PIAT	Ana Tenorio	29.42	342	eP		P		11 56 29.1	+2.5	
PTLC	Puerto Leguiza	29.80	349	eP		P		11 56 26.8	-2.8	
GUA01	Guaratinga, BA	30.03	72	eP		P		11 56 30.9	-0.8	
FLOC	Florencia	31.32	348	eP		P		11 56 44.3	+1.2	
GARC	Garzon, Huila	31.89	349	eP		P		11 56 50.1	+1.8	
BBAC	Balboa, Cauca	32.07	345	eP		P		11 56 51.6	+1.7	
POPC	Popayan, Colom	32.45	347	eP		P		11 56 54.1	+0.9	
BOAV	Boa Vista	32.71	17	P		P		11 56 54.6	-0.6	
BOAV				IAmb		IAmb		11 56 55.5		
	comp=Z,26nm,0.9s									
BOAV	Boa Vista	32.71	17	eP		P		11 56 54.7	-0.5	
ORTC	Ortega, Tolima	33.53	350	eP		P		11 57 04.1	+1.7	
TMAB	Tom-Au,PA,Br	33.67	41	eP		P		11 57 03.8	+0.4	
YOTC	Yotoco, Valle	33.80	348	eP		P		11 57 05.3	+0.5	
CHIC	Chingaza	34.03	352	eP		P		11 57 06.6	-0.5	
ROSC	El Rosal	34.31	351	P		P		11 57 09.9	+0.4	
	comp=Z,14nm,0.4s,baz=227,slow=17,SNR=5.4									
	comp=Z,14nm,0.4s									
PLMC	San Jos del P	34.69	348	eP		P		11 57 13.2	+0.8	
GUY2C	Guyana, Caldas	34.84	350	eP		P		11 57 15.2	+1.0	
TAMC	Tame, Arauca	35.65	356	eP		P		11 57 20.3	-0.3	
HELC	Santa Helena	35.82	350	eP		P		11 57 22.6	+0.3	
BARC	Barichara	35.92	354	eP		P		11 57 20.4	-2.7	
PTBC	PUERTO BERRIO,	36.01	352	eP		P		11 57 22.1	-1.5	
PAMC	Pamplona, Colo	36.61	355	eP		P		11 57 29.0	-0.3	
DBBC	Dabeiba	36.74	349	eP		P		11 57 31.5	+1.6	
UREC	San Jos de Ur	37.35	350	eP		P		11 57 34.8	-0.2	
SDV	Santo Domingo	38.03	358	P		P		11 57 39.4	-1.5	
SDV				IAmb		IAmb		11 57 40.9		
	comp=Z,21nm,0.8s									
SDV	Santo Domingo	38.03	358	P		P		11 57 39.8	-1.1	
	comp=Z,20nm,0.8s,baz=179,slow=8.5,SNR=20									
	comp=Z,20nm,0.8s									
SDV	Santo Domingo	38.03	358	eP		P		11 57 40.3	-0.6	
SDV	Santo Domingo	38.03	358	eP		P		11 57 40.0	-0.9	
BAUV	El Baul	38.10	2	P		P		11 57 39.8	-1.4	
RCBR	Riachuelo	39.39	60	P		P		11 57 52.0	-0.1	
SJCC	San Jacinto, C	39.41	351	eP		P		11 57 52.3	+0.1	
CELP	Cerrillos	47.23	4	P		P		11 58 53.6	-1.3	
PETF	Flores	50.04	334	P		P		11 59 15.6	-0.8	
PETF				IAmb		IAmb		11 59 18.1		
	comp=Z,20nm,0.8s									
BELA	Belgrano 2	51.09	171	P		P		11 59 23.5	-0.1	
BELA				IAmb		IAmb		11 59 24.6		
	comp=Z,8.6nm,0.7s									
CMIG	Matias Romero	52.29	329	LR		LR		12 17 16.5		
	comp=Z,104nm,20.0s,baz=66,slow=31									
TEIG	Tepich	52.52	338	P		P		11 59 35.4	+0.5	
TEIG	Tepich	52.52	338	eP		P		11 59 35.1	+0.2	
TEIG	Tepich	52.52	338	P		P		11 59 35.3	+0.5	
TEIG				pP		pP		12 00 07.5	+3.1	
VNA3	Neumayer Olymp	52.88	159	⇑P		P		11 59 37.0	+0.1	
	comp=Z,10nm,0.7s									
CAMR	Camarioca	53.35	346	P		P		11 59 41.0	+0.1	
CAMR				IAmb		IAmb		11 59 42.5		
	comp=Z,68nm,0.6s									
SOR	Soroa	53.46	344	P		P		11 59 41.8	+0.1	
VNA2	Neumayer--Watz	53.49	159	⇑P		P		11 59 41.5	0.0	
	comp=Z,0.2nm,0.4s,baz=285,slow=8.0									
SNAA	Sanae	55.10	159	P		P		11 59 53.0	-0.1	
SNAA				IAmb		IAmb		11 59 54.0		
	comp=Z,27nm,1.2s									
SNAA	Sanae	55.10	159	⇑P		P		11 59 53.2	0.0	
	comp=Z,1828µm,0.1s									
SNAA	Sanae	55.10	159	P		P		11 59 53.1	-0.1	
	comp=Z,8.3nm,0.5s,baz=294,slow=6.5,SNR=8.0									
	comp=Z,8.3nm,0.5s									
TROLL	Troll, Antarti	56.81	159	⇑P		P		12 00 05.4	0.0	
	comp=Z,294nm,0.5s									
DWPF	Disney Wildern	58.27	348	P		P		12 00 15.1	-0.9	
	baz=168									
656A	Willston	59.71	347	P		P		12 00 25.7	-0.2	
ZAIG	Zacatecas	60.83	325	P		P		12 00 36.8	+2.8	
QSPA	South Pole Qui	60.87	180	P		P		12 00 34.1	+0.6	
QSPA				IAmb		IAmb		12 00 34.6		
	comp=Z,6.7nm,0.7s									
QSPA	South Pole Qui	60.87	180	P		P		12 00 34.1	+0.6	
	comp=Z,5.3nm,0.6s,baz=154,slow=1.9,SNR=58									
QSPA				pP		pP		12 01 04.0	+0.4	
	comp=Z,12nm,0.9s,baz=133,slow=5.2,SNR=9.4									
	comp=Z,5.3nm,0.6s									
QSPA	South Pole Qui	60.87	180	P		P		12 00 34.2	+0.6	
QSPA				pP		pP		12 01 05.4	+1.9	
QSPA				PcP		PcP		12 01 16.5	+0.5	
553A	Crawfordville	60.91	345	P		P		12 00 34.9	+0.9	
456A	Hilliard	60.93	348	P		P		12 00 34.6	+0.5	
TIGA	Tifton	61.93	346	P		P		12 00 41.1	+0.2	
TIGA				IAmb		IAmb		12 00 41.4		
	comp=Z,19nm,0.8s									
TIGA	Tifton	61.93	346	P		P		12 00 40.6	-0.2	
	baz=166									
BRAL	Brewton	62.47	343	P		P		12 00 44.3	-0.1	
	baz=163									
NHSC	New Hope	62.94	350	P		P		12 00 47.7	+0.2	
	baz=170									
250A	Grady	63.05	344	IAmb		IAmb		12 00 48.2		
	comp=Z,14nm,0.8s									
152A	Waverly Hall	63.36	346	IAmb		IAmb		12 00 50.1		
	comp=Z,11nm,0.6s									
GOGA	Godfrey	63.82	347	P		P		12 00 53.0	-0.3	
	baz=166									
833A	Chaparral WMA,	64.09	331	P		P		12 00 56.7	+1.5	
	baz=151,SNR=21									
HKT	Hockley	64.11	335	P		P		12 00 55.8	+0.6	
HKT				IAmb		IAmb		12 00 57.5		
	comp=Z,13nm,1.1s									
HKT	Hockley	64.11	335	P		P		12 00 56.3	+1.1	
LRAL	Lakeview Retre	64.23	344	P		P		12 00 55.8	-0.2	
	baz=163									
X58A	Rowland	64.25	351	P		P		12 00 56.0	-0.1	
VBMS	Vicksburg	64.41	340	P		P		12 00 57.4	+0.2	
	baz=160									
Y49A	Blount Mountai	64.88	344	IAmb		IAmb		12 01 00.8		
	comp=Z,8.1nm,0.6s									
W57A	Gilead	64.92	350	IAmb		IAmb		12 01 01.3		
	comp=Z,14nm,0.8s									
KMSC	Kings Mountain	65.12	349	P		P		12 01 02.4	+0.7	
	baz=169									
BG3	Lake Jocassee	65.25	348	P		P		12 01 02.2	-0.4	
BG3				IAmb		IAmb		12 01 03.0		
	comp=Z,9.4nm,0.7s									
NATX	Nacogdoches	65.32	336	P		P		12 01 04.1	+1.0	
	baz=156									
FPAL	Fort Paine	65.35	345	P		P		12 01 02.3	-1.0	
FPAL				IAmb		IAmb		12 01 03.7		
	comp=Z,11nm,0.7s									
V58A	Windy Hill, Pi	65.44	351	P		P		12 01 03.5	-0.2	
V58A				IAmb		IAmb		12 01 04.7		
	comp=Z,22nm,0.9s									
435B	Jarrell	65.52	334	P		P		12 01 05.0	+0.5	
	baz=153									
W52A	Murphy	65.54	347	P		P		12 01 04.3	-0.2	
W52A				IAmb		IAmb		12 01 05.2		
	comp=Z,13nm,0.9s									
SLBS	Sierra La Lagu	65.54	319	P		P		12 01 07.0	+2.2	
V55A	Taylorsville	65.80	350	IAmb		IAmb		12 01 07.1		
	comp=Z,18nm,0.8s									
HPIG		65.84	325	IAmb		IAmb		12 01 08.8		
	comp=Z,7.5nm,0.6s									
W50A	Signal Mountai	65.92	346	P		P		12 01 06.9	-0.1	
237A	Washetta, Mont	65.95	336	P		P		12 01 08.1	+1.0	
CPCT	Cooper Cave	66.00	347	P		P		12 01 07.5	0.0	
CPCT				IAmb		IAmb		12 01 08.1		
	comp=Z,16nm,0.7s									
JCT	Junction City	66.15	332	P		P		12 01 09.4	+0.9	
	baz=151,SNR=8.3									
U56A	King	66.15	350	IAmb		IAmb		12 01 09.6		
	comp=Z,22nm,0.9s									
OXF	Oxford	66.26	342	P		P		12 01 09.1	0.0	
	baz=161									
BRDY	Brady	66.53	333	P		P		12 01 11.7	+0.7	
BRDY				IAmb		IAmb		12 01 12.6		
	comp=Z,20nm,0.8s									
WHTX	Lake Whitney,	66.55	334	P		P		12 01 11.8	+0.8	
WHTX				IAmb		IAmb		12 01 12.6		
	comp=Z,14nm,0.8s									
WHTX	Lake Whitney,	66.55	334	P		P		12 01 11.5	+0.5	
	baz=154,SNR=6.1									
WLAR	White Oak Lake	66.57	339	P		P		12 01 12.3	+1.2	
T57A	Hurt	66.64	351	P		P		12 01 12.1	+0.6	
T57A				IAmb		IAmb		12 01 12.5		
	comp=Z,11nm,0.8s									
SAND	Sanderson	66.69	329	IAmb		IAmb		12 01 14.4		
	comp=Z,26nm,1.2s									
TXAR	Lajitas Array	66.87	328	P		P		12 01 14.2	+0.9	
TXAR	Lajitas Array	66.87	328	P		P		12 01 14.3	+1.1	
	comp=Z,3.2nm,0.7s,baz=153,slow=8.1,SNR=44									
TXAR				pP		PcP		12 01 42.1	+1.1	
	comp=Z,1.4nm,0.8s,baz=152,slow=8.3,SNR=4.0									
	comp=Z,3.2nm,0.7s									
TZTN	Tazewell	66.87	348	P		P		12 01 12.4	-0.6	
	baz=167									
CLTN	Cedars of Leba	67.00	345	P		P		12 01 13.9	+0.1	
BLA	Blacksburg	67.01	351	P		P		12 01 13.6	-0.3	
	baz=170									
OZNA	Ozona	67.09	331	P		P		12 01 15.5	+1.0	
U49A	Red Boiling Sp	67.29	346	P		P		12 01 15.1	-0.5	
S57A	Dark Hollow, R	67.35	352	IAmb		IAmb		12 01 17.3		
	comp=Z,19nm,0.8s									
WVT	Waverly	67.39	344	P		P		12 01 15.8	-0.4	
WVT	Waverly	67.39	344	P		P		12 01 16.0	-0.2	
	baz=163									
WVT	Waverly	67.39	344	P		P		12 01 15.6	-0.6	
WVT				pP		pP		12 01 49.0	+1.9	
R58B	Mineral	67.43	353	P		P		12 01 17.5	+1.1	
MIAR	Mount Ida	67.51	339	IAmb		IAmb		12 01 18.5		
	comp=Z,19nm,1.2s									
MIAR	Mount Ida	67.51	339	P		P		12 01 17.4	+0.4	
	baz=157,SNR=10									
T50A	Nancy	67.58	347	IAmb		IAmb		12 01 17.6		
	comp=Z,7.8nm,0.7s									
PLPT	Palo Pinto	67.61	334	P		P		12 01 18.7	+1.0	
PLPT				IAmb		IAmb		12 01 19.3		
	comp=Z,16nm,0.8s									
CBN	Corbin Frederi	67.61	353	P		P		12 01 18.2	+0.7	
	baz=173									
Z35A	Perchaven, San	67.67	335	P		P		12 01 19.1	+1.0	
ALPN	Alpine	67.73	328	P		P		12 01 19.7	+1.0	
WHAR	Wooly Hollow	67.80	340	P		P		12 01 19.0	+0.2	
WHAR				IAmb		IAmb		12 01 20.1		
	comp=Z,19nm,1.0s									
S51A	Beattyville	67.94	348	P		P		12 01 19.3	-0.4	
S51A				IAmb		IAmb		12 01 19.7		
	comp=Z,12nm,0.7s									
ABTX	Abilene, Hawle	67.96	333	IAmb		IAmb		12 01 21.7		
	comp=Z,22nm,0.9s									
ABTX	Abilene, Hawle	67.96	333	P		P		12 01 20.5	+0.6	
	baz=152,SNR=5.9									
R55A	Marlinton	68.02	351	IAmb		IAmb		12 01 21.9		
	comp=Z,11nm,0.7s									
T47A	Sharon Grove	68.04	345	IAmb		IAmb		12 01 20.7		
	comp=Z,34nm,1.2s									
MNHN	Monahans	68.16	330	P		P		12 01 22.5	+1.2	
MNHN				IAmb		IAmb		12 01 23.2		
	comp=Z,22nm,1.0s									
LCAR	Lake Charles	68.20	341	P		P		12 01 21.4	+0.1	
FCAR	Ozark Folk Cen	68.31	340	IAmb		IAmb		12 01 22.9		
	comp=Z,11nm,0.8s									
WTFS	Witchita Falls	68.51	334	IAmb		IAmb		12 01 24.8		
	comp=Z,19nm,0.8s									
APMT	Aspermont	68.77	333	IAmb		IAmb		12 01 26.6		
	comp=Z,27nm,0.9s									
Q54A	Coxs Mills	68.81	351	IAmb		IAmb		12 01 25.4		
	comp=Z,11nm,0.7s									
R49A	Shelbyville	68.88	347	P		P		12 01 24.8	-0.7	
CGM3	Cape Girardeau	68.95	343	P		P		12 01 26.2	+0.3	
Q52A	Bidwell	69.00	349	IAmb		IAmb		12 01 26.8		
	comp=Z,15nm,0.8s									
X34A	Smith Ranch, M	69.02	335	P		P		12 01 27.3	+0.8	
X34A				IAmb		IAmb		12 01 28.6		
	comp=Z,29nm,1.1s									
WCI	Wyandotte Cave	69.05	346	P		P		12 01 26.0	-0.6	
WCI				IAmb		IAmb		12 01 26.5		
	comp=Z,14nm,0.6s									
WCI	Wyandotte Cave	69.05	346	P		P		12 01 25.9	-0.6	
	baz=164									
WCI	Wyandotte Cave	69.05	346	P		P		12 01 25.9	-0.6	
VNDA	Vanda	69.06	190	P		P		12 01 26.9	+0.7	
	comp=Z,2.0nm,0.9s,baz=104,slow=5.2,SNR=2.9									
VNDA				pP		pP		12 01 58.1	+1.0	
	comp=Z,1.6nm,0.8s,baz=142,slow=5.5,SNR=2.0									
	comp=Z,2.0nm,0.9s									
POST	Post	69.11	332	IAmb		IAmb		12 01 27.9		
	comp=Z,12nm,0.9s									
HHAR	Hobbs	69.22	339	IAmb		IAmb		12 01 28.9		
	comp=Z,13nm,0.7s									
SIUC	Southern Illin	69.23	343	P		P		12 01 27.5	-0.2	
Q51A	Peebles	69.25	348	P		P		12 01 27.0	-0.7	
Q51A				IAmb		IAmb		12 01 28.3		
	comp=Z,22nm,1.0s									
MVL	Millersville	69.30	354	P		P		12 01 29.2	+1.2	
MVL				IAmb		IAmb		12 01 29.8		
	comp=Z,25nm,1.1s									
MCWV	Mont Chateau	69.33	351	P		P		12 01 28.2	0.0	
	baz=170									
TUL3	Leonard	69.48	337	IAmb		IAmb		12 01 30.5		
	comp=Z,25nm,0.8s									
TUL3	Leonard	69.48	337	P		P		12 01 29.3	0.0	
	baz=156,SNR=6.0									
WMOK	Wichita Mounta	69.49	335	P		P		12 01 29.3	-0.1	
WMOK				PcP		PcP		12 01 52.1	+0.3	
WMOK	Wichita Mounta	69.49	335	P		P		12 01 29.4	-0.1	
	baz=153									
U38A	Gravette	69.51	339	P		P		12 01 29.6	+0.2	
U38A				IAmb		IAmb		12 01 30.1		
	comp=Z,9.2nm,0.6s									
U38A				PcP		PcP		12 01 52.5	+0.7	
MGMO	Mountain Grove	69.53	341	P		P		12 01 29.2	-0.3	
MGMO				IAmb		IAmb		12 01 30.8		
	comp=Z,15nm,0.9s									
MGMO				PcP		PcP		12 01 52.7	+0.9	
P52A	Corning	69.64	350	P		P		12 01 30.0	-0.1	
P52A				IAmb		IAmb		12 01 30.6		
	comp=Z,21nm,0.9s									
P52A	Corning	69.64	350	P		P		12 01 29.4	-0.7	
	baz=168,SNR=7.3									
MNTX	Cornudas Mount	69.65	328	P		P		12 01 30.2	-0.2	
	baz=147,SNR=14									
OK052	Battle Ridge R	69.90	337			P		12 01 32.5	+0.7	
OK052				IAmb		IAmb		12 01 33.0		
	comp=Z,24nm,0.8s									
OLIL	Olney	69.93	345	P		P		12 01 31.5	-0.4	
OLIL				IAmb		IAmb		12 01 32.0		
	comp=Z,19nm,0.8s									
OK029	Liberty Lake	69.95	336	IAmb		IAmb		12 01 33.3		
	comp=Z,31nm,0.9s									
P49A	Miami Univ. Ec	69.99	348	IAmb		IAmb		12 01 32.3		
	comp=Z,16nm,0.8s									
P49A	Miami Univ. Ec	69.99	348	P		P		12 01 31.4	-0.9	
	baz=166,SNR=5.0									
P48A	Milroy	70.06	347	P		P		12 01 31.8	-0.9	
P48A				IAmb		IAmb		12 01 32.6		
	comp=Z,14nm,0.8s									
O52A	Adamsville	70.06	350	IAmb		IAmb		12 01 33.3		
	comp=Z,16nm,0.8s									
SSPA	Standing Stone	70.07	353	P		P		12 01 33.0	+0.3	
	baz=172									
SSPA	Standing Stone	70.07	353	P		P		12 01 33.2	+0.4	
CCM	Cathedral Cave	70.08	342	P		P		12 01 32.8	-0.1	
CCM	Cathedral Cave	70.08	342	P		P		12 01 33.1	+0.2	
	baz=160									
CCM	Cathedral Cave	70.08	342	⇑P		P		12 01 33.1	+0.2	
						pP				
O53A	New Philadelph	70.10	350	P		P		12 02 06.5	+2.5	
	baz=169							12 01 33.1	+0.2	
PAL	Palisades	70.13	356	P		P		12 01 33.3	+0.3	
	baz=176									
N58A	Sunbury	70.16	354	IAmb		IAmb		12 01 35.0		
	comp=Z,18nm,0.9s									
ODNJ	Ogdensburg	70.24	356	IAmb		IAmb		12 01 35.4		
	comp=Z,19nm,0.9s									
Q44A	Meyer Farm, Va	70.31	344	IAmb		IAmb		12 01 34.3		
	comp=Z,13nm,0.8s									
OK048	Pawnee Station	70.33	337	IAmb		IAmb		12 01 35.8		
	comp=Z,18nm,0.7s									
S39A	Bolivar	70.34	340	P		P		12 01 34.8	+0.4	
SMWD	Samnorwood	70.38	334	IAmb		IAmb		12 01 36.3		
	comp=Z,23nm,0.9s									
MSTX	Muleshoe	70.42	331	P		P		12 01 35.3	+0.1	
	baz=150,SNR=11									
M57A	Sunshine Farm,	70.69	354	IAmb		IAmb		12 01 38.1		
	comp=Z,11nm,0.8s									
AMTX	Amarillo	70.75	332	IAmb		IAmb		12 01 38.8		
	comp=Z,22nm,1.2s									
AMTX	Amarillo	70.75	332	P		P		12 01 36.7	-0.5	
	baz=151									
O48B	Farmland	70.77	347	P		P		12 01 36.5	-0.6	
	baz=166,SNR=7.5									
KSPA	Keystone Colle	70.80	355	P		P		12 01 38.1	+0.9	
KSPA				IAmb		IAmb		12 01 38.2		
	comp=Z,12nm,0.9s									
M53A	WI Miller and	71.20	351	P		P		12 01 39.3	-0.3	
	baz=170									
KAN09	Caldwell North	71.22	337	P		P		12 01 37.8	-2.0	
LIC	Lamto	71.23	71	⇑iP		P		12 01 40.1	-0.3	
	comp=Z,50nm,0.7s									
319A	Douglas	71.28	325	IAmb		IAmb		12 01 43.3		
	comp=Z,29nm,0.9s									
SFIN	Lafayette	71.28	346	P		P		12 01 39.3	-0.8	
SFIN				IAmb		IAmb		12 01 40.5		
	comp=Z,15nm,0.8s									
SFIN	Lafayette	71.28	346	P		P		12 01 39.1	-1.0	
	baz=164									
M52A	Chesterland	71.39	351	IAmb		IAmb		12 01 41.5		
	comp=Z,18nm,0.8s									
KAN06	Argonia West S	71.40	336	P		P		12 01 41.7	+0.7	
KAN06				IAmb		IAmb		12 01 42.6		
	comp=Z,30nm,1.0s									
BINY	Binghamton	71.45	355	P		P		12 01 41.5	+0.4	
BINY				IAmb		IAmb		12 01 42.7		
	comp=Z,23nm,1.1s									
BINY	Binghamton	71.45	355	P		P		12 01 41.5	+0.4	
	baz=174									
TIC	Toumodi	71.46	71	⇑iP		P		12 01 41.5	-0.3	
	comp=Z,7.3nm,0.3s									
121A	Cookes Peak, D	71.48	326	P		P		12 01 43.6	+1.9	
121A				IAmb		IAmb		12 01 44.6		
	comp=Z,19nm,1.1s									
121A	Cookes Peak, D	71.48	326	P		P		12 01 43.2	+1.5	
	baz=145,SNR=11									
L61B	Northampton	71.51	357	IAmb		IAmb		12 01 43.0		
	comp=Z,26nm,0.9s									
L61B	Northampton	71.51	357	P		P		12 01 41.9	+0.5	
	baz=177									
L56A	Greenwood	71.53	354	IAmb		IAmb		12 01 42.9		
	comp=Z,24nm,0.8s									
HRV	Adam Dziewonsk	71.53	358	P		P		12 01 41.9	+0.4	
	baz=178									
HRV	Adam Dziewonsk	71.53	358	P		P		12 01 42.4	+0.9	
HRV				pP		pP		12 02 16.0	+3.2	
KIC	Kosan Boka	71.54	71	⇑iP		P		12 01 42.1	-0.2	
	comp=Z,38nm,0.6s									
DBIC	Dimbokro	71.61	71	P		P		12 01 42.5	-0.1	
DBIC	Dimbokro	71.61	71	P		P		12 01 42.6	-0.1	
	comp=Z,30nm,0.6s,baz=225,slow=6.0,SNR=45									
	comp=Z,30nm,0.6s									
DBIC	Dimbokro	71.61	71	⇑P		P		12 01 42.6	-0.1	
DBIC				PcP		PcP		12 02 01.0	-0.3	
P40A	Paris	71.68	342	P		P		12 01 42.6	0.0	
ERPA	Erie	71.78	352	P		P		12 01 43.4	+0.4	
ERPA				IAmb		IAmb		12 01 43.9		
	comp=Z,26nm,0.9s									
ERPA	Erie	71.78	352	P		P		12 01 43.1	+0.1	
	baz

KSCO **Kaye Shedlock'** 74.71 334 IAmb IAmb 12 02 03.6
comp=Z,22nm,1.1s
KSCO **Kaye Shedlock'** 74.71 334 P **P** **12 02 02.0 +1.5**
comp=Z,27nm,1.1s baz=150
SDCO **Great Sand Dun** 74.79 331 P **P** **12 02 02.5 +1.3**
baz=148,SNR=12
X16A **Lo Mia Camp, P** 74.80 325 IAmb IAmb 12 02 04.1
comp=Z,16nm,0.9s
F64A **Sherman** 74.87 1 P **P** **12 02 02.1 +1.1**
F64A IAmb IAmb 12 02 02.9
comp=Z,26nm,0.8s
GLMI **Grayling** 75.11 349 P **P** **12 02 02.5 0.0**
GLMI **Grayling** 75.11 349 P **P** **12 02 02.9 +0.4**
baz=166
SUR **Sutherland** 75.15 119 P **P** **12 02 04.0 +0.5**
SUR IAmb IAmb 12 02 05.0
comp=Z,22nm,0.8s
L34A **Svendsen Farm,** 75.19 340 P **P** **12 02 03.0 0.0**
BGNE **Belgrade** 75.24 338 P **P** **12 02 03.9 +0.6**
baz=154,SNR=5.8
S22A **4UR Ranch, Cre** 75.36 330 P **P** **12 02 05.9 +1.4**
baz=147,SNR=7.0
TRQ **Mont Tremblant** 75.36 356 IAmb IAmb 12 02 04.9
comp=Z,19nm,0.8s
GLA **Glamis** 75.49 322 P **P** **12 02 06.7 +1.6**
baz=140
WUAZ **Wupatki** 75.64 326 IAmb IAmb 12 02 09.0
comp=Z,23nm,1.0s
WUAZ **Wupatki** 75.64 326 P **P** **12 02 08.1 +2.1**
baz=143,SNR=17
MVCO **Mesa Verde** 75.65 329 P **P** **12 02 07.7 +1.6**
MVCO IAmb IAmb 12 02 08.6
comp=Z,18nm,0.9s
MVCO **Mesa Verde** 75.65 329 P **P** **12 02 07.8 +1.6**
baz=146,SNR=18
Q24A **Divide** 75.67 332 IAmb IAmb 12 02 08.7
comp=Z,17nm,0.8s
Q24A **Divide** 75.67 332 P **P** **12 02 07.9 +1.6**
baz=148,SNR=10.0
PQI **Presque Isle** 75.68 1 P **P** **12 02 06.8 +1.2**
PQI IAmb IAmb 12 02 07.4
comp=Z,22nm,0.7s
IKP **In-Ko-Pah, Jac** 75.89 321 P **P** **12 02 08.0 +0.6**
baz=139
SWSC **Sam W. Stewart** 75.94 321 P **P** **12 02 08.6 +1.1**
baz=140
PDMCI **Parker Dam,Lak** 76.09 323 P **P** **12 02 09.5 +1.2**
baz=141
OGNE **Ogallala** 76.17 335 P **P** **12 02 10.2 +1.5**
baz=151
MONP2 **Monument Peak** 76.24 321 P **P** **12 02 10.9 +1.4**
baz=139
BC3 **Big Chuckawall** 76.29 322 P **P** **12 02 11.3 +1.6**
baz=140,SNR=10
BATG **Bathurst New B** 76.34 2 P **P** **12 02 10.5 +1.1**
BATG IAmb IAmb 12 02 11.1
comp=Z,17nm,0.7s
IRM **Iron Mountain** 76.51 322 P **P** **12 02 12.5 +1.8**
baz=140,SNR=8.2
LMQ **La Malbaie** 76.55 359 IAmb IAmb 12 02 11.9
comp=Z,17nm,0.8s
ISCO **Idaho Springs** 76.57 332 P **P** **12 02 12.7 +1.3**
baz=148,SNR=10.0
W13A **Hualapai Mount** 76.57 324 P **P** **12 02 13.3 +1.9**
SMCO **Snowmass** 76.61 331 P **P** **12 02 13.6 +1.9**
SMCO IAmb IAmb 12 02 14.5
comp=Z,14nm,0.8s
TPFO **Pinon Flats** 76.80 321 P **P** **12 02 14.0 +1.5**
baz=139
PFO **Pinyon Flats O** 76.80 321 P **P** **12 02 14.8 +2.2**
PFO IAmb IAmb 12 02 15.3
comp=Z,22nm,1.3s
PFO **Pinyon Flats O** 76.80 321 P **P** **12 02 14.3 +1.8**
baz=139
U15A **North Rim** 76.81 326 P **P** **12 02 14.9 +2.1**
U15A IAmb IAmb 12 02 15.7
comp=Z,15nm,0.8s
BELC **Belle Mtn. Jos** 76.85 322 P **P** **12 02 14.6 +1.8**
baz=140,SNR=5.9
K30B **Basset** 76.86 338 P **P** **12 02 13.7 +1.2**
ECSD **EROS Data Cent** 76.87 340 P **P** **12 02 12.8 +0.3**
ECSD IAmb IAmb 12 02 13.7
comp=Z,29nm,0.8s
LDAQ **Lac Daran** 76.98 359 IAmb IAmb 12 02 14.4
comp=Z,20nm,0.8s
COWI **Conover** 77.19 346 IAmb IAmb 12 02 15.3
comp=Z,19nm,1.2s
MURC **Murrieta** 77.20 321 P **P** **12 02 16.6 +1.9**
baz=139
SPMN **Marine on St.** 77.20 343 IAmb IAmb 12 02 14.8
comp=Z,46nm,1.4s
SPMN **Marine on St.** 77.20 343 P **P** **12 02 14.0 -0.3**
baz=159,SNR=8.0
GMRC **Granite Mounta** 77.26 322 P **P** **12 02 16.9 +1.8**
baz=140,SNR=14
ELS **Elsinore Mount** 77.36 321 IAmb IAmb 12 02 18.3
comp=Z,13nm,0.8s
VLDQ **Val d'Or** 77.44 355 IAmb IAmb 12 02 16.8
comp=Z,22nm,1.0s
KNB **Kanab** 77.54 326 P **P** **12 02 18.8 +2.1**
KNB IAmb IAmb 12 02 19.8
comp=Z,37nm,1.1s
BBRC **Big Bear Solar** 77.55 321 P **P** **12 02 18.1 +1.3**
baz=139
N23A **Red Feather La** 77.63 333 P **P** **12 02 18.3 +1.1**
N23A **Red Feather La** 77.63 333 P **P** **12 02 18.7 +1.5**
baz=148
HEC **Hector,Ludlow** 77.66 322 P **P** **12 02 18.9 +1.7**
baz=139,SNR=9.4
CIS **Catalina Islan** 77.73 320 P **P** **12 02 19.0 +1.3**
baz=138
TUQ **Turquoise Moun** 77.90 323 P **P** **12 02 20.1 +1.5**
baz=140,SNR=5.0
BFSC **Mount Baldy Ra** 77.93 321 P **P** **12 02 20.0 +1.1**
baz=138
O20A **White River Ci** 77.95 331 IAmb IAmb 12 02 21.4
comp=Z,18nm,0.9s
O20A **White River Ci** 77.95 331 P **P** **12 02 20.5 +1.6**
baz=146,SNR=12
F36A **Milaca** 77.98 343 IAmb IAmb 12 02 19.2
comp=Z,18nm,0.9s
MTPU **Mount Pierson** 78.04 327 IAmb IAmb 12 02 22.1
comp=Z,13nm,0.9s
SRU **San Rafael Swe** 78.12 329 P **P** **12 02 21.1 +1.2**
SRU IAmb IAmb 12 02 21.9
comp=Z,15nm,0.8s
E38A **The Farm, Brul** 78.20 345 IAmb IAmb 12 02 20.6
comp=Z,14nm,0.8s
CCUT **Cedar City** 78.22 326 IAmb IAmb 12 02 23.8
comp=Z,22nm,0.8s
GSC **Goldstone, Bar** 78.26 322 P **P** **12 02 22.4 +1.8**
GSC **Goldstone, Bar** 78.26 322 P **P** **12 02 22.1 +1.5**
baz=139
Q16A **Castle Valley** 78.27 328 IAmb IAmb 12 02 23.3
comp=Z,16nm,1.1s
SHPR **Sheep Range** 78.32 324 P **P** **12 02 22.7 +1.8**
DECC **Green Verdugo** 78.32 320 P **P** **12 02 22.4 +1.6**
baz=138
TSUM **Tsumeb** 78.36 106 P **P** **12 02 21.8 +0.1**
TSUM IAmb IAmb 12 02 22.9
comp=Z,23nm,1.0s
P18A **Preston Nutter** 78.42 329 IAmb IAmb 12 02 24.2
comp=Z,16nm,0.8s
P17A **Butcher Ranch,** 78.52 329 P **P** **12 02 23.6 +1.6**
P17A IAmb IAmb 12 02 24.3
comp=Z,15nm,1.0s
TMUT **Trail Mountain** 78.59 328 P **P** **12 02 24.0 +1.5**
EDW2 **Edwards Air Fo** 78.59 321 P **P** **12 02 23.7 +1.3**
baz=138
SOE **Somerset East** 78.60 121 P **P** **12 02 22.8 +0.1**
SOE IAmb IAmb 12 02 23.8
comp=Z,29nm,1.0s
F33A **5 Mile Ranch,** 78.70 341 P **P** **12 02 22.5 -0.1**
LRMC **Laurel Mtn Rad** 78.87 322 P **P** **12 02 25.7 +1.7**
baz=139
RDMU **Red Mountain** 78.89 330 IAmb IAmb 12 02 26.1
comp=Z,18nm,0.8s
PRN **Pahroc Range** 78.95 325 IAmb IAmb 12 02 27.4
comp=Z,19nm,1.0s
FURC **Furnace Creek,** 79.17 323 P **P** **12 02 27.1 +1.7**
baz=139,SNR=6.6
MPMC **Manual Prospec** 79.20 322 P **P** **12 02 26.9 +1.1**
baz=139
TPNV **Topopah Spring** 79.22 324 P **P** **12 02 27.7 +1.8**
baz=140,SNR=12
SBC **Santa Barbara** 79.23 320 P **P** **12 02 27.2 +1.4**
baz=137
ARVC **Arvin** 79.24 321 P **P** **12 02 27.7 +1.9**
baz=138
K22A **Casper** 79.35 333 IAmb IAmb 12 02 28.8
comp=Z,14nm,0.8s
K22A **Casper** 79.35 333 P **P** **12 02 28.2 +1.7**
baz=148,SNR=9.2
MPU **Maple Canyon** 79.36 328 P **P** **12 02 28.2 +1.6**
BSUT **Blindstream Ca** 79.38 329 P **P** **12 02 27.9 +1.0**
ISA **Isabella, Lake** 79.44 321 P **P** **12 02 28.7 +1.8**
baz=138,SNR=7.7
EYMN **Ely** 79.45 345 IAmb IAmb 12 02 27.4
comp=Z,14nm,0.8s
EYMN **Ely** 79.45 345 P **P** **12 02 26.5 -0.2**
baz=161,SNR=6.8
PKM **Mcpherson Peak** 79.61 320 P **P** **12 02 29.2 +1.1**
baz=137
RSSD **Black Hills** 79.66 335 P **P** **12 02 29.4 +1.2**
RSSD IAmb IAmb 12 02 30.0
comp=Z,11nm,0.7s
RSSD **Black Hills** 79.66 335 P **P** **12 02 29.6 +1.4**
baz=150
CWC **Cottonwood Cre** 79.80 322 P **P** **12 02 30.3 +1.2**
baz=138
GRAC **Grapevine Rang** 79.84 323 P **P** **12 02 30.7 +1.7**
baz=139
VES **Vestal, Richgr** 79.90 321 P **P** **12 02 30.7 +1.3**
baz=138,SNR=6.6
R11B **Troy Canyon, C** 79.95 325 P **P** **12 02 31.3 +1.4**
baz=140,SNR=17
SMMC **Simmler** 80.02 320 P **P** **12 02 31.4 +1.3**
baz=137
DUG **Dugway, Tooele** 80.05 328 P **P** **12 02 31.6 +1.3**
baz=143,SNR=8.1
TCUT **Toone Canyon** 80.14 329 P **P** **12 02 32.8 +1.9**
LCH **Last Change Ra** 80.16 323 P **P** **12 02 32.6 +1.7**
BOSA **Boshof** 80.27 117 P **P** **12 02 31.2 -0.7**
comp=Z,19nm,0.6s,baz=253,slow=3.8,SNR=46
comp=Z,19nm,0.6s
TIN **Tinemaha, Big** 80.34 322 P **P** **12 02 33.3 +1.4**
baz=138
B35A **Bob, Littlefor** 80.36 344 IAmb IAmb 12 02 32.3
comp=Z,21nm,0.7s
TOA0 **Torodi Ar. Sit** 80.55 69 P **P** **12 02 33.1 -0.2**
TORD **Torodi Ar. Bea** 80.55 69 P **P** **12 02 33.3 0.0**
TORD **Torodi Ar. Bea** 80.55 69 P **P** **12 02 33.5 +0.2**
comp=Z,32nm,0.6s,baz=290,slow=2.8,SNR=27
comp=Z,32nm,0.6s
TPH **Tonopah** 80.58 324 P **P** **12 02 34.9 +1.7**
HWUT **Hardware Ranch** 80.61 329 IAmb IAmb 12 02 35.0
comp=Z,12nm,0.8s
E28A **Huff** 80.68 339 IAmb IAmb 12 02 34.9
comp=Z,25nm,0.8s
BW06 **Boulder Array** 80.68 331 P **P** **12 02 34.0 +0.3**
baz=145,SNR=13
PDAR **Pinedale Array** 80.68 331 P **P** **12 02 34.4 +0.6**
PDAR **Pinedale Array** 80.68 331 P **P** **12 02 34.2 +0.5**
comp=Z,3.0nm,0.5s,baz=129,slow=7.3,SNR=43
PDAR pP **pP** **12 03 06.2 +0.6**
comp=Z,1.5nm,0.7s,baz=120,slow=5.3,SNR=2.9
comp=Z,3.0nm,0.5s
SPUT **South Promonto** 80.77 329 P **P** **12 02 34.9 +0.8**
AGMN **Agassiz Nation** 80.84 343 P **P** **12 02 34.2 +0.1**
AGMN IAmb IAmb 12 02 35.0
comp=Z,18nm,0.7s
AGMN **Agassiz Nation** 80.84 343 P **P** **12 02 34.5 +0.4**
baz=157
MLAC **Mammoth, Mammo** 81.09 322 P **P** **12 02 37.4 +1.4**
baz=138
HVU **Hansel Valley** 81.29 329 P **P** **12 02 37.5 +0.6**
NV11 **Mina Array Sit** 81.33 323 P **P** **12 02 38.6 +1.4**
AHID **Auburn Hatcher** 81.34 330 IAmb IAmb 12 02 38.8
comp=Z,23nm,1.4s
LHV **Little Huntoon** 81.37 323 IAmb IAmb 12 02 39.9
comp=Z,10nm,0.7s
NVAR **Mina Array Bea** 81.40 323 P **P** **12 02 38.6 +1.0**
comp=Z,5.6nm,0.9s,baz=158,slow=6.2,SNR=28
comp=Z,5.6nm,0.9s
MDND **Maddock** 81.48 340 P **P** **12 02 38.6 +1.1**
MDND **Maddock** 81.48 340 P **P** **12 02 38.3 +0.8**
baz=154,SNR=7.9
ELK **Elko** 81.63 327 P **P** **12 02 39.8 +1.0**
RYN **Ryan** 81.67 323 P **P** **12 02 39.7 +0.7**
LOHW **Long Hollow** 81.81 331 P **P** **12 02 40.3 +0.6**
TPAW **Teton Pass** 81.86 331 P **P** **12 02 40.1 +0.1**
FLWY **Flagg Ranch** 82.24 331 IAmb IAmb 12 02 44.0
comp=Z,14nm,0.7s
LBTB **Lobatse** 82.24 114 P **P** **12 02 41.8 -0.5**
YERR **Yerington** 82.31 323 P **P** **12 02 44.2 +1.9**
H17A **Grant Village** 82.44 332 P **P** **12 02 43.9 +1.0**
baz=145
RLMT **Red Lodge** 82.50 333 P **P** **12 02 44.1 +0.9**
RLMT **Red Lodge** 82.50 333 P **P** **12 02 44.1 +0.9**
baz=146,SNR=22
PNTR **Pine Nut** 82.57 323 IAmb IAmb 12 02 46.7
comp=Z,21nm,0.7s
ULM **Lac du Bonnet** 82.64 343 IAmb IAmb 12 02 44.2
comp=Z,17nm,0.9s
ULM **Lac du Bonnet** 82.64 343 P **P** **12 02 43.2 -0.3**
comp=Z,11nm,0.8s,baz=152,slow=6.5,SNR=24
ULM pP **pP** **12 03 14.2 -1.3**
comp=Z,3.4nm,0.8s,baz=228,slow=1.6,SNR=2.5
comp=Z,11nm,0.8s
LAO **LASA Array** 82.66 335 IAmb IAmb 12 02 45.4
comp=Z,23nm,1.1s
LAO **LASA Array** 82.66 335 P **P** **12 02 44.6 +0.8**
baz=148
PAHR **Pah Rah Range** 82.91 324 IAmb IAmb 12 02 47.9
comp=Z,17nm,1.1s
MPK **Martis Peak** 82.95 323 IAmb IAmb 12 02 48.3
comp=Z,14nm,1.0s
YHL **Hebgen Lake** 83.06 332 P **P** **12 02 48.0 +1.8**
AFDM **Forest Hills D** 83.20 322 P **P** **12 02 47.9 +1.2**
HLID **Hailey** 83.44 329 IAmb IAmb 12 02 50.3
comp=Z,15nm,1.2s
HLID **Hailey** 83.44 329 P **P** **12 02 49.4 +1.4**
baz=142,SNR=18
DGMT **Dagmar** 83.48 338 P **P** **12 02 48.8 +0.9**
baz=150,SNR=8.2
BOZ **Bozeman (W)** 83.85 332 P **P** **12 02 50.8 +0.7**
baz=144,SNR=5.3
SCHQ **Schefferville** 83.87 2 IAmb IAmb 12 02 50.4
comp=Z,15nm,1.1s
SCHQ **Schefferville** 83.87 2 P **P** **12 02 49.0 -0.7**
comp=Z,11nm,0.9s,baz=195,slow=4.0,SNR=14
comp=Z,11nm,0.9s
ORV **Orrville** 83.92 322 IAmb IAmb 12 02 52.7
comp=Z,17nm,1.2s
EGMT **Eagleton** 85.09 334 P **P** **12 02 56.7 +0.6**
EGMT IAmb IAmb 12 02 57.3
comp=Z,22nm,1.4s
EGMT **Eagleton** 85.09 334 P **P** **12 02 56.2 +0.1**
baz=146
J08A **Circle Bar Ran** 85.17 326 P **P** **12 02 57.9 +1.2**
J08A IAmb IAmb 12 02 58.8
comp=Z,16nm,0.7s
LYMT **Lyon Mountain** 85.23 332 P **P** **12 02 58.4 +1.3**
PLID **Pearl Lake** 85.34 329 IAmb IAmb 12 02 59.3
comp=Z,16nm,0.8s
K05A **Summer Lake** 85.90 325 P **P** **12 03 01.6 +1.2**
K05A IAmb IAmb 12 03 02.9
comp=Z,21nm,1.1s
I07A **Izee** 86.21 326 P **P** **12 03 02.7 +0.9**
I07A IAmb IAmb 12 03 03.9
comp=Z,9.5nm,0.9s
J05D **Fort Rock, OR** 86.48 325 P **P** **12 03 04.6 +1.4**
J05D IAmb IAmb 12 03 05.3
comp=Z,15nm,1.2s
PINE **Pine Mountain** 86.70 325 IAmb IAmb 12 03 06.7
comp=Z,17nm,0.8s
I05D **Terrebonne, OR** 87.30 326 P **P** **12 03 08.0 +1.0**
I05D IAmb IAmb 12 03 09.2
comp=Z,14nm,0.9s
K02D **Willamette Mer** 87.30 323 P **P** **12 03 08.8 +1.7**
K02D IAmb IAmb 12 03 09.4
comp=Z,14nm,0.8s
DBO **Dodson Butte** 87.38 324 P **P** **12 03 08.4 +0.9**
DBO IAmb IAmb 12 03 09.7
comp=Z,16nm,0.9s
I04A **Tendick Farm,** 87.44 325 P **P** **12 03 08.4 +0.7**
I04A IAmb IAmb 12 03 09.1
comp=Z,15nm,1.2s
H04A **Detroit Lake** 87.97 325 IAmb IAmb 12 03 11.5
comp=Z,16nm,0.9s
NEW **Newport** 88.27 330 P **P** **12 03 11.6 +0.1**
baz=140
FFC **Flin Flon** 88.29 342 P **P** **12 03 11.4 0.0**
URZ **Urewera** 88.42 226 LR LR 12 38 04.1
comp=Z,68nm,18.4s,baz=121,slow=32
C09A **Chrisman Ranch** 88.42 330 P **P** **12 03 13.1 +0.9**
C09A IAmb IAmb 12 03 13.8
comp=Z,14nm,1.1s
MXC **Moxie City** 88.43 328 IAmb IAmb 12 03 14.3
comp=Z,6.7nm,0.8s
RPZ **Rata Peaks** 88.60 219 P **P** **12 03 14.6 +1.2**
RPZ **Rata Peaks** 88.60 219 LR LR 12 37 53.0
comp=Z,55nm,18.2s,baz=121,slow=32
TAM **Tamanrasset** 88.81 63 IAmb IAmb 12 03 15.8
comp=Z,7.8nm,0.9s
LSZ **Lusaka** 89.12 107 P **P** **12 03 15.0 -1.4**
LSZ IAmb IAmb 12 03 18.5
comp=Z,9.4nm,1.0s
EDM **Edmonton** 90.65 335 IAmb IAmb 12 03 22.6
comp=Z,15nm,1.1s
ESDC **Sonseca Array** 91.77 45 P **P** **12 03 27.7 -0.4**
comp=Z,1.8nm,1.0s,baz=249,slow=5.8,SNR=8.1
comp=Z,1.8nm,1.0s
YKA **Yellowknife Ar** 98.39 341 P **P** **12 03 57.5 -0.1**
comp=Z,1.4nm,0.8s,baz=140,slow=4.6,SNR=24
YKA pP **pP** **12 04 29.2 -1.0**
comp=Z,0.1nm,0.5s,baz=227,slow=18,SNR=1.8
comp=Z,1.4nm,0.8s
T35M **Bob Quinn** 100.06 331 P **Pdif** **12 04 06.2 +0.9**
baz=129
TGTN **Hyland Airport** 102.20 335 P **Pdif** **12 04 15.9 +1.2**
baz=130
WHY **Whitehorse** 104.21 332 P **Pdif** **12 04 25.5 +1.7**
baz=125
EYAK **Cordova Ski Ar** 108.76 330 P **PKiKP** **12 08 50.7 +2.6**
baz=116
J26L **Joseph Creek** 109.64 334 P **PKiKP** **12 08 52.2 +2.4**
baz=117
H27K **Steamboat Moun** 109.68 336 P **PKiKP** **12 08 52.1 +2.3**
baz=118
SEW **Seward** 110.24 328 P **PKiKP** **12 08 52.9 +2.0**
baz=114
CHUM **Lake Minchumin** 112.90 332 P **PKiKP** **12 08 56.6 +0.7**
baz=110
G23K **Bananza Creek** 112.98 335 P **PKiKP** **12 08 56.8 +0.7**
baz=111
TOLK **Toolik Lake Re** 113.50 337 P **PKiKP** **12 08 57.6 +0.6**
baz=110
G21K **Allakaket** 114.23 334 P **PKiKP** **12 08 59.5 +1.1**
baz=108
F21K **Alatna River** 114.44 335 P **PKiKP** **12 08 59.8 +0.9**
baz=108
G19K **Purcell Mounta** 115.52 333 P **PKiKP** **12 09 01.8 +0.9**
baz=105
B21K **Ikpikpuk River** 115.52 337 P **PKiKP** **12 09 01.6 +0.8**
baz=105
E20K **Nigu River** 115.72 336 P **PKiKP** **12 09 02.1 +0.8**
baz=105
E19K **Redstone River** 115.90 335 P **PKiKP** **12 09 02.3 +0.7**
baz=104
D20K **Etivluk River** 115.98 336 P **PKiKP** **12 09 03.0 +1.3**
baz=104
N14K **Kuskokwak Cree** 115.99 326 P **PKiKP** **12 09 03.3 +1.4**
baz=104
J16K **Anvik River** 116.28 330 P **PKiKP** **12 09 03.8 +1.4**
baz=103
M14K **Bethel** 116.32 327 P **PKiKP** **12 09 04.4 +1.8**
baz=103
D19K **Kuna River** 116.47 336 P **PKiKP** **12 09 03.7 +1.0**
baz=103
C19K **Lookout Ridge** 117.12 336 P **PKiKP** **12 09 05.1 +1.1**
baz=101
E18K **Tukpahlearik C** 117.16 334 P **PKiKP** **12 09 04.7 +0.7**
baz=101
AKASG **Malin Array Be** 117.41 45 PKiKP **PKPdf** **12 09 04.3 -0.7**
comp=Z,0.2nm,0.3s,baz=256,slow=0.8,SNR=1.9
G16K **Koyuk River** 117.47 332 P **PKiKP** **12 09 05.7 +1.1**
baz=101
E17K **Hotham Inlet** 117.57 334 P **PKiKP** **12 09 05.9 +1.1**
baz=100
BRTR **Keskin Array B** 117.59 58 PKiKP **PKPdf** **12 09 05.8 -0.1**
comp=Z,0.8nm,0.6s,baz=171,slow=2.8,SNR=2.9
B18K **Kokolik River** 117.94 336 P **PKiKP** **12 09 06.5 +1.1**
baz=99
C16K **Lisburne Hills** 119.07 335 P **PKPdf** **12 09 07.9 +0.3**
baz=96
ASAR **Alice Springs** 122.69 206 PKP **PKPdf** **12 09 15.2 -0.9**
comp=Z,1.7nm,0.8s,baz=135,slow=1.7,SNR=22
ASAR PKKPbc **PKKPbc** **12 19 09.5 0.0**
comp=Z,0.9nm,0.6s,baz=330,slow=3.1,SNR=11
KBZ **Khabaz** 125.23 55 PKP **PKPdf** **12 09 20.6 +0.5**
comp=Z,3.7nm,0.9s,baz=103,slow=2.0,SNR=6.1
WRA **Warramunga Arr** 125.87 208 PKP **PKPdf** **12 09 21.9 -0.4**
comp=Z,3.6nm,0.8s,baz=160,slow=1.7,SNR=50
GEYT **Alibeck** 136.03 64 PKP **PKPdf** **12 09 39.3 -1.6**
comp=Z,1.9nm,0.7s,baz=254,slow=5.5,SNR=3.0
PETK **Petropavlovsk-** 138.32 318 PKP **PKPdf** **12 09 45.0 +0.4**
comp=Z,3.7nm,0.8s,baz=80,slow=11,SNR=2.3
BVAR **Borovoye Array** 142.36 40 PKhKP PKPpre 12 09 48.5
comp=Z,1.0nm,0.5s,baz=319,slow=4.7,SNR=5.6
LEM **Lembang** 143.92 175 PKP PKPbc 12 09 55.2 +1.1
comp=Z,61nm,0.6s,baz=154,slow=1.9,SNR=12
GUMO **Guam** 144.56 251 PKP **PKPab** **12 09 55.6 -0.1**
comp=Z,49nm,0.6s,baz=180,slow=20,SNR=3.6
EKS2 **Erkin-Say** 147.70 56 P **PKPbc** **12 10 05.4 +0.8**
SNR=13
KURBB **Kurchatov Arra** 147.95 39 PKPbc **PKPbc** **12 10 05.1 +0.3**
comp=Z,19nm,0.6s,baz=305,slow=3.1,SNR=61
USP **Ospenovka** 148.08 54 P **PKPbc** **12 10 06.0 +0.6**
SNR=10.0
AAK **Ala-Archa** 148.22 56 P **PKPbc** **12 10 06.9 +0.9**
SNR=19
UCH **Uchtor** 148.33 56 P **PKPbc** **12 10 07.7 +1.0**
SNR=21
KBK **Karagaybulak** 148.55 55 P **PKPbc** **12 10 07.8 +0.9**
SNR=13
TKM2 **Tokmak 2** 148.95 55 P **PKPbc** **12 10 08.4 +0.5**
SNR=18
ZALV **Zalesovo Beam** 149.13 30 PKP **PKPdf** **12 10 03.1 -0.2**
comp=Z,32nm,0.4s,baz=266,slow=1.4,SNR=84
ZALV PKPbc **PKPbc** **12 10 08.2 +0.5**
comp=Z,11nm,0.7s,baz=285,slow=4.3,SNR=9.0
KSH **Kashi** 149.91 61 PKPbc **PKPbc** **12 10 10.4 +0.1**
KSH sPKP 12 10 44.3
ASAJ **Asahikawa** 150.59 309 PKPbc **PKPbc** **12 10 12.3 +0.8**
comp=Z,17nm,0.9s,baz=323,slow=2.3,SNR=10
MKAR **Makanchi Array** 151.98 44 PKP **PKPdf** **12 10 07.8 -0.3**
comp=Z,0.7nm,0.8s,baz=264,slow=1.2,SNR=6.3
MKAR PKPbc **PKPbc** **12 10 14.6 -0.2**
comp=Z,13nm,0.8s,baz=349,slow=1.2,SNR=13
MKAR PKPab **PKPab** **12 10 25.0 +0.5**
comp=Z,14nm,0.6s,baz=282,slow=3.7,SNR=39
KLR **Kul'dur** 154.39 327 PKP **PKPdf** **12 10 11.3 -0.1**
comp=Z,1.0nm,0.7s,baz=52,slow=2.3,SNR=3.2
KLR PKPbc **PKPbc** **12 10 19.9 0.0**
comp=Z,2.9nm,0.7s,baz=64,slow=3.6,SNR=8.1
HEH **HeiHe** 155.53 333 PKP **PKPdf** **12 10 17.4 +4.4**
HEH pPKP **PKPab** **12 10 39.3 -0.1**
MJAR **Matsushiro Arr** 155.74 294 PKP **PKPdf** **12 10 14.1 +0.4**
comp=Z,0.6nm,0.6s,baz=202,slow=22,SNR=1.9
MJAR PKPab **PKPab** **12 10 40.3 -0.5**
comp=Z,2.6nm,0.7s,baz=160,slow=1.8,SNR=5.7
SONM **Songino Array** 161.27 9 PKP **PKPdf** **12 10 20.4 +0.2**
comp=Z,1.3nm,0.9s,baz=282,slow=1.1,SNR=9.1
SONM PKPab **PKPab** **12 11 04.9 +0.5**
comp=Z,2.3nm,0.8s,baz=328,slow=4.3,SNR=15
KSRS **Korea Array** 163.39 304 PKP **PKPdf** **12 10 22.6 +0.2**
comp=Z,2.8nm,1.0s,baz=101,slow=1.3,SNR=6.9
KSRS PKPab **PKPab** **12 11 14.6 +0.5**
comp=Z,0.5nm,0.6s,baz=290,slow=18,SNR=2.0
CMAR **Chiang Mai Arr** 164.85 133 PKP **PKPdf** **12 10 24.8 +0.5**
comp=Z,0.7nm,0.6s,baz=263,slow=2.7,SNR=6.5
CMAR PKPab **PKPab** **12 11 20.1 -0.8**
comp=Z,0.7nm,0.5s,baz=231,slow=3.7,SNR=5.1
GTA **Gaotai** 166.64 39 PKP **PKPdf** **12 10 26.0 +0.7**
GTA PKPab **PKPab** **12 11 29.0 +0.6**
HHC **Hu-ho-hao-te** 168.50 356 *e*P **PKPdf** **12 10 28.3 +1.8**
PZH **PanZhiHua** 171.73 108 PKP **PKPdf** **12 10 28.5 -0.3**
NJ2 **Nanjing** 172.34 293 *e*P **PKPdf** **12 10 30.1 +1.3**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 pmax pmax
comp=Z,100nm,4.7s

IDC 16 11:54:33.0 -295.0, 68°15N 36°21E, h0km, Error ellipse: s-maj=132.6km s-min=119.1km az=39.0, Baltic States-Belarus-Northwestern Russia

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

I37NO I37NO 6.50 286 I I 12 30 00.0
0.1nm,0.6s,baz=88,slow=324,SNR=2.9
I46RU ZALESOVO INFRA 26.59 98 I I 14 36 50.0
baz=322,slow=344,SNR=0.8
I18DK QAANAAQ INFRAS 27.98 333 I I 14 48 50.0
baz=49,slow=339,SNR=0.8

IDC ***16*** *11:55:27.8±0.8, 1°.68N×127°.44E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=83.0km s-min=16.3km az=68.0*
ISC 16 11:55:42.9±0.9,**1°.5N**±0°.2×**127°.3E**±0°.5**, h128**km**, n8, σ0°81/9, mb3.5**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.39**	**162**	P	**P**	**12 00 30.9**	**0.0**
	0.7nm,0.5s,baz=339,slow=11,SNR=13						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**25.81**	**166**	P	**P**	**12 01 02.8**	**+0.5**
	0.3nm,0.6s,baz=345,slow=10,SNR=5.9						
ASAR				PcP	**PcP**	**12 04 27.9**	**-0.9**
	0.2nm,0.5s,baz=346,slow=2.6,SNR=5.6						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**35.84**	**159**	P	**P**	**12 02 30.2**	**-0.1**
	2.1nm,0.5s,baz=350,slow=7.2,SNR=7.3						
	2.1nm,0.5s						
SONM	**Songino Array**	**49.59**	**342**	P	**P**	**12 04 20.1**	**-1.0**
	0.6nm,0.6s,baz=152,slow=8.1,SNR=5.9						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**59.71**	**326**	P	**P**	**12 05 34.8**	**+0.7**
	1.5nm,0.6s,baz=115,slow=8.1,SNR=23						
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.92**	**328**	P	**P**	**12 06 01.2**	**-0.9**
	1.5nm,0.6s,baz=126,slow=5.9,SNR=15						
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**69.50**	**327**	P	**P**	**12 06 37.8**	**+0.3**
	0.4nm,0.6s,baz=108,slow=9.3,SNR=2.1						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**86.88**	**25**	P	**P**	**12 08 13.6**	**+0.6**
	0.2nm,0.9s,baz=239,slow=3.0,SNR=2.0						
	0.2nm,0.9s						

NOU ***16*** *12:02:29.9, 41°.23S×172°.67E, h187km, MLv3.6/8, South Island, New Zealand*
WEL ***16*** *12:02:33.0±1.2, 41°.S±7°.×17°.3E±°, h156km±7km, M2.8/9, MLv2.8/9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.7, confirmed*
ISC 16 12:02:28.2±1.6,**41°.25S**±0°.05×**172°.67E**±0°.05**, h193**km±8km**, n120, σ1°.38/137, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.16**	**156**	P	**Pn**	**12 02 54.9**	**+1.2**
MRNZ				S	**Sn**	**12 03 11.9**	**-1.6**
TKNZ	**Takaka Hill**	**0.31**	**45**	P	**Pn**	**12 02 55.2**	**+1.1**
TKNZ				S	**Sn**	**12 03 12.7**	**-1.2**
QRZ	**Quartz Range**	**0.44**	**346**	P	**Pn**	**12 02 55.8**	**+1.4**
QRZ	**Quartz Range**	**0.44**	**346**	P	**Pn**	**12 02 55.8**	**+1.4**
QRZ				S	**Sn**	**12 03 13.5**	**-1.0**
NNZ	**Nelson**	**0.54**	**86**	P	**Pn**	**12 02 55.9**	**+1.2**
NNZ				S	**Sn**	**12 03 13.7**	**-1.4**
THZ	**Tophouse**	**0.54**	**161**	P	**Pn**	**12 02 56.2**	**+1.4**
THZ				S	**Sn**	**12 03 14.2**	**-1.3**
DSZ	**Denniston Nort**	**0.81**	**233**	P	**Pn**	**12 02 57.3**	**+1.2**
DSZ				S	**Sn**	**12 03 16.1**	**-1.7**
TUWZ	**Tuamarina**	**0.97**	**101**	P	**Pn**	**12 02 58.7**	**+1.6**
TUWZ				S	**Sn**	**12 03 18.0**	**-1.4**
BSWZ	**Blackbirch Sta**	**1.02**	**117**	P	**Pn**	**12 02 59.1**	**+1.7**
BSWZ				S	**Sn**	**12 03 19.3**	**-0.8**
DUWZ	**D'Urville Isla**	**1.05**	**65**	P	**Pn**	**12 02 59.2**	**+1.5**
DUWZ				S	**Sn**	**12 03 20.4**	**0.0**
TCW	**Tory Channel**	**1.21**	**89**	P	**Pn**	**12 03 00.4**	**+1.6**
TCW				S	**Sn**	**12 03 21.1**	**-1.5**
KHZ	**Kahutara**	**1.33**	**151**	P	**Pn**	**12 03 01.3**	**+1.5**
KHZ	**Kahutara**	**1.33**	**151**	P	**Pn**	**12 03 01.5**	**+1.7**
KHZ				S	**Sn**	**12 03 22.6**	**-1.8**
LTZ	**Lake Taylor**	**1.56**	**191**	P	**Pn**	**12 03 03.6**	**+1.7**
LTZ				S	**Sn**	**12 03 26.3**	**-1.9**
WEL	**Wellington**	**1.58**	**92**	P	**Pn**	**12 03 03.4**	**+1.4**
WEL				S	**Sn**	**12 03 26.7**	**-1.6**
BHW	**Baring Head**	**1.66**	**96**	P	**Pn**	**12 03 04.1**	**+1.3**
BHW				S	**Sn**	**12 03 27.7**	**-2.0**
INZ	**Inchbonnie**	**1.73**	**211**	P	**Pn**	**12 03 04.9**	**+1.4**
INZ				S	**Sn**	**12 03 28.7**	**-2.3**
GVZ	**Greta Valley S**	**1.73**	**171**	P	**Pn**	**12 03 05.2**	**+1.6**
GVZ				S	**Sn**	**12 03 30.5**	**-0.6**
KIW	**Kapiti Island**	**1.74**	**78**	P	**Pn**	**12 03 05.1**	**+1.5**
KIW				S	**Sn**	**12 03 30.0**	**-1.1**
CAW	**Cannon Point**	**1.81**	**86**	P	**Pn**	**12 03 05.7**	**+1.4**
CAW				S	**Sn**	**12 03 31.1**	**-1.3**
AMCZ	**Amberley**	**1.92**	**180**	P	**Pn**	**12 03 07.0**	**+1.7**
OGWZ	**Otaki Gorge**	**1.94**	**78**	P	**Pn**	**12 03 07.2**	**+1.6**
PLWZ	**Palliser**	**1.97**	**100**	P	**Pn**	**12 03 07.3**	**+1.4**
NMEZ	**Namu Road**	**2.06**	**27**	P	**Pn**	**12 03 08.9**	**+2.0**
PAWZ	**Paruwai Farm**	**2.08**	**95**	P	**Pn**	**12 03 09.5**	**+1.3**
OXZ	**Oxford**	**2.12**	**193**	P	**Pn**	**12 03 08.8**	**+1.2**
MTW	**Mount Morrison**	**2.14**	**88**	P	**Pn**	**12 03 09.1**	**+1.4**
HOWZ	**Holdsworth Sta**	**2.18**	**82**	P	**Pn**	**12 03 09.6**	**+1.5**
NBEZ	**Newall Road No**	**2.18**	**25**	P	**Pn**	**12 03 10.2**	**+2.0**
KHEZ	**Kahui Hut**	**2.21**	**28**	P	**Pn**	**12 03 10.4**	**+1.8**
KHEZ	**Kahui Hut**	**2.21**	**28**	P	**Pn**	**12 03 10.4**	**+1.8**
PREZ	**Palmer Road**	**2.22**	**31**	P	**Pn**	**12 03 10.4**	**+1.7**
LREZ	**Lake Rotokare**	**2.23**	**37**	P	**Pn**	**12 03 10.7**	**+2.0**
NEZ	**North Egmont**	**2.26**	**29**	P	**Pn**	**12 03 10.6**	**+1.4**
OHWZ	**Ohakea**	**2.27**	**63**	P	**Pn**	**12 03 11.0**	**+1.9**
TRWZ	**Traveller**	**2.28**	**95**	P	**Pn**	**12 03 10.9**	**+1.7**
MRZ	**Mangatainoka R**	**2.28**	**76**	P	**Pn**	**12 03 10.5**	**+1.3**
PKE	**Pukeiti**	**2.29**	**27**	P	**Pn**	**12 03 11.3**	**+1.9**
WAZ	**Wanganui**	**2.31**	**50**	P	**Pn**	**12 03 11.8**	**+2.1**
WVZ	**Waitaha Valley**	**2.32**	**218**	P	**Pn**	**12 03 11.0**	**+1.4**
DREZ	**Durham Road**	**2.37**	**30**	P	**Pn**	**12 03 12.0**	**+1.7**
MHCZ	**Mount Hutt**	**2.42**	**199**	P	**Pn**	**12 03 12.3**	**+1.5**
TMWZ	**Te Maipa**	**2.43**	**88**	P	**Pn**	**12 03 12.6**	**+1.6**
MQZ	**McQueen's Vall**	**2.45**	**180**	P	**Pn**	**12 03 11.7**	**+0.7**
TIWZ	**Tintock**	**2.48**	**80**	P	**Pn**	**12 03 13.1**	**+1.6**
POWZ	**Post Office Ro**	**2.50**	**71**	P	**Pn**	**12 03 13.0**	**+1.3**
RACZ	**Rakaia**	**2.50**	**189**	P	**Pn**	**12 03 13.1**	**+1.5**
MHEZ	**Mangahewa**	**2.52**	**31**	P	**Pn**	**12 03 13.9**	**+1.9**
PRWZ	**Pori Road**	**2.60**	**75**	P	**Pn**	**12 03 14.6**	**+1.8**
AKCZ	**Akaroa Harbour**	**2.62**	**176**	P	**Pn**	**12 03 14.1**	**+1.0**
VRZ	**Vera Road**	**2.66**	**38**	P	**Pn**	**12 03 14.6**	**+1.0**
RPZ	**Rata Peaks**	**2.73**	**205**	P	**Pn**	**12 03 16.0**	**+1.6**
RPZ	**Rata Peaks**	**2.73**	**205**	P	**Pn**	**12 03 15.9**	**+1.5**
WACZ	**Wakanui South**	**2.76**	**193**	P	**Pn**	**12 03 16.5**	**+1.9**
BFZ	**Birch Farm**	**2.77**	**79**	P	**Pn**	**12 03 16.3**	**+1.5**
BFZ	**Birch Farm**	**2.77**	**79**	P	**Pn**	**12 03 16.3**	**+1.5**
TSZ	**Takapari Road**	**2.77**	**66**	P	**Pn**	**12 03 16.1**	**+1.2**
DVHZ	**Dannevirke**	**2.82**	**71**	P	**Pn**	**12 03 16.6**	**+1.1**
PKVZ	**Pokaka**	**2.83**	**47**	P	**Pn**	**12 03 17.1**	**+1.4**
MTVZ	**Mangateitei**	**2.84**	**50**	P	**Pn**	**12 03 17.1**	**+1.4**
ARCZ	**Arundel**	**2.91**	**202**	P	**Pn**	**12 03 17.7**	**+1.3**
TRVZ	**Turoa**	**2.94**	**49**	P	**Pn**	**12 03 18.0**	**+0.9**
WNVZ	**Wahianoa**	**2.95**	**50**	P	**Pn**	**12 03 18.3**	**+1.1**
MAVZ	**Matarangi**	**2.97**	**49**	P	**Pn**	**12 03 19.1**	**+1.6**
FWVZ	**Far West T-bar**	**2.97**	**49**	P	**Pn**	**12 03 18.8**	**+1.3**
ANWZ	**Angora Road**	**2.99**	**76**	P	**Pn**	**12 03 19.1**	**+1.7**
MOVZ	**Moawhango**	**2.99**	**53**	P	**Pn**	**12 03 18.4**	**+0.9**
PNHZ	**Pukenui**	**3.00**	**65**	P	**Pn**	**12 03 18.7**	**+1.1**
COVZ	**Chateau Observ**	**3.01**	**48**	P	**Pn**	**12 03 18.7**	**+1.0**
TWVZ	**Taurewa**	**3.04**	**45**	P	**Pn**	**12 03 19.1**	**+1.0**
NGZ	**Ngauruhoe**	**3.06**	**48**	P	**Pn**	**12 03 20.0**	**+1.6**
SNVZ	**South Ngauruho**	**3.07**	**49**	P	**Pn**	**12 03 19.9**	**+1.3**
WTVZ	**West Tongariro**	**3.09**	**47**	P	**Pn**	**12 03 19.6**	**+0.8**
NNVZ	**North Ngauruho**	**3.09**	**48**	P	**Pn**	**12 03 19.8**	**+1.0**
OTVZ	**Oturere**	**3.10**	**49**	P	**Pn**	**12 03 20.1**	**+1.2**
WPHZ	**Waipukurau**	**3.10**	**69**	P	**Pn**	**12 03 20.2**	**+1.4**
FOZ	**Fox Glacier**	**3.11**	**222**	P	**Pn**	**12 03 19.7**	**+1.0**
BHHZ	**Black Hill Sta**	**3.13**	**57**	P	**Pn**	**12 03 20.1**	**+0.9**
KRVZ	**Karewarewa**	**3.13**	**48**	P	**Pn**	**12 03 20.1**	**+0.8**
ETVZ	**East Tongariro**	**3.15**	**49**	P	**Pn**	**12 03 20.6**	**+1.1**
NTVZ	**North Tongarir**	**3.15**	**48**	P	**Pn**	**12 03 21.5**	**+2.0**
TMVZ	**Te Maari**	**3.15**	**48**	P	**Pn**	**12 03 20.9**	**+1.3**
PRHZ	**Porangahau**	**3.17**	**73**	P	**Pn**	**12 03 21.1**	**+1.6**
HIZ	**Hauiti**	**3.21**	**32**	P	**Pn**	**12 03 21.0**	**+0.9**
HIZ	**Hauiti**	**3.21**	**32**	P	**Pn**	**12 03 21.0**	**+0.9**
KATZ	**Kakaramea**	**3.25**	**47**	P	**Pn**	**12 03 22.5**	**+1.8**
KRHZ	**Kereru**	**3.25**	**62**	P	**Pn**	**12 03 21.4**	**+0.9**
TMZ	**Timaru**	**3.36**	**201**	P	**Pn**	**12 03 23.3**	**+1.5**
KWHZ	**Kaweka Forest**	**3.40**	**59**	P	**Pn**	**12 03 23.3**	**+0.9**
PXZ	**Pawanui**	**3.42**	**70**	P	**Pn**	**12 03 24.0**	**+1.5**
KAHZ	**Kahuranaki**	**3.52**	**67**	P	**Pn**	**12 03 25.3**	**+1.4**
MCHZ	**McNeill Hill**	**3.57**	**61**	P	**Pn**	**12 03 25.7**	**+1.3**
BKZ	**Black Stump Fm**	**3.59**	**56**	P	**Pn**	**12 03 25.6**	**+0.8**
BKZ	**Black Stump Fm**	**3.59**	**56**	P	**Pn**	**12 03 25.4**	**+0.6**
LBZ	**Lake Benmore**	**3.63**	**209**	P	**Pn**	**12 03 26.4**	**+1.4**
TLZ	**Tolley Road**	**3.66**	**38**	P	**Pn**	**12 03 26.3**	**+0.7**
MRHZ	**Matea Rd**	**3.76**	**51**	P	**Pn**	**12 03 27.0**	**+0.2**
WPRZ	**Whakapapataran**	**3.83**	**46**	P	**Pn**	**12 03 27.6**	**-0.1**
NMHZ	**Naumai**	**3.83**	**57**	P	**Pn**	**12 03 28.9**	**+1.2**
ARHZ	**Aropaoanui**	**3.86**	**60**	P	**Pn**	**12 03 28.9**	**+0.9**
MTHZ	**Maungataniwha**	**4.00**	**55**	P	**Pn**	**12 03 30.4**	**+0.6**
JCZ	**Jackson Bay**	**4.02**	**224**	P	**Pn**	**12 03 31.6**	**+1.6**
JCZ	**Jackson Bay**	**4.02**	**224**	P	**Pn**	**12 03 31.8**	**+1.8**
ODZ	**Otahua Downs**	**4.07**	**201**	P	**Pn**	**12 03 32.2**	**+1.7**
SNGZ	**Shannon Statio**	**4.35**	**57**	P	**Pn**	**12 03 35.2**	**+1.0**
KNZ	**Kokohu**	**4.43**	**61**	P	**Pn**	**12 03 35.8**	**+0.6**
WKZ	**Wanaka**	**4.46**	**216**	P	**Pn**	**12 03 36.5**	**+0.9**
MHGZ	**Mahia Peninsul**	**4.53**	**64**	P	**Pn**	**12 03 37.6**	**+1.2**
URZ	**Urewera**	**4.54**	**50**	P	**Pn**	**12 03 36.2**	**-0.4**
PRGZ	**Paritu Road**	**4.63**	**61**	P	**Pn**	**12 03 38.2**	**+0.5**
RIGZ	**Rimuhau**	**4.67**	**59**	P	**Pn**	**12 03 38.8**	**+0.6**
EAZ	**Earnscleugh**	**4.67**	**211**	P	**Pn**	**12 03 39.1**	**+0.9**
MWZ	**Matawai**	**4.74**	**54**	P	**Pn**	**12 03 39.2**	**-0.1**
TKGZ	**Te Karaka**	**4.88**	**56**	P	**Pn**	**12 03 41.3**	**+0.4**
RUGZ	**Raukumara Rang**	**5.07**	**51**	P	**Pn**	**12 03 43.1**	**-0.5**
CNGZ	**Carnagh Statio**	**5.08**	**59**	P	**Pn**	**12 03 44.2**	**+0.7**
TWGZ	**Tauwhareparae**	**5.12**	**55**	P	**Pn**	**12 03 44.6**	**+0.5**
HAZ	**Te Kaha**	**5.27**	**50**	P	**Pn**	**12 03 45.1**	**-0.9**
PKGZ	**Pakihiroa**	**5.36**	**53**	P	**Pn**	**12 03 47.1**	**-0.1**
WCZ	**Waipu Caves**	**5.47**	**14**	P	Pn	12 03 56.0	+7.5

IDC ***16*** *12:04:15.3±0.7, 23°.85S×30°.72E, h0km, mb4.1/11, mbtmp4.2/16, ML3.3/4, MS3.5/2, Error ellipse: s-maj=20.0km s-min=16.3km az=149.0*
PRE ***16*** *12:04:15.6±2.2, 23°.82S×30°.78E, h5km, ML3.4, Fault plane solution: NP1:ϕ=306.61000°, δ35.00000°, λ0.00000°.*
NEIC ***16*** *12:04:16.0±2.1, 23°.85S±0°.07×30°.89E±0°.09, h5km±1km, mb4.5/10, Error ellipse: s-maj=14.6km s-min=10.8km az=65.0*
EAF ***16*** *12:04:17.0±1.8, 24°.03S×31°.01E, h10km, MD3.8*
BUL ***16*** *12:04:17.0±1.9, 24°.03S×31°.01E, h10km, MD4.0*
ISC 16 12:04:16.0±1.3,**23°.83S**±0°.03×**30°.79E**±0°.03**, h9**km±8km**, n95, σ2°.51/142, mb4.3**/15**, 9C-13D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOED	**Hoedspruit, Li**	**0.60**	**167**	⇑*i* P	**Pb**	**12 04 29.1**	**+0.3**
HOED				*e* S	**Sb**	**12 04 36.6**	**-0.8**
HOED				IAML		12 04 37.0	
	comp=Z,1μm,0.2s						
MOPA	**Mopani**	**0.64**	**61**	*i* P	**Pb**	**12 04 28.5**	**-1.0**
MOPA				*i* S	**Sb**	**12 04 36.6**	**-2.0**
MOPA	**Mopani**	**0.64**	**61**	⇓*i* P	**Pb**	**12 04 28.1**	**-1.4**
MOPA				*e* S	**Sg**	**12 04 35.6**	**-1.3**
MOPA				IAML		12 04 36.0	
	comp=Z,1μm,0.7s						
MOPA	**Mopani**	**0.64**	**61**	*i* P	**Pb**	**12 04 28.5**	**-1.0**
MOPA				*i* S	**Sb**	**12 04 36.6**	**-2.0**
MPHEP	**Siloam, Limpop**	**1.07**	**329**	⇑*i* P	**Pg**	**12 04 36.8**	**+0.1**
MPHEP				*e* S	**Sg**	**12 04 50.5**	**-0.2**
MPHEP				IAML		12 04 51.2	
	comp=Z,1μm,0.5s						
PILG	**Pilgrimsrest,**	**1.10**	**184**	⇑*i* P	**Pn**	**12 04 38.4**	**+0.4**
PILG				*e* S	**Sb**	**12 04 52.7**	**+0.7**
PILG				IAML		12 04 55.8	
	comp=Z,951nm,0.4s						
DULL	**Dullstroom, Mp**	**1.63**	**200**	⇑*i* P	**Pb**	**12 04 47.0**	**+0.5**
DULL				*e* S	**Sn**	**12 05 07.5**	**+1.1**
DULL				IAML		12 05 10.9	
	comp=Z,598nm,0.2s						
MUSN	**Musina, Limpop**	**1.75**	**331**	*i* P	**Pn**	**12 04 48.7**	**+2.0**
MUSN	**Musina, Limpop**	**1.75**	**331**	⇓*i* P	**Pn**	**12 04 48.1**	**+1.3**
MUSN				*e* S	**Sn**	**12 05 09.3**	**0.0**
MUSN				IAML		12 05 11.3	
	comp=Z,243nm,0.7s						
MUSN	**Musina, Limpop**	**1.75**	**331**	*i* P	**Pn**	**12 04 48.7**	**+2.0**
CRLN	**Carolina, Mapu**	**2.27**	**198**	*e* P	**Pn**	**12 04 55.5**	**+1.6**
CRLN				*e* S	**Sn**	**12 05 23.4**	**+1.3**
CRLN				IAML		12 05 30.0	
	comp=Z,146nm,0.2s						
HAGI	**HAGI**	**2.31**	**171**	⇑*i* P	**Pn**	**12 04 55.3**	**+0.8**
HAGI				*e* S	**Sn**	**12 05 22.2**	**-0.9**
HAGI				IAML		12 05 34.5	
	comp=Z,293nm,0.4s						
RUST	**Rust De Winter**	**2.49**	**235**	⇓*i* P	**Pn**	**12 04 59.1**	**+2.1**
RUST				*e* S	**Sn**	**12 05 27.4**	**-0.2**
RUST				IAML		12 05 38.5	
	comp=Z,262nm,0.5s						
TSWA	**Tswaing Meteor**	**2.93**	**237**	⇓*i* P	**Pn**	**12 05 05.0**	**+2.0**
TSWA				*e* S	**Sn**	**12 05 38.8**	**+0.4**
TSWA				IAML		12 05 57.4	
	comp=Z,204nm,0.6s						
NYAT	**Nyati, Northwe**	**3.31**	**242**	⇓*i* P	**Pn**	**12 05 10.3**	**+2.2**
NYAT				*e* S	**Sn**	**12 05 49.9**	**+2.2**
NYAT				IAML		12 06 06.3	
	comp=Z,182nm,0.6s						
NHAM	**Northam, North**	**3.34**	**250**	*e* P	**Pn**	**12 05 10.7**	**+2.0**
NHAM				*e* S	**Sn**	**12 05 50.4**	**+1.8**
NHAM				IAML		12 06 09.2	
	comp=Z,116nm,0.3s						
HRAO	**HartRAO**	**3.48**	**233**	⇓*i* P	**Pn**	**12 05 12.1**	**+1.5**
HRAO				*e* S	**Sn**	**12 05 51.0**	**-1.1**
POGA	**Pongola**	**3.60**	**167**	P	**Pn**	**12 05 12.7**	**+0.6**
POGA				Sn	**Sn**	**12 05 52.7**	**-2.1**
POGA	**Pongola**	**3.60**	**167**	⇑*i* P	**Pn**	**12 05 12.6**	**+0.6**
POGA				*e* S	**Sn**	**12 05 53.5**	**-1.3**
POGA				IAML		12 06 13.0	
	comp=Z,40nm,0.5s						
NWCL	**Newcastle**	**3.97**	**191**	*e* P	**Pn**	**12 05 17.6**	**+0.2**
NWCL				*e* S	**Sn**	**12 06 02.3**	**-1.9**
NWCL				IAML		12 06 24.3	
	comp=Z,161nm,0.5s						
WDLM	**Western Deep L**	**4.00**	**229**	*e* P	**Pn**	**12 05 18.3**	**+0.6**
WDLM				*e* S	**Sn**	**12 06 05.3**	**+0.5**
WDLM				IAML		12 06 28.2	
	comp=Z,108nm,0.7s						
KSR	**Koster**	**4.07**	**239**	*e* P	**Pn**	**12 05 18.3**	**-0.4**
KSR				*e* S	**Sn**	**12 06 05.9**	**-0.6**
KSR				IAML		12 06 29.2	
	comp=Z,372nm,0.4s						
BLWY	**Bulawayo**	**4.19**	**331**	*i* P	**Pb**	**12 05 27.9**	**-2.2**
BLWY				*i* S	**Sb**	**12 06 21.5**	**+0.6**
BLWY	**Bulawayo**	**4.19**	**331**	*i* P	**Pn**	**12 05 24.3**	**+3.9**
BLWY				*i* S	**Sn**	**12 06 14.9**	**+5.3**
LBTB	**Lobatse**	**4.87**	**255**		**Pn**	**12 05 30.6**	**+0.9**
LBTB				Sn	**Sn**	**12 06 27.5**	**+1.2**
LBTB	**Lobatse**	**4.87**	**255**	*i* P	**Pn**	**12 05 31.6**	**+1.9**
LBTB				*i* S	**Sn**	**12 06 27.0**	**+0.7**
LBTB	**Lobatse**	**4.87**	**255**	*e* P	**Pn**	**12 05 30.9**	**+1.2**
LBTB				*e* S	**Sn**	**12 06 25.4**	**-1.0**
LBTB				IAML		12 06 56.2	
	comp=Z,91nm,0.5s						
LBTB	**Lobatse**	**4.87**	**255**	Pn	**Pn**	**12 05 30.6**	**+0.9**
	comp=Z,2.4nm,0.3s,baz=72,slow=15,SNR=24						
LBTB				Sn	**Sn**	**12 06 25.1**	**-1.2**
	comp=Z,24nm,0.3s,baz=83,slow=20,SNR=8.8						
LBTB				Lg	Lg	12 06 47.4	
	comp=Z,75nm,0.3s,baz=0.0,slow=20,SNR=11						
	comp=Z,8.0nm,0.4s						
LBTB	**Lobatse**	**4.87**	**255**	*i* P	**Pn**	**12 05 31.6**	**+1.9**
LBTB				*i* S	**Sn**	**12 06 27.0**	**+0.7**
SNKL	**Senekal, Frees**	**5.19**	**211**	⇑*i* P	**Pn**	**12 05 35.4**	**+1.2**
SNKL				*e* S	**Sn**	**12 06 35.2**	**+0.9**
SNKL				IAML		12 07 05.5	
	comp=Z,105nm,0.6s						
BOSA	**Boshof**	**6.88**	**225**	*i* P	**Pn**	**12 05 57.2**	**-0.1**
BOSA				*i* S	**Sn**	**12 07 10.7**	**-5.1**
BOSA	**Boshof**	**6.88**	**225**	⇓*i* P	**Pn**	**12 05 56.7**	**-0.6**
BOSA				*e* S	**Sn**	**12 07 11.2**	**-4.7**
BOSA				IAML		12 08 02.6	
	comp=Z,29nm,0.5s						
BOSA	**Boshof**	**6.88**	**225**	Pn	**Pn**	**12 05 56.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=43,slow=12,SNR=18						
BOSA				Sn	**Sn**	**12 07 10.6**	**-5.3**
	comp=Z,6.0nm,0.3s,baz=350,slow=11,SNR=4.6						
BOSA				Lg	Lg	12 07 48.9	
	comp=Z,13nm,0.3s,baz=142,slow=19,SNR=9.4						
	comp=Z,3.2nm,0.3s						
BOSA	**Boshof**	**6.88**	**225**	*i* P	**Pn**	**12 05 57.2**	**-0.1**
BOSA				*i* S	**Sn**	**12 07 10.7**	**-5.1**
KSTD	**Kokstad**	**6.89**	**191**	⇑*i* P	**Pn**	**12 05 58.4**	**+1.0**
KSTD				*e* S	**Sn**	**12 07 12.7**	**-3.4**
KSTD				IAML		12 07 55.3	
	comp=Z,38nm,0.6s						
KRI	**Karoi**	**7.05**	**351**	*i* P	**Pn**	**12 06 00.1**	**+0.5**
KRI				*i* S	Sn	12 07 04.8	-15
KRI	**Karoi**	**7.05**	**351**	*e* P	**Pn**	**12 06 00.3**	**+0.6**
KRI				*e* S	**Sn**	**12 07 16.8**	**-3.2**
KRI	**Karoi**	**7.05**	**351**	*i* P	Pn	12 05 55.6	-4.1
KRI				*i* S	Sn	12 07 04.8	-15
HVD	**Gariep Dam**	**8.23**	**214**	*e* P	**Pn**	**12 06 18.2**	**+2.4**
HVD				*e* S	**Sn**	**12 07 44.4**	**-4.6**
HVD				IAML		12 08 49.4	
	comp=Z,25nm,0.6s						
LSZ	**Lusaka**	**8.85**	**343**	Pn	**Pn**	**12 06 25.0**	**+0.6**
	comp=Z,49nm,0.5s,baz=167,slow=12,SNR=38						
LSZ				Sn	Sn	12 07 56.3	-8.1
	comp=Z,4.8nm,0.3s,baz=71,slow=14,SNR=4.3						
LSZ				Lg	Lg	12 08 45.3	
	comp=Z,13nm,0.3s,baz=252,slow=19,SNR=5.7						
PKA	**Prieska**	**9.24**	**229**	*e* P	**Pn**	**12 06 28.6**	**-1.0**
PKA				*e* S	**Sn**	**12 08 09.8**	**-4.0**
PKA				IAML		12 09 17.0	
	comp=Z,56nm,0.5s						
GAMM	**Gam**	**9.90**	**289**	*i* P	Pn	12 06 35.4	-3.4
GAMM				*i* S	Sn	12 09 21.9	+52
SOE	**Somerset East**	**9.97**	**206**	Pn	**Pn**	**12 06 39.1**	**-0.6**
GRAF	**Camdeboo Natio**	**10.09**	**212**	*e* P	**Pn**	**12 06 42.7**	**+1.5**
GRAF				*e* S	**Sn**	**12 08 30.7**	**-3.9**
GRAF				IAML		12 09 42.5	
	comp=Z,13nm,0.6s						
BFON	**Badsfontein, M**	**10.12**	**217**	⇓*i* P	**Pn**	**12 06 42.7**	**+0.9**
BFON				*e* S	**Sn**	**12 08 29.3**	**-6.3**
BFON				IAML		12 09 52.6	
	comp=Z,29nm,0.6s						
GRHM	**Grahamstown, E**	**10.18**	**201**	Pn	**Pn**	**12 06 41.3**	**-1.1**
GRHM	**Grahamstown, E**	**10.18**	**201**	*e* P	**Pn**	**12 06 45.7**	**+3.2**
GRHM				*e* S	**Sn**	**12 08 31.4**	**-5.4**
GRHM				IAML		12 09 46.5	
	comp=Z,14nm,0.7s						
BRAK	**Brakfontein**	**10.56**	**220**	⇓*i* P	**Pn**	**12 06 47.8**	**+0.1**
BRAK				*e* S	**Sn**	**12 08 41.8**	**-4.4**
BRAK				IAML		12 10 04.3	
	comp=Z,20nm,0.8s						
ROOI	**Rooidraai Farm**	**10.73**	**215**	⇑*i* P	**Pn**	**12 06 50.2**	**+0.1**
ROOI				*e* S	**Sn**	**12 08 44.4**	**-6.1**
ROOI				IAML		12 10 17.0	
	comp=Z,15nm,0.7s						
GRAN	**Grantham**	**11.36**	**220**	⇓*i* P	**Pn**	**12 06 58.6**	**-0.1**
GRAN				*e* S	**Sn**	**12 09 00.6**	**-5.2**
GRAN				IAML		12 09 30.6	
	comp=Z,8.1nm,0.4s						
FRAZ	**Fraserburg**	**11.57**	**224**	*e* P	**Pn**	**12 07 01.5**	**-0.1**
FRAZ				*e* S	**Sn**	**12 09 05.4**	**-5.6**
FRAZ				IAML		12 10 24.1	
	comp=Z,16nm,0.6s						
ROSN	**Rosenhof**	**11.60**	**207**	*e* P	**Pn**	**12 07 05.2**	**+3.3**
ROSN				*

comp=Z,0.6nm,0.8s
WRA Warramunga Arr 93.77 114 P **P** **12 17 34.8 +0.6**
comp=Z,0.3nm,0.8s,baz=237,slow=3.1,SNR=2.3
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 134.89 338 PKP **PKPdf** **12 23 35.6 +0.7**
comp=Z,0.6nm,0.7s,baz=41,slow=1.8,SNR=8.9
ILAR Eielson Array 139.03 358 PKP **PKPdf** **12 23 44.3 +1.7**
comp=Z,0.1nm,0.5s,baz=328,slow=3.2,SNR=3.5
PDAR Pinedale Array 142.28 310 PKP **PKPdf** **12 23 49.8 +0.4**
comp=Z,0.4nm,0.8s,baz=123,slow=3.3,SNR=2.4
NVAR Mina Array Bea 149.97 306 PKPbc **PKiKP** **12 24 09.7 +1.3**
comp=Z,1.4nm,0.7s,baz=89,slow=3.7,SNR=14

*IDC **16** 12:12:54.8±2.8,56˚28N×148˚56W,h0km,mb3.5/3, mbtmp3.2/8,ML2.9/5,MS3.9/2,Error ellipse: s-maj=55.1km s-min=24.2km az=176.0*
*NEIC **16** 12:12:56.2±1.8,56˚46N±0˚09×148˚48W±0˚08, h25km±10km,ML3.2/72,ML2.9(AEIC),Error ellipse: s-maj=13.2km s-min=5.7km az=161.0*
*AEIC **16** 12:13:01.0±1.5,56˚68N±0˚09×148˚6W±0˚1,h3km±7km, Error ellipse: s-maj=13.6km s-min=7.7km az=168.0*

ISC 16 12:12:57.6±1.2,56˚68N±0˚09×148˚59W±0˚05,h10km, n133,σ1§52/140,mb3.6/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.44**	**299**		**Pn**	**12 13 36.8**	**-0.7**
KDAK					**Sn**	**12 14 04.9**	**-2.5**
KDAK	**Kodiak Island**	**2.44**	**299**	Pn	**Pn**	**12 13 36.5**	**-1.0**
	1.8nm,0.3s,baz=106,slow=5.7,SNR=78						
KDAK				Sn	**Sn**	**12 14 04.2**	**-3.2**
	4.1nm,0.3s,baz=72,slow=23,SNR=4.2						
	5.8nm,0.5s						
OHAK	**Old Harbor**	**2.63**	**284**		**Pn**	**12 13 38.5**	**-1.7**
OHAK					**Sn**	**12 14 07.8**	**-4.3**
SYI	**Shuyak Island**	**2.82**	**315**		**Pn**	**12 13 42.3**	**-0.4**
SYI					**Sn**	**12 14 16.2**	**-0.5**
MID	**Middleton Isla**	**3.01**	**22**	Pn	**Pn**	**12 13 44.8**	**-0.5**
MID				IAML		12 14 37.6	
	comp=N,79nm,1.2s						
MID				IAML		12 15 07.8	
	comp=E,74nm,1.1s						
Q23K	**Middleton Isla**	**3.01**	**22**		**Pn**	**12 13 44.5**	**-0.7**
Q23K				IAML		12 14 21.0	
	comp=E,66nm,1.1s						
Q23K				IAML		12 15 34.3	
	comp=N,60nm,1.1s						
SII	**Sitkinak Islan**	**3.10**	**270**	Pn	**Pn**	**12 13 43.3**	**-3.3**
SII				IAML		12 14 31.4	
	comp=E,84nm,1.2s						
CNPM	**China Poot**	**3.19**	**335**		**Pn**	**12 13 47.4**	**-0.4**
CNPM					**Sn**	**12 14 24.5**	**-1.3**
BRSE	**Bradley Lake S**	**3.28**	**341**		**Pn**	**12 13 48.2**	**-0.8**
BRSE					**Sn**	**12 14 27.0**	**-1.1**
BRLK	**Bradley Lake**	**3.33**	**340**		**Pn**	**12 13 48.8**	**-0.9**
P23K	**Montague Islan**	**3.39**	**10**		**Pn**	**12 13 49.7**	**-0.8**
P23K					**Sn**	**12 14 28.4**	**-2.3**
HOM	**Homer**	**3.40**	**333**		**Pn**	**12 13 50.7**	**0.0**
Q19K	**Cape Douglas,**	**3.53**	**312**		**Pn**	**12 13 52.4**	**-0.1**
KAHG	**Katmai Hook Gl**	**3.69**	**302**		**Pn**	**12 13 55.6**	**+0.9**
P19K	**Oil Pt**	**3.87**	**322**		**Pn**	**12 13 56.9**	**-0.3**
HIN	**Hinchinbrook I**	**3.89**	**15**		**Pn**	**12 13 56.9**	**-0.5**
HIN					**Sn**	**12 14 40.5**	**-2.7**
HIN				IAML		12 14 41.6	
	comp=E,31nm,1.0s						
KAIM	**Kayak Island**	**3.93**	**32**		**Pn**	**12 13 57.1**	**-0.9**
KAIM				IAML		12 15 07.4	
	comp=E,41nm,0.8s						
SLKM	**Skilak Lake**	**3.94**	**348**		**Pn**	**12 13 57.5**	**-0.6**
IVE	**Iliamna Volcan**	**4.08**	**327**		**Pn**	**12 13 59.5**	**-0.6**
ILSW	**Iliamna Southw**	**4.09**	**326**		**Pn**	**12 13 59.6**	**-0.7**
ILSW				IAML		12 14 49.4	
	comp=E,22nm,1.0s						
ILSW				IAML		12 14 53.5	
	comp=N,27nm,0.3s						
EYAK	**Cordova Ski Ar**	**4.16**	**20**		**Pn**	**12 14 00.0**	**-1.0**
FID	**Port Fidalgo**	**4.23**	**14**		**Pn**	**12 14 00.9**	**-1.2**
FID				IAML		12 14 48.6	
	comp=N,19nm,0.9s						
FID				IAML		12 14 59.0	
	comp=E,19nm,1.0s						
SUCK	**Suckling Hills**	**4.24**	**35**		**Pn**	**12 14 00.9**	**-1.4**
SUCK				IAML		12 15 03.0	
	comp=N,22nm,1.2s						
SUCK				IAML		12 15 12.2	
	comp=E,26nm,0.8s						
RAGM	**Ragged Mountai**	**4.25**	**27**	Pn	**Pn**	**12 14 02.5**	**+0.1**
CNTC	**Contact Creek**	**4.25**	**295**		**Pn**	**12 14 03.0**	**+0.5**
HMT	**Hamilton**	**4.32**	**30**	Pn	**Pn**	**12 14 02.8**	**-0.5**
RED	**Redoubt Volcan**	**4.35**	**331**		**Pn**	**12 14 03.0**	**-0.8**
RDSO	**Redoubt South**	**4.37**	**332**		**Pn**	**12 14 03.2**	**-1.0**
RSO	**Redoubt South**	**4.38**	**332**	Pn	**Pn**	**12 14 04.0**	**-0.4**
RDT	**Redoubt**	**4.39**	**335**		**Pn**	**12 14 03.1**	**-1.2**
RDWB	**Redoubt West**	**4.42**	**332**		**Pn**	**12 14 03.8**	**-1.1**
BGLC	**Bering Glacier**	**4.44**	**37**		**Pn**	**12 14 04.5**	**-0.5**
P18K	**Big Mountain,**	**4.46**	**310**		**Pn**	**12 14 04.8**	**-0.5**
RC01	**Rabbit Creek A**	**4.47**	**353**		**Pn**	**12 14 05.0**	**-0.4**
RC01				IAML		12 14 57.1	
	comp=N,19nm,0.5s						
RC01				IAML		12 14 58.2	
	comp=E,15nm,0.4s						
NCT	**North Crescent**	**4.51**	**332**		**Pn**	**12 14 05.0**	**-1.0**
BERG	**Berg Lake**	**4.52**	**32**		**Pn**	**12 14 05.7**	**-0.4**
BERG				IAML		12 14 59.4	
	comp=N,25nm,0.4s						
SNH	**Sunshine Point**	**4.63**	**38**		**Pn**	**12 14 04.8**	**-2.9**
SNH				IAML		12 15 08.2	
	comp=N,24nm,1.0s						
SNH				IAML		12 15 09.8	
	comp=E,17nm,1.1s						
O19K	**Port Alsworth**	**4.64**	**322**	Pn	**Pn**	**12 14 07.5**	**-0.2**
O18K	**Koktuh Hills**	**4.73**	**315**		**Pn**	**12 14 08.4**	**-0.5**
KNK	**Knik Glacier**	**4.75**	**1**	Pn	**Pn**	**12 14 09.1**	**-0.2**
KNK				IAML		12 15 18.2	
	comp=N,8.6nm,0.7s						
KNK				IAML		12 15 23.3	
	comp=E,9.4nm,0.8s						
BMRM	**Bremner River**	**4.78**	**24**		**Pn**	**12 14 08.8**	**-0.8**
WAX	**Waxell Ridge**	**4.83**	**36**	Pn	**Pn**	**12 14 10.3**	**-0.1**
WAX				IAML		12 15 13.9	
	comp=E,19nm,0.4s						
BARK	**Barkley Ridge**	**4.92**	**38**		**Pn**	**12 14 10.8**	**-0.8**
SUA	**Susitna One**	**4.93**	**348**	Pn	**Pn**	**12 14 11.6**	**-0.2**
PMR	**Palmer**	**4.94**	**357**	Pn	**Pn**	**12 14 11.6**	**-0.2**
PMR				IAML		12 15 07.1	
	comp=E,9.5nm,1.0s						
PMR				IAML		12 15 08.4	
	comp=N,8.3nm,1.0s						
MESA	**MESA**	**4.95**	**42**	Pn	**Pn**	**12 14 12.1**	**0.0**
MESA				IAML		12 16 20.6	
	comp=E,17nm,1.1s						
CRQM	**Cirque**	**4.98**	**32**		**Pn**	**12 14 12.0**	**-0.5**
CRQM						12 15 10.5	
	comp=E,14nm,0.8s						
CRQM				IAML		12 15 18.2	
	comp=N,12nm,0.8s						
KLU	**Klutina**	**5.02**	**15**		**Pn**	**12 14 13.0**	**0.0**
KLU				IAML		12 15 09.1	
	comp=N,12nm,1.0s						
KLU				IAML		12 15 11.2	
	comp=E,14nm,0.5s						
TGL	**Tana Glacier**	**5.07**	**34**		**Pn**	**12 14 13.1**	**-0.6**
TGL				IAML		12 15 10.7	
	comp=E,12nm,0.4s						
TGL				IAML		12 15 26.2	
	comp=N,8.0nm,1.0s						
ISLE	**Juniper Island**	**5.11**	**37**		**Pn**	**12 14 13.7**	**-0.6**
ISLE				IAML		12 15 26.2	
	comp=N,13nm,1.0s						
ISLE				IAML		12 15 30.1	
	comp=E,9.9nm,0.9s						
BAGL	**Bagley Icefiel**	**5.12**	**39**		**Pn**	**12 14 13.3**	**-0.9**
GHO	**Glory Hole Cre**	**5.12**	**358**		**Pn**	**12 14 14.6**	**+0.3**
GHO				IAML		12 15 20.1	
	comp=N,15nm,0.5s						
GHO				IAML		12 15 22.9	
	comp=E,16nm,1.0s						
SML	**Sawmill**	**5.15**	**1**	Pn	**Pn**	**12 14 16.7**	**+1.9**
SML				IAML		12 15 17.8	
	comp=E,11nm,1.2s						
SML				IAML		12 15 19.9	
	comp=N,9.6nm,1.1s						
N19K	**Bonanza Creek**	**5.16**	**326**		**Pn**	**12 14 13.9**	**-1.1**
VRDI	**Verde Repeater**	**5.28**	**28**		**Pn**	**12 14 14.1**	**-2.6**
KIAG	**Kiagna River**	**5.35**	**35**		**Pn**	**12 14 17.1**	**-0.5**
N25K	**Chitina, Valde**	**5.35**	**21**		**Pn**	**12 14 17.9**	**+0.3**
SAMH	**Samovar Hills**	**5.37**	**47**		**Pn**	**12 14 17.6**	**-0.2**
GLB	**Gilahina Butte**	**5.38**	**25**	Pn	**Pn**	**12 14 18.0**	**+0.1**
GRNC	**Granite Creek**	**5.41**	**38**		**Pn**	**12 14 15.5**	**-2.9**
TABL	**Table Mountain**	**5.42**	**43**		**Pn**	**12 14 16.7**	**-2.0**
O17K	**Koliganek Bris**	**5.46**	**308**		**Pn**	**12 14 18.7**	**-0.3**
PTPK	**Patty Peak**	**5.52**	**32**		**Pn**	**12 14 19.7**	**-0.3**
MCARA	**McCarthy VSAT**	**5.53**	**29**	Pn	**Pn**	**12 14 20.7**	**+0.9**
N18K	**Kilae Creek**	**5.53**	**320**		**Pn**	**12 14 19.9**	**-0.1**
P16K	**Nushagak River**	**5.55**	**299**		**Pn**	**12 14 20.4**	**+0.3**
PCA	**Pinnacle**	**5.56**	**48**	Pn	**Pn**	**12 14 19.6**	**-0.8**
BARN	**Barnard Glacie**	**5.68**	**36**		**Pn**	**12 14 21.1**	**-1.0**
PNL	**Peninsula**	**5.71**	**54**		**Pn**	**12 14 22.0**	**-0.5**
CTGM	**Chitina Glacie**	**5.72**	**38**		**Pn**	**12 14 21.4**	**-1.2**
M20K	**Styx River**	**5.72**	**338**		**Pn**	**12 14 21.8**	**-0.8**
N17K	**Nushagak Hills**	**5.92**	**314**	Pn	**Pn**	**12 14 25.2**	**-0.1**
M19K	**Big River Lodg**	**6.03**	**333**	Pn	**Pn**	**12 14 25.9**	**-0.9**
M18K	**Stony River**	**6.10**	**325**		**Pn**	**12 14 27.1**	**-0.6**
L19K	**White Mountain**	**6.38**	**333**	Pn	**Pn**	**12 14 30.5**	**-1.1**
O29M	**Mount Kennedy**	**6.38**	**51**		**Pn**	**12 14 27.1**	**-4.6**
DHY	**Denali Highway**	**6.45**	**5**	Pn	**Pn**	**12 14 33.5**	**+0.9**
P29M	**Windy Craggy**	**6.46**	**58**		**Pn**	**12 14 28.9**	**-3.8**
O15K	**Ungalikthiuk R**	**6.49**	**297**		**Pn**	**12 14 33.4**	**+0.3**
N16K	**Nishlik Lake**	**6.54**	**310**		**Pn**	**12 14 33.4**	**-0.5**
M17K	**Holitna River**	**6.58**	**320**	Pn	**Pn**	**12 14 34.0**	**-0.3**
M27K	**Edge Creek, AK**	**6.64**	**28**	Pn	**Pn**	**12 14 34.0**	**-1.3**
YUK7	**Dusty Glacier**	**6.69**	**50**		**Pn**	**12 14 35.5**	**-0.5**
RND	**Reindeer**	**6.75**	**359**	Pn	**Pn**	**12 14 36.4**	**-0.4**
S31K	**Pelican**	**6.81**	**74**		**Pn**	**12 14 35.0**	**-2.5**
TRF	**Thorofare Moun**	**6.85**	**354**	Pn	**Pn**	**12 14 38.9**	**+0.7**
M16K	**Timber Creek**	**6.92**	**313**	Pn	**Pn**	**12 14 39.1**	**+0.1**
L18K	**Granite Mounta**	**6.92**	**327**	Pn	**Pn**	**12 14 38.2**	**-0.8**
N15K	**Kwethluk River**	**6.98**	**305**	Pn	**Pn**	**12 14 41.2**	**+1.4**
CAST	**Castle Rocks**	**6.99**	**347**	Pn	**Pn**	**12 14 39.9**	**0.0**
KTH	**Kantishna Hill**	**7.00**	**351**	Pn	**Pn**	**12 14 40.7**	**+0.6**
O14K	**Tigyukauivet M**	**7.22**	**296**	Pn	**Pn**	**12 14 44.3**	**+1.2**
K20K	**Telida**	**7.24**	**340**	Pn	**Pn**	**12 14 45.3**	**+1.9**
BCAR	**Beaver Creek A**	**7.26**	**25**	Pn	**Pn**	**12 14 43.7**	**0.0**
SIT	**Sitka**	**7.28**	**81**	Pn	**Pn**	**12 14 39.8**	**-4.1**
TTA	**Tatalina**	**7.30**	**332**	Pn	**Pn**	**12 14 43.2**	**-1.1**
SKAG	**Skagway**	**7.56**	**63**	Pn	**Pn**	**12 14 46.0**	**-1.8**
N30M	**Aishikik Lake**	**7.62**	**46**	Pn	**Pn**	**12 14 47.4**	**-1.2**
S32K	**Killisnoo**	**7.68**	**78**	Pn	**Pn**	**12 14 46.4**	**-3.0**
M29M	**Somme Creek**	**7.73**	**37**	Pn	**Pn**	**12 14 50.2**	**-0.1**
R32K	**Eaglecrest**	**7.75**	**72**	Pn	**Pn**	**12 14 46.1**	**-4.3**
K17K	**Iditarod**	**7.79**	**325**	Pn	**Pn**	**12 14 50.5**	**-0.5**
HDA	**Harding Lake**	**7.80**	**5**	Pn	**Pn**	**12 14 51.0**	**0.0**
JIS	**Juneau Island**	**7.82**	**72**	Pn	**Pn**	**12 14 49.8**	**-1.5**
J18K	**Tanoko River**	**7.93**	**333**	Pn	**Pn**	**12 14 52.6**	**-0.2**
J25K	**Salcha River,**	**8.12**	**10**	Pn	**Pn**	**12 14 54.6**	**-0.9**
J19K	**Poorman**	**8.12**	**338**	Pn	**Pn**	**12 14 53.5**	**-2.0**
IL31		**8.17**	**5**	Pn	**Pn**	**12 14 54.6**	**-1.4**
ILAR	**Eielson Array**	**8.17**	**5**	Pn	**Pn**	**12 14 57.0**	**+1.0**
ILAR	**Eielson Array**	**8.17**	**5**	Pn	**Pn**	**12 14 56.8**	**+0.7**
	comp=N,0.1nm,0.3s,baz=187,slow=13,SNR=2.1						
ILAR				Sn	**Sn**	**12 16 25.1**	**-3.2**
	comp=N,0.1nm,0.3s,baz=189,slow=23,SNR=6.0						
	comp=N,0.2nm,0.4s						
J26L	**Joseph Creek**	**8.23**	**15**	Pn	**Pn**	**12 14 58.1**	**+1.1**
L29M	**L29M**	**8.31**	**35**	Pn	**Pn**	**12 14 58.5**	**+0.4**
MDM	**Murphy Dome**	**8.31**	**1**	Pn	**Pn**	**12 14 59.1**	**+1.0**
P32M	**Atlin**	**8.39**	**63**	Pn	**Pn**	**12 14 56.9**	**-2.3**
M30M	**Minto, Yukon**	**8.40**	**40**	Pn	**Pn**	**12 14 58.8**	**-0.5**
I23K	**Minto, Yukon-K**	**8.51**	**358**	Pn	**Pn**	**12 15 01.2**	**+0.5**
U33K	**Whale Pass**	**8.60**	**87**	Pn	**Pn**	**12 14 57.6**	**-4.3**
DAWY	**Dawson**	**8.69**	**28**	Pn	**Pn**	**12 15 02.7**	**-0.6**
I21K	**Tanana**	**8.69**	**350**	Pn	**Pn**	**12 15 03.7**	**+0.5**
WRAK	**Wrangell Islan**	**8.98**	**85**	Pn	Pn	12 15 01.6	-5.5
K29M	**Barlow Dome**	**9.04**	**33**	Pn	**Pn**	**12 15 07.0**	**-1.1**
I26K	**Coal Creek Min**	**9.05**	**15**	Pn	**Pn**	**12 15 08.3**	**+0.2**
H24K	**Noodor Dome**	**9.20**	**2**	Pn	**Pn**	**12 15 08.7**	**-1.6**
H21K	**Melozitna Rive**	**9.24**	**349**	Pn	**Pn**	**12 15 10.9**	**+0.1**
IMAR	**Indian Mountai**	**9.66**	**347**	Pn	**Pn**	**12 15 16.2**	**-0.3**
R33M	**Jennings River**	**9.73**	**66**	Pn	**Pn**	**12 15 14.9**	**-2.7**
DLBC	**Dease Lake**	**10.12**	**72**	Pn	**Pn**	**12 15 22.3**	**-0.7**
	comp=N,0.3nm,0.3s,baz=272,slow=6.2,SNR=14						
	comp=N,0.7nm,0.2s						
INK	**Inuvik**	**13.53**	**24**	Pn	**Pn**	**12 16 13.4**	**+4.2**
	baz=277,slow=6.6,SNR=1.9						
	comp=N,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**18.00**	**57**	P	**P**	**12 17 10.0**	**+1.9**
	baz=268,slow=12,SNR=2.8						
	comp=N,0.2nm,0.7s						
JHJ	**Hachijo jima 2**	**53.17**	**276**	LR	LR	12 45 54.4	
	comp=N,45nm,18.8s,baz=65,slow=37						
SONM	**Songino Array**	**58.68**	**310**	P	**P**	**12 22 57.2**	**+2.2**
	comp=N,0.2nm,0.4s,baz=57,slow=5.3,SNR=2.0						
	comp=N,0.2nm,0.4s						
BVAR	**Borovoye Array**	**66.09**	**335**	P	**P**	**12 23 44.7**	**+0.4**
	comp=N,0.6nm,0.6s,baz=17,slow=6.0,SNR=2.9						
	comp=N,0.6nm,0.6s						
MKAR	**Makanchi Array**	**68.50**	**325**	P	**P**	**12 23 59.9**	**+0.2**
	comp=N,0.1nm,0.6s,baz=35,slow=4.9,SNR=2.2						
MKAR				LR	LR	12 57 10.4	
	comp=N,229nm,20.9s,baz=327,slow=39						
	comp=N,0.1nm,0.6s						

*DNK **16** 12:22:37.6±0.4,59˚50N×17˚85E,h0km,ML1.7(UPP), Explosion*
*UPP **16** 12:22:37.3±0.1,59˚50N×17˚85E,h2km±3km,ML1.7, Suspected explosion*
*IDC **16** 12:22:39.4±1.7,59˚61N×17˚93E,h0km,mbtmp2.8/4, ML1.8/4,Error ellipse: s-maj=23.9km s-min=7.7km az=174.0*

ISC 16 12:22:36.5±0.9,59˚49N±0˚04×17˚85E±0˚03,h0km,n32, σ0§91/41,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPP	**Uppsala**	**0.38**	**343**	P	**Pg**	**12 22 44.5**	**+0.6**
UPP				S	**Sg**	**12 22 49.7**	**+0.8**
UPP	**Uppsala**	**0.38**	**343**	P	**Pg**	**12 22 44.5**	**+0.6**
UPP				S	**Sg**	**12 22 49.7**	**+0.8**
NRTU	**Norrtaelje**	**0.44**	**65**	P	**Pg**	**12 22 45.5**	**+0.6**
NRTU				S	**Sg**	**12 22 51.1**	**+0.5**
NRTU	**Norrtaelje**	**0.44**	**65**	P	**Pg**	**12 22 45.5**	**+0.6**
NRTU				S	**Sg**	**12 22 51.1**	**+0.5**
FIBU	**Brunna**	**0.48**	**329**	P	**Pg**	**12 22 46.3**	**+0.6**
FIBU				S	**Sg**	**12 22 52.2**	**+0.2**
FIBU	**Brunna**	**0.48**	**329**	P	**Pg**	**12 22 46.3**	**+0.6**
FIBU				S	**Sg**	**12 22 52.2**	**+0.2**
BACU	**Backbrunna**	**0.52**	**314**	P	**Pg**	**12 22 47.1**	**+0.5**
BACU	**Backbrunna**	**0.52**	**314**	P	**Pg**	**12 22 47.1**	**+0.5**
FLYU	**Flymyra**	**0.64**	**2**	P	**Pg**	**12 22 49.0**	**+0.2**
FLYU	**Flymyra**	**0.64**	**2**	P	**Pg**	**12 22 49.0**	**+0.2**
ESKU	**Eskilstuna**	**0.79**	**251**	P	**Pg**	**12 22 52.0**	**+0.3**
ESKU	**Eskilstuna**	**0.79**	**251**	P	**Pg**	**12 22 52.0**	**+0.3**
OSTU	**Oestervaala**	**0.82**	**334**	P	**Pg**	**12 22 52.5**	**+0.2**
OSTU	**Oestervaala**	**0.82**	**334**	P	**Pg**	**12 22 52.5**	**+0.2**
GRAU	**Graesoe**	**0.91**	**22**	P	**Pg**	**12 22 54.2**	**+0.2**
GRAU	**Graesoe**	**0.91**	**22**	P	**Pg**	**12 22 54.2**	**+0.2**
VIKU	**Vikbolandet**	**1.16**	**211**	P	**Pb**	**12 22 59.0**	**-0.4**
VIKU	**Vikbolandet**	**1.16**	**211**	P	**Pb**	**12 22 59.0**	**-0.4**
IGGU	**Iggoen**	**1.41**	**349**	P	**Pn**	**12 23 03.4**	**0.0**
IGGU	**Iggoen**	**1.41**	**349**	P	**Pn**	**12 23 03.4**	**0.0**
FALU	**Falun**	**1.43**	**316**	P	**Pn**	**12 23 03.5**	**-0.1**
FALU	**Falun**	**1.43**	**316**	P	**Pn**	**12 23 03.5**	**-0.1**
NRAU	**Nora**	**1.43**	**274**	P	**Pn**	**12 23 03.5**	**-0.3**
NRAU	**Nora**	**1.43**	**274**	P	**Pn**	**12 23 03.5**	**-0.3**
ASKU	**Askersund**	**1.67**	**250**	P	**Pb**	**12 23 07.8**	**-0.2**
ASKU	**Askersund**	**1.67**	**250**	P	**Pb**	**12 23 07.8**	**-0.2**
LNKU	**Linkoeping**	**1.76**	**225**	P	**Pb**	**12 23 09.4**	**-0.3**
LNKU	**Linkoeping**	**1.76**	**225**	P	**Pb**	**12 23 09.4**	**-0.3**
HFS	**Hagfors**	**2.19**	**289**	Pn	**Pb**	**12 23 15.9**	**-1.2**
	0.5nm,0.3s,baz=103,slow=19,SNR=13						
HFS				Sn	**Sb**	**12 23 44.7**	**-0.1**
	3.1nm,0.3s,baz=101,slow=30,SNR=30						
	1.5nm,0.2s						
NOA	**NORSAR Array B**	**3.65**	**298**	Pn	**Pn**	**12 23 36.2**	**+2.0**
	baz=112,slow=16,SNR=1.5						
NOA				Sn	**Sn**	**12 24 18.2**	**+0.2**
	baz=109,slow=18,SNR=1.3						
NOA				Lg	Lg	12 24 35.6	
	0.1nm,0.3s,baz=109,slow=18,SNR=2.8						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**4.52**	**61**	Pn	**Pn**	**12 23 47.9**	**+1.8**
	0.2nm,0.3s,baz=256,slow=14,SNR=1.6						
FINES				Sn	**Sn**	**12 24 40.4**	**+1.1**
	0.4nm,0.3s,baz=256,slow=21,SNR=10						
FINES				Lg	Lg	12 24 57.6	
	0.5nm,0.3s,baz=251,slow=24,SNR=3.1						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**10.60**	**15**	Pn	**Pn**	**12 25 05.5**	**-3.9**
	baz=199,slow=14,SNR=1.6						
	1.4nm,0.9s						

IDC 16 12:36:51.9±1.8,3˚88N×125˚42E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=194.3km s-min=22.1km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.25**	**160**	P	P	12 42 20.1	+0.2
	0.9nm,0.3s,baz=339,slow=9.8,SNR=35						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**28.61**	**164**	P	P	12 42 49.8	-0.4
	0.1nm,0.3s,baz=348,slow=8.4,SNR=1.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**56.69**	**326**	P	P	12 46 37.5	+0.2
	0.5nm,0.3s,baz=122,slow=8.1,SNR=6.2						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**60.91**	**328**	P	P	12 47 06.2	-0.3
	0.5nm,0.7s,baz=130,slow=6.3,SNR=5.1						
	0.5nm,0.7s						

*IDC **16** 12:36:54.5±2.3,63˚93N×28˚76E,h0km,mbtmp3.0/3, ML1.9/3,Error ellipse: s-maj=41.2km s-min=9.5km az=97.0*
*HEL **16** 12:36:54.9±0.1,63˚98N×28˚13E,h0km,ML1.6,Suspected explosion*
*UPP **16** 12:36:56.8±2.6,63˚89N×27˚72E,h0km,ML1.5*

ISC 16 12:36:54.3±0.8,63˚91N±0˚03×28˚10E±0˚03,h0km,n37, σ1§25/62,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	**Nilsia**	**0.54**	**194**	PG	**Pb**	**12 37 05.6**	**-1.0**
NIF				SG	**Sb**	**12 37 13.6**	**-1.2**
RMF	**Romuvaara**	**0.86**	**68**	PB	**Pg**	**12 37 10.5**	**-0.4**
RMF				MSG		12 37 20.6	
	comp=Z,6.1nm,0.2s						
RMF				SB	**Sg**	**12 37 21.2**	**-0.9**
SUF	**Sumiainen**	**1.48**	**217**	PG	**Pb**	**12 37 22.8**	**+0.1**
	baz=30						
SUF				MSG		12 37 41.3	
	comp=Z,2.1nm,0.2s						
OUL	**Oulu**	**1.52**	**322**	PG	**Pn**	**12 37 22.2**	**-0.5**
OUL				SG	**Sn**	**12 37 41.2**	**-1.8**
OUF	**Merijarvi**	**1.54**	**289**	PG	**Pn**	**12 37 22.3**	**-0.7**
OUF				MSG		12 37 41.0	
	comp=Z,4.6nm,0.2s						
OUF				SG	**Sn**	**12 37 43.0**	**-0.7**
OBF4	**Vikkela, Lumij**	**1.59**	**306**	PG	**Pn**	**12 37 23.4**	**-0.2**
OBF4				MSG		12 37 41.8	
	comp=Z,4.8nm,0.2s						
OBF4				SN	**Sg**	**12 37 46.4**	**+1.2**
JOF	**Joensuu**	**1.76**	**123**	PG	**Pb**	**12 37 27.2**	**-0.2**
JOF				SG	**Sg**	**12 37 50.0**	**-0.6**
OBF0	**Syolatti, Pyha**	**1.79**	**291**	PG	**Pn**	**12 37 26.9**	**+0.5**
OBF0				MSG		12 37 48.0	
	comp=Z,7.5nm,0.2s						
OBF0				SG	**Sn**	**12 37 50.2**	**+0.4**
KAF	**Kangasniemi**	**1.98**	**205**	PB	**Pb**	**12 37 31.1**	**0.0**
KAF				MSG		12 37 55.8	
	comp=Z,6.0nm,0.2s						
KAF				SG	**Sg**	**12 37 58.3**	**+0.4**
MSF	**Maaselka**	**2.05**	**11**	PG	**Pn**	**12 37 30.3**	**+0.3**
MSF				SG	**Sn**	**12 37 56.6**	**+0.4**
OBF8	**Ulkokalla**	**2.08**	**284**	PG	**Pn**	**12 37 31.8**	**+1.4**
OBF8				MSG		12 37 56.8	
	comp=Z,2.4nm,0.2s						
OBF8				SG	**Sg**	**12 38 01.1**	**-0.1**
RANF	**Ranua**	**2.19**	**346**	PG	**Pn**	**12 37 33.5**	**+1.6**
RANF				SG	**Sn**	**12 38 00.4**	**+0.8**
KU6	**Riekki**	**2.26**	**19**	PG	**Pn**	**12 37 34.2**	**+1.4**
	baz=200						
KU6				MSG		12 37 59.7	
	comp=Z,2.1nm,0.2s						
KU6				SG	**Sn**	**12 38 01.9**	**+0.6**
KEF	**Keuruu**	**2.29**	**221**	PG	**Pb**	**12 37

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**3.48**	**118**		**Pn**	**12 39 05.7**	**-1.4**
KBS	**Kingsbay**	**3.48**	**118**	*e*P	**Pn**	**12 39 05.8**	**-1.3**
KBS				IAML		12 39 08.7	
	comp=Z,30nm,0.4s						
KBS				*e*S	**Sn**	**12 39 42.5**	**-5.7**
KBS	**Kingsbay**	**3.48**	**118**	*i* P	**Pn**	**12 39 06.6**	**-0.5**
KBS				*e*S	**Sn**	**12 39 42.5**	**-5.7**
KBS	**Kingsbay**	**3.48**	**118**	Pn	**Pn**	**12 39 05.8**	**-1.3**
KBS	**Kingsbay**	**3.48**	**118**	*e*P	**Pn**	**12 39 05.3**	**-1.7**
KBS				*e*S	**Sn**	**12 39 43.1**	**-5.1**
BRBB	**Barentsburg B**	**4.40**	**121**	*e*P	**Pn**	**12 39 19.6**	**-0.1**
BRBB				*e*S	**Sn**	**12 40 05.9**	**-5.0**
BRBB	**Barentsburg B**	**4.40**	**121**	Pn	**Pn**	**12 39 20.5**	**+0.7**
BRBB				Sn	**Sn**	**12 40 09.4**	**-1.5**
BRBA	**Barentsburg A**	**4.43**	**122**	*e*P	**Pn**	**12 39 20.9**	**+0.8**
BRBA				*e*S	**Sn**	**12 40 08.8**	**-2.8**
BRBA	**Barentsburg A**	**4.43**	**122**	Pn	**Pn**	**12 39 20.9**	**+0.8**
BRBA				Sn	**Sn**	**12 40 08.8**	**-2.8**
SPA0	**Spitsbergen Ar**	**4.64**	**117**	Pn	**Pn**	**12 39 22.1**	**-0.9**
	baz=316,slow=12						
SPA0				Sn	**Sn**	**12 40 13.8**	**-3.0**
	baz=312,slow=12						
SPA0	**Spitsbergen Ar**	**4.64**	**117**	Pn	**Pn**	**12 39 22.1**	**-0.9**
	baz=316,slow=12						
SPA0				Sn	**Sn**	**12 40 13.8**	**-3.0**
	baz=312,slow=12						
SPA0	**Spitsbergen Ar**	**4.64**	**117⇑**	*i*P	**Pn**	**12 39 22.0**	**-1.0**
SPA0				*e*S	**Sn**	**12 40 12.3**	**-4.5**
SPITS	**Spitsbergen Ar**	**4.64**	**117**	Pn	**Pn**	**12 39 22.3**	**-0.7**
	baz=328,slow=5.9						
SPITS				Sn	**Sn**	**12 40 13.3**	**-3.5**
	baz=326,slow=13						
	comp=Z,34nm,0.5s						
SPB2	**Spitsbergen Ar**	**4.64**	**117**		**Pn**	**12 39 21.6**	**-1.4**
HSPB	**Hornsund (broa**	**5.45**	**127**	*e*P	**Pn**	**12 39 34.9**	**+0.8**
HSPB	**Hornsund (broa**	**5.45**	**127**	Pn	**Pn**	**12 39 34.6**	**+0.5**
HOPEN	**Hopen**	**7.15**	**113**	*e*P	**Pn**	**12 39 56.1**	**-1.3**
HOPEN	**Hopen**	**7.15**	**113**	Pn	**Pn**	**12 39 56.0**	**-1.4**
HOPEN	**Hopen**	**7.15**	**113**	*e*P	**Pn**	**12 39 55.7**	**-1.7**
HOPEN				*e*S	**Sn**	**12 41 10.4**	**-8.1**
ZFI2	**Zemlya Franca-**	**7.99**	**65**	*e*P	**Pn**	**12 40 05.1**	**-3.7**
ZFI2				*e*S	Sn	12 41 26.1	-13
	comp=Z,16nm,2.9s						
OMEGA	**Omega**	**8.01**	**66**	*e*P	**Pn**	**12 40 05.3**	**-3.8**
OMEGA				*e*S	Sn	12 41 26.0	-14
	comp=Z,13nm,0.8s						
NEEM	**North Greenlan**	**9.20**	**272**	*e*	Pn	12 40 19.5	-6.3
	baz=48,slow=8.6						
NEEM				*i* P	**Pn**	**12 40 24.6**	**-1.2**
NEEM				*e*S	Sn	12 41 59.4	-10
NEEM				IAML		12 42 06.7	
	comp=Z,8.6nm,0.3s						
NEEM	**North Greenlan**	**9.20**	**272**	*e*	Pn	12 40 19.5	-6.3
	baz=48,slow=8.6						
NEEM				*i* P	**Pn**	**12 40 24.6**	**-1.2**
NEEM				*e*S	Sn	12 41 59.4	-10
NEEM				IAML		12 42 06.7	
	comp=Z,8.6nm,0.3s						
JMIC	**Jan Mayen**	**10.09**	**188**	LR	LR	12 44 15.5	
	comp=Z,457nm,21.5s,baz=48,slow=36						
SUMG	**Summit**	**11.22**	**241**	Pn	**Pn**	**12 40 52.0**	**-1.5**
SUMG	**Summit**	**11.22**	**241**	*i* P	**Pn**	**12 40 52.0**	**-1.5**
SUMG				*i* S	**Sn**	**12 42 53.7**	**-5.2**
SUMG				IAML		12 43 03.6	
	comp=Z,4.2nm,0.4s						
SUMG	**Summit**	**11.22**	**241**	*i* P	**Pn**	**12 40 52.0**	**-1.5**
SUMG				*i* S	**Sn**	**12 42 53.7**	**-5.2**
SUMG				IAML		12 43 03.6	
	comp=Z,4.2nm,0.4s						
SCO	**Scoresbysund**	**11.32**	**212**	*i* P	Pn	12 40 58.0	+3.6
SCO	**Scoresbysund**	**11.32**	**212**	*i* P	Pn	12 40 58.0	+3.6
ARCES	**ARCESS Array B**	**13.44**	**131**	Pn	**Pn**	**12 41 24.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=354,slow=11,SNR=5.0						
	comp=Z,1.7nm,0.6s						
UPNV	**Upernavik**	**13.68**	**263**	*i* P	**Pn**	**12 41 22.9**	**-3.8**
UPNV				IAML		12 43 50.0	
	comp=Z,5.5nm,0.3s						
UPNV	**Upernavik**	**13.68**	**263**	*i* P	**Pn**	**12 41 22.9**	**-3.8**
UPNV				IAML		12 43 50.0	
	comp=Z,5.5nm,0.3s						
NUUG	**Nuugaatsiaq**	**14.31**	**257**	*e*P	**Pn**	**12 41 30.8**	**-4.4**
NUUG	**Nuugaatsiaq**	**14.31**	**257**	*e*P	**Pn**	**12 41 30.8**	**-4.4**
ICESG	**Greenland Ices**	**14.58**	**236**	*e*P	**Pn**	**12 41 38.1**	**-1.2**
ICESG	**Greenland Ices**	**14.58**	**236**	*e*P	**Pn**	**12 41 38.1**	**-1.2**
DY2G	**Dye2**	**17.93**	**241**	*e*P	**Pn**	**12 42 21.3**	**-0.9**
DY2G	**Dye2**	**17.93**	**241**	*e*P	**Pn**	**12 42 21.3**	**-0.9**
RES	**Resolute Bay**	**17.93**	**300**		**Pn**	**12 42 17.5**	**-4.5**
RES	**Resolute Bay**	**17.93**	**300**	P	**Pn**	**12 42 17.1**	**-4.8**
	comp=Z,5.0nm,0.7s,baz=34,slow=13,SNR=21						
RES				S	Sn	12 45 25.8	-16
	comp=Z,1.2nm,0.6s,baz=359,slow=16,SNR=1.9						
RES				LR	LR	12 49 01.9	
	comp=Z,123nm,18.1s,baz=354,slow=36						
SFJD	**Kangerlussuaq**	**18.06**	**247**	P	**Pn**	**12 42 22.1**	**-1.4**
SFJD				IAmb	IAmb	12 42 36.2	
	comp=Z,18nm,0.9s						
SFJD	**Kangerlussuaq**	**18.06**	**247**	*e*P	**Pn**	**12 42 22.6**	**-0.8**
SFJD	**Kangerlussuaq**	**18.06**	**247**	*e*P	**Pn**	**12 42 22.6**	**-0.8**
SFJD	**Kangerlussuaq**	**18.06**	**247**	P	**Pn**	**12 42 21.0**	**-2.4**
	comp=Z,4.5nm,0.4s,baz=17,slow=13,SNR=8.6						
SFJD				S	Sn	12 45 31.8	-13
	comp=Z,4.0nm,0.7s,baz=73,slow=14,SNR=1.8						
SFJD				LR	LR	12 49 51.5	
	comp=Z,250nm,18.1s,baz=17,slow=39						
NB201	**NORSAR Array S**	**20.49**	**158**	P	**P**	**12 42 48.5**	**-2.1**
NB201				IAmb	IAmb	12 43 07.8	
	comp=Z,31nm,1.4s						
NC602	**NORSAR Array S**	**20.82**	**158**	P	**P**	**12 42 51.6**	**-2.5**
FIA1	**FINESS Array S**	**21.32**	**138**	P	**P**	**12 42 57.9**	**-1.6**
FINES	**FINESS Array B**	**21.32**	**138**	P	**P**	**12 42 58.1**	**-1.4**
FINES	**FINESS Array B**	**21.32**	**138**	P	**P**	**12 43 02.4**	**+2.9**
	comp=Z,3.4nm,1.0s,baz=325,slow=14,SNR=2.6						
FINES				PcP	**PcP**	**12 47 04.5**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=268,slow=4.2,SNR=3.7						
	comp=Z,3.4nm,1.0s						
HFS	**Hagfors**	**21.55**	**155**	P	**P**	**12 43 05.3**	**+3.4**
	comp=Z,2.7nm,0.9s,baz=347,slow=5.9,SNR=2.5						
	comp=Z,2.7nm,0.9s						
NRIK	**Noril'sk**	**22.86**	**66**	P	**P**	**12 43 16.0**	**+0.2**
NRIK	**Noril'sk**	**22.86**	**66**	P	**P**	**12 43 17.2**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=338,slow=8.5,SNR=4.0						
	comp=Z,1.2nm,0.3s						
KLMR	**Klimovskoe**	**23.52**	**122**	*e*P	**P**	**12 43 21.8**	**-0.8**
	comp=Z,24nm,1.6s						
FRB	**Frobisher Bay**	**23.82**	**263**	LR	LR	12 52 30.6	
	comp=Z,140nm,19.3s,baz=24,slow=36						
A36M	**Sachs Harbour**	**24.07**	**319**	P	**P**	**12 43 28.7**	**+0.9**
TIXI	**Tiksi**	**25.52**	**33**	P	**P**	**12 43 42.6**	**+1.7**
C36M	**Paulatuk**	**26.45**	**316**	P	**P**	**12 43 50.4**	**+0.9**
C36M				IAmb	IAmb	12 44 01.8	
	comp=Z,7.5nm,1.2s						
INK	**Inuvik**	**28.43**	**323**	P	**P**	**12 44 07.4**	**+0.3**
B21K	**Ikpikpuk River**	**28.75**	**339**	P	**P**	**12 44 11.2**	**+1.3**
B21K				IAmb	IAmb	12 44 11.8	
	comp=Z,4.5nm,1.1s						
D24K	**Happy Valley**	**28.85**	**335**	P	**P**	**12 44 12.3**	**+1.5**
D24K				IAmb	IAmb	12 44 19.8	
	comp=Z,11nm,1.4s						
F31M	**Tsiigehtchic**	**29.29**	**323**	P	**P**	**12 44 15.6**	**+0.8**
F31M				IAmb	IAmb	12 44 40.8	
	comp=Z,8.3nm,1.5s						
TOLK	**Toolik Lake Re**	**29.40**	**335**	P	**P**	**12 44 17.1**	**+1.3**
E25K	**Arctic Village**	**29.63**	**332**	P	**P**	**12 44 18.8**	**+0.8**
C18K	**Utukok River**	**30.05**	**343**	P	**P**	**12 44 22.6**	**+1.0**
C18K				IAmb	IAmb	12 44 40.1	
	comp=Z,5.5nm,1.2s						
BMAR	**Burnt Mountain**	**30.24**	**331**	P	**P**	**12 44 24.4**	**+1.1**
FYU	**Fort Yukon**	**31.14**	**331**	P	**P**	**12 44 32.5**	**+1.3**
FYU				IAmb	IAmb	12 44 41.2	
	comp=Z,2.7nm,0.6s						
YKA	**Yellowknife Ar**	**31.90**	**305**	P	**P**	**12 44 38.8**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=10.0,slow=8.8,SNR=14						
YKA				PcP	**PcP**	**12 47 29.5**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=5.1,slow=2.8,SNR=6.7						
YKA				LR	LR	12 57 42.9	
	comp=Z,100nm,20.0s,baz=86,slow=37						
	comp=Z,0.6nm,0.8s						
SCHQ	**Schefferville**	**32.08**	**255**	P	**P**	**12 44 41.6**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=330,slow=2.9,SNR=8.9						
SCHQ				LR	LR	12 57 52.8	
	comp=Z,119nm,19.4s,baz=42,slow=37						
	comp=Z,1.4nm,0.5s						
IMAR	**Indian Mountai**	**32.30**	**337**	P	**P**	**12 44 42.4**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCC	**Fort Churchill**	**32.55**	**284**	P	**P**	**12 44 44.6**	**+1.0**
FCC				IAmb	IAmb	12 44 46.2	
	comp=Z,8.5nm,1.2s						
H21K	**Melozitna Rive**	**32.57**	**336**	P	**P**	**12 44 45.3**	**+1.6**
H21K				IAmb	IAmb	12 44 45.4	
	comp=Z,5.8nm,1.2s						
I23K	**Minto, Yukon-K**	**32.84**	**334**	P	**P**	**12 44 47.7**	**+1.6**
H19K	**Roundabout Mou**	**32.92**	**339**	P	**P**	**12 44 48.2**	**+1.5**
H19K				IAmb	IAmb	12 45 06.2	
	comp=Z,9.9nm,1.5s						
I21K	**Tanana**	**32.99**	**336**	P	**P**	**12 44 49.5**	**+2.1**
I21K				IAmb	IAmb	12 45 01.3	
	comp=Z,8.7nm,1.4s						
IL31		**33.04**	**332**	P	**P**	**12 44 48.8**	**+1.1**
IL31				IAmb	IAmb	12 44 57.7	
	comp=Z,5.2nm,1.4s						
ILAR	**Eielson Array**	**33.04**	**332**	P	**P**	**12 44 48.7**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=7.9,slow=6.7,SNR=10.0						
ILAR				PcP	**PcP**	**12 47 32.1**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=343,slow=2.8,SNR=2.1						
	comp=Z,1.4nm,1.0s						
DAWY	**Dawson**	**33.12**	**325**	P	**P**	**12 44 49.7**	**+1.1**
BCAR	**Beaver Creek A**	**34.31**	**327**	P	**P**	**12 45 00.1**	**+1.1**
BVAR	**Borovoye Array**	**35.67**	**93**	P	**P**	**12 45 12.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=316,slow=8.1,SNR=2.6						
	comp=Z,0.2nm,0.3s						
AKTO	**Aktyubinsk**	**36.27**	**107**	P	**P**	**12 45 18.2**	**+2.3**
	comp=Z,1.1nm,0.8s,baz=325,slow=11,SNR=2.4						
	comp=Z,1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**37.05**	**79**	P	**P**	**12 45 25.3**	**+2.9**
	comp=Z,0.4nm,0.4s,baz=9.7,slow=10,SNR=1.7						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**39.28**	**86**	P	**P**	**12 45 42.3**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=345,slow=7.6,SNR=9.4						
	comp=Z,0.8nm,0.8s						
KBZ	**Khabaz**	**40.70**	**126**	P	**P**	**12 45 56.4**	**+3.3**
	comp=Z,1.1nm,0.6s,baz=270,slow=6.1,SNR=1.7						
	comp=Z,1.1nm,0.6s						
ULM	**Lac du Bonnet**	**41.05**	**282**	P	**P**	**12 45 56.6**	**+0.6**
ULM				IAmb	IAmb	12 46 06.9	
	comp=Z,10.0nm,1.2s						
ULM	**Lac du Bonnet**	**41.05**	**282**	P	**P**	**12 45 57.5**	**+1.6**
	comp=Z,4.5nm,0.8s,baz=358,slow=5.2,SNR=9.5						
	comp=Z,4.5nm,0.8s						
ESDC	**Sonseca Array**	**41.43**	**180**	P	**P**	**12 46 01.7**	**+2.5**
	comp=Z,0.8nm,0.9s,baz=350,slow=11,SNR=3.1						
	comp=Z,0.8nm,0.9s						
AGMN	**Agassiz Nation**	**42.95**	**282**	P	**P**	**12 46 13.7**	**+2.2**
AGMN				IAmb	IAmb	12 46 22.8	
	comp=Z,12nm,1.2s						
MAKZ	**Makanchi**	**43.54**	**84**	P	**P**	**12 46 16.2**	**0.0**
MAKZ				IAmb	IAmb	12 46 26.2	
	comp=Z,6.1nm,1.2s						
BRTR	**Keskin Array B**	**43.55**	**137**	P	**P**	**12 46 18.8**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=346,slow=7.3,SNR=1.6						
	comp=Z,0.2nm,0.3s						
MK31	**Makanchi Array**	**43.60**	**84**	P	**P**	**12 46 17.0**	**+0.2**
MKAR	**Makanchi Array**	**43.60**	**84**	P	**P**	**12 46 15.1**	**-1.7**
MKAR	**Makanchi Array**	**43.60**	**84**	P	**P**	**12 46 18.6**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=350,slow=7.1,SNR=6.4						
	comp=Z,0.4nm,0.8s						
SADO	**Sadowa**	**43.76**	**264**	LR	LR	13 05 05.5	
	comp=Z,88nm,19.8s,baz=68,slow=37						
NEW	**Newport**	**46.09**	**301**	LR	LR	13 05 03.3	
	comp=Z,56nm,20.3s,baz=22,slow=35						
SONM	**Songino Array**	**46.19**	**61**	P	**P**	**12 46 39.1**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=339,slow=7.9,SNR=4.1						
	comp=Z,0.5nm,0.8s						
ULN	**Ulaanbaatar**	**46.25**	**60**	P	**P**	**12 46 37.5**	**-0.4**
ULN				IAmb	IAmb	12 46 47.2	
	comp=Z,3.3nm,0.9s						
AAK	**Ala-Archa**	**46.42**	**93**	P	**P**	**12 46 38.5**	**-1.0**
AAK				IAmb	IAmb	12 46 50.4	
	comp=Z,7.8nm,1.4s						
PDAR	**Pinedale Array**	**50.42**	**293**	P	**P**	**12 47 12.5**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=27,slow=4.2,SNR=2.4						
	comp=Z,0.2nm,0.5s						
GHAJ	**Ghor Haditha**	**52.09**	**136**	P	**P**	**12 47 22.1**	**-0.5**
O20A	**White River Ci**	**52.80**	**291**	P	**P**	**12 47 28.0**	**-0.1**
ELK	**Elko**	**53.21**	**298**	LR	LR	13 09 28.8	
	comp=Z,58nm,19.6s,baz=31,slow=35						
YBH	**Yreka Blue Hor**	**53.25**	**305**	LR	LR	13 09 19.9	
	comp=Z,78nm,18.2s,baz=11,slow=35						
HHC	**Hu-ho-hao-te**	**53.75**	**58**	*e*P	**P**	**12 47 32.4**	**-2.5**
HHC				S	**S**	**12 55 09.6**	**+0.8**
HHC	**Hu-ho-hao-te**	**53.75**	**58**	SS	**SKiKP**	**12 58 43.3**	**-4.9**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC				LR	LR		
	comp=N,140nm,17.4s						
HHC				LR	LR		
	comp=Z,180nm,16.8s						
V48A	**Smith Brothers**	**53.80**	**269**	P	**P**	**12 47 35.5**	**+0.3**
BG3	**Lake Jocassee**	**53.91**	**265**	P	**P**	**12 47 34.8**	**-1.3**
KAN09	**Caldwell North**	**54.13**	**280**	P	**P**	**12 47 37.7**	**+0.1**
KAN01	**Argonia South**	**54.13**	**280**	P	**P**	**12 47 36.7**	**-1.0**
NVAR	**Mina Array Bea**	**55.91**	**300**	P	**P**	**12 47 51.9**	**+1.2**
	comp=Z,1.2nm,1.0s,baz=33,slow=3.7,SNR=5.2						
	comp=Z,1.2nm,1.0s						
ANMO	**Albuquerque**	**57.63**	**288**	P	**P**	**12 48 03.0**	**+0.1**
VHRN	**Van Horn**	**61.48**	**286**	P	**P**	**12 48 31.4**	**+1.8**
ALPN	**Alpine**	**61.68**	**284**	P	**P**	**12 48 33.2**	**+2.3**
ALPN				IAmb	IAmb	12 48 43.7	
	comp=Z,2.9nm,0.8s						
JWT	**Wachi**	**62.00**	**37**	P	**P**	**12 48 32.9**	**+0.1**
JWT				IAmb	IAmb	12 48 36.3	
	comp=Z,1.2nm,0.6s						
TX31	**Lajitas Ar. Si**	**62.71**	**284**	P	**P**	**12 48 39.5**	**+1.8**
TX31				IAmb	IAmb	12 48 40.5	
	comp=Z,3.3nm,1.2s						
TXAR	**Lajitas Array**	**62.71**	**284**	P	**P**	**12 48 39.9**	**+2.2**
TXAR	**Lajitas Array**	**62.71**	**284**	P	**P**	**12 48 39.7**	**+2.0**
	comp=Z,1.0nm,0.9s,baz=41,slow=3.7,SNR=7.4						
	comp=Z,1.0nm,0.9s						
CMIG	**Matias Romero**	**73.35**	**273**	LR	LR	13 23 26.6	
	comp=Z,27nm,20.8s,baz=52,slow=37						
JTS	**Las Juntas de**	**78.45**	**263**	LR	LR	13 24 35.0	
	comp=Z,45nm,18.8s,baz=72,slow=35						

*IDC **16** 12:38:07.2±1.4,51.72S×14.49E,h0km,mb4.0/5, mbtmp4.0/5,MS3.8/13,Error ellipse: s-maj=71.3km s-min=24.5km az=101.0*
*NEIC **16** 12:38:14.2±0.6,52.50S±0.08×13.5E±0.4,h10km±2km, mb4.4/7,Error ellipse: s-maj=47.3km s-min=7.0km az=283.0*

ISC 16 12:38:13.5±0.9,52.5S±0.1×13.7E±0.2,h10km,n31, σ1$70/11,mb4.2/6,MS3.9/13,3C,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**20.16**	**190**	⇑P	Pn	12 42 54.4	+4.8
	comp=Z,793nm,1.0s						
SNAA	**Sanae**	**20.57**	**195**	P	**P**	**12 42 52.6**	**+0.6**
SNAA				IAmb	IAmb	12 42 58.3	
	comp=Z,11nm,0.8s						
SNAA	**Sanae**	**20.57**	**195**	⇑P	Pn	12 42 56.0	+1.8
	comp=Z,172nm,0.6s						
SNAA	**Sanae**	**20.57**	**195**	P	Pn	12 42 55.7	+1.5
	comp=Z,9.9nm,0.7s,baz=19,slow=9.2,SNR=16						
SNAA				LR	LR	12 49 05.5	
	comp=Z,155nm,21.8s,baz=0.5,slow=31						
	comp=Z,9.9nm,0.7s						
VNA2	**Neumayer--Watz**	**20.77**	**199**	⇑P	Pn	12 42 58.1	+1.5
	comp=Z,12nm,0.7s,baz=26,slow=11						
SUR	**Sutherland**	**20.78**	**17**	P	**P**	**12 42 54.9**	**+0.1**
SUR				IAmb	IAmb	12 43 32.6	
	comp=Z,18nm,1.1s						
SUR	**Sutherland**	**20.78**	**17**	LR	LR	12 49 14.3	
	comp=Z,282nm,18.7s,baz=216,slow=34						
GRHM	**Grahamstown, E**	**21.30**	**30**	P	**P**	**12 43 00.7**	**+0.5**
GRHM				IAmb	IAmb	12 43 03.1	
	comp=Z,13nm,0.9s						
H04S2	**CROZET ISLANDS**	**25.14**	**92**	T	T	13 09 11.9	
	baz=244,slow=75,SNR=21						
H04S3	**CROZET ISLANDS**	**25.14**	**92**	T	T	13 09 13.4	
	baz=244,slow=75,SNR=21						
H04S1	**CROZET ISLANDS**	**25.15**	**92**	T	T	13 09 12.9	
	baz=244,slow=75,SNR=28						
BOSA	**Boshof**	**25.38**	**24**	P	P	12 43 25.9	-15
	comp=Z,3.7nm,0.8s,baz=200,slow=18,SNR=5.9						
BOSA				LR	LR	12 52 19.6	
	comp=Z,177nm,18.0s,baz=212,slow=35						
	comp=Z,3.7nm,0.8s						
LBTB	**Lobatse**	**28.91**	**23**	LR	LR	12 53 47.3	
	comp=Z,189nm,20.3s,baz=222,slow=34						
TSUM	**Tsumeb**	**33.39**	**7**	LR	LR	12 55 54.4	
	comp=Z,109nm,19.1s,baz=160,slow=33						
QSPA	**South Pole Qui**	**37.71**	**180**	P	**P**	**12 45 30.4**	**+1.4**
QSPA	**South Pole Qui**	**37.71**	**180**	P	**P**	**12 45 29.9**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=242,slow=8.5,SNR=2.6						
QSPA				LR	LR	13 00 08.2	
	comp=Z,98nm,20.8s,baz=238,slow=34						
	comp=Z,2.5nm,1.0s						
LSZ	**Lusaka**	**38.90**	**23**	LR	LR	12 59 35.3	
	comp=Z,211nm,19.8s,baz=204,slow=34						
PMSA	**Palmer Station**	**39.57**	**221**	LR	LR	12 59 22.0	
	comp=Z,145nm,18.5s,baz=98,slow=32						
SMAI	**San Martin Ant**	**39.60**	**215**	P	**P**	**12 45 42.5**	**-1.9**
VNDA	**Vanda**	**48.72**	**171**	P	**P**	**12 46 58.8**	**+1.3**
VNDA				IAmb	IAmb	12 47 27.5	
	comp=Z,7.4nm,1.3s						
VNDA	**Vanda**	**48.72**	**171**	P	**P**	**12 46 57.9**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=211,slow=5.9,SNR=1.9						
VNDA				LR	LR	13 06 47.3	
	comp=Z,158nm,18.8s,baz=208,slow=35						
	comp=Z,1.2nm,0.8s						
TRQA	**Tornquist**	**52.75**	**254**	P	**P**	**12 47 28.2**	**-0.2**
TRQA				IAmb	IAmb	12 48 11.2	
	comp=Z,12nm,1.4s						
H01W2	**Cape Leeuwin H**	**68.91**	**120**	T	T	14 04 51.0	
	baz=220						
H01W3	**Cape Leeuwin H**	**68.92**	**120**	T	T	14 04 44.8	
	baz=220						
H01W1	**Cape Leeuwin H**	**68.92**	**120**	T	T	14 04 46.4	
	baz=220						
EIL	**Elat**	**83.93**	**18**	LR	LR	13 24 50.3	
	comp=Z,57nm,21.2s,baz=254,slow=34						
ASF	**Jabal al Asfar**	**86.75**	**20**	LR	LR	13 28 47.9	
	comp=Z,50nm,18.3s,baz=29,slow=35						
MMAI	**Mount Meron Ar**	**87.27**	**18**	LR	LR	13 29 47.8	
	comp=Z,54nm,18.1s,baz=186,slow=36						
ASAR	**Alice Springs**	**88.05**	**128**	P	**P**	**12 51 01.4**	**-2.8**
	comp=Z,0.6nm,0.7s,baz=206,slow=4.2,SNR=7.2						
	comp=Z,0.6nm,0.7s						
URZ	**Urewera**	**88.44**	**167**	LR	LR	13 30 26.6	
	comp=Z,65nm,18.3s,baz=303,slow=35						
YKA	**Yellowknife Ar**	**151.28**	**311**	PKPbc	**PKPdf**	**12 58 02.3**	**+2.5**
	comp=Z,0.5nm,0.9s,baz=91,slow=3.1,SNR=3.5						

*JMA **16** 12:39:32.0±0.2,34.6N±0.7×140.6E±0.8,h55km±2km, MV3.0/34,SE OFF BOSO PENINSULA*
*IDC **16** 12:39:32.5±1.2,33.93N×138.57E,h0km,mb3.3/3, mbtmp3.3/4,ML2.4/1,Error ellipse: s-maj=33.1km s-min=17.3km az=58.0*

ISC 16 12:39:33.0±1.1,34.57N±0.05×140.60E±0.06,h50km±10km, n24,σ0$65/25,mb3.6/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.24**	**343**	*i* P	**Pn**	**12 39 41.2**	**-0.2**
BSO3				X		12 39 48.2	
BSO1	**Boso 1**	**0.33**	**75**	*i* P	**Pn**	**12 39 41.5**	**-0.2**
BSO1				X		12 39 48.5	
BSO4	**Boso 4**	**0.47**	**333**	P	**Pn**	**12 39 44.0**	**+0.1**
KTR	**Katsuura**	**0.62**	**338**	P	**Pn**	**12 39 45.5**	**-0.3**
KTR				*e*S	**Sn**	**12 39 54.6**	**-0.3**
JKUC	**kamogawauchiur**	**0.67**	**331**	*i* P	**Pn**	**12 39 46.1**	**-0.3**
JKUC				*e*S	**Sn**	**12 39 56.1**	**0.0**
TATJ	**Tateyama 2**	**0.74**	**309**	P	**Pn**	**12 39 47.5**	**+0.2**
TATJ				*e*S	**Sn**	**12 39 59.1**	**+1.4**
JIM2	**Oshima 3**	**0.97**	**279**	P	**Pn**	**12 39 49.9**	**-0.5**
JMYK	**Miyake Tsubota**	**1.01**	**240**	P	**Pn**	**12 39 51.1**	**+0.3**
JMYK				*e*S	**Sn**	**12 40 04.2**	**+0.3**
JSMT	**Sammumatsuo**	**1.08**	**354**	P	**Pn**	**12 39 51.3**	**-0.5**
JTHY	**Toshimahigashi**	**1.08**	**268**	P	**Pn**	**12 39 51.8**	**0.0**
KTJ3	**Kamata3**	**1.31**	**287**	P	**Pn**	**12 39 54.2**	**-0.7**
KTJ3				S	**Sn**	**12 40 09.3**	**-2.0

STKA	**Stephens Creek**	**50.98**	**132**	P	**P**	**12 49 30.6**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=308,slow=12,SNR=3.4							
	comp=Z,1.1nm,0.6s							
USRK	**Ussuriysk Ar.**	**53.17**	**29**	P	**P**	**12 49 44.8**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=250,slow=8.6,SNR=2.9							
	comp=Z,0.9nm,0.6s							
KURBB	**Kurchatov Arra**	**53.69**	**344**	P	**P**	**12 49 49.1**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=164,slow=7.1,SNR=4.0							
	comp=Z,0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**55.36**	**350**	P	**P**	**12 50 01.6**	**+0.2**
ZALV	**Zalesovo Beam**	**55.36**	**350**	P	**P**	**12 50 01.0**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=150,slow=6.3,SNR=4.4							
	comp=Z,0.7nm,0.5s							
KLR	**Kul'dur**	**56.83**	**25**	P	**P**	**12 50 11.1**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=149,slow=12,SNR=2.8							
	comp=Z,0.8nm,0.5s							
BVAR	**Borovoye Array**	**58.29**	**340**	P	**P**	**12 50 21.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=134,slow=11,SNR=4.9							
	comp=Z,0.9nm,0.6s							
ABKAR	**Akbulak array**	**59.72**	**331**	P	**P**	**12 50 32.2**	**+0.1**
H04N2	**CROZET ISLANDS**	**61.58**	**215**	T	T	13 57 07.4		
	baz=56,slow=75,SNR=28							
H04N1	**CROZET ISLANDS**	**61.58**	**215**	T	T	13 56 52.5		
	baz=56,slow=75,SNR=24							
H04N3	**CROZET ISLANDS**	**61.58**	**215**	T	T	13 56 49.9		
	baz=56,slow=75,SNR=36							
ARCES	**ARCESS Array B**	**84.58**	**340**	P	**P**	**12 53 00.8**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=97,slow=4.9,SNR=7.6							
	comp=Z,0.4nm,0.4s							
TXAR	**Lajitas Array**	**143.94**	**35**	PKP	PKPbc	13 00 01.6	+0.4	
	comp=Z,0.1nm,0.3s,baz=197,slow=1.0,SNR=5.8							

TEH ***16*** *13:05:13.3, 30.78N×57.25E, h6km±32km, ML3.8*
IDC ***16*** *13:05:14.2±2.7, 30.71N×57.20E, h0km, mb3.7/5, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=41.9km s-min=36.4km az=174.0*

ISC 16 13:05:15.9±0.8, 30.75N±0.04×57.25E±0.04, h11km, n39, σ0s95/40, mb3.7/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.24**	**175**	Pg	**Pg**	**13 05 20.5**	**-0.7**
KRM1				Sg	**Sg**	**13 05 24.7**	**0.0**
ZRDN	**Zarand Kerman**	**0.65**	**290**	Pg	**Pg**	**13 05 27.1**	**-1.5**
KHGB	**Koh Gabri**	**0.76**	**241**	Pg	**Pg**	**13 05 29.3**	**-1.4**
TVBK	**TV Kerman**	**0.87**	**209**	Pg	**Pg**	**13 05 32.3**	**-0.4**
CHMN	**Cheshme madani**	**0.92**	**164**	Pg	**Pg**	**13 05 32.5**	**-1.3**
NGRK	**Negar Kerman**	**1.19**	**202**	Pg	**Pb**	**13 05 38.0**	**-0.7**
IBAF	**Bafgh**	**1.67**	**301**	Pg	**Pn**	**13 05 45.8**	**+0.6**
KBAM	**BAM**	**1.92**	**147**	Pn	**Pn**	**13 05 49.4**	**+0.7**
BSRN	**Basiran**	**2.02**	**52**	Pn	**Pn**	**13 05 50.0**	**-0.1**
IKOO	**Kooshah**	**2.25**	**41**	Pn	**Pn**	**13 05 53.9**	**+0.6**
TPRV	**Parvadeh(Tabas**	**2.32**	**348**	Pn	**Pn**	**13 05 54.5**	**+0.3**
IMEH	**Mehriz**	**2.35**	**287**	Pn	**Pn**	**13 05 55.5**	**+0.8**
NHDN	**Nehbandan**	**2.49**	**74**	Pn	**Pn**	**13 05 57.3**	**+0.8**
ITEG	**Tejag**	**2.50**	**30**	Pn	**Pn**	**13 05 56.6**	**-0.1**
TKDS	**Koohdasht(Taba**	**2.86**	**358**	Pn	**Pn**	**13 06 02.0**	**+0.3**
IDAH	**Dahanechah**	**2.99**	**48**	Pn	**Pn**	**13 06 04.3**	**+0.8**
AFRZ	**Afriz**	**3.06**	**29**	Pn	**Pn**	**13 06 04.3**	**-0.1**
ISAD	**Sadrabad**	**3.26**	**292**	Pn	**Pn**	**13 06 09.0**	**+1.7**
ZHDN	**Zahedan**	**3.37**	**113**	Pn	**Pn**	**13 06 10.3**	**+1.6**
ANAR	**Anarak**	**3.85**	**310**	Pn	**Pn**	**13 06 16.1**	**+0.8**
SHRT	**Shahrakht**	**3.88**	**41**	Pn	**Pn**	**13 06 17.0**	**+1.4**
IRAM	**Ramesheh**	**4.30**	**286**	Pn	**Pn**	**13 06 22.7**	**+1.2**
IZEF	**Zefreh**	**4.70**	**298**	Pn	**Pn**	**13 06 28.0**	**+0.9**
KRSH	**Karshahi**	**5.39**	**308**	Pn	**Pn**	**13 06 37.0**	**+0.6**
ISFB	**Sefidab**	**5.55**	**312**	Pn	**Pn**	**13 06 39.9**	**+1.4**
SBZV	**Sabzevar**	**5.63**	**3**	Pn	**Pn**	**13 06 40.5**	**+0.6**
IAKL	**Akhelmad**	**5.97**	**12**	Pn	**Pn**	**13 06 46.0**	**+1.4**
IFIR	**Firoozkooh**	**6.16**	**324**	Pn	**Pn**	**13 06 47.4**	**+0.2**
IVRN	**Varamin**	**6.28**	**314**	Pn	**Pn**	**13 06 50.1**	**+1.4**
ISFR	**Sfrayin**	**6.32**	**5**	Pn	**Pn**	**13 06 50.9**	**+1.5**
IDMV	**Damavand**	**6.50**	**319**	Pn	**Pn**	**13 06 53.2**	**+1.4**
GEYT	**Alibeck**	**7.20**	**6**	Pn	**Pn**	**13 07 02.0**	**+0.8**
	0.2nm,0.3s,baz=184,slow=15,SNR=1.9							
GEYT				Lg	Lg	13 09 04.0		
	0.2nm,0.3s,baz=212,slow=37,SNR=1.8							
	0.8nm,0.4s							
KLST	**Kelardasht - M**	**7.73**	**320**	Pn	**Pn**	**13 07 09.3**	**+0.7**
AKTO	**Aktyubinsk**	**19.68**	**1**	P	**P**	**13 09 44.9**	**0.0**
	0.2nm,0.3s,baz=161,slow=8.2,SNR=4.4							
	1.3nm,0.6s							
BRTR	**Keskin Array B**	**21.21**	**301**	P	**P**	**13 10 01.7**	**-0.1**
	0.7nm,0.6s,baz=122,slow=12,SNR=2.5							
	0.7nm,0.6s							
BVAR	**Borovoye Array**	**24.24**	**20**	P	**P**	**13 10 32.9**	**+0.1**
	1.5nm,0.7s,baz=202,slow=7.5,SNR=11							
	1.5nm,0.7s							
MKAR	**Makanchi Array**	**25.11**	**43**	P	**P**	**13 10 41.3**	**+0.6**
	0.7nm,0.7s,baz=232,slow=8.4,SNR=10							
	0.7nm,0.7s							
KURBB	**Kurchatov Arra**	**25.43**	**33**	P	**P**	**13 10 44.4**	**+0.9**
	0.6nm,0.3s,baz=232,slow=9.1,SNR=9.1							
	0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**30.52**	**33**	P	**P**	**13 11 29.1**	**+0.1**
	2.0nm,0.6s,baz=236,slow=8.6,SNR=12							
	2.0nm,0.6s							

IDC 16 13:06:35.2±2.1, 6.68S×129.01E, h0km, mb3.4/1, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=112.3km s-min=32.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.16**	**159**	Pn	Pn	13 09 58.1	+0.8
	0.1nm,0.3s,baz=338,slow=12,SNR=1.8						
WRA				Sn	Sn	13 12 22.1	-13
	0.1nm,0.3s,baz=351,slow=24,SNR=2.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.53**	**165**	P	Pn	13 10 40.6	-0.7
	0.1nm,0.3s,baz=351,slow=10,SNR=11						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	13 17 32.8	+0.1
	0.2nm,0.3s,baz=120,slow=7.8,SNR=4.3						
	0.2nm,0.3s						

IDC 16 13:09:14.7±2.1, 2.67S×139.76E, h0km, mb3.7/4, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=100.3km s-min=25.2km az=85.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.97**	**197**	P	Pn	13 13 25.0	-1.1
	0.3nm,0.3s,baz=18,slow=12,SNR=14						
WRA				S	Sn	13 16 32.6	-15
	1.3nm,0.8s,baz=10,slow=22,SNR=4.9						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**21.63**	**195**	P	P	13 14 06.5	-0.2
	0.8nm,0.5s,baz=23,slow=10,SNR=26						
ASAR				S	S	13 18 00.9	-6.5
	0.5nm,0.8s,baz=17,slow=26,SNR=4.1						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**70.40**	**322**	P	P	13 20 30.7	0.0
	0.3nm,0.6s,baz=112,slow=5.0,SNR=4.8						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**79.88**	**325**	P	P	13 21 25.4	+0.1
	0.7nm,0.7s,baz=104,slow=6.3,SNR=3.8						
	0.7nm,0.7s						
QSPA	**South Pole Qui**	**87.28**	**180**	P	P	13 22 03.5	+0.3
	1.1nm,0.6s,baz=289,slow=1.6,SNR=12						
	1.1nm,0.6s						

NEIC ***16*** *13:17:18.8±0.9, 36.54N±0.03×98.98W±0.03, h8km±5km, Error ellipse: s-maj=4.2km s-min=2.4km az=146.0*

TUL 16 13:17:19.7±1.2, 36.52N±0.02×98.96W±0.03, h7km±3km, ML2.5, mb_Lg2.4/26(NEIC), Error ellipse: s-maj=3.7km s-min=2.7km az=143.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.15**	**192**	Pg	Pg	13 17 22.9	+0.2
U32A				Sg	Sg	13 17 25.7	+0.9
ELIS	**Ellis County**	**0.59**	**219**		Pg	13 17 31.1	0.0
ELIS				Sg	Sg	13 17 38.7	0.0
CROK	**Carrier**	**0.79**	**91**		Pg	13 17 34.1	-0.7
CSTR	**Hydro, Custer**	**0.90**	**166**	Pg	Pg	13 17 36.6	-0.5
GC02	**Grant County #**	**0.94**	**69**	Pg	Pg	13 17 37.3	-0.5
OK029	**Liberty Lake**	**1.42**	**120**		Pn	13 17 45.0	-1.0
OK048	**Pawnee Station**	**1.63**	**93**		Pn	13 17 48.5	-0.3
SMWD	**Samnorwood**	**1.76**	**217**		Pn	13 17 50.5	-0.2
WMOK	**Wichita Mounta**	**1.79**	**175**	Pn	Pn	13 17 50.9	-0.1
FNO	**Franklin**	**1.79**	**134**		Pn	13 17 51.4	+0.3
OK052	**Battle Ridge R**	**1.82**	**106**	Pn	Pn	13 17 51.6	+0.1
QUOK	**Quay**	**1.85**	**100**	Pn	Pn	13 17 51.8	-0.1
R32A	**Long Quarter,**	**1.91**	**6**		Pn	13 17 52.8	+0.1
R32A				IAmb_Lg		13 18 20.3	
	comp=Z,15nm,1.0s						
T35A	**Sooner Cattle**	**2.01**	**78**		Pn	13 17 54.4	+0.3
T35A				IAmb_Lg		13 18 25.5	
	comp=Z,13nm,0.9s						
X34A	**Smith Ranch, M**	**2.13**	**154**	IAmb_Lg		13 18 29.0	
	comp=Z,16nm,0.7s						
W35A	**Tecumseh**	**2.18**	**128**		Pn	13 17 56.7	+0.3
CBKS	**Cedar Bluff**	**2.37**	**345**		Pn	13 17 58.7	-0.4
CBKS				IAmb_Lg		13 18 35.4	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**2.75**	**234**	IAmb_Lg		13 18 45.5	
	comp=Z,9.2nm,0.8s						
X37A	**Clayton**	**3.51**	**122**	IAmb_Lg		13 19 18.9	
	comp=Z,16nm,0.9s						
U38A	**Gravette**	**3.69**	**90**	IAmb_Lg		13 19 19.0	
	comp=Z,6.0nm,0.8s						
KSCO	**Kaye Shedlock'**	**3.82**	**312**	IAmb_Lg		13 19 23.9	
	comp=Z,10nm,0.7s						
T25A	**Trinidad**	**4.41**	**280**	IAmb_Lg		13 19 43.9	
	comp=Z,8.3nm,0.7s						
S39A	**Bolivar**	**4.66**	**74**	IAmb_Lg		13 19 47.6	
	comp=Z,7.6nm,0.7s						
FVM	**French Village**	**6.96**	**75**	IAmb_Lg		13 20 59.5	
	comp=Z,7.5nm,0.7s						
N23A	**Red Feather La**	**6.99**	**311**	IAmb_Lg		13 21 11.3	
	comp=Z,6.6nm,0.9s						
RSSD	**Black Hills**	**8.52**	**335**	IAmb_Lg		13 22 04.5	
	comp=Z,2.4nm,0.9s						

IDC ***16*** *13:21:07.9±1.5, 36.70N×99.03W, h0km, mb3.1/2, mbtmp3.3/7, ML3.3/5, MS2.7/1, Error ellipse: s-maj=23.7km s-min=9.4km az=100.0*
NEIC ***16*** *13:21:09.0±0.9, 36.53N±0.02×98.95W±0.01, h5km±1km, Error ellipse: s-maj=3.4km s-min=2.4km az=313.0*
NEIC ***16*** *13:21:08, 36.53N×98.95W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.28; $M_{\theta\theta}$3.08; $M_{\phi\phi}$-3.36; $M_{r\theta}$1.54; $M_{r\phi}$-0.42; $M_{\theta\phi}$1.08; Fault plane solution: M_o3.76000×10^{14} NP1:ϕ_s140.00000°, δ60.00000°, λ5.00000°. NP2:ϕ_s47.00000°, δ86.00000°, λ150.00000°. Principal axes: T 3.7610, Plg24.0000°, Azm360.0000°; N 0.0001, Plg60.0000°, Azm220.0000°; P -3.7611, Plg17.0000°, Azm98.0000°;*
ANF ***16*** *13:21:09.8±1.4, 36.52N×98.94W, h13km±11km, ML4.7/14 Error ellipse: s-maj=2.1km s-min=1.7km az=124.0*
TUL ***16*** *13:21:09±0.9, 36.53N±0.02×98.97W±0.03, h7km±3km, ML4.0, mb_Lg3.8/140(NEIC), ML3.7/8(NEIC), Mwr3.7/17(SLM), Error ellipse: s-maj=4.3km s-min=1.8km az=121.0*

ISC 16 13:21:09.2±0.9, 36.53N±0.02×98.92W±0.03, h9km±7km, n140, σ1s60/98, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.17**	**203**	Pg	**Pg**	**13 21 12.4**	**-0.4**
U32A				Sg	**Sg**	**13 21 15.2**	**0.0**
ELIS	**Ellis County**	**0.61**	**221**	Pg	**Pg**	**13 21 20.3**	**-0.9**
ELIS				Sg	**Sg**	**13 21 29.0**	**-0.2**
ELIS				IAML		13 21 37.2	
	comp=E,5μm,0.9s						
ELIS				IAML		13 21 42.2	
	comp=N,3μm,0.6s						
OK032	**Salt Plains WL**	**0.63**	**64**		**Pg**	**13 21 21.8**	**+0.3**
OK032				Sg	**Sg**	**13 21 30.5**	**+0.7**
CROK	**Carrier**	**0.76**	**92**	Pg	**Pg**	**13 21 24.2**	**+0.4**
KAN14	**Manchester OK**	**0.88**	**61**	Pg	**Pg**	**13 21 26.3**	**+0.2**
KAN10	**Anthony SW Sta**	**0.89**	**48**		**Pg**	**13 21 26.5**	**+0.1**
CSTR	**Hydro, Custer**	**0.90**	**168**	Pg	**Pg**	**13 21 26.3**	**-0.4**
GC02	**Grant County #**	**0.91**	**69**	Pg	**Pg**	**13 21 26.9**	**+0.1**
KAN05	**Bluff City Nor**	**1.02**	**55**		**Pg**	**13 21 29.0**	**+0.2**
KAN08	**Anthony NE Sta**	**1.03**	**47**		**Pg**	**13 21 28.9**	**-0.2**
KAN17	**Caldwell West**	**1.06**	**61**	Pg	**Pg**	**13 21 29.6**	**-0.1**
KAN12	**Harper NE Stat**	**1.06**	**44**		**Pg**	**13 21 29.6**	**-0.1**
KAN06	**Argonia West S**	**1.11**	**50**		**Pg**	**13 21 30.5**	**-0.1**
KAN01	**Argonia South**	**1.12**	**56**		**Pg**	**13 21 30.7**	**-0.1**
KAN09	**Caldwell North**	**1.21**	**60**		**Pg**	**13 21 32.2**	**-0.2**
KAN13	**South Haven SW**	**1.25**	**67**	Pg	**Pn**	**13 21 32.9**	**-0.1**
KS21	**Milan North St**	**1.26**	**53**	Pg	**Pn**	**13 21 33.3**	**+0.3**
BLOK	**Blackwell**	**1.39**	**80**		**Pn**	**13 21 35.3**	**+0.4**
OK029	**Liberty Lake**	**1.40**	**121**	Pg	**Pn**	**13 21 34.8**	**-0.1**
ADOK	**Arcadia Dam**	**1.53**	**124**		**Pb**	**13 21 37.6**	**-0.2**
OK048	**Pawnee Station**	**1.60**	**94**		**Pb**	**13 21 38.7**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**1.65**	**133**		**Pn**	**13 21 39.2**	**+0.8**
OK033	**Mehan**	**1.67**	**106**		**Pn**	**13 21 39.5**	**+0.8**
OK051	**E0350 and S346**	**1.68**	**90**		**Pb**	**13 21 40.0**	**-0.3**
SMWD	**Samnorwood**	**1.78**	**217**	Pn	**Pn**	**13 21 40.7**	**+0.4**
WMOK	**Wichita Mounta**	**1.79**	**176**	Pn	**Pn**	**13 21 40.6**	**+0.2**
WMOK	**Wichita Mounta**	**1.79**	**176**	P	**Pn**	**13 21 40.2**	**-0.2**
	baz=355,SNR=213						
WMOK				S	**Sb**	**13 22 04.6**	**-0.3**
	baz=355						
OK052	**Battle Ridge R**	**1.79**	**107**	Pn	**Pn**	**13 21 41.3**	**+0.9**
R32A	**Long Quarter,**	**1.90**	**5**		**Pn**	**13 21 42.6**	**+0.8**
R32A				IAmb_Lg		13 22 11.3	
	comp=Z,443nm,0.7s						
T35A	**Sooner Cattle**	**1.97**	**78**		**Pn**	**13 21 43.9**	**+1.0**
T35A				IAmb_Lg		13 22 13.9	
	comp=Z,487nm,0.8s						
DEOK	**Depew**	**2.08**	**109**	Pn	**Pn**	**13 21 45.1**	**+0.8**
X34A	**Smith Ranch, M**	**2.12**	**155**		**Pb**	**13 21 47.4**	**-0.5**
X34A				IAmb_Lg		13 22 22.1	
	comp=Z,586nm,0.8s						
W35A	**Tecumseh**	**2.16**	**129**		**Pn**	**13 21 46.2**	**+0.8**
CBKS	**Cedar Bluff**	**2.37**	**344**	Pn	**Pn**	**13 21 49.2**	**+0.8**
CBKS				IAmb_Lg		13 22 27.4	
	comp=Z,511nm,0.7s						
CBKS	**Cedar Bluff**	**2.37**	**344**	P	**Pn**	**13 21 48.8**	**+0.4**
	baz=165,SNR=61						
TUL3	**Leonard**	**2.60**	**103**	IAmb_Lg		13 22 36.5	
	comp=Z,406nm,1.0s						
TUL3	**Leonard**	**2.60**	**103**	P	**Pn**	**13 21 51.8**	**+0.3**
	baz=285,SNR=39						
AMTX	**Amarillo**	**2.78**	**235**	IAmb_Lg		13 22 38.4	
	comp=Z,532nm,1.1s						
AMTX	**Amarillo**	**2.78**	**235**	P	**Pn**	**13 21 53.5**	**-0.6**
	baz=52						
AMTX				Sb	**Sb**	**13 22 34.3**	**+0.8**
	baz=52						
LOOK	**Love County**	**2.91**	**150**	IAmb_Lg		13 22 40.9	
	comp=Z,204nm,0.7s						
KSU1	**Kansas State U**	**3.15**	**35**	IAmb_Lg		13 22 51.5	
	comp=Z,336nm,0.8s						
KSU1	**Kansas State U**	**3.15**	**35**	P	**Pn**	**13 22 00.1**	**+1.0**
	baz=217,SNR=9.2						
KSU1				Sb	**Sb**	**13 22 46.0**	**+2.1**
	baz=217						
RLO	**Rose Lookout**	**3.17**	**95**	IAmb_Lg		13 22 49.6	
	comp=Z,129nm,0.9s						
DKNS	**Dickens**	**3.30**	**210**	IAmb_Lg		13 22 54.9	
	comp=Z,167nm,0.8s						
U38A	**Gravette**	**3.66**	**90**	IAmb_Lg		13 23 09.4	
	comp=Z,302nm,0.9s						
FW06	**Azle**	**3.72**	**162**	IAmb_Lg		13 23 15.5	
	comp=Z,201nm,1.0s						
SN07	**Snyder 07**	**3.80**	**206**	IAmb_Lg		13 23 10.7	
	comp=Z,176nm,0.9s						
KSCO	**Kaye Shedlock'**	**3.84**	**311**	IAmb_Lg		13 23 16.5	
	comp=Z,270nm,0.7s						
KSCO	**Kaye Shedlock'**	**3.84**	**311**	P	**Pn**	**13 22 09.7**	**+1.0**
	baz=129,SNR=31						
KSCO				Sb	**Sg**	**13 23 07.9**	**-4.7**
	baz=129						
ABTX	**Abilene, Hawle**	**3.94**	**189**	P	**Pn**	**13 22 10.2**	**+0.2**
	baz=7.9						
ABTX				Sb	**Sb**	**13 23 10.3**	**+3.5**
	baz=7.9						
SN05	**Snyder 5**	**3.99**	**204**	IAmb_Lg		13 23 18.3	
	comp=Z,190nm,0.9s						
HHAR	**Hobbs**	**4.03**	**92**	IAmb_Lg		13 23 20.2	
	comp=Z,181nm,0.7s						
MSTX	**Muleshoe**	**4.06**	**232**	IAmb_Lg		13 23 23.2	
	comp=Z,198nm,1.0s						
MSTX	**Muleshoe**	**4.06**	**232**	P	**Pn**	**13 22 11.2**	**-0.4**
	baz=49,SNR=16						
MSTX				Sb	**Sb**	**13 23 13.4**	**+3.2**
	baz=49						
FW16	**Waxahatchie**	**4.37**	**157**	IAmb_Lg		13 23 39.0	
	comp=Z,234nm,0.8s						
T25A	**Trinidad**	**4.45**	**279**	IAmb_Lg		13 23 28.0	
	comp=Z,250nm,1.0s						
T25A	**Trinidad**	**4.45**	**279**	P	**Pn**	**13 22 17.2**	**+0.1**
	baz=96,SNR=15						
T25A				Sb	**Sb**	**13 23 25.4**	**+4.0**
	baz=96						
Z38A	**Mt. Pleasant**	**4.59**	**134**	IAmb_Lg		13 23 47.1	
	comp=Z,197nm,0.8s						
S39A	**Bolivar**	**4.62**	**74**	IAmb_Lg		13 23 34.4	
	comp=Z,292nm,0.7s						
WHTX	**Lake Whitney,**	**4.69**	**165**	IAmb_Lg		13 23 45.6	
	comp=Z,194nm,1.2s						
WHTX	**Lake Whitney,**	**4.69**	**165**	P	**Pn**	**13 22 19.7**	**-0.5**
	baz=345						
WHTX				Sb	**Sb**	**13 23 32.5**	**+4.3**
	baz=345						
MIAR	**Mount Ida**	**4.79**	**113**	IAmb_Lg		13 23 50.8	
	comp=Z,135nm,0.8s						
MIAR	**Mount Ida**	**4.79**	**113**	P	**Pn**	**13 22 22.1**	**+0.6**
	baz=296,SNR=19						
MIAR				S	**Sn**	**13 23 17.3**	**+0.1**
	baz=296						
BGNE	**Belgrade**	**4.91**	**7**	IAmb_Lg		13 23 55.8	
	comp=Z,303nm,0.8s						
BGNE	**Belgrade**	**4.91**	**7**	P	**Pn**	**13 22 23.6**	**+0.4**
	baz=188,SNR=10						
BGNE				S	**Sn**	**13 23 20.1**	**0.0**
	baz=188						
SGCY	**Sterling City**	**4.96**	**202**	IAmb_Lg		13 23 59.6	
	comp=Z,154nm,0.9s						
OGNE	**Ogallala**	**5.03**	**332**	P	**Pn**	**13 22 24.7**	**-0.3**
	baz=151						
OGNE				Sb	**Sb**	**13 23 43.3**	**+5.1**
	baz=151						
237A	**Washetta, Mont**	**5.20**	**149**	IAmb_Lg		13 24 07.8	
	comp=Z,266nm,0.9s						
BRDY	**Brady**	**5.23**	**181**	IAmb_Lg		13 24 00.9	
	comp=Z,170nm,1.1s						
P38A	**Dawn**	**5.25**	**52**	IAmb_Lg		13 24 09.3	
	comp=Z,159nm,0.7s						
ODSA	**Odessa**	**5.33**	**215**	IAmb_Lg		13 24 12.1	
	comp=Z,108nm,1.1s						
MGMO	**Mountain Grove**	**5.37**	**81**	IAmb_Lg		13 24 01.8	
	comp=Z,224nm,0.8s						
SDCO	**Great Sand Dun**	**5.39**	**285**	IAmb_Lg		13 24 06.3	
	comp=Z,123nm,1.1s						
SDCO	**Great Sand Dun**	**5.39**	**285**	P	**Pn**	**13 22 30.3**	**+0.1**
	baz=101,SNR=26						
SDCO				Sb	**Sb**	**13 23 52.8**	**+4.0**
	baz=101						
Q24A	**Divide**	**5.50**	**298**	IAmb_Lg		13 24 04.5	
	comp=Z,109nm,0.8s						
Q24A	**Divide**	**5.50**	**298**	P	**Pn**	**13 22 32.1**	**+0.5**
	baz=114						
Q24A				Sb	**Sb**	**13 23 56.2**	**+4.3**
	baz=114						
FCAR	**Ozark Folk Cen**	**5.53**	**95**	IAmb_Lg		13 24 08.7	
	comp=Z,131nm,0.8s						
WLAR	**White Oak Lake**	**5.54**	**119**	IAmb_Lg		13 24 05.6	
	comp=Z,121nm,1.0s						
UALR	**University of**	**5.63**	**106**	IAmb_Lg		13 24 15.0	
	comp=Z,155nm,0.9s						
435B	**Jarrell**	**5.84**	**169**	IAmb_Lg		13 24 29.9	
	comp=Z,203nm,1.0s						
435B	**Jarrell**	**5.84**	**169**	Sb	**Sb**	**13 24 08.4**	**+7.0**
	baz=349						
OZNA	**Ozona**	**5.89**	**199**	IAmb_Lg		13 24 24.3	
	comp=Z,106nm,1.0s						
NATX	**Nacogdoches**	**5.93**	**142**	IAmb_Lg		13 24 28.1	
	comp=Z,95nm,0.7s						
Z41A	**Richland Creek**	**6.00**	**121**	IAmb_Lg		13 24 34.0	
	comp=Z,194nm,0.8s						
JCT	**Junction City**	**6.08**	**187**	IAmb_Lg		13 24 32.3	
	comp=Z,147nm,0.8s						
JCT	**Junction City**	**6.08**	**187**	P	**Pn**	**13 22 40.0**	**+0.6**
	baz=6.3						
MNHN	**Monahans**	**6.08**	**213**	IAmb_Lg		13 24 27.0	
	comp=Z,94nm,0.9s						
ISCO	**Idaho Springs**	**6.20**	**304**	P	**Pn**	**13 22 40.6**	**-0.7**
	baz=120,SNR=5.8						
LCAR	**Lake Charles**	**6.29**	**92**	IAmb_Lg		13 24 34.0	
	comp=Z,183nm,1.1s						
CCM	**Cathedral Cave**	**6.31**	**74**	P	**Pn**	**13 22 43.1**	**+0.7**
	baz=258						
ANMO	**Albuquerque**	**6.33**	**258**	P	**Pn**	**13 22 42.3**	**-0.6**
	baz=73						
ANMO	**Albuquerque**	**6.33**	**258**	Pn	**Pn**	**13 22 42.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=100,slow=4.9,SNR=4.0						
ANMO				Pg	**Pb**	**13 23 02.8**	**+3.1**
	comp=Z,1.7nm,0.3s,baz=160,slow=17,SNR=16						
ANMO				Lg	Lg	13 24 23.4	
	comp=Z,2.9nm,0.3s,baz=57,slow=16,SNR=6.0						
	comp=Z,1.4nm,0.6s						
CCAR	**Cane Creek**	**6.41**	**112**	IAmb_Lg		13 24 35.3	
	comp=Z,105nm,0.8s						
S22A	**4UR Ranch, Cre**	**6.43**	**283**	P	**Pn**	**13 22 43.7**	**-0.8**
	baz=99						
PBMO	**Poplar Bluff**	**6.83**	**85**	IAmb_Lg		13 24 51.9	
	comp=Z,170nm,0.8s						
SCIA	**State Center**	**6.96**	**38**	IAmb_Lg		13 24 57.2	
	comp=Z,153nm,0.9s						
PHWY	**Pilot Hill**	**6.97**	**315**	IAmb_Lg		13 24 52.3	

SFIN	**Lafayette**	**10.04**	**64**	P		**Pn**	**13 23 33.9**	**+0.3**
	baz=251							
WCI	**Wyandotte Cave**	**10.19**	**77**	P		**Pn**	**13 23 35.7**	**0.0**
	baz=264							
BW06	**Boulder Array**	**10.29**	**310**	P		**Pn**	**13 23 36.7**	**-0.6**
	baz=124							
PDAR	**Pinedale Array**	**10.29**	**310**	Pn		**Pn**	**13 23 36.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=120,slow=14,SNR=10							
PDAR				Lg		Lg	13 26 23.7	
	comp=Z,0.8nm,0.3s,baz=98,slow=32,SNR=2.9							
	comp=Z,1.1nm,0.7s							
LRAL	**Lakeview Retre**	**10.41**	**106**	P		**Pn**	**13 23 38.8**	**+0.2**
	baz=293							
O48B	**Farmland**	**11.42**	**67**	P		**Pn**	**13 23 51.5**	**-1.1**
	baz=255							
LAO	**LASA Array**	**11.52**	**334**	P		**Pn**	**13 23 52.7**	**-1.2**
	baz=149							
P49A	**Miami Univ. Ec**	**11.60**	**71**	P		**Pn**	**13 23 53.6**	**-1.4**
	baz=260							
DGMT	**Dagmar**	**12.54**	**344**	P		**Pn**	**13 24 06.5**	**-1.4**
	baz=160							
ULM	**Lac du Bonnet**	**13.89**	**8**	Pn		Pn	13 24 17.6	-8.5
	comp=Z,0.3nm,0.3s,baz=182,slow=11,SNR=2.7							
ULM				Sn		Sn	13 26 46.0	-14
	comp=Z,0.6nm,0.3s,baz=267,slow=17,SNR=2.0							
ULM				Lg		Lg	13 28 13.1	
	comp=Z,0.5nm,0.3s,baz=98,slow=16,SNR=1.9							
	comp=Z,1.0nm,0.4s							
NVAR	**Mina Array Bea**	**15.51**	**283**	Pn		**Pn**	**13 24 47.2**	**-1.1**
	baz=85,slow=11,SNR=2.9							
	comp=Z,0.1nm,0.4s							
LPIG	**La Paz**	**15.80**	**222**	Pn		**Pn**	**13 24 51.7**	**-0.2**
	comp=Z,13nm,0.3s,baz=41,slow=13,SNR=2.5							
YKA	**Yellowknife Ar**	**27.75**	**344**	P		**P**	**13 26 55.7**	**-2.2**
	comp=Z,0.2nm,0.8s,baz=146,slow=9.2,SNR=2.9							
	comp=Z,0.2nm,0.8s							
ILAR	**Eielson Array**	**39.95**	**330**	P		**P**	**13 28 43.2**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=125,slow=7.6,SNR=2.7							
	comp=Z,0.3nm,0.7s							

TAP 16 13:26:46.1,22.86N×121.08E,h15km,ML2.2,B,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWG	**Pinlang**	**0.04**	**184**	*i* P		Pg	13 26 49.1	+0.2
	baz=173							
TWG				*i* S		Sg	13 26 51.2	+0.4
	baz=173							
TWGBT	**Beinan**	**0.04**	**174**	*i* P		Pg	13 26 49.1	+0.2
	baz=174							
TWGBT				*i* S		Sg	13 26 51.2	+0.4
	baz=174							
LONT	**Longtian**	**0.07**	**48**	P		Pg	13 26 49.3	+0.2
	baz=48							
LONT				S		Sg	13 26 51.8	+0.7
	baz=48							
TTN	**Taitung**	**0.13**	**148**	P		Pb	13 26 50.7	+0.6
	baz=154							
TTN				*e*S		Sb	13 26 54.5	+1.7
	baz=154							
EDH	**Donghe**	**0.24**	**62**	P		Pb	13 26 51.8	-0.3
	baz=77							
EDH				S		Sb	13 26 56.3	+0.2
	baz=77							
ECS	**Chishang**	**0.27**	**30**	P		Pb	13 26 52.3	-0.3
	baz=26							
ECS				*e*S		Sb	13 26 57.2	+0.2
	baz=26							
ECL	**Taimali**	**0.29**	**203**	P		Pg	13 26 52.1	0.0
	baz=201							
ECL				S		Sg	13 26 56.3	0.0
	baz=201							
EHD	**Haiduan**	**0.31**	**23**	*e*P		Pg	13 26 52.2	-0.4
	baz=16							
EHD				*e*S		Sg	13 26 56.5	-0.7
	baz=16							
ELDTW	**Lidau**	**0.33**	**351**	P		Pg	13 26 53.1	+0.1
	baz=1.0							
ELDTW				S		Sg	13 26 57.3	-0.5
	baz=1.0							
CHKT	**Chengkung**	**0.36**	**48**	P		Pg	13 26 53.7	+0.3
	baz=51							
CHKT				S		Sb	13 26 59.6	0.0
	baz=51							
LDUT	**Ludao**	**0.41**	**117**	P		Pg	13 26 54.5	+0.2
	baz=117							
LDUT				S		Sb	13 27 01.2	+0.2
	baz=117							
STYH	**Taoyuan**	**0.41**	**318**	P		Pb	13 26 54.8	-0.2
	baz=319							
STYH				S		Sb	13 27 01.1	0.0
	baz=319							
STYT	**Tauyuan**	**0.42**	**316**	*i* P		Pb	13 26 54.9	-0.3
	baz=317							
STYT				*i* S		Sb	13 27 01.1	-0.3
	baz=317							
SSD	**Sandimen**	**0.42**	**254**	*e*P		Pg	13 26 53.7	-0.9
	baz=253							
SSD				*e*S		Sg	13 26 58.9	-1.6
	baz=253							
TSMG	**Majia**	**0.43**	**249**	P		Pb	13 26 55.0	-0.3
	baz=248							
TSMG				S		Sg	13 27 00.4	-0.1
	baz=248							
CHKH	**Chenggong**	**0.44**	**42**	*e*P		Pg	13 26 54.8	-0.1
	baz=44							
CHKH				*e*S		Sg	13 27 01.4	+0.4
	baz=44							
MASBT	**Mashibuluo**	**0.48**	**239**	P		Pg	13 26 55.8	+0.2
	baz=237							
MASBT				S		Sg	13 27 01.9	-0.2
	baz=237							
SGST	**Jiashian**	**0.50**	**296**	P		Pg	13 26 56.2	+0.1
	baz=297							
SGST				*e*S		Sb	13 27 03.8	0.0
	baz=297							
EAST	**Anshuo**	**0.52**	**204**	*e*P		Pg	13 26 56.2	-0.2
	baz=192							
TAW	**Tawu**	**0.53**	**198**	*e*S		Sb	13 27 04.3	-0.1
	baz=195							
TWF1	**Yuli**	**0.53**	**23**	P		Pb	13 26 56.9	-0.1
	baz=18							
TWF1				S		Sg	13 27 03.7	0.0
	baz=18							
EYUL	**Yuli**	**0.53**	**25**	P		Pb	13 26 56.9	-0.2
	baz=18							
EYUL				S		Sg	13 27 03.9	+0.1
	baz=18							
SCST	**Cishan**	**0.54**	**273**	*e*P		Pb	13 26 57.6	+0.4
	baz=273							
SCST				*e*S		Sb	13 27 05.3	+0.7
	baz=273							
TAWH	**Dawu Township**	**0.55**	**198**	*e*P		Pg	13 26 56.5	-0.4
	baz=191							
TAWH				*e*S		Sg	13 27 04.6	+0.4
	baz=191							
YULB	**Yu-li**	**0.57**	**21**	*e*P		Pg	13 26 56.0	-1.4
	baz=22							
YULB				*e*S		Sg	13 27 04.2	-0.6
	baz=22							
WTP	**Ta-pu**	**0.57**	**312**	P		Pb	13 26 58.2	+0.4
	baz=313							
WTP				*e*S		Sb	13 27 05.8	+0.1
	baz=313							
CHN1	**Nanshi**	**0.60**	**303**	P		Pn	13 26 59.3	-0.7
	baz=306							
CHN1				*e*S		Sn	13 27 09.4	-0.1
	baz=306							
TPUB	**Ta-pu**	**0.60**	**317**	P		Pb	13 26 58.7	+0.4
	baz=318							
TPUB				*e*S		Sb	13 27 07.8	+1.3
	baz=318							
SNST	**Tainan City**	**0.64**	**304**	*e*P		Pn	13 26 59.8	-0.8
	baz=316							
SNST				*e*S		Sn	13 27 10.3	-0.2
	baz=316							
SCZT	**Fangliau**	**0.64**	**221**	*e*P		Pb	13 26 58.9	-0.1
	baz=221							
SCZT				*e*S		Sg	13 27 07.5	+0.2
	baz=221							
CHN4	**Tsaushan**	**0.66**	**318**	*e*P		Pb	13 26 60.0	+0.7
	baz=328							
CHN4				*e*S		Sb	13 27 09.4	+1.2
	baz=328							
TWK	**Hsinying**	**0.68**	**307**	*e*P		Pb	13 27 00.3	+0.7
	baz=319							
TWK				*e*S		Sn	13 27 11.6	+0.2
	baz=319							
SHHT	**Tainan City**	**0.69**	**284**	P		Pn	13 27 02.2	+1.0
	baz=283							
SHHT				*e*S		Sn	13 27 15.1	+3.4
	baz=283							
SLIU	**Shizi**	**0.69**	**202**	*e*P		Pg	13 26 58.8	-0.8
	baz=196							
SLIU				*e*S		Sg	13 27 08.8	0.0
	baz=196							
ALS	**Alishan**	**0.69**	**339**	P		Pb	13 27 00.0	0.0
	baz=341							
ALS				*e*S		Sg	13 27 08.9	0.0
	baz=341							
HGSD	**Ruisui**	**0.70**	**27**	*e*S		Sn	13 27 11.7	-0.4
	baz=20							
CHN5	**Tsauling**	**0.82**	**334**	*e*P		Pb	13 27 02.4	+0.4
	baz=335							
CHN5				*e*S		Sn	13 27 14.1	-0.9
	baz=335							
SSLB	**Suanglung**	**0.93**	**353**	*e*P		Pg	13 27 04.3	+0.2
	baz=356							
WDLH	**Douliu**	**0.96**	**329**	*e*P		Pg	13 27 04.6	-0.1
	baz=331							
WDLH				*e*S		Sn	13 27 20.0	+1.6
	baz=331							
WJS	**Zhushan**	**1.01**	**342**	*e*P		Pn	13 27 06.6	+1.0
	baz=345							
TYC	**Yuchr**	**1.06**	**349**	*e*P		Pg	13 27 06.9	+0.4
	baz=4.0							
TYC				*e*S		Sn	13 27 22.7	+2.0
	baz=4.0							

TAP 16 13:26:49.1,23.97N×121.65E,h31km,ML1.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.04**	**276**	*e*P		Pb	13 26 54.3	0.0
	baz=273							
TWD	**Chiawan**	**0.12**	**335**	*i* P		Pb	13 26 54.5	-0.2
	baz=338							
TWD				S		Sn	13 26 58.3	0.0
	baz=338							
ETM	**Tongmen**	**0.14**	**267**	P		Pb	13 26 55.0	0.0
	baz=267							
ETM				S		Sb	13 26 58.9	0.0
	baz=267							
ETL	**Fush Village**	**0.19**	**352**	P		Pb	13 26 55.1	-0.3
	baz=352							
ETL				*e*S		Sb	13 26 59.6	0.0
	baz=352							
NACB	**Ninganchiao**	**0.21**	**346**	*i* P		Pb	13 26 55.2	-0.3
	baz=345							
NACB				S		Sb	13 26 59.8	-0.1
	baz=345							
LXIB	**Xiulin Townshi**	**0.22**	**283**	P		Pb	13 26 55.5	-0.4
	baz=282							
LXIB				S		Sb	13 26 59.9	-0.5
	baz=282							
ESL	**Shilin**	**0.25**	**231**	*e*P		Pb	13 26 55.9	-0.2
	baz=230							
ESL				*e*S		Sb	13 27 00.6	-0.2
	baz=230							
ETLH	**Xiulin Townshi**	**0.28**	**327**	P		Pb	13 26 56.0	-0.5
	baz=326							
ETLH				S		Sb	13 27 01.1	-0.4
	baz=326							
WARBT	**Fenglin Townsh**	**0.35**	**224**	*e*P		Pb	13 26 57.0	-0.4
	baz=223							
WARBT				*e*S		Sb	13 27 02.8	-0.2
	baz=223							
WHF	**Hehuan Shan**	**0.39**	**296**	P		Pb	13 26 57.8	-0.5
	baz=296							
CHGB	**Renai**	**0.44**	**281**	*e*P		Pb	13 26 58.7	-0.2
	baz=281							
CHGB				*e*S		Sb	13 27 05.3	-0.3
	baz=281							
FUSS	**Fushou**	**0.46**	**306**	P		Pb	13 26 58.8	-0.4
	baz=306							
FUSS				*e*S		Sb	13 27 05.9	-0.2
	baz=306							
WUSB	**Renai**	**0.49**	**272**	*e*P		Pb	13 26 59.3	-0.2
	baz=272							
WUSB				*e*S		Sb	13 27 06.5	-0.1
	baz=272							
NNSB	**Datong**	**0.52**	**332**	P		Pb	13 26 59.6	-0.4
	baz=331							
NNSB				*e*S		Sb	13 27 06.6	-0.8
	baz=331							
HGSD	**Ruisui**	**0.52**	**203**	*e*P		Pn	13 27 00.6	+0.1
	baz=203							
HGSD	**Ruisui**	**0.52**	**203**	*e*P		Pn	13 27 00.6	+0.1
	baz=20							
EHY	**Hungye**	**0.55**	**213**	*e*P		Pb	13 26 59.3	-1.2
	baz=30							
EHY				*e*S		Sb	13 27 07.6	-0.7
	baz=30							
EHY	**Hungye**	**0.55**	**213**	P		Pb	13 26 59.4	-1.1
	baz=212							
EHY				*e*S		Sb	13 27 07.5	-0.7
	baz=212							
YHNB	**Yeheng**	**0.74**	**340**	*e*P		Pn	13 27 02.8	-0.8
	baz=340							

*IDC **16** 13:28:03.4±0.5,7.45S×106.56E,h0km,mb4.6/27, mbtmp4.5/27,MS3.7/22,Error ellipse: s-maj=19.9km s-min=11.7km az=57.0*
*MOS **16** 13:28:07.0±1.0,7.41S×106.61E,h36km,mb5.0/39,Error ellipse: s-maj=11.2km s-min=6.2km az=116.1*
*DJA **16** 13:28:09.8±0.2,8°S±2°×10°6E±°,h46km±3km,M5.2/48, mB5.7/17,mb5.0/48,MLv5.1/24,Mw(mB)5.2/17*
*NEIC **16** 13:28:09.1±2.8,7.76S±0.06×106.43E±0.07,h35km±2km, mb4.7/46,Error ellipse: s-maj=11.2km s-min=10.5km az=254.0*
ISC 16 13:28:10.7±0.8,7.64S±0.05×106.53E±0.05,h56km±7km, n275,σ1$34/256,mb4.7/85,MS3.8/27,15C-1D,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKJI	**Sukabumi**	**0.63**	**2**	P		**Pn**	**13 28 23.8**	**-0.1**
CNJI	**Cibinong**	**0.68**	**61**	P		**Pn**	**13 28 23.4**	**-1.0**
DBJI	**Dramaga**	**1.10**	**11**	P		**Pn**	**13 28 31.3**	**+1.4**
BBJI	**Bungbulang**	**1.12**	**81**	P		**Pn**	**13 28 29.3**	**-1.0**
LEM	**Lembang**	**1.35**	**53**	Pg		**Pn**	**13 28 34.4**	**+1.1**
	5μm,0.3s,baz=274,slow=6.0,SNR=452							
LEM				Lg		Lg	13 28 50.3	
	2μm,0.3s,baz=310,slow=22,SNR=9.8							
LEM				LR		LR	13 29 10.2	
	comp=Z,3μm,18.8s,baz=212,slow=55							
LEM	**Lembang**	**1.35**	**53**	P		**Pn**	**13 28 34.6**	**+1.2**
TNG	**Tangerang**	**1.46**	**5**	P		Pn	13 28 37.0	+2.2
SBJI	**Serang**	**1.56**	**345**	P		**Pn**	**13 28 38.2**	**+2.1**
CMJI	**Cimerak**	**1.91**	**94**	P		**Pn**	**13 28 39.2**	**-1.6**
JCJI	**Jatiwangi**	**2.07**	**57**	P		**Pn**	**13 28 42.8**	**-0.2**
KPJI	**Karang Pucung**	**2.40**	**83**	P		**Pn**	**13 28 48.1**	**+0.6**
XMI	**Christmas Isla**	**2.91**	**196**	P		Pn	13 28 51.6	-3.0
KASI	**Kota Agung**	**2.92**	**316**	P		**Pn**	**13 28 56.6**	**+2.0**
XMIS	**Christmas Isla**	**2.95**	**197**			Pn	13 28 51.6	-3.6
XMIS	**Christmas Isla**	**2.95**	**197**	P		Pn	13 28 51.9	-3.2
LWLI	**Liwa**	**3.58**	**317**	P		**Pn**	**13 29 06.1**	**+2.3**
SMRI	**Semarang**	**3.92**	**82**			**Pn**	**13 29 09.9**	**+1.4**
SMRI	**Semarang**	**3.92**	**82**	P		**Pn**	**13 29 11.5**	**+3.1**
SMRI	**Semarang**	**3.92**	**82**	P		**Pn**	**13 29 09.2**	**+0.8**
UGM	**Wanagama**	**3.97**	**94**	Pn		**Pn**	**13 29 08.8**	**-0.2**
UGM	**Wanagama**	**3.97**	**94**	P		**Pn**	**13 29 08.7**	**-0.3**
UGM	**Wanagama**	**3.97**	**94**	P		**Pn**	**13 29 08.2**	**-0.8**
MNAI	**Manna**	**4.82**	**312**	Pn		**Pn**	**13 29 21.5**	**+0.8**
MNAI	**Manna**	**4.82**	**312**	P		**Pn**	**13 29 22.7**	**+1.9**
MNAI	**Manna**	**4.82**	**312**	P		**Pn**	**13 29 22.4**	**+1.6**
NGJI	**Ngawi**	**4.90**	**87**	P		**Pn**	**13 29 22.0**	**+0.2**
PMBI	**Palembang**	**5.00**	**339**	P		Pn	13 29 26.2	+3.0
	664nm,0.8s,29μm2.9nm							
PWJI	**Pagerwojo**	**5.24**	**95**	P		**Pn**	**13 29 25.9**	**-0.6**
	372nm,0.9s,5μm2.7nm							
PPBI	**Pangkal Pinang**	**5.46**	**356**	P		Pn	13 29 32.5	+3.0
	93nm,1.1s,18μm0.8nm							
GRJI	**Gresik**	**5.95**	**83**	P		**Pn**	**13 29 36.1**	**-0.1**
	218nm,0.8s,1.2nm							
BWJI	**Bawean**	**6.34**	**74**	P		**Pn**	**13 29 42.1**	**+0.5**
	599nm,1.4s,2.2nm							
GMJI	**Gumukmas**	**6.88**	**96**	P		**Pn**	**13 29 49.6**	**+0.7**
BLJI	**Banyuglugur**	**7.00**	**91**	P		**Pn**	**13 29 50.5**	**-0.2**
	156nm,0.4s,22μm1.5nm							
DSRI	**Dabo**	**7.38**	**345**	P		Pn	13 29 58.7	+2.9
	52nm,0.8s,0.2nm							

KRJI	**Kerinci**	**7.47**	**317**	P		**Pn**	**13 29 57.8**	**+0.6**
JAGI	**Jajag, Banyuwa**	**7.59**	**97**	Pn		**Pn**	**13 30 00.4**	**+1.7**
JAGI	**Jajag, Banyuwa**	**7.59**	**97**	P		**Pn**	**13 30 00.6**	**+1.8**
JAGI	**Jajag, Banyuwa**	**7.59**	**97**	P		**Pn**	**13 29 59.9**	**+1.1**
	193nm,0.5s,6μm1.4nm							
PPSI	**Pulau Pagai**	**8.10**	**306**	P		**Pn**	**13 30 05.5**	**-0.2**
	376nm,0.7s,4μm							
SRBI	**Singaraja**	**8.61**	**94**	P		**Pn**	**13 30 13.8**	**+1.1**
	262nm,0.8s,4μm							
DNP	**Denpasar**	**8.65**	**97**	P		**Pn**	**13 30 14.0**	**+0.7**
	440nm,0.4s							
TPRI	**Tanjung Pinang**	**8.73**	**347**	P		**Pn**	**13 30 16.5**	**+2.1**
PDSI	**Padang**	**9.01**	**318**	P		**Pn**	**13 30 18.4**	**+0.2**
STKI	**Sintang**	**9.11**	**33**	P		Pn	13 30 21.9	+2.4
SISI	**Saibi**	**9.71**	**310**	P		**Pn**	**13 30 26.0**	**-1.8**
	111nm,0.9s,1μm							
TWSI	**Taliwang, Sumb**	**10.30**	**97**	P		**Pn**	**13 30 34.9**	**-1.0**
	68nm,0.6s,2μm							
COCO	**West Island**	**10.57**	**244**	Pn		**Pn**	**13 30 39.3**	**-0.1**
COCO	**West Island**	**10.57**	**244**	P		**Pn**	**13 30 39.3**	**-0.1**
PBSI	**Pulau Batu**	**11.15**	**312**	P		**Pn**	**13 30 47.4**	**-0.1**
	80nm,0.4s							
PLAI	**Plampang**	**11.19**	**97**	P		**Pn**	**13 30 47.9**	**-0.2**
PLAI	**Plampang**	**11.19**	**97**	P		**Pn**	**13 30 46.9**	**-1.2**
	107nm,0.9s,1μm							
SBUM	**Sibu**	**11.52**	**30**	Pn		**Pn**	**13 30 53.9**	**+1.5**
GSI	**Gunungsitoli**	**12.60**	**314**	Pn		**Pn**	**13 31 03.9**	**-3.3**
GSI	**Gunungsitoli**	**12.60**	**314**	P		**Pn**	**13 31 06.8**	**-0.4**
GSI	**Gunungsitoli**	**12.60**	**314**	P		**Pn**	**13 31 08.4**	**+1.2**
	89nm,0.5s,2μm							
BKSI	**Bulukumba**	**13.70**	**81**	P		**Pn**	**13 31 22.9**	**+0.6**
	36nm,0.9s							
TTSI	**Tana Toraja**	**13.99**	**72**	P		**Pn**	**13 31 28.0**	**+1.8**
	26nm,1.0s							
BASI	**Baing, Sumba**	**14.11**	**101**	P		**Pn**	**13 31 27.0**	**-0.8**
	149nm,0.6s							
MPSI	**Mapaga**	**15.51**	**60**	P		**P**	**13 31 48.3**	**-1.1**
	26nm,0.9s							
MMRI	**Maumere**	**15.58**	**95**	P		**Pn**	**13 31 47.2**	**+0.3**
	178nm,0.7s							
GIRL	**Giralia**	**16.66**	**154**	Pn		Pn	13 31 57.1	-3.4
GIRL	**Giralia**	**16.66**	**154**	P		**Pn**	**13 31 57.8**	**-2.7**
TOLI2	**Tolitoli**	**16.66**	**59**			**P**	**13 32 01.6**	**-0.6**
TOLI2	**Tolitoli**	**16.66**	**59**	P		**P**	**13 32 02.2**	**0.0**
KKM	**Kota Kinabalu**	**16.68**	**36**	P		**P**	**13 32 04.2**	**+1.8**
KKM	**Kota Kinabalu**	**16.68**	**36**	P		**P**	**13 32 05.7**	**+3.3**
MRSI	**Marisa**	**17.36**	**63**	P		**P**	**13 32 10.4**	**+0.6**
	29nm,0.7s							
LUWI	**Luwuk**	**17.46**	**69**	P		**P**	**13 32 11.0**	**0.0**
	48nm,0.9s,1μm							
SOEI	**Soe**	**17.66**	**98**	P		**P**	**13 32 14.2**	**+0.9**
SOEI	**Soe**	**17.66**	**98**	P		**Pn**	**13 32 12.7**	**-0.3**
	103nm,0.8s							
MBWA	**Marble Bar**	**18.53**	**138**	P		**P**	**13 32 22.5**	**-0.2**
MBWA				IAmb		IAmb	13 32 47.6	
	comp=Z,47nm,1.2s							
MBWA	**Marble Bar**	**18.53**	**138**	P		**P**	**13 32 22.6**	**-0.2**
PSA00	**Pilbara Seismi**	**18.89**	**139**	P		**P**	**13 32 28.2**	**+1.4**
PSA00	**Pilbara Seismi**	**18.89**	**139**	P		**P**	**13 32 29.0**	**+2.2**
KMSI	**Cibinong**	**19.22**	**66**	P		**Pn**	**13 32 32.0**	**+0.2**
	comp=Z,102nm,1.0s							
DLV	**T Lat**	**19.55**	**6**	P		**Pn**	**13 32 35.3**	**-0.6**
DLV				IAmb		IAmb	13 32 36.3	
	comp=Z,26nm,0.7s							
SANI	**Sanana**	**20.16**	**75**	P		**P**	**13 32 40.4**	**-0.2**
SANI	**Sanana**	**20.16**	**75**	P		**P**	**13 32 39.5**	**-1.1**
	comp=Z,25nm,0.7s							
NLAI	**Namlea**	**20.93**	**79**	P		Pn	13 32 50.0	-2.1
	comp=Z,35nm,0.8s							
FITZ	**Fitzroy Crossi**	**21.31**	**121**	P		**P**	**13 32 55.3**	**+2.3**
FITZ	**Fitzroy Crossi**	**21.31**	**121**	P		**P**	**13 32 54.9**	**+1.9**
LBMI	**Labuha**	**22.03**	**73**	P		**P**	**13 33 01.3**	**+0.6**
	comp=Z,37nm,0.8s,comp=Z,1μm							
MEEK	**Meekatharra**	**22.11**	**150**	P		**P**	**13 33 01.2**	**-0.3**
MORW	**Morawa**	**23.12**	**158**	P		**P**	**13 33 09.8**	**-2.3**
MORW				IAmb		IAmb	13 33 45.2	
	comp=Z,22nm,1.3s							
DAV	**Davao City (W)**	**23.97**	**53**	LR		LR	13 43 15.6	
	comp=Z,119nm,19.7s,baz=266,slow=38							
MTN	**Manton Dam**	**24.75**	**104**	P		**P**	**13 33 26.9**	**-0.3**
MTN	**Manton Dam**	**24.75**	**104**	P		**P**	**13 33 26.7**	**-0.5**
TGY	**Tagaytay City**	**25.90**	**34**	LR		LR	13 45 03.2	
	comp=Z,143nm,18.8s,baz=236,slow=40							
KDU	**Kakadu**	**26.01**	**103**	P		**P**	**13 33 38.8**	**+0.1**
FAKI	**Fak Fak**	**26.03**	**81**	P		**P**	**13 33 38.1**	**-0.8**
FAKI				IAmb		IAmb	13 34 00.8	
	comp=Z,23nm,0.9s							
FAKI	**Fak Fak**	**26.03**	**81**	P		**P**	**13 33 38.6**	**-0.3**
	comp=Z,28nm,1.0s							
QIZ	**Qiongzhong**	**26.70**	**7**	P		**P**	**13 33 46.5**	**+1.7**
QIZ				S		**S**	**13 38 19.6**	**+3.1**
QIZ				sS		sS	13 38 47.4	+7.8
QIZ				pmax		pmax		
	comp=Z,120nm,11.8s							
QIZ				LR		LR		
	comp=N,150nm,10.9s							
QIZ				LR		LR		
	comp=E,110nm,9.3s							
QIZ				LR		LR		
	comp=Z,240nm,14.3s							
CMAR	**Chiang Mai Arr**	**26.99**	**344**	*i* P		**P**	**13 33 46.0**	**-1.5**
CMAR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**26.99**	**344**	P		**P**	**13 33 45.7**	**-1.7**
	comp=Z,3.0nm,0.6s,baz=179,slow=8.6,SNR=46							
CMAR				PcP		**PcP**	**13 37 10.0**	**+1.8**
	comp=Z,2.1nm,0.6s,baz=203,slow=3.3,SNR=13							
CMAR				ScP		**ScP**	**13 40 47.1**	**+3.3**
	comp=Z,0.7nm,0.5s,baz=201,slow=3.9,SNR=6.7							
CMAR				LR		LR	13 45 36.5	
	comp=Z,67nm,19.7s,baz=165,slow=39							
	comp=Z,3.0nm,0.6s							
WRKA	**Warakurna**	**27.05**	**132**	P		**P**	**13 33 48.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**27.05**	**160**	LR		LR	13 43 31.3	
	comp=Z,222nm,21.2s,baz=12,slow=34							
H01W3	**Cape Leeuwin H**	**28.00**	**167**	T		T	14 03 24.8	
	baz=347,slow=76,SNR=107							
H01W1	**Cape Leeuwin H**	**28.02**	**167**	T		T	14 03 30.0	
	baz=347,slow=76,SNR=96							
H01W2	**Cape Leeuwin H**	**28.02**	**167**	T		T	14 03 25.9	
	baz=347,slow=76,SNR

comp=Z,210nm,12.4s
TNCH TengChong 33.40 347 P P 13 34 48.8 +4.6
TNCH pP pP 13 34 58.3 -0.1
TNCH PP **PP** **13 35 58.8 -1.9**
TNCH S **S** **13 40 05.6 +3.9**
TNCH sS sS 13 40 32.3 +7.3
TNCH pmax pmax
comp=Z,5.0nm,0.4s
TNCH pmax pmax
comp=Z,66nm,4.1s
TNCH LR LR
comp=N,90nm,4.7s
TNCH LR LR
comp=E,170nm,4.1s
TNCH LR LR
comp=Z,77nm,6.4s
OOD Oodnadatta 34.09 130 P **P** **13 34 51.1 +1.0**
MULG Mulgathing 34.25 135 P **P** **13 34 51.9 +0.5**
PZH PanZhiHua 34.26 352 P P 13 34 56.3 +4.7
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,80nm,4.7s
QIS Mount Isa 34.47 115 P **P** **13 34 54.6 +1.1**
COEN Coen 36.51 103 P **P** **13 35 11.3 +0.3**
BBOO Buckleboo 37.10 137 P **P** **13 35 15.9 0.0**
LCRK Leigh Creek 37.34 132 P **P** **13 35 18.7 +0.8**
ENH Enshi 37.80 4 P **P** **13 35 21.2 -0.5**
INKA Innaminka 38.03 126 P **P** **13 35 24.6 +0.8**
MTSU Mount Surprise 38.20 110 P **P** **13 35 26.1 +0.7**
HTT Hallett 39.43 135 P **P** **13 35 37.5 +2.0**
LSA Lhasa 39.96 339 P **P** **13 35 39.9 -0.5**
LSA IAmb IAmb 13 35 44.2
comp=Z,5.4nm,0.5s
LSA Lhasa 39.96 339 P **P** **13 35 39.9 -0.5**
LSA pmax pmax
comp=Z,5.0nm,0.5s
PMG Port Moresby 40.20 96 P **P** **13 35 41.9 -0.2**
PMG IAmb IAmb 13 35 43.1
comp=Z,18nm,0.8s
PMG Port Moresby 40.20 96 P **P** **13 35 41.9 -0.2**
PMG pmax pmax
comp=Z,18nm,0.8s
PMG Port Moresby 40.20 96 P **P** **13 35 41.9 -0.2**
comp=Z,19nm,0.9s,baz=221,slow=11,SNR=5.3
comp=Z,19nm,0.9s
CTA Charters Tower 40.39 112 P **P** **13 35 43.7 +0.1**
CTA pmax pmax
comp=Z,18nm,0.9s
CTA Charters Tower 40.39 112 LR LR 13 52 23.4
comp=Z,82nm,21.8s,baz=266,slow=36
CTAO Charters Tower 40.39 112 P **P** **13 35 44.2 +0.6**
CTAO IAmb IAmb 13 35 45.8
comp=Z,12nm,0.8s
CTAO Charters Tower 40.39 112 P **P** **13 35 44.5 +0.9**
CTAO Charters Tower 40.39 112 P **P** **13 35 44.2 +0.6**
CTAO pmax pmax
comp=Z,12nm,0.9s
STKA Stephens Creek 40.57 131 P **P** **13 35 45.8 +0.9**
STKA Stephens Creek 40.57 131 P **P** **13 35 46.1 +1.2**
STKA Stephens Creek 40.57 131 P **P** **13 35 45.8 +0.9**
STKA pmax pmax
comp=Z,3.0nm,0.6s
STKA Stephens Creek 40.57 131 P **P** **13 35 45.8 +0.9**
comp=Z,9.0nm,0.5s,baz=303,slow=7.8,SNR=42
STKA LR LR 13 55 04.4
comp=Z,85nm,18.3s,baz=228,slow=40
comp=Z,9.0nm,0.5s
NJ2 Nanjing 41.19 16 *e*P **P** **13 35 52.4 +2.5**
NJ2 pmax pmax
comp=Z,4.0nm,0.7s
NJ2 pmax pmax
comp=Z,410nm,8.8s
XAN Xi'an 41.51 3 ⇑P **P** **13 35 51.8 -0.8**
XAN pmax pmax
comp=Z,7.0nm,0.7s
LYN LuoYang 42.34 7 *e*P **P** **13 36 01.1 +1.9**
LYN sS sS 13 42 34.3 -5.9
LYN pmax pmax
comp=Z,7.0nm,0.6s
LYN pmax pmax
comp=Z,160nm,4.4s
LYN LR LR
comp=N,220nm,8.5s
LYN LR LR
comp=E,250nm,6.7s
LYN LR LR
comp=Z,200nm,8.9s
CMSA Cobar Meteorol 43.53 128 P **P** **13 36 10.7 +1.6**
LZH Lanzhou 43.57 357 *e*P **P** **13 36 09.5 +0.1**
LZH pP pP 13 36 20.0 -3.9
LZH pmax pmax
comp=Z,9.0nm,1.4s
YNG Young 46.75 131 P **P** **13 36 35.3 +0.7**
GTA Gaotai 47.22 353 P **P** **13 36 38.8 +0.6**
GTA pP pP 13 36 49.8 -3.1
GTA PcP **PcP** **13 38 10.6 +1.7**
GTA pmax pmax
comp=Z,4.0nm,0.7s
CAN Canberra 47.63 132 P **P** **13 36 41.9 +0.4**
HHC Hu-ho-hao-te 48.47 5 *e*P P 13 36 52.1 +4.3
HHC pP sP 13 37 07.0 -2.0
HHC sP pP 13 37 19.8 +17
HHC PP PP 13 38 50.3 +9.2
HHC *e*S **S** **13 43 43.8 -1.1**
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,6.5s
HHC LR LR
comp=E,220nm,14.7s
HHC LR LR
comp=Z,180nm,16.1s
KSRS Korea Array 49.12 23 P **P** **13 36 52.2 -0.4**
comp=Z,3.6nm,0.8s,baz=208,slow=8.7,SNR=12
comp=Z,3.6nm,0.8s
NIL Nilore 51.80 324 P **P** **13 37 12.0 -1.1**
NIL IAmb IAmb 13 37 13.7
comp=Z,11nm,0.8s
NIL Nilore 51.80 324 P **P** **13 37 12.0 -1.1**
NIL pmax pmax
comp=Z,11nm,0.8s
XLT XiLinHaoTe 52.02 9 *e*P **P** **13 37 15.3 +0.7**
XLT pP pP 13 37 27.4 -2.1
XLT sP sP 13 37 38.0 +2.1
XLT PcP **PcP** **13 38 27.1 +0.8**
XLT PP PP 13 39 19.8 +6.5
XLT pmax pmax
comp=Z,5.0nm,0.9s
XLT pmax pmax
comp=Z,170nm,5.6s
MJAR Matsushiro Arr 53.05 32 P **P** **13 37 19.8 -2.5**
comp=Z,3.1nm,1.0s,baz=218,slow=7.7,SNR=6.5
comp=Z,3.1nm,1.0s
WMQ Urumqi 53.99 343 *e*P **P** **13 37 29.4 +0.3**
WMQ pmax pmax
comp=Z,12nm,1.3s
CN2 Changchun 53.99 17 *e*P **P** **13 37 26.9 -2.1**
CN2 *e*pP pP 13 37 42.8 -1.2
CN2 *e*S **S** **13 44 59.0 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
KSH Kashi 54.79 331 P **P** **13 37 34.3 -0.8**
KSH sP sP 13 37 56.9 +0.6
KSH pmax pmax
comp=Z,6.0nm,0.7s
SONM Songino Array 55.23 360 P **P** **13 37 37.5 -0.7**
comp=Z,1.9nm,0.9s,baz=181,slow=7.2,SNR=11
SONM PcP **PcP** **13 38 38.9 +0.4**
comp=Z,5.8nm,0.7s,baz=174,slow=3.7,SNR=15
comp=Z,1.9nm,0.9s
ULN Ulaanbaatar 55.27 0 P **P** **13 37 38.5 +0.1**
ULN Ulaanbaatar 55.27 0 *ce*P **P** **13 37 36.8 -1.6**
ULN pmax pmax
comp=Z,3.0nm,1.0s
WSAR Wadi Sarin 55.98 305 LR LR 13 59 28.1
comp=Z,66nm,20.6s,baz=144,slow=34
NRN Naryn 56.29 333 P **P** **13 37 45.8 -0.3**
NRN IAmb IAmb 13 38 09.4
comp=Z,5.8nm,1.2s
NRN Naryn 56.29 333 P **P** **13 37 45.8 -0.3**
NRN pmax pmax
comp=Z,6.0nm,1.2s
BNX BinXian 56.33 17 ⇓P **P** **13 37 45.3 -0.6**
BNX pmax pmax
comp=Z,31nm,0.8s
BNX pmax pmax
comp=Z,220nm,6.2s
PDGK Podgornoye 56.36 337 P **P** **13 37 45.4 -0.9**
USRK Ussuriysk Ar. 56.50 22 P **P** **13 37 46.4 -0.6**
USRK Ussuriysk Ar. 56.50 22 P **P** **13 37 46.4 -0.6**
USRK Ussuriysk Ar. 56.50 22 P **P** **13 37 45.6 -1.5**
comp=Z,4.4nm,0.7s,baz=209,slow=6.0,SNR=8.9
comp=Z,4.4nm,0.7s
BOOM Boomskoye usch 57.16 333 P **P** **13 37 52.6 +0.6**
BOOM Boomskoye usch 57.16 333 P **P** **13 37 52.6 +0.6**
BOOM pmax pmax
comp=Z,21nm,1.3s
ARLS Aral 57.40 332 P **P** **13 37 53.7 0.0**
ARLS pmax pmax
comp=Z,7.0nm,1.0s
ARSB Arslanbob 57.63 330 P **P** **13 37 54.8 -0.5**
ARSB Arslanbob 57.63 330 P **P** **13 37 54.8 -0.5**
ARSB pmax pmax
comp=Z,4.0nm,1.3s
JTM Tenmabayashi 57.72 31 P **P** **13 37 54.0 -1.8**
SIMJ Simiganj 57.77 326 P **P** **13 37 54.9 -1.4**
SIMJ IAmb IAmb 13 37 56.5
comp=Z,16nm,1.2s
BTK Batken 57.79 328 P **P** **13 37 56.9 +0.5**
BTK IAmb IAmb 13 37 57.1
comp=Z,6.0nm,0.7s
BTK Batken 57.79 328 P **P** **13 37 56.9 +0.5**
BTK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 57.93 332 LR LR 14 06 01.1
comp=Z,76nm,18.9s,baz=316,slow=39
MK31 Makanchi Array 58.33 341 P **P** **13 37 58.6 -1.4**
MK31 IAmb IAmb 13 38 02.8
comp=Z,3.4nm,0.8s
MK31 Makanchi Array 58.33 341 P **P** **13 37 58.6 -1.4**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 58.33 341 P **P** **13 37 58.8 -1.1**
MKAR Makanchi Array 58.33 341 *ce*P **P** **13 37 58.5 -1.5**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 58.33 341 P **P** **13 37 58.6 -1.3**
comp=Z,4.1nm,0.5s,baz=151,slow=8.5,SNR=77
MKAR LR LR 14 04 36.9
comp=Z,78nm,21.5s,baz=306,slow=38
comp=Z,4.1nm,0.5s
MAKZ Makanchi 58.45 340 P **P** **13 38 00.5 -0.2**
MAKZ IAmb IAmb 13 38 03.6
comp=Z,8.3nm,1.4s
MAKZ Makanchi 58.45 340 P **P** **13 38 00.5 -0.2**
MAKZ pmax pmax
comp=Z,8.0nm,1.5s
TRKS Terek-Say 58.70 329 P **P** **13 38 02.7 -0.1**
TRKS pmax pmax
comp=Z,11nm,1.2s
UOSS Minazif 58.73 305 P **P** **13 38 04.5 +1.4**
UOSS IAmb IAmb 13 38 06.4
comp=Z,15nm,1.3s
VOI Vohitsoka 59.14 249 P **P** **13 38 08.5 +2.3**
DGZ Jazzator, Alta 59.49 346 *c*i**P** **P** **13 38 07.2 -0.9**
DGZ pmax pmax
comp=Z,11nm,0.5s
KK31 Karatay Array 60.18 330 *e*P **P** **13 38 12.8 0.0**
HEH HeiHe 60.45 15 *e*P **P** **13 38 13.1 -1.3**
HEH PcP **PcP** **13 38 57.8 -1.0**
HEH pmax pmax
comp=Z,16nm,0.7s
HEH LR LR
comp=N,310nm,6.4s
HEH LR LR
comp=E,310nm,6.0s
HEH LR LR
comp=Z,270nm,6.8s
H04N2 CROZET ISLANDS 60.48 221 T T 14 44 30.4
baz=67,slow=75,SNR=257
H04N1 CROZET ISLANDS 60.49 221 T T 14 44 14.7
baz=67,slow=75,SNR=255
H04N3 CROZET ISLANDS 60.49 221 T T 14 44 13.8
baz=67,slow=75,SNR=442
H04S1 CROZET ISLANDS 60.66 220 T T 14 44 23.5
baz=65,slow=74,SNR=7.3
H04S3 CROZET ISLANDS 60.67 220 T T 14 44 40.3
baz=65,slow=74,SNR=6.8
H04S2 CROZET ISLANDS 60.67 220 T T 14 44 36.4
baz=65,slow=74,SNR=3.0
KLR Kul'dur 60.78 19 *ce*P **P** **13 38 14.6 -2.2**
KLR pmax pmax
comp=Z,10.0nm,0.8s
KLR Kul'dur 60.78 19 LR LR 14 07 12.2
comp=Z,56nm,18.1s,baz=196,slow=39
KURBB Kurchatov Arra 62.89 340 P **P** **13 38 29.9 -1.0**
comp=Z,4.4nm,0.6s,baz=153,slow=6.0,SNR=26
comp=Z,4.4nm,0.6s
KURK Kurchatov 62.94 340 P **P** **13 38 30.4 -0.8**
KURK Kurchatov 62.94 340 P **P** **13 38 30.4 -0.8**
KURK pmax pmax
comp=Z,21nm,1.3s
YSS Yuzh-Sakhalins 63.16 27 *ce*P **P** **13 38 29.7 -3.0**
YSS pmax pmax
comp=Z,18nm,1.3s
ZEA Zeya 63.61 14 *e*P **P** **13 38 35.1 -0.5**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
GEYT Alibeck 63.93 319 P **P** **13 38 39.0 +0.9**
GEYT Alibeck 63.93 319 P **P** **13 38 39.0 +0.9**
GEYT pmax pmax
comp=Z,9.0nm,0.5s
GEYT Alibeck 63.93 319 P **P** **13 38 38.6 +0.5**
comp=Z,5.1nm,0.4s,baz=176,slow=4.8,SNR=17
comp=Z,5.1nm,0.4s
GYA0B ALIBECK ARRAY 63.93 319 P **P** **13 38 39.4 +1.2**
ZAA0 Zalesovo Array 64.03 346 P **P** **13 38 36.5 -1.9**
ZAA0 IAmb IAmb 13 38 39.9
comp=Z,14nm,1.2s
ZALV Zalesovo Beam 64.03 346 P **P** **13 38 36.6 -1.8**
ZALV Zalesovo Beam 64.03 346 *i*P **P** **13 38 38.0 -0.4**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
ZALV Zalesovo Beam 64.03 346 P **P** **13 38 36.3 -2.1**
comp=Z,3.0nm,0.5s,baz=145,slow=3.6,SNR=17
comp=Z,3.0nm,0.5s
RPZ Rata Peaks 66.42 134 LR LR 14 06 44.2
comp=Z,121nm,21.9s,baz=268,slow=35
BVA0 Borovoye Array 67.77 337 *i*P **P** **13 39 01.8 -0.7**
BVAR Borovoye Array 67.77 337 P **P** **13 39 01.4 -1.0**
comp=Z,7.2nm,0.4s,baz=136,slow=8.4,SNR=58
comp=Z,7.2nm,0.4s
BRVK Borovoye 67.84 337 P **P** **13 39 02.3 -0.6**
BRVK Borovoye 67.84 337 *ce*P **P** **13 39 02.4 -0.5**
BRVK pmax pmax
comp=Z,19nm,1.7s
AB31 Akbulak array 69.72 330 *i*P **P** **13 39 14.6 0.0**
ABKAR Akbulak array 69.72 330 P **P** **13 39 14.4 -0.3**
ABKAR Akbulak array 69.72 330 P **P** **13 39 14.5 -0.1**
ABKAR IAmb IAmb 13 39 15.9
comp=Z,46nm,1.3s
URZ Urewera 70.07 128 LR LR 14 11 20.3
comp=Z,60nm,19.7s,baz=138,slow=37
YAK Yakutsk 71.75 11 *e*P **P** **13 39 25.2 -1.5**
YAK pmax pmax
comp=Z,23nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
PETK Petropavlovsk- 74.38 29 P **P** **13 39 42.3 -0.2**
comp=E,3.8nm,1.0s,baz=176,slow=1.9,SNR=8.0
comp=E,3.8nm,1.0s
SVE Sverdlovsk 74.40 336 *e*P **P** **13 39 43.7 +1.2**
SVE pmax pmax
comp=Z,51nm,1.3s
ARU Arti 75.00 335 P **P** **13 39 46.2 +0.2**
ARU Arti 75.00 335 *ci*P **P** **13 39 46.5 +0.6**
ARU 13 42 30.0
ARU S **S** **13 49 22.5 +3.2**
ARU SS **SS** **13 54 01.5 -7.7**
ARU pmax pmax
comp=Z,25nm,0.7s
VNDA Vanda 75.43 169 P **P** **13 39 50.1 +2.0**
comp=Z,1.1nm,0.7s,baz=326,slow=3.3,SNR=1.6
VNDA LR LR 14 10 12.4
comp=Z,63nm,18.0s,baz=290,slow=33
comp=Z,1.1nm,0.7s
ZEI Tsey 75.75 318 *e*P **P** **13 39 50.7 -0.2**
ZEI pmax pmax
comp=Z,8.0nm,1.2s
KBZ Khabaz 76.81 318 *i*P **P** **13 39 55.6 -0.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 76.81 318 P **P** **13 39 57.2 +0.7**
comp=Z,5.6nm,0.9s,baz=179,slow=3.7,SNR=9.6
comp=Z,5.6nm,0.9s
LSZ Lusaka 76.83 256 LR LR 14 09 28.5
comp=Z,68nm,19.9s,baz=110,slow=32
KIV Kislovodsk 77.04 318 *e*P **P** **13 39 57.6 -0.4**
KIV pmax pmax
comp=Z,5.0nm,1.0s
BELG Belogornoye 77.92 328 *i*P **P** **13 40 01.8 -0.7**
BELG pmax pmax
comp=Z,4.0nm,1.3s
NRIK Noril'sk 77.92 353 *ce*P **P** **13 40 01.0 -1.2**
NRIK pmax pmax
comp=Z,16nm,1.1s
NRIK Noril'sk 77.92 353 P **P** **13 40 01.9 -0.4**
comp=Z,3.8nm,0.5s,baz=173,slow=2.7,SNR=9.5
comp=Z,3.8nm,0.5s
SEY Seymchan 78.56 20 *i*P **P** **13 40 03.7 -2.1**
SEY pmax pmax
comp=Z,8.0nm,1.6s
MMAI Mount Meron Ar 78.59 306 P **P** **13 40 07.4 +0.6**
comp=Z,2.9nm,0.5s,baz=84,slow=8.5,SNR=5.7
comp=Z,2.9nm,0.5s
LBTB Lobatse 78.62 246 LR LR 14 10 22.2
comp=Z,42nm,18.2s,baz=78,slow=32
BOSA Boshof 78.75 242 P **P** **13 40 09.1 +1.2**
comp=Z,1.8nm,0.8s,baz=90,slow=13,SNR=2.4
BOSA LR LR 14 10 29.5
comp=Z,45nm,18.4s,baz=70,slow=32
comp=Z,1.8nm,0.8s
SOC Sochi 78.88 317 *e*P **P** **13 40 05.4 -2.7**
SOC *e* 13 43 04.4
SOC *e*S **S** **13 49 59.1 -3.0**
SOC *e*SS **SS** **13 55 08.9 +0.5**
SOC *e*SSS SSS 13 58 33.8
SOC MLR MLR
comp=Z,132nm,15.0s
KIRV Kirov 80.25 333 *ce*P **P** **13 40 15.4 +0.3**
TIXI Tiksi 80.49 7 P **P** **13 40 15.0 -1.2**
TIXI IAmb IAmb 13 40 16.2
comp=Z,7.3nm,0.7s
TIXI Tiksi 80.49 7 *ce*P **P** **13 40 14.5 -1.7**
TIXI pmax pmax
comp=Z,7.0nm,0.6s
VRH Novokhopyorsk 80.63 325 *e*P **P** **13 40 17.2 -0.2**
VRH pmax pmax
comp=Z,30nm,0.9s
BR131 Keskin Array S 81.90 312 *i*P **P** **13 40 24.7 +0.1**
BRTR Keskin Array B 81.90 312 *ce*P **P** **13 40 25.2 +0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 81.90 312 P **P** **13 40 24.6 +0.1**
comp=Z,3.5nm,0.8s,baz=132,slow=7.4,SNR=15
comp=Z,3.5nm,0.8s
VORD Divnogorie 81.94 324 *e*P **P** **13 40 22.7 -1.6**
VORD pmax pmax
comp=Z,20nm,0.4s
VSR Storozhevoye 82.11 324 *e*P **P** **13 40 24.9 -0.3**
VSR pmax pmax
comp=Z,20nm,0.5s
QSPA South Pole Qui 82.35 180 P **P** **13 40 27.7 +1.2**
QSPA IAmb IAmb 13 40 47.3
comp=Z,15nm,1.4s
QSPA South Pole Qui 82.35 180 P **P** **13 40 27.6 +1.2**
comp=Z,1.3nm,0.4s,baz=258,slow=1.6,SNR=30
QSPA LR LR 14 10 18.2
comp=Z,71nm,20.2s,baz=269,slow=31
comp=Z,1.3nm,0.4s
SUR Sutherland 82.36 238 LR LR 14 10 38.0
comp=Z,75nm,19.9s,baz=102,slow=31
LPSR Galich'ya Gora 82.78 325 *e*P **P** **13 40 28.5 -0.1**
LPSR pmax pmax
comp=Z,20nm,0.8s
OBN Obninsk 85.01 327 *e*P **P** **13 40 39.9 0.0**
OBN *e*PPP PPP 13 45 53.3
OBN *e*S **SKSac** **13 50 56.0 -3.6**
OBN pmax pmax
comp=Z,21nm,0.7s
OBN MLR MLR
comp=Z,123nm,11.0s
KLMR Klimovskoe 85.74 333 *e*P **P** **13 40 42.2 -1.3**
KLMR pmax pmax
comp=Z,42nm,1.9s
TSUM Tsumeb 86.54 251 LR LR 14 15 22.8
comp=Z,3nm,19.0s,baz=154,slow=33
AKASG Malin Array Be 87.90 322 *ce*P **P** **13 40 54.4 +0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 87.90 322 P **P** **13 40 53.6 -0.6**
comp=Z,2.2nm,0.6s,baz=83,slow=4.5,SNR=7.7
comp=Z,2.2nm,0.6s
AKBB Malin Array Si 87.90 322 *i*P **P** **13 40 54.0 -0.2**
AKBB pmax pmax
comp=Z,43nm,3.8s
VRI Vrincioaia 88.39 317 P **P** **13 40 59.1 +2.4**
VRI pmax pmax
comp=Z,11nm,1.0s
SNAA Sanae 88.78 197 P **P** **13 40 56.5 -1.6**
SNAA IAmb IAmb 13 41 02.2
comp=Z,7.4nm,1.2s
SNAA Sanae 88.78 197 P **P** **13 40 56.6 -1.6**
SNAA pmax pmax
comp=Z,7.0nm,1.2s
SNAA Sanae 88.78 197 P **P** **13 40 58.7 +0.6**
comp=Z,2.2nm,0.8s,baz=82,slow=6.7,SNR=1.9
SNAA LR LR 14 14 51.5
comp=Z,80nm,21.6s,baz=11,slow=32
comp=Z,2.2nm,0.8s
MLR Muntele Rosu 88.84 316 P **P** **13 41 01.2 +2.2**
MLR pmax pmax
comp=Z,9.0nm,1.2s
FINES FINESS Array B 92.11 332 *i*P **P** **13 41 14.8 +1.1**
FINES pmax pmax
comp=Z,4.0nm,0.8s
FINES FINESS Array B 92.11 332 P **P** **13 41 13.6 0.0**
comp=Z,4.1nm,0.8s,baz=104,slow=8.0,SNR=9.3
comp=Z,4.1nm,0.8s
ARCES ARCESS Array B 93.97 340 P **P** **13 41 22.1 -0.1**
comp=Z,1.3nm,0.5s,baz=98,slow=5.0,SNR=12
comp=Z,1.3nm,0.5s
SPITS Spitsbergen Ar 97.46 348 P Pdif 13 41 37.7 -0.3
comp=Z,5.1nm,0.7s,baz=112,slow=6.6,SNR=2.6
comp=Z,5.1nm,0.7s
YKA Yellowknife Ar 117.62 20 *c*i PKIKP **PKiKP** **13 46 50.7 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 117.62 20 PKP **PKPdf** **13 46 50.3 +0.2**
comp=Z,0.7nm,0.5s,baz=354,slow=2.5,SNR=22
ELK Elko 130.36 42 PKP **PKiKP** **13 47 17.1 +0.7**
comp=Z,1.4nm,0.5s,baz=294,slow=2.3,SNR=12
SCHQ Schefferville 132.64 355 PKP **PKPdf** **13 47 20.0 +0.9**
comp=Z,1.9nm,0.5s,baz=16,slow=2.8,SNR=10
PDAR Pinedale Array 132.78 36 PKP **PKiKP** **13 47 21.0 -0.2**
comp=Z,1.1nm,0.6s,baz=46,slow=0.8,SNR=15
ULM Lac du Bonnet 133.60 20 PKP **PKPdf** **13 47 21.5 +0.5**
comp=Z,2.9nm,0.8s,baz=355,slow=4.7,SNR=6.5
ANMO Albuquerque 139.32 43 PKP **PKiKP** **13 47 34.5 -0.1**
comp=Z,1.1nm,0.6s,baz=340,slow=3.8,SNR=6.1
TXAR Lajitas Array 144.34 49 PKP **PKPdf** **13 47 41.7 +0.3**
comp=Z,2.4nm,0.7s,baz=271,slow=1.0,SNR=32

IDC 16 13:41:46.2±245.0, 54.58N×41.51E, h0km, Error ellipse: s-maj=111.3km s-min=66.4km az=142.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.24**	**313**		I		14 01 20.0	
	1.4nm,0.8s,baz=129,slow=321,SNR=7.9							
I31KZ	**AKTYUBINSK INF**	**10.90**	**106**		I		14 43 20.0	
	0.1nm,0.6s,baz=297,slow=334,SNR=2.3							
I37NO	**I37NO**	**17.92**	**333**		I		15 26 37.1	
	baz=128,slow=314,SNR=1.7							
I46RU	**ZALESOVO INFRA**	**25.01**	**74**		I		16 16 40.0	
	baz=288,slow=342,SNR=1.8							
I34MN	**SONGINO INFRAS**	**39.91**	**72**		I		17 48 40.0	
	baz=301,slow=334,SNR=0.9							

*NOU **16** 13:42:18.1, 39.10S×174.62E, h223km, MLv3.8/13, North*

Island, New Zealand
*WEL **16** 13:42:21.0±0.7,39°S±4′×17°5E±′, h200km±5km, M3.1/58, MLv3.1/58, Error ellipse: s-maj=0.0km s-min=0.0km az=101.4, confirmed*
ISC 16 13:42:16.7±1.9, 39°16′S±0°07′×174°71′E±0°05, h232km±10km, n150, σ1§41/162, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	Vera Road	0.05	50	P	Pn	13 42 47.4	+0.7
LREZ	Lake Rotokare	0.39	218	P	Pn	13 42 48.7	+1.6
LREZ				S	S	13 43 11.6	+0.6
DREZ	Durham Road	0.40	265	P	Pn	13 42 48.7	+1.5
PREZ	Palmer Road	0.47	246	P	Pn	13 42 49.0	+1.6
PREZ				S	S	13 43 11.7	+0.2
NEZ	North Egmont	0.49	256	P	Pn	13 42 49.2	+1.6
NEZ				S	S	13 43 11.4	-0.4
PKVZ	Pokaka	0.51	105	P	Pn	13 42 48.8	+1.1
PKVZ				S	S	13 43 10.3	-1.4
KHEZ	Kahui Hut	0.56	255	P	Pn	13 42 49.3	+1.5
KHEZ	Kahui Hut	0.56	255	P	Pn	13 42 49.5	+1.7
PKE	Pukeiti	0.56	266	P	Pn	13 42 49.3	+1.6
TWVZ	Taurewa	0.57	82	P	Pn	13 42 48.9	+1.0
MTVZ	Mangateitei	0.63	111	P	Pn	13 42 49.4	+1.3
MTVZ				S	S	13 43 09.3	-3.3
WAZ	Wanganui	0.64	161	P	Pn	13 42 49.7	+1.7
WAZ				S	S	13 43 11.3	-1.3
COVZ	Chateau Observ	0.65	94	P	Pn	13 42 49.4	+1.2
HIZ	Hauiti	0.65	10	P	Pn	13 42 48.8	+0.7
HIZ	Hauiti	0.65	10	P	Pn	13 42 48.8	+0.7
FWVZ	Far West T-bar	0.66	99	P	Pn	13 42 49.6	+1.2
FWVZ				S	S	13 43 10.4	-2.7
NBEZ	Newall Road No	0.67	260	P	Pn	13 42 49.5	+1.4
MAVZ	Matarangi	0.67	100	P	Pn	13 42 49.8	+1.3
MAVZ				S	S	13 43 11.2	-2.2
WTVZ	West Tongariro	0.69	87	P	Pn	13 42 49.6	+1.3
WTVZ				S	S	13 43 10.9	-2.1
NGZ	Ngauruhoe	0.69	92	P	Pn	13 42 49.7	+1.3
NGZ				S	S	13 43 10.5	-2.7
NMEZ	Namu Road	0.70	248	P	Pn	13 42 49.8	+1.7
NNVZ	North Ngauruho	0.70	88	P	Pn	13 42 49.6	+1.1
WNVZ	Wahianoa	0.71	104	P	Pn	13 42 49.9	+1.4
SNVZ	South Ngauruho	0.72	93	P	Pn	13 42 50.0	+1.4
KRVZ	Karewarewa	0.73	86	P	Pn	13 42 49.2	+1.1
OTVZ	Oturere	0.74	91	P	Pn	13 42 50.2	+1.5
NTVZ	North Tongarir	0.75	86	P	Pn	13 42 50.1	+1.4
TMVZ	Te Maari	0.77	87	P	Pn	13 42 50.2	+1.5
ETVZ	East Tongariro	0.78	89	P	Pn	13 42 50.1	+1.4
KATZ	Kakaramea	0.79	77	P	Pn	13 42 49.9	+1.0
MOVZ	Moawhango	0.85	108	P	Pn	13 42 50.1	+1.0
RITZ	Rihia Road	0.91	79	P	Pn	13 42 50.6	+1.3
WATZ	Wairara	0.91	61	P	Pn	13 42 50.6	+1.2
KUTZ	Kaahu Road	1.09	53	P	Pn	13 42 51.7	+1.2
BHHZ	Black Hill Sta	1.10	108	P	Pn	13 42 51.6	+1.1
OHWZ	Ohakea	1.15	156	P	Pn	13 42 52.8	+2.2
TSZ	Takapari Road	1.32	133	P	Pn	13 42 53.7	+1.7
KWHZ	Kaweka Forest	1.35	102	P	Pn	13 42 54.0	+1.7
MRHZ	Matea Rd	1.37	77	P	Pn	13 42 52.9	+0.6
KRHZ	Kereru	1.38	111	P	Pn	13 42 53.9	+1.5
PNHZ	Pukenui	1.38	124	P	Pn	13 42 54.1	+1.8
BKZ	Black Stump Fm	1.39	91	P	Pn	13 42 53.5	+1.0
BKZ	Black Stump Fm	1.39	91	P	Pn	13 42 53.5	+1.0
ALRZ	Allen Road	1.41	66	P	Pn	13 42 53.7	+1.0
HRRZ	Handcock Road	1.45	59	P	Pn	13 42 54.0	+1.0
HSRZ	Hossack Road	1.47	55	P	Pn	13 42 54.2	+1.1
HSRZ				P	Pn	13 42 54.2	+1.1
POWZ	Post Office Ro	1.48	147	P	Pn	13 42 54.7	+1.6
TOZ	Tahuroa Road	1.55	24	P	Pn	13 42 54.6	+0.9
MCHZ	McNeill Hill	1.57	101	P	Pn	13 42 56.0	+2.2
DVHZ	Dannevirke	1.60	136	P	Pn	13 42 55.7	+1.6
WPHZ	Waipukurau	1.61	125	P	Pn	13 42 56.1	+1.9
RRRZ	Republican Roa	1.63	61	P	Pn	13 42 55.2	+0.8
NMHZ	Naumai	1.63	89	P	Pn	13 42 56.5	+2.1
MRZ	Mangatainoka R	1.65	156	P	Pn	13 42 56.0	+1.5
TARZ	Mount Tarawera	1.68	57	P	Pn	13 42 54.7	-0.2
MTHZ	Maungataniwha	1.69	80	P	Pn	13 42 55.8	+0.9
OGWZ	Otaki Gorge	1.70	168	P	Pn	13 42 56.8	+1.9
PRWZ	Pori Road	1.70	146	P	Pn	13 42 56.8	+1.9
KIWZ	Kapiti Island	1.71	175	P	Pn	13 42 56.7	+1.5
MUGZ	Murupara	1.75	68	P	Pn	13 42 55.8	+0.4
DUWZ	D'Urville Isla	1.75	200	P	Pn	13 42 57.0	+1.6
ARHZ	Aropaoanui	1.78	94	P	Pn	13 42 57.5	+1.8
KAHZ	Kahuranaki	1.79	112	P	Pn	13 42 57.9	+2.1
HOWZ	Holdsworth Sta	1.85	161	P	Pn	13 42 57.7	+1.4
RTZ	Ruatahuna	1.85	74	P	Pn	13 42 57.1	+0.7
PRHZ	Porangahau	1.85	127	P	Pn	13 42 58.3	+2.0
TIWZ	Tintock	1.85	151	P	Pn	13 42 57.9	+1.6
RAHZ	Arahi	1.86	83	P	Pn	13 42 58.0	+1.5
PXZ	Pawanui	1.88	118	P	Pn	13 42 58.4	+1.9
ANWZ	Angora Road	1.88	134	P	Pn	13 42 58.7	+2.1
BFZ	Birch Farm	1.93	143	P	Pn	13 42 58.5	+1.5
BFZ	Birch Farm	1.93	143	P	Pn	13 42 58.5	+1.5
MARZ	Manawahe	1.93	53	P	Pn	13 42 58.1	+1.0
WHHZ	Waihua	1.96	89	P	Pn	13 42 59.0	+1.6
CAW	Cannon Point	1.97	172	P	Pn	13 42 58.9	+1.6
MKAZ	Moumakai	2.08	10	P	Pn	13 42 59.8	+1.3
TCW	Tory Channel	2.08	189	P	Pn	13 43 00.1	+1.9
URZ	Urewera	2.08	65	P	Pn	13 42 58.7	+0.2
URZ	Urewera	2.08	65	P	Pn	13 42 58.7	+0.2
SNGZ	Shannon Statio	2.08	81	P	Pn	13 42 59.8	+1.3
AWAZ	Awhitu Peninsu	2.09	359	P	Pn	13 43 00.0	+1.5
MTW	Mount Morrison	2.09	163	P	Pn	13 42 59.8	+1.3
CPWZ	Castlepoint	2.09	147	P	Pn	13 43 00.6	+2.1
TMWZ	Te Maipa	2.15	155	P	Pn	13 43 00.6	+1.5
SNZO	South Karori	2.15	180	P	Pn	13 43 00.5	+1.4
ETAZ	East Tamaki Re	2.21	5	P	Pn	13 43 01.1	+1.4
RAGZ	Rawiri	2.21	74	P	Pn	13 43 00.8	+1.0
WTAZ	Waiatarua	2.22	357	P	Pn	13 43 01.6	+1.7
BHW	Baring Head	2.25	177	P	Pn	13 43 01.3	+1.3
PAWZ	Paruwai Farm	2.29	166	P	Pn	13 43 01.9	+1.4
NNZ	Nelson	2.30	206	P	Pn	13 43 02.0	+1.4
NNZ				S	S	13 43 33.3	-1.7
TKNZ	Takaka Hill	2.31	215	P	Pn	13 43 01.6	+0.9
KNZ	Kokohu	2.31	88	P	Pn	13 43 02.0	+1.3
TUWZ	Tuamarina	2.35	194	P	Pn	13 43 02.6	+1.6
MWZ	Matawai	2.35	70	P	Pn	13 43 01.8	+0.6
TRWZ	Traveller	2.36	162	P	Pn	13 43 02.7	+1.5
QRZ	Quartz Range	2.37	224	P	Pn	13 43 02.0	+0.8
QRZ	Quartz Range	2.37	224	P	Pn	13 43 02.1	+0.8
WIAZ	Waiheke Island	2.38	8	P	Pn	13 43 03.0	+1.5
RVAZ	Riverhead Bore	2.38	357	P	Pn	13 43 03.0	+1.5
RIGZ	Rimuhau	2.42	80	P	Pn	13 43 03.1	+1.2
PLWZ	Palliser	2.45	170	P	Pn	13 43 03.3	+1.2
PRGZ	Paritu Road	2.48	86	P	Pn	13 43 03.9	+1.4
MHGZ	Mahia Peninsul	2.48	91	P	Pn	13 43 04.2	+1.7
TKGZ	Te Karaka	2.55	75	P	Pn	13 43 04.5	+1.2
RUGZ	Raukumara Rang	2.61	64	P	Pn	13 43 03.7	-0.3
CMWZ	Cape Campbell	2.62	188	P	Pn	13 43 06.1	+2.2
BSWZ	Blackbirch Sta	2.63	194	P	Pn	13 43 06.0	+2.0
MRNZ	Matariki Terra	2.69	213	P	Pn	13 43 05.6	+1.0
TWGZ	Tauwhareparae	2.74	70	P	Pn	13 43 06.5	+1.2
HAZ	Te Kaha	2.79	61	P	Pn	13 43 05.5	-0.2
CNGZ	Carnagh Statio	2.81	77	P	Pn	13 43 07.4	+1.4
PKGZ	Pakihiroa	2.93	65	P	Pn	13 43 08.1	+0.8
THZ	Tophouse	2.95	207	P	Pn	13 43 08.7	+1.2
GRZ	Great Barrier	2.96	12	P	Pn	13 43 09.4	+1.7
PUZ	Puketiti	2.98	70	P	Pn	13 43 08.4	+0.4
WMGZ	Waiomatatini S	3.20	67	P	Pn	13 43 10.7	+0.4
MXZ	Matakaoa Point	3.24	62	P	Pn	13 43 13.0	+2.2
MXZ	Matakaoa Point	3.24	62	P	Pn	13 43 11.8	+1.0
KHZ	Kahutara	3.38	195	P	Pn	13 43 13.8	+1.5
KHZ	Kahutara	3.38	195	P	Pn	13 43 13.8	+1.5
DSZ	Denniston Nort	3.41	220	P	Pn	13 43 13.5	+0.8
GVZ	Greta Valley S	4.01	198	P	Pn	13 43 20.8	+0.9
LTZ	Lake Taylor	4.07	206	P	Pn	13 43 21.5	+1.0
AMCZ	Amberley	4.31	200	P	Pn	13 43 24.4	+1.0
INZ	Inchbonnie	4.34	214	P	Pn	13 43 24.0	+0.3
OXZ	Oxford	4.63	205	P	Pn	13 43 27.7	+0.4
MQZ	McQueen's Vall	4.80	198	P	Pn	13 43 29.3	-0.1
AKCZ	Akaroa Harbour	4.90	195	P	Pn	13 43 31.1	+0.5
WVZ	Waitaha Valley	4.93	216	P	Pn	13 43 31.3	+0.3
RACZ	Rakaia	4.96	202	P	Pn	13 43 31.9	+0.5
MHCZ	Mount Hutt	4.97	207	P	Pn	13 43 32.0	+0.5
WACZ	Wakanui South	5.25	203	P	Pn	13 43 35.5	+0.7
RPZ	Rata Peaks	5.32	210	P	Pn	13 43 36.8	+0.9
RPZ	Rata Peaks	5.32	210	P	Pn	13 43 36.2	+0.4
ARCZ	Arundel	5.47	208	P	Pn	13 43 38.0	+0.2
FOZ	Fox Glacier	5.72	219	P	Pn	13 43 41.4	+0.6
TMZ	Timaru	5.91	207	P	Pn	13 43 44.2	+0.9
LBZ	Lake Benmore	6.22	211	P	Pn	13 43 47.8	+0.5
ODZ	Otahua Downs	6.62	206	P	Pn	13 43 53.4	+1.2
ODZ	Otahua Downs	6.62	206	P	Pn	13 43 53.4	+1.2
JCZ	Jackson Bay	6.62	220	P	Pn	13 43 52.7	+0.3
JCZ	Jackson Bay	6.62	220	P	Pn	13 43 52.6	+0.2
EAZ	Earnscleugh	7.28	212	P	Pn	13 44 00.0	-0.6
HHSZ	Highcliff Hill	7.38	203	P	Pn	13 44 04.0	+2.1
TUZ	Tuapeka	7.76	207	P	Pn	13 44 08.8	+2.0
MLZ	Mavora Lakes	7.90	216	P	Pn	13 44 10.1	+1.5
WHZ	Wether Hill Ro	8.38	214	P	Pn	13 44 14.2	-0.5
SYZ	Scrubby Hill	8.43	207	P	Pn	13 44 18.1	+2.7
SYZ	Scrubby Hill	8.43	207	P	Pn	13 44 17.0	+1.7

*IDC **16** 13:47:01.4±3.5,24°.00N×109°.04W, h0km, mb3.5/3, mbtmp3.6/8, ML3.6/5, MS3.7/26, Error ellipse: s-maj=49.7km s-min=12.2km az=160.0*
*MEX **16** 13:47:04.5±0.6,24°.13N×108°.98W, h10km, MD4.3*
ISC 16 13:47:03.6±1.2,24°.14N±0°.09×109°.03W±0°.06, h10km, n41, σ1§84/18, mb3.6/3, MS3.6/20, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.17	268	Pg	Pn	13 47 23.7	-2.3
	215nm,0.3s,baz=77,slow=9.0,SNR=84						
LPIG				Lg	Lg	13 47 38.6	
	590nm,0.3s,baz=151,slow=19,SNR=11						
LPIG	La Paz	1.17	268	*i* P	Pn	13 47 23.7	-2.3
TSIG	Topolobambo	1.46	360	*e*P	Pn	13 47 27.4	-2.6
SSIG	Sanalona	1.85	68	*e*P	Pn	13 47 32.0	-3.5
MAIG	Mazatlaan	2.57	111	*i* P	Pn	13 47 43.9	-1.4
CSIG	Choix	2.75	12	*e*P	Pn	13 47 46.7	-1.1
PDIG	Papasquiaro	3.43	74	*e*P	Pn	13 47 56.1	-1.2
HPIG		4.12	47	*i* P	Pn	13 48 07.4	+0.6
BCIG	La Boquilla	4.70	43	*e*P	Pn	13 48 13.9	-0.8
TXAR	Lajitas Array	7.05	42	Pn	Pn	13 48 46.9	-0.1
	0.3nm,0.3s,baz=218,slow=14,SNR=11						
TXAR				Sn	Sn	13 50 05.3	-2.1
	0.5nm,0.3s,baz=222,slow=20,SNR=1.0						
TXAR				Lg	Lg	13 50 45.2	
	baz=242,slow=25						
	0.8nm,0.4s						
ANMO	Albuquerque	11.00	11	Pn	Pn	13 49 43.5	+2.3
	0.1nm,0.3s,baz=126,slow=14,SNR=5.8						
ANMO				Lg	Lg	13 52 55.9	
	0.1nm,0.3s,baz=168,slow=22,SNR=2.4						
	1.2nm,1.0s						
PFO	Pinyon Flats O	11.46	327	LR	LR	13 54 06.0	
	comp=Z,139nm,18.4s,baz=154,slow=37						
CMIG	Matias Romero	14.98	115	LR	LR	13 56 24.3	
	comp=Z,529nm,19.5s,baz=287,slow=38						
NVAR	Mina Array Bea	16.29	333	Pn	P	13 50 56.7	+1.0
	0.1nm,0.3s,baz=157,slow=12,SNR=26						
NVAR				LR	LR	13 57 17.9	
	comp=Z,124nm,18.2s,baz=152,slow=38						
	4.5nm,0.9s						
ELK	Elko	17.36	344	P	P	13 51 08.4	+0.8
	0.1nm,0.3s,baz=170,slow=10,SNR=4.5						
ELK				LR	LR	13 58 13.0	
	comp=Z,222nm,18.9s,baz=172,slow=38						
	1.3nm,0.9s						
PDAR	Pinedale Array	18.58	359	P	P	13 51 22.2	+1.1
	0.1nm,0.3s,baz=175,slow=12,SNR=18						
PDAR				LR	LR	13 58 46.8	
	comp=Z,201nm,18.5s,baz=176,slow=38						
	3.1nm,0.9s						
TEIG	Tepich	19.61	97	LR	LR	14 01 14.4	
	comp=Z,822nm,18.7s,baz=85,slow=44						
YBH	Yreka Blue Hor	20.92	330	LR	LR	13 59 20.3	
	comp=Z,100nm,19.1s,baz=165,slow=35						
NEW	Newport	24.92	347	LR	LR	14 01 22.2	
	comp=Z,134nm,18.8s,baz=178,slow=34						
JTS	Las Juntas de	26.75	117	LR	LR	14 02 11.3	
	comp=Z,109nm,19.1s,baz=307,slow=34						
ULM	Lac du Bonnet	28.00	18	LR	LR	14 04 35.8	
	comp=Z,144nm,18.5s,baz=196,slow=38						
SADO	Sadowa	31.83	42	LR	LR	14 06 57.3	
	comp=Z,146nm,21.1s,baz=278,slow=37						
DLBC	Dease Lake	37.39	342	P	P	13 54 15.9	-0.7
	1.3nm,0.9s,baz=162,slow=9.6,SNR=1.7						
	1.3nm,0.9s						
ROSC	El Rosal	38.52	114	LR	LR	14 10 20.5	
	comp=Z,88nm,19.5s,baz=54,slow=36						
YKA	Yellowknife Ar	38.52	356	P	P	13 54 25.9	-0.1
	0.3nm,0.8s,baz=172,slow=7.6,SNR=7.7						
YKA				LR	LR	14 12 53.4	
	comp=Z,153nm,18.3s,baz=7.0,slow=40						
	0.3nm,0.8s						
SDV	Santo Domingo	39.65	106	LR	LR	14 12 56.2	
	comp=Z,80nm,18.6s,baz=14,slow=39						
SJG	San Juan	40.33	90	LR	LR	14 13 11.8	
	comp=Z,44nm,19.2s,baz=228,slow=39						
SCHQ	Schefferville	43.67	34	LR	LR	14 13 40.4	
	comp=Z,93nm,18.4s,baz=13,slow=36						
INK	Inuvik	46.64	348	LR	LR	14 15 43.0	
	comp=Z,112nm,18.1s,baz=178,slow=37						
ILAR	Eielson Array	47.42	339	P	P	13 55 39.7	+1.7
	0.5nm,0.9s,baz=142,slow=7.2,SNR=5.0						
ILAR				LR	LR	14 15 50.4	
	comp=Z,96nm,19.2s,baz=92,slow=36						
	0.5nm,0.9s						
FRB	Frobisher Bay	47.68	23	LR	LR	14 16 35.3	
	comp=Z,152nm,18.9s,baz=316,slow=37						
NNA	Nana	47.73	135	LR	LR	14 12 31.9	
	comp=Z,30nm,20.2s,baz=346,slow=32						
RPN	Rapa Nui	50.97	180	LR	LR	14 12 44.7	
	comp=Z,19nm,20.8s,baz=18,slow=30						
RES	Resolute Bay	51.13	5	LR	LR	14 18 53.0	
	comp=Z,155nm,18.9s,baz=333,slow=37						
PPT	Papeete	57.30	227	LR	LR	14 16 23.6	
	comp=Z,32nm,18.3s,baz=35,slow=31						
MDP	Montagnes des	57.34	100	LR	LR	14 23 00.7	
	comp=Z,30nm,21.6s,baz=284,slow=38						
H03N2	Juan Fernandez	64.03	152	T	T	15 07 14.9	
	baz=331,slow=78,SNR=6.2						
H03N1	Juan Fernandez	64.04	152	T	T	15 07 14.6	
	baz=331,slow=78,SNR=7.1						
H03N3	Juan Fernandez	64.05	152	T	T	15 07 17.9	
	baz=331,slow=78,SNR=7.0						
RAR	Rarotonga	66.85	232	LR	LR	14 18 59.9	
	comp=Z,69nm,21.1s,baz=319,slow=29						
BDFB	Brasilia	71.49	117	LR	LR	14 29 54.9	
	comp=Z,66nm,18.6s,baz=53,slow=36						

ISK 16 13:53:37.9, 40°.58N×41°.51E, h5km, ML1.6/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.64	91	Pg	Pb	13 53 51.4	-0.3
SENK				Sg	Sb	13 54 01.4	+0.4
BCA	Borcka	0.87	5	Pg	Pb	13 53 55.8	+0.3
BCA				Sg	Sn	13 54 08.9	-1.1
BAYT	Aydıntepe-Bayb	1.06	261	Pg	Pn	13 53 59.5	-0.1
BAYT				Sg	Sn	13 54 15.2	+0.3

AFAD 16 13:53:46.4±0.0, 40°.92N×40°.93E, h7km±5km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZDR	Rize	0.31	245	P	Pg	13 53 52.2	-0.3
IZDR				S	Sb	13 53 58.7	-0.8
IZDR				*i* AML	AML	13 53 59.0	
	comp=E,19nm,0.4s						
DBAD	Bademkaya	0.59	80	P	Pg	13 53 57.5	-0.3
DBAD				S	Sb	13 54 07.0	-0.7
DDEM	Demirkent	0.62	92	P	Pg	13 53 58.8	+0.4
DDEM				S	Sb	13 54 10.4	+1.6
DDEM				*i* AML	AML	13 54 14.0	
	comp=N,14nm,0.4s						
DDEM				*i* AML	AML	13 54 14.0	
	comp=E,8.2nm,0.3s						
DAGI	Agillar	0.76	78	P	Pg	13 54 00.3	-0.8
DAGI				S	Sb	13 54 12.2	-0.5
KELT	Kelkit	1.49	239	P	Pn	13 54 12.2	-1.5

*NEIC **16** 13:55:23.4±1.4, 55°.98N±0°.07×150°.0W±0°.1, h8km±8km, ML3.6/44, ML3.4(AEIC), Error ellipse: s-maj=11.0km s-min=9.0km az=200.0*
*AEIC **16** 13:55:27.5±1.5, 56°.0N±0°.1×150°.1W±0°.1, h5km±8km, Error ellipse: s-maj=14.8km s-min=9.3km az=179.0*
ISC 16 13:55:23.3±2.4, 56°.0N±0°.1×150°.05W±0°.07, h10km, n191, σ1§01/191, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.16	305		Pn	13 55 58.1	-1.2
OHAK	Old Harbor	2.16	305	P	Pn	13 55 58.6	-0.6
	baz=123						
OHAK				S	Sn	13 56 23.7	-2.3
	baz=123						
KDAK	Kodiak Island	2.25	323		Pn	13 56 00.4	-0.1
KDAK	Kodiak Island	2.25	323		Sn	13 56 27.5	-0.8
SII	Sitkinak Islan	2.37	285	Pn	Pn	13 56 01.7	-0.5
SII				IAML		13 56 34.7	
	comp=E,165nm,1.4s						
Q20K	Shuyak Island	2.89	335	P	Pn	13 56 09.7	+0.3
	baz=153						
Q20K				S	Sn	13 56 43.6	-0.5
	baz=153						
SYI	Shuyak Island	2.89	335		Pn	13 56 09.7	+0.4
SYI	Shuyak Island	2.89	335		Sn	13 56 43.6	-0.5
KAHG	Katmai Hook Gl	3.48	317		Pn	13 56 18.8	+1.3
Q19K	Cape Douglas,	3.50	328		Pn	13 56 18.2	+0.4
Q19K	Cape Douglas,	3.50	328	IAML		13 57 11.8	
	comp=N,176nm,0.7s						
Q19K	Cape Douglas,	3.50	328	P	Pn	13 56 18.2	+0.4
	baz=145						
CNPM	China Poot	3.57	350		Pn	13 56 17.2	-1.6
CNPM				IAML		13 57 02.6	
	comp=E,71nm,0.6s						
CNPM	China Poot	3.57	350		Sn	13 57 00.1	-1.0
ACHA	Angle Creek He	3.62	310		Pn	13 56 20.2	+0.8
ANCK	Angle Creek	3.69	309		Pn	13 56 21.3	+0.9
HOM	Homer	3.75	348	Pn	Pn	13 56 23.7	+2.5
HOM				IAML		13 58 11.0	
	comp=E,188nm,1.3s						
BRSE	Bradley Lake S	3.75	355		Pn	13 56 20.9	-0.4
BRSE					Sn	13 57 03.5	-1.9
BRSE	Bradley Lake S	3.75	355	P	Pn	13 56 20.9	-0.4
	baz=174						
BRSE				S	Sn	13 57 03.5	-1.9
	baz=174						
BRLK	Bradley Lake	3.78	354	Pn	Pn	13 56 21.5	-0.2
BRLK				IAML		13 57 07.5	
	comp=E,48nm,0.5s						
CNTC	Contact Creek	3.89	308		Pn	13 56 23.2	-0.1
Q17K	Contact Creek	3.90	308	P	Pn	13 56 23.2	-0.1
	baz=123						
Q23K	Middleton Isla	3.95	29		Pn	13 56 23.9	-0.1
Q23K	Middleton Isla	3.95	29	P	Pn	13 56 23.9	-0.1
	baz=212						
MID	Middleton Isla	3.96	29	Pn	Pn	13 56 23.4	-0.5
P19K	Oil Pt	4.02	336	Pn	Pn	13 56 26.4	+1.5
P19K				IAML		13 57 16.9	
	comp=N,114nm,0.7s						
P19K				IAML		13 57 22.8	
	comp=E,130nm,0.6s						
P19K	Oil Pt	4.02	336	P	Pn	13 56 25.8	+0.9
	baz=154						
P23K	Montague Islan	4.23	18		Pn	13 56 27.6	-0.2
P23K	Montague Islan	4.23	18	P	Pn	13 56 27.6	-0.2
	baz=201						
O20K	Slope Mountain	4.30	343		Pn	13 56 29.2	+0.4
O20K	Slope Mountain	4.30	343	P	Pn	13 56 29.2	+0.4
	baz=161						
ILSW	Iliamna Southw	4.30	339		Pn	13 56 29.5	+0.6
ILSW				IAML		13 57 23.3	
	comp=N,36nm,0.7s						
ILSW				IAML		13 57 24.9	
	comp=E,38nm,0.8s						
IVE	Iliamna Volcan	4.31	340		Pn	13 56 29.5	+0.6
P18K	Big Mountain,	4.38	323		Pn	13 56 30.7	+0.9
P18K	Big Mountain,	4.38	323	P	Pn	13 56 30.1	+0.3
	baz=139						
Q16K	King Salmon	4.46	309		Pn	13 56 31.9	+1.0
Q16K	King Salmon	4.46	309	P	Pn	13 56 31.8	+1.0
	baz=124						
RDSO	Redoubt South	4.67	343		Pn	13 56 33.5	-0.4
RSO	Redoubt South	4.68	343	Pn	Pn	13 56 34.2	+0.1
P17K	Kvichak River	4.68	315		Pn	13 56 34.7	+0.7
P17K	Kvichak River	4.68	315	P	Pn	13 56 34.7	+0.7
	baz=130						
O18K	Koktuh Hills	4.73	327		Pn	13 56 34.9	+0.3
O18K	Koktuh Hills	4.73	327	IAML		13 57 33.3	
	comp=E,33nm,3.2s						
O18K				IAML		13 57 40.4	
	comp=N,30nm,3.8s						
O18K	Koktuh Hills	4.73	327	P	Pn	13 56 34.9	+0.3
	baz=142						
RDT	Redoubt	4.73	346		Pn	13 56 34.6	-0.1
O19K	Port Alsworth	4.76	333		Pn	13 56 35.1	+0.1
O19K	Port Alsworth	4.76	333	P	Pn	13 56 35.1	+0.1
	baz=150						
HIN	Hinchinbrook I	4.77	22	Pn	Pn	13 56 34.9	-0.4
HIN				IAML		13 57 31.1	

SKT	Skwentna	6.03	353			Pn	13 56 55.9	+3.5
TGL	Tana Glacier	6.08	36			Pn	13 56 53.1	-0.1
ISLE	Juniper Island	6.13	38			Pn	13 56 55.3	+1.3
O15K	Ungalikthiuk R	6.13	305			Pn	13 56 54.4	+0.5
O15K	Ungalikthiuk R baz=117	6.13	305	P		Pn	13 56 54.4	+0.5
BAGL	Bagley Icefiel	6.14	40			Pn	13 56 54.1	+0.1
M18K	Stony River	6.25	334			Pn	13 56 55.5	0.0
M18K	Stony River baz=149	6.25	334	P		Pn	13 56 55.6	0.0
VRDI	Verde Repeater	6.26	31	Pn		Pn	13 56 56.0	+0.2
N25K	Chitina, Valde	6.28	25			Pn	13 56 56.4	+0.4
N25K	Chitina, Valde baz=209	6.28	25	P		Pn	13 56 56.4	+0.4
GLB	Gilahina Butte	6.33	28			Pn	13 56 57.1	+0.5
KIAG	Kiagna River	6.36	36			Pn	13 56 57.3	+0.1
N16K	Nishlik Lake	6.41	318			Pn	13 56 59.0	+1.2
N16K	Nishlik Lake baz=131	6.41	318	P		Pn	13 56 59.0	+1.2
SAMH	Samovar Hills	6.41	46			Pn	13 56 58.8	+0.9
M24K	Tolsona, Glenn	6.42	17			Pn	13 56 59.3	+1.4
M24K	Tolsona, Glenn baz=200	6.42	17	P		Pn	13 56 58.9	+1.0
GRNC	Granite Creek	6.43	39			Pn	13 56 58.8	+0.7
TABL	Table Mountain	6.46	43			Pn	13 56 58.8	+0.2
MCARA	McCarthy VSAT	6.50	31			Pn	13 56 59.1	+0.1
MCARA	McCarthy VSAT baz=217	6.50	31	P		Pn	13 56 59.1	+0.1
PTPK	Patty Peak	6.52	34			Pn	13 56 59.2	-0.2
PCA	Pinnacle	6.61	48			Pn	13 57 00.4	-0.1
PINM	Pinnacle baz=236	6.61	48	P		Pn	13 57 00.4	-0.1
M17K	Holitna River	6.62	328			Pn	13 57 01.0	+0.4
M17K	Holitna River baz=142	6.62	328	P		Pn	13 57 01.0	+0.4
WASW	Wrangell South	6.66	25			Pn	13 57 02.8	+1.5
BARN	Barnard Glacie	6.69	38			Pn	13 57 02.2	+0.5
CTG	Chitna Glacier baz=226	6.74	39	P		Pn	13 57 02.9	+0.6
CTGM	Chitina Glacie	6.74	39			Pn	13 57 02.9	+0.6
N15K	Kwethluk River	6.75	312			Pn	13 57 03.5	+1.1
N15K	Kwethluk River baz=124	6.75	312	P		Pn	13 57 03.5	+1.1
PNL	Peninsula	6.76	53			Pn	13 57 03.0	+0.5
PNL	Peninsula baz=242	6.76	53	P		Pn	13 57 03.0	+0.5
LOGN	Logan Glacier	6.76	41			Pn	13 57 02.9	+0.3
BCPM	Bancas Point	6.80	50			Pn	13 57 04.2	+1.2
M16K	Timber Creek	6.85	321			Pn	13 57 04.7	+1.0
M16K	Timber Creek baz=133	6.85	321	P		Pn	13 57 04.7	+1.0
HARP	HAARP	6.87	19			Pn	13 57 06.0	+1.9
HARP	HAARP baz=204	6.87	19	P		Pn	13 57 06.0	+1.9
M15K	Kasigluk River	7.30	314			Pn	13 57 11.2	+1.4
M15K	Kasigluk River baz=126	7.30	314	P		Pn	13 57 11.2	+1.4
M26K	Nabesna, AK	7.35	27			Pn	13 57 12.2	+1.5
M26K	Nabesna, AK baz=213	7.35	27	P		Pn	13 57 12.2	+1.5
O29M	Mount Kennedy	7.43	50			Pn	13 57 12.8	+1.0
O29M	Mount Kennedy baz=240	7.43	50	P		Pn	13 57 12.8	+1.0
L17K	Donlin	7.46	329			Pn	13 57 13.0	+1.0
L17K	Donlin baz=142	7.46	329	P		Pn	13 57 13.0	+1.0
P29M	Windy Craggy	7.50	56			Pn	13 57 12.4	-0.3
P29M	Windy Craggy baz=246	7.50	56	P		Pn	13 57 12.4	-0.3
L16K	Owhat River	7.51	323			Pn	13 57 13.0	+0.3
L16K	Owhat River baz=136	7.51	323	P		Pn	13 57 13.0	+0.3
YUK3	Moose Creek	7.61	37			Pn	13 57 15.0	+0.7
YUK3	Moose Creek baz=225	7.61	37	P		Pn	13 57 15.0	+0.7
M27K	Edge Creek, AK	7.61	30			Pn	13 57 15.1	+0.8
M27K	Edge Creek, AK baz=217	7.61	30	P		Pn	13 57 15.1	+0.8
MENT	Mentasta	7.65	22	Pn		Pn	13 57 16.1	+1.4
YUK7	Dusty Glacier	7.73	49			Pn	13 57 17.5	+1.5
S31K	Pelican	7.79	70	Pn		Pn	13 57 15.5	-1.2
L26K	Log Cabin Wild	7.81	23			Pn	13 57 19.0	+2.1
M14K	Bethel	7.85	312	Pn		Pn	13 57 18.0	+0.6
HYT	Haines Junctio	8.15	49	Pn		Pn	13 57 21.2	-0.5
L27K	Beaver Creek,	8.20	27	Pn		Pn	13 57 23.4	+1.2
BCAR	Beaver Creek A	8.21	27	Pn		Pn	13 57 23.6	+1.1
M13K	Dall Lake	8.28	308	Pn		Pn	13 57 24.6	+1.3
J20K	Nowinta River	8.43	348	Pn		Pn	13 57 27.8	+2.4
L14K	Kuka Creek	8.46	314	Pn		Pn	13 57 26.6	+0.8
J19K	Poorman	8.47	343	Pn		Pn	13 57 28.9	+3.0
SCRK	Sand Creek	8.54	18	Pn		Pn	13 57 27.1	+0.2
HDA	Harding Lake	8.56	9	Pn		Pn	13 57 29.1	+2.0
SKAG	Skagway	8.59	60	Pn		Pn	13 57 28.5	+0.9
K15K	Wolf Creek Mou	8.61	322	Pn		Pn	13 57 29.9	+2.0
N30M	Aishikik Lake	8.66	46	Pn		Pn	13 57 29.0	+0.4
O30N	Mendenhall	8.73	51	Pn		Pn	13 57 26.4	-3.2
M29M	Somme Creek	8.75	38			Pn	13 57 31.1	+1.2
IL31		8.92	9	Pn		Pn	13 57 33.8	+1.8
K27K	Chicken	8.96	23	Pn		Pn	13 57 33.4	+0.8
MDM	Murphy Dome	9.02	5	Pn		Pn	13 57 34.3	+0.9
J16K	Anvik River	9.02	328	Pn		Pn	13 57 35.0	+1.6
J26L	Joseph Creek	9.09	18	Pn		Pn	13 57 35.4	+0.9
I23K	Minto, Yukon-K	9.17	2	Pn		Pn	13 57 36.5	+1.1
WHY	Whitehorse	9.22	54	Pn		Pn	13 57 37.0	+0.7
L29M	L29M	9.32	35	Pn		Pn	13 57 38.2	+0.6
P32M	Atlin	9.42	61	Pn		Pn	13 57 38.9	0.0
M30M	Minto, Yukon	9.43	40	Pn		Pn	13 57 39.9	+0.8
DAWY	Dawson	9.66	29	Pn		Pn	13 57 43.8	+1.6
H21K	Melozitna Rive	9.76	353	Pn		Pn	13 57 44.3	+0.7
PRP	Porcupine Dome	9.78	11			Pn	13 57 43.9	-0.1
EGAK	Eagle	9.81	23	Pn		Pn	13 57 45.5	+1.2
H18K	Honhosa River	10.02	339	Pn		Pn	13 57 48.1	+0.9
P33M	Teslin, Yukon	10.03	58			Pn	13 57 47.9	+0.6
K29M	Barlow Dome	10.04	33	Pn		Pn	13 57 48.0	+0.5
M31M	Drury Creek, Y	10.14	46			Pn	13 57 50.8	+2.0
IMAR	Indian Mountai	10.16	351	Pn		Pn	13 57 49.2	+0.3
I28M	Miner Creek	10.66	23	Pn		Pn	13 57 57.5	+1.5
G23K	Bananza Creek	10.73	0	Pn		Pn	13 57 57.7	+0.9
R33M	Jennings River	10.74	64	Pn		Pn	13 57 57.5	+0.4
FYU	Fort Yukon	10.83	10	Pn		Pn	13 57 58.5	+0.3
J30M	Hart River	10.92	33	Pn		Pn	13 58 01.4	+1.8
BMAR	Burnt Mountain	11.73	10	Pn		Pn	13 58 10.2	-0.4

MOS ***16*** *13:57:53.6±1.1, 43.˙98N×138.˙20E, h249km, mb4.3/28, Error ellipse: s-maj=6.7km s-min=5.1km az=101.5*

NIED ***16*** *13:57:55.1, 43.˙80N×138.˙33E, h277km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.42; $M_{t\theta}$1.47; $M_{\theta\phi}$-0.05; $M_{r\theta}$0.67; $M_{t\phi}$-1.00; $M_{r\phi}$0.86; Fault plane solution: M_o2.07000×10^{16} NP1: ϕ_s267.00000°, δ58.00000°, λ-131.00000°. NP2: ϕ_s145.00000°, δ50.00000°, λ-44.00000°.*

NEIC ***16*** *13:57:55.6±1.5, 43.˙91N±0.˙06×138.˙21E±0.˙09, h255km±7km, mb4.4/120 Error ellipse: s-maj=10.4km s-min=8.3km az=127.0*

SKHL ***16*** *13:57:55.1±0.1, 43.˙90N×138.˙30E, h266km±9km, mb5.1/13, mbv5.6/3, msh5.3/3, msha5.6/9*

IDC ***16*** *13:57:55.2±0.6, 43.˙97N×138.˙21E, h255km±5km, mb4.0/32, mbtmp4.6/42, Error ellipse: s-maj=6.6km s-min=6.2km az=162.0*

JMA ***16*** *13:57:55.1±0.3, 43.˙8N±1.˙0×13.˙8E±.˚, h277km±2km, MD4.5/39, MW4.8/39, EASTERN SEA OF JAPAN*

ISC 16 13:57:55.2±0.5, 43.92N±0.˙03×138.˙26E±0.˙03, h260km±4km, n708, σ1$30/751, mb4.4/126, 53C-16D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEY	**Ternei**	**1.62**	**314**	⇑	*eP*		**Pn**	**13 58 35.2**	**-0.1**
TEY					*e*			13 59 07.4	
TEY	comp=E,470nm,0.8s					pmax	pmax		
TEY	comp=N,500nm,0.7s					pmax	pmax		
TEY	comp=Z,2μm,0.6s					pmax	pmax		
TEY	comp=N,600nm,1.6s					pmax	pmax		
TEY	comp=E,700nm,1.6s					pmax	pmax		
TEY	comp=Z,2μm,1.6s					pmax	pmax		
TEY	**Ternei**	**1.62**	**314**		*eP*		**Pn**	**13 58 36.0**	**+0.7**
TEY	comp=Z,2μm,2.0s					AMB	AMB	13 58 36.9	
TEY	comp=Z,440nm,0.6s					AMB	AMB	13 58 37.7	
TEY						*eS*	**S**	**13 59 07.4**	**+0.4**
TEY	comp=Z,280nm,0.6s					A	A	13 59 08.5	
TEY	comp=Z,210nm,0.6s					A	A	13 59 08.5	
TEY	comp=Z,2μm,2.0s					A	A	13 59 09.1	
TEY	comp=Z,2μm,2.0s					A	A	13 59 09.1	
JSK	**Shakotan**	**1.71**	**109**		*eP*		**Pn**	**13 58 36.8**	**+0.8**
JSK					*eS*		**S**	**13 59 09.2**	**+0.9**
JSK	**Shakotan** comp=E,8.0nm,2.7s,comp=N,4.0nm,2.1s	**1.71**	**109**		A		A	13 58 36.8	
JSH	**Shimam** comp=E,3.0nm,6.9s,comp=N,3.0nm,4.2s	**1.83**	**134**		A		A	13 58 37.7	
JOSM	**Okushiri--Mats**	**2.04**	**154**		*eP*		**Pn**	**13 58 39.5**	**+0.5**
JOSM					*eS*		**S**	**13 59 13.7**	**+0.2**
JYG	**Yagishiri** comp=E,5.0nm,3.5s,comp=N,6.0nm,3.5s	**2.33**	**76**		A		A	13 58 42.8	
JYM2	**Yakumo 2** comp=E,2.0nm,5.9s,comp=N,2.0nm,1.2s	**2.38**	**139**		A		A	13 58 42.2	
JRBN	**Rebuntou**	**2.50**	**52**		*eP*		**Pn**	**13 58 44.2**	**+1.1**
JRBN					*eS*		**S**	**13 59 21.9**	**+0.8**
JRBN	**Rebuntou** comp=E,6.0nm,3.1s,comp=N,4.0nm,2.1s	**2.50**	**52**		A		A	13 58 44.2	
JHR	**Hokuryu**	**2.52**	**93**		*eP*		**Pn**	**13 58 44.5**	**+1.2**
JHR	**Hokuryu** comp=E,5.0nm,2.8s,comp=N,5.0nm,2.7s	**2.52**	**93**		A		A	13 58 44.5	
JEW	**Eniwo**	**2.57**	**114**		*eP*		**Pn**	**13 58 44.9**	**+1.0**
JSS	**Shosan**	**2.63**	**78**		*eP*		**Pn**	**13 58 46.3**	**+1.9**
JSS					*eS*		**S**	**13 59 25.6**	**+2.2**
JSS	**Shosan** comp=E,5.0nm,5.1s,comp=N,7.0nm,5.8s	**2.63**	**78**		A		A	13 58 46.3	
JOMM	**Oshimamatsumae**	**2.72**	**151**		*eP*		**Pn**	**13 58 45.3**	**-0.2**
JOMM					*eS*		**S**	**13 59 24.8**	**-0.4**
JOMM	**Oshimamatsumae** comp=E,4.0nm,4.4s,comp=N,3.0nm,2.3s	**2.72**	**151**		A		A	13 58 45.3	
JWK2	**Keihoku**	**2.95**	**61**		*eP*		**Pn**	**13 58 49.9**	**+2.2**
JWK2					*eS*		**S**	**13 59 32.6**	**+3.3**
JWK2	**Keihoku** comp=E,5.0nm,4.4s,comp=N,7.0nm,2.7s	**2.95**	**61**		A		A	13 58 49.9	
ASAJ	**Asahikawa** comp=N,70nm,0.4s,baz=277,slow=7.2,SNR=178	**3.14**	**85**		P		**Pn**	**13 58 50.5**	**+0.7**
ASAJ	comp=N,106nm,0.8s,baz=216,slow=14,SNR=13				S		**S**	**13 59 33.7**	**+0.7**
JKA	**Kamikawa-asahi**	**3.14**	**85**		Pn		**Pn**	**13 58 49.6**	**-0.2**
JKK2	**Kamakawa 2**	**3.25**	**89**		*eP*		**Pn**	**13 58 51.9**	**+0.9**
JKK2					*eS*		**S**	**13 59 36.6**	**+1.4**
JOT	**Ohata**	**3.27**	**140**		*eP*		**Pn**	**13 58 50.9**	**-0.4**
JSE	**Soyaes**	**3.27**	**70**		*eP*		**Pn**	**13 58 52.4**	**+1.3**
JSE					*eS*		**S**	**13 59 38.0**	**+2.5**
JSE	**Soyaes** comp=E,6.0nm,4.9s,comp=N,14nm,3.9s	**3.27**	**70**		A		A	13 58 52.4	
JSI2	**Shiura 2** comp=E,6.0nm,1.3s,comp=N,4.0nm,2.8s	**3.28**	**150**		A		A	13 58 51.0	
JAHD	**Aomorihigashid** comp=E,7.0nm,1.5s,comp=N,7.0nm,1.5s	**3.50**	**138**		A		A	13 58 53.5	
JIW	**Iwasaki** comp=E,7.0nm,1.3s,comp=N,3.0nm,4.7s	**3.57**	**158**		A		A	13 58 54.2	
JHHS	**Hirosakihyakuz** comp=E,7.0nm,1.1s,comp=N,6.0nm,4.2s	**3.62**	**154**		A		A	13 58 54.8	
JNBK	**Urakawa-nobuka**	**3.68**	**115**		*eP*		**Pn**	**13 58 55.5**	**-0.3**
JTM	**Tenmabayashi**	**3.76**	**145**		Pn		**Pn**	**13 58 55.8**	**-1.0**
JTM	**Tenmabayashi**	**3.76**	**145**		P		**Pn**	**13 58 55.9**	**-0.9**
JCH	**Churui**	**3.95**	**108**		*eP*		**Pn**	**13 58 57.6**	**-1.3**
JCH					*eS*		**S**	**13 59 45.1**	**-4.4**
JAR	**Ashorobuto**	**4.05**	**97**		*eP*		**Pn**	**13 59 00.3**	**+0.2**
JAR					*eS*		**S**	**13 59 51.0**	**-0.6**
ERM	**Erimo**	**4.07**	**116**		Pn		**Pn**	**13 59 00.6**	**+0.4**
ERM	**Erimo**	**4.07**	**116**		*i P*		**Pn**	**13 59 00.7**	**+0.4**
JTKR	**Abashiri--Toko**	**4.08**	**87**		*eP*		**Pn**	**13 59 01.0**	**+0.6**
JTKR					*eS*		**S**	**13 59 52.2**	**+0.1**
JANG	**Nango**	**4.29**	**145**		*eP*		**Pn**	**13 59 01.4**	**-1.5**
YSS	**Yuzh-Sakhalins**	**4.38**	**45**		Pn		**Pn**	**13 59 04.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.38**	**45**		P		**Pn**	**13 59 05.1**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.38**	**45**		*ae*	*P*	**Pn**	**13 59 04.8**	**+1.0**
YSS						*eS*	**S**	**13 59 58.3**	**-0.2**
YSS	comp=Z,740nm,1.1s					pmax	pmax		
YSS	comp=N,600μm,0.8s					pmax	pmax		
YSS	comp=N,2μm,5.5s					smax	smax		
YSS	comp=Z,800nm,13.0s					MLR	MLR		
YSS	**Yuzh-Sakhalins**	**4.38**	**45**		*eP*		**Pn**	**13 59 04.8**	**+1.0**
YSS	comp=Z,2μm,1.0s					AMB	AMB	13 59 06.8	
YSS	comp=Z,780nm,0.4s					AMB	AMB	13 59 07.0	
YSS						*eS*	**S**	**13 59 59.2**	**+0.7**
USA0B	**Ussuriysk Arra**	**4.53**	**276**				**Pn**	**13 59 05.7**	**+0.1**
USA0B	**Ussuriysk Arra**	**4.53**	**276**		*d i P*		**Pn**	**13 59 05.7**	**+0.1**
USRK	**Ussuriysk Ar.**	**4.53**	**276**		Pn		**Pn**	**13 59 05.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**4.53**	**276**		P		**Pn**	**13 59 06.0**	**+0.4**
USRK	comp=Z,48nm,0.7s,baz=90,slow=12,SNR=78					S	**S**	**13 59 59.9**	**-1.8**
JAK	**Akkeshi** comp=Z,18nm,0.8s,baz=83,slow=16,SNR=6.5	**4.78**	**99**		*eP*		**Pn**	**13 59 07.5**	**-1.1**
JAK					*eS*		**S**	**14 00 02.2**	**-4.9**
AKK	**Akkeshi**	**4.88**	**98**		*eP*		**Pn**	**13 59 08.5**	**-1.3**
JRA	**Rausu**	**4.96**	**87**		*eP*		**Pn**	**13 59 11.7**	**+0.9**
RUSJ	**Misakicho**	**5.04**	**86**	⇓	*iP*		**Pn**	**13 59 13.5**	**+1.7**
RUSJ					*eS*		**S**	**14 00 12.6**	**-0.4**
KHBR	**Khabarovsk**	**5.07**	**335**		*eP*		**Pn**	**13 59 13.2**	**+1.2**
MSHR	**Mys Shultsa**	**5.36**	**258**		*ce*	*P*	**Pn**	**13 59 16.8**	**+1.2**
MSHR	comp=Z,44nm,0.6s					pmax	pmax		
JMK	**Ichinoseki**	**5.44**	**155**		*eP*		**Pn**	**13 59 14.6**	**-2.1**
NMR	**Nemuro--Hokkai**	**5.45**	**93**		*eP*		**Pn**	**13 59 14.8**	**-1.9**
NMR					*eS*		**S**	**14 00 15.6**	**-6.3**
NMR	**Nemuro--Hokkai**	**5.45**	**93**		*eP*		**Pn**	**13 59 15.8**	**-0.9**
NEM2	**Nemuro 2**	**5.46**	**93**		*eP*		**Pn**	**13 59 15.2**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**5.49**	**86**		*d i P*		**Pn**	**13 59 18.0**	**+0.8**
YUK						*eS*	**S**	**14 00 20.1**	**-2.7**
YUK	comp=Z,114nm,0.4s					pmax	pmax		
YUK	comp=N,54nm,0.2s					pmax	pmax		
YUK	comp=E,18nm,0.2s					pmax	pmax		
YUK	comp=N,329nm,0.5s					smax	smax		
YUK	comp=E,204nm,0.4s					smax	smax		
YUK	**Yuzh-Kuril'sk**	**5.49**	**86**		*eS*		**S**	**14 00 21.5**	**-1.3**
YUK					*i*	P	**Pn**	**13 59 18.0**	**+0.8**
YUK	comp=E,110nm,0.4s					AMB	AMB	13 59 27.3	
YUK	comp=E,330nm,0.5s					A	A	14 00 28.0	
YUK	comp=E,200nm,0.5s					A	A	14 00 28.0	
UGL	**Uglegorsk**	**5.79**	**26**		*eP*		**Pn**	**13 59 22.3**	**+1.5**
UGL	comp=Z,350nm,1.2s					pmax	pmax		
UGL	**Uglegorsk**	**5.79**	**26**		*eP*		**Pn**	**13 59 22.2**	**+1.5**
UGL	comp=Z,160nm,0.9s					AMB	AMB	13 59 24.3	
JSD	**Sado**	**5.88**	**180**				**Pn**	**13 59 21.4**	**-0.7**
JSD	**Sado**	**5.88**	**180**		P		**Pn**	**13 59 22.5**	**+0.4**
SHO	**Shikotan**	**6.20**	**88**		*eP*		**Pn**	**13 59 25.1**	**-0.8**
SHO					*eS*		**S**	**14 00 31.7**	**-6.9**
SHO	comp=E,35nm,0.3s					pmax	pmax		
SHO	comp=Z,55nm,0.3s					pmax	pmax		
SHO	comp=N,42nm,0.4s					pmax	pmax		
SHO	comp=E,176nm,0.2s					smax	smax		
SHO	comp=N,520nm,0.5s					smax	smax		
SHO	**Shikotan**	**6.20**	**88**		*eS*		**S**	**14 00 31.7**	**-6.9**
SHO					*eP*		**Pn**	**13 59 25.1**	**-0.8**
SHO	comp=N,60nm,0.3s					AMB	AMB	13 59 29.0	
SHO	comp=N,520nm,0.5s					A	A	14 00 37.0	
SHO	comp=N,180nm,0.5s					A	A	14 00 37.0	
MDJ	**Mudanjiang**	**6.26**	**279**		Pn		**Pn**	**13 59 27.5**	**+0.7**
JMM	**Marumori**	**6.35**	**162**				**Pn**	**13 59 26.0**	**-1.9**
JMM	**Marumori**	**6.35**	**162**		P		**Pn**	**13 59 25.8**	**-2.1**
KLR	**Kul'dur** comp=N,8.6nm,0.6s,baz=127,slow=11,SNR=36	**6.95**	**322**		P		**Pn**	**13 59 35.1**	**-0.1**
KLR	comp=N,3.2nm,0.7s,baz=126,slow=14,SNR=1.2					S	**S**	**14 00 55.6**	**0.0**
GRNR	**Gornyy**	**6.96**	**350**	⇑	*iP*		**Pn**	**13 59 36.4**	**+1.0**
GRNR						*eS*	**S**	**14 00 56.9**	**+1.0**
GRNR	comp=N,70nm,0.7s					pmax	pmax		
GRNR	comp=E,30nm,0.7s					pmax	pmax		
GRNR	comp=Z,100nm,0.7s					pmax	pmax		
GRNR	comp=N,9.0nm,0.7s					smax	smax		
GRNR	comp=E,360nm,18.0s					MLR	MLR		
GRNR	comp=Z,180nm,10.0s					MLR	MLR		
GRNR	**Gornyy**	**6.96**	**350**		*eP*		**Pn**	**13 59 36.4**	**+1.0**
GRNR	comp=Z,100nm,0.7s					AMB	AMB	13 59 37.4	
KUR	**Kuril'sk**	**6.99**	**76**	⇓	*iP*		**Pn**	**13 59 36.8**	**+1.1**
KUR					*i*	S	**S**	**14 00 54.9**	**-1.6**
KUR	comp=Z,122nm,0.9s					pmax	pmax		
KUR	comp=N,117nm,0.7s					smax	smax		
KUR	comp=E,49nm,0.7s					smax	smax		
KUR	**Kuril'sk**	**6.99**	**76**		*i*	S	**S**	**14 00 55.0**	**-1.6**
KUR						*eP*	**Pn**	**13 59 37.0**	**+1.3**
KUR	comp=E,190nm,0.8s					AMB	AMB	13 59 39.7	
KUR	comp=E,120nm,0.7s					A	A	14 01 11.7	
KUR	comp=E,50nm,0.7s					A	A	14 01 11.7	
MJB9	**Matsu-Tunnel**	**7.37**	**180**		Pn		**Pn**	**13 59 40.9**	**+0.2**
MAJO	**Matsushiro**	**7.37**	**180**		Pn		**Pn**	**13 59 39.9**	**-0.8**
MAJO	**Matsushiro**	**7.37**	**180**		P		**Pn**	**13 59 40.2**	**-0.5**
MAJO	**Matsushiro**	**7.37**	**180**		P		**Pn**	**13 59 39.9**	**-0.8**
MJAR	**Matsushiro Arr** comp=E,89nm,0.4s,baz=6.2,slow=12,SNR=320	**7.37**	**180**		P		**Pn**	**13 59 40.5**	**-0.3**
MJAR	comp=E,4.0nm,0.3s,baz=351,slow=15,SNR=1.2					S	**S**	**14 01 03.8**	**-1.9**
TYV	**Tymovskoe**	**7.56**	**22**		*eP*		**Pn**	**13 59 44.8**	**+2.0**
TYV						*eS*	**S**	**14 01 13.1**	**+3.6**
TYV	comp=Z,500nm,2.1s					pmax	pmax		
TYV	comp=Z,83nm,1.0s					pmax	pmax		
TYV	comp=N,7.0nm,1.7s					smax	smax		
TYV	comp=E,12nm,1.7s					smax	smax		
TYV	comp=N,400nm,4.4s					smax	smax		
TYV	comp=E,200nm,4.4s					smax	smax		
TYV	**Tymovskoe**	**7.56**	**22**		*eS*		**S**	**14 01 10.6**	**+1.1**
TYV						*eP*	**Pn**	**13 59 44.8**	**+2.0**
TYV	comp=E,500nm,2.0s					AMB	AMB	13 59 45.7	
TYV	comp=E,60nm,0.7s					AMB	AMB	13 59 46.2	
TYV	comp=E,10.0nm,0.8s					A	A	14 01 16.0	
TYV	comp=E,400nm,5.0s					A	A	14 01 16.8	
TYV	comp=E,200nm,5.0s					A	A	14 01 16.8	
BNX	**BinXian**	**7.93**	**287**	⇓	*eP*		**Pn**	**13 59 48.3**	**+0.8**
BNX						S	**S**	**14 01 20.0**	**+1.9**
BNX	comp=Z,29nm,0.7s					pmax	pmax		
BNX	comp=N,920nm,8.1s					LR	LR		
BNX	comp=E,550nm,8.1s					LR	LR		
JGF	**Kuroka**	**8.34**	**185**				**Pn**	**13 59 51.6**	**-1.3**
JGF	**Kuroka**	**8.34**	**185**		P		**Pn**	**13 59 52.5**	**-0.4**
INU	**Inuyama**	**8.62**	**187**		Pn		**Pn**	**13 59 55.2**	**-1.1**
INU	**Inuyama**	**8.62**	**187**		P		**Pn**	**13 59 55.7**	**-0.7**
JSG	**Sagara**	**9.24**	**180**				**Pn**	**14 00 04.5**	**+0.4**
KSRS	**Korea Array** comp=E,18nn,0.8s,baz=58,slow=12,SNR=34	**10.16**	**234**		P		**Pn**	**14 00 16.4**	**+0.8**
KS19	**Wonju Array Si**	**10.16**	**234**		Pn		**Pn**	**14 00 16.9**	**+1.2**
KSAR	**Wonju Array Be**	**10.19**	**234**		Pn		**Pn**	**14 00 15.4**	**-0.7**
KSAR	**Wonju Array Be**	**10.19**	**234**		P		**Pn**	**14 00 15.4**	**-0.7**
JMN	**Monobe**	**10.73**	**200**		Pn		**Pn**	**14 00 23.0**	**+0.1**
JMN	**Monobe**	**10.73**	**200**		P		**Pn**	**14 00 23.1**	**+0.1**
JHJ	**Hachijo jima 2** comp=E,439nm,0.3s,baz=289,slow=22,SNR=51	**10.85**	**173**		P		Pn	14 00 19.4	-5.0
JHJ	comp=E,183nm,0.3s,baz=257,slow=22,SNR=6.6					S	S	14 02 13.3	-13
JHJ2	**Mitsune**	**10.86**	**173**		Pn		Pn	14 00 19.1	-5.4
TJN	**Taejon**	**11.23**	**232**		Pn		**Pn**	**14 00 29.8**	**+0.7**
TJN	**Taejon**	**11.23**	**232**		P		**Pn**	**14 00 29.8**	**+0.7**
ZEA	**Zeya**	**12.19**	**328**		*eP*		**Pn**	**14 00 40.6**	**-0.2**
ZEA						*e*		14 03 00.2	
ZEA	comp=E,10.0nm,1.2s					pmax	pmax		
ZEA	comp=N,10.0nm,0.9s					pmax	pmax		
ZEA	comp=Z,20nm,1.0s					pmax	pmax		
ZEA	**Zeya**	**12.19**	**328**		*eP*		**Pn**	**14 00 40.6**	**-0.2**
ZEA						AMB	AMB	14 00 43.2	
JNU	**Nakatsue** comp=Z,25nm,0.6s,baz=19,slow=22,SNR=18	**12.23**	**211**		P		**Pn**	**14 00 41.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**15.78**	**48**		P		**P**	**14 01 22.2**	**-0.6**
PEA0B	**Petropavlovsk-**	**15.78**	**48**		P		**P**	**14 01 22.2**	**-0.6**
PEA0B	comp=Z,54nm,1.0s					pmax	pmax		
PETK	**Petropavlovsk-**	**15.78**	**48**		P		**P**	**14 01 22.6**	**-0.2**
**P

comp=N,11nm,0.5s,baz=217,slow=20,SNR=17
JOW Kunigami 18.87 209 P **P** **14 01 55.4 -1.2**
comp=N,18nm,0.8s,baz=357,slow=18,SNR=6.4
JOW S **S** **14 05 20.0 +3.0**
comp=N,13nm,0.7s,baz=283,slow=25,SNR=1.5
HNS HongShan 18.98 258 ⇑P **P** **14 01 59.4 +1.7**
HNS pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 19.93 270 *e*P **P** **14 02 07.3 -0.5**
HHC S **S** **14 05 32.8 -4.7**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,140nm,4.7s
SEY Seymchan 20.73 18 *ce*P **P** **14 02 14.3 -1.6**
SEY pmax pmax
comp=Z,6.0nm,0.6s
SEY Seymchan 20.73 18 P **P** **14 02 14.4 -1.6**
comp=Z,10nm,0.5s,baz=210,slow=9.0,SNR=19
comp=Z,10nm,0.5s
LYN LuoYang 21.98 254 ⇓P **P** **14 02 26.5 -1.7**
LYN sP sP 14 03 46.8 +2.5
LYN S **S** **14 06 11.4 -0.4**
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN pmax pmax
comp=Z,120nm,4.8s
ULN Ulaanbaatar 21.99 291 *i*P **P** **14 02 27.8 -0.5**
ULN pmax pmax
comp=Z,6.0nm,1.7s
ULN Ulaanbaatar 21.99 291 *e*P **P** **14 02 27.8 -0.5**
SONM Songino Array 22.44 291 P **P** **14 02 31.7 -0.7**
SONM Songino Array 22.44 291 P **P** **14 02 31.7 -0.7**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 22.44 291 P **P** **14 02 32.3 -0.1**
comp=Z,1.2nm,0.5s,baz=77,slow=8.9,SNR=18
SONM PcP **PcP** **14 06 17.8 +0.5**
comp=Z,1.2nm,0.7s,baz=155,slow=3.2,SNR=6.1
SONM ScP **ScP** **14 09 30.2 +0.5**
comp=Z,0.5nm,0.5s,baz=152,slow=2.4,SNR=6.0
comp=Z,1.2nm,0.5s
WHN Wuhan 23.15 243 ⇓P **P** **14 02 39.8 +0.9**
WHN pmax pmax
comp=Z,26nm,0.5s
XAN Xi'an 24.73 256 ⇑P **P** **14 02 54.5 +1.2**
TWG Pinlang 25.38 220 P **P** **14 02 58.7 -0.4**
ENH Enshi 26.53 249 P **P** **14 03 09.3 -0.1**
TIXI Tiksi 28.18 354 *i*P **P** **14 03 19.4 -4.0**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 28.30 22 P **P** **14 03 24.4 -0.1**
BILL IAmb IAmb 14 03 26.3
comp=Z,8.3nm,0.8s
BILL Bilibino 28.30 22 *i*P **P** **14 03 23.1 -1.5**
BILL pmax pmax
comp=Z,17nm,1.4s
PZH PanZhiHua 34.18 252 P **P** **14 04 18.1 +1.6**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.0s
DGZ Jazzator, Alta 34.70 298 *i*P **P** **14 04 20.7 0.0**
NIKH Nikolski High 35.49 56 P **P** **14 04 27.2 +0.1**
baz=277
ZAA0 Zalesovo Array 35.71 306 P **P** **14 04 29.4 +0.4**
ZALV Zalesovo Beam 35.71 306 P **P** **14 04 29.0 +0.1**
ZALV Zalesovo Beam 35.71 306 P **P** **14 04 28.8 -0.2**
comp=Z,4.0nm,0.4s,baz=89,slow=9.0,SNR=20
ZALV PcP **PcP** **14 06 51.0 +0.2**
comp=Z,4.0nm,0.5s,baz=98,slow=2.4,SNR=16
ZALV ScP **ScP** **14 10 11.8 +0.2**
comp=Z,1.5nm,0.5s,baz=92,slow=4.4,SNR=6.5
comp=Z,4.0nm,0.4s
NRIK Noril'sk 36.03 332 P **P** **14 04 31.1 -0.4**
NRIK IAmb IAmb 14 04 31.8
comp=Z,7.2nm,0.6s
NRIK Noril'sk 36.03 332 *ce*P **P** **14 04 30.3 -1.2**
NRIK pmax pmax
comp=Z,5.0nm,0.6s
NRIK Noril'sk 36.03 332 P **P** **14 04 30.7 -0.8**
comp=Z,6.1nm,0.4s,baz=111,slow=8.5,SNR=11
NRIK S **S** **14 09 44.8 -5.6**
comp=Z,2.4nm,0.5s,baz=135,slow=2.9,SNR=5.7
comp=Z,6.1nm,0.4s
TNA Tin City 36.29 35 P **P** **14 04 33.4 -0.2**
baz=260
M11K Mekoryuk 36.58 43 P **P** **14 04 36.2 0.0**
baz=269
F14K Arctic Creek 36.93 35 P **P** **14 04 38.8 -0.3**
baz=262
ANM Nome 37.22 36 P **P** **14 04 41.7 +0.1**
baz=264
F15K North Star Dit 37.65 35 P **P** **14 04 45.2 0.0**
baz=263
C16K Lisburne Hills 37.77 30 P **P** **14 04 45.3 -0.8**
C16K IAmb IAmb 14 04 46.9
comp=Z,16nm,0.8s
C16K Lisburne Hills 37.77 30 P **P** **14 04 45.9 -0.2**
baz=259
G15K Niukluk 37.83 36 P **P** **14 04 46.9 +0.2**
baz=265
J14K Nanvaranak Lak 37.91 40 P **P** **14 04 47.6 +0.3**
baz=268
M13K Dall Lake 37.99 43 P **P** **14 04 48.4 +0.4**
baz=271
L14K Kuka Creek 38.30 42 P **P** **14 04 51.6 +1.0**
L14K Kuka Creek 38.30 42 P **P** **14 04 50.5 0.0**
baz=271
FALS False Pass 38.43 52 P **P** **14 04 51.4 -0.3**
baz=278
G16K Koyuk River 38.57 35 P **P** **14 04 53.0 +0.2**
baz=266
H16K Elim 38.57 37 P **P** **14 04 53.0 +0.2**
baz=267
C17K DeLong Mountai 38.60 30 P **P** **14 04 53.8 +0.8**
baz=261
M14K Bethel 38.67 43 P **P** **14 04 55.1 +1.5**
M14K Bethel 38.67 43 P **P** **14 04 54.3 +0.6**
baz=272
MK31 Makanchi Array 38.73 294 P **P** **14 04 54.6 +0.3**
MK31 Makanchi Array 38.73 294 P **P** **14 04 54.7 +0.3**
MK31 pmax pmax
comp=Z,3.0nm,1.1s
MKAR Makanchi Array 38.73 294 P **P** **14 04 54.5 +0.1**
MKAR Makanchi Array 38.73 294 P **P** **14 04 54.1 -0.3**
comp=Z,1.4nm,0.5s,baz=82,slow=10,SNR=30
MKAR PcP **PcP** **14 07 00.2 0.0**
comp=Z,1.0nm,0.7s,baz=72,slow=4.4,SNR=5.3
MKAR ScP **ScP** **14 10 22.7 -0.4**
comp=Z,1.4nm,0.7s,baz=67,slow=4.5,SNR=15
comp=Z,1.4nm,0.5s
K15K Wolf Creek Mou 38.84 40 P **P** **14 04 56.0 +1.0**
K15K Wolf Creek Mou 38.84 40 P **P** **14 04 55.3 +0.3**
baz=271
N14K Kuskokwak Cree 38.85 44 P **P** **14 04 56.2 +1.1**
baz=273
L15K Ungalak Mounta 38.87 41 P **P** **14 04 56.0 +0.7**
baz=271
MAKZ Makanchi 38.93 295 P **P** **14 04 56.1 0.0**
MAKZ Makanchi 38.93 295 P **P** **14 04 56.1 0.0**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
E17K Hotham Inlet 38.93 33 P **P** **14 04 56.7 +0.9**
baz=264
F17K Baldwin Pennin 39.10 34 P **P** **14 04 57.6 +0.5**
F17K IAmb IAmb 14 04 58.2
comp=Z,9.2nm,0.6s
F17K Baldwin Pennin 39.10 34 P **P** **14 04 57.6 +0.5**
baz=266
O14K Tigyukauivet M 39.11 45 P **P** **14 04 57.7 +0.5**
baz=275
I17K Unalakleet 39.22 38 P **P** **14 04 58.8 +0.6**
baz=269
B18K Kokolik River 39.22 29 P **P** **14 04 58.9 +0.7**
baz=262
J16K Anvik River 39.26 39 P **P** **14 04 58.9 +0.4**
baz=270
G17K Kiwalik Mounta 39.29 35 P **P** **14 04 59.4 +0.6**
baz=267
M15K Kasigluk River 39.30 43 P **P** **14 04 59.2 +0.3**
baz=273
C18K Utukok River 39.34 30 P **P** **14 04 59.0 -0.3**
C18K IAmb IAmb 14 05 00.3
comp=Z,15nm,0.8s
C18K Utukok River 39.34 30 P **P** **14 04 59.3 0.0**
baz=263

CRAI Chiangrai 39.36 245 P **P** **14 04 59.6 -0.3**
H17K Granite Mounta 39.58 36 P **P** **14 05 01.6 +0.5**
baz=269
N15K Kwethluk River 39.63 44 P **P** **14 05 02.1 +0.5**
baz=274
F18K Selawik 39.75 34 P **P** **14 05 02.5 0.0**
baz=267
L16K Owhat River 39.83 41 P **P** **14 05 03.3 +0.1**
baz=273
O15K Ungalikthiuk R 39.85 45 P **P** **14 05 04.3 +0.9**
baz=276
C19K Lookout Ridge 39.98 30 P **P** **14 05 04.3 -0.1**
C19K IAmb IAmb 14 05 06.0
comp=Z,32nm,1.4s
C19K PcP **PcP** **14 07 05.0 +1.2**
C19K Lookout Ridge 39.98 30 P **P** **14 05 04.7 +0.3**
baz=264
SDPT Sand Point 40.02 51 P **P** **14 05 04.6 -0.2**
baz=280
KURK Kurchatov 40.02 301 P **P** **14 05 05.2 +0.3**
KURK IAmb IAmb 14 05 05.9
comp=Z,10nm,0.8s
KURK Kurchatov 40.02 301 P **P** **14 05 05.7 +0.8**
KURK 14 07 04.6
KURK S **S** **14 10 51.4 +0.9**
KURK Kurchatov 40.02 301 *e*P **P** **14 05 05.6 +0.7**
KURBB Kurchatov Arra 40.10 301 P **P** **14 05 05.7 +0.1**
comp=Z,9.7nm,0.4s,baz=77,slow=8.9,SNR=80
KURBB PcP **PcP** **14 07 04.5 +0.1**
comp=Z,2.5nm,0.6s,baz=79,slow=3.2,SNR=11
KURBB ScP **ScP** **14 10 28.1 -0.2**
comp=Z,0.7nm,0.5s,baz=81,slow=4.3,SNR=8.0
KURBB S **S** **14 10 51.4 -0.3**
comp=Z,0.2nm,0.4s,baz=104,slow=23,SNR=2.4
comp=Z,9.7nm,0.4s
M16K Timber Creek 40.12 42 P **P** **14 05 05.9 +0.3**
baz=274
G18K Tagagawik 40.13 35 P **P** **14 05 05.3 -0.3**
G18K Tagagawik 40.13 35 P **P** **14 05 05.5 -0.1**
baz=269
H18K Honhosa River 40.24 36 P **P** **14 05 07.0 +0.5**
baz=270
N16K Nishlik Lake 40.26 43 P **P** **14 05 07.4 +0.6**
baz=275
K17K Iditarod 40.33 40 P **P** **14 05 08.2 +1.0**
K17K IAmb IAmb 14 05 09.3
comp=Z,11nm,0.6s
K17K Iditarod 40.33 40 P **P** **14 05 08.5 +1.2**
baz=273
L17K Donlin 40.36 40 P **P** **14 05 09.3 +1.7**
baz=274,SNR=6.4
D19K Kuna River 40.46 31 P **P** **14 05 08.2 -0.1**
D19K IAmb IAmb 14 05 09.6
comp=Z,18nm,0.8s
D19K Kuna River 40.46 31 P **P** **14 05 08.7 +0.3**
baz=266,SNR=18
F19K Shaleruckik Mo 40.51 33 P **P** **14 05 08.0 -0.7**
F19K Shaleruckik Mo 40.51 33 P **P** **14 05 09.5 +0.9**
baz=268
CHNA Chernabura Isl 40.62 52 P **P** **14 05 09.8 +0.1**
baz=281
O16K Kokwok River B 40.69 44 P **P** **14 05 11.6 +1.4**
baz=277
G19K Purcell Mounta 40.77 34 P **P** **14 05 11.1 +0.3**
baz=270
P16K Nushagak River 40.81 45 P **P** **14 05 11.7 +0.5**
baz=277
M17K Holitna River 40.82 42 P **P** **14 05 12.9 +1.5**
baz=275
GCSA Galena City Sc 40.88 36 P **P** **14 05 11.7 +0.1**
baz=272
J18K Innoko River 41.01 38 P **P** **14 05 13.0 +0.2**
baz=273
D20K Etivluk River 41.02 30 P **P** **14 05 13.7 +0.8**
baz=267
N17K Nushagak Hills 41.03 43 P **P** **14 05 14.0 +1.0**
baz=276
H19K Roundabout Mou 41.04 35 P **P** **14 05 13.4 +0.5**
H19K IAmb IAmb 14 05 14.4
comp=Z,7.8nm,0.6s
H19K Roundabout Mou 41.04 35 P **P** **14 05 13.5 +0.5**
baz=271
L18K Granite Mounta 41.11 40 P **P** **14 05 14.8 +1.2**
baz=275
E20K Nigu River 41.16 31 P **P** **14 05 14.7 +0.7**
baz=268
O17K Koliganek Bris 41.17 44 P **P** **14 05 15.3 +1.2**
baz=277,SNR=7.2
A21K Barrow 41.21 26 P **P** **14 05 14.5 +0.3**
baz=264
F20K Avaraart Lake 41.32 33 P **P** **14 05 16.2 +1.0**
baz=270
TTA Tatalina 41.36 39 P **P** **14 05 16.9 +1.1**
TTA Tatalina 41.36 39 P **P** **14 05 16.4 +0.7**
baz=275
TTA Tatalina 41.36 39 P **P** **14 05 16.9 +1.1**
TTA pmax pmax
comp=Z,7.0nm,0.9s
J19K Poorman 41.46 38 P **P** **14 05 17.2 +0.8**
baz=274
Q16K King Salmon 41.54 46 P **P** **14 05 18.6 +1.4**
baz=279
CMAR Chiang Mai Arr 41.57 245 P **P** **14 05 17.5 -0.4**
comp=Z,0.5nm,0.4s,baz=50,slow=8.4,SNR=4.8
CMAR PcP **PcP** **14 07 10.1 +0.3**
comp=Z,1.5nm,0.6s,baz=16,slow=1.4,SNR=9.6
CMAR ScP **ScP** **14 10 35.3 +0.7**
comp=Z,0.5nm,0.3s,baz=30,slow=2.9,SNR=6.3
comp=Z,0.5nm,0.4s
P17K Kvichak River 41.58 45 P **P** **14 05 19.2 +1.8**
baz=278
M18K Stony River 41.59 41 P **P** **14 05 18.7 +1.2**
baz=276
N18K Kilae Creek 41.65 43 P **P** **14 05 19.2 +1.1**
baz=277
C21K Kniveblade Rid 41.70 30 P **P** **14 05 19.5 +1.2**
baz=269
H20K Anotleneega Mo 41.70 35 P **P** **14 05 19.0 +0.7**
baz=273
B21K Ikpikpuk River 41.77 29 P **P** **14 05 19.3 +0.4**
baz=268
I20K Naaghedeneel 41.90 36 P **P** **14 05 21.1 +1.2**
baz=274
L19K White Mountain 41.97 40 P **P** **14 05 21.3 +0.7**
baz=276
E21K Killik River 41.98 31 P **P** **14 05 20.9 +0.2**
baz=270
Q17K Contact Creek 42.01 46 P **P** **14 05 21.8 +0.7**
baz=280
J20K Nowinta River 42.09 37 P **P** **14 05 22.2 +0.6**
J20K IAmb IAmb 14 05 23.7
comp=Z,12nm,1.0s
J20K Nowinta River 42.09 37 P **P** **14 05 22.4 +0.9**
baz=275
O18K Koktuh Hills 42.10 44 P **P** **14 05 23.2 +1.5**
baz=279
IMAR Indian Mountai 42.14 34 P **P** **14 05 22.1 +0.2**
P18K Big Mountain, 42.16 44 P **P** **14 05 23.3 +1.1**
baz=279
F21K Alatna River 42.19 33 P **P** **14 05 22.8 +0.4**
baz=272
K20K Telida 42.20 38 P **P** **14 05 24.1 +1.6**
baz=276
G21K Allakaket 42.21 34 P **P** **14 05 23.8 +1.3**
baz=273
M19K Big River Lodg 42.22 41 P **P** **14 05 23.9 +1.3**
baz=277
N19K Bonanza Creek 42.32 42 P **P** **14 05 24.6 +1.1**
N19K Bonanza Creek 42.32 42 P **P** **14 05 24.6 +1.1**
baz=278
L20K Farewell, AK 42.38 40 P **P** **14 05 24.8 +0.8**
baz=277
D22K Ayikyak River 42.45 30 P **P** **14 05 24.9 +0.5**
baz=271,SNR=13
O19K Port Alsworth 42.49 43 P **P** **14 05 25.8 +1.1**
baz=279
H21K Melozitna Rive 42.55 35 P **P** **14 05 25.7 +0.5**
baz=274
E22K Anaktuvuk Pass 42.79 31 P **P** **14 05 28.0 +0.9**
baz=272
M20K Styx River 42.81 40 P **P** **14 05 29.0 +1.5**
baz=278
CHUM Lake Minchumin 42.92 37 P **P** **14 05 29.3 +1.1**
baz=277
I21K Tanana 42.93 36 P **P** **14 05 29.2 +1.0**
baz=276
G22K Bettles 42.98 33 P **P** **14 05 29.1 +0.5**
baz=274

Q19K Cape Douglas, 43.05 45 P **P** **14 05 30.1 +0.8**
baz=281
CAST Castle Rocks 43.08 38 P **P** **14 05 30.7 +1.2**
CAST IAmb IAmb 14 05 31.9
comp=Z,12nm,0.7s
CAST Castle Rocks 43.08 38 P **P** **14 05 30.9 +1.4**
baz=277,SNR=13
PPLA Purkeypile 43.10 39 P **P** **14 05 31.4 +1.6**
baz=278
H22K Ishtalitna Cre 43.11 34 P **P** **14 05 30.8 +1.1**
baz=275
P19K Oil Pt 43.12 44 P **P** **14 05 31.4 +1.5**
baz=280
D23K Nanushuk River 43.17 30 P **P** **14 05 30.6 +0.5**
baz=273
N20K Mount Spurr 43.35 41 P **P** **14 05 33.7 +1.9**
baz=280,SNR=8.6
COLD Coldfoot 43.47 32 P **P** **14 05 33.1 +0.6**
baz=275,SNR=7.8
MLY Manley 43.47 36 P **P** **14 05 33.7 +1.1**
baz=277
BPAW Bear Paw Mtn. 43.48 37 P **P** **14 05 33.5 +0.8**
baz=278
SKT Skwentna 43.54 40 P **P** **14 05 33.4 +0.2**
baz=279
G23K Bananza Creek 43.58 33 P **P** **14 05 34.1 +0.6**
baz=276
OHAK Old Harbor 43.58 47 P **P** **14 05 34.1 +0.6**
baz=283
TOLK Toolik Lake Re 43.59 30 P **P** **14 05 33.5 0.0**
TOLK IAmb IAmb 14 05 34.6
comp=Z,7.1nm,0.6s
TOLK Toolik Lake Re 43.59 30 P **P** **14 05 34.2 +0.7**
baz=274,SNR=8.7
E23K Chandalar 43.62 31 P **P** **14 05 34.6 +0.8**
baz=275
Q20K Shuyak Island 43.75 45 P **P** **14 05 35.4 +0.6**
baz=282
D24K Happy Valley 43.83 30 P **P** **14 05 36.2 +0.9**
baz=274
KDAK Kodiak Island 43.83 46 P **P** **14 05 36.2 +0.8**
KDAK IAmb IAmb 14 05 36.6
comp=Z,15nm,0.6s
KDAK Kodiak Island 43.83 46 P **P** **14 05 35.8 +0.3**
baz=283
KDAK Kodiak Island 43.83 46 P **P** **14 05 36.2 +0.8**
KDAK pmax pmax
comp=Z,15nm,0.6s
C24K Franklin Bluff 43.83 29 P **P** **14 05 36.2 +0.8**
baz=274
TRF Thorofare Moun 43.88 38 P **P** **14 05 36.9 +0.8**
baz=279
SUA Susitna One 44.00 41 P **P** **14 05 37.4 +0.5**
baz=280,SNR=7.1
I23K Minto, Yukon-K 44.03 35 P **P** **14 05 37.5 +0.5**
baz=278
E24K Your Creek 44.04 31 P **P** **14 05 37.6 +0.5**
baz=276
CUT Chulitna 44.06 39 P **P** **14 05 37.8 +0.6**
baz=280
NEA2 Nenana 44.24 36 P **P** **14 05 39.5 +0.8**
baz=279
M22K Willow 44.24 40 P **P** **14 05 39.3 +0.6**
baz=281
F24K Squaw Lake 44.33 32 P **P** **14 05 39.3 0.0**
F24K IAmb IAmb 14 05 41.1
comp=Z,9.0nm,0.7s
F24K Squaw Lake 44.33 32 P **P** **14 05 39.9 +0.6**
baz=277
BVAR Borovoye Array 44.33 307 P **P** **14 05 39.7 +0.1**
comp=Z,7.0nm,0.4s,baz=81,slow=9.7,SNR=96
BVAR PcP **PcP** **14 07 19.1 +0.4**
comp=Z,5.1nm,0.6s,baz=74,slow=2.5,SNR=12
comp=Z,7.0nm,0.4s
BRSE Bradley Lake S 44.34 43 P **P** **14 05 40.6 +1.1**
baz=282,SNR=7.8
BRVK Borovoye 44.38 307 P **P** **14 05 40.7 +0.8**
BRVK Borovoye 44.38 307 P **P** **14 05 40.7 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,0.5s
BRVK Borovoye 44.38 307 *e*P **P** **14 05 40.3 +0.4**
MCK McKinley 44.43 37 P **P** **14 05 41.6 +1.4**
baz=280,SNR=6.2
H24K Noodor Dome 44.55 34 P **P** **14 05 42.3 +1.1**
baz=278
RC01 Rabbit Creek A 44.55 41 P **P** **14 05 41.9 +0.8**
baz=282,SNR=7.0
G24K Hadweenzic Riv 44.59 33 P **P** **14 05 42.3 +0.9**
baz=278
D25K Kavik River 44.68 29 P **P** **14 05 42.4 +0.3**
D25K IAmb IAmb 14 05 43.6
comp=Z,13nm,0.7s
D25K Kavik River 44.68 29 P **P** **14 05 42.7 +0.6**
baz=276
O22K Cooper Landing 44.68 42 P **P** **14 05 43.1 +0.9**
baz=282
COLA College 44.71 36 P **P** **14 05 43.4 +1.1**
baz=279
PMR Palmer 44.74 40 P **P** **14 05 43.0 +0.5**
baz=282,SNR=5.8
WAT1 Susitna Watana 44.76 39 P **P** **14 05 43.6 +0.7**
baz=281
POKR Poker Plat Res 44.84 35 P **P** **14 05 44.8 +1.4**
baz=280,SNR=5.8
SEW Seward 44.90 43 P **P** **14 05 44.7 +0.9**
baz=283,SNR=5.3
SML Sawmill 45.06 40 P **P** **14 05 46.0 +0.7**
SML IAmb IAmb 14 05 48.2
comp=Z,17nm,0.8s
SML Sawmill 45.06 40 P **P** **14 05 46.6 +1.4**
baz=282,SNR=7.3
KNK Knik Glacier 45.09 41 P **P** **14 05 46.6 +1.2**
baz=282,SNR=9.3
E25K Arctic Village 45.12 31 P **P** **14 05 46.9 +1.3**
baz=278,SNR=8.2
IL31 45.13 36 P **P** **14 05 45.7 0.0**
ILAR Eielson Array 45.13 36 P **P** **14 05 46.5 +0.8**
ILAR Eielson Array 45.13 36 P **P** **14 05 45.8 +0.1**
comp=Z,6.9nm,0.8s,baz=287,slow=8.1,SNR=81
ILAR PcP **PcP** **14 07 20.4 -0.8**
comp=Z,0.8nm,0.7s,baz=279,slow=3.8,SNR=4.5
comp=Z,6.9nm,0.8s
F25K Christian Rive 45.17 32 P **P** **14 05 47.1 +1.1**
baz=278
HDA Harding Lake 45.17 36 P **P** **14 05 46.8 +0.8**
baz=281,SNR=12
WAT6 Susitna Watana 45.18 39 P **P** **14 05 46.7 +0.5**
baz=282
DHY Denali Highway 45.24 38 P **P** **14 05 46.9 +0.2**
DHY IAmb IAmb 14 05 47.9
comp=Z,12nm,0.8s
DHY Denali Highway 45.24 38 P **P** **14 05 47.5 +0.8**
baz=282,SNR=11
M23K Glacier View 45.35 40 P **P** **14 05 48.2 +0.7**
baz=282
AAK Ala-Archa 45.39 292 *i*P **P** **14 05 46.5 -1.7**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 45.39 292 *e*P **P** **14 05 46.5 -1.7**
SCM Sheep Creek Mo 45.52 40 P **P** **14 05 50.2 +1.3**
baz=283
PRP Porcupine Dome 45.56 35 P **P** **14 05 50.4 +1.2**
baz=281,SNR=31
BMAR Burnt Mountain 45.60 32 P **P** **14 05 50.4 +1.0**
F26K Sheenjek River 45.72 31 P **P** **14 05 51.5 +1.2**
baz=280
K24K Donnelly Dome 45.80 37 P **P** **14 05 51.0 0.0**
baz=282,SNR=5.6
J25K Salcha River, 45.80 36 P **P** **14 05 50.9 -0.1**
baz=282
P23K Montague Islan 45.92 42 P **P** **14 05 53.6 +1.8**
baz=284
G26K Porcupine Rive 45.99 32 P **P** **14 05 54.3 +2.0**
baz=281
M24K Tolsona, Glenn 45.99 39 P **P** **14 05 54.2 +1.7**
baz=283
PAX Paxson 46.11 38 P **P** **14 05 54.6 +1.1**
baz=283
FID Port Fidalgo 46.18 41 P **P** **14 05 54.3 +0.5**
HIN Hinchinbrook I 46.26 42 P **P** **14 05 55.8 +1.3**
HIN IAmb IAmb 14 06 34.0
comp=Z,38nm,1.3s
KLU Klutina 46.26 40 P **P** **14 05 55.2 +0.6**
KLU IAmb IAmb 14 05 57.1
comp=Z,17nm,0.6s
KLU Klutina 46.26 40 P **P** **14 05 55.9 +1.3**
baz=284,SNR=12

HARP HAARP 46.39 39 P P 14 05 57.2 +1.7
baz=284,SNR=14
SCRK Sand Creek 46.53 36 P P 14 05 57.3 +0.6
SCRK IAmb IAmb 14 05 57.7
comp=Z,20nm,0.6s
SCRK Sand Creek 46.53 36 P P 14 05 57.1 +0.4
baz=283,SNR=22
EYAK Cordova Ski Ar 46.58 41 P P 14 05 58.1 +1.2
baz=285
I26K Coal Creek Min 46.58 35 P P 14 05 56.7 -0.2
I26K Coal Creek Min 46.58 35 P P 14 05 56.9 0.0
baz=283
J26L Joseph Creek 46.59 36 P P 14 05 56.7 -0.4
J26L Joseph Creek 46.59 36 P P 14 05 56.9 -0.3
baz=283
D27M Malcolm River 46.60 29 P P 14 05 58.0 +0.9
D27M Malcolm River 46.60 29 P P 14 05 58.0 +0.9
baz=281
N25K Chitina, Valde 46.84 40 P P 14 06 00.6 +1.5
N25K IAmb IAmb 14 06 02.3
comp=Z,18nm,1.1s
N25K Chitina, Valde 46.84 40 P P 14 06 00.7 +1.6
baz=285,SNR=9.1
MENT Mentasta 46.90 38 P P 14 06 00.6 +1.1
MENT IAmb IAmb 14 06 02.3
comp=Z,25nm,1.4s
FAKI Fak Fak 46.94 188 P P 14 06 01.0 +0.7
BMRM Bremner River 47.01 41 P P 14 06 01.8 +1.4
baz=286
H27K Steamboat Moun 47.02 33 P P 14 06 01.9 +1.5
baz=283
L26K Log Cabin Wild 47.04 38 P P 14 06 01.8 +1.2
L26K IAmb IAmb 14 06 03.2
comp=Z,21nm,1.4s
L26K Log Cabin Wild 47.04 38 P P 14 06 02.2 +1.6
baz=285,SNR=11
RAGM Ragged Mountai 47.13 41 P P 14 06 02.6 +1.3
RAGM IAmb IAmb 14 06 04.7
comp=Z,20nm,0.6s
I27K Kandik River 47.13 34 P P 14 06 02.8 +1.5
baz=284
E28M Babbage River 47.23 30 P P 14 06 02.7 +0.8
E28M IAmb IAmb 14 06 04.0
comp=Z,9.5nm,0.7s
E28M Babbage River 47.23 30 P P 14 06 03.2 +1.3
baz=283
GLB Gilahina Butte 47.25 40 P P 14 06 03.5 +1.3
GLB IAmb IAmb 14 06 05.4
comp=Z,26nm,1.4s
SBUM Sibu 47.31 217 P P 14 06 04.4 +1.3
K27K Chicken 47.33 36 P P 14 06 03.9 +1.2
K27K IAmb IAmb 14 06 04.7
comp=Z,21nm,0.6s
K27K Chicken 47.33 36 P P 14 06 04.2 +1.4
baz=285
F28M Old Crow 47.34 31 P P 14 06 03.7 +1.0
F28M Old Crow 47.34 31 P P 14 06 04.4 +1.6
baz=283,SNR=9.4
HMT Hamilton 47.34 41 P P 14 06 04.2 +1.3
M26K Nabesna, AK 47.36 38 P P 14 06 04.3 +1.3
M26K IAmb IAmb 14 06 06.4
comp=Z,23nm,1.1s
M26K Nabesna, AK 47.36 38 P P 14 06 05.1 +2.0
baz=286
KAIM Kayak Island 47.39 42 P P 14 06 04.6 +1.4
baz=287
VRDI Verde Repeater 47.47 40 P P 14 06 05.0 +0.9
VRDI IAmb IAmb 14 06 07.1
comp=Z,19nm,0.8s
EGAK Eagle 47.53 35 P P 14 06 04.6 +0.4
EGAK Eagle 47.53 35 P P 14 06 05.0 +0.8
baz=285,SNR=33
BERG Berg Lake 47.59 41 P P 14 06 07.0 +2.2
MCARA McCarthy VSAT 47.63 40 P P 14 06 06.2 +1.1
MCARA IAmb IAmb 14 06 08.5
comp=Z,23nm,0.8s
MCARA McCarthy VSAT 47.63 40 P P 14 06 07.0 +2.0
baz=286,SNR=10.0
SUCK Suckling Hills 47.65 42 P P 14 06 06.8 +1.5
SUCK IAmb IAmb 14 06 08.7
comp=Z,27nm,0.9s
L27K Beaver Creek, 47.70 37 P P 14 06 07.1 +1.5
L27K IAmb IAmb 14 06 08.8
comp=Z,17nm,0.9s
L27K Beaver Creek, 47.70 37 P P 14 06 07.3 +1.7
baz=286
BCAR Beaver Creek A 47.72 37 P P 14 06 07.3 +1.5
CRQM Cirque 47.76 41 P P 14 06 08.0 +1.7
CRQE Cirque 47.78 41 P P 14 06 08.5 +2.1
baz=287,SNR=8.7
KKAR Karatay Array 47.85 294 P P 14 06 07.1 +0.1
KKAR Karatay Array 47.85 294 P P 14 06 07.1 +0.1
I28M Miner Creek 47.85 34 P P 14 06 08.4 +1.6
I28M Miner Creek 47.85 34 P P 14 06 08.9 +2.1
baz=285
E29M Blow River 47.87 30 P P 14 06 07.6 +0.8
E29M Blow River 47.87 30 P P 14 06 08.7 +2.0
baz=284
M27K Edge Creek, AK 47.87 38 P P 14 06 08.9 +1.8
M27K IAmb IAmb 14 06 10.3
comp=Z,32nm,1.2s
M27K Edge Creek, AK 47.87 38 P P 14 06 08.6 +1.6
baz=286
TGL Tana Glacier 47.90 40 P P 14 06 08.7 +1.4
TGL IAmb IAmb 14 06 10.4
comp=Z,23nm,1.1s
WAX Waxell Ridge 47.98 41 P P 14 06 09.3 +1.5
WAX IAmb IAmb 14 06 12.0
comp=Z,22nm,1.0s
ISLE Juniper Island 48.18 41 P P 14 06 10.2 +0.7
H29M Whitestone 48.27 33 P P 14 06 11.2 +1.4
H29M IAmb IAmb 14 06 12.2
comp=Z,14nm,0.6s
H29M Whitestone 48.27 33 P P 14 06 11.4 +1.6
baz=286
BVCY Beaver Creek 48.31 38 P P 14 06 11.7 +1.5
baz=287,SNR=6.5
BARN Barnard Glacie 48.35 40 P P 14 06 11.9 +1.1
BARN IAmb IAmb 14 06 14.1
comp=Z,21nm,0.7s
GRNC Granite Creek 48.41 40 P P 14 06 12.6 +1.3
GRNC IAmb IAmb 14 06 14.4
comp=Z,29nm,1.2s
DAWY Dawson 48.46 36 P P 14 06 12.0 +0.6
DAWY Dawson 48.46 36 P P 14 06 13.2 +1.8
baz=287,SNR=5.2
MESA MESA 48.49 41 P P 14 06 13.2 +1.4
baz=288
SVE Sverdlovsk 48.50 314 *e*P P 14 06 13.3 +1.6
SVE pmax pmax
comp=Z,16nm,0.8s
CTG Chitna Glacier 48.53 40 P P 14 06 13.9 +1.8
baz=288,SNR=18
CTGM Chitina Glacie 48.54 40 P P 14 06 13.7 +1.6
YUK3 Moose Creek 48.68 39 P P 14 06 14.2 +0.9
baz=288,SNR=5.8
LOGN Logan Glacier 48.73 40 P P 14 06 14.6 +0.9
LOGN IAmb IAmb 14 06 17.7
comp=Z,28nm,1.4s
J29N Klondike Camp 48.84 35 P P 14 06 15.6 +1.3
baz=288
F30M Barrier River 48.85 30 P P 14 06 16.0 +1.8
baz=287
EPYK Eagle Plains 48.86 32 P P 14 06 15.6 +1.2
EPYK Eagle Plains 48.86 32 P P 14 06 15.9 +1.5
baz=287,SNR=28
G30M tAoh Zraii Nji 48.87 31 P P 14 06 15.6 +1.2
G30M IAmb IAmb 14 06 16.9
comp=Z,36nm,1.4s
G30M tAoh Zraii Nji 48.87 31 P P 14 06 15.6 +1.2
baz=287
YUK8 Steele Glacier 49.16 39 P P 14 06 18.8 +1.9
baz=289
L29M L29M 49.29 37 P P 14 06 19.9 +2.2
L29M IAmb IAmb 14 06 21.0
comp=Z,23nm,1.1s
L29M L29M 49.29 37 P P 14 06 19.8 +2.2
baz=289,SNR=14
K29M Barlow Dome 49.31 36 P P 14 06 19.4 +1.5
K29M IAmb IAmb 14 06 20.4
comp=Z,20nm,1.0s
K29M Barlow Dome 49.31 36 P P 14 06 19.7 +1.7
baz=289
PINM Pinnacle 49.32 41 P P 14 06 19.7 +1.7
baz=290
I30M Mount Dempster 49.35 34 P P 14 06 20.0 +1.8
baz=288
M29M Somme Creek 49.36 37 P P 14 06 20.9 +2.6
baz=289
INK Inuvik 49.45 29 P P 14 06 19.9 +1.2
INK Inuvik 49.45 29 P P 14 06 19.9 +1.2
baz=288,SNR=26
INK Inuvik 49.45 29 P P 14 06 19.9 +1.2
INK pmax pmax
comp=Z,19nm,0.5s
INK Inuvik 49.45 29 P P 14 06 19.7 +1.0
comp=Z,15nm,0.4s,baz=291,slow=7.1,SNR=194
comp=Z,15nm,0.4s
J30M Hart River 49.57 34 P P 14 06 20.3 +0.4
J30M Hart River 49.57 34 P P 14 06 21.2 +1.3
baz=289,SNR=8.5
G31M Satah River 49.62 31 P P 14 06 20.6 +0.6
G31M IAmb IAmb 14 06 21.5
comp=Z,13nm,0.6s
G31M Satah River 49.62 31 P P 14 06 21.0 +1.0
baz=289
YUK4 Talbot Arm 49.65 39 P P 14 06 22.9 +2.4
baz=290
F31M Tsiigehtchic 49.65 30 P P 14 06 21.1 +0.9
F31M IAmb IAmb 14 06 22.3
comp=Z,12nm,0.8s
F31M Tsiigehtchic 49.65 30 P P 14 06 21.4 +1.2
baz=289,SNR=10
ARU Arti 49.72 314 P P 14 06 20.9 0.0
ARU Arti 49.72 314 *d*iP P 14 06 21.5 +0.6
ARU 14 07 35.1
ARU S S 14 13 11.7 +2.6
ARU SS SS 14 16 39.4 -5.0
ARU pmax pmax
comp=Z,6.0nm,0.7s
ARU Arti 49.72 314 *e*P P 14 06 21.2 +0.3
PNL Peninsula 49.87 41 P P 14 06 24.9 +2.8
baz=291
YUK6 Outpost Mounta 49.91 39 P P 14 06 25.2 +2.6
baz=290,SNR=5.8
O29M Mount Kennedy 50.04 40 P P 14 06 26.3 +2.9
baz=291
M30M Minto, Yukon 50.05 37 P P 14 06 26.0 +2.6
M30M IAmb IAmb 14 06 27.2
comp=Z,12nm,0.8s
M30M Minto, Yukon 50.05 37 P P 14 06 25.6 +2.2
baz=290,SNR=15
MAYO Mayo, Yukon 50.08 36 P P 14 06 25.0 +1.4
MAYO Mayo, Yukon 50.08 36 P P 14 06 25.9 +2.3
baz=290,SNR=6.3
N30M Aishikik Lake 50.31 38 P P 14 06 27.8 +2.4
baz=291
HYT Haines Junctio 50.35 39 P P 14 06 27.9 +2.2
HYT Haines Junctio 50.35 39 P P 14 06 28.3 +2.6
baz=291,SNR=24
P29M Windy Craggy 50.67 41 P P 14 06 30.2 +2.2
P29M Windy Craggy 50.67 41 P P 14 06 30.5 +2.4
baz=292
A36M Sachs Harbour 50.84 23 P P 14 06 29.9 +0.9
A36M IAmb IAmb 14 06 31.4
comp=Z,19nm,0.7s
A36M Sachs Harbour 50.84 23 P P 14 06 30.5 +1.5
baz=292,SNR=31
P30M Million Dollar 50.86 40 P P 14 06 31.6 +2.2
baz=292
O30N Mendenhall 51.01 39 P P 14 06 32.5 +2.0
baz=292,SNR=7.3
M31M Drury Creek, Y 51.23 37 P P 14 06 33.7 +1.6
M31M Drury Creek, Y 51.23 37 P P 14 06 33.9 +1.8
baz=292,SNR=5.2
WHY Whitehorse 51.60 39 P P 14 06 36.6 +1.5
WHY IAmb IAmb 14 06 38.9
comp=Z,9.8nm,0.9s
WHY Whitehorse 51.60 39 P P 14 06 37.3 +2.3
baz=293,SNR=5.7
FARO Faro, Yukon 51.67 37 P P 14 06 37.4 +2.0
FARO IAmb IAmb 14 06 38.8
comp=Z,15nm,1.1s
FARO Faro, Yukon 51.67 37 P P 14 06 37.2 +1.8
baz=293,SNR=8.7
ABKAR Akbulak array 51.82 305 P P 14 06 37.2 +0.5
SKAG Skagway 51.87 40 P P 14 06 38.9 +2.0
SKAG IAmb IAmb 14 06 41.6
comp=Z,12nm,1.2s
SKAG Skagway 51.87 40 P P 14 06 38.6 +1.7
baz=294
N32M Quiet Lake 52.21 38 P P 14 06 40.4 +1.0
N32M Quiet Lake 52.21 38 P P 14 06 40.5 +1.0
baz=294
C36M Paulatuk 52.26 26 P P 14 06 40.6 +1.0
baz=295,SNR=13
P32M Atlin 52.57 40 P P 14 06 43.8 +1.7
P32M Atlin 52.57 40 P P 14 06 43.1 +1.0
baz=295
P33M Teslin, Yukon 52.72 39 P P 14 06 45.4 +2.2
baz=295,SNR=10
SPITS Spitsbergen Ar 53.30 347 P P 14 06 46.8 -0.2
comp=Z,4.0nm,0.7s,baz=80,slow=9.4,SNR=9.3
comp=Z,4.0nm,0.7s
KIRV Kirov 53.38 319 *ce*P P 14 06 47.9 +0.1
Q32M Nakina River 53.51 40 P P 14 06 50.2 +1.1
baz=296
R33M Jennings River 53.92 39 P P 14 06 54.3 +2.4
R33M Jennings River 53.92 39 P P 14 06 53.8 +1.8
baz=297
TGTN Hyland Airport 54.14 36 P P 14 06 55.5 +2.0
baz=297,SNR=15
S34M Telegraph Cree 54.52 41 P P 14 06 57.7 +1.6
baz=298
WTLY Watson Lake, Y 54.57 38 P P 14 06 58.4 +1.9
baz=298
WRAK Wrangell Islan 54.62 43 P P 14 06 59.4 +2.6
baz=298
CRAG Craig 54.68 44 P P 14 06 59.8 +2.6
baz=298
DLBC Dease Lake 54.79 40 P P 14 07 00.4 +2.2
DLBC Dease Lake 54.79 40 P P 14 07 00.4 +2.2
baz=298
WRGLY Wrigley 55.31 33 P P 14 07 04.3 +2.7
baz=300
T35M Bob Quinn 55.38 42 P P 14 07 05.0 +2.7
baz=299
RES Resolute Bay 56.55 15 P P 14 07 10.6 +0.4
RES IAmb IAmb 14 07 11.3
comp=Z,6.9nm,0.7s
RES Resolute Bay 56.55 15 P P 14 07 10.6 +0.4
RES pmax pmax
comp=Z,7.0nm,0.7s
ARCES ARCESS Array B 56.71 337 P P 14 07 12.2 +0.7
ARCES IAmb IAmb 14 07 45.7
comp=Z,28nm,1.5s
ARCES ARCESS Array B 56.71 337 P P 14 07 12.2 +0.7
ARCES pmax pmax
comp=Z,28nm,1.5s
ARCES ARCESS Array B 56.71 337 P P 14 07 11.6 +0.1
comp=Z,3.9nm,0.5s,baz=58,slow=8.6,SNR=43
comp=Z,3.9nm,0.5s
MTN Manton Dam 56.86 188 P P 14 07 13.2 0.0
COEN Coen 57.77 174 P P 14 07 19.7 +0.2
COEN IAmb IAmb 14 07 25.3
comp=Z,17nm,1.4s
GEYT Alibeck 58.60 294 P P 14 07 25.2 +0.1
GEYT Alibeck 58.60 294 P P 14 07 25.2 +0.1
GEYT pmax pmax
comp=Z,4.0nm,0.6s
GEYT Alibeck 58.60 294 P P 14 07 25.0 -0.1
comp=Z,2.1nm,0.5s,baz=71,slow=11,SNR=6.8
comp=Z,2.1nm,0.5s
NEEM North Greenlan 58.77 2 *i*P P 14 07 25.5 -0.4
NEEM IAmb IAmb 14 07 29.5
comp=Z,8.8nm,0.7s
YKA Yellowknife Ar 59.11 31 P P 14 07 28.4 +0.3
comp=Z,3.3nm,0.9s,baz=304,slow=6.8,SNR=43
YKA PcP PcP 14 08 14.6 +0.8
comp=Z,0.9nm,0.7s,baz=309,slow=3.6,SNR=7.2
comp=Z,3.3nm,0.9s
HILA High Level 60.50 36 P P 14 07 37.8 +0.2
OBN Obninsk 61.20 320 *e*P P 14 07 43.6 +1.2
OBN *e* 14 08 19.7
OBN *e**PP pP 14 08 37.9 -2.3
OBN *e**SP sP 14 09 10.0 +1.5
OBN *e* 14 09 58.8
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 61.20 320 *e*P P 14 07 43.6 +1.2
FINES FINESS Array B 61.63 330 P P 14 07 45.1 0.0
comp=Z,5.2nm,0.6s,baz=66,slow=6.5,SNR=26
FINES PcP PcP 14 08 23.6 -0.4
comp=Z,2.2nm,0.3s,baz=62,slow=4.0,SNR=9.5
comp=Z,5.2nm,0.6s
PGC Sidney 63.37 47 P P 14 07 57.4 +0.6
WB0 Warramunga Arr 63.47 184 P P 14 07 57.3 -0.4
WRAB Tennant Creek 63.64 184 P P 14 07 59.0 +0.1
WRAB Tennant Creek 63.64 184 P P 14 07 59.0 +0.1
WRAB pmax pmax
comp=Z,11nm,0.8s
WB2 Warramunga Arr 63.65 184 P P 14 07 58.7 -0.2
WRA Warramunga Arr 63.65 184 P P 14 07 58.4 -0.5
WRA Warramunga Arr 63.65 184 P P 14 07 58.4 -0.5
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 63.65 184 P P 14 07 58.6 -0.3
comp=Z,9.1nm,0.6s,baz=0.6,slow=6.9,SNR=122
WRA PcP PcP 14 08 33.1 +0.4
comp=Z,8.9nm,0.5s,baz=358,slow=4.4,SNR=28
comp=Z,9.1nm,0.6s
WR0 Warramunga Arr 63.66 184 P P 14 07 58.2 -0.7
SUMG Summit 63.78 359 P P 14 07 60.0 +0.4
SUMG Summit 63.78 359 P P 14 08 00.0 +0.4
SUMG pmax pmax
comp=Z,12nm,0.8s
SUMG Summit 63.78 359 *i*P P 14 08 00.0 +0.4
SUMG IAmb IAmb 14 08 01.7
comp=Z,7.1nm,0.6s
CTAO Charters Tower 64.12 172 P P 14 08 02.2 +0.4
CTAO IAmb IAmb 14 08 03.3
comp=Z,8.0nm,0.8s
CTAO Charters Tower 64.12 172 P P 14 08 02.3 +0.4
CTAO pmax pmax
comp=Z,8.0nm,0.8s
KIV Kislovodsk 64.69 307 ⇑P P 14 08 06.6 +1.0
KIV Kislovodsk 64.69 307 *e*P P 14 08 04.5 -1.1
KIV pmax pmax
comp=Z,21nm,1.0s
KIV Kislovodsk 64.69 307 *e*P P 14 08 04.5 -1.1
ZEI Tsey 64.69 306 *e*P P 14 08 04.2 -1.6
ZEI pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 64.71 307 *ce*P P 14 08 06.3 +0.7
KBZ pmax pmax
comp=Z,8.0nm,0.8s
KBZ Khabaz 64.71 307 P P 14 08 06.0 +0.4
comp=Z,6.2nm,0.7s,baz=40,slow=5.0,SNR=14
comp=Z,6.2nm,0.7s
KBZ Khabaz 64.71 307 *e*P P 14 08 06.3 +0.7
HFS Hagfors 66.84 333 P P 14 08 18.9 +0.1
comp=Z,1.6nm,0.3s,baz=50,slow=6.4,SNR=14
comp=Z,1.6nm,0.3s
BCA Borcka 66.86 306 ⇑P P 14 08 20.5 +1.2
NB2 NORSAR Subarra 66.92 335 P P 14 08 19.3 -0.1
comp=Z,0.6nm,0.3s,baz=37,slow=6.5
NOA NORSAR Array B 66.92 335 P P 14 08 19.1 -0.3
comp=Z,1.3nm,0.6s,baz=52,slow=7.7,SNR=9.3
comp=Z,1.3nm,0.6s
ICESG Greenland Ices 67.30 359 *i*P P 14 08 22.7 +0.7
ICESG IAmb IAmb 14 08 23.8
comp=Z,7.7nm,0.5s
AS31 Alice Springs 67.37 184 P P 14 08 23.4 +0.8
ASAR Alice Springs 67.37 184 P P 14 08 23.6 +1.0
ASAR Alice Springs 67.37 184 P P 14 08 23.8 +1.2
comp=Z,9.4nm,0.8s,baz=359,slow=5.2,SNR=105
comp=Z,9.4nm,0.8s
AKASG Malin Array Be 67.44 319 P P 14 08 22.8 0.0
comp=Z,4.2nm,0.5s,baz=44,slow=6.0,SNR=23
comp=Z,4.2nm,0.5s
AKBB Malin Array Si 67.44 319 P P 14 08 22.1 -0.6
AKBB IAmb IAmb 14 08 23.3
comp=Z,6.8nm,0.8s
AKBB Malin Array Si 67.44 319 P P 14 08 22.1 -0.6
AKBB pmax pmax
comp=Z,7.0nm,0.8s
KIEV Kiev 67.45 319 ⇑P P 14 08 23.4 +0.5
KIEV Kiev 67.45 319 P P 14 08 21.9 -0.9
KIEV IAmb IAmb 14 08 23.3
comp=Z,6.0nm,0.7s
KIEV Kiev 67.45 319 P P 14 08 21.9 -0.9
KIEV pmax pmax
comp=Z,6.0nm,0.7s
FCC Fort Churchill 68.91 26 P P 14 08 31.7 +0.1
FCC IAmb IAmb 14 08 32.4
comp=Z,4.4nm,0.7s
FCC Fort Churchill 68.91 26 P P 14 08 31.7 +0.1
FCC pmax pmax
comp=Z,4.0nm,0.7s
BMO Blue Mountains 69.04 48 P P 14 08 34.0 +1.2
BMO IAmb IAmb 14 08 35.2
comp=Z,3.8nm,0.7s
BMO Blue Mountains 69.04 48 P P 14 08 34.1 +1.2
BMO pmax pmax
comp=Z,4.0nm,0.7s
FFC Flin Flon 69.21 33 P P 14 08 34.0 +0.4
FFC IAmb IAmb 14 08 36.1
comp=Z,12nm,1.4s
FFC Flin Flon 69.21 33 P P 14 08 34.0 +0.4
FFC pmax pmax
comp=Z,13nm,1.4s
SORM Soroca 69.61 318 ⇑P P 14 08 36.5 +0.3
SORM Soroca 69.61 318 ⇑P P 14 08 36.5 +0.3
DY2G Dye2 69.88 2 *i*P P 14 08 38.3 +0.5
DY2G IAmb IAmb 14 08 39.7
comp=Z,16nm,0.6s
DIKM Dikmen 70.38 309 ⇓P P 14 08 42.0 +1.0
EGMT Eagleton 70.69 41 P P 14 08 44.2 +1.4
baz=315
GIRR Girov 71.33 318 ⇑P P 14 08 47.8 +1.2
HLID Hailey 71.44 47 P P 14 08 49.2 +1.6
baz=313
BOZ Bozeman (W) 71.47 44 P P 14 08 48.5 +0.8
baz=314
BURAR Bucovina Array 71.48 319 ⇑P P 14 08 48.6 +1.0
BURAR Bucovina Array 71.48 319 ⇑P P 14 08 48.6 +1.0
TESR Tescani 71.57 317 ⇑P P 14 08 49.0 +1.0
SCHLR Schela 71.72 316 ⇑P P 14 08 49.9 +1.0
CFR Carcaliu 71.77 316 ⇑P P 14 08 49.9 +0.7
CFR Carcaliu 71.77 316 ⇑P P 14 08 49.9 +0.7
TPGR Topolog 71.85 315 ⇑P P 14 08 50.3 +0.6
VRI Vrincioaia 71.99 317 ⇑P P 14 08 51.8 +1.2
VRI Vrincioaia 71.99 317 ⇑P P 14 08 51.8 +1.2
PLOR Plostina 72.04 317 ⇓P P 14 08 52.4 +1.5
PLOR Plostina 72.04 317 ⇓P P 14 08 52.4 +1.5
TURR Turia 72.20 317 ⇑P P 14 08 53.8 +1.9
DOPR Dopca 72.57 318 ⇑P P 14 08 55.9 +1.9
BRTR Keskin Array B 72.58 309 P P 14 08 54.9 +0.6
comp=Z,1.6nm,0.6s,baz=102,slow=3.6,SNR=8.7
comp=Z,1.6nm,0.6s
ISR Istrita 72.61 316 ⇓P P 14 08 55.9 +1.6
ISR Istrita 72.61 316 ⇓P P 14 08 55.9 +1.6
MLR Muntele Rosu 72.64 317 ⇑P P 14 08 56.0 +1.5
MLR Muntele Rosu 72.64 317 ⇑P P 14 08 56.0 +1.5
ICOR Ion Corvin 72.68 315 ⇑P P 14 08 56.3 +1.6
NVAR Mina Array Bea 72.78 53 P P 14 08 57.0 +1.3
comp=Z,4.2nm,0.6s,baz=301,slow=5.9,SNR=58
comp=Z,4.2nm,0.6s
H17A Grant Village 72.85 44 P P 14 08 57.8 +1.8
baz=315
DGMT Dagmar 72.93 38 P P 14 08 56.9 +0.8
baz=318
VOIR 73.12 317 ⇑P P 14 08 58.9 +1.6
VOIR 73.12 317 ⇑P P 14 08 58.9 +1.6
MARR Marisel-Cluj 73.15 319 ⇓P P 14 08 58.3 +0.8
LAO LASA Array 73.32 40 P P 14 08 59.2 +0.8
baz=317
MORC Moravsky Berou 73.32 324 ⇑P P 14 08 58.8 +0.5
MORC Moravsky Berou 73.32 324 *e*P P 14 08 59.1 +0.8
MORC Moravsky Berou 73.32 324 ⇑P P 14 08 58.8 +0.5
ARR Arges 73.37 318 ⇓P P 14 09 00.3 +1.6
DPC Dobruska-Polom 73.39 325 *e*P P 14 08 59.9 +1.2
DPC Dobruska-Polom 73.39 325 *e*P P 14 08 59.9 +1.2
KRLC Kraliky 73.41 325 *e*P P 14 08 59.9 +1.1
KRLC Kraliky 73.41 325 *e*P P 14 08 59.9 +1.1
VYHS Vyhne 73.74 323 *e*P P 14 09 02.1 +1.4
VYHS Vyhne 73.74 323 *e*P P 14 09 02.1 +1.4
PVCC Panska Ves 73.96 326 *e*P P 14 09 03.3 +1.4
PVCC Panska Ves 73.96 326 *e*P P 14 09 03.3 +1.4
CLL Collm 73.96 328 *i*P P 14 09 02.3 +0.4
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 73.96 328 *i*P P 14 09 02.3 +0.4
comp=Z,7.0nm,0.6s
VES Vestal, Richgr 74.08 56 P P 14 09 03.6 +0.7
baz=313
SIRR Siria 74.13 320 ⇑P P 14 09 03.4 +0.3

GZR	Gura Zlata	74.25	319	⇑P		P		14 09 04.4	+0.6
GZR	Gura Zlata	74.25	319	⇑P		P		14 09 04.4	+0.6
CWC	Cottonwood Cre baz=313	74.27	54	P		P		14 09 05.3	+1.1
PKM	Mcpherson Peak baz=313	74.29	57	P		P		14 09 05.5	+1.1
SURR	Surduc	74.29	319	⇑P		P		14 09 05.2	+1.2
GRAC	Grapevine Rang baz=314	74.30	54	P		P		14 09 04.9	+0.7
SMOL	Smolenice	74.33	324	*eP*		P		14 09 05.7	+1.6
GOPC	GO Pecny, Ondr	74.35	326	*eP*		P		14 09 01.1	-3.1
R11B	Troy Canyon, C baz=314	74.39	52	P		P		14 09 05.9	+1.0
MODS	Modra-Piesok	74.50	324	*eP*		P		14 09 07.0	+1.8
MODS	Modra-Piesok	74.50	324	*eP*		P		14 09 07.0	+1.8
BW06	Boulder Array baz=316	74.53	45	P		P		14 09 06.4	+1.0
PDAR	Pinedale Array comp=Z,5.0nm,0.6s,baz=315,slow=1.9,SNR=66 comp=Z,5.0nm,0.6s	74.53	45	P		P		14 09 06.4	+0.7
ISA	Isabella, Lake baz=313	74.56	55	P		P		14 09 05.7	-0.1
BZS	Buzias	74.63	319	⇑P		P		14 09 06.7	+0.8
BZS	Buzias	74.63	319	⇑P		P		14 09 06.7	+0.8
DUG	Dugway, Tooele baz=315	74.64	49	P		P		14 09 07.4	+1.1
SBC	Santa Barbara baz=313	74.65	57	P		P		14 09 06.6	+0.4
HERR	Herculane	74.80	318	⇓P		P		14 09 07.1	+0.3
MPMC	Manual Prospec baz=314	74.88	54	P		P		14 09 08.5	+0.7
FURC	Furnace Creek, baz=314	74.96	54	P		P		14 09 08.7	+0.8
ZVC	Zvikov	74.96	326	*eP*		P		14 09 08.8	+1.1
TPNV	Topopah Spring baz=314	74.98	53	P		P		14 09 09.4	+1.1
ULM	Lac du Bonnet comp=Z,13nm,0.5s,baz=319,slow=6.0,SNR=53 comp=Z,13nm,0.5s	75.04	33	P		P		14 09 07.8	-0.4
LRMC	Laurel Mtn Rad baz=314	75.16	55	P		P		14 09 10.7	+1.4
MDVR	Moldovita	75.21	319	⇑P		P		14 09 10.0	+0.7
EDW2	Edwards Air Fo baz=314	75.38	56	P		P		14 09 12.0	+1.5
CKRC	Cesky Krumlov	75.40	325	*eP*		P		14 09 11.1	+0.8
CKRC	Cesky Krumlov	75.40	325	*eP*		P		14 09 11.1	+0.8
RONA	Rosalia, Austr comp=Z,4.3nm,0.6s	75.44	324	*i* P		P		14 09 12.6	+2.0
CONA	Conrad Observa comp=Z,8.1nm,1.4s	75.45	324	*i* P		P		14 09 12.5	+1.8
KHC	Kasperske Hory	75.45	326	*eP*		P		14 09 11.4	+0.8
KHC	Kasperske Hory	75.45	326	*ceP*		P		14 09 10.4	-0.2
KHC	comp=Z,33nm,2.5s			pmax		pmax			
STKA	Stephens Creek	75.50	177	P		P		14 09 12.0	+1.2
STKA	Stephens Creek comp=Z,8.4nm,0.5s,baz=346,slow=6.8,SNR=29 comp=Z,8.4nm,0.5s	75.50	177	P		P		14 09 12.0	+1.2
GERES	GERESS Array B comp=Z,2.1nm,0.6s,baz=29,slow=7.0,SNR=10.0 comp=Z,2.1nm,0.6s	75.63	326	P		P		14 09 12.1	+0.5
GSC	Goldstone, Bar baz=314	75.80	55	P		P		14 09 14.4	+1.6
FRGS	Fruska Gora	75.82	320	⇑P		P		14 09 13.3	+0.6
EKA	Eskdalemuir Ar	75.84	338	P		P		14 09 13.0	+0.4
EKA	Eskdalemuir Ar comp=Z,1.1nm,0.5s,baz=66,slow=7.7,SNR=4.2 comp=Z,1.1nm,0.5s	75.84	338	P		P		14 09 13.0	+0.4
BFSC	Mount Baldy Ra baz=314	76.03	56	P		P		14 09 14.8	+0.6
BOVS	Bovan	76.07	318	⇑P		P		14 09 14.1	0.0
ARSA	Arzberg comp=Z,5.1nm,1.4s	76.12	324	*i* P		P		14 09 15.7	+1.3
MMAI	Mount Meron Ar comp=Z,2.6nm,0.5s,baz=32,slow=5.8,SNR=4.2 comp=Z,2.6nm,0.5s	76.13	302	P		P		14 09 15.1	+0.4
K22A	Casper baz=318	76.14	43	P		P		14 09 15.7	+0.9
TUQ	Turquoise Moun baz=314	76.22	54	P		P		14 09 16.2	+0.9
RSSD	Black Hills baz=319	76.25	41	P		P		14 09 16.1	+0.6
SCI2	San Clemente I baz=314	76.36	57	P		P		14 09 17.3	+1.4
HEC	Hector,Ludlow baz=314	76.40	55	P		P		14 09 17.0	+0.8
BBRC	Big Bear Solar baz=314	76.45	55	P		P		14 09 17.0	+0.3
BIOA	Bad Ischl, Aus comp=Z,3.2nm,0.6s	76.57	325	*i* P		P		14 09 18.2	+1.3
AGMN	Agassiz Nation baz=323	76.60	34	P		P		14 09 17.0	0.0
MURC	Murrieta baz=314	76.75	56	P		P		14 09 18.3	+0.2
SOKA	Soboth comp=Z,5.6nm,0.8s	76.78	324	*i* P		P		14 09 19.3	+1.1
GMRC	Granite Mounta baz=315	76.83	54	P		P		14 09 18.9	+0.2
OBKA	Obir comp=Z,3.7nm,0.7s	77.12	324	*i* P		P		14 09 21.0	+1.0
O20A	White River Ci baz=317	77.12	46	P		P		14 09 20.3	0.0
KBA	Koelnbreinsper comp=Z,5.1nm,0.5s	77.17	325	*i* P		P		14 09 22.0	+1.5
LESA	Schwarzleotal comp=Z,6.2nm,0.9s	77.17	326	*i* P		P		14 09 21.6	+1.3
PFO	Pinyon Flats O baz=314	77.18	56	P		P		14 09 21.2	+0.5
BELC	Belle Mtn. Jos baz=315	77.18	55	P		P		14 09 21.2	+0.5
TPFO	Pinon Flats baz=314	77.19	56	P		P		14 09 20.9	+0.2
MYKA	Terra Mystica comp=Z,4.8nm,0.7s	77.41	324	*i* P		P		14 09 22.3	+0.7
IRM	Iron Mountain baz=315	77.57	54	P		P		14 09 23.9	+1.2
WTTA	Wattenberg comp=Z,3.7nm,0.6s	77.73	326	*i* P		P		14 09 24.9	+1.4
N23A	Red Feather La baz=318	77.74	44	P		P		14 09 24.6	+0.8
BC3	Big Chuckawall baz=315	77.75	55	P		P		14 09 24.2	+0.4
ABTA	Abfaltersbach comp=Z,1.2nm,0.6s	77.78	325	*i* P		P		14 09 24.5	+0.8
MOTA	Moosalm comp=Z,9.3nm,1.0s	77.88	326	*i* P		P		14 09 25.4	+1.2
RETA	Reutte comp=Z,7.1nm,1.0s	77.90	327	*i* P		P		14 09 25.6	+1.3
SQTA	Sankt Quirin comp=Z,5.4nm,0.9s	77.93	326	*i* P		P		14 09 25.7	+1.2
PDMCI	Parker Dam,Lak baz=315	78.06	54	P		P		14 09 26.3	+1.0
FETA	Feichten comp=Z,6.7nm,1.3s	78.29	326	*eP*		P		14 09 26.9	+0.4
DAVA	Damuels comp=Z,7.6nm,0.8s	78.41	327	*i* P		P		14 09 27.2	0.0
EYMN	Ely baz=326	78.59	32	P		P		14 09 27.8	-0.2
ISCO	Idaho Springs baz=319	78.72	45	P		P		14 09 30.3	+1.1
WUAZ	Wupatki baz=316	78.78	51	P		P		14 09 31.0	+1.6
MVCO	Mesa Verde baz=318	79.13	48	P		P		14 09 32.1	+0.7
SCHQ	Schefferville comp=Z,2.8nm,0.6s,baz=294,slow=8.0,SNR=8.5 comp=Z,2.8nm,0.6s	79.33	14	P		P		14 09 31.9	+0.1
Q24A	Divide baz=319	79.59	45	P		P		14 09 34.6	+0.6
S22A	4UR Ranch, Cre baz=318	79.62	47	P		P		14 09 35.2	+1.0
OGNE	Ogallala baz=320	79.63	42	P		P		14 09 34.3	+0.5
W18A	Petrified Fore baz=317	79.99	51	P		P		14 09 36.7	+0.7
SDCO	Great Sand Dun baz=319	80.32	46	P		P		14 09 38.6	+0.8
214A	Organ Pipe Nat baz=316	80.51	55	P		P		14 09 39.5	+0.9
BGNE	Belgrade baz=323	81.10	39	P		P		14 09 42.4	+0.9
T25A	Trinidad baz=320	81.35	46	P		P		14 09 43.5	+0.3
TUC	Tucson baz=317	81.44	53	P		P		14 09 44.1	+0.6
ANMO	Albuquerque baz=319	81.92	49	P		P		14 09 46.4	+0.3
Y22F	Passcal Instru baz=319	82.32	49	P		P		14 09 48.5	+0.3
CBKS	Cedar Bluff baz=322	82.40	42	P		P		14 09 48.9	+0.5
SCIA	State Center baz=325	82.88	36	P		P		14 09 51.0	+0.3
121A	Cookes Peak, D baz=318	82.99	51	P		P		14 09 51.2	-0.5
JFWS	Jewell Farm baz=327	83.27	34	P		P		14 09 52.7	+0.1
AMTX	Amarillo baz=321	84.49	46	P		P		14 09 59.6	+0.5
MSTX	Muleshoe baz=321	84.63	47	P		P		14 10 00.3	+0.5
L44A	Lake County Fo baz=329	84.81	33	P		P		14 10 00.9	+0.4
MNTX	Cornudas Mount baz=320	84.95	50	P		P		14 10 01.7	+0.3
CCM	Cathedral Cave baz=327	86.91	37	P		P		14 10 10.9	+0.1
O48B	Farmland baz=330	87.52	32	P		P		14 10 14.2	+0.5
TXAR	Lajitas Array comp=Z,1.4nm,0.5s,baz=286,slow=2.6,SNR=19 comp=Z,1.4nm,0.5s	87.71	50	P		P		14 10 15.1	+0.2
PKME	Peaks-Kenny Pk baz=341	87.88	19	P		P		14 10 15.2	-0.1
M53A	WI Miller and baz=333	88.10	28	P		P		14 10 16.4	0.0
P49A	Miami Univ. Ec baz=331	88.32	32	P		P		14 10 17.7	+0.3
MIAR	Mount Ida baz=326	88.76	40	P		P		14 10 19.9	+0.3
JCT	Junction City baz=322	88.92	47	P		P		14 10 20.1	-0.3
BINY	Binghamton baz=336	88.92	25	P		P		14 10 19.9	-0.4
WHTX	Lake Whitney, baz=324	88.94	45	P		P		14 10 20.1	-0.3
O53A	New Philadelph baz=333	88.97	29	P		P		14 10 19.9	-0.5
P52A	Corning baz=332	89.19	30	P		P		14 10 21.5	0.0
HRV	Adam Dziewonsk baz=339	89.90	22	P		P		14 10 24.5	-0.2
ESDC	Sonseca Array comp=Z,1.0nm,0.6s,baz=22,slow=4.2,SNR=6.0 comp=Z,1.0nm,0.6s	90.07	332	P		P		14 10 25.4	-0.3
VNDA	Vanda comp=Z,2.0nm,0.5s,baz=332,slow=5.6,SNR=11	122.05	174	PKP		PKPdf		14 16 17.1	-0.1
QSPA	South Pole Qui comp=Z,0.8nm,0.5s,baz=24,slow=6.8,SNR=10	133.66	180	PKhKP		PKPpre		14 16 26.1	
QSPA	comp=Z,2.8nm,0.5s,baz=338,slow=1.2,SNR=8.5			PKP		PKPdf		14 16 39.4	-0.3
NNA	Nana	136.15	54	*i* PKIKP		PKPdf		14 16 45.0	-0.9
TROLL	Troll, Antarti comp=Z,870nm,0.5s	144.87	202	⇑P		PKPab		14 17 00.4	+0.3
SNAA	Sanae comp=Z,365nm,0.8s	146.48	201	⇑P		PKPbc		14 17 03.9	-0.7
SNAA	Sanae comp=Z,9.5nm,0.7s,baz=142,slow=6.6,SNR=19	146.48	201	PKPbc		PKPbc		14 17 03.9	-0.7
VNA2	Neumayer--Watz comp=Z,47nm,0.6s,baz=113,slow=2.9	148.10	201	⇑P		PKPbc		14 17 09.0	+0.1
VNA3	Neumayer Olymp comp=Z,13nm,0.7s	148.45	199	⇑P		PKPbc		14 17 09.2	-0.6
VNA1	Neumayer--Stat comp=Z,1.0nm,0.2s	148.50	201	⇑P		PKPbc		14 17 09.7	-0.2
BDFB	Brasilia comp=Z,4.4nm,0.4s,baz=304,slow=3.6,SNR=9.3	151.31	13	PKPbc		PKPbc		14 17 18.2	-0.1
CPUP	Villa Florida comp=Z,1.2nm,0.5s,baz=319,slow=4.2,SNR=3.8	158.37	41	PKPab		PKPab		14 17 56.7	-0.5
PLCA	Paso Flores comp=Z,2.4nm,0.6s,baz=294,slow=3.6,SNR=10.0	158.51	91	PKPab		PKPab		14 17 57.8	+0.1

IDC 16 14:22:16.6±3.8, 53.08N×62.50E, h0km, mbtmp3.2/2, ML2.0/2, Error ellipse: s-maj=62.8km s-min=14.8km az=28.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	3.85	228	I	I	14 45 20.0	
	0.2nm,0.8s,baz=43,slow=334,SNR=12						
ARU	Arti	4.06	327	Pn	Pn	14 23 20.5	+0.6
	1.2nm,0.3s,baz=142,slow=19,SNR=4.5						
ARU				Lg	Lg	14 24 27.4	
	1.0nm,0.3s,baz=338,slow=21,SNR=6.2						
	3.2nm,0.3s						
BVAR	Borovoye Array	4.76	88	Pn	Pn	14 23 30.8	+1.2
	0.1nm,0.3s,baz=288,slow=14,SNR=2.8						
BVAR				Lg	Lg	14 24 44.9	
	0.1nm,0.3s,baz=298,slow=32,SNR=6.2						
	0.8nm,0.3s						
I46RU	ZALESOVO INFRA	13.30	77	I	I	15 48 40.0	
	baz=275,slow=338,SNR=2.3						
I43RU	DUBNA INFRASON	14.96	294	I	I	15 55 00.0	
	baz=92,slow=331,SNR=9.6						

IDC 16 14:22:48.3±3.2, 48.65N×77.56E, h0km, mbtmp2.1/2, ML1.8/2, Error ellipse: s-maj=45.9km s-min=14.4km az=74.0
NNC 16 14:22:48.4±1.1, 48.66N×77.74E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=10.2km s-min=8.3km az=78.0, Suspected Mining explosion.

ISC 16 14:22:52.1±1.2, 48.86N±0.06×78.29E±0.09, h0km, n9, σ0s 77/7, 6C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	1.77	5	⇓Pg	Pb	14 23 25.0	-0.4
	4.2nm,0.6s						
KURBB				⇑Lg	Lg	14 23 54.5	
	9.7nm,0.6s						
KURBB	Kurchatov Arra	1.77	5	Pn	Pn	14 23 24.7	+0.7
	0.3nm,0.3s,baz=201,slow=16,SNR=29						
KURBB				Lg	Lg	14 23 53.8	
	0.1nm,0.3s,baz=196,slow=26,SNR=2.8						
	2.8nm,0.6s						
KURK	Kurchatov	1.87	6	⇑Pg	Pb	14 23 27.2	+0.1
	4.6nm,0.7s						
KURK				⇓Lg	Lg	14 23 54.7	
	4.1nm,0.5s						
MAKZ	Makanchi	3.22	128	⇑Pg	Pb	14 23 50.4	+0.1
	0.3nm,0.4s						
MAKZ				⇓Lg	Lg	14 24 34.5	
	2.1nm,0.6s						
MK31	Makanchi Array	3.40	126	⇑Pg	Pg	14 23 56.3	-0.9
	0.1nm,0.2s,baz=308,slow=15,SNR=8.9						
MK31				⇓Lg	Lg	14 24 43.0	
	1.3nm,0.6s,baz=309,slow=27,SNR=6.8						
MKAR	Makanchi Array	3.40	126	Pn	Pn	14 23 47.2	+0.8
	0.1nm,0.3s,baz=302,slow=12,SNR=7.7						
MKAR				Lg	Lg	14 24 38.7	
	0.3nm,0.3s,baz=314,slow=28,SNR=8.0						
	0.3nm,0.5s						
OTUK	Ortayu	4.00	263	⇑Pg	Pn	14 23 55.1	+0.4
	0.4nm,0.5s						
OTUK				⇑Lg	Lg	14 24 41.7	
	5.3nm,0.8s						
I46RU	ZALESOVO INFRA	6.53	36	I	I	15 08 20.0	
	baz=224,slow=338,SNR=2.3						
I31KZ	AKTYUBINSK INF	13.22	284	I	I	15 42 20.0	
	baz=91,slow=335,SNR=2.1						

IDC 16 14:24:12.8±0.9, 31.85N×48.57E, h0km, mb4.0/13, mbtmp4.0/17, ML3.8/4, MS3.5/17, Error ellipse: s-maj=21.4km s-min=16.4km az=170.0
TEH 16 14:24:15.9, 31.85N×48.66E, h20km±44km, ML4.0
OMAN 16 14:24:19.9±1.2, 31.48N×49.10E, h10km, mb4.3/32, ms2.9/1, Error ellipse: s-maj=11.2km s-min=7.5km az=15.0
DSN 16 14:24:23.7±1.6, 31.27N×48.90E, h43km, ML3.9/8, Error ellipse: s-maj=20.2km s-min=9.3km az=0.0

ISC 16 14:24:14.2±0.5, 31.81N±0.04×48.72E±0.05, h10km, n135, σ2s 26/160, mb4.0/15, MS3.7/12, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHWZ	Ahwaz	0.48	188	Pg	Pg	14 24 26.3	+2.8
JHBN	Jahan bin	1.71	75	Pg	Pn	14 24 47.0	+2.7
ABEH	Behbahan	1.78	132	Pn	Pn	14 24 48.5	+3.4
ZNGN	Zangian	1.84	80	Pn	Pn	14 24 48.9	+2.8
IKFM	Kafar-mosalman	1.87	337	Pn	Pn	14 24 47.6	+1.4
IDOB	Doab	2.03	347	Pn	Pn	14 24 50.3	+1.6
IPIR	Pirpir	2.04	64	Pn	Pn	14 24 51.3	+2.4
IBRJ	Brojen	2.16	87	Pn	Pn	14 24 53.5	+2.9
HSAM	Samen	2.40	358	Pn	Pn	14 24 55.4	+1.6
KLNJ	Kolanjah	2.58	107	Pn	Pn	14 24 59.3	+2.9
IBZA	Bozab	2.75	345	Pn	Pn	14 25 00.9	+2.2
KBD	Kabd	2.77	199	P	Pn	14 25 02.4	+3.8
ILBA	Ilam Banvizeh	2.79	311	Pn	Pn	14 25 00.0	+1.0
KCHF	Cheshme Sefid,	2.84	331	Pn	Pn	14 25 01.2	+1.4
IKLH	Kolahrood	2.84	57	Pn	Pn	14 25 02.6	+2.6
IGAR	Gharneh	2.88	77	Pn	Pn	14 25 03.4	+3.0
QAMS	Qamsar	2.96	49	Pn	Pn	14 25 04.6	+3.1
HAGD	Aghdareh	3.03	7	Pn	Pn	14 25 04.1	+1.7
IGHG	Ghaleghazi	3.10	325	Pn	Pn	14 25 04.8	+1.4
IRAM	Ramesheh	3.12	89	Pn	Pn	14 25 06.2	+2.6
IZEF	Zefreh	3.24	69	Pn	Pn	14 25 07.9	+2.5
ILIN	Lien	3.44	335	Pn	Pn	14 25 10.0	+2.0
IDHR	Dehrash	3.49	326	Pn	Pn	14 25 09.7	+1.0
KRSH	Karshahi	3.59	52	Pn	Pn	14 25 12.7	+2.6
IQOM	Qom	3.61	32	Pn	Pn	14 25 12.3	+1.9
AHBU	AHRAM	3.68	142	Pn	Pn	14 25 14.1	+3.0
IRAZ	Razeghan	3.73	15	Pn	Pn	14 25 13.6	+1.6
KGS1	Ghasr-e-Shirin	3.76	317	Pn	Pn	14 25 13.1	+0.8
ISFB	Sefidab	3.90	48	Pn	Pn	14 25 16.3	+2.1
IVRN	Varamin	4.05	38	Pn	Pn	14 25 18.5	+2.1
DSBU	Dashti - Bushe	4.08	147	Pn	Pn	14 25 19.8	+3.2
IMHD	Mahdasht	4.20	22	Pn	Pn	14 25 20.4	+2.0
IHSB	Hasanabad	4.20	30	Pn	Pn	14 25 20.5	+2.1
ISAD	Sadrabad	4.22	87	Pn	Pn	14 25 21.4	+2.5
ANAR	Anarak	4.45	71	Pn	Pn	14 25 24.4	+2.5
IDMV	Damavand	4.67	35	Pn	Pn	14 25 27.0	+2.1
QIR1	Qir	5.00	130	Pn	Pn	14 25 32.3	+2.9
ILAS	Lasjerd	5.02	44	Pn	Pn	14 25 31.6	+1.8
IMEH	Mehriz	5.04	93	Pn	Pn	14 25 32.7	+2.5
KLST	Kelardasht - M	5.08	22	Pn	Pn	14 25 33.0	+2.2
IFIR	Firoozkooh	5.09	40	Pn	Pn	14 25 32.8	+2.0
MZPU	Pul - Mazandar	5.19	26	Pn	Pn	14 25 34.9	+2.8
IPRN	Peran	5.35	33	Pn	Pn	14 25 37.1	+2.9
IBAF	Bafgh	5.84	90	Pn	Pn	14 25 43.4	+2.4
SHMA	Al-Shehemyia	6.25	161	P	Pn	14 25 47.9	+1.4
IGLO	Ghaloghah	6.31	41	Pn	Pn	14 25 49.8	+2.2
TPRV	Parvadeh(Tabas	6.84	78	Pn	Pn	14 25 57.1	+2.4
GRMI	Germi	7.02	355	Pn	Pn	14 25 58.9	+1.8
NGRK	Negar Kerman	7.22	105	Pn	Pn	14 26 03.3	+3.1
SMRA	Abu-Samra	7.27	165	P	Pn	14 26 02.3	+1.7
SMRA				S	Sn	14 27 23.6	+0.4
TKDS	Koohdasht(Taba	7.30	73	Pn	Pn	14 26 03.5	+2.4
TRNA	Turayna SNR=7.0	7.38	162	P	Pn	14 26 03.8	+1.8
TRNA				S	Sn	14 27 25.6	-0.1
JRN	Qarnain Island	7.74	151	P	Pn	14 26 08.4	+1.4
JRN				S	Sn	14 27 33.5	-1.2
SLWR	Sila	8.14	160	P	Pn	14 26 13.6	+1.1
SLWR				S	Sn	14 27 43.6	-0.9
ITEG	Tejag	8.55	80	Pn	Pn	14 26 20.7	+2.4
SHME	Shamm	8.67	130	P	Pn	14 26 19.8	+0.1
SHME	Shamm SNR=8.2	8.67	130	P	Pn	14 26 20.1	+0.4
SHME				S	Sn	14 27 52.5	-5.0
SBZV	Sabzevar	8.67	56	Pn	Pn	14 26 22.4	+2.4
KHNJ	Kahnooj	8.69	114	Pn	Pn	14 26 23.0	+2.9
RAYN	Ar Rayn	8.73	200	P	Pn	14 26 20.8	+0.2
RAYN	Ar Rayn SNR=5.6	8.73	200	P	Pn	14 26 23.4	+2.7
RAYN				S	Sn	14 28 00.8	+1.7
AFRZ	Afriz	8.83	77	Pn	Pn	14 26 25.0	+2.9
AJN	Ajban	9.09	141	P	Pn	14 26 26.5	+1.1
AJN	Ajban SNR=7.9	9.09	141	P	Pn	14 26 26.1	+1.1
AJN				S	Sn	14 28 06.2	-1.6
NAZ	Nazwa, Dubai	9.13	136	P	Pn	14 26 26.7	+0.6
NAZ	Nazwa, Dubai SNR=8.6	9.13	136	P	Pn	14 26 27.6	+1.5
NAZ				S	Sn	14 28 07.1	-1.9
MASF	Masafi SNR=5.6	9.15	133	P	Pn	14 26 27.2	+0.8
MASF				S	Sn	14 28 05.5	-4.1
MSFE	Esma-Masafi	9.16	133	P	Pn	14 26 26.4	-0.2
MZWR	Madinat Zayed	9.22	149	P	Pn	14 26 28.7	+1.4
MZWR				S	Sn	14 28 09.7	-1.5
ASUD	Al Ashush, Dub SNR=8.1	9.22	139	*i* P	Pn	14 26 28.8	+1.5
ASUD	Al Ashush, Dub SNR=8.1	9.22	139	P	Pn	14 26 29.1	+1.8
ASUD				S	Sn	14 28 09.8	-1.4
ISFR	Sfrayin	9.28	53	Pn	Pn	14 26 30.5	+2.2
FAQ	Al Faqa, Dubai	9.28	138	P	Pn	14 26 29.3	+1.2
FAQ	Al Faqa, Dubai SNR=5.6	9.28	138	P	Pn	14 26 29.6	+1.5
FAQ				S	Sn	14 28 10.3	-2.2
MDH	Madha SNR=7.9	9.29	132	*i* P	Pn	14 26 28.4	+0.2
MDH	Madha SNR=8.1	9.29	132	P	Pn	14 26 28.7	+0.4
MDH				S	Sn	14 28 07.8	-5.1
UOSS	Minazif	9.49	134	P	Pn	14 26 30.7	-0.3
UOSS	Minazif	9.49	134	P	Pn	14 26 31.2	+0.2
UOSS				S	Sn	14 28 12.7	-5.1
HATD	Hatta, Dubai SNR=6.2	9.54	135	*i* P	Pn	14 26 32.1	+0.4
HATD				S	Sn	14 28 12.9	-6.0
HATD	Hatta, Dubai SNR=6.1	9.54	135	P	Pn	14 26 32.5	+0.9
HATD				S	Sn	14 28 14.5	-4.4
ASHO	Ashiyiah SNR=8.8	9.60	136	*i* P	Pn	14 26 32.9	+0.4
ASHO	Ashiyiah SNR=8.8	9.60	136	P	Pn	14 26 33.1	+0.6
ASHO				S	Sn	14 28 17.4	-3.0
IPAY	Payeh	9.69	59	Pn	Pn	14 26 36.0	+2.1
GEYT	Alibeck 0.4nm,0.3s,baz=255,slow=11,SNR=7.2	9.84	49	Pn	Pn	14 26 37.9	+2.1
GEYT				LR	LR	14 30 49.5	
	comp=Z,314nm,18.5s,baz=286,slow=40 1.4nm,0.4s						
ALNE	Al Ain SNR=27	9.91	139	*i* P	Pn	14 26 37.8	+1.0
ALNE	Al Ain SNR=27	9.91	139	P	Pn	14 26 38.0	+1.2
ALNE				S	Sn	14 28 24.1	-3.9
JASK	Jask - Hormozg	9.96	124	P	Pn	14 26 37.6	+0.2
ASF	Jabal al Asfar 1.2nm,0.3s,baz=331,slow=3.5,SNR=10	10.05	275	Pn	Pn	14 26 37.5	-1.2
ASF				LR	LR	14 31 39.6	
	comp=Z,78nm,18.6s,baz=144,slow=45 2.7nm,0.4s						
SOHO	SOHO	10.30	136	P	Pn	14 26 41.4	-0.7
SOHO	SOHO	10.30	136	P	Pn	14 26 42.0	0.0
SOHO				S	Sn	14 28 32.9	-4.6
UMZA	Um Al Zommool	10.71	146	P	Pn	14 26 47.5	-0.2
UMZA				S	Sn	14 28 43.1	-4.6
ARQ	Araqi SNR=6.2	10.91	139	P	Pn	14 26 50.9	+0.5
ARQ				S	Sn	14 28 52.3	-0.3
HOQ	Hoqain	11.18	135	P	Pn	14 26 56.1	+2.0
HOQ				S	Sn	14 28 54.4	-4.8
MMAI	Mount Meron Ar comp=Z,93nm,18.7s,baz=68,slow=45	11.32	280	LR	LR	14 32 39.1	
BIDO	Bidbid	11.72	132	P	Pn	14 27 02.3	+0.7
BIDO				S	Sn	14 29 06.7	-5.9
BSY	Bisya SNR=11	11.76	138	P	Pn	14 27 02.3	+0.3
BSY				S	Sn	14 29 08.6	-4.7
SMDO	Samad	12.02	134	P	Pn	14 27 05.8	+0.1
SMDO				S	Sn	14 29 15.3	-4.5
EIL	Elat comp=Z,109nm,19.7s,baz=69,slow=43	12.04	263	LR	LR

DQM				S	Sn	14 30 09.1	-4.8
BRTR	**Keskin Array B**	**14.56**	**307**	Pn	**Pn**	**14 27 38.3**	**-2.1**
	0.1nm,0.3s,baz=110,slow=8.7,SNR=2.5						
WHFO	**Wadi Hawf**	**14.56**	**161**	P	**Pn**	**14 27 38.7**	**-1.7**
WHFO				S	**Sn**	**14 30 19.2**	**-2.8**
ABTO	**Aybut**	**14.97**	**163**	P	**Pn**	**14 27 44.4**	**-1.7**
RBK	**Rabkut**	**15.08**	**159**	P	**Pn**	**14 27 45.6**	**-1.9**
RBK				S	**Sn**	**14 30 30.2**	**-4.5**
DMTO	**DMTO**	**15.12**	**157**	P	**Pn**	**14 27 46.9**	**-1.0**
	SNR=6.6						
AKTO	**Aktyubinsk**	**19.86**	**18**	P	**P**	**14 28 45.7**	**+0.4**
	0.3nm,0.3s,baz=201,slow=11,SNR=2.7						
AKTO				LR	LR	14 39 29.2	
	comp=Z,152nm,18.6s,baz=162,slow=46						
	1.9nm,0.6s						
AAK	**Ala-Archa**	**23.11**	**55**	LR	LR	14 40 05.8	
	comp=Z,138nm,19.3s,baz=287,slow=41						
KSH	**Kashi**	**23.38**	**63**	P	**P**	**14 29 21.5**	**-1.7**
KSH				PP	**PnPn**	**14 29 52.1**	**+2.9**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**23.77**	**328**	P	**P**	**14 29 25.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=135,slow=8.7,SNR=1.7						
	comp=Z,0.2nm,0.3s						
BVAR	**Borovoye Array**	**26.37**	**30**	P	**P**	**14 29 50.5**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=230,slow=7.6,SNR=19						
BVAR				LR	LR	14 41 19.5	
	comp=Z,121nm,21.6s,baz=301,slow=39						
	comp=Z,3.1nm,0.7s						
KURBB	**Kurchatov Arra**	**28.97**	**41**	P	**P**	**14 30 14.6**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=243,slow=9.4,SNR=9.7						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**29.71**	**50**	P	**P**	**14 30 21.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=242,slow=5.9,SNR=9.6						
MKAR				PcP	**PcP**	**14 33 23.8**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=242,slow=3.0,SNR=2.8						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**33.12**	**340**	P	**P**	**14 30 49.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=143,slow=8.8,SNR=11						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**33.93**	**39**	P	**P**	**14 30 57.6**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=257,slow=8.8,SNR=7.4						
ZALV				LR	LR	14 47 44.2	
	comp=Z,80nm,19.2s,baz=342,slow=42						
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**36.58**	**331**	P	**P**	**14 31 19.1**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=108,slow=9.5,SNR=9.1						
	comp=Z,1.3nm,0.3s						
ARCES	**ARCESS Array B**	**39.99**	**348**	P	**P**	**14 31 48.1**	**-0.5**
	comp=Z,2.4nm,1.0s,baz=155,slow=6.6,SNR=5.4						
	comp=Z,2.4nm,1.0s						
ESDC	**Sonseca Array**	**42.96**	**296**	LR	LR	14 54 09.5	
	comp=Z,133nm,18.2s,baz=329,slow=42						
SONM	**Songino Array**	**46.03**	**52**	P	**P**	**14 32 39.2**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=241,slow=8.1,SNR=2.3						
SONM				PcP	**PcP**	**14 34 15.6**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=202,slow=3.1,SNR=3.6						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**46.85**	**258**	P	**P**	**14 32 43.9**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=57,slow=12,SNR=1.9						
TORD				LR	LR	14 55 57.8	
	comp=Z,83nm,20.9s,baz=340,slow=41						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.99**	**94**	P	**P**	**14 32 46.6**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=282,slow=7.3,SNR=4.5						
CMAR				LR	LR	14 54 47.0	
	comp=Z,14nm,20.7s,baz=325,slow=39						
	comp=Z,1.7nm,0.3s						
SPITS	**Spitsbergen Ar**	**48.58**	**352**	P	**P**	**14 32 57.0**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=146,slow=11,SNR=6.6						
	comp=Z,1.1nm,0.4s						
XLT	**XiLinHaoTe**	**53.18**	**56**	*e*P	**P**	**14 33 34.9**	**+2.4**
XLT				pP	sP	14 33 38.3	+1.3
XLT				sP	pP	14 33 41.4	+5.7
XLT				PcP	**PcP**	**14 34 38.3**	**-2.2**
XLT				PP	**PP**	**14 35 34.1**	**+1.8**
XLT				pmax	pmax		
	comp=Z,3.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,210nm,5.5s						
DBIC	**Dimbokro**	**55.76**	**255**	P	**P**	**14 33 51.2**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=106,slow=7.4,SNR=2.0						
DBIC				LR	LR	15 00 58.7	
	comp=Z,100nm,20.1s,baz=345,slow=40						
	comp=Z,1.9nm,0.6s						
TIXI	**Tiksi**	**57.07**	**22**	LR	LR	15 01 42.6	
	comp=Z,72nm,19.0s,baz=52,slow=39						
LBTB	**Lobatse**	**60.67**	**204**	LR	LR	14 59 32.3	
	comp=Z,55nm,21.3s,baz=340,slow=35						
KSRS	**Korea Array**	**65.60**	**61**	LR	LR	15 05 37.5	
	comp=Z,39nm,18.5s,baz=325,slow=39						
BOSA	**Boshof**	**64.10**	**203**	LR	LR	15 02 21.8	
	comp=Z,57nm,19.8s,baz=26,slow=36						
ASAJ	**Asahikawa**	**71.19**	**49**	LR	LR	15 09 16.4	
	comp=Z,71nm,18.3s,baz=355,slow=38						
QSPA	**South Pole Qui**	**121.64**	**180**	PKP	**PKPdf**	**14 43 07.5**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=328,slow=2.0,SNR=3.7						

IDC 16 14:38:35.8±484.0, 49°.15N×82°.99E, h0km, Error ellipse: s-maj=246.3km s-min=95.5km az=5.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**4.94**	**13**	I	I	15 08 50.0	
	baz=195,slow=340,SNR=5.2						
I31KZ	**AKTYUBINSK INF**	**16.15**	**284**	I	I	16 05 40.0	
	baz=83,slow=317,SNR=4.1						
I43RU	**DUBNA INFRASON**	**28.14**	**303**	I	I	17 35 45.0	
	baz=85,slow=330,SNR=6.7						

*IDC **16** 14:41:43.4±0.7,34°.55N×142°.23E, h0km, mb3.7/13, mbtmp3.7/15, ML3.2/2, MS2.8/1, Error ellipse: s-maj=19.5km s-min=18.3km az=127.0*
*JMA **16** 14:41:45.6±0.4,35°.N±1°.×14°.2E±°, h42km, MV4.0/37, FAR E OFF CENTRAL HONSHU*
*NIED **16** 14:41:45.6, 34°.56N×142°.32E, h42km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_T-4.45; M_{90}0.57; M_{90}3.88; M_{60}0.05; M_{90}0.30; M_{0T}0.31; Fault plane solution: $M_0$4.19000×10^{14} NP1: ϕ_s185.00000°, δ47.00000°, λ-90.00000°. NP2:ϕ_s5.00000°, δ43.00000°, λ-90.00000°.*

ISC 16 14:41:45.0±3.3, 34°.58N±0°.05×142°.21E±0°.07, h11km±20km, n34, σ1°.04/44, mb3.7/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.02**	**275**	P	**Pn**	**14 42 05.0**	**+0.3**
BSO1				*e*S	**Sn**	**14 42 19.2**	**+0.4**
BSO3	**Boso 3**	**1.42**	**279**	P	**Pb**	**14 42 11.4**	**0.0**
BSO4	**Boso 4**	**1.60**	**285**	P	**Pb**	**14 42 14.3**	**-0.2**
KTR	**Katsuura**	**1.66**	**291**	P	**Pn**	**14 42 14.8**	**+0.8**
KTR				*e*S	**Sn**	**14 42 36.1**	**+0.8**
JKUC	**kamogawauchiur**	**1.75**	**290**	P	**Pn**	**14 42 15.9**	**+0.6**
JKUC				S	**Sn**	**14 42 37.9**	**+0.3**
JSMT	**Sammumatsuo**	**1.79**	**307**	P	**Pb**	**14 42 17.2**	**-0.7**
JMYK	**Miyake Tsubota**	**2.27**	**258**	P	**Pn**	**14 42 22.3**	**-0.1**
JMYK				*e*S	**Sn**	**14 42 48.0**	**-2.3**
JMKN	**Mikurajimanish**	**2.28**	**253**	P	**Pn**	**14 42 22.3**	**-0.2**
JIM2	**Oshima 3**	**2.30**	**274**	P	**Pn**	**14 42 22.8**	**0.0**
JHJ2	**Mitsune**	**2.47**	**234**	P	**Pn**	**14 42 25.6**	**+0.3**
JHJ2				*e*S	**Sn**	**14 42 53.4**	**-2.0**
JHJ	**Hachijo jima 2**	**2.49**	**235**	Pn	**Pn**	**14 42 25.5**	**+0.1**
	29nm,0.3s,baz=339,slow=16,SNR=49						
JHJ				Sn	**Sn**	**14 42 53.6**	**-2.3**
	165nm,0.3s,baz=37,slow=22,SNR=29						
	64nm,0.3s						
JOD2	**Odawara 2**	**2.66**	**286**	P	**Pn**	**14 42 27.7**	**0.0**
JOD2				*e*S	**Sn**	**14 42 59.1**	**-0.8**
JAG	**Ashikaga**	**2.91**	**310**	P	**Pn**	**14 42 31.6**	**+0.4**
JFNN	**Fujinakano**	**2.96**	**283**	*e*S	**Sn**	**14 43 07.5**	**0.0**
JRY	**Ryogami san**	**3.06**	**299**	P	**Pn**	**14 42 34.1**	**+0.7**
JRY				*e*S	**Sn**	**14 43 10.1**	**0.0**
JYN	**Shimob**	**3.15**	**288**	P	**Pn**	**14 42 34.9**	**+0.3**
JOTO	**OTAMA OYAMA**	**3.34**	**333**	P	**Pn**	**14 42 37.3**	**+0.1**
JOTO				*e*S	**Sn**	**14 43 13.6**	**-3.3**
MJAR	**Matsushiro Arr**	**3.81**	**302**	Pn	**Pn**	**14 42 44.1**	**+0.5**
	0.7nm,0.3s,baz=100,slow=14,SNR=9.6						
MJAR				Sn	**Sn**	**14 43 25.7**	**-2.6**
	0.6nm,0.3s,baz=116,slow=23,SNR=6.4						
	2.2nm,0.3s						
JCJ	**Chichijima**	**7.46**	**180**	Sn	Sn	14 44 47.1	-11
	3.8nm,0.3s,baz=159,slow=22,SNR=2.1						
ASAJ	**Asahikawa**	**9.53**	**2**	Pn	**Pn**	**14 43 59.9**	**-2.2**
	0.6nm,0.3s,baz=200,slow=13,SNR=15						
ASAJ				Sn	Sn	14 45 39.4	-10
	0.4nm,0.3s,baz=108,slow=20,SNR=1.8						
KSRS	**Korea Array**	**11.92**	**288**	LR	LR	14 50 10.3	
	comp=Z,42nm,18.4s,baz=330,slow=42						
SONM	**Songino Array**	**29.74**	**307**	P	**P**	**14 47 52.1**	**+0.7**
	0.4nm,0.6s,baz=111,slow=9.2,SNR=3.6						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.58**	**259**	P	**P**	**14 49 33.0**	**0.0**
	0.6nm,0.6s,baz=54,slow=7.8,SNR=5.5						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**44.07**	**314**	P	**P**	**14 49 52.9**	**+0.2**
	0.8nm,0.5s,baz=91,slow=9.0,SNR=4.5						
ZALV				PcP	**PcP**	**14 51 38.1**	**+0.2**
	0.3nm,0.3s,baz=40,slow=4.8,SNR=3.7						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**46.00**	**304**	P	**P**	**14 50 08.6**	**+0.3**
	0.3nm,0.8s,baz=83,slow=12,SNR=3.2						
MKAR				PcP	**PcP**	**14 51 44.6**	**-0.2**
	0.3nm,0.7s,baz=82,slow=3.2,SNR=2.4						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**48.05**	**310**	P	**P**	**14 50 24.2**	**+0.1**
	0.7nm,0.6s,baz=83,slow=7.5,SNR=14						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**51.23**	**31**	P	**P**	**14 50 48.5**	**+0.2**
	0.7nm,0.8s,baz=263,slow=5.9,SNR=7.2						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**52.72**	**314**	P	**P**	**14 50 59.8**	**+0.3**
	0.2nm,0.3s,baz=115,slow=9.7,SNR=2.8						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**54.73**	**189**	P	**P**	**14 51 14.3**	**-0.2**
	3.5nm,0.8s,baz=6.9,slow=7.6,SNR=31						
	3.5nm,0.8s						
ASAR	**Alice Springs**	**58.46**	**189**	P	**P**	**14 51 41.0**	**0.0**
	0.4nm,0.8s,baz=14,slow=5.1,SNR=5.1						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**71.29**	**333**	P	**P**	**14 53 04.2**	**+0.1**
	1.3nm,0.9s,baz=81,slow=8.6,SNR=3.5						
	1.3nm,0.9s						
NVAR	**Mina Array Bea**	**75.94**	**53**	P	**P**	**14 53 33.0**	**+0.8**
	0.6nm,0.7s,baz=289,slow=5.7,SNR=4.6						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**78.92**	**45**	P	**P**	**14 53 48.9**	**+0.1**
	0.5nm,0.7s,baz=284,slow=2.8,SNR=5.9						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**91.09**	**53**	P	**P**	**14 54 50.7**	**+0.6**
	0.4nm,0.6s,baz=299,slow=5.2,SNR=4.3						
	0.4nm,0.6s						

*IDC **16** 15:01:38.4±1.3, 56°.41N×148°.75W, h0km, mb3.9/6, mbtmp3.7/10, ML3.3/4, MS3.1/6, Error ellipse: s-maj=26.8km s-min=21.7km az=6.0*
*NEIC **16** 15:01:39.0±2.2, 56°.39N±0°.07×148°.51W±0°.08, h21km±9km, mb3.6/2, ML3.6/60, ML3.3(AEIC), Error ellipse: s-maj=10.9km s-min=6.3km az=189.0*
*AEIC **16** 15:01:43.6±2.0, 56°.64N±0°.08×148°.59W±0°.10, h0km±7km, Error ellipse: s-maj=12.2km s-min=7.2km az=164.0*

ISC 16 15:01:39.6±0.9, 56°.58N±0°.08×148°.62W±0°.05, h10km, n216, σ1°15/219, mb4.1/6, MS3.3/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.47**	**301**		**Pn**	**15 02 20.4**	**+0.5**
KDAK				Sn	**Sn**	**15 02 47.8**	**-2.3**
KDAK	**Kodiak Island**	**2.47**	**301**	Pn	**Pn**	**15 02 19.9**	**+0.1**
	3.4nm,0.3s,baz=124,slow=5.1,SNR=56						
KDAK				Sn	**Sn**	**15 02 47.8**	**-2.3**
	13nm,0.3s,baz=261,slow=21,SNR=16						
KDAK				LR	LR	15 03 32.2	
	comp=Z,260nm,19.9s,baz=159,slow=45						
	6.3nm,0.3s						
OHAK	**Old Harbor**	**2.64**	**286**		**Pn**	**15 02 21.9**	**-0.3**
OHAK				Sn	**Sn**	**15 02 51.2**	**-3.0**
OHAK	**Old Harbor**	**2.64**	**286**	P	**Pn**	**15 02 22.1**	**-0.1**
OHAK	**Old Harbor**	**2.64**	**286**	P	**Pn**	**15 02 21.7**	**-0.5**
	baz=101						
OHAK				S	**Sn**	**15 02 51.3**	**-3.0**
	baz=101						
SYI	**Shuyak Island**	**2.87**	**317**		**Pn**	**15 02 26.4**	**+1.0**
SYI				Sn	**Sn**	**15 02 59.6**	**-0.4**
Q20K	**Shuyak Island**	**2.87**	**317**	P	**Pn**	**15 02 25.3**	**-0.1**
	baz=132						
Q20K				S	**Sn**	**15 02 58.8**	**-1.2**
	baz=132						
Q23K	**Middleton Isla**	**3.10**	**22**	Pn	**Pn**	**15 02 28.0**	**-0.5**
Q23K				IAML		15 03 11.8	
	comp=N,132nm,1.4s						
Q23K				IAML		15 03 24.0	
	comp=E,148nm,1.2s						
Q23K	**Middleton Isla**	**3.10**	**22**		**Sn**	**15 03 02.6**	**-3.0**
Q23K	**Middleton Isla**	**3.10**	**22**	P	**Pn**	**15 02 27.6**	**-0.9**
	baz=204						
Q23K				S	**Sn**	**15 03 02.6**	**-3.0**
	baz=204						
MID	**Middleton Isla**	**3.10**	**22**	Pn	**Pn**	**15 02 27.8**	**-0.6**
MID				IAML		15 03 04.0	
	comp=N,123nm,0.7s						
MID				IAML		15 03 24.1	
	comp=E,138nm,1.1s						
MID	**Middleton Isla**	**3.10**	**22**	P	**Pn**	**15 02 27.9**	**-0.6**
CNPM	**China Poot**	**3.26**	**336**	Pn	**Pn**	**15 02 30.9**	**+0.1**
BRSE	**Bradley Lake S**	**3.36**	**341**		**Pn**	**15 02 31.7**	**-0.5**
BRSE					**Sn**	**15 03 09.9**	**-2.1**
BRSE	**Bradley Lake S**	**3.36**	**341**	P	**Pn**	**15 02 31.7**	**-0.5**
	baz=159						
BRSE				S	**Sn**	**15 03 09.9**	**-2.1**
	baz=159						
BRLK	**Bradley Lake**	**3.41**	**340**	Pn	**Pn**	**15 02 32.5**	**-0.3**
BRLK	**Bradley Lake**	**3.41**	**340**		**Sn**	**15 03 11.6**	**-1.6**
BRLK	**Bradley Lake**	**3.41**	**340**	IAML		15 03 14.7	
	comp=N,68nm,0.6s						
BRLK				IAML		15 03 17.9	
	comp=E,87nm,0.5s						
HOM	**Homer**	**3.48**	**334**	Pn	**Pn**	**15 02 34.9**	**+1.2**
HOM	**Homer**	**3.48**	**334**	P	**Pn**	**15 02 34.6**	**+0.9**
	baz=150						
P23K	**Montague Islan**	**3.48**	**10**		**Pn**	**15 02 33.3**	**-0.6**
P23K	**Montague Islan**	**3.48**	**10**	P	**Pn**	**15 02 33.3**	**-0.6**
	baz=191						
SEW	**Seward**	**3.56**	**353**		**Pn**	**15 02 34.1**	**-0.7**
SEW	**Seward**	**3.56**	**353**	P	**Pn**	**15 02 34.1**	**-0.7**
	baz=172						
Q19K	**Cape Douglas,**	**3.57**	**313**	Pn	**Pn**	**15 02 36.8**	**+1.7**
Q19K				IAML		15 03 24.9	
	comp=N,142nm,1.1s						
Q19K	**Cape Douglas,**	**3.57**	**313**	P	**Pn**	**15 02 36.4**	**+1.3**
	baz=128						
KAHG	**Katmai Hook Gl**	**3.73**	**303**		**Pn**	**15 02 38.4**	**+1.2**
P19K	**Oil Pt**	**3.93**	**323**	Pn	**Pn**	**15 02 42.1**	**+2.1**
P19K	**Oil Pt**	**3.93**	**323**	P	**Pn**	**15 02 40.8**	**+0.8**
	baz=139						
O22K	**Cooper Landing**	**3.95**	**352**		**Pn**	**15 02 40.6**	**+0.4**
HIN	**Hinchinbrook I**	**3.98**	**15**	Pn	**Pn**	**15 02 40.5**	**-0.2**
HIN				IAML		15 03 30.3	
	comp=E,103nm,0.7s						
HIN				IAML		15 03 32.0	
	comp=N,124nm,1.4s						
KAIM	**Kayak Island**	**4.02**	**32**		**Pn**	**15 02 40.7**	**-0.5**
KAIM	**Kayak Island**	**4.02**	**32**	IAML		15 03 32.0	
	comp=E,97nm,0.8s						
KAIM				IAML		15 03 35.1	
	comp=N,117nm,0.7s						
KAIM	**Kayak Island**	**4.02**	**32**	P	**Pn**	**15 02 40.7**	**-0.5**
	baz=216						
SLKM	**Skilak Lake**	**4.02**	**349**		**Pn**	**15 02 40.4**	**-0.9**
O20K	**Slope Mountain**	**4.09**	**331**		**Pn**	**15 02 42.5**	**+0.3**
O20K	**Slope Mountain**	**4.09**	**331**	P	**Pn**	**15 02 42.5**	**+0.3**
	baz=147						
IVE	**Iliamna Volcan**	**4.15**	**328**		**Pn**	**15 02 42.5**	**-0.5**
ILSW	**Iliamna Southw**	**4.16**	**327**		**Pn**	**15 02 44.0**	**+0.8**
ILSW				IAML		15 03 37.3	
	comp=N,81nm,0.4s						
ILSW				IAML		15 03 38.8	
	comp=E,58nm,0.5s						
EYAK	**Cordova Ski Ar**	**4.25**	**19**		**Pn**	**15 02 44.1**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.25**	**19**	P	**Pn**	**15 02 44.2**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.25**	**19**	P	**Pn**	**15 02 44.1**	**-0.2**
	baz=202						
CNTC	**Contact Creek**	**4.27**	**296**		**Pn**	**15 02 45.8**	**+1.0**
Q17K	**Contact Creek**	**4.28**	**296**	P	**Pn**	**15 02 45.8**	**+1.0**
	baz=109						
FID	**Port Fidalgo**	**4.33**	**14**		**Pn**	**15 02 44.6**	**-0.8**
FID	**Port Fidalgo**	**4.33**	**14**	IAML		15 03 33.8	
	comp=E,61nm,0.5s						
FID				IAML		15 03 35.8	
	comp=N,52nm,0.4s						
SUCK	**Suckling Hills**	**4.33**	**34**		**Pn**	**15 02 45.5**	**0.0**
SUCK				IAML		15 03 44.0	
	comp=E,44nm,1.4s						
SUCK				IAML		15 03 45.2	
	comp=N,81nm,0.9s						
RAGM	**Ragged Mountai**	**4.34**	**27**		**Pn**	**15 02 45.6**	**0.0**
NICHA	**Nichawak Mount**	**4.40**	**32**		**Pn**	**15 02 46.5**	**0.0**
GOAT	**Goat Mountain**	**4.50**	**25**		**Pn**	**15 02 47.8**	**0.0**
P18K	**Big Mountain,**	**4.50**	**311**		**Pn**	**15 02 48.6**	**+0.7**
P18K	**Big Mountain,**	**4.50**	**311**	P	**Pn**	**15 02 47.9**	**0.0**
	baz=125						
BGLC	**Bering Glacier**	**4.52**	**36**		**Pn**	**15 02 48.3**	**+0.2**
BGLC	**Bering Glacier**	**4.52**	**36**	P	**Pn**	**15 02 48.3**	**+0.2**
	baz=221						
BERG	**Berg Lake**	**4.61**	**32**		**Pn**	**15 02 48.5**	**-0.8**
BERG				IAML		15 03 45.9	
	comp=N,76nm,0.3s						
O19K	**Port Alsworth**	**4.70**	**323**		**Pn**	**15 02 49.8**	**-0.7**
SNH	**Sunshine Point**	**4.72**	**38**	Pn	**Pn**	**15 02 50.9**	**+0.1**
SNH				IAML		15 03 51.6	
	comp=N,42nm,1.1s						
SNH				IAML		15 03 55.4	
	comp=E,37nm,0.9s						
O18K	**Koktuh Hills**	**4.78**	**316**		**Pn**	**15 02 52.8**	**+1.1**
O18K				IAML		15 03 52.5	
	comp=N,35nm,0.7s						
O18K	**Koktuh Hills**	**4.78**	**316**	P	**Pn**	**15 02 51.6**	**-0.1**
	baz=130						
KHIT	**Khitrov Hills**	**4.79**	**34**		**Pn**	**15 02 51.0**	**-0.8**
BMRM	**Bremner River**	**4.87**	**24**	P	**Pn**	**15 02 52.9**	**0.0**
	baz=207						
WAX	**Waxell Ridge**	**4.92**	**36**	Pn	**Pn**	**15 02 53.2**	**-0.3**
BARK	**Barkley Ridge**	**5.00**	**37**		**Pn**	**15 02 54.2**	**-0.5**
SUA	**Susitna One**	**5.02**	**348**	Pn	**Pn**	**15 02 55.6**	**+0.7**
SUA	**Susitna One**	**5.02**	**348**	P	**Pn**	**15 02 54.8**	**-0.2**
	baz=166						
MESA	**MESA**	**5.03**	**41**	Pn	**Pn**	**15 02 56.4**	**+1.2**
MESA				IAML		15 04 18.7	
	comp=E,48nm,0.2s						
PMR	**Palmer**	**5.03**	**357**		**Pn**	**15 02 54.6**	**-0.5**
PMR				IAML		15 03 52.1	
	comp=E,22nm,0.4s						
PMR				IAML		15 03 57.8	
	comp=N,29nm,0.6s						
PMR	**Palmer**	**5.03**	**357**	P	**Pn**	**15 02 56.0**	**+1.0**
CRQM	**Cirque**	**5.07**	**32**		**Pn**	**15 02 55.7**	**0.0**
CRQM				IAML		15 03 54.6	
	comp=N,56nm,0.5s						
CRQM				IAML		15 03 55.3	
	comp=E,29nm,0.5s						
CRQE	**Cirque**	**5.08**	**32**	P	**Pn**	**15 02 54.8**	**-1.1**
	baz=217						
KLU	**Klutina**	**5.12**	**15**		**Pn**	**15 02 56.3**	**0.0**
KLU				IAML		15 03 58.5	
	comp=E,26nm,1.1s						
KLU				IAML		15 03 59.5	
	comp=N,33nm,0.5s						
KLU	**Klutina**	**5.12**	**15**	P	**Pn**	**15 02 56.3**	**0.0**
	baz=197						
TGL	**Tana Glacier**	**5.16**	**33**		**Pn**	**15 02 56.9**	**0.0**
TGL				IAML		15 03 54.1	
	comp=E,33nm,0.6s						
TGL				IAML		15 04 03.0	
	comp=N,25nm,1.0s						
ISLE	**Juniper Island**	**5.20**	**37**	Pn	**Pn**	**15 02 57.3**	**-0.2**
ISLE				IAML		15 03 56.2	
	comp=N,25nm,0.9s						
BAGL	**Bagley Icefiel**	**5.20**	**38**		**Pn**	**15 02 57.0**	**-0.3**
STLK	**Strandline Lak**	**5.20**	**343**		**Pn**	**15 02 57.5**	**0.0**
GHO	**Glory Hole Cre**	**5.21**	**358**		**Pn**	**15 02 58.4**	**+0.9**
N19K	**Bonanza Creek**	**5.23**	**327**		**Pn**	**15 02 57.6**	**-0.3**
N19K	**Bonanza Creek**	**5.23**	**327**	P	**Pn**	**15 02 57.6**	**-0.3**
	baz=141						
SML	**Sawmill**	**5.24**	**1**	Pn	**Pn**	**15 02 58.7**	**+0.7**
SML	**Sawmill**	**5.24**	**1**	P	**Pn**	**15 02 58.1**	**+0.1**
	baz=182						
SCM	**Sheep Creek Mo**	**5.31**	**7**		**Pn**	**15 02 59.5**	**+0.6**
VRDI	**Verde Repeater**	**5.37**	**28**		**Pn**	**15 02 59.9**	**0.0**
CHGN	**Chignik**	**5.44**	**271**	Pn	**Pn**	**15 02 59.5**	**-1.2**
SAMH	**Samovar Hills**	**5.45**	**46**		**Pn**	**15 03 00.5**	**-0.3**
N25K	**Chitina, Valde**	**5.45**	**21**		**Pn**	**15 03 00.9**	**+0.1**
N25K	**Chitina, Valde**	**5.45**	**21**	P	**Pn**	**15 03 00.9**	**+0.1**
	baz=204						
GLB	**Gilahina Butte**	**5.47**	**25**		**Pn**	**15 03 00.6**	**-0.5**
GRNC	**Granite Creek**	**5.49**	**38**		**Pn**	**15 03 00.9**	**-0.6**
TABL	**Table Mountain**	**5.50**	**42**		**Pn**	**15 03 01.6**	**-0.1**
PTPK	**Patty Peak**	**5.61**	**32**		**Pn**	**15 03 03.0**	**-0.2**
MCARA	**McCarthy VSAT**	**5.61**	**29**		**Pn**	**15 03 03.5**	**+0.4**
M24K	**Tolsona, Glenn**	**5.68**	**12**		**Pn**	**15 03 04.9**	**+0.9**
M24K	**Tolsona, Glenn**	**5.68**	**12**	P	**Pn**	**15 03 04.6**	**+0.6**
	baz=194

O30N	Mendenhall	7.76	52	Pn	Pn	15 03 33.4	+0.8
SCRK	Sand Creek	7.76	15	Pn	Pn	15 03 33.8	+1.1
R32K	Eaglecrest	7.80	72	Pn	Pn	15 03 32.5	-0.6
K17K	Iditarod	7.86	325	Pn	Pn	15 03 33.9	+0.1
JIS	Juneau Island	7.87	72	Pn	Pn	15 03 32.9	-1.1
JIS	Juneau Island	7.87	72	P	Pn	15 03 32.8	-1.1
HDA	Harding Lake	7.89	5	Pn	Pn	15 03 37.0	+2.7
J18K	Innoko River	8.00	333	Pn	Pn	15 03 33.8	-2.0
CCB	Clear Creek Bu	8.10	2	Pn	Pn	15 03 37.6	+0.4
K27K	Chicken	8.14	21	Pn	Pn	15 03 38.6	+0.9
J19K	Poorman	8.20	338	Pn	Pn	15 03 38.2	-0.3
J25K	Salcha River,	8.21	10	Pn	Pn	15 03 37.6	-1.2
WHY	Whitehorse	8.25	55		Pn	15 03 39.8	+0.6
IL31		8.26	5	Pn	Pn	15 03 40.9	+1.6
ILAR	Eielson Array	8.26	5	Pn	Pn	15 03 41.0	+1.7
ILAR	Eielson Array comp=N,0.2nm,0.3s,baz=187,slow=13,SNR=8.9	8.26	5	Pn	Pn	15 03 40.2	+0.9
ILAR				Sn	Sn	15 05 09.8	-2.7
	comp=N,0.4nm,0.3s,baz=189,slow=22,SNR=10 comp=N,0.4nm,0.3s						
J26L	Joseph Creek	8.32	15		Pn	15 03 40.2	-0.1
L29M	L29M	8.40	35	Pn	Pn	15 03 41.0	-0.2
MDM	Murphy Dome	8.41	1	Pn	Pn	15 03 41.4	0.0
P32M	Atlin	8.45	63	Pn	Pn	15 03 41.2	-0.8
P32M	Atlin baz=256	8.45	63	P	Pn	15 03 41.7	-0.3
I23K	Minto, Yukon-K	8.60	358	Pn	Pn	15 03 44.2	+0.2
U33K	Whale Pass	8.62	87	Pn	Pn	15 03 40.5	-3.8
K15K	Wolf Creek Mou	8.71	316	Pn	Pn	15 03 44.8	-0.7
CRAG	Craig	8.75	91	Pn	Pn	15 03 42.5	-3.6
CRAG	Craig	8.75	91	P	Pn	15 03 43.0	-3.1
I21K	Tanana	8.78	351	Pn	Pn	15 03 46.6	+0.2
EGAK	Eagle	8.99	21	Pn	Pn	15 03 51.6	+2.2
J16K	Anvik River	9.01	323	Pn	Pn	15 03 48.8	-0.7
P33M	Teslin, Yukon	9.05	60		Pn	15 03 49.9	-0.4
P33M	Teslin, Yukon baz=254	9.05	60	P	Pn	15 03 51.0	+0.7
Q32M	Nakina River	9.05	68	Pn	Pn	15 03 51.0	+0.6
K29M	Barlow Dome	9.12	33	Pn	Pn	15 03 52.6	+1.3
I26K	Coal Creek Min	9.14	19	Pn	Pn	15 03 51.5	+0.1
M31M	Drury Creek, Y	9.17	46	Pn	Pn	15 03 53.0	+1.1
H21K	Melozitna Rive	9.32	349		Pn	15 03 54.4	+0.5
S34M	Telegraph Cree	9.57	75	Pn	Pn	15 03 56.6	-0.7
IMAR	Indian Mountai	9.74	348	Pn	Pn	15 03 58.8	-0.8
R33M	Jennings River	9.78	66	Pn	Pn	15 03 60.0	-0.4
H18K	Honhosa River	9.81	335	Pn	Pn	15 03 59.4	-1.1
I28M	Miner Creek	9.83	22	Pn	Pn	15 03 59.5	-1.4
T35M	Bob Quinn	10.09	80	Pn	Pn	15 04 03.0	-1.5
FYU	Fort Yukon	10.14	8	Pn	Pn	15 04 02.8	-2.3
G24K	Hadweenzic Riv	10.17	3	Pn	Pn	15 04 05.7	+0.3
DLBC	Dease Lake	10.17	72	Pn	Pn	15 04 05.2	-0.4
DLBC	Dease Lake comp=N,0.7nm,0.3s,baz=293,slow=9.6,SNR=6.9	10.17	72	Pn	Pn	15 04 06.9	+1.3
DLBC				LR	LR	15 07 23.3	
	comp=N,77nm,19.0s,baz=310,slow=34 comp=N,1.2nm,0.3s						
F20K	Avaraart Lake	11.02	345	Pn	Pn	15 04 16.6	-0.3
E24K	Your Creek	11.53	0	Pn	Pn	15 04 24.2	0.0
BBB	Bella Bella comp=N,40nm,21.2s,baz=280,slow=32	12.72	102	LR	LR	15 08 27.0	
INK	Inuvik comp=N,0.1nm,0.3s,baz=219,slow=6.3,SNR=4.8	13.62	24	Pn	P	15 05 03.7	+2.2
C36M	Paulatuk	16.79	31	Pn	Pn	15 05 32.2	-2.3
C36M	comp=Z,6.7nm,1.5s			IAmb	IAmb	15 05 49.9	
KIWB	Kanaga Island	17.27	266	P	Pn	15 05 40.2	-0.4
YKA	Yellowknife Ar baz=267,slow=11,SNR=8.1 comp=Z,0.6nm,0.8s	18.07	57	P	P	15 05 52.2	+1.4
A36M	Sachs Harbour	18.26	23	P	P	15 05 53.5	+0.7
A36M	comp=Z,9.1nm,1.5s			IAmb	IAmb	15 06 03.4	
ELK	Elko comp=Z,70nm,18.9s,baz=20,slow=32	26.80	112	LR	LR	15 16 00.1	
ULM	Lac du Bonnet comp=Z,67nm,18.5s,baz=36,slow=35	31.38	79	LR	LR	15 20 09.1	
MJAR	Matsushiro Arr comp=Z,27nm,18.2s,baz=59,slow=40	51.48	280	LR	LR	15 35 48.3	
SONM	Songino Array comp=Z,1.7nm,1.1s,baz=53,slow=5.9,SNR=6.3 comp=Z,1.7nm,1.1s	58.73	310	P	P	15 11 37.1	-0.3
ZALV	Zalesovo Beam comp=Z,1.1nm,0.5s,baz=21,slow=7.3,SNR=5.9 comp=Z,1.1nm,0.5s	61.51	327	P	P	15 11 57.4	+1.3
FINES	FINESS Array B comp=Z,1.3nm,0.8s,baz=335,slow=8.4,SNR=3.5 comp=Z,1.3nm,0.8s	62.24	3	P	P	15 12 02.1	+1.2
BVAR	Borovoye Array comp=Z,1.4nm,0.7s,baz=23,slow=8.4,SNR=8.9 comp=Z,1.4nm,0.7s	66.16	335	P	P	15 12 28.2	+1.5
KURBB	Kurchatov Arra comp=Z,0.5nm,0.6s,baz=29,slow=6.3,SNR=4.8 comp=Z,0.5nm,0.6s	66.27	329	P	P	15 12 28.5	+1.0
MKAR	Makanchi Array comp=Z,0.3nm,0.7s,baz=52,slow=7.9,SNR=4.5 comp=Z,0.3nm,0.7s	68.56	325	P	P	15 12 43.0	+0.8
QSPA	South Pole Qui comp=Z,1.0nm,0.6s,baz=319,slow=2.6,SNR=5.5	146.38	180	PKPbc	PKPab	15 21 19.1	-1.0

*IDC **16** 15:13:15.9±2.2,35°.91N×139°.83E,h60^{km}±19^{km},mb3.0/3, mbtmp3.5/5,Error ellipse: s-maj=30.4km s-min=9.4km az=60.0*

*JMA **16** 15:13:15.4±0.1,36°.1N±0°.3×139°.9E±0°.4,h44^{km}±1^{km}, MV3.4/35,SW IBARAKI PREF*

JMA Felt II J1 at SW IBARAKI PREF .

ISC 16 15:13:14.7±1.0,36°.03N±0°.05×139°.92E±0°.06,h54^{km}±9km, n13,σ0^{s}96/20,mb3.4/3,8D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.29	49	⇓*i*P	Pn	15 13 23.9	-0.2
JYT				⇓S	Sn	15 13 30.1	-0.7
TOK	Tokyo	0.37	201	P	Pn	15 13 26.0	+1.2
JAG	Ashikaga	0.54	316	⇓*i*P	Pn	15 13 26.5	-0.2
JAG				⇓S	Sn	15 13 34.5	-0.9
JRY	Ryogami san	0.83	269	⇓*i*P	Pn	15 13 30.2	-0.1
JRY				⇓*e*S	Sn	15 13 40.5	-1.1
JKT	Katashina	0.91	324	⇓*i*P	Pn	15 13 31.2	-0.2
JKT				⇓S	Sn	15 13 43.1	-0.6
JOD2	Odawara 2	1.03	222	P	Pn	15 13 33.1	+0.2
JOD2				*e*S	Sn	15 13 46.3	0.0
JYN	Shimob	1.24	245	P	Pn	15 13 36.6	+0.8
MJAR	Matsushiro Arr 12nm,0.3s,baz=90,slow=15,SNR=88	1.47	291	P	Pn	15 13 39.3	+0.4
MJAR				S	Sn	15 13 57.3	+0.2
	15nm,0.3s,baz=293,slow=25,SNR=6.8						
JHJ	Hachijo jima 2 86nm,0.3s,baz=32,slow=13,SNR=25	2.91	182	P	Pn	15 13 58.6	+0.1
JHJ				S	Sn	15 14 31.0	-1.3
	51nm,0.3s,baz=71,slow=22,SNR=1.8						
ASAJ	Asahikawa 1.4nm,0.3s,baz=189,slow=34,SNR=1.0	8.33	13	P	Pn	15 15 15.5	+2.8
MKAR	Makanchi Array 0.1nm,0.5s,baz=86,slow=8.8,SNR=1.7 0.1nm,0.5s	43.64	303	P	P	15 21 13.8	0.0
WRA	Warramunga Arr 0.2nm,0.5s,baz=0.6,slow=7.5,SNR=5.5 0.2nm,0.5s	55.92	186	P	P	15 22 47.1	-0.1
ASAR	Alice Springs 0.6nm,1.1s,baz=7.0,slow=8.4,SNR=2.2 0.6nm,1.1s	59.65	186	P	P	15 23 13.2	-0.1

IDC 16 15:38:10.1±2.1,8.74S×126.22E,h0^{km},mb3.2/1, mbtmp3.5/3,ML3.6/2,Error ellipse: s-maj=179.4km s-min=33.6km az=60.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.3s,baz=323,slow=14,SNR=26	13.63	146	Pn	Pn	15 41 24.7	-0.1
WRA				Sn	Sn	15 43 47.9	-9.2
	0.1nm,0.3s,baz=317,slow=24,SNR=1.1 1.8nm,0.6s						
ASAR	Alice Springs 0.1nm,0.3s,baz=324,slow=11,SNR=20	16.56	155	Pn	Pn	15 42 04.1	+0.1
ASAR				Sn	Sn	15 44 58.6	-10
	baz=316,slow=21,SNR=1.8 0.4nm,0.4s						
MKAR	Makanchi Array 0.1nm,0.5s,baz=141,slow=7.1,SNR=1.9 0.1nm,0.5s	67.70	329	P	P	15 49 09.4	0.0

*NEIC **16** 15:53:06.2±1.3,36°.98N±0°.02×99°.37W±0°.02,h5^{km}±1^{km}, Error ellipse: s-maj=3.9km s-min=2.9km az=233.0*

TUL 16 15:53:06.9±1.1,36°.96N±0°.02×99°.35W±0°.03,h3^{km}±5km, ML3.1,mb_Lg2.7/70(NEIC),ML2.9/12(NEIC),Error ellipse: s-maj=4.2km s-min=1.9km az=118.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK035	E0210 Rd and N	0.57	116	Pg	Pg	15 53 17.1	-0.6
OK035	503nm,0.4s			IAML	Sg	15 53 26.8	+1.6
OK035				Sg	Sg	15 53 26.8	+1.6
U32A	Winter Ranch,	0.64	154	Pg	Pg	15 53 19.0	-0.1
U32A				Sg	Sg	15 53 28.3	+0.9
U32A	comp=E,484nm,0.6s			IAML		15 53 31.9	
OK038	West end E0370	0.68	134	Pg	Pg	15 53 19.3	-0.6
ELIS	Ellis County	0.89	184	Pg	Pg	15 53 23.9	-0.1
ELIS	comp=E,557nm,0.3s			IAML		15 53 39.0	
ELIS				IAML		15 53 40.6	
	comp=N,507nm,0.4s						
KAN10	Anthony SW Sta	1.02	80	Pg	Pg	15 53 26.2	-0.2
KAN14	Manchester OK	1.11	90	Pg	Pg	15 53 26.9	-1.2
CROK	Carrier	1.19	112	Pg	Pg	15 53 28.9	-0.7
CROK	comp=N,307nm,0.4s			IAML		15 53 51.1	
GC02	Grant County #	1.20	95		Pg	15 53 28.8	-1.1
KAN06	Argonia West S	1.23	76	Pg	Pg	15 53 29.6	-0.8
KAN17	Caldwell West	1.27	86	Pg	Pg	15 53 30.2	-1.0
KAN01	Argonia South	1.29	81	Pg	Pg	15 53 29.5	-2.1
KS21	Milan North St	1.39	76		Pn	15 53 32.1	-1.1
KAN09	Caldwell North	1.40	82		Pn	15 53 32.7	-0.6
CSTR	Hydro, Custer	1.41	158		Pn	15 53 31.6	-1.9
R32A	Long Quarter,	1.55	19		Pn	15 53 34.8	-0.7
R32A	comp=Z,47nm,0.7s			IAmb_Lg		15 53 55.6	
BLOK	Blackwell	1.72	96		Pn	15 53 38.4	+0.6
CBKS	Cedar Bluff	1.88	351	Pn	Pn	15 53 40.4	+0.3
SMWD	Samnorwood	1.98	202	Pn	Pn	15 53 42.1	+0.7
SMWD	comp=Z,34nm,0.7s			IAmb_Lg		15 54 11.6	
OK048	Pawnee Station	2.01	105		Pn	15 53 42.2	+0.5
OK051	E0350 and S346	2.07	102	Pn	Pn	15 53 42.0	-0.5
WMOK	Wichita Mounta	2.26	168	Pn	Pn	15 53 45.5	+0.2
WMOK	comp=Z,30nm,1.0s			IAmb_Lg		15 54 18.5	
QUOK	Quay	2.27	109		Pn	15 53 46.5	+1.3
T35A	Sooner Cattle	2.27	90		Pn	15 53 46.6	+1.3
T35A	comp=Z,27nm,0.7s			IAmb_Lg		15 54 19.4	
DEOK	Depew	2.55	115	Pn	Pn	15 53 49.2	0.0
W35A	Tecumseh	2.69	131		Pn	15 53 50.9	-0.2
RTBA	Rita Blanca	2.77	260	Pn	Pn	15 53 51.8	-0.6
RTBA	comp=Z,20nm,0.8s			IAmb_Lg		15 54 40.5	
AMTX	Amarillo	2.80	223		Pb	15 53 55.4	-2.3
AMTX	comp=Z,19nm,0.9s			IAmb_Lg		15 54 34.2	
KSU1	Kansas State U	3.04	44	IAmb_Lg		15 54 48.1	
TUL3	comp=Z,18nm,0.8s Leonard	3.05	109	IAmb_Lg		15 54 48.0	
WTFS	comp=Z,28nm,0.9s Witchita Falls	3.26	167	Pn	Pn	15 53 58.0	-1.0
LOOK	Love County	3.44	148	IAmb_Lg		15 55 02.6	
DKNS	comp=Z,19nm,0.7s Dickens	3.52	202		Pn	15 54 04.4	+1.8
DKNS	comp=Z,18nm,0.8s			IAmb_Lg		15 55 08.6	
X37A	Clayton	4.00	125	Pn	Pn	15 54 09.5	+0.4
X37A	comp=Z,23nm,0.8s			IAmb_Lg		15 55 17.6	
T25A	Trinidad	4.05	274		Pn	15 54 09.4	-0.6
SN07	Snyder 07 comp=Z,12nm,0.8s	4.06	199	IAmb_Lg		15 55 17.3	
MSTX	Muleshoe	4.08	224	Pn	Pn	15 54 11.9	+1.5
MSTX	comp=Z,15nm,0.7s			IAmb_Lg		15 55 21.3	
PLPT	Palo Pinto	4.22	168	Pn	Pn	15 54 11.6	-0.5
SN05	Snyder 5 comp=Z,16nm,0.8s	4.26	198	IAmb_Lg		15 55 29.3	
POST	Post comp=Z,15nm,0.8s	4.26	205	IAmb_Lg		15 55 30.8	
ABTX	Abilene, Hawle comp=Z,12nm,0.8s	4.33	183	IAmb_Lg		15 55 34.6	
OGNE	Ogallala	4.50	333	Pn	Pn	15 54 14.7	-1.3
S39A	Bolivar	4.86	79	Pn	Pn	15 54 23.8	+2.9
S39A	comp=Z,19nm,0.9s			IAmb_Lg		15 55 51.3	
Q24A	Divide comp=Z,14nm,0.9s	5.00	295	IAmb_Lg		15 55 45.1	
MIAR	Mount Ida	5.27	115	Pn	Pn	15 54 25.4	-1.2
P38A	Dawn comp=Z,14nm,0.7s	5.29	58	IAmb_Lg		15 56 09.2	
BRIGG	Briggsdale comp=Z,17nm,0.9s	5.31	315	IAmb_Lg		15 55 57.6	
ISCO	Idaho Springs	5.68	302	Pn	Pn	15 54 31.8	-0.7
FCAR	Ozark Folk Cen comp=Z,11nm,0.8s	5.92	98	IAmb_Lg		15 56 14.1	
WHAR	Wooly Hollow comp=Z,13nm,1.0s	5.95	104	IAmb_Lg		15 56 25.4	
N38A	Joes South For comp=Z,14nm,0.7s	6.12	49	IAmb_Lg		15 56 24.4	
OZNA	Ozona comp=Z,8.1nm,0.7s	6.20	194	IAmb_Lg		15 56 31.9	
P40A	Paris comp=Z,14nm,0.8s	6.29	64	IAmb_Lg		15 56 40.0	
PHWY	Pilot Hill comp=Z,8.8nm,0.8s	6.43	314	IAmb_Lg		15 56 35.1	
JCT	Junction City comp=Z,13nm,0.8s	6.47	183	IAmb_Lg		15 56 43.9	
LCAR	Lake Charles comp=Z,7.9nm,0.7s	6.66	95	IAmb_Lg		15 56 40.0	
PBMO	Poplar Bluff comp=Z,9.7nm,0.7s	7.15	89	IAmb_Lg		15 57 04.0	
FVM	French Village comp=Z,12nm,0.9s	7.17	79	IAmb_Lg		15 56 55.2	
K22A	Casper comp=Z,9.9nm,0.9s	7.93	318	IAmb_Lg		15 57 38.9	
RSSD	Black Hills comp=Z,5.9nm,0.8s	8.00	335	IAmb_Lg		15 57 43.2	

DJA 16 16:13:59.3±0.3,4°S±3°×107°E±°,h10^{km},M3.8/10,mB5.4/1, MLv3.8/10,Mw(mB)4.9/1,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.30	209	P	Pb	16 14 06.3	-0.4
MNAI				S	Sb	16 14 12.3	+0.6
LWLI	Liwa	1.32	134	P	Pn	16 14 23.0	-0.9
KASI	Kota Agung	1.98	136	P	Pn	16 14 33.3	+0.3
PMBI	Palembang	2.04	55	P	Pn	16 14 33.1	-0.6
KRJI	Kerinci	2.58	321	P	Pn	16 14 42.0	+0.7
PPSI	Pulau Pagai	3.36	293	P	Pn	16 14 51.5	-0.4
SBJI	Serang	3.62	124	P	Pn	16 14 55.1	-0.4
DSRI	Dabo	3.89	22	P	Pn	16 14 58.9	-0.3
GSI	Gunungsitoli	7.70	314	P	Pn	16 15 51.5	-0.1

*IDC **16** 16:14:53.4±3.3,34°.76S×178°.68W,h0^{km},mb3.7/2, mbtmp3.8/3,ML4.0/1,Error ellipse: s-maj=78.6km s-min=36.7km az=126.0*

*WEL **16** 16:15:49.6,38°S±33°×17°8E±2°,1,h23^{km}±26^{km},M2.1/6, ML2.2/5,MLv2.1/6,Error ellipse: s-maj=0.1km s-min=0.0km az=10.6*

ISC 16 16:14:54.2±2.5,34°.9S±0°.2×178°.5W±0°.3,h10^{km},n14, σ0^{s}78/14,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.72	222	P	Pn	16 15 43.9	-7.7
WMGZ	Waiomatatini S	3.85	219	P	**Pn**	**16 15 54.1**	**+0.7**
PUZ	Puketiti	4.12	218	P	**Pn**	**16 15 56.7**	**-0.5**
HAZ	Te Kaha	4.15	225	P	**Pn**	**16 15 58.9**	**+1.3**
TWGZ	Tauwhareparae	4.34	219	P	**Pn**	**16 16 01.1**	**+0.8**
RUGZ	Raukumara Rang	4.35	223	P	**Pn**	**16 16 01.3**	**+0.8**
CNGZ	Carnagh Statio	4.47	215	P	**Pn**	**16 16 02.7**	**+0.7**
TKGZ	Te Karaka	4.61	218	P	**Pn**	**16 16 04.0**	**+0.1**
MWZ	Matawai	4.70	221	P	**Pn**	**16 16 05.3**	**+0.1**
URZ	Urewera 5.8nm,0.3s,baz=336,slow=3.2,SNR=23	4.88	225	Pn	**Pn**	**16 16 08.6**	**+1.0**
URZ				Sn	**Sn**	**16 17 03.3**	**-0.8**
	8.7nm,0.3s,baz=61,slow=23,SNR=17						
URZ	Urewera 12nm,0.3s	4.88	225	P	**Pn**	**16 16 08.2**	**+0.6**
ASAR	Alice Springs 0.8nm,0.8s,baz=115,slow=7.1,SNR=12 0.8nm,0.8s	42.62	272	P	**P**	**16 22 50.6**	**-0.2**
WRA	Warramunga Arr 0.7nm,0.5s,baz=118,slow=7.6,SNR=16 0.7nm,0.5s	44.00	277	P	**P**	**16 23 01.6**	**-0.5**
FINES	FINESS Array B 3.3nm,1.1s,baz=48,slow=4.3,SNR=4.6	149.12	337	PKPbc	**PKPbc**	**16 34 41.8**	**-0.1**

TAP 16 16:26:39.6,23°.78N×121°.74E,h40^{km},ML1.9,1C-3D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUL	Shoufeng baz=273	0.17	273	P	Pn	16 26 47.0	+0.3
SHUL				*e*S	Sn	16 26 53.2	+1.7
TEGC	Jichi Village baz=248	0.20	250	*e*P	Pn	16 26 46.0	-1.0
TEGC				*e*S	Sn	16 26 52.0	0.0
HWA	Hwalien baz=329	0.23	327	*e*P	Pn	16 26 46.7	-0.5
HWA				S	Sn	16 26 52.7	+0.2
ESL	Shilin baz=277	0.29	277	*i* P	Pn	16 26 47.7	-0.1
ESL				S	Sn	16 26 53.5	+0.1
ETM	Tongmen baz=309	0.29	309	*i* P	Pn	16 26 47.7	-0.1
ETM				S	Sn	16 26 54.1	+0.4
TWD	Chiawan baz=340	0.33	336	*e*P	Pn	16 26 47.6	-0.7
TWD				S	Sn	16 26 54.4	+0.2
WARBT	Fenglin Townsh baz=259	0.33	260	*i* P	Pn	16 26 48.0	-0.3
WARBT				*i* S	Sn	16 26 54.0	-0.3
LXIB	Xiulin Townshi baz=308	0.39	309	P	Pn	16 26 48.7	-0.4
LXIB				*e*S	Sn	16 26 55.4	-0.3
ETL	Fush Village baz=346	0.39	344	P	Pn	16 26 48.7	-0.4
ETL				S	Sn	16 26 56.0	+0.3
HGSD	Ruisui baz=223	0.41	226	*e*P	Pn	16 26 49.9	+0.7
HGSD				*e*S	Sn	16 26 57.9	+2.0
NACB	Ninganchiao baz=344	0.42	341	*e*P	Pn	16 26 47.7	-1.6
NACB				*e*S	Sn	16 26 56.3	+0.2
EHY	Hungye baz=245	0.47	235	*i* P	Pn	16 26 49.8	-0.2
EHY				S	Sn	16 26 57.2	-0.1
ETLH	Xiulin Townshi baz=320	0.49	331	*e*P	Pn	16 26 49.8	-0.5
ETLH				*e*S	Sn	16 26 57.2	-0.6
EAHA	Aohua baz=359	0.55	360	P	Pn	16 26 51.2	+0.2
EAHA				S	Sn	16 26 59.5	+0.4
VWDT	VWDT baz=267	0.55	268	P	Pn	16 26 51.2	+0.2
VWDT				*e*S	Sn	16 26 59.4	+0.2
YULB	Yu-li baz=238	0.56	227	P	Pn	16 26 50.8	-0.5
YULB				*i* S	Sn	16 26 58.8	-0.6
WHF	Hehuan Shan baz=303	0.57	310	*i* P	Pn	16 26 51.7	-0.1
WHF				*e*S	Sn	16 26 59.7	-0.5
EYUL	Yuli baz=234	0.58	222	*e*P	Pn	16 26 50.5	-1.0
EYUL				*e*S	Sn	16 26 59.7	-0.2
TWF1	Yuli baz=234	0.59	224	P	Pn	16 26 51.2	-0.4
TWF1				S	Sn	16 26 59.6	-0.5
CHGB	Renai baz=305	0.59	298	*i* P	Pn	16 26 51.8	-0.1
CHGB				S	Sn	16 27 00.0	-0.4
WUSB	Renai baz=290	0.61	290	P	Pn	16 26 51.9	-0.1
WUSB				*e*S	Sn	16 27 00.3	-0.5
EOS4	EOS4 baz=66	0.63	57	P	Pn	16 26 52.9	+1.1
EOS4				*i* S	Sn	16 27 01.3	+0.8
ENA	Nanau	0.65	360	*e*P	Pn	16 26 51.5	-0.9
ENA				*e*S	Sn	16 27 01.4	-0.1
FUSS	Fushou baz=323	0.65	316	⇓*e*P	Pn	16 26 52.4	-0.3
FUSS				S	Sn	16 27 02.1	+0.1
EWUT	Wuta baz=2.0	0.66	3	P	Pn	16 26 52.1	-0.5
EWUT				*e*S	Sn	16 27 01.7	-0.2
CHKH	Chenggong baz=199	0.67	209	*i* P	Pn	16 26 52.3	-0.3
CHKH				*i* S	Sn	16 27 02.0	+0.1
TWT	Tachien baz=311	0.70	312	*e*P	Pn	16 26 52.1	-1.2
TWT				*i* S	Sn	16 27 03.8	+0.7
TDCB	Techi baz=311	0.71	312	*i* P	Pn	16 26 53.6	+0.2
TDCB				S	Sn	16 27 03.3	0.0
SSLB	Suanglung baz=271	0.72	271	P	Pn	16 26 53.5	+0.1
SSLB				*i* S	Sn	16 27 03.5	+0.2
NNSB	Datong baz=327	0.72	333	*i* P	Pn	16 26 53.7	+0.2
NNSB				*e*S	Sn	16 27 03.1	-0.5
EOS3	EOS3 baz=41	0.73	46	*e*S	Sn	16 27 04.8	+1.5
NNS	Nan Shan baz=327	0.74	333	*e*P	Pn	16 26 53.5	-0.3
NNS				S	Sn	16 27 03.8	-0.1
LATG	Datong baz=335	0.78	345	*e*P	Pn	16 26 53.9	-0.4
LATG				*e*S	Sn	16 27 04.2	-0.6
SMLT	Sun Moon Lake baz=281	0.78	278	P	Pn	16 26 54.3	0.0
SMLT				*e*S	Sn	16 27 08.0	+3.1
EHD	Haiduan baz=229	0.80	218	⇓*e*P	Pn	16 26 53.2	-1.2
EHD				*e*S	Sn	16 27 06.4	+1.2
WCS	Beigang Elemen baz=290	0.81	290	P	Pn	16 26 54.8	+0.2
TYC	Yuchr baz=284	0.82	279	P	Pn	16 26 54.7	0.0
TYC				S	Sn	16 27 05.9	+0.2
TWC	Suao baz=1.0	0.83	7	*e*P	Pn	16 26 55.0	0.0
TWC				*e*S	Sn	16 27 06.5	+0.5
NDT	Datong Townshi baz=335	0.85	346	*i* P	Pn	16 26 55.5	+0.4
NDT				*e*S	Sn	16 27 06.1	-0.3
ENTT	Nioudou baz=349	0.87	349	*e*P	Pn	16 26 55.1	-0.4

ENTT				*e*S	Sn	16 27 06.8	-0.3
	baz=349						
ELDTW	**Lidau**	**0.89**	**229**	*e*P	Pn	16 26 55.0	-0.8
	baz=229						
ELDTW				*e*S	Sn	16 27 04.1	-3.4
	baz=229						
EDH	**Donghe**	**0.90**	**207**⇓	*e*P	Pn	16 26 54.4	-1.4
	baz=201						
ALS	**Alishan**	**0.90**	**253**	P	Pn	16 26 56.7	+0.6
	baz=253						
ALS				S	Sn	16 27 09.0	+0.9
	baz=253						
WJS	**Zhushan**	**0.93**	**273**⇓	*e*P	Pn	16 26 56.9	+0.7
	baz=273						
WJS				*e*S	Sn	16 27 09.6	+1.2
	baz=273						
TWE	**Neicheng**	**0.94**	**356**	P	Pn	16 26 56.9	+0.5
	baz=346						
TWE				*e*S	Sn	16 27 09.4	+0.8
	baz=346						
YHNB	**Yeheng**	**0.95**	**339**	*i* P	Pn	16 26 56.8	+0.3
	baz=339						
YHNB				*e*S	Sn	16 27 07.9	-1.0
	baz=339						
NSK	**Sanguang**	**0.96**	**339**	*e*P	Pn	16 26 56.1	-0.6
	baz=338						
NSK				*e*S	Sn	16 27 08.9	-0.3
	baz=338						
WNT	**Mingjian**	**0.97**	**276**	*e*P	Pn	16 26 57.1	+0.3
	baz=276						
WNT				*e*S	Sn	16 27 11.0	+1.5
	baz=276						
FUSB	**Fushanzhiwuyua**	**0.99**	**352**	*e*P	Pn	16 26 56.6	-0.5
	baz=351						
FUSB				*e*S	Sn	16 27 09.6	-0.3
	baz=351						
NWLT	**Wulai**	**1.02**	**348**	P	Pn	16 26 56.9	-0.6
	baz=339						
NWLT				*e*S	Sn	16 27 09.2	-1.4
	baz=339						
NFF	**Wufeng Townshi**	**1.02**	**326**	*e*P	Pn	16 26 58.3	+0.7
	baz=326						
NFF				S	Sn	16 27 11.8	+1.0
	baz=326						
EGS		**1.07**	**9**	*e*P	Pn	16 27 00.3	+2.1
	baz=9.0						
EGS				*e*S	Sn	16 27 15.5	+3.6
	baz=9.0						
LIOB	**Emei**	**1.09**	**323**	P	Pn	16 27 00.1	+1.6
	baz=308						
LIOB				*e*S	Sn	16 27 13.8	+1.5
	baz=308						
WCKO	**Fanlu**	**1.10**	**252**	*e*P	Pn	16 27 00.7	+2.1
	baz=252						
WCKO				S	Sn	16 27 14.7	+2.1
	baz=252						
TPUB	**Ta-pu**	**1.13**	**245**	P	Pn	16 27 00.4	+1.4
	baz=246						
TPUB				S	Sn	16 27 15.6	+2.3
	baz=246						
CHN4	**Tsaushan**	**1.14**	**248**	*e*P	Pn	16 27 00.1	+1.0
	baz=249						
CHN4				*i* S	Sn	16 27 16.1	+2.6
	baz=249						
WTP	**Ta-pu**	**1.16**	**243**	*i* P	Pn	16 27 00.9	+1.4
	baz=243						
TWK	**Hsinying**	**1.26**	**246**	*e*P	Pn	16 27 00.6	-0.3
	baz=246						
TWK				*e*S	Sn	16 27 18.2	+1.6
	baz=246						
MASBT	**Mashibuluo**	**1.55**	**222**	*e*P	Pn	16 27 05.5	+0.8
	baz=222						
MASBT				*e*S	Sn	16 27 24.8	+1.2
	baz=222						

TAP 16 16:26:57.3, 23.02N×121.01E, h15km±1km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONT	**Longtian**	**0.16**	**135**	*e*P	Pb	16 27 02.6	+0.6
	baz=134						
LONT				S	Sb	16 27 05.2	+0.2
	baz=134						
ELDTW	**Lidau**	**0.17**	**2**	P	Pg	16 27 01.6	+0.1
	baz=4.0						
ELDTW				*e*S	Sb	16 27 07.3	+1.8
	baz=4.0						
TWG	**Pinlang**	**0.20**	**163**	P	Pb	16 27 02.9	+0.2
	baz=161						
TWG				S	Sb	16 27 06.6	+0.2
	baz=161						
ECS	**Chishang**	**0.21**	**68**	*e*P	Pb	16 27 03.5	+0.7
	baz=67						
ECS				*e*S	Sb	16 27 08.2	+1.6
	baz=67						
TWGBT	**Beinan**	**0.21**	**162**	P	Pb	16 27 02.9	+0.1
	baz=161						
TWGBT				*i* S	Sb	16 27 07.0	+0.5
	baz=161						
EHD	**Haiduan**	**0.22**	**54**	*e*P	Pb	16 27 03.3	+0.2
	baz=54						
EHD				S	Sb	16 27 06.9	-0.1
	baz=54						
STYH	**Taoyuan**	**0.26**	**305**	*i* P	Pb	16 27 03.8	+0.1
	baz=307						
STYH				*e*S	Sg	16 27 07.2	+0.4
	baz=307						
EDH	**Donghe**	**0.28**	**99**	P	Pb	16 27 04.1	+0.2
	baz=99						
EDH				S	Sb	16 27 08.4	0.0
	baz=99						
TTN	**Taitung**	**0.29**	**154**	*e*P	Pb	16 27 04.6	+0.4
	baz=152						
TTN				*e*S	Sb	16 27 08.9	+0.1
	baz=152						
CHKT	**Chengkung**	**0.34**	**76**	S	Sg	16 27 03.5	-5.5
	baz=198						
CHKT	**Chengkung**	**0.34**	**76**	*e*P	Pg	16 27 03.6	-0.7
	baz=76						
CHKT				*e*S	Sg	16 27 08.6	-0.4
	baz=76						
SGST	**Jiashian**	**0.40**	**279**	P	Pb	16 27 05.8	-0.3
	baz=279						
SGST				S	Sb	16 27 12.0	0.0
	baz=279						
ECL	**Taimali**	**0.42**	**187**	P	Pb	16 27 06.2	-0.2
	baz=185						
ECL				S	Sb	16 27 13.4	+0.8
	baz=185						
TWF1	**Yuli**	**0.43**	**38**	*e*P	Pg	16 27 05.9	+0.1
	baz=39						
TWF1				*e*S	Sb	16 27 12.8	0.0
	baz=39						
WTP	**Ta-pu**	**0.43**	**302**	P	Pb	16 27 06.8	+0.1
	baz=302						
WTP				S	Sb	16 27 13.7	+0.8
	baz=302						
WTP	**Ta-pu**	**0.43**	**302**	*e*S	Sb	16 27 13.8	+0.8
	baz=243						
EYUL	**Yuli**	**0.43**	**41**	P	Pb	16 27 06.9	+0.2
	baz=40						
EYUL				S	Sb	16 27 13.9	+0.8
	baz=40						

MOS ***16*** *16:46:32.5±1.0, 32.97N×140.14E, h121km, mb4.5/27, Error ellipse: s-maj=10.3km s-min=5.4km az=102.4*
IDC ***16*** *16:46:35.6±0.5, 32.97N×140.11E, h130km±2km, mb3.8/25, mbtmp4.1/29, MS3.9/1, Error ellipse: s-maj=13.6km s-min=10.5km az=76.0*
JMA ***16*** *16:46:36.4±0.1, 33.1N±0.2×140.2E±0.9, h128km, MV4.3/35, E OFF HACHIJOJIMA ISLAND*
NEIC ***16*** *16:46:36.0±2.3, 33.00N±0.07×140.13E±0.10, h137km±5km, mb4.5/47, Error ellipse: s-maj=12.1km s-min=10.3km az=70.0*
NIED ***16*** *16:46:36.4, 33.09N×140.22E, h128km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.07; Mθθ=0.43; Mϕϕ=0.50; Mrθ=0.52; Mϕθ=-0.65; Mϕr=1.21; Fault plane solution: Mo=1.54000×10¹⁵ NP1: ϕs=199.00000°, δ=89.00000°, λ=-59.00000°. NP2: ϕs=291.00000°, δ=31.00000°, λ=-178.00000°.*
ISC 16 16:46:35.4±0.5, 32.99N±0.04×140.19E±0.05, h135km±3km, h136km: pP-P, n201, σ1.54/224, mb4.3/69, 12C-1D,

Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.33**	**291**	Pn	**Pn**	**16 46 54.6**	**+0.5**
JHJ2	**Mitsune**	**0.33**	**291**	P	**Pn**	**16 46 54.8**	**+0.6**
JHJ2	**Mitsune**	**0.33**	**291**	P	**Pn**	**16 46 54.7**	**+0.5**
JHJ2				S	**Sn**	**16 47 08.7**	**+0.3**
JHCJ	**Hachijojimakas**	**0.34**	**284**	P	**Pn**	**16 46 54.6**	**+0.5**
JHCJ				S	**Sn**	**16 47 08.5**	**0.0**
JHJ	**Hachijo jima 2**	**0.36**	**291**	P	**Pn**	**16 46 54.8**	**+0.5**
	4μm,0.3s,baz=90,slow=20,SNR=1239						
JHJ				S	**Sn**	**16 47 08.7**	**+0.1**
	9μm,0.4s,baz=253,slow=19,SNR=20						
JAOM	**Aogashimamukai**	**0.64**	**214**	P	**Pn**	**16 46 57.1**	**+1.2**
JAOM				*e*S	**Sn**	**16 47 12.8**	**+1.5**
JMKN	**Mikurajimanish**	**1.03**	**331**	P	**Pn**	**16 46 58.9**	**-0.1**
JMKN				*e*S	**Sn**	**16 47 16.1**	**-0.8**
JMYK	**Miyake Tsubota**	**1.19**	**334**	P	**Pn**	**16 47 00.6**	**+0.1**
JMYK				*e*S	**Sn**	**16 47 18.8**	**-0.9**
JKO	**Kozu shima**	**1.48**	**324**	P	**Pn**	**16 47 03.9**	**+0.3**
BSO1	**Boso 1**	**1.78**	**22**	P	**Pn**	**16 47 07.0**	**+0.6**
BSO1				*e*S	**Sn**	**16 47 30.1**	**-0.2**
BSO3	**Boso 3**	**1.82**	**8**	P	**Pn**	**16 47 07.6**	**+0.4**
BSO3				*e*S	**Sn**	**16 47 31.2**	**-0.5**
JIM2	**Oshima 3**	**1.83**	**340**	P	**Pn**	**16 47 07.7**	**+0.1**
JIM2				*e*S	**Sn**	**16 47 30.9**	**-1.4**
JIZS	**Izushimoda**	**2.04**	**328**	P	**Pn**	**16 47 10.4**	**+0.4**
TK02	**Tokai 2**	**2.24**	**296**	P	**Pn**	**16 47 13.4**	**+1.1**
JSG	**Sagara**	**2.36**	**316**		**Pn**	**16 47 13.8**	**-0.2**
JSG	**Sagara**	**2.36**	**316**	P	**Pn**	**16 47 15.3**	**+1.3**
TK04	**Tokai 4**	**2.37**	**306**	P	**Pn**	**16 47 15.2**	**+1.1**
TK04				*e*S	**Sn**	**16 47 44.5**	**+0.7**
JOD2	**Odawara 2**	**2.44**	**338**	*i* P	**Pn**	**16 47 15.4**	**+0.4**
JOD2				S	**Sn**	**16 47 45.4**	**-0.2**
JFNN	**Fujinakano**	**2.52**	**331**	P	**Pn**	**16 47 17.0**	**+0.9**
JFNN				S	**Sn**	**16 47 49.3**	**+1.9**
SHZ3	**Shizuoka 3**	**2.64**	**322**	P	**Pn**	**16 47 18.5**	**+0.9**
SHZ3				*e*S	**Sn**	**16 47 51.0**	**+0.9**
TTO2	**TONANKAI O.B.S**	**2.74**	**287**	P	**Pn**	**16 47 19.7**	**+1.1**
JGF	**Kuroka**	**3.50**	**319**		**Pn**	**16 47 28.1**	**-0.5**
JGF	**Kuroka**	**3.50**	**319**	P	**Pn**	**16 47 29.5**	**+0.8**
INU	**Inuyama**	**3.52**	**313**	Pn	**Pn**	**16 47 28.9**	**0.0**
INU	**Inuyama**	**3.52**	**313**	P	**Pn**	**16 47 29.6**	**+0.7**
MJAR	**Matsushiro Arr**	**3.90**	**336**	P	**Pn**	**16 47 33.7**	**-0.2**
	12nm,0.3s,baz=162,slow=9.5,SNR=132						
MJAR				S	**Sn**	**16 48 18.9**	**-0.3**
	11nm,0.4s,baz=142,slow=24,SNR=6.7						
MAJO	**Matsushiro**	**3.90**	**336**		**Pn**	**16 47 34.2**	**+0.3**
MAJO	**Matsushiro**	**3.90**	**336**	P	**Pn**	**16 47 34.4**	**+0.5**
MAJO	**Matsushiro**	**3.90**	**336**	*c iP*	**Pn**	**16 47 34.4**	**+0.5**
MJB9	**Matsu-Tunnel**	**3.90**	**336**		**Pn**	**16 47 35.0**	**+1.0**
JMM	**Marumori**	**4.89**	**6**	Pn	**Pn**	**16 47 45.5**	**-1.5**
JMM	**Marumori**	**4.89**	**6**	P	**Pn**	**16 47 45.6**	**-1.4**
JMN	**Monobe**	**5.33**	**280**		**Pn**	**16 47 53.9**	**+0.9**
JMN	**Monobe**	**5.33**	**280**	P	**Pn**	**16 47 54.1**	**+1.2**
JCJ	**Chichijima**	**6.13**	**163**	Pn	**Pn**	**16 48 02.4**	**-1.3**
JCJ	**Chichijima**	**6.13**	**163**	P	**Pn**	**16 48 02.4**	**-1.3**
JCJ	**Chichijima**	**6.13**	**163**	P	Pn	16 47 58.0	-5.7
	39nm,0.2s,baz=6.7,slow=20,SNR=36						
JCJ				S	Sn	16 49 02.6	-10
	108nm,0.4s,baz=319,slow=22,SNR=6.6						
JTM	**Tenmabayashi**	**7.81**	**5**	Pn	**Pn**	**16 48 24.2**	**-2.0**
JTM	**Tenmabayashi**	**7.81**	**5**	P	**Pn**	**16 48 24.5**	**-1.7**
JNU	**Nakatsue**	**7.81**	**273**		**Pn**	**16 48 27.6**	**+1.2**
JNU	**Nakatsue**	**7.81**	**273**	P	**Pn**	**16 48 28.3**	**+2.0**
JNU	**Nakatsue**	**7.81**	**273**	P	**Pn**	**16 48 27.7**	**+1.4**
	23nm,0.8s,baz=68,slow=9.3,SNR=17						
ERM	**Erimo**	**9.31**	**14**	Pn	**Pn**	**16 48 45.3**	**-1.0**
ERM	**Erimo**	**9.31**	**14**	P	**Pn**	**16 48 44.7**	**-1.6**
ERM	**Erimo**	**9.31**	**14**	*i* P	**Pn**	**16 48 43.8**	**-2.5**
JEM	**Erimo**	**9.31**	**14**	P	**Pn**	**16 48 44.8**	**-1.5**
KSRS	**Korea Array**	**10.97**	**297**	P	**Pn**	**16 49 10.5**	**+2.1**
	2.0nm,0.5s,baz=105,slow=13,SNR=10						
NMR	**Nemuro--Hokkai**	**11.24**	**21**	*e*P	**Pn**	**16 49 09.4**	**-2.5**
ASAJ	**Asahikawa**	**11.27**	**9**	P	**Pn**	**16 49 08.9**	**-3.4**
ASAJ	**Asahikawa**	**11.27**	**9**	P	**Pn**	**16 49 09.1**	**-3.2**
	3.9nm,0.3s,baz=229,slow=16,SNR=20						
ASAJ				S	Sn	16 51 06.9	-10
	4.4nm,0.5s,baz=34,slow=34,SNR=1.4						
JKA	**Kamikawa-asahi**	**11.27**	**9**	Pn	**Pn**	**16 49 08.9**	**-3.4**
RUSJ	**Misakicho**	**11.78**	**18**	*e*P	**Pn**	**16 49 17.9**	**-1.2**
RUSJ				*e*S	Sn	16 51 18.5	-10
YUK	**Yuzh-Kuril'sk**	**11.88**	**20**	*e*P	**Pn**	**16 49 19.1**	**-1.3**
YUK				*e*S	Sn	16 51 20.7	-11
YUK				pmax	pmax		
	comp=E,25nm,0.5s						
YUK				pmax	pmax		
	comp=Z,30nm,0.5s						
YUK				pmax	pmax		
	comp=N,24nm,0.4s						
SHO	**Shikotan**	**12.04**	**24**	*e*P	**Pn**	**16 49 20.8**	**-1.7**
SHO				pmax	pmax		
	comp=Z,40nm,0.8s						
SHO				pmax	pmax		
	comp=N,46nm,0.5s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
USA0B	**Ussuriysk Arra**	**12.89**	**333**	Pn	**Pn**	**16 49 29.9**	**-3.6**
USA0B	**Ussuriysk Arra**	**12.89**	**333**	P	**Pn**	**16 49 29.9**	**-3.6**
YSS	**Yuzh-Sakhalins**	**14.08**	**7**	Pn	**Pn**	**16 49 47.8**	**-1.0**
YSS	**Yuzh-Sakhalins**	**14.08**	**7**	*e*P	**Pn**	**16 49 49.9**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ	**Mudanjiang**	**14.23**	**328**	P	**Pn**	**16 49 51.1**	**+0.4**
MDJ				sP	P	16 50 26.3	+32
MDJ				S	**Sn**	**16 52 29.4**	**+1.4**
MDJ	**Mudanjiang**	**14.23**	**328**	ScS	ScS	17 01 57.8	+0.8
MDJ				pmax	pmax		
	comp=Z,12nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.6s						
MDJ	**Mudanjiang**	**14.23**	**328**	Pn	**Pn**	**16 49 48.3**	**-2.3**
KLR	**Kul'dur**	**17.40**	**341**	P	**P**	**16 50 29.1**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=152,slow=13,SNR=5.2						
NJ2	**Nanjing**	**18.01**	**273**	*e*P	**P**	**16 50 36.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,130nm,5.1s						
TATO	**Taipei**	**18.19**	**249**	P	**P**	**16 50 34.5**	**-3.2**
YHNB	**Yeheng**	**18.43**	**248**	P	**P**	**16 50 38.9**	**-1.7**
YHNB	**Yeheng**	**18.43**	**248**	P	**P**	**16 50 40.7**	**+0.2**
NACB	**Ninganchiao**	**18.52**	**246**	P	**P**	**16 50 39.8**	**-1.7**
NACB				IAmb	IAmb	16 50 47.1	
	comp=Z,34nm,1.3s						
YULB	**Yu-li**	**19.17**	**245**	P	**P**	**16 50 47.1**	**-1.5**
YULB				IAmb	IAmb	16 51 27.8	
	comp=Z,42nm,1.5s						
YULB	**Yu-li**	**19.17**	**245**	P	**P**	**16 50 49.2**	**+0.6**
SSLB	**Suanglung**	**19.22**	**246**	P	**P**	**16 50 48.2**	**-0.9**
SSLB				IAmb	IAmb	16 50 49.8	
	comp=Z,26nm,1.1s						
SSLB	**Suanglung**	**19.22**	**246**	P	**P**	**16 50 49.5**	**+0.4**
HEH	**HeiHe**	**19.66**	**335**	*e*P	**P**	**16 50 54.3**	**+0.7**
TWGBT	**Beinan**	**19.66**	**244**	P	**P**	**16 50 53.9**	**0.0**
TWG	**Pinlang**	**19.67**	**244**	P	**P**	**16 50 52.7**	**-1.2**
TWG				IAmb	IAmb	16 51 03.9	
	comp=Z,45nm,1.4s						
BJT	**Baijiatuan**	**20.50**	**297**	P	**P**	**16 51 02.1**	**-0.7**
XLT	**XiLinHaoTe**	**21.72**	**307**	*e*P	**P**	**16 51 13.1**	**-2.7**
XLT				pP	pP	16 51 42.0	+1.7
XLT				PP	**sP**	**16 51 54.1**	**-2.8**
XLT				sP	sP	16 51 58.8	+1.9
XLT				PcP	**PcP**	**16 55 13.8**	**+2.7**
XLT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,240nm,5.1s						
WHN	**Wuhan**	**22.09**	**271**	⇑P	**P**	**16 51 19.3**	**-0.3**
WHN				pmax	pmax		
	comp=Z,44nm,0.6s						
HIA	**Hailar**	**22.28**	**323**	P	**P**	**16 51 18.6**	**-2.8**
HIA				IAmb	IAmb	16 51 20.7	
	comp=Z,13nm,0.6s						
HIA	**Hailar**	**22.28**	**323**	P	**P**	**16 51 18.6**	**-2.8**
HIA				pmax	pmax		
	comp=Z,13nm,0.6s						
ZEA	**Zeya**	**22.70**	**340**	*e*P	**P**	**16 51 26.3**	**+0.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
LYN	**LuoYang**	**23.07**	**282**	⇓P	**P**	**16 51 27.3**	**-1.8**
LYN				pP	pP	16 51 52.6	-1.4
LYN				PP	**PnPn**	**16 52 04.3**	**+1.3**
LYN				sP	sP	16 52 10.8	+0.2
LYN				S	**S**	**16 55 25.3**	**-4.4**
LYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LYN				pmax	pmax		
	comp=Z,240nm,4.9s						
HHC	**Hu-ho-hao-te**	**24.11**	**297**	*e*P	**P**	**16 51 39.4**	**+0.7**
HHC				sP	sP	16 52 24.3	+2.6
HHC				*e*S	**S**	**16 55 47.8**	**+1.1**
HHC				sS	sS	16 56 36.6	+0.6
HHC				SS	**SnSn**	**16 56 54.3**	**+10**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,85nm,5.1s						
XAN	**Xi'an**	**26.04**	**281**	⇑P	**P**	**16 51 54.1**	**-2.0**
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
ENH	**Enshi**	**26.23**	**272**	P	**P**	**16 51 56.1**	**-1.8**
ENH				IAmb	IAmb	16 51 57.7	
	comp=Z,8.5nm,0.9s						
ENH	**Enshi**	**26.23**	**272**	P	**P**	**16 51 56.4**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**27.25**	**112**	T	T	17 21 22.6	
	baz=306,slow=75,SNR=143						
H11N1	**WAKE ISLAND Hy**	**27.25**	**112**	T	T	17 21 25.4	
	baz=306,slow=75,SNR=124						
H11N3	**WAKE ISLAND Hy**	**27.26**	**112**	T	T	17 21 25.2	
	baz=306,slow=75,SNR=148						
H11S3	**WAKE ISLAND Hy**	**27.80**	**115**	T	T	17 21 56.3	
	baz=307,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**27.80**	**115**	T	T	17 22 05.2	
	baz=307,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**27.81**	**115**	T	T	17 22 06.3	
	baz=307,slow=75,SNR=13						
ULN	**Ulaanbaatar**	**29.01**	**311**		**P**	**16 52 23.5**	**+0.9**
ULN				IAmb	IAmb	16 52 24.4	
	comp=Z,8.6nm,0.7s						
ULN	**Ulaanbaatar**	**29.01**	**311**	P	**P**	**16 52 23.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM	**Songino Array**	**29.42**	**310**		**P**	**16 52 27.0**	**+0.8**
SONM				IAmb	IAmb	16 52 27.9	
	comp=Z,6.4nm,0.6s						
SONM	**Songino Array**	**29.42**	**310**	P	**P**	**16 52 27.0**	**+0.8**
SONM	**Songino Array**	**29.42**	**310**	P	**P**	**16 52 27.0**	**+0.8**
	comp=Z,5.5nm,0.6s,baz=112,slow=8.7,SNR=41						
	comp=Z,5.5nm,0.6s						
QIZ	**Qiongzhong**	**30.48**	**250**	P	**P**	**16 52 35.0**	**-0.7**
QIZ				sP	**sP**	**16 53 17.9**	**-1.7**
QIZ				S	**S**	**16 57 26.0**	**-1.1**
QIZ				sS	**sS**	**16 58 19.0**	**+1.6**
QIZ				SS	**SS**	**16 59 43.3**	**+0.6**
QIZ				LR	LR		
	comp=N,95nm,6.7s						
QIZ				LR	LR		
	comp=E,76nm,10.6s						
QIZ				LR	LR		
	comp=Z,90nm,11.8s						
QIZ	**Qiongzhong**	**30.48**	**250**	P	**P**	**16 52 35.5**	**-0.2**
QIZ				IAmb	IAmb	16 53 00.5	
	comp=Z,22nm,1.4s						
CD2	**Chengdu**	**30.88**	**276**	P	**P**	**16 52 37.3**	**-1.9**
CD2				S	**S**	**16 57 32.1**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=N,170nm,14.0s						
CD2				LR	LR		
	comp=E,170nm,15.6s						
CD2				LR	LR		
	comp=Z,220nm,15.3s						
SEY	**Seymchan**	**30.94**	**11**	*i* P	**P**	**16 52 35.5**	**-3.7**
SEY				pmax	pmax		
	comp=Z,13nm,2.6s						
ZAK	**Zakamensk**	**32.16**	**314**	*e*P	**P**	**16 52 50.6**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA	**Gaotai**	**32.99**	**293**	P	**P**	**16 52 56.8**	**-0.9**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PZH	**PanZhiHua**	**33.86**	**269**	P	**P**	**16 53 03.5**	**-1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,120nm,4.6s						
SLVN	**Son La**	**34.14**	**259**	P	**P**	**16 53 08.1**	**+0.4**
DLV	**T Lat**	**35.79**	**242**	P	**P**	**16 53 21.4**	**-0.6**
DLV				IAmb	IAmb	16 53 58.2	
	comp=Z,11nm,1.2s						
UBPT	**Khong Chiam**	**36.04**	**249**	P	**P**	**16 53 23.7**	**-0.2**
GSTR	**Great Sitkin T**	**36.77**	**45**	P	**P**	**16 53 27.9**	**-1.9**
TNCH	**TengChong**	**37.10**	**269**	⇑P	**P**	**16 53 34.9**	**+1.8**
TNCH				pmax	pmax		
	comp=Z,7.0nm,3.0s						
TNCH				pmax	pmax		
	comp=Z,71nm,4.1s						
CRAI	**Chiangrai**	**37.58**	**260**	P	**P**	**16 53 36.2**	**-0.8**
BILL	**Bilibino**	**38.18**	**16**	*i* P	**P**	**16 53 42.4**	**+1.0**
BILL				pmax	pmax		
	comp=Z,11nm,1.8s						
TIXI	**Tiksi**	**39.19**	**354**	P	**P**	**16 53 49.1**	**-0.6**
TIXI	**Tiksi**	**39.19**	**354**	*i* P	**P**	**16 53 48.7**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.3s						
CMAR	**Chiang Mai Arr**	**39.61**	**259**	*ce*P	**P**	**16 53 53.2**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.61**	**259**	P	**P**	**16 53 53.6**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=48,slow=7.4,SNR=13						
	comp=Z,1.0nm,0.6s						
LSA	**Lhasa**	**41.71**	**279**	P	**P**	**16 54 10.7**	**-0.9**
LSA	**Lhasa**	**41.71**	**279**	P	**P**	**16 54 10.7**	**-0.9**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WMQ	**Urumqi**	**41.90**	**301**	*e*P	**P**	**16 54 12.8**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
DGZ	**Jazzator, Alta**	**42.06**	**310**	*i* P	**P**	**16 54 13.8**	**0.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKUT	**Akutan**	**43.23**	**44**	P	**P**	**16 54 23.1**	**+0.1**
ZALV	**Zalesovo Beam**	**43.99**	**316**	*i* P	**P**	**16 54 30.1**	**+1.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**43.99**	**316**	P	**P**	**16 54 29.4**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=108,slow=7.8,SNR=6.7						
	comp=Z,1.6nm,0.4s						
SOEI	**Soe**	**45.14**	**202**	P	**P**	**16 54 37.5**	**-1.2**
MK31	**Makanchi Array**	**45.52**	**305**	P	**P**	**16 54 41.5**	**+0.2**
MK31				IAmb	IAmb	16 54 42.6	
	comp=Z,13nm,0.7s						
MK31	**Makanchi Array**	**45.52**	**305**	P	**P**	**16 54 41.5**	**+0.2**
MK31				pmax	pmax		

KURK IAmb IAmb 16 54 59.9
comp=Z,10nm,0.9s
KURK Kurchatov 47.72 311 *ce*P **P** **16 54 59.0 +0.7**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURBB Kurchatov Arra 47.78 311 P **P** **16 54 59.1 +0.3**
comp=Z,4.7nm,0.5s,baz=91,slow=6.6,SNR=108
comp=Z,4.7nm,0.5s
KDAK Kodiak Island 50.81 40 P **P** **16 55 22.9 +1.2**
comp=Z,3.2nm,0.5s,baz=257,slow=7.8,SNR=11
comp=Z,3.2nm,0.5s
AAK Ala-Archa 51.61 301 P **P** **16 55 26.7 -1.5**
AAK IAmb IAmb 16 55 29.0
comp=Z,3.3nm,0.7s
AAK Ala-Archa 51.61 301 *ce*P **P** **16 55 27.3 -0.8**
AAK pmax pmax
comp=Z,5.0nm,1.7s
RND Reindeer 52.60 32 P **P** **16 55 35.9 +0.9**
RND IAmb IAmb 16 55 38.1
comp=Z,7.5nm,1.2s
RND Reindeer 52.60 32 P **P** **16 55 35.9 +0.9**
RND pmax pmax
comp=Z,7.0nm,1.2s
BVAR Borovoye Array 52.61 314 P **P** **16 55 36.0 +0.8**
BVAR Borovoye Array 52.61 314 P **P** **16 55 36.0 +0.8**
comp=Z,4.7nm,0.5s,baz=97,slow=8.6,SNR=32
comp=Z,4.7nm,0.5s
BRVK Borovoye 52.67 315 P **P** **16 55 36.2 +0.7**
BRVK IAmb IAmb 16 55 38.1
comp=Z,4.3nm,0.7s
BRVK Borovoye 52.67 315 *ce*P **P** **16 55 36.3 +0.7**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
WB0 Warramunga Arr 52.75 187 P **P** **16 55 36.4 -0.1**
WB0 IAmb IAmb 16 55 37.2
comp=Z,4.3nm,0.6s
WR0 Warramunga Arr 52.93 187 P **P** **16 55 38.3 +0.5**
WR0 IAmb IAmb 16 55 38.9
comp=Z,5.1nm,0.5s
WB2 Warramunga Arr 52.93 187 P **P** **16 55 38.1 +0.3**
WB2 IAmb IAmb 16 55 38.5
comp=Z,3.5nm,0.8s
WRA Warramunga Arr 52.93 187 P **P** **16 55 38.1 +0.3**
comp=Z,2.2nm,0.3s,baz=1.9,slow=7.9,SNR=146
comp=Z,2.2nm,0.3s
ARSB Arslanbob 53.00 300 P **P** **16 55 38.4 0.0**
ARSB Arslanbob 53.00 300 P **P** **16 55 38.4 0.0**
ARSB pmax pmax
comp=Z,4.0nm,1.4s
CTAO Charters Tower 53.10 173 P **P** **16 55 40.0 +0.9**
CTAO Charters Tower 53.10 173 P **P** **16 55 40.0 +0.9**
CTAO pmax pmax
comp=Z,21nm,1.4s
ILAR Eielson Array 53.46 31 P **P** **16 55 42.6 +1.4**
comp=Z,0.4nm,0.7s,baz=264,slow=6.5,SNR=1.9
comp=Z,0.4nm,0.7s
ARK Arkit 53.63 300 P **P** **16 55 43.6 +0.6**
ARK pmax pmax
comp=Z,7.0nm,0.7s
E25K Arctic Village 53.99 26 P **P** **16 55 46.9 +1.9**
TRKS Terek-Say 54.29 300 P **P** **16 55 48.3 +0.5**
TRKS pmax pmax
comp=Z,10.0nm,0.5s
KK31 Karatay Array 54.35 302 P **P** **16 55 48.8 +0.7**
KK31 Karatay Array 54.35 302 P **P** **16 55 48.8 +0.7**
KK31 pmax pmax
comp=Z,12nm,0.7s
KKAR Karatay Array 54.35 302 P **P** **16 55 48.7 +0.6**
KKAR Karatay Array 54.35 302 P **P** **16 55 48.5 +0.5**
KKAR Karatay Array 54.35 302 P **P** **16 55 48.7 +0.6**
KKAR pmax pmax
comp=Z,12nm,0.7s
BMAR Burnt Mountain 54.36 27 P **P** **16 55 50.0 +2.3**
NIL Nilore 55.00 290 P **P** **16 55 51.0 -1.9**
NIL Nilore 55.00 290 P **P** **16 55 51.0 -1.9**
NIL pmax pmax
comp=Z,13nm,0.7s
MCARA McCarthy VSAT 55.43 35 P **P** **16 55 55.2 -0.3**
MCARA IAmb IAmb 16 56 00.3
comp=Z,6.1nm,1.0s
BCAR Beaver Creek A 55.81 33 P **P** **16 55 59.4 +1.1**
AS31 Alice Springs 56.66 187 P **P** **16 56 05.0 +0.3**
ASAR Alice Springs 56.66 187 P **P** **16 56 04.8 +0.2**
ASAR Alice Springs 56.66 187 P **P** **16 56 05.1 +0.5**
comp=Z,0.6nm,0.3s,baz=6.3,slow=6.9,SNR=47
comp=Z,0.6nm,0.3s
SIMJ Simiganj 56.67 298 P **P** **16 56 04.0 -0.9**
EPYK Eagle Plains 57.54 28 P **P** **16 56 12.6 +2.2**
EPYK IAmb IAmb 16 56 13.3
comp=Z,4.5nm,0.6s
INK Inuvik 58.44 26 P **P** **16 56 18.2 +1.7**
INK IAmb IAmb 16 56 27.1
comp=Z,5.7nm,1.5s
INK Inuvik 58.44 26 P **P** **16 56 18.2 +1.7**
INK pmax pmax
comp=Z,6.0nm,1.5s
INK Inuvik 58.44 26 P **P** **16 56 18.1 +1.5**
comp=Z,0.4nm,0.3s,baz=286,slow=7.4,SNR=2.8
comp=Z,0.4nm,0.3s
ARU Arti 58.76 320 P **P** **16 56 18.8 -0.1**
ARU IAmb IAmb 16 56 22.6
comp=Z,3.0nm,0.8s
ARU Arti 58.76 320 *c i*P **P** **16 56 18.8 -0.1**
ARU 16 58 25.7
ARU S **S** **17 04 18.4 +5.2**
ARU SS **SS** **17 08 05.0 -3.0**
ARU pmax pmax
comp=Z,25nm,3.9s
ABKAR Akbulak array 59.82 312 P **P** **16 56 26.2 -0.1**
GEYT Alibeck 64.95 300 P **P** **16 57 01.2 +0.5**
comp=Z,1.9nm,0.8s,baz=33,slow=3.4,SNR=4.7
comp=Z,1.9nm,0.8s
ARCES ARCESS Array B 67.42 340 P **P** **16 57 16.8 +0.9**
comp=Z,2.1nm,0.9s,baz=60,slow=7.1,SNR=5.0
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 67.81 29 P **P** **16 57 19.3 +0.8**
comp=Z,0.2nm,0.7s,baz=299,slow=6.3,SNR=3.1
comp=Z,0.2nm,0.7s
OBN Obninsk 70.74 324 *e*P **P** **16 57 34.0 -2.5**
OBN *e* 16 57 54.7
OBN *e**PP **pP** **16 58 08.3 -1.1**
OBN *e* 17 00 15.6
OBN pmax pmax
comp=Z,4.0nm,0.8s
FINES FINESS Array B 71.92 333 P **P** **16 57 43.9 +0.3**
comp=Z,1.4nm,0.3s,baz=56,slow=6.0,SNR=20
comp=Z,1.4nm,0.3s
KBZ Khabaz 72.78 311 *ce*P **P** **16 57 48.1 -0.9**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 72.78 311 P **P** **16 57 49.8 +0.8**
comp=Z,3.4nm,0.8s,baz=84,slow=4.6,SNR=7.6
comp=Z,3.4nm,0.8s
AKASG Malin Array Be 76.87 322 P **P** **16 58 12.4 0.0**
comp=Z,0.4nm,0.3s,baz=52,slow=5.2,SNR=3.0
comp=Z,0.4nm,0.3s
HFS Hagfors 77.35 336 P **P** **16 58 15.1 +0.2**
comp=Z,1.8nm,0.6s,baz=144,slow=5.5,SNR=7.7
comp=Z,1.8nm,0.6s
NB2 NORSAR Subarra 77.51 337 P **P** **16 58 16.2 +0.3**
comp=Z,0.4nm,0.5s,baz=43,slow=5.6
NOA NORSAR Array B 77.51 337 P **P** **16 58 16.4 +0.5**
comp=Z,1.0nm,0.7s,baz=44,slow=5.7,SNR=3.8
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 78.24 52 P **P** **16 58 22.1 +1.5**
comp=Z,0.4nm,0.6s,baz=305,slow=5.6,SNR=4.0
comp=Z,0.4nm,0.6s
BR131 Keskin Array S 80.77 311 P **P** **16 58 33.3 -0.8**
BR131 Keskin Array S 80.77 311 P **P** **16 58 33.3 -0.8**
BR131 pmax pmax
comp=Z,4.0nm,1.0s
BRTR Keskin Array B 80.77 311 P **P** **16 58 34.0 -0.1**
BRTR Keskin Array B 80.77 311 P **P** **16 58 34.9 +0.7**
comp=Z,2.2nm,0.9s,baz=119,slow=4.4,SNR=10.0
comp=Z,2.2nm,0.9s
PDAR Pinedale Array 81.23 44 P **P** **16 58 37.8 +1.1**
comp=Z,0.3nm,0.6s,baz=224,slow=0.7,SNR=3.5
comp=Z,0.3nm,0.6s
MMAI Mount Meron Ar 83.47 305 P **P** **16 58 49.4 +1.1**
comp=Z,0.9nm,0.5s,baz=41,slow=4.6,SNR=2.1
comp=Z,0.9nm,0.5s
CLL Collm 84.08 330 *e*P **P** **16 58 51.0 +0.1**
CLL Collm 84.08 330 *e*P **P** **16 58 51.0 +0.1**
CLL *es*P **sP** **16 59 43.0 +4.1**
TXAR Lajitas Array 93.40 52 P **P** **16 59 37.6 +1.9**
comp=Z,1.0nm,0.7s,baz=298,slow=2.9,SNR=11
comp=Z,1.0nm,0.7s

TORD Torodi Ar. Bea 119.38 312 PKP **PKiKP** **17 05 09.7 +0.2**
comp=Z,0.1nm,0.3s,baz=78,slow=3.8,SNR=1.8

TAP 16 16:50:45.2, 23.06N×120.85E, h5km±1km, ML1.2, 1C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.13**	**329**	*i* P	Pg	16 50 48.5	+0.6
	baz=329						
STYH				S	Sg	16 50 50.6	+0.9
	baz=329						
STYT	**Tauyuan**	**0.14**	**321**	*i* P	Pg	16 50 48.4	+0.4
	baz=324						
STYT				*i* S	Sg	16 50 50.5	+0.6
	baz=324						
ELDTW	**Lidau**	**0.20**	**49**	⇑ *i* P	Pg	16 50 50.0	+0.7
	baz=49						
ELDTW				*i* S	Sg	16 50 52.8	+0.8
	baz=49						
SGST	**Jiashian**	**0.25**	**276**	*i* P	Pg	16 50 50.0	0.0
	baz=277						
SGST				*i* S	Sg	16 50 54.5	+1.2
	baz=277						
WTP	**Ta-pu**	**0.29**	**311**	⇓ *i* P	Pb	16 50 52.0	-1.0
	baz=312						
WTP				*i* S	Sb	16 50 56.5	-1.7
	baz=312						
LONT	**Longtian**	**0.30**	**120**	*e*P	Pg	16 50 51.5	+0.5
	baz=120						
LONT				S	Sb	16 50 56.7	-1.6
	baz=120						
TWG	**Pinlang**	**0.31**	**139**	*i* S	Sb	16 50 57.1	-1.6
	baz=138						
TWGBT	**Beinan**	**0.32**	**138**	P	Pb	16 50 52.4	-1.0
TWGBT	baz=138			S	Sb	16 50 57.5	-1.4
	baz=138						
TPUB	**Ta-pu**	**0.32**	**320**	*i* P	Pb	16 50 52.6	-0.8
	baz=320						
TPUB				*i* S	Sb	16 50 57.3	-1.6
	baz=320						
CHN1	**Nanshi**	**0.32**	**294**	*i* P	Pb	16 50 53.7	+0.2
	baz=303						
CHN1				*i* S	Sb	16 50 58.9	-0.2
	baz=303						
EHD	**Haiduan**	**0.34**	**74**	*i* P	Pg	16 50 52.5	+0.7
	baz=69						
EHD				S	Sg	16 50 57.6	+1.4
	baz=69						
ECS	**Chishang**	**0.34**	**83**	P	Pb	16 50 52.9	-0.9
	baz=83						
ECS				S	Sb	16 50 58.7	-0.8
	baz=83						
SNST	**Tainan City**	**0.36**	**297**	P	Pb	16 50 54.1	-0.1
	baz=297						
SNST				S	Sb	16 51 00.5	+0.2
	baz=297						
SCST	**Cishan**	**0.37**	**243**	P	Pg	16 50 53.2	+0.9
	baz=244						
SCST				*e*S	Sb	16 50 59.8	-0.6
	baz=244						
TWK	**Hsinying**	**0.40**	**302**	*i* P	Pb	16 50 54.3	-0.4
	baz=304						
TWK				*i* S	Sb	16 51 01.3	+0.1
	baz=304						
TSMG	**Majia**	**0.40**	**209**	P	Pg	16 50 52.9	+0.1
	baz=215						
TTN	**Taitung**	**0.41**	**138**	*e*P	Pb	16 50 54.1	-0.8
	baz=137						
EDH	**Donghe**	**0.42**	**101**	*e*P	Pb	16 50 54.3	-0.9
	baz=101						
WCKO	**Fanlu**	**0.44**	**329**	*e*P	Pb	16 50 55.3	-0.3
	baz=339						
WCKO				*e*S	Sb	16 51 03.0	+0.5
	baz=339						
ALS	**Alishan**	**0.46**	**355**	*i* P	Pg	16 50 54.1	+0.1
	baz=346						
ALS				S	Sb	16 51 01.8	-1.4
	baz=346						
ECL	**Taimali**	**0.47**	**168**	P	Pg	16 50 55.0	+0.8
	baz=168						
ECL				S	Sg	16 51 01.0	+0.7
	baz=168						
MASBT	**Mashibuluo**	**0.48**	**205**	*e*P	Pg	16 50 54.7	+0.2
	baz=210						

*PRE **16** 16:50:44.0±1.0, 23.66S×31.30E, h5km, ML2.5*
*BUL **16** 16:50:55.2±1.2, 23.82S×31.16E, h10km±16km, MD3.6*
ISC 16 16:50:49.7±2.6, 23.94S±0.04×31.03E±0.05, h12km±16km, n20, σ2.9 15/33, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**0.54**	**39**	*i* P	**Pn**	**16 51 04.7**	**+1.4**
MOPA				*i* S	**Sn**	**16 51 12.5**	**+0.3**
MOPA	**Mopani**	**0.54**	**39**	*i* P	**Pn**	**16 51 04.7**	**+1.4**
MOPA				*i* S	**Sn**	**16 51 12.5**	**+0.3**
PILG	**Pilgrimsrest,**	**1.03**	**197**	*e*P	**Pn**	**16 51 10.3**	**0.0**
PILG				*e*S	**Sn**	**16 51 29.0**	**+4.2**
PILG				IAML		16 51 31.4	
	comp=Z,124nm,0.2s						
MUSN	**Musina, Limpop**	**1.96**	**326**	*i* P	**Pn**	**16 51 25.3**	**+2.4**
MUSN				*i* S	**Sn**	**16 51 48.7**	**+1.1**
MUSN	**Musina, Limpop**	**1.96**	**326**	*e*P	Pn	16 51 18.2	-4.7
MUSN				*e*S	**Sn**	**16 51 42.6**	**-5.0**
MUSN				IAML		16 51 48.1	
	comp=Z,35nm,0.3s						
MUSN	**Musina, Limpop**	**1.96**	**326**	*i* P	**Pn**	**16 51 25.3**	**+2.4**
MUSN				*i* S	**Sn**	**16 51 48.7**	**+1.1**
CRLN	**Carolina, Mapu**	**2.24**	**204**	*e*P	**Pn**	**16 51 26.9**	**0.0**
CRLN				*e*S	**Sg**	**16 52 00.1**	**-1.8**
CRLN				IAML		16 52 08.6	
	comp=Z,23nm,0.2s						
LEPH	**Lephalale, Lim**	**2.96**	**271**	*e*P	**Pn**	**16 51 35.5**	**-1.2**
LEPH				*e*S	**Sn**	**16 52 14.0**	**+1.7**
LEPH				IAML		16 52 20.1	
	comp=Z,50nm,0.3s						
BLWY	**Bulawayo**	**4.40**	**329**	*i* P	**Pn**	**16 51 58.7**	**+2.2**
BLWY				*i* S	**Sn**	**16 52 45.8**	**-1.9**
BLWY	**Bulawayo**	**4.40**	**329**	*i* P	**Pn**	**16 51 58.7**	**+2.2**
BLWY				*i* S	**Sn**	**16 52 45.8**	**-1.9**
LBTB	**Lobatse**	**5.07**	**257**	*i* P	**Pn**	**16 52 09.6**	**+3.9**
LBTB				*i* S	**Sn**	**16 53 04.7**	**+0.5**
LBTB	**Lobatse**	**5.07**	**257**	*e*P	**Pn**	**16 52 05.6**	**-0.1**
LBTB				*e*S	**Sn**	**16 53 05.9**	**+1.7**
LBTB				IAML		16 53 27.6	
	comp=Z,16nm,0.5s						
LBTB	**Lobatse**	**5.07**	**257**	*i* P	**Pn**	**16 52 09.6**	**+3.9**
LBTB				*i* S	**Sn**	**16 53 04.7**	**+0.5**
KSTD	**Kokstad**	**6.83**	**193**	*e*P	**Pn**	**16 52 30.8**	**+0.9**
KSTD				*e*S	**Sn**	**16 53 49.2**	**+1.5**
KSTD				IAML		16 54 36.0	
	comp=Z,3.2nm,0.8s						
BOSA	**Boshof**	**6.97**	**227**	*i* P	Pn	16 52 36.6	+4.8
BOSA				*i* S	**Sn**	**16 53 50.3**	**-0.8**
BOSA	**Boshof**	**6.97**	**227**	*e*P	**Pn**	**16 52 32.4**	**+0.6**
BOSA				*e*S	**Sn**	**16 53 53.0**	**+1.9**
BOSA				IAML		16 54 31.1	
	comp=Z,3.8nm,0.6s						
BOSA	**Boshof**	**6.97**	**227**	*i* P	Pn	16 52 36.6	+4.8
BOSA				*i* S	**Sn**	**16 53 50.3**	**-0.8**
KRI	**Karoi**	**7.20**	**349**	*i* P	Pn	16 52 26.8	-8.1
KRI				*i* S	Sn	16 53 34.6	-22
KRI	**Karoi**	**7.20**	**349**	*i* P	Pn	16 52 26.8	-8.1
KRI				*i* S	Sn	16 53 34.6	-22
BRAK	**Brakfontein**	**10.62**	**221**	*e*P	**Pn**	**16 53 24.3**	**+2.5**
BRAK				*e*S	**Sn**	**16 55 21.0**	**+0.2**
BRAK				IAML		16 55 43.5	
	comp=Z,1.3nm,0.8s						

*IDC **16** 16:52:39.6±0.8, 7.48S×105.84E, h0km, mb4.2/18, mbtmp4.2/18, MS3.4/3, Error ellipse: s-maj=26.5km s-min=14.4km az=38.0*
*NEIC **16** 16:52:42.1±2.2, 7.83S±0.04×105.79E±0.05, h35km±2km, mb4.4/29, Error ellipse: s-maj=10.9km s-min=3.4km az=127.0*
*DJA **16** 16:52:43.0±0.3, 8.3S±3.1×10.6E±., h41km±4km, M4.7/29, mB5.4/4, mb4.6/29, MLv4.6/24, Mw(mB)4.9/4*
ISC 16 16:52:42.0±0.5, 7.79S±0.06×105.84E±0.06, h31km, n116, σ1.8 33/110, mb4.4/38, MS3.4/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.06**	**42**	P	**Pn**	**16 52 59.3**	**-1.4**
CNJI	**Cibinong**	**1.37**	**70**	P	**Pn**	**16 53 04.3**	**-0.6**
DBJI	**Dramaga**	**1.53**	**36**	P	**Pn**	**16 53 07.1**	**0.0**
SBJI	**Serang**	**1.69**	**10**	P	**Pn**	**16 53 09.7**	**+0.4**
CBJI	**Citeko**	**1.69**	**36**	P	**Pn**	**16 53 06.9**	**-2.5**
TNG	**Tangerang**	**1.80**	**27**	P	**Pn**	**16 53 11.4**	**+0.5**
LEM	**Lembang**	**2.01**	**62**	Pn	**Pn**	**16 53 15.3**	**+1.4**
	187nm,0.3s,baz=321,slow=6.1,SNR=85						
LEM				Sn	**Sn**	**16 53 39.0**	**+1.0**
	135nm,0.3s,baz=8.4,slow=20,SNR=8.5						
LEM				LR	LR	16 54 20.5	
	comp=Z,493nm,21.4s,baz=310,slow=54						
LEM	**Lembang**	**2.01**	**62**	P	**Pn**	**16 53 14.9**	**+1.0**
CMJI	**Cimerak**	**2.59**	**90**	P	**Pn**	**16 53 21.4**	**-0.3**
KASI	**Kota Agung**	**2.62**	**329**	P	**Pn**	**16 53 23.3**	**+1.2**
XMIS	**Christmas Isla**	**2.68**	**184**		**Pn**	**16 53 24.4**	**+1.4**
JCJI	**Jatiwangi**	**2.74**	**62**	P	**Pn**	**16 53 22.1**	**-1.7**
KPJI	**Karang Pucung**	**3.10**	**82**	P	**Pn**	**16 53 29.5**	**+0.7**
LWLI	**Liwa**	**3.27**	**327**	P	**Pn**	**16 53 32.3**	**+1.0**
MNAI	**Manna**	**4.45**	**320**	Pn	**Pn**	**16 53 50.1**	**+2.7**
MNAI	**Manna**	**4.45**	**320**	P	**Pn**	**16 53 48.5**	**+1.1**
SMRI	**Semarang**	**4.62**	**81**	P	**Pn**	**16 53 49.9**	**+0.1**
UGM	**Wanagama**	**4.64**	**92**	Pn	**Pn**	**16 53 50.8**	**+0.8**
UGM	**Wanagama**	**4.64**	**92**	P	**Pn**	**16 53 50.5**	**+0.5**
NGJI	**Ngawi**	**5.59**	**86**	P	**Pn**	**16 54 03.1**	**+0.1**
	68nm,0.8s,0.4nm						
PPBI	**Pangkal Pinang**	**5.60**	**3**	P	**Pn**	**16 54 03.4**	**+0.2**
	51nm,1.0s,0.3nm						
PWJI	**Pagerwojo**	**5.91**	**93**	P	**Pn**	**16 54 07.8**	**+0.3**
	79nm,0.8s,0.7nm						
GRJI	**Gresik**	**6.64**	**83**	P	**Pn**	**16 54 17.4**	**-0.1**
	228nm,1.3s,1.0nm						
BWJI	**Bawean**	**7.04**	**75**	P	**Pn**	**16 54 22.2**	**-0.8**
	292nm,1.0s,1.8nm						
DSRI	**Dabo**	**7.37**	**350**	P	**Pn**	**16 54 28.2**	**+0.7**
	37nm,1.0s,0.1nm						
GMJI	**Gumukmas**	**7.55**	**94**	P	**Pn**	**16 54 30.6**	**+0.7**
	35nm,0.8s						
PPSI	**Pulau Pagai**	**7.66**	**310**	P	**Pn**	**16 54 32.1**	**+0.7**
	203nm,0.8s,2μm0.7nm						
BLJI	**Banyuglugur**	**7.69**	**90**	P	**Pn**	**16 54 32.1**	**+0.3**
JAGI	**Jajag, Banyuwa**	**8.26**	**95**	Pn	**Pn**	**16 54 40.6**	**+0.9**
JAGI	**Jajag, Banyuwa**	**8.26**	**95**	P	**Pn**	**16 54 40.2**	**+0.5**
	35nm,0.9s						
PDSI	**Padang**	**8.68**	**322**	P	**Pn**	**16 54 46.7**	**+1.1**
	14nm,0.4s						
SRBI	**Singaraja**	**9.29**	**92**	P	**Pn**	**16 54 53.4**	**-0.5**
	73nm,0.8s						
SISI	**Saibi**	**9.30**	**313**	P	**Pn**	**16 54 53.8**	**-0.2**
	69nm,1.0s						
STKI	**Sintang**	**9.62**	**36**	P	**Pn**	**16 54 58.6**	**+0.2**
	23nm,1.3s						
MYKOM	**Kota Tinggi**	**9.72**	**348**	Pn	**Pn**	**16 55 02.0**	**+2.2**
PBSI	**Pulau Batu**	**10.76**	**315**	P	**Pn**	**16 55 13.5**	**-0.6**
	44nm,1.0s						
TWSI	**Taliwang, Sumb**	**10.97**	**96**	P	**Pn**	**16 55 16.6**	**-0.3**
	32nm,1.0s						
MTKI	**Muara Teweh, K**	**11.30**	**53**	P	**Pn**	**16 55 21.1**	**-0.4**
PLAI	**Plampang**	**11.86**	**96**	P	**Pn**	**16 55 29.0**	**-0.1**
	36nm,1.0s						
GSI	**Gunungsitoli**	**12.23**	**317**	Pn	**Pn**	**16 55 33.1**	**-1.1**
GIRL	**Giralia**	**16.83**	**152**	P	**P**	**16 56 37.8**	**+0.5**
KKM	**Kota Kinabalu**	**17.20**	**37**	P	**P**	**16 56 43.2**	**+1.6**
KKM				IAmb	IAmb	16 56 43.8	
	comp=Z,36nm,1.2s						
TOLI2	**Tolitoli**	**17.33**	**60**	P	**P**	**16 56 43.5**	**+0.6**
MRSI	**Marisa**	**18.03**	**64**	P	**Pn**	**16 56 50.1**	**-0.3**
	comp=Z,19nm,0.9s						
LUWI	**Luwuk**	**18.16**	**69**	P	**P**	**16 56 52.3**	**+0.3**
	comp=Z,39nm,1.0s						
SOEI	**Soe**	**18.32**	**97**	P	**Pn**	**16 56 56.1**	**+2.1**
SOEI	**Soe**	**18.32**	**97**	P	**Pn**	**16 56 53.8**	**-0.2**
	comp=Z,45nm,1.1s						
PSA00	**Pilbara Seismi**	**19.25**	**137**	P	**P**	**16 57 02.5**	**-1.5**
SANI	**Sanana**	**20.86**	**75**	P	**P**	**16 57 20.7**	**-0.9**
	comp=Z,13nm,1.3s						
NLAI	**Namlea**	**21.64**	**79**	P	**P**	**16 57 30.0**	**+0.1**
	comp=Z,12nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.82**	**120**	P	**P**	**16 57 32.0**	**+0.1**
LBMI	**Labuha**	**22.73**	**73**	P	**P**	**16 57 42.0**	**+0.3**
	comp=Z,33nm,0.8s						
TNTI	**Ternate**	**23.09**	**69**	P	**P**	**16 57 44.6**	**-0.8**
	comp=Z,15nm,1.1s						
MORW	**Morawa**	**23.25**	**157**	P	**P**	**16 57 45.9**	**-0.9**
MORW				IAmb	IAmb	16 58 06.6	
	comp=Z,20nm,1.2s						
SWI	**Sorong**	**26.25**	**76**	P	**P**	**16 58 13.9**	**-0.8**
	comp=Z,14nm,0.9s						
QIZ	**Qiongzhong**	**26.94**	**8**	P	**P**	**16 58 22.4**	**+1.6**
QIZ				S	**S**	**17 02 58.8**	**+2.7**
QIZ				LR	LR		
	comp=N,83nm,11.4s						
QIZ				LR	LR		
	comp=E,170nm,9.8s						
QIZ				LR	LR		
	comp=Z,150nm,18.9s						
CMAR	**Chiang Mai Arr**	**26.95**	**345**	P	**P**	**16 58 18.9**	**-2.0**
CMAR	**Chiang Mai Arr**	**26.95**	**345**	P	**P**	**16 58 21.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=179,slow=8.4,SNR=8.4						
	comp=Z,0.6nm,0.6s						
CHTO	**Chiang Mai**	**27.30**	**346**	P	**P**	**16 58 21.1**	**-2.9**
H01W3	**Cape Leeuwin H**	**28.02**	**165**	T	T	17 28 15.8	
	baz=344,slow=76,SNR=49						
H01W1	**Cape Leeuwin H**	**28.04**	**165**	T	T	17 28 20.7	
	baz=344,slow=76,SNR=50						
H01W2	**Cape Leeuwin H**	**28.04**	**165**	T	T	17 28 16.8	
	baz=344,slow=76,SNR=44						
PALK	**Pallekele**	**29.19**	**300**	LR	LR	17 08 35.5	
	comp=Z,68nm,20.1s,baz=234,slow=33						
WB0	**Warramunga Arr**	**30.12**	**116**	P	**P**	**16 58 47.9**	**-1.3**
WB0				IAmb	IAmb	16 58 52.9	
	comp=Z,8.7nm,1.4s						
WRA	**Warramunga Arr**	**30.13**	**117**	P	**P**	**16 58 46.8**	**-2.5**
WRA	**Warramunga Arr**	**30.13**	**117**	P	**P**	**16 58 52.2**	**+2.9**
	comp=Z,0.5nm,0.4s,baz=288,slow=11,SNR=8.5						
	comp=Z,0.5nm,0.4s						
WB2	**Warramunga Arr**	**30.14**	**117**	P	**P**	**16 58 48.1**	**-1.3**
WB2				IAmb	IAmb	16 59 07.1	
	comp=Z,9.0nm,1.3s						
WR0	**Warramunga Arr**	**30.31**	**116**	P	**P**	**16 58 48.9**	**-2.0**
WR0				IAmb	IAmb	16 58 55.6	
	comp=Z,9.7nm,1.4s						
FORT	**Forrest**	**30.90**	**141**	P	**P**	**16 58 53.3**	**-2.6**
ASAR	**Alice Springs**	**31.19**	**124**	P	**P**	**16 59 02.1**	**+3.4**
	comp=Z,0.9nm,0.7s,baz=306,slow=7.6,SNR=15						
	comp=Z,0.9nm,0.7s						
AS31	**Alice Springs**	**31.19**	**124**	P	**P**	**16 58 58.8**	**+0.2**
PZH	**PanZhiHua**	**34.32**	**353**	P	**P**	**16 59 24.0**	**-2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
COEN	**Coen**	**37.14**	**103**	P	**P**	**16 59 48.5**	**-1.8**
COEN				IAmb	IAmb	17 00 12.2	
	comp=Z,7.7nm,1.1s						
CTA	**Charters Tower**	**40.97**	**112**	LR	LR	17 17 10.2	
	comp=Z,30nm,21.1s,baz=267,slow=36						
CTAO	**Charters Tower**	**40.97**	**112**	P	**P**	**17 00 20.2**	**-2.1**
STKA	**Stephens Creek**	**40.98**	**131**	P	**P**	**17 00 26.4**	**+4.2**
	comp=Z,1.6nm,0.4s,baz=283,slow=5.4,SNR=5.8						
	comp=Z,1.6nm,0.4s						
JNU	**Nakatsue**	**47.15**	**29**	P	**P**	**17 01 09.6**	**-2.1**
GTA	**Gaotai**	**47.29**	**354**	P	**P**	**17 01 12.6**	**-0.2**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**48.69**	**6**	*e*P	**P**	**17 01 25.0**	**+1.5**
HHC				sP	sP	17 01 52.4	+17
HHC				PP	**PP**	**17 03 16.4**	**-0.4**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
KSRS	**Korea Array**	**49.52**	**23**	P	**P**	**17 01 29.5**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=215,slow=9.0,SNR=4.6						
	comp=Z,1.4nm,0.7s					

SONM	**Songino Array**	**55.38**	**0**	P	**P**	**17 02 11.4**	**-1.8**
SONM				IAmb	IAmb	17 02 13.8	
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**55.38**	**0**	P	**P**	**17 02 13.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=181,slow=9.2,SNR=7.1						
SONM				PcP	**PcP**	**17 03 14.4**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=192,slow=3.9,SNR=3.7						
	comp=Z,0.8nm,0.5s						
ULN	**Ulaanbaatar**	**55.42**	**1**	P	**P**	**17 02 12.2**	**-1.4**
ULN				IAmb	IAmb	17 02 14.3	
	comp=Z,1.2nm,0.7s						
TARG	**Taragay, Kyrgy**	**55.57**	**335**	P	**P**	**17 02 13.5**	**-1.6**
TARG				IAmb	IAmb	17 02 36.6	
	comp=Z,4.2nm,0.9s						
ARSB	**Arslanbob**	**57.43**	**331**	P	**P**	**17 02 26.9**	**-1.1**
MK31	**Makanchi Array**	**58.25**	**341**	P	**P**	**17 02 33.5**	**0.0**
MK31				IAmb	IAmb	17 02 34.3	
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**58.25**	**341**	P	**P**	**17 02 33.3**	**-0.2**
MKAR	**Makanchi Array**	**58.25**	**341**	P	**P**	**17 02 33.4**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=152,slow=8.8,SNR=68						
	comp=Z,1.6nm,0.4s						
H04N2	**CROZET ISLANDS**	**59.92**	**221**	T	T	18 08 35.0	
	baz=66,slow=75,SNR=72						
H04N1	**CROZET ISLANDS**	**59.93**	**221**	T	T	18 08 35.3	
	baz=66,slow=75,SNR=66						
H04N3	**CROZET ISLANDS**	**59.93**	**221**	T	T	18 08 34.0	
	baz=66,slow=75,SNR=58						
KLR	**Kul'dur**	**61.15**	**19**	P	**P**	**17 02 52.8**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=242,slow=8.0,SNR=3.5						
	comp=Z,1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**62.81**	**341**	P	**P**	**17 03 04.9**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=152,slow=6.0,SNR=14						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**62.86**	**341**	P	**P**	**17 03 04.0**	**-0.8**
KURK				IAmb	IAmb	17 03 07.6	
	comp=Z,2.3nm,0.7s						
GEYT	**Alibeck**	**63.60**	**319**	P	**P**	**17 03 09.1**	**-1.0**
GEYT				IAmb	IAmb	17 03 17.4	
	comp=Z,3.0nm,0.7s						
GEYT	**Alibeck**	**63.60**	**319**	P	**P**	**17 03 11.0**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=148,slow=8.7,SNR=4.5						
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**64.02**	**346**	P	**P**	**17 03 11.7**	**-0.7**
ZALV	**Zalesovo Beam**	**64.02**	**346**	P	**P**	**17 03 13.1**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=156,slow=6.2,SNR=8.0						
	comp=Z,1.2nm,0.3s						
BVAR	**Borovoye Array**	**67.65**	**338**	P	**P**	**17 03 36.7**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=141,slow=8.8,SNR=31						
	comp=Z,2.9nm,0.5s						
BRVK	**Borovoye**	**67.72**	**338**	P	**P**	**17 03 36.2**	**0.0**
ABKAR	**Akbulak array**	**69.51**	**330**	P	**P**	**17 03 46.5**	**-1.0**
ABKAR	**Akbulak array**	**69.51**	**330**	P	**P**	**17 03 48.1**	**+0.6**
ABKAR				IAmb	IAmb	17 03 49.6	
	comp=Z,10nm,1.4s						
MA2	**Magadan**	**76.05**	**22**	P	**P**	**17 04 26.2**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=198,slow=6.4,SNR=3.9						
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**76.47**	**318**	P	**P**	**17 04 31.3**	**+2.5**
	comp=Z,3.8nm,0.9s,baz=165,slow=6.8,SNR=6.1						
	comp=Z,3.8nm,0.9s						
NRIK	**Noril'sk**	**77.99**	**353**	P	**P**	**17 04 37.3**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=165,slow=12,SNR=5.7						
	comp=Z,1.9nm,0.3s						
SEY	**Seymchan**	**78.93**	**20**	P	**P**	**17 04 42.8**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=17,slow=19,SNR=5.2						
	comp=Z,0.9nm,0.6s						
TIXI	**Tiksi**	**80.73**	**7**	P	**P**	**17 04 50.7**	**-1.0**
TIXI				IAmb	IAmb	17 04 51.7	
	comp=Z,2.6nm,0.8s						
BR131	**Keskin Array S**	**81.50**	**312**	P	**P**	**17 04 55.4**	**-1.4**
BR131				IAmb	IAmb	17 04 59.4	
	comp=Z,4.7nm,0.8s						
BRTR	**Keskin Array B**	**81.50**	**312**	P	**P**	**17 04 56.0**	**-0.7**
BRTR	**Keskin Array B**	**81.50**	**312**	P	**P**	**17 04 58.4**	**+1.7**
	comp=Z,3.4nm,0.8s,baz=135,slow=7.8,SNR=20						
	comp=Z,3.4nm,0.8s						
SUR	**Sutherland**	**81.69**	**238**	LR	LR	17 34 32.4	
	comp=Z,42nm,19.3s,baz=107,slow=31						
QSPA	**South Pole Qui**	**82.20**	**180**	P	**P**	**17 04 59.8**	**-0.2**
QSPA				IAmb	IAmb	17 05 01.9	
	comp=Z,4.3nm,1.2s						
FINES	**FINESS Array B**	**91.92**	**332**	P	**P**	**17 05 48.8**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=203,slow=8.3,SNR=4.6						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**144.95**	**48**	PKP	**PKiKP**	**17 12 19.0**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=332,slow=1.4,SNR=5.9						

*IDC **16** 16:57:10.5±1.1,55°.96N×149°.37W,h0km,mb3.6/6, mbtmp3.4/9,ML2.8/3,MS2.9/2,Error ellipse: s-maj=28.3km s-min=21.2km az=47.0*

*NEIC **16** 16:57:13.4±1.7,56°.09N±0°.06×149°.4W±0°.1,h22km±9km, ML3.3/34,ML3.0(AEIC),Error ellipse: s-maj=11.6km s-min=4.6km az=128.0*

*AEIC **16** 16:57:17.0±2.4,56°.1N±0°.1×149°.21W±0°.1,h12km±8km, Error ellipse: s-maj=15.5km s-min=6.5km az=162.0*

ISC 16 16:57:12.0±0.9,**56°.13N**±0°.08×**149°.35W**±0°.05,**h10**km, **n109,σ1°15/109,mb3.8/6,Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.42**	**314**		**Pn**	**16 57 51.8**	**+0.2**
KDAK					**Sn**	**16 58 20.1**	**-1.2**
KDAK	**Kodiak Island**	**2.42**	**314**	Pn	**Pn**	**16 57 51.7**	**+0.1**
	1.3nm,0.3s,baz=128,slow=5.6,SNR=31						
KDAK				Sn	**Sn**	**16 58 20.5**	**-0.8**
	3.7nm,0.3s,baz=300,slow=22,SNR=18						
KDAK				LR	LR	16 58 31.8	
	comp=Z,88nm,21.1s,baz=200,slow=32						
	13nm,0.9s						
OHAK	**Old Harbor**	**2.43**	**298**		**Pn**	**16 57 51.2**	**-0.5**
OHAK					**Sn**	**16 58 19.8**	**-1.7**
OHAK	**Old Harbor**	**2.43**	**298**	P	**Pn**	**16 57 51.3**	**-0.5**
	baz=114						
OHAK				S	**Sn**	**16 58 19.8**	**-1.7**
	baz=114						
SII	**Sitkinak Islan**	**2.73**	**281**		**Pn**	**16 57 56.0**	**+0.2**
SII	**Sitkinak Islan**	**2.73**	**281**	IAML		16 58 35.6	
	comp=N,114nm,0.9s						
SII				IAML		16 58 37.9	
	comp=E,114nm,1.1s						
SII	**Sitkinak Islan**	**2.73**	**281**	P	**Pn**	**16 57 56.0**	**+0.2**
	baz=97						
SYI	**Shuyak Island**	**2.98**	**328**		**Pn**	**16 57 59.6**	**+0.4**
SYI					**Sn**	**16 58 34.6**	**-0.4**
Q20K	**Shuyak Island**	**2.98**	**328**	P	**Pn**	**16 57 59.6**	**+0.4**
	baz=144						
Q20K				S	**Sn**	**16 58 34.6**	**-0.5**
	baz=144						
CNPM	**China Poot**	**3.55**	**344**		**Pn**	**16 58 07.4**	**+0.3**
CNPM					**Sn**	**16 58 47.9**	**-1.2**
CNPM	**China Poot**	**3.55**	**344**	IAML		16 58 58.8	
	comp=E,27nm,0.7s						
CNPM				IAML		16 58 59.0	
	comp=N,26nm,1.1s						
Q19K	**Cape Douglas,**	**3.64**	**322**		**Pn**	**16 58 10.5**	**+2.2**
Q19K	**Cape Douglas,**	**3.64**	**322**	P	**Pn**	**16 58 10.5**	**+2.2**
	baz=138						
KAHG	**Katmai Hook Gl**	**3.68**	**312**		**Pn**	**16 58 10.5**	**+1.6**
BRSE	**Bradley Lake S**	**3.69**	**349**		**Pn**	**16 58 09.1**	**0.0**
BRSE	**Bradley Lake S**	**3.69**	**349**	P	**Pn**	**16 58 09.1**	**0.0**
	baz=167						
BRLK	**Bradley Lake**	**3.73**	**348**		**Pn**	**16 58 09.6**	**0.0**
BRLK	**Bradley Lake**	**3.73**	**348**	IAML		16 58 58.8	
	comp=E,22nm,0.5s						
ACHA	**Angle Creek He**	**3.86**	**305**		**Pn**	**16 58 12.9**	**+1.4**
ANCK	**Angle Creek**	**3.94**	**304**		**Pn**	**16 58 14.1**	**+1.6**
KAHC	**Katmai Hardscr**	**3.97**	**312**		**Pn**	**16 58 14.1**	**+1.2**
KAHC	**Katmai Hardscr**	**3.97**	**312**	P	**Pn**	**16 58 14.1**	**+1.2**
	baz=126						
P23K	**Montague Islan**	**4.01**	**14**		**Pn**	**16 58 13.6**	**+0.2**
P23K	**Montague Islan**	**4.01**	**14**	P	**Pn**	**16 58 13.5**	**+0.2**
	baz=195						
P19K	**Oil Pt**	**4.09**	**331**		**Pn**	**16 58 15.3**	**+0.8**
P19K	**Oil Pt**	**4.09**	**331**	IAML		16 59 23.8	
	comp=E,55nm,1.5s						
P19K	**Oil Pt**	**4.09**	**331**	P	**Pn**	**16 58 15.3**	**+0.8**
	baz=147						
CNTC	**Contact Creek**	**4.15**	**304**		**Pn**	**16 58 16.4**	**+1.0**
Q17K	**Contact Creek**	**4.15**	**304**	P	**Pn**	**16 58 16.4**	**+1.0**
	baz=118						
IVE	**Iliamna Volcan**	**4.35**	**335**		**Pn**	**16 58 18.9**	**+0.7**
SLKM	**Skilak Lake**	**4.41**	**354**		**Pn**	**16 58 18.9**	**0.0**
HIN	**Hinchinbrook I**	**4.53**	**18**		**Pn**	**16 58 20.7**	**+0.1**
HIN	**Hinchinbrook I**	**4.53**	**18**	IAML		16 59 14.5	
	comp=E,33nm,1.2s						
HIN				IAML		16 59 19.1	
	comp=N,35nm,0.7s						
P18K	**Big Mountain,**	**4.54**	**318**		**Pn**	**16 58 21.4**	**+0.7**
P18K	**Big Mountain,**	**4.54**	**318**	IAML		16 59 14.7	
	comp=N,12nm,1.0s						
P18K	**Big Mountain,**	**4.54**	**318**	P	**Pn**	**16 58 21.4**	**+0.7**
	baz=133						
RSO	**Redoubt South**	**4.70**	**339**		**Pn**	**16 58 21.3**	**-1.7**
O18K	**Koktuh Hills**	**4.86**	**323**		**Pn**	**16 58 25.6**	**+0.5**
O18K				IAML		16 59 23.4	
	comp=E,13nm,1.0s						
O18K				IAML		16 59 35.1	
	comp=N,18nm,1.2s						
FID	**Port Fidalgo**	**4.87**	**17**		**Pn**	**16 58 25.5**	**+0.3**
FID	**Port Fidalgo**	**4.87**	**17**	IAML		16 59 22.3	
	comp=E,18nm,1.2s						
FID				IAML		16 59 24.4	
	comp=N,14nm,0.9s						
P17K	**Kvichak River**	**4.89**	**312**	P	**Pn**	**16 58 26.8**	**+1.4**
	baz=125						
RAGM	**Ragged Mountai**	**4.93**	**28**	Pn	**Pn**	**16 58 27.2**	**+1.1**
SUCK	**Suckling Hills**	**4.93**	**34**	Pn	**Pn**	**16 58 26.5**	**+0.5**
SUCK				IAML		16 59 35.1	
	comp=N,28nm,1.0s						
SUCK				IAML		16 59 53.5	
	comp=E,29nm,1.2s						
HMT	**Hamilton**	**5.00**	**30**	Pn	**Pn**	**16 58 28.4**	**+1.5**
NICHA	**Nichawak Mount**	**5.00**	**32**		**Pn**	**16 58 27.6**	**+0.6**
GOAT	**Goat Mountain**	**5.08**	**27**		**Pn**	**16 58 29.6**	**+1.5**
BERG	**Berg Lake**	**5.21**	**33**	Pn	**Pn**	**16 58 30.2**	**+0.4**
BERG				IAML		16 59 29.8	
	comp=N,26nm,1.4s						
SNH	**Sunshine Point**	**5.32**	**38**	Pn	**Pn**	**16 58 32.6**	**+1.2**
SNH				IAML		16 59 32.5	
	comp=E,18nm,1.5s						
SNH				IAML		17 00 45.8	
	comp=N,20nm,1.4s						
KHIT	**Khitrov Hills**	**5.38**	**34**		**Pn**	**16 58 32.6**	**+0.2**
SUA	**Susitna One**	**5.39**	**353**	Pn	**Pn**	**16 58 31.3**	**-1.2**
N19K	**Bonanza Creek**	**5.41**	**332**	Pn	**Pn**	**16 58 33.2**	**+0.5**
BMRM	**Bremner River**	**5.45**	**25**		**Pn**	**16 58 34.0**	**+0.8**
BMRM	**Bremner River**	**5.45**	**25**	P	**Pn**	**16 58 34.0**	**+0.8**
	baz=208						
P16K	**Nushagak River**	**5.48**	**306**		**Pn**	**16 58 34.7**	**+1.1**
P16K	**Nushagak River**	**5.48**	**306**	P	**Pn**	**16 58 34.7**	**+1.1**
	baz=118						
WAX	**Waxell Ridge**	**5.52**	**36**	Pn	**Pn**	**16 58 32.6**	**-1.5**
GHO	**Glory Hole Cre**	**5.66**	**2**		**Pn**	**16 58 37.4**	**+1.3**
KLU	**Klutina**	**5.66**	**17**		**Pn**	**16 58 37.0**	**+0.8**
CRQE	**Cirque**	**5.68**	**33**	P	**Pn**	**16 58 35.3**	**-1.0**
	baz=217						
N18K	**Kilae Creek**	**5.71**	**326**	Pn	**Pn**	**16 58 36.6**	**-0.1**
SML	**Sawmill**	**5.71**	**5**		**Pn**	**16 58 38.0**	**+1.1**
SML	**Sawmill**	**5.71**	**5**	P	**Pn**	**16 58 38.0**	**+1.1**
	baz=185						
TGL	**Tana Glacier**	**5.76**	**34**		**Pn**	**16 58 38.0**	**+0.5**
ISLE	**Juniper Island**	**5.80**	**37**	Pn	**Pn**	**16 58 39.6**	**+1.5**
BAGL	**Bagley Icefiel**	**5.80**	**38**		**Pn**	**16 58 38.9**	**+0.9**
SCM	**Sheep Creek Mo**	**5.81**	**9**		**Pn**	**16 58 37.2**	**-1.0**
O16K	**Kokwok River B**	**5.81**	**310**		**Pn**	**16 58 39.3**	**+1.1**
SVW2	**Sparrevohn**	**5.95**	**329**	Pn	**Pn**	**16 58 39.5**	**-0.5**
VRDI	**Verde Repeater**	**5.96**	**29**	Pn	**Pn**	**16 58 41.1**	**+0.8**
CNBA	**Chernabura Isl**	**5.97**	**262**	Pn	**Pn**	**16 58 38.1**	**-2.2**
N25K	**Chitina, Valde**	**6.01**	**22**		**Pn**	**16 58 42.0**	**+1.0**
GLB	**Gilahina Butte**	**6.05**	**26**	Pn	**Pn**	**16 58 42.5**	**+1.0**
GRNC	**Granite Creek**	**6.09**	**38**		**Pn**	**16 58 42.4**	**+0.2**
TABL	**Table Mountain**	**6.11**	**42**		**Pn**	**16 58 42.9**	**+0.5**
MCARA	**McCarthy VSAT**	**6.21**	**29**		**Pn**	**16 58 44.9**	**+1.4**
PTPK	**Pastol Peak**	**6.21**	**32**		**Pn**	**16 58 44.4**	**+0.7**
PCA	**Pinnacle**	**6.24**	**47**		**Pn**	**16 58 44.5**	**+0.4**
PINM	**Pinnacle**	**6.24**	**47**	P	**Pn**	**16 58 44.5**	**+0.4**
	baz=234						
BARN	**Barnard Glacie**	**6.36**	**36**		**Pn**	**16 58 46.3**	**+0.4**
CTGM	**Chitina Glacie**	**6.40**	**38**	Pn	**Pn**	**16 58 46.6**	**+0.2**
BCPM	**Bancas Point**	**6.42**	**49**	Pn	**Pn**	**16 58 46.9**	**+0.4**
LOGN	**Logan Glacier**	**6.42**	**39**	Pn	**Pn**	**16 58 47.4**	**+0.8**
N16K	**Nishlik Lake**	**6.60**	**315**		**Pn**	**16 58 50.5**	**+1.5**
N16K	**Nishlik Lake**	**6.60**	**315**	P	**Pn**	**16 58 50.5**	**+1.5**
	baz=127						
L19K	**White Mountain**	**6.69**	**337**	Pn	**Pn**	**16 58 50.8**	**+0.6**
M17K	**Holitna River**	**6.75**	**325**	Pn	**Pn**	**16 58 51.8**	**+0.9**
DHY	**Denali Highway**	**7.04**	**7**	Pn	**Pn**	**16 58 56.7**	**+1.6**
O29M	**Mount Kennedy**	**7.05**	**49**		**Pn**	**16 58 55.8**	**+0.4**
O29M	**Mount Kennedy**	**7.05**	**49**	P	**Pn**	**16 58 55.8**	**+0.4**
	baz=238						
P29M	**Windy Craggy**	**7.11**	**56**		**Pn**	**16 58 55.5**	**-0.5**
P29M	**Windy Craggy**	**7.11**	**56**	P	**Pn**	**16 58 55.5**	**-0.5**
	baz=245						
RND	**Reindeer**	**7.30**	**2**	Pn	**Pn**	**16 58 59.2**	**+0.6**
M27K	**Edge Creek, AK**	**7.32**	**28**	Pn	**Pn**	**16 59 01.8**	**+2.9**
TRF	**Thorofare Moun**	**7.36**	**357**	Pn	**Pn**	**16 58 57.5**	**-1.9**
S31K	**Pelican**	**7.38**	**70**	Pn	**Pn**	**16 58 56.8**	**-2.9**
CAST	**Castle Rocks**	**7.44**	**350**	Pn	**Pn**	**16 59 02.2**	**+1.8**
KTH	**Kantishna Hill**	**7.49**	**355**	Pn	**Pn**	**16 59 03.9**	**+2.8**
L16K	**Owhat River**	**7.66**	**321**	Pn	**Pn**	**16 59 04.3**	**+0.8**
L27K	**Beaver Creek,**	**7.92**	**26**	Pn	**Pn**	**16 59 05.8**	**-1.3**
ILAR	**Eielson Array**	**8.75**	**7**	Pn	**Pn**	**16 59 19.3**	**+0.9**
	comp=N,0.1nm,0.3s,baz=189,slow=13,SNR=5.5						
ILAR					**Sn**	**17 00 53.2**	**-3.7**
	comp=N,0.1nm,0.3s,baz=190,slow=15,SNR=5.0						
	comp=N,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**18.65**	**56**	P	**P**	**17 01 29.4**	**-0.2**
	baz=267,slow=11,SNR=2.5						
	comp=N,0.1nm,0.6s						
YBH	**Yreka Blue Hor**	**22.47**	**119**	LR	LR	17 08 10.4	
	comp=N,75nm,18.8s,baz=334,slow=30						
PDAR	**Pinedale Array**	**28.67**	**101**	P	**P**	**17 03 09.0**	**0.0**
	comp=N,0.1nm,0.5s,baz=298,slow=6.1,SNR=2.1						
	comp=N,0.1nm,0.5s						
SONM	**Songino Array**	**58.71**	**310**	P	**P**	**17 07 10.2**	**+0.6**
	comp=N,0.7nm,0.8s,baz=61,slow=7.0,SNR=4.2						
	comp=N,0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**61.67**	**327**	P	**P**	**17 07 30.3**	**+0.8**
	comp=N,0.8nm,0.6s,baz=31,slow=4.7,SNR=4.0						
	comp=N,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**66.45**	**329**	P	**P**	**17 08 02.0**	**+1.0**
	comp=N,0.4nm,0.6s,baz=31,slow=6.3,SNR=5.2						
	comp=N,0.4nm,0.6s						
MKAR	**Makanchi Array**	**68.69**	**325**	P	**P**	**17 08 16.2**	**+0.9**
	comp=N,0.4nm,0.5s,baz=26,slow=4.5,SNR=6.3						
	comp=N,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**86.32**	**298**	P	**P**	**17 09 54.6**	**+0.5**
	comp=N,0.6nm,0.8s,baz=16,slow=4.6,SNR=4.9						
	comp=N,0.6nm,0.8s						
QSPA	**South Pole Qui**	**145.93**	**180**	PKPbc	**PKPdf**	**17 16 49.3**	**-0.2**
	comp=N,0.3nm,0.5s,baz=349,slow=3.8,SNR=6.9						

*SCB **16** 17:02:09.5±1.3,20°.34S×68°.10W,h174km±11km,ML3.6/3, MW3.7,Error ellipse: s-maj=4.2km s-min=3.0km az=2.0*

*SJA **16** 17:02:09.6±2.2,20°.28S×67°.92W,h150km,ML3.8,MW3.7*

*GUC **16** 17:02:10.8±0.7,20°.30S×68°.13W,h175km±6km,ML3.5*

ISC 16 17:02:09.5±1.5,**20°.35S**±0°.03×**68°.11W**±0°.04, **h179km**±11km,**n53,σ0°.99/85,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.00**	**282**	*eP*	**Pn**	**17 02 37.8**	**+0.2**
PB08				*eS*	**Sn**	**17 03 00.5**	**+1.3**
PB08	**IPOC Station P**	**1.00**	**282**	*eP*	**Pn**	**17 02 37.9**	**+0.4**
PB08				*i* S	**Sn**	**17 02 58.3**	**-0.9**
PB08				IAML		17 03 03.2	
	comp=N,323nm,0.1s						
PB08	**IPOC Station P**	**1.00**	**282**	Pg	**Pn**	**17 02 38.0**	**+0.4**
GO01	**Chusmiza**	**1.22**	**304**	*eP*	**Pn**	**17 02 39.4**	**-0.2**
GO01				*eS*	**Sn**	**17 03 05.5**	**+3.0**
GO01	**Chusmiza**	**1.22**	**304**	*eP*	**Pn**	**17 02 39.5**	**0.0**
GO01				*i* S	**Sn**	**17 03 01.8**	**-0.7**
GO01	**Chusmiza**	**1.22**	**304**	Pg	**Pn**	**17 02 39.2**	**-0.3**
PB01	**IPOC Station P**	**1.46**	**242**	*eP*	**Pn**	**17 02 41.4**	**+0.3**
PB01				*eS*	**Sn**	**17 03 06.0**	**+0.4**
PB01				IAML		17 03 07.2	
	comp=Z,294nm,0.1s						
PB01	**IPOC Station P**	**1.46**	**242**	*eP*	**Pn**	**17 02 41.2**	**+0.1**
PB01				*i* S	**Sn**	**17 03 05.3**	**-0.3**
PB01				IAML		17 03 06.5	
	comp=E,520nm,0.2s						
PB01	**IPOC Station P**	**1.46**	**242**	Pg	**Pn**	**17 02 41.4**	**+0.3**
PB01				Sg	**Sn**	**17 03 05.7**	**+0.1**
PB01				IAML		17 03 06.4	
	comp=E,476nm,0.2s						
PB11	**IPOC Station P**	**1.56**	**292**	*eP*	**Pn**	**17 02 42.0**	**-0.2**
PB11				*eS*	**Sn**	**17 03 07.2**	**-0.3**
PB11				IAML		17 03 09.8	
	comp=Z,666nm,0.1s						
PB11	**IPOC Station P**	**1.56**	**292**	*eP*	**Pn**	**17 02 42.1**	**-0.1**
PB11				*i* S	**Sn**	**17 03 06.0**	**-1.5**
PB11	**IPOC Station P**	**1.56**	**292**	Pg	**Pn**	**17 02 42.1**	**-0.1**
HMBC	**Humberstone**	**1.67**	**272**	*eP*	**Pn**	**17 02 42.8**	**-0.4**
HMBC				*eS*	**Sn**	**17 03 08.6**	**-0.6**
HMBC				IAML		17 03 10.9	
	comp=Z,515nm,0.3s						
HMBC	**Humberstone**	**1.67**	**272**	*eP*	**Pn**	**17 02 42.8**	**-0.4**
HMBC				*i* S	**Sn**	**17 03 07.5**	**-1.7**
HMBC				IAML		17 03 09.9	
	comp=E,632nm,0.2s						
HMBC	**Humberstone**	**1.67**	**272**	Pg	**Pn**	**17 02 42.7**	**-0.4**
PB09	**IPOC Station P**	**1.78**	**216**	*eP*	**Pn**	**17 02 45.1**	**+0.7**
PB09				*eS*	**Sn**	**17 03 13.4**	**+1.9**
PB09				IAML		17 03 14.0	
	comp=Z,258nm,0.4s						
PB09	**IPOC Station P**	**1.78**	**216**	*eP*	**Pn**	**17 02 45.3**	**+0.9**
PB09				*i* S	**Sn**	**17 03 12.2**	**+0.6**
PB09				IAML		17 03 13.9	
	comp=N,211nm,0.4s						
PB09	**IPOC Station P**	**1.78**	**216**	Pg	**Pn**	**17 02 45.5**	**+1.1**
SOEO	**Opoqueri**	**1.79**	**7**	Pg	**Pn**	**17 02 45.0**	**+0.1**
TA02	**Huaiquique**	**1.90**	**272**	*eP*	**Pn**	**17 02 44.9**	**-0.5**
TA02				*eS*	**Sn**	**17 03 12.6**	**-0.6**
TA02				IAML		17 03 13.4	
	comp=Z,1μm,0.1s						
TA02	**Huaiquique**	**1.90**	**272**	*eP*	**Pn**	**17 02 45.4**	**+0.1**
TA02				*i* S	**Sn**	**17 03 11.8**	**-1.4**
TA02	**Huaiquique**	**1.90**	**272**	Pg	**Pn**	**17 02 45.5**	**+0.1**
PB02	**IPOC Station P**	**1.92**	**240**	*eP*	**Pn**	**17 02 46.1**	**+0.3**
PB02				*eS*	**Sn**	**17 03 14.5**	**+0.5**
PB02				IAML		17 03 16.1	
	comp=Z,488nm,0.3s						
PB02	**IPOC Station P**	**1.92**	**240**	*eP*	**Pn**	**17 02 46.2**	**+0.4**
PB02				*i* S	**Sn**	**17 03 13.5**	**-0.5**
PB02	**IPOC Station P**	**1.92**	**240**	Pg	**Pn**	**17 02 46.2**	**+0.4**
PB02				Sg	**Sn**	**17 03 13.6**	**-0.4**
PB02				IAML		17 03 14.2	
	comp=Z,519nm,0.3s						
TA01	**Diego Aracena**	**1.95**	**263**	*eP*	**Pn**	**17 02 45.9**	**0.0**
TA01				*eS*	**Sn**	**17 03 14.1**	**-0.1**
TA01	**Diego Aracena**	**1.95**	**263**	*eP*	**Pn**	**17 02 45.9**	**0.0**
TA01				*i* S	**Sn**	**17 03 12.3**	**-1.9**
TA01				IAML		17 03 13.2	
	comp=E,227nm,0.1s						
TA01	**Diego Aracena**	**1.95**	**263**	Pg	**Pn**	**17 02 45.8**	**-0.2**
PATCX	**Punta Patache**	**1.97**	**256**	*eP*	**Pn**	**17 02 46.4**	**+0.2**
PATCX				*i* S	**Sn**	**17 03 13.8**	**-0.9**
PATCX				IAML		17 03 15.7	
	comp=E,256nm,0.2s						
PB07	**IPOC Station P**	**2.15**	**230**	*eP*	**Pn**	**17 02 48.8**	**+0.5**
PB07				*eS*	**Sn**	**17 03 19.0**	**+0.5**
PB07				IAML		17 03 21.0	
	comp=Z,258nm,0.1s						
PB07	**IPOC Station P**	**2.15**	**230**	*eP*	**Pn**	**17 02 48.8**	**+0.5**
PB07				*i* S	**Sn**	**17 03 17.9**	**-0.6**
PB07				IAML		17 03 19.8	
	comp=N,464nm,0.3s						
PB07	**IPOC Station P**	**2.15**	**230**	Pg	**Pn**	**17 02 48.9**	**+0.5**
LVC	**Limon Verde**	**2.37**	**198**	*eP*	**Pn**	**17 02 51.8**	**+0.8**
LVC				*eS*	**Sn**	**17 03 13.3**	**-5.0**
LVC	**Limon Verde**	**2.37**	**198**	Pg	**Pn**	**17 02 52.0**	**+1.0**
MOCB	**Mochara**	**2.48**	**112**	Pg	**Pn**	**17 02 53.2**	**+0.8**
MOCB				Sg	**Sn**	**17 03 25.3**	**-0.4**
MOCB				IAML		17 03 25.5	
	comp=N,109nm,0.6s						
PB06	**IPOC Station P**	**2.71**	**210**	*eP*	**Pn**	**17 02 55.4**	**+0.7**
PB06				*eS*	**Sn**	**17 03 30.5**	**+0.4**

0.5nm,0.3s
BVAR Borovoye Array 67.57 338 P P 17 14 53.9 -0.9
0.6nm,0.3s,baz=130,slow=7.6,SNR=10
0.6nm,0.3s
BRTR Keskin Array B 81.54 312 P P 17 16 16.7 +0.3
0.5nm,0.8s,baz=112,slow=6.5,SNR=2.8
0.5nm,0.8s

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*IDC **16** 17:06:33.8±1.2,28°.76N×130°.41E,h0km,mb3.6/6, mbtmp3.6/8,ML3.1/2,MS2.6/1,Error ellipse: s-maj=36.6km s-min=17.6km az=83.0*
*JMA **16** 17:06:37.9±0.1,28°.8N±0°.4×130°.4E±0°.8,h52km±2km, MV3.3/25,NEAR AMAMI-OSHIMA ISLAND*
ISC 16 17:06:36.9±2.0,28°.77N±0°.04×130°.49E±0°.06,h24km±15km, n27,σ0s83/36,mb3.7/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.64**	**226**	*eP*	**Pn**	**17 06 51.1**	**+0.6**
JZK				*eS*	**Sn**	**17 07 00.3**	**+0.5**
JAM	**Amami Oshima**	**0.86**	**246**	*eP*	**Pb**	**17 06 53.0**	**-0.1**
JTAJ	**Takarajima**	**1.20**	**289**	*eP*	**Pn**	**17 06 57.3**	**-0.8**
JTAJ				*eS*	**Sn**	**17 07 12.2**	**-1.3**
JNN	**Nakanoshima**	**1.20**	**333**	*eP*	**Pn**	**17 06 57.4**	**-0.7**
JAMN	**Amaminishikomi**	**1.27**	**246**	*eP*	**Pn**	**17 06 59.4**	**+0.3**
JYAK	**Yakushimahirau**	**1.47**	**1**	*eP*	**Pn**	**17 07 01.6**	**-0.2**
JYAK				*eS*	**Sn**	**17 07 19.4**	**-0.9**
JMTN	**Minamitane**	**1.67**	**12**	*eP*	**Pn**	**17 07 04.7**	**+0.1**
JTK	**Tokunoshima**	**1.68**	**235**	P	**Pn**	**17 07 05.5**	**+0.8**
JTK				*eS*	**Sn**	**17 07 25.9**	**+0.5**
JKC	**Kuchinoerabu**	**1.71**	**351**	*eP*	**Pn**	**17 07 05.3**	**+0.1**
JTN	**Tanegashima 3**	**1.93**	**13**	*eP*	**Pn**	**17 07 08.2**	**0.0**
JOKE	**Okinoerabujima**	**2.20**	**231**	*eP*	**Pn**	**17 07 12.4**	**+0.5**
JOKE				*eS*	**Sn**	**17 07 38.4**	**0.0**
JTSR	**Tashiro 2**	**2.42**	**9**	*eP*	**Pn**	**17 07 15.9**	**+0.9**
JTSR				*eS*	**Sn**	**17 07 43.5**	**-0.4**
JYRO	**Yoronjima**	**2.50**	**227**	P	**Pn**	**17 07 16.3**	**+0.2**
JYRO				S	**Sn**	**17 07 44.9**	**-0.9**
JOW	**Kunigami**	**2.75**	**226**	*eP*	**Pn**	**17 07 19.4**	**-0.1**
JOW				*eS*	**Sn**	**17 07 50.7**	**-1.3**
JOW	**Kunigami**	**2.75**	**226**	Pn	**Pn**	**17 07 19.3**	**-0.1**
	11nm,0.3s,baz=102,slow=15,SNR=44						
JOW				Sn	**Sn**	**17 07 51.4**	**-0.6**
	20nm,0.3s,baz=124,slow=27,SNR=13						
	25nm,0.3s						
JIH	**Iheya**	**2.82**	**233**	P	**Pn**	**17 07 20.3**	**-0.1**
JIH				*eS*	**Sn**	**17 07 51.4**	**-2.3**
JKDJ	**Kitadaitoujima**	**2.89**	**166**	*eS*	**Sn**	**17 07 53.2**	**-2.2**
JMZ	**Minamidaito 2**	**3.00**	**167**	*eP*	**Pn**	**17 07 22.6**	**-0.3**
JNTH	**Nagotoyohara**	**3.13**	**225**	*eP*	**Pn**	**17 07 24.7**	**0.0**
JNU	**Nakatsue**	**4.36**	**4**	Pn	**Pn**	**17 07 42.1**	**+0.6**
	0.7nm,0.3s,baz=190,slow=11,SNR=15						
	7.3nm,0.7s						
SONM	**Songino Array**	**26.65**	**322**	P	**P**	**17 12 14.7**	**+0.9**
	0.3nm,0.5s,baz=120,slow=10,SNR=1.5						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.59**	**257**	LR	LR	17 25 44.6	
	comp=Z,9.1nm,18.2s,baz=220,slow=38						
KURBB	**Kurchatov Arra**	**44.47**	**314**	P	**P**	**17 14 46.3**	**+0.4**
	0.2nm,0.4s,baz=97,slow=8.6,SNR=4.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**48.56**	**175**	P	**P**	**17 15 18.7**	**+0.4**
	1.3nm,0.7s,baz=354,slow=8.3,SNR=11						
	1.3nm,0.7s						
BVAR	**Borovoye Array**	**49.77**	**317**	P	**P**	**17 15 27.4**	**+0.1**
	0.8nm,0.6s,baz=90,slow=11,SNR=4.9						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**52.23**	**176**	P	**P**	**17 15 46.7**	**+0.7**
	0.7nm,0.7s,baz=6.8,slow=14,SNR=20						
	0.7nm,0.7s						
FINES	**FINESS Array B**	**71.65**	**331**	P	**P**	**17 17 55.6**	**-0.6**
	0.4nm,0.5s,baz=67,slow=8.3,SNR=4.0						
	0.4nm,0.5s						

IDC 16 17:09:51.7±250.0,54°.50N×41°.15E,h0km,Error ellipse: s-maj=114.6km s-min=67.7km az=146.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.15**	**317**	I	I	17 29 40.0	
	baz=132,slow=302,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**11.08**	**105**	I	I	18 14 40.0	
	baz=297,slow=334,SNR=2.8						
I37NO	**I37NO**	**17.90**	**333**	I	I	18 51 30.0	
	baz=131,slow=301,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**25.24**	**73**	I	I	19 46 20.0	
	baz=289,slow=343,SNR=0.9						
I34MN	**SONGINO INFRAS**	**40.14**	**72**	I	I	21 16 20.0	
	baz=295,slow=338,SNR=1.7						

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*UCR **16** 17:21:02.8±0.6,10°.36N×86°.42W,h25km±4km,MW4.0*
*IDC **16** 17:21:04.3±2.2,11°.47N×85°.18W,h0km,mb3.3/3, mbtmp3.3/3,MS3.8/1,Error ellipse: s-maj=116.4km s-min=12.0km az=73.0*
*CATAC **16** 17:21:04.5±0.8,10°.33N×86°.26W,h24km±5km,ML3.5*
ISC 16 17:21:04.4±1.0,10°.33N±0°.05×86°.27W±0°.06,h23km,n42, σ0s76/45,mb3.2/3,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAJU	**San Juanillo,**	**0.61**	**115**	*i* P	**Pn**	**17 21 17.0**	**-0.7**
SAJU				*i* S	**Sn**	**17 21 26.3**	**-0.6**
SAJU				IAML		17 21 31.8	
	comp=Z,2μm,1.0s						
DELF	**Filadelfia**	**0.72**	**81**	*eP*	**Pn**	**17 21 18.7**	**-0.5**
JUD3	**Juan Diaz 3**	**0.74**	**103**	*eP*	**Pn**	**17 21 19.2**	**-0.4**
HZTE	**Horizontes, Gu**	**0.77**	**60**	*eP*	**Pn**	**17 21 19.6**	**-0.2**
HZTE				*eS*	**Sn**	**17 21 32.5**	**+1.8**
HZTE	**Horizontes, Gu**	**0.77**	**60**	*i* P	**Pn**	**17 21 19.6**	**-0.2**
HZTE				IAML		17 21 20.4	
	comp=Z,3μm,1.0s						
ELI1	**Hacienda Flor**	**0.78**	**66**	*eP*	**Pn**	**17 21 20.2**	**+0.3**
ORTG	**Ortega, Santa**	**0.80**	**88**	*eP*	**Pn**	**17 21 19.9**	**-0.5**
ORTG	**Ortega, Santa**	**0.80**	**88**	*i* P	**Pn**	**17 21 19.8**	**-0.6**
ORTG				IAML		17 21 39.2	
	comp=Z,2μm,1.0s						
INDI	**Punta indio, G**	**0.89**	**121**	*eP*	**Pn**	**17 21 21.3**	**-0.2**
INDI	**Punta indio, G**	**0.89**	**121**	*i* P	**Pb**	**17 21 21.1**	**0.0**
INDI				*i* S	**Sn**	**17 21 33.3**	**-0.4**
INDI				IAML		17 21 46.0	
	comp=Z,1μm,1.0s						
CMARA	**Lajas Hojancha**	**0.89**	**110**	*eP*	**Pn**	**17 21 21.3**	**-0.3**
LCRUZ	**La Cruz**	**0.98**	**40**	*eP*	**Pn**	**17 21 23.3**	**+0.6**
VRLE	**La Escondida,**	**1.00**	**63**	*eP*	**Pn**	**17 21 22.8**	**-0.4**
CUI	**Cuipilapa**	**1.14**	**73**	*eP*	**Pb**	**17 21 25.0**	**-0.4**
VMAR	**Armenia, Volca**	**1.24**	**67**	*eP*	**Pb**	**17 21 26.6**	**-0.5**
ACAL	**Aguas Claras**	**1.25**	**76**	*eP*	**Pb**	**17 21 27.1**	**-0.3**
JTS	**Las Juntas de**	**1.30**	**92**	Pg	**Pn**	**17 21 26.7**	**-0.5**
	comp=Z,10nm,0.3s,baz=312,slow=12,SNR=19						
JTS				LR	LR	17 21 36.5	
	comp=Z,30nm,18.4s,baz=16,slow=27						
JTS				Lg	Lg	17 21 43.7	
	comp=Z,21nm,0.3s,baz=312,slow=21,SNR=5.0						
JTS	**Las Juntas de**	**1.30**	**92**	*eP*	**Pn**	**17 21 27.3**	**+0.1**
JAPN	**Al SSO del Vol**	**1.32**	**26**	*i* P	**Pb**	**17 21 27.9**	**-0.7**
JAPN				IAML		17 21 38.2	
	comp=Z,620nm,1.0s						
OMEN	**Al SSO del Vol**	**1.33**	**28**	*i* P	**Pb**	**17 21 27.7**	**-1.0**
OMEN				IAML		17 21 56.3	
	comp=Z,810nm,1.0s						
MORN	**Al O del Volca**	**1.36**	**27**	*i* P	**Pn**	**17 21 27.6**	**-0.4**
MORN				IAML		17 21 54.1	
	comp=Z,2μm,1.0s						
LAFE	**Finca La Fe, P**	**1.44**	**111**	*i* P	**Pb**	**17 21 29.8**	**-0.7**
LAFE				*i* S	**Sn**	**17 21 46.2**	**-1.1**
LAFE				IAML		17 22 10.9	
	comp=Z,5.0nm,1.0s						
CEDE	**Laguna Cedeo**	**1.55**	**84**	*eP*	**Pb**	**17 21 32.4**	**-0.1**
NANN	**Nandasmo**	**1.60**	**5**	*i* P	**Pb**	**17 21 31.9**	**-1.5**
NANN				IAML		17 22 16.6	
	comp=Z,11μm,1.0s						
SOCE	**Pocosol**	**1.63**	**88**	*i* P	**Pn**	**17 21 32.2**	**+0.5**
SOCE				IAML		17 21 58.7	
	comp=Z,96nm,1.0s						
JACO	**JACO, Garabito**	**1.72**	**113**	*i* P	**Pn**	**17 21 33.2**	**+0.2**
JACO				IAML		17 22 26.5	
	comp=Z,250nm,1.0s						
SAPS	**Ciudad Sandino**	**1.83**	**356**	*i* P	**Pn**	**17 21 34.5**	**0.0**
SAPS				IAML		17 21 45.0	
	comp=Z,430nm,1.0s						

APQ2	**Apoyeque**	**1.86**	**358**	*i* P	**Pn**	**17 21 34.6**	**-0.2**
APQ2				IAML		17 22 00.5	
	comp=Z,450nm,1.0s						
CPMI	**Catarata Coope**	**1.86**	**91**	*i* P	**Pn**	**17 21 35.0**	**-0.1**
CPMI				IAML		17 22 18.4	
	comp=Z,560nm,1.0s						
COPN	**Copaltepe**	**1.86**	**350**	*i* P	**Pn**	**17 21 34.7**	**-0.2**
COPN				IAML		17 22 09.6	
	comp=Z,490nm,1.0s						
ACON	**Acoyapa**	**1.95**	**33**	*eP*	**Pn**	**17 21 36.0**	**-0.2**
ACON	**Acoyapa**	**1.95**	**33**	*i* P	**Pn**	**17 21 35.9**	**-0.2**
ACON				IAML		17 21 43.2	
	comp=Z,420nm,1.0s						
BOAB	**BOACO BROADBAN**	**2.19**	**16**	*i* P	**Pn**	**17 21 39.0**	**-0.4**
BOAB				IAML		17 21 49.1	
	comp=Z,160nm,1.0s						
VIRE	**VIRE**	**2.37**	**99**	*i* P	**Pn**	**17 21 41.4**	**-0.8**
VIRE				IAML		17 21 50.8	
	comp=Z,230nm,1.0s						
RIMA	**Rio Macho**	**2.44**	**103**	*i* P	**Pn**	**17 21 42.8**	**-0.2**
RIMA				IAML		17 22 33.3	
	comp=Z,120nm,1.0s						
CDM	**Cerro de Muert**	**2.59**	**107**	*i* P	**Pn**	**17 21 45.1**	**-0.2**
CDM				IAML		17 22 45.3	
	comp=Z,98nm,1.0s						
LIMN	**Finca el Limon**	**2.72**	**358**	*i* P	**Pn**	**17 21 46.1**	**-0.6**
LIMN				IAML		17 22 30.5	
	comp=Z,91nm,1.0s						
CSGN	**Cosiguina Volc**	**2.92**	**335**	*i* P	**Pn**	**17 21 49.1**	**-0.4**
CSGN				IAML		17 22 06.4	
	comp=Z,470nm,1.0s						
TEIG	**Tepich**	**10.03**	**349**	LR	LR	17 27 23.7	
	comp=Z,562nm,20.9s,baz=168,slow=41						
TXAR	**Lajitas Array**	**24.94**	**322**	P	**P**	**17 26 27.3**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=135,slow=14,SNR=6.2						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**40.05**	**320**	P	**P**	**17 28 40.7**	**+2.5**
	comp=Z,0.9nm,0.9s,baz=127,slow=7.1,SNR=4.6						
	comp=Z,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**55.95**	**345**	P	**P**	**17 30 38.8**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=126,slow=8.0,SNR=4.1						
	comp=Z,0.1nm,0.4s						

ATH 16 17:23:13.7,40°.77N×23°.00E,h17km±2km,ML1.1/4,Error ellipse: s-maj=2.4km s-min=1.1km az=210.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THE	**Thessaloniki**	**0.14**	**192**	P	Pb	17 23 18.0	+0.2
THE				S	Sg	17 23 19.8	-0.5
THE				AML	AML	17 23 20.5	
	comp=E,376μm,0.2s						
THE				AML	AML	17 23 20.8	
	comp=N,248μm,0.1s						
HORT	**Hortiatis**	**0.18**	**156**	P	Pb	17 23 18.7	+0.1
HORT				S	Sg	17 23 21.4	-0.1
HORT				AML	AML	17 23 22.3	
	comp=N,92μm,0.1s						
HORT				AML	AML	17 23 22.3	
	comp=E,148μm,0.2s						
SOH	**Sokhos**	**0.27**	**78**	P	Pg	17 23 19.5	-0.2
SOH				S	Sg	17 23 24.0	+0.1
SOH				AML	AML	17 23 25.5	
	comp=E,111μm,0.1s						
SOH				AML	AML	17 23 25.6	
	comp=N,100μm,0.2s						
KNT	**Kendrikon**	**0.40**	**349**	P	Pb	17 23 22.3	0.0
KNT				S	Sg	17 23 27.4	-0.2
GRG	**Griva**	**0.49**	**293**	P	Pg	17 23 23.4	-0.2
GRG				AML	AML	17 23 32.1	
	comp=N,45μm,0.2s						
GRG				AML	AML	17 23 33.7	
	comp=E,40μm,0.1s						
SRS	**Serrai**	**0.57**	**52**	P	Pg	17 23 24.4	-0.6
SRS				S	Sg	17 23 32.7	0.0
KOKK	**Kokkinochori,**	**0.76**	**86**	P	Pb	17 23 27.8	-0.6
KOKK				S	Sb	17 23 38.4	0.0
NVR	**Nevrokopi**	**0.87**	**48**	P	Pb	17 23 29.3	-1.1

SKO 16 17:23:15.0,41°.81N×23°.18E,h0km,ML1.3,1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.05**	**310**	⇑*i* Pg	Pg	17 23 16.0	+0.1
KKB				*i* Sg	Sg	17 23 18.2	+1.6
VAY	**Valandovo**	**0.67**	**223**	*i* Pg	Pg	17 23 27.6	-0.2
VAY				*i* Sg	Sg	17 23 36.1	-0.4
VAY				*e*Lg	Lg	17 23 36.2	
	comp=N,9.0nm,0.3s						
VAY				*e*Lg	Lg	17 23 36.4	
	comp=E,6.5nm,0.4s						
STIP	**Stip**	**0.75**	**261**	*i* Pg	Pg	17 23 25.1	-4.4
STIP				*i* Sg	Sg	17 23 32.7	-6.5

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*KRNET **16** 17:23:50.6±0.1,39°.56N×71°.83E,h23km,mb3.4*
*IDC **16** 17:23:51.6±1.2,39°.36N×71°.89E,h0km,mb3.6/4, mbtmp3.5/11,ML2.9/7,MS4.0/1,Error ellipse: s-maj=17.3km s-min=15.3km az=129.0*
*SOME **16** 17:23:52.5,39°.60N×71°.93E,h0km*
*ISU **16** 17:23:53.2,39°.58N×72°.07E,h24km*
*NNC **16** 17:23:56.3±1.6,39°.67N×71°.98E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=13.1km s-min=6.5km az=0.0*
ISC 16 17:23:51.6±0.6,39°.55N±0°.03×71°.90E±0°.02,h10km,n79, σ2s35/124,mb3.7/4,25C-21D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.11**	**227**	⇓*i* P	**Pg**	**17 23 53.2**	**-1.4**
	baz=97						
DRK				⇓*i* S	**Sg**	**17 23 55.2**	**-1.5**
	baz=97						
CHMI	**Chimion**	**0.77**	**338**	P	**Pn**	**17 24 09.0**	**+0.4**
CHMI				S	**Sn**	**17 24 20.5**	**+0.2**
FRG	**Fergana**	**0.82**	**354**	P	**Pn**	**17 24 09.3**	**-0.1**
FRG				S	**Sn**	**17 24 21.1**	**-0.5**
BTK	**Batken**	**0.97**	**302**	⇓*i* P	**Pg**	**17 24 08.2**	**-2.2**
	baz=3.0						
BTK				⇓*i* S	**Sg**	**17 24 20.9**	**-2.2**
	baz=3.0						
MINT	**Mingtut**	**1.16**	**322**	P	**Pn**	**17 24 16.2**	**+2.3**
MINT				S	**Sn**	**17 24 33.6**	**+3.8**
OHH	**Osh**	**1.19**	**35**	⇑*i* P	**Pb**	**17 24 13.4**	**-0.8**
	baz=37						
OHH				⇑*i* S	**Sb**	**17 24 29.5**	**-0.2**
	baz=37						
SFK	**Sufi-Kurgan**	**1.32**	**69**	⇑*eP*	**Pn**	**17 24 15.9**	**-0.4**
	baz=70						
SFK				⇑*eS*	**Sn**	**17 24 34.2**	**+0.1**
	baz=70						
KSNS	**Kasansay**	**1.63**	**350**	P	**Pg**	**17 24 23.3**	**+0.4**
KSNS				S	**Sg**	**17 24 45.7**	**+1.6**
ARSB	**Arslanbob**	**1.95**	**25**	⇓*i* P	**Pb**	**17 24 26.2**	**-1.2**
	baz=26						
ARSB				⇓*i* S	**Sb**	**17 24 51.9**	**+0.1**
	baz=26						
TRKS	**Terek-Say**	**2.06**	**344**	⇑*i* P	**Pn**	**17 24 26.0**	**-0.4**
	baz=45						
TRKS				⇑*i* S	**Sn**	**17 24 51.8**	**-0.5**
	baz=45						
ARK	**Arkit**	**2.24**	**1**	⇑*i* P	**Pb**	**17 24 29.9**	**-2.4**
	baz=3.0						
ARK				⇑*i* S	**Sb**	**17 24 58.4**	**-1.8**
	baz=3.0						
CHRV	**Charvak**	**2.56**	**325**	P	**Pg**	**17 24 37.9**	**-2.8**
CHRV				S	**Sg**	**17 25 12.9**	**-1.0**
TAS	**Tashkent**	**2.66**	**313**	P	**Pg**	**17 24 39.7**	**-2.9**
TAS				S	**Sg**	**17 25 16.1**	**-1.0**
ARLS	**Aral**	**2.95**	**38**	⇓*eP*	**Pn**	**17 24 40.2**	**+1.5**
	baz=39						
ARLS				⇓*i* S	**Sn**	**17 25 16.0**	**+1.7**
	baz=39						
IUG	**luzhnay**	**2.95**	**332**	Pg	**Pg**	**17 24 47.7**	**-0.6**
	25nm,0.2s						
IUG				Lg	Lg	17 25 28.3	
	211nm,0.5s						
IUG	**luzhnay**	**2.95**	**332**	*eP*	**Pg**	**17 24 48.1**	**-0.1**
	29nm,0.2s						
IUG				*eS*	**Sg**	**17 25 27.8**	**+1.3**
	279nm,0.5s						
MNAS	**Manas**	**2.97**	**9**	⇓*i* P	**Pn**	**17 24 40.2**	**+1.3**
	baz=10.0						
MNAS				⇓*i* S	**Sn**	**17 25 15.9**	**+1.3**
	baz=10.0						
BXML	**Bakhmal**	**2.99**	**274**	P	**Pg**	**17 24 48.0**	**-0.9**
BXML				S	**Sg**	**17 25 32.2**	**+4.5**
UCH	**Uchtor**	**3.33**	**36**	P	**Pb**	**17 24 49.2**	**-1.7**
	SNR=19						
UCH	**Uchtor**	**3.33**	**36**	⇑*i* P	**Pn**	**17 24 45.4**	**+1.3**
	baz=36						
UCH				⇑*i* S	**Sn**	**17 25 25.4**	**+1.5**
	baz=36						
MRKS	**Merke**	**3.34**	**17**	Pg	**Pg**	**17 24 53.6**	**-2.1**
	6.3nm,0.3s						
MRKS				Lg	Lg	17 25 38.1	
	61nm,0.5s						
MRKS	**Merke**	**3.34**	**17**	*eP*	**Pg**	**17 24 53.6**	**-2.1**
	6.3nm,0.3s						
MRKS				*eS*	**Sg**	**17 25 38.1**	**-0.8**
	61nm,0.5s						
DZA	**Taraz**	**3.36**	**353**	*eP*	**Pg**	**17 24 55.0**	**-1.1**
	21nm,0.2s						
DZA				*eS*	**Sg**	**17 25 39.7**	**+0.1**
	197nm,0.3s						
EKS2	**Erkin-Say**	**3.41**	**24**	P	**Pb**	**17 24 51.6**	**-0.6**
	SNR=15						
EKS2	**Erkin-Say**	**3.41**	**24**	⇓*i* P	**Pn**	**17 24 46.4**	**+1.4**
	baz=25						
EKS2				⇓*i* S	**Sn**	**17 25 27.0**	**+1.4**
	baz=25						
NRN	**Naryn**	**3.65**	**58**	⇓*i* P	**Pn**	**17 24 49.7**	**+1.3**
	baz=58						
NRN				⇓*i* S	**Sn**	**17 25 32.6**	**+0.9**
	baz=58						
AAK	**Ala-Archa**	**3.65**	**32**	P	**Pb**	**17 24 54.8**	**-1.6**
	SNR=14						
AAK	**Ala-Archa**	**3.65**	**32**	Pn	**Pb**	**17 24 55.1**	**-1.3**
	4.0nm,0.3s,baz=183,slow=6.0,SNR=52						
AAK				Sn	**Sb**	**17 25 42.3**	**+1.6**
	2.2nm,0.3s,baz=18,slow=20,SNR=7.0						
	9.0nm,0.3s						
AAK	**Ala-Archa**	**3.65**	**32**	⇑*i* P	**Pn**	**17 24 49.9**	**+1.6**
	baz=32						
AAK				⇑*i* S	**Sn**	**17 25 33.0**	**+1.4**
	baz=32						
KK31	**Karatay Array**	**3.70**	**344**	⇓Pn	**Pb**	**17 24 54.7**	**-2.3**
	1.5nm,0.4s,baz=151,slow=12,SNR=75						
KK31				⇑Pg	**Pg**	**17 25 05.6**	**+3.2**
	16nm,0.6s,baz=169,slow=16,SNR=14						
KK31				⇓Lg	Lg	17 25 51.5	
	9.0nm,0.4s,baz=169,slow=27,SNR=7.9						
KKAR	**Karatay Array**	**3.70**	**344**	⇑*i* P	**Pn**	**17 24 49.9**	**+1.1**
	baz=45						
KKAR				⇑*i* S	**Sn**	**17 25 32.6**	**+0.1**
	baz=45						
BRLS	**Borolday**	**3.81**	**337**	Pg	**Pg**	**17 25 00.7**	**-3.9**
	2.3nm,0.3s						
BRLS				Lg	Lg	17 25 49.5	
	13nm,0.3s						
BRLS	**Borolday**	**3.81**	**337**	*eP*	**Pg**	**17 25 00.7**	**-3.9**
	2.3nm,0.3s						
BRLS				*eS*	**Sg**	**17 25 49.5**	**-4.4**
	13nm,0.3s						
FRU1	**Bishkek**	**3.85**	**31**	⇑*i* P	**Pn**	**17 24 52.8**	**+1.8**
	baz=32						
FRU1				⇑*i* S	**Sn**	**17 25 37.8**	**+1.5**
	baz=32						
KBK	**Karagaybulak**	**3.86**	**36**	P	**Pb**	**17 24 55.9**	**-4.0**
	SNR=11						
KBK	**Karagaybulak**	**3.86**	**36**	⇓*i* P	**Pn**	**17 24 52.9**	**+1.7**
	baz=36						
KBK				⇓*i* S	**Sn**	**17 25 37.9**	**+1.1**
	baz=36						
USP	**Ospenovka**	**4.19**	**27**	P	**Pb**	**17 25 02.2**	**-3.3**
	SNR=8.5						
USP	**Ospenovka**	**4.19**	**27**	⇑*i* P	**Pn**	**17 24 57.2**	**+1.5**
	baz=28						
USP				⇑*i* S	**Sn**	**17 25 45.7**	**+0.9**
	baz=28						
ULHL	**Ulahol**	**4.25**	**49**	⇓*i* P	**Pn**	**17 24 58.2**	**+1.6**
	baz=50						
ULHL				⇓*i* S	**Sn**	**17 25 47.5**	**+1.1**
	baz=50						
TKM2	**Tokmak 2**	**4.37**	**38**	⇑Pn	**Pb**	**17 25 03.9**	**-4.7**
	3.5nm,0.5s						
TKM2				⇑Pg	**Pg**	**17 25 16.0**	**+0.7**
	4.3nm,0.5s						
TKM2				⇑Lg	Lg	17 26 11.9	
	8.8nm,0.6s						
TKM2	**Tokmak 2**	**4.37**	**38**	⇑*i* P	**Pn**	**17 24 59.9**	**+1.7**
	baz=39						
TKM2				⇑*i* S	**Sn**	**17 25 50.3**	**+1.0**
	baz=39						
SGDS	**Sogindy**	**4.40**	**27**	Pg	**Pg**	**17 25 13.3**	**-2.6**
	2.5nm,0.3s						
SGDS				Lg	Lg	17 26 12.2	
	17nm,0.6s						
PKMR	**Pachkamar**	**4.41**	**259**	P	**Pb**	**17 25 05.2**	**-3.9**
PKMR				S	**Sg**	**17 26 05.3**	**-7.8**
ZRB	**Zarabog**	**4.62**	**253**	P	Pb	17 25 05.7	-7.0
ZRB				S	**Sb**	**17 26 06.1**	**-2.4**
KST	**Kastek**	**4.64**	**40**	Pg	**Pg**	**17 25 18.6**	**-1.9**
	4.3nm,0.6s						
KST				Lg	Lg	17 26 20.5	
	9.3nm,0.6s						
KST	**Kastek**	**4.64**	**40**	*eP*	**Pg**	**17 25 18.6**	**-1.9**
	4.3nm,0.6s						
KST				*eS*	**Sg**	**17 26 20.5**	**-0.1**
	9.3nm,0.6s						
DGS	**Degeres**	**4.70**	**37**	Pg	**Pg**	**17 25 18.7**	**-2.8**
	3.8nm,0.5s						
DGS				Lg	Lg	17 26 20.5	
	14nm,0.7s						
DGS	**Degeres**	**4.70**	**37**	*eP*	**Pg**	**17 25 18.7**	**-2.8**
	3.8nm,0.5s						
DGS				*eS*	**Sg**	**17 26 20.5**	**-1.9**
	14nm,0.7s						
MTBS	**Maitube**	**4.94**	**42**	Pg	**Pg**	**17 25 23.6**	**-2.6**
	1.8nm,0.5s						
MTBS				Lg	Lg	17 26 29.7	
	13nm,0.4s						
MTBS	**Maitube**	**4.94**	**42**	*eP*	**Pg**	**17 25 23.6**	**-2.6**
	1.8nm,0.5s						
MTBS				*eS*	**Sg**	**17 26 29.7**	**-0.5**
	13nm,0.4s						
KRBS	**Karabastau**	**5.01**	**33**	Pg	**Pg**	**17

	2.3nm,0.5s								
KTBS					*e*S		**Sg**	17 26 45.5	**-2.3**
	10nm,0.8s								
CHKK	**Chushkaly**	**5.74**	**40**	Pg		**Pg**		17 25 37.4	**-4.1**
	1.1nm,0.1s								
CHKK				Lg		Lg		17 26 52.5	
	9.4nm,0.5s								
CHKK	**Chushkaly**	**5.74**	**40**	*e*P		**Pg**		17 25 37.4	**-4.1**
	1.1nm,0.1s								
CHKK				*e*S		**Sg**		17 26 52.5	**-3.3**
	9.4nm,0.5s								
KPKS	**Kokpek**	**6.42**	**50**	Pg		**Pg**		17 25 50.3	**-4.2**
	1.8nm,0.6s								
KPKS				Lg		Lg		17 27 14.8	
	7.7nm,0.6s								
KPKS	**Kokpek**	**6.42**	**50**	*e*P		**Pg**		17 25 50.3	**-4.2**
	1.8nm,0.6s								
KPKS				*e*S		**Sg**		17 27 14.8	**-2.8**
	7.7nm,0.6s								
MKAR	**Makanchi Array**	**10.48**	**43**	Pn		Pn		17 26 27.4	+5.5
	baz=234,slow=12,SNR=2.9								
MKAR				Lg		Lg		17 29 30.0	
	baz=234,slow=27,SNR=2.4								
	0.4nm,0.9s								
GEYT	**Allbeck**	**10.89**	**266**	Pn		**Pn**		17 26 29.9	**+2.4**
	0.2nm,0.3s,baz=83,slow=12,SNR=2.4								
GEYT				Sn		**Sn**		17 28 28.9	**-0.5**
	0.3nm,0.3s,baz=176,slow=23,SNR=3.6								
	1.2nm,0.6s								
KURBB	**Kurchatov Arra**	**12.01**	**21**	Pn		**Pn**		17 26 45.1	**+2.3**
	baz=215,slow=13,SNR=5.4								
KURBB				Lg		Lg		17 30 14.1	
	baz=210,slow=29,SNR=5.6								
	0.4nm,0.6s								
AB31	**Akbulak array**	**12.91**	**323**	⇑P		**Pn**		17 26 55.3	**+0.3**
	0.9nm,0.6s,baz=128,slow=14,SNR=18								
BVAR	**Borovoye Array**	**13.52**	**356**	Pn		**Pn**		17 27 05.1	**+1.8**
	baz=159,slow=11,SNR=2.1								
	0.3nm,0.5s								
AKTO	**Aktyubinsk**	**14.63**	**323**	⇓P		**P**		17 27 24.2	**-0.8**
	0.7nm,0.6s								
AKTO	**Aktyubinsk**	**14.63**	**323**	Pn		**Pn**		17 27 19.4	**+0.8**
	0.1nm,0.3s,baz=117,slow=14,SNR=1.9								
AKTO				Sn		**Sn**		17 29 55.6	**-5.0**
	0.1nm,0.3s,baz=226,slow=6.1,SNR=1.4								
	0.4nm,0.3s								
ZALV	**Zalesovo Beam**	**16.86**	**27**	P		**P**		17 27 51.1	**+1.4**
	0.3nm,0.3s,baz=204,slow=9.2,SNR=5.4								
	0.6nm,0.4s								
SONM	**Songino Array**	**26.11**	**60**	P		**P**		17 29 29.7	**+4.1**
	0.4nm,0.6s,baz=275,slow=11,SNR=3.6								
	0.4nm,0.6s								
MLR	**Muntele Rosu**	**34.02**	**295**	LR		LR		17 47 54.3	
	comp=Z,206nm,18.8s,baz=344,slow=42								
FINES	**FINESS Array B**	**35.40**	**323**	P		**P**		17 30 50.5	**+3.2**
	1.3nm,0.8s,baz=122,slow=9.3,SNR=7.2								
	1.3nm,0.8s								
WRA	**Warramunga Arr**	**83.02**	**123**	P		**P**		17 36 17.6	**+0.3**
	0.4nm,0.7s,baz=330,slow=5.0,SNR=2.4								
	0.4nm,0.7s								
ASAR	**Alice Springs**	**85.44**	**126**	P		**P**		17 36 30.0	**+0.5**
	0.4nm,0.8s,baz=318,slow=4.1,SNR=5.8								
	0.4nm,0.8s								

*NNC **16** 17:30:09.2±9.8, 37.04N×71.08E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=83.9km s-min=65.1km az=154.0*
*IDC **16** 17:30:16.6±5.0, 37.11N×71.41E, h227km±28km, mb3.3/2, mbtmp3.8/9, Error ellipse: s-maj=65.1km s-min=22.0km az=154.0*
ISC 16 17:30:15.0±2.0, 37.0N±0.2×71.4E±0.1, h200km, n19, σ1§03/22, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
UCH	**Uchtor**	**5.72**	**24**	P			**Pn**	**17 31 39.5**	**+0.6**
	SNR=7.7								
EKS2	**Erkin-Say**	**5.91**	**17**	P			**Pn**	**17 31 42.2**	**+1.1**
	SNR=10								
AAK	**Ala-Archa**	**6.08**	**22**	P			**Pn**	**17 31 44.3**	**+1.0**
	SNR=15								
AAK	**Ala-Archa**	**6.08**	**22**	P			**Pn**	**17 31 44.2**	**+0.9**
	8.6nm,0.3s,baz=212,slow=13,SNR=47								
AAK				S			**Sn**	**17 32 54.5**	**+1.2**
	3.4nm,0.4s,baz=332,slow=23,SNR=14								
KK31	**Karatay Array**	**6.10**	**354**	⇑P			**Pn**	**17 31 43.4**	**0.0**
	3.4nm,0.5s,baz=173,slow=12,SNR=40								
KK31				⇓S			**Sn**	**17 32 52.1**	**-1.4**
	5.8nm,0.4s,baz=176,slow=18,SNR=28								
KBK	**Karagaybulak**	**6.24**	**25**	P			**Pn**	**17 31 46.7**	**+1.3**
	SNR=8.7								
ULHL	**Ulahol**	**6.41**	**34**	P			**Pn**	**17 31 47.9**	**+0.3**
	SNR=10.0								
TKM2	**Tokmak 2**	**6.70**	**27**	P			**Pn**	**17 31 52.2**	**+0.7**
	SNR=7.7								
TKM2	**Tokmak 2**	**6.70**	**27**	⇑P			**Pn**	**17 31 51.5**	**+0.1**
	7.2nm,0.5s								
TKM2				⇓S			**Sn**	**17 33 08.5**	**+0.5**
	6.1nm,0.8s								
GEYT	**Allbeck**	**10.60**	**279**	P			**Pn**	**17 32 43.5**	**+1.6**
	0.6nm,0.3s,baz=96,slow=12,SNR=4.5								
GEYT				S			Sn	17 34 32.4	-7.8
	1.2nm,0.6s,baz=230,slow=26,SNR=2.1								
MKAR	**Makanchi Array**	**12.67**	**36**	P			**Pn**	**17 33 07.6**	**-0.5**
	1.1nm,0.6s,baz=218,slow=13,SNR=16								
KURBB	**Kurchatov Arra**	**14.52**	**18**	P			**Pn**	**17 33 31.1**	**+0.1**
	0.7nm,0.2s,baz=204,slow=11,SNR=2.7								
AB31	**Akbulak array**	**14.78**	**329**	P			**P**	**17 33 35.8**	**+0.5**
	0.3nm,0.5s,baz=145,slow=12,SNR=11								
BVAR	**Borovoye Array**	**16.01**	**358**	P			**P**	**17 33 48.9**	**+0.2**
	1.0nm,0.3s,baz=153,slow=11,SNR=14								
AKTO	**Aktyubinsk**	**16.49**	**329**	⇑P			**P**	**17 33 53.6**	**-0.5**
	0.6nm,0.5s								
AKTO	**Aktyubinsk**	**16.49**	**329**	P			**P**	**17 33 54.2**	**+0.2**
	0.8nm,0.3s,baz=160,slow=8.5,SNR=2.1								
ZALV	**Zalesovo Beam**	**19.30**	**25**	P			**P**	**17 34 24.0**	**-0.5**
	2.0nm,0.3s,baz=222,slow=11,SNR=10								
FINES	**FINESS Array B**	**37.22**	**326**	P			**P**	**17 37 05.2**	**-1.5**
	2.1nm,1.1s,baz=106,slow=8.0,SNR=3.5								
	2.1nm,1.1s								
HFS	**Hagfors**	**42.85**	**322**	P			**P**	**17 37 50.8**	**-2.2**
	0.8nm,0.5s,baz=90,slow=12,SNR=5.4								
	0.8nm,0.5s								

IDC 16 17:45:42.0±11.0, 20.61N×144.40E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=417.2km s-min=34.8km az=75.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
WRA	**Warramunga Arr**	**41.49**	**194**	P			P	17 53 31.2	+0.1
	0.6nm,0.7s,baz=17,slow=9.2,SNR=4.9								
	0.6nm,0.7s								
ASAR	**Alice Springs**	**45.18**	**194**	P			P	17 54 00.6	-0.3
	0.4nm,0.6s,baz=10,slow=8.9,SNR=8.4								
	0.4nm,0.6s								
MKAR	**Makanchi Array**	**56.27**	**313**	P			P	17 55 24.3	-0.1
	0.1nm,0.6s,baz=94,slow=8.7,SNR=2.0								
	0.1nm,0.6s								

*UPP **16** 18:01:39.9±0.1, 67.05N×20.96E, h0km, ML2.2, Suspected explosion*
*IDC **16** 18:01:40.6±1.1, 67.11N×20.90E, h0km, mbtmp2.8/4, ML1.6/4, Error ellipse: s-maj=19.9km s-min=9.3km az=110.0*
ISC 16 18:01:40.4±0.8, 67.07N±0.03×20.94E±0.04, h10km, n18, σ1§22/22, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
DUNU	**Dundret**	**0.15**	**290**	P			**Pg**	**18 01 43.5**	**-0.3**
DUNU				S			**Sg**	**18 01 45.7**	**-0.5**
MASU	**Masugnsbyn**	**0.57**	**46**	P			**Pg**	**18 01 50.9**	**-0.5**
MASU				S			**Sb**	**18 01 59.5**	**-1.0**
PAJU	**Pajala**	**0.86**	**92**	P			**Pg**	**18 01 55.6**	**-1.2**
PAJU				S			**Sb**	**18 02 07.8**	**-1.1**
HARU	**Harads**	**0.91**	**179**	P			**Pg**	**18 01 56.5**	**-1.3**
KUA	**Kurravaara**	**0.92**	**346**	P			**Pg**	**18 01 57.4**	**-0.6**
RATU	**Laukkuluspa**	**0.92**	**326**	P			**Pg**	**18 01 57.2**	**-0.8**
SALU	**Saltoluokta**	**0.99**	**289**	P			**Pg**	**18 01 58.9**	**-0.5**
LANU	**Lannavaara**	**1.06**	**22**	P			**Pg**	**18 01 59.8**	**-0.9**
KOVU	**Salmi**	**1.20**	**346**	P			**Pn**	**18 02 02.4**	**-0.8**
KALU	**Kalix**	**1.56**	**140**	P			**Pb**	**18 02 08.2**	**-1.0**
SJUU	**Sjulsmark**	**1.59**	**170**	P			**Pb**	**18 02 08.9**	**-0.9**
HEF	**Hetta**	**1.70**	**36**	*e*P			**Pb**	**18 02 11.3**	**-0.3**

KTK1	**Kautokeino**	**2.13**	**23**	*e*P			**Pb**	**18 02 19.0**	**-0.1**
I37NO	**I37NO**	**2.19**	**338**	I			I	18 14 40.0	
	0.1nm,0.6s,baz=155,slow=316,SNR=2.3								
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn			**Pn**	**18 02 29.2**	**+1.3**
	0.1nm,0.3s,baz=218,slow=14,SNR=27								
ARCES				Sn			**Sn**	**18 03 06.2**	**+2.2**
	0.2nm,0.3s,baz=219,slow=23,SNR=7.7								
	0.3nm,0.3s								
FINES	**FINESS Array B**	**6.08**	**156**	Pn			**Pn**	**18 03 12.3**	**+2.2**
	0.1nm,0.3s,baz=346,slow=13,SNR=8.6								
FINES				Sn			**Sn**	**18 04 22.0**	**+2.4**
	0.1nm,0.3s,baz=338,slow=25,SNR=2.6								
	2.6nm,1.0s								
NOA	**NORSAR Array B**	**7.39**	**220**	Pn			**Pn**	**18 03 28.8**	**+0.5**
	baz=39,slow=12,SNR=1.4								
	0.5nm,0.9s								
HFS	**Hagfors**	**7.67**	**208**	Pn			**Pn**	**18 03 32.1**	**+0.2**
	baz=32,slow=14,SNR=1.4								
	1.5nm,0.8s								

*JMA **16** 18:16:52.4±0.3, 28.1N±0.5×128.1E±0.7, h13km±3km, MV3.6/15, NW OFF OKINAWAJIMA IS*
*NIED **16** 18:16:52.4, 28.11N×128.09E, h13km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.55; Mθθ0.41; Mϕϕ0.13; Mrθ-0.59; Mθϕ0.99; Mϕr-0.09; Fault plane solution: M0 1.21000×10¹⁵ NP1:ϕ=84.00000°, δ73.00000°, λ-43.00000°. NP2:ϕ=189.00000°, δ50.00000°, λ-158.00000°.*
*IDC **16** 18:16:52.7±1.0, 27.88N×127.71E, h0km, mb3.6/7, mbtmp3.7/8, ML3.4/1, MS3.2/5 Error ellipse: s-maj=46.4km s-min=13.4km az=63.0*
ISC 16 18:16:52.7±1.8, 28.09N±0.04×128.12E±0.07, h10km±12km, n26, σ0§69/30, mb3.8/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JTK	**Tokunoshima**	**0.79**	**112**	P			**Pg**	**18 17 07.8**	**-0.2**
JTK				S			**Sg**	**18 17 18.7**	**+0.3**
JOKE	**Okinoerabujima**	**0.82**	**151**	P			**Pg**	**18 17 08.8**	**+0.2**
JOKE				*e*S			**Sg**	**18 17 19.9**	**+0.5**
JAMN	**Amaminishikomi**	**0.94**	**80**	*e*P			**Pb**	**18 17 10.5**	**-0.6**
JAMN				*e*S			**Sg**	**18 17 23.8**	**+0.6**
JIH	**Iheya**	**1.05**	**187**	*e*P			**Pb**	**18 17 12.0**	**-1.0**
JIH				*e*S			**Sb**	**18 17 26.4**	**-0.6**
JYRO	**Yoronjima**	**1.10**	**164**	*e*P			**Pb**	**18 17 13.4**	**-0.3**
JYRO				*e*S			**Sb**	**18 17 27.9**	**-0.2**
JOW	**Kunigami**	**1.26**	**174**	P			**Pn**	**18 17 15.9**	**-0.4**
JOW				*e*S			**Sb**	**18 17 32.9**	**+0.2**
JOW	**Kunigami**	**1.26**	**174**	Pn			**Pn**	**18 17 16.2**	**-0.1**
	148nm,0.3s,baz=351,slow=16,SNR=116								
JOW				Sn			**Sn**	**18 17 33.1**	**-0.2**
	198nm,0.3s,baz=187,slow=23,SNR=10								
JOW				LR			LR	18 17 40.6	
	comp=Z,186nm,19.7s,baz=197,slow=41								
JAM	**Amami Oshima**	**1.35**	**76**	*e*P			**Pn**	**18 17 17.4**	**-0.2**
JTAJ	**Takarajima**	**1.43**	**42**	P			**Pn**	**18 17 17.9**	**-0.8**
JTAJ				*e*S			**Sn**	**18 17 36.1**	**-1.4**
JNTH	**Nagotoyohara**	**1.56**	**183**	*e*P			**Pn**	**18 17 20.6**	**0.0**
JNTH				*e*S			**Sn**	**18 17 40.5**	**-0.3**
JAGN	**Aguni-jima**	**1.68**	**208**	*e*P			**Pn**	**18 17 21.1**	**-1.1**
JAGN				*e*S			**Sn**	**18 17 42.8**	**-1.0**
JJT3	**Tamagusuku3**	**1.96**	**189**	*e*P			**Pb**	**18 17 27.4**	**-1.0**
JKE	**Kume jima 2**	**2.12**	**214**	*e*P			**Pn**	**18 17 28.1**	**0.0**
JNU	**Nakatsue**	**5.55**	**25**	Pn			Pb	18 18 21.9	-7.9
	1.1nm,0.3s,baz=202,slow=6.7,SNR=15								
	58nm,0.9s								
KSRS	**Korea Array**	**9.34**	**359**	LR			LR	18 22 47.7	
	comp=Z,62nm,18.7s,baz=325,slow=37								
JHJ	**Hachijo jima 2**	**11.23**	**61**	LR			LR	18 23 56.9	
	comp=Z,98nm,19.4s,baz=276,slow=36								
MJAR	**Matsushiro Arr**	**11.99**	**43**	LR			LR	18 25 03.7	
	comp=Z,85nm,18.3s,baz=193,slow=40								
GUMO	**Guam**	**21.25**	**129**	LR			LR	18 28 37.6	
	comp=Z,68nm,20.0s,baz=2.0,slow=33								
SONM	**Songino Array**	**25.96**	**325**	P			**P**	**18 22 26.9**	**+1.4**
	1.6nm,0.8s,baz=138,slow=10,SNR=11								
	1.6nm,0.8s								
MKAR	**Makanchi Array**	**40.25**	**310**	P			**P**	**18 24 30.0**	**+0.3**
	0.6nm,0.7s,baz=98,slow=9.6,SNR=7.5								
	0.6nm,0.7s								
ZALV	**Zalesovo Beam**	**40.73**	**322**	P			**P**	**18 24 33.8**	**+0.4**
	0.5nm,0.5s,baz=108,slow=11,SNR=3.0								
	0.5nm,0.5s								
KURBB	**Kurchatov Arra**	**43.46**	**315**	P			**P**	**18 24 56.1**	**+0.3**
	0.9nm,0.6s,baz=103,slow=8.8,SNR=9.7								
	0.9nm,0.6s								
WRA	**Warramunga Arr**	**48.12**	**172**	P			**P**	**18 25 33.3**	**+0.3**
	0.6nm,0.7s,baz=354,slow=8.4,SNR=3.4								
	0.6nm,0.7s								
BVAR	**Borovoye Array**	**48.84**	**317**	P			**P**	**18 25 39.0**	**+0.8**
	0.7nm,0.7s,baz=83,slow=12,SNR=4.1								
	0.7nm,0.7s								
ASAR	**Alice Springs**	**51.75**	**173**	P			**P**	**18 26 01.1**	**+0.6**
	0.2nm,0.7s,baz=8.4,slow=13,SNR=4.2								
	0.2nm,0.7s								
NOA	**NORSAR Array B**	**77.61**	**334**	LR			LR	19 09 20.5	
	comp=Z,59nm,19.6s,baz=10.0,slow=40								

DJA 16 18:17:32.6±0.4, 9°S±7°×117°E±°, h102km±5km, M3.8/9, mb3.9/3, MLv3.7/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PLAI	**Plampang**	**0.96**	**267**	P			Pn	18 17 53.7	+0.9
PLAI				S			Sn	18 18 09.7	+1.7
TWSI	**Taliwang, Sumb**	**1.85**	**271**	P			Pn	18 18 04.0	+0.7
TWSI				S			Sn	18 18 28.1	+1.4
BASI	**Baing, Sumba**	**2.31**	**129**	P			Pn	18 18 09.3	0.0
SRBI	**Singaraja**	**3.56**	**281**	P			Pn	18 18 24.9	-1.1
BKSI	**Bulukumba**	**3.69**	**22**	P			Pn	18 18 28.2	+0.6
JAGI	**Jajag, Banyuwa**	**4.56**	**273**	P			Pn	18 18 38.1	-1.3
GMJI	**Gumukmas**	**5.27**	**275**	P			Pn	18 18 48.4	-0.6
SOEI	**Soe**	**5.53**	**101**	P			Pn	18 18 51.8	-0.9
	38nm,2.0s,0.2nm								
PWJI	**Pagerwojo**	**6.91**	**276**	P			Pn	18 19 12.6	+1.3

*ISN **16** 18:21:19.5±0.3, 33.50N×45.61E, h25km, ML2.3*
*TEH **16** 18:21:20.1, 33.54N×45.61E, h17km±284km, ML2.7*
ISC 16 18:21:18.2±2.1, 33.48N±0.08×45.5E±0.1, h13km, n7, σ0§74/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
IBDR	**Badra**	**0.51**	**137**	*e*Pg			**Pb**	**18 21 29.0**	**-0.1**
	baz=325								
IBDR				*e*Sg			**Sg**	**18 21 36.0**	**+0.9**
IBDR				AML			AML	18 21 52.3	
	comp=N,204nm,0.4s								
IBDR				AML			AML	18 21 57.4	
	comp=E,182nm,0.4s								
ILBA	**Ilam Banvizeh**	**0.60**	**76**	Pg			**Pn**	**18 21 31.5**	**-1.0**
KGS1	**Ghasr-e-Shirin**	**1.02**	**4**	Pg			**Pn**	**18 21 38.6**	**+0.3**
KGS1				Sg			**Sn**	**18 21 52.2**	**-0.3**
IGHG	**Ghaleghazi**	**1.22**	**46**	Pg			**Pg**	**18 21 41.8**	**+0.1**
IDHR	**Dehrash**	**1.41**	**31**	Pg			**Pg**	**18 21 44.8**	**-0.6**
ILIN	**Lien**	**1.87**	**40**	Pg			**Pg**	**18 21 53.7**	**-0.4**
IDOB	**Doab**	**2.25**	**82**	Pn			**Pb**	**18 21 59.7**	**+0.9**

*ISN **16** 18:21:57.0±1.1, 33.62N×45.69E, h10km±315km, ML4.0*
*IDC **16** 18:21:58.8±0.8, 33.63N×45.73E, h0km, mb3.9/16, mbtmp3.9/24, ML3.8/7, MS3.3/8, Error ellipse: s-maj=16.4km s-min=12.9km az=157.0*
*TEH **16** 18:22:00.1, 33.63N×45.70E, h12km±33km, ML4.0*
*NEIC **16** 18:22:00.3±2.0, 33.52N±0.06×45.70E±0.07, h10km±1km, mb4.0/34, Error ellipse: s-maj=10.3km s-min=9.4km az=203.0*
*DSN **16** 18:22:11.7±1.1, 32.66N×46.18E, h10km, Error ellipse: s-maj=41.2km s-min=9.5km az=34.0*
ISC 16 18:21:60.0±0.4, 33.53N±0.04×45.70E±0.03, h13km, n169, σ1§79/135, mb3.9/27, MS3.5/4, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ILBA	**Ilam Banvizeh**	**0.43**	**77**	Pg			**Pg**	**18 22 08.8**	**+0.2**
IBDR	**Badra**	**0.46**	**155**	*e*Pg			**Pg**	**18 22 08.5**	**-0.5**
IBDR				*e*Sg			**Sg**	**18 22 15.0**	**-0.1**
KGS1	**Ghasr-e-Shirin**	**0.98**	**355**	Pg			**Pb**	**18 22 16.7**	**-2.1**
IGHG	**Ghaleghazi**	**1.08**	**42**	Pg			**Pb**	**18 22 19.4**	**-1.3**
IDHR	**Dehrash**	**1.30**	**26**	Pg			**Pn**	**18 22 22.6**	**-1.5**

KCHF	**Cheshme Sefid,**	**1.34**	**56**	Pg			**Pn**	**18 22 24.5**	**-0.1**
ILIN	**Lien**	**1.74**	**37**	Pg			**Pn**	**18 22 30.7**	**+0.6**
IKFM	**Kafar-mosalman**	**1.79**	**89**	Pg			**Pb**	**18 22 33.3**	**+0.6**
RAFI	**Al-Rafai**	**1.83**	**169**	*e*Pn			**Pn**	**18 22 32.0**	**+0.9**
RAFI				*e*Sn			**Sb**	**18 22 57.0**	**+0.9**
IBZA	**Bozab**	**2.03**	**62**	Pn			**Pn**	**18 22 35.4**	**+1.4**
IDOB	**Doab**	**2.08**	**82**	Pn			**Pn**	**18 22 36.3**	**+1.5**
IKRK	**Kirkuk**	**2.18**	**329**	*e*Pn			**Pn**	**18 22 34.0**	**-2.0**
IKRK				*e*Sn			**Sn**	**18 23 01.0**	**-1.8**
IKRK				AML			AML	18 23 09.5	
	comp=N,2μm,0.1s								
IKRK				AML			AML	18 23 21.8	
	comp=E,1μm,0.5s								
IALM	**Almabolaq**	**2.44**	**56**	Pn			**Pn**	**18 22 40.5**	**+0.7**
HSAM	**Samen**	**2.51**	**73**	Pn			**Pn**	**18 22 41.9**	**+1.2**
SDS1	**Sardasht. Az.**	**2.62**	**356**	Pn			**Pn**	**18 22 42.4**	**+0.2**
HAGD	**Aghdareh**	**3.13**	**65**	Pn			**Pn**	**18 22 50.4**	**+1.1**
MAHB	**Mahabad**	**3.23**	**0**	Pn			**Pn**	**18 22 51.5**	**+1.0**
IRAZ	**Razeghan**	**3.96**	**61**	Pn			**Pn**	**18 23 02.0**	**+1.3**
IPIR	**Pirpir**	**4.44**	**99**	Pn			**Pn**	**18 23 09.6**	**+2.3**
ZNGN	**Zangian**	**4.56**	**107**	Pn			**Pn**	**18 23 10.9**	**+1.9**
JIR1	**Jirandeh**	**4.62**	**45**	Pn			**Pn**	**18 23 10.6**	**+0.9**
IQOM	**Qom**	**4.64**	**72**	Pn			**Pn**	**18 23 11.1**	**+1.1**
ITBZ	**Tabriz**	**4.71**	**4**	Pn			**Pn**	**18 23 11.0**	**+0.1**
ISHB	**Shabestar**	**4.75**	**359**	Pn			**Pn**	**18 23 11.0**	**-0.4**
QAMS	**Qamsar**	**4.76**	**86**	Pn			**Pn**	**18 23 13.7**	**+2.1**
IKLH	**Kolahrood**	**4.92**	**91**	Pn			**Pn**	**18 23 16.1**	**+2.3**
IMRD	**Marand**	**5.18**	**0**	Pn			**Pn**	**18 23 18.0**	**+0.7**
IVRN	**Varamin**	**5.20**	**72**	Pn			**Pn**	**18 23 18.6**	**+1.0**
KLST	**Kelardasht - M**	**5.31**	**54**	Pn			**Pn**	**18 23 19.9**	**+0.6**
KRSH	**Karshahi**	**5.38**	**84**	Pn			**Pn**	**18 23 21.7**	**+1.7**
ISFB	**Sefidab**	**5.50**	**80**	Pn			**Pn**	**18 23 23.3**	**+1.6**
GRMI	**Germi**	**5.56**	**18**	Pn			**Pn**	**18 23 23.0**	**+0.5**
KLNJ	**Kolanjah**	**5.59**	**115**	Pn			**Pn**	**18 23 25.9**	**+2.9**
IZEF	**Zefreh**	**5.59**	**95**	Pn			**Pn**	**18 23 25.1**	**+2.0**
IDMV	**Damavand**	**5.61**	**67**	Pn			**Pn**	**18 23 24.0**	**+0.6**
MZPU	**Pul - Mazandar**	**5.63**	**57**	Pn			**Pn**	**18 23 25.0**	**+1.4**
GURO	**Guroymak-BITLI**	**5.83**	**330**				**Pn**	**18 23 25.5**	**-0.7**
GURO							**Sn**	**18 24 30.4**	**-2.6**
MAKU	**Maku**	**5.88**	**352**	Pn			**Pn**	**18 23 27.9**	**+1.0**
IRAM	**Ramesheh**	**5.89**	**105**	Pn			**Pn**	**18 23 29.6**	**+2.5**
IFIR	**Firoozkooh**	**6.19**	**68**	Pn			**Pn**	**18 23 32.3**	**+1.0**
GNI	**Garni**	**6.66**	**354**	Pn			**Pn**	**18 23 38.8**	**+1.2**
GNI	**Garni**	**6.66**	**354**	Pn			**Pn**	**18 23 41.6**	**+4.0**
	comp=E,1.8nm,0.5s,baz=210,slow=18,SNR=1.4								
GNI				Pg			**Pb**	**18 23 56.1**	**+0.5**
	comp=E,0.5nm,0.3s,baz=139,slow=19,SNR=2.3								
GNI				Lg			Lg	18 25 28.6	
	comp=E,0.4nm,0.3s,baz=17,slow=19,SNR=0.7								
GNI				LR			LR	18 26 31.3	
	comp=E,82nm,20.6s,baz=202,slow=42								
DSBU	**Dashti - Bushe**	**7.02**	**136**	Pn			**Pn**	**18 23 45.8**	**+3.3**
ASF	**Jabal al Asfar**	**7.53**	**262**	Pn			**Pn**	**18 23 50.7**	**+1.1**
	comp=E,0.3nm,0.3s,baz=154,slow=6.5,SNR=5.2								
ASF				Lg			Lg	18 25 59.0	
	comp=E,0.7nm,0.3s,baz=153,slow=20,SNR=3.9								
	comp=E,1.4nm,0.4s								
ASF	**Jabal al Asfar**	**7.53**	**262**	P			Pg	18 24 33.3	+9.2
ARPR	**Arapgir-MALATY**	**8.13**	**315**	Pn			**Pn**	**18 23 59.6**	**+1.7**
KSHT	**Keshet**	**8.30**	**269**	S			**Sg**	**18 26 28.7**	**+2.4**
KSHT	**Keshet**	**8.30**	**269**	P			Pg	18 24 55.4	+17
NATI	**Neve Ativ**	**8.34**	**271**	P			Pg	18 24 57.1	+18
NATI	**Neve Ativ**	**8.34**	**271**	S			**Sg**	**18 26 29.7**	**+2.2**
NATI	**Neve Ativ**	**8.34**	**271**	P			Pg	18 24 55.9

SIMJ					IAmb	IAmb	18 26 39.5	
	comp=Z,6.4nm,1.2s							
AGG	**Agios Georgios**	**19.60**	**293**	P	**Pn**		**18 26 29.7**	**+0.4**
AGG					IAmb	IAmb	18 26 47.1	
	comp=Z,24nm,1.5s							
FNA	**Florina**	**20.66**	**298**	P	**P**		**18 26 40.0**	**+0.6**
BURAR	**Bucovina Array**	**20.89**	**318**	P	**P**		**18 26 42.1**	**+0.2**
BUR08	**Bucovina Ar. S**	**20.92**	**318**	P	**P**		**18 26 41.8**	**-0.4**
AKASG	**Malin Array Be**	**20.99**	**330**	P	**P**		**18 26 41.9**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=139,slow=9.9,SNR=10.0							
AKASG					LR	LR	18 36 25.6	
	comp=Z,85nm,21.8s,baz=11,slow=42							
	comp=Z,2.0nm,0.6s							
AKBB	**Malin Array Si**	**20.99**	**330**		**P**		**18 26 40.8**	**-2.0**
AKBB					IAmb	IAmb	18 26 51.5	
	comp=Z,6.7nm,1.1s							
KIEV	**Kiev**	**20.99**	**330**		**P**		**18 26 40.8**	**-2.0**
KIEV					IAmb	IAmb	18 26 51.5	
	comp=Z,6.0nm,1.1s							
BTK	**Batken**	**21.11**	**65**	P	**P**		**18 26 45.6**	**+1.3**
BTK					IAmb	IAmb	18 27 06.2	
	comp=Z,5.5nm,1.1s							
KK31	**Karatay Array**	**21.62**	**57**	P	**P**		**18 26 50.0**	**+0.2**
KK31					IAmb	IAmb	18 26 57.5	
	comp=Z,4.2nm,1.0s							
KKAR	**Karatay Array**	**21.62**	**57**	P	**P**		**18 26 50.5**	**+0.7**
KKAR	**Karatay Array**	**21.62**	**57**	P	**P**		**18 26 49.4**	**-0.4**
KKAR					IAmb	IAmb	18 26 57.5	
	comp=Z,4.2nm,1.0s							
NIL	**Nilore**	**22.93**	**82**	P	**P**		**18 27 03.9**	**0.0**
NIL					IAmb	IAmb	18 27 10.3	
	comp=Z,6.6nm,1.0s							
ARSB	**Arslanbob**	**22.96**	**62**	P	**P**		**18 27 04.9**	**+0.7**
TIP	**Timpagrande**	**23.93**	**292**	P	**P**		**18 27 13.7**	**0.0**
AAK	**Ala-Archa**	**24.33**	**60**	LR	LR		18 38 22.4	
	comp=Z,89nm,19.2s,baz=320,slow=41							
CEL	**Celeste**	**24.55**	**290**	P	**P**		**18 27 20.0**	**+0.6**
ARU	**Arti**	**24.56**	**17**	P	**P**		**18 27 21.2**	**+1.9**
ARU					IAmb	IAmb	18 27 29.4	
	comp=Z,2.9nm,0.8s							
CUC	**Castrocucco**	**24.72**	**294**	P	**P**		**18 27 20.9**	**-0.1**
CUC					IAmb	IAmb	18 27 26.6	
	comp=Z,9.6nm,1.3s							
NACGM	**Naroch**	**25.15**	**334**	*e*P	**P**		**18 27 22.2**	**-2.4**
	comp=E,890nm,1.2s							
NRN	**Naryn**	**25.21**	**63**	P	**P**		**18 27 26.9**	**+1.2**
NRN					IAmb	IAmb	18 27 30.5	
	comp=Z,3.0nm,0.7s							
BRVK	**Borovoye**	**26.26**	**35**	P	**P**		**18 27 37.3**	**+2.6**
BRVK					IAmb	IAmb	18 27 39.5	
	comp=Z,3.8nm,1.2s							
BVAR	**Borovoye Array**	**26.29**	**35**	P	**P**		**18 27 34.8**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=233,slow=8.2,SNR=20							
	comp=Z,2.2nm,0.5s							
CIMO	**Cimolais**	**28.31**	**307**	P	**P**		**18 27 53.8**	**+0.6**
CIMO					IAmb	IAmb	18 28 10.0	
	comp=Z,1.6nm,0.8s							
KURBB	**Kurchatov Arra**	**29.44**	**45**	P	**P**		**18 28 03.8**	**+0.7**
	comp=Z,0.5nm,0.2s,baz=253,slow=9.1,SNR=5.4							
	comp=Z,0.5nm,0.2s							
VSL	**Villasalto**	**29.66**	**292**	P	**P**		**18 28 06.6**	**+1.3**
MAKZ	**Makanchi**	**30.45**	**53**	P	**P**		**18 28 12.6**	**+0.4**
MAKZ					IAmb	IAmb	18 28 12.8	
	comp=Z,3.0nm,1.5s							
MK31	**Makanchi Array**	**30.66**	**53**	P	**P**		**18 28 14.0**	**-0.1**
MK31					IAmb	IAmb	18 28 18.4	
	comp=Z,1.5nm,0.8s							
MKAR	**Makanchi Array**	**30.66**	**53**	P	**P**		**18 28 14.2**	**+0.2**
MKAR	**Makanchi Array**	**30.66**	**53**	P	**P**		**18 28 14.7**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=249,slow=7.5,SNR=16							
	comp=Z,1.2nm,0.5s							
FINES	**FINESS Array B**	**30.66**	**342**	P	**P**		**18 28 15.4**	**+1.5**
FINES	**FINESS Array B**	**30.66**	**342**	P	**P**		**18 28 15.1**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=151,slow=8.9,SNR=0.8							
	comp=Z,0.8nm,0.8s							
BNI	**Bardonecchia**	**32.03**	**303**	P	**P**		**18 28 25.7**	**-0.5**
HFS	**Hagfors**	**33.85**	**332**	P	**P**		**18 28 41.4**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=123,slow=11,SNR=10							
	comp=Z,1.6nm,0.4s							
ZALV	**Zalesovo Beam**	**34.26**	**41**	P	**P**		**18 28 44.4**	**-1.1**
ZALV	**Zalesovo Beam**	**34.26**	**41**	P	**P**		**18 28 45.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=251,slow=7.0,SNR=6.3							
	comp=Z,0.8nm,0.3s							
ARCES	**ARCESS Array B**	**37.78**	**349**	P	**P**		**18 29 15.5**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=132,slow=3.4,SNR=4.5							
	comp=Z,1.1nm,0.7s							
ESBB	**Sonseca Array**	**39.92**	**294**	P	**P**		**18 29 34.2**	**+0.3**
ESBB					IAmb	IAmb	18 29 34.4	
	comp=Z,6.1nm,1.3s							
ESDC	**Sonseca Array**	**39.93**	**294**	P	**P**		**18 29 33.9**	**0.0**
ESDC	**Sonseca Array**	**39.93**	**294**	P	**P**		**18 29 34.6**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=77,slow=8.7,SNR=13							
	comp=Z,0.6nm,0.5s							
EKA	**Eskdalemuir Ar**	**40.08**	**318**	P	**P**		**18 29 34.9**	**0.0**
	comp=Z,1.5nm,0.6s,baz=102,slow=7.8,SNR=5.6							
	comp=Z,1.5nm,0.6s							
ESK	**Eskdalemuir**	**40.10**	**318**	P	**P**		**18 29 35.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**44.80**	**254**	P	**P**		**18 30 15.1**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=56,slow=8.4,SNR=4.6							
	comp=Z,1.0nm,0.5s							
SPB2	**Spitsbergen Ar**	**46.52**	**352**	P	**P**		**18 30 26.9**	**+0.4**
SPITS	**Spitsbergen Ar**	**46.52**	**352**	P	**P**		**18 30 26.7**	**+0.1**
	comp=Z,15nm,1.1s,baz=179,slow=5.8,SNR=1.8							
	comp=Z,15nm,1.1s							
SONM	**Songino Array**	**47.02**	**53**	P	**P**		**18 30 30.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=267,slow=9.5,SNR=2.7							
	comp=Z,0.2nm,0.5s							
ULN	**Ulaanbaatar**	**47.46**	**53**	P	**P**		**18 30 35.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**49.65**	**94**	P	**P**		**18 30 52.4**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=295,slow=8.6,SNR=1.2							
	comp=Z,0.9nm,0.4s							
YAK	**Yakutsk**	**58.26**	**33**	LR	LR		18 59 24.2	
	comp=Z,53nm,19.1s,baz=304,slow=39							
BOSA	**Boshof**	**64.77**	**200**	P	**P**		**18 32 39.8**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=0.0,slow=7.1,SNR=3.7							
	comp=Z,1.6nm,0.7s							
YKA	**Yellowknife Ar**	**83.01**	**351**	P	**P**		**18 34 25.1**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=18,slow=8.7,SNR=1.7							
YKA					LR	LR	19 10 58.4	
	comp=Z,33nm,18.8s,baz=326,slow=36							
	comp=Z,0.1nm,0.4s							

*IDC **16** 18:39:00.7±1.6,36°.95N×33°.01W,h0km,mb3.9/6,*
mbtmp3.9/6,MS3.6/26,Error ellipse: s-maj=59.9km
s-min=22.4km az=152.0

ISC 16 18:39:02.3±1.7,37°.0N±0°.3×33°.0W±0°.3,h10km,n32,
σ0s21/7,mb3.9/7,MS3.7/26,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ESDC	**Sonseca Array**	**22.91**	**74**	LR		LR	18 51 31.8	
	comp=Z,133nm,18.0s,baz=286,slow=33							
MDT	**Midelt**	**23.63**	**92**	LR		LR	18 51 08.0	
	comp=Z,85nm,19.6s,baz=324,slow=31							
SCHQ	**Schefferville**	**29.15**	**319**	LR		LR	18 55 38.7	
	comp=Z,188nm,19.4s,baz=99,slow=34							
SFJD	**Kangerlussuaq**	**31.73**	**347**	LR		LR	18 55 10.3	
	comp=Z,140nm,18.6s,baz=146,slow=31							
SADO	**Sadowa**	**35.35**	**297**	LR		LR	18 57 53.7	
	comp=Z,65nm,21.4s,baz=226,slow=32							
NOA	**NORSAR Array B**	**36.65**	**35**	P		**P**	**18 46 08.6**	**-0.2**
	2.0nm,1.0s,baz=251,slow=9.0,SNR=3.7							
	2.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**39.04**	**118**	LR		LR	19 01 45.1	
	comp=Z,81nm,18.2s,baz=312,slow=35							
DBIC	**Dimbokro**	**39.60**	**133**	LR		LR	19 00 43.6	
	comp=Z,141nm,21.2s,baz=319,slow=33							
FINES	**FINESS Array B**	**43.72**	**37**	P		**P**	**18 47 07.5**	**+0.2**
	2.8nm,0.8s,baz=245,slow=8.2,SNR=4.9							
	2.8nm,0.8s							
ULM	**Lac du Bonnet**	**46.08**	**308**	LR		LR	19 07 11.1	
	comp=Z,72nm,18.5s,baz=166,slow=37							
ROSC	**El Rosal**	**49.47**	**240**	P		**P**	**18 47 53.5**	**+0.1**
	16nm,0.6s,baz=40,slow=7.9,SNR=5.2							
YKA	**Yellowknife Ar**	**54.22**	**326**	P		**P**	**18 48 28.0**	**+0.2**
	0.5nm,0.9s,baz=79,slow=6.9,SNR=5.0							
	0.5nm,0.9s							
PDAR	**Pinedale Array**	**57.16**	**302**	LR		LR	19 14 36.0	
	comp=Z,49nm,18.3s,baz=52,slow=37							
CMIG	**Matias Romero**	**57.58**	**268**	LR		LR	19 14 09.2	
	comp=Z,28nm,18.2s,baz=12,slow=37							
ANMO	**Albuquerque**	**58.07**	**292**	LR		LR	19 11 52.7	
	comp=Z,55nm,19.9s,baz=133,slow=34							
TXAR	**Lajitas Array**	**58.43**	**285**	P		**P**	**18 48 58.3**	**-0.2**
	0.9nm,0.8s,baz=88,slow=7.0,SNR=8.0							
TXAR						LR	LR	19 10 57.6
	comp=Z,24nm,21.9s,baz=26,slow=33							
	0.9nm,0.8s							
INK	**Inuvik**	**59.90**	**335**	LR		LR	19 12 06.8	
	comp=Z,83nm,18.6s,baz=0.0,slow=33							
NEW	**Newport**	**59.97**	**310**	LR		LR	19 14 33.2	
	comp=Z,74nm,18.4s,baz=42,slow=36							
ELK	**Elko**	**61.86**	**301**	LR		LR	19 14 39.4	
	comp=Z,40nm,21.9s,baz=42,slow=35							
BBB	**Bella Bella**	**64.66**	**317**	LR		LR	19 16 37.6	
	comp=Z,103nm,18.1s,baz=67,slow=35							
NVAR	**Mina Array Bea**	**65.02**	**300**	LR		LR	19 18 12.4	
	comp=Z,42nm,18.2s,baz=35,slow=36							
PFO	**Pinyon Flats O**	**66.03**	**295**	LR		LR	19 18 46.0	
	comp=Z,48nm,18.0s,baz=20,slow=36							
LPIG	**La Paz**	**66.16**	**283**	LR		LR	19 16 14.5	
	comp=Z,22nm,20.8s,baz=42,slow=34							
YBH	**Yreka Blue Hor**	**66.41**	**305**	LR		LR	19 18 09.7	
	comp=Z,79nm,20.0s,baz=24,slow=35							
MBAR	**Mbarara**	**69.64**	**107**	LR		LR	19 20 58.8	
	comp=Z,32nm,18.4s,baz=288,slow=36							
KDAK	**Kodiak Island**	**72.91**	**331**	LR		LR	19 20 45.8	
	comp=Z,86nm,18.2s,baz=276,slow=34							
TSUM	**Tsumeb**	**73.46**	**130**	LR		LR	19 19 43.3	
	comp=Z,25nm,20.6s,baz=337,slow=33							
KURBB	**Kurchatov Arra**	**74.09**	**38**	P		**P**	**18 50 38.3**	**-0.1**
	0.9nm,0.6s,baz=312,slow=5.9,SNR=11							
	0.9nm,0.6s							
LSZ	**Lusaka**	**77.55**	**120**	LR		LR	19 23 41.3	
	comp=Z,72nm,19.6s,baz=83,slow=35							
MKAR	**Makanchi Array**	**78.48**	**39**	P		**P**	**18 51 03.6**	**0.0**
	0.9nm,0.8s,baz=322,slow=5.1,SNR=11							
	0.9nm,0.8s							
BOSA	**Boshof**	**85.12**	**131**	LR		LR	19 26 20.2	
	comp=Z,38nm,19.1s,baz=342,slow=33							
SUR	**Sutherland**	**85.36**	**137**	LR		LR	19 25 25.0	
	comp=Z,33nm,19.6s,baz=199,slow=33							

*SJA **16** 18:40:26.7±0.6,27°.29S×71°.58W,h12km,ML3.8,MW3.6*
*GUC **16** 18:40:33.1±0.8,27°.45S×71°.27W,h15km±6km,ML3.4*

ISC 16 18:40:28.9±1.6,27°.34S±0°.03×71°.31W±0°.07,h0km±12km,
n22,σ2s06/40,1C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.89**	**167**	*e*P		**Pb**	**18 40 45.3**	**-1.9**
AC04	**Llanos de Chal**	**0.89**	**167**	*e*P		**Pb**	**18 40 45.9**	**-1.3**
AC04				*e*S		**Sg**	**18 40 55.3**	**-2.2**
AC04				IAML			18 40 57.4	
	comp=N,3μm,0.2s							
GO03	**Copiap**	**0.98**	**105**	*e*P		**Pn**	**18 40 48.9**	**-1.1**
GO03				*e*S		**Sb**	**18 41 00.6**	**-1.8**
GO03				IAML			18 41 01.8	
	comp=Z,2μm,0.4s							
GO03	**Copiap**	**0.98**	**105**	*e*P		**Pn**	**18 40 48.8**	**-1.2**
GO03				*e*S		**Sb**	**18 41 00.0**	**-2.4**
GO03				IAML			18 41 01.9	
	comp=N,2μm,0.4s							
AC01	**Pan de Azucar**	**1.34**	**28**	*e*P		**Pg**	**18 40 55.7**	**+1.1**
AC01	**Pan de Azucar**	**1.34**	**28**	*i*P		**Pg**	**18 40 56.4**	**+1.8**
AC01				*e*S		**Sg**	**18 41 13.5**	**+1.5**
AC01				IAML			18 41 15.5	
	comp=N,682nm,0.3s							
AC05	**El Transito**	**1.75**	**149**	*e*P		**Pn**	**18 41 00.1**	**-0.5**
AC05				*e*S		**Sn**	**18 41 20.1**	**-3.5**
AC05				IAML			18 41 22.9	
	comp=E,707nm,0.2s							
LCO	**Las Campanas**	**1.75**	**162**	*e*P		**Pn**	**18 40 59.8**	**-1.0**
AC02	**Maricunga**	**2.00**	**76**	*e*P		**Pb**	**18 41 06.2**	**-0.3**
AC02	**Maricunga**	**2.00**	**76**	*e*P		**Pb**	**18 41 06.6**	**+0.1**
AC02				IAML			18 41 33.9	
	comp=E,837nm,0.4s							
GO02	**Mina Guanaco**	**2.66**	**36**	*e*P		**Pb**	**18 41 14.8**	**-2.7**
GO02				*e*S		**Sn**	**18 41 43.1**	**-3.2**
GO02				*e*S		**Sb**	**18 41 48.8**	**-2.0**
GO02				IAML			18 42 03.4	
	comp=Z,426nm,0.7s							
CO01	**Juntas del Tor**	**2.84**	**158**	*e*P		**Pn**	**18 41 16.1**	**+0.5**
CO01				IAML			18 42 00.5	
	comp=N,168nm,0.5s							
VCA	**Vinchina**	**3.07**	**118**	*e*P		**Pb**	**18 41 22.8**	**-1.7**
VCA				*e*S		**Sb**	**18 42 02.1**	**-0.6**
VCA				IAML			18 42 15.5	
	comp=Z,130nm,1.0s							
AROD	**Rodeo**	**3.25**	**151**	*e*P		**Pn**	**18 41 23.5**	**+2.1**
AROD				*e*S		**Sb**	**18 42 08.6**	**+0.8**
AGUA	**GUANDACOL**	**3.28**	**131**	*e*P		**Pb**	**18 41 25.6**	**-2.4**
AGUA				*e*S		**Sb**	**18 42 07.1**	**-1.3**
ACCO	**Cerro Coronel**	**3.79**	**149**	*e*P		**Pn**	**18 41 31.3**	**+2.5**
ACCO				*e*S		**Sb**	**18 42 21.1**	**-2.3**
ACLC	**CERRO LA CRUZ**	**4.36**	**119**	*e*P		**Pn**	**18 41 39.5**	**+2.9**
ACLC				*e*S		**Sb**	**18 42 39.5**	**-0.3**
ACLC				IAML			18 42 53.0	
	comp=Z,63nm,1.8s							
AVFE	**Valle Fertil**	**4.72**	**135**	*e*P		**Pn**	**18 41 43.6**	**+2.2**
AVFE				*e*S		**Sn**	**18 42 40.6**	**+3.6**
RTLS	**Leoncito**	**4.78**	**159**	*e*P		**Pn**	**18 41 44.8**	**+2.4**
RTLS				*e*S		**Sn**	**18 42 43.1**	**+4.5**
RTLS				IAML			18 42 57.0	
	comp=Z,126nm,0.6s							
PB06	**IPOC Station P**	**4.87**	**19**	*e*P		**Pn**	**18 41 44.4**	**+0.9**
PB06				*e*S		**Sn**	**18 42 40.4**	**-0.3**
PB06				IAML			18 43 17.6	
	comp=Z,79nm,0.6s							
PB04	**IPOC Station P**	**5.09**	**12**	*e*P		**Pn**	**18 41 46.9**	**+0.3**
PB04				*e*S		**Sn**	**18 42 44.3**	**-1.9**
PB04				IAML			18 43 26.3	
	comp=Z,39nm,0.9s							
LVC	**Limon Verde**	**5.18**	**25**	*e*P		**Pn**	**18 41 49.3**	**+1.2**
LVC				*e*S		**Sn**	**18 42 50.2**	**+1.4**
LVC				*e*S		**Sb**	**18 43 02.1**	**-1.5**
LVC				IAML			18 43 20.1	
	comp=Z,72nm,0.7s							

*NEIC **16** 18:49:46.8±1.3,56°.27N±0°.07×149°.4W±0°.1,h24km±9km,*
ML3.6/64,ML3.4(AEIC),Error ellipse: s-maj=11.2km
s-min=7.0km az=149.0
*IDC **16** 18:49:47.5±2.8,56°.52N×149°.21W,h0km,mb3.3/2,*
mbtmp3.3/6,ML3.2/4,Error ellipse: s-maj=56.1km
s-min=22.6km az=0.0
*AEIC **16** 18:49:51.4±1.2,56°.41N±0°.09×149°.32W±0°.09,h6km±7km,*
Error ellipse: s-maj=12.6km s-min=7.4km az=172.0

ISC 16 18:49:46.8±1.1,56°.36N±0°.08×149°.37W±0°.06,h10km,
n241,σ1s09/237,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.26**	**310**			**Pn**	**18 50 23.8**	**-0.4**
KDAK	**Kodiak Island**	**2.26**	**310**			**Sn**	**18 50 50.9**	**-1.2**
KDAK	**Kodiak Island**	**2.26**	**310**	Pn		**Pn**	**18 50 24.5**	**+0.3**
	2.5nm,0.3s,baz=124,slow=4.9,SNR=51							
KDAK				Sn		**Sn**	**18 50 51.0**	**-1.1**
	5.9nm,0.3s,baz=126,slow=23,SNR=17							
	7.4nm,0.2s							
OHAK	**Old Harbor**	**2.32**	**293**			**Pn**	**18 50 24.2**	**-0.8**
OHAK	**Old Harbor**	**2.32**	**293**			**Sn**	**18 50 51.3**	**-2.3**
OHAK	**Old Harbor**	**2.32**	**293**	IAML			18 50 51.8	
	comp=N,106nm,0.7s							
OHAK				IAML			18 51 10.3	
	comp=E,70nm,0.8s							
OHAK	**Old Harbor**	**2.32**	**293**	P		**Pn**	**18 50 24.3**	**-0.8**
OHAK	**Old Harbor**	**2.32**	**293**	P		**Pn**	**18 50 24.2**	**-0.8**
	baz=109							
OHAK				S		**Sn**	**18 50 51.3**	**-2.3**
	baz=109							
SII	**Sitkinak Islan**	**2.68**	**276**	Pn		**Pn**	**18 50 27.1**	**-2.9**
SII				IAML			18 51 03.6	
	comp=N,188nm,2.2s							
SII	**Sitkinak Islan**	**2.68**	**276**			**Sn**	**18 51 00.6**	**-1.9**
SII	**Sitkinak Islan**	**2.68**	**276**	P		**Pn**	**18 50 29.6**	**-0.4**
	baz=91							
SII				S		**Sn**	**18 51 00.6**	**-1.9**
	baz=91							
SYI	**Shuyak Island**	**2.78**	**325**			**Pn**	**18 50 31.2**	**-0.1**
Q20K	**Shuyak Island**	**2.78**	**325**	P		**Pn**	**18 50 31.3**	**0.0**
	baz=142							
Q20K				S		**Sn**	**18 51 03.6**	**-1.3**
	baz=142							
R18K	**Karluk**	**3.04**	**296**			**Pn**	**18 50 35.1**	**+0.3**
R18K						**Sn**	**18 51 09.4**	**-1.7**
	comp=E,143nm,0.4s							
R18K				IAML			18 51 25.9	
	comp=N,192nm,0.5s							
R18K	**Karluk**	**3.04**	**296**	P		**Pn**	**18 50 35.1**	**+0.3**
	baz=110							
R18K				S		**Sn**	**18 51 09.4**	**-1.7**
	baz=110							
CNPM	**China Poot**	**3.32**	**343**			**Pn**	**18 50 38.5**	**-0.3**
CNPM	**China Poot**	**3.32**	**343**			**Sn**	**18 51 16.0**	**-2.3**
CNPM	**China Poot**	**3.32**	**343**	IAML			18 51 24.7	
	comp=E,55nm,0.6s							
CNPM				IAML			18 51 30.4	
	comp=N,45nm,0.6s							
Q19K	**Cape Douglas,**	**3.45**	**320**			**Pn**	**18 50 40.9**	**+0.3**
Q19K				IAML			18 51 33.2	
	comp=N,215nm,0.7s							
Q19K	**Cape Douglas,**	**3.45**	**320**	P		**Pn**	**18 50 40.5**	**-0.1**
	baz=136							
BRSE	**Bradley Lake S**	**3.46**	**348**			**Pn**	**18 50 40.2**	**-0.6**
BRSE	**Bradley Lake S**	**3.46**	**348**	P		**Pn**	**18 50 40.2**	**-0.6**
	baz=167							
Q23K	**Middleton Isla**	**3.47**	**26**	Pn		**Pn**	**18 50 39.5**	**-1.2**
Q23K				IAML			18 51 29.5	
	comp=E,132nm,1.3s							
Q23K				IAML			18 52 39.7	
	comp=N,124nm,1.9s							
MID	**Middleton Isla**	**3.47**	**26**	Pn		**Pn**	**18 50 39.6**	**-1.2**
MID				IAML			18 51 33.9	
	comp=E,130nm,1.6s							
MID				IAML			18 52 46.6	
	comp=N,125nm,1.9s							
MID	**Middleton Isla**	**3.47**	**26**	P		**Pn**	**18 50 39.8**	**-1.0**
BRLK	**Bradley Lake**	**3.50**	**347**			**Pn**	**18 50 40.6**	**-0.7**
KAHG	**Katmai Hook Gl**	**3.52**	**309**			**Pn**	**18 50 42.6**	**+1.0**
CHIR	**Chirikof Islan**	**3.55**	**264**	Pn		**Pn**	**18 50 39.0**	**-2.9**
CHIR				IAML			18 52 55.1	
	comp=E,166nm,2.7s							
SEW	**Seward**	**3.75**	**359**			**Pn**	**18 50 43.9**	**-0.7**
SEW	**Seward**	**3.75**	**359**	P		**Pn**	**18 50 43.9**	**-0.7**
	baz=179							
P23K	**Montague Islan**	**3.79**	**15**			**Pn**	**18 50 44.3**	**-0.8**
P23K	**Montague Islan**	**3.79**	**15**	P		**Pn**	**18 50 44.3**	**-0.8**
	baz=196							
ANCK	**Angle Creek**	**3.80**	**301**			**Pn**	**18 50 47.1**	**+1.7**
KAHC	**Katmai Hardscr**	**3.81**	**309**			**Pn**	**18 50 46.8**	**+1.3**
KAHC	**Katmai Hardscr**	**3.81**	**309**	P		**Pn**	**18 50 46.8**	**+1.3**
	baz=124							
P19K	**Oil Pt**	**3.89**	**330**	Pn		**Pn**	**18 50 46.9**	**+0.3**
P19K				IAML			18 51 38.7	
	comp=E,101nm,0.5s							
P19K				IAML			18 51 38.7	
	comp=N,95nm,0.5s							
P19K	**Oil Pt**	**3.89**	**330**	P		**Pn**	**18 50 47.0**	**+0.4**
	baz=146							
CNTC	**Contact Creek**	**4.01**	**301**			**Pn**	**18 50 49.5**	**+1.2**
Q17K	**Contact Creek**	**4.02**	**301**	P		**Pn**	**18 50 49.5**	**+1.1**
	baz=115							
O20K	**Slope Mountain**	**4.11**	**337**			**Pn**	**18 50 49.5**	**-0.1**
O20K	**Slope Mountain**	**4.11**	**337**	P		**Pn**	**18 50 49.5**	**-0.1**
	baz=153							
O22K	**Cooper Landing**	**4.13**	**358**			**Pn**	**18 50 48.8**	**-1.1**
IVE	**Iliamna Volcan**	**4.14**	**334**			**Pn**	**18 50 49.6**	**-0.5**
ILSW	**Iliamna Southw**	**4.14**	**333**			**Pn**	**18 50 49.9**	**-0.3**
ILSW				IAML			18 51 40.5	
	comp=N,48nm,0.7s							
SLKM	**Skilak Lake**	**4.18**	**354**			**Pn**	**18 50 49.6**	**-0.9**
HIN	**Hinchinbrook I**	**4.32**	**19**	Pn		**Pn**	**18 50 51.7**	**-0.7**
HIN				IAML			18 51 42.7	
	comp=N,117nm,0.5s							
HIN				IAML			18 51 52.1	
	comp=E,78nm,0.6s							
P18K	**Big Mountain,**	**4.36**	**317**	Pn		**Pn**	**18 50 52.9**	**-0.1**
P18K	**Big Mountain,**	**4.36**	**317**	P		**Pn**	**18 50 52.7**	**-0.3**
	baz=131							
KAIM	**Kayak Island**	**4.43**	**34**	Pn		**Pn**	**18 50 52.2**	**-1.8**
KAIM	**Kayak Island**	**4.43**	**34**	P		**Pn**	**18 50 53.7**	**-0.3**
	baz=218							
RED	**Redoubt Volcan**	**4.44**	**338**			**Pn**	**18 50 53.2**	**-1.1**
RDSO	**Redoubt South**	**4.47**	**338**			**Pn**	**18 50 53.4**	**-1.2**
RSO	**Redoubt South**	**4.48**	**338**			**Pn**	**18 50 54.1**	**-0.7**
RDT	**Redoubt**	**4.51**	**341**			**Pn**	**18 50 54.1**	**-1.1**
CAPN	**Captain Cook N**	**4.51**	**349**	Pn		**Pn**	**18 50 55.6**	**+0.5**
RDWB	**Redoubt West**	**4.52**	**338**			**Pn**	**18 50 54.6**	**-0.7**
EYAK	**Cordova Ski Ar

STLK	Strandline Lak	5.31	347			Pn	18 51 05.6	-0.4
WAX	Waxell Ridge	5.34	37			Pn	18 51 05.4	-1.1
BARK	Barkley Ridge	5.43	39			Pn	18 51 07.5	-0.3
GHO	Glory Hole Cre	5.43	2			Pn	18 51 07.6	-0.2
KLU	Klutina	5.44	18			Pn	18 51 07.7	-0.2
KLU	Klutina baz=200	5.44	18	P		Pn	18 51 07.8	-0.2
MESA	MESA	5.47	43	Pn		Pn	18 51 07.3	-1.1
MESA	MESA baz=229	5.47	43	P		Pn	18 51 07.3	-1.1
CRQM	Cirque	5.48	34			Pn	18 51 08.1	-0.5
SML	Sawmill	5.49	5	Pn		Pn	18 51 08.4	-0.1
SML	Sawmill baz=186	5.49	5	P		Pn	18 51 08.4	-0.1
CRQE	Cirque baz=220	5.49	34	P		Pn	18 51 07.9	-0.7
N18K	Kilae Creek	5.51	324	Pn		Pn	18 51 08.4	-0.5
N18K	Kilae Creek baz=138	5.51	324	P		Pn	18 51 08.2	-0.6
TGL	Tana Glacier	5.57	35			Pn	18 51 09.0	-0.8
SCM	Sheep Creek Mo	5.58	10			Pn	18 51 09.4	-0.5
SCM	Sheep Creek Mo baz=192	5.58	10	P		Pn	18 51 09.7	-0.2
ISLE	Juniper Island	5.62	38	Pn		Pn	18 51 09.7	-0.8
BAGL	Bagley Icefiel	5.63	40			Pn	18 51 10.1	-0.3
O16K	Kokwok River B	5.66	308	Pn		Pn	18 51 10.9	+0.1
SKT	Skwentna	5.74	350	Pn		Pn	18 51 11.5	-0.5
SKT	Skwentna baz=168	5.74	350	P		Pn	18 51 11.8	-0.2
SVW2	Sparrevohn	5.74	328	Pn		Pn	18 51 11.4	-0.6
SVW2	Sparrevohn	5.74	328	P		Pn	18 51 11.7	-0.3
VRDI	Verde Repeater	5.76	30	Pn		Pn	18 51 11.7	-0.8
N25K	Chitina, Valde	5.80	23			Pn	18 51 12.5	-0.4
N25K	Chitina, Valde baz=207	5.80	23	P		Pn	18 51 12.3	-0.6
GLB	Gilahina Butte	5.85	27			Pn	18 51 12.6	-0.9
KIAG	Kiagna River	5.85	36			Pn	18 51 13.1	-0.6
N17K	Nushagak Hills	5.85	319	Pn		Pn	18 51 13.3	-0.2
N17K	Nushagak Hills baz=132	5.85	319	P		Pn	18 51 13.1	-0.4
M20K	Styx River	5.86	342			Pn	18 51 13.3	-0.4
M20K	Styx River baz=159	5.86	342	P		Pn	18 51 13.3	-0.4
SAMH	Samovar Hills	5.90	47			Pn	18 51 14.1	-0.1
GRNC	Granite Creek	5.92	39			Pn	18 51 13.6	-1.0
TABL	Table Mountain	5.95	43			Pn	18 51 14.2	-0.8
M24K	Tolsona, Glenn	5.99	15	Pn		Pn	18 51 14.6	-0.8
M24K	Tolsona, Glenn baz=197	5.99	15	P		Pn	18 51 16.1	+0.7
CNBA	Chernabura Isl	6.00	259	Pn		Pn	18 51 13.5	-2.0
MCARA	McCarthy VSAT	6.01	31			Pn	18 51 15.5	-0.2
MCARA	McCarthy VSAT baz=216	6.01	31	P		Pn	18 51 15.8	+0.1
PTPK	Patty Peak	6.02	34			Pn	18 51 15.7	-0.2
CUT	Chulitna	6.08	356	Pn		Pn	18 51 15.3	-1.3
PCA	Pinnacle	6.09	48			Pn	18 51 16.3	-0.5
PINM	Pinnacle baz=236	6.09	48	P		Pn	18 51 16.3	-0.6
M19K	Big River Lodg	6.13	337	Pn		Pn	18 51 16.5	-0.7
M19K	Big River Lodg baz=152	6.13	337	P		Pn	18 51 16.5	-0.7
M18K	Stony River	6.13	330			Pn	18 51 16.5	-0.8
M18K	Stony River baz=144	6.13	330	P		Pn	18 51 16.5	-0.8
BARN	Barnard Glacie	6.18	37			Pn	18 51 17.6	-0.6
WASW	Wrangell South	6.18	23			Pn	18 51 17.9	-0.3
CTG	Chitna Glacier baz=226	6.23	39	P		Pn	18 51 18.2	-0.5
CTGM	Chitina Glacie	6.23	39			Pn	18 51 18.1	-0.7
PNL	Peninsula	6.25	54			Pn	18 51 18.5	-0.5
PNL	Peninsula baz=242	6.25	54	P		Pn	18 51 18.5	-0.5
LOGN	Logan Glacier	6.25	41			Pn	18 51 18.4	-0.7
BCPM	Bancas Point	6.28	51	Pn		Pn	18 51 18.3	-1.1
SDPT	Sand Point	6.34	265	Pn		Pn	18 51 17.8	-2.4
SDPT	Sand Point	6.34	265	P		Pn	18 51 20.3	+0.1
SDPT	Sand Point baz=76	6.34	265	P		Pn	18 51 20.2	0.0
HARP	HAARP	6.42	18			Pn	18 51 22.0	+0.6
HARP	HAARP baz=201	6.42	18	P		Pn	18 51 22.0	+0.6
N16K	Nishlik Lake	6.43	314			Pn	18 51 21.6	+0.2
N16K	Nishlik Lake baz=125	6.43	314	P		Pn	18 51 21.6	+0.2
L19K	White Mountain	6.47	337			Pn	18 51 20.9	-1.1
M17K	Holitna River	6.55	324			Pn	18 51 22.9	-0.2
M17K	Holitna River baz=136	6.55	324	P		Pn	18 51 22.9	-0.2
DHY	Denali Highway	6.81	8			Pn	18 51 27.0	+0.3
M26K	Nabesna, AK	6.87	26			Pn	18 51 28.3	+0.8
PAX	Paxson	6.91	15			Pn	18 51 28.4	+0.3
PAX	Paxson baz=198	6.91	15	P		Pn	18 51 28.4	+0.3
O29M	Mount Kennedy	6.92	51			Pn	18 51 27.8	-0.4
O29M	Mount Kennedy baz=240	6.92	51	P		Pn	18 51 27.8	-0.4
L18K	Granite Mounta	6.96	330	Pn		Pn	18 51 28.1	-0.6
P29M	Windy Craggy	6.99	57			Pn	18 51 27.9	-1.2
P29M	Windy Craggy baz=247	6.99	57	P		Pn	18 51 27.7	-1.4
RND	Reindeer	7.07	2	Pn		Pn	18 51 30.7	+0.4
YUK3	Moose Creek	7.10	37			Pn	18 51 31.8	+0.9
YUK3	Moose Creek baz=224	7.10	37	P		Pn	18 51 31.8	+0.9
M27K	Edge Creek, AK	7.12	29	Pn		Pn	18 51 31.1	0.0
M27K	Edge Creek, AK baz=216	7.12	29	P		Pn	18 51 31.6	+0.5
TRF	Thorofare Moun	7.12	357	Pn		Pn	18 51 31.1	0.0
TRF	Thorofare Moun baz=176	7.12	357	P		Pn	18 51 31.3	+0.2
MENT	Mentasta	7.18	21	Pn		Pn	18 51 31.5	-0.3
CAST	Castle Rocks	7.21	350			Pn	18 51 32.0	-0.1
CAST	Castle Rocks baz=168	7.21	350	P		Pn	18 51 32.1	-0.1
YUK7	Dusty Glacier	7.22	50			Pn	18 51 32.5	+0.1
KTH	Kantishna Hill	7.25	354			Pn	18 51 29.7	-3.1
S31K	Pelican	7.32	72	Pn		Pn	18 51 30.5	-3.1
L26K	Log Cabin Wild	7.34	22	Pn		Pn	18 51 32.0	-1.9
YUK6	Outpost Mounta	7.34	47			Pn	18 51 34.5	+0.3
YUK6	Outpost Mounta baz=236	7.34	47	P		Pn	18 51 34.5	+0.3
TTA	Tatalina	7.39	336	Pn		Pn	18 51 32.4	-2.3
YUK4	Talbot Arm baz=233	7.47	44	P		Pn	18 51 37.9	+2.1
L16K	Owhat River	7.47	320	Pn		Pn	18 51 34.5	-1.2
L16K	Owhat River baz=131	7.47	320	P		Pn	18 51 35.9	+0.2
P30M	Million Dollar	7.55	55			Pn	18 51 37.4	+0.6
P30M	Million Dollar baz=246	7.55	55	P		Pn	18 51 37.4	+0.6
HYT	Haines Junctio	7.64	49	Pn		Pn	18 51 37.3	-0.7
L27K	Beaver Creek,	7.72	26	Pn		Pn	18 51 39.7	+0.6
BCAR	Beaver Creek A	7.73	27	Pn		Pn	18 51 38.6	-0.7
SIT	Sitka	7.76	79	Pn		Pn	18 51 35.0	-4.7
BPAW	Bear Paw Mtn.	7.80	355			Pn	18 51 38.8	-1.4
M14K	Bethel	7.91	309	Pn		Pn	18 51 40.1	-1.6
SKAG	Skagway	8.09	62	Pn		Pn	18 51 42.6	-1.6
SKAG	Skagway	8.09	62	P		Pn	18 51 43.9	-0.3
SCRK	Sand Creek	8.09	17	Pn		Pn	18 51 45.2	+0.9
FALS	False Pass	8.10	265	P		Pn	18 51 44.6	+0.3
N30M	Aishikik Lake	8.14	46	Pn		Pn	18 51 44.8	-0.2
S32K	Killisnoo	8.17	76	Pn		Pn	18 51 42.0	-3.3
J20K	Nowinta River	8.19	345	Pn		Pn	18 51 45.4	-0.1
O30N	Mendenhall	8.22	52	Pn		Pn	18 51 45.1	-0.9
M29M	Somme Creek	8.24	38			Pn	18 51 45.9	-0.4
J19K	Poorman	8.26	340	Pn		Pn	18 51 45.4	-1.1
R32K	Eaglecrest	8.26	70	Pn		Pn	18 51 44.6	-1.9
JIS	Juneau Island	8.33	70	Pn		Pn	18 51 44.6	-2.9
L14K	Kuka Creek	8.51	311	Pn		Pn	18 51 50.9	+1.0
J26L	Joseph Creek	8.65	17			Pn	18 51 52.2	+0.3
WHY	Whitehorse	8.71	54	Pn		Pn	18 51 51.5	-1.3
L29M	L29M	8.82	35			Pn	18 51 54.9	+0.7
M30M	Minto, Yukon	8.92	41	Pn		Pn	18 51 55.3	-0.2
P32M	Atlin	8.92	62	Pn		Pn	18 51 54.6	-1.0
J16K	Anvik River	8.94	325	Pn		Pn	18 51 54.8	-1.0
U33K	Whale Pass	9.05	85	Pn		Pn	18 51 52.6	-4.7
DAWY	Dawson	9.17	29	Pn		Pn	18 51 58.4	-0.6
P33M	Teslin, Yukon	9.52	59	Pn		Pn	18 52 02.0	-1.9
Q32M	Nakina River	9.52	67	Pn		Pn	18 52 02.9	-1.1
K29M	Barlow Dome	9.54	33			Pn	18 52 03.9	-0.2
M31M	Drury Creek, Y	9.63	46	Pn		Pn	18 52 05.1	-0.2
N32M	Quiet Lake	9.71	54	Pn		Pn	18 52 06.2	-0.2
I28M	Miner Creek	10.19	23	Pn		Pn	18 52 14.4	+1.4
R33M	Jennings River	10.25	65			Pn	18 52 12.9	-0.9
J30M	Hart River	10.43	33	Pn		Pn	18 52 15.3	-1.0
DLBC	Dease Lake	10.63	71	Pn		Pn	18 52 17.9	-1.1
DLBC	Dease Lake comp=N,0.3nm,0.3s,baz=260,slow=11,SNR=2.5 comp=N,0.7nm,0.3s	10.63	71	Pn		Pn	18 52 19.5	+0.4
INK	Inuvik comp=N,0.1nm,0.3s,baz=254,slow=7.2,SNR=4.5 comp=N,1.8nm,1.0s	13.99	25	Pn		Pn	18 53 04.9	+0.2
YKA	Yellowknife Ar baz=265,slow=10,SNR=5.7 comp=N,0.6nm,1.1s	18.53	56	P		P	18 54 03.4	+0.3
H11N2	WAKE ISLAND Hy baz=28	48.88	240	T		T	19 52 00.4	
H11N3	WAKE ISLAND Hy baz=28	48.89	240	T		T	19 51 37.3	
H11N1	WAKE ISLAND Hy baz=28	48.90	240	T		T	19 52 02.1	
H11S1	WAKE ISLAND Hy baz=29	50.03	239	T		T	19 53 23.9	
H11S2	WAKE ISLAND Hy baz=29	50.04	239	T		T	19 53 25.5	
H11S3	WAKE ISLAND Hy baz=29	50.04	239	T		T	19 53 24.7	
SONM	Songino Array comp=N,0.3nm,0.6s,baz=46,slow=6.2,SNR=1.7 comp=N,0.3nm,0.6s	58.55	310	P		P	18 59 46.6	+3.3
MKAR	Makanchi Array comp=N,0.1nm,0.5s,baz=31,slow=6.5,SNR=4.3 comp=N,0.1nm,0.5s	68.50	325	P		P	19 00 49.9	+1.0

*IDC **16** 19:11:58.3±1.3, 9.°53S×119.°55E, h0km, mb3.8/7, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=121.8km s-min=18.2km az=55.0*

*DJA **16** 19:12:03.4±2.8, 10.°5±6.°×11.°9E±.°, h18km±27km, M4.3/12, mb4.5/6, MLv4.2/12*

ISC 16 19:12:03.9±0.7, 9.°75S±0.°08×119.°49E±0.°07, h35km, n36, σ1833/34, mb3.9/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.18	114	P			Pn	19 12 24.8	+1.0
PLAI	Plampang	1.92	298	P			Pn	19 12 35.1	+1.0
PLAI	Plampang	1.92	298	P			Pn	19 12 34.6	+0.5
TWSI	Taliwang, Sumb	2.76	291	P			Pn	19 12 46.9	+1.3
MMRI	Maumere	2.93	68	P			Pn	19 12 50.0	+1.9
DNP	Denpasar	4.35	284	P			Pn	19 13 08.4	+0.8
BKSI	Bulukumba	4.44	8	P			Pn	19 13 11.5	+2.7
SRBI	Singaraja	4.53	291	P			Pn	19 13 10.9	+0.9
SOEI	Soe	4.71	91	P			Pn	19 13 15.2	+2.5
JAGI	Jajag, Banyuwa	5.42	283	P			Pn	19 13 23.9	+1.7
JAGI	Jajag, Banyuwa 40nm,1.0s,0.3nm	5.42	283	P			Pn	19 13 22.5	+0.3
GMJI	Gumukmas	6.14	283	P			Pn	19 13 32.5	+0.3
BLJI	Banyuglugur	6.15	288	P			Pn	19 13 33.0	+0.7
TTSI	Tana Toraja 14nm,0.5s,0.1nm	6.67	3	P			Pn	19 13 41.8	+2.4
PWJI	Pagerwojo 31nm,1.1s,0.1nm	7.78	282	P			Pn	19 13 56.5	+1.8
UGM	Wanagama	9.04	281	P			Pn	19 14 12.8	+0.7
KDU	Kakadu	13.07	104	P			Pn	19 15 07.3	+0.1
GIRL	Giralia 92nm,1.6s	13.78	201	P			Pn	19 15 18.2	+1.4
MEEK	Meekatharra	16.82	183	P			P	19 15 59.4	+0.7
WRKA	Warakurna	17.36	152	P			P	19 16 05.4	+0.7
WRA	Warramunga Arr 0.2nm,0.3s,baz=300,slow=13,SNR=12 1.7nm,0.6s	17.56	127	P			Pn	19 16 04.5	-1.6
ASAR	Alice Springs 0.5nm,0.3s,baz=322,slow=12,SNR=54	19.53	137	P			Pn	19 16 29.4	-0.6
ASAR				PcP			PcP	19 20 49.1	+0.8
AS01	Alice Springs 0.5nm,0.6s,baz=317,slow=1.8,SNR=6.5 1.7nm,0.5s	19.56	137	P			Pn	19 16 29.4	-0.9
QIS	Mount Isa	22.17	121	P			P	19 16 57.4	+0.3
FORT	Forrest	22.40	160	P			P	19 16 59.2	-0.2
OOD	Oodnadatta	23.56	142	P			P	19 17 11.6	+0.3
STKA	Stephens Creek 1.3nm,0.6s,baz=311,slow=9.5,SNR=6.5 1.3nm,0.6s	30.08	140	P			P	19 18 10.3	+0.3
SONM	Songino Array 0.6nm,0.5s,baz=166,slow=7.8,SNR=6.9 0.6nm,0.5s	58.49	350	P			P	19 21 55.1	-1.5
MKAR	Makanchi Array 0.4nm,0.5s,baz=153,slow=6.9,SNR=10 0.4nm,0.5s	65.33	333	P			P	19 22 41.6	-1.0
H04N2	CROZET ISLANDS baz=80,slow=75,SNR=11	67.60	224	T		T	T	20 36 55.0	
H04N1	CROZET ISLANDS baz=80,slow=75,SNR=16	67.61	224	T		T	T	20 36 55.0	
H04N3	CROZET ISLANDS baz=80,slow=75,SNR=12	67.61	224	T		T	T	20 36 53.7	
KURBB	Kurchatov Arra 0.3nm,0.7s,baz=145,slow=5.9,SNR=4.7 0.3nm,0.7s	69.84	334	P			P	19 23 09.3	-1.6
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=143,slow=5.2,SNR=3.0 0.3nm,0.3s	69.90	339	P			P	19 23 10.1	-1.1
BVAR	Borovoye Array 0.4nm,0.5s,baz=123,slow=5.3,SNR=2.9 0.4nm,0.5s	75.17	332	P			P	19 23 41.3	-1.3
AKTO	Aktyubinsk 0.7nm,0.5s,baz=70,slow=5.0,SNR=2.7 0.7nm,0.5s	80.11	325	P			P	19 24 08.6	-1.6

IDC 16 19:12:27.8±2.2, 5.°18N×126.°01E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=215.2km s-min=23.6km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.5s,baz=342,slow=10,SNR=3.6 0.3nm,0.5s	26.28	162	P			P	19 18 05.5	+0.3
ASAR	Alice Springs 0.1nm,0.3s,baz=338,slow=7.8,SNR=1.8 0.1nm,0.3s	29.69	165	P			P	19 18 35.5	-0.3
MKAR	Makanchi Array 0.2nm,0.5s,baz=123,slow=7.7,SNR=7.9 0.2nm,0.5s	55.96	325	P			P	19 22 07.8	-0.3
KURBB	Kurchatov Arra 0.2nm,0.6s,baz=123,slow=7.3,SNR=4.8 0.2nm,0.6s	60.14	327	P			P	19 22 37.3	+0.1

DJA 16 19:12:45.0±0.5, 0.°N±5.°×12.°2E±.°, h67km±7km, M2.8/6, MLv2.8/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRSI	Marisa	0.28	91	P			Pn	19 12 57.1	+1.4
MRSI				S			Sn	19 13 07.0	+3.5
MPSI	Mapaga	1.77	265	P			Pn	19 13 14.0	+0.5
LUWI	Luwuk	1.88	144	P			Pn	19 13 14.4	-0.5
TTSI	Tana Toraja	3.96	208	P			Pn	19 13 43.6	+0.3

IDC 16 19:26:20.7±4.5, 25.°57N×140.°47E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=320.2km s-min=32.1km az=84.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.7nm,0.6s,baz=9.1,slow=8.6,SNR=11 0.7nm,0.6s	45.63	188	P			P	19 34 43.2	+0.2
ASAR	Alice Springs 0.2nm,0.9s,baz=3.8,slow=5.6,SNR=1.7 0.2nm,0.9s	49.36	188	P			P	19 35 11.4	-0.6
FINES	FINESS Array B 1.0nm,0.7s,baz=72,slow=4.5,SNR=5.1 1.0nm,0.7s	78.62	333	P			P	19 38 24.2	0.0

KRSC 16 19:36:01.7±0.8, 55.°27N×166.°32E, h35km±2km, Ml3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BKI	Bering	0.21	253	eP			Pn	19 36 09.0	-0.1
BKI				eS			Sn	19 36 14.2	-0.5
TUMD	Tumrok D	3.39	271	eP			Pn	19 36 55.5	+3.5
KMNR	Kamenistaya	3.50	281	eP			Pn	19 36 57.7	+4.2
TUMR	Tumrok	3.53	273	eP			Pn	19 36 58.5	+4.4
SMAR	Somma	4.84	249	eP			Pn	19 37 16.7	+4.5
AVH	Avacha	4.88	249	eP			Pn	19 37 17.1	+4.6
KRX	Arik	4.88	250	eP			Pn	19 37 17.3	+4.6
KOK	Koryaka	4.92	249	eP			Pn	19 37 17.8	+4.7
MTVR	Mutnovka	5.56	243	eP			Pn	19 37 26.8	+4.8

*TAP **16** 19:48:01.1, 24.°18N×121.°77E, h14km, ML3.8, B*

*ASIES **16** 19:48:01.1, 24.°18N×121.°77E, h14km, ML3.8, Mw3.5, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}0.47; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-0.30; $M_{r\theta}$0.19; $M_{\theta\phi}$-1.68; $M_{r\phi}$1.70; Fault plane solution: $M_0$2.42987×10^{21} NP1:ϕ_s4.73000°, δ83.23000°, λ47.56000°. NP2:ϕ_s267.38000°, δ42.88000°, λ170.02000°. Principal axes: T Plg36.9800°, Azm238.0450°; N Plg42.0800°, Azm10.8830°; P Plg25.7700°, Azm126.7270°;*

*JMA **16** 19:48:01.0±0.1, 24.°1N±0.2×121.°7E±0.°5, h18km, MV3.0/14, TAIWAN REGION*

ISC 16 19:48:01.1±0.8, 24.°17N±0.°01×121.°79E±0.°02, h13km±5km, n152, σ0981/254, 4C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	Heping Village baz=349	0.14	341	P			Pg	19 48 04.8	0.0
EHP				S			Sb	19 48 07.6	-1.1
ETL	Fush Village baz=261	0.15	265	⇓P			Pg	19 48 04.9	0.0
ETL				S			Sg	19 48 07.7	+0.2
EAHA	Aohua baz=347	0.16	343	⇓iP			Pg	19 48 05.0	0.0
EAHA				S			Sg	19 48 07.9	+0.2
NACB	Ninganchiao	0.18	270	P			Pg	19 48 05.1	-0.1
NACB	Ninganchiao baz=269	0.18	270	⇓iP			Pg	19 48 05.2	-0.1
NACB				*i* S			Sg	19 48 08.1	0.0
TWD	Chiawan baz=244	0.20	243	⇓iP			Pg	19 48 05.6	0.0
TWD				*i* S			Sg	19 48 09.1	+0.5
ENA	Nanau baz=353	0.26	350	⇓iP			Pg	19 48 06.6	0.0
ENA				*i* S			Sg	19 48 10.5	+0.3
HWA	Hwalien baz=226	0.26	221	P			Pb	19 48 07.5	-0.1
HWA				S			Sb	19 48 13.3	+1.4
EWUT	Wuta	0.27	357	⇓iP			Pg	19 48 07.0	+0.2
EWUT				*i* S			Sg	19 48 11.0	+0.3
ETLH	Xiulin Townshi baz=276	0.28	277	⇓iP			Pg	19 48 07.0	0.0
ETLH				*i* S			Sg	19 48 11.2	+0.1
ETM	Tongmen baz=231	0.34	233	⇓iP			Pg	19 48 08.0	0.0
ETM				*e*S			Sg	19 48 13.3	+0.6
LXIB	Xiulin Townshi baz=245	0.38	246	⇓*i*P			Pg	19 48 08.5	-0.2
LXIB				S			Sg	19 48 14.1	+0.2
ESAO	Su ao baz=4.0	0.40	7	P			Pg	19 48 09.2	+0.1
ESAO				S			Sg	19 48 14.9	+0.2
LATG	Datong baz=326	0.43	326	⇓iP			Pg	19 48 09.8	0.0
LATG				S			Sg	19 48 15.4	-0.2
SHUL	Shoufeng baz=199	0.44	209	*e*P			Pb	19 48 10.9	+0.3
SHUL				*e*S			Sn	19 48 19.2	-1.6
TWC	Suao baz=6.0	0.44	7	⇓iP			Pg	19 48 10.0	+0.2
TWC				*i* S			Sg	19 48 16.0	+0.3
NNSH	Datong baz=304	0.45	304	⇓iP			Pg	19 48 10.1	0.0
NNSH				*i* S			Sg	19 48 16.2	0.0
NNSB	Datong baz=304	0.45	304	⇓iP			Pg	19 48 10.1	0.0
NNSB				S			Sg	19 48 16.1	-0.1
NDS	Dongshan baz=352	0.46	351	⇓iP			Pb	19 48 10.5	-0.6
NDS				*i* S			Sb	19 48 17.0	-0.9
NNS	Nan Shan baz=305	0.47	305	⇓iP			Pg	19 48 10.3	0.0
NNS				*i* S			Sb	19 48 16.8	-1.3
EOS2	EOS2 baz=45	0.47	59	*e*P			Pb	19 48 12.3	+1.1
WHF	Hehuan Shan baz=266	0.48	267	P			Pg	19 48 10.7	-0.1
WHF				S			Sg	19 48 17.2	0.0
EOS4	EOS4 baz=97	0.48	96	*e*P			Pn	19 48 12.6	-0.8
ESL	Shilin baz=227	0.48	223	P			Pg	19 48 10.8	+0.2
ESL				S			Sb	19 48 18.8	+0.4
EOS3	EOS3 baz=75	0.49	77	*e*P			Pn	19 48 13.0	-0.7
NDT	Datong Townshi baz=329	0.50	329	⇓iP			Pb	19 48 11.2	-0.5
NDT				S			Sb	19 48 18.2	-0.7
FUSS	Fushou baz=278	0.51	279	⇓iP			Pb	19 48 11.3	-0.6
FUSS				S			Sg	19 48 18.0	0.0
ENTT	Nioudou baz=336	0.51	336	⇓iP			Pb	19 48 11.3	-0.6
ENTT				*i* S			Sb	19 48 18.5	-0.7
TEGC	Jichi Village baz=198	0.52	207	*e*P			Pb	19 48 12.1	+0.1
TEGC				*e*S			Sn	19 48 21.4	-1.4
TWE	Neicheng baz=349	0.56	348	⇓iP			Pb	19 48 12.2	-0.5
TWE				*i* S			Sb	19 48 19.8	-0.7
TWT	Tachien baz=277	0.57	278	⇓iP			Pb	19 48 12.8	-0.2
TWT				*i* S			Sb	19 48 20.4	-0.6
CHGB	Renai baz=253	0.57	259	⇓iP			Pb	19 48 12.5	-0.6
CHGB				S			Sb	19 48 20.6	-0.7
TDCB	Techi baz=278	0.58	278	⇓iP			Pb	19 48 12.9	-0.4
TDCB				*i* S			Sb	19 48 20.3	-1.1
WARBT	Fenglin Townsh baz=224	0.58	219	*i* P			Pg	19 48 12.3	-0.2
WARBT				S			Sg	19 48 20.6	+0.3
ILA	Ilan baz=352	0.59	356	P			Pb	19 48 13.2	-0.1
ILA				S			Sb	19 48 21.7	+0.1
FUSB	Fushanzhiwuyua baz=335	0.61	342	⇓iP			Pb	19 48 13.2	-0.6
FUSB				S			Sg	19 48 21.2	0.0
YHNB	Yeheng	0.62	323	P			Pb	19 48 13.4	-0.5
YHNB	Yeheng baz=322	0.62	323	⇓iP			Pb	19 48 13.4	-0.5
YHNB				*i* S			Sb	19 48 21.6	-1.0
NSK	Sanguang baz=322	0.64	322	⇓iP			Pb	19 48 13.5	-0.6
NSK				*i* S			Sb	19 48 22.1	-0.9
WUSB	Renai baz=248	0.64	254	P			Pb	19 48 13.8	-0.4

WUSB				S		Sg	19 48 22.2	0.0
	baz=248							
NWLT	**Wulai**	**0.66**	**336**	P		**Pb**	**19 48 13.9**	**-0.5**
	baz=336							
NWLT				S		Sg	19 48 22.5	-0.1
	baz=336							
EGS		**0.68**	**11**	*e*P		**Pb**	**19 48 14.9**	**+0.1**
	baz=19							
VWDT	**VWDT**	**0.73**	**235**	⇑*i*P		**Pb**	**19 48 15.4**	**-0.2**
	baz=241							
VWDT				*i* S		Sb	19 48 25.9	+0.5
	baz=241							
HGSD	**Ruisui**	**0.76**	**206**	*e*P		**Pg**	**19 48 15.9**	**+0.1**
	baz=197							
HGSD				*e*S		Sn	19 48 28.6	-0.1
	baz=197							
NFF	**Wufeng Townshi**	**0.77**	**307**	P		**Pb**	**19 48 16.2**	**-0.1**
	baz=306							
NFF				*e*S		Sb	19 48 26.1	-0.6
	baz=306							
EHY	**Hungye**	**0.79**	**213**	P		**Pg**	**19 48 15.3**	**-1.2**
	baz=224							
EHY				*e*S		Sb	19 48 28.2	+0.9
	baz=224							
WCS	**Beigang Elemen**	**0.81**	**262**	*e*P		**Pb**	**19 48 17.0**	**0.0**
	baz=262							
WCS				*e*S		Sb	19 48 27.9	0.0
	baz=262							
NHDH	**Xindian Distri**	**0.82**	**343**	*e*P		**Pb**	**19 48 17.0**	**-0.2**
	baz=342							
NHDH				*e*S		Sb	19 48 27.8	-0.5
	baz=342							
TWA	**Mucha**	**0.83**	**347**	*e*P		**Pb**	**19 48 17.3**	**0.0**
	baz=337							
TWA				*e*S		Sb	19 48 28.7	+0.4
	baz=337							
TATO	**Taipei**	**0.85**	**341**	P		**Pn**	**19 48 18.0**	**-0.7**
LIOB	**Emei**	**0.85**	**304**	*e*P		**Pn**	**19 48 18.0**	**-0.7**
	baz=303							
LIOB				*e*S		Sn	19 48 29.6	-1.4
	baz=303							
TWB1	**Santiao Chiao**	**0.85**	**12**	P		**Pb**	**19 48 17.7**	**0.0**
	baz=7.0							
TWB1				*e*S		Sb	19 48 29.2	+0.2
	baz=7.0							
NSTT	**Nanjuang**	**0.85**	**303**	*e*P		**Pn**	**19 48 17.8**	**-0.9**
	baz=302							
NSTT				*e*S		Sb	19 48 29.3	+0.2
	baz=302							
SSLB	**Suanglung**	**0.86**	**244**	P		**Pb**	**19 48 17.6**	**-0.2**
SSLB	**Suanglung**	**0.86**	**244**	⇑P		**Pg**	**19 48 17.2**	**-0.4**
	baz=252							
SSLB				*e*S		Sb	19 48 29.2	0.0
	baz=252							
SMLT	**Sun Moon Lake**	**0.86**	**251**	P		**Pg**	**19 48 17.6**	**-0.2**
	baz=250							
SMLT				S		Sb	19 48 29.9	+0.3
	baz=250							
NHY	**Taipei**	**0.89**	**347**	*e*P		**Pg**	**19 48 18.2**	**0.0**
	baz=344							
NWF	**Wu-fen Shan**	**0.90**	**359**	*e*P		**Pn**	**19 48 18.8**	**-0.7**
	baz=352							
NWF				*e*S		Sb	19 48 30.2	-0.2
	baz=352							
TYC	**Yuchr**	**0.90**	**253**	⇑P		**Pb**	**19 48 18.0**	**-0.4**
	baz=253							
TYC				*e*S		Sn	19 48 31.6	-0.5
	baz=253							
WFSB	**Wu-fen Shan**	**0.90**	**359**	*e*P		**Pn**	**19 48 18.9**	**-0.5**
	baz=352							
WFSB				*e*S		Sg	19 48 30.2	+0.1
	baz=352							
YULB	**Yu-li**	**0.90**	**210**	P		**Pb**	**19 48 18.1**	**-0.4**
YULB	**Yu-li**	**0.90**	**210**	*e*P		**Pb**	**19 48 16.8**	**-1.7**
	baz=219							
ECBN	**Changbin**	**0.91**	**200**	*e*P		**Pn**	**19 48 19.1**	**-0.4**
	baz=200							
SXI1	**Grass Mountain**	**0.92**	**5**	*e*P		**Pn**	**19 48 19.2**	**-0.5**
	baz=345							
EYUL	**Yuli**	**0.93**	**208**	*e*P		**Pg**	**19 48 19.1**	**+0.1**
	baz=223							
TWF1	**Yuli**	**0.93**	**209**	*e*P		**Pb**	**19 48 17.4**	**-1.7**
	baz=209							
TWF1				*e*S		Sg	19 48 31.5	+0.2
	baz=209							
TWQ1	**Liyutan**	**0.95**	**281**	P		**Pn**	**19 48 20.0**	**-0.1**
	baz=281							
TWQ1				S		Sn	19 48 33.1	-0.3
	baz=281							
SBCB	**Hsinchu**	**0.96**	**310**	*e*P		**Pn**	**19 48 20.7**	**+0.5**
	baz=310							
SBCB				*e*S		Sn	19 48 34.5	+0.8
	baz=310							
NCUH	**Zhongli**	**0.96**	**325**	*e*P		**Pn**	**19 48 20.4**	**+0.1**
	baz=323							
NCUH				*e*S		Sn	19 48 34.5	+0.6
	baz=323							
NSY	**Sanyi**	**0.97**	**285**	P		**Pn**	**19 48 20.6**	**+0.2**
	baz=284							
NSY				S		Sn	19 48 34.5	+0.4
	baz=284							
TNOU	**National Taiwa**	**0.97**	**359**	*e*P		**Pn**	**19 48 20.4**	**-0.1**
	baz=353							
TNOU				*e*S		Sg	19 48 32.6	0.0
	baz=353							
HSN	**Hsinchu**	**0.98**	**310**	*e*P		**Pn**	**19 48 20.6**	**+0.2**
	baz=304							
HSN				*e*S		Sn	19 48 35.4	+1.2
	baz=304							
NMLH	**Miaoli**	**0.98**	**292**	P		**Pn**	**19 48 21.1**	**+0.5**
	baz=291							
TWS1	**Kuangyinshan**	**0.98**	**340**	*e*P		**Pn**	**19 48 20.4**	**-0.1**
	baz=339							
TWS1				*e*S		Sn	19 48 34.5	+0.1
	baz=339							
YM01	**YM01**	**0.99**	**348**	*e*P		**Pn**	**19 48 20.4**	**-0.3**
	baz=330							
YM01				*e*S		Sn	19 48 34.4	-0.2
	baz=330							
TCU	**Taichung**	**1.02**	**269**	*e*P		**Pn**	**19 48 22.1**	**+1.1**
	baz=269							
TCU				S		Sn	19 48 37.2	+2.0
	baz=269							
YM08	**YM08**	**1.03**	**350**	*e*P		**Pg**	**19 48 20.7**	**-0.2**
	baz=333							
WJS	**Zhushan**	**1.03**	**250**	P		**Pn**	**19 48 21.7**	**+0.5**
	baz=246							
WJS				*e*S		Sn	19 48 37.0	+1.4
	baz=246							
NTST	**Danshui**	**1.03**	**343**	*e*P		**Pn**	**19 48 21.5**	**+0.3**
	baz=340							
NTST				*e*S		Sn	19 48 37.2	+1.6
	baz=340							
ANP	**Anpu**	**1.04**	**346**	P		**Pn**	**19 48 21.1**	**-0.3**
	baz=344							
CHKH	**Chenggong**	**1.04**	**200**	P		**Pb**	**19 48 20.7**	**-0.3**
	baz=217							
CHKH				*e*S		Sn	19 48 36.2	+0.5
	baz=217							
WNT	**Mingjian**	**1.05**	**254**	*e*P		**Pn**	**19 48 21.9**	**+0.4**
	baz=251							
WNT				*e*S		Sn	19 48 37.8	+1.7
	baz=251							
NHW	**Xinwu Township**	**1.07**	**321**	*e*P		**Pg**	**19 48 21.6**	**-0.1**
	baz=319							
NHW				S		Sn	19 48 38.5	+2.0
	baz=319							
JYNG	**Yonagunijimaku**	**1.09**	**75**	S		**Sn**	**19 48 37.9**	**+1.0**
TWY	**Chenhua**	**1.11**	**351**	*e*P		**Pn**	**19 48 22.1**	**-0.2**
	baz=334							
TWY				*e*S		Sn	19 48 38.7	+1.2
	baz=334							
ALS	**Alishan**	**1.12**	**234**	⇑*i*P		**Pb**	**19 48 22.2**	**-0.2**
	baz=225							
ALS				S		Sn	19 48 38.9	+0.9
	baz=225							
WCHH	**Zhanghua**	**1.13**	**266**	P		**Pg**	**19 48 23.6**	**+0.8**
	baz=265							
WCHH				S		Sn	19 48 41.0	+3.1
	baz=265							
CHKT	**Chengkung**	**1.14**	**200**	P		**Pb**	**19 48 21.9**	**-0.7**
	baz=215							
CHKT				*e*S		Sn	19 48 38.7	+0.6
	baz=215							
YOJ	**Yonaguni jima**	**1.15**	**75**	P		**Pn**	**19 48 22.7**	**-0.1**
YOJ	**Yonaguni jima**	**1.15**	**75**	*e*P		**Pn**	**19 48 22.9**	**0.0**
	baz=76							
YOJ	**Yonaguni jima**	**1.15**	**75**	P		**Pn**	**19 48 22.9**	**0.0**
YOJ				S		Sg	19 48 38.8	+0.6
EHD	**Haiduan**	**1.15**	**208**	*e*P		**Pn**	**19 48 20.9**	**-2.0**
	baz=208							
EHD				*e*S		Sg	19 48 39.4	+1.1
	baz=208							
ECS	**Chishang**	**1.19**	**206**	*e*P		**Pn**	**19 48 23.3**	**-0.2**
	baz=207							
ELDTW	**Lidau**	**1.21**	**216**	*e*P		**Pn**	**19 48 21.9**	**-1.8**
	baz=204							
ELDTW				*e*S		Sn	19 48 39.8	-0.3
	baz=204							
WGK	**Gukeng**	**1.23**	**247**	P		**Pg**	**19 48 24.4**	**-0.3**
	baz=247							
WGK				S		Sg	19 48 43.7	+3.1
	baz=247							
WDLH	**Douliu**	**1.24**	**247**	*e*P		**Pg**	**19 48 24.8**	**-0.2**
	baz=247							
WDLH				*e*S		Sg	19 48 45.3	+4.1
	baz=247							
EDH	**Donghe**	**1.28**	**201**	*e*P		**Pn**	**19 48 22.4**	**-2.2**
	baz=186							
EDH				*e*S		Sb	19 48 40.5	-0.7
	baz=186							
WCKO	**Fanlu**	**1.31**	**236**	P		**Pg**	**19 48 25.9**	**-0.4**
	baz=236							
WCKO				*e*S		Sg	19 48 45.2	+1.9
	baz=236							
WRL	**Guolierlin Hig**	**1.32**	**258**	*e*P		**Pb**	**19 48 25.7**	**0.0**
	baz=259							
WRL				*e*S		Sg	19 48 44.8	+1.1
	baz=259							
CHN2	**Minshiung**	**1.36**	**242**	*e*P		**Pg**	**19 48 26.9**	**-0.4**
	baz=243							
STYH	**Taoyuan**	**1.36**	**223**	*e*P		**Pn**	**19 48 25.7**	**-0.1**
	baz=224							
STYH				*e*S		Sn	19 48 42.6	-1.1
	baz=224							
CHN4	**Tsaushan**	**1.37**	**234**	P		**Pb**	**19 48 26.5**	**0.0**
	baz=233							
CHN4				S		Sg	19 48 46.2	+0.9
	baz=233							
WTK	**Tuku**	**1.37**	**250**	*e*P		**Pb**	**19 48 26.6**	**0.0**
	baz=250							
WTK				*e*S		Sg	19 48 47.5	+2.2
	baz=250							
TPUB	**Ta-pu**	**1.37**	**231**	P		**Pb**	**19 48 26.4**	**-0.2**
TPUB	**Ta-pu**	**1.37**	**231**	P		**Pb**	**19 48 26.3**	**-0.3**
	baz=220							
TPUB				S		Sg	19 48 46.2	+0.8
	baz=220							
STYT	**Tauyuan**	**1.38**	**224**	P		**Pn**	**19 48 26.2**	**+0.1**
	baz=224							
STYT				*e*S		Sg	19 48 46.2	+0.6
	baz=224							
LONT	**Longtian**	**1.40**	**206**	*e*P		**Pn**	**19 48 24.5**	**-1.8**
	baz=206							
WTCT	**Ta-ch'eng**	**1.42**	**258**	*e*P		**Pb**	**19 48 27.5**	**+0.2**
	baz=258							
WTCT				*e*S		Sg	19 48 48.1	+1.5
	baz=258							
WTP	**Ta-pu**	**1.42**	**230**	P		**Pb**	**19 48 27.0**	**-0.4**
	baz=229							
WTP				S		Sg	19 48 47.3	+0.5
	baz=229							
CHY	**Chiayi**	**1.42**	**242**	*e*P		**Pb**	**19 48 27.1**	**-0.3**
	baz=242							
CHY				*e*S		Sg	19 48 47.2	+0.3
	baz=242							
TWK	**Hsinying**	**1.50**	**233**	*e*P		**Pb**	**19 48 28.5**	**-0.2**
	baz=232							
TWK				*e*S		Sg	19 48 49.2	-0.2
	baz=232							
TWGBT	**Beinan**	**1.50**	**206**	P		**Pn**	**19 48 25.9**	**-1.7**
TWGBT	**Beinan**	**1.50**	**206**	*e*P		**Pn**	**19 48 25.7**	**-2.0**
	baz=192							
CHN1	**Nanshi**	**1.52**	**230**	P		**Pb**	**19 48 28.9**	**-0.2**
	baz=230							
CHN1				S		Sg	19 48 49.6	-0.5
	baz=230							
SNST	**Tainan City**	**1.52**	**232**	*e*P		**Pb**	**19 48 29.0**	**-0.1**
	baz=231							
SNST				*e*S		Sg	19 48 50.5	+0.5
	baz=231							
LDUT	**Ludao**	**1.52**	**191**	*e*P		**Pn**	**19 48 28.2**	**+0.3**
	baz=181							
SGST	**Jiashian**	**1.55**	**226**	P		**Pn**	**19 48 28.5**	**+0.1**
	baz=226							
SGST				S		Sg	19 48 50.4	-0.7
	baz=226							
WSL	**Shuilin Townsh**	**1.57**	**246**	*e*P		**Pb**	**19 48 30.1**	**+0.1**
	baz=246							
WSL				*e*S		Sg	19 48 52.9	+1.3
	baz=246							
ICHU	**Yijhu**	**1.60**	**240**	*e*P		**Pb**	**19 48 30.4**	**-0.1**
	baz=239							
ICHU				*e*S		Sg	19 48 52.8	+0.1
	baz=239							
CHN8	**Yiju**	**1.67**	**241**	*e*P		**Pb**	**19 48 31.1**	**-0.5**
	baz=240							
CHN8				*e*S		Sg	19 48 54.2	-0.5
	baz=240							
CHN3	**Shinhua**	**1.70**	**230**	*e*P		**Pg**	**19 48 33.1**	**-0.7**
	baz=229							
SSHA	**Shanhua**	**1.72**	**233**	*e*S		**Sg**	**19 48 55.7**	**-0.8**
	baz=232							
ECL	**Taimali**	**1.75**	**206**	*e*P		**Pn**	**19 48 30.6**	**-0.5**
	baz=195							
SCST	**Cishan**	**1.75**	**223**	*e*P		**Pb**	**19 48 32.8**	**-0.2**
	baz=222							
SCST				*e*S		Sg	19 48 57.4	0.0
	baz=222							
SHHT	**Tainan City**	**1.75**	**229**	*e*P		**Pb**	**19 48 32.9**	**-0.1**
	baz=228							
SCLT	**Jiali**	**1.77**	**236**	*e*P		**Pb**	**19 48 32.6**	**-0.8**
	baz=235							
SCLT				*e*S		Sg	19 48 57.1	-0.9
	baz=235							
IRIF	**Iriomote-Funau**	**1.78**	**84**	*e*P		**Pn**	**19 48 32.5**	**+1.0**
IRIF				*e*S		Sb	19 48 55.6	0.0
TSMG	**Majia**	**1.80**	**216**	*e*P		**Pb**	**19 48 33.0**	**-0.9**
	baz=227							
TSMG				*e*S		Sb	19 48 56.4	+0.1
	baz=227							
TWM1	**Shoushan**	**1.84**	**223**	*e*P		**Pb**	**19 48 34.6**	**0.0**
	baz=223							
HATJ	**Hateruma jima**	**1.84**	**93**	*e*P		**Pn**	**19 48 32.7**	**+0.3**
HATJ				S		Sn	19 48 56.7	+1.1
TSCK	**Chigu Township**	**1.87**	**237**	*e*P		**Pb**	**19 48 33.6**	**-1.4**
	baz=236							
TSCK				*e*S		Sb	19 48 58.3	0.0
	baz=236							
SGLT	**Jiouru**	**1.87**	**220**	*e*P		**Pb**	**19 48 35.1**	**0.0**
	baz=204							
MASBT	**Mashibuluo**	**1.88**	**215**	*e*P		**Pn**	**19 48 32.9**	**-0.1**
	baz=214							
EAST	**Anshuo**	**1.98**	**206**	*e*P		**Pn**	**19 48 35.0**	**+0.7**
	baz=196							
TAWH	**Dawu Township**	**2.00**	**205**	*e*P		**Pb**	**19 48 37.0**	**-0.4**
	baz=194							
JKRS	**Kuro-shima**	**2.03**	**88**	P		**Pn**	**19 48 35.9**	**+1.0**
JKRS				*e*S		Sb	19 49 02.2	-0.7
SCZT	**Fangliau**	**2.09**	**211**	*e*P		**Pn**	**19 48 37.0**	**+1.2**
	baz=196							
PHUB	**P'eng-hu**	**2.14**	**253**	*e*P		**Pn**	**19 48 36.5**	**+0.1**
	baz=253							
JIJ	**Ishigaki jima**	**2.15**	**84**	P		**Pn**	**19 48 36.6**	**0.0**
JIJ				S		Sn	19 49 02.5	-0.7
WDGT	**Dungji**	**2.15**	**245**	*e*P		**Pn**	**19 48 37.3**	**+0.6**
	baz=245							
VWUC	**VWUC**	**2.28**	**291**	*e*P		**Pn**	**19 48 37.9**	**-0.5**
	baz=280							
JISG	**Ishigakijimahi**	**2.33**	**79**	P		**Pn**	**19 48 39.1**	**-0.1**
JISG				*e*S		Sn	19 49 07.7	0.0
VCHM	**Qimei**	**2.37**	**247**	*e*P		**Pn**	**19 48 40.4**	**+0.8**
	baz=229							
TWKBT	**Hengchun**	**2.40**	**202**	*e*P		**Pn**	**19 48 39.9**	**-0.1**
	baz=193							
PTMZ	**Houxiangcun**	**2.58**	**290**	*e*P		**Pn**	**19 48 42.2**	**-0.3**
	baz=289							
MATB	**Ma-tsu**	**2.58**	**320**	*e*P		**Pn**	**19 48 41.4**	**-1.2**
	baz=315							
KNM	**Kinmen**	**3.07**	**275**	*e*P		**Pn**	**19 48 50.0**	**+0.7**
	baz=275							
XPSS	**Dashiqiu**	**3.10**	**333**	*e*P		**Pn**	**19 48 48.5**	**-1.2**
	baz=326							
KNMB	**Chin-men Tao**	**3.12**	**276**	*e*P		**Pn**	**19 48 49.1**	**-0.8**
	baz=276							
AXDP	**Jialang**	**3.56**	**283**	*e*P		**Pn**	**19 48 55.7**	**-0.2**
	baz=282							
DSXP	**Dongshan**	**4.02**	**264**	*e*P		**Pn**	**19 49 01.5**	**-0.9**
	baz=264							
SXFK	**Yanhouchang**	**4.36**	**301**	*e*P		**Pn**	**19 49 06.7**	**-0.3**
	baz=300							

NEIC ***16*** *19:48:34.7±1.8,20.5°S±0.1°×177.9°W±0.1,h453km±12km, mb4.4/21, Error ellipse: s-maj=19.9km s-min=15.8km az=225.0*

IDC ***16*** *19:48:38.4±4.9,20.33°S×177.89°W,h518km±53km, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=25.0km s-min=21.6km az=6.0*

ISC 16 19:48:33.3±0.5,20.3°S±0.1°×177.92°W±0.07,h450km,n40, σ1°58/43,mb4.2/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.63**	**82**	P	**P**	**19 50 24.9**	**+0.1**
NIUE				S	**S**	**19 51 58.9**	**+2.7**
URZ	**Urewera**	**18.40**	**192**	P	**P**	**19 52 19.6**	**-0.2**
	2.7nm,0.3s,baz=30,slow=13,SNR=1.9						
BFZ	**Birch Farm**	**20.91**	**192**	P	**P**	**19 52 41.4**	**-1.5**
MRZ	**Mangatainoka R**	**21.03**	**194**	P	**P**	**19 52 41.8**	**-2.2**
MRZ				IAmb	IAmb	19 53 12.5	
	comp=Z,24nm,1.3s						
THZ	**Tophouse**	**22.76**	**198**	P	**P**	**19 52 59.1**	**-0.5**
THZ				IAmb	IAmb	19 53 40.3	
	comp=Z,45nm,1.4s						
GVZ	**Greta Valley S**	**23.84**	**197**	P	**P**	**19 53 07.4**	**-1.9**
LTZ	**Lake Taylor**	**23.88**	**198**	P	**P**	**19 53 09.2**	**-0.4**
LTZ				IAmb	IAmb	19 53 49.3	
	comp=Z,20nm,1.3s						
RABL	**Rabaul**	**33.23**	**295**	P	**P**	**19 54 34.6**	**+2.8**
CTAO	**Charters Tower**	**33.58**	**264**	P	**P**	**19 54 34.9**	**+0.2**
CTAO				IAmb	IAmb	19 54 37.1	
	comp=Z,15nm,1.1s						
TOO	**Toolangi**	**36.07**	**234**	P	**P**	**19 54 55.6**	**+0.1**
TOO				IAmb	IAmb	19 55 02.4	
	comp=Z,14nm,1.2s						
COEN	**Coen**	**37.64**	**273**	P	**P**	**19 55 08.8**	**+0.1**
COEN				IAmb	IAmb	19 55 33.7	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**37.94**	**244**	P	**P**	**19 55 10.7**	**-0.2**
STKA	**Stephens Creek**	**37.94**	**244**	P	**P**	**19 55 11.9**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=101,slow=8.7,SNR=6.5 comp=Z,0.8nm,0.5s						
BBOO	**Buckleboo**	**42.70**	**243**	P	**P**	**19 55 49.4**	**+0.2**
BBOO				IAmb	IAmb	19 55 50.4	
	comp=Z,25nm,1.5s						
PTCN	**Pitcairn Islan**	**44.21**	**105**	P	**P**	**19 56 03.3**	**+2.1**
WR0	**Warramunga Arr**	**44.51**	**262**	P	**P**	**19 56 03.5**	**-0.2**
AS31	**Alice Springs**	**44.63**	**257**	P	**P**	**19 56 05.1**	**+0.5**
AS31				PcP	**pwP**	**19 57 36.5**	**+2.3**
ASAR	**Alice Springs**	**44.63**	**257**	P	**P**	**19 56 04.9**	**+0.3**
ASAR				PcP	**pwP**	**19 57 36.8**	**+2.5**
ASAR	**Alice Springs**	**44.63**	**257**	P	**P**	**19 56 05.3**	**+0.7**
	comp=Z,5.2nm,0.5s,baz=96,slow=7.6,SNR=58						
ASAR				PcP	**pwP**	**19 57 36.6**	**+2.4**
	comp=Z,0.6nm,0.5s,baz=106,slow=3.7,SNR=4.7 comp=Z,5.2nm,0.5s						
WB0	**Warramunga Arr**	**44.68**	**262**	P	**P**	**19 56 05.0**	**0.0**
WB0				IAmb	IAmb	19 56 05.3	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.70**	**262**	P	**P**	**19 56 04.3**	**-0.8**
WRA	**Warramunga Arr**	**44.70**	**262**	P	**P**	**19 56 05.0**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=96,slow=7.6,SNR=85 comp=Z,1.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**53.12**	**262**	P	**P**	**19 57 08.5**	**+0.6**
SOEI	**Soe**	**56.57**	**272**	P	**P**	**19 57 32.2**	**-0.2**
SOEI				IAmb	IAmb	19 57 40.1	
	comp=Z,31nm,1.1s						
VNDA	**Vanda**	**58.11**	**185**	P	**P**	**19 57 42.3**	**+0.5**
VNDA				IAmb	IAmb	19 58 24.5	
	comp=Z,15nm,1.4s						
JCJ	**Chichijima**	**60.94**	**319**	P	**P**	**19 58 00.0**	**-1.6**
QSPA	**South Pole Qui**	**69.76**	**180**	P	**P**	**19 58 56.2**	**-0.6**
QSPA				IAmb	IAmb	19 58 56.9	
	comp=Z,3.8nm,0.7s						
QSPA				PcP	**PcP**	**19 59 13.5**	**-2.7**
QSPA	**South Pole Qui**	**69.76**	**180**	P	**P**	**19 58 56.1**	**-0.7**
	comp=Z,2.7nm,0.6s,baz=11,slow=2.2,SNR=23 comp=Z,2.7nm,0.6s						
NVAR	**Mina Array Bea**	**80.84**	**43**	P	**P**	**19 59 59.0**	**-0.5**
	comp=Z,0.2nm,0.2s,baz=222,slow=9.4,SNR=1.6 comp=Z,0.2nm,0.2s						
TXAR	**Lajitas Array**	**86.89**	**57**	P	**P**	**20 00 29.2**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=221,slow=6.9,SNR=7.7 comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**88.11**	**13**	P	**P**	**20 00 32.2**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=225,slow=5.6,SNR=5.8 comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**88.77**	**43**	P	**P**	**20 00 36.9**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=202,slow=4.4,SNR=4.5 comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**111.12**	**313**	PKiKP	**PKiKP**	**20 06 11.7**	**-3.1**
	comp=Z,0.2nm,0.6s,baz=236,slow=2.9,SNR=4.5						
KURBB	**Kurchatov Arra**	**113.95**	**317**	PKiKP		20 06 16.9	
	comp=Z,0.2nm,0.7s,baz=76,slow=1.5,SNR=4.3						
BVAR	**Borovoye Array**	**118.98**	**320**	PKP	**PKPdf**	**20 06 27.0**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=119,slow=2.4,SNR=7.4						
FINES	**FINESS Array B**	**135.61**	**344**	PKP	**PKPdf**	**20 07 01.1**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=90,slow=4.7,SNR=3.9						
AKASG	**Malin Array Be**	**142.88**	**331**	PKhKP	PKPpre	20 07 07.9	
	comp=Z,1.5nm,0.5s,baz=40,slow=4.1,SNR=4.8						
BRTR	**Keskin Array B**	**146.76**	**313**	PKPbc	**PKPdf**	**20 07 21.3**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=128,slow=8.1,SNR=4.8						
MMAI	**Mount Meron Ar**	**147.78**	**300**	PKPbc	**PKPdf**	**20 07 25.4**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=74,slow=6.2,SNR=9.9						
GERES	**GERESS Array B**	**150.03**	**345**	PKPbc	**PKPdf**	**20 07 29.9**	**+3.2**
	comp=Z,0.5nm,0.6s,baz=358,slow=9.6,SNR=4.1						

IDC ***16*** *19:49:23.5±1.8,41.3°S×90.6°W,h0km,mb3.5/4, mbtmp3.6/5,ML3.5/1,MS4.0/16,Error ellipse: s-maj=74.9km s-min=37.7km az=20.0*

GCMT ***16*** *19:49:29.3±0.4,40.99°S±0.04×90.28°W±0.03,h15km±1km, MW4.9/84,Moment Tensor Solution. s25,c27; s84,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.23±.16; $M_{\theta\theta}$0.07±.10; $M_{\phi\phi}$2.16±.12; $M_{r\theta}$1.26±.27; $M_{r\phi}$-0.28±.06; $M_{\theta\phi}$0.08±.21; Best double couple: $M_0$2.49600×10^{16} NP1:ϕ_s330.00000°,δ51.00000°,λ-122.00000°. NP2: ϕ_s194.00000°,δ49.00000°,λ-57.00000°. Principal axes: T 2.1990, Plg1.0000°, Azm82.0000°; N 0.5920, Plg24.0000°, Azm351.0000°; P -2.7930, Plg66.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *19:49:31.3±1.9,41.1°S±0.2×89.9°W±0.2,h10km±2km, mb4.4/40 Error ellipse:

MT09					IAmb	IAmb	19 53 41.2	
	comp=Z,28nm,1.2s							
BO04	**La Punta**	**17.01**	**71**	P	**P**		**19 53 27.8**	**-0.8**
BO04				IAmb	IAmb		19 53 42.2	
	comp=Z,26nm,1.4s							
MT02	**Curacav**	**17.03**	**68**	P	**Pn**		**19 53 26.9**	**0.0**
MT13	**San Alfonso**	**17.37**	**71**	P	**P**		**19 53 33.3**	**+0.7**
LMEL	**Las Melosas**	**17.37**	**71**	P	**P**		**19 53 31.9**	**-0.9**
PEL	**Peldehue**	**17.41**	**68**	P	**P**		**19 53 32.8**	**-0.2**
PEL				IAmb	IAmb		19 53 53.6	
	comp=Z,39nm,1.5s							
VA03	**San Esteban**	**17.71**	**67**	P	**P**		**19 53 36.7**	**+0.3**
CO06	**Fray Jorge**	**18.25**	**60**	P	**P**		**19 53 41.7**	**-0.5**
CO06				IAmb	IAmb		19 53 57.1	
	comp=Z,26nm,1.4s							
CO02	**Combarbal**	**18.33**	**63**	P	**P**		**19 53 42.6**	**-0.7**
CO02				IAmb	IAmb		19 53 54.1	
	comp=Z,18nm,0.9s							
CO01	**Juntas del Tor**	**19.71**	**61**	P	**P**		**19 53 57.8**	**-0.8**
CO01				IAmb	IAmb		19 54 20.4	
	comp=Z,18nm,1.4s							
LCO	**Las Campanas**	**19.96**	**58**	P	**P**		**19 53 59.9**	**-1.4**
AC05	**El Transito**	**20.35**	**58**	P	**P**		**19 54 04.5**	**-1.0**
AC05				IAmb	IAmb		19 54 16.6	
	comp=Z,44nm,1.5s							
RPN	**Rapa Nui**	**21.28**	**306**	LR	LR		20 00 05.7	
	comp=Z,388nm,19.9s,baz=118,slow=31							
TRQA	**Tornquist**	**21.79**	**91**	P	**P**		**19 54 22.7**	**+1.9**
TRQA				IAmb	IAmb		19 54 47.0	
	comp=Z,18nm,1.2s							
AC01	**Pan de Azucar**	**22.07**	**53**	P	**P**		**19 54 24.5**	**+0.7**
AC01				IAmb	IAmb		19 54 28.7	
	comp=Z,16nm,1.1s							
AC02	**Maricunga**	**22.47**	**56**	P	**P**		**19 54 26.6**	**-2.0**
AC02				IAmb	IAmb		19 54 48.1	
	comp=Z,14nm,0.7s							
PB14	**IPOC Station P**	**23.33**	**51**	P	**P**		**19 54 36.7**	**-0.7**
PB14				IAmb	IAmb		19 55 03.3	
	comp=Z,20nm,1.4s							
GO02	**Mina Guanaco**	**23.40**	**53**	P	**P**		**19 54 38.3**	**+0.2**
GO02				IAmb	IAmb		19 54 57.7	
	comp=Z,23nm,1.5s							
EFI	**East Falkland**	**24.13**	**126**	P	**P**		**19 54 45.8**	**+1.2**
PB15	**IPOC Station P**	**24.96**	**50**	P	**P**		**19 54 51.9**	**-0.7**
LVC	**Limon Verde**	**25.75**	**50**	P	**P**		**19 54 59.8**	**-0.2**
LVC				IAmb	IAmb		19 55 31.4	
	comp=Z,5.0nm,0.9s							
LVC	**Limon Verde**	**25.75**	**50**	LR	LR		20 02 36.8	
	comp=Z,332nm,19.4s,baz=219,slow=30							
PMSA	**Palmer Station**	**27.81**	**156**	LR	LR		20 03 19.2	
	comp=Z,115nm,21.2s,baz=285,slow=30							
CPUP	**Villa Florida**	**30.79**	**71**	P	**P**		**19 55 43.4**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=184,slow=14,SNR=1.7							
CPUP				LR	LR		20 07 01.7	
	comp=Z,360nm,19.9s,baz=226,slow=34							
	comp=Z,1.0nm,0.7s							
NNA	**Nana**	**31.43**	**25**	LR	LR		20 05 01.4	
	comp=Z,120nm,20.4s,baz=192,slow=30							
SIV	**San Ignacio**	**35.52**	**53**	LR	LR		20 10 19.0	
	comp=Z,261nm,18.9s,baz=287,slow=35							
ATAH	**Atahualpa**	**35.59**	**20**	LR	LR		20 07 21.3	
	comp=Z,293nm,20.0s,baz=212,slow=30							
AQDB	**Aquidauana**	**35.72**	**65**	P	**P**		**19 56 27.7**	**+0.2**
AQDB				IAmb	IAmb		19 56 34.9	
	comp=Z,10.0nm,1.0s							
MCRA	**Macar, Loja**	**37.89**	**16**	P	**P**		**19 56 46.3**	**+0.3**
BOSC	**San Juan Bosco**	**39.40**	**18**	P	**P**		**19 56 56.8**	**-2.1**
COHC	**Cochancay**	**39.89**	**17**	P	**P**		**19 57 03.2**	**+0.5**
OTAV	**Otavalo**	**42.68**	**17**	P	**P**		**19 57 25.6**	**-0.7**
OTAV				IAmb	IAmb		19 57 34.5	
	comp=Z,5.8nm,1.1s							
BDFB	**Brasilia**	**44.32**	**67**	LR	LR		20 15 34.5	
	comp=Z,370nm,18.3s,baz=177,slow=35							
ROSC	**El Rosal**	**48.14**	**21**	LR	LR		20 15 39.8	
	comp=Z,129nm,20.6s,baz=190,slow=33							
QSPA	**South Pole Qui**	**48.91**	**180**	LR	LR		20 17 07.5	
	comp=Z,81nm,18.1s,baz=146,slow=34							
SDV	**Santo Domingo**	**53.05**	**24**	LR	LR		20 19 17.2	
	comp=Z,120nm,20.1s,baz=111,slow=34							
VNDA	**Vanda**	**53.76**	**195**	LR	LR		20 16 36.4	
	comp=Z,84nm,21.4s,baz=104,slow=30							
MDP	**Montagnes des**	**57.45**	**46**	LR	LR		20 21 47.8	
	comp=Z,88nm,21.6s,baz=210,slow=34							
RCBR	**Riachuelo**	**59.64**	**69**	LR	LR		20 24 45.0	
	comp=Z,220nm,19.1s,baz=250,slow=35							
SJG	**San Juan**	**63.15**	**26**	LR	LR		20 25 44.0	
	comp=Z,77nm,19.4s,baz=192,slow=34							
TXAR	**Lajitas Array**	**71.43**	**347**	P	**P**		**20 00 46.1**	**-3.0**
	comp=Z,0.2nm,0.5s,baz=158,slow=7.6,SNR=2.5							
	comp=Z,0.2nm,0.5s							
TX31	**Lajitas Ar. Si**	**71.43**	**347**	P	**P**		**20 00 48.2**	**-0.9**
TX31				IAmb	IAmb		20 00 55.7	
	comp=Z,4.8nm,1.1s							
OZNA	**Ozona**	**72.62**	**350**	P	**P**		**20 00 55.8**	**-0.4**
AMTX	**Amarillo**	**76.59**	**350**	P	**P**		**20 01 20.9**	**+1.7**
S39A	**Bolivar**	**78.70**	**357**		**P**		**20 01 32.2**	**+1.4**
CCM	**Cathedral Cave**	**79.01**	**359**		**P**		**20 01 34.0**	**+1.5**
S22A	**4UR Ranch, Cre**	**80.18**	**347**		**P**		**20 01 39.5**	**+0.3**
S22A				IAmb	IAmb		20 01 46.5	
	comp=Z,5.4nm,1.1s							
P52A	**Corning**	**80.90**	**6**	P	**P**		**20 01 44.4**	**+1.7**
TMUT	**Trail Mountain**	**82.53**	**344**	P	**P**		**20 01 54.1**	**+2.4**
TMUT				IAmb	IAmb		20 01 58.6	
	comp=Z,3.1nm,0.9s							
NLU	**North Lily Min**	**83.35**	**343**		**P**		**20 01 57.8**	**+2.0**
NVAR	**Mina Arroy Bea**	**83.47**	**338**	P	P		20 01 51.2	-5.3
	comp=Z,0.2nm,0.5s,baz=181,slow=4.5,SNR=1.8							
	comp=Z,0.2nm,0.5s							
BSUT	**Blindstream Ca**	**83.63**	**344**		**P**		**20 02 00.6**	**+3.2**
DUG	**Dugway, Tooele**	**83.74**	**343**		**P**		**20 02 00.0**	**+2.3**
DUG				IAmb	IAmb		20 02 04.7	
	comp=Z,3.4nm,1.0s							
ECSD	**EROS Data Cent**	**84.89**	**355**		**P**		**20 02 05.7**	**+2.4**
PDAR	**Pinedale Array**	**85.55**	**346**	P	P		20 02 02.3	-4.6
	comp=Z,0.2nm,0.7s,baz=163,slow=4.3,SNR=1.7							
	comp=Z,0.2nm,0.7s							
BELG	**Belogornoye**	**149.42**	**54**	PKPbc	**PKPdf**		**20 09 15.0**	**+2.3**
	comp=Z,2.7nm,0.7s,baz=273,slow=1.3,SNR=1.1							
BVAR	**Borovoye Array**	**162.34**	**42**	PKP	**PKPdf**		**20 09 28.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=196,slow=1.0,SNR=2.6							
ZALV	**Zalesovo Beam**	**166.91**	**14**	PKP	PKPdf		20 09 28.4	-5.3
	comp=Z,0.2nm,0.3s,baz=5.2,slow=1.6,SNR=4.2							
KURBB	**Kurchatov Arra**	**167.78**	**37**	PKP	**PKPdf**		**20 09 30.2**	**-4.3**
	comp=Z,0.4nm,0.6s,baz=347,slow=1.2,SNR=6.1							
MKAR	**Makanchi Array**	**172.22**	**43**	PKP	**PKPdf**		**20 09 32.6**	**-4.6**
	comp=Z,0.7nm,1.1s,baz=337,slow=3.3,SNR=3.6							

TEH ***16*** *20:09:58.5,33˚.76N×45˚.90E,h15km±3.3km,ML2.7*
ISN ***16*** *20:09:58.2±0.7,33˚.76N×45˚.91E,h9km±3km,ML2.4*
ISC 16 20:09:58.5±1.0,33˚.76N±0˚.03×45˚.88E±0˚.05,h10km,n11, σ0°79/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.65**	**176**	*e*Pg	**Pg**	**20 10 10.8**	**-0.2**
IBDR				*e*Sg	**Sg**	**20 10 20.0**	**+0.5**
IBDR				AML	AML	20 10 26.6	
	comp=N,162nm,0.4s						
IBDR				AML	AML	20 10 39.2	
	comp=E,187nm,0.7s						
KGS1	**Ghasr-e-Shirin**	**0.79**	**342**	Pg	**Pg**	**20 10 13.7**	**-0.1**
IDHR	**Dehrash**	**1.03**	**24**	Pg	**Pg**	**20 10 18.2**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.09**	**61**	Pg	**Pg**	**20 10 18.7**	**-0.9**
ILIN	**Lien**	**1.47**	**37**	Pg	**Pb**	**20 10 26.0**	**0.0**
IKFM	**Kafar-mosalman**	**1.66**	**97**	Pg	**Pb**	**20 10 28.9**	**-0.3**
IDOB	**Doab**	**1.91**	**88**	Pn	**Pb**	**20 10 32.3**	**-1.3**
RAFI	**Al-Rafai**	**2.04**	**174**	*e*Pn	**Pb**	**20 10 35.0**	**-0.6**
RAFI				*e*Sn	**Sb**	**20 11 01.0**	**0.0**
IKRK	**Kirkuk**	**2.08**	**323**	*e*Pn	**Pb**	**20 10 35.0**	**-1.3**
IKRK				*e*Sn	**Sb**	**20 11 02.7**	**+0.6**
HSAM	**Samen**	**2.31**	**78**	Pn	**Pn**	**20 10 37.5**	**+0.6**
HAGD	**Aghdareh**	**2.90**	**68**	Pn	**Pn**	**20 10 46.1**	**+1.1**

AEIC ***16*** *20:15:59.3±2.6,51˚.0N±0˚.1×170˚.97W±0˚.06,h17km±8km, Error ellipse: s-maj=18.2km s-min=5.5km az=174.0*
NEIC 16 20:15:57.6±2.5,50.9N±0˚.1×170.93W±0˚.09,h16km±8km, mb3.8/34,ML3.4/6,ML3.2(AEIC),Error ellipse: s-maj=21.2km s-min=6.8km az=165.0,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**2.41**	**303**		Pn	20 16 35.7	-0.7
ATKA	**Atka Island**	**2.41**	**303**		Sn	20 17 04.7	-0.8
ATKA	**Atka Island**	**2.41**	**303**	IAML		20 16 58.6	
	comp=N,91nm,1.4s						
NIKH	**Nikolski High**	**2.42**	**31**		Pn	20 16 36.5	0.0
NIKH					Sn	20 17 05.5	-0.2
OKTU	**Okmok Mt. Tuli**	**3.04**	**35**		Pn	20 16 45.0	-0.1
OKTU					Sn	20 17 20.9	-0.2
GSMY	**Great Sitkin M**	**3.40**	**291**		Pn	20 16 49.6	-0.3
GSMY					Sn	20 17 29.3	-0.6
GSTR	**Great Sitkin T**	**3.41**	**292**	Pn	Pn	20 16 50.4	+0.2
ADK	**Adak**	**3.73**	**287**		Pn	20 16 54.0	-0.5
ADK	**Adak**	**3.73**	**287**	IAML		20 17 38.5	
	comp=N,93nm,1.5s						
MAPS	**Pakushin South**	**3.78**	**39**		Pn	20 16 55.2	-0.1
MAPS					Sn	20 17 37.5	-1.9
MGOD	**Makushin Gods**	**3.80**	**39**		Pn	20 16 55.4	-0.1
MSW	**Makushin Switc**	**3.92**	**39**		Pn	20 16 57.4	+0.2
MNAT	**Makushin Natee**	**3.94**	**40**		Pn	20 16 57.6	+0.2
UNV	**Unalaska Valle**	**3.98**	**41**		Pn	20 16 58.6	+0.6
ZRO	**Akutan Zero**	**4.38**	**42**		Pn	20 17 04.7	+1.2
AKUT	**Akutan**	**4.50**	**42**	Pn	Pn	20 17 05.7	+0.7
AKUT				IAML		20 18 36.3	
	comp=N,41nm,1.5s						
AKUT				IAML		20 19 46.2	
	comp=E,42nm,1.4s						
TAFP	**Tanaga Falls P**	**4.52**	**285**		Pn	20 17 05.7	+0.2
AMKA	**Amchitka**	**6.17**	**278**		Pn	20 17 27.8	-0.2
SDPT	**Sand Point**	**7.69**	**51**	Pn	Pn	20 17 48.7	-0.1
CNBA	**Chernabura Isl**	**7.89**	**56**	Pn	Pn	20 17 51.3	-0.3
CHGN	**Chignik**	**9.18**	**49**	Pn	Pn	20 18 09.6	+0.4
OHAK	**Old Harbor**	**12.11**	**52**	Pn	Pn	20 18 47.9	-1.4
KDAK	**Kodiak Island**	**12.69**	**50**	Pn	Pn	20 18 55.3	-1.9
Q19K	**Cape Douglas,**	**12.73**	**44**	Pn	Pn	20 18 56.9	-1.1
SYI	**Shuyak Island**	**13.14**	**47**	Pn	Pn	20 19 02.1	-1.3
CNPM	**China Poot**	**14.11**	**45**	Pn	Pn	20 19 15.5	-1.2
SUA	**Susitna One**	**15.34**	**39**	Pn	Pn	20 19 31.7	-1.6
SUA				IAmb	IAmb	20 20 15.0	
	comp=Z,3.9nm,1.0s						
K20K	**Telida**	**15.38**	**30**	Pn	Pn	20 19 34.0	+0.1
J20K	**Nowinta River**	**15.97**	**27**	Pn	Pn	20 19 42.3	+1.0
J20K				IAmb	IAmb	20 20 10.1	
	comp=Z,11nm,1.5s						
HIN	**Hinchinbrook I**	**16.63**	**46**	Pn	Pn	20 19 47.7	-2.1
FID	**Port Fidalgo**	**16.79**	**45**	Pn	Pn	20 19 48.3	-3.5
BPAW	**Bear Paw Mtn.**	**16.89**	**31**	Pn	Pn	20 19 51.1	-2.0
SCM	**Sheep Creek Mo**	**16.92**	**41**	Pn	Pn	20 19 50.9	-2.6
RAGM	**Ragged Mountai**	**17.46**	**47**	Pn	Pn	20 19 57.8	-2.5
MLY	**Manley**	**17.60**	**29**	Pn	Pn	20 20 00.5	-1.6
GLB	**Gilahina Butte**	**18.25**	**44**	Pn	Pn	20 20 07.3	-2.8
GLB				IAmb	IAmb	20 20 20.6	
	comp=Z,5.0nm,0.9s						
WAX	**Waxell Ridge**	**18.33**	**48**	P	Pn	20 20 08.4	-2.7
MDM	**Murphy Dome**	**18.35**	**31**		Pn	20 20 09.7	-1.6
ISLE	**Juniper Island**	**18.62**	**48**	P	P	20 20 10.5	-3.9
D19K	**Kuna River**	**18.69**	**15**	P	P	20 20 11.8	-3.1
GRNC	**Granite Creek**	**18.94**	**48**	P	P	20 20 16.9	-1.0
GRNC				IAmb	IAmb	20 20 32.5	
	comp=Z,8.4nm,1.2s						
M26K	**Nabesna, AK**	**18.99**	**42**	P	P	20 20 17.0	-1.3
M26K				IAmb	IAmb	20 20 41.8	
	comp=Z,6.2nm,1.2s						
H24K	**Noodor Dome**	**19.03**	**30**	P	P	20 20 17.7	-1.0
H24K				IAmb	IAmb	20 20 22.9	
	comp=Z,4.9nm,1.1s						
J25K	**Salcha River,**	**19.14**	**35**	P	P	20 20 19.4	-0.4
J25K				IAmb	IAmb	20 20 23.1	
	comp=Z,9.0nm,1.4s						
M27K	**Edge Creek, AK**	**19.45**	**43**	P	P	20 20 23.0	-0.4
M27K				IAmb	IAmb	20 21 04.5	
	comp=Z,8.6nm,1.5s						
G24K	**Hadweenzic Riv**	**19.73**	**28**	P	Pn	20 20 27.5	-0.3
G24K				IAmb	IAmb	20 20 32.0	
	comp=Z,5.8nm,1.1s						
J26L	**Joseph Creek**	**19.74**	**36**	P	P	20 20 26.9	+0.4
J26L				IAmb	IAmb	20 20 30.1	
	comp=Z,2.9nm,0.7s						
D22K	**Ayikyak River**	**20.04**	**19**	P	Pn	20 20 31.4	-0.1
B21K	**Ikpikpuk River**	**20.29**	**16**	P	P	20 20 32.9	+0.6
I26K	**Coal Creek Min**	**20.30**	**34**	P	P	20 20 32.7	+0.2
I26K				IAmb	IAmb	20 20 37.9	
	comp=Z,3.2nm,0.6s						
BILL	**Bilibino**	**20.47**	**335**	P	Pn	20 20 35.5	-1.0
BILL				IAmb	IAmb	20 20 38.0	
	comp=Z,3.8nm,0.7s						
TOLK	**Toolik Lake Re**	**20.55**	**22**	P	Pn	20 20 36.8	-0.7
EGAK	**Eagle**	**20.78**	**37**	P	Pn	20 20 39.3	-0.8
EGAK				IAmb	IAmb	20 20 50.3	
	comp=Z,6.2nm,1.2s						
HYT	**Haines Junctio**	**20.97**	**49**	P	Pn	20 20 41.2	-1.3
I28M	**Miner Creek**	**21.55**	**36**	P	P	20 20 46.8	+0.8
I28M				IAmb	IAmb	20 21 00.2	
	comp=Z,1.6nm,0.5s						
D25K	**Kavik River**	**21.84**	**23**	P	P	20 20 50.3	+1.2
D25K				IAmb	IAmb	20 20 53.0	
	comp=Z,5.5nm,1.4s						
H29M	**Whitestone**	**22.48**	**35**	P	P	20 20 57.4	+1.5
I30M	**Mount Dempster**	**22.81**	**38**	P	P	20 20 59.6	+0.1
G30M	**tAoh Zrai Nji**	**23.58**	**34**	P	P	20 21 08.1	+0.8
G30M				IAmb	IAmb	20 21 20.0	
	comp=Z,4.1nm,1.4s						
INK	**Inuvik**	**25.09**	**32**	P	P	20 21 21.8	+0.7
INK				IAmb	IAmb	20 21 35.2	
	comp=Z,2.8nm,1.2s						

IDC ***16*** *20:19:03.8±0.7,41˚.27S×90˚.49W,h0km,mb4.0/5, mbtmp4.0/6,ML3.3/1,MS4.2/39,Error ellipse: s-maj=34.6km s-min=26.5km az=72.0*
NEIC ***16*** *20:19:05.6±1.4,41˚.15±0˚.1×90˚.5W±0˚.2,h10km±1km, mb4.6/74,Error ellipse: s-maj=22.0km s-min=17.9km az=262.0*
GCMT ***16*** *20:19:08.6±0.2,41˚.15S±0˚.02×90˚.26W±0˚.01,h12km, MW5.0/128,Moment Tensor Solution. s70,c93; s128,c193; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=4.38±.15; Mθθ0.35±.09; Mϕϕ4.03±.10; Mrθ1.06±.33; Mθϕ-1.16±.07; Mϕr-0.72±.24; Best double couple: Mϕ4.55400×10¹⁶ NP1:ϕs334.00000°,δ52.00000°, λ-102.00000°. NP2:ϕs174.00000°,δ39.00000°, λ-75.00000°. Principal axes: T 4.4770, Plg6.0000°, Azm73.0000°; N 0.1600, Plg10.0000°, Azm342.0000°; P -4.6320, Plg78.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 20:19:05.3±0.6,41.15S±0.09×90.53W±0.10,h10km,n134, σ0°81/94,mb4.6/37,MS4.2/38,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**11.75**	**55**	T	T	20 33 56.1	
	baz=225,slow=73						
H03S1	**Juan Fernandez**	**11.76**	**55**	T	T	20 33 55.6	
	baz=225,slow=73						
H03S3	**Juan Fernandez**	**11.76**	**55**	T	T	20 33 52.3	
	baz=225,slow=73						
H03N3	**Juan Fernandez**	**12.00**	**54**	T	T	20 34 14.2	
	baz=226,slow=72						
H03N2	**Juan Fernandez**	**12.01**	**54**	T	T	20 34 15.8	
	baz=226,slow=72						
H03N1	**Juan Fernandez**	**12.02**	**54**	T	T	20 34 05.6	
	baz=226,slow=72						
LL02	**Futaleuf**	**14.01**	**105**	Pn	**Pn**	**20 22 22.9**	**-0.8**
LR05	**Currie**	**14.09**	**92**	Pn	**Pn**	**20 22 24.3**	**-0.6**
COYC	**Coyhaique**	**14.12**	**114**	Pn	**Pn**	**20 22 24.4**	**-0.9**
GO06	**Curarrehue**	**14.61**	**90**		**Pn**	**20 22 32.5**	**+0.2**
GO08	**Villa O'Higgin**	**14.69**	**126**	Pn	**Pn**	**20 22 33.0**	**0.0**
PLCA	**Paso Flores**	**15.11**	**95**		**Pn**	**20 22 39.3**	**+0.5**
PLCA				IAmb	IAmb	20 22 54.7	
	comp=Z,20nm,1.4s						
PLCA	**Paso Flores**	**15.11**	**95**	Pn	**Pn**	**20 22 37.6**	**-1.2**
	baz=270,slow=12,SNR=4.2						
PLCA				LR	LR	20 27 04.0	
	comp=Z,3μm,19.7s,baz=290,slow=32						
	comp=Z,13nm,1.4s						
GO05	**Huala**	**15.86**	**73**	Pn	**Pn**	**20 22 47.5**	**-1.2**
ML02	**Panimavida**	**15.90**	**76**	Pn	**Pn**	**20 22 48.7**	**-0.4**
ML02				IAmb	IAmb	20 23 02.0	
	comp=Z,60nm,1.2s						
GO09	**Cerro Castillo**	**16.11**	**135**	Pn	**Pn**	**20 22 52.5**	**+0.7**
GO09				IAmb	IAmb	20 23 30.1	
	comp=Z,77nm,1.4s						

BO01	**Tunca**	**16.77**	**73**	Pn	**Pn**		**20 23 00.5**	**+0.2**
BO02	**Sierra Bellavi**	**16.80**	**74**	Pn	**Pn**		**20 23 00.7**	**0.0**
MT09	**Talagante**	**17.15**	**71**	P	**Pn**		**20 23 05.4**	**+0.3**
MT09				IAmb	IAmb		20 23 20.8	
	comp=Z,58nm,1.4s							
BO04	**La Punta**	**17.31**	**72**	P	**P**		**20 23 08.2**	**-0.3**
MT02	**Curacav**	**17.32**	**69**		**Pn**		**20 23 07.3**	**+0.2**
MT13	**San Alfonso**	**17.67**	**72**	P	**Pn**		**20 23 11.1**	**-0.5**
LMEL	**Las Melosas**	**17.68**	**72**	P	**Pn**		**20 23 10.5**	**-1.2**
PEL	**Peldehue**	**17.70**	**70**	P	**Pn**		**20 23 11.8**	**-0.1**
GO10	**Punta Arenas**	**17.81**	**139**	P	**Pn**		**20 23 12.1**	**-1.1**
VA03	**San Esteban**	**18.00**	**69**	P	**Pn**		**20 23 14.2**	**-1.5**
CO02	**Combarbal**	**18.59**	**64**	P	**P**		**20 23 22.0**	**-0.7**
CO03	**El Pedregal**	**19.02**	**64**	P	**P**		**20 23 27.5**	**0.0**
CO01	**Juntas del Tor**	**19.96**	**63**	P	**P**		**20 23 37.4**	**-0.5**
LCO	**Las Campanas**	**20.19**	**59**	P	**P**		**20 23 39.8**	**-0.7**
LCO				IAmb	IAmb		20 24 09.5	
	comp=Z,18nm,1.3s							
AC05	**El Transito**	**20.59**	**60**	P	**P**		**20 23 43.8**	**-0.8**
AC05				IAmb	IAmb		20 23 56.1	
	comp=Z,30nm,1.1s							
RPN	**Rapa Nui**	**20.86**	**306**	LR	LR		20 29 45.3	
	comp=Z,1μm,20.1s,baz=146,slow=31							
GO03	**Copiap**	**21.46**	**57**	P	**P**		**20 23 54.7**	**+0.7**
GO03				IAmb	IAmb		20 24 15.4	
	comp=Z,13nm,1.1s							
TRQA	**Tornquist**	**22.17**	**91**	P	**P**		**20 24 00.5**	**-1.0**
TRQA				IAmb	IAmb		20 24 14.8	
	comp=Z,20nm,1.1s							
AC02	**Maricunga**	**22.69**	**58**	P	**P**		**20 24 08.6**	**+1.0**
AC02				IAmb	IAmb		20 24 23.1	
	comp=Z,18nm,0.8s							
PB14	**IPOC Station P**	**23.51**	**52**	P	**P**		**20 24 16.5**	**+0.7**
PB14				IAmb	IAmb		20 24 29.9	
	comp=Z,19nm,1.2s							
GO02	**Mina Guanaco**	**23.60**	**54**	P	**P**		**20 24 16.9**	**+0.2**
GO02				IAmb	IAmb		20 24 31.4	
	comp=Z,28nm,1.4s							
PB15	**IPOC Station P**	**25.14**	**51**	P	**P**		**20 24 30.3**	**-0.5**
PB04	**IPOC Station P**	**25.43**	**49**	P	**P**		**20 24 33.1**	**-0.3**
LVC	**Limon Verde**	**25.93**	**51**	P	**P**		**20 24 37.0**	**-1.1**
LVC				IAmb	IAmb		20 24 52.2	
	comp=Z,7.3nm,0.9s							
LVC	**Limon Verde**	**25.93**	**51**	LR	LR		20 32 16.4	
	comp=Z,853nm,19.9s,baz=226,slow=30							
PB07	**IPOC Station P**	**26.06**	**48**	P	**P**		**20 24 39.3**	**+0.2**
PB07				IAmb	IAmb		20 25 21.0	
	comp=Z,15nm,1.3s							
PMSA	**Palmer Station**	**28.12**	**156**	LR	LR		20 32 58.0	
	comp=Z,303nm,18.4s,baz=293,slow=30							
ITQB	**Itaqui**	**29.73**	**78**	P	**P**		**20 25 13.7**	**+2.0**
ITQB				IAmb	IAmb		20 25 19.1	
	comp=Z,8.8nm,0.8s							
PLTB	**Pedras Altas**	**30.95**	**84**	P	**P**		**20 25 23.5**	**+1.0**
PLTB				IAmb	IAmb		20 25 43.8	
	comp=Z,9.7nm,1.1s							
CPUP	**Villa Florida**	**31.10**	**72**	P	**P**		**20 25 24.8**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=233,slow=5.1,SNR=1.3							
CPUP				LR	LR		20 36 30.9	
	comp=Z,972nm,21.3s,baz=234,slow=34							
	comp=Z,0.6nm,0.4s							
NNA	**Nana**	**31.43**	**26**	LR	LR		20 34 40.8	
	comp=Z,315nm,21.4s,baz=194,slow=30							
ORCD	**Orcadas**	**33.94**	**141**	P	**P**		**20 25 49.4**	**+1.0**
ATAH	**Atahualpa**	**35.55**	**21**	LR	LR		20 37 01.0	
	comp=Z,678nm,21.0s,baz=218,slow=30							
SIV	**San Ignacio**	**35.72**	**54**	LR	LR		20 39 58.5	
	comp=Z,592nm,19.3s,baz=282,slow=35							
AQDB	**Aquidauana**	**35.98**	**66**	P	**P**		**20 26 05.9**	**-0.5**
AQDB				IAmb	IAmb		20 26 19.4	
	comp=Z,11nm,1.0s							
MCRA	**Macar, Loja**	**37.83**	**17**	P	**P**		**20 26 22.3**	**+0.1**
BOSC	**San Juan Bosco**	**39.35**	**19**	P	**P**		**20 26 35.3**	**+0.2**
COHC	**Cochancay**	**39.83**	**18**	P	**P**		**20 26 39.8**	**+0.9**
SPB	**Sao Paulo**	**39.94**	**78**	P	**P**		**20 26 41.1**	**+1.3**
SAML	**Samuel**	**40.18**	**45**	P	**P**		**20 26 41.4**	**-0.4**
OTAV	**Otavalo**	**42.63**	**18**	P	**P**		**20 27 02.9**	**+0.5**
OTAV				IAmb	IAmb		20 27

V51A	**Loudon**	**76.79**	**5**	P	**P**	**20 30 57.0 +0.2**			
ANMO	**Albuquerque**	**77.13**	**347**	P	**P**	**20 30 59.2 +0.2**			
ANMO				IAmb	IAmb	20 31 01.7			
	comp=Z,3.8nm,1.1s								
ANMO	**Albuquerque**	**77.13**	**347**	LR	LR	20 58 45.5			
	comp=Z,60nm,21.1s,baz=250,slow=31								
U38A	**Gravette**	**77.29**	**357**	P	**P**	**20 30 59.3 -0.4**			
U38A				IAmb	IAmb	20 31 01.1			
	comp=Z,5.6nm,0.8s								
U49A	**Red Boiling Sp**	**77.41**	**4**	P	**P**	**20 31 00.2 0.0**			
T42A	**Van Buren**	**77.80**	**360**	P	**P**	**20 31 02.0 -0.5**			
KAN17	**Caldwell West**	**78.10**	**354**	P	**P**	**20 31 03.0 -1.2**			
PFO	**Pinyon Flats O**	**78.14**	**338**	LR	LR	20 57 52.5			
	comp=Z,56nm,18.5s,baz=124,slow=30								
S39A	**Bolivar**	**78.50**	**358**	P	**P**	**20 31 06.1 -0.2**			
S39A				IAmb	IAmb	20 31 07.7			
	comp=Z,5.7nm,0.9s								
S51A	**Beattyville**	**78.67**	**6**	P	**P**	**20 31 07.2 -0.1**			
CCM	**Cathedral Cave**	**78.83**	**359**	P	**P**	**20 31 08.0 -0.1**			
CCM				IAmb	IAmb	20 31 09.5			
	comp=Z,7.3nm,0.9s								
S22A	**4UR Ranch, Cre**	**79.92**	**347**	P	**P**	**20 31 16.3 +1.8**			
BCW	**Bitter Crk WRg**	**80.24**	**336**	P	**P**	**20 31 15.6 -0.5**			
P40A	**Paris**	**80.31**	**359**	P	**P**	**20 31 16.2 +0.1**			
P40A				IAmb	IAmb	20 31 17.4			
	comp=Z,6.9nm,0.9s								
P38A	**Dawn**	**80.44**	**358**	P	**P**	**20 31 16.8 -0.1**			
P38A				IAmb	IAmb	20 31 18.0			
	comp=Z,8.7nm,1.1s								
P49A	**Miami Univ. Ec**	**80.48**	**5**	P	**P**	**20 31 16.9 -0.1**			
P52A	**Corning**	**80.76**	**7**	P	**P**	**20 31 17.7 -0.9**			
Q24A	**Divide**	**80.84**	**349**	P	**P**	**20 31 19.3 -0.2**			
Q24A				IAmb	IAmb	20 31 36.6			
	comp=Z,6.7nm,1.4s								
NVAR	**Mina Array Bea**	**83.16**	**338**	P	**P**	**20 31 33.6 +2.1**			
	comp=Z,1.1nm,0.9s,baz=154,slow=5.1,SNR=5.9								
	comp=Z,1.1nm,0.9s								
SUR	**Sutherland**	**83.29**	**127**	LR	LR	21 02 39.0			
	comp=Z,89nm,19.6s,baz=220,slow=31								
DZM	**Mont Dzumac**	**85.01**	**245**	LR	LR	21 02 33.9			
	comp=Z,246nm,19.5s,baz=194,slow=31								
PDAR	**Pinedale Array**	**85.28**	**346**	P	**P**	**20 31 43.7 +1.5**			
	comp=Z,1.7nm,1.1s,baz=182,slow=5.3,SNR=5.9								
PDAR				LR	LR	21 05 10.1			
	comp=Z,46nm,19.3s,baz=82,slow=32								
	comp=Z,1.7nm,1.1s								
SADO	**Sadowa**	**86.14**	**8**	LR	LR	21 04 34.8			
	comp=Z,94nm,21.6s,baz=198,slow=32								
YBH	**Yreka Blue Hor**	**87.50**	**336**	LR	LR	21 04 41.5			
	comp=Z,33nm,19.0s,baz=124,slow=31								
BBTS	**Babate**	**87.90**	**69**	LR	LR	21 10 20.6			
	comp=Z,284nm,18.1s,baz=138,slow=35								
BOSA	**Boshof**	**88.66**	**128**	LR	LR	21 05 54.0			
	comp=Z,101nm,18.6s,baz=197,slow=32								
TSUM	**Tsumeb**	**90.43**	**116**	LR	LR	21 07 45.4			
	comp=Z,90nm,19.2s,baz=239,slow=32								
DBIC	**Dimbokro**	**91.09**	**82**	LR	LR	21 07 11.7			
	comp=Z,217nm,20.4s,baz=198,slow=32								
LBTB	**Lobatse**	**91.49**	**125**	LR	LR	21 09 09.9			
	comp=Z,49nm,18.5s,baz=229,slow=33								
STKA	**Stephens Creek**	**92.87**	**222**	LR	LR	21 07 02.3			
	comp=Z,94nm,18.5s,baz=197,slow=31								
SCHQ	**Schefferville**	**97.73**	**14**	LR	LR	21 15 09.8			
	comp=Z,56nm,18.6s,baz=228,slow=34								
CTA	**Charters Tower**	**99.50**	**233**	LR	LR	21 11 37.0			
	comp=Z,109nm,18.1s,baz=89,slow=32								
WSAR	**Wadi Sarin**	**148.60**	**115**	PKPbc	**PKPbc**	**20 38 51.8 -1.0**			
	comp=Z,2.2nm,0.7s,baz=184,slow=3.6,SNR=8.0								
USRK	**Ussuriysk Ar.**	**148.84**	**290**	PKPbc	**PKPbc**	**20 38 52.0 -0.7**			
	comp=Z,3.8nm,0.9s,baz=150,slow=3.2,SNR=4.7								
BELG	**Belogornoye**	**149.62**	**54**	PKPbc	**PKPbc**	**20 38 53.5 -0.9**			
	comp=Z,12nm,1.0s,baz=90,slow=2.0,SNR=8.2								
KSRS	**Korea Array**	**150.18**	**276**	PKPbc	**PKPbc**	**20 38 55.1 -1.1**			
	comp=Z,1.9nm,0.8s,baz=116,slow=4.0,SNR=5.2								
CMAR	**Chiang Mai Arr**	**155.97**	**203**	PKP	**PKPdf**	**20 39 00.4 +0.3**			
	comp=Z,0.3nm,0.5s,baz=202,slow=3.3,SNR=4.5								
BVAR	**Borovoye Array**	**162.46**	**41**	PKP	**PKPdf**	**20 39 06.5 -0.1**			
	comp=Z,0.8nm,0.8s,baz=259,slow=1.5,SNR=4.1								
ZALV	**Zalesovo Beam**	**166.82**	**12**	PKP	**PKPdf**	**20 39 08.4 -2.0**			
	comp=Z,3.1nm,1.1s,baz=270,slow=1.4,SNR=9.4								
KURBB	**Kurchatov Arra**	**167.85**	**35**	PKP	**PKPdf**	**20 39 09.3 -1.9**			
	comp=Z,0.5nm,0.8s,baz=29,slow=2.1,SNR=2.5								
MKAR	**Makanchi Array**	**172.34**	**40**	PKP	**PKPdf**	**20 39 12.7 -1.3**			
	comp=Z,0.9nm,1.1s,baz=305,slow=4.3,SNR=4.0								

*SNET **16** 20:33:46.8±1.2, 12°.79N×90°.50W, h14km, ML3.6*
*IDC **16** 20:33:47.6±4.1, 13°.51N×89°.40W, h0km, mb3.6/4, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=80.8km s-min=42.3km az=8.0*
*CATAC **16** 20:33:50.7±0.6, 13°.18N×90°.25W, h111km±6km, ML3.5*
*GCG **16** 20:33:50.1±0.3, 12°.98N×90°.48W, h1km±7km, MD4.0*

ISC 16 20:33:48.4±2.1, 12°.98N±0°.09×90°.31W±0°.04, h3km±11km, n39,σ1°08/58, mb3.7/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**1.05**	**29**	*e*P	**Pn**	**20 34 10.4**	**+0.2**
NUBE	**Las Nubes**	**1.05**	**29**	*i* P	**Pn**	**20 34 10.9**	**+0.7**
NUBE				*i* S	**Sn**	**20 34 26.1**	**+0.7**
NUBE				IAML		20 34 34.2	
	comp=Z,560nm,1.0s						
JAYA	**Jayaque - finc**	**1.07**	**51**	*e*P	**Pn**	**20 34 10.8**	**+0.3**
JAYA				*e*S	**Sn**	**20 34 28.4**	**+2.4**
JAYA	**Jayaque - finc**	**1.07**	**51**	*i* P	**Pn**	**20 34 11.2**	**+0.7**
JAYA				*i* S	**Sn**	**20 34 27.6**	**+1.7**
JAYA				IAML		20 34 36.4	
	comp=Z,2μm,1.0s						
CEVE	**Cerro Verde**	**1.07**	**38**	*e*P	**Pn**	**20 34 10.9**	**+0.3**
CEVE				*e*S	**Sn**	**20 34 28.7**	**+2.6**
CEVE	**Cerro Verde**	**1.07**	**38**	*i* P	**Pn**	**20 34 11.4**	**+0.8**
CEVE				*i* S	**Sn**	**20 34 27.8**	**+1.7**
CEVE				IAML		20 34 34.4	
	comp=Z,2μm,1.0s						
SBLS	**San Blas**	**1.08**	**38**	*e*P	**Pn**	**20 34 11.4**	**+0.7**
LALI	**Alcalda de L**	**1.09**	**62**	*i* P	**Pn**	**20 34 11.5**	**+1.0**
LALI				IAML		20 34 24.1	
	comp=Z,230nm,1.0s						
LALI				*i* S	**Sn**	**20 34 28.0**	**+2.0**
RTR	**El Retiro**	**1.12**	**35**	*e*P	**Pn**	**20 34 11.6**	**+0.5**
SNJE	**San Jose**	**1.12**	**38**	*e*P	**Pn**	**20 34 11.4**	**+0.3**
LOAL	**Lomas de Alarc**	**1.14**	**27**	*i* P	**Pn**	**20 34 11.6**	**+0.3**
LOAL				*i* S	**Sn**	**20 34 28.4**	**+1.0**
LOAL				IAML		20 34 57.7	
	comp=Z,2μm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.16**	**26**	*e*P	**Pn**	**20 34 12.2**	**+0.6**
SLOZ				*e*S	**Sn**	**20 34 30.2**	**+2.3**
CEDA	**San Andres**	**1.21**	**47**	*i* P	**Pb**	**20 34 11.7**	**-0.3**
CEDA				*i* S	**Sn**	**20 34 29.8**	**+0.7**
CEDA				IAML		20 34 47.9	
	comp=Z,3μm,1.0s						
PMON	**Piamonte**	**1.21**	**53**	*i* P	**Pn**	**20 34 13.1**	**+0.8**
PMON				*i* S	**Sn**	**20 34 29.7**	**+0.4**
PMON				IAML		20 34 41.0	
	comp=Z,1μm,1.0s						
UNIC	**Universidad Ca**	**1.24**	**36**	*i* P	**Pn**	**20 34 12.5**	**-0.2**
UNIC				*i* S	**Sn**	**20 34 28.5**	**-1.5**
UNIC				IAML		20 34 36.4	
	comp=Z,470nm,1.0s						
BOQS	**Boqueron**	**1.25**	**53**	*e*P	**Pn**	**20 34 14.0**	**+1.0**
SNET	**Serv Nac Est T**	**1.26**	**56**	*i* P	**Pb**	**20 34 12.9**	**0.0**
SNET				*i* S	**Sn**	**20 34 31.1**	**+0.6**
SNET				IAML		20 34 43.7	
	comp=Z,1μm,1.0s						
PANCS	**Alcalda de**	**1.27**	**60**	*i* P	**Pb**	**20 34 13.1**	**+0.2**
PANCS				*i* S	**Sn**	**20 34 30.2**	**-0.4**
PANCS				IAML		20 34 37.9	
	comp=Z,2μm,1.0s						
UEES	**Universidad Ev**	**1.27**	**55**	*i* P	**Pg**	**20 34 13.5**	**+0.6**
UEES				*i* S	**Sn**	**20 34 31.2**	**+0.4**
UEES				IAML		20 34 43.0	
	comp=Z,550nm,1.0s						
LOMA	**Loma Larga**	**1.29**	**59**	*e*P	**Pb**	**20 34 13.7**	**+0.3**
LOMA	**Loma Larga**	**1.29**	**59**	*i* P	**Pb**	**20 34 13.6**	**+0.2**
LOMA				*i* S	**Sn**	**20 34 30.6**	**-0.7**
LOMA				IAML		20 34 40.5	
	comp=Z,590nm,1.0s						
QUEZ	**Alcaldia de Qu**	**1.32**	**50**	*i* P	**Pb**	**20 34 13.4**	**-0.4**
QUEZ				*i* S	**Sn**	**20 34 32.1**	**+0.2**
QUEZ				IAML		20 34 42.4	
	comp=Z,3μm,1.0s						
LFRS	**El Faro**	**1.37**	**62**	*e*P	**Pn**	**20 34 14.8**	**+0.2**
SJTE	**Alcalda de S**	**1.42**	**63**	*e*P	**Pn**	**20 34 15.4**	**+0.3**
SJTE	**Alcalda de S**	**1.42**	**63**	*i* P	**Pn**	**20 34 15.4**	**+0.3**
SJTE				*i* S	**Sg**	**20 34 34.9**	**+0.9**
SJTE				IAML		20 34 42.9	
	comp=Z,340nm,1.0s						
PCG	**Pacaya**	**1.43**	**348**	*i* P	**Pn**	**20 34 13.9**	**-1.6**
PAVA	**Las Pavas**	**1.52**	**61**	*i* P	**Pn**	**20 34 16.8**	**+0.2**
PAVA				IAML		20 34 21.2	
	comp=Z,780nm,1.0s						
PAVA				*i* S	**Sg**	**20 34 35.9**	**-1.5**
TECO	**Alcaldia de Te**	**1.59**	**69**	*i* P	**Pn**	**20 34 17.3**	**-0.1**
TECO				*i* S	**Sb**	**20 34 38.2**	**-0.7**
TECO				IAML		20 34 50.7	
	comp=Z,270nm,1.0s						
NBG	**Las Nubes**	**1.60**	**359**	*i* P	**Pg**	**20 34 20.0**	**+0.9**
MTO3	**Montecristo**	**1.69**	**33**	*e*P	**Pg**	**20 34 20.2**	**-0.6**
MTO3	**Montecristo**	**1.69**	**33**	*i* P	**Pn**	**20 34 18.2**	**-0.8**
MTO3				IAML		20 34 49.1	
	comp=Z,290nm,1.0s						
STG3	**Santiaguito 3,**	**2.11**	**325**	*i* P	**Pn**	**20 34 25.7**	**+0.8**
STG3				*i* S	**Sb**	**20 34 53.4**	**-0.8**
MRL	**Marmol**	**2.18**	**16**	*i* P	**Pb**	**20 34 28.7**	**+0.1**
CMIG	**Matias Romero**	**6.02**	**313**	Pn	Pn	20 35 24.5	+6.1
	comp=Z,0.5nm,0.3s,baz=125,slow=9.6,SNR=5.0						
CMIG				Sn	**Sn**	**20 36 29.9**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=217,slow=23,SNR=4.4						
	comp=Z,1.7nm,0.4s						
TXAR	**Lajitas Array**	**20.46**	**325**	P	**P**	**20 38 28.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=149,slow=12,SNR=5.2						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**35.50**	**321**	P	**P**	**20 40 47.0**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=134,slow=8.9,SNR=5.7						
	comp=Z,0.8nm,0.7s						
SCHQ	**Schefferville**	**45.63**	**19**	P	P	20 42 03.6	-6.3
	comp=Z,2.1nm,0.5s,baz=237,slow=11,SNR=6.2						
	comp=Z,2.1nm,0.5s						
YKA	**Yellowknife Ar**	**52.40**	**346**	P	**P**	**20 42 58.7**	**-3.0**
	comp=Z,0.4nm,0.7s,baz=139,slow=8.2,SNR=5.7						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**147.46**	**344**	PKPbc	**PKPdf**	**20 53 33.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=332,slow=3.2,SNR=4.1						

*IDC **16** 20:36:31.2±3.5, 36°.14N×70°.50E, h73km±30km, mb3.4/8, mbtmp3.7/14, Error ellipse: s-maj=26.0km s-min=18.4km az=177.0*
*NNC **16** 20:36:37.3±9.0, 36°.85N×70°.35E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=95.4km s-min=50.4km az=155.0*

ISC 16 20:36:34.0±1.2, 36°.3N±0°.1×70°.42E±0°.08, h100km, n18, σ1°44/21, mb3.6/7, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.81**	**1**	Pn	**Pn**	**20 38 11.7**	**+0.4**
	3.6nm,0.3s,baz=176,slow=12,SNR=138						
KK31				⇓Sn	**Sn**	**20 39 26.6**	**-0.8**
	4.6nm,0.4s,baz=321,slow=20,SNR=4.9						
AAK	**Ala-Archa**	**7.08**	**25**	P	**Pn**	**20 38 15.2**	**+0.1**
	7.3nm,0.5s,baz=199,slow=5.3,SNR=25						
AAK				S	**Sn**	**20 39 33.7**	**-0.4**
	24nm,0.6s,baz=357,slow=22,SNR=32						
TKM2	**Tokmak 2**	**7.74**	**29**	⇑Pn	**Pn**	**20 38 26.5**	**+2.4**
	5.1nm,0.6s						
TKM2				⇓Sn	**Sn**	**20 39 48.0**	**-2.1**
	16nm,0.8s						
GEYT	**Alibeck**	**9.97**	**283**	P	**Pn**	**20 38 53.4**	**-0.8**
	0.5nm,0.3s,baz=111,slow=10,SNR=6.6						
GEYT				S	**Sn**	**20 40 42.2**	**-2.0**
	0.9nm,0.3s,baz=304,slow=48,SNR=3.5						
MKAR	**Makanchi Array**	**13.74**	**37**	P	**Pn**	**20 39 43.0**	**-1.5**
	1.3nm,0.8s,baz=223,slow=14,SNR=11						
AB31	**Akbulak array**	**15.06**	**333**	P	**Pn**	**20 40 01.3**	**0.0**
	2.2nm,0.3s,baz=155,slow=14,SNR=97						
KURBB	**Kurchatov Arra**	**15.48**	**20**	P	**Pn**	**20 40 04.6**	**-2.0**
	0.1nm,0.3s,baz=205,slow=12,SNR=2.1						
BVAR	**Borovoye Array**	**16.74**	**360**	P	**P**	**20 40 22.0**	**-0.9**
	0.6nm,0.4s,baz=163,slow=10,SNR=10						
AKTO	**Aktyubinsk**	**16.74**	**332**	⇑P	**P**	**20 40 24.7**	**+1.8**
	4.3nm,0.9s						
AKTO	**Aktyubinsk**	**16.74**	**332**	P	**P**	**20 40 23.8**	**+0.9**
	3.8nm,0.7s,baz=140,slow=12,SNR=9.2						
ZALV	**Zalesovo Beam**	**20.31**	**25**	P	Pn	20 41 01.7	-3.0
	3.2nm,0.4s,baz=220,slow=11,SNR=21						
	3.2nm,0.4s						
ARU	**Arti**	**21.69**	**342**	P	**P**	**20 41 18.6**	**+2.0**
	2.1nm,0.7s,baz=144,slow=5.3,SNR=4.8						
	2.1nm,0.7s						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**20 43 38.3**	**+1.4**
	1.2nm,0.8s,baz=90,slow=12,SNR=2.0						
	1.2nm,0.8s						
ARCES	**ARCESS Array B**	**41.17**	**338**	P	**P**	**20 44 09.8**	**+1.6**
	2.4nm,0.9s,baz=102,slow=7.5,SNR=2.0						
	2.4nm,0.9s						
HFS	**Hagfors**	**42.95**	**322**	P	**P**	**20 44 23.3**	**+0.5**
	1.4nm,0.6s,baz=106,slow=14,SNR=5.5						
	1.4nm,0.6s						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**20 44 34.0**	**+0.6**
	0.3nm,0.6s,baz=99,slow=7.9,SNR=1.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**82.27**	**121**	P	**P**	**20 48 44.5**	**0.0**
	0.2nm,0.6s,baz=327,slow=4.8,SNR=5.2						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**84.51**	**124**	P	**P**	**20 48 55.1**	**-0.9**
	0.2nm,0.6s,baz=330,slow=5.4,SNR=2.3						
	0.2nm,0.6s						

*SNET **16** 20:40:31.0±1.9, 12°.81N×90°.62W, h13km±8km, ML3.6*
*GCG **16** 20:40:37.0±0.3, 12°.94N×90°.59W, h14km±3km, MD3.9*

ISC 16 20:40:21.1±4.0, 12°.2N±0°.2×90°.60W±0°.08, h15km±15km, n22,σ1°17/33, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**1.81**	**38**	*e*P	**Pg**	**20 40 56.1**	**+0.1**
JAYA				*e*S	**Sn**	**20 41 14.9**	**+0.3**
JAYA				IAML		20 41 20.3	
	comp=Z,773nm,0.5s						
NUBE	**Las Nubes**	**1.85**	**26**	*e*P	**Pb**	**20 40 55.4**	**+0.7**
NUBE				*e*S	**Sn**	**20 41 13.5**	**-2.1**
CEVE	**Cerro Verde**	**1.86**	**31**	*e*P	**Pg**	**20 40 56.1**	**-0.7**
CEVE				*e*S	**Sn**	**20 41 15.9**	**+0.1**
CEVE				IAML		20 41 18.2	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**1.87**	**31**	*e*P	**Pg**	**20 40 56.4**	**-0.6**
SNJE	**San Jose**	**1.90**	**31**	*e*P	**Pg**	**20 40 56.8**	**-0.8**
SNJE				*e*P	**Pg**	**20 40 56.9**	**-0.8**
SNJE				*e*S	**Sn**	**20 41 16.2**	**-0.7**
RTR	**El Retiro**	**1.91**	**29**	*e*P	**Pg**	**20 40 56.9**	**-0.8**
CEDA	**San Andres**	**1.96**	**37**	*e*P	**Pg**	**20 40 58.7**	**-0.1**
CEDA				*e*S	**Sn**	**20 41 19.5**	**+1.3**
CEDA				IAML		20 41 30.8	
	comp=Z,1μm,0.4s						
SLOZ	**Alcaldia de Sa**	**1.96**	**24**	*e*P	**Pb**	**20 40 57.2**	**+0.7**
SLOZ				*e*S	**Sn**	**20 41 15.5**	**-2.7**
BOQS	**Boqueron**	**1.98**	**40**	*e*P	**Pg**	**20 40 59.3**	**+0.2**
LOMA	**Loma Larga**	**1.98**	**44**	*e*P	**Pg**	**20 40 58.9**	**-0.4**
LOMA				*e*S	**Sb**	**20 41 22.9**	**+1.4**
PIC2	**El Picacho**	**2.00**	**41**	*e*P	**Pb**	**20 40 57.7**	**+0.4**
LFRS	**El Faro**	**2.05**	**47**	*e*P	**Pg**	**20 41 00.9**	**+0.5**
SJTE	**Alcalda de S**	**2.08**	**48**	*e*P	**Pg**	**20 41 01.0**	**-0.1**
PCG	**Pacaya**	**2.16**	**360**	*i* P	**Pg**	**20 41 03.1**	**+0.6**
PCG				*i* S	**Sn**	**20 41 20.2**	**-3.1**
PAVA	**Las Pavas**	**2.20**	**47**	*e*P	**Pg**	**20 41 02.9**	**-0.3**
TECO	**Alcaldia de Te**	**2.20**	**53**	*e*P	**Pg**	**20 41 02.4**	**-1.0**
SCLA	**Alcaldia de Sa**	**2.34**	**51**	*e*P	**Pg**	**20 41 05.1**	**-1.0**
NBG	**Las Nubes**	**2.36**	**6**	*i* P	**Pg**	**20 41 06.2**	**-0.3**
TECA	**Tecapa**	**2.41**	**58**	*e*P	**Pg**	**20 41 06.2**	**-1.1**
MTO3	**Montecristo**	**2.48**	**29**	*e*P	**Pb**	**20 41 05.5**	**+0.1**
MTO3				*e*S	**Sn**	**20 41 30.4**	**-0.7**
MTO3				IAML		20 41 34.5	
	comp=Z,124nm,0.5s						
STG3	**Santiaguito 3,**	**2.65**	**339**	*i* P	**Pg**	**20 41 10.7**	**-1.1**
STG3				*i* S	**Sn**	**20 41 37.1**	**+1.8**
MRL	**Marmol**	**2.98**	**17**	*i* P	**Pb**	**20 41 15.0**	**+1.1**

IDC 16 20:40:34.8±44.0, 14°.73S×171°.77W, h0km, mb3.9/3, mbtmp3.9/3, MS3.9/1, Error ellipse: s-maj=863.8km s-min=187.1km az=78.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**39.24**	**327**	T	T	21 29 02.6	
	baz=146,slow=76,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**39.25**	**327**	T	T	21 29 04.3	
	baz=146,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**39.26**	**327**	T	T	21 29 06.1	
	baz=146,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**40.15**	**328**	T	T	21 30 14.5	
	baz=147,slow=74						
H11N1	**WAKE ISLAND Hy**	**40.16**	**328**	T	T	21 30 14.8	
	baz=147,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.17**	**328**	T	T	21 30 14.2	
	baz=147						
STKA	**Stephens Creek**	**45.73**	**240**	P	P	20 48 57.2	-0.8
	1.0nm,0.6s,baz=66,slow=10.0,SNR=3.8						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**51.53**	**256**	P	P	20 49 43.1	+0.2
	0.3nm,0.5s,baz=91,slow=6.8,SNR=8.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**51.81**	**251**	P	P	20 49 45.1	+0.1
	2.4nm,0.6s,baz=86,slow=8.2,SNR=42						
ASAR				LR	LR	21 11 24.6	
	comp=Z,128nm,21.6s,baz=154,slow=36						
	2.4nm,0.6s						

*IDC **16** 20:43:37.8±5.8, 49°.77N×114°.92W, h0km, mbtmp3.1/1, ML3.1/1, Error ellipse: s-maj=73.2km s-min=37.9km az=66.0*
*NEIC **16** 20:43:40.0±1.1, 50°.13N±0°.04×114°.7W±0°.1, h0km±1km, ML3.1/12, Error ellipse: s-maj=13.6km s-min=6.0km az=281.0*

ISC 16 20:43:39.2±1.2, 50°.16N±0°.06×114°.74W±0°.08, h0km, n13, σ0°90/12, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEW	**Newport**	**2.45**	**220**		**Pn**	**20 44 22.2**	**+1.6**
I56US	**NEWPORT INFRAS**	**2.46**	**220**	I	I	20 58 30.0	
	0.1nm,1.2s,baz=41,slow=325,SNR=2.2						
EDM	**Edmonton**	**3.19**	**15**		**Pn**	**20 44 31.6**	**+0.9**
EDM				IAML		20 45 35.4	
	comp=E,61nm,0.9s						
C09A	**Chrisman Ranch**	**3.31**	**226**		**Pn**	**20 44 33.4**	**+1.0**
C09A				IAML		20 45 31.9	
	comp=E,46nm,0.3s						
C09A				IAML		20 45 36.1	
	comp=N,36nm,0.9s						
LYMT	**Lyon Mountain**	**3.58**	**152**	Pn	**Pn**	**20 44 36.4**	**+0.2**
BPMT	**Black Pine Rid**	**3.82**	**166**	Pn	**Pn**	**20 44 39.4**	**-0.2**
EGMT	**Eagleton**	**3.91**	**121**	Pn	**Pn**	**20 44 41.8**	**+1.1**
LTY	**Liberty**	**4.88**	**236**	Pn	**Pn**	**20 44 54.0**	**+0.1**
LTY				IAML		20 46 20.5	
	comp=E,16nm,2.6s						
LTY				IAML		20 46 29.4	
	comp=N,11nm,2.7s						
PLID	**Pearl Lake**	**5.14**	**190**	Pn	**Pn**	**20 44 57.8**	**+0.1**
PLID				IAML		20 46 45.4	
	comp=N,9.6nm,2.8s						
BMO	**Blue Mountains**	**5.58**	**199**		**Pn**	**20 45 04.1**	**+0.5**
G08A	**Pilot Rock**	**5.64**	**212**	Pn	**Pn**	**20 45 04.1**	**-0.3**
I10CA	**LAC DU BONNET**	**12.00**	**83**	I	I	21 51 40.0	
	baz=270,slow=325,SNR=3.5						
YKA	**Yellowknife Ar**	**12.37**	**0**	Pn	**Pn**	**20 46 35.9**	**-0.5**
	comp=N,0.1nm,0.3s,baz=185,slow=13,SNR=5.4						
YKA				Sn	**Sn**	**20 48 53.9**	**-0.9**
	comp=N,0.1nm,0.3s,baz=171,slow=24,SNR=3.8						
YKA				Lg	Lg	20 50 10.2	
	comp=N,0.1nm,0.3s,baz=172,slow=26,SNR=3.7						
	comp=N,0.3nm,0.6s						

*SJA **16** 20:51:43.9±1.4, 21°.71S×68°.43W, h110km, ML3.5, MW3.8*
*GUC **16** 20:51:45.6±0.7, 21°.77S×68°.51W, h112km±4km, ML3.7*

ISC 16 20:51:44.9±1.9, 21°.75S±0°.04×68°.59W±0°.06, h126km±14km, n27,σ0°67/53, 3C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.61**	**266**	*e*P	**Pn**	**20 52 04.3**	**-0.1**
PB09				*e*S	**Sn**	**20 52 20.2**	**+1.1**
PB09				IAML		20 52 22.3	
	comp=Z,553nm,0.2s						
PB09	**IPOC Station P**	**0.61**	**266**	⇑*i*P	**Pn**	**20 52 04.3**	**-0.1**
PB09				*e*S	**Sn**	**20 52 18.9**	**-0.1**
LVC	**Limon Verde**	**0.91**	**199**	*e*P	**Pn**	**

GO01	**Chusmiza**	**2.15**	**345**	*e*P	**Pn**	**20 52 21.0**	**0.0**
GO01				*e*S	**Sn**	**20 52 48.7**	**+0.2**
GO01				IAML		20 52 50.9	
	comp=N,548nm,0.2s						
PB11	**IPOC Station P**	**2.22**	**333**	*e*P	**Pn**	**20 52 21.2**	**-0.3**
PB11				*e*S	**Sn**	**20 52 49.3**	**-0.3**
PB11				IAML		20 52 50.9	
	comp=Z,241nm,0.3s						
PB11	**IPOC Station P**	**2.22**	**333**	⇓*i*P	**Pn**	**20 52 21.1**	**-0.5**
PB11				*e*S	**Sn**	**20 52 48.5**	**-1.1**
PB11				IAML		20 52 50.9	
	comp=N,728nm,0.6s						
YJA	**Yavi**	**2.88**	**99**	*e*P	**Pn**	**20 52 30.4**	**+0.1**

ROM 16 20:53:06.0±0.1, 38°.107N×0°.004×15°.179E±0°.007, h10km, ML1.2/10, 1C-2D, Error ellipse: s-maj=0.6km s-min=0.4km az=130.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOV	**Novara**	**0.09**	**203**	P	Pg	20 53 08.8	+0.4
NOV				S	Sg	20 53 10.6	+0.5
NOV				AML	AML		
	comp=E,160μm,1.2s						
NOV				AML	AML		
	comp=E,160μm,0.8s						
NOV				AML	AML		
	comp=N,173μm,1.3s						
AIO	**Antillo**	**0.14**	**162**	P	Pg	20 53 09.8	+0.6
AIO				S	Sg	20 53 12.3	+0.8
AIO				AML	AML		
	comp=E,336μm,0.2s						
AIO				AML	AML		
	comp=N,282μm,0.2s						
MPNC	**Port Mandanici**	**0.14**	**74**	⇑P	Pg	20 53 09.9	+0.7
MPNC				S	Sg	20 53 12.3	+0.9
MPNC				AML	AML		
	comp=E,153μm,1.5s						
MPNC				AML	AML		
	comp=N,144μm,1.4s						
MPNC				AML	AML		
	comp=N,144μm,0.6s						
MILZ	**Milazzo**	**0.17**	**14**	P	Pg	20 53 09.9	+0.3
MILZ				S	Sg	20 53 13.1	+1.0
MUCR	**Ucria**	**0.25**	**255**	⇓P	Pg	20 53 11.7	+0.6
MUCR				S	Sg	20 53 15.7	+1.2
MUCR				AML	AML		
	comp=E,93μm,0.5s						
MUCR				AML	AML		
	comp=N,130μm,0.8s						
MUCR				AML	AML		
	comp=N,130μm,1.2s						
MSRU	**Castanea**	**0.30**	**59**	⇓P	Pb	20 53 13.0	-0.6
MSRU				S	Sg	20 53 17.4	+1.2
MSRU				AML	AML		
	comp=E,84μm,2.0s						
MSRU				AML	AML		
	comp=N,572μm,0.3s						
MSRU				AML	AML		
	comp=E,778μm,0.4s						
VPL	**Vulcano Piano**	**0.31**	**331**	P	Pb	20 53 13.1	-0.6
VPL				S	Sb	20 53 18.5	-0.4
IVGP	**Vulcano Grotta**	**0.34**	**329**	P	Pg	20 53 13.2	+0.5
IVGP				S	Sb	20 53 18.6	-0.9

ROM 16 20:53:19.5±0.1, 38°.110N×0°.004×15°.187E±0°.006, h10km, ML2.0/32, 9C-1D, Error ellipse: s-maj=0.5km s-min=0.4km az=146.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOV	**Novara**	**0.09**	**206**	⇓P	Pg	20 53 22.3	+0.3
NOV				S	Sg	20 53 24.1	+0.3
NOV				AML	AML		
	comp=N,2230μm,0.6s						
NOV				AML	AML		
	comp=E,2150μm,0.3s						
NOV				AML	AML		
	comp=N,2026μm,0.4s						
NOV				AML	AML		
	comp=E,2149μm,0.3s						
MPNC	**Port Mandanici**	**0.14**	**75**	⇑P	Pg	20 53 23.3	+0.7
MPNC				S	Sg	20 53 25.8	+1.1
MPNC				AML	AML		
	comp=E,2420μm,1.5s						
MPNC				AML	AML		
	comp=N,1970μm,0.7s						
MPNC				AML	AML		
	comp=E,1917μm,0.3s						
MPNC				AML	AML		
	comp=N,1963μm,0.3s						
AIO	**Antillo**	**0.14**	**165**	⇑P	Pg	20 53 23.2	+0.5
AIO				S	Sg	20 53 25.6	+0.7
AIO				AML	AML		
	comp=E,4565μm,0.2s						
AIO				AML	AML		
	comp=N,3265μm,0.2s						
AIO				AML	AML		
	comp=E,4565μm,0.2s						
AIO				AML	AML		
	comp=N,3266μm,0.2s						
MILZ	**Milazzo**	**0.17**	**12**	⇑P	Pg	20 53 23.7	+0.7
MILZ				S	Sg	20 53 26.5	+1.0
MILZ				AML	AML		
	comp=E,919μm,0.3s						
MILZ				AML	AML		
	comp=N,502μm,0.2s						
MILZ				AML	AML		
	comp=E,919μm,0.3s						
MILZ				AML	AML		
	comp=N,502μm,0.2s						
MUCR	**Ucria**	**0.26**	**255**	P	Pg	20 53 25.0	+0.3
MUCR				S	Sg	20 53 29.0	+0.8
MUCR				AML	AML		
	comp=E,394μm,0.5s						
MUCR				AML	AML		
	comp=N,485μm,0.4s						
MUCR				AML	AML		
	comp=N,485μm,0.4s						
MUCR				AML	AML		
	comp=E,388μm,0.2s						
MSRU	**Castanea**	**0.30**	**59**	⇑P	Pg	20 53 26.1	+0.7
MSRU				S	Sb	20 53 30.9	-1.0
MSRU				AML	AML		
	comp=E,778μm,0.4s						
MSRU				AML	AML		
	comp=N,758μm,0.3s						
MSRU				AML	AML		
	comp=E,981μm,0.3s						
MSRU				AML	AML		
	comp=N,758μm,0.3s						
VPL	**Vulcano Piano**	**0.31**	**329**	⇑P	Pg	20 53 26.5	+0.7
VPL				S	Sb	20 53 31.6	-0.8
VPL				AML	AML		
	comp=N,814μm,0.2s						
VPL				AML	AML		
	comp=E,704μm,0.3s						
VPL				AML	AML		
	comp=N,812μm,0.2s						
VPL				AML	AML		
	comp=E,704μm,0.3s						
IVGP	**Vulcano Grotta**	**0.34**	**328**	⇑P	Pg	20 53 26.6	+0.4
IVGP				S	Sb	20 53 32.2	-0.9
IVGP				AML	AML		
	comp=E,629μm,1.5s						
IVGP				AML	AML		
	comp=N,584μm,1.4s						
IVGP				AML	AML		
	comp=N,459μm,0.1s						
IVGP				AML	AML		
	comp=E,607μm,0.2s						
EMSG	**Monte Spagnolo**	**0.34**	**213**	P	Pb	20 53 27.9	+0.1
LLI	**Lipari**	**0.38**	**331**	P	Pb	20 53 27.9	-0.5
LLI				AML	AML		
	comp=E,516μm,0.4s						
LLI				AML	AML		
	comp=N,723μm,0.3s						
LLI				AML	AML		
	comp=E,516μm,1.6s						
LLI				AML	AML		
	comp=N,723μm,0.3s						
LLI				AML	AML		
	comp=E,517μm,0.4s						
MTTG	**Motta San Giov**	**0.41**	**105**	⇑P	Pg	20 53 28.1	+0.5
MTTG				AML	AML		
	comp=E,136μm,1.6s						
MTTG				AML	AML		
	comp=N,206μm,0.6s						
MTTG				AML	AML		
	comp=N,189μm,0.3s						
MTTG				AML	AML		
	comp=E,129μm,0.4s						
MSFR	**San Fratello**	**0.48**	**261**	⇑P	Pg	20 53 29.1	+0.3
MSFR				S	Sb	20 53 36.5	-0.6
MSFR				AML	AML		
	comp=E,79μm,0.9s						
MSFR				AML	AML		
	comp=N,104μm,1.4s						
MSFR				AML	AML		
	comp=E,71μm,0.2s						
MSFR				AML	AML		
	comp=N,76μm,0.2s						
CEL	**Celeste**	**0.58**	**75**	P	Pg	20 53 30.6	-0.1
CEL				S	Sb	20 53 39.7	-0.4
CEL				AML	AML		
	comp=E,124μm,0.2s						
CEL				AML	AML		
	comp=N,138μm,1.0s						
CEL				AML	AML		
	comp=E,97μm,0.2s						
CEL				AML	AML		
	comp=N,109μm,0.2s						
CEL				AML	AML		
	comp=N,96μm,0.2s						
CEL				AML	AML		
	comp=E,124μm,0.2s						
SOI	**Samo**	**0.69**	**93**	⇑P	Pg	20 53 32.4	-0.3
SOI				AML	AML		
	comp=E,57μm,0.5s						
SOI				AML	AML		
	comp=N,77μm,0.4s						
SOI				AML	AML		
	comp=E,57μm,0.5s						
SOI				AML	AML		
	comp=N,77μm,0.4s						
PLLN	**Pollina**	**0.83**	**262**	P	Pg	20 53 35.8	+0.2
PETRA	**Petralia Sopra**	**0.89**	**252**	P	Pg	20 53 36.9	+0.2
PETRA				AML	AML		
	comp=E,82μm,1.6s						
PETRA				AML	AML		
	comp=N,74μm,1.0s						
PETRA				AML	AML		
	comp=E,64μm,0.7s						
PETRA				AML	AML		
	comp=N,70μm,0.5s						
CSLB	**Castelbuono**	**0.91**	**259**	P	Pg	20 53 36.8	-0.2
CSLB				AML	AML		
	comp=E,24μm,1.2s						
CSLB				AML	AML		
	comp=N,33μm,0.4s						
CSLB				AML	AML		
	comp=E,18μm,0.6s						
CSLB				AML	AML		
	comp=N,33μm,0.4s						

*TEH **16** 21:03:10.0, 34°.82N×45°.84E, h5km, ML2.6*
*ISN **16** 21:03:11.8±2.0, 34°.84N×45°.82E, h5km±46km, ML2.6*
ISC 16 21:03:10.8±1.0, **34°.83N**±0°.04×**45°.81E**±0°.05, **h10**km, **n9,** σ 0.8 **70**/12, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.37**	**209**	Pg	**Pg**	**21 03 17.3**	**-0.8**
KGS1				Sg	**Sg**	**21 03 24.1**	**+1.1**
IDHR	**Dehrash**	**0.49**	**105**	Pg	**Pg**	**21 03 20.0**	**-0.5**
IGHG	**Ghaleghazi**	**0.80**	**128**	Pg	**Pg**	**21 03 26.0**	**-0.3**
ILIN	**Lien**	**0.95**	**84**	Pg	**Pg**	**21 03 29.2**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.16**	**118**	Pg	**Pb**	**21 03 33.0**	**-0.1**
IKRK	**Kirkuk** baz=115	**1.33**	**296**	*e*Pg	**Pn**	**21 03 35.0**	**-0.5**
IKRK				*e*Sg	**Sg**	**21 03 55.0**	**+1.3**
IBDR	**Badra**	**1.72**	**177**	*e*Pn	**Pn**	**21 03 41.0**	**+0.3**
IBDR				*e*Sn	**Sb**	**21 04 04.0**	**0.0**
MAHB	**Mahabad**	**1.94**	**358**	Pn	**Pb**	**21 03 46.1**	**-0.2**
IKFM	**Kafar-mosalman**	**2.13**	**127**	Pn	**Pb**	**21 03 49.3**	**-0.2**

TAP 16 21:21:52.6, 24°.25N×121°.74E, h11km±1km**, ML1.7, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=7.0	**0.06**	**1**	*e*P	Pg	21 21 55.5	+0.5
EAHA	**Aohua** baz=359	**0.08**	**360**	P	Pg	21 21 55.6	+0.5
EAHA				*e*S	Sg	21 21 57.6	+0.7
ETL	**Fush Village** baz=230	**0.14**	**231**	*i* P	Pb	21 21 56.8	-0.5
NACB	**Ninganchiao** baz=241	**0.15**	**241**	P	Pb	21 21 57.0	-0.5
ENA	**Nanau** baz=2.0	**0.18**	**0**	*i* P	Pb	21 21 57.5	-0.5
ENA	baz=2.0			*i* S	Sg	21 22 00.8	+1.5
EWUT	**Wuta** baz=10.0	**0.20**	**10**	*i* P	Pb	21 21 57.7	-0.6
EWUT	baz=10.0			S	Sg	21 22 01.3	+1.4
ETLH	**Xiulin Townshi** baz=260	**0.24**	**260**	P	Pb	21 21 58.7	-0.4
LATG	**Datong** baz=325	**0.35**	**326**	P	Pb	21 22 00.6	-0.3
NNSB	**Datong** baz=299	**0.37**	**299**	*e*P	Pg	21 22 00.6	+0.5
NDS	**Dongshan** baz=356	**0.39**	**357**	*e*P	Pb	21 22 01.1	-0.4
NNS	**Nan Shan** baz=300	**0.39**	**300**	*e*P	Pb	21 22 01.7	+0.1
NDT	**Datong Townshi** baz=329	**0.41**	**330**	*e*P	Pg	21 22 01.3	+0.5
ENTT	**Nioudou** baz=338	**0.42**	**338**	*i* P	Pb	21 22 01.9	-0.2
ENTT	baz=338			*i* S	Sb	21 22 08.3	-0.2
FUSB	**Fushanzhiwuyua** baz=344	**0.53**	**345**	*e*P	Pb	21 22 03.8	-0.2
YHNB	**Yeheng** baz=321	**0.54**	**322**	*e*P	Pb	21 22 03.8	-0.4
NSK	**Sanguang** baz=321	**0.55**	**321**	*e*P	Pb	21 22 03.9	-0.5

TAP 16 21:21:54.3, 23°.90N×121°.56E, h9km**, ML1.9, 1C-2D, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=317	**0.09**	**318**	*i* P	Pg	21 21 57.0	+0.4
ETM	baz=317			S	Sg	21 21 58.6	+0.3
HWA	**Hwalien** baz=30	**0.09**	**29**	*i* P	Pg	21 21 57.2	+0.6
HWA	baz=30			*i* S	Sg	21 21 59.5	+1.3
SHUL	**Shoufeng** baz=182	**0.11**	**178**	*i* P	Pg	21 21 57.5	+0.7
SHUL	baz=182			S	Sg	21 21 59.9	+1.2
ESL	**Shilin** baz=241	**0.14**	**234**	⇓*i* P	Pg	21 21 57.6	+0.3
ESL	baz=241			*i* S	Sg	21 21 59.8	+0.3
LXIB	**Xiulin Townshi** baz=312	**0.18**	**313**	⇓*i* P	Pg	21 21 58.6	+0.5
LXIB	baz=312			*i* S	Sg	21 22 01.5	+0.7
TWD	**Chiawan** baz=216	**0.18**	**11**	*i* P	Pg	21 21 57.8	-0.3
TWD	baz=216			*i* S	Sg	21 22 00.8	+0.1
TWD	**Chiawan** baz=4.0	**0.18**	**11**	*i* P	Pg	21 21 57.9	-0.3
TWD	baz=4.0			*i* S	Sg	21 22 00.9	+0.2
TEGC	**Jichi Village** baz=192	**0.19**	**185**	*e*S	Sg	21 22 03.9	+3.1
WARBT	**Fenglin Townsh** baz=229	**0.24**	**221**	⇑*i*P	Pg	21 21 59.4	+0.3
WARBT	baz=229			*i* S	Sg	21 22 02.6	+0.3
ETL	**Fush Village** baz=8.0	**0.27**	**13**	*i* P	Pg	21 21 59.8	+0.2
ETL	baz=8.0			*i* S	Sg	21 22 03.5	+0.3
NACB	**Ninganchiao** baz=3.0	**0.28**	**7**	P	Pg	21 21 60.0	+0.2
NACB	baz=3.0			*i* S	Sg	21 22 03.9	+0.3
ETLH	**Xiulin Townshi** baz=345	**0.31**	**347**	*e*P	Sg	21 22 00.9	+0.4
ETLH	baz=345			S	Sg	21 22 05.2	+0.4
WHF	**Hehuan Shan** baz=312	**0.36**	**312**	*i* P	Pg	21 22 02.2	+0.6
WHF	baz=312			*i* S	Sg	21 22 07.4	+1.0
CHGB	**Renai** baz=295	**0.39**	**295**	*i* P	Pb	21 22 03.0	-0.4
CHGB	baz=295			S	Sb	21 22 08.7	-0.9
VWDT	**VWDT** baz=252	**0.41**	**249**	P	Pb	21 22 03.5	-0.2
VWDT	baz=252			S	Sb	21 22 09.4	-0.6
WUSB	**Renai** baz=284	**0.41**	**283**	P	Pb	21 22 03.4	-0.4
WUSB	baz=284			S	Sg	21 22 09.1	+1.2
HGSD	**Ruisui** baz=207	**0.42**	**197**	P	Pb	21 22 03.7	-0.2
EHY	**Hungye** baz=218	**0.45**	**209**	*i* P	Pg	21 22 03.4	+0.4
EHY	baz=218			*i* S	Sg	21 22 09.5	+0.6
FUSS	**Fushou** baz=328	**0.45**	**320**	P	Pb	21 22 04.1	-0.5
FUSS	baz=328			S	Sg	21 22 09.7	+0.6
TWT	**Tachien** baz=303	**0.50**	**315**	*i* P	Pb	21 22 05.2	-0.1
TWT	baz=303			*i* S	Sb	21 22 12.2	-0.5
TDCB	**Techi** baz=306	**0.51**	**314**	P	Pg	21 22 04.5	+0.3
TDCB	baz=306			S	Sb	21 22 12.2	-0.9
NNSB	**Datong** baz=340	**0.55**	**343**	P	Pb	21 22 05.8	-0.4
NNSB	baz=340			S	Sg	21 22 12.9	+0.7
ENA	**Nanau** baz=4.0	**0.55**	**18**	P	Pb	21 22 06.8	+0.6
ENA	baz=4.0			S	Sb	21 22 15.2	+1.0
YULB	**Yu-li** baz=217	**0.56**	**205**	*e*P	Pb	21 22 06.3	0.0
YULB	baz=217			S	Sb	21 22 13.6	-0.8
NNS	**Nan Shan** baz=340	**0.56**	**343**	P	Pb	21 22 06.8	+0.4
NNS	baz=340			S	Sb	21 22 13.8	-0.9
SSLB	**Suanglung** baz=261	**0.56**	**259**	P	Pg	21 22 05.7	+0.5
SSLB	baz=261			S	Sg	21 22 12.9	+0.3
EWUT	**Wuta** baz=9.0	**0.58**	**20**	*e*P	Pb	21 22 06.2	-0.4
TWF1	**Yuli** baz=215	**0.59**	**204**	*e*P	Pb	21 22 06.6	-0.3
TWF1	baz=215			S	Sb	21 22 15.2	-0.2
SMLT	**Sun Moon Lake** baz=270	**0.60**	**269**	*i* P	Pb	21 22 07.1	0.0
SMLT	baz=270			*i* S	Sb	21 22 16.0	+0.3
WCS	**Beigang Elemen** baz=286	**0.61**	**285**	*i* P	Pb	21 22 07.6	+0.5
WCS	baz=286			S	Sb	21 22 15.8	-0.1
LATG	**Datong** baz=346	**0.63**	**357**	*e*S	Sb	21 22 16.7	0.0
TYC	**Yuchr** baz=281	**0.64**	**271**	P	Pb	21 22 07.7	0.0
TYC	baz=281			S	Sb	21 22 17.1	+0.4
NDT	**Datong Townshi** baz=346	**0.70**	**357**	P	Pg	21 22 08.1	+0.3
NDT	baz=346			S	Sg	21 22 17.4	+0.4
ENTT	**Nioudou** baz=358	**0.74**	**1**	*e*S	Sb	21 22 18.9	-0.6
WJS	**Zhushan** baz=272	**0.76**	**264**	*e*S	Sn	21 22 22.1	-0.9
YHNB	**Yeheng** baz=345	**0.79**	**348**	P	Pb	21 22 10.5	+0.3
YHNB	baz=345			S	Sg	21 22 19.9	+0.2
ALS	**Alishan** baz=243	**0.79**	**241**	*e*P	Pn	21 22 11.2	-0.7
ALS	baz=243			*i* S	Sb	21 22 22.3	+0.9
NSK	**Sanguang** baz=345	**0.80**	**347**	P	Pb	21 22 10.3	0.0
NSK	baz=345			S	Sb	21 22 20.8	-0.5
EHD	**Haiduan** baz=218	**0.81**	**203**	*e*P	Pb	21 22 10.9	+0.3
EHD	baz=218			*e*S	Sn	21 22 23.1	-1.0
TWE	**Neicheng** baz=5.0	**0.82**	**7**	P	Pb	21 22 11.3	+0.5
TWE	baz=5.0			*e*S	Sb	21 22 23.0	+1.0
NFF	**Wufeng Townshi** baz=336	**0.83**	**331**	*e*P	Pb	21 22 10.8	-0.2
FUSB	**Fushanzhiwuyua** baz=359	**0.86**	**2**	*e*P	Pb	21 22 12.0	+0.6
FUSB	baz=359			*e*S	Sb	21 22 23.5	+0.5
NWLT	**Wulai** baz=353	**0.88**	**357**	*e*P	Pb	21 22 12.2	+0.5
NWLT	baz=353			*e*S	Sb	21 22 23.5	-0.1
NSTT	**Nanjuang** baz=324	**0.89**	**325**	*e*P	Pn	21 22 12.8	-0.1
NSTT	baz=324			*e*S	Sb	21 22 24.1	+0.2
LIOB	**Emei** baz=325	**0.89**	**326**	*e*P	Pn	21 22 13.5	+0.5
LIOB	baz=325			*e*S	Sb	21 22 25.0	+0.9

*MOS **16** 21:38:43.0±0.9, 38°.51N×141°.99E, h46km, mb4.8/47, Error ellipse: s-maj=7.0km s-min=4.4km az=94.0*
*IDC **16** 21:38:44.8±1.8, 38°.37N×141°.89E, h52km±16km, mb4.2/30, mbtmp4.5/36, ML4.1/5, MS3.5/16, Error ellipse: s-maj=12.8km s-min=9.8km az=98.0*
*JMA **16** 21:38:45.7±0.1, 38°.4N±0°.2×142°.0E±0°.5, h57km, MD4.5/40, MW4.5/40, E OFF MIYAGI PREF*
JMA Felt III J1 at E OFF MIYAGI PREF .
*NIED **16** 21:38:45.7, 38°.43N×141°.98E, h57km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.81; $M_{\theta\theta}$-2.08; $M_{\phi\phi}$-3.73; $M_{r\theta}$-0.30; $M_{\theta\phi}$-1.09; $M_{\phi r}$-1.03; Fault plane solution: $M_0$5.15000×10^{15} NP1: ϕ_s205.00000°, δ51.00000°, λ88.00000°. NP2:ϕ_s28.00000°, δ39.00000°, λ92.00000°.*
*NEIC **16** 21:38:46.0±1.5, 38°.43N±0°.06×141°.97E±0°.10, h56km±5km, mb4.6/206, Mwr4.4/22 Error ellipse: s-maj=12.0km s-min=6.4km az=120.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.84; $M_{\theta\theta}$-1.90; $M_{\phi\phi}$-1.94; $M_{r\theta}$-1.28; $M_{\theta\phi}$-1.90; $M_{\phi r}$-3.71; Fault plane solution: $M_0$5.48000×10^{15} NP1:ϕ_s207.35000°, δ68.27000°, λ77.18000°. NP2:ϕ_s58.94000°, δ25.07000°, λ119.12000°. Principal axes: T 5.6638, Plg64.0000°, Azm96.0000°; N -0.3813, Plg12.0000°, Azm212.0000°; P -5.2825, Plg22.0000°, Azm307.0000°;*
*NEIC **16** 21:38:46.5, 38°.45N×142°.00E, h59km*
ISC 16 21:38:45.6±0.4, **38°.45N**±0°.04×**142°.03E**±0°.04, **h58**km±3km, **h58**km**:pP-P, n726,** σ1**$ 30**/746, **mb4.6**/190, **MS3.8**/12,

11C-22D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.46**	**253**	*i* P	**Pn**	**21 38 56.6**	**-0.4**
JIKH				S	**Sn**	**21 39 04.4**	**-0.9**
JIKH	**Ishinomakikobu**	**0.46**	**253**	A	A	21 38 56.6	
	comp=E,117nm,1.2s,comp=N,50nm,0.2s						
JIO	**Ouri**	**0.53**	**271**	*i* P	**Pn**	**21 38 57.4**	**-0.3**
JIO				S	**Sn**	**21 39 05.8**	**-0.8**
JIO	**Ouri**	**0.53**	**271**	A	A	21 38 57.4	
	comp=E,103nm,2.5s,comp=N,34nm,0.5s						
JKMT	**Kesennumamotoy**	**0.56**	**310**	*i* P	**Pn**	**21 38 58.1**	**0.0**
JKMT				S	**Sn**	**21 39 06.9**	**-0.3**
JKMT	**Kesennumamotoy**	**0.56**	**310**	A	A	21 38 58.1	
	comp=E,45nm,1.5s,comp=N,47nm,1.0s						
OFUJ	**Ofunato**	**0.69**	**336**	*i* P	**Pn**	**21 38 59.8**	**+0.1**
OFUJ				S	**Sn**	**21 39 10.0**	**+0.1**
OFUJ	**Ofunato**	**0.69**	**336**	A	A	21 38 59.8	
	comp=E,61nm,0.9s,comp=N,58nm,0.7s						
JMK	**Ichinoseki**	**0.81**	**309**	⇓*i* P	**Pn**	**21 39 01.2**	**+0.1**
JMK				⇓S	**Sn**	**21 39 12.5**	**+0.1**
JMK	**Ichinoseki**	**0.81**	**309**	A	A	21 39 01.2	
	comp=E,85nm,0.4s,comp=N,47nm,0.4s						
JOU	**Okura**	**1.07**	**266**	⇓*i* P	**Pn**	**21 39 04.2**	**-0.4**
JOU				⇓S	**Sn**	**21 39 18.1**	**-0.5**
JOU	**Okura**	**1.07**	**266**	A	A	21 39 04.2	
	comp=E,46nm,1.0s,comp=N,31nm,1.2s						
JMM	**Marumori**	**1.13**	**240**		**Pn**	**21 39 04.4**	**-0.9**
JMM				Sn	**Sn**	**21 39 17.8**	**-2.2**
JMM	**Marumori**	**1.13**	**240**	P	**Pn**	**21 39 04.6**	**-0.7**
JMM	**Marumori**	**1.13**	**240**	⇓*i* P	**Pn**	**21 39 04.4**	**-0.9**
JMM				⇓S	**Sn**	**21 39 18.4**	**-1.5**
JMM	**Marumori**	**1.13**	**240**	A	A	21 39 04.4	
	comp=E,13nm,0.6s,comp=N,9.0nm,0.3s						
MIYJ	**Miyakonagasawa**	**1.14**	**352**	A	A	21 39 06.0	
	comp=E,17nm,0.7s,comp=N,17nm,0.8s						
JMST	**Minamisoumatoc**	**1.15**	**232**	A	A	21 39 05.4	
	comp=E,22nm,1.2s,comp=N,17nm,0.5s						
JOM	**Ohasama**	**1.17**	**331**	⇓*i* P	**Pn**	**21 39 06.2**	**+0.4**
JOM				⇓S	**Sn**	**21 39 21.7**	**+0.8**
JOM	**Ohasama**	**1.17**	**331**	A	A	21 39 06.2	
	comp=E,34nm,0.7s,comp=N,20nm,0.3s						
JYK	**Kaneyama**	**1.39**	**290**	⇓*i* P	**Pn**	**21 39 08.8**	**+0.1**
JYK				⇓*e*S	**Sn**	**21 39 26.6**	**+0.5**
JYK	**Kaneyama**	**1.39**	**290**	A	A	21 39 08.8	
	comp=E,21nm,0.7s,comp=N,11nm,0.9s						
JFK	**Kawauchi**	**1.41**	**221**	⇓*i* P	**Pn**	**21 39 08.3**	**-0.8**
JFK				⇓S	**Sn**	**21 39 25.4**	**-1.3**
JFK	**Kawauchi**	**1.41**	**221**	A	A	21 39 08.3	
	comp=E,9.0nm,1.0s,comp=N,11nm,0.6s						
JRG	**Rokugo**	**1.44**	**312**	⇓*i* P	**Pn**	**21 39 09.6**	**+0.2**
JRG				⇓*e*S	**Sn**	**21 39 28.6**	**+1.2**
JRG	**Rokugo**	**1.44**	**312**	A	A	21 39 09.6	
	comp=E,19nm,0.4s,comp=N,12nm,0.4s						
JTH	**Tanohata**	**1.50**	**355**	A	A	21 39 11.0	
	comp=E,7.0nm,2.4s,comp=N,4.0nm,0.5s						
JSZI	**Iwateshizukuis**	**1.54**	**327**	A	A	21 39 11.3	
	comp=E,15nm,4.2s,comp=N,14nm,0.7s						
JYS	**Shirataka**	**1.56**	**262**	*i* P	**Pn**	**21 39 11.0**	**-0.1**
JYS				*e*S	**Sn**	**21 39 30.4**	**+0.2**
JYS	**Shirataka**	**1.56**	**262**	A	A	21 39 11.0	
	comp=E,22nm,1.2s,comp=N,19nm,1.9s						
JYAR	**Yonezawaarcadi**	**1.58**	**251**	A	A	21 39 11.3	
	comp=E,18nm,1.0s,comp=N,23nm,1.1s						
JOTO	**OTAMA OYAMA**	**1.60**	**237**	*i* P	**Pn**	**21 39 11.4**	**-0.3**
JOTO	**OTAMA OYAMA**	**1.60**	**237**	A	A	21 39 11.4	
	comp=E,12nm,0.9s,comp=N,15nm,2.7s						
ONAJ	**Iwakimizuishiy**	**1.66**	**216**	A	A	21 39 12.5	
	comp=E,8.0nm,0.9s,comp=N,6.0nm,0.4s						
JYYZ	**Yamagatayuza**	**1.73**	**290**	A	A	21 39 13.7	
	comp=E,14nm,3.2s,comp=N,20nm,3.8s						
JKEN	**Kujiedanarisaw**	**1.77**	**352**	A	A	21 39 14.9	
	comp=E,16nm,0.4s,comp=N,13nm,0.4s						
JYW	**Yuwa**	**1.79**	**308**	A	A	21 39 14.7	
	comp=E,29nm,0.8s,comp=N,23nm,1.2s						
JYA	**Atsumi**	**1.82**	**275**	A	A	21 39 14.9	
	comp=E,19nm,0.7s,comp=N,16nm,0.7s						
JANG	**Nango**	**1.96**	**349**	A	A	21 39 17.6	
	comp=E,4.0nm,0.6s,comp=N,4.0nm,1.5s						
JFY	**Yanaizu**	**2.11**	**241**	A	A	21 39 18.8	
	comp=E,4.0nm,3.4s,comp=N,3.0nm,3.6s						
JSB	**Shiboa**	**2.23**	**229**	A	A	21 39 20.5	
	comp=E,9.0nm,1.3s,comp=N,9.0nm,2.0s						
JNTW	**Noshirotokiwa**	**2.33**	**322**	A	A	21 39 22.4	
	comp=E,14nm,2.4s,comp=N,18nm,1.8s						
JTM	**Tenmabayashi**	**2.45**	**343**	Pn	**Pn**	**21 39 23.7**	**+0.5**
JTM				Sn	**Sn**	**21 39 51.6**	**-0.4**
JTM	**Tenmabayashi**	**2.45**	**343**	P	**Pn**	**21 39 24.1**	**+0.9**
JHHS	**Hirosakihyakuz**	**2.55**	**330**	A	A	21 39 25.7	
	comp=E,8.0nm,2.1s,comp=N,10.0nm,2.5s						
JOG3	**Oga3**	**2.72**	**304**	A	A	21 39 21.4	
	comp=E,8.0nm,3.8s,comp=N,7.0nm,1.7s						
JAHD	**Aomorihigashid**	**2.87**	**350**	A	A	21 39 30.3	
	comp=E,7.0nm,1.0s,comp=N,9.0nm,1.1s						
JSI2	**Shiura 2**	**2.89**	**335**	A	A	21 39 30.5	
	comp=E,3.0nm,1.9s,comp=N,3.0nm,1.0s						
JSD	**Sado**	**2.99**	**263**		**Pn**	**21 39 29.9**	**-0.7**
MAJO	**Matsushiro**	**3.58**	**239**		**Pn**	**21 39 39.5**	**+0.8**
MAJO	**Matsushiro**	**3.58**	**239**	P	**Pn**	**21 39 40.2**	**+1.5**
MAJO	**Matsushiro**	**3.58**	**239**	*i* P	**Pn**	**21 39 39.8**	**+1.1**
MJAR	**Matsushiro Arr**	**3.58**	**239**	P	**Pn**	**21 39 39.7**	**+1.0**
	comp=N,148nm,0.7s,baz=36,slow=14,SNR=197						
MJB9	**Matsu-Tunnel**	**3.58**	**239**		**Pn**	**21 39 40.0**	**+1.3**
ERM	**Erimo**	**3.67**	**13**	Pn	**Pn**	**21 39 39.3**	**-0.5**
ERM	**Erimo**	**3.67**	**13**	P	**Pn**	**21 39 39.6**	**-0.2**
ERM	**Erimo**	**3.67**	**13**	P	**Pn**	**21 39 39.3**	**-0.5**
JEM	**Erimo**	**3.67**	**13**	P	**Pn**	**21 39 39.7**	**-0.1**
JGF	**Kuroka**	**4.69**	**234**		**Pn**	**21 39 54.1**	**+0.2**
JGF	**Kuroka**	**4.69**	**234**	P	**Pn**	**21 39 55.5**	**+1.6**
JSG	**Sagara**	**4.87**	**221**	Pn	**Pn**	**21 39 56.6**	**+0.3**
INU	**Inuyama**	**5.07**	**234**		**Pn**	**21 39 59.2**	**+0.3**
INU	**Inuyama**	**5.07**	**234**	P	**Pn**	**21 40 00.6**	**+1.6**
JHJ2	**Mitsune**	**5.62**	**199**	Pn	**Pn**	**21 40 04.9**	**-1.7**
JHJ2	**Mitsune**	**5.62**	**199**	P	**Pn**	**21 40 04.8**	**-1.8**
JHJ	**Hachijo jima 2**	**5.62**	**200**	P	**Pn**	**21 40 04.7**	**-1.9**
	comp=N,26nm,0.3s,baz=18,slow=11,SNR=24						
JHJ				S	**Sn**	**21 41 05.0**	**-4.7**
	comp=N,135nm,0.3s,baz=73,slow=24,SNR=9.0						
	comp=N,70nm,0.3s						
NMR	**Nemuro--Hokkai**	**5.66**	**29**	⇓*i* P	**Pn**	**21 40 05.1**	**-2.0**
NMR				*e*S	**Sn**	**21 41 04.3**	**-6.4**
ASAJ	**Asahikawa**	**5.68**	**4**	P	**Pn**	**21 40 07.1**	**-0.3**
	comp=N,12nm,0.3s,baz=210,slow=13,SNR=61						
ASAJ				LR	LR	21 42 53.2	
	comp=N,128nm,20.1s,baz=173,slow=43						
	comp=N,32nm,0.3s						
JKA	**Kamikawa-asahi**	**5.68**	**4**	Pn	**Pn**	**21 40 06.5**	**-0.8**
RUSJ	**Misakicho**	**6.15**	**22**	*e*P	**Pn**	**21 40 12.8**	**-1.0**
RUSJ				*e*S	**Sn**	**21 41 18.9**	**-3.8**
YUK	**Yuzh-Kuril'sk**	**6.29**	**26**	*e*P	**Pn**	**21 40 14.0**	**-1.6**
YUK				*e*S	**Sn**	**21 41 20.2**	**-5.8**
YUK				pmax	pmax		
	comp=Z,267nm,0.2s						
YUK				pmax	pmax		
	comp=N,69nm,0.3s						
YUK				pmax	pmax		
	comp=E,88nm,0.3s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,885nm,0.3s						
SHO	**Shikotan**	**6.52**	**32**	*e*P	**Pn**	**21 40 16.4**	**-2.4**
SHO				*e*S	**Sn**	**21 41 23.7**	**-8.0**
SHO				pmax	pmax		
	comp=N,38nm,0.4s						
SHO				pmax	pmax		
	comp=E,35nm,0.4s						
SHO				pmax	pmax		
	comp=Z,52nm,0.4s						
SHO				smax	smax		
	comp=E,630nm,0.5s						
SHO				smax	smax		
	comp=N,849nm,0.3s						
KUR	**Kuril'sk**	**8.06**	**31**	*e*P	**Pn**	**21 40 38.8**	**-1.1**
KUR				*e*S	**Sn**	**21 42 04.2**	**-5.3**
KUR				pmax	pmax		
	comp=Z,70nm,0.8s						
KUR				pmax	pmax		
	comp=N,35nm,0.6s						
KUR				pmax	pmax		
	comp=E,40nm,0.5s						
KUR				smax	smax		
	comp=N,231nm,0.5s						
KUR				smax	smax		
	comp=E,391nm,0.4s						
JMN	**Monobe**	**8.10**	**237**	Pn	**Pn**	**21 40 40.8**	**+0.2**
JMN	**Monobe**	**8.10**	**237**	P	**Pn**	**21 40 41.3**	**+0.7**
YSS	**Yuzh-Sakhalins**	**8.52**	**3**	Pn	**Pn**	**21 40 45.5**	**-0.7**
YSS	**Yuzh-Sakhalins**	**8.52**	**3**	*e*P	**Pn**	**21 40 45.2**	**-1.0**
YSS				*e*S	**Sn**	**21 42 20.5**	**-0.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,0.9s						
MSHR	**Mys Shultsa**	**9.25**	**300**	*i* P	**Pn**	**21 40 55.1**	**-1.1**
USA0B	**Ussuriysk Arra**	**9.48**	**310**	Pn	**Pn**	**21 40 59.7**	**+0.3**
USA0B	**Ussuriysk Arra**	**9.48**	**310**	*i* P	**Pn**	**21 40 59.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.48**	**310**	Pn	**Pn**	**21 40 59.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**9.48**	**310**	P	**Pn**	**21 41 00.2**	**+0.8**
	comp=N,1.6nm,0.3s,baz=120,slow=14,SNR=33						
USRK				LR	LR	21 44 23.7	
	comp=N,311nm,21.4s,baz=86,slow=36						
	comp=N,12nm,0.6s						
JNU	**Nakatsue**	**10.49**	**243**	Pn	**Pn**	**21 41 13.7**	**+0.4**
JNU	**Nakatsue**	**10.49**	**243**	P	**Pn**	**21 41 14.1**	**+0.8**
JNU	**Nakatsue**	**10.49**	**243**	P	**Pn**	**21 41 12.5**	**-0.8**
	comp=N,0.6nm,0.3s,baz=56,slow=11,SNR=9.8						
JNU				LR	LR	21 45 42.0	
	comp=N,232nm,21.5s,baz=52,slow=40						
	comp=N,16nm,0.7s						
MDJ	**Mudanjiang**	**11.17**	**307**		**Pn**	**21 41 22.6**	**+0.2**
KSRS	**Korea Array**	**11.18**	**269**	P	**Pn**	**21 41 24.3**	**+1.7**
	comp=N,7.0nm,0.4s,baz=81,slow=14,SNR=31						
KSRS				LR	LR	21 45 27.0	
	comp=N,114nm,21.5s,baz=85,slow=36						
KSAR	**Wonju Array Be**	**11.21**	**269**	Pn	**Pn**	**21 41 22.0**	**-1.1**
KSAR	**Wonju Array Be**	**11.21**	**269**	P	**Pn**	**21 41 22.0**	**-1.1**
KS19	**Wonju Array Si**	**11.22**	**270**	Pn	**Pn**	**21 41 24.2**	**+1.0**
JCJ	**Chichijima**	**11.32**	**179**	P	**Pn**	**21 41 21.5**	**-3.1**
JCJ	**Chichijima**	**11.32**	**179**	P	Pn	21 41 16.3	-8.3
	comp=N,54nm,0.4s,baz=287,slow=21,SNR=5.9						
JCJ				S	Sn	21 43 13.1	-16
	comp=N,57nm,0.6s,baz=290,slow=17,SNR=1.8						
JCJ				LR	LR	21 46 54.3	
	comp=N,67nm,21.1s,baz=70,slow=44						
TJN	**Taejon**	**11.84**	**264**	Pn	**Pn**	**21 41 33.3**	**+1.6**
TJN	**Taejon**	**11.84**	**264**	*ce*P	**Pn**	**21 41 33.4**	**+1.7**
TYV	**Tymovskoe**	**12.42**	**2**	*e*P	**Pn**	**21 41 38.4**	**-1.1**
TYV				*e*S	**Sn**	**21 43 55.6**	**-0.6**
TYV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				smax	smax		
	comp=N,100nm,4.6s						
TYV				smax	smax		
	comp=E,200nm,4.6s						
BNX	**BinXian**	**13.06**	**309**	⇓P	**Pn**	**21 41 45.3**	**-3.0**
BNX				pmax	pmax		
	comp=Z,160nm,4.0s						
BNX				pmax	pmax		
	comp=Z,7.0nm,2.0s						
KLR	**Kul'dur**	**13.07**	**329**	*i* P	**Pn**	**21 41 45.8**	**-2.5**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLR	**Kul'dur**	**13.07**	**329**	P	**Pn**	**21 41 47.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=137,slow=13,SNR=5.1						
KLR				LR	LR	21 46 51.0	
	comp=Z,215nm,19.1s,baz=148,slow=37						
	comp=Z,1.4nm,0.6s						
CN2	**Changchun**	**13.59**	**298**	*e*P	**P**	**21 41 59.6**	**-2.9**
CN2				*e*PP	**PnPn**	**21 42 11.8**	**+8.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
HEH	**HeiHe**	**15.73**	**323**	*e*P	**Pn**	**21 42 21.4**	**-1.9**
PEA0B	**Petropavlovsk-**	**18.23**	**31**	P	**Pn**	**21 42 55.0**	**+0.7**
PEA0B				IAmb	IAmb	21 42 55.7	
	comp=Z,60nm,1.4s						
PEA0B	**Petropavlovsk-**	**18.23**	**31**	P	**Pn**	**21 42 55.0**	**+0.7**
PEA0B				pmax	pmax		
	comp=Z,60nm,1.4s						
PETK	**Petropavlovsk-**	**18.23**	**31**	P	**Pn**	**21 42 55.2**	**+0.9**
PETK	**Petropavlovsk-**	**18.23**	**31**	P	**Pn**	**21 42 55.2**	**+0.9**
PETK	**Petropavlovsk-**	**18.23**	**31**	P	**Pn**	**21 42 54.7**	**+0.4**
	comp=Z,8.1nm,1.0s,baz=226,slow=10,SNR=4.8						
PETK				LR	LR	21 49 02.3	
	comp=Z,147nm,20.9s,baz=235,slow=34						
ZEA	**Zeya**	**18.35**	**331**	*e*P	**P**	**21 42 53.7**	**-1.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.7s						
HIA	**Hailar**	**19.30**	**311**	*i* P	**P**	**21 43 05.9**	**+0.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIA	**Tai'an**	**19.91**	**271**	⇑P	**P**	**21 43 10.6**	**-1.8**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJT	**Baijiatuau**	**20.07**	**283**	P	**P**	**21 43 12.0**	**-2.1**
BJT	**Baijiatuau**	**20.07**	**283**	P	**P**	**21 43 12.0**	**-2.1**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XLT	**XiLinHaoTe**	**20.24**	**294**	*e*P	**P**	**21 43 13.6**	**-2.4**
XLT				pP	Pn	21 43 20.4	+2.0
XLT				sP	pP	21 43 26.1	-2.6
XLT				PP	**PnPn**	**21 43 33.3**	**-1.3**
XLT				PcP	**PcP**	**21 47 21.5**	**-6.4**
XLT				pmax	pmax		
	comp=Z,15nm,0.7s						
XLT				pmax	pmax		
	comp=Z,140nm,5.2s						
HNS	**HongShan**	**21.55**	**276**	⇑P	**P**	**21 43 26.4**	**-3.6**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**21.87**	**12**		**P**	**21 43 34.1**	**+0.8**
MA2				IAmb	IAmb	21 43 36.9	
	comp=Z,24nm,0.8s						
MA2	**Magadan**	**21.87**	**12**	*ce*P	**P**	**21 43 33.7**	**+0.4**
MA2				pmax	pmax		
	comp=Z,20nm,0.6s						
MA2	**Magadan**	**21.87**	**12**	P	**P**	**21 43 35.0**	**+1.7**
	comp=Z,25nm,0.7s,baz=194,slow=8.8,SNR=28						
MA2				LR	LR	21 53 56.6	
	comp=Z,83nm,18.2s,baz=188,slow=42						
	comp=Z,25nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.52**	**286**	*e*P	**P**	**21 43 49.9**	**-0.7**
HHC				pP	pP	21 44 05.5	+1.2
HHC				PP	**PnPn**	**21 44 21.3**	**+1.7**
HHC				*e*S	**S**	**21 47 59.5**	**-0.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,4.3s						
HHC				LR	LR		
	comp=N,140nm,9.3s						
HHC				LR	LR		
	comp=E,150nm,13.2s						
HHC				LR	LR		
	comp=Z,200nm,16.0s						
TWG	**Pinlang**	**23.74**	**235**	P	**P**	**21 43 53.7**	**+1.1**
LYN	**LuoYang**	**24.03**	**270**	⇓P	**P**	**21 43 53.6**	**-1.5**
LYN				PP	**PnPn**	**21 44 32.1**	**+5.7**
LYN				pmax	pmax		
	comp=Z,27nm,0.8s						
LYN				pmax	pmax		
	comp=Z,150nm,3.9s						
WHN	**Wuhan**	**24.07**	**259**	⇑P	**P**	**21 43 56.6**	**+1.1**
YAK	**Yakutsk**	**24.81**	**346**	P	**P**	**21 44 00.8**	**-1.0**
YAK				IAmb	IAmb	21 44 24.4	
	comp=Z,22nm,0.8s						
YAK	**Yakutsk**	**24.81**	**346**	*e*P	**P**	**21 44 01.1**	**-0.8**
YAK				*e*'PP	**pP**	**21 44 18.0**	**+1.9**
YAK				*e*		21 44 35.4	
YAK				*e*S	**S**	**21 48 20.1**	**0.0**
YAK				*e*'SS	**sS**	**21 48 40.3**	**-3.9**
YAK				*e*SS	**SnSn**	**21 49 11.1**	**-1.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				smax	smax		
	comp=E,9.0nm,1.1s						
YAK				smax	smax		
	comp=N,68nm,2.8s						
SEY	**Seymchan**	**25.31**	**11**	*ce*P	**P**	**21 44 05.6**	**-0.9**
SEY				pmax	pmax		
	comp=Z,17nm,1.0s						
BOD	**Bodaibo**	**26.61**	**326**	*e*P	**P**	**21 44 17.9**	**-0.4**
BOD				pmax	pmax		
	comp=Z,13nm,1.6s						
XAN	**Xi'an**	**26.97**	**271**	⇑P	**P**	**21 44 20.8**	**-1.1**
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
ULN	**Ulaanbaatar**	**26.99**	**302**	P	**P**	**21 44 21.4**	**-0.6**
ULN	**Ulaanbaatar**	**26.99**	**302**	*ce*P	**P**	**21 44 22.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**21 44 25.4**	**-0.5**
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**21 44 25.4**	**-0.5**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**21 44 24.8**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=102,slow=9.0,SNR=30						
SONM				PcP	**PcP**	**21 47 42.7**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=127,slow=2.8,SNR=4.2						
	comp=Z,3.1nm,0.5s						
ENH	**Enshi**	**27.96**	**263**	P	**P**	**21 44 29.5**	**-1.2**
H11N2	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	22 15 12.5	
	baz=317,slow=75,SNR=976						
H11N1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	22 15 14.2	
	baz=317,slow=75,SNR=1353						
H11N3	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	22 15 13.8	
	baz=317,slow=75,SNR=1030						
H11S1	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	22 15 51.8	
	baz=318,slow=76,SNR=445						
H11S3	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	22 16 11.9	
	baz=318,slow=76,SNR=715						
H11S2	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	22 15 50.7	
	baz=318,slow=76,SNR=474						
ZAK	**Zakamensk**	**29.80**	**306**	*e*P	**P**	**21 44 45.0**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LZH	**Lanzhou**	**30.34**	**278**	*e*P	**P**	**21 44 50.1**	**-1.8**
LZH				sP	sP	21 45 10.0	-3.2
LZH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MOY	**Mondy**	**31.42**	**308**	*e*P	**P**	**21 45 01.3**	**+0.1**
GYA	**Guiyang**	**31.96**	**259**	*e*P	**P**	**21 45 05.0**	**-1.2**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
BILL	**Bilibino**	**32.54**	**17**	P	**P**	**21 45 10.1**	**-0.6**
BILL	**Bilibino**	**32.54**	**17**	*e*P	**P**	**21 45 09.5**	**-1.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA	**Gaotai**	**32.64**	**285**	*e*P	**P**	**21 45 12.3**	**+0.3**
GTA				PcP	**PcP**	**21 47 56.8**	**-0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				LR	LR		
	comp=N,180nm,14.2s						
GTA				LR	LR		
	comp=E,170nm,17.8s						
GTA				LR	LR		
	comp=Z,230nm,18.5s						
TIXI	**Tiksi**	**33.95**	**353**	P	**P**	**21 45 23.9**	**+1.0**
TIXI	**Tiksi**	**33.95**	**353**	*i* P	**P**	**21 45 21.6**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KMI	**Kunming**	**35.67**	**260**	⇓P	**P**	**21 45 38.8**	**+0.3**
KMI				pP	pP	21 45 51.3	-1.8
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
PZH	**PanZhiHua**	**35.75**	**263**	P	**P**	**21 45 40.5**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
NIKH	**Nikolski High**	**36.49**	**50**	P	**P**	**21 45 44.9**	**-0.1**
	baz=267						
GAMB	**Gambell**	**37.26**	**32**	P	**P**	**21 45 52.7**	**+1.4**
	baz=250						
GOMU	**GeErMu**	**37.29**	**282**	P	**P**	**21 45 51.8**	**-0.6**
GOMU				pP	pP	21 46 05.5	-1.6
GOMU				sP	sP	21 46 12.8	-1.1
GOMU				PcP	**PcP**	**21 48 11.9**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,11nm,0.6s						
UNV	**Unalaska Valle**	**37.94**	**49**	P	**P**	**21 45 57.7**	**+0.5**
	baz=268						
TNA	**Tin City**	**39.39**	**30**	P	**P**	**21 46 10.6**	**+1.4**
	baz=252						
DGZ	**Jazzator, Alta**	**39.98**	**305**	*d* iP	**P**	**21 46 15.1**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,22nm,0.7s						
ANM	**Nome**	**40.14**	**32**	P	**P**	**21 46 16.5**	**+1.0**
	baz=255						
CRAI	**Chiangrai**	**40.20**	**255**	P	**P**	**21 46 17.5**	**+1.0**
CRAI				IAmb	IAmb	21 46 19.9	
	comp=Z,9.9nm,0.6s						
WMQ	**Urumqi**	**40.65**	**295**	*e*P	**P**	**21 46 21.0**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,50nm,0.7s						
L14K	**Kuka Creek**	**40.71**	**37**	P	**P**	**21 46 20.3**	**+0.2**
	baz=262						
M14K	**Bethel**	**40.98**	**38**	P	**P**	**21 46 23.6**	**+1.2**
M14K	**Bethel**	**40.98**	**38**	P	**P**	**21 46 22.3**	**0.0**
	baz=263						
L15K	**Ungalak Mounta**	**41.32**	**37**	P	**P**	**21 46 25.5**	**+0.3**
	baz=263						
ZAA0	**Zalesovo Array**	**41.34**	**311**	P	**P**	**21 46 25.2**	**-0.2**
ZAA0				IAmb	IAmb	21 46 27.2	
	comp=Z,5.5nm,0.7s						
ZALV	**Zalesovo Beam**	**41.34**	**311**	P	**P**	**21 46 25.1**	**-0.3**
ZALV	**

F18K Selawik 42.91 30 P P 21 46 38.6 +0.5
baz=259
R16K Pilot Point 43.06 43 P P 21 46 39.6 +0.3
baz=271
M17K Holitna River 43.23 38 P P 21 46 42.5 +1.8
baz=267
N17K Nushagak Hills 43.30 39 P P 21 46 42.1 +0.8
baz=268
O17K Koliganek Bris 43.33 40 P P 21 46 42.0 +0.5
baz=269
L18K Granite Mounta 43.63 37 P P 21 46 45.8 +1.9
baz=266
P17K Kvichak River 43.65 41 P P 21 46 45.2 +1.1
baz=270
MKAR Makanchi Array 43.80 301 P P 21 46 44.1 -1.5
MKAR Makanchi Array 43.80 301 P P 21 46 44.2 -1.4
comp=Z,3.4nm,0.7s,baz=80,slow=10,SNR=39
comp=Z,3.4nm,0.7s
G19K Purcell Mounta 43.86 31 P P 21 46 45.7 0.0
G19K Purcell Mounta 43.86 31 P P 21 46 47.5 +1.7
baz=262
D19K Kuna River 43.87 27 P P 21 46 45.6 -0.2
D19K IAmb IAmb 21 46 48.2
comp=Z,18nm,1.1s
D19K Kuna River 43.87 27 P P 21 46 46.8 +1.0
baz=258
N18K Kilae Creek 43.95 39 P P 21 46 47.8 +1.3
baz=269
Q17K Contact Creek 43.95 42 P P 21 46 47.1 +0.4
baz=271
TTA Tatalina 43.99 36 P P 21 46 48.4 +1.5
baz=266
MAKZ Makanchi 44.00 301 P P 21 46 46.6 -0.6
MAKZ Makanchi 44.00 301 P P 21 46 46.6 -0.6
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
M18K Stony River 44.00 38 P P 21 46 48.4 +1.5
baz=268
H19K Roundabout Mou 44.04 32 P P 21 46 48.3 +1.1
H19K IAmb IAmb 21 47 05.8
comp=Z,10nm,0.9s
H19K Roundabout Mou 44.04 32 P P 21 46 48.5 +1.4
baz=263
J19K Poorman 44.24 34 P P 21 46 49.9 +1.1
J19K IAmb IAmb 21 47 07.6
comp=Z,11nm,0.9s
J19K Poorman 44.24 34 P P 21 46 50.3 +1.5
baz=266
P18K Big Mountain, 44.27 41 P P 21 46 50.2 +1.0
P18K IAmb IAmb 21 47 04.0
comp=Z,19nm,1.5s
P18K Big Mountain, 44.27 41 P P 21 46 50.2 +1.0
baz=271
O18K Koktuh Hills 44.28 40 P P 21 46 50.6 +1.4
O18K IAmb IAmb 21 46 52.0
comp=Z,22nm,1.4s
O18K Koktuh Hills 44.28 40 P P 21 46 50.4 +1.2
baz=270
L19K White Mountain 44.49 37 P P 21 46 52.0 +1.1
L19K IAmb IAmb 21 47 12.2
comp=Z,16nm,1.3s
L19K White Mountain 44.49 37 P P 21 46 52.1 +1.2
baz=268
B20K Meade River 44.51 25 P P 21 46 52.2 +1.4
B20K IAmb IAmb 21 46 53.0
comp=Z,11nm,0.7s
B20K Meade River 44.51 25 P P 21 46 52.3 +1.4
baz=258,SNR=16
F20K Avaraart Lake 44.52 30 P P 21 46 52.3 +1.3
F20K Avaraart Lake 44.52 30 P P 21 46 52.8 +1.8
baz=262
N19K Bonanza Creek 44.64 39 P P 21 46 51.9 -0.3
baz=270
H20K Anotleneega Mo 44.68 32 P P 21 46 52.2 -0.2
baz=265
M19K Big River Lodg 44.70 37 P 21 46 54.0 +1.5
M19K IAmb IAmb 21 47 07.7
comp=Z,13nm,1.4s
M19K Big River Lodg 44.70 37 P P 21 46 53.1 +0.6
baz=269
O19K Port Alsworth 44.72 40 P P 21 46 54.5 +1.8
baz=271
R18K Karluk 44.74 43 P P 21 46 53.2 +0.4
baz=273
I20K Naaghedeneel 44.80 33 P P 21 46 53.9 +0.8
baz=266
K20K Telida 44.89 35 P P 21 46 55.7 +1.7
K20K IAmb IAmb 21 46 56.8
comp=Z,14nm,1.2s
K20K Telida 44.89 35 P P 21 46 55.2 +1.2
baz=268
J20K Nowinta River 44.90 34 P P 21 46 55.6 +1.5
J20K IAmb IAmb 21 47 13.3
comp=Z,7.1nm,0.9s
J20K Nowinta River 44.90 34 P P 21 46 55.3 +1.2
baz=267
SII Sitkinak Islan 44.95 45 P P 21 46 55.4 +0.8
baz=274
A21K Barrow 44.97 24 P P 21 46 55.6 +1.1
baz=257
C21K Knifeblade Rid 45.17 27 P P 21 46 57.4 +1.2
baz=261
B21K Ikpikpuk River 45.31 26 P P 21 46 59.0 +1.8
B21K Ikpikpuk River 45.31 26 P P 21 46 58.7 +1.5
baz=261
E21K Killik River 45.37 28 P P 21 46 58.9 +1.2
baz=263
OHAK Old Harbor 45.40 44 P P 21 46 57.1 -0.9
baz=274
F21K Alatna River 45.41 30 P P 21 46 57.6 -0.5
baz=264
KURK Kurchatov 45.46 307 P P 21 46 58.5 -0.1
KURK Kurchatov 45.46 307 P P 21 46 58.5 -0.1
KURK pmax pmax
comp=Z,29nm,0.6s
KURBB Kurchatov Arra 45.53 307 P P 21 46 58.6 -0.6
comp=Z,26nm,0.6s,baz=81,slow=8.3,SNR=127
KURBB PcP PcP 21 48 36.4 -0.6
comp=Z,1.6nm,0.8s,baz=86,slow=4.7,SNR=2.5
comp=Z,26nm,0.6s
H21K Melozitna Rive 45.56 32 P P 21 47 00.7 +1.4
H21K Melozitna Rive 45.56 32 P P 21 46 59.6 +0.3
baz=267
CHUM Lake Minchumin 45.69 34 P P 21 47 01.8 +1.5
baz=269
KDAK Kodiak Island 45.73 43 P P 21 47 01.8 +1.1
KDAK Kodiak Island 45.73 43 P P 21 47 01.0 +0.3
baz=274
KDAK Kodiak Island 45.73 43 P P 21 47 01.8 +1.1
KDAK pmax pmax
comp=Z,41nm,1.5s
KDAK Kodiak Island 45.73 43 LR LR 22 06 51.5
comp=Z,52nm,21.7s,baz=289,slow=37
PPLA Purkeypile 45.74 36 P P 21 47 01.4 +0.5
baz=270
N20K Mount Spurr 45.74 38 P P 21 47 02.2 +1.3
baz=272
CAST Castle Rocks 45.79 35 P P 21 47 02.1 +1.0
CAST Castle Rocks 45.79 35 P P 21 47 02.7 +1.5
baz=269
B22K Teshekpuk Lake 45.83 25 P P 21 47 02.1 +0.8
B22K IAmb IAmb 21 47 03.1
comp=Z,7.5nm,0.6s
B22K Teshekpuk Lake 45.83 25 P P 21 47 03.1 +1.8
baz=261
I21K Tanana 45.88 32 P P 21 47 03.1 +1.3
baz=268
D22K Ayikyak River 45.89 27 P P 21 47 03.5 +1.7
D22K Ayikyak River 45.89 27 P P 21 47 03.1 +1.2
baz=264
SKT Skwentna 46.05 37 P P 21 47 04.3 +1.1
baz=271
HOM Homer 46.09 40 P P 21 47 04.6 +1.1
baz=273
H22K Ishtalitna Cre 46.16 32 P P 21 47 05.3 +1.3
baz=268
CAPN Captain Cook N 46.27 39 P P 21 47 05.8 +0.9
baz=273
BPAW Bear Paw Mtn. 46.28 34 P P 21 47 06.2 +1.2
baz=270
KTH Kantishna Hill 46.31 35 P P 21 47 05.8 +0.5
KTH IAmb IAmb 21 47 07.9
comp=Z,9.5nm,0.9s
KTH pP 21 47 22.5 +2.3
MLY Manley 46.40 33 P P 21 47 06.6 +0.6
MLY pP 21 47 23.4 +2.5
baz=269
SUA Susitna One 46.44 38 P P 21 47 06.9 +0.5
SUA pP 21 47 23.8 +2.6
SUA IAmb IAmb 21 47 26.2
comp=Z,8.3nm,0.8s
SUA Susitna One 46.44 38 P P 21 47 08.1 +1.7
baz=272
BRSE Bradley Lake S 46.54 40 P P 21 47 08.7 +1.6
baz=274
TRF Thorofare Moun 46.59 35 P P 21 47 09.0 +1.4
baz=271
D23K Nanushuk River 46.62 27 P P 21 47 09.1 +1.5
baz=265
CUT Chulitna 46.63 36 P P 21 47 09.3 +1.6
baz=272
COLD Coldfoot 46.69 30 P P 21 47 10.0 +1.9
baz=268
M22K Willow 46.73 37 P P 21 47 10.2 +1.8
baz=273
G23K Bananza Creek 46.73 30 P P 21 47 09.9 +1.3
baz=268
BWN Browne 46.95 34 P P 21 47 12.2 +2.1
E23K Chandalar 46.95 29 P P 21 47 11.9 +1.6
baz=267
RC01 Rabbit Creek A 46.95 38 P P 21 47 11.5 +1.3
baz=274
I23K Minto, Yukon-K 46.98 33 P P 21 47 12.0 +1.6
baz=270
TOLK Toolik Lake Re 46.99 28 P P 21 47 12.0 +1.5
TOLK IAmb IAmb 21 47 13.0
comp=Z,5.0nm,0.8s
TOLK Toolik Lake Re 46.99 28 P P 21 47 12.0 +1.5
baz=267,SNR=5.1
O22K Cooper Landing 47.00 39 P P 21 47 11.8 +1.2
baz=274
NEA2 Nenana 47.11 33 P P 21 47 11.7 +0.2
NEA2 IAmb IAmb 21 47 13.4
comp=Z,6.7nm,1.0s
NEA2 Nenana 47.11 33 P P 21 47 13.2 +1.7
baz=271
MCK McKinley 47.19 34 P P 21 47 13.3 +1.2
baz=272
PMR Palmer 47.21 37 P P 21 47 12.1 -0.1
PMR Palmer 47.21 37 P P 21 47 13.3 +1.1
baz=274
PMR Palmer 47.21 37 P P 21 47 12.1 -0.1
PMR pmax pmax
comp=Z,19nm,1.3s
RND Reindeer 47.24 35 P P 21 47 12.6 0.0
RND IAmb IAmb 21 47 14.1
comp=Z,8.6nm,0.8s
RND Reindeer 47.24 35 P P 21 47 12.6 0.0
RND pmax pmax
comp=Z,9.0nm,0.8s
GHO Glory Hole Cre 47.29 37 P P 21 47 13.4 +0.4
D24K Happy Valley 47.30 27 P P 21 47 13.9 +1.1
D24K Happy Valley 47.30 27 P P 21 47 14.2 +1.4
baz=267
C24K Franklin Bluff 47.37 26 P P 21 47 14.8 +1.4
baz=267
E24K Your Creek 47.37 29 P P 21 47 14.3 +0.8
E24K IAmb IAmb 21 47 32.8
comp=Z,7.7nm,0.9s
E24K Your Creek 47.37 29 P P 21 47 15.4 +1.9
baz=268,SNR=9.4
WAT1 Susitna Watana 47.41 36 P P 21 47 14.5 +0.7
baz=273
MDM Murphy Dome 47.47 33 P P 21 47 15.0 +0.8
MDM IAmb IAmb 21 47 16.6
comp=Z,10nm,1.1s
WRH Wood River Hil 47.54 33 P P 21 47 15.5 +0.7
WRH IAmb IAmb 21 47 40.4
comp=Z,7.4nm,1.2s
KNK Knik Glacier 47.54 38 P P 21 47 15.1 +0.2
KNK IAmb IAmb 21 47 16.6
comp=Z,6.3nm,0.8s
KNK Knik Glacier 47.54 38 P P 21 47 16.1 +1.2
baz=274
SML Sawmill 47.57 37 P P 21 47 14.9 -0.2
SML IAmb IAmb 21 47 17.0
comp=Z,9.3nm,0.8s
SML Sawmill 47.57 37 P P 21 47 15.8 +0.7
baz=274,SNR=5.3
SML Sawmill 47.57 37 P P 21 47 17.3 +2.2
SML pmax pmax
comp=Z,9.0nm,0.8s
F24K Squaw Lake 47.59 29 P P 21 47 15.9 +0.7
F24K Squaw Lake 47.59 29 P P 21 47 16.4 +1.2
baz=269
H24K Noodor Dome 47.59 32 P P 21 47 17.2 +2.0
baz=271
G24K Hadweenzic Riv 47.75 30 P P 21 47 17.3 +0.9
G24K IAmb IAmb 21 47 19.5
comp=Z,11nm,1.4s
G24K Hadweenzic Riv 47.75 30 P P 21 47 18.6 +2.2
baz=270
WAT6 Susitna Watana 47.79 36 P P 21 47 18.0 +1.0
baz=274
POKR Poker Plat Res 47.80 33 P P 21 47 17.3 +0.6
POKR pP 21 47 32.4 +0.6
POKR Poker Plat Res 47.80 33 P P 21 47 18.4 +1.6
baz=272,SNR=7.3
PMG Port Moresby 47.84 173 LR LR 22 06 43.6
comp=Z,28nm,20.7s,baz=208,slow=35
M23K Glacier View 47.86 37 P P 21 47 19.0 +1.7
baz=275
DHY Denali Highway 47.93 35 P P 21 47 18.9 +0.9
baz=274
HDA Harding Lake 48.04 34 P P 21 47 18.3 -0.3
HDA IAmb IAmb 21 47 20.0
comp=Z,8.0nm,0.9s
HDA Harding Lake 48.04 34 P P 21 47 19.8 +1.2
baz=273
IL31 48.05 33 P P 21 47 18.6 0.0
IL31 IAmb IAmb 21 47 20.2
comp=Z,7.1nm,0.8s
IL31 pP 21 47 35.6 +2.0
ILAR Eielson Array 48.05 33 P P 21 47 19.0 +0.3
comp=Z,4.6nm,0.7s,baz=269,slow=6.4,SNR=57
ILAR PcP PcP 21 48 45.1 -0.6
comp=Z,1.4nm,0.9s,baz=266,slow=3.9,SNR=2.1
comp=Z,4.6nm,0.7s
SCM Sheep Creek Mo 48.05 37 P P 21 47 20.1 +1.3
baz=275
IL03 Eielson Array 48.06 33 P P 21 47 18.4 -0.4
D25K Kavik River 48.17 27 P P 21 47 20.9 +1.2
D25K Kavik River 48.17 27 P P 21 47 20.9 +1.2
baz=269
P23K Montague Islan 48.19 39 P P 21 47 21.2 +1.3
baz=277
F25K Christian Rive 48.45 29 P P 21 47 23.8 +2.0
baz=271,SNR=5.8
E25K Arctic Village 48.47 29 P P 21 47 23.1 +1.2
E25K IAmb IAmb 21 47 25.0
comp=Z,13nm,1.4s
E25K Arctic Village 48.47 29 P P 21 47 23.7 +1.8
baz=271
M24K Tolsona, Glenn 48.56 37 P P 21 47 23.9 +1.2
M24K Tolsona, Glenn 48.56 37 P P 21 47 24.2 +1.4
baz=276
PRP Porcupine Dome 48.58 32 P P 21 47 23.6 +0.7
PRP IAmb IAmb 21 47 25.3
comp=Z,5.1nm,0.8s
PRP Porcupine Dome 48.58 32 P P 21 47 24.7 +1.8
baz=273,SNR=8.7
K24K Donnelly Dome 48.59 34 P P 21 47 24.1 +1.2
baz=275
KLU Klutina 48.75 37 P P 21 47 25.5 +1.3
baz=276
PAX Paxson 48.80 35 P P 21 47 26.3 +1.7
baz=276
EYAK Cordova Ski Ar 48.95 39 P P 21 47 26.9 +1.3
baz=278
HARP HAARP 49.01 36 P P 21 47 27.3 +1.2
baz=276
F26K Sheenjek River 49.02 29 P P 21 47 28.0 +1.8
baz=273
G26K Porcupine Rive 49.20 30 P P 21 47 29.4 +1.9
baz=274
N25K Chitina, Valde 49.36 37 P P 21 47 30.6 +1.6
baz=278
SCRK Sand Creek 49.36 34 P P 21 47 29.3 +0.3
SCRK IAmb IAmb 21 47 30.5
comp=Z,7.1nm,0.8s
SCRK Sand Creek 49.36 34 P P 21 47 29.6 +0.7
baz=276,SNR=9.6
BMRM Bremner River 49.45 38 P P 21 47 31.0 +1.5
baz=278
J26L Joseph Creek 49.49 33 P P 21 47 29.9 0.0
baz=276
L26K Log Cabin Wild 49.76 35 P P 21 47 32.5 +0.7
L26K IAmb IAmb 21 47 34.5
comp=Z,8.6nm,0.8s
L26K Log Cabin Wild 49.76 35 P P 21 47 33.7 +1.9
baz=277,SNR=5.6
BVAR Borovoye Array 49.99 312 P P 21 47 33.3 -0.4
comp=Z,3.1nm,0.5s,baz=74,slow=7.3,SNR=25
BVAR PcP PcP 21 48 52.6 -0.3
comp=Z,5.5nm,0.7s,baz=70,slow=4.2,SNR=8.1
comp=Z,3.1nm,0.5s
M26K Nabesna, AK 50.00 36 P P 21 47 34.6 +0.8
baz=278
BRVK Borovoye 50.05 312 P P 21 47 33.7 -0.5
BRVK IAmb IAmb 21 47 42.8
comp=Z,3.4nm,0.7s
BRVK Borovoye 50.05 312 *ce* P P 21 47 34.2 +0.1
BRVK pmax pmax
comp=Z,2.0nm,0.7s
D27M Malcolm River 50.10 27 P P 21 47 34.9 +0.5
D27M IAmb IAmb 21 47 37.1
comp=Z,7.2nm,0.9s
D27M Malcolm River 50.10 27 P P 21 47 35.7 +1.3
baz=274
MCARA McCarthy VSAT 50.14 37 P P 21 47 35.2 +0.5
MCARA McCarthy VSAT 50.14 37 P P 21 47 36.0 +1.3
baz=279
H27K Steamboat Moun 50.16 31 P P 21 47 36.3 +1.4
baz=276
K27K Chicken 50.19 34 P P 21 47 36.5 +1.4
baz=278
I27K Kandik River 50.19 32 P P 21 47 36.5 +1.4
baz=277
CRQE Cirque 50.21 38 P P 21 47 36.7 +1.3
baz=280
BGLC Bering Glacier 50.22 39 P P 21 47 34.9 -0.4
baz=280
KSH Kashi 50.28 293 P P 21 47 41.5 +5.2
KSH sP sP 21 48 00.6 +2.4
KSH pmax pmax
comp=Z,4.0nm,0.8s
L27K Beaver Creek, 50.44 35 P P 21 47 38.2 +1.2
L27K IAmb IAmb 21 47 39.7
comp=Z,7.4nm,0.9s
L27K Beaver Creek, 50.44 35 P P 21 47 38.8 +1.8
baz=279,SNR=9.2
BCAR Beaver Creek A 50.46 35 P P 21 47 37.6 +0.4
HNR Honiara 50.48 157 LR LR 22 06 23.5
comp=Z,647nm,21.3s,baz=332,slow=33
M27K Edge Creek, AK 50.52 36 P P 21 47 39.0 +1.2
M27K IAmb IAmb 21 48 22.7
comp=Z,16nm,1.4s
M27K Edge Creek, AK 50.52 36 P P 21 47 39.3 +1.5
baz=279
F28M Old Crow 50.65 29 P P 21 47 39.4 +0.9
F28M pP 21 47 54.8 +1.2
F28M IAmb IAmb 21 47 57.6
comp=Z,3.7nm,0.8s
F28M Old Crow 50.65 29 P P 21 47 40.6 +2.0
baz=277
E28M Babbage River 50.67 28 P P 21 47 39.3 +0.7
E28M pP 21 47 54.3 +0.6
E28M IAmb IAmb 21 47 57.6
comp=Z,4.7nm,0.8s
E28M Babbage River 50.67 28 P P 21 47 40.4 +1.8
baz=276
MESA MESA 50.87 39 P P 21 47 41.9 +1.4
baz=281
I28M Miner Creek 50.91 32 P P 21 47 41.4 +0.8
I28M Miner Creek 50.91 32 P P 21 47 42.2 +1.7
baz=278
BVCY Beaver Creek 50.98 36 P P 21 47 42.7 +1.6
baz=280
CTG Chitna Glacier 51.02 38 P P 21 47 42.5 +1.0
baz=281
CTGM Chitina Glacie 51.02 38 P P 21 47 41.8 +0.3
CTGM IAmb IAmb 21 47 43.3
comp=Z,6.3nm,0.8s
YUK3 Moose Creek 51.28 37 P P 21 47 44.7 +1.2
baz=281
E29M Blow River 51.30 28 P P 21 47 44.5 +1.1
E29M IAmb IAmb 21 47 46.5
comp=Z,11nm,0.9s
E29M Blow River 51.30 28 P P 21 47 44.8 +1.5
baz=278
DAWY Dawson 51.35 33 P P 21 47 45.6 +1.7
baz=280
H29M Whitestone 51.43 31 P P 21 47 45.0 +0.7
H29M IAmb IAmb 21 48 03.2
comp=Z,9.2nm,1.2s
H29M Whitestone 51.43 31 P P 21 47 46.3 +1.9
baz=279
ARSB Arslanbob 51.77 296 P P 21 47 48.0 +0.5
ARSB Arslanbob 51.77 296 P P 21 47 48.0 +0.5
ARSB pmax pmax
comp=Z,2.0nm,0.8s
EPYK Eagle Plains 52.06 30 P P 21 47 49.9 +0.8
baz=280
M29M Somme Creek 52.07 35 P P 21 47 50.9 +1.6
M29M IAmb IAmb 21 47 52.7
comp=Z,5.2nm,0.8s
M29M Somme Creek 52.07 35 P P 21 47 50.8 +1.4
baz=282
L29M L29M 52.09 35 P P 21 47 50.7 +1.3
L29M pP 21 48 07.5 +2.9
L29M L29M 52.09 35 P P 21 47 51.1 +1.7
baz=282
G30M tAoh Zraii Nji 52.15 30 P P 21 47 50.4 +0.6
G30M tAoh Zraii Nji 52.15 30 P P 21 47 51.4 +1.6
baz=280,SNR=6.4
F30M Barrier River 52.20 29 P P 21 47 52.1 +2.0
baz=280
K29M Barlow Dome 52.21 34 P P 21 47 51.3 +0.9
K29M IAmb IAmb 21 47 53.2
comp=Z,6.0nm,0.8s
K29M pP pP 21 48 06.8 +1.3
K29M Barlow Dome 52.21 34 P P 21 47 52.3 +2.0
baz=282,SNR=8.6
YUK4 Talbot Arm 52.22 37 P P 21 47 52.4 +1.8
baz=283,SNR=5.5
I30M Mount Dempster 52.42 32 P P 21 47 52.0 +0.1
I30M Mount Dempster 52.42 32 P P 21 47 53.5 +1.6
baz=282
YUK6 Outpost Mounta 52.44 37 P P 21 47 52.8 +0.6
baz=283
O29M Mount Kennedy 52.49 38 P P 21 47 53.0 +0.5
baz=283
J30M Hart River 52.57 33 P P 21 47 53.2 +0.2
J30M IAmb IAmb 21 47 55.6
comp=Z,7.6nm,1.3s
J30M Hart River 52.57 33 P P 21 47 54.3 +1.2
baz=282
M30M Minto, Yukon 52.80 35 P P 21 47 55.7 +1.0
M30M IAmb IAmb 21 47 57.6
comp=Z,4.1nm,0.8s
M30M Minto, Yukon 52.80 35 P P 21 47 57.0 +2.3
baz=283
KK31 Karatay Array 52.85 299 P P 21 47 55.4 +0.1
KK31 Karatay Array 52.85 299 P P 21 47 55.4 +0.1
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 52.85 299 P P 21 47 55.6 +0.3
KKAR Karatay Array 52.85 299 P P 21 47 55.8 +0.6
KKAR Karatay Array 52.85 299 P P 21 47 55.6 +0.3
KKAR pmax pmax
comp=Z,3.0nm,0.7s
HYT Haines Junctio 52.88 37 P P 21 47 56.5 +1.2
HYT Haines Junctio 52.88 37 P P 21 47 57.4 +2.0
baz=284,SNR=7.2
INK Inuvik 52.91 28 P P 21 47 55.8 +0.5
INK IAmb IAmb 21 47 57.4
comp=Z,6.6nm,0.9s
INK pP 21 48 09.6 -0.8
INK Inuvik 52.91 28 P P 21 47 56.6 +1.3
baz=282,SNR=7.4
INK Inuvik 52.91 28 P P 21 47 55.8 +0.5
INK *PP pP 21 48 09.6 -0.8
INK pmax pmax
comp=Z,7.0nm,1.0s
G31M Satah River 52.91 29 P P 21 47 57.1 +1.8
baz=282
N30M Aishikik Lake 52.92 36 P P 21 47 56.3 +0.7
baz=284

F31M Tsiigehtchic 53.01 29 P **P** **21 47 57.2 +1.2**
F31M Tsiigehtchic 53.01 29 P **P** **21 47 57.8 +1.8**
baz=282
P29M Windy Craggy 53.06 39 P **P** **21 47 58.2 +1.7**
baz=284
P30M Million Dollar 53.31 38 P **P** **21 47 59.9 +1.4**
baz=285
O30N Mendenhall 53.56 37 P **P** **21 48 02.0 +1.7**
baz=285
BTK Batken 53.77 296 P **P** **21 48 03.1 +1.0**
BTK Batken 53.77 296 P **P** **21 48 03.2 +1.0**
BTK pmax pmax
comp=Z,3.0nm,0.8s
PLBC Pleasant Camp 53.78 39 P **P** **21 48 03.1 +1.3**
baz=286
M31M Drury Creek, Y 53.98 35 P **P** **21 48 03.0 -0.2**
M31M IAmb IAmb 21 48 05.8
comp=Z,5.8nm,0.9s
M31M Drury Creek, Y 53.98 35 P **P** **21 48 04.8 +1.6**
baz=285
WHY Whitehorse 54.17 37 P **P** **21 48 05.8 +1.0**
baz=286
SKAG Skagway 54.29 39 P **P** **21 48 07.0 +1.5**
baz=286
SVE Sverdlovsk 54.42 318 *e*P **P** **21 48 07.4 +0.9**
SVE pmax pmax
comp=Z,9.0nm,0.9s
FARO Faro, Yukon 54.44 35 P **P** **21 48 06.9 +0.3**
FARO IAmb IAmb 21 48 09.1
comp=Z,4.3nm,0.8s
FARO Faro, Yukon 54.44 35 P **P** **21 48 07.9 +1.3**
baz=286
NIL Nilore 54.64 288 P **P** **21 48 08.6 0.0**
NIL Nilore 54.64 288 P **P** **21 48 08.6 0.0**
NIL pmax pmax
comp=Z,17nm,0.6s
A36M Sachs Harbour 54.77 22 P **P** **21 48 09.1 +0.4**
A36M Sachs Harbour 54.77 22 P **P** **21 48 11.2 +2.4**
baz=286,SNR=8.3
N32M Quiet Lake 54.87 36 P **P** **21 48 10.1 +0.3**
N32M IAmb IAmb 21 48 12.1
comp=Z,6.3nm,1.1s
N32M Quiet Lake 54.87 36 P **P** **21 48 11.0 +1.3**
baz=287
MMPY Sheldon Lake, 55.26 34 P **P** **21 48 14.3 +1.7**
baz=288
P33M Teslin, Yukon 55.28 37 P **P** **21 48 13.4 +0.7**
P33M IAmb IAmb 21 48 15.7
comp=Z,8.4nm,1.1s
P33M Teslin, Yukon 55.28 37 P **P** **21 48 14.3 +1.5**
baz=288
ARU Arti 55.63 318 *d i*P **P** **21 48 15.0 -0.2**
ARU 21 50 16.6
ARU S **S** **21 55 56.5 -0.2**
ARU SS **SS** **21 59 37.8 -4.1**
ARU pmax pmax
comp=Z,3.0nm,0.7s
ARU Arti 55.63 318 LR LR 22 14 21.8
comp=Z,119nm,18.7s,baz=56,slow=38
Q32M Nakina River 55.94 39 P **P** **21 48 16.6 -1.1**
baz=289
C36M Paulatuk 55.95 25 P **P** **21 48 17.5 +0.2**
C36M Paulatuk 55.95 25 P **P** **21 48 18.5 +1.2**
baz=289
R33M Jennings River 56.43 38 P **P** **21 48 21.6 +0.6**
baz=290
S34M Telegraph Cree 56.86 40 P **P** **21 48 25.0 +1.0**
S34M IAmb IAmb 21 48 27.7
comp=Z,7.8nm,1.1s
S34M Telegraph Cree 56.86 40 P **P** **21 48 26.1 +2.2**
baz=291
TGTN Hyland Airport 56.95 35 P **P** **21 48 27.1 +2.5**
baz=290
DLBC Dease Lake 57.22 39 P **P** **21 48 28.4 +1.8**
DLBC IAmb IAmb 21 48 29.5
comp=Z,4.3nm,0.8s
DLBC Dease Lake 57.22 39 P **P** **21 48 28.6 +2.0**
baz=291
V35K Ketchikan 57.55 43 P **P** **21 48 30.7 +1.9**
baz=292
T35M Bob Quinn 57.64 40 P **P** **21 48 32.0 +2.5**
T35M Bob Quinn 57.64 40 P **P** **21 48 31.7 +2.1**
baz=292,SNR=5.2
WB0 Warramunga Arr 58.35 188 P **P** **21 48 34.0 -0.8**
CTA Charters Tower 58.36 175 LR LR 22 13 02.3
comp=Z,40nm,21.5s,baz=94,slow=35
WRGLY Wrigley 58.39 32 P **P** **21 48 36.2 +1.6**
baz=293
WRAB Tennant Creek 58.52 188 P **P** **21 48 35.2 -0.8**
WRAB Tennant Creek 58.52 188 P **P** **21 48 35.2 -0.8**
WRAB pmax pmax
comp=Z,11nm,0.9s
WR0 Warramunga Arr 58.52 188 P **P** **21 48 35.2 -0.8**
WB2 Warramunga Arr 58.52 188 P **P** **21 48 35.2 -0.8**
WRA Warramunga Arr 58.53 188 P **P** **21 48 34.6 -1.4**
WRA Warramunga Arr 58.53 188 P **P** **21 48 34.6 -1.4**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 58.53 188 P **P** **21 48 35.0 -1.0**
comp=Z,13nm,0.8s,baz=5.6,slow=7.1,SNR=95
comp=Z,13nm,0.8s
GRNB Grenville Isla 59.01 44 P **P** **21 48 40.1 +1.0**
SPITS Spitsbergen Ar 59.23 349 P **P** **21 48 41.1 +0.8**
comp=Z,10nm,1.0s,baz=80,slow=9.4,SNR=2.5
comp=Z,10nm,1.0s
KIRV Kirov 59.42 323 *i*P **P** **21 48 40.7 -1.1**
RES Resolute Bay 61.11 15 P **P** **21 48 53.4 +0.2**
RES IAmb IAmb 21 48 54.0
comp=Z,6.2nm,0.7s
RES pP **pP** **21 49 09.7 +1.0**
AS31 Alice Springs 62.25 188 P **P** **21 49 01.2 -0.2**
ASAR Alice Springs 62.25 188 P **P** **21 49 01.0 -0.4**
ASAR Alice Springs 62.25 188 P **P** **21 49 01.0 -0.4**
ASAR Alice Springs 62.25 188 P **P** **21 49 00.8 -0.6**
comp=Z,4.7nm,0.7s,baz=11,slow=5.7,SNR=53
ASAR LR LR 22 16 26.8
comp=Z,58nm,19.6s,baz=26,slow=36
comp=Z,4.7nm,0.7s
YKA Yellowknife Ar 62.35 31 P **P** **21 49 01.6 0.0**
YKA Yellowknife Ar 62.35 31 P **P** **21 49 02.0 +0.4**
comp=Z,3.0nm,0.8s,baz=301,slow=6.9,SNR=33
YKA PcP **PcP** **21 49 41.4 +0.6**
comp=Z,0.9nm,0.7s,baz=304,slow=4.1,SNR=7.0
comp=Z,3.0nm,0.8s
YKAB2 New Yellowknif 62.38 31 P **P** **21 49 02.7 +0.9**
HRA Herat 62.40 293 P **P** **21 49 03.2 +0.5**
ARCES ARCESS Array B 62.85 339 P **P** **21 49 04.7 -0.2**
comp=Z,1.8nm,0.8s,baz=40,slow=5.0,SNR=6.4
comp=Z,1.8nm,0.8s
GEYT Alibeck 63.58 299 P **P** **21 49 11.8 +1.5**
GEYT Alibeck 63.58 299 P **P** **21 49 11.8 +1.5**
GEYT pmax pmax
comp=Z,2.0nm,0.8s
GEYT Alibeck 63.58 299 P **P** **21 49 08.9 -1.4**
comp=Z,0.7nm,0.4s,baz=79,slow=7.8,SNR=2.1
comp=Z,0.7nm,0.4s
NEEM North Greenlan 64.09 3 *i*P **P** **21 49 12.6 -0.8**
NEEM IAmb IAmb 21 49 13.7
comp=Z,10nm,0.7s
OBN Obninsk 67.26 323 *e*P **P** **21 49 32.5 -1.1**
OBN *e**PP **pP** **21 49 47.9 -1.6**
OBN *e**SP **sP** **21 49 55.4 -0.6**
OBN *e* 21 50 00.9
OBN *e* 21 51 58.1
OBN *e*PPP PPP 21 53 36.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
FIA1 FINESS Array S 67.79 332 P **P** **21 49 37.0 +0.1**
FINES FINESS Array B 67.79 332 P **P** **21 49 37.0 +0.1**
FINES FINESS Array B 67.79 332 *i*P **P** **21 49 36.9 0.0**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 67.79 332 P **P** **21 49 36.5 -0.4**
comp=Z,4.5nm,0.6s,baz=45,slow=8.1,SNR=26
comp=Z,4.5nm,0.6s
EDM Edmonton 67.94 39 P **P** **21 49 39.1 +1.0**
EDM IAmb IAmb 21 49 39.7
comp=Z,7.0nm,0.8s
EDM Edmonton 67.94 39 P **P** **21 49 39.1 +1.0**
EDM pmax pmax
comp=Z,7.0nm,0.8s
K02D Willamette Mer 67.98 52 P **P** **21 49 39.4 +0.8**
K02D IAmb IAmb 21 49 41.3
comp=Z,12nm,1.2s
NEW Newport 68.78 45 P **P** **21 49 44.7 +1.3**
NEW IAmb IAmb 21 49 45.4
comp=Z,7.2nm,0.8s
NEW Newport 68.78 45 P **P** **21 49 44.5 +1.0**
baz=304
NEW Newport 68.78 45 P **P** **21 49 44.7 +1.3**
NEW pmax pmax
comp=Z,7.0nm,0.9s
PINE Pine Mountain 69.06 50 P **P** **21 49 47.3 +1.9**
PINE IAmb IAmb 21 49 48.4
comp=Z,15nm,1.1s
MEF Metsahovi 69.22 332 *e*P **P** **21 49 45.6 -0.3**
SUMG Summit 69.27 0 P **P** **21 49 47.3 +0.8**
SUMG Summit 69.27 0 P **P** **21 49 47.3 +0.8**
SUMG pmax pmax
comp=Z,11nm,0.6s
SUMG Summit 69.27 0 *i*P **P** **21 49 46.0 -0.6**
SUMG IAmb IAmb 21 49 47.6
comp=Z,13nm,0.4s
RAF Rauma 69.63 333 *e*P **P** **21 49 48.1 -0.2**
K05A Summer Lake 69.68 51 P **P** **21 49 50.9 +1.6**
STKA Stephens Creek 69.97 180 P **P** **21 49 50.4 -0.3**
comp=Z,0.7nm,0.3s,baz=324,slow=8.8,SNR=3.7
STKA LR LR 22 21 47.9
comp=Z,58nm,18.5s,baz=19,slow=37
comp=Z,0.7nm,0.3s
KIV Kislovodsk 70.35 311 *e*P **P** **21 49 54.5 +1.3**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KBZ Khabaz 70.35 311 P **P** **21 49 53.2 +0.1**
comp=Z,2.5nm,0.8s,baz=11,slow=4.0,SNR=4.7
comp=Z,2.5nm,0.8s
MTSE Matsula 70.46 331 *e*P **P** **21 49 53.6 +0.1**
BMO Blue Mountains 70.62 48 P **P** **21 49 56.0 +1.1**
BMO Blue Mountains 70.62 48 P **P** **21 49 56.0 +1.1**
BMO pmax pmax
comp=Z,4.0nm,1.1s
IDID Didziasalis 71.56 327 *e*P P 21 49 55.6 -4.6
IIGN Ignalina 71.75 327 *e*P **P** **21 49 59.3 -2.1**
FFC Flin Flon 72.26 33 P **P** **21 50 05.0 +0.6**
FFC IAmb IAmb 21 50 05.8
comp=Z,9.4nm,0.9s
FFC Flin Flon 72.26 33 P **P** **21 50 05.0 +0.6**
FFC pmax pmax
comp=Z,9.0nm,0.9s
PABE Paberze 72.59 328 *e*P **P** **21 50 06.2 -0.2**
ICESG Greenland Ices 72.77 1 *i*P **P** **21 50 07.3 -0.3**
ICESG IAmb IAmb 21 50 09.1
comp=Z,10.0nm,0.7s
NC405 NORSAR Array S 72.86 337 P **P** **21 50 08.1 +0.2**
NC405 IAmb IAmb 21 50 18.5
comp=Z,18nm,1.2s
EGMT Eagleton 72.89 42 P **P** **21 50 09.8 +1.4**
baz=309
HFS Hagfors 73.00 336 P **P** **21 50 08.5 -0.2**
comp=Z,3.2nm,0.4s,baz=46,slow=6.4,SNR=31
HFS LR LR 22 23 57.7
comp=Z,144nm,18.4s,baz=2.5,slow=37
comp=Z,3.2nm,0.4s
NC204 NORSAR Array S 73.02 338 P **P** **21 50 09.3 +0.4**
NB201 NORSAR Array S 73.04 337 P **P** **21 50 09.1 +0.1**
HLID Hailey 73.06 48 P **P** **21 50 11.0 +1.4**
baz=307
NB2 NORSAR Subarra 73.07 337 P **P** **21 50 08.9 -0.3**
comp=Z,13nm,1.0s,baz=38,slow=6.2
NOA NORSAR Array B 73.07 337 P **P** **21 50 09.1 -0.1**
comp=Z,3.3nm,0.7s,baz=52,slow=7.0,SNR=9.6
comp=Z,3.3nm,0.7s
NBO00 NORSAR Array S 73.21 338 P **P** **21 50 10.2 +0.2**
BOZ Bozeman (W) 73.39 45 P **P** **21 50 12.8 +1.3**
baz=308,SNR=5.1
AKASG Malin Array Be 73.48 322 P **P** **21 50 11.2 -0.5**
comp=Z,3.0nm,0.5s,baz=44,slow=6.2,SNR=12
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 73.48 322 *ce*P **P** **21 50 10.3 -1.4**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 73.76 54 P **P** **21 50 14.8 +0.9**
comp=Z,2.6nm,0.8s,baz=286,slow=5.5,SNR=16
comp=Z,2.6nm,0.8s
TPH Tonopah 74.65 54 P **P** **21 50 19.8 +0.8**
TPH **pP** **21 50 36.6 +1.6**
H17A Grant Village 74.73 45 P **P** **21 50 22.1 +2.6**
baz=309,SNR=5.5
MZP Montezuma Peak 74.78 54 P **P** **21 50 20.5 +0.7**
IMW Indian Meadow 74.84 46 P **P** **21 50 20.9 +0.7**
IMW IAmb IAmb 21 50 23.0
comp=Z,6.1nm,0.8s
FLWY Flagg Ranch 74.86 45 P **P** **21 50 20.4 +0.2**
FLWY IAmb IAmb 21 50 41.0
comp=Z,8.1nm,1.3s
PKM Mcpherson Peak 74.87 57 P **P** **21 50 21.6 +1.2**
baz=306
LCH Last Change Ra 74.89 54 P **P** **21 50 20.8 +0.4**
FXWY Fox Creek 74.95 46 P **P** **21 50 21.9 +1.2**
FXWY IAmb IAmb 21 50 23.6
comp=Z,4.8nm,0.8s
FXWY **pP** **21 50 38.0 +1.3**
CWC Cottonwood Cre 75.08 55 P **P** **21 50 22.4 +0.9**
baz=307
TPAW Teton Pass 75.09 46 P **P** **21 50 21.3 -0.3**
TPAW IAmb IAmb 21 50 23.3
comp=Z,5.2nm,0.8s
HVU Hansel Valley 75.11 48 P **P** **21 50 21.6 0.0**
HVU IAmb IAmb 21 50 40.9
comp=Z,5.5nm,0.8s
HVU Hansel Valley 75.11 48 P **P** **21 50 21.6 0.0**
HVU pmax pmax
comp=Z,6.0nm,0.8s
LOHW Long Hollow 75.21 46 P **P** **21 50 23.3 +1.1**
DY2G Dye2 75.21 3 *i*P **P** **21 50 20.1 -1.7**
ISA Isabella, Lake 75.29 56 P **P** **21 50 23.1 +0.4**
baz=307
ARVC Arvin 75.38 57 P **P** **21 50 24.2 +1.2**
baz=307
DGMT Dagmar 75.44 39 P **P** **21 50 24.4 +1.2**
DGMT Dagmar 75.44 39 P **P** **21 50 24.2 +1.0**
baz=312
AHID Auburn Hatcher 75.46 47 P **P** **21 50 24.3 +0.7**
AHID IAmb IAmb 21 50 25.6
comp=Z,3.7nm,0.7s
R11B Troy Canyon, C 75.51 52 P **P** **21 50 24.5 +0.5**
R11B **pP** **21 50 40.5 +0.5**
R11B Troy Canyon, C 75.51 52 P **P** **21 50 24.9 +0.9**
baz=308,SNR=5.9
Q12A Willow Creek R 75.56 52 P **P** **21 50 25.3 +1.1**
Q12A IAmb IAmb 21 50 43.7
comp=Z,5.5nm,0.7s
SPUT South Promonto 75.59 49 P **P** **21 50 24.6 +0.3**
LAO LASA Array 75.59 41 P **P** **21 50 24.6 +0.5**
LAO IAmb IAmb 21 50 26.4
comp=Z,13nm,0.9s
LAO LASA Array 75.59 41 P **P** **21 50 25.4 +1.2**
baz=311
MPMC Manual Prospec 75.69 55 P **P** **21 50 25.7 +0.6**
baz=307
S11A Rachel 75.84 53 P **P** **21 50 26.8 +0.9**
S11A IAmb IAmb 21 50 45.7
comp=Z,6.4nm,0.8s
FURC Furnace Creek, 75.85 55 P **P** **21 50 26.8 +1.2**
baz=308
ARPR Arapgir-MALATY 75.86 309 P **P** **21 50 26.0 +0.1**
ARPR IAmb IAmb 21 50 27.5
comp=Z,6.6nm,0.8s
SPR3 Spring Creek 3 75.89 51 P **P** **21 50 26.6 +0.3**
LRMC Laurel Mtn Rad 75.92 56 P **P** **21 50 27.3 +1.0**
baz=307
HWUT Hardware Ranch 75.92 48 P **P** **21 50 26.6 +0.4**
HWUT IAmb IAmb 21 50 45.6
comp=Z,5.4nm,0.8s
TPNV Topopah Spring 75.95 54 P **P** **21 50 27.3 +0.8**
baz=308
DUG Dugway, Tooele 76.07 50 P **P** **21 50 27.9 +0.8**
DUG IAmb IAmb 21 50 46.5
comp=Z,6.2nm,0.8s
DUG Dugway, Tooele 76.07 50 P **P** **21 50 28.6 +1.5**
baz=309,SNR=7.3
DUG Dugway, Tooele 76.07 50 P **P** **21 50 27.9 +0.8**
DUG pmax pmax
comp=Z,6.0nm,0.8s
EDW2 Edwards Air Fo 76.08 57 P **P** **21 50 28.4 +1.3**
baz=307
QSM Queen of Sheba 76.15 55 P **P** **21 50 28.0 +0.5**
QSM IAmb IAmb 21 50 29.5
comp=Z,6.6nm,0.9s
BW06 Boulder Array 76.33 46 P **P** **21 50 29.5 +0.8**
baz=310,SNR=8.9
PDAR Pinedale Array 76.33 46 P **P** **21 50 29.0 +0.3**
PDAR Pinedale Array 76.33 46 P **P** **21 50 29.3 +0.6**
comp=Z,3.9nm,0.6s,baz=274,slow=1.5,SNR=67
comp=Z,3.9nm,0.6s
GSC Goldstone, Bar 76.59 56 P **P** **21 50 30.6 +0.6**
GSC IAmb IAmb 21 50 31.9
comp=Z,7.4nm,1.3s
GSC Goldstone, Bar 76.59 56 P **P** **21 50 30.6 +0.6**
baz=308
GSC Goldstone, Bar 76.59 56 P **P** **21 50 30.7 +0.6**
GSC pmax pmax
comp=Z,7.0nm,1.3s
NLU North Lily Min 76.66 49 P **P** **21 50 31.4 +0.9**
BFSC Mount Baldy Ra 76.69 57 P **P** **21 50 32.3 +1.6**
baz=308
SHPR Sheep Range 76.91 54 P **P** **21 50 33.0 +1.1**
TUQ Turquoise Moun 77.08 55 P **P** **21 50 34.1 +1.2**
baz=308
HEC Hector,Ludlow 77.19 56 P **P** **21 50 34.2 +0.8**
baz=308
KWP Kalwaria Pacla 77.27 324 P **P** **21 50 33.9 +0.4**
KWP Kalwaria Pacla 77.27 324 P **P** **21 50 33.9 +0.4**
KWP pmax pmax
comp=Z,20nm,1.4s
BUR08 Bucovina Ar. S 77.49 322 P **P** **21 50 34.7 -0.2**
MVU Marysvale 77.49 51 P **P** **21 50 35.4 +0.1**
MVU **pP** **21 50 51.3 +0.1**
BURAR Bucovina Array 77.50 322 P **P** **21 50 34.5 -0.5**
BURAR Bucovina Array 77.50 322 P **P** **21 50 34.5 -0.5**
BURAR pmax pmax
comp=Z,3.0nm,0.7s
MSU Marysvale 77.51 51 P **P** **21 50 36.3 +1.0**
MSU pP **pP** **21 50 54.0 +2.6**
V12A Nelson 77.59 54 P **P** **21 50 36.5 +0.8**
GMRC Granite Mounta 77.65 55 P **P** **21 50 37.2 +1.1**
baz=308
RDMU Red Mountain 77.74 48 P **P** **21 50 37.6 +1.0**
LCMT Little Creek M 77.80 52 P **P** **21 50 37.7 +0.8**
LCMT **pP** **21 50 54.7 +1.9**
LCMT IAmb IAmb 21 50 56.5
comp=Z,6.2nm,1.1s
MTPU Mount Pierson 77.80 51 P **P** **21 50 37.5 +0.4**
MTPU IAmb IAmb 21 50 57.0
comp=Z,4.2nm,0.8s
PFO Pinyon Flats O 77.86 57 P **P** **21 50 37.1 -0.2**
baz=308
Q16A Castle Valley 77.86 50 P **P** **21 50 37.4 +0.2**
Q16A IAmb IAmb 21 50 39.2
comp=Z,9.7nm,1.4s
TPFO Pinon Flats 77.86 57 P **P** **21 50 37.0 -0.3**
baz=308
BELC Belle Mtn. Jos 77.92 56 P **P** **21 50 37.7 +0.2**
baz=308
P18A Preston Nutter 77.95 49 P **P** **21 50 38.5 +0.6**
P18A IAmb IAmb 21 50 57.9
comp=Z,6.4nm,1.2s
KOLS Kolonicke sedl 77.96 324 *e*P **P** **21 50 37.7 +0.3**
KOLS Kolonicke sedl 77.96 324 *e*P **P** **21 50 37.7 +0.3**
ULM Lac du Bonnet 78.06 34 P **P** **21 50 37.5 -0.4**
ULM IAmb IAmb 21 50 38.8
comp=Z,8.4nm,1.1s
ULM Lac du Bonnet 78.06 34 P **P** **21 50 37.5 -0.4**
ULM pmax pmax
comp=Z,8.0nm,1.1s
ULM Lac du Bonnet 78.06 34 P **P** **21 50 38.0 +0.1**
comp=Z,3.3nm,0.7s,baz=309,slow=8.2,SNR=7.8
comp=Z,3.3nm,0.7s
MDND Maddock 78.09 37 P **P** **21 50 38.6 +0.6**
MDND Maddock 78.09 37 P **P** **21 50 38.7 +0.6**
baz=315
K22A Casper 78.10 45 P **P** **21 50 37.9 -0.6**
baz=312
SRU San Rafael Swe 78.12 49 P **P** **21 50 39.6 +0.9**
SRU San Rafael Swe 78.12 49 P **P** **21 50 39.6 +0.9**
SRU pmax pmax
comp=Z,11nm,0.8s
OJC Ojcow 78.14 326 P **P** **21 50 38.3 0.0**
OJC IAmb IAmb 21 50 39.1
comp=Z,5.0nm,0.7s
OJC Ojcow 78.14 326 P **P** **21 50 38.3 0.0**
OJC pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 78.28 312 *ce*P **P** **21 50 39.2 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.4s
BRTR Keskin Array B 78.28 312 P **P** **21 50 38.6 -0.8**
comp=Z,0.8nm,0.6s,baz=65,slow=3.1,SNR=7.2
comp=Z,0.8nm,0.6s
MONP2 Monument Peak 78.32 57 P **P** **21 50 40.6 +0.6**
baz=308
IRM Iron Mountain 78.38 56 P **P** **21 50 41.0 +1.0**
baz=309
RSSD Black Hills 78.45 42 P **P** **21 50 41.3 +0.8**
baz=313
BC3 Big Chuckawall 78.49 56 P **P** **21 50 41.5 +0.8**
baz=309
MLR Muntele Rosu 78.62 320 LR LR 22 26 17.2
comp=Z,108nm,18.3s,baz=1.5,slow=36
IKP In-Ko-Pah, Jac 78.68 57 P **P** **21 50 42.5 +0.8**
baz=309
SWSC Sam W. Stewart 78.70 57 P **P** **21 50 42.3 +0.6**
baz=309
HMU Henry Mountain 78.75 50 P **P** **21 50 42.6 +0.4**
HMU IAmb IAmb 21 51 01.4
comp=Z,6.9nm,0.7s
U15A North Rim 78.76 52 P **P** **21 50 42.7 +0.4**
U15A **pP** **21 51 00.2 +1.8**
O20A White River Ci 78.80 47 P **P** **21 50 42.4 0.0**
O20A **pP** **21 50 59.6 +1.2**
O20A IAmb IAmb 21 51 01.1
comp=Z,11nm,1.4s
O20A White River Ci 78.80 47 P **P** **21 50 43.4 +1.0**
baz=311
YUH Yuha Desert 78.81 57 P **P** **21 50 42.4 +0.1**
PDMCI Parker Dam,Lak 78.93 55 P **P** **21 50 44.0 +1.1**
baz=309
LANS Liptovska Anna 79.07 326 *e*P **P** **21 50 44.8 +1.3**
LANS Liptovska Anna 79.07 326 *e*P **P** **21 50 44.8 +1.3**
ESJX Sierra Juarez 79.19 58 P **P** **21 50 45.3 +0.7**
DPC Dobruska-Polom 79.52 328 *e*P **P** **21 50 46.3 +0.3**
DPC Dobruska-Polom 79.52 328 *e*P **P** **21 50 46.3 +0.3**
KRLC Kraliky 79.54 328 *e*P **P** **21 50 46.4 +0.3**
KRLC Kraliky 79.54 328 *e*P **P** **21 50 46.4 +0.3**
N23A Red Feather La 79.60 46 P **P** **21 50 48.0 +1.2**
baz=312
VYHS Vyhne 79.84 326 *e*P **P** **21 50 48.1 +0.4**
VYHS Vyhne 79.84 326 *e*P **P** **21 50 48.0 +0.4**
Y14A Wickenburg 79.89 55 P **P** **21 50 47.8 -0.5**
WUAZ Wupatki 79.91 53 P **P** **21 50 48.6 +0.1**
WUAZ IAmb IAmb 21 50 51.0
comp=Z,5.6nm,0.9s
WUAZ **pP** **21 51 06.4 +1.8**
WUAZ Wupatki 79.91 53 P **P** **21 50 49.6 +1.1**
baz=310,SNR=5.6
PVCC Panska Ves 80.10 329 *e*P **P** **21 50 49.4 +0.4**
PVCC Panska Ves 80.10 329 *e*P **P** **21 50 49.4 +0.4**
CLL Collm 80.11 330 P **P** **21 50 48.7 -0.4**
CLL IAmb IAmb 21 50 49.7
comp=Z,6.0nm,0.7s
CLL Collm 80.11 330 *i*P **P** **21 50 48.8 -0.3**
CLL pmax pmax
comp=Z,9.0nm,0.9s
CLL Collm 80.11 330 *i*P **P** **21 50 48.8 -0.3**
comp=Z,9.0nm,0.9s
CLL *i*x x 21 50 52.7
113A Mohawk Valley, 80.14 56 P **P** **21 50 49.8 +0.2**
SMCO Snowmass 80.16 47 P **P** **21 50 50.6 +0.5**
ISCO Idaho Springs 80.52 46 P **P** **21 50 53.1 +1.2**
baz=313
MVCO Mesa Verde 80.57 50 P **P** **21 50 51.4 -0.7**
MVCO IAmb IAmb 21 50 54.2
comp=Z,5.4nm,0.9s
MVCO Mesa Verde 80.57 50 P **P** **21 50 53.2 +1.1**
baz=312
X16A Lo Mia Camp, P 80.58 53 P **P** **21 50 51.6 -0.6**
MODS Modra-Piesok 80.61 326 *e*P **P** **21 50 53.2 +1.3**
MODS Modra-Piesok 80.61 326 *e*P **P** **21 50 53.2 +1.3**
SUSD Miller 80.84 39 P **P** **21 50 54.4 +1.2**
baz=316
ZVC Zvikov 81.10 329 *e*P **P** **21 50 54.7 +0.3**
W18A Petrified Fore 81.19 52 P **P** **21 50 56.2 +0.9**
baz=311
S22A 4UR Ranch, Cre 81.20 48 P **P** **21 50 56.0 +0.4**
S22A IAmb IAmb 21 50 58.2
comp=Z,7.1nm,1.2s
S22A 4UR Ranch, Cre 81.20 48 P **P** **21 50 56.9 +1.3**

baz=312,SNR=5.8
214A Organ Pipe Nat 81.28 56 P **P** 21 50 56.0 +0.3
214A Organ Pipe Nat 81.28 56 P **P** 21 50 56.9 +1.1
baz=310
Q24A Divide 81.35 47 P **P** 21 50 57.5 +1.1
baz=313
CKRC Cesky Krumlov 81.53 328 *e*P **P** 21 50 57.1 +0.4
CKRC Cesky Krumlov 81.53 328 *e*P **P** 21 50 57.1 +0.4
MMAI Mount Meron Ar 81.54 306 P **P** 21 50 57.4 +0.3
comp=Z,2.6nm,0.7s,baz=53,slow=7.5,SNR=6.3
comp=Z,2.6nm,0.7s
RONA Rosalia, Austr 81.56 326 *e*P **P** 21 50 57.7 +0.8
comp=Z,5.1nm,0.8s
CONA Conrad Observa 81.57 327 *i*P **P** 21 50 56.2 -0.8
comp=Z,3.6nm,1.0s
KHC Kasperske Hory 81.59 329 P **P** 21 50 57.2 +0.1
KHC IAmb IAmb 21 50 57.9
comp=Z,5.7nm,0.9s
KHC Kasperske Hory 81.59 329 *e*P **P** 21 50 57.4 +0.3
KHC Kasperske Hory 81.59 329 P **P** 21 50 57.2 +0.1
KHC pmax pmax
comp=Z,6.0nm,0.9s
OGNE Ogallala 81.72 44 P **P** 21 50 59.8 +1.9
baz=315
GERES GERESS Array B 81.77 328 P **P** 21 50 57.9 -0.1
comp=Z,1.5nm,0.6s,baz=26,slow=9.4,SNR=6.7
comp=Z,1.5nm,0.6s
EKA Eskdalemuir Ar 81.96 341 P **P** 21 50 59.0 +0.2
EKA Eskdalemuir Ar 81.96 341 P **P** 21 50 59.0 +0.2
comp=Z,2.5nm,0.8s,baz=32,slow=6.7,SNR=2.5
comp=Z,2.5nm,0.8s
SDCO Great Sand Dun 81.98 48 P **P** 21 51 00.5 +0.9
baz=313
ARSA Arzberg 82.24 326 *i*P **P** 21 51 00.7 +0.2
comp=Z,1.9nm,0.6s
MOA Molln 82.31 327 *e*P **P** 21 50 59.9 -0.9
comp=Z,5.5nm,1.2s,SNR=19
TUC Tucson 82.36 55 P **P** 21 51 02.7 +1.2
baz=311
ECSD EROS Data Cent 82.51 39 P **P** 21 51 01.9 -0.1
ECSD IAmb IAmb 21 51 02.9
comp=Z,5.1nm,0.8s
BIOA Bad Ischl, Aus 82.70 328 *i*P **P** 21 51 01.6 -1.3
comp=Z,6.1nm,0.9s
E38A The Farm, Brul 82.70 34 P **P** 21 51 02.4 -0.5
E38A IAmb IAmb 21 51 03.4
comp=Z,8.5nm,0.8s
SOKA Soboth 82.89 326 *e*P **P** 21 51 03.8 -0.2
comp=Z,8.4nm,1.2s,SNR=5.4
T25A Trinidad 83.03 48 P **P** 21 51 06.0 +1.0
baz=314
OBKA Obir 83.23 326 *e*P **P** 21 51 06.0 +0.3
comp=Z,3.3nm,0.8s
DUN6 Lazy B Ranch 83.28 54 P **P** 21 51 06.8 +0.5
KBA Koelnbreinsper 83.30 328 *e*P **P** 21 51 06.4 +0.2
comp=Z,5.0nm,0.8s
LESA Schwarzleotal 83.31 328 *e*P **P** 21 51 06.2 +0.1
comp=Z,4.6nm,0.8s
ANMO Albuquerque 83.31 50 P **P** 21 51 06.9 +0.4
ANMO IAmb IAmb 21 51 08.9
comp=Z,5.8nm,1.2s
ANMO Albuquerque 83.31 50 P **P** 21 51 07.8 +1.3
baz=313
ANMO Albuquerque 83.31 50 P **P** 21 51 06.9 +0.4
ANMO pmax pmax
comp=Z,6.0nm,1.2s
MYKA Terra Mystica 83.53 327 *i*P **P** 21 51 06.3 -0.9
comp=Z,2.8nm,0.5s
PRED Cave del Predi 83.71 327 P **P** 21 51 06.9 -1.2
PRED IAmb IAmb 21 51 08.7
comp=Z,3.7nm,0.8s
WATA Walderalm 83.83 329 *i*P **P** 21 51 08.4 -0.5
comp=Z,3.1nm,0.9s
I37A Lemond, Waseca 83.84 37 P **P** 21 51 08.6 -0.2
SCHQ Schefferville 83.85 16 P **P** 21 51 08.9 +0.3
comp=Z,3.7nm,0.9s,baz=346,slow=3.9,SNR=6.5
comp=Z,3.7nm,0.9s
WTTA Wattenberg 83.87 329 *e*P **P** 21 51 08.8 -0.3
comp=Z,4.9nm,1.1s
ABTA Abfaltersbach 83.91 328 *e*P **P** 21 51 09.0 -0.2
comp=Z,3.4nm,1.2s
BMRD Maredsous 83.95 334 *d*P **P** 21 51 09.4 +0.2
MOTA Moosalm 84.02 329 *e*P **P** 21 51 09.4 -0.4
comp=Z,6.0nm,1.2s
RETA Reutte 84.04 329 *i*P **P** 21 51 09.9 +0.1
comp=Z,9.9nm,1.4s,SNR=6.5
SQTA Sankt Quirin 84.08 329 *e*P **P** 21 51 10.1 0.0
comp=Z,4.0nm,0.7s
121A Cookes Peak, D 84.12 53 P **P** 21 51 11.0 +0.3
121A IAmb IAmb 21 51 13.0
comp=Z,6.0nm,0.9s
121A Cookes Peak, D 84.12 53 P **P** 21 51 12.0 +1.3
baz=312,SNR=6.0
STAL STALIGIAL 84.22 327 P **P** 21 51 09.4 -1.2
STAL IAmb IAmb 21 51 10.0
comp=Z,5.8nm,0.7s
CIMO Cimolais 84.29 328 P **P** 21 51 09.5 -1.5
CIMO IAmb IAmb 21 51 13.1
comp=Z,3.2nm,0.9s
BFO Black Forest 84.31 331 P **P** 21 51 10.8 -0.3
BFO IAmb IAmb 21 51 12.1
comp=Z,8.9nm,1.0s
BFO Black Forest 84.31 331 P **P** 21 51 10.8 -0.3
BFO pmax pmax
comp=Z,9.0nm,1.0s
FETA Feichten 84.43 329 *e*P **P** 21 51 11.8 -0.1
comp=Z,4.7nm,0.8s,SNR=5.5
DAVA Damuels 84.56 330 *e*P **P** 21 51 12.3 -0.3
comp=Z,10nm,0.9s
FUORN Ofenpass-Fuorn 84.94 329 P **P** 21 51 14.3 -0.3
FUORN IAmb IAmb 21 51 15.6
comp=Z,6.2nm,0.7s
JFWS Jewell Farm 86.15 36 P **P** 21 51 20.9 +0.5
baz=322
MNTX Cornudas Mount 86.18 52 P **P** 21 51 21.6 +0.9
baz=314
AMTX Amarillo 86.18 48 P **P** 21 51 21.6 +0.8
baz=315
MSTX Muleshoe 86.19 49 P **P** 21 51 21.7 +0.9
baz=315
VHRN Van Horn 87.05 52 P **P** 21 51 25.3 +0.2
P38A Dawn 87.11 40 P **P** 21 51 25.0 -0.2
DKNS Dickens 87.49 48 P **P** 21 51 27.8 +0.7
DKNS IAmb IAmb 21 51 29.9
comp=Z,5.2nm,0.7s
P40A Paris 87.92 39 P **P** 21 51 29.1 +0.1
WMOK Wichita Mounta 87.95 46 P **P** 21 51 29.7 +0.4
WMOK Wichita Mounta 87.95 46 P **P** 21 51 30.5 +1.2
baz=317
WMOK Wichita Mounta 87.95 46 P **P** 21 51 29.7 +0.4
WMOK pmax pmax
comp=Z,3.0nm,1.0s
TX31 Lajitas Ar. Si 88.88 53 P **P** 21 51 34.1 +0.2
TX31 IAmb IAmb 21 51 35.4
comp=Z,3.4nm,0.8s
TXAR Lajitas Array 88.88 53 P **P** 21 51 34.3 +0.5
TXAR Lajitas Array 88.88 53 P **P** 21 51 34.5 +0.6
comp=Z,2.5nm,0.7s,baz=299,slow=3.1,SNR=37
comp=Z,2.5nm,0.7s
CCM Cathedral Cave 89.46 39 P **P** 21 51 37.5 +1.2
baz=321
L48A N Adams 89.50 33 P **P** 21 51 35.4 -1.0
BRDY Brady 90.32 49 P **P** 21 51 40.5 0.0
BRDY IAmb IAmb 21 51 42.1
comp=Z,4.6nm,1.0s
JCT Junction City 90.43 50 P **P** 21 51 41.5 +0.5
baz=316
DRIO Del Rio 90.69 51 P **P** 21 51 41.6 -0.7
DRIO IAmb IAmb 21 51 44.2
comp=Z,2.6nm,0.8s
WHTX Lake Whitney, 90.71 47 P **P** 21 51 43.3 +1.1
baz=318
MIAR Mount Ida 90.95 43 P **P** 21 51 43.1 -0.2
MIAR Mount Ida 90.95 43 P **P** 21 51 44.1 +0.8
baz=320
MIAR Mount Ida 90.95 43 P **P** 21 51 43.1 -0.2
MIAR pmax pmax
comp=Z,6.0nm,0.8s
LONY Lake Ozonia 90.96 25 P **P** 21 51 44.9 +1.8
baz=332
ERPA Erie 91.16 30 P **P** 21 51 45.0 +0.8
baz=328
M53A WI Miller and 91.47 31 P **P** 21 51 46.6 +1.0
baz=328
BINY Binghamton 92.60 27 P **P** 21 51 51.3 +0.5
baz=331
SIV San Ignacio 149.79 49 PKPbc **PKPbc** 21 58 29.4 0.0
comp=Z,5.9nm,0.8s,baz=293,slow=1.4,SNR=16
PLCA Paso Flores 154.87 106 PKPab **PKPab** 21 58 56.7 +0.9
comp=Z,1.5nm,0.8s,baz=235,slow=4.4,SNR=4.0

*IDC **16** 21:53:14.1±0.8, 14°.60N×146°.97E, h0km, mb4.4/19, mbtmp4.4/20, ML4.4/1, MS3.6/5, Error ellipse: s-maj=21.6km s-min=14.8km az=113.0*
*NEIC **16** 21:53:23.1±1.5, 14°.55N±0°.08×146°.8E±0°.1, h56km±8km, mb4.6/103, Error ellipse: s-maj=15.1km s-min=11.1km az=89.0*
ISC 16 21:53:19.8±0.6, 14°.59N±0°.08×146°.87E±0°.08, h33km, n150, σ1s05/149, mb4.6/88, MS3.7/6, 3C-3D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.18**	**243**	Pn	**Pn**	**21 53 54.0**	**+0.2**
GUMO	**Guam**	**2.18**	**243**	Pn	**Pn**	**21 53 53.3**	**-0.5**
	104nm,0.3s,baz=84,slow=3.8,SNR=17						
GUMO				Sn	**Sn**	**21 54 21.7**	**+1.9**
	93nm,0.3s,baz=18,slow=22,SNR=4.4						
	272nm,0.3s						
DAV	**Davao City (W)**	**22.20**	**253**	LR	LR	22 08 20.3	
	comp=Z,54nm,18.7s,baz=74,slow=41						
MJAR	**Matsushiro Arr**	**23.19**	**342**	P	**P**	**21 58 20.7**	**-3.1**
	1.3nm,0.6s,baz=167,slow=9.4,SNR=4.9						
	1.3nm,0.6s						
JNU	**Nakatsue**	**23.49**	**325**	P	**P**	**21 58 26.0**	**-0.7**
JNU				IAmb	IAmb	21 59 03.0	
	comp=Z,28nm,1.1s						
JMM	**Marumori**	**23.80**	**348**	P	**P**	**21 58 30.8**	**+1.1**
JMM				IAmb	IAmb	21 58 43.9	
	comp=Z,36nm,1.1s						
PMG	**Port Moresby**	**23.84**	**179**	P	**P**	**21 58 30.3**	**+0.1**
PMG				IAmb	IAmb	21 58 45.7	
	comp=Z,22nm,0.8s						
TATO	**Taipei**	**25.98**	**297**	P	**P**	**21 58 50.2**	**+0.6**
YHNB	**Yeheng**	**25.98**	**297**	P	**P**	**21 58 50.2**	**+0.4**
SSLB	**Suanglung**	**26.09**	**294**	P	**P**	**21 58 52.1**	**+1.4**
TPUB	**Ta-pu**	**26.25**	**293**	P	**P**	**21 58 52.4**	**+0.1**
TPUB				IAmb	IAmb	21 58 52.8	
	comp=Z,39nm,1.2s						
JTM	**Tenmabayashi**	**26.59**	**350**	P	**P**	**21 58 54.5**	**-0.5**
KSRS	**Korea Array**	**28.32**	**327**	P	**P**	**21 59 09.6**	**-1.0**
	comp=Z,5.8nm,0.9s,baz=148,slow=9.7,SNR=13						
	comp=Z,5.8nm,0.9s						
KS19	**Wonju Array Si**	**28.39**	**327**	P	**P**	**21 59 12.6**	**+1.4**
KS19				IAmb	IAmb	21 59 33.6	
	comp=Z,17nm,1.1s						
NJ2	**Nanjing**	**30.91**	**309**	*e*P	**P**	**21 59 35.3**	**+1.7**
NJ2				pP	**pwP**	**21 59 48.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,130nm,3.9s						
USRK	**Ussuriysk Ar.**	**32.13**	**340**	P	**P**	**21 59 42.1**	**-2.0**
	comp=Z,2.0nm,0.8s,baz=143,slow=7.0,SNR=2.5						
	comp=Z,2.0nm,0.8s						
SBUM	**Sibu**	**36.26**	**254**	P	**P**	**22 00 20.2**	**-0.1**
WB0	**Warramunga Arr**	**36.28**	**200**	P	**P**	**22 00 19.5**	**-0.9**
WB0				IAmb	IAmb	22 00 37.2	
	comp=Z,8.0nm,1.1s						
WR0	**Warramunga Arr**	**36.41**	**200**	P	**P**	**22 00 21.2**	**-0.3**
WR0				IAmb	IAmb	22 01 05.1	
	comp=Z,9.5nm,1.1s						
WB2	**Warramunga Arr**	**36.46**	**200**	P	**P**	**22 00 21.6**	**-0.3**
WB2				IAmb	IAmb	22 00 36.5	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**36.46**	**200**	P	**P**	**22 00 22.2**	**+0.3**
WRA	**Warramunga Arr**	**36.46**	**200**	P	**P**	**22 00 20.4**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=22,slow=9.5,SNR=11						
	comp=Z,1.8nm,0.8s						
HNS	**HongShan**	**36.48**	**315**	⇑P	**P**	**22 00 21.9**	**0.0**
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
LYN	**LuoYang**	**36.81**	**309**	⇓P	**P**	**22 00 25.3**	**+0.5**
LYN				PP	**PP**	**22 01 48.8**	**-0.2**
LYN				pmax	pmax		
	comp=Z,14nm,1.4s						
LYN				pmax	pmax		
	comp=Z,250nm,4.1s						
BJT	**Baijiatuan**	**36.91**	**319**	P	**P**	**22 00 25.0**	**-0.5**
BJT				IAmb	IAmb	22 00 26.7	
	comp=Z,13nm,1.3s						
BJI	**Beijing**	**36.92**	**319**	P	**P**	**22 00 25.5**	**-0.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ENH	**Enshi**	**37.72**	**301**	P	**P**	**22 00 32.3**	**-0.3**
HEH	**HeiHe**	**38.93**	**340**	*e*P	**P**	**22 00 41.6**	**-0.8**
HEH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GYA	**Guiyang**	**39.31**	**294**	⇓*i*P	**P**	**22 00 47.8**	**+1.7**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GYA				pmax	pmax		
	comp=Z,160nm,4.5s						
XAN	**Xi'an**	**39.34**	**306**	⇑P	**P**	**22 00 46.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**39.38**	**10**	P	**P**	**22 00 46.0**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=189,slow=6.9,SNR=5.3						
PETK				LR	LR	22 16 28.6	
	comp=Z,82nm,20.5s,baz=249,slow=35						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**40.08**	**199**	P	**P**	**22 00 51.2**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=22,slow=9.4,SNR=14						
	comp=Z,0.6nm,0.6s						
HHC	**Hu-ho-hao-te**	**40.32**	**317**	*e*P	**P**	**22 00 54.3**	**0.0**
HHC				pP	pwP	22 01 13.9	+4.7
HHC				sP	sP	22 01 22.5	+17
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
DZM	**Mont Dzumac**	**41.18**	**152**	*e*LR	LR	22 12 33.1	
	comp=Z,93nm,22.1s						
SLVN	**Son La**	**41.32**	**286**	P	**P**	**22 01 02.0**	**-0.8**
KMI	**Kunming**	**42.64**	**291**	⇓P	**P**	**22 01 15.4**	**+1.7**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CD2	**Chengdu**	**42.66**	**300**	P	**P**	**22 01 13.9**	**+0.3**
CD2				S	**S**	**22 07 32.9**	**-2.0**
CD2				pmax	pmax		
	comp=Z,180nm,5.7s						
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=N,190nm,16.2s						
CD2				LR	LR		
	comp=E,190nm,17.4s						
CD2				LR	LR		
	comp=Z,210nm,13.0s						
PZH	**PanZhiHua**	**43.68**	**293**	P	**P**	**22 01 21.8**	**-0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,4.9s						
LZH	**Lanzhou**	**43.94**	**307**	⇑P	**P**	**22 01 25.1**	**+1.1**
LZH				sP	pwP	22 01 50.1	+11
LZH				pmax	pmax		
	comp=Z,33nm,1.4s						
MA2	**Magadan**	**45.00**	**3**	P	**P**	**22 01 33.3**	**+1.4**
MA2				IAmb	IAmb	22 01 35.5	
	comp=Z,7.9nm,0.8s						
CHTO	**Chiang Mai**	**45.99**	**282**	P	**P**	**22 01 40.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**46.01**	**282**	P	**P**	**22 01 40.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**46.01**	**282**	P	**P**	**22 01 41.0**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=80,slow=6.1,SNR=18						
CMAR				PcP	**PcP**	**22 03 18.4**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=80,slow=2.8,SNR=4.1						
	comp=Z,1.9nm,0.3s						
TNCH	**TengChong**	**46.45**	**291**	P	**P**	**22 01 44.6**	**+0.5**
TNCH				pP	sP	22 01 53.5	-1.7
TNCH				pmax	pmax		
	comp=Z,13nm,1.2s						
ULN	**Ulaanbaatar**	**46.70**	**324**	P	**P**	**22 01 44.9**	**-0.8**
ULN				IAmb	IAmb	22 01 49.6	
	comp=Z,5.1nm,0.8s						
SONM	**Songino Array**	**47.07**	**323**	P	**P**	**22 01 47.6**	**-0.9**
SONM				IAmb	IAmb	22 01 52.4	
	comp=Z,6.1nm,0.9s						
SONM	**Songino Array**	**47.07**	**323**	P	**P**	**22 01 48.6**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=138,slow=10,SNR=20						
	comp=Z,4.9nm,0.8s						
GTA	**Gaotai**	**47.99**	**310**	*e*P	**P**	**22 01 56.8**	**+0.9**
GTA				sP	pwP	22 02 21.1	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RPSI	**Rantau Prapat**	**48.74**	**261**	P	**P**	**22 02 01.3**	**-0.5**
GOMU	**GeErMu**	**51.05**	**305**	P	**P**	**22 02 21.3**	**+1.8**
GOMU				pP	pwP	22 02 33.3	-1.8
GOMU				sP	sP	22 02 38.3	+7.7
GOMU				PcP	**PcP**	**22 03 32.8**	**-2.4**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SHL	**Shillong**	**52.47**	**291**	P	**P**	**22 02 29.7**	**-0.4**
LSA	**Lhasa**	**53.29**	**296**	P	**P**	**22 02 35.8**	**-0.6**
BILL	**Bilibino**	**54.87**	**9**	P	**P**	**22 02 48.3**	**+1.6**
WMQ	**Urumqi**	**57.88**	**313**	*e*P	**P**	**22 03 09.9**	**+1.3**
WMQ				pP	pwP	22 03 22.3	-1.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
ZAA0	**Zalesovo Array**	**61.96**	**324**	P	**P**	**22 03 35.4**	**-1.0**
ZAA0				IAmb	IAmb	22 03 43.8	
	comp=Z,4.2nm,0.7s						
ZALV	**Zalesovo Beam**	**61.96**	**324**	P	**P**	**22 03 35.4**	**-1.0**
ZALV	**Zalesovo Beam**	**61.96**	**324**	P	**P**	**22 03 35.6**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=114,slow=6.6,SNR=13						
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**62.14**	**315**	P	**P**	**22 03 38.1**	**+0.3**
MKAR	**Makanchi Array**	**62.14**	**315**	P	**P**	**22 03 38.2**	**+0.4**
	comp=Z,7.4nm,0.5s,baz=85,slow=8.6,SNR=96						
	comp=Z,7.4nm,0.5s						
N19K	**Bonanza Creek**	**62.28**	**28**	P	**P**	**22 03 38.8**	**+0.3**
MAKZ	**Makanchi**	**62.35**	**315**	P	**P**	**22 03 39.5**	**+0.3**
H19K	**Roundabout Mou**	**63.31**	**23**	P	**P**	**22 03 47.1**	**+1.9**
H19K				IAmb	IAmb	22 03 49.3	
	comp=Z,4.0nm,0.9s						
G19K	**Purcell Mounta**	**63.34**	**22**	P	**P**	**22 03 46.8**	**+1.4**
G19K				IAmb	IAmb	22 03 48.9	
	comp=Z,8.9nm,1.1s						
K20K	**Telida**	**63.39**	**26**	P	**P**	**22 03 46.8**	**+0.9**
F20K	**Avaraart Lake**	**64.23**	**22**	P	**P**	**22 03 52.4**	**+1.2**
CAST	**Castle Rocks**	**64.25**	**26**	P	**P**	**22 03 52.6**	**+1.1**
CAST				IAmb	IAmb	22 03 54.2	
	comp=Z,10.0nm,1.2s						
KTH	**Kantishna Hill**	**64.79**	**26**	P	**P**	**22 03 55.5**	**+0.4**
KTH				IAmb	IAmb	22 04 35.6	
	comp=Z,11nm,1.1s						
TRF	**Thorofare Moun**	**65.03**	**26**	P	**P**	**22 03 57.8**	**+1.1**
TRF				IAmb	IAmb	22 04 04.3	
	comp=Z,8.5nm,1.1s						
KURK	**Kurchatov**	**65.09**	**319**	P	**P**	**22 03 56.2**	**-0.9**
KURBB	**Kurchatov Arra**	**65.13**	**319**	P	**P**	**22 03 57.3**	**-0.1**
	comp=Z,24nm,0.7s,baz=99,slow=6.6,SNR=301						
	comp=Z,24nm,0.7s						
MLY	**Manley**	**65.35**	**24**	P	**P**	**22 03 59.6**	**+0.9**
MLY				IAmb	IAmb	22 04 02.1	
	comp=Z,8.8nm,1.2s						
SML	**Sawmill**	**65.41**	**28**	P	**P**	**22 04 00.2**	**+1.1**
NRIK	**Norii'sk**	**65.84**	**340**	P	**P**	**22 04 00.7**	**-0.9**
	comp=Z,4.2nm,0.5s,baz=98,slow=6.5,SNR=5.0						
	comp=Z,4.2nm,0.5s						
G23K	**Bananza Creek**	**66.18**	**23**	P	**P**	**22 04 05.4**	**+1.4**
KSH	**Kashi**	**66.19**	**307**	P	**P**	**22 04 07.8**	**+3.2**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WRH	**Wood River Hil**	**66.26**	**25**	P	**P**	**22 04 04.7**	**+0.3**
WRH				IAmb	IAmb	22 04 37.4	
	comp=Z,8.0nm,1.2s						
MDM	**Murphy Dome**	**66.34**	**25**	P	**P**	**22 04 06.3**	**+1.3**
MDM				IAmb	IAmb	22 04 11.1	
	comp=Z,5.3nm,1.0s						
B22K	**Teshekpuk Lake**	**66.37**	**19**	P	**P**	**22 04 06.3**	**+1.3**
B22K				IAmb	IAmb	22 04 08.2	
	comp=Z,4.1nm,0.8s						
H24K	**Noodor Dome**	**66.74**	**24**	P	**P**	**22 04 08.8**	**+1.2**
H24K				IAmb	IAmb	22 04 11.1	
	comp=Z,6.5nm,1.1s						
IL31		**66.84**	**25**	P	**P**	**22 04 07.6**	**-0.5**
ILAR	**Eielson Array**	**66.84**	**25**	P	**P**	**22 04 07.3**	**-0.8**
ILAR	**Eielson Array**	**66.84**	**25**	P	**P**	**22 04 06.8**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=250,slow=5.9,SNR=18						
	comp=Z,3.1nm,0.9s						
G24K	**Hadweenzic Riv**	**67.14**	**23**	P	**P**	**22 04 11.9**	**+1.9**
F24K	**Squaw Lake**	**67.23**	**22**	P	**P**	**22 04 12.4**	**+1.7**
F24K				IAmb	IAmb	22 04 14.2	
	comp=Z,6.4nm,1.2s						
AAK	**Ala-Archa**	**67.34**	**310**	P	**P**	**22 04 11.1**	**-0.9**
D24K	**Happy Valley**	**67.42**	**20**	P	**P**	**22 04 12.8**	**+1.0**
CRQM	**Cirque**	**67.62**	**30**	P	**P**	**22 04 14.4**	**+1.0**
L26K	**Log Cabin Wild**	**67.95**	**27**	P	**P**	**22 04 16.8**	**+1.5**
L26K				IAmb	IAmb	22 04 41.0	
	comp=Z,4.7nm,1.1s						
FYU	**Fort Yukon**	**67.97**	**24**	P	**P**	**22 04 17.2**	**+2.0**
MESA	**MESA**	**68.10**	**31**	P	**P**	**22 04 16.5**	**0.0**
J26L	**Joseph Creek**	**68.16**	**26**	P	**P**	**22 04 16.9**	**+0.3**
E25K	**Arctic Village**	**68.25**	**22**	P	**P**	**22 04 18.6**	**+1.5**
E25K				IAmb	IAmb	22 04 50.2	
	comp=Z,9.1nm,1.5s						
GRNC	**Granite Creek**	**68.29**	**30**	P	**P**	**22 04 18.9**	**+1.3**
GRNC				IAmb	IAmb	22 04 24.2	
	comp=Z,13nm,1.2s						
D25K	**Kavik River**	**68.30**	**21**	P	**P**	**22 04 17.4**	**0.0**
D25K				IAmb	IAmb	22 04 21.4	
	comp=Z,10nm,1.1s						
BMAR	**Burnt Mountain**	**68.43**	**23**	P	**P**	**22 04 19.2**	**+1.0**
TABL	**Table Mountain**	**68.54**	**30**	P	**P**	**22 04 20.4**	**+1.1**
NIL	**Nilore**	**68.55**	**301**	P	**P**	**22 04 18.7**	**-0.8**
L27K	**Beaver Creek,**	**68.64**	**28**	P	**P**	**22 04 20.3**	**+0.8**
BCAR	**Beaver Creek A**	**68.66**	**28**	P	**P**	**22 04 20.8**	**+1.1**
EGAK	**Eagle**	**69.23**	**26**	P	**P**	**22 04 25.1**	**+1.9**
EGAK				IAmb	IAmb	22 04 26.3	
	comp=Z,7.3nm,1.1s						
I28M	**Miner Creek**	**69.86**	**25**	P	**P**	**22 04 27.1**	**-0.1**
DAWY	**Dawson**	**69.88**	**27**	P	**P**	**22 04 28.6**	**+1.4**
M29M	**Somme Creek**	**70.08**	**28**	P	**P**	**22 04 28.9**	**+0.3**
M29M				IAmb	IAmb	22 04 32.4	
	comp=Z,7.2nm,1.1s						
F28M	**Old Crow**	**70.24**	**23**	P	**P**	**22 04 30.7**	**+1.3**
KK31	**Karatay Array**	**70.27**	**311**	P	**P**	**22 04 29.9**	**-0.1**
KKAR	**Karatay Array**	**70.27**	**311**	P	**P**	**22 04 28.9**	**-1.1**
KKAR	**Karatay Array**	**70.27**	**311**	P	**P**	**22 04 29.6**	**-0.4**
KKAR				IAmb	IAmb	22 04 31.1	
	comp=Z,5.0nm,0.9s						
L29M	**L29M**	**70.31**	**28**	P	**P**	**22 04 31.3**	**+1.4**
L29M				IAmb	IAmb	22 04 33.4	
	comp=Z,10nm,1.1s						
BVAR	**Borovoye Array**	**70.36**	**321**	P	**P**	**22 04 30.3**	**0.0**
	comp=Z,9.3nm,0.7s,baz=96,slow=8.2,SNR=62						
	comp=Z,9.3nm,0.7s						
PPT2	**Papeete2**	**70.36**	**115**	*e*LR	LR	22 26 02.3	
	comp=Z,77nm,21.5s						
HYT	**Haines Junctio**	**70.37**	**30**	P	**P**	**22 04 31.4**	**+1.0**
HYT				IAmb	IAmb	22 04 33.8	
	comp=Z,8.4nm,1.0s						
BRVK	**Borovoye**	**70.42**	**321**	P	**P**	**22 04 30.1**	**-0.6**
E28M	**Babbage River**	**70.54**	**22**	P	**P**	**22 04 32.2**	**+1.1**
N30M	**Aishikik Lake**	**70.63**	**30**	P	**P**	**22 04 32.6**	**+0.8**
N30M				IAmb	IAmb	22 04 37.6	
	comp=Z,6.3nm,1.1s						
K29M	**Barlow Dome**	**70.67**	**27**	P	**P**	**22 04 33.0**	**+0.9**
K29M				IAmb	IAmb	22 04 35.4	
	comp=Z,9.5nm,1.2s						
M30M	**Minto, Yukon**	**70.87**	**28**	P	**P**	**22 04 34.8**	**+1.5**
J30M	**Hart River**	**71.26**	**26**	P	**P**	**22 04 36.5**	**+0.7**
EPYK	**Eagle Plains**	**71.29**	**24**	P	**P**	**22 04 37.2**	**+1.4**
EPYK				IAmb	IAmb	22 05 10.1	
	comp=Z,15nm,1.4s						
SIMJ	**Simiganj**	**71.64**	**306**	P	**P**	**22 04 38.2**	**-0.3**
SIMJ				IAmb	IAmb	22 04 41.1	
	comp=Z,10.0nm,1.1s						
WHY	**Whitehorse**	**71.64**	**31**	P	**P**	**22 04 39.3**	**+1.2**
G31M	**Satah River**	**72.31**	**24**	P	**P**	**22 04 42.2**	**+0.4**
G31M				IAmb	IAmb	22 04 44.5	
	comp=Z,14nm,1.3s						
N32M	**Quiet

comp=Z,16nm,1.4s
ARU Arti 77.06 325 P **P** **22 05 09.0 -0.5**
ARU IAmb IAmb 22 05 10.9
comp=Z,5.5nm,1.0s
ABKAR Akbulak array 77.11 318 P **P** **22 05 08.8 -1.2**
GEYT Alibeck 80.22 307 P **P** **22 05 26.4 -1.0**
GEYT Alibeck 80.22 307 P **P** **22 05 28.0 +0.6**
comp=Z,3.0nm,0.8s,baz=69,slow=16,SNR=6.6
comp=Z,3.0nm,0.8s
YBH Yreka Blue Hor 80.75 49 LR LR 22 37 39.9
comp=Z,49nm,18.0s,baz=356,slow=33
YKA Yellowknife Ar 81.08 28 P **P** **22 05 31.1 -0.3**
comp=Z,1.4nm,0.8s,baz=285,slow=5.5,SNR=18
comp=Z,1.4nm,0.8s
RES Resolute Bay 83.13 14 P **P** **22 05 42.2 +0.2**
NVAR Mina Array Bea 84.78 52 P **P** **22 05 51.6 +0.2**
comp=Z,0.9nm,0.7s,baz=247,slow=8.1,SNR=5.3
comp=Z,0.9nm,0.7s
ELK Elko 86.46 49 P **P** **22 06 00.2 +0.4**
ELK IAmb IAmb 22 06 02.8
comp=Z,2.9nm,1.0s
WCT Wildcat Mounta 86.49 53 P **P** **22 06 00.5 +0.7**
WCT IAmb IAmb 22 06 02.9
comp=Z,4.9nm,1.4s
GWY Greenwater Val 86.61 54 P **P** **22 05 59.9 -0.7**
GWY IAmb IAmb 22 06 03.2
comp=Z,6.3nm,1.4s
ARCES ARCESS Array B 86.73 342 P **P** **22 05 59.9 -0.3**
comp=Z,2.0nm,0.8s,baz=47,slow=5.3,SNR=5.7
comp=Z,2.0nm,0.8s
PFO Pinyon Flats O 87.47 56 LR LR 22 45 16.2
comp=Z,35nm,18.0s,baz=34,slow=36
YHL Hebgen Lake 88.09 44 P **P** **22 06 07.6 0.0**
YHL IAmb IAmb 22 06 24.6
comp=Z,5.1nm,1.0s
V12A Nelson 88.16 54 P **P** **22 06 07.4 -0.5**
V12A IAmb IAmb 22 06 11.0
comp=Z,3.3nm,1.0s
DUG Dugway, Tooele 88.39 49 P **P** **22 06 09.3 +0.4**
DUG IAmb IAmb 22 06 49.2
comp=Z,2.7nm,0.8s
PDAR Pinedale Array 89.88 46 LR LR 22 46 46.0
comp=Z,23nm,18.1s,baz=356,slow=36
U15A North Rim 89.93 52 P **P** **22 06 15.8 -0.6**
U15A IAmb IAmb 22 06 19.5
comp=Z,3.7nm,1.1s
Y14A Wickenburg 90.14 55 P **P** **22 06 17.0 -0.1**
Y14A IAmb IAmb 22 06 21.3
comp=Z,2.0nm,0.7s
P18A Preston Nutter 90.44 49 P **P** **22 06 18.4 -0.4**
P18A IAmb IAmb 22 06 40.3
comp=Z,2.4nm,0.9s
214A Organ Pipe Nat 90.89 57 P **P** **22 06 20.2 -0.5**
214A IAmb IAmb 22 06 22.9
comp=Z,2.9nm,0.9s
FINES FINESS Array B 91.07 336 P **P** **22 06 21.3 +0.5**
FINES FINESS Array B 91.07 336 P **P** **22 06 19.1 -1.7**
comp=Z,2.0nm,0.6s,baz=82,slow=3.8,SNR=10.0
comp=Z,2.0nm,0.6s
DBIC Dimbokro 144.90 305 PKP PKPbc 22 12 53.8 +0.1
comp=Z,16nm,0.7s,baz=48,slow=3.9,SNR=25

*NAO **16** 21:53:23.1±1.5,77.10N×22.94E,h17km±13km,ML3.1*
*KOLA **16** 21:53:25.5,77.25N×21.66E,h0km,ML2.6,Storfjorden zone*
*BER **16** 21:53:25.6±3.6,77.13N×23.27E,h20km±12km,ML2.6, ML3.1(NAO),Confirmed Earthquake*
ISC 16 21:53:22.8±0.8,77.12N±0.04×23.33E±0.04,h10km,n37, σ2.08/59,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPEN	**Hopen**	**0.73**	**147**	*eP*	**Pg**	**21 53 38.4**	**+1.6**
HOPEN				*eS*	**Sg**	**21 54 47.6**	**+1.3**
HOPEN				IAML		21 53 48.6	
	comp=Z,603nm,0.2s						
HOPEN	**Hopen**	**0.73**	**147**	Pg	**Pg**	**21 53 38.5**	**+1.6**
HOPEN				Lg	Lg	21 53 47.8	
HSPB	**Hornsund (broa**	**1.76**	**270**	P	**Pn**	**21 53 51.6**	**-1.6**
HSPB				S	**Sn**	**21 54 10.1**	**-5.5**
HSPB	**Hornsund (broa**	**1.76**	**270**	*eP*	**Pn**	**21 53 51.7**	**-1.6**
HSPB				*ePg*	**Pb**	**21 53 54.7**	**-0.3**
HSPB				*eS*	**Sn**	**21 54 15.7**	**+0.1**
HSPB				IAML		21 54 21.4	
	comp=Z,56nm,0.3s						
HSPB	**Hornsund (broa**	**1.76**	**270**	Pn	Pn	21 53 50.8	-2.5
HSPB				Pg	**Pb**	**21 53 54.6**	**-0.5**
HSPB				Lg	Lg	21 54 15.8	
SPA0	**Spitsbergen Ar**	**1.83**	**309**	Pn	**Pn**	**21 53 53.3**	**-1.0**
	baz=120,slow=22						
SPA0				Pg	**Pb**	**21 53 57.0**	**+0.7**
	baz=140,slow=22						
SPA0				Sg	**Sn**	**21 54 18.8**	**+1.2**
	baz=138,slow=28						
SPA0	**Spitsbergen Ar**	**1.83**	**309**	Pn	**Pn**	**21 53 53.3**	**-1.0**
	baz=120,slow=22						
SPA0				Pg	**Pb**	**21 53 57.0**	**+0.7**
	baz=140,slow=22						
SPA0				Lg	Lg	21 54 18.8	
	baz=138,slow=28						
SPITS	**Spitsbergen Ar**	**1.83**	**309**	P	**Pn**	**21 53 53.2**	**-1.1**
BRBA	**Barentsburg A**	**2.18**	**300**	*eP*	**Pn**	**21 53 58.4**	**-0.7**
BRBA				*ePg*	**Pb**	**21 54 03.2**	**+0.9**
BRBA				*eSg*	**Sn**	**21 54 29.1**	**+3.1**
BRBA				IAML		21 54 33.2	
	comp=Z,79nm,0.4s						
BRBA	**Barentsburg A**	**2.18**	**300**	Pn	**Pn**	**21 53 58.4**	**-0.7**
BRBA				Pg	**Pb**	**21 54 03.3**	**+0.9**
BRBA				Lg	Lg	21 54 29.2	
BRBB	**Barentsburg B**	**2.19**	**301**	P	**Pn**	**21 53 58.4**	**-0.8**
BRBB				S	**Sn**	**21 54 22.3**	**-4.1**
BRBB	**Barentsburg B**	**2.19**	**301**	*eP*	**Pn**	**21 53 58.7**	**-0.5**
BRBB				*ePg*	**Pb**	**21 54 03.6**	**+1.1**
BRBB				*e*		21 54 23.5	
BRBB				*eSg*	**Sn**	**21 54 29.5**	**+3.1**
BRBB	**Barentsburg B**	**2.19**	**301**	Pn	**Pn**	**21 53 58.8**	**-0.5**
BRBB				Pg	**Pb**	**21 54 03.6**	**+1.1**
BRBB				Lg	Lg	21 54 29.6	
BJO1	**Bjornoya**	**2.84**	**204**	*ePg*	**Pb**	**21 54 15.3**	**+1.8**
BJO1				*eSg*	**Sb**	**21 54 50.5**	**+2.2**
BJO1				IAML		21 54 51.8	
	comp=Z,31nm,0.4s						
BJO1	**Bjornoya**	**2.84**	**204**	Pg	**Pb**	**21 54 14.8**	**+1.3**
BJO1				Lg	Lg	21 54 49.9	
KBS	**Kingsbay**	**2.98**	**313**	P	**Pn**	**21 54 08.5**	**-1.5**
KBS				S	**Sn**	**21 54 41.6**	**-4.2**
KBS	**Kingsbay**	**2.98**	**313**	*eP*	**Pn**	**21 54 09.1**	**-1.0**
KBS				*ePg*	**Pb**	**21 54 17.7**	**+1.7**
KBS				*e*		21 54 41.5	
KBS				*eSg*	**Sb**	**21 54 54.7**	**+2.4**
KBS				IAML		21 54 58.1	
	comp=Z,54nm,0.2s						
KBS	**Kingsbay**	**2.98**	**313**	Pn	**Pn**	**21 54 08.9**	**-1.2**
KBS				Sn	**Sn**	**21 54 42.1**	**-3.7**
KBS				Lg	Lg	21 54 54.7	
OMEGA	**Omega**	**5.90**	**40**	*eP*	**Pn**	**21 54 50.9**	**+0.8**
OMEGA				*eS*	**Sn**	**21 55 54.2**	**-3.4**
	comp=Z,19nm,3.0s						
ZFI2	**Zemlya Franca-**	**5.90**	**40**	*eP*	**Pn**	**21 54 50.9**	**+0.8**
ZFI2				*eS*	**Sn**	**21 55 54.5**	**-3.0**
	comp=Z,23nm,3.9s						
HAMF	**Hammerfest**	**6.52**	**179**	*eP*	**Pn**	**21 54 56.9**	**-1.7**
HAMF	**Hammerfest**	**6.52**	**179**	Pn	**Pn**	**21 54 56.9**	**-1.7**
HAMF				Sn	Sn	21 56 02.9	-10
VADS	**Vadso**	**7.24**	**163**	P	**Pn**	**21 55 08.1**	**-0.4**
VADS				S	Sn	21 56 24.5	-6.0
VADS	**Vadso**	**7.24**	**163**	*eP*	**Pn**	**21 55 08.0**	**-0.4**
VADS				*eS*	Sn	21 56 24.5	-6.1
VADS				IAML		21 56 34.0	
	comp=Z,5.5nm,0.4s						
KEV	**Kevo**	**7.48**	**170**	*eP*	**Pn**	**21 55 11.3**	**-0.4**
KEV				*eS*	**Sn**	**21 56 30.7**	**-5.8**
KEV	**Kevo**	**7.48**	**170**	Pn	**Pn**	**21 55 11.3**	**-0.4**
KEV				Sn	**Sn**	**21 56 31.3**	**-5.1**
JETT	**Jettan, Norway**	**7.65**	**188**	*eP*	**Pn**	**21 55 13.2**	**-0.9**
JETT				*eS*	Sn	21 56 32.7	-8.1
JETT	**Jettan, Norway**	**7.65**	**188**	Pn	**Pn**	**21 55 12.9**	**-1.3**
JETT				Sn	Sn	21 56 33.5	-7.4
ARA0	**ARCESS Array S**	**7.66**	**174**	*eP*	**Pn**	**21 55 13.6**	**-0.6**
ARA0				*eS*	Sn	21 56 32.2	-8.6
ARA0	**ARCESS Array S**	**7.66**	**174**	Pn	**Pn**	**21 55 14.1**	**-0.1**
	baz=360,slow=10						
ARA0				Sn	Sn	21 56 32.5	-8.3
	baz=2.7,slow=22						
ARCES	**ARCESS Array B**	**7.66**	**174**	P	**Pn**	**21 55 14.0**	**-0.2**
ARCES				S	Sn	21 56 34.1	-6.7
KTK1	**Kautokeino**	**8.16**	**180**	*eP*	**Pn**	**21 55 20.5**	**-0.5**
TERR	**Teriberka**	**8.63**	**151**	S	Sn	21 56 56.2	-8.6
HEF	**Hetta**	**8.76**	**179**	*eP*	**Pn**	**21 55 28.5**	**-0.8**
APA0	**Apatity Array**	**9.98**	**158**	Pn	**Pn**	**21 55 44.5**	**-1.4**
	baz=8.1,slow=16						
APA0				Sn	Sn	21 57 27.6	-10
	baz=354,slow=22						
APA0	**Apatity Array**	**9.98**	**158**	Pn	**Pn**	**21 55 44.5**	**-1.4**
	baz=8.1,slow=16						
APA0				Sn	Sn	21 57 27.6	-10
	baz=354,slow=22						
FAUS	**Fauske**	**10.08**	**198**	P	**Pn**	**21 55 47.0**	**-0.3**
FAUS				S	Sn	21 57 33.7	-6.5

*NEIC **16** 22:01:54.1±1.1,35.96N±0.01×97.81W±0.02,h12km±7km, Error ellipse: s-maj=2.6km s-min=1.3km az=55.0*
TUL 16 22:01:54.4±0.8,35.97N±0.01×97.79W±0.01,h8km±8km, ML2.5,mb_Lg2.2/7(NEIC),ML2.4/50(NEIC),Error ellipse: s-maj=1.7km s-min=1.4km az=220.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.33**	**123**	Pg	Pg	22 02 00.7	-0.1
OK029				Sg	Sg	22 02 05.5	+0.3
ADOK	**Arcadia Dam**	**0.47**	**133**	Pg	Pg	22 02 02.9	-0.6
ADOK				Sg	Sg	22 02 10.6	+0.9
CROK	**Carrier**	**0.55**	**344**	Pg	Pg	22 02 05.0	-0.1
CROK				Sg	Sg	22 02 12.9	+0.5
CROK				IAML		22 02 17.8	
	comp=N,332nm,0.2s						
OKCSV	**OKLAHOMA CITY**	**0.64**	**153**	Pg	Pg	22 02 05.7	-1.0
OKCSW				Sg	Sg	22 02 14.4	-0.6
OKCSW				IAML		22 02 17.0	
	comp=E,162nm,0.1s						
OK033	**Mehan**	**0.70**	**84**	Pg	Pg	22 02 07.6	-0.2
OK033				IAML		22 02 17.6	
	comp=E,204nm,0.3s						
OK033				IAML		22 02 32.3	
	comp=E,280nm,0.1s						
FNO	**Franklin**	**0.78**	**156**	Pg	Pg	22 02 08.6	-0.8
FNO				IAML		22 02 22.9	
	comp=E,183nm,0.4s						
CSTR	**Hydro, Custer**	**0.80**	**246**	Pg	Pg	22 02 09.4	-0.4
OK052	**Battle Ridge R**	**0.80**	**88**	Pg	Pg	22 02 09.7	-0.2
OK052				IAML		22 02 20.9	
	comp=E,129nm,0.3s						
OK048	**Pawnee Station**	**0.82**	**57**	Pg	Pg	22 02 09.8	-0.3
GC02	**Grant County #**	**0.88**	**357**		Pg	22 02 10.4	-0.9
OK032	**Salt Plains WL**	**0.89**	**338**	Pg	Pg	22 02 10.9	-0.7
OK032				IAML		22 02 29.4	
	comp=E,145nm,0.2s						
QUOK	**Quay**	**0.90**	**77**	Pg	Pg	22 02 11.0	-0.8
QUOK				IAML		22 02 26.1	
	comp=N,120nm,0.4s						
QUOK				IAML		22 02 27.1	
	comp=E,87nm,0.1s						
BLOK	**Blackwell**	**0.91**	**31**		Pg	22 02 11.7	-0.3
BLOK				IAML		22 02 28.7	
	comp=E,170nm,0.2s						
OK038	**West end E0370**	**0.92**	**304**		Pg	22 02 11.5	-0.6
OK038				IAML		22 02 35.9	
	comp=E,170nm,0.3s						
OK038				IAML		22 02 39.9	
	comp=E,179nm,0.3s						
OK051	**E0350 and S346**	**0.94**	**55**	Pg	Pg	22 02 11.6	-0.8
OK051				IAML		22 02 34.0	
	comp=E,164nm,0.2s						
KAN14	**Manchester OK**	**0.99**	**352**	Pg	Pg	22 02 13.2	-0.2
KAN14				IAML		22 02 28.9	
	comp=E,138nm,0.2s						
KAN14				IAML		22 02 29.7	
	comp=N,128nm,0.1s						
OK035	**E0210 Rd and N**	**1.04**	**315**		Pg	22 02 13.1	-1.3
OK035				IAML		22 02 28.3	
	comp=N,120nm,0.3s						
OK035				IAML		22 02 31.2	
	comp=N,114nm,0.3s						
U32A	**Winter Ranch,**	**1.06**	**293**	Pg	Pg	22 02 13.6	-1.1
DEOK	**Depew**	**1.06**	**97**	Pg	Pg	22 02 14.5	-0.3
DEOK				IAML		22 02 31.4	
	comp=N,85nm,0.4s						
DEOK				IAML		22 02 33.5	
	comp=E,74nm,0.3s						
KAN13	**South Haven SW**	**1.07**	**14**		Pg	22 02 14.5	-0.5
KAN17	**Caldwell West**	**1.07**	**1**	Pg	Pg	22 02 14.4	-0.6
KAN17					Sg	22 02 28.8	0.0
W35A	**Tecumseh**	**1.11**	**137**		Pg	22 02 15.0	-0.7
W35A				IAML		22 02 31.6	
	comp=N,112nm,0.3s						
W35A				IAML		22 02 34.4	
	comp=E,70nm,0.3s						
KAN05	**Bluff City Nor**	**1.14**	**357**		Pg	22 02 15.5	-0.7
KAN09	**Caldwell North**	**1.17**	**7**		Pg	22 02 16.0	-0.8
KAN09					Sg	22 02 32.0	0.0
KAN10	**Anthony SW Sta**	**1.17**	**348**		Pg	22 02 15.9	-1.0
KAN01	**Argonia South**	**1.18**	**1**	Pg	Pg	22 02 16.3	-0.7
KAN06	**Argonia West S**	**1.27**	**358**		Pn	22 02 18.1	-0.5
ELIS	**Ellis County**	**1.32**	**274**		Pn	22 02 18.8	-0.4
ELIS				IAML		22 02 43.7	
	comp=E,103nm,0.2s						
X34A	**Smith Ranch, M**	**1.37**	**181**		Pb	22 02 20.2	-0.1
T35A	**Sooner Cattle**	**1.40**	**47**		Pn	22 02 20.3	+0.1
WMOK	**Wichita Mounta**	**1.47**	**214**		Pn	22 02 21.2	0.0
TUL3	**Leonard**	**1.62**	**92**		Pg	22 02 25.2	-0.4
TUL3				IAmb_Lg		22 02 49.0	
	comp=Z,10nm,0.8s						
LOOK	**Love County**	**2.04**	**166**		Pn	22 02 28.5	-0.6
SMWD	**Samnorwood**	**2.18**	**247**	Pn	Pn	22 02 31.5	+0.5
RLO	**Rose Lookout**	**2.25**	**84**	Pn	Pn	22 02 31.9	-0.1
WTFS	**Witchita Falls**	**2.27**	**194**	Pn	Pn	22 02 31.4	-0.8
X37A	**Clayton**	**2.42**	**124**		Pn	22 02 33.7	-0.5
U38A	**Gravette**	**2.79**	**79**	Pn	Pn	22 02 39.4	0.0
AMTX	**Amarillo**	**3.36**	**252**	IAmb_Lg		22 03 39.5	
	comp=Z,6.5nm,0.8s						
MGMO	**Mountain Grove**	**4.60**	**74**	IAmb_Lg		22 04 23.1	
	comp=Z,5.6nm,0.8s						
143A	**Socs Landing,**	**6.21**	**120**	IAmb_Lg		22 05 20.6	
	comp=Z,11nm,0.7s						

*IDC **16** 22:12:09.4±0.8,8.53S×26.66E,h0km,mb3.9/12, mbtmp3.9/16,ML2.5/2,MS3.0/2,Error ellipse: s-maj=27.5km s-min=16.2km az=97.0*
*NEIC **16** 22:12:10±1.8,8.60S±0.07×26.8E±0.1,h10km±2km, mb4.0/6,Error ellipse: s-maj=20.4km s-min=10.9km az=71.0*
ISC 16 22:12:09.9±0.5,8.57S±0.05×26.69E±0.09,h10km,n28, σ2.32/30,mb4.0/13,Zaire

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**6.82**	**168**	Pn	**Pn**	**22 13 51.9**	**+1.6**
LSZ	**Lusaka**	**6.82**	**168**	Pn	**Pn**	**22 13 53.4**	**+3.1**
	4.5nm,0.3s,baz=0.9,slow=15,SNR=23						
LSZ				Sn	**Sn**	**22 15 07.6**	**-0.5**
	6.7nm,0.3s,baz=8.5,slow=15,SNR=5.2						
LSZ				Lg	Lg	22 15 38.7	
	4.7nm,0.3s,baz=100,slow=22,SNR=3.5						
LSZ				LR	LR	22 16 46.5	
	comp=Z,52nm,19.4s,baz=290,slow=40						
MBAR	**Mbarara**	**8.89**	**27**	Pn	**Pn**	**22 14 18.1**	**-0.5**
	5.8nm,0.3s,baz=11,slow=20,SNR=5.5						
MBAR				Sn	**Sn**	**22 15 55.1**	**-3.9**
	3.1nm,0.3s,baz=203,slow=18,SNR=3.6						
MBAR				Lg	Lg	22 16 41.4	
	5.9nm,0.3s,baz=268,slow=20,SNR=6.5						
KMBO	**Kilima Mbogo**	**12.86**	**55**		**Pn**	**22 15 09.4**	**-3.7**
KIBK	**Kibwezi**	**12.88**	**62**	Pn	**Pn**	**22 15 11.8**	**-1.5**
TSUM	**Tsumeb**	**13.77**	**219**	Pn	**Pn**	**22 15 25.4**	**-0.1**
TSUM	**Tsumeb**	**13.77**	**219**	Pn	**Pn**	**22 15 26.9**	**+1.4**
	0.6nm,0.3s,baz=52,slow=12,SNR=2.2						
TSUM				Sn	**Sn**	**22 17 51.0**	**-7.6**
	0.5nm,0.3s,baz=223,slow=14,SNR=2.8						
TSUM				Lg	Lg	22 19 24.5	
	0.5nm,0.3s,baz=283,slow=23,SNR=4.4						
	2.2nm,0.4s						
LODK	**Lodwar**	**14.72**	**36**	Pn	**Pn**	**22 15 33.7**	**-4.8**
LBTB	**Lobatse**	**16.38**	**184**	Pn	**Pn**	**22 15 58.9**	**-1.4**
LBTB	**Lobatse**	**16.38**	**184**	Pn	**Pn**	**22 16 00.7**	**+0.4**
	0.2nm,0.3s,baz=66,slow=22,SNR=1.7						
LBTB				Lg	Lg	22 20 49.0	
	0.2nm,0.3s,baz=69,slow=17,SNR=2.6						
	1.2nm,0.6s						
WIN	**Windhoek**	**16.69**	**212**	Pn	**Pn**	**22 16 03.8**	**-0.4**
WIN				IAmb	IAmb	22 16 11.6	
	comp=Z,5.9nm,1.1s						
BOSA	**Boshof**	**19.98**	**184**	P	**P**	**22 16 42.5**	**-0.2**
BOSA				IAmb	IAmb	22 16 51.4	
	comp=Z,9.4nm,1.1s						
BOSA	**Boshof**	**19.98**	**184**	P	**P**	**22 16 43.7**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=357,slow=10.0,SNR=5.2						
	comp=Z,1.1nm,0.6s						
SUR	**Sutherland**	**24.31**	**192**	P	**P**	**22 17 26.4**	**-1.6**
TOA0	**Torodi Ar. Sit**	**32.90**	**311**	P	**P**	**22 18 45.7**	**+1.1**
TOA0				IAmb	IAmb	22 18 59.3	
	comp=Z,3.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.90**	**311**	P	**P**	**22 18 45.7**	**+1.1**
	comp=Z,4.7nm,0.3s,baz=122,slow=8.7,SNR=11						
	comp=Z,4.7nm,0.3s						
DBIC	**Dimbokro**	**34.91**	**295**	P	**P**	**22 19 02.2**	**+0.1**
DBIC				IAmb	IAmb	22 19 20.6	
	comp=Z,4.8nm,1.1s						
BRTR	**Keskin Array B**	**48.48**	**7**	P	**P**	**22 20 53.5**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=189,slow=11,SNR=3.5						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**55.78**	**332**	P	**P**	**22 21 48.0**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=157,slow=6.8,SNR=4.1						
	comp=Z,0.6nm,0.9s						
DAVOX	**Davos/Dischmat**	**57.11**	**346**	P	**P**	**22 21 57.0**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=150,slow=14,SNR=3.0						
	comp=Z,1.6nm,0.7s						
GERES	**GERESS Array B**	**58.30**	**350**	P	**P**	**22 22 05.9**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=150,slow=8.0,SNR=5.4						
	comp=Z,1.1nm,0.7s						
FINES	**FINESS Array B**	**69.80**	**360**	P	**P**	**22 23 20.6**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=142,slow=7.0,SNR=4.3						
	comp=Z,0.9nm,0.7s						
BVAR	**Borovoye Array**	**71.71**	**26**	P	**P**	**22 23 33.0**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=226,slow=3.8,SNR=4.8						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**73.96**	**36**	P	**P**	**22 23 46.4**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=245,slow=5.2,SNR=5.8						
	comp=Z,0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**74.03**	**31**	P	**P**	**22 23 47.3**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=240,slow=6.4,SNR=4.4						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**76.14**	**69**	P	**P**	**22 24 00.5**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=251,slow=7.3,SNR=2.5						
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**77.93**	**360**	P	**P**	**22 24 08.8**	**+1.0**
	comp=Z,2.6nm,0.9s,baz=193,slow=3.2,SNR=6.4						
	comp=Z,2.6nm,0.9s						
LVC	**Limon Verde**	**91.87**	**247**	LR	LR	23 04 14.9	
	comp=Z,18nm,19.3s,baz=342,slow=34						

*IDC **16** 22:18:06.1±1.4,56.34N×148.78W,h0km,mb3.5/5, mbtmp3.6/10,ML3.6/5,MS2.6/1,Error ellipse: s-maj=27.2km s-min=20.8km az=19.0*
*NEIC **16** 22:18:09.1±1.5,56.44N±0.07×148.70W±0.09,h21km±8km, mb3.8/2,ML3.9/84,ML3.6(AEIC),Error ellipse: s-maj=10.5km s-min=7.2km az=167.0*
*AEIC **16** 22:18:13.5±1.2,56.52N±0.07×148.79W±0.02,h12km±6km, Error ellipse: s-maj=9.8km s-min=0.9km az=189.0*
ISC 16 22:18:07.9±0.9,56.52N±0.07×148.74W±0.05,h10km, n331,σ1.19/330,mb3.6/5,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.45**	**303**	Pn	**Pn**	**22 18 48.5**	**+0.6**
KDAK				Sn	**Sn**	**22 19 15.7**	**-2.1**
KDAK	**Kodiak Island**	**2.45**	**303**	Pn	**Pn**	**22 18 48.4**	**+0.6**
	6.5nm,0.3s,baz=128,slow=6.9,SNR=261						
KDAK				Sn	**Sn**	**22 19 15.2**	**-2.6**
	31nm,0.3s,baz=229,slow=22,SNR=42						
KDAK				LR	LR	22 19 59.9	
	comp=Z,119nm,19.7s,baz=43,slow=45						
	18nm,0.2s						
OHAK	**Old Harbor**	**2.60**	**288**	Pn	**Pn**	**22 18 50.0**	**+0.1**
OHAK				Sn	**Sn**	**22 19 18.4**	**-3.0**
OHAK	**Old Harbor**	**2.60**	**288**	P	**Pn**	**22 18 49.9**	**+0.1**
OHAK	**Old Harbor**	**2.60**	**288**	P	**Pn**	**22 18 49.9**	**+0.1**
	baz=103						
OHAK				S	**Sn**	**22 19 18.5**	**-3.0**
	baz=103						
SYI	**Shuyak Island**	**2.87**	**318**		**Pn**	**22 18 54.4**	**+0.7**
SYI				Sn	**Sn**	**22 19 27.5**	**-0.7**
Q20K	**Shuyak Island**	**2.87**	**318**	P	**Pn**	**22 18 54.4**	**+0.7**
	baz=135						
Q20K				S	**Sn**	**22 19 27.5**	**-0.8**
	baz=135						
SII	**Sitkinak Islan**	**3.02**	**273**	Pn	**Pn**	**22 18 55.4**	**-0.3**
SII				Sn	**Sn**	**22 19 29.0**	**-2.9**
SII				IAML		22 19 29.4	
	comp=E,270nm,0.8s						
SII				IAML		22 19 29.4	
	comp=N,327nm,1.3s						
SII	**Sitkinak Islan**	**3.02**	**273**	P	**Pn**	**22 18 55.6**	**-0.1**
Q23K	**Middleton Isla**	**3.18**	**23**	Pn	**Pn**	**22 18 57.9**	**+0.1**
Q23K				IAML		22 19 35.7	
	comp=E,198nm,0.9s						
Q23K	**Middleton Isla**	**3.18**	**23**	P	**Pn**	**22 18 58.1**	**+0.3**
	baz=205						
MID	**Middleton Isla**	**3.18**	**23**	Pn	**Pn**	**22 18 57.9**	**+0.1**
MID				IAML		22 19 35.7	
	comp=E,182nm,0.7s						
MID	**Middleton Isla**	**3.18**	**23**		**Sn**	**22 19 32.6**	**-3.2**
MID	**Middleton Isla**	**3.18**	**23**	P	**Pn**	**22 18 58.3**	**+0.4**
CNPM	**China Poot**	**3.29**	**337**		**Pn**	**22 18 59.6**	**+0.2**
R18K	**Karluk**	**3.29**	**291**		**Pn**	**22 19 00.1**	**+0.7**
R18K	**Karluk**	**3.29**	**291**	IAML		22 19 39.0	
	comp=N,423nm,0.5s						
R18K				IAML		22 19 41.2	
	comp=E,299nm,0.4s						
R18K	**Karluk**	**3.29**	**291**	P	**Pn**	**22 19 00.1**	**+0.7**
	baz=105						
BRSE	**Bradley Lake S**	**3.40**	**343**		**Pn**	**22 19 00.8**	**-0.1**
BRSE					**Sn**	**22 19 39.9**	**-1.4**
BRSE	**Bradley Lake S**	**3.40**	**343**	P	**Pn**	**22 19 00.8**	**-0.1**
	baz=161						
BRSE				S	**Sn**	**22 19 39.9**	**-1.4**
	baz=161						
BRLK	**Bradley Lake**	**3.44**	**342**		**Pn**	**22 19 01.5**	**-0.1**
**

KAIM	Kayak Island	4.11	32			Pn	22 19 11.2 +0.7
KAIM	Kayak Island	4.11	32	IAML			22 20 01.0
	comp=E,184nm,0.4s						
KAIM				IAML			22 20 02.5
	comp=N,248nm,0.6s						
KAIM	Kayak Island	4.11	32	P		Pn	22 19 11.2 +0.7
	baz=216						
O20K	Slope Mountain	4.12	332			Pn	22 19 11.3 +0.5
O20K	Slope Mountain	4.12	332	P		Pn	22 19 11.3 +0.5
	baz=148						
ILSW	Iliamna Southw	4.18	328			Pn	22 19 12.1 +0.4
ILSW				IAML			22 20 03.3
	comp=N,128nm,0.3s						
ILSW				IAML			22 20 04.0
	comp=E,93nm,0.4s						
CNTC	Contact Creek	4.24	297			Pn	22 19 14.0 +1.4
Q17K	Contact Creek	4.25	297	P		Pn	22 19 14.0 +1.4
	baz=111						
EYAK	Cordova Ski Ar	4.33	20			Pn	22 19 14.5 +0.8
EYAK	Cordova Ski Ar	4.33	20	P		Pn	22 19 14.6 +1.0
EYAK	Cordova Ski Ar	4.33	20	P		Pn	22 19 14.5 +0.8
	baz=203						
FID	Port Fidalgo	4.40	15			Pn	22 19 14.8 +0.2
FID	Port Fidalgo	4.40	15	IAML			22 20 05.2
	comp=E,92nm,0.3s						
FID				IAML			22 20 06.4
	comp=N,82nm,0.4s						
SUCK	Suckling Hills	4.42	34			Pn	22 19 16.1 +1.2
SUCK				IAML			22 20 07.1
	comp=N,193nm,0.4s						
SUCK				IAML			22 20 07.2
	comp=E,147nm,0.7s						
RAGM	Ragged Mountai	4.42	27			Pn	22 19 15.8 +0.9
CAPN	Captain Cook N	4.44	344			Pn	22 19 14.7 -0.5
RED	Redoubt Volcan	4.44	333			Pn	22 19 15.2 -0.1
RDSO	Redoubt South	4.47	334			Pn	22 19 15.7 -0.1
RSO	Redoubt South	4.48	334			Pn	22 19 16.2 +0.3
HMT	Hamilton	4.49	30			Pn	22 19 17.0 +1.1
RDT	Redoubt	4.49	336			Pn	22 19 15.9 -0.1
P18K	Big Mountain,	4.50	312	Pn		Pn	22 19 17.2 +1.1
P18K	Big Mountain,	4.50	312	P		Pn	22 19 16.6 +0.5
	baz=127						
DFR	Drift River	4.58	335			Pn	22 19 17.2 +0.1
GOAT	Goat Mountain	4.58	26			Pn	22 19 18.2 +1.0
NCT	North Crescent	4.61	333			Pn	22 19 17.6 0.0
RC01	Rabbit Creek A	4.61	354			Pn	22 19 18.1 +0.6
RC01	Rabbit Creek A	4.61	354	IAML			22 20 10.3
	comp=E,127nm,0.5s						
RC01				IAML			22 20 13.5
	comp=N,73nm,0.4s						
RC01	Rabbit Creek A	4.61	354	P		Pn	22 19 18.1 +0.6
	baz=173						
BGLC	Bering Glacier	4.61	36			Pn	22 19 19.1 +1.6
BGLC	Bering Glacier	4.61	36	P		Pn	22 19 19.0 +1.6
	baz=227						
BERG	Berg Lake	4.69	32			Pn	22 19 19.7 +1.0
FIS	Fire Island	4.70	351	Pn		Pn	22 19 19.8 +1.1
O19K	Port Alsworth	4.71	324			Pn	22 19 19.3 +0.4
O19K	Port Alsworth	4.71	324	P		Pn	22 19 19.3 +0.4
	baz=139						
GRIN	Grindle Hills	4.72	35			Pn	22 19 20.1 +1.0
O18K	Koktuh Hills	4.78	317			Pn	22 19 20.4 +0.5
O18K	Koktuh Hills	4.78	317	P		Pn	22 19 20.4 +0.5
	baz=131						
SNH	Sunshine Point	4.80	38			Pn	22 19 21.4 +1.2
SNH	Sunshine Point	4.80	38	IAML			22 20 14.7
	comp=E,134nm,0.7s						
SNH				IAML			22 20 15.7
	comp=N,119nm,0.3s						
CYK	Cape Yakataga	4.86	40			Pn	22 19 21.8 +1.0
DIV	Divide	4.87	17			Pn	22 19 22.1 +0.9
KNK	Knik Glacier	4.91	2			Pn	22 19 22.3 +0.7
KNK	Knik Glacier	4.91	2	IAML			22 20 16.7
	comp=E,60nm,0.7s						
KNK				IAML			22 20 16.8
	comp=N,56nm,0.6s						
KNK	Knik Glacier	4.91	2	P		Pn	22 19 22.3 +0.7
	baz=182						
P17K	Kvichak River	4.91	306			Pn	22 19 22.9 +1.3
P17K	Kvichak River	4.91	306	P		Pn	22 19 22.9 +1.3
	baz=119						
BMRM	Bremner River	4.95	24	P		Pn	22 19 23.0 +0.8
	baz=208						
N20K	Mount Spurr	5.03	340	P		Pn	22 19 23.8 +0.5
	baz=157						
SPCR	Spurr Chakacha	5.03	340			Pn	22 19 23.8 +0.5
SPCN	Chakachatna No	5.04	341			Pn	22 19 24.2 +0.7
SUA	Susitna One	5.06	349			Pn	22 19 24.0 +0.2
SUA	Susitna One	5.06	349	P		Pn	22 19 24.0 +0.2
	baz=167						
SPCP	Crater Peak Br	5.08	341			Pn	22 19 24.9 +0.8
SPCG	Spurr Capps Gl	5.08	342			Pn	22 19 24.9 +0.8
PMR	Palmer	5.09	358			Pn	22 19 24.9 +0.8
PMR	Palmer	5.09	358	IAML			22 20 22.5
	comp=N,41nm,0.4s						
PMR	Palmer	5.09	358	P		Pn	22 19 25.1 +1.0
PMR	Palmer	5.09	358	P		Pn	22 19 24.9 +0.8
	baz=178						
MESA	MESA	5.12	41			Pn	22 19 25.8 +1.2
MESA	MESA	5.12	41	IAML			22 20 25.1
	comp=E,82nm,0.4s						
MESA	MESA	5.12	41	P		Pn	22 19 25.8 +1.2
	baz=228						
CRQM	Cirque	5.15	32			Pn	22 19 26.1 +1.0
CRQM	Cirque	5.15	32	IAML			22 20 25.3
	comp=E,117nm,0.7s						
CRQE	Cirque	5.16	32	P		Pn	22 19 26.1 +0.9
	baz=218						
KLU	Klutina	5.19	15	IAML			22 20 27.1
	comp=N,67nm,0.3s						
KLU				IAML			22 20 27.2
	comp=E,48nm,0.3s						
KLU	Klutina	5.19	15	P		Pn	22 19 26.6 +1.0
	baz=198						
STLK	Strandline Lak	5.24	344			Pn	22 19 26.9 +0.6
N19K	Bonanza Creek	5.24	328	P		Pn	22 19 26.5 +0.2
	baz=142						
TGL	Tana Glacier	5.25	34			Pn	22 19 27.3 +1.0
TGL	Tana Glacier	5.25	34	IAML			22 20 24.9
	comp=E,91nm,0.9s						
TGL				IAML			22 20 25.8
	comp=N,73nm,0.4s						
GHO	Glory Hole Cre	5.27	359	IAML			22 20 28.1
	comp=N,83nm,0.4s						
GHO				IAML			22 20 30.3
	comp=E,74nm,0.6s						
SPNN	North Nagishla	5.27	339			Pn	22 19 27.5 +0.7
ISLE	Juniper Island	5.28	37	Pn		Pn	22 19 28.0 +1.0
ISLE				IAML			22 20 24.7
	comp=E,77nm,0.3s						
ISLE				IAML			22 20 29.5
	comp=N,103nm,0.7s						
BAGL	Bagley Icefiel	5.29	38			Pn	22 19 27.8 +1.1
M22K	Willow	5.29	353			Pn	22 19 25.4 -1.5
M22K				IAML			22 20 31.5
	comp=E,66nm,0.6s						
M22K				IAML			22 20 32.5
	comp=N,69nm,1.4s						
SML	Sawmill	5.30	2			Pn	22 19 28.0 +0.9
SML	Sawmill	5.30	2	IAML			22 20 27.4
	comp=E,68nm,0.5s						
SML				IAML			22 20 30.1
	comp=N,63nm,0.8s						
SML	Sawmill	5.30	2	P		Pn	22 19 28.0 +0.9
	baz=183						
M23K	Glacier View	5.31	5			Pn	22 19 28.5 +1.4
M23K	Glacier View	5.31	5	P		Pn	22 19 28.5 +1.4
	baz=186						
SCM	Sheep Creek Mo	5.38	7			Pn	22 19 29.3 +1.2
SCM	Sheep Creek Mo	5.38	7	P		Pn	22 19 29.3 +1.2
	baz=189						
CHGN	Chignik	5.38	272	Pn		Pn	22 19 28.2 +0.1
VRDI	Verde Repeater	5.46	28			Pn	22 19 30.2 +0.9
O17K	Koliganek Bris	5.50	310	P		Pn	22 19 30.6 +1.0
	baz=122						
KIAG	Kiagna River	5.52	34			Pn	22 19 31.0 +0.8
N25K	Chitina, Valde	5.53	21			Pn	22 19 31.2 +1.0
N25K	Chitina, Valde	5.53	21	P		Pn	22 19 31.2 +1.0
	baz=205						
SAMH	Samovar Hills	5.53	46			Pn	22 19 32.3 +2.0
GLB	Gilahina Butte	5.55	25			Pn	22 19 31.4 +0.9
P16K	Nushagak River	5.55	301			Pn	22 19 31.8 +1.4
P16K	Nushagak River	5.55	301	P		Pn	22 19 31.8 +1.4
	baz=113						
TABL	Table Mountain	5.59	42			Pn	22 19 32.6 +1.4
N18K	Kilae Creek	5.60	321			Pn	22 19 31.4 +0.2
N18K	Kilae Creek	5.60	321	P		Pn	22 19 31.3 +0.2
	baz=135						
SKT	Skwentna	5.66	346			Pn	22 19 32.5 +0.6
SKT	Skwentna	5.66	346	P		Pn	22 19 32.5 +0.6
	baz=164						
MCARA	McCarthy VSAT	5.70	29			Pn	22 19 33.9 +1.4
MCARA	McCarthy VSAT	5.70	29	P		Pn	22 19 33.9 +1.4
	baz=214						
PCA	Pinnacle	5.73	48			Pn	22 19 34.3 +1.4
PINM	Pinnacle	5.73	48	P		Pn	22 19 34.3 +1.3
	baz=235						
M24K	Tolsona, Glenn	5.75	12			Pn	22 19 34.9 +1.7
M24K	Tolsona, Glenn	5.75	12	P		Pn	22 19 34.9 +1.7
	baz=194						
SVW2	Sparrevohn	5.80	325	Pn		Pn	22 19 33.9 -0.1
SVW2	Sparrevohn	5.80	325	P		Pn	22 19 33.8 -0.1
M20K	Styx River	5.83	339			Pn	22 19 34.8 +0.5
M20K	Styx River	5.83	339	P		Pn	22 19 34.8 +0.5
	baz=155						
O16K	Kokwok River B	5.84	306			Pn	22 19 35.6 +1.2
O16K	Kokwok River B	5.84	306	P		Pn	22 19 35.6 +1.2
	baz=117						
PNL	Peninsula	5.87	54			Pn	22 19 35.9 +1.1
PNL	Peninsula	5.87	54	P		Pn	22 19 36.3 +1.5
PNL	Peninsula	5.87	54	P		Pn	22 19 35.9 +1.1
	baz=242						
CTG	Chitna Glacier	5.88	38	P		Pn	22 19 36.2 +1.1
	baz=224						
CTGM	Chitina Glacie	5.89	38			Pn	22 19 36.2 +1.0
LOGN	Logan Glacier	5.90	40			Pn	22 19 36.4 +1.0
WASW	Wrangell South	5.90	21			Pn	22 19 36.8 +1.3
BCPM	Bancas Point	5.91	51			Pn	22 19 36.8 +1.4
WACK	Wrangell Chich	5.93	21			Pn	22 19 36.9 +1.1
CUT	Chulitna	5.95	353	Pn		Pn	22 19 37.9 +2.0
N17K	Nushagak Hills	5.97	316			Pn	22 19 36.9 +0.7
N17K	Nushagak Hills	5.97	316	P		Pn	22 19 36.9 +0.7
	baz=128						
S14K	Fog Glacier	6.01	272	P		Pn	22 19 38.2 +1.3
	baz=83						
VNFG	Fog Glacier, M	6.01	272			Pn	22 19 38.2 +1.3
WAT6	Susitna Watana	6.10	4	P		Pn	22 19 39.2 +1.1
	baz=185						
M19K	Big River Lodg	6.13	334			Pn	22 19 38.5 +0.1
M19K	Big River Lodg	6.13	334	P		Pn	22 19 38.5 +0.1
	baz=149						
HARP	HAARP	6.17	16			Pn	22 19 39.5 +0.6
HARP	HAARP	6.17	16	P		Pn	22 19 39.5 +0.6
	baz=199						
M18K	Stony River	6.18	327			Pn	22 19 38.9 -0.1
M18K	Stony River	6.18	327	P		Pn	22 19 38.9 -0.1
	baz=140						
WAT1	Susitna Watana	6.33	1	P		Pn	22 19 42.4 +1.3
	baz=181						
WAT7	Susitna Watana	6.33	360			Pn	22 19 42.6 +1.4
CNBA	Cheakamus Isl	6.37	259	Pn		Pn	22 19 42.0 +0.2
L19K	White Mountain	6.48	334			Pn	22 19 43.0 -0.2
L19K	White Mountain	6.48	334	P		Pn	22 19 43.0 -0.2
	baz=148						
L20K	Farewell, AK	6.52	338			Pn	22 19 43.8 0.0
L20K	Farewell, AK	6.52	338	P		Pn	22 19 43.8 0.0
	baz=154						
O29M	Mount Kennedy	6.54	50			Pn	22 19 45.8 +1.6
O29M	Mount Kennedy	6.54	50	P		Pn	22 19 45.8 +1.6
	baz=240						
M26K	Nabesna, AK	6.58	24			Pn	22 19 46.1 +1.5
M26K	Nabesna, AK	6.58	24	P		Pn	22 19 45.9 +1.3
	baz=209						
N16K	Nishlik Lake	6.58	311			Pn	22 19 45.6 +1.0
N16K	Nishlik Lake	6.58	311	P		Pn	22 19 45.6 +1.0
	baz=122						
DHY	Denali Highway	6.61	5			Pn	22 19 46.5 +1.4
DHY	Denali Highway	6.61	5	P		Pn	22 19 46.5 +1.4
	baz=187						
P29M	Windy Craggy	6.61	57			Pn	22 19 45.6 +0.6
P29M	Windy Craggy	6.61	57	P		Pn	22 19 45.6 +0.6
	baz=247						
M17K	Holitna River	6.64	321			Pn	22 19 46.2 +0.7
M17K	Holitna River	6.64	321	P		Pn	22 19 46.0 +0.6
	baz=133						
YUK2	White River	6.66	34			Pn	22 19 47.6 +1.9
YUK8	Steele Glacier	6.66	40			Pn	22 19 48.2 +2.3
YUK8	Steele Glacier	6.66	40	P		Pn	22 19 48.2 +2.3
	baz=228						
PAX	Paxson	6.67	13			Pn	22 19 47.4 +1.4
PAX	Paxson	6.67	13	P		Pn	22 19 47.4 +1.4
	baz=196						
SDPT	Sand Point	6.70	265	Pn		Pn	22 19 47.0 +0.8
SDPT	Sand Point	6.70	265	P		Pn	22 19 47.2 +1.0
YUK3	Moose Creek	6.77	35	P		Pn	22 19 49.4 +2.0
	baz=222						
M27K	Edge Creek, AK	6.81	28			Pn	22 19 49.5 +1.6
M27K	Edge Creek, AK	6.81	28	P		Pn	22 19 49.5 +1.6
	baz=214						
YUK7	Dusty Glacier	6.85	50			Pn	22 19 50.1 +1.7
RND	Reindeer	6.91	360			Pn	22 19 50.6 +1.5
MENT	Mentasta	6.91	19			Pn	22 19 50.2 +1.1
MENT	Mentasta	6.91	19	P		Pn	22 19 51.7 +2.5
S31K	Pelican	6.94	73			Pn	22 19 48.5 -0.9
S31K	Pelican	6.94	73	P		Pn	22 19 48.5 -0.9
	baz=264						
YUK6	Outpost Mounta	6.98	46	P		Pn	22 19 52.5 +2.2
	baz=236						
TRF	Thorofare Moun	6.99	354			Pn	22 19 51.6 +1.3
TRF	Thorofare Moun	6.99	354	P		Pn	22 19 51.6 +1.3
	baz=173						
L18K	Granite Mounta	7.01	328			Pn	22 19 50.2 -0.2
L18K	Granite Mounta	7.01	328	P		Pn	22 19 50.2 -0.2
	baz=141						
L26K	Log Cabin Wild	7.06	20			Pn	22 19 53.1 +1.9
CAST	Castle Rocks	7.12	348	Pn		Pn	22 19 52.7 +0.8
CAST	Castle Rocks	7.12	348	P		Pn	22 19 53.0 +1.1
	baz=165						
BVCY	Beaver Creek	7.14	31			Pn	22 19 53.9 +1.7
BVCY	Beaver Creek	7.14	31	P		Pn	22 19 53.9 +1.7
	baz=218						
KTH	Kantishna Hill	7.14	352			Pn	22 19 53.8 +1.5
MCK	McKinley	7.23	359			Pn	22 19 54.7 +1.2
MCK	McKinley	7.23	359	P		Pn	22 19 55.1 +1.6
	baz=179						
HYT	Haines Junctio	7.27	49			Pn	22 19 55.3 +1.2
K20K	Telida	7.36	341			Pn	22 19 56.0 +0.7
PS1A	Pavlof South-1	7.38	267			Pn	22 19 56.2 +0.6
SIT	Sitka	7.39	80	Pn		Pn	22 19 53.4 -2.2
TTA	Tatalina	7.40	333	Pn		Pn	22 19 55.7 -0.1
L27K	Beaver Creek,	7.42	25			Pn	22 19 57.2 +1.0
L27K	Beaver Creek,	7.42	25	P		Pn	22 19 57.4 +1.3
	baz=211						
BCAR	Beaver Creek A	7.43	25	Pn		Pn	22 19 57.0 +0.7
PN7A	Pavlof North-7	7.52	267			Pn	22 19 58.5 +0.9
L16K	Owhat River	7.58	318	Pn		Pn	22 19 58.5 +0.2
L16K	Owhat River	7.58	318	P		Pn	22 19 58.7 +0.4
	baz=128						
BPAW	Bear Paw Mtn.	7.68	353			Pn	22 20 00.2 +0.5
BPAW	Bear Paw Mtn.	7.68	353	P		Pn	22 20 00.2 +0.5
	baz=171						
SKAG	Skagway	7.71	62	Pn		Pn	22 20 00.2 +0.2
SKAG	Skagway	7.71	62	P		Pn	22 20 01.5 +1.5
BESE	Bessie Mountai	7.75	69			Pn	22 20 00.9 +0.3
N30M	Aishikik Lake	7.78	46			Pn	22 20 02.8 +1.7
N30M	Aishikik Lake	7.78	46	P		Pn	22 20 02.6 +1.5
	baz=236						
S32K	Killisnoo	7.79	77	Pn		Pn	22 20 00.2 -0.9
SCRK	Sand Creek	7.84	16			Pn	22 20 03.3 +1.4
O30N	Mendenhall	7.84	52			Pn	22 20 03.5 +1.6
O30N	Mendenhall	7.84	52	P		Pn	22 20 03.5 +1.6
	baz=243						
R32K	Eaglecrest	7.88	71	Pn		Pn	22 20 02.3 -0.1
M29M	Somme Creek	7.90	37			Pn	22 20 04.7 +1.9
M29M	Somme Creek	7.90	37	P		Pn	22 20 04.7 +1.9
	baz=226						
JIS	Juneau Island	7.95	71	Pn		Pn	22 20 03.5 +0.2
HDA	Harding Lake	7.96	6			Pn	22 20 06.0 +2.5
HDA	Harding Lake	7.96	6	P		Pn	22 20 05.1 +1.6
	baz=187						
WRH	Wood River Hil	7.98	2			Pn	22 20 04.8 +1.0
M14K	Bethel	8.09	307	Pn		Pn	22 20 05.3 +0.1
NEA2	Nenana	8.10	359			Pn	22 20 06.3 +1.0
J20K	Nowinta River	8.13	343			Pn	22 20 06.5 +0.7
J20K	Nowinta River	8.13	343	P		Pn	22 20 06.5 +0.7
	baz=158						
CCB	Clear Creek Bu	8.16	3			Pn	22 20 07.3 +1.1
K27K	Chicken	8.22	21			Pn	22 20 08.0 +1.0
K27K	Chicken	8.22	21	P		Pn	22 20 08.2 +1.1
	baz=207						
J19K	Poorman	8.23	338	Pn		Pn	22 20 07.3 +0.1
J25K	Salcha River,	8.28	10			Pn	22 20 09.2 +1.2
J25K	Salcha River,	8.28	10	P		Pn	22 20 09.2 +1.2
	baz=193						
IL31		8.33	5			Pn	22 20 09.5 +1.0
ILAR	Eielson Array	8.33	5	Pn		Pn	22 20 09.1 +0.7
	comp=N,1.5nm,0.3s,baz=189,slow=13,SNR=49						
ILAR				Sn		Sn	22 21 40.2 -2.2
	comp=N,0.8nm,0.3s,baz=187,slow=22,SNR=11 comp=N,2.5nm,0.3s						
WHY	Whitehorse	8.33	54			Pn	22 20 11.1 +2.4
L15K	Ungalak Mounta	8.35	314			Pn	22 20 09.9 +1.2
L15K	Ungalak Mounta	8.35	314	P		Pn	22 20 09.9 +1.2
	baz=122						
COLA	College	8.39	3	Pn		Pn	22 20 10.7 +1.4
COLA	College	8.39	3	P		Pn	22 20 11.1 +1.8
J26L	Joseph Creek	8.40	15			Pn	22 20 10.7 +1.1
J26L	Joseph Creek	8.40	15	P		Pn	22 20 10.9 +1.4
	baz=200						
MDM	Murphy Dome	8.47	1			Pn	22 20 11.4 +1.0
L29M	L29M	8.48	35			Pn	22 20 12.3 +1.6
P32M	Atlin	8.53	63			Pn	22 20 11.8 +0.4
P32M	Atlin	8.53	63	P		Pn	22 20 12.6 +1.2
	baz=256						
M30M	Minto, Yukon	8.57	40			Pn	22 20 13.3 +1.4
M30M	Minto, Yukon	8.57	40	P		Pn	22 20 13.1 +1.2
	baz=231						
MLY	Manley	8.59	354			Pn	22 20 13.1 +1.0
MLY	Manley	8.59	354	P		Pn	22 20 12.8 +0.7
	baz=173						
J17K	VABM Dome	8.62	327	Pn		Pn	22 20 12.8 +0.4
POKR	Poker Plat Res	8.65	4	Pn		Pn	22 20 14.0 +1.1
POKR	Poker Plat Res	8.65	4	P		Pn	22 20 14.0 +1.1
	baz=185						
I23K	Minto, Yukon-K	8.66	358			Pn	22 20 13.8 +0.8
I23K	Minto, Yukon-K	8.66	358	P		Pn	22 20 13.8 +0.8
	baz=178						
ISLZ	Isanotski Laza	8.66	264			Pn	22 20 13.5 +0.3
L14K	Kuka Creek	8.67	310	Pn		Pn	22 20 14.9 +1.7
U33K	Whale Pass	8.69	86	Pn		Pn	22 20 11.6 -1.9
CRAG	Craig	8.81	90	Pn		Pn	22 20 14.1 -1.1
I21K	Tanana	8.83	351			Pn	22 20 16.0 +0.6
DAWY	Dawson	8.86	28			Pn	22 20 17.3 +1.4
J16K	Anvik River	9.02	324	Pn		Pn	22 20 18.0 +0.1
Q32M	Nakina River	9.14	68	Pn		Pn	22 20 21.1 +1.3
P33M	Teslin, Yukon	9.14	60	P		Pn	22 20 21.2 +1.5
	baz=253						
PRP	Porcupine Dome	9.16	8	Pn		Pn	22 20 20.5 +0.5
PRP	Porcupine Dome	9.16	8	P		Pn	22 20 21.4 +1.4
	baz=191						
K29M	Barlow Dome	9.21	33	Pn		Pn	22 20 21.8 +1.1
I26K	Coal Creek Min	9.22	15			Pn	22 20 21.8 +1.1
M31M	Drury Creek, Y	9.26	46	Pn		Pn	22 20 22.9 +1.6
N32M	Quiet Lake	9.34	54	Pn		Pn	22 20 24.3 +1.9
H24K	Noodor Dome	9.36	2			Pn	22 20 23.5 +0.9
H21K	Melozitna Rive	9.37	350			Pn	22 20 23.2 +0.4
I17K	Unalakleet	9.47	326	Pn		Pn	22 20 24.7 +0.6
J29N	Klondike Camp	9.48	29			Pn	22 20 25.0 +0.6
S34M	Telegraph Cree	9.65	74	Pn		Pn	22 20 26.9 +0.3
FARO	Faro, Yukon	9.70	48			Pn	22 20 29.0 +1.7
H19K	Roundabout Mou	9.77	341	Pn		Pn	22 20 29.6 +1.5
IMAR	Indian Mountai	9.79	348			Pn	22 20 28.9 +0.4
R33M	Jennings River	9.87	66			Pn	22 20 31.1 +1.4
I28M	Miner Creek	9.91	22	Pn		Pn	22 20 31.7 +1.4
J30M	Hart River	10.10	32			Pn	22 20 34.7 +1.8
T35M	Bob Quinn	10.16	80	Pn		Pn	22 20 34.8 +1.1
FYU	Fort Yukon	10.21	8	Pn		Pn	22 20 35.1 +0.8
G24K	Hadweenzic Riv	10.23	3			Pn	22 20 36.1 +1.5
G23K	Bananza Creek	10.24	357			Pn	22 20 35.6 +0.9
DLBC	Dease Lake	10.25	71	Pn		Pn	22 20 35.9 +0.9
DLBC	Dease Lake	10.25	71	Pn		Pn	22 20 35.4 +0.5
	comp=N,0.6nm,0.3s,baz=243,slow=12,SNR=7.9 comp=N,1.9nm,0.4s						
G21K	Allakaket	10.28	349			Pn	22 20 35.2 0.0
G19K	Purcell Mounta	10.44	341	Pn		Pn	22 20 38.6 +1.2
I30M	Mount Dempster	10.58	29	Pn		Pn	22 20 42.2 +2.8
MMPY	Sheldon Lake,	10.74	48			Pn	22 20 44.1 +2.5
F21K	Alatna River	10.96	350			Pn	22 20 45.6 +1.1
F24K	Squaw Lake	11.04	2			Pn	22 20 46.9 +1.2
F20K	Avaraart Lake	11.06	346			Pn	22 20 46.7 +0.8
BMAR	Burnt Mountain	11.11	8	Pn		Pn	22 20 47.1 +0.5
INK	Inuvik	13.70	24	Pn		Pn	22 21 23.4 +1.5
	comp=N,0.1nm,0.3s,baz=202,slow=16,SNR=5.8 comp=N,2.2nm,0.9s						
B22K	Teshekpuk Lake	14.02	353			Pn	22 21 27.3 +1.1
YKA	Yellowknife Ar	18.15	57	P		Pn	22 22 19.9 +0.3
	comp=N,0.1nm,0.3s,baz=266,slow=11,SNR=7.7 comp=N,1.2nm,1.0s						
A36M	Sachs Harbour	18.34	23	P		P	22 22 23.1 +1.1
A36M				IAmb		IAmb	22 22 49.2
	comp=Z,3.5nm,0.8s						
LTY	Liberty	19.52	106	P		P	22 22 33.0 -2.2
LTY				IAmb		IAmb	22 22 34.9
	comp=Z,6.5nm,0.7s						
NVAR	Mina Array Bea	27.06	119	P		P	22 23 50.8 +0.3
	comp=Z,0.3nm,0.5s,baz=304,slow=9.7,SNR=2.4 comp=Z,0.3nm,0.5s						
SONM	Songino Array	58.72	310	P		P	22 28 06.5 +1.1
	comp=Z,0.4nm,0.8s,baz=46,slow=10,SNR=3.5 comp=Z,0.4nm,0.8s						
ZALV	Zalesovo Beam	61.52	327	P		P	22 28 24.6 +0.2
	comp=Z,0.5nm,0.5s,baz=40,slow=4.7,SNR=2.7 comp=Z,0

IKVO	**Krokottuvotn**	**0.84**	**154**	P		**Pg**	**22 20 30.7**	**-0.2**
	baz=157							
IKVO				S		**Sb**	**22 20 43.1**	**-0.6**
	baz=157							
IREN	**Reynihlio**	**0.90**	**156**	P		**Pg**	**22 20 31.6**	**-0.4**
	baz=159							
IREN				S		**Sg**	**22 20 44.5**	**+0.9**
	baz=159							
IHRN	**Hraun**	**1.01**	**250**	P		**Pg**	**22 20 32.0**	**-2.1**
	baz=244							
IHRN				S		**Sg**	**22 20 45.1**	**-2.0**
	baz=244							
IMEL	**Melhnausar**	**1.01**	**152**	P		**Pg**	**22 20 33.2**	**-0.9**
	baz=155							
IGRS	**Grimsstaoir**	**1.07**	**140**	P		**Pg**	**22 20 34.0**	**-1.3**
	baz=144							
IGRS				S		**Sg**	**22 20 49.3**	**0.0**
	baz=144							
ISVA	**Svartarkot**	**1.16**	**169**	P		**Pg**	**22 20 35.8**	**-1.1**
	baz=170							
ISVA				S		**Sg**	**22 20 52.2**	**+0.3**
	baz=170							
THOR	**Thorvaldshraun**	**1.61**	**163**	P		**Pn**	**22 20 43.2**	**-0.8**
	baz=164							
IMKO	**Mokollar**	**1.61**	**158**	P		**Pn**	**22 20 43.3**	**-0.8**
	baz=159							
IURH	**Urdarhals**	**1.68**	**171**	P		**Pn**	**22 20 43.6**	**-1.4**
	baz=171							
ISTE	**Stelbrattur**	**1.79**	**206**	P		**Pn**	**22 20 45.8**	**-0.8**
	baz=205							
ISTE				S		**Sn**	**22 21 09.3**	**-0.5**
	baz=205							
IVON	**Vonarskard**	**1.80**	**180**	P		**Pn**	**22 20 45.7**	**-1.1**
	baz=180							
IKIS	**Kista**	**1.81**	**177**	P		**Pn**	**22 20 45.8**	**-1.1**
	baz=177							
ISKR	**Skrokkalda**	**1.93**	**188**	P		**Pn**	**22 20 47.7**	**-0.8**
	baz=187							
IDJK	**Dyngjujokull**	**1.99**	**173**	P		**Pn**	**22 20 48.3**	**-1.1**
	baz=174							
IHUS	**Husbondi**	**2.18**	**178**	P		**Pn**	**22 20 51.3**	**-0.7**
	baz=179							
IASB	**`sbjarnarst**	**2.27**	**222**	P		**Pn**	**22 20 52.5**	**-0.6**
	baz=220							
SCO	**Scoresbysund**	**4.32**	**341**	*e*		**Pn**	**22 21 17.3**	**-3.9**
	baz=224,slow=3.7							
SCO				*i* P		**Pn**	**22 21 18.5**	**-2.6**
SCO				*i* S		**Pn**	**22 21 24.5**	**+3.3**
SCO				IAML			22 21 34.7	
	comp=Z,3.9nm,0.4s							
SOEG	**Soedalen**	**5.53**	**295**	*e*		Pn	22 21 43.7	+5.8
SOEG				*i*			22 22 04.8	
FINES	**FINESS Array B**	**19.56**	**84**	P		**Pn**	**22 24 44.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=315,slow=11,SNR=4.1 comp=Z,0.9nm,0.7s							
ESDC	**Sonseca Array**	**27.96**	**157**	P		**P**	**22 26 10.9**	**+4.7**
	comp=Z,0.4nm,0.8s,baz=343,slow=12,SNR=2.0 comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**37.91**	**311**	P		**P**	**22 27 33.1**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=41,slow=8.4,SNR=5.6 comp=Z,0.3nm,0.8s							
BVAR	**Borovoye Array**	**42.47**	**63**	P		**P**	**22 28 10.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=322,slow=9.1,SNR=2.7 comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**44.03**	**331**	P		**P**	**22 28 23.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=20,slow=8.0,SNR=2.7 comp=Z,0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**47.32**	**59**	P		**P**	**22 28 49.0**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=330,slow=6.9,SNR=7.5 comp=Z,0.7nm,0.7s							
NEW	**Newport**	**50.37**	**301**	LR		LR	22 50 59.4	
	comp=Z,30nm,18.2s,baz=18,slow=37							
MKAR	**Makanchi Array**	**51.89**	**59**	P		**P**	**22 29 22.9**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=309,slow=6.9,SNR=3.6 comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**52.38**	**292**	P		**P**	**22 29 27.9**	**0.0**
	comp=Z,0.5nm,0.8s,baz=52,slow=5.8,SNR=4.8 comp=Z,0.5nm,0.8s							

AUST 16 22:38:15.6±2.1, 32°.59S×150°.38E, h10km, Error ellipse: s-maj=30.6km s-min=7.8km az=81.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.87**	**136**	P	Pg	22 38 32.5	+0.1
	baz=0.7						
MGCD				S	Sg	22 38 44.0	+0.3
	baz=0.7						
RIV	**Riverview**	**1.40**	**152**	P	Pn	22 38 40.9	-0.2
	baz=1.4						
AUPHS	**Peel High Scho**	**1.55**	**16**	P	Pn	22 38 43.5	+0.3
	baz=1.6						
AUPHS				S	Sn	22 39 03.3	-0.1
	baz=1.6						
ARMA	**Armidale**	**2.41**	**27**	P	Pn	22 38 55.1	-0.1
	baz=2.4						
ARMA				S	Sb	22 39 27.6	-1.5
	baz=2.4						

*ISN **16** 22:39:18.1±0.9,34.°64N×45.°74E, h7km, ML3.1*
*TEH **16** 22:39:19.7,34.°59N×45.°68E, h8km±28km, ML3.0*
ISC 16 22:39:20.3±1.1, 34.°55N±0.°04×45.°65E±0.°04, h11km±9km, n18, σ1s46/22, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.07**	**230**	Pg	**Pg**	**22 39 22.2**	**-0.4**
IDHR	**Dehrash**	**0.62**	**76**	Pg	**Pg**	**22 39 31.2**	**-1.3**
IGHG	**Ghaleghazi**	**0.79**	**106**	Pg	**Pg**	**22 39 35.2**	**-0.4**
IGHG				Sg	**Sb**	**22 39 46.7**	**-0.2**
ILIN	**Lien**	**1.14**	**71**	Pg	**Pb**	**22 39 41.0**	**-1.2**
KCHF	**Cheshme Sefid,**	**1.18**	**103**	Pg	**Pb**	**22 39 41.9**	**-0.9**
IKRK	**Kirkuk**	**1.37**	**309**	*e*Pg	**Pn**	**22 39 45.0**	**-0.4**
IKRK				*e*Sg	**Sn**	**22 40 03.5**	**0.0**
IBDR	**Badra**	**1.45**	**171**	*e*Pn	**Pb**	**22 39 47.0**	**-0.3**
IBDR				*e*Sn	**Sg**	**22 40 09.0**	**+1.9**
IBDR				AML	AML	22 40 10.4	
	comp=N,204nm,0.3s						
IBDR				AML	AML	22 40 10.8	
	comp=E,459nm,0.5s						
SDS1	**Sardasht. Az.**	**1.60**	**355**	Pg	**Pb**	**22 39 50.3**	**+0.3**
IBZA	**Bozab**	**1.83**	**92**	Pg	**Pb**	**22 39 53.5**	**-0.4**
IKFM	**Kafar-mosalman**	**2.09**	**119**	Pn	**Pb**	**22 39 56.9**	**-1.3**
IALM	**Almabolaq**	**2.10**	**81**	Pn	**Pb**	**22 39 57.2**	**-1.2**
MAHB	**Mahabad**	**2.21**	**1**	Pn	**Pn**	**22 39 58.7**	**+1.7**
HSAM	**Samen**	**2.46**	**97**	Pn	**Pn**	**22 40 01.4**	**+0.8**
RAFI	**Al-Rafai**	**2.84**	**172**	*e*Pn	**Pn**	**22 40 07.0**	**+1.4**
RAFI				*e*Sn	**Sb**	**22 40 43.0**	**-2.9**
HAGD	**Aghdareh**	**2.89**	**84**	Pn	**Pn**	**22 40 08.1**	**+1.7**
ISHB	**Shabestar**	**3.73**	**360**	Pn	**Pn**	**22 40 19.2**	**+1.2**
ZNGN	**Zangian**	**4.98**	**118**	Pn	**Pn**	**22 40 37.5**	**+2.2**
IKLH	**Kolahrood**	**5.08**	**102**	Pn	**Pn**	**22 40 38.6**	**+2.0**

*JMA **16** 22:43:31.8±0.1,36.°9N±0.°3×141.°1E±0.°5, h62km, MV3.5/40, E OFF FUKUSHIMA PREF*
*NIED **16** 22:43:31.8,36.°90N×141.°07E, h62km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr0.46; Mθθ-0.29; Mφφ-0.17; Mrθ0.05; Mθφ0.61; Mφr-1.29; Fault plane solution: M0 1.48000×10^14^ NP1: φs170.00000°,δ81.00000°,λ115.00000°. NP2: φs280.00000°,δ26.00000°,λ22.00000°.*
*IDC **16** 22:43:33.1±6.5,36.°81N×141.°09E, h84km±49km, mb3.2/4, mbtmp3.4/6, ML2.8/2 Error ellipse: s-maj=56.1km s-min=24.9km az=69.0*
ISC 16 22:43:30.9±1.3, 36.°86N±0.°06×141.°19E±0.°09, h60km±8km, n24, σ0s84/29, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.39**	**308**	*i* P	**Pn**	**22 43 42.0**	**+0.1**
ONAJ				S	**Sn**	**22 43 49.4**	**-0.4**
JFFD	**Fukushimafurud**	**0.55**	**295**	*i* P	**Pn**	**22 43 43.5**	**0.0**
JFFD				S	**Sn**	**22 43 51.6**	**-1.0**
JHO	**Hitachi**	**0.56**	**244**	*i* P	**Pn**	**22 43 43.8**	**+0.3**
JHO				S	**Sn**	**22 43 52.4**	**-0.2**
JFK	**Kawauchi**	**0.56**	**334**	*i* P	**Pn**	**22 43 43.7**	**+0.1**
JFK				S	**Sn**	**22 43 52.3**	**-0.6**
JOTO	**OTAMA OYAMA**	**0.98**	**316**	*i* P	**Pn**	**22 43 48.9**	**+0.2**
JOTO				S	**Sn**	**22 44 01.2**	**-0.5**
JMM	**Marumori**	**1.05**	**343**	*i* P	**Pn**	**22 43 49.8**	**+0.2**
JMM				S	**Sn**	**22 44 02.9**	**-0.5**
JFY	**Yanaizu**	**1.30**	**295**	P	**Pn**	**22 43 52.7**	**-0.2**
JFY				*e*S	**Sn**	**22 44 08.2**	**-1.3**
JAG	**Ashikaga**	**1.46**	**253**	*i* P	**Pn**	**22 43 55.2**	**+0.1**
JAG				S	**Sn**	**22 44 12.1**	**-1.1**
JOU	**Okura**	**1.56**	**345**	P	**Pn**	**22 43 56.7**	**+0.4**
JKT	**Katashina**	**1.56**	**267**	P	**Pn**	**22 43 56.8**	**+0.4**
JKT				S	**Sn**	**22 44 15.2**	**-0.6**
JIO	**Ouri**	**1.59**	**5**	P	**Pn**	**22 43 57.4**	**+0.6**
JIO				*e*S	**Sn**	**22 44 16.3**	**-0.1**
JYS	**Shirataka**	**1.62**	**327**	S	**Sn**	**22 44 17.4**	**+0.2**
MJAR	**Matsushiro Arr**	**2.42**	**263**	P	**Pn**	**22 44 08.4**	**+0.4**
	1.6nm,0.3s,baz=82,slow=14,SNR=44						
MJAR				S	**Sn**	**22 44 37.4**	**+1.0**
	14nm,0.4s,baz=87,slow=18,SNR=12 13nm,0.4s						
KSRS	**Korea Array**	**10.61**	**277**	P	**Pn**	**22 46 02.9**	**+2.9**
	0.1nm,0.3s,baz=89,slow=14,SNR=1.2 0.4nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.21**	**120**	T	T	23 19 15.7	
	baz=313,slow=75,SNR=5.3						
H11N1	**WAKE ISLAND Hy**	**28.22**	**120**	T	T	23 19 17.6	
	baz=313,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**28.23**	**120**	T	T	23 19 15.6	
	baz=313,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**28.92**	**122**	T	T	23 20 10.2	
	baz=314,slow=76,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**28.92**	**122**	T	T	23 20 07.6	
	baz=314,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	23 20 15.2	
	baz=314,slow=76,SNR=6.9						
ZALV	**Zalesovo Beam**	**41.90**	**313**	P	**P**	**22 51 14.4**	**-0.7**
	0.4nm,0.5s,baz=108,slow=9.3,SNR=2.9 0.4nm,0.5s						
MKAR	**Makanchi Array**	**44.06**	**302**	P	**P**	**22 51 32.4**	**-0.4**
	0.2nm,0.5s,baz=75,slow=9.9,SNR=5.0 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.97**	**308**	P	**P**	**22 51 46.9**	**-0.8**
	0.4nm,0.6s,baz=75,slow=6.9,SNR=6.3 0.4nm,0.6s						
WRA	**Warramunga Arr**	**56.87**	**188**	P	**P**	**22 53 08.8**	**-0.6**
	0.5nm,0.6s,baz=3.2,slow=7.4,SNR=6.1 0.5nm,0.6s						

DJA 16 22:45:43.5±0.5, 9°.S±6°.×111°.8E±°, h10km, M3.8/7, mb4.1/1, MLv3.7/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.11**	**36**	P	Pg	22 45 47.0	+0.7
TWSI	**Taliwang, Sumb**	**0.84**	**282**	P	Pg	22 45 58.1	-1.6
DNP	**Denpasar**	**2.48**	**275**	P	Pn	22 46 23.5	-0.5
SRBI	**Singaraja**	**2.61**	**288**	P	Pn	22 46 25.8	+0.1
BASI	**Baing, Sumba**	**3.11**	**115**	P	Pn	22 46 32.5	-0.1
JAGI	**Jajag, Banyuwa**	**3.55**	**277**	P	Pn	22 46 39.2	+0.5
JAGI				S	Sn	22 47 22.1	+1.4
GMJI	**Gumukmas**	**4.27**	**278**	P	Pn	22 46 49.4	+0.8
BKSI	**Bulukumba**	**4.30**	**34**	P	Pn	22 46 49.4	+0.3
PWJI	**Pagerwojo**	**5.91**	**278**	P	Pn	22 47 10.6	-0.6

*IDC **16** 22:50:26.7±0.8,6.°39S×154.°54E, h0km, mb4.0/14, mbtmp4.0/16, ML2.8/2, MS3.5/5, Error ellipse: s-maj=28.2km s-min=17.1km az=121.0*
*NEIC **16** 22:50:28.1±0.8,6.°6S±0.°1×154.°7E±0.°1, h10km±2km, mb4.5/10, Error ellipse: s-maj=21.5km s-min=18.3km az=143.0*
ISC 16 22:50:27.9±0.7, 6.°55S±0.°10×154.°65E±0.°10, h10km, n28, σ1s05/31, mb4.1/19, MS3.4/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.41**	**313**	Pn	**Pn**	**22 51 21.8**	**+0.7**
PMG	**Port Moresby**	**7.95**	**249**		**Pn**	**22 52 24.7**	**+1.2**
PMG					**Sn**	**22 53 54.0**	**+0.4**
PMG	**Port Moresby**	**7.95**	**249**	Pn	**Pn**	**22 52 24.7**	**+1.2**
	3.3nm,0.3s,baz=29,slow=11,SNR=12						
PMG				Sn	**Sn**	**22 53 53.0**	**-0.5**
	1.7nm,0.3s,baz=51,slow=24,SNR=7.8						
PMG				LR	LR	22 55 47.3	
	comp=Z,338nm,18.5s,baz=54,slow=40 27nm,0.6s						
CTA	**Charters Tower**	**15.74**	**210**	Pn	**P**	**22 54 12.2**	**-1.6**
	baz=17,slow=17,SNR=2.3						
CTA				LR	LR	23 00 27.1	
	comp=Z,117nm,18.1s,baz=85,slow=38 17nm,1.3s						
FAKI	**Fak Fak**	**22.61**	**278**	P	**P**	**22 55 29.5**	**+0.5**
WR0	**Warramunga Arr**	**23.64**	**234**	P	**P**	**22 55 39.7**	**+0.1**
WR0				IAmb	IAmb	22 55 52.0	
	comp=Z,7.6nm,0.8s						
WB0	**Warramunga Arr**	**23.66**	**234**	P	**P**	**22 55 39.5**	**-0.3**
WB0				IAmb	IAmb	22 55 55.5	
	comp=Z,15nm,1.3s						
WB2	**Warramunga Arr**	**23.79**	**234**	P	**P**	**22 55 40.7**	**-0.2**
WB2				IAmb	IAmb	22 55 57.9	
	comp=Z,8.5nm,0.8s						
WRA	**Warramunga Arr**	**23.80**	**234**	P	**P**	**22 55 40.8**	**-0.2**
WRA	**Warramunga Arr**	**23.80**	**234**	P	**P**	**22 55 40.6**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=55,slow=9.9,SNR=17						
WRA				PcP	**PcP**	**22 59 26.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=48,slow=2.5,SNR=5.2 comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**26.22**	**227**	P	**P**	**22 56 03.4**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=57,slow=8.9,SNR=10						
ASAR				PcP	**PcP**	**22 59 31.9**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=52,slow=3.1,SNR=1.6						
ASAR				LR	LR	23 05 32.4	
	comp=Z,92nm,20.2s,baz=92,slow=34 comp=Z,0.6nm,0.5s						
STKA	**Stephens Creek**	**28.00**	**204**	P	**P**	**22 56 20.1**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=18,slow=15,SNR=3.8						
STKA				LR	LR	23 07 55.8	
	comp=Z,93nm,18.0s,baz=18,slow=37 comp=Z,1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**30.52**	**245**	P	**P**	**22 56 40.8**	**-0.9**
BBOO	**Buckleboo**	**31.34**	**211**	P	**P**	**22 56 46.3**	**-2.4**
NWAO	**Narrogin (SRO)**	**43.54**	**228**	LR	LR	23 15 49.5	
	comp=Z,69nm,18.0s,baz=158,slow=35						
ENH	**Enshi**	**56.69**	**313**	P	**P**	**23 00 11.8**	**-0.1**
ENH				IAmb	IAmb	23 00 12.8	
	comp=Z,9.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**60.28**	**295**	P	**P**	**23 00 37.5**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=119,slow=5.6,SNR=4.7 comp=Z,0.6nm,0.3s						
SONM	**Songino Array**	**68.78**	**327**	P	**P**	**23 01 32.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=148,slow=5.2,SNR=6.5 comp=Z,0.6nm,0.5s						
LSA	**Lhasa**	**70.74**	**304**	P	**P**	**23 01 45.3**	**0.0**
LSA				IAmb	IAmb	23 02 00.0	
	comp=Z,3.4nm,0.9s						
MKAR	**Makanchi Array**	**82.84**	**319**	P	**P**	**23 02 52.3**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=96,slow=5.5,SNR=18 comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**23 02 53.0**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=244,slow=5.6,SNR=4.9 comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	**83.42**	**180**	P	**P**	**23 02 56.6**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=4.4,slow=2.8,SNR=7.5 comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**83.62**	**326**	P	**P**	**23 02 55.2**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=98,slow=5.7,SNR=5.8 comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**86.30**	**322**	P	**P**	**23 03 08.8**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=93,slow=5.6,SNR=3.3 comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**91.71**	**52**	P	**P**	**23 03 37.3**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=252,slow=7.5,SNR=7.1 comp=Z,1.6nm,0.8s						
BVAR	**Borovoye Array**	**91.73**	**323**	P	**P**	**23 03 33.4**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=131,slow=4.2,SNR=4.3 comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**96.10**	**28**	P	**P**	**23 03 55.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=261,slow=5.0,SNR=3.7 comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**98.65**	**48**	P	**P**	**23 04 07.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=69,slow=0.6,SNR=3.6 comp=Z,0.3nm,0.7s						

*GCG **16** 23:08:06.1±0.7,13.°51N×90.°58W, h23km±3km, MD3.5*
*SNET **16** 23:08:06.3±1.0,13.°61N×90.°38W, h54km, ML3.5*
ISC 16 23:08:05.2±2.2, 13.°5N±0.°1×90.°45W±0.°05, h31km±14km, n29, σ0s44/46, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.79**	**55**	*e*P	**Pn**	**23 08 20.0**	**-0.4**
NUBE				*e*S	**Sb**	**23 08 30.4**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.86**	**48**	*e*P	**Pn**	**23 08 21.3**	**0.0**
SLOZ				*e*S	**Sb**	**23 08 32.6**	**-0.4**
CEVE	**Cerro Verde**	**0.88**	**65**	*e*P	**Pn**	**23 08 21.6**	**-0.1**
CEVE				*e*S	**Sb**	**23 08 33.4**	**-0.3**
SBLS	**San Blas**	**0.89**	**64**	*e*P	**Pn**	**23 08 21.6**	**-0.2**
SBLS				*e*S	**Sn**	**23 08 33.4**	**-0.4**
RTR	**El Retiro**	**0.90**	**60**	*e*P	**Pn**	**23 08 21.8**	**0.0**
RTR				*e*S	**Sb**	**23 08 34.0**	**-0.1**
SNJE	**San Jose**	**0.92**	**63**	*e*P	**Pn**	**23 08 22.1**	**-0.1**
SNJE				*e*S	**Sb**	**23 08 34.2**	**-0.5**
PCG	**Pacaya**	**0.95**	**351**	*i* P	**Pb**	**23 08 23.0**	**-0.3**
PCG				*i* S	**Sb**	**23 08 36.2**	**+0.5**
JAYA	**Jayaque - finc**	**0.99**	**78**	*e*P	**Pn**	**23 08 23.0**	**-0.2**
JAYA				*e*S	**Sn**	**23 08 35.7**	**-0.5**
FUG	**Fuego 3**	**1.06**	**339**	*i* P	**Pn**	**23 08 24.0**	**-0.2**
FUG				*i* S	**Sb**	**23 08 38.2**	**-0.7**
CEDA	**San Andres**	**1.08**	**71**	*e*P	**Pn**	**23 08 23.9**	**-0.4**
CEDA				*e*S	**Sn**	**23 08 37.5**	**-0.7**
LALI	**Alcalda de L**	**1.10**	**88**	*e*P	**Pn**	**23 08 24.4**	**0.0**
NBG	**Las Nubes**	**1.14**	**5**	*i* P	**Pb**	**23 08 27.0**	**+0.6**
NBG				*i* S	**Sb**	**23 08 42.1**	**+1.1**
BOQS	**Boqueron**	**1.17**	**76**	*e*P	**Pn**	**23 08 25.8**	**+0.1**
BOQS				*e*S	**Sb**	**23 08 41.6**	**-0.2**
PIC2	**El Picacho**	**1.19**	**76**	*e*P	**Pn**	**23 08 26.8**	**+0.8**
UEES	**Universidad Ev**	**1.20**	**77**	*e*P	**Pn**	**23 08 25.9**	**-0.1**
SNET	**Serv Nac Est T**	**1.21**	**79**	*e*P	**Pn**	**23 08 26.2**	**+0.1**
LOMA	**Loma Larga**	**1.26**	**81**	*e*P	**Pn**	**23 08 26.7**	**-0.1**
LOMA				*e*S	**Sn**	**23 08 43.5**	**+0.8**
LFU	**La Fuente**	**1.33**	**77**	*e*P	**Pn**	**23 08 28.3**	**+0.6**
LFU				*e*S	**Sn**	**23 08 44.9**	**+0.5**
LFRS	**El Faro**	**1.36**	**82**	*e*P	**Pn**	**23 08 28.6**	**+0.5**
LFRS				*e*S	**Sn**	**23 08 45.5**	**+0.3**
SJTE	**Alcalda de S**	**1.41**	**83**	*e*P	**Pn**	**23 08 29.1**	**+0.3**
SJTE				*e*S	**Sn**	**23 08 46.6**	**+0.1**
PAVA	**Las Pavas**	**1.49**	**80**	*e*P	**Pn**	**23 08 30.0**	**0.0**
TECO	**Alcaldia de Te**	**1.62**	**87**	*e*P	**Pn**	**23 08 31.5**	**-0.2**
STG3	**Santiaguito 3,**	**1.66**	**319**	*i* P	**Pn**	**23 08 32.7**	**+0.3**
STG3				*i* S	**Sn**	**23 08 52.1**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.69**	**81**	*e*P	**Pn**	**23 08 32.9**	**+0.2**
MRL	**Marmol**	**1.78**	**24**	*i* P	**Pn**	**23 08 34.4**	**+0.3**
TECA	**Tecapa**	**1.89**	**88**	*e*P	**Pn**	**23 08 35.5**	**0.0**
JUCU	**Jucuar¡n**	**2.15**	**95**	*e*P	**Pn**	**23 08 39.2**	**+0.2**
LCND	**La Caada**	**2.49**	**93**	*e*P	**Pn**	**23 08 44.0**	**+0.4**
CNCH	**Conchagua**	**2.55**	**94**	*e*P	**Pn**	**23 08 44.3**	**-0.2**

*NEIC **16** 23:08:35.0±0.6, 35.°684N±0.°009×97.°31W±0.°01, h5km±1km, Error ellipse: s-maj=2.8km s-min=2.0km az=291.0*
TUL 16 23:08:35.2±0.6, 35.°689N±0.°010×97.°30W±0.°02, h6km±2km, ML3.2, mb_Lg2.5/53(NEIC), ML2.8/38(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=95.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.07**	**236**	Pg	Pg	23 08 37.0	+0.1
ADOK				Sg	Sg	23 08 38.3	+0.3
OK029	**Liberty Lake**	**0.16**	**311**	Pg	Pg	23 08 38.9	+0.4
OK029				Sg	Sg	23 08 41.4	+0.7
OK029				IAML		23 08 41.7	
	3µm,0.3s						
OKCSW	**OKLAHOMA CITY**	**0.30**	**201**	Pg	Pg	23 08 41.4	+0.3
OKCSW				Sg	Sg	23 08 45.8	+0.7
OKCSW				IAML		23 08 46.2	
	comp=E,2µm,0.4s						
FNO	**Franklin**	**0.44**	**190**	Pg	Pg	23 08 43.8	+0.2
FNO				Sg	Sg	23 08 50.2	+0.8
OK033	**Mehan**	**0.46**	**40**		Pg	23 08 44.5	+0.4
OK033				IAML		23 08 51.4	
	comp=E,647nm,0.2s						
OK033				IAML		23 08 51.4	
	comp=E,1µm,0.3s						
OK033				Sg	Sg	23 08 51.0	+0.8
OK052	**Battle Ridge R**	**0.51**	**53**	Pg	Pg	23 08 45.3	+0.3
OK052				Sg	Sg	23 08 52.4	+0.8
OK052				IAML		23 08 52.8	
	comp=E,1µm,0.4s						
OK052				IAML		23 08 53.1	
	comp=E,838nm,0.4s						
W35A	**Tecumseh**	**0.64**	**147**	Pg	Pg	23 08 47.3	-0.2
W35A				Sg	Sg	23 08 56.4	+0.6
W35A				IAML		23 08 59.2	
	comp=E,421nm,0.5s						
DEOK	**Depew**	**0.67**	**77**	Pg	Pg	23 08 48.5	+0.3
DEOK				Sg	Sg	23 08 57.5	+0.6
DEOK				IAML		23 08 57.8	
	comp=N,369nm,0.3s						
QUOK	**Quay**	**0.68**	**45**	Pg	Pg	23 08 48.4	0.0
QUOK				Sg	Sg	23 08 57.7	+0.5
QUOK				IAML		23 08 58.1	
	comp=E,479nm,0.3s						
QUOK				IAML		23 08 58.1	
	comp=N,521nm,0.3s						
OK048	**Pawnee Station**	**0.78**	**22**	Pg	Pg	23 08 50.1	-0.1
OK048				Sg	Sg	23 09 00.7	+0.3
OK051	**E0350 and S346**	**0.90**	**25**	Pg	Pg	23 08 52.2	-0.3
OK051				Sg	Sg	23 09 04.3	+0.2
OK051				IAML		23 09 06.7	
	comp=N,404nm,0.2s						
OK051				IAML		23 09 07.8	
	comp=N,369nm,0.2s						
CROK

DKNS	**Dickens**	**3.60**	**237**			Pg	23 09 42.0	-2.3
DKNS				IAmb_Lg			23 10 31.8	
	comp=Z,18nm,1.0s							
ABTX	**Abilene, Hawle**	**3.62**	**213**	Pg		Pg	23 09 43.3	-1.3
ABTX				IAmb_Lg			23 10 30.4	
	comp=Z,11nm,0.9s							
AMTX	**Amarillo**	**3.67**	**259**	IAmb_Lg			23 10 33.2	
	comp=Z,11nm,0.9s							
CBKS	**Cedar Bluff**	**3.67**	**329**			Pg	23 09 44.9	-0.7
CBKS				IAmb_Lg			23 10 38.0	
	comp=Z,14nm,0.8s							
WHTX	**Lake Whitney,**	**3.69**	**182**	Pn		Pn	23 09 33.4	+0.5
S39A	**Bolivar**	**3.77**	**57**			Pn	23 09 34.8	+0.9
X40A	**Basin Creek Fa**	**3.86**	**107**			Pn	23 09 35.4	+0.3
X40A				IAmb_Lg			23 10 40.4	
	comp=Z,11nm,0.9s							
SN07	**Snyder 07**	**3.94**	**230**	IAmb_Lg			23 10 46.9	
	comp=Z,16nm,0.8s							
WHAR	**Wooly Hollow**	**4.11**	**94**	Pn		Pn	23 09 39.0	+0.4
WHAR				IAmb_Lg			23 10 47.4	
	comp=Z,16nm,1.1s							
FCAR	**Ozark Folk Cen**	**4.21**	**86**			Pn	23 09 40.6	+0.6
FCAR				IAmb_Lg			23 10 53.1	
	comp=Z,11nm,0.8s							
MGMO	**Mountain Grove**	**4.32**	**69**	Pn		Pn	23 09 42.1	+0.6
POST	**Post**	**4.35**	**234**	Pn		Pn	23 09 41.7	-0.2
POST				IAmb_Lg			23 10 54.9	
	comp=Z,14nm,0.8s							
RTBA	**Rita Blanca**	**4.46**	**281**	Pn		Pn	23 09 42.5	-1.1
BRDY	**Brady**	**4.62**	**198**	IAmb_Lg			23 11 06.7	
	comp=Z,9.1nm,0.9s							
R40A	**Maddies Statio**	**4.79**	**56**	IAmb_Lg			23 11 11.2	
	comp=Z,12nm,1.1s							
P38A	**Dawn**	**4.94**	**36**	IAmb_Lg			23 11 20.7	
	comp=Z,11nm,0.7s							
KSCO	**Kaye Shedlock'**	**5.38**	**310**	IAmb_Lg			23 11 28.3	
	comp=Z,8.2nm,0.7s							
CCM	**Cathedral Cave**	**5.40**	**62**	IAmb_Lg			23 11 26.4	
	comp=Z,9.3nm,0.8s							
JCT	**Junction City**	**5.60**	**203**	IAmb_Lg			23 11 41.3	
	comp=Z,12nm,0.8s							
OZNA	**Ozona**	**5.73**	**215**	IAmb_Lg			23 11 44.1	
	comp=Z,7.7nm,0.9s							
FVM	**French Village**	**5.97**	**65**	IAmb_Lg			23 11 44.5	
	comp=Z,10nm,0.7s							
MNHN	**Monahans**	**6.29**	**228**	IAmb_Lg			23 12 11.4	
	comp=Z,6.2nm,0.9s							
HNDO	**Hondo**	**6.37**	**196**	IAmb_Lg			23 11 56.8	
	comp=Z,9.6nm,1.0s							
DRIO	**Del Rio**	**6.85**	**205**	IAmb_Lg			23 12 23.1	
	comp=Z,5.7nm,0.7s							

KRSC 16 23:16:17.4±1.6,**53.79N**×**168.46E**,**h30**km±16km,**MI3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.03**	**315**	*e*S	Sn	23 17 15.8	+2.0
SMKR	**Semkarok**	**4.89**	**308**	*e*P	Pn	23 17 32.8	+4.0
TUMD	**Tumrok D**	**4.91**	**290**	*e*P	Pn	23 17 33.2	+4.1
BZGR	**Bezymyannyi-Gr**	**4.97**	**299**	*e*P	Pn	23 17 34.5	+4.4
BDR	**Baidarnaya**	**5.00**	**307**	*e*P	Pn	23 17 36.0	+5.5
TUMR	**Tumrok**	**5.07**	**291**	*e*P	Pn	23 17 36.3	+4.9
BZMR	**Bezymyannaya**	**5.08**	**298**	*e*P	Pn	23 17 36.2	+4.6
BZWR	**Bezymyannyi-We**	**5.09**	**299**	*e*P	Pn	23 17 36.3	+4.6
SPN	**Mys Shipunski**	**5.09**	**266**	*e*P	Pn	23 17 35.9	+4.3
KMNR	**Kamenistaya**	**5.15**	**296**	*e*P	Pn	23 17 37.2	+4.6
KMNR				*e*S	Sn	23 18 36.2	+5.2
KRSR	**Krestovskiy**	**5.15**	**301**	*e*P	Pn	23 17 36.7	+4.1
KIRR	**Kirishev**	**5.17**	**298**	*e*P	Pn	23 17 37.6	+4.9
KPT	**Kopyto**	**5.23**	**298**	*e*P	Pn	23 17 38.5	+4.9
KII	**Karymskiy**	**5.33**	**276**	*e*P	Pn	23 17 39.5	+4.5
SRDR	**Sredinnyy**	**5.63**	**300**	*e*P	Pn	23 17 43.8	+4.8
SMAR	**Somma**	**5.78**	**269**	*e*P	Pn	23 17 45.8	+4.4
AVH	**Avacha**	**5.82**	**269**	*e*P	Pn	23 17 46.7	+5.0
KRX	**Arik**	**5.86**	**270**	*e*P	Pn	23 17 47.0	+4.7
KOK	**Koryaka**	**5.88**	**269**	*e*P	Pn	23 17 47.3	+4.8
GNL	**Ganaly**	**6.24**	**273**	*e*P	Pn	23 17 53.3	+5.8
KRMR	**Karymshinskiy**	**6.26**	**265**	*e*P	Pn	23 17 52.5	+4.8
MTVR	**Mutnovka**	**6.32**	**262**	*e*P	Pn	23 17 53.3	+4.6
GRL	**Gorelyy**	**6.37**	**263**	*e*P	Pn	23 17 54.6	+5.4
ASAK	**Asacha**	**6.51**	**262**	*e*P	Pn	23 17 56.4	+5.1

BGR ***16*** *23:39:35.8, 14.46N×97.26W, h33km, mb6.3, mB_BB7.4, Ms7.4*

IDC ***16*** *23:39:35.6±0.4, 16.43N×97.44W, h0km, mb5.3/25, mbtmp5.3/27, ML4.6/2, MS7.2/61, Error ellipse: s-maj=14.4km s-min=9.7km az=68.0*

BJI ***16*** *23:39:37.6±0.0, 16.60N×97.75W, h10km, mB7.4/22, Ms7.6/82, Ms7 7.4/79*

MOS ***16*** *23:39:38.7±1.2, 16.51N×97.80W, h26km, mb6.5/58, MS7.4/46, Error ellipse: s-maj=7.9km s-min=4.7km az=87.1*

NEIC ***16*** *23:39:39.3±2.5, 16.39N±0.04×97.98W±0.04, h22km±1km, mb6.6/883, Ms_20 7.3/607, Mwb7.1/104, Mww7.2/25, Md7.2/36(MEX), Error ellipse: s-maj=7.8km s-min=5.4km az=210.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr2.10; Mθθ-1.88; Mϕϕ-0.21; Mrθ3.99; Mθϕ1.87; Mϕr-2.02; Fault plane solution: M₀5.24000×10¹⁹ NP1:ϕs116.86000°, δ75.07000°, λ85.37000°. NP2: ϕs314.31000°, δ15.62000°, λ106.84000°. Principal axes: T 4.6948, Plg60.0000°, Azm20.0000°; N 0.9645, Plg4.0000°, Azm118.0000°; P -5.6593, Plg30.0000°, Azm211.0000°;*

MEX ***16*** *23:39:39.1±2.2, 16.22N×98.01W, h16km±21km, MD7.2, Mw7.2*

NEIC ***16*** *23:39:40.9, 16.56N×97.68W, h24km*

IPGP ***16*** *23:39:42.0, 16.65N×97.65W, h20km, Mw7.2, Fault plane solution: NP1:ϕs119.00000°, δ73.00000°, λ86.00000°. NP2:ϕs313.00000°, δ17.00000°, λ103.00000°.*

CATAC ***16*** *23:39:42.4±0.2, 17.15N×97.54W, h20km, MB6.7, mb6.4, ML7.6*

GCG ***16*** *23:39:42.7±3.2, 17.55N×97.26W, h0km±999km*

NEIC ***16*** *23:39:43, 16.58N×97.77W, h26km*

NEIC ***16*** *23:39:43, 16.38N×97.67W, h26km, Moment Tensor Solution. Duration: 19s0 Moment tensor: Scale 10¹⁹Nm; Mrr3.24; Mθθ-2.71; Mϕϕ-0.53; Mrθ6.57; Mθϕ1.40; Mϕr-3.13; Fault plane solution: M₀7.99000×10¹⁹ NP1: ϕs115.55000°, δ77.75000°, λ89.78000°. NP2: ϕs296.59000°, δ12.25000°, λ91.02000°. Principal axes: T 7.9196, Plg57.0000°, Azm25.0000°; N 0.1505, Plg0.0000°, Azm116.0000°; P -8.0701, Plg33.0000°, Azm206.0000°;*

GCMT ***16*** *23:39:45.5±0.1, 16.53N×97.88W, h20km, MW7.2/176, Moment Tensor Solution. s176,c486; s172,c857; Duration: 9s3 Moment tensor: Scale 10¹⁹Nm; Mrr3.19±.01; Mθθ-2.53±.01; Mϕϕ-0.66±.01; Mrθ5.46±.10; Mθϕ1.11±.01; Mϕr-3.03±.07; Best double couple: M₀6.98000×10¹⁹ NP1:ϕs119.00000°, δ77.00000°, λ92.00000°. NP2:ϕs292.00000°, δ13.00000°, λ83.00000°. Principal axes: T 7.0570, Plg58.0000°, Azm31.0000°; N -0.1570, Plg2.0000°, Azm298.0000°; P -6.9020, Plg32.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 23:39:38.3±0.3,**16.35N**±0.02×**97.93W**±0.02,**h16**km±1km, **h17**km:**pP-P,n2939,**σ2²**63**/3102,**mb6.6**/571,**MS7.3**/470, **339C-61D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.20**	**283**		**Pg**	**23 39 41.6**	**-1.4**
PNIG					**Sg**	**23 39 44.9**	**-1.3**
PNIG	**Pinotepa**	**0.20**	**283**	*e*P	**Pg**	**23 39 41.6**	**-1.4**
PNIG				*i* S	**Sg**	**23 39 44.9**	**-1.3**
YOIG	**Yosondua**	**0.62**	**36**		**Pb**	**23 39 51.1**	**+0.1**
YOIG	**Yosondua**	**0.62**	**36**	*i*P	**Pb**	**23 39 51.1**	**+0.1**
	baz=219,slow=16						
YOIG				*e*S	**Sb**	**23 40 00.9**	**+1.3**
PEIG	**Puerto Escondi**	**0.82**	**115**		**Pb**	**23 39 53.0**	**-1.3**
PEIG	**Puerto Escondi**	**0.82**	**115**	*e*P	**Pb**	**23 39 53.0**	**-1.3**
	baz=283,slow=9.3						
PEIG				*i* S	**Sb**	**23 40 02.6**	**-2.6**
TXIG	**Tlaxiaco**	**0.91**	**10**		**Pb**	**23 39 55.4**	**-0.5**
TXIG	**Tlaxiaco**	**0.91**	**10**	*e*P	**Pb**	**23 39 55.4**	**-0.5**
TXIG				*i* S	**Sn**	**23 40 09.1**	**-0.6**
MGIG	**Malinaltepec**	**1.11**	**323**		**Pb**	**23 39 57.0**	**-2.2**
MGIG	**Malinaltepec**	**1.11**	**323**	*e*P	**Pb**	**23 39 57.0**	**-2.2**
MGIG				*i* S	**Sb**	**23 40 05.6**	**-7.9**
CRIG	**Cruz Grande**	**1.22**	**289**		**Pn**	**23 39 56.7**	**-4.0**
CRIG	**Cruz Grande**	**1.22**	**289**	*e*P	**Pn**	**23 39 56.7**	**-4.0**
CRIG				*i* S	**Sb**	**23 40 11.9**	**-4.6**
OXIG	**Oaxaca**	**1.35**	**58**		**Pn**	**23 40 02.4**	**-0.3**
VHO	**Vista Hermosa**	**1.35**	**58**	*e*P	**Pn**	**23 40 02.4**	**-0.3**
	baz=238,slow=14						
VHO				*i* S	**Sn**	**23 40 19.2**	**-1.2**
TLIG	**Tlapa**	**1.35**	**333**		**Pn**	**23 40 01.1**	**-1.6**
TLIG				Sn	**Sn**	**23 40 18.4**	**-2.1**
TLIG	**Tlapa**	**1.35**	**333**	P	**Pn**	**23 40 00.9**	**-1.7**
TLIG	**Tlapa**	**1.35**	**333**	*e*P	**Pn**	**23 40 01.3**	**-1.3**
TLIG				*e*S	**Sn**	**23 40 16.7**	**-3.8**
TLIG	**Tlapa**	**1.35**	**333**	*i*P	**Pn**	**23 40 01.1**	**-1.6**
TLIG				*i* S	**Sn**	**23 40 16.6**	**-3.8**
TLIG				IAML		23 40 35.9	
	comp=Z,2100μm,1.0s						
OXBJ	**Oaxaca**	**1.36**	**58**	*e*P	**Pn**	**23 40 02.5**	**-0.3**
OXBJ				*i* S	**Sg**	**23 40 23.4**	**+1.2**
HLIG	**Huajuapan de L**	**1.48**	**5**		**Pn**	**23 40 04.2**	**-0.3**
HLIG	**Huajuapan de L**	**1.48**	**5**	*e*P	**Pn**	**23 40 04.2**	**-0.3**
HLIG				*e*S	**Sn**	**23 40 22.8**	**-0.8**
FTIG	**Fresnillo de T**	**1.56**	**353**		**Pn**	**23 40 05.0**	**-0.5**
FTIG	**Fresnillo de T**	**1.56**	**353**	*e*P	**Pn**	**23 40 05.0**	**-0.5**
FTIG				*e*S	**Sb**	**23 40 26.3**	**-0.3**
HMTT	**Tlapaneco**	**1.56**	**337**	*e*P	**Pn**	**23 40 04.8**	**-0.8**
HMTT				*i* S	**Sn**	**23 40 24.3**	**-1.2**
DAIG	**Los Arroyos**	**1.78**	**292**		**Pn**	**23 40 05.2**	**-3.3**
DAIG	**Los Arroyos**	**1.78**	**292**	*e*P	**Pn**	**23 40 05.2**	**-3.3**
DAIG				*e*S	**Sn**	**23 40 27.2**	**-3.6**
HUIG	**Huatulco**	**1.84**	**108**		**Pn**	**23 40 08.4**	**-0.8**
HUIG	**Huatulco**	**1.84**	**108**	*e*P	**Pn**	**23 40 08.0**	**-1.2**
HUIG				*e*S	**Sn**	**23 40 26.9**	**-5.3**
VNTA	**La Mica**	**1.90**	**288**	*e*P	**Pn**	**23 40 07.0**	**-3.1**
VNTA				*e*S	**Sn**	**23 40 31.0**	**-2.7**
TOIG	**Toxpalan**	**1.92**	**25**		**Pn**	**23 40 10.5**	**+0.1**
TOIG	**Toxpalan**	**1.92**	**25**	*e*P	**Pn**	**23 40 10.4**	**-0.1**
	baz=186,slow=16						
TOIG				*e*S	**Sb**	**23 40 35.9**	**-1.0**
ACP2	**Acapulco**	**1.95**	**286**	*e*P	**Pn**	**23 40 07.8**	**-3.0**
ACP2				*e*S	**Sn**	**23 40 35.2**	**+0.2**
TPIG	**Tehuac#an**	**2.13**	**15**	*e*P	**Pn**	**23 40 14.5**	**+1.1**
TPIG				*e*S	**Sn**	**23 40 40.6**	**+1.0**
MEIG	**Mezcala**	**2.25**	**314**	*e*P	**Pn**	**23 40 13.6**	**-1.4**
MEIG				*e*S	**Sn**	**23 40 40.5**	**-2.1**
CAIG	**El Cayaco**	**2.35**	**288**		**Pn**	**23 40 12.9**	**-3.3**
CAIG	**El Cayaco**	**2.35**	**288**	*e*P	**Pn**	**23 40 12.9**	**-3.3**
CAIG				*i* S	**Sn**	**23 40 43.5**	**-1.2**
NEUV	**Arroyo Zacate**	**2.44**	**56**	*e*P	**Pn**	**23 40 17.8**	**+0.3**
NEUV				*e*S	**Sn**	**23 40 49.0**	**+1.9**
PLIG	**Platanillo**	**2.53**	**324**		**Pn**	**23 40 18.2**	**-0.6**
PLIG	**Platanillo**	**2.53**	**324**	*e*P	**Pn**	**23 40 18.2**	**-0.6**
PLIG				*e*S	**Sn**	**23 40 48.5**	**-0.9**
ATYC	**Atoyac**	**2.55**	**290**	*e*P	**Pn**	**23 40 17.7**	**-1.3**
ATYC				*e*S	**Sb**	**23 40 54.7**	**-0.1**
OZST	**Orizaba**	**2.62**	**17**	*e*P	**Pn**	**23 40 21.7**	**+1.6**
OZST				*e*S	**Sb**	**23 40 55.9**	**-1.1**
PHPU	**Puebla**	**2.69**	**355**	*e*P	**Pb**	**23 40 24.9**	**-1.4**
PHPU				*i* S	**Sn**	**23 40 54.6**	**+1.0**
YAIG	**Yautepec**	**2.73**	**337**		**Pn**	**23 40 21.3**	**-0.3**
YAIG	**Yautepec**	**2.73**	**337**	*e*P	**Pn**	**23 40 21.3**	**-0.3**
YAIG				*e*S	**Sn**	**23 40 51.5**	**-2.8**
PPM	**Popocatepetl**	**2.79**	**346**	*e*P	**Pn**	**23 40 23.7**	**+1.0**
PPM				*i* S	**Sn**	**23 40 52.1**	**-4.2**
AMVM	**AMECAMECA**	**2.89**	**344**		**Pn**	**23 40 24.4**	**+0.4**
AMVM	**AMECAMECA**	**2.89**	**344**	*e*P	**Pn**	**23 40 24.4**	**+0.4**
AMVM				*i* S	**Sn**	**23 40 52.9**	**-5.6**
ARIG	**Puente Sto Nin**	**3.01**	**310**		**Pn**	**23 40 25.1**	**-0.2**
ARIG	**Puente Sto Nin**	**3.01**	**310**	*e*P	**Pn**	**23 40 24.5**	**-0.8**
ARIG				*e*S	**Sn**	**23 40 55.8**	**-5.3**
CMIG	**Matias Romero**	**3.01**	**75**	Pn	**Pn**	**23 40 24.3**	**-1.0**
	comp=Z,464nm,0.3s,baz=266,slow=12,SNR=1220						
CMIG				LR	LR	23 40 53.6	
	comp=Z,1325μm,18.1s,baz=245,slow=31						
CMIG	**Matias Romero**	**3.01**	**75**	*e*P	**Pn**	**23 40 24.4**	**-0.9**
CMIG				*e*S	**Sb**	**23 41 05.9**	**-2.2**
MPVM	**San Francisco**	**3.02**	**340**	*e*P	**Pn**	**23 40 27.2**	**+1.5**
MPVM				*e*S	**Sn**	**23 41 00.5**	**-1.2**
TLVM	**San Miguel Top**	**3.08**	**338**	*e*P	**Pb**	**23 40 29.8**	**-3.1**
TLVM				*e*S	**Sn**	**23 40 59.5**	**-3.8**
MZVM		**3.09**	**336**	*e*P	**Pn**	**23 40 27.5**	**+1.1**
XCVM	**Xochimilco**	**3.10**	**339**	*e*P	**Pb**	**23 40 30.5**	**-2.8**
XCVM				*e*S	**Sn**	**23 41 00.9**	**-2.9**
THVM	**De Xico**	**3.11**	**341**	*e*P	**Pn**	**23 40 28.3**	**+1.4**
THVM				*e*S	**Sn**	**23 41 00.8**	**-3.2**
CNCY	**Coyoacan**	**3.18**	**338**	*i*P	**Pb**	**23 40 32.7**	**-1.9**
CNCY				*i* S	**Sn**	**23 41 05.5**	**-0.3**
NILT	**Santiago Nilte**	**3.18**	**86**	*e*P	**Pn**	**23 40 27.8**	**+0.1**
NILT				*e*S	**Sb**	**23 41 09.9**	**-3.2**
JAUV	**Jalcomulco**	**3.19**	**19**	*e*P	**Pn**	**23 40 27.7**	**-0.1**
JAUV				*e*S	**Sb**	**23 41 10.0**	**-3.3**
AOVM	**Tlapan**	**3.19**	**336**	*e*P	**Pn**	**23 40 28.7**	**+0.4**
AOVM				*e*S	**Sn**	**23 41 09.0**	**+2.7**
UNM	**Universidad Na**	**3.20**	**338**	Pn	**Pn**	**23 40 28.2**	**+0.1**
UNM	**Universidad Na**	**3.20**	**338**	P	**Pn**	**23 40 28.9**	**+0.8**
UNM	**Universidad Na**	**3.20**	**338**	*e*P	**Pn**	**23 40 28.7**	**+0.6**
UNM				*e*S	**Sn**	**23 41 09.1**	**+3.0**
CUP5	**Mexico City**	**3.20**	**338**	*e*P	**Pb**	**23 40 32.3**	**-2.6**
CUP5				*e*S	**Sn**	**23 41 04.5**	**-1.7**
COVM	**Coyoacan**	**3.21**	**339**	*e*P	**Pb**	**23 40 31.9**	**-3.1**
COVM				*e*P	**Pn**	**23 40 32.8**	**+4.5**
COVM				*i* S	**Sn**	**23 41 01.3**	**-5.1**
TXVM	**Universitario**	**3.21**	**343**	*e*P	**Pn**	**23 40 31.4**	**+3.1**
BJVM	**Benito Juarez**	**3.24**	**339**	*e*P	**Pn**	**23 40 30.6**	**+1.9**
BJVM				*i* S	**Sn**	**23 41 03.1**	**-3.9**
INVM	**La Marquesa**	**3.24**	**335**	*e*P	**Pn**	**23 40 29.4**	**+0.6**
INVM				*i* S	**Sn**	**23 41 07.3**	**0.0**
SCT2	**Benito Juarez**	**3.25**	**339**	*e*P	**Pb**	**23 40 35.4**	**-0.3**
SCT2				*e*S	**Sn**	**23 41 06.5**	**-0.4**
VRVM	**Mexico City**	**3.26**	**340**	*e*P	**Pn**	**23 40 35.9**	**0.0**
CJVM	**Cuajimalpa**	**3.27**	**337**	*e*P	**Pn**	**23 40 30.2**	**+1.1**
CJVM				*e*S	**Sn**	**23 41 07.2**	**-0.6**
PBVM	**Pinon**	**3.27**	**340**		**Pn**	**23 40 29.3**	**+0.4**
PBVM	**Pinon**	**3.27**	**340**	*e*P	**Pn**	**23 40 29.5**	**+0.7**
PBVM				*e*S	**Sn**	**23 41 05.4**	**-2.1**
MHVM	**Bosque de Chap**	**3.28**	**338**	*e*P	**Pn**	**23 40 29.6**	**+0.3**
MHVM				*e*S	**Sn**	**23 41 08.3**	**+0.2**
CTVM	**Cuauhtemoc**	**3.30**	**339**	*e*P	**Pb**	**23 40 34.1**	**-2.5**
XALA	**Xalapa**	**3.31**	**17**	*e*P	**Pn**	**23 40 32.1**	**+2.5**
XALA				*i* S	**Sn**	**23 41 09.7**	**+1.0**
TEJU	**Tejupilco**	**3.32**	**320**	*e*P	**Pn**	**23 40 29.9**	**+0.3**
TEJU				*e*S	**Sb**	**23 41 14.0**	**-3.1**
TOVM	**TOLUCA**	**3.36**	**331**	*e*P	**Pn**	**23 40 31.5**	**+1.0**
TOVM				*e*S	**Sn**	**23 41 10.3**	**0.0**
PET2	**Petatlan**	**3.41**	**291**	*e*P	**Pn**	**23 40 29.4**	**-1.3**
PET2				*e*S	**Sn**	**23 41 09.1**	**-1.7**
PTVM	**Pico Tres Padr**	**3.42**	**341**	*e*P	**Pn**	**23 40 32.3**	**+1.1**
PTVM				*e*S	**Sn**	**23 41 11.3**	**-0.3**
PMUV	**Sontecomapan**	**3.46**	**50**	*e*P	**Pn**	**23 40 30.3**	**-1.3**
PMUV				*e*S	**Sn**	**23 41 14.6**	**+2.4**
AZVM	**Cuida Lopez Ma**	**3.47**	**338**	*e*P	**Pn**	**23 40 33.5**	**+1.5**
AZVM				*i* S	**Sn**	**23 41 10.5**	**-2.4**
VTVM	**Tizayuca**	**3.50**	**347**	*e*P	**Pn**	**23 40 33.7**	**+1.4**
VTVM				*e*S	**Sn**	**23 41 11.9**	**-1.7**
MIHL	**Minatitlan**	**3.62**	**63**	*e*P	**Pn**	**23 40 32.5**	**-1.3**
MIHL				*e*S	**Sn**	**23 41 16.6**	**+0.4**
ZUVM	**ZUMPANGO**	**3.63**	**343**	*e*P	**Pn**	**23 40 34.4**	**+0.3**
ZUVM				*e*S	**Sn**	**23 41 19.1**	**+2.3**
LVIG	**Laguna Verde**	**3.65**	**23**	*e*P	**Pn**	**23 40 32.3**	**-1.8**
LVIG				*e*S	**Sn**	**23 41 17.1**	**+0.2**
TUIG	**Tuzandepetl**	**3.75**	**63**	*e*P	**Pn**	**23 40 35.7**	**+0.3**
TUIG				*e*S	**Sn**	**23 41 18.4**	**-0.8**
ATVM	**ATLACOMULCO**	**3.85**	**332**	*e*P	**Pn**	**23 40 38.4**	**+1.2**
ATVM				*e*S	**Sn**	**23 41 24.4**	**+2.0**
CARR	**Arriaga**	**3.86**	**91**	*e*P	**Pn**	**23 40 35.9**	**-1.1**
CARR				*e*S	**Sn**	**23 41 21.2**	**-0.8**
UON	**La Union**	**4.05**	**294**	*e*P	**Pn**	**23 40 38.1**	**-1.6**
UON				*e*S	**Sn**	**23 41 25.7**	**-1.1**
ACIG	**Acambay**	**4.06**	**333**		**Pn**	**23 40 40.9**	**+0.9**
ACIG	**Acambay**	**4.06**	**333**	*e*P	**Pn**	**23 40 40.6**	**+0.7**
ACIG				*e*S	**Sn**	**23 41 26.6**	**-0.8**
DEIG	**Demacu**	**4.07**	**345**	*e*P	**Pn**	**23 40 41.0**	**+0.8**
DEIG				*e*S	**Sb**	**23 41 33.5**	**-5.4**
ACAM	**Acambaro**	**4.53**	**325**	*e*P	**Pb**	**23 40 56.1**	**-1.6**
ACAM				*e*S	**Sb**	**23 41 51.5**	**-0.6**
MOIG	**Morelia**	**4.54**	**317**	Pn	**Pn**	**23 40 46.2**	**-0.4**
MOIG	**Morelia**	**4.54**	**317**	P	**Pn**	**23 40 47.0**	**+0.5**
MOIG	**Morelia**	**4.54**	**317**	*e*P	**Pn**	**23 40 46.8**	**+0.2**
MOIG				*e*S	**Sn**	**23 41 43.4**	**+4.2**
MOIG	**Morelia**	**4.54**	**317**	*i*P	**Pn**	**23 40 46.4**	**-0.2**
MOIG				*i* S	**Sn**	**23 41 37.6**	**-1.6**
MOIG				IAML		23 42 18.3	
	comp=Z,680μm,1.0s						
PCIG		**4.57**	**97**	*e*P	**Pn**	**23 40 46.2**	**-0.6**
PCIG				*e*S	**Sn**	**23 41 37.7**	**-2.0**
TGIG		**4.63**	**84**	*e*P	**Pn**	**23 40 47.1**	**-0.5**
TGIG				*e*S	**Sn**	**23 41 43.4**	**+2.3**
TGBT	**Tuxtla Gutierr**	**4.66**	**84**	*e*P	**Pn**	**23 40 48.6**	**+0.6**
TGBT				*e*S	**Sn**	**23 41 43.9**	**+2.1**
JRQG	**Juriquilla Cam**	**4.95**	**331**		**Pn**	**23 40 51.7**	**-0.5**
JRQG	**Juriquilla Cam**	**4.95**	**331**	*e*P	**Pn**	**23 40 51.8**	**-0.4**
JRQG				*e*S	**Sn**	**23 41 52.0**	**+2.8**
VHSA	**Villahermosa**	**5.04**	**70**	*e*P	**Pn**	**23 40 53.8**	**+0.6**
VHSA				*e*S	**Sn**	**23 41 53.9**	**+2.8**
CTUV	**Llano Grande**	**5.11**	**356**	*e*P	**Pn**	**23 40 54.6**	**+0.4**
CTUV				*e*S	**Sn**	**23 41 57.2**	**+4.2**
IGIG	**Irapuato, Guan**	**5.44**	**324**	*e*P	**Pn**	**23 41 00.1**	**+1.1**
IGIG				*e*S	**Sn**	**23 42 02.0**	**+0.6**
MMIG	**Aquila**	**5.52**	**291**	*e*P	**Pn**	**23 40 58.4**	**-1.5**
MMIG				*e*S	**Sn**	**23 41 56.6**	**-6.6**
CCIG	**Comitan**	**5.56**	**90**	Pn	**Pn**	**23 41 00.4**	**-0.2**
CCIG				Sn	**Sn**	**23 42 05.8**	**+1.6**
CCIG	**Comitan**	**5.56**	**90**	P	**Pn**	**23 41 00.8**	**+0.2**
CCIG	**Comitan**	**5.56**	**90**	*e*P	**Pn**	**23 41 00.7**	**+0.2**
CCIG				*e*S	**Sn**	**23 42 05.5**	**+1.3**
CCIG	**Comitan**	**5.56**	**90**	*i*P	**Pn**	**23 41 00.8**	**+0.2**
CCIG				IAmb	IAmb	23 41 26.7	
	comp=Z,9μm,1.3s						
CCIG				IVmB_BB		23 41 38.8	
	comp=Z,310μm,1.0s						
CCIG				*i* S	**Sn**	**23 42 01.1**	**-3.2**
CCIG				IAML		23 43 11.3	
	comp=Z,260μm,1.0s						
PATR	**El Naranjo**	**5.62**	**102**	*e*P	**Pn**	**23 41 01.4**	**0.0**
PATR				*e*S	**Sn**	**23 41 59.7**	**-6.0**
THIG		**5.64**	**104**	*e*P	**Pn**	**23 41 00.7**	**-0.8**
THIG				*e*S	**Sn**	**23 42 05.5**	**-0.5**
PAVE	**Pavencul**	**5.65**	**101**	*e*P	**Pn**	**23 41 02.3**	**+0.4**
PAVE				*i* S	**Sn**	**23 41 59.3**	**-7.3**
CHUJ	**Union Juarez**	**5.74**	**102**	*e*P	**Pn**	**23 41 03.1**	**0.0**
CHUJ				*e*S	**Sn**	**23 42 06.5**	**-2.3**
SMCA	**Catarina**	**5.83**	**104**	*i*P	**Pn**	**23 41 06.8**	**+2.7**
SMCA				IAmb	IAmb	23 41 30.8	
	comp=Z,8μm,1.0s						
SMCA				IVmB_BB		23 41 51.5	
	comp=Z,130μm,1.0s						
SMCA				*i* S	**Sn**	**23 42 08.5**	**-2.2**
SMCA				IAML		23 43 25.2	
	comp=Z,140μm,1.0s						
RPIG	**Rio Verde**	**5.84**	**341**	*e*P	**Pn**	**23 41 04.8**	**+0.4**
RPIG				*e*S	**Sn**	**23 42 15.3**	**+4.2**
SMSP	**San Marcos**	**6.08**	**102**	*e*P	**Pn**	**23 41 09.2**	**+1.5**
SMSP				*e*S	**Sn**	**23 42 19.8**	**-3.4**
COIG	**Colima**	**6.17**	**298**	*e*P	**Pn**	**23 41 09.8**	**+0.9**
COIG				*e*S	**Sn**	**23 42 19.4**	**+0.2**
JUBC	**Volcan de Coli**	**6.23**	**301**	*e*P	**Pn**	**23 41 11.9**	**+2.0**
JUBC				*e*S	**Sn**	**23 42 14.6**	**-

TEPI eS Sn 23 43 09.6 -4.0
CEVE Cerro Verde 8.40 106⇓ iP Pn 23 41 43.7 +4.0
CEVE IAmb IAmb 23 42 11.9
comp=Z,2µm,0.7s
CEVE IVmB_BB 23 42 24.7
comp=Z,24µm,1.0s
ESQI Esquipulas 8.47 101 Pn 23 41 40.7 +0.3
ESQI Esquipulas 8.47 101⇑ iP Pn 23 41 41.2 +0.8
ESQI IVmB_BB 23 41 50.8
comp=Z,85µm,1.0s
ESQI IAmb IAmb 23 42 08.2
comp=Z,2µm,1.1s
MTO3 Montecristo 8.49 102 Pn 23 41 41.6 +0.8
MTO3 Montecristo 8.49 102⇑ iP Pn 23 41 41.6 +0.8
MTO3 IVmB_BB 23 41 50.5
comp=Z,64µm,1.0s
MTO3 IAmb IAmb 23 42 00.8
comp=Z,1µm,1.2s
JAYA Jayaque - finc 8.62 107⇑ iP Pn 23 41 43.9 +1.3
JAYA IVmB_BB 23 41 52.2
comp=Z,90µm,1.0s
JAYA IAmb IAmb 23 42 07.9
comp=Z,4µm,0.7s
LNIG Linares 8.63 351⇑ eP Pn 23 41 42.7 +0.1
LNIG eS Sn 23 43 15.0 -4.6
PMON Piamonte 8.72 106⇑ iP Pn 23 41 48.5 +4.5
PMON IVmB_BB 23 42 00.9
comp=Z,20µm,1.0s
PMON IAmb IAmb 23 42 18.2
comp=Z,1µm,0.7s
LALI Alcalda de L 8.79 108 iP Pn 23 41 48.6 +3.8
LALI IVmB_BB 23 42 14.3
comp=Z,11µm,1.0s
LALI IAmb IAmb 23 42 18.0
comp=Z,1µm,1.2s
SNET Serv Nac Est T 8.81 106 Pn 23 41 46.9 +1.8
LOMA Loma Larga 8.88 106⇑ iP Pn 23 41 51.2 +5.1
LOMA IAmb IAmb 23 42 18.4
comp=Z,950nm,0.8s
LOMA IVmB_BB 23 42 45.5
comp=Z,14µm,1.0s
IZABA Izabal, Puerto 9.00 93 eP Pn 23 41 45.6 -2.0
IZABA eS Sn 23 43 27.2 -1.6
IZABA Izabal, Puerto 9.00 93 iP Pn 23 41 52.9 +5.2
IZABA IAmb IAmb 23 42 21.6
comp=Z,15nm,0.6s
IZABA IVmB_BB 23 42 47.6
comp=Z,630nm,1.0s
MYIG Mrida 9.01 58⇑ eP Pn 23 41 45.6 -2.2
MYIG eS Sn 23 43 31.0 +2.0
SJTE Alcalda de S 9.04 106 iP Pn 23 41 52.7 +4.5
SJTE IAmb IAmb 23 42 14.5
comp=Z,750nm,0.7s
SJTE IVmB_BB 23 42 51.1
comp=Z,12µm,1.0s
PAVA Las Pavas 9.07 106⇑ iP Pn 23 41 49.9 +1.2
PAVA IAmb IAmb 23 42 04.3
comp=Z,3µm,1.3s
PAVA IVmB_BB 23 42 37.7
comp=Z,74µm,1.0s
TECO Alcaldia de Te 9.27 106 iP Pn 23 41 57.3 +5.9
TECO IAmb IAmb 23 42 09.5
comp=Z,660nm,1.3s
TECO IVmB_BB 23 42 45.5
comp=Z,9µm,1.0s
PQSS Presa 15 de Se 9.45 105 iP Pn 23 41 58.0 +4.2
PQSS IAmb IAmb 23 42 23.9
comp=Z,390nm,0.8s
PQSS IVmB_BB 23 42 56.3
comp=Z,6µm,1.0s
MNIG Monterrey 9.48 347⇑ eP Pn 23 41 54.7 +0.5
COEB Comit de Eme 9.51 106 iP Pn 23 42 00.2 +5.4
COEB IAmb IAmb 23 42 18.2
comp=Z,520nm,1.1s
COEB IVmB_BB 23 42 53.1
comp=Z,11µm,1.0s
PACA Pacayal 9.71 106⇑ iP Pn 23 41 54.5 -3.1
PACA IAmb IAmb 23 42 18.9
comp=Z,7µm,0.9s
PACA IVmB_BB 23 42 32.2
comp=Z,82µm,1.0s
JUCU Jucuarán 9.85 107⇑ iP Pn 23 42 03.8 +4.4
JUCU IAmb IAmb 23 42 24.7
comp=Z,450nm,0.9s
JUCU IVmB_BB 23 43 02.2
comp=Z,7µm,1.0s
TEIG Tepich 9.94 66 Pn Pn 23 41 57.1 -3.5
TEIG Tepich 9.94 66⇑ Pn Pn 23 41 55.8 -4.8
TEIG Tepich 9.94 66⇑ eP Pn 23 41 56.3 -4.3
TEIG iS Sn 23 43 51.1 -0.9
TEIG Tepich 9.94 66 eP Pn 23 41 56.6 -4.0
LCND La Caada 10.16 106 iP Pn 23 42 07.7 +4.1
LCND IAmb IAmb 23 42 25.7
comp=Z,870nm,0.9s
LCND IVmB_BB 23 42 34.5
comp=Z,9µm,1.0s
CNCH Conchagua 10.23 106⇑ iP Pn 23 42 06.5 +1.9
CNCH IVmB_BB 23 42 14.8
comp=Z,83µm,1.0s
CNCH IAmb IAmb 23 42 20.3
comp=Z,3µm,0.7s
MAIG Mazatlaan 10.50 312 eP Pn 23 42 09.5 +1.3
MAIG eS Sn 23 44 05.4 -0.1
TGUH Tegucigalpa,Un 10.53 101 Pn Pn 23 42 07.6 -1.2
TGUH Tegucigalpa,Un 10.53 101⇑ Pn Pn 23 42 08.2 -0.6
TGUH Tegucigalpa,Un 10.53 101⇑ iP Pn 23 42 09.4 +0.6
TGUH Tegucigalpa,Un 10.53 101⇑ iP Pn 23 42 09.1 +0.3
TGUH Tegucigalpa,Un 10.53 101⇑ iP Pn 23 42 09.6 +0.8
TGUH IVmB_BB 23 42 18.9
comp=Z,63µm,1.0s
TGUH IAmb IAmb 23 42 39.3
comp=Z,2µm,1.2s
CSGN Cosiguina Volc 10.58 107 iP Pn 23 42 13.3 +3.9
CSGN IAmb IAmb 23 42 38.8
comp=Z,2µm,0.6s
CSGN IVmB_BB 23 42 46.3
comp=Z,26µm,1.0s
HBVL Hebbronville 10.69 356 Pn Pn 23 42 11.1 +0.4
PDIG Papasquiaro 11.12 322⇑ eP Pn 23 42 19.8 +3.0
PDIG eS Sn 23 44 13.1 -7.9
CRIN San Cristobal 11.14 108 Pn Pn 23 42 17.9 +0.8
CRIN San Cristobal 11.14 108⇑ iP Pn 23 42 18.7 +1.7
CRIN San Cristobal 11.14 108⇑ iP Pn 23 42 19.3 +2.3
CRIN IAmb IAmb 23 42 34.2
comp=Z,4µm,0.8s
CRIN IVmB_BB 23 42 34.5
comp=Z,160µm,1.0s
KVTX Kingsville 11.14 0 Pn Pn 23 42 16.7 -0.3
KVTX Kingsville 11.14 0⇑ Pn Pn 23 42 17.6 +0.6
KVTX Kingsville 11.14 0 eP Pn 23 42 18.6 +1.6
QUEN Al S del Volca 11.36 108 iP Pn 23 42 23.0 +3.0
QUEN IVmB_BB 23 42 36.8
comp=Z,8µm,1.0s
TEL3 Telica 3 11.37 108 iP Pn 23 42 23.1 +2.9
TEL3 IAmb IAmb 23 42 38.2
comp=Z,5µm,0.9s
TEL3 IVmB_BB 23 42 58.1
comp=Z,34µm,1.0s
TELN Telica 11.37 108 iP Pn 23 42 23.3 +3.1
TELN IVmB_BB 23 42 33.1
comp=Z,630nm,1.0s
TELN IAmb IAmb 23 42 38.5
comp=Z,29nm,0.5s
PACN Al O del Volca 11.44 108 iP Pn 23 42 25.9 +4.7
PACN IVmB_BB 23 42 34.3
comp=Z,32µm,1.0s
PACN IAmb IAmb 23 42 44.2
comp=Z,620nm,0.5s
ROCN Rota Cerro Neg 11.48 108⇓ iP Pn 23 42 25.1 +3.4
ROCN IAmb IAmb 23 42 49.2
comp=Z,780nm,0.8s
ROCN IVmB_BB 23 43 19.9
comp=Z,10µm,1.0s
CNGA Al SSO del Vol 11.53 108⇓ iP Pn 23 42 25.9 +3.6
CNGA IVmB_BB 23 42 40.1
comp=Z,6µm,1.0s
CNGA IAmb IAmb 23 42 50.7
comp=Z,360nm,0.6s
CNGN Cerro Negro 11.53 108 Pn 23 42 23.4 +1.0
CNGN Sn Sn 23 44 35.2 +4.3
CNGN Cerro Negro 11.53 108⇑ iP Pn 23 42 23.0 +0.7
CNGN Cerro Negro 11.53 108⇑ iP Pn 23 42 23.9 +1.5
CNGN IVmB_BB 23 42 32.0
comp=Z,79µm,1.0s
CNGN IAmb IAmb 23 42 42.7
comp=Z,1µm,0.9s
MACN El Madrono 11.56 108 iP Pn 23 42 26.0 +3.2
MACN IVmB_BB 23 42 44.2
comp=Z,7µm,1.0s
LEVN Ruinas Leon Vi 11.64 108 iP Pn 23 42 27.2 +3.4
LEVN IVmB_BB 23 42 44.6
comp=Z,24µm,1.0s
LEVN IAmb IAmb 23 42 54.5
comp=Z,2µm,1.2s
LIMN Finca el Limon 11.65 105 iP Pn 23 42 27.1 +3.0
LIMN IVmB_BB 23 42 33.6
comp=Z,67µm,1.0s
LIMN IAmb IAmb 23 42 49.0
comp=Z,2µm,1.1s
MOMN Momotombo 11.71 108⇓ iP Pn 23 42 26.8 +2.0
MOMN IVmB_BB 23 42 38.6
comp=Z,1µm,1.0s
MOMN IAmb IAmb 23 42 53.9
comp=Z,86nm,0.8s
COPN Copaltepe 11.74 109 iP Pn 23 42 28.1 +2.9
COPN IVmB_BB 23 42 54.4
comp=Z,36µm,1.0s
COPN IAmb IAmb 23 42 54.9
comp=Z,5µm,0.9s
MOM2 El Cardon 11.75 108⇑ iP Pn 23 42 30.5 +5.2
MOM2 IVmB_BB 23 42 44.5
comp=Z,27µm,1.0s
MOM2 IAmb IAmb 23 42 59.9
comp=Z,2µm,1.1s
SAPS Ciudad Sandino 11.91 109⇑ iP Pn 23 42 29.8 +2.2
SAPS IVmB_BB 23 42 43.8
comp=Z,51µm,1.0s
SAPS IAmb IAmb 23 42 44.3
comp=Z,2µm,1.1s
MSHP Masachapa 11.93 111 iP Pn 23 42 30.1 +2.3
MSHP IAmb IAmb 23 42 40.6
comp=Z,74nm,0.5s
MSHP IVmB_BB 23 42 50.9
comp=Z,3µm,1.0s
APQ2 Apoyeque 11.98 109⇓ iP Pn 23 42 31.4 +3.0
APQ2 IVmB_BB 23 42 47.3
comp=Z,21µm,1.0s
APQ2 IAmb IAmb 23 42 57.4
comp=Z,2µm,0.9s
833A Chaparral WMA, 12.00 354 Pn 23 42 27.3 -1.4
833A Sn Sn 23 44 46.0 +3.8
833A Chaparral WMA, 12.00 354 P Pn 23 42 29.4 +0.7
baz=172,SNR=251
TISN Laguna Tiscapa 12.05 109 iP Pn 23 42 31.5 +2.1
TISN IVmB_BB 23 42 45.8
comp=Z,2µm,1.0s
TISN IAmb IAmb 23 42 46.3
comp=Z,170nm,0.9s
SSIG Sanalona 12.06 316 eP Pn 23 42 32.3 +2.8
UNAN Cigeo UNAN 12.06 109 iP Pn 23 42 32.6 +3.0
UNAN IVmB_BB 23 42 45.7
comp=Z,210µm,1.0s
UNAN IAmb IAmb 23 42 46.2
comp=Z,20µm,1.4s
MATN Matagalpa 12.10 105 Pn 23 42 29.1 -1.1
MATN Sn Sn 23 44 47.8 +2.8
MATN Matagalpa 12.10 105⇑ iP Pn 23 42 31.0 +0.8
MATN IVmB_BB 23 42 43.1
comp=Z,26µm,1.0s
MATN IAmb IAmb 23 42 45.4
comp=Z,910nm,1.1s
MAS3 Al N del Volca 12.18 109 iP Pn 23 42 34.4 +3.2
MAS3 IVmB_BB 23 42 39.0
comp=Z,27µm,1.0s
MAS3 IAmb IAmb 23 43 01.4
comp=Z,2µm,0.7s
NANN Nandasmo 12.26 109⇑ iP Pn 23 42 34.4 +2.1
NANN IVmB_BB 23 42 46.4
comp=Z,800µm,1.0s
NANN IAmb IAmb 23 43 04.0
comp=Z,41µm,1.1s
735A Kenedy 12.45 0 Pn 23 42 34.8 -0.1
BOAB BOACO BROADBAN 12.49 106 Pn Pn 23 42 36.2 +0.7
BOAB BOACO BROADBAN 12.49 106 P Pn 23 42 34.8 -0.7
BOAB BOACO BROADBAN 12.49 106⇑ Pn Pn 23 42 35.8 +0.2
BOAB BOACO BROADBAN 12.49 106⇑ iP Pn 23 42 35.5 0.0
BOAB IVmB_BB 23 42 45.1
comp=Z,42µm,1.0s
BOAB IAmb IAmb 23 43 02.5
comp=Z,790nm,2.0s
EF01 Eagle Ford 01 12.73 358 Pn 23 42 37.7 -1.0
HPIG 12.75 327 Pn 23 42 39.7 +0.5
HPIG 12.75 327⇑ iP Pn 23 42 41.2 +2.0
HPIG 12.75 327⇑ eP Pn 23 42 41.2 +2.0
MORN Al O del Volca 12.84 110 iP Pn 23 42 43.6 +3.4
MORN IAmb IAmb 23 43 11.1
comp=Z,3µm,0.7s
MORN IVmB_BB 23 43 18.7
comp=Z,28µm,1.0s
CONN Concepcion 12.85 110 iP Pn 23 42 43.3 +2.9
CONN IAmb IAmb 23 43 10.4
comp=Z,12µm,0.8s
CONN IVmB_BB 23 43 20.1
comp=Z,120µm,1.0s
ACON Acoyapa 13.11 108 Pn 23 42 43.5 -0.4
ACON Acoyapa 13.11 108⇑ iP Pn 23 42 43.6 -0.4
ACON Acoyapa 13.11 108⇑ iP Pn 23 42 45.1 +1.2
ACON IVmB_BB 23 42 53.2
comp=Z,41µm,1.0s
ACON IAmb IAmb 23 43 04.5
comp=Z,900nm,1.1s
BCIG La Boquilla 13.12 329⇑ eP Pn 23 42 45.8 +1.6
HNDO Hondo 13.18 355 Pn 23 42 43.5 -1.3
HZTE Horizontes, Gu 13.23 113 Pn 23 42 46.0 +0.4
HZTE Horizontes, Gu 13.23 113⇑ iP Pn 23 42 48.7 +3.1
HZTE IVmB_BB 23 43 01.0
comp=Z,290µm,1.0s
HZTE IAmb IAmb 23 43 04.0
comp=Z,13µm,2.2s
DRIO Del Rio 13.25 350 Pn Pn 23 42 43.8 -2.0
ELI1 Hacienda Flor 13.30 114 eP P 23 42 51.5 -4.6
ALIBA Liberia Airpor 13.33 114 eP P 23 42 51.9 -4.6
GB1A Borinquen Arri 13.36 113 eP P 23 42 52.4 -4.6
DELF Filadelfia 13.39 114 eP P 23 42 53.1 -4.1
MLDN Muldoon 13.40 3 Pn 23 42 45.7 -2.1
ERIA Liberia 13.40 114 eP P 23 42 54.5 -2.8
GPS3 Bodega del ICE 13.41 113 eP P 23 42 54.3 -3.3
SAJU San Juanillo, 13.43 116⇑ iP Pn 23 42 50.5 +2.2
SAJU IVmB_BB 23 43 04.0
comp=Z,84µm,1.0s
SAJU IAmb IAmb 23 43 15.3
comp=Z,3µm,1.3s
SLBS Sierra La Lagu 13.44 305 Pn Pn 23 42 49.5 +0.9
SLBS Sierra La Lagu 13.44 305⇑ Pn Pn 23 42 50.0 +1.4
SLBS Sierra La Lagu 13.44 305 eP Pn 23 42 49.4 +0.8
ORTG Ortega, Santa 13.51 115 Pn 23 42 49.7 +0.3
ORTG Ortega, Santa 13.51 115 eP Pn 23 42 52.1 +2.7
ORTG Ortega, Santa 13.51 115⇑ iP Pn 23 42 51.3 +1.8
ORTG IVmB_BB 23 43 00.5
comp=Z,140µm,1.0s
ORTG IAmb IAmb 23 43 08.0
comp=Z,4µm,1.8s
JUD3 Juan Diaz 3 13.53 115 eP Pn 23 42 51.7 +1.9
BAGA Bagaces 13.61 114 eP Pn 23 42 55.1 +4.4
PLVR Palo Verde 13.61 114 eP Pn 23 42 55.4 +4.4
DUNO Dulce Nombre, 13.61 116 Pn 23 42 53.4 +2.7
DUNO Dulce Nombre, 13.61 116 eP P 23 42 57.4 -2.3
VMAR Armenia, Volca 13.61 112 eP Pn 23 42 51.8 +0.9
VMAR Armenia, Volca 13.61 112⇑ iP Pn 23 42 52.6 +1.7
VMAR IAmb IAmb 23 43 21.5
comp=Z,6µm,1.3s
VMAR IVmB_BB 23 43 22.9
comp=Z,90µm,1.0s
NICO Nicoya 13.62 115 eP Pn 23 42 55.3 +4.3
CUI Cuipilapa 13.63 113 eP Pn 23 42 55.0 +3.8
HKT Hockley 13.68 8 Pn 23 42 48.7 -2.9
HKT Hockley 13.68 8 P Pn 23 42 48.7 -2.9
CMARA Lajas Hojancha 13.70 116 eP Pn 23 42 52.6 +0.6
INDI Punta indio, G 13.70 117 eP Pn 23 42 54.3 +2.2
INDI Punta indio, G 13.70 117⇑ iP Pn 23 42 52.7 +0.6
INDI IVmB_BB 23 43 10.6
comp=Z,70µm,1.0s
INDI IAmb IAmb 23 43 16.1
comp=Z,2µm,1.0s
ACAL Aguas Claras 13.76 113 eP P 23 42 58.1 -3.3
CNAS Canas 13.80 114 eP Pn 23 42 57.4 +4.1
VERA Finca Concepci 13.81 112 eP Pn 23 42 55.3 +1.7
ESPN Las Esperanzas 13.84 106 Pn 23 42 53.3 -0.6
ESPN Las Esperanzas 13.84 106 eP Pn 23 42 54.1 +0.2
ESPN Las Esperanzas 13.84 106 iP Pn 23 42 55.1 +1.2
ESPN IVmB_BB 23 43 03.2
comp=Z,47µm,1.0s
ESPN IAmb IAmb 23 43 20.5
comp=Z,850nm,1.2s
NYURE Nandayure 13.86 116 eP Pn 23 42 58.0 +3.8
TSIG Topolobambo 13.87 313⇑ eP Pn 23 42 56.1 +1.9
LPIG La Paz 13.94 306 Pn Pn 23 42 57.7 +2.4
comp=Z,3.6nm,0.3s,baz=264,slow=3.2,SNR=13
LPIG Sn S 23 45 44.0 -7.5
comp=Z,3.4nm,0.3s,baz=72,slow=3.6,SNR=1.1
LPIG LR LR 23 48 01.4
comp=Z,349µm,18.4s,baz=122,slow=35
comp=Z,106nm,0.9s
LPIG La Paz 13.94 306 eP Pn 23 42 56.3 +1.1
TXAR Lajitas Array 13.96 339 Pn 23 42 55.1 -0.5
TXAR Lajitas Array 13.96 339 Pn Pn 23 42 56.8 +1.1
comp=Z,0.5nm,0.3s,baz=160,slow=9.7,SNR=62
TXAR LR LR 23 48 58.1
comp=Z,3139µm,18.1s,baz=144,slow=40
comp=Z,39nm,0.9s
TX31 Lajitas Ar. Si 13.96 339 Pn 23 42 55.9 +0.2
JUNT Juntas 13.98 114 eP Pn 23 42 58.1 +2.2
JTS Las Juntas de 13.98 114 Pn 23 42 58.0 +2.1
JTS Las Juntas de 13.98 114 P Pn 23 42 58.0 +2.1
JTS Las Juntas de 13.98 114 Pn Pn 23 42 57.5 +1.6
comp=Z,17nm,0.3s,baz=309,slow=12,SNR=30
JTS Sn Sn 23 45 26.4 -4.5
baz=204,slow=22
JTS Las Juntas de 13.98 114⇑ iP Pn 23 42 57.2 +1.3
JTS Las Juntas de 13.98 114 eP Pn 23 42 58.0 +2.1
SAND Sanderson 14.08 345 Pn 23 42 56.9 -0.3
ARE1 Arenal 1 14.11 113 Pn 23 42 58.5 +0.8
ARE1 Arenal 1 14.11 113 eP Pn 23 42 59.4 +1.6
CEDE Laguna Cedeo 14.12 113 eP Pn 23 42 59.5 +1.8
VACR Volcan Arenal 14.15 113 eP Pn 23 42 59.8 +1.6
JCT Junction City 14.17 353 Pn 23 42 58.0 -0.4
JCT Junction City 14.17 353⇑ Pn Pn 23 42 57.5 -0.9
JCT Junction City 14.17 353⇑ eP Pn 23 42 58.1 -0.4
TUNA La Fortuna 14.18 113 eP P 23 43 04.4 -1.6
SOCE Pocosol 14.24 113 P P 23 43 04.4 -2.3
SOCE Pocosol 14.24 113 eP P 23 43 04.3 -2.4
SOCE Pocosol 14.24 113⇓ iP P 23 43 05.4 -1.3
SOCE IVmB_BB 23 43 14.8
comp=Z,2µm,1.0s
SOCE IAmb IAmb 23 43 19.6
comp=Z,220nm,0.8s
CSIG Choix 14.24 319 eP Pn 23 43 01.8 +2.4
LAFE Finca La Fe, P 14.24 116 eP Pn 23 42 59.5 +0.1
LAFE Finca La Fe, P 14.24 116⇓ iP Pn 23 42 59.9 +0.4
LAFE IVmB_BB 23 43 23.4
comp=Z,560nm,1.0s
LAFE IAmb IAmb 23 43 25.5
comp=Z,27nm,1.0s
ARZA Esparza 14.37 114 eP P 23 43 06.6 -1.5
435B Jarrell 14.37 1 Pn 23 43 00.1 -1.0
435B Jarrell 14.37 1 P Pn 23 43 00.5 -0.7
baz=180
435B S Sn 23 45 39.3 -1.0
baz=180
CPMI Catarata Coope 14.49 113 eP Pn 23 43 04.0 +0.9
CPMI Catarata Coope 14.49 113⇑ iP Pn 23 43 04.9 +1.9
CPMI IAmb IAmb 23 43 18.8
comp=Z,4µm,1.0s
CPMI IVmB_BB 23 43 27.4
comp=Z,100µm,1.0s
SRA1 San Ramn 14.49 114 eP Pn 23 43 04.8 +1.8
RAMO San Ramon 14.50 114 eP P 23 43 06.8 -2.9
ITAL Pital 14.52 112 eP Pn 23 43 05.0 +1.8
HNVL Huntsville, TX 14.52 8 Pn 23 43 01.1 -2.0
ZARE Zarcero 14.53 113 eP P 23 43 07.9 -2.2
JACO JACO, Garabito 14.53 116 Pn 23 43 04.2 +0.9
JACO JACO, Garabito 14.53 116 eP Pn 23 43 04.1 +0.7
JACO JACO, Garabito 14.53 116⇑ iP Pn 23 43 04.0 +0.7
JACO IAmb IAmb 23 43 24.8
comp=Z,2µm,1.4s
JACO IVmB_BB 23 43 30.5
comp=Z,72µm,1.0s
NARAN Naranjo de Ala 14.58 114 eP P 23 43 09.5 -1.1
SARCI Sarchí 14.61 114 eP P 23 43 07.8 -3.1
VPS6 Volcano Poas 14.65 113 eP P 23 43 09.9 -1.8
SARA Sarapiqu 14.74 112 eP P 23 43 09.6 -2.6
BELE Belen 14.80 114 eP P 23 43 11.0 -2.0
OZNA Ozona 14.80 349 Pn 23 43 06.1 -0.9
SANTA Santa Ana 14.82 114 eP P 23 43 10.4 -2.8
HDC Heredia 14.85 113 Pn 23 43 08.3 +0.4
HDC Heredia 14.85 113⇑ Pn Pn 23 43 09.2 +1.3
HDC Heredia 14.85 113 eP Pn 23 43 09.9 +2.0
HDC Heredia 14.85 113 eP Pn 23 43 09.5 +1.6
HDC3 Heredia 3 14.85 113 eP Pn 23 43 09.5 +1.6
DOMI Santo Domingo 14.88 113 eP P 23 43 11.6 -2.3
RITA Parrita 14.88 115 eP P 23 43 14.3 +0.5
RIFO Rio Frio, Sara 14.88 112 eP Pn 23 43 08.1 -0.1
ACOS Acosta 14.90 114 eP P 23 43 11.7 -2.4
MEXI Barrio Mexico 14.90 114 eP P 23 43 11.5 -2.7
BRDY Brady 14.90 356 Pn Pn 23 43 06.0 -2.4
TIBA Tibas 14.90 113 eP P 23 43 13.2 -1.1
ALPN Alpine 14.91 340 P Pn 23 43 08.3 -0.3
CENT San Jose 14.91 114 eP P 23 43 12.2 -2.0
LUJA Lujan 14.92 114 eP P 23 43 12.8 -1.6
LUPE Guadalupe 14.93 114 eP P 23 43 12.4 -2.0
AMPA Desamparados 14.94 114 eP P 23 43 12.3 -2.3
CORON Coronado 14.96 113 eP P 23 43 15.8 +0.9
TRT1 Tortuguero 14.97 111 eP Pn 23 43 07.8 -1.5
441A DeRidder 14.98 16 Pn 23 43 05.4 -4.0
CVIMO Finca Echandi 14.99 113 eP Pn 23 43 10.9 +1.1
TRIO Tres Rios 15.00 114 eP P 23 43 12.7 -2.6
OCM Ochomogo 15.03 114 eP Pn 23 43 11.2 +0.9
LCR2 La Lucha 2 15.06 114 Pn 23 43 10.9 +0.1
LCR2 IAmb IAmb 23 43 18.2
comp=Z,6µm,2.2s
LCR2 La Lucha 2 15.06 114 eP Pn 23 43 11.2 +0.4
TAGO Cartago 15.08 114 eP P 23 43 14.7 -1.5
RAZU San Marcos de 15.09 114 eP P 23 43 13.9 -2.4
VICA Volcano Irazu 15.10 113 eP Pn 23 43 09.9 +0.5
ICR3 Volcano Irazu 15.11 113 eP Pn 23 43 12.3 +0.7
VTRT Volcan Turrial 15.13 113 eP Pn 23 43 12.4 +0.6
REPA Paraso 15.14 114 eP P 23 43 15.6 -1.3
VTLA Turrialba Volc 15.15 113 eP Pn 23 43 13.6 +1.5
CVTR Volcan Turrial 15.15 113 eP Pn 23 43 13.6 +1.4
PCAYA Pacayas 15.15 113 eP P 23 43 15.3 -1.8
VTR0 Volcan Turrial 15.16 113 eP Pn 23 43 13.4 +1.2
CVTV Tajo 15.17 113 eP Pn 23 43 13.4 +1.1
VTLO VTLO 15.17 113 eP Pn 23 43 12.3 0.0
RIMA Rio Macho 15.18 114 Pn 23 43 13.1 +0.8
VTCV VTCV, Calle Va 15.20 113 eP Pn 23 43 13.5 +0.9
VINA Juan Vinas 15.22 113 eP P 23 43 15.3 -2.5
545A Edgard 15.24 25 Pn 23 43 10.5 -2.4
VERB Verbena 15.24 113 eP P 23 43 16.1 -2.0
RVLA Villa Bonita 15.27 112 eP P 23 43 16.0 -2.1
TURIB Turrialba 15.27 113 eP P 23 43 16.3 -2.0
RVSTA Santa Teresita 15.27 113 eP P 23 43 16.3 -2.0
LCOCO El Coco 15.31 112 eP P 23 43 17.2 -1.3
IRES Siquirres 15.35 112 eP Pn 23 43 16.0 +1.6
CDM Cerro de Muert 15.36 114 eP Pn 23 43 15.8 +0.9
SOR Soroa 15.45 63 Pn 23 43 10.5 -5.1
SOR Soroa 15.45 63 P Pn 23 43 10.5 -5.1
SOR Soroa 15.45 63 eP Pn 23 43 07.5 -8.2
ZELE Perez Zeledon 15.49 115 eP P 23 43 20.1 -0.6
PEZE Perez Zeledon, 15.51 115 Pn 23 43 16.2 -0.4
PEZE Perez Zeledon, 15.51 115 eP Pn 23 43 17.2 +0.6
MNHN Monahans 15.56 344 Pn 23 43 16.5 -0.6
WHTX Lake Whitney, 15.58 1 Pn 23 43 15.5 -1.8
WHTX Lake Whitney, 15.58 1 P Pn 23 43 16.2 -1.1
baz=181
WHTX S Sn 23 46 09.4 -0.3
baz=181
NATX Nacogdoches 15.63 10 Pn 23 43 14.7 -3.2
NATX Nacogdoches 15.63 10 P Pn 23 43 15.8 -2.2
baz=191,SNR=31
NATX S Sn 23 46 13.4 +2.6
baz=191
NATX Nacogdoches 15.63 10⇑ P Pn 23 43 14.8 -3.2
237A Washetta, Mont 15.70 7 P Pn 23 43 16.0 -2.9
VHRN Van Horn 15.76 337 Pn 23 43 19.3 -0.4
SGCY Sterling City 15.77 350 Pn 23 43 18.6 -1.3
EDPN Palmar Norte 15.90 116 eP P 23 43 27.7 +2.5
PECS Pecos 15.91 341 Pn 23 43 21.2 -0.4
BURE Buenos Aires 15.91 115 eP P 23 43 25.8 +0.5
FW13 Cleburne 15.94 2 Pn 23 43 18.7 -3.2
DRK0 Durika 15.95 114 P Pn 23 43 20.6 +1.8
DRK0 Durika 15.95 114 eP Pn 23 43 22.4 +0.1

EDBA Buenos Aires 15.97 115 eP P 23 43 26.0 +0.1
FW14 Alvarado 16.00 2 P Pn 23 43 20.9 -1.7
POTG Potrero Grande 16.16 115 eP Pn 23 43 25.0 +0.1
FSCY Frank Sound, G 16.21 77 Pn Pn 23 43 18.7 -6.8
FSCY Frank Sound, G 16.21 77 eP Pn 23 43 11.2 -14
JIME Puerto Jimenez 16.23 117 eP P 23 43 30.0 +1.2
PTJ1 Puerto Jimnez 16.25 117 eP P 23 43 31.5 +2.6
ABTX Abilene, Hawle 16.28 355 P Pn 23 43 25.2 -1.1
baz=173
ABTX S Sn 23 46 31.7 +4.9
baz=173
PRVC Isla de Provid 16.28 98 eP Pn 23 43 24.0 -2.4
PIRO Carate, Puerto 16.28 117 eP Pn 23 43 26.4 -0.1
EDAD Golfito 16.31 116 eP P 23 43 30.1 +0.4
FITO Golfito 16.33 116 eP P 23 43 30.2 +0.3
RGM0 Gandoca 16.36 112 Pn Pn 23 43 27.4 0.0
RGM0 Gandoca 16.36 112 eP Pn 23 43 25.8 -1.7
TREL Terrell 16.40 5 Pn 23 43 25.6 -2.2
TREL IAmb IAmb 23 43 35.1
comp=Z,9µm,2.0s
PLPT Palo Pinto 16.40 359 Pn 23 43 25.9 -1.9
PLPT IAmb IAmb 23 43 35.6
comp=Z,10µm,1.8s
CDITO Canoas 16.60 116 Pn 23 43 30.5 0.0
GUYB Guaymas 16.60 316 eP Pn 23 43 31.0 +0.7
BRU2 Volcan 16.65 115 Pn 23 43 30.3 -1.0
BRU2 Volcan 16.65 115 eP Pn 23 43 31.1 -0.1
SN05 Snyder 5 16.68 351 IAmb IAmb 23 43 37.8
comp=Z,10µm,2.8s
CGIG 16.71 328 eP P 23 43 33.2 -1.0
MNTX Cornudas Mount 16.72 337 P Pn 23 43 32.0 0.0
baz=153,SNR=106
MNTX S Sn 23 46 42.3 +4.9
baz=153
MNTX Cornudas Mount 16.72 337 ⇑P Pn 23 43 31.6 -0.4
MNTX Cornudas Mount 16.72 337 ⇑eP Pn 23 43 31.6 -0.3
CLNB Carlsbad 16.74 342 P 23 43 33.8 -0.7
GD2 Guadallupe Moun 16.83 341 Pn 23 43 33.2 -0.3
346A Big Creek Wild 16.84 26 Pn 23 43 30.0 -3.4
CLN7 Carlsbad 7 16.86 343 P Pn 23 43 34.7 +0.9
SN07 Snyder 07 16.89 351 P Pn 23 43 32.7 -1.4
SN07 IAmb IAmb 23 43 42.8
comp=Z,7µm,2.3s
Z35A Perchaven, San 16.92 2 P Pn 23 43 32.4 -2.1
CAMR Camarioca 16.95 64 P Pn 23 43 30.7 -4.1
CAMR IAmb IAmb 23 43 43.3
comp=Z,757nm,0.9s
CAMR Camarioca 16.95 64 eP Pn 23 43 29.3 -5.6
POST Post 16.96 350 P Pn 23 43 33.4 -1.6
POST IAmb IAmb 23 43 42.7
comp=Z,12µm,2.1s
APMT Aspermont 17.02 354 Pn 23 43 33.7 -2.0
Z38A Mt. Pleasant 17.05 8 Pn 23 43 32.6 -3.4
VBMS Vicksburg 17.17 22 P Pn 23 43 33.2 -4.4
VBMS IAmb IAmb 23 43 44.2
comp=Z,5µm,1.0s
VBMS Vicksburg 17.17 22 P Pn 23 43 35.2 -2.3
baz=204
VBMS S Sn 23 46 43.5 -4.8
baz=204
VBMS Vicksburg 17.17 22 ⇑P Pn 23 43 32.5 -5.1
SRIG Santa Rosalia 17.18 312 P 23 43 39.8 +0.5
SRIG Santa Rosalia 17.18 312 ⇑P Pn 23 43 38.0 +0.3
SRIG Santa Rosalia 17.18 312 eP P 23 43 39.0 -0.3
EPT El Paso 17.23 335 Pn 23 43 37.5 -0.9
143A Socs Landing, 17.32 19 Pn Pn 23 43 35.6 -3.8
WTFS Witchita Falls 17.35 358 Pn 23 43 38.5 -1.3
HSIG 17.40 319 P Pn 23 43 41.1 +0.6
HSIG 17.40 319 ⇑P P 23 43 41.8 +0.1
HSIG 17.40 319 ⇑eP P 23 43 41.8 +0.1
DKNS Dickens 17.46 352 Pn 23 43 38.9 -2.3
Z41A Richland Creek 17.46 14 P Pn 23 43 39.8 -1.4
LOOK Love County 17.58 2 Pn 23 43 41.5 -1.3
BRAL Brewton 17.78 32 Pn 23 43 41.3 -3.8
BRAL Brewton 17.78 32 P Pn 23 43 42.8 -2.4
baz=216,SNR=12
BRAL S Sn 23 46 57.6 -5.4
baz=216
BRAL Brewton 17.78 32 ⇑P Pn 23 43 41.0 -4.1
WLAR White Oak Lake 17.80 13 Pn 23 43 41.5 -3.9
MGV Manicaragua 17.88 69 eP Pn 23 43 43.0 -3.5
451A Vernon 18.05 36 Pn 23 43 45.4 -3.1
MSTX Muleshoe 18.08 347 P Pn 23 43 48.3 -0.6
baz=164
MSTX S Sn 23 47 12.5 +2.0
baz=164
146A Union 18.10 25 Pn 23 43 46.0 -3.1
319A Douglas 18.19 327 P Pn 23 43 50.0 -0.3
X37A Clayton 18.31 7 Pn 23 43 48.8 -2.8
X37A IAmb IAmb 23 44 00.6
comp=Z,8µm,1.9s
WMOK Wichita Mounta 18.33 358 Pn 23 43 49.4 -2.5
WMOK Wichita Mounta 18.33 358 P Pn 23 43 50.2 -1.7
baz=176
WMOK S Sn 23 47 13.9 -2.4
baz=176
WMOK Wichita Mounta 18.33 358 ⇑P Pn 23 43 49.9 -2.0
WMOK Wichita Mounta 18.33 358 P Pn 23 43 49.4 -2.5
WMOK pmax pmax
comp=Z,2µm,1.3s
CCAR Cane Creek 18.35 16 P P 23 43 49.0 -3.1
CCAR IAmb IAmb 23 43 58.6
comp=Z,3µm,1.0s
GMAL Guarumal, Vera 18.41 116 ⇑iP Pn 23 43 53.6 +0.7
GMAL Guarumal, Vera 18.41 116 eP Pn 23 43 54.5 +1.5
I20EC Galapagos 18.42 155 I I 01 30 50.0
baz=341,slow=319,SNR=1.6
121A Cookes Peak, D 18.43 333 P Pn 23 43 54.1 +0.9
baz=148,SNR=164
121A S S 23 47 27.4 +4.1
baz=148
121A Cookes Peak, D 18.43 333 ⇑eP Pn 23 43 54.4 +1.1
CAIB Caibarien 18.44 68 eP P 23 43 49.8 -3.4
061Z Ochoppi 18.47 56 P P 23 43 49.1 -4.4
061Z IAmb IAmb 23 44 02.5
comp=Z,8µm,2.0s
553A Crawfordville 18.51 40 P P 23 43 50.0 -3.9
PAYG Puerto Ayora 18.52 155 P Pn 23 43 56.0 +1.7
PAYG Puerto Ayora 18.52 155 ⇓P Pn 23 43 56.5 +2.2
PAYG Puerto Ayora 18.52 155 ⇓iP Pn 23 43 56.0 +1.7
MIAR Mount Ida 18.54 11 P P 23 43 51.2 -3.0
MIAR Mount Ida 18.54 11 P P 23 43 52.1 -2.1
baz=193
MIAR S S 23 47 23.6 -1.6
baz=193
MIAR Mount Ida 18.54 11 ⇑P P 23 43 51.5 -2.7
MIAR Mount Ida 18.54 11 P P 23 43 51.2 -3.0
MIAR pmax pmax
comp=Z,4µm,1.5s
X40A Basin Creek Fa 18.63 13 P P 23 43 50.9 -4.3
W35A Tecumseh 18.75 3 P 23 43 55.3 -1.2
W35A IAmb IAmb 23 44 04.8
comp=Z,4µm,1.1s
AMTX Amarillo 18.76 350 P P 23 43 56.2 -0.6
baz=168
AMTX S Sn 23 47 26.2 -0.8
baz=168
AMTX Amarillo 18.76 350 ⇑P P 23 43 56.0 -0.8
SMWD Samnorwood 18.80 354 P P 23 43 55.7 -1.4
PNME Penonome 18.87 112 eP Pn 23 44 00.3 +1.7
CACAO El Cacao, Vera 18.93 116 ⇑iP Pn 23 44 01.1 +1.8
Y45A Yeager Farm, C 19.01 22 IAmb IAmb 23 44 08.7
comp=Z,5µm,1.4s
BCIP Isla Barro Col 19.02 110 ⇑P Pn 23 44 00.3 -0.2
BCIP Isla Barro Col 19.02 110 ⇑iP P 23 43 59.8 +0.1
BCIP Isla Barro Col 19.02 110 eP Pn 23 44 00.2 -0.2
DUN6 Lazy B Ranch 19.05 330 IAmb IAmb 23 44 10.2
comp=Z,4µm,0.9s
BAHB Baha de los 19.09 314 ⇑eP Pn 23 44 02.2 +1.0
656A Willston 19.18 45 P P 23 43 57.2 -4.1
DWPF Disney Wildern 19.21 50 P P 23 43 58.3 -3.3
DWPF Disney Wildern 19.21 50 P P 23 43 59.2 -2.4
baz=236
DWPF S Sn 23 47 37.8 +0.1
baz=236
DWPF Disney Wildern 19.21 50 ⇑P P 23 43 58.2 -3.5
DWPF Disney Wildern 19.21 50 eP P 23 43 57.2 -4.5
AZU Azuero 19.23 114 ⇑iP Pn 23 44 04.2 +1.3
LRAL Lakeview Retre 19.33 29 P P 23 44 01.6 -1.3
baz=213
LRAL S Sn 23 47 36.6 -3.9
baz=213
LRAL Lakeview Retre 19.33 29 ⇑P P 23 44 00.9 -2.0

UPA Univ. de Panam 19.37 110 ⇑iP P 23 44 03.5 0.0
OK029 Liberty Lake 19.38 1 IAmb IAmb 23 44 12.4
comp=Z,7µm,1.8s
Y22D IRIS PASSCAL I 19.42 337 P Pn 23 44 05.5 +0.3
baz=152,SNR=20
Y22D S Sn 23 47 43.0 +0.1
baz=152
Y22F Passcal Instru 19.42 337 P Pn 23 44 05.4 +0.2
baz=152,SNR=20
Y22F S Sn 23 47 42.0 -0.9
baz=152
TUL3 Leonard 19.58 5 IAmb IAmb 23 44 12.6
comp=Z,3µm,1.1s
TUL3 Leonard 19.58 5 P P 23 44 03.7 -1.9
baz=185
TUL3 S S 23 47 43.2 -2.9
baz=185
OK052 Battle Ridge R 19.59 3 IAmb IAmb 23 44 13.6
comp=Z,3µm,1.1s
OK033 Mehan 19.64 2 IAmb IAmb 23 44 14.1
comp=Z,3µm,1.1s
OXF Oxford 19.64 21 IAmb IAmb 23 44 11.6
comp=Z,3µm,0.8s
OXF Oxford 19.64 21 P P 23 44 04.6 -1.7
baz=204
OXF S S 23 47 39.2 -8.1
baz=204
OXF Oxford 19.64 21 ⇑P P 23 44 04.5 -1.8
OXF Oxford 19.64 21 P P 23 44 04.5 -1.8
TUC Tucson 19.71 326 P Pn 23 44 08.6 -0.2
baz=140
TUC S Sn 23 47 50.7 +0.8
baz=140
TUC Tucson 19.71 326 ⇑P Pn 23 44 08.5 -0.2
TUC Tucson 19.71 326 ⇑eP Pn 23 44 08.6 -0.2
QUOK Quay 19.77 3 IAmb IAmb 23 44 14.8
comp=Z,3µm,1.3s
PILO Pilon 19.82 77 eP P 23 44 05.2 -3.2
TIGA Tifton 19.91 38 P P 23 44 07.2 -2.0
baz=224
TIGA S S 23 47 47.5 -5.2
baz=224
RLO Rose Lookout 19.91 7 IAmb IAmb 23 44 18.1
comp=Z,9µm,1.9s
U32A Winter Ranch, 19.98 357 IAmb IAmb 23 44 18.0
comp=Z,8µm,1.8s
OK048 Pawnee Station 20.01 2 IAmb IAmb 23 44 23.9
comp=Z,3µm,1.0s
ANMO Albuquerque 20.04 339 P P 23 44 11.7 +0.9
baz=154
ANMO S S 23 47 56.5 +0.8
baz=154
ANMO Albuquerque 20.04 339 ⇑P P 23 44 11.3 +0.4
ANMO Albuquerque 20.04 339 P P 23 44 11.4 +0.6
comp=Z,85nm,0.9s,baz=235,slow=10,SNR=96
ANMO LR LR 23 52 43.6
comp=Z,2016µm,20.3s,baz=248,slow=39
comp=Z,85nm,0.9s
ANMO Albuquerque 20.04 339 eP Pn 23 44 11.8 -0.8
OK038 West end E0370 20.06 358 IAmb IAmb 23 44 24.2
comp=Z,4µm,1.3s
OK038 IAMs_20 IAMs_20 23 52 30.8
comp=Z,1043µm,22.0s
OK051 E0350 and S346 20.10 3 IAmb IAmb 23 44 24.8
comp=Z,2µm,1.0s
OK051 IAMs_20 IAMs_20 23 52 56.9
comp=Z,1122µm,19.0s
LMGC Las Mercedes 20.21 76 eP P 23 44 11.1 -1.5
LMGC IAMs_20 IAMs_20 23 51 42.0
comp=N,745µm,19.3s
LMGC IAMs_20 IAMs_20 23 52 22.3
comp=E,551µm,18.7s
STH Stony Hill 20.25 82 iP P 23 44 13.6 +0.5
U38A Gravette 20.26 8 IAmb IAmb 23 44 24.3
comp=Z,4µm,1.8s
Y49A Blount Mountai 20.29 29 IAmb IAmb 23 44 23.2
comp=Z,5µm,1.7s
OK035 E0210 Rd and N 20.29 358 IAmb IAmb 23 44 26.6
comp=Z,7µm,1.7s
HOJ Hope 20.30 82 iP P 23 44 13.9 +0.3
BLOK Blackwell 20.34 2 IAmb IAmb 23 44 22.7
comp=Z,3µm,1.2s
OK032 Salt Plains WL 20.38 359 IAmb IAmb 23 44 23.1
comp=Z,3µm,1.1s
KAN14 Manchester OK 20.53 360 IAmb IAmb 23 44 32.2
comp=Z,5µm,1.7s
PLAL Pickwick Lake 20.55 24 IAmb IAmb 23 44 28.6
comp=Z,6µm,1.6s
KAN13 South Haven SW 20.59 1 IAmb IAmb 23 44 30.1
comp=Z,2µm,1.0s
214A Organ Pipe Nat 20.60 322 IAmb IAmb 23 44 28.6
comp=Z,6µm,1.9s
214A Organ Pipe Nat 20.60 322 P Pn 23 44 18.1 -1.0
baz=134,SNR=294
214A S Sn 23 48 09.5 -1.7
baz=134
214A Organ Pipe Nat 20.60 322 ⇑eP Pn 23 44 18.1 -1.0
KAN17 Caldwell West 20.62 0 IAmb IAmb 23 44 25.6
comp=Z,6µm,1.8s
KAN05 Bluff City Nor 20.68 0 IAmb IAmb 23 44 31.1
comp=Z,2µm,1.1s
PIX Pinacate 20.72 320 IAmb IAmb 23 44 33.7
comp=Z,3µm,1.5s
KAN01 Argonia South 20.73 0 IAmb IAmb 23 44 31.6
comp=Z,2µm,1.0s
CHIV Chivirico 20.75 77 eP P 23 44 16.1 -2.4
KAN08 Anthony NE Sta 20.80 360 IAmb IAmb 23 44 32.4
comp=Z,3µm,1.5s
KAN06 Argonia West S 20.82 0 IAmb IAmb 23 44 33.3
comp=Z,2µm,0.9s
UPD2 Meteti 20.92 109 ⇑iP P 23 44 20.6 +0.3
X18A Snowflake 21.08 331 IAMs_20 IAMs_20 23 53 31.9
comp=Z,1402µm,19.0s
HLGC Holguin 21.20 74 eP P 23 44 18.2 -5.2
MARVS Santiago de Cu 21.24 77 eP P 23 44 22.1 -1.6
SFX San Felipe 21.27 316 IAmb IAmb 23 44 40.5
comp=Z,1µm,1.5s
SFX San Felipe 21.27 316 eP P 23 44 25.3 +1.3
PINC Pinares de May 21.40 76 eP P 23 44 21.1 -4.4
PBMO Poplar Bluff 21.41 17 IAmb IAmb 23 44 42.0
comp=Z,4µm,1.0s
GOGA Godfrey 21.42 35 IAmb IAmb 23 44 40.3
comp=Z,2µm,1.1s
GOGA Godfrey 21.42 35 P P 23 44 23.7 -1.9
baz=221
GOGA S S 23 48 22.8 -0.1
baz=221
GOGA Godfrey 21.42 35 ⇑P P 23 44 23.6 -2.1
GOGA Godfrey 21.42 35 ⇓P P 23 44 28.9 +3.2
RCC Rio Carpintero 21.43 77 eP P 23 44 24.4 -1.4
RCC IAMs_20 IAMs_20 23 52 54.9
comp=N,670µm,22.7s
RCC IAMs_20 IAMs_20 23 52 58.5
comp=E,476µm,18.1s
Y52A Lilburn 21.45 33 IAmb IAmb 23 44 40.7
comp=Z,3µm,1.1s
W18A Petrified Fore 21.47 333 P P 23 44 26.4 +0.1
W18A IAmb IAmb 23 44 42.1
comp=Z,2µm,1.4s
W18A Petrified Fore 21.47 333 P P 23 44 27.4 +1.1
baz=147,SNR=75
W18A S Sn 23 48 29.2 -3.2
baz=147
CAPC Capurgana 21.49 108 ⇑iP P 23 44 26.3 -0.2
T25A Trinidad 21.49 346 P P 23 44 26.9 +0.3
T25A IAmb IAmb 23 44 45.0
comp=Z,4µm,1.0s
T25A Trinidad 21.49 346 P P 23 44 27.2 +0.6
baz=162,SNR=560
T25A S Sn 23 48 33.6 +0.8
baz=162
X51A Calhoun 21.60 30 IAmb IAmb 23 44 42.4
comp=Z,4µm,1.2s
S39A Bolivar 21.65 10 IAmb IAmb 23 44 42.4
comp=Z,6µm,1.6s
WVT Waverly 21.66 23 IAmb IAmb 23 44 43.4
comp=Z,4µm,0.9s
WVT Waverly 21.66 23 P P 23 44 26.4 -1.7
baz=207
WVT S S 23 48 30.7 +3.2
baz=207
WVT Waverly 21.66 23 ⇑P P 23 44 25.8 -2.3
WVT Waverly 21.66 23 ⇓P P 23 44 30.4 +2.3
SPIG San Pedro Mart 21.68 316 eP P 23 44 29.9 +1.1
PTAC Punta Ardita, 21.70 113 ⇑iP P 23 44 28.7 0.0
X16A Lo Mia Camp, P 21.70 329 IAMs_20 IAMs_20 23 54 04.0
comp=Z,1261µm,18.0s

113A Mohawk Valley, 21.75 322 IAmb IAmb 23 44 45.6
comp=Z,4µm,1.5s
SABCS La Quijada 21.82 76 eP P 23 44 27.1 -3.0
257A Skidaway Islan 21.86 42 IAmb IAmb 23 44 49.3
comp=Z,5µm,1.2s
GTBY Guantanamo Bay 21.97 77 P P 23 44 29.6 -2.0
GTBY IAmb IAmb 23 44 39.4
comp=Z,2µm,1.1s
GTBY Guantanamo Bay 21.97 77 iP P 23 44 30.6 -1.0
GTBY Guantanamo Bay 21.97 77 ⇑P P 23 44 30.2 -1.4
GTBY Guantanamo Bay 21.97 77 eP P 23 44 29.8 -1.8
GTBY Guantanamo Bay 21.97 77 ⇑iP P 23 44 29.1 -2.5
R32A Long Quarter, 22.00 358 IAmb IAmb 23 44 51.0
comp=Z,2µm,0.9s
NMDO Nuevo Mundo 22.16 76 eP P 23 44 31.7 -2.0
Y14A Wickenburg 22.16 325 IAmb IAmb 23 44 49.1
comp=Z,4µm,1.4s
SDCO Great Sand Dun 22.34 344 IAmb IAmb 23 44 50.1
comp=Z,4µm,1.4s
SDCO Great Sand Dun 22.34 344 P P 23 44 35.8 0.0
baz=160,SNR=272
SDCO S S 23 48 46.7 +5.6
baz=160
SDCO Great Sand Dun 22.34 344 ⇑P P 23 44 35.6 -0.1
MBIG Mexicali 22.38 319 eP P 23 44 36.8 +0.9
MBIG ⇑eP pP 23 44 37.0 -3.6
CCM Cathedral Cave 22.41 14 IAmb IAmb 23 44 56.4
comp=Z,2µm,0.8s
CCM Cathedral Cave 22.41 14 P P 23 44 34.6 -1.6
baz=196
CCM S S 23 48 46.0 +4.2
baz=196
CCM Cathedral Cave 22.41 14 ⇑P P 23 44 33.7 -2.5
CCM Cathedral Cave 22.41 14 ⇓P P 23 44 40.2 +4.0
CCM Cathedral Cave 22.41 14 P P 23 44 33.9 -2.3
CCM pmax pmax
comp=Z,3µm,0.9s
R40A Maddies Statio 22.42 12 IAmb IAmb 23 44 44.2
comp=Z,3µm,1.1s
CBKS Cedar Bluff 22.44 356 P P 23 44 35.5 -1.1
baz=175,SNR=81
CBKS S S 23 48 44.2 +1.8
baz=175
CBKS Cedar Bluff 22.44 356 ⇑P P 23 44 34.7 -1.9
CPBX Cerro Prieto 22.45 319 P P 23 44 37.1 +0.4
CPBX IAmb IAmb 23 44 57.5
comp=Z,7µm,2.3s
SOLC Bahia Solano 22.47 114 eP P 23 44 42.6 +5.6
APAC Apartado, Choc 22.48 109 ⇑iP P 23 44 38.5 +1.4
CPCT Cooper Cave 22.48 30 IAmb IAmb 23 44 55.7
comp=Z,3µm,1.0s
FVM French Village 22.55 16 IAmb IAmb 23 44 57.5
comp=Z,2µm,1.2s
WUAZ Wupatki 22.55 330 IAMs_20 IAMs_20 23 54 29.4
comp=Z,1121µm,18.0s
WUAZ Wupatki 22.55 330 P P 23 44 39.4 +1.4
baz=144,SNR=464
WUAZ S S 23 48 47.7 +2.9
baz=144
WUAZ Wupatki 22.55 330 ⇑P P 23 44 39.1 +1.2
ESJX Sierra Juarez 22.60 317 IAmb IAmb 23 44 57.8
comp=Z,3µm,1.8s
KSU1 Kansas State U 22.70 3 IAmb IAmb 23 44 52.3
comp=Z,2µm,0.9s
KSU1 IAMs_20 IAMs_20 23 54 27.6
comp=Z,1069µm,19.0s
KSU1 Kansas State U 22.70 3 P P 23 44 37.5 -1.8
baz=183
KSU1 S S 23 48 48.6 +1.5
baz=183
KSU1 Kansas State U 22.70 3 ⇑P P 23 44 36.6 -2.7
HODGE Hodges 22.70 35 IAmb IAmb 23 44 48.5
comp=Z,1µm,0.8s
S22A 4UR Ranch, Cre 22.72 341 IAmb IAmb 23 45 01.1
comp=Z,5µm,1.6s
S22A 4UR Ranch, Cre 22.72 341 P P 23 44 40.2 +0.4
baz=157,SNR=31
S22A S S 23 48 52.8 +4.8
baz=157
MVCO Mesa Verde 22.79 338 P P 23 44 40.7 +0.2
baz=152,SNR=401
MVCO S S 23 48 53.7 +4.5
baz=152
MVCO Mesa Verde 22.79 338 ⇑P P 23 44 40.4 -0.1
MVCO Mesa Verde 22.79 338 ⇑P P 23 44 40.5 0.0
MVCO Mesa Verde 22.79 338 ⇓P P 23 44 44.4 +3.8
V51A Loudon 22.85 29 IAmb IAmb 23 44 51.6
comp=Z,4µm,1.3s
BLYC Blythe 22.89 322 IAmb IAmb 23 45 01.6
comp=Z,6µm,2.0s
BLYC IAMs_20 IAMs_20 23 54 51.8
comp=Z,746µm,20.0s
BG3 Lake Jocassee 22.91 33 IAmb IAmb 23 44 56.3
comp=Z,2µm,1.0s
KSCO Kaye Shedlock' 22.95 351 P P 23 44 41.5 -0.6
baz=168,SNR=52
KSCO S S 23 48 57.8 +6.0
baz=168
YUH Yuha Desert 23.00 318 IAmb IAmb 23 44 55.3
comp=Z,5µm,1.9s
SJCC San Jacinto, C 23.05 103 ⇑iP P 23 44 42.1 -1.1
PDMCI Parker Dam, Lak 23.06 324 P P 23 44 44.5 +1.4
baz=136,SNR=146
PDMCI S S 23 48 58.4 +4.9
baz=136
SWSC Sam W. Stewart 23.11 319 P P 23 44 44.9 +1.3
baz=130,SNR=114
SWSC S Sn 23 49 04.1 -7.3
baz=130
IKP In-Ko-Pah, Jac 23.12 318 P P 23 44 44.8 +1.0
baz=129,SNR=90
IKP S S 23 49 02.2 +7.6
baz=129
PIZC Pizarro, Choco 23.13 117 ⇑iP P 23 44 45.6 +1.7
NHSC New Hope 23.14 41 P P 23 44 41.1 -2.8
NHSC New Hope 23.14 41 P P 23 44 41.8 -2.1
baz=228
NHSC S S 23 48 58.8 +4.0
baz=228
NHSC New Hope 23.14 41 ⇑P P 23 44 42.0 -1.9
DBBC Dabeiba 23.18 111 ⇑iP P 23 44 44.9 +0.4
CBX Cerro Bola 23.27 316 ⇑eP P 23 44 46.2 +0.9
JSC Jenkinsville 23.30 37 IAmb IAmb 23 44 57.1
comp=Z,3µm,1.4s
TJIG Tijuana 23.35 317 ⇑eP P 23 44 46.9 +0.8
BC3 Big Chuckawall 23.38 321 P P 23 44 47.2 +0.8
baz=132,SNR=356
BC3 S S 23 49 05.8 +6.8
baz=132
PAULI Pauline 23.38 35 IAmb IAmb 23 44 57.2
comp=Z,3µm,1.1s
TKX Tecate 23.39 317 IAmb IAmb 23 45 01.9
comp=Z,2µm,1.5s
Q24A Divide 23.41 346 P P 23 44 46.7 -0.2
baz=162
Q24A S S 23 49 05.8 +6.1
baz=162
MONP2 Monument Peak 23.48 318 P P 23 44 48.1 +0.6
baz=129,SNR=149
MONP2 S S 23 49 08.9 +8.2
baz=129
UREC San Jos de Ur 23.49 109 eP P 23 44 47.7 +0.1
V53A Saluda 23.50 32 IAmb IAmb 23 45 07.2
comp=Z,2µm,1.1s
GR1C Gorgona, Isla 23.53 122 eP P 23 44 49.8 +1.9
IRM Iron Mountain 23.54 322 P P 23 44 48.9 +1.0
baz=134,SNR=374
IRM S S 23 49 10.3 +8.9
baz=134
SMRC Santa Marta, M 23.58 100 ⇑iP P 23 44 47.7 -0.8
Y57A Sumter 23.63 39 IAmb IAmb 23 45 05.7
comp=Z,2µm,1.1s
T50A Nancy 23.63 27 IAmb IAmb 23 45 08.3
comp=Z,5µm,1.6s
MALC Bahia Malaga 23.65 119 eP P 23 44 52.5 +3.3
NEE2 Needles Airpor 23.67 324 P P 23 44 50.2 +1.0
baz=136,SNR=13
NEE2 S S 23 49 10.4 +7.0
baz=136
TUMC Tumaco 23.78 125 ⇑iP P 23 44 52.1 +1.7
TZTN Tazewell 23.83 30 P P 23 44 49.2 -1.4
baz=216
TZTN S S 23 49 10.1 +4.2
baz=216
TZTN Tazewell 23.83 30 ⇑P P 23 44 48.8 -1.9
TZTN Tazewell 23.83 30 ⇓P P 23 44 49.5 -1.2

TZTN Tazewell 23.83 30 ⇓P P 23 44 51.2 +0.5
CBOC Ciudad Bolivar 23.86 113 ⇑iP P 23 44 53.3 +1.9
KMSC Kings Mountain 23.89 35 IAmb IAmb 23 45 07.4
comp=Z,3μm,1.1s
KMSC Kings Mountain 23.89 35 P P 23 44 49.8 -1.5
baz=222
KMSC S S 23 49 10.6 +3.7
baz=222
OLIL Olney 23.91 19 IAmb IAmb 23 45 04.5
comp=Z,3μm,1.0s
109C Camp Elliot, M 23.92 317 P P 23 44 52.2 +0.7
baz=128,SNR=20
109C S S 23 49 13.0 +5.6
baz=128
ARGC Ariguani, Magd 23.93 103 ⇑iP P 23 44 52.2 +0.3
PMD Palm Desert 23.94 319 IAmb IAmb 23 45 12.7
comp=Z,3μm,1.9s
BELC Belle Mtn. Jos 23.94 321 P P 23 44 53.0 +1.1
baz=132,SNR=198
BELC S S 23 49 15.0 +7.0
baz=132
TPFO Pinon Flats 23.96 319 P P 23 44 53.3 +1.1
baz=130,SNR=125
TPFO S S 23 49 18.2 +10
baz=130
PFO Pinyon Flats O 23.97 319 P P 23 44 53.3 +1.1
baz=130,SNR=120
PFO S S 23 49 17.3 +8.8
baz=130
PFO Pinyon Flats O 23.97 319 *c*iP P 23 44 51.9 -0.3
PFO pmax pmax
comp=Z,5μm,2.7s
PFO MLR MLR
comp=Z,438μm,16.0s
PFO Pinyon Flats O 23.97 319 LR LR 23 55 34.7
comp=Z,248μm,19.9s,baz=134,slow=40
Y58A Scranton 23.99 40 P P 23 44 49.9 -2.3
WCI Wyandotte Cave 24.08 23 P P 23 44 51.8 -1.2
baz=208
WCI S S 23 49 13.7 +3.8
baz=208
WCI Wyandotte Cave 24.08 23 ⇑P P 23 44 51.3 -1.8
SMCO Snowmass 24.08 343 IAMs_20 IAMs_20 23 54 58.2
comp=Z,676μm,19.0s
SMCO Snowmass 24.08 343 ⇑P P 23 44 53.9 +0.4
PLMC San Jos del P 24.09 116 ⇑iP P 23 44 53.6 +0.3
HELC Santa Helena 24.14 112 ⇑iP P 23 44 55.2 +0.9
GMRC Granite Mounta 24.28 322 P P 23 44 56.1 +1.1
baz=134,SNR=146
GMRC S S 23 49 20.0 +6.5
baz=134
HMU Henry Mountain 24.29 335 P P 23 44 54.9 -0.5
ISCO Idaho Springs 24.31 346 P 23 44 54.8 -0.7
ISCO IAMs_20 IAMs_20 23 55 21.2
comp=Z,975μm,20.0s
ISCO Idaho Springs 24.31 346 P P 23 44 55.9 +0.4
baz=161,SNR=415
ISCO S S 23 49 18.3 +4.1
baz=161
ISCO Idaho Springs 24.31 346 ⇑P P 23 44 55.7 +0.2
ISCO Idaho Springs 24.31 346 P P 23 44 54.8 -0.7
ISCO MLR MLR
comp=Z,975μm,20.0s
MURC Murrieta 24.43 318 P P 23 44 57.8 +1.5
baz=129,SNR=86
MURC S S 23 49 22.5 +6.8
baz=129
KNB Kanab 24.45 330 IAMs_20 IAMs_20 23 55 10.4
comp=Z,663μm,20.0s
V12A Nelson 24.50 325 IAmb IAmb 23 45 15.2
comp=Z,3μm,1.9s
YOTC Yotoco, Valle 24.50 118 ⇑iP P 23 44 57.2 0.0
N35A Tabor 24.51 4 P P 23 44 55.2 -1.7
PAPH Port-au-Prince 24.54 81 P P 23 44 56.2 -1.3
PAPH Port-au-Prince 24.54 81 *e*P P 23 44 57.3 -0.1
PPLP Puerto Lpez 24.55 135 *e*P P 23 45 01.9 +4.3
ELS Elsinore Mount 24.61 318 IAmb IAmb 23 45 22.0
comp=Z,3μm,1.9s
X58A Rowland 24.63 39 P P 23 44 57.0 -1.1
JAMC Jamundi, Valle 24.64 120 ⇑iP P 23 44 58.8 +0.2
LCMT Little Creek M 24.65 330 IAMs_20 IAMs_20 23 55 23.8
comp=Z,828μm,19.0s
W57A Gilead 24.66 37 IAmb IAmb 23 45 15.2
comp=Z,3μm,1.2s
BBRC Big Bear Solar 24.68 320 P P 23 45 00.4 +1.5
baz=131,SNR=7.4
BBRC S S 23 49 26.8 +6.6
baz=131
S51A Beattyville 24.70 28 IAmb IAmb 23 45 18.2
comp=Z,2μm,1.0s
HEC Hector,Ludlow 24.71 322 P P 23 45 00.1 +1.2
baz=133,SNR=63
HEC S S 23 49 30.9 +11
baz=133
NIZA Niza - Manizal 24.72 115 *e*P P 23 45 04.6 +5.2
PAC1 Pacto, Paraso 24.73 128 ⇑iP P 23 44 59.5 +0.2
GUY2C Guyana, Caldas 24.73 114 ⇑iP P 23 45 01.5 +1.8
OGNE Ogallala 24.77 353 P P 23 44 59.5 +0.1
baz=170,SNR=95
OGNE S S 23 49 23.1 +2.0
baz=170
OGNE Ogallala 24.77 353 ⇑P P 23 45 00.8 +1.4
BRIGG Briggsdale 24.78 348 P P 23 44 59.7 +0.2
BRIGG IAMs_20 IAMs_20 23 56 08.7
comp=Z,785μm,20.0s
BBAC Balboa, Cauca 24.84 123 ⇑iP P 23 45 01.2 +0.8
RECRC Villamaria, Ca 24.87 115 *e*P P 23 45 05.5 +4.5
LL6C La Loma 6 Bece 24.89 102 ⇑iP P 23 45 00.7 +0.1
CRJC Cerrejon, Guaj 24.89 99 ⇑iP P 23 44 60.0 -0.8
TUQ Turquoise Moun 24.89 323 P P 23 45 01.8 +1.2
baz=134,SNR=492
TUQ S S 23 49 27.5 +4.2
baz=134
R50A Paris 24.91 26 IAmb IAmb 23 45 21.4
comp=Z,2μm,1.1s
SCI2 San Clemente I 24.93 315 P P 23 45 02.4 +1.6
baz=126,SNR=36
SCI2 S S 23 49 25.3 +1.5
baz=126
PTBC PUERTO BERRIO, 24.95 110 ⇑iP P 23 45 01.8 +0.5
Y60A Bolivia 24.97 42 P P 23 44 59.3 -1.8
BGNE Belgrade 24.98 360 P P 23 45 00.7 -0.4
baz=179,SNR=54
BGNE S S 23 49 28.6 +4.3
baz=179
MTPU Mount Pierson 24.99 333 IAmb IAmb 23 45 19.3
comp=Z,3μm,1.1s
MTPU IAMs_20 IAMs_20 23 54 29.3
comp=Z,1026μm,21.0s
CUSE Cuicocha Este 25.00 128 ⇑iP P 23 45 03.1 +1.1
OTAV Otavalo 25.00 128 P P 23 45 02.7 +0.6
OTAV IAmb IAmb 23 45 17.9
comp=Z,8μm,2.8s
OTAV Otavalo 25.00 128 ⇑P P 23 45 02.8 +0.7
OTAV Otavalo 25.00 128 P P 23 45 02.7 +0.6
OTAV pmax pmax
comp=Z,8μm,2.8s
OTAV MLR MLR
comp=Z,396μm,22.0s
OTAV Otavalo 25.00 128 *e*P P 23 45 03.4 +1.2
OTAV Otavalo 25.00 128 ⇑iP P 23 45 02.7 +0.6
POPC Popayan, Colom 25.01 121 ⇑iP P 23 45 02.8 +0.9
CMBC Cumbal 25.04 126 *e*P P 23 45 06.7 +4.2
ANIL Santa Ana 25.05 116 *e*P P 23 45 05.8 +3.4
CIS Catalina Islan 25.10 316 P P 23 45 02.5 +0.1
baz=127,SNR=51
CIS S S 23 49 30.7 +4.2
baz=127
PULU Pululahua 25.10 128 P P 23 45 06.5 +3.5
BFSC Mount Baldy Ra 25.13 319 P P 23 45 04.1 +1.3
baz=129,SNR=40
BFSC S S 23 49 33.8 +6.6
baz=129
RRX Edison Barstow 25.14 321 P P 23 45 03.8 +1.1
baz=132,SNR=14
RRX S S 23 49 32.8 +5.7
baz=132
TULM Tulcn-Chalpat 25.21 126 ⇑iP P 23 45 05.6 +1.6
FMP Fort Macarthur 25.21 317 P P 23 45 04.0 +0.7
baz=128
FMP S S 23 49 33.6 +5.5
baz=128
GCUF Volcan Galeras 25.24 124 ⇑iP P 23 45 05.7 +1.3
HDIL Hopedale 25.26 16 P P 23 45 02.6 -1.1
baz=199
HDIL S S 23 49 29.6 +0.8
baz=199
HDIL Hopedale 25.26 16 ⇑P P 23 45 02.3 -1.4
Q16A Castle Valley 25.30 335 IAmb IAmb 23 45 22.7
comp=Z,3μm,1.5s
GSC Goldstone, Bar 25.32 322 IAmb IAmb 23 45 23.5
comp=Z,2μm,1.6s
GSC Goldstone, Bar 25.32 322 P P 23 45 05.6 +1.2
baz=133,SNR=59
GSC S S 23 49 33.4 +3.4
baz=133
OCAC Ocana 25.34 106 ⇑iP P 23 45 04.8 0.0
O20A White River Ci 25.34 341 P P 23 45 05.5 +0.7
baz=156,SNR=172
O20A S S 23 49 39.7 +9.1
baz=156
CRUC La Cruz 25.35 123 *e*P P 23 45 07.9 +2.7
SHOC Shoshone, Teco 25.42 323 P P 23 45 06.5 +1.2
baz=134,SNR=11
SHOC S S 23 49 36.3 +4.7
baz=134
PASC Pasadena Art C 25.42 318 IAmb IAmb 23 45 31.7
comp=Z,2μm,1.6s
N23A Red Feather La 25.43 346 IAmb IAmb 23 45 27.3
comp=Z,1μm,1.1s
N23A Red Feather La 25.43 346 P P 23 45 05.8 +0.2
baz=161,SNR=343
N23A S S 23 49 40.2 +8.2
baz=161
ORTC Ortega, Tolima 25.48 117 ⇑iP P 23 45 07.0 +1.0
SDDR Presa de Saban 25.51 80 *i*P P 23 45 07.8 +1.6
SDDR Presa de Saban 25.51 80 ⇑P P 23 45 06.6 +0.3
SDDR Presa de Saban 25.51 80 *e*P P 23 45 06.0 -0.2
SDDR Presa de Saban 25.51 80 ⇑iP P 23 45 06.5 +0.3
BONI La Bonita 25.57 126 ⇑iP P 23 45 08.4 +1.3
DECC Green Verdugo 25.57 318 P P 23 45 07.5 +0.9
baz=128,SNR=21
DECC S S 23 49 38.8 +4.9
baz=128
TCRU Three Creeks R 25.58 333 IAmb IAmb 23 45 29.9
comp=Z,4μm,1.9s
TCRU IAMs_20 IAMs_20 23 54 47.8
comp=Z,939μm,22.0s
W59A Clinton 25.59 39 IAmb IAmb 23 45 23.0
comp=Z,2μm,1.4s
P17A Butcher Ranch, 25.61 337 IAmb IAmb 23 45 24.2
comp=Z,1μm,1.3s
TMUT Trail Mountain 25.64 336 IAmb IAmb 23 45 26.1
comp=Z,2μm,1.4s
SPBC San Pablo de B 25.68 112 ⇑iP P 23 45 08.8 +0.9
PHWY Pilot Hill 25.70 347 IAmb IAmb 23 45 29.7
comp=Z,2μm,1.4s
PHWY IAMs_20 IAMs_20 23 56 13.9
comp=Z,579μm,19.0s
SFIN Lafayette 25.73 19 IAmb IAmb 23 45 19.9
comp=Z,2μm,1.1s
SFIN Lafayette 25.73 19 P P 23 45 06.8 -1.1
baz=204
SFIN S S 23 49 41.6 +5.4
baz=204
SNCC San Nicolas Is 25.75 315 P P 23 45 09.3 +1.0
baz=125,SNR=12
SNCC S S 23 49 40.6 +3.8
baz=125
EDW2 Edwards Air Fo 25.76 320 P P 23 45 08.8 +0.5
baz=130,SNR=72
EDW2 S S 23 49 38.5 +1.5
baz=130
SCIA State Center 25.79 8 IAMs_20 IAMs_20 23 57 00.7
comp=Z,653μm,20.0s
SCIA State Center 25.79 8 P P 23 45 07.6 -1.0
baz=190
SCIA S S 23 49 41.6 +4.4
baz=190
SCIA State Center 25.79 8 ⇑P P 23 45 07.5 -1.0
P49A Miami Univ. Ec 25.82 24 P P 23 45 06.8 -2.0
baz=210
P49A S S 23 49 39.3 +1.6
baz=210
ROSC El Rosal 25.83 114 P P 23 45 11.7 +2.1
comp=Z,124nm,1.1s,baz=303,slow=9.4,SNR=24
ROSC El Rosal 25.83 114 ⇑iP P 23 45 12.3 +2.7
PRN Pahroc Range 25.86 327 IAmb IAmb 23 45 31.2
comp=Z,1μm,1.1s
PRN Pahroc Range 25.86 327 ⇑P P 23 45 08.5 -0.9
BLA Blacksburg 25.92 33 P P 23 45 08.9 -0.9
baz=221
BLA S S 23 49 37.0 -2.4
baz=221
BLA Blacksburg 25.92 33 ⇑P P 23 45 08.2 -1.6
BETC Betania 25.95 119 *e*P P 23 45 15.5 +5.2
LRMC Laurel Mtn Rad 25.96 321 P P 23 45 11.1 +0.8
baz=131,SNR=120
LRMC S S 23 49 45.2 +4.9
baz=131
CNNC Cliffs of the 25.97 40 IAmb IAmb 23 45 26.2
comp=Z,2μm,0.9s
CNNC Cliffs of the 25.97 40 P P 23 45 09.4 -0.9
baz=228
CNNC S S 23 49 37.3 -2.8
baz=228
CNNC Cliffs of the 25.97 40 ⇑P P 23 45 09.2 -1.1
OSI Osito Audit: C 26.05 318 P P 23 45 11.7 +0.7
baz=128,SNR=26
OSI S S 23 49 48.1 +6.5
baz=128
BARC Barichara 26.09 109 *e*P P 23 45 14.1 +2.4
FURC Furnace Creek, 26.16 324 P P 23 45 12.7 +0.8
baz=134,SNR=42
FURC S S 23 49 49.8 +6.7
baz=134
TPNV Topopah Spring 26.16 325 P P 23 45 13.4 +1.2
baz=136
GARC Garzon, Huila 26.18 120 ⇑iP P 23 45 12.9 +0.3
CVER Cruz Verde, Cu 26.20 114 ⇑iP P 23 45 15.4 +2.4
PAMC Pamplona, Colo 26.23 107 *e*P P 23 45 15.3 +2.0
MPMC Manual Prospec 26.24 322 P P 23 45 13.3 +0.4
baz=133,SNR=115
MPMC S S 23 49 45.7 +0.9
baz=133
COHC Cochancay 26.26 134 *e*P P 23 45 13.4 +0.4
L40A Anamosa 26.27 11 IAmb IAmb 23 45 31.6
comp=Z,2μm,1.0s
O48B Farmland 26.28 22 P P 23 45 11.2 -1.8
baz=208
O48B S S 23 49 48.5 +3.5
baz=208
FLOC Florencia 26.39 122 ⇑iP P 23 45 14.9 +0.6
T57A Hurt 26.39 35 IAmb IAmb 23 45 34.7
comp=Z,2μm,1.1s
S11A Rachel 26.41 327 IAMs_20 IAMs_20 23 56 48.8
comp=Z,1257μm,21.0s
ARVC Arvin 26.44 319 P P 23 45 15.9 +1.4
baz=129,SNR=27
ARVC S S 23 49 50.6 +3.0
baz=129
CHIC Chingaza 26.45 113 ⇑iP P 23 45 16.4 +1.2
RWWY Rawlins 26.49 344 IAMs_20 IAMs_20 23 56 32.7
comp=Z,1058μm,19.0s
ARNL Arenillas 26.50 137 P P 23 45 15.6 +0.3
ARNL IAmb IAmb 23 45 38.9
comp=Z,4μm,2.1s
BSUT Blindstream Ca 26.55 338 IAmb IAmb 23 45 38.8
comp=Z,1μm,1.1s
NLU North Lily Min 26.55 335 IAmb IAmb 23 45 32.1
comp=Z,3μm,1.7s
ISA Isabella, Lake 26.57 320 IAmb IAmb 23 45 34.7
comp=Z,2μm,1.8s
ISA Isabella, Lake 26.57 320 P P 23 45 16.8 +1.1
baz=130,SNR=55
ISA S S 23 49 55.6 +5.8
baz=130
SBC Santa Barbara 26.58 317 P P 23 45 16.6 +0.8
baz=126
SBC S S 23 49 57.9 +8.0
baz=126
VILC Villavicencio, 26.72 114 *e*P P 23 45 19.4 +2.0
SPR3 Spring Creek 3 26.75 331 IAmb IAmb 23 45 42.3
comp=Z,3μm,2.0s
SPR3 IAMs_20 IAMs_20 23 56 41.3
comp=Z,881μm,18.0s
U59A Littleton 26.78 38 IAmb IAmb 23 45 38.1
comp=Z,1μm,1.1s
GRAC Grapevine Rang 26.82 324 P P 23 45 18.4 +0.5
GRAC IAmb IAmb 23 45 37.9
comp=Z,3μm,1.6s
GRAC Grapevine Rang 26.82 324 P P 23 45 19.0 +1.0
baz=134
GRAC S S 23 50 00.7 +7.0
baz=134
CWC Cottonwood Cre 26.85 322 P P 23 45 19.2 +0.9
baz=132
CWC S S 23 49 59.0 +4.7
baz=132
R11B Troy Canyon, C 26.86 328 IAmb IAmb 23 45 37.9
comp=Z,2μm,1.8s
R11B Troy Canyon, C 26.86 328 P P 23 45 19.4 +0.9
baz=139,SNR=130
R11B S S 23 50 00.8 +6.3
baz=139
PKM Mcpherson Peak 26.92 317 P P 23 45 19.8 +0.7
baz=127,SNR=28
PKM S S 23 50 01.9 +6.3
baz=127
P52A Corning 26.98 28 P P 23 45 17.8 -1.6
baz=215
P52A S S 23 49 58.6 +2.5
baz=215
Q12A Willow Creek R 27.02 330 IAmb IAmb 23 45 39.1
comp=Z,1μm,1.3s
Q12A IAMs_20 IAMs_20 23 56 51.5
comp=Z,913μm,21.0s
DUG Dugway, Tooele 27.06 334 P P 23 45 21.1 +0.9
baz=146,SNR=214
DUG S S 23 50 01.4 +3.8
baz=146
DUG Dugway, Tooele 27.06 334 ⇑P P 23 45 20.9 +0.8
VES Vestal, Richgr 27.06 320 P P 23 45 21.1 +1.1
baz=130,SNR=24
VES S S 23 50 03.0 +5.7
baz=130
L44A Lake County Fo 27.14 16 P P 23 45 19.7 -1.0
baz=201
L44A S S 23 50 05.3 +6.8
baz=201
MCRA Macar, Loja 27.20 138 *e*P P 23 45 22.9 +1.3
N49A Columbus Grove 27.23 23 IAmb IAmb 23 45 47.6
comp=Z,3μm,1.8s
K22A Casper 27.23 346 IAmb IAmb 23 45 45.7
comp=Z,2μm,1.2s
K22A Casper 27.23 346 P P 23 45 21.9 +0.2
baz=161,SNR=93
K22A S S 23 50 04.4 +4.1
baz=161
JFWS Jewell Farm 27.28 12 IAmb IAmb 23 45 42.9
comp=Z,2μm,1.1s
JFWS Jewell Farm 27.28 12 IAMs_20 IAMs_20 23 57 49.1
comp=Z,989μm,21.0s
JFWS Jewell Farm 27.28 12 P P 23 45 20.9 -1.1
baz=196
JFWS S S 23 50 03.8 +3.1
baz=196
JFWS Jewell Farm 27.28 12 ⇑P P 23 45 20.6 -1.4
AUA1 Aruba 27.29 94 *e*P P 23 45 22.0 -0.3
TCUT Toone Canyon 27.30 337 IAmb IAmb 23 46 01.1
comp=Z,3μm,1.5s
SMMC Simmler 27.30 318 P P 23 45 23.3 +1.0
baz=127,SNR=10
SMMC S S 23 50 04.3 +3.0
baz=127
ECSD EROS Data Cent 27.32 2 IAmb IAmb 23 45 39.9
comp=Z,928nm,1.0s
ECSD IAMs_20 IAMs_20 23 57 11.0
comp=Z,827μm,20.0s
TIN Tinemaha, Big 27.36 323 P P 23 45 24.3 +1.4
baz=133
TIN S S 23 50 08.5 +6.2
baz=133
TAMC Tame, Arauca 27.41 108 ⇑iP P 23 45 24.2 +0.7
L46A Eue Claire 27.46 19 IAmb IAmb 23 45 36.5
comp=Z,3μm,1.3s
TPH Tonopah 27.51 326 IAmb IAmb 23 45 48.0
comp=Z,2μm,1.2s
VOG Valley Oaks Go 27.55 320 P P 23 45 25.9 +1.5
baz=130
VOG S S 23 50 07.4 +2.3
baz=130
SDV Santo Domingo 27.62 102 IAmb IAmb 23 45 35.2
comp=Z,893nm,0.8s
SDV Santo Domingo 27.62 102 LR LR 23 58 06.1
comp=Z,396μm,20.2s,baz=311,slow=41
SDV Santo Domingo 27.62 102 *e*P P 23 45 26.0 +0.4
SDV Santo Domingo 27.62 102 *i*P P 23 45 25.4 -0.2
BGU Big Grassy Mou 27.76 335 IAmb IAmb 23 45 46.7
comp=Z,3μm,2.0s
HWUT Hardware Ranch 27.78 338 ⇑P P 23 45 26.9 +0.2
R58B Mineral 27.84 35 IAmb IAmb 23 45 38.0
comp=Z,779nm,1.0s
I37A Lemond, Waseca 27.84 7 IAmb IAmb 23 45 41.7
comp=Z,2μm,1.1s
O53A New Philadelph 27.90 28 IAmb IAmb 23 45 49.4
comp=Z,1μm,1.2s
O53A New Philadelph 27.90 28 P P 23 45 26.0 -1.6
baz=216,SNR=41
O53A S S 23 50 15.6 +5.2
baz=216
PTLC Puerto Leguiza 27.90 123 ⇑iP P 23 45 30.2 +2.4
N51A Ashland 27.94 26 IAmb IAmb 23 45 48.1
comp=Z,2μm,1.3s
SUSD Miller 28.02 358 IAmb IAmb 23 45 47.8
comp=Z,1μm,1.3s
SUSD Miller 28.02 358 P P 23 45 28.2 -0.4
baz=177
SUSD S S 23 50 18.8 +6.5
baz=177
L48A N Adams 28.02 22 IAmb IAmb 23 45 47.9
comp=Z,1μm,0.8s
Q09A Carvers 28.05 327 IAMs_20 IAMs_20 23 57 28.2
comp=Z,687μm,20.0s
PTGC Puerto Gaitan, 28.06 113 ⇑iP P 23 45 29.2 0.0
MCWV Mont Chateau 28.07 31 P P 23 45 28.0 -1.1
baz=219,SNR=24
MCWV S S 23 50 17.1 +3.9
baz=219
MCWV Mont Chateau 28.07 31 ⇑P P 23 45 27.4 -1.7
M50A Fremont 28.08 24 IAmb IAmb 23 46 26.2
comp=Z,2μm,1.2s
MLAC Mammoth, Mammc 28.10 323 P P 23 45 31.0 +1.3
baz=133
MLAC S S 23 50 20.1 +5.8
baz=133
BW06 Boulder Array 28.15 342 P P 23 45 30.4 +0.3
baz=155,SNR=170
BW06 S S 23 50 17.7 +2.9
baz=155
BW06 Boulder Array 28.15 342 ⇑P P 23 45 29.8 -0.3
I40A Norwalk 28.15 11 IAmb IAmb 23 45 40.4
comp=Z,1μm,1.1s
PD31 Pinedale Array 28.15 342 IAmb IAmb 23 45 45.9
comp=Z,3μm,1.6s
PDAR Pinedale Array 28.15 342 P P 23 45 29.1 -1.0
comp=Z,22nm,0.8s,baz=138,slow=9.0,SNR=82
PDAR LR LR 23 58 05.9
comp=Z,940μm,20.2s,baz=166,slow=39
PDAR P3KPbc 00 17 47.8
comp=Z,0.3nm,0.9s,baz=335,slow=4.0,SNR=1.7
comp=Z,22nm,0.8s
RSSD Black Hills 28.17 351 IAmb IAmb 23 45 46.0
comp=Z,2μm,2.0s
RSSD Black Hills 28.17 351 P P 23 45 30.0 -0.1
baz=167
RSSD S S 23 50 16.5 +1.4
baz=167
RSSD Black Hills 28.17 351 ⇑P P 23 45 30.0 -0.1
O54A Avella 28.23 29 IAmb IAmb 23 46 20.6
comp=Z,1μm,1.1s
CBN Corbin Frederi 28.30 36 IAmb IAmb 23 45 46.4
comp=Z,2μm,1.4s
CBN IAMs_20 IAMs_20 23 58 51.8
comp=Z,620μm,21.0s
CBN Corbin Frederi 28.30 36 P P 23 45 30.4 -0.7
baz=225,SNR=21
CBN S S 23 50 19.0 +2.2
baz=225
CBN Corbin Frederi 28.30 36 ⇑P P 23 45 30.4 -0.7
NVAR Mina Array Bea 28.36 325 P P 23 45 33.3 +1.4
comp=Z,152nm,0.9s,baz=147,slow=9.5,SNR=151
NVAR LR LR 23 57 22.0
comp=Z,436μm,21.5s,baz=133,slow=37
NVAR P3KPbc 00 17 45.9
comp=Z,0.1nm,0.3s,baz=263,slow=3.5,SNR=1.8
PMPB Monarch Peak 28.37 319 IAmb IAmb 23 46 27.5
comp=Z,2μm,1.6s
I42A Draeger Farm, 28.50 14 IAmb IAmb 23 45 52.8
comp=Z,2μm,1.2s
N53A Lisbon 28.51 28 IAmb IAmb 23 45 50.3

	comp=Z,1µm,1.0s									
ELK	**Elko**	**28.57**	**332**		IAmb	IAmb	23 45 49.3			
	comp=Z,2µm,1.9s									
ELK					IAMs_20	IAMs_20	23 56 45.4			
	comp=Z,1011µm,21.0s									
ELK	**Elko**	**28.57**	**332**	⇑P		**P**	**23 45 34.5**	**+0.8**		
ELK	**Elko**	**28.57**	**332**	LR		LR	23 56 55.8			
	comp=Z,932µm,21.4s,baz=150,slow=36									
AAM	**Ann Arbor**	**28.62**	**22**	IAmb		IAmb	23 45 47.8			
	comp=Z,986nm,1.0s									
AAM	**Ann Arbor**	**28.62**	**22**	P		**P**	**23 45 32.7**	**-1.2**		
	baz=209,SNR=11									
AAM				S		**S**	**23 50 28.2**	**+6.4**		
	baz=209									
AAM	**Ann Arbor**	**28.62**	**22**	⇑P		**P**	**23 45 32.0**	**-1.9**		
AHID	**Auburn Hatcher**	**28.64**	**340**	IAmb		IAmb	23 45 53.9			
	comp=Z,3µm,1.9s									
AHID					IAMs_20	IAMs_20	23 57 57.0			
	comp=Z,758µm,19.0s									
AHID	**Auburn Hatcher**	**28.64**	**340**	⇑P		**P**	**23 45 34.3**	**-0.1**		
KVN	**Kaiserville**	**28.69**	**326**	IAMs_20		IAMs_20	23 57 58.7			
	comp=Z,648µm,19.0s									
P57A	**Homestead Farm**	**28.87**	**33**	IAmb		IAmb	23 46 33.8			
	comp=Z,2µm,1.6s									
M52A	**Chesterland**	**28.89**	**26**	IAmb		IAmb	23 45 55.3			
	comp=Z,2µm,1.3s									
J47A	**Sunmer**	**29.04**	**20**	IAmb		IAmb	23 45 57.2			
	comp=Z,2µm,1.4s									
M53A	**WI Miller and**	**29.10**	**27**	IAmb		IAmb	23 45 57.4			
	comp=Z,1µm,1.1s									
M53A	**WI Miller and**	**29.10**	**27**	P		**P**	**23 45 36.4**	**-1.8**		
	baz=216									
M53A				S		**S**	**23 50 33.3**	**+3.9**		
	baz=216									
SPMN	**Marine on St.**	**29.11**	**7**	P		**P**	**23 45 37.3**	**-0.9**		
	baz=190									
SPMN				S		**S**	**23 50 33.1**	**+3.6**		
	baz=190									
SAO	**San Andreas Ge**	**29.12**	**319**	⇑P		**P**	**23 45 38.9**	**+0.4**		
SNOW	**Snow King Moun**	**29.15**	**341**	IAMs_20		IAMs_20	23 59 11.2			
	comp=Z,787µm,19.0s									
LOHW	**Long Hollow**	**29.24**	**341**	IAMs_20		IAMs_20	23 58 30.6			
	comp=Z,1033µm,19.0s									
TPAW	**Teton Pass**	**29.24**	**340**	IAMs_20		IAMs_20	23 59 12.7			
	comp=Z,720µm,18.0s									
H43A	**Windswept, Lux**	**29.32**	**15**	IAmb		IAmb	23 45 53.3			
	comp=Z,1µm,1.1s									
FXWY	**Fox Creek**	**29.39**	**340**	IAmb		IAmb	23 46 02.4			
	comp=Z,3µm,1.9s									
FXWY					IAMs_20	IAMs_20	23 59 18.8			
	comp=Z,658µm,19.0s									
MOOW	**Moose Ponds**	**29.41**	**341**	IAmb		IAmb	23 45 57.3			
	comp=Z,3µm,1.8s									
MOOW					IAMs_20	IAMs_20	23 58 37.0			
	comp=Z,871µm,19.0s									
K50A	**Casco**	**29.41**	**23**	IAmb		IAmb	23 46 39.2			
	comp=Z,1µm,1.1s									
F33A	**5 Mile Ranch,**	**29.44**	**2**	IAmb		IAmb	23 46 43.8			
	comp=Z,909nm,1.3s									
CRPR	**Cabo Rojo, PR**	**29.47**	**82**	P		**P**	**23 45 39.2**	**-2.5**		
ALLY	**Alegheny Colle**	**29.50**	**28**	IAmb		IAmb	23 46 01.1			
	comp=Z,2µm,1.2s									
PNTR	**Pine Nut**	**29.54**	**324**	IAmb		IAmb	23 45 58.3			
	comp=Z,1µm,1.4s									
G40A	**Rib Lake**	**29.56**	**11**	IAmb		IAmb	23 46 01.9			
	comp=Z,2µm,1.3s									
IMW	**Indian Meadow**	**29.60**	**341**	IAmb		IAmb	23 46 04.8			
	comp=Z,1µm,1.6s									
IMW					IAMs_20	IAMs_20	23 58 43.1			
	comp=Z,783µm,19.0s									
F36A	**Milaca**	**29.66**	**6**	IAmb		IAmb	23 45 57.2			
	comp=Z,657nm,1.0s									
FLWY	**Flagg Ranch**	**29.69**	**341**	IAMs_20		IAMs_20	23 58 44.6			
	comp=Z,944µm,20.0s									
SSPA	**Standing Stone**	**29.79**	**32**	IAmb		IAmb	23 46 02.1			
	comp=Z,846nm,1.2s									
SSPA	**Standing Stone**	**29.79**	**32**	P		**P**	**23 45 43.0**	**-1.3**		
	baz=221									
SSPA				S		**S**	**23 50 37.3**	**-2.9**		
	baz=221									
SSPA	**Standing Stone**	**29.79**	**32**	⇑P		**P**	**23 45 43.1**	**-1.3**		
AOPR	**Arecibo Observ**	**29.80**	**82**	IAmb		IAmb	23 46 35.3			
	comp=Z,1µm,1.6s									
PAHR	**Pah Rah Range**	**29.86**	**325**	IAmb		IAmb	23 46 06.2			
	comp=Z,1µm,1.5s									
H17A	**Grant Village**	**29.94**	**342**	P		**P**	**23 45 46.6**	**+0.7**		
	baz=154,SNR=45									
H17A				S		**S**	**23 50 48.4**	**+5.4**		
	baz=154									
ERPA	**Erie**	**29.95**	**27**	IAmb		IAmb	23 46 48.4			
	comp=Z,852nm,1.0s									
ERPA	**Erie**	**29.95**	**27**	P		**P**	**23 45 44.5**	**-1.3**		
	baz=216									
ERPA				S		**S**	**23 50 44.7**	**+2.0**		
	baz=216									
ERPA	**Erie**	**29.95**	**27**	⇑P		**P**	**23 45 43.8**	**-1.9**		
OBIP	**Obispado Ponce**	**29.95**	**82**	IAmb		IAmb	23 46 02.5			
	comp=Z,1µm,1.9s									
CELP	**Cerrillos**	**29.98**	**82**	IAmb		IAmb	23 46 03.7			
	comp=Z,1µm,1.5s									
M55A	**Ridgway**	**29.99**	**30**	IAmb		IAmb	23 46 06.5			
	comp=Z,785nm,0.9s									
EMPR	**Esperanza - Ma**	**30.02**	**81**	P		**P**	**23 45 44.8**	**-1.8**		
EMPR				IAmb		IAmb	23 46 06.7			
	comp=Z,806nm,1.2s									
LKWY	**Lake**	**30.04**	**342**	⇑P		**P**	**23 45 48.1**	**+1.3**		
BAUV	**El Baul**	**30.05**	**101**	P		**P**	**23 45 46.1**	**-0.8**		
BAUV				IAmb		IAmb	23 45 55.3			
	comp=Z,2µm,1.1s									
MVL	**Millersville**	**30.13**	**34**	IAmb		IAmb	23 45 56.9			
	comp=Z,1µm,1.5s									
E28A	**Huff**	**30.23**	**356**	P		**P**	**23 45 47.7**	**-0.5**		
AFDM	**Forest Hills D**	**30.23**	**323**	P		**P**	**23 45 49.2**	**+0.9**		
RLMT	**Red Lodge**	**30.23**	**344**	P		**P**	**23 45 48.5**	**0.0**		
RLMT					IAMs_20	IAMs_20	23 59 13.9			
	comp=Z,699µm,20.0s									
RLMT	**Red Lodge**	**30.23**	**344**	P		**P**	**23 45 49.1**	**+0.6**		
	baz=157,SNR=107									
RLMT				S		**S**	**23 50 52.9**	**+5.3**		
	baz=157									
RLMT	**Red Lodge**	**30.23**	**344**	⇑P		**P**	**23 45 48.4**	**0.0**		
YNR	**Norris Junctio**	**30.26**	**342**	P		**P**	**23 45 46.3**	**-2.4**		
ATAH	**Atahualpa**	**30.30**	**139**	LR		LR	23 56 02.7			
	comp=Z,450µm,18.9s,baz=325,slow=33									
I49A	**Point Hope**	**30.34**	**22**	P		**P**	**23 45 50.5**	**+1.3**		
I49A				IAmb		IAmb	23 46 43.6			
	comp=Z,1µm,1.5s									
YHH	**Holmes Hill**	**30.38**	**342**	P		**P**	**23 45 50.5**	**+0.6**		
SJG	**San Juan**	**30.38**	**82**	P		**P**	**23 45 49.3**	**-0.5**		
SJG				IAmb		IAmb	23 45 58.4			
	comp=Z,524nm,0.8s									
SJG	**San Juan**	**30.38**	**82**	⇑P		**P**	**23 45 48.2**	**-1.6**		
SJG	**San Juan**	**30.38**	**82**	P		**P**	**23 45 49.3**	**-0.5**		
SJG				pmax		pmax				
	comp=Z,524nm,0.9s									
SJG				MLR		MLR				
	comp=Z,368µm,21.0s									
SJG	**San Juan**	**30.38**	**82**	LR		LR	23 57 46.9			
	comp=Z,211µm,21.3s,baz=286,slow=36									
SJG	**San Juan**	**30.38**	**82**	⇑*i*P		**P**	**23 45 48.0**	**-1.8**		
G45A	**Suttons Bay**	**30.41**	**17**	P		**P**	**23 45 49.9**	**+0.1**		
G45A				IAmb		IAmb	23 46 02.8			
	comp=Z,1µm,1.0s									
GCPR	**Guaynabo City**	**30.44**	**82**	P		**P**	**23 45 49.8**	**-0.5**		
F42A	**Maple Grove Fa**	**30.45**	**14**	P		**P**	**23 45 49.1**	**-1.0**		
F42A				IAmb		IAmb	23 46 10.8			
	comp=Z,2µm,1.2s									
WUPA	**West Chester U**	**30.49**	**35**	P		**P**	**23 45 50.0**	**-0.5**		
WUPA				IAmb		IAmb	23 46 05.6			
	comp=Z,1µm,2.0s									
GLMI	**Grayling**	**30.53**	**19**	P		**P**	**23 45 49.9**	**-0.9**		
GLMI				IAmb		IAmb	23 46 11.3			
	comp=Z,1µm,0.8s									
GLMI	**Grayling**	**30.53**	**19**	P		**P**	**23 45 49.2**	**-1.6**		
	baz=205									
GLMI				S		**S**	**23 50 56.0**	**+4.3**		
	baz=205									
GLMI	**Grayling**	**30.53**	**19**	⇑P		**P**	**23 45 49.1**	**-1.6**		
YHL	**Hebgen Lake**	**30.53**	**341**	IAmb		IAmb	23 46 11.8			
	comp=Z,3µm,1.7s									
HLID	**Hailey**	**30.54**	**336**	P		**P**	**23 45 52.3**	**+1.1**		
	baz=147,SNR=147									
HLID				S		**S**	**23 50 59.8**	**+7.5**		
	baz=147									
HLID	**Hailey**	**30.54**	**336**	⇑P		**P**	**23 45 51.5**	**+0.4**		
N58A	**Sunbury**	**30.54**	**33**	P		**P**	**23 45 49.8**	**-1.1**		
COWI	**Conover**	**30.56**	**12**	P		**P**	**23 45 50.3**	**-0.8**		
COWI				IAmb		IAmb	23 46 08.5			
	comp=Z,2µm,1.6s									
COWI				IAMs_20		IAMs_20	23 59 37.9			
	comp=Z,705µm,22.0s									
COWI	**Conover**	**30.56**	**12**	⇑P		**P**	**23 45 49.5**	**-1.6**		
HUMP	**Col San Antoni**	**30.67**	**82**	IAmb		IAmb	23 46 15.9			
	comp=Z,1µm,1.6s									
M57A	**Sunshine Farm,**	**30.69**	**32**	IAmb		IAmb	23 46 16.4			
	comp=Z,1µm,1.8s									
D32A	**Dogwood Acres,**	**30.71**	**1**	IAmb		IAmb	23 46 06.3			
	comp=Z,694nm,1.1s									
WVNY	**West Valley, N**	**30.80**	**29**	IAmb		IAmb	23 46 13.6			
	comp=Z,2µm,1.2s									
MCCM	**Marconi Confer**	**30.87**	**320**	⇑P		**P**	**23 45 54.0**	**+0.1**		
ORV	**Oroville**	**30.94**	**323**	IAmb		IAmb	23 46 10.4			
	comp=Z,2µm,1.9s									
MFID	**Camas Ranch**	**30.98**	**334**	IAMs_20		IAMs_20	23 59 14.3			
	comp=Z,668µm,20.0s									
LAO	**LASA Array**	**31.03**	**349**	IAmb		IAmb	23 46 15.2			
	comp=Z,2µm,1.6s									
LAO				IAMs_20		IAMs_20	23 59 38.9			
	comp=Z,613µm,20.0s									
LAO	**LASA Array**	**31.03**	**349**	P		**P**	**23 45 54.9**	**-0.5**		
	baz=164									
LAO				S		**S**	**23 51 04.6**	**+4.9**		
	baz=164									
LAO	**LASA Array**	**31.03**	**349**	⇑P		**P**	**23 45 54.6**	**-0.7**		
LUPA	**Lehigh Univers**	**31.08**	**34**	IAmb		IAmb	23 46 05.5			
	comp=Z,2µm,1.7s									
L56A	**Greenwood**	**31.08**	**30**	IAmb		IAmb	23 46 11.6			
	comp=Z,572nm,0.9s									
E43A	**Lone Tree Farm**	**31.30**	**15**	IAmb		IAmb	23 46 17.0			
	comp=Z,2µm,1.4s									
BOZ	**Bozeman (W)**	**31.34**	**341**	IAmb		IAmb	23 46 13.6			
	comp=Z,1µm,1.8s									
BOZ	**Bozeman (W)**	**31.34**	**341**	P		**P**	**23 45 59.6**	**+1.4**		
	baz=154,SNR=145									
BOZ				S		**S**	**23 51 08.7**	**+3.9**		
	baz=154									
BOZ	**Bozeman (W)**	**31.34**	**341**	⇑P		**P**	**23 45 58.6**	**+0.4**		
MDND	**Maddock**	**31.44**	**358**	P		**P**	**23 45 58.5**	**-0.4**		
	baz=176									
MDND				S		**S**	**23 51 08.9**	**+2.8**		
	baz=176									
MEDO	**Medina**	**31.46**	**28**	IAmb		IAmb	23 46 14.3			
	comp=Z,584nm,1.1s									
WVOR	**Wild Horse Val**	**31.48**	**330**	IAmb		IAmb	23 46 14.3			
	comp=Z,1µm,1.1s									
WVOR	**Wild Horse Val**	**31.48**	**330**	⇑P		**P**	**23 45 59.8**	**+0.4**		
J55A	**Hilton**	**31.83**	**28**	IAmb		IAmb	23 46 22.2			
	comp=Z,1µm,1.2s									
BINY	**Binghamton**	**31.91**	**32**	IAmb		IAmb	23 46 19.9			
	comp=Z,826nm,1.1s									
BINY					IAMs_20	IAMs_20	00 00 00.2			
	comp=Z,506µm,22.0s									
BINY	**Binghamton**	**31.91**	**32**	P		**P**	**23 46 02.2**	**-0.8**		
	baz=222									
BINY				S		**S**	**23 51 09.6**	**-3.8**		
	baz=222									
BINY	**Binghamton**	**31.91**	**32**	⇑P		**P**	**23 46 01.7**	**-1.4**		
AGMN	**Agassiz Nation**	**31.91**	**3**	IAMs_20		IAMs_20	00 00 01.3			
	comp=Z,730µm,18.0s									
AGMN	**Agassiz Nation**	**31.91**	**3**	P		**P**	**23 46 02.0**	**-0.9**		
	baz=183									
AGMN				S		**S**	**23 51 09.9**	**-3.4**		
	baz=183									
AGMN	**Agassiz Nation**	**31.91**	**3**	⇑P		**P**	**23 46 01.5**	**-1.4**		
EYMN	**Ely**	**31.95**	**8**	IAMs_20		IAMs_20	00 00 30.7			
	comp=Z,782µm,19.0s									
EYMN	**Ely**	**31.95**	**8**	P		**P**	**23 46 01.8**	**-1.5**		
	baz=191									
EYMN				S		**S**	**23 51 15.3**	**+1.3**		
	baz=191									
EYMN	**Ely**	**31.95**	**8**	⇑P		**P**	**23 46 01.6**	**-1.8**		
CPNY	**Central Park**	**31.99**	**36**	IAmb		IAmb	23 46 25.2			
	comp=Z,645nm,1.3s									
E46A	**Sault Ste Mari**	**32.01**	**18**	IAmb		IAmb	23 46 23.5			
	comp=Z,1µm,1.2s									
K57A	**Scipio Center**	**32.04**	**30**	IAmb		IAmb	23 46 26.0			
	comp=Z,1µm,1.2s									
TRNY	**Table Rock, Ra**	**32.09**	**35**	IAmb		IAmb	23 46 15.9			
	comp=Z,747nm,0.9s									
B35A	**Bob, Littlefor**	**32.11**	**5**	IAmb		IAmb	23 46 20.7			
	comp=Z,956nm,1.1s									
PAL	**Palisades**	**32.16**	**35**	IAmb		IAmb	23 46 21.6			
	comp=Z,896nm,1.1s									
PAL	**Palisades**	**32.16**	**35**	P		**P**	**23 46 04.6**	**-0.6**		
	baz=227,SNR=42									
PAL				S		**S**	**23 51 16.3**	**-1.1**		
	baz=227									
J56A	**Wolcott**	**32.29**	**29**	IAmb		IAmb	23 46 26.6			
	comp=Z,1µm,1.0s									
L59A	**Walton**	**32.38**	**33**	IAmb		IAmb	23 46 17.0			
	comp=Z,1µm,1.3s									
PLID	**Pearl Lake**	**32.44**	**336**	IAmb		IAmb	23 46 27.7			
	comp=Z,2µm,1.4s									
PLID					IAMs_20	IAMs_20	00 00 43.1			
	comp=Z,473µm,19.0s									
DGMT	**Dagmar**	**32.45**	**352**	IAmb		IAmb	23 46 22.1			
	comp=Z,886nm,1.1s									
DGMT	**Dagmar**	**32.45**	**352**	P		**P**	**23 46 08.1**	**+0.4**		
	baz=168,SNR=30									
DGMT				S		**S**	**23 51 24.0**	**+2.3**		
	baz=168									
DGMT	**Dagmar**	**32.45**	**352**	⇑P		**P**	**23 46 07.5**	**-0.3**		
SADO	**Sadowa**	**32.46**	**25**	IAmb		IAmb	23 46 19.7			
	comp=Z,1µm,1.5s									
SADO	**Sadowa**	**32.46**	**25**	⇑P		**P**	**23 46 05.3**	**-2.5**		
SADO	**Sadowa**	**32.46**	**25**	LR		LR	00 02 26.6			
	comp=Z,236µm,18.2s,baz=216,slow=43									
WSPT	**Westport, CT**	**32.60**	**36**	IAmb		IAmb	23 46 25.2			
	comp=Z,1µm,1.1s									
KMRM	**Mail Ridge**	**32.66**	**322**	IAMs_20		IAMs_20	23 59 01.3			
	comp=Z,505µm,19.0s									
BMO	**Blue Mountains**	**32.77**	**334**	IAMs_20		IAMs_20	00 00 19.9			
	comp=Z,522µm,22.0s									
BMO	**Blue Mountains**	**32.77**	**334**	⇑P		**P**	**23 46 10.1**	**-0.6**		
J57A	**Williamstown**	**32.80**	**30**	IAmb		IAmb	23 46 30.9			
	comp=Z,750nm,1.1s									
K05A	**Summer Lake**	**32.81**	**328**	IAmb		IAmb	23 46 37.7			
	comp=Z,1µm,1.5s									
DELO	**Deloro Mine**	**32.90**	**27**	IAmb		IAmb	23 46 28.3			
	comp=Z,637nm,1.0s									
YLE	**Yale**	**32.91**	**36**	IAmb		IAmb	23 46 32.9			
	comp=Z,926nm,1.0s									
YLE					IAMs_20	IAMs_20	00 01 20.4			
	comp=Z,418µm,20.0s									
PCRV	**Puerto La Cruz**	**32.95**	**97**	LR		LR	00 00 25.3			
	comp=Z,155µm,21.0s,slow=38									
EGMT	**Eagleton**	**33.06**	**345**	IAMs_20		IAMs_20	00 01 19.6			
	comp=Z,454µm,19.0s									
EGMT	**Eagleton**	**33.06**	**345**	P		**P**	**23 46 13.7**	**+0.6**		
	baz=158,SNR=75									
EGMT				S		**S**	**23 51 33.3**	**+2.0**		
	baz=158									
EGMT	**Eagleton**	**33.06**	**345**	⇑P		**P**	**23 46 13.2**	**0.0**		
YBH	**Yreka Blue Hor**	**33.08**	**325**	LR		LR	00 01 04.7			
	comp=Z,332µm,18.9s,baz=152,slow=39									
J58A	**Remsen**	**33.11**	**31**	IAmb		IAmb	23 46 38.1			
	comp=Z,1µm,1.7s									
I07A	**Izee**	**33.14**	**331**	IAMs_20		IAMs_20	00 01 27.5			
	comp=Z,492µm,18.0s									
SABA	**Saba**	**33.17**	**83**	IAmb		IAmb	23 46 31.8			
	comp=Z,1µm,1.2s									
K04D	**Chiloquin, OR**	**33.18**	**327**	IAMs_20		IAMs_20	00 01 42.3			
	comp=Z,828µm,18.0s									
L04D	**Klamath Falls**	**33.19**	**326**	IAmb		IAmb	23 46 28.8			
	comp=Z,983nm,1.3s									
L04D					IAMs_20	IAMs_20	00 01 35.8			
	comp=Z,555µm,18.0s									
JCC	**Jacoby Creek,**	**33.23**	**322**	IAMs_20		IAMs_20	23 59 42.5			
	comp=Z,435µm,19.0s									
SMRT	**St. Maarten**	**33.31**	**82**	IAmb		IAmb	23 46 38.3			
	comp=Z,952nm,1.2s									
J05D	**Fort Rock, OR**	**33.39**	**328**	IAmb		IAmb	23 46 31.0			
	comp=Z,1µm,1.9s									
KRPM	**Rodgers**	**33.44**	**323**	IAMs_20		IAMs_20	23 59 51.1			
	comp=Z,382µm,19.0s									
TRY	**Troy**	**33.48**	**33**	IAmb		IAmb	23 46 38.0			
	comp=Z,1µm,1.4s									
TRY					IAMs_20	IAMs_20	00 02 25.0			
	comp=Z,457µm,20.0s									
J59A	**Piesco**	**33.57**	**32**	IAmb		IAmb	23 46 42.3			
	comp=Z,1µm,1.6s									
PINE	**Pine Mountain**	**33.61**	**329**	IAMs_20		IAMs_20	00 01 13.2			
	comp=Z,753µm,20.0s									
F10A	**Beach Ranch, E**	**33.65**	**335**	IAmb		IAmb	23 46 46.2			
	comp=Z,828nm,1.1s									
F10A				IAMs_20		IAMs_20	00 00 50.4			
	comp=Z,476µm,21.0s									
F10A	**Beach Ranch, E**	**33.65**	**335**	⇑P		**P**	**23 46 18.2**	**-0.2**		
KSXB	**Camp Six Broad**	**33.80**	**324**	IAmb		IAmb	23 46 35.7			
	comp=Z,878nm,1.4s									
KSXB				IAMs_20		IAMs_20	00 01 38.2			
	comp=Z,538µm,22.0s									
HUMO	**Hull Mountain**	**33.81**	**326**	IAMs_20		IAMs_20	00 01 59.1			
	comp=Z,520µm,19.0s									
HUMO	**Hull Mountain**	**33.81**	**326**	⇑P		**P**	**23 46 19.0**	**-0.7**		
L02F	**Cave Junction**	**33.82**	**325**	IAMs_20		IAMs_20	00 01 09.6			
	comp=Z,500µm,20.0s									
L61B	**Northampton**	**33.82**	**35**	IAmb		IAmb	23 46 29.1			
	comp=Z,620nm,1.2s									
L61B				IAMs_20		IAMs_20	00 02 11.9			
	comp=Z,389µm,21.0s									
L61B	**Northampton**	**33.82**	**35**	P		**P**	**23 46 19.5**	**-0.3**		
	baz=227,SNR=49									
L61B				S		**S**	**23 51 38.2**	**-4.9**		
	baz=227									
G08A	**Pilot Rock**	**33.83**	**333**	IAmb		IAmb	23 46 35.4			
	comp=Z,718nm,1.3s									
ULM	**Lac du Bonnet**	**33.86**	**2**	P		**P**	**23 46 17.9**	**-2.1**		
ULM				IAmb		IAmb	23 46 39.2			
	comp=Z,652nm,1.1s									
ULM	**Lac du Bonnet**	**33.86**	**2**	⇑P		**P**	**23 46 17.9**	**-2.1**		
ULM	**Lac du Bonnet**	**33.86**	**2**	P		**P**	**23 46 17.9**	**-2.1**		
ULM				pmax		pmax				
	comp=Z,652nm,1.1s									
ULM	**Lac du Bonnet**	**33.86**	**2**	P		**P**	**23 46 18.1**	**-1.8**		
	comp=Z,177nm,1.3s,baz=186,slow=8.8,SNR=76									
ULM				LR		LR	00 01 11.6			
	comp=Z,453µm,21.4s,baz=184,slow=38									
	comp=Z,177nm,1.3s									
QUA2	**Belchertown**	**33.88**	**35**	IAmb		IAmb	23 46 36.6			
	comp=Z,1µm,1.0s									
ACCN	**Adirondack Com**	**33.94**	**32**	IAmb		IAmb	23 46 37.7			
	comp=Z,751nm,1.4s									
BBSR	**BB Station**	**34.04**	**56**	P		**P**	**23 46 21.5**	**-0.3**		
BBSR				IAmb		IAmb	23 46 30.4			
	comp=Z,904nm,1.1s									
BBSR	**BB Station**	**34.04**	**56**	IAMs_20		IAMs_20	00 00 26.8			
	comp=Z,696µm,20.0s									
BBSR	**BB Station**	**34.04**	**56**	⇑P		**P**	**23 46 21.4**	**-0.3**		
NCB	**Newcomb**	**34.08**	**31**	IAmb		IAmb	23 46 46.1			
	comp=Z,1µm,1.6s									
I05D	**Terrebonne, OR**	**34.21**	**330**	IAMs_20		IAMs_20	23 59 59.0			
	comp=Z,413µm,21.0s									
K62A	**Royalston**	**34.21**	**35**	IAmb		IAmb	23 46 45.7			
	comp=Z,622nm,1.1s									
K02D	**Willamette Mer**	**34.25**	**325**	IAmb		IAmb	23 46 38.4			
	comp=Z,1µm,1.8s									
K02D				IAMs_20		IAMs_20	00 02 07.0			
	comp=Z,561µm,18.0s									
DBO	**Dodson Butte**	**34.31**	**326**	IAMs_20		IAMs_20	00 01 56.4			
	comp=Z,584µm,20.0s									
WBO	**Williamsburg**	**34.34**	**29**	IAmb		IAmb	23 46 45.0			
	comp=Z,900nm,1.4s									
I04A	**Tendick Farm,**	**34.35**	**328**	IAmb		IAmb	23 46 43.9			
	comp=Z,724nm,1.1s									
LONY	**Lake Ozonia**	**34.38**	**30**	IAmb		IAmb	23 46 44.9			
	comp=Z,793nm,1.4s									
LONY					IAMs_20	IAMs_20	00 01 51.6			
	comp=Z,575µm,22.0s									
LONY	**Lake Ozonia**	**34.38**	**30**	P		**P**	**23 46 23.9**	**-0.7**		
	baz=222,SNR=41									
LONY				S		**S**	**23 51 51.4**	**-0.4**		
	baz=222									
LONY	**Lake Ozonia**	**34.38**	**30**	⇑P		**P**	**23 46 22.9**	**-1.7**		
M65A	**Busby, Falmout**	**34.39**	**38**	IAMs_20		IAMs_20	00 01 23.2			
	comp=Z,538µm,22.0s									
M65A	**Busby, Falmout**	**34.39**	**38**	P		**P**	**23 46 23.7**	**-1.0**		
	baz=231									
M65A				S		**S**	**23

COR	**Corvallis**	**35.36**	**328**	⇑P		**P**		**23 46 33.7**	**+0.6**
GRGR	**Grenville**	**35.38**	**92**	*i*P		**P**		**23 46 32.1**	**-1.5**
SVN	**Savane Anatole**	**35.41**	**87**	IAMs_20	IAMs_20	00 01 36.5			
	comp=Z,328µm,19.0s								
MXC	**Moxie City**	**35.42**	**333**	IAmb	IAmb	23 46 54.1			
	comp=Z,1µm,1.5s								
MXC				IAMs_20	IAMs_20	00 02 13.5			
	comp=Z,845µm,21.0s								
FDF	**Fort de France**	**35.44**	**87**	IAmb	IAmb	23 46 44.9			
	comp=Z,529nm,1.0s								
FDF				IAMs_20	IAMs_20	00 01 37.3			
	comp=Z,328µm,19.0s								
FDF	**Fort de France**	**35.44**	**87**	⇑P		**P**		**23 46 32.1**	**-2.0**
LBNH	**Lisbon**	**35.44**	**33**	IAmb	IAmb	23 46 46.3			
	comp=Z,1µm,1.4s								
LBNH				IAMs_20	IAMs_20	00 03 33.8			
	comp=Z,505µm,20.0s								
LBNH	**Lisbon**	**35.44**	**33**	P		**P**		**23 46 33.5**	**-0.3**
	baz=226,SNR=60								
LBNH				S		**S**		**23 52 08.7**	**+0.6**
	baz=226								
LBNH	**Lisbon**	**35.44**	**33**	⇑P		**P**		**23 46 32.9**	**-0.9**
I62A	**Tamworth**	**35.51**	**34**	IAmb	IAmb	23 46 55.8			
	comp=Z,1µm,1.1s								
NEW	**Newport**	**35.52**	**338**	P		**P**		**23 46 34.5**	**+0.1**
	baz=147,SNR=45								
NEW				S		**S**		**23 52 11.4**	**+2.1**
	baz=147								
NEW	**Newport**	**35.52**	**338**	⇑P		**P**		**23 46 33.6**	**-0.8**
NEW	**Newport**	**35.52**	**338**	LR	LR	00 02 01.8			
	comp=Z,357µm,20.1s,baz=148,slow=38								
BIM	**Bigot**	**35.54**	**88**	IAmb	IAmb	23 46 56.5			
	comp=Z,903nm,1.1s								
SVB	**Belmont**	**35.56**	**90**	P		**P**		**23 46 33.5**	**-1.6**
SVB				pP		**pP**		**23 46 40.2**	**0.0**
C09A	**Chrisman Ranch**	**35.56**	**336**	IAmb	IAmb	23 46 48.3			
	comp=Z,558nm,1.1s								
C09A				IAMs_20	IAMs_20	00 02 31.8			
	comp=Z,723µm,19.0s								
TRQ	**Mont Tremblant**	**35.59**	**28**	IAmb	IAmb	23 46 47.9			
	comp=Z,1µm,1.4s								
MPOM	**Morne Pois Mar**	**35.76**	**88**	IAMs_20	IAMs_20	00 01 46.6			
	comp=Z,369µm,19.0s								
G03D	**McMinnville, O**	**35.78**	**329**	P		**P**		**23 46 37.2**	**+0.6**
G03D						**sP**		**23 46 45.7**	**+2.0**
VLDQ	**Val d'Or**	**35.87**	**24**	IAmb	IAmb	23 46 46.9			
	comp=Z,1µm,2.0s								
F04A	**Amboy**	**35.90**	**330**	IAMs_20	IAMs_20	00 02 10.7			
	comp=Z,329µm,19.0s								
I63A	**Otisfield**	**36.03**	**34**	IAmb	IAmb	23 47 00.6			
	comp=Z,931nm,1.1s								
H62A	**Milan**	**36.07**	**33**	IAmb	IAmb	23 47 00.8			
	comp=Z,728nm,1.2s								
LTY	**Liberty**	**36.11**	**333**	IAMs_20	IAMs_20	00 02 34.5			
	comp=Z,491µm,21.0s								
LON	**Longmire**	**36.22**	**332**	IAmb	IAmb	23 46 55.5			
	comp=Z,901nm,1.4s								
LON				IAMs_20	IAMs_20	00 02 15.9			
	comp=Z,422µm,22.0s								
B08A	**Colville Reser**	**36.43**	**336**	IAMs_20	IAMs_20	00 02 54.6			
	comp=Z,402µm,18.0s								
F03A	**Seaside**	**36.44**	**329**	IAMs_20	IAMs_20	00 03 49.4			
	comp=Z,318µm,19.0s								
D05A	**Enumclaw**	**36.63**	**332**	IAmb	IAmb	23 46 59.8			
	comp=Z,964nm,1.1s								
D05A				IAMs_20	IAMs_20	00 03 02.7			
	comp=Z,784µm,21.0s								
E03A	**Lebam**	**36.89**	**330**	IAMs_20	IAMs_20	00 03 42.0			
	comp=Z,680µm,18.0s								
RADR	**Rader Ridge**	**36.91**	**330**	IAMs_20	IAMs_20	00 01 56.7			
	comp=Z,372µm,20.0s								
BBGH	**Gun Hill**	**37.20**	**90**	IAMs_20	IAMs_20	00 03 33.1			
	comp=Z,519µm,21.0s								
BBGH	**Gun Hill**	**37.20**	**90**	*e*P		**P**		**23 46 52.2**	**+3.1**
GNW	**Green Mountain**	**37.29**	**332**	IAmb	IAmb	23 47 08.6			
	comp=Z,949nm,1.3s								
GNW				IAMs_20	IAMs_20	00 03 49.2			
	comp=Z,339µm,18.0s								
PKME	**Peaks-Kenny Pk**	**37.52**	**34**	IAmb	IAmb	23 47 12.2			
	comp=Z,2µm,1.7s								
PKME				IAMs_20	IAMs_20	00 04 23.9			
	comp=Z,461µm,22.0s								
PKME	**Peaks-Kenny Pk**	**37.52**	**34**	P		**P**		**23 46 51.6**	**+0.2**
	baz=229,SNR=19								
PKME				S		S		23 52 49.7	+10
	baz=229								
PKME	**Peaks-Kenny Pk**	**37.52**	**34**	⇑P		**P**		**23 46 51.2**	**-0.3**
NLWA	**Neilton Lookou**	**37.64**	**331**	IAmb	IAmb	23 47 06.7			
	comp=Z,2µm,1.4s								
NLWA	**Neilton Lookou**	**37.64**	**331**	⇑P		**P**		**23 46 53.2**	**+0.7**
F63A	**Nahmakanta, Br**	**37.91**	**33**	IAmb	IAmb	23 47 15.4			
	comp=Z,1µm,1.4s								
EMMW	**East Machias**	**38.17**	**36**	IAmb	IAmb	23 47 13.8			
	comp=Z,881nm,1.1s								
EMMW				IAMs_20	IAMs_20	00 05 13.2			
	comp=Z,294µm,19.0s								
E62A	**Clayton Lake**	**38.30**	**32**	IAmb	IAmb	23 47 20.1			
	comp=Z,2µm,1.6s								
TEFE	**Tefe**	**38.37**	**118**	*e*P		**P**		**23 46 58.6**	**-0.4**
C03A	**Quillayute Air**	**38.37**	**331**	IAMs_20	IAMs_20	00 03 47.7			
	comp=Z,729µm,20.0s								
PGC	**Sidney**	**38.38**	**333**	P		**P**		**23 46 58.1**	**-0.5**
PGC						**sP**		**23 47 07.3**	**+1.5**
PGC				IAMs_20	IAMs_20	00 03 44.9			
	comp=Z,434µm,20.0s								
F64A	**Sherman**	**38.41**	**34**	IAmb	IAmb	23 47 20.5			
	comp=Z,1µm,1.2s								
G65A	**Princeton**	**38.42**	**35**	IAmb	IAmb	23 47 16.0			
	comp=Z,1µm,1.1s								
FFC	**Flin Flon**	**38.43**	**356**	P		**P**		**23 46 58.0**	**-1.0**
FFC				pP		**sP**		**23 47 06.7**	**+0.6**
LMQ	**La Malbaie**	**38.54**	**30**	P		**P**		**23 46 59.5**	**-0.6**
GGN	**Saint George**	**38.77**	**36**	IAmb	IAmb	23 47 18.8			
	comp=Z,890nm,1.2s								
CLRS	**Cowichan Lake**	**38.81**	**332**	IAmb	IAmb	23 47 22.3			
	comp=Z,2µm,1.8s								
CLRS				IAMs_20	IAMs_20	00 04 19.3			
	comp=Z,459µm,18.0s								
D62A	**Allapoint, All**	**38.85**	**32**	IAmb	IAmb	23 47 29.2			
	comp=Z,1µm,1.2s								
PQI	**Presque Isle**	**39.11**	**33**	IAmb	IAmb	23 47 26.5			
	comp=Z,2µm,1.7s								
BOAV	**Boa Vista**	**39.32**	**107**	*e*P		**P**		**23 47 06.2**	**-0.8**
BOAV	**Boa Vista**	**39.32**	**107**	⇑*i*P		**P**		**23 47 05.7**	**-1.3**
OZB	**Mount Ozzard**	**39.53**	**331**	IAmb	IAmb	23 47 23.5			
	comp=Z,3µm,1.9s								
CBB	**Campbell River**	**40.25**	**333**	P		**P**		**23 47 15.2**	**+1.0**
LMN	**Caledonia Moun**	**40.35**	**36**	P		**P**		**23 47 16.4**	**+1.1**
HAL	**Halifax**	**40.37**	**38**	P		**P**		**23 47 16.3**	**+1.0**
HAL	**Halifax**	**40.37**	**38**	P		**P**		**23 47 16.3**	**+1.0**
HAL				pmax	pmax				
	comp=Z,1µm,2.0s								
BATG	**Bathurst New B**	**40.53**	**34**	P		**P**		**23 47 16.0**	**-0.7**
ETMB	**Extrema**	**40.75**	**127**	IAmb	IAmb	23 47 31.2			
	comp=Z,1µm,1.2s								
ETMB	**Extrema**	**40.75**	**127**	*e*P		**P**		**23 47 18.1**	**-0.8**
MACA	**Manacapuru-AM**	**41.60**	**114**	P		**P**		**23 47 24.1**	**-1.7**
MACA				IAmb	IAmb	23 47 41.6			
	comp=Z,2µm,1.9s								
MACA	**Manacapuru-AM**	**41.60**	**114**	*e*P		**P**		**23 47 24.9**	**-0.9**
HOLB	**Holberg**	**41.93**	**331**	IAMs_20	IAMs_20	00 06 19.7			
	comp=Z,597µm,19.0s								
SAML	**Samuel**	**42.59**	**124**	P		**P**		**23 47 31.5**	**-2.5**
SAML	**Samuel**	**42.59**	**124**	⇑P		**P**		**23 47 31.3**	**-2.7**
SAML	**Samuel**	**42.59**	**124**	P		**P**		**23 47 32.6**	**-1.3**
SAML				pmax	pmax				
	comp=Z,272nm,1.2s								
SAML	**Samuel**	**42.59**	**124**	*e*P		**P**		**23 47 32.2**	**-1.8**
SAML	**Samuel**	**42.59**	**124**	⇑*i*P		**P**		**23 47 31.4**	**-2.5**
BBB	**Bella Bella**	**43.00**	**333**	IAMs_20	IAMs_20	00 05 47.8			
	comp=Z,312µm,19.0s								
BBB	**Bella Bella**	**43.00**	**333**	⇑P		**P**		**23 47 37.1**	**+0.4**
BBB	**Bella Bella**	**43.00**	**333**	LR	LR	00 05 58.4			
	comp=Z,296µm,19.9s,baz=144,slow=37								
SCHQ	**Schefferville**	**45.27**	**25**	IAmb	IAmb	23 48 14.7			
	comp=Z,652nm,0.9s								
SCHQ	**Schefferville**	**45.27**	**25**	P		**P**		**23 47 53.3**	**-1.6**
	comp=Z,73nm,0.7s,baz=227,slow=7.4,SNR=48								
SCHQ				S		**S**		**23 54 30.3**	**-4.2**
	comp=Z,24nm,1.1s,baz=81,slow=16,SNR=1.2								
SCHQ				LR	LR	00 10 58.2			
	comp=Z,280µm,19.0s,baz=220,slow=42								
	comp=Z,73nm,0.7s								
RUBB	**Prince Rupert**	**45.42**	**334**	IAMs_20	IAMs_20	00 08 16.6			
	comp=Z,289µm,19.0s								
GO01	**Chusmiza**	**45.59**	**141**	IAmb	IAmb	23 48 15.8			
	comp=Z,681nm,1.2s								
TA01	**Diego Aracena**	**45.69**	**142**	IAmb	IAmb	23 48 07.2			
	comp=Z,596nm,1.0s								
PATCX	**Punta Patache**	**45.91**	**143**	IAmb	IAmb	23 48 10.9			
	comp=Z,860nm,1.4s								
PB08	**IPOC Station P**	**45.98**	**141**	P		**P**		**23 48 00.0**	**-1.4**
DRLN	**Deer Lake**	**46.35**	**36**	IAmb	IAmb	23 48 38.6			
	comp=Z,770nm,1.4s								
DRLN	**Deer Lake**	**46.35**	**36**	⇑P		**P**		**23 48 02.7**	**-0.9**
U35K	**Hyder**	**46.44**	**336**	IAMs_20	IAMs_20	00 09 56.4			
	comp=Z,385µm,20.0s								
U35K	**Hyder**	**46.44**	**336**	P		**P**		**23 48 05.0**	**+0.9**
	baz=135								
U35K				S		**S**		**23 54 58.4**	**+7.1**
	baz=135								
PB02	**IPOC Station P**	**46.44**	**143**	IAmb	IAmb	23 48 15.4			
	comp=Z,466nm,0.8s								
PB01	**IPOC Station P**	**46.47**	**142**	IAmb	IAmb	23 48 19.4			
	comp=Z,695nm,1.4s								
ITTB	**Itaituba**	**46.52**	**113**	*e*P		**P**		**23 48 03.6**	**-1.8**
V35K	**Ketchikan**	**46.68**	**334**	IAMs_20	IAMs_20	00 08 32.9			
	comp=Z,281µm,20.0s								
V35K	**Ketchikan**	**46.68**	**334**	P		**P**		**23 48 07.6**	**+1.6**
	baz=132,SNR=18								
V35K				S		S		23 55 04.0	+9.3
	baz=132								
MALB	**Monte Alegre**	**46.75**	**109**	*e*P		**P**		**23 48 06.4**	**-0.8**
PB07	**IPOC Station P**	**46.77**	**143**	IAmb	IAmb	23 48 17.9			
	comp=Z,346nm,0.9s								
PB07	**IPOC Station P**	**46.77**	**143**	P		**P**		**23 48 09.7**	**+2.3**
PB09	**IPOC Station P**	**47.20**	**143**	IAmb	IAmb	23 48 21.7			
	comp=Z,577nm,1.0s								
T35M	**Bob Quinn**	**47.29**	**337**	IAMs_20	IAMs_20	00 10 35.7			
	comp=Z,362µm,21.0s								
T35M	**Bob Quinn**	**47.29**	**337**	P		**P**		**23 48 12.2**	**+1.4**
	baz=135,SNR=45								
T35M				S		**S**		**23 55 10.2**	**+6.6**
	baz=135								
VILB	**Vilhena**	**47.31**	**126**	P		**P**		**23 48 09.3**	**-2.2**
VILB	**Vilhena**	**47.31**	**126**	*e*P		**P**		**23 48 10.2**	**-1.3**
CRAG	**Craig**	**47.41**	**334**	IAMs_20	IAMs_20	00 09 40.4			
	comp=Z,277µm,20.0s								
CRAG	**Craig**	**47.41**	**334**	P		**P**		**23 48 13.1**	**+1.3**
CRAG	**Craig**	**47.41**	**334**	P		**P**		**23 48 12.8**	**+1.1**
	baz=131,SNR=19								
CRAG				S		**S**		**23 55 12.0**	**+6.8**
	baz=131								
CRAG	**Craig**	**47.41**	**334**	⇑P		**P**		**23 48 12.8**	**+1.1**
YKA	**Yellowknife Ar**	**47.56**	**350**	P		**P**		**23 48 11.2**	**-1.6**
YKA	**Yellowknife Ar**	**47.56**	**350**	P		**P**		**23 48 11.5**	**-1.4**
	comp=Z,27nm,0.8s,baz=157,slow=7.3,SNR=140								
YKA				LR	LR	00 10 19.4			
	comp=Z,413µm,18.2s,baz=162,slow=39								
	comp=Z,27nm,0.8s								
FLDN	**Fort Liard**	**47.58**	**343**	P		**P**		**23 48 13.0**	**0.0**
	baz=146								
FLDN				S		**S**		**23 55 10.7**	**+3.2**
	baz=146								
KOTAN	**Kotaneelee Air**	**47.65**	**343**	P		**P**		**23 48 14.1**	**+0.5**
	baz=145,SNR=10								
KOTAN				S		**S**		**23 55 10.5**	**+2.0**
	baz=145								
PB06	**IPOC Station P**	**47.71**	**144**	IAmb	IAmb	23 48 29.2			
	comp=Z,1µm,1.6s								
WRAK	**Wrangell Islan**	**47.73**	**335**	IAMs_20	IAMs_20	00 09 15.2			
	comp=Z,261µm,18.0s								
WRAK	**Wrangell Islan**	**47.73**	**335**	P		**P**		**23 48 15.1**	**+1.0**
	baz=132								
WRAK				S		**S**		**23 55 15.1**	**+5.5**
	baz=132								
U33K	**Whale Pass**	**47.84**	**334**	IAMs_20	IAMs_20	00 09 40.6			
	comp=Z,283µm,20.0s								
U33K	**Whale Pass**	**47.84**	**334**	P		**P**		**23 48 15.7**	**+0.6**
	baz=131								
U33K				S		**S**		**23 55 19.8**	**+8.5**
	baz=131								
LVC	**Limon Verde**	**48.02**	**143**	⇑P		**P**		**23 48 17.9**	**+0.6**
LVC	**Limon Verde**	**48.02**	**143**	*i*P		**P**		**23 48 19.4**	**+2.1**
LVC	**Limon Verde**	**48.02**	**143**	*e*P		**P**		**23 48 15.2**	**-2.1**
NPGB	**Novo Progresso**	**48.11**	**116**	*e*P		**P**		**23 48 15.8**	**-2.0**
PB15	**IPOC Station P**	**48.16**	**144**	IAmb	IAmb	23 48 33.1			
	comp=Z,1µm,1.9s								
MCPB	**Macapa, AP**	**48.18**	**106**	*e*P		**P**		**23 48 17.9**	**-0.5**
T33K	**Petersburg**	**48.24**	**335**	P		**P**		**23 48 19.5**	**+1.4**
	baz=132								
T33K				S		**S**		**23 55 25.1**	**+8.2**
	baz=132								
DLBC	**Dease Lake**	**48.27**	**338**	P		**P**		**23 48 20.3**	**+1.9**
	baz=136,SNR=95								
DLBC				S		S		23 55 28.2	+11
	baz=136								
DLBC	**Dease Lake**	**48.27**	**338**	LR	LR	00 10 25.2			
	comp=Z,933µm,18.4s,baz=131,slow=38								
S34M	**Telegraph Cree**	**48.29**	**337**	P		**P**		**23 48 20.0**	**+1.4**
	baz=135,SNR=35								
S34M				S		**S**		**23 55 26.2**	**+8.5**
	baz=135								
SIV	**San Ignacio**	**48.52**	**130**	LR	LR	00 08 16.0			
	comp=Z,265µm,19.0s,baz=331,slow=36								
TAOE	**Nuku Hiva Isla**	**48.71**	**242**	P		**P**		**23 48 26.4**	**+3.9**
TAOE	**Nuku Hiva Isla**	**48.71**	**242**	P		**P**		23 48 27.8	+5.3
PB14	**IPOC Station P**	**48.78**	**146**	P		**P**		**23 48 25.6**	**+2.5**
WTLY	**Watson Lake, Y**	**49.09**	**340**	P		**P**		**23 48 26.1**	**+1.4**
	baz=139,SNR=21								
WTLY				S		**S**		**23 55 33.7**	**+4.7**
	baz=139								
R33M	**Jennings River**	**49.30**	**338**	P		**P**		**23 48 27.8**	**+1.4**
	baz=136								
R33M				S		**S**		**23 55 38.3**	**+6.2**
	baz=136								
PDRB	**Porto dos Gac**	**49.32**	**122**	*e*P		**P**		**23 48 24.5**	**-2.5**
S32K	**Killisnoo**	**49.34**	**335**	IAMs_20	IAMs_20	00 11 26.1			
	comp=Z,282µm,18.0s								
S32K	**Killisnoo**	**49.34**	**335**	P		**P**		**23 48 27.4**	**+0.8**
	baz=130								
S32K				S		**S**		**23 55 38.8**	**+6.4**
	baz=130								
SIT	**Sitka**	**49.38**	**334**	IAMs_20	IAMs_20	00 10 37.4			
	comp=Z,346µm,21.0s								
SIT	**Sitka**	**49.38**	**334**	P		**P**		**23 48 29.1**	**+2.2**
SIT	**Sitka**	**49.38**	**334**	P		**P**		**23 48 27.9**	**+1.0**
	baz=129								
SIT				S		**S**		**23 55 39.1**	**+6.2**
	baz=129								
Q32M	**Nakina River**	**49.46**	**337**	P		**P**		**23 48 28.9**	**+1.1**
	baz=134								
Q32M				S		**S**		**23 55 41.1**	**+6.6**
	baz=134								
BBSD	**Serra de San D**	**49.63**	**130**	*e*P		**P**		**23 48 27.5**	**-1.9**
PTLB	**Pontes e Lacer**	**49.64**	**128**	P		**P**		**23 48 27.7**	**-1.7**
PTLB				IAmb	IAmb	23 48 42.4			
	comp=Z,1µm,1.9s								
PTLB	**Pontes e Lacer**	**49.64**	**128**	*e*P		**P**		**23 48 27.8**	**-1.7**
GO02	**Mina Guanaco**	**49.65**	**146**	⇓P		**P**		**23 48 31.3**	**+1.6**
GO02	**Mina Guanaco**	**49.65**	**146**	*e*P		P		23 48 35.3	+5.6
CLDB	**Colider**	**49.69**	**120**	*e*P		**P**		**23 48 27.4**	**-2.5**
YJA	**Yavi**	**49.74**	**139**	*e*P		**P**		**23 48 31.5**	**+0.9**
JIS	**Juneau Island**	**49.80**	**336**	IAMs_20	IAMs_20	00 11 42.1			
	comp=Z,416µm,19.0s								
JIS	**Juneau Island**	**49.80**	**336**	P		**P**		**23 48 31.6**	**+1.6**
R32K	**Eaglecrest**	**49.85**	**336**	IAMs_20	IAMs_20	00 11 43.5			
	comp=Z,452µm,19.0s								
R32K	**Eaglecrest**	**49.85**	**336**	P		**P**		**23 48 31.9**	**+1.4**
	baz=131,SNR=12								
R32K				S		**S**		**23 55 47.1**	**+7.5**
	baz=131								
AC01	**Pan de Azucar**	**49.91**	**147**	P		**P**		**23 48 32.0**	**+0.6**
TGTN	**Hyland Airport**	**50.02**	**342**	P		**P**		**23 48 33.1**	**+1.4**
	baz=140,SNR=103								
TGTN				S		**S**		**23 55 47.4**	**+5.5**
	baz=140								
WRGLY	**Wrigley**	**50.08**	**345**	P		**P**		**23 48 31.9**	**-0.2**
WRGLY				IAmb	IAmb	23 48 46.7			
	comp=Z,1µm,1.3s								
WRGLY	**Wrigley**	**50.08**	**345**	P		**P**		**23 48 32.5**	**+0.4**
	baz=147,SNR=15								
WRGLY				S		**S**		**23 55 45.5**	**+2.9**
	baz=147								
S31K	**Pelican**	**50.34**	**335**	P		**P**		**23 48 35.1**	**+1.0**
S31K				IAmb	IAmb	23 48 49.8			
	comp=Z,960nm,1.8s								
S31K				IAMs_20	IAMs_20	00 11 18.6			
	comp=Z,311µm,20.0s								
S31K	**Pelican**	**50.34**	**335**	P		**P**		**23 48 35.0**	**+0.8**
	baz=129								
S31K				S		**S**		**23 55 53.1**	**+6.8**
	baz=129								
R31K	**City Hall, Gus**	**50.43**	**335**	P		**P**		**23 48 35.6**	**+0.8**
	baz=130								
R31K				S		**S**		**23 55 53.7**	**+6.2**
	baz=130								
P32M	**Atlin**	**50.43**	**337**	IAmb	IAmb	23 48 55.5			
	comp=Z,993nm,1.4s								
P32M	**Atlin**	**50.43**	**337**	P		**P**		**23 48 35.9**	**+1.0**
	baz=133,SNR=64								
P32M				S		**S**		**23 55 54.4**	**+6.7**
	baz=133								
P33M	**Teslin, Yukon**	**50.54**	**338**	IAmb	IAmb	23 48 51.4			
	comp=Z,1µm,1.6s								
P33M	**Teslin, Yukon**	**50.54**	**338**	P		**P**		**23 48 36.6**	**+0.9**
	baz=134,SNR=65								
P33M				S		**S**		**23 55 56.7**	**+7.4**
	baz=134								
SKAG	**Skagway**	**50.95**	**336**	IAmb	IAmb	23 48 54.4			
	comp=Z,665nm,1.4s								
SKAG	**Skagway**	**50.95**	**336**	P		**P**		**23 48 39.8**	**+1.0**
SKAG	**Skagway**	**50.95**	**336**	P		**P**		**23 48 40.2**	**+1.4**
	baz=131,SNR=28								
SKAG				S		S		23 56 04.4	+10
	baz=131								
SKAG	**Skagway**	**50.95**	**336**	⇑P		**P**		**23 48 39.6**	**+0.8**
AC02	**Maricunga**	**51.23**	**146**	*e*P		**P**		**23 48 44.6**	**+2.7**
GO03	**Copiap**	**51.27**	**148**	⇓P		**P**		**23 48 46.0**	**+4.4**
GO03	**Copiap**	**51.27**	**148**	*e*P		P		23 48 46.9	+5.2
N32M	**Quiet Lake**	**51.30**	**339**	P		**P**		**23 48 42.4**	**+0.9**
N32M						**sP**		**23 48 50.9**	**+2.2**
N32M				IAmb	IAmb	23 48 57.0			
	comp=Z,1µm,1.4s								
N32M	**Quiet Lake**	**51.30**	**339**	P		**P**		**23 48 42.4**	**+0.9**
	baz=134,SNR=74								
N32M				S		**S**		**23 56 08.3**	**+8.7**
	baz=134								
PLBC	**Pleasant Camp**	**51.35**	**336**	P		**P**		**23 48 43.1**	**+1.3**
	baz=130								
PLBC				S		**S**		**23 56 08.4**	**+8.1**
	baz=130								
FRB	**Frobisher Bay**	**51.49**	**16**	⇑P		**P**		**23 48 41.4**	**-1.3**
FRB	**Frobisher Bay**	**51.49**	**16**	LR	LR	00 12 27.2			
	comp=Z,260µm,20.8s,baz=200,slow=38								
WHY	**Whitehorse**	**51.59**	**338**	IAmb	IAmb	23 48 59.1			
	comp=Z,1µm,1.9s								
WHY	**Whitehorse**	**51.59**	**338**	P		**P**		**23 48 44.7**	**+1.0**
	baz=132,SNR=40								
WHY				S		**S**		**23 56 10.6**	**+6.7**
	baz=132								
SLA	**San Lorenzo**	**51.63**	**142**	*e*P		**P**		**23 48 45.5**	**+1.0**
MMPY	**Sheldon Lake,**	**51.77**	**341**	P		**P**		**23 48 46.2**	**+1.3**
	baz=137,SNR=155								
MMPY				S		**S**		**23 56 13.3**	**+7.2**
	baz=137								
P29M	**Windy Craggy**	**52.00**	**336**	P		**P**		**23 48 47.8**	**+1.1**
P29M				pP		**sP**		**23 48 56.6**	**+2.7**
P29M				IAmb	IAmb	23 49 10.7			
	comp=Z,1µm,1.6s								
P29M	**Windy Craggy**	**52.00**	**336**	P		**P**		**23 48 47.7**	**+1.1**
	baz=128								
P29M				S		**S**		**23 56 17.5**	**+8.1**
	baz=128								
P30M	**Million Dollar**	**52.01**	**336**	P		**P**		**23 48 47.5**	**+0.7**
	baz=130								
P30M				S		**S**		**23 56 17.5**	**+8.0**
	baz=130								
O30N	**Mendenhall**	**52.11**	**337**	IAmb	IAmb	23 49 03.3			
	comp=Z,1µm,1.4s								
O30N	**Mendenhall**	**52.11**	**337**	P		**P**		**23 48 48.6**	**+1.1**
	baz=131,SNR=62								
O30N				S		**S**		**23 56 17.5**	**+6.6**
	baz=131								
FARO	**Faro, Yukon**	**52.15**	**340**	IAMs_20	IAMs_20	00 12 39.6			
	comp=Z,316µm,18.0s								
FARO	**Faro, Yukon**	**52.15**	**340**	P		**P**		**23 48 48.3**	**+0.5**
	baz=135,SNR=51								
FARO				S		S		23 56 20.7	+9.3
	baz=135								
LCO	**Las Campanas**	**52.21**	**150**	P		**P**		**23 48 48.7**	**-0.2**
LCO	**Las Campanas**	**52.21**	**150**	⇑P		**P**		**23 48 49.7**	**+0.8**
LCO	**Las Campanas**	**52.21**	**150**	P		**P**		**23 48 48.7**	**-0.2**
LCO				pmax	pmax				
	comp=Z,356nm,1.2s								
FSA	**Cafayete**	**52.41**	**143**	*e*P		**P**		**23 48 51.1**	**+0.8**
M31M	**Drury Creek, Y**	**52.48**

	comp=Z,2µm,1.8s								
CTGM					IAMs_20	IAMs_20	00 14 18.5		
	comp=Z,387µm,19.0s								
CTG	**Chitna Glacier**	**54.24 336**		P	**P**		**23 49 04.5**	**+1.2**	
	baz=125,SNR=36								
CTG				S	**S**		**23 56 48.9**	**+8.9**	
	baz=125								
GRNC	**Granite Creek**	**54.27 335**		IAMs_20	IAMs_20		00 13 19.1		
	comp=Z,298µm,19.0s								
ACCO	**Cerro Coronel**	**54.31 149**	*e*	P	**P**		**23 49 05.6**	**+1.2**	
STCH	**Steam Cracks**	**54.32 282**			pP		23 49 10.3	+0.6	
L29M	**L29M**	**54.37 339**		IAmb	IAmb		23 49 19.6		
	comp=Z,787nm,1.2s								
L29M	**L29M**	**54.37 339**		P	**P**		**23 49 04.8**	**+0.7**	
	baz=130								
L29M				S	**S**		**23 56 49.7**	**+8.2**	
	baz=130								
YUK3	**Moose Creek**	**54.38 337**		P	**P**		**23 49 05.1**	**+0.7**	
	baz=127,SNR=55								
YUK3				S	**S**		**23 56 50.6**	**+8.6**	
	baz=127								
SNH	**Sunshine Point**	**54.40 334**		IAMs_20	IAMs_20		00 11 31.1		
	comp=Z,413µm,21.0s								
BARN	**Barnard Glacie**	**54.42 336**		IAmb	IAmb		23 49 32.6		
	comp=Z,1µm,1.7s								
BARN				IAMs_20	IAMs_20		00 14 25.1		
	comp=Z,377µm,19.0s								
ISLE	**Juniper Island**	**54.43 335**		IAmb	IAmb		23 49 20.4		
	comp=Z,945nm,1.4s								
ACLC	**CERRO LA CRUZ**	**54.45 147**	*e*	P	**P**		**23 49 06.1**	**+0.8**	
BDQN	**Bodoquena, MS**	**54.51 131**	*e*	P	**P**		**23 49 04.6**	**-1.1**	
MLH	**Mauna Loa**	**54.55 283**		P	**P**		**23 49 08.3**	**+1.9**	
BGLC	**Bering Glacier**	**54.55 334**		P	**P**		**23 49 06.1**	**+0.7**	
	baz=123								
BGLC				S	**S**		**23 56 51.3**	**+7.3**	
	baz=123								
WAX	**Waxell Ridge**	**54.56 335**		IAMs_20	IAMs_20		00 14 45.1		
	comp=Z,317µm,20.0s								
K29M	**Barlow Dome**	**54.65 340**		IAmb	IAmb		23 49 26.2		
	comp=Z,489nm,1.2s								
K29M				IAMs_20	IAMs_20		00 15 13.5		
	comp=Z,221µm,21.0s								
K29M	**Barlow Dome**	**54.65 340**		P	**P**		**23 49 07.1**	**+0.9**	
	baz=131								
K29M				S	**S**		**23 56 50.7**	**+5.3**	
	baz=131								
POHA	**Pohakuloa**	**54.66 283**		P	**P**		**23 49 09.8**	**+2.7**	
TGL	**Tana Glacier**	**54.72 335**		IAmb	IAmb		23 49 31.5		
	comp=Z,582nm,1.2s								
SUCK	**Suckling Hills**	**54.74 334**		IAMs_20	IAMs_20		00 12 05.0		
	comp=Z,318µm,20.0s								
MWH	**Moku'aweowe**	**54.75 283**			pP		23 49 14.6	+1.2	
J30M	**Hart River**	**54.75 341**		P	**P**		**23 49 07.1**	**+0.1**	
	baz=133								
J30M				S	**S**		**23 56 51.0**	**+4.1**	
	baz=133								
KHU	**Kahuku**	**54.80 282**			pP		23 49 14.7	+1.3	
CRQE	**Cirque**	**54.82 335**		P	**P**		**23 49 08.9**	**+1.3**	
	baz=123,SNR=30								
CRQE				S	**S**		**23 56 54.7**	**+6.8**	
	baz=123								
CRQM	**Cirque**	**54.85 335**		IAmb	IAmb		23 49 32.7		
	comp=Z,782nm,1.2s								
CRQM				IAMs_20	IAMs_20		00 14 51.1		
	comp=Z,367µm,21.0s								
VA06	**Catapilco**	**54.91 152**		IAmb	IAmb		23 49 22.4		
	comp=Z,662nm,1.5s								
BVCY	**Beaver Creek**	**54.92 337**		P	**P**		**23 49 08.8**	**+0.7**	
	baz=126,SNR=30								
BVCY				S	**S**		**23 56 55.3**	**+6.4**	
	baz=126								
KAIM	**Kayak Island**	**54.93 333**		P	**P**		**23 49 09.2**	**+1.0**	
	baz=121								
KAIM				S	**S**		**23 56 54.8**	**+5.7**	
	baz=121								
MCARA	**McCarthy VSAT**	**55.15 335**		IAMs_20	IAMs_20		00 14 50.6		
	comp=Z,306µm,20.0s								
MCARA	**McCarthy VSAT**	**55.15 335**		P	**P**		**23 49 11.1**	**+1.4**	
	baz=124,SNR=55								
MCARA				S	**S**		**23 56 57.0**	**+5.0**	
	baz=124								
AVFE	**Valle Fertil**	**55.17 148**	*e*	P	**P**		**23 49 11.0**	**+0.6**	
RTLS	**Leoncito**	**55.19 150**	*e*	P	**P**		**23 49 12.1**	**+1.4**	
RTLL	**Cerro Villicun**	**55.20 149**	*e*	P	**P**		**23 49 14.8**	**+4.3**	
I30M	**Mount Dempster**	**55.21 341**		IAmb	IAmb		23 49 33.6		
	comp=Z,566nm,1.1s								
I30M	**Mount Dempster**	**55.21 341**		P	**P**		**23 49 10.5**	**+0.2**	
	baz=133								
I30M				S	**S**		**23 56 55.7**	**+2.8**	
	baz=133								
HLK	**Haleakala**	**55.22 284**			pP		23 49 18.6	+2.1	
VRDI	**Verde Repeater**	**55.23 335**		IAmb	IAmb		23 49 44.6		
	comp=Z,580nm,1.4s								
VRDI				IAMs_20	IAMs_20		00 14 20.9		
	comp=Z,341µm,19.0s								
M27K	**Edge Creek, AK**	**55.26 337**		P	**P**		**23 49 11.6**	**+0.8**	
	baz=125,SNR=85								
M27K				S	**S**		**23 57 01.1**	**+7.4**	
	baz=125								
J29N	**Klondike Camp**	**55.28 340**		IAmb	IAmb		23 49 38.6		
	comp=Z,939nm,1.8s								
J29N				IAMs_20	IAMs_20		00 14 54.2		
	comp=Z,210µm,21.0s								
J29N	**Klondike Camp**	**55.28 340**		P	**P**		**23 49 11.3**	**+0.6**	
	baz=131,SNR=42								
J29N				S	**S**		**23 56 54.8**	**+1.0**	
	baz=131								
RAGM	**Ragged Mountai**	**55.28 334**		IAMs_20	IAMs_20		00 12 20.5		
	comp=Z,414µm,21.0s								
AQDB	**Aquidauana**	**55.30 130**		P	**P**		**23 49 08.5**	**-2.8**	
AQDB				IAmb	IAmb		23 49 24.4		
	comp=Z,2µm,2.2s								
AQDB	**Aquidauana**	**55.30 130**	*e*	P	**P**		**23 49 09.9**	**-1.5**	
ROC1	**El Roble**	**55.38 152**	*e*	P	**P**		**23 49 16.5**	**+4.4**	
VA03	**San Esteban**	**55.41 152**		IAmb	IAmb		23 49 22.6		
	comp=Z,1µm,1.4s								
VA03	**San Esteban**	**55.41 152**	*e*	P	**P**		**23 49 15.7**	**+3.6**	
DAWY	**Dawson**	**55.42 339**		IAMs_20	IAMs_20		00 14 52.1		
	comp=Z,361µm,19.0s								
DAWY	**Dawson**	**55.42 339**		P	**P**		**23 49 11.3**	**-0.4**	
	baz=129								
DAWY				S	**S**		**23 56 59.5**	**+3.9**	
	baz=129								
C36M	**Paulatuk**	**55.44 349**		IAMs_20	IAMs_20		00 15 34.5		
	comp=Z,265µm,20.0s								
C36M	**Paulatuk**	**55.44 349**		P	**P**		**23 49 10.8**	**-0.9**	
	baz=149								
C36M				S	**S**		**23 56 56.3**	**+0.8**	
	baz=149								
GLB	**Gilahina Butte**	**55.50 335**		IAMs_20	IAMs_20		00 13 01.8		
	comp=Z,371µm,22.0s								
AUSP	**Uspallata**	**55.50 151**	*e*	P	**P**		**23 49 14.7**	**+1.8**	
Q23K	**Middleton Isla**	**55.52 332**		P	**P**		**23 49 13.1**	**+0.7**	
	baz=119								
Q23K				S	**S**		**23 57 00.5**	**+3.6**	
	baz=119								
BMRM	**Bremner River**	**55.56 335**		P	**P**		**23 49 13.7**	**+0.9**	
	baz=122,SNR=45								
BMRM				S	**S**		**23 57 04.5**	**+6.9**	
	baz=122								
MT02	**Curacav**	**55.57 153**		IAmb	IAmb		23 49 23.6		
	comp=Z,1µm,1.7s								
BCAR	**Beaver Creek A**	**55.65 338**		P	**P**		**23 49 13.5**	**+0.2**	
L27K	**Beaver Creek,**	**55.66 338**		IAmb	IAmb		23 49 28.8		
	comp=Z,695nm,1.4s								
L27K	**Beaver Creek,**	**55.66 338**		P	**P**		**23 49 14.3**	**+0.8**	
	baz=126,SNR=89								
L27K				S	**S**		**23 57 05.8**	**+7.0**	
	baz=126								
PEL	**Peldehue**	**55.67 152**		IAmb	IAmb		23 49 25.3		
	comp=Z,549nm,1.4s								
PEL				IAMs_20	IAMs_20		00 07 52.3		
	comp=Z,272µm,19.0s								
PEL	**Peldehue**	**55.67 152**	⇓	P	**P**		**23 49 17.7**	**+3.8**	
PEL	**Peldehue**	**55.67 152**	*e*	P	**P**		**23 49 18.7**	**+4.8**	
M26K	**Nabesna, AK**	**55.72 336**		IAmb	IAmb		23 49 35.8		
	comp=Z,1µm,1.5s								
M26K	**Nabesna, AK**	**55.72 336**		P	**P**		**23 49 14.8**	**+0.9**	
	baz=124								
M26K				S	**S**		**23 57 06.3**	**+6.6**	
	baz=124								
G31M	**Satah River**	**55.81 344**		P	**P**		**23 49 14.3**	**-0.1**	
	baz=136								
G31M				S	**S**		**23 57 03.4**	**+2.8**	
	baz=136								
EYAK	**Cordova Ski Ar**	**55.82 334**		P	**P**		**23 49 15.9**	**+1.3**	
EYAK	**Cordova Ski Ar**	**55.82 334**		P	**P**		**23 49 16.0**	**+1.5**	
	baz=120,SNR=43								
EYAK				S	**S**		**23 57 06.4**	**+5.5**	
	baz=120								
N25K	**Chitina, Valde**	**55.90 335**		IAmb	IAmb		23 49 31.1		
	comp=Z,845nm,1.4s								
N25K				IAMs_20	IAMs_20		00 15 15.6		
	comp=Z,342µm,18.0s								
N25K	**Chitina, Valde**	**55.90 335**		P	**P**		**23 49 16.4**	**+1.1**	
	baz=122,SNR=89								
N25K				S	**S**		**23 57 09.2**	**+6.9**	
	baz=122								
ACHE	**Chepes**	**55.98 148**	*e*	P	**P**		**23 49 19.5**	**+3.2**	
TICA	**Tres Isletas**	**56.00 139**	*e*	P	**P**		**23 49 14.8**	**-1.5**	
ANTJ	**Antonio Joao (**	**56.03 132**	*e*	P	**P**		**23 49 15.2**	**-1.5**	
F31M	**Tsiigehtchic**	**56.05 344**		IAmb	IAmb		23 49 30.3		
	comp=Z,540nm,1.1s								
F31M	**Tsiigehtchic**	**56.05 344**		P	**P**		**23 49 16.1**	**0.0**	
	baz=137,SNR=18								
F31M				S	**S**		**23 57 07.6**	**+3.9**	
	baz=137								
ASAL	**Salagasta**	**56.06 150**	*e*	P	**P**		**23 49 17.9**	**+1.2**	
HIN	**Hinchinbrook I**	**56.07 333**		IAMs_20	IAMs_20		00 12 04.3		
	comp=Z,262µm,22.0s								
EPYK	**Eagle Plains**	**56.11 342**		IAmb	IAmb		23 49 52.7		
	comp=Z,1µm,1.9s								
EPYK	**Eagle Plains**	**56.11 342**		P	**P**		**23 49 16.4**	**-0.2**	
	baz=133,SNR=34								
EPYK				S	**S**		**23 57 08.1**	**+3.4**	
	baz=133								
L26K	**Log Cabin Wild**	**56.20 337**		P	**P**		**23 49 17.9**	**+0.6**	
	baz=124,SNR=43								
L26K				S	**S**		**23 57 12.7**	**+6.7**	
	baz=124								
FID	**Port Fidalgo**	**56.24 334**		IAmb	IAmb		23 49 45.3		
	comp=Z,1µm,1.2s								
FID				IAMs_20	IAMs_20		00 16 06.3		
	comp=Z,294µm,18.0s								
ESFA	**Espinillo Form**	**56.24 136**	*e*	P	**P**		**23 49 17.3**	**-0.8**	
P23K	**Montague Islan**	**56.27 333**		P	**P**		**23 49 18.6**	**+0.9**	
	baz=118,SNR=39								
P23K				S	**S**		**23 57 12.6**	**+5.7**	
	baz=118								
MENT	**Mentasta**	**56.29 337**		IAmb	IAmb		23 49 36.4		
	comp=Z,618nm,1.5s								
MENT	**Mentasta**	**56.29 337**		P	**P**		**23 49 18.8**	**+0.8**	
K27K	**Chicken**	**56.33 338**		IAmb	IAmb		23 49 33.8		
	comp=Z,1µm,1.2s								
K27K				IAMs_20	IAMs_20		00 16 22.2		
	comp=Z,294µm,19.0s								
K27K	**Chicken**	**56.33 338**		P	**P**		**23 49 18.8**	**+0.7**	
	baz=126								
K27K				S	**S**		**23 57 13.0**	**+5.4**	
	baz=126								
MT13	**San Alfonso**	**56.36 152**		IAmb	IAmb		23 49 33.6		
	comp=Z,2µm,1.7s								
KLU	**Klutina**	**56.38 335**		IAmb	IAmb		23 49 34.1		
	comp=Z,1µm,1.4s								
KLU				IAMs_20	IAMs_20		00 12 45.3		
	comp=Z,425µm,22.0s								
KLU	**Klutina**	**56.38 335**		P	**P**		**23 49 19.5**	**+0.8**	
	baz=121,SNR=96								
KLU				S	**S**		**23 57 13.3**	**+4.8**	
	baz=121								
G30M	**tAoh Zraii Nji**	**56.39 343**		P	**P**		**23 49 18.1**	**-0.5**	
	baz=134								
G30M				S	**S**		**23 57 11.6**	**+3.1**	
	baz=134								
EGAK	**Eagle**	**56.46 339**		IAmb	IAmb		23 49 33.4		
	comp=Z,685nm,1.4s								
EGAK	**Eagle**	**56.46 339**		P	**P**		**23 49 18.9**	**-0.2**	
	baz=128								
EGAK				S	**S**		**23 57 13.8**	**+4.4**	
	baz=128								
EGAK	**Eagle**	**56.46 339**	⇑	P	**P**		**23 49 18.5**	**-0.6**	
AAGR	**Agrelo**	**56.47 151**	*e*	P	P		23 49 24.6	+4.9	
LMEL	**Las Melosas**	**56.48 152**		IAmb	IAmb		23 49 36.4		
	comp=Z,522nm,1.4s								
I28M	**Miner Creek**	**56.48 340**		IAmb	IAmb		23 49 50.7		
	comp=Z,695nm,1.9s								
I28M	**Miner Creek**	**56.48 340**		P	**P**		**23 49 18.9**	**-0.4**	
	baz=129								
I28M				S	**S**		**23 57 11.6**	**+1.7**	
	baz=129								
H29M	**Whitestone**	**56.50 342**		IAmb	IAmb		23 49 37.9		
	comp=Z,622nm,1.4s								
H29M	**Whitestone**	**56.50 342**		P	**P**		**23 49 19.0**	**-0.3**	
	baz=131								
H29M				S	**S**		**23 57 13.9**	**+4.1**	
	baz=131								
HARP	**HAARP**	**56.55 336**		P	**P**		**23 49 20.6**	**+0.8**	
	baz=122,SNR=106								
HARP				S	**S**		**23 57 15.3**	**+4.6**	
	baz=122								
INK	**Inuvik**	**56.64 345**		IAmb	IAmb		23 49 38.5		
	comp=Z,544nm,1.1s								
INK	**Inuvik**	**56.64 345**		P	**P**		**23 49 20.0**	**-0.2**	
	baz=138								
INK				S	**S**		**23 57 12.6**	**+1.0**	
	baz=138								
INK	**Inuvik**	**56.64 345**	⇑	P	**P**		**23 49 18.7**	**-1.5**	
INK	**Inuvik**	**56.64 345**		LR	LR		00 16 38.1		
	comp=Z,429µm,18.9s,baz=134,slow=39								
VACA	**Villa Angela C**	**56.69 140**	*e*	P	**P**		**23 49 19.7**	**-1.5**	
F30M	**Barrier River**	**56.72 344**		P	**P**		**23 49 20.9**	**0.0**	
	baz=135								
F30M				S	**S**		**23 57 16.1**	**+3.5**	
	baz=135								
GO05	**Huala**	**56.73 155**	⇓	P	**P**		**23 49 21.7**	**+0.3**	
OPA	**Opana**	**56.76 285**			pP		23 49 28.3	+1.1	
RPRD	**Ribas do Rio P**	**56.79 129**	*e*	P	**P**		**23 49 20.8**	**-1.3**	
KIP	**Kipapa**	**56.79 285**		P	**P**		**23 49 25.2**	**+3.0**	
KIP	**Kipapa**	**56.79 285**	*ce*	P	**P**		**23 49 25.1**	**+3.0**	
KIP				pmax	pmax				
	comp=Z,606nm,1.7s								
M24K	**Tolsona, Glenn**	**56.80 335**		IAmb	IAmb		23 50 36.9		
	comp=Z,917nm,1.1s								
M24K				IAMs_20	IAMs_20		00 15 55.4		
	comp=Z,379µm,20.0s								
M24K	**Tolsona, Glenn**	**56.80 335**		P	**P**		**23 49 22.6**	**+1.0**	
	baz=121,SNR=52								
M24K				S	**S**		**23 57 19.3**	**+5.2**	
	baz=121								
IVI	**Ivigtut**	**56.97 26**		P	**P**		**23 49 22.3**	**-0.4**	
IVI				IAmb	IAmb		23 50 28.7		
	comp=Z,552nm,1.3s								
IVI	**Ivigtut**	**56.97 26**	⇑	P	**P**		**23 49 22.6**	**-0.1**	
IVI	**Ivigtut**	**56.97 26**	*i*	P	**P**		**23 49 22.0**	**-0.7**	
IVI				IAmb	IAmb		23 49 33.3		
	comp=Z,439nm,1.2s								
IVI				IVmBBB			23 49 34.4		
	comp=Z,22µm,5.4s								
IVI				*e*PP	**PP**		**23 51 27.0**	**-2.2**	
IVI				*e*PP	**PP**		**23 51 32.8**	**+3.6**	
PAX	**Paxson**	**56.98 336**		P	**P**		**23 49 23.2**	**+0.2**	
	baz=122,SNR=80								
PAX				S	**S**		**23 57 20.5**	**+4.0**	
	baz=122								
SCRK	**Sand Creek**	**56.98 338**		IAmb	IAmb		23 49 38.2		
	comp=Z,2µm,1.8s								
SCRK	**Sand Creek**	**56.98 338**		P	**P**		**23 49 23.8**	**+0.9**	
	baz=124,SNR=142								
SCRK				S	**S**		**23 57 24.2**	**+7.7**	
	baz=124								
BO02	**Sierra Bellavi**	**57.03 153**	⇓	P	**P**		**23 49 24.3**	**+0.7**	
I27K	**Kandik River**	**57.12 340**		P	**P**		**23 49 23.6**	**-0.3**	
	baz=128								
I27K				S	**S**		**23 57 20.4**	**+2.2**	
	baz=128								
J26L	**Joseph Creek**	**57.13 338**		P	**P**		**23 49 24.8**	**+0.9**	
	baz=125								
J26L				S	**S**		**23 57 24.5**	**+6.1**	
	baz=125								
SCM	**Sheep Creek Mo**	**57.13 335**		IAmb	IAmb		23 49 39.0		
	comp=Z,2µm,1.9s								
SCM				IAMs_20	IAMs_20		00 13 45.2		
	comp=Z,205µm,22.0s								
SCM	**Sheep Creek Mo**	**57.13 335**		P	**P**		**23 49 24.4**	**+0.4**	
	baz=119,SNR=36								
SCM				S	**S**		**23 57 24.7**	**+6.2**	
	baz=119								
NUUK	**Nuuk**	**57.15 22**	⇑	P	**P**		**23 49 24.8**	**+0.9**	
NUUK	**Nuuk**	**57.15 22**	*i*	P	**P**		**23 49 23.3**	**-0.6**	
NUUK				IAmb	IAmb		23 49 35.4		
	comp=Z,853nm,1.4s								
TCA	**Tanti**	**57.21 146**	*e*	P	**P**		**23 49 25.0**	**+0.1**	
SEW	**Seward**	**57.23 332**		P	**P**		**23 49 24.6**	**0.0**	
	baz=116,SNR=28								
SEW				S	**S**		**23 57 23.9**	**+4.4**	
	baz=116								
M23K	**Glacier View**	**57.28 334**		P	**P**		**23 49 25.0**	**0.0**	
	baz=119,SNR=28								
M23K				S	**S**		**23 57 24.9**	**+4.7**	
	baz=119								
KNK	**Knik Glacier**	**57.40 334**		P	**P**		**23 49 25.8**	**0.0**	
KNK				pP	**sP**		**23 49 34.4**	**+1.3**	
KNK				IAmb	IAmb		23 49 49.4		
	comp=Z,654nm,1.4s								
KNK				IAMs_20	IAMs_20		00 15 31.4		
	comp=Z,219µm,21.0s								
KNK	**Knik Glacier**	**57.40 334**		P	**P**		**23 49 26.1**	**+0.3**	
	baz=118,SNR=45								
KNK				S	**S**		**23 57 27.3**	**+5.4**	
	baz=118								
I26K	**Coal Creek Min**	**57.46 339**		IAmb	IAmb		23 49 45.6		
	comp=Z,574nm,1.4s								
I26K	**Coal Creek Min**	**57.46 339**		P	**P**		**23 49 26.2**	**+0.1**	
	baz=126								
I26K				S	**S**		**23 57 27.0**	**+4.5**	
	baz=126								
H27K	**Steamboat Moun**	**57.48 341**		P	**P**		**23 49 26.3**	**0.0**	
	baz=128								
H27K				S	**S**		**23 57 27.2**	**+4.3**	
	baz=128								
O22K	**Cooper Landing**	**57.52 333**		IAmb	IAmb		23 49 41.4		
	comp=Z,860nm,1.1s								
O22K				IAMs_20	IAMs_20		00 15 03.7		
	comp=Z,238µm,19.0s								
O22K	**Cooper Landing**	**57.52 333**		P	**P**		**23 49 26.9**	**+0.3**	
	baz=116,SNR=22								
O22K				S	**S**		**23 57 27.4**	**+4.1**	
	baz=116								
SML	**Sawmill**	**57.54 334**		IAmb	IAmb		23 49 51.1		
	comp=Z,940nm,1.3s								
SML				IAMs_20	IAMs_20		00 17 08.9		
	comp=Z,230µm,20.0s								
SML	**Sawmill**	**57.54 334**		P	**P**		**23 49 27.1**	**+0.2**	
	baz=118,SNR=59								
SML				S	**S**		**23 57 28.3**	**+4.5**	
	baz=118								
K24K	**Donnelly Dome**	**57.55 337**		P	**P**		**23 49 27.2**	**+0.3**	
	baz=122,SNR=54								
K24K				S	**S**		**23 57 29.7**	**+5.9**	
	baz=122								
ML02	**Panimavida**	**57.59 155**		IAmb	IAmb		23 49 39.2		
	comp=Z,726nm,1.4s								
BRSE	**Bradley Lake S**	**57.65 331**		P	**P**		**23 49 27.7**	**+0.1**	
	baz=115,SNR=31								
BRSE				S	**S**		**23 57 29.9**	**+4.7**	
	baz=115								
WAT6	**Susitna Watana**	**57.67 335**		P	**P**		**23 49 28.0**	**+0.1**	
	baz=119,SNR=150								
WAT6				S	**S**		**23 57 29.9**	**+4.2**	
	baz=119								
BRLK	**Bradley Lake**	**57.73 331**		IAmb	IAmb		23 49 47.8		
	comp=Z,521nm,1.1s								
BRLK				IAMs_20	IAMs_20		00 13 47.6		
	comp=Z,266µm,20.0s								
KDAK	**Kodiak Island**	**57.74 329**		P	**P**		**23 49 28.1**	**-0.2**	
KDAK				IAmb	IAmb		23 49 42.8		
	comp=Z,1µm,1.9s								
KDAK	**Kodiak Island**	**57.74 329**		P	**P**		**23 49 28.0**	**-0.2**	
	baz=112								
KDAK				S	**S**		**23 57 28.4**	**+2.0**	
	baz=112								
KDAK	**Kodiak Island**	**57.74 329**	*c*	*i*P	**P**		**23 49 28.4**	**+0.2**	
KDAK				pmax	pmax				
	comp=Z,726nm,1.8s								
KDAK				MLR	MLR				
	comp=Z,562µm,18.0s								
KDAK	**Kodiak Island**	**57.74 329**		LR	LR		00 14 35.5		
	comp=Z,435µm,19.1s,baz=129,slow=36								
GHO	**Glory Hole Cre**	**57.77 334**		IAmb	IAmb		23 49 48.0		
	comp=Z,792nm,1.2s								
GHO				IAMs_20	IAMs_20		00 13 10.1		
	comp=Z,323µm,22.0s								
PMR	**Palmer**	**57.77 334**		IAmb	IAmb		23 49 50.4		
	comp=Z,467nm,1.2s								
PMR				IAMs_20	IAMs_20		00 13 21.2		
	comp=Z,222µm,21.0s								
PMR	**Palmer**	**57.77 334**		P	**P**		**23 49 28.4**	**0.0**	
PMR	**Palmer**	**57.77 334**		P	**P**		**23 49 28.8**	**+0.5**	
	baz=117,SNR=80								
PMR				S	**S**		**23 57 32.2**	**+5.5**	
	baz=117								
DHY	**Denali Highway**	**57.78 336**		IAMs_20	IAMs_20		00 15 48.0		
	comp=Z,343µm,22.0s								
DHY	**Denali Highway**	**57.78 336**		P	**P**		**23 49 28.5**	**-0.1**	
	baz=120,SNR=54								
DHY				S	**S**		**23 57 30.6**	**+3.6**	
	baz=120								
CNPM	**China Poot**	**57.79 331**		IAmb	IAmb		23 49 48.3		
	comp=Z,513nm,1.1s								
CNPM				IAMs_20	IAMs_20		00 15 05.2		
	comp=Z,270µm,18.0s								
RC01	**Rabbit Creek A**	**57.80 333**		IAmb	IAmb		23 49 48.1		
	comp=Z,550nm,1.0s								
RC01				IAMs_20	IAMs_20		00 14 32.0		
	comp=Z,190µm,21.0s								
RC01	**Rabbit Creek A**	**57.80 333**		P	**P**		**23 49 28.6**	**-0.1**	
	baz=116,SNR=79								
RC01				S	**S**		**23 57 30.9**	**+3.8**	
	baz=116								
E29M	**Blow River**	**57.83 344**		IAmb	IAmb		23 49 49.7		
	comp=Z,664nm,1.3s								
E29M	**Blow River**	**57.83 344**		P	**P**		**23 49 28.9**	**+0.1**	
	baz=133								
E29M				S	**S**		**23 57 29.3**	**+1.9**	
	baz=133								
J25K	**Salcha River,**	**57.84 338**		IAmb	IAmb		23 49 43.9		
	comp=Z,923nm,1.4s								
J25K	**Salcha River,**	**57.84 338**		P	**P**		**23 49 29.5**	**+0.6**	
	baz=123								
J25K				S	**S**		**23 57 33.2**	**+5.6**	
	baz=123								
F28M	**Old Crow**	**57.87 342**		IAmb	IAmb		23 49 43.6		
	comp=Z,1µm,1.4s								
F28M	**Old Crow**	**57.87 342

baz=110
SII S **S** **23 57 34.8 +3.4**
baz=110
WAT1 Susitna Watana 58.12 335 P **P** **23 49 31.0 0.0**
baz=119
WAT1 S **S** **23 57 35.3 +4.0**
baz=119
NRS Narsarsuaq 58.13 27 *i* P **P** **23 49 29.4 -1.5**
NRS IAmb IAmb 23 49 47.0
comp=Z,721nm,1.2s
M22K Willow 58.26 334 IAMs_20 IAMs_20 00 13 25.2
comp=Z,303μm,21.0s
M22K Willow 58.26 334 P **P** **23 49 32.4 +0.6**
baz=116,SNR=37
M22K S **S** **23 57 36.4 +3.3**
baz=116
CAPN Captain Cook N 58.28 332 IAMs_20 IAMs_20 00 16 17.8
comp=Z,172μm,18.0s
CAPN Captain Cook N 58.28 332 P **P** **23 49 33.2 +1.3**
baz=115,SNR=27
CAPN S **S** **23 57 39.5 +6.2**
baz=115
HDA Harding Lake 58.30 337 IAmb IAmb 23 49 53.7
comp=Z,1μm,1.7s
HDA Harding Lake 58.30 337 P **P** **23 49 31.7 -0.4**
baz=121,SNR=50
HDA S **S** **23 57 38.0 +4.4**
baz=121
HDA S **S** **23 57 38.0 +4.4**
baz=121
RES Resolute Bay 58.37 1 IAmb IAmb 23 49 51.9
comp=Z,787nm,1.5s
RES Resolute Bay 58.37 1 ⇑P **P** **23 49 30.7 -1.6**
RES Resolute Bay 58.37 1 LR LR 00 15 43.6
comp=Z,355μm,18.6s,baz=182,slow=37
PRP Porcupine Dome 58.40 339 IAmb IAmb 23 49 47.6
comp=Z,1μm,1.4s
PRP Porcupine Dome 58.40 339 P **P** **23 49 32.8 -0.1**
baz=123,SNR=122
PRP S **S** **23 57 40.8 +5.8**
baz=123
SUA Susitna One 58.40 333 P **P** **23 49 32.6 -0.3**
SUA pP **sP** **23 49 41.6 +1.4**
SUA Susitna One 58.40 333 P **P** **23 49 33.3 +0.3**
baz=116,SNR=197
SUA S **S** **23 57 40.3 +5.1**
baz=116
E28M Babbage River 58.42 343 IAmb IAmb 23 49 55.6
comp=Z,465nm,1.2s
E28M Babbage River 58.42 343 P **P** **23 49 32.2 -0.7**
baz=131
E28M S **S** **23 57 37.2 +2.1**
baz=131
ILAR Eielson Array 58.47 338 P **P** **23 49 32.6 -0.7**
comp=Z,30nm,0.9s,baz=136,slow=4.5,SNR=199
ILAR LR LR 00 17 19.5
comp=Z,602μm,18.0s,baz=114,slow=39
ILAR PKPPKP **P'P'df** **00 19 11.7 -4.0**
comp=Z,4.3nm,1.1s,baz=311,slow=3.4,SNR=7.9
comp=Z,30nm,0.9s
RND Reindeer 58.52 336 IAMs_20 IAMs_20 00 14 56.8
comp=Z,328μm,21.0s
R18K Karluk 58.60 328 P **P** **23 49 34.2 -0.1**
baz=110
R18K S **S** **23 57 42.7 +5.1**
baz=110
BDFB Brasilia 58.62 120 P **P** **23 49 33.6 -1.5**
comp=Z,138nm,0.8s,baz=286,slow=8.0,SNR=45
BDFB S **S** **23 57 35.1 -4.1**
comp=Z,10nm,1.1s,baz=156,slow=20,SNR=1.5
BDFB PKPPKP **P'P'df** **00 19 09.1 -2.7**
comp=Z,2.7nm,0.7s,baz=90,slow=5.1,SNR=4.2
comp=Z,138nm,0.8s
CUT Chulitna 58.62 334 IAMs_20 IAMs_20 00 17 51.5
comp=Z,299μm,20.0s
CUT Chulitna 58.62 334 P **P** **23 49 34.5 +0.2**
baz=117,SNR=82
CUT S **S** **23 57 41.8 +4.1**
baz=117
CHIR Chirikof Islan 58.64 326 IAMs_20 IAMs_20 00 14 44.7
comp=Z,195μm,18.0s
CHIR Chirikof Islan 58.64 326 P **P** **23 49 34.5 -0.1**
baz=108
CHIR S **S** **23 57 41.5 +3.4**
baz=108
G26K Porcupine Rive 58.64 341 P **P** **23 49 34.3 0.0**
baz=126
G26K S **S** **23 57 41.7 +3.9**
baz=126
O20K Slope Mountain 58.66 331 P **P** **23 49 34.6 -0.1**
baz=113,SNR=20
O20K S **S** **23 57 43.7 +5.2**
baz=113
Q19K Cape Douglas, 58.69 330 IAmb IAmb 23 49 56.2
comp=Z,349nm,0.9s
Q19K Cape Douglas, 58.69 330 P **P** **23 49 34.8 -0.1**
baz=111,SNR=7.1
Q19K S **S** **23 57 41.7 +2.9**
baz=111
MCK McKinley 58.72 336 P **P** **23 49 34.8 -0.2**
baz=119,SNR=80
MCK S **S** **23 57 42.4 +3.4**
baz=119
CCB Clear Creek Bu 58.75 337 IAmb IAmb 23 49 59.7
comp=Z,886nm,1.7s
P19K Oil Pt 58.77 331 IAMs_20 IAMs_20 00 15 30.2
comp=Z,222μm,18.0s
P19K Oil Pt 58.77 331 P **P** **23 49 35.2 -0.3**
baz=112,SNR=7.6
P19K S **S** **23 57 43.8 +3.9**
baz=112
POKR Poker Plat Res 58.85 338 IAmb IAmb 23 49 58.5
comp=Z,855nm,1.4s
POKR Poker Plat Res 58.85 338 P **P** **23 49 35.7 -0.3**
baz=121,SNR=29
POKR S **S** **23 57 45.6 +4.8**
baz=121
ILSW Iliamna Southw 58.86 331 IAmb IAmb 23 49 55.3
comp=Z,1μm,1.8s
ILSW IAMs_20 IAMs_20 00 15 42.4
comp=Z,208μm,18.0s
COLA College 58.88 338 P **P** **23 49 35.0 -1.1**
COLA IAmb IAmb 23 49 50.0
comp=Z,632nm,1.4s
COLA College 58.88 338 P **P** **23 49 35.6 -0.5**
COLA College 58.88 338 P **P** **23 49 35.5 -0.5**
baz=120
COLA S **S** **23 57 44.3 +3.3**
baz=120
COLA College 58.88 338 ⇑P **P** **23 49 35.4 -0.7**
COLA College 58.88 338 P **P** **23 49 35.0 -1.1**
COLA pmax pmax
comp=Z,632nm,1.4s
COLA MLR MLR
comp=Z,591μm,18.0s
ITRB Iturama 58.90 126 *eP* **P** **23 49 36.3 -0.6**
N20K Mount Spurr 58.93 333 P **P** **23 49 36.6 0.0**
baz=114,SNR=76
N20K S **S** **23 57 45.5 +3.6**
baz=114
SKT Skwentna 58.96 334 IAMs_20 IAMs_20 00 13 46.8
comp=Z,305μm,22.0s
SKT Skwentna 58.96 334 P **P** **23 49 36.6 -0.1**
baz=115,SNR=134
SKT S **S** **23 57 46.5 +4.2**
baz=115
TRCB Terra Rica 58.97 130 *eP* **P** **23 49 35.5 -1.8**
MCR1 Marechal Candi 58.98 133 *eP* **P** **23 49 35.8 -1.6**
MDM Murphy Dome 59.06 338 IAmb IAmb 23 50 40.5
comp=Z,447nm,1.4s
TRF Thorofare Moun 59.11 336 P **P** **23 49 37.8 -0.1**
baz=117,SNR=251
TRF S **S** **23 57 47.4 +2.9**
baz=117
SFJD Kangerlussuaq 59.13 20 P **P** **23 49 37.2 -0.6**
SFJD IAmb IAmb 23 49 48.8
comp=Z,944nm,1.2s
SFJD Kangerlussuaq 59.13 20 P **P** **23 49 37.2 -0.6**
SFJD pmax pmax
comp=Z,944nm,1.3s
SFJD MLR MLR
comp=Z,490μm,21.0s
SFJD Kangerlussuaq 59.13 20 *i* P **P** **23 49 37.0 -0.7**
SFJD IAmb IAmb 23 49 48.5
comp=Z,878nm,1.2s
SFJD Kangerlussuaq 59.13 20 LR LR 00 17 12.6
comp=Z,500μm,21.2s,baz=232,slow=38
BMAR Burnt Mountain 59.17 341 P **P** **23 49 36.8 -1.3**

NEA2 Nenana 59.19 337 P **P** **23 49 38.2 -0.1**
baz=119,SNR=38
NEA2 S **S** **23 57 47.2 +2.0**
baz=119
F26K Sheenjek River 59.20 341 P **P** **23 49 38.2 -0.1**
baz=126
F26K S **S** **23 57 47.7 +2.5**
baz=126
D27M Malcolm River 59.24 344 IAmb IAmb 23 49 53.0
comp=Z,834nm,1.6s
D27M Malcolm River 59.24 344 P **P** **23 49 38.5 -0.1**
baz=130
D27M S **S** **23 57 48.0 +2.3**
baz=130
PCMB Pacaembu 59.29 128 *eP* **P** **23 49 37.1 -2.4**
H24K Noodor Dome 59.39 339 IAMs_20 IAMs_20 00 17 21.1
comp=Z,256μm,19.0s
H24K Noodor Dome 59.39 339 P **P** **23 49 39.7 0.0**
baz=121
H24K S **S** **23 57 50.0 +2.2**
baz=121
KTH Kantishna Hill 59.41 335 IAmb IAmb 23 50 11.4
comp=Z,622nm,1.0s
O19K Port Alsworth 59.48 331 IAmb IAmb 23 49 54.2
comp=Z,1μm,1.9s
O19K IAMs_20 IAMs_20 00 16 02.0
comp=Z,223μm,18.0s
O19K Port Alsworth 59.48 331 P **P** **23 49 39.9 -0.4**
baz=112
O19K S **S** **23 57 51.4 +2.4**
baz=112
Q17K Contact Creek 59.56 329 P **P** **23 49 39.9 -1.2**
baz=109,SNR=44
Q17K S **S** **23 57 53.0 +2.8**
baz=109
I23K Minto, Yukon-K 59.57 337 P **P** **23 49 40.8 0.0**
baz=119,SNR=180
I23K S **S** **23 57 52.0 +2.1**
baz=119
F25K Christian Rive 59.60 341 P **P** **23 49 41.4 +0.2**
baz=124
F25K S **S** **23 57 56.5 +6.0**
baz=124
M20K Styx River 59.61 333 IAmb IAmb 23 50 00.6
comp=Z,791nm,1.2s
M20K IAMs_20 IAMs_20 00 17 06.9
comp=Z,264μm,19.0s
M20K Styx River 59.61 333 P **P** **23 49 41.2 -0.1**
baz=114
M20K S **S** **23 57 54.0 +3.1**
baz=114
P18K Big Mountain, 59.62 330 P **P** **23 49 40.6 -0.7**
baz=110
P18K S **S** **23 57 52.7 +1.7**
baz=110
PPLA Purkeypile 59.64 334 P **P** **23 49 41.5 -0.1**
baz=115,SNR=52
PPLA S **S** **23 57 53.3 +2.1**
baz=115
IPMB Ipameri, GO 59.67 123 *eP* **P** **23 49 40.7 -1.7**
BPAW Bear Paw Mtn. 59.69 336 IAmb IAmb 23 49 59.1
comp=Z,1μm,1.6s
BPAW IAMs_20 IAMs_20 00 14 23.5
comp=Z,288μm,20.0s
BPAW Bear Paw Mtn. 59.69 336 P **P** **23 49 40.8 -1.0**
baz=117,SNR=84
BPAW S **S** **23 57 54.4 +2.8**
baz=117
SDBA SAO DESIDERIO 59.71 115 *eP* **P** **23 49 41.3 -1.3**
G24K Hadweenzic Riv 59.71 339 IAmb IAmb 23 49 56.6
comp=Z,994nm,1.5s
G24K Hadweenzic Riv 59.71 339 P **P** **23 49 41.9 0.0**
baz=122
G24K S **S** **23 57 57.2 +5.5**
baz=122
O18K Koktuh Hills 59.77 331 P **P** **23 49 42.0 -0.4**
baz=110,SNR=49
O18K S **S** **23 57 56.7 +3.8**
baz=110
N19K Bonanza Creek 59.79 332 IAmb IAmb 23 50 01.6
comp=Z,631nm,1.1s
N19K IAMs_20 IAMs_20 00 15 06.0
comp=Z,215μm,21.0s
N19K Bonanza Creek 59.79 332 P **P** **23 49 42.5 -0.1**
baz=112
N19K S **S** **23 57 56.0 +2.8**
baz=112
CAST Castle Rocks 59.82 335 IAmb IAmb 23 49 54.4
comp=Z,548nm,1.0s
CAST Castle Rocks 59.82 335 P **P** **23 49 42.1 -0.5**
baz=115
CAST S **S** **23 57 55.3 +2.0**
baz=115
E25K Arctic Village 59.88 341 IAmb IAmb 23 50 05.9
comp=Z,745nm,1.6s
E25K IAMs_20 IAMs_20 00 18 07.7
comp=Z,349μm,20.0s
E25K Arctic Village 59.88 341 P **P** **23 49 43.0 -0.1**
baz=124,SNR=92
E25K S **S** **23 57 59.3 +5.2**
baz=124
MLY Manley 60.03 337 P **P** **23 49 43.8 -0.3**
baz=118,SNR=139
MLY S **S** **23 57 59.7 +3.7**
baz=118
Q16K King Salmon 60.08 329 P **P** **23 49 43.9 -0.5**
baz=108
Q16K S **S** **23 57 59.6 +2.9**
baz=108
CHUM Lake Minchumin 60.12 335 P **P** **23 49 44.0 -0.6**
baz=115,SNR=12
CHUM S **S** **23 57 58.8 +1.8**
baz=115
P17K Kvichak River 60.14 330 P **P** **23 49 45.1 +0.3**
baz=109,SNR=39
P17K S **S** **23 58 01.5 +4.0**
baz=109
M19K Big River Lodg 60.17 333 IAMs_20 IAMs_20 00 16 32.7
comp=Z,224μm,18.0s
M19K Big River Lodg 60.17 333 P **P** **23 49 44.9 -0.2**
baz=112,SNR=291
M19K S **S** **23 58 00.8 +3.0**
baz=112
L20K Farewell, AK 60.17 334 P **P** **23 49 44.2 -0.9**
baz=113
L20K S **S** **23 58 00.4 +2.5**
baz=113
R16K Pilot Point 60.19 328 P **P** **23 49 44.4 -0.9**
baz=107
R16K S **S** **23 58 00.4 +2.2**
baz=107
XMAS Kiritimati 60.22 263 P **P** **23 49 49.1 +2.9**
XMAS Kiritimati 60.22 263 P P 23 49 51.6 +5.4
CHGN Chignik 60.27 326 IAmb IAmb 23 49 59.2
comp=Z,532nm,1.2s
CHGN Chignik 60.27 326 P **P** **23 49 45.3 -0.5**
baz=105,SNR=13
CHGN S **S** **23 58 01.8 +2.5**
baz=105
ILULI Ilulissat 60.28 17 IAmb IAmb 23 49 56.6
comp=Z,1μm,1.6s
ILULI IAMs_20 IAMs_20 00 19 13.8
comp=Z,199μm,19.0s
ILULI Ilulissat 60.28 17 ⇓P **P** **23 49 45.2 -0.4**
ILULI Ilulissat 60.28 17 *i* P **P** **23 49 44.4 -1.2**
ILULI IAmb IAmb 23 49 56.1
comp=Z,931nm,1.6s
F24K Squaw Lake 60.28 340 IAmb IAmb 23 50 00.8
comp=Z,1μm,2.3s
F24K Squaw Lake 60.28 340 P **P** **23 49 45.9 +0.2**
baz=122
F24K S **S** **23 58 04.6 +5.4**
baz=122
DY2G Dye2 60.31 21 *i* P **P** **23 49 45.7 -0.6**
DY2G IAmb IAmb 23 49 56.8
comp=Z,1μm,1.0s
N18K Kilae Creek 60.39 331 IAMs_20 IAMs_20 00 16 31.8
comp=Z,176μm,18.0s
N18K Kilae Creek 60.39 331 P **P** **23 49 46.1 -0.5**
baz=110,SNR=73
N18K S **S** **23 58 03.1 +2.4**
baz=110
SVW2 Sparrevohn 60.39 332 IAmb IAmb 23 50 05.3
comp=Z,637nm,1.3s
SVW2 IAMs_20 IAMs_20 00 17 22.5
comp=Z,185μm,18.0s
SVW2 Sparrevohn 60.39 332 P **P** **23 49 46.0 -0.6**
LDASE Londrina, Braz 60.44 130 *eP* **P** **23 49 46.3 -1.2**

L19K White Mountain 60.48 333 IAmb IAmb 23 50 04.6
comp=Z,738nm,1.4s
L19K IAMs_20 IAMs_20 00 17 42.8
comp=Z,259μm,20.0s
L19K White Mountain 60.48 333 P **P** **23 49 47.2 0.0**
baz=112
L19K S **S** **23 58 04.2 +2.4**
baz=112
CNBA Chernabura Isl 60.54 324 P **P** **23 49 46.7 -0.9**
CNBA IAmb IAmb 23 50 01.4
comp=Z,460nm,1.4s
CNBA IAMs_20 IAMs_20 00 16 41.8
comp=Z,221μm,18.0s
CHNA Chernabura Isl 60.54 324 P **P** **23 49 47.4 -0.3**
baz=104
CHNA S **S** **23 58 05.9 +3.2**
baz=104
I21K Tanana 60.56 337 P **P** **23 49 47.2 -0.4**
baz=116
I21K S **S** **23 58 05.6 +2.9**
baz=116
G23K Bananza Creek 60.58 339 IAmb IAmb 23 50 02.4
comp=Z,804nm,1.5s
G23K Bananza Creek 60.58 339 P **P** **23 49 47.7 -0.2**
baz=119
G23K S **S** **23 58 09.4 +6.3**
baz=119
K20K Telida 60.60 335 IAmb IAmb 23 50 02.9
comp=Z,920nm,1.2s
K20K Telida 60.60 335 P **P** **23 49 47.5 -0.5**
baz=113
K20K S **S** **23 58 05.9 +2.5**
baz=113
FRBT Francisco Belt 60.61 133 *eP* **P** **23 49 46.6 -2.0**
O17K Koliganek Bris 60.64 330 P **P** **23 49 48.1 -0.2**
baz=108
O17K S **S** **23 58 06.4 +2.5**
baz=108
M18K Stony River 60.65 332 P **P** **23 49 47.6 -0.7**
baz=111
M18K S **S** **23 58 06.2 +2.3**
baz=111
ITQB Itaqui 60.66 139 IAmb IAmb 23 49 58.3
comp=Z,625nm,1.2s
ITQB IAMs_20 IAMs_20 00 17 17.1
comp=Z,127μm,18.0s
ITQB Itaqui 60.66 139 *eP* **P** **23 49 47.3 -1.5**
H22K Ishtalitna Cre 60.67 338 P **P** **23 49 48.0 -0.5**
baz=117
H22K S **S** **23 58 07.8 +3.6**
baz=117
D25K Kavik River 60.81 342 IAmb IAmb 23 50 04.0
comp=Z,544nm,1.1s
D25K Kavik River 60.81 342 P **P** **23 49 49.1 -0.3**
baz=124
D25K S **S** **23 58 09.9 +4.0**
baz=124
P16K Nushagak River 60.84 329 P **P** **23 49 49.0 -0.7**
baz=107,SNR=30
P16K S **S** **23 58 10.0 +3.6**
baz=107
S14K Fog Glacier 60.88 326 P **P** **23 49 49.7 -0.5**
baz=104
S14K S **S** **23 58 09.5 +2.2**
baz=104
UMMG Uummannaq 60.89 16 *i* P **P** **23 49 49.2 -0.5**
UMMG IAmb IAmb 23 50 00.8
comp=Z,1μm,1.4s
COLD Coldfoot 60.90 339 P **P** **23 49 49.9 0.0**
baz=119,SNR=85
COLD S **S** **23 58 11.5 +4.5**
baz=119
CRSM Crissiumal (Br 60.91 135 *eP* **P** **23 49 49.0 -1.5**
N17K Nushagak Hills 60.94 331 IAMs_20 IAMs_20 00 16 48.4
comp=Z,246μm,19.0s
N17K Nushagak Hills 60.94 331 P **P** **23 49 49.9 -0.4**
baz=109
N17K S **S** **23 58 11.3 +3.7**
baz=109
J20K Nowinta River 60.97 335 P **P** **23 49 50.0 -0.4**
baz=114
J20K S **S** **23 58 11.0 +3.0**
baz=114
PPT Papeete 61.03 239 P **P** **23 49 54.5 +2.9**
comp=Z,21nm,0.5s,baz=27,slow=6.8,SNR=5.7
PPT S S 23 58 20.5 +10
comp=Z,19nm,0.7s,baz=243,slow=18,SNR=1.7
PPT LR LR 00 08 56.0
comp=Z,64μm,18.2s,baz=60,slow=29
comp=Z,21nm,0.5s
PSAL Palomas, Salto 61.03 141 *eP* **P** **23 49 49.9 -1.4**
PPTF Pamatai, Papee 61.03 239 P P 23 49 57.0 +5.3
O16K Kokwok River B 61.07 330 IAmb IAmb 23 50 05.2
comp=Z,1μm,1.6s
O16K Kokwok River B 61.07 330 P **P** **23 49 50.5 -0.7**
baz=108,SNR=108
O16K S **S** **23 58 12.5 +3.1**
baz=108
BB19B Bebedouro 61.08 126 *eP* **P** **23 49 50.5 -1.4**
H21K Melozitna Rive 61.09 337 IAmb IAmb 23 50 09.9
comp=Z,522nm,1.3s
H21K Melozitna Rive 61.09 337 P **P** **23 49 50.3 -1.0**
baz=116
H21K S **S** **23 58 11.8 +2.3**
baz=116
E23K Chandalar 61.12 340 P **P** **23 49 52.0 +0.4**
baz=120
E23K S **S** **23 58 14.5 +4.5**
baz=120
NUUG Nuugaatsiaq 61.15 15 *i* P **P** **23 49 51.5 -0.1**
SDPT Sand Point 61.16 325 IAmb IAmb 23 50 07.9
comp=Z,1μm,1.6s
SDPT Sand Point 61.16 325 P **P** **23 49 51.2 -0.6**
SDPT Sand Point 61.16 325 P **P** **23 49 51.2 -0.6**
baz=103,SNR=12
SDPT S **S** **23 58 10.1 -0.5**
baz=103
G22K Bettles 61.20 339 P **P** **23 49 51.9 -0.1**
baz=118
G22K S **S** **23 58 15.1 +4.3**
baz=118
TTA Tatalina 61.25 334 IAmb IAmb 23 50 06.1
comp=Z,1μm,1.6s
TTA Tatalina 61.25 334 P **P** **23 49 51.8 -0.7**
TTA Tatalina 61.25 334 P **P** **23 49 52.0 -0.5**
baz=111,SNR=144
TTA S **S** **23 58 14.1 +2.3**
baz=111
UNIS Unistalda (Bra 61.25 137 *eP* **P** **23 49 52.4 -0.5**
L18K Granite Mounta 61.29 333 IAmb IAmb 23 50 11.7
comp=Z,647nm,1.1s
L18K IAMs_20 IAMs_20 00 18 59.4
comp=Z,199μm,19.0s
L18K Granite Mounta 61.29 333 P **P** **23 49 52.5 -0.2**
baz=110
L18K S **S** **23 58 14.0 +1.9**
baz=110
UPNV Upernavik 61.30 13 *i* P **P** **23 49 53.0 +0.5**
UPNV IAmb IAmb 23 50 03.5
comp=Z,488nm,1.1s
M17K Holitna River 61.34 332 IAMs_20 IAMs_20 00 17 20.0
comp=Z,229μm,18.0s
M17K Holitna River 61.34 332 P **P** **23 49 53.0 0.0**
baz=109
M17K S **S** **23 58 14.8 +2.0**
baz=109
I20K Naaghedeneel 61.36 336 P **P** **23 49 52.6 -0.4**
baz=114
I20K S **S** **23 58 15.5 +2.7**
baz=114
PMNB Patos De Minas 61.39 122 ⇑P **P** **23 49 53.1 -1.1**
PMNB Patos De Minas 61.39 122 *eP* **P** **23 49 51.4 -2.7**
TOLK Toolik Lake Re 61.41 341 P **P** **23 49 53.2 -0.2**
baz=121,SNR=84
TOLK S **S** **23 58 14.9 +1.3**
baz=121
JANB Januaria 61.45 118 *eP* **P** **23 49 52.0 -2.5**
D24K Happy Valley 61.45 342 IAMs_20 IAMs_20 00 18 37.3
comp=Z,226μm,20.0s
D24K Happy Valley 61.45 342 P **P** **23 49 53.4 -0.2**
baz=122
D24K S **S** **23 58 17.7 +3.7**
baz=122
J19K Poorman 61.49 335 IAmb IAmb 23 50 25.1
comp=Z,640nm,1.0s
J19K Poorman 61.49 335 P **P** **23 49 53.2 -0.9**
baz=112
J19K S **S** **23 58 17.1 +2.4**

baz=112
FRTB Fartura 61.57 129 *e*P **P** **23 49 53.2 -2.0**
IMAR Indian Mountai 61.58 337 P **P** **23 49 53.1 -1.5**
N16K Nishlik Lake 61.66 331 P **P** **23 49 54.8 -0.5**
baz=107
N16K S **S** **23 58 20.8 +3.8**
baz=107
C24K Franklin Bluff 61.72 342 P **P** **23 49 55.2 -0.2**
C24K baz=122 S **S** **23 58 19.4 +2.2**
baz=122
G21K Allakaket 61.72 338 IAmb IAmb 23 50 09.7
comp=Z,1µm,1.8s
G21K Allakaket 61.72 338 P **P** **23 49 55.1 -0.5**
baz=116
G21K S **S** **23 58 20.3 +2.8**
baz=116
J18K Innoko River 61.75 334 IAmb IAmb 23 50 10.3
comp=Z,707nm,1.4s
J18K IAMs_20 IAMs_20 00 18 43.7
comp=Z,264µm,19.0s
J18K Innoko River 61.75 334 P **P** **23 49 54.9 -0.9**
baz=111
J18K S **S** **23 58 19.6 +1.7**
baz=111
H20K Anotleneega Mo 61.80 337 P **P** **23 49 55.2 -0.8**
baz=114
H20K S **S** **23 58 20.8 +2.3**
baz=114
H07S1 FLORES T-PHASE 61.91 54⇑ *e*P **P** **23 50 00.3 +3.0**
comp=Z,1µm,1.8s
H07S1 *e*S **S** **23 58 29.5 +8.7**
M16K Timber Creek 61.92 331 IAMs_20 IAMs_20 00 17 29.7
comp=Z,285µm,18.0s
D23K Nanushuk River 61.92 341 P **P** **23 49 57.0 +0.2**
baz=120
D23K S **S** **23 58 24.3 +4.3**
baz=120
L17K Donlin 61.97 332 P **P** **23 49 56.9 -0.4**
baz=109
L17K S **S** **23 58 23.7 +3.0**
baz=109
H07N1 FLORES T-PHASE 61.99 53 *e*P **P** **23 49 55.0 -2.8**
comp=Z,459nm,0.9s
F21K Alatna River 62.02 339 P **P** **23 49 57.7 +0.1**
baz=116,SNR=337
F21K S **S** **23 58 24.9 +3.6**
baz=116
RODS Rosario do Sul 62.03 138 *e*P **P** **23 49 56.7 -1.4**
ITAB Concordia 62.05 134 P **P** **23 49 56.0 -2.3**
ITAB Concordia 62.05 134 *e*P **P** **23 49 56.3 -2.0**
TULEG Thule 62.06 7 IAMs_20 IAMs_20 00 18 10.7
comp=Z,211µm,22.0s
TULEG Thule 62.06 7 *i*P **P** **23 49 56.6 -1.1**
TULEG IAmb IAmb 23 50 23.8
comp=Z,838nm,1.6s
K17K Iditarod 62.16 333 IAmb IAmb 23 50 17.1
comp=Z,539nm,1.2s
K17K IAMs_20 IAMs_20 00 18 43.9
comp=Z,281µm,20.0s
K17K Iditarod 62.16 333 P **P** **23 49 57.9 -0.7**
baz=109
K17K S **S** **23 58 25.0 +1.8**
baz=109
N15K Kwethluk River 62.20 330 P **P** **23 49 57.9 -0.9**
baz=106
N15K S **S** **23 58 25.2 +1.5**
baz=106
PLCA Paso Flores 62.22 157 P **P** **23 49 59.7 +0.4**
PLCA IAmb IAmb 23 50 10.8
comp=Z,346nm,1.1s
PLCA Paso Flores 62.22 157 ⇑P **P** **23 49 59.5 +0.2**
PLCA Paso Flores 62.22 157 P **P** **23 49 59.6 +0.4**
comp=Z,32nm,0.8s,baz=327,slow=8.1,SNR=51
PLCA S **S** **23 58 21.1 -3.3**
comp=Z,1.2nm,0.5s,baz=195,slow=5.2,SNR=1.3
PLCA LR LR 00 12 13.9
comp=Z,206µm,18.2s,baz=332,slow=32
PLCA PKPPKP **P'P'df** **00 19 07.4 +5.1**
comp=Z,3.0nm,1.0s,baz=210,slow=7.4,SNR=3.6
comp=Z,32nm,0.8s
PLCA Paso Flores 62.22 157 *e*P **P** **23 49 56.3 -3.0**
GCSA Galena City Sc 62.28 335 P **P** **23 49 59.0 -0.2**
baz=111,SNR=6.7
GCSA S **S** **23 58 27.0 +2.4**
baz=111
L16K Owhat River 62.37 332 IAmb IAmb 23 50 14.3
comp=Z,1µm,1.6s
L16K IAMs_20 IAMs_20 00 18 51.0
comp=Z,189µm,19.0s
L16K Owhat River 62.37 332 P **P** **23 49 59.7 -0.2**
baz=107,SNR=60
L16K S **S** **23 58 28.4 +2.7**
baz=107
H19K Roundabout Mou 62.41 336 IAmb IAmb 23 50 13.9
comp=Z,1µm,1.6s
H19K Roundabout Mou 62.41 336 P **P** **23 49 59.8 -0.3**
baz=112
H19K S **S** **23 58 27.5 +1.4**
baz=112
ALGR Alto Alegre (B 62.43 136 *e*P **P** **23 49 59.6 -1.3**
TBOT Tacuaremb 62.47 140 *e*P **P** **23 49 59.1 -1.9**
D22K Ayikyak River 62.52 341 P **P** **23 50 01.0 +0.2**
baz=118
D22K S **S** **23 58 29.1 +1.6**
baz=118
RCLB Rio Claro- Sao 62.60 127 *e*P **P** **23 50 00.4 -1.7**
M15K Kasigluk River 62.63 330 P **P** **23 50 00.8 -0.9**
baz=106
M15K S **S** **23 58 30.7 +1.6**
baz=106
FALS False Pass 62.71 324 P **P** **23 50 01.4 -0.9**
FALS False Pass 62.71 324 P **P** **23 50 01.0 -1.3**
baz=100,SNR=23
FALS S **S** **23 58 31.0 +0.8**
baz=100
J17K VABM Dome 62.72 334 P **P** **23 50 01.4 -0.8**
baz=108
J17K S **S** **23 58 31.3 +1.1**
baz=108
E21K Killik River 62.73 340 IAmb IAmb 23 50 16.6
comp=Z,1µm,1.8s
E21K IAMs_20 IAMs_20 00 20 07.3
comp=Z,308µm,20.0s
E21K Killik River 62.73 340 P **P** **23 50 01.9 -0.5**
baz=116
E21K S **S** **23 58 32.3 +2.0**
baz=116
F20K Avaraart Lake 62.74 338 P **P** **23 50 02.3 -0.1**
baz=114
F20K S **S** **23 58 33.2 +2.9**
baz=114
G19K Purcell Mounta 62.89 337 IAmb IAmb 23 50 18.2
comp=Z,760nm,1.2s
G19K Purcell Mounta 62.89 337 P **P** **23 50 02.3 -1.0**
baz=112
G19K S **S** **23 58 34.1 +1.9**
baz=112
LL01 San Ignacio de 62.99 159 IAmb IAmb 23 50 14.8
comp=Z,1µm,1.8s
H18K Honhosa River 63.02 336 IAmb IAmb 23 51 02.0
comp=Z,672nm,1.4s
H18K IAMs_20 IAMs_20 00 16 35.4
comp=Z,198µm,19.0s
H18K Honhosa River 63.02 336 P **P** **23 50 03.7 -0.5**
baz=110
H18K S **S** **23 58 36.7 +2.8**
baz=110
ANGG Ammassalik, Gr 63.13 24 *i*P **P** **23 50 03.3 -1.6**
ANGG IAmb IAmb 23 50 15.0
comp=Z,884nm,1.2s
CPSB Cacapava Do Su 63.20 137 *e*P **P** **23 50 04.9 -1.0**
M14K Bethel 63.25 330 IAMs_20 IAMs_20 00 18 10.7
comp=Z,211µm,19.0s
M14K Bethel 63.25 330 P **P** **23 50 05.1 -0.7**
baz=104,SNR=44
M14K S **S** **23 58 38.8 +2.1**
baz=104
L15K Ungalak Mounta 63.27 331 P **P** **23 50 06.0 +0.1**
baz=105
L15K S **S** **23 58 41.0 +3.8**
baz=105
C21K Knifeblade Rid 63.32 340 P **P** **23 50 06.2 0.0**
baz=116
C21K S **S** **23 58 42.1 +4.6**
baz=116
SPB Sao Paulo 63.32 128 P **P** **23 50 04.6 -2.2**
SPB Sao Paulo 63.32 128 ⇑P **P** **23 50 05.2 -1.6**
SPB Sao Paulo 63.32 128 *e*P **P** **23 50 05.5 -1.3**
J16K Anvik River 63.34 333 P **P** **23 50 06.4 +0.1**
baz=107
J16K S **S** **23 58 42.2 +4.3**
baz=107
G18K Tagagawik 63.40 336 P **P** **23 50 06.7 -0.1**
baz=110
G18K S **S** **23 58 42.6 +4.1**
baz=110
F19K Shaleruckik Mo 63.40 338 P **P** **23 50 06.6 -0.2**
baz=111
F19K S **S** **23 58 44.4 +5.8**
baz=111
K15K Wolf Creek Mou 63.46 332 IAMs_20 IAMs_20 00 17 23.4
comp=Z,218µm,20.0s
K15K Wolf Creek Mou 63.46 332 P **P** **23 50 07.4 +0.1**
baz=106
K15K S **S** **23 58 43.9 +4.4**
baz=106
B21K Ikpikpuk River 63.47 341 IAmb IAmb 23 50 21.4
comp=Z,652nm,1.3s
B21K Ikpikpuk River 63.47 341 P **P** **23 50 07.2 +0.1**
baz=116
B21K S **S** **23 58 44.0 +4.7**
baz=116
DIAM Diamantina, MG 63.54 121 *e*P **P** **23 50 07.5 -1.1**
I17K Unalakleet 63.56 334 P **P** **23 50 08.3 +0.5**
baz=107,SNR=47
I17K S **S** **23 58 46.8 +6.2**
baz=107
H17K Granite Mounta 63.57 335 IAMs_20 IAMs_20 00 19 29.9
comp=Z,270µm,22.0s
H17K Granite Mounta 63.57 335 P **P** **23 50 08.0 +0.1**
baz=108
H17K S **S** **23 58 43.7 +3.0**
baz=108
L14K Kuka Creek 63.74 331 IAMs_20 IAMs_20 00 18 35.8
comp=Z,278µm,18.0s
L14K Kuka Creek 63.74 331 P **P** **23 50 08.9 -0.1**
baz=104
L14K S **S** **23 58 45.5 +2.6**
baz=104
ICESG Greenland Ices 63.75 20 *i*P **P** **23 50 08.7 -0.7**
ICESG IAmb IAmb 23 50 28.9
comp=Z,2µm,1.2s
TRQA Tornquist 63.78 149 P **P** **23 50 09.3 -0.3**
TRQA IAmb IAmb 23 50 22.4
comp=Z,748nm,1.5s
TRQA IAMs_20 IAMs_20 00 12 47.9
comp=Z,326µm,22.0s
TRQA Tornquist 63.78 149 P **P** **23 50 09.3 -0.3**
TRQA pmax pmax
comp=Z,748nm,1.5s
TRQA Tornquist 63.78 149 *e*P **P** **23 50 14.3 +4.7**
PET01 Itanhaem-SP 63.83 128 *e*P **P** **23 50 08.2 -2.0**
M13K Dall Lake 63.83 330 P **P** **23 50 09.5 -0.1**
baz=103
M13K S **S** **23 58 47.4 +3.3**
baz=103
CALA Caldeira 63.86 55⇑ *e*P **P** **23 50 11.7 +1.3**
comp=Z,2µm,1.4s
CALA *e*S S 23 59 00.3 +15
CALA Caldeira 63.86 55 *e*LR LR 00 10 00.0
comp=Z,156µm,22.5s
PCED Cedros 63.86 55 *e*P **P** **23 50 12.2 +2.0**
comp=Z,1µm,1.2s
HOR Horta 63.91 55 *e*P **P** **23 50 12.3 +1.7**
comp=Z,1µm,1.4s
AKUT Akutan 63.95 323 P **P** **23 50 13.3 +2.8**
PLTB Pedras Altas 63.99 139 IAmb IAmb 23 50 20.6
comp=Z,346nm,1.1s
PLTB Pedras Altas 63.99 139 *e*P **P** **23 50 09.6 -1.5**
F18K Selawik 64.02 337 P **P** **23 50 10.6 -0.2**
baz=110,SNR=56
F18K S **S** **23 58 48.9 +2.7**
baz=110
PCAN Candelaria 64.03 55 *e*P **P** **23 50 13.9 +2.5**
comp=Z,1µm,1.5s
PICO Pico 64.07 55⇑ *e*P **P** **23 50 13.4 +1.6**
comp=Z,1µm,1.3s
PICO *e*S S 23 59 00.8 +13
PICO Pico 64.07 55 *e*LR LR 00 09 20.1
comp=Z,153µm,20.3s
D19K Kuna River 64.15 339 P **P** **23 50 11.2 -0.5**
baz=112
D19K S **S** **23 58 51.4 +3.5**
baz=112
PPNO Prainha do Nor 64.20 55 *e*P **P** **23 50 12.3 -0.3**
comp=Z,1µm,1.2s
ROSA Rosais 64.22 55⇑ *e*P **P** **23 50 13.1 +0.5**
comp=Z,751nm,1.5s
ROSA *e*S S 23 58 58.8 +9.2
ROSA Rosais 64.22 55 *e*LR LR 00 09 22.1
comp=Z,161µm,20.3s
CNLB Canela 64.23 135 *e*P **P** **23 50 10.6 -2.2**
PID Ribeirinha 64.31 55 *e*P **P** **23 50 15.8 +2.5**
comp=Z,1µm,1.8s
PMAN Manadas 64.33 55 *e*P **P** **23 50 17.0 +3.6**
comp=Z,520nm,1.4s
UNV Unalaska Valle 64.33 322 P **P** **23 50 12.8 -0.3**
UNV Unalaska Valle 64.33 322 P **P** **23 50 12.3 -0.7**
baz=97,SNR=31
UNV S **S** **23 58 50.8 +0.3**
baz=97
SRBC Serra Branca 64.37 54 *e*P **P** **23 50 13.8 +0.2**
comp=Z,3µm,1.7s
H16K Elim 64.43 335 P **P** **23 50 13.5 0.0**
baz=106,SNR=72
H16K S **S** **23 58 53.2 +1.8**
baz=106
J14K Nanvaranak Lak 64.49 332 IAMs_20 IAMs_20 00 20 51.5
comp=Z,214µm,19.0s
J14K Nanvaranak Lak 64.49 332 P **P** **23 50 14.0 +0.1**
baz=104
J14K S **S** **23 58 57.5 +5.4**
baz=104
PARB Paraibuna 64.57 126 *e*P **P** **23 50 12.7 -2.5**
G16K Koyuk River 64.69 335 IAmb IAmb 23 50 30.2
comp=Z,848nm,1.2s
G16K IAMs_20 IAMs_20 00 20 15.3
comp=Z,203µm,20.0s
G16K Koyuk River 64.69 335 P **P** **23 50 15.1 -0.1**
baz=106
G16K S **S** **23 58 58.9 +4.3**
baz=106
AY01 Puyuhuapi 64.72 160 P **P** **23 50 15.2 -0.4**
A21K Barrow 64.81 342 P **P** **23 50 15.3 -0.6**
baz=115,SNR=19
A21K S **S** **23 58 57.7 +1.8**
baz=115
GDU01 Guandu, BA 64.94 114 *e*P **P** **23 50 16.2 -1.5**
TER01 Tubaro-SC 64.94 133 *e*P **P** **23 50 16.1 -1.3**
E17K Hotham Inlet 64.99 337 P **P** **23 50 16.7 -0.4**
baz=108,SNR=187
E17K S **S** **23 58 59.0 +0.8**
baz=108
ADH Angra Heroismo 65.00 55 *e*P **P** **23 50 17.6 -0.1**
comp=Z,800nm,1.7s
PAGU Agualva, Azore 65.04 54⇑ *e*P **P** **23 50 18.7 +0.7**
comp=Z,1µm,1.6s
PAGU *e*S **S** **23 59 05.7 +5.9**
PAGU Agualva, Azore 65.04 54 *e*LR LR 00 09 52.0
comp=Z,129µm,23.6s
PSCM Serra do Cume 65.09 55 *e*P **P** **23 50 20.5 +2.1**
comp=Z,897nm,2.3s
RCBR Riachuelo 65.17 105 P **P** **23 50 18.8 -0.5**
RCBR pP **sP** **23 50 26.5 -0.1**
RCBR IAmb IAmb 23 50 38.3
comp=Z,784nm,1.4s
RCBR Riachuelo 65.17 105 IAMs_20 IAMs_20 00 23 33.9
comp=Z,117µm,18.0s
RCBR Riachuelo 65.17 105 P **P** **23 50 18.8 -0.5**
RCBR *PP **sP** **23 50 26.5 -0.1**
RCBR MLR MLR
comp=Z,117µm,18.0s
RCBR Riachuelo 65.17 105 LR LR 00 19 28.7
comp=Z,79µm,21.8s,baz=308,slow=37
RCBR Riachuelo 65.17 105 *e*P **P** **23 50 18.2 -1.1**
M11K Mekoryuk 65.21 329 P **P** **23 50 18.6 -0.1**
baz=100,SNR=6.8
M11K S **S** **23 59 02.2 +1.1**
baz=100
NEEM North Greenlan 65.38 10 *i*P **P** **23 50 19.9 0.0**
NEEM IAmb IAmb 23 50 39.2
comp=Z,10µm,2.4s
SUMG Summit 65.57 17 P **P** **23 50 19.8 -1.5**
SUMG IAmb IAmb 23 50 27.9
comp=Z,566nm,1.0s
SUMG Summit 65.57 17 P **P** **23 50 19.7 -1.5**
SUMG Summit 65.57 17 ⇑P **P** **23 50 20.5 -0.8**
SUMG ⇓P **pP** **23 50 24.5 -2.1**
SUMG Summit 65.57 17 P **P** **23 50 19.8 -1.5**
SUMG pmax pmax
comp=Z,566nm,1.0s
SUMG Summit 65.57 17 *i*P **P** **23 50 20.0 -1.3**
SUMG IAmb IAmb 23 50 41.2
comp=Z,3µm,1.7s
MAN01 Angra dos Reis 65.61 125 *e*P **P** **23 50 20.8 -1.2**
D17K Noatak River 65.64 338 P **P** **23 50 20.2 -1.1**
baz=107
D17K S **S** **23 59 08.2 +2.1**
baz=107
NIKH Nikolski High 65.64 321 P **P** **23 50 24.3 +2.7**
NIKH Nikolski High 65.64 321 P **P** **23 50 20.5 -1.1**
baz=95,SNR=5.2
NIKH S **S** **23 59 07.5 +0.9**
baz=95
CMC01 Camacan, BA 65.69 116 *e*P **P** **23 50 21.1 -1.5**
ANM Nome 65.71 334 IAmb IAmb 23 50 46.3
comp=Z,486nm,1.2s
ANM Nome 65.71 334 P **P** **23 50 21.0 -0.9**
baz=103,SNR=32
ANM S **S** **23 59 09.8 +2.6**
baz=103
VAS01 Vassouras-RJ 65.72 124 *e*P **P** **23 50 21.1 -1.6**
C17K DeLong Mountai 65.90 338 P **P** **23 50 22.5 -0.6**
baz=107
C17K S **S** **23 59 11.9 +2.5**
baz=107
COYC Coyhaique 65.93 160 P **P** **23 50 24.2 +0.8**
COYC IAmb IAmb 23 50 33.3
comp=Z,1µm,1.9s
COYC Coyhaique 65.93 160 IAMs_20 IAMs_20 00 12 07.9
comp=Z,127µm,20.0s
GUA01 Guaratinga, BA 65.99 117 *e*P **P** **23 50 23.0 -1.4**
PSET Sete Cidades 66.22 55⇑ *e*P **P** **23 50 26.4 +0.7**
comp=Z,1µm,1.5s
PSET *e*S S 23 59 29.7 +15
PSET Sete Cidades 66.22 55 *e*LR LR 00 10 23.9
comp=Z,214µm,20.3s
PDA Ponta Delgada 66.27 56 *e*P **P** **23 50 27.9 +1.9**
comp=Z,1µm,1.3s
SOEG Soedalen 66.29 22 *i*P **P** **23 50 24.5 -1.0**
SOEG IAmb IAmb 23 50 45.9
comp=Z,2µm,1.8s
CMLA Cha da Macela 66.38 56⇑ *e*P **P** **23 50 28.2 +1.5**
comp=Z,2µm,1.7s
CMLA *e*S S 23 59 31.7 +15
CMLA Cha da Macela 66.38 56 *e*LR LR 00 10 27.9
comp=Z,200µm,22.5s
P08K Saint George I 66.39 325 P **P** **23 50 25.7 -0.7**
baz=96
P08K S **S** **23 59 13.0 -2.7**
baz=96
PCALD Caldeiras da R 66.41 56 *e*P **P** **23 50 26.8 -0.1**
comp=Z,2µm,1.7s
PCALD A A 00 16 26.0
comp=Z,193µm,24.8s
DUB01 Friburgo-RJ 66.47 123 *e*P **P** **23 50 25.7 -1.8**
PGRON Lagoa das Cont 66.50 56 *e*P **P** **23 50 29.6 +2.1**
comp=Z,2µm,1.8s
BART Pico Bartolome 66.66 56⇑ *e*P **P** **23 50 29.2 +0.6**
comp=Z,3µm,1.3s
BART *e*S S 23 59 32.7 +13
BART Pico Bartolome 66.66 56 *e*LR LR 00 11 37.7
comp=Z,190µm,20.3s
PSMA Santa Maria 66.74 56 *e*P **P** **23 50 29.1 +0.1**
comp=Z,788nm,1.8s
VPORT Vila do Porto, 66.74 56⇑ *e*P **P** **23 50 29.4 +0.4**
comp=Z,865nm,1.3s
VPORT *e*S S 23 59 29.7 +9.1
VPORT Vila do Porto, 66.74 56 *e*LR LR 00 10 41.9
comp=Z,264µm,21.4s
RIB01 Linhares ES 66.75 120 *e*P **P** **23 50 27.3 -1.9**
PSMN Pico do Norte, 66.79 56⇑ *e*P **P** **23 50 29.2 -0.1**
comp=Z,1µm,1.8s
PSMN *e*S **S** **23 59 29.7 +8.5**
PSMN Pico do Norte, 66.79 56 *e*LR LR 00 10 43.9
comp=Z,264µm,21.4s
SPIA Saint Paul Isl 66.83 326 P **P** **23 50 28.7 -0.5**
baz=95
SPIA S **S** **23 59 19.5 -1.5**
baz=95
CAM01 Campos-RJ 66.92 123 *e*P **P** **23 50 28.7 -1.6**
TNA Tin City 66.98 335 P **P** **23 50 30.2 +0.2**
baz=101,SNR=25
TNA S **S** **23 59 26.8 +4.3**
baz=101
ALF01 Guarapari-ES 67.09 121 *e*P **P** **23 50 29.5 -1.9**
AY03 Cochrane 67.27 162 IAmb IAmb 23 50 42.2
comp=Z,318nm,1.6s
ABR01 Abrolhos, BA 67.56 118 *e*P **P** **23 50 33.2 -1.2**
JOHN Johnston Islan 68.26 282 P **P** **23 50 38.7 -0.2**
JOHN Johnston Islan 68.26 282 P P 23 50 43.8 +4.9
GAMB Gambell 68.30 333 P **P** **23 50 38.6 +0.3**
baz=97,SNR=6.3
GAMB S **S** **23 59 43.4 +5.1**
baz=97
ATKA Atka Island 68.86 320 P P **23 50 44.4 +2.4**
SATA Santo Ant£o 69.20 78 *e*P **P** **23 50 44.3 -0.7**
SATA *e* 23 53 15.6
SATA *i*S **S** **23 59 55.0 +4.1**
SATA *i* 00 04 10.2
SATA *i* 00 07 18.1
SAAJ Santo Ant£o 69.41 78 *e*P **P** **23 50 45.6 -0.6**
SAAJ *e* 23 53 03.3
SAAJ *i*S **S** **23 59 58.0 +4.7**
SAAJ *i* 00 04 08.9
SVMA Madeiral 69.56 78 *e*P **P** **23 50 45.5 -1.6**
SVMA *e* 23 53 17.4
SVMA *e*S **S** **23 59 51.2 -3.6**
SVMA *i* 00 04 12.5
SVMA *e* 00 07 50.4
BORG Borgarnes 69.63 26 LR LR 00 23 49.3
comp=Z,145µm,18.7s,baz=275,slow=38
SCO Scoresbysund 70.02 20 *i*P **P** **23 50 48.6 -0.3**
SCO IAmb IAmb 23 51 05.2
comp=Z,1µm,2.0s
BCCH Brava--Cachaco 70.18 80 *e*P **P** **23 50 50.1 -0.9**
BCCH *e* 23 53 22.2
BCCH *e*S **S** **00 00 05.7 +3.3**
ADK Adak 70.40 320 P **P** **23 50 50.5 -1.0**
ADK IAmb IAmb 23 50 57.9
comp=Z,328nm,0.9s
ADK Adak 70.40 320 P **P** **23 50 53.5 +2.0**
ADK Adak 70.40 320 ⇑P **P** **23 50 50.7 -0.8**
ADK ⇓P **P** **23 50 53.6 +2.0**
ADK Adak 70.40 320 P **P** **23 50 50.5 -1.0**
ADK pmax pmax
comp=Z,328nm,0.9s
FGPP Fogo 70.48 80 *e*P **P** **23 50 51.6 -1.3**
FGPP *e* 23 53 25.6
FGPP *i*S **S** **00 00 08.8 +2.7**
FGAF Fogo 70.48 80 *e*P **P** **23 50 51.8 -1.0**
FGAF *e* 23 53 25.9
FGAF *i*S **S** **00 00 09.6 +3.7**
STAG Santiago 71.02 79 *e*P **P** **23 50 55.6 -0.4**
STAG *e* 23 53 27.9
STAG *i*S **S** **00 00 14.1 +2.1**
STAG *i* 00 04 44.1
STAG *e* 00 08 22.2
SACV Santiago Islan 71.18 79 P **P** **23 50 55.4 -1.6**
SACV pP **sP** **23 51 04.0 -0.3**
RAR Rarotonga 71.21 240 P P 23 51 03.3 +6.4
RAR Rarotonga 71.21 240 LR LR 00 13 36.0
comp=Z,46µm,18.4s,baz=48,slow=28
MIDW Midway 73.33 295 P **P** **23 51 09.1 -0.5**
MIDW IAmb IAmb 23 51 20.0
comp=Z,1µm,1.2s
MIDW Midway 73.33 295 P **P** **23 51 12.6 +3.0**
PMOZ Porto Moniz, M 73.67 60 *e*P **P** **23 51 11.0 -0.7**
comp=Z,679nm,2.0s
PMOZ Porto Moniz, M 73.67 60 *e*PP **PP** **23 53 57.0 +1.1**
PMOZ *e*S S 00 00 59.4 +17
PMOZ *e*LQ LQ 00 10 24.5
PMOZ *e*LR LR 00 13 01.8
comp=Z,242µm,22.0s
PMOZ Porto Moniz, M 73.67 60 P **P** **23 51 10.9 -0.7**
PMAR Madeira 73.92 60 *e*P **P** **23 51 11.5 -1.8**
comp=Z,787nm,1.4s
PMAR Madeira 73.92 60 *e*PP **PP** **23 53 58.3 +0.1**

PMPST **Porto Santo, M** 74.35 60 *e*P P 23 51 14.4 -1.1
comp=Z,863nm,1.9s
PMPST **Porto Santo, M** 74.35 60 *e*PP PP 23 54 04.8 +3.3
JMI Jan Mayen 74.42 20 *e*P P 23 51 14.9 -0.2
JMI IVmB_BB 23 51 31.7
comp=Z,20µm,4.0s
JMI *e*PP PP 23 53 59.0 -2.1
JMI *e*S S 00 00 47.6 -1.3
JMI IVMs_BB IVMs_BB 00 26 44.9
comp=Z,57µm,16.8s
JMIC Jan Mayen 74.49 20 *e*P P 23 51 15.9 +0.4
JMIC *e*pP sP 23 51 24.2 +1.3
JMIC IVmB_BB 23 51 27.8
comp=Z,15µm,3.8s
JMIC *e*PP PP 23 54 02.0 +0.2
JMIC *e*S S 00 00 48.4 -1.3
JMIC *e*SS SS 00 05 34.3 -1.5
JMIC IVMs_BB IVMs_BB 00 26 45.8
comp=Z,57µm,18.6s
JMIC Jan Mayen 74.49 20 LR LR 00 27 08.1
comp=Z,140µm,18.3s,baz=271,slow=38
USHA Ushuaia 75.21 163 LR LR 00 18 17.0
comp=Z,144µm,20.4s,baz=334,slow=31
VAL Valentia 75.89 40 P P 23 51 23.8 -0.2
VAL Valentia 75.89 40 P P 23 51 23.6 -0.4
VAL Valentia 75.89 40 P P 23 51 24.2 +0.2
VAL pmax pmax
comp=Z,493nm,1.2s
EOSO Osorio 75.91 65 P P 23 51 25.3 +0.6
EFI East Falkland 76.11 156 *i* P P 23 51 27.0 +1.9
EFI pmax pmax
comp=Z,465nm,2.0s
IGLA Glengowla, Co 76.20 38 P P 23 51 25.0 -0.7
IGLA Glengowla, Co 76.20 38 *e*P P 23 51 25.9 +0.2
LEWI Lewis, Hebride 76.83 33 *e*P P 23 51 30.8 +1.5
LEWI IAMs_20 IAMs_20 00 23 07.5
comp=Z,271µm,21.8s
BILL Bilibino 77.13 337 P P 23 51 30.2 -0.6
BILL IAmb IAmb 23 51 45.1
comp=Z,1µm,1.7s
BILL IAMs_20 IAMs_20 00 29 10.4
comp=Z,202µm,18.0s
BILL Bilibino 77.13 337 *i* P P 23 51 30.4 -0.4
BILL pmax pmax
comp=Z,669nm,1.7s
KPL Plockton 77.62 34 *e*P P 23 51 34.2 +0.6
KPL IAMs_20 IAMs_20 00 24 35.1
comp=Z,253µm,21.6s
LINV Loch Inver, As 77.71 33 *e*P P 23 51 35.8 +1.7
LINV IAMs_20 IAMs_20 00 23 44.1
comp=Z,243µm,22.0s
CLGH Cloghs, Cushen 77.80 36 *e*P P 23 51 36.2 +1.5
CLGH IAMs_20 IAMs_20 00 28 44.0
comp=Z,219µm,18.7s
KBS Kingsbay 77.80 11 IAMs_20 IAMs_20 00 27 51.5
comp=Z,211µm,20.0s
KBS Kingsbay 77.80 11 *e*P P 23 51 34.2 -0.1
KBS *e*pP PcP 23 51 43.3 -0.9
KBS *e*PP PP 23 54 30.1 +0.6
KBS *e*S S 00 01 24.4 -1.5
KBS *e*SS SS 00 06 24.6 -1.0
KBS IVMs_BB IVMs_BB 00 27 40.1
comp=Z,67µm,20.2s
KBS Kingsbay 77.80 11 P P 23 51 35.3 +0.9
KBS pmax pmax
comp=Z,7µm,3.0s
KBS MLR MLR
comp=Z,211µm,20.0s
KBS Kingsbay 77.80 11 *i* P P 23 51 35.2 +0.9
ILTH Belurgan, Co L 77.87 37 P P 23 51 36.8 +1.7
ILTH Belurgan, Co L 77.87 37 *e*P P 23 51 35.7 +0.6
ILTH *e* 00 01 32.8
BBTS Babate 77.91 78 LR LR 00 20 17.1
comp=Z,157µm,21.9s,baz=170,slow=32
IWEX Carrickbyrne, 77.93 39 P P 23 51 35.1 -0.4
IWEX Carrickbyrne, 77.93 39 *e*P P 23 51 37.0 +1.6
LAWE Loch Awe, Argy 77.97 35 *e*P P 23 51 36.3 +0.7
LAWE IAMs_20 IAMs_20 00 23 53.7
comp=Z,275µm,23.3s
DSB Dublin 78.00 38 IAMs_20 IAMs_20 00 26 47.7
comp=Z,191µm,20.0s
DSB Dublin 78.00 38 P P 23 51 37.1 +1.2
DSB Dublin 78.00 38 P P 23 51 34.2 -1.6
BIGH Upper Bighouse 78.30 32 *e*P P 23 51 39.8 +2.4
BIGH IAMs_20 IAMs_20 00 24 24.9
comp=Z,266µm,22.1s
PGBU Glenifferbraes 78.56 35 *e*P P 23 51 40.5 +1.6
PGBU IAMs_20 IAMs_20 00 23 57.6
comp=Z,214µm,22.8s
GAL1 Galloway 78.63 36 *e*P P 23 51 40.7 +1.3
INVG Invergeldie, C 78.67 34 *e*P P 23 51 40.9 +1.3
INVG *e* 00 01 37.4
INVG IAMs_20 IAMs_20 00 24 27.1
comp=Z,306µm,22.8s
MCD Coleburn Disti 78.84 33 *e*P P 23 51 42.0 +1.6
IOMK Kirk Michael 78.84 37 *e*P P 23 51 41.8 +1.3
IOMK IAMs_20 IAMs_20 00 29 25.1
comp=Z,329µm,18.2s
NEWG New Galloway 78.85 36 *e*P P 23 51 41.3 +0.8
PMAFR Mafra 78.88 53 *e*P P 23 51 39.8 -1.3
comp=Z,1µm,1.3s
PMAFR Mafra 78.88 53 *e*PP PP 23 54 45.4 +5.9
PMAFR Mafra 78.88 53 P P 23 51 40.0 -1.0
SPA0 Spitsbergen Ar 78.92 11 *e*P P 23 51 40.1 -0.5
SPA0 IVmBBB 23 51 49.9
comp=Z,17µm,7.9s
SPA0 *e*S S 00 01 36.3 -1.7
SPA0 *e*SS SS 00 06 41.4 -1.0
SPA0 IVMs_BB IVMs_BB 00 28 36.4
comp=Z,101µm,19.8s
SPITS Spitsbergen Ar 78.92 11 P P 23 51 40.5 0.0
comp=Z,12nm,0.7s,baz=211,slow=1.0,SNR=15
SPITS LR LR 00 28 48.6
comp=Z,305nm,21.0s,baz=264,slow=38
comp=Z,12nm,0.7s
PTO Porto 78.94 50 *e*P P 23 51 40.4 -0.9
PGAV Gavieira, Arco 79.01 49 *e*P P 23 51 41.1 -0.7
comp=Z,671nm,2.2s
PGAV Gavieira, Arco 79.01 49 *e*PP PP 23 54 46.9 +6.3
PGAV *e*S S 00 01 47.0 +6.6
PGAV Gavieira, Arco 79.01 49 *e*LQ LQ 00 13 29.5
PGAV *e*LR LR 00 15 57.4
comp=Z,104µm,20.0s
LIS Lisbon 79.03 53 *e*P P 23 51 41.9 0.0
LIS IAMs_20 IAMs_20 00 19 38.5
comp=Z,201µm,24.6s
LIS Lisbon 79.03 53 *e*P P 23 51 41.9 0.0
NIUE Niue 79.06 246 pP 23 51 49.6 +2.0
NIUE Niue 79.06 246 P P 23 51 47.8 +5.5
WPS Cemaes, Angles 79.07 38 *e*P P 23 51 43.2 +1.5
WPS IAMs_20 IAMs_20 00 27 23.9
comp=Z,163µm,19.1s
PSBE So Bento 79.13 52 *e*P P 23 51 42.2 -0.3
comp=Z,840nm,1.7s
PSBE So Bento 79.13 52 *e*PP PP 23 54 58.3 +17
WLF1 Llynfaes 79.15 38 *e*P P 23 51 42.9 +0.7
WLF1 IAMs_20 IAMs_20 00 27 16.4
comp=Z,352µm,19.4s
RSBS Rosebush, Pemb 79.24 39 *e*P P 23 51 43.2 +0.5
RSBS IAMs_20 IAMs_20 00 24 54.4
comp=Z,184µm,24.1s
PCAS Casmilo, Conde 79.24 51 *e*P P 23 51 43.3 +0.3
comp=Z,2µm,1.4s
PCAS Casmilo, Conde 79.24 51 *e*PP PP 23 54 44.2 +1.7
EDI Edinburgh 79.25 35 *e*P P 23 51 42.6 -0.1
EDI IAMs_20 IAMs_20 00 24 31.4
comp=Z,236µm,22.6s
COI Coimbra 79.27 51 *e*P P 23 51 43.1 -0.1
comp=Z,1µm,1.7s
COI Coimbra 79.27 51 *e*PP PP 23 54 32.7 -10
COI Coimbra 79.27 51 IAmb IAmb 23 51 56.8
comp=Z,952nm,1.4s
COI IAMs_20 IAMs_20 00 25 15.8
comp=Z,180µm,21.0s
HSPB Hornsund (broa 79.28 12 *e*P P 23 51 45.0 +2.4
HSPB *e*PP PP 23 54 38.8 -3.1
HSPB *e*S S 00 01 40.8 -1.1
HSPB *e*L L 00 26 00.9
comp=Z,297µm,25.6s
LRW Lerwick 79.30 30 *e*P P 23 51 44.1 +1.3
LRW IAMs_20 IAMs_20 00 26 49.0
comp=Z,196µm,20.1s
CCA1 Carnmenellis 79.33 41 *e*P P 23 51 43.7 +0.4
CCA1 IAMs_20 IAMs_20 00 27 32.0
comp=Z,148µm,19.7s
ESK Eskdalemuir 79.38 35 P P 23 51 43.2 -0.2
ESK Eskdalemuir 79.38 35 *e*P P 23 51 43.8 +0.3
ESK *e* 00 01 42.3
ESK IAMs_20 IAMs_20 00 24 19.7
comp=Z,197µm,21.7s
ESK Eskdalemuir 79.38 35 P P 23 51 43.2 -0.2
ESK pmax pmax
comp=Z,245nm,1.0s
DRUM Mains of Drumt 79.40 34 *e*P P 23 51 43.9 +0.4
DRUM IAMs_20 IAMs_20 00 25 25.4
comp=Z,324µm,21.9s
EKA Eskdalemuir Ar 79.40 35 P P 23 51 42.0 -1.5
EKA Eskdalemuir Ar 79.40 35 P P 23 51 42.0 -1.5
comp=Z,22nm,0.8s,baz=284,slow=5.1,SNR=29
comp=Z,22nm,0.8s
POLO Lamas de Olo 79.48 50 *e*P P 23 51 43.2 -1.2
comp=Z,287nm,1.3s
POLO Lamas de Olo 79.48 50 *e*PP PP 23 54 34.1 -11
PVIS Viseu 79.55 51 *e*P P 23 51 43.6 -1.2
PVIS Viseu 79.55 51 *e*PP PP 23 54 40.7 -4.4
PVRL Vila Real 79.56 50 *e*P P 23 51 43.7 -1.1
comp=Z,510nm,1.4s
PVRL Vila Real 79.56 50 *e*PP PP 23 54 48.5 +3.3
KESW Keswick, Cumbr 79.60 36 *e*P P 23 51 46.6 +1.9
KESW IAMs_20 IAMs_20 00 29 47.7
comp=Z,219µm,18.5s
PTEO Sao Teotonio 79.61 54 *e*P P 23 51 43.9 -1.1
comp=Z,1µm,1.4s
PFVI Vila Bisbo 79.62 54 *e*P P 23 51 44.5 -0.6
comp=Z,1µm,1.5s
PFVI Vila Bisbo 79.62 54 *e*PP PP 23 54 46.1 +0.4
PFVI Vila Bisbo 79.62 54 IAmb IAmb 23 51 54.6
comp=Z,1µm,1.2s
PFVI Vila Bisbo 79.62 54 P P 23 51 45.0 -0.1
PNCL Nicolau / Gran 79.64 53 *e*P P 23 51 43.2 -2.0
comp=Z,368nm,1.2s
PNCL Nicolau / Gran 79.64 53 *e*PP PP 23 54 47.0 +1.2
PNCL Nicolau / Gran 79.64 53 P P 23 51 44.6 -0.6
PMTG Montargil 79.66 52 *e*P P 23 51 44.4 -0.9
comp=Z,900nm,1.3s
LLW Llanuwchllyn 79.68 38 *e*P P 23 51 46.3 +1.2
MORF Marmelete 79.72 54 *e*P P 23 51 45.2 -0.5
comp=Z,492nm,1.6s
MORF Marmelete 79.72 54 IAmb IAmb 23 51 55.0
comp=Z,436nm,1.1s
MORF Marmelete 79.72 54 *e*P P 23 51 45.7 0.0
MORF *e*PP PP 23 54 45.1 -1.5
MORF IAMs_20 IAMs_20 00 22 50.6
comp=Z,227µm,16.7s
MORF Marmelete 79.72 54 *e*P P 23 51 45.7 0.0
MORF *e* 23 54 45.1
MTE Manteigas 79.88 51 *e*P P 23 51 46.3 -0.3
comp=Z,731nm,1.3s
MTE Manteigas 79.88 51 *e*PP PP 23 54 47.8 -0.1
MTE *e*S S 00 01 52.8 +3.2
MTE Manteigas 79.88 51 *e*LQ LQ 00 13 22.8
MTE *e*LR LR 00 16 20.8
comp=Z,100µm,24.0s
MTE Manteigas 79.88 51 IAmb IAmb 23 51 55.5
comp=Z,484nm,1.1s
MTE IAMs_20 IAMs_20 00 25 44.8
comp=Z,120µm,20.0s
SBD1 Bryn Du 79.91 38 *e*P P 23 51 44.7 -1.7
MESJ Messejana 79.94 54 *e*P P 23 51 46.5 -0.3
comp=Z,638nm,1.6s
MESJ Messejana 79.94 54 *e*PP PP 23 54 49.9 +1.6
MESJ Messejana 79.94 54 IAmb IAmb 23 52 00.5
comp=Z,1µm,1.7s
MESJ Messejana 79.94 54 *e*P P 23 51 46.9 +0.1
MESJ *e*PP PP 23 54 47.0 -1.4
MESJ IAMs_20 IAMs_20 00 24 41.0
comp=Z,131µm,17.9s
MESJ Messejana 79.94 54 *e*P P 23 51 46.9 +0.1
MESJ *e* 23 54 47.0
EVO Evora 79.94 53 *e*P P 23 51 45.9 -0.9
comp=Z,602nm,1.4s
EVO Evora 79.94 53 *e*PP PP 23 54 48.3 -0.1
EVO Evora 79.94 53 P P 23 51 46.0 -0.8
FOEL Foel Wylfa 79.94 38 *e*P P 23 51 46.9 +0.3
FOEL IAMs_20 IAMs_20 00 27 40.2
comp=Z,212µm,20.1s
PCBR Castelo Branco 80.06 51 *e*P P 23 51 47.0 -0.4
comp=Z,1µm,1.3s
DYA Yadsworthy 80.08 40 *e*P P 23 51 48.9 +1.6
DYA *e* 00 02 03.3
DYA IAMs_20 IAMs_20 00 26 05.4
comp=Z,140µm,21.9s
MVO Moncorvo 80.09 50 *e*P P 23 51 46.5 -1.2
comp=Z,808nm,1.4s
MVO Moncorvo 80.09 50 *e*PP PP 23 54 49.9 +0.3
MVO *e*S S 00 01 57.0 +5.2
MVO Moncorvo 80.09 50 *e*LQ LQ 00 12 39.6
MVO *e*LR LR 00 16 44.2
comp=Z,86µm,20.0s
PCVE Castro Verde 80.12 54 *e*P P 23 51 47.3 -0.5
comp=Z,623nm,1.5s
PCVE Castro Verde 80.12 54 *e*PP PP 23 54 51.2 +1.3
PCVE Castro Verde 80.12 54 P P 23 51 47.1 -0.7
ECAL Calabor 80.13 49 P P 23 51 47.1 -0.8
PBRG Braganca 80.16 49 *e*P P 23 51 46.2 -1.8
comp=Z,630nm,1.7s
PBRG Braganca 80.16 49 *e*PP PP 23 54 48.6 -1.5
PBEJ Beja 80.17 53 *e*P P 23 51 47.3 -0.8
comp=Z,617nm,1.4s
PBEJ Beja 80.17 53 *e*PP PP 23 54 53.4 +3.1
EDMD Edmundbyers 80.19 36 *e*P P 23 51 49.4 +1.5
EDMD IAMs_20 IAMs_20 00 30 15.3
comp=Z,184µm,19.7s
PESTR Estremoz 80.19 52 *e*P P 23 51 47.9 -0.3
comp=Z,605nm,1.3s
PESTR Estremoz 80.19 52 *e*PP PP 23 54 52.1 +1.7
PESTR Estremoz 80.19 52 IAmb IAmb 23 51 57.1
comp=Z,456nm,1.1s
PESTR Estremoz 80.19 52 P P 23 51 47.1 -1.1
PMRV Marv??o 80.21 52 *e*P P 23 51 47.5 -0.8
comp=Z,877nm,1.6s
PMRV Marv??o 80.21 52 *e*PP PP 23 54 49.0 -1.6
PMRV *e*S S 00 01 54.8 +1.7
PMRV Marv??o 80.21 52 *e*LR LR 00 16 32.5
comp=Z,180µm,22.0s
MCH1 Michaelchurch 80.28 39 *e*P P 23 51 50.0 +1.7
MCH1 IAMs_20 IAMs_20 00 24 13.4
comp=Z,181µm,23.8s
PBDV Barranco-do-Ve 80.29 54 *e*P P 23 51 47.6 -1.2
comp=Z,937nm,1.4s
PBDV Barranco-do-Ve 80.29 54 *e*PP PP 23 54 53.4 +2.0
PBDV Barranco-do-Ve 80.29 54 P P 23 51 48.6 -0.2
PVAQ Vaqueiros 80.42 54 *e*P P 23 51 48.8 -0.7
comp=Z,74nm,1.4s
PVAQ Vaqueiros 80.42 54 *e*S S 00 02 09.7 +14
PVAQ Vaqueiros 80.42 54 P P 23 51 49.0 -0.5
MONM Monmouth 80.43 39 *e*P P 23 51 51.1 +1.9
MONM IAMs_20 IAMs_20 00 24 17.7
comp=Z,209µm,23.0s
STNC Stoke 80.48 37 *e*P P 23 51 50.0 +0.5
STNC IAMs_20 IAMs_20 00 28 07.8
comp=Z,166µm,19.7s
EGRO El Granado 80.57 54 P P 23 51 49.0 -1.3
OLDB Oldbury-Upon-S 80.63 39 *e*P P 23 51 51.5 +1.3
OLDB IAMs_20 IAMs_20 00 24 10.5
comp=Z,224µm,22.6s
EBAD Badajoz 80.65 52 P P 23 51 49.0 -1.7
LBWR Ladybower, Pea 80.68 37 *e*P P 23 51 52.6 +2.0
LBWR IAMs_20 IAMs_20 00 33 23.6
comp=Z,124µm,17.5s
PBAR Barrancos 80.77 53 *e*P P 23 51 49.2 -2.1
comp=Z,718nm,1.3s
PBAR Barrancos 80.77 53 *e*PP PP 23 54 56.5 +1.3
PBAR Barrancos 80.77 53 P P 23 51 49.0 -2.3
STRD Stroud 80.83 39 *e*P P 23 51 52.8 +1.4
STRD IAMs_20 IAMs_20 00 24 28.3
comp=Z,235µm,23.1s
GDLE Glaisdale, N Y 80.94 36 *e*P P 23 51 51.6 -0.2
CWF Charnwood Fore 81.10 38 *e*P P 23 51 54.5 +1.8
CWF IAMs_20 IAMs_20 00 28 25.9
comp=Z,166µm,19.9s
SWN1 Swindon 81.12 39 *e*P P 23 51 54.4 +1.5
SWN1 IAMs_20 IAMs_20 00 24 35.4
comp=Z,240µm,22.8s
EMIN Mina Concepcio 81.14 53 P P 23 51 53.4 +0.1
BJO1 Bjornoya 81.23 14 *e*P P 23 51 53.7 +0.7
BJO1 *e*pP sP 23 52 01.9 +1.5
BJO1 IVmBBB 23 52 03.1
comp=Z,21µm,6.3s
BJO1 *e*PP PP 23 55 01.7 +3.7
BJO1 *e*ScS S 00 02 17.5 +15
BJO1 *e*SS SS 00 07 14.7 -2.3
BJO1 IVMs_BB IVMs_BB 00 27 13.2
comp=Z,68µm,22.7s
ARNO Arenosillo 81.26 54 P P 23 51 54.2 +0.3
HOPEN Hopen 81.41 11 *e*P P 23 51 53.9 -0.1
HOPEN *e*pP sP 23 52 02.6 +1.2
HOPEN IVmB_BB 23 52 03.6
comp=Z,17µm,4.7s
HOPEN *e*PP PP 23 54 57.0 -2.4
HOPEN *e*SKSac SKSac 00 02 10.6 -1.9
HOPEN *e*SS SS 00 07 20.4 +0.8
HOPEN IVMs_BB IVMs_BB 00 27 16.6
comp=Z,59µm,27.7s
LMK Market Rasen 81.47 37 *e*P P 23 51 55.3 +0.6
LMK IAMs_20 IAMs_20 00 34 48.9
comp=Z,121µm,17.4s
JSA Saint Aubin 81.49 41 *e*P P 23 51 56.9 +2.0
JSA *e* 00 02 13.3
JSA IAMs_20 IAMs_20 00 32 07.2
comp=Z,164µm,18.5s
WOL Wolverton 81.52 39 *e*P P 23 51 55.8 +0.8
AVE Averroes 81.63 58 IAmb IAmb 23 52 05.2
comp=Z,753nm,1.1s
AVE Averroes 81.63 58 P P 23 51 55.2 -0.7
FOO Floro 81.80 28 *e*P P 23 51 56.9 +0.6
FOO *e*pP sP 23 52 05.2 +1.6
FOO IVmBBB 23 52 06.1
comp=Z,16µm,7.0s
FOO *e*PP PP 23 55 02.7 -0.3
FOO *e*S S 00 02 05.5 -3.1
FOO *e*SS SS 00 07 23.8 -2.2
FOO IVMs_BB IVMs_BB 00 25 40.8
comp=Z,36µm,26.3s
SFS San Fernando 81.82 54 P P 23 51 57.1 +0.2
SUE Sulen 81.85 29 *e*P P 23 51 56.8 +0.3
SUE *e*pP sP 23 52 05.0 +1.1
SUE IVmB_BB 23 52 06.4
comp=Z,21µm,5.4s
SUE *e*PP PP 23 55 02.4 -1.0
SUE *e*S S 00 02 06.5 -2.6
SUE *e*ScS ScS 00 02 24.6 -1.2
SUE *e*SS SS 00 07 24.8 -1.9
SUE IVMs_BB IVMs_BB 00 26 35.5
comp=Z,62µm,22.4s
RTC Rabat Centre 81.91 57 P P 23 51 55.5 -1.9
ESPR Espera 81.99 54 P P 23 51 57.6 -0.2
ECAB El Cabril 82.03 53 P P 23 51 56.8 -1.3
WACR West Acre 82.23 37 *e*P P 23 51 59.1 +0.4
WACR IAMs_20 IAMs_20 00 27 51.4
comp=Z,146µm,22.3s
ASK Askoy 82.24 29 *e*P P 23 51 59.3 +0.7
ASK *e*PP PP 23 55 06.5 -0.2
ASK *e*S S 00 02 11.2 -2.0
ASK IVMs_BB IVMs_BB 00 26 49.4
comp=Z,51µm,22.7s
TIO Tiouine 82.33 60 P P 23 51 59.1 -0.8
BER Bergen 82.33 29 *e*P P 23 52 00.2 +1.2
BER *e*PP PP 23 55 06.9 -0.5
BER *e*S S 00 02 13.7 -0.5
BER IVMs_BB IVMs_BB 00 26 36.4
comp=Z,52µm,25.3s
HYA Hoyanger 82.46 28 *e*P P 23 51 58.4 -1.3
HYA IVmBBB 23 52 13.4
comp=Z,21µm,6.6s
HYA *e* 23 55 10.1
HYA *e*S S 00 02 14.5 -0.9
HYA *e*SS SS 00 07 35.0 -0.9
HYA IVMs_BB IVMs_BB 00 28 30.3
comp=Z,44µm,20.0s
PAB San Pablo 82.47 51 P P 23 52 00.1 -0.3
PAB San Pablo 82.47 51 IAMs_20 IAMs_20 00 23 32.4
comp=Z,161µm,22.0s
PAB San Pablo 82.47 51 P P 23 52 00.1 -0.3
PAB pmax pmax
comp=Z,2µm,1.7s
AKN Aaknes 82.47 27 *e*P P 23 51 59.5 -0.3
AKN IVmBBB 23 52 09.7
comp=Z,19µm,7.9s
AKN *e*S S 00 02 13.8 -1.9
AKN *e*SS SS 00 07 34.6 -1.5
AKN IVMs_BB IVMs_BB 00 27 02.2
comp=Z,41µm,21.4s
MOL Molde 82.57 27 *e*P P 23 52 00.8 +0.5
MOL *e*pP sP 23 52 08.9 +1.2
MOL IVmBBB 23 52 10.4
comp=Z,18µm,6.6s
MOL *e*S S 00 02 15.6 -0.9
MOL *e*SS SS 00 07 35.1 -2.3
MOL IVMs_BB IVMs_BB 00 29 58.5
comp=Z,44µm,21.1s
HMNX Herstmonceux 82.59 39 *e*P P 23 52 02.0 +1.4
HMNX IAMs_20 IAMs_20 00 27 51.7
comp=Z,290µm,21.7s
ECEU Ceuta 82.61 55 P P 23 52 01.1 0.0
CEU Ceuta 82.61 55 P P 23 52 01.1 0.0
ELMS Elmsett, Ipswi 82.63 38 *e*P P 23 52 02.3 +1.6
ELMS IAMs_20 IAMs_20 00 31 48.2
comp=Z,206µm,17.7s
EADA Adamuz 82.65 53 P P 23 52 00.6 -0.7
LOF Lofoten 82.66 21 *e*P P 23 52 01.3 +0.6
LOF *e*pP sP 23 52 09.3 +1.3
LOF IVmBBB 23 52 10.3
comp=Z,18µm,4.1s
LOF *e*S S 00 02 16.3 -1.0
LOF *e*SS SS 00 07 36.9 -1.7
LOF IVMs_BB IVMs_BB 00 28 37.0
comp=Z,67µm,21.9s
KMY Karmoy 82.69 30 *e*P P 23 52 00.1 -0.8
KMY *e*pP sP 23 52 09.2 +0.8
KMY IVmBBB 23 52 10.4
comp=Z,17µm,6.7s
KMY *e*PP PP 23 55 09.6 -0.8
KMY *e*S S 00 02 15.2 -2.6
KMY IVMs_BB IVMs_BB 00 25 07.3
comp=Z,55µm,25.4s
ESDC Sonseca Array 82.72 51 P P 23 52 00.7 -1.0
ESDC IAmb IAmb 23 52 11.0
comp=Z,441nm,1.4s
ESDC Sonseca Array 82.72 51 P P 23 52 00.3 -1.4
comp=Z,38nm,1.0s,baz=297,slow=5.1,SNR=59
ESDC PKPPKP 00 18 30.6
comp=Z,0.8nm,0.9s,baz=64,slow=2.7,SNR=3.4
ESDC LR LR 00 24 03.4
comp=Z,138µm,21.9s,baz=275,slow=32
comp=Z,38nm,1.0s
EMIJ Mijas 82.91 54 P P 23 52 02.5 -0.2
ELSH Elham, Standar 82.99 39 *e*P P 23 52 03.8 +1.1
ELSH IAMs_20 IAMs_20 00 29 27.8
comp=Z,227µm,20.4s
UCM Universidad Co 83.09 50 P P 23 52 02.5 -1.1
ODD1 Odda 83.11 29 *e*P P 23 52 03.9 +0.7
ODD1 *e*pP sP 23 52 11.9 +1.3
ODD1 IVmB_BB 23 52 13.2
comp=Z,19µm,5.1s
ODD1 *e*PP PP 23 55 12.9 -1.0
ODD1 *e*S S 00 02 19.5 -2.7
ODD1 *e*ScS ScS 00 02 35.8 -0.6
ODD1 *e*SS SS 00 07 45.2 -0.4
ODD1 IVMs_BB IVMs_BB 00 26 47.2
comp=Z,44µm,25.1s
BLS5 Blasjo 83.19 30 *e*P P 23 52 03.9 +0.3
BLS5 IVmB_BB 23 52 13.6
comp=Z,22µm,8.0s
BLS5 *e*PP PP 23 55 13.6 -1.0
BLS5 *e*S S 00 02 21.1 -2.0
BLS5 *e*SS SS 00 07 46.1 -0.8
BLS5 IVMs_BB IVMs_BB 00 26 35.6
comp=Z,56µm,23.5s
KONS Konsvik 83.22 22 *e*P P 23 52 04.4 +0.8
STOK Stokkvaagen 83.26 22 *e*P P 23 52 03.9 +0.1
STOK IVmBBB 23 52 13.9
comp=Z,22µm,4.1s
STOK *e*PP PP 23 55 14.0 -0.9
STOK *e*S S 00 02 21.6 -1.8
STOK *e*SS SS 00 07 45.8 -1.5
STOK IVMs_BB IVMs_BB 00 31 19.4
comp=Z,45µm,18.6s
STEI Steigen 83.33 20 *e*P P 23 52 04.8 +0.7
STEI *e*pP sP 23 52 12.5 +1.0
STEI IVmB_BB 23 52 13.9
comp=Z,20µm,6.2s
STEI *e*PP PP 23 55 14.9 -0.4

STEI eS S 00 02 23.2 -0.8
STEI eSS SS 00 07 47.9 -0.4
STEI IVMs_BB IVMs_BB 00 28 57.8
comp=Z,81µm,22.3s
DOMB Dombas 83.43 27 eP P **23 52 04.9 +0.1**
DOMB epP sP **23 52 13.5 +1.2**
DOMB IVmBBB 23 52 15.0
comp=Z,19µm,6.0s
DOMB ePP PP **23 55 14.9 -1.5**
DOMB eS S **00 02 23.5 -1.9**
DOMB eSS SS **00 07 49.7 -0.5**
DOMB IVMs_BB IVMs_BB 00 34 14.4
comp=Z,39µm,17.9s
TBLU Trondheim 83.46 26 eP P **23 52 05.2 +0.3**
TBLU IVmBBB 23 52 15.0
comp=Z,19µm,6.7s
TBLU ePP PP **23 55 15.8 -0.8**
TBLU eS S **00 02 24.3 -1.3**
TBLU eSS SS **00 07 49.2 -1.4**
TBLU IVMs_BB IVMs_BB 00 22 50.0
comp=Z,36µm,33.8s
MFF Saint Martin d 83.51 43 eP P **23 52 04.4 -1.1**
MFF pmax pmax
comp=Z,186nm,1.3s
FAUS Fauske 83.59 21 eP P **23 52 06.2 +0.7**
FAUS epP sP **23 52 14.2 +1.3**
FAUS IVmB_BB 23 52 18.8
comp=Z,16µm,7.1s
FAUS ePP PP **23 55 16.2 -1.3**
FAUS eS S **00 02 25.6 -1.2**
FAUS eSS SS **00 07 52.3 0.0**
FAUS IVMs_BB IVMs_BB 00 27 34.9
comp=Z,61µm,21.6s
SKAR Skarslia 83.60 28 eP P **23 52 06.2 +0.5**
SKAR epP sP **23 52 14.7 +1.5**
SKAR IVmB_BB 23 52 15.9
comp=Z,17µm,6.8s
SKAR ePP PP **23 55 17.7 -0.3**
SKAR eS S **00 02 25.6 -1.7**
SKAR eSS SS **00 07 51.2 -1.7**
SKAR IVMs_BB IVMs_BB 00 31 23.4
comp=Z,46µm,19.7s
NSS Namsos 83.63 24 eP P **23 52 05.7 0.0**
NSS IVmBBB 23 52 15.4
comp=Z,18µm,6.9s
NSS ePP PP **23 55 18.4 +0.5**
NSS eS S **00 02 24.3 -2.9**
NSS eSS SS **00 07 53.1 +0.2**
TRO Tromso 83.67 18 *i* P P **23 52 06.0 +0.2**
TRO epP sP **23 52 13.9 +0.6**
TRO IVmBBB 23 52 15.6
comp=Z,18µm,4.5s
TRO ePP PP **23 55 17.0 -1.2**
TRO eSKSac S **00 02 24.2 -3.3**
TRO eSS SS **00 07 52.1 -1.3**
TRO IVMs_BB IVMs_BB 00 30 09.0
comp=Z,40µm,20.6s
MOR8 Moi Rana 83.85 22 eP P **23 52 07.4 +0.5**
MOR8 epP sP **23 52 16.1 +1.8**
MOR8 IVmBBB 23 52 16.8
comp=Z,17µm,7.1s
MOR8 ePP PP **23 55 20.2 +0.4**
MOR8 eS SKSac **00 02 28.3 -0.8**
MOR8 eSS SS **00 07 54.5 -1.7**
MOR8 IVMs_BB IVMs_BB 00 27 05.2
comp=Z,63µm,23.9s
SNART Snartemo 83.95 31 eP P **23 52 08.0 +0.5**
SNART Snartemo 83.95 31 *i* P P **23 52 07.2 -0.2**
MDT Midelt 84.03 58 LR LR 00 25 04.7
comp=Z,284µm,21.0s,baz=309,slow=33
JETT Jettan, Norway 84.16 18 eP P **23 52 09.2 +0.7**
JETT IVmBBB 23 52 18.1
comp=Z,17µm,4.1s
JETT ePP PP **23 55 22.0 -0.2**
JETT eS SKSac **00 02 30.8 -0.2**
JETT eSS SS **00 07 59.9 -0.8**
JETT IVMs_BB IVMs_BB 00 26 16.5
comp=Z,39µm,26.6s
SEY Seymchan 84.22 334*c* *i* P P **23 52 08.7 -0.1**
SEY pmax pmax
comp=Z,436nm,1.6s
SEY Seymchan 84.22 334 S S **00 02 35.8 +2.6**
comp=Z,0.4nm,0.5s,baz=37,slow=23,SNR=1.0
SEY PKKPbc PKKPbc 00 10 21.2 -2.5
comp=Z,6.5nm,0.8s,baz=254,slow=6.0,SNR=9.7
SEY LR LR 00 32 29.2
comp=Z,172µm,20.7s,baz=57,slow=38
NC204 NORSAR Array S 84.47 27 IAmb IAmb 23 52 32.7
comp=Z,484nm,1.5s
HAMF Hammerfest 84.50 17 eP P **23 52 09.5 -0.5**
HAMF IVmB_BB 23 52 19.0
comp=Z,14µm,6.7s
HAMF ePP PP **23 55 25.6 +0.8**
HAMF eSKSac SKSac **00 02 31.3 -1.7**
HAMF eSS SS **00 08 04.6 -0.9**
HAMF IVMs_BB IVMs_BB 00 29 18.4
comp=Z,65µm,23.8s
NBO00 NORSAR Array S 84.58 28 IAmb IAmb 23 52 25.4
comp=Z,651nm,1.4s
KONO Kongsberg 84.60 29 P P **23 52 10.0 -0.8**
KONO IAmb IAmb 23 52 22.7
comp=Z,518nm,1.1s
KONO Kongsberg 84.60 29 IAMs_20 IAMs_20 00 30 51.4
comp=Z,150µm,20.0s
KONO Kongsberg 84.60 29 eP P **23 52 11.1 +0.3**
KONO IVmBBB 23 52 20.7
comp=Z,17µm,7.1s
KONO ePP PP **23 55 25.9 -0.1**
KONO eSKSac SKSac **00 02 31.1 -2.9**
KONO eSS SS **00 08 05.5 -1.9**
KONO IVMs_BB IVMs_BB 00 30 60.0
comp=Z,50µm,20.5s
KONO Kongsberg 84.60 29 P P **23 52 10.0 -0.8**
KONO pmax pmax
comp=Z,517nm,1.1s
KONO MLR MLR
comp=Z,150µm,20.0s
LFF La Frestale 84.60 45 eP P **23 52 10.3 -0.8**
LFF pmax pmax
comp=Z,92nm,0.8s
HOMB Homborsund 84.61 31 *i* P P **23 52 10.8 0.0**
HOMB IVmB_BB 23 52 20.6
comp=Z,20µm,7.5s
HOMB ePP PP **23 55 24.9 -1.1**
HOMB eSKSac SKSac **00 02 31.6 -2.5**
HOMB eSS SS **00 08 06.0 -1.7**
HOMB IVMs_BB IVMs_BB 00 30 29.2
comp=Z,64µm,19.5s
HOMB Homborsund 84.61 31 *i* P P **23 52 12.0 +1.2**
CLF Chambon-Foret 84.64 42 IAMs_20 IAMs_20 00 29 24.9
comp=Z,173µm,21.0s
NAO01 NORSAR Array S 84.70 28 IAmb IAmb 23 52 32.1
comp=Z,548nm,1.3s
NC303 NORSAR Array S 84.76 27 IAmb IAmb 23 52 29.4
comp=Z,660nm,1.8s
NB2 NORSAR Subarra 84.77 27 P P **23 52 12.2 +0.5**
comp=Z,1µm,2.0s,baz=295,slow=5.3
NB2 NORSAR Subarra 84.77 27 P P **23 52 12.2 +0.5**
baz=295,slow=5.3
NOA NORSAR Array B 84.77 27 P P **23 52 11.2 -0.5**
comp=Z,19nm,1.1s,baz=297,slow=5.2,SNR=39
NOA LR LR 00 29 05.9
comp=Z,98µm,21.9s,baz=290,slow=35
comp=Z,19nm,1.1s
NB201 NORSAR Array S 84.80 27 IAmb IAmb 23 52 26.4
comp=Z,573nm,1.3s
PMSA Palmer Station 84.90 166 LR LR 00 22 20.9
comp=Z,76µm,18.9s,baz=336,slow=30
PMSA Palmer Station 84.90 166 eP P **23 52 10.7 -1.3**
PET Petropavlovsk 84.93 324 P P **23 52 12.7 +0.1**
PET Petropavlovsk 84.93 324 P P **23 52 15.5 +2.9**
PET Petropavlovsk 84.93 324 eP P **23 52 14.6 +2.0**
PET *e* 23 55 31.9
PET eS S **00 02 40.2 -0.5**
PET ePS 00 03 35.2
PET ePPS PPS 00 03 53.9
PET pmax pmax
comp=Z,308nm,1.5s
PET pmax pmax
comp=Z,27µm,16.3s
PET pmax pmax
comp=Z,28µm,17.0s
PET pmax pmax
comp=Z,16µm,18.0s
PET smax smax
comp=E,39µm,20.8s
PET smax smax
comp=N,61µm,19.7s
PET smax smax
comp=N,50µm,12.3s
OSL Oslo 85.00 29 eP P **23 52 13.1 +0.3**
OSL IVmB_BB 23 52 22.6
comp=Z,18µm,7.2s
OSL ePP PP **23 55 29.7 +0.5**
OSL eSKSac SKSac **00 02 34.5 -2.1**
OSL eSS SS **00 08 12.6 -0.8**
OSL IVMs_BB IVMs_BB 00 32 03.6
comp=Z,49µm,20.3s
NC602 NORSAR Array S 85.04 28 IAmb IAmb 23 52 27.6
comp=Z,623nm,1.5s
NC602 NORSAR Array S 85.04 28 *i* P P **23 52 13.4 +0.4**
NC602 epP sP **23 52 21.8 +1.4**
NC602 IVmBBB 23 52 23.1
comp=Z,20µm,6.4s
NC602 ePP PP **23 55 28.8 -0.8**
NC602 eSKSac SKSac **00 02 32.7 -4.2**
NC602 eSS SS **00 08 10.8 -3.2**
NC602 IVMs_BB IVMs_BB 00 28 36.6
comp=Z,45µm,23.2s
KTK1 Kautokeino 85.30 18 eP P **23 52 12.6 -1.6**
KTK1 IVmBBB 23 52 23.1
comp=Z,12µm,7.8s
KTK1 ePP PP **23 55 32.5 +1.1**
KTK1 eSKSac SKSac **00 02 36.8 -1.5**
KTK1 eSS SS **00 08 16.8 -0.6**
KTK1 IVMs_BB IVMs_BB 00 35 27.7
comp=Z,31µm,18.6s
DOU Dourbes 85.42 39 *d*P P **23 52 14.5 -0.5**
comp=Z,113nm,1.1s
PEA0B Petropavlovsk- 85.44 324 IAmb IAmb 23 52 35.1
comp=Z,484nm,1.1s
PEA0B Petropavlovsk- 85.44 324*c* *i* P P **23 52 14.6 -0.6**
PETK Petropavlovsk- 85.44 324 P P **23 52 14.6 -0.6**
PETK Petropavlovsk- 85.44 324 P P **23 52 14.7 -0.5**
comp=Z,45nm,0.8s,baz=77,slow=9.8,SNR=19
PETK LR LR 00 30 07.3
comp=Z,64µm,20.2s,baz=54,slow=35
comp=Z,45nm,0.8s
BMRD Maredsous 85.45 39 *d*P P **23 52 14.4 -0.9**
comp=Z,186nm,1.4s
BMRD *d*SKiKP **SKiKP 00 01 04.2 +4.7**
CAF Calviac 85.50 45 eP P **23 52 15.8 +0.1**
CAF pmax pmax
comp=Z,496nm,1.8s
CART Cartagena 85.53 52 P P **23 52 13.7 -2.2**
CART pP **pP 23 52 22.1 +0.7**
CART IAmb IAmb 23 52 28.5
comp=Z,1µm,2.0s
CART IAMs_20 IAMs_20 00 28 47.5
comp=Z,134µm,20.0s
STRU Stroemstad 85.59 29 *i* P P **23 52 17.4 +1.7**
FUNA Funafuti 85.61 260 pP 23 52 23.5 +1.4
FUNA Funafuti 85.61 260 P P 23 52 22.8 +6.1
BGES Gesves 85.61 39 *d*P P **23 52 15.1 -1.0**
comp=Z,237nm,1.3s
MUD Monsted U'grnd 85.64 32 *i* P P **23 52 14.6 -1.5**
MUD IVmBBB 23 52 28.9
comp=Z,16µm,6.6s
MUD IAmb IAmb 23 52 30.8
comp=Z,396nm,1.5s
ARA0 ARCESS Array S 85.65 17 eP P **23 52 14.6 -1.3**
ARA0 IVmBBB 23 52 23.9
comp=Z,12µm,7.9s
ARA0 ePP PP **23 55 34.1 -0.2**
ARA0 eSKSac SKSac **00 02 38.4 -2.1**
ARA0 eScS ScS **00 02 56.1 -0.9**
ARA0 eSS SS **00 08 22.1 -0.4**
ARA0 IVMs_BB IVMs_BB 00 29 12.4
comp=Z,55µm,25.7s
ARCES ARCESS Array B 85.65 17 P P **23 52 15.1 -0.8**
ARCES ARCESS Array B 85.65 17 P P **23 52 15.1 -0.8**
ARCES pmax pmax
comp=Z,275nm,1.2s
ARCES ARCESS Array B 85.65 17 P P **23 52 14.6 -1.3**
comp=Z,42nm,0.9s,baz=308,slow=4.1,SNR=19
ARCES PKKPbc **PKKPbc 00 10 20.6 0.0**
comp=Z,4.5nm,0.9s,baz=111,slow=2.2,SNR=6.0
ARCES LR LR 00 32 34.0
comp=Z,123µm,21.0s,baz=300,slow=37
comp=Z,42nm,0.9s
BCLA Clavier 85.73 39 *d*P P **23 52 16.1 -0.5**
comp=Z,137nm,1.6s
BCLA *d*SKiKP **SKiKP 00 01 08.4 +8.4**
RCHB Rochefort 85.78 39 *d*P P **23 52 15.7 -1.2**
comp=Z,169nm,1.5s
BEBN Eben Emael 85.82 38 *d*P P **23 52 16.4 -0.6**
BSTI Sart Tilman 85.83 38 *d*P P **23 52 16.5 -0.6**
comp=Z,30nm,1.4s
HLG Helgoland 85.84 35 *e*PP PP **23 55 34.4 -1.8**
HLG eS S 00 03 01.6 +12
KEV Kevo 85.94 17 P P **23 52 15.9 -1.4**
KEV IAMs_20 IAMs_20 00 34 28.8
comp=Z,109µm,21.0s
KEV Kevo 85.94 17 P P **23 52 15.9 -1.4**
KEV pmax pmax
comp=Z,253nm,1.2s
KEV MLR MLR
comp=Z,109µm,21.0s
MEM Membach 86.08 38 *d*P P **23 52 17.8 -0.6**
comp=Z,137nm,1.2s
BTNL Ternell 86.17 38 *d*P P **23 52 17.5 -1.3**
comp=Z,89nm,1.5s
BHOU Houvegnez 86.17 39 *d*P P **23 52 19.5 +0.7**
comp=Z,106nm,1.5s
TJOU Tjoern 86.22 30 *i* P P **23 52 19.8 +0.9**
HFS Hagfors 86.27 28 P P **23 52 18.2 -0.9**
comp=Z,16nm,1.0s,baz=318,slow=4.0,SNR=16
HFS LR LR 00 32 01.5
comp=Z,132µm,20.0s,baz=282,slow=37
comp=Z,16nm,1.0s
SSRD Sdr. Stenderup 86.27 33 *i* P P **23 52 18.7 -0.4**
SSRD IVmB_BB 23 52 28.4
comp=Z,14µm,7.2s
SSRD IAmb IAmb 23 52 34.0
comp=Z,364nm,1.3s
SSRD *e*PP PP **23 55 37.2 -2.4**
SSRD eP PP **23 55 39.4 -0.2**
VADS Vadso 86.34 16 eP P **23 52 18.9 -0.3**
VADS IVmB_BB 23 52 27.8
comp=Z,7µm,5.9s
VADS ePP PP **23 55 40.3 +0.5**
VADS eSKSac SKSac **00 02 44.9 +0.2**
VADS IVMs_BB IVMs_BB 00 31 02.7
comp=Z,54µm,22.4s
MA2 Magadan 86.37 332 P P **23 52 19.3 -0.4**
MA2 IAmb IAmb 23 52 38.7
comp=Z,725nm,1.5s
MA2 IAMs_20 IAMs_20 00 33 49.7
comp=Z,119µm,21.0s
MA2 Magadan 86.37 332 P P **23 52 19.7 +0.1**
MA2 Magadan 86.37 332*c* *i* P P **23 52 19.7 +0.1**
MA2 pmax pmax
comp=Z,526nm,1.5s
MA2 MLR MLR
comp=Z,116µm,21.0s
MA2 Magadan 86.37 332 S S **00 02 52.6 -2.0**
comp=Z,1.3nm,0.3s,baz=160,slow=23,SNR=1.3
MA2 LR LR 00 34 19.0
comp=Z,68µm,18.6s,baz=52,slow=38
IBBN Ibbenburen 86.48 36 *e*P P **23 52 22.2 +1.9**
comp=Z,2µm,2.2s,baz=292,slow=7.7
IBBN ePP PP **23 55 40.4 -1.0**
IBBN eS S 00 03 06.0 +10
WLF Walferdange 86.51 39 *d*P P **23 52 20.9 +0.4**
comp=Z,130nm,1.3s
WLF Walferdange 86.51 39 P P **23 52 19.8 -0.7**
WLF Walferdange 86.51 39 *e*P P **23 52 21.4 +0.8**
comp=Z,1µm,1.8s,baz=292,slow=7.7
WLF *e*PP PP **23 55 41.7 -0.1**
WLF eS S 00 03 08.7 +12
BUG Bochum--Univer 86.52 37 *e*P P **23 52 21.4 +0.9**
comp=Z,1µm,2.0s,baz=292,slow=7.7
BUG *e*PP PP **23 55 41.7 -0.1**
BUG eS S **00 03 04.9 +8.5**
ONAU Onsala 86.63 31 *i* P P **23 52 19.2 -1.7**
LKBA Tubou, Lakemba 86.70 250 P P 23 52 28.3 +6.3
TIXI Tiksi 86.73 347 P P **23 52 19.5 -1.6**
TIXI IAmb IAmb 23 52 37.8
comp=Z,578nm,1.4s
TIXI Tiksi 86.73 347 IAMs_20 IAMs_20 00 38 34.8
comp=Z,163µm,19.0s
TIXI Tiksi 86.73 347*c* *i* P P **23 52 19.5 -1.6**
TIXI pmax pmax
comp=Z,784nm,1.9s
TIXI Tiksi 86.73 347 LR LR 00 37 04.4
comp=Z,62µm,18.1s,baz=56,slow=40
AHRW Bad Neuenahr-A 86.74 38 eP P **23 52 21.6 0.0**
comp=Z,689nm,1.5s,baz=292,slow=7.7
AHRW *e*PP PP **23 55 43.1 -0.6**
AHRW eS S 00 03 10.1 +12
BORU Boraas 86.94 30 *i* P P **23 52 21.0 -1.4**
SSB Saint Sauveur 87.03 44 IAmb IAmb 23 52 36.8
comp=Z,379nm,1.5s
SSB Saint Sauveur 87.03 44 IAMs_20 IAMs_20 00 29 55.4
comp=Z,131µm,21.0s
FABU Falkenberg 87.20 31 *i* P P **23 52 23.4 -0.3**
RETH Rethem/Aller, 87.22 36 eP P **23 52 24.0 +0.2**
comp=Z,266nm,1.4s,baz=292,slow=7.7
RETH *e*PP PP **23 55 46.4 -0.9**
RETH eS S **00 03 11.6 +8.7**
TAVE Taveuni 87.22 252 P P 23 52 31.1 +6.6
SKR Severo-Kuril's 87.25 322 eP P **23 52 26.5 +2.4**
SKR eS S **00 03 08.1 +4.6**
SKR pmax pmax
comp=Z,17µm,11.8s
BSEG Bad Segeberg 87.26 34 eP P **23 52 24.4 +0.4**
comp=Z,177nm,1.1s,baz=292,slow=7.7
BSEG *e*PP PP **23 55 50.4 +2.8**
BSEG eS S 00 03 13.6 +10
KASTN Kahler Asten 87.28 37 eP P **23 52 23.7 -0.6**
comp=Z,953nm,2.4s,baz=292,slow=7.7
KASTN *e*PP PP **23 55 48.4 +0.4**
KASTN eS S **00 03 11.9 +8.1**
DGTI Dogotuki 87.43 252 P P **23 52 29.3 +3.8**
HOPE Hope Point 87.56 149 P P **23 52 24.6 -0.7**
HOPE IAmb IAmb 23 52 35.7
comp=Z,318nm,1.1s
HOPE Hope Point 87.56 149 P P **23 52 24.6 -0.7**
HOPE pmax pmax
comp=Z,318nm,1.1s
TNS Taunus Mts 87.68 38 eP P **23 52 26.8 +0.5**
comp=Z,587nm,2.0s,baz=292,slow=7.7
TNS *e*PP PP **23 55 51.1 -0.2**
TNS eS S **00 03 16.5 +8.8**
NRDL Niedersach Rie 87.73 36 eP P **23 52 27.0 +0.8**
comp=Z,108nm,1.2s,baz=292,slow=7.7
NRDL *e*PP PP **23 55 53.6 +2.2**
NRDL eS S 00 03 18.1 +10
BJUU Bjuv 87.76 32 *i* P P **23 52 23.4 -3.0**
DEL Delary 88.00 31 *i* P P **23 52 26.0 -1.6**
GTTG Gottingen 88.03 36 eP P **23 52 28.5 +0.6**
comp=Z,118nm,1.1s,baz=292,slow=7.7
GTTG *e*PP PP **23 55 56.5 +2.5**
CLZ Clausthal 88.14 36 eP P **23 52 29.0 +0.6**
comp=Z,253nm,1.6s,baz=292,slow=7.7
CLZ *e*PP PP **23 55 57.8 +2.9**
LUNU Lund 88.17 32 *i* P P **23 52 28.2 -0.2**
ASSE Asse, Remlinge 88.20 36 eP P **23 52 29.0 +0.5**
comp=Z,233nm,1.6s,baz=292,slow=7.7
ASSE *e*PP PP **23 55 59.7 +4.6**
ASSE eS S **00 03 20.7 +8.3**
BFO Black Forest 88.34 40 P P **23 52 28.5 -0.9**
BFO Black Forest 88.34 40 P P **23 52 28.5 -0.9**
BFO pmax pmax
comp=Z,152nm,1.3s
BFO Black Forest 88.34 40 eP P **23 52 27.4 -2.0**
comp=Z,60nm,0.9s,baz=292,slow=7.7
BFO *e*PP PP **23 55 59.2 +2.7**
UBBA Unterbreizbach 88.35 37 eP P **23 52 28.7 -0.5**
comp=Z,615nm,2.1s,baz=292,slow=7.7
UBBA *e*PP PP **23 56 00.1 +3.7**
LPL La Plagne 88.39 43 eP P **23 52 30.8 +0.8**
LPL pmax pmax
comp=Z,325nm,1.9s
FLTG Flechtingen 88.43 35 eP P **23 52 29.3 -0.4**
comp=Z,94nm,1.1s,baz=292,slow=7.7
FLTG *e*PP PP **23 56 00.9 +3.8**
BNI Bardonecchia 88.53 43 IAmb IAmb 23 53 38.0
comp=Z,346nm,1.6s
RGN Rugen 88.59 33 IAMs_20 IAMs_20 00 31 27.3
comp=Z,198µm,22.0s
RGN Rugen 88.59 33 *e*PP PP **23 56 01.4 +3.1**
STU Stuttgart 88.69 39 eP P **23 52 30.9 -0.1**
comp=Z,334nm,0.9s,baz=292,slow=7.7
STU *e*PP PP **23 56 01.6 +2.3**
STU eS S **00 03 14.6 -2.8**
MAHO Mahon 88.70 49 IAmb IAmb 23 53 36.5
comp=Z,652nm,1.6s
MAHO IAMs_20 IAMs_20 00 31 01.0
comp=Z,124µm,20.0s
BLEU Blekinge 89.04 31 *i* P P **23 52 31.8 -0.7**
APA Apatity 89.14 17‖ *i* P P **23 52 34.5 +1.8**
APA *i* 23 56 00.0
APA *i* S S **00 03 22.0 +1.2**
APA *i* PS PS **00 04 28.0 +1.1**
APA *i* SS SS **00 09 06.0 -7.5**
APA pmax pmax
comp=Z,30nm,1.1s
BSD Bornholm Skovb 89.15 32 *i* P P **23 52 31.8 -1.2**
BSD IVmBBB 23 52 45.3
comp=Z,8µm,6.6s
BSD IAmb IAmb 23 52 50.7
comp=Z,161nm,1.2s
NEUB Neuenburg 89.21 36 eP P **23 52 33.2 -0.2**
comp=Z,425nm,2.1s,baz=292,slow=7.7
NEUB *e*PP PP **23 56 05.1 +1.8**
LVZ Lovozero 89.25 16*c* *i* P P **23 52 32.0 -1.3**
LVZ pmax pmax
comp=Z,126nm,1.2s
LVZ MLR MLR
comp=Z,158µm,23.0s
RAF Rauma 89.27 25 eP P **23 52 35.2 +1.8**
MOX Moxa 89.36 37 P P **23 52 34.3 +0.2**
MOX pmax pmax
comp=Z,94nm,1.4s
MOX Moxa 89.36 37 eP P **23 52 34.1 0.0**
comp=Z,176nm,1.4s,baz=292,slow=7.7
MOX *e*PP PP **23 56 11.8 +7.2**
MOX eS S **00 03 22.6 -0.9**
MOX eL L 00 34 03.9
comp=Z,118µm,21.3s
RAO Raoul Island 89.44 239 LR LR 00 22 14.8
comp=Z,44µm,21.4s,baz=55,slow=28
YSA Yasawairara 89.52 253 P P 23 52 41.4 +6.0
GRFO Grafenberg 89.53 38 P P **23 52 33.6 -1.3**
GRFO IAMs_20 IAMs_20 00 32 15.8
comp=Z,175µm,21.0s
GRFO Grafenberg 89.53 38 P P **23 52 33.6 -1.3**
GRFO pmax pmax
comp=Z,242nm,1.2s
GRFO MLR MLR
comp=Z,176µm,21.0s
GRA1 Grafenberg Arr 89.53 38 IAMs_20 IAMs_20 00 30 17.8
comp=Z,168µm,21.0s
GRF Grafenberg Arr 89.53 38 eP P **23 52 35.6 +0.6**
comp=Z,238nm,1.2s,baz=292,slow=7.7
GRF *e*PP PP **23 56 05.0 -1.0**
GRF eL L 00 30 06.0
comp=Z,176µm,22.0s
UBR Ueberruh 89.69 40 eP P **23 52 35.1 -0.7**
comp=Z,104nm,1.0s,baz=292,slow=7.7
UBR *e*PP PP **23 56 09.7 +2.2**
DAVA Damuels 89.71 40 *i* P P **23 52 35.7 -0.3**
comp=Z,152nm,1.1s,SNR=21
DAVA *e*PKKP **PKKPbc 00 10 13.5 +3.2**
comp=Z,14nm,1.2s
DAVA *e*P'P' 00 18 17.8
comp=Z,8.3nm,1.4s
PLN Plauen 89.74 37 eP P **23 52 36.6 +0.7**
comp=Z,314nm,1.9s,baz=292,slow=7.7
PLN *e*PP PP **23 56 08.4 +0.7**
RUE Ruedersdorf 89.76 35 eP P **23 52 38.9 +2.9**
RUE Ruedersdorf 89.76 35 eP P **23 52 37.3 +1.4**
comp=Z,69nm,1.1s,baz=292,slow=7.7
RUE *e*PP PP **23 56 09.7 +2.0**
CLL Collm 89.86 36 IAMs_20 IAMs_20 00 39 31.2
comp=Z,120µm,18.0s
CLL Collm 89.86 36 *i* P P **23 52 36.3 -0.1**
CLL *i* 23 56 08.4
CLL *e* 00 03 05.0
CLL eS S **00 03 26.0 -2.1**
CLL pmax pmax
comp=Z,247nm,2.0s
CLL MLR MLR
comp=Z,123µm,18.4s

CLL Collm 89.86 36 *e*P **P 23 52 36.3 -0.1**
comp=Z,122nm,1.2s,baz=292,slow=7.7
CLL *e*PP **PP 23 56 11.2 +2.6**
CLL *e*S **S 00 03 32.5 +4.3**
DAVOX Davos/Dischmat 89.92 41 PKKPbc PKKPbc 00 10 13.3 +3.5
comp=Z,4.4nm,1.0s,baz=135,slow=5.7,SNR=4.2
MANZ Manzenberg 89.92 37 *e*P **P 23 52 37.2 +0.4**
comp=Z,30nm,1.3s,baz=292,slow=7.7
MANZ *e*PP **PP 23 56 11.0 +1.8**
TANN Tannenbergstha 89.94 37 *e*P **P 23 52 37.9 +1.0**
comp=Z,249nm,1.7s,baz=292,slow=7.7
TANN *e*PP **PP 23 56 09.7 +0.4**
NKC Novy Kostel 90.01 37 *e*P **P 23 52 37.1 -0.1**
NKC AMS AMS 00 36 30.0
comp=Z,184µm,17.7s
NKC Novy Kostel 90.01 37 *e*P **P 23 52 37.1 -0.1**
NKC MLR MLR
comp=Z,184µm,17.7s
ROTZ Rotzenmuhle 90.08 38 *e*P **P 23 52 37.9 +0.4**
comp=Z,30nm,1.3s,baz=292,slow=7.7
ROTZ *e*PP **PP 23 56 11.7 +1.3**
ROTZ *e*S **S 00 03 38.5 +8.2**
RETA Reutte 90.18 40 *i* P **P 23 52 38.0 -0.1**
comp=Z,85nm,1.3s,SNR=31
RETA *i* P'P' 00 18 14.7
comp=Z,4.3nm,1.3s
FUR Furstenfeldbru 90.21 39 *e*P **P 23 52 37.8 -0.4**
comp=Z,119nm,1.4s,baz=292,slow=7.7
FUR *e*PP **PP 23 56 12.3 +0.9**
FUR *e*S **S 00 03 36.7 +5.1**
FUORN Ofenpass-Fuorn 90.22 41 IAMs_20 IAMs_20 00 33 03.5
comp=Z,116µm,21.0s
FETA Feichten 90.35 40 *i* PcP **P 23 52 39.2 +0.1**
comp=Z,74nm,1.2s,SNR=28
FETA *e*PKKP **PKKPbc 00 10 10.1 +1.4**
comp=Z,9.2nm,1.0s
FETA *i* P'P' 00 18 16.6
comp=Z,11nm,1.9s
HSKC Hora Svate Kat 90.41 36 *e*P **P 23 52 38.5 -0.6**
HSKC AMS AMS 00 33 40.0
comp=Z,116µm,20.1s
MOTA Moosalm 90.45 40 *i* P **P 23 52 39.2 -0.2**
comp=Z,122nm,1.3s,SNR=43
MOTA *e*P'P' 00 18 16.1
comp=Z,10.0nm,1.5s
SQTA Sankt Quirin 90.56 40 *i* P **P 23 52 39.8 -0.2**
comp=Z,102nm,1.5s,SNR=41
SQTA *e*P'P' 00 18 16.1
comp=Z,11nm,1.4s
BRG Berggiesshubel 90.58 36 *e*P **P 23 52 39.2 -0.7**
BRG Amp 23 52 44.5
comp=Z,107nm,1.4s
BRG Berggiesshubel 90.58 36 SKS **SKSac 00 03 20.0 +9.2**
BRG Berggiesshubel 90.58 36 *e*P **P 23 52 39.1 -0.7**
BRG 23 52 51.2
BRG 23 56 16.7
BRG 00 03 20.0
BRG pmax pmax
comp=Z,107nm,1.4s
BRG pmax pmax
comp=Z,74nm,1.3s
BRG Berggiesshubel 90.58 36 *e*P **P 23 52 40.1 +0.3**
comp=Z,206nm,1.4s,baz=292,slow=7.7
BRG *e*PP **PP 23 56 17.0 +2.7**
FIA1 FINESS Array S 90.73 23 IAmb IAmb 23 53 53.7
comp=Z,362nm,1.1s
FINES FINESS Array B 90.73 23 P **P 23 52 38.4 -1.9**
comp=Z,9.9nm,1.0s,baz=304,slow=3.4,SNR=25
FINES PKKPbc **PKKPbc 00 10 07.7 -0.3**
comp=Z,3.6nm,0.8s,baz=64,slow=4.4,SNR=5.1
FINES LR LR 00 34 57.7
comp=Z,157µm,21.4s,baz=306,slow=37
comp=Z,9.9nm,1.0s
WATA Walderalm 90.74 40 *i* P **P 23 52 40.1 -0.8**
comp=Z,116nm,1.7s,SNR=9.5
WATA *e*PKKP **PKKPbc 00 10 10.5 +2.8**
comp=Z,17nm,1.4s
WATA *e*P'P' 00 18 17.1
comp=Z,6.8nm,0.8s
WET Wettzell 90.74 38 *e*P **P 23 52 40.1 -0.6**
comp=Z,378nm,1.8s,baz=292,slow=7.7
WET *e*PP **PP 23 56 19.0 +3.3**
MEF Metsahovi 90.80 25 *e*P **P 23 52 42.1 +1.5**
WTTA Wattenberg 90.81 40 *i* P **P 23 52 40.7 -0.5**
comp=Z,96nm,1.4s,SNR=19
WTTA *i* PKKP **PKKPbc 00 10 10.0 +2.4**
comp=Z,20nm,1.4s
WTTA *e*P'P' 00 18 15.6
comp=Z,6.8nm,1.3s
RICC Richard 90.82 36 *e*P **P 23 52 40.7 -0.2**
RICC AMS AMS 00 39 40.0
comp=Z,132µm,18.0s
SET Setif 90.83 52 P **P 23 52 45.0 +3.6**
TIC Toumodi 90.93 83⇑ *e*P **P 23 52 43.6 +1.4**
comp=Z,477nm,1.4s
LIC Lamto 91.04 83⇓ *e*P **P 23 52 43.7 +1.0**
comp=Z,1µm,1.6s
DBIC Dimbokro 91.08 83 IAmb IAmb 23 52 52.8
comp=Z,375nm,1.4s
DBIC Dimbokro 91.08 83 P **P 23 52 40.6 -2.2**
comp=Z,21nm,0.9s,baz=278,slow=6.2,SNR=16
DBIC S **SKSac 00 03 19.4 +4.4**
comp=Z,2.7nm,0.8s,baz=182,slow=4.3,SNR=1.7
DBIC PKKPbc **PKKPbc 00 10 05.8 0.0**
comp=Z,5.0nm,1.0s,baz=129,slow=8.3,SNR=3.7
DBIC LR LR 00 30 10.2
comp=Z,97µm,21.2s,baz=280,slow=34
comp=Z,21nm,0.9s
PVCC Panska Ves 91.09 36 AMS AMS 00 40 00.0
comp=Z,177µm,17.5s
KHC Kasperske Hory 91.16 38 *e*P **P 23 52 42.8 +0.2**
KHC *e*PP **PP 23 56 21.3 +2.3**
KHC *e*SKS **SKSac 00 03 11.3 -3.0**
KHC *e*PKKP **PKKPbc 00 10 10.5 +3.9**
KHC AMS AMS 00 37 10.0
comp=Z,205µm,18.1s
KHC Kasperske Hory 91.16 38 *e*P **P 23 52 42.8 +0.2**
KHC *e* 23 56 21.3
KHC *e* 00 03 11.3
KHC MLR MLR
comp=Z,205µm,18.1s
PRA Prague 91.23 37 *e*P **P 23 52 43.1 +0.3**
PRA AMS AMS 00 37 20.0
comp=Z,158µm,17.6s
PRA Prague 91.23 37 *e*P **P 23 52 43.1 +0.3**
PRA MLR MLR
comp=Z,158µm,17.6s
GKP Gorka Klasztor 91.23 33 *e*P **P 23 52 44.3 +1.6**
GKP *e*PP **PP 23 56 19.9 +0.5**
GKP *e*S **S 00 03 33.4 -7.3**
GKP *e*SS **SS 00 09 37.2 -7.2**
GKP *e*L L 00 32 47.7
comp=Z,253µm,22.6s
GKP Gorka Klasztor 91.23 33 *e*P **P 23 52 46.9 +4.2**
KIC Kosan Boka 91.27 83⇑ *e*P **P 23 52 42.3 -1.5**
comp=Z,312nm,1.1s
RJOB Jochberg 91.31 39 *e*P **P 23 52 43.5 +0.1**
comp=Z,407nm,2.2s,baz=292,slow=7.7
RJOB *e*PP **PP 23 56 22.6 +2.3**
PRU Pruhonice 91.33 37 *e*P **P 23 52 42.5 -0.8**
PRU AMS AMS 00 37 30.0
comp=Z,174µm,17.8s
PRU Pruhonice 91.33 37 *e*P **P 23 52 42.5 -0.8**
PRU MLR MLR
comp=Z,174µm,17.8s
CTI Castel Tesino 91.34 41 IAmb IAmb 23 53 01.8
comp=Z,359nm,1.9s
GEC2 GERESS Array S 91.36 38 *e*P **P 23 52 42.8 -0.8**
comp=Z,292nm,1.9s,baz=292,slow=7.7
GEC2 *e*PP **PP 23 56 22.5 +1.8**
GERES GERESS Array B 91.36 38 P **P 23 52 41.9 -1.7**
comp=Z,2.7nm,0.8s,baz=343,slow=4.2,SNR=31
GERES PKKPbc **PKKPbc 00 10 06.8 +0.6**
comp=Z,3.4nm,0.9s,baz=142,slow=3.7,SNR=3.5
GERES PKPPKP **P'P'df 00 18 17.6 -0.5**
comp=Z,1.6nm,1.0s,baz=142,slow=3.4,SNR=5.8
GERES LR LR 00 35 56.6
comp=Z,161µm,18.2s,baz=296,slow=37
comp=Z,2.7nm,0.8s
LESA Schwarzleotal 91.38 39 *i* P **P 23 52 43.5 -0.2**
comp=Z,95nm,1.4s
ZVC Zvikov 91.38 37 *e*P **P 23 52 44.0 +0.4**
ZVC *e*PKKP **PKKPbc 00 10 07.8 +1.8**
ZVC AMS AMS 00 31 50.0
comp=Z,171µm,22.7s
SLIT Slitere, Latvi 91.38 28 *e*P **P 23 52 46.4 +3.1**

MTSE Matsula 91.43 26 *e*P **P 23 52 46.6 +3.1**
GOPC GO Pecny, Ondr 91.50 37 *e*P **P 23 52 43.7 -0.5**
GOPC AMS AMS 00 37 30.0
comp=Z,156µm,17.8s
GOPC GO Pecny, Ondr 91.50 37 *e*P **P 23 52 43.7 -0.5**
GOPC MLR MLR
comp=Z,156µm,17.8s
ABTA Abfaltersbach 91.57 40 *i* P **P 23 52 44.4 -0.3**
comp=Z,133nm,1.4s,SNR=58
ABTA *e*PKKP **PKKPbc 00 10 06.6 +1.1**
comp=Z,17nm,2.0s
ABTA *e*P'P' 00 18 15.6
comp=Z,5.3nm,1.4s
ZCCA Zocca 91.62 43 IAmb IAmb 23 53 06.4
comp=Z,311nm,1.2s
CASM Ain Smara 91.63 52 P **P 23 52 46.2 +1.1**
CAEH 'Ain El Ouahch 91.71 51 P **P 23 52 49.2 +3.8**
CIMO Cimolais 91.72 41 IAmb IAmb 23 52 58.2
comp=Z,140nm,1.1s
CKRC Cesky Krumlov 91.73 38 *e*P **P 23 52 45.2 0.0**
CKRC *e*PKKP **PKKPbc 00 10 10.3 +5.2**
CKRC AMS AMS 00 36 00.0
comp=Z,173µm,18.9s
CKRC Cesky Krumlov 91.73 38 *e*P **P 23 52 45.2 0.0**
CKRC MLR MLR
comp=Z,173µm,18.9s
BIOA Bad Ischl, Aus 91.84 39 *i* P **P 23 52 44.7 -1.1**
comp=Z,100nm,1.5s,SNR=34
BIOA *e*P'P' 00 18 13.6
comp=Z,4.9nm,1.4s
CHVC Chvalec 91.90 36 *e*P **P 23 52 45.3 -0.7**
CHVC AMS AMS 00 37 20.0
comp=Z,138µm,18.9s
CHVC Chvalec 91.90 36 *e*P **P 23 52 45.3 -0.7**
CHVC MLR MLR
comp=Z,138µm,18.9s
KSP Ksiaz 91.91 35 *e*P **P 23 52 46.5 +0.5**
KSP *e*PP **PP 23 56 23.4 -1.4**
KSP *e*S **S 00 03 38.0 -8.9**
KSP *e*L L 00 31 29.9
comp=Z,166µm,24.4s
KBA Koelnbreinsper 91.94 40 *i* P **P 23 52 46.2 -0.3**
comp=Z,99nm,1.3s,SNR=34
KBA *e*PKKP **PKKPbc 00 10 05.2 +0.4**
comp=Z,9.2nm,1.7s
OSTC Ostas 92.01 36 *e*P **P 23 52 45.5 -1.0**
OSTC *e*PKKP **PKKPbc 00 10 10.5 +6.0**
OSTC AMS AMS 00 37 20.0
comp=Z,145µm,18.8s
OSTC Ostas 92.01 36 *e*P **P 23 52 45.5 -1.0**
OSTC MLR MLR
comp=Z,145µm,18.8s
KLNR Kaliningrad 92.06 31 *i* P **P 23 52 45.9 -0.6**
KLNR pmax pmax
comp=Z,345nm,1.6s
KLNR MLR MLR
comp=Z,203µm,21.0s
PBUR Paburge 92.11 29 *e*P P 23 52 51.6 +4.9
MOA Molln 92.15 39 *i* P **P 23 52 45.8 -1.4**
comp=Z,102nm,1.4s,SNR=30
DPC Dobruska-Polom 92.17 36 *e*P **P 23 52 47.0 -0.3**
DPC *e*PKKP **PKKPbc 00 10 09.3 +5.2**
DPC AMS AMS 00 37 10.0
comp=Z,150µm,18.7s
DPC Dobruska-Polom 92.17 36 *e*P **P 23 52 47.0 -0.3**
DPC *e* 00 10 09.3
DPC MLR MLR
comp=Z,150µm,18.7s
CMAH Djebel Manchou 92.19 51 P **P 23 52 47.2 -0.5**
TREC Trest 92.20 37 *e*P **P 23 52 46.0 -1.4**
TREC AMS AMS 00 38 00.0
comp=Z,146µm,18.2s
TREC Trest 92.20 37 *e*P **P 23 52 46.0 -1.4**
TREC MLR MLR
comp=Z,146µm,18.2s
MYKA Terra Mystica 92.32 40 *i* P **P 23 52 47.6 -0.4**
comp=Z,80nm,1.4s,SNR=21
ABSA Djebel Ababsia 92.37 51 P **P 23 52 51.4 +2.8**
ROBS Robic 92.41 40 *e*P **P 23 52 47.2 -1.2**
ROBS *i* sP **sP 23 52 55.0 -0.9**
ROBS *e*PP **PP 23 56 29.6 +0.7**
VSL Villasalto 92.51 48 IAmb IAmb 23 53 05.8
comp=Z,563nm,1.6s
VSL IAMs_20 IAMs_20 00 30 56.7
comp=Z,99µm,20.0s
KRLC Kraliky 92.56 36 *e*P **P 23 52 48.9 -0.2**
KRLC *e*SKS **SKSac 00 03 27.5 +5.3**
KRLC *e*PKKP **PKKPbc 00 10 05.2 +2.1**
KRLC AMS AMS 00 37 10.0
comp=Z,122µm,18.9s
KRLC Kraliky 92.56 36 *e*P **P 23 52 48.9 -0.2**
KRLC *e* 00 10 05.2
KRLC MLR MLR
comp=Z,122µm,18.9s
VALR Valaam 92.57 22 *i* P **P 23 52 46.7 -2.0**
VALR pmax pmax
comp=Z,136nm,1.3s
SABO M.te Sabotino 92.59 40 IAmb IAmb 23 53 02.9
comp=Z,443nm,1.8s
VSU Vasula 92.81 26*c* *i*P **P 23 52 47.3 -2.6**
VSU pmax pmax
comp=Z,89nm,1.1s
VSU MLR MLR
comp=Z,147µm,21.0s
VSU Vasula 92.81 26 *e*P **P 23 52 52.7 +2.7**
VRAC Vranov 92.83 37⇑ P **P 23 52 53.3 +3.0**
VRAC Vranov 92.83 37 *e*P **P 23 52 50.1 -0.2**
VRAC *e*PP **PP 23 56 30.3 -1.8**
VRAC *e*SKS **SKSac 00 03 25.2 +1.6**
VRAC *e*PKPPKP **P'P'df 00 18 15.5 +0.3**
VRAC Vranov 92.83 37 P **P 23 52 51.1 +0.8**
VRAC pmax pmax
comp=Z,82nm,1.9s
VRAC Vranov 92.83 37 PKKPbc PKKPbc 00 10 02.0 -0.3
comp=Z,0.5nm,0.3s,baz=117,slow=4.5,SNR=5.8
VRAC LR LR 00 38 40.4
comp=Z,99µm,18.2s,baz=298,slow=38
KRUC Moravsky 92.83 37 *e*P **P 23 52 49.7 -0.6**
KRUC *e*PP **PP 23 56 30.3 -1.8**
KRUC *e*SKS **SKSac 00 03 23.7 0.0**
KRUC *e*PKPPKP **P'P'df 00 18 15.8 +0.6**
OBKA Obir 92.94 40 *i* P **P 23 52 49.9 -1.0**
comp=Z,70nm,1.3s,SNR=16
OBKA Obir 92.94 40⇑ *i*P **P 23 52 49.0 -1.9**
MOZS Mozjanca 92.97 40 *e*P **P 23 52 50.5 -0.5**
MOZS *e*SKSac **SKSac 00 03 24.2 -0.4**
MOZS *e* 00 03 44.0
CONA Conrad Observa 93.06 38 *i* P **P 23 52 50.1 -1.4**
comp=Z,99nm,1.5s,SNR=38
CONA *e*P'P' 00 18 14.6
comp=Z,5.9nm,1.7s
VSVD Vaisvydziai 93.06 29 *e*P **P 23 52 52.9 +1.7**
MORC Moravsky Berou 93.13 36⇑ P **P 23 52 54.8 +3.1**
MORC Moravsky Berou 93.13 36 *e*P **P 23 52 51.5 -0.2**
MORC *e*PP **PP 23 56 32.9 -1.6**
MORC *e*SKS **SKSac 00 03 27.6 +2.2**
MORC *e*PKPPKP **P'P'df 00 18 15.2 +0.5**
MORC Moravsky Berou 93.13 36 P **P 23 52 52.6 +0.9**
MORC pmax pmax
comp=Z,102nm,1.3s
LJU Ljubljana 93.14 40 *e*P **P 23 52 51.7 -0.1**
LJU *e*sP **sP 23 52 59.3 +0.1**
LJU *e*PP **PP 23 56 31.9 -2.7**
LJU *e*SKSac **SKSac 00 03 26.5 +1.0**
LJU *e*PS PS 00 05 13.2 +1.2
LJU *e* 00 10 08.7
LJU *e*SS **SS 00 10 09.9 -2.3**
LJU *e* 00 18 14.4
LJU *i* 00 45 46.5
SOKA Soboth 93.15 39 *i* P **P 23 52 50.8 -1.1**
comp=Z,111nm,1.4s,SNR=34
SOKA *i* PKKP **PKKPbc 00 10 06.5 +5.0**
comp=Z,13nm,1.5s
SOKA *e*P'P' 00 18 15.6
comp=Z,13nm,1.8s
ARSA Arzberg 93.18 39 *i* P **P 23 52 49.7 -2.3**
comp=Z,51nm,1.3s,SNR=19
CEY Cerknica 93.21 40⇑ *i*P **P 23 52 50.7 -1.5**
CTZ Chatham Island 93.22 225 IAMs_20 IAMs_20 00 24 08.8
comp=Z,86µm,22.0s
CTZ Chatham Island 93.22 225 P **P 23 52 55.6 +3.6**
RAC Raciborz 93.34 35 *e*P **P 23 52 52.0 -0.6**
RAC Raciborz 93.34 35 *e*S S 00 03 47.0 -13
RAC AMS AMS 00 38 09.5
comp=Z,194nm,18.8s
RAC Raciborz 93.34 35 *e*P **P 23 52 52.0 -0.6**
YAK Yakutsk 93.35 340 P **P 23 52 51.4 -1.0**
YAK IAmb IAmb 23 53 01.5
comp=Z,358nm,0.9s
YAK Yakutsk 93.35 340 IAMs_20 IAMs_20 00 39 39.5
comp=Z,144µm,20.0s
YAK Yakutsk 93.35 340 *e*P **P 23 52 51.3 -1.0**
YAK *e* 23 56 33.6
YAK *e*S **SKSac 00 03 22.6 -3.3**
YAK pmax pmax
comp=Z,373nm,1.0s
YAK pmax pmax
comp=N,36nm,1.1s
YAK pmax pmax
comp=E,39nm,1.0s
YAK pmax pmax
comp=Z,22µm,15.6s
YAK pmax pmax
comp=E,9µm,15.6s
YAK pmax pmax
comp=N,12µm,18.5s
YAK smax smax
comp=N,9µm,14.4s
YAK smax smax
comp=E,7µm,11.8s
YAK MLR MLR
comp=Z,126µm,18.0s
YAK MLR MLR
comp=E,78µm,17.0s
YAK MLR MLR
comp=N,68µm,17.0s
YAK Yakutsk 93.35 340 S **SKSac 00 03 25.5 -0.5**
comp=N,6.0nm,0.4s,baz=263,slow=3.7,SNR=1.1
YAK LR LR 00 39 57.4
comp=N,131µm,18.9s,baz=44,slow=39
PABE Paberze 93.36 29 IAmb IAmb 23 53 11.3
comp=Z,333nm,1.6s
PABE IAMs_20 IAMs_20 00 35 56.0
comp=Z,155µm,20.0s
PABE Paberze 93.36 29 *e*P **P 23 52 55.4 +2.9**
PUL Pulkovo 93.41 23 *i* P **P 23 52 52.0 -0.7**
PUL pmax pmax
comp=Z,272nm,1.2s
PUL MLR MLR
comp=Z,172µm,21.0s
CESX Cesi 93.42 44 IAmb IAmb 23 53 06.0
comp=Z,256nm,1.4s
RONA Rosalia, Austr 93.43 38 *i* P **P 23 52 51.4 -1.7**
comp=Z,87nm,1.3s,SNR=29
RONA *i* P'P' 00 18 14.5
comp=Z,11nm,2.4s
OKC Ostrava-Krasne 93.44 36 *e*P **P 23 52 53.1 0.0**
OKC AMS AMS 00 37 50.0
comp=Z,158µm,18.6s
OKC Ostrava-Krasne 93.44 36 *e*P **P 23 52 53.1 0.0**
OKC MLR MLR
comp=Z,158µm,18.6s
MAUC Maruska 93.50 36 *e*P **P 23 52 53.6 +0.2**
ZST Bratislava 93.66 37 *e*P **P 23 52 55.1 +1.0**
ZST *e* 23 56 42.8
ZST *e*S **SKSac 00 03 31.3 +3.1**
JAVC Velka Javorina 93.66 37 *e*P **P 23 52 55.2 +1.0**
JAVC *e*PP **PP 23 56 37.0 -1.7**
JAVC *e*SKS **SKSac 00 03 30.5 +2.1**
JAVC *e*PKPPKP 00 18 15.0
MODS Modra-Piesok 93.68 37 *e*P **P 23 52 54.6 +0.4**
MODS pmax pmax
comp=Z,647nm,1.8s
SMOL Smolenice 93.70 37 *e*P **P 23 52 55.3 +1.0**
SMOL pmax pmax
comp=Z,107nm,1.7s
GUMA Gualdo di Mace 93.72 43 IAmb IAmb 23 53 10.7
comp=Z,178nm,1.3s
CRES Cresnjev 93.81 40⇑ *i*P **P 23 52 54.5 -0.4**
BEL Belsk 93.83 33 *e*P **P 23 52 56.4 +1.6**
BEL *e*PP **PP 23 56 36.8 -3.0**
BEL *e*S **SKSac 00 03 34.2 +5.3**
BEL *e*L L 00 34 00.8
comp=Z,927µm,22.6s
BOJS Bojanci 93.83 40⇑ *i*P **P 23 52 54.6 -0.4**
SUW Suwalki 93.84 30 *e*P **P 23 52 55.4 +0.6**
SUW *e*PP **PP 23 56 39.8 0.0**
SUW *e*S **SKSac 00 03 29.9 +1.0**
SUW *e*SS **SS 00 10 13.4 -8.2**
SUW *e*L L 00 30 51.2
comp=Z,195µm,24.8s
SUW Suwalki 93.84 30 IAmb IAmb 23 53 11.0
comp=Z,211nm,1.2s
SUW Suwalki 93.84 30 *e*P **P 23 52 58.9 +4.1**
KEST Kesra 93.97 51 IAmb IAmb 23 54 00.2
comp=Z,264nm,1.4s
KEST Kesra 93.97 51 P **P 23 52 54.3 -1.7**
comp=Z,12nm,0.9s,baz=173,slow=4.6,SNR=12
KEST LR LR 00 33 57.0
comp=Z,101µm,19.3s,baz=242,slow=35
comp=Z,12nm,0.9s
OJC Ojcow 94.16 35 *e*P **P 23 52 56.5 +0.1**
OJC *e*PP **PP 23 56 42.7 +0.2**
OJC *e*S **SKSac 00 03 38.9 +8.0**
OJC *e*SS **SS 00 10 22.8 -3.8**
OJC *e*L L 00 33 12.2
comp=Z,172µm,23.0s
IZAR Zarasai 94.25 28 *e*P **P 23 52 59.2 +2.5**
ISAL Salakas 94.31 28 *e*P **P 23 52 59.0 +2.1**
NRIK Noril'sk 94.45 358*c* *i*P **P 23 52 55.3 -2.0**
NRIK pmax pmax
comp=Z,187nm,1.2s
NRIK Noril'sk 94.45 358 P **P 23 52 56.2 -1.1**
comp=Z,12nm,0.7s,baz=39,slow=2.4,SNR=24
NRIK PP **PP 23 56 43.5 -0.6**
comp=Z,28nm,1.1s,baz=22,slow=9.7,SNR=5.3
NRIK S **SKSac 00 03 32.3 +0.6**
comp=Z,0.7nm,0.2s,baz=244,slow=7.4,SNR=1.1
NRIK PKKPbc **PKKPdf 00 09 56.2 -0.6**
comp=Z,0.8nm,0.2s,baz=138,slow=3.7,SNR=4.1
comp=Z,12nm,0.7s
NKL Nikolayevsk 94.47 329 *e*P **P 23 52 56.7 -1.0**
NKL *e* 23 56 43.4
NKL *e*S SKSac 00 03 57.6 +25
NKL pmax pmax
comp=E,210nm,1.1s
NKL pmax pmax
comp=Z,740nm,1.1s
NKL pmax pmax
comp=N,360nm,2.0s
IIGN Ignalina 94.48 28 *e*P **P 23 52 59.7 +2.0**
VYHS Vyhne 94.52 37 *e*P **P 23 52 58.0 -0.1**
VYHS pmax pmax
comp=Z,710nm,3.0s
LANS Liptovska Anna 94.53 36 *e*P **P 23 52 59.5 +1.3**
LANS pmax pmax
comp=Z,265nm,3.5s
LANS Liptovska Anna 94.53 36 *e*P **P 23 52 59.5 +1.3**
SRO Srobarova 94.56 37 *e*P **P 23 52 59.2 +1.0**
SRO pmax pmax
comp=Z,243nm,1.8s
SRO Srobarova 94.56 37 *e*P **P 23 52 59.2 +1.0**
KUR Kuril'sk 94.60 320*c* *i*P **P 23 52 56.9 -1.6**
KUR *e* 23 56 53.3
KUR *i* PS **PS 00 05 36.0 +7.9**
KUR *i* SS SS 00 10 41.1 +8.0
KUR pmax pmax
comp=Z,9µm,17.2s
KUR pmax pmax
comp=Z,396nm,1.3s
TYV Tymovskoe 94.73 326 *e*P **P 23 53 00.5 +1.6**
TYV pmax pmax
comp=Z,1µm,4.1s
TYV pmax pmax
comp=Z,67nm,1.2s
IDID Didziasalis 94.74 28 *e*P **P 23 52 57.9 -1.0**
NIE Niedzica 94.86 35 *e*P **P 23 53 00.1 +0.5**
NIE *e*PP **PP 23 56 48.8 +0.9**
NIE *e*S **SKSac 00 03 43.3 +8.5**
NIE *e*L L 00 33 14.9
comp=Z,92µm,25.1s
A051A Mrakovica 95.10 40⇑ *i*P **P 23 53 00.5 -0.4**
A050A Klekovaca 95.12 41⇑ *i*P **P 23 53 00.1 -0.9**
TORD Torodi Ar. Bea 95.34 75 P **P 23 53 00.6 -1.9**
comp=Z,7.0nm,0.9s,baz=346,slow=4.4,SNR=8.4
TORD PKKPbc **PKKPdf 00 09 55.5 +0.4**
comp=Z,1.3nm,0.3s,baz=86,slow=2.0,SNR=1.6
TORD LR LR 00 34 15.6
comp=Z,157µm,19.7s,baz=298,slow=35

	comp=Z,7.0nm,0.9s									
BLY	**Banja Luka**	**95.40**	**40**	⇑	*i*P		**P**	**23 53 01.7**	**-0.5**	
PSZ	**Piszkesteto**	**95.42**	**37**	⇓	P		**P**	**23 53 05.5**	**+3.2**	
PSZ	**Piszkesteto**	**95.42**	**37**		IAmb		IAmb	23 53 19.6		
	comp=Z,338nm,1.7s									
PSZ	**Piszkesteto**	**95.42**	**37**		P		**P**	**23 53 03.6**	**+1.3**	
PSZ					pmax		pmax			
	comp=Z,100nm,2.0s									
MGRS	**Mrkonjic Grad**	**95.50**	**41**		*e*P		**P**	**23 53 07.3**	**+4.6**	
MORH	**Mrgy. Hungar**	**95.56**	**39**	⇑	P		**P**	**23 53 05.6**	**+2.7**	
TAM	**Tamanrasset**	**95.64**	**64**		IAmb		IAmb	23 53 14.2		
	comp=Z,511nm,1.9s									
MNK	**Minsk**	**95.76**	**28**		*e*P		**P**	**23 53 04.0**	**+0.4**	
MNK					*e*S		**SKSac**	**00 03 37.0**	**-2.3**	
CRVS	**Cervenica-Dubn**	**95.78**	**35**		*e*P		**P**	**23 53 03.2**	**-0.6**	
CRVS					pmax		pmax			
	comp=Z,490nm,2.3s									
KLMR	**Klimovskoe**	**95.87**	**19**		*e*P		**P**	**23 53 00.2**	**-3.7**	
KLMR					S		**SKSac**	**00 03 35.9**	**-3.7**	
KLMR					SS		**SS**	**00 10 46.2**	**-3.9**	
KLMR					pmax		pmax			
	comp=Z,148nm,1.2s									
KLMR					MLR		MLR			
	comp=Z,164µm,21.0s									
BSZH	**Besenyszg**	**95.96**	**37**	⇑	P		**P**	**23 53 06.3**	**+1.7**	
UGL	**Uglegorsk**	**96.03**	**325**	*c*	*i*P		**P**	**23 53 04.1**	**-0.8**	
UGL					*e*			23 56 57.5		
UGL					*e*SS		SS	00 11 02.4	+9.4	
UGL					pmax		pmax			
	comp=Z,90nm,1.5s									
UGL					pmax		pmax			
	comp=Z,9µm,15.0s									
UGL					pmax		pmax			
	comp=E,4µm,12.0s									
UGL					pmax		pmax			
	comp=N,2µm,10.0s									
UGL					pmax		pmax			
	comp=Z,8µm,16.0s									
UGL					MLR		MLR			
	comp=N,31µm,17.0s									
UGL					MLR		MLR			
	comp=E,59µm,18.0s									
UGL					MLR		MLR			
	comp=Z,56µm,18.0s									
CLTB	**Caltabellotta**	**96.04**	**48**		IAmb		IAmb	23 53 14.8		
	comp=Z,314nm,1.3s									
KWP	**Kalwaria Pacla**	**96.06**	**34**		*e*P		**P**	**23 53 06.4**	**+1.3**	
KWP					*e*PP		**PP**	**23 56 55.2**	**-2.0**	
KWP					*e*S		**SKSac**	**00 03 45.9**	**+4.8**	
KWP					*e*L		L	00 30 53.5		
	comp=Z,104µm,27.6s									
KWP	**Kalwaria Pacla**	**96.06**	**34**		IAmb		IAmb	23 54 22.1		
	comp=Z,649nm,1.9s									
KWP					IAMs_20		IAMs_20	00 39 29.1		
	comp=Z,124µm,20.0s									
URZ	**Urewera**	**96.09**	**232**		LR		LR	00 26 30.9		
	comp=Z,69µm,21.9s,baz=170,slow=29									
KOLS	**Kolonicke sedl**	**96.21**	**35**		*e*P		**P**	**23 53 05.7**	**-0.1**	
KOLS					pmax		pmax			
	comp=Z,19nm,1.0s									
YUK	**Yuzh-Kuril'sk**	**96.44**	**319**		*e*P		P	23 53 01.6	-5.3	
YUK					*e*S		**SKSac**	**00 03 47.4**	**+4.2**	
YUK					*e*SS		**SS**	**00 11 01.5**	**+2.3**	
YUK					pmax		pmax			
	comp=Z,738nm,2.0s									
YUK					pmax		pmax			
	comp=Z,361nm,1.1s									
YUK					pmax		pmax			
	comp=N,192nm,1.0s									
STON	**Ston**	**96.64**	**42**	⇑	*i*P		**P**	**23 53 06.9**	**-0.9**	
LVV	**L'vov**	**96.66**	**34**		*e*P		**P**	**23 53 07.5**	**-0.3**	
LVV					*e*			23 57 10.3		
LVV					*e*			00 03 35.0		
LVV					*e*S		**S**	**00 04 23.5**	**-5.1**	
LVV					*e*SS		**SS**	**00 10 56.6**	**-5.4**	
NEVS	**Nevesinje**	**96.69**	**41**		*e*P		**P**	**23 53 12.8**	**+4.6**	
CUC	**Castrocucco**	**96.77**	**45**		IAMs_20		IAMs_20	00 35 23.2		
	comp=Z,125µm,22.0s									
YSS	**Yuzh-Sakhalins**	**96.79**	**323**		P		**P**	**23 53 07.0**	**-1.4**	
YSS					IAmb		IAmb	23 53 26.6		
	comp=Z,161nm,1.3s									
YSS					IAMs_20		IAMs_20	00 40 40.6		
	comp=Z,82µm,20.0s									
YSS	**Yuzh-Sakhalins**	**96.79**	**323**		P		**P**	**23 53 11.2**	**+2.8**	
YSS	**Yuzh-Sakhalins**	**96.79**	**323**	*c*	*i*P		**P**	**23 53 07.8**	**-0.6**	
YSS					*e*SP		**sP**	**23 53 22.6**	**+6.7**	
YSS					*e*PPP		PPP	23 59 10.4		
YSS					*e*			00 03 36.5		
YSS					*e*S		**S**	**00 04 20.8**	**-9.0**	
YSS					*e*PS		**PS**	**00 05 48.8**	**-3.2**	
YSS					*e*SS		**SS**	**00 11 06.7**	**+2.7**	
YSS					pmax		pmax			
	comp=Z,80nm,1.0s									
YSS					pmax		pmax			
	comp=Z,7µm,18.0s									
YSS					pmax		pmax			
	comp=N,1µm,17.6s									
YSS					pmax		pmax			
	comp=E,2µm,15.3s									
FRGS	**Fruska Gora**	**96.80**	**39**	⇑	P		**P**	**23 53 11.5**	**+2.9**	
FRGS	**Fruska Gora**	**96.80**	**39**	⇑	*i*P		**P**	**23 53 08.1**	**-0.5**	
HAPS	**Han Pijesak,BI**	**96.83**	**40**	⇑	*i*P		**P**	**23 53 08.2**	**-0.6**	
VAE	**Valguarnera**	**96.94**	**48**		LR		LR	00 34 59.2		
	comp=E,96µm,19.5s,baz=320,slow=34									
MATE	**Matera**	**97.06**	**44**	⇑	P		Pdif	23 53 12.4	+2.5	
TREB	**Trebinje**	**97.13**	**42**		*e*P		Pdif	23 53 13.7	+3.5	
BRY	**Bratogost**	**97.16**	**42**	⇑	*i*P		**P**	**23 53 09.9**	**-0.5**	
BRY	**Bratogost**	**97.16**	**42**		*e*P		Pdif	23 53 13.4	+2.9	
BBLS	**Lazići**	**97.22**	**40**	⇑	*i*P		**P**	**23 53 10.5**	**-0.1**	
UPM	**Unac-Piva**	**97.24**	**41**		*e*P		Pdif	23 53 14.1	+3.2	
SIRR	**Siria**	**97.32**	**37**	⇑	P		Pdif	23 53 13.6	+2.7	
RUDO	**Rudo**	**97.32**	**41**		*e*P		Pdif	23 53 11.4	+0.4	
HCY	**Herceg Novi**	**97.36**	**42**	⇑	*i*P		**P**	**23 53 10.9**	**-0.2**	
HCY	**Herceg Novi**	**97.36**	**42**	⇑	*i*P		Pdif	23 53 14.3	+3.1	
PLE	**Pljevlja**	**97.48**	**41**	⇑	*i*P		**P**	**23 53 10.6**	**-1.2**	
NKME	**Niksic**	**97.49**	**41**	⇑	*i*P		**P**	**23 53 11.3**	**-0.5**	
CEME	**Cevo**	**97.58**	**42**	⇑	*i*P		**P**	**23 53 11.9**	**-0.3**	
CEL	**Celeste**	**97.63**	**47**		IAMs_20		IAMs_20	00 37 27.1		
	comp=Z,78µm,22.0s									
DRGR		**97.64**	**37**		P		Pdif	23 53 13.0	+0.6	
DRGR					pmax		pmax			
	comp=Z,35nm,2.1s									
BZS	**Buzias**	**97.64**	**38**	⇑	P		Pdif	23 53 15.2	+2.8	
BZS	**Buzias**	**97.64**	**38**		P		Pdif	23 53 13.0	+0.6	
WDD	**Wied Dalam**	**97.75**	**49**		IAMs_20		IAMs_20	00 37 33.7		
	comp=Z,108µm,20.0s									
TIP	**Timpagrande**	**97.80**	**45**	⇑	P		Pdif	23 53 14.8	+1.5	
KOME	**Kolasin**	**97.81**	**41**	⇑	*i*P		**P**	**23 53 12.5**	**-0.8**	
SURR	**Surduc**	**97.87**	**38**	⇑	P		Pdif	23 53 16.5	+3.2	
HIZ	**Hauiti**	**97.87**	**232**		IAMs_20		IAMs_20	00 28 26.9		
	comp=Z,66µm,20.0s									
MRZ	**Mangatainoka R**	**97.87**	**230**		IAMs_20		IAMs_20	00 27 15.8		
	comp=Z,72µm,21.0s									
SJES	**Sjenica**	**97.88**	**41**	⇑	*i*P		**P**	**23 53 13.0**	**-0.6**	
DRME	**Dracevica, Mon**	**97.93**	**42**	⇑	*i*P		**P**	**23 53 13.5**	**-0.2**	
DRME	**Dracevica, Mon**	**97.93**	**42**		*e*P		Pdif	23 53 15.5	+1.7	
MARR	**Marisel-Cluj**	**97.94**	**37**	⇑	P		Pdif	23 53 16.0	+2.2	
GRNR	**Gornyy**	**98.00**	**329**	⇓	*i*P		Pdif	23 53 14.5	+0.6	
GRNR					*e*			23 57 12.0		
GRNR					pmax		pmax			
	comp=N,4.0nm,1.1s									
GRNR					pmax		pmax			
	comp=Z,10.0nm,1.1s									
IVA	**Berane**	**98.03**	**41**	⇑	*i*P		**P**	**23 53 14.0**	**-0.3**	
ULC	**Ulcinj**	**98.08**	**42**	⇑	*i*P		**P**	**23 53 14.3**	**-0.1**	
MDVR	**Moldovita**	**98.15**	**39**	⇓	P		Pdif	23 53 16.3	+1.6	
BCI	**Bajram Curri**	**98.41**	**41**		*i*P		Pdif	23 53 16.8	+0.9	
JKA	**Kamikawa-asahi**	**98.41**	**321**		IAMs_20		IAMs_20	00 44 34.9		
	comp=Z,62µm,19.0s									
ASAJ	**Asahikawa**	**98.41**	**321**		P		Pdif	23 53 17.1	+1.3	
	comp=Z,8.5nm,0.8s,baz=308,slow=12,SNR=5.7									
	comp=Z,8.5nm,0.8s									
GZR	**Gura Zlata**	**98.45**	**38**	⇑	P		Pdif	23 53 18.7	+2.6	
PUK	**Puka**	**98.46**	**42**		*i*P		Pdif	23 53 17.5	+1.3	
HERR	**Herculane**	**98.52**	**38**	⇓	P		Pdif	23 53 18.2	+1.9	
BURAR	**Bucovina Array**	**98.58**	**35**	⇓	P		Pdif	23 53 19.5	+2.8	
BURAR	**Bucovina Array**	**98.58**	**35**		P		Pdif	23 53 19.4	+2.8	
SNZO	**South Karori**	**98.67**	**230**		IAMs_20		IAMs_20	00 26 56.0		
	comp=Z,76µm,22.0s									
BOVS	**Bovan**	**98.76**	**40**	⇑	P		Pdif	23 53 19.6	+2.2	
KIEV	**Kiev**	**98.79**	**31**	⇓	P		Pdif	23 53 19.9	+2.5	
KIEV	**Kiev**	**98.79**	**31**		P		**P**	**23 53 15.6**	**-1.7**	
KIEV	**Kiev**	**98.79**	**31**		IAMs_20		IAMs_20	00 40 30.9		
	comp=Z,143µm,20.0s									
KIEV	**Kiev**	**98.79**	**31**		*i* Pdiff		**P**	**23 53 14.6**	**-2.7**	
	SNR=7.4									
KIEV	**Kiev**	**98.79**	**31**		P		**P**	**23 53 15.6**	**-1.7**	
KIEV					pmax		pmax			
	comp=Z,106nm,1.7s									
KIEV					MLR		MLR			
	comp=Z,143µm,20.0s									
AKASG	**Malin Array Be**	**98.79**	**31**		P		**P**	**23 53 14.6**	**-2.8**	
	comp=Z,4.7nm,1.0s,baz=290,slow=3.7,SNR=18									
AKASG					PP		**PP**	**23 57 17.7**	**-0.4**	
	comp=Z,4.7nm,0.8s,baz=307,slow=6.0,SNR=2.0									
AKASG					PKKP		**PKKPdf**	**00 09 50.0**	**+1.0**	
	comp=Z,0.9nm,0.5s,baz=96,slow=2.1,SNR=6.1									
AKASG					PKPPKP			00 18 02.9		
	comp=Z,0.3nm,0.4s,baz=103,slow=0.8,SNR=6.6									
AKASG					LR		LR	00 40 04.2		
	comp=Z,136µm,19.5s,baz=302,slow=37									
	comp=Z,4.7nm,1.0s									
AKBB	**Malin Array Si**	**98.79**	**31**	*c*	*e*P		**P**	**23 53 14.4**	**-2.9**	
AKBB					pmax		pmax			
	comp=Z,86nm,2.0s									
AKBB					MLR		MLR			
	comp=Z,161µm,20.0s									
TIR	**Tirane**	**98.80**	**42**	⇑	P		Pdif	23 53 20.5	+2.9	
TIR	**Tirane**	**98.80**	**42**		*e*P		**PP**	**23 57 25.3**	**+6.8**	
TIR	**Tirane**	**98.80**	**42**		IAMs_20		IAMs_20	00 37 49.5		
	comp=Z,127µm,22.0s									
TIR	**Tirane**	**98.80**	**42**		*i*P		Pdif	23 53 19.2	+1.6	
TIR	**Tirane**	**98.80**	**42**		P		Pdif	23 53 20.5	+2.9	
PHP	**Peshkopia**	**99.00**	**42**		*i*P		Pdif	23 53 18.6	0.0	
PHP	**Peshkopia**	**99.00**	**42**		P		**P**	**23 53 18.1**	**-0.5**	
LOT	**Lotru**	**99.00**	**37**		*e*P		**PP**	**23 57 26.3**	**+6.3**	
VLO	**Vlora**	**99.00**	**43**		P		**Pdif**	**23 53 16.7**	**-1.8**	
MOS	**Moscow**	**99.03**	**24**		*e*P		**Pdif**	**23 53 16.8**	**-1.5**	
MOS					*e*			23 57 17.3		
MOS					*e*			00 03 52.2		
MOS					*e*PS		PS	00 06 11.8	-4.0	
MOS					*e*SSS		SSS	00 15 19.4		
MOS					pmax		pmax			
	comp=Z,135nm,2.0s									
OBN	**Obninsk**	**99.07**	**25**	⇑	P		**Pdif**	**23 53 19.4**	**+0.9**	
OBN	**Obninsk**	**99.07**	**25**		P		**Pdif**	**23 53 17.3**	**-1.2**	
OBN					IAmb		IAmb	23 53 35.4		
	comp=Z,237nm,1.6s									
OBN	**Obninsk**	**99.07**	**25**	*c*	*e*P		**Pdif**	**23 53 16.4**	**-2.1**	
OBN					*i*			23 57 14.7		
OBN					*e*PPP		PPP	23 59 23.3		
OBN					*i*S		**SKSac**	**00 03 54.0**	**-2.1**	
OBN					*e*SS		**SS**	**00 11 41.7**	**+6.4**	
OBN					*e*SSS		SSS	00 15 23.2		
OBN					pmax		pmax			
	comp=Z,221nm,2.0s									
OBN					pmax		pmax			
	comp=Z,2µm,4.0s									
OBN					MLR		MLR			
	comp=Z,175µm,22.0s									
OBN	**Obninsk**	**99.07**	**25**		LR		LR	00 40 01.6		
	comp=Z,153µm,20.4s,baz=320,slow=37									
JEM	**Erimo**	**99.17**	**319**		IAMs_20		IAMs_20	00 39 03.9		
	comp=Z,66µm,21.0s									
BLKB	**Belogradchik**	**99.36**	**39**	⇑	P		**Pdif**	**23 53 22.5**	**+2.4**	
SKO	**Skopje**	**99.48**	**41**		*i*P		**Pdif**	**23 53 21.3**	**+0.7**	
OHR	**Ohrid**	**99.52**	**42**		*i*P		**Pdif**	**23 53 21.9**	**+1.0**	
KEK	**Kerkira**	**99.59**	**44**		*e*P		**PP**	**23 57 28.9**	**+4.3**	
DOPR	**Dopca**	**99.63**	**36**	⇑	P		**Pdif**	**23 53 23.8**	**+2.5**	
SRN	**Sarande**	**99.64**	**44**		*i*P		**Pdif**	**23 53 18.6**	**-2.7**	
VOIR		**99.75**	**37**	⇑	P		**Pdif**	**23 53 24.2**	**+2.3**	
VOIR		**99.75**	**37**		P		**Pdif**	**23 53 24.2**	**+2.3**	
KBN	**Korca**	**99.77**	**43**		*i*P		**Pdif**	**23 53 20.6**	**-1.5**	
KBN	**Korca**	**99.77**	**43**		P		**Pdif**	**23 53 19.9**	**-2.2**	
LSK	**Leskovik**	**99.89**	**43**		*i*P		**Pdif**	**23 53 23.6**	**+1.0**	
TURR	**Turia**	**99.94**	**36**	⇓	P		**Pdif**	**23 53 24.5**	**+1.9**	
SORM	**Soroca**	**99.95**	**33**	⇑	P		**Pdif**	**23 53 25.3**	**+2.7**	
SORM	**Soroca**	**99.95**	**33**		P		**Pdif**	**23 53 25.3**	**+2.7**	
FNA	**Florina**	**100.07**	**42**		*e*P		**PP**	**23 57 35.4**	**+7.2**	
FNA	**Florina**	**100.07**	**42**		*i*P		**Pdif**	**23 53 19.7**	**-3.6**	
FNA	**Florina**	**100.07**	**42**		P		**Pdif**	**23 53 21.2**	**-2.2**	
THZ	**Tophouse**	**100.09**	**229**		IAMs_20		IAMs_20	00 28 56.6		
	comp=Z,92µm,20.0s									
STIP	**Stip**	**100.10**	**41**		*i*P		**Pdif**	**23 53 25.1**	**+1.7**	
QRZ	**Quartz Range**	**100.16**	**230**		IAMs_20		IAMs_20	00 27 57.5		
	comp=Z,76µm,22.0s									
COVR	**Voineasa-Covas**	**100.17**	**36**	⇑	P		**Pdif**	**23 53 25.8**	**+2.1**	
ZEA	**Zeya**	**100.20**	**335**		*e*P		**Pdif**	**23 53 24.3**	**+0.7**	
ZEA					*e*			23 57 32.8		
ZEA					*e*S		**Sdif**	**00 04 59.6**	**+1.2**	
ZEA					*e*SS		**SS**	**00 12 01.9**	**+11**	
ZEA					pmax		pmax			
	comp=E,2µm,17.2s									
ZEA					pmax		pmax			
	comp=N,2µm,17.4s									
ZEA					pmax		pmax			
	comp=Z,4µm,17.3s									
ZEA					pmax		pmax			
	comp=N,20nm,1.3s									
ZEA					pmax		pmax			
	comp=Z,30nm,1.6s									
MLR	**Muntele Rosu**	**100.23**	**36**	⇑	P		**Pdif**	**23 53 26.4**	**+2.3**	
MLR	**Muntele Rosu**	**100.23**	**36**		*e*P		**PP**	**23 57 35.1**	**+5.7**	
MLR	**Muntele Rosu**	**100.23**	**36**		IAMs_20		IAMs_20	00 47 15.6		
	comp=Z,91µm,19.0s									
MLR	**Muntele Rosu**	**100.23**	**36**		P		**Pdif**	**23 53 26.4**	**+2.3**	
MLR	**Muntele Rosu**	**100.23**	**36**		PKKP			00 09 46.7		
	comp=Z,9.2nm,1.1s,baz=164,slow=2.2,SNR=5.0									
MLR					LR		LR	00 44 02.3		
	comp=Z,86µm,18.3s,baz=315,slow=39									
VTS	**Vitosha**	**100.25**	**40**		P		**Pdif**	**23 53 28.7**	**+4.4**	
GVZ	**Greta Valley S**	**100.26**	**228**		IAMs_20		IAMs_20	00 28 15.1		
	comp=Z,71µm,21.0s									
PLOR	**Plostina**	**100.41**	**36**	⇑	P		**Pdif**	**23 53 28.0**	**+3.2**	
PLOR	**Plostina**	**100.41**	**36**		P		**Pdif**	**23 53 28.0**	**+3.2**	
VRI	**Vrincioaia**	**100.45**	**36**	⇑	P		**Pdif**	**23 53 27.8**	**+2.8**	
VRI	**Vrincioaia**	**100.45**	**36**		P		**Pdif**	**23 53 27.7**	**+2.8**	
KPRO	**Kipourio**	**100.49**	**43**		P		**Pdif**	**23 53 25.0**	**-0.3**	
VAY	**Valandovo**	**100.54**	**41**		*i*P		**Pdif**	**23 53 28.5**	**+3.1**	
LKD2	**Lefkada island**	**100.63**	**44**		*e*P		**PP**	**23 57 33.8**	**+1.3**	
GRG	**Griva**	**100.63**	**42**		*e*P		**PP**	**23 57 35.5**	**+3.0**	
GRG	**Griva**	**100.63**	**42**		P		**Pdif**	**23 53 24.4**	**-1.4**	
KNT	**Kendrikon**	**100.84**	**41**		*e*P		**PP**	**23 57 36.5**	**+2.5**	
KNT	**Kendrikon**	**100.84**	**41**		P		**Pdif**	**23 53 27.4**	**+0.7**	
DSZ	**Denniston Nort**	**100.89**	**230**		IAMs_20		IAMs_20	00 30 20.8		
	comp=Z,66µm,20.0s									
KIS	**Kishinev**	**100.91**	**34**		*e*P		**Pdif**	**23 53 23.0**	**-3.9**	
	comp=Z,1µm,6.9s									
KIS	**Kishinev**	**100.91**	**34**		*e*SKS			00 04 04.0		
KIS					*e*PP		PP	23 57 22.0	-12	
	comp=Z,4µm,19.5s									
KIS	**Kishinev**	**100.91**	**34**		*e*PS		PS	00 06 34.0	-2.4	
KIS					*e*L		L	00 28 29.0		
KIS					LRM		MLR	00 42 17.0		
	comp=Z,33µm,21.0s									
KIS	**Kishinev**	**100.91**	**34**		*e*P		**Pdif**	**23 53 23.0**	**-3.9**	
KIS					*e*			00 04 04.0		
KIS					*e*PS		**PS**	**00 06 34.0**	**-2.4**	
KIS					pmax		pmax			
	comp=Z,1µm,6.9s									
MILM	**Milestii Mici**	**100.95**	**34**	⇑	*i*P		**Pdif**	**23 53 23.3**	**-3.8**	
	comp=Z,4µm,8.9s									
MILM	**Milestii Mici**	**100.95**	**34**		*e*SKS			00 04 04.0		
MILM					*e*PP		**PP**	**23 57 27.0**	**-7.6**	
MILM	**Milestii Mici**	**100.95**	**34**		*i*PS		PS	00 06 34.0	-2.8	
MILM					*e*L		L	00 26 36.0		
MILM					LRM		MLR	00 42 26.0		
	comp=Z,165µm,19.5s									
MILM	**Milestii Mici**	**100.95**	**34**	*c*	*i*P		**Pdif**	**23 53 23.3**	**-3.8**	
MILM					*e*			23 57 34.0		
MILM					*e*			00 04 04.0		
MILM					*i*PS		**PS**	**00 06 34.0**	**-2.8**	
MILM					pmax		pmax			
	comp=Z,4µm,8.9s									
THL	**Klokotos Trika**	**101.12**	**43**		P		**Pdif**	**23 53 27.4**	**-0.6**	
MMB	**Musomishta**	**101.16**	**41**		P		**Pdif**	**23 53 26.4**	**-1.8**	
TYRN	**Tyrnavos**	**101.19**	**43**		P		**Pdif**	**23 53 25.6**	**-2.7**	
HORT	**Hortiatis**	**101.27**	**42**		*e*P		**PP**	**23 57 39.5**	**+2.1**	
KLR	**Kul'dur**	**101.31**	**329**		P		**Pdif**	**23 53 29.0**	**+0.4**	
KLR	**Kul'dur**	**101.31**	**329**		P		**Pdif**	**23 53 28.9**	**+0.4**	
	comp=Z,2.4nm,0.9s,baz=45,slow=3.3,SNR=3.8									
KLR					PP		**PP**	**23 57 39.2**	**+2.1**	
	comp=Z,9.3nm,1.1s,baz=44,slow=8.5,SNR=3.6									
KLR					PKKP		**PKKPdf**	**00 09 43.5**	**-0.8**	
	comp=Z,1.9nm,0.7s,baz=222,slow=5.8,SNR=4.2									
NVR	**Nevrokopi**	**101.34**	**41**		P		**Pdif**	**23 53 29.8**	**+0.8**	
INZ	**Inchbonnie**	**101.35**	**229**		IAMs_20		IAMs_20	00 29 03.0		
	comp=Z,83µm,22.0s									
PLD	**Plovdiv**	**101.45**	**40**		*e*P		**PP**	**23 57 40.6**	**+2.1**	
BOD	**Bodaibo**	**101.52**	**343**		*e*P		**Pdif**	**23 53 27.5**	**-1.9**	
BOD					*e*			23 57 38.6		
BOD					pmax		pmax			
	comp=Z,55nm,1.9s									
SZH	**Strazhitsa**	**101.55**	**38**		P		**Pdif**	**23 53 30.0**	**+0.2**	
AGG	**Agios Georgios**	**101.62**	**43**		*e*P		**PP**	**23 57 44.3**	**+4.3**	
AGG	**Agios Georgios**	**101.62**	**43**		P		**Pdif**	**23 53 28.0**	**-2.3**	
CFR	**Carcaliu**	**101.65**	**36**	⇑	P		**Pdif**	**23 53 31.9**	**+1.7**	
CFR	**Carcaliu**	**101.65**	**36**		P		**Pdif**	**23 53 31.9**	**+1.7**	
RZN	**Rozhen**	**101.70**	**40**		P		**Pdif**	**23 53 31.1**	**+0.3**	
KOKK	**Kokkinochori,**	**101.72**	**41**		P		**Pdif**	**23 53 31.5**	**+0.8**	
PURM	**Purcari**	**101.77**	**34**	⇓	P		**Pdif**	**23 53 33.1**	**+2.5**	
RPZ	**Rata Peaks**	**101.83**	**228**		IAMs_20		IAMs_20	00 31 06.6		
	comp=Z,68µm,21.0s									
HARR	**Harsova**	**101.83**	**36**	⇑	P		**Pdif**	**23 53 32.9**	**+1.9**	
HARR	**Harsova**	**101.83**	**36**		P		**Pdif**	**23 53 32.9**	**+1.9**	
LPSR	**Galich'ya Gora**	**101.86**	**25**		*e*P		**Pdif**	**23 53 30.1**	**-0.9**	
LPSR					*e*			23 57 38.1		
LPSR					*e*SP		SP	00 06 42.9	-0.8	
LPSR					pmax		pmax			
	comp=Z,120nm,1.6s									
LPSR					MLR		MLR			
	comp=Z,138µm,18.0s									
AXAR	**Agios Charalam**	**101.97**	**43**		P		**Pdif**	**23 53 29.2**	**-2.6**	
OUR	**Ouranopolis**	**101.98**	**42**		*e*P		**PP**	**23 57 43.9**	**+1.3**	
OUR	**Ouranopolis**	**101.98**	**42**		P		**Pdif**	**23 53 30.9**	**-0.9**	
XOR	**Xorichti**	**102.00**	**43**		*e*P		**PP**	**23 57 45.3**	**+2.5**	
XOR	**Xorichti**	**102.00**	**43**		P		**Pdif**	**23 53 28.0**	**-4.0**	
TPGR	**Topolog**	**102.01**	**36**	⇓	P		**Pdif**	**23 53 34.5**	**+2.6**	
PAIG	**Paliouri**	**102.01**	**42**		*e*P		**PP**	**23 57 42.9**	**+0.1**	
PAIG	**Paliouri**	**102.01**	**42**		P		**Pdif**	**23 53 30.9**	**-1.0**	
NEO	**Neokhori**	**102.05**	**43**		P		**Pdif**	**23 53 28.0**	**-4.2**	
KDZ	**Kurdzhali**	**102.10**	**40**		*e*P		**PP**	**23 57 42.6**	**-0.9**	
KDZ	**Kurdzhali**	**102.10**	**40**		P		**Pdif**	**23 53 32.9**	**+0.6**	
TIRR	**Tirgusor**	**102.25**	**36**	⇑	P		**Pdif**	**23 53 35.0**	**+2.2**	
TIRR	**Tirgusor**	**102.25**	**36**		*e*P		**PP**	**23 57 41.9**	**-2.5**	
TIRR	**Tirgusor**	**102.25**	**36**		P		**Pdif**	**23 53 35.0**	**+2.2**	
JMB	**Yambol**	**102.33**	**39**		P		**Pdif**	**23 53 37.8**	**+4.5**	
ODZ	**Otahua Downs**	**102.37**	**227**		IAMs_20		IAMs_20	00 30 22.9		
	comp=Z,96µm,20.0s									
MFTR	**Murfatlar**	**102.43**	**36**	⇓

SAUV	**Serdivan-Sakar**	**105.65**	**38**	*eP*		**PP**		**23 58 06.7**	**-3.2**
CAVI	**Cavuskoy**	**105.70**	**39**	*eP*		**PP**		**23 58 08.8**	**-1.5**
BNX	**BinXian**	**105.84**	**329**	Pdif		**Pdif**		**23 53 47.6**	**-1.3**
BNX				PP		**PP**		**23 58 09.6**	**-1.4**
BNX				SS		SS		00 13 11.6	+2.3
BNX				AMB		AMB			
	comp=Z,12µm,15.6s								
BNX				LR		LR			
	comp=Z,42µm,18.3s								
BNX				LR		LR			
	comp=Z,70µm,17.9s								
BNX				LR		LR			
	comp=Z,94µm,20.0s								
TVSB	**Tavsanli**	**105.92**	**40**	*eP*		**PKiKP**		**23 58 01.9**	**0.0**
GULT	**Gulveren**	**105.96**	**38**	*eP*		**PP**		**23 58 12.2**	**0.0**
BODT	**Bodrum**	**105.98**	**43**	*eP*		**PKiKP**		**23 58 05.4**	**+3.4**
KULA	**Kula-Manisa**	**105.99**	**41**	*eP*		**PKiKP**		**23 58 00.3**	**-1.7**
SRCK	**Saricakaya, Es**	**106.27**	**39**	*eP*		**PKiKP**		**23 58 04.3**	**+1.9**
QSPA	**South Pole Qui**	**106.28**	**180**	IAMs_20		IAMs_20		00 33 24.4	
	comp=Z,69µm,22.0s								
QSPA	**South Pole Qui**	**106.28**	**180**	Pdiff		**Pdif**		**23 53 50.9**	**+0.6**
	comp=Z,3.7nm,1.1s,baz=94,slow=4.7,SNR=5.3								
QSPA				PKiKP		**PKiKP**		**23 58 01.3**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=96,slow=5.0,SNR=3.0								
QSPA				PKKP		**PKKPdf**		**00 09 37.0**	**-0.7**
	comp=Z,16nm,1.0s,baz=311,slow=0.9,SNR=3.7								
RFTAA	**Mazikoy-Bodrum**	**106.30**	**43**	*eP*		**PP**		**23 58 11.8**	**-3.0**
MDUB	**Mudurnu**	**106.34**	**38**	*eP*		**PP**		**23 58 16.9**	**+1.8**
KURC	**Kurucasile-Bar**	**106.35**	**36**	*eP*		**PP**		**23 58 08.8**	**-6.2**
ZKR	**Zakros**	**106.36**	**45**	*eP*		**PP**		**23 58 16.9**	**+1.6**
HIA	**Hailar**	**106.65**	**335**	IAMs_20		IAMs_20		00 47 55.9	
	comp=Z,122µm,20.0s								
KARP	**Karpathos**	**106.75**	**44**	*eP*		**PP**		**23 58 17.6**	**-0.6**
KARP	**Karpathos**	**106.75**	**44**	IAMs_20		IAMs_20		00 45 13.2	
	comp=Z,72µm,21.0s								
CIFT	**Cifteler, Eski**	**106.95**	**39**	*eP*		**PP**		**23 58 14.9**	**-4.7**
DALY	**Dalyan (Mula)**	**106.99**	**42**	*eP*		**PP**		**23 58 17.9**	**-2.0**
SNAA	**Sanae**	**107.00**	**161**	IAMs_20		IAMs_20		00 33 53.5	
	comp=Z,73µm,22.0s								
SNAA	**Sanae**	**107.00**	**161**	⇑PP		**PP**		**23 58 21.7**	**+1.9**
	comp=Z,91nm,0.9s								
SNAA				⇓Pdiff		**Pdif**		**23 54 07.6**	**+14**
	comp=Z,60nm,0.9s								
SNAA	**Sanae**	**107.00**	**161**	Pdiff		**Pdif**		**23 53 54.2**	**+0.9**
	comp=Z,3.3nm,1.0s,baz=298,slow=13,SNR=2.3								
SNAA				PKiKP		**PKiKP**		**23 58 01.6**	**-1.2**
	comp=Z,4.6nm,1.0s,baz=248,slow=5.4,SNR=2.7								
SNAA				PKKP		**PKKPdf**		**00 09 36.3**	**+0.4**
	comp=Z,8.6nm,1.1s,baz=46,slow=3.2,SNR=6.3								
SHUT	**Suhut-Afyon**	**107.14**	**40**	*eP*		**PP**		**23 58 20.3**	**-0.8**
SVRH	**Sivrihisar-ESK**	**107.18**	**39**	*eP*		**PP**		**23 58 22.3**	**+1.1**
FETY	**Fethiye**	**107.38**	**42**	*eP*		**PP**		**23 58 20.3**	**-2.5**
ISP	**Isparta**	**107.58**	**41**	IAMs_20		IAMs_20		00 49 05.0	
	comp=Z,63µm,20.0s								
ANTO	**Ankara**	**107.66**	**38**	IAMs_20		IAMs_20		00 44 40.6	
	comp=Z,106µm,20.0s								
ERBR	**Yeremizino-Bor**	**107.67**	**29**	*eP*		**Pdif**		**23 53 59.0**	**+2.0**
ERBR				*i*				23 58 21.5	
ERBR				*i*				00 04 33.0	
ERBR				*e*SSS		SSS		00 17 29.4	
ERBR				pmax		pmax			
	comp=Z,27nm,1.6s								
KIZT	**Kizilcal**	**107.75**	**39**	*eP*		**PP**		**23 58 25.4**	**-0.1**
BCK	**Bucak**	**107.84**	**41**	*eP*		**PP**		**23 58 24.4**	**-1.7**
ELL	**Elmali**	**107.84**	**42**	*eP*		**PP**		**23 58 25.4**	**-0.9**
DIKM	**Dikmen**	**107.89**	**35**	*eP*		**PP**		**23 58 25.4**	**-0.8**
VNDA	**Vanda**	**108.06**	**193**	PKiKP		**PKiKP**		**23 58 04.6**	**0.0**
	comp=Z,2.0nm,0.9s,baz=125,slow=6.4,SNR=2.1								
AFSR	**Afar-Bala (An**	**108.10**	**38**	*eP*		**PP**		**23 58 22.4**	**-5.6**
CN2	**Changchun**	**108.20**	**328**	Pdif		**Pdif**		**23 54 01.9**	**+2.5**
CN2				PP		**PP**		**23 58 33.6**	**+5.2**
CN2				SS		SS		00 13 43.1	+1.7
CN2				AMB		AMB			
	comp=Z,4µm,7.0s								
CN2				LR		LR			
	comp=Z,13µm,17.0s								
CN2				LR		LR			
	comp=Z,16µm,17.0s								
CN2				LR		LR			
	comp=Z,25µm,24.0s								
ANTB	**Antalya**	**108.22**	**41**	*eP*		**PP**		**23 58 24.7**	**-4.1**
BRTR	**Keskin Array B**	**108.25**	**37**	Pdiff		**Pdif**		**23 54 04.2**	**+4.3**
	comp=Z,0.5nm,0.8s,baz=260,slow=4.4,SNR=2.4								
BRTR				PKiKP		**PKiKP**		**23 58 06.4**	**+0.1**
	comp=Z,5.4nm,0.9s,baz=258,slow=0.9,SNR=10								
LADK	**Ladik-KONYA**	**108.47**	**39**	*eP*		**PP**		**23 58 26.8**	**-4.0**
LABN	**Labinsk**	**108.58**	**30**	*eP*		**Pdif**		**23 54 04.9**	**+3.8**
LABN				*i*				23 58 28.3	
LABN				*e*SS		SS		00 13 46.6	+0.2
LABN				*e*SSS		SSS		00 17 48.8	
LABN				pmax		pmax			
	comp=Z,11nm,0.7s								
KONT	**Konya--Tatoy**	**108.63**	**40**	*eP*		**PP**		**23 58 31.5**	**-0.4**
TROLL	**Troll, Antarti**	**108.66**	**161**	⇓PP		**PP**		**23 58 34.3**	**+2.2**
	comp=Z,30nm,0.8s								
TROLL				⇑Pdiff		**Pdif**		**23 54 08.2**	**+7.4**
	comp=Z,60µm,5.6s								
KVT	**Kavak**	**108.71**	**35**	*eP*		**PP**		**23 58 33.2**	**+0.9**
IRK	**Irkutsk**	**109.03**	**346**	*eP*		**Pdif**		**23 54 06.5**	**+3.6**
IRK				pmax		pmax			
	comp=Z,86nm,2.8s								
HDMB	**Hadim**	**109.33**	**40**	*eP*		**PP**		**23 58 33.2**	**-4.0**
TOKT	**Tokat**	**109.51**	**35**	*eP*		**PP**		**23 58 35.9**	**-2.2**
HHU	**Hamhung**	**109.82**	**324**	PKPbc		**PP**		**23 58 42.0**	**+1.7**
RSDY	**Resadiye-TOKAT**	**109.89**	**35**	*eP*		**PP**		**23 58 36.9**	**-3.9**
ZALV	**Zalesovo Beam**	**109.95**	**358**	Pdiff		**Pdif**		**23 54 08.6**	**+1.7**
	comp=Z,2.8nm,0.7s,baz=1.7,slow=5.0,SNR=11								
ZALV				PKiKP		**PKiKP**		**23 58 09.8**	**+1.0**
	comp=Z,5.4nm,0.8s,baz=357,slow=3.0,SNR=4.2								
ZALV				PP		**PP**		**23 58 37.5**	**-2.9**
	comp=Z,12nm,0.7s,baz=350,slow=7.5,SNR=4.2								
ZALV				PKKPbc		**PKKPbc**		**00 09 10.8**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=173,slow=3.8,SNR=2.7								
KIV	**Kislovodsk**	**110.02**	**29**	*i* P		**Pdif**		**23 54 04.5**	**-3.1**
KIV				*e*				23 58 38.1	
KIV				*e*PPP		PPP		00 00 56.8	
KIV				*e*				00 04 45.2	
KIV				*e*PS		**PS**		**00 08 07.4**	**-3.9**
KIV				*e*SS		SS		00 14 03.1	-2.9
KIV				*e*SSS		SSS		00 18 14.3	
KIV				MLR		MLR			
	comp=Z,84µm,21.0s								
SVSK	**Karacayir**	**110.04**	**35**	*eP*		**PP**		**23 58 38.7**	**-3.1**
BNN	**Bunyan**	**110.11**	**37**	*eP*		**PP**		**23 58 35.3**	**-7.3**
BVAR	**Borovoye Array**	**110.18**	**7**	Pdiff		**Pdif**		**23 54 10.5**	**+2.5**
	comp=Z,2.3nm,1.0s,baz=357,slow=3.0,SNR=6.7								
BVAR				PKiKP		**PKiKP**		**23 58 10.6**	**+1.2**
	comp=Z,6.7nm,0.9s,baz=25,slow=1.6,SNR=4.5								
BVAR				PP		**PP**		**23 58 40.4**	**-1.9**
	comp=Z,26nm,0.9s,baz=313,slow=5.2,SNR=4.1								
BVAR				PKKPbc		**PKKPbc**		**00 09 10.3**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=145,slow=5.3,SNR=2.6								
ESPY	**Espiye-Giresun**	**110.28**	**34**	*eP*		**PP**		**23 58 36.6**	**-7.0**
MOY	**Mondy**	**110.29**	**348**	*eP*		**Pdif**		**23 54 12.4**	**+3.7**
MOY				pmax		pmax			
	comp=Z,57nm,2.4s								
KBZ	**Khabaz**	**110.30**	**29**	Pdiff		**Pdif**		**23 54 12.6**	**+3.9**
	comp=Z,2.1nm,1.0s,baz=211,slow=10.0,SNR=2.5								
KBZ				PP		**PP**		**23 58 44.1**	**+0.6**
	comp=Z,11nm,0.9s,baz=293,slow=4.2,SNR=4.2								
KBZ				PKKPbc		**PKKPbc**		**00 09 13.4**	**+1.8**
	comp=Z,5.0nm,1.0s,baz=159,slow=3.1,SNR=4.4								
AKKU	**Akkuyu-Mersin**	**110.50**	**40**	*eP*		**PP**		**23 58 37.9**	**-7.5**
IKL	**Isikli**	**110.54**	**40**	*eP*		**PP**		**23 58 40.4**	**-5.2**
SNY	**Shenyang**	**110.58**	**328**	⇑Pdif		**Pdif**		**23 54 10.4**	**+0.4**
SNY				PP		**PP**		**23 58 47.3**	**+1.7**
SNY				LR		LR			
	comp=Z,45µm,20.1s								
SNY				LR		LR			
	comp=Z,12µm,20.1s								
SNY				LR		LR			
	comp=Z,71µm,21.1s								
SILI	**Silifke-Mersin**	**110.60**	**40**	*eP*		**PP**		**23 58 44.8**	**-1.3**
KARA	**Karaisali**	**110.71**	**39**	*eP*		**PP**		**23 58 45.5**	**-1.3**
SARI	**SarD1z-Kayseri**	**110.74**	**37**	*eP*		**PP**		**23 58 40.7**	**-6.5**
KTUT	**Trabzon**	**110.78**	**33**	*eP*		**PP**		**23 58 40.7**	**-6.4**
ZAK	**Zakamensk**	**110.99**	**346**	*eP*		**Pdif**		**23 54 11.6**	**-0.2**
ZAK				pmax		pmax			
	comp=Z,10.0nm,2.1s								
KOZT	**Kozan**	**111.02**	**38**	*eP*		**PP**		**23 58 44.1**	**-5.0**
CSS	**Mathiatis**	**111.13**	**41**	*eP*		**PP**		**23 58 46.8**	**-3.2**
CSS	**Mathiatis**	**111.13**	**41**	IAMs_20		IAMs_20		00 45 16.8	
	comp=Z,59µm,22.0s								
ILIC	**ilic-Erzincan**	**111.23**	**35**	*eP*		**PP**		**23 58 45.8**	**-4.8**
DARE	**Darende-Malaty**	**111.24**	**36**	*eP*		**PP**		**23 58 45.5**	**-5.2**
KSRS	**Korea Array**	**111.27**	**322**	Pdiff		**Pdif**		**23 54 14.7**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=26,slow=2.4,SNR=1.8								
KSRS				PKiKP		**PKiKP**		**23 58 12.6**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=351,slow=1.1,SNR=8.4								
KSRS				PP		**PP**		**23 58 50.8**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=48,slow=3.8,SNR=4.5								
KSRS				PKKP		**PKKPdf**		**00 09 24.8**	**-1.1**
	comp=Z,4.9nm,1.0s,baz=233,slow=4.1,SNR=6.9								
CEYT	**Ceyhan**	**111.29**	**38**	*eP*		**PP**		**23 58 48.9**	**-2.1**
EREN	**Erenkoy**	**111.29**	**41**	*eP*		**PP**		**23 58 49.2**	**-1.9**
BATM	**Batumi**	**111.31**	**31**	*eP*		**PP**		**23 58 48.5**	**-2.4**
ARPR	**Arapgir-MALATY**	**111.35**	**35**	*eP*		**PP**		**23 58 50.6**	**-0.9**
ARPR	**Arapgir-MALATY**	**111.35**	**35**	IAMs_20		IAMs_20		00 55 00.9	
	comp=Z,54µm,20.0s								
SUJ	**Sinuiju**	**111.36**	**326**	PKPbc		**PP**		**23 58 46.3**	**-4.9**
BCA	**Borcka**	**111.39**	**32**	*eP*		**PP**		**23 58 45.8**	**-5.7**
PYAG	**Pyongyang**	**111.41**	**325**	PKPbc		**PP**		**23 58 47.1**	**-4.6**
ONI	**Oni**	**111.43**	**30**	*eP*		**PP**		**23 58 45.5**	**-6.3**
ZEI	**Tsey**	**111.49**	**29**	*e*PKIKP		PKiKP		23 57 58.5	-14
ZEI				pmax		pmax			
	comp=Z,19nm,1.5s								
KMRS	**Kahramanmaras**	**111.63**	**37**	*eP*		**PP**		**23 58 47.5**	**-6.0**
ERZN	**Erzincan**	**111.76**	**34**	*eP*		**PP**		**23 58 52.9**	**-1.5**
TAHT	**Tahtakopru-Hat**	**111.97**	**39**	*eP*		**PP**		**23 58 48.5**	**-7.4**
GROC	**Groznyy**	**112.03**	**28**	*e*PKIKP		**PKiKP**		**23 58 19.9**	**+6.8**
GROC				*e*PS		**PS**		**00 08 28.5**	**-1.1**
GAZ	**Gaziantep**	**112.04**	**37**	*eP*		**PP**		**23 58 52.3**	**-4.1**
PTK	**Pertek**	**112.08**	**35**	*eP*		**PP**		**23 58 52.6**	**-4.2**
HJU	**Haeju**	**112.14**	**324**	PP		PP		23 59 37.7	+41
HJU				PKPbc		PP		23 58 48.6	-8.4
AKH	**Akhalkalaki**	**112.35**	**30**	*eP*		**PP**		**23 58 54.6**	**-3.9**
SENK	**Senkaya-Erzuru**	**112.42**	**32**	*eP*		PP		23 58 51.2	-7.9
XLT	**XiLinHaoTe**	**112.46**	**334**	*e*PKP		**PKiKP**		**23 58 09.5**	**-4.5**
XLT				PP		PP		23 59 06.9	+7.8
XLT				SKKS				00 05 59.8	
XLT				LR		LR			
	comp=Z,8µm,20.4s								
XLT				LR		LR			
	comp=Z,60µm,19.6s								
XLT				LR		LR			
	comp=Z,128µm,20.8s								
SONM	**Songino Array**	**112.50**	**343**	Pdiff		**Pdif**		**23 54 20.5**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=6.0,slow=3.3,SNR=4.1								
SONM				PKiKP		**PKiKP**		**23 58 15.6**	**+1.5**
	comp=Z,4.1nm,1.0s,baz=39,slow=0.7,SNR=4.7								
SONM				PP		**PP**		**23 58 56.3**	**-2.9**
	comp=Z,9.5nm,1.0s,baz=18,slow=3.0,SNR=5.3								
SONM				PKKPbc		**PKKPbc**		**00 09 02.8**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=195,slow=4.2,SNR=4.4								
KOPR	**Koprukoy-ERZUR**	**112.59**	**33**	*eP*		**PP**		**23 58 58.0**	**-2.3**
KARO	**Karliova-Bingo**	**112.67**	**33**	*eP*		**PP**		**23 58 57.4**	**-3.6**
BNGB	**Bingl**	**112.70**	**34**	*eP*		**PP**		**23 59 01.2**	**+0.1**
KARS	**Kars**	**112.74**	**31**	*eP*		**PP**		**23 58 57.7**	**-3.6**
MAK	**Makhachkala**	**112.98**	**27**	*eP*		**Pdif**		**23 54 17.2**	**-3.4**
MAK				*i*				23 58 15.2	
MAK				*e*				23 59 06.0	
MAK				*e*PPP		PPP		00 01 22.0	
MAK				*e*				00 04 54.7	
MAK				*e*PS		**PS**		**00 08 36.2**	**-2.1**
MAK				*e*SS		SS		00 14 48.0	+3.0
MAK				*e*SSS		SSS		00 18 52.9	
MAK				pmax		pmax			
	comp=Z,378nm,1.4s								
MAK				MLR		MLR			
	comp=N,213µm,22.0s								
MAK				MLR		MLR			
	comp=Z,123µm,21.0s								
MAK				MLR		MLR			
	comp=E,132µm,21.0s								
VRTB	**Varto-Mus**	**113.00**	**33**	*eP*		**PP**		**23 58 58.4**	**-4.8**
DYBB	**Diyarbakir**	**113.16**	**35**	*eP*		**PP**		**23 59 01.8**	**-2.5**
KURK	**Kurchatov**	**113.16**	**2**	*i* PKiKP		**PKiKP**		**23 58 13.9**	**-1.1**
KURBB	**Kurchatov Arra**	**113.25**	**2**	Pdiff		**Pdif**		**23 54 23.8**	**+2.1**
	comp=E,0.2nm,0.4s,baz=354,slow=4.1,SNR=3.3								
KURBB				PKiKP		**PKiKP**		**23 58 13.9**	**-1.3**
	comp=E,4.9nm,0.8s,baz=356,slow=1.7,SNR=10.0								
KURBB				PP		**PP**		**23 59 01.5**	**-2.6**
	comp=E,12nm,1.0s,baz=347,slow=4.5,SNR=5.4								
KURBB				PKKPbc		**PKKPbc**		**00 09 00.6**	**-1.6**
	comp=E,3.0nm,0.9s,baz=193,slow=3.3,SNR=12								
BRZS	**Berezniki**	**113.44**	**7**	*e*PKiKP		**PKiKP**		**23 58 13.5**	**-2.1**
	baz=6.7								
BRZS				*e*PP		**PP**		**23 59 03.2**	**-2.4**
	baz=6.7								
BRZS	**Berezniki**	**113.44**	**7**	*i* PKiKP		**PKiKP**		**23 58 13.5**	**-2.1**
BRZS				*e*				23 59 03.1	
AGRB	**Hanur-Agry**	**113.48**	**32**	*eP*		**PP**		**23 59 00.4**	**-6.3**
SEM	**Semipalatinsk**	**113.52**	**1**	*e*PKiKP		**PKiKP**		**23 58 14.3**	**-1.8**
	baz=1.4								
SEM				LR		LR		00 49 24.4	
	comp=E,65µm,19.0s,baz=1.4								
SEM	**Semipalatinsk**	**113.52**	**1**	*i* PKiKP		**PKiKP**		**23 58 14.2**	**-1.8**
MLAZ	**Malazgirt-MUS**	**113.58**	**33**	*eP*		PP		23 58 58.0	-9.4
SVAN	**Silvan-Diyarba**	**113.59**	**34**	*eP*		**PP**		**23 59 07.6**	**+0.2**
MAZI	**Mazidag**	**113.68**	**35**	*eP*		**PP**		**23 59 05.5**	**-2.6**
MMAI	**Mount Meron Ar**	**113.69**	**42**	PKiKP		**PKiKP**		**23 58 18.2**	**+1.5**
	comp=E,5.9nm,0.9s,baz=283,slow=7.6,SNR=4.4								
MMAI				PKKPbc		**PKKPbc**		**00 09 01.7**	**+1.5**
	comp=E,0.7nm,0.3s,baz=90,slow=4.3,SNR=3.1								
TASB	**TASBURUN-IGDIR**	**113.80**	**31**	*eP*		PP		23 58 57.0	-12
GNI	**Garni**	**113.92**	**31**	IAMs_20		IAMs_20		00 51 45.3	
	comp=Z,94µm,20.0s								
MMLI	**Mount Malkishu**	**114.08**	**42**	*eP*		**PP**		**23 59 05.5**	**-5.6**
AKDM	**Akdamar-Van**	**114.41**	**33**	*eP*		PP		23 59 02.5	-11
VANB	**Van**	**114.42**	**33**	*eP*		PP		23 59 03.5	-10
ELIB	**Princess Elisa**	**114.91**	**163**	*d*PKiKP		PKPdf		23 58 19.2	+1.4
ELIB				*d*PP		**PP**		**23 59 22.1**	**+5.4**
ELIB				*d*SKPdf		SKPdf		00 01 41.6	-11
HRFI	**Mount Harif**	**115.35**	**45**	*eP*		**PP**		**23 59 14.3**	**-5.8**
EIL	**Elat**	**115.52**	**45**	*eP*		**PP**		**23 59 14.3**	**-7.0**
BJI	**Beijing**	**115.54**	**332**	Pdif		**Pdif**		**23 54 31.8**	**-0.3**
BJI				PKP		**PKPdf**		**23 58 20.8**	**+0.9**
BJI				PP		**PP**		**23 59 22.4**	**+1.6**
BJI				PKS				00 01 53.6	
BJI				AMB		AMB			
	comp=Z,8µm,14.7s								
BJI				LR		LR			
	comp=Z,19µm,21.9s								
BJI				LR		LR			
	comp=Z,37µm,22.4s								
BJI				LR		LR			
	comp=Z,46µm,21.2s								
CUKT	**Cukurca**	**115.55**	**33**	*eP*		**PP**		**23 59 15.7**	**-5.6**
BJT	**Baijiatuau**	**115.56**	**331**	IAMs_20		IAMs_20		00 55 01.6	
	comp=Z,78µm,20.0s								
ZSN	**Zaisan**	**116.45**	**358**	*e*PKP		**PKiKP**		**23 58 19.9**	**-1.7**
	baz=358								
ZSN				*e*PP		**PP**		**23 59 24.4**	**-2.4**
	baz=358								
ZSN	**Zaisan**	**116.45**	**358**	*e*PKIKP		**PKiKP**		**23 58 19.8**	**-1.7**
ZSN				*e*				23 59 24.4	
HHC	**Hu-ho-hao-te**	**116.85**	**335**	*e*PKP		**PKiKP**		**23 58 24.3**	**+1.7**
HHC				PP		**PP**		**23 59 33.3**	**+3.2**
HHC				SS		SS		00 15 38.3	+2.2
HHC				AMB		AMB			
	comp=Z,16µm,9.6s								
HHC				LR		LR			
	comp=Z,71µm,20.1s								
HHC				LR		LR			
	comp=Z,79µm,20.6s								
HHC				LR		LR			
	comp=Z,141µm,21.0s								
MKAR	**Makanchi Array**	**117.16**	**360**	PKP		**PKiKP**		**23 58 23.2**	**+0.3**
	comp=Z,6.9nm,0.8s,baz=7.4,slow=3.8,SNR=11								
MKAR				PP		**PP**		**23 59 26.4**	**-5.3**
	comp=Z,1.9nm,0.4s,baz=24,slow=18,SNR=29								
MKAR				PKKPbc		**PKKPbc**		**00 08 46.5**	**-2.1**
	comp=Z,1.3nm,0.8s,baz=129,slow=3.3,SNR=4.0								
BTO	**Baotou**	**117.67**	**336**	*e*PKP		**PKiKP**		**23 58 25.3**	**+1.1**
BTO				PP		**PP**		**23 59 37.8**	**+2.0**
BTO				SS		SS		00 15 51.9	+5.2
BTO				LR		LR			
	comp=Z,122µm,19.2s								
BTO				LR		LR			
	comp=Z,139µm,22.4s								
BTO				LR		LR			
	comp=Z,187µm,21.6s								
TIA	**Tai'an**	**118.11**	**328**	Pdif		**Pdif**		**23 54 44.3**	**+0.7**
TIA				PKP		**PKiKP**		**23 58 26.0**	**+1.0**
TIA				AMB		AMB			
	comp=Z,8µm,15.7s								
TIA				LR		LR			
	comp=Z,24µm,21.6s								
TIA				LR		LR			
	comp=Z,40µm,24.5s								
TIA				LR		LR			
	comp=Z,71µm,24.5s								
HNS	**HongShan**	**118.34**	**331**	⇑Pdif		**Pdif**		**23 54 45.9**	**+1.3**
HNS				PKP		**PKiKP**		**23 58 26.6**	**+1.2**
HNS				PP		**PP**		**23 59 42.3**	**+1.9**
HNS				SKS		**SKSdf**		**00 05 40.4**	**+3.3**
HNS				SKKS		**SKKSac**		**00 06 39.5**	**-2.0**
HNS				LR		LR			
	comp=Z,40µm,20.2s								
HNS				LR		LR			
	comp=Z,86µm,20.8s								
HNS				LR		LR			
	comp=Z,76µm,23.5s								
BTLS	**Baital**	**118.47**	**6**	*e*PKP		**PKPdf**		**23 58 23.9**	**-1.5**
	baz=6.6								
BTLS	**Baital**	**118.47**	**6**	*e*PKIKP		**PKPdf**		**23 58 23.9**	**-1.5**
WIN	**Windhoek**	**118.83**	**107**	IAMs_20		IAMs_20		00 43 51.3	
	comp=Z,83µm,22.0s								
TSUM	**Tsumeb**	**118.83**	**103**	IAMs_20		IAMs_20		00 46 06.7	
	comp=Z,54µm,21.0s								
TDK	**Taldyqorghan**	**118.86**	**3**	*e*PKP		**PKPdf**		**23 58 24.4**	**-1.9**
	baz=3.1								
TDK				LR		LR		00 52 21.1	
	comp=Z,54µm,18.4s,baz=3.1								
TDK	**Taldyqorghan**	**118.86**	**3**	*e*PKIKP		**PKPdf**		**23 58 24.3**	**-1.9**
TIY	**Taiyuan**	**119.12**	**333**	*e*Pdif		**Pdif**		**23 54 51.4**	**+3.2**
TIY				PKP		**PKPdf**		**23 58 24.4**	**-2.6**
TIY				PP		**PP**		**23 59 48.4**	**+2.5**
TIY				SKS		**SKSdf**		**00 05 31.4**	**-7.4**
TIY				SS		**SS**		**00 16 10.1**	**+4.5**
TIY				AMB		AMB			
	comp=Z,19µm,12.5s								
TIY				LR		LR			
	comp=Z,60µm,19.2s								
TIY				LR		LR			
	comp=Z,93µm,21.3s								
TIY				LR		LR			
	comp=Z,74µm,24.7s								
ARXS	**Arharly**	**119.61**	**4**	*i* PKIKP		**PKPdf**		**23 58 24.5**	**-3.3**
SSE	**Sheshan**	**119.69**	**321**	Pdif		**Pdif**		**23 54 50.6**	**-0.1**
SSE				PKP		**pPKPdf**		**23 58 31.8**	**-2.0**
KUU	**Kurty**	**119.83**	**5**	*e*PKP		**PKPdf**		**23 58 25.8**	**-2.4**
	baz=4.9								
KUU				LR		LR		00 52 03.4	
	comp=Z,56µm,18.1s,baz=4.9								
KUU	**Kurty**	**119.83**	**5**	*e*PKIKP		**PKPdf**		**23 58 25.7**	**-2.4**
BRLS	**Borolday**	**119.86**	**10**	*e*PKP		**PKPdf**		**23 58 26.4**	**-1.8**
	baz=11								
BRLS				*e*PP		**PP**		**23 59 49.8**	**-0.7**
	baz=11								
BRLS	**Borolday**	**119.86**	**10**	*e*PKIKP		**PKPdf**		**23 58 26.4**	**-1.8**
BRLS				*e*				23 59 49.8	
WMQ	**Urumqi**	**119.91**	**355**	*e*PKP		**PKiKP**		**23 58 29.3**	**+0.9**
WMQ				PP		**PP**		**23 59 54.8**	**+4.0**
WMQ				AMB		AMB			

	comp=Z,134µm,22.7s								
XAN					LR	LR			
	comp=Z,81µm,20.3s								
XAN					LR	LR			
	comp=Z,179µm,19.2s								
LZH	**Lanzhou**	**123.93**	**339**		Pdif	**Pdif**	**23 55**	**12.0**	**+2.2**
LZH					PKP	**PKiKP**	**23 58**	**38.5**	**+1.8**
LZH					PP	**PP**	**00 00**	**21.4**	**+2.8**
LZH					AMB	AMB			
	comp=Z,2µm,6.2s								
LZH					LR	LR			
	comp=Z,59µm,16.1s								
LZH					LR	LR			
	comp=Z,47µm,17.9s								
LZH					LR	LR			
	comp=Z,150µm,16.8s								
SIMJ	**Simiganj**	**123.93**	**12**			**PKPdf**	**23 58**	**34.6**	**-1.7**
WHN	**Wuhan**	**123.98**	**326**		Pdif	**Pdif**	**23 55**	**09.4**	**-0.4**
WHN				⇑	PKP	**PKiKP**	**23 58**	**37.8**	**+1.1**
WHN					PP	**PP**	**00 00**	**24.3**	**+5.2**
WHN					SS	SS	00 17	13.0	+5.1
WHN					LR	LR			
	comp=Z,92µm,17.4s								
WHN					LR	LR			
	comp=Z,112µm,17.4s								
WHN					LR	LR			
	comp=Z,218µm,20.8s								
YHNB	**Yeheng**	**124.04**	**316**		IAMs_20	IAMs_20	01 00	45.3	
	comp=Z,56µm,21.0s								
KSH	**Kashi**	**124.14**	**6**		Pdif	**Pdif**	**23 55**	**18.1**	**+7.5**
KSH	**Kashi**	**124.14**	**6**		PKP	**PKiKP**	**23 58**	**37.6**	**+0.6**
KSH					AMB	AMB			
	comp=Z,30µm,19.6s								
KSH					LR	LR			
	comp=N,149µm,24.0s								
KSH					LR	LR			
	comp=E,103µm,20.3s								
KSH					LR	LR			
	comp=Z,262µm,24.7s								
STKA	**Stephens Creek**	**124.15**	**242**		P	**PKiKP**	**23 58**	**36.8**	**-0.1**
STKA	**Stephens Creek**	**124.15**	**242**		P	**PKPdf**	**23 58**	**35.9**	**-0.7**
STKA	**Stephens Creek**	**124.15**	**242**		PKP	**PKPdf**	**23 58**	**36.1**	**-0.5**
	comp=Z,34nm,1.0s,baz=77,slow=2.0,SNR=37								
STKA					PKKPbc	**PKKPbc**	**00 08**	**24.2**	**+2.6**
	comp=Z,5.5nm,1.0s,baz=336,slow=2.7,SNR=4.4								
NACB	**Ninganchiao**	**124.23**	**315**		IAMs_20	IAMs_20	01 02	36.4	
	comp=Z,55µm,20.0s								
INKA	**Innaminka**	**124.89**	**247**		P	**PKiKP**	**23 58**	**39.4**	**+0.9**
INKA	**Innaminka**	**124.89**	**247**		P	**PKPdf**	**23 58**	**37.7**	**-0.4**
SSLB	**Suanglung**	**124.92**	**315**		IAMs_20	IAMs_20	01 03	23.7	
	comp=Z,61µm,20.0s								
SSLB	**Suanglung**	**124.92**	**315**		P	**PKiKP**	**23 58**	**40.6**	**+1.8**
SSLB	**Suanglung**	**124.92**	**315**		P	**PKiKP**	**23 58**	**39.6**	**+0.8**
QIS	**Mount Isa**	**125.50**	**256**		P	**PKiKP**	**23 58**	**40.9**	**+1.0**
QIS	**Mount Isa**	**125.50**	**256**		P	**PKPdf**	**23 58**	**39.6**	**+0.1**
QZH	**Quanzhou**	**125.67**	**318**		Pdif	**Pdif**	**23 55**	**21.9**	**+4.5**
QZH					SS	SS	00 17	28.8	-1.0
QZH					LR	LR			
	comp=Z,38µm,19.1s								
QZH					LR	LR			
	comp=Z,36µm,16.1s								
QZH					LR	LR			
	comp=Z,60µm,19.4s								
GRD1	**Great Renaissa**	**126.07**	**63**	*e*	P	**Pdif**	**23 55**	**26.7**	**+7.2**
KNMB	**Chin-men Tao**	**126.14**	**318**		IAMs_20	IAMs_20	01 01	22.8	
	comp=Z,44µm,20.0s								
HTT	**Hallett**	**126.33**	**240**		P	**PKiKP**	**23 58**	**42.4**	**+1.1**
HTT	**Hallett**	**126.33**	**240**		P	**PKiKP**	**23 58**	**41.1**	**-0.2**
GOMU	**GeErMu**	**126.37**	**347**		Pdif	**Pdif**	**23 55**	**22.8**	**+1.9**
GOMU					SKS	**SKSdf**	**00 05**	**51.9**	**-1.3**
GOMU					SS	**SS**	**00 17**	**34.3**	**-3.4**
GOMU					LR	LR			
	comp=Z,48µm,24.4s								
GOMU					LR	LR			
	comp=Z,77µm,24.1s								
GOMU					LR	LR			
	comp=Z,80µm,24.1s								
BOSA	**Boshof**	**126.53**	**114**		PKP	**PKPdf**	**23 58**	**41.1**	**-0.4**
	comp=Z,9.4nm,0.8s,baz=136,slow=18,SNR=5.0								
CNSH	**ChangSha**	**126.59**	**326**	⇑	PKP	**PKiKP**	**23 58**	**43.0**	**+1.1**
CNSH					LR	LR			
	comp=Z,42µm,23.5s								
CNSH					LR	LR			
	comp=Z,40µm,22.1s								
CNSH					LR	LR			
	comp=Z,55µm,21.6s								
RAYN	**Ar Rayn**	**126.64**	**43**	*i*	PKPdf	**PKPdf**	**23 58**	**39.9**	**-1.9**
	SNR=11								
ENH	**Enshi**	**126.66**	**330**			**PKPdf**	**23 58**	**38.2**	**-3.4**
ENH					IAMs_20	IAMs_20	01 03	03.6	
	comp=Z,63µm,20.0s								
ENH	**Enshi**	**126.66**	**330**		P	**PKPdf**	**23 58**	**40.3**	**-1.3**
ENH	**Enshi**	**126.66**	**330**		P	**PKPdf**	**23 58**	**40.1**	**-1.5**
LBTB	**Lobatse**	**126.78**	**109**		PKP	**PKPdf**	**23 58**	**42.1**	**+0.1**
	comp=Z,20nm,0.8s,baz=246,slow=2.4,SNR=8.4								
MBAR	**Mbarara**	**127.06**	**78**	*e*	PKIKP	**PKPdf**	**23 58**	**42.8**	**-0.2**
MBAR	**Mbarara**	**127.06**	**78**	*e*	P	**Pdif**	**23 55**	**30.4**	**+6.3**
LCRK	**Leigh Creek**	**127.08**	**244**		P	**PKiKP**	**23 58**	**43.7**	**+0.9**
LCRK	**Leigh Creek**	**127.08**	**244**		P	**PKiKP**	**23 58**	**42.6**	**-0.2**
WHYH	**Whyalla**	**127.48**	**241**		P	**PKiKP**	**23 58**	**44.5**	**+1.0**
WHYH	**Whyalla**	**127.48**	**241**		P	**PKiKP**	**23 58**	**43.3**	**-0.2**
KBU	**Kabul Universi**	**127.94**	**14**		PKP	**PKPdf**	**23 58**	**42.6**	**-1.5**
LSZ	**Lusaka**	**128.27**	**97**		IAMs_20	IAMs_20	00 57	50.8	
	comp=Z,53µm,20.0s								
LSZ	**Lusaka**	**128.27**	**97**		PKP	**PKPdf**	**23 58**	**44.3**	**-0.8**
	comp=Z,23nm,0.8s,baz=327,slow=0.9,SNR=19								
CD2	**Chengdu**	**128.59**	**336**		PKP	**PKPdf**	**23 58**	**45.5**	**+0.2**
CD2					PP	**PP**	**00 00**	**49.8**	**+0.3**
CD2					SKS	**SKSac**	**00 05**	**53.8**	**+0.9**
CD2					SKKS	**SKKSac**	**00 07**	**41.0**	**-6.8**
CD2					SS	**SS**	**00 18**	**01.9**	**-3.4**
CD2					AMB	AMB			
	comp=Z,24µm,17.7s								
CD2					LR	LR			
	comp=Z,72µm,21.6s								
CD2					LR	LR			
	comp=Z,109µm,23.1s								
CD2					LR	LR			
	comp=Z,93µm,22.8s								
BBOO	**Buckleboo**	**128.77**	**241**		P	**PKiKP**	**23 58**	**47.1**	**+1.0**
BBOO	**Buckleboo**	**128.77**	**241**		P	**PKPdf**	**23 58**	**45.2**	**-0.3**
FAKI	**Fak Fak**	**128.92**	**280**		IAMs_20	IAMs_20	00 44	53.8	
	comp=Z,48µm,21.0s								
FAKI	**Fak Fak**	**128.92**	**280**		P	**PKPdf**	**23 58**	**44.5**	**-1.8**
FAKI	**Fak Fak**	**128.92**	**280**		PKP	**PKPdf**	**23 58**	**46.3**	**0.0**
OOD	**Oodnadatta**	**129.37**	**247**		P	**PKiKP**	**23 58**	**47.6**	**+0.2**
OOD	**Oodnadatta**	**129.37**	**247**		P	**PKPdf**	**23 58**	**45.8**	**-0.9**
NIL	**Nilore**	**129.58**	**10**			**PKPdf**	**23 58**	**45.3**	**-1.8**
NIL	**Nilore**	**129.58**	**10**		PKIKP	**PKPdf**	**23 58**	**45.3**	**-1.8**
LODK	**Lodwar**	**129.83**	**71**	*e*	P	**Pdif**	**23 55**	**42.3**	**+6.0**
WLRA	**Wolmera**	**130.18**	**63**	*e*	P	**Pdif**	**23 55**	**45.7**	**+7.5**
FURI	**Furi**	**130.27**	**63**		IAMs_20	IAMs_20	00 57	42.0	
	comp=Z,64µm,20.0s								
FURI	**Furi**	**130.27**	**63**	*e*	P	**Pdif**	**23 55**	**46.1**	**+7.6**
GULI	**GuiLin**	**130.27**	**326**	⇓	PKP	**PKPdf**	**23 58**	**47.4**	**-1.2**
GULI					PP	**PP**	**00 01**	**00.9**	**+0.1**
GULI					LR	LR			
	comp=Z,13µm,19.8s								
GULI					LR	LR			
	comp=Z,16µm,19.8s								
GULI					LR	LR			
	comp=Z,20µm,21.1s								
GZH	**Guangzhou**	**130.29**	**321**	⇓	PKP	**PKPdf**	**23 58**	**46.6**	**-2.0**
GZH					PP	**PP**	**00 00**	**56.4**	**-4.6**
GZH					SS	SS	00 18	18.9	-8.0
GZH					LR	LR			
	comp=Z,11µm,17.7s								
GZH					LR	LR			
	comp=Z,11µm,17.1s								
WRA	**Warramunga Arr**	**130.36**	**258**		PKP	**PKPdf**	**23 58**	**48.2**	**-0.6**
	comp=Z,22nm,0.9s,baz=84,slow=2.4,SNR=19								
HKPS	**Hong Kong Po S**	**130.40**	**320**		IAMs_20	IAMs_20	01 04	56.1	
	comp=Z,42µm,19.0s								
MULG	**Mulgathing**	**130.68**	**244**		P	**PKiKP**	**23 58**	**50.3**	**+0.3**
MULG	**Mulgathing**	**130.68**	**244**		P	**PKPdf**	**23 58**	**49.1**	**0.0**
SHME	**Shamm**	**130.88**	**31**	*i*	PKPdf	**PKPdf**	**23 58**	**48.2**	**-1.6**
	SNR=18								
AS01	**Alice Springs**	**130.93**	**253**		P	**PKiKP**	**23 58**	**51.2**	**+0.4**
AS01	**Alice Springs**	**130.93**	**253**		P	**PKiKP**	**23 58**	**50.3**	**-0.5**
ASAR	**Alice Springs**	**130.97**	**253**		PKP	**PKPdf**	**23 58**	**50.2**	**+0.3**
	comp=Z,17nm,0.9s,baz=93,slow=1.8,SNR=34								
DAV	**Davao City (W)**	**131.07**	**295**		IAMs_20	IAMs_20	00 48	50.2	
	comp=Z,39µm,20.0s								
UMQ	**Umm Al-Quwin**	**131.07**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**49.8**	**-0.3**
	SNR=30								
THN	**Thein Dam**	**131.12**	**7**	*e*	P	**PKPdf**	**23 58**	**46.2**	**-3.7**
THN					IAmb	IAmb	23 59	08.6	
	comp=Z,245nm,1.4s								
DILA	**Dilla**	**131.12**	**66**	*e*	P	**Pdif**	**23 55**	**48.8**	**+6.7**
KDU	**Kakadu**	**131.17**	**267**		P	**PKiKP**	**23 58**	**53.4**	**+2.0**
KDU	**Kakadu**	**131.17**	**267**		P	**PKiKP**	**23 58**	**52.2**	**+0.8**
GYA	**Guiyang**	**131.20**	**330**		Pdif	**Pdif**	**23 55**	**42.6**	**+0.4**
GYA					PKP	**PKiKP**	**23 58**	**51.6**	**+0.2**
GYA					PP	**PP**	**00 01**	**09.9**	**+3.2**
GYA					SKKS		00 08	03.6	
GYA					AMB	AMB			
	comp=Z,28µm,17.2s								
GYA					LR	LR			
	comp=Z,57µm,21.5s								
GYA					LR	LR			
	comp=Z,63µm,19.9s								
GYA					LR	LR			
	comp=Z,64µm,30.6s								
DHRM	**DHARAMSHALA**	**131.36**	**7**	*e*	P	**PKPdf**	**23 58**	**48.3**	**-2.5**
DHRM					IAmb	IAmb	23 59	20.0	
	comp=Z,137nm,1.2s								
DHRM					IAMs_20	IAMs_20	00 04	18.8	
	comp=Z,25µm,18.2s								
MSFE	**Esma-Masafi**	**131.46**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**49.5**	**-1.4**
	SNR=45								
NAZ	**Nazwa, Dubai**	**131.51**	**33**	*i*	PKPdf	**PKPdf**	**23 58**	**49.9**	**-1.0**
	SNR=36								
MDH	**Madha**	**131.58**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**49.0**	**-2.1**
	SNR=44								
ASUD	**Al Ashush, Dub**	**131.63**	**33**	*i*	PKPdf	**PKPdf**	**23 58**	**50.2**	**-1.0**
	SNR=37								
FAQ	**Al Faqa, Dubai**	**131.68**	**33**	*i*	PKPdf	**PKPdf**	**23 58**	**49.9**	**-1.4**
	SNR=45								
UOSS	**Minazif**	**131.83**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**50.0**	**-1.6**
	SNR=35								
HATD	**Hatta, Dubai**	**131.89**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**50.3**	**-1.4**
	SNR=33								
ASHO	**Ashiyiah**	**131.97**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**50.4**	**-1.5**
	SNR=31								
BHK	**Bhakra**	**132.20**	**7**	*e*	P	**PKPdf**	**23 58**	**50.1**	**-2.0**
ALNE	**Al Ain**	**132.32**	**33**	*i*	PKPdf	**PKPdf**	**23 58**	**52.0**	**-0.5**
	SNR=26								
ATD	**Arta Tunnel**	**132.33**	**57**	*e*	P	**Pdif**	**23 55**	**55.1**	**+7.8**
SMLA	**Simla**	**132.56**	**6**	*e*	P	**PKPdf**	**23 58**	**50.1**	**-2.6**
SMLA					IAmb	IAmb	23 59	11.2	
	comp=Z,538nm,1.8s								
SOHO	**SOHO**	**132.66**	**32**	*i*	PKPdf	**PKPdf**	**23 58**	**51.4**	**-1.8**
	SNR=31								
PZH	**PanZhiHua**	**133.31**	**336**		Pdif	**Pdif**	**23 55**	**54.4**	**+2.8**
PZH					PKP	**PKPdf**	**23 58**	**54.4**	**-0.1**
PZH					PP	**PP**	**00 01**	**22.8**	**+2.6**
PZH					PKS	**PKSdf**	**00 02**	**27.5**	**-3.7**
PZH					LR	LR			
	comp=Z,40µm,24.0s								
PZH					LR	LR			
	comp=Z,49µm,23.0s								
PZH					LR	LR			
	comp=Z,62µm,23.5s								
KMBO	**Kilima Mbogo**	**133.34**	**76**	*i*	PKPdf	**PKPdf**	**23 58**	**55.1**	**+0.1**
	SNR=49								
KMBO	**Kilima Mbogo**	**133.34**	**76**	*e*	P	**Pdif**	**23 55**	**56.6**	**+4.6**
LSA	**Lhasa**	**133.39**	**349**		IAMs_20	IAMs_20	01 01	30.6	
	comp=Z,49µm,21.0s								
LSA	**Lhasa**	**133.39**	**349**		PKPdf	**PKPdf**	**23 58**	**54.1**	**-0.9**
HARA	**HARA**	**133.93**	**59**	*e*	P	**Pdif**	**23 56**	**02.4**	**+7.8**
KMI	**Kunming**	**134.12**	**334**	⇑	Pdif	**Pdif**	**23 55**	**57.8**	**+2.4**
KMI					PKP	**PKPdf**	**23 58**	**55.4**	**-0.8**
KMI					PP	**PP**	**00 01**	**27.0**	**+1.5**
KMI					SKKS		00 08	21.6	
KMI					AMB	AMB			
	comp=Z,18µm,17.8s								
KMI					LR	LR			
	comp=Z,41µm,24.0s								
KMI					LR	LR			
	comp=Z,68µm,24.9s								
KMI					LR	LR			
	comp=Z,89µm,24.1s								
LGTI	**Lohaghat**	**134.44**	**2**	*e*	P	**PKPdf**	**23 58**	**53.7**	**-2.6**
LGTI					IAmb	IAmb	23 59	14.8	
	comp=Z,147nm,1.8s								
LGTI					IAMs_20	IAMs_20	00 02	54.6	
	comp=Z,26µm,23.2s								
KIBK	**Kibwezi**	**134.51**	**77**		PKP	**PKPdf**	**23 58**	**56.4**	**-0.6**
SANI	**Sanana**	**134.52**	**284**		PKP	**PKPdf**	**23 58**	**55.4**	**-1.4**
ZIRO	**ZIRO**	**134.92**	**345**	*e*	P	**PKPdf**	**23 58**	**54.9**	**-2.6**
NDI	**New Delhi**	**134.99**	**6**		IAMs_20	IAMs_20	00 04	47.0	
	comp=Z,24µm,20.5s								
ITAN	**ITANAGAR**	**135.31**	**345**	*e*	P	**PKPdf**	**23 58**	**53.7**	**-4.3**
KHET	**Khetri**	**135.43**	**8**	*e*	P	**PKPdf**	**23 58**	**55.1**	**-3.1**
QIZ	**Qiongzhong**	**135.48**	**321**		Pdif	**Pdif**	**23 56**	**09.8**	**+8.6**
QIZ	**Qiongzhong**	**135.48**	**321**		PKP	PKPdf	23 58	48.8	-10
QIZ					AMB	AMB			
	comp=Z,9µm,15.1s								
QIZ					LR	LR			
	comp=N,20µm,22.7s								
QIZ					LR	LR			
	comp=E,48µm,17.7s								
QIZ					LR	LR			
	comp=Z,50µm,20.2s								
QIZ	**Qiongzhong**	**135.48**	**321**		IAMs_20	IAMs_20	00 58	57.3	
	comp=Z,57µm,22.0s								
QIZ	**Qiongzhong**	**135.48**	**321**		P	**PKiKP**	**23 59**	**00.2**	**+0.1**
JORH	**JORHAT**	**135.56**	**344**	*e*	P	**PKPdf**	**23 58**	**57.2**	**-1.3**
FORT	**Forrest**	**135.77**	**243**		P	**PKiKP**	**23 59**	**00.5**	**+0.2**
FORT	**Forrest**	**135.77**	**243**		P	**PKiKP**	**23 59**	**00.0**	**-0.3**
TNCH	**TengChong**	**135.86**	**338**		PKP	PKPpre	23 58	51.3	
TNCH	**TengChong**	**135.86**	**338**		sPKP		23 59	04.9	
TNCH					AMB	AMB			
	comp=Z,16µm,17.5s								
TNCH					LR	LR			
	comp=N,18µm,22.4s								
TNCH					LR	LR			
	comp=E,38µm,21.6s								
TNCH					LR	LR			
	comp=Z,47µm,24.1s								
TEZP	**TEZPUR**	**136.04**	**346**	*e*	P	**PKPdf**	**23 58**	**56.6**	**-2.8**
WRKA	**Warakurna**	**136.08**	**251**		P	**PKPdf**	**23 58**	**58.9**	**-0.6**
GTK	**Tadong**	**136.13**	**352**	*e*	P	**PKPdf**	**23 58**	**58.4**	**-1.3**
KOHI	**KOHIMA**	**136.58**	**344**	*e*	P	**PKPdf**	**23 58**	**58.1**	**-2.5**
GUWA	**GUWAHATI**	**136.69**	**347**	*e*	P	**PKPdf**	**23 59**	**00.7**	**+0.1**
AJM	**Ajmer**	**136.82**	**10**	*e*	P	**PKPdf**	**23 59**	**00.2**	**-0.7**
AJM					IAMs_20	IAMs_20	00 03	02.0	
	comp=Z,31µm,23.7s								
SHAO	**Shalim**	**137.05**	**38**	*i*	PKPdf	**PKPdf**	**23 59**	**00.0**	**-1.4**
	SNR=17								
LUWI	**Luwuk**	**137.12**	**287**		PKP	**PKPdf**	**23 58**	**59.7**	**-2.0**
SHL	**Shillong**	**137.26**	**347**	*e*	P	**PKPdf**	**23 58**	**58.8**	**-3.1**
SHL					IAmb	IAmb	23 59	20.2	
	comp=Z,207nm,1.7s								
SHL					IAMs_20	IAMs_20	00 03	04.8	
	comp=Z,25µm,20.4s								
IMP	**Imphal**	**137.47**	**344**	*e*	P	**PKPdf**	**23 58**	**58.9**	**-3.3**
TOLI2	**Tolitoli**	**138.04**	**291**		P	**PKPdf**	**23 59**	**01.8**	**-1.6**
SOEI	**Soe**	**138.44**	**274**		IAMs_20	IAMs_20	00 55	49.5	
	comp=Z,41µm,21.0s								
SOEI	**Soe**	**138.44**	**274**		PKP	**PKPdf**	**23 59**	**03.2**	**-1.0**
SOEI	**Soe**	**138.44**	**274**		PKP	**PKPdf**	**23 59**	**01.6**	**-2.6**
ALBI	**Allahabad**	**138.59**	**0**	*e*	P	**PKPdf**	**23 59**	**00.1**	**-4.0**
ALBI					IAMs_20	IAMs_20	00 02	10.0	
	comp=Z,23µm,18.1s								
AGT	**Agartala**	**139.02**	**347**	*e*	P	**PKPdf**	**23 58**	**59.7**	**-5.3**
CRAI	**Chiangrai**	**139.45**	**333**		IAMs_20	IAMs_20	01 09	59.0	
	comp=Z,83µm,20.0s								
BOK	**Bokaro**	**139.93**	**355**	*e*	P	**PKPdf**	**23 59**	**02.7**	**-3.9**
BOK					IAmb	IAmb	23 59	17.6	
	comp=Z,94nm,1.3s								
BOK					IAMs_20	IAMs_20	00 05	26.5	
	comp=Z,19µm,18.5s								
SAIH	**SAIHA**	**139.95**	**344**	*e*	P	**PKPdf**	**23 59**	**02.4**	**-4.5**
NONG	**Nongkai**	**140.00**	**328**		P	**PKPdf**	**23 59**	**06.2**	**-0.7**
KMBL	**Kambalda**	**140.87**	**240**		P	**PKPdf**	**23 59**	**08.0**	**-0.1**
KMBL	**Kambalda**	**140.87**	**240**		P	**PKPdf**	**23 59**	**07.0**	**-1.1**
BHV	**Bhavnagar**	**140.91**	**15**	*e*	P	**PKPdf**	**23 59**	**07.6**	**-0.8**
CHTO	**Chiang Mai**	**141.32**	**334**		IAMs_20	IAMs_20	01 05	53.2	
	comp=Z,64µm,22.0s								
CHTO	**Chiang Mai**	**141.32**	**334**		P	**PKPdf**	**23 59**	**05.5**	**-3.8**
CHTO	**Chiang Mai**	**141.32**	**334**		P	**PKPdf**	**23 59**	**05.0**	**-4.3**
DLV	**T Lat**	**141.63**	**315**		IAMs_20	IAMs_20	01 11	08.2	
	comp=Z,79µm,21.0s								
DLV	**T Lat**	**141.63**	**315**		P	**PKPdf**	**23 59**	**07.3**	**-2.8**
CMAR	**Chiang Mai Arr**	**141.63**	**334**		PKhKP	PKPpre	23 59	04.4	
	comp=Z,19nm,1.0s,baz=353,slow=3.0,SNR=19								
JHSG	**JHARSUGUGA**	**142.09**	**357**		IAMs_20	IAMs_20	00 05	41.7	
	comp=Z,18µm,15.8s								
AKL	**Akola**	**142.85**	**8**	*e*	P	**PKPdf**	**23 59**	**08.7**	**-3.3**
AKL					IAmb	IAmb	23 59	12.6	
	comp=Z,137nm,1.2s								
AKL					IAMs_20	IAMs_20	00 02	36.5	
	comp=Z,32µm,18.3s								
AUALB	**St Joseph's Co**	**143.01**	**233**		P	**PKPdf**	**23 59**	**13.0**	**+1.3**
BOM	**Bombay**	**143.81**	**15**		IAMs_20	IAMs_20	00 02	43.5	
	comp=Z,20µm,18.3s								
BOM				*e*	P	**PKPdf**	**23 59**	**11.1**	**-2.5**
RKGY	**Rocky Gully**	**143.86**	**233**		P	PKPbc	23 59	11.7	+0.7
PSA00	**Pilbara Seismi**	**143.96**	**256**		P	**PKPdf**	**23 59**	**15.2**	**+1.4**
PSA00	**Pilbara Seismi**	**143.96**	**256**		P	PKPbc	23 59	12.0	+0.3
MBWA	**Marble Bar**	**144.08**	**256**		IAMs_20	IAMs_20	00 56	50.3	
	comp=Z,45µm,21.0s								
MBWA	**Marble Bar**	**144.08**	**256**		P	**PKPdf**	**23 59**	**14.0**	**0.0**
MBWA	**Marble Bar**	**144.08**	**256**		P	PKPbc	23 59	11.8	-0.2
NAYO	**Nakonayok**	**144.09**	**327**		P	**PKPdf**	**23 59**	**14.6**	**+0.4**
NAYO	**Nakonayok**	**144.09**	**327**		P	**PKPab**	**23 59**	**11.6**	**-0.1**
KLBR	**Kellerberrin**	**144.22**	**238**		P	**PKPdf**	**23 59**	**14.5**	**+0.5**
KLBR	**Kellerberrin**	**144.22**	**238**		P	PKPbc	23 59	12.9	+0.7
NWAO	**Narrogin (SRO)**	**144.24**	**236**		P	**PKiKP**	**23 59**	**18.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**144.24**	**236**		P	**PKiKP**	**23 59**	**18.0**	**+0.5**
NWAO	**Narrogin (SRO)**	**144.24**	**236**		P	PKPbc	23 59	12.9	+0.7
PLAI	**Plampang**	**144.41**	**278**		P	**PKPdf**	**23 59**	**15.4**	**+0.6**
PLAI	**Plampang**	**144.41**	**278**		P	PKPbc	23 59	13.8	+0.6
POO	**Poona**	**144.41**	**13**	*e*	P	**PKPab**	**23 59**	**12.1**	**-0.7**
POO					IAmb	IAmb	23 59	23.1	
	comp=Z,131nm,1.0s								
POO					IAMs_20	IAMs_20	00 05	59.7	
	comp=Z,18µm,16.4s								
MEEK	**Meekatharra**	**144.60**	**247**		P	**PKPab**	**23 59**	**13.4**	**0.0**
MEEK	**Meekatharra**	**144.60**	**247**		P	**PKPab**	**23 59**	**12.8**	**-0.6**
SRDT	**SRDT**	**145.16**	**330**		P	**PKPbc**	**23 59**	**14.7**	**-0.8**
SRDT	**SRDT**	**145.16**	**330**		P	**PKPbc**	**23 59**	**14.4**	**-1.1**
BLDU	**Ballidu**	**145.36**	**240**		P	**PKPbc**	**23 59**	**15.7**	**-0.2**
BLDU	**Ballidu**	**145.36**	**240**		P	**PKPbc**	**23 59**	**15.1**	**-0.8**
MUN	**Mundaring**	**145.36**	**237**		P	**PKPab**	**23 59**	**16.2**	**+0.2**
MUN	**Mundaring**	**145.36**	**237**		P	**PKPbc**	**23 59**	**15.0**	**-0.8**
KAD	**Karad**	**145.67**	**13**	*e*	P	**PKPdf**	**23 59**	**15.1**	**-1.9**
KAD					IAmb	IAmb	23 59	34.7	
	comp=Z,1µm,1.4s								
PAF	**Port-aux-Franc**	**145.70**	**166**		IAMs_20	IAMs_20	00 59	23.8	
	comp=Z,54µm,19.0s								
MTKN	**Mount Kenneth**	**145.73**	**237**		P	**PKiKP**	**23 59**	**19.6**	**-1.0**
VIS	**Vishakhapatnam**	**146.12**	**358**	*e*	P	**PKPdf**	**23 59**	**15.6**	**-2.1**
VIS					IAmb	IAmb	23 59	40.5	
	comp=Z,2µm,1.6s								
FOMA	**Nahampoana Res**	**146.14**	**111**		IAMs_20	IAMs_20	01 06	23.9	
	comp=Z,67µm,20.0s								
VOI	**Vohitsoka**	**146.26**	**105**		IAMs_20	IAMs_20	01 10	40.4	
	comp=Z,7µm,20.0s								
HYB	**Hyderabad**	**146.27**	**6**	*e*	PKPbc	**PKPdf**	**23 59**	**17.2**	**-0.8**
HYB				*e*	PKPab	**PKPbc**	**23 59**	**18.1**	**-0.9**
HYB				*e*	PKiKP	**PKiKP**	**23 59**	**21.1**	**-1.1**
HYB				*e*	PP	**PP**	**00 02**	**40.6**	**+1.1**
HYB				*e*	SKSdf	**SKSdf**	**00 06**	**24.3**	**-2.5**
HYB

CCIG	**Comitan**	**2.50**	**59**	*i* P		**Pn**	**00 02 46.4**	**+2.0**
CCIG				*i* S		**Sn**	**00 03 14.7**	**+0.9**
CCIG				IAML			00 03 22.1	
	comp=Z,6μm,1.0s							
RTAL	**Retalhuleu**	**2.64**	**100**	*i* P		**Pn**	**00 02 47.3**	**+1.2**
RTAL				*i* S		**Sn**	**00 03 15.6**	**-1.3**
RTAL				IAML			00 03 42.8	
	comp=Z,4μm,1.0s							
STG3	**Santiaguito 3,**	**2.73**	**96**	*i* P		**Pn**	**00 02 47.7**	**+0.2**
HUEH	**Huehuetenango**	**2.79**	**83**	*i* P		**Pn**	**00 02 49.9**	**+1.5**
HUEH				*i* S		**Sn**	**00 03 18.9**	**-2.1**
HUEH				IAML			00 03 44.4	
	comp=Z,6μm,1.0s							
FUG	**Fuego 3**	**3.46**	**99**	*i* P		**Pn**	**00 02 58.6**	**+1.0**
FUG				*i* S		**Sn**	**00 03 36.0**	**-1.5**
PCG	**Pacaya**	**3.70**	**99**	*i* P		**Pn**	**00 03 04.7**	**+3.8**
PCG				*i* S		**Sn**	**00 03 43.8**	**+0.4**
NBG	**Las Nubes**	**3.92**	**96**	*i* P		**Pn**	**00 03 07.6**	**+3.7**
MRL	**Marmol**	**4.53**	**88**	*i* P		**Pn**	**00 03 13.8**	**+1.4**
NUBE	**Las Nubes**	**4.58**	**103**	*i* P		**Pn**	**00 03 13.9**	**+0.9**
NUBE				IAML			00 03 16.5	
	comp=Z,2μm,1.0s							
NUBE				*i* S		**Sn**	**00 04 02.7**	**-2.5**
PETF	**Flores**	**4.74**	**66**	*i* P		**Pn**	**00 03 15.7**	**+0.7**
PETF				IAML			00 03 24.5	
	comp=Z,2μm,1.0s							
PETF				*i* S		**Sn**	**00 04 07.6**	**-1.1**
CEVE	**Cerro Verde**	**4.75**	**104**	*i* P		**Pn**	**00 03 15.5**	**+0.1**
CEVE				*i* S		**Sn**	**00 04 07.9**	**-1.5**
CEVE				IAML			00 04 35.1	
	comp=Z,380nm,1.0s							
MTO3	**Montecristo**	**4.89**	**96**	*i* P		**Pn**	**00 03 17.7**	**+0.4**
MTO3				*i* S		**Sn**	**00 04 10.4**	**-2.4**
MTO3				IAML			00 04 34.3	
	comp=Z,890nm,1.0s							
JTS	**Las Juntas de**	**10.32**	**116**	P		**Pn**	**00 04 32.8**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=96,slow=23,SNR=2.2							
	comp=Z,6.0nm,0.6s							
TXAR	**Lajitas Array**	**16.64**	**331**	P		**P**	**00 05 57.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=2.5							
	comp=Z,0.5nm,0.6s							
ROSC	**El Rosal**	**22.16**	**115**	P		**P**	**00 07 01.6**	**+2.1**
	comp=Z,5.7nm,0.3s,baz=334,slow=9.9,SNR=3.8							
	comp=Z,5.7nm,0.3s							
NVAR	**Mina Array Bea**	**31.46**	**322**	P		**P**	**00 08 26.2**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=128,slow=12,SNR=1.6							
	comp=Z,0.5nm,0.6s							
ULM	**Lac du Bonnet**	**35.17**	**358**	P		**P**	**00 08 56.5**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=167,slow=11,SNR=6.0							
	comp=Z,1.9nm,0.4s							
YKA	**Yellowknife Ar**	**49.55**	**348**	P		**P**	**00 10 53.5**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=155,slow=7.0,SNR=4.7							
	comp=Z,0.7nm,0.9s							
H03N2	**Juan Fernandez**	**50.38**	**163**	T		T	01 04 54.8	
	baz=338,slow=77,SNR=8.5							
H03N1	**Juan Fernandez**	**50.38**	**163**	T		T	01 04 55.1	
	baz=338,slow=77,SNR=9.8							
H03N3	**Juan Fernandez**	**50.39**	**163**	T		T	01 04 55.8	
	baz=338,slow=77,SNR=8.5							
BDFB	**Brasilia**	**55.00**	**122**	P		**P**	**00 11 34.2**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=282,slow=5.1,SNR=4.9							
	comp=Z,2.0nm,0.6s							
ILAR	**Eielson Array**	**61.02**	**337**	P		**P**	**00 12 16.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=140,slow=5.4,SNR=7.2							
	comp=Z,0.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**78.50**	**36**	P		**P**	**00 14 02.2**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=282,slow=5.7,SNR=4.7							
	comp=Z,3.5nm,0.8s							
ESDC	**Sonseca Array**	**80.90**	**51**	P		**P**	**00 14 15.5**	**-1.5**
	comp=Z,0.7nm,0.9s,baz=293,slow=5.4,SNR=4.2							
	comp=Z,0.7nm,0.9s							
ARCES	**ARCESS Array B**	**85.90**	**18**	P		**P**	**00 14 40.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=338,slow=2.9,SNR=3.9							
	comp=Z,0.3nm,0.3s							
PETK	**Petropavlovsk-**	**88.52**	**325**	P		**P**	**00 14 54.7**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=116,slow=32,SNR=1.9							
	comp=Z,2.5nm,0.9s							
FINES	**FINESS Array B**	**90.56**	**24**	P		**P**	**00 15 05.4**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=243,slow=6.1,SNR=1.2							
	comp=Z,1.1nm,0.9s							

*IDC **17** 00:20:20.2±3.5,26˚.42S×133˚.04E,h0km,mbtmp3.0/3, ML3.1/3,Error ellipse: s-maj=32.2km s-min=18.2km az=67.0*
*AUST **17** 00:20:21.4±0.8,26˚.47S×132˚.94E,h10km,Error ellipse: s-maj=11.1km s-min=7.8km az=96.0*
ISC 17 00:20:20.6±1.0,**26˚.43S**±0˚.04×**133˚.04E**±0˚.07,**h10**km,**n14,** σ1**s55/22,South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
OOD	**Oodnadatta**	**2.72**	**120**	P		**Pn**	**00 21 05.7**	**+1.3**
	baz=2.8,SNR=8.5							
OOD				S		**Sb**	**00 21 41.2**	**-1.7**
	baz=2.8							
ASPA	**Alice Springs**	**2.86**	**16**	P		**Pn**	**00 21 08.2**	**+1.8**
	baz=2.9							
ASPA				S		**Sb**	**00 21 44.7**	**-2.3**
	baz=2.9							
ASAR	**Alice Springs**	**2.86**	**16**	Pn		**Pn**	**00 21 08.8**	**+2.4**
	0.5nm,0.3s,baz=197,slow=12,SNR=14							
ASAR				Sn		**Sn**	**00 21 45.1**	**-1.9**
	2.4nm,0.3s,baz=197,slow=21,SNR=2.9							
ASAR				Lg		Lg	00 21 50.6	
	11nm,0.3s,baz=194,slow=26,SNR=7.2							
	0.9nm,0.4s							
MULG	**Mulgathing**	**3.94**	**167**	P		**Pn**	**00 21 21.9**	**+0.7**
	baz=3.9,SNR=16							
MULG				S		**Sn**	**00 22 09.7**	**+2.2**
	baz=3.9							
WRKA	**Warakurna**	**4.50**	**287**	P		**Pn**	**00 21 29.8**	**+1.0**
	baz=4.4,SNR=5.3							
LCRK	**Leigh Creek**	**6.07**	**132**	P		**Pn**	**00 21 51.8**	**+1.4**
	baz=6.1							
FORT	**Forrest**	**6.16**	**224**	P		**Pn**	**00 21 51.0**	**-0.7**
	baz=6.1,SNR=8.3							
FORT				S		**Sn**	**00 23 01.4**	**-0.7**
	baz=6.1							
WC3	**Warramunga Arr**	**6.56**	**11**	P		**Pn**	**00 21 59.0**	**+1.8**
	baz=6.6							
WC3				S		**Sn**	**00 23 12.5**	**+0.3**
	baz=6.6							
WRA	**Warramunga Arr**	**6.57**	**11**	Pn		**Pn**	**00 21 57.7**	**+0.3**
	0.4nm,0.3s,baz=193,slow=12,SNR=24							
WRA				Sn		**Sn**	**00 23 12.4**	**0.0**
	2.2nm,0.3s,baz=191,slow=24,SNR=13							
WRA				Lg		Lg	00 23 47.4	
	1.3nm,0.3s,baz=190,slow=29,SNR=8.6							
	1.1nm,0.8s							
WB2	**Warramunga Arr**	**6.57**	**11**	P		**Pn**	**00 21 58.6**	**+1.2**
	baz=6.7							
WB2				S		**Sn**	**00 23 11.8**	**-0.6**
	baz=6.7							
BBOO	**Buckleboo**	**6.88**	**158**	P		**Pn**	**00 22 01.9**	**+0.4**
	baz=6.9							
QIS	**Mount Isa**	**8.40**	**47**	P		**Pn**	**00 22 24.2**	**+1.8**
	baz=8.5							
STKA	**Stephens Creek**	**9.24**	**128**	Pn		**Pn**	**00 22 33.6**	**-0.3**
	0.3nm,0.3s,baz=308,slow=19,SNR=3.1							
STKA				Sn		**Sn**	**00 24 15.9**	**-2.1**
	0.8nm,0.3s,baz=304,slow=21,SNR=6.8							
STKA				Lg		Lg	00 25 14.0	
	baz=18,slow=20							
	0.7nm,0.3s							
MEEK	**Meekatharra**	**12.92**	**266**	P		Pn	00 23 19.5	-4.8
	baz=13							

*IDC **17** 00:25:13.6±0.5,18˚.71N×73˚.62W,h0km,mb4.3/20, mbtmp4.4/25,ML3.6/4,Error ellipse: s-maj=15.3km s-min=12.3km az=54.0*
*SSNC **17** 00:25:14.7±2.0,18˚.52N×73˚.73W,h4km±11km,MD4.3, ML4.5,MW4.2*
*OSPL **17** 00:25:16.3±2.4,18˚.85N×73˚.60W,h20km±22km,ML4.7*
*JSN **17** 00:25:16.3±0.5,17˚.29N×80˚.02W,h15km,MD5.1*
*NEIC **17** 00:25:16.3±1.7,18˚.83N±0˚.07×73˚.61W±0˚.04,h12km±4km, mb4.6/228,Error ellipse: s-maj=10.0km s-min=5.2km az=202.0*
ISC 17 00:25:16.1±0.7,**18˚.75N**±0˚.04×**73˚.63W**±0˚.03,**h16**km±4km, **n556,** σ1**s23**/560,**mb4.6**/127,**1C-6D,Haiti region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PAPH	**Port-au-Prince**	**1.28**	**100**	Pn		**Pn**	**00 25 36.9**	**-2.4**
PAPH				Sn		**Sb**	**00 25 55.0**	**-1.0**
PAPH						eS	**Sb**	**00 25 54.5**	**-1.6**
PAPH						IAML		00 25 57.5	
	comp=N,14μm,0.4s								
PAPH						IAML		00 25 58.8	
	comp=E,15μm,0.3s								
PAPH	**Port-au-Prince**	**1.28**	**100**	*i* P		**Pn**	**00 25 37.6**	**-1.8**
PAPH						eS	**Sb**	**00 25 55.2**	**-0.8**
PAPH						IAML		00 25 57.0	
	comp=Z,8μm,0.4s								
GTBY	**Guantanamo Bay**	**1.82**	**310**			**Pn**	**00 25 45.3**	**-1.5**
GTBY					Sn	**Sn**	**00 26 09.6**	**0.0**
GTBY	**Guantanamo Bay**	**1.82**	**310**		eP	**Pn**	**00 25 45.4**	**-1.4**
GTBY					eS	**Sn**	**00 26 09.1**	**-0.5**
GTBY					IAML		00 26 14.3	
	comp=Z,3μm,0.3s								
GTBY					IAML		00 26 14.3	
	comp=Z,3μm,0.4s								
GTBY	**Guantanamo Bay**	**1.82**	**310**	⇑ *i* P		**Pn**	**00 25 45.5**	**-1.4**
GTBY					eS	**Sn**	**00 26 09.3**	**-0.3**
GTBY					IAML		00 26 12.6	
	comp=Z,795nm,1.0s								
LODA1	**ITESIL, Dajabo**	**1.98**	**66**	⇓ *i* P		**Pn**	**00 25 46.7**	**-2.3**
LODA1					eS	**Sn**	**00 26 11.7**	**-1.8**
LODA1					IAML		00 26 13.1	
	comp=Z,17μm,0.5s								
NMDO	**Nuevo Mundo**	**2.20**	**325**	eP		**Pn**	**00 25 51.7**	**-0.3**
NMDO					eS	**Sn**	**00 26 19.0**	**0.0**
NMDO					IAML		00 26 23.1	
	comp=E,2μm,0.4s								
NMDO					IAML		00 26 24.5	
	comp=N,1μm,0.5s								
SDDR	**Presa de Saban**	**2.23**	**84**			**Pn**	**00 25 51.3**	**-1.1**
SDDR					Sn	**Sn**	**00 26 19.1**	**-0.6**
SDDR	**Presa de Saban**	**2.23**	**84**	eP		**Pn**	**00 25 52.2**	**-0.2**
SDDR					eS	**Sn**	**00 26 18.6**	**-1.0**
SDDR					IAML		00 26 23.4	
	comp=N,4μm,0.4s								
SDDR					IAML		00 26 25.9	
	comp=N,7μm,0.7s								
SDDR	**Presa de Saban**	**2.23**	**84**	eP		**Pn**	**00 25 51.5**	**-1.0**
SDDR					eS	**Sn**	**00 26 18.9**	**-0.7**
SDDR					*i*		00 26 28.4	
	comp=Z,4μm,0.4s								
SDDR	**Presa de Saban**	**2.23**	**84**	⇓ *i* P		**Pn**	**00 25 52.5**	**+0.1**
SDDR					eS	**Sn**	**00 26 19.3**	**-0.3**
SDDR					IAML		00 26 27.6	
	comp=Z,3μm,0.8s								
SABCS	**La Quijada**	**2.26**	**315**	eP		**Pn**	**00 25 50.9**	**-1.9**
SABCS					eS	**Sn**	**00 26 16.8**	**-3.6**
RCC	**Rio Carpintero**	**2.31**	**303**	eP		**Pn**	**00 25 51.7**	**-1.8**
RCC					eS	**Sn**	**00 26 19.5**	**-2.1**
RCC					IAML		00 26 26.4	
	comp=N,2μm,0.3s								
RCC					IAML		00 26 27.1	
	comp=E,2μm,0.3s								
MARVS	**Santiago de Cu**	**2.48**	**300**	eP		**Pn**	**00 25 53.9**	**-2.0**
MARVS					eS	**Sn**	**00 26 23.9**	**-1.9**
LOPP1	**Punta Rusia, P**	**2.54**	**64**	*i* P		**Pn**	**00 25 55.8**	**-0.9**
LOPP1					IAML		00 26 32.8	
	comp=Z,7μm,0.9s								
SC01	**Santiago de lo**	**2.82**	**76**	⇓ *i* P		**Pn**	**00 26 01.6**	**+1.0**
CHIV	**Chivirico**	**2.90**	**295**	eP		**Pn**	**00 25 59.2**	**-2.4**
GWJ	**Greenwich**	**3.02**	**258**	*i* P		**Pn**	**00 26 05.5**	**+2.1**
HOJ	**Hope**	**3.06**	**256**	*i* P		**Pn**	**00 26 05.4**	**+1.6**
HOJ				*i* S		**Sn**	**00 26 42.1**	**+2.1**
STH	**Stony Hill**	**3.10**	**258**	*i* P		**Pn**	**00 26 05.1**	**+0.8**
HLGC	**Holguin**	**3.12**	**313**	eP		**Pn**	**00 26 06.1**	**+1.4**
LMGC	**Las Mercedes**	**3.44**	**293**	eP		**Pn**	**00 26 06.7**	**-2.4**
SDD	**Santo Domingo**	**3.53**	**94**	*i* P		**Pn**	**00 26 11.7**	**+1.4**
PILO	**Pilon**	**3.75**	**288**	eP		**Pn**	**00 26 10.5**	**-2.9**
PILO					eS	**Sn**	**00 26 52.2**	**-5.0**
PILO					IAML		00 26 54.9	
	comp=N,221nm,0.3s								
PILO					IAML		00 26 55.2	
	comp=E,199nm,0.4s								
PCDR	**Punta Cana, DR**	**4.98**	**92**			**Pn**	**00 26 30.6**	**+0.3**
PCDR					Sn	**Sn**	**00 27 29.1**	**+1.7**
CRPR	**Cabo Rojo, PR**	**6.23**	**96**			**Pn**	**00 26 47.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**6.23**	**96**	*i* P		**Pn**	**00 26 47.6**	**+0.2**
MLPR	**Magueyes Islan**	**6.30**	**96**			**Pn**	**00 26 47.8**	**-0.6**
AOPR	**Arecibo Observ**	**6.53**	**92**			**Pn**	**00 26 52.2**	**+0.6**
UUPR	**Utuado, UPR, P**	**6.57**	**93**			**Pn**	**00 26 52.8**	**+0.6**
OBIP	**Obispado Ponce**	**6.70**	**95**			**Pn**	**00 26 52.5**	**-1.5**
CELP	**Cerrillos**	**6.72**	**95**			**Pn**	**00 26 53.7**	**-0.6**
EMPR	**Esperanza - Ma**	**6.74**	**91**	Pn		**Pn**	**00 26 54.5**	**+0.1**
AUA1	**Aruba**	**7.12**	**150**	Pn		**Pn**	**00 27 00.1**	**+0.4**
SJG	**San Juan**	**7.13**	**94**			**Pn**	**00 26 60.0**	**+0.2**
SJG	**San Juan**	**7.13**	**94**	Pn		**Pn**	**00 26 59.1**	**-0.7**
	comp=E,2.1nm,0.3s,baz=236,slow=14,SNR=5.7								
SJG					Sn	**Sn**	**00 28 22.5**	**+2.1**
	comp=E,0.5nm,0.3s,baz=296,slow=17,SNR=1.4								
	comp=E,18nm,0.6s								
GCPR	**Guaynabo City**	**7.17**	**92**			**Pn**	**00 27 00.2**	**-0.2**
IGPR	**InterUniversit**	**7.18**	**95**			**Pn**	**00 27 00.5**	**0.0**
HUMP	**Col San Antoni**	**7.41**	**93**			**Pn**	**00 27 03.0**	**-0.6**
SMRC	**Santa Marta, M**	**7.57**	**184**	eP		**Pn**	**00 27 05.7**	**-0.2**
SMRC					eS	**Sn**	**00 28 24.4**	**-6.9**
SMRC					*i*		00 28 30.2	
	comp=Z,48nm,0.3s								
CRJC	**Cerrejon, Guaj**	**7.72**	**175**	eP		**Pn**	**00 27 08.0**	**-0.1**
CRJC					eS	**Sn**	**00 28 31.9**	**-3.3**
HATO	**Hato, Curacao**	**7.94**	**145**	Pn		**Pn**	**00 27 10.8**	**-0.1**
SJCC	**San Jacinto, C**	**8.93**	**190**	eP		**Pn**	**00 27 26.1**	**+1.5**
SMRT	**St. Maarten**	**10.04**	**92**			**Pn**	**00 27 37.8**	**-2.0**
SDV	**Santo Domingo**	**10.23**	**163**	Pn		**Pn**	**00 27 42.8**	**+0.2**
SDV	**Santo Domingo**	**10.23**	**163**	Pn		**Pn**	**00 27 42.0**	**-0.5**
	comp=Z,4.4nm,0.3s,baz=32,slow=7.0,SNR=32								
SDV					Sn	**Sn**	**00 29 34.1**	**-2.9**
	comp=Z,6.3nm,0.3s,baz=22,slow=23,SNR=3.6								
	comp=Z,15nm,0.4s								
SDV	**Santo Domingo**	**10.23**	**163**	eP		**Pn**	**00 27 42.8**	**+0.2**
SDV					eS	Sn	00 29 26.7	-10
SDV					*i*		00 29 50.3	
	comp=Z,26nm,0.6s								
OCAC	**Ocana**	**10.46**	**178**	⇓ eP		**Pn**	**00 27 47.9**	**+2.3**
OCAC					eS	**Sn**	**00 29 40.4**	**-2.2**
CAPC	**Capurgana**	**10.69**	**200**	eP		**Pn**	**00 27 49.6**	**+0.9**
UPD2	**Meteti**	**11.00**	**203**	eP		**Pn**	**00 27 54.0**	**+1.0**
UREC	**San Jos de Ur**	**11.09**	**190**	eP		**Pn**	**00 27 57.1**	**+2.9**
BAUV	**El Baul**	**11.16**	**150**	Pn		**Pn**	**00 27 55.0**	**-0.1**
APAC	**Apartado, Choc**	**11.16**	**195**	eP		**Pn**	**00 27 57.6**	**+2.4**
BCIP	**Isla Barro Col**	**11.27**	**213**	Pn		**Pn**	**00 27 57.1**	**+0.5**
BCIP	**Isla Barro Col**	**11.27**	**213**	eP		**Pn**	**00 27 56.4**	**-0.3**
PAMC	**Pamplona, Colo**	**11.38**	**175**	eP		**Pn**	**00 27 59.3**	**+0.7**
DBBC	**Dabeiba**	**11.93**	**192**	eP		**Pn**	**00 28 07.2**	**+1.5**
BARC	**Barichara**	**12.10**	**178**	eP		**Pn**	**00 28 09.8**	**+1.7**
PTBC	**PUERTO BERRIO,**	**12.17**	**184**	eP		**Pn**	**00 28 10.7**	**+1.8**
PCRV	**Puerto La Cruz**	**12.18**	**133**	Pn		**Pn**	**00 28 08.9**	**-0.2**
	comp=Z,51nm,0.5s,baz=276,slow=2.7,SNR=34								
PTAC	**Punta Ardita,**	**12.23**	**200**	eP		**Pn**	**00 28 11.6**	**+1.8**
HELC	**Santa Helena**	**12.62**	**189**	eP		**Pn**	**00 28 17.2**	**+1.8**
AZU	**Azuero**	**12.67**	**212**	eP		**Pn**	**00 28 16.3**	**+0.5**
CBOC	**Ciudad Bolivar**	**13.02**	**191**	eP		**Pn**	**00 28 23.7**	**+2.9**
MATN	**Matagalpa**	**13.17**	**246**			**Pn**	**00 28 22.0**	**-0.7**
BOAB	**BOACO BROADBAN**	**13.18**	**243**	Pn		**Pn**	**00 28 22.2**	**-0.5**
656A	**Williston**	**13.33**	**324**	Pn		**Pn**	**00 28 22.9**	**-1.8**
LCR2	**La Lucha 2**	**13.46**	**230**	Pn		**Pn**	**00 28 26.4**	**-0.4**
GUY2C	**Guyana, Caldas**	**13.55**	**187**	eP		**Pn**	**00 28 30.7**	**+2.4**
JTS	**Las Juntas de**	**13.81**	**234**	Pn		**Pn**	**00 28 32.2**	**+0.8**
JTS	**Las Juntas de**	**13.81**	**234**	Pn		**Pn**	**00 28 28.8**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=321,slow=17,SNR=2.0								
	comp=Z,2.4nm,0.3s								
ROSC	**El Rosal**	**13.85**	**183**	Pn		**Pn**	**00 28 32.6**	**+0.4**
ROSC	**El Rosal**	**13.85**	**183**	Pn		**Pn**	**00 28 33.1**	**+0.9**
	comp=Z,2.1nm,0.3s,baz=58,slow=23,SNR=5.0								
ROSC					Sn	**Sn**	**00 31 05.0**	**-0.9**
	comp=Z,1.9nm,0.3s,baz=353,slow=21,SNR=2.3								
	comp=Z,9.5nm,0.6s								
TEIG	**Tepich**	**13.89**	**278**	Pn		**Pn**	**00 28 31.6**	**-0.8**
JACO	**JACO, Garabito**	**13.99**	**231**	P		**P**	**00 28 41.4**	**-0.3**
PLMC	**San Jos del P**	**14.01**	**191**	eP		**Pn**	**00 28 37.1**	**+3.0**
CHIC	**Chingaza**	**14.04**	**180**	eP		**Pn**	**00 28 36.9**	**+2.0**
CVER	**Cruz Verde, Cu**	**14.15**	**182**	eP		**Pn**	**00 28 39.6**	**+3.2**
ANIL	**Santa Ana**	**14.28**	**187**	eP		**P**	**00 28 41.8**	**-3.5**
VILC	**Villavicencio,**	**14.55**	**180**	eP		**Pn**	**00 28 44.8**	**+3.1**
ORTC	**Ortega, Tolima**	**14.84**	**186**	eP		**Pn**	**00 28 42.2**	**+2.8**
PRAC	**Prado**	**15.00**	**185**	eP		**Pn**	**00 28 49.9**	**+2.3**
TIGA	**Tifton**	**15.51**	**326**	P		**P**	**00 28 56.9**	**-1.6**
JAMC	**Jamundi, Valle**	**15.73**	**191**	eP		**P**	**00 29 01.7**	**+0.4**
BETC	**Betania**	**16.07**	**187**	eP		**P**	**00 29 04.3**	**-0.7**
154A	**Montrose**	**16.22**	**330**	Pn		**Pn**	**00 29 01.2**	**-2.1**
154A						IAmb	IAmb	00 29 09.2	
	comp=Z,54nm,1.1s								
POPC	**Popayan, Colom**	**16.39**	**191**	eP		**P**	**00 29 08.2**	**-0.4**
X58A	**Rowland**	**16.54**	**343**			**Pn**	**00 29 06.1**	**-1.3**
X58A						IAmb	IAmb	00 29 18.7	
	comp=Z,35nm,0.9s								
GARC	**Garzon, Huila**	**16.57**	**187**	eP		**P**	**00 29 10.8**	**+0.1**
CNNC	**Cliffs of the**	**16.85**	**348**	Pn		**Pn**	**00 29 11.1**	**-0.2**
JSC	**Jenkinsville**	**16.89**	**338**	Pn		**Pn**	**00 29 10.6**	**-1.3**
JSC						IAmb	IAmb	00 29 33.2	
	comp=Z,52nm,1.5s								
W59A	**Clinton**	**16.90**	**346**	Pn		**Pn**	**00 29 09.2**	**-2.7**
W59A						IAmb	IAmb	00 29 22.3	
	comp=Z,36nm,1.1s								
BIRD	**Birdtown, Kers**	**16.95**	**340**	Pn		**Pn**	**00 29 10.3**	**-2.4**
GOGA	**Godfrey**	**17.05**	**331**	P		**P**	**00 29 15.3**	**-0.3**
	baz=146								
152A	**Waverly Hall**	**17.07**	**326**	Pn		**Pn**	**00 29 12.4**	**-1.7**
V61A	**Roper**	**17.17**	**352**	Pn		**Pn**	**00 29 13.7**	**-1.7**
HODGE	**Hodges**	**17.23**	**335**	Pn		**Pn**	**00 29 13.7**	**-2.4**
W57A	**Gilead**	**17.28**	**342**			**P**	**00 29 18.0**	**-0.2**
BRAL	**Brewton**	**17.33**	**318**	Pn		**Pn**	**00 29 15.6**	**-1.8**
BRAL						IAmb	IAmb	00 29 21.7	
	comp=Z,62nm,1.0s								
BRAL	**Brewton**	**17.33**	**318**	P		**P**	**00 29 18.8**	**+0.1**
	baz=132								
250A	**Grady**	**17.41**	**322**	Pn		**Pn**	**00 29 16.4**	**-2.0**
250A						IAmb	IAmb	00 29 22.8	
	comp=Z,54nm,1.5s								
PAULI	**Pauline**	**17.58**	**337**	Pn		**Pn**	**00 29 17.8**	**-2.7**
V58A	**Windy Hill, Pi**	**17.66**	**345**	Pn		**Pn**	**00 29 15.0**	**-6.3**
KMSC	**Kings Mountain**	**17.70**	**339**			**Pn**	**00 29 21.9**	**-0.1**
Y52A	**Lilburn**	**17.70**	**330**	Pn		**Pn**	**00 29 21.0**	**-1.0**
Z51A	**Franklin**	**17.81**	**327**			**Pn**	**00 29 23.2**	**-0.2**
U59A	**Littleton**	**17.91**	**349**	Pn		**Pn**	**00 29 23.1**	**-1.5**
BG3	**Lake Jocassee**	**18.16**	**335**			**Pn**	**00 29 26.2**	**-1.5**
V55A	**Taylorsville**	**18.30**	**340**	P		**Pn**	**00 29 28.3**	**-1.1**
TULM	**Tulcn-Chalpat**	**18.38**	**193**	P		**Pn**	**00 29 30.3**	**-0.7**
TULM						IAmb	IAmb	00 29 48.3	
	comp=Z,24nm,0.8s								
T59A	**Double "B" Far**	**18.48**	**350**	P		**P**	**00 29 30.9**	**-0.4**
T60A	**Surry**	**18.52**	**352**	P		**P**	**00 29 30.2**	**-1.6**
LRAL	**Lakeview Retre**	**18.60**	**322**	P		**P**	**00 29 32.3**	**-0.5**
	baz=137								
W52A	**Murphy**	**18.67**	**333**	P		**P**	**00 29 33.5**	**0.0**
V53A	**Saluda**	**18.71**	**336**	P		**P**	**00 29 33.0**	**-0.9**
T57A	**Hurt**	**18.84**	**346**	P		**P**	**00 29 34.8**	**-0.5**
Y49A	**Blount Mountai**	**18.88**	**325**	P		**P**	**00 29 35.6**	**-0.2**
FPAL	**Fort Paine**	**19.00**	**328**	P		**P**	**00 29 36.7**	**-0.4**
FPAL						IAmb	IAmb	00 29 46.4	
	comp=Z,41nm,1.4s								
OTAV	**Otavalo**	**19.00**	**195**	P		**P**	**00 29 37.8**	**0.0**
346A	**Big Creek Wild**	**19.05**	**314**	P		**P**	**00 29 37.1**	**-0.5**
346A						IAmb	IAmb	00 29 52.6	
	comp=Z,26nm,0.9s								
U54A	**Nelsons Funny**	**19.11**	**339**	P		**P**	**00 29 38.0**	**-0.4**
V52A	**Sevierville**	**19.17**	**335**	P		**P**	**00 29 38.8**	**-0.2**
CPCT	**Cooper Cave**	**19.23**	**332**	Pn		**Pn**	**00 29 40.6**	**0.0**
CPCT						IAmb	IAmb	00 29 49.0	
	comp=Z,38nm,1.5s								
BLA	**Blacksburg**	**19.33**	**343**			**P**	**00 29 41.0**	**+0.3**
BLA					

ODNJ IAmb IAmb 00 30 14.4
comp=Z,42nm,1.1s
TRNY Table Rock, Ra 22.32 359 P P 00 30 12.9 -0.1
WCI Wyandotte Cave 22.33 333 P P 00 30 13.2 +0.1
WCI IAmb IAmb 00 30 34.9
comp=Z,34nm,1.4s
O53A New Philadelph 22.40 345 P P 00 30 12.7 -1.2
O53A IAmb IAmb 00 30 17.4
comp=Z,28nm,0.9s
O53A New Philadelph 22.40 345 P P 00 30 16.3 +2.5
baz=161
Z41A Richland Creek 22.43 314 P P 00 30 15.0 +0.7
Z41A IAmb IAmb 00 30 18.1
comp=Z,41nm,1.1s
O52A Adamsville 22.43 343 P P 00 30 13.1 -1.1
O52A IAmb IAmb 00 30 23.0
comp=Z,35nm,1.1s
HBAR Harrisburg 22.52 321 P P 00 30 15.5 +0.3
USIN University of 22.73 330 P P 00 30 17.5 +0.1
USIN IAmb IAmb 00 30 20.5
comp=Z,32nm,1.1s
P49A Miami Univ. Ec 22.82 337 P P 00 30 17.7 -0.7
P49A IAmb IAmb 00 30 31.9
comp=Z,45nm,1.3s
P49A Miami Univ. Ec 22.82 337 P P 00 30 19.4 +1.0
baz=152
WLAR White Oak Lake 22.89 314 P P 00 30 20.4 +1.3
P48A Milroy 23.02 336 P P 00 30 19.3 -1.2
P48A IAmb IAmb 00 30 22.4
comp=Z,16nm,1.1s
UALR University of 23.04 318 P P 00 30 21.4 +0.7
UALR IAmb IAmb 00 30 34.8
comp=Z,19nm,1.1s
HKT Hockley 23.05 303 P P 00 30 21.3 +0.5
HKT IAmb IAmb 00 31 00.1
comp=Z,29nm,1.5s
LCAR Lake Charles 23.16 322 P P 00 30 21.6 -0.3
LCAR IAmb IAmb 00 30 25.4
comp=Z,30nm,1.2s
X40A Basin Creek Fa 23.18 316 P P 00 30 21.6 -0.5
CGM3 Cape Girardeau 23.21 326 P P 00 30 22.2 -0.2
CGM3 IAmb IAmb 00 30 47.5
comp=Z,19nm,1.2s
BLO Bloomington 23.21 334 P P 00 30 22.6 +0.2
BLO IAmb IAmb 00 30 39.1
comp=Z,36nm,1.2s
PBMO Poplar Bluff 23.25 324 P P 00 30 22.1 -0.7
PBMO IAmb IAmb 00 30 24.9
comp=Z,17nm,1.0s
SIUC Southern Illin 23.30 327 P P 00 30 24.4 +1.1
SIUC IAmb IAmb 00 30 53.0
comp=Z,18nm,1.1s
S44A Carbondale 23.30 327 P P 00 30 23.1 -0.1
S44A IAmb IAmb 00 30 32.8
comp=Z,41nm,1.5s
WHAR Wooly Hollow 23.34 319 P P 00 30 23.5 -0.2
WHAR IAmb IAmb 00 30 27.0
comp=Z,23nm,1.1s
M53A WI Miller and 23.40 347 P P 00 30 24.6 +0.3
M53A IAmb IAmb 00 30 33.7
comp=Z,38nm,1.2s
M53A WI Miller and 23.40 347 P P 00 30 25.4 +1.1
baz=163
BINY Binghamton 23.46 356 P P 00 30 26.8 +2.0
baz=174
ALLY Alegheny Colle 23.49 348 P P 00 30 24.9 -0.2
L56A Greenwood 23.55 353 P P 00 30 25.1 -0.7
L56A IAmb IAmb 00 30 41.3
comp=Z,31nm,1.4s
OLIL Olney 23.55 331 P P 00 30 25.0 -0.7
OLIL IAmb IAmb 00 30 28.3
comp=Z,19nm,0.9s
BCX Boston College 23.60 5 P P 00 30 25.3 -0.9
BCX IAmb IAmb 00 31 04.0
comp=Z,36nm,1.3s
O48B Farmland 23.62 338 P P 00 30 24.8 -1.6
O48B IAmb IAmb 00 30 34.3
comp=Z,24nm,1.2s
O48B Farmland 23.62 338 P P 00 30 26.6 +0.2
baz=152
L61B Northampton 23.64 2 P P 00 30 27.6 +1.0
baz=182
WES Weston 23.64 4 P P 00 30 26.1 -0.4
M52A Chesterland 23.65 345 P P 00 30 26.7 0.0
M52A IAmb IAmb 00 30 29.3
comp=Z,24nm,1.0s
MIAR Mount Ida 23.71 316 P P 00 30 28.3 +1.0
baz=126
HRV Adam Dziewonsk 23.74 4 P P 00 30 27.7 +0.2
baz=185
MCRA Macar, Loja 23.81 196 P P 00 30 30.2 +1.7
P46A Rosedale 23.88 333 P P 00 30 30.0 +1.1
P46A IAmb IAmb 00 30 59.6
comp=Z,15nm,0.9s
ERPA Erie 23.91 348 P P 00 30 29.9 +0.7
baz=165
237A Washetta, Mont 23.93 308 P P 00 30 29.2 -0.3
WVNY West Valley, N 23.95 351 P P 00 30 29.7 +0.1
Z38A Mt. Pleasant 23.96 311 P P 00 30 30.1 +0.4
Z38A IAmb IAmb 00 30 32.3
comp=Z,15nm,0.7s
M50A Fremont 23.97 342 P P 00 30 30.1 +0.3
M50A IAmb IAmb 00 30 40.7
comp=Z,14nm,0.9s
K57A Scipio Center 24.03 355 P P 00 30 29.1 -1.2
MGMO Mountain Grove 24.56 322 IAmb IAmb 00 30 39.2
comp=Z,22nm,0.8s
CCM Cathedral Cave 24.62 325 P P 00 30 37.6 +1.9
baz=136
X37A Clayton 24.94 314 IAmb IAmb 00 30 42.9
comp=Z,9.3nm,0.8s
WHTX Lake Whitney, 25.17 306 P P 00 30 42.4 +1.6
baz=116
MACA Manacapuru-AM 25.23 148 P P 00 30 43.4 +1.9
R40A Maddies Statio 25.35 324 IAmb IAmb 00 30 46.0
comp=Z,18nm,1.0s
U38A Gravette 25.38 318 IAmb IAmb 00 30 51.9
comp=Z,22nm,1.4s
833A Chaparral WMA, 25.43 297 P P 00 30 44.4 +1.2
baz=106
LBNH Lisbon 25.45 3 P P 00 30 44.8 +1.6
baz=184
S39A Bolivar 25.54 322 IAmb IAmb 00 30 46.8
comp=Z,22nm,0.9s
HDIL Hopedale 25.56 332 P P 00 30 45.3 +1.1
baz=144
RLO Rose Lookout 25.62 317 IAmb IAmb 00 30 54.2
comp=Z,14nm,1.1s
HNDO Hondo 25.69 300 IAmb IAmb 00 30 58.0
comp=Z,13nm,1.2s
LONY Lake Ozonia 25.80 358 P P 00 30 48.5 +2.1
baz=178
TUL3 Leonard 25.97 316 P P 00 30 49.7 +1.6
baz=125
FW03 Perrin-Whitt E 26.10 308 IAmb IAmb 00 30 52.1
comp=Z,13nm,0.9s
P40A Paris 26.12 326 IAmb IAmb 00 30 51.9
comp=Z,12nm,0.8s
PLPT Palo Pinto 26.19 307 IAmb IAmb 00 30 52.8
comp=Z,14nm,1.1s
OK052 Battle Ridge R 26.70 315 P 00 30 56.6 +2.0
OK052 IAmb IAmb 00 31 31.6
comp=Z,25nm,1.1s
T35A Sooner Cattle 27.03 317 IAmb IAmb 00 31 05.0
comp=Z,12nm,0.8s
WMOK Wichita Mounta 27.42 311 P P 00 31 02.9 +1.7
JFWS Jewell Farm 27.89 333 P P 00 31 06.1 +0.8
baz=145
KSU1 Kansas State U 28.42 320 P P 00 31 11.4 +1.4
baz=129
TXAR Lajitas Array 29.31 297 P P 00 31 19.2 +1.1
comp=Z,1.4nm,1.0s,baz=125,slow=11,SNR=5.9
TXAR PcP PcP 00 34 25.1 +0.4
comp=Z,0.9nm,0.9s,baz=126,slow=6.4,SNR=3.7
comp=Z,1.4nm,1.0s
ETMB Extrema 29.32 165 P P 00 31 18.4 +0.3
ETMB IAmb IAmb 00 31 19.2
comp=Z,14nm,0.9s
SAML Samuel 29.39 159 P P 00 31 20.1 +1.3
CBKS Cedar Bluff 30.21 317 P P 00 31 27.0 +1.0
baz=124
MNTX Cornudas Mount 31.36 300 P P 00 31 37.8 +1.6
baz=107
T25A Trinidad 32.58 311 P P 00 31 48.9 +1.9
baz=116
OGNE Ogallala 32.86 318 P P 00 31 49.7 +0.3
baz=124
ANMO Albuquerque 33.25 306 P P 00 31 53.9 +0.9
baz=110
121A Cookes Peak, D 33.55 301 P P 00 31 57.4 +1.8
baz=106
SDCO Great Sand Dun 33.62 311 P P 00 31 57.6 +1.3
baz=115
Q24A Divide 33.92 313 P P 00 31 59.9 +1.0
baz=117
AGMN Agassiz Nation 34.56 334 P P 00 32 05.4 +1.5
baz=141
S22A 4UR Ranch, Cre 34.58 310 P P 00 32 05.4 +0.8
baz=114
ISCO Idaho Springs 34.62 314 P P 00 32 05.5 +0.6
baz=118
LPAZ La Paz 35.24 171 P P 00 32 11.0 +0.2
TUC Tucson 35.96 299 P P 00 32 17.4 +1.2
baz=103
ULM Lac du Bonnet 36.09 336 P P 00 32 16.8 -0.3
comp=Z,2.5nm,0.8s,baz=95,slow=2.8,SNR=3.8
comp=Z,2.5nm,0.8s
SCHQ Schefferville 36.39 7 P P 00 32 19.9 +0.3
comp=Z,11nm,0.7s,baz=194,slow=7.0,SNR=29
comp=Z,11nm,0.7s
O20A White River Ci 36.58 313 P P 00 32 22.9 +1.3
baz=115
K22A Casper 36.61 318 P P 00 32 23.2 +1.4
baz=120
WUAZ Wupatki 37.24 304 P P 00 32 28.8 +1.5
baz=106
P18A Preston Nutter 37.78 311 IAmb IAmb 00 32 30.7
comp=Z,18nm,1.0s
U15A North Rim 38.22 305 P P 00 32 35.6 -0.1
U15A IAmb IAmb 00 32 50.1
comp=Z,10nm,1.3s
GO01 Chusmiza 38.43 173 P P 00 32 35.3 -2.4
GO01 IAmb IAmb 00 32 38.2
comp=Z,17nm,1.2s
BSUT Blindstream Ca 38.50 312 P P 00 32 37.9 -0.2
BSUT IAmb IAmb 00 32 40.6
comp=Z,9.9nm,1.2s
PDAR Pinedale Array 38.63 316 P P 00 32 38.7 -0.3
comp=Z,0.7nm,0.7s,baz=116,slow=10,SNR=7.3
PDAR PcP PcP 00 34 51.4 +0.3
comp=Z,1.2nm,0.8s,baz=127,slow=4.9,SNR=6.1
comp=Z,0.7nm,0.7s
TCRU Three Creeks R 39.01 309 IAmb IAmb 00 32 56.5
comp=Z,9.0nm,0.5s
NLU North Lily Min 39.21 311 IAmb IAmb 00 32 52.5
comp=Z,15nm,1.4s
LOHW Long Hollow 39.69 317 P P 00 32 48.1 +0.2
LOHW IAmb IAmb 00 32 50.2
comp=Z,12nm,1.0s
SNOW Snow King Moun 39.72 317 P P 00 32 48.2 0.0
SNOW IAmb IAmb 00 32 55.3
comp=Z,11nm,1.1s
REDW Red Top Meadow 39.74 316 P P 00 32 48.5 +0.2
DUG Dugway, Tooele 39.82 311 P P 00 32 50.7 +1.8
baz=111
MOOW Moose Ponds 39.85 317 P P 00 32 48.9 -0.2
TPAW Teton Pass 39.86 316 P P 00 32 48.3 -1.1
TPAW IAmb IAmb 00 32 50.0
comp=Z,14nm,1.1s
IRM Iron Mountain 39.92 301 P P 00 32 51.7 +2.0
baz=102
FXWY Fox Creek 39.98 317 IAmb IAmb 00 32 59.1
comp=Z,15nm,1.4s
BC3 Big Chuckawall 40.07 300 P P 00 32 52.3 +1.3
baz=101
BGU Big Grassy Mou 40.24 312 P P 00 32 54.1 +1.8
BGU IAmb IAmb 00 32 55.5
comp=Z,14nm,1.4s
SPR3 Spring Creek 3 40.53 309 P P 00 32 57.5 +2.4
YHL Hebgen Lake 40.63 318 IAmb IAmb 00 33 05.3
comp=Z,13nm,1.3s
TUQ Turquoise Moun 40.82 303 P P 00 32 58.9 +1.7
baz=103
TPFO Pinon Flats 40.88 300 P P 00 32 57.5 -0.2
baz=100
PFO Pinyon Flats O 40.89 300 P P 00 32 59.5 +1.7
baz=100
BOZ Bozeman (W) 41.25 319 P P 00 33 02.4 +1.8
baz=118
R11B Troy Canyon, C 41.28 307 P P 00 33 02.7 +1.6
baz=106
EGMT Eagleton 41.35 323 P P 00 33 03.2 +1.9
EGMT IAmb IAmb 00 33 03.5
comp=Z,11nm,1.1s
EGMT Eagleton 41.35 323 P P 00 33 02.4 +1.1
baz=122
TPNV Topopah Spring 41.42 305 P P 00 33 04.3 +2.1
baz=104
ELK Elko 41.75 311 P P 00 33 06.4 +1.5
HLID Hailey 42.19 315 P P 00 33 09.6 +1.3
baz=113
MPMC Manual Prospec 42.19 303 P P 00 33 09.4 +0.9
baz=102
LRMC Laurel Mtn Rad 42.23 302 P P 00 33 10.9 +2.1
baz=101
GRAC Grapevine Rang 42.30 305 P P 00 33 11.3 +2.0
baz=103
EDW2 Edwards Air Fo 42.37 301 P P 00 33 11.8 +2.0
baz=100
BDFB Brasilia 42.47 142 P P 00 33 11.2 +0.4
BDFB Brasilia 42.47 142 P P 00 33 11.2 +0.4
comp=Z,17nm,0.8s,baz=314,slow=9.5,SNR=28
comp=Z,17nm,0.8s
FCC Fort Churchill 42.66 344 P P 00 33 11.5 -0.2
CWC Cottonwood Cre 42.74 304 P P 00 33 14.8 +1.8
baz=102
AQDB Aquidauana 42.76 155 P P 00 33 13.8 +0.8
AQDB IAmb IAmb 00 33 14.4
comp=Z,16nm,0.9s
ISA Isabella, Lake 42.90 302 P P 00 33 15.2 +1.0
baz=101
KVN Kaiserville 43.36 307 IAmb IAmb 00 33 20.7
comp=Z,8.3nm,0.9s
NVAR Mina Array Bea 43.36 306 P P 00 33 19.8 +1.7
comp=Z,1.9nm,0.8s,baz=91,slow=6.7,SNR=11
comp=Z,1.9nm,0.8s
LHV Little Huntoon 43.47 306 IAmb IAmb 00 33 21.6
comp=Z,8.1nm,1.0s
J08A Circle Bar Ran 44.88 313 IAmb IAmb 00 33 32.0
comp=Z,6.9nm,1.0s
NEW Newport 45.81 320 P P 00 33 37.9 +0.7
NEW IAmb IAmb 00 33 38.9
comp=Z,5.3nm,0.9s
NEW Newport 45.81 320 P P 00 33 38.0 +0.7
baz=114
G08A Pilot Rock 45.85 316 IAmb IAmb 00 33 39.7
comp=Z,6.4nm,0.9s
EDM Edmonton 46.09 328 P P 00 33 39.6 +0.3
EDM IAmb IAmb 00 33 47.2
comp=Z,14nm,1.3s
GO03 Copiap 46.19 176 P P 00 33 39.9 -0.4
GO03 IAmb IAmb 00 33 47.4
comp=Z,8.7nm,0.9s
C09A Chrisman Ranch 46.33 319 P P 00 33 41.5 +0.2
C09A IAmb IAmb 00 33 49.8
comp=Z,8.4nm,1.1s
CPUP Villa Florida 47.53 160 P P 00 33 49.2 -1.6
comp=Z,0.9nm,0.6s,baz=350,slow=12,SNR=2.0
comp=Z,0.9nm,0.6s
YKA Yellowknife Ar 52.03 337 P P 00 34 24.2 -0.5
comp=Z,2.4nm,0.8s,baz=129,slow=7.7,SNR=38
YKA PcP PcP 00 35 37.0 +0.3
comp=Z,0.7nm,0.8s,baz=118,slow=4.7,SNR=3.9
comp=Z,2.4nm,0.8s
UMMG Uummannaq 53.50 9 *i* P P 00 34 29.8 -5.6
ICESG Greenland Ices 54.52 14 *e* P P **00 34 42.7 -0.6**
ICESG IAmb IAmb 00 34 44.2
comp=Z,13nm,1.1s
DLBC Dease Lake 56.80 328 P P 00 34 59.8 +0.3
DLBC Dease Lake 56.80 328 P P 00 35 00.9 +1.4
baz=109
TGTN Hyland Airport 57.10 332 P P 00 35 02.6 +1.0
baz=113
RES Resolute Bay 57.13 353 P P 00 35 01.3 -0.2
S34M Telegraph Cree 57.18 328 P P 00 35 03.8 +1.7
baz=108
WRAK Wrangell Islan 57.38 326 P P 00 35 02.8 -0.7
WRAK Wrangell Islan 57.38 326 P P 00 35 03.1 -0.4
baz=106
SUMG Summit 57.45 12 P P 00 35 04.0 -0.3
SUMG IAmb IAmb 00 35 12.1
comp=Z,11nm,1.3s
SUMG Summit 57.45 12 *i* P P **00 35 04.0 -0.3**
SUMG IAmb IAmb 00 35 04.8
comp=Z,7.0nm,1.1s
R33M Jennings River 57.57 329 P P 00 35 05.1 +0.1
R33M IAmb IAmb 00 35 07.6
comp=Z,3.6nm,0.8s
R33M Jennings River 57.57 329 P P 00 35 06.6 +1.5
baz=109
TULEG Thule 57.87 1 *i* P P **00 35 03.2 -3.4**
TULEG IAmb IAmb 00 35 06.2
comp=Z,36nm,0.6s
Q32M Nakina River 58.07 329 P P 00 35 09.9 +1.2
baz=108
LR04 Corral 58.33 180 P P 00 35 12.2 +1.9
P33M Teslin, Yukon 58.72 330 P P 00 35 14.0 +1.0
baz=108
S32K Killisnoo 58.83 326 P P 00 35 14.4 +0.8
baz=104
P32M Atlin 58.97 329 P P 00 35 15.4 +0.7
baz=106
N32M Quiet Lake 59.13 331 P P 00 35 16.9 +1.1
baz=108
PLCA Paso Flores 59.25 177 P P 00 35 15.1 -1.7
comp=Z,1.1nm,0.7s,baz=343,slow=8.0,SNR=4.7
comp=Z,1.1nm,0.7s
SKAG Skagway 59.73 329 P P 00 35 20.9 +1.1
baz=105
NEEM North Greenlan 59.78 6 *i* P P **00 35 18.4 -2.0**
WHY Whitehorse 59.83 330 P P 00 35 21.3 +0.6
baz=106
M31M Drury Creek, Y 60.05 332 P P 00 35 23.1 +1.0
baz=107
O30N Mendenhall 60.43 330 P P 00 35 25.9 +1.1
baz=105
A36M Sachs Harbour 60.87 344 P P 00 35 27.3 -0.2
baz=122,SNR=12
N30M Aishikik Lake 61.08 331 P P 00 35 30.0 +0.9
baz=104
HYT Haines Junctio 61.12 330 P P 00 35 30.8 +1.3
baz=104
M30M Minto, Yukon 61.23 332 P P 00 35 30.6 +0.5
baz=105
F31M Tsiigehtchic 61.51 338 P P 00 35 32.5 +0.6
baz=111
O29M Mount Kennedy 61.52 329 P P 00 35 32.5 +0.3
baz=102
G31M Satah River 61.52 337 P P 00 35 32.3 +0.4
baz=110
YUK6 Outpost Mounta 61.55 330 P P 00 35 33.3 +0.7
baz=103
J30M Hart River 61.59 334 P P 00 35 33.5 +0.9
baz=107
INK Inuvik 61.75 339 P P 00 35 33.2 -0.2
INK IAmb IAmb 00 35 41.1
comp=Z,8.1nm,1.4s
INK Inuvik 61.75 339 P P 00 35 33.4 0.0
baz=111
YUK4 Talbot Arm 61.78 330 P P 00 35 35.1 +1.0
baz=103
I30M Mount Dempster 61.79 335 IAmb IAmb 00 35 56.7
comp=Z,7.0nm,1.4s
I30M Mount Dempster 61.79 335 P P 00 35 34.7 +0.7
baz=107
K29M Barlow Dome 61.88 333 P P 00 35 35.8 +1.1
baz=105
M29M Somme Creek 61.95 332 P P 00 35 35.9 +0.8
baz=104
G30M tAoh Zraii Nji 62.27 337 P P 00 35 37.8 +0.8
baz=108
YUK8 Steele Glacier 62.29 330 P P 00 35 38.3 +0.7
baz=102
F30M Barrier River 62.31 338 P P 00 35 37.6 +0.3
baz=109
J29N Klondike Camp 62.34 334 P P 00 35 38.2 +0.6
J29N IAmb IAmb 00 35 40.3
comp=Z,4.8nm,0.8s
J29N Klondike Camp 62.34 334 P P 00 35 39.0 +1.4
baz=105
YUK3 Moose Creek 62.72 331 P P 00 35 41.5 +1.2
baz=101
DAWY Dawson 62.74 333 P P 00 35 40.7 +0.5
baz=104
ESDC Sonseca Array 62.78 54 P P 00 35 41.1 +0.1
ESDC IAmb IAmb 00 35 43.4
comp=Z,5.9nm,1.1s
ESDC Sonseca Array 62.78 54 P P 00 35 41.1 +0.1
comp=Z,4.9nm,1.0s,baz=279,slow=6.7,SNR=22
comp=Z,4.9nm,1.0s
ESBB Sonseca Array 62.78 54 P P 00 35 40.7 -0.3
H29M Whitestone 62.87 336 P P 00 35 42.1 +1.1
baz=106
CTGM Chitina Glacie 62.98 330 P P 00 35 41.9 -0.2
CTG Chitna Glacier 62.98 330 P P 00 35 43.5 +1.5
baz=100
GRNC Granite Creek 63.14 329 P P 00 35 44.0 +0.8
I28M Miner Creek 63.29 335 P P 00 35 44.4 +0.4
baz=104
E29M Blow River 63.31 338 IAmb IAmb 00 35 45.2
comp=Z,3.5nm,0.7s
E29M Blow River 63.31 338 P P 00 35 43.8 -0.1
baz=107
M27K Edge Creek, AK 63.48 331 P P 00 35 47.1 +1.7
baz=100
BCAR Beaver Creek A 63.57 332 P P 00 35 46.5 +0.6
L27K Beaver Creek, 63.59 332 P P 00 35 47.1 +1.1
baz=101
EGAK Eagle 63.65 334 P P 00 35 47.0 +0.8
baz=102
TGL Tana Glacier 63.67 329 P P 00 35 46.4 -0.2
EKA Eskdalemuir Ar 63.69 37 P P 00 35 46.5 -0.1
comp=Z,2.1nm,0.8s,baz=353,slow=13,SNR=2.4
comp=Z,2.1nm,0.8s
CRQE Cirque 63.79 329 P P 00 35 48.2 +0.8
baz=98
F28M Old Crow 63.81 337 P P 00 35 47.7 +0.5
baz=105
CRQM Cirque 63.82 329 P P 00 35 46.9 -0.7
MCARA McCarthy VSAT 63.86 330 P P 00 35 48.9 +1.2
baz=99
E28M Babbage River 63.95 338 P P 00 35 48.0 -0.2
baz=106
M26K Nabesna, AK 64.00 331 P P 00 35 49.8 +1.1
baz=99
I27K Kandik River 64.01 335 P P 00 35 49.8 +1.1
baz=102,SNR=5.8
H27K Steamboat Moun 64.11 335 P P 00 35 50.2 +0.9
baz=103
L26K Log Cabin Wild 64.27 332 P P 00 35 51.7 +1.4
baz=99
MENT Mentasta 64.42 332 P P 00 35 51.3 0.0
MENT IAmb IAmb 00 35 53.3
comp=Z,6.2nm,1.0s
BMRM Bremner River 64.56 329 P P 00 35 53.2 +0.9
baz=97
I26K Coal Creek Min 64.58 334 IAmb IAmb 00 35 54.4
comp=Z,6.8nm,0.9s
I26K Coal Creek Min 64.58 334 P P 00 35 53.7 +1.4
baz=101,SNR=5.4
J26L Joseph Creek 64.61 333 IAmb IAmb 00 35 54.8
comp=Z,3.2nm,0.8s
J26L Joseph Creek 64.61 333 P P 00 35 53.5 +0.8
baz=100
D27M Malcolm River 64.61 339 P P 00 35 52.6 0.0
baz=104
N25K Chitina, Valde 64.64 330 P P 00 35 53.7 +0.9
N25K IAmb IAmb 00 36 10.5
comp=Z,3.0nm,0.9s
N25K Chitina, Valde 64.64 330 P P 00 35 54.0 +1.1
baz=98
SCRK Sand Creek 64.70 333 P P 00 35 53.8 +0.4
SCRK Sand Creek 64.70 333 P P 00 35 55.0 +1.7
baz=99,SNR=8.2
DIV Divide 65.14 329 P P 00 35 56.2 +0.1
G26K Porcupine Rive 65.14 336 P P 00 35 56.7 +0.8
baz=101
PAX Paxson 65.22 331 P P 00 35 56.8 +0.2
PAX IAmb IAmb 00 35 58.8
comp=Z,5.4nm,0.9s
PAX Paxson 65.22 331 P P 00 35 57.8 +1.1
baz=97
KLU Klutina 65.25 330 P P 00 35 57.5 +0.6
KLU Klutina 65.25 330 P P 00 35 57.6 +0.8
baz=96
MID Middleton Isla 65.25 327 P P 00 35 57.2 +0.5
J25K Salcha River, 65.40 333 P P 00 35 57.7 -0.1
baz=98
F26K Sheenjek River 65.42 337 P P 00 35 58.7 +0.9
baz=101

M24K	Tolsona, Glenn	65.44	330	P	P	00 35 57.5	-0.5
M24K	Tolsona, Glenn	65.44	330	P	P	00 35 59.1	+1.1
	baz=96						
K24K	Donnelly Dome	65.46	332	P	P	00 35 59.1	+1.0
	baz=97						
BMAR	Burnt Mountain	65.53	336	P	P	00 35 59.1	+0.6
PRP	Porcupine Dome	65.59	334	P	P	00 35 58.4	-0.7
PRP				IAmb	IAmb	00 36 00.7	
	comp=Z,5.1nm,0.8s						
PRP	Porcupine Dome	65.59	334	P	P	00 36 00.0	+1.0
	baz=98,SNR=6.8						
FYU	Fort Yukon	65.64	335	P	P	00 36 00.1	+0.9
P23K	Montague Islan	65.84	328	P	P	00 36 02.1	+1.5
	baz=94						
SCM	Sheep Creek Mo	65.95	330	P	P	00 36 02.0	+0.6
	baz=95						
F25K	Christian Rive	65.96	336	P	P	00 36 02.2	+0.9
	baz=99						
E25K	Arctic Village	66.02	337	P	P	00 36 02.9	+1.2
	baz=100,SNR=5.4						
IL03	Eielson Array	66.05	333	P	P	00 36 00.6	-1.2
ILAR	Eielson Array	66.06	333	P	P	00 36 01.8	-0.2
	comp=Z,1.6nm,0.9s,baz=105,slow=4.9,SNR=20						
	comp=Z,1.6nm,0.9s						
M23K	Glacier View	66.14	330	P	P	00 36 03.6	+1.1
	baz=95						
WAT6	Susitna Watana	66.21	331	P	P	00 36 03.6	+0.5
	baz=95						
POKR	Poker Flat Res	66.34	334	P	P	00 36 04.6	+0.9
	baz=96						
SML	Sawmill	66.42	330	P	P	00 36 05.0	+0.6
	baz=94						
KNK	Knik Glacier	66.46	330	P	P	00 36 05.2	+0.6
	baz=94						
D25K	Kavik River	66.51	338	IAmb	IAmb	00 36 11.7	
	comp=Z,7.8nm,1.1s						
D25K	Kavik River	66.51	338	P	P	00 36 05.3	+0.5
	baz=99						
G24K	Hadweenzic Riv	66.54	335	P	P	00 36 05.5	+0.5
	baz=97						
H24K	Noodor Dome	66.60	334	P	P	00 36 06.1	+0.6
	baz=96						
WAT1	Susitna Watana	66.61	331	P	P	00 36 06.6	+1.1
	baz=94						
F24K	Squaw Lake	66.81	336	P	P	00 36 08.1	+1.4
	baz=97						
RC01	Rabbit Creek A	67.06	329	P	P	00 36 08.7	+0.4
	baz=93						
I23K	Minto, Yukon-K	67.15	334	P	P	00 36 09.5	+0.7
	baz=95,SNR=5.9						
M22K	Willow	67.27	330	P	P	00 36 10.3	+0.7
	baz=93						
CUT	Chulitna	67.37	331	P	P	00 36 11.2	+0.9
	baz=93						
C24K	Franklin Bluff	67.38	339	P	P	00 36 10.8	+0.6
	baz=97						
TRF	Thorofare Moun	67.44	332	P	P	00 36 11.4	+0.5
	baz=93						
BRSE	Bradley Lake S	67.51	328	P	P	00 36 12.3	+1.1
	baz=91						
E23K	Chandalar	67.52	337	P	P	00 36 12.4	+1.1
	baz=96						
G23K	Bananza Creek	67.55	335	P	P	00 36 12.2	+0.7
	baz=95						
SUA	Susitna One	67.56	330	P	P	00 36 12.4	+0.7
	baz=92						
TOLK	Toolik Lake Re	67.56	337	P	P	00 36 11.5	0.0
	baz=96						
COLD	Coldfoot	67.67	336	P	P	00 36 13.3	+1.2
	baz=95						
MLY	Manley	67.72	333	P	P	00 36 12.5	-0.1
	baz=93						
BPAW	Bear Paw Mtn.	67.78	332	P	P	00 36 13.2	+0.3
	baz=93,SNR=5.3						
DBIC	Dimbokro	67.81	90	P	P	00 36 13.3	-0.6
	comp=Z,4.9nm,0.8s,baz=307,slow=9.1,SNR=4.4						
	comp=Z,4.9nm,0.8s						
SKT	Skwentna	67.95	330	P	P	00 36 13.9	-0.1
	baz=91						
D23K	Nanushuk River	68.00	338	P	P	00 36 14.9	+0.7
	baz=95						
G22K	Bettles	68.15	335	P	P	00 36 15.9	+0.7
	baz=94						
I21K	Tanana	68.26	334	P	P	00 36 16.6	+0.7
	baz=92						
N20K	Mount Spurr	68.26	329	P	P	00 36 16.6	+0.5
	baz=90						
CHUM	Lake Minchumin	68.36	332	P	P	00 36 16.7	+0.2
	baz=92						
BMRD	Maredsous	68.44	42	*d*P	P	00 36 17.9	+0.7
H21K	Melozitna Rive	68.62	334	P	P	00 36 18.8	+0.7
	baz=92						
M20K	Styx River	68.70	330	P	P	00 36 19.6	+0.8
	baz=90						
D22K	Ayikyak River	68.71	338	P	P	00 36 19.2	+0.5
	baz=93						
G21K	Allakaket	68.93	335	P	P	00 36 21.2	+1.1
	baz=92						
F21K	Alatna River	68.94	336	P	P	00 36 20.5	+0.4
	baz=92						
L20K	Farewell, AK	69.05	331	P	P	00 36 21.3	+0.4
	baz=90						
K20K	Telida	69.13	332	P	P	00 36 21.3	-0.1
	baz=90						
J20K	Nowinta River	69.17	332	P	P	00 36 21.4	-0.2
	baz=90,SNR=5.1						
M19K	Big River Lodg	69.30	330	P	P	00 36 22.8	+0.4
	baz=89						
O19K	Port Alsworth	69.31	328	P	P	00 36 23.1	+0.7
	baz=88						
N19K	Bonanza Creek	69.37	329	P	P	00 36 23.3	+0.3
	baz=88						
SII	Sitkinak Island	69.38	324	P	P	00 36 23.1	+0.1
	baz=87						
WLF	Walferdange	69.38	43	*d*PcP	PcP	00 36 47.8	+1.2
B21K	Ikpikpuk River	69.43	338	P	P	00 36 23.4	+0.4
	baz=92						
H20K	Anotleneega Mo	69.48	334	P	P	00 36 23.9	+0.4
	baz=90						
C21K	Knifeblade Rid	69.48	338	P	P	00 36 24.1	+0.7
	baz=91						
P18K	Big Mountain,	69.80	327	P	P	00 36 26.3	+0.7
	baz=87						
F20K	Avaraart Lake	69.81	336	P	P	00 36 25.7	+0.2
	baz=90						
J19K	Poorman	69.82	332	P	P	00 36 25.5	-0.1
	baz=89						
E20K	Nigu River	69.98	337	P	P	00 36 27.5	+0.8
	baz=90						
M18K	Stony River	70.00	330	P	P	00 36 27.3	+0.6
	baz=88						
TTA	Tatalina	70.03	331	P	P	00 36 26.8	-0.2
	baz=88						
N18K	Kilae Creek	70.06	329	P	P	00 36 27.1	-0.1
	baz=87						
H19K	Roundabout Mou	70.13	334	P	P	00 36 27.5	+0.1
	baz=88						
D20K	Etivluk River	70.14	337	P	P	00 36 27.8	+0.3
	baz=89						
L18K	Granite Mounta	70.37	330	P	P	00 36 29.8	+0.8
	baz=87						
G19K	Purcell Mounta	70.38	335	P	P	00 36 30.1	+1.1
	baz=88						
F19K	Shaleruckik Mo	70.63	335	P	P	00 36 30.7	+0.2
	baz=88						
D19K	Kuna River	70.69	337	P	P	00 36 31.3	+0.4
	baz=88						
N17K	Nushagak Hills	70.71	329	P	P	00 36 30.4	-0.7
	baz=86						
O17K	Koliganek Bris	70.72	328	P	P	00 36 31.8	+0.6
	baz=86						
H18K	Honhosa River	70.95	334	P	P	00 36 32.4	-0.1
	baz=86						
G18K	Tagagawik	71.03	334	P	P	00 36 33.4	+0.4
	baz=86						
K17K	Iditarod	71.09	331	P	P	00 36 34.0	+0.6
	baz=86						
L17K	Donlin	71.13	330	P	P	00 36 34.5	+0.8
	baz=86						
R16K	Pilot Point	71.15	326	P	P	00 36 34.0	+0.2
	baz=85						
C19K	Lookout Ridge	71.20	338	P	P	00 36 34.6	+0.6
	baz=87						
P16K	Nushagak River	71.24	327	P	P	00 36 34.4	+0.1
	baz=85						
O16K	Kokwok River B	71.24	328	P	P	00 36 34.0	-0.3
	baz=85						
F18K	Selawik	71.39	335	P	P	00 36 35.0	0.0
	baz=86						
J17K	VABM Dome	71.39	332	P	P	00 36 35.3	+0.1
	baz=85						
N16K	Nishlik Lake	71.50	329	P	P	00 36 36.0	+0.1
	baz=85						
H17K	Granite Mounta	71.62	333	P	P	00 36 36.9	+0.4
	baz=85						
L16K	Owhat River	71.72	330	P	P	00 36 38.1	+0.9
	baz=84						
SPITS	Spitsbergen Ar	71.78	13	P	P	00 36 37.6	+0.3
	comp=Z,14nm,0.9s,baz=251,slow=5.0,SNR=4.8						
	comp=Z,14nm,0.9s						
C18K	Utukok River	71.81	337	P	P	00 36 38.1	+0.3
	baz=85						
G17K	Kiwalik Mounta	71.88	334	P	P	00 36 38.3	+0.2
	baz=85						
DAVA	Damuels	72.12	45	*e*P	P	00 36 40.5	+0.4
	comp=Z,6.1nm,0.8s						
TORD	Torodi Ar. Bea	72.17	82	P	P	00 36 39.9	-0.8
	comp=Z,1.9nm,0.3s,baz=295,slow=4.6,SNR=1.3						
	comp=Z,1.9nm,0.3s						
E17K	Hotham Inlet	72.20	336	P	P	00 36 39.9	0.0
	baz=84						
M15K	Kasigluk River	72.42	329	P	P	00 36 41.5	+0.1
	baz=83						
FUORN	Ofenpass-Fuorn	72.48	46	P	P	00 36 44.0	+1.6
FUORN				IAmb	IAmb	00 36 44.7	
	comp=Z,7.4nm,0.8s						
C17K	DeLong Mountai	72.56	337	P	P	00 36 42.7	+0.6
	baz=83						
D17K	Noatak River	72.61	336	P	P	00 36 42.4	0.0
	baz=83						
H16K	Elim	72.64	333	P	P	00 36 43.5	+0.9
	baz=83						
RETA	Reute	72.68	45	*e*P	P	00 36 43.6	+0.3
	comp=Z,8.0nm,0.8s,SNR=9.0						
FETA	Feichten	72.73	45	*e*P	P	00 36 44.5	+0.8
	comp=Z,6.9nm,0.9s						
MOTA	Moosalm	72.93	45	*e*P	P	00 36 45.5	+0.6
	comp=Z,6.2nm,0.9s						
N14K	Kuskokwak Cree	73.01	328	P	P	00 36 45.7	+0.8
	baz=82						
SQTA	Sankt Quirin	73.03	45	*e*P	P	00 36 45.8	+0.4
	comp=Z,5.8nm,0.9s						
M14K	Bethel	73.03	329	P	P	00 36 46.1	+1.1
	baz=82						
WATA	Walderalm	73.25	45	*i* P	P	00 36 47.1	+0.3
	comp=Z,4.4nm,0.7s						
L14K	Kuka Creek	73.29	330	P	P	00 36 47.4	+0.8
	baz=82						
G15K	Niukluk	73.36	334	P	P	00 36 47.3	+0.5
	baz=81						
F15K	North Star Dit	73.50	334	P	P	00 36 48.3	+0.6
	baz=81						
KEST	Kesra	73.73	57	P	P	00 36 51.1	+1.3
	comp=Z,11nm,0.8s,baz=202,slow=2.3,SNR=14						
	comp=Z,11nm,0.8s						
ABTA	Abfaltersbach	73.98	46	*i* P	P	00 36 51.6	+0.5
	comp=Z,4.6nm,0.9s						
CIMO	Cimolais	74.02	46	IAmb	IAmb	00 36 52.2	
	comp=Z,4.6nm,0.8s						
BRG	Berggiesshubel	74.17	41	*e*P	P	00 36 52.7	+0.8
BRG				Amp		00 36 53.5	
	comp=Z,4.8nm,1.0s						
STAL	STALIGIAL	74.21	46	P	P	00 36 49.1	-3.1
F14K	Arctic Creek	74.23	334	P	P	00 36 52.6	+0.6
	baz=80						
KHC	Kasperske Hory	74.26	43	P	P	00 36 52.3	-0.3
KHC	Kasperske Hory	74.26	43	*e*P	P	00 36 53.3	+0.8
KHC				*e*pP	sP	00 36 58.8	+0.3
GERES	GERESS Array B	74.39	43	P	P	00 36 54.4	+1.0
	comp=Z,3.8nm,0.8s,baz=305,slow=4.7,SNR=20						
	comp=Z,3.8nm,0.8s						
KBA	Koelnbreinsper	74.48	45	*i* P	P	00 36 54.5	+0.4
	comp=Z,7.2nm,1.2s						
BIOA	Bad Ischl, Aus	74.56	44	*e*P	P	00 36 54.8	+0.4
	comp=Z,6.9nm,0.9s						
ZVC	Zvikov	74.60	43	*e*P	P	00 36 56.0	+1.6
MYKA	Terra Mystica	74.77	46	*e*P	P	00 36 56.0	+0.4
	comp=Z,3.7nm,0.9s						
MOA	Molln	74.95	44	*e*P	P	00 36 56.9	+0.4
	comp=Z,7.9nm,0.9s,SNR=6.4						
OBKA	Obir	75.41	46	*e*P	P	00 36 59.9	+0.6
	comp=Z,6.9nm,1.1s						
TREC	Trest	75.45	43	*e*P	P	00 37 00.7	+1.3
TREC				*e*pP	sP	00 37 05.5	+0.1
UPC	Upice	75.54	41	*e*P	P	00 37 00.7	+0.8
SOKA	Soboth	75.70	45	*e*P	P	00 37 01.1	+0.1
	comp=Z,4.7nm,1.0s,SNR=4.0						
ARCES	ARCESS Array B	75.74	21	P	P	00 37 00.8	+0.1
	comp=Z,2.1nm,0.6s,baz=298,slow=3.6,SNR=13						
	comp=Z,2.1nm,0.6s						
DPC	Dobruska-Polom	75.76	41	*e*P	P	00 37 02.2	+1.0
DPC				*e*pP	sP	00 37 07.6	+0.4
CONA	Conrad Observa	75.98	44	*e*P	P	00 37 03.3	+0.7
	comp=Z,4.0nm,0.9s						
KRUC	Moravsky	76.09	43	*e*P	P	00 37 03.7	+0.7
KRLC	Kraliky	76.11	42	*e*P	P	00 37 04.7	+1.5
VRAC	Vranov	76.16	42	*e*P	P	00 37 04.0	+0.6
RONA	Rosalia, Austr	76.32	44	*e*P	P	00 37 05.1	+0.6
	comp=Z,5.9nm,0.8s						
MORC	Moravsky Berou	76.66	42	*e*P	P	00 37 07.2	+0.9
MODS	Modra-Piesok	76.81	43	*e*P	P	00 37 08.4	+1.2
MODS				*e*		00 45 39.5	
MAUC	Maruska	76.93	42	*e*P	P	00 37 09.2	+1.3
P08K	Saint George I	77.75	326	P	P	00 37 13.0	+0.8
	baz=75						
VYHS	Vyhne	77.79	43	*e*P	P	00 37 14.0	+1.4
VYHS				*e*		00 45 37.6	
SPIA	Saint Paul Isl	77.96	326	P	P	00 37 14.1	+0.7
	baz=74						
FINES	FINESS Array B	78.26	29	P	P	00 37 15.2	+0.3
	comp=Z,2.6nm,0.9s,baz=270,slow=1.9,SNR=3.3						
	comp=Z,2.6nm,0.9s						
KOLS	Kolonicke sedl	79.86	42	*e*P	P	00 37 25.5	+1.5
KOLS				*e*		00 45 36.0	
BRTR	Keskin Array B	90.77	47	P	P	00 38 19.0	+0.1
	comp=Z,1.4nm,0.9s,baz=284,slow=5.0,SNR=7.5						
	comp=Z,1.4nm,0.9s						
KSRS	Korea Array	120.52	340	PKP	PKPdf	00 44 07.1	-0.2
	comp=Z,0.5nm,0.7s,baz=348,slow=1.4,SNR=2.8						
CMAR	Chiang Mai Arr	142.31	12	PKP	PKPdf	00 44 48.6	-0.2
	comp=Z,0.6nm,0.3s,baz=302,slow=2.0,SNR=5.0						
STKA	Stephens Creek	145.74	241	PKPbc	PKPab	00 44 55.0	-0.2
	comp=Z,5.0nm,0.7s,baz=121,slow=2.2,SNR=10						
WRA	Warramunga Arr	153.60	263	PKP	PKPdf	00 45 07.7	+0.5
	comp=Z,3.1nm,0.8s,baz=85,slow=1.1,SNR=15						
WRA				PKPbc	PKPbc	00 45 14.7	-0.3
	comp=Z,8.5nm,0.7s,baz=85,slow=2.0,SNR=38						
ASAR	Alice Springs	153.89	254	PKP	PKPdf	00 45 08.2	+0.6
	comp=Z,1.6nm,1.0s,baz=78,slow=0.7,SNR=4.4						
ASAR				PKPbc	PKPbc	00 45 15.1	-0.5
	comp=Z,3.4nm,0.7s,baz=94,slow=2.2,SNR=19						

IDC ***17*** *00:25:57.9±0.5, 15.°17S×173.°60W, h0km, mb4.5/14, mbtmp4.5/15, ML3.5/1, Error ellipse: s-maj=23.1km s-min=14.7km az=133.0*

BGR ***17*** *00:26:00.8, 16.°37S×173.°20W, h33km*

NEIC ***17*** *00:26:04.2±3.0, 15.°38S±0.°10×173.°4W±0.°1, h35km±1km, mb4.9/111, Error ellipse: s-maj=18.9km s-min=16.4km az=79.0*

ISC 17 00:26:03.8±0.3, 15.°33S±0.°06×173.°46W±0.°08, h42km, n283, σ0°88/278, mb4.8/66, 26C-14D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	Niue	5.03	138		Op	Pn	00 27 16.3	-0.5
NIUE					Sn	Sn	00 28 07.6	-6.1
RAR	Rarotonga	14.25	116	Pn		Pn	00 29 24.1	+1.0
	2.2nm,0.3s,baz=169,slow=7.1,SNR=1.8							
	12nm,0.6s							
RAO	Raoul Island	14.45	196	Pn		Pn	00 29 25.4	-0.3
RAO	Raoul Island	14.45	196	Pn		Pn	00 29 26.7	+1.0
	55nm,0.3s,baz=48,slow=23,SNR=1.6							
PINNC	Pines Island,	19.44	245	P		P	00 30 24.9	-2.0
PINNC				IAmb		IAmb	00 30 29.4	
	comp=Z,142nm,1.2s							
DZM	Mont Dzumac	20.17	248	P		P	00 30 35.3	+0.3
	comp=Z,11nm,0.9s,baz=106,slow=23,SNR=1.7							
	comp=Z,11nm,0.9s							
TOZ	Tahuroa Road	24.36	202	P		P	00 31 19.0	+1.1
RTZ	Ruatahuna	24.68	198	P		P	00 31 22.2	+1.4
HIZ	Hauiti	25.28	202	P		P	00 31 28.7	+2.4
BKZ	Black Stump Fm	25.33	198	P		P	00 31 25.8	-1.0
BFZ	Birch Farm	26.80	198	P		P	00 31 40.7	+0.7
BFZ				IAmb		IAmb	00 31 44.1	
	comp=Z,34nm,1.0s							
MRZ	Mangatainoka R	26.98	199	P		P	00 31 42.1	+0.5
BHW	Baring Head	27.88	199	P		P	00 31 50.1	+0.5
BHW				IAmb		IAmb	00 32 15.9	
	comp=Z,88nm,1.6s							
TCW	Tory Channel	27.89	200	P		P	00 31 50.8	+1.1
QRZ	Quartz Range	28.17	203	P		P	00 31 53.4	+1.1
TKNZ	Takaka Hill	28.19	202	P		P	00 31 49.7	-2.8
TUWZ	Tuamarina	28.20	200	P		P	00 31 54.0	+1.4
NNZ	Nelson	28.20	201	P		P	00 31 53.3	+0.8
BSWZ	Blackbirch Sta	28.48	200	P		P	00 31 56.5	+1.5
MRNZ	Matariki Terra	28.59	202	P		P	00 31 56.2	+0.3
THZ	Tophouse	28.85	201	P		P	00 31 58.9	+0.5
THZ				IAmb		IAmb	00 32 04.8	
	comp=Z,71nm,1.5s							
KHZ	Kahutara	29.22	200	P		P	00 32 01.9	+0.4
KHZ				IAmb		IAmb	00 32 04.9	
	comp=Z,21nm,0.8s							
DSZ	Denniston Nort	29.24	203	P		P	00 32 02.6	+0.8
GVZ	Greta Valley S	29.88	200	P		P	00 32 08.4	+1.0
LTZ	Lake Taylor	29.97	201	P		P	00 32 08.8	+0.5
LTZ				IAmb		IAmb	00 32 12.4	
	comp=Z,31nm,0.8s							
INZ	Inchbonnie	30.22	202	P		P	00 32 11.1	+0.7
OXZ	Oxford	30.53	201	P		P	00 32 13.5	+0.3
MQZ	McQueen's Vall	30.66	200	P		P	00 32 15.1	+0.8
RPZ	Rata Peaks	31.22	202	P		P	00 32 19.6	+0.4
LBZ	Lake Benmore	32.12	202	P		P	00 32 26.5	-0.7
ODZ	Otahua Downs	32.52	201	P		P	00 32 31.6	+1.0
ODZ				IAmb		IAmb	00 33 22.1	
	comp=Z,50nm,1.4s							
MLZ	Mavora Lakes	33.73	204	P		P	00 32 41.9	+0.6
WHZ	Wether Hill Ro	34.23	203	P		P	00 32 44.1	-1.4
WHZ				IAmb		IAmb	00 32 49.1	
	comp=Z,61nm,0.9s							
ARMA	Armidale	35.33	239	P		P	00 32 55.0	-0.4
ARMA				IAmb		IAmb	00 33 52.3	
	comp=Z,33nm,1.5s							
CAN	Canberra	39.02	232	P		P	00 33 26.4	-0.3
CAN				IAmb		IAmb	00 33 26.9	
	comp=Z,13nm,0.8s							
CAN	Canberra	39.02	232	P		P	00 33 26.2	-0.5
TOO	Toolangi	42.46	231	P		P	00 33 54.6	-0.3
TOO				IAmb		IAmb	00 33 55.5	
	comp=Z,24nm,0.9s							
STKA	Stephens Creek	44.02	240	P		P	00 34 07.3	-0.2
STKA	Stephens Creek	44.02	240	P		P	00 34 06.8	-0.8
	comp=Z,9.3nm,0.8s,baz=86,slow=9.3,SNR=19							
	comp=Z,9.3nm,0.8s							
BBOO	Buckleboo	48.79	240	P		P	00 34 43.3	-1.7
WB0	Warramunga Arr	49.76	257	P		P	00 34 52.2	-0.4
WB0				IAmb		IAmb	00 36 26.3	
	comp=Z,10nm,0.8s							
WB2	Warramunga Arr	49.79	257	P		P	00 34 52.5	-0.4
WB2				IAmb		IAmb	00 36 39.5	
	comp=Z,8.9nm,0.7s							
WRAB	Tennant Creek	49.79	257	P		P	00 34 51.9	-0.9
WRAB				IAmb		IAmb	00 36 13.9	
	comp=Z,10nm,0.7s							
WRA	Warramunga Arr	49.80	257	P		P	00 34 52.1	-0.8
WRA	Warramunga Arr	49.80	257	P		P	00 34 51.6	-1.3
	comp=Z,5.0nm,0.9s,baz=92,slow=6.3,SNR=8.0							
	comp=Z,5.0nm,0.9s							
AS31	Alice Springs	50.07	252	P		P	00 34 54.0	-0.9
AS31				IAmb		IAmb	00 34 55.1	
	comp=Z,7.6nm,0.8s							
ASAR	Alice Springs	50.07	252	P		P	00 34 53.3	-1.7
ASAR	Alice Springs	50.07	252	P		P	00 34 54.2	-0.7
	comp=Z,23nm,0.6s,baz=86,slow=8.5,SNR=53							
	comp=Z,23nm,0.6s							
FORT	Forrest	55.39	243	P		P	00 35 33.7	-0.4
VNDA	Vanda	63.44	186	P		P	00 36 30.9	+2.0
VNDA				IAmb		IAmb	00 36 32.5	
	comp=Z,7.3nm,0.9s							
VNDA	Vanda	63.44	186	P		P	00 36 31.1	+2.2
	comp=Z,6.5nm,0.9s,baz=20,slow=6.1,SNR=8.4							
	comp=Z,6.5nm,0.9s							
VNDA	Vanda	63.44	186	P		P	00 36 31.3	+2.4
VNDA				pP		pwP	00 36 42.0	-0.8
VNDA				sP		sP	00 36 46.9	+1.7
CCD	Concordia, Ant	68.52	194	P		P	00 37 03.3	+1.2
CCD				pP		pP	00 37 15.4	+1.4
MJAR	Matsushiro Arr	68.85	320	P		P	00 37 03.4	-0.7
	comp=Z,1.9nm,0.7s,baz=142,slow=4.3,SNR=4.4							
	comp=Z,1.9nm,0.7s							
PETK	Petropavlovsk-	72.55	342	P		P	00 37 25.6	-0.7
	comp=Z,5.3nm,0.8s,baz=156,slow=7.8,SNR=5.9							
	comp=Z,5.3nm,0.8s							
NVAR	Mina Array Bea	74.32	42	P		P	00 37 38.1	+0.7
	comp=Z,0.6nm,0.3s,baz=229,slow=11,SNR=6.0							
	comp=Z,0.6nm,0.3s							
NV11	Mina Array Sit	74.42	42	P		P	00 37 38.9	+1.1
QSPA	South Pole Qui	74.71	180	P		P	00 37 40.6	+1.5
QSPA				IAmb		IAmb	00 37 42.2	
	comp=Z,36nm,1.4s							
QSPA	South Pole Qui	74.71	180	P		P	00 37 39.6	+0.5
	comp=Z,11nm,0.9s,baz=42,slow=1.7,SNR=24							
	comp=Z,11nm,0.9s							
J05D	Fort Rock, OR	75.40	37	P		P	00 37 44.4	+1.0
TUC	Tucson	76.39	51	P		P	00 37 50.2	+0.9
WVOR	Wild Horse Val	76.42	39	P		P	00 37 50.4	+1.2
WVOR				IAmb		IAmb	00 37 51.5	
	comp=Z,15nm,1.6s							
X16A	Lo Mia Camp, P	76.92	49	P		P	00 37 53.6	+1.3
319A	Douglas	77.10	52	P		P	00 37 54.0	+0.7
319A				IAmb		IAmb	00 37 55.3	
	comp=Z,5.9nm,0.7s							
USA0B	Ussuriysk Arra	77.29	323	P		P	00 37 50.7	-3.2
U15A	North Rim	77.30	46	P		P	00 37 55.8	+1.3
DUN6	Lazy B Ranch	77.78	51	P		P	00 37 57.8	+0.7
PKCU	Pink Cliffs	77.79	46	P		P	00 37 58.3	+1.0
G08A	Pilot Rock	77.92	36	P		P	00 37 57.4	-0.1
HPIG		78.05	58	P		P	00 37 58.8	0.0
X18A	Snowflake	78.05	49	P		P	00 37 59.2	+0.6
X18A				IAmb		IAmb	00 38 40.3	
	comp=Z,15nm,1.8s							
MTPU	Mount Pierson	78.18	45			P	00 38 00.2	+0.7
HAWA	Hanford	78.26	35	P		P	00 37 59.1	-0.1
HAWA				IAmb		IAmb	00 38 00.5	
	comp=Z,23nm,1.7s							
MVU	Marysvale	78.39	45	P		P	00 38 00.6	+0.1
MVU				IAmb		IAmb	00 38 03.0	
	comp=Z,30nm,1.3s							
MSU	Marysvale	78.42	45	P		P

WRH	Wood River Hil	81.90	11	P		P		00 38 18.1	-0.3
WRH				IAmb		IAmb		00 38 35.9	
	comp=Z,9.2nm,1.0s								
MLY	Manley	81.96	10	P		P		00 38 18.1	-0.7
CCB	Clear Creek Bu	82.11	11	P		P		00 38 19.0	-0.5
CCB				IAmb		IAmb		00 38 20.3	
	comp=Z,8.0nm,0.9s								
G19K	Purcell Mounta	82.16	7	P		P		00 38 19.9	+0.1
G19K				IAmb		IAmb		00 38 34.3	
	comp=Z,14nm,1.3s								
PDAR	Pinedale Array	82.26	42	P		P		00 38 21.1	0.0
PDAR	Pinedale Array	82.26	42	P		P		00 38 21.0	-0.2
	comp=Z,3.6nm,0.8s,baz=216,slow=3.0,SNR=27								
	comp=Z,3.6nm,0.8s								
YHL	Hebgen Lake	82.27	39	P		P		00 38 22.5	+1.3
YHL				IAmb		IAmb		00 38 24.2	
	comp=Z,24nm,1.2s								
SMCO	Snowmass	82.31	46	IAmb		IAmb		00 38 25.9	
	comp=Z,10nm,1.4s								
IL31		82.39	11	P		P		00 38 20.7	-0.3
IL31				IAmb		IAmb		00 38 40.5	
	comp=Z,23nm,1.9s								
ILAR	Eielson Array	82.39	11	P		P		00 38 20.7	-0.4
ILAR	Eielson Array	82.39	11	P		P		00 38 20.0	-1.1
	comp=Z,1.5nm,0.8s,baz=235,slow=6.3,SNR=15								
	comp=Z,1.5nm,0.8s								
IL03	Eielson Array	82.40	11	P		P		00 38 20.3	-0.8
IMAR	Indian Mountai	82.42	8	P		P		00 38 20.8	-0.4
J25K	Salcha River,	82.54	12	P		P		00 38 21.8	-0.2
J25K				IAmb		IAmb		00 38 39.0	
	comp=Z,8.2nm,1.1s								
F19K	Shaleruckim Mo	82.75	6	P		P		00 38 23.1	+0.3
F19K				IAmb		IAmb		00 38 28.8	
	comp=Z,14nm,1.5s								
M30M	Minto, Yukon	82.80	16	P		P		00 38 23.1	-0.2
M30M				IAmb		IAmb		00 38 26.1	
	comp=Z,11nm,1.6s								
J26L	Joseph Creek	82.81	13	P		P		00 38 24.4	+1.0
J26L				IAmb		IAmb		00 38 24.9	
	comp=Z,7.8nm,1.1s								
L29M	L29M	82.88	15	P		P		00 38 24.1	+0.4
L29M				IAmb		IAmb		00 38 24.9	
	comp=Z,17nm,1.2s								
G21K	Allakaket	82.95	8	P		P		00 38 24.4	+0.5
G21K				IAmb		IAmb		00 38 25.7	
	comp=Z,27nm,1.9s								
MSTX	Muleshoe	83.17	52	P		P		00 38 25.9	-0.1
F20K	Avaraart Lake	83.18	7	P		P		00 38 25.2	+0.2
F20K				IAmb		IAmb		00 40 17.2	
	comp=Z,17nm,2.0s								
PRP	Porcupine Dome	83.32	11			P		00 38 26.2	+0.2
PRP				IAmb		IAmb		00 38 26.8	
	comp=Z,7.3nm,1.0s								
DAWY	Dawson	83.37	14			P		00 38 26.6	+0.4
F21K	Alatna River	83.62	8	P		P		00 38 27.4	0.0
G23K	Bananza Creek	83.63	9	P		P		00 38 27.8	+0.3
G23K				IAmb		IAmb		00 38 32.8	
	comp=Z,7.0nm,1.2s								
BELA	Belgrano 2	84.07	172	P		P		00 38 30.6	+0.9
D19K	Kuna River	84.33	6	P		P		00 38 30.9	-0.1
D19K				IAmb		IAmb		00 38 45.2	
	comp=Z,15nm,1.3s								
MMPY	Sheldon Lake,	84.41	18	P		P		00 38 31.2	-0.3
MMPY				IAmb		IAmb		00 38 32.6	
	comp=Z,8.5nm,1.3s								
I28M	Miner Creek	84.41	13	P		P		00 38 31.1	-0.5
I28M				IAmb		IAmb		00 39 17.9	
	comp=Z,22nm,1.9s								
J30M	Hart River	84.55	15	P		P		00 38 33.0	+0.7
F24K	Squaw Lake	84.71	10	P		P		00 38 33.5	+0.5
F24K				IAmb		IAmb		00 39 41.0	
	comp=Z,19nm,2.0s								
C19K	Lookout Ridge	84.79	5	P		P		00 38 33.8	+0.4
C19K				IAmb		IAmb		00 39 26.7	
	comp=Z,23nm,1.8s								
APMT	Aspermont	84.96	54	P		P		00 38 35.2	+0.2
I30M	Mount Dempster	85.06	15	P		P		00 38 34.5	-0.4
I30M				IAmb		IAmb		00 38 38.6	
	comp=Z,12nm,1.6s								
ABTX	Abilene, Hawle	85.07	54	P		P		00 38 36.0	+0.4
BMAR	Burnt Mountain	85.20	11	P		P		00 38 36.2	+0.8
D22K	Ayikyak River	85.29	7	P		P		00 38 36.7	+0.9
H29M	Whitestone	85.42	14	P		P		00 38 36.6	+0.2
H29M				IAmb		IAmb		00 38 37.3	
	comp=Z,3.9nm,0.8s								
TOLK	Toolik Lake Re	85.49	9	P		P		00 38 36.9	+0.1
TOLK				IAmb		IAmb		00 39 16.5	
	comp=Z,20nm,1.8s								
E25K	Arctic Village	85.64	10	P		P		00 38 38.4	+0.8
E25K				IAmb		IAmb		00 39 14.2	
	comp=Z,25nm,2.0s								
B21K	Ikpikpuk River	85.77	7	P		P		00 38 39.0	+0.9
B21K				IAmb		IAmb		00 39 31.4	
	comp=Z,8.8nm,1.4s								
PLPT	Palo Pinto	86.18	55	P		P		00 38 41.5	+0.4
G31M	Satah River	86.94	14	P		P		00 38 43.6	-0.3
G31M				IAmb		IAmb		00 38 44.5	
	comp=Z,7.1nm,1.1s								
INK	Inuvik	88.22	14	P		P		00 38 49.2	-0.8
INK				IAmb		IAmb		00 40 04.2	
	comp=Z,17nm,1.9s								
YKA	Yellowknife Ar	90.06	23	P		P		00 38 58.6	-0.2
	comp=Z,0.9nm,0.8s,baz=238,slow=4.6,SNR=11								
	comp=Z,0.9nm,0.8s								
MKAR	Makanchi Array	110.74	315	PKiKP		PKiKP		00 44 31.3	-1.0
	comp=Z,0.4nm,0.7s,baz=333,slow=0.5,SNR=4.0								
BVAR	Borovoye Array	117.79	322	PKP		PKPdf		00 44 45.1	-0.4
	comp=Z,1.2nm,0.7s,baz=40,slow=2.5,SNR=6.8								
ARCES	ARCESS Array B	124.53	352	PKP		PKPdf		00 44 57.9	-0.2
	comp=Z,5.2nm,0.8s,baz=284,slow=2.0,SNR=7.4								
FINES	FINESS Array B	131.86	348	PKP		PKPdf		00 45 12.6	+0.5
	comp=Z,2.5nm,0.8s,baz=48,slow=2.8,SNR=6.9								
AKASG	Malin Array Be	140.25	337	PKP		PKPdf		00 45 27.7	-0.4
	comp=Z,0.9nm,0.5s,baz=32,slow=1.2,SNR=5.2								
SORM	Soroca	142.67	336	⇓P		PKPdf		00 45 29.7	-2.8
CLL	Collm	143.74	353	e(PKPdf)		PKPbc		00 45 32.0	+0.1
DPC	Dobruska-Polom	144.18	349	ePKP		PKPbc		00 45 34.2	+0.9
KIBK	Kibwezi	144.22	243	PKPdf		PKPdf		00 45 35.6	-0.8
BUR08	Bucovina Ar. S	144.26	338	PKPdf		PKPbc		00 45 34.1	+0.3
BURAR	Bucovina Array	144.28	338	⇑P		PKPbc		00 45 34.5	+0.7
BURAR	Bucovina Array	144.28	338	PKPdf		PKPdf		00 45 35.2	-0.3
KRLC	Kraliky	144.36	349	ePKP		PKPbc		00 45 33.9	0.0
MORC	Moravsky Berou	144.50	348	⇑P		PKPbc		00 45 34.8	+0.5
MORC	Moravsky Berou	144.50	348	PKPdf		PKPbc		00 45 34.2	-0.1
MORC	Moravsky Berou	144.50	348	ePKP		PKPbc		00 45 34.6	+0.3
MOX	Moxa	144.54	354	ePKPbc		PKPdf		00 45 35.1	+0.7
	baz=7.7,slow=3.0								
PLN	Plauen	144.64	354	ePKPbc		PKPdf		00 45 35.4	-0.5
	baz=7.7,slow=3.0								
LANS	Liptovska Anna	144.65	345	e		PKPdf		00 45 36.1	+0.1
TANN	Tannenbergstha	144.68	353	ePKPbc		PKPdf		00 45 35.6	-0.4
	baz=7.7,slow=3.0								
TLCR		144.80	332	⇑P		PKPdf		00 45 36.5	+0.2
MAUC	Maruska	144.83	347	ePKP		PKPdf		00 45 36.2	-0.1
PRU	Pruhonice	144.83	351	ePKP		PKPdf		00 45 35.9	-0.3
NKC	Novy Kostel	144.86	353	ePKP		PKPdf		00 45 36.0	-0.3
GOPC	GO Pecny, Ondr	144.86	351	ePKP		PKPdf		00 45 36.4	+0.1
SLCR	Slobozia Conac	144.95	334	⇑P		PKPdf		00 45 36.7	+0.1
KECS	Kecovo	145.00	344	e		PKPdf		00 45 37.2	+0.6
ARCR	ARCALIA	145.04	339	⇓P		PKPdf		00 45 37.0	+0.3
ODBI	Odobesti	145.11	335	⇓P		PKPdf		00 45 37.8	+0.9
CFR	Carcaliu	145.11	333	⇑P		PKPdf		00 45 37.0	+0.2
VRAC	Vranov	145.13	348	⇑P		PKPdf		00 45 36.7	-0.1
VRAC	Vranov	145.13	348	ePKP		PKPab		00 45 36.4	0.0
VRI	Vrincioaia	145.16	335	⇑P		PKPbc		00 45 36.3	-0.2
TNS	Taunus Mts	145.17	358	ePKPbc		PKPab		00 45 36.6	0.0
	baz=7.7,slow=3.0								
GAZ	Gaziantep	145.18	314	PKPbc		PKPdf		00 45 37.9	+0.5
ILGA	Ilgaz	145.19	323	PKPbc		PKPdf		00 45 38.5	+1.0
BNN	Bunyan	145.20	318	PKPbc		PKPdf		00 45 37.6	+0.2
PLOR	Plostina	145.20	335	⇓P		PKPdf		00 45 37.0	-0.1
TPGR	Topolog	145.24	332	⇑P		PKPdf		00 45 37.4	+0.2
TURR	Turia	145.29	336	⇓P		PKPdf		00 45 38.0	+0.8
JAVC	Velka Javorina	145.34	347	ePKP		PKPab		00 45 38.3	+1.1
OZUR		145.34	336	⇓P		PKPab		00 45 38.1	+0.7
TREC	Trest	145.35	350	ePKP		PKPab		00 45 37.2	0.0
ROTZ	Rotzenmuhle	145.35	354	ePKPbc		PKPab		00 45 37.7	+0.5
	baz=7.7,slow=3.0								
COVR	Voineasa-Covas	145.39	336	⇓P		PKPab		00 45 37.6	+0.1
KRUC	Moravsky	145.41	349	ePKP		PKPbc		00 45 37.1	-0.1
ZVC	Zvikov	145.41	351	ePKP		PKPab		00 45 37.6	+0.2
KMBO	Kilima Mbogo	145.51	244	PKPdf		PKPdf		00 45 38.7	-0.1
GRA1	Grafenberg Arr	145.52	355	PKPdf		PKPab		00 45 38.1	+0.3
GRF	Grafenberg Arr	145.52	355	ePKPbc		PKPab		00 45 38.1	+0.3
	baz=7.7,slow=3.0								
GRFO	Grafenberg	145.52	355	PKPdf		PKPab		00 45 38.1	+0.3
TIRR	Tirgusor	145.55	332	⇑P		PKPab		00 45 38.3	+0.2
TIRR	Tirgusor	145.55	332	PKPdf		PKPbc		00 45 37.8	0.0
HARR	Harsova	145.59	333	⇑P		PKPab		00 45 38.7	+0.5
DOPR	Dopca	145.61	336	⇑P		PKPab		00 45 38.9	+0.7
TLBR	Topalu	145.65	332	⇑P		PKPab		00 45 38.9	+0.5
PSZ	Piszkesteto	145.68	344	⇑P		PKPab		00 45 38.6	0.0
PSZ	Piszkesteto	145.68	344	PKPdf		PKPbc		00 45 38.1	-0.1
NEHR	Nehoiu	145.69	335	⇑P		PKPab		00 45 39.3	+0.7
WLF	Walferdange	145.76	0	PKPdf		PKPbc		00 45 38.4	+0.1
WLF	Walferdange	145.76	0	ePKPbc		PKPab		00 45 39.0	+0.3
	baz=7.7,slow=3.0								
MLR	Muntele Rosu	145.78	335	⇑P		PKPab		00 45 39.6	+0.5
MLR	Muntele Rosu	145.78	335	PKPdf		PKPbc		00 45 38.7	0.0
KHC	Kasperske Hory	145.80	352	PKPdf		PKPbc		00 45 38.5	0.0
KHC	Kasperske Hory	145.80	352	ePKP		PKPab		00 45 38.8	-0.1
MARR	Marisel-Cluj	145.82	340	⇓P		PKPbc		00 45 38.6	-0.1
ISR	Istrita	145.84	334	⇑P		PKPab		00 45 39.2	0.0
MANR	Mangalia	145.96	331	⇑P		PKPab		00 45 39.5	-0.1
GEC2	GERESS Array S	146.07	352	PKPdf		PKPbc		00 45 39.5	0.0
GEC2	GERESS Array S	146.07	352	ePKPbc		PKPbc		00 45 39.1	-0.3
	baz=7.7,slow=3.0								
GERES	GERESS Array B	146.07	352	PKPbc		PKPbc		00 45 39.5	0.0
	comp=Z,6.6nm,0.9s,baz=42,slow=4.2,SNR=23								
BR131	Keskin Array S	146.07	321	PKPdf		PKPab		00 45 40.4	0.0
BRTR	Keskin Array B	146.07	321	PKPdf		PKPab		00 45 40.3	-0.1
BRTR	Keskin Array B	146.07	321	PKPbc		PKPbc		00 45 39.9	+0.1
	comp=Z,7.6nm,0.9s,baz=99,slow=3.1,SNR=40								
ZST	Bratislava	146.09	347	e		PKPab		00 45 40.4	+0.4
VOIR		146.18	336	⇓P		PKPab		00 45 41.1	+0.5
SULR		146.32	334	⇓P		PKPab		00 45 40.9	0.0
ARR	Arges	146.40	337	⇓P		PKPab		00 45 41.5	+0.1
CONA	Conrad Observa	146.59	349	i PKP		PKPbc		00 45 40.5	-0.5
	comp=Z,15nm,1.0s,SNR=6.8								
SIRR	Siria	146.66	341	⇑P		PKPdf		00 45 40.2	+0.7
RONA	Rosalia, Austr	146.73	348	i PKP		PKPbc		00 45 40.6	-0.7
	comp=Z,21nm,1.0s,SNR=11								
AMBH	Amberzfalva	146.87	342	⇑P		PKPbc		00 45 40.9	-0.8
MOA	Molln	146.95	350	i PKP		PKPbc		00 45 42.1	+0.2
	comp=Z,16nm,1.0s								
SURR	Surduc	146.96	340	⇓P		PKPbc		00 45 42.6	+0.6
FUR	Furstenfeldbru	147.03	354	ePKPbc		PKPbc		00 45 42.6	+0.5
	baz=7.7,slow=3.0								
BFO	Black Forest	147.06	358	PKPdf		PKPbc		00 45 41.5	-0.7
BFO	Black Forest	147.06	358	ePKPbc		PKPbc		00 45 42.4	+0.2
	baz=7.7,slow=3.0								
RAZG	Razgrad	147.10	333	⇑P		PKPbc		00 45 43.0	+0.5
BIOA	Bad Ischl, Aus	147.20	351	ePKP		PKPdf		00 45 41.4	+1.0
	comp=Z,8.7nm,1.0s								
RJOB	Jochberg	147.28	352	ePKPbc		PKPbc		00 45 43.2	+0.3
	baz=7.7,slow=3.0								
ARSA	Arzberg	147.31	349	i PKP		PKPbc		00 45 42.2	-0.7
	comp=Z,11nm,0.9s								
MORH	Mrgy, Hungar	147.58	344	⇓P		PKPbc		00 45 43.7	+0.1
LESA	Schwarzleotal	147.60	352	i PKP		PKPbc		00 45 44.4	+0.6
	comp=Z,12nm,1.2s								
UBR	Ueberruh	147.61	355	ePKPbc		PKPbc		00 45 44.6	+0.8
	baz=7.7,slow=3.0								
BANR	Banloc	147.61	341	⇑P		PKPbc		00 45 44.6	+0.9
RETA	Reutte	147.75	355	i PKP		PKPbc		00 45 44.2	0.0
	comp=Z,12nm,1.3s								
WATA	Walderalm	147.82	354	i PKP		PKPbc		00 45 44.2	-0.3
	comp=Z,12nm,1.1s								
KBA	Koelnbreinsper	147.84	351	ePKP		PKPbc		00 45 43.7	-0.9
	comp=Z,11nm,1.1s								
MOTA	Moosalm	147.86	354	i PKP		PKPbc		00 45 45.2	+0.6
	comp=Z,14nm,1.1s								
WTTA	Wanenberg	147.88	353	ePKP		PKPbc		00 45 44.8	+0.1
	comp=Z,12nm,0.9s,SNR=6.0								
SOKA	Soboth	147.95	349	i PKP		PKPbc		00 45 43.5	-1.3
	comp=Z,18nm,1.0s,SNR=6.7								
SQTA	Sankt Quirin	147.97	354	i PKP		PKPbc		00 45 45.0	+0.2
	comp=Z,8.5nm,1.1s								
DAVA	Damuels	148.02	356	ePKP		PKPbc		00 45 44.2	-0.9
	comp=Z,10nm,0.9s								
PLVB	Pleven	148.05	335	⇓P		PKPbc		00 45 45.7	+0.7
OBKA	Obir	148.20	349	i PKP		PKPbc		00 45 44.9	-0.5
	comp=Z,10.0nm,1.0s								
OBKA	Obir	148.20	349	ePKP		PKPbc		00 45 44.5	-1.0
FETA	Feichten	148.21	355	i PKP		PKPdf		00 45 42.9	+0.6
	comp=Z,10nm,1.2s								
FRGS	Fruska Gora	148.23	342	⇑P		PKPbc		00 45 45.9	+0.4
FRGS	Fruska Gora	148.23	342	ePKP		PKPbc		00 45 44.5	-1.0
MYKA	Terra Mystica	148.24	351	i PKP		PKPbc		00 45 44.7	-0.8
	comp=Z,16nm,1.2s								
ABTA	Abfaltersbach	148.28	352	i PKP		PKPbc		00 45 45.0	-0.6
	comp=Z,17nm,1.0s,SNR=5.9								
PRED	Cast del Predi	148.43	351	PKPbc		PKiKP		00 45 47.3	-0.4
MMAI	Mount Meron Ar	148.48	309	PKPbc		PKPbc		00 45 46.4	-0.2
	comp=Z,5.7nm,0.8s,baz=89,slow=4.5,SNR=7.4								
FUORN	Ofenpass-Fuorn	148.65	355	PKPbc		PKiKP		00 45 47.6	-0.7
CRES	Cresnjev	148.69	348	ePKP		PKPbc		00 45 45.3	-1.4
CIMO	Cimolais	148.72	352	PKPbc		PKPbc		00 45 46.3	-0.4
STAL	STALIGIAL	148.74	352	PKPbc		PKPbc		00 45 46.1	-0.7
BOVS	Bovan	148.96	338	⇑P		PKPbc		00 45 46.8	-0.6
CEY	Cerknica	148.97	349	ePKP		PKPbc		00 45 46.0	-1.4
BOJS	Bojanci	149.04	348	ePKP		PKPbc		00 45 46.2	-1.3
SENIN	Lac Senin/Sane	149.06	359	PKPbc		PKiKP		00 45 49.2	0.0
CTI	Castel Tesino	149.08	353	PKPbc		PKPbc		00 45 47.5	-0.3
A051A	Mrakovica	149.14	346	ePKP		PKPbc		00 45 46.6	-1.3
BLY	Banja Luka	149.32	345	⇑P		PKPbc		00 45 48.4	+0.1
HAPS	Han Pijesak,BI	149.46	342	⇑P		PKPbc		00 45 48.9	+0.1
BBLS	Lazići	149.52	341	ePKP		PKPbc		00 45 49.0	+0.1
MGRS	Mrkonjic Grad	149.66	345	ePKP		PKiKP		00 45 51.3	+1.1
A050A	Klekovaca	149.73	346	ePKP		PKPbc		00 45 48.0	-1.4
RUDO	Rudo	149.75	341	⇑P		PKPbc		00 45 49.0	-0.4
SJES	Sjenica	149.88	340	ePKP		PKPbc		00 45 49.9	0.0
BNI	Bardonecchia	150.38	360	PKPab		PKPab		00 45 58.9	+1.5
NEVS	Nevesinje	150.42	343	ePKP		PKiKP		00 45 51.7	-0.2
BRY	Bratogost	150.66	342	ePKP		PKPbc		00 45 50.8	-1.0
ZCCA	Zocca	150.83	353	PKPbc		PKiKP		00 45 53.6	+1.0
STON	Ston	150.93	343	ePKP		PKPbc		00 45 49.7	-2.5
DRME	Dracevica, Mon	151.10	340	ePKP		PKPbc		00 45 52.4	-0.2
FNA	Florina	151.55	336	PKPbc		PKPbc		00 45 53.7	-0.1
MURB	Monte Urbino	151.69	351	PKPbc		PKPbc		00 45 53.8	-0.3
CASP	Castiglione de	152.38	353	PKPbc		PKPbc		00 45 55.1	-0.5
SGRT	San Giovanni R	152.49	345	PKPbc		PKPbc		00 45 55.8	-0.1
AGG	Agios Georgios	152.62	333	PKPbc		PKPbc		00 45 55.4	-0.8
INTR	Introdacqua	152.66	348	PKPbc		PKPbc		00 45 56.2	-0.1
ESDC	Sonseca Array	154.06	19	PKPbc		PKPbc		00 45 58.7	-0.7
	comp=Z,0.8nm,1.0s,baz=332,slow=3.6,SNR=3.3								
ESDC				PKPab		pPKPbc		00 46 12.2	+0.3
	comp=Z,1.7nm,1.0s,baz=325,slow=5.7,SNR=7.1								

*IDC **17** 00:28:18.1±0.6,9.°34S×117.°62E,h0km,mb4.6/19, mbtmp4.5/21,ML4.4/2,Error ellipse: s-maj=23.1km s-min=14.2km az=66.0*
*NEIC **17** 00:28:26.5±2.0,9.°47S×0.°07×117.°61E±0.°06,h67km±7km, mb4.7/57,Error ellipse: s-maj=10.2km s-min=8.6km az=189.0*

ISC 17 00:28:26.2±0.3,9.°56S±0.°05×117.°64E±0.°06,h67km,n171,
σ1°14/183,mb4.7/53,1C-2D,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PLAI	Plampang	0.73	11	P	Pn	00 28 40.6	-0.7
JAGI	Jajag, Banyuwa	3.61	287	Pn	Pn	00 29 20.6	+0.8
JAGI	Jajag, Banyuwa	3.61	287	P	Pn	00 29 21.8	+2.1
MMRI	Maumere	4.63	79	Pn	Pn	00 29 33.9	+0.2
MMRI	Maumere	4.63	79	P	Pn	00 29 34.7	+1.0
KAPI	Kappang	4.97	25	Pn	Pn	00 29 38.6	+0.2
SOEI	Soe	6.54	92	Pn	Pn	00 29 59.5	-0.4
SOEI	Soe	6.54	92	P	Pn	00 30 00.2	+0.3
UGM	Wanagama	7.22	283	Pn	Pn	00 30 09.9	+0.7
UGM	Wanagama	7.22	283	P	Pn	00 30 13.2	+4.0
BBJI	Bungbulang	10.10	281	P	Pn	00 30 49.9	+1.4
LEM	Lembang	10.29	285	Pn	Pn	00 30 45.2	-6.0
	5.2nm,0.3s,baz=344,slow=22,SNR=1.5						
	11nm,0.3s						
TOLI2	Tolitoli	11.05	17	Pn	Pn	00 31 00.1	-1.3
FITZ	Fitzroy Crossi	11.51	138	Pn	Pn	00 31 05.1	-2.6
MBWA	Marble Bar	11.71	170	Pn	Pn	00 31 07.3	-3.2
MBWA	Marble Bar	11.71	170	P	Pn	00 31 07.3	-3.2
PSA00	Pilbara Seismi	12.14	170	Pn	Pn	00 31 12.9	-3.4
PSA00	Pilbara Seismi	12.14	170	Pn	Pn	00 31 12.1	-4.2
PSA00	Pilbara Seismi	12.14	170	P	Pn	00 31 13.0	-3.3
SBUM	Sibum	13.09	335	Pn	Pn	00 31 29.4	+0.1
GIRL	Giralia	13.42	194	Pn	Pn	00 31 31.9	-1.7
GIRL	Giralia	13.42	194	P	Pn	00 31 31.5	-2.2
KDU	Kakadu	14.88	103	P	Pn	00 31 51.2	-1.7
MNAI	Manna	15.46	288		P	00 32 01.9	-1.7
MNAI	Manna	15.46	288	P	P	00 32 02.9	-0.6
KKM	Kota Kinabalu	15.56	355	P	P	00 32 06.0	+1.2
KKM				IAmb	IAmb	00 32 07.9	
	comp=Z,30nm,0.9s						
KKM	Kota Kinabalu	15.56	355	P	P	00 32 04.9	+0.1
FAKI	Fak Fak	15.94	67	Pn	Pn	00 32 05.1	-1.4
FAKI				IAmb	IAmb	00 32 29.9	
	comp=Z,44nm,1.2s						
MEEK	Meekatharra	17.02	177	P	Pn	00 32 18.8	-1.1
WRKA	Warakurna	18.44	148	P	P	00 32 37.8	+1.4
WR0	Warramunga Arr	19.11	124		P	00 32 43.7	-0.1
WRA	Warramunga Arr	19.15	125	P	P	00 32 45.6	+1.4
WRA	Warramunga Arr	19.15	125	Pn	P	00 32 43.8	-0.5
	comp=Z,0.9nm,0.3s,baz=295,slow=14,SNR=46						
WRA				Sn	S	00 36 07.2	-11
	comp=Z,1.2nm,0.3s,baz=292,slow=22,SNR=6.7						
	comp=Z,2.5nm,0.5s						
WRAB	Tennant Creek	19.15	124		Pn	00 32 46.3	+0.5
WB2	Warramunga Arr	19.16	124	P	P	00 32 45.5	+1.1
WR0	Warramunga Arr	19.32	124	P	P	00 32 46.4	+0.3
MORW	Morawa	19.47	184		Pn	00 32 52.5	+3.1
MORW				IAmb	IAmb	00 32 54.5	
	comp=Z,45nm,0.7s						
MORW	Morawa	19.47	184	P	Pn	00 32 50.0	+0.5
AS31	Alice Springs	20.94	134		P	00 33 04.4	+0.7
ASAR	Alice Springs	20.94	134		P	00 33 03.9	+0.2
ASAR	Alice Springs	20.94	134	P	P	00 33 04.4	+0.7
	comp=Z,6.3nm,0.6s,baz=311,slow=10,SNR=51						
ASAR				S	S	00 36 53.0	-0.4
	comp=Z,4.2nm,0.6s,baz=305,slow=22,SNR=5.6						
	comp=Z,6.3nm,0.6s						
AS01	Alice Springs	20.97	134	P	P	00 33 04.5	+0.5
BLDU	Ballidu	20.97	182	P	P	00 33 04.8	+0.9
IPM	Ipoh	21.65	309	P	P	00 33 12.0	+0.8
IPM				IAmb	IAmb	00 33 14.5	
	comp=Z,21nm,1.2s						
KLBR	Kellerberrin	21.93	180	P	P	00 33 16.4	+2.3
KMBL	Kambalda	22.06	170	P	P	00 33 16.4	+0.9
PSI	Prapat	22.32	302	P	P	00 33 19.8	+1.1
MTKN	Mount Kenneth	22.34	184	P	P	00 33 20.0	+1.5
MUN	Mundaring	22.35	183	P	P	00 33 19.5	+0.8
KULM	Kulim	22

	comp=N,98μm,16.9s							
WMQ				LR	LR			
	comp=E,75μm,16.1s							
WMQ				LR	LR			
	comp=Z,73μm,18.7s							
HEH	**HeiHe**	**60.16**	**7**	*eP*	**P**	**00 38 26.1**	**-0.7**	
HEH				pmax	pmax			
	comp=Z,32nm,0.5s							
KSH	**Kashi**	**62.26**	**324**	P	**P**	**00 38 40.5**	**-0.9**	
KSH				pP	pP	00 38 58.3	-0.3	
KSH				pmax	pmax			
	comp=Z,9.0nm,0.8s							
MKAR	**Makanchi Array**	**64.35**	**334**	P	**P**	**00 38 54.0**	**-0.9**	
MKAR	**Makanchi Array**	**64.35**	**334**	P	**P**	**00 38 54.2**	**-0.7**	
	comp=Z,2.9nm,0.4s,baz=151,slow=6.7,SNR=83							
	comp=Z,2.9nm,0.4s							
MAKZ	**Makanchi**	**64.50**	**334**	P	**P**	**00 38 54.7**	**-1.1**	
ARSB	**Arslanbob**	**65.17**	**324**	P	**P**	**00 38 59.9**	**-0.6**	
ARSB				IAmb	IAmb	00 39 02.0		
	comp=Z,4.1nm,0.6s							
AAK	**Ala-Archa**	**65.18**	**326**	P	**P**	**00 38 59.8**	**-0.8**	
AAK				IAmb	IAmb	00 39 02.2		
	comp=Z,5.8nm,0.7s							
JLN	**Jalan Bani Buh**	**65.19**	**300**	P	**P**	**00 39 00.3**	**-0.6**	
BTK	**Batken**	**65.65**	**322**	IAmb	IAmb	00 39 06.0		
	comp=Z,4.7nm,0.6s							
WBK	**Wadi Bani Khal**	**65.74**	**300**	P	**P**	**00 39 04.3**	**-0.1**	
SIMJ	**Simiganj**	**65.94**	**320**	P	**P**	**00 39 04.1**	**-1.4**	
SIMJ				IAmb	IAmb	00 39 05.5		
	comp=Z,5.5nm,0.8s							
MHTO	**MHTO**	**66.00**	**298**	P	**P**	**00 39 05.6**	**-0.5**	
MHTO				P	**P**	**00 39 05.6**	**-0.5**	
WSAR	**Wadi Sarin**	**66.27**	**301**	P	**P**	**00 39 08.0**	**+0.2**	
JMDO	**Jabal Madar**	**66.39**	**299**	P	**P**	**00 39 08.5**	**-0.1**	
JMDO				P	**P**	**00 39 08.5**	**-0.1**	
H04N1	**CROZET ISLANDS**	**66.49**	**224**	T	T	01 52 57.3		
	baz=24,slow=74,SNR=2.7							
H04N3	**CROZET ISLANDS**	**66.49**	**224**	T	T	01 52 27.5		
	baz=78,slow=74,SNR=3.3							
SMDO	**Samad**	**66.70**	**300**	P	**P**	**00 39 10.6**	**-0.1**	
	SNR=6.7							
SMDO				P	**P**	**00 39 10.6**	**-0.1**	
	SNR=6.7							
BIDO	**Bidbid**	**66.81**	**301**	P	**P**	**00 39 11.3**	**+0.1**	
BIDO				P	**P**	**00 39 11.3**	**+0.1**	
BSY	**Bisya**	**67.31**	**299**	P	**P**	**00 39 14.4**	**-0.1**	
BSY				P	**P**	**00 39 14.4**	**-0.1**	
HOQ	**Hoqain**	**67.52**	**300**	P	**P**	**00 39 16.1**	**+0.3**	
DMTO	**DMTO**	**67.58**	**294**	P	**P**	**00 39 16.4**	**+0.2**	
KK31	**Karatay Array**	**67.72**	**325**	IAmb	IAmb	00 39 17.5		
	comp=Z,3.1nm,0.7s							
KKAR	**Karatay Array**	**67.72**	**325**	P	**P**	**00 39 15.7**	**-0.9**	
KKAR				IAmb	IAmb	00 39 17.5		
	comp=Z,3.1nm,0.7s							
ARQ	**Araqi**	**68.11**	**300**	P	**P**	**00 39 19.3**	**-0.2**	
	SNR=7.0							
SOHO	**SOHO**	**68.39**	**301**	P	**P**	**00 39 21.1**	**0.0**	
SOHO				P	**P**	**00 39 21.1**	**0.0**	
ABPO	**Ambohimpanom**	**68.52**	**253**	P	**P**	**00 39 21.2**	**-1.1**	
ABPO				IAmb	IAmb	00 39 28.2		
	comp=Z,8.3nm,1.1s							
DOK	**Doka**	**68.60**	**294**	P	**P**	**00 39 22.4**	**-0.2**	
DOK				P	**P**	**00 39 22.4**	**-0.2**	
WHFO	**Wadi Hawf**	**68.71**	**293**	P	**P**	**00 39 23.1**	**-0.2**	
WHFO				P	**P**	**00 39 23.1**	**-0.2**	
KURBB	**Kurchatov Arra**	**68.88**	**334**	P	**P**	**00 39 22.9**	**-0.7**	
	comp=Z,1.7nm,0.6s,baz=148,slow=5.7,SNR=23							
	comp=Z,1.7nm,0.6s							
KURK	**Kurchatov**	**68.91**	**335**	P	**P**	**00 39 22.7**	**-1.1**	
ABTO	**Aybut**	**68.96**	**293**	P	**P**	**00 39 25.1**	**+0.2**	
UOSS	**Minazif**	**68.97**	**301**	P	**P**	**00 39 24.3**	**-0.5**	
UOSS				P	**P**	**00 39 24.3**	**-0.5**	
HATD	**Hatta, Dubai**	**68.98**	**301**	P	**P**	**00 39 25.3**	**+0.4**	
HATD				P	**P**	**00 39 25.3**	**+0.4**	
ASHO	**Ashiyiah**	**68.99**	**301**	P	**P**	**00 39 24.8**	**-0.2**	
	SNR=10							
ASHO				P	**P**	**00 39 24.8**	**-0.2**	
	SNR=10							
MDH	**Madha**	**69.02**	**302**	P	**P**	**00 39 24.2**	**-0.9**	
MDH				P	**P**	**00 39 24.2**	**-0.9**	
ALNE	**Al Ain**	**69.02**	**300**	P	**P**	**00 39 25.0**	**-0.1**	
ALNE				P	**P**	**00 39 25.0**	**-0.1**	
ZAA0	**Zalesovo Array**	**69.09**	**340**	IAmb	IAmb	00 39 24.5		
	comp=Z,6.3nm,0.6s							
ZALV	**Zalesovo Beam**	**69.09**	**340**	P	**P**	**00 39 23.4**	**-1.5**	
	comp=Z,7.0nm,0.5s,baz=146,slow=5.4,SNR=55							
	comp=Z,7.0nm,0.5s							
MASF	**Masafi**	**69.16**	**302**	P	**P**	**00 39 26.4**	**+0.4**	
MASF				P	**P**	**00 39 26.4**	**+0.4**	
FAQ	**Al Faqa, Dubai**	**69.41**	**301**	P	**P**	**00 39 27.4**	**-0.1**	
FAQ				P	**P**	**00 39 27.4**	**-0.1**	
SHME	**Shamm**	**69.43**	**302**	P	**P**	**00 39 28.0**	**+0.4**	
SHME				P	**P**	**00 39 28.0**	**+0.4**	
ASUD	**Al Ashush, Dub**	**69.59**	**301**	P	**P**	**00 39 28.8**	**+0.2**	
	SNR=6.0							
MZWR	**Madinat Zayed**	**70.52**	**299**	P	**P**	**00 39 34.2**	**-0.1**	
MZWR				P	**P**	**00 39 34.2**	**-0.1**	
PETK	**Petropavlovsk-**	**71.12**	**24**	P	**P**	**00 39 36.5**	**-0.8**	
	comp=Z,5.5nm,0.8s,baz=198,slow=6.3,SNR=4.6							
	comp=Z,5.5nm,0.8s							
GHWR	**Ruwais**	**71.45**	**299**	P	**P**	**00 39 40.0**	**0.0**	
GHWR				P	**P**	**00 39 40.0**	**0.0**	
SLWR	**Sila**	**72.51**	**299**	P	**P**	**00 39 46.5**	**+0.3**	
SLWR				P	**P**	**00 39 46.5**	**+0.3**	
GEYT	**Alibeck**	**72.86**	**315**	P	**P**	**00 39 48.2**	**0.0**	
	comp=Z,0.7nm,0.4s,baz=102,slow=6.0,SNR=5.0							
	comp=Z,0.7nm,0.4s							
TRNA	**Turayna**	**73.14**	**299**	P	**P**	**00 39 49.9**	**-0.1**	
SHMA	**Al-Shehemyia**	**73.72**	**300**	P	**P**	**00 39 53.4**	**0.0**	
BVAR	**Borovoye Array**	**74.16**	**333**	P	**P**	**00 39 54.7**	**-0.7**	
	comp=Z,5.0nm,0.7s,baz=126,slow=7.5,SNR=40							
	comp=Z,5.0nm,0.7s							
BRVK	**Borovoye**	**74.23**	**333**	P	**P**	**00 39 54.8**	**-1.0**	
BRVK				IAmb	IAmb	00 39 56.3		
	comp=Z,8.2nm,1.1s							
ABKAR	**Akbulak array**	**77.25**	**325**	IAmb	IAmb	00 40 13.8		
	comp=Z,7.5nm,0.7s							
RAYN	**Ar Rayn**	**77.75**	**297**	P	**P**	**00 40 16.4**	**-0.2**	
RAYN				IAmb	IAmb	00 40 17.7		
	comp=Z,9.2nm,0.9s							
KMBO	**Kilima Mbogo**	**80.34**	**270**	P	**P**	**00 40 30.3**	**-0.8**	
TIXI	**Tiksi**	**81.37**	**4**	P	**P**	**00 40 33.9**	**-1.2**	
AKH	**Akhalkalaki**	**84.61**	**313**	P	**P**	**00 40 51.3**	**-1.4**	
AKH				IAmb	IAmb	00 40 57.4		
	comp=Z,17nm,1.2s							
KBZ	**Khabaz**	**85.72**	**315**	P	**P**	**00 40 58.7**	**+0.7**	
	comp=Z,1.4nm,0.8s,baz=198,slow=12,SNR=2.7							
	comp=Z,1.4nm,0.8s							
BOSA	**Boshof**	**87.56**	**242**	P	**P**	**00 41 09.8**	**+2.2**	
	comp=Z,2.9nm,0.7s,baz=143,slow=4.8,SNR=5.6							
	comp=Z,2.9nm,0.7s							
GHAJ	**Ghor Haditha**	**88.22**	**302**	P	**P**	**00 41 09.2**	**-1.2**	
MMAI	**Mount Meron Ar**	**88.71**	**304**	P	**P**	**00 41 14.0**	**+1.2**	
	comp=Z,3.6nm,0.7s,baz=63,slow=5.7,SNR=4.7							
	comp=Z,3.6nm,0.7s							
BRTR	**Keskin Array B**	**91.46**	**310**	P	**P**	**00 41 25.5**	**-0.1**	
	comp=Z,1.0nm,0.8s,baz=137,slow=7.1,SNR=6.6							
	comp=Z,1.0nm,0.8s							
MDUB	**Mudurnu**	**93.44**	**310**	P	**P**	**00 41 33.6**	**-1.0**	
WIN	**Windhoek**	**95.96**	**246**	P	**P**	**00 41 45.4**	**-1.4**	
TIRR	**Tirgusor**	**96.06**	**314**	P	**P**	**00 41 46.2**	**-0.2**	
FINES	**FINESS Array B**	**99.06**	**331**	P		00 41 59.2		
	comp=Z,1.8nm,1.0s,baz=111,slow=10,SNR=3.7							
	comp=Z,1.8nm,1.0s							
SPITS	**Spitsbergen Ar**	**101.60**	**348**	P		**Pdif**	**00 42 09.5**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=98,slow=9.3,SNR=2.0							
ESDC	**Sonseca Array**	**120.25**	**310**	PKP		**PKiKP**	**00 47 10.9**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=28,slow=3.4,SNR=1.1							
NVAR	**Mina Array Bea**	**122.40**	**50**	PKP		**PKiKP**	**00 47 16.5**	**+1.8**
	comp=Z,1.4nm,0.7s,baz=246,slow=1.5,SNR=3.6							
PDAR	**Pinedale Array**	**127.23**	**43**	PKP		**PKiKP**	**00 47 25.1**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=128,slow=1.3,SNR=8.2							
LVC	**Limon Verde**	**147.40**	**169**	PKPbc		**PKPab**	**00 48 05.6**	**0.0**
	comp=Z,4.1nm,0.8s,baz=305,slow=9.1,SNR=1.6							

*UPP **17** 00:32:56.2±0.1, 67.86N×20.19E, h0km, ML2.8, Suspected explosion*
*DNK **17** 00:32:56.6±0.3, 67.86N×20.19E, h0km, ML2.8(UPP), Explosion*
*HEL **17** 00:32:57.1±0.3, 67.83N×20.24E, h0km, ML1.2, Suspected explosion*
ISC 17 00:32:55.7±0.8, **67.82N**±0.02×**20.25E**±0.02, **h0**km, **n25**, **s0**:**70**/42, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**13**	P	**Pg**	**00 32 58.5**	**+0.1**
KUA				S	**Sg**	**00 33 00.0**	**-0.3**
KUA	**Kurravaara**	**0.14**	**13**	P	**Pg**	**00 32 58.5**	**+0.1**
KUA				S	**Sg**	**00 33 00.0**	**-0.3**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Pg**	**00 33 00.8**	**+0.3**
RATU				S	**Sg**	**00 33 03.9**	**+0.2**
RATU	**Laukkuluspa**	**0.25**	**272**	P	**Pg**	**00 33 00.8**	**+0.3**
RATU				S	**Sg**	**00 33 03.9**	**+0.2**
KOVU	**Salmi**	**0.41**	**355**	P	**Pg**	**00 33 03.4**	**-0.2**
KOVU	**Salmi**	**0.41**	**355**	P	**Pg**	**00 33 03.4**	**-0.2**
LANU	**Lannavaara**	**0.70**	**70**	P	**Pg**	**00 33 09.7**	**+0.6**
LANU				S	**Sg**	**00 33 18.9**	**+0.7**
LANU	**Lannavaara**	**0.70**	**70**	P	**Pg**	**00 33 09.7**	**+0.6**
LANU				S	**Sg**	**00 33 18.9**	**+0.7**
LANU	**Lannavaara**	**0.70**	**70**	PG	**Pg**	**00 33 09.7**	**+0.6**
LANU				SG	**Sg**	**00 33 18.7**	**+0.6**
MASU	**Masugnsbyn**	**0.76**	**117**	P	**Pb**	**00 33 11.2**	**-0.6**
MASU	**Masugnsbyn**	**0.76**	**117**	P	**Pb**	**00 33 11.2**	**-0.6**
SALU	**Saltoluokta**	**0.80**	**238**	P	**Pg**	**00 33 11.2**	**+0.2**
SALU	**Saltoluokta**	**0.80**	**238**	P	**Pg**	**00 33 11.2**	**+0.2**
KIF	**Kilpisjarvi**	**1.21**	**9**	PG	**Pb**	**00 33 19.4**	**-0.1**
KIF				SG	**Sg**	**00 33 34.4**	**-0.2**
KIF				MSG		00 33 34.4	
	comp=Z,3.0nm,0.2s						
PAJU	**Pajala**	**1.36**	**124**	PG	**Pg**	**00 33 21.5**	**-0.2**
PAJU				SB	**Sn**	**00 33 40.3**	**-0.3**
HEF	**Hetta**	**1.41**	**63**	PG	**Pn**	**00 33 22.3**	**-0.3**
HEF				MSG		00 33 39.4	
	comp=Z,2.0nm,0.2s						
HEF				SG	**Sg**	**00 33 40.5**	**-0.5**
KLF	**Kolari**	**1.54**	**110**	PG	**Pg**	**00 33 25.2**	**0.0**
	baz=295						
KLF				MSG		00 33 43.5	
	comp=Z,0.8nm,0.2s						
KLF				SN	**Sg**	**00 33 46.3**	**+1.2**
KTK1	**Kautokeino**	**1.63**	**41**	PG	**Pb**	**00 33 26.6**	**-0.1**
KTK1				SN	**Sg**	**00 33 49.5**	**+1.4**
TRO	**Tromso**	**1.89**	**346**	SN	**Sb**	**00 33 55.3**	**+0.2**
KALU	**Kalix**	**2.32**	**147**	PB	**Pb**	**00 33 37.1**	**-1.1**
	baz=332						
KALU				SG	**Sb**	**00 34 08.0**	**+0.7**
TOF	**Tornio**	**2.37**	**135**	PB	**Pb**	**00 33 38.8**	**-0.3**
	baz=318						
TOF				MSG		00 34 07.6	
	comp=Z,1.8nm,0.2s						
TOF				SG	**Sg**	**00 34 11.1**	**-0.5**
SGF	**Sodankyl**	**2.43**	**96**	PG	**Pb**	**00 33 39.9**	**-0.3**
	baz=285						
SGF				SG	**Sg**	**00 34 13.5**	**-0.2**
RNF	**Rovaniemi**	**2.55**	**116**	PB	**Pb**	**00 33 41.3**	**-0.9**
RNF				SG	**Sb**	**00 34 15.1**	**+1.0**
ARA0	**ARCESS Array S**	**2.58**	**46**	PN	**Pn**	**00 33 40.1**	**+1.4**
	baz=230						
ARA0				SG	**Sb**	**00 34 14.2**	**-0.9**
KMNF	**Kaamanen**	**2.83**	**59**	SB	**Sb**	**00 34 19.9**	**-2.1**

*AEIC **17** 00:36:49.9±2.1, 56.1N±0.1×149.2W±0.1, h10km±8km, Error ellipse: s-maj=18.2km s-min=10.0km az=182.0*
NEIC 17 00:36:46.4±2.4, **56.2N**±0.1×**149.2W**±0.1, **h21**km±11km, **ML2.9**/40, **ML2.9**(AEIC), **Error ellipse: s-maj=18.4km s-min=9.1km az=175.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.47**	**312**		Pn	00 37 25.7	+0.4
KDAK	**Kodiak Island**	**2.47**	**312**		Sn	00 37 53.2	-1.6
KDAK				IAML		00 37 54.2	
	27nm,1.4s						
OHAK	**Old Harbor**	**2.51**	**296**		Pn	00 37 25.8	0.0
OHAK					Sn	00 37 53.1	-2.5
SYI	**Shuyak Island**	**3.00**	**326**		Pn	00 37 33.5	+0.9
SYI					Sn	00 38 08.2	+0.3
SYI	**Shuyak Island**	**3.00**	**326**	IAML		00 39 20.2	
	comp=N,19nm,1.4s						
SYI				IAML		00 39 23.8	
	comp=E,15nm,1.4s						
CNPM	**China Poot**	**3.54**	**343**		Pn	00 37 40.7	+0.6
CNPM					Sn	00 38 20.6	-0.6
CNPM	**China Poot**	**3.54**	**343**	IAML		00 38 21.6	
	comp=N,11nm,1.0s						
Q19K	**Cape Douglas,**	**3.67**	**321**	Pn	Pn	00 37 43.8	+2.0
BRSE	**Bradley Lake S**	**3.67**	**347**		Pn	00 37 42.6	+0.7
BRSE					Sn	00 38 23.7	-0.8
BRLK	**Bradley Lake**	**3.71**	**346**		Pn	00 37 42.5	0.0
BRLK	**Bradley Lake**	**3.71**	**346**		Sn	00 38 24.6	-1.0
P23K	**Montague Islan**	**3.94**	**13**		Pn	00 37 46.1	+0.5
P23K					Sn	00 38 29.5	-1.7
P19K	**Oil Pt**	**4.11**	**330**		Pn	00 37 48.7	+0.8
P19K	**Oil Pt**	**4.11**	**330**	IAML		00 40 09.8	
	comp=E,31nm,1.3s						
P19K				IAML		00 40 17.2	
	comp=N,29nm,1.3s						
CNTC	**Contact Creek**	**4.21**	**303**		Pn	00 37 49.8	+0.5
O22K	**Cooper Landing**	**4.33**	**356**	Pn	Pn	00 37 49.0	-1.8
O22K				IAML		00 38 52.0	
	comp=E,30nm,0.7s						
ILSW	**Iliamna Southw**	**4.36**	**333**	Pn	Pn	00 37 51.2	-0.3
ILSW				IAML		00 38 51.3	
	comp=N,5.2nm,1.0s						
ILSW				IAML		00 39 33.2	
	comp=E,10.0nm,1.4s						
SLKM	**Skilak Lake**	**4.38**	**353**		Pn	00 37 51.5	-0.1
SLKM					Sn	00 38 39.3	-2.6
HIN	**Hinchinbrook I**	**4.46**	**17**	Pn	Pn	00 37 53.3	+0.6
HIN				IAML		00 39 40.9	
	comp=E,27nm,1.2s						
HIN				IAML		00 40 00.7	
	comp=N,22nm,1.4s						
KAIM	**Kayak Island**	**4.53**	**32**		Pn	00 37 54.1	+0.5
P18K	**Big Mountain,**	**4.58**	**317**		Pn	00 37 55.0	+0.7
RSO	**Redoubt South**	**4.70**	**338**	Pn	Pn	00 37 56.5	+0.4
RDT	**Redoubt**	**4.73**	**340**		Pn	00 37 57.3	+0.8
FID	**Port Fidalgo**	**4.80**	**16**	Pn	Pn	00 37 57.5	+0.2
FID				IAML		00 40 15.8	
	comp=E,7.3nm,1.1s						
FID				IAML		00 40 29.2	
	comp=N,8.3nm,1.1s						
SUCK	**Suckling Hills**	**4.84**	**34**		Pn	00 37 55.8	-2.1
RAGM	**Ragged Mountai**	**4.84**	**27**	Pn	Pn	00 37 57.5	-0.4
RAGM				IAML		00 39 05.8	
	comp=E,20nm,1.3s						
HMT	**Hamilton**	**4.91**	**30**	Pn	Pn	00 37 56.7	-2.2
HMT				IAML		00 40 40.2	
	comp=N,16nm,1.3s						
RC01	**Rabbit Creek A**	**4.94**	**357**	Pn	Pn	00 37 59.0	-0.3
RC01				IAML		00 39 02.6	
	comp=N,6.3nm,1.3s						
RC01				IAML		00 39 24.1	
	comp=E,5.8nm,1.4s						
P17K	**Kvichak River**	**4.94**	**311**		Pn	00 37 59.9	+0.7
BERG	**Berg Lake**	**5.12**	**32**	Pn	Pn	00 37 59.2	-2.4
BERG				IAML		00 39 15.7	
	comp=N,11nm,0.9s						
KNK	**Knik Glacier**	**5.27**	**4**	Pn	Pn	00 38 02.9	-0.9
KNK				IAML		00 41 02.4	
	comp=E,5.1nm,1.1s						
SUA	**Susitna One**	**5.37**	**352**	Pn	Pn	00 38 03.0	-2.3
SUA				IAML		00 39 04.8	
	comp=E,3.2nm,1.5s						
SUA	**Susitna One**	**5.37**	**352**		Pn	00 38 03.0	-2.3
N19K	**Bonanza Creek**	**5.42**	**331**		Pn	00 38 06.6	+0.7
WAX	**Waxell Ridge**	**5.42**	**35**	Pn	Pn	00 38 03.2	-2.7
O17K	**Koliganek Bris**	**5.55**	**314**		Pn	00 38 08.4	+0.8
CRQM	**Cirque**	**5.57**	**32**	Pn	Pn	00 38 06.0	-2.1
KLU	**Klutina**	**5.59**	**16**	Pn	Pn	00 38 08.5	+0.3
GHO	**Glory Hole Cre**	**5.62**	**1**	Pn	Pn	00 38 09.4	+0.8
SML	**Sawmill**	**5.67**	**4**	Pn	Pn	00 38 10.1	+0.9
TGL	**Tana Glacier**	**5.67**	**33**	Pn	Pn	00 38 07.2	-2.1
ISLE	**Juniper Island**	**5.71**	**36**	Pn	Pn	00 38 08.1	-1.8
N18K	**Kilae Creek**	**5.73**	**325**	Pn	Pn	00 38 09.4	-0.8
SCM	**Sheep Creek Mo**	**5.75**	**9**	Pn	Pn	00 38 06.3	-4.2
O16K	**Kokwok River B**	**5.87**	**309**	Pn	Pn	00 38 12.2	+0.3
VRDI	**Verde Repeater**	**5.87**	**28**		Pn	00 38 10.7	-1.5
N25K	**Chitina, Valde**	**5.94**	**22**	Pn	Pn	00 38 11.1	-1.9
SKT	**Skwentna**	**5.95**	**349**	Pn	Pn	00 38 14.1	+1.0
SVW2	**Sparrevohn**	**5.96**	**328**	Pn	Pn	00 38 13.4	+0.1
GLB	**Gilahina Butte**	**5.97**	**26**	Pn	Pn	00 38 12.4	-1.0
GRNC	**Granite Creek**	**6.00**	**37**	Pn	Pn	00 38 14.2	+0.2
TABL	**Table Mountain**	**6.01**	**41**	Pn	Pn	00 38 12.1	-2.1
N17K	**Nushagak Hills**	**6.07**	**319**	Pn	Pn	00 38 14.7	-0.1
MCARA	**McCarthy VSAT**	**6.12**	**29**		Pn	00 38 15.8	+0.3
M24K	**Tolsona, Glenn**	**6.14**	**13**	Pn	Pn	00 38 16.7	+0.9
BARN	**Barnard Glacie**	**6.27**	**36**	Pn	Pn	00 38 18.4	+0.7
CTGM	**Chitina Glacie**	**6.31**	**37**	Pn	Pn	00 38 18.8	+0.6
BCPM	**Bancas Point**	**6.31**	**49**	Pn	Pn	00 38 19.0	+0.8
LOGN	**Logan Glacier**	**6.32**	**39**	Pn	Pn	00 38 18.8	+0.4
HARP	**HAARP**	**6.57**	**17**		Pn	00 38 22.0	+0.4
L19K	**White Mountain**	**6.69**	**336**	Pn	Pn	00 38 23.0	-0.4
M17K	**Holitna River**	**6.78**	**324**	Pn	Pn	00 38 24.5	+0.1
PPLA	**Purkeypile**	**6.91**	**348**	Pn	Pn	00 38 25.6	-0.9
O29M	**Mount Kennedy**	**6.95**	**49**		Pn	00 38 25.2	-1.7
P29M	**Windy Craggy**	**7.00**	**56**		Pn	00 38 26.0	-1.5
N15K	**Kwethluk River**	**7.03**	**309**	Pn	Pn	00 38 29.4	+1.5
M16K	**Timber Creek**	**7.05**	**318**	Pn	Pn	00 38 28.7	+0.5
S31K	**Pelican**	**7.27**	**70**		Pn	00 38 31.1	-0.1
MENT	**Mentasta**	**7.32**	**20**	Pn	Pn	00 38 32.1	+0.2

*GCG **17** 00:35:03.9±3.5, 18.18N×105.92W, h0km±999km*
*IDC **17** 00:36:50.4±0.5, 16.05N×97.76W, h0km, mb5.0/31, mbtmp5.0/35, ML4.4/3, MS5.8/9, Error ellipse: s-maj=15.0km s-min=9.1km az=48.0*
*MOS **17** 00:36:51.7±1.2, 16.14N×97.79W, h16km, mb5.6/36, Error ellipse: s-maj=9.6km s-min=5.4km az=100.8*
*MEX **17** 00:36:51.4±0.8, 15.84N×97.99W, h24km±21km, MD5.9, Mw5.9*
*NEIC **17** 00:36:52.1±2.6, 16.16N±0.05×97.87W±0.05, h3km±3km, mb5.5/771, Mww5.8/19, Md5.9/14(MEX), Error ellipse: s-maj=7.8km s-min=6.7km az=49.0*
*NEIC **17** 00:36:53.4, 16.29N×97.66W, h16km, Moment Tensor Solution. Duration: 3ᵊ6 Moment tensor: Scale 10^{17}Nm; M_{rr}3.69; $M_{\theta\theta}$-3.13; $M_{\phi\phi}$-0.56; $M_{r\theta}$4.58; $M_{\theta\phi}$0.83; $M_{\phi r}$-0.56; Fault plane solution: $M_0$5.81000×10^{17} NP1:ϕ99.14000°, δ71.35000°, λ85.87000°. NP2:ϕ291.86000°, δ19.09000°, λ102.04000°. Principal axes: T 5.9903, Plg63.0000°, Azm3.0000°; N -0.3632, Plg4.0000°, Azm100.0000°; P -5.6271, Plg26.0000°, Azm192.0000°;*
*NEIC **17** 00:36:53.4, 16.19N×97.77W, h16km*
*GCMT **17** 00:36:56.3±0.5, 16.17N±0.03×97.80W±0.04, h17km±2km, MW6.0/76, Moment Tensor Solution. s9,c9; s76,c143; Duration: 2ᵊ3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.61±.07; $M_{\theta\theta}$-0.56±.04; $M_{\phi\phi}$-0.05±.03; $M_{r\theta}$0.89±.17; $M_{\theta\phi}$0.05±.02; $M_{\phi r}$-0.08±.10; Best double couple: $M_0$1.06700×10^{18} NP1:ϕ95.00000°, δ73.00000°, λ90.00000°. NP2:ϕ276.00000°, δ17.00000°, λ91.00000°. Principal axes: T 1.0930, Plg62.0000°, Azm5.0000°; N -0.0510, Plg0.0000°, Azm95.0000°; P -1.0410, Plg28.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 17 00:36:50.9±1.1, **16.09N**±0.03×**97.93W**±0.02, **h5**km±7km, **n1280**, **σ1**ᵊ**81**/1030, **mb5.5**/410, **MS5.8**/11, **13C-13D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.35**	**328**	*eP*	**Pg**	**00 36 58.7**	**+0.9**
PNIG				*i* S	**Sb**	**00 37 06.3**	**+0.6**
PEIG	**Puerto Escondi**	**0.76**	**97**		**Pg**	**00 37 04.1**	**-1.4**
PEIG					**Sg**	**00 37 15.6**	**+0.3**
PEIG	**Puerto Escondi**	**0.76**	**97**	*eP*	**Pg**	**00 37 04.1**	**-1.4**
PEIG				*eS*	**Sg**	**00 37 15.7**	**+0.3**
YOIG	**Yosondua**	**0.85**	**26**		**Pb**	**00 37 08.0**	**-0.3**
YOIG					**Sn**	**00 37 21.7**	**-1.0**
YOIG	**Yosondua**	**0.85**	**26**	*eP*	**Pb**	**00 37 07.8**	**-0.5**
YOIG				*eS*	**Sn**	**00 37 21.5**	**-1.2**
YOIG				*eS*	**Sb**	**00 37 22.0**	**+1.9**
TXIG	**Tlaxiaco**	**1.17**	**8**		**Pg**	**00 37 13.3**	**-0.1**
TXIG					**Sg**	**00 37 28.1**	**-0.5**
TXIG	**Tlaxiaco**	**1.17**	**8**	*eP*	**Pg**	**00 37 13.3**	**-0.1**
TXIG				*eS*	**Sn**	**00 37 30.3**	**-0.3**
CRIG	**Cruz Grande**	**1.32**	**299**		**Pn**	**00 37 12.6**	**-3.4**
CRIG					**Sn**	**00 37 34.5**	**+0.5**
CRIG	**Cruz Grande**	**1.32**	**299**	*eP*	**Pn**	**00 37 12.5**	**-3.5**
CRIG				*eS*	**Sg**	**00 37 30.5**	**-2.9**
MGIG	**Malinaltepec**	**1.32**	**329**		**Pn**	**00 37 14.5**	**-1.7**
MGIG					**Sn**	**00 37 34.7**	**+0

INVM eS Sn 00 38 24.0 -3.7
SCT2 Benito Juarez 3.49 341 eP Pb 00 37 49.9 -3.4
SCT2 eS Sn 00 38 24.4 -3.4
PET2 Petatlan 3.50 295 eP Pn 00 37 44.5 -1.5
PET2 i S Sn 00 38 20.8 -7.0
PBVM Pinon 3.51 342 eP Pn 00 37 47.3 +1.2
PBVM eS Sn 00 38 27.9 -0.2
TEJU Tejupilco 3.52 323 eP Pn 00 37 47.6 +1.2
TEJU eS Sn 00 38 26.1 -2.3
XALA Xalapa 3.56 16 eP Pb 00 37 51.2 -3.3
XALA eS Sn 00 38 27.5 -2.0
TOVM TOLUCA 3.59 333⇑ eP Pn 00 37 48.0 +0.5
TOVM eS Sn 00 38 33.8 +3.4
PMUV Sontecomapan 3.63 47 eP Pn 00 37 46.6 -1.3
PMUV eS Sn 00 38 32.8 +1.7
PTVM Pico Tres Padr 3.66 342 eP Pn 00 37 42.1 -6.4
PTVM eS Sn 00 38 28.2 -4.0
AZVM Cuida Lopez Ma 3.71 340⇑ eP Pn 00 37 49.5 +0.4
AZVM eS Sn 00 38 34.9 +1.5
VTVM Tizayuca 3.75 348 eP Pn 00 37 49.4 -0.3
VTVM eS Sn 00 38 36.7 +2.3
MIHL Minatitlan 3.75 59 eP Pn 00 37 47.4 -2.1
MIHL eS Sn 00 38 31.6 -2.3
CARR Arriaga 3.87 87 eP Pn 00 37 47.8 -3.2
CARR eS Sn 00 38 31.1 -5.7
TUIG Tuzandepetl 3.87 60 eP Pn 00 37 50.1 -1.0
TUIG i S Sb 00 38 44.4 -2.5
ZUVM ZUMPANGO 3.87 344 eP Pn 00 37 53.0 +1.5
ZUVM eS Sb 00 38 43.4 -3.9
LVIG Laguna Verde 3.89 22 eP Pn 00 37 49.2 -2.2
LVIG eS Sn 00 38 35.9 -1.5
ATVM ATLACOMULCO 4.08 334 eP Pn 00 37 56.9 +2.6
ATVM eS Sn 00 38 44.9 +2.3
UON La Union 4.16 297 eP Pn 00 37 55.9 +0.9
UON eS Sn 00 38 40.1 -4.0
ACIG Acambay 4.29 335 eP Pn 00 37 55.3 -1.7
ACIG eS Sn 00 38 43.7 -3.9
DEIG Demacu 4.32 346 eP Pn 00 37 59.3 +1.8
DEIG eS Sn 00 38 47.2 -1.1
PCIG 4.55 94 eP Pn 00 37 58.3 -2.1
PCIG i S Sn 00 38 49.0 -4.8
TGIG 4.67 81 eP Pn 00 38 01.4 -0.6
TGIG eS Sn 00 38 50.2 -6.5
TGBT Tuxtla Gutierr 4.70 81 eP Pn 00 38 06.9 +4.5
TGBT eS Sn 00 38 59.1 +1.8
MOIG Morelia 4.73 319 Pn Pn 00 38 05.7 +2.6
MOIG Morelia 4.73 319 eP Pn 00 38 05.2 +2.1
MOIG eS Sn 00 38 55.0 -3.5
ACAM Acambaro 4.74 326 eP Pn 00 38 08.0 +4.7
ACAM eS Sn 00 38 59.7 +0.9
JRQG Juriquilla Cam 5.17 333 Pn 00 38 10.0 +0.8
JRQG Juriquilla Cam 5.17 333 eP Pn 00 38 12.2 +3.0
JRQG eS Sn 00 39 13.1 +3.6
CTUV Llano Grande 5.37 356 eP Pn 00 38 13.4 +1.7
CTUV eS Sn 00 39 13.3 -0.6
CCIG Comitan 5.57 87 Pn Pn 00 38 14.6 0.0
CCIG Comitan 5.57 87 eP Pn 00 38 15.2 +0.5
CCIG i S Sn 00 39 11.0 -8.2
CCIG Comitan 5.57 87 i P Pn 00 38 21.2 +6.6
CCIG i S Sn 00 38 52.4 -27
CCIG IAML 00 39 44.5
comp=Z,5µm,1.0s
PATR El Naranjo 5.57 99 eP Pn 00 38 13.6 -1.2
PATR eS Sn 00 39 13.1 -6.3
PAVE Pavencul 5.62 98 eP Pn 00 38 14.5 -0.8
PAVE eS Sn 00 39 14.8 -5.5
MMIG Aquila 5.62 294 eP Pn 00 38 14.5 -0.7
MMIG eS Sn 00 39 16.2 -3.9
IGIG Irapuato, Guan 5.65 326 eP Pn 00 38 20.2 +4.4
CHUJ Union Juarez 5.70 99 eP Pn 00 38 15.0 -1.4
CHUJ eS Sn 00 39 16.5 -5.9
SMCA Catarina 5.78 101 i P Pn 00 38 19.9 +2.6
SMCA i S Pg 00 38 51.2 +10
SMCA IAML 00 39 37.3
comp=Z,2µm,1.0s
SMSP San Marcos 6.03 100 i P Pn 00 38 28.6 +7.5
SMSP i S Sn 00 38 52.0 -39
SMSP IAML 00 39 52.1
comp=Z,3µm,1.0s
RPIG Rio Verde 6.08 342 eP Pn 00 38 25.7 +4.1
RPIG eS Sn 00 39 31.9 +0.2
RTAL Retalhuleu 6.21 104 Pn 00 38 23.7 +0.3
RTAL Retalhuleu 6.21 104 i P Pn 00 38 25.5 +2.1
RTAL i S Pg 00 38 56.2 +6.1
RTAL IAML 00 39 51.0
comp=Z,2µm,1.0s
HUEH Huehuetenango 6.24 96 Pn 00 38 24.2 +0.3
HUEH Huehuetenango 6.24 96 eP Pn 00 38 26.3 +2.4
HUEH eS Sn 00 39 37.5 +1.8
HUEH Huehuetenango 6.24 96 i P Pn 00 38 27.1 +3.2
HUEH i S Pg 00 38 54.9 +4.4
HUEH IAML 00 40 02.5
comp=Z,5µm,1.0s
STG3 Santiaguito 3, 6.29 102 eP Pn 00 38 26.2 +1.7
COIG Colima 6.29 300 eP Pn 00 38 25.8 +1.3
COIG eS Sn 00 39 35.6 -1.2
JUBC Volcan de Coli 6.36 303 eP Pn 00 38 27.2 +1.6
JUBC eS Sn 00 39 30.3 -8.5
EZ5V 6.37 303 eP Pn 00 38 28.0 +2.3
EZ5V eS Sn 00 39 39.1 +0.1
MNGA Volcan de Coli 6.38 303 eP Pn 00 38 28.0 +2.2
MNGA eS Sn 00 39 35.8 -3.4
SULM Suchitepequez, 6.40 105 eP Pn 00 38 27.4 +1.6
SOMAC Volcano de Col 6.41 303 eP Pn 00 38 28.4 +2.0
SOMAC eS Sn 00 39 43.4 +3.2
COMA Comala 6.42 301 eS Sn 00 39 42.1 +2.1
CDAR Ciudad de Arme 6.46 297 eP Pn 00 38 26.8 +0.2
CDAR eS Sn 00 39 36.0 -4.8
CEGR Campo Tres 6.53 301 eP Pn 00 38 30.3 +2.4
CEGR eS Sn 00 39 40.3 -2.6
FUG Fuego 3 7.03 102 eP Pn 00 38 34.6 -0.2
GTIG Gomez Farias 7.04 351 eP Pn 00 38 36.0 +1.4
GTIG eS Sn 00 39 50.5 -4.6
SCIG Sabancuy 7.04 65 eP Pn 00 38 27.8 -6.9
SCIG eS Sn 00 39 49.7 -5.5
AAIG Aguscalientes 7.20 325 eP Pn 00 38 41.4 +4.2
AAIG eS Sn 00 39 55.6 -3.9
CIHU Emiliano Zapat 7.21 297 eP Pn 00 38 37.0 -0.1
CIHU eS Sn 00 39 52.2 -7.3
PCG Pacaya 7.27 102 eP Pn 00 38 40.6 +2.5
NBG Las Nubes 7.47 101 eP Pn 00 38 45.9 +5.1
CJM Chamela 7.58 298 eP Pn 00 38 43.0 +0.9
CJM eS Sn 00 39 57.3 -11
PETF Flores 7.78 83 Pn 00 38 43.5 -1.3
PETF Flores 7.78 83 eP Pn 00 38 43.3 -1.6
PETF eS Sn 00 40 08.4 -5.0
ESTA Talpa de Allen 7.84 304 eP Pn 00 38 48.8 +2.9
ESTA eS Sn 00 40 15.2 +0.1
ZAIG Zacatecas 7.95 327 Pn Pn 00 38 49.7 +2.2
ZAIG Zacatecas 7.95 327 eP Pn 00 38 50.8 +3.3
ZAIG eS Sn 00 40 16.8 -1.3
ANIG Ahuacatlan 7.96 309 eP Pn 00 38 46.9 -0.5
ANIG eS Sn 00 40 15.1 -3.0
MRL Marmol 8.01 96 eP Pn 00 38 48.9 +0.7
NUBE Las Nubes 8.17 104 i P Pn 00 38 51.5 +1.1
NUBE i S Pg 00 39 38.8 +11
NUBE IAML 00 40 44.8
comp=Z,770nm,1.0s
CEVE Cerro Verde 8.34 105 i P Pn 00 38 55.0 +2.3
CEVE i S Pg 00 39 41.6 +11
CEVE IAML 00 41 10.7
comp=Z,450nm,1.0s
ESQI Esquipulas 8.43 99 Pn 00 38 54.3 +0.5
MTO3 Montecristo 8.44 100 Pn 00 38 54.6 +0.5
MTO3 Montecristo 8.44 100 i P Pn 00 38 55.4 +1.3
MTO3 i S Pg 00 39 44.4 +12
MTO3 IAML 00 41 03.0
comp=Z,560nm,1.0s
JAYA Jayaque - finc 8.55 105 i P Pn 00 38 57.2 +1.6
JAYA i S Pg 00 39 48.0 +13
JAYA IAML 00 41 25.1
comp=Z,670nm,1.0s
PMON Piamonte 8.66 105 i P Pn 00 39 00.0 +3.0
PMON i S Pg 00 39 50.6 +14
PMON IAML 00 41 12.5
comp=Z,320nm,1.0s
SNET Serv Nac Est T 8.74 105 Pn Pn 00 38 59.0 +0.9
LNIG Linares 8.88 351 eP Pn 00 38 59.8 -0.2
MYIG Mrida 9.15 57 eP Pn 00 39 01.2 -2.5
MYIG eS Sn 00 40 44.1 -3.1

SCLA Alcaldia de Sa 9.21 104 i P Pn 00 39 06.2 +1.7
SCLA i S Pg 00 39 59.9
SCLA IAML 00 41 34.5
comp=Z,200nm,1.0s
TEIG Tepich 10.06 64 Pn Pn 00 39 14.6 -1.5
TEIG Tepich 10.06 64 eP Pn 00 39 13.8 -2.3
TEIG Tepich 10.06 64 eP Pn 00 39 14.2 -1.9
TEIG eS Sn 00 41 03.1 -6.2
CNCH Conchagua 10.16 105 i P Pn 00 39 18.7 +1.0
CNCH IAmb IAmb 00 39 29.9
comp=Z,170nm,0.7s
CNCH i S Pg 00 40 19.6
CNCH IAML 00 41 41.0
comp=Z,360nm,1.0s
TGUH Tegucigalpa,Un 10.49 100 Pn Pn 00 39 22.1 -0.1
TGUH Tegucigalpa,Un 10.49 100 eP Pn 00 39 16.4 -5.7
CSGN Cosiguina Volc 10.51 106 i P Pn 00 39 23.7 +1.3
CSGN IVmB_BB 00 39 28.5
comp=Z,4µm,1.0s
CSGN IAML 00 39 28.6
comp=Z,380nm,1.0s
CSGN IAmb IAmb 00 39 50.7
comp=Z,270nm,0.6s
HBVL Hebbronville 10.94 357 Pn Pn 00 39 29.4 +1.2
CRIN San Cristobal 11.07 106 Pn 00 39 30.8 +0.8
PDIG Papasquiaro 11.32 323 eP Pn 00 39 38.7 +5.2
KVTX Kingsville 11.40 0 Pn Pn 00 39 34.3 -0.2
CNGN Cerro Negro 11.46 107 Pn 00 39 35.4 +0.1
MACN El Madrono 11.49 107 i P Pn 00 39 37.6 +1.8
MACN IAmb IAmb 00 39 42.6
comp=Z,24nm,0.5s
MACN IVmB_BB 00 40 10.9
comp=Z,2µm,1.0s
MACN IAML 00 40 11.0
comp=Z,53nm,1.0s
MOMN Momotombo 11.63 107 i P Pn 00 39 39.7 +2.0
MOMN IAML 00 39 40.8
comp=Z,10.0nm,1.0s
MOMN IVmB_BB 00 39 41.0
comp=Z,130nm,1.0s
MOMN IAmb IAmb 00 39 41.3
comp=Z,8.6nm,1.1s
COPN Copaltepe 11.66 108 i P Pn 00 39 39.8 +1.7
COPN IAML 00 39 40.8
comp=Z,330nm,1.0s
COPN IVmB_BB 00 39 41.0
comp=Z,3µm,1.0s
COPN IAmb IAmb 00 40 05.2
comp=Z,280nm,0.9s
MATN Matagalpa 12.04 104 Pn 00 39 44.1 +0.7
833A Chaparral WMA, 12.25 354 P Pn 00 39 46.3 +0.2
baz=173,SNR=36
BOAB BOACO BROADBAN 12.43 105 Pn 00 39 48.3 -0.3
HPIG 12.97 328 Pn Pn 00 39 58.2 +2.1
EF01 Eagle Ford 01 12.98 358 Pn Pn 00 39 56.0 -0.1
ACON Acoyapa 13.04 107 Pn 00 39 56.9 0.0
HZTE Horizontes, Gu 13.13 112 Pn 00 39 59.2 +0.9
HNDO Hondo 13.43 355 Pn 00 40 03.3 +1.0
DRIO Del Rio 13.50 350 Pn Pn 00 40 03.8 +0.6
DUNO Dulce Nombre, 13.50 115 Pn 00 40 05.1 +1.8
PLVR Palo Verde 13.51 113 eP Pn 00 40 07.4 +3.9
SLBS Sierra La Lagu 13.59 306 Pn Pn 00 40 07.5 +3.0
SLBS Sierra La Lagu 13.59 306 eP Pn 00 40 02.0 -2.5
MLDN Muldoon 13.65 3 Pn 00 40 06.9 +1.7
NYURE Nandayure 13.75 115 eP Pn 00 40 10.9 +4.2
JUNT Juntas 13.88 113 eP Pn 00 40 11.0 +2.5
JTS Las Juntas de 13.88 113 Pn 00 40 09.5 +1.0
JTS Las Juntas de 13.88 113 Pn Pn 00 40 07.1 -1.4
comp=Z,3.4nm,0.3s,baz=278,slow=7.7,SNR=11
JTS Sn Sn 00 42 41.3 -2.0
comp=Z,0.8nm,0.3s,baz=288,slow=20,SNR=1.0
JTS Lg Lg 00 44 02.0
comp=Z,0.6nm,0.3s,baz=347,slow=16,SNR=1.6
comp=Z,39nm,0.9s
HKT Hockley 13.93 8 Pn Pn 00 40 08.6 -0.4
HKT Hockley 13.93 8 P Pn 00 40 08.6 -0.4
ARE1 Arenal 1 14.02 112 Pn 00 40 12.0 +1.7
CEDE Laguna Cedeo 14.02 112 eP Pn 00 40 12.9 +2.5
LPIG La Paz 14.09 306 Pn Pn 00 40 13.1 +1.9
comp=Z,6.7nm,0.3s,baz=196,slow=12,SNR=6.3
LPIG Sn Sn 00 42 53.8 +5.7
comp=Z,7.3nm,0.3s,baz=94,slow=9.5,SNR=1.3
LPIG Lg Lg 00 44 22.0
comp=Z,9.5nm,0.3s,baz=125,slow=2.4,SNR=1.8
comp=Z,22nm,0.3s
TXAR Lajitas Array 14.20 339 Pn Pn 00 40 14.8 +2.0
TXAR Lajitas Array 14.20 339 P Pn 00 40 14.8 +2.0
TXAR Lajitas Array 14.20 339 Pn Pn 00 40 15.8 +2.9
comp=Z,0.1nm,0.3s,baz=159,slow=15,SNR=32
TXAR Lg Lg 00 44 28.3
comp=Z,0.3nm,0.3s,baz=162,slow=21,SNR=8.2
comp=Z,12nm,1.0s
SAND Sanderson 14.33 345 Pn Pn 00 40 16.2 +1.6
SRA1 San Ramn 14.39 113 eP Pn 00 40 18.9 +3.3
JCT Junction City 14.43 354 Pn Pn 00 40 15.9 0.0
JCT Junction City 14.43 354 P Pn 00 40 14.6 -1.3
baz=173,SNR=58
JCT Junction City 14.43 354 P Pn 00 40 15.9 0.0
JCT Junction City 14.43 354 eP Pn 00 40 16.0 +0.1
CSIG Choix 14.44 319 eP Pn 00 40 17.8 +1.8
435B Jarrell 14.63 1 Pn 00 40 17.7 -1.0
435B Jarrell 14.63 1 P Pn 00 40 18.6 0.0
baz=181
BELE Belen 14.70 113 eP P 00 40 23.9 -2.2
HDC Heredia 14.75 113 Pn 00 40 22.0 +1.5
HDC Heredia 14.75 113 eP Pn 00 40 23.5 +3.0
CVIMO Finca Echandi 14.90 112 eP Pn 00 40 25.5 +3.0
LCR2 La Lucha 2 14.96 113 eP P 00 40 26.8 -2.3
LLNJ Naranjito 15.00 114 eP P 00 40 29.5 +0.2
VICA Volcano Irazu 15.00 112 eP Pn 00 40 26.2 +2.1
OZNA Ozona 15.05 349 Pn 00 40 23.5 -0.9
VTLA Turrialba Volc 15.05 112 eP P 00 40 27.8 -2.5
VTCV VTCV, Calle Va 15.11 112 eP Pn 00 40 27.7 +2.3
VERB Verbena 15.15 112 eP P 00 40 28.8 -2.3
441A DeRidder 15.22 16 IAmb IAmb 00 40 34.0
comp=Z,274nm,1.1s
WHTX Lake Whitney, 15.84 1 Pn 00 40 34.1 -0.5
WHTX IAmb IAmb 00 40 41.5
comp=Z,374nm,0.9s
WHTX Lake Whitney, 15.84 1 P Pn 00 40 35.1 +0.5
baz=182,SNR=53
DRK0 Durika 15.85 114 IAmb IAmb 00 40 41.9
comp=Z,242nm,0.6s
NATX Nacogdoches 15.88 10 Pn 00 40 34.1 -1.1
NATX Nacogdoches 15.88 10 P Pn 00 40 32.9 -2.3
baz=191,SNR=14
JIME Puerto Jimenez 16.11 116 eP P 00 40 44.8 +3.1
PECS Pecos 16.15 341 Pn 00 40 39.6 +0.9
PECS IAmb IAmb 00 40 46.7
comp=Z,257nm,0.9s
FW14 Alvarado 16.25 2 Pn 00 40 39.4 -0.6
FSCY Frank Sound, G 16.27 76 IAmb IAmb 00 40 40.8
comp=Z,337nm,1.0s
ABTX Abilene, Hawle 16.54 355 IAmb IAmb 00 40 49.4
comp=Z,429nm,0.9s
ABTX Abilene, Hawle 16.54 355 P Pn 00 40 43.7 +0.1
baz=174,SNR=159
FW07 Weatherford 16.54 0 IAmb IAmb 00 40 48.8
comp=Z,472nm,1.2s
TREL Terrell 16.65 5 IAmb IAmb 00 40 49.9
comp=Z,414nm,1.2s
PLPT Palo Pinto 16.65 359 IAmb IAmb 00 40 50.4
comp=Z,654nm,1.1s
FW06 Azle 16.81 1 IAmb IAmb 00 40 55.7
comp=Z,251nm,0.8s
FW03 Perrin-Whitt E 16.88 360 IAmb IAmb 00 40 52.8
comp=Z,314nm,1.1s
SN05 Snyder 5 16.93 351 IAmb IAmb 00 40 54.0
comp=Z,462nm,1.2s
CGIG 16.93 329 eP P 00 40 51.3 +0.4
MNTX Cornudas Mount 16.96 338 P P 00 40 50.3 -0.7
baz=155,SNR=48
MNTX Cornudas Mount 16.96 338 eP Pn 00 40 48.3 -0.7
Z35A Perchaven, San 17.18 2 IAmb IAmb 00 40 59.4
comp=Z,313nm,0.9s
Z38A Mt. Pleasant 17.30 8 IAmb IAmb 00 41 00.9
comp=Z,239nm,0.8s
VBMS Vicksburg 17.41 21 IAmb IAmb 00 41 01.7
comp=Z,349nm,1.0s
VBMS Vicksburg 17.41 21 P Pn 00 40 50.9 -3.7
baz=204,SNR=9.7
143A Socs Landing, 17.57 19 IAmb IAmb 00 41 03.8
comp=Z,268nm,1.0s
HSIG 17.59 319 P P 00 40 59.6 +1.6
HSIG IAmb IAmb 00 41 07.1
comp=Z,399nm,1.5s
DKNS Dickens 17.71 352 IAmb IAmb 00 41 07.4
comp=Z,222nm,0.8s
LOOK Love County 17.84 2 IAmb IAmb 00 41 09.9
comp=Z,337nm,1.2s
BRAL Brewton 18.00 32 P Pn 00 40 58.1 -3.9
baz=216
MSTX Muleshoe 18.33 347 P Pn 00 41 06.1 0.0
baz=165,SNR=69
WMOK Wichita Mounta 18.59 358 P P 00 41 08.6 -0.3
baz=177,SNR=130
121A Cookes Peak, D 18.65 333 P Pn 00 41 12.2 +2.1
baz=149,SNR=79
121A Cookes Peak, D 18.65 333⇑ eP Pn 00 41 11.5 +1.4
MIAR Mount Ida 18.79 11 P P 00 41 10.3 -0.9
baz=193,SNR=56
W35A Tecumseh 19.01 3 IAmb IAmb 00 41 17.3
comp=Z,210nm,1.0s
AMTX Amarillo 19.02 351 P Pn 00 41 14.2 -0.2
baz=169
FNO Franklin 19.09 1 IAmb IAmb 00 41 24.4
comp=Z,272nm,0.9s
Y45A Yeager Farm, C 19.25 22 IAmb IAmb 00 41 19.9
comp=Z,282nm,1.2s
352A Blakely 19.37 35 IAmb IAmb 00 41 27.4
comp=Z,211nm,0.8s
656A Willston 19.37 44 P P 00 41 15.2 -2.3
DWPF Disney Wildern 19.38 49 P P 00 41 15.7 -2.0
DWPF Disney Wildern 19.38 49 P P 00 41 16.2 -1.5
baz=235
LRAL Lakeview Retre 19.56 28 P P 00 41 19.1 -0.5
baz=213,SNR=33
060A Indiantown 19.61 53 P Pn 00 41 21.0 -0.5
060A IAmb IAmb 00 41 21.9
comp=Z,297nm,0.8s
OK029 Liberty Lake 19.63 1 IAmb IAmb 00 41 28.3
comp=Z,320nm,1.0s
Y22D IRIS PASSCAL I 19.65 337 P P 00 41 20.8 0.0
baz=153,SNR=11
Y22F Passcal Instru 19.65 337 P P 00 41 20.3 -0.5
baz=153,SNR=11
DEOK Depew 19.71 3 IAmb IAmb 00 41 28.9
comp=Z,246nm,0.9s
TUL3 Leonard 19.83 5 P P 00 41 21.8 -0.7
baz=186,SNR=57
OK052 Battle Ridge R 19.85 3 IAmb IAmb 00 41 34.2
comp=Z,304nm,1.0s
OXF Oxford 19.88 21 IAmb IAmb 00 41 33.0
comp=Z,189nm,0.9s
OXF Oxford 19.88 21 P P 00 41 22.4 -0.6
baz=205,SNR=25
TUC Tucson 19.93 326 P Pn 00 41 25.3 0.0
TUC Tucson 19.93 326 P Pn 00 41 25.4 0.0
baz=141
TUC Tucson 19.93 326 P Pn 00 41 25.3 0.0
TUC pmax pmax
comp=Z,243nm,1.5s
TUC Tucson 19.93 326 eP Pn 00 41 26.4 +1.1
QUOK Quay 20.03 3 IAmb IAmb 00 41 31.1
comp=Z,235nm,1.0s
TIGA Tifton 20.11 38 IAmb IAmb 00 41 33.1
comp=Z,211nm,0.8s
TIGA Tifton 20.11 38 P P 00 41 23.8 -1.8
baz=224,SNR=23
RLO Rose Lookout 20.16 7 IAmb IAmb 00 41 33.9
comp=Z,331nm,1.4s
U32A Winter Ranch, 20.23 358 IAmb IAmb 00 41 34.5
comp=Z,310nm,0.9s
ANMO Albuquerque 20.27 339 P P 00 41 28.5 +0.8
ANMO Albuquerque 20.27 339 P Pn 00 41 29.1 -0.5
baz=156
ANMO Albuquerque 20.27 339ce eP Pn 00 41 29.8 +0.3
ANMO pmax pmax
comp=Z,203nm,1.3s
ANMO Albuquerque 20.27 339 P Pn 00 41 30.1 +0.5
comp=Z,94nm,1.0s,baz=240,slow=11,SNR=131
ANMO Lg Lg 00 47 44.4
comp=Z,0.1nm,0.3s,baz=154,slow=19,SNR=7.5
ANMO LR LR 00 50 31.9
comp=Z,24µm,18.4s,baz=200,slow=40
comp=Z,94nm,1.0s
ANMO Albuquerque 20.27 339 eP Pn 00 41 29.6 +0.1
OK038 West end E0370 20.32 358 IAmb IAmb 00 41 35.2
comp=Z,267nm,1.1s
HHAR Hobbs 20.42 9 IAmb IAmb 00 41 35.1
comp=Z,202nm,0.9s
HBAR Harrisburg 20.45 17 IAmb IAmb 00 41 40.2
comp=Z,239nm,1.0s
U38A Gravette 20.51 8 IAmb IAmb 00 41 35.9
comp=Z,236nm,0.8s
OK035 E0210 Rd and N 20.55 358 IAmb IAmb 00 41 37.9
comp=Z,233nm,0.9s
456A Hilliard 20.59 42 P P 00 41 28.7 -2.1
456A IAmb IAmb 00 41 37.6
comp=Z,200nm,0.9s
BLOK Blackwell 20.60 2 IAmb IAmb 00 41 38.5
comp=Z,271nm,1.0s
OK032 Salt Plains WL 20.63 359 IAmb IAmb 00 41 39.0
comp=Z,274nm,1.0s
RTBA Rita Blanca 20.71 349 IAmb IAmb 00 41 37.8
comp=Z,326nm,1.2s
T35A Sooner Cattle 20.78 3 IAmb IAmb 00 41 40.3
comp=Z,388nm,1.1s
KAN14 Manchester OK 20.79 360 IAmb IAmb 00 41 39.7
comp=Z,203nm,1.1s
214A Organ Pipe Nat 20.80 322 P Pn 00 41 36.1 +0.6
baz=136,SNR=73
214A Organ Pipe Nat 20.80 322 eP Pn 00 41 35.6 +0.1
PIX Pinacate 20.91 320 IAmb IAmb 00 41 39.0
comp=Z,342nm,1.9s
KAN05 Bluff City Nor 20.94 0 IAmb IAmb 00 41 41.3
comp=Z,237nm,1.2s
KAN09 Caldwell North 20.97 1 IAmb IAmb 00 41 44.9
comp=Z,162nm,0.9s
KAN01 Argonia South 20.98 0 IAmb IAmb 00 41 41.8
comp=Z,446nm,1.5s
KAN06 Argonia West S 21.08 0 IAmb IAmb 00 41 41.8
comp=Z,150nm,0.8s
PEBM Pemiscott Bayo 21.20 18 P P 00 41 36.4 -0.9
PEBM IAmb IAmb 00 41 45.4
comp=Z,404nm,1.2s
154A Montrose 21.24 37 IAmb IAmb 00 41 52.0
comp=Z,368nm,1.2s
X18A Snowflake 21.30 332 IAmb IAmb 00 41 43.9
comp=Z,289nm,1.1s
MGMO Mountain Grove 21.57 12 IAmb IAmb 00 41 50.2
comp=Z,314nm,1.1s
GOGA Godfrey 21.64 35 IAmb IAmb 00 41 43.5
comp=Z,113nm,0.7s
GOGA Godfrey 21.64 35 P P 00 41 40.2 -1.9
baz=220,SNR=64
PBMO Poplar Bluff 21.66 16 IAmb IAmb 00 41 50.4
comp=Z,257nm,0.8s
Y52A Lilburn 21.67 33 IAmb IAmb 00 41 44.1
comp=Z,186nm,0.8s
W18A Petrified Fore 21.70 333 IAmb IAmb 00 41 51.0
comp=Z,210nm,1.0s
W18A Petrified Fore 21.70 333 P P 00 41 45.6 +2.7
baz=148,SNR=31
T25A Trinidad 21.74 346 P P 00 41 43.9 +0.5
baz=163,SNR=213
SPIG San Pedro Mart 21.86 316 eP P 00 41 45.0 +0.1
WVT Waverly 21.89 22 P P 00 41 43.9 -0.9
WVT IAmb IAmb 00 41 48.1
comp=Z,172nm,0.9s
WVT Waverly 21.89 22 P P 00 41 43.6 -1.2
baz=207
WVT Waverly 21.89 22 P P 00 41 43.9 -0.9
WVT pmax pmax
comp=Z,172nm,1.0s
X16A Lo Mia Camp, P 21.92 329 IAmb IAmb 00 41 54.7
comp=Z,198nm,0.9s
V48A Smith Brothers 21.94 25 IAmb IAmb 00 41 52.0
comp=Z,126nm,0.8s
113A Mohawk Valley, 21.94 322 IAmb IAmb 00 41 56.2
comp=Z,347nm,1.9s
GTBY Guantanamo Bay 22.03 77 P P 00 41 47.3 +0.8
GTBY IAmb IAmb 00 41 58.6
comp=Z,194nm,1.1s
W50A Signal Mountai 22.13 28 IAmb IAmb 00 41 53.4
comp=Z,230nm,0.8s
R32A Long Quarter, 22.26 358 IAmb IAmb 00 42 07.8
comp=Z,384nm,1.4s
CGM3 Cape Girardeau 22.36 18 IAmb IAmb 00 41 54.9
comp=Z,178nm,1.2s
APAC Apartado, Choc 22.40 109 eP P 00 41 53.7 +3.3
SDCO Great Sand Dun 22.59 344 P P 00 41 51.7 -0.8
baz=161,SNR=126

CCM	Cathedral Cave	22.66	14	P	P	00 41 52.5	-0.6	
CCM	comp=Z,114nm,0.8s			IAmb	IAmb	00 42 02.9		
CCM	Cathedral Cave	22.66	14	P	P	00 41 51.9	-1.2	
CCM	baz=197 Cathedral Cave	22.66	14	P	P	00 41 52.5	-0.6	
CCM	comp=Z,114nm,0.8s			pmax	pmax			
CBKS	Cedar Bluff	22.70	356	IAmb	IAmb	00 42 05.2		
CBKS	comp=Z,294nm,1.2s Cedar Bluff	22.70	356	P	P	00 41 52.0	-1.4	
CPCT	baz=175,SNR=12 Cooper Cave	22.70	29	IAmb	IAmb	00 41 58.0		
W52A	comp=Z,121nm,0.9s Murphy	22.70	31	IAmb	IAmb	00 42 10.2		
WUAZ	comp=Z,290nm,1.3s Wupatki	22.77	331	P	P	00 41 54.6	+0.1	
FVM	baz=145,SNR=251 French Village	22.79	15	IAmb	IAmb	00 41 56.7		
S44A	comp=Z,139nm,1.1s Carbondale	22.84	18	IAmb	IAmb	00 42 04.0		
SIUC	comp=Z,147nm,0.8s Southern Illin	22.88	18	IAmb	IAmb	00 41 59.1		
HODGE	comp=Z,145nm,0.9s Hodges	22.91	35	IAmb	IAmb	00 41 56.8		
T47A	comp=Z,108nm,0.8s Sharon Grove	22.92	23	IAmb	IAmb	00 42 04.6		
KSU1	comp=Z,134nm,0.9s Kansas State U	22.95	3	IAmb	IAmb	00 41 58.8		
KSU1	comp=Z,251nm,1.0s Kansas State U	22.95	3	P	P	00 41 54.9	-1.3	
S22A	baz=183,SNR=41 4UR Ranch, Cre	22.96	342	P	P	00 41 57.1	+0.5	
SJCC	baz=158,SNR=17 San Jacinto, C	23.00	103	eP	P	00 41 59.4	+2.5	
MVCO	Mesa Verde	23.03	338	P	P	00 41 57.0	-0.2	
U49A	baz=153,SNR=219 Red Boiling Sp	23.03	26	IAmb	IAmb	00 42 02.9		
V51A	comp=Z,137nm,0.8s Loudon	23.07	29	IAmb	IAmb	00 42 03.1		
BLYC	comp=Z,166nm,1.1s Blythe	23.09	323	IAmb	IAmb	00 42 06.2		
DBBC	comp=Z,201nm,1.4s Dabeiba	23.09	110	eP	P	00 42 00.1	+2.3	
BG3	Lake Jocassee	23.13	33	IAmb	IAmb	00 42 02.1		
YUH	comp=Z,164nm,0.9s Yuha Desert	23.19	319	P	P	00 42 01.4	+2.8	
YUH	comp=Z,441nm,1.9s			IAmb	IAmb	00 42 08.6		
KSCO	Kaye Shedlock'	23.20	351	IAmb	IAmb	00 42 01.4		
KSCO	comp=Z,128nm,0.8s Kaye Shedlock'	23.20	351	P	P	00 41 59.2	+0.3	
PDMCI	baz=168,SNR=8.0 Parker Dam,Lak	23.27	324	P	P	00 42 01.2	+1.8	
SWSC	baz=137,SNR=28 Sam W. Stewart	23.30	319	P	P	00 42 01.4	+1.6	
IKP	baz=132,SNR=31 In-Ko-Pah, Jac	23.31	318	P	P	00 42 01.5	+1.6	
NHSC	baz=131,SNR=16 New Hope	23.34	40	P	P	00 41 59.2	-0.9	
NHSC	New Hope	23.34	40	P	P	00 41 58.4	-1.7	
UREC	baz=228,SNR=16 San Jos de Ur	23.41	108	eP	P	00 42 02.0	+0.9	
CBX	Cerro Bola	23.45	317	IAmb	IAmb	00 42 05.0		
SLM	comp=Z,289nm,1.8s Saint Louis	23.46	15	IAmb	IAmb	00 42 03.4		
JSC	comp=Z,248nm,1.2s Jenkinsville	23.51	37	IAmb	IAmb	00 42 03.9		
BC3	comp=Z,175nm,0.9s Big Chuckawall	23.57	321	P	P	00 42 04.9	+2.3	
TKX	baz=134,SNR=59 Tecate	23.58	317	IAmb	IAmb	00 42 06.0		
PAULI	comp=Z,169nm,1.5s Pauline	23.60	35	IAmb	IAmb	00 42 11.5		
USIN	comp=Z,176nm,1.1s University of	23.60	21	IAmb	IAmb	00 42 11.3		
Q24A	comp=Z,181nm,1.0s Divide	23.65	346	P	P	00 42 03.3	-0.2	
MONP2	baz=162,SNR=37 Monument Peak	23.66	318	P	P	00 42 04.2	+0.6	
V53A	baz=130,SNR=29 Saluda	23.72	32	IAmb	IAmb	00 42 10.8		
W13A	comp=Z,127nm,0.9s Hualapai Mount	23.72	326	IAmb	IAmb	00 42 09.1		
IRM	comp=Z,166nm,1.4s Iron Mountain	23.74	322	P	P	00 42 06.1	+2.0	
CBOC	baz=135,SNR=86 Ciudad Bolivar	23.77	113	eP	P	00 42 06.5	+1.8	
NEE2	Needles Airpor	23.88	324	P	P	00 42 07.3	+1.9	
U15A	baz=137 North Rim	23.95	330	IAmb	IAmb	00 42 11.5		
PLMC	comp=Z,218nm,1.2s San Jos del P	23.98	115	eP	P	00 42 07.1	+0.4	
Q44A	Meyer Farm, Va	24.04	17	IAmb	IAmb	00 42 17.0		
TZTN	comp=Z,152nm,0.8s Tazewell	24.05	29	IAmb	IAmb	00 42 14.1		
TZTN	comp=Z,92nm,0.8s Tazewell	24.05	29	P	P	00 42 05.7	-1.3	
KMSC	baz=216,SNR=29 Kings Mountain	24.10	35	IAmb	IAmb	00 42 10.2		
KMSC	comp=Z,195nm,1.0s Kings Mountain	24.10	35	P	P	00 42 07.0	-0.5	
109C	baz=222,SNR=56 Camp Elliot, M	24.10	317	IAmb	IAmb	00 42 22.2		
109C	comp=Z,192nm,1.9s Camp Elliot, M	24.10	317	P	P	00 42 08.5	+0.9	
PMD	baz=129 Palm Desert	24.13	320	IAmb	IAmb	00 42 12.5		
BELC	comp=Z,217nm,1.7s Belle Mtn. Jos	24.14	321	P	P	00 42 08.8	+0.7	
TPFO	baz=133,SNR=28 Pinon Flats	24.15	320	P	P	00 42 06.6	-1.6	
OLIL	baz=132,SNR=25 Olney	24.16	19	IAmb	IAmb	00 42 26.4		
PFO	comp=Z,131nm,0.9s Pinyon Flats O	24.16	320	P	P	00 42 11.2	+3.0	
PFO	comp=Z,320nm,1.8s			IAmb	IAmb	00 42 16.9		
PFO	Pinyon Flats O	24.16	320	P	P	00 42 10.0	+1.7	
PFO	baz=132,SNR=24 Pinyon Flats O	24.16	320	P	P	00 42 11.2	+3.0	
PFO	comp=Z,320nm,1.8s			pmax	pmax			
PFO	Pinyon Flats O	24.16	320	P	P	00 42 11.3	+3.0	
PFO	comp=Z,24nm,1.1s,baz=124,slow=10,SNR=34			Lg	Lg	00 49 51.1		
WCI	comp=Z,0.1nm,0.3s,baz=75,slow=17,SNR=1.7 Wyandotte Cave	24.32	23	P	P	00 42 09.1	-0.4	
WCI	comp=Z,24nm,1.1s Wyandotte Cave	24.32	23	P	P	00 42 09.4	-0.1	
WCI	baz=208 Wyandotte Cave	24.32	23	P	P	00 42 09.1	-0.4	
WCI	comp=Z,194nm,1.0s			pmax	pmax			
YOTC	Yotoco, Valle	24.39	117	eP	P	00 42 11.5	+1.0	
GMRC	Granite Mounta	24.48	323	P	P	00 42 13.1	+1.9	
ISCO	baz=135,SNR=26 Idaho Springs	24.56	346	IAmb	IAmb	00 42 16.1		
ISCO	comp=Z,189nm,1.1s Idaho Springs	24.56	346	P	P	00 42 13.1	+1.1	
MURC	baz=162,SNR=125 Murrieta	24.61	319	P	P	00 42 13.7	+1.3	
GUY2C	baz=130,SNR=15 Guyana, Caldas	24.63	114	eP	P	00 42 15.2	+2.1	
KNB	Kanab	24.67	330	IAmb	IAmb	00 42 32.1		
BBAC	comp=Z,106nm,1.0s Balboa, Cauca	24.71	122	eP	P	00 42 14.9	+1.4	
PKCU	Pink Cliffs	24.78	332	IAmb	IAmb	00 42 26.1		
ELS	comp=Z,112nm,0.9s Elsinore Mount	24.79	318	IAmb	IAmb	00 42 19.0		
R49A	comp=Z,200nm,2.0s Shelbyville	24.81	24	IAmb	IAmb	00 42 33.0		
CUSE	comp=Z,88nm,1.0s Cuicocha Este	24.84	127	eP	P	00 42 18.0	+3.0	
OTAV	Otavalo	24.85	127	P	P	00 42 16.7	+1.7	
OTAV	baz=132 Popayan, Colom	24.88	121	eP	P	00 42 16.4	+1.3	
HEC	Hector,Ludlow	24.91	322	P	P	00 42 16.3	+1.3	
S51A	baz=134,SNR=55 Beattyville	24.92	28	IAmb	IAmb	00 42 18.8		
ANIL	comp=Z,115nm,0.9s Santa Ana	24.95	115	eP	P	00 42 18.1	+2.3	
IMBA	Imbabura, San	25.02	127	P	P	00 42 18.2	+1.7	
OGNE	Ogallala	25.02	353	P	P	00 42 17.7	+1.8	
TULM	baz=171,SNR=33 Tulcn-Chalpat	25.06	126	IAmb	IAmb	00 42 40.7		
TULM	comp=Z,155nm,1.1s Tulcn-Chalpat	25.06	126	eP	P	00 42 19.8	+2.8	
BLO	Bloomington	25.07	21	IAmb	IAmb	00 42 22.2		
TUQ	comp=Z,195nm,1.2s Turquoise Moun	25.10	324	P	P	00 42 18.7	+2.0	
GCUF	baz=136,SNR=92 Volcan Galeras	25.10	124	eP	P	00 42 19.3	+2.0	
SCI2	San Clemente I	25.11	316	P	P	00 42 18.5	+1.7	
R50A	baz=127 Paris	25.14	26	IAmb	IAmb	00 42 18.8		
MTPU	comp=Z,76nm,0.9s Mount Pierson	25.22	333	IAmb	IAmb	00 42 25.0		
BGNE	comp=Z,126nm,0.8s Belgrade	25.23	360	P	P	00 42 18.2	+0.4	
CIS	baz=179,SNR=6.5 Catalina Islan	25.28	317	P	P	00 42 20.0	+1.7	
BFSC	baz=128,SNR=9.3 Mount Baldy Ra	25.32	319	P	P	00 42 20.6	+1.8	
RRX	baz=131,SNR=15 Edison Barstow	25.34	321	P	P	00 42 21.0	+2.2	
ORTC	baz=133 Ortega, Tolima	25.37	116	eP	P	00 42 21.0	+1.7	
FMP	Fort Macarthur	25.39	317	P	P	00 42 20.0	+0.7	
BONI	baz=129 La Bonita	25.42	126	eP	P	00 42 21.9	+1.9	
SRU	San Rafael Swe	25.45	337	IAmb	IAmb	00 42 29.5		
SHPR	comp=Z,117nm,1.0s Sheep Range	25.45	326	IAmb	IAmb	00 42 27.3		
HDIL	comp=Z,155nm,2.0s Hopedale	25.51	15	IAmb	IAmb	00 42 21.8		
HDIL	comp=Z,94nm,0.8s Hopedale	25.51	15	P	P	00 42 20.2	-0.1	
GSC	baz=199,SNR=29 Goldstone, Bar	25.52	322	P	P	00 42 22.3	+1.8	
Q16A	baz=134,SNR=25 Castle Valley	25.54	336	IAmb	IAmb	00 42 24.8		
SDDR	comp=Z,96nm,1.0s Presa de Saban	25.56	80	P	P	00 42 20.6	-0.4	
SDDR	Presa de Saban	25.56	80	eP	P	00 42 23.4	+2.4	
O20A	White River Ci	25.59	341	P	P	00 42 23.6	+2.4	
SHOC	baz=156,SNR=61 Shoshone, Teco	25.63	324	P	P	00 42 23.5	+2.1	
N23A	baz=136 Red Feather La	25.68	346	IAmb	IAmb	00 42 30.9		
N23A	comp=Z,151nm,1.1s Red Feather La	25.68	346	P	P	00 42 24.1	+2.0	
CHSH	baz=162,SNR=61 Refugio Sur-Vo	25.69	131	IAmb	IAmb	00 42 26.8		
P48A	comp=Z,123nm,1.0s Milroy	25.72	23	IAmb	IAmb	00 42 45.8		
ROSC	comp=Z,105nm,1.1s El Rosal	25.73	113	P	P	00 42 25.1	+2.1	
ROSC	comp=Z,233nm,1.5s			IAmb	IAmb	00 42 48.1		
ROSC	El Rosal	25.73	113	P	P	00 42 25.1	+2.1	
ROSC	comp=Z,233nm,1.5s			pmax	pmax			
ROSC	El Rosal	25.73	113	P	P	00 42 23.6	+0.6	
	comp=Z,21nm,0.9s,baz=315,slow=8.7,SNR=20 comp=Z,21nm,0.9s							
DECC	Green Verdugo	25.76	318	P	P	00 42 23.8	+1.1	
PRAC	baz=130 Prado	25.78	116	eP	P	00 42 24.9	+1.9	
W59A	Clinton	25.79	39	IAmb	IAmb	00 42 28.3		
P18A	comp=Z,90nm,1.1s Preston Nutter	25.80	338	IAmb	IAmb	00 42 37.2		
SNCC	comp=Z,164nm,1.1s San Nicolas Is	25.93	315	P	P	00 42 25.4	+1.2	
EDW2	baz=126 Edwards Air Fo	25.95	320	P	P	00 42 25.2	+0.8	
PHWY	baz=131,SNR=26 Pilot Hill	25.95	347	IAmb	IAmb	00 42 34.3		
SFIN	comp=Z,155nm,1.3s Lafayette	25.97	19	IAmb	IAmb	00 42 30.8		
SFIN	comp=Z,73nm,0.9s Lafayette	25.97	19	P	P	00 42 23.5	-0.9	
BARC	baz=204,SNR=17 Barranca	26.01	108	eP	P	00 42 27.5	+2.2	
QSM	Queen of Sheba	26.01	323	IAmb	IAmb	00 42 39.8		
SCIA	comp=Z,81nm,1.1s State Center	26.05	8	P	P	00 42 26.1	+1.0	
P49A	baz=190,SNR=43 Miami Univ. Ec	26.06	24	P	P	00 42 23.9	-1.3	
PRN	baz=210,SNR=57 Pahroc Range	26.08	328	IAmb	IAmb	00 42 32.2		
S54A	comp=Z,88nm,1.1s Dngess, Beckl	26.13	31	IAmb	IAmb	00 42 30.3		
BLA	comp=Z,104nm,0.9s Blacksburg	26.13	33	P	P	00 42 24.8	-1.2	
LRMC	baz=221,SNR=56 Laurel Mtn Rad	26.16	321	P	P	00 42 27.6	+1.2	
PAMC	baz=132,SNR=41 Pamplona, Colo	26.16	106	eP	P	00 42 28.7	+1.7	
CNNC	Cliffs of the	26.17	39	IAmb	IAmb	00 42 27.7		
CNNC	comp=Z,122nm,0.9s Cliffs of the	26.17	39	P	P	00 42 25.5	-0.8	
OSI	baz=202,SNR=5.7 Osito Audit: C	26.24	319	P	P	00 42 28.6	+1.6	
ARNL	baz=129 Arenillas	26.32	136	IAmb	IAmb	00 42 33.5		
CHIC	comp=Z,199nm,1.6s Chingaza	26.35	113	eP	P	00 42 31.0	+2.4	
FURC	Furnace Creek,	26.36	324	P	P	00 42 30.2	+2.2	
TPNV	baz=135,SNR=9.8 Topopah Spring	26.37	325	IAmb	IAmb	00 42 38.7		
TPNV	comp=Z,132nm,1.3s Topopah Spring	26.37	325	P	P	00 42 28.4	+0.1	
RDMU	baz=137 Red Mountain	26.41	340	IAmb	IAmb	00 42 58.4		
MPMC	comp=Z,209nm,1.4s Manual Prospec	26.44	322	P	P	00 42 31.0	+2.0	
L40A	baz=134,SNR=40 Anamosa	26.52	11	IAmb	IAmb	00 42 36.8		
O48B	comp=Z,108nm,0.9s Farmland	26.52	22	P	P	00 42 28.4	-1.0	
T57A	baz=208,SNR=60 Hurt	26.60	35	IAmb	IAmb	00 42 38.5		
ARVC	comp=Z,148nm,1.0s Arvin	26.63	319	P	P	00 42 31.9	+1.4	
P51A	baz=130 Williamsport	26.68	26	IAmb	IAmb	00 42 49.5		
ISA	comp=Z,134nm,0.8s Isabella, Lake	26.76	321	P	P	00 42 33.8	+2.1	
SBC	baz=131,SNR=15 Santa Barbara	26.77	317	P	P	00 42 32.2	+0.4	
NLU	baz=128 North Lily Min	26.78	335	IAmb	IAmb	00 42 40.2		
BSUT	comp=Z,120nm,1.2s Blindstream Ca	26.79	338	IAmb	IAmb	00 42 59.4		
BCW	comp=Z,70nm,1.0s Bitter Crk WRg	26.88	318	IAmb	IAmb	00 42 59.3		
SPR3	comp=Z,137nm,1.5s Spring Creek 3	26.97	331	IAmb	IAmb	00 42 37.5		
U59A	comp=Z,83nm,1.2s Littleton	26.98	38	IAmb	IAmb	00 42 35.1		
MCRA	comp=Z,104nm,1.2s Macar, Loja	27.01	137	eP	P	00 42 34.6	+0.5	
GRAC	Grapevine Rang	27.02	324	P	P	00 42 34.3	+0.3	
CWC	baz=135 Cottonwood Cre	27.05	322	P	P	00 42 36.9	+2.5	
R11B	baz=133 Troy Canyon, C	27.07	328	P	P	00 42 35.7	+1.1	
PKM	baz=140,SNR=44 Mcpherson Peak	27.11	318	P	P	00 42 35.7	+0.7	
P52A	baz=128,SNR=9.3 Corning	27.21	27	IAmb	IAmb	00 42 41.5		
P52A	comp=Z,65nm,0.8s Corning	27.21	27	P	P	00 42 34.5	-1.2	
Q12A	baz=215,SNR=26 Willow Creek R	27.24	330	IAmb	IAmb	00 42 44.5		
VES	comp=Z,78nm,1.1s Vestal, Richgr	27.25	320	P	P	00 42 37.7	+1.7	
DUG	baz=131 Dugway, Tooele	27.29	335	IAmb	IAmb	00 42 40.9		
DUG	comp=Z,86nm,1.1s Dugway, Tooele	27.29	335	P	P	00 42 39.1	+2.6	
S57A	baz=147,SNR=66 Dark Hollow, R	27.32	34	IAmb	IAmb	00 42 39.4		
TAMC	comp=Z,125nm,0.9s Tame, Arauca	27.34	108	eP	P	00 42 38.8	+1.7	
L44A	Lake County Fo	27.39	16	P	P	00 42 37.2	0.0	
P53A	baz=201,SNR=8.9 Whipple	27.43	29	IAmb	IAmb	00 42 43.9		
K22A	comp=Z,93nm,0.8s Casper	27.48	346	P	P	00 42 40.8	+2.5	
SMMC	baz=162,SNR=17 Simmler	27.49	318	P	P	00 42 41.2	+2.9	
JFWS	baz=128 Jewell Farm	27.53	12	IAmb	IAmb	00 42 41.7		
JFWS	comp=Z,88nm,0.9s Jewell Farm	27.53	12	P	P	00 42 38.3	-0.2	
TIN	baz=196,SNR=21 Tinemaha, Big	27.56	323	P	P	00 42 40.4	+1.5	
SDV	baz=134 Santo Domingo	27.57	102	P	P	00 42 40.6	+1.2	
SDV	Santo Domingo	27.57	102	eP	P	00 42 40.9	+1.5	
SDV	Santo Domingo	27.57	102	eP	P	00 42 39.5	+0.1	
ECSD	EROS Data Cent	27.58	2	IAmb	IAmb	00 43 00.1		
L46A	comp=Z,65nm,1.0s Eue Claire	27.71	19	IAmb	IAmb	00 43 22.1		
O52A	comp=Z,90nm,1.0s Adamsville	27.74	27	IAmb	IAmb	00 42 51.0		
VOG	comp=Z,65nm,0.8s Valley Oaks Go	27.75	321	P	P	00 42 41.4	+0.9	
PTLC	baz=131 Puerto Leguiza	27.77	123	eP	P	00 42 44.4	+3.4	
K43A	Burlington	27.77	15	IAmb	IAmb	00 42 54.5		
BGU	comp=Z,150nm,1.1s Big Grassy Mou	27.99	335	IAmb	IAmb	00 42 51.0		
R58B	comp=Z,180nm,1.7s Mineral	28.06	35	IAmb	IAmb	00 42 53.5		
I37A	comp=Z,79nm,1.1s Lemond, Waseca	28.10	7	IAmb	IAmb	00 43 27.7		
O53A	comp=Z,86nm,1.1s New Philadelph	28.12	28	IAmb	IAmb	00 43 18.5		
O53A	comp=Z,57nm,0.9s New Philadelph	28.12	28	P	P	00 42 42.9	-1.0	
N51A	baz=216,SNR=9.0 Ashland	28.17	25	IAmb	IAmb	00 43 23.5		
L48A	comp=Z,54nm,1.0s N Adams	28.26	22	IAmb	IAmb	00 42 46.3		
SUSD	comp=Z,65nm,0.8s Miller	28.28	358	P	P	00 42 45.6	+0.5	
MCWV	baz=178 Mont Chateau	28.30	30	IAmb	IAmb	00 43 25.0		
MCWV	comp=Z,59nm,0.9s Mont Chateau	28.30	30	P	P	00 42 45.4	0.0	
MLAC	baz=219 Mammoth, Mammo	28.30	323	P	P	00 42 48.1	+2.4	
BW06	baz=134 Boulder Array	28.39	342	P	P	00 42 48.1	+1.6	
PD31	baz=156,SNR=60 Pinedale Array	28.39	342	IAmb	IAmb	00 42 54.0		
PDAR	comp=Z,99nm,1.4s Pinedale Array	28.39	342	P	P	00 42 46.9	+0.4	
PDAR	Pinedale Array	28.39	342	P	P	00 42 48.2	+1.7	
PDAR	comp=Z,14nm,0.8s,baz=142,slow=7.5,SNR=35			Lg	Lg	00 51 51.5		
PDAR	baz=333,slow=32,SNR=1.5			LR	LR	00 55 22.5		
I40A	comp=Z,22µm,19.1s,baz=72,slow=39 comp=Z,14nm,0.8s Norwalk	28.40	11	IAmb	IAmb	00 43 30.8		
RSSD	comp=Z,150nm,1.4s Black Hills	28.42	351	P	P	00 42 48.6	+1.9	
RSSD	comp=Z,108nm,1.9s			IAmb	IAmb	00 42 59.1		
RSSD	Black Hills	28.42	351	P	P	00 42 47.6	+0.9	
RSSD	baz=168 Black Hills	28.42	351	P	P	00 42 48.6	+1.9	
RSSD	comp=Z,108nm,1.9s			pmax	pmax			
O54A	Avella	28.45	29	IAmb	IAmb	00 43 48.8		
NV11	comp=Z,60nm,0.9s Mina Array Sit	28.48	325	IAmb	IAmb	00 42 56.6		
CBN	comp=Z,102nm,1.2s Corbin Frederi	28.51	35	IAmb	IAmb	00 43 01.8		
CBN	comp=Z,78nm,0.8s Corbin Frederi	28.51	35	P	P	00 42 47.1	-0.1	
LHV	baz=225 Little Huntoon	28.55	325	IAmb	IAmb	00 43 14.3		
PMPB	comp=Z,72nm,1.3s Monarch Peak	28.56	319	IAmb	IAmb	00 42 57.4		
NVAR	comp=Z,85nm,1.3s Mina Array Bea	28.57	325	P	P	00 42 50.1	+2.1	
NVAR	Mina Array Bea	28.57	325	P	P	00 42 51.3	+3.2	
N53A	comp=Z,28nm,1.0s,baz=195,slow=27,SNR=5.4 comp=Z,28nm,1.0s Lisbon	28.74	28	IAmb	IAmb	00 43 31.2		
I42A	comp=Z,75nm,1.0s Draeger Farm,	28.75	14	IAmb	IAmb	00 43 36.9		
ELK	comp=Z,68nm,1.1s Elko	28.79	332	IAmb	IAmb	00 42 58.7		
ELK	comp=Z,217nm,1.9s Elko	28.79	332	P	P	00 42 52.5	+2.5	
ELK	comp=Z,17nm,1.0s,baz=156,slow=6.9,SNR=40			Lg	Lg	00 52 14.8		
ELK	comp=Z,0.2nm,0.3s,baz=258,slow=15,SNR=3.4			LR	LR	00 54 10.3		
AAM	comp=Z,19µm,19.9s,baz=62,slow=36 comp=Z,17nm,1.0s Ann Arbor	28.86	22	IAmb	IAmb	00 42 55.7		
AAM	comp=Z,18nm,0.8s Ann Arbor	28.86	22	P	P	00 42 50.6	+0.3	
AHID	baz=209 Auburn Hatcher	28.88	340	IAmb	IAmb	00 43 03.2		
BBGB	comp=Z,69nm,1.2s Big Mountain B	28.94	319	IAmb	IAmb	00 43 26.7		
P57A	comp=Z,63nm,1.0s Homestead Farm	29.09	33	IAmb	IAmb	00 42 55.3		
M52A	comp=Z,95nm,1.1s Chesterland	29.12	26	IAmb	IAmb	00 43 48.3		
WAKR	comp=Z,54nm,1.0s Walker	29.25	324	IAmb	IAmb	00 43 17.4		
M53A	comp=Z,117nm,1.9s WI Miller and	29.33	27	IAmb	IAmb	00 43 53.8		
M53A	comp=Z,106nm,1.4s WI Miller and	29.33	27	P	P	00 42 54.1	-0.4	
SPMN	baz=216 Marine on St.	29.36	7	P	P	00 42 54.3	-0.5	
SNOW	baz=190,SNR=17 Snow King Moun	29.39	341	IAmb	IAmb	00 43 26.2		
TPAW	comp=Z,90nm,1.1s Teton Pass	29.48	341	IAmb	IAmb	00 43 09.2		
LOHW	comp=Z,87nm,1.1s Long Hollow	29.48	341	IAmb	IAmb	00 43 21.3		
BMN	comp=Z,88nm,1.3s Battle Mountai	29.48	329	IAmb	IAmb	00 43 04.4		
MOOW	comp=Z,72nm,1.2s Moose Ponds	29.65	341	IAmb	IAmb	00 43 11.4		
ALLY	comp=Z,196nm,1.9s Alegheny Colle	29.73	27	IAmb	IAmb	00 43 49.6		
PNTR	comp=Z,64nm,1.1s Pine Nut	29.75	325	IAmb	IAmb	00 43 07.4		
G40A	comp=Z,162nm,1.8s Rib Lake	29.81	11	IAmb	IAmb	00 43 00.2		
FLWY	comp=Z,67nm,1.1s Flagg Ranch	29.93	341	IAmb	IAmb	00 43 14.2		
EMB	comp=Z,109nm,1.4s Emerald Bay	29.95	324	IAmb	IAmb	00 43 05.3		
BAUV	comp=Z,120nm,1.4s El Baul	30.00	100	IAmb	IAmb	00 43 09.2		
SSPA	comp=Z,130nm,1.2s Standing Stone	30.01	31	P	P	00 43 01.2	+0.6	
SSPA	Standing Stone	30.01	31	P	P	00 42 58.2	-2.4	
PAHR	baz=221 Pah Rah Range	30.06	326	IAmb	IAmb	00 43 23.4		
MPK	comp=Z,101nm,1.7s Martis Peak	30.13	324	IAmb	IAmb	00 43 06.9		
ERPA	comp=Z,102nm,1.3s Erie	30.18	27	IAmb	IAmb	00 43 58.5		
ERPA	comp=Z,67nm,1.2s Erie	30.18	27	P	P	00 43 00.9	-1.2	
H17A	baz=216 Grant Village	30.18	342	P	P	00 43 03.7	+1.3	
M55A	baz=155 Ridgway	30.22	29	IAmb	IAmb	00 43 13.3		
LKWY	comp=Z,54nm,0.9s Lake	30.28	342	IAmb	IAmb	00 43 27.0		
MVL	comp=Z,96nm,1.6s Millersville	30.34	34	IAmb	IAmb	00 43 06.0		
SJG	comp=Z,79nm,1.1s San Juan	30.42	82	eP	P	00 43 04.3	-0.1	
RLMT	Red Lodge	30.48	344	IAmb	IAmb	00 43 12.6		
RLMT	comp=Z,94nm,1.4s Red Lodge	30.48	344	P	P	00 43 06.5	+1.6	
F42A	baz=158,SNR=7.4 Maple Grove Fa	30.70	13	IAmb	IAmb	00 43 20.2		

comp=Z,107nm,1.5s
HLID Hailey 30.77 336 P P 00 43 08.5 +1.0
baz=148,SNR=25
GLMI Grayling 30.77 19 P P 00 43 06.1 -1.1
baz=206
YHL Hebgen Lake 30.78 341 IAmb IAmb 00 43 28.3
comp=Z,74nm,1.5s
COWI Conover 30.81 12 IAmb IAmb 00 44 13.4
comp=Z,55nm,1.2s
E38A The Farm, Brul 30.89 9 IAmb IAmb 00 43 15.1
comp=Z,48nm,0.9s
WVNY West Valley, N 31.03 28 IAmb IAmb 00 43 41.7
comp=Z,72nm,0.9s
ORV Oroville 31.14 323 P P 00 43 13.8 +3.2
ORV IAmb IAmb 00 43 19.5
comp=Z,166nm,2.0s
ORV Oroville 31.14 323 P P 00 43 13.8 +3.2
ORV pmax pmax
comp=Z,166nm,2.0s
MFID Camas Ranch 31.21 334 IAmb IAmb 00 43 25.0
comp=Z,104nm,1.5s
LAO LASA Array 31.28 349 P P 00 43 12.2 +0.4
baz=164,SNR=7.3
LUPA Lehigh Univers 31.29 34 IAmb IAmb 00 43 14.5
comp=Z,103nm,1.1s
E43A Lone Tree Farm 31.55 15 IAmb IAmb 00 43 27.6
comp=Z,45nm,1.0s
BOZ Bozeman (W) 31.59 341 IAmb IAmb 00 43 17.9
comp=Z,99nm,1.8s
BOZ Bozeman (W) 31.59 341 P P 00 43 16.3 +1.7
baz=154,SNR=15
MDND Maddock 31.70 358 P P 00 43 15.4 0.0
baz=177,SNR=23
D41A Chassel 31.85 12 IAmb IAmb 00 44 02.8
comp=Z,89nm,1.1s
BINY Binghamton 32.13 31 IAmb IAmb 00 43 26.6
comp=Z,41nm,0.8s
BINY Binghamton 32.13 31 P P 00 43 18.9 -0.3
baz=222
AGMN Agassiz Nation 32.16 3 P P 00 43 19.1 -0.4
baz=184,SNR=24
EYMN Ely 32.21 8 IAmb IAmb 00 43 20.5
comp=Z,106nm,1.5s
EYMN Ely 32.21 8 P P 00 43 18.8 -1.1
baz=192,SNR=5.2
K57A Scipio Center 32.26 30 IAmb IAmb 00 43 24.8
comp=Z,63nm,1.1s
B35A Bob, Littlefor 32.37 5 IAmb IAmb 00 43 22.4
comp=Z,36nm,0.8s
PAL Palisades 32.38 35 IAmb IAmb 00 43 27.8
comp=Z,77nm,1.0s
PAL Palisades 32.38 35 P P 00 43 20.2 -1.2
baz=227
L59A Walton 32.60 32 IAmb IAmb 00 43 26.0
comp=Z,104nm,1.2s
SADO Sadowa 32.69 25 P P 00 43 23.2 -1.0
comp=Z,11nm,0.8s,baz=249,slow=6.9,SNR=5.9
comp=Z,11nm,0.8s
DGMT Dagmar 32.70 352 IAmb IAmb 00 43 27.2
comp=Z,91nm,1.0s
DGMT Dagmar 32.70 352 P P 00 43 25.9 +1.6
baz=169,SNR=16
WSPT Westport, CT 32.81 35 IAmb IAmb 00 43 27.6
comp=Z,112nm,1.2s
BMO Blue Mountains 33.00 334 IAmb IAmb 00 43 34.2
comp=Z,148nm,1.8s
J57A Williamstown 33.02 30 IAmb IAmb 00 43 31.9
comp=Z,80nm,0.9s
K05A Summer Lake 33.02 328 IAmb IAmb 00 43 34.7
comp=Z,45nm,1.1s
YBH Yreka Blue Hor 33.29 325 LR LR 00 56 42.4
comp=Z,13µm,19.5s,baz=318,slow=36
KHMM Horse Mountain 33.29 323 IAmb IAmb 00 43 37.7
comp=Z,118nm,1.4s
EGMT Eagleton 33.30 345 P P 00 43 29.7 +0.1
baz=159,SNR=16
J58A Remsen 33.33 31 IAmb IAmb 00 43 37.0
comp=Z,41nm,0.9s
K04D Chiloquin, OR 33.39 327 IAmb IAmb 00 43 38.3
comp=Z,116nm,1.2s
L04D Klamath Falls 33.40 326 IAmb IAmb 00 43 42.9
comp=Z,128nm,1.5s
TRY Troy 33.70 33 IAmb IAmb 00 43 42.5
comp=Z,109nm,1.3s
J59A Piesco 33.80 31 IAmb IAmb 00 43 45.4
comp=Z,47nm,1.1s
L61B Northampton 34.03 34 IAmb IAmb 00 43 38.0
comp=Z,42nm,1.0s
L61B Northampton 34.03 34 P P 00 43 35.2 -0.7
baz=227
G08A Pilot Rock 34.06 333 IAmb IAmb 00 43 39.4
comp=Z,63nm,1.1s
QUA2 Belchertown 34.09 35 IAmb IAmb 00 43 38.4
comp=Z,60nm,0.9s
ULM Lac du Bonnet 34.11 2 IAmb IAmb 00 43 37.7
comp=Z,121nm,1.4s
ULM Lac du Bonnet 34.11 2 P P 00 43 36.5 0.0
comp=Z,30nm,0.9s,baz=189,slow=8.9,SNR=34
comp=Z,30nm,0.9s
ACCN Adirondack Com 34.16 32 IAmb IAmb 00 43 46.4
comp=Z,81nm,1.4s
CZSB Cruzeiro do Su 34.41 132 P P 00 43 41.3 +1.9
I04A Tendick Farm, 34.56 328 IAmb IAmb 00 43 47.8
comp=Z,131nm,1.5s
WBO Williamsburg 34.56 29 IAmb IAmb 00 43 45.7
comp=Z,44nm,0.8s
M65A Busby, Falmout 34.59 37 P P 00 43 40.0 -0.8
baz=231
LONY Lake Ozonia 34.60 30 P P 00 43 40.8 -0.1
baz=222,SNR=6.8
HRV Adam Dziewonsk 34.69 35 P P 00 43 41.3 -0.2
HRV IAmb IAmb 00 44 16.1
comp=Z,81nm,1.2s
HRV Adam Dziewonsk 34.69 35 P P 00 43 39.5 -2.0
baz=228
HRV Adam Dziewonsk 34.69 35 P P 00 43 41.3 -0.2
HRV pmax pmax
comp=Z,81nm,1.2s
J61A Chester 34.71 33 IAmb IAmb 00 43 45.6
comp=Z,74nm,1.1s
L64A Middleborough 34.72 37 IAmb IAmb 00 43 48.7
comp=Z,121nm,1.4s
G06A Carlson Farm, 34.76 331 IAmb IAmb 00 43 52.0
comp=Z,108nm,1.5s
NNA Nana 34.84 142 P P 00 43 44.4 +1.2
NNA IAmb IAmb 00 43 50.6
comp=Z,83nm,1.7s
NNA Nana 34.84 142 P P 00 43 44.4 +1.2
NNA pmax pmax
comp=Z,83nm,1.7s
NNA Nana 34.84 142 LR LR 00 55 28.5
comp=Z,13µm,18.5s,baz=306,slow=32
J01E Myrtle Point 34.92 326 IAmb IAmb 00 43 47.7
comp=Z,103nm,1.1s
I03D Drain, OR 34.98 327 IAmb IAmb 00 43 47.5
comp=Z,116nm,1.3s
G05A Wamic 35.09 331 IAmb IAmb 00 44 01.0
comp=Z,172nm,1.5s
H04D Lebanon 35.25 329 IAmb IAmb 00 44 00.7
comp=Z,96nm,1.2s
HOOD Mount Hood Mea 35.30 331 IAmb IAmb 00 43 55.2
comp=Z,70nm,0.8s
MXC Moxie City 35.64 333 IAmb IAmb 00 43 54.1
comp=Z,64nm,1.2s
LBNH Lisbon 35.66 33 P P 00 43 50.0 +0.1
baz=226,SNR=6.1
MNTQ Montreal, Queb 35.71 30 IAmb IAmb 00 43 55.9
comp=Z,77nm,0.9s
NEW Newport 35.75 338 P P 00 43 50.7 0.0
baz=147,SNR=14
NEW Newport 35.75 338 P P 00 43 52.5 +1.8
comp=Z,15nm,0.8s,baz=148,slow=9.2,SNR=23
NEW LR LR 00 59 53.6
comp=Z,30µm,18.4s,baz=52,slow=39
comp=Z,15nm,0.8s
C09A Chrisman Ranch 35.80 336 IAmb IAmb 00 43 54.6
comp=Z,74nm,1.2s
F04A Amboy 36.12 331 IAmb IAmb 00 44 01.4
comp=Z,111nm,1.5s
I63A Otisfield 36.24 34 IAmb IAmb 00 43 58.4
comp=Z,90nm,1.0s
H62A Milan 36.29 33 IAmb IAmb 00 43 59.0
comp=Z,50nm,0.8s
D05A Enumclaw 36.86 332 IAmb IAmb 00 44 03.8
comp=Z,95nm,0.9s
E03A Lebam 37.11 330 IAmb IAmb 00 44 06.2
comp=Z,176nm,1.2s
PKME Peaks-Kenny Pk 37.74 34 P P 00 44 07.4 -0.2
baz=229
NLWA Neilton Lookou 37.87 331 IAmb IAmb 00 44 16.9
comp=Z,135nm,1.3s
TEFE Tefe 38.25 118 eP P 00 44 12.3 0.0
EMMW East Machias 38.38 36 IAmb IAmb 00 44 16.2
comp=Z,63nm,0.9s
G65A Princeton 38.63 35 IAmb IAmb 00 44 18.5
comp=Z,75nm,0.8s
FFC Flin Flon 38.68 356 P P 00 44 15.4 -0.1
FFC IAmb IAmb 00 44 17.6
comp=Z,111nm,0.9s
FFC Flin Flon 38.68 356 P P 00 44 15.4 -0.1
FFC pmax pmax
comp=Z,111nm,0.9s
EDM Edmonton 38.99 345 IAmb IAmb 00 44 20.5
comp=Z,75nm,0.9s
D62A Allapoint, All 39.07 32 IAmb IAmb 00 44 40.0
comp=Z,100nm,1.2s
BOAV Boa Vista 39.25 106 P P 00 44 20.9 +0.1
BOAV Boa Vista 39.25 106 eP P 00 44 20.0 -0.8
CBB Campbell River 40.47 333 P P 00 44 33.2 +2.8
LMN Caledonia Moun 40.56 36 P P 00 44 31.9 +0.6
LMN IAmb IAmb 00 44 34.2
comp=Z,114nm,1.6s
HAL Halifax 40.58 38 P P 00 44 33.0 +1.6
HAL Halifax 40.58 38 P P 00 44 33.0 +1.6
HAL pmax pmax
comp=Z,40nm,1.1s
ETMB Extrema 40.60 127 P P 00 44 31.1 -0.8
ETMB IAmb IAmb 00 44 32.8
comp=Z,100nm,1.0s
ETMB Extrema 40.60 127 eP P 00 44 32.0 +0.1
BATG Bathurst New B 40.75 33 P P 00 44 32.9 +0.1
MACA Manacapuru-AM 41.49 114 P P 00 44 38.6 -0.7
MACA Manacapuru-AM 41.49 114 eP P 00 44 39.0 -0.3
SAML Samuel 42.45 123 P P 00 44 45.0 -2.1
SAML Samuel 42.45 123 P P 00 44 45.0 -2.1
SAML pmax pmax
comp=Z,32nm,1.0s
SAML Samuel 42.45 123 eP P 00 44 45.6 -1.5
SAML Samuel 42.45 123 eP P 00 44 44.7 -2.4
FCC Fort Churchill 42.70 3 IAmb IAmb 00 44 55.0
comp=Z,163nm,1.5s
BBB Bella Bella 43.23 333 P P 00 44 55.1 +2.3
comp=Z,10.0nm,0.9s,baz=139,slow=17,SNR=2.4
comp=Z,10.0nm,0.9s
LPAZ La Paz 43.58 136 P P 00 44 57.0 0.0
LPAZ La Paz 43.58 136 P P 00 44 57.0 0.0
GO01 Chusmiza 45.40 140 IAmb IAmb 00 45 13.6
comp=Z,61nm,1.1s
SCHQ Schefferville 45.50 25 P P 00 45 10.8 -0.3
comp=Z,19nm,0.9s,baz=221,slow=6.1,SNR=23
comp=Z,19nm,0.9s
DIB Davison Inlet, 45.87 332 IAmb IAmb 00 45 17.7
comp=Z,47nm,1.0s
ITTB Itaituba 46.42 112 eP P 00 45 17.9 -1.1
DRLN Deer Lake 46.56 36 IAmb IAmb 00 45 25.2
comp=Z,71nm,1.1s
PB07 IPOC Station P 46.56 143 IAmb IAmb 00 45 21.9
comp=Z,44nm,0.8s
MALB Monte Alegre 46.67 108 eP P 00 45 21.2 +0.3
U35K Hyder 46.67 336 P P 00 45 21.8 +1.5
baz=135
V35K Ketchikan 46.91 334 P P 00 45 23.4 +1.2
baz=133,SNR=5.4
VILB Vilhena 47.17 126 eP P 00 45 24.5 -0.2
T35M Bob Quinn 47.53 337 P P 00 45 28.9 +1.9
baz=136,SNR=12
CRAG Craig 47.64 334 P P 00 45 31.0 +3.1
CRAG Craig 47.64 334 P P 00 45 28.8 +1.0
baz=131
LVC Limon Verde 47.82 143 P P 00 45 31.3 +1.2
LVC IAmb IAmb 00 45 31.9
comp=Z,32nm,0.9s
LVC Limon Verde 47.82 143 P P 00 45 31.3 +1.2
LVC pmax pmax
comp=Z,32nm,1.0s
LVC Limon Verde 47.82 143 P P 00 45 29.2 -0.9
comp=Z,21nm,0.9s,baz=309,slow=5.7,SNR=15
comp=Z,21nm,0.9s
LVC Limon Verde 47.82 143 eP P 00 45 31.1 +1.0
YKA Yellowknife Ar 47.82 350 P P 00 45 28.6 -0.6
YKA Yellowknife Ar 47.82 350 P P 00 45 28.7 -0.4
comp=Z,27nm,0.9s,baz=156,slow=7.3,SNR=178
YKA PcP PcP 00 46 58.9 +1.0
comp=Z,3.7nm,0.9s,baz=157,slow=7.2,SNR=0.9
comp=Z,27nm,0.9s
FLDN Fort Liard 47.82 343 P P 00 45 31.4 +2.1
baz=146
KOTAN Kotaneelee Air 47.90 343 P P 00 45 30.7 +0.8
baz=145,SNR=7.5
WRAK Wrangell Islan 47.96 335 P P 00 45 31.3 +0.9
baz=133
NPGB Novo Progresso 48.00 115 eP P 00 45 30.3 -1.0
U33K Whale Pass 48.07 334 P P 00 45 33.2 +2.0
baz=132
MCPB Macapa, AP 48.12 105 eP P 00 45 32.4 +0.2
SIV San Ignacio 48.37 129 P P 00 45 33.3 -0.8
comp=Z,22nm,0.9s,baz=303,slow=8.8,SNR=59
comp=Z,22nm,0.9s
DLBC Dease Lake 48.50 338 P P 00 45 37.1 +2.5
baz=137,SNR=53
S34M Telegraph Cree 48.53 337 IAmb IAmb 00 45 38.6
comp=Z,43nm,1.4s
S34M Telegraph Cree 48.53 337 P P 00 45 37.2 +2.4
baz=135,SNR=8.3
PB14 IPOC Station P 48.57 146 IAmb IAmb 00 45 37.6
comp=Z,123nm,1.9s
PDRB Porto dos Gac 49.19 121 eP P 00 45 39.0 -1.4
WTLY Watson Lake, Y 49.33 340 P P 00 45 41.7 +0.8
baz=139,SNR=14
GO02 Miuanaco 49.44 146 IAmb IAmb 00 45 44.5
comp=Z,51nm,0.8s
BBSD Serra de San D 49.47 130 eP P 00 45 41.1 -1.4
PTLB Pontes e Lacer 49.49 127 eP P 00 45 41.5 -1.1
R33M Jennings River 49.53 338 IAmb IAmb 00 45 47.1
comp=Z,85nm,1.1s
R33M Jennings River 49.53 338 P P 00 45 44.3 +1.7
baz=136
CLDB Colider 49.56 120 eP P 00 45 42.1 -1.2
S32K Killisnoo 49.57 335 P P 00 45 42.6 -0.1
baz=131
SIT Sitka 49.61 334 P P 00 45 42.9 -0.1
baz=130
Q32M Nakina River 49.69 337 IAmb IAmb 00 45 47.9
comp=Z,79nm,1.4s
Q32M Nakina River 49.69 337 P P 00 45 46.8 +2.9
baz=135
R32K Eaglecrest 50.08 336 P P 00 45 45.9 -0.7
baz=132
TGTN Hyland Airport 50.26 342 P P 00 45 50.5 +2.5
baz=141,SNR=55
WRGLY Wrigley 50.33 345 IAmb IAmb 00 45 51.3
comp=Z,60nm,0.9s
WRGLY Wrigley 50.33 345 P P 00 45 48.4 0.0
baz=147,SNR=12
S31K Pelican 50.57 335 P P 00 45 52.2 +1.9
baz=130
P32M Atlin 50.67 337 IAmb IAmb 00 45 55.1
comp=Z,83nm,1.1s
P32M Atlin 50.67 337 P P 00 45 53.3 +2.2
baz=133,SNR=30
BBRB Robore, Bolivi 50.75 131 eP P 00 45 50.4 -1.8
P33M Teslin, Yukon 50.77 338 IAmb IAmb 00 46 00.3
comp=Z,92nm,1.5s
P33M Teslin, Yukon 50.77 338 P P 00 45 54.6 +2.7
baz=135,SNR=28
AC02 Maricunga 51.02 146 IAmb IAmb 00 45 57.1
comp=Z,38nm,0.8s
SKAG Skagway 51.19 337 IAmb IAmb 00 46 03.1
comp=Z,101nm,1.8s
SKAG Skagway 51.19 337 P P 00 45 57.8 +2.9
SKAG Skagway 51.19 337 P P 00 45 57.1 +2.2
baz=131,SNR=6.6
N32M Quiet Lake 51.53 339 P P 00 46 00.6 +3.1
baz=135
FRB Frobisher Bay 51.74 16 P P 00 45 59.6 +0.6
comp=Z,32nm,0.9s,baz=219,slow=7.7,SNR=59
comp=Z,32nm,0.9s
WHY Whitehorse 51.83 338 P P 00 46 01.9 +2.1
baz=133,SNR=21
LCO Las Campanas 51.99 149 P P 00 46 02.5 +0.9
LCO Las Campanas 51.99 149 P P 00 46 02.5 +0.9
LCO pmax pmax
comp=Z,33nm,1.0s
MMPY Sheldon Lake, 52.01 341 P P 00 46 03.2 +2.1
baz=138,SNR=85
AC05 El Transito 52.05 149 IAmb IAmb 00 46 03.8
comp=Z,39nm,0.8s
P29M Windy Craggy 52.23 336 P P 00 46 05.6 +2.8
baz=129
P30M Million Dollar 52.24 336 P P 00 46 06.2 +3.3
baz=130
O30N Mendenhall 52.34 337 IAmb IAmb 00 46 07.8
comp=Z,65nm,1.1s
O30N Mendenhall 52.34 337 P P 00 46 06.5 +2.9
baz=131,SNR=22
FARO Faro, Yukon 52.39 340 IAmb IAmb 00 46 07.5
comp=Z,48nm,1.0s
FARO Faro, Yukon 52.39 340 P P 00 46 05.8 +1.9
baz=135,SNR=42
SALV Santo Antonio 52.42 125 eP P 00 46 04.0 -0.7
H03N2 Juan Fernandez 52.48 160 T T 01 42 24.8
baz=338,slow=77,SNR=5040
H03N1 Juan Fernandez 52.49 160 T T 01 42 26.4
baz=338,slow=77
H03N3 Juan Fernandez 52.50 160 T T 01 42 25.0
baz=338,slow=77,SNR=6857
TMAB Tom-Au,PA,Br 52.54 106 eP P 00 46 06.5 +0.8
M31M Drury Creek, Y 52.72 340 P P 00 46 08.4 +2.0
baz=134,SNR=19
HYT Haines Junctio 52.90 337 IAmb IAmb 00 46 12.5
comp=Z,117nm,1.3s
HYT Haines Junctio 52.90 337 P P 00 46 10.3 +2.4
baz=130,SNR=26
PNL Peninsula 52.92 335 P P 00 46 10.3 +2.4
PNL Peninsula 52.92 335 P P 00 46 10.5 +2.6
baz=127,SNR=6.5
O29M Mount Kennedy 52.98 336 IAmb IAmb 00 46 12.5
comp=Z,59nm,1.1s
O29M Mount Kennedy 52.98 336 P P 00 46 10.1 +1.7
baz=128
N30M Aishikik Lake 53.16 338 IAmb IAmb 00 46 13.3
comp=Z,52nm,1.1s
N30M Aishikik Lake 53.16 338 P P 00 46 11.4 +1.7
baz=131
BCPM Bancas Point 53.19 335 IAmb IAmb 00 46 19.7
comp=Z,110nm,1.4s
YUK6 Outpost Mounta 53.30 337 P P 00 46 13.5 +2.6
baz=129,SNR=16
CO03 El Pedregal 53.51 151 IAmb IAmb 00 46 14.2
comp=Z,38nm,0.9s
PINM Pinnacle 53.52 335 P P 00 46 15.5 +3.1
baz=126,SNR=10
YUK4 Talbot Arm 53.66 337 P P 00 46 16.3 +2.7
baz=129,SNR=23
M30M Minto, Yukon 53.79 339 P P 00 46 16.3 +2.0
baz=132,SNR=19
SNDB Serra Nova Dou 53.91 118 eP P 00 46 15.4 -0.3
YUK8 Steele Glacier 54.05 337 P P 00 46 18.7 +2.3
baz=128,SNR=28
TABL Table Mountain 54.09 335 IAmb IAmb 00 46 28.3
comp=Z,99nm,1.3s
MAYO Mayo, Yukon 54.18 340 P P 00 46 19.1 +2.0
baz=133
LOGN Logan Glacier 54.26 336 IAmb IAmb 00 46 23.8
comp=Z,85nm,1.4s
MESA MESA 54.26 335 P P 00 46 20.6 +2.6
baz=125
M29M Somme Creek 54.29 338 IAmb IAmb 00 46 22.1
comp=Z,64nm,0.9s
M29M Somme Creek 54.29 338 P P 00 46 19.7 +1.7
baz=130
BDQN Bodoquena, MS 54.35 131 eP P 00 46 17.7 -1.2
CTG Chitna Glacier 54.47 336 P P 00 46 22.6 +3.3
baz=126,SNR=8.9
L29M L29M 54.61 339 P P 00 46 21.7 +1.5
baz=130
YUK3 Moose Creek 54.61 337 P P 00 46 22.6 +2.1
baz=127,SNR=27
ISLE Juniper Island 54.66 335 IAmb IAmb 00 46 32.3
comp=Z,65nm,1.2s
VA06 Catapilco 54.68 152 IAmb IAmb 00 46 22.1
comp=Z,30nm,0.9s
BGLC Bering Glacier 54.78 334 P P 00 46 23.8 +2.4
baz=123
K29M Barlow Dome 54.88 340 P P 00 46 24.8 +2.5
baz=131,SNR=36
TGL Tana Glacier 54.95 335 IAmb IAmb 00 46 26.8
comp=Z,67nm,1.1s
J30M Hart River 54.99 341 IAmb IAmb 00 46 32.0
comp=Z,101nm,1.7s
J30M Hart River 54.99 341 P P 00 46 25.2 +2.1
baz=133
CRQE Cirque 55.05 335 P P 00 46 26.5 +2.9
baz=124,SNR=13
CRQM Cirque 55.08 335 IAmb IAmb 00 46 27.6
comp=Z,59nm,1.1s
AQDB Aquidauana 55.14 130 eP P 00 46 23.5 -1.1
BVCY Beaver Creek 55.15 337 P P 00 46 26.6 +2.5
baz=127,SNR=7.7
KAIM Kayak Island 55.16 334 P P 00 46 25.8 +1.6
baz=122
VA03 San Esteban 55.19 152 IAmb IAmb 00 46 26.4
comp=Z,89nm,1.4s
HMT Hamilton 55.31 334 IAmb IAmb 00 46 29.5
comp=Z,63nm,1.1s
MCARA McCarthy VSAT 55.38 336 IAmb IAmb 00 46 30.1
comp=Z,77nm,1.0s
MCARA McCarthy VSAT 55.38 336 P P 00 46 28.7 +3.0
baz=124,SNR=23
ARAG Araguaiana, MT 55.41 123 eP P 00 46 25.8 -0.9
I30M Mount Dempster 55.45 341 IAmb IAmb 00 46 36.6
comp=Z,38nm,1.1s
I30M Mount Dempster 55.45 341 P P 00 46 27.5 +1.1
baz=133
VRDI Verde Repeater 55.47 335 IAmb IAmb 00 46 29.8
comp=Z,54nm,1.2s
M27K Edge Creek, AK 55.50 337 P P 00 46 29.2 +2.5
baz=126,SNR=17
RAGM Ragged Mountai 55.51 334 IAmb IAmb 00 46 30.9
comp=Z,54nm,1.0s
J29N Klondike Camp 55.52 340 P P 00 46 28.0 +1.2
baz=131
DAWY Dawson 55.66 339 IAmb IAmb 00 46 34.8
comp=Z,122nm,2.0s
DAWY Dawson 55.66 339 P P 00 46 28.7 +0.9
baz=130,SNR=17
SMTB Santa Maria do 55.66 113 eP P 00 46 28.2 -0.2
C36M Paulatuk 55.69 349 P P 00 46 28.0 +0.2
baz=149,SNR=14
GLB Gilahina Butte 55.73 335 IAmb IAmb 00 46 32.3
comp=Z,52nm,1.0s
BMRM Bremner River 55.79 335 P P 00 46 31.5 +2.7
baz=122,SNR=16
TICA Tres Isletas 55.81 139 eP P 00 46 29.6 +0.3
ANTJ Antonio Joao (55.86 131 eP P 00 46 28.8 -1.0
BCAR Beaver Creek A 55.88 338 P P 00 46 29.7 +0.3
L27K Beaver Creek, 55.90 338 IAmb IAmb 00 46 33.2
comp=Z,60nm,1.1s
L27K Beaver Creek, 55.90 338 P P 00 46 32.0 +2.5
baz=126
M26K Nabesna, AK 55.95 337 IAmb IAmb 00 46 33.7
comp=Z,57nm,1.1s
M26K Nabesna, AK 55.95 337 P P 00 46 32.4 +2.5
baz=125
EYAK Cordova Ski Ar 56.05 334 P P 00 46 32.9 +2.3
EYAK Cordova Ski Ar 56.05 334 P P 00 46 32.4 +1.8
baz=121,SNR=8.8
G31M Satah River 56.06 344 P P 00 46 31.2 +0.7
baz=137
ESFA Espinillo Form 56.06 136 eP P 00 46 30.8 -0.4
MT13 San Alfonso 56.13 152 IAmb IAmb 00 46 39.4
comp=Z,125nm,1.9s
N25K Chitina, Valde 56.13 335 IAmb IAmb 00 46 35.5
comp=Z,50nm,1.1s
N25K Chitina, Valde 56.13 335 P P 00 46 34.1 +2.8
baz=123,SNR=14
F31M Tsiigehtchic 56.30 344 IAmb IAmb 00 46 34.5
comp=Z,59nm,1.1s
F31M Tsiigehtchic 56.30 344 P P 00 46 33.7 +1.5
baz=137,SNR=45
EPYK Eagle Plains 56.35 342 IAmb IAmb 00 46 37.0
comp=Z,124nm,1.9s
EPYK Eagle Plains 56.35 342 P P 00 46 34.5 +1.8
baz=134,SNR=9.2
L26K Log Cabin Wild 56.44 337 IAmb IAmb 00 46 37.0
comp=Z,44nm,1.1s
L26K Log Cabin Wild 56.44 337 P P 00 46 35.1 +1.7
baz=125,SNR=24
P23K Montague Islan 56.49 333 P P 00 46 35.0 +1.3
baz=119
VACA Villa Angela C 56.50 140 eP P 00 46 34.5 +0.3
MENT Mentasta 56.53 337 P P 00 46 35.7 +1.7
K27K Chicken 56.56 338 P P 00 46 36.7 +2.5

baz=127,SNR=96
KLU Klutina 56.61 335 IAmb IAmb 00 46 38.5
comp=Z,66nm,1.1s
KLU Klutina 56.61 335 P **P** **00 46 37.5 +2.8**
baz=121,SNR=23
RPRD Ribas do Rio P 56.63 128 *eP* **P** **00 46 34.6 -0.7**
G30M tAoh Zraii Nji 56.64 343 P **P** **00 46 36.1 +1.4**
baz=134
EGAK Eagle 56.70 339 IAmb IAmb 00 46 37.7
comp=Z,38nm,0.9s
EGAK Eagle 56.70 339 P **P** **00 46 36.4 +1.3**
baz=128,SNR=34
I28M Miner Creek 56.72 340 IAmb IAmb 00 46 41.2
comp=Z,55nm,1.6s
I28M Miner Creek 56.72 340 P **P** **00 46 36.3 +0.8**
baz=130
H29M Whitestone 56.74 342 IAmb IAmb 00 46 38.2
comp=Z,43nm,0.9s
H29M Whitestone 56.74 342 P **P** **00 46 36.6 +1.2**
baz=132
HARP HAARP 56.78 336 P **P** **00 46 37.8 +1.9**
baz=122,SNR=18
INK Inuvik 56.89 345 P **P** **00 46 37.1 +0.7**
baz=138,SNR=116
F30M Barrier River 56.96 344 P **P** **00 46 38.2 +1.2**
baz=135
M24K Tolsona, Glenn 57.03 335 P **P** **00 46 39.9 +2.2**
baz=121,SNR=8.6
IVI Ivigtut 57.20 26 *eP* **P** **00 46 39.6 +0.9**
PAX Paxson 57.21 336 P **P** **00 46 39.8 +0.8**
baz=122,SNR=33
SCRK Sand Creek 57.22 338 P **P** **00 46 40.5 +1.5**
SCRK IAmb IAmb 00 46 46.9
comp=Z,72nm,1.2s
SCRK Sand Creek 57.22 338 P **P** **00 46 40.2 +1.2**
baz=124,SNR=45
ML02 Panimavida 57.36 154 IAmb IAmb 00 46 41.3
comp=Z,40nm,1.0s
SCM Sheep Creek Mo 57.36 335 P **P** **00 46 41.9 +1.9**
baz=120,SNR=7.2
I27K Kandik River 57.37 340 P **P** **00 46 41.3 +1.4**
baz=128
J26L Joseph Creek 57.37 338 P **P** **00 46 41.6 +1.6**
baz=125
SEW Seward 57.45 332 P **P** **00 46 42.1 +1.6**
baz=117,SNR=5.2
M23K Glacier View 57.51 335 P **P** **00 46 42.2 +1.2**
baz=119
KNK Knik Glacier 57.63 334 IAmb IAmb 00 46 45.0
comp=Z,54nm,1.2s
KNK Knik Glacier 57.63 334 P **P** **00 46 44.1 +2.3**
baz=118,SNR=12
I26K Coal Creek Min 57.70 339 IAmb IAmb 00 46 45.1
comp=Z,54nm,1.4s
I26K Coal Creek Min 57.70 339 P **P** **00 46 43.6 +1.4**
baz=126,SNR=19
H27K Steamboat Moun 57.73 341 P **P** **00 46 44.1 +1.7**
baz=128
O22K Cooper Landing 57.74 333 P **P** **00 46 44.4 +1.8**
baz=117
CPUP Villa Florida 57.76 136 P **P** **00 46 41.9 -1.3**
comp=Z,6.5nm,0.7s,baz=330,slow=7.9,SNR=17
comp=Z,6.5nm,0.7s
CPUP Villa Florida 57.76 136 *eP* **P** **00 46 42.3 -0.8**
SML Sawmill 57.77 334 IAmb IAmb 00 46 45.9
comp=Z,74nm,1.2s
SML Sawmill 57.77 334 P **P** **00 46 45.0 +2.2**
baz=119,SNR=12
K24K Donnelly Dome 57.78 337 P **P** **00 46 44.6 +1.7**
baz=123,SNR=16
BRSE Bradley Lake S 57.88 332 P **P** **00 46 44.8 +1.2**
baz=115,SNR=7.2
WAT6 Susitna Watana 57.91 335 P **P** **00 46 45.2 +1.3**
baz=120,SNR=37
BRLK Bradley Lake 57.95 332 IAmb IAmb 00 46 47.1
comp=Z,45nm,1.0s
GHO Glory Hole Cre 58.00 334 IAmb IAmb 00 46 55.9
comp=Z,62nm,1.0s
PMR Palmer 58.00 334 IAmb IAmb 00 46 47.4
comp=Z,42nm,1.0s
PMR Palmer 58.00 334 P **P** **00 46 45.7 +1.3**
PMR Palmer 58.00 334 P **P** **00 46 45.7 +1.3**
baz=116,SNR=15
DHY Denali Highway 58.01 336 P **P** **00 46 46.2 +1.6**
baz=120,SNR=11
RC01 Rabbit Creek A 58.02 333 IAmb IAmb 00 46 51.8
comp=Z,48nm,1.0s
RC01 Rabbit Creek A 58.02 333 P **P** **00 46 45.8 +1.3**
baz=117,SNR=14
J25K Salcha River, 58.08 338 IAmb IAmb 00 46 52.6
comp=Z,110nm,1.6s
J25K Salcha River, 58.08 338 P **P** **00 46 46.9 +1.9**
baz=123
E29M Blow River 58.08 344 IAmb IAmb 00 46 47.7
comp=Z,74nm,1.1s
E29M Blow River 58.08 344 P **P** **00 46 46.3 +1.4**
baz=133
OHAK Old Harbor 58.10 328 P **P** **00 46 45.4 +0.3**
baz=111
F28M Old Crow 58.11 342 P **P** **00 46 46.2 +1.1**
baz=131,SNR=102
A36M Sachs Harbour 58.16 350 P **P** **00 46 46.5 +1.1**
baz=149,SNR=82
WAT1 Susitna Watana 58.35 335 P **P** **00 46 49.1 +2.2**
baz=119
NRS Narsarsuaq 58.36 27 *i* P **P** **00 46 47.1 +0.2**
NRS IAmb IAmb 00 46 48.1
comp=Z,67nm,0.9s
M22K Willow 58.49 334 P **P** **00 46 50.0 +2.2**
baz=117,SNR=9.0
BDFB Brasilia 58.49 120 IAmb IAmb 00 46 49.7
comp=Z,29nm,0.9s
BDFB Brasilia 58.49 120 P **P** **00 46 48.6 -0.1**
comp=Z,19nm,0.8s,baz=294,slow=8.0,SNR=37
comp=Z,19nm,0.8s
CAPN Captain Cook N 58.50 333 P **P** **00 46 50.7 +2.9**
baz=115
HDA Harding Lake 58.54 337 IAmb IAmb 00 46 50.0
comp=Z,55nm,1.2s
HDA Harding Lake 58.54 337 P **P** **00 46 49.2 +1.1**
baz=122,SNR=27
SUA Susitna One 58.63 333 P **P** **00 46 50.6 +1.6**
baz=116,SNR=27
PRP Porcupine Dome 58.63 339 P **P** **00 46 50.1 +1.2**
baz=124,SNR=61
E28M Babbage River 58.67 343 IAmb IAmb 00 46 51.3
comp=Z,56nm,1.0s
E28M Babbage River 58.67 343 P **P** **00 46 50.1 +1.2**
baz=132
ILAR Eielson Array 58.71 338 P **P** **00 46 49.4 +0.1**
ILAR Eielson Array 58.71 338 P **P** **00 46 49.9 +0.6**
comp=Z,37nm,1.1s,baz=136,slow=4.9,SNR=157
ILAR LR LR 01 13 25.1
comp=Z,12µm,19.1s,baz=80,slow=37
comp=Z,37nm,1.1s
ITRB Iturama 58.75 126 *eP* **P** **00 46 50.0 -0.3**
TRCB Terra Rica 58.81 130 *eP* **P** **00 46 49.8 -0.9**
MCR1 Marechal Candi 58.81 132 *eP* **P** **00 46 50.2 -0.4**
CUT Chuliitna 58.85 334 P **P** **00 46 52.1 +1.8**
baz=117,SNR=12
O20K Slope Mountain 58.88 331 P **P** **00 46 51.8 +1.2**
baz=114
G26K Porcupine Rive 58.88 341 P **P** **00 46 51.9 +1.5**
baz=126
Q19K Cape Douglas, 58.91 330 P **P** **00 46 53.4 +2.5**
baz=112
MCK McKinley 58.95 336 P **P** **00 46 52.1 +1.1**
baz=119,SNR=34
CCB Clear Creek Bu 58.98 337 IAmb IAmb 00 46 57.9
comp=Z,78nm,1.7s
WRH Wood River Hil 59.00 337 IAmb IAmb 00 46 55.8
comp=Z,32nm,1.1s
ILSW Iliamna Southw 59.08 331 IAmb IAmb 00 46 58.9
comp=Z,40nm,1.1s
POKR Poker Plat Res 59.09 338 IAmb IAmb 00 46 54.7
comp=Z,58nm,1.1s
POKR Poker Plat Res 59.09 338 P **P** **00 46 54.0 +2.0**
baz=122,SNR=5.3
COLA College 59.12 338 P **P** **00 46 53.4 +1.3**
COLA IAmb IAmb 00 46 54.4
comp=Z,60nm,1.1s
COLA College 59.12 338 P **P** **00 46 52.9 +0.8**
COLA College 59.12 338 P **P** **00 46 53.9 +1.8**
baz=121
COLA College 59.12 338 P **P** **00 46 53.4 +1.3**
COLA pmax pmax
comp=Z,60nm,1.1s
PCMB Pacaembu 59.13 128 *eP* **P** **00 46 52.2 -0.6**

N20K Mount Spurr 59.15 333 P **P** **00 46 54.5 +1.9**
baz=115,SNR=14
SKT Skwentna 59.19 334 P **P** **00 46 53.8 +1.1**
baz=116,SNR=26
MDM Murphy Dome 59.30 338 IAmb IAmb 00 47 00.2
comp=Z,104nm,1.8s
TRF Thorofare Moun 59.34 336 P **P** **00 46 55.2 +1.3**
baz=118,SNR=56
SFJD Kangerlussuaq 59.37 20 P **P** **00 46 54.1 +0.3**
SFJD IAmb IAmb 00 46 55.6
comp=Z,57nm,1.0s
SFJD Kangerlussuaq 59.37 20 P **P** **00 46 54.1 +0.3**
SFJD pmax pmax
comp=Z,57nm,1.0s
SFJD Kangerlussuaq 59.37 20 *i* P **P** **00 46 53.3 -0.5**
SFJD IAmb IAmb 00 46 55.2
comp=Z,50nm,0.9s
BMAR Burnt Mountain 59.41 341 P **P** **00 46 54.6 +0.4**
NEA2 Nenana 59.42 337 P **P** **00 46 56.0 +1.7**
baz=120,SNR=11
F26K Sheenjek River 59.44 341 P **P** **00 46 55.5 +1.1**
baz=126
D27M Malcolm River 59.48 344 IAmb IAmb 00 46 57.4
comp=Z,46nm,1.1s
D27M Malcolm River 59.48 344 P **P** **00 46 56.3 +1.6**
baz=130
IPMB Ipameri, GO 59.53 123 *eP* **P** **00 46 55.4 -0.4**
SDBA SÃO DESIDERIO 59.60 115 *eP* **P** **00 46 56.0 -0.3**
H24K Nooster Dome 59.63 339 P **P** **00 46 57.6 +1.9**
baz=121
O19K Port Alsworth 59.71 331 IAmb IAmb 00 46 58.5
comp=Z,44nm,1.1s
O19K Port Alsworth 59.71 331 P **P** **00 46 57.3 +1.0**
baz=112
Q17K Contact Creek 59.77 329 P **P** **00 46 58.3 +1.4**
baz=109,SNR=5.6
I23K Minto, Yukon-K 59.81 338 P **P** **00 46 58.6 +1.8**
baz=120,SNR=62
M20K Styx River 59.84 333 IAmb IAmb 00 47 00.1
comp=Z,58nm,1.1s
M20K Styx River 59.84 333 P **P** **00 46 58.4 +1.1**
baz=114
P18K Big Mountain, 59.84 330 P **P** **00 46 58.7 +1.4**
baz=111,SNR=8.9
F25K Christian Rive 59.84 341 P **P** **00 46 58.5 +1.4**
baz=125,SNR=38
PPLA Purkeypile 59.87 335 P **P** **00 46 58.8 +1.3**
baz=116,SNR=17
BPAW Bear Paw Mtn. 59.92 336 P **P** **00 46 58.9 +1.2**
baz=117,SNR=29
G24K Hadweenzic Riv 59.95 340 IAmb IAmb 00 47 00.9
comp=Z,66nm,1.1s
G24K Hadweenzic Riv 59.95 340 P **P** **00 46 59.5 +1.7**
baz=122,SNR=31
O18K Koktuh Hills 60.00 331 IAmb IAmb 00 47 00.8
comp=Z,47nm,1.1s
O18K Koktuh Hills 60.00 331 P **P** **00 46 59.7 +1.4**
baz=111,SNR=6.8
N19K Bonanza Creek 60.02 332 P **P** **00 47 00.1 +1.6**
baz=112
CAST Castle Rocks 60.05 335 P **P** **00 46 58.7 +0.1**
CAST Castle Rocks 60.05 335 P **P** **00 47 00.1 +1.4**
baz=116,SNR=56
E25K Arctic Village 60.12 341 IAmb IAmb 00 47 01.4
comp=Z,33nm,1.1s
E25K Arctic Village 60.12 341 P **P** **00 47 00.3 +1.2**
baz=125,SNR=22
MLY Manley 60.26 337 P **P** **00 47 01.0 +0.9**
baz=118,SNR=72
LDASE Londrina, Braz 60.28 130 *eP* **P** **00 46 59.9 -0.9**
Q16K King Salmon 60.29 329 P **P** **00 47 01.8 +1.6**
baz=109
CHUM Lake Minchumin 60.35 336 P **P** **00 47 01.8 +1.3**
baz=116,SNR=8.6
P17K Kvichak River 60.36 330 P **P** **00 47 01.7 +1.0**
baz=109,SNR=6.1
M19K Big River Lodg 60.39 333 P **P** **00 47 02.4 +1.5**
baz=113
L20K Farewell, AK 60.40 334 P **P** **00 47 02.5 +1.4**
baz=114
R16K Pilot Point 60.41 328 P **P** **00 47 02.9 +1.8**
baz=107
FRBT Francisco Belt 60.44 133 *eP* **P** **00 47 01.4 -0.5**
ITQB Itaqui 60.47 139 P **P** **00 47 01.7 -0.2**
ITQB IAmb IAmb 00 47 02.4
comp=Z,33nm,1.0s
ITQB Itaqui 60.47 139 *eP* **P** **00 47 01.8 -0.2**
CHGN Chignik 60.48 326 P **P** **00 47 02.4 +0.8**
baz=106
F24K Squaw Lake 60.52 340 P **P** **00 47 04.0 +2.1**
baz=122
ILULI Ilulissat 60.52 17 *eP* **P** **00 47 02.1 +0.5**
ILULI IAmb IAmb 00 47 03.0
comp=Z,31nm,1.0s
DY2G Dye2 60.55 21 *i* P **P** **00 47 02.5 +0.3**
DY2G IAmb IAmb 00 47 04.1
comp=Z,70nm,0.8s
N18K Kilae Creek 60.61 331 IAmb IAmb 00 47 05.0
comp=Z,63nm,1.1s
N18K Kilae Creek 60.61 331 P **P** **00 47 03.9 +1.4**
baz=111
SVW2 Sparrevohn 60.62 332 P **P** **00 47 02.1 -0.4**
SVW2 IAmb IAmb 00 47 04.7
comp=Z,43nm,1.0s
SVW2 Sparrevohn 60.62 332 P **P** **00 47 03.1 +0.6**
GO06 Curarrehue 60.64 157 P **P** **00 47 03.2 +0.2**
L19K White Mountain 60.70 333 P **P** **00 47 04.2 +1.0**
baz=112,SNR=15
CRSM Crissiumal (Br 60.73 135 *eP* **P** **00 47 02.8 -0.9**
I21K Tanana 60.80 337 P **P** **00 47 04.6 +1.0**
baz=117
G23K Bananza Creek 60.82 339 IAmb IAmb 00 47 06.7
comp=Z,47nm,1.1s
G23K Bananza Creek 60.82 339 P **P** **00 47 05.8 +1.9**
baz=120
K20K Telida 60.84 335 P **P** **00 47 04.9 +0.9**
baz=114
O17K Koliganek Bris 60.86 330 P **P** **00 47 05.7 +1.5**
baz=109
M18K Stony River 60.87 332 P **P** **00 47 05.2 +1.0**
baz=111
H22K Ishtalitna Cre 60.90 338 P **P** **00 47 05.8 +1.4**
baz=118
BB19B Bebedouro 60.93 126 *eP* **P** **00 47 04.9 -0.4**
LR05 Currie 61.01 157 P **P** **00 47 05.0 -0.4**
LR05 IAmb IAmb 00 47 06.5
comp=Z,46nm,1.5s
D25K Kavik River 61.05 342 P **P** **00 47 06.5 +1.0**
baz=125,SNR=57
P16K Nushagak River 61.06 329 P **P** **00 47 06.8 +1.3**
baz=108
UNIS Unistalda (Bra 61.07 137 *eP* **P** **00 47 06.1 +0.1**
UMMG Uummannaq 61.13 16 *i* P **P** **00 47 06.9 +1.0**
UMMG IAmb IAmb 00 47 15.5
comp=Z,84nm,1.5s
COLD Coldfoot 61.14 339 P **P** **00 47 08.5 +2.6**
baz=120,SNR=9.6
N17K Nushagak Hills 61.16 331 P **P** **00 47 07.9 +1.7**
baz=109
J20K Nowinta River 61.20 335 P **P** **00 47 07.1 +0.7**
baz=114
PMNB Patos De Minas 61.26 122 *eP* **P** **00 47 08.0 +0.3**
O16K Kokwok River B 61.29 330 P **P** **00 47 07.8 +0.7**
baz=108
H21K Melozitna Rive 61.32 337 IAmb IAmb 00 47 09.3
comp=Z,34nm,1.1s
H21K Melozitna Rive 61.32 337 P **P** **00 47 08.1 +0.9**
baz=116
JANB Januaria 61.33 118 *eP* **P** **00 47 08.4 +0.3**
E23K Chandalar 61.37 340 P **P** **00 47 09.9 +2.3**
baz=121
NUUG Nuugaatsiaq 61.40 15 *i* P **P** **00 47 08.4 +0.8**
NUUG IAmb IAmb 00 47 09.5
comp=Z,654nm,2.9s
FRTB Fartura 61.41 129 *eP* **P** **00 47 08.0 -0.6**
G22K Bettles 61.44 339 P **P** **00 47 08.6 +0.7**
baz=118
TTA Tatalina 61.48 334 P **P** **00 47 08.6 +0.1**
TTA IAmb IAmb 00 47 10.4
comp=Z,35nm,1.0s
TTA Tatalina 61.48 334 P **P** **00 47 08.7 +0.3**
TTA Tatalina 61.48 334 P **P** **00 47 08.5 +0.1**
baz=112,SNR=20
TTA Tatalina 61.48 334 P **P** **00 47 08.6 +0.1**
TTA pmax pmax
comp=Z,35nm,1.0s
L18K Granite Mounta 61.52 333 IAmb IAmb 00 47 15.4

comp=Z,68nm,1.2s
L18K Granite Mounta 61.52 333 P **P** **00 47 09.5 +1.0**
baz=111
UPNV Upernavik 61.55 13 *eP* **P** **00 47 09.8 +1.1**
UPNV IAmb IAmb 00 47 10.3
comp=Z,26nm,0.8s
M17K Holitna River 61.56 332 IAmb IAmb 00 47 11.4
comp=Z,60nm,1.1s
M17K Holitna River 61.56 332 P **P** **00 47 10.1 +1.2**
baz=110
I20K Naaghedeneel 61.59 336 P **P** **00 47 10.2 +1.2**
baz=114
TOLK Toolik Lake Re 61.65 341 IAmb IAmb 00 47 12.2
comp=Z,51nm,1.1s
TOLK Toolik Lake Re 61.65 341 P **P** **00 47 10.3 +0.8**
baz=121,SNR=39
D24K Happy Valley 61.69 342 IAmb IAmb 00 47 16.6
comp=Z,56nm,1.2s
D24K Happy Valley 61.69 342 P **P** **00 47 11.3 +1.7**
baz=122
J19K Poorman 61.72 335 P **P** **00 47 10.6 +0.7**
baz=113
IMAR Indian Mountai 61.81 337 P **P** **00 47 11.2 +0.7**
RODS Rosario do Sul 61.84 138 *eP* **P** **00 47 11.1 -0.1**
ITAB Concordia 61.88 134 *eP* **P** **00 47 10.9 -0.6**
N16K Nishlik Lake 61.88 331 P **P** **00 47 11.5 +0.4**
baz=108
G21K Allakaket 61.96 338 IAmb IAmb 00 47 18.3
comp=Z,43nm,1.2s
G21K Allakaket 61.96 338 P **P** **00 47 12.7 +1.2**
baz=116
C24K Franklin Bluff 61.96 342 P **P** **00 47 12.6 +1.2**
baz=122
J18K Innoko River 61.98 334 IAmb IAmb 00 47 18.1
comp=Z,59nm,1.4s
J18K Innoko River 61.98 334 P **P** **00 47 12.6 +0.9**
baz=118
PLCA Paso Flores 61.99 157 IAmb IAmb 00 47 13.5
comp=Z,41nm,1.1s
PLCA Paso Flores 61.99 157 P **P** **00 47 12.1 0.0**
comp=Z,17nm,0.9s,baz=331,slow=7.9,SNR=30
comp=Z,17nm,0.9s
PLCA Paso Flores 61.99 157 *eP* **P** **00 47 12.3 +0.2**
O15K Ungalikthiuk R 62.01 329 P **P** **00 47 12.7 +0.7**
baz=106
H20K Anotleneega Mo 62.03 337 P **P** **00 47 13.2 +1.1**
baz=114
M16K Timber Creek 62.14 331 IAmb IAmb 00 47 16.3
comp=Z,37nm,0.9s
M16K Timber Creek 62.14 331 P **P** **00 47 14.3 +1.5**
baz=108
D23K Nanushuk River 62.16 341 P **P** **00 47 14.5 +1.6**
baz=120
L17K Donlin 62.20 333 P **P** **00 47 14.1 +0.9**
baz=109
ALGR Alto Alegre (B 62.25 136 *eP* **P** **00 47 13.2 -0.9**
F21K Alatna River 62.26 339 P **P** **00 47 14.5 +0.9**
baz=116,SNR=67
TBOT Tacuaremb 62.28 140 *eP* **P** **00 47 14.0 -0.1**
K17K Iditarod 62.39 333 IAmb IAmb 00 47 16.4
comp=Z,51nm,1.1s
K17K Iditarod 62.39 333 P **P** **00 47 15.7 +1.2**
baz=109
N15K Kwethluk River 62.42 330 P **P** **00 47 16.7 +2.0**
baz=106
RCLB Rio Claro- Sao 62.45 126 *eP* **P** **00 47 15.4 -0.1**
L16K Owhat River 62.59 332 IAmb IAmb 00 47 22.8
comp=Z,54nm,1.2s
L16K Owhat River 62.59 332 P **P** **00 47 16.6 +0.8**
baz=108,SNR=14
H19K Roundabout Mou 62.64 336 IAmb IAmb 00 47 18.2
comp=Z,41nm,1.1s
H19K Roundabout Mou 62.64 336 P **P** **00 47 16.8 +0.7**
baz=113
LL01 San Ignacio de 62.75 159 IAmb IAmb 00 47 22.7
comp=Z,27nm,1.1s
D22K Ayikyak River 62.76 341 P **P** **00 47 18.7 +1.9**
baz=118
ISOG Isortoq, Green 62.82 24 *i* P **P** **00 47 17.4 +0.1**
ISOG IAmb IAmb 00 47 19.1
comp=Z,37nm,0.8s
M15K Kasigluk River 62.85 331 P **P** **00 47 18.8 +1.2**
baz=106
FALS False Pass 62.91 324 P **P** **00 47 20.1 +2.0**
baz=101
J17K VABM Dome 62.95 334 P **P** **00 47 19.1 +0.9**
baz=109
E21K Killik River 62.98 340 P **P** **00 47 19.4 +1.1**
baz=116
F20K Avaraart Lake 62.98 338 IAmb IAmb 00 47 21.1
comp=Z,41nm,1.1s
F20K Avaraart Lake 62.98 338 P **P** **00 47 19.3 +1.0**
baz=114,SNR=30
CPSB Cacapava Do Su 63.02 137 *eP* **P** **00 47 18.5 -0.6**
G19K Purcell Mounta 63.12 337 P **P** **00 47 19.7 +0.4**
baz=112,SNR=56
N14K Kuskokwak Cree 63.12 330 P **P** **00 47 19.8 +0.5**
baz=105
SPB Sao Paulo 63.17 128 *eP* **P** **00 47 20.3 +0.1**
H18K Honhosa River 63.25 336 IAmb IAmb 00 47 22.7
comp=Z,22nm,1.1s
H18K Honhosa River 63.25 336 P **P** **00 47 21.1 +0.9**
baz=110
ANGG Ammassalik, Gr 63.36 24 *i* P **P** **00 47 20.8 -0.1**
ANGG IAmb IAmb 00 47 26.1
comp=Z,40nm,0.9s
DIAM Diamantina, MG 63.41 120 *eP* **P** **00 47 22.1 0.0**
M14K Bethel 63.47 330 P **P** **00 47 22.6 +1.0**
baz=105,SNR=6.5
L15K Ungalak Mounta 63.50 332 P **P** **00 47 23.5 +1.7**
baz=106
C21K Knifeblade Rid 63.56 340 P **P** **00 47 23.8 +1.6**
baz=116
TRQA Tornquist 63.56 149 P **P** **00 47 22.7 +0.1**
TRQA IAmb IAmb 00 47 23.6
comp=Z,67nm,1.5s
TRQA Tornquist 63.56 149 P **P** **00 47 22.7 +0.1**
TRQA pmax pmax
comp=Z,67nm,1.5s
J16K Anvik River 63.57 333 IAmb IAmb 00 47 25.3
comp=Z,46nm,1.1s
J16K Anvik River 63.57 333 P **P** **00 47 23.4 +1.2**
baz=107,SNR=15
G18K Tagagawik 63.63 336 P **P** **00 47 24.3 +1.6**
baz=111
E20K Nigu River 63.64 339 P **P** **00 47 24.3 +1.6**
baz=114
F19K Shaleruckik Mo 63.64 338 IAmb IAmb 00 47 24.6
comp=Z,47nm,1.1s
F19K Shaleruckik Mo 63.64 338 P **P** **00 47 23.8 +1.2**
baz=112
LL02 Futaleuf 63.66 159 IAmb IAmb 00 47 24.7
comp=Z,28nm,1.2s
PET01 Itanhaem-SP 63.67 128 *eP* **P** **00 47 23.4 -0.1**
K15K Wolf Creek Mou 63.69 332 P **P** **00 47 25.0 +1.9**
baz=106
B21K Ikpikpuk River 63.71 341 IAmb IAmb 00 47 25.5
comp=Z,40nm,1.1s
B21K Ikpikpuk River 63.71 341 P **P** **00 47 24.2 +1.2**
baz=116
I17K Unalakleet 63.79 334 IAmb IAmb 00 48 11.4
comp=Z,35nm,1.3s
I17K Unalakleet 63.79 334 P **P** **00 47 26.3 +2.6**
baz=108,SNR=7.9
H17K Granite Mounta 63.80 335 P **P** **00 47 25.7 +1.9**
baz=109
PLTB Pedras Altas 63.80 138 IAmb IAmb 00 47 24.6
comp=Z,28nm,0.9s
PLTB Pedras Altas 63.80 138 *eP* **P** **00 47 23.5 -0.7**
BSCB Bom Sucesso 63.86 124 *eP* **P** **00 47 25.1 +0.1**
L14K Kuka Creek 63.96 331 IAmb IAmb 00 47 33.0
comp=Z,38nm,0.9s
L14K Kuka Creek 63.96 331 P **P** **00 47 25.8 +1.0**
baz=104
D20K Etivluk River 63.97 340 P **P** **00 47 25.7 +0.8**
baz=114
ICESG Greenland Ices 63.99 20 *i* P **P** **00 47 26.0 +0.6**
ICESG IAmb IAmb 00 47 27.6
comp=Z,89nm,1.0s
CNLB Canela 64.05 135 *eP* **P** **00 47 25.5 -0.5**
M13K Dall Lake 64.05 330 P **P** **00 47 25.9 +0.5**
baz=104
F18K Selawik 64.25 337 P **P** **00 47 28.4 +1.7**
baz=110,SNR=10
G17K Kiwalik Mounta 64.28 336 P **P** **00 47 28.3 +1.4**
baz=108
D19K Kuna River 64.39 339 IAmb IAmb 00 47 30.0

	comp=Z,44nm,1.1s							
D19K	**Kuna River**	**64.39**	**339**	P		**P**		**00 47 28.5 +0.8**
	baz=112							
UNV	**Unalaska Valle**	**64.54**	**322**	P		P		00 47 35.0 +6.2
UNV	**Unalaska Valle**	**64.54**	**322**	P		**P**		**00 47 29.5 +0.7**
	baz=98							
H16K	**Elim**	**64.66**	**335**	P		**P**		**00 47 31.1 +1.8**
	baz=106,SNR=14							
J14K	**Nanvaranak Lak**	**64.71**	**332**	P		**P**		**00 47 31.7 +2.0**
	baz=104							
F17K	**Baldwin Pennin**	**64.81**	**337**	IAmb		IAmb		00 47 39.2
	comp=Z,37nm,1.1s							
F17K	**Baldwin Pennin**	**64.81**	**337**	P		**P**		**00 47 31.2 +0.9**
	baz=108							
G16K	**Koyuk River**	**64.92**	**335**	IAmb		IAmb		00 47 38.6
	comp=Z,54nm,1.1s							
G16K	**Koyuk River**	**64.92**	**335**	P		**P**		**00 47 33.5 +2.5**
	baz=107							
A21K	**Barrow**	**65.06**	**342**	P		**P**		**00 47 33.3 +1.4**
	baz=115,SNR=7.5							
C19K	**Lookout Ridge**	**65.11**	**340**	P		**P**		**00 47 33.9 +1.6**
	baz=111							
RCBR	**Riachuelo**	**65.11**	**104**	P		**P**		**00 47 34.0 +0.7**
RCBR	**Riachuelo**	**65.11**	**104**	P		**P**		**00 47 34.0 +0.7**
	comp=Z,19nm,1.1s,baz=235,slow=7.4,SNR=4.6							
	comp=Z,19nm,1.1s							
RCBR	**Riachuelo**	**65.11**	**104**	*e*P		**P**		**00 47 33.9 +0.7**
E17K	**Hotham Inlet**	**65.22**	**337**	P		**P**		**00 47 33.9 +0.9**
	baz=108,SNR=61							
G15K	**Niukluk**	**65.49**	**335**	P		**P**		**00 47 35.7 +0.9**
	baz=105							
C18K	**Utukok River**	**65.50**	**339**	IAmb		IAmb		00 47 36.9
	comp=Z,36nm,1.1s							
C18K	**Utukok River**	**65.50**	**339**	P		**P**		**00 47 35.4 +0.5**
	baz=109							
NEEM	**North Greenlan**	**65.64**	**10**	*i* P		**P**		**00 47 36.9 +0.9**
NEEM				IAmb		IAmb		00 47 38.3
	comp=Z,78nm,0.9s							
COYC	**Coyhaique**	**65.69**	**160**	P		**P**		**00 47 36.8 +0.6**
COYC				IAmb		IAmb		00 47 38.0
	comp=Z,28nm,0.9s							
SUMG	**Summit**	**65.81**	**17**	P		**P**		**00 47 38.3 +1.0**
SUMG	**Summit**	**65.81**	**17**	P		**P**		**00 47 38.3 +1.0**
SUMG				pmax		pmax		
	comp=Z,64nm,1.2s							
SUMG	**Summit**	**65.81**	**17**	*i* P		**P**		**00 47 37.0 -0.3**
SUMG				IAmb		IAmb		00 47 40.5
	comp=Z,71nm,1.2s							
D17K	**Noatak River**	**65.87**	**338**	P		**P**		**00 47 37.9 +0.6**
	baz=107							
GUA01	**Guaratinga, BA**	**65.88**	**117**	*e*P		**P**		**00 47 38.5 +0.4**
F15K	**North Star Dit**	**65.92**	**335**	P		**P**		**00 47 39.0 +1.4**
	baz=105							
ANM	**Nome**	**65.94**	**334**	IAmb		IAmb		00 47 45.1
	comp=Z,40nm,1.2s							
ANM	**Nome**	**65.94**	**334**	P		**P**		**00 47 38.6 +0.9**
	baz=104,SNR=6.4							
C17K	**DeLong Mountai**	**66.14**	**339**	P		**P**		**00 47 40.0 +1.1**
	baz=107							
DUB01	**Friburgo-RJ**	**66.34**	**123**	*e*P		**P**		**00 47 41.4 +0.4**
SOEG	**Soedalen**	**66.53**	**22**	*i* P		**P**		**00 47 41.8 +0.4**
SOEG				IAmb		IAmb		00 47 43.0
	comp=Z,81nm,1.3s							
F14K	**Arctic Creek**	**66.55**	**335**	P		**P**		**00 47 43.2 +1.6**
	baz=103							
RIB01	**Linhares ES**	**66.62**	**120**	*e*P		**P**		**00 47 42.6 -0.2**
ALF01	**Guarapari-ES**	**66.96**	**121**	*e*P		**P**		**00 47 45.5 +0.6**
TNA	**Tin City**	**67.21**	**335**	P		**P**		**00 47 46.7 +0.9**
	baz=102,SNR=8.4							
ABR01	**Abrolhos, BA**	**67.44**	**118**	*e*P		**P**		**00 47 49.2 +1.2**
GO08	**Villa O'Higgin**	**68.13**	**162**	P		**P**		**00 47 53.5 +1.8**
GO08				IAmb		IAmb		00 48 07.1
	comp=Z,34nm,1.4s							
BILL	**Bilibino**	**77.37**	**337**	P		**P**		**00 48 47.4 +0.9**
BILL				IAmb		IAmb		00 48 53.4
	comp=Z,40nm,1.3s							
BILL	**Bilibino**	**77.37**	**337**	*i* P		**P**		**00 48 45.6 -0.9**
BILL				pmax		pmax		
	comp=Z,37nm,1.2s							
KBS	**Kingsbay**	**78.05**	**11**	P		**P**		**00 48 53.2 +3.0**
KBS				IAmb		IAmb		00 48 56.4
	comp=Z,32nm,1.0s							
KBS	**Kingsbay**	**78.05**	**11**	*i* P		**P**		**00 48 50.5 +0.4**
KBS				pmax		pmax		
	comp=Z,102nm,2.3s							
KBS	**Kingsbay**	**78.05**	**11**	*e*P		**P**		**00 48 52.0 +1.9**
SPITS	**Spitsbergen Ar**	**79.17**	**11**	P		**P**		**00 48 57.7 +1.3**
	comp=Z,13nm,0.9s,baz=220,slow=6.6,SNR=5.8							
SPITS				LR		LR		01 26 22.7
	comp=Z,9µm,20.6s,baz=91,slow=38							
	comp=Z,13nm,0.9s							
PGAV	**Gavieira, Arco**	**79.18**	**49**	*e*P		**P**		**00 48 56.9 -0.3**
	comp=Z,515nm,1.7s							
PSBE	**So Bento**	**79.29**	**52**	*e*P		**P**		**00 48 58.0 +0.2**
	comp=Z,159nm,1.6s							
PCAS	**Casmilo, Conde**	**79.41**	**51**	*e*P		**P**		**00 48 58.6 +0.2**
	comp=Z,225nm,1.4s							
EKA	**Eskdalemuir Ar**	**79.61**	**35**	P		**P**		**00 48 59.0 -0.1**
	comp=Z,16nm,0.8s,baz=285,slow=5.5,SNR=18							
	comp=Z,16nm,0.8s							
POLO	**Lamas de Olo**	**79.65**	**50**	*e*P		**P**		**00 49 00.4 +0.6**
PVIS	**Viseu**	**79.72**	**51**	*e*P		**P**		**00 48 59.5 -0.6**
PVRL	**Vila Real**	**79.73**	**50**	*e*P		**P**		**00 49 00.5 +0.4**
	comp=Z,67nm,1.8s							
PNCL	**Nicolau / Gran**	**79.79**	**53**	*e*P		**P**		**00 49 00.7 +0.2**
PMTG	**Montargil**	**79.82**	**52**	*e*P		**P**		**00 48 59.8 -0.8**
	comp=Z,74nm,1.8s							
MORF	**Marmelete**	**79.87**	**54**	*e*P		**P**		**00 49 01.5 +0.5**
	comp=Z,191nm,1.6s							
MORF	**Marmelete**	**79.87**	**54**	*e*P		**P**		**00 49 01.4 +0.5**
MTE	**Manteigas**	**80.05**	**51**	*e*P		**P**		**00 49 01.7 -0.2**
	comp=Z,177nm,1.8s							
MTE	**Manteigas**	**80.05**	**51**	IAmb		IAmb		00 49 07.7
	comp=Z,32nm,0.8s							
MESJ	**Messejana**	**80.09**	**53**	*e*P		**P**		**00 49 02.5 +0.3**
MESJ	**Messejana**	**80.09**	**53**	*e*P		**P**		**00 49 02.4 +0.3**
EVO	**Evora**	**80.10**	**53**	*e*P		**P**		**00 49 01.8 -0.3**
	comp=Z,47nm,2.2s							
PCBR	**Castelo Branco**	**80.22**	**51**	*e*P		**P**		**00 49 02.5 -0.2**
	comp=Z,58nm,1.6s							
MVO	**Moncorvo**	**80.26**	**50**	*e*P		**P**		**00 49 03.1 +0.1**
PCVE	**Castro Verde**	**80.28**	**54**	*e*P		**P**		**00 49 03.2 +0.1**
PBEJ	**Beja**	**80.32**	**53**	*e*P		**P**		**00 49 03.4 +0.1**
	comp=Z,28nm,2.0s							
PBRG	**Braganca**	**80.33**	**49**	*e*P		**P**		**00 49 03.3 -0.1**
	comp=Z,53nm,1.7s							
PESTR	**Estremoz**	**80.35**	**52**	*e*P		**P**		**00 49 03.1 -0.4**
	comp=Z,455nm,1.6s							
PESTR	**Estremoz**	**80.35**	**52**	P		**P**		**00 49 04.0 +0.5**
PMRV	**Marv??o**	**80.37**	**52**	*e*P		**P**		**00 49 03.2 -0.4**
	comp=Z,484nm,1.4s							
PBDV	**Barranco-do-Ve**	**80.45**	**54**	*e*P		**P**		**00 49 04.5 +0.4**
	comp=Z,263nm,1.7s							
PVAQ	**Vaqueiros**	**80.58**	**54**	*e*P		**P**		**00 49 05.7 +1.0**
PBAR	**Barrancos**	**80.92**	**53**	*e*P		**P**		**00 49 06.5 -0.1**
	comp=Z,36nm,1.9s							
PAB	**San Pablo**	**82.63**	**51**	P		**P**		**00 49 16.0 +0.3**
PAB				IAmb		IAmb		00 49 22.0
	comp=Z,27nm,1.0s							
PAB	**San Pablo**	**82.63**	**51**	P		**P**		**00 49 16.0 +0.3**
PAB				pmax		pmax		
	comp=Z,27nm,1.0s							
ESDC	**Sonseca Array**	**82.89**	**51**	P		**P**		**00 49 16.6 -0.3**
ESDC	**Sonseca Array**	**82.89**	**51**	P		**P**		**00 49 16.5 -0.5**
	comp=Z,11nm,0.9s,baz=296,slow=4.9,SNR=49							
	comp=Z,11nm,0.9s							
MFF	**Saint Martin d**	**83.70**	**43**	*e*P		**P**		**00 49 21.3 +0.4**
MFF				pmax		pmax		
	comp=Z,18nm,1.2s							
SEY	**Seymchan**	**84.45**	**334**	*i* P		**P**		**00 49 21.5 -2.9**
SEY				pmax		pmax		
	comp=Z,32nm,1.6s							
LFF	**La Frestale**	**84.78**	**45**	*e*P		**P**		**00 49 26.8 +0.4**
LFF				pmax		pmax		
	comp=Z,20nm,0.8s							
KONO	**Kongsberg**	**84.82**	**29**	*i* P		**P**		**00 49 23.6 -2.7**
KONO				pmax		pmax		
	comp=Z,63nm,1.8s							
NB2	**NORSAR Subarra**	**85.00**	**27**	P		**P**		**00 49 28.3 +1.0**
	comp=Z,206nm,2.5s,baz=295,slow=5.1							
NB2	**NORSAR Subarra**	**85.00**	**27**	P		**P**		**00 49 28.3 +1.0**
	baz=295,slow=5.1							
NOA	**NORSAR Array B**	**85.00**	**27**	P		**P**		**00 49 27.8 +0.5**
	comp=Z,9.1nm,1.0s,baz=292,slow=5.0,SNR=11							
NOA				LR		LR		01 29 48.1
	comp=Z,2µm,18.5s,baz=50,slow=37							
	comp=Z,9.1nm,1.0s							
NC602	**NORSAR Array S**	**85.27**	**28**	IAmb		IAmb		00 50 25.2
	comp=Z,33nm,1.2s							
DOU	**Dourbes**	**85.62**	**39**	*d*P		**P**		**00 49 30.7 +0.1**
	comp=Z,14nm,1.1s							
PEA0B	**Petropavlovsk-**	**85.65**	**324**	*i* P		**P**		**00 49 30.4 -0.2**
PETK	**Petropavlovsk-**	**85.65**	**324**	P		**P**		**00 49 31.4 +0.7**
	comp=Z,11nm,1.0s,baz=91,slow=10,SNR=5.4							
	comp=Z,11nm,1.0s							
BMRD	**Maredsous**	**85.65**	**39**	*d*P		**P**		**00 49 30.8 +0.2**
	comp=Z,19nm,1.0s							
CAF	**Calviac**	**85.68**	**45**	*e*P		**P**		**00 49 32.9 +1.9**
CAF				pmax		pmax		
	comp=Z,67nm,1.9s							
BGES	**Gesves**	**85.82**	**39**	*d*P		**P**		**00 49 31.6 +0.1**
	comp=Z,23nm,1.2s							
ARCES	**ARCESS Array B**	**85.90**	**17**	P		**P**		**00 49 31.5 -0.1**
ARCES	**ARCESS Array B**	**85.90**	**17**	P		**P**		**00 49 31.5 -0.1**
ARCES				pmax		pmax		
	comp=Z,20nm,1.0s							
ARCES	**ARCESS Array B**	**85.90**	**17**	P		**P**		**00 49 31.8 +0.2**
	comp=Z,18nm,0.9s,baz=349,slow=5.6,SNR=16							
	comp=Z,18nm,0.9s							
BCLA	**Clavier**	**85.93**	**39**	*d*P		**P**		**00 49 31.8 -0.3**
	comp=Z,15nm,1.2s							
RCHB	**Rochefort**	**85.98**	**39**	*d*P		**P**		**00 49 32.7 +0.4**
	comp=Z,15nm,0.9s							
BEBN	**Eben Emael**	**86.03**	**38**	*d*P		**P**		**00 49 32.9 +0.4**
BSTI	**Sart Tilman**	**86.03**	**38**	*d*P		**P**		**00 49 33.0 +0.4**
MEM	**Membach**	**86.29**	**38**	*d*P		**P**		**00 49 34.2 +0.4**
	comp=Z,13nm,0.9s							
BTNL	**Ternell**	**86.37**	**38**	*d*P		**P**		**00 49 35.6 +1.3**
	comp=Z,9.0nm,1.3s							
BHOU	**Houvegnez**	**86.38**	**39**	*d*P		**P**		**00 49 35.1 +0.8**
	comp=Z,7.8nm,1.3s							
HFS	**Hagfors**	**86.50**	**28**	P		**P**		**00 49 35.2 +0.6**
	comp=Z,6.2nm,0.9s,baz=252,slow=3.0,SNR=6.6							
	comp=Z,6.2nm,0.9s							
MA2	**Magadan**	**86.60**	**332**	P		**P**		**00 49 35.7 +0.6**
MA2				IAmb		IAmb		00 49 42.1
	comp=Z,27nm,1.1s							
MA2	**Magadan**	**86.60**	**332**	P		**P**		**00 49 35.8 +0.6**
MA2	**Magadan**	**86.60**	**332**	*i* P		**P**		**00 49 34.1 -1.1**
MA2				pmax		pmax		
	comp=Z,71nm,2.8s							
WLF	**Walferdange**	**86.71**	**39**	*d*P		**P**		**00 49 37.0 +1.1**
TIXI	**Tiksi**	**86.97**	**347**	P		**P**		**00 49 35.9 -0.9**
TIXI				IAmb		IAmb		00 49 38.2
	comp=Z,42nm,1.1s							
TIXI	**Tiksi**	**86.97**	**347**	*i* P		**P**		**00 49 36.0 -0.8**
TIXI				pmax		pmax		
	comp=Z,41nm,1.1s							
LPL	**La Plagne**	**88.58**	**43**	*e*P		**P**		**00 49 45.9 +0.6**
LPL				pmax		pmax		
	comp=Z,9.0nm,1.2s							
APA	**Apatity**	**89.39**	**17**	⇓*i* P		**P**		**00 49 44.8 -3.5**
APA				pmax		pmax		
	comp=Z,6.0nm,1.4s							
APA				MLR		MLR		
	comp=Z,10µm,17.0s							
MOX	**Moxa**	**89.56**	**37**	P		**P**		**00 49 49.2 -0.3**
DAVA	**Damuels**	**89.91**	**40**	*e*P		**P**		**00 49 51.6 +0.2**
	comp=Z,14nm,1.0s							
CLL	**Collm**	**90.07**	**36**	*e*P		**P**		**00 49 52.0 +0.1**
CLL	**Collm**	**90.07**	**36**	*e*P		**P**		**00 49 52.0 +0.1**
CLL				AMS		AMS		01 29 00.0
	comp=Z,11µm,20.0s							
NKC	**Novy Kostel**	**90.22**	**37**	*e*P		**P**		**00 49 53.4 +0.8**
NKC	**Novy Kostel**	**90.22**	**37**	*e*P		**P**		**00 49 53.4 +0.8**
RETA	**Reutte**	**90.38**	**40**	*e*P		**P**		**00 49 53.6 +0.2**
	comp=Z,14nm,1.1s							
FETA	**Feichten**	**90.55**	**40**	*e*P		**P**		**00 49 54.6 +0.2**
	comp=Z,8.0nm,1.0s,SNR=5.7							
MOTA	**Moosalm**	**90.65**	**40**	*i* P		**P**		**00 49 54.8 0.0**
	comp=Z,15nm,1.3s,SNR=5.0							
SQTA	**Sankt Quirin**	**90.76**	**40**	*e*P		**P**		**00 49 55.4 0.0**
	comp=Z,8.5nm,1.2s							
BRG	**Berggiesshubel**	**90.79**	**36**	Amp				00 49 56.2
	comp=Z,5.0nm,0.9s							
BRG	**Berggiesshubel**	**90.79**	**36**	*e*P		**P**		**00 49 55.1 -0.1**
BRG								00 53 30.1
BRG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
BRG	**Berggiesshubel**	**90.79**	**36**	*e*P		**P**		**00 49 55.1 -0.1**
WATA	**Walderalm**	**90.94**	**40**	*i* P		**P**		**00 49 56.3 +0.1**
	comp=Z,9.7nm,1.4s							
FINES	**FINESS Array B**	**90.96**	**23**	P		**P**		**00 49 54.7 -1.1**
	comp=Z,3.4nm,0.8s,baz=29,slow=4.4,SNR=9.0							
	comp=Z,3.4nm,0.8s							
WTTA	**Wattenberg**	**91.01**	**40**	*i* P		**P**		**00 49 56.2 -0.4**
	comp=Z,5.3nm,1.1s							
KHC	**Kasperske Hory**	**91.37**	**38**	*e*P		**P**		**00 49 58.5 +0.5**
KHC	**Kasperske Hory**	**91.37**	**38**	*e*P		**P**		**00 49 58.5 +0.5**
PRU	**Pruhonice**	**91.54**	**37**	*e*P		**P**		**00 49 58.9 +0.2**
PRU	**Pruhonice**	**91.54**	**37**	*e*P		**P**		**00 49 58.9 +0.2**
GERES	**GERESS Array B**	**91.57**	**38**	P		**P**		**00 49 59.0 0.0**
GERES	**GERESS Array B**	**91.57**	**38**	P		**P**		**00 49 59.0 0.0**
GERES	**GERESS Array B**	**91.57**	**38**	P		**P**		**00 49 58.5 -0.6**
	comp=Z,2.9nm,1.0s,baz=358,slow=4.0,SNR=9.9							
GERES				PP		**PP**		**00 53 35.7 -1.0**
	comp=Z,2.2nm,0.9s,baz=347,slow=4.1,SNR=5.3							
	comp=Z,2.9nm,1.0s							
LESA	**Schwarzleotal**	**91.58**	**39**	*e*P		**P**		**00 49 58.7 -0.4**
	comp=Z,3.5nm,0.9s							
ZVC	**Zvikov**	**91.59**	**37**	*e*P		**P**		**00 49 59.3 +0.3**
ABTA	**Abfaltersbach**	**91.77**	**40**	*i* P		**P**		**00 50 00.1 +0.1**
	comp=Z,12nm,1.0s							
CIMO	**Cimolais**	**91.92**	**41**	IAmb		IAmb		00 50 01.7
	comp=Z,8.1nm,1.0s							
BIOA	**Bad Ischl, Aus**	**92.05**	**39**	*e*P		**P**		**00 50 00.9 -0.3**
	comp=Z,8.5nm,1.0s							
KBA	**Koelnbreinsper**	**92.14**	**40**	*e*P		**P**		**00 50 01.7 -0.1**
	comp=Z,9.1nm,1.0s,SNR=5.9							
MOA	**Molln**	**92.35**	**39**	*e*P		**P**		**00 50 02.3 -0.3**
	comp=Z,7.0nm,1.0s							
DPC	**Dobruska-Polom**	**92.38**	**36**	*e*P		**P**		**00 50 03.4 +0.7**
DPC	**Dobruska-Polom**	**92.38**	**36**	*e*P		**P**		**00 50 03.4 +0.7**
VSL	**Villasalto**	**92.68**	**48**	IAmb		IAmb		00 50 07.4
	comp=Z,26nm,1.2s							
KRLC	**Kraliky**	**92.77**	**36**	*e*P		**P**		**00 50 05.1 +0.6**
KRLC	**Kraliky**	**92.77**	**36**	*e*P		**P**		**00 50 05.1 +0.6**
VRAC	**Vranov**	**93.03**	**37**	*e*P		**P**		**00 50 05.9 +0.2**
VRAC				*e*				00 53 47.7
KRUC	**Moravsky**	**93.04**	**37**	*e*P		**P**		**00 50 05.5 -0.2**
OBKA	**Obir**	**93.14**	**40**	*i* P		**P**		**00 50 05.9 -0.5**
	comp=Z,14nm,1.1s							
CONA	**Conrad Observa**	**93.27**	**38**	*i* P		**P**		**00 50 07.1 +0.3**
	comp=Z,5.5nm,1.4s							
MORC	**Moravsky Berou**	**93.34**	**36**	*e*P		**P**		**00 50 07.5 +0.3**
SOKA	**Soboth**	**93.35**	**39**	*i* P		**P**		**00 50 06.9 -0.5**
	comp=Z,9.5nm,1.1s							
YAK	**Yakutsk**	**93.59**	**340**	*i* P		**P**		**00 50 07.5 -0.4**
YAK				pmax		pmax		
	comp=Z,29nm,0.9s							
CESX	**Cesi**	**93.61**	**44**	IAmb		IAmb		00 50 17.8
	comp=Z,28nm,1.6s							
RONA	**Rosalia, Austr**	**93.63**	**38**	*e*P		**P**		**00 50 08.7 +0.2**
	comp=Z,6.7nm,1.1s							
MAUC	**Maruska**	**93.71**	**36**	*e*P		**P**		**00 50 08.4 -0.4**
JAVC	**Velka Javorina**	**93.87**	**37**	*e*P		**P**		**00 50 09.1 -0.5**
MODS	**Modra-Piesok**	**93.88**	**37**	*e*P		**P**		**00 50 10.2 +0.6**
MODS	**Modra-Piesok**	**93.88**	**37**	*e*P		**P**		**00 50 10.2 +0.6**
KEST	**Kesra**	**94.14**	**51**	P		**P**		**00 50 11.2 +0.1**
	comp=Z,4.7nm,0.9s,baz=304,slow=1.8,SNR=6.9							
	comp=Z,4.7nm,0.9s							
NRIK	**Noril'sk**	**94.71**	**358**	P		**P**		**00 50 12.3 -0.7**
	comp=Z,6.4nm,0.8s,baz=23,slow=3.9,SNR=16							
	comp=Z,6.4nm,0.8s							
VYHS	**Vyhne**	**94.72**	**37**	*e*P		**P**		**00 50 14.7 +1.2**
VYHS	**Vyhne**	**94.72**	**37**	*e*P		**P**		**00 50 14.7 +1.2**
KLMR	**Klimovskoe**	**96.11**	**19**	*e*P		**P**		**00 50 17.3 -2.2**
KLMR				*e*				00 54 08.7
KLMR				pmax		pmax		
	comp=Z,27nm,1.7s							
LVV	**L'vov**	**96.88**	**34**	*e*P		**P**		**00 50 21.5 -1.7**
MOS	**Moscow**	**99.27**	**24**	*e*P		**Pdif**		**00 50 32.9 -0.9**
MOS				*e*				00 54 40.3
ZEA	**Zeya**	**100.43**	**335**	*e*P		**Pdif**		**00 50 28.5 -11**
LPSR	**Galich'ya Gora**	**102.10**	**25**	*e*P		**Pdif**		**00 50 45.6 -0.9**
LPSR				pmax		pmax		
	comp=Z,8.0nm,0.8s							
VSR	**Storozhevoye**	**103.22**	**26**	*e*P		**Pdif**		**00 50 50.0 -1.5**
VSR				pmax		pmax		
	comp=Z,10.0nm,1.2s							
CIT	**Chita**	**106.86**	**340**	*e*P		**Pdif**		**00 51 11.5 +3.7**
BRTR	**Keskin Array B**	**108.46**	**37**	PKiKP		**PKiKP**		**00 55 19.6 -1.6**
	comp=Z,1.1nm,0.8s,baz=247,slow=0.9,SNR=5.7							
BRTR				PP		**PP**		**00 55 46.0 +1.0**
	comp=Z,1.4nm,0.9s,baz=306,slow=2.9,SNR=4.4							
SONM	**Songino Array**	**112.75**	**342**	PP		**PP**		**00 56 15.3 -0.1**
	comp=Z,1.6nm,1.0s,baz=21,slow=5.1,SNR=6.2							
KURK	**Kurchatov**	**113.42**	**2**	*i* PKiKP		**PKiKP**		**00 55 29.7 -0.3**
KURBB	**Kurchatov Arra**	**113.51**	**2**	PKiKP		**PKiKP**		**00 55 29.6 -0.5**
	comp=Z,1.5nm,0.9s,baz=349,slow=2.2,SNR=11							
KURBB				PP		**PP**		**00 56 18.4 -1.9**
	comp=Z,2.6nm,0.9s,baz=355,slow=6.6,SNR=8.4							
HHC	**Hu-ho-hao-te**	**117.08**	**335**	*e*P		**PKiKP**		**00 55 38.8 +1.2**
MKAR	**Makanchi Array**	**117.41**	**360**	PKP		**PKPdf**		**00 55 36.4 -1.5**
	comp=Z,1.8nm,1.0s,baz=5.7,slow=1.2,SNR=10							
MKAR				PP		**PP**		**00 56 45.9 -2.0**
	comp=Z,1.7nm,1.0s,baz=0.0,slow=7.3,SNR=4.3							
BTO	**Baotou**	**117.90**	**336**	*e*PKP		**PKPdf**		**00 55 37.9 -1.2**
BTO				sPKP				00 55 57.9
BTO				PP		PP		00 56 37.6 -14
WMQ	**Urumqi**	**120.16**	**355**	*e*P		**PKiKP**		**00 55 44.8 +1.4**
NJ2	**Nanjing**	**120.55**	**324**	*e*P		**PKiKP**		**00 55 46.3 +1.9**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
AAK	**Ala-Archa**	**121.15**	**7**	*c i* PKiKP		**PKiKP**		**00 55 46.2 +0.7**
AAK				pmax		pmax		
	comp=Z,32nm,1.7s							
AAK	**Ala-Archa**	**121.15**	**7**	PKP		**PKPdf**		**00 55 45.0 -0.4**
	comp=Z,2.9nm,0.9s,baz=242,slow=2.5,SNR=7.3							
GEYT	**Alibeck**	**121.74**	**22**	PKPdf		**PKPdf**		**00 55 46.5 0.0**
GEYT	**Alibeck**	**121.74**	**22**	PKiKP		**PKPdf**		**00 55 46.5 0.0**
GEYT	**Alibeck**	**121.74**	**22**	PKP		**PKPdf**		**00 55 46.0 -0.5**
	comp=Z,5.6nm,0.8s,baz=289,slow=4.5,SNR=16							
GTA	**Gaotai**	**122.35**	**344**	PKP		**PKPdf**		**00 55 47.8 0.0**
GTA				PP		PP		**00 57 23.9 +1.7**
XAN	**Xi'an**	**123.97**	**333**	PKP		**PKPdf**		**00 55 50.3 -0.6**
STKA	**Stephens Creek**	**124.02**	**242**	PKP		**PKPdf**		**00 55 50.7 -0.2**
	comp=Z,2.8nm,0.7s,baz=11,slow=2.1,SNR=5.9							
LZH	**Lanzhou**	**124.17**	**339**	*e*PKP		**PKPdf**		**00 55 51.5 +0.1**
SIMJ	**Simiganj**	**124.18**	**12**			**PKPdf**		**00 55 51.0 -0.3**
BOSA	**Boshof**	**126.43**	**114**	PKP		**PKPdf**		**00 55 54.6 -1.2**
	comp=Z,2.1nm,0.8s,baz=213,slow=4.1,SNR=7.0							
RAYN	**Ar Rayn**	**126.83**	**43**	PKPdf		**PKPdf**		**00 55 56.2 -0.4**
RAYN	**Ar Rayn**	**126.83**	**43**	PKiKP		**PKPdf**		**00 55 56.2 -0.4**
ENH	**Enshi**	**126.88**	**330**			**PKPdf**		**00 55 55.1 -1.5**
CD2	**Chengdu**	**128.83**	**336**	PKP		**PKPdf**		**00 55 59.9 -0.4**
WRA	**Warramunga Arr**	**130.30**	**257**	PKiKP		**PKPdf**		**00 56 03.0 -0.2**
WRA	**Warramunga Arr**	**130.30**	**257**	PKP		**PKPdf**		**00 56 03.0 -0.2**
	comp=Z,3.1nm,1.0s,baz=83,slow=1.8,SNR=10							
ASAR	**Alice Springs**	**130.89**	**252**	PKP		**PKPdf**		**00 56 03.9 -0.4**
	comp=Z,3.8nm,1.2s,baz=83,slow=1.6,SNR=8.8							
GYA	**Guiyang**	**131.42**	**330**	*e*P		**PKiKP**		**00 56 07.3 +1.0**
GYA				pmax		pmax		
	comp=Z,13nm,0.7s							
UOSS	**Minazif**	**132.05**	**32**	PKPdf		**PKPdf**		**00 56 06.2 -0.3**
PZH	**PanZhiHua**	**133.54**	**335**	PKP		**PKPdf**		**00 56 10.0 +0.6**
KMI	**Kunming**	**134.35**	**333**	⇑PKP		**PKPdf**		**00 56 10.5 -0.6**
CMAR	**Chiang Mai Arr**	**141.86**	**334**	PKPdf		**PKPdf**		**00 56 24.8 0.0**
CMAR	**Chiang Mai Arr**	**141.86**	**334**	PKhKP		PKPpre		00 56 18.9

MTRA					AML	AML		
	comp=E,75μm,0.4s							
MTRA					AML	AML		
	comp=N,58μm,0.6s							
GAVE	**Gavelli**	**0.20**	**266**	⇓P	Pg		00 47 23.1	+0.4
RM33	**Pellescritta (**	**0.20**	**168**	P	Pg		00 47 23.2	+0.5
RM33				S	Sg		00 47 26.6	+0.9
MC2	**Monte Cornacci**	**0.21**	**6**	⇑P	Sg		00 47 23.3	+0.4
MC2				S	Sg		00 47 26.8	+0.8
MMO1	**Montemonaco**	**0.23**	**32**	⇓P	Pg		00 47 23.6	+0.3
MMO1				S	Sg		00 47 27.4	+0.9
T1247	**Pizzolo (AQ)**	**0.28**	**159**	S	Sb		00 47 29.7	-0.6
TERO	**Teramo**	**0.34**	**104**	P	Pg		00 47 25.5	+0.4
TERO				S	Sg		00 47 30.2	+0.5
TERO				AML	AML			
	comp=E,43μm,1.6s							
TERO				AML	AML			
	comp=N,47μm,1.5s							
TERO				AML	AML			
	comp=E,43μm,1.6s							
TERO				AML	AML			
	comp=N,47μm,1.5s							
TERO				AML	AML			
	comp=E,43μm,0.4s							
TERO				AML	AML			
	comp=N,47μm,0.5s							
MF5	**Montefalcone A**	**0.36**	**38**	⇓P	Pb		00 47 26.4	-0.4
MF5				S	Sb		00 47 32.0	-0.5
CSP1	**Cessapalombo**	**0.39**	**5**	⇓P	Pg		00 47 26.3	+0.2
CSP1				S	Sg		00 47 32.3	+1.0
PF6	**Pievefavera**	**0.44**	**3**	P	Pg		00 47 27.0	-0.1
PF6				S	Sg		00 47 33.7	+0.7

RSPR ***17*** *00:56:08.0, 18˚.39N×68˚.38W, h116km, MD3.4/5*
NEIC ***17*** *00:56:07.0±1.0, 18˚.2N±0˚.3×68˚.5W±0˚.2, h117km±14km, ML2.5/18, Md3.4/5(RSPR), Error ellipse: s-maj=49.9km s-min=13.9km az=199.0*
OSPL ***17*** *00:56:09.8±1.1, 18˚.34N×68˚.49W, h111km±13km, ML2.6*
SDD ***17*** *00:56:16.3±2.2, 18˚.57N×68˚.34W, h57km±22km, MD2.9, ML2.5, MW2.7*

ISC 17 00:56:10.6±1.7, 18˚.3N±0˚.1×68˚.40W±0˚.05, h95km±11km, n41, σ1§47/45, 13C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.25**	**4**	⇓*e*P		**Pn**	**00 56 23.7**	**-0.7**
PCDR	**Punta Cana, DR**	**0.25**	**4**			**Pn**	**00 56 23.7**	**-0.7**
PCDR						**Sn**	**00 56 35.6**	**+1.1**
PCDR	**Punta Cana, DR**	**0.25**	**4**	IAML			00 57 06.9	
	comp=E,87nm,2.9s							
PCDR				IAML			00 57 07.9	
	comp=N,192nm,2.6s							
PCDR	**Punta Cana, DR**	**0.25**	**4**	*i* P		**Pn**	**00 56 23.7**	**-0.7**
PCDR				*e*S		**Sn**	**00 56 35.5**	**+0.9**
PCDR				IAML			00 56 38.1	
	comp=Z,128nm,1.3s							
SADR	**Isla Saona**	**0.37**	**259**	⇓*e*Pg		Pn	00 56 28.6	+3.7
SADR				⇑*e*Sg		**Sn**	**00 56 36.2**	**+0.6**
SADR				IAML			00 56 41.0	
	comp=E,140nm,1.7s							
SADR				IAML			00 57 04.3	
	comp=N,178nm,1.8s							
MIDR	**Miches**	**0.94**	**319**	⇑*e*P	g	**Pn**	**00 56 28.3**	**-1.7**
MIDR				IAML			00 56 36.5	
	comp=N,38nm,9.0s							
MIDR				⇑*e*Sg		**Sn**	**00 56 42.1**	**-2.4**
MIDR				IAML			00 57 04.5	
	comp=E,27nm,2.0s							
PRSN	**Puerto Rico Se**	**1.19**	**92**	Pn		**Pn**	**00 56 29.8**	**-3.0**
PRSN				IAML			00 56 56.8	
	comp=E,41nm,0.3s							
PRSN				IAML			00 56 58.2	
	comp=N,45nm,0.3s							
AGPR	**Aguadilla, PR**	**1.24**	**80**	⇓*e*P		**Pn**	**00 56 33.6**	**+0.2**
AGPR	**Aguadilla, PR**	**1.24**	**80**	*e*S		**Sn**	**00 56 52.5**	**+2.0**
AGPR	**Aguadilla, PR**	**1.24**	**80**			**Sn**	**00 56 32.8**	**-0.6**
AGPR				IAML			00 56 57.0	
	comp=E,77nm,4.8s							
AGPR	**Aguadilla, PR**	**1.24**	**80**			**Sn**	**00 56 52.5**	**+2.0**
AGPR	**Aguadilla, PR**	**1.24**	**80**	*i* P		**Pn**	**00 56 33.7**	**+0.3**
AGPR				*e*S		**Sn**	**00 56 51.5**	**+0.9**
AGPR				IAML			00 56 56.1	
	comp=Z,62nm,2.0s							
LSP	**Las Mesas**	**1.25**	**94**	⇑*e*P		**Pn**	**00 56 33.3**	**-0.2**
LSP	**Las Mesas**	**1.25**	**94**	*e*S		**Sn**	**00 56 53.3**	**+2.4**
LSP	**Las Mesas**	**1.25**	**94**			**Pn**	**00 56 33.3**	**-0.2**
LSP						**Sn**	**00 56 53.3**	**+2.4**
CRPR	**Cabo Rojo, PR**	**1.25**	**102**	⇑*e*P		**Pn**	**00 56 32.4**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.25**	**102**	*e*S		**Sn**	**00 56 50.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.25**	**102**			**Pn**	**00 56 32.4**	**-1.1**
CRPR						**Sn**	**00 56 50.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.25**	**102**	⇑*e*Pg		Pn	00 56 37.2	+3.7
CRPR				IAML			00 56 52.2	
	comp=N,63nm,6.4s							
CRPR				IAML			00 56 52.3	
	comp=E,38nm,2.4s							
CRPR				⇑*e*Sg		**Sn**	**00 56 54.0**	**+3.1**
CRPR	**Cabo Rojo, PR**	**1.25**	**102**	*i* P		**Pn**	**00 56 33.3**	**-0.2**
CRPR				IAML			00 56 50.2	
	comp=Z,84nm,1.2s							
MLPR	**Magueyes Islan**	**1.32**	**103**	Pn		**Pn**	**00 56 32.8**	**-1.5**
MLPR				IAML			00 57 03.2	
	comp=N,52nm,3.0s							
MLPR				IAML			00 57 27.2	
	comp=E,41nm,2.2s							
AOPR	**Arecibo Observ**	**1.56**	**87**	⇑*e*P		**Pn**	**00 56 36.8**	**-0.6**
AOPR	**Arecibo Observ**	**1.56**	**87**	*e*S		**Sn**	**00 56 57.9**	**+0.1**
AOPR	**Arecibo Observ**	**1.56**	**87**			**Pn**	**00 56 36.3**	**-1.1**
AOPR	**Arecibo Observ**	**1.56**	**87**			**Sn**	**00 56 57.9**	**+0.1**
AOPR	**Arecibo Observ**	**1.56**	**87**	IAML			00 57 01.6	
	comp=E,73nm,0.4s							
AOPR				IAML			00 57 03.8	
	comp=N,63nm,1.8s							
AOPR	**Arecibo Observ**	**1.56**	**87**	⇓*e*Pg		**Pn**	**00 56 40.5**	**+3.1**
AOPR				⇑*e*Sg		**Sn**	**00 56 57.8**	**+0.1**
AOPR				IAML			00 57 02.8	
	comp=N,60nm,2.1s							
AOPR				IAML			00 57 03.3	
	comp=E,64nm,0.2s							
UUPR	**Utuado, UPR, P**	**1.59**	**90**	⇑*e*P		**Pn**	**00 56 36.8**	**-0.9**
UUPR	**Utuado, UPR, P**	**1.59**	**90**	*e*S		**Sn**	**00 56 58.4**	**0.0**
UUPR	**Utuado, UPR, P**	**1.59**	**90**			**Sn**	**00 56 58.4**	**0.0**
UUPR	**Utuado, UPR, P**	**1.59**	**90**			**Pn**	**00 56 37.5**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.59**	**90**	IAML			00 57 02.1	
	comp=N,167nm,0.4s							
UUPR				IAML			00 57 03.2	
	comp=E,168nm,0.3s							
OBIP	**Obispado Ponce**	**1.72**	**97**	Pn		**Pn**	**00 56 37.3**	**-2.0**
OBIP				IAML			00 57 35.3	
	comp=E,26nm,2.8s							
CELP	**Cerrillos**	**1.74**	**96**	⇑*e*P		**Pn**	**00 56 37.9**	**-1.7**
CELP	**Cerrillos**	**1.74**	**96**	*e*S		**Sn**	**00 57 01.2**	**-0.5**
CELP	**Cerrillos**	**1.74**	**96**			**Pn**	**00 56 37.9**	**-1.7**
CELP	**Cerrillos**	**1.74**	**96**	IAML			00 56 55.3	
	comp=N,30nm,4.1s							
CELP	**Cerrillos**	**1.74**	**96**			**Sn**	**00 57 01.2**	**-0.5**
CELP	**Cerrillos**	**1.74**	**96**	⇓*e*		Pn	00 56 42.9	+3.3
CELP				⇓*e*Pg		Pn	00 56 42.9	+3.3
CELP				⇑*e*Sg		**Sn**	**00 57 02.6**	**+0.9**
NADR	**Nagua**	**1.75**	**308**	⇓*e*Pg		**Pn**	**00 56 41.4**	**+1.7**
NADR				⇓*e*Sg		**Sn**	**00 57 01.2**	**-0.8**
NADR				IAML			00 57 06.1	
	comp=N,132nm,0.8s							
NADR				IAML			00 57 12.9	
	comp=E,194nm,1.8s							
BANI	**BANI**	**1.87**	**274**	⇑*e*Pg		Pn	00 56 46.4	+5.1
BANI				IAML			00 57 03.4	
	comp=E,41nm,1.6s							
BANI				⇓*e*Sg		**Sn**	**00 57 06.9**	**+2.2**
BANI				IAML			00 57 52.4	
	comp=N,57nm,3.1s							

IDC ***17*** *01:02:19.2±9.3, 22˚.27S×179˚.64W, h613km±95km, mb2.7/3, mbtmp3.6/3, Error ellipse: s-maj=364.0km s-min=52.9km az=159.0*

ISC 17 01:02:20.4±5.4, 20˚.5±2˚.×178˚.0E±˚, h600km, n8, σ1§42/8, mb3.4/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.37**	**257**	P		**P**	**01 09 24.3**	**+0.5**
	0.7nm,0.6s,baz=96,slow=8.6,SNR=5.4							
	0.7nm,0.6s							
WRA	**Warramunga Arr**	**42.41**	**263**	P		**P**	**01 09 25.1**	**+1.0**
	0.3nm,0.4s,baz=95,slow=7.8,SNR=16							
	0.3nm,0.4s							
PDAR	**Pinedale Array**	**90.48**	**44**	P		**P**	**01 14 21.2**	**+1.6**
	0.2nm,0.5s,baz=224,slow=3.8,SNR=1.8							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**117.65**	**320**	PKP		**PKiKP**	**01 19 58.6**	**-0.5**
	0.6nm,0.3s,baz=74,slow=0.4,SNR=7.1							
ARCES	**ARCESS Array B**	**128.49**	**349**	PKP		**PKiKP**	**01 20 19.1**	**-1.0**
	4.6nm,1.1s,baz=354,slow=6.1,SNR=4.0							
FINES	**FINESS Array B**	**135.11**	**342**	PKP		**PKiKP**	**01 20 32.1**	**-1.5**
	2.3nm,1.0s,baz=170,slow=1.2,SNR=4.1							
BRTR	**Keskin Array B**	**145.18**	**311**	PKPbc		**PKiKP**	**01 20 53.7**	**-1.5**
	0.2nm,0.4s,baz=98,slow=6.0,SNR=2.2							
MMAI	**Mount Meron Ar**	**145.88**	**299**	PKPbc		**PKiKP**	**01 20 56.0**	**-0.8**
	1.3nm,0.6s,baz=79,slow=7.8,SNR=5.7							

GCG ***17*** *01:30:01.5±0.4, 14˚.76N×93˚.26W, h42km±111km, MD4.0*
MEX ***17*** *01:30:03.5±1.1, 14˚.41N×93˚.18W, h9km±176km, MD3.9*

ISC 17 01:30:00.0±2.9, 14˚.5N±0˚.1×93˚.20W±0˚.09, h5km±13km, n9, σ0§82/17, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**1.10**	**57**	*e*P		**Pg**	**01 30 21.8**	**+0.6**
PATR				*e*S		**Sg**	**01 30 36.0**	**+0.4**
PCIG		**1.18**	**359**	*e*P		**Pn**	**01 30 24.3**	**+1.1**
PCIG				*e*S		**Sn**	**01 30 39.1**	**-0.5**
PAVE	**Pavencul**	**1.19**	**56**	*e*P		**Pg**	**01 30 23.4**	**+0.5**
PAVE				*e*S		**Sb**	**01 30 39.4**	**+0.3**
CHUJ	**Union Juarez**	**1.20**	**61**	*e*P		**Pg**	**01 30 23.1**	**+0.1**
CHUJ				*i* S		**Sb**	**01 30 39.6**	**+0.3**
STG3	**Santiaguito 3,**	**1.58**	**83**	*i* P		**Pn**	**01 30 28.3**	**-0.7**
STG3				*i* S		**Sn**	**01 30 49.6**	**-0.4**
SULM	**Suchitepequez,**	**1.59**	**98**	*i* P		**Pn**	**01 30 28.7**	**-0.3**
TGIG		**2.25**	**2**	*e*P		**Pb**	**01 30 41.3**	**+0.1**
TGIG				*e*S		**Sg**	**01 31 10.1**	**-2.2**
FUG	**Fuego 3**	**2.28**	**92**	*i* P		**Pn**	**01 30 38.6**	**0.0**
FUG				*i* S		**Sb**	**01 31 09.7**	**-0.7**
PCG	**Pacaya**	**2.51**	**93**	*i* P		**Pn**	**01 30 42.1**	**+0.3**
PCG				*i* S		**Sn**	**01 31 13.6**	**+0.6**

NOU ***17*** *01:31:19.5, 36˚.97S×176˚.64E, h368km, MLv3.8/6, Off E. Coast of N. Island, N.Z.*
WEL ***17*** *01:31:33.5±0.9, 38˚.5S±5˚×17˚6E±˚, h255km±7km, M3.1/13, ML3.1/13, MLv3.1/13, Error ellipse: s-maj=0.0km s-min=0.0km az=102.4, confirmed*

ISC 17 01:31:28.4±2.3, 37˚.54S±0˚.08×176˚.39E±0˚.08, h293km±14km, n58, σ1§65/79, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**0.73**	**254**	P		**Pn**	**01 32 08.9**	**+2.0**
URZ	**Urewera**	**0.92**	**142**	P		**Pn**	**01 32 08.5**	**+0.9**
URZ	**Urewera**	**0.92**	**142**	P		**Pn**	**01 32 08.6**	**+1.0**
URZ				S		**S**	**01 32 35.9**	**-2.9**
MKAZ	**Moumakai**	**1.07**	**294**	P		**Pn**	**01 32 10.3**	**+1.9**
RUGZ	**Raukumara Rang**	**1.11**	**113**	P		**Pn**	**01 32 09.1**	**+0.4**
RUGZ				S		**S**	**01 32 36.8**	**-3.9**
MWZ	**Matawai**	**1.20**	**132**	P		**Pn**	**01 32 10.5**	**+1.5**
MWZ				S		**S**	**01 32 39.0**	**-2.4**
MRHZ	**Matea Rd**	**1.29**	**179**	P		**Pn**	**01 32 11.1**	**+1.5**
MRHZ				S		**S**	**01 32 40.7**	**-1.7**
PKGZ	**Pakihiroa**	**1.39**	**105**	P		**Pn**	**01 32 11.9**	**+1.7**
SNGZ	**Shannon Statio**	**1.45**	**149**	P		**Pn**	**01 32 12.6**	**+2.1**
SNGZ				S		**S**	**01 32 43.0**	**-1.0**
TKGZ	**Te Karaka**	**1.46**	**128**	P		**Pn**	**01 32 12.6**	**+2.0**
HIZ	**Hauiti**	**1.55**	**231**	P		**Pn**	**01 32 13.7**	**+2.5**
RIGZ	**Rimuhau**	**1.59**	**137**	P		**Pn**	**01 32 13.2**	**+1.7**
RIGZ				S		**S**	**01 32 45.1**	**-0.7**
BKZ	**Black Stump Fm**	**1.63**	**177**	P		**Pn**	**01 32 13.5**	**+1.7**
BKZ	**Black Stump Fm**	**1.63**	**177**	P		**Pn**	**01 32 13.5**	**+1.7**
BKZ				S		**S**	**01 32 44.8**	**-1.5**
WMGZ	**Waiomatatini S**	**1.64**	**100**	P		**Pn**	**01 32 13.6**	**+1.8**
WMGZ				S		**S**	**01 32 44.6**	**-1.6**
WTVZ	**West Tongariro**	**1.69**	**201**	P		**Pn**	**01 32 14.2**	**+1.9**
SNVZ	**South Ngauruho**	**1.75**	**199**	P		**Pn**	**01 32 14.9**	**+2.1**
SNVZ				S		**S**	**01 32 47.0**	**-1.0**
KWHZ	**Kaweka Forest**	**1.88**	**179**	P		**Pn**	**01 32 15.7**	**+2.1**
KAHZ	**Kahuranaki**	**2.28**	**170**	P		**Pn**	**01 32 19.2**	**+2.3**
WCZ	**Waipu Caves**	**2.29**	**314**	P		**Pn**	**01 32 19.1**	**+2.0**
PNHZ	**Pukenui**	**2.38**	**183**	P		**Pn**	**01 32 19.5**	**+1.8**
PXZ	**Pawanui**	**2.52**	**172**	P		**Pn**	**01 32 20.9**	**+2.0**
PXZ				S		**S**	**01 32 59.3**	**+0.1**
TSZ	**Takapari Road**	**2.54**	**187**	P		**Pn**	**01 32 20.9**	**+1.7**
TSZ				S		**S**	**01 32 58.4**	**-1.3**
PRHZ	**Porangahau**	**2.73**	**176**	P		**Pn**	**01 32 22.9**	**+1.9**
PRWZ	**Pori Road**	**3.03**	**186**	P		**Pn**	**01 32 26.2**	**+2.3**
BFZ	**Birch Farm**	**3.14**	**182**	P		**Pn**	**01 32 26.6**	**+1.6**
BFZ	**Birch Farm**	**3.14**	**182**	P		**Pn**	**01 32 26.8**	**+1.8**
BFZ				S		**S**	**01 33 09.7**	**-0.5**
MRZ	**Mangatainoka R**	**3.18**	**191**	P		**Pn**	**01 32 26.7**	**+1.3**
MRZ				S		**S**	**01 33 09.5**	**-1.4**
OUZ	**Omahuta**	**3.23**	**315**	P		**Pn**	**01 32 28.1**	**+2.0**
OGWZ	**Otaki Gorge**	**3.41**	**196**	P		**Pn**	**01 32 29.2**	**+1.5**
OGWZ				S		**S**	**01 33 14.0**	**-1.2**
HOWZ	**Holdsworth Sta**	**3.42**	**191**	P		**Pn**	**01 32 29.4**	**+1.5**
HOWZ				S		**S**	**01 33 13.6**	**-1.9**
KIW	**Kapiti Island**	**3.51**	**199**	P		**Pn**	**01 32 30.3**	**+1.4**
KIW				S		**S**	**01 33 15.5**	**-1.7**
TMWZ	**Te Maipa**	**3.58**	**186**	P		**Pn**	**01 32 31.3**	**+1.7**
MTW	**Mount Morrison**	**3.68**	**190**	P		**Pn**	**01 32 32.2**	**+1.5**
CAW	**Cannon Point**	**3.71**	**196**	P		**Pn**	**01 32 32.6**	**+1.6**
CAW				S		**S**	**01 33 19.6**	**-1.3**
DUWZ	**D'Urville Isla**	**3.78**	**210**	P		**Pn**	**01 32 33.0**	**+1.2**
DUWZ				S		**S**	**01 33 20.9**	**-1.6**
TRWZ	**Traveller**	**3.89**	**188**	P		**Pn**	**01 32 34.7**	**+1.7**
TRWZ				S		**S**	**01 33 23.6**	**-1.0**
TCW	**Tory Channel**	**4.01**	**203**	P		**Pn**	**01 32 35.8**	**+1.5**
TCW				S		**S**	**01 33 25.5**	**-1.6**
PLWZ	**Palliser**	**4.12**	**192**	P		**Pn**	**01 32 36.8**	**+1.3**
PLWZ				S		**S**	**01 33 27.8**	**-1.4**
TUWZ	**Tuamarina**	**4.32**	**205**	P		**Pn**	**01 32 39.3**	**+1.6**
NNZ	**Nelson**	**4.35**	**211**	P		**Pn**	**01 32 38.8**	**+0.8**
TKNZ	**Takaka Hill**	**4.38**	**216**	P		**Pn**	**01 32 39.2**	**+0.7**
QRZ	**Quartz Range**	**4.44**	**221**	P		**Pn**	**01 32 39.0**	**-0.2**
QRZ	**Quartz Range**	**4.44**	**221**	P		**Pn**	**01 32 39.5**	**+0.4**
BSWZ	**Blackbirch Sta**	**4.60**	**204**	P		**Pn**	**01 32 42.6**	**+1.7**
MRNZ	**Matariki Terra**	**4.77**	**215**	P		**Pn**	**01 32 44.2**	**+1.4**
THZ	**Tophouse**	**5.00**	**211**	P		**Pn**	**01 32 47.0**	**+1.3**
KHZ	**Kahutara**	**5.34**	**203**	P		**Pn**	**01 32 51.0**	**+1.5**
KHZ	**Kahutara**	**5.34**	**203**	P		**Pn**	**01 32 51.1**	**+1.5**
DSZ	**Denniston Nort**	**5.49**	**219**	P		**Pn**	**01 32 51.4**	**0.0**
GVZ	**Greta Valley S**	**6.00**	**204**	P		**Pn**	**01 32 58.5**	**+1.1**
LTZ	**Lake Taylor**	**6.11**	**210**	P		**Pn**	**01 32 59.6**	**+0.8**
INZ	**Inchbonnie**	**6.41**	**215**	P		**Pn**	**01 33 03.5**	**+1.1**
OXZ	**Oxford**	**6.66**	**208**	P		**Pn**	**01 33 05.7**	**+0.3**
MQZ	**McQueen's Vall**	**6.78**	**204**	P		**Pn**	**01 33 07.0**	**+0.1**
ARCZ	**Arundel**	**7.52**	**210**	P		**Pn**	**01 33 16.4**	**+0.4**
TMZ	**Timaru**	**7.95**	**209**	P		**Pn**	**01 33 22.3**	**+1.0**
ODZ	**Otahua Downs**	**8.65**	**208**	P		**Pn**	**01 33 31.7**	**+1.9**

IDC ***17*** *01:38:25.4±2.4, 17˚.41N×96˚.20E, h0km, mb3.8/5, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=41.3km s-min=18.9km az=179.0*

ISC 17 01:38:26.6±5.8, 17˚.3N±0˚.8×96˚.1E±0˚.1, h10km, n6, σ1§62/7, mb3.8/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**2.91**	**67**	Pn		**Pn**	**01 39 11.1**	**-1.9**
	1.1nm,0.3s,baz=250,slow=15,SNR=9.2							
CMAR					Pg	**Pb**	**01 39 20.2**	**+1.6**
	10nm,0.3s,baz=246,slow=18,SNR=9.6							
CMAR					Lg	Lg	01 39 55.4	
	4.8nm,0.3s,baz=253,slow=18,SNR=6.0							
	1.7nm,0.3s							
MKAR	**Makanchi Array**	**31.53**	**342**	P		**P**	**01 44 47.5**	**-1.4**
	0.8nm,0.7s,baz=153,slow=8.2,SNR=9.5							
	0.8nm,0.7s							
KURBB	**Kurchatov Arra**	**36.08**	**341**	P		**P**	**01 45 27.6**	**-0.7**
	1.7nm,0.7s,baz=151,slow=8.3,SNR=12							
	1.7nm,0.7s							
ZALV	**Zalesovo Beam**	**37.58**	**349**	P		**P**	**01 45 41.8**	**+0.7**
	0.7nm,0.6s,baz=187,slow=9.6,SNR=4.7							
	0.7nm,0.6s							
GEYT	**Alibeck**	**39.07**	**309**	P		**P**	**01 45 54.9**	**+0.9**
	1.4nm,0.7s,baz=120,slow=8.5,SNR=3.4							
	1.4nm,0.7s							
BVAR	**Borovoye Array**	**40.91**	**336**	P		**P**	**01 46 09.6**	**+0.6**
	0.6nm,0.8s,baz=142,slow=7.2,SNR=2.9							
	0.6nm,0.8s							

BJI ***17*** *01:55:38.5±0.0, 7˚.88S×128˚.36E, h148km, mb5.1/74, mB5.6/10*
MOS ***17*** *01:55:39.4±1.0, 7˚.42S×128˚.08E, h121km, mb4.8/35, Error ellipse: s-maj=11.0km s-min=5.9km az=115.2*
IDC ***17*** *01:55:40.7±3.0, 7˚.49S×128˚.02E, h118km±26km, mb4.5/24, mbtmp4.8/25, Error ellipse: s-maj=15.7km s-min=8.6km az=69.0*
NEIC ***17*** *01:55:41.1±1.8, 7˚.56S±0˚.07×128˚.09E±0˚.06, h124km±5km, mb5.0/72, Error ellipse: s-maj=10.2km s-min=7.9km az=173.0*
DJA ***17*** *01:55:41.7±0.2, 8˚.S±2˚×12˚8E±˚, h124km±3km, M5.0/52, mB5.5/9, mb4.9/52, MLv5.3/18, Mw(mB)4.9/9*

ISC 17 01:55:41.2±0.5, 7˚.56S±0˚.04×128˚.07E±0˚.04, h129km±4km, n341, σ1§25/364, mb5.0/127, 18C-6D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.23**	**98**			**Pn**	**01 56 29.8**	**-1.0**
SAUI					Sn	**Sn**	**01 57 05.4**	**-3.7**
SAUI	**Saumlaki**	**3.23**	**98**	P		**Pn**	**01 56 30.6**	**-0.2**
SAUI	**Saumlaki**	**3.23**	**98**	P		**Pn**	**01 56 30.5**	**-0.2**
BNDI	**Bandanaira**	**3.52**	**31**	P		**Pn**	**01 56 33.2**	**-1.4**
BNDI	**Bandanaira**	**3.52**	**31**	P		**Pn**	**01 56 33.9**	**-0.7**
SOEI	**Soe**	**4.35**	**240**	Pn		**Pn**	**01 56 45.8**	**0.0**
SOEI					Sn	**Sn**	**01 57 34.1**	**-1.7**
SOEI	**Soe**	**4.35**	**240**	P		**Pn**	**01 56 45.6**	**-0.2**
SOEI	**Soe**	**4.35**	**240**	P		**Pn**	**01 56 45.5**	**-0.2**
NLAI	**Namlea**	**4.39**	**347**	P		**Pn**	**01 56 47.9**	**+1.7**
BBSI	**Bau Bau**	**5.84**	**290**	P		**Pn**	**01 57 08.4**	**+2.8**
	56nm,1.0s,0.2nm							
SANI	**Sanana**	**5.85**	**339**	P		**Pn**	**01 57 07.4**	**+1.7**
	154nm,1.1s,0.5nm							
MMRI	**Maumere**	**5.87**	**259**	Pn		**Pn**	**01 57 05.6**	**-0.5**
MMRI	**Maumere**	**5.87**	**259**	P		**Pn**	**01 57 06.2**	**+0.2**
	134nm,0.9s,1.0nm							
FAKI	**Fak Fak**	**6.21**	**42**	Pn		**Pn**	**01 57 08.8**	**-1.7**
FAKI	**Fak Fak**	**6.21**	**42**	P		**Pn**	**01 57 07.8**	**-2.8**
	123nm,0.5s							
FAKI	**Fak Fak**	**6.21**	**42**	P		**Pn**	**01 57 09.5**	**-1.1**
	126nm,0.6s,1.6nm							
KDU	**Kakadu**	**6.69**	**140**	P		**Pn**	**01 57 14.6**	**-2.5**
KMPI	**Kaimana, Papua**	**6.81**	**56**	P		**Pn**	**01 57 20.7**	**+2.0**
	297nm,0.5s,5μm3.6nm							
LBMI	**Labuha**	**6.89**	**355**	P		**Pn**	**01 57 23.0**	**+3.2**
	287nm,0.9s,4μm1.0nm							
SWI	**Sorong**	**7.37**	**26**	P		**Pn**	**01 57 26.9**	**+0.7**
	102nm,0.4s,4μm0.7nm							
BASI	**Baing, Sumba**	**7.86**	**250**	P		**Pn**	**01 57 32.6**	**-0.2**
	236nm,1.1s,2.3nm							
KNRA	**Kununurra**	**8.10**	**175**	Pn		**Pn**	**01 57 32.3**	**-3.7**
KNRA	**Kununurra**	**8.10**	**175**	P		**Pn**	**01 57 33.8**	**-2.2**
	154nm,0.8s							
TNTI	**Ternate**	**8.30**	**355**	Pn		**Pn**	**01 57 39.2**	**+0.4**
TNTI	**Ternate**	**8.30**	**355**	P		**Pn**	**01 57 42.6**	**+3.8**
	57nm,0.4s,5μm0.8nm							
LUWI	**Luwuk**	**8.35**	**321**	Pn		**Pn**	**01 57 40.0**	**+0.5**
LUWI	**Luwuk**	**8.35**	**321**	P		**Pn**	**01 57 42.7**	**+3.2**
	105nm,1.2s,2μm							
KAPI	**Kappang**	**8.64**	**286**	Pn		**Pn**	**01 57 43.2**	**-0.2**
KAPI	**Kappang**	**8.64**	**286**	P		**Pn**	**01 57 43.2**	**-0.2**
PLAI	**Plampang**	**10.27**	**262**	P		**Pn**	**01 58 04.1**	**-1.1**
	87nm,0.7s							
PLAI	**Plampang**	**10.27**	**262**	P		**Pn**	**01 58 04.4**	**-0.8**
	86nm,0.7s							
FITZ	**Fitzroy Crossi**	**10.74**	**192**	Pn		Pn	01 58 06.5	-5.1
FITZ	**Fitzroy Crossi**	**10.74**	**192**	P		**Pn**	**01 58 06.9**	**-4.7**
	3.6nm,0.8s	

64nm,1.2s
LCRK Leigh Creek 24.68 159 P **P** 02 00 51.5 +1.3
55nm,0.9s
BLDU Ballidu 25.29 203 P **P** 02 00 56.3 +0.6
48nm,1.0s
KLBR Kellerberrin 25.78 201 P **P** 02 01 01.4 +1.2
65nm,0.7s
MYKOM Kota Tinggi 25.88 290 P **P** 02 01 00.5 -0.8
MYKOM IAmb IAmb 02 01 03.4
comp=Z,62nm,1.4s
BBOO Buckleboo 26.20 165 P **P** 02 01 04.4 +0.5
BBOO IAmb IAmb 02 01 09.0
comp=Z,24nm,0.8s
BBOO Buckleboo 26.20 165 P **P** 02 01 05.4 +1.4
comp=Z,46nm,0.8s
RK1H Rockhampton Ha 26.67 129 P **P** 02 01 09.8 +1.6
comp=Z,34nm,0.6s
NWAO Narrogin (SRO) 27.18 200 P **P** 02 01 12.9 +0.2
NWAO IAmb IAmb 02 02 04.2
comp=Z,112nm,1.6s
NWAO Narrogin (SRO) 27.18 200 P **P** 02 01 13.9 +1.2
comp=Z,30nm,1.5s
NWAO Narrogin (SRO) 27.18 200 P **P** 02 01 13.8 +1.1
comp=Z,30nm,1.5s
NWAO Narrogin (SRO) 27.18 200 P **P** 02 01 12.9 +0.2
NWAO pmax pmax
comp=Z,113nm,1.6s
NWAO Narrogin (SRO) 27.18 200 P **P** 02 01 13.6 +0.9
comp=Z,18nm,0.8s,baz=35,slow=9.1,SNR=7.3
comp=Z,18nm,0.8s
STKA Stephens Creek 27.29 154 P **P** 02 01 14.5 +0.8
STKA Stephens Creek 27.29 154 P **P** 02 01 15.2 +1.5
comp=Z,5.9nm,0.8s
STKA Stephens Creek 27.29 154 P **P** 02 01 14.5 +0.8
STKA pmax pmax
comp=Z,5.0nm,0.9s
STKA Stephens Creek 27.29 154 P **P** 02 01 14.9 +1.2
comp=Z,12nm,0.6s,baz=322,slow=9.9,SNR=32
comp=Z,12nm,0.6s
HTT Hallett 27.64 160 P **P** 02 01 18.9 +2.0
comp=Z,41nm,1.1s
EIDS Eidsvold 28.21 132 P **P** 02 01 21.2 -0.8
EIDS IAmb IAmb 02 01 47.9
comp=Z,37nm,1.8s
CMSA Cobar Meteorol 28.98 148 P **P** 02 01 30.8 +2.1
comp=Z,18nm,0.8s
IPM Ipoh 29.52 293 P **P** 02 01 33.2 -0.5
IPM IAmb IAmb 02 01 35.3
comp=Z,21nm,0.9s
KULM Kulim 30.19 294 P **P** 02 01 39.2 -0.4
KULM IAmb IAmb 02 01 40.6
comp=Z,28nm,1.2s
RPSI Rantau Prapat 30.81 288 P **P** 02 01 44.9 -0.3
PSI Prapat 30.85 288 P **P** 02 01 44.9 -0.7
PSI pmax pmax
comp=Z,40nm,0.7s
YULB Yu-li 31.46 348 P **P** 02 01 50.5 -0.2
TPUB Ta-pu 31.52 347 P **P** 02 01 49.7 -1.5
TPUB Ta-pu 31.52 347 P **P** 02 01 50.1 -1.1
comp=Z,40nm,1.3s
GSI Gunungsitoli 31.67 285 P **P** 02 01 51.2 -1.4
GSI IAmb IAmb 02 01 54.3
comp=Z,13nm,0.7s
ARPS Mount Arapiles 31.67 159 P **P** 02 01 54.8 +2.4
comp=Z,24nm,0.7s
UBPT Khong Chiam 31.88 315 P **P** 02 01 54.7 +0.2
SSLB Suanglung 31.92 348 P **P** 02 01 55.0 +0.3
comp=Z,25nm,0.8s
QIZ Qiongzhong 31.95 326 P **P** 02 01 55.4 +0.4
QIZ pmax pmax
comp=Z,14nm,1.1s
QIZ Qiongzhong 31.95 326 P **P** 02 01 55.0 0.0
QIZ Qiongzhong 31.95 326 P **P** 02 01 55.9 +0.8
NACB Ninganchiao 32.16 349 P **P** 02 01 55.8 -1.0
SRIT Nakonsritamara 32.59 299 P **P** 02 02 00.7 -0.1
YHNB Yeheng 32.69 349 P **P** 02 02 00.5 -1.0
YHNB Yeheng 32.69 349 P **P** 02 02 03.3 +1.8
comp=Z,45nm,2.5s
CAN Canberra 33.65 148 P **P** 02 02 11.3 +1.6
CAN IAmb IAmb 02 02 13.5
comp=Z,14nm,0.7s
CAN Canberra 33.65 148 P **P** 02 02 11.3 +1.6
CAN pmax pmax
comp=Z,14nm,0.7s
CAN Canberra 33.65 148 P **P** 02 02 12.4 +2.7
MLSI Meulaboh, Aceh 33.71 289 P **P** 02 02 09.4 -1.1
comp=Z,53nm,0.6s
TOO Toolangi 33.80 155 P **P** 02 02 11.8 +0.7
TOO IAmb IAmb 02 03 21.2
comp=Z,54nm,1.9s
TOO Toolangi 33.80 155 P **P** 02 02 11.8 +0.7
TOO pmax pmax
comp=Z,54nm,1.9s
JOW Kunigami 34.18 0 P **P** 02 02 15.0 +0.7
comp=Z,27nm,0.5s,baz=152,slow=22,SNR=2.3
comp=Z,27nm,0.5s
SRDT SRDT 36.03 307 P **P** 02 02 31.9 +1.5
comp=Z,18nm,0.7s
GULI GuiLin 36.92 333 ⇑P **P** 02 02 37.4 -0.3
GULI pmax pmax
comp=Z,30nm,1.3s
JCJ Chichijima 37.06 21 P **P** 02 02 38.7 -0.2
comp=Z,146nm,0.9s
SLVN Son La 37.24 321 P **P** 02 02 41.3 +0.7
SLVN IAmb IAmb 02 02 43.2
comp=Z,44nm,1.4s
CMAR Chiang Mai Arr 38.65 312 P **P** 02 02 51.8 -0.6
CMAR Chiang Mai Arr 38.65 312 P **P** 02 02 53.4 +0.9
comp=Z,8.1nm,0.7s,baz=143,slow=7.1,SNR=33
CMAR PcP **PcP** 02 05 03.4 +1.3
comp=Z,2.3nm,0.5s,baz=170,slow=3.2,SNR=7.6
comp=Z,8.1nm,0.7s
CRAI Chiangrai 38.79 316 P **P** 02 02 53.4 -0.2
CHTO Chiang Mai 38.88 313 P **P** 02 02 54.1 -0.2
CHTO IAmb IAmb 02 02 57.2
comp=Z,15nm,0.8s
CHTO Chiang Mai 38.88 313 P **P** 02 02 54.1 -0.2
CHTO pmax pmax
comp=Z,15nm,0.8s
SSE Sheshan 38.99 351 P **P** 02 02 55.8 +0.8
DZM Mont Dzumac 39.67 116 P **P** 02 03 01.6 +0.6
GYA Guiyang 39.68 329 *eP* **P** 02 03 01.9 +0.9
GYA pmax pmax
comp=Z,29nm,0.8s
WHN Wuhan 40.10 341 ⇓P **P** 02 03 05.8 +1.5
WHN pmax pmax
comp=Z,130nm,1.0s
NJ2 Nanjing 40.35 348 ⇓P **P** 02 03 07.6 +1.3
NJ2 pP **pP** 02 03 35.4 +1.6
NJ2 sP **sP** 02 03 51.3 +3.5
NJ2 pmax pmax
comp=Z,42nm,0.7s
JNU Nakatsue 40.54 4 P **P** 02 03 07.7 -0.1
JNU Nakatsue 40.54 4 P **P** 02 03 08.2 +0.3
comp=Z,38nm,2.0s
JNU Nakatsue 40.54 4 P **P** 02 03 07.5 -0.4
comp=Z,14nm,0.9s,baz=181,slow=5.8,SNR=5.8
comp=Z,14nm,0.9s
KMI Kunming 40.78 324 ⇑P **P** 02 03 12.1 +1.8
KMI pmax pmax
comp=Z,23nm,1.2s
KMI Kunming 40.78 324 P **P** 02 03 12.0 +1.8
JMN Monobe 41.42 7 P **P** 02 03 15.3 +0.2
JMN Monobe 41.42 7 P **P** 02 03 15.9 +0.8
comp=Z,53nm,1.7s
ENH Enshi 41.63 335 P **P** 02 03 16.4 -0.5
ENH IAmb IAmb 02 03 17.6
comp=Z,20nm,0.5s
ENH Enshi 41.63 335 P **P** 02 03 17.3 +0.4
comp=Z,29nm,1.0s
ENH Enshi 41.63 335 P **P** 02 03 17.1 +0.2
PZH PanZhiHua 42.41 324 P **P** 02 03 24.1 +0.7
PZH pmax pmax
comp=Z,30nm,0.9s
TNCH TengChong 43.33 319 P **P** 02 03 31.5 +0.6
TNCH pP pwP 02 04 01.6 -3.1
TNCH pmax pmax
comp=Z,21nm,0.8s
TJN Taejon 43.70 359 P **P** 02 03 33.5 +0.1
TJN Taejon 43.70 359 P **P** 02 03 33.5 +0.1
TJN pmax pmax
comp=Z,169nm,1.0s
LYN LuoYang 44.40 342 ⇑P **P** 02 03 39.3 +0.2
LYN pmax pmax
comp=Z,31nm,1.3s
TIA Tai'an 44.73 347 ⇓P **P** 02 03 41.8 +0.1
TIA pmax pmax
comp=Z,16nm,0.7s
KSAR Wonju Array Be 44.76 360 P **P** 02 03 42.3 +0.5
KSAR Wonju Array Be 44.76 360 P **P** 02 03 42.3 +0.5
KSRS Korea Array 44.77 360 P **P** 02 03 43.0 +1.1
comp=Z,18nm,0.6s,baz=177,slow=9.2,SNR=91
KSRS PcP **PcP** 02 05 22.5 +0.6
comp=Z,2.1nm,0.7s,baz=186,slow=4.0,SNR=4.6
comp=Z,18nm,0.6s
CD2 Chengdu 44.78 330 P **P** 02 03 42.3 +0.1
CD2 pmax pmax
comp=Z,30nm,0.6s
KS19 Wonju Array Si 44.82 360 P **P** 02 03 42.9 +0.6
KS19 IAmb IAmb 02 03 43.8
comp=Z,26nm,0.6s
MAJO Matsushiro 44.88 12 P **P** 02 03 42.0 -0.9
MJAR Matsushiro Arr 44.88 12 P **P** 02 03 41.7 -1.2
comp=Z,14nm,0.8s,baz=192,slow=9.1,SNR=20
comp=Z,14nm,0.8s
MJB9 Matsu-Tunnel 44.89 12 P **P** 02 03 42.6 -0.4
MJB9 IAmb IAmb 02 03 43.5
comp=Z,20nm,0.8s
XAN Xi'an 45.17 337 ⇑P **P** 02 03 44.9 -0.4
XAN pmax pmax
comp=Z,47nm,0.8s
XAN LR LR
comp=Z,1μm,16.8s
XAN LR LR
comp=Z,2μm,18.2s
XAN LR LR
comp=Z,2μm,17.9s
XAN Xi'an 45.17 337 P **P** 02 03 44.8 -0.4
XAN PcP **PcP** 02 05 23.6 +0.2
HNS HongShan 46.43 345 ⇑P **P** 02 03 55.1 +0.1
HNS pmax pmax
comp=Z,80nm,0.9s
DL2 Dalian 46.61 353 P **P** 02 03 56.4 +0.1
DL2 pmax pmax
comp=Z,35nm,0.8s
JMM Marumori 46.72 14 P **P** 02 03 57.1 -0.1
JMM IAmb IAmb 02 03 58.0
comp=Z,30nm,0.7s
JMM Marumori 46.72 14 P **P** 02 03 57.6 +0.4
comp=Z,48nm,2.9s
SHL Shillong 48.19 314 P **P** 02 04 07.9 -1.2
SHL Shillong 48.19 314 P **P** 02 04 07.9 -1.2
SHL pmax pmax
comp=Z,9.0nm,0.8s
BJT Baijiatuan 48.60 348 P **P** 02 04 11.3 -0.4
BJT IAmb IAmb 02 04 12.8
comp=Z,34nm,0.8s
BJT Baijiatuan 48.60 348 P **P** 02 04 11.0 -0.7
comp=Z,45nm,0.8s
BJT Baijiatuan 48.60 348 P **P** 02 04 11.3 -0.4
BJT pmax pmax
comp=Z,34nm,0.8s
BJT Baijiatuan 48.60 348 P **P** 02 04 12.1 +0.4
BJT PcP **PcP** 02 05 36.2 +0.8
BJI Beijing 48.62 348 P **P** 02 04 11.8 0.0
BJI pmax pmax
comp=Z,23nm,0.8s
LZH Lanzhou 49.02 334 ⇑P **P** 02 04 16.1 +0.8
LZH pP pwP 02 04 48.8 -0.5
LZH pmax pmax
comp=Z,58nm,1.4s
JTM Tenmabayashi 49.57 13 P **P** 02 04 18.9 -0.2
JTM Tenmabayashi 49.57 13 P **P** 02 04 19.8 +0.7
comp=Z,74nm,1.5s
HHC Hu-ho-hao-te 50.51 344 ⇓*iP* **P** 02 04 27.3 +1.0
HHC pmax pmax
comp=Z,16nm,1.1s
BTO Baotou 50.73 342 *eP* **P** 02 04 28.8 +0.8
BTO S **S** 02 11 34.6 +1.0
BTO pmax pmax
comp=Z,17nm,0.7s
BTO pmax pmax
comp=Z,3μm,10.3s
BTO LR LR
comp=Z,4μm,17.7s
BTO LR LR
comp=Z,2μm,16.5s
BTO LR LR
comp=Z,3μm,16.7s
CN2 Changchun 51.17 358 *eP* **P** 02 04 31.0 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.4s
LSA Lhasa 51.30 318 P **P** 02 04 32.3 -0.6
LSA IAmb IAmb 02 04 34.9
comp=Z,23nm,0.7s
LSA Lhasa 51.30 318 P **P** 02 04 32.3 -0.6
LSA pmax pmax
comp=Z,23nm,0.7s
LSA Lhasa 51.30 318 P **P** 02 04 34.2 +1.3
QRZ Quartz Range 51.53 137 P **P** 02 04 33.6 -0.3
USA0B Ussuriysk Arra 51.63 4 P **P** 02 04 34.6 +0.1
USA0B IAmb IAmb 02 04 35.8
comp=Z,21nm,0.6s
USA0B Ussuriysk Arra 51.63 4 P **P** 02 04 34.6 +0.1
USA0B pmax pmax
comp=Z,21nm,0.6s
USRK Ussuriysk Ar. 51.63 4 P **P** 02 04 34.7 +0.2
USRK Ussuriysk Ar. 51.63 4 P **P** 02 04 35.0 +0.5
USRK Ussuriysk Ar. 51.63 4 P **P** 02 04 35.0 +0.5
comp=Z,18nm,0.5s,baz=187,slow=7.1,SNR=54
comp=Z,18nm,0.5s
MDJ Mudanjiang 51.95 1 P **P** 02 04 39.9 +3.1
MDJ pmax pmax
comp=Z,27nm,0.7s
MDJ pmax pmax
comp=Z,310nm,10.7s
MDJ Mudanjiang 51.95 1 P **P** 02 04 37.1 +0.3
MDJ IAmb IAmb 02 04 40.5
comp=Z,19nm,0.8s
RPZ Rata Peaks 51.99 141 P **P** 02 04 38.1 +0.8
XLT XiLinHaoTe 52.35 349 *eP* **P** 02 04 40.4 +0.4
XLT pmax pmax
comp=Z,64nm,0.8s
KHZ Kahutara 52.94 139 P **P** 02 04 45.6 +1.3
comp=Z,47nm,1.3s
BNX BinXian 53.06 359 ⇓P **P** 02 04 44.8 -0.2
BNX pmax pmax
comp=Z,15nm,0.9s
ASAJ Asahikawa 53.08 13 P **P** 02 04 45.3 +0.1
comp=Z,6.2nm,0.5s,baz=227,slow=9.7,SNR=4.5
comp=Z,6.2nm,0.5s
JKA Kamikawa-asahi 53.08 13 P **P** 02 04 45.3 +0.1
GTA Gaotai 53.56 333 *eP* **P** 02 04 49.6 +0.6
GTA PcP **PcP** 02 05 54.6 +0.5
GTA pmax pmax
comp=Z,31nm,0.7s
HYB Hyderabad 54.85 297 *eP* **P** 02 04 58.6 -0.1
YSS Yuzh-Sakhalins 55.82 12 *ceP* **P** 02 05 04.2 -0.7
YSS pmax pmax
comp=Z,34nm,1.7s
KLR Kul'dur 56.64 3 *ceP* **P** 02 05 10.2 -0.5
KLR pmax pmax
comp=Z,24nm,1.7s
KLR Kul'dur 56.64 3 P **P** 02 05 10.7 0.0
comp=Z,7.7nm,1.0s,baz=208,slow=5.6,SNR=12
KLR PcP **PcP** 02 06 05.3 -0.2
comp=Z,3.1nm,0.7s,baz=292,slow=4.8,SNR=4.6
comp=Z,7.7nm,1.0s
HEH HeiHe 57.57 360 *eP* **P** 02 05 17.5 +0.2
HEH pmax pmax
comp=Z,35nm,0.8s
ULN Ulaanbaatar 58.22 343 P **P** 02 05 23.1 +1.0
ULN Ulaanbaatar 58.22 343 P **P** 02 05 23.1 +1.0
ULN pmax pmax
comp=Z,26nm,0.9s
ULN Ulaanbaatar 58.22 343 P **P** 02 05 23.3 +1.2
ULN PcP **PcP** 02 06 12.9 +0.9
SONM Songino Array 58.38 343 P **P** 02 05 23.9 +0.7
SONM IAmb IAmb 02 05 25.2
comp=Z,27nm,1.0s
SONM Songino Array 58.38 343 P **P** 02 05 23.9 +0.7
SONM pmax pmax
comp=Z,27nm,1.0s
SONM Songino Array 58.38 343 P **P** 02 05 24.0 +0.9
comp=Z,19nm,0.9s,baz=160,slow=7.5,SNR=81
SONM PKP2bc 02 35 11.8
comp=Z,0.7nm,0.8s,baz=299,slow=3.1,SNR=4.3
comp=Z,19nm,0.9s
TYV Tymovskoe 59.53 11 *eP* **P** 02 05 31.2 +0.4
TYV pmax pmax
comp=Z,4.0nm,0.8s
TYV pmax pmax
comp=Z,200nm,3.4s
ZEA Zeya 61.06 359 *eP* **P** 02 05 42.0 +0.8
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZAK Zakamensk 61.58 342 *eP* **P** 02 05 45.3 +0.4
ZAK pmax pmax
comp=Z,7.0nm,1.1s
WMQ Urumqi 62.83 328 *eP* **P** 02 05 54.0 +0.6
WMQ pP pwP 02 06 29.9 +0.2
WMQ PP **PP** 02 08 17.5 +4.2
WMQ ScP **ScP** 02 10 19.8 -1.0
WMQ pmax pmax
comp=Z,8.0nm,0.9s
MOY Mondy 63.41 342 *eP* **P** 02 05 57.9 +0.8
MOY pmax pmax
comp=Z,32nm,1.8s
PEA0B Petropavlovsk- 65.46 19 P **P** 02 06 10.8 +0.6
PEA0B Petropavlovsk- 65.46 19 P **P** 02 06 10.8 +0.6
PEA0B pmax pmax
comp=Z,100nm,1.6s
PETK Petropavlovsk- 65.46 19 P **P** 02 06 10.0 -0.2
PETK Petropavlovsk- 65.46 19 P **P** 02 06 10.7 +0.5
comp=Z,7.9nm,0.8s,baz=207,slow=3.3,SNR=7.2
comp=Z,7.9nm,0.8s
NIL Nilore 66.14 312 P **P** 02 06 14.1 -1.0
NIL IAmb IAmb 02 06 15.8
comp=Z,22nm,1.1s
NIL Nilore 66.14 312 P **P** 02 06 14.1 -1.0
NIL pmax pmax
comp=Z,22nm,1.1s
NIL Nilore 66.14 312 P **P** 02 06 14.8 -0.3
BOD Bodaibo 66.15 352 *eP* **P** 02 06 15.0 +0.5
BOD pmax pmax
comp=Z,17nm,1.3s
DGZ Jazzator, Alta 67.10 333 P **P** 02 06 19.7 -1.2
DGZ pmax pmax
comp=Z,5.0nm,0.6s
KSH Kashi 67.15 319 P **P** 02 06 22.1 +0.7
KSH pmax pmax
comp=Z,10.0nm,1.0s
CCD Concordia, Ant 67.56 181 P **P** 02 06 26.1 +2.3
CCD PcP **PcP** 02 06 51.5 +1.5
MKAR Makanchi Array 67.66 328 P **P** 02 06 24.6 +0.2
comp=Z,6.9nm,0.5s,baz=116,slow=7.3,SNR=213
MKAR PcP **PcP** 02 06 50.5 +0.1
comp=Z,5.4nm,0.6s,baz=106,slow=4.4,SNR=12
comp=Z,6.9nm,0.5s
MAKZ Makanchi 67.83 328 P **P** 02 06 25.5 0.0
MAKZ Makanchi 67.83 328 P **P** 02 06 25.5 0.0
MAKZ pmax pmax
comp=Z,15nm,1.6s
MAKZ Makanchi 67.83 328 P **P** 02 06 25.8 +0.3
MAKZ PcP **PcP** 02 06 51.1 0.0
MA2 Magadan 69.33 12 P **P** 02 06 34.0 -0.4
MA2 Magadan 69.33 12 *ceP* **P** 02 06 34.2 -0.2
MA2 pmax pmax
comp=Z,18nm,1.7s
YAK Yakutsk 69.39 1 P **P** 02 06 34.5 -0.3
YAK Yakutsk 69.39 1 *eP* **P** 02 06 34.6 -0.1
YAK *e* 02 06 55.5
YAK *e**PP **pP** 02 07 03.3 -1.5
YAK *e*S **S** 02 15 32.4 +1.3
YAK *e* 02 16 20.8
YAK pmax pmax
comp=Z,59nm,1.0s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK smax smax
comp=E,287nm,7.1s
KBL Kabul 69.67 311 P **P** 02 06 36.7 -0.6
KBL Kabul 69.67 311 P **P** 02 06 36.7 -0.6
KBL pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 69.74 321 P **P** 02 06 37.7 +0.1
AAK Ala-Archa 69.74 321 P **P** 02 06 37.7 +0.1
AAK pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 69.74 321 P **P** 02 06 38.8 +1.3
AAK PcP **PcP** 02 07 00.5 +1.0
ZAA0 Zalesovo Array 71.25 335 P **P** 02 06 45.4 -0.8
ZAA0 IAmb IAmb 02 06 47.0
comp=Z,17nm,0.7s
ZALV Zalesovo Beam 71.25 335 P **P** 02 06 45.5 -0.7
ZALV Zalesovo Beam 71.25 335 P **P** 02 06 46.0 -0.2
comp=Z,13nm,0.5s,baz=132,slow=5.2,SNR=67
comp=Z,13nm,0.5s
SIMJ Simiganj 71.47 315 P **P** 02 06 47.7 -0.4
SIMJ IAmb IAmb 02 06 49.1
comp=Z,20nm,1.2s
SIMJ Simiganj 71.47 315 P **P** 02 06 48.3 +0.2
KURBB Kurchatov Arra 71.99 329 P **P** 02 06 51.2 +0.5
comp=Z,8.4nm,0.8s,baz=134,slow=5.1,SNR=54
comp=Z,8.4nm,0.8s
KURK Kurchatov 72.01 329 P **P** 02 06 50.7 -0.1
KURK IAmb IAmb 02 06 52.2
comp=Z,64nm,1.8s
KURK Kurchatov 72.01 329 *ceP* **P** 02 06 51.3 +0.5
KURK pmax pmax
comp=Z,24nm,1.3s
VNDA Vanda 72.14 173 P **P** 02 06 52.0 +0.8
VNDA IAmb IAmb 02 08 41.1
comp=Z,38nm,1.9s
VNDA Vanda 72.14 173 P **P** 02 06 52.0 +0.8
VNDA Vanda 72.14 173 P **P** 02 06 52.0 +0.8
comp=Z,3.4nm,0.8s,baz=318,slow=8.1,SNR=9.9
comp=Z,3.4nm,0.8s
KK31 Karatay Array 72.51 320 P **P** 02 06 54.0 -0.1
KK31 Karatay Array 72.51 320 P **P** 02 06 54.0 -0.1
KK31 pmax pmax
comp=Z,11nm,1.4s
KKAR Karatay Array 72.51 320 P **P** 02 06 54.1 +0.1
KKAR Karatay Array 72.51 320 P **P** 02 06 54.1 +0.1
SEY Seymchan 72.71 11 *ceP* **P** 02 06 55.0 +0.2
SEY pmax pmax
comp=Z,12nm,0.7s
HRA Herat 74.79 309 P **P** 02 07 07.5 -0.4
UOSS Minazif 76.98 298 P **P** 02 07 19.0 -1.1
BVAR Borovoye Array 77.52 328 P **P** 02 07 22.6 +0.1
comp=Z,4.3nm,0.5s,baz=130,slow=6.5,SNR=43
comp=Z,4.3nm,0.5s
BRVK Borovoye 77.59 328 P **P** 02 07 22.7 -0.3
BRVK IAmb IAmb 02 07 24.3
comp=Z,20nm,1.1s
BRVK Borovoye 77.59 328 *ceP* **P** 02 07 23.4 +0.4
BRVK pmax pmax
comp=Z,21nm,1.3s
TIXI Tiksi 79.04 0 *ceP* **P** 02 07 28.9 -1.6
TIXI pmax pmax
comp=Z,10.0nm,0.6s
GEYT Alibeck 79.12 311 P **P** 02 07 31.0 -0.8
GEYT Alibeck 79.12 311 P **P** 02 07 31.0 -0.8
GEYT pmax pmax
comp=Z,7.0nm,1.1s
GEYT Alibeck 79.12 311 P **P** 02 07 30.6 -1.2
comp=Z,3.1nm,0.9s,baz=224,slow=4.1,SNR=7.9
comp=Z,3.1nm,0.9s
GYA0B ALIBECK ARRAY 79.12 311 P **P** 02 07 31.1 -0.7
NRIK Noril'sk 81.64 347 P **P** 02 07 44.3 -0.2
NRIK IAmb IAmb 02 07 46.6
comp=Z,13nm,0.7s
NRIK Noril'sk 81.64 347 *ceP* **P** 02 07 44.1 -0.4
NRIK pmax pmax
comp=Z,12nm,0.6s
NRIK Noril'sk 81.64 347 P **P** 02 07 44.4 -0.2
comp=Z,12nm,0.6s,baz=132,slow=6.0,SNR=16
comp=Z,12nm,0.6s
ABKAR Akbulak array 81.76 322 P **P** 02 07 44.9 -0.7
ABKAR Akbulak array 81.76 322 P **P** 02 07 44.6 -0.9
QSPA South Pole Qui 82.42 180 P **P** 02 07 49.7 +0.8
QSPA South Pole Qui 82.42 180 P **P** 02 07 49.6 +0.6
comp=Z,5.9nm,0.9s,baz=298,slow=0.9,SNR=19
comp=Z,5.9nm,0.9s
SVE Sverdlovsk 84.26 329 *eP* **P** 02 07 57.9 -0.3
SVE pmax pmax
comp=Z,31nm,1.4s
ARU Arti 85.17 329 P **P** 02 08 02.2 -0.6
ARU IAmb IAmb 02 08 03.6
comp=Z,11nm,0.8s
ARU Arti 85.17 329 *c iP* **P** 02 08 02.1 -0.7
ARU S **SKSac** 02 18 14.2 -1.3
ARU SS **SS** 02 23 52.0 -6.8
ARU pmax pmax
comp=Z,25nm,1.4s

RAYN Ar Rayn 86.22 294 P P 02 08 08.1 -0.8
RAYN IAmb IAmb 02 08 09.4
comp=Z,8.0nm,0.8s
RAYN Ar Rayn 86.22 294 P P 02 08 08.1 -0.8
RAYN pmax pmax
comp=Z,8.0nm,0.8s
LKRN Lenkeran, Azer 86.40 310 P P 02 08 10.2 +0.9
L14K Kuka Creek 86.85 27 P P 02 08 10.9 -0.1
ELIB Princess Elisa 87.39 198 dPcP PcP 02 08 16.1 +0.5
comp=Z,13nm,0.9s
K15K Wolf Creek Mou 87.71 26 P P 02 08 15.5 +0.4
K15K IAmb IAmb 02 10 29.8
comp=Z,49nm,1.8s
MNGR Mingechevir, A 88.11 311 P P 02 08 18.3 +0.8
SEKA Sheki 88.11 312 P P 02 08 18.0 +0.4
ZKTA Zakatala 88.62 312 P P 02 08 20.7 +0.8
GANJ Ganja 88.65 311 P P 02 08 20.8 +0.7
NAX Nakhchivan 89.00 310 P P 02 08 22.5 +0.7
H17K Granite Mounta 89.30 24 P P 02 08 22.0 -0.6
H17K IAmb IAmb 02 08 53.8
comp=Z,20nm,1.6s
C19K Lookout Ridge 90.80 20 P P 02 08 29.1 -0.4
C19K IAmb IAmb 02 08 30.0
comp=Z,5.5nm,0.8s
ZEI Tsey 90.82 313 eP P 02 08 30.0 -0.4
ZEI pmax pmax
comp=Z,6.0nm,1.5s
AKH Akhalkalaki 90.89 312 P P 02 08 30.1 -0.7
AKH Akhalkalaki 90.89 312 P P 02 08 30.1 -0.7
AKH pmax pmax
comp=Z,26nm,1.0s
D19K Kuna River 91.12 21 P P 02 08 30.3 -0.7
D19K IAmb IAmb 02 08 34.1
comp=Z,20nm,1.6s
TROLL Troll, Antarti 93.15 195 ⇑P P 02 08 42.7 +2.2
comp=Z,504nm,0.7s
RND Reindeer 93.60 27 P P 02 08 41.0 -1.6
RND IAmb IAmb 02 08 42.9
comp=Z,7.0nm,0.9s
RND Reindeer 93.60 27 P P 02 08 41.0 -1.6
RND pmax pmax
comp=Z,7.0nm,0.9s
ILAR Eielson Array 94.66 25 P P 02 08 47.0 -0.4
ILAR Eielson Array 94.66 25 P P 02 08 47.0 -0.4
comp=Z,0.5nm,0.6s,baz=252,slow=5.1,SNR=11
ILAR PKKP PKKPdf 02 25 45.5 -1.1
comp=Z,0.5nm,0.8s,baz=46,slow=1.9,SNR=6.9
comp=Z,0.5nm,0.6s
SNAA Sanae 94.67 194 ⇑P P 02 08 49.0 +1.5
comp=Z,120nm,0.7s
SNAA Sanae 94.67 194 P P 02 08 48.8 +1.3
comp=Z,7.5nm,0.9s,baz=128,slow=6.3,SNR=9.5
comp=Z,7.5nm,0.9s
VSR Storozhevoye 95.14 321 eP P 02 08 46.7 -3.1
VSR pmax pmax
comp=Z,4.0nm,0.9s
VORR Voronezh 95.16 321 eP P 02 08 47.6 -2.3
VORR pmax pmax
comp=Z,9.0nm,0.9s
LPSR Galich'ya Gora 95.42 322 eP P 02 08 47.4 -3.6
LPSR pmax pmax
comp=Z,10.0nm,0.8s
BOSA Boshof 97.53 240 P Pdif 02 09 02.8 +1.3
comp=Z,1.3nm,0.6s,baz=139,slow=4.5,SNR=4.2
comp=Z,1.3nm,0.6s
BRTR Keskin Array B 98.18 309ceP P 02 09 03.5 -0.5
BRTR pmax pmax
comp=Z,1.0nm,1.0s
ARCES ARCESS Array B 101.43 339 Pdiff Pdif 02 09 16.8 -0.8
comp=Z,2.2nm,0.7s,baz=43,slow=2.3,SNR=4.0
ARCES PKiKP PKiKP 02 13 40.8 -0.3
comp=Z,2.2nm,0.8s,baz=336,slow=1.5,SNR=7.7
SPITS Spitsbergen Ar 101.74 349 Pdiff Pdif 02 09 18.1 -0.8
comp=Z,4.8nm,0.7s,baz=89,slow=9.4,SNR=6.1
FINES FINESS Array B 102.33 331 Pdiff Pdif 02 09 20.4 -1.4
comp=Z,0.9nm,0.7s,baz=51,slow=18,SNR=1.6
FINES PKiKP PKiKP 02 13 43.1 +0.2
comp=Z,0.6nm,0.5s,baz=94,slow=3.2,SNR=6.5
YKA Yellowknife Ar 109.09 26 PKiKP PKiKP 02 13 55.1 -0.3
comp=Z,0.8nm,0.8s,baz=300,slow=1.7,SNR=12
YKA PKKPbc PKKPbc 02 25 03.0 -2.2
comp=Z,0.6nm,0.9s,baz=107,slow=3.2,SNR=8.2
CLL Collm 111.43 322 iPKiKP PKiKP 02 13 59.9 -0.2
GERES GERESS Array B 111.61 320 PKiKP PKiKP 02 14 00.3 -0.3
comp=Z,1.2nm,0.7s,baz=90,slow=4.0,SNR=5.4
NVAR Mina Array Bea 113.14 51 PKiKP PKiKP 02 14 04.5 +0.4
comp=Z,0.9nm,0.8s,baz=260,slow=2.9,SNR=6.6
WTTA Wattenberg 113.34 318 iPKiKP PKiKP 02 14 04.0 -0.2
comp=Z,2.4nm,0.2s
WATA Walderalm 113.36 318 iPKiKP PKiKP 02 14 04.1 0.0
comp=Z,1.8nm,0.5s
SQTA Sankt Quirin 113.64 318 iPKiKP PKiKP 02 14 05.1 +0.4
comp=Z,0.5nm,0.3s
MOTA Moosalm 113.67 319 iPKiKP PKiKP 02 14 04.8 +0.1
comp=Z,1.0nm,0.3s
RETA Reutte 113.86 319 iPKiKP PKiKP 02 14 05.6 +0.6
comp=Z,0.4nm,0.3s
FETA Feichten 114.00 318 iPKP PKPdf 02 14 04.9 -0.5
comp=Z,0.5nm,0.4s
DAVA Damuels 114.49 319 iPKP PKPdf 02 14 06.1 -0.2
comp=Z,1.1nm,0.3s
KEST Kesra 117.62 306 PKP PKPdf 02 14 12.5 -0.1
comp=Z,2.4nm,0.9s,baz=74,slow=7.5,SNR=2.8
PD31 Pinedale Array 118.64 45 PKPdf 02 14 14.2 -0.4
PDAR Pinedale Array 118.64 45 PKiKP 02 14 14.6 0.0
PDAR Pinedale Array 118.64 45 PKP PKiKP 02 14 15.1 +0.5
comp=Z,1.5nm,0.7s,baz=228,slow=0.7,SNR=16
PDAR PKKPab PKKPab 02 24 34.9 +1.0
comp=Z,0.4nm,0.6s,baz=126,slow=6.5,SNR=4.1
EKA Eskdalemuir Ar 118.72 331 PKiKP PKiKP 02 14 14.0 0.0
EKA Eskdalemuir Ar 118.72 331 PKP PKiKP 02 14 14.0 0.0
comp=Z,0.6nm,0.4s,baz=32,slow=3.6,SNR=7.7
RSSD Black Hills 121.95 42 PKPdf PKPdf 02 14 20.2 -0.6
RSSD Black Hills 121.95 42 PKiKP PKPdf 02 14 20.2 -0.6
ANMO Albuquerque 123.17 53 PKP PKiKP 02 14 24.7 +1.0
comp=Z,2.7nm,0.8s,baz=288,slow=4.9,SNR=8.9
ULM Lac du Bonnet 123.95 32 PKP PKiKP 02 14 24.4 -0.1
comp=Z,2.6nm,0.8s,baz=300,slow=3.9,SNR=5.0
ESDC Sonseca Array 126.54 314 PKP PKiKP 02 14 30.0 -0.1
comp=Z,1.5nm,1.0s,baz=324,slow=2.0,SNR=5.1
TXAR Lajitas Array 125.85 59 PKP PKiKP 02 14 31.9 +0.8
comp=Z,1.5nm,0.7s,baz=234,slow=1.5,SNR=11
TORD Torodi Ar. Bea 127.03 281 PKP PKiKP 02 14 31.7 +0.1
comp=Z,1.1nm,0.2s,baz=53,slow=4.7,SNR=4.3
PLCA Paso Flores 128.98 162 PKP PKiKP 02 14 36.1 +1.1
comp=Z,2.3nm,0.7s,baz=179,slow=2.8,SNR=6.8
SCHQ Schefferville 131.37 11 PKP PKiKP 02 14 39.6 +0.4
comp=Z,1.3nm,0.5s,baz=304,slow=3.9,SNR=7.6
DBIC Dimbokro 133.30 272 PKP PKPdf 02 14 43.2 +0.1
comp=Z,2.7nm,0.5s,baz=207,slow=2.2,SNR=5.2
CPUP Villa Florida 145.91 171 PKPbc PKPab 02 15 06.8 -0.2
comp=Z,16nm,0.9s,baz=188,slow=2.0,SNR=32
BDFB Brasilia 156.63 190 PKPab PKPab 02 15 52.7 +1.2
comp=Z,3.8nm,0.9s,baz=156,slow=0.0,SNR=4.4

IDC **17** *02:01:27.4±0.8, 16°.23N×98°.03W, h0km, mb4.0/10, mbtmp3.9/12, ML3.2/2, Error ellipse: s-maj=20.6km s-min=15.2km az=32.0*
NEIC **17** *02:01:32.1±1.9, 16°.42N±0°.04×98°.12W±0°.03, h18km±4km, mb4.3/55, Md4.0/12(MEX), Error ellipse: s-maj=6.8km s-min=3.6km az=215.0*
MEX **17** *02:01:32.2±0.6, 16°.28N×98°.11W, h12km±9km, MD4.1*
ISC 17 02:01:29.4±1.4, **16.33N**±0°.04×**98.11W**±0°.03, **h10**km±8km, **n306**,σ1**s69/342**, **mb4.3**/27, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOIG	Yosondua	0.75	46		Pb	02 01 45.3	+0.4
YOIG					Sb	02 01 55.4	+0.1
YOIG	Yosondua	0.75	46	*i* P	Pb	02 01 45.3	+0.4
YOIG				*i* S	Sb	02 01 55.4	+0.1
TXIG	Tlaxiaco	0.97	20		Pn	02 01 49.1	-0.4
TXIG					Sb	02 02 01.7	0.0
TXIG	Tlaxiaco	0.97	20	*i* P	Pn	02 01 49.1	-0.4
TXIG				*e*S	Sb	02 02 01.7	0.0
MGIG	Malinaltepec	1.03	331		Pg	02 01 49.5	+0.2
MGIG					Sb	02 02 03.3	+0.1
MGIG	Malinaltepec	1.03	331	*e*P	Pg	02 01 49.5	+0.2
MGIG				*e*S	Sb	02 02 03.3	+0.1
CRIG	Cruz Grande	1.06	293		Pb	02 01 48.8	-1.1
CRIG					Sg	02 02 03.6	0.0
CRIG	Cruz Grande	1.06	293	*e*P	Pb	02 01 48.8	-1.1
CRIG				*e*S	Sg	02 02 03.2	-0.4
TLIG	Tlapa	1.30	340	Pn	Pn	02 01 53.9	+0.1
TLIG					Sb	02 02 10.1	-0.9
TLIG	Tlapa	1.30	340	*e*P	Pn	02 01 53.8	-0.1
TLIG				*e*S	Sb	02 02 07.5	-3.4
VHO	Vista Hermosa	1.51	61	*e*P	Pn	02 01 56.6	-0.2
VHO				*e*S	Sn	02 02 15.3	-1.4
FTIG	Fresnillo de T	1.57	359		Pb	02 01 58.0	-0.6
FTIG					Sg	02 02 19.2	-0.8
FTIG	Fresnillo de T	1.57	359	*e*P	Pb	02 01 58.0	-0.6
FTIG				*e*S	Sg	02 02 19.2	-0.8
DAIG	Los Arroyos	1.63	295		Pn	02 01 57.0	-1.2
DAIG					Sn	02 02 17.6	-1.7
DAIG	Los Arroyos	1.63	295	*e*P	Pn	02 01 57.0	-1.2
DAIG				*i* S	Sn	02 02 17.6	-1.7
HUIG	Huatulco	2.00	106	*e*P	Pn	02 02 02.1	-1.3
HUIG				*e*S	Sn	02 02 24.2	-4.3
MEIG	Mezcala	2.14	318	*e*P	Pn	02 02 06.2	+0.8
MEIG				*e*S	Sn	02 02 30.5	-1.6
TPIG	Tehuac#an	2.20	19	*e*P	Pn	02 02 07.0	+0.8
TPIG				*e*S	Sn	02 02 30.4	-3.2
PLIG	Platanillo	2.44	327	*e*P	Pb	02 02 11.9	-1.7
PLIG				*e*S	Sn	02 02 38.0	-1.6
NEUV	Arroyo Zacate	2.60	58	*e*P	Pn	02 02 11.7	+0.1
NEUV				*e*S	Sn	02 02 42.3	-1.0
AMVM	AMECAMECA	2.86	347	*e*P	Pb	02 02 20.8	0.0
AMVM				*e*S	Sn	02 02 47.9	-2.2
ARIG	Puente Sto Nin	2.88	313	*e*P	Pn	02 02 17.0	+1.4
ARIG				*e*S	Sn	02 02 46.5	-3.8
UNM	Universidad Na	3.15	341		Pn	02 02 19.4	-0.1
TXVM	Universitario	3.18	346	*e*P	Pb	02 02 24.4	-1.8
TXVM				*e*S	Sn	02 02 52.7	-5.3
CMIG	Matias Romero	3.18	76	Pn	Pn	02 02 18.9	-0.7
	7.0nm,0.3s,baz=251,slow=14,SNR=25						
CMIG				Sn	Sn	02 02 56.0	-1.7
	50nm,0.3s,baz=252,slow=13,SNR=4.4						
CMIG				Lg	Lg	02 03 08.8	
	132nm,0.3s,baz=353,slow=17,SNR=17						
	23nm,0.4s						
CMIG	Matias Romero	3.18	76	*e*P	Pn	02 02 18.5	-1.2
CMIG				*e*S	Sn	02 02 58.5	+0.8
INVM	La Marquesa	3.18	338	*e*P	Pb	02 02 24.7	-1.7
INVM				*e*S	Sn	02 02 55.0	-3.3
PBVM	Pinon	3.23	343	*e*P	Pb	02 02 25.9	-1.0
PBVM				*e*S	Sn	02 02 53.3	-5.5
JAUV	Jalcomulco	3.27	22	*e*P	Pn	02 02 23.8	+3.0
JAUV				*e*S	Sn	02 02 56.1	-3.7
TOVM	TOLUCA	3.29	333	*e*P	Pb	02 02 27.2	-1.0
TOVM				*e*S	Sn	02 02 56.3	-4.6
PTVM	Pico Tres Padr	3.38	344	*e*P	Pb	02 02 29.7	0.0
PTVM				*e*S	Sn	02 03 00.3	-2.7
AZVM	Cuida Lopez Ma	3.42	341	*e*P	Pb	02 02 29.5	-0.9
AZVM				*i* S	Sn	02 03 07.0	+3.0
VTVM	Tizayuca	3.48	350	*e*P	Pb	02 02 32.3	+1.0
VTVM				*e*S	Sn	02 03 04.5	-0.9
ZUVM	ZUMPANGO	3.60	345	*e*P	Pb	02 02 29.9	-3.5
ZUVM				*e*S	Sn	02 03 04.5	-3.8
PMUV	Sontecomapan	3.60	52	*e*P	Pn	02 02 24.6	-0.8
LVIG	Laguna Verde	3.74	25	*e*P	Pn	02 02 28.5	+1.2
LVIG				*e*S	Sb	02 03 15.7	-5.3
ATVM	ATLACOMULCO	3.79	335	*e*P	Pb	02 02 34.2	-2.4
ATVM				*e*S	Sn	02 03 10.2	-2.8
ACIG	Acambay	4.00	335	*e*P	Pb	02 02 41.4	+1.2
ACIG				*e*S	Sn	02 03 16.6	-1.5
DEIG	Demacu	4.05	348	*e*	Pb	02 02 43.0	+2.0
DEIG				*i* S	Sn	02 03 20.9	+1.5
MOIG	Morelia	4.43	319		Pn	02 02 38.5	+1.5
JRQG	Juriquilla Cam	4.88	333	Pn	Pn	02 02 45.0	+1.8
CCIG	Comitan	5.74	90		Pn	02 02 55.5	+0.6
ZAIG	Zacatecas	7.66	327	Pn	Pn	02 03 22.5	+1.1
PETF	Flores	7.92	85		Pn	02 03 24.7	-0.2
MTO3	Montecristo	8.66	102	Pn	Pn	02 03 36.5	+1.4
TEIG	Tepich	10.11	66		Pn	02 03 52.4	-2.4
833A	Chaparral WMA,	11.99	355		Pn	02 04 20.7	+0.2
833A	Chaparral WMA,	11.99	355	P	Pn	02 04 20.9	+0.3
	baz=174						
HNDO	Hondo	13.18	356	Pn	Pn	02 04 36.9	+0.1
DRIO	Del Rio	13.23	350		Pn	02 04 37.9	+0.3
TXAR	Lajitas Array	13.91	339	Pn	Pn	02 04 50.9	+4.0
	baz=158,slow=15,SNR=2.7						
TXAR				Lg	Lg	02 08 51.9	
	baz=200,slow=31,SNR=2.1						
	0.1nm,0.5s						
SAND	Sanderson	14.05	346		Pn	02 04 49.5	+0.8
435B	Jarrell	14.39	2	Pn	Pn	02 04 52.4	-1.0
BRDY	Brady	14.91	357		Pn	02 05 02.1	+1.7
MNHN	Monahans	15.53	345		Pn	02 05 09.3	+0.6
NATX	Nacogdoches	15.68	11	P	Pn	02 05 10.4	-0.1
	baz=192						
PECS	Pecos	15.87	342		Pn	02 05 14.3	+1.2
DRK0	Durika	16.10	114	Pn	P	02 05 18.1	-1.5
ABTX	Abilene, Hawle	16.28	355	P	P	02 05 20.6	-0.8
ABTX				IAmb	IAmb	02 05 24.2	
	comp=Z,20nm,0.9s						
ABTX	Abilene, Hawle	16.28	355	P	P	02 05 20.2	-1.1
	baz=175,SNR=9.7						
MNTX	Cornudas Mount	16.67	338	P	P	02 05 26.3	+0.6
	baz=155						
Z35A	Perchaven, San	16.95	2	Pn	Pn	02 05 26.9	+0.2
Z35A				IAmb	IAmb	02 06 05.8	
	comp=Z,15nm,0.9s						
Z38A	Mt. Pleasant	17.09	9	Pn	Pn	02 05 28.6	0.0
Z38A				IAmb	IAmb	02 05 40.9	
	comp=Z,15nm,0.8s						
VBMS	Vicksburg	17.25	22	Pn	Pn	02 05 30.5	-0.1
VBMS				IAmb	IAmb	02 05 45.8	
	comp=Z,25nm,1.1s						
VBMS	Vicksburg	17.25	22	P	Pn	02 05 30.1	-0.5
	baz=205						
Z41A	Richland Creek	17.52	15		Pn	02 05 34.1	+0.2
Z41A				IAmb	IAmb	02 06 02.6	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	17.86	14		Pn	02 05 38.4	+0.2
WLAR				IAmb	IAmb	02 06 21.8	
	comp=Z,16nm,1.0s						
BRAL	Brewton	17.89	32	P	Pn	02 05 37.2	-1.2
	baz=217						
MSTX	Muleshoe	18.06	347	P	P	02 05 42.0	+0.9
	baz=166						
X34A	Smith Ranch, M	18.20	1		Pn	02 05 41.2	-1.1
X34A				IAmb	IAmb	02 06 12.3	
	comp=Z,15nm,0.7s						
WMOK	Wichita Mounta	18.34	358	P	Pn	02 05 43.5	-0.6
WMOK	Wichita Mounta	18.34	358	P	P	02 05 44.7	+0.6
	baz=178						
121A	Cookes Peak, D	18.36	333	P	Pn	02 05 43.9	-0.6
121A	Cookes Peak, D	18.36	333	P	P	02 05 46.6	+2.0
	baz=149						
MIAR	Mount Ida	18.59	12	P	Pn	02 05 47.6	+0.5
MIAR	Mount Ida	18.59	12	P	Pn	02 05 47.0	-0.1
	baz=194						
AMTX	Amarillo	18.75	351	P	Pn	02 05 50.1	+1.0
	baz=169						
LRAL	Lakeview Retre	19.43	29	P	P	02 05 56.1	0.0
	baz=214						
TUL3	Leonard	19.61	6	P	P	02 05 57.0	-1.0
TUL3				IAmb	IAmb	02 06 20.7	
	comp=Z,14nm,0.8s						
TUL3	Leonard	19.61	6	P	P	02 05 58.6	+0.6
	baz=187						
TUC	Tucson	19.63	326	P	Pn	02 06 01.4	+1.7
	baz=141						
OXF	Oxford	19.72	22	P	P	02 05 59.3	+0.1
	baz=206						
ANMO	Albuquerque	19.99	340	P	Pn	02 06 03.6	-0.5
ANMO	Albuquerque	19.99	340	P	Pn	02 06 04.6	+0.5
	baz=156						
ANMO	Albuquerque	19.99	340	P	Pn	02 06 03.4	-0.7
	comp=Z,3.4nm,0.9s,baz=251,slow=11,SNR=12						
	comp=Z,3.4nm,0.9s						
TIGA	Tifton	20.03	39	P	P	02 06 01.8	-0.9
	baz=225						
FCAR	Ozark Folk Cen	20.20	14	P	P	02 06 03.6	-0.8
U38A	Gravette	20.30	9	P	P	02 06 06.4	+0.8
U38A				IAmb	IAmb	02 06 44.7	
	comp=Z,12nm,1.3s						
BLOK	Blackwell	20.36	2		P	02 06 04.7	-1.5
BLOK				IAmb	IAmb	02 06 08.1	
	comp=Z,11nm,0.7s						
Y49A	Blount Mountai	20.39	29	P	P	02 06 06.0	-0.5
214A	Organ Pipe Nat	20.50	322	P	Pn	02 06 12.0	+2.0
	baz=136						
MGMO	Mountain Grove	21.38	13	P	P	02 06 15.9	-1.3
MGMO				IAmb	IAmb	02 06 34.4	
	comp=Z,15nm,1.0s						
T25A	Trinidad	21.46	346	P	P	02 06 19.0	+0.6
T25A	Trinidad	21.46	346	P	P	02 06 20.4	+2.1
	baz=163,SNR=10						
GOGA	Godfrey	21.54	35	P	P	02 06 18.5	-0.4
	baz=221						
WVT	Waverly	21.74	23	P	P	02 06 19.0	-2.1
WVT				IAmb	IAmb	02 06 24.2	
	comp=Z,13nm,1.0s						
WVT	Waverly	21.74	23	P	P	02 06 20.4	-0.6
	baz=208						
SDCO	Great Sand Dun	22.31	344	P	P	02 06 27.8	+0.3
SDCO	Great Sand Dun	22.31	344	P	P	02 06 29.6	+2.1
	baz=161						
CCM	Cathedral Cave	22.47	14	P	P	02 06 27.8	-1.1
CCM				IAmb	IAmb	02 06 34.0	
	comp=Z,6.2nm,0.8s						
CCM	Cathedral Cave	22.47	14	P	P	02 06 28.9	0.0
	baz=198						
WUAZ	Wupatki	22.48	331	P	P	02 06 30.1	+0.9
WUAZ				IAmb	IAmb	02 06 35.0	
	comp=Z,14nm,0.9s						
WUAZ	Wupatki	22.48	331	P	P	02 06 32.6	+3.4
	baz=145,SNR=13						
GLA	Glamis	22.48	321	P	P	02 06 32.8	+3.6
	baz=134						
S22A	4UR Ranch, Cre	22.68	342	P	P	02 06 33.7	+2.2
	baz=158,SNR=12						
KSU1	Kansas State U	22.72	3	P	P	02 06 32.6	+1.0
	baz=184						
MVCO	Mesa Verde	22.74	338	P	P	02 06 32.2	+0.2
MVCO				IAmb	IAmb	02 06 44.5	
	comp=Z,10nm,0.8s						
MVCO	Mesa Verde	22.74	338	P	P	02 06 34.1	+2.0
	baz=153,SNR=7.9						
U49A	Red Boiling Sp	22.89	26	P	P	02 06 32.5	-0.8
PDMCI	Parker Dam,Lak	22.97	324	P	P	02 06 37.5	+3.3
	baz=137						
SWSC	Sam W. Stewart	23.01	319	P	P	02 06 38.5	+3.9
	baz=132						
IKP	In-Ko-Pah, Jac	23.01	318	P	P	02 06 37.8	+3.1
	baz=131						
BG3	Lake Jocassee	23.02	33	P	P	02 06 33.7	-1.1
BG3				IAmb	IAmb	02 06 44.2	
	comp=Z,7.2nm,0.8s						
BC3	Big Chuckawall	23.28	321	P	P	02 06 40.2	+2.7
	baz=134						
MONP2	Monument Peak	23.37	318	P	P	02 06 41.9	+3.3
	baz=130						
Q24A	Divide	23.38	346	P	P	02 06 38.2	-0.5
Q24A	Divide	23.38	346	P	P	02 06 40.8	+2.1
	baz=163						
USIN	University of	23.43	21	P	P	02 06 38.2	-0.7
IRM	Iron Mountain	23.44	322	P	P	02 06 42.1	+3.0
	baz=135						
BELC	Belle Mtn. Jos	23.84	321	P	P	02 06 45.2	+2.1
	baz=133						
TPFO	Pinon Flats	23.86	320	P	P	02 06 46.2	+3.0
	baz=132						
Q44A	Meyer Farm, Va	23.86	18	P	P	02 06 42.8	-0.3
Q44A				IAmb	IAmb	02 07 24.6	
	comp=Z,12nm,0.8s						
PFO	Pinyon Flats O	23.86	320	P	P	02 06 46.3	+3.0
	baz=132						
WCI	Wyandotte Cave	24.17	23	P	P	02 06 45.1	-0.8
	baz=209						
GMRC	Granite Mounta	24.19	323	P	P	02 06 50.1	+3.8
	baz=135						
HMU	Henry Mountain	24.23	335	P	P	02 06 47.5	+0.6
ISCO	Idaho Springs	24.28	346	P	P	02 06 47.3	-0.1
ISCO				IAmb	IAmb	02 06 50.1	
	comp=Z,8.3nm,0.8s						
ISCO	Idaho Springs	24.28	346	P	P	02 06 49.5	+2.2
	baz=162,SNR=14						
MURC	Murrieta	24.32	319	P	P	02 06 51.6	+4.1
	baz=130						
HEC	Hector,Ludlow	24.61	322	P	P	02 06 53.5	+3.4
	baz=134						
OGNE	Ogallala	24.76	353	P	P	02 06 54.1	+2.7
	baz=171						
U54A	Nelsons Funny	24.77	33	P	P	02 06 51.4	-0.2
S51A	Beattyville	24.79	28	P	P	02 06 52.2	+0.5
S51A				IAmb	IAmb	02 06 53.2	
	comp=Z,7.7nm,0.8s						
TUQ	Turquoise Moun	24.80	323	P	P	02 06 55.4	+3.5
	baz=136						
CIS	Catalina Islan	24.99	317	P	P	02 06 56.7	+3.2
	baz=128						
GSC	Goldstone, Bar	25.22	322	P	P	02 06 59.0	+3.4
	baz=134						
O20A	White River Ci	25.30	342	P	P	02 06 58.1	+1.6
O20A				IAmb	IAmb	02 07 08.6	
	comp=Z,13nm,1.0s						
O20A	White River Ci	25.30	342	P	P	02 06 59.5	+3.1
	baz=157,SNR=8.5						
HDIL	Hopedale	25.32	16	P	P	02 06 55.7	-0.7
HDIL	Hopedale	25.32	16	P	P	02 06 56.8	+0.4
	baz=200						
N23A	Red Feather La	25.40	346	P	P	02 07 00.0	+2.6
	baz=162,SNR=6.0						
EDW2	Edwards Air Fo	25.66	320	P	P	02 07 03.6	+4.1
	baz=131						
SFIN	Lafayette	25.80	20	P	P	02 07 00.7	-0.1
	baz=205						
SCIA	State Center	25.84	8	P	P	02 07 02.6	+1.5
	baz=191						
LRMC	Laurel Mtn Rad	25.86	321	P	P	02 07 04.4	+2.8
	baz=132						
P49A	Miami Univ. Ec	25.91	24	P	P	02 07 01.0	-0.8
P49A	Miami Univ. Ec	25.91	24	P	P	02 07 01.2	-0.5
	baz=211,SNR=5.5						
CHSH	Refugio Sur-Vo	25.98	131	P	P	02 07 04.2	+1.0
CHSH				IAmb	IAmb	02 07 07.1	
	comp=Z,6.8nm,0.8s						
BLA	Blacksburg	26.03	34	P	P	02 07 04.1	+1.2
	baz=222						
TPNV	Topopah Spring	26.07	325	P	P	02 07 07.4	+3.9
	baz=137						
MPMC	Manual Prospec	26.14	322	P	P	02 07 06.6	+2.4
	baz=134						
R11B	Troy Canyon, C	26.78	328	P	P	02 07 13.5	+3.7
	baz=140						
DUG	Dugway, Tooele	27.00	335	P	P	02 07 12.7	+0.9
DUG	Dugway, Tooele	27.00	335	P	P	02 07 14.4	+2.6
	baz=148						
K22A	Casper	27.20	346	P	P	02 07 13.8	+0.2
K22A				IAmb	IAmb	02 07 28.2	
	comp=Z,11nm,0.8s						
ECSD	EROS Data Cent	27.34	2	P	P	02 07 13.7	-0.9
ECSD				IAmb	IAmb	02 07 16.6	
	comp=Z,4.2nm,1.0s						
BOSC	San Juan Bosco	27.40	133	P	P	02 07 16.5	+0.9
BOSC				IAmb	IAmb	02 07 19.2	
	comp=Z,2.4nm,0.5s						
SDV	Santo Domingo	27.79	102	P	P	02 07 19.7	+0.5
SDV				IAmb	IAmb	02 07 30.1	
	comp=Z,8.4nm,0.9s						
PD31	Pinedale Array	28.11	342	P	P	02 07 22.4	+0.6
PDAR	Pinedale Array	28.11	342	P	P	02 07 22.2	+0.4
PDAR	Pinedale Array	28.11	342	P	P	02 07 22.6	+0.8
	comp=Z,1.2nm,1.0s,baz=134,slow=11,SNR=4.6						
PDAR				PcP	PcP	02 10 34.6	-1.4
	comp=Z,0.2nm,0.4s,baz=150,slow=3.8,SNR=2.1						
	comp=Z,1.2nm,1.0s						
NVAR	Mina

YKA	Yellowknife Ar	47.55	350	P	P	02 10 04.8 -0.1
	comp=Z,1.4nm,0.9s,baz=155,slow=7.3,SNR=14					
YKA				PcP	PcP	02 11 34.6 -0.1
	comp=Z,0.6nm,0.8s,baz=159,slow=4.4,SNR=6.0					
	comp=Z,1.4nm,0.9s					
DLBC	Dease Lake	48.21	338	P	P	02 10 13.2 +3.0
	baz=137					
R33M	Jennings River	49.25	339	P	P	02 10 20.8 +2.6
	baz=137					
O30N	Mendenhall	52.05	337	P	P	02 10 41.5 +2.2
	baz=132					
FARO	Faro, Yukon	52.10	340	P	P	02 10 40.7 +1.1
	baz=135					
M31M	Drury Creek, Y	52.43	340	P	P	02 10 43.9 +1.9
	baz=134					
H03N2	Juan Fernandez	52.77	160	T	T	03 07 27.0
	baz=338,slow=77,SNR=452					
H03N1	Juan Fernandez	52.78	160	T	T	03 07 28.8
	baz=338,slow=77,SNR=503					
H03N3	Juan Fernandez	52.79	160	T	T	03 07 27.6
	baz=338,slow=77,SNR=228					
N30M	Aishikik Lake	52.87	338	P	P	02 10 48.1 +2.7
	baz=131					
YUK4	Talbot Arm	53.38	337	P	P	02 10 51.9 +2.7
	baz=129					
YUK8	Steele Glacier	53.76	337	P	P	02 10 53.9 +1.7
	baz=128					
M29M	Somme Creek	54.01	338	P	P	02 10 55.6 +1.8
	baz=130					
L29M	L29M	54.32	339	P	P	02 10 58.1 +2.2
	baz=130					
YUK3	Moose Creek	54.33	337	P	P	02 10 58.0 +1.8
	baz=127					
K29M	Barlow Dome	54.60	340	P	P	02 11 00.1 +2.0
	baz=132					
CRQE	Cirque	54.76	335	P	P	02 11 00.7 +1.4
	baz=124					
KAIM	Kayak Island	54.87	334	P	P	02 11 01.8 +1.9
	baz=122					
I30M	Mount Dempster	55.17	341	P	P	02 11 03.3 +1.2
	baz=134					
C36M	Paulatuk	55.42	349	P	P	02 11 07.2 +3.5
	baz=149					
BMRM	Bremner River	55.50	335	P	P	02 11 06.0 +1.5
	baz=122					
L27K	Beaver Creek,	55.61	338	P	P	02 11 06.7 +1.4
	baz=126					
M26K	Nabesna, AK	55.66	337	P	P	02 11 07.9 +2.2
	baz=125					
G31M	Satah River	55.78	344	P	P	02 11 07.3 +1.0
	baz=137					
F31M	Tsiigehtchic	56.02	344	P	P	02 11 08.8 +0.7
	baz=138					
EPYK	Eagle Plains	56.07	342	P	P	02 11 10.5 +2.0
	baz=134					
K27K	Chicken	56.28	338	P	P	02 11 12.2 +2.2
	baz=127					
KLU	Klutina	56.32	335	P	P	02 11 13.0 +2.5
	baz=121					
EGAK	Eagle	56.42	339	P	P	02 11 11.8 +0.9
	baz=128					
H29M	Whitestone	56.46	342	P	P	02 11 11.7 +0.5
	baz=132					
HARP	HAARP	56.49	336	P	P	02 11 13.1 +1.5
	baz=123					
INK	Inuvik	56.61	345	P	P	02 11 12.7 +0.5
INK	Inuvik	56.61	345	P	P	02 11 13.1 +0.9
	baz=138,SNR=7.4					
F30M	Barrier River	56.68	344	P	P	02 11 13.3 +0.4
	baz=135					
PAX	Paxson	56.92	336	P	P	02 11 16.6 +1.9
	baz=123					
SCRK	Sand Creek	56.93	338	P	P	02 11 16.3 +1.6
	baz=125					
I27K	Kandik River	57.08	340	P	P	02 11 16.5 +0.8
	baz=128					
J26L	Joseph Creek	57.08	338	P	P	02 11 17.6 +1.8
	baz=125					
H27K	Steamboat Moun	57.44	341	P	P	02 11 19.3 +1.0
	baz=128					
K24K	Donnelly Dome	57.49	337	P	P	02 11 20.1 +1.4
	baz=123					
WAT6	Susitna Watana	57.62	335	P	P	02 11 20.8 +1.1
	baz=120					
DHY	Denali Highway	57.72	336	P	P	02 11 21.7 +1.3
	baz=121					
J25K	Salcha River,	57.79	338	P	P	02 11 22.6 +1.9
	baz=124					
E29M	Blow River	57.80	344	P	P	02 11 22.2 +1.5
	baz=133					
F28M	Old Crow	57.83	342	P	P	02 11 21.8 +0.9
F28M				IAmb	IAmb	02 11 23.0
	comp=Z,4.6nm,0.9s					
F28M	Old Crow	57.83	342	P	P	02 11 22.5 +1.6
	baz=131,SNR=5.1					
A36M	Sachs Harbour	57.90	350	P	P	02 11 22.1 +0.8
	baz=149					
HDA	Harding Lake	58.25	337	P	P	02 11 25.1 +1.2
	baz=122					
PRP	Porcupine Dome	58.35	339	P	P	02 11 26.5 +1.8
	baz=124					
E28M	Babbage River	58.39	343	P	P	02 11 25.5 +0.7
	baz=132					
ILAR	Eielson Array	58.42	338	P	P	02 11 25.9 +0.8
	comp=Z,1.5nm,1.0s,baz=135,slow=5.1,SNR=13					
	comp=Z,1.5nm,1.0s					
MCK	McKinley	58.66	336	P	P	02 11 27.5 +0.7
	baz=119					
BDFB	Brasília	58.77	120	P	P	02 11 27.4 -0.9
	comp=Z,4.7nm,0.8s,baz=273,slow=5.0,SNR=9.2					
	comp=Z,4.7nm,0.8s					
SKT	Skwentna	58.90	334	P	P	02 11 28.8 +0.2
	baz=116					
TRF	Thorofare Moun	59.05	336	P	P	02 11 30.7 +0.9
TRF	Thorofare Moun	59.05	336	P	P	02 11 31.4 +1.6
	baz=118,SNR=6.6					
BMAR	Burnt Mountain	59.13	341	P	P	02 11 30.9 +0.9
F26K	Sheenjek River	59.15	341	P	P	02 11 31.2 +1.0
	baz=126					
H24K	Noodor Dome	59.34	339	P	P	02 11 32.6 +1.1
	baz=122					
I23K	Minto, Yukon-K	59.52	338	P	P	02 11 33.1 +0.4
	baz=120					
M20K	Styx River	59.55	333	P	P	02 11 34.3 +1.2
	baz=114					
F25K	Christian River	59.56	341	P	P	02 11 33.8 +0.7
	baz=125					
PPLA	Purkeypile	59.58	335	P	P	02 11 34.4 +1.1
	baz=116					
BPAW	Bear Paw Mtn.	59.63	336	P	P	02 11 34.8 +1.2
	baz=118					
G24K	Hadweenzic Riv	59.66	340	P	P	02 11 34.3 +0.6
	baz=122					
O18K	Koktuh Hills	59.70	331	P	P	02 11 35.0 +0.9
	baz=111					
N19K	Bonanza Creek	59.72	332	P	P	02 11 35.6 +1.3
	baz=112					
CAST	Castle Rocks	59.76	335	P	P	02 11 34.4 0.0
CAST	Castle Rocks	59.76	335	P	P	02 11 35.3 +0.9
	baz=116,SNR=7.1					
E25K	Arctic Village	59.84	341	P	P	02 11 35.7 +0.7
	baz=125					
MLY	Manley	59.97	337	P	P	02 11 36.5 +0.6
	baz=118					
M19K	Big River Lodg	60.10	333	P	P	02 11 37.6 +0.8
	baz=113					
L20K	Farewell, AK	60.11	334	P	P	02 11 38.1 +1.3
	baz=114					
N18K	Kilae Creek	60.31	331	P	P	02 11 39.1 +0.9
	baz=111					
I21K	Tanana	60.51	337	P	P	02 11 40.5 +1.0
	baz=117					
G23K	Bananza Creek	60.53	339	P	P	02 11 40.3 +0.6
	baz=120					
K20K	Telida	60.54	335	P	P	02 11 40.3 +0.5
	baz=114					
O17K	Koliganek Bris	60.57	330	P	P	02 11 40.7 +0.7
	baz=109					
M18K	Stony River	60.58	332	P	P	02 11 40.6 +0.6
	baz=111					
H22K	Ishtalitna Cre	60.62	338	P	P	02 11 40.6 +0.4
	baz=118					
D25K	Kavik River	60.77	342	P	P	02 11 42.0 +0.7
	baz=125					
N17K	Nushagak Hills	60.86	331	P	P	02 11 42.9 +0.9
	baz=109					
J20K	Nowinta River	60.91	335	P	P	02 11 42.7 +0.5
	baz=114					
O16K	Kokwok River B	60.99	330	P	P	02 11 43.6 +0.7
	baz=108					
H21K	Melozitna Rive	61.03	337	P	P	02 11 43.2 +0.1
	baz=116					
E23K	Chandalar	61.08	340	P	P	02 11 44.7 +1.2
	baz=121					
TTA	Tatalina	61.19	334	P	P	02 11 44.7 +0.4
	baz=112					
L18K	Granite Mounta	61.22	333	P	P	02 11 44.4 0.0
	baz=111					
TOLK	Toolik Lake Re	61.37	341	P	P	02 11 46.1 +0.7
	baz=121					
J19K	Poorman	61.43	335	P	P	02 11 46.0 +0.2
	baz=113					
N16K	Nishlik Lake	61.59	331	P	P	02 11 47.8 +0.9
	baz=108					
G21K	Allakaket	61.67	338	P	P	02 11 47.2 -0.2
	baz=116					
C24K	Franklin Bluff	61.68	342	P	P	02 11 47.6 +0.3
	baz=123					
H20K	Anotleneega Mo	61.74	337	P	P	02 11 49.1 +1.2
	baz=114					
M16K	Timber Creek	61.85	331	P	P	02 11 50.1 +1.4
	baz=108					
D23K	Nanushuk River	61.88	341	P	P	02 11 50.1 +1.3
	baz=120					
F21K	Alatna River	61.98	339	P	P	02 11 50.8 +1.4
	baz=116					
K17K	Iditarod	62.10	333	P	P	02 11 51.6 +1.4
	baz=110					
PLCA	Paso Flores	62.28	157	P	P	02 11 51.1 -0.7
	comp=Z,1.6nm,0.9s,baz=326,slow=8.4,SNR=3.8					
	comp=Z,1.6nm,0.9s					
H19K	Roundabout Mou	62.35	336	P	P	02 11 52.7 +0.7
	baz=113					
D22K	Ayikyak River	62.47	341	P	P	02 11 54.3 +1.6
	baz=118					
F20K	Avaraart Lake	62.69	338	P	P	02 11 55.7 +1.5
	baz=114					
G19K	Purcell Mounta	62.84	337	P	P	02 11 55.3 +0.2
	baz=112					
M14K	Bethel	63.18	330	P	P	02 11 58.7 +1.2
	baz=105					
L15K	Ungalak Mounta	63.20	331	P	P	02 11 58.3 +0.6
	baz=106					
C21K	Knifeblade Rid	63.27	340	P	P	02 11 59.1 +1.1
	baz=116					
J16K	Anvik River	63.27	333	P	P	02 11 58.9 +0.8
	baz=108					
G18K	Tagagawik	63.34	336	P	P	02 11 59.5 +0.9
	baz=111					
F19K	Shaleruckik Mo	63.35	338	P	P	02 11 59.0 +0.4
	baz=112					
E20K	Nigu River	63.35	339	P	P	02 11 58.9 +0.3
	baz=114					
K15K	Wolf Creek Mou	63.40	332	P	P	02 12 00.6 +1.6
	baz=106					
B21K	Ikpikpuk River	63.43	341	P	P	02 11 59.1 +0.1
	baz=116					
H17K	Granite Mounta	63.51	335	P	P	02 12 00.7 +1.0
	baz=109					
L14K	Kuka Creek	63.67	331	P	P	02 12 01.9 +1.2
	baz=105					
D20K	Etivluk River	63.68	340	P	P	02 12 02.1 +1.3
	baz=114					
F18K	Selawik	63.96	337	P	P	02 12 03.8 +1.3
	baz=110					
G17K	Kiwalik Mounta	63.98	336	P	P	02 12 04.3 +1.5
	baz=108					
D19K	Kuna River	64.10	339	P	P	02 12 04.9 +1.3
	baz=112					
J14K	Nanvranak Lak	64.42	332	P	P	02 12 08.1 +2.5
	baz=104					
F17K	Baldwin Pennin	64.52	337	P	P	02 12 06.4 +0.2
	baz=108					
G16K	Koyuk River	64.63	335	P	P	02 12 07.5 +0.5
	baz=107					
C19K	Lookout Ridge	64.83	340	P	P	02 12 10.2 +1.8
	baz=111					
E17K	Hotham Inlet	64.94	337	P	P	02 12 10.4 +1.4
	baz=108,SNR=5.3					
G15K	Niukluk	65.20	335	P	P	02 12 12.8 +2.1
	baz=105					
C18K	Utukok River	65.22	339	P	P	02 12 12.2 +1.3
	baz=109					
D17K	Noatak River	65.59	338	P	P	02 12 13.6 +0.4
	baz=107					
F15K	North Star Dit	65.63	335	P	P	02 12 14.8 +1.3
F15K	North Star Dit	65.63	335	P	P	02 12 14.3 +0.7
	baz=105					
C17K	Deng Mountai	65.85	338	P	P	02 12 16.3 +1.4
	baz=107					
F14K	Arctic Creek	66.26	335	P	P	02 12 17.8 +0.2
	baz=103					
P08K	Saint George I	66.31	325	P	P	02 12 20.2 +2.2
	baz=96					
PETK	Petropavlovsk-	85.35	324	P	P	02 14 07.8 +0.9
	comp=Z,2.6nm,0.8s,baz=77,slow=13,SNR=2.5					
	comp=Z,2.6nm,0.8s					
MKAR	Ivanchi Array	117.17	360	PKP	PKPdf	02 20 13.6 -1.6
	comp=Z,0.2nm,0.7s,baz=354,slow=4.3,SNR=2.4					
WRA	Warramunga Arr	130.19	258	PKP	PKPdf	02 20 39.9 -0.8
	comp=Z,0.8nm,1.0s,baz=89,slow=2.2,SNR=5.4					
ASAR	Alice Springs	130.79	253	PKP	PKPdf	02 20 40.8 -1.0
	comp=Z,0.6nm,0.8s,baz=80,slow=3.0,SNR=4.7					

CNRM ***17*** *02:06:30.9, 35.53N×3.74W, h25km, ML2.2*
MDD ***17*** *02:06:30.3±0.8, 35.40N×3.79W, h12km±8km, mb_Lg2.4/20, Error ellipse: s-maj=7.3km s-min=3.7km az=172.0*
SFS ***17*** *02:06:31.0, 35.47N×3.73W, h24km, ML2.6/9, ML2.6/9, MLv2.5/9*
INMG ***17*** *02:06:31.1±1.4, 35.51N×3.75W, h6km±6km, ML1.8, Error ellipse: s-maj=4.1km s-min=3.1km az=107.0*
ISC 17 02:06:30.3±1.1, 35.53N±0.02×3.76W±0.02, h15km±9km, n55, σ1°39/72, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.34	206	P	Pg	02 06 37.3	0.0
PALE	Palemas	0.34	206	S	Sb	02 06 43.0	-0.3
EMEL	Melilla	0.69	109	P	Pb	02 06 43.8	-0.2
EMEL				S	Sg	02 06 52.8	-0.1
GOG	Mont Gurugu	0.69	116	P	Pb	02 06 43.9	-0.2
GOG	Mont Gurugu	0.69	116	S	Sb	02 06 54.3	+0.8
EMLI	Melilla	0.70	109	Pg	Pg	02 06 43.7	-0.2
EALB	Alboran	0.72	55	Pg	Pg	02 06 44.0	-0.3
EALB	Alboran	0.72	55	P	Pg	02 06 44.3	0.0
EALB				S	Sg	02 06 54.3	+0.5
EALB				*i* Vmb_Lg		02 06 59.0	
AKLM	AKL	1.02	185	P	Pb	02 06 49.9	+0.3
AKLM	AKL	1.02	185	S	Sn	02 07 03.6	-0.5
CHAS	Isla Isabel II	1.14	107	Pn	Pb	02 06 49.6	-2.0
TAF	Taforalt	1.31	122	P	Pn	02 06 53.2	-0.9
TAF	Taforalt	1.31	122	S	Sb	02 07 11.0	-0.3
EMIJ	Mijas	1.32	322	Pn	Pn	02 06 53.2	-1.0
EMIJ	Mijas	1.32	322	P	Pn	02 06 53.5	-0.7
EMIJ				S	Sb	02 07 08.6	-3.0
EMIJ				*i* Vmb_Lg		02 07 15.8	
SMIR	Smir Dam	1.33	277	P	Pn	02 06 54.6	+0.3
SMIR	Smir Dam	1.33	277	S	Sb	02 07 12.4	+0.6
ELGU	Los Guajares,	1.34	4	Pn	Pn	02 06 53.0	-1.5
ELGU	Los Guajares,	1.34	4	P	Pn	02 06 53.4	-1.1
ELGU				S	Sb	02 07 11.1	-1.1
ELGU				*i* Vmb_Lg		02 07 15.2	
EMAL	Malaga-Limoner	1.35	336	Pn	Pn	02 06 53.8	-0.8
CHEFC	Chefchaouen	1.36	253	P	Pg	02 06 56.6	+0.2
CHEFC	Chefchaouen	1.36	253	S	Sb	02 07 11.5	-1.2
CEU	Ceuta	1.37	286	Pn	Pn	02 06 53.8	-1.0
ECEU	Ceuta	1.37	286	P	Pn	02 06 55.7	+0.9
ECEU				S	Sn	02 07 09.0	-3.7
ECEU				*i* Vmb_Lg		02 07 16.5	
EBER	Berja	1.54	27	Pn	Pn	02 06 55.9	-1.4
EBER	Berja	1.54	27	P	Pn	02 06 55.7	-1.6
EBER				S	Sn	02 07 18.3	+1.2
EBER				*i* Vmb_Lg		02 07 31.1	
JBK	JBK	1.54	140	P	Pn	02 06 56.2	-1.2
JBK	JBK	1.54	140	S	Sn	02 07 15.5	-1.7
EGOR	Sierra Gorda,	1.60	350	Pn	Pn	02 06 58.6	+0.4
EGOR	Sierra Gorda,	1.60	350	P	Pn	02 06 59.1	+0.9
EGOR				S	Sn	02 07 20.4	+1.7
EGOR				*i* Vmb_Lg		02 07 27.5	
EQUE	Quentar	1.69	9	P	Pn	02 06 59.7	+0.3
EQUE				S	Sn	02 07 21.5	+0.6
EQUE				*i* Vmb_Lg		02 07 26.8	
EQTA	Presa de Quent	1.70	9	Pn	Pn	02 06 59.6	+0.2
ENIJ	Nijar	1.91	41	P	Pn	02 07 03.2	+0.9
ENIJ				*i* Vmb_Lg		02 07 26.8	
SICH	Sidi Chahed	1.91	223	S	Sn	02 07 26.5	+0.4
LCRM	LCR	2.05	207	P	Pn	02 07 05.4	+1.1
LCRM	LCR	2.05	207	S	Sb	02 07 33.0	+0.4
ESPR	Espera	2.16	309	S	Sn	02 07 32.5	+0.3
ESPR				*i* Vmb_Lg		02 07 49.5	
EQES	Quesada	2.34	13	P	Pn	02 07 09.8	+1.6
EQES				S	Sn	02 07 39.1	+2.3
EQES				*i* Vmb_Lg		02 07 42.0	
EADA	Adamuz	2.72	346	Pn	Pn	02 07 14.1	+0.7
EADA	Adamuz	2.72	346	P	Pn	02 07 15.0	+1.6
EADA				S	Sn	02 07 47.9	+1.9
EADA				*i* Vmb_Lg		02 07 54.9	
MD31	MD31	2.78	198	P	Pn	02 07 14.7	+0.4
MD31	MD31	2.78	198	S	Sn	02 07 47.7	0.0
MDT	Midelt	2.80	195	P	Pn	02 07 16.3	+1.7
MDT	Midelt	2.80	195	S	Sn	02 07 48.2	+0.1
ECAB	El Cabril	2.87	333	P	Pn	02 07 18.5	+3.0
ECAB				S	Sn	02 07 50.7	+0.9
ECAB				*i* Vmb_Lg		02 08 10.2	
ZHG	ZHG	3.16	230	P	Pn	02 07 21.8	+2.3
PSIM	Granatula de C	3.29	0	P	Pn	02 07 23.8	+2.5
PSIM				S	Sn	02 08 02.0	+1.9
ETOB	Tobarra	3.58	29	P	Pn	02 07 26.9	+1.6
ETOB				*i* Vmb_Lg		02 08 18.2	
EGRO	El Granado	3.61	305	P	Pn	02 07 26.5	+0.9
EGRO				S	Sn	02 08 05.4	-2.5
EGRO				*i* Vmb_Lg		02 08 06.4	
PVAQ	Vaqueiros	3.70	302	*e*P	Pn	02 07 27.5	+0.6
PVAQ				*e*S	Sn	02 08 08.8	-1.4
PBAR	Barrancos	3.73	316	*e*P	Pn	02 07 28.3	+0.8
PBAR				*e*S	Sn	02 08 11.3	+0.4
PBAR				A	A	02 08 18.8	
	1.0nm,0.4s						
PAB	San Pablo	4.04	354	P	Pn	02 07 33.4	+1.8
PAB				*i* Vmb_Lg		02 08 36.1	
EBAD	Badajoz	4.14	322	P	Pn	02 07 35.1	+2.1
EBAD				S	Sn	02 08 19.1	-2.0
EBAD				*i* Vmb_Lg		02 08 22.2	
MESJ	Messejana	4.26	304	*e*P	Pn	02 07 35.7	+1.1
MESJ				*e*S	Sn	02 08 21.8	-2.3
OUZM	OUZ	5.25	209	P	Pn	02 07 49.8	+1.5

IDC ***17*** *02:17:34.8±1.2, 22.07N×121.39E, h0km, mb3.6/7, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=70.2km s-min=20.0km az=66.0*
JMA ***17*** *02:17:37.8±0.1, 22.4N±0.6×121.7E±0.3, h28km, MV3.9/17, TAIWAN REGION*
TAP ***17*** *02:17:38.6, 22.42N×121.65E, h15km, ML4.0, C*
ISC 17 02:17:37.3±1.0, 22.41N±0.02×121.69E±0.03, h16km±7km, n96, σ0.81/127, mb3.6/7, 2C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	Ludao	0.33	322	*i* P	Pb	02 17 45.5	+0.7
	baz=336						
LDUT				S	Sb	02 17 50.2	+0.3
	baz=336						
LAY	Lan-yu	0.39	199⇑	*i* P	Pb	02 17 46.5	+0.6
	baz=192						
LYUB	Lan-yu	0.42	193⇑	*i* P	Pg	02 17 46.1	+0.3
	baz=188						
LYUB				S	Sg	02 17 50.9	-0.7
	baz=188						
TTN	Taitung	0.60	305	*e*P	Pb	02 17 50.0	+0.5
	baz=318						
TWGBT	Beinan	0.69	306	P	Pb	02 17 51.7	+0.7
TWGBT	Beinan	0.69	306	*i* P	Pb	02 17 51.0	0.0
	baz=317						
TWGBT				S	Sb	02 18 00.6	+0.2
	baz=317						
TWG	Pinlang	0.70	306	*e*P	Pb	02 17 51.5	+0.3
	baz=317						
TWG				S	Sb	02 18 01.2	+0.6
	baz=317						
ECL	Taimali	0.70	285⇓	*i* P	Pb	02 17 51.2	0.0
	baz=285						
ECL				S	Sb	02 18 00.1	-0.5
	baz=285						
LONT	Longtian	0.71	314	*e*S	Sn	02 18 02.2	-1.2
	baz=326						
TAW	Tawu	0.73	266	*e*P	Pg	02 17 51.5	-0.2
	baz=264						
TAWH	Dawu Township	0.74	265	P	Pg	02 17 51.7	-0.2
	baz=263						
CHKT	Chengkung	0.75	337	*i* P	Pg	02 17 51.9	-0.1
	baz=339						
CHKT				*i* S	Sg	02 18 01.2	-0.7
	baz=339						
EAST	Anshuo	0.78	268⇓	*i* P	Pg	02 17 52.2	-0.2
	baz=266						
EAST				*e*S	Sg	02 18 01.1	-1.6
	baz=266						
ECS	Chishang	0.81	328	*i* P	Pn	02 17 53.9	-0.1
	baz=329						
ECS				S	Sn	02 18 05.0	-0.7
	baz=329						
CHKH	Chenggong	0.82	341	*i* P	Pg	02 17 53.1	-0.2
	baz=357						
CHKH				S	Sg	02 18 03.3	-0.9
	baz=357						
SLIU	Shizi	0.84	257	⇓P	Pg	02 17 53.3	-0.4
	baz=255						
EHD	Haiduan	0.86	329	*e*P	Pg	02 17 53.9	-0.1
	baz=342						
EHD				*e*S	Sb	02 18 05.4	+0.2
	baz=342						
SMST	Manzhou Townsh	0.88	244	S	Sb	02 18 05.2	-0.5
	baz=241						
TSEB	Hengchuen, Pin	0.89	235	*e*S	Sg	02 18 06.3	+0.1
	baz=247						
ECBN	Changbin	0.93	346	S	Sb	02 18 06.3	-0.8
	baz=348						
TWKBT	Hengchun	0.94	240	*e*P	Pb	02 17 55.2	0.0
	baz=238						
HEN	Hengchun	0.97	246	*e*P	Pb	02 17 55.9	+0.2
	baz=243						
SCZT	Fangliau	0.99	268	*e*P	Pb	02 17 55.7	-0.4
	baz=266						
ELDTW	Lidau	0.99	322	*e*P	Pb	02 17 55.6	-0.6
	baz=333						
ELDTW				*i* S	Sb	02 18 08.1	-1.0
	baz=333						
EYUL	Yuli	0.99	340	*e*S	Sg	02 18 09.9	+0.3
	baz=341						
MASBT	Mashibuluo	0.99	282	*e*P	Pb	02 17 55.8	-0.4
	baz=281						
TWF1	Yuli	1.00	339	*e*P	Pb	02 17 56.0	-0.3
	baz=351						
TSMG	Majia	1.01	287	*e*P	Pb	02 17 56.1	-0.3
	baz=286						
SSD	Sandimen	1.03	289	*e*P	Pb	02 17 55.8	-1.0
	baz=288						
YULB	Yu-li	1.04	340	P	Pb	02 17 57.4	+0.4
YULB	Yu-li	1.04	340	*e*P	Pb	02 17 56.5	-0.5
	baz=351						
HGSD	Ruisui	1.10	347	*e*P	Pb	02 17 57.2	-0.8
	baz=348						
STYH	Taoyuan	1.13	312	*e*P	Pb	02 17 58.3	-0.2
	baz=312						
STYT	Tauyuan	1.14	311	*e*P	Pb	02 17 58.6	-0.1
	baz=311						
EHY	Hungye	1.14	343	*e*P	Pb	02 17 58.6	-0.1
	baz=354						
EHY				*e*S	Sb	02 18 13.8	+0.5
	baz=354						
SGLT	Jiouru	1.15	286	*e*P	Pg	02 18 00.1	+0.5
	baz=292						
SCST	Cishan	1.20	293	*e*P	Pg	02 18 00.6	+0.1
	baz=293						
SGST	Jiashian	1.22	303	*e*P	Pn	02 17 60.0	+0.2
	baz=298						
SGST				*e*S	Sg	02 18 19.0	+2.2
	baz=298						
TWM1	Shoushan	1.24	290	*e*P	Pg	02 18 02.0	+0.8
	baz=295						
WTP	Ta-pu	1.29	310	*e*P	Pb	02 18 01.8	+0.4
	baz=320						
WTP				*e*S	Sg	02 18 18.3	-0.8
	baz=320						
TEGC	Jichi Village	1.30	354	*e*S	Sb	02 18 16.9	-0.9
	baz=7.0						

CHN1	**Nanshi**	**1.32 306**	⇓*i* P		**Pg**	**02 18 02.4**	**-0.3**
	baz=315							
CHN1			S		**Sg**	**02 18 19.4**	**-0.5**
	baz=315							
TPUB	**Ta-pu**	**1.32 312**	P		**Pg**	**02 18 02.3**	**-0.4**
TPUB	**Ta-pu**	**1.32 312**	*i* P		**Pb**	**02 18 02.2**	**+0.5**
	baz=312							
WARBT	**Fenglin Townsh**	**1.33 348**	*e*P		**Pn**	**02 18 01.1**	**-0.2**
WARBT	baz=2.0		*e*S		**Sb**	**02 18 18.1**	**-0.6**
	baz=2.0							
SNST	**Tainan City**	**1.36 307**	*e*P		**Pg**	**02 18 03.5**	**-0.1**
	baz=316							
ALS	**Alishan**	**1.36 324**	*e*P		**Pb**	**02 18 02.7**	**0.0**
	baz=324							
SHUL	**Shoufeng**	**1.38 355**	*e*S		**Sn**	**02 18 18.9**	**-0.8**
	baz=8.0							
TWK	**Hsinying**	**1.40 308**	*e*P		**Pg**	**02 18 03.8**	**-0.4**
	baz=317							
TWK			*e*S		**Sg**	**02 18 23.4**	**+1.0**
	baz=317							
ESL	**Shilin**	**1.42 351**	*e*P		**Pn**	**02 18 02.7**	**+0.3**
	baz=4.0							
ESL			*e*S		**Sn**	**02 18 19.1**	**-1.7**
	baz=4.0							
VWDT	**VWDT**	**1.43 340**	*e*P		**Pn**	**02 18 03.0**	**+0.4**
	baz=353							
VWDT			*e*S		**Sn**	**02 18 19.7**	**-1.4**
	baz=353							
WCKO	**Fanlu**	**1.43 316**	*e*P		**Pg**	**02 18 04.9**	**+0.1**
	baz=325							
WCKO			*e*S		**Sg**	**02 18 22.9**	**-0.6**
	baz=325							
CHN5	**Tsauling**	**1.50 322**	*e*P		**Pb**	**02 18 05.5**	**+0.6**
	baz=322							
CHN5			*e*S		**Sg**	**02 18 25.6**	**-0.3**
	baz=322							
SSLB	**Suanglung**	**1.53 334**	P		**Pg**	**02 18 06.3**	**-0.4**
SSLB	**Suanglung**	**1.53 334**	*e*P		**Pb**	**02 18 05.2**	**-0.1**
	baz=345							
SSLB			*e*S		**Sn**	**02 18 23.4**	**-0.2**
	baz=345							
HWA	**Hwalien**	**1.56 357**	*e*S		**Sn**	**02 18 24.7**	**+0.3**
	baz=11							
CHN2	**Minshiung**	**1.58 315**	*e*P		**Pg**	**02 18 07.3**	**-0.4**
	baz=314							
CHN2			*e*S		**Sg**	**02 18 28.4**	**+0.1**
	baz=314							
LXIB	**Xiulin Townshi**	**1.62 351**	*i* P		**Pn**	**02 18 05.2**	**-0.2**
	baz=351							
SMLT	**Sun Moon Lake**	**1.64 334**	*e*P		**Pb**	**02 18 07.3**	**+0.1**
	baz=343							
WGK	**Gukeng**	**1.64 321**	*e*P		**Pg**	**02 18 08.6**	**-0.3**
	baz=321							
WGK			*e*S		**Sg**	**02 18 30.0**	**-0.2**
	baz=321							
WJS	**Zhushan**	**1.66 328**	P		**Pg**	**02 18 08.8**	**-0.5**
	baz=340							
WUSB	**Renai**	**1.66 342**	*e*P		**Pn**	**02 18 06.6**	**+0.7**
	baz=342							
WUSB			*e*S		**Sn**	**02 18 26.3**	**-0.7**
	baz=342							
TWD	**Chiawan**	**1.66 357**	*e*P		**Pn**	**02 18 06.4**	**+0.5**
	baz=9.0							
TWD			*e*S		**Sn**	**02 18 26.0**	**-0.9**
	baz=9.0							
CHGB	**Renai**	**1.71 344**	*e*P		**Pn**	**02 18 07.7**	**+1.0**
	baz=356							
CHGB			*e*S		**Sn**	**02 18 27.8**	**-0.5**
	baz=356							
WNT	**Mingjian**	**1.73 328**	*e*P		**Pb**	**02 18 09.4**	**+0.7**
	baz=328							
WNT			*e*S		**Sg**	**02 18 31.9**	**-1.2**
	baz=328							
WTK	**Tuku**	**1.75 317**	*e*P		**Pb**	**02 18 09.1**	**+0.1**
	baz=316							
WTK			*e*S		**Sg**	**02 18 32.8**	**-0.8**
	baz=316							
NACB	**Ninganchiao**	**1.76 357**	P		**Pn**	**02 18 06.9**	**-0.2**
WCS	**Beigang Elemen**	**1.79 337**	*e*P		**Pb**	**02 18 09.9**	**+0.2**
	baz=348							
FUSS	**Fushou**	**1.87 348**	*e*S		**Sn**	**02 18 32.1**	**-0.3**
	baz=348							
TDCB	**Techi**	**1.90 345**	*e*P		**Pn**	**02 18 10.6**	**+1.4**
	baz=345							
TCU	**Taichung**	**1.96 332**	*e*S		**Sb**	**02 18 38.0**	**+1.1**
	baz=332							
TWQ1	**Liyutan**	**2.10 337**	*e*P		**Pb**	**02 18 15.0**	**-0.1**
	baz=337							
TWQ1			*e*S		**Sb**	**02 18 41.4**	**+0.3**
	baz=337							
JYNG	**Yonagunijimaku**	**2.34 29**	S		**Sn**	**02 18 42.0**	**-1.5**
YOJ	**Yonaguni jima**	**2.38 31**	*e*P		**Pn**	**02 18 16.6**	**+1.0**
YOJ			S		**Sn**	**02 18 44.1**	**-0.3**
HATJ	**Hateruma jima**	**2.55 50**	P		**Pn**	**02 18 18.8**	**+0.9**
HATJ			S		**Sn**	**02 18 47.2**	**-1.5**
IRIF	**Iriomote-Funau**	**2.68 44**	P		**Pn**	**02 18 21.1**	**+1.3**
IRIF			S		**Sn**	**02 18 51.5**	**-0.5**
JKRS	**Kuro-shima**	**2.80 49**	P		**Pn**	**02 18 22.7**	**+1.2**
JKRS			S		**Sn**	**02 18 54.4**	**-0.6**
JIJ	**Ishigaki jima**	**2.98 49**	P		**Pn**	**02 18 24.4**	**+0.5**
JIJ			S		**Sn**	**02 18 57.3**	**-2.0**
JISG	**Ishigakijimahi**	**3.24 48**	P		**Pn**	**02 18 27.9**	**+0.4**
JISG			S		**Sn**	**02 19 04.5**	**-1.3**
JTJ	**Tarama**	**3.55 51**	P		**Pn**	**02 18 32.7**	**+1.0**
JTJ			*e*S		**Sn**	**02 19 12.1**	**-1.3**
JMJ2	**Miyako jima3**	**4.07 55**	S		**Sn**	**02 19 26.1**	**-0.1**
JIKM	**Ikemajima**	**4.11 52**	S		**Sn**	**02 19 26.2**	**-1.1**
KSRS	**Korea Array**	**15.93 18**	Pn		**P**	**02 21 26.4**	**+2.1**
	0.2nm,0.3s,baz=196,slow=11,SNR=6.3 1.9nm,0.7s							
SONM	**Songino Array**	**28.18 338**	P		**P**	**02 23 30.5**	**+1.4**
	0.6nm,0.7s,baz=159,slow=6.2,SNR=2.7 0.6nm,0.7s							
MKAR	**Makanchi Array**	**39.94 317**	P		**P**	**02 25 12.4**	**+1.6**
	1.0nm,0.6s,baz=107,slow=8.2,SNR=11 1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**41.98 328**	P		**P**	**02 25 27.8**	**+0.3**
	0.4nm,0.3s,baz=116,slow=9.8,SNR=4.8 0.4nm,0.3s							
H11N1	**WAKE ISLAND Hy 42.15**	**85**	T		T	03 10 44.5		
	baz=282,slow=75,SNR=22							
H11N2	**WAKE ISLAND Hy 42.15**	**85**	T		T	03 10 46.0		
	baz=282,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy 42.17**	**85**	T		T	03 10 45.5		
	baz=282,slow=75,SNR=16							
H11S3	**WAKE ISLAND Hy 42.23**	**87**	T		T	03 10 51.0		
	baz=283,slow=74,SNR=37							
H11S1	**WAKE ISLAND Hy 42.24**	**87**	T		T	03 11 04.0		
	baz=283,slow=74,SNR=47							
H11S2	**WAKE ISLAND Hy 42.25**	**87**	T		T	03 10 52.3		
	baz=283,slow=74,SNR=36							
KURBB	**Kurchatov Arra**	**43.76 321**	P		**P**	**02 25 42.9**	**+0.9**
	0.7nm,0.2s,baz=118,slow=8.1,SNR=5.4 0.7nm,0.2s							
WRA	**Warramunga Arr**	**43.87 163**	P		**P**	**02 25 41.2**	**-1.9**
	0.3nm,0.9s,baz=343,slow=8.8,SNR=1.4 0.3nm,0.9s							
ASAR	**Alice Springs**	**47.32 165**	P		**P**	**02 26 08.2**	**-2.2**
	0.1nm,0.3s,baz=342,slow=6.7,SNR=4.2 0.1nm,0.3s							
BVAR	**Borovoye Array**	**49.34 322**	P		**P**	**02 26 25.1**	**-0.6**
	0.6nm,0.7s,baz=107,slow=4.1,SNR=2.4 0.6nm,0.7s							

IDC ***17*** *02:44:41.6±1.0, 18°.81S×175°.27W, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=50.6km s-min=24.4km az=145.0*

ISC 17 02:45:09.8±0.9, 18°.9S±0°.3×175°.6W±0°.2, h231km, n11, σ1s45/13, mb3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.53**	**243**	P		**P**	**P**	**02 52 26.0**	**-0.6**
	0.7nm,0.4s,baz=89,slow=11,SNR=4.6 0.7nm,0.4s								
WRA	**Warramunga Arr**	**47.10**	**260**	P		**P**	**P**	**02 53 18.1**	**-1.0**
	1.8nm,0.5s,baz=96,slow=5.7,SNR=44								
WRA				PcP		**PcP**	**PcP**	**02 54 47.3**	**+0.2**
	0.5nm,1.0s,baz=94,slow=3.4,SNR=2.1 1.8nm,0.5s								
ASAR	**Alice Springs**	**47.12**	**255**	P		**P**	**P**	**02 53 18.7**	**-0.5**
	6.9nm,0.8s,baz=91,slow=8.4,SNR=79								
ASAR				PcP		**PcP**	**PcP**	**02 54 47.5**	**+0.4**
	0.9nm,0.7s,baz=106,slow=3.9,SNR=7.3 6.9nm,0.8s								
QSPA	**South Pole Qui**	**71.12**	**180**	P		**P**	**P**	**02 56 02.8**	**-0.2**
	1.6nm,0.9s,baz=31,slow=2.9,SNR=2.8 1.6nm,0.9s								
NVAR	**Mina Array Bea**	**78.33**	**42**	P		**P**	**P**	**02 56 43.8**	**-1.0**
	0.4nm,0.7s,baz=198,slow=5.7,SNR=3.7 0.4nm,0.7s								
YKA	**Yellowknife Ar**	**94.16**	**24**	P		**P**	**P**	**02 58 00.4**	**-1.4**
	0.1nm,0.4s,baz=240,slow=4.9,SNR=2.2 0.1nm,0.4s								
BVAR	**Borovoye Array**	**119.35**	**321**	PKP			**PKPdf**	**03 03 31.2**	**-0.1**
	0.2nm,0.4s,baz=103,slow=6.4,SNR=2.0								
ARCES	**ARCESS Array B**	**127.78**	**351**	PKP			**PKPdf**	**03 03 47.2**	**+0.2**
	6.7nm,1.2s,baz=341,slow=1.9,SNR=3.9								
BRTR	**Keskin Array B**	**147.41**	**316**	PKPbc			**PKPdf**	**03 04 27.6**	**+3.7**
	0.8nm,0.8s,baz=47,slow=1.6,SNR=5.1								
MMAI	**Mount Meron Ar**	**148.97**	**303**	PKPbc			**PKPbc**	**03 04 32.0**	**+1.2**
	2.3nm,0.8s,baz=69,slow=4.9,SNR=4.4								
GERES	**GERESS Array B**	**149.24**	**348**	PKPbc			**PKPbc**	**03 04 32.2**	**+1.1**
	0.4nm,0.5s,baz=32,slow=3.7,SNR=2.2								

IDC ***17*** *02:50:10.8±0.9, 67°.75N×33°.95E, h0km, mb3.3/2, mbtmp3.5/9, ML2.6/6, Error ellipse: s-maj=10.8km s-min=8.2km az=66.0*
HEL ***17*** *02:50:10.4±0.2, 67°.62N×33°.78E, h0km, ML2.0, Suspected explosion*
BER ***17*** *02:50:11.1±1.0, 67°.52N×33°.92E, h0km, ML2.4, Suspected explosion*
KOLA ***17*** *02:50:11.0, 67°.66N×33°.75E, h0km, ML2.2, Error ellipse: s-maj=6.2km s-min=2.7km az=150.0, Khibiny, mines Kirovsk, Yukspor*

ISC 17 02:50:09.3±0.7, 67°.63N±0°.04×33°.81E±0°.03, h0km, n44, σ1s89/74, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.17**	**250**	P		**Pg**	**Pg**	**02 50 13.7**	**+1.2**
APA				S		**Sg**	**Sg**	**02 50 16.7**	**+2.1**
LVZ	**Lovozero**	**0.42**	**49**	P		**Pg**	**Pg**	**02 50 18.7**	**+1.4**
LVZ				S		**Sg**	**Sg**	**02 50 24.6**	**+1.8**
LVZ	**Lovozero**	**0.42**	**49**	PG		**Pg**	**Pg**	**02 50 17.9**	**+0.5**
	baz=225								
LVZ				SG		**Sg**	**Sg**	**02 50 24.1**	**+1.4**
VRF	**Varrio**	**1.61**	**276**	PG		**Pn**	**Pn**	**02 50 39.3**	**+0.3**
	baz=90								
VRF				MSG				02 50 58.4	
	comp=Z,14nm,0.2s								
VRF				SG		**Sn**	**Sn**	**02 50 59.6**	**-0.8**
TERR	**Teriberka**	**1.65**	**16**	P		**Pn**	**Pn**	**02 50 40.1**	**+0.6**
TERR				S		**Sn**	**Sn**	**02 51 01.4**	**0.0**
OLKF	**Oulanka, Finla**	**2.17**	**235**	PG		**Pb**	**Pb**	**02 50 49.2**	**-0.3**
OLKF				MSG				02 51 14.4	
	comp=Z,8.5nm,0.2s								
OLKF				SG		**Sg**	**Sg**	**02 51 19.4**	**+0.3**
KU6	**Riekki**	**2.23**	**226**	PG		**Pn**	**Pn**	**02 50 49.5**	**+1.9**
	baz=44								
KU6				MSG				02 51 16.2	
	comp=Z,5.1nm,0.2s								
KU6				SG		**Sb**	**Sb**	**02 51 20.3**	**+1.6**
RAJF	**Raja-Jooseppi**	**2.24**	**295**	PB		**Pn**	**Pn**	**02 50 48.3**	**+0.8**
RAJF				SB		**Sn**	**Sn**	**02 51 17.2**	**+1.3**
MSF	**Maaselka**	**2.56**	**230**	PB		**Pn**	**Pn**	**02 50 54.6**	**+2.6**
MSF				SG		**Sb**	**Sb**	**02 51 29.8**	**+1.8**
SGF	**Sodankyl**	**2.81**	**270**	PN		**Pn**	**Pn**	**02 50 56.3**	**+1.0**
SGF				SB		**Sb**	**Sb**	**02 51 33.1**	**-1.9**
KMNF	**Kaamanen**	**2.95**	**304**	PN		**Pn**	**Pn**	**02 50 58.2**	**+0.8**
KMNF				SB		**Sn**	**Sn**	**02 51 34.9**	**+1.5**
VADS	**Vadso**	**2.98**	**329**	P		**Pn**	**Pn**	**02 50 58.5**	**+0.8**
VADS				S		**Sn**	**Sn**	**02 51 34.2**	**+0.1**
VADS	**Vadso**	**2.98**	**329**	*e*P		**Pn**	**Pn**	**02 50 58.6**	**+0.8**
VADS				*e*S		**Sn**	**Sn**	**02 51 35.4**	**+1.2**
VADS				IAML				02 51 40.2	
	comp=Z,32nm,0.4s								
RNF	**Rovaniemi**	**3.21**	**255**	PN		**Pn**	**Pn**	**02 51 02.1**	**+1.1**
	baz=69								
RNF				SN		**Sn**	**Sn**	**02 51 41.2**	**+1.2**
RANF	**Ranua**	**3.21**	**243**	PN		**Pn**	**Pn**	**02 51 02.7**	**+1.7**
	baz=55								
RANF				SG		**Sb**	**Sb**	**02 51 48.8**	**+2.0**
KEV	**Kevo**	**3.28**	**314**	*e*P		**Pn**	**Pn**	**02 51 03.5**	**+1.6**
KEV				*e*S		**Sn**	**Sn**	**02 51 41.9**	**+0.5**
KEV	**Kevo**	**3.28**	**314**	PN		**Pn**	**Pn**	**02 51 03.2**	**+1.3**
	baz=128								
KEV				SN		**Sn**	**Sn**	**02 51 42.1**	**+0.6**
ARA0	**ARCESS Array S**	**3.60**	**306**	*e*P		**Pn**	**Pn**	**02 51 07.4**	**+1.1**
ARA0				*e*S		**Sn**	**Sn**	**02 51 48.7**	**-0.7**
ARA0				IAML				02 52 09.6	
	comp=Z,17nm,0.6s								
ARCES	**ARCESS Array B**	**3.60**	**306**	P		**Pn**	**Pn**	**02 51 07.0**	**+0.8**
ARCES				S		**Sn**	**Sn**	**02 51 47.0**	**-2.4**
ARCES	**ARCESS Array B**	**3.60**	**306**	Pn		**Pn**	**Pn**	**02 51 07.1**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=120,slow=15,SNR=204								
ARCES				Sn		**Sn**	**Sn**	**02 51 48.1**	**-1.4**
	comp=Z,1.6nm,0.3s,baz=116,slow=24,SNR=17								
ARCES				Lg		Lg		02 52 03.8	
	comp=Z,3.3nm,0.3s,baz=120,slow=27,SNR=8.7 comp=Z,3.4nm,0.3s								
RMF	**Romuvaara**	**3.77**	**207**	PN		**Pn**	**Pn**	**02 51 10.0**	**+1.3**
	baz=24								
KLF	**Kolari**	**3.82**	**269**	PN		**Pn**	**Pn**	**02 51 10.0**	**+0.8**
KLF				SN		**Sn**	**Sn**	**02 51 55.2**	**+0.4**
HEF	**Hetta**	**3.90**	**286**	*e*P		**Pn**	**Pn**	**02 51 11.2**	**+0.8**
HEF	**Hetta**	**3.90**	**286**	PN		**Pn**	**Pn**	**02 51 10.8**	**+0.5**
	baz=99								
HEF				SN		**Sn**	**Sn**	**02 51 56.2**	**-0.6**
TOF	**Tornio**	**4.05**	**252**	PN		**Pn**	**Pn**	**02 51 13.5**	**+1.0**
KTK1	**Kautokeino**	**4.16**	**294**	*e*P		**Pn**	**Pn**	**02 51 15.3**	**+1.3**
KTK1	**Kautokeino**	**4.16**	**294**	PN		**Pn**	**Pn**	**02 51 15.9**	**+1.9**
KTK1				SN		**Sn**	**Sn**	**02 52 03.3**	**0.0**
PAJU	**Pajala**	**4.19**	**267**	PN		**Pn**	**Pn**	**02 51 14.7**	**+0.3**
PAJU				SN		**Sn**	**Sn**	**02 52 03.9**	**0.0**
LANU	**Lannavaara**	**4.50**	**281**	PN		**Pn**	**Pn**	**02 51 18.7**	**+0.1**
LANU				SG		**Sb**	**Sb**	**02 52 27.3**	**+3.6**
KALU	**Kalix**	**4.51**	**252**	PG		**Pb**	**Pb**	**02 51 31.8**	**+2.6**
OBF4	**Vikkela, Lumij**	**4.52**	**235**	PN		**Pn**	**Pn**	**02 51 21.5**	**+2.7**
HAMF	**Hammerfest**	**4.72**	**315**	*e*P		**Pn**	**Pn**	**02 51 22.4**	**+0.8**
KIF	**Kilpisjarvi**	**5.02**	**292**	*e*P		**Pn**	**Pn**	**02 51 26.5**	**+0.8**
KIF				*e*S		**Sn**	**Sn**	**02 52 22.1**	**-2.2**
JETT	**Jettan, Norway**	**5.28**	**298**	*e*P		**Pn**	**Pn**	**02 51 30.8**	**+1.4**
JETT				*e*S		**Sn**	**Sn**	**02 52 29.1**	**-1.7**
TRO	**Tromso**	**5.80**	**297**	*e*P		**Pn**	**Pn**	**02 51 37.6**	**+1.1**
FINES	**FINESS Array B**	**7.04**	**212**	Pn		**Pn**	**Pn**	**02 51 53.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=7.6								
FINES				Sn		**Sn**	**Sn**	**02 53 14.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=25,slow=23,SNR=6.2								
FINES				Lg		Lg		02 53 48.1	
	comp=Z,0.8nm,0.3s,baz=24,slow=26,SNR=5.4 comp=Z,1.0nm,0.6s								
FAUS	**Fauske**	**7.11**	**277**	S		**Sn**	**Sn**	**02 53 10.8**	**-4.8**
HFS	**Hagfors**	**11.56**	**239**	Pn		**Pn**	**Pn**	**02 52 54.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=47,slow=16,SNR=3.6								
HFS				Sn		**Sn**	**Sn**	**02 54 59.7**	**-5.4**
	comp=Z,0.2nm,0.3s,baz=45,slow=23,SNR=2.8								
HFS				Lg		Lg		02 56 08.8	
	comp=Z,0.3nm,0.3s,baz=70,slow=27,SNR=5.0 comp=Z,2.4nm,0.8s								
SPITS	**Spitsbergen Ar**	**11.69**	**342**	Pn		**Pn**	**Pn**	**02 52 54.0**	**-3.0**
	baz=145,slow=16								
SPITS				Sn		Sn		02 54 57.2	-11
	baz=160,slow=42 comp=Z,1.3nm,0.6s								
NOA	**NORSAR Array B**	**11.75**	**247**	Pn		**Pn**	**Pn**	**02 52 56.9**	**-1.1**
	baz=52,slow=11,SNR=1.7								
NOA				Sn		**Sn**	**Sn**	**02 55 03.1**	**-6.6**
	baz=140,slow=23,SNR=1.6								
NOA				Lg		Lg		02 56 23.6	
	baz=52,slow=23,SNR=3.9 comp=Z,0.7nm,0.9s								
ARU	**Arti**	**15.99**	**122**	Pn		**Pn**	**Pn**	**02 53 51.8**	**-3.6**
	comp=Z,0.4nm,0.3s,baz=66,slow=18,SNR=4.8 comp=Z,1.5nm,0.4s								
AKASG	**Malin Array Be**	**17.13**	**190**	Pn		**Pn**	**Pn**	**02 54 06.4**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=8,2,slow=13,SNR=1.6								
AKTO	**Aktyubinsk**	**21.01**	**133**	P		**P**	**P**	**02 54 54.1**	**0.0**
	comp=Z,1.3nm,0.6s,baz=332,slow=8.9,SNR=4.0 comp=Z,1.3nm,0.6s								
BVAR	**Borovoye Array**	**22.79**	**112**	P		**P**	**P**	**02 55 14.9**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=322,slow=9.1,SNR=4.0 comp=Z,0.6nm,0.6s								

PRE ***17*** *03:15:17.5±0.9, 23°.81S×30°.84E, h5km, ML2.8*
BUL ***17*** *03:15:20.8±1.0, 23°.92S×31°.15E, h10km±16km, MD3.8*
EAF ***17*** *03:15:21.0±1.0, 23°.92S×31°.13E, h36km±9km, MD3.6*

ISC 17 03:15:18.1±1.4, 23°.90S±0°.03×30°.81E±0°.05, h5km±13km, n33, σ1s75/60, 2D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOED	**Hoedspruit, Li**	**0.52**	**167**	*e*P		**Pg**	**Pg**	**03 15 29.5**	**+1.2**
HOED				*e*S		**Sb**	**Sb**	**03 15 37.1**	**-0.6**
HOED				IAML				03 15 39.9	
	comp=Z,466nm,0.1s								
MOPA	**Mopani**	**0.66**	**55**	*i* P		**Pg**	**Pg**	**03 15 31.6**	**+0.7**
MOPA				*i* S		**Sg**	**Sg**	**03 15 37.4**	**-2.1**
MOPA	**Mopani**	**0.66**	**55**	*i* P		**Pg**	**Pg**	**03 15 31.6**	**+0.7**
MOPA				*i* S		**Sg**	**Sg**	**03 15 37.4**	**-2.1**
PILG	**Pilgrimsrest,**	**1.03**	**185**	*e*P		**Pb**	**Pb**	**03 15 38.2**	**-0.4**
PILG				*e*S		**Sn**	**Sn**	**03 15 54.1**	**-0.3**
PILG				IAML				03 15 58.1	
	comp=Z,413nm,0.7s								
MUSN	**Musina, Limpop**	**1.82**	**331**	*i* P		**Pb**	**Pb**	**03 15 52.0**	**-0.1**
MUSN				*i* S		**Sb**	**Sb**	**03 16 15.3**	**+0.1**
MUSN	**Musina, Limpop**	**1.82**	**331**	*i* P		**Pb**	**Pb**	**03 15 52.0**	**-0.1**
MUSN				*i* S		**Sb**	**Sb**	**03 16 15.3**	**+0.1**
CRLN	**Carolina, Mapu**	**2.20**	**199**	*e*P		**Pb**	**Pb**	**03 15 57.4**	**-1.2**
CRLN				*e*S		**Sb**	**Sb**	**03 16 26.0**	**-0.2**
CRLN				IAML				03 16 33.6	
	comp=Z,66nm,0.2s								
HAGI	**HAGI**	**2.23**	**171**	*e*P		**Pn**	**Pn**	**03 15 56.5**	**+0.6**
HAGI				*e*S		**Sb**	**Sb**	**03 16 24.8**	**-2.3**
HAGI				IAML				03 16 38.5	
	comp=Z,122nm,0.3s								
LEPH	**Lephalale, Lim**	**2.75**	**270**	*e*P		**Pn**	**Pn**	**03 16 03.1**	**+0.1**
LEPH				*e*S		**Sn**	**Sn**	**03 16 37.0**	**+0.3**
LEPH				IAML				03 16 46.6	
	comp=Z,168nm,0.5s								
TEMBE	**Tembe Elephant**	**3.46**	**155**	*e*P		**Pn**	**Pn**	**03 16 13.7**	**+1.1**
TEMBE				*e*S		**Sn**	**Sn**	**03 16 55.1**	**+1.2**
POGA	**Pongola**	**3.53**	**167**	*e*P		**Pn**	**Pn**	**03 16 15.4**	**+1.8**
POGA				*e*S		**Sn**	**Sn**	**03 16 57.2**	**+1.5**
POGA				IAML				03 17 12.5	
	comp=Z,10nm,0.5s								
NWCL	**Newcastle**	**3.91**	**192**	*e*P		**Pn**	**Pn**	**03 16 20.3**	**+1.4**
NWCL				*e*S		**Sn**	**Sn**	**03 17 06.4**	**+1.1**
NWCL				IAML				03 17 27.2	
	comp=Z,43nm,0.3s								
WDLM	**Western Deep L**	**3.96**	**230**	*e*P		**Pn**	**Pn**	**03 16 20.9**	**+1.2**
WDLM				*e*S		**Sn**	**Sn**	**03 17 07.9**	**+1.2**
WDLM				IAML				03 17 37.4	
	comp=Z,66nm,0.3s								
KSR	**Koster**	**4.05**	**240**	*e*P		**Pn**	**Pn**	**03 16 21.8**	**+0.9**
KSR				*e*S		**Sn**	**Sn**	**03 17 09.4**	**+0.7**
KSR				IAML				03 17 32.3	
	comp=Z,255nm,0.3s								
BLWY	**Bulawayo**	**4.26**	**331**	*i* P		**Pn**	**Pn**	**03 16 25.3**	**+1.5**
BLWY				*i* S		**Sn**	**Sn**	**03 17 12.3**	**-1.6**
BLWY	**Bulawayo**	**4.26**	**331**	*i* P		**Pn**	**Pn**	**03 16 25.3**	**+1.5**
BLWY				*i* S		**Sn**	**Sn**	**03 17 12.3**	**-1.6**
PRYS	**Parys**	**4.33**	**225**	*e*P		**Pn**	**Pn**	**03 16 26.3**	**+1.5**
PRYS				*e*S		**Sn**	**Sn**	**03 17 16.8**	**+1.0**
PRYS				IAML				03 17 48.4	
	comp=Z,28nm,0.3s								
LBTB	**Lobatse**	**4.87**	**256**	⇓*i* P		**Pn**	**Pn**	**03 16 35.2**	**+3.1**
LBTB				*i* S		**Sn**	**Sn**	**03 17 29.6**	**+0.6**
LBTB	**Lobatse**	**4.87**	**256**	*e*P		**Pn**	**Pn**	**03 16 32.7**	**+0.6**
LBTB				*e*S		**Sn**	**Sn**	**03 17 29.1**	**+0.1**
LBTB				IAML				03 17 54.0	
	comp=Z,30nm,0.5s								
LBTB	**Lobatse**	**4.87**	**256**	⇓*i* P		**Pn**	**Pn**	**03 16 35.2**	**+3.1**
LBTB				*i* S		**Sn**	**Sn**	**03 17 29.6**	**+0.6**
SNKL	**Senekal, Frees**	**5.14**	**211**	*e*P		**Pn**	**Pn**	**03 16 37.7**	**+1.8**
SNKL				*e*S		**Sn**	**Sn**	**03 17 35.6**	**-0.1**
SNKL				IAML				03 18 19.5	
	comp=Z,32nm,0.5s								
SWZ	**Schweizer**	**5.93**	**235**	*e*P		**Pn**	**Pn**	**03 16 47.4**	**+0.8**
SWZ				*e*S		**Sn**	**Sn**	**03 17 55.1**	**+0.1**
SWZ				IAML				03 18 33.9	
	comp=Z,16nm,0.5s								
KSTD	**Kokstad**	**6.82**	**191**	*e*P		**Pn**	**Pn**	**03 17 01.4**	**+2.4**
KSTD				*e*S		**Sn**	**Sn**	**03 18 16

baz=239,slow=74,SNR=6.8
H03S3 Juan Fernandez 80.48 123 T T 05 07 08.1
baz=239,slow=74,SNR=8.8
KURBB Kurchatov Arra 121.01 314 PKP **PKPdf 03 44 21.0 -1.2**
0.1nm,0.3s,baz=112,slow=2.3,SNR=4.1
H10N3 ASCENSION HYDR 39.01 154 T T 06 21 27.0
baz=204,slow=75,SNR=6.9
H10N1 ASCENSION HYDR 39.02 154 T T 06 21 06.3
baz=204,slow=75,SNR=12
H10N2 ASCENSION HYDR 39.03 154 T T 06 21 27.0
baz=204,slow=75,SNR=7.0
FINES FINESS Array B 144.91 340 PKP **PKPab 03 45 04.8 -0.8**
1.7nm,0.3s,baz=39,slow=2.7,SNR=39
HFS Hagfors 148.96 349 PKPbc **PKPbc 03 45 17.1 -0.2**
1.2nm,0.7s,baz=27,slow=0.6,SNR=4.9
MMAI Mount Meron Ar 151.66 285 PKPbc **PKiKP 03 45 25.3 +0.1**
1.5nm,0.7s,baz=90,slow=7.2,SNR=1.6
BRTR Keskin Array B 152.63 299 PKPbc **PKPbc 03 45 26.3 -0.6**
0.5nm,0.8s,baz=73,slow=4.4,SNR=2.9

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*IDC **17** 03:28:39.2±3.2, 15°.47N×98°.28W, h0km, mb3.9/5, mbtmp3.8/7, ML3.6/2, MS4.3/1, Error ellipse: s-maj=55.5km s-min=20.2km az=175.0*
*MEX **17** 03:28:43.8±0.6, 15°.76N×98°.45W, h16km±16km, MD3.9*
*NEIC **17** 03:28:46.7±1.4, 16°.0N±0°.1×98°.18W±0°.09, h21km±14km, mb4.2/36, Md3.9/9(MEX), Error ellipse: s-maj=17.1km s-min=11.0km az=213.0*
ISC 17 03:28:43.9±0.9, 15°.89N±0°.07×98°.33W±0°.05, h17km, n70, σ1$28/75, mb4.2/16, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**1.14**	**318**			**Pn**	**03 29 01.8**	**-3.2**
CRIG	**Cruz Grande**	**1.14**	**318**	*eP*		**Pn**	**03 29 01.8**	**-3.2**
PEIG	**Puerto Escondi**	**1.15**	**85**			**Pb**	**03 29 03.7**	**-1.6**
PEIG						**Sb**	**03 29 17.8**	**-2.1**
PEIG	**Puerto Escondi**	**1.15**	**85**	*i*	P	**Pb**	**03 29 03.7**	**-1.6**
PEIG					*eS*	**Sb**	**03 29 17.8**	**-2.1**
YOIG	**Yosondua**	**1.22**	**38**			**Pn**	**03 29 05.1**	**-1.4**
YOIG						**Sb**	**03 29 21.9**	**-0.4**
YOIG	**Yosondua**	**1.22**	**38**	*i*	P	**Pn**	**03 29 05.1**	**-1.4**
YOIG					*eS*	**Sb**	**03 29 21.9**	**-0.4**
MGIG	**Malinaltepec**	**1.37**	**348**			**Pn**	**03 29 06.4**	**-2.0**
MGIG						**Sn**	**03 29 23.8**	**-2.4**
MGIG	**Malinaltepec**	**1.37**	**348**	*i*	P	**Pn**	**03 29 06.4**	**-2.0**
MGIG					*eS*	**Sn**	**03 29 23.8**	**-2.4**
TXIG	**Tlaxiaco**	**1.46**	**22**			**Pn**	**03 29 09.0**	**-0.8**
TXIG						**Sn**	**03 29 28.5**	**-0.1**
TXIG	**Tlaxiaco**	**1.46**	**22**	*i*	P	**Pn**	**03 29 09.0**	**-0.8**
TXIG					*eS*	**Sn**	**03 29 28.5**	**-0.1**
TLIG	**Tlapa**	**1.68**	**352**		Pn	**Pn**	**03 29 11.7**	**-0.9**
UNM	**Universidad Na**	**3.51**	**347**		Pn	**Pn**	**03 29 39.2**	**+1.2**
CMIG	**Matias Romero**	**3.52**	**70**		Pn	**Pn**	**03 29 36.3**	**-1.6**
	6.1nm,0.3s,baz=231,slow=12,SNR=30							
CMIG						Sn	**Sn**	**03 30 20.3**	**+1.2**
	17nm,0.3s,baz=213,slow=18,SNR=6.0							
CMIG						Lg	Lg	03 30 36.5	
	48nm,0.3s,baz=298,slow=12,SNR=12							
	12nm,0.3s							
MOIG	**Morelia**	**4.65**	**325**			**Pn**	**03 29 54.4**	**+0.8**
JRQG	**Juriquilla Cam**	**5.19**	**338**		Pn	**Pn**	**03 30 02.6**	**+1.6**
CCIG	**Comitan**	**5.97**	**85**			**Pn**	**03 30 12.3**	**+0.6**
HUEH	**Huehuetenango**	**6.61**	**94**		Pn	**Pn**	**03 30 20.2**	**-0.3**
ZAIG	**Zacatecas**	**7.92**	**330**		Pn	**Pn**	**03 30 40.2**	**+1.6**
833A	**Chaparral WMA,**	**12.41**	**356**		Pn	**Pn**	**03 31 40.2**	**+0.4**
ORTG	**Ortega, Santa**	**13.69**	**112**		Pn	**Pn**	**03 31 57.9**	**+0.5**
TXAR	**Lajitas Array**	**14.25**	**341**		Pn	**P**	**03 32 11.2**	**-1.1**
	0.1nm,0.3s,baz=158,slow=14,SNR=5.1							
TXAR						Lg	Lg	03 36 20.5	
	baz=288,slow=9.1,SNR=2.8							
	0.6nm,0.8s							
ARE1	**Arenal 1**	**14.31**	**110**		Pn	**Pn**	**03 32 06.9**	**+1.0**
SAND	**Sanderson**	**14.43**	**347**		Pn	**Pn**	**03 32 08.1**	**+0.6**
JCT	**Junction City**	**14.58**	**355**		Pn	**Pn**	**03 32 10.0**	**+0.4**
435B	**Jarrell**	**14.84**	**3**		Pn	**Pn**	**03 32 14.3**	**+1.2**
MNHN	**Monahans**	**15.90**	**346**			**Pn**	**03 32 28.8**	**+1.8**
WHTX	**Lake Whitney,**	**16.05**	**3**			**Pn**	**03 32 29.8**	**+1.0**
WHTX						IAmb	IAmb	03 32 34.2	
	comp=Z,12nm,0.8s							
PLPT	**Palo Pinto**	**16.85**	**0**			**Pn**	**03 32 39.4**	**+0.4**
Z38A	**Mt. Pleasant**	**17.56**	**9**		Pn	**Pn**	**03 32 46.6**	**-1.3**
Z38A						IAmb	IAmb	03 32 50.6	
	comp=Z,14nm,0.7s							
MSTX	**Muleshoe**	**18.44**	**348**		P	**P**	**03 32 58.5**	**-0.2**
X37A	**Clayton**	**18.81**	**8**		P	**P**	**03 33 02.4**	**-0.3**
MIAR	**Mount Ida**	**19.06**	**12**			**P**	**03 33 04.8**	**-0.6**
W35A	**Tecumseh**	**19.23**	**4**			**P**	**03 33 07.3**	**0.0**
W35A						IAmb	IAmb	03 33 08.7	
	comp=Z,23nm,1.4s							
DUN6	**Lazy B Ranch**	**19.25**	**331**		P	**Pn**	**03 33 09.4**	**+0.7**
DUN6						IAmb	IAmb	03 33 21.8	
	comp=Z,26nm,1.2s							
TUL3	**Leonard**	**20.07**	**6**		P	**P**	**03 33 15.9**	**-0.6**
TUL3						IAmb	IAmb	03 33 23.1	
	comp=Z,13nm,1.0s							
ANMO	**Albuquerque**	**20.33**	**340**		P	**P**	**03 33 21.0**	**+1.5**
ANMO	**Albuquerque**	**20.33**	**340**		LR	LR	03 42 23.7	
	comp=Z,726nm,19.0s,baz=172,slow=40							
HHAR	**Hobbs**	**20.68**	**10**		P	**P**	**03 33 22.8**	**-0.3**
U38A	**Gravette**	**20.77**	**9**			**P**	**03 33 24.5**	**+0.5**
U38A						IAmb	IAmb	03 33 29.7	
	comp=Z,14nm,1.0s							
T35A	**Sooner Cattle**	**21.00**	**4**		P	**P**	**03 33 25.4**	**-1.2**
T35A						IAmb	IAmb	03 33 27.0	
	comp=Z,13nm,1.2s							
T25A	**Trinidad**	**21.84**	**347**		P	**P**	**03 33 37.2**	**+1.4**
MGMO	**Mountain Grove**	**21.85**	**13**		P	**P**	**03 33 35.9**	**+0.2**
GOGA	**Godfrey**	**22.02**	**35**		P	**P**	**03 33 37.7**	**+0.1**
GOGA						IAmb	IAmb	03 33 39.1	
	comp=Z,6.9nm,0.8s							
Y52A	**Lilburn**	**22.04**	**33**		P	**P**	**03 33 37.0**	**-0.7**
Y52A						IAmb	IAmb	03 33 38.9	
	comp=Z,16nm,1.1s							
S39A	**Bolivar**	**22.16**	**11**		P	**P**	**03 33 39.5**	**+0.5**
SWET	**Sewanee**	**22.22**	**28**		P	**P**	**03 33 38.9**	**-0.9**
SWET						IAmb	IAmb	03 33 40.4	
	comp=Z,11nm,1.0s							
WVT	**Waverly**	**22.23**	**23**		P	**P**	**03 33 39.0**	**-0.7**
SDCO	**Great Sand Dun**	**22.67**	**345**		P	**P**	**03 33 45.9**	**+1.1**
WUAZ	**Wupatki**	**22.76**	**332**		P	**P**	**03 33 47.9**	**+2.2**
WUAZ						IAmb	IAmb	03 33 51.1	
	comp=Z,7.6nm,1.1s							
CCM	**Cathedral Cave**	**22.95**	**14**		P	**P**	**03 33 47.9**	**+0.6**
CCM						IAmb	IAmb	03 33 53.6	
	comp=Z,8.7nm,0.9s							
CPCT	**Cooper Cave**	**23.07**	**30**		P	**P**	**03 33 48.0**	**-0.6**
CPCT						IAmb	IAmb	03 33 53.6	
	comp=Z,12nm,1.3s							
MVCO	**Mesa Verde**	**23.07**	**339**		P	**P**	**03 33 50.5**	**+1.6**
MVCO						IAmb	IAmb	03 33 52.0	
	comp=Z,6.3nm,0.9s							
HODGE	**Hodges**	**23.30**	**35**		P	**P**	**03 33 49.9**	**-1.1**
U49A	**Red Boiling Sp**	**23.38**	**26**		P	**P**	**03 33 51.3**	**-0.5**
U49A						IAmb	IAmb	03 33 53.2	
	comp=Z,5.0nm,0.7s							
HMU	**Henry Mountain**	**24.54**	**336**		P	**P**	**03 34 04.3**	**+1.3**
HMU						IAmb	IAmb	03 34 07.5	
	comp=Z,10.0nm,1.0s							
WCI	**Wyandotte Cave**	**24.65**	**23**		P	**P**	**03 34 03.6**	**-0.1**
ISCO	**Idaho Springs**	**24.66**	**346**		P	**P**	**03 34 05.1**	**+1.0**
ISCO						IAmb	IAmb	03 34 16.4	
	comp=Z,5.8nm,0.9s							
OGNE	**Ogallala**	**25.17**	**353**		P	**P**	**03 34 09.5**	**+1.0**
N38A	**Joes South For**	**25.20**	**9**		P	**P**	**03 34 08.6**	**-0.1**
SCIA	**State Center**	**26.30**	**9**		P	**P**	**03 34 19.5**	**+0.9**
O48B	**Farmland**	**26.85**	**29**		P	**P**	**03 34 23.9**	**+0.3**
PDAR	**Pinedale Array**	**28.46**	**342**		P	**P**	**03 34 39.5**	**+1.3**
PDAR	**Pinedale Array**	**28.46**	**342**		P	**P**	**03 34 39.4**	**+1.1**
	comp=Z,1.9nm,1.1s,baz=142,slow=19,SNR=6.4							
	comp=Z,1.9nm,1.1s							
NVAR	**Mina Array Bea**	**28.51**	**326**		P	**P**	**03 34 41.2**	**+2.5**
	comp=Z,0.7nm,0.8s,baz=163,slow=11,SNR=6.0							
	comp=Z,0.7nm,0.8s							
SCHQ	**Schefferville**	**45.84**	**25**		P	**P**	**03 37 05.0**	**0.0**
	comp=Z,3.9nm,0.9s,baz=229,slow=7.2,SNR=4.9							
	comp=Z,3.9nm,0.9s							
YKA	**Yellowknife Ar**	**47.94**	**350**		P	**P**	**03 37 22.0**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=157,slow=7.2,SNR=13							
	comp=Z,1.6nm,0.9s							
H03N2	**Juan Fernandez**	**52.43**	**159**		T	T	04 34 25.0	
	baz=338,slow=77,SNR=278							
H03N1	**Juan Fernandez**	**52.44**	**159**		T	T	04 34 26.2	
	baz=338,slow=77,SNR=294							
H03N3	**Juan Fernandez**	**52.45**	**159**		T	T	04 34 25.2	
	baz=338,slow=77,SNR=248							
ILAR	**Eielson Array**	**58.75**	**338**		P	**P**	**03 38 41.5**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=139,slow=4.5,SNR=10.0							
	comp=Z,1.1nm,1.0s							

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*IDC **17** 03:43:04.8±1.5, 0°.44N×121°.46E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=213.4km s-min=25.6km az=60.0*
*DJA **17** 03:43:14.8±0.6, 0°N±5°×12°2E±°, h90km±7km, M3.5/7, MLv3.5/7*
ISC 17 03:43:16.3±1.3, 0°.4N±0°.1×121°.8E±0°.2, h100km, n6, σ0$99/7, mb3.5/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.19**	**67**		P	**Pn**	**03 43 30.5**	**+0.1**
MRSI					S	**Sn**	**03 43 40.8**	**-0.2**
LUWI	**Luwuk**	**1.75**	**145**		P	**Pn**	**03 43 44.9**	**-0.8**
KMSI	**Cibinong**	**2.22**	**86**		P	**Pn**	**03 43 51.5**	**-0.3**
WRA	**Warramunga Arr**	**23.68**	**149**		P	**P**	**03 48 20.4**	**+1.3**
	1.1nm,0.5s,baz=325,slow=10,SNR=16							
	1.1nm,0.5s							
ASAR	**Alice Springs**	**26.68**	**155**		P	**P**	**03 48 47.1**	**+1.0**
	0.1nm,0.3s,baz=340,slow=7.9,SNR=1.4							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**57.63**	**329**		P	**P**	**03 52 55.4**	**-0.6**
	0.3nm,0.5s,baz=115,slow=8.0,SNR=6.3							
	0.3nm,0.5s							

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*JMA **17** 03:50:08.7±0.2, 41°.9N±0°.9×142°.4E±0°.9, h63km±2km, MD3.8/40, MV3.8/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .
*NEIC **17** 03:50:09.3±0.8, 41°.91N±0°.04×142°.43E±0°.07, h63km±9km, mb4.4/8, Error ellipse: s-maj=8.2km s-min=5.8km az=112.0*
*IDC **17** 03:50:10.7±1.7, 41°.92N×142°.44E, h77km±14km, mb3.3/11, mbtmp3.6/15, MS3.9/1, Error ellipse: s-maj=21.6km s-min=12.0km az=108.0*
ISC 17 03:50:09.3±0.8, 41°.91N±0°.04×142°.39E±0°.03, h61km±7km, n67, σ0$84/72, mb3.8/15, 15D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.46**	**36**	*i*	P	**Pn**	**03 50 19.9**	**-1.1**
JNBK					*eS*	**Sn**	**03 50 29.2**	**-0.3**
JNBK	**Urakawa-nobuka**	**0.46**	**36**		A	A	03 50 19.9	
	comp=E,21nm,0.4s,comp=N,21nm,0.3s							
JSHD	**Hidakashinhida**	**0.51**	**6**	*i*	P	**Pn**	**03 50 21.1**	**-0.4**
JSHD					*eS*	**Sn**	**03 50 30.6**	**+0.4**
JSHD	**Hidakashinhida**	**0.51**	**6**		A	A	03 50 21.1	
	comp=E,8.0nm,1.6s,comp=N,11nm,0.3s							
ERM	**Erimo**	**0.58**	**79**			**Pn**	**03 50 21.9**	**-0.3**
ERM					Sn	**Sn**	**03 50 31.7**	**0.0**
JEM	**Erimo**	**0.58**	**79**	*i*	P	**Pn**	**03 50 21.9**	**-0.4**
JEM					*eS*	**Sn**	**03 50 31.4**	**-0.3**
JTHR	**Tokachihiroo**	**0.78**	**60**	*i*	P	**Pn**	**03 50 24.4**	**-0.1**
JTHR					*eS*	**Sn**	**03 50 36.0**	**+0.2**
JTHR	**Tokachihiroo**	**0.78**	**60**		A	A	03 50 24.4	
	comp=E,8.0nm,1.2s,comp=N,4.0nm,0.6s							
JIAM	**Iburiatsuma**	**0.80**	**334**	*i*	P	**Pn**	**03 50 25.2**	**+0.4**
JIAM					*eS*	**Sn**	**03 50 37.6**	**+1.5**
JIAM	**Iburiatsuma**	**0.80**	**334**		A	A	03 50 25.2	
	comp=E,15nm,0.7s,comp=N,25nm,0.6s							
JBT2	**Biratori 2**	**0.87**	**359**		P	**Pn**	**03 50 25.0**	**-0.8**
JBT2					*eS*	**Sn**	**03 50 37.7**	**-0.2**
JCH	**Churui**	**1.01**	**45**	*i*	P	**Pn**	**03 50 27.4**	**-0.2**
JCH					*eS*	**Sn**	**03 50 42.0**	**+0.9**
JCH	**Churui**	**1.01**	**45**		A	A	03 50 27.4	
	comp=E,2.0nm,0.9s,comp=N,2.0nm,0.9s							
JKB	**Kayabe**	**1.01**	**269**	*i*	P	**Pn**	**03 50 27.0**	**-0.6**
JKB					*eS*	**Sn**	**03 50 40.3**	**-0.7**
JKB	**Kayabe**	**1.01**	**269**		A	A	03 50 27.0	
	comp=E,6.0nm,0.8s,comp=N,6.0nm,1.0s							
JOT	**Ohata**	**1.13**	**243**	*i*	P	**Pn**	**03 50 28.8**	**-0.4**
JOT					*eS*	**Sn**	**03 50 43.3**	**-0.6**
JNB	**Noboribetsu**	**1.15**	**300**	*i*	P	**Pn**	**03 50 28.5**	**-0.9**
JNB					*eS*	**Sn**	**03 50 43.1**	**-1.1**
JEW	**Eniwo**	**1.16**	**324**		P	**Pn**	**03 50 29.4**	**-0.2**
JEW					*eS*	**Sn**	**03 50 44.8**	**+0.2**
JFR	**Furan**	**1.27**	**7**		P	**Pn**	**03 50 30.6**	**-0.4**
JOB	**Onbets**	**1.46**	**47**	*i*	P	**Pn**	**03 50 34.3**	**+0.8**
JOB					*eS*	**Sn**	**03 50 54.0**	**+2.3**
JTM	**Tenmabayashi**	**1.50**	**222**			**Pn**	**03 50 34.2**	**+0.2**
JTM					Sn	**Sn**	**03 50 52.8**	**+0.2**
JTM	**Tenmabayashi**	**1.50**	**222**	*i*	P	**Pn**	**03 50 34.1**	**+0.2**
JYM2	**Yakumo 2**	**1.52**	**279**	*eP*		**Pn**	**03 50 33.9**	**-0.4**
JYM2					*eS*	**Sn**	**03 50 53.1**	**0.0**
JSR	**Shiriuchi**	**1.52**	**256**		P	**Pn**	**03 50 34.0**	**-0.3**
JSR					*eS*	**Sn**	**03 50 53.8**	**+0.6**
JISS	**Ishikarishitsu**	**1.54**	**333**	*eP*		**Pn**	**03 50 34.7**	**+0.1**
JISS					*eS*	**Sn**	**03 50 54.0**	**+0.4**
JANG	**Nango**	**1.67**	**204**	*i*	P	**Pn**	**03 50 36.2**	**-0.1**
JAR	**Ashorobuto**	**1.72**	**36**	*i*	P	**Pn**	**03 50 36.9**	**-0.1**
JOMM	**Oshimamatsumae**	**1.82**	**259**		P	**Pn**	**03 50 38.3**	**-0.1**
ASAJ	**Asahikawa**	**2.21**	**4**		P	**Pn**	**03 50 44.6**	**+1.0**
	comp=N,82nm,0.4s,baz=225,slow=9.3,SNR=127							
ASAJ					S	**Sn**	**03 51 12.2**	**+2.3**
	comp=N,129nm,0.4s,baz=40,slow=28,SNR=14							
JKA	**Kamikawa-asahi**	**2.21**	**4**			**Pn**	**03 50 43.6**	**-0.1**
JMM	**Marumori**	**4.22**	**197**			**Pn**	**03 51 11.7**	**+0.6**
MAJO	**Matsushiro**	**6.26**	**213**			**Pn**	**03 51 39.1**	**0.0**
MJAR	**Matsushiro Arr**	**6.26**	**213**		P	**Pn**	**03 51 40.6**	**+1.5**
	comp=N,2.1nm,0.4s,baz=18,slow=15,SNR=11							
JGF	**Kuroka**	**7.42**	**214**		Pn	**Pn**	**03 51 55.2**	**+0.2**
INU	**Inuyama**	**7.78**	**214**		Pn	**Pn**	**03 52 00.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**7.96**	**290**		P	**Pn**	**03 52 02.9**	**+0.7**
	comp=N,5.2nm,0.9s,baz=95,slow=15,SNR=4.6							
JHJ	**Hachijo jima 2**	**9.01**	**194**		LR	LR	03 56 13.7	
	comp=N,773nm,21.3s,baz=104,slow=40							
KSRS	**Korea Array**	**12.00**	**253**		P	**Pn**	**03 53 01.4**	**+4.0**
	comp=N,2.6nm,0.4s,baz=64,slow=14,SNR=8.9							
SONM	**Songino Array**	**26.02**	**296**		P	**P**	**03 55 36.6**	**-0.1**
	comp=N,0.3nm,0.4s,baz=75,slow=11,SNR=2.3							
	comp=N,0.3nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**30.33**	**129**		T	T	04 27 52.8	
	baz=324,slow=74							
H11N1	**WAKE ISLAND Hy**	**30.34**	**129**		T	T	04 27 47.1	
	baz=324,slow=74							
H11N3	**WAKE ISLAND Hy**	**30.35**	**129**		T	T	04 27 48.5	
	baz=324							
ATKA	**Atka Island**	**30.89**	**55**		P	**P**	**03 56 18.7**	**-1.0**
H11S1	**WAKE ISLAND Hy**	**31.19**	**131**		T	T	04 28 46.9	
	baz=325,slow=76,SNR=30							
H11S3	**WAKE ISLAND Hy**	**31.19**	**131**		T	T	04 28 55.6	
	baz=325,slow=76,SNR=21							
H11S2	**WAKE ISLAND Hy**	**31.20**	**131**		T	T	04 28 59.2	
	baz=325,slow=76,SNR=22							
ZALV	**Zalesovo Beam**	**39.34**	**308**		P	**P**	**03 57 31.8**	**-0.6**
	comp=N,0.5nm,0.4s,baz=77,slow=7.7,SNR=2.0							
	comp=N,0.5nm,0.4s							
C18K	**Utukok River**	**39.61**	**29**		P	**P**	**03 57 34.8**	**+0.3**
C18K					IAmb	IAmb	03 58 08.7	
	comp=Z,7.2nm,1.5s							
G18K	**Tagagawik**	**40.11**	**33**		P	**P**	**03 57 38.0**	**-0.6**
G18K					IAmb	IAmb	03 58 06.4	
	comp=Z,4.4nm,1.4s							
D19K	**Kuna River**	**40.69**	**29**		P	**P**	**03 57 43.3**	**-0.1**
D19K					IAmb	IAmb	03 58 09.9	
	comp=Z,9.9nm,1.5s							
IMAR	**Indian Mountai**	**42.12**	**33**		P	**P**	**03 57 55.5**	**+0.4**
MKAR	**Makanchi Array**	**42.34**	**298**		P	**P**	**03 57 57.4**	**+0.2**
MKAR	**Makanchi Array**	**42.34**	**298**		P	**P**	**03 57 57.0**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=82,slow=11,SNR=2.5							
	comp=Z,0.3nm,0.9s							
KURBB	**Kurchatov Arra**	**43.74**	**304**		P	**P**	**03 58 08.2**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=77,slow=8.6,SNR=5.4							
	comp=Z,0.5nm,0.4s							
ILAR	**Eielson Array**	**45.02**	**35**		P	**P**	**03 58 18.1**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=262,slow=5.7,SNR=7.2							
	comp=Z,0.3nm,0.9s							
BVAR	**Borovoye Array**	**47.96**	**309**		P	**P**	**03 58 41.6**	**0.0**
	comp=Z,0.4nm,0.3s,baz=67,slow=11,SNR=3.2							
	comp=Z,0.4nm,0.3s							
ABKAR	**Akbulak array**	**55.46**	**308**		P	**P**	**03 59 37.2**	**-0.3**
ABKAR	**Akbulak array**	**55.46**	**308**		P	**P**	**03 59 37.4**	**-0.1**
ABKAR					IAmb	IAmb	03 59 37.5	
	comp=Z,2.9nm,1.4s							
YKA	**Yellowknife Ar**	**59.24**	**32**		P	**P**	**04 00 03.1**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=294,slow=6.0,SNR=1.4							
	comp=Z,0.1nm,0.5s							
WB0	**Warramunga Arr**	**61.81**	**189**		P	**P**	**04 00 21.1**	**-0.7**
WB0					IAmb	IAmb	04 00 44.5	
	comp=Z,8.7nm,1.3s							
WR0	**Warramunga Arr**	**61.98**	**188**		P	**P**	**04 00 22.2**	**-0.7**
WRA	**Warramunga Arr**	**61.98**	**189**		P	**P**	**04 00 21.9**	**-1.1**
WRA	**Warramunga Arr**	**61.98**	**189**		P	**P**	**04 00 22.6**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=6.2,slow=6.9,SNR=14							
	comp=Z,0.7nm,0.4s							
FINES	**FINESS Array B**	**64.88**	**332**		P	**P**	**04 00 41.2**	**-0.4**
FINES	**FINESS Array B**	**64.88**	**332**		P	**P**	**04 00 41.4**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=56,slow=8.6,SNR=8.7							
	comp=Z,1.3nm,0.6s							
ASAR	**Alice Springs**	**65.71**	**189**		P	**P**	**04 00 47.4**	**0.0**
	comp=Z,0.2nm,0.4s,baz=14,slow=8.0,SNR=2.6							
	comp=Z,0.2nm,0.4s							
HFS	**Hagfors**	**69.97**	**335**		P	**P**	**04 01 13.1**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=52,slow=7.9,SNR=7.1							
	comp=Z,0.7nm,0.3s							

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*IDC **17** 03:54:39.2±0.6, 16°.15N×97°.69W, h0km, mb4.5/20, mbtmp4.4/23, ML3.9/3, MS4.7/39, Error ellipse: s-maj=16.9km s-min=12.5km az=45.0*
*MOS **17** 03:54:40.9±1.0, 16°.32N×97°.55W, h16km, mb5.2/34, Error ellipse: s-maj=9.2km s-min=5.1km az=98.5*
*MEX **17** 03:54:42.8±1.0, 16°.07N×97°.80W, h10km±10km, MD5.2, Ml5.2*
*NEIC **17** 03:54:46.4±1.8, 16°.40N±0°.08×97°.49W±0°.07, h34km±5km, mb5.0/159, Md4.2/18(MEX), Error ellipse: s-maj=13.6km s-min=5.0km az=218.0*
ISC 17 03:54:44.8±0.6, 16°.23N±0°.03×97°.64W±0°.03, h34km±1km, n853, σ1$40/890, mb5.0/131, MS4.7/39, 8C-13D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.52**	**116**			**Pn**	**03 54 53.6**	**-2.2**
PEIG						**Sb**	**03 55 02.4**	**-1.0**
PEIG	**Puerto Escondi**	**0.52**	**116**	*eP*		**Pn**	**03 54 53.6**	**-2.2**
PEIG					*i* S	**Sb**	**03 55 02.4**	**-1.0**
YOIG	**Yosondua**	**0.63**	**8**	*eP*		**Pb**	**03 54 55.8**	**-2.0**
YOIG					*eS*	**Sn**	**03 55 06.1**	**-0.5**
TXIG	**Tlaxiaco**	**1.03**	**353**			**Pn**	**03 55 01.8**	**-1.3**
TXIG	**Tlaxiaco**	**1.03**	**353**	*eP*		**Pn**	**03 55 01.8**	**-1.3**
TXIG					*i* S	**Sb**	**03 55 17.3**	**-0.4**
VHO	**Vista Hermosa**	**1.21**	**46**	*eP*		**Pb**	**03 55 05.8**	**-1.5**
VHO					*eS*	**Sb**	**03 55 23.8**	**+1.1**
OXIG	**Oaxaca**	**1.21**	**46**			**Pb**	**03 55 05.8**	**-1.5**
OXBJ	**Oaxaca**	**1.21**	**46**			**Pb**	**03 55 05.8**	**-1.5**
OXBJ	**Oaxaca**	**1.21**	**46**	*eP*		**Pb**	**03 55 05.8**	**-1.5**
OXBJ						**Sb**	**03 55 24.2**	**+1.4**
MGIG	**Malinaltepec**	**1.39**	**316**	*eP*		**Pn**	**03 55 05.5**	**-2.3**
MGIG					*i* S	**Sn**	**03 55 21.5**	**-3.6**
CRIG	**Cruz Grande**	**1.52**	**290**	*eP*		Pn	03 55 06.9	-2.7
CRIG					*i* S	**Sn**	**03 55 23.2**	**-5.0**
HUIG	**Huatulco**	**1.54**	**107**			**Pn**	**03 55 08.4**	**-1.4**
HUIG						**Sn**	**03 55 26.6**	**-2.0**
HUIG	**Huatulco**	**1.54**	**107**	*eP*		**Pn**	**03 55 08.4**	**-1.4**
HUIG					*i* S	**Sn**	**03 55 27.6**	**-1.0**
TLIG	**Tlapa**	**1.60**	**326**	Pn		**Pn**	**03 55 09.2**	**-1.6**
TLIG					Sn	**Sn**	**03 55 30.8**	**+0.4**
TLIG	**Tlapa**	**1.60**	**326**	*eP*		**Pn**	**03 55 09.2**	**-1.6**
TLIG					*eS*	**Sn**	**03 55 29.1**	**-1.2**
HLIG	**Huajuapan de L**	**1.60**	**354**	*eP*		**Pn**	**03 55 10.8**	**-0.1**
HLIG					*i* S	**Sb**	**03 55 31.0**	**-3.0**
FTIG	**Fresnillo de T**	**1.74**	**344**			**Pn**	**

CHUJ *i* S **Sn** **03 57 02.4 -3.0**
MMIG Aquila 5.83 291 *e*P **Pn** **03 56 06.7 -2.1**
MMIG *e*S Sn 03 57 08.2 -6.3
HUEH Huehuetenango 5.97 98 **Pn** **03 56 10.3 -0.7**
RTAL Retalhuleu 5.97 106 **Pn** **03 56 12.7 +1.8**
RPIG Rio Verde 6.05 339 *e*P **Pn** **03 56 09.5 -2.4**
COIG Colima 6.47 298 *e*P **Pn** **03 56 17.5 -0.3**
COIG *e*S **Sn** **03 57 30.2 -0.4**
JUBC Volcan de Coli 6.53 301 *e*P **Pn** **03 56 17.7 -1.0**
JUBC *e*S **Sn** **03 57 30.5 -1.6**
EZ5V 6.54 301 *e*P **Pn** **03 56 19.5 +0.7**
EZ5V *e*S **Sn** **03 57 28.7 -3.7**
MNGA Volcan de Coli 6.55 300 *e*P **Pn** **03 56 19.9 +0.9**
MNGA *e*S **Sn** **03 57 31.6 -0.9**
SOMAC Volcano de Col 6.58 301 *e*P **Pn** **03 56 19.9 +0.4**
SOMAC *e*S **Sn** **03 57 30.5 -3.1**
CDAR Ciudad de Arme 6.65 295 *e*P **Pn** **03 56 19.0 -1.2**
CDAR *e*S **Sn** **03 57 30.9 -3.9**
CEGR Campo Tres 6.71 299 *e*P **Pn** **03 56 21.8 +0.7**
CEGR *e*S **Sn** **03 57 33.5 -3.0**
SCIG Sabancuy 6.73 65 *e*P **Pn** **03 56 19.4 -1.8**
SCIG *e*S **Sn** **03 57 37.7 +1.0**
AAIG Aguscalientes 7.26 323 *e*P **Pn** **03 56 29.8 +1.0**
AAIG *e*S **Sn** **03 57 51.2 +1.1**
CIHU Emiliano Zapat 7.41 295 *e*P **Pn** **03 56 29.4 -1.2**
CIHU *e*S Sn 03 57 46.5 -7.0
PETF Flores 7.48 84 **Pn** **03 56 31.0 -0.6**
CJM Chamela 7.77 296 *e*P **Pn** **03 56 35.5 0.0**
CJM *e*S **Sn** **03 58 05.0 +2.7**
ZAIG Zacatecas 8.00 325 Pn **Pn** **03 56 39.3 +0.5**
ZAIG Zacatecas 8.00 325 *e*P **Pn** **03 56 42.4 +3.5**
ESTA Talpa de Allen 8.01 302 *e*P **Pn** **03 56 40.0 +1.1**
ESTA *e*S Sn 03 58 00.9 -7.4
ESQI Esquipulas 8.17 101 Pn **Pn** **03 56 42.2 +1.1**
MTO3 Montecristo 8.19 102 **Pn** **03 56 42.3 +0.9**
SNET Serv Nac Est T 8.51 106 Pn **Pn** **03 56 47.6 +1.9**
LNIG Linares 8.80 349 *e*P **Pn** **03 56 49.2 -0.4**
MYIG Mrida 8.84 57 *e*P **Pn** **03 56 46.8 -3.4**
MYIG *e*S **Sn** **03 58 28.6 -0.1**
TEIG Tepich 9.74 64 Pn **Pn** **03 57 00.0 -2.5**
TEIG Tepich 9.74 64 LR LR 04 01 36.6
comp=Z,58µm,18.0s,baz=22,slow=42
TGUH Tegucigalpa,Un 10.24 101 Pn **Pn** **03 57 10.2 +0.7**
MATN Matagalpa 11.80 105 **Pn** **03 57 29.7 -1.2**
833A Chaparral WMA, 12.15 353 **Pn** **03 57 32.7 -2.8**
833A Chaparral WMA, 12.15 353 P **Pn** **03 57 36.4 +0.9**
baz=171
BOAB BOACO BROADBAN 12.19 106 Pn **Pn** **03 57 35.9 -0.2**
735A Kenedy 12.57 359 Pn **Pn** **03 57 37.5 -3.8**
ACON Acoyapa 12.81 108 **Pn** **03 57 43.7 -0.9**
HZTE Horizontes, Gu 12.93 114 Pn **Pn** **03 57 46.7 +0.5**
HPIG 13.01 326 Pn **Pn** **03 57 46.2 -1.2**
ORTG Ortega, Santa 13.20 115 Pn **Pn** **03 57 51.1 +1.1**
DUNO Dulce Nombre, 13.31 116 **Pn** **03 57 53.1 +1.7**
HNDO Hondo 13.33 354 Pn **Pn** **03 57 49.1 -2.5**
DRIO Del Rio 13.42 349 Pn **Pn** **03 57 51.1 -1.7**
MLDN Muldoon 13.50 2 Pn **Pn** **03 57 52.5 -1.5**
JTS Las Juntas de 13.68 114 Pn **Pn** **03 57 58.2 +1.7**
JTS Las Juntas de 13.68 114 *i* P **Pn** **03 57 58.4 +1.9**
JTS Las Juntas de 13.68 114 Pn **Pn** **03 57 55.3 -1.2**
1.6nm,0.3s,baz=345,slow=7.1,SNR=6.6
14nm,0.8s
SLBS Sierra La Lagu 13.74 305 **Pn** **03 57 59.4 +2.1**
ARE1 Arenal 1 13.81 113 **Pn** **03 57 59.5 +1.2**
TXAR Lajitas Array 14.18 338 Pn **Pn** **03 58 03.0 -0.3**
TXAR Lajitas Array 14.18 338 P **Pn** **03 58 03.0 -0.3**
TXAR Lajitas Array 14.18 338 Pn **Pn** **03 58 05.4 +2.1**
baz=148,slow=14,SNR=10
TXAR Lg Lg 04 02 13.2
baz=86,slow=20,SNR=3.5
TXAR LR LR 04 04 20.5
comp=Z,4µm,18.1s,baz=143,slow=41
1.3nm,0.8s
TX31 Lajitas Ar. Si 14.18 338 Pn **Pn** **03 58 03.2 -0.1**
JACO JACO, Garabito 14.23 116 **Pn** **03 58 04.7 +0.8**
LPIG La Paz 14.24 305 LR LR 04 02 37.9
comp=Z,2µm,18.2s,baz=112,slow=34
SAND Sanderson 14.27 344 Pn **Pn** **03 58 02.7 -1.8**
JCT Junction City 14.33 352 Pn **Pn** **03 58 03.4 -1.9**
JCT Junction City 14.33 352 P **Pn** **03 58 05.2 0.0**
baz=171
JCT Junction City 14.33 352 P **Pn** **03 58 03.4 -1.9**
435B Jarrell 14.49 0 Pn **Pn** **03 58 04.7 -2.7**
435B Jarrell 14.49 0 P **Pn** **03 58 07.1 -0.3**
baz=180
HDC Heredia 14.55 114 **Pn** **03 58 08.0 -0.4**
HNVL Huntsville, TX 14.60 7 **Pn** **03 58 04.5 -4.4**
LCR2 La Lucha 2 14.76 114 **Pn** **03 58 10.9 -0.5**
RIMA Rio Macho 14.87 114 Pn **Pn** **03 58 11.5 -1.4**
PEZE Perez Zeledon, 15.21 115 **Pn** **03 58 17.7 +0.5**
PEZE IAmb IAmb 03 58 24.3
comp=Z,207nm,2.0s
SOR Soroa 15.25 62 **Pn** **03 58 15.0 -2.7**
SOR Soroa 15.25 62 P **Pn** **03 58 15.0 -2.7**
SOR pmax pmax
comp=Z,17nm,1.3s
DRK0 Durika 15.64 115 **Pn** **03 58 24.2 +1.2**
DRK0 IAmb IAmb 03 58 30.4
comp=Z,93nm,1.0s
WHTX Lake Whitney, 15.70 1 Pn **Pn** **03 58 20.9 -2.4**
WHTX IAmb IAmb 03 58 28.8
comp=Z,111nm,1.6s
WHTX Lake Whitney, 15.70 1 P **Pn** **03 58 22.8 -0.6**
baz=180,SNR=7.9
NATX Nacogdoches 15.70 9 **Pn** **03 58 20.8 -2.6**
NATX IAmb IAmb 03 58 29.2
comp=Z,106nm,1.7s
NATX Nacogdoches 15.70 9 P **Pn** **03 58 23.0 -0.5**
baz=190
MNHN Monahans 15.76 344 **Pn** **03 58 22.9 -1.4**
BRU2 Volcan 16.35 115 **Pn** **03 58 33.9 +2.0**
ABTX Abilene, Hawle 16.43 354 P **Pn** **03 58 31.9 -0.9**
baz=173,SNR=14
MNTX Cornudas Mount 16.94 337 P **Pn** **03 58 39.1 -0.1**
baz=153,SNR=15
Z35A Perchaven, San 17.04 1 **Pn** **03 58 39.3 -1.0**
VBMS Vicksburg 17.18 21 P **Pn** **03 58 41.0 -1.2**
VBMS Vicksburg 17.18 21 P **Pn** **03 58 40.3 -2.0**
baz=203,SNR=5.5
143A Socs Landing, 17.35 18 **Pn** **03 58 42.7 -1.6**
143A IAmb IAmb 03 58 47.5
comp=Z,114nm,1.2s
EPT El Paso 17.45 334 **Pn** **03 58 45.9 +0.2**
Z41A Richland Creek 17.51 14 P **Pn** **03 58 45.9 -0.4**
HSIG 17.68 318 P **Pn** **03 58 48.5 +0.2**
BRAL Brewton 17.74 31 P **Pn** **03 58 48.2 -0.8**
baz=215
MSTX Muleshoe 18.26 346 P **Pn** **03 58 55.3 -0.3**
baz=164
319A Douglas 18.44 327 **P** **03 58 58.5 +0.9**
WMOK Wichita Mounta 18.46 357 **P** **03 58 55.8 -1.9**
WMOK Wichita Mounta 18.46 357 P **P** **03 58 56.6 -1.1**
baz=176,SNR=21
WMOK Wichita Mounta 18.46 357 P **P** **03 58 55.8 -1.9**
WMOK pmax pmax
comp=Z,24nm,1.1s
MIAR Mount Ida 18.60 11 **P** **03 58 57.7 -1.5**
MIAR Mount Ida 18.60 11 P **P** **03 58 58.6 -0.6**
baz=192,SNR=17
MIAR Mount Ida 18.60 11 P **P** **03 58 57.7 -1.5**
MIAR pmax pmax
comp=Z,76nm,1.4s
121A Cookes Peak, D 18.66 332 P **P** **03 58 59.4 -0.7**
121A Cookes Peak, D 18.66 332 P **Pn** **03 59 01.0 +0.4**
baz=148,SNR=6.5
AMTX Amarillo 18.93 350 P **P** **03 59 02.5 -0.4**
AMTX Amarillo 18.93 350 P **Pn** **03 59 03.2 -0.5**
baz=168
UALR University of 19.07 13 P **P** **03 59 03.9 -0.5**
DWPF Disney Wildern 19.08 49 P **P** **03 59 04.0 -0.5**
DWPF IAmb IAmb 03 59 08.4
comp=Z,108nm,1.4s
DWPF Disney Wildern 19.08 49 P **P** **03 59 02.9 -1.5**
baz=235
LRAL Lakeview Retre 19.30 28 P **Pn** **03 59 06.6 -1.5**
LRAL Lakeview Retre 19.30 28 P **Pn** **03 59 06.6 -1.5**
baz=212,SNR=14
WHAR Wooly Hollow 19.58 13 P **P** **03 59 09.2 -0.7**
Y22D IRIS PASSCAL I 19.64 337 P **Pn** **03 59 12.3 0.0**
baz=152
Y22F Passcal Instru 19.64 337 P **Pn** **03 59 12.0 -0.3**
baz=152
OXF Oxford 19.65 21 P **P** **03 59 09.9 -0.8**

OXF IAmb IAmb 03 59 12.3
comp=Z,75nm,1.1s
OXF Oxford 19.65 21 P **P** **03 59 09.9 -0.8**
baz=204,SNR=8.4
OXF Oxford 19.65 21 P **P** **03 59 09.9 -0.8**
OXF pmax pmax
comp=Z,75nm,1.1s
TUL3 Leonard 19.67 4 P **P** **03 59 09.8 -1.1**
TUL3 Leonard 19.67 4 P **P** **03 59 10.5 -0.4**
baz=185,SNR=10
TIGA Tifton 19.83 38 P **P** **03 59 11.8 -0.8**
TIGA Tifton 19.83 38 P **P** **03 59 12.0 -0.6**
baz=223,SNR=10
TUC Tucson 19.97 326 P **P** **03 59 15.0 +0.7**
TUC IAmb IAmb 03 59 25.1
comp=Z,89nm,1.9s
TUC Tucson 19.97 326 P **Pn** **03 59 16.2 0.0**
baz=140
TUC Tucson 19.97 326 P **P** **03 59 15.0 +0.7**
TUC pmax pmax
comp=Z,89nm,1.9s
FCAR Ozark Folk Cen 20.19 13 P **P** **03 59 15.6 -0.9**
FCAR IAmb IAmb 03 59 27.9
comp=Z,122nm,1.9s
HBAR Harrisburg 20.23 17 P **P** **03 59 16.2 -0.8**
HBAR IAmb IAmb 03 59 24.9
comp=Z,149nm,1.3s
ANMO Albuquerque 20.25 339 P **P** **03 59 17.2 -0.2**
ANMO Albuquerque 20.25 339 P **P** **03 59 17.9 +0.5**
baz=154
ANMO Albuquerque 20.25 339 P **P** **03 59 17.2 -0.2**
ANMO pmax pmax
comp=Z,42nm,1.4s
ANMO Albuquerque 20.25 339 P **Pn** **03 59 18.9 -0.6**
comp=Z,8.5nm,0.8s,baz=237,slow=11,SNR=22
ANMO LR LR 04 07 58.9
comp=Z,3µm,19.0s,baz=247,slow=39
comp=Z,8.5nm,0.8s
OK035 E0210 Rd and N 20.42 358 P **P** **03 59 18.3 -0.8**
OK035 IAmb IAmb 03 59 26.2
comp=Z,44nm,0.7s
T35A Sooner Cattle 20.63 3 P **P** **03 59 20.0 -1.4**
T35A IAmb IAmb 03 59 31.9
comp=Z,45nm,0.9s
KAN17 Caldwell West 20.74 360 P **P** **03 59 21.0 -1.5**
KAN17 IAmb IAmb 03 59 35.5
comp=Z,164nm,1.9s
214A Organ Pipe Nat 20.87 321 P **P** **03 59 24.9 +0.9**
baz=135,SNR=11
PIX Pinacate 20.99 319 P **P** **03 59 25.8 +0.6**
FPAL Fort Paine 21.19 28 P **P** **03 59 25.6 -1.9**
FPAL IAmb IAmb 03 59 40.4
comp=Z,93nm,1.4s
GOGA Godfrey 21.36 34 P **P** **03 59 27.6 -1.6**
GOGA IAmb IAmb 03 59 33.3
comp=Z,114nm,1.2s
GOGA Godfrey 21.36 34 P **P** **03 59 27.9 -1.3**
baz=220,SNR=25
GOGA Godfrey 21.36 34 P **P** **03 59 27.6 -1.6**
GOGA pmax pmax
comp=Z,114nm,1.3s
SFX San Felipe 21.55 316 P **P** **03 59 31.6 +0.5**
SWET Sewanee 21.62 27 P **P** **03 59 30.5 -1.5**
SWET IAmb IAmb 03 59 38.9
comp=Z,52nm,0.7s
WVT Waverly 21.66 22 P **P** **03 59 30.5 -1.9**
WVT IAmb IAmb 03 59 39.2
comp=Z,118nm,1.4s
WVT Waverly 21.66 22 P **P** **03 59 31.7 -0.7**
baz=206
WVT Waverly 21.66 22 P **P** **03 59 30.5 -1.9**
WVT pmax pmax
comp=Z,118nm,1.4s
T25A Trinidad 21.68 345 P **P** **03 59 33.0 +0.2**
T25A Trinidad 21.68 345 P **P** **03 59 34.4 +1.6**
baz=162,SNR=39
W18A Petrified Fore 21.71 332 P **P** **03 59 34.8 +1.6**
baz=147
GTBY Guantanamo Bay 21.72 77 P **P** **03 59 32.7 -0.5**
APAC Apartado, Choc 22.17 109 *e*P **P** **03 59 43.0 +4.9**
CCM Cathedral Cave 22.46 13 P **P** **03 59 40.2 -0.8**
CCM Cathedral Cave 22.46 13 P **P** **03 59 39.9 -1.1**
baz=196
CCM Cathedral Cave 22.46 13 P **P** **03 59 40.2 -0.8**
CCM pmax pmax
comp=Z,229nm,2.0s
SDCO Great Sand Dun 22.53 344 P **P** **03 59 40.8 -1.3**
SDCO IAmb IAmb 03 59 51.6
comp=Z,51nm,1.4s
SDCO Great Sand Dun 22.53 344 P **P** **03 59 42.4 +0.3**
baz=160,SNR=32
CBKS Cedar Bluff 22.58 356 P **P** **03 59 41.7 -0.5**
baz=174
SJCC San Jacinto, C 22.75 103 *e*P **P** **03 59 46.2 +1.9**
WUAZ Wupatki 22.80 330 P **P** **03 59 45.8 +1.1**
WUAZ IAmb IAmb 03 59 48.7
comp=Z,102nm,1.4s
WUAZ Wupatki 22.80 330 P **P** **03 59 46.2 +1.4**
baz=144,SNR=23
KSU1 Kansas State U 22.81 2 P **P** **03 59 44.5 -0.1**
KSU1 Kansas State U 22.81 2 P **P** **03 59 45.3 +0.7**
baz=182,SNR=14
GLA Glamis 22.85 320 P **P** **03 59 47.1 +1.9**
baz=133
DBBC Dabeiba 22.87 111 *e*P **P** **03 59 47.7 +2.1**
ESJX Sierra Juarez 22.88 317 P **P** **03 59 46.3 +0.7**
S22A 4UR Ranch, Cre 22.92 341 P **P** **03 59 47.4 +1.3**
baz=156,SNR=16
MVCO Mesa Verde 23.01 337 P **P** **03 59 46.6 -0.3**
MVCO IAmb IAmb 03 59 58.6
comp=Z,87nm,1.2s
MVCO Mesa Verde 23.01 337 P **P** **03 59 47.7 +0.7**
baz=152,SNR=24
NHSC New Hope 23.05 40 P **P** **03 59 47.2 0.0**
NHSC New Hope 23.05 40 P **P** **03 59 47.1 -0.1**
baz=227
KSCO Kaye Shedlock' 23.12 350 P **P** **03 59 47.9 0.0**
baz=167
BLYC Blythe 23.15 322 P **P** **03 59 49.3 +1.1**
BLYC IAmb IAmb 03 59 59.0
comp=Z,85nm,1.6s
UREC San Jos de Ur 23.18 109 *e*P **P** **03 59 50.0 +1.3**
PDMCI Parker Dam,Lak 23.32 324 P **P** **03 59 50.9 +1.0**
baz=136,SNR=5.2
RMX La Rumorosa 23.34 318 P **P** **03 59 50.4 0.0**
SWSC Sam W. Stewart 23.39 319 P **P** **03 59 52.1 +1.5**
baz=131
IKP In-Ko-Pah, Jac 23.40 318 P **P** **03 59 52.1 +1.3**
baz=130
CBOC Ciudad Bolivar 23.56 113 *e*P **P** **03 59 55.0 +2.4**
Q24A Divide 23.59 345 P **P** **03 59 53.0 +0.2**
Q24A IAmb IAmb 03 59 56.0
comp=Z,120nm,1.9s
Q24A Divide 23.59 345 P **P** **03 59 53.9 +1.1**
baz=161,SNR=6.5
BC3 Big Chuckawall 23.65 320 P **P** **03 59 54.3 +1.2**
baz=132,SNR=12
MONP2 Monument Peak 23.75 318 P **P** **03 59 55.0 +0.7**
baz=129
PLMC San Jos del P 23.78 116 *e*P **P** **03 59 55.3 +0.7**
TZTN Tazewell 23.79 29 P **P** **03 59 53.3 -1.1**
TZTN Tazewell 23.79 29 P **P** **03 59 53.8 -0.6**
baz=215
IRM Iron Mountain 23.80 322 P **P** **03 59 55.7 +1.1**
baz=134,SNR=13
KMSC Kings Mountain 23.83 35 P **P** **03 59 53.8 -0.9**
KMSC Kings Mountain 23.83 35 P **P** **03 59 54.7 -0.1**
baz=222,SNR=36
NEE2 Needles Airpor 23.93 324 P **P** **03 59 56.8 +1.0**
baz=136
WCI Wyandotte Cave 24.09 22 P **P** **03 59 56.7 -0.4**
WCI IAmb IAmb 04 00 23.2
comp=Z,47nm,0.8s
WCI Wyandotte Cave 24.09 22 P **P** **03 59 56.9 -0.2**
baz=207
WCI Wyandotte Cave 24.09 22 P **P** **03 59 56.7 -0.4**
WCI pmax pmax
comp=Z,47nm,0.9s
109C Camp Elliot, M 24.20 317 P **P** **03 59 59.2 +1.0**
baz=128
YOTC Yotoco, Valle 24.20 118 *e*P **P** **04 00 00.1 +1.5**
BELC Belle Mtn. Jos 24.21 320 P **P** **03 59 59.0 +0.4**
baz=132,SNR=7.8
TPFO Pinon Flats 24.23 319 P **P** **04 00 00.1 +1.4**
baz=131
PFO Pinyon Flats O 24.24 319 P **P** **03 59 59.9 +1.1**

PFO IAmb IAmb 04 00 09.7
comp=Z,61nm,1.8s
PFO Pinyon Flats O 24.24 319 P **P** **04 00 00.3 +1.5**
baz=131
PFO Pinyon Flats O 24.24 319 *i* P **P** **03 59 59.5 +0.7**
GUY2C Guyana, Caldas 24.43 114 *e*P **P** **04 00 02.0 +1.0**
ISCO Idaho Springs 24.50 345 P **P** **04 00 01.9 +0.7**
ISCO IAmb IAmb 04 00 04.6
comp=Z,35nm,1.3s
ISCO Idaho Springs 24.50 345 P **P** **04 00 02.4 +1.1**
baz=161,SNR=10
ISCO Idaho Springs 24.50 345 P **P** **04 00 01.9 +0.7**
ISCO pmax pmax
comp=Z,35nm,1.3s
HMU Henry Mountain 24.52 334 P **P** **04 00 02.1 +0.6**
HMU IAmb IAmb 04 00 05.2
comp=Z,84nm,1.3s
BBAC Balboa, Cauca 24.54 123 *e*P **P** **04 00 03.9 +2.1**
GMRC Granite Mounta 24.55 322 P **P** **04 00 03.1 +1.6**
baz=134
PTBC PUERTO BERRIO, 24.65 110 *e*P **P** **04 00 04.2 +1.6**
MURC Murrieta 24.70 318 P **P** **04 00 04.6 +1.7**
baz=129
POPC Popayan, Colom 24.71 121 *e*P **P** **04 00 05.6 +2.3**
OTAV Otavalo 24.71 128 *e*P **P** **04 00 03.3 -0.2**
V12A Nelson 24.76 325 P **P** **04 00 04.2 +0.8**
V12A IAmb IAmb 04 00 14.9
comp=Z,57nm,1.9s
PULU Pululahua 24.81 129 P **P** **04 00 05.2 +0.8**
TULM Tulcn-Chalpat 24.91 126 P **P** **04 00 06.2 +0.8**
TULM IAmb IAmb 04 00 25.8
comp=Z,47nm,1.1s
TULM Tulcn-Chalpat 24.91 126 *e*P **P** **04 00 08.2 +2.8**
OGNE Ogallala 24.93 352 P **P** **04 00 05.2 +0.4**
OGNE Ogallala 24.93 352 P **P** **04 00 05.8 +1.0**
baz=170
GCUF Volcan Galeras 24.94 125 *e*P **P** **04 00 09.7 +4.1**
BBRC Big Bear Solar 24.96 320 P **P** **04 00 06.4 +1.1**
baz=131
HEC Hector,Ludlow 24.98 321 P **P** **04 00 05.6 +0.2**
baz=133
BGNE Belgrade 25.10 359 P **P** **04 00 06.9 +0.6**
baz=178
TUQ Turquoise Moun 25.16 323 P **P** **04 00 06.7 -0.3**
baz=134,SNR=26
ORTC Ortega, Tolima 25.18 117 *e*P **P** **04 00 09.7 +2.4**
SCI2 San Clemente I 25.21 315 P **P** **04 00 07.9 +0.5**
baz=126
SDDR Presa de Saban 25.25 80 P **P** **04 00 08.1 +0.1**
SDDR Presa de Saban 25.25 80 *e*P **P** **04 00 09.2 +1.2**
HDIL Hopedale 25.30 15 P **P** **04 00 08.3 +0.1**
HDIL IAmb IAmb 04 00 16.3
comp=Z,31nm,0.9s
HDIL Hopedale 25.30 15 P **P** **04 00 07.6 -0.6**
baz=199,SNR=6.8
SLOR San Lorenzo - 25.31 130 P **P** **04 00 11.4 +2.4**
CIS Catalina Islan 25.38 316 P **P** **04 00 09.2 +0.2**
baz=127
SPBC San Pablo de B 25.38 112 *e*P **P** **04 00 14.1 +4.9**
BFSC Mount Baldy Ra 25.41 319 P **P** **04 00 09.6 +0.3**
baz=130
RRX Edison Barstow 25.41 321 P **P** **04 00 11.1 +1.9**
baz=132
FMP Fort Macarthur 25.49 317 P **P** **04 00 11.7 +1.9**
baz=128
ROSC El Rosal 25.53 114 P **P** **04 00 12.0 +1.1**
ROSC IAmb IAmb 04 00 34.7
comp=Z,29nm,0.9s
ROSC El Rosal 25.53 114 P **P** **04 00 12.0 +1.1**
comp=Z,16nm,0.8s,baz=294,slow=20,SNR=3.0
comp=Z,16nm,0.8s
ROSC El Rosal 25.53 114 *e*P **P** **04 00 14.4 +3.5**
O20A White River Ci 25.55 341 P **P** **04 00 11.9 +1.3**
baz=156,SNR=14
CHSH Refugio Sur-Vo 25.57 132 P **P** **04 00 12.2 +0.8**
GSC Goldstone, Bar 25.58 322 P **P** **04 00 11.9 +1.0**
GSC Goldstone, Bar 25.58 322 P **P** **04 00 12.2 +1.3**
baz=133
GSC Goldstone, Bar 25.58 322 P **P** **04 00 11.9 +1.0**
GSC pmax pmax
comp=Z,25nm,1.5s
N23A Red Feather La 25.61 345 P **P** **04 00 12.0 +0.7**
baz=161,SNR=7.3
SHOC Shoshone, Teco 25.69 323 P **P** **04 00 13.3 +1.6**
baz=135
SSFO Shawnee State 25.72 27 P **P** **04 00 10.9 -1.1**
SFIN Lafayette 25.75 19 P **P** **04 00 11.1 -1.1**
SFIN IAmb IAmb 04 00 14.4
comp=Z,87nm,1.5s
SFIN Lafayette 25.75 19 P **P** **04 00 12.5 +0.3**
baz=204,SNR=9.4
SC01 Santiago de lo 25.80 79 P **P** **04 00 13.9 +1.0**
P49A Miami Univ. Ec 25.82 23 P **P** **04 00 12.4 -0.4**
baz=209,SNR=16
DECC Green Verdugo 25.85 318 P **P** **04 00 14.5 +1.3**
baz=128
BLA Blacksburg 25.86 33 P **P** **04 00 12.8 -0.6**
BLA Blacksburg 25.86 33 P **P** **04 00 12.7 -0.6**
baz=220,SNR=14
BLA Blacksburg 25.86 33 P **P** **04 00 12.8 -0.6**
BLA pmax pmax
comp=Z,141nm,1.3s
SCIA State Center 25.87 8 P **P** **04 00 12.4 -0.9**
SCIA State Center 25.87 8 P **P** **04 00 13.7 +0.4**
baz=190
CNNC Cliffs of the 25.89 39 P **P** **04 00 12.4 -1.1**
CNNC IAmb IAmb 04 00 24.0
comp=Z,41nm,0.8s
CNNC Cliffs of the 25.89 39 P **P** **04 00 12.0 -1.5**
baz=228
PAMC Pamplona, Colo 25.93 107 *e*P **P** **04 00 16.9 +2.2**
COHC Cochancay 25.98 134 P **P** **04 00 16.8 +2.3**
EDW2 Edwards Air Fo 26.03 319 P **P** **04 00 17.0 +2.1**
baz=130
SNCC San Nicolas Is 26.03 315 P **P** **04 00 15.4 +0.5**
baz=125
CHIC Chingaza 26.14 114 *e*P **P** **04 00 19.1 +2.6**
ARNL Arenillas 26.23 137 P **P** **04 00 18.3 +1.6**
LRMC Laurel Mtn Rad 26.23 321 P **P** **04 00 15.9 -0.9**
baz=132
O48B Farmland 26.29 22 P **P** **04 00 15.8 -1.3**
O48B Farmland 26.29 22 P **P** **04 00 15.7 -1.4**
baz=208,SNR=9.5
OSI Osito Audit: C 26.32 318 P **P** **04 00 18.2 +0.6**
baz=128
TPNV Topopah Spring 26.42 325 P **P** **04 00 18.4 -0.1**
baz=136
FURC Furnace Creek, 26.42 323 P **P** **04 00 18.1 -0.2**
baz=134
MPMC Manual Prospec 26.50 322 P **P** **04 00 18.0 -1.3**
baz=133,SNR=7.3
ARVC Arvin 26.71 319 P **P** **04 00 20.1 -0.9**
baz=129
ISA Isabella, Lake 26.84 320 P **P** **04 00 21.7 -0.5**
baz=130
HQIL Hanson Quary C 26.84 16 P **P** **04 00 21.4 -0.7**
SBC Santa Barbara 26.86 317 P **P** **04 00 22.0 -0.3**
baz=127
P52A Corning 26.96 27 P **P** **04 00 21.9 -1.2**
P52A IAmb IAmb 04 00 48.2
comp=Z,37nm,0.9s
P52A Corning 26.96 27 P **P** **04 00 20.8 -2.3**
baz=214,SNR=8.2
GRAC Grapevine Rang 27.08 324 P **P** **04 00 24.7 +0.4**
baz=134
R11B Troy Canyon, C 27.11 328 P **P** **04 00 25.2 +0.5**
baz=139,SNR=7.0
TAMC Tame, Arauca 27.11 108 *e*P **P** **04 00 24.4 -0.4**
CWC Cottonwood Cre 27.11 322 P **P** **04 00 24.9 +0.1**
baz=132
L44A Lake County Fo 27.18 16 P **P** **04 00 24.2 -0.9**
baz=201
PKM Mcpherson Peak 27.20 317 P **P** **04 00 26.6 +1.0**
baz=127
DUG Dugway, Tooele 27.29 334 P **P** **04 00 25.6 -0.7**
DUG Dugway, Tooele 27.29 334 P **P** **04 00 26.1 -0.2**
baz=146,SNR=7.8
DUG Dugway, Tooele 27.29 334 P **P** **04 00 25.6 -0.7**
DUG pmax pmax
comp=Z,11nm,1.1s
SDV Santo Domingo 27.32 102 P **P** **04 00 26.8 -0.1**
SDV IAmb IAmb 04 00 30.3
comp=Z,41nm,0.9s
SDV Santo Domingo 27.32 102 LR LR 04 13 00.8
comp=Z,750nm,20.0s,baz=308,slow=40
SDV Santo Domingo 27.32 102 *e*P **P** **04 00 27.2 +0.3**

SDV Santo Domingo 27.32 102 eP P 04 00 28.1 +1.2
VES Vestal, Richgr 27.33 320 P P 04 00 27.4 +0.9
baz=130
JFWS Jewell Farm 27.34 12 P P 04 00 25.2 -1.3
JFWS IAmb IAmb 04 01 07.7
comp=Z,28nm,0.8s
JFWS Jewell Farm 27.34 12 P P 04 00 25.7 -0.8
baz=195
JFWS Jewell Farm 27.34 12 P P 04 00 25.2 -1.3
JFWS pmax pmax
comp=Z,28nm,0.8s
K22A Casper 27.41 346 P P 04 00 28.1 +0.7
K22A IAmb IAmb 04 00 37.6
comp=Z,31nm,1.1s
K22A Casper 27.41 346 P P 04 00 27.9 +0.5
baz=161,SNR=5.9
ECSD EROS Data Cent 27.43 2 P P 04 00 27.0 -0.4
SMMC Simmler 27.58 318 P P 04 00 30.4 +1.5
baz=128
TIN Tinemaha, Big 27.62 323 P P 04 00 30.7 +1.4
baz=133
TPH Tonopah 27.77 325 P P 04 00 31.2 +0.5
TPH IAmb IAmb 04 00 41.2
comp=Z,76nm,1.5s
TPH Tonopah 27.77 325 P P 04 00 31.2 +0.5
TPH pmax pmax
comp=Z,76nm,1.5s
VOG Valley Oaks Go 27.82 320 P P 04 00 32.0 +1.0
baz=130
O53A New Philadelph 27.87 28 P P 04 00 30.0 -1.3
baz=215
MCWV Mont Chateau 28.04 30 P P 04 00 32.5 -0.3
baz=218
SUSD Miller 28.15 358 P P 04 00 33.7 -0.1
baz=177
CBN Corbin Frederi 28.23 35 P P 04 00 34.2 -0.3
baz=224
RSSD Black Hills 28.33 350 P P 04 00 35.7 0.0
baz=167
BW06 Boulder Array 28.35 341 P P 04 00 36.5 +0.6
baz=155
PD31 Pinedale Array 28.35 341 P P 04 00 35.6 -0.2
PDAR Pinedale Array 28.35 341 P P 04 00 35.7 -0.2
PDAR Pinedale Array 28.35 341 P P 04 00 36.5 +0.7
comp=Z,1.4nm,0.8s,baz=141,slow=12,SNR=8.8
PDAR PcP PcP 04 03 48.2 +0.1
comp=Z,1.3nm,1.1s,baz=134,slow=5.1,SNR=1.6
PDAR LR LR 04 13 00.5
comp=Z,3µm,18.1s,baz=166,slow=39
comp=Z,1.4nm,0.8s
MLAC Mammoth, Mammo 28.36 323 P P 04 00 35.8 -0.2
baz=133
MDPB Devils Postpil 28.51 323 P P 04 00 37.8 +0.4
MDPB IAmb IAmb 04 00 48.2
comp=Z,39nm,1.7s
NVAR Mina Array Bea 28.62 325 P P 04 00 39.2 +1.0
NVAR Mina Array Bea 28.62 325 P P 04 00 39.7 +1.4
comp=Z,5.4nm,1.0s,baz=146,slow=8.9,SNR=26
NVAR PcP PcP 04 03 49.0 +0.2
comp=Z,1.7nm,1.0s,baz=157,slow=4.9,SNR=2.0
comp=Z,5.4nm,1.0s
AAM Ann Arbor 28.62 22 P P 04 00 37.1 -0.9
baz=209
ELK Elko 28.80 332 LR LR 04 12 10.3
comp=Z,2µm,19.4s,baz=155,slow=36
M53A WI Miller and 29.08 27 P P 04 00 40.9 -1.2
baz=215
SPMN Marine on St. 29.19 7 P P 04 00 41.2 -1.9
baz=189
SNOW Snow King Moun 29.36 340 P P 04 00 44.6 -0.3
SSPA Standing Stone 29.75 31 P P 04 00 47.9 -0.1
SSPA IAmb IAmb 04 00 50.5
comp=Z,39nm,1.2s
SSPA Standing Stone 29.75 31 P P 04 00 46.4 -1.6
baz=221
BAUV El Baul 29.75 100 P P 04 00 48.4 +0.1
ERPA Erie 29.93 27 P P 04 00 47.0 -2.6
baz=216
SJG San Juan 30.12 82 P P 04 00 51.4 -0.2
SJG San Juan 30.12 82 P P 04 00 51.4 -0.2
SJG pmax pmax
comp=Z,38nm,0.9s
SJG San Juan 30.12 82 LR LR 04 14 07.2
comp=Z,757nm,21.7s,baz=295,slow=39
H17A Grant Village 30.14 341 P P 04 00 51.3 -0.4
baz=154
GCPR Guaynabo City 30.18 81 P P 04 00 52.0 -0.1
GCPR IAmb IAmb 04 00 54.7
comp=Z,39nm,1.1s
RLMT Red Lodge 30.43 344 P P 04 00 54.5 +0.3
baz=157
GLMI Grayling 30.55 18 P P 04 00 55.0 0.0
baz=205
HLID Hailey 30.76 336 P P 04 00 57.6 +0.5
baz=147
WVNY West Valley, N 30.77 28 P P 04 00 56.5 -0.6
LAO LASA Array 31.20 349 P P 04 01 02.0 +1.1
baz=164
BOZ Bozeman (W) 31.55 341 P P 04 01 04.8 +0.9
BOZ Bozeman (W) 31.55 341 P P 04 01 05.1 +1.1
baz=153
BOZ Bozeman (W) 31.55 341 P P 04 01 04.9 +0.9
BOZ pmax pmax
comp=Z,24nm,1.8s
MDND Maddock 31.58 357 P P 04 01 04.2 +0.2
baz=176,SNR=5.2
WVOR Wild Horse Val 31.72 330 P P 04 01 06.1 +0.6
WVOR IAmb IAmb 04 01 16.0
comp=Z,45nm,1.4s
WVOR Wild Horse Val 31.72 330 P P 04 01 06.1 +0.6
WVOR pmax pmax
comp=Z,45nm,1.4s
BINY Binghamton 31.86 31 P P 04 01 06.7 0.0
BINY Binghamton 31.86 31 P P 04 01 05.8 -0.9
baz=222,SNR=7.0
AGMN Agassiz Nation 32.02 2 P P 04 01 07.5 -0.4
AGMN IAmb IAmb 04 02 05.5
comp=Z,19nm,1.0s
AGMN Agassiz Nation 32.02 2 P P 04 01 08.1 +0.2
baz=183,SNR=7.7
EYMN Ely 32.03 8 P P 04 01 09.3 +1.2
baz=191
PAL Palisades 32.10 35 P P 04 01 09.6 +0.8
baz=226
SADO Sadowa 32.45 25 P P 04 01 11.0 -0.8
SADO IAmb IAmb 04 01 19.1
comp=Z,34nm,1.6s
SADO Sadowa 32.45 25 LR LR 04 18 12.8
comp=Z,495nm,18.0s,baz=238,slow=43
DGMT Dagmar 32.60 352 P P 04 01 13.9 +0.8
baz=168
BMO Blue Mountains 33.00 334 P P 04 01 16.8 0.0
BMO IAmb IAmb 04 01 26.5
comp=Z,38nm,1.9s
BMO Blue Mountains 33.00 334 P P 04 01 16.8 0.0
BMO pmax pmax
comp=Z,38nm,2.0s
EGMT Eagleton 33.24 345 P P 04 01 19.2 +0.5
EGMT Eagleton 33.24 345 P P 04 01 20.2 +1.5
baz=158
YBH Yreka Blue Hor 33.34 325 LR LR 04 16 09.7
comp=Z,1µm,18.1s,baz=152,slow=39
L61B Northampton 33.76 34 P P 04 01 23.9 +0.6
baz=227
F10A Beach Ranch, E 33.88 335 P P 04 01 24.6 +0.2
ULM Lac du Bonnet 33.97 2 P P 04 01 24.2 -0.7
ULM IAmb IAmb 04 01 25.7
comp=Z,16nm,1.2s
ULM Lac du Bonnet 33.97 2 P P 04 01 24.2 -0.7
ULM pmax pmax
comp=Z,16nm,1.2s
ULM Lac du Bonnet 33.97 2 P P 04 01 24.5 -0.4
comp=Z,6.0nm,1.0s,baz=194,slow=8.1,SNR=7.7
comp=Z,6.0nm,1.0s
CZSB Cruzeiro do Su 34.29 132 P P 04 01 29.7 +1.6
CZSB IAmb IAmb 04 01 36.2
comp=Z,25nm,1.0s
LONY Lake Ozonia 34.34 30 P P 04 01 27.9 -0.4
LONY Lake Ozonia 34.34 30 P P 04 01 28.3 0.0
baz=222
HRV Adam Dziewonsk 34.41 35 P P 04 01 29.0 +0.1
baz=228
NNA Nana 34.77 142 LR LR 04 13 10.6
comp=Z,746nm,19.6s,baz=290,slow=32
LBNH Lisbon 35.39 33 P P 04 01 37.8 +0.5
baz=226
TRQ Mont Tremblant 35.57 28 P P 04 01 38.8 -0.1

NEW Newport 35.73 338 P P 04 01 41.3 +1.1
baz=146
NEW Newport 35.73 338 LR LR 04 17 58.6
comp=Z,3µm,18.2s,baz=156,slow=39
PKME Peaks-Kenny Pk 37.47 33 P P 04 01 54.6 -0.4
baz=228
TEFE Tefe 38.07 118 eP P 04 02 01.3 +0.9
LMQ La Malbaie 38.51 30 P P 04 02 03.9 +0.2
LMQ IAmb IAmb 04 02 30.3
comp=Z,32nm,1.1s
FFC Flin Flon 38.57 356 P P 04 02 04.0 -0.2
FFC IAmb IAmb 04 02 06.0
comp=Z,57nm,1.8s
FFC Flin Flon 38.57 356 P P 04 02 04.0 -0.2
FFC pmax pmax
comp=Z,57nm,1.8s
FFC Flin Flon 38.57 356 P P 04 02 04.7 +0.6
FFC pP pP 04 02 14.2 -0.1
FFC sP sP 04 02 18.5 +0.2
EDM Edmonton 38.93 345 P P 04 02 07.3 0.0
EDM IAmb IAmb 04 02 17.4
comp=Z,23nm,1.0s
EDM Edmonton 38.93 345 P P 04 02 07.3 0.0
EDM pmax pmax
comp=Z,23nm,1.0s
BOAV Boa Vista 39.02 107 P P 04 02 08.7 +0.2
BOAV Boa Vista 39.02 107 eP P 04 02 09.1 +0.6
ETMB Extrema 40.46 128 P P 04 02 20.3 -0.1
ETMB Extrema 40.46 128 eP P 04 02 19.7 -0.6
BATG Bathurst New B 40.48 33 P P 04 02 20.3 +0.1
SAML Samuel 42.29 124 P P 04 02 34.4 -1.1
SAML Samuel 42.29 124 P P 04 02 34.4 -1.1
SAML pmax pmax
comp=Z,8.0nm,1.1s
SAML Samuel 42.29 124 eP P 04 02 34.8 -0.7
SAML Samuel 42.29 124 P P 04 02 34.3 -1.1
FCC Fort Churchill 42.55 3 P P 04 02 36.9 -0.1
FCC IAmb IAmb 04 02 38.1
comp=Z,35nm,1.6s
FCC Fort Churchill 42.55 3 P P 04 02 36.9 -0.1
FCC pmax pmax
comp=Z,35nm,1.6s
LPAZ La Paz 43.49 137 P P 04 02 46.1 +0.3
LPAZ La Paz 43.49 137 P P 04 02 46.1 +0.3
RPN Rapa Nui 44.56 195 LR LR 04 16 55.3
comp=Z,508nm,21.8s,baz=44,slow=30
PB11 IPOC Station P 45.11 141 P P 04 02 59.6 +1.3
PB11 IAmb IAmb 04 03 05.3
comp=Z,28nm,1.1s
SCHQ Schefferville 45.26 25 P P 04 02 58.6 -0.2
comp=Z,7.4nm,1.0s,baz=225,slow=7.8,SNR=8.5
SCHQ LR LR 04 25 44.0
comp=Z,911nm,18.6s,baz=220,slow=41
comp=Z,7.4nm,1.0s
PB02 IPOC Station P 46.18 143 P P 04 03 07.8 +1.2
PB02 IAmb IAmb 04 03 14.0
comp=Z,24nm,1.1s
ITTB Itaituba 46.21 113 eP P 04 03 06.0 -0.9
MALB Monte Alegre 46.45 109 eP P 04 03 09.9 +1.1
V35K Ketchikan 46.91 334 P P 04 03 12.8 +1.0
baz=132
PB09 IPOC Station P 46.93 143 P P 04 03 13.8 +1.3
PB09 IAmb IAmb 04 03 15.2
comp=Z,16nm,1.0s
VILB Vilhena 47.02 126 P P 04 03 12.9 -0.3
VILB IAmb IAmb 04 04 10.3
comp=Z,16nm,0.9s
VILB Vilhena 47.02 126 eP P 04 03 13.2 +0.1
TOAD Toad River Com 47.17 341 P P 04 03 14.4 +0.5
baz=142
T35M Bob Quinn 47.51 336 P P 04 03 17.4 +0.9
baz=135
CRAG Craig 47.65 333 P P 04 03 19.7 +2.2
baz=131
YKA Yellowknife Ar 47.73 349 P P 04 03 17.9 -0.2
comp=Z,4.6nm,1.0s,baz=157,slow=7.6,SNR=26
YKA LR LR 04 25 31.8
comp=Z,1µm,18.3s,baz=162,slow=39
comp=Z,4.6nm,1.0s
FLDN Fort Liard 47.78 343 P P 04 03 19.2 +0.8
baz=145
NPGB Novo Progresso 47.80 116 eP P 04 03 18.1 -1.3
KOTAN Kotaneelee Air 47.85 343 P P 04 03 20.0 +0.9
baz=145
MCPB Macapa, AP 47.88 106 eP P 04 03 20.8 +0.8
WRAK Wrangell Islan 47.95 335 P P 04 03 20.9 +1.0
baz=132
AF01 San Pedro de A 48.44 143 P P 04 03 25.5 +1.1
DLBC Dease Lake 48.48 338 P P 04 03 24.2 +0.2
baz=136,SNR=6.1
DLBC Dease Lake 48.48 338 LR LR 04 25 49.7
comp=Z,2µm,18.6s,baz=135,slow=38
S34M Telegraph Cree 48.51 337 P P 04 03 24.6 +0.4
baz=135
WTLY Watson Lake, Y 49.30 340 P P 04 03 31.5 +1.2
baz=133,SNR=6.6
BBSD Serra de San D 49.34 131 eP P 04 03 30.2 -0.9
PTLB Pontes e Lacer 49.34 128 P P 04 03 30.7 -0.4
PTLB Pontes e Lacer 49.34 128 eP P 04 03 30.7 -0.4
GO02 Mina Guanaco 49.39 146 P P 04 03 32.9 +1.2
GO02 IAmb IAmb 04 03 39.2
comp=Z,21nm,1.1s
R33M Jennings River 49.51 338 P P 04 03 32.8 +0.8
baz=136
S32K Killisnoo 49.57 335 P P 04 03 32.1 -0.1
baz=130
SIT Sitka 49.61 334 P P 04 03 32.2 -0.4
baz=129
Q32M Nakina River 49.68 337 P P 04 03 34.5 +1.2
baz=134
R32K Eaglecrest 50.07 336 P P 04 03 36.7 +0.6
baz=131
TGTN Hyland Airport 50.22 341 P P 04 03 39.5 +2.2
baz=140
WRGLY Wrigley 50.27 345 P P 04 03 38.4 +0.9
baz=147
S31K Pelican 50.57 334 P P 04 03 41.0 +1.2
baz=129
BBRB Robore, Bolivi 50.62 131 eP P 04 03 40.1 -0.7
P32M Atlin 50.65 337 P P 04 03 42.1 +1.5
baz=133
P33M Teslin, Yukon 50.75 338 P P 04 03 42.5 +1.2
baz=134
AC02 Maricunga 50.98 147 P P 04 03 45.3 +1.3
SKAG Skagway 51.17 336 P P 04 03 46.0 +1.7
baz=131
N32M Quiet Lake 51.51 339 P P 04 03 48.8 +1.8
baz=134
FRB Frobisher Bay 51.53 16 P P 04 03 46.2 -0.7
comp=Z,8.0nm,1.1s,baz=223,slow=8.6,SNR=8.8
FRB LR LR 04 27 42.4
comp=Z,502nm,20.7s,baz=183,slow=38
comp=Z,8.0nm,1.1s
WHY Whitehorse 51.81 338 P P 04 03 50.4 +1.2
baz=132
LCO Las Campanas 51.96 150 P P 04 03 51.3 +0.3
LCO IAmb IAmb 04 03 58.1
comp=Z,17nm,1.1s
LCO Las Campanas 51.96 150 P P 04 03 51.3 +0.3
LCO pmax pmax
comp=Z,17nm,1.1s
AC05 El Transito 52.03 149 P P 04 03 52.7 +1.4
P29M Windy Craggy 52.23 336 P P 04 03 54.8 +2.5
baz=128
P30M Million Dollar 52.23 336 P P 04 03 55.1 +2.7
baz=129
SALV Santo Antonio 52.27 126 eP P 04 03 53.2 0.0
O30N Mendenhall 52.33 337 P P 04 03 54.0 +0.9
baz=131
FARO Faro, Yukon 52.36 340 P P 04 03 54.5 +1.2
baz=135
H03N2 Juan Fernandez 52.52 160 T T 05 00 16.8
baz=338,slow=77,SNR=884
H03N1 Juan Fernandez 52.52 160 T T 05 00 17.9
baz=338,slow=77,SNR=887
H03N3 Juan Fernandez 52.53 160 T T 05 00 16.9
baz=338,slow=77,SNR=826
M31M Drury Creek, Y 52.69 339 P P 04 03 56.9 +1.3
baz=134
HYT Haines Junctio 52.89 337 P P 04 03 58.8 +1.4
baz=129,SNR=8.1
O29M Mount Kennedy 52.98 336 P P 04 03 59.4 +1.4
baz=128
N30M Aishikik Lake 53.14 338 P P 04 04 00.3 +1.2
baz=130
YUK6 Outpost Mounta 53.29 337 P P 04 04 02.0 +1.6
baz=128
CO03 El Pedregal 53.49 151 P P 04 04 03.2 +1.2
CO03 IAmb IAmb 04 04 09.0
comp=Z,24nm,1.1s
PINM Pinnacle 53.52 335 P P 04 04 04.0 +2.1
baz=126
YUK4 Talbot Arm 53.65 337 P P 04 04 04.5 +1.5
baz=128
SNDB Serra Nova Dou 53.72 119 eP P 04 04 04.3 +0.4
M30M Minto, Yukon 53.77 339 P P 04 04 05.5 +1.8
baz=131
YUK8 Steele Glacier 54.04 336 P P 04 04 07.2 +1.3
baz=127,SNR=5.3
MAYO Mayo, Yukon 54.15 340 P P 04 04 07.3 +1.0
baz=133
BDQN Bodoquena, MS 54.22 131 eP P 04 04 06.8 -0.7
M29M Somme Creek 54.27 338 P P 04 04 09.2 +1.8
baz=129
MURT Porto Murtinho 54.38 133 eP P 04 04 07.7 -0.8
CTG Chitna Glacier 54.46 336 P P 04 04 10.3 +1.4
baz=125
L29M L29M 54.58 339 P P 04 04 10.9 +1.3
L29M IAmb IAmb 04 04 20.3
comp=Z,30nm,1.4s
L29M L29M 54.58 339 P P 04 04 10.5 +0.9
baz=130
YUK3 Moose Creek 54.60 337 P P 04 04 10.4 +0.4
baz=127
BARN Barnard Glacie 54.65 336 P P 04 04 11.0 +0.8
BARN IAmb IAmb 04 04 13.0
comp=Z,15nm,1.2s
RVDE Rio Verde (Bra 54.69 128 eP P 04 04 10.6 -0.3
K29M Barlow Dome 54.85 340 P P 04 04 12.7 +1.1
baz=131
J30M Hart River 54.96 341 P P 04 04 14.1 +1.7
baz=133
AQDB Aquidauana 55.01 130 P P 04 04 12.8 -0.4
AQDB Aquidauana 55.01 130 eP P 04 04 12.8 -0.4
CRQE Cirque 55.05 335 P P 04 04 12.8 -0.3
baz=123
BVCY Beaver Creek 55.13 337 P P 04 04 14.5 +1.0
baz=126
ARAG Araguaiana, MT 55.24 123 eP P 04 04 14.8 -0.2
MCARA McCarthy VSAT 55.38 335 P P 04 04 15.7 +0.4
baz=124
I30M Mount Dempster 55.42 341 P P 04 04 16.8 +1.1
baz=133
SMTB Santa Maria do 55.45 113 eP P 04 04 17.2 +0.7
VRDI Verde Repeater 55.46 335 P P 04 04 16.1 0.0
VRDI IAmb IAmb 04 04 26.4
comp=Z,12nm,1.2s
M27K Edge Creek, AK 55.48 337 P P 04 04 16.1 -0.1
baz=125
J29N Klondike Camp 55.49 340 P P 04 04 17.0 +0.9
baz=130
C36M Paulatuk 55.61 349 P P 04 04 15.7 -1.1
baz=149
DAWY Dawson 55.63 339 P P 04 04 17.7 +0.6
baz=129
GLB Gilahina Butte 55.72 335 P P 04 04 18.9 +1.1
GLB IAmb IAmb 04 04 22.6
comp=Z,11nm,1.1s
ANTJ Antonio Joao (55.74 132 eP P 04 04 17.7 -0.8
BMRM Bremner River 55.79 334 P P 04 04 19.9 +1.5
baz=122
BCAR Beaver Creek A 55.87 337 P P 04 04 19.5 +0.7
L27K Beaver Creek, 55.88 337 P P 04 04 19.5 +0.6
baz=126
M26K Nabesna, AK 55.94 336 P P 04 04 20.6 +1.2
baz=124
G31M Satah River 56.01 344 P P 04 04 21.6 +1.9
baz=136
EYAK Cordova Ski Ar 56.06 334 P P 04 04 22.4 +2.3
baz=120
N25K Chitina, Valde 56.13 335 P P 04 04 22.3 +1.5
baz=122
F31M Tsiigehtchic 56.24 344 P P 04 04 22.1 +0.8
baz=137,SNR=6.7
EPYK Eagle Plains 56.31 342 P P 04 04 22.5 +0.6
baz=133
L26K Log Cabin Wild 56.42 337 P P 04 04 23.4 +0.7
baz=124
P23K Montague Islan 56.50 333 P P 04 04 23.2 -0.2
baz=118
K27K Chicken 56.54 338 P P 04 04 25.2 +1.6
baz=126
KLU Klutina 56.61 335 P P 04 04 26.3 +2.1
baz=121
EGAK Eagle 56.67 339 P P 04 04 24.9 +0.5
EGAK Eagle 56.67 339 P P 04 04 25.5 +1.0
baz=128
I28M Miner Creek 56.69 340 P P 04 04 26.5 +1.8
baz=129
H29M Whitestone 56.70 342 P P 04 04 25.4 +0.7
baz=131,SNR=5.5
HARP HAARP 56.78 336 P P 04 04 26.9 +1.6
baz=122
INK Inuvik 56.83 345 P P 04 04 25.9 +0.4
INK IAmb IAmb 04 04 55.3
comp=Z,9.4nm,0.8s
INK Inuvik 56.83 345 P P 04 04 26.1 +0.6
baz=138,SNR=11
INK Inuvik 56.83 345 P P 04 04 25.9 +0.4
INK pmax pmax
comp=Z,9.0nm,0.9s
F30M Barrier River 56.91 344 P P 04 04 26.8 +0.6
baz=135,SNR=6.9
M24K Tolsona, Glenn 57.03 335 P P 04 04 28.4 +1.2
baz=121
SCRK Sand Creek 57.20 338 P P 04 04 29.0 +0.6
SCRK IAmb IAmb 04 04 40.4
comp=Z,38nm,1.8s
SCRK Sand Creek 57.20 338 P P 04 04 29.5 +1.1
baz=124,SNR=6.0
PAX Paxson 57.20 336 P P 04 04 29.3 +0.9
baz=122,SNR=5.5
I27K Kandik River 57.33 340 P P 04 04 29.2 0.0
baz=127
J26L Joseph Creek 57.35 338 P P 04 04 30.8 +1.5
baz=125
SCM Sheep Creek Mo 57.36 335 P P 04 04 30.7 +1.2
baz=119
M23K Glacier View 57.51 334 P P 04 04 31.4 +1.0
baz=119
KNK Knik Glacier 57.63 334 P P 04 04 32.0 +0.7
baz=118
CPUP Villa Florida 57.66 137 P P 04 04 31.5 -0.5
CPUP IAmb IAmb 04 04 37.5
comp=Z,13nm,1.4s
CPUP Villa Florida 57.66 137 P P 04 04 31.5 -0.5
CPUP pmax pmax
comp=Z,13nm,1.5s
CPUP Villa Florida 57.66 137 P P 04 04 31.0 -1.0
comp=Z,3.0nm,0.9s,baz=314,slow=7.8,SNR=7.1
CPUP LR LR 04 28 36.1
comp=Z,219nm,21.2s,baz=351,slow=35
comp=Z,3.0nm,0.9s
CPUP Villa Florida 57.66 137 eP P 04 04 31.0 -1.0
CPUP Villa Florida 57.66 137 P P 04 04 31.3 -0.7
I26K Coal Creek Min 57.67 339 P P 04 04 32.2 +0.7
baz=126
H27K Steamboat Moun 57.69 341 P P 04 04 32.9 +1.2
baz=128
SML Sawmill 57.77 334 P P 04 04 33.3 +0.9
baz=118
K24K Donnelly Dome 57.77 337 P P 04 04 33.2 +0.9
baz=122
BRSE Bradley Lake S 57.89 331 P P 04 04 34.5 +1.3
baz=115
WAT6 Susitna Watana 57.90 335 P P 04 04 34.9 +1.5
baz=119,SNR=5.5
KDAK Kodiak Island 57.99 329 LR LR 04 29 50.1
comp=Z,1µm,18.7s,baz=100,slow=36
PMR Palmer 58.00 334 P P 04 04 34.6 +0.8
baz=117
DHY Denali Highway 58.00 336 P P 04 04 34.9 +0.8
baz=120
E29M Blow River 58.03 344 P P 04 04 35.2 +1.3
baz=133
RC01 Rabbit Creek A 58.03 333 P P 04 04 34.8 +0.7
baz=116
J25K Salcha River, 58.05 338 P P 04 04 36.1 +1.8
baz=123
F28M Old Crow 58.06 342 P P 04 04 35.3 +1.0
baz=130,SNR=10
A36M Sachs Harbour 58.08 350 P P 04 04 33.5 -0.7
A36M IAmb IAmb 04 04 37.2

comp=Z,11nm,0.9s
A36M Sachs Harbour 58.08 350 P **P** **04 04 34.7 +0.5**
baz=148,SNR=10
OHAK Old Harbor 58.14 328 P **P** **04 04 36.0 +1.1**
baz=111
BDFB Brasilia 58.32 120 P **P** **04 04 36.8 -0.1**
BDFB IAmb IAmb 04 04 38.6
comp=Z,7.2nm,0.9s
BDFB Brasilia 58.32 120 P **P** **04 04 36.8 -0.1**
BDFB pmax pmax
comp=Z,7.0nm,0.9s
BDFB Brasilia 58.32 120 P **P** **04 04 36.5 -0.4**
comp=Z,6.9nm,0.9s,baz=292,slow=7.8,SNR=12
comp=Z,6.9nm,0.9s
WAT1 Susitna Watana 58.35 335 P **P** **04 04 37.0 +0.7**
baz=119
RES Resolute Bay 58.48 1 LR LR 04 33 07.4
comp=Z,519nm,19.2s,baz=182,slow=39
M22K Willow 58.49 334 P **P** **04 04 38.7 +1.4**
baz=116
CAPN Captain Cook N 58.51 332 P **P** **04 04 39.4 +2.0**
baz=115
HDA Harding Lake 58.52 337 P **P** **04 04 39.1 +1.6**
baz=121
ITRB Iturama 58.60 126 *e*P **P** **04 04 38.7 0.0**
PRP Porcupine Dome 58.61 339 P **P** **04 04 38.6 +0.4**
PRP IAmb IAmb 04 04 42.1
comp=Z,13nm,1.2s
PRP Porcupine Dome 58.61 339 P **P** **04 04 39.6 +1.4**
baz=123,SNR=9.5
E28M Babbage River 58.62 343 P **P** **04 04 39.1 +0.9**
baz=131
SUA Susitna One 58.63 333 P **P** **04 04 39.8 +1.4**
baz=116,SNR=5.8
TRCB Terra Rica 58.68 130 *e*P **P** **04 04 39.0 -0.3**
ILAR Eielson Array 58.69 338 P **P** **04 04 38.9 +0.3**
ILAR Eielson Array 58.69 338 P **P** **04 04 39.2 +0.5**
comp=Z,7.1nm,1.1s,baz=138,slow=4.3,SNR=33
ILAR LR LR 04 32 07.7
comp=Z,2µm,18.2s,baz=122,slow=38
comp=Z,7.1nm,1.1s
G26K Porcupine Rive 58.85 341 P **P** **04 04 40.7 +1.0**
baz=126
CUT Chulitna 58.85 334 P **P** **04 04 40.8 +1.0**
baz=117
O20K Slope Mountain 58.90 331 P **P** **04 04 42.4 +2.1**
baz=113
MCK McKinley 58.94 336 P **P** **04 04 41.8 +1.4**
baz=119,SNR=6.0
PCMB Pacaembu 58.99 128 *e*P **P** **04 04 41.1 -0.3**
POKR Poker Plat Res 59.07 338 P **P** **04 04 41.8 +0.5**
POKR IAmb IAmb 04 04 43.4
comp=Z,22nm,1.6s
POKR Poker Plat Res 59.07 338 P **P** **04 04 42.5 +1.2**
baz=121,SNR=6.0
COLA College 59.10 338 P **P** **04 04 42.5 +1.1**
baz=120
COLA College 59.10 338 P **P** **04 04 42.3 +0.9**
SFJD Kangerlussuaq 59.15 20 P **P** **04 04 41.5 -0.3**
SFJD Kangerlussuaq 59.15 20 P **P** **04 04 41.5 -0.3**
SFJD pmax pmax
comp=Z,34nm,1.3s
SFJD Kangerlussuaq 59.15 20 P **P** **04 04 40.1 -1.6**
comp=Z,13nm,0.9s,baz=229,slow=9.3,SNR=6.4
SFJD LR LR 04 32 03.6
comp=Z,736nm,21.9s,baz=225,slow=38
comp=Z,13nm,0.9s
SFJD Kangerlussuaq 59.15 20 P **P** **04 04 39.9 -1.9**
SFJD pP **pP** **04 04 50.4 -2.1**
N20K Mount Spurr 59.16 333 P **P** **04 04 43.0 +0.9**
baz=114
SKT Skwentna 59.20 334 P **P** **04 04 43.7 +1.4**
baz=115,SNR=5.2
TRF Thorofare Moun 59.34 335 P **P** **04 04 44.7 +1.3**
baz=117,SNR=8.7
IPMB Ipameri, GO 59.37 123 *e*P **P** **04 04 44.3 +0.2**
BMAR Burnt Mountain 59.38 341 P **P** **04 04 43.9 +0.4**
F26K Sheenjek River 59.40 341 P **P** **04 04 44.8 +1.2**
baz=126
SDBA SAO DESIDERIO 59.40 115 *e*P **P** **04 04 44.8 +0.4**
NEA2 Nenana 59.41 337 P **P** **04 04 44.9 +1.3**
baz=119
D27M Malcolm River 59.43 343 P **P** **04 04 44.7 +0.9**
baz=130
H24K Noodor Dome 59.60 338 P **P** **04 04 45.4 +0.3**
baz=121
O19K Port Alsworth 59.73 331 P **P** **04 04 46.3 +0.5**
baz=112
I23K Minto, Yukon-K 59.79 337 P **P** **04 04 47.4 +1.1**
baz=119,SNR=8.9
Q17K Contact Creek 59.81 329 P **P** **04 04 46.6 0.0**
baz=109
F25K Christian Rive 59.81 341 P **P** **04 04 47.0 +0.6**
baz=124
M20K Styx River 59.84 333 P **P** **04 04 46.8 0.0**
baz=114
P18K Big Mountain, 59.87 330 P **P** **04 04 46.7 -0.2**
baz=110
PPLA Purkeypile 59.87 334 P **P** **04 04 47.5 +0.5**
baz=115
BPAW Bear Paw Mtn. 59.91 336 P **P** **04 04 47.2 +0.1**
baz=117
G24K Hadweenzic Riv 59.92 339 P **P** **04 04 47.8 +0.7**
baz=122
O18K Koktuh Hills 60.02 331 P **P** **04 04 48.9 +1.0**
baz=110
N19K Bonanza Creek 60.03 332 P **P** **04 04 48.1 0.0**
baz=112
CAST Castle Rocks 60.05 335 P **P** **04 04 47.9 -0.2**
CAST IAmb IAmb 04 04 57.5
comp=Z,21nm,1.2s
CAST Castle Rocks 60.05 335 P **P** **04 04 48.4 +0.3**
baz=115,SNR=10
E25K Arctic Village 60.09 341 P **P** **04 04 48.3 0.0**
baz=124,SNR=6.1
LDASE Londrina, Braz 60.15 130 *e*P **P** **04 04 48.6 -0.8**
MLY Manley 60.25 337 P **P** **04 04 50.7 +1.3**
baz=118,SNR=11
ILULI Ilulissat 60.31 17 P **P** **04 04 49.5 -0.2**
ILULI Ilulissat 60.31 17 P **P** **04 04 49.5 -0.2**
ILULI pmax pmax
comp=Z,35nm,1.5s
Q16K King Salmon 60.32 329 P **P** **04 04 50.7 +0.8**
baz=108
CHUM Lake Minchumin 60.34 335 P **P** **04 04 50.2 +0.1**
baz=115
P17K Kvichak River 60.38 330 P **P** **04 04 51.2 +0.8**
baz=109
ITQB Itaqui 60.39 139 *e*P **P** **04 04 51.3 +0.5**
M19K Big River Lodg 60.40 333 P **P** **04 04 51.8 +1.3**
baz=112
L20K Farewell, AK 60.40 334 P **P** **04 04 50.9 +0.4**
baz=113
R16K Pilot Point 60.45 328 P **P** **04 04 51.9 +1.1**
baz=107
F24K Squaw Lake 60.49 340 P **P** **04 04 51.7 +0.6**
baz=122
CRSM Crissiumal (Br 60.62 135 *e*P **P** **04 04 52.3 -0.2**
N18K Kilae Creek 60.62 331 P **P** **04 04 51.9 -0.2**
baz=110
L19K White Mountain 60.71 333 P **P** **04 04 53.6 +1.0**
baz=112
BB19B Bebedouro 60.78 126 *e*P **P** **04 04 54.2 +0.5**
I21K Tanana 60.78 337 P **P** **04 04 54.1 +1.0**
baz=116
G23K Bananza Creek 60.80 339 P **P** **04 04 53.5 +0.3**
baz=119
K20K Telida 60.83 335 P **P** **04 04 53.5 +0.1**
baz=113
M18K Stony River 60.88 332 P **P** **04 04 53.6 -0.2**
baz=111
H22K Ishtalitna Cre 60.89 338 P **P** **04 04 54.0 +0.2**
baz=117,SNR=6.4
O17K Koliganek Bris 60.89 330 P **P** **04 04 54.3 +0.5**
baz=108
D25K Kavik River 61.01 342 P **P** **04 04 55.8 +1.2**
baz=124
PMNB Patos De Minas 61.09 122 *e*P **P** **04 04 56.2 +0.2**
COLD Coldfoot 61.11 339 P **P** **04 04 55.6 +0.4**
baz=119
JANB Januaria 61.14 118 *e*P **P** **04 04 56.6 +0.3**
N17K Nushagak Hills 61.18 331 P **P** **04 04 56.5 +0.7**
baz=109
J20K Nowinta River 61.20 335 P **P** **04 04 56.0 +0.1**
baz=114
H21K Melozitna Rive 61.30 337 P **P** **04 04 56.7 +0.1**
baz=116
O16K Kokwok River B 61.31 330 P **P** **04 04 56.9 +0.2**
baz=108
E23K Chandalar 61.33 340 P **P** **04 04 57.4 +0.6**
baz=120
G22K Bettles 61.41 339 P **P** **04 04 58.3 +1.0**
baz=118
SDPT Sand Point 61.42 325 P **P** **04 04 58.9 +1.4**
baz=103
TTA Tatalina 61.48 334 P **P** **04 04 57.9 0.0**
TTA IAmb IAmb 04 04 59.2
comp=Z,21nm,1.4s
TTA Tatalina 61.48 334 P **P** **04 04 58.3 +0.3**
baz=111
TTA Tatalina 61.48 334 P **P** **04 04 57.9 0.0**
TTA pmax pmax
comp=Z,21nm,1.4s
L18K Granite Mounta 61.52 333 P **P** **04 04 59.4 +1.3**
baz=110
M17K Holitna River 61.58 332 P **P** **04 04 59.8 +1.3**
baz=109
I20K Naaghedeneel 61.58 336 P **P** **04 04 59.8 +1.3**
baz=114
TOLK Toolik Lake Re 61.62 341 P **P** **04 04 59.7 +1.0**
baz=120,SNR=5.9
D24K Happy Valley 61.65 342 P **P** **04 05 00.4 +1.6**
baz=122
J19K Poorman 61.72 335 P **P** **04 05 00.4 +1.0**
baz=112
ITAB Concordia 61.77 134 P **P** **04 05 00.2 0.0**
ITAB Concordia 61.77 134 *e*P **P** **04 05 00.2 0.0**
N16K Nishlik Lake 61.90 331 P **P** **04 05 02.0 +1.3**
baz=107
C24K Franklin Bluff 61.92 342 P **P** **04 05 01.9 +1.3**
baz=122,SNR=9.2
G21K Allakaket 61.94 338 P **P** **04 05 02.1 +1.3**
baz=116
J18K Innoko River 61.98 334 P **P** **04 05 02.8 +1.6**
baz=111
PLCA Paso Flores 62.00 157 P **P** **04 05 02.2 +0.5**
PLCA Paso Flores 62.00 157 P **P** **04 05 02.2 +0.5**
PLCA pmax pmax
comp=Z,26nm,1.3s
PLCA Paso Flores 62.00 157 P **P** **04 05 01.6 -0.1**
comp=Z,3.1nm,0.9s,baz=319,slow=7.5,SNR=7.4
PLCA LR LR 04 26 40.9
comp=Z,687nm,18.3s,baz=3.5,slow=31
comp=Z,3.1nm,0.9s
PLCA Paso Flores 62.00 157 *e*P **P** **04 05 03.3 +1.7**
PLCA Paso Flores 62.00 157 P **P** **04 05 03.2 +1.5**
PLCA sP **sP** **04 05 19.0 +2.6**
H20K Anotleneega Mo 62.02 337 P **P** **04 05 02.4 +1.0**
baz=114
O15K Ungalikthiuk R 62.04 329 P **P** **04 05 02.4 +0.7**
baz=106
D23K Nanushuk River 62.13 341 P **P** **04 05 02.5 +0.4**
baz=120
ALGR Alto Alegre (B 62.15 136 *e*P **P** **04 05 03.2 +0.3**
M16K Timber Creek 62.16 331 P **P** **04 05 02.5 +0.1**
baz=107
TBOT Tacuaremb 62.20 140 *e*P **P** **04 05 04.4 +1.3**
L17K Donlin 62.21 332 P **P** **04 05 03.4 +0.7**
baz=109
F21K Alatna River 62.24 339 P **P** **04 05 04.1 +1.3**
baz=116
K17K Iditarod 62.40 333 P **P** **04 05 05.3 +1.3**
baz=109
L16K Owhat River 62.60 332 P **P** **04 05 05.8 +0.4**
baz=107
H19K Roundabout Mou 62.63 336 P **P** **04 05 06.2 +0.7**
baz=112
D22K Ayikyak River 62.72 340 P **P** **04 05 06.7 +0.7**
baz=118
O14K Tigyukauivet M 62.77 329 P **P** **04 05 08.2 +1.7**
baz=104
LL01 San Ignacio de 62.78 159 P **P** **04 05 07.8 +1.2**
M15K Kasigluk River 62.87 330 P **P** **04 05 09.4 +2.2**
baz=106
CPSB Cacapava Do Su 62.92 137 *e*P **P** **04 05 07.8 -0.1**
F20K Avaraart Lake 62.96 338 P **P** **04 05 08.4 +0.7**
baz=114
G19K Purcell Mounta 63.11 337 P **P** **04 05 10.0 +1.3**
baz=112
DIAM Diamantina, MG 63.24 121 *e*P **P** **04 05 11.2 +0.7**
H18K Honhosa River 63.25 336 P **P** **04 05 10.9 +1.3**
baz=110
M14K Bethel 63.49 330 P **P** **04 05 11.7 +0.5**
baz=104
L15K Unguluk Mounta 63.51 331 P **P** **04 05 12.7 +1.3**
baz=105
C21K Knifeblade Rid 63.52 340 P **P** **04 05 12.6 +1.3**
baz=116,SNR=6.2
TRQA Tornquist 63.53 149 P **P** **04 05 11.7 -0.1**
TRQA Tornquist 63.53 149 P **P** **04 05 11.7 -0.1**
TRQA pmax pmax
comp=Z,77nm,1.9s
J16K Anvik River 63.57 333 P **P** **04 05 12.8 +1.0**
baz=107
E20K Nigu River 63.61 339 P **P** **04 05 12.9 +0.9**
baz=114
G18K Tagagawik 63.62 336 P **P** **04 05 12.4 +0.4**
baz=110
F19K Shaleruckik Mo 63.62 337 P **P** **04 05 11.8 -0.2**
baz=111
B21K Ikpikpuk River 63.67 341 P **P** **04 05 13.9 +1.6**
baz=116
K15K Wolf Creek Mou 63.70 332 P **P** **04 05 13.3 +0.7**
baz=106
BSCB Bom Sucesso 63.70 124 *e*P **P** **04 05 14.3 +0.9**
PLTB Pedras Altas 63.71 139 *e*P **P** **04 05 14.3 +1.1**
I17K Unalakleet 63.79 334 P **P** **04 05 13.6 +0.5**
baz=107
H17K Granite Mounta 63.79 335 P **P** **04 05 13.6 +0.4**
baz=108
D20K Etivluk River 63.94 340 P **P** **04 05 14.2 0.0**
baz=113
F18K Selawik 64.24 337 P **P** **04 05 16.5 +0.4**
baz=105
G17K Kiwalik Mounta 64.27 336 P **P** **04 05 17.6 +1.3**
baz=108
D19K Kuna River 64.36 339 P **P** **04 05 17.3 +0.3**
baz=112
H16K Elim 64.66 334 P **P** **04 05 20.2 +1.3**
baz=106
J14K Nanvaranak Lak 64.72 332 P **P** **04 05 20.9 +1.7**
baz=104
F17K Baldwin Pennin 64.79 337 P **P** **04 05 20.7 +1.0**
baz=108
G16K Koyuk River 64.92 335 P **P** **04 05 21.2 +0.7**
baz=106
A21K Barrow 65.02 342 P **P** **04 05 21.5 +0.4**
baz=114
C19K Lookout Ridge 65.08 340 P **P** **04 05 22.3 +0.6**
baz=111
E17K Hotham Inlet 65.21 337 P **P** **04 05 23.2 +0.8**
baz=108,SNR=9.9
C18K Utukok River 65.48 339 P **P** **04 05 23.6 -0.6**
C18K IAmb IAmb 04 05 25.0
comp=Z,8.5nm,1.1s
C18K Utukok River 65.48 339 P **P** **04 05 23.9 -0.3**
baz=109
G15K Niukluk 65.49 335 P **P** **04 05 26.8 +2.5**
baz=104
SUMG Summit 65.60 17 P **P** **04 05 24.6 -0.7**
SUMG IAmb IAmb 04 05 28.3
comp=Z,9.3nm,0.9s
SUMG Summit 65.60 17 P **P** **04 05 24.6 -0.7**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
D17K Noatak River 65.86 338 P **P** **04 05 27.9 +1.3**
baz=107
F15K North Star Dit 65.92 335 P **P** **04 05 28.6 +1.6**
baz=104
C17K DeLong Mountai 66.12 338 P **P** **04 05 28.9 +0.7**
baz=107
RIB01 Linhares ES 66.45 120 *e*P **P** **04 05 31.5 +0.4**
ALF01 Guarapari-ES 66.79 121 *e*P **P** **04 05 33.9 +0.6**
TNA Tin City 67.21 335 P **P** **04 05 36.9 +1.6**
baz=101
BORG Borgarnes 69.61 26 LR LR 04 39 18.8
comp=Z,220nm,18.0s,baz=304,slow=38
BILL Bilibino 77.35 337 P **P** **04 06 35.9 +0.1**
BILL IAmb IAmb 04 06 45.8
comp=Z,23nm,1.5s
BILL Bilibino 77.35 337 *i* P **P** **04 06 36.2 +0.4**
BILL pmax pmax
comp=Z,16nm,1.5s
BBTS Babate 77.66 78 LR LR 04 40 11.8
comp=Z,249nm,19.0s,baz=168,slow=35
SPITS Spitsbergen Ar 78.98 11 LR LR 04 44 19.3
comp=Z,613nm,19.4s,baz=262,slow=38
PCAS Casmilo, Conde 79.10 51 *e*P **P** **04 06 46.1 +0.1**
comp=Z,60nm,1.5s
ESK Eskdalemuir 79.31 35 *i* P **P** **04 06 47.1 +0.2**
EKA Eskdalemuir Ar 79.34 35 P **P** **04 06 46.7 -0.3**
comp=Z,10nm,1.0s,baz=292,slow=4.4,SNR=7.7
comp=Z,10nm,1.0s
POLO Lamas de Olo 79.35 50 *e*P **P** **04 06 48.5 +1.0**
comp=Z,19nm,2.1s
PVIS Viseu 79.41 51 *e*P **P** **04 06 48.2 +0.4**
PNCL Nicolau / Gran 79.48 53 *e*P **P** **04 06 49.4 +1.3**
comp=Z,37nm,1.2s
PMTG Montargil 79.51 52 *e*P **P** **04 06 49.0 +0.7**
comp=Z,27nm,1.1s
MORF Marmelete 79.56 54 *e*P **P** **04 06 51.6 +3.0**
comp=Z,21nm,1.4s
MTE Manteigas 79.74 51 *e*P **P** **04 06 50.1 +0.5**
comp=Z,35nm,1.5s
MTE Manteigas 79.74 51 P **P** **04 06 49.6 0.0**
MESJ Messejana 79.78 54 *e*P **P** **04 06 51.1 +1.3**
comp=Z,49nm,1.4s
MESJ Messejana 79.78 54 *e*P **P** **04 06 51.1 +1.3**
MESJ IAmb IAmb 04 06 52.0
comp=Z,53nm,1.7s
MESJ Messejana 79.78 54 *e*P **P** **04 06 51.1 +1.3**
EVO Evora 79.79 53 *e*P **P** **04 06 50.5 +0.7**
comp=Z,24nm,1.3s
PCBR Castelo Branco 79.91 51 *e*P **P** **04 06 49.6 -0.8**
comp=Z,19nm,1.1s
MVO Moncorvo 79.96 50 *e*P **P** **04 06 51.1 +0.4**
comp=Z,45nm,1.8s
PBEJ Beja 80.01 53 *e*P **P** **04 06 52.4 +1.4**
comp=Z,22nm,1.2s
PBRG Braganca 80.03 49 *e*P **P** **04 06 52.2 +1.1**
PESTR Estremoz 80.04 52 *e*P **P** **04 06 52.4 +1.2**
comp=Z,37nm,1.4s
PMRV Marv??o 80.07 52 *e*P **P** **04 06 51.9 +0.6**
comp=Z,32nm,1.7s
PBAR Barrancos 80.62 53 *e*P **P** **04 06 53.2 -1.1**
comp=Z,2.9nm,0.7s
PAB San Pablo 82.33 51 P **P** **04 07 03.5 +0.1**
PAB San Pablo 82.33 51 P **P** **04 07 03.5 +0.1**
PAB pmax pmax
comp=Z,27nm,1.2s
ESDC Sonseca Array 82.58 51 P **P** **04 07 04.8 +0.1**
ESDC IAmb IAmb 04 07 06.1
comp=Z,13nm,1.2s
ESDC Sonseca Array 82.58 51 P **P** **04 07 04.8 +0.1**
comp=Z,6.6nm,1.0s,baz=297,slow=5.0,SNR=28
ESDC LR LR 04 41 17.7
comp=Z,318nm,19.3s,baz=266,slow=34
comp=Z,6.6nm,1.0s
ESBB Sonseca Array 82.58 51 P **P** **04 07 04.9 +0.2**
ESBB IAmb IAmb 04 07 06.0
comp=Z,20nm,1.3s
MFF Saint Martin d 83.41 43 *e*P **P** **04 07 09.3 +0.5**
MFF pmax pmax
comp=Z,68nm,1.7s
MDT Midelt 83.86 58 LR LR 04 39 51.8
comp=Z,595nm,21.1s,baz=318,slow=32
SEY Seymchan 84.45 334 *i* P **P** **04 07 11.6 -2.1**
SEY pmax pmax
comp=Z,12nm,2.9s
SEY Seymchan 84.45 334 P **P** **04 07 12.7 -1.0**
comp=Z,1.0nm,0.7s,baz=107,slow=11,SNR=4.0
SEY LR LR 04 47 44.5
comp=Z,439nm,20.2s,baz=1.0,slow=38
comp=Z,1.0nm,0.7s
KONO Kongsberg 84.57 29 *i* P **P** **04 07 14.2 -0.2**
KONO pmax pmax
comp=Z,35nm,1.4s
NB2 NORSAR Subarra 84.75 28 P **P** **04 07 16.7 +1.4**
comp=Z,22nm,1.4s,baz=299,slow=5.1
NB2 NORSAR Subarra 84.75 28 P **P** **04 07 16.7 +1.4**
baz=299,slow=5.1
NOA NORSAR Array B 84.75 28 P **P** **04 07 15.5 +0.1**
comp=Z,5.6nm,1.0s,baz=298,slow=5.0,SNR=6.3
NOA LR LR 04 44 06.5
comp=Z,212nm,21.9s,baz=275,slow=35
comp=Z,5.6nm,1.0s
DOU Dourbes 85.33 39 *d*P **P** **04 07 19.4 +0.9**
comp=Z,7.2nm,1.3s
BMRD Maredsous 85.37 39 *d*P **P** **04 07 19.6 +1.0**
comp=Z,12nm,1.1s
BGES Gesves 85.53 39 *d*P **P** **04 07 20.5 +1.1**
comp=Z,13nm,1.1s
BCLA Clavier 85.65 39 *d*P **P** **04 07 20.6 +0.7**
comp=Z,6.6nm,1.3s
RCHB Rochefort 85.70 39 *d*P **P** **04 07 21.3 +1.1**
comp=Z,9.9nm,1.1s
BSTI Sart Tilman 85.75 38 *d*P **P** **04 07 21.6 +1.1**
MEM Membach 86.01 38 *d*P **P** **04 07 23.1 +1.4**
comp=Z,8.4nm,1.1s
SMF Signal de Mont 86.01 43 *e*P **P** **04 07 22.0 +0.1**
SMF pmax pmax
comp=Z,70nm,2.1s
BTNL Ternell 86.09 38 *d*P **P** **04 07 23.4 +1.2**
BHOU Houvegnez 86.09 39 *d*P **P** **04 07 22.8 +0.6**
WLF Walferdange 86.43 39 *d*P **P** **04 07 25.3 +1.5**
comp=Z,7.9nm,1.3s
MA2 Magadan 86.61 332 LR LR 04 48 45.2
comp=Z,236nm,18.8s,baz=44,slow=38
TIXI Tiksi 86.91 347 P **P** **04 07 25.9 +0.1**
TIXI IAmb IAmb 04 07 35.0
comp=Z,17nm,1.4s
TIXI Tiksi 86.91 347 *i* P **P** **04 07 24.3 -1.4**
TIXI pmax pmax
comp=Z,13nm,1.2s
TIXI Tiksi 86.91 347 P **P** **04 07 25.1 -0.6**
comp=Z,3.9nm,0.7s,baz=66,slow=6.0,SNR=9.1
TIXI LR LR 04 51 04.9
comp=Z,223nm,20.1s,baz=38,slow=39
comp=Z,3.9nm,0.7s
DAVA Damuels 89.62 40 *e*P **P** **04 07 39.5 +0.2**
comp=Z,8.9nm,1.3s
CLL Collm 89.79 36 *e*P **P** **04 07 44.0 +4.1**
CLL MLR MLR
comp=Z,500nm,19.8s
CLL Collm 89.79 36 *e*Px Px 04 07 44.0
CLL AMS AMS 04 49 00.0
comp=Z,500nm,19.8s
RETA Reutte 90.09 40 *i* P **P** **04 07 41.8 +0.3**
comp=Z,6.8nm,1.1s
FUORN Ofenpass-Fuorn 90.13 41 P **P** **04 07 41.4 -0.5**
FETA Feichten 90.26 40 *i* P **P** **04 07 42.6 +0.2**
comp=Z,4.2nm,1.0s
MOTA Moosalm 90.36 40 *e*P **P** **04 07 44.1 +1.3**
comp=Z,8.8nm,1.1s
SQTA Sankt Quirin 90.48 40 *i* PcP **PcP** **04 07 44.8 +0.4**
comp=Z,6.6nm,1.3s
BRG Berggiesshubel 90.52 36 *e*P **P** **04 07 44.7 +1.5**
BRG Amp 04 07 45.1
comp=Z,2.1nm,0.8s
BRG Berggiesshubel 90.52 36 P P 04 07 52.0 +8.8
BRG Amp 04 07 53.1
comp=Z,4.9nm,1.2s
BRG Berggiesshubel 90.52 36 *e*P **P** **04 07 44.7 +1.5**
BRG 04 07 52.0
BRG pmax pmax
comp=Z,2.0nm,0.8s
WATA Walderalm 90.66 40 *i* P **P** **04 07 44.6 +0.4**
comp=Z,7.1nm,1.5s
WTTA Wattenberg 90.72 40 *e*P **P** **04 07 45.2 +0.6**
comp=Z,6.9nm,1.7s
FINES FINESS Array B 90.73 24 P **P** **04 07 44.1 +0.2**
comp=Z,1.6nm,0.9s,baz=316,slow=7.9,SNR=2.1
FINES LR LR 04 50 32.9
comp=Z,315nm,20.8s,baz=286,slow=37
comp=Z,1.6nm,0.9s
DBIC Dimbokro 90.82 83 LR LR 04 47 05.9
comp=Z,263nm,19.6s,baz=244,slow=35
KHC Kasperske Hory 91.09 38 *i* P **P** **04 07 45.5 -0.5**
KHC pmax pmax
comp=Z,6.0nm,1.2s
GERES GERESS Array B 91.29 38 P **P** **04 07 47.4 +0.4**
comp=Z,1.5nm,0.9s,baz=284,slow=4.0,SNR=7.2
GERES LR LR 04 47 49.4
comp=Z,240nm,21.2s,baz=290,slow=35
comp=Z,1.5nm,0.9s
LESA Schwarzleotal 91.30 40 *e*P **P** **04 07 47.4 +0.3**
comp=Z,5.7nm,1.5s
ABTA Abtaltersbach 91.49 40 *i* P **P** **04 07 48.3 +0.3**
comp=Z,7.6nm,1.1s
BIOA Bad Ischl, Aus 91.76 39 *i* P **P** **04 07 50.4 +1.2**
comp=Z,5.0nm,1.2s

KBA	**Koelnbreinsper**	**91.86**	**40**	*e*P		**P**	**04 07 49.6**	**-0.2**
	comp=Z,6.1nm,1.0s							
MOA	**Molln**	**92.07**	**39**	*e*P		**P**	**04 07 51.2**	**+0.6**
	comp=Z,6.4nm,1.1s							
PRED	**Cave del Predi**	**92.27**	**40**	P		**P**	**04 07 51.0**	**-0.6**
PRED				IAmb		IAmb	04 08 07.6	
	comp=Z,6.1nm,1.1s							
CADS	**Cadrg**	**92.47**	**40**	*e*P		**P**	**04 07 52.5**	**0.0**
OBKA	**Obir**	**92.85**	**40**	*e*P		**P**	**04 07 55.1**	**+0.8**
	comp=Z,7.1nm,1.0s							
CONA	**Conrad Observa**	**92.99**	**38**	*e*P		**P**	**04 07 55.4**	**+0.5**
	comp=Z,3.3nm,1.1s							
LJU	**Ljubljana**	**93.05**	**40**	*e*P		**P**	**04 07 55.4**	**+0.3**
SOKA	**Soboth**	**93.07**	**40**	*e*P		**P**	**04 07 55.7**	**+0.4**
	comp=Z,6.7nm,1.1s							
ARSA	**Arzberg**	**93.10**	**39**	*i* P		**P**	**04 07 55.8**	**+0.5**
	comp=Z,3.0nm,0.9s							
RONA	**Rosalia, Austr**	**93.35**	**38**	*e*P		**P**	**04 07 56.7**	**+0.2**
	comp=Z,5.1nm,1.2s							
YAK	**Yakutsk**	**93.56**	**340**	*i* P		**P**	**04 07 58.1**	**+1.0**
YAK				pmax		pmax		
	comp=Z,7.0nm,0.7s							
YAK	**Yakutsk**	**93.56**	**340**	LR		LR	04 53 12.6	
	comp=Z,308nm,20.4s,baz=20,slow=38							
KEST	**Kesra**	**93.83**	**51**	LR		LR	04 48 06.9	
	comp=Z,269nm,18.1s,baz=184,slow=34							
NRIK	**Noril'sk**	**94.58**	**358**	*i* P		**P**	**04 08 01.0**	**-0.7**
NRIK				pmax		pmax		
	comp=Z,4.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**95.10**	**75**	LR		LR	04 48 52.3	
	comp=Z,454nm,18.3s,baz=315,slow=34							
KLMR	**Klimovskoe**	**95.89**	**20**	*e*P		**P**	**04 08 06.0**	**-1.8**
KLMR				pmax		pmax		
	comp=Z,20nm,1.7s							
LVV	**L'vov**	**96.61**	**34**	*e*P		**P**	**04 08 10.2**	**-1.1**
VAE	**Valguarnera**	**96.81**	**48**	LR		LR	04 52 38.8	
	comp=Z,325nm,18.1s,baz=258,slow=36							
AKASG	**Malin Array Be**	**98.75**	**31**	LR		LR	04 52 34.6	
	comp=Z,270nm,21.6s,baz=323,slow=35							
MDJ	**Mudanjiang**	**105.76**	**327**	P		**Pdif**	**04 08 53.9**	**+1.7**
MDJ				pmax		pmax		
	comp=Z,10.0nm,1.1s							
MDJ				pmax		pmax		
	comp=Z,320nm,10.7s							
ELIB	**Princess Elisa**	**114.71**	**163**	*d*PKiKP		**PKiKP**	**04 13 20.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**117.08**	**335**	*e*PKP		**PKPdf**	**04 13 25.5**	**-1.2**
HHC				PP		**PP**	**04 14 38.1**	**+2.6**
HHC	**Hu-ho-hao-te**	**117.08**	**335**	SS		SS	04 30 43.8	+2.6
HHC				AMB		AMB		
	comp=Z,130nm,7.3s							
HHC				LR		LR		
	comp=N,250nm,17.2s							
HHC				LR		LR		
	comp=Z,400nm,17.3s							
MKAR	**Makanchi Array**	**117.28**	**0**	PKP		**PKPdf**	**04 13 26.8**	**0.0**
	comp=Z,0.5nm,0.8s,baz=353,slow=3.3,SNR=4.1							
WMQ	**Urumqi**	**120.05**	**356**	*e*P		**PKiKP**	**04 13 34.9**	**+2.5**
NJ2	**Nanjing**	**120.61**	**324**	*e*P		**PKPdf**	**04 13 35.0**	**+1.5**
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.5s							
GEYT	**Alibeck**	**121.51**	**22**	PKP		**PKPdf**	**04 13 34.8**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=343,slow=4.5,SNR=2.5							
WRA	**Warramunga Arr**	**130.61**	**257**			**PKPdf**	**04 13 53.8**	**+0.8**
WRA	**Warramunga Arr**	**130.61**	**257**	PKIKP		**PKPdf**	**04 13 53.8**	**+0.8**
WRA	**Warramunga Arr**	**130.61**	**257**	PKP		**PKPdf**	**04 13 52.7**	**-0.2**
	comp=Z,2.7nm,1.1s,baz=95,slow=1.2,SNR=12							
ASAR	**Alice Springs**	**131.20**	**253**	PKP		**PKPdf**	**04 13 52.9**	**-1.1**
	comp=Z,1.6nm,1.0s,baz=81,slow=2.1,SNR=10							
CMAR	**Chiang Mai Arr**	**141.87**	**334**	PKhKP		PKPpre	04 14 10.0	
	comp=Z,1.1nm,0.3s,baz=355,slow=3.9,SNR=7.8							
HYB	**Hyderabad**	**146.36**	**7**	*e*PKPbc		**PKPdf**	**04 14 22.2**	**+0.4**

IDC ***17*** *03:55:41.6±0.8, 66°.42N×17°.83W, h0km, mb3.6/12, mbtmp3.6/16, ML3.4/4, Error ellipse: s-maj=19.1km s-min=14.7km az=11.0*
REY ***17*** *03:55:41.1, 66°.63N×17°.84W, h12km*
DNK ***17*** *03:55:46.0±0.3, 66°.78N×18°.97W, h18km, ML1.9*

ISC 17 03:55:42.3±0.7, 66°.44N±0°.03×17°.96W±0°.03, h7km±4km, n34, σ1°63/45, mb3.6/12, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.10**	**348**	P	**Pg**	**03 55 44.0**	**-0.4**
IGRI	baz=216			S	**Sg**	**03 55 46.0**	**0.0**
	baz=216						
IBRE	**Brettingsstaoi**	**0.32**	**177**	P	**Pg**	**03 55 50.5**	**+1.9**
IBRE	baz=183			S	**Sg**	**03 55 57.8**	**+5.0**
	baz=183						
IHED	**Heoinshofoi**	**0.45**	**144**	P	**Pb**	**03 55 51.6**	**-0.9**
IHED	baz=159			S	**Sb**	**03 55 59.8**	**+0.5**
	baz=159						
ISIG	**Siglufjorour**	**0.50**	**231**	P	**Pb**	**03 55 52.7**	**-0.6**
ISIG	baz=221			S	**Sb**	**03 56 01.4**	**+0.6**
	baz=221						
IHLA	**Hella**	**0.53**	**199**	P	**Pn**	**03 55 53.8**	**-2.4**
IHLA	baz=198			S	**Sb**	**03 56 03.2**	**+1.5**
	baz=198						
IGRA	**Granastaoir**	**0.55**	**164**	P	**Pb**	**03 55 53.8**	**-0.4**
IGRA	baz=171			S	**Sb**	**03 56 03.3**	**+1.0**
	baz=171						
IDIM	**Dimmadalss**	**0.64**	**139**	S	**Sb**	**03 56 04.8**	**0.0**
IDIM	baz=151			P	**Pb**	**03 55 54.4**	**-1.3**
	baz=151						
ISKI	**Skildingahlsh**	**0.69**	**146**	S	**Sn**	**03 56 06.9**	**-2.5**
ISKI	baz=156			P	**Pb**	**03 55 55.6**	**-1.0**
	baz=156						
IGIL	**Gilhagi**	**0.75**	**119**	P	**Pg**	**03 55 55.2**	**-1.4**
IGIL	baz=132			S	**Sg**	**03 56 06.1**	**-0.2**
	baz=132						
IGHA	**Grjothals**	**0.80**	**138**	P	**Pg**	**03 55 56.9**	**-0.7**
IGHA	baz=148			S	**Sb**	**03 56 09.4**	**-0.1**
	baz=148						
IKVO	**Krokottuvotn**	**0.85**	**149**	P	**Pb**	**03 55 58.0**	**-1.4**
IKVO	baz=157			S	**Sn**	**03 56 11.7**	**-1.8**
	baz=157						
BORG	**Borgarnes**	**2.21**	**221**	Pn	**Pb**	**03 56 19.7**	**-2.7**
	35nm,0.3s,baz=33,slow=7.2,SNR=172						
BORG				Sn	**Sg**	**03 56 49.1**	**-3.8**
	54nm,0.3s,baz=179,slow=22,SNR=37 206nm,0.6s						
SCO	**Scoresbysund**	**4.32**	**342**	*e*	Pn	03 56 43.2	-5.0
	baz=162,slow=10						
SCO				*i* P	Pb	03 56 44.2	-14
SCO				IAML		03 56 54.1	
	comp=Z,6.0nm,0.5s						
SOEG	**Soedalen**	**5.48**	**295**	*e*P	Pn	03 56 59.1	-5.1
EKA	**Eskdalemuir Ar**	**13.22**	**140**	Pn	**Pn**	**03 58 50.0**	**-0.1**
	baz=224,slow=48 comp=Z,0.5nm,0.7s						
NOA	**NORSAR Array B**	**13.90**	**99**	Pn	**Pn**	**03 59 01.3**	**+1.9**
	baz=298,slow=13,SNR=1.7						
SPITS	**Spitsbergen Ar**	**15.32**	**26**	Pn	**Pn**	**03 59 21.7**	**+3.0**
	baz=228,slow=11						
HFS	**Hagfors**	**15.43**	**99**	Pn	**Pn**	**03 59 20.6**	**+0.6**
	baz=318,slow=7.8						
ARCES	**ARCESS Array B**	**16.31**	**60**	Pn	**Pn**	**03 59 30.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=262,slow=14,SNR=1.1 comp=Z,1.8nm,0.9s						
FINES	**FINESS Array B**	**19.63**	**84**	P	**P**	**04 00 10.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=316,slow=8.0,SNR=6.5 comp=Z,2.2nm,0.9s						
FRB	**Frobisher Bay**	**20.99**	**286**	P	**P**	**04 00 26.5**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=76,slow=9.5,SNR=3.8 comp=Z,0.6nm,0.3s						
CLL	**Collm**	**21.70**	**119**	*e*P	**P**	**04 00 32.0**	**-1.4**
CLL				*es*P	**sP**	**04 00 36.0**	**-0.2**
	comp=Z,9.0nm,1.4s						
BRG	**Berggiesshubel**	**22.39**	**118**	*e*P	**P**	**04 00 43.5**	**+2.6**
BRG				Amp		04 00 44.6	
	comp=Z,3.9nm,1.1s						
GERES	**GERESS Array B**	**24.02**	**122**	P	**P**	**04 00 58.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=337,slow=13,SNR=3.8 comp=Z,0.7nm,0.7s						
ESDC	**Sonseca Array**	**27.96**	**157**	P	**P**	**04 01 32.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=340,slow=9.2,SNR=1.7						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**37.87**	**311**	P	**P**	**04 02 59.5**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=41,slow=8.5,SNR=16 comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**39.16**	**107**	P	**P**	**04 03 10.2**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=350,slow=10,SNR=4.2 comp=Z,0.7nm,0.9s						
BVAR	**Borovoye Array**	**42.54**	**63**	P	**P**	**04 03 38.9**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=309,slow=6.9,SNR=1.9 comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**44.02**	**331**	P	**P**	**04 03 51.3**	**+1.5**
	comp=Z,1.3nm,1.0s,baz=23,slow=6.7,SNR=9.2 comp=Z,1.3nm,1.0s						
KURBB	**Kurchatov Arra**	**47.39**	**59**	P	**P**	**04 04 15.8**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=334,slow=6.2,SNR=3.6 comp=Z,0.3nm,0.4s						
GEYT	**Alibeck**	**50.43**	**85**	P	**P**	**04 04 40.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=321,slow=11,SNR=1.4 comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**51.96**	**59**	P	**P**	**04 04 50.6**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=352,slow=8.9,SNR=2.8 comp=Z,0.4nm,0.9s						
PDAR	**Pinedale Array**	**52.32**	**292**	P	**P**	**04 04 54.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=46,slow=5.2,SNR=2.4 comp=Z,0.5nm,0.7s						
PETK	**Petropavlovsk-**	**60.73**	**3**	P	**P**	**04 05 54.7**	**+0.8**
	comp=Z,4.1nm,1.0s,baz=328,slow=5.1,SNR=2.8 comp=Z,4.1nm,1.0s						

IDC 17 04:07:19.0±51.0, 17°.56S×179°.19E, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=926.2km s-min=147.1km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.80**	**240**	P	P	04 14 29.5	+0.7
	1.3nm,0.5s,baz=60,slow=8.1,SNR=4.6 1.3nm,0.5s						
WRA	**Warramunga Arr**	**42.44**	**259**	P	P	04 15 15.6	-0.4
	0.7nm,0.4s,baz=96,slow=7.9,SNR=15 0.7nm,0.4s						
ASAR	**Alice Springs**	**42.68**	**254**	P	P	04 15 17.5	-0.4
	6.6nm,0.6s,baz=88,slow=8.4,SNR=128 6.6nm,0.6s						

PRU 17 04:07:34.2, 49°.88N×18°.49E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**259**	*e*PG	Pg	04 07 38.2	-0.3
OKC				*e*SG	Sg	04 07 42.4	+1.0
	comp=Z,5.6nm,0.6s						
MORC	**Moravsky Berou**	**0.62**	**261**	*e*PG	Pg	04 07 45.9	-0.2
MORC				*e*SG	Sg	04 07 53.3	-0.9
MAUC	**Maruska**	**0.67**	**220**	*e*SG	Sg	04 07 55.2	-0.5
LANS	**Liptovska Anna**	**0.97**	**139**	*e*PG	Pg	04 07 51.3	-1.4
LANS				*e*SG	Sg	04 08 03.9	-1.4
LANS				*e*LG	Lg	04 08 08.4	
KRLC	**Kraliky**	**1.12**	**281**	*e*PG	Pg	04 07 53.7	-2.0
KRLC				*e*SG	Sg	04 08 10.1	-0.1
KRLC	**Kraliky**	**1.12**	**281**	*e*P	Pg	04 07 53.7	-2.0
JAVC	**Velka Javorina**	**1.15**	**208**	*e*PG	Pg	04 07 55.6	-0.7
VRAC	**Vranov**	**1.36**	**246**	*e*PG	Pg	04 07 58.6	-1.6
VRAC				*e*SG	Sg	04 08 16.2	-1.7
VYHS	**Vyhne**	**1.41**	**171**	*e*PG	Pn	04 07 58.3	-2.8
VYHS				*e*SG	Sg	04 08 17.0	-2.3
DPC	**Dobruska-Polom**	**1.47**	**289**	*e*PG	Pn	04 08 00.4	-1.6
DPC				*e*SG	Sg	04 08 20.9	-0.6
KRUC	**Moravsky**	**1.59**	**240**	*e*PG	Pn	04 08 02.5	-1.1
KRUC				*e*SG	Sn	04 08 23.4	-1.5

TAP ***17*** *04:12:00.8, 24°.97N×122°.69E, h152km±1km, ML3.6, D*
JMA ***17*** *04:12:01.4±0.2, 25°.N±2°×122°.7E±0°.5, h143km±2km, MV3.0/17, NW OFF ISHIGAKIJIMA IS*

ISC 17 04:12:01.8±1.9, 24°.98N±0°.07×122°.71E±0°.03, h142km±12km, n44, σ0°55/74, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.57**	**157**	P	**Pn**	**04 12 22.4**	**-0.1**
JYNG				S	**Sn**	**04 12 38.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.58**	**151**	*i* P	**Pn**	**04 12 22.6**	**-0.1**
	baz=149						
YOJ				*i* S	**Sn**	**04 12 39.1**	**+0.6**
	baz=149						
YOJ	**Yonaguni jima**	**0.58**	**151**	P	**Pn**	**04 12 22.5**	**-0.1**
YOJ				S	**Sn**	**04 12 38.5**	**0.0**
TWB1	**Santiao Chiao**	**0.65**	**273**	P	**Pn**	**04 12 23.0**	**0.0**
	baz=273						
TWB1				S	**Sn**	**04 12 38.3**	**-0.8**
	baz=273						
EOS2	**EOS2**	**0.70**	**218**	*e*P	**Pn**	**04 12 23.6**	**+0.3**
	baz=217						
EOS2				*e*S	**Sn**	**04 12 40.0**	**+0.4**
	baz=217						
SXI1	**Grass Mountain**	**0.76**	**279**	*i* P	**Pn**	**04 12 23.7**	**-0.2**
	baz=279						
SXI1				*i* S	**Sn**	**04 12 40.5**	**-0.3**
	baz=279						
EOS3	**EOS3**	**0.77**	**207**	*e*P	**Pn**	**04 12 24.4**	**+0.6**
	baz=206						
EOS3				S	**Sn**	**04 12 41.5**	**+1.1**
	baz=206						
NWF	**Wu-fen Shan**	**0.84**	**277**	*i* P	**Pn**	**04 12 24.6**	**+0.1**
	baz=277						
NWF				S	**Sn**	**04 12 42.9**	**+1.0**
	baz=277						
WFSB	**Wu-fen Shan**	**0.84**	**277**	P	**Pn**	**04 12 24.5**	**0.0**
	baz=277						
WFSB				S	**Sn**	**04 12 42.3**	**+0.7**
	baz=277						
TWC	**Suao**	**0.86**	**245**	*e*P	**Pn**	**04 12 24.7**	**+0.1**
	baz=244						
TWC				*e*S	**Sn**	**04 12 40.9**	**-1.0**
	baz=244						
TNOU	**National Taiwa**	**0.86**	**282**	*i* P	**Pn**	**04 12 24.5**	**-0.1**
	baz=282						
PCYT	**Pengchaiyu**	**0.87**	**319**	P	**Pn**	**04 12 24.8**	**+0.1**
	baz=320						
EOS4	**EOS4**	**0.92**	**203**	*e*S	**Sn**	**04 12 42.2**	**+0.1**
	baz=201						
NDS	**Dongshan**	**0.96**	**249**	*e*P	**Pn**	**04 12 25.7**	**+0.3**
	baz=249						
NDS				*e*S	**Sn**	**04 12 43.0**	**-0.4**
	baz=249						
TWE	**Neicheng**	**0.98**	**255**	*i* P	**Pn**	**04 12 25.4**	**-0.2**
	baz=254						
TWE				*e*S	**Sn**	**04 12 42.9**	**-0.8**
	baz=254						
EWUT	**Wuta**	**0.99**	**238**	P	**Pn**	**04 12 25.6**	**-0.1**
	baz=237						
EWUT				S	**Sn**	**04 12 43.4**	**-0.5**
	baz=237						
TWA	**Mucha**	**1.02**	**270**	P	**Pn**	**04 12 26.1**	**+0.1**
	baz=270						
TWA				S	**Sn**	**04 12 44.5**	**+0.2**
	baz=270						
YM08	**YM08**	**1.03**	**282**	*e*P	**Pn**	**04 12 27.0**	**+0.9**
	baz=282						
FUSB	**Fushanzhiwuyua**	**1.04**	**258**	*i* P	**Pn**	**04 12 26.1**	**-0.1**
	baz=258						
FUSB				*i* S	**Sn**	**04 12 46.0**	**+1.3**
	baz=258						
YM01	**YM01**	**1.04**	**280**	*i* P	**Pn**	**04 12 26.0**	**-0.2**
	baz=280						
YM01				*i* S	**Sn**	**04 12 44.6**	**-0.2**
	baz=280						
TWY	**Chenhua**	**1.05**	**287**	P	**Pn**	**04 12 26.1**	**-0.1**
	baz=287						
ENTT	**Nioudou**	**1.09**	**252**	P	**Pn**	**04 12 26.8**	**+0.2**
	baz=252						
ENTT				*e*S	**Sn**	**04 12 45.9**	**+0.5**
	baz=252						
EAHA	**Aohua**	**1.09**	**234**	*i* P	**Pn**	**04 12 26.2**	**-0.3**
	baz=233						
EAHA				*i* S	**Sn**	**04 12 45.3**	**-0.1**
	baz=233						
TATO	**Taipei**	**1.10**	**270**	P	**Pn**	**04 12 26.3**	**-0.4**
NWLT	**Wulai**	**1.11**	**260**	*e*P	**Pn**	**04 12 26.6**	**-0.2**
	baz=260						
NWLT				S	**Sn**	**04 12 45.5**	**-0.4**
	baz=260						
IRIF	**Iriomote-Funau**	**1.13**	**124**	*e*P	**Pn**	**04 12 27.2**	**+0.3**
IRIF				S	**Sn**	**04 12 46.2**	**+0.1**
NDT	**Datong Townshi**	**1.15**	**251**	P	**Pn**	**04 12 27.4**	**+0.3**
	baz=251						
NDT				*i* S	**Sn**	**04 12 46.8**	**+0.4**
	baz=251						
LATG	**Datong**	**1.16**	**248**	*i* P	**Pn**	**04 12 27.8**	**+0.4**
	baz=247						
LATG				*i* S	**Sn**	**04 12 46.6**	**-0.2**
	baz=247						
YHNB	**Yeheng**	**1.25**	**256**	P	**Pn**	**04 12 28.1**	**-0.1**
ETL	**Fush Village**	**1.28**	**231**	*e*P	**Pn**	**04 12 28.4**	**-0.1**
	baz=230						
ETL				S	**Sn**	**04 12 47.8**	**-1.0**
	baz=230						
NACB	**Ninganchiao**	**1.29**	**232**	*e*P	**Pn**	**04 12 27.7**	**-0.8**
	baz=231						
NACB				S	**Sn**	**04 12 48.1**	**-0.8**
	baz=231						
NNS	**Nan Shan**	**1.32**	**247**	P	**Pn**	**04 12 29.1**	**+0.1**
	baz=246						
NNS				S	**Sn**	**04 12 49.0**	**-0.8**
	baz=246						
TWD	**Chiawan**	**1.35**	**229**	*e*P	**Pn**	**04 12 28.8**	**-0.3**
	baz=228						
TWD				*e*S	**Sn**	**04 12 48.5**	**-1.4**
	baz=228						
HATJ	**Hateruma jima**	**1.36**	**132**	S	**Sn**	**04 12 50.1**	**0.0**
JKRS	**Kuro-shima**	**1.40**	**122**	P	**Pn**	**04 12 30.0**	**+0.4**
JKRS				S	**Sn**	**04 12 51.0**	**+0.2**
JIJ	**Ishigaki jima**	**1.44**	**115**	P	**Pn**	**04 12 30.1**	**0.0**
JIJ				S	**Sn**	**04 12 50.5**	**-1.2**
JISG	**Ishigakijimahi**	**1.51**	**105**	P	**Pn**	**04 12 30.8**	**0.0**
JISG				S	**Sn**	**04 12 52.2**	**-0.8**
JTJ	**Tarama**	**1.84**	**100**	P	**Pn**	**04 12 34.8**	**+0.2**
JTJ				S	**Sn**	**04 12 59.0**	**-0.7**
SSLB	**Suanglung**	**1.99**	**234**	P	**Pn**	**04 12 36.8**	**+0.5**
YULB	**Yu-li**	**2.03**	**219**	P	**Pn**	**04 12 36.3**	**-0.6**
JMJ2	**Miyako jima3**	**2.39**	**95**	S	**Sn**	**04 13 11.3**	**-0.1**
JOGS	**Gusukube**	**2.46**	**94**	S	**Sn**	**04 13 13.2**	**+0.2**
TPUB	**Ta-pu**	**2.52**	**229**	P	**Pn**	**04 12 43.2**	**+0.3**
TWGBT	**Beinan**	**2.61**	**215**	P	**Pn**	**04 12 45.2**	**+1.2**

PRE ***17*** *05:16:58.4±0.9, 26°.42S×27°.50E, h2km, ML3.0*
NEIC ***17*** *05:16:59.3±1.6, 26°.45S±0°.05×27°.79E±0°.10, h5km±2km, mb4.2/5, Error ellipse: s-maj=15.2km s-min=8.2km az=80.0*
IDC ***17*** *05:17:00.6±1.4, 26°.38S×27°.62E, h0km, mb4.0/4, mbtmp4.1/9, ML3.9/3, Error ellipse: s-maj=35.9km s-min=19.4km az=118.0*
BUL ***17*** *05:17:02.3±0.8, 26°.42S×27°.59E, h6km±7km, MD3.9*
EAF ***17*** *05:17:02.3±0.9, 26°.42S×27°.60E, h6km±8km, MD3.6*

ISC 17 05:16:59.6±1.2, 26°.41S±0°.03×27°.52E±0°.04, h9km±8km, n59, σ2°05/95, mb4.1/6, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.54**	**195**	*e*P	**Pg**	**05 17 09.0**	**-1.1**
PRYS				*e*S	**Sg**	**05 17 16.1**	**-1.0**
PRYS				IAML		05 17 23.9	
	comp=Z,402nm,0.5s						
KSR	**Koster**	**0.78**	**315**	*e*P	**Pg**	**05 17 13.4**	**-1.2**
KSR				*e*S	**Sg**	**05 17 24.0**	**-0.9**
KSR				IAML		05 17 34.2	
	comp=Z,2μm,0.8s						
SNKL	**Senekal, Frees**	**1.88**	**173**	*e*P	**Pn**	**05 17 32.4**	**+0.3**
SNKL				*e*S	**Sn**	**05 17 56.1**	**0.0**
SNKL				IAML		05 18 02.4	
	comp=Z,466nm,0.5s						
SWZ	**Schweizer**	**2.10**	**248**	*e*P	**Pn**	**05 17 35.0**	**-0.1**
SWZ				*e*S	**Sn**	**05 18 01.3**	**-0.2**
SWZ				IAML		05 18 08.1	
	comp=Z,418nm,0.5s						
LBTB	**Lobatse**	**2.22**	**308**		**Pb**	**05 17 39.8**	**-0.2**
LBTB	**Lobatse**	**2.22**	**308**	*i* P	**Pb**	**05 17 40.9**	**+1.0**
LBTB				*i* S	**Sb**	**05 18 07.6**	**+0.1**
LBTB	**Lobatse**	**2.22**	**308**	*e*P	**Pn**	**05 17 36.9**	**+0.2**
LBTB				*e*S	**Sn**	**05 18 05.1**	**+0.8**
LBTB				IAML		05 18 11.1	
	comp=Z,284nm,0.3s						
LBTB	**Lobatse**	**2.22**	**308**	Pn	**Pb**	**05 17 41.2**	**+1.3**
	comp=Z,34nm,0.3s,baz=132,slow=14,SNR=332						
LBTB				Lg	Lg	05 18 08.3	
	comp=Z,82nm,0.3s,baz=31,slow=24,SNR=65 comp=Z,70nm,0.3s						
LBTB	**Lobatse**	**2.22**	**308**	*i* P	**Pb**	**05 17 40.9**	**+1.0**
LBTB				*i* S	**Sb**	**05 18 07.6**	**+0.1**
CRLN	**Carolina, Mapu**	**2.29**	**80**	*e*P	**Pn**	**05 17 38.2**	**+0.5**
CRLN				*e*S	**Sn**	**05 18 07.4**	**+1.3**
CRLN				IAML		05 18 11.1	
	comp=Z,112nm,0.2s						
NWCL	**Newcastle**	**2.50**	**123**	*e*P	**Pn**	**05 17 40.2**	**-0.4**
NWCL				*e*S	**Sn**	**05 18 11.9**	**+0.6**
NWCL				IAML		05 18 19.4	
	comp=Z,155nm,0.5s						
LEPH	**Lephalale, Lim**	**2.55**	**6**	*e*P	**Pn**	**05 17 42.1**	**+0.8**
LEPH				*e*S	**Sn**	**05 18 13.3**	**+0.9**
LEPH				IAML		05 18 17.3	
	comp=Z,107nm,0.4s						
BOSA	**Boshof**	**2.98**	**222**		**Pn**	**05 17 48.8**	**+1.6**
BOSA	**Boshof**	**2.98**	**222**	*i* P	**Pn**	**05 17 50.2**	**+3.0**
BOSA				*i* S	**Sn**	**05 18 25.6**	**+2.5**
BOSA	**Boshof**	**2.98**	**222**	*e*P	**Pn**	**05 17 48.0**	**+0.8**
BOSA				*e*S	**Sn**	**05 18 22.9**	**-0.2**
BOSA				IAML		05 18 38.8	
	comp=Z,59nm,0.5s						
BOSA	**Boshof**	**2.98**	**222**	Pn	**Pn**	**05 17 49.2**	**+2.0**
	comp=Z,7.6nm,0.3s,baz=39,slow=12,SNR=159						
BOSA				Pg	**Pg**	**05 17 57.2**	**+0.6**
	comp=Z,13nm,0.3s,baz=50,slow=15,SNR=37						
BOSA				Lg	Lg	05 18 31.6	
	comp=Z,15nm,0.3s,baz=318,slow=21,SNR=17 comp=Z,20nm,0.3s						
BOSA	**Boshof**	**2.98**	**222**	*i* P	**Pn**	**05 17 50.2**	**+3.0**
BOSA				*i* S	**Sn**	**05 18 25.6**	**+2.5**
PILG	**Pilgrimsrest,**	**3.23**	**64**	*e*P	**Pn**	**05 17 51.7**	**+0.9**
PILG				*e*S	**Sn**	**05 18 30.7**	**+1.1**
PILG				IAML		05 18 45.5	
	comp=Z,204nm,0.5s						
POGA	**Pongola**	**3.86**	**105**	*e*P	**Pn**	**05 18 00.1**	**+0.9**
POGA				*e*S	**Sn**	**05 18 44.3**	**-0.4**
POGA				IAML		05 19 01.0	
	comp=Z,27nm,0.4s						
TEMBE	**Tembe Elephant**	**4.44**	**99**	*e

BRAK IAML 05 20 33.8
comp=Z,19nm,0.8s
GRHM Grahamstown, E 6.92 188 Pn **Pn** **05 18 41.9 +0.6**
ROOI Rooidraai Farm 6.98 209 *e*P **Pn** **05 18 43.0 +0.8**
ROOI *e*S **Sn** **05 19 58.5 -3.3**
ROOI IAML 05 20 05.3
comp=Z,7.8nm,0.3s
GRAN Grantham 7.50 217 *e*P **Pn** **05 18 49.5 +0.2**
GRAN *e*S **Sn** **05 20 11.2 -3.4**
GRAN IAML 05 20 19.9
comp=Z,10.0nm,0.4s
FRAZ Fraserburg 7.67 223 *e*P **Pn** **05 18 52.8 +1.2**
FRAZ *e*S **Sn** **05 20 15.5 -3.2**
FRAZ IAML 05 21 22.1
comp=Z,14nm,0.5s
SUR Sutherland 8.34 223 Pn **Pn** **05 19 03.4 +2.4**
SUR Sutherland 8.34 223 *e*P **Pn** **05 19 02.1 +1.2**
SUR *e*S **Sn** **05 20 30.4 -5.1**
SUR IAML 05 21 46.4
comp=Z,19nm,0.5s
SUR Sutherland 8.34 223 Pn **Pn** **05 19 03.0 +2.0**
comp=Z,2.2nm,0.3s,baz=48,slow=9.5,SNR=31
SUR Sn **Sn** **05 20 32.3 -3.1**
comp=Z,2.0nm,0.3s,baz=31,slow=13,SNR=8.6
SUR Lg Lg 05 21 18.6
comp=Z,3.5nm,0.3s,baz=135,slow=20,SNR=7.5
comp=Z,8.2nm,0.4s
KOMG Komaggas 9.48 247 *e*P **Pn** **05 19 16.8 +0.4**
KOMG *e*S **Sn** **05 20 58.0 -5.2**
KOMG IAML 05 22 03.9
comp=Z,14nm,0.4s
KRI Karoi 9.72 12 *i* P Pn 05 19 13.9 -6.0
KRI *i* S Sn 05 20 51.0 -18
KRI Karoi 9.72 12 *i* P Pn 05 19 13.9 -6.0
KRI *i* S Sn 05 20 51.0 -18
WIN Windhoek 10.23 290 Pn **Pn** **05 19 29.5 +2.7**
LSZ Lusaka 11.09 3 **Pn** **05 19 38.1 -0.5**
LSZ Lusaka 11.09 3 Pn **Pn** **05 19 38.6 0.0**
comp=Z,4.0nm,0.4s,baz=186,slow=13,SNR=11
LSZ Sn **Sn** **05 21 38.7 -4.2**
comp=Z,0.8nm,0.3s,baz=111,slow=12,SNR=4.2
LSZ Lg Lg 05 22 40.2
comp=Z,0.7nm,0.3s,baz=108,slow=4.5,SNR=1.7
TSUM Tsumeb 11.63 306 Pn **Pn** **05 19 47.6 +1.7**
TSUM Tsumeb 11.63 306 Pn **Pn** **05 19 47.2 +1.3**
comp=Z,3.4nm,0.5s,baz=144,slow=14,SNR=5.9
TSUM Sn **Sn** **05 21 49.3 -6.8**
comp=Z,0.7nm,0.3s,baz=248,slow=19,SNR=3.5
TSUM Lg Lg 05 23 02.6
comp=Z,0.7nm,0.3s,baz=230,slow=18,SNR=4.0
FOMA Nahampoana Res 17.60 90 Pn **Pn** **05 21 01.0 -4.2**
FOMA IAmb IAmb 05 21 28.3
comp=Z,20nm,1.1s
ABPO Ambohimpanom 19.60 72 P **P** **05 21 25.2 -3.3**
MBAR Mbarara 25.84 7 P **P** **05 22 32.3 +0.6**
MBAR IAmb IAmb 05 22 37.8
comp=Z,4.2nm,0.9s
TOA0 Torodi Ar. Sit 46.65 324 P **P** **05 25 29.9 +1.3**
TOA0 IAmb IAmb 05 25 45.5
comp=Z,2.3nm,1.1s
TORD Torodi Ar. Bea 46.65 324 P **P** **05 25 30.3 +1.6**
comp=Z,2.4nm,0.3s,baz=129,slow=6.7,SNR=0.6
comp=Z,2.4nm,0.3s
SNAA Sanae 48.36 192 P **P** **05 25 41.9 +0.4**
ESDC Sonseca Array 72.00 335 P **P** **05 28 26.4 +2.7**
comp=Z,0.7nm,0.7s,baz=152,slow=6.0,SNR=8.2
comp=Z,0.7nm,0.7s
FINES FINESS Array B 87.54 359 P **P** **05 29 50.0 +2.6**
comp=Z,1.1nm,0.6s,baz=161,slow=5.9,SNR=8.1
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 88.05 34 P **P** **05 29 52.2 +2.0**
comp=Z,0.3nm,0.7s,baz=226,slow=4.3,SNR=4.5
comp=Z,0.3nm,0.7s
NVAR Mina Array Bea 148.93 301 PKPbc **PKiKP** **05 36 51.8 +2.1**
comp=Z,0.2nm,0.5s,baz=64,slow=4.1,SNR=2.5

*IDC **17**05:18:27.6±0.6,53.37°S×25.47°E,h0km,mb4.6/17, mbtmp4.6/17,MS4.2/22,Error ellipse: s-maj=22.0km s-min=13.9km az=82.0*
*NEIC **17**05:18:29.9±0.8,53.38°S±0.06×25.76°E±0.2,h10km±1km, mb5.0/39,Error ellipse: s-maj=20.3km s-min=6.2km az=295.0*

ISC 17 05:18:29.4±0.4,53°35S±0.06×25°42E±0.09,h10km,n109, σ1965/88,mb4.9/37,MS4.3/22,6C,South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04S2	**CROZET ISLANDS**	**18.12**	**80**	T	T	05 41 40.5	
	baz=240,slow=75						
H04S3	**CROZET ISLANDS**	**18.12**	**80**	T	T	05 41 45.0	
	baz=240,slow=75						
H04S1	**CROZET ISLANDS**	**18.13**	**80**	T	T	05 41 33.8	
	baz=240,slow=75						
H04N3	**CROZET ISLANDS**	**18.41**	**78**	T	T	05 42 02.3	
	baz=240,slow=75						
H04N1	**CROZET ISLANDS**	**18.41**	**78**	T	T	05 42 01.7	
	baz=240,slow=75						
H04N2	**CROZET ISLANDS**	**18.42**	**78**	T	T	05 42 02.1	
	baz=240,slow=75						
GRHM	**Grahamstown, E**	**20.08**	**2**	*e*P	**P**	**05 23 03.6 +0.7**	
GRHM				IAmb	IAmb	05 23 04.5	
	comp=Z,57nm,1.1s						
MATJ	**Matjiesfontein**	**20.38**	**348**	*e*P	Pn	05 23 08.2	0.0
MATJ				IAmb	IAmb	05 23 10.6	
	comp=Z,113nm,1.1s						
CER	**Ceres**	**20.46**	**345**	*e*P	**P**	**05 23 07.6 +0.6**	
CER				IAmb	IAmb	05 23 09.1	
	comp=Z,49nm,1.3s						
SOE	**Somerset East**	**20.63**	**0**	P	**P**	**05 23 09.8 +0.9**	
SOE				IAmb	IAmb	05 23 10.6	
	comp=Z,68nm,1.2s						
SOE	**Somerset East**	**20.63**	**0**	*e*P	**P**	**05 23 09.0 +0.1**	
ROOI	**Rooidraai Farm**	**20.89**	**356**	*e*P	**P**	**05 23 11.4 -0.3**	
GRAF	**Camdeboo Natio**	**21.07**	**358**	*e*P	**P**	**05 23 14.3 +0.6**	
GRAF				IAmb	IAmb	05 23 15.0	
	comp=Z,135nm,1.5s						
TROLL	**Troll, Antarti**	**21.19**	**200**	⇑P	**P**	**05 23 15.2 +0.4**	
	comp=Z,2μm,0.8s						
SUR	**Sutherland**	**21.22**	**349**	P	**P**	**05 23 16.7 +1.3**	
SUR	**Sutherland**	**21.22**	**349**	*e*P	**P**	**05 23 16.8 +1.3**	
SUR				IAmb	IAmb	05 23 16.9	
	comp=Z,149nm,0.9s						
SUR	**Sutherland**	**21.22**	**349**	P	**P**	**05 23 16.6 +1.3**	
	comp=Z,120nm,0.9s,baz=165,slow=10,SNR=16						
SUR				S	**S**	**05 27 02.1 -9.3**	
	comp=Z,4.8nm,0.9s,baz=227,slow=11,SNR=1.2						
SUR				LR	LR	05 29 31.1	
	comp=Z,918nm,21.8s,baz=168,slow=31						
	comp=Z,120nm,0.9s						
FRAZ	**Fraserburg**	**21.61**	**351**	*e*P	**P**	**05 23 19.7 +0.2**	
FRAZ				IAmb	IAmb	05 23 31.1	
	comp=Z,200nm,1.7s						
BRAK	**Brakfontein**	**21.64**	**354**	⇑*i*P	**P**	**05 23 20.4 +0.6**	
BRAK				IAmb	IAmb	05 23 21.4	
	comp=Z,66nm,1.0s						
SNAA	**Sanae**	**22.13**	**203**	P	**P**	**05 23 25.5 +0.7**	
SNAA				IAmb	IAmb	05 23 26.5	
	comp=Z,50nm,1.0s						
SNAA	**Sanae**	**22.13**	**203**	*e*P	**P**	**05 23 25.7 +1.0**	
SNAA	**Sanae**	**22.13**	**203**	⇑P	**P**	**05 23 25.3 +0.6**	
	comp=Z,702nm,1.0s						
SNAA	**Sanae**	**22.13**	**203**	P	**P**	**05 23 25.1 +0.4**	
	comp=Z,29nm,0.8s,baz=38,slow=10,SNR=28						
SNAA				S	**S**	**05 27 19.5 -8.7**	
	comp=Z,1.7nm,0.8s,baz=345,slow=19,SNR=1.0						
SNAA				LR	LR	05 29 46.6	
	comp=Z,240nm,20.4s,baz=142,slow=31						
	comp=Z,29nm,0.8s						
CVNA	**Calvinia**	**22.24**	**347**	*e*P	**P**	**05 23 27.9 +1.6**	
CVNA				IAmb	IAmb	05 23 28.8	
	comp=Z,188nm,1.7s						
VNA2	**Neumayer--Watz**	**22.85**	**207**	⇑P	**P**	**05 23 32.6 +0.3**	
	comp=Z,5.6nm,0.6s,baz=66,slow=9.4						
VNA1	**Neumayer--Stat**	**22.94**	**208**	⇑P	**P**	**05 23 34.2 +1.0**	
	comp=Z,0.8nm,0.4s						
VNA3	**Neumayer Olymp**	**23.65**	**208**	⇑P	**P**	**05 23 39.7 -0.7**	
	comp=Z,6.3nm,0.8s						
BOSA	**Boshof**	**24.72**	**360**	P	**P**	**05 23 51.2 +0.4**	
BOSA				IAmb	IAmb	05 24 03.4	
	comp=Z,93nm,2.0s						
BOSA	**Boshof**	**24.72**	**360**	*e*P	**P**	**05 23 51.2 +0.4**	
BOSA				IAmb	IAmb	05 24 01.6	
	comp=Z,339nm,2.7s						
BOSA	**Boshof**	**24.72**	**360**	P	**P**	**05 23 51.0 +0.2**	
	comp=Z,9.2nm,0.8s,baz=184,slow=10,SNR=3.9						
BOSA				LR	LR	05 31 41.6	
	comp=Z,612nm,20.6s,baz=176,slow=32						
	comp=Z,9.2nm,0.8s						
UPI	**Upington**	**25.16**	**351**	*e*P	**P**	**05 23 55.0 +0.3**	
SWZ	**Schweizer**	**26.14**	**360**	*e*P	**P**	**05 24 03.7 0.0**	
WDLM	**Western Deep L**	**26.94**	**4**	*e*P	P	05 24 18.9 +7.9	
NYAT	**Nyati, Northwe**	**28.00**	**4**	*e*P	**P**	**05 24 20.9 +0.6**	
NYAT				IAmb	IAmb	05 24 30.3	
	comp=Z,254nm,3.1s						
LBTB	**Lobatse**	**28.30**	**0**	P	**P**	**05 24 23.2 +0.1**	
LBTB				IAmb	IAmb	05 24 23.7	
	comp=Z,14nm,0.8s						
LBTB	**Lobatse**	**28.30**	**0**	*e*P	**P**	**05 24 22.4 -0.7**	
LBTB				IAmb	IAmb	05 24 23.5	
	comp=Z,14nm,0.8s						
LBTB	**Lobatse**	**28.30**	**0**	LR	LR	05 33 49.6	
	comp=Z,556nm,20.5s,baz=188,slow=33						
WIN	**Windhoek**	**31.39**	**345**	P	**P**	**05 24 50.6 +0.1**	
WIN				IAmb	IAmb	05 25 00.3	
	comp=Z,25nm,1.4s						
BELA	**Belgrano 2**	**32.27**	**200**	P	**P**	**05 24 57.5 -0.1**	
FOMA	**Nahampoana Res**	**32.64**	**38**	P	**P**	**05 25 01.1 -0.2**	
FOMA				IAmb	IAmb	05 25 03.0	
	comp=Z,28nm,0.8s						
TSUM	**Tsumeb**	**34.62**	**347**	P	**P**	**05 25 19.3 +0.6**	
TSUM				IAmb	IAmb	05 25 20.5	
	comp=Z,50nm,1.7s						
TSUM	**Tsumeb**	**34.62**	**347**	P	**P**	**05 25 19.4 +0.6**	
	comp=Z,6.3nm,0.7s,baz=176,slow=8.1,SNR=4.9						
TSUM				LR	LR	05 38 55.9	
	comp=Z,211nm,18.8s,baz=182,slow=36						
	comp=Z,6.3nm,0.7s						
VOI	**Vohitsoka**	**35.38**	**36**	P	**P**	**05 25 25.8 +0.6**	
VOI				IAmb	IAmb	05 25 30.2	
	comp=Z,40nm,1.7s						
QSPA	**South Pole Qui**	**36.87**	**180**	P	**P**	**05 25 37.3 -0.3**	
QSPA	**South Pole Qui**	**36.87**	**180**	P	**P**	**05 25 37.1 -0.5**	
	comp=Z,38nm,0.7s,baz=247,slow=3.0,SNR=220						
QSPA				LR	LR	05 39 43.0	
	comp=Z,564nm,21.5s,baz=241,slow=35						
	comp=Z,38nm,0.7s						
LSZ	**Lusaka**	**38.05**	**4**	P	**P**	**05 25 48.2 +0.1**	
LSZ	**Lusaka**	**38.05**	**4**	P	**P**	**05 25 47.4 -0.6**	
	comp=Z,4.0nm,0.6s,baz=188,slow=9.7,SNR=3.6						
LSZ				LR	LR	05 39 25.9	
	comp=Z,571nm,21.4s,baz=174,slow=33						
	comp=Z,4.0nm,0.6s						
ABPO	**Ambohimpanom**	**38.20**	**35**	P	**P**	**05 25 48.8 -0.6**	
CASY	**Casey**	**41.18**	**142**	P	**P**	**05 26 13.2 -0.2**	
VNDA	**Vanda**	**46.63**	**168**	P	**P**	**05 26 57.2 +0.1**	
VNDA				IAmb	IAmb	05 26 58.2	
	comp=Z,54nm,1.8s						
VNDA	**Vanda**	**46.63**	**168**	P	**P**	**05 26 57.2 +0.1**	
	comp=Z,7.4nm,0.7s,baz=237,slow=7.7,SNR=27						
VNDA				LR	LR	05 46 03.5	
	comp=Z,402nm,21.2s,baz=202,slow=36						
	comp=Z,7.4nm,0.7s						
SBA	**Scott Base**	**46.91**	**170**	P	**P**	**05 27 00.3 +1.1**	
MBAR	**Mbarara**	**52.76**	**7**	LR	LR	05 48 25.5	
	comp=Z,258nm,19.9s,baz=57,slow=34						
TRQA	**Tornquist**	**59.15**	**247**	P	**P**	**05 28 30.9 +0.9**	
ITAB	**Concordia**	**61.35**	**262**	P	**P**	**05 28 46.9 +1.7**	
LL07	**Hotel Espejo d**	**61.71**	**236**	P	**P**	**05 28 49.4 +2.0**	
PLCA	**Paso Flores**	**61.78**	**239**	P	**P**	**05 28 48.0 0.0**	
PLCA				IAmb	IAmb	05 28 50.2	
	comp=Z,5.8nm,0.9s						
PLCA	**Paso Flores**	**61.78**	**239**	P	**P**	**05 28 49.5 +1.4**	
	comp=Z,4.2nm,0.8s,baz=134,slow=7.8,SNR=14						
PLCA				LR	LR	05 52 23.7	
	comp=Z,73nm,20.2s,baz=143,slow=33						
	comp=Z,4.2nm,0.8s						
H01W2	**Cape Leeuwin H**	**62.16**	**112**	T	T	06 37 16.1	
	baz=223,slow=75,SNR=28						
H01W3	**Cape Leeuwin H**	**62.18**	**112**	T	T	06 37 17.6	
	baz=223,slow=75,SNR=31						
H01W1	**Cape Leeuwin H**	**62.18**	**112**	T	T	06 37 17.2	
	baz=223,slow=75,SNR=26						
GO06	**Curarrehue**	**63.10**	**239**	P	**P**	**05 28 58.8 +1.8**	
GO06				IAmb	IAmb	05 29 05.6	
	comp=Z,7.3nm,0.8s						
DBIC	**Dimbokro**	**65.05**	**326**	P	**P**	**05 29 09.1 -0.7**	
DBIC	**Dimbokro**	**65.05**	**326**	P	**P**	**05 29 08.9 -0.8**	
	comp=Z,7.6nm,0.9s,baz=169,slow=4.3,SNR=4.7						
DBIC				LR	LR	05 51 33.6	
	comp=Z,216nm,19.2s,baz=149,slow=30						
	comp=Z,7.6nm,0.9s						
CPUP	**Villa Florida**	**65.10**	**259**	P	**P**	**05 29 10.0 -0.1**	
CPUP				IAmb	IAmb	05 29 46.1	
	comp=Z,18nm,1.9s						
CPUP	**Villa Florida**	**65.10**	**259**	P	**P**	**05 29 08.9 -1.2**	
	comp=Z,2.1nm,0.9s,baz=185,slow=8.9,SNR=5.1						
CPUP				LR	LR	05 53 19.6	
	comp=Z,68nm,19.4s,baz=133,slow=32						
	comp=Z,2.1nm,0.9s						
NWAO	**Narrogin (SRO)**	**65.35**	**112**	P	**P**	**05 29 11.3 -0.4**	
MT01	**Popeta**	**67.30**	**244**	P	**P**	**05 29 24.5 +0.4**	
MT01				IAmb	IAmb	05 30 51.7	
	comp=Z,22nm,1.4s						
BDFB	**Brasília**	**67.72**	**274**	P	**P**	**05 29 26.5 -0.6**	
	comp=Z,3.8nm,0.9s,baz=125,slow=7.0,SNR=5.5						
	comp=Z,3.8nm,0.9s						
TOA0	**Torodi Ar. Sit**	**69.29**	**335**	P	**P**	**05 29 36.7 +0.1**	
TOA0				IAmb	IAmb	05 29 41.7	
	comp=Z,13nm,1.5s						
TORD	**Torodi Ar. Bea**	**69.29**	**335**	P	**P**	**05 29 37.8 +1.2**	
TORD				IAmb	IAmb	05 29 54.0	
	comp=Z,25nm,1.4s						
TORD	**Torodi Ar. Bea**	**69.29**	**335**	P	**P**	**05 29 36.0 -0.6**	
	comp=Z,3.0nm,0.3s,baz=168,slow=5.7,SNR=3.3						
	comp=Z,3.0nm,0.3s						
CO01	**Juntas del Tor**	**69.64**	**247**	P	**P**	**05 29 40.2 +1.0**	
CO01				IAmb	IAmb	05 29 43.9	
	comp=Z,6.6nm,0.7s						
LCO	**Las Campanas**	**70.72**	**247**	P	**P**	**05 29 46.4 +0.6**	
LCO				IAmb	IAmb	05 32 22.3	
	comp=Z,14nm,1.3s						
AC02	**Maricunga**	**71.53**	**250**	P	**P**	**05 29 51.9 +1.0**	
PTLB	**Pontes e Lacer**	**74.53**	**265**	P	**P**	**05 30 08.7 +0.4**	
SIV	**San Ignacio**	**75.26**	**261**	LR	LR	05 58 21.7	
	comp=Z,102nm,18.5s,baz=118,slow=32						
BBOO	**Buckleboo**	**75.30**	**125**	P	**P**	**05 30 12.1 -0.5**	
BBOO				IAmb	IAmb	05 32 28.4	
	comp=Z,56nm,2.0s						
BBTS	**Babate**	**76.69**	**318**	LR	LR	05 58 25.7	
	comp=Z,156nm,19.5s,baz=68,slow=31						
TAM	**Tamanrasset**	**77.77**	**341**	P	**P**	**05 30 27.6 +1.0**	
STKA	**Stephens Creek**	**78.72**	**129**	P	**P**	**05 30 30.9 -0.8**	
	comp=Z,0.9nm,0.5s,baz=225,slow=8.6,SNR=2.4						
	comp=Z,0.9nm,0.5s						
LEM	**Lebang**	**79.90**	**88**	LR	LR	05 58 13.0	
	comp=Z,153nm,20.8s,baz=236,slow=30						
ASAR	**Alice Springs**	**81.65**	**118**	P	**P**	**05 30 46.9 -0.9**	
ASAR	**Alice Springs**	**81.65**	**118**	P	**P**	**05 30 47.5 -0.3**	
	comp=Z,4.0nm,0.7s,baz=210,slow=5.4,SNR=30						
	comp=Z,4.0nm,0.7s						
AS31	**Alice Springs**	**81.65**	**118**	P	**P**	**05 30 47.3 -0.5**	
SAML	**Samuel**	**82.06**	**266**	P	**P**	**05 30 50.4 +0.5**	
UOSS	**Minazif**	**82.42**	**28**	P	**P**	**05 30 51.0 -0.5**	
HYB	**Hyderabad**	**83.96**	**50**	*e*P	**P**	**05 31 00.0 +0.5**	
WRA	**Warramunga Arr**	**84.92**	**117**	P	**P**	**05 31 03.9 -0.7**	
	comp=Z,4.3nm,0.9s,baz=211,slow=3.8,SNR=24						
	comp=Z,4.3nm,0.9s						
WB2	**Warramunga Arr**	**84.92**	**117**	P	**P**	**05 31 04.5 -0.2**	
WB2				IAmb	IAmb	05 31 05.1	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**85.01**	**117**	P	**P**	**05 31 04.6 -0.5**	
WR0				IAmb	IAmb	05 32 27.4	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**85.09**	**117**	P	**P**	**05 31 05.2 -0.3**	
WB0				IAmb	IAmb	05 31 19.4	
	comp=Z,21nm,1.5s						
IDI	**Anoyia**	**88.28**	**360**	LR	LR	06 13 01.9	
	comp=Z,60nm,18.0s,baz=269,slow=37						
MDT	**Midelt**	**89.69**	**335**	LR	LR	06 08 45.4	
	comp=Z,103nm,18.5s,baz=130,slow=34						
KEST	**Kesra**	**89.81**	**347**	LR	LR	06 12 57.0	
	comp=Z,124nm,18.9s,baz=169,slow=36						
VAE	**Valguarnera**	**90.96**	**351**	LR	LR	06 14 30.2	
	comp=Z,265nm,18.2s,baz=153,slow=37						
BRTR	**Keskin Array B**	**92.98**	**6**	P	**P**	**05 31 43.4 +1.0**	
	comp=Z,1.0nm,1.0s,baz=200,slow=7.7,SNR=2.8						
BRTR				LR	LR	06 14 19.7	
	comp=Z,65nm,20.1s,baz=220,slow=36						
	comp=Z,1.0nm,1.0s						
ESDC	**Sonseca Array**	**96.08**	**338**	P	**P**	**05 31 57.9 +1.4**	
	comp=Z,0.4nm,0.8s,baz=160,slow=4.1,SNR=2.8						
	comp=Z,0.4nm,0.8s						
PCRV	**Puerto La Cruz**	**98.11**	**276**	LR	LR	06 12 00.3	
	comp=Z,106nm,18.1s,slow=33						
MLR	**Muntele Rosu**	**98.47**	**0**	LR	LR	06 19 47.2	
	comp=Z,180nm,18.9s,baz=184,slow=37						
PPT2	**Papeete2**	**109.22**	**185**	*e*LR	LR	06 09 05.7	
	comp=Z,178nm,24.2s						
PPT2				*e*LR	LR	06 09 11.1	
	comp=Z,200nm,36.5s						
WMQ	**Urumqi**	**110.51**	**43**	*e*P	**PKiKP**	**05 37 02.4 +1.2**	
NJ2	**Nanjing**	**116.95**	**72**	*e*P	**PKiKP**	**05 37 15.1 +1.3**	
NJ2				pP	pPKPdf	05 37 15.3	-0.9
NJ2				sP	sPKPdf	05 37 22.5	+5.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.8s						
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**119.40**	**60**	*e*P	**PKPdf**	**05 37 15.9 -2.5**	
XLT	**XiLinHaoTe**	**123.92**	**61**	*e*P	**PKPdf**	**05 37 25.0 -1.9**	
XLT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,210nm,4.4s						
MDJ	**Mudanjiang**	**131.69**	**68**	P	**PKiKP**	**05 37 44.8 +2.2**	
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,7.2s						
PDAR	**Pinedale Array**	**148.60**	**269**	PKPbc	**PKPbc**	**05 38 14.3 -1.8**	
	comp=Z,0.7nm,0.9s,baz=98,slow=4.9,SNR=5.5						
NVAR	**Mina Array Bea**	**151.05**	**254**	PKPbc	**PKPbc**	**05 38 21.5 -0.7**	
	comp=Z,1.9nm,0.9s,baz=134,slow=3.2,SNR=8.9						
YKA	**Yellowknife Ar**	**157.25**	**310**	PKP	**PKPdf**	**05 38 25.2 +1.2**	
	comp=Z,0.1nm,0.6s,baz=80,slow=2.0,SNR=3.8						

TAP 17 05:23:13.7,24.01°N×121.60°E,h6km,ML1.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**164**	P	Pg	05 23 15.6	+0.7
	baz=154						
HWA				*e*S	Sg	05 23 17.1	+1.3
	baz=154						
TWD	**Chiawan**	**0.07**	**1**	P	Pg	05 23 16.3	+0.8
	baz=7.0						
TWD				S	Sg	05 23 18.1	+1.4
	baz=7.0						
ETM	**Tongmen**	**0.10**	**245**	*i* P	Pg	05 23 16.7	+0.7
	baz=244						
ETM				S	Sg	05 23 18.6	+1.1
	baz=244						
ETL	**Fush Village**	**0.15**	**10**	*i* P	Pg	05 23 17.6	+0.8
	baz=9.0						
ETL				S	Sg	05 23 20.4	+1.4
	baz=9.0						
NACB	**Ninganchiao**	**0.16**	**360**	P	Pg	05 23 17.8	+0.7
	baz=359						
NACB				*i* S	Sg	05 23 20.6	+1.3
	baz=359						
LXIB	**Xiulin Townshi**	**0.17**	**274**	P	Pg	05 23 18.2	+1.1
	baz=273						
LXIB				*e*S	Sg	05 23 21.1	+1.6
	baz=273						
ETLH	**Xiulin Townshi**	**0.22**	**332**	P	Pg	05 23 19.2	+1.1
	baz=332						
ETLH				*e*S	Sg	05 23 22.5	+1.4
	baz=332						
ESL	**Shilin**	**0.24**	**217**	*e*P	Pg	05 23 18.9	+0.4
	baz=215						
ESL				*e*S	Sg	05 23 22.3	+0.5
	baz=215						
WHF	**Hehuan Shan**	**0.33**	**294**	*e*P	Pb	05 23 21.6	-0.8
	baz=294						
WHF				*e*S	Sb	05 23 26.7	-1.3
	baz=294						
WARBT	**Fenglin Townsh**	**0.35**	**213**	*e*S	Sb	05 23 26.9	-1.2
	baz=213						
CHGB	**Renai**	**0.39**	**277**	P	Pb	05 23 22.7	-0.5
	baz=277						
FUSS	**Fushou**	**0.40**	**306**	*e*P	Pb	05 23 23.0	-0.4
	baz=306						
FUSS				*e*S	Sb	05 23 29.3	-0.6
	baz=306						
WUSB	**Renai**	**0.44**	**268**	P	Pb	05 23 23.6	-0.4
	baz=267						
NNSB	**Datong**	**0.46**	**335**	*e*P	Pb	05 23 24.1	-0.3
	baz=335						
VWDT	**VWDT**	**0.49**	**239**	*e*P	Pb	05 23 24.6	-0.1
	baz=238						
LATG	**Datong**	**0.53**	**353**	P	Pb	05 23 24.9	-0.6
	baz=353						
LATG				*e*S	Sb	05 23 33.6	+0.1
	baz=353						
SSLB	**Suanglung**	**0.63**	**249**	P	Pb	05 23 26.8	-0.3
	baz=249						
SSLB				*e*S	Sb	05 23 36.4	+0.2
	baz=249						
YHNB	**Yeheng**	**0.69**	**343**	*e*P	Pb	05 23 28.5	+0.3
	baz=343						

TAP 17 05:23:21.1,24.02N×121.58E,h4km,ML2.0,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.05**	**157**	P	Pg	05 23 22.8	+0.5
	baz=150						
HWA				S	Sg	05 23 23.9	+0.8
	baz=150						
TWD	**Chiawan**	**0.06**	**11**	*i* P	Pg	05 23 23.4	+1.0
	baz=17						
TWD				S	Sg	05 23 25.2	+1.8
	baz=17						
ETM	**Tongmen**	**0.10**	**236**	*i* P	Pg	05 23 23.9	+0.7
	baz=236						
ETM				*i* S	Sg	05 23 25.9	+1.3
	baz=236						
ETL	**Fush Village**	**0.14**	**15**	*i* P	Pg	05 23 24.8	+0.8
	baz=14						
ETL				S	Sg	05 23 27.1	+1.2
	baz=14						
NACB	**Ninganchiao**	**0.15**	**4**	P	Pg	05 23 25.1	+0.9
	baz=3.0						
NACB				*i* S	Sg	05 23 27.7	+1.6
	baz=3.0						
LXIB	**Xiulin Townshi**	**0.16**	**270**	P	Pg	05 23 25.4	+1.1
	baz=269						
LXIB				S	Sg	05 23 28.1	+1.7
	baz=269						
ETLH	**Xiulin Townshi**	**0.21**	**333**	P	Pg	05 23 26.3	+1.1
	baz=333						
ETLH				*i* S	Sg	05 23 29.8	+1.9
	baz=333						
**SHU

NNS	**Nan Shan**	**0.46**	**335**	P	Pb	05 23 31.4	-0.4
	baz=335							
NNS				*e*S	Sb	05 23 38.7	-0.3
	baz=335							
VWDT	**VWDT**	**0.48**	**237**	P	Pb	05 23 31.7	-0.5
	baz=236							
VWDT				*e*S	Sb	05 23 39.2	-0.5
	baz=236							
VWDT	**VWDT**	**0.48**	**237**	*e*S	Sg	05 23 32.0	-4.8
	baz=238							

*BUT **17** 05:29:03.9±1.0,46˚91N±0˚05×112˚53W±0˚07,h12km±7km, Error ellipse: s-maj=8.1km s-min=5.3km az=224.0*
NEIC 17 05:29:01.9±2.2,**47˚06N**±0˚04×**112˚62W**±0˚05,**h10**km±2km, **ML2.7**/18,**ML2.8**/15(BUT),**Error ellipse: s-maj=7.7km s-min=5.9km az=164.0,Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYMT	**Lyon Mountain**	**0.24**	**112**	Pg	Pg	05 29 08.1	+1.1
BPMT	**Black Pine Rid**	**0.84**	**223**	Pg	Pb	05 29 18.5	-0.2
BOZ	**Bozeman (W)**	**1.62**	**154**		Pn	05 29 30.7	+0.1
BOZ					Sn	05 29 50.8	-0.8
BOZ				IAML		05 29 55.8	
	49nm,0.3s						
EGMT	**Eagleton**	**2.17**	**63**		Pn	05 29 39.4	+1.3
EGMT				IAML		05 30 14.6	
	51nm,0.3s						
EGMT				IAML		05 30 17.5	
	53nm,0.4s						
YHL	**Hebgen Lake**	**2.43**	**155**	Pn	Pn	05 29 42.1	+0.2
YHL				IAML		05 30 18.9	
	comp=N,38nm,0.9s						
YHL				IAML		05 30 19.9	
	comp=E,31nm,1.0s						
RLMT	**Red Lodge**	**3.04**	**129**	Pn	Pn	05 29 51.1	+0.9
RLMT				IAML		05 30 38.0	
	comp=E,16nm,0.4s						
RLMT				IAML		05 30 38.8	
	comp=E,15nm,0.6s						
PLID	**Pearl Lake**	**3.07**	**231**	Pn	Pn	05 29 52.1	+1.4
NEW	**Newport**	**3.27**	**293**	Pn	Pn	05 29 53.8	+0.6
NEW				IAML		05 30 52.7	
	comp=E,14nm,0.5s						
F10A	**Beach Ranch, E**	**3.36**	**253**	Pn	Pn	05 29 55.2	+0.7
F10A				IAML		05 30 51.8	
	comp=E,31nm,0.3s						
MFID	**Camas Ranch**	**4.29**	**213**	Pn	Pn	05 30 08.9	+1.6
MFID				IAML		05 31 19.8	
	comp=E,16nm,0.4s						
LAO	**LASA Array**	**4.41**	**93**	Pn	Pn	05 30 11.1	+2.3

*DJA **17** 05:30:58.3±0.5,3˚N±4˚×12˚7E±˚,h55km±5km,M4.6/23, mB5.2/8,mb4.6/23,MLv4.6/12,Mw(mB)4.5/8*
*IDC **17** 05:31:00.1±2.5,3.˚12N×126˚66E,h54km±21km,mb4.1/19, mbtmp4.4/20,ML4.9/1,MS3.8/13,Error ellipse: s-maj=29.1km s-min=10.3km az=71.0*
*NEIC **17** 05:31:00.2±2.3,3.˚14N±0˚09×126˚81E±0˚09,h52km±1km, mb4.7/47,Error ellipse: s-maj=14.0km s-min=11.1km az=49.0*
*MOS **17** 05:31:00.1±0.8,3.˚17N×126˚71E,h77km,mb4.9/27,Error ellipse: s-maj=16.8km s-min=7.0km az=107.4*
ISC 17 05:30:58.9±0.3,**3˚19N**±0˚04×**126˚82E**±0˚06,**h44**km,**n159,** σ1**958**/153,**mb4.7**/73,**MS3.8**/17,**12C-1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.38**	**291**	P	**Pn**	**05 31 19.6**	**-2.2**
TNTI	**Ternate**	**2.46**	**167**		**Pn**	**05 31 37.7**	**+1.1**
TNTI	**Ternate**	**2.46**	**167**	P	**Pn**	**05 31 38.7**	**+2.1**
KMSI	**Cibinong**	**3.85**	**228**	P	**Pn**	**05 31 58.2**	**+2.6**
LBMI	**Labuha**	**3.86**	**170**	P	**Pn**	**05 31 58.6**	**+2.8**
DAV	**Davao City (W)**	**4.05**	**342**	P	**Pn**	**05 32 01.5**	**+3.0**
	68nm,0.3s,baz=184,slow=5.8,SNR=1.9						
DAV				S	**Sn**	**05 32 48.5**	**+3.8**
	256nm,0.4s,baz=40,slow=16,SNR=1.7						
	258nm,0.4s						
SANI	**Sanana**	**5.27**	**189**	P	**Pn**	**05 32 17.0**	**+1.8**
	25nm,0.8s,809nm0.2nm						
MRSI	**Marisa**	**5.57**	**241**	P	**Pn**	**05 32 20.0**	**+0.7**
	179nm,0.6s,2μm0.7nm						
LUWI	**Luwuk**	**5.83**	**224**		**Pn**	**05 32 24.6**	**+1.6**
LUWI	**Luwuk**	**5.83**	**224**	P	**Pn**	**05 32 25.9**	**+3.0**
	391nm,1.2s,3μm1.7nm						
SWI	**Sorong**	**5.99**	**132**	P	**Pn**	**05 32 27.3**	**+2.2**
	43nm,0.5s,1μm0.2nm						
TOLI2	**Tolitoli**	**6.38**	**251**		**Pn**	**05 32 30.9**	**+0.5**
NLAI	**Namlea**	**6.39**	**177**	P	**Pn**	**05 32 32.5**	**+1.9**
	20nm,0.8s,0.1nm						
FAKI	**Fak Fak**	**8.14**	**138**	P	**Pn**	**05 32 56.2**	**+1.6**
	34nm,1.2s						
TTSI	**Tana Toraja**	**9.34**	**229**	P	**Pn**	**05 33 13.2**	**+2.1**
	80nm,1.5s,2μm						
KKM	**Kota Kinabalu**	**10.95**	**285**	Pn	**Pn**	**05 33 35.0**	**+1.8**
BBKI	**Banjar Baru**	**13.67**	**241**	P	**Pn**	**05 34 11.9**	**+1.5**
GENI	**Genyem**	**14.52**	**113**	P	**Pn**	**05 34 22.2**	**+0.4**
	127nm,1.0s						
SBUM	**Sibu**	**14.60**	**267**		**Pn**	**05 34 25.4**	**+2.6**
PLAI	**Plampang**	**14.96**	**217**	P	**P**	**05 34 30.7**	**-1.7**
	61nm,0.8s						
TWSI	**Taliwang, Sumb**	**15.45**	**220**	P	**P**	**05 34 35.7**	**-2.1**
	35nm,1.1s						
STKI	**Sintang**	**15.65**	**259**	P	P	05 34 47.6	+7.6
SRBI	**Singaraja**	**16.11**	**226**	P	**Pn**	**05 34 43.6**	**+1.2**
	82nm,0.9s						
KSM	**Kuching**	**16.59**	**264**		**Pn**	**05 34 48.9**	**+0.4**
DLV	**T Lat**	**20.13**	**297**	P	Pn	05 35 32.4	+0.5
DLV				IAmb	IAmb	05 35 37.1	
	comp=Z,38nm,1.1s						
GUMO	**Guam**	**20.61**	**59**	LR	LR	05 42 29.0	
	comp=Z,202nm,20.8s,baz=219,slow=33						
YULB	**Yu-li**	**20.79**	**346**	P	**P**	**05 35 35.4**	**-1.1**
YULB				IAmb	IAmb	05 36 11.1	
	comp=Z,74nm,1.5s						
FITZ	**Fitzroy Crossi**	**21.18**	**183**	P	**P**	**05 35 40.3**	**-0.4**
DSRI	**Dabo**	**22.53**	**261**	P	**P**	**05 35 54.7**	**-0.6**
MYKOM	**Kota Tinggi**	**22.99**	**267**	P	**P**	**05 36 02.3**	**+2.2**
MYKOM				IAmb	IAmb	05 36 08.9	
	comp=Z,22nm,1.1s						
COEN	**Coen**	**23.52**	**137**	P	**P**	**05 36 04.8**	**-0.5**
PMG	**Port Moresby**	**23.82**	**122**	LR	LR	05 46 48.3	
	comp=Z,304nm,21.7s,baz=320,slow=40						
WB0	**Warramunga Arr**	**23.99**	**162**	P	**P**	**05 36 08.2**	**-1.5**
WRA	**Warramunga Arr**	**24.14**	**162**	P	**P**	**05 36 09.8**	**-1.2**
WRA	**Warramunga Arr**	**24.14**	**162**	P	**P**	**05 36 10.0**	**-1.1**
	comp=Z,21nm,0.9s,baz=340,slow=10,SNR=71						
WRA				PcP	**PcP**	**05 39 51.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=336,slow=2.1,SNR=2.0						
WRA				S	**S**	**05 40 27.1**	**+0.9**
	comp=Z,3.0nm,1.1s,baz=345,slow=18,SNR=5.2						
	comp=Z,21nm,0.9s						
UBPT	**Khong Chiam**	**24.22**	**301**	P	**P**	**05 36 12.1**	**+0.3**
KULM	**Kulim**	**26.18**	**275**	P	**P**	**05 36 30.6**	**+0.9**
KULM				IAmb	IAmb	05 36 39.7	
	comp=Z,38nm,1.3s						
AS31	**Alice Springs**	**27.57**	**166**	P	**P**	**05 36 40.7**	**-1.3**
ASAR	**Alice Springs**	**27.57**	**166**	P	**P**	**05 36 40.4**	**-1.6**
ASAR	**Alice Springs**	**27.57**	**166**	P	**P**	**05 36 41.2**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=348,slow=7.1,SNR=22						
ASAR				PcP	**PcP**	**05 39 59.7**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=3.7,slow=3.3,SNR=4.2						
ASAR				S	**S**	**05 41 21.7**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=347,slow=19,SNR=4.0						
	comp=Z,1.5nm,0.5s						
JCJ	**Chichijima**	**27.95**	**30**	LR	LR	05 46 14.7	
	comp=Z,231nm,21.2s,baz=269,slow=33						
NJ2	**Nanjing**	**29.67**	**346**	*e*P	**P**	**05 37 03.3**	**+2.7**
CMAR	**Chiang Mai Arr**	**31.23**	**301**	P	**P**	**05 37 14.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**31.23**	**301**	P	**P**	**05 37 14.8**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=123,slow=7.7,SNR=7.6						
CMAR				LR	LR	05 51 54.4	
	comp=Z,70nm,18.5s,baz=55,slow=40						
	comp=Z,0.5nm,0.3s						
CHTO	**Chiang Mai**	**31.38**	**302**	P	**P**	**05 37 15.8**	**-0.1**
CHTO	**Chiang Mai**	**31.38**	**302**	P	**P**	**05 37 15.8**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ENH	**Enshi**	**31.54**	**330**	P	**P**	**05 37 16.2**	**-1.0**
ENH				IAmb	IAmb	05 37 18.5	
	comp=Z,13nm,1.1s						
FORT	**Forrest**	**33.80**	**178**	P	**P**	**05 37 36.9**	**0.0**
LYN	**LuoYang**	**33.94**	**339**	⇓P	**P**	**05 37 42.1**	**+4.0**
LYN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSRS	**Korea Array**	**34.12**	**2**	P	**P**	**05 37 39.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=184,slow=9.7,SNR=4.5						
	comp=Z,2.1nm,0.8s						
MJAR	**Matsushiro Arr**	**34.81**	**16**	LR	LR	05 50 08.7	
	comp=Z,194nm,21.4s,baz=192,slow=33						
HNR	**Honiara**	**35.31**	**111**	LR	LR	05 51 06.6	
	comp=Z,2μm,21.2s,baz=332,slow=34						
HNS	**HongShan**	**35.82**	**343**	⇑P	**P**	**05 37 52.9**	**-1.3**
BBOO	**Buckleboo**	**36.86**	**167**	P	**P**	**05 38 01.6**	**-1.5**
BBOO				IAmb	IAmb	05 38 06.0	
	comp=Z,10nm,1.0s						
EIDS	**Eidsvold**	**36.87**	**142**	P	**P**	**05 38 03.1**	**-0.3**
EIDS				IAmb	IAmb	05 38 04.0	
	comp=Z,8.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**37.05**	**193**	P	**P**	**05 38 04.8**	**0.0**
NWAO	**Narrogin (SRO)**	**37.05**	**193**	P	**P**	**05 38 04.8**	**0.0**
NWAO				pmax	pmax		
	comp=Z,34nm,1.4s						
STKA	**Stephens Creek**	**37.59**	**159**	P	**P**	**05 38 08.7**	**-0.7**
STKA	**Stephens Creek**	**37.59**	**159**	P	**P**	**05 38 09.2**	**-0.3**
	comp=Z,19nm,0.8s,baz=336,slow=8.2,SNR=44						
	comp=Z,19nm,0.8s						
BJT	**Baijiatuan**	**37.91**	**347**	P	**P**	**05 38 10.9**	**-1.1**
BJT	**Baijiatuan**	**37.91**	**347**	P	**P**	**05 38 10.9**	**-1.1**
BJT				pmax	pmax		
	comp=Z,15nm,1.1s						
BJI	**Beijing**	**37.93**	**347**	P	**P**	**05 38 12.0**	**-0.1**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**39.01**	**330**	⇑P	**P**	**05 38 23.3**	**+1.8**
LZH				pP	sP	05 38 38.8	+0.9
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				LR	LR		
	comp=N,260nm,11.7s						
LZH				LR	LR		
	comp=E,190nm,10.7s						
LZH				LR	LR		
	comp=Z,280nm,12.0s						
HHC	**Hu-ho-hao-te**	**39.94**	**342**	*e*P	**P**	**05 38 32.8**	**+3.7**
HHC				sP	sP	05 38 58.4	+13
HHC				PP	**PnPn**	**05 40 13.8**	**+8.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,4.8s						
HHC				LR	LR		
	comp=N,150nm,11.8s						
HHC				LR	LR		
	comp=E,110nm,15.9s						
HHC				LR	LR		
	comp=Z,240nm,15.3s						
ARMA	**Armidale**	**40.97**	**146**	P	**P**	**05 38 38.0**	**+0.3**
ARMA				IAmb	IAmb	05 39 01.8	
	comp=Z,23nm,1.4s						
USRK	**Ussuriysk Ar.**	**41.10**	**6**	P	**P**	**05 38 38.8**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=162,slow=6.3,SNR=5.3						
	comp=Z,3.3nm,0.7s						
XLT	**XiLinHaoTe**	**41.64**	**348**	*e*P	**P**	**05 38 43.5**	**+0.4**
XLT				pP	sP	05 39 00.3	+0.7
XLT				sP	pwP	05 39 06.5	+10
XLT				PP	**PP**	**05 40 19.8**	**-0.2**
XLT				pmax	pmax		
	comp=Z,14nm,1.1s						
XLT				pmax	pmax		
	comp=Z,110nm,4.3s						
H11S3	**WAKE ISLAND Hy**	**41.87**	**66**	T	T	06 23 24.9	
	baz=253,slow=75,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**41.88**	**66**	T	T	06 23 26.6	
	baz=253,slow=75,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**41.88**	**66**	T	T	06 23 26.5	
	baz=253,slow=75,SNR=7.8						
ASAJ	**Asahikawa**	**43.08**	**17**	LR	LR	05 54 35.9	
	comp=Z,118nm,21.4s,baz=310,slow=33						
GTA	**Gaotai**	**43.61**	**329**	*e*P	**P**	**05 39 00.1**	**+1.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				LR	LR		
	comp=N,140nm,19.3s						
GTA				LR	LR		
	comp=E,200nm,21.8s						
GTA				LR	LR		
	comp=Z,270nm,22.2s						
GOMU	**GeErMu**	**44.16**	**322**	P	**P**	**05 39 04.1**	**+0.1**
GOMU				pP	pwP	05 39 18.3	0.0
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**45.74**	**15**	*e*P	**P**	**05 39 13.9**	**-1.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLR	**Kul'dur**	**46.07**	**4**	*ce*P	**P**	**05 39 18.5**	**+0.1**
KLR				pmax	pmax		
	comp=Z,19nm,2.5s						
KLR	**Kul'dur**	**46.07**	**4**	LR	LR	05 58 53.6	
	comp=Z,43nm,20.3s,baz=282,slow=36						
HEH	**HeiHe**	**46.90**	**1**	*e*P	**P**	**05 39 25.0**	**+0.1**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**47.66**	**342**	P	**P**	**05 39 31.5**	**+0.5**
ULN	**Ulaanbaatar**	**47.66**	**342**	*ce*P	**P**	**05 39 30.7**	**-0.4**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
SONM	**Songino Array**	**47.84**	**342**	P	**P**	**05 39 32.2**	**-0.1**
SONM	**Songino Array**	**47.84**	**342**	P	**P**	**05 39 32.3**	**-0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**47.84**	**342**	P	**P**	**05 39 33.0**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=152,slow=8.9,SNR=8.7						
SONM				PcP	**PcP**	**05 41 01.4**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=151,slow=3.3,SNR=3.6						
	comp=Z,0.7nm,0.4s						
ZEA	**Zeya**	**50.39**	**0**	*e*P	**P**	**05 39 52.8**	**+1.1**
ZEA				*e*		05 40 10.6	
WMQ	**Urumqi**	**53.22**	**325**	*e*P	**P**	**05 40 14.9**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
BOD	**Bodaibo**	**55.41**	**352**	*e*P	**P**	**05 40 28.8**	**+0.2**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PEA0B	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**05 40 33.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**05 40 33.5**	**+1.3**
PEA0B				pmax	pmax		
	comp=Z,31nm,1.2s						
PETK	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**05 40 32.7**	**+0.5**
PETK	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**05 40 33.3**	**+1.1**
	comp=Z,2.7nm,0.5s,baz=198,slow=3.9,SNR=9.2						
PETK				LR	LR	06 05 56.4	
	comp=Z,26nm,19.8s,baz=165,slow=37						
	comp=Z,2.7nm,0.5s						
DGZ	**Jazzator, Alta**	**57.11**	**331**	*i* P	**P**	**05 40 40.4**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**58.05**	**325**	P	**P**	**05 40 46.5**	**-1.1**
MKAR	**Makanchi Array**	**58.05**	**325**	P	**P**	**05 40 47.0**	**-0.6**
MKAR	**Makanchi Array**	**58.05**	**325**	P	**P**	**05 40 47.0**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=112,slow=7.4,SNR=54						
	comp=Z,1.5nm,0.4s						
MAKZ	**Makanchi**	**58.24**	**325**	P	**P**	**05 40 47.9**	**-1.0**
MAKZ				IAmb	IAmb	05 40 51.7	
	comp=Z,6.0nm,1.0s						
MAKZ	**Makanchi**	**58.24**	**325**	P	**P**	**05 40 47.9**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK	**Yakutsk**	**58.74**	**2**	*ce*P	**P**	**05 40 52.5**	**+0.4**
YAK				pmax	pmax		
	comp=Z,25nm,0.6s						
MA2	**Magadan**	**59.21**	**14**	*ce*P	**P**	**05 40 54.0**	**-1.4**
MA2				pmax	pmax		
	comp=Z,18nm,2.5s						
MA2	**Magadan**	**59.21**	**14**	LR	LR	06 05 36.4	
	comp=Z,51nm,21.4s,baz=182,slow=35						
ZALV	**Zalesovo Beam**	**61.11**	**333**	P	**P**	**05 41 08.0**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=144,slow=6.8,SNR=14						
	comp=Z,1.4nm,0.3s						
ARK	**Arkit**	**62.20**	**316**	P	**P**	**05 41 16.8**	**+0.5**
ARK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURBB	**Kurchatov Arra**	**62.24**	**327**	P	**P**	**05 41 15.3**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=125,slow=6.0,SNR=38						
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**62.24**	**328**	P	**P**	**05 41 15.2**	**-1.0**
KURK	**Kurchatov**	**62.24**	**328**	P	**P**	**05 41 15.2**	**-1.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SEY	**Seymchan**	**62.54**	**13**	*ce*P	**P**	**05 41 17.6**	**-0.3**
SEY				pmax	pmax		
	comp=Z,18nm,2.5s						
SIMJ	**Simiganj**	**63.21**	**312**	P	**P**	**05 41 21.9**	**-1.2**
SIMJ				IAmb	IAmb	05 41 24.4	
	comp=Z,9.6nm,1.2s						
KK31	**Karatay Array**	**63.69**	**317**	P	**P**	**05 41 24.9**	**-1.1**
KK31	**Karatay Array**	**63.69**	**317**	P	**P**	**05 41 24.9**	**-1.1**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KKAR	**Karatay Array**	**63.69**	**317**	P	**P**	**05 41 25.0**	**-1.0**
KKAR	**Karatay Array**	**63.69**	**317**	P	**P**	**05 41 25.0**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BVAR	**Borovoye Array**	**67.82**	**327**	P	**P**	**05 41 52.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=123,slow=7.3,SNR=8.7						
	comp=Z,1.4nm,0.5s						
BRVK	**Borovoye**	**67.89**	**327**	P	**P**	**05 41 52.1**	**-0.7**
BRVK				IAmb	IAmb	05 42 18.7	
	comp=Z,7.4nm,0.9s						
BRVK	**Borovoye**	**67.89**	**327**	P	**P**	**05 41 52.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIXI	**Tiksi**	**68.38**	**1**	P	**P**	**05 41 55.4**	**-0.2**
TIXI	**Tiksi**	**68.38**	**1**	*ce*P	**P**	**05 41 53.9**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,21nm,1.7s						
TIXI	**Tiksi**	**68.38**	**1**	LR	LR	06 12 14.7	
	comp=Z,61nm,21.6s,baz=192,slow=36						
BILL	**Bilibino**	**70.05**	**15**	*i* P	**P**	**05 42 05.8**	**-0.2**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NRIK	**Noril'sk**	**70.97**	**346**	P	**P**	**05 42 11.1**	**-0.5**
NRIK				IAmb	IAmb	05 42 12.6	
	comp=Z,8.9nm,1.2s						
NRIK	**Noril'sk**	**70.97**	**346**	*ce*P	**P**	**05 42 11.0**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,11nm,1.6s						
NRIK	**Noril'sk**	**70.97**	**346**	P	**P**	**05 42 12.1**	**+0.5**
	comp=Z,3.1nm,0.4s,baz=150,slow=4.9,SNR=7.1						
	comp=Z,3.1nm,0.4s						
ABKAR	**Akbulak array**	**72.62**	**321**	P	**P**	**05 42 21.0**	**-0.9**
ARU	**Arti**	**75.44**	**328**	*c i*P	**P**	**05 42 36.3**	**-1.9**
ARU						05 45 21.6	
ARU				S	**S**	**05 52 12.2**	**-2.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIRV	**Kirov**	**80.73**	**329**	*ce*P	**P**	**05 43 06.4**	**-1.0**
BELG	**Belogornoye**	**80.89**	**322**	*i* P	**P**	**05 43 06.9**	**-1.5**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BELG	**Belogornoye**	**80.89**	**322**	P	**P**	**05 43 07.6**	**-0.8**
	comp=Z,6.4nm,0.8s,baz=90,slow=4.0,SNR=3.2						
BELG				LR	LR	06 23 20.7	
	comp=Z,72nm,18.3s,baz=82,slow=39						
	comp=Z,6.4nm,0.8s						
G19K	**Purcell Mounta**	**81.48**	**24**	P	**P**	**05 43 12.8**	**+1.5**
G19K				IAmb	IAmb	05 43 14.8	
	comp=Z,8.3nm,0.9s						
J20K	**Nowinta River**	**82.37**	**26**	P	**P**	**05 43 17.6**	**+1.6**
J20K				IAmb	IAmb	05 43 18.9	
	comp=Z,5.1nm,0.9s						
IMAR	**Indian Mountai**	**82.80**	**24**	P	**P**	**05 43 19.6**	**+1.4**
CAST	**Castle Rocks**	**83.17**	**27**	P	**P**	**05 43 19.7**	**-0.5**
CAST				IAmb	IAmb	05 43 22.8	
	comp=Z,4.9nm,0.8s						
SKT	**Skwentna**	**83.27**	**28**	P	**P**	**05 43 21.1**	**+0.4**
SKT				IAmb	IAmb	05 43 22.4	
	comp=Z,9.8nm,1.0s						
BRLK	**Bradley Lake**	**83.37**	**30**	P	**P**	**05 43 20.5**	**-0.9**
BPAW	**Bear Paw Mtn.**	**83.73**	**26**	P	**P**	**05 43 23.7**	**+0.6**
BPAW				IAmb	IAmb	05 43 48.7	
	comp=Z,9.9nm,1.3s						
M22K	**Willow**	**83.92**	**28**	P	**P**	**05 43 23.6**	**-0.4**
MLY	**Manley**	**83.93**	**25**	P	**P**	**05 43 24.8**	**+0.7**
MLY				IAmb	IAmb	05 43 26.3	
	comp=Z,6.6nm,1.0s						
PMR	**Palmer**	**84.38**	**29**	P	**P**	**05 43 26.4**	**+0.1**
PMR	**Palmer**	**84.38**	**29**	P	**P**	**05 43 26.4**	**+0.1**
PMR				pmax	pmax		
	comp=Z,14nm,1.0s						
VRH	**Novokhopyorsk**	**84.46**	**321**	*e*P	**P**	**05 43 25.0**	**-2.0**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NEA2	**Nenana**	**84.60**	**26**	P	**P**	**05 43 27.4**	**-0.1**
NEA2				IAmb	IAmb	05 43 30.2	
	comp=Z,3.9nm,0.9s						
KNK	**Knik Glacier**	**84.69**	**29**	P	**P**	**05 43 28.6**	**+0.6**
TOLK	**Toolik Lake Re**	**84.71**	**21**	P	**P**	**05 43 28.9**	**+0.8**
TOLK				IAmb	IAmb	05 43 30.9	
	comp=Z,7.7nm,1.0s						
CCB	**Clear Creek Bu**	**85.15**	**26**	P	**P**	**05 43 30.7**	**+0.5**
CCB				IAmb	IAmb	05 43 31.9	
	comp=Z,8.6nm,1.3s						
ERBR	**Yeremizino-Bor**	**85.18**	**315**	*e*P	**P**	**05 43 27.9**	**-2.9**
ERBR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
G24K	**Hadweenzic Riv**	**85.39**	**23**	P	**P**	**05 43 32.8**	**+1.4**
G24K				IAmb	IAmb	05 43 38.4	
	comp=Z,10nm,1.4s						
ILAR	**Eielson Array**	**85.55**	**25**	P	**P**	**05 43 32.0**	**-0.2**
ILAR	**Eielson Array**	**85.55**	**25**	P	**P**	**05 43 32.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=257,slow=5.1,SNR=6.2						
	comp=Z,0.2nm,0.4s						
KLMR	**Klimovskoe**	**85.92**	**331**	*e*P	**P**	**05 43 30.6**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
VSR	**Storozhevoye**	**86.06**	**321**	*e*P	**P**	**05 43 32.8**	**-2.2**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPSR	**Galich'ya Gora**	**86.21**	**322**	*e*P	**P**	**05 43 32.8**	**-2.9**
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
BMAR	**Burnt Mountain**	**86.54**	**23**	P	**

SKO 17 05:33:00.8, 40.42N±20.66E, h0km, ML3.7
THE 17 05:33:00.9, 40.42N±20.66E, h0km±1km, ML3.6/10, Error ellipse: s-maj=1.4km s-min=0.4km az=315.0
NEIC 17 05:33:01.6±2.0, 40.41N±0.04×20.62E±0.06, h10km±2km, mb4.3/6, Error ellipse: s-maj=7.2km s-min=6.3km az=107.0

ISC 17 05:33:01.1±0.9, 40.41N±0.01×20.65E±0.01, h5km±6km, n331, σ1s48/389, mb3.8/19, 41C-16D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.24**	**26**	Pg		**Pg**	**05 33 05.7**	**-0.1**
KBN				Sg		**Sg**	**05 33 10.6**	**+1.6**
KBN	**Korca**	**0.24**	**26**	P		**Pg**	**05 33 05.4**	**-0.4**
	baz=11							
KBN				S		**Sg**	**05 33 10.2**	**+1.2**
	baz=11							
KBN				AMP				
	comp=N,79nm,0.8s,baz=11							
KBN	**Korca**	**0.24**	**26**	P		**Pg**	**05 33 05.6**	**-0.1**
KBN				S		**Sg**	**05 33 09.3**	**+0.3**
	comp=N,20μm,0.8s							
KBN	**Korca**	**0.24**	**26**	P		**Pg**	**05 33 05.7**	**-0.1**
LSK	**Leskovik**	**0.26**	**189**	P		**Pg**	**05 33 06.0**	**-0.1**
	baz=203							
LSK				S		**Sg**	**05 33 10.9**	**+1.3**
	baz=203							
LSK				AMP				
	comp=N,499nm,0.4s,baz=203							
LSK	**Leskovik**	**0.26**	**189**	P		**Pg**	**05 33 06.2**	**0.0**
LSK				S		**Sg**	**05 33 10.4**	**+0.8**
NEST	**Nestorio**	**0.30**	**88**	P		**Pg**	**05 33 06.7**	**-0.3**
NEST				S		**Sg**	**05 33 11.5**	**+0.5**
	comp=N,11μm,0.8s							
NEST	**Nestorio**	**0.30**	**88**	P		**Pg**	**05 33 06.8**	**-0.3**
NEST				S		**Sg**	**05 33 11.7**	**+0.6**
PENT	**Pentalofos**	**0.43**	**119**	P		**Pg**	**05 33 08.7**	**-0.7**
PENT	**Pentalofos**	**0.43**	**119**	P		**Pg**	**05 33 08.7**	**-0.7**
PENT				S		**Sg**	**05 33 16.0**	**+1.0**
FNA	**Florina**	**0.67**	**55**	Pg		**Pg**	**05 33 12.6**	**-1.3**
FNA				Sg		**Sg**	**05 33 22.6**	**0.0**
FNA	**Florina**	**0.67**	**55**	P		**Pg**	**05 33 13.5**	**-0.4**
	baz=51							
FNA				S		**Sg**	**05 33 23.0**	**+0.4**
	baz=51							
FNA				AMP				
	comp=E,7.5nm,0.5s,baz=51							
FNA	**Florina**	**0.67**	**55**	P		**Pg**	**05 33 13.3**	**-0.7**
FNA				S		**Sg**	**05 33 23.4**	**+0.8**
	comp=E,5μm,0.5s							
FNA	**Florina**	**0.67**	**55**	*e*Pg		**Pg**	**05 33 13.2**	**-0.7**
FNA				*e*Sg		**Sb**	**05 33 25.8**	**+0.9**
FNA	**Florina**	**0.67**	**55**	P		**Pg**	**05 33 12.6**	**-1.3**
FNA							05 33 22.6	
FNA	**Florina**	**0.67**	**55**	⇑*i*Pg		**Pg**	**05 33 13.1**	**-0.8**
FNA				*i* Sg		**Sb**	**05 33 24.1**	**-0.9**
FNA	**Florina**	**0.67**	**55**	P		**Pg**	**05 33 13.1**	**-0.8**
FNA				S		**Sg**	**05 33 21.6**	**-1.0**
KPRO	**Kipourio**	**0.71**	**129**	P		**Pg**	**05 33 13.5**	**-1.2**
KPRO				S		**Sb**	**05 33 24.9**	**-1.2**
	comp=E,6μm,0.4s							
KPRO	**Kipourio**	**0.71**	**129**	P		**Pg**	**05 33 13.6**	**-1.2**
KPRO				S		**Sb**	**05 33 25.8**	**-0.3**
OHR	**Ohrid**	**0.71**	**9**	*e*Pg		**Pg**	**05 33 14.9**	**+0.1**
OHR				*e*Sg		**Sn**	**05 33 33.0**	**+3.6**
OHR	**Ohrid**	**0.71**	**9**	*e*P		**Pg**	**05 33 14.9**	**+0.1**
OHR	**Ohrid**	**0.71**	**9**	⇓*i*Pg		**Pg**	**05 33 15.0**	**+0.2**
OHR				*i* Sg		**Sb**	**05 33 26.4**	**+0.2**
OHR				*e*Lg		Lg	05 33 38.2	
	comp=E,3μm,0.6s							
OHR				*e*Lg		Lg	05 33 38.2	
	comp=N,1μm,0.6s							
SRN	**Sarande**	**0.73**	**224**	P		**Pg**	**05 33 14.7**	**-0.3**
	baz=228							
SRN				S		**Sb**	**05 33 26.8**	**+0.3**
	baz=228							
SRN				AMP				
	comp=E,25nm,0.4s,baz=228							
SRN	**Sarande**	**0.73**	**224**	P		**Pg**	**05 33 15.0**	**0.0**
SRN				S		**Sb**	**05 33 26.0**	**-0.5**
	comp=E,7μm,0.4s							
JAN	**Janina**	**0.77**	**168**	P		**Pg**	**05 33 15.8**	**0.0**
JAN				S		**Sb**	**05 33 27.1**	**-0.6**
	comp=E,8μm,0.4s							
JAN	**Janina**	**0.77**	**168**	P		**Pg**	**05 33 15.8**	**0.0**
JAN				S		**Sb**	**05 33 27.1**	**-0.6**
JAN	**Janina**	**0.77**	**168**	P		**Pb**	**05 33 16.7**	**-0.2**
JAN				S		**Sb**	**05 33 28.0**	**+0.3**
KASA	**Kassiopi**	**0.86**	**220**	P		**Pg**	**05 33 17.1**	**-0.4**
KASA				S		**Sb**	**05 33 30.9**	**+0.5**
VLO	**Vlora**	**0.88**	**274**	Pg		**Pg**	**05 33 17.1**	**-1.0**
VLO	**Vlora**	**0.88**	**274**	P		**Pg**	**05 33 18.1**	**+0.1**
	baz=275							
VLO				S		**Sn**	**05 33 34.8**	**+1.3**
	baz=275							
VLO				AMP				
	comp=E,45nm,0.5s,baz=275							
VLO	**Vlora**	**0.88**	**274**	P		**Pg**	**05 33 18.0**	**-0.1**
VLO				S		**Sb**	**05 33 31.1**	**0.0**
VLO	**Vlora**	**0.88**	**274**	P		**Pg**	**05 33 17.1**	**-1.0**
VLO				S		**Sb**	**05 33 31.1**	**0.0**
IGT	**Igoumenitsa**	**0.91**	**196**	P		**Pg**	**05 33 18.9**	**+0.4**
	baz=200							
IGT				S		**Sb**	**05 33 33.3**	**+1.5**
	baz=200							
IGT				AMP				
	comp=N,18nm,0.9s,baz=200							
IGT	**Igoumenitsa**	**0.91**	**196**	P		**Pg**	**05 33 18.6**	**+0.1**
IGT				S		**Sb**	**05 33 32.0**	**+0.2**
	comp=N,5μm,0.5s							
IGT	**Igoumenitsa**	**0.91**	**196**	P		**Pg**	**05 33 18.6**	**+0.1**
IGT				S		**Sb**	**05 33 33.2**	**+1.4**
KEK	**Kerkira**	**0.95**	**224**	Pg		**Pg**	**05 33 18.8**	**-0.6**
NASA	**Naoussa**	**1.10**	**78**	P		**Pg**	**05 33 21.8**	**-0.5**
TIR	**Tirane**	**1.11**	**328**	⇓P		**Pg**	**05 33 22.3**	**-0.1**
TIR				⇓S		**Sg**	**05 33 35.8**	**-1.0**
TIR	**Tirane**	**1.11**	**328**			**Pg**	**05 33 22.1**	**-0.3**
TIR	**Tirane**	**1.11**	**328**	P		**Pg**	**05 33 21.8**	**-0.6**
	baz=326							
TIR				S		**Sn**	**05 33 41.7**	**+2.5**
	baz=326							
TIR				AMP				
	comp=E,7.0nm,0.8s,baz=326							
TIR	**Tirane**	**1.11**	**328**	P		**Pg**	**05 33 21.1**	**-1.4**
TIR				S		**Sb**	**05 33 38.0**	**+0.3**
	comp=E,2μm,0.7s							
TIR	**Tirane**	**1.11**	**328**	*e*Pg		**Pg**	**05 33 21.8**	**-0.6**
TIR				*e*Sg		**Sn**	**05 33 45.5**	**+6.4**
TIR	**Tirane**	**1.11**	**328**	P		**Pg**	**05 33 21.1**	**-1.4**
TIR				S		**Sb**	**05 33 38.0**	**+0.3**
KTI	**Kastanea**	**1.12**	**90**	P		**Pg**	**05 33 21.6**	**-1.0**
PRGA	**Parga**	**1.14**	**190**	P		**Pg**	**05 33 22.9**	**0.0**
VERN	**Vergina**	**1.28**	**86**	P		**Pg**	**05 33 24.3**	**-1.3**
PHP	**Peshkopia**	**1.29**	**353**	P		**Pn**	**05 33 26.0**	**+0.1**
	baz=351							
PHP				S		**Sn**	**05 33 45.6**	**+2.1**
	baz=351							
PHP				AMP				
	comp=E,3.8nm,1.4s,baz=351							
PHP	**Peshkopia**	**1.29**	**353**	P		**Pg**	**05 33 24.7**	**-1.1**
PHP				S		**Sn**	**05 33 43.5**	**0.0**
	comp=E,1μm,1.0s							
THL	**Klokotos Trika**	**1.34**	**128**	P		**Pg**	**05 33 25.7**	**-1.2**
THL				S		**Sb**	**05 33 44.5**	**+0.2**
TYRN	**Tyrnavos**	**1.40**	**119**	P		**Pn**	**05 33 27.1**	**-0.2**
TYRN				S		**Sn**	**05 33 47.2**	**+1.0**
	comp=E,3μm,0.8s							
TYRN	**Tyrnavos**	**1.40**	**119**	P		**Pn**	**05 33 26.8**	**-0.5**
GRG	**Griva**	**1.44**	**67**	*i* Pn		**Pg**	**05 33 28.2**	**-0.5**
GRG				*e*Sg		**Sn**	**05 33 49.1**	**+1.9**
GRG	**Griva**	**1.44**	**67**	P		**Pn**	**05 33 27.4**	**-0.5**
LRSO	**Larissa Observ**	**1.52**	**118**	P		**Pn**	**05 33 28.5**	**-0.5**
SOFA	**Sofades**	**1.54**	**133**	P		**Pn**	**05 33 28.7**	**-0.5**
TSLK	**Tsoukalades, L**	**1.58**	**180**	P		**Pb**	**05 33 30.8**	**0.0**
LKD2	**Lefkada island**	**1.62**	**180**	P		**Pb**	**05 33 31.6**	**+0.1**
SKO	**Skopje**	**1.67**	**21**	*e*Pn		**Pg**	**05 33 32.8**	**-0.4**
SKO				*e*Sn		**Sg**	**05 34 00.4**	**+5.5**
SKO	**Skopje**	**1.67**	**21**	*i* Pn		**Pb**	**05 33 32.2**	**-0.2**
SKO				*e*Sg		**Sg**	**05 33 57.1**	**+2.2**
NYDR	**Nydri-Lefkada**	**1.69**	**179**	P		**Pb**	**05 33 32.5**	**-0.2**
SCTE	**Santa Cesarea**	**1.71**	**259**	Pn		**Pn**	**05 33 31.1**	**-0.4**
SCTE	**Santa Cesarea**	**1.71**	**259**	P		**Pn**	**05 33 31.4**	**-0.1**
VAY	**Valandovo**	**1.72**	**57**	*e*Pn		**Pn**	**05 33 31.6**	**-0.1**
VAY				*e*Sn		**Sg**	**05 33 56.5**	**+0.2**
VAY	**Valandovo**	**1.72**	**57**	*e*P		**Pn**	**05 33 31.6**	**-0.1**
VAY				*e*SN		**Sg**	**05 33 56.5**	**+0.2**
VAY	**Valandovo**	**1.72**	**57**	*e*Pn		**Pn**	**05 33 31.8**	**+0.1**
VAY				*e*Sg		**Sg**	**05 34 00.9**	**+4.7**
VAY				*e*Lg		Lg	05 34 02.5	
	comp=N,718nm,0.9s							
VAY				*e*Lg		Lg	05 34 07.7	
	comp=E,445nm,0.8s							
DRAG	**Dragano-Lefkad**	**1.72**	**182**	P		**Pb**	**05 33 32.8**	**-0.4**
PUK	**Puka**	**1.73**	**341**	Pn		**Pb**	**05 33 33.0**	**-0.4**
PUK	**Puka**	**1.73**	**341**	P		**Pg**	**05 33 33.8**	**-0.5**
	baz=340							
PUK				S		**Sg**	**05 33 59.6**	**+2.8**
	baz=340							
PUK				AMP				
	comp=N,4.8nm,0.8s,baz=340							
STIP	**Stip**	**1.73**	**42**	*i* Pn		**Pg**	**05 33 34.9**	**+0.6**
EVR	**Evrytania**	**1.74**	**149**	P		**Pn**	**05 33 31.9**	**-0.2**
OREA	**Oraiokastro**	**1.75**	**79**	P		**Pn**	**05 33 32.4**	**+0.2**
THE	**Thessaloniki**	**1.78**	**82**	P		**Pn**	**05 33 31.5**	**-1.0**
EVGI	**Lefkada island**	**1.78**	**180**	P		**Pb**	**05 33 33.8**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.80**	**140**	P		**Pn**	**05 33 33.6**	**+0.7**
KNT	**Kendrikon**	**1.86**	**65**	*i* Pn		**Pn**	**05 33 34.0**	**+0.3**
KNT	**Kendrikon**	**1.86**	**65**	P		**Pn**	**05 33 33.3**	**-0.4**
HORT	**Hortiatis**	**1.88**	**83**	P		**Pn**	**05 33 32.8**	**-1.2**
ULC	**Ulcinj**	**1.88**	**326**	⇑*i*Pn		**Pn**	**05 33 34.5**	**+0.5**
ULC				*i* Sn		**Sg**	**05 34 02.6**	**+1.0**
ULC	**Ulcinj**	**1.88**	**326**	*i* Pn		**Pn**	**05 33 34.9**	**+0.9**
AGG	**Agios Georgios**	**1.90**	**136**	Pn		**Pn**	**05 33 34.0**	**-0.2**
AGG	**Agios Georgios**	**1.90**	**136**	P		**Pn**	**05 33 34.0**	**-0.2**
AGG	**Agios Georgios**	**1.90**	**136**	P		**Pn**	**05 33 34.9**	**+0.7**
PVO	**Paravola**	**1.91**	**159**	P		**Pn**	**05 33 35.3**	**+1.0**
FSK	**Fiskardo**	**1.95**	**182**	P		**Pn**	**05 33 36.0**	**+1.1**
BCI	**Bajram Curri**	**2.01**	**348**	P		**Pg**	**05 33 38.8**	**-0.7**
	baz=347							
BCI				S		**Sg**	**05 34 08.7**	**+3.1**
	baz=347							
BCI				AMP				
	comp=E,5.9nm,1.0s,baz=347							
ANX	**Ano Chora**	**2.06**	**151**	P		**Pn**	**05 33 37.1**	**+0.6**
DRME	**Dracevica, Mon**	**2.09**	**329**	⇑*i*Pn		**Pn**	**05 33 37.8**	**+0.9**
DRME	**Dracevica, Mon**	**2.09**	**329**	⇑*i*Pn		**Pn**	**05 33 37.7**	**+0.9**
SOH	**Sokhos**	**2.10**	**78**	*i* Pn		**Pn**	**05 33 37.5**	**+0.5**
SOH	**Sokhos**	**2.10**	**78**	P		**Pn**	**05 33 36.7**	**-0.3**
KEF4	**Livadi, Kephal**	**2.15**	**185**	P		**Pn**	**05 33 38.4**	**+0.7**
EFP	**Efpalio**	**2.20**	**153**	P		**Pn**	**05 33 38.8**	**+0.4**
XOR	**Xorichti**	**2.21**	**117**	P		**Pn**	**05 33 38.6**	**+0.1**
VLS	**Valsamata**	**2.23**	**181**	P		**Pn**	**05 33 39.2**	**+0.5**
PVY	**Plav**	**2.25**	**347**	⇓*i*Pn		**Pn**	**05 33 40.1**	**+1.0**
PVY				*i* Sn		**Sg**	**05 34 12.6**	**-0.7**
NEO	**Neokhori**	**2.26**	**118**	P		**Pn**	**05 33 39.3**	**0.0**
PSDA	**Pessada-Kefalo**	**2.29**	**181**	P		**Pn**	**05 33 39.5**	**0.0**
BUM	**Brajici-Budva**	**2.31**	**326**	⇑*i*Pn		**Pn**	**05 33 40.4**	**+0.5**
BUM				*i* Sn		**Sb**	**05 34 13.4**	**+1.2**
SRS	**Serrai**	**2.34**	**71**	*e*Pn		**Pn**	**05 33 37.7**	**-2.6**
SRS	**Serrai**	**2.34**	**71**	P		**Pn**	**05 33 39.3**	**-1.0**
PRVS	**Prvonek**	**2.36**	**27**	*e*Pn		**Pn**	**05 33 41.2**	**+0.7**
CEME	**Cevo**	**2.50**	**329**	⇑*i*Pn		**Pn**	**05 33 43.0**	**+0.4**
CEME				*i* Sn		**Sb**	**05 34 17.8**	**0.0**
IVA	**Berane**	**2.53**	**347**	⇑*i*Pn		**Pb**	**05 33 45.5**	**-1.5**
IVA				*i* Sn		**Sb**	**05 34 19.5**	**+1.0**
OUR	**Ouranopolis**	**2.54**	**91**	P		**Pn**	**05 33 42.2**	**-0.9**
BARS	**Barje**	**2.56**	**20**	*e*Pn		**Pn**	**05 33 43.6**	**+0.3**
KOME	**Kolasin**	**2.58**	**341**	⇑*i*Pn		**Pn**	**05 33 44.8**	**+1.1**
KOME				*i* Sn		**Sb**	**05 34 20.6**	**+0.4**
GUR	**Goura**	**2.80**	**151**	P		**Pn**	**05 33 47.0**	**+0.3**
SELS	**Selova**	**2.83**	**7**	*e*Pn		**Pn**	**05 33 49.3**	**+2.2**
THAL	**Thalero**	**2.84**	**146**	P		**Pn**	**05 33 48.4**	**+1.4**
TREB	**Trebinje**	**2.88**	**324**	*e*Pn		**Pn**	**05 33 47.5**	**-0.2**
TREB	**Trebinje**	**2.88**	**324**	*e*Pn		**Pn**	**05 33 47.0**	**-0.7**
SJES	**Sjenica**	**2.90**	**350**	*e*Pn		**Pb**	**05 33 51.4**	**-1.9**
SJES				*e*Sn		**Sb**	**05 34 30.1**	**+1.0**
SJES	**Sjenica**	**2.90**	**350**	*e*Pn		**Pn**	**05 33 49.9**	**+1.9**
DBRK	**Dubrovnik**	**2.94**	**321**	*e*Pn		**Pn**	**05 33 47.6**	**-0.9**
VTS	**Vitosha**	**2.94**	**40**	*e*Pn		**Pn**	**05 33 48.1**	**-0.6**
BRY	**Bratogost**	**2.95**	**328**	⇑*i*Pn		**Pn**	**05 33 49.7**	**+0.9**
BRY				*i* Sn		**Sb**	**05 34 29.0**	**-1.8**
BRY	**Bratogost**	**2.95**	**328**	*e*Pn		**Pn**	**05 33 49.1**	**+0.3**
LTK	**Loutraki**	**2.98**	**142**	P		**Pn**	**05 33 49.4**	**+0.3**
VILZ	**Platees**	**2.99**	**135**	P		**Pn**	**05 33 49.4**	**+1.2**
MATE	**Matera**	**3.02**	**276**	⇑P		**Pn**	**05 33 48.7**	**-1.8**
MATE				⇓S		**Sn**	**05 34 22.5**	**-3.6**
PLE	**Pljevlja**	**3.07**	**343**	⇓*i*Pn		**Pn**	**05 33 51.6**	**+1.2**
PLE				*i* Sn		**Sb**	**05 34 32.2**	**-1.9**
UPM	**Unac-Piva**	**3.08**	**336**	⇓*i*Pn		**Pn**	**05 33 51.8**	**+1.1**
UPM				*i* Sn		**Sb**	**05 34 32.6**	**-2.0**
UPM	**Unac-Piva**	**3.08**	**336**	⇑*i*Pn		**Pn**	**05 33 52.5**	**+1.8**
THAS	**Thassos island**	**3.11**	**85**	P		**Pn**	**05 33 49.3**	**-1.5**
IVAS	**Ivanjica**	**3.19**	**353**	*e*Pn		**Pn**	**05 33 52.0**	**0.0**
KYMI	**Kymi, Euboea I**	**3.20**	**122**	P		**Pn**	**05 33 51.9**	**-0.2**
ZAPS	**Zavoj**	**3.22**	**27**	*e*Pn		**Pn**	**05 33 53.4**	**+0.9**
TIP	**Timpagrande**	**3.24**	**249**	⇓P		**Pn**	**05 33 53.0**	**+0.3**
TIP	**Timpagrande**	**3.24**	**249**	Pn		**Pn**	**05 33 51.7**	**-1.1**
STON	**Ston**	**3.31**	**319**	*e*Pn		**Pn**	**05 33 53.2**	**-0.4**
STON				*e*Sn		**Sn**	**05 34 36.7**	**+3.4**
STON	**Ston**	**3.31**	**319**	*e*Pn		**Pn**	**05 33 52.8**	**-0.8**
STON	**Ston**	**3.31**	**319**	⇑*i*Pn		**Pn**	**05 33 52.4**	**-1.2**
BOVS	**Bovan**	**3.32**	**13**	⇑P		**Pb**	**05 33 58.3**	**-2.1**
BOVS	**Bovan**	**3.32**	**13**	*e*Pn		**Pn**	**05 33 53.2**	**-0.5**
RUDO	**Rudo**	**3.35**	**344**	⇑*i*Pn		**Pn**	**05 33 54.3**	**+0.2**
PTL	**Penteli**	**3.43**	**132**	P		**Pn**	**05 33 55.7**	**+0.4**
DION	**Dionisos Attik**	**3.45**	**131**	P		**Pn**	**05 33 55.6**	**+0.1**
NEVS	**Nevesinje**	**3.46**	**327**	*e*Pn		**Pn**	**05 33 57.2**	**+1.5**
GRUS	**Gruza**	**3.48**	**1**	*e*Pn		**Pn**	**05 33 57.5**	**+1.6**
LIA	**Limnos Island**	**3.51**	**97**	P		**Pn**	**05 33 56.3**	**0.0**
VLY	**Voula,Athens**	**3.53**	**135**	P		**Pn**	**05 33 56.5**	**-0.1**
BLKB	**Belogradchik**	**3.55**	**24**	⇑P		**Pb**	**05 34 02.5**	**-1.9**
BBLS	**Lazići**	**3.58**	**345**	*e*Pn		**Pn**	**05 33 59.2**	**+1.8**
BBLS	**Lazići**	**3.58**	**345**	*e*Pn		**Pn**	**05 33 57.8**	**+0.4**
ZAGS	**Zajecar**	**3.60**	**19**	*e*Pn		**Pn**	**05 33 58.2**	**+0.6**
PYL	**PYLOS**	**3.61**	**166**	P		**Pn**	**05 33 58.6**	**+0.9**
LSTV	**Lastovo**	**3.68**	**311**	*e*Pn		**Pn**	**05 33 56.8**	**-1.8**
DIVS	**Divibare**	**3.72**	**353**	*e*Pn		**Pn**	**05 34 00.6**	**+1.3**
CUC	**Castrocucco**	**3.73**	**265**	Pn		**Pn**	**05 33 59.9**	**+0.5**
CUC	**Castrocucco**	**3.73**	**265**	P		**Pn**	**05 33 59.7**	**+0.4**
RDO	**Rodhopi**	**3.78**	**77**	P		**Pn**	**05 33 59.4**	**-0.6**
TRUS	**Trudelj**	**3.82**	**357**	*e*Pn		**Pn**	**05 34 02.8**	**+2.2**
HAPS	**Han Pijesak,BI**	**3.89**	**342**	*e*Pn		**Pn**	**05 34 02.4**	**+0.8**
HAPS	**Han Pijesak,BI**	**3.89**	**342**	⇑*i*Pn		**Pn**	**05 34 02.3**	**+0.7**
SGRT	**San Giovanni R**	**3.95**	**292**			**Pn**	**05 34 01.7**	**-0.7**
MAKA	**Makarska**	**3.96**	**318**	*e*Pn		**Pn**	**05 34 01.8**	**-0.6**
RICI	**Ricice**	**4.05**	**321**	*e*Pn		**Pn**	**05 34 02.9**	**-0.9**
PLVB	**Pleven**	**4.20**	**44**	⇓P		**Pb**	**05 34 11.6**	**-3.9**
TEKS	**Tekeris**	**4.22**	**349**	*e*Pn		**Pn**	**05 34 05.9**	**-0.3**
TEKS	**Tekeris**	**4.22**	**349**	*e*Pn		**Pn**	**05 34 05.1**	**-1.1**
CEL	**Celeste**	**4.27**	**241**			**Pn**	**05 34 06.2**	**-0.6**
MDVR	**Moldovita**	**4.44**	**10**	⇑P		**Pn**	**05 34 13.8**	**+4.6**
DJES	**Djerdap**	**4.47**	**17**			**Pn**	**05 34 08.7**	**-0.9**
HERR	**Herculane**	**4.66**	**16**	⇑P		**Pn**	**05 34 16.0**	**+3.9**
PAOL	**Paolisi**	**4.67**	**280**	Pn		**Pn**	**05 34 11.7**	**-0.6**
KIJV	**Kijevo**	**4.78**	**320**	*e*Pn		**Pn**	**05 34 13.6**	**-0.2**
FRGS	**Fruska Gora**	**4.79**	**353**	⇑P		**Pn**	**05 34 16.5**	**+2.6**
FRGS	**Fruska Gora**	**4.79**	**353**	*e*Pn		**Pn**	**05 34 14.0**	**+0.1**
FRGS	**Fruska Gora**	**4.79**	**353**	*e*Pn		**Pn**	**05 34 12.9**	**-1.0**
MGRS	**Mrkonjic Grad**	**4.80**	**328**	⇑*i*Pn		**Pn**	**05 34 15.7**	**+1.6**
ZIRJ	**Zirje**	**4.94**	**313**	*e*Pn		**Pn**	**05 34 15.0**	**-1.0**
BLY	**Banja Luka**	**5.04**	**331**	⇑*i*Pn		**Pn**	**05 34 16.4**	**-0.9**
MORI	**Morici**	**5.04**	**315**	*e*Pn		**Pn**	**05 34 16.7**	**-0.7**
APE	**Apeiranthos**	**5.07**	**130**	*i* P		**Pn**	**05 34 17.5**	**-0.3**
A050A	**Klekovaca**	**5.09**	**325**	⇑*i*Pn		**Pn**	**05 34 18.0**	**-0.1**
GZR	**Gura Zlata**	**5.22**	**17**	⇓P		Pn	05 34 24.5	+4.6
BZS	**Buzias**	**5.25**	**7**	⇑P		**Pn**	**05 34 23.5**	**+3.2**
BZS	**Buzias**	**5.25**	**7**	*e*Pn		**Pn**	**05 34 21.0**	**+0.7**
BZS	**Buzias**	**5.25**	**7**	P		**Pn**	**05 34 23.5**	**+3.2**
INTR	**Introdacqua**	**5.33**	**290**	Pn		**Pn**	**05 34 20.5**	**-1.0**
A051A	**Mrakovica**	**5.37**	**330**	⇑*i*Pn		**Pn**	**05 34 21.6**	**-0.3**
SURR	**Surduc**	**5.45**	**11**	⇓P		Pn	05 34 27.7	+4.6
UDBI	**Udbina**	**5.48**	**320**	*i* Pn		**Pn**	**05 34 24.0**	**+0.5**
DUGI	**Dugi Otok**	**5.49**	**313**	*e*Pn		**Pn**	**05 34 22.6**	**-0.9**
LOT	**Lotru**	**5.53**	**23**	⇓P		Pn	05 34 28.9	+4.7
VAE	**Valgurarnera**	**5.67**	**241**	Pn		**Pn**	**05 34 29.2**	**+3.1**
	comp=E,0.6nm,0.3s,baz=120,slow=11,SNR=1.6							
VAE				Sn		**Sn**	**05 35 35.4**	**+3.7**
	comp=E,1.1nm,0.3s,baz=31,slow=18,SNR=2.8							
	comp=E,5.4nm,0.6s							
VIRC	**Vir**	**5.68**	**315**	*e*Pn		**Pn**	**05 34 25.2**	**-0.9**
ARR	**Arges**	**5.75**	**29**	⇑P		Pn	05 34 33.7	+6.5
CAMP	**Campotosto**	**5.84**	**294**	Pn		**Pn**	**05 34 28.2**	**-0.3**
RAFF	**Raffo Rosso**	**5.85**	**239**	Pn		**Pn**	**05 34 26.6**	**-1.9**
SIRR	**Siria**	**5.90**	**7**	⇑P		**Pn**	**05 34 33.2**	**+4.0**
NVLJ	**Novalja**	**5.96**	**316**	*e*Pn		**Pn**	**05 34 29.0**	**-0.9**
VOIR		**5.97**	**31**	⇓P		Pn	05 34 35.0	+4.7
VOIR		**5.97**	**31**	P		Pn	05 34 35.0	+4.7
MORH	**Mrgy, Hungar**	**5.99**	**347**	⇑P		**Pn**	**05 34 32.6**	**+2.2**
GUMA	**Gualdo di Mace**	**6.08**	**298**			**Pn**	**05 34 30.9**	**-0.8**
RABC	**Rab**	**6.13**	**317**	*e*Pn		**Pn**	**05 34 31.4**	**-0.9**
NRCA	**Norcia**	**6.15**	**296**			**Pn**	**05 34 32.3**	**-0.4**
MLR	**Muntele Rosu**	**6.39**	**36**	⇓P		Pn	05 34 42.3	+6.3
MLR	**Muntele Rosu**	**6.39**	**36**			**Pn**	**05 34 35.4**	**-0.7**
MLR	**Muntele Rosu**	**6.39**	**36**	P		**Pn**	**05 34 35.4**	**-0.7**
MLR	**Muntele Rosu**	**6.39**	**36**	Pn		**Pn**	**05 34 33.2**	**-2.9**
	comp=E,0.4nm,0.3s,baz=236,slow=9.9,SNR=3.6							
MLR				Sn		**Sn**	**05 35 49.0**	**-0.5**
	baz=109,slow=14,SNR=2.1							
	comp=E,0.9nm,0.7s							
CESX	**Cesi**	**6.45**	**293**			**Pn**	**05 34 36.2**	**-0.5**
BOJS	**Bojanci**	**6.45**	**324**	*e*Pn		**Pn**	**05 34 36.2**	**-0.5**
BOJS				*e*Sn		**Sn**	**05 35 48.6**	**-2.2**
BOJS				IAML			05 37 16.1	
	comp=Z,287nm,3.4s							
BOJS	**Bojanci**	**6.45**	**324**	⇑*i*Pn		**Pn**	**05 34 36.1**	**-0.6**
KALN	**Kalnik**	**6.49**	**333**	*e*Pn		**Pn**	**05 34 36.4**	**-0.9**
MARR	**Marisel-Cluj**	**6.52**	**15**	⇓P		Pn	05 34 42.6	+4.8
DOPR	**Dopca**	**6.55**	**30**	⇑P		Pn	05 34 43.5	+5.4
DRGR		**6.55**	**12**	⇑P		Pn	05 34 42.9	+4.7
DRGR		**6.55**	**12**	P		Pn	05 34 42.9	+4.7
CRES	**Cresnjev**	**6.62**	**327**	⇑*i*Pn		**Pn**	**05 34 38.0**	**-1.0**
LOBO	**Lobor**	**6.65**	**331**	*e*Pn		**Pn**	**05 34 38.4**	**-1.1**
MURB	**Monte Urbino**	**6.71**	**298**			**Pn**	**05 34 40.0**	**-0.3**
BISRR	**Bisoca

DAVA Damuels 10.38 315 *i* Pn **Pn** **05 35 30.0 -0.7**
comp=Z,5.4nm,0.6s
DAVA *i* Sn **Sn** **05 37 24.2 -3.2**
comp=Z,4.4nm,0.7s
SENIN Lac Senin/Sane 11.39 306 **Pn** **05 35 44.4 -0.2**
MMAI Mount Meron Ar 13.93 117 Pn **Pn** **05 36 20.8 +1.5**
comp=Z,0.9nm,0.3s,baz=311,slow=12,SNR=6.0
comp=Z,0.6nm,0.4s
SOC Sochi 14.53 71 *e*P **Pn** **05 36 23.9 -3.4**
SOC *e* 05 39 05.7
SOC pmax pmax
comp=Z,4.0nm,0.4s
SOC MLR MLR
comp=Z,90nm,17.0s
MNK Minsk 14.91 17 *i* P **Pn** **05 36 28.4 -4.1**
comp=E,1.0nm,0.4s,baz=17
MNK *i* P **Pn** **05 36 28.4 -4.1**
comp=N,14nm,1.0s,baz=17
MNK *i* P **Pn** **05 36 28.4 -4.1**
comp=Z,4.0nm,0.6s,baz=17
MNK *i* PP **P** **05 36 36.4 -1.9**
baz=17
MNK *i* PPP PPP 05 36 44.1
baz=17
MNK *i* S **Sn** **05 39 14.8 -3.2**
baz=17
MNK *i* SS **SnSn** **05 39 28.7 -1.9**
baz=17
MNK *i* SSS SSS 05 39 41.3
baz=17
MNK *i* LQ LQ 05 40 51.4
baz=17
MNK *i* LR LR 05 41 59.6
baz=17
MNK *i* LRM MLR 05 42 53.8
comp=E,53nm,15.2s,baz=17
MNK *i* LRM MLR 05 42 53.8
comp=Z,43nm,8.4s,baz=17
MNK *i* LRM MLR 05 42 56.9
comp=N,35nm,7.7s,baz=17
MNK Minsk 14.91 17 *i* P **Pn** **05 36 28.3 -4.1**
MNK *i* S **Sn** **05 39 14.8 -3.2**
MNK pmax pmax
comp=N,14nm,1.0s
MNK pmax pmax
comp=Z,4.0nm,0.6s
MNK pmax pmax
comp=E,1.0nm,0.4s
MNK MLR MLR
comp=Z,43nm,8.0s
MNK MLR MLR
comp=N,35nm,8.0s
MNK MLR MLR
comp=E,53nm,15.0s
ZFRI Zfri 15.37 125 P **P** **05 36 43.1 -0.3**
PRNI Paran 15.40 126 P **P** **05 36 43.4 -0.4**
EIL Elat 15.85 128 Pn **Pn** **05 36 45.1 +0.1**
comp=E,0.3nm,0.3s,baz=313,slow=15,SNR=2.1
comp=E,3.2nm,0.9s
AQBJ Aqaba 15.87 128 P P 05 36 56.4 +7.4
OBN Obninsk 18.12 30⇑ *e*P **Pn** **05 37 12.7 -0.7**
OBN pmax pmax
comp=Z,7.0nm,0.4s
OBN MLR MLR
comp=Z,82nm,16.0s
GNI Garni 18.38 83 *i* P **Pn** **05 37 16.9 +0.1**
VSU Vasula 18.48 10 *i* P **P** **05 37 16.8 -0.9**
ESDC Sonseca Array 18.85 276 P **Pn** **05 37 22.8 +0.3**
baz=75,slow=11,SNR=10
comp=Z,2.2nm,0.8s
PAB San Pablo 19.17 276 P **P** **05 37 26.0 +0.5**
PAB San Pablo 19.17 276 P **P** **05 37 26.0 +0.5**
PAB pmax pmax
comp=Z,15nm,1.4s
HFS Hagfors 20.22 350 P **P** **05 37 35.5 -1.2**
comp=Z,1.2nm,0.4s,baz=162,slow=11,SNR=16
comp=Z,1.2nm,0.4s
FINES FINESS Array B 21.32 7 P **P** **05 37 46.9 -1.7**
comp=Z,1.6nm,0.5s,baz=163,slow=9.3,SNR=10.0
comp=Z,1.6nm,0.5s
NAO01 NORSAR Array S 21.33 347 P **P** **05 37 48.6 -0.2**
NAO01 IAmb IAmb 05 37 57.7
comp=Z,15nm,1.1s
NC405 NORSAR Array S 21.45 348 P **P** **05 37 50.0 -0.1**
NB2 NORSAR Subarra 21.46 347 P **P** **05 37 49.7 -0.5**
comp=Z,5.7nm,0.8s,baz=158,slow=9.3
NOA NORSAR Array B 21.46 347 P **P** **05 37 48.7 -1.4**
comp=Z,0.9nm,0.6s,baz=159,slow=9.6,SNR=4.3
comp=Z,0.9nm,0.6s
MDT Midelt 21.60 257 P **P** **05 37 54.4 +2.4**
comp=Z,4.0nm,0.9s,baz=89,slow=11,SNR=7.5
comp=Z,4.0nm,0.9s
EKA Eskdalemuir Ar 21.71 321 P **P** **05 37 51.8 -1.0**
comp=Z,1.4nm,0.8s,baz=121,slow=11,SNR=4.7
comp=Z,1.4nm,0.8s
BELG Belogornoye 21.98 48 *i* P **P** **05 37 56.2 +0.4**
BELG pmax pmax
comp=Z,2.0nm,1.3s
BELG Belogornoye 21.98 48 P **P** **05 37 54.9 -0.9**
comp=Z,7.7nm,1.1s,baz=211,slow=5.9,SNR=2.6
comp=Z,7.7nm,1.1s
KLMR Klimovskoe 23.54 23 *e*P **P** **05 38 09.7 -2.3**
KLMR pmax pmax
comp=Z,23nm,2.1s
KIRV Kirov 25.76 35 *i* P **P** **05 38 30.5 -1.9**
ARCES ARCESS Array B 29.30 3 P **P** **05 39 04.1 -0.1**
comp=Z,2.1nm,0.8s,baz=183,slow=11,SNR=1.4
comp=Z,2.1nm,0.8s
TORD Torodi Ar. Bea 31.85 217 P **P** **05 39 29.7 +2.6**
comp=Z,9.7nm,0.7s,baz=36,slow=11,SNR=1.5
ATD Arta Tunnel 34.80 140 LR LR 05 55 20.0
comp=Z,6.5nm,18.9s,baz=152,slow=38
BRVK Borovoye 35.58 52 P **P** **05 40 00.3 +1.1**
BRVK IAmb IAmb 05 40 11.0
comp=Z,2.1nm,0.8s
BRVK Borovoye 35.58 52 P **P** **05 40 00.3 +1.1**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 35.64 52 P **P** **05 40 00.1 +0.3**
comp=Z,0.2nm,0.3s,baz=269,slow=9.7,SNR=1.6
comp=Z,0.2nm,0.3s
MKAR Makanchi Array 44.08 60 P **P** **05 41 09.2 -0.8**
comp=Z,1.2nm,0.8s,baz=284,slow=7.5,SNR=9.2
MKAR PcP **PP** **05 42 54.1 +1.6**
comp=Z,1.1nm,0.8s,baz=276,slow=4.6,SNR=3.7
comp=Z,1.2nm,0.8s
SCHQ Schefferville 56.91 316 P **P** **05 42 47.3 +0.4**
comp=Z,1.1nm,0.7s,baz=112,slow=5.4,SNR=1.5
comp=Z,1.1nm,0.7s
SONM Songino Array 58.98 52 P **P** **05 42 59.9 -1.8**
comp=Z,0.6nm,0.8s,baz=325,slow=7.2,SNR=3.0
comp=Z,0.6nm,0.8s
ZEA Zeya 67.06 38 *e*P P 05 43 45.8 -9.3
CMAR Chiang Mai Arr 69.50 83 P **P** **05 44 10.8 -0.1**
comp=Z,0.7nm,0.3s,baz=289,slow=5.6,SNR=1.8
comp=Z,0.7nm,0.3s
YKA Yellowknife Ar 71.33 340 P **P** **05 44 21.8 +0.3**
comp=Z,0.5nm,1.0s,baz=28,slow=6.4,SNR=4.9
comp=Z,0.5nm,1.0s
ULM Lac du Bonnet 73.97 323 P **P** **05 44 38.1 +0.8**
comp=Z,1.0nm,0.6s,baz=76,slow=2.2,SNR=2.3
comp=Z,1.0nm,0.6s
ILAR Eielson Array 74.70 354 P **P** **05 44 41.7 +0.3**
comp=Z,0.4nm,0.8s,baz=1.9,slow=3.4,SNR=5.8
comp=Z,0.4nm,0.8s
JOW Kunigami 85.22 59 LR LR 06 29 42.3
comp=Z,178nm,19.0s,baz=18,slow=40
PDAR Pinedale Array 85.77 326 P **P** **05 45 43.1 +1.4**
comp=Z,0.1nm,0.5s,baz=36,slow=7.8,SNR=1.6
comp=Z,0.1nm,0.5s
ELIB Princess Elisa 112.07 179 *d*PP **PP** **05 52 20.2 -1.1**
ASAR Alice Springs 122.28 95 PKP **PKPdf** **05 51 55.9 -1.6**
comp=Z,0.3nm,0.7s,baz=301,slow=1.5,SNR=2.7

IDC **17** *05:41:34.4±1.5,3.00N×127.66E,h0km,mb3.6/5, mbtmp3.7/5,MS3.8/1,Error ellipse: s-maj=146.6km s-min=19.3km az=66.0,Northern Molucca Sea*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.72**	**164**	P	P	05 46 48.5	+0.2
	1.9nm,0.8s,baz=343,slow=10,SNR=19						
WRA				LR	LR	05 56 19.2	
	comp=Z,239nm,21.7s,baz=352,slow=37						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**27.19**	**167**	P	P	05 47 20.4	+0.4
	0.2nm,0.5s,baz=350,slow=7.6,SNR=5.2						
ASAR				PcP	PcP	05 50 38.8	-1.8
	0.2nm,0.5s,baz=347,slow=2.2,SNR=5.5						
	0.2nm,0.5s						
STKA	**Stephens Creek**	**37.13**	**160**	P	P	05 48 46.8	-0.1
	0.8nm,0.4s,baz=339,slow=9.4,SNR=4.0						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**58.68**	**325**	P	P	05 51 34.4	+0.6
	0.3nm,0.4s,baz=104,slow=7.3,SNR=8.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.85**	**327**	P	P	05 52 01.8	-0.2
	0.4nm,0.5s,baz=126,slow=6.0,SNR=6.5						
	0.4nm,0.5s						

NEIC **17** *05:45:23.0±0.3,35.982N±0.006×97.81W±0.02,h3km±6km, Error ellipse: s-maj=2.0km s-min=0.6km az=68.0*
TUL 17 05:45:23.5±0.4,35.99N±0.01×97.80W±0.02,h7km±6km, ML2.7,mb_Lg2.1/13(NEIC),ML2.5/42(NEIC),Error ellipse: s-maj=1.9km s-min=1.8km az=64.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.34**	**124**	Pg	Pg	05 45 30.2	+0.1
ADOK	**Arcadia Dam**	**0.48**	**134**		Pg	05 45 32.8	-0.1
CROK	**Carrier**	**0.54**	**344**		Pg	05 45 33.7	-0.2
CROK				IAML		05 45 41.7	
	comp=E,478nm,0.3s						
CROK				IAML		05 45 45.4	
	comp=N,364nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.65**	**153**		Pg	05 45 35.7	-0.4
OKCSW				IAML		05 45 45.2	
	comp=E,164nm,0.1s						
CSTR	**Hydro, Custer**	**0.80**	**245**		Pg	05 45 38.7	-0.2
FNO	**Franklin**	**0.80**	**156**	Pg	Pg	05 45 38.5	-0.4
FNO				IAML		05 45 50.5	
	comp=E,165nm,0.1s						
OK052	**Battle Ridge R**	**0.81**	**89**		Pg	05 45 38.9	-0.1
OK048	**Pawnee Station**	**0.82**	**58**		Pg	05 45 38.9	-0.3
GC02	**Grant County #**	**0.86**	**357**		Pg	05 45 39.6	-0.5
OK032	**Salt Plains WL**	**0.88**	**338**		Pg	05 45 39.9	-0.6
OK032				IAML		05 45 52.4	
	comp=E,265nm,0.2s						
OK038	**West end E0370**	**0.91**	**303**		Pg	05 45 40.3	-0.6
QUOK	**Quay**	**0.91**	**78**	Pg	Pg	05 45 40.5	-0.4
QUOK				IAML		05 45 55.3	
	comp=N,132nm,0.3s						
QUOK				IAML		05 45 56.5	
	comp=E,119nm,0.2s						
BLOK	**Blackwell**	**0.91**	**31**	Pg	Pg	05 45 40.6	-0.3
OK051	**E0350 and S346**	**0.94**	**56**		Pg	05 45 41.2	-0.3
OK051				IAML		05 45 56.4	
	comp=E,155nm,0.2s						
OK051				IAML		05 46 00.8	
	comp=E,182nm,0.2s						
KAN14	**Manchester OK**	**0.98**	**352**	Pg	Pg	05 45 41.6	-0.6
KAN14				IAML		05 45 58.4	
	comp=E,177nm,0.1s						
KAN14				IAML		05 45 59.3	
	comp=N,140nm,0.1s						
U32A	**Winter Ranch,**	**1.05**	**292**		Pg	05 45 42.8	-0.8
U32A				IAML		05 45 58.6	
	comp=N,127nm,0.1s						
U32A				IAML		05 45 59.0	
	comp=E,142nm,0.1s						
KAN17	**Caldwell West**	**1.05**	**2**		Pg	05 45 43.1	-0.6
KAN17				IAML		05 46 02.9	
	comp=E,201nm,0.2s						
KAN13	**South Haven SW**	**1.06**	**14**	Pg	Pg	05 45 43.2	-0.5
KAN13				IAML		05 46 04.6	
	comp=E,200nm,0.2s						
KAN05	**Bluff City Nor**	**1.12**	**357**		Pg	05 45 44.3	-0.7
W35A	**Tecumseh**	**1.12**	**137**		Pg	05 45 44.1	-0.9
W35A				IAML		05 46 01.5	
	comp=N,116nm,0.3s						
W35A				IAML		05 46 03.4	
	comp=E,92nm,0.2s						
KAN09	**Caldwell North**	**1.16**	**7**		Pg	05 45 44.9	-0.9
KAN01	**Argonia South**	**1.17**	**2**		Pg	05 45 45.1	-0.8
KAN06	**Argonia West S**	**1.26**	**358**		Pn	05 45 46.8	-0.7
X34A	**Smith Ranch, M**	**1.38**	**181**		Pn	05 45 49.2	0.0
T35A	**Sooner Cattle**	**1.39**	**48**		Pn	05 45 49.2	-0.1
WMOK	**Wichita Mounta**	**1.48**	**213**		Pn	05 45 50.1	-0.5
TUL3	**Leonard**	**1.63**	**92**		Pn	05 45 52.8	+0.1
TUL3				IAmb_Lg		05 46 16.3	
	comp=Z,12nm,0.7s						
WTFS	**Witchita Falls**	**2.28**	**194**	IAmb_Lg		05 46 41.1	
	comp=Z,10nm,1.2s						
R32A	**Long Quarter,**	**2.54**	**344**	IAmb_Lg		05 46 50.3	
	comp=Z,6.0nm,1.0s						
U38A	**Gravette**	**2.80**	**80**	IAmb_Lg		05 46 51.9	
	comp=Z,6.3nm,1.1s						
POST	**Post**	**4.22**	**227**	IAmb_Lg		05 47 42.1	
	comp=Z,4.9nm,0.9s						
CCM	**Cathedral Cave**	**5.64**	**67**	IAmb_Lg		05 48 25.6	
	comp=Z,4.1nm,0.8s						
Q24A	**Divide**	**6.55**	**299**	IAmb_Lg		05 49 05.0	
	comp=Z,1.9nm,0.8s						

IDC **17** *06:11:31.7±3.8,3.65S×144.38E,h90km±36km,mb3.6/11, mbtmp3.9/13,MS3.9/14,Error ellipse: s-maj=31.5km s-min=19.5km az=90.0*
ISC 17 06:11:24.4±0.7,3.60S±0.09×144.5E±0.2,h26km,n31, σ0.80/16,mb3.9/11,MS3.9/11,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.35**	**155**	P	Pn	06 13 02.9	+6.5
	20nm,0.6s,baz=354,slow=7.8,SNR=8.6						
PMG				S	**Sn**	**06 14 08.2**	**+0.1**
	20nm,0.8s,baz=130,slow=6.5,SNR=1.5						
PMG				LR	LR	06 15 54.6	
	comp=Z,2μm,22.0s,baz=338,slow=41						
CTA	**Charters Tower**	**16.48**	**174**	LR	LR	06 22 00.9	
	comp=Z,208nm,21.2s,baz=4.5,slow=38						
GUMO	**Guam**	**17.08**	**1**	LR	LR	06 21 44.4	
	comp=Z,238nm,19.1s,baz=174,slow=36						
WRA	**Warramunga Arr**	**19.02**	**211**	P	**Pn**	**06 15 45.9**	**+0.6**
	3.9nm,0.8s,baz=32,slow=13,SNR=18						
DAV	**Davao City (W)**	**21.64**	**299**	LR	LR	06 24 28.7	
	comp=Z,159nm,18.5s,baz=87,slow=36						
ASAR	**Alice Springs**	**22.41**	**206**	P	**P**	**06 16 22.1**	**+0.9**
	1.9nm,0.9s,baz=32,slow=9.7,SNR=15						
ASAR				LR	LR	06 25 53.6	
	comp=Z,931nm,21.3s,baz=34,slow=39						
	1.9nm,0.9s						
STKA	**Stephens Creek**	**28.26**	**185**	LR	LR	06 30 21.5	
	comp=Z,325nm,19.8s,baz=357,slow=40						
TGY	**Tagaytay City**	**29.23**	**307**	LR	LR	06 30 23.3	
	comp=Z,89nm,18.6s,baz=262,slow=39						
H11S3	**WAKE ISLAND Hy**	**30.99**	**44**	T	T	06 50 06.1	
	baz=227,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**31.00**	**44**	T	T	06 50 05.2	
	baz=227,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**31.01**	**44**	T	T	06 50 06.1	
	baz=227,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**31.97**	**43**	T	T	06 51 16.3	
	baz=226,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**31.98**	**43**	T	T	06 51 20.2	
	baz=226,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**31.98**	**43**	T	T	06 51 16.3	
	baz=226,slow=76,SNR=42						
NWAO	**Narrogin (SRO)**	**38.74**	**218**	LR	LR	06 33 35.7	
	comp=Z,208nm,21.6s,baz=312,slow=34						
KSRS	**Korea Array**	**43.65**	**341**	P	**P**	**06 19 27.6**	**+0.7**
	1.2nm,0.7s,baz=167,slow=7.8,SNR=3.9						
	1.2nm,0.7s						
URZ	**Urewera**	**45.56**	**144**	LR	LR	06 39 59.9	
	comp=Z,126nm,18.0s,baz=312,slow=38						
ASAJ	**Asahikawa**	**47.53**	**358**	LR	LR	06 39 42.3	
	comp=Z,47nm,20.2s,baz=137,slow=36						
CMAR	**Chiang Mai Arr**	**49.92**	**298**	P	**P**	**06 20 15.1**	**-1.2**
	0.7nm,0.3s,baz=128,slow=6.6,SNR=5.1						
	0.7nm,0.3s						
PETK	**Petropavlovsk-**	**57.59**	**9**	P	**P**	**06 21 12.5**	**+0.7**
	3.6nm,0.7s,baz=182,slow=6.6,SNR=3.4						
PETK				LR	LR	06 41 14.4	
	comp=Z,38nm,20.4s,baz=182,slow=31						
	3.6nm,0.7s						
SONM	**Songino Array**	**61.11**	**332**	P	**P**	**06 21 37.7**	**+1.2**
	0.6nm,0.9s,baz=121,slow=6.9,SNR=2.4						
SONM				LR	LR	06 46 30.1	
	comp=Z,98nm,21.6s,baz=90,slow=34						
	0.6nm,0.9s						
SHEM	**Shemya Is, Ala**	**61.44**	**20**	LR	LR	06 43 34.6	
	comp=Z,180nm,19.9s,baz=172,slow=31						
MKAR	**Makanchi Array**	**74.06**	**321**	P	**P**	**06 22 57.5**	**-0.7**
	0.7nm,1.0s,baz=94,slow=5.9,SNR=3.2						
	0.7nm,1.0s						
ZALV	**Zalesovo Beam**	**75.66**	**328**	P	**P**	**06 23 07.3**	**+0.1**
	1.1nm,0.7s,baz=129,slow=6.3,SNR=5.5						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**77.82**	**323**	P	**P**	**06 23 19.2**	**-0.3**
	0.6nm,0.9s,baz=112,slow=5.0,SNR=2.8						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**83.37**	**324**	P	**P**	**06 23 49.3**	**+0.1**
	0.6nm,0.4s,baz=116,slow=6.8,SNR=7.0						
	0.6nm,0.4s						
ILAR	**Eielson Array**	**84.29**	**24**	P	**P**	**06 23 52.9**	**-0.8**
	0.8nm,0.9s,baz=246,slow=5.7,SNR=6.9						
	0.8nm,0.9s						
QSPA	**South Pole Qui**	**86.35**	**180**	P	**P**	**06 24 03.4**	**-0.7**
	1.6nm,0.6s,baz=83,slow=3.8,SNR=9.6						
QSPA				LR	LR	07 01 58.3	
	comp=Z,117nm,20.7s,baz=340,slow=35						
	1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**142.03**	**287**	PKP	**PKPdf**	**06 30 54.0**	**-1.2**
	0.2nm,0.5s,baz=112,slow=1.6,SNR=1.2						
CPUP	**Villa Florida**	**143.52**	**146**	PKP	**PKPdf**	**06 30 57.8**	**+0.2**
	1.4nm,1.0s,baz=315,slow=2.9,SNR=1.3						
SDV	**Santo Domingo**	**144.72**	**80**	PKP	**PKPab**	**06 30 59.1**	**+0.1**
	2.5nm,0.9s,baz=180,slow=5.1,SNR=2.1						

IDC **17** *06:13:04.5±1.6,66.01N×17.99W,h0km,mb3.5/7, mbtmp3.6/9,ML2.9/2,MS3.5/1,Error ellipse: s-maj=54.0km s-min=18.5km az=16.0*
REY **17** *06:13:06.7,66.65N×17.82W,h12km*
ISC 17 06:13:07.3±1.0,66.58N±0.06×17.74W±0.04,h10km±7km, n21,σ1.13/30,mb3.4/7,Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.11**	**252**	P	**Pg**	**06 13 09.9**	**-0.1**
	baz=214						
IGRI				S	**Sg**	**06 13 12.1**	**+0.2**
	baz=214						
IBRE	**Brettingsstaoi**	**0.46**	**188**	P	**Pg**	**06 13 16.3**	**+0.1**
	baz=184						
IBRE				S	**Sg**	**06 13 23.9**	**+1.6**
	baz=184						
IHED	**Heoinshofoi**	**0.53**	**160**	P	**Pg**	**06 13 17.4**	**-0.1**
	baz=160						
IHED				S	**Sg**	**06 13 25.7**	**+1.2**
	baz=160						
ISIG	**Siglufjorour**	**0.65**	**227**	P	**Pg**	**06 13 18.6**	**-1.2**
	baz=220						
ISIG				S	**Sg**	**06 13 27.4**	**-0.9**
	baz=220						
IGRA	**Granastaoir**	**0.67**	**174**	P	**Pg**	**06 13 19.7**	**-0.4**
	baz=172						
IGRA				S	**Sg**	**06 13 29.5**	**+0.7**
	baz=172						
IHLA	**Hella**	**0.69**	**203**	P	**Pg**	**06 13 19.7**	**-0.8**
	baz=198						
IHLA				S	**Sg**	**06 13 29.3**	**-0.1**
	baz=198						
IDIM	**Dimmadalss**	**0.70**	**152**	P	**Pg**	**06 13 20.3**	**-0.5**
	baz=152						
IDIM				S	**Sg**	**06 13 30.7**	**+0.8**
	baz=152						
IGIL	**Gilhagi**	**0.75**	**131**	P	**Pg**	**06 13 20.8**	**-1.0**
	baz=134						
IGIL				S	**Sg**	**06 13 31.8**	**+0.2**
	baz=134						
ISKI	**Skildingahlsh**	**0.77**	**157**	S	**Sg**	**06 13 32.5**	**+0.4**
	baz=157						
ISKI				P	**Pg**	**06 13 21.4**	**-0.7**
	baz=157						
IGHA	**Grjothals**	**0.86**	**149**	P	**Pg**	**06 13 22.5**	**-1.2**
	baz=150						
IGHA				S	**Sg**	**06 13 35.2**	**+0.3**
	baz=150						
SCO	**Scoresbysund**	**4.22**	**340**	*i* P	**Pn**	**06 14 10.0**	**-1.5**
ARCES	**ARCESS Array B**	**16.16**	**60**	Pn	**P**	**06 16 57.1**	**-0.3**
	baz=269,slow=11,SNR=1.8						
	4.0nm,1.1s						
FINES	**FINESS Array B**	**19.53**	**84**	P	**Pn**	**06 17 36.7**	**+1.0**
	0.1nm,0.3s,baz=319,slow=7.6,SNR=7.9						
	1.0nm,0.7s						
AKASG	**Malin Array Be**	**28.25**	**101**	P	**P**	**06 18 58.4**	**-1.6**
	0.6nm,0.4s,baz=12,slow=3.2,SNR=4.0						
	0.6nm,0.4s						
KEST	**Kesra**	**34.66**	**139**	LR	LR	06 33 09.2	
	comp=Z,75nm,19.2s,baz=87,slow=35						
YKA	**Yellowknife Ar**	**37.85**	**311**	P	**P**	**06 20 25.1**	**+1.6**
	0.5nm,0.9s,baz=41,slow=8.4,SNR=8.4						
	0.5nm,0.9s						
BRTR	**Keskin Array B**	**39.11**	**107**	P	**P**	**06 20 33.3**	**-1.2**
	0.9nm,0.8s,baz=312,slow=7.0,SNR=3.1						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**43.94**	**331**	P	**P**	**06 21 16.6**	**+3.0**
	0.4nm,0.9s,baz=14,slow=7.8,SNR=4.1						
	0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**47.25**	**60**	P	**P**	**06 21 40.1**	**+0.1**
	0.7nm,0.7s,baz=324,slow=7.3,SNR=6.9						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**51.82**	**59**	P	**P**	**06 22 16.0**	**+1.1**
	0.4nm,0.8s,baz=329,slow=6.4,SNR=4.5						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**52.35**	**292**	P	**P**	**06 22 18.1**	**-1.1**
	0.4nm,0.8s,baz=64,slow=3.4,SNR=4.1						
	0.4nm,0.8s						

IDC **17** *06:18:03.3±0.7,14.86S×166.88E,h0km,mb4.2/17, mbtmp4.1/18,ML3.9/1,MS3.7/1,Error ellipse: s-maj=23.8km s-min=16.1km az=93.0*
NEIC **17** *06:18:05.5±1.2,14.84S±0.09×166.9E±0.1,h10km±1km, mb4.7/27,Error ellipse: s-maj=20.6km s-min=14.2km az=65.0*
ISC 17 06:18:06.7±1.2,15.0S±0.1×166.9E±0.2,h10km,n55, σ2.19/18,mb4.6/29,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.05**	**204**		**Pn**	**06 19 37.1**	**+0.9**
DZM	**Mont Dzumac**	**7.04**	**184**	Pn	**Pn**	**06 19 49.8**	**-0.1**
DZM	**Mont Dzumac**	**7.04**	**184**	Pn	**Pn**	**06 19 50.5**	**+0.7**
	2.1nm,0.3s,baz=12,slow=23,SNR=10						
DZM				Sn	**Sn**	**06 21 07.0**	**-3.0**
	baz=71,slow=14						
	5.4nm,0.4s						
ONTNC	**Ouen Toro**	**7.27**	**183**	Pn	**Pn**	**06 19 54.0**	**+1.1**
OUENC	**Ouen Island, N**	**7.37**	**181**	Pn	**Pn**	**06 19 57.3**	**+2.9**
PINNC	**Pines Island,**	**7.58**	**176**	Pn	**Pn**	**06 19 59.8**	**+2.6**
EIDS	**Eidsvold**	**18.07**	**233**	P	**Pn**	**06 22 19.9**	**+2.0**
CTA	**Charters Tower**	**20.33**	**253**	P	**P**	**06 22 42.5**	**-0.7**
	3.5nm,0.8s,baz=90,slow=15,SNR=2.6						
	3.5nm,0.8s						
URZ	**Urewera**	**24.85**	**161**	P	**P**	**06 23 29.0**	**-0.3**
	6.7nm,0.8s,baz=18,slow=13,SNR=1.6						
	6.7nm,0.8s						
RTZ	**Ruatahuna**	**25.13**	**161**	P	**P**	**06 23 33.1**	**+1.2**
RTZ				IAmb	IAmb	06 23 37.9	
	comp=Z,32nm,1.3s						
MRZ	**Mangatainoka R**	**26.64**	**165**	P	**P**	**06 23 45.0**	**-0.6**
LTZ	**Lake Taylor**	**28.05**	**172**	P	P	06 23 56.1	-2.1
STKA	**Stephens Creek**	**28.55**	**230**	P	P	06 24 01.4	-1.3
STKA	**Stephens Creek**	**28.55**	**230**	P	P	06 24 01.7	-1.1
	comp=Z,0.9nm,0.4s,baz=12,slow=13,SNR=5.0						
	comp=Z,0.9nm,0.4s						
WB0	**Warramunga Arr**	**31.37**	**257**	P	P	06 24 24.7	-3.2
WB0				IAmb	IAmb	06 24 32.6	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**31.43**	**256**	P	P	06 24 25.2	-3.2
	comp=Z,0.6nm,0.5s,baz=83,slow=7.8,SNR=8.3						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**32.26**	**249**	P	P	06 24 32.6	-3.1
	comp=Z,0.7nm,0.6s,baz=73,slow=9.8,SNR=13						
ASAR				LR	LR	06 37 05.9	
	comp=Z,113nm,18.2s,baz=64,slow=35						
	comp=Z,0.7nm,0.6s						
BBOO	**Buckleboo**	**33.14**	**232**	P	P	06 24 41.5	-1.8
BBOO				IAmb	IAmb	06 24 52.4	
	comp=Z,9.8nm,1.2s						
FITZ	**Fitzroy Crossi**	**39.63**	**260**	P	P	06 25 36.4	-2.5
MORW	**Morawa**	**48.84**	**244**	P	P	06 26 50.0	-2.7
MORW		

VNDA	**Vanda**	**62.57**	**181**	P	**P**		**06 28 30.3**	**-0.1**
VNDA				IAmb	IAmb		06 28 42.1	
	comp=Z,11nm,1.2s							
VNDA	**Vanda**	**62.57**	**181**	P	**P**		**06 28 30.2**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=11,slow=9.8,SNR=1.5							
	comp=Z,1.8nm,0.7s							
JKA	**Kamikawa-asahi**	**62.89**	**341**	P	P		06 28 31.0	-1.9
KSRS	**Korea Array**	**63.78**	**326**	P	P		06 28 36.9	-2.1
	comp=Z,1.3nm,0.6s,baz=149,slow=7.3,SNR=3.5							
	comp=Z,1.3nm,0.6s							
USRK	**Ussuriysk Ar.**	**66.98**	**333**	P	P		06 28 57.2	-2.4
	comp=Z,4.3nm,0.9s,baz=101,slow=7.5,SNR=3.6							
	comp=Z,4.3nm,0.9s							
PETK	**Petropavlovsk-**	**68.31**	**354**	P	P		06 29 05.5	-2.2
	comp=Z,3.0nm,0.8s,baz=157,slow=7.8,SNR=2.1							
	comp=Z,3.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**74.76**	**294**	P	P		06 29 46.4	-1.0
	comp=Z,1.5nm,0.3s,baz=126,slow=4.2,SNR=6.5							
	comp=Z,1.5nm,0.3s							
QSPA	**South Pole Qui**	**75.02**	**180**	P	P		06 29 47.6	-0.7
QSPA				IAmb	IAmb		06 29 52.7	
	comp=Z,6.1nm,0.8s							
QSPA	**South Pole Qui**	**75.02**	**180**	P	P		06 29 47.6	-0.7
	comp=Z,6.5nm,0.9s,baz=51,slow=0.3,SNR=18							
	comp=Z,6.5nm,0.9s							
N15K	**Kwethluk River**	**79.50**	**16**	P	P		06 30 10.5	-2.7
M14K	**Bethel**	**79.51**	**15**	P	P		06 30 11.2	-2.0
M16K	**Timber Creek**	**80.52**	**16**	P	P		06 30 16.9	-1.8
M16K				IAmb	IAmb		06 30 22.3	
	comp=Z,15nm,1.4s							
K15K	**Wolf Creek Mou**	**80.95**	**14**	P	P		06 30 19.2	-1.7
J16K	**Anvik River**	**82.02**	**14**	P	P		06 30 24.8	-1.8
J16K				IAmb	IAmb		06 30 29.4	
	comp=Z,12nm,1.2s							
L18K	**Granite Mounta**	**82.12**	**16**	P	P		06 30 25.3	-1.9
L18K				IAmb	IAmb		06 30 47.6	
	comp=Z,12nm,1.4s							
SONM	**Songino Array**	**82.52**	**324**	P	P		06 30 28.0	-1.8
	comp=Z,0.6nm,0.6s,baz=152,slow=6.7,SNR=3.9							
	comp=Z,0.6nm,0.6s							
M20K	**Styx River**	**82.86**	**18**	P	P		06 30 28.3	-2.9
J18K	**Innoko River**	**83.14**	**16**	P	P		06 30 29.9	-2.6
J18K				IAmb	IAmb		06 30 33.3	
	comp=Z,7.1nm,1.4s							
CUT	**Chulitna**	**84.13**	**19**	P	P		06 30 35.2	-2.3
CAST	**Castle Rocks**	**84.36**	**17**		P		06 30 35.6	-3.2
CAST				IAmb	IAmb		06 30 36.8	
	comp=Z,5.4nm,0.8s							
J20K	**Nowinta River**	**84.39**	**16**	P	P		06 30 36.7	-2.1
J20K				IAmb	IAmb		06 30 39.7	
	comp=Z,6.2nm,1.5s							
G19K	**Purcell Mounta**	**85.25**	**14**	P	P		06 30 41.5	-1.6
G19K				IAmb	IAmb		06 30 43.1	
	comp=Z,6.6nm,1.0s							
I21K	**Tanana**	**85.76**	**16**	P	P		06 30 44.0	-1.7
I21K				IAmb	IAmb		06 30 45.0	
	comp=Z,5.6nm,0.8s							
H21K	**Melozitna Rive**	**85.91**	**16**	P	P		06 30 44.7	-1.7
IMAR	**Indian Mountai**	**85.93**	**15**	P	P		06 30 44.1	-2.4
WRH	**Wood River Hil**	**86.32**	**18**	P	P		06 30 45.4	-3.1
WRH				IAmb	IAmb		06 30 47.8	
	comp=Z,7.8nm,1.4s							
ILAR	**Eielson Array**	**86.90**	**18**	P	P		06 30 48.0	-3.4
	comp=Z,1.0nm,0.6s,baz=240,slow=5.1,SNR=20							
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**97.17**	**316**	P	P		06 31 37.2	-2.3
	comp=Z,0.5nm,0.8s,baz=83,slow=6.0,SNR=5.4							
	comp=Z,0.5nm,0.8s							
ZALV	**Zalesovo Beam**	**97.42**	**324**	P	P		06 31 37.9	-2.5
	comp=Z,0.3nm,0.4s,baz=106,slow=5.3,SNR=3.7							
	comp=Z,0.3nm,0.4s							
YKA	**Yellowknife Ar**	**97.95**	**27**	P	P		06 31 39.6	-2.9
	comp=Z,0.2nm,0.6s,baz=255,slow=4.6,SNR=5.7							
	comp=Z,0.2nm,0.6s							
ARCES	**ARCESS Array B**	**120.44**	**345**	PKP		**PKPdf**	**06 36 55.0**	**-2.8**
	comp=Z,1.2nm,0.5s,baz=73,slow=1.2,SNR=1.5							
FINES	**FINESS Array B**	**125.86**	**338**	PKP		**PKPdf**	**06 37 05.7**	**-2.7**
	comp=Z,1.2nm,0.9s,baz=80,slow=2.1,SNR=4.4							
BDFB	**Brasilia**	**133.97**	**130**	PKP		**PKPdf**	**06 37 23.2**	**-2.2**
	comp=Z,1.2nm,0.6s,baz=225,slow=4.3,SNR=3.4							
KEST	**Kesra**	**151.21**	**320**	PKPbc		**PKPdf**	**06 37 59.2**	**+4.3**
	comp=Z,3.9nm,0.7s,baz=127,slow=0.7,SNR=6.3							

SNET ***17*** *06:29:37.0±0.8, 12°.77N×88°.63W, h35km, ML4.8*
CATAC ***17*** *06:29:37.9±0.5, 12°.88N×88°.57W, h34km±9km, ML4.7*
UCR ***17*** *06:29:38.9±2.2, 12°.93N×88°.52W, h60km, MB4.3(NEIC)*
NEIC ***17*** *06:29:39.9±2.1, 12°.93N±0°.07×88°.52W±0°.07, h60km±11km, mb4.3/53, Error ellipse: s-maj=12.6km s-min=7.4km az=219.0*
IDC ***17*** *06:29:40.0±2.4, 13°.08N×88°.15W, h81km±22km, mb4.0/14, mbtmp4.3/16, MS4.1/3, Error ellipse: s-maj=29.0km s-min=12.2km az=53.0*
GCG ***17*** *06:29:44.2±2.8, 13°.98N×88°.92W, h193km±69km, MD4.4*

ISC 17 06:29:38.0±0.4, 12°.86N±0°.05×88°.58W±0°.04, h67km, n506, σ1s29/507, mb4.3/33, 5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.62**	**27**	*eP*		**Pn**		**06 29 51.1**	**-0.9**
RANC	**El Ranchito**	**0.64**	**27**	*eP*		**Pn**		**06 29 51.4**	**-0.8**
RANC	**El Ranchito**	**0.64**	**27**	*i P*		**Pn**		**06 29 51.4**	**-0.8**
RANC					IAML			06 30 12.8	
	comp=Z,20μm,1.0s								
PACA	**Pacayal**	**0.65**	**23**	*eP*		**Pn**		**06 29 51.6**	**-0.7**
PACA	**Pacayal**	**0.65**	**23**	*i P*		**Pn**		**06 29 51.7**	**-0.7**
PACA					IAML			06 30 04.9	
	comp=Z,210μm,1.0s								
BLLM	**Bellamira**	**0.67**	**30**	*eP*		**Pn**		**06 29 51.5**	**-0.9**
TECO	**Alcaldia de Te**	**0.70**	**344**	*i P*		**Pn**		**06 29 51.4**	**-1.3**
TECO					IAML			06 29 51.9	
	comp=Z,22μm,1.0s								
CNRM	**Centro Naciona**	**0.73**	**34**	*eP*		**Pn**		**06 29 52.5**	**-0.6**
PQSS	**Presa 15 de Se**	**0.76**	**2**	*eP*		**Pn**		**06 29 52.8**	**-0.6**
PQSS	**Presa 15 de Se**	**0.76**	**2**	*i P*		**Pn**		**06 29 52.8**	**-0.6**
PQSS					IAML			06 30 05.2	
	comp=Z,34μm,1.0s								
UESV	**Universidad de**	**0.79**	**346**	*i P*		**Pn**		**06 29 53.1**	**-0.8**
UESV					IAML			06 30 08.9	
	comp=Z,28μm,1.0s								
LCND	**La Caada**	**0.81**	**57**	*eP*		**Pn**		**06 29 53.1**	**-0.9**
LCND				*eP*				06 29 53.1	
LCND	**La Caada**	**0.81**	**57**	*i P*		**Pn**		**06 29 53.1**	**-0.9**
LCND					IAML			06 30 09.3	
	comp=Z,20μm,1.0s								
CNCH	**Conchagua**	**0.84**	**61**	*eP*		**Pn**		**06 29 53.4**	**-1.1**
CNCH	**Conchagua**	**0.84**	**61**	*i P*		**Pn**		**06 29 53.4**	**-1.1**
CNCH					IAML			06 30 13.8	
	comp=Z,45μm,1.0s								
SCLA	**Alcaldia de Sa**	**0.84**	**350**	*ǁeP*		**Pn**		**06 29 54.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.84**	**350**	*i P*		**Pn**		**06 29 54.2**	**-0.3**
SCLA					IAML			06 29 54.5	
	comp=Z,13μm,1.0s								
SJTE	**Alcalda de S**	**0.85**	**331**	*eP*		**Pn**		**06 29 53.4**	**-1.2**
SJTE	**Alcalda de S**	**0.85**	**331**	*i P*		**Pn**		**06 29 53.4**	**-1.2**
SJTE					IAML			06 30 09.1	
	comp=Z,17μm,1.0s								
LFRS	**El Faro**	**0.89**	**328**	*eP*		**Pn**		**06 29 53.8**	**-1.3**
PAVA	**Las Pavas**	**0.91**	**338**	*eP*		**Pn**		**06 29 54.7**	**-0.7**
PAVA	**Las Pavas**	**0.91**	**338**	*i P*		**Pn**		**06 29 54.7**	**-0.7**
PAVA					IAML			06 30 09.2	
	comp=Z,52μm,1.0s								
PANCS	**Alcalda de**	**0.94**	**322**	*eP*		**Pn**		**06 29 54.2**	**-1.5**
PANCS	**Alcalda de**	**0.94**	**322**	*i P*		**Pn**		**06 29 54.4**	**-1.3**
PANCS					IAML			06 30 08.3	
	comp=Z,21μm,1.0s								
LALI	**Alcalda de L**	**0.95**	**311**	*eP*		**Pn**		**06 29 54.0**	**-1.7**
LALI	**Alcalda de L**	**0.95**	**311**	*i P*		**Pn**		**06 29 54.1**	**-1.7**
LALI					IAML			06 30 07.9	
	comp=Z,2μm,1.0s								
LOMA	**Loma Larga**	**0.96**	**324**	*eP*		**Pn**		**06 29 55.0**	**-1.1**
LOMA	**Loma Larga**	**0.96**	**324**	*i P*		**Pn**		**06 29 54.8**	**-1.3**
LOMA					IAML			06 30 10.0	
	comp=Z,11μm,1.0s								
AEIL	**Aeropuerto Ilo**	**0.98**	**328**	*eP*		**Pn**		**06 29 55.3**	**-0.8**
LBRS	**Las Brisas**	**0.98**	**333**	*eP*		**Pn**		**06 29 55.7**	**-0.5**
LBRS				*eS*		**Sn**		**06 30 08.1**	**-1.5**
AMPH	**Amapala**	**0.99**	**65**	*eP*		**Pn**		**06 29 55.7**	**-0.6**
CSGN	**Cosiguina Volc**	**1.01**	**84**	*i P*		**Pn**		**06 29 55.0**	**-1.5**
CSGN					IAML			06 30 13.3	
	comp=Z,71μm,1.0s								
UDBS	**Universidad Do**	**1.01**	**327**	*i P*		**Pn**		**06 29 55.8**	**-0.8**
UDBS					IAML			06 30 11.5	
	comp=Z,23μm,1.0s								
IGN	**Direccin Gen**	**1.02**	**326**	*eP*		**Pn**		**06 29 55.8**	**-0.9**
IGN	**Direccin Gen**	**1.02**	**326**	*i P*		**Pn**		**06 29 55.9**	**-0.8**
IGN					IAML			06 30 12.2	
	comp=Z,75μm,1.0s								
LFU	**La Fuente**	**1.02**	**330**	*eP*		**Pn**		**06 29 56.0**	**-0.7**
UTEC	**Universidad Te**	**1.03**	**324**	*i P*		**Pn**		**06 29 56.1**	**-0.7**
UTEC					IAML			06 30 12.7	
	comp=Z,11μm,1.0s								
SNET	**Serv Nac Est T**	**1.03**	**322**			**Pn**		**06 29 55.6**	**-1.2**
SNET	**Serv Nac Est T**	**1.03**	**322**	*eP*		**Pn**		**06 29 55.8**	**-1.1**
SNET	**Serv Nac Est T**	**1.03**	**322**	*i P*		**Pn**		**06 29 55.8**	**-1.1**
SNET					IAML			06 30 10.9	
	comp=Z,16μm,1.0s								
SEMO	**Seminario San**	**1.04**	**323**	*i P*		**Pn**		**06 29 56.1**	**-0.9**
SEMO					IAML			06 30 21.0	
	comp=Z,18μm,1.0s								
ITCA	**Escuela Especi**	**1.05**	**320**	*eP*		**Pn**		**06 29 56.0**	**-1.1**
ITCA	**Escuela Especi**	**1.05**	**320**	*i P*		**Pn**		**06 29 56.1**	**-1.1**
ITCA					IAML			06 30 25.2	
	comp=Z,20μm,1.0s								
UEES	**Universidad Ev**	**1.06**	**323**	*i P*		**Pn**		**06 29 56.3**	**-0.9**
UEES					IAML			06 30 14.3	
	comp=Z,8μm,1.0s								
MAGS	**Ministerio de**	**1.06**	**320**	*eP*		**Pn**		**06 29 56.2**	**-1.1**
PIC2	**El Picacho**	**1.09**	**323**	*eP*		**Pn**		**06 29 57.1**	**-0.7**
BOQS	**Boqueron**	**1.10**	**322**	*eP*		**Pn**		**06 29 57.0**	**-0.8**
PMON	**Piamonte**	**1.10**	**320**	*eP*		**Pn**		**06 29 56.9**	**-0.9**
PMON	**Piamonte**	**1.10**	**320**	*i P*		**Pn**		**06 29 56.9**	**-0.9**
PMON					IAML			06 30 16.9	
	comp=Z,13μm,1.0s								
JAYA	**Jayaque - finc**	**1.15**	**313**	*eP*		**Pn**		**06 29 57.0**	**-1.5**
JAYA	**Jayaque - finc**	**1.15**	**313**	*i P*		**Pn**		**06 29 57.1**	**-1.4**
JAYA					IAML			06 30 18.3	
	comp=Z,18μm,1.0s								
QUEZ	**Alcaldia de Qu**	**1.18**	**325**	*eP*		**Pn**		**06 29 58.1**	**-0.6**
QUEZ	**Alcaldia de Qu**	**1.18**	**325**	*i P*		**Pn**		**06 29 58.2**	**-0.5**
QUEZ					IAML			06 30 21.5	
	comp=Z,26μm,1.0s								
CEDA	**San Andres**	**1.22**	**320**	*eP*		**Pn**		**06 29 58.1**	**-1.2**
CEDA	**San Andres**	**1.22**	**320**	*i P*		**Pn**		**06 29 58.5**	**-0.8**
CEDA					IAML			06 30 23.5	
	comp=Z,20μm,1.0s								
LLGN	**La Laguna**	**1.34**	**345**	*eP*		**Pn**		**06 30 00.5**	**-0.4**
LLGN	**La Laguna**	**1.34**	**345**	*i P*		**Pn**		**06 30 00.7**	**-0.2**
LLGN					IAML			06 30 22.7	
	comp=Z,3μm,1.0s								
CEVE	**Cerro Verde**	**1.39**	**314**	*eP*		**Pn**		**06 30 01.0**	**-0.8**
CEVE	**Cerro Verde**	**1.39**	**314**	*i P*		**Pn**		**06 30 01.5**	**-0.2**
CEVE					IAML			06 30 24.1	
	comp=Z,9μm,1.0s								
SBLS	**San Blas**	**1.40**	**314**	*eP*		**Pn**		**06 30 01.3**	**-0.5**
CHNN	**El Viejo**	**1.44**	**99**	*i P*		**Pn**		**06 30 00.9**	**-1.2**
CHNN					IAML			06 30 21.5	
	comp=Z,11μm,1.0s								
UNIC	**Universidad Ca**	**1.45**	**320**	*i P*		**Pn**		**06 30 01.9**	**-0.5**
UNIC					IAML			06 30 22.1	
	comp=Z,2μm,1.0s								
CRIN	**San Cristobal**	**1.50**	**96**			**Pn**		**06 30 02.6**	**-0.4**
CRIN	**San Cristobal**	**1.50**	**96**	*ǁi P*		**Pn**		**06 30 02.7**	**-0.4**
CRIN	**San Cristobal**	**1.50**	**96**	*ǁeP*		**Pn**		**06 30 02.8**	**-0.2**
CRIN				*eS*		**Sn**		**06 30 21.7**	**-0.2**
CRIN	**San Cristobal**	**1.50**	**96**	*i P*		**Pn**		**06 30 02.8**	**-0.2**
CRIN					IAML			06 30 26.4	
	comp=Z,27μm,1.0s								
NUBE	**Las Nubes**	**1.56**	**312**	*i P*		**Pn**		**06 30 02.9**	**-0.9**
NUBE					IAML			06 30 23.9	
	comp=Z,11μm,1.0s								
LOAL	**Lomas de Alarc**	**1.62**	**314**	*i P*		**Pn**		**06 30 04.4**	**-0.2**
LOAL					IAML			06 30 33.2	
	comp=Z,7μm,1.0s								
SLOZ	**Alcaldia de Sa**	**1.64**	**315**	*eP*		**Pn**		**06 30 04.3**	**-0.5**
MTO3	**Montecristo**	**1.70**	**334**			**Pn**		**06 30 05.3**	**-0.5**
MTO3	**Montecristo**	**1.70**	**334**	*eP*		**Pn**		**06 30 05.6**	**-0.2**
MTO3	**Montecristo**	**1.70**	**334**	*i P*		**Pn**		**06 30 05.6**	**-0.2**
MTO3					IAML			06 30 30.7	
	comp=Z,3μm,1.0s								
TEL3	**Telica 3**	**1.72**	**100**	*i P*		**Pn**		**06 30 05.3**	**-0.6**
TEL3					IAML			06 30 35.8	
	comp=Z,12μm,1.0s								
HERN	**Volcan Telica**	**1.73**	**98**	*i P*		**Pn**		**06 30 05.2**	**-0.8**
HERN					IAML			06 30 29.1	
	comp=Z,13μm,1.0s								
TELN	**Telica**	**1.73**	**98**	*i P*		**Pn**		**06 30 04.8**	**-1.3**
TELN					IAML			06 30 30.1	
	comp=Z,820nm,1.0s								
TGUH	**Tegucigalpa,Un**	**1.74**	**47**			**Pn**		**06 30 06.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.74**	**47**	*ǁi P*		**Pn**		**06 30 06.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.74**	**47**	*i P*		**Pn**		**06 30 06.7**	**+0.4**
TGUH					IAML			06 31 01.9	
	comp=Z,4μm,1.0s								
ROCN	**Rota Cerro Neg**	**1.83**	**101**	*i P*		**Pn**		**06 30 06.8**	**-0.5**
ROCN					IAML			06 30 31.2	
	comp=Z,3μm,1.0s								
ESQI	**Esquipulas**	**1.84**	**337**	Pn		**Pn**		**06 30 07.9**	**+0.4**
ESQI	**Esquipulas**	**1.84**	**337**	*i P*		**Pn**		**06 30 08.0**	**+0.4**
ESQI					IAML			06 30 38.0	
	comp=Z,4μm,1.0s								
CNGA	**Al SSO del Vol**	**1.87**	**101**	*i P*		**Pn**		**06 30 07.1**	**-0.9**
CNGA					IAML			06 30 36.9	
	comp=Z,8μm,1.0s								
CNGN	**Cerro Negro**	**1.88**	**101**			**Pn**		**06 30 06.3**	**-1.7**
CNGN	**Cerro Negro**	**1.88**	**101**	*eP*		**Pn**		**06 30 06.8**	**-1.1**
CNGN	**Cerro Negro**	**1.88**	**101**	*eP*		**Pn**		**06 30 07.0**	**-1.0**
CNGN	**Cerro Negro**	**1.88**	**101**	*i P*		**Pn**		**06 30 07.0**	**-1.0**
CNGN					IAML			06 30 43.1	
	comp=Z,5μm,1.0s								
MACN	**El Madrono**	**1.91**	**102**	*i P*		**Pn**		**06 30 07.4**	**-1.0**
MACN					IAML			06 30 35.1	
	comp=Z,2μm,1.0s								
LEVN	**Ruinas Leon Vi**	**1.98**	**103**	*i P*		**Pn**		**06 30 08.3**	**-1.0**
LEVN					IAML			06 30 45.9	
	comp=Z,4μm,1.0s								
AESN	**El Sauce Leon**	**1.99**	**89**	*i P*		**Pn**		**06 30 08.5**	**-1.0**
AESN					IAML			06 31 15.7	
	comp=Z,4μm,1.0s								
MOMN	**Momotombo**	**2.05**	**103**	*i P*		**Pn**		**06 30 09.3**	**-1.0**
MOMN					IAML			06 30 37.8	
	comp=Z,150nm,1.0s								
MOM2	**El Cardon**	**2.09**	**101**	*i P*		**Pn**		**06 30 10.5**	**-0.4**
MOM2					IAML			06 30 42.7	
	comp=Z,3μm,1.0s								
LIMN	**Finca el Limon**	**2.17**	**85**	*i P*		**Pn**		**06 30 11.5**	**-0.5**
LIMN					IAML			06 30 45.3	
	comp=Z,2μm,1.0s								
BRAN	**Las Pilas**	**2.18**	**94**	*i P*		**Pn**		**06 30 13.4**	**+1.3**
BRAN					IAML			06 30 45.9	
	comp=Z,4μm,1.0s								
SAPS	**Ciudad Sandino**	**2.24**	**108**	*i P*		**Pn**		**06 30 11.8**	**-1.0**
SAPS					IAML			06 30 46.3	
	comp=Z,7μm,1.0s								
APYN	**Apoyeque**	**2.27**	**106**	*i P*		**Pn**		**06 30 12.7**	**-0.6**
APYN					IAML			06 30 45.5	
	comp=Z,3μm,1.0s								
APQ2	**Apoyeque**	**2.30**	**106**	*i P*		**Pn**		**06 30 13.3**	**-0.4**
APQ2					IAML			06 30 46.4	
	comp=Z,4μm,1.0s								
ABCN	**Banco Central**	**2.34**	**108**	*i P*		**Pn**		**06 30 14.0**	**-0.2**
ABCN					IAML			06 30 42.6	
	comp=Z,12μm,1.0s								
TISN	**Laguna Tiscapa**	**2.37**	**107**	*i P*		**Pn**		**06 30 13.9**	**-0.8**
TISN					IAML			06 30 48.9	
	comp=Z,330nm,1.0s								
USIM	**UNAN**	**2.38**	**108**	*i P*		**Pn**		**06 30 14.6**	**-0.1**
USIM					IAML			06 30 45.1	
	comp=Z,11μm,1.0s								
UNAN	**Cigeo UNAN**	**2.38**	**108**	*i P*		**Pn**		**06 30 13.9**	**-0.9**
UNAN					IAML			06 30 47.0	
	comp=Z,15μm,1.0s								
NBG	**Las Nubes**	**2.42**	**315**	*i P*		**Pn**		**06 30 17.0**	**+1.4**
GUNB	**GUNB**	**2.43**	**315**	*i P*		**Pn**		**06 30 15.2**	**-0.5**
GUNB					IAML			06 30 38.8	
	comp=Z,1μm,1.0s								
WILN	**Americas 2**	**2.44**	**106**	*i P*		**Pn**		**06 30 14.9**	**-0.7**
WILN					IAML			06 30 50.8	
	comp=Z,1μm,1.0s								
MRL	**Marmol**	**2.45**	**334**	*i P*		**Pn**		**06 30 17.4**	**+1.4**
PCG	**Pacaya**	**2.48**	**308**	*i P*		Pn		06 30 22.2	+5.8
MAS3	**Al N del Volca**	**2.50**	**109**	*i P*		**Pn**		**06 30 15.5**	**-0.9**
MAS3					IAML			06 30 55.0	
	comp=Z,4μm,1.0s								
RCPN	**Sur Rio San Ju**	**2.51**	**75**	*i P*		**Pn**		**06 30 15.9**	**-0.8**
RCPN					IAML			06 30 54.0	
	comp=Z,6.3nm,1.0s								
NANN	**Nandasmo**	**2.58**	**111**	*i P*		**Pn**		**06 30 17.4**	**-0.1**
NANN					IAML			06 30 50.7	
	comp=Z,41μm,1.0s								
MATN	**Matagalpa**	**2.59**	**88**			**Pn**		**06 30 16.6**	**-1.1**
MATN	**Matagalpa**	**2.59**	**88**	*ǁi P*		**Pn**		**06 30 17.1**	**-0.6**
MATN				*eS*		**Sn**		**06 30 47.0**	**-1.2**
MATN	**Matagalpa**	**2.59**	**88**	*i P*		**Pn**		**06 30 17.2**	**-0.6**
MATN					IAML			06 30 53.1	
	comp=Z,900nm,1.0s								
FUG	**Fuego 3**	**2.70**	**306**	*i P*		**Pn**		**06 30 20.9**	**+1.6**
FUG				*i S*		**Sn**		**06 30 53.2**	**+2.1**
NADN	**Granada**	**2.73**	**114**	*i P*		**Pn**		**06 30 19.5**	**0.0**
NADN					IAML			06 30 51.4	
	comp=Z,5μm,1.0s								
BOAB	**BOACO BROADBAN**	**2.88**	**98**	Pn		**Pn**		**06 30 20.6**	**-0.9**
BOAB	**BOACO BROADBAN**	**2.88**	**98**	*i P*		**Pn**		**06 30 20.5**	**-1.0**
BOAB					IAML			06 30 33.4	
	comp=Z,480nm,1.0s								
JAPN	**Al SSO del Vol**	**3.14**	**115**	*i P*		**Pn**		**06 30 25.0**	**-0.1**
JAPN					IAML			06 31 19.0	
	comp=Z,1μm,1.0s								
MORN	**Al O del Volca**	**3.15**	**114**	*i P*		**Pn**		**06 30 27.0**	**+1.6**
MORN					IAML			06 31 10.3	
	comp=Z,2μm,1.0s								
CONN	**Concepcion**	**3.17**	**114**	*i P*		**Pn**		**06 30 25.5**	**0.0**
CONN					IAML			06 31 12.1	
	comp=Z,6μm,1.0s								
STG3	**Santiaguito 3,**	**3.43**	**303**	*i P*		**Pn**		**06 30 32.3**	**+3.0**
STG3				*i S*		**Sn**		**06 31 07.4**	**-1.5**
RTAL	**Retalhuleu**	**3.44**	**299**	Pn		**Pn**		**06 30 30.2**	**+0.9**
ACON	**Acoyapa**	**3.45**	**105**			**Pn**		**06 30 28.9**	**-0.4**
ACON	**Acoyapa**	**3.45**	**105**	*eP*		**Pn**		**06 30 28.7**	**-0.6**
ACON	**Acoyapa**	**3.45**	**105**	*eP*		**Pn**		**06 30 29.0**	**-0.3**
ACON	**Acoyapa**	**3.45**	**105**	*i P*		**Pn**		**06 30 33.6**	**+4.3**
ACON					IAML			06 31 26.5	
	comp=Z,400nm,1.0s								
HZTE	**Horizontes, Gu**	**3.62**	**126**			**Pn**		**06 30 32.6**	**+0.9**
HZTE	**Horizontes, Gu**	**3.62**	**126**	*eP*		**Pn**		**06 30 31.5**	**-0.2**
ALIBA	**Liberia Airpor**	**3.73**	**127**	*eP*		**Pn**		**06 30 33.6**	**+0.4**
ALIBA				*eS*		**Sn**		**06 31 16.0**	**-0.1**
HUEH	**Huehuetenango**	**3.74**	**311**			**Pn**		**06 30 34.9**	**+1.4**
DELF	**Filadelfia**	**3.82**	**129**	*eP*		**Pn**		**06 30 35.0**	**+0.7**
SMCA	**Catarina**	**3.93**	**301**	*i P*		**Pn**		**06 30 37.4**	**+1.5**
SMCA					IAML			06 31 30.3	
	comp=Z,560nm,1.0s								
ORTG	**Ortega, Santa**	**3.94**	**129**	Pn		**Pn**		**06 30 37.7**	**+1.5**
ORTG	**Ortega, Santa**	**3.94**	**129**	*eP*		**Pn**		**06 30 36.8**	**+0.6**
ORTG	**Ortega, Santa**	**3.94**	**129**	*i P*		**Pn**		**06 30 36.7**	**+0.5**
ORTG					IAML			06 31 41.8	
	comp=Z,530nm,1.0s								
VMAR	**Armenia, Volca**	**3.96**	**121**	*eP*		**Pn**		**06 30 36.1**	**-0.3**
VMAR	**Armenia, Volca**	**3.96**	**121**	*i P*		**Pn**		**06 30 37.0**	**+0.6**
VMAR					IAML			06 31 43.3	
	comp=Z,700nm,1.0s								
COLC	**Colonia**	**3.97**	**123**	*eP*		**Pn**		**06 30 37.7**	**+1.2**
BAGA	**Bagaces**	**4.00**	**125**	*eP*		**Pn**		**06 30 38.2**	**+1.4**
PLVR	**Palo Verde**	**4.04**	**

KVTX **Kingsville** 17.01 331 P P 06 33 33.2 +0.8
SDV **Santo Domingo** 18.06 101 P 06 33 44.2 -0.2
SDV **Santo Domingo** 18.06 101 P P 06 33 43.2 -1.2
comp=Z,10nm,0.7s,baz=282,slow=7.8,SNR=13
BRAL **Brewton** 18.27 4 P Pn 06 33 47.5 +0.6
baz=185
833A **Chaparral WMA,** 18.39 328 P Pn 06 33 49.4 +0.9
833A **Chaparral WMA,** 18.39 328 P Pn 06 33 49.4 +0.9
baz=144
352A **Blakely** 18.83 10 P Pn 06 33 55.6 +1.9
HNVL **Huntsville, TX** 18.91 341 P Pn 06 33 56.4 +1.8
TIGA **Tifton** 19.05 13 P Pn 06 33 57.8 +1.5
TIGA IAmb IAmb 06 34 00.5
comp=Z,18nm,0.6s
TIGA **Tifton** 19.05 13 P Pn 06 33 56.2 -0.1
baz=195
HNDO **Hondo** 19.33 331 P Pn 06 34 00.3 +0.6
HNDO IAmb IAmb 06 34 04.6
comp=Z,12nm,0.5s
VBMS **Vicksburg** 19.35 355 P Pn 06 34 00.9 +1.1
VBMS **Vicksburg** 19.35 355 P Pn 06 33 59.9 +0.1
baz=174
435B **Jarrell** 19.68 336 P Pn 06 34 03.2 -0.5
baz=153
255A **Hazlehurst** 19.79 16 P Pn 06 34 05.2 +0.3
DRIO **Del Rio** 19.91 328 P Pn 06 34 05.7 -0.8
152A **Waverly Hall** 20.03 10 P Pn 06 34 07.5 -0.3
152A IAmb IAmb 06 34 10.5
comp=Z,11nm,0.7s
LRAL **Lakeview Retre** 20.13 4 Pn Pn 06 34 09.6 +0.6
LRAL **Lakeview Retre** 20.13 4 P Pn 06 34 08.8 -0.2
baz=184,SNR=5.3
Z47A **Carrollton** 20.25 1 P Pn 06 34 09.0 -1.3
Z47A IAmb IAmb 06 34 12.4
comp=Z,15nm,0.7s
JCT **Junction City** 20.37 331 P P 06 34 10.1 +0.8
JCT IAmb IAmb 06 34 14.9
comp=Z,9.6nm,0.7s
JCT **Junction City** 20.37 331 P Pn 06 34 11.0 -0.9
baz=147
BRDY **Brady** 20.69 334 P P 06 34 13.9 +1.1
BRDY IAmb IAmb 06 34 27.8
comp=Z,11nm,0.8s
WHTX **Lake Whitney,** 20.71 338 P Pn 06 34 14.8 -1.0
baz=155
GOGA **Godfrey** 20.98 12 Pn 06 34 17.5 -1.5
GOGA **Godfrey** 20.98 12 P P 06 34 16.5 +0.8
baz=194
SAND **Sanderson** 21.13 326 P P 06 34 18.9 +1.3
OZNA **Ozona** 21.38 329 P P 06 34 21.7 +1.5
OZNA IAmb IAmb 06 34 24.2
comp=Z,12nm,1.0s
FW07 **Weatherford** 21.47 338 P P 06 34 23.8 +2.8
FW07 IAmb IAmb 06 34 25.8
comp=Z,9.8nm,0.7s
X48A **Hartselle** 21.54 3 P P 06 34 21.6 -0.1
TXAR **Lajitas Array** 21.56 322 P P 06 34 24.1 +1.9
comp=Z,4.4nm,0.7s,baz=148,slow=11,SNR=50
TXAR PcP PcP 06 38 23.9 +1.6
comp=Z,0.5nm,0.7s,baz=146,slow=4.7,SNR=5.7
comp=Z,4.4nm,0.7s
TX31 **Lajitas Ar. Si** 21.56 322 P P 06 34 24.6 +2.5
OXF **Oxford** 21.57 358 P P 06 34 22.9 +0.9
baz=178
FPAL **Fort Paine** 21.75 7 P P 06 34 26.0 +2.0
FPAL IAmb IAmb 06 34 43.2
comp=Z,11nm,1.0s
PLPT **Palo Pinto** 21.76 337 P P 06 34 26.3 +2.1
PLPT IAmb IAmb 06 34 53.1
comp=Z,9.6nm,0.8s
Z35A **Perchaven, San** 21.86 340 P P 06 34 27.4 +2.2
Z35A IAmb IAmb 06 34 29.3
comp=Z,13nm,0.6s
FW03 **Perrin-Whitt E** 21.87 338 P P 06 34 27.5 +2.1
FW03 IAmb IAmb 06 35 07.6
comp=Z,11nm,0.9s
MIAR **Mount Ida** 22.06 349 P P 06 34 28.0 +0.7
baz=167
UALR **University of** 22.08 352 P P 06 34 28.7 +1.2
UALR IAmb IAmb 06 34 32.2
comp=Z,8.5nm,0.8s
ABTX **Abilene, Hawle** 22.12 335 P P 06 34 28.9 +0.8
ABTX IAmb IAmb 06 34 31.8
comp=Z,10nm,0.7s
ABTX **Abilene, Hawle** 22.12 335 P P 06 34 28.2 +0.1
baz=150,SNR=6.5
SGCY **Sterling City** 22.19 331 P P 06 34 30.7 +1.9
SGCY IAmb IAmb 06 34 33.1
comp=Z,16nm,0.8s
ALPN **Alpine** 22.30 324 P P 06 34 32.2 +2.0
JSC **Jenkinsville** 22.34 16 P P 06 34 31.3 +1.0
JSC IAmb IAmb 06 34 33.4
comp=Z,12nm,0.8s
Y57A **Sumter** 22.34 18 P P 06 34 32.2 +1.8
W50A **Signal Mountai** 22.43 7 P P 06 34 32.4 +0.9
W50A IAmb IAmb 06 34 53.5
comp=Z,15nm,1.3s
X37A **Clayton** 22.49 345 P P 06 34 33.9 +1.9
X37A IAmb IAmb 06 34 47.3
comp=Z,8.8nm,0.8s
MNHN **Monahans** 22.55 327 P P 06 34 34.4 +1.6
WHAR **Wooly Hollow** 22.58 352 P P 06 34 34.0 +1.1
WHAR IAmb IAmb 06 34 57.2
comp=Z,11nm,0.9s
WTFS **Witchita Falls** 22.67 338 P P 06 34 35.3 +1.3
WTFS IAmb IAmb 06 34 57.8
comp=Z,9.7nm,0.7s
BIRD **Birdtown, Kers** 22.90 17 P P 06 34 37.3 +1.0
SN07 **Snyder 07** 23.06 333 P P 06 34 39.0 +1.0
KMSC **Kings Mountain** 23.13 15 P P 06 34 38.7 +0.2
baz=198
FCAR **Ozark Folk Cen** 23.15 353 P P 06 34 39.1 +0.5
FCAR IAmb IAmb 06 34 41.6
comp=Z,12nm,0.7s
WVT **Waverly** 23.18 2 P P 06 34 39.7 +0.8
baz=182
X34A **Smith Ranch, M** 23.21 340 P 06 34 40.4 +1.0
LCAR **Lake Charles** 23.22 355 P P 06 34 39.5 +0.1
LCAR IAmb IAmb 06 35 03.0
comp=Z,18nm,1.5s
WMOK **Wichita Mounta** 23.66 339 P P 06 34 44.5 +1.0
WMOK **Wichita Mounta** 23.66 339 P P 06 34 44.1 +0.6
baz=154,SNR=6.5
TUL3 **Leonard** 23.85 345 P P 06 34 46.2 +1.0
baz=162
TZTN **Tazewell** 24.01 10 P P 06 34 47.1 +0.5
baz=192
CNNC **Cliffs of the** 24.29 22 P P 06 34 49.8 +0.7
baz=206
MNTX **Cornudas Mount** 24.29 323 P P 06 34 50.1 +0.9
baz=137
V58A **Windy Hill, Pi** 24.38 19 P P 06 34 50.6 +0.7
MSTX **Muleshoe** 24.66 331 P P 06 34 53.5 +0.8
baz=145,SNR=7.5
S39A **Bolivar** 25.08 351 P P 06 34 56.7 +0.3
CCM **Cathedral Cave** 25.20 355 P P 06 34 58.4 +1.1
baz=174
BLA **Blacksburg** 25.32 15 P P 06 34 58.8 +0.2
baz=199
WCI **Wyandotte Cave** 25.34 4 P P 06 34 59.2 +0.5
baz=185
R40A **Maddies Statio** 25.54 353 P P 06 35 00.7 +0.2
R40A IAmb IAmb 06 35 21.6
comp=Z,8.1nm,1.0s
121A **Cookes Peak, D** 26.32 321 P P 06 35 09.6 +1.8
121A **Cookes Peak, D** 26.32 321 P P 06 35 09.1 +1.3
baz=134
R55A **Marlinton** 26.41 15 P P 06 35 09.4 +1.0
R55A IAmb IAmb 06 35 53.1
comp=Z,18nm,1.3s
Y22F **Passcal Instru** 26.91 325 P P 06 35 13.6 +0.6
baz=137
KSU1 **Kansas State U** 27.08 346 P P 06 35 16.1 +1.7
baz=162
CBN **Corbin Frederi** 27.14 20 P P 06 35 16.0 +1.1
baz=204
P52A **Corning** 27.27 11 P P 06 35 17.1 +1.0
baz=194
ANMO **Albuquerque** 27.30 327 P P 06 35 17.5 +0.9
baz=139
O48B **Farmland** 27.45 6 P P 06 35 18.2 +0.5
baz=187
CBKS **Cedar Bluff** 27.68 341 P P 06 35 20.9 +1.2
baz=156
T25A **Trinidad** 28.02 332 P P 06 35 24.9 +1.8
T25A IAmb IAmb 06 35 26.1
comp=Z,7.3nm,0.7s
T25A **Trinidad** 28.02 332 P P 06 35 24.2 +1.1
baz=145,SNR=6.7
O53A **New Philadelph** 28.04 12 P P 06 35 23.6 +0.7
baz=195
TUC **Tucson** 28.08 317 P P 06 35 25.0 +1.5
baz=128
KSCO **Kaye Shedlock'** 28.86 337 P P 06 35 32.0 +1.5
baz=151
SDCO **Great Sand Dun** 29.02 332 P P 06 35 33.2 +1.2
baz=144
L44A **Lake County Fo** 29.21 1 P P 06 35 35.1 +1.8
baz=181
S22A **4UR Ranch, Cre** 29.65 330 P P 06 35 39.4 +1.7
baz=142,SNR=10
MVCO **Mesa Verde** 30.09 327 P P 06 35 43.8 +2.4
baz=138
WUAZ **Wupatki** 30.52 322 P P 06 35 46.8 +1.6
baz=132
ISCO **Idaho Springs** 30.75 334 P P 06 35 49.1 +1.7
baz=146
BINY **Binghamton** 31.21 18 P P 06 35 52.6 +1.6
baz=204
PDMCI **Parker Dam,Lak** 31.52 317 P P 06 35 55.7 +1.8
baz=126
N23A **Red Feather La** 31.80 335 P P 06 35 57.3 +0.8
baz=146
BC3 **Big Chuckawall** 32.04 315 P P 06 36 00.2 +1.6
baz=124
O20A **White River Ci** 32.21 331 P P 06 36 01.4 +1.4
baz=142,SNR=13
SADO **Sadowa** 32.80 12 P P 06 36 04.1 -0.9
comp=Z,4.6nm,0.7s,baz=209,slow=10,SNR=3.1
comp=Z,4.6nm,0.7s
K22A **Casper** 33.51 336 P P 06 36 13.0 +1.7
baz=147
RSSD **Black Hills** 33.85 340 P P 06 36 15.6 +1.2
baz=152
EDW2 **Edwards Air Fo** 34.47 315 P P 06 36 21.1 +1.4
baz=122
TPNV **Topopah Spring** 34.48 319 P P 06 36 21.8 +2.0
baz=127
DUG **Dugway, Tooele** 34.57 326 P P 06 36 22.2 +1.7
baz=135
MPMC **Manual Prospec** 34.77 317 P P 06 36 23.7 +1.3
baz=124
BW06 **Boulder Array** 34.89 333 P P 06 36 24.7 +1.3
baz=142
PDAR **Pinedale Array** 34.89 333 P P 06 36 23.9 +0.6
comp=Z,1.9nm,0.7s,baz=127,slow=10,SNR=18
PDAR PcP PcP 06 38 54.8 -0.2
comp=Z,0.6nm,0.6s,baz=138,slow=5.1,SNR=5.8
comp=Z,1.9nm,0.7s
R11B **Troy Canyon, C** 34.93 321 P P 06 36 24.8 +1.1
baz=129
EYMN **Ely** 35.06 357 P P 06 36 25.6 +1.1
baz=175
GRAC **Grapevine Rang** 35.23 318 P P 06 36 27.0 +0.9
baz=126
AGMN **Agassiz Nation** 35.84 352 P P 06 36 30.7 -0.5
baz=168
MDND **Maddock** 36.07 347 P P 06 36 33.0 -0.1
baz=162
H17A **Grant Village** 36.63 333 P P 06 36 38.9 +0.6
baz=142
RLMT **Red Lodge** 36.66 335 P P 06 36 38.9 +0.4
baz=145
NVAR **Mina Array Bea** 36.67 319 P P 06 36 40.8 +2.2
comp=Z,1.4nm,0.7s,baz=129,slow=7.6,SNR=18
NVAR PcP PcP 06 39 01.9 +1.5
comp=Z,2.0nm,0.6s,baz=132,slow=3.8,SNR=21
comp=Z,1.4nm,0.7s
LAO **LASA Array** 36.85 340 P P 06 36 40.0 +0.2
baz=150
ULM **Lac du Bonnet** 37.76 352 P P 06 36 46.2 -1.2
comp=Z,7.2nm,0.6s,baz=172,slow=9.1,SNR=22
comp=Z,7.2nm,0.6s
DGMT **Dagmar** 37.80 343 P P 06 36 48.7 +0.9
baz=155,SNR=12
HLID **Hailey** 37.81 329 P P 06 36 48.3 +0.1
baz=136
BOZ **Bozeman (W)** 38.04 334 P P 06 36 50.8 +0.7
baz=142,SNR=11
EGMT **Eagleton** 39.24 337 P P 06 37 01.1 +1.1
baz=146,SNR=14
YBH **Yreka Blue Hor** 41.33 321 LR LR 06 55 56.5
comp=Z,106nm,21.6s,baz=215,slow=38
NEW **Newport** 42.52 332 P P 06 37 27.6 +0.7
baz=136
SCHQ **Schefferville** 45.21 18 P P 06 37 47.0 -1.3
comp=Z,4.2nm,0.6s,baz=224,slow=11,SNR=5.8
SCHQ PcP PcP 06 39 26.5 -0.9
comp=Z,1.7nm,0.9s,baz=225,slow=2.9,SNR=1.6
comp=Z,4.2nm,0.6s
BDFB **Brasilia** 49.12 124 P P 06 38 18.2 -1.3
comp=Z,3.3nm,0.6s,baz=298,slow=8.1,SNR=7.1
comp=Z,3.3nm,0.6s
CPUP **Villa Florida** 49.41 142 P P 06 38 20.4 -1.0
comp=Z,1.5nm,1.0s,baz=330,slow=8.6,SNR=3.8
comp=Z,1.5nm,1.0s
FRB **Frobisher Bay** 52.73 11 P P 06 38 43.8 -1.8
comp=Z,7.3nm,0.5s,baz=218,slow=8.5,SNR=51
comp=Z,7.3nm,0.5s
YKA **Yellowknife Ar** 52.93 345 P P 06 38 46.9 -0.3
YKA **Yellowknife Ar** 52.93 345 P P 06 38 46.7 -0.5
comp=Z,4.9nm,0.7s,baz=141,slow=7.5,SNR=109
YKA PcP PcP 06 39 54.8 -0.4
comp=Z,0.7nm,0.7s,baz=143,slow=3.7,SNR=4.5
comp=Z,4.9nm,0.7s
KOTAN **Kotaneelee Air** 53.91 339 P P 06 38 55.3 +0.9
baz=136
DLBC **Dease Lake** 55.06 335 P P 06 39 04.0 +1.1
baz=128,SNR=7.0
R33M **Jennings River** 56.04 335 P P 06 39 10.6 +0.7
baz=128
Q32M **Nakina River** 56.31 335 P P 06 39 12.5 +0.5
baz=126
TGTN **Hyland Airport** 56.37 338 P P 06 39 13.0 +0.8
baz=132
P33M **Teslin, Yukon** 57.28 336 P P 06 39 19.4 +0.7
baz=126
N32M **Quiet Lake** 57.94 336 P P 06 39 23.1 -0.1
baz
WHY **Whitehorse** 58.37 335 P P 06 39 26.5 +0.1
baz=124
FARO **Faro, Yukon** 58.68 337 P P 06 39 28.4 0.0
baz=126
O30N **Mendenhall** 58.93 335 P P 06 39 30.1 -0.1
baz=123
P30M **Million Dollar** 58.95 334 P P 06 39 31.1 +0.8
baz=122
P29M **Windy Craggy** 59.03 333 P P 06 39 31.6 +0.7
baz=121
M31M **Drury Creek, Y** 59.06 337 P P 06 39 31.6 +0.6
baz=125
N30M **Aishikik Lake** 59.71 335 P P 06 39 35.4 -0.2
baz=122
M30M **Minto, Yukon** 60.20 337 P P 06 39 38.8 0.0
baz=123
YUK4 **Talbot Arm** 60.29 335 P P 06 39 39.5 -0.2
baz=121
YUK8 **Steele Glacier** 60.73 334 P P 06 39 42.0 -0.8
baz=119
C36M **Paulatuk** 60.75 346 P P 06 39 42.2 -0.2
baz=140
M29M **Somme Creek** 60.78 336 P P 06 39 42.7 -0.3
baz=121
L29M **L29M** 61.00 337 P P 06 39 44.6 +0.3
baz=122
J30M **Hart River** 61.14 339 P P 06 39 45.7 +0.3
baz=124
K29M **Barlow Dome** 61.17 338 P P 06 39 45.0 -0.5
baz=123
CTG **Chitna Glacier** 61.25 334 P P 06 39 45.8 -0.3
baz=118
YUK3 **Moose Creek** 61.26 335 P P 06 39 46.5 +0.2
baz=119
I30M **Mount Dempster** 61.53 339 P P 06 39 48.3 +0.3
baz=125
BGLC **Bering Glacier** 61.73 332 P P 06 39 49.0 -0.1
baz=115
BVCY **Beaver Creek** 61.73 335 P P 06 39 49.0 -0.3
baz=119
J29N **Klondike Camp** 61.76 338 P P 06 39 49.3 -0.1
baz=122
G31M **Satah River** 61.84 341 P P 06 39 49.5 -0.4
baz=128
RES **Resolute Bay** 61.91 358 P P 06 39 48.7 -1.4
comp=Z,2.2nm,0.6s,baz=179,slow=9.5,SNR=14
comp=Z,2.2nm,0.6s
DAWY **Dawson** 61.99 337 P P 06 39 50.4 -0.5
baz=121
F31M **Tsiigehtchic** 62.00 342 P P 06 39 50.5 -0.4
F31M **Tsiigehtchic** 62.00 342 P P 06 39 50.8 -0.1
baz=128,SNR=6.9
M27K **Edge Creek, AK** 62.12 335 P P 06 39 51.7 -0.3
baz=118
MCARA **McCarthy VSAT** 62.16 334 P P 06 39 51.9 -0.2
baz=116
EPYK **Eagle Plains** 62.30 340 P P 06 39 53.3 +0.3
baz=125
L27K **Beaver Creek,** 62.44 336 P P 06 39 53.7 -0.2
baz=118
INK **Inuvik** 62.48 343 P P 06 39 53.0 -1.0
baz=129,SNR=7.9
G30M **tAoh Zraii Nji** 62.49 341 P P 06 39 53.1 -1.2
baz=126
F30M **Barrier River** 62.73 342 P P 06 39 55.1 -0.6
baz=126
H29M **Whitestone** 62.77 340 P P 06 39 55.1 -1.0
baz=123
I28M **Miner Creek** 62.91 338 P P 06 39 56.4 -0.7
baz=121
N25K **Chitina, Valde** 62.94 334 P P 06 39 56.6 -0.8
baz=115
K27K **Chicken** 62.99 337 P P 06 39 56.9 -0.7
baz=118
EGAK **Eagle** 63.01 338 P P 06 39 56.5 -1.1
baz=120
EYAK **Cordova Ski Ar** 63.02 332 P P 06 39 56.4 -1.4
baz=113
A36M **Sachs Harbour** 63.02 348 P P 06 39 56.8 -0.8
baz=139
KLU **Klutina** 63.48 333 P P 06 39 59.5 -1.4
baz=113
HARP **HAARP** 63.51 334 P P 06 40 00.1 -1.0
baz=114
P23K **Montague Islan** 63.58 331 P P 06 40 00.8 -0.7
baz=111
I27K **Kandik River** 63.59 338 P P 06 40 00.6 -1.0
baz=120
SCRK **Sand Creek** 63.72 336 P P 06 40 03.1 +0.5
baz=116
J26L **Joseph Creek** 63.79 337 P P 06 40 03.2 +0.2
baz=117
M24K **Tolsona, Glenn** 63.83 334 P P 06 40 03.4 +0.2
baz=113
E29M **Blow River** 63.83 342 P P 06 40 03.4 +0.3
baz=124
H27K **Steamboat Moun** 63.87 339 P P 06 40 03.0 -0.4
baz=120,SNR=9.3
PAX **Paxson** 63.88 335 P P 06 40 03.0 -0.6
baz=114
I26K **Coal Creek Min** 64.01 338 P P 06 40 04.0 -0.2
baz=118
F28M **Old Crow** 64.03 341 P P 06 40 03.9 -0.5
baz=122,SNR=21
K24K **Donnelly Dome** 64.36 336 P P 06 40 06.4 -0.2
baz=114
M23K **Glacier View** 64.39 333 P P 06 40 06.4 -0.4
baz=112
E28M **Babbage River** 64.45 342 P P 06 40 06.6 -0.5
baz=123
J25K **Salcha River,** 64.54 336 P P 06 40 07.3 -0.6
baz=115
WAT6 **Susitna Watana** 64.69 334 P P 06 40 07.4 -1.5
baz=112
DHY **Denali Highway** 64.72 334 P P 06 40 08.2 -0.9
baz=113
PMR **Palmer** 64.94 333 P P 06 40 10.0 -0.4
baz=110
PRP **Porcupine Dome** 64.99 337 P P 06 40 09.6 -1.2
baz=116,SNR=5.9
G26K **Porcupine Rive** 65.01 339 P P 06 40 10.0 -0.7
baz=118
RC01 **Rabbit Creek A** 65.04 332 P P 06 40 10.3 -0.7
baz=110
HDA **Harding Lake** 65.08 336 P P 06 40 10.4 -0.8
baz=114,SNR=5.8
ILAR **Eielson Array** 65.20 336 P P 06 40 11.5 -0.5
comp=Z,2.0nm,0.8s,baz=167,slow=5.0,SNR=44
comp=Z,2.0nm,0.8s
D27M **Malcolm River** 65.23 342 P P 06 40 11.6 -0.6
baz=122
KDAK **Kodiak Island** 65.43 328 P P 06 40 12.5 -1.1
baz=105
F26K **Sheenjek River** 65.48 340 P P 06 40 12.7 -1.2
baz=118,SNR=7.7
POKR **Poker Plat Res** 65.55 337 P P 06 40 12.9 -1.4
baz=114
Q20K **Shuyak Island** 65.56 329 P P 06 40 13.3 -1.1
baz=106
MCK **McKinley** 65.62 335 P P 06 40 13.6 -1.2
baz=111
SUA **Susitna One** 65.62 332 P P 06 40 14.2 -0.8
baz=109
F25K **Christian Rive** 65.94 339 P P 06 40 16.0 -0.9
baz=116,SNR=6.8
NEA2 **Nenana** 65.99 336 P P 06 40 16.8 -0.4
baz=112
H24K **Noodor Dome** 66.01 337 P P 06 40 16.3 -1.0
baz=113
TRF **Thorofare Moun** 66.09 334 P P 06 40 17.0 -1.0
baz=110
SKT **Skwentna** 66.14 333 P P 06 40 17.4 -0.8
baz=108
E25K **Arctic Village** 66.16 340 P P 06 40 18.7 +0.5
E25K **Arctic Village** 66.16 340 P P 06 40 17.7 -0.5
baz=116,SNR=7.0
G24K **Hadweenzic Riv** 66.21 338 P P 06 40 18.1 -0.4
baz=114
I23K **Minto, Yukon-K** 66.31 336 P P 06 40 18.4 -0.8
baz=112
BPAW **Bear Paw Mtn.** 66.60 335 P P 06 40 20.4 -0.7
baz=110
F24K **Squaw Lake** 66.69 339 P P 06 40 21.6 0.0
baz=114
PPLA **Purkeypile** 66.72 333 P P 06 40 20.9 -1.1
baz=108
MLY **Manley** 66.82 336 P P 06 40 22.1 -0.4
baz=110,SNR=6.6
M20K **Styx River** 66.83 332 P P 06 40 22.3 -0.4
baz=107
CAST **Castle Rocks** 66.84 334 P P 06 40 21.2 -1.4
baz=108
D25K **Kavik River** 66.96 341 P P 06 40 21.5 -1.8
baz=116
CHUM **Lake Minchumin** 67.08 334 P P 06 40 22.6 -1.5
baz=108
G23K **Bananza Creek** 67.15 338 P P 06 40 23.5 -1.0
baz=112
L20K **Farewell, AK** 67.34 333 P P 06 40 23.9 -2.0
baz=106
I21K **Tanana** 67.36 336 P P 06 40 23.3 -2.5
baz=109
H22K **Ishtalitna Cre** 67.37 337 P P 06 40 23.8 -2.1
baz=110
COLD **Coldfoot** 67.40 338 P P 06 40 24.1 -2.0
baz=112,SNR=6.2
E23K **Chandalar** 67.51 339 P P 06 40 25.8 -1.1
baz=112
K20K **Telida** 67.67 334 P P 06 40 27.0 -0.9
baz=106
D24K **Happy Valley** 67.68 340 P P 06 40 26.7 -1.0
baz=114
L19K **White Mountain** 67.70 332 P P 06 40 26.3 -1.7
baz=105
TOLK **Toolik Lake Re** 67.72 340 P P 06 40 27.1 -1.0
baz=113
G22K **Bettles** 67.77 338 P P 06 40 27.0 -1.4
baz=110
N18K **Kilae Creek** 67.81 331 P P 06 40 26.8 -2.0
baz=104
C24K **Franklin Bluff** 67.87 341 P P 06 40 27.7 -1.2
baz=114
J20K **Nowinta River** 67.94 335 P P 06 40 27.7 -1.8
baz=107
M18K **Stony River** 67.97 331 P P 06 40 28.4 -1.4
baz=104
O17K **Koliganek Bris** 68.19 330 P P 06 40 30.1 -1.0
baz=102
D23K **Nanushuk River** 68.22 340 P P 06 40 30.2 -0.9
baz=112
I20K **Naaghedeneel** 68.26 335 P P 06 40 30.3 -1.2
baz=106
E22K **Anaktuvuk Pass** 68.31 339 P P 06 40 30.7 -1.1
baz=110

G21K	**Allakaket**	**68.39**	**337**	P		**P**	**06 40 31.2**	**-1.0**
	baz=108							
N17K	**Nushagak Hills**	**68.39**	**330**	P		**P**	**06 40 31.1**	**-1.3**
	baz=102							
TTA	**Tatalina**	**68.41**	**333**	P		**P**	**06 40 31.2**	**-1.4**
	baz=104							
J19K	**Poorman**	**68.51**	**334**	P		**P**	**06 40 31.6**	**-1.5**
	baz=105							
L18K	**Granite Mounta**	**68.54**	**332**	P		**P**	**06 40 31.5**	**-1.8**
	baz=104							
F21K	**Alatna River**	**68.60**	**338**	P		**P**	**06 40 32.4**	**-1.2**
	baz=108							
H20K	**Anotleneega Mo**	**68.62**	**336**	P		**P**	**06 40 32.7**	**-1.0**
	baz=106							
D22K	**Ayikyak River**	**68.86**	**340**	P		**P**	**06 40 34.2**	**-1.0**
	baz=110							
H19K	**Roundabout Mou**	**69.26**	**336**	P		**P**	**06 40 36.7**	**-1.0**
	baz=105							
F20K	**Avaraart Lake**	**69.39**	**337**	P		**P**	**06 40 37.7**	**-0.7**
	baz=106							
G19K	**Purcell Mounta**	**69.67**	**336**	P		**P**	**06 40 39.3**	**-0.9**
	baz=104							
C21K	**Knifeblade Rid**	**69.67**	**340**	P		**P**	**06 40 39.2**	**-1.0**
	baz=108							
B21K	**Ikpikpuk River**	**69.76**	**340**	P		**P**	**06 40 40.5**	**-0.1**
	baz=108							
E20K	**Nigu River**	**69.90**	**338**	P		**P**	**06 40 40.6**	**-1.1**
	baz=106							
F19K	**Shaleruckik Mo**	**70.11**	**337**	P		**P**	**06 40 41.8**	**-1.1**
	baz=104							
D20K	**Etivluk River**	**70.17**	**339**	P		**P**	**06 40 41.5**	**-1.8**
	baz=106							
G18K	**Tagagawik**	**70.23**	**336**	P		**P**	**06 40 42.7**	**-1.0**
	baz=103							
N14K	**Kuskokwak Cree**	**70.50**	**329**	P		**P**	**06 40 45.1**	**-0.2**
	baz=98							
H17K	**Granite Mounta**	**70.54**	**335**	P		**P**	**06 40 45.1**	**-0.5**
	baz=101							
D19K	**Kuna River**	**70.65**	**339**	P		**P**	**06 40 45.5**	**-0.7**
	baz=104							
K15K	**Wolf Creek Mou**	**70.78**	**332**	P		**P**	**06 40 46.2**	**-0.8**
	baz=99							
F18K	**Selawik**	**70.78**	**336**	P		**P**	**06 40 46.3**	**-0.6**
	baz=102							
G17K	**Kiwalik Mounta**	**70.96**	**335**	P		**P**	**06 40 47.3**	**-0.8**
	baz=101							
C19K	**Lookout Ridge**	**71.31**	**339**	P		**P**	**06 40 48.3**	**-2.0**
	baz=103							
E17K	**Hotham Inlet**	**71.72**	**337**	P		**P**	**06 40 52.0**	**-0.6**
	baz=100							
C18K	**Utukok River**	**71.78**	**338**	P		**P**	**06 40 52.6**	**-0.5**
	baz=102							
C17K	**DeLong Mountai**	**72.47**	**338**	P		**P**	**06 40 56.6**	**-0.6**
	baz=100							
F15K	**North Star Dit**	**72.63**	**335**	P		**P**	**06 40 57.6**	**-0.5**
	baz=97							
ESDC	**Sonseca Array**	**77.81**	**52**	P		**P**	**06 41 26.0**	**-2.4**
	comp=Z,0.6nm,0.8s,baz=297,slow=5.6,SNR=2.4							
	comp=Z,0.6nm,0.8s							
ARCES	**ARCESS Array B**	**86.15**	**19**	P		**P**	**06 42 10.7**	**-0.8**
	comp=Z,4.3nm,1.1s,baz=292,slow=4.8,SNR=2.1							
	comp=Z,4.3nm,1.1s							
GERES	**GERESS Array B**	**88.34**	**40**	LR		LR	07 19 48.1	
	comp=Z,62nm,18.9s,baz=338,slow=34							
SONM	**Songino Array**	**118.12**	**349**	PKP		**PKPdf**	**06 48 16.3**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=344,slow=2.0,SNR=3.8							
KSRS	**Korea Array**	**119.33**	**327**	PKP		**PKiKP**	**06 48 20.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=123,slow=0.4,SNR=4.4							
WRA	**Warramunga Arr**	**138.32**	**254**	PKP		**PKiKP**	**06 48 58.0**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=85,slow=1.8,SNR=9.2							
ASAR	**Alice Springs**	**138.39**	**249**	PKPdf	PKPpre		06 48 47.7	
	comp=Z,0.4nm,0.8s,baz=99,slow=3.6,SNR=4.7							
ASAR				PKP		**PKiKP**	**06 48 58.1**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=101,slow=2.2,SNR=6.9							
CMAR	**Chiang Mai Arr**	**148.00**	**346**	PKPbc		**PKPbc**	**06 49 16.5**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=347,slow=3.9,SNR=7.0							

*AEIC **17** 06:38:10.6±1.0,55.9N±0.1×149.9W±0.1,h11km±8km, Error ellipse: s-maj=15.5km s-min=10.9km az=178.0*

NEIC 17 06:38:05.7±1.0,55.90N±0.09×150.0W±0.1,h8km±7km, ML3.1/26,ML3.0(AEIC),Error ellipse: s-maj=13.7km s-min=8.5km az=150.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.27**	**307**		Pn	06 38 43.4	0.0
OHAK					Sn	06 39 08.6	-2.9
KDAK	**Kodiak Island**	**2.37**	**324**		Pn	06 38 44.9	+0.1
KDAK					Sn	06 39 11.1	-3.0
KDAK	**Kodiak Island**	**2.37**	**324**	IAML		06 39 20.3	
	53nm,3.0s						
KDAK				IAML		06 39 28.1	
	47nm,3.1s						
SII	**Sitkinak Islan**	**2.45**	**287**		Pn	06 38 45.8	-0.1
SII	**Sitkinak Islan**	**2.45**	**287**	IAML		06 39 30.8	
	comp=E,81nm,1.5s						
SII				IAML		06 39 59.7	
	comp=N,182nm,2.5s						
SYI	**Shuyak Island**	**3.02**	**335**		Pn	06 38 53.0	-0.7
SYI					Sn	06 39 28.3	-1.7
SYI	**Shuyak Island**	**3.02**	**335**	IAML		06 40 34.2	
	comp=N,37nm,3.5s						
KAHG	**Katmai Hook Gl**	**3.60**	**318**		Pn	06 39 03.3	+1.5
Q19K	**Cape Douglas,**	**3.63**	**328**		Pn	06 39 03.4	+1.2
Q19K	**Cape Douglas,**	**3.63**	**328**	IAML		06 41 00.4	
	comp=N,70nm,2.3s						
Q19K				IAML		06 41 14.2	
	comp=E,82nm,1.4s						
KAKN	**Katmai Knife C**	**3.67**	**313**		Pn	06 39 03.7	+0.9
CNPM	**China Poot**	**3.70**	**350**		Pn	06 39 02.7	-0.4
CNPM					Sn	06 39 44.8	-2.0
CNPM	**China Poot**	**3.70**	**350**	IAML		06 39 46.3	
	comp=E,34nm,2.7s						
CNPM				IAML		06 39 57.8	
	comp=N,43nm,2.7s						
BRLK	**Bradley Lake**	**3.91**	**353**	Pn	Pn	06 39 05.2	-0.8
CNTC	**Contact Creek**	**4.01**	**309**		Pn	06 39 08.1	+0.7
P19K	**Oil Pt**	**4.15**	**336**	Pn	Pn	06 39 09.5	+0.3
P19K				IAML		06 40 24.4	
	comp=E,29nm,1.4s						
P19K				IAML		06 40 54.5	
	comp=N,35nm,1.4s						
P23K	**Montague Islan**	**4.33**	**17**		Pn	06 39 11.2	-0.5
P18K	**Big Mountain,**	**4.50**	**323**		Pn	06 39 14.2	+0.1
P18K	**Big Mountain,**	**4.50**	**323**	IAML		06 41 55.8	
	comp=E,16nm,3.5s						
O18K	**Koktuh Hills**	**4.85**	**327**		Pn	06 39 19.6	+0.6
O18K	**Koktuh Hills**	**4.85**	**327**	IAML		06 40 35.5	
	comp=E,21nm,3.6s						
O18K				IAML		06 41 11.2	
	comp=N,6.6nm,1.5s						
HIN	**Hinchinbrook I**	**4.87**	**21**		Pn	06 39 18.8	-0.4
KAIM	**Kayak Island**	**5.00**	**34**		Pn	06 39 20.7	-0.3
SUCK	**Suckling Hills**	**5.32**	**36**		Pn	06 39 25.4	+0.1
NICHA	**Nichawak Mount**	**5.39**	**34**		Pn	06 39 26.4	+0.1
N19K	**Bonanza Creek**	**5.47**	**336**	Pn	Pn	06 39 27.7	+0.2
BERG	**Berg Lake**	**5.59**	**34**		Pn	06 39 28.8	-0.3
O16K	**Kokwok River B**	**5.71**	**314**	Pn	Pn	06 39 30.7	0.0
N18K	**Kilae Creek**	**5.72**	**329**	Pn	Pn	06 39 31.3	+0.4
BMRM	**Bremner River**	**5.81**	**27**		Pn	06 39 32.0	-0.1
GHO	**Glory Hole Cre**	**5.92**	**5**	Pn	Pn	06 39 34.9	+1.3
SVW2	**Sparrevohn**	**5.99**	**333**	Pn	Pn	06 39 34.5	0.0
TGL	**Tana Glacier**	**6.15**	**35**		Pn	06 39 36.7	-0.1
BAGL	**Bagley Icefiel**	**6.21**	**39**		Pn	06 39 37.3	-0.1
VRDI	**Verde Repeater**	**6.34**	**30**	Pn	Pn	06 39 38.8	-0.6
N25K	**Chitina, Valde**	**6.37**	**24**	Pn	Pn	06 39 40.7	+1.0
KIAG	**Kiagna River**	**6.43**	**35**		Pn	06 39 40.4	-0.3
GRNC	**Granite Creek**	**6.49**	**38**		Pn	06 39 41.5	-0.1
TABL	**Table Mountain**	**6.52**	**42**	Pn	Pn	06 39 41.2	-0.7
PCA	**Pinnacle**	**6.66**	**47**		Pn	06 39 44.1	+0.4
M17K	**Holitna River**	**6.75**	**328**	Pn	Pn	06 39 45.0	+0.1
BARN	**Barnard Glacie**	**6.76**	**37**		Pn	06 39 45.5	+0.2
LOGN	**Logan Glacier**	**6.82**	**40**	Pn	Pn	06 39 46.2	+0.1
M26K	**Nabesna, AK**	**7.44**	**26**	Pn	Pn	06 39 54.0	-0.3
P29M	**Windy Craggy**	**7.53**	**55**		Pn	06 39 55.5	-0.2

*AEIC **17** 06:39:07.0±1.5,56.2N±0.1×149.4W±0.1,h10km±8km, Error ellipse: s-maj=15.7km s-min=8.6km az=170.0*

NEIC 17 06:39:03.4±1.9,56.2N±0.1×149.4W±0.1,h21km±10km, ML2.9/20,ML2.9(AEIC),Error ellipse: s-maj=14.9km s-min=9.2km az=173.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.33**	**313**		Pn	06 39 41.2	+0.7
KDAK				IAML		06 40 08.3	
	46nm,2.9s						
KDAK	**Kodiak Island**	**2.33**	**313**		Sn	06 40 06.3	-2.2
OHAK	**Old Harbor**	**2.36**	**297**		Pn	06 39 40.5	-0.4
OHAK	**Old Harbor**	**2.36**	**297**		Sn	06 40 06.9	-2.2
OHAK	**Old Harbor**	**2.36**	**297**	IAML		06 40 04.5	
	comp=E,12nm,1.2s						
SII	**Sitkinak Islan**	**2.67**	**279**		Sn	06 40 14.9	-2.0
SYI	**Shuyak Island**	**2.88**	**327**		Pn	06 39 48.2	+0.1
SYI					Sn	06 40 20.8	-1.3
SYI	**Shuyak Island**	**2.88**	**327**	IAML		06 41 27.5	
	comp=N,52nm,2.9s						
CNPM	**China Poot**	**3.45**	**344**		Pn	06 39 55.1	-0.8
CNPM					Sn	06 40 33.0	-3.1
BRSE	**Bradley Lake S**	**3.60**	**349**		Pn	06 39 57.5	-0.4
BRSE					Sn	06 40 38.2	-1.6
BRLK	**Bradley Lake**	**3.64**	**348**		Pn	06 39 58.2	-0.3
BRLK	**Bradley Lake**	**3.64**	**348**	IAML		06 41 07.9	
	comp=N,32nm,2.6s						
BRLK				IAML		06 41 09.7	
	comp=E,34nm,2.7s						
P23K	**Montague Islan**	**3.93**	**15**		Pn	06 40 02.5	0.0
HIN	**Hinchinbrook I**	**4.46**	**19**		Pn	06 40 09.8	0.0
RSO	**Redoubt South**	**4.60**	**339**	Pn	Pn	06 40 11.0	-0.8
O18K	**Koktuh Hills**	**4.77**	**322**	Pn	Pn	06 40 13.4	-0.6
O18K				IAML		06 41 53.4	
	comp=E,18nm,2.9s						
FID	**Port Fidalgo**	**4.79**	**18**	Pn	Pn	06 40 13.7	-0.7
FID				IAML		06 41 36.1	
	comp=N,9.9nm,1.5s						
FID				IAML		06 42 36.0	
	comp=E,12nm,1.4s						
NICHA	**Nichawak Mount**	**4.95**	**33**		Pn	06 40 16.5	+0.1
BERG	**Berg Lake**	**5.15**	**33**	Pn	Pn	06 40 20.1	+0.9
N19K	**Bonanza Creek**	**5.31**	**332**	Pn	Pn	06 40 22.1	+0.6
N19K				IAML		06 42 36.2	
	comp=N,5.0nm,1.4s						
N19K				IAML		06 43 50.6	
	comp=E,3.0nm,1.4s						
N19K	**Bonanza Creek**	**5.31**	**332**	P	Pn	06 40 22.5	+1.0
	baz=105						
KHIT	**Khitrov Hills**	**5.33**	**35**		Pn	06 40 21.8	0.0
BMRM	**Bremner River**	**5.38**	**26**		Pn	06 40 22.8	+0.4
GHO	**Glory Hole Cre**	**5.57**	**2**		Pn	06 40 25.7	+0.6
KLU	**Klutina**	**5.59**	**17**		Pn	06 40 25.8	+0.5
TGL	**Tana Glacier**	**5.71**	**35**		Pn	06 40 27.6	+0.6
O16K	**Kokwok River B**	**5.73**	**310**	Pn	Pn	06 40 27.2	+0.1
GLB	**Gilahina Butte**	**5.99**	**27**	Pn	Pn	06 40 31.1	+0.3
O15K	**Ungalikthiuk R**	**6.32**	**302**		Pn	06 40 35.8	+0.6
BARN	**Barnard Glacie**	**6.32**	**37**	Pn	Pn	06 40 35.0	-0.4
S31K	**Pelican**	**7.39**	**71**		Pn	06 40 49.0	-1.0

*NNC **17** 07:23:20.6±0.6,50.02N×78.81E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=12.5km s-min=3.2km az=73.0, Suspected Mining explosion.*

*IDC **17** 07:23:22.2±0.9,50.06N×78.76E,h0km,mbtmp3.0/3, ML2.3/3,Error ellipse: s-maj=11.0km s-min=6.4km az=57.0.*

ISC 17 07:23:21.4±1.0,50.00N±0.06×78.67E±0.08,h0km,n10, σ0s82/14,7C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.63**	**352**	⇑P	**Pg**	**07 23 32.9**	**-0.6**
	14nm,0.2s						
KURBB				⇓S	**Sg**	**07 23 41.9**	**+0.3**
	55nm,0.7s						
KURBB	**Kurchatov Arra**	**0.63**	**352**	Pg	**Pg**	**07 23 32.9**	**-0.6**
	3.0nm,0.3s,baz=167,slow=17,SNR=28						
KURBB				Lg	Lg	07 23 41.9	
	2.0nm,0.3s,baz=163,slow=33,SNR=9.8						
KURK	**Kurchatov**	**0.71**	**357**	⇑P	**Pg**	**07 23 34.2**	**-0.9**
	6.2nm,0.3s						
KURK				⇑S	**Sg**	**07 23 44.2**	**-0.2**
	17nm,0.9s						
MAKZ	**Makanchi**	**3.88**	**144**	⇑Pg	**Pb**	**07 24 29.2**	**-1.6**
	0.2nm,0.2s						
MAKZ				⇓Lg	Lg	07 25 20.4	
	5.7nm,0.9s						
MK31	**Makanchi Array**	**4.01**	**142**	⇓Pn	**Pn**	**07 24 24.8**	**+0.6**
	0.2nm,0.2s,baz=326,slow=10,SNR=46						
MK31				⇓Pg	**Pb**	**07 24 33.2**	**+0.2**
	0.4nm,0.3s,baz=305,slow=10,SNR=7.6						
MK31				⇑Lg	Lg	07 25 28.1	
	6.0nm,0.7s,baz=327,slow=27,SNR=19						
MKAR	**Makanchi Array**	**4.01**	**142**	Pn	**Pn**	**07 24 25.1**	**+0.8**
	0.4nm,0.3s,baz=321,slow=10,SNR=84						
MKAR				Pg	**Pb**	**07 24 32.9**	**-0.2**
	0.8nm,0.3s,baz=317,slow=14,SNR=13						
MKAR				Lg	Lg	07 25 24.9	
	0.5nm,0.3s,baz=330,slow=26,SNR=3.6						
	0.4nm,0.3s						
OTUK	**Ortayu**	**4.52**	**249**	⇑Pn	**Pn**	**07 24 31.5**	**+0.4**
	1.1nm,0.3s						
OTUK				⇑Lg	Lg	07 25 44.0	
	2.8nm,0.8s						
I46RU	**ZALESOVO INFRA**	**5.48**	**42**	I	I	07 59 10.0	
	baz=227,slow=338,SNR=5.2						
ZALV	**Zalesovo Beam**	**5.48**	**42**	Pn	**Pn**	**07 24 45.5**	**+1.3**
	0.6nm,0.3s,baz=233,slow=14,SNR=8.9						
ZALV				Lg	Lg	07 26 16.3	
	0.2nm,0.3s,baz=223,slow=26,SNR=3.8						
	1.8nm,0.2s						
BVAR	**Borovoye Array**	**5.99**	**304**	Pn	**Pn**	**07 24 51.8**	**+0.5**
	baz=120,slow=14,SNR=5.2						
BVAR				Sn	**Sn**	**07 26 00.8**	**+0.3**
	0.1nm,0.3s,baz=110,slow=22,SNR=6.1						
BVAR				Lg	Lg	07 26 29.6	
	baz=116,slow=26,SNR=2.1						
	0.3nm,0.3s						

*IDC **17** 07:23:25.9±3.2,15.78N×98.38W,h0km,mb3.7/5, mbtmp3.6/7,ML3.1/2,MS3.4/2,Error ellipse: s-maj=57.3km s-min=20.0km az=0.0*

*MEX **17** 07:23:27.4±0.7,15.67N×98.49W,h13km±14km,MD4.3*

*NEIC **17** 07:23:31.3±2.5,16.03N±0.06×98.08W±0.05,h10km±6km, mb4.2/24,Md4.4/10(MEX),Error ellipse: s-maj=9.5km s-min=5.4km az=209.0*

ISC 17 07:23:28.7±1.8,15.95N±0.05×98.23W±0.04,h9km±10km, n77,σ2s04/103,mb4.0/8,1C,Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**1.04**	**87**		**Pb**	**07 23 48.9**	**-0.2**
PEIG					**Sn**	**07 24 03.5**	**-0.9**
PEIG	**Puerto Escondi**	**1.04**	**87**	*e*P	**Pb**	**07 23 48.9**	**-0.2**
PEIG				*e*S	**Sn**	**07 24 03.5**	**-0.9**
YOIG	**Yosondua**	**1.12**	**36**		**Pg**	**07 23 50.0**	**-0.3**
YOIG	**Yosondua**	**1.12**	**36**	*e*P	**Pg**	**07 23 50.0**	**-0.3**
YOIG				*e*S	**Sn**	**07 24 09.0**	**+2.5**
CRIG	**Cruz Grande**	**1.17**	**312**	*e*P	Pn	07 23 46.4	-4.9
CRIG				*i* S	Sb	07 23 59.6	-6.8
MGIG	**Malinaltepec**	**1.33**	**343**	*e*P	**Pn**	**07 23 51.2**	**-2.5**
MGIG				*e*S	**Sb**	**07 24 10.4**	**-1.0**
TXIG	**Tlaxiaco**	**1.37**	**19**		**Pn**	**07 23 53.7**	**-0.7**
TXIG	**Tlaxiaco**	**1.37**	**19**	*e*P	**Pn**	**07 23 53.7**	**-0.7**
TXIG				*e*S	**Sn**	**07 24 14.8**	**+2.0**
TLIG	**Tlapa**	**1.64**	**349**		**Pn**	**07 23 57.7**	**-0.2**
TLIG				Sn	**Sn**	**07 24 20.5**	**+1.3**
TLIG	**Tlapa**	**1.64**	**349**	*e*P	**Pn**	**07 23 56.4**	**-1.5**
TLIG				*e*S	**Sn**	**07 24 15.5**	**-3.7**
DAIG	**Los Arroyos**	**1.73**	**308**	*e*P	Pn	07 23 54.7	-4.4
DAIG				*e*S	Sn	07 24 13.1	-8.2
VHO	**Vista Hermosa**	**1.82**	**52**	*e*P	**Pn**	**07 24 00.4**	**-0.1**
VHO				*e*S	**Sg**	**07 24 27.4**	**+0.1**
OXBJ	**Oaxaca**	**1.82**	**52**	*e*P	**Pn**	**07 23 59.0**	**-1.6**
OXBJ				*e*S	**Sg**	**07 24 26.8**	**-0.7**
HLIG	**Huajuapan de L**	**1.92**	**12**	*e*P	**Pn**	**07 24 00.9**	**-0.9**
HLIG				*e*S	**Sb**	**07 24 28.3**	**+0.1**
FTIG	**Fresnillo de T**	**1.95**	**3**	*e*P	**Pn**	**07 24 00.5**	**-1.7**
FTIG				*e*S	**Sn**	**07 24 23.9**	**-3.1**
HUIG	**Huatulco**	**2.05**	**95**	*e*P	**Pn**	**07 24 03.0**	**-0.5**
HUIG				*e*S	**Sn**	**07 24 27.1**	**-2.1**
CAIG	**El Cayaco**	**2.24**	**300**	*e*P	Pn	07 24 01.4	-4.6
CAIG				*e*S	Sn	07 24 25.2	-8.6
MEIG	**Mezcala**	**2.37**	**326**	*e*P	**Pn**	**07 24 05.9**	**-2.1**
MEIG				*e*S	**Sn**	**07 24 33.7**	**-3.6**
TOIG	**Toxpalan**	**2.41**	**27**	*e*P	**Pn**	**07 24 07.0**	**-1.5**
TOIG				*e*S	**Sb**	**07 24 39.8**	**-2.5**
TPIG	**Tehuac#an**	**2.59**	**19**	*e*P	**Pn**	**07 24 11.1**	**-0.1**
TPIG				*e*S	**Sn**	**07 24 44.2**	**+1.4**
PLIG	**Platanillo**	**2.72**	**334**	*e*P	**Pn**	**07 24 13.5**	**+0.7**
PLIG				*e*S	**Sn**	**07 24 42.9**	**-2.9**
NEUV	**Arroyo Zacate**	**2.91**	**53**	*e*P	**Pn**	**07 24 16.2**	**+0.9**
NEUV				*e*S	**Sn**	**07 24 49.9**	**-0.6**
YAIG	**Yautepec**	**3.01**	**345**	*e*P	**Pn**	**07 24 20.2**	**+3.5**
YAIG				*e*S	**Sn**	**07 24 54.7**	**+1.7**
ARIG	**Puente Sto Nin**	**3.08**	**319**	*e*P	**Pn**	**07 24 16.4**	**-1.2**
ARIG				*e*S	Sn	07 24 47.8	-6.8
PPM	**Popocatepetl**	**3.12**	**353**	*e*P	**Pn**	**07 24 18.4**	**-0.3**
PPM				*e*S	**Sn**	**07 24 57.1**	**+0.7**
AMVM	**AMECAMECA**	**3.21**	**351**	*e*P	**Pb**	**07 24 25.4**	**-0.8**
AMVM				*e*S	**Sn**	**07 24 56.5**	**-1.8**
CMIG	**Matias Romero**	**3.41**	**70**	Pn	**Pn**	**07 24 22.6**	**+0.5**
	1.9nm,0.3s,baz=262,slow=14,SNR=32						
CMIG				Sn	**Sb**	**07 25 05.5**	**-5.4**
	4.9nm,0.3s,baz=65,slow=22,SNR=3.5						
CMIG				Lg	Lg	07 25 21.1	
	11nm,0.3s,baz=294,slow=14,SNR=5.1						
	4.0nm,0.3s						
CMIG	**Matias Romero**	**3.41**	**70**	*e*P	Pn	07 24 16.5	-5.6
CMIG				*e*S	**Sn**	**07 25 02.6**	**0.0**
UNM	**Universidad Na**	**3.48**	**345**	Pn	Pn	**07 24 26.5**	**+3.1**
UNM	**Universidad Na**	**3.48**	**345**	*e*P	**Pn**	**07 24 26.1**	**+2.7**
UNM				*e*S	**Sn**	**07 25 00.2**	**-4.7**
INVM	**La Marquesa**	**3.50**	**342**	*e*P	**Pn**	**07 24 26.6**	**+2.8**
INVM				*e*S	**Sn**	**07 25 01.3**	**-4.3**
TXVM	**Universitario**	**3.53**	**349**	*e*S	**Sn**	**07 25 02.3**	**-3.7**
PBVM	**Pinon**	**3.57**	**347**	*e*P	**Pn**	**07 24 23.3**	**-1.0**
PBVM				*e*S	**Sn**	**07 25 04.8**	**-1.9**
TOVM	**TOLUCA**	**3.59**	**338**	*e*P	**Pn**	**07 24 26.0**	**+1.0**
TOVM				*e*S	**Sn**	**07 25 03.9**	**-3.8**
JAUV	**Jalcomulco**	**3.66**	**22**	*e*P	**Pn**	**07 24 25.7**	**+0.1**
JAUV				*e*S	**Sn**	**07 25 10.9**	**+1.9**
PTVM	**Pico Tres Padr**	**3.72**	**347**	*e*P	**Pn**	**07 24 30.9**	**+4.3**
PTVM				*e*S	**Sn**	**07 25 06.3**	**-4.5**
AZVM	**Cuida Lopez Ma**	**3.75**	**345**	*e*P	Pn	07 24 32.5	+5.3
AZVM				*e*S	**Sn**	**07 25 12.5**	**+0.8**
VTVM	**Tizayuca**	**3.84**	**352**	*e*P	**Pb**	**07 24 37.0**	**+0.1**
VTVM				*e*S	**Sn**	**07 25 14.1**	**+0.3**
ZUVM	**ZUMPANGO**	**3.94**	**348**	*e*P	**Pn**	**07 24 30.1**	**+0.4**
ZUVM				*e*S	**Sn**	**07 25 18.1**	**+1.8**
ATVM	**ATLACOMULCO**	**4.09**	**338**	*e*S	**Sn**	**07 25 20.6**	**+0.6**
ACIG	**Acambay**	**4.31**	**339**	*e*P	**Pn**	**07 24 35.4**	**+0.7**
ACIG				*e*S	**Sn**	**07 25 21.5**	**-3.7**
MOIG	**Morelia**	**4.66**	**323**	Pn	**Pn**	**07 24 44.0**	**+4.5**
JRQG	**Juriquilla Cam**	**5.18**	**336**	Pn	**Pn**	**07 24 50.8**	**+4.1**
CCIG	**Comitan**	**5.87**	**86**	Pn	**Pn**	**07 24 58.1**	**+2.0**
ZAIG	**Zacatecas**	**7.92**	**330**	Pn	**Pn**	**07 25 26.7**	**+2.2**
TXAR	**Lajitas Array**	**14.23**	**340**	Pn	**Pn**	**07 26 51.1**	**+0.4**
TXAR	**Lajitas Array**	**14.23**	**340**	Pn	**Pn**	**07 26 51.9**	**+1.2**
	baz=151,slow=13,SNR=2.5						
TXAR				Lg	Lg	07 30 59.1	
	baz=163,slow=35,SNR=1.7						
TXAR				LR	LR	07 32 07.1	
	comp=Z,107nm,19.4s,baz=138,slow=36						
	0.5nm,1.0s						
SAND	**Sanderson**	**14.39**	**346**	Pn	**Pn**	**07 26 54.8**	**+1.9**
BRDY	**Brady**	**15.29**	**358**		**Pn**	**07 27 05.4**	**+0.6**
NATX	**Nacogdoches**	**16.07**	**11**	Pn	**Pn**	**07 27 16.5**	**+1.5**
NATX				IAmb	IAmb	07 27 20.2	
	comp=Z,11nm,0.8s						
SGCY	**Sterling City**	**16.11**	**351**		**P**	**07 27 19.1**	**+0.1**
SGCY				IAmb	IAmb	07 27 20.9	
	comp=Z,22nm,1.4s						
FW13	**Cleburne**	**16.35**	**2**	Pn	**Pn**	**07 27 20.2**	**+1.6**
FW13				IAmb	IAmb	07 27 56.8	
	comp=Z,12nm,0.4s						
ABTX	**Abilene, Hawle**	**16.65**	**356**	P	**Pn**	**07 27 24.8**	**+2.3**
ABTX				IAmb	IAmb	07 27 27.5	
	comp=Z,21nm,1.1s						
PLPT	**Palo Pinto**	**16.79**	**360**	P	**Pn**	**07 27 26.2**	**+2.0**
PLPT				IAmb	IAmb	07 27 28.9	
	comp=Z,20nm,1.0s						
FW03	**Perrin-Whitt E**	**17.02**	**0**	P	**Pn**	**07 27 29.0**	**+1.9**
GDL2	**Guadalupe Moun**	**17.11**	**342**	P	**Pn**	**07 27 30.3**	**+1.9**
MIAR	**Mount Ida**	**18.99**	**12**	P	**P**	**07 27 51.0**	**+0.4**
TUL3	**Leonard**	**20.00**	**6**	P	**P**	**07 28 02.9**	**+1.2**
OK033	**Mehan**	**20.05**	**3**	P	**P**	**07 28 02.0**	**-0.2**
OK033				IAmb	IAmb	07 28 45.2	
	comp=Z,6.8nm,0.8s						
**ANM

YAK	**Yakutsk**	**24.58**	**132**	LR	LR	07 44 59.9	
	comp=Z,67nm,18.7s,baz=314,slow=38						
FINES	**FINESS Array B**	**26.81**	**252**	P	**P**	**07 34 53.8**	**+2.5**
	1.5nm,0.9s,baz=23,slow=7.5,SNR=2.2						
	1.5nm,0.9s						
KIRV	**Kirov**	**27.95**	**226**	LR	LR	07 48 23.6	
	comp=Z,126nm,18.1s,baz=351,slow=41						
ILAR	**Eielson Array**	**28.41**	**48**	P	**P**	**07 35 04.9**	**-0.7**
	0.5nm,0.8s,baz=352,slow=8.0,SNR=6.6						
ILAR				LR	LR	07 46 10.5	
	comp=Z,53nm,21.1s,baz=122,slow=36						
	0.5nm,0.8s						
ARU	**Arti**	**29.60**	**215**	LR	LR	07 48 38.3	
	comp=Z,153nm,19.5s,baz=334,slow=39						
YKA	**Yellowknife Ar**	**32.23**	**20**	P	P	07 35 37.3	-2.0
	0.6nm,0.7s,baz=356,slow=9.1,SNR=11						
YKA				LR	LR	07 48 20.9	
	comp=Z,88nm,20.2s,baz=34,slow=36						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**32.53**	**201**	P	**P**	**07 35 44.1**	**+2.0**
	0.8nm,0.8s,baz=5.4,slow=9.4,SNR=4.3						
BVAR				LR	LR	07 51 11.5	
	comp=Z,116nm,19.4s,baz=348,slow=40						
	0.8nm,0.8s						
BELG	**Belogornoye**	**34.23**	**226**	LR	LR	07 52 15.3	
	comp=Z,80nm,18.1s,baz=251,slow=40						
KURBB	**Kurchatov Arra**	**34.73**	**192**	LR	LR	07 53 14.8	
	comp=Z,112nm,19.1s,baz=143,slow=41						
KDAK	**Kodiak Island**	**34.97**	**55**	LR	LR	07 50 11.2	
	comp=Z,77nm,19.5s,baz=2.4,slow=36						
AKTO	**Aktyubinsk**	**35.61**	**215**	P	**P**	**07 36 11.8**	**+3.1**
	0.9nm,0.7s,baz=330,slow=8.1,SNR=2.0						
	0.9nm,0.7s						
SONM	**Songino Array**	**37.68**	**161**	P	**P**	**07 36 28.1**	**+1.6**
	0.3nm,0.5s,baz=15,slow=6.0,SNR=2.0						
SONM				LR	LR	07 53 17.8	
	comp=Z,91nm,18.2s,baz=350,slow=38						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**38.51**	**188**	P	**P**	**07 36 35.1**	**+1.6**
	0.4nm,0.6s,baz=19,slow=7.7,SNR=5.2						
	0.4nm,0.6s						
BBB	**Bella Bella**	**42.02**	**34**	LR	LR	07 54 12.9	
	comp=Z,48nm,21.6s,baz=350,slow=36						
AAK	**Ala-Archa**	**42.80**	**196**	LR	LR	07 57 57.0	
	comp=Z,120nm,18.2s,baz=336,slow=40						
NEW	**Newport**	**46.39**	**24**	LR	LR	07 57 14.8	
	comp=Z,53nm,18.9s,baz=102,slow=36						
GNI	**Garni**	**46.61**	**227**	LR	LR	07 58 06.9	
	comp=Z,48nm,19.2s,baz=312,slow=37						
BRTR	**Keskin Array B**	**47.80**	**239**	P	**P**	**07 37 49.6**	**+0.9**
	0.3nm,0.6s,baz=19,slow=9.2,SNR=1.2						
BRTR				LR	LR	08 03 42.5	
	comp=Z,51nm,19.2s,baz=348,slow=43						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**65.64**	**12**	P	**P**	**07 39 53.9**	**-1.6**
	0.4nm,0.6s,baz=358,slow=6.9,SNR=3.3						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.76**	**269**	P	**P**	**07 41 04.4**	**+1.6**
	0.3nm,0.7s,baz=340,slow=3.8,SNR=1.9						

IDC 17 07:35:45.1±393.0, 48°02.N×48°38.E, h0km, Error ellipse: s-maj=179.2km s-min=107.2km az=35.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**6.76**	**66**	I	I	08 12 50.0	
	0.1nm,0.7s,baz=252,slow=332,SNR=4.5						
I43RU	**DUBNA INFRASONI**	**1.05**	**326**	I	I	08 45 00.0	
	0.1nm,0.6s,baz=134,slow=327,SNR=1.8						
I46RU	**ZALESOVO INFRA**	**23.50**	**62**	I	I	10 04 02.0	
	baz=268,slow=339,SNR=1.2						
I37NO	**I37NO**	**25.71**	**336**	I	I	10 09 10.0	
	baz=130,slow=308,SNR=0.8						

IDC 17 07:43:34.2±1.1, 67°89N×20°43E, h0km, mbtmp3.0/4, ML2.0/4, Error ellipse: s-maj=19.5km s-min=6.8km az=125.0, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**1.37**	**331**	I	I	07 52 06.0	
	baz=153,slow=332,SNR=4.6						
ARCES	**ARCESS Array B**	**2.48**	**46**	Pn	Pn	07 44 15.7	-0.2
	0.9nm,0.3s,baz=230,slow=13,SNR=38						
ARCES				Sn	Sn	07 44 47.9	+1.0
	1.1nm,0.3s,baz=228,slow=27,SNR=11						
ARCES				Lg	Lg	07 44 52.5	
	1.4nm,0.3s,baz=226,slow=30,SNR=5.8						
	1.7nm,0.2s						
FINES	**FINESS Array B**	**6.90**	**157**	Pn	Pn	07 45 18.6	+2.1
	baz=345,slow=10,SNR=3.8						
FINES				Sn	Sn	07 46 32.4	-3.2
	0.1nm,0.3s,baz=348,slow=23,SNR=1.0						
FINES				Lg	Lg	07 47 07.6	
	0.1nm,0.3s,baz=345,slow=26,SNR=3.4						
	2.8nm,1.0s						
NOA	**NORSAR Array B**	**7.93**	**214**	Pn	Pn	07 45 29.1	-1.6
	baz=24,slow=11,SNR=1.7						
NOA				Sn	Sn	07 46 55.2	-5.8
	baz=34,slow=17,SNR=1.5						
NOA				Lg	Lg	07 47 38.2	
	baz=44,slow=21,SNR=1.3						
	0.5nm,0.8s						
HFS	**Hagfors**	**8.32**	**204**	Pn	Pn	07 45 34.2	-1.7
	0.1nm,0.3s,baz=25,slow=11,SNR=1.6						
HFS				Sn	Sn	07 47 02.6	-7.8
	baz=27,slow=26,SNR=1.6						
HFS				Lg	Lg	07 47 52.4	
	0.1nm,0.3s,baz=28,slow=28,SNR=2.5						
	0.8nm,0.7s						

*SSNC **17** 07:47:13.1±0.9, 19°82N×73°53W, h5km, MD3.0, ML1.2*
*OSPL **17** 07:47:32.9±2.8, 18°96N×73°59W, h0km±31km, ML2.4*
ISC 17 07:47:13.4±2.1, 20°2N±0°2×73°6W±0°1, h17km±13km, n9, σ0°93/15, 1C-2D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMDO	**Nuevo Mundo**	**1.32**	**287**	*eP*	**Pg**	**07 47 38.2**	**-0.8**
NMDO				*eS*	**Sg**	**07 47 56.8**	**+0.6**
NMDO				IAML		07 47 58.0	
	comp=E,4.4nm,0.2s						
NMDO				IAML		07 47 58.0	
	comp=N,9.7nm,0.2s						
GTBY	**Guantanamo Bay**	**1.41**	**260**	*eP*	**Pn**	**07 47 37.6**	**-0.7**
GTBY				*eS*	**Sn**	**07 47 55.6**	**-0.8**
GTBY				IAML		07 47 57.5	
	comp=N,2.1nm,0.2s						
GTBY				IAML		07 47 57.9	
	comp=N,3.6nm,0.1s						
SABCS	**La Quijada**	**1.59**	**277**	*eP*	**Pb**	**07 47 42.2**	**-0.1**
SABCS				*eS*	**Sb**	**07 48 03.4**	**+1.2**
RCC	**Rio Carpintero**	**1.94**	**265**	*eP*	**Pn**	**07 47 45.4**	**-0.3**
RCC				*eS*	**Sn**	**07 48 09.6**	**-0.1**
RCC				IAML		07 48 10.7	
	comp=E,0.6nm,0.1s						
RCC				IAML		07 48 10.9	
	comp=N,0.4nm,0.2s						
PINC	**Pinares de May**	**2.05**	**279**	*eP*	**Pn**	**07 47 47.7**	**+0.7**
PAPH	**Port-au-Prince**	**2.07**	**142**	*i P*	**Pg**	**07 47 54.7**	**+1.5**
PAPH				*eS*	**Sn**	**07 48 12.3**	**-0.4**
PAPH				IAML		07 48 15.5	
	comp=Z,25nm,0.2s						
MARVS	**Santiago de Cu**	**2.14**	**266**	*eP*	**Pn**	**07 47 48.8**	**+0.5**
MARVS				*eS*	**Sn**	**07 48 14.6**	**+0.2**
MARVS				IAML		07 48 17.3	
	comp=E,2.1nm,0.1s						
MARVS				IAML		07 48 17.4	
	comp=N,1.1nm,0.1s						
SDDR	**Presa de Saban**	**2.51**	**118**	*i P*	Pg	07 48 09.9	+8.3
LOPE2	**Hotel El Peder**	**2.78**	**140**	*i P*	**Pg**	**07 48 05.1**	**-1.7**
LOPE2				*eS*	**Sn**	**07 48 30.1**	**-0.1**

*NNC **17** 08:01:43.7±2.6, 53°74N×90°85E, h16km±12km, mb3.1, mpv2.9, Error ellipse: s-maj=21.9km s-min=16.1km az=26.0, Suspected Mining explosion.*
*IDC **17** 08:01:44.7±3.3, 53°52N×90°77E, h0km, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=27.7km s-min=21.9km az=62.0*
ISC 17 08:01:45.7±3.9, 53°5N±0°1×90°7E±0°2, h0km, n11, σ1s31/15, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.50**	**279**	I	I	08 23 10.0	
	0.1nm,0.9s,baz=91,slow=336,SNR=2.6						
ZAA0	**Zalesovo Array**	**3.50**	**279**	*Pg*	**Pb**	**08 02 48.1**	**-0.3**
	0.2nm,0.4s						
ZAA0				Lg	Lg	08 03 39.5	
	4.1nm,1.0s						
ZALV	**Zalesovo Beam**	**3.50**	**279**	Pn	**Pn**	**08 02 41.5**	**+0.3**
	0.1nm,0.3s,baz=96,slow=16,SNR=2.6						
ZALV				*Pg*	**Pb**	**08 02 49.1**	**+0.7**
	0.6nm,0.3s,baz=93,slow=15,SNR=8.4						
ZALV				Lg	Lg	08 03 36.3	
	0.8nm,0.3s,baz=93,slow=25,SNR=7.1						
	0.8nm,0.3s						
KURK	**Kurchatov**	**7.92**	**254**	Pn	**Pn**	**08 03 40.4**	**-1.7**
	0.3nm,0.4s						
KURK				⇓Sn	**Sn**	**08 05 14.2**	**+1.9**
	0.6nm,0.5s						
KURK				⇑Lg	Lg	08 06 00.8	
	4.0nm,0.8s						
KURBB	**Kurchatov Arra**	**8.02**	**254**	Pn	**Pn**	**08 03 42.1**	**-1.2**
	1.5nm,0.5s						
KURBB				⇑Sn	**Sn**	**08 05 13.7**	**-0.9**
	2.4nm,0.6s						
KURBB				⇓Lg	Lg	08 06 03.9	
	7.9nm,0.9s						
KURBB	**Kurchatov Arra**	**8.02**	**254**	Pn	**Pn**	**08 03 43.8**	**+0.4**
	baz=66,slow=14,SNR=5.6						
KURBB				Sn	**Sn**	**08 05 13.9**	**-0.7**
	baz=68,slow=25,SNR=3.8						
KURBB				Lg	Lg	08 06 01.1	
	baz=62,slow=32						
	1.4nm,0.6s						
MK31	**Makanchi Array**	**8.61**	**222**	Pn	**Pn**	**08 03 52.5**	**+1.0**
	0.1nm,0.4s,baz=37,slow=14,SNR=7.7						
MK31				⇑Sn	**Sn**	**08 05 31.7**	**+2.5**
	0.2nm,0.5s,baz=38,slow=20,SNR=4.5						
MK31				⇑Lg	Lg	08 06 26.6	
	1.3nm,0.8s,baz=34,slow=27						
MKAR	**Makanchi Array**	**8.61**	**222**	Pn	**Pn**	**08 03 51.4**	**-0.1**
	0.1nm,0.3s,baz=37,slow=12,SNR=7.0						
MKAR				Sn	**Sn**	**08 05 27.9**	**-1.4**
	baz=40,slow=25,SNR=2.4						
MKAR				Lg	Lg	08 06 19.3	
	baz=37,slow=29						
	0.4nm,0.5s						
MAKZ	**Makanchi**	**8.72**	**223**	Pn	**Pn**	**08 03 51.8**	**-1.3**
	0.4nm,0.4s						
MAKZ				⇑Sn	**Sn**	**08 05 32.1**	**0.0**
	0.3nm,0.5s						
MAKZ				⇑Lg	Lg	08 06 27.9	
	1.0nm,0.9s						
SONM	**Songino Array**	**11.48**	**113**	Lg	Lg	08 07 36.1	
	0.1nm,0.3s,baz=294,slow=28,SNR=2.3						
I31KZ	**AKTYUBINSK INF**	**20.24**	**274**	I	I	10 07 35.0	
	baz=68,slow=331,SNR=5.9						

*NNC **17** 08:08:31.2±2.4, 51°76N×75°27E, h3km±27km, mb2.7, mpv2.3, Error ellipse: s-maj=24.4km s-min=12.8km az=61.0, Suspected Mining explosion.*
*IDC **17** 08:08:32.6±1.1, 51°62N×75°50E, h0km, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=26.5km s-min=8.6km az=27.0*
ISC 17 08:08:29.7±1.0, 51°66N±0°08×75°22E±0°05, h0km, n11, σ1s38/12, 5C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.33**	**115**	⇓Pn	**Pb**	**08 09 11.6**	**-1.0**
	1.9nm,0.3s						
KURBB				⇓Sn	**Sb**	**08 09 41.4**	**-0.6**
	24nm,1.1s						
KURBB	**Kurchatov Arra**	**2.33**	**115**	Pg	**Pn**	**08 09 10.5**	**+1.2**
	0.4nm,0.3s,baz=303,slow=18,SNR=20						
KURBB				Lg	Lg	08 09 42.8	
	0.6nm,0.3s,baz=306,slow=31,SNR=12						
KURK	**Kurchatov**	**2.34**	**113**	⇑Pn	**Pn**	**08 09 10.3**	**+0.9**
	0.5nm,0.4s						
KURK				⇑Sn	**Sb**	**08 09 40.3**	**-1.9**
	8.7nm,0.9s						
BVA0	**Borovoye Array**	**3.26**	**297**	⇓Pg	**Pg**	**08 09 31.6**	**-0.6**
	0.6nm,0.5s,baz=110,slow=14,SNR=4.7						
BVA0				Lg	Lg	08 10 15.8	
	5.0nm,0.6s,baz=108,slow=24,SNR=7.9						
BVAR	**Borovoye Array**	**3.26**	**297**	Pn	**Pb**	**08 09 27.6**	**-0.9**
	baz=116,slow=16,SNR=3.4						
BVAR				Sn	**Sb**	**08 10 07.5**	**-1.2**
	0.1nm,0.3s,baz=109,slow=23,SNR=6.2						
	1.5nm,0.6s						
BRVK	**Borovoye**	**3.33**	**297**	⇓Pg	**Pb**	**08 09 30.1**	**+0.4**
	0.3nm,0.4s						
BRVK				⇑Lg	Lg	08 10 15.5	
	6.5nm,0.7s						
OTUK	**Ortayu**	**3.90**	**210**	⇑Pg	**Pg**	**08 09 44.5**	**+0.1**
	0.3nm,0.5s						
OTUK				⇓Lg	Lg	08 10 36.8	
	4.6nm,0.8s						
I46RU	**ZALESOVO INFRA**	**6.25**	**65**	I	I	08 48 50.0	
	baz=253,slow=344,SNR=10						
ZALV	**Zalesovo Beam**	**6.25**	**65**	Pn	**Pn**	**08 10 05.2**	**+2.0**
	0.2nm,0.3s,baz=257,slow=18,SNR=3.6						
ZALV				Lg	Lg	08 11 47.3	
	0.1nm,0.3s,baz=247,slow=31,SNR=1.6						
	0.8nm,0.4s						
MK31	**Makanchi Array**	**6.72**	**134**	⇑Lg	Lg	08 12 04.8	
	2.5nm,0.7s,baz=320,slow=27,SNR=3.4						
MKAR	**Makanchi Array**	**6.72**	**134**	Pn	**Pn**	**08 10 11.5**	**+1.8**
	0.1nm,0.3s,baz=319,slow=14,SNR=3.6						
MKAR				Lg	Lg	08 11 58.8	
	0.4nm,0.3s,baz=315,slow=30,SNR=8.7						
	0.7nm,0.8s						

IDC 17 08:25:13.8±5.5, 18°22S×175°55W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=240.9km s-min=39.6km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.88**	**242**	P	P	08 32 57.6	-0.2
	0.5nm,0.4s,baz=80,slow=6.1,SNR=2.0						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**47.25**	**259**	P	P	08 33 49.1	0.0
	0.6nm,0.8s,baz=96,slow=8.6,SNR=4.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**47.33**	**254**	P	P	08 33 49.5	-0.2
	0.5nm,0.6s,baz=88,slow=7.7,SNR=5.6						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**85.60**	**12**	P	P	08 37 53.6	0.0
	0.5nm,1.1s,baz=203,slow=6.6,SNR=2.3						
	0.5nm,1.1s						

*IDC **17** 08:32:07.1±0.6, 0°76S×134°04E, h0km, mb4.2/15, mbtmp4.2/16, ML4.6/1, MS3.5/15, Error ellipse: s-maj=35.1km s-min=11.3km az=79.0*
*DJA **17** 08:32:12.9±0.5, 1°S±5°×13°4E±°, h59km±5km, M4.9/20, mB5.6/4, mb4.7/20, MLv4.9/11, Mw(mB)5.1/4*
*NEIC **17** 08:32:13.7±1.8, 0°78S±0°09×133°85E±0°09, h34km±4km, mb4.6/39, Error ellipse: s-maj=15.0km s-min=9.7km az=48.0*
ISC 17 08:32:12.7±0.4, 0°84S±0°05×133°84E±0°06, h27km, n114, σ2s90/112, mb4.6/43, MS3.4/14, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**2.58**	**269**	P	**Pn**	**08 32 52.1**	**-0.5**
FAKI	**Fak Fak**	**2.61**	**217**		**Pn**	**08 32 54.7**	**+1.6**
FAKI	**Fak Fak**	**2.61**	**217**	P	**Pn**	**08 32 55.0**	**+1.9**
FAKI	**Fak Fak**	**2.61**	**217**	P	**Pn**	**08 32 54.9**	**+1.9**
KMPI	**Kaimana, Papua**	**2.81**	**183**	P	**Pn**	**08 32 59.1**	**+3.2**
SMPI	**Sarmi**	**5.00**	**103**	P	**Pn**	**08 33 26.9**	**+0.9**
	122nm,1.2s,0.7nm						
BNDI	**Bandanaira**	**5.37**	**227**	P	**Pn**	**08 33 34.3**	**+3.2**
BNDI	**Bandanaira**	**5.37**	**227**	P	**Pn**	**08 33 32.0**	**+0.9**
	1μm,0.7s,3.7nm						
LBMI	**Labuha**	**6.34**	**272**	P	**Pn**	**08 33 42.8**	**-1.6**
	182nm,0.8s,3μm0.7nm						
TNTI	**Ternate**	**6.67**	**284**	Pn	**Pn**	**08 33 50.7**	**+1.8**
NLAI	**Namlea**	**7.14**	**250**	P	**Pn**	**08 33 55.2**	**-0.3**
SANI	**Sanana**	**7.94**	**261**	P	**Pn**	**08 34 06.2**	**-0.2**
	28nm,0.7s,0.1nm						
KDU	**Kakadu**	**11.85**	**186**	P	**Pn**	**08 35 01.1**	**+1.1**
MRSI	**Marisa**	**11.97**	**276**	P	**Pn**	**08 35 01.1**	**-0.5**
	17nm,0.8s						
SOEI	**Soe**	**13.01**	**227**	Pn	**Pn**	**08 35 19.7**	**+3.8**
SOEI	**Soe**	**13.01**	**227**	P	**Pn**	**08 35 18.9**	**+3.0**
	56nm,1.2s						
TOLI2	**Tolitoli**	**13.20**	**278**	Pn	**Pn**	**08 35 18.3**	**-0.1**
MPSI	**Mapaga**	**13.99**	**275**	P	**Pn**	**08 35 28.9**	**-0.3**
	12nm,1.4s						
BKSI	**Bulukumba**	**14.40**	**252**	P	**Pn**	**08 35 33.7**	**-1.2**
	41nm,1.2s						
KAPI	**Kappang**	**14.66**	**253**	Pn	**Pn**	**08 35 36.3**	**-2.1**
KNRA	**Kununurra**	**15.57**	**199**	Pn	**Pn**	**08 35 51.3**	**+0.8**
KNRA				IAmb	IAmb	08 36 00.7	
	comp=Z,52nm,0.8s						
PMG	**Port Moresby**	**15.76**	**123**	LR	LR	08 43 33.8	
	comp=Z,143nm,18.1s,baz=286,slow=44						
COEN	**Coen**	**15.98**	**145**	Pn	**Pn**	**08 35 54.9**	**-0.9**
KAVG	**Kavieng**	**17.05**	**96**	P	**Pn**	**08 36 07.7**	**-1.6**
PLAI	**Plampang**	**17.85**	**243**	P	**P**	**08 36 23.3**	**+3.5**
PLAI	**Plampang**	**17.85**	**243**	P	**Pn**	**08 36 18.3**	**-1.0**
	comp=Z,34nm,0.7s						
TWSI	**Taliwang, Sumb**	**18.62**	**245**	P	**P**	**08 36 27.9**	**-0.4**
WB0	**Warramunga Arr**	**18.82**	**178**		**P**	**08 36 29.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**18.95**	**205**		**Pn**	**08 36 32.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.95**	**205**	P	**Pn**	**08 36 33.2**	**+0.5**
WB2	**Warramunga Arr**	**19.00**	**179**		**P**	**08 36 31.9**	**-0.4**
WB2				IAmb	IAmb	08 36 46.5	
	comp=Z,32nm,1.0s						
WRA	**Warramunga Arr**	**19.00**	**179**	P	**P**	**08 36 31.9**	**-0.4**
WRA	**Warramunga Arr**	**19.00**	**179**	P	**P**	**08 36 31.4**	**-1.0**
	comp=Z,2.1nm,0.3s,baz=358,slow=12,SNR=83						
WRA				S	**Sn**	**08 39 56.4**	**-9.0**
	comp=Z,2.2nm,0.6s,baz=0.3,slow=23,SNR=2.4						
	comp=Z,5.4nm,0.4s						
QIS	**Mount Isa**	**20.40**	**164**	P	**P**	**08 36 47.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**21.02**	**248**	P	**P**	**08 36 52.9**	**-1.6**
	comp=Z,36nm,1.5s						
SBUM	**Sibu**	**21.86**	**279**	P	**P**	**08 37 03.6**	**+0.1**
CTAO	**Charters Tower**	**22.66**	**148**	P	**P**	**08 37 13.6**	**+1.5**
CTAO				IAmb	IAmb	08 37 15.6	
	comp=Z,16nm,0.8s						
AS31	**Alice Springs**	**22.69**	**180**	P	**P**	**08 37 12.2**	**-0.1**
AS31				IAmb	IAmb	08 37 28.3	
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**22.70**	**180**	P	**P**	**08 37 11.7**	**-0.7**
ASAR	**Alice Springs**	**22.70**	**180**	P	**P**	**08 37 12.1**	**-0.3**
	comp=Z,8.9nm,0.4s,baz=6.7,slow=11,SNR=71						
ASAR				S	**S**	**08 41 21.2**	**+1.9**
	comp=Z,1.0nm,0.8s,baz=356,slow=26,SNR=1.8						
ASAR				LR	LR	08 47 37.3	
	comp=Z,164nm,20.9s,baz=354,slow=41						
	comp=Z,8.9nm,0.4s						
KSM	**Kuching**	**23.64**	**276**	P	**P**	**08 37 21.0**	**-1.0**
KSM				IAmb	IAmb	08 37 39.1	
	comp=Z,30nm,0.8s						
WRKA	**Warakurna**	**24.65**	**192**	P	**P**	**08 37 31.9**	**+0.6**
PSA00	**Pilbara Seismi**	**24.72**	**213**	P	**P**	**08 37 32.8**	**+0.9**
KPJI	**Karang Pucung**	**25.66**	**255**	P	**P**	**08 37 36.9**	**-3.6**
	comp=Z,26nm,1.6s						
BBJI	**Bungbulang**	**26.92**	**255**	P	**P**	**08 37 54.8**	**+2.8**
JOW	**Kunigami**	**28.02**	**349**	LR	LR	08 46 45.7	
	comp=Z,176nm,21.5s,baz=62,slow=31						
FORT	**Forrest**	**30.28**	**190**	P	**P**	**08 38 22.2**	**+0.5**
STKA	**Stephens Creek**	**31.73**	**167**	P	**P**	**08 38 33.8**	**-0.7**
STKA	**Stephens Creek**	**31.73**	**167**	P	**P**	**08 38 31.8**	**-2.7**
	comp=Z,4.6nm,0.8s,baz=333,slow=8.6,SNR=11						
STKA				LR	LR	08 53 07.1	
	comp=Z,68nm,20.1s,baz=4.2,slow=40						
	comp=Z,4.6nm,0.8s						
BBOO	**Buckleboo**	**31.87**	**176**	P	**P**	**08 38 36.1**	**+0.4**
BBOO				IAmb	IAmb	08 39 12.2	
	comp=Z,15nm,1.4s						
KULM	**Kulim**	**33.70**	**281**	P	**P**	**08 38 50.5**	**-1.5**
KULM				IAmb	IAmb	08 39 03.9	
	comp=Z,15nm,1.4s						
JNU	**Nakatsue**	**33.89**	**356**	LR	LR	08 50 47.3	
	comp=Z,51nm,20.8s,baz=139,slow=33						
ARMA	**Armidale**	**33.93**	**152**	P	**P**	**08 38 55.9**	**+2.0**
ARMA				IAmb	IAmb	08 39 31.8	
	comp=Z,16nm,1.3s						
RPSI	**Rantau Prapat**	**35.08**	**276**	P	**P**	**08 39 02.5**	**-1.4**
RPSI				IAmb	IAmb	08 39 03.6	
	comp=Z,9.9nm,1.0s						
NWAO	**Narrogin (SRO)**	**35.54**	**204**	LR	LR	08 54 27.2	
	comp=Z,68nm,20.0s,baz=48,slow=38						
NJ2	**Nanjing**	**35.65**	**338**	*eP*	**P**	**08 39 11.5**	**+3.0**
NJ2				pP	**sP**	**08 39 19.6**	**-0.3**
NJ2				sP	**pwP**	**08 39 23.3**	**+6.8**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,310nm,7.5s						
MJAR	**Matsushiro Arr**	**37.41**	**6**	P	**P**	**08 39 19.3**	**-4.2**
	comp=Z,1.8nm,0.8s,baz=190,slow=11,SNR=2.1						
MJAR				LR	LR	08 51 59.4	
	comp=Z,124nm,20.1s,baz=178,slow=32						
	comp=Z,1.8nm,0.8s						
KSRS	**Korea Array**	**38.49**	**352**	LR	LR	08 54 34.7	
	comp=Z,30nm,18.8s,baz=185,slow=35						
CMAR	**Chiang Mai Arr**	**39.30**	**301**	P	**P**	**08 39 38.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**39.30**	**301**	P	**P**	**08 39 39.0**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=122,slow=6.7,SNR=20						
CMAR				LR	LR	08 55 53.4	
	comp=Z,14nm,18.5s,baz=265,slow=36						
	comp=Z,3.6nm,0.9s						
CHTO	**Chiang Mai**	**39.45**	**301**	P	**P**	**08 39 39.6**	**-1.3**
LYN	**LuoYang**	**40.50**	**332**	*eP*	P	08 39 53.6	+4.2
LYN				pmax	pmax		
	comp=Z,14nm,1.0s						
PZH	**PanZhiHua**	**41.18**	**314**	P	**P**	**08 39 56.4**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
HNS	**HongShan**	**41.96**	**337**	⇑P	**P**	**08 39 59.8**	**-1.6**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CD2	**Chengdu**	**42.59**	**320**	P	**P**	**08 40 06.8**	**+0.2**
BJI	**Beijing**	**43.77**	**340**	P	**P**	**08 40 14.4**	**-1.5**
BJI				pmax	pmax		
	comp=

TUWZ	**Tuamarina**	**54.22**	**143**	P		**P**		**08 41 36.0**	**-0.1**
PETK	**Petropavlovsk-**	**57.33**	**17**	LR		LR		09 01 01.9	
	comp=Z,22nm,21.9s,baz=165,slow=30								
WMQ	**Urumqi**	**60.56**	**323**	*e*P		**P**		**08 42 20.5**	**-0.4**
WMQ				pP		pP		08 42 27.9	-1.5
WMQ				pmax		pmax			
	comp=Z,15nm,1.3s								
MK31	**Makanchi Array**	**65.37**	**324**	P		**P**		**08 42 52.1**	**-0.7**
MK31				IAmb		IAmb		08 43 06.8	
	comp=Z,3.2nm,0.9s								
MKAR	**Makanchi Array**	**65.37**	**324**	P		**P**		**08 42 52.2**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=107,slow=8.5,SNR=42								
	comp=Z,2.2nm,0.5s								
MAKZ	**Makanchi**	**65.57**	**324**	P		**P**		**08 42 53.5**	**-0.6**
MAKZ				IAmb		IAmb		08 43 07.9	
	comp=Z,5.9nm,0.9s								
ZAA0	**Zalesovo Array**	**67.92**	**331**	P		**P**		**08 43 08.3**	**-0.6**
ZAA0				IAmb		IAmb		08 43 16.9	
	comp=Z,8.6nm,1.4s								
ZALV	**Zalesovo Beam**	**67.92**	**331**	P		**P**		**08 43 07.3**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=107,slow=5.1,SNR=4.2								
	comp=Z,0.7nm,0.5s								
KURK	**Kurchatov**	**69.42**	**326**	P		**P**		**08 43 17.1**	**-1.1**
KURK				IAmb		IAmb		08 43 32.2	
	comp=Z,5.9nm,1.0s								
KURBB	**Kurchatov Arra**	**69.43**	**326**	P		**P**		**08 43 17.1**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=119,slow=5.9,SNR=18								
	comp=Z,2.2nm,0.8s								
KK31	**Karatay Array**	**71.40**	**316**	P		**P**		**08 43 29.8**	**-0.9**
KK31				IAmb		IAmb		08 43 44.5	
	comp=Z,4.9nm,1.0s								
KKAR	**Karatay Array**	**71.40**	**316**	P		**P**		**08 43 29.6**	**-1.0**
BVAR	**Borovoye Array**	**75.02**	**326**	P		**P**		**08 43 50.7**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=106,slow=8.4,SNR=6.7								
	comp=Z,1.0nm,0.7s								
NRIK	**Noril'sk**	**76.60**	**345**	P		**P**		**08 43 59.4**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=124,slow=11,SNR=1.1								
	comp=Z,1.5nm,0.7s								
VNDA	**Vanda**	**78.10**	**174**	P		**P**		**08 44 08.2**	**-0.5**
	comp=Z,5.7nm,1.0s,baz=314,slow=6.3,SNR=4.3								
VNDA				LR		LR		09 17 36.6	
	comp=Z,70nm,19.9s,baz=321,slow=35								
	comp=Z,5.7nm,1.0s								
GEYT	**Alibeck**	**79.27**	**309**	P		**P**		**08 44 15.4**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=99,slow=9.3,SNR=5.9								
	comp=Z,3.3nm,0.8s								
ABKAR	**Akbulak array**	**80.17**	**320**	P		**P**		**08 44 19.2**	**-1.3**
TTA	**Tatalina**	**81.81**	**26**	P		**P**		**08 44 29.1**	**-0.1**
TTA				IAmb		IAmb		08 44 41.4	
	comp=Z,12nm,1.4s								
KDAK	**Kodiak Island**	**82.00**	**31**	LR		LR		09 14 52.8	
	comp=Z,63nm,21.0s,baz=302,slow=31								
G19K	**Purcell Mounta**	**82.42**	**23**	P		**P**		**08 44 31.1**	**-1.1**
G19K				IAmb		IAmb		08 44 43.6	
	comp=Z,6.9nm,1.1s								
SKT	**Skwentna**	**83.55**	**27**	P		**P**		**08 44 37.7**	**-0.4**
CAST	**Castle Rocks**	**83.66**	**26**	P		**P**		**08 44 39.2**	**+0.6**
CAST				IAmb		IAmb		08 44 53.6	
	comp=Z,8.7nm,1.4s								
IMAR	**Indian Mountai**	**83.66**	**23**	P		**P**		**08 44 38.8**	**+0.2**
MLY	**Manley**	**84.62**	**24**	P		**P**		**08 44 43.3**	**-0.3**
MLY				IAmb		IAmb		08 45 15.4	
	comp=Z,4.6nm,1.1s								
SML	**Sawmill**	**84.99**	**28**	P		**P**		**08 44 44.3**	**-1.2**
I23K	**Minto, Yukon-K**	**85.22**	**24**	P		**P**		**08 44 46.0**	**-0.4**
WRH	**Wood River Hil**	**85.61**	**25**	P		**P**		**08 44 48.0**	**-0.4**
CCB	**Clear Creek Bu**	**85.77**	**25**	P		**P**		**08 44 47.8**	**-1.4**
ILAR	**Eielson Array**	**86.18**	**25**	P		**P**		**08 44 50.0**	**-1.3**
ILAR	**Eielson Array**	**86.18**	**25**	P		**P**		**08 44 49.2**	**-2.1**
	comp=Z,1.1nm,0.8s,baz=254,slow=4.0,SNR=15								
	comp=Z,1.1nm,0.8s								
BMAR	**Burnt Mountain**	**87.53**	**22**	P		**P**		**08 44 56.5**	**-1.3**
BCAR	**Beaver Creek A**	**88.18**	**27**	P		**P**		**08 45 01.4**	**+0.3**
QSPA	**South Pole Qui**	**89.10**	**180**	P		**P**		**08 45 05.6**	**+0.2**
QSPA	**South Pole Qui**	**89.10**	**180**	P		**P**		**08 45 05.7**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=166,slow=1.0,SNR=27								
QSPA				LR		LR		09 25 18.0	
	comp=Z,89nm,19.2s,baz=359,slow=36								
	comp=Z,2.6nm,0.6s								
DAWY	**Dawson**	**89.33**	**26**	P		**P**		**08 45 06.5**	**0.0**
DAWY				IAmb		IAmb		08 45 08.8	
	comp=Z,4.8nm,1.2s								
PLCA	**Paso Flores**	**133.05**	**155**	PKP		**PKPdf**		**08 51 25.8**	**-0.5**
	comp=Z,1.2nm,1.0s,baz=242,slow=5.8,SNR=2.8								
CPUP	**Villa Florida**	**150.92**	**159**	PKPbc		**PKPbc**		**08 52 03.5**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=233,slow=2.4,SNR=12								

*IDC **17** 08:46:08.9±0.9, 4.°12S×150.°96E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=27.3km s-min=11.6km az=10.0*

ISC 17 08:46:03.3±2.2, 4.°9S±0.°2×153.°5E±0.°3, h35km, n7, σ0°38/7, mb3.7/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.56**	**294**	Pg	**Pn**	**08 46 28.6**	**0.0**
	baz=11,slow=23						
KRVT				Lg	Lg	08 46 45.8	
	5µm,0.3s,baz=192,slow=24,SNR=7.8						
WRA	**Warramunga Arr**	**23.85**	**230**	P	**P**	**08 51 13.1**	**-0.4**
	0.5nm,0.5s,baz=51,slow=9.7,SNR=3.1						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.49**	**223**	P	**P**	**08 51 38.0**	**+0.4**
	0.4nm,0.5s,baz=55,slow=9.1,SNR=9.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**08 58 14.0**	**+0.2**
	0.4nm,0.5s,baz=94,slow=6.5,SNR=7.6						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**81.64**	**326**	P	**P**	**08 58 17.9**	**+0.3**
	0.4nm,0.4s,baz=130,slow=4.5,SNR=3.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**84.32**	**322**	P	**P**	**08 58 31.3**	**-0.3**
	0.7nm,0.2s,baz=106,slow=3.6,SNR=4.8						
	0.7nm,0.2s						
BVAR	**Borovoye Array**	**89.75**	**323**	P	**P**	**08 58 57.7**	**-0.3**
	2.0nm,0.7s,baz=97,slow=5.1,SNR=11						
	2.0nm,0.7s						

IDC 17 08:51:08.8±8.2, 15.°53S×175.°95W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=368.9km s-min=35.0km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.42**	**257**	P	P	08 59 45.5	-0.1
	0.6nm,0.8s,baz=90,slow=7.6,SNR=5.4						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**47.74**	**252**	P	P	08 59 47.8	-0.2
	0.9nm,0.4s,baz=87,slow=8.1,SNR=28						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**83.07**	**12**	P	P	09 03 35.9	0.0
	0.3nm,0.7s,baz=218,slow=4.5,SNR=8.2						
	0.3nm,0.7s						

*SJA **17** 09:05:30.5±0.6, 24.°02S×67.°00W, h222km±5km, ML3.7, MW3.5*

*GUC **17** 09:05:33.0±0.8, 24.°01S×67.°05W, h193km±9km, ML3.7*

ISC 17 09:05:30.9±1.9, 24.°01S±0.°04×67.°02W±0.°05, h212km±16km, n31, σ1°06/47, 6C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.50**	**314**	*e*P	**Pn**	**09 06 06.2**	**+0.1**
SLA	**San Lorenzo**	**1.55**	**117**	*e*P	**Pn**	**09 06 06.9**	**+0.6**
SLA	**San Lorenzo**	**1.55**	**117**	⇓*i*P	**Pn**	**09 06 06.3**	**+0.1**
LVC	**Limon Verde**	**2.23**	**308**	*e*P	**Pn**	**09 06 14.0**	**+1.0**
LVC				*e*S	**S**	**09 06 46.2**	**+0.7**
LVC	**Limon Verde**	**2.23**	**308**	⇑*i*P	**Pn**	**09 06 14.0**	**+1.0**
LVC				*e*S	**S**	**09 06 43.7**	**-1.8**
LVC				IAML		09 06 47.4	
	406nm,0.5s						
YJA	**Yavi**	**2.29**	**37**	*e*P	**Pn**	**09 06 15.2**	**+1.4**
YJA				*e*S	**S**	**09 06 46.4**	**-0.6**
YJA	**Yavi**	**2.29**	**37**	*e*P	**Pn**	**09 06 14.6**	**+0.7**
YJA				*e*S	**S**	**09 06 46.3**	**-0.6**
FSA	**Cafayete**	**2.29**	**156**	*e*P	**Pn**	**09 06 13.6**	**0.0**
PB15	**IPOC Station P**	**2.39**	**289**	*e*P	**Pn**	**09 06 15.3**	**+0.7**
PB15				IAML		09 06 52.0	
	comp=Z,527nm,0.1s						
PB15	**IPOC Station P**	**2.39**	**289**	⇑*i*P	**Pn**	**09 06 15.6**	**+1.0**
PB15				*e*S	**S**	**09 06 47.1**	**-1.1**
GO02	**Mina Guanaco**	**2.61**	**243**	*e*P	**Pn**	**09 06 18.2**	**+1.1**
GO02				*e*S	**S**	**09 06 52.9**	**+0.2**
GO02	**Mina Guanaco**	**2.61**	**243**	⇑*i*P	**Pn**	**09 06 17.8**	**+0.8**
GO02				*e*S	**S**	**09 06 52.3**	**-0.4**
GO02				IAML		09 06 55.9	
	comp=N,100nm,0.3s						
PB06	**IPOC Station P**	**2.68**	**298**	*e*P	**Pn**	**09 06 18.7**	**+0.9**
PB06				*e*S	**S**	**09 06 53.2**	**-0.8**
PB06				IAML		09 06 54.5	
	comp=Z,169nm,0.3s						
PB06	**IPOC Station P**	**2.68**	**298**	⇑*i*P	**Pn**	**09 06 18.8**	**+1.0**
PB06				*e*S	**S**	**09 06 52.7**	**-1.2**
PB06				IAML		09 06 54.8	
	comp=E,255nm,0.1s						
PB09	**IPOC Station P**	**3.01**	**317**	*e*P	**Pn**	**09 06 23.3**	**+1.8**
PB09				*e*S	**S**	**09 07 01.8**	**+1.1**
PB09	**IPOC Station P**	**3.01**	**317**	*e*P	**Pn**	**09 06 23.1**	**+1.7**
PB09				*e*S	**S**	**09 07 00.1**	**-0.6**
PB14	**IPOC Station P**	**3.15**	**258**	*e*P	**Pn**	**09 06 24.0**	**+0.8**
PB14				*e*S	**S**	**09 07 02.5**	**-1.2**
AHML	**Horco Molle**	**3.15**	**152**	*e*P	**Pn**	**09 06 23.5**	**+0.5**
PB04	**IPOC Station P**	**3.33**	**299**	*e*P	**Pn**	**09 06 25.9**	**+0.7**
PB04				IAML		09 07 10.1	
	comp=Z,115nm,0.2s						
PB04	**IPOC Station P**	**3.33**	**299**	*e*P	**Pn**	**09 06 26.2**	**+0.9**
AC02	**Maricunga**	**3.40**	**214**	*e*P	**Pn**	**09 06 27.2**	**+0.9**
AC02	**Maricunga**	**3.40**	**214**	⇑*i*P	**Pn**	**09 06 27.4**	**+1.1**
PB07	**IPOC Station P**	**3.49**	**310**	*e*P	**Pn**	**09 06 28.1**	**+1.0**
PB07				*e*S	**S**	**09 07 08.7**	**-2.1**
PB07				IAML		09 07 09.7	
	comp=Z,104nm,0.4s						
PB07	**IPOC Station P**	**3.49**	**310**	⇑*i*P	**Pn**	**09 06 27.9**	**+0.8**
PB01	**IPOC Station P**	**3.73**	**322**	*e*P	**Pn**	**09 06 31.0**	**+1.1**
PB01				*e*S	**S**	**09 07 15.2**	**-0.8**
PB01				IAML		09 07 17.7	
	comp=Z,44nm,0.2s						
PB01	**IPOC Station P**	**3.73**	**322**	*e*P	**Pn**	**09 06 30.9**	**+0.9**
PB02	**IPOC Station P**	**3.77**	**315**	*e*P	**Pn**	**09 06 31.3**	**+0.8**
PB02				*e*S	**S**	**09 07 15.3**	**-1.7**
PB02				IAML		09 07 23.0	
	comp=Z,90nm,0.3s						
PB02	**IPOC Station P**	**3.77**	**315**	*e*P	**Pn**	**09 06 31.3**	**+0.8**
HMBC	**Humberstone**	**4.57**	**324**	*e*P	**Pn**	**09 06 40.5**	**+0.2**
HMBC				*e*S	**S**	**09 07 32.8**	**-1.9**
HMBC				IAML		09 07 38.0	
	comp=Z,46nm,0.3s						
GO03	**Copiap**	**4.60**	**218**	*e*P	**Pn**	**09 06 40.8**	**+0.2**
PB11	**IPOC Station P**	**4.89**	**329**	*e*P	**Pn**	**09 06 44.7**	**+0.3**
PB11				IAML		09 07 43.5	
	comp=Z,20nm,0.2s						

*NEIC **17** 09:06:35.0±1.3, 22.°57N±0.°05×121.°41E±0.°05, h10km±1km, mb4.3/27, Error ellipse: s-maj=10.4km s-min=6.0km az=45.0*

*TAP **17** 09:06:36.7, 22.°63N×121.°32E, h20km, ML4.5, B*

*ASIES **17** 09:06:36.7, 22.°63N×121.°32E, h20km, ML4.5, Mw4.3, Moment Tensor Solution. Moment tensor: Scale 10^{22}Nm; M_{rr}2.79; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-3.28; $M_{r\theta}$-1.61; $M_{r\phi}$-1.07; $M_{\theta\phi}$0.46; Fault plane solution: $M_0$3.65785×10^{22} NP1: ϕ_s348.03000°, δ52.54000°, λ51.15000°. NP2: ϕ_s220.98000°, δ51.82000°, λ129.31000°. Principal axes: T Plg60.1300°, Azm195.0660°; N Plg29.8670°, Azm14.1350°; P Plg0.4020°, Azm104.3660°;*

*JMA **17** 09:06:36.1±0.1, 22.°7N±0.°2×121.°5E±0.°2, h8km±1km, MD4.3/19, MV4.5/19, TAIWAN REGION*

*NIED **17** 09:06:36.1, 22.°67N×121.°48E, h8km, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.20; $M_{\theta\theta}$1.35; $M_{\phi\phi}$-2.56; $M_{r\theta}$-0.69; $M_{r\phi}$-0.43; $M_{\theta\phi}$-0.45; Fault plane solution: $M_0$2.32000×10^{15} NP1: ϕ_s222.00000°, δ68.00000°, λ142.00000°. NP2: ϕ_s328.00000°, δ55.00000°, λ27.00000°.*

*IDC **17** 09:06:41.8±4.1, 22.°59N×121.°56E, h71km±37km, mb3.8/22, mbtmp4.1/23, ML3.5/1, MS3.6/21 Error ellipse: s-maj=20.9km s-min=12.2km az=66.0*

ISC 17 09:06:36.7±0.7, 22.°60N±0.°02×121.°38E±0.°02, h23km±5km, n262, σ1°28/343, mb4.2/38, MS3.6/20, 18C-24D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.11**	**48**	⇓*i*P	**Pb**	**09 06 41.5**	**+0.3**
LDUT	baz=74			S	**Sb**	**09 06 45.0**	**+0.7**
	baz=74						
TTN	**Taitung**	**0.27**	**306**	*i* P	**Pb**	**09 06 42.5**	**-0.6**
TTN	baz=314			S	**Sb**	**09 06 46.5**	**-0.9**
	baz=314						
TWGBT	**Beinan**	**0.35**	**308**	P	**Pb**	**09 06 43.9**	**-0.6**
TWGBT	**Beinan**	**0.35**	**308**	⇑*i*P	**Pb**	**09 06 43.6**	**-0.9**
TWGBT	baz=296			S	**Sb**	**09 06 48.9**	**-0.9**
	baz=296						
TWG	**Pinlang**	**0.36**	**308**		**Pb**	**09 06 43.7**	**-0.9**
TWG				Sg	**Sb**	**09 06 48.2**	**-1.8**
TWG	**Pinlang**	**0.36**	**308**	⇑*i*P	**Pb**	**09 06 43.5**	**-1.1**
TWG	baz=296			S	**Sb**	**09 06 48.9**	**-1.0**
	baz=296						
EDH	**Donghe**	**0.38**	**349**	⇑P	**Pb**	**09 06 44.0**	**-0.9**
EDH	baz=358			*e*S	**Sb**	**09 06 50.4**	**0.0**
	baz=358						
LONT	**Longtian**	**0.38**	**323**	⇑*e*P	**Pb**	**09 06 44.1**	**-0.9**
LONT	baz=332			S	**Sb**	**09 06 50.1**	**-0.4**
	baz=332						
ECL	**Taimali**	**0.39**	**270**	⇓*i*P	**Pb**	**09 06 44.0**	**-1.0**
ECL	baz=275			S	**Sb**	**09 06 49.5**	**-1.2**
	baz=275						
CHKT	**Chengkung**	**0.50**	**358**	⇑*i*P	**Pb**	**09 06 46.0**	**-0.9**
CHKT	baz=14			*i* S	**Sb**	**09 06 52.9**	**-0.9**
	baz=14						
TAW	**Tawu**	**0.51**	**242**	⇑*e*P	**Pb**	**09 06 46.3**	**-0.7**
TAW	baz=248			*e*S	**Sb**	**09 06 52.8**	**-1.2**
	baz=248						
ECS	**Chishang**	**0.52**	**343**	⇑P	**Pb**	**09 06 46.8**	**-0.4**
ECS	baz=333			*e*S	**Sb**	**09 06 54.6**	**+0.3**
	baz=333						
TAWH	**Dawu Township**	**0.52**	**241**	⇑*i*P	**Pb**	**09 06 46.6**	**-0.7**
TAWH	baz=247			*e*S	**Sb**	**09 06 53.6**	**-0.8**
	baz=247						
EAST	**Anshuo**	**0.54**	**247**	⇓P	**Pb**	**09 06 46.7**	**-0.8**
EAST	baz=241			*e*S	**Sb**	**09 06 53.7**	**-1.1**
	baz=241						
EHD	**Haiduan**	**0.57**	**344**	⇓*e*P	**Pb**	**09 06 47.0**	**-1.1**
	baz=347						
LAY	**Lan-yu**	**0.58**	**164**	*e*P	**Pb**	**09 06 47.9**	**-0.3**
LAY	baz=159			S	**Sb**	**09 06 56.9**	**+0.8**
	baz=159						
CHKH	**Chenggong**	**0.59**	**1**	⇑*e*P	**Pb**	**09 06 47.4**	**-1.0**
CHKH	baz=17			*e*S	**Sb**	**09 06 55.4**	**-1.0**
	baz=17						
LYUB	**Lan-yu**	**0.62**	**162**	⇓*i*P	**Pb**	**09 06 47.5**	**-1.4**
LYUB	baz=158			*e*S	**Sb**	**09 06 57.2**	**-0.1**
	baz=158						
SLIU	**Shizi**	**0.66**	**235**	⇑*e*P	**Pb**	**09 06 48.6**	**-0.9**
SLIU	baz=230			*e*S	**Sb**	**09 06 56.8**	**-1.5**
	baz=230						
ELDTW	**Lidau**	**0.68**	**330**	⇓*i*P	**Pb**	**09 06 48.3**	**-1.7**
ELDTW	baz=334			*e*S	**Sb**	**09 06 56.6**	**-2.4**
	baz=334						
TSMG	**Majia**	**0.69**	**279**	⇓P	**Pb**	**09 06 48.6**	**-1.4**
TSMG	baz=275			*e*S	**Sb**	**09 06 56.6**	**-2.5**
	baz=275						
MASBT	**Mashibuluo**	**0.69**	**271**	⇓*i*P	**Pb**	**09 06 48.9**	**-1.2**
MASBT	baz=264			*e*S	**Sb**	**09 06 55.7**	**-3.5**
	baz=264						
ECBN	**Changbin**	**0.72**	**5**	*e*P	**Pb**	**09 06 49.9**	**-0.7**
ECBN	baz=18			*e*S	**Sb**	**09 06 59.1**	**-1.0**
	baz=18						
SCZT	**Fangliau**	**0.74**	**252**	⇑P	**Pb**	**09 06 50.0**	**-0.9**
SCZT	baz=253			*i* S	**Sb**	**09 06 59.1**	**-1.4**
	baz=253						
EYUL	**Yuli**	**0.75**	**356**	*e*P	**Pb**	**09 06 50.1**	**-1.0**
	baz=346						
TWF1	**Yuli**	**0.76**	**354**	⇓P	**Pb**	**09 06 49.6**	**-1.6**
TWF1	baz=345			*e*S	**Sb**	**09 06 58.5**	**-2.7**
	baz=345						
SMST	**Manzhou Townsh**	**0.76**	**221**	*e*P	**Pb**	**09 06 50.5**	**-0.9**
SMST	baz=217			*e*S	**Sb**	**09 07 00.6**	**-0.7**
	baz=217						
YULB	**Yu-li**	**0.80**	**355**	Pg	**Pb**	**09 06 50.5**	**-1.5**
YULB	**Yu-li**	**0.80**	**355**	P	**Pb**	**09 06 50.3**	**-1.6**
YULB	**Yu-li**	**0.80**	**355**	*e*P	**Pb**	**09 06 50.1**	**-1.8**
	baz=345						
YULB				*e*S	**Sb**	**09 07 00.1**	**-2.2**
	baz=345						
STYH	**Taoyuan**	**0.80**	**316**	⇓P	**Pb**	**09 06 50.7**	**-1.2**
STYH	baz=317			*e*S	**Sb**	**09 06 59.6**	**-2.7**
	baz=317						
TSEB	**Hengchuen, Pin**	**0.82**	**213**	⇑*e*P	**Pb**	**09 06 52.1**	**-0.3**
TSEB	baz=212			*i* S	**Sb**	**09 07 03.8**	**+0.8**
	baz=212						
SGLT	**Jiouru**	**0.83**	**279**	*e*P	**Pb**	**09 06 52.0**	**-0.4**
SGLT	baz=277			*e*S	**Sb**	**09 07 01.9**	**-1.3**
	baz=277						
HEN	**Hengchun**	**0.84**	**225**	*e*P	**Pb**	**09 06 52.2**	**-0.4**
HEN	baz=214			*e*S	**Sb**	**09 07 02.5**	**-0.9**
	baz=214						
TWKBT	**Hengchun**	**0.84**	**219**	⇑*i*P	**Pb**	**09 06 51.7**	**-0.9**
TWKBT	baz=215			*e*S	**Sb**	**09 07 02.8**	**-0.7**
	baz=215						
TWK1	**Hengchun**	**0.84**	**219**	⇑P	**Pb**	**09 06 51.8**	**-0.8**
TWK1	baz=216			*e*S	**Sb**	**09 07 03.1**	**-0.4**
	baz=216						
SCST	**Cishan**	**0.87**	**289**	⇓*e*P	**Pb**	**09 06 52.6**	**-0.5**
	baz=285						
SGST	**Jiashian**	**0.88**	**303**	⇓*i*P	**Pb**	**09 06 51.9**	**-1.5**
SGST	baz=302			*e*S	**Sb**	**09 07 03.3**	**-1.3**
	baz=302						
HGSD	**Ruisui**	**0.89**	**3**	*e*P	**Pb**	**09 06 52.7**	**-0.8**
	baz=13						
EHY	**Hungye**	**0.91**	**357**	*e*P	**Pb**	**09 06 51.9**	**-1.9**
	baz=348						
TWM1	**Shoushan**	**0.91**	**284**	⇓*i*P	**Pb**	**09 06 54.1**	**+0.2**
TWM1	baz=283			*e*S	**Sn**	**09 07 06.3**	**-0.2**
	baz=283						
WTP	**Ta-pu**	**0.96**	**313**	⇓*i*P	**Pn**	**09 06 54.1**	**-0.7**
	baz=322						
SNJT	**Kaohsiung City**	**0.98**	**279**	⇓*e*P	**Pb**	**09 06 56.3**	**+1.3**
SNJT	baz=278			*e*S	**Sn**	**09 07 10.5**	**+2.3**
	baz=278						
CHN1	**Nanshi**	**0.98**	**307**	⇓*i*P	**Pn**	**09 06 54.9**	**-0.2**
CHN1	baz=315			*e*S	**Sb**	**09 07 08.0**	**+0.4**
	baz=315						
TPUB	**Ta-pu**	**0.98**	**315**		**Pn**	**09 06 54.5**	**-0.7**
TPUB	**Ta-pu**	**0.98**	**315**	P	**Pn**	**09 06 54.6**	**-0.6**
TPUB	**Ta-pu**	**0.98**	**315**	⇓*i*P	**Pn**	**09 06 54.4**	**-0.7**
	baz=325						
KAU	**Kaohsiung**	**0.99**	**269**	*e*P	**Pb**	**09 06 57.5**	**+2.3**
	baz=265						
SNST	**Tainan City**	**1.02**	**307**	⇓P	**Pn**	**09 06 55.6**	**-0.1**
SNST	baz=316			*e*S	**Sn**	**09 07 09.3**	**0.0**
	baz=316						
SHHT	**Tainan City**	**1.04**	**294**	⇓*e*P	**Pb**	**09 06 57.3**	**+1.3**
SHHT	baz=294			*e*S	**Sn**	**09 07 12.4**	**+2.6**
	baz=294						
CHN4	**Tsaushan**	**1.04**	**316**	⇓*i*P	**Pn**	**09 06 55.6**	**-0.4**
	baz=317						
CHN3	**Shinhua**	**1.05**	**297**	*e*P	**Pb**	**09 06 57.1**	**+0.9**
CHN3	baz=297			*e*S	**Sn**	**09 07 12.2**	**+2.3**
	baz=297						
ALS	**Alishan**	**1.05**	**330**	⇓P	**Pn**	**09 06 55.3**	**-1.1**
ALS	baz=332			*e*S	**Sb**	**09 07 09.0**	**-0.9**
	baz=332						
TWK	**Hsinying**	**1.06**	**309**	⇓*i*P	**Pn**	**09 06 55.9**	**-0.3**
TWK	baz=320			*e*S	**Sb**	**09 07 09.4**	**-0.4**
	baz=320						
WCKO	**Fanlu**	**1.10**	**320**	⇓*e*P	**Pn**	**09 06 56.6**	**-0.2**
WCKO	baz=320			*e*S	**Sn**	**09 07 11.1**	**-0.2**
	baz=320						
WARBT	**Fenglin Townsh**	**1.11**	**0**	*e*P	**Pn**	**09 06 55.3**	**-1.7**
	baz=1.0						
TEGC	**Jichi Village**	**1.12**	**8**	*e*P	**Pn**	**09 06 56.3**	**-0.7**
	baz=18						
SSHA	**Shanhua**	**1.14**	**298**	*e*P	**Pb**	**09 06 58.7**	**+1.0**
SSHA	baz=297			*e*S	**Sb**	**09 07 14.9**	**+2.8**
	baz=297						
TAI1	**Yung-k'ang**	**1.15**	**293**	*e*P	**Pb**	**09 06 58.5**	**+0.6**
	baz=292						
VWDT	**VWDT**	**1.17**	**349**	*e*P	**Pn**	**09 06 57.0**	**-0.7**
SHUL	**Shoufeng**	**1.20**	**8**	*e*P	**Pn**	**09 06 57.9**	**-0.1**
	baz=353						
SHUL				*e*S	**Sn**	**09 07 13.4**	**-0.2**
	baz=353						
ESL	**Shilin**	**1.21**	**2**	*e*P	**Pn**	**09 06 56.4**	**-1.8**
	baz=354						
SCLT	**Jiali**	**1.23**	**298**	*e*P	**Pb**	**09 06 59.2**	**-0.1**
SCLT	baz=297			S	**Sb**	**09 07 16.4**	**+1.5**
	baz=297						
SSLB	**Suanglung**	**1.25**	**342**		**Pn**	**09 06 58.1**	**-0.7**
SSLB	**Suanglung**	**1.25**	**342**	P	**Pn**	**09 06 58.3**	**-0.5**
SSLB	**Suanglung**	**1.25**	**342**	*e*P	**Pn**	**09 06 58.1**	**-0.7**
	baz=353						
CHY	**Chiayi**	**1.26**	**316**	*e*P	**Pb**	**09 06 59.9**	**+0.1**
CHY	baz=325			*e*S	**Sb**	**09 07 17.1**	**+1.6**
	ba

WSL Shuilin Townsh 1.41 311 *e*P Pn 09 07 01.7 +0.8
baz=293
WSL *e*S **Sb** 09 07 21.0 +1.2
baz=293
WUSB Renai 1.41 350 *e*P **Pn** 09 07 01.0 -0.1
baz=1.0
LXIB Xiulin Townshi 1.42 1 *e*P **Pn** 09 06 59.9 -1.4
baz=1.0
WTK Tuku 1.42 320 *e*P **Pn** 09 07 01.6 +0.5
baz=319
WTK S **Sb** 09 07 20.6 +0.5
baz=319
WNT Mingjian 1.43 333 *e*P **Pb** 09 07 02.6 0.0
baz=333
WNT *e*S **Sb** 09 07 21.2 +0.8
baz=333
CHGB Renai 1.47 353 *e*P **Pn** 09 07 02.2 +0.2
baz=2.0
WSF Szhu 1.49 314 *e*P **Pn** 09 07 02.9 +0.8
baz=313
WSF *i* S **Sb** 09 07 22.3 +0.2
baz=313
TWD Chiawan 1.49 8 *e*P **Pn** 09 07 02.5 +0.4
baz=356
WCS Beigang Elemen 1.52 344 *e*P **Pn** 09 07 03.3 +0.9
baz=344
WCS *e*S **Sb** 09 07 23.3 +0.4
baz=344
WHF Hehuan Shan 1.54 356 *e*P **Pn** 09 07 03.3 0.0
baz=357
NACB Ninganchiao 1.58 7 **Pn** 09 07 02.4 -1.0
NACB Ninganchiao 1.58 7 P **Pn** 09 07 03.3 -0.1
NACB Ninganchiao 1.58 7 *e*P **Pn** 09 07 02.3 -1.0
baz=6.0
NACB *e*S **Sn** 09 07 22.1 -1.0
baz=6.0
WRL Guolierlin Hig 1.59 325 *e*P **Pn** 09 07 04.0 +0.5
baz=325
WRL *e*S **Sb** 09 07 25.0 -0.2
baz=325
ETLH Xiulin Townshi 1.60 3 *e*P **Pn** 09 07 03.3 -0.5
baz=3.0
ETLH *e*S **Sn** 09 07 23.2 -0.6
baz=3.0
WTCT Ta-ch'eng 1.62 321 *e*P **Pn** 09 07 03.4 -0.4
baz=320
WTCT *e*S **Sb** 09 07 25.2 -0.6
baz=320
FUSS Fushou 1.65 356 *e*P **Pn** 09 07 05.0 +0.5
baz=8.0
WCHH Zhanghua 1.66 333 *e*P **Pb** 09 07 06.0 -0.6
baz=316
TWT Tachien 1.66 354 *e*P **Pn** 09 07 05.0 +0.4
baz=4.0
TDCB Techi 1.66 353 *e*P **Pn** 09 07 04.9 +0.3
baz=4.0
TCU Taichung 1.67 337 *e*P **Pn** 09 07 05.5 +0.9
baz=336
TCU *e*S **Sb** 09 07 27.6 +0.1
baz=336
WDGT Dungji 1.72 293 *i* P **Pn** 09 07 04.9 -0.3
baz=291
WDGT *e*S **Sn** 09 07 25.5 -0.9
baz=291
EOS4 EOS4 1.74 29 *e*P **Pn** 09 07 05.3 0.0
baz=33
EAHA Aohua 1.75 11 *e*P **Pn** 09 07 06.6 +0.8
baz=357
EAHA *e*S **Sn** 09 07 27.5 +0.1
baz=357
NNSB Datong 1.82 0 *e*P **Pn** 09 07 06.8 0.0
baz=11
NNSB *e*S **Sn** 09 07 29.1 -0.1
baz=11
TWQ1 Liyutan 1.83 342 *e*P **Pn** 09 07 08.2 +1.5
baz=340
TWQ1 *i* S **Sb** 09 07 32.4 +0.4
baz=340
NNS Nan Shan 1.83 360 *e*P **Pn** 09 07 06.3 -0.6
baz=11
ENA Nanau 1.85 10 *e*P **Pn** 09 07 07.4 +0.3
baz=356
ENA *e*S **Sn** 09 07 29.9 +0.1
baz=356
EWUT Wuta 1.88 11 *e*P **Pn** 09 07 07.8 +0.5
baz=358
EOS3 EOS3 1.89 27 *e*P **Pn** 09 07 06.5 -0.9
baz=29
NSY Sanyi 1.90 343 *e*P **Pb** 09 07 09.7 -1.0
baz=340
NSY *e*S **Sb** 09 07 34.0 0.0
baz=340
PHUB P'eng-hu 1.90 299 *e*P **Pn** 09 07 07.2 -0.5
baz=297
PHUB *e*S **Sn** 09 07 29.7 -1.2
baz=297
VCHM Qimei 1.90 289 *e*P **Pn** 09 07 07.2 -0.5
baz=288
VCHM *e*S **Sn** 09 07 30.0 -1.0
baz=288
LATG Datong 1.93 4 *e*P **Pn** 09 07 07.9 -0.4
baz=2.0
PNG Penghu 1.94 300 *e*P **Pn** 09 07 07.6 -0.6
baz=298
PNG S **Sn** 09 07 31.0 -0.9
baz=298
NDT Datong Townshi 2.00 3 *e*P **Pn** 09 07 09.3 +0.2
baz=2.0
NMLH Miaoli 2.00 344 *e*P **Pn** 09 07 09.7 +0.5
baz=341
NMLH *e*S **Sb** 09 07 36.5 -0.6
baz=341
ESAO Su ao 2.02 12 *e*P **Pn** 09 07 09.8 +0.5
baz=358
NFF Wufeng Townshi 2.04 353 *e*P **Pn** 09 07 11.1 +1.3
baz=1.0
ENTT Nioudou 2.04 5 *e*P **Pn** 09 07 10.4 +0.7
baz=3.0
TWC Suao 2.05 12 *e*P **Pn** 09 07 09.9 +0.2
baz=359
TWC *e*S **Sn** 09 07 34.4 -0.2
baz=359
NDS Dongshan 2.05 9 *e*P **Pn** 09 07 10.7 +0.9
baz=6.0
NSTT Nanjuang 2.05 350 *e*P **Pn** 09 07 11.1 +1.2
baz=1.0
YHNB Yeheng 2.06 360 **Pn** 09 07 10.7 +0.7
YHNB Yeheng 2.06 360 P **Pn** 09 07 11.0 +0.9
YHNB Yeheng 2.06 360 *e*P **Pn** 09 07 10.8 +0.7
baz=10.0
LIOB Emei 2.07 351 *e*P **Pn** 09 07 10.7 +0.7
baz=346
NSK Sanguang 2.07 359 *e*P **Pn** 09 07 10.5 +0.3
baz=10.0
NSK *e*S **Sn** 09 07 33.9 -1.4
baz=10.0
TWE Neicheng 2.13 7 *e*P **Pn** 09 07 10.9 +0.1
baz=4.0
FUSB Fushanzhiwuyua 2.16 5 *e*P **Pn** 09 07 12.2 +0.9
baz=3.0
NWLT Wulai 2.17 3 *e*P **Pn** 09 07 12.6 +1.0
baz=12
HSN Hsinchu 2.23 350 *e*P **Pn** 09 07 14.0 +1.8
baz=347
EGS 2.29 13 *e*P **Pn** 09 07 14.9 +1.7
baz=358
JYNG Yonagunijimaku 2.34 38 *e*P **Pn** 09 07 14.4 +0.6
JYNG S **Sn** 09 07 41.6 -0.2
JYNG Yonagunijimaku 2.34 38 A A 09 07 14.4
comp=E,2.0nm,5.2s,comp=N,4.0nm,4.0s
NHDH Xindian Distri 2.36 3 *e*P **Pn** 09 07 14.3 +0.2
baz=12
NCUH Zhongli 2.37 356 *e*P **Pn** 09 07 15.4 +1.2
baz=335
TATO Taipei 2.37 2 **Pn** 09 07 14.6 +0.4
TWA Mucha 2.38 4 *e*P **Pn** 09 07 16.2 +1.9
baz=13
YOJ Yonaguni jima 2.38 39 Pn **Pn** 09 07 14.6 +0.2
YOJ Yonaguni jima 2.38 39 P **Pn** 09 07 15.4 +1.0
YOJ Yonaguni jima 2.38 39 *e*P **Pn** 09 07 15.4 +1.0
baz=54
YOJ *e*S **Sn** 09 07 43.2 +0.3
baz=54
YOJ Yonaguni jima 2.38 39 P **Pn** 09 07 15.1 +0.8
YOJ *e*S **Sn** 09 07 43.2 +0.3
YOJ Yonaguni jima 2.38 39 A A 09 07 15.1
comp=E,2.0nm,1.9s,comp=N,3.0nm,4.1s
TWB1 Santiao Chiao 2.46 13 *e*P **Pn** 09 07 17.2 +1.7
baz=360
NWF Wu-fen Shan 2.49 8 *e*P **Pn** 09 07 17.1 +1.2
baz=3.0
WFSB Wu-fen Shan 2.49 8 *e*P **Pn** 09 07 16.4 +0.6
baz=4.0
TWS1 Kuangyinshan 2.49 1 *e*P **Pn** 09 07 17.0 +1.2
baz=9.0
SXI1 Grass Mountain 2.53 10 *e*P **Pn** 09 07 17.5 +1.0
baz=358
SXI1 *e*S **Sn** 09 07 47.2 +0.7
baz=358
YM01 YM01 2.54 4 *e*P **Pn** 09 07 18.0 +1.4
baz=358
HATJ Hateruma jima 2.66 56 P **Pn** 09 07 18.2 +0.1
HATJ *e*S **Sn** 09 07 48.5 -1.2
IRIF Iriomote-Funau 2.77 51 P **Pn** 09 07 20.2 +0.5
IRIF S **Sn** 09 07 53.1 +0.8
JKRS Kuro-shima 2.92 55 P **Pn** 09 07 22.1 +0.4
JKRS *e*S **Sn** 09 07 55.6 -0.4
JKRS Kuro-shima 2.92 55 A A 09 07 22.1
comp=E,8.0nm,3.4s,comp=N,8.0nm,3.9s
VWUC VWUC 2.97 324 *e*P **Pn** 09 07 22.1 -0.3
baz=321
JIJ Ishigaki jima 3.09 55 P **Pn** 09 07 24.9 +0.8
JIJ *e*S **Sn** 09 07 59.7 -0.6
PTMZ Houxiangcun 3.19 320 *e*P **Pn** 09 07 25.3 -0.2
baz=317
KNM Kinmen 3.25 304 *e*P **Pn** 09 07 27.4 +1.1
baz=301
KNMB Chin-men Tao 3.31 305 Pn **Pn** 09 07 27.3 +0.1
KNMB Chin-men Tao 3.31 305 *e*P **Pn** 09 07 26.7 -0.5
baz=303
JISG Ishigakijimahi 3.34 53 *e*P **Pn** 09 07 27.4 -0.1
JISG S **Sn** 09 08 06.6 +0.1
QZH Quanzhou 3.46 313 ⇓ *i*Pn **Pn** 09 07 28.6 -0.6
QZH Sn **Sn** 09 08 06.9 -2.6
QZH smax smax
comp=N,290nm,0.5s
QZH smax smax
comp=E,460nm,0.7s
QZH LR LR
comp=N,1μm,21.1s
QZH LR LR
comp=E,1μm,16.5s
QZH LR LR
comp=Z,1μm,15.1s
ZPLA Ao Xicun 3.59 292 *e*P **Pn** 09 07 30.6 -0.4
baz=291
JTJ Tarama 3.66 56 P **Pn** 09 07 32.6 +0.6
JTJ *e*S **Sn** 09 08 14.2 -0.3
MATB Ma-tsu 3.77 340 *e*P **Pn** 09 07 32.6 -0.9
baz=334
DSXP Dongshan 3.80 288 *e*P **Pn** 09 07 33.4 -0.5
baz=287
AXDP Jialang 3.88 307 *e*P **Pn** 09 07 34.7 -0.2
baz=305
MHZQ Yeshan 4.09 329 *e*P **Pn** 09 07 37.6 -0.2
baz=325
JIRB Irabujima 4.12 57 *e*P **Pn** 09 07 39.1 +0.7
JIRB S **Sn** 09 08 26.3 +0.4
JMJ2 Miyako jima3 4.20 59 *e*P **Pn** 09 07 39.7 +0.3
JMJ2 S **Sn** 09 08 27.7 0.0
LYJJ Jianjiangzhen 4.20 340 *e*P **Pn** 09 07 39.3 -0.1
baz=333
JMJ Miyako jima 2 4.21 58 P **Pn** 09 07 40.0 +0.5
JIKM Ikemajima 4.23 56 *e*P **Pn** 09 07 40.9 +1.1
JIKM S **Sn** 09 08 29.4 +0.9
JOGS Gusukube 4.27 59 P **Pn** 09 07 41.2 +0.9
JOGS *e*S **Sn** 09 08 30.1 +0.6
XPSS Dashiqiu 4.45 346 *e*P **Pn** 09 07 42.4 -0.4
baz=339
SXFK Yanhouchang 5.09 319 *e*P **Pn** 09 07 51.0 -0.6
baz=317
HKPS Hong Kong Po S 6.70 269 Pn **Pn** 09 08 14.2 +0.4
JOW Kunigami 7.55 55 Pn **Pn** 09 08 24.6 -0.9
JOW Kunigami 7.55 55 P **Pn** 09 08 24.2 -1.2
comp=Z,8.1nm,0.2s,baz=344,slow=21,SNR=1.2
JOW S **Sn** 09 09 46.6 -3.8
comp=Z,22nm,0.7s,baz=143,slow=28,SNR=2.2
TGY Tagaytay City 8.46 183 LR LR 09 12 48.0
comp=Z,298nm,18.1s,baz=162,slow=43
CNSH ChangSha 9.45 308 ⇑P **Pn** 09 08 49.1 -2.3
CNSH S **Sn** 09 10 30.3 -6.6
CNSH smax smax
comp=N,75nm,1.3s
CNSH smax smax
comp=E,110nm,1.2s
QIZ Qiongzhong 11.36 254 P **Pn** 09 09 18.8 +1.1
QIZ S **Sn** 09 11 25.4 +1.5
QIZ SS **SnSn** 09 11 42.3 +6.4
QIZ pmax pmax
comp=Z,9.0nm,1.4s
QIZ LR LR
comp=N,450nm,6.7s
QIZ LR LR
comp=E,330nm,8.4s
QIZ LR LR
comp=Z,510nm,11.8s
LYN LuoYang 14.24 329 *e*P **Pn** 09 09 56.1 -0.9
LYN pmax pmax
comp=Z,8.0nm,0.5s
LYN LR LR
comp=N,570nm,12.4s
LYN LR LR
comp=E,470nm,12.7s
LYN LR LR
comp=Z,830nm,11.3s
XAN Xi'an 15.80 319 ⇑P **Pn** 09 10 18.5 +0.6
XAN pP P 09 10 21.8 +0.3
XAN sP pP 09 10 25.3 -2.2
XAN PcP **PcP** 09 15 17.8 +1.2
XAN pmax pmax
comp=Z,5.0nm,1.6s
XAN LR LR
comp=N,480nm,15.8s
XAN LR LR
comp=E,440nm,16.8s
XAN LR LR
comp=Z,690nm,14.8s
HNS HongShan 15.84 340 ⇑P **P** 09 10 24.3 +2.5
HNS pmax pmax
comp=Z,10.0nm,1.2s
KSRS Korea Array 15.85 19 P **P** 09 10 21.4 -0.4
comp=Z,0.2nm,0.3s,baz=196,slow=10,SNR=8.8
KSRS LR LR 09 17 21.0
comp=Z,83nm,18.6s,baz=180,slow=40
comp=Z,1.3nm,0.6s
SLVN Son La 16.26 269 **P** 09 10 26.5 -0.2
JWT Wachi 17.59 41 P **Pn** 09 10 40.3 -0.1
CD2 Chengdu 17.77 301 P **Pn** 09 10 42.8 +0.2
CD2 S **Sn** 09 14 02.3 +2.2
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=N,400nm,13.1s
CD2 LR LR
comp=E,440nm,12.6s
CD2 LR LR
comp=Z,390nm,15.7s
PZH PanZhiHua 18.28 286 P **P** 09 10 49.5 +0.4
PZH S **Sn** 09 14 09.3 -3.4
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,70nm,3.9s
PZH LR LR
comp=N,250nm,15.7s
PZH LR LR
comp=E,240nm,14.2s
PZH LR LR
comp=Z,280nm,14.2s
JGF Kuroka 19.01 44 P **P** 09 10 56.2 -0.8
JGF IAmb IAmb 09 11 11.5
comp=Z,8.3nm,0.8s
JHJ Hachijo jima 2 19.33 53 LR LR 09 16 35.7
comp=Z,202nm,19.4s,baz=66,slow=31
HHC Hu-ho-hao-te 20.00 338 *e*P **Pn** 09 11 10.0 +0.4
HHC *e*S **S** 09 14 51.1 -0.5
HHC SS **SnSn** 09 15 16.0 +7.5
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,120nm,5.6s
HHC LR LR
comp=N,360nm,14.7s
HHC LR LR
comp=Z,430nm,15.5s
MJAR Matsushiro Arr 20.14 43 P Pn 09 11 10.9 -0.3
comp=Z,2.9nm,0.9s,baz=232,slow=8.7,SNR=4.1
MJAR LR LR 09 18 44.7
comp=Z,63nm,21.5s,baz=238,slow=36
comp=Z,2.9nm,0.9s
LZH Lanzhou 20.31 315 ⇑P Pn 09 11 16.1 +2.7
LZH pP sP 09 11 24.3 +4.1
LZH S Sn 09 15 01.8 +0.2
LZH pmax pmax
comp=Z,11nm,1.4s
LZH LR LR
comp=N,200nm,10.0s
LZH LR LR
comp=E,120nm,11.2s
LZH LR LR
comp=Z,160nm,13.6s
TNCH TengChong 21.05 281 *e*P **P** 09 11 20.5 +1.1
TNCH pP pP 09 11 23.3 -2.3
TNCH pmax pmax
comp=Z,17nm,0.5s
CHTO Chiang Mai 21.32 264 P **P** 09 11 22.9 +0.8
TOLI2 Tolitoli 21.36 182 P **P** 09 11 22.7 +0.1
TOLI2 IAmb IAmb 09 11 44.8
comp=Z,13nm,0.9s
CMAR Chiang Mai Arr 21.41 263 P **P** 09 11 23.6 +0.5
CMAR Chiang Mai Arr 21.41 263 P **P** 09 11 25.4 +2.3
comp=Z,1.2nm,0.3s,baz=67,slow=9.0,SNR=8.7
CMAR LR LR 09 20 50.9
comp=Z,243nm,19.0s,baz=75,slow=39
comp=Z,1.2nm,0.3s
XLT XiLinHaoTe 21.69 350 *e*P **P** 09 11 31.0 +5.0
XLT pP pP 09 11 34.3 +2.0
XLT sP sP 09 11 37.8 +2.7
XLT PP PnPn 09 12 00.4 +13
XLT pmax pmax
comp=Z,4.0nm,1.2s
XLT pmax pmax
comp=Z,98nm,4.2s
SBUM Sibu 21.91 205 P **P** 09 11 28.5 0.0
USRK Ussuriysk Ar. 23.25 20 P **P** 09 11 41.9 -0.5
comp=Z,0.8nm,0.7s,baz=213,slow=9.2,SNR=2.0
comp=Z,0.8nm,0.7s
GUMO Guam 24.03 108 LR LR 09 20 21.3
comp=Z,50nm,20.7s,baz=307,slow=34
GTA Gaotai 24.85 317 *e*P **P** 09 12 02.9 +5.3
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA LR LR
comp=N,95nm,15.6s
GTA LR LR
comp=E,180nm,15.3s
GTA LR LR
comp=Z,180nm,15.6s
MYKOM Kota Tinggi 26.79 222 P **P** 09 12 14.5 -0.7
SHL Shillong 27.07 282 P **P** 09 12 17.0 -0.8
ASAJ Asahikawa 27.68 34 LR LR 09 22 57.9
comp=Z,70nm,20.1s,baz=166,slow=35
ULN Ulaanbaatar 27.70 339 P **P** 09 12 23.0 -0.3
ULN IAmb IAmb 09 12 28.5
comp=Z,3.0nm,0.8s
KLR Kul'dur 27.82 15 LR LR 09 24 40.1
comp=Z,94nm,19.5s,baz=215,slow=39
SONM Songino Array 27.90 338 P **P** 09 12 25.6 +0.6
SONM Songino Array 27.90 338 P **P** 09 12 25.0 0.0
comp=Z,1.0nm,0.6s,baz=157,slow=9.9,SNR=6.9
SONM LR LR 09 25 07.0
comp=Z,174nm,19.5s,baz=106,slow=40
comp=Z,1.0nm,0.6s
LSA Lhasa 27.99 291 P **P** 09 12 24.3 -2.1
WMQ Urumqi 34.89 315 *e*P **P** 09 13 26.4 -0.1
WMQ pmax pmax
comp=Z,14nm,0.7s
MK31 Makanchi Array 39.61 317 P **P** 09 14 07.5 +1.0
MK31 IAmb IAmb 09 14 14.1
comp=Z,3.3nm,1.0s
MKAR Makanchi Array 39.61 317 P **P** 09 14 07.5 +1.0
MKAR Makanchi Array 39.61 317 P **P** 09 14 07.8 +1.3
comp=Z,1.5nm,0.7s,baz=110,slow=9.5,SNR=15
MKAR PcP **PcP** 09 16 12.8 -0.5
comp=Z,0.2nm,0.6s,baz=90,slow=4.6,SNR=1.7
MKAR LR LR 09 31 51.6
comp=Z,85nm,20.1s,baz=10.0,slow=38
comp=Z,1.5nm,0.7s
MAKZ Makanchi 39.81 317 P **P** 09 14 09.2 +1.0
MAKZ IAmb IAmb 09 14 16.4
comp=Z,3.7nm,0.8s
YAK Yakutsk 39.82 6 LR LR 09 31 32.0
comp=Z,67nm,19.4s,baz=154,slow=37
PMG Port Moresby 40.62 139 LR LR 09 30 03.1
comp=Z,40nm,18.9s,baz=317,slow=35
ZAA0 Zalesovo Array 41.67 328 P **P** 09 14 23.4 0.0
ZAA0 IAmb IAmb 09 14 33.9
comp=Z,5.4nm,0.9s
ZALV Zalesovo Beam 41.67 328 P **P** 09 14 23.6 +0.3
comp=Z,3.5nm,0.6s,baz=116,slow=7.5,SNR=10
ZALV PcP **PcP** 09 16 19.6 -0.2
comp=Z,0.7nm,0.6s,baz=157,slow=4.1,SNR=2.8
comp=Z,3.5nm,0.6s
MA2 Magadan 42.38 22 LR LR 09 32 35.0
comp=Z,60nm,18.0s,baz=336,slow=37
H11N1 WAKE ISLAND Hy 42.42 85 T T 09 59 42.8
baz=282,slow=75,SNR=105
H11N2 WAKE ISLAND Hy 42.42 85 T T 09 59 40.7
baz=282,slow=75,SNR=200
H11N3 WAKE ISLAND Hy 42.44 85 T T 09 59 48.8
baz=282,slow=75,SNR=126
H11S3 WAKE ISLAND Hy 42.50 87 T T 09 59 49.1
baz=284,slow=75,SNR=341
H11S1 WAKE ISLAND Hy 42.51 87 T T 10 00 01.7
baz=284,slow=75,SNR=212
H11S2 WAKE ISLAND Hy 42.52 87 T T 09 59 50.5
baz=284,slow=75,SNR=282
KURK Kurchatov 43.43 321 P **P** 09 14 38.9 +1.3
KURK IAmb IAmb 09 14 42.7
comp=Z,7.2nm,0.9s
KURBB Kurchatov Arra 43.44 321 P **P** 09 14 38.3 +0.6
comp=Z,4.4nm,0.9s,baz=114,slow=6.8,SNR=24
KURBB PcP **PcP** 09 16 25.8 0.0
comp=Z,0.2nm,0.4s,baz=90,slow=2.8,SNR=1.5
comp=Z,4.4nm,0.9s
AAK Ala-Archa 43.62 309 LR LR 09 33 43.8
comp=Z,67nm,19.2s,baz=82,slow=37
PSA00 Pilbara Seismi 43.93 182 P **P** 09 14 41.3 -0.6
PSA00 IAmb IAmb 09 14 44.8
comp=Z,7.8nm,1.1s
WB0 Warramunga Arr 43.98 162 P **P** 09 14 41.0 -1.4
WB0 IAmb IAmb 09 14 41.5
comp=Z,5.4nm,1.1s
WRA Warramunga Arr 44.13 162 P **P** 09 14 42.5 -1.1
WRA Warramunga Arr 44.13 162 P **P** 09 14 42.2 -1.4
comp=Z,2.2nm,0.8s,baz=343,slow=8.9,SNR=14
WRA PcP **PP** 09 16 27.5 +0.7
comp=Z,0.5nm,0.8s,baz=341,slow=2.8,SNR=2.0
comp=Z,2.2nm,0.8s
WB2 Warramunga Arr 44.14 162 P **P** 09 14 42.4 -1.2
WB2 IAmb IAmb 09 14 42.7
comp=Z,4.6nm,0.9s
WR0 Warramunga Arr 44.21 162 P **P** 09 14 43.0 -1.2
WR0 IAmb IAmb 09 14 43.4
comp=Z,4.9nm,0.9s
GIRL Giralia 45.50 189 P **P** 09 14 55.2 +0.7
KK31 Karatay Array 46.58 309 P **P** 09 15 02.6 -0.3
KK31 IAmb IAmb 09 15 15.3
comp=Z,3.6nm,1.0s
KKAR Karatay Array 46.58 309 P **P** 09 15 02.5 -0.5
AS31 Alice Springs 47.57 164 P **P** 09 15 09.9 -0.9
AS31 IAmb IAmb 09 15 17.9
comp=Z,1.3nm,0.5s
ASAR Alice Springs 47.57 164 P **P** 09 15 10.2 -0.6
ASAR Alice Springs 47.57 164 P **P** 09 15 09.8 -1.0
comp=Z,1.1nm,0.5s,baz=342,slow=6.6,SNR=21
ASAR PcP **PcP** 09 16 40.3 -0.2
comp=Z,0.6nm,0.8s,baz=347,slow=4.2,SNR=2.8
comp=Z,1.1nm,0.5s
BVAR Borovoye Array 49.02 322 P **P** 09 15 22.4 +0.8
comp=Z,1.0nm,0.5s,baz=112,slow=11,SNR=9.5
BVAR PcP **PcP** 09 16 45.0 -0.3
comp=Z,2.1nm,0.6s,baz=109,slow=3.9,SNR=9.0
comp=Z,1.0nm,0.5s
BRVK Borovoye 49.09 322 P **P** 09 15 22.6 +0.4
TIXI Tiksi 49.26 3 LR LR 09 38 48.0
comp=Z,72nm,18.1s,baz=216,slow=39
ABKAR Akbulak array 54.68 315 P **P** 09 16 03.3 -0.6
ABKAR IAmb IAmb 09 16 11.1
comp=Z,2.6nm,0.9s
AKTO Aktyubinsk 56.04 316 P **P** 09 16 15.1 +1.5

comp=Z,1.9nm,0.8s,baz=108,slow=6.0,SNR=4.3
comp=Z,1.9nm,0.8s

ARU	**Arti**	**56.48**	**324**	P		**P**	**09 16 17.1**	**+0.4**
	comp=Z,4.5nm,0.2s,baz=114,slow=20,SNR=3.9							
	comp=Z,4.5nm,0.2s							
STKA	**Stephens Creek**	**57.52**	**160**	P		**P**	**09 16 23.2**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=325,slow=9.4,SNR=4.4							
	comp=Z,1.0nm,0.4s							
KBZ	**Khabaz**	**66.61**	**309**	P		**P**	**09 17 26.7**	**+1.4**
	comp=Z,4.5nm,0.9s,baz=114,slow=6.1,SNR=6.1							
	comp=Z,4.5nm,0.9s							
ILAR	**Eielson Array**	**70.54**	**27**	P		**P**	**09 17 48.6**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=305,slow=6.4,SNR=1.9							
	comp=Z,0.2nm,0.8s							
ARCES	**ARCESS Array B**	**71.07**	**338**	P		**P**	**09 17 52.7**	**0.0**
	comp=Z,4.6nm,1.1s,baz=57,slow=9.8,SNR=2.0							
	comp=Z,4.6nm,1.1s							
FINES	**FINESS Array B**	**72.90**	**330**	P		**P**	**09 18 01.9**	**-1.8**
	comp=Z,2.8nm,0.8s,baz=54,slow=7.1,SNR=9.3							
	comp=Z,2.8nm,0.8s							
HFS	**Hagfors**	**79.03**	**331**	P		**P**	**09 18 37.5**	**-1.2**
	comp=Z,2.5nm,0.7s,baz=81,slow=10,SNR=3.7							
HFS				LR		LR	09 56 57.8	
	comp=Z,158nm,18.0s,baz=40,slow=38							
	comp=Z,2.5nm,0.7s							
NB2	**NORSAR Subarra**	**79.71**	**332**	P		**P**	**09 18 41.6**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=61,slow=5.1							
NOA	**NORSAR Array B**	**79.71**	**332**	P		**P**	**09 18 41.4**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=56,slow=6.0,SNR=4.0							
NOA				LR		LR	09 57 35.9	
	comp=Z,115nm,18.0s,baz=355,slow=38							
	comp=Z,1.1nm,0.7s							
JMIC	**Jan Mayen**	**80.40**	**345**	LR		LR	09 59 06.2	
	comp=Z,30nm,18.2s,baz=282,slow=39							
VYHS	**Vyhne**	**81.27**	**319**	*e*P		**P**	**09 18 52.1**	**+1.0**
GERES	**GERESS Array B**	**84.18**	**321**	P		**P**	**09 19 05.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=11,slow=7.2,SNR=2.5							
	comp=Z,0.6nm,0.7s							
YKA	**Yellowknife Ar**	**84.36**	**23**	P		**P**	**09 19 04.8**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=313,slow=4.9,SNR=8.1							
	comp=Z,0.3nm,0.7s							
NEW	**Newport**	**92.20**	**35**	LR		LR	10 00 43.6	
	comp=Z,89nm,20.1s,baz=136,slow=35							
YBH	**Yreka Blue Hor**	**92.80**	**42**	LR		LR	09 58 05.5	
	comp=Z,82nm,19.4s,baz=141,slow=33							
FRB	**Frobisher Bay**	**93.59**	**4**	P		**P**	**09 19 49.3**	**-1.4**
	comp=Z,1.9nm,0.9s,baz=21,slow=5.3,SNR=4.1							
FRB				LR		LR	10 05 47.2	
	comp=Z,69nm,18.7s,baz=224,slow=38							
	comp=Z,1.9nm,0.9s							

IDC 17 09:12:52.5±1.6, 1°26S×122°39E, h0km, mb3.3/3, mbtmp3.3/3, MS2.4/1, Error ellipse: s-maj=235.9km s-min=26.9km az=60.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.94**	**149**	P	P	09 17 46.6	-1.3
	0.3nm,0.6s,baz=324,slow=11,SNR=1.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**24.92**	**154**	P	P	09 18 18.4	+0.9
	0.6nm,0.8s,baz=326,slow=8.6,SNR=4.8						
	0.6nm,0.8s						
KSRS	**Korea Array**	**38.86**	**7**	LR	LR	09 35 39.5	
	comp=Z,6.0nm,21.8s,baz=55,slow=35						
MKAR	**Makanchi Array**	**59.36**	**329**	P	P	09 22 56.5	-0.1
	0.6nm,0.6s,baz=128,slow=8.2,SNR=5.8						
	0.6nm,0.6s						

*NEIC **17** 09:41:32.9±0.8, 35°.68N±0°.02×98°.84W±0°.03, h5km±2km, Error ellipse: s-maj=4.6km s-min=3.0km az=61.0*
TUL 17 09:41:33.7±0.4, 35°.712N±0°.008×98°.77W±0°.02, h3km±7km, ML2.8, mb_Lg2.8/76(NEIC), ML3.0/24(NEIC), Error ellipse: s-maj=2.7km s-min=0.9km az=74.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSTR	**Hydro, Custer**	**0.10**	**134**		Pg	09 41 36.6	+1.0
CSTR				Sg	Sg	09 41 38.9	+1.9
CSTR				IAML		09 41 38.9	
	comp=N,5μm,0.2s						
U32A	**Winter Ranch,**	**0.69**	**345**	Pg	Pg	09 41 47.1	+0.1
OK038	**West end E0370**	**0.77**	**2**	Pg	Pg	09 41 48.6	+0.2
OK038				IAML		09 42 06.1	
	comp=N,1μm,0.2s						
WMOK	**Wichita Mounta**	**0.97**	**180**	Pg	Pg	09 41 51.0	-1.3
CROK	**Carrier**	**1.02**	**39**	Pg	Pg	09 41 53.1	-0.1
OK029	**Liberty Lake**	**1.07**	**85**	Pg	Pg	09 41 54.0	-0.3
OK029				IAML		09 42 16.7	
	comp=N,265nm,0.3s						
OK029				IAML		09 42 17.0	
	comp=N,292nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**1.13**	**105**		Pg	09 41 55.0	-0.4
OKCSW				IAML		09 42 15.8	
	comp=N,285nm,0.2s						
OKCSW				IAML		09 42 17.2	
	comp=E,315nm,0.3s						
ADOK	**Arcadia Dam**	**1.14**	**93**		Pg	09 41 55.4	-0.2
OK032	**Salt Plains WL**	**1.18**	**22**		Pg	09 41 55.8	-0.6
FNO	**Franklin**	**1.21**	**112**		Pg	09 41 56.3	-0.5
FNO				IAML		09 42 17.6	
	comp=N,347nm,0.3s						
FNO				IAML		09 42 20.5	
	comp=E,372nm,0.2s						
SMWD	**Samnorwood**	**1.34**	**244**		Pn	09 41 57.9	-1.5
SMWD				IAML		09 42 25.6	
	comp=E,179nm,0.4s						
X34A	**Smith Ranch, M**	**1.35**	**145**	Pg	Pn	09 41 58.9	-0.5
GC02	**Grant County #**	**1.36**	**33**		Pn	09 41 59.0	-0.5
KAN14	**Manchester OK**	**1.40**	**28**		Pn	09 41 59.7	-0.4
OK033	**Mehan**	**1.53**	**77**		Pn	09 42 01.5	-0.3
KAN17	**Caldwell West**	**1.56**	**31**		Pn	09 42 02.5	+0.2
OK052	**Battle Ridge R**	**1.62**	**79**		Pn	09 42 02.9	-0.3
OK048	**Pawnee Station**	**1.64**	**64**		Pn	09 42 03.1	-0.3
KAN08	**Anthony NE Sta**	**1.64**	**23**		Pn	09 42 03.4	-0.1
KAN01	**Argonia South**	**1.66**	**29**		Pn	09 42 03.3	-0.3
KAN13	**South Haven SW**	**1.67**	**38**		Pn	09 42 03.9	+0.1
QUOK	**Quay**	**1.74**	**74**		Pn	09 42 04.7	0.0
DEOK	**Depew**	**1.85**	**85**	Pn	Pn	09 42 06.6	+0.3
TUL3	**Leonard**	**2.43**	**84**	IAmb_Lg		09 42 51.0	
	comp=Z,23nm,0.9s						
Z35A	**Perchaven, San**	**2.69**	**152**	IAmb_Lg		09 43 03.6	
	comp=Z,23nm,1.1s						
DKNS	**Dickens**	**2.70**	**222**	IAmb_Lg		09 43 03.2	
	comp=Z,24nm,0.8s						
X37A	**Clayton**	**3.00**	**111**	Pn	Pn	09 42 22.2	+0.1
X37A				IAmb_Lg		09 43 17.0	
	comp=Z,37nm,0.9s						
RLO	**Rose Lookout**	**3.08**	**80**	Pn	Pn	09 42 23.3	+0.1
FW07	**Weatherford**	**3.11**	**164**	IAmb_Lg		09 43 10.3	
	comp=Z,22nm,1.1s						
SN05	**Snyder 5**	**3.32**	**212**	IAmb_Lg		09 43 23.4	
	comp=Z,17nm,0.9s						
FW16	**Waxahatchie**	**3.58**	**154**	IAmb_Lg		09 43 36.9	
	comp=Z,18nm,0.9s						
U38A	**Gravette**	**3.63**	**77**	IAmb_Lg		09 43 34.7	
	comp=Z,23nm,0.9s						
KSU1	**Kansas State U**	**3.80**	**26**	IAmb_Lg		09 43 41.4	
	comp=Z,38nm,0.8s						
WHTX	**Lake Whitney,**	**3.87**	**163**	IAmb_Lg		09 43 39.3	
	comp=Z,16nm,0.8s						
HHAR	**Hobbs**	**3.96**	**80**	IAmb_Lg		09 43 46.5	
	comp=Z,17nm,0.7s						
Z38A	**Mt. Pleasant**	**3.97**	**127**	IAmb_Lg		09 43 44.1	
	comp=Z,21nm,0.8s						
SGCY	**Sterling City**	**4.26**	**208**	IAmb_Lg		09 43 54.1	
	comp=Z,23nm,0.8s						
MIAR	**Mount Ida**	**4.42**	**104**	IAmb_Lg		09 43 59.6	
	comp=Z,20nm,0.9s						
237A	**Washetta, Mont**	**4.45**	**145**	IAmb_Lg		09 44 03.2	
	comp=Z,13nm,0.7s						
KSCO	**Kaye Shedlock**	**4.50**	**318**	IAmb_Lg		09 44 05.3	
	comp=Z,22nm,0.7s						
T25A	**Trinidad**	**4.76**	**289**	IAmb_Lg		09 44 09.9	
	comp=Z,22nm,0.9s						
S39A	**Bolivar**	**4.80**	**64**	IAmb_Lg		09 44 10.6	
	comp=Z,20nm,0.7s						
435B	**Jarrell**	**5.01**	**168**	IAmb_Lg		09 44 24.9	
	comp=Z,21nm,0.8s						
X40A	**Basin Creek Fa**	**5.02**	**102**	IAmb_Lg		09 44 21.9	
	comp=Z,13nm,0.8s						
WLAR	**White Oak Lake**	**5.08**	**112**	IAmb_Lg		09 44 23.1	
	comp=Z,16nm,0.8s						
OZNA	**Ozona**	**5.17**	**203**	IAmb_Lg		09 44 21.0	
	comp=Z,14nm,1.0s						

WHAR	**Wooly Hollow**	**5.31**	**93**	IAmb_Lg	09 44 36.0
	comp=Z,26nm,1.3s				
FCAR	**Ozark Folk Cen**	**5.41**	**86**	IAmb_Lg	09 44 32.6
	comp=Z,16nm,0.8s				
MGMO	**Mountain Grove**	**5.44**	**73**	IAmb_Lg	09 44 33.2
	comp=Z,24nm,0.8s				
MNHN	**Monahans**	**5.49**	**219**	IAmb_Lg	09 44 40.2
	comp=Z,22nm,1.3s				
R40A	**Maddies Statio**	**5.81**	**62**	IAmb_Lg	09 44 38.0
	comp=Z,20nm,0.8s				
Q24A	**Divide**	**6.03**	**304**	IAmb_Lg	09 44 51.1
	comp=Z,14nm,0.7s				
LCAR	**Lake Charles**	**6.20**	**84**	IAmb_Lg	09 44 53.1
	comp=Z,13nm,0.7s				
CCM	**Cathedral Cave**	**6.47**	**67**	IAmb_Lg	09 45 08.6
	comp=Z,18nm,0.8s				
BRIGG	**Briggsdale**	**6.54**	**320**	IAmb_Lg	09 45 09.2
	comp=Z,23nm,0.8s				
ISCO	**Idaho Springs**	**6.78**	**309**	IAmb_Lg	09 45 12.7
	comp=Z,8.9nm,0.7s				
PBMO	**Poplar Bluff**	**6.83**	**79**	IAmb_Lg	09 45 27.5
	comp=Z,13nm,0.7s				
FVM	**French Village**	**7.07**	**69**	IAmb_Lg	09 45 28.5
	comp=Z,12nm,0.9s				
CGM3	**Cape Girardeau**	**7.51**	**75**	IAmb_Lg	09 45 38.4
	comp=Z,11nm,0.8s				
Y45A	**Yeager Farm, C**	**7.81**	**101**	IAmb_Lg	09 45 56.7
	comp=Z,7.6nm,0.7s				

*SOF **17** 09:45:19.4, 41°.37N±0°.02×25°.53E±0°.01, h2km±2km, MD3.0/9*
*BEO **17** 09:45:20.9±0.9, 41°.34N×25°.59E, h0km, ML3.0/8*
*ISK **17** 09:45:21.6, 41°.44N×25°.48E, h9km, ML3.0/26*
*THE **17** 09:45:21.2, 41°.45N×25°.50E, h9km±1km, ML2.9/8, Error ellipse: s-maj=1.3km s-min=0.4km az=135.0*
*ATH **17** 09:45:22.9, 41°.38N×25°.43E, h13km±1km, ML2.7/13, Error ellipse: s-maj=2.2km s-min=0.8km az=199.0*
*AFAD **17** 09:45:23.1±0.0, 41°.45N×25°.60E, h7km±1km, ML3.0*
ISC 17 09:45:21.6±0.9, 41°.43N±0°.01×25°.50E±0°.01, h11km±7km, n101, σ1§14/157, 9C-5D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDZ	**Kurdzhali**	**0.23**	**329**	*i* Pg	**Pg**	**09 45 25.9**	**-0.5**
KDZ				Sg	**Sg**	**09 45 28.7**	**-0.9**
RDO	**Rodhopi**	**0.29**	**174**	Pg	**Pg**	**09 45 28.0**	**+0.6**
RDO				Sg	**Sg**	**09 45 32.2**	**+0.9**
RDO	**Rodhopi**	**0.29**	**174**	P	**Pg**	**09 45 27.5**	**+0.1**
RDO				S	**Sg**	**09 45 31.9**	**+0.6**
	6μm,0.1s						
RDO	**Rodhopi**	**0.29**	**174**	P	**Pg**	**09 45 28.1**	**+0.6**
RDO				S	**Sg**	**09 45 32.1**	**+0.9**
RDO				AML	AML	09 45 32.2	
	comp=E,10979μm,0.1s						
RDO				AML	AML	09 45 32.4	
	comp=N,12500μm,0.1s						
DIM	**Dimitrovgrad**	**0.61**	**6**	*i* P	**Pg**	**09 45 33.3**	**-0.2**
DIM				S	**Sg**	**09 45 41.6**	**0.0**
RZN	**Rozhen**	**0.63**	**295**	*i* Pg	**Pg**	**09 45 33.0**	**-0.8**
RZN				Sg	**Sg**	**09 45 40.8**	**-1.2**
ALN	**Alexandroupoli**	**0.68**	**142**	Pg	**Pn**	**09 45 35.6**	**+0.2**
ALN				Sg	**Sb**	**09 45 44.9**	**+0.1**
ALN	**Alexandroupoli**	**0.68**	**142**	P	**Pb**	**09 45 35.1**	**-0.3**
ALN				S	**Sb**	**09 45 44.7**	**-0.1**
	comp=N,528nm,0.2s						
ALN	**Alexandroupoli**	**0.68**	**142**	P	**Pb**	**09 45 35.4**	**0.0**
ALN				S	**Sb**	**09 45 44.6**	**-0.1**
ALN				AML	AML	09 45 45.5	
	comp=E,1219μm,0.2s						
ALN				AML	AML	09 45 45.7	
	comp=N,952μm,0.1s						
ENEZ	**Enez**	**0.85**	**144**	Pg	**Pn**	**09 45 39.1**	**-0.5**
ENEZ				Sg	**Sn**	**09 45 51.3**	**-0.8**
ENEZ	**Enez**	**0.85**	**144**	P	**Pg**	**09 45 37.3**	**-0.7**
ENEZ				S	**Sb**	**09 45 50.1**	**+0.2**
	comp=N,2μm,0.3s						
KAVA	**Kavala**	**0.86**	**240**	P	**Pg**	**09 45 37.5**	**-0.6**
KAVA				S	**Sg**	**09 45 50.2**	**+0.8**
KAVA	**Kavala**	**0.86**	**240**	P	**Pg**	**09 45 37.5**	**-0.6**
KAVA				S	**Sg**	**09 45 48.5**	**-0.9**
CAVK	**Edirne/Enez-Ca**	**0.90**	**145**	P	**Pn**	**09 45 39.9**	**-0.3**
CAVK				S	**Sn**	**09 45 52.5**	**-0.6**
CAVK				*i* AML	AML	09 45 54.0	
	comp=N,1μm,0.1s						
CAVK				*i* AML	AML	09 45 54.0	
	comp=N,911nm,0.6s						
PLD	**Plovdiv**	**0.91**	**322**	*i* P	**Pg**	**09 45 38.4**	**-0.6**
PLD				S	**Sg**	**09 45 51.2**	**+0.3**
PLD	**Plovdiv**	**0.91**	**322**	*e*Pg	**Pg**	**09 45 37.9**	**-1.1**
PLD				*e*Sg	**Sb**	**09 45 52.6**	**+1.2**
UKOP	**Uzunkopru-Edir**	**0.91**	**109**	Pg	**Pn**	**09 45 40.1**	**-0.2**
UKOP				Sg	**Sn**	**09 45 52.9**	**-0.5**
ENZZ	**Sultanice-Enez**	**0.96**	**149**	Pg	**Pb**	**09 45 40.5**	**+0.3**
ENZZ				Sg	**Sn**	**09 45 54.8**	**+0.2**
SMTH	**Samothraki Isl**	**0.96**	**178**	P	**Pg**	**09 45 40.1**	**0.0**
SMTH				S	**Sb**	**09 45 53.8**	**+0.8**
SMTH	**Samothraki Isl**	**0.96**	**178**	P	**Pg**	**09 45 40.0**	**-0.1**
SMTH				S	**Sg**	**09 45 52.3**	**-0.3**
SMTH				AML	AML	09 45 57.0	
	comp=E,359μm,0.1s						
SMTH				AML	AML	09 45 59.6	
	comp=N,389μm,0.2s						
KVLA	**Kavala**	**0.97**	**240**	P	**Pg**	**09 45 39.7**	**-0.6**
KVLA				S	**Sg**	**09 45 52.7**	**-0.3**
KVLA				AML	AML	09 45 55.4	
	comp=E,1759μm,0.2s						
KVLA				AML	AML	09 45 55.4	
	comp=N,1191μm,0.1s						
THAS	**Thassos island**	**1.01**	**216**	P	**Pg**	**09 45 40.3**	**-0.8**
THAS				S	**Sb**	**09 45 55.5**	**+1.0**
	comp=N,845nm,0.2s						
THAS	**Thassos island**	**1.01**	**216**	P	**Pg**	**09 45 40.3**	**-0.8**
THAS				S	**Sg**	**09 45 54.1**	**-0.2**
THAS				AML	AML	09 45 56.4	
	comp=N,1884μm,0.3s						
THAS				AML	AML	09 45 57.1	
	comp=E,1476μm,0.3s						
EDRB	**Edirne**	**1.02**	**66**	Pg	**Pn**	**09 45 41.4**	**-0.5**
EDRB	**Edirne**	**1.02**	**66**	P	**Pg**	**09 45 40.1**	**-1.1**
EDRB				S	**Sb**	**09 45 54.5**	**-0.2**
	comp=E,542nm,0.2s						
ERIK	**Erikli-Kesan**	**1.08**	**134**	Pn	**Pn**	**09 45 42.9**	**+0.2**
NVR	**Nevrokopi**	**1.23**	**267**	P	**Pn**	**09 45 44.4**	**-0.4**
NVR				S	**Sb**	**09 46 01.0**	**+0.1**
NVR	**Nevrokopi**	**1.23**	**267**	P	**Pn**	**09 45 44.9**	**+0.1**
NVR				S	**Sb**	**09 46 00.1**	**-0.7**
NVR				AML	AML	09 46 05.1	
	comp=N,344μm,0.2s						
NVR				AML	AML	09 46 05.8	
	comp=E,493μm,0.2s						
KIRK	**Kırklareli**	**1.25**	**73**	P	**Pg**	**09 45 45.3**	**-0.2**
KIRK				S	**Sn**	**09 46 01.9**	**0.0**
GELI	**Tayfur-Gelibol**	**1.27**	**144**	Pn	**Pg**	**09 45 46.2**	**+0.2**
GELI				Sn	**Sn**	**09 46 03.8**	**+1.4**
GADA	**Gvkgeada**	**1.28**	**166**	Pn	**Pb**	**09 45 45.7**	**+0.1**
JMB	**Yambol**	**1.31**	**36**	*i* Pg	**Pn**	**09 45 46.1**	**-0.1**
JMB				Sg	**Sn**	**09 46 03.5**	**+0.2**
MMB	**Musomishta**	**1.32**	**276**	*i* P	**Pn**	**09 45 45.8**	**-0.2**
MMB				S	**Sb**	**09 46 03.9**	**+0.6**
LPK	**Lapseki**	**1.43**	**137**	Pn	**Pg**	**09 45 48.6**	**-0.4**
PGB	**Panagyurishte**	**1.46**	**318**	*i* P	**Pb**	**09 45 49.3**	**+0.5**
PGB				S	**Sg**	**09 46 09.9**	**+1.3**
SRS	**Serrai**	**1.47**	**258**	P	**Pn**	**09 45 47.5**	**-0.6**
SRS				S	**Sn**	**09 46 07.2**	**-0.1**
	comp=E,262nm,0.1s						
SRS	**Serrai**	**1.47**	**258**	*e*Pn	**Pn**	**09 45 47.7**	**-0.4**
SRS				*e*Sn	**Sg**	**09 46 09.2**	**+0.3**
SRS	**Serrai**	**1.47**	**258**	P	**Pn**	**09 45 47.7**	**-0.4**
SRS				S	**Sn**	**09 46 05.1**	**-2.2**
SRS				AML	AML	09 46 10.3	
	comp=N,518μm,0.3s						
SRS				AML	AML	09 46 12.6	
	comp=E,659μm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.47**	**120**	Pn	**Pb**	**09 45 49.1**	**+0.1**
SART	**Tekirdag**	**1.47**	**120**	P	**Pg**	**09 45 50.3**	**+0.5**
SART				S	**Sg**	**09 46 09.8**	**+0.8**
SART				*i* AML	AML	09 46 11.0	
	comp=E,266nm,0.5s						
SART				*i* AML	AML	09 46 13.0	
	comp=E,293nm,0.6s						
ARMN	**Kirklareli, Me**	**1.51**	**73**	P	**Pg**	**09 45 49.8**	**-0.8**
ARMN				S	**Sg**	**09 46 09.4**	**-0.7**

ELND	**Elena**	**1.52**	**11**	⇑P	**Pn**	**09 45 48.5**	**-0.2**
COMU	**Canakkale**	**1.52**	**151**	Pn	**Pb**	**09 45 49.6**	**-0.3**
LIA	**Limnos Island**	**1.55**	**189**	P	**Pn**	**09 45 48.8**	**-0.3**
LIA				S	**Sn**	**09 46 06.5**	**-2.8**
OUR	**Ouranopolis**	**1.59**	**227**	Pn	**Pn**	**09 45 50.5**	**+0.9**
OUR	**Ouranopolis**	**1.59**	**227**	P	**Pn**	**09 45 48.9**	**-0.7**
OUR				S	**Sn**	**09 46 10.7**	**+0.5**
OUR	**Ouranopolis**	**1.59**	**227**	P	**Pn**	**09 45 48.7**	**-0.9**
OUR				AML	AML	09 46 13.1	
	comp=N,1064μm,0.4s						
OUR				AML	AML	09 46 13.7	
	comp=E,1924μm,0.5s						
KRBG	**Karabiga-Canak**	**1.71**	**127**	Pn	**Pb**	**09 45 52.7**	**-0.4**
EZN	**Ezine**	**1.73**	**158**	Pn	**Pn**	**09 45 52.2**	**+0.7**
SOH	**Sokhos**	**1.73**	**250**	P	**Pn**	**09 45 50.6**	**-1.0**
SOH				S	**Sn**	**09 46 13.6**	**-0.2**
	comp=E,235nm,0.4s						
SOH	**Sokhos**	**1.73**	**250**	P	**Pn**	**09 45 50.7**	**-1.0**
SOH				S	**Sn**	**09 46 11.0**	**-2.8**
SOH				AML	AML	09 46 18.8	
	comp=E,614μm,0.3s						
SOH				AML	AML	09 46 19.4	
	comp=N,559μm,0.5s						
VIZE	**Kirklareli, Vi**	**1.77**	**85**	P	**Pn**	**09 45 52.7**	**+0.6**
VIZE				S	**Sg**	**09 46 16.9**	**-1.4**
MRMT	**Marmara Adasi**	**1.79**	**117**	Pn	**Pn**	**09 45 53.1**	**+0.6**
KKB	**Krupnik**	**1.82**	**284**	*i* P	**Pb**	**09 45 54.9**	**0.0**
KKB				S	**Sg**	**09 46 21.2**	**+1.1**
CANM	**Can-anakkale**	**1.85**	**140**	Pn	**Pn**	**09 45 53.8**	**+0.6**
KNL	**Balıkesir**	**1.93**	**126**	P	**Pg**	**09 45 58.8**	**+0.3**
KNL				S	**Sg**	**09 46 24.0**	**+0.5**
KNL				*i* AML	AML	09 46 25.0	
	comp=N,192nm,0.4s						
KNL				*i* AML	AML	09 46 26.0	
	comp=N,115nm,0.3s						
KNT	**Kendrikon**	**1.98**	**263**	Pn	**Pn**	**09 45 55.4**	**+0.4**
KNT	**Kendrikon**	**1.98**	**263**	P	**Pn**	**09 45 54.9**	**-0.1**
KNT				S	**Sn**	**09 46 19.8**	**0.0**
	comp=N,122nm,0.4s						
KNT	**Kendrikon**	**1.98**	**263**	P	**Pn**	**09 45 55.1**	**+0.1**
KNT				AML	AML	09 46 24.6	
	comp=N,282μm,0.6s						
KNT				AML	AML	09 46 26.4	
	comp=E,230μm,0.4s						
HORT	**Hortiatis**	**2.00**	**246**	Pn	**Pn**	**09 45 56.4**	**+1.0**
HORT	**Hortiatis**	**2.00**	**246**	P	**Pn**	**09 45 54.6**	**-0.8**
HORT				S	**Sn**	**09 46 20.7**	**+0.3**
HORT	**Hortiatis**	**2.00**	**246**	P	**Pn**	**09 45 54.5**	**-0.8**
HORT				AML	AML	09 46 27.5	
	comp=E,257μm,0.3s						
HORT				AML	AML	09 46 28.8	
	comp=N,160μm,0.2s						
PAIG	**Paliouri**	**2.04**	**223**	Pn	**Pn**	**09 45 55.4**	**-0.5**
PAIG	**Paliouri**	**2.04**	**223**	P	**Pn**	**09 45 55.0**	**-0.9**
PAIG				S	**Sn**	**09 46 21.8**	**+0.4**
VTS	**Vitosha**	**2.06**	**306**	*i* P	**Pb**	**09 45 59.2**	**+0.1**
VTS				S	**Sb**	**09 46 26.3**	**+1.5**
VTS	**Vitosha**	**2.06**	**306**	*e*Pn	**Pb**	**09 45 59.0**	**-0.1**
VTS				*e*Sn	**Sb**	**09 46 25.4**	**+0.6**
THE	**Thessaloniki**	**2.08**	**248**	P	**Pn**	**09 45 56.7**	**+0.3**
THE				AML	AML	09 46 28.8	
	comp=N,172μm,0.4s						
THE				AML	AML	09 46 29.6	
	comp=E,154μm,0.3s						
EDC	**Edincik**	**2.10**	**120**	Pn	**Pn**	**09 45 57.6**	**+0.9**
LOZB	**Loznitsa**	**2.10**	**22**	⇑P	**Pg**	**09 46 01.3**	**-0.5**
VAY	**Valandovo**	**2.21**	**268**	*e*Pn	**Pn**	**09 45 59.6**	**+1.5**
VAY				*e*Sn	**Sb**	**09 46 29.3**	**+0.5**
VAY	**Valandovo**	**2.21**	**268**	*e*Pn	**Pn**	**09 45 58.8**	**+0.7**
VAY				*e*Sg	**Sg**	**09 46 33.2**	**+0.8**
SIGR	**SIGRI**	**2.24**	**173**	Pn	**Pn**	**09 45 58.9**	**+0.3**
SIGR	**SIGRI**	**2.24**	**173**	P	**Pn**	**09 45 58.5**	**-0.1**
BAND	**Balkesir-Ban**	**2.25**	**118**	P	**Pg**	**09 46 04.2**	**-0.4**
BAND				S	**Sg**	**09 46 32.1**	**-1.7**
BAND				*i* AML	AML	09 46 35.0	
	comp=E,61nm,0.6s						
BAND				*i* AML	AML	09 46 35.0	
	comp=E,62nm,0.5s						
NEF	**NEVSHA**	**2.25**	**35**	*i* P	**Pb**	**09 46 02.5**	**+0.2**
RAZG	**Razgrad**	**2.26**	**19**	⇑P	**Pg**	**09 46 03.8**	**-1.1**
PRK	**Paraskevi**	**2.26**	**165**	P	**Pn**	**09 45 59.3**	**+0.4**
CTKS	**Kestanelik-??a**	**2.27**	**94**	Pn	**Pn**	**09 46 00.3**	**+1.2**
MPEP	**Malo Peshtene**	**2.32**	**326**	P	**Pn**	**09 46 00.7**	**+1.0**
MPEP				S	**Sb**	**09 46 32.9**	**+0.8**
GRG	**Griva**	**2.38**	**259**	Pn	**Pn**	**09 46 01.5**	**+0.9**
GRG	**Griva**	**2.38**	**259**	P	**Pn**	**09 46 00.6**	**0.0**
GRG				AML	AML	09 46 41.9	
	comp=E,109μm,0.4s						
GRG				AML	AML	09 46 43.4	
	comp=N,109μm,0.3s						
BOSS	**Bosilegrad**	**2.49**	**296**	*e*Pn	**Pn**	**09 46 04.6**	**+2.5**
BOSS				*e*Sn	**Sb**	**09 46 36.3**	**-0.7**
PRVS	**Prvonek**	**2.77**	**294**	*e*Pn	**Pn**	**09 46 07.7**	**+1.8**
PRV

0.5nm,0.3s,baz=224,slow=11,SNR=9.2
1.4nm,0.4s
CMAR Chiang Mai Arr 29.51 125 LR LR 10 06 07.9
comp=Z,19nm,20.8s,baz=150,slow=41
FINES FINESS Array B 37.31 324 P **P** **09 53 48.0 -0.7**
1.6nm,0.9s,baz=111,slow=7.6,SNR=7.3
1.6nm,0.9s
ARCES ARCESS Array B 40.40 336 P **P** **09 54 14.0 -0.4**
3.4nm,0.9s,baz=112,slow=7.2,SNR=9.1
3.4nm,0.9s
HFS Hagfors 43.08 321 P **P** **09 54 35.8 -0.6**
1.1nm,0.4s,baz=95,slow=13,SNR=8.9
1.1nm,0.4s
NOA NORSAR Array B 44.33 322 P **P** **09 54 45.9 -0.6**
0.3nm,0.5s,baz=92,slow=8.5,SNR=1.2
0.3nm,0.5s
EKA Eskdalemuir Ar 52.57 316 P P 09 55 46.7 -2.9
0.4nm,0.5s,baz=85,slow=7.9,SNR=1.5
0.4nm,0.5s

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*SNET **17** 10:05:59.6±0.9, 13°.80N×90°.71W, h75km, ML4.4*
*IDC **17** 10:06:00.3±3.7, 14°.12N×90°.28W, h87km±30km, mb3.6/5, mbtmp3.9/8, MS3.3/1, Error ellipse: s-maj=37.5km s-min=23.9km az=28.0*
*CATAC **17** 10:06:00.9±0.4, 13°.77N×90°.66W, h67km±10km, ML4.4*
*NEIC **17** 10:06:00.9±1.8, 13°.80N±0°.08×90°.67W±0°.06, h77km±12km, mb4.2/45, Error ellipse: s-maj=12.1km s-min=8.3km az=205.0*
*GCG **17** 10:06:03.6±0.6, 14°.07N×90°.74W, h72km±10km, MD4.2*
ISC 17 10:05:59.9±0.9, 13°.81N±0°.06×90°.67W±0°.05, h90km±7km, n189, σ1°.08/188, mb4.2/18, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.58**	**5**	*i* P	**Pn**	**10 06 16.0**	**+0.3**
FUG	**Fuego 3**	**0.66**	**345**	*i* P	**Pn**	**10 06 16.3**	**0.0**
GCG4	**OSOP**	**0.79**	**9**	*i* P	**Pn**	**10 06 17.2**	**-0.3**
GCG4				IAML		10 06 33.7	
comp=Z,6μm,1.0s							
GUMI	**Mixco**	**0.82**	**3**	*i* P	**Pn**	**10 06 17.9**	**0.0**
GUMI				IAML		10 06 36.3	
comp=Z,10μm,1.0s							
NBG	**Las Nubes**	**0.83**	**22**	*i* P	**Pn**	**10 06 19.3**	**+1.2**
NBG				*i* S	**Sn**	**10 06 33.1**	**+1.4**
GUNB	**GUNB**	**0.84**	**22**	*i* P	**Pn**	**10 06 17.9**	**-0.3**
GUNB				IAML		10 06 33.6	
comp=Z,7μm,1.0s							
NUBE	**Las Nubes**	**0.86**	**84**	*e*P	**Pn**	**10 06 17.8**	**-0.4**
NUBE				*e*S	**Sn**	**10 06 32.0**	**0.0**
NUBE	**Las Nubes**	**0.86**	**84**	*i* P	**Pn**	**10 06 17.9**	**-0.4**
NUBE				IAML		10 06 18.7	
comp=Z,7μm,1.0s							
LOAL	**Lomas de Alarc**	**0.88**	**77**	*e*P	**Pn**	**10 06 18.2**	**-0.1**
LOAL	**Lomas de Alarc**	**0.88**	**77**	*i* P	**Pn**	**10 06 18.2**	**-0.1**
LOAL				IAML		10 06 18.5	
comp=Z,20μm,1.0s							
SLOZ	**Alcaldia de Sa**	**0.88**	**76**	*e*P	**Pn**	**10 06 17.8**	**-0.6**
SLOZ				*e*S	**Sn**	**10 06 32.6**	**+0.4**
RTR	**El Retiro**	**0.99**	**85**	*e*P	**Pn**	**10 06 19.4**	**-0.3**
SULM	**Suchitepequez,**	**1.00**	**300**	*i* P	**Pn**	**10 06 20.4**	**+0.8**
CEVE	**Cerro Verde**	**1.01**	**89**	*e*P	**Pn**	**10 06 20.0**	**0.0**
CEVE				*e*S	**Sn**	**10 06 35.2**	**+0.1**
CEVE	**Cerro Verde**	**1.01**	**89**	*i* P	**Pn**	**10 06 19.5**	**-0.5**
CEVE				IAML		10 06 21.3	
comp=Z,14μm,1.0s							
SBLS	**San Blas**	**1.01**	**88**	*e*P	**Pn**	**10 06 19.7**	**-0.3**
UNIC	**Universidad Ca**	**1.10**	**81**	*i* P	**Pn**	**10 06 20.5**	**-0.3**
UNIC				IAML		10 06 22.1	
comp=Z,2μm,1.0s							
JAYA	**Jayaque - finc**	**1.19**	**97**	⇓*e*P	**Pn**	**10 06 21.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.19**	**97**	*i* P	**Pn**	**10 06 21.8**	**-0.2**
JAYA				IAML		10 06 42.0	
comp=Z,18μm,1.0s							
RTAL	**Retalhuleu**	**1.23**	**306**	Pn	**Pn**	**10 06 21.8**	**-0.5**
RTAL	**Retalhuleu**	**1.23**	**306**	*i* P	**Pn**	**10 06 22.6**	**+0.3**
RTAL				IAML		10 06 41.5	
comp=Z,2μm,1.0s							
CEDA	**San Andres**	**1.23**	**90**	*e*P	**Pn**	**10 06 22.1**	**-0.3**
CEDA	**San Andres**	**1.23**	**90**	*i* P	**Pn**	**10 06 22.4**	**0.0**
CEDA				IAML		10 06 23.2	
comp=Z,9μm,1.0s							
STG3	**Santiaguito 3,**	**1.26**	**316**	*i* P	**Pn**	**10 06 23.1**	**+0.3**
STG3				*i* S	**Sn**	**10 06 40.1**	**0.0**
PMON	**Piamonte**	**1.32**	**94**	*e*P	**Pn**	**10 06 23.4**	**-0.1**
PMON	**Piamonte**	**1.32**	**94**	*i* P	**Pn**	**10 06 23.4**	**-0.1**
PMON				IAML		10 06 46.3	
comp=Z,6μm,1.0s							
LALI	**Alcalda de L**	**1.34**	**103**	*e*P	**Pn**	**10 06 23.7**	**0.0**
LALI	**Alcalda de L**	**1.34**	**103**	*i* P	**Pn**	**10 06 23.7**	**0.0**
LALI				IAML		10 06 24.3	
comp=Z,2μm,1.0s							
MAGS	**Ministerio de**	**1.34**	**95**	*e*P	**Pn**	**10 06 23.7**	**-0.2**
BOQS	**Boqueron**	**1.35**	**93**	*e*P	**Pn**	**10 06 23.9**	**0.0**
BOQS				*e*S	**Sn**	**10 06 42.9**	**+0.7**
QUEZ	**Alcaldia de Qu**	**1.35**	**89**	*i* P	**Pn**	**10 06 23.9**	**0.0**
QUEZ				IAML		10 06 24.1	
comp=Z,8μm,1.0s							
ITCA	**Escuela Especi**	**1.35**	**95**	*e*P	**Pn**	**10 06 23.8**	**-0.1**
ITCA	**Escuela Especi**	**1.35**	**95**	*i* P	**Pn**	**10 06 23.9**	**-0.1**
ITCA				IAML		10 06 44.7	
comp=Z,10μm,1.0s							
PIC2	**El Picacho**	**1.37**	**92**	*e*P	**Pn**	**10 06 24.2**	**-0.1**
UEES	**Universidad Ev**	**1.39**	**94**	*i* P	**Pn**	**10 06 24.4**	**+0.1**
UEES				IAML		10 06 25.7	
comp=Z,3μm,1.0s							
MTO3	**Montecristo**	**1.40**	**65**		**Pn**	**10 06 24.4**	**-0.2**
MTO3				Sn	**Sn**	**10 06 43.5**	**+0.3**
MTO3	**Montecristo**	**1.40**	**65**	*e*P	**Pn**	**10 06 24.4**	**-0.2**
MTO3	**Montecristo**	**1.40**	**65**	*i* P	**Pn**	**10 06 24.4**	**-0.2**
MTO3				IAML		10 06 44.9	
comp=Z,1μm,1.0s							
SNET	**Serv Nac Est T**	**1.40**	**95**		**Pn**	**10 06 24.1**	**-0.3**
SNET	**Serv Nac Est T**	**1.40**	**95**	*e*P	**Pn**	**10 06 24.1**	**-0.3**
SNET	**Serv Nac Est T**	**1.40**	**95**	*i* P	**Pn**	**10 06 24.4**	**-0.1**
SNET				IAML		10 06 25.7	
comp=Z,9μm,1.0s							
SEMO	**Seminario San**	**1.40**	**94**	*i* P	**Pn**	**10 06 24.6**	**+0.1**
SEMO				IAML		10 06 25.8	
comp=Z,17μm,1.0s							
UTEC	**Universidad Te**	**1.43**	**94**	*i* P	**Pn**	**10 06 24.7**	**-0.1**
UTEC				IAML		10 06 26.2	
comp=Z,3μm,1.0s							
IGN	**Direccin Gen**	**1.46**	**93**	*e*P	**Pn**	**10 06 25.1**	**-0.1**
IGN	**Direccin Gen**	**1.46**	**93**	*i* P	**Pn**	**10 06 25.4**	**+0.2**
IGN				IAML		10 06 26.8	
comp=Z,15μm,1.0s							
PANCS	**Alcalda de**	**1.46**	**97**	*e*P	**Pn**	**10 06 24.9**	**-0.3**
PANCS	**Alcalda de**	**1.46**	**97**	*i* P	**Pn**	**10 06 25.1**	**-0.1**
PANCS				IAML		10 06 46.0	
comp=Z,10μm,1.0s							
LOMA	**Loma Larga**	**1.46**	**96**	*e*P	**Pn**	**10 06 25.1**	**-0.2**
LOMA	**Loma Larga**	**1.46**	**96**	*i* P	**Pn**	**10 06 25.2**	**-0.1**
LOMA				IAML		10 06 48.4	
comp=Z,3μm,1.0s							
UDBS	**Universidad Do**	**1.47**	**93**	*i* P	**Pn**	**10 06 25.4**	**+0.1**
UDBS				IAML		10 06 27.0	
comp=Z,3μm,1.0s							
ESQI	**Esquipulas**	**1.49**	**60**		**Pn**	**10 06 25.8**	**+0.2**
ESQI				Sn	**Sn**	**10 06 46.2**	**+1.2**
ESQI	**Esquipulas**	**1.49**	**60**	*i* P	**Pn**	**10 06 25.8**	**+0.2**
ESQI				IAML		10 06 53.5	
comp=Z,2μm,1.0s							
LFU	**La Fuente**	**1.51**	**92**	*e*P	**Pn**	**10 06 26.0**	**+0.2**
LFRS	**El Faro**	**1.57**	**97**	*e*P	**Pn**	**10 06 26.6**	**-0.1**
LFRS				*e*S	**Sn**	**10 06 47.2**	**+0.3**
MRL	**Marmol**	**1.58**	**37**	*i* P	**Pn**	**10 06 28.5**	**+1.5**
MRL				*i* S	**Sn**	**10 06 48.2**	**+0.8**
SMSP	**San Marcos**	**1.59**	**317**	*i* P	**Pn**	**10 06 28.0**	**+1.0**
SMSP				IAML		10 06 50.0	
comp=Z,10μm,1.0s							
SJTE	**Alcalda de S**	**1.62**	**97**	*e*P	**Pn**	**10 06 27.2**	**-0.1**
SJTE	**Alcalda de S**	**1.62**	**97**	*i* P	**Pn**	**10 06 27.2**	**-0.1**
SJTE				IAML		10 06 28.8	
comp=Z,2μm,1.0s							
PAVA	**Las Pavas**	**1.68**	**93**	*e*P	**Pn**	**10 06 28.0**	**-0.1**
PAVA	**Las Pavas**	**1.68**	**93**	*i* P	**Pn**	**10 06 28.3**	**+0.2**
PAVA				IAML		10 06 30.7	
comp=Z,4μm,1.0s							
HUEH	**Huehuetenango**	**1.71**	**332**		**Pn**	**10 06 29.1**	**+0.6**
HUEH	**Huehuetenango**	**1.71**	**332**	*i* P	**Pn**	**10 06 29.2**	**+0.7**
HUEH				IAML		10 07 02.4	
comp=Z,2μm,1.0s							
LLGN	**La Laguna**	**1.71**	**78**	*e*P	**Pn**	**10 06 28.2**	**-0.2**
LLGN	**La Laguna**	**1.71**	**78**	*i* P	**Pn**	**10 06 28.2**	**-0.2**
LLGN				IAML		10 06 48.8	
comp=Z,940nm,1.0s							
UESV	**Universidad de**	**1.83**	**95**	*i* P	**Pn**	**10 06 30.4**	**+0.4**
UESV				IAML		10 06 59.4	
comp=Z,1μm,1.0s							
TECO	**Alcaldia de Te**	**1.85**	**98**	*i* P	**Pn**	**10 06 30.3**	**+0.1**
TECO				IAML		10 06 57.6	
comp=Z,710nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.88**	**93**	*e*P	**Pn**	**10 06 30.8**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.88**	**93**	*i* P	**Pn**	**10 06 30.9**	**+0.3**
SCLA				IAML		10 07 01.2	
comp=Z,730nm,1.0s							
PQSS	**Presa 15 de Se**	**2.05**	**95**	*e*P	**Pn**	**10 06 32.7**	**-0.1**
PQSS	**Presa 15 de Se**	**2.05**	**95**	*i* P	**Pn**	**10 06 33.1**	**+0.3**
PQSS				IAML		10 06 33.2	
comp=Z,510nm,1.0s							
PACA	**Pacayal**	**2.30**	**98**	*i* P	**Pn**	**10 06 36.5**	**+0.3**
PACA				IAML		10 07 13.2	
comp=Z,4μm,1.0s							
LCY	**Lacayo**	**2.34**	**99**	*e*P	**Pn**	**10 06 37.2**	**+0.5**
RANC	**El Ranchito**	**2.34**	**99**	*i* P	**Pn**	**10 06 37.2**	**+0.5**
RANC				IAML		10 07 35.8	
comp=Z,570nm,1.0s							
BLLM	**Bellamira**	**2.39**	**98**	*e*P	**Pn**	**10 06 38.0**	**+0.7**
LCND	**La Caada**	**2.74**	**100**	*e*P	**Pn**	**10 06 42.2**	**+0.3**
LCND	**La Caada**	**2.74**	**100**	*i* P	**Pn**	**10 06 42.3**	**+0.3**
LCND				IAML		10 06 46.1	
comp=Z,500nm,1.0s							
CNCH	**Conchagua**	**2.80**	**101**	*i* P	**Pn**	**10 06 43.3**	**+0.4**
CNCH				IAML		10 07 23.4	
comp=Z,1μm,1.0s							
CCIG	**Comitan**	**2.84**	**330**		**Pn**	**10 06 45.0**	**+1.5**
CSGN	**Cosiguina Volc**	**3.13**	**105**	*i* P	**Pn**	**10 06 47.7**	**+0.4**
CSGN				IAML		10 07 38.2	
comp=Z,2μm,1.0s							
PETF	**Flores**	**3.19**	**14**		**Pn**	**10 06 49.3**	**+1.4**
PETF	**Flores**	**3.19**	**14**	*i* P	**Pn**	**10 06 49.2**	**+1.3**
PETF				IAML		10 07 28.6	
comp=Z,550nm,1.0s							
TGUH	**Tegucigalpa,Un**	**3.30**	**85**	Pn	**Pn**	**10 06 49.9**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.30**	**85**	*i* P	**Pn**	**10 06 50.1**	**+0.5**
TGUH				IAML		10 07 50.4	
comp=Z,230nm,1.0s							
CRIN	**San Cristobal**	**3.69**	**107**		**Pn**	**10 06 55.6**	**+0.8**
CRIN	**San Cristobal**	**3.69**	**107**	*i* P	**Pn**	**10 06 55.2**	**+0.4**
CRIN				IAML		10 07 44.7	
comp=Z,1μm,1.0s							
HERN	**Volcan Telica**	**3.92**	**107**	*i* P	**Pn**	**10 06 58.4**	**+0.5**
HERN				IAML		10 06 59.4	
comp=Z,800nm,1.0s							
TELN	**Telica**	**3.92**	**107**	*i* P	**Pn**	**10 06 58.4**	**+0.4**
TELN				IAML		10 08 25.5	
comp=Z,120nm,1.0s							
CNGA	**Al SSO del Vol**	**4.08**	**108**	*i* P	**Pn**	**10 07 00.5**	**+0.5**
CNGA				IAML		10 08 32.8	
comp=Z,570nm,1.0s							
CNGN	**Cerro Negro**	**4.08**	**108**		**Pn**	**10 07 00.4**	**+0.4**
CNGN	**Cerro Negro**	**4.08**	**108**	*i* P	**Pn**	**10 07 00.6**	**+0.6**
CNGN				IAML		10 08 16.7	
comp=Z,440nm,1.0s							
MACN	**El Madrono**	**4.11**	**108**	*i* P	**Pn**	**10 07 00.9**	**+0.4**
MACN				IAML		10 07 54.4	
comp=Z,230nm,1.0s							
LEVN	**Ruinas Leon Vi**	**4.18**	**109**	*i* P	**Pn**	**10 07 02.2**	**+0.7**
LEVN				IAML		10 07 02.3	
comp=Z,530nm,1.0s							
LIMN	**Finca el Limon**	**4.25**	**100**	*i* P	**Pn**	**10 07 02.8**	**+0.4**
LIMN				IAML		10 07 04.8	
comp=Z,120nm,1.0s							
MOMN	**Momotombo**	**4.25**	**109**	*i* P	**Pn**	**10 07 02.8**	**+0.4**
MOMN				IAML		10 07 04.1	
comp=Z,29nm,1.0s							
COPN	**Copaltepe**	**4.29**	**112**	*i* P	**Pn**	**10 07 02.5**	**-0.4**
COPN				IAML		10 07 54.3	
comp=Z,530nm,1.0s							
MOM2	**El Cardon**	**4.29**	**108**	*i* P	**Pn**	**10 07 03.4**	**+0.5**
MOM2				IAML		10 07 55.1	
comp=Z,250nm,1.0s							
SAPS	**Ciudad Sandino**	**4.46**	**111**	*i* P	**Pn**	**10 07 06.1**	**+0.9**
SAPS				IAML		10 07 06.9	
comp=Z,460nm,1.0s							
SAPS	**Ciudad Sandino**	**4.46**	**111**	*i* P	**Sn**	**10 07 55.7**	**-0.3**
SAPS				IAML		10 07 57.1	
comp=Z,420nm,1.0s							
APQ2	**Apoyeque**	**4.52**	**110**	*i* P	**Pn**	**10 07 06.2**	**+0.2**
APQ2	**Apoyeque**	**4.52**	**110**	*i* P	**Sn**	**10 07 55.7**	**-1.8**
APQ2				IAML		10 07 59.8	
comp=Z,420nm,1.0s							
TISN	**Laguna Tiscapa**	**4.59**	**111**	*i* P	**Pn**	**10 07 07.4**	**+0.4**
TISN				IAML		10 07 08.0	
comp=Z,35nm,1.0s							
UNAN	**Cigeo UNAN**	**4.60**	**111**	*i* P	**Pn**	**10 07 07.7**	**+0.5**
UNAN				IAML		10 08 03.1	
comp=Z,2μm,1.0s							
CRUN	**El Crucero**	**4.63**	**113**	*i* P	**Pn**	**10 07 07.8**	**+0.2**
CRUN				IAML		10 07 09.1	
comp=Z,6.2nm,1.0s							
MATN	**Matagalpa**	**4.69**	**100**		**Pn**	**10 07 08.9**	**+0.4**
MATN	**Matagalpa**	**4.69**	**100**	*i* P	**Pn**	**10 07 08.9**	**+0.4**
MATN				IAML		10 07 09.9	
comp=Z,45nm,1.0s							
MAS3	**Al N del Volca**	**4.72**	**112**	*i* P	**Pn**	**10 07 09.2**	**+0.4**
MAS3				IAML		10 08 14.0	
comp=Z,360nm,1.0s							
NANN	**Nandasmo**	**4.80**	**112**	*i* P	**Pn**	**10 07 10.5**	**+0.6**
NANN				IAML		10 08 10.2	
comp=Z,5μm,1.0s							
NADN	**Granada**	**4.96**	**114**	*i* P	**Pn**	**10 07 13.0**	**+1.0**
NADN				IAML		10 08 56.5	
comp=Z,2μm,1.0s							
BOAB	**BOACO BROADBAN**	**5.05**	**105**	Pn	**Pn**	**10 07 13.1**	**-0.2**
BOAB	**BOACO BROADBAN**	**5.05**	**105**	*i* P	**Pn**	**10 07 13.0**	**-0.2**
CMIG	**Matias Romero**	**5.22**	**309**	P	**Pn**	**10 07 15.7**	**+0.2**
comp=Z,6.7nm,0.3s,baz=129,slow=11,SNR=36							
CMIG				S	**Sn**	**10 08 12.5**	**-1.8**
comp=Z,14nm,0.4s,baz=115,slow=9.9,SNR=4.7							
JAPN	**Al SSO del Vol**	**5.37**	**114**	*i* P	**Pn**	**10 07 18.9**	**+1.3**
ACON	**Acoyapa**	**5.66**	**108**		**Pn**	**10 07 21.5**	**0.0**
SIUN	**Universidad Ur**	**5.72**	**90**	*i* P	Sn	10 08 13.9	-13
SIUN				IAML		10 08 47.4	
comp=Z,18μm,1.0s							
HZTE	**Horizontes, Gu**	**5.83**	**121**		**Pn**	**10 07 26.1**	**+2.2**
HZTE	**Horizontes, Gu**	**5.83**	**121**	*i* P	**Pn**	**10 07 25.7**	**+1.8**
ORTG	**Ortega, Santa**	**6.13**	**123**	Pn	**Pn**	**10 07 30.0**	**+1.9**
ORTG	**Ortega, Santa**	**6.13**	**123**	*i* P	**Pn**	**10 07 29.7**	**+1.6**
VMAR	**Armenia, Volca**	**6.19**	**118**	*i* P	**Pn**	**10 07 29.5**	**+0.7**
DUNO	**Dulce Nombre,**	**6.27**	**126**		**Pn**	**10 07 31.7**	**+1.8**
DUNO	**Dulce Nombre,**	**6.27**	**126**	*i* P	**Pn**	**10 07 31.6**	**+1.8**
ESPN	**Las Esperanzas**	**6.41**	**104**	Pn	**Pn**	**10 07 33.5**	**+1.8**
JTS	**Las Juntas de**	**6.59**	**121**	Pn	**Pn**	**10 07 35.6**	**+1.3**
JTS	**Las Juntas de**	**6.59**	**121**	P	**Pn**	**10 07 35.3**	**+1.0**
comp=Z,19nm,0.4s,baz=303,slow=18,SNR=41							
JTS				S	**Sn**	**10 08 43.3**	**-4.7**
comp=Z,4.4nm,0.4s,baz=318,slow=23,SNR=1.1							
ARE1	**Arenal 1**	**6.70**	**119**		**Pn**	**10 07 37.8**	**+2.1**
TEIG	**Tepich**	**6.78**	**19**	Pn	**Pn**	**10 07 38.1**	**+1.3**
JACO	**JACO, Garabito**	**7.18**	**124**		**Pn**	**10 07 44.3**	**+2.0**
HDC	**Heredia**	**7.44**	**120**	Pn	**Pn**	**10 07 45.5**	**-0.4**
LCR2	**La Lucha 2**	**7.67**	**121**		**Pn**	**10 07 49.8**	**+0.7**
RIMA	**Rio Macho**	**7.78**	**120**		**Pn**	**10 07 52.4**	**+1.8**
CDM	**Cerro de Muert**	**7.97**	**121**	*i* P	**Pn**	**10 07 55.9**	**+2.4**
CDM				IAML		10 07 57.2	
comp=Z,63nm,1.0s							
PEZE	**Perez Zeledon,**	**8.13**	**122**		**Pn**	**10 07 57.7**	**+2.3**
PEZE	**Perez Zeledon,**	**8.13**	**122**	*i* P	**Pn**	**10 07 58.4**	**+3.0**
PEZE				IAML		10 08 01.6	
comp=Z,63nm,1.0s							
OCHAL	**Ojochal**	**8.32**	**123**	*i* P	**Pn**	**10 08 01.1**	**+3.3**
OCHAL				IAML		10 08 02.2	
comp=Z,1.7nm,1.0s							
PLAN	**Los Planes de**	**8.54**	**126**	*i* P	**Pn**	**10 08 03.8**	**+2.9**
PLAN				IAML		10 08 05.3	
comp=Z,420nm,1.0s							
DRK0	**Durika**	**8.56**	**121**		**Pn**	**10 08 00.6**	**-0.6**
POTG	**Potrero Grande**	**8.78**	**122**	*i* P	**Pn**	**10 08 07.1**	**+3.0**
POTG				IAML		10 10 18.6	
comp=Z,580nm,1.0s							
PIRO	**Carate, Puerto**	**8.97**	**126**	*i* P	**Pn**	**10 08 10.0**	**+3.3**
PIRO				IAML		10 08 11.9	
comp=Z,250nm,1.0s							
BRU2	**Volcan**	**9.27**	**122**	Pn	**Pn**	**10 08 10.5**	**-0.4**
SOR	**Soroa**	**11.52**	**38**		**Pn**	**10 08 42.1**	**+0.9**
061Z	**Ochoppi**	**15.10**	**36**	Pn	**Pn**	**10 09 29.8**	**+1.5**
656A	**Willston**	**17.22**	**25**		**P**	**10 09 56.4**	**+1.5**
656A				IAmb	IAmb	10 09 58.5	
comp=Z,19nm,0.8s							
553A	**Crawfordville**	**17.29**	**18**	Pn	**Pn**	**10 09 55.5**	**0.0**
553A				IAmb	IAmb	10 10 01.7	
comp=Z,13nm,0.6s							
346A	**Big Creek Wild**	**17.53**	**3**	P	**Pn**	**10 09 59.9**	**+1.4**
NATX	**Nacogdoches**	**18.24**	**349**	P	**P**	**10 10 06.2**	**0.0**
NATX				IAmb	IAmb	10 10 08.9	
comp=Z,7.8nm,0.6s							
352A	**Blakely**	**18.36**	**16**	P	**Pn**	**10 10 08.9**	**+0.4**
352A				IAmb	IAmb	10 10 11.5	
comp=Z,15nm,0.9s							
ROSC	**El Rosal**	**18.41**	**117**	P	**P**	**10 10 08.6**	**0.0**
ROSC				IAmb	IAmb	10 10 09.3	
comp=Z,6.7nm,0.7s							
PRAC	**Prado**	**18.52**	**121**	P	**Pn**	**10 10 10.5**	**-0.2**
250A	**Grady**	**18.53**	**12**	P	**Pn**	**10 10 11.1**	**+0.6**
BRDY	**Brady**	**19.01**	**338**	P	**Pn**	**10 10 16.4**	**+0.2**
LRAL	**Lakeview Retre**	**19.43**	**9**	P	**Pn**	**10 10 20.9**	**-0.3**
Z47A	**Carrollton**	**19.45**	**7**	P	**Pn**	**10 10 21.3**	**-0.1**
TXAR	**Lajitas Array**	**19.59**	**324**	P	**Pn**	**10 10 22.9**	**-0.4**
TXAR	**Lajitas Array**	**19.59**	**324**	P	**Pn**	**10 10 22.6**	**-0.6**
comp=Z,0.7nm,0.7s,baz=146,slow=12,SNR=9.8							
TXAR				PcP	**PcP**	**10 14 37.5**	**-0.1**
comp=Z,0.2nm,0.5s,baz=151,slow=4.1,SNR=2.8							
TX31	**Lajitas Ar. Si**	**19.59**	**324**	P	**Pn**	**10 10 22.6**	**-0.6**
Z38A	**Mt. Pleasant**	**19.76**	**349**	IAmb	IAmb	10 10 23.9	
comp=Z,18nm,0.7s							
PLPT	**Palo Pinto**	**20.17**	**341**	P	**P**	**10 10 27.6**	**+0.4**
PLPT				IAmb	IAmb	10 10 28.6	
comp=Z,9.4nm,0.7s							
SDV	**Santo Domingo**	**20.23**	**102**	P	**P**	**10 10 27.4**	**-0.8**
SDV	**Santo Domingo**	**20.23**	**102**	P	**P**	**10 10 26.4**	**-1.8**
comp=Z,1.8nm,0.4s,baz=319,slow=11,SNR=4.2							
Y49A	**Blount Mountai**	**20.33**	**10**	P	Pn	10 10 30.5	-1.2
Y49A				IAmb	IAmb	10 10 30.9	
comp=Z,16nm,0.7s							
ALPN	**Alpine**	**20.37**	**326**	P	Pn	10 10 31.6	-0.8
GOGA	**Godfrey**	**20.59**	**17**	P	Pn	10 10 33.2	-1.4
X48A	**Hartselle**	**20.81**	**8**	P	**P**	**10 10 35.0**	**+1.0**
X48A				IAmb	IAmb	10 10 35.5	
comp=Z,5.7nm,0.8s							
MIAR	**Mount Ida**	**20.82**	**353**	P	**P**	**10 10 33.8**	**-0.3**
Y52A	**Lilburn**	**20.85**	**16**	P	**P**	**10 10 36.0**	**+1.6**
Y52A				IAmb	IAmb	10 10 37.4	
comp=Z,11nm,0.8s							
X37A	**Clayton**	**21.12**	**349**	IAmb	IAmb	10 10 40.0	
comp=Z,8.1nm,0.8s							
FPAL	**Fort Paine**	**21.14**	**12**	P	**P**	**10 10 38.7**	**+1.0**
FPAL				IAmb	IAmb	10 10 40.8	
comp=Z,10nm,0.9s							
VHRN	**Van Horn**	**21.43**	**324**	P	**P**	**10 10 42.6**	**+1.7**
SWET	**Sewanee**	**21.74**	**11**	IAmb	IAmb	10 10 46.0	
comp=Z,12nm,0.7s							
W50A	**Signal Mountai**	**21.84**	**12**	IAmb	IAmb	10 10 46.4	
comp=Z,8.2nm,0.6s							
TUL3	**Leonard**	**22.49**	**349**	IAmb	IAmb	10 10 51.0	
comp=Z,9.4nm,0.7s							
CLTN	**Cedars of Leba**	**22.53**	**9**	IAmb	IAmb	10 10 53.4	
comp=Z,5.7nm,0.6s							
SMWD	**Samnorwood**	**22.90**	**339**	IAmb	IAmb	10 10 57.5	
comp=Z,4.4nm,0.6s							
T35A	**Sooner Cattle**	**23.60**	**348**	IAmb	IAmb	10 11 02.3	
comp=Z,10nm,0.9s							
T50A	**Nancy**	**23.70**	**12**	IAmb	IAmb	10 11 04.2	
comp=Z,8.1nm,0.8s							
S39A	**Bolivar**	**23.90**	**355**	IAmb	IAmb	10 11 06.0	
comp=Z,6.7nm,0.7s							
WCI	**Wyandotte Cave**	**24.63**	**8**	P	**P**	**10 11 11.7**	**-0.2**
WCI				IAmb	IAmb	10 11 13.6	
comp=Z,10nm,0.8s							
R49A	**Shelbyville**	**24.87**	**10**	P	**P**	**10 11 13.8**	**-0.3**
NV11	**Mina Array Sit**	**34.55**	**320**	IAmb	IAmb	10 12 43.7	
comp=Z,3.2nm,0.9s							
NVAR	**Mina Array Bea**	**34.64**	**320**	P	**P**	**10 12 43.5**	**+2.6**
comp=Z,2.8nm,0.7s,baz=130,slow=8.4,SNR=31							
NVAR				PcP	**PcP**	**10 15 14.0**	**+0.7**
comp=Z,1.2nm,0.7s,baz

AC05 El Transito 1.73 71 ⇓*i*P Pb 10 08 44.7 +0.2
AC05 *i* S **Sn** **10 09 04.5 -1.4**
AC05 IAML 10 09 06.7
comp=N,2µm,0.4s
CO01 Juntas del Tor 1.87 108 ⇓*i*P Pn 10 08 45.9 +0.7
CO01 *i* S **Sn** **10 09 06.6 -2.9**
CO03 El Pedregal 1.90 139 *e*P Pb 10 08 46.7 -0.7
CO03 *e*S **Sn** **10 09 04.7 -5.3**
CO03 IAML 10 09 13.1
comp=Z,642nm,0.3s
CO03 El Pedregal 1.90 139 ⇑*i*P Pb 10 08 46.6 -0.8
CO03 *i* S **Sn** **10 09 08.9 -1.2**
CO03 IAML 10 09 12.2
comp=E,1µm,0.6s
CO02 Combarbal 2.04 151 *e*P Pb 10 08 49.5 -0.3
CO02 *e*S **Sb** **10 09 17.7 +2.0**
CO02 IAML 10 09 18.5
comp=Z,2µm,0.6s
CO02 Combarbal 2.04 151 ⇑*i*P Pb 10 08 49.4 -0.3
CO02 IAML 10 09 20.7
comp=N,3µm,0.3s
AROD Rodeo 2.44 109 *e*P Pb 10 08 56.1 -0.6
AROD *e*S **Sb** **10 09 26.8 -0.5**
GO03 Copiap 2.47 43 *e*P Pb 10 08 54.7 -2.4
GO03 *e*S **Sb** **10 09 26.2 -1.8**
GO03 IAML 10 09 38.5
comp=Z,652nm,0.9s
GO03 Copiap 2.47 43 *i* P Pb 10 08 55.0 -2.1
GO03 IAML 10 09 36.4
comp=E,805nm,0.2s
ACDV Cuesta del Vie 2.73 107 *e*P Pb 10 09 00.3 -1.3
ACDV *e*S **Sb** **10 09 34.7 -1.0**
ACDV IAML 10 09 44.6
comp=Z,317nm,0.6s
ACCO Cerro Coronel 2.91 114 *e*P Pb 10 09 03.5 -1.4
ACCO *e*S **Sn** **10 09 37.7 +2.3**
DOCA Reserva Natura 3.06 121 *e*P Pb 10 09 05.1 -2.2
DOCA *e*S **Sb** **10 09 46.2 +0.9**
AGUA GUANDACOL 3.18 92 *e*P Pb 10 09 07.7 -1.6
AGUA *e*P Pn 10 09 08.2 +5.0
AGUA *e*S **Sb** **10 09 49.2 +0.6**
AGUA IAML 10 09 58.2
comp=Z,337nm,0.6s
RTLS Leoncito 3.42 135 *e*P Pb 10 09 10.7 -2.7
RTLS *e*S **Sb** **10 09 54.7 -0.8**
RTLS IAML 10 10 00.2
comp=Z,627nm,0.7s
VCA Vinchina 3.51 80 *e*P Pn 10 09 07.7 0.0
VCA *e*P Pb 10 09 08.2 -6.7
VCA *e*S **Sb** **10 10 00.2 +2.2**
VCA *e*S **Sg** **10 10 00.7 -4.0**
VCA IAML 10 10 09.4
comp=Z,247nm,0.6s
AC01 Pan de Azucar 3.53 23 *e*P Pn 10 09 09.1 +1.3
AC01 *e*S **Sg** **10 10 05.7 +0.4**
AC01 IAML 10 10 11.9
comp=Z,158nm,0.6s
VA03 San Esteban 3.61 158 *e*P Pn 10 09 11.8 +2.7
VA03 *e*S **Sb** **10 09 59.2 -1.6**
VA03 IAML 10 10 13.4
comp=Z,318nm,0.8s
AC02 Maricunga 3.69 47 *e*P Pn 10 09 12.8 +2.3
AC02 *e*S **Sb** **10 10 00.7 -3.0**
AC02 *e*S **Sg** **10 10 04.2 -6.5**
AC02 IAML 10 10 12.9
comp=Z,222nm,0.9s
RTLL Cerro Villicun 3.70 122 *e*P Pn 10 09 10.7 +0.5
RTLL *e*P **Pb** **10 09 14.2 -3.9**
RTLL *e*P Pg 10 09 15.4 -7.4
RTLL *e*S **Sn** **10 09 59.2 +4.8**
MT02 Curacav 3.93 168 *e*P Pn 10 09 15.4 +2.1
MT02 *e*S **Sb** **10 10 06.2 -3.8**
MT02 IAML 10 10 29.4
comp=Z,109nm,0.8s
RTCV Cerro Valdivia 3.95 129 *e*P Pn 10 09 04.2 -9.4
RTCV *e*P Pb 10 09 10.0 -12
RTCV *e*S **Sb** **10 10 10.0 -0.6**
AVFE Valle Fertil 4.25 108 *e*P Pn 10 09 21.0 +3.2
AVFE *e*S **Sn** **10 10 06.2 -1.8**
AVFE *e*S **Sb** **10 10 13.6 -5.6**
AVFE IAML 10 10 23.0
comp=Z,80nm,0.6s
ASAL Salagasta 4.25 139 *e*P Pn 10 09 17.7 -0.2
ASAL *e*P Pb 10 09 18.7 -8.8
ASAL *e*P Pg 10 09 22.8 -11
MT03 Universidad Ad 4.30 162 *e*P Pn 10 09 21.6 +3.1
MT03 *e*S **Sn** **10 10 14.9 +5.5**
MT03 IAML 10 10 32.2
comp=Z,192nm,1.0s
H03N1 Juan Fernandez 7.04 234 Pn Pn 10 09 59.5 +3.7
baz=111,slow=18
H03N1 **Sn** **Sn** **10 11 12.4 -4.0**
H03N1 T T 10 17 39.5
baz=63,slow=71,SNR=978
H03N2 Juan Fernandez 7.06 234 Pn Pn 10 09 59.9 +3.9
baz=111,slow=18
H03N2 T T 10 17 39.4
baz=63,slow=71,SNR=758
H03N3 Juan Fernandez 7.06 233 Pn Pn 10 09 59.2 +3.0
baz=111,slow=18
H03N3 T T 10 17 46.6
baz=63,slow=71,SNR=854
H03S3 Juan Fernandez 7.26 231 Pn Pn 10 10 01.4 +2.6
baz=102,slow=74
H03S3 **Sn** **Sn** **10 11 17.1 -4.6**
H03S1 Juan Fernandez 7.27 231 Pn **Pn** **10 10 01.2 +2.3**
H03S1 **Sn** **Sn** **10 11 16.9 -5.0**
H03S2 Juan Fernandez 7.28 231 Pn Pn 10 10 01.7 +2.7
baz=198,slow=74
H03S2 **Sn** **Sn** **10 11 17.1 -5.0**
PLCA Paso Flores 11.37 174 Pn **Pn** **10 10 57.5 +2.0**
comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=6.4
comp=Z,0.5nm,0.4s
CPUP Villa Florida 13.46 80 Pn **Pn** **10 11 27.4 +3.4**
comp=Z,0.4nm,0.3s,baz=251,slow=15,SNR=3.1
CPUP LR LR 10 16 40.0
comp=Z,48nm,20.6s,baz=331,slow=38
comp=Z,1.1nm,0.3s
QSPA South Pole Qui 60.81 180 P P 10 18 28.8 +3.3
comp=Z,1.0nm,1.0s,baz=156,slow=1.1,SNR=1.6
comp=Z,1.0nm,1.0s
TORD Torodi Ar. Bea 82.75 71 P **P** **10 20 40.1 +2.2**
comp=Z,1.0nm,0.8s,baz=247,slow=5.8,SNR=3.3
H11S2 WAKE ISLAND Hyl 25.62 272 T T 12 46 15.0
baz=115,slow=75,SNR=4.4
H11S1 WAKE ISLAND Hyl 25.63 272 T T 12 46 14.9
baz=115,slow=75,SNR=5.5
H11S3 WAKE ISLAND Hyl 25.64 272 T T 12 46 11.9
baz=115,slow=75,SNR=5.1
KURBB Kurchatov Arra 149.45 38 PKPbc **PKPab** **10 28 05.8 -1.4**
comp=Z,0.4nm,0.4s,baz=309,slow=3.2,SNR=4.3
ZALV Zalesovo Beam 150.31 28 PKPbc **PKPab** **10 28 08.0 -2.7**
comp=Z,1.1nm,0.5s,baz=298,slow=3.1,SNR=6.9
MKAR Makanchi Array 153.61 42 PKPbc **PKiKP** **10 28 13.0 +0.7**
comp=Z,0.3nm,0.8s,baz=296,slow=11,SNR=3.4

*IDC **17** 10:11:20.7±1.7, 12°.66N×142°.23E, h0km, mb3.8/4, mbtmp3.8/5, ML3.8/1, MS3.1/6, Error ellipse: s-maj=55.5km s-min=21.2km az=128.0*
*NEIC **17** 10:11:28.9±0.8, 13°.0N±0°.1×142°.3E±0°.2, h94km±9km, mb4.2/15, Error ellipse: s-maj=24.4km s-min=17.6km az=58.0*
ISC 17 10:11:20.7±0.6, 12°.77N±0°.10×142°.02E±0°.08, h10km, n34, σ1§13/25, mb4.2/12, MS2.9/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.89**	**73**	Pn	**Pn**	**10 12 08.5**	**+1.6**
GUMO	**Guam**	**2.89**	**73**	Pn	**Pn**	**10 12 05.9**	**-0.9**
	16nm,0.3s,baz=255,slow=20,SNR=6.8						
GUMO				Sn	**Sn**	**10 12 40.5**	**-1.2**
	3.8nm,0.3s,baz=190,slow=18,SNR=1.7						
	53nm,0.4s						
YULB	**Yu-li**	**22.33**	**301**	P	**P**	**10 16 20.9**	**+2.1**
PMG	**Port Moresby**	**22.61**	**167**	P	**P**	**10 16 21.3**	**-0.5**
PMG				IAmb	IAmb	10 16 28.4	
	comp=Z,11nm,1.1s						
PMG	**Port Moresby**	**22.61**	**167**	LR	LR	10 23 57.0	
	comp=Z,15nm,20.8s,baz=288,slow=34						
JNU	**Nakatsue**	**22.68**	**335**	P	**P**	**10 16 21.2**	**-1.3**
JNU				IAmb	IAmb	10 16 34.5	
	comp=Z,18nm,1.1s						
JNU	**Nakatsue**	**22.68**	**335**	LR	LR	10 23 35.4	
	comp=Z,20nm,21.8s,baz=121,slow=32						
TPUB	**Ta-pu**	**22.85**	**300**	P	**P**	**10 16 24.7**	**+0.3**
H11N1	**WAKE ISLAND Hy**	**24.83**	**71**	T	T	10 42 20.1	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**24.84**	**71**	T	T	10 42 34.9	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**24.85**	**71**	T	T	10 42 24.0	
	baz=255						
KSRS	**Korea Array**	**27.63**	**335**	LR	LR	10 26 17.1	
	comp=Z,18nm,21.6s,baz=40,slow=32						
CTAO	**Charters Tower**	**32.91**	**173**	P	**P**	**10 17 55.5**	**+0.1**
CTAO				IAmb	IAmb	10 17 59.7	
	comp=Z,3.5nm,0.9s						
WB0	**Warramunga Arr**	**33.19**	**193**	P	**P**	**10 17 59.1**	**+1.2**
WR0	**Warramunga Arr**	**33.34**	**193**	P	**P**	**10 17 59.8**	**+0.6**
KSM	**Kuching**	**33.36**	**253**	P	**P**	**10 17 58.6**	**-0.8**
WRAB	**Tennant Creek**	**33.36**	**193**	P	**P**	**10 17 59.9**	**+0.6**
WRAB				IAmb	IAmb	10 18 01.6	
	comp=Z,3.9nm,0.7s						
WB2	**Warramunga Arr**	**33.37**	**193**	P	**P**	**10 18 00.3**	**+0.8**
WB2				IAmb	IAmb	10 18 07.3	
	comp=Z,4.7nm,1.1s						
WRA	**Warramunga Arr**	**33.37**	**193**	P	**P**	**10 18 00.4**	**+0.9**
WRA	**Warramunga Arr**	**33.37**	**193**	P	**P**	**10 18 00.9**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=13,slow=9.5,SNR=20						
	comp=Z,1.3nm,0.6s						
ENH	**Enshi**	**34.75**	**305**	P	**P**	**10 18 10.6**	**-0.8**
ENH				IAmb	IAmb	10 18 24.7	
	comp=Z,3.4nm,1.0s						
BJT	**Baijiatuau**	**35.43**	**325**	P	P	10 18 14.9	-2.2
BJT				IAmb	IAmb	10 18 34.0	
	comp=Z,4.4nm,1.1s						
AS31	**Alice Springs**	**37.07**	**192**	P	**P**	**10 18 31.9**	**+0.6**
ASAR	**Alice Springs**	**37.07**	**192**	P	**P**	**10 18 31.0**	**-0.4**
ASAR	**Alice Springs**	**37.07**	**192**	P	**P**	**10 18 32.8**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=12,slow=10,SNR=29						
	comp=Z,0.6nm,0.6s						
KLR	**Kul'dur**	**37.33**	**349**	LR	LR	10 33 47.1	
	comp=Z,61nm,18.1s,baz=24,slow=36						
LEM	**Lembang**	**39.34**	**242**	LR	LR	10 34 23.5	
	comp=Z,40nm,21.2s,baz=235,slow=35						
PMBI	**Palembang**	**40.15**	**250**	P	**P**	**10 18 58.0**	**+0.7**
CRAI	**Chiangrai**	**40.53**	**286**	P	**P**	**10 18 59.2**	**-1.3**
CRAI				IAmb	IAmb	10 19 01.6	
	comp=Z,2.9nm,0.9s						
CM31	**Chiang Mai Arr**	**41.80**	**283**	P	**P**	**10 19 10.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**41.80**	**283**	P	**P**	**10 19 11.0**	**0.0**
STKA	**Stephens Creek**	**44.39**	**181**	P	**P**	**10 19 30.5**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=346,slow=8.3,SNR=3.1						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**70.49**	**25**	P	**P**	**10 22 37.2**	**+1.8**
	comp=Z,0.6nm,1.1s,baz=246,slow=6.8,SNR=2.5						
	comp=Z,0.6nm,1.1s						
PFO	**Pinyon Flats O**	**92.38**	**55**	LR	LR	10 57 05.0	
	comp=Z,56nm,21.8s,baz=180,slow=30						

*IDC **17** 10:14:10.2±0.7, 38°.37N×87°.61E, h0km, mb3.8/14, mbtmp3.8/19, ML3.6/5, MS3.0/3, Error ellipse: s-maj=20.1km s-min=13.7km az=47.0*
*BJI **17** 10:14:12.5±0.0, 38°.32N×87°.53E, h21km, mb4.1/8, mB4.6/5, ML4.3/10, Ms3.8/2, Ms7 3.8/1*
*NNC **17** 10:14:18.4±1.8, 38°.98N×87°.37E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=14.4km s-min=13.8km az=27.0*
ISC 17 10:14:13.2±0.6, 38°.54N±0°.06×87°.43E±0°.06, h10km, n35, σ2§06/38, mb3.9/16, MS3.2/3, 6C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**5.28**	**2**	Pn	**Pn**	**10 15 35.1**	**+3.0**
WMQ				Sg	**Sg**	**10 17 03.0**	**+0.4**
WMQ				smax	smax		
	comp=N,250nm,0.9s						
WMQ				smax	smax		
	comp=E,230nm,0.7s						
GOMU	**GeErMu**	**6.33**	**109**	Pn	**Pn**	**10 15 46.8**	**-0.1**
GOMU				Sg	**Sb**	**10 17 27.6**	**+8.0**
GOMU				smax	smax		
	comp=N,75nm,0.7s						
GOMU				smax	smax		
	comp=E,36nm,0.7s						
PDGK	**Podgornoye**	**7.68**	**311**	⇑Pn	**Pn**	**10 16 06.5**	**+1.4**
	7.0nm,0.5s						
PDGK				⇓Sn	**Sn**	**10 17 32.5**	**+0.3**
	69nm,0.8s						
MK31	**Makanchi Array**	**9.07**	**337**	⇑Pn	**Pn**	**10 16 24.9**	**+0.8**
	1.2nm,0.3s,baz=150,slow=13,SNR=119						
MK31				⇑Sn	**Sn**	**10 18 04.4**	**-1.9**
	12nm,0.6s,baz=142,slow=17,SNR=9.5						
MKAR	**Makanchi Array**	**9.07**	**337**	Pn	**Pn**	**10 16 24.9**	**+0.8**
	1.9nm,0.3s,baz=149,slow=14,SNR=51						
MKAR				Sn	**Sn**	**10 18 04.3**	**-2.0**
	7.2nm,0.3s,baz=143,slow=20,SNR=14						
MKAR				Lg	Lg	10 19 17.2	
	0.4nm,0.3s,baz=145,slow=30,SNR=3.5						
	3.2nm,0.4s						
MDOK	**Medeo**	**9.12**	**304**	Pn	**Pn**	**10 16 27.8**	**+2.9**
	8.6nm,0.4s						
MDOK				Sn	**Sn**	**10 18 09.7**	**+2.1**
	23nm,0.6s						
MAKZ	**Makanchi**	**9.18**	**336**	⇑Pn	**Pn**	**10 16 26.7**	**+1.1**
	3.2nm,0.3s						
MAKZ				⇑Sn	**Sn**	**10 18 07.0**	**-2.0**
	9.3nm,0.7s						
GTA	**Gaotai**	**9.69**	**81**	P	**Pn**	**10 16 32.9**	**+0.2**
AAK	**Ala-Archa**	**10.65**	**297**	Pn	**Pn**	**10 16 46.7**	**+0.8**
	0.4nm,0.3s,baz=117,slow=11,SNR=4.4						
AAK				Lg	Lg	10 20 02.4	
	baz=278,slow=19,SNR=1.4						
	1.2nm,0.5s						
LZH	**Lanzhou**	**13.30**	**96**	*e*P	**Pn**	**10 17 19.9**	**-2.2**
LZH				sP	P	10 17 35.0	+3.0
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
KURBB	**Kurchatov Arra**	**13.63**	**335**	Pn	Pn	10 17 24.9	-1.4
	0.1nm,0.3s,baz=145,slow=12,SNR=19						
KURBB				Sn	Sn	10 19 43.6	-14
	baz=332,slow=12						
KURBB				Lg	Lg	10 21 36.9	
	baz=344,slow=1.9						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**15.51**	**354**	Pn	**Pn**	**10 17 50.7**	**-1.2**
	0.9nm,0.3s,baz=179,slow=13,SNR=13						
ZALV				Sn	Sn	10 20 35.5	-8.1
	0.7nm,0.3s,baz=168,slow=23,SNR=6.1						
ZALV				LR	LR	10 24 22.3	
	comp=Z,32nm,19.9s,baz=251,slow=39						
	2.9nm,0.4s						
SONM	**Songino Array**	**16.63**	**50**	Pn	**Pn**	**10 18 04.8**	**-1.5**
	0.2nm,0.3s,baz=242,slow=12,SNR=2.4						
SONM				Lg	Lg	10 22 58.3	
	0.1nm,0.3s,baz=233,slow=16,SNR=1.8						
	0.2nm,0.4s						
PZH	**PanZhiHua**	**17.00**	**131**	P	**Pn**	**10 18 08.1**	**-3.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,6.0s						
BVAR	**Borovoye Array**	**18.66**	**326**	Pn	**P**	**10 18 32.2**	**+1.2**
	baz=124,slow=13,SNR=8.3						
HHC	**Hu-ho-hao-te**	**18.71**	**75**	*e*P	**P**	**10 18 32.6**	**+0.8**
HHC				pP	pP	10 18 37.3	+2.3
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.2s						
HHC				LR	LR		
	comp=N,170nm,14.7s						
HNS	**HongShan**	**21.51**	**85**	⇑P	**P**	**10 19 01.6**	**-0.6**
HNS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**22.39**	**150**	P	**P**	**10 19 08.4**	**-3.3**
	1.4nm,0.9s,baz=331,slow=10,SNR=4.2						
	1.4nm,0.6s						
GEYT	**Alibeck**	**22.99**	**278**	P	**P**	**10 19 20.0**	**+2.0**
	1.0nm,0.5s,baz=120,slow=8.5,SNR=2.3						
	1.0nm,0.5s						
NRIK	**Noril'sk**	**30.86**	**0**	P	**P**	**10 20 30.4**	**+1.2**
	2.0nm,0.5s,baz=166,slow=8.5,SNR=1.4						
	2.0nm,0.5s						
KSRS	**Korea Array**	**31.75**	**79**	LR	LR	10 35 22.2	
	comp=Z,20nm,20.6s,baz=15,slow=40						
KBZ	**Khabaz**	**33.62**	**293**	LR	LR	10 38 41.2	
	comp=Z,47nm,19.5s,baz=344,slow=44						
BRTR	**Keskin Array B**	**41.21**	**289**	P	**P**	**10 21 58.8**	**+0.5**
	0.7nm,0.5s,baz=87,slow=8.3,SNR=4.0						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**43.54**	**322**	P	**P**	**10 22 15.6**	**-1.1**
	0.7nm,0.5s,baz=100,slow=7.2,SNR=4.6						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	**44.71**	**334**	P	**P**	**10 22 27.2**	**+1.2**
	0.6nm,0.4s,baz=104,slow=3.8,SNR=5.5						
ARCES				PcP	**PcP**	**10 24 06.6**	**-1.6**
	0.6nm,0.4s,baz=93,slow=3.7,SNR=8.2						
	0.6nm,0.4s						
PETK	**Petropavlovsk-**	**49.11**	**49**	P	**P**	**10 22 59.8**	**-0.7**
	2.5nm,0.9s,baz=298,slow=6.4,SNR=1.9						
	2.5nm,0.9s						
HFS	**Hagfors**	**49.67**	**321**	P	**P**	**10 23 05.4**	**+0.6**
	1.1nm,0.4s,baz=82,slow=10,SNR=17						
	1.1nm,0.4s						
NB2	**NORSAR Subarra**	**50.73**	**322**	P	**P**	**10 23 13.3**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=80,slow=7.9						
NOA	**NORSAR Array B**	**50.73**	**322**	P	**P**	**10 23 13.3**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=80,slow=7.4,SNR=8.0						
	comp=Z,0.6nm,0.4s						
ESDC	**Sonseca Array**	**67.67**	**303**	P	**P**	**10 25 10.8**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=48,slow=6.2,SNR=11						
	comp=Z,1.5nm,0.6s						
ILAR	**Eielson Array**	**68.62**	**22**	P	**P**	**10 25 15.4**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=321,slow=5.0,SNR=11						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**72.93**	**134**	P	P	10 25 39.9	-2.9
	comp=Z,0.6nm,0.6s,baz=328,slow=6.4,SNR=12						
WRA				LR	LR	11 01 35.9	
	comp=Z,443nm,19.9s,baz=112,slow=39						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**75.67**	**137**	P	P	10 25 56.0	-2.7
	comp=Z,0.3nm,0.6s,baz=318,slow=5.5,SNR=7.7						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**77.76**	**10**	P	**P**	**10 26 09.1**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=337,slow=6.1,SNR=12						
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.63**	**278**	P	**P**	**10 26 14.4**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=42,slow=5.5,SNR=6.2						

*KRNET **17** 10:16:48.3±0.1, 41°.68N×73°.00E, h29km, mb3.0*
*SOME **17** 10:16:49.7, 41°.77N×72°.97E, h5km*
*NNC **17** 10:16:50.0±1.6, 41°.78N×73°.00E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=13.5km s-min=6.9km az=162.0*
*KNET **17** 10:16:51.5±0.4, 41°.83N×73°.12E, h9km±1km, ml2.5, Error ellipse: s-maj=2.7km s-min=2.5km az=43.0*
ISC 17 10:16:48.6±1.0, 41°.70N±0°.02×73°.00E±0°.02, h11km±9km, n41, σ1§07/76, 28C-28D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.38**	**182**	⇑*i*P	**Pg**	**10 16 56.3**	**+0.2**
	baz=82						
ARSB				⇑*i*S	**Sg**	**10 17 01.9**	**+0.9**
	baz=82						
ARK	**Arkit**	**0.78**	**278**	⇑*i*P	**Pg**	**10 17 03.4**	**-0.3**
	baz=79						
ARK				⇑*i*S	**Sg**	**10 17 14.2**	**+0.2**
	baz=79						
MNAS	**Manas**	**0.87**	**335**	⇓*i*P	**Pg**	**10 17 05.0**	**-0.4**
	baz=36						
MNAS				⇓*i*S	**Sb**	**10 17 17.2**	**-0.4**
	baz=36						
ARLS	**Aral**	**1.00**	**80**	⇓*i*P	**Pg**	**10 17 07.0**	**-0.9**
	baz=80						
ARLS				⇓*i*S	**Sg**	**10 17 20.6**	**-0.3**
	baz=80						
MRKS	**Merke**	**1.06**	**9**	P	**Pb**	**10 17 09.2**	**+0.2**
	36nm,0.2s						
MRKS				S	**Sn**	**10 17 23.6**	**-0.7**
	139nm,0.2s						
MRKS	**Merke**	**1.06**	**9**	*e*P	**Pb**	**10 17 09.2**	**+0.2**
	36nm,0.2s						
MRKS				*e*S	**Sn**	**10 17 23.6**	**-0.7**
	139nm,0.2s						
EKS2	**Erkin-Say**	**1.12**	**31**	⇑P	**Pg**	**10 17 10.2**	**0.0**
	5.9nm,0.1s,SNR=19						
EKS2				⇓S	**Sb**	**10 17 24.7**	**0.0**
	25nm,0.1s						
EKS2	**Erkin-Say**	**1.12**	**31**	⇑*i*P	**Pg**	**10 17 09.4**	**-0.7**
	baz=30						
EKS2				⇑*i*S	**Sb**	**10 17 24.3**	**-0.5**
	baz=30						
OHH	**Osh**	**1.19**	**188**	⇓*i*P	**Pn**	**10 17 09.7**	**-1.5**
	baz=88						
OHH				⇓*i*S	**Sb**	**10 17 25.2**	**-1.3**
	baz=88						
UCH	**Uchtor**	**1.25**	**64**	⇑P	**Pg**	**10 17 12.5**	**0.0**
	26nm,0.1s,SNR=12						
UCH				⇑S	**Sn**	**10 17 30.3**	**+0.9**
	33nm,0.1s						
UCH	**Uchtor**	**1.25**	**64**	⇑*i*P	**Pg**	**10 17 11.3**	**-1.2**
	baz=64						
UCH				⇑*i*S	**Sg**	**10 17 28.1**	**-0.6**
	baz=64						
TRKS	**Terek-Say**	**1.41**	**264**	⇓*i*P	**Pn**	**10 17 13.6**	**-0.7**
	baz=62						
TRKS				⇓*i*S	**Sb**	**10 17 32.0**	**-1.0**
	baz=62						
AAK	**Ala-Archa**	**1.45**	**49**	⇓P	**Pg**	**10 17 16.7**	**+0.3**
	26nm,0.2s,SNR=30						
AAK				⇓S	**Sg**	**10 17 35.5**	**+0.2**
	27nm,0.2s						
AAK	**Ala-Archa**	**1.45**	**49**	⇑*i*P	**Pn**	**10 17 14.9**	**-0.1**
	baz=49						
AAK				⇑*i*S	**Sb**	**10 17 34.0**	**-0.3**
	baz=49						
FRU1	**Bishkek**	**1.64**	**47**	⇓*i*P	**Pn**	**10 17 17.9**	**+0.4**
	baz=46						
FRU1				⇓*i*S	**Sn**	**10 17 39.3**	**+0.7**
	baz=46						
SFK	**Sufi-Kurgan**	**1.73**	**167**	⇑*i*P	**Pn**	**10 17 18.6**	**-0.2**
	baz=67						
SFK				⇑*i*S	**Sn**	**10 17 40.8**	**-0.2**
	baz=67						
KBK	**Karagaybulak**	**1.73**	**56**	⇑P	**Pb**	**10 17 21.4**	**+0.9**
	23nm,0.1s,SNR=26						
KBK				⇑S	**Sg**	**10 17 44.5**	**+0.2**
	68nm,0.3s						
KBK	**Karagaybulak**	**1.73**	**56**	⇓*i*P	**Pn**	**10 17 19.2**	**+0.3**
	baz=55						
KBK				⇓*i*S	**Sn**	**10 17 41.6**	**+0.5**
	baz=55						
USP	**Ospenovka**	**1.92**	**35**	⇓P	**Pb**	**10 17 23.8**	**+0.2**
	21nm,0.3s,SNR=18						
USP				⇑S	**Sg**	**10 17 49.5**	**-0.8**
	155nm,0.5s						
USP	**Ospenovka**	**1.92**	**35**	⇑*i*P	**Pn**	**10 17 21.8**	**+0.5**
	baz=34						
USP				⇑*i*S	**Sn**	**10 17 46.0**	**+0.5**
	baz=34						
SGDS	**Sogindy**	**2.12**	**34**	Pg	**Pb**	**10 17 28.4**	**+1.2**
	2.9nm,0.2s						
SGDS				Lg	Lg	10 17 56.4	
	31nm,0.4s						
IUG	**Iuzhnay**	**2.26**	**282**	Pg	**Pb**	**10 17 30.4**	**+0.9**
	65nm,0.4s						
IUG				Lg	Lg	10 17 59.7	
	95nm,0.5s						
IUG	**Iuzhnay**	**2.26**	**282**	*e*P	**Pb**	**10 17 30.4**	**+0.9**
	65nm,0.4s						
IUG				*e*S	**Sb**	**10 17 59.7**	**+2.1**
	95nm,0.5s						
NRN	**Naryn**	**2.27**	**96**	⇓*i*P	**Pn**	**10 17 26.0**	**-0.3**
	baz=96						
NRN				⇓*i*S	**Sn**	**10 17 53.5**	**-0.9**
	baz=96						
TKM2	**Tokmak 2**	**2.28**	**57**	⇑Pg	**Pb**	**10 17 29.7**	**-0.1**
	4.0nm,0.3s						
TKM2				⇓Lg	Lg	10 18 01.2	
	23nm,0.5s						
TKM2	**Tokmak 2**	**2.28**	**57**	⇓*i*P	**Pn**	**10 17 26.7**	**+0.3**
	baz=56						
TKM2				⇓*i*S	**Sn**	**10 17 54.7**	**+0.1**
	baz=56						
KK31	**Karatay Array**	**2.32**

baz=26
BTK ⇓*i*S **Sn** 10 17 55.3 -0.4
baz=26
DRK Karamyk 2.40 203⇑*e*P **Pn** 10 17 27.9 -0.2
baz=3.0
DRK ⇑*e*S **Sn** 10 17 56.5 -1.1
baz=3.0
ULHL Ulahol 2.48 76⇑*i*P **Pn** 10 17 29.6 +0.5
baz=76
ULHL ⇑*i*S **Sn** 10 17 59.4 -0.1
baz=76
DGS Degeres 2.56 52 *e*P **Pb** 10 17 35.9 +1.2
14nm,0.5s
DGS *e*S **Sg** 10 18 09.5 -1.5
43nm,0.3s
BRLS Boroldav 2.70 301 Pg **Pb** 10 17 38.7 +1.9
4.2nm,0.2s
BRLS Lg Lg 10 18 14.0
21nm,0.5s
BRLS Boroldav 2.70 301 *e*P **Pb** 10 17 38.7 +1.9
4.2nm,0.2s
BRLS *e*S **Sg** 10 18 14.0 -1.2
21nm,0.5s
KRBS Karabastau 2.80 44 *e*P **Pb** 10 17 40.8 +2.1
4.0nm,0.2s
KRBS *e*S **Sg** 10 18 17.4 -1.3
15nm,0.3s
MTBS Maitube 2.91 59 Pg **Pb** 10 17 42.8 +2.2
12nm,0.3s
MTBS Lg Lg 10 18 21.3
22nm,0.5s
MTBS Maitube 2.91 59 *e*P **Pb** 10 17 42.8 +2.2
12nm,0.3s
MTBS *e*S **Sg** 10 18 21.3 -0.8
22nm,0.5s
KDJ Kajisay 3.15 81⇓*e*P **Pn** 10 17 39.1 +0.8
baz=81
KDJ ⇓*e*S **Sn** 10 18 15.8 -0.2
baz=81
KTBS Karatobe 3.38 52 *e*P **Pb** 10 17 50.5 +2.0
4.6nm,0.3s
KTBS *e*S **Sg** 10 18 34.1 -2.9
21nm,0.6s
BTLS Baital 3.43 12 *e*P **Pb** 10 17 51.4 +2.1
3.5nm,0.3s
BTLS *e*S **Sg** 10 18 35.5 -3.1
8.1nm,0.2s

SNET 17 10:16:48.8±1.2, 15°24N×89°82W, h15km±999km, ML2.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	**1.21**	**179**	*e*P	Pn	10 17 09.7	-1.6
SLOZ				*e*S	Sb	10 17 26.6	-0.3
SLOZ				IAML		10 17 32.3	
	comp=Z,51nm,0.3s						
NUBE	**Las Nubes**	**1.33**	**178**	*e*P	Pn	10 17 12.7	-0.4
NUBE				*e*S	Sb	10 17 30.6	0.0
NUBE				IAML		10 17 36.0	
	comp=Z,47nm,0.3s						
SNJE	**San Jose**	**1.38**	**171**	*e*P	Pn	10 17 13.2	-0.5
SNJE				IAML		10 17 44.6	
	comp=Z,28nm,0.7s						
UEES	**Universidad Ev**	**1.62**	**160**	*e*P	Pn	10 17 17.5	+0.6
UEES				*e*S	Sb	10 17 38.8	+0.1
UEES				IAML		10 17 41.4	
	comp=Z,139nm,0.4s						
JAYA	**Jayaque - finc**	**1.62**	**167**	*e*P	Pn	10 17 16.8	-0.2
JAYA				*e*S	Sn	10 17 38.0	+0.3
JAYA				IAML		10 17 41.7	
	comp=Z,155nm,0.2s						
PAVA	**Las Pavas**	**1.74**	**151**	*e*P	Pn	10 17 18.2	-0.4
PAVA				IAML		10 17 44.0	
	comp=Z,232nm,0.5s						
SCLA	**Alcaldia de Sa**	**1.86**	**145**	*e*P	Pn	10 17 20.0	-0.2
SCLA				IAML		10 17 50.5	
	comp=Z,34nm,0.4s						

CATAC 17 10:17:28.4±4.4, 14°24N×89°53W, h7km, ML2.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.42**	**192**	*i* P	Pg	10 17 37.1	+0.5
CEVE				IAML		10 17 49.7	
	comp=Z,130nm,1.0s						
PMON	**Piamonte**	**0.56**	**158**	*i* P	Pg	10 17 39.7	+0.4
PMON				IAML		10 17 48.9	
	comp=Z,220nm,1.0s						
JAYA	**Jayaque - finc**	**0.59**	**172**	*i* P	Pg	10 17 40.2	+0.4
UEES	**Universidad Ev**	**0.59**	**151**	*i* P	Pg	10 17 40.2	+0.3
PAVA	**Las Pavas**	**0.78**	**132**	IAML		10 17 43.2	
	comp=Z,540nm,1.0s						
PAVA				*i* P	Pg	10 17 43.5	+0.1
SCLA	**Alcaldia de Sa**	**0.94**	**124**	*i* P	Pg	10 17 46.4	-0.2
TECO	**Alcaldia de Te**	**1.01**	**134**	*i* P	Pg	10 17 48.0	+0.2
TECO				IAML		10 18 55.7	
	comp=Z,150nm,1.0s						

IDC 17 10:27:17.9±1.8, 2°05S×126°65E, h0km, mb3.2/3, mbtmp3.1/4, ML3.2/1, Error ellipse: s-maj=179.1km s-min=24.5km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.31**	**158**	P	P	10 31 45.0	+0.2
	0.1nm,0.3s,baz=336,slow=10,SNR=5.4 0.1nm,0.4s						
ASAR	**Alice Springs**	**22.61**	**162**	P	P	10 32 20.0	-0.5
	0.1nm,0.3s,baz=346,slow=12,SNR=6.0 0.1nm,0.3s						
MKAR	**Makanchi Array**	**62.28**	**327**	P	P	10 37 41.9	-0.1
	0.3nm,0.8s,baz=108,slow=6.8,SNR=2.4 0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**66.57**	**329**	P	P	10 38 10.2	+0.3
	0.2nm,0.4s,baz=127,slow=6.8,SNR=2.0 0.2nm,0.4s						

*NEIC **17** 10:31:28.9±3.1, 51.7°N±0.1°×171.29°W±0.08, h35km±18km, mb3.8/15, ML3.8(AEIC), Error ellipse: s-maj=18.1km s-min=6.4km az=168.0*
*AEIC **17** 10:31:29.4±2.9, 51.74°N±0.09°×171.33°W±0.09, h7km±6km, Error ellipse: s-maj=15.0km s-min=3.0km az=150.0*
*IDC **17** 10:31:35.5±8.9, 52.13°N×171.63°W, h115km±81km, mb3.2/8, mbtmp3.5/10, ML2.9/2, MS3.9/1, Error ellipse: s-maj=42.8km s-min=17.2km az=11.0*

ISC 17 10:31:27.0±0.9, 51.7°N±0.1°×171.34°W±0.05, h27km, n90, σ1§67/78, mb3.6/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**1.80**	**292**		**Pn**	**10 31 56.1**	**-0.2**
KOSE					**Sn**	**10 32 20.3**	**+2.1**
KOFP	**Korovin Flat P**	**1.80**	**290**		**Pn**	**10 31 56.1**	**-0.3**
ATKA	**Atka Island**	**1.84**	**287**		**Pn**	**10 31 56.3**	**-0.5**
KONE	**Korovin Northe**	**1.85**	**293**		**Pn**	**10 31 56.6**	**-0.5**
KOKL	**Mount Kliuchef**	**1.88**	**290**		**Pn**	**10 31 56.6**	**-0.8**
NIKH	**Nikolski High**	**1.98**	**49**		**Pn**	**10 31 58.4**	**-0.4**
NIKH	**Nikolski High**	**1.98**	**49**		**Sn**	**10 32 21.8**	**-0.9**
OKWE	**Okmok W'ng Wal**	**2.59**	**46**		**Pn**	**10 32 07.7**	**+0.6**
OKTU	**Okmok Mt. Tuli**	**2.62**	**49**		**Pn**	**10 32 08.2**	**+0.5**
GSMY	**Great Sitkin M**	**2.95**	**279**		**Pn**	**10 32 12.5**	**+0.5**
GSTR	**Great Sitkin T**	**2.95**	**280**		**Pn**	**10 32 12.9**	**+0.7**
GSCK	**Great Sitkin C**	**3.01**	**278**		**Pn**	**10 32 13.2**	**+0.3**
GSCK					**Sn**	**10 32 46.2**	**-1.9**
ADK	**Adak**	**3.33**	**275**	Pn	**Pn**	**10 32 17.5**	**+0.3**
MREP	**Makushin Rep't**	**3.50**	**51**		**Pn**	**10 32 20.0**	**+0.4**
MNAT	**Makushin Natee**	**3.57**	**50**		**Pn**	**10 32 21.2**	**+0.6**
KIWB	**Kanaga Island**	**3.62**	**275**		**Pn**	**10 32 22.4**	**+1.2**
UNV	**Unalaska Valle**	**3.63**	**52**		**Pn**	**10 32 22.2**	**+0.8**
UNV	**Unalaska Valle**	**3.63**	**52**		**Sn**	**10 33 01.6**	**-1.8**
ZRO	**Akutan Zero**	**4.03**	**51**		**Pn**	**10 32 27.6**	**+0.7**
TAFP	**Tanaga Falls P**	**4.13**	**275**		**Pn**	**10 32 28.6**	**+0.3**
GANE	**Gareloi Northe**	**4.62**	**274**		**Pn**	**10 32 35.5**	**+0.4**
P08K	**Saint George I**	**5.02**	**11**		**Pn**	**10 32 39.0**	**-1.5**
AMKA	**Amchitka**	**5.85**	**270**		**Pn**	**10 32 53.8**	**+1.9**
SDPT	**Sand Point**	**7.43**	**56**	Pn	**Pn**	**10 33 13.4**	**-0.1**
CHGN	**Chignik**	**8.89**	**54**	Pn	**Pn**	**10 33 33.7**	**+0.2**
O14K	**Tigyukauivet M**	**9.47**	**33**	Pn	**Pn**	**10 33 42.7**	**+1.1**
CHIR	**Chirikof Islan**	**10.17**	**60**	Pn	**Pn**	**10 33 49.3**	**-1.8**
M14K	**Bethel**	**10.45**	**26**	Pn	**Pn**	**10 33 55.6**	**+0.7**
N15K	**Kwethluk River**	**10.56**	**32**	Pn	**Pn**	**10 33 58.0**	**+1.7**
O16K	**Kokwok River B**	**10.87**	**38**		**Pn**	**10 34 02.6**	**+2.0**
M16K	**Timber Creek**	**11.57**	**31**	Pn	**Pn**	**10 34 13.9**	**+3.7**
N17K	**Nushagak Hills**	**11.83**	**36**	Pn	**Pn**	**10 34 16.0**	**+2.3**
OHAK	**Old Harbor**	**11.85**	**55**	Pn	Pn	10 34 10.3	-3.7
K15K	**Wolf Creek Mou**	**11.87**	**23**	Pn	**Pn**	**10 34 15.4**	**+1.1**
P18K	**Big Mountain,**	**11.91**	**43**	Pn	**Pn**	**10 34 18.0**	**+3.1**
L16K	**Owhat River**	**11.94**	**28**	Pn	**Pn**	**10 34 17.5**	**+2.3**
O18K	**Koktuh Hills**	**12.18**	**42**	Pn	**Pn**	**10 34 21.4**	**+2.8**
M17K	**Holitna River**	**12.35**	**33**	Pn	**Pn**	**10 34 23.1**	**+2.3**
KDAK	**Kodiak Island**	**12.40**	**53**	Pn	**Pn**	**10 34 21.4**	**-0.2**
N18K	**Kilae Creek**	**12.41**	**38**	Pn	**Pn**	**10 34 23.5**	**+1.7**
SVW2	**Sparrevohn**	**12.80**	**37**	Pn	**Pn**	**10 34 28.7**	**+1.8**
J16K	**Anvik River**	**12.94**	**22**	Pn	**Pn**	**10 34 29.5**	**+0.6**
N19K	**Bonanza Creek**	**13.04**	**39**	Pn	**Pn**	**10 34 32.6**	**+2.2**
K17K	**Iditarod**	**13.07**	**27**	Pn	**Pn**	**10 34 32.1**	**+1.5**
ILSW	**Iliamna Southw**	**13.12**	**44**	Pn	**Pn**	**10 34 35.0**	**+3.4**
L18K	**Granite Mounta**	**13.19**	**31**	Pn	**Pn**	**10 34 34.5**	**+2.3**
ANM	**Nome**	**13.27**	**11**	Pn	**Pn**	**10 34 33.0**	**-0.3**
I17K	**Unalakleet**	**13.44**	**21**	Pn	**Pn**	**10 34 37.6**	**+1.9**
M19K	**Big River Lodg**	**13.76**	**35**	Pn	**Pn**	**10 34 42.4**	**+2.3**
M20K	**Styx River**	**14.21**	**37**	Pn	**Pn**	**10 34 49.2**	**+2.9**
G16K	**Koyuk River**	**14.48**	**15**	Pn	**Pn**	**10 34 51.3**	**+1.4**
J19K	**Poorman**	**14.83**	**28**	Pn	**Pn**	**10 34 55.4**	**+0.8**
K20K	**Telida**	**14.85**	**31**	Pn	**Pn**	**10 34 57.2**	**+2.4**
SKT	**Skwentna**	**14.88**	**39**	Pn	**Pn**	**10 34 58.3**	**+3.0**
H18K	**Honhosa River**	**15.05**	**21**		**Pn**	**10 35 01.1**	**+3.5**
H18K				IAmb	IAmb	10 35 41.9	
	comp=Z,15nm,1.5s						
J20K	**Nowinta River**	**15.40**	**29**	Pn	**Pn**	**10 35 03.2**	**+1.0**
CAST	**Castle Rocks**	**15.55**	**34**		**P**	**10 35 07.7**	**-0.6**
CAST				IAmb	IAmb	10 35 33.0	
	comp=Z,4.3nm,1.2s						
MID	**Middleton Isla**	**16.04**	**51**		**P**	**10 35 13.8**	**+0.3**
KTH	**Kantishna Hill**	**16.04**	**34**		**P**	**10 35 13.7**	**-0.1**
KTH				IAmb	IAmb	10 35 33.5	
	comp=Z,8.0nm,1.4s						
SCM	**Sheep Creek Mo**	**16.51**	**43**	Pn	**Pn**	**10 35 15.5**	**-1.0**
IMAR	**Indian Mountai**	**16.86**	**25**		**P**	**10 35 24.1**	**+1.4**
H21K	**Melozitna Rive**	**16.88**	**27**		**Pn**	**10 35 22.4**	**+1.3**
M24K	**Tolsona, Glenn**	**17.12**	**43**		**P**	**10 35 27.4**	**+1.8**
M24K				IAmb	IAmb	10 35 45.6	
	comp=Z,13nm,1.2s						
F21K	**Alatna River**	**17.89**	**23**	P	**P**	**10 35 36.8**	**+2.7**
ILAR	**Eielson Array**	**18.19**	**35**	P	**Pn**	**10 35 34.5**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=229,slow=9.7,SNR=6.1 comp=Z,0.2nm,0.5s						
GRNC	**Granite Creek**	**18.61**	**49**	P	**Pn**	**10 35 43.8**	**+1.1**
GRNC				IAmb	IAmb	10 36 10.2	
	comp=Z,10.0nm,1.3s						
BARN	**Barnard Glacie**	**18.75**	**49**	P	**Pn**	**10 35 45.3**	**+1.0**
BARN				IAmb	IAmb	10 35 59.7	
	comp=Z,11nm,1.2s						
PETK	**Petropavlovsk-**	**18.88**	**286**	P	**P**	**10 35 44.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=89,slow=16,SNR=1.8 comp=Z,2.9nm,0.9s						
LOGN	**Logan Glacier**	**19.00**	**49**	P	**P**	**10 35 47.6**	**+1.2**
LOGN				IAmb	IAmb	10 36 29.3	
	comp=Z,14nm,1.4s						
G24K	**Hadweenzic Riv**	**19.17**	**29**	P	**P**	**10 35 47.5**	**-0.6**
G24K				IAmb	IAmb	10 36 29.8	
	comp=Z,5.7nm,1.5s						
TOLK	**Toolik Lake Re**	**19.93**	**23**	P	**Pn**	**10 35 58.6**	**+0.3**
TOLK				IAmb	IAmb	10 36 42.1	
	comp=Z,9.0nm,1.4s						
O29M	**Mount Kennedy**	**20.05**	**52**	P	**P**	**10 35 58.6**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**36.18**	**216**	T	T	11 17 00.2	
	baz=21,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**36.19**	**216**	T	T	11 17 04.6	
	baz=21,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	**36.20**	**216**	T	T	11 17 02.1	
	baz=21,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**37.38**	**216**	T	T	11 18 34.9	
	baz=22,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**37.39**	**216**	T	T	11 18 34.8	
	baz=22,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**37.40**	**216**	T	T	11 18 33.8	
	baz=22,slow=76,SNR=10						
NVAR	**Mina Array Bea**	**38.88**	**89**	P	**P**	**10 38 52.0**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=294,slow=8.8,SNR=2.4 comp=Z,0.1nm,0.5s						
PDAR	**Pinedale Array**	**41.73**	**77**	P	**P**	**10 39 13.7**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=290,slow=5.3,SNR=6.3 comp=Z,0.5nm,0.6s						
ANMO	**Albuquerque**	**48.44**	**84**	LR	LR	10 57 03.2	
	comp=Z,148nm,21.8s,baz=262,slow=31						
TXAR	**Lajitas Array**	**53.98**	**87**	P	**P**	**10 40 48.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.6,SNR=5.3 comp=Z,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**62.16**	**317**	P	P	10 41 40.1	-5.3
	comp=Z,0.4nm,0.2s,baz=42,slow=6.8,SNR=5.3 comp=Z,0.4nm,0.2s						
MKAR	**Makanchi Array**	**63.37**	**312**	P	P	10 41 48.5	-5.2
	comp=Z,0.1nm,0.4s,baz=32,slow=4.5,SNR=2.8 comp=Z,0.1nm,0.4s						
BVAR	**Borovoye Array**	**63.53**	**324**	P	**P**	**10 41 51.3**	**-3.2**
	comp=Z,0.7nm,0.5s,baz=42,slow=6.6,SNR=4.4 comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**75.57**	**281**	P	**P**	**10 43 07.2**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=27,slow=8.1,SNR=5.0 comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**89.04**	**229**	P	P	10 44 16.2	-3.2
	comp=Z,0.2nm,0.5s,baz=24,slow=4.6,SNR=5.2 comp=Z,0.2nm,0.5s						
H03N2	**Juan Fernandez**	**116.82**	**111**	T	T	12 58 15.2	
	baz=318,slow=77,SNR=2.8						
H03N1	**Juan Fernandez**	**116.83**	**111**	T	T	12 58 18.9	
	baz=318,slow=77,SNR=2.8						
H03N3	**Juan Fernandez**	**116.83**	**111**	T	T	12 58 17.1	
	baz=318,slow=77,SNR=3.3						

IDC 17 10:45:41.3±8.1, 22.52S×178.12W, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/1, Error ellipse: s-maj=204.1km s-min=44.9km az=32.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.85**	**247**	P	P	10 52 50.2	-1.2
	0.9nm,0.5s,baz=66,slow=10.0,SNR=3.4 0.9nm,0.5s						
ASAR	**Alice Springs**	**43.99**	**259**	P	P	10 53 50.5	-0.2
	0.7nm,0.8s,baz=100,slow=7.2,SNR=8.8						
ASAR				LR	LR	11 12 00.9	
	comp=Z,43nm,18.4s,baz=171,slow=36 0.7nm,0.8s						
WRA	**Warramunga Arr**	**44.25**	**264**	P	P	10 53 53.5	+0.6
	1.0nm,0.3s,baz=97,slow=8.1,SNR=32 1.0nm,0.3s						
QSPA	**South Pole Qui**	**67.56**	**180**	P	P	10 56 39.5	+0.1
	0.7nm,0.7s,baz=41,slow=9.3,SNR=1.9 0.7nm,0.7s						

*IDC **17** 10:49:00.6±1.9, 22.05N×108.28W, h0km, mb3.2/3, mbtmp3.5/8, ML3.3/5, MS3.5/15, Error ellipse: s-maj=44.5km s-min=22.0km az=65.0*
*MEX **17** 10:49:01.4±0.7, 22.10N×108.27W, h16km±111km, MD4.2*
*NEIC **17** 10:49:07.4±1.7, 22.3N±0.1°×108.16W±0.01, h10km±2km, mb4.0/101, Md4.2/10(MEX), Error ellipse: s-maj=18.9km s-min=3.1km az=182.0*

ISC 17 10:49:04.6±1.0, 22.23N±0.08°×108.31W±0.08, h10km, n125, σ1§99/69, mb3.9/12, MS3.4/11, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIG	**Mazatlaan**	**1.98**	**61**		**Pg**	**10 49 42.0**	**-0.7**
MAIG	**Mazatlaan**	**1.98**	**61**	*e*P	Pn	10 49 31.4	-6.9
MAIG				*e*S	Sn	10 49 42.0	-21
LPIG	**La Paz**	**2.62**	**316**	Pn	Pn	10 49 42.2	-4.7
	7.7nm,0.3s,baz=147,slow=5.0,SNR=19						
LPIG				Sn	Sn	10 50 08.3	-10
	27nm,0.3s,baz=304,slow=12,SNR=12						
LPIG	**La Paz**	**2.62**	**316**	*e*P	Pn	10 49 41.6	-5.4
LPIG				*e*S	Sn	10 49 59.4	-19
SSIG	**Sanalona**	**2.79**	**22**		**Pn**	**10 49 46.8**	**-2.6**
SSIG					**Sn**	**10 50 17.2**	**-5.9**
SSIG	**Sanalona**	**2.79**	**22**	*e*P	**Pn**	**10 49 46.8**	**-2.6**
SSIG				*e*S	**Sn**	**10 50 17.2**	**-5.9**
PDIG	**Papasquiaro**	**3.87**	**43**		**Pn**	**10 50 04.5**	**+0.1**
PDIG	**Papasquiaro**	**3.87**	**43**	*i* P	**Pn**	**10 50 04.5**	**+0.1**
H06E1	**SOCORRO T-PHAS**	**4.22**	**216**	T	T	10 54 16.5	
	SNR=36						
CSIG	**Choix**	**4.58**	**359**		**Pn**	**10 50 11.4**	**-2.6**
CSIG	**Choix**	**4.58**	**359**	*e*P	**Pn**	**10 50 11.4**	**-2.6**
HPIG		**5.26**	**27**	Pn	**Pn**	**10 50 23.5**	**-0.1**
ZAIG	**Zacatecas**	**5.34**	**83**	Pn	**Pn**	**10 50 24.2**	**-0.5**
BCIG	**La Boquilla**	**5.91**	**26**		**Pn**	**10 50 30.6**	**-1.7**
BCIG					**Sn**	**10 51 44.4**	**+4.2**
BCIG	**La Boquilla**	**5.91**	**26**	*e*P	**Pn**	**10 50 30.6**	**-1.7**
BCIG				*e*S	**Sn**	**10 51 44.4**	**+4.2**
TX31	**Lajitas Ar. Si**	**8.22**	**30**		**Pn**	**10 51 04.2**	**+0.2**
TXAR	**Lajitas Array**	**8.22**	**30**		**Pn**	**10 51 05.1**	**+1.0**
TXAR	**Lajitas Array**	**8.22**	**30**	Pn	**Pn**	**10 51 04.8**	**+0.8**
	0.3nm,0.3s,baz=207,slow=14,SNR=25						
TXAR				LR	LR	10 53 56.9	
	comp=Z,115nm,18.9s,baz=206,slow=36 2.5nm,0.6s						
VHRN	**Van Horn**	**9.02**	**19**	Pn	**Pn**	**10 51 16.4**	**+1.2**
ALPN	**Alpine**	**9.13**	**26**	Pn	**Pn**	**10 51 16.6**	**+0.1**
319A	**Douglas**	**9.15**	**355**	Pn	**Pn**	**10 51 18.4**	**+1.6**
SAND	**Sanderson**	**9.49**	**35**	Pn	**Pn**	**10 51 22.2**	**+0.8**
PECS	**Pecos**	**9.93**	**23**	Pn	**Pn**	**10 51 28.3**	**+0.8**
121A	**Cookes Peak, D**	**10.27**	**2**		**Pn**	**10 51 33.9**	**+1.6**
TUC	**Tucson**	**10.28**	**348**		**Pn**	**10 51 34.6**	**+2.3**
DUN6	**Lazy B Ranch**	**10.30**	**356**		**Pn**	**10 51 35.0**	**+2.3**
MNHN	**Monahans**	**10.34**	**27**		**Pn**	**10 51 35.8**	**+2.7**
OZNA	**Ozona**	**10.78**	**35**	Pn	**Pn**	**10 51 41.2**	**+2.1**
HNDO	**Hondo**	**10.90**	**46**		**Pn**	**10 51 42.6**	**+1.8**
VTX	**Valle De La Tr**	**11.30**	**325**	Pn	**Pn**	**10 51 47.1**	**+0.8**
SGCY	**Sterling City**	**11.57**	**32**	Pn	**Pn**	**10 51 51.0**	**+1.0**
Y22D	**IRIS PASSCAL I**	**11.86**	**6**		**Pn**	**10 51 56.1**	**+2.1**
BRDY	**Brady**	**12.26**	**41**	Pn	**Pn**	**10 52 00.5**	**+1.1**
X18A	**Snowflake**	**12.34**	**354**		**Pn**	**10 52 03.0**	**+2.5**
Y14A	**Wickenburg**	**12.37**	**341**	Pn	**Pn**	**10 52 02.7**	**+1.7**
SN07	**Snyder 07**	**12.65**	**30**	Pn	**Pn**	**10 52 04.8**	**+0.1**
ANMO	**Albuquerque**	**12.77**	**7**	Pn	**Pn**	**10 52 08.4**	**+1.9**
ANMO	**Albuquerque**	**12.77**	**7**	Pn	**Pn**	**10 52 07.9**	**+1.4**
	0.1nm,0.3s,baz=289,slow=12,SNR=6.4 2.3nm,1.1s						
435B	**Jarrell**	**12.83**	**46**	Pn	**Pn**	**10 52 07.5**	**+0.4**
APMT	**Aspermont**	**13.21**	**31**	Pn	**Pn**	**10 52 12.8**	**+0.5**
PFO	**Pinyon Flats O**	**13.42**	**329**	Pn	**Pn**	**10 52 17.8**	**+2.4**
	0.1nm,0.3s,baz=140,slow=12,SNR=2.2 0.5nm,0.4s						
WUAZ	**Wupatki**	**13.50**	**349**	Pn	**Pn**	**10 52 19.0**	**+2.6**
CMIG	**Matias Romero**	**13.64**	**110**	Pn	**Pn**	**10 52 18.8**	**+0.5**
	0.6nm,0.3s,baz=296,slow=13,SNR=6.2						
CMIG				LR	LR	10 57 38.6	
	comp=Z,233nm,20.9s,baz=276,slow=38						
W13A	**Hualapai Mount**	**13.72**	**340**		**Pn**	**10 52 21.6**	**+2.1**
ELS	**Elsinore Mount**	**13.93**	**327**		**Pn**	**10 52 25.7**	**+3.6**
FW13	**Cleburne**	**13.96**	**41**	Pn	**Pn**	**10 52 21.6**	**-1.0**
GSC	**Goldstone, Bar**	**14.99**	**332**	IAmb	IAmb	10 52 50.0	
	comp=Z,5.9nm,1.1s						
KNB	**Kanab**	**15.24**	**346**	IAmb	IAmb	10 52 53.4	
	comp=Z,11nm,1.1s						
LCMT	**Little Creek M**	**15.34**	**345**	IAmb	IAmb	10 52 49.4	
	comp=Z,12nm,1.1s						
CCAC	**Calif City Air**	**15.42**	**329**	IAmb	IAmb	10 52 48.6	
	comp=Z,7.8nm,0.8s						
S22A	**4UR Ranch, Cre**	**15.51**	**4**	IAmb	IAmb	10 52 56.6	
	comp=Z,10nm,1.0s						
QSM	**Queen of Sheba**	**15.58**	**333**	IAmb	IAmb	10 52 50.4	
	comp=Z,7.3nm,1.1s						
SDCO	**Great Sand Dun**	**15.65**	**8**	IAmb	IAmb	10 52 59.1	
	comp=Z,16nm,1.1s						
GWY	**Greenwater Val**	**15.69**	**334**	IAmb	IAmb	10 52 53.2	
	comp=Z,8.3nm,1.1s						
HMU	**Henry Mountain**	**15.79**	**353**	IAmb	IAmb	10 52 51.7	
	comp=Z,16nm,1.1s						
Z38A	**Mt. Pleasant**	**16.10**	**44**	Pn	**Pn**	**10 52 51.1**	**-0.1**
MTPU	**Mount Pierson**	**16.11**	**349**	IAmb	IAmb	10 52 59.5	
	comp=Z,10nm,1.0s						
TPNV	**Topopah Spring**	**16.20**	**337**	IAmb	IAmb	10 53 00.6	
	comp=Z,9.5nm,1.1s						
PRN	**Pahroc Range**	**16.20**	**340**	IAmb	IAmb	10 53 06.8	
	comp=Z,8.7nm,1.2s						
W35A	**Tecumseh**	**16.30**	**35**	IAmb	IAmb	10 53 04.8	
	comp=Z,23nm,1.1s						
S11A	**Rachel**	**16.65**	**339**	IAmb	IAmb	10 53 09.4	
	comp=Z,11nm,1.1s						
Q16A	**Castle Valley**	**16.81**	**352**	IAmb	IAmb	10 53 26.6	
	comp=Z,8.3nm,1.0s						
SMCO	**Snowmass**	**16.93**	**4**	IAmb	IAmb	10 53 20.9	
	comp=Z,7.5nm,1.1s						
SRU	**San Rafael Swe**	**16.93**	**354**	IAmb	IAmb	10 53 04.5	
	comp=Z,9.1nm,1.2s						
OK048	**Pawnee Station**	**17.24**	**32**	IAmb	IAmb	10 53 15.5	
	comp=Z,23nm,1.1s						
P17A	**Butcher Ranch,**	**17.31**	**354**	IAmb	IAmb	10 53 10.8	
	comp=Z,8.3nm,1.0s						
P18A	**Preston Nutter**	**17.42**	**355**	IAmb	IAmb	10 53 11.9	
	comp=Z,12nm,1.0s						
TPH	**Tonopah**	**17.55**	**336**	IAmb	IAmb	10 53 17.1	
	comp=Z,17nm,0.9s						
O20A	**White River Ci**	**17.85**	**0**	IAmb	IAmb	10 53 22.1	
	comp=Z,13nm,1.1s						
T35A	**Sooner Cattle**	**17.85**	**32**	IAmb	IAmb	10 53 20.9	
	comp=Z,19nm,1.1s						
PETF	**Flores**	**18.16**	**104**	P	**Pn**	**10 53 17.5**	**+0.4**
143A	**Socs Landing,**	**18.25**	**52**	P	**Pn**	**10 53 18.0**	**0.0**
143A				IAmb	IAmb	10 53 23.5	
	comp=Z,17nm,0.8s						
X40A	**Basin Creek Fa**	**18.26**	**45**	P	**Pn**	**10 53 18.6**	**+0.4**
NVAR	**Mina Array Bea**	**18.28**	**334**	P	**Pn**	**10 53 18.4**	**-

	comp=Z,6.1nm,0.9s						
MOOW	**Moose Ponds**	**21.55**	**355**	IAmb	IAmb	10 54 09.1	
	comp=Z,6.9nm,1.1s						
TGUH	**Tegucigalpa,Un**	**21.56**	**109**	P	**P**	**10 53 55.5**	**+0.9**
K30B	**Basset**	**21.64**	**18**	P	**P**	**10 53 56.0**	**+0.9**
IMW	**Indian Meadow**	**21.72**	**355**	P	**P**	**10 53 56.9**	**+0.7**
IMW				IAmb	IAmb	10 54 07.1	
	comp=Z,4.0nm,0.9s						
HLID	**Hailey**	**21.87**	**348**	IAmb	IAmb	10 54 20.9	
	comp=Z,3.7nm,1.1s						
WVOR	**Wild Horse Val**	**21.92**	**339**	IAmb	IAmb	10 54 11.3	
	comp=Z,8.8nm,1.0s						
H17A	**Grant Village**	**22.18**	**356**	IAmb	IAmb	10 54 15.8	
	comp=Z,5.4nm,1.1s						
J05D	**Fort Rock, OR**	**23.58**	**336**	IAmb	IAmb	10 54 17.6	
	comp=Z,4.3nm,0.8s						
BMO	**Blue Mountains**	**23.74**	**344**	IAmb	IAmb	10 54 32.4	
	comp=Z,2.8nm,1.1s						
NEW	**Newport**	**26.91**	**347**	LR	LR	11 05 21.3	
	comp=Z,84nm,19.4s,baz=164,slow=36						
ULM	**Lac du Bonnet**	**29.62**	**16**	LR	LR	11 07 01.0	
	comp=Z,73nm,19.7s,baz=118,slow=36						
BBB	**Bella Bella**	**33.58**	**338**	LR	LR	11 11 04.3	
	comp=Z,73nm,18.1s,baz=132,slow=39						
SDV	**Santo Domingo**	**38.52**	**104**	LR	LR	11 12 59.5	
	comp=Z,70nm,18.5s,baz=284,slow=37						
DLBC	**Dease Lake**	**39.40**	**342**	LR	LR	11 13 33.6	
	comp=Z,185nm,18.1s,baz=96,slow=37						
SJG	**San Juan**	**39.70**	**88**	LR	LR	11 14 04.6	
	comp=Z,54nm,19.7s,baz=293,slow=38						
YKA	**Yellowknife Ar**	**40.47**	**356**	P	**P**	**10 56 41.8**	**-1.4**
	comp=Z,0.3nm,0.9s,baz=174,slow=7.7,SNR=3.2						
	comp=Z,0.3nm,0.9s						
NNA	**Nana**	**45.92**	**135**	LR	LR	11 12 13.6	
	comp=Z,38nm,18.4s,baz=300,slow=30						
INK	**Inuvik**	**48.63**	**348**	LR	LR	11 18 51.7	
	comp=Z,120nm,18.5s,baz=304,slow=37						
FRB	**Frobisher Bay**	**49.18**	**22**	LR	LR	11 19 55.1	
	comp=Z,73nm,18.3s,baz=212,slow=38						
ILAR	**Eielson Array**	**49.43**	**339**	P	**P**	**10 57 52.9**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=138,slow=7.0,SNR=5.0						
	comp=Z,0.3nm,0.6s						
RES	**Resolute Bay**	**52.97**	**4**	LR	LR	11 20 43.1	
	comp=Z,67nm,18.9s,baz=30,slow=36						
H03N2	**Juan Fernandez**	**62.05**	**152**	T	T	12 06 58.2	
	baz=331,slow=77,SNR=8.6						
H03N1	**Juan Fernandez**	**62.06**	**152**	T	T	12 06 51.8	
	baz=331,slow=77,SNR=10						
H03N3	**Juan Fernandez**	**62.06**	**152**	T	T	12 06 49.5	
	baz=331,slow=77,SNR=7.9						
ASAR	**Alice Springs**	**123.11**	**256**	PKP	**PKPdf**	**11 07 59.9**	**-2.3**
	comp=Z,0.2nm,0.7s,baz=101,slow=0.9,SNR=4.3						

*IDC **17** 10:52:13.0±8.1,34°.39N×24°.68E,h52km±41km,mb3.4/2, mbtmp3.6/7, ML3.6/5, Error ellipse: s-maj=99.2km s-min=38.2km az=38.0*
*ATH **17** 10:52:13.0,34°.71N×24°.75E,h10km±2km, ML3.1/4, Error ellipse: s-maj=3.8km s-min=1.6km az=342.0*
*THE **17** 10:52:13.1,34°.73N×24°.73E,h25km±1km, ML3.1/4, Error ellipse: s-maj=1.2km s-min=0.5km az=112.0*

ISC 17 10:52:13.0±1.3,**34.73N**±0.07×**24.71E**±0.04,**h29**km±8km, **n30**,σ1§**02**/42,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMBK	**Timbaki Herakl**	**0.34**	**8**	P	**Pb**	**10 52 20.7**	**-0.3**
TMBK				S	**Sb**	**10 52 26.6**	**+0.2**
TMBK	**Timbaki Herakl**	**0.34**	**8**	P	**Pb**	**10 52 20.7**	**-0.3**
TMBK				S	**Sb**	**10 52 26.0**	**-0.4**
GVD	**Gavdhos**	**0.53**	**282**	P	**Pb**	**10 52 23.4**	**-0.4**
GVD				S	**Sn**	**10 52 32.0**	**-0.4**
	9µm,0.4s						
GVD	**Gavdhos**	**0.53**	**282**	P	**Pb**	**10 52 23.3**	**-0.5**
GVD				S	**Sb**	**10 52 31.6**	**+0.5**
GVD				AML	AML	10 52 36.1	
	comp=E,20490µm,0.3s						
GVD				AML	AML	10 52 39.0	
	comp=N,16363µm,0.4s						
IDI	**Anoyia**	**0.58**	**15**	P	**Pb**	**10 52 24.0**	**-0.7**
IDI				S	**Sb**	**10 52 32.7**	**0.0**
	comp=N,1µm,0.4s						
IDI	**Anoyia**	**0.58**	**15**	P	**Pb**	**10 52 23.6**	**-1.1**
IDI				S	**Sb**	**10 52 31.4**	**-1.3**
IDI				AML	AML	10 52 35.7	
	comp=E,3245µm,0.5s						
IDI				AML	AML	10 52 37.8	
	comp=N,2358µm,0.3s						
KSTL	**Kastelli Herak**	**0.64**	**27**	P	**Pn**	**10 52 26.0**	**-0.2**
KSTL				S	**Sn**	**10 52 35.8**	**+0.4**
KSTL	**Kastelli Herak**	**0.64**	**27**	P	**Pn**	**10 52 26.8**	**+0.7**
KSTL				S	**Sb**	**10 52 34.8**	**+0.4**
KSTL				AML	AML	10 52 37.8	
	comp=N,3153µm,0.7s						
KSTL				AML	AML	10 52 40.0	
	comp=E,1168µm,0.5s						
IACM	**Heraklion**	**0.65**	**27**	P	**Pb**	**10 52 25.2**	**-0.6**
IACM				S	**Sb**	**10 52 34.4**	**-0.1**
IACM	**Heraklion**	**0.65**	**27**	P	**Pn**	**10 52 25.8**	**-0.4**
PRNS	**Prines Rethymn**	**0.66**	**345**	P	**Pb**	**10 52 25.1**	**-0.9**
PRNS				S	**Sb**	**10 52 35.0**	**+0.2**
	comp=E,962nm,0.2s						
FRMA	**Ierapetra Chan**	**0.89**	**71**	P	**Pn**	**10 52 31.0**	**+1.5**
CHAN	**Chania**	**0.96**	**325**	P	**Pn**	**10 52 31.8**	**+1.4**
CHAN				AML	AML	10 52 52.5	
	comp=N,2774µm,0.9s						
CHAN				AML	AML	10 52 59.2	
	comp=E,2231µm,0.6s						
RODP	**Rodopos**	**1.14**	**317**	P	**Pn**	**10 52 32.7**	**-0.3**
RODP				S	**Sb**	**10 52 47.5**	**-1.0**
ANKY	**Antikythira Is**	**1.62**	**315**	P	**Pn**	**10 52 39.3**	**-0.2**
ANKY				S	**Sn**	**10 52 59.4**	**0.0**
	comp=E,330nm,0.8s						
ANKY	**Antikythira Is**	**1.62**	**315**	P	**Pb**	**10 52 42.1**	**-0.1**
THR6	**Thira Island,**	**1.72**	**19**	P	**Pb**	**10 52 43.0**	**-0.9**
SNT5	**Nea Kammeni, S**	**1.76**	**18**	P	**Pb**	**10 52 43.4**	**-1.2**
MHLO	**Agia Marina, M**	**1.97**	**353**	P	**Pn**	**10 52 46.0**	**+1.6**
APE	**Apeiranthos**	**2.43**	**16**	P	**Pn**	**10 52 51.9**	**+1.1**
VLI	**Veliai**	**2.45**	**324**	P	**Pn**	**10 52 51.9**	**+0.9**
DION	**Dionisos Attik**	**3.40**	**350**	P	**Pn**	**10 53 06.8**	**+2.7**
GUR	**Goura**	**3.73**	**330**	P	**Pn**	**10 53 09.8**	**+1.2**
BRTR	**Keskin Array B**	**8.69**	**52**	P	**Pn**	**10 54 18.6**	**+1.7**
	comp=E,0.1nm,0.3s,baz=230,slow=18,SNR=2.1						
	comp=E,0.4nm,0.4s						
MMAI	**Mount Meron Ar**	**9.05**	**98**	P	**Pn**	**10 54 20.8**	**-1.0**
	comp=E,0.9nm,0.3s,baz=287,slow=12,SNR=5.4						
	comp=E,0.5nm,0.3s						
GERES	**GERESS Array B**	**16.29**	**333**	P	**P**	**10 56 02.9**	**+0.5**
	comp=E,0.2nm,0.3s,baz=138,slow=10,SNR=4.3						
	comp=E,0.8nm,0.6s						
AKASG	**Malin Array B**	**16.30**	**10**	P	**Pn**	**10 56 01.0**	**+1.4**
	comp=E,0.7nm,0.3s,baz=198,slow=11,SNR=2.0						
	comp=E,0.6nm,0.4s						
KBZ	**Khabaz**	**16.68**	**52**	P	**P**	**10 56 07.8**	**+1.1**
	comp=E,0.2nm,0.3s,baz=234,slow=13,SNR=4.2						
	comp=E,3.0nm,0.8s						
MKAR	**Makanchi Array**	**44.32**	**56**	P	**P**	**11 00 19.9**	**-0.4**
	comp=E,0.6nm,0.6s,baz=280,slow=6.9,SNR=11						
	comp=E,0.6nm,0.6s						
SONM	**Songino Array**	**60.04**	**50**	P	**P**	**11 02 15.2**	**-2.0**
	comp=E,0.3nm,0.3s,baz=298,slow=9.3,SNR=2.1						
	comp=E,0.3nm,0.3s						

*HEL **17** 11:07:43.9±0.2,67°.59N×30°.57E,h0km, ML1.8, Suspected explosion*
*UPP **17** 11:07:44.6±2.6,67°.42N×30°.48E,h0km, ML1.9*
*IDC **17** 11:07:47.7±2.2,67°.71N×29°.83E,h0km, mbtmp3.1/3, ML1.7/3, Error ellipse: s-maj=30.8km s-min=8.8km az=76.0*
*KOLA **17** 11:07:47.7,67°.69N×30°.30E,h0km, ML2.0, Error ellipse: s-maj=10.5km s-min=5.0km az=10.0, Murmansk region, Kola district*

ISC 17 11:07:44.5±0.9,**67.55N**±0.03×**30.39E**±0.03,**h0**km,**n45**, σ1§**08**/68,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.36**	**304**	PG	**Pg**	**11 07 50.9**	**-0.6**
APA	**Apatity**	**1.16**	**88**	P	**Pn**	**11 08 08.8**	**+0.8**
APA				S	**Sn**	**11 08 25.8**	**+1.4**
OLKF	**Oulanka, Finla**	**1.29**	**198**	PG	**Pg**	**11 08 08.6**	**-0.7**
OLKF				MSG		11 08 24.9	
	comp=Z,8.8nm,0.2s						
OLKF				SN	**Sn**	**11 08 28.5**	**+0.7**
SGF	**Sodankyl**	**1.49**	**268**	PG	**Pn**	**11 08 12.0**	**-0.6**
	baz=82						
SGF				SG	**Sn**	**11 08 32.7**	**0.0**
KU6	**Riekki**	**1.54**	**188**	PG	**Pn**	**11 08 12.2**	**-1.0**
KU6				MSG		11 08 31.9	
	comp=Z,3.9nm,0.2s						
KU6				SN	**Sn**	**11 08 36.0**	**+2.1**
LVZ	**Lovozero**	**1.66**	**76**	SN	**Sn**	**11 08 35.2**	**-1.7**
MSF	**Maaselka**	**1.73**	**199**	PG	**Pn**	**11 08 15.7**	**-0.1**
MSF				SG	**Sn**	**11 08 38.7**	**+0.1**
RNF	**Rovaniemi**	**1.96**	**243**	PB	**Pn**	**11 08 19.3**	**+0.4**
	baz=58						
RNF				SB	**Sb**	**11 08 45.6**	**-0.2**
KMNF	**Kaamanen**	**2.04**	**323**	PG	**Pn**	**11 08 20.7**	**+0.5**
KMNF				SG	**Sn**	**11 08 47.0**	**+0.7**
RANF	**Ranua**	**2.10**	**225**	PB	**Pn**	**11 08 22.0**	**+1.1**
	baz=39						
RANF				SB	**Sb**	**11 08 50.0**	**-0.1**
TERR	**Teriberka**	**2.41**	**44**	P	**Pn**	**11 08 27.1**	**+2.0**
TERR				S	**Sn**	**11 08 53.9**	**-1.4**
KLF	**Kolari**	**2.50**	**266**	PN	**Pn**	**11 08 26.8**	**+0.3**
KLF				MSG		11 08 59.8	
	comp=Z,4.3nm,0.2s						
KLF				SB	**Sb**	**11 09 01.2**	**-0.5**
KEV	**Kevo**	**2.54**	**332**	*e*P	**Pn**	**11 08 27.5**	**+0.6**
KEV	**Kevo**	**2.54**	**332**	PB	**Pn**	**11 08 27.6**	**+0.6**
KEV				MSG		11 08 58.8	
	comp=Z,4.5nm,0.2s						
KEV				SB	**Sn**	**11 08 59.1**	**+0.6**
VADS	**Vadso**	**2.61**	**352**	P	**Pn**	**11 08 28.4**	**+0.5**
VADS				S	**Sn**	**11 08 59.6**	**-0.7**
HEF	**Hetta**	**2.68**	**292**	*e*P	**Pn**	**11 08 29.1**	**+0.2**
HEF	**Hetta**	**2.68**	**292**	PN	**Pn**	**11 08 29.8**	**+0.9**
HEF				MSG		11 09 04.2	
	comp=Z,3.0nm,0.2s						
HEF				SB	**Sb**	**11 09 05.2**	**-1.5**
ARA0	**ARCESS Array S**	**2.69**	**320**	PB	**Pn**	**11 08 30.2**	**+1.2**
ARA0				SG	**Sb**	**11 09 05.9**	**-1.0**
ARCES	**ARCESS Array B**	**2.69**	**320**	P	**Pn**	**11 08 30.1**	**+1.2**
ARCES				S	**Sn**	**11 09 02.8**	**+0.7**
ARCES	**ARCESS Array B**	**2.69**	**320**	Pn	**Pn**	**11 08 29.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=135,slow=16,SNR=21						
ARCES				Lg	Lg	11 09 02.8	
	comp=Z,0.6nm,0.3s,baz=133,slow=30,SNR=16						
	comp=Z,1.4nm,0.7s						
TOF	**Tornio**	**2.82**	**241**	PN	**Pn**	**11 08 30.9**	**+0.1**
TOF				MSG		11 09 09.2	
	comp=Z,2.0nm,0.2s						
TOF				SG	**Sb**	**11 09 12.4**	**+1.7**
PAJU	**Pajala**	**2.87**	**263**	P	**Pn**	**11 08 31.5**	**-0.1**
PAJU				S	**Sn**	**11 09 08.5**	**+1.7**
PAJU	**Pajala**	**2.87**	**263**	PN	**Pn**	**11 08 31.7**	**+0.1**
PAJU				SB	**Sb**	**11 09 11.8**	**-0.5**
KTK1	**Kautokeino**	**3.04**	**302**	PB	**Pn**	**11 08 35.0**	**+1.2**
KTK1				SG	**Sb**	**11 09 16.4**	**-0.7**
LANU	**Lannavaara**	**3.23**	**283**	P	**Pn**	**11 08 37.4**	**+1.0**
LANU				S	**Sn**	**11 09 16.9**	**+1.4**
LANU	**Lannavaara**	**3.23**	**283**	PN	**Pn**	**11 08 37.1**	**+0.6**
MASU	**Masugnsbyn**	**3.23**	**272**	P	**Pn**	**11 08 37.0**	**+0.6**
KALU	**Kalix**	**3.27**	**242**	P	**Pn**	**11 08 36.8**	**-0.2**
KALU	**Kalix**	**3.27**	**242**	PN	**Pn**	**11 08 37.1**	**+0.1**
	baz=51						
KALU				SB	**Sb**	**11 09 24.2**	**+0.6**
RMF	**Romuvaara**	**3.35**	**183**	PN	**Pn**	**11 08 38.2**	**+0.1**
OBF4	**Vikkela, Lumij**	**3.48**	**220**	PN	**Pn**	**11 08 40.4**	**+0.5**
DUNU	**Dundret**	**3.83**	**268**	P	**Pn**	**11 08 44.6**	**0.0**
KIF	**Kilpisjarvi**	**3.85**	**297**	PN	**Pn**	**11 08 46.3**	**+1.4**
KOVU	**Salmi**	**3.93**	**285**	P	**Pn**	**11 08 46.7**	**+0.7**
OUF	**Merijarvi**	**3.94**	**219**	PN	**Pn**	**11 08 46.6**	**+0.4**
OBF0	**Syolatti, Pyha**	**3.96**	**222**	PN	**Pn**	**11 08 47.6**	**+1.1**
HARU	**Harads**	**3.97**	**254**	P	**Pn**	**11 08 46.0**	**-0.6**
SJUU	**Sjulsmark**	**4.07**	**244**	P	**Pn**	**11 08 47.6**	**-0.3**
RATU	**Laukkuluspa**	**4.13**	**279**	P	**Pn**	**11 08 49.2**	**+0.4**
OBF8	**Ulkokalla**	**4.30**	**225**	PN	**Pn**	**11 08 51.4**	**+0.3**
I37NO	**I37NO**	**4.63**	**295**	I	I	11 38 10.0	
	baz=103,slow=330,SNR=2.0						
JOF	**Joensuu**	**4.67**	**175**	PN	**Pn**	**11 08 55.1**	**-1.0**
JOF				SN	**Sn**	**11 09 48.7**	**-2.2**
FAUS	**Fauske**	**5.81**	**275**	P	**Pn**	**11 09 12.6**	**+0.8**
FAUS				S	**Sn**	**11 10 15.9**	**-3.1**
FINES	**FINESS Array B**	**6.41**	**199**	Pn	**Pn**	**11 09 22.4**	**+2.4**
	baz=6.9,slow=13,SNR=1.9						
FINES				Sn	**Sn**	**11 10 35.8**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=14,slow=24,SNR=1.2						
FINES				Lg	Lg	11 11 01.6	
	comp=Z,0.1nm,0.3s,baz=28,slow=26,SNR=1.4						
	comp=Z,1.5nm,0.9s						
HFS	**Hagfors**	**10.43**	**233**	Pn	**Pn**	**11 10 13.7**	**-1.5**
	comp=Z,2.2nm,0.3s,baz=59,slow=20,SNR=2.1						
	comp=Z,2.3nm,0.9s						

*IDC **17** 11:15:14.6±1.5,27°.58N×53°.01E,h0km, mb3.6/9, mbtmp3.6/10, ML3.4/1, MS3.7/1, Error ellipse: s-maj=33.1km s-min=24.0km az=9.0*
*TEH **17** 11:15:18.6,27°.69N×53°.31E,h19km±20km, ML3.4*
*DSN **17** 11:15:22.7±1.2,27°.41N×53°.35E,h10km, ML3.0/8, Error ellipse: s-maj=20.4km s-min=11.7km az=37.0*
*OMAN **17** 11:15:23.9±1.3,27°.69N×53°.75E,h15km, mb4.0/5, ml3.2/14, Error ellipse: s-maj=12.4km s-min=6.3km az=9.0*

ISC 17 11:15:18.3±0.6,**27.76N**±0.03×**53.38E**±0.04,**h10**km,**n55**, σ1§**48**/71,**mb3.6**/9,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.46**	**205**	Pg	**Pg**	**11 15 26.4**	**-0.8**
JHRM	**Jahrom**	**0.77**	**13**	Pg	**Pb**	**11 15 35.0**	**+1.1**
QIR1	**Qir**	**0.78**	**338**	Pg	**Pg**	**11 15 34.2**	**+0.9**
LAR1	**LAR**	**0.89**	**95**	Pg	**Pb**	**11 15 37.0**	**+1.1**
DSBU	**Dashti - Bushe**	**1.97**	**288**	Pn	**Pn**	**11 15 52.5**	**+0.8**
GENO	**Geno**	**2.51**	**97**	Pn	**Pn**	**11 16 00.5**	**+1.2**
JRN	**Qarnain Island**	**2.84**	**190**	P	**Pn**	**11 16 06.0**	**+2.3**
JRN				S	**Sb**	**11 16 47.0**	**+3.1**
SHMA	**Al-Shehemyia**	**2.87**	**229**	P	**Pb**	**11 16 11.6**	**+2.0**
	SNR=7.5						
SHMA				S	**Sg**	**11 16 49.3**	**-1.2**
SHME	**Shamm**	**3.00**	**124**	P	**Pn**	**11 16 07.5**	**+1.7**
SHME				S	**Sn**	**11 16 42.0**	**+0.1**
SAKB	**Bahrain**	**3.09**	**236**	P	**Pg**	**11 16 18.5**	**+0.9**
SAKB				S	**Sg**	**11 16 57.9**	**+0.2**
BANOM	**Banah**	**3.19**	**124**	P	**Pn**	**11 16 12.4**	**+3.9**
BANOM				S	**Sn**	**11 16 47.2**	**+0.6**
NAZ	**Nazwa, Dubai**	**3.43**	**143**	P	**Pn**	**11 16 13.4**	**+1.5**
NAZ				S	**Sn**	**11 16 53.6**	**+0.9**
MASF	**Masafi**	**3.44**	**133**	P	**Pn**	**11 16 14.1**	**+2.1**
MASF				S	**Sn**	**11 16 53.0**	**+0.1**
MSFE	**Esma-Masafi**	**3.45**	**133**	P	**Pn**	**11 16 14.4**	**+2.2**
AJN	**Ajban**	**3.49**	**155**	P	**Pn**	**11 16 15.2**	**+2.5**
AJN				S	**Sn**	**11 16 54.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**3.58**	**150**	P	**Pn**	**11 16 15.3**	**+1.5**
ASUD	**Al Ashush, Dub**	**3.58**	**150**	P	**Pn**	**11 16 15.5**	**+1.6**
ASUD				S	**Sn**	**11 16 56.8**	**+0.6**
MDH	**Madha**	**3.58**	**132**	P	**Pn**	**11 16 15.7**	**+1.7**
MDH				S	**Sn**	**11 16 57.1**	**+0.7**
KLNJ	**Kolanjah**	**3.60**	**335**	Pn	**Pn**	**11 16 15.8**	**+1.4**
FAQ	**Al Faqa, Dubai**	**3.60**	**146**	P	**Pn**	**11 16 15.1**	**+0.9**
FAQ	**Al Faqa, Dubai**	**3.60**	**146**	P	**Pn**	**11 16 15.4**	**+1.3**
FAQ				S	**Sn**	**11 16 56.5**	**-0.2**
UOSS	**Minazif**	**3.78**	**137**	P	**Pn**	**11 16 17.1**	**+0.4**
UOSS	**Minazif**	**3.78**	**137**	P	**Pn**	**11 16 17.4**	**+0.8**
HATD	**Hatta, Dubai**	**3.83**	**139**	P	**Pn**	**11 16 18.7**	**+1.4**
HATD	**Hatta, Dubai**	**3.83**	**139**	P	**Pn**	**11 16 18.7**	**+1.4**
HATD				S	**Sn**	**11 17 02.0**	**-0.4**
ASHO	**Ashiyiah**	**3.89**	**141**	P	**Pn**	**11 16 18.8**	**+0.5**
ASHO				S	**Sn**	**11 17 03.4**	**-0.7**
ASHO	**Ashiyiah**	**3.89**	**141**	P	**Pn**	**11 16 19.1**	**+0.8**
	SNR=14						
ASHO				S	**Sn**	**11 17 03.7**	**-0.4**
IRAM	**Ramesheh**	**4.13**	**348**	Pn	**Pn**	**11 16 23.2**	**+1.5**
CHMN	**Cheshme madani**	**4.21**	**59**	Pn	**Pn**	**11 16 25.7**	**+2.8**
ALNE	**Al Ain**	**4.26**	**149**	P	**Pn**	**11 16 24.0**	**+0.7**
ALNE	**Al Ain**	**4.26**	**149**	P	**Pn**	**11 16 23.9**	**+0.7**
ALNE				S	**Sn**	**11 17 12.2**	**-0.9**
IBAF	**Bafgh**	**4.27**	**26**	Pn	**Pn**	**11 16 25.7**	**+2.1**
SOHO	**SOHO**	**4.59**	**141**	P	**Pn**	**11 16 28.1**	**+0.3**
SOHO	**SOHO**	**4.59**	**141**	P	**Pn**	**11 16 29.3**	**+1.5**
SOHO				S	**Sn**	**11 17 20.4**	**-0.9**
ARQ	**Araqi**	**5.24**	**146**	P	**Pn**	**11 16 37.1**	**+0.4**
	SNR=15						
ARQ				S	**Sn**	**11 17 35.8**	**-1.4**
ANAR	**Anarak**	**5.42**	**3**	Pn	**Pn**	**11 16 41.7**	**+2.3**
BSY	**Bisya**	**6.07**	**144**	P	**Pn**	**11 16 48.7**	**+0.5**
	SNR=8.2						
SMDO	**Samad**	**6.30**	**137**	P	**Pn**	**11 16 52.0**	**+0.6**
WSAR	**Wadi Sarin**	**6.54**	**132**	Pn	**Pn**	**11 16 55.2**	**+0.6**
	0.7nm,0.3s,baz=356,slow=14,SNR=20						
WSAR				Sn	**Sn**	**11 18 05.8**	**-3.5**
	1.1nm,0.3s,baz=88,slow=17,SNR=5.8						
	2.1nm,0.3s						
WSAR	**Wadi Sarin**	**6.54**	**132**	P	**Pn**	**11 16 55.3**	**+0.7**
JMDO	**Jabal Madar**	**6.86**	**140**	P	**Pn**	**11 16 59.7**	**+0.7**
WBK	**Wadi Bani Khal**	**7.20**	**134**	P	**Pn**	**11 17 03.8**	**+0.1**
MHTO	**MHTO**	**7.93**	**147**	P	**Pn**	**11 17 13.5**	**-0.3**
DQM	**DQM**	**8.67**	**153**	P	**Pn**	**11 17 22.9**	**-0.9**
BRTR	**Keskin Array B**	**20.25**	**311**	P	**P**	**11 19 50.9**	**-3.0**
	0.5nm,0.7s,baz=104,slow=12,SNR=1.6						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**28.23**	**22**	P	**P**	**11 21 11.9**	**+0.7**
	1.0nm,0.7s,baz=201,slow=7.7,SNR=2.8						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**29.59**	**42**	P	**P**	**11 21 23.3**	**-0.2**
	0.2nm,0.5s,baz=234,slow=9.4,SNR=5.7						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**34.86**	**33**	P	**P**	**11 22 11.0**	**+1.5**
	0.4nm,0.4s,baz=238,slow=8.3,SNR=2.3						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**38.31**	**339**	P	**P**	**11 22 37.3**	**-1.5**
	0.5nm,0.4s,baz=150,slow=9.3,SNR=7.0						
	0.5nm,0.4s						
DAVOX	**Davos/Dischmat**	**38.89**	**311**	LR	LR	11 41 07.9	
	comp=Z,92nm,18.0s,baz=249,slow=40						
HFS	**Hagfors**	**42.06**	**332**	P	**P**	**11 23 07.4**	**-2.6**
	0.8nm,0.6s,baz=161,slow=9.2,SNR=1.5						
	0.8nm,0.6s						
ARCES	**ARCESS Array B**	**44.83**	**347**	P	**P**	**11 23 31.3**	**-0.9**
	2.0nm,1.0s,baz=147,slow=8.6,SNR=5.5						
	2.0nm,1.0s						
SONM	**Songino Array**	**45.45**	**49**	P	**P**	**11 23 37.6**	**0.0**
	0.2nm,0.5s,baz=270,slow=6.8,SNR=2.7						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**50.21**	**264**	P	P	11 24 09.3	-5.5
	0.6nm,1.0s,baz=67,slow=7.5,SNR=2.1						
YKA	**Yellowknife Ar**	**89.55**	**354**	P	**P**	**11 28 14.4**	**-1.3**
	0.2nm,0.7s,baz=13,slow=5.7,SNR=4.0						
	0.2nm,0.7s						

IDC 17 11:17:31.8±2.4,**19.08S**×**177.66W**,**h0**km,**mb3.7**/4, **mbtmp3.7**/4,**Error ellipse: s-maj=144.1km s-min=30.1km az=154.0**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.13**	**261**	P	P	11 25 50.6	+0.1
	0.9nm,0.3s,baz=97,slow=7.6,SNR=40						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**45.17**	**255**	P	P	11 25 50.4	-0.4
	0.9nm,0.5s,baz=92,slow=7.8,SNR=23						
	0.9nm,0.5s						
TXAR	**Lajitas Array**	**86.02**	**57**	P	P	11 30 14.7	-0.1
	0.1nm,0.5s,baz=216,slow=9.0,SNR=2.4						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**86.86**	**13**	P	P	11 30 18.0	0.0
	0.1nm,0.4s,baz=208,slow=6.8,SNR=1.8						
	0.1nm,0.4s						

*NOU **17** 11:22:33.4,38°.30S×176°.29E,h212km,MLv2.9/5, North Island, New Zealand*
*WEL **17** 11:22:40.5,39°.5±6°.1×17°.6E±°,h152km±12km,M2.7/56, ML2.5/30,MLv2.7/56, Error ellipse: s-maj=0.0km s-min=0.0km az=95.5*

ISC 17 11:22:36.9±1.6,**38.48S**±0.05×**175.97E**±0.05,**h177**km, **n127**,σ1§**22**/127,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLZ	**Tolley Road**	**0.37**	**294**	P	**Pn**	**11 23 02.0**	**+1.1**
RATZ	**Rangitukua**	**0.42**	**202**	P	**Pn**	**11 23 02.1**	**+1.0**
OMRZ	**Omania**	**0.49**	**40**	P	**Pn**	**11 23 01.6**	**+0.3**
MRHZ	**Matea Rd**	**0.49**	**136**	P	**Pn**	**11 23 02.0**	**+0.6**
RITZ	**Rihia Road**	**0.50**	**190**	P	**Pn**	**11 23 02.8**	**+1.4**
KARZ	**Kaharoa**	**0.51**	**25**	P	**Pn**	**11 23 01.8**	**+0.4**
KMRZ	**Kaimai**	**0.63**	**358**	P	**Pn**	**11 23 02.5**	**+0.4**
NTVZ	**North Tongarir**	**0.66**	**201**	P	**Pn**	**11 23 03.8**	**+1.6**
KRVZ	**Karewarewa**	**0.67**

BFZ	**Birch Farm**	**2.21 175**	P	**Pn**	**11 23 16.9**	**+0.9**	
BFZ	**Birch Farm**	**2.21 175**	P	**Pn**	**11 23 16.8**	**+0.9**	
TIWZ	**Tintock**	**2.29 182**	P	**Pn**	**11 23 17.9**	**+0.9**	
OGWZ	**Otaki Gorge**	**2.42 195**	P	**Pn**	**11 23 19.2**	**+0.9**	
CPWZ	**Castlepoint**	**2.43 176**	P	**Pn**	**11 23 19.8**	**+1.3**	
HOWZ	**Holdsworth Sta**	**2.44 188**	P	**Pn**	**11 23 19.2**	**+0.5**	
KIW	**Kapiti Island**	**2.52 199**	P	**Pn**	**11 23 20.0**	**+0.5**	
TMWZ	**Te Maipa**	**2.62 181**	P	**Pn**	**11 23 21.2**	**+0.4**	
MTW	**Mount Morrison**	**2.70 188**	P	**Pn**	**11 23 21.9**	**+0.1**	
CAW	**Cannon Point**	**2.71 195**	P	**Pn**	**11 23 22.3**	**+0.4**	
DUWZ	**D'Urville Isla**	**2.81 214**	P	**Pn**	**11 23 23.4**	**+0.4**	
TRWZ	**Traveller**	**2.92 184**	P	**Pn**	**11 23 24.6**	**+0.2**	
PAWZ	**Paruwai Farm**	**2.93 188**	P	**Pn**	**11 23 24.4**	**-0.1**	
WEL	**Wellington**	**2.95 198**	P	**Pn**	**11 23 25.0**	**+0.3**	
SNZO	**South Karori**	**2.99 199**	P	**Pn**	**11 23 25.4**	**+0.2**	
TCW	**Tory Channel**	**3.02 205**	P	**Pn**	**11 23 25.9**	**+0.3**	
BHW	**Baring Head**	**3.04 196**	P	**Pn**	**11 23 25.8**	**0.0**	
PLWZ	**Palliser**	**3.13 190**	P	**Pn**	**11 23 26.9**	**-0.2**	
TUWZ	**Tuamarina**	**3.33 207**	P	**Pn**	**11 23 29.4**	**0.0**	
NNZ	**Nelson**	**3.38 215**	P	**Pn**	**11 23 28.7**	**-1.3**	
TKNZ	**Takaka Hill**	**3.45 221**	P	**Pn**	**11 23 30.4**	**-0.5**	
QRZ	**Quartz Range**	**3.54 228**	P	**Pn**	**11 23 31.6**	**-0.5**	
QRZ	**Quartz Range**	**3.54 228**	P	**Pn**	**11 23 31.4**	**-0.7**	
BSWZ	**Blackbirch Sta**	**3.61 206**	P	**Pn**	**11 23 32.8**	**-0.1**	
MRNZ	**Matariki Terra**	**3.82 219**	P	**Pn**	**11 23 35.0**	**-0.6**	
THZ	**Tophouse**	**4.04 215**	P	**Pn**	**11 23 38.1**	**-0.2**	
KHZ	**Kahutara**	**4.35 205**	P	**Pn**	**11 23 41.8**	**-0.4**	
KHZ	**Kahutara**	**4.35 205**	P	**Pn**	**11 23 42.2**	**-0.1**	
DSZ	**Denniston Nort**	**4.57 223**	P	**Pn**	**11 23 44.1**	**-1.0**	
GVZ	**Greta Valley S**	**5.01 206**	P	**Pn**	**11 23 50.2**	**-0.6**	
LTZ	**Lake Taylor**	**5.14 212**	P	**Pn**	**11 23 51.4**	**-1.2**	
INZ	**Inchbonnie**	**5.46 218**	P	**Pn**	**11 23 55.1**	**-1.6**	
OXZ	**Oxford**	**5.69 210**	P	**Pn**	**11 23 57.8**	**-1.8**	
MQZ	**McQueen's Vall**	**5.79 205**	P	**Pn**	**11 23 59.2**	**-1.8**	
AKCZ	**Akaroa Harbour**	**5.86 202**	P	**Pn**	**11 24 00.8**	**-1.1**	
MHCZ	**Mount Hutt**	**6.05 212**	P	**Pn**	**11 24 03.1**	**-1.3**	
WACZ	**Wakanui South**	**6.28 208**	P	**Pn**	**11 24 05.8**	**-1.6**	
RPZ	**Rata Peaks**	**6.41 214**	P	**Pn**	**11 24 07.9**	**-1.4**	
ARCZ	**Arundel**	**6.55 212**	P	**Pn**	**11 24 10.1**	**-0.9**	
TMZ	**Timaru**	**6.98 211**	P	**Pn**	**11 24 15.2**	**-1.4**	
ODZ	**Otahua Downs**	**7.67 210**	P	**Pn**	**11 24 24.6**	**-1.1**	

IDC 17 11:23:56.8±1.8, 1°55S×124°34E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=265.0km s-min=25.5km az=62.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.73**	**153**	P	Pn	11 28 41.0	-0.4
	1.5nm,0.6s,baz=333,slow=10.0,SNR=20 1.5nm,0.6s						
ASAR	**Alice Springs**	**23.86**	**158**	P	P	11 29 10.7	-1.4
	0.5nm,0.7s,baz=344,slow=12,SNR=13 0.5nm,0.7s						
MKAR	**Makanchi Array**	**60.63**	**328**	P	P	11 34 09.7	+0.1
	0.2nm,0.5s,baz=136,slow=5.0,SNR=6.0 0.2nm,0.5s						

*HEL **17** 11:27:17.3±0.1, 67°58N×30°43E, h0km, ML1.8, Suspected explosion*
*IDC **17** 11:27:18.7±2.3, 67°65N×30°17E, h0km, mbtmp3.2/3, ML1.8/3, Error ellipse: s-maj=30.9km s-min=8.9km az=76.0*
*KOLA **17** 11:27:19.0, 67°60N×30°34E, h0km, ML1.9, Murmansk region, Kovdor district*
*UPP **17** 11:27:18.0±2.8, 67°47N×30°23E, h0km, ML1.9*

ISC 17 11:27:16.6±0.8, 67°55N±0°02×30°42E±0°03, h0km, n45, σ0s82/65, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**0.37**	**304**	PG	**Pg**	**11 27 23.8**	**0.0**
VRF				SG	**Sg**	**11 27 28.5**	**0.0**
APA	**Apatity**	**1.15**	**87**	S	**Sn**	**11 27 56.5**	**+0.3**
RAJF	**Raja-Jooseppi**	**1.23**	**321**	PG	**Pg**	**11 27 39.1**	**-1.0**
RAJF				SN	**Sb**	**11 27 57.2**	**+0.1**
OLKF	**Oulanka, Finla**	**1.29**	**199**	PG	**Pg**	**11 27 41.3**	**-0.1**
OLKF				MSG		11 27 57.2	
	comp=Z,11nm,0.2s						
OLKF				SN	**Sn**	**11 28 00.9**	**+1.0**
SGF	**Sodankyl**	**1.50**	**268**	PG	**Pn**	**11 27 44.6**	**-0.2**
SGF				SN	**Sg**	**11 28 04.6**	**-0.2**
KU6	**Riekki** baz=11	**1.54**	**188**	PG	**Pn**	**11 27 45.5**	**+0.2**
KU6				MSG		11 28 04.5	
	comp=Z,5.2nm,0.2s						
KU6				SG	**Sg**	**11 28 06.2**	**+0.1**
LVZ	**Lovozero**	**1.65**	**76**	S	**Sn**	**11 28 08.4**	**-0.3**
LVZ	**Lovozero**	**1.65**	**76**	PN	**Pn**	**11 27 46.8**	**-0.1**
LVZ				SN	**Sb**	**11 28 09.2**	**0.0**
MSF	**Maaselka**	**1.73**	**199**	PG	**Pb**	**11 27 48.7**	**-0.5**
MSF				SG	**Sb**	**11 28 11.8**	**+0.3**
RNF	**Rovaniemi**	**1.97**	**243**	PG	**Pb**	**11 27 52.3**	**-0.9**
RNF				SG	**Sg**	**11 28 19.4**	**-0.2**
KMNF	**Kaamanen**	**2.05**	**323**	PG	**Pn**	**11 27 53.4**	**+1.0**
KMNF				SG	**Sb**	**11 28 20.0**	**-0.8**
RANF	**Ranua**	**2.11**	**225**	PG	**Pb**	**11 27 55.0**	**-0.7**
RANF				SG	**Sb**	**11 28 22.3**	**0.0**
TERR	**Teriberka**	**2.40**	**44**	S	**Sn**	**11 28 27.9**	**+0.7**
KLF	**Kolari**	**2.52**	**266**	PN	**Pn**	**11 27 59.4**	**+0.7**
KLF				MSG		11 28 31.7	
	comp=Z,4.7nm,0.2s						
KLF				SG	**Sb**	**11 28 34.7**	**+0.6**
KEV	**Kevo**	**2.55**	**332**	*eP*	**Pn**	**11 28 00.0**	**+0.9**
KEV	**Kevo**	**2.55**	**332**	PB	**Pn**	**11 27 59.9**	**+0.7**
KEV				MSG		11 28 31.9	
	comp=Z,5.5nm,0.2s						
KEV				SG	**Sn**	**11 28 32.6**	**+1.8**
VADS	**Vadso**	**2.62**	**352**	P	**Pn**	**11 28 01.1**	**+1.1**
VADS				S	**Sn**	**11 28 32.9**	**+0.4**
HEF	**Hetta**	**2.69**	**292**	*eP*	**Pn**	**11 28 02.4**	**+1.3**
HEF	**Hetta** baz=100	**2.69**	**292**	PN	**Pn**	**11 28 02.0**	**+0.8**
HEF				MSG		11 28 36.3	
	comp=Z,5.3nm,0.2s						
HEF				SG	**Sb**	**11 28 38.2**	**-0.9**
ARCES	**ARCESS Array B**	**2.69**	**320**	P	**Pn**	**11 28 02.0**	**+0.9**
ARCES				S	Sn	11 28 19.4	-15
ARCES	**ARCESS Array B** comp=Z,0.3nm,0.3s,baz=138,slow=16,SNR=28	**2.69**	**320**	Pn	**Pn**	**11 28 02.2**	**+1.0**
ARCES				Lg	Lg	11 28 38.0	
	comp=Z,0.5nm,0.3s,baz=131,slow=30,SNR=14 comp=Z,3.3nm,0.9s						
TOF	**Tornio**	**2.83**	**241**	PN	**Pn**	**11 28 03.1**	**+0.1**
TOF				MSG		11 28 41.0	
	comp=Z,1.8nm,0.2s						
TOF				SG	**Sb**	**11 28 44.2**	**+1.3**
PAJU	**Pajala**	**2.88**	**263**	P	**Pn**	**11 28 04.3**	**+0.5**
PAJU				S	**Sn**	**11 28 38.6**	**-0.6**
PAJU	**Pajala**	**2.88**	**263**	PN	**Pn**	**11 28 04.1**	**+0.3**
PAJU				SG	**Sb**	**11 28 45.7**	**+1.0**
KTK1	**Kautokeino**	**3.05**	**302**	PB	**Pn**	**11 28 07.2**	**+1.1**
LANU	**Lannavaara**	**3.24**	**283**	P	**Pn**	**11 28 08.9**	**+0.2**
LANU	**Lannavaara**	**3.24**	**283**	PN	**Pn**	**11 28 08.8**	**+0.1**
MASU	**Masugnsbyn**	**3.24**	**272**	P	**Pn**	**11 28 09.1**	**+0.4**
KALU	**Kalix**	**3.28**	**242**	P	**Pn**	**11 28 09.2**	**0.0**
KALU	**Kalix** baz=55	**3.28**	**242**	PN	**Pn**	**11 28 09.1**	**0.0**
KALU				SB	**Sb**	**11 28 53.9**	**-2.1**
RMF	**Romuvaara** baz=1.0	**3.35**	**184**	PN	**Pn**	**11 28 11.0**	**+0.8**
OBF4	**Vikkela, Lumij** baz=38	**3.49**	**221**	PN	**Pn**	**11 28 12.9**	**+0.8**
OBF4				SN	**Sn**	**11 28 55.7**	**+1.7**
DUNU	**Dundret**	**3.84**	**268**	P	**Pn**	**11 28 17.1**	**+0.2**
KUA	**Kurravaara**	**3.86**	**281**	P	**Pn**	**11 28 17.3**	**+0.1**
KIF	**Kilpisjarvi**	**3.87**	**297**	PN	**Pn**	**11 28 18.1**	**+0.9**
KOVU	**Salmi**	**3.94**	**285**	P	**Pn**	**11 28 19.1**	**+0.8**
OUF	**Merijarvi** baz=33	**3.95**	**219**	PN	**Pn**	**11 28 19.1**	**+0.7**
OBF0	**Syolatti, Pyha**	**3.97**	**222**	PN	**Pn**	**11 28 19.8**	**+1.2**
HARU	**Harads**	**3.98**	**254**	P	**Pn**	**11 28 18.4**	**-0.4**
OBF8	**Ulkokalla** baz=43	**4.31**	**225**	PN	**Pn**	**11 28 24.0**	**+0.7**
OBF8				SB	**Sb**	**11 29 25.7**	**+0.1**
I37NO	**I37NO** baz=101,slow=336,SNR=4.5	**4.64**	**295**	I	I	11 57 40.0	
JOF	**Joensuu**	**4.66**	**175**	SN	**Sn**	**11 29 22.0**	**-0.8**
FAUS	**Fauske**	**5.82**	**275**	P	**Pn**	**11 28 44.3**	**+0.2**
FINES	**FINESS Array B**	**6.41**	**199**	Pn	**Pn**	**11 28 53.7**	**+1.6**
	baz=11,slow=23,SNR=1.5						
FINES				Sn	**Sn**	**11 30 06.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=15,slow=16,SNR=1.6						
FINES				Lg	Lg	11 30 37.0	
	comp=Z,0.1nm,0.3s,baz=25,slow=25,SNR=1.9 comp=Z,1.4nm,1.1s						
HFS	**Hagfors**	**10.44**	**233**	Pn	**Pn**	**11 29 45.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=10,slow=10,SNR=2.7 comp=Z,4.3nm,1.1s						

*NNC **17** 11:50:24.9±2.4, 52°12N×75°49E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=101.2km s-min=7.5km az=27.0, Suspected Mining explosion.*
*IDC **17** 11:50:28.5±5.2, 51°54N×75°54E, h0km, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=51.6km s-min=28.4km az=107.0*

ISC 17 11:50:28.6±1.7, 51°7N±0°2×75°6E±0°1, h0km, n8, σ1s11/8, 7C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.15**	**120**	⇑Pn	**Pn**	**11 51 06.8**	**+1.2**
	2.1nm,0.3s						
KURBB				⇑Sn	**Sg**	**11 51 37.6**	**+0.1**
	23nm,0.9s						
KURK	**Kurchatov**	**2.15**	**117**	⇓Pn	**Pn**	**11 51 05.7**	**0.0**
	0.3nm,0.3s						
KURK				⇑Sn	**Sb**	**11 51 35.8**	**+0.2**
	3.0nm,0.9s						
BVA0	**Borovoye Array**	**3.45**	**294**	⇑Pg	**Pn**	**11 51 23.2**	**-0.4**
	0.3nm,0.5s,baz=108,slow=16,SNR=5.4						
BVA0				⇑Lg	Lg	11 52 10.9	
	2.7nm,0.8s,baz=108,slow=26,SNR=4.8						
BRVK	**Borovoye**	**3.52**	**294**	⇓Pg	**Pn**	**11 51 23.4**	**-1.2**
	0.1nm,0.4s						
BRVK				⇑Lg	Lg	11 52 12.1	
	1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**6.02**	**65**	Pn	**Pn**	**11 51 59.7**	**+0.8**
	0.1nm,0.3s,baz=254,slow=10,SNR=4.2						
ZALV				Lg	Lg	11 53 43.5	
	0.2nm,0.3s,baz=249,slow=29,SNR=2.4 0.7nm,0.5s						
I46RU	**ZALESOVO INFRA** baz=253,slow=346,SNR=5.1	**6.02**	**65**	I	I	12 30 30.0	
MK31	**Makanchi Array**	**6.59**	**136**	⇑Lg	Lg	11 54 01.9	
	1.5nm,0.7s,baz=334,slow=28,SNR=5.2						
MKAR	**Makanchi Array**	**6.59**	**136**	Pn	**Pn**	**11 52 05.1**	**-1.6**
	0.1nm,0.3s,baz=317,slow=9.8,SNR=5.2						
MKAR				Lg	Lg	11 53 53.1	
	0.1nm,0.3s,baz=320,slow=26,SNR=8.2 0.4nm,0.8s						

IDC 17 12:01:02.4±3.4, 10°10S×161°37E, h0km, mb3.5/5, mbtmp3.5/5, MS3.1/6, Error ellipse: s-maj=118.2km s-min=32.0km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.56**	**295**	LR	LR	12 02 17.6	
	comp=Z,3μm,21.1s,baz=184,slow=48						
DZM	**Mont Dzumac**	**12.86**	**158**	LR	LR	12 08 05.3	
	comp=Z,94nm,18.1s,baz=35,slow=33						
PMG	**Port Moresby**	**14.03**	**272**	LR	LR	12 09 27.3	
	comp=Z,205nm,18.0s,baz=126,slow=36						
CTA	**Charters Tower**	**17.64**	**234**	LR	LR	12 10 17.7	
	comp=Z,86nm,18.1s,baz=56,slow=32						
WRA	**Warramunga Arr**	**27.84**	**246**	P	P	12 06 54.2	+0.3
	0.6nm,0.5s,baz=75,slow=9.1,SNR=4.5 0.6nm,0.5s						
GUMO	**Guam**	**28.68**	**325**	LR	LR	12 15 49.5	
	comp=Z,15nm,21.9s,baz=127,slow=31						
ASAR	**Alice Springs**	**29.47**	**239**	P	P	12 07 08.0	-0.4
	0.2nm,0.6s,baz=64,slow=9.9,SNR=5.7						
ASAR				LR	LR	12 18 23.2	
	comp=Z,59nm,20.2s,baz=74,slow=35 0.2nm,0.6s						
KSRS	**Korea Array**	**56.75**	**328**	LR	LR	12 31 13.4	
	comp=Z,8.9nm,21.5s,baz=345,slow=32						
SONM	**Songino Array**	**75.41**	**325**	P	P	12 12 48.7	+0.4
	0.6nm,0.7s,baz=134,slow=4.2,SNR=2.5 0.6nm,0.7s						
ILAR	**Eielson Array**	**84.04**	**20**	P	P	12 13 34.3	-0.3
	0.3nm,0.8s,baz=217,slow=3.9,SNR=2.2 0.3nm,0.8s						
MKAR	**Makanchi Array**	**89.91**	**318**	P	P	12 14 03.6	0.0
	0.1nm,0.3s,baz=106,slow=5.1,SNR=5.3 0.1nm,0.3s						

KRSC 17 12:20:21.5±0.9, 53°68N×167°83E, h43km±23km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.87**	**325**	*eS*	Sn	12 21 15.8	+2.4
SPN	**Mys Shipunski**	**4.71**	**266**	*eP*	Pn	12 21 34.1	+4.1
SPN				*eS*	Sn	12 22 28.1	+4.8
TUMR	**Tumrok**	**4.76**	**293**	*eP*	Pn	12 21 34.6	+3.9
SMAR	**Somma**	**5.41**	**269**	*eP*	Pn	12 21 44.2	+4.3
AVH	**Avacha**	**5.45**	**269**	*eP*	Pn	12 21 44.9	+4.7
KRX	**Arik**	**5.49**	**270**	*eP*	Pn	12 21 45.1	+4.3
KOK	**Koryaka**	**5.51**	**270**	*eP*	Pn	12 21 45.4	+4.4
RUS	**Russkaya**	**5.76**	**261**	*eP*	Pn	12 21 49.1	+4.8
RUS				*eS*	Sn	12 22 54.0	+4.9
GNL	**Ganaly**	**5.88**	**274**	*eP*	Pn	12 21 51.7	+5.5
MTVR	**Mutnovka**	**5.94**	**262**	*eP*	Pn	12 21 51.5	+4.5
MTVR				*eS*	Sn	12 22 58.5	+4.8
KDTR	**Khodutka, Kamc**	**6.21**	**256**	*eS*	Sn	12 23 04.9	+4.6

IDC 17 12:25:56.9±2.0, 4°42S×125°41E, h0km, mb3.0/2, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=168.3km s-min=29.2km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.71**	**151**	P	Pn	12 30 03.8	-1.4
	0.1nm,0.3s,baz=328,slow=12,SNR=6.9 0.3nm,0.4s						
ASAR	**Alice Springs**	**20.81**	**158**	P	P	12 30 40.3	+0.2
	0.3nm,0.6s,baz=340,slow=11,SNR=7.2 0.3nm,0.6s						
MKAR	**Makanchi Array**	**63.62**	**328**	P	P	12 36 30.0	+0.3
	0.2nm,0.7s,baz=139,slow=7.7,SNR=1.1 0.2nm,0.7s						

*IDC **17** 12:30:20.8±2.8, 36°29N×71°09E, h174km±24km, mb3.3/9, mbtmp3.8/15, Error ellipse: s-maj=21.7km s-min=16.3km az=9.0*
*NNC **17** 12:30:28.2±8.4, 36°99N×70°75E, h179km±92km, mb2.9, mpv3.8, Error ellipse: s-maj=71.6km s-min=45.4km az=21.0*

ISC 17 12:30:23.5±0.9, 36°65N±0°08×70°96E±0°07, h188km, n26, σ1s66/32, mb3.5/9, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor** SNR=8.0	**6.21**	**25**	P	**Pn**	**12 31 55.5**	**+1.7**
EKS2	**Erkin-Say** SNR=8.2	**6.39**	**19**	P	**Pn**	**12 31 57.6**	**+1.9**
KK31	**Karatay Array**	**6.46**	**357**	⇓P	**Pn**	**12 31 58.2**	**+1.7**
	5.5nm,0.3s,baz=177,slow=13,SNR=4.3						
KK31				⇑S	**Sn**	**12 33 07.3**	**-2.8**
	30nm,0.8s,baz=185,slow=21,SNR=14						
AAK	**Ala-Archa** SNR=8.1	**6.58**	**23**	P	**Pn**	**12 31 59.9**	**+1.7**
AAK	**Ala-Archa**	**6.58**	**23**	P	**Pn**	**12 31 59.8**	**+1.6**
	6.5nm,0.4s,baz=196,slow=5.8,SNR=28						
AAK				S	**Sn**	**12 33 11.1**	**-1.9**
	9.1nm,0.6s,baz=130,slow=21,SNR=12						
USP	**Ospenovka** SNR=5.8	**7.15**	**21**	P	**Pn**	**12 32 07.0**	**+1.4**
TKM2	**Tokmak 2** SNR=5.8	**7.21**	**28**	P	**Pn**	**12 32 07.8**	**+1.2**
TKM2	**Tokmak 2** 1.5nm,0.5s	**7.21**	**28**	⇓P	**Pn**	**12 32 07.4**	**+0.8**
TKM2				⇑S	**Sn**	**12 33 26.4**	**-1.8**
	5.0nm,0.8s						
GEYT	**Alibeck**	**10.31**	**281**	P	**Pn**	**12 32 46.8**	**-0.2**
	0.8nm,0.3s,baz=118,slow=12,SNR=5.6						
GEYT				S	**Sn**	**12 34 41.6**	**-0.2**
	1.2nm,0.4s,baz=133,slow=6.3,SNR=2.0						
MKAR	**Makanchi Array**	**13.19**	**36**	P	**Pn**	**12 33 24.6**	**+0.9**
	1.0nm,0.8s,baz=225,slow=3.7,SNR=11						
AB31	**Akbulak array**	**14.94**	**331**	⇑P	**Pn**	**12 33 45.7**	**+0.4**
	1.2nm,0.4s,baz=143,slow=12,SNR=53						
AB31				⇓S	**Sn**	**12 36 31.3**	**-0.8**
	0.7nm,0.6s,baz=150,slow=24,SNR=3.8						
KURBB	**Kurchatov Arra**	**14.99**	**19**	P	**P**	**12 33 47.8**	**+0.9**
	0.2nm,0.4s,baz=209,slow=9.1,SNR=1.6						
BVAR	**Borovoye Array**	**16.38**	**359**	P	**Pn**	**12 34 03.8**	**+1.0**
	1.2nm,0.4s,baz=161,slow=13,SNR=13						
AKTO	**Aktyubinsk** 0.4nm,0.3s	**16.64**	**330**	⇑P	**Pn**	**12 34 06.4**	**+0.6**
AKTO				⇑S	**S**	**12 37 05.3**	**-3.5**
	1.5nm,0.9s						
AKTO	**Aktyubinsk**	**16.64**	**330**	P	**Pn**	**12 34 07.6**	**+1.7**
	2.7nm,0.4s,baz=147,slow=5.4,SNR=9.5						
ZALV	**Zalesovo Beam** 1.3nm,0.3s,baz=218,slow=11,SNR=10 1.3nm,0.3s	**19.80**	**25**	P	**P**	**12 34 40.0**	**+0.7**
FINES	**FINESS Array B** 1.3nm,0.8s,baz=108,slow=8.9,SNR=2.8 1.3nm,0.8s	**37.34**	**326**	P	**P**	**12 37 19.6**	**+2.1**
ARCES	**ARCESS Array B** 2.2nm,0.9s,baz=106,slow=8.6,SNR=3.7 2.2nm,0.9s	**40.99**	**338**	P	**P**	**12 37 49.4**	**+1.7**
HFS	**Hagfors** 1.5nm,0.5s,baz=103,slow=10,SNR=9.1 1.5nm,0.5s	**42.93**	**322**	P	**P**	**12 38 05.1**	**+1.8**
NB2	**NORSAR Subarra** comp=Z,0.3nm,0.5s,baz=92,slow=7.9	**44.24**	**323**	P	**P**	**12 38 15.2**	**+1.3**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.7s,baz=103,slow=6.0,SNR=4.4 comp=Z,0.9nm,0.7s	**44.24**	**323**	P	**P**	**12 38 15.1**	**+1.2**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.5s,baz=47,slow=6.9,SNR=3.6	**65.69**	**269**	P	**P**	**12 40 47.5**	**-0.6**
ILAR	**Eielson Array** comp=Z,0.3nm,0.9s,baz=320,slow=5.2,SNR=2.6 comp=Z,0.3nm,0.9s	**74.65**	**16**	P	**P**	**12 41 41.4**	**-0.3**
YKA	**Yellowknife Ar** comp=Z,0.5nm,0.8s,baz=348,slow=5.4,SNR=11 comp=Z,0.5nm,0.8s	**81.10**	**3**	P	**P**	**12 42 18.0**	**+0.7**
WRA	**Warramunga Arr** comp=Z,0.5nm,0.7s,baz=325,slow=5.1,SNR=6.1 comp=Z,0.5nm,0.7s	**82.10**	**122**	P	**P**	**12 42 21.1**	**-2.1**
ASAR	**Alice Springs** comp=Z,0.6nm,0.7s,baz=311,slow=5.0,SNR=11 comp=Z,0.6nm,0.7s	**84.37**	**125**	P	**P**	**12 42 32.0**	**-2.7**

*KMA **17** 12:31:18.9±0.1, 36°09N×129°33E, h9km±1km, Error ellipse: s-maj=1.2km s-min=0.8km az=106.0*
*JMA **17** 12:31:18.8±0.9, 36°N±3°×129°E±°, h23km, MV3.0/6, S KOREAN PENINSULA REG*
*KEA **17** 12:31:18.1, 36°09N×129°21E, h18km, ML2.9/3*

ISC 17 12:31:18.4±1.0, 36°08N±0°03×129°34E±0°04, h8km±7km, n18, σ1s20/28, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSPHA	**Pohang** SNR=2110	**0.12**	**13**	P	**Pb**	**12 31 21.6**	**+0.5**
KSPHA				S	**Sb**	**12 31 23.5**	**+0.6**
YOCB	**Yeongcheon** SNR=65	**0.33**	**253**	P	**Pg**	**12 31 25.5**	**+0.6**
KSUSN	**Ulsan** SNR=103	**0.41**	**205**	P	**Pg**	**12 31 27.1**	**+0.7**
JEJB	**Jeongja** SNR=57	**0.45**	**169**	P	**Pg**	**12 31 27.7**	**+0.7**
YODB	**Yeongdeok** SNR=267	**0.46**	**7**	P	**Pg**	**12 31 27.6**	**+0.3**
YODB				P	**Pg**	**12 31 27.6**	**+0.3**
	SNR=267						
KSADO	**Andong** SNR=235	**0.46**	**317**	P	**Pg**	**12 31 27.8**	**+0.4**
KSDAG	**Daegu** SNR=406	**0.47**	**229**	P	**Pg**	**12 31 28.1**	**+0.6**
KSDAG				P	**Pg**	**12 31 28.1**	**+0.6**
	SNR=406						
YEYB	**Yeongyang** SNR=99	**0.58**	**340**	P	**Pg**	**12 31 30.0**	**+0.3**
YEYB				P	**Pg**	**12 31 30.0**	**+0.3**
	SNR=99						
EUSB	**Uiseong** SNR=91	**0.59**	**298**	P	**Pg**	**12 31 30.1**	**+0.2**
EUSB				P	**Pg**	**12 31 30.1**	**+0.2**
	SNR=91						
GUWB	**Gunwi** SNR=272	**0.61**	**280**	P	**Pg**	**12 31 30.5**	**+0.2**
GUWB				P	**Pg**	**12 31 30.5**	**+0.2**
	SNR=272						
KSDAU	**Deagu-acc** SNR=40	**0.61**	**252**	P	**Pg**	**12 31 30.6**	**+0.4**
KSULJ	**Uljin** SNR=829	**0.63**	**5**	P	**Pg**	**12 31 30.7**	**+0.2**
KSULJ				P	**Pg**	**12 31 30.7**	**+0.2**
	SNR=829						
JTU	**Tsushima**	**1.55**	**178**	*eP*	**Pb**	**12 31 47.0**	**-0.4**
JTU				*eS*	**Sb**	**12 32 07.4**	**+0.2**
JTSM	**Tsushimamitsus**	**1.73**	**179**	*eP*	**Pb**	**12 31 50.4**	**-0.2**
JTSM				*eS*	**Sb**	**12 32 13.1**	**+0.6**
JHGM	**Hagimishima**	**1.96**	**131**	*eS*	**Sn**	**12 32 16.3**	**-0.4**
WOSN	**Wonsan**	**3.44**	**334**	Sg	**Sb**	**12 33 04.5**	**+3.0**
WOSN				AML	AML		
	comp=N,27nm,0.2s						
WOSN				AML	AML		
	comp=E,22nm,0.1s						
WOSN				AML	AML		
	comp=Z,14nm,0.1s						
HJU	**Haeju**	**3.49**	**305**	Pg	**Pb**	**12 32 20.2**	**-0.3**
HJU				Sg	**Sb**	**12 33 05.5**	**+2.4**
HJU				AML	AML		
	comp=N,91nm,0.3s						
HJU				AML	AML		
	comp=E,51nm,0.8s						
HJU				AML	AML		
	comp=Z,36nm,0.4s						
PYS	**Pyongsong**	**4.20**	**320**	Sg	**Sg**	**12 33 29.5**	**-3.9**
PYS				AML	AML		
	comp=N,39nm,0.4s						
PYS				AML	AML		
	comp=E,29nm,0.3s						
PYS				AML	AML		
	comp=Z,31nm,0.4s						

**TUN 17 12:50:30.4, 34°76N×8°10E, h36km±7km, MD

comp=E,7.0nm,0.3s,comp=N,8.0nm,0.6s
JTH Tanohata 1.17 335 P **Pn 12 55 44.6 0.0**
JTH eS **Sn 12 55 59.4 0.0**
JOU Okura 1.54 251 *i* P **Pn 12 55 50.0 +0.3**
JOU eS **Sn 12 56 09.2 +0.7**
JRG Rokugo 1.55 290 ⇓P **Pn 12 55 50.4 +0.6**
JRG ⇓eS **Sn 12 56 09.8 +1.0**
JANG Nango 1.68 333 P **Pn 12 55 51.1 -0.5**
JYK Kaneyama 1.68 272 P **Pn 12 55 52.1 +0.4**
JMM Marumori 1.69 234 P **Pn 12 55 51.5 -0.3**
JMM eS **Sn 12 56 12.1 -0.1**
MJAR Matsushiro Arr 4.14 237 P **Pn 12 56 27.1 +1.7**
comp=N,0.6nm,0.3s,baz=86,slow=32,SNR=24
MJAR S Sn 12 57 23.8 +11
comp=N,2.6nm,0.4s,baz=80,slow=10,SNR=4.3
comp=N,5.3nm,0.5s
ASAJ Asahikawa 5.23 1 P **Pn 12 56 41.1 +0.7**
comp=N,1.5nm,0.3s,baz=184,slow=19,SNR=15
ASAJ S **Sn 12 57 38.3 -1.0**
comp=N,7.7nm,0.5s,baz=104,slow=32,SNR=1.8
comp=N,8.8nm,0.6s
JHJ Hachijo jima 2 6.16 202 LR LR 12 58 58.6
comp=N,772nm,19.3s,baz=110,slow=35
USRK Ussuriysk Ar. 9.51 307 P **Pn 12 57 41.5 +2.5**
comp=N,0.2nm,0.3s,baz=125,slow=14,SNR=5.5
USRK LR LR 13 01 35.9
comp=N,34nm,18.2s,baz=142,slow=39
comp=N,4.0nm,0.7s
KSRS Korea Array 11.58 267 P **Pn 12 58 08.1 +0.8**
comp=N,0.1nm,0.3s,baz=78,slow=16,SNR=2.9
KSRS LR LR 13 02 32.6
comp=N,24nm,21.9s,baz=65,slow=37
comp=N,1.2nm,0.8s
KLR Kul'dur 12.90 327 P **Pn 12 58 25.5 0.0**
comp=N,0.1nm,0.3s,baz=135,slow=5.7,SNR=2.4
KLR LR LR 13 03 11.4
comp=N,41nm,19.1s,baz=108,slow=36
comp=N,0.3nm,0.3s
MA2 Magadan 21.37 12 P **P 13 00 08.4 +0.1**
comp=N,1.5nm,0.3s,baz=199,slow=7.0,SNR=5.3
comp=N,1.5nm,0.3s
SEY Seymchan 24.81 11 P **P 13 00 43.4 +0.7**
comp=N,1.2nm,0.7s,baz=187,slow=17,SNR=7.1
comp=N,1.2nm,0.7s
SONM Songino Array 27.53 301 P **P 13 01 07.2 -0.3**
comp=N,0.5nm,0.7s,baz=88,slow=7.7,SNR=2.3
comp=N,0.5nm,0.7s
H11N2 WAKE ISLAND Hy 28.42 125 T T 13 31 43.3
baz=317,slow=75,SNR=122
H11N1 WAKE ISLAND Hy 28.43 125 T T 13 31 44.1
baz=317,slow=75,SNR=122
H11N3 WAKE ISLAND Hy 28.44 125 T T 13 31 44.7
baz=317,slow=75,SNR=117
H11S1 WAKE ISLAND Hy 29.21 127 T T 13 32 39.7
baz=318,slow=76,SNR=18
H11S3 WAKE ISLAND Hy 29.21 127 T T 13 32 39.9
baz=318,slow=76,SNR=31
H11S2 WAKE ISLAND Hy 29.22 127 T T 13 32 44.6
baz=318,slow=76,SNR=16
ZALV Zalesovo Beam 41.34 311 P **P 13 03 05.8 -0.5**
comp=N,0.8nm,0.5s,baz=91,slow=8.6,SNR=6.3
comp=N,0.8nm,0.5s
MKAR Makanchi Array 43.90 301 P **P 13 03 26.8 -0.4**
comp=N,0.6nm,0.7s,baz=87,slow=12,SNR=6.4
comp=N,0.6nm,0.7s
KURBB Kurchatov Arra 45.57 307 P **P 13 03 40.1 -0.3**
comp=N,1.0nm,0.4s,baz=80,slow=8.5,SNR=13
comp=N,1.0nm,0.4s
ILAR Eielson Array 47.47 33 P **P 13 03 55.5 +0.5**
comp=N,1.2nm,0.7s,baz=265,slow=5.9,SNR=13
comp=N,1.2nm,0.7s
BVAR Borovoye Array 49.99 311 P **P 13 04 13.7 -0.9**
comp=N,0.5nm,0.5s,baz=75,slow=7.5,SNR=2.9
comp=N,0.5nm,0.5s
ARU Arti 55.56 318 LR LR 13 30 33.0
comp=N,52nm,18.9s,baz=252,slow=38
WRA Warramunga Arr 59.02 189 P **P 13 05 19.4 -0.9**
comp=N,1.0nm,0.4s,baz=5.5,slow=7.1,SNR=25
comp=N,1.0nm,0.4s
YKA Yellowknife Ar 61.77 31 P **P 13 05 38.9 +0.2**
comp=N,0.2nm,0.5s,baz=301,slow=6.3,SNR=5.3
comp=N,0.2nm,0.5s
ARCES ARCESS Array B 62.58 339 P **P 13 05 44.1 +0.1**
comp=N,4.6nm,1.1s,baz=53,slow=8.0,SNR=2.2
comp=N,4.6nm,1.1s
ASAR Alice Springs 62.74 189 P **P 13 05 45.2 -0.4**
comp=N,0.5nm,0.6s,baz=14,slow=10,SNR=11
comp=N,0.5nm,0.6s
NVAR Mina Array Bea 73.19 54 P **P 13 06 52.2 +0.6**
comp=N,0.1nm,0.4s,baz=294,slow=6.8,SNR=3.7
comp=N,0.1nm,0.4s
PDAR Pinedale Array 75.75 46 P **P 13 07 05.4 -1.0**
comp=N,0.3nm,0.6s,baz=292,slow=3.7,SNR=2.9
comp=N,0.3nm,0.6s
TXAR Lajitas Array 88.31 53 P **P 13 08 12.6 +0.3**
comp=N,0.2nm,0.6s,baz=300,slow=3.6,SNR=2.6
comp=N,0.2nm,0.6s

IDC 17 13:22:33.9±269.0, 67.83N×36.58E, h0km, Error ellipse: s-maj=126.5km s-min=108.6km az=43.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**6.73**	**289**	I	I	14 00 10.0	
baz=92,slow=334,SNR=0.9							
I31KZ	**AKTYUBINSK INF**	**20.44**	**138**	I	I	15 22 30.0	
baz=336,slow=337,SNR=0.7							
I46RU	**ZALESOVO INFRA**	**26.40**	**98**	I	I	16 05 10.0	
baz=321,slow=335,SNR=1.0							
I18DK	**QAANAAQ INFRAS**	**28.33**	**334**	I	I	16 17 40.0	
baz=43,slow=346,SNR=1.3							

IDC 17 13:23:40.6±2.1, 2.23N×125.05E, h0km, mb3.4/4, mbtmp3.4/4, MS3.3/1, Error ellipse: s-maj=272.4km s-min=23.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.85**	**158**	P	P	13 28 55.5	-0.2
0.7nm,0.5s,baz=337,slow=10,SNR=5.0							
0.7nm,0.5s							
PMG	**Port Moresby**	**24.88**	**118**	LR	LR	13 40 28.0	
comp=Z,61nm,18.6s,baz=171,slow=40							
ASAR	**Alice Springs**	**27.15**	**162**	P	P	13 29 26.1	+0.3
0.2nm,0.9s,baz=338,slow=8.4,SNR=1.6							
0.2nm,0.9s							
MKAR	**Makanchi Array**	**57.85**	**327**	P	P	13 33 33.2	-1.0
0.1nm,0.4s,baz=118,slow=7.7,SNR=5.7							
0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**62.11**	**328**	P	P	13 34 04.4	+1.1
0.5nm,0.5s,baz=127,slow=6.2,SNR=2.0							
0.5nm,0.5s							

IDC 17 13:28:24.2±3.5, 19.14S×173.86W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=184.8km s-min=27.8km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.63**	**255**	P	P	13 37 10.2	-0.1
0.5nm,0.6s,baz=94,slow=7.1,SNR=11							
0.5nm,0.6s							
WRA	**Warramunga Arr**	**48.66**	**260**	P	P	13 37 10.2	-0.3
0.5nm,0.6s,baz=96,slow=7.9,SNR=9.4							
0.5nm,0.6s							
NVAR	**Mina Array Bea**	**77.40**	**42**	P	P	13 40 20.8	-0.7
0.4nm,0.7s,baz=225,slow=8.9,SNR=4.2							
0.4nm,0.7s							
ILAR	**Eielson Array**	**86.18**	**11**	P	P	13 41 07.7	+0.7
0.3nm,0.6s,baz=222,slow=5.8,SNR=10							
0.3nm,0.6s							

IDC 17 13:31:03.9±318.0, 68.13N×36.71E, h0km, Error ellipse: s-maj=133.1km s-min=126.0km az=178.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**6.69**	**286**	I	I	14 11 10.0	
0.1nm,0.5s,baz=89,slow=332,SNR=5.5							
I31KZ	**AKTYUBINSK INF**	**20.64**	**139**	I	I	15 32 20.0	
baz=336,slow=336,SNR=1.4							
I46RU	**ZALESOVO INFRA**	**26.40**	**98**	I	I	16 13 04.0	
baz=321,slow=341							

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*JMA **17** 13:31:18.8±0.4,34.°N±1.°×14.°2E±.°, h41km±3km, MV3.1/32, FAR SE OFF BOSO PEN*
*IDC **17** 13:31:25.3±2.8,34.°11N×141.°45E, h66km±23km, mb3.2/6, mbtmp3.5/8, Error ellipse: s-maj=26.5km s-min=12.2km az=91.0*
ISC 17 13:31:20.7±1.0, 34.°08N±0.°06×141.°51E±0.°09, h24km, n17, σ0.96/21, mb3.5/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.72**	**323**	*e*P	**Pn**	**13 31 34.6**	**-0.2**
BSO3	**Boso 3**	**1.09**	**311**	*e*P	**Pb**	**13 31 40.9**	**+0.1**
BSO4	**Boso 4**	**1.32**	**313**	P	**Pb**	**13 31 44.5**	**-0.3**
JKUC	**kamogawauchiur**	**1.52**	**315**	P	**Pn**	**13 31 46.7**	**+0.3**
JKUC				*e*S	**Sb**	**13 32 07.4**	**+0.3**
JCN	**Nagara**	**1.71**	**321**	*e*P	**Pn**	**13 31 50.0**	**+1.0**
JHJ	**Hachijo jima 2**	**1.73**	**237**	P	**Pb**	**13 31 51.6**	**-0.1**
129nm,0.3s,baz=61,slow=19,SNR=2.5							
JHJ				S	**Sb**	**13 32 14.2**	**+1.1**
186nm,0.3s,baz=72,slow=22,SNR=2.9							
JSMT	**Sammumatsuo**	**1.78**	**331**	*e*S	**Sn**	**13 32 09.8**	**-2.1**
JIM2	**Oshima 3**	**1.83**	**291**	*e*P	**Pn**	**13 31 51.0**	**+0.3**
JIM2				*e*S	**Sb**	**13 32 15.7**	**-0.2**
MJAR	**Matsushiro Arr**	**3.65**	**313**	P	**Pn**	**13 32 16.8**	**+1.2**
4.0nm,0.4s,baz=128,slow=14,SNR=17							
MJAR				S	**Sn**	**13 32 59.8**	**+1.9**
2.7nm,0.4s,baz=162,slow=16,SNR=4.1							
KLR	**Kul'dur**	**16.77**	**337**	P	**Pn**	**13 35 13.6**	**-0.3**
1.1nm,0.7s,baz=235,slow=14,SNR=3.7							
SONM	**Songino Array**	**29.58**	**308**	P	**P**	**13 37 23.8**	**0.0**
0.3nm,0.4s,baz=102,slow=8.7,SNR=1.9							
0.3nm,0.4s							
SHEM	**Shemya Is, Ala**	**29.77**	**41**	P	**P**	**13 37 26.6**	**+1.5**
181nm,1.2s,baz=317,slow=13,SNR=4.1							
CMAR	**Chiang Mai Arr**	**40.91**	**259**	P	**P**	**13 39 00.1**	**-1.2**
1.0nm,0.2s,baz=49,slow=9.7,SNR=1.4							
1.0nm,0.2s							
MKAR	**Makanchi Array**	**45.80**	**305**	P	**P**	**13 39 40.5**	**0.0**
0.3nm,0.7s,baz=99,slow=7.7,SNR=2.9							
0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**47.92**	**310**	P	**P**	**13 39 56.3**	**-0.6**
0.4nm,0.4s,baz=83,slow=7.9,SNR=4.7							
0.4nm,0.4s							
WRA	**Warramunga Arr**	**54.16**	**188**	P	**P**	**13 40 43.4**	**-0.7**
0.3nm,0.6s,baz=6.3,slow=7.7,SNR=1.5							
0.3nm,0.6s							
ASAR	**Alice Springs**	**57.88**	**188**	P	**P**	**13 41 10.3**	**-0.3**
0.2nm,0.7s,baz=2.0,slow=6.8,SNR=1.8							
0.2nm,0.7s							

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*IDC **17** 13:32:05.0±4.3, 43.°32N×146.°86E, h0km, mb3.3/3, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=118.2km s-min=27.9km az=178.0*
*SKHL **17** 13:32:06.9±0.0, 43.°30N×146.°90E, h38km±2km, mb5.0/3*
*MOS **17** 13:32:06.5±0.6, 43.°31N×146.°80E, h23km, mb4.6/1, Error ellipse: s-maj=19.9km s-min=12.7km az=110.6*
*JMA **17** 13:32:06.0±0.3, 43.°3N±1.°0×14.°7E±.°, h32km±2km, MV3.7/38, E OFF HOKKAIDO*
JMA Felt I J1 at E OFF HOKKAIDO .
ISC 17 13:32:05.8±1.6, 43.°26N±0.°06×146.°78E±0.°05, h13km±9km, n35, σ1.°17/48, mb3.3/3, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.61**	**3**	*i* P	**Pb**	**13 32 18.4**	**+0.1**
SHO				*i* S	**Sb**	**13 32 27.0**	**+0.2**
SHO				pmax	pmax		
comp=Z,999nm,0.1s							
SHO				smax	smax		
comp=N,4μm,0.1s							
SHO				smax	smax		
comp=E,4μm,0.2s							
SHO	**Shikotan**	**0.61**	**3**	*i* P	**Pb**	**13 32 18.4**	**+0.1**
SHO				AMB	AMB	13 32 18.7	
comp=E,1μm,0.3s							
SHO				*i* S	**Sb**	**13 32 27.0**	**+0.2**
SHO				A	A	13 32 28.3	
comp=E,4μm,0.2s							
SHO				A	A	13 32 28.3	
comp=E,4μm,0.2s							
NEM2	**Nemuro 2**	**0.77**	**278**	*e*P	**Pg**	**13 32 20.7**	**0.0**
NEM2				*e*S	**Sg**	**13 32 31.2**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.78**	**278**	⇓*i*PN	**Pg**	**13 32 20.7**	**-0.1**
NMR				*i* S	**Sg**	**13 32 31.1**	**0.0**
NMR	**Nemuro--Hokkai**	**0.78**	**278**	*i* P	**Pg**	**13 32 20.8**	**-0.1**
NMR				*i* S	**Sg**	**13 32 31.2**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**1.02**	**319**	*d* iPN	**Pb**	**13 32 24.6**	**-0.8**
YUK				*i* S	**Sb**	**13 32 37.5**	**-1.2**
YUK				pmax	pmax		
comp=N,163nm,0.2s							
YUK				pmax	pmax		
comp=Z,2μm,0.2s							
YUK				pmax	pmax		
comp=E,297nm,0.1s							
YUK				smax	smax		
comp=N,4μm,0.4s							
YUK				smax	smax		
comp=E,10μm,0.4s							
YUK				smax	smax		
comp=E,7μm,0.8s							
YUK				smax	smax		
comp=N,9μm,1.2s							
YUK	**Yuzh-Kuril'sk**	**1.02**	**319**	*i* P	**Pb**	**13 32 24.6**	**-0.8**
YUK				AMB	AMB	13 32 25.2	
comp=N,1μm,0.2s							
YUK				*i* S	**Sb**	**13 32 37.4**	**-1.2**
YUK				A	A	13 32 39.1	
comp=N,3μm,0.5s							
YUK				A	A	13 32 39.1	
comp=N,10μm,0.5s							
JKHN	**Kushirohamanak**	**1.20**	**262**	P	**Pn**	**13 32 28.0**	**-0.3**
JKHN				*e*S	**Sb**	**13 32 44.1**	**+0.3**
JRA	**Rausu**	**1.38**	**300**	*e*P	**Pn**	**13 32 30.0**	**-0.8**
JRA				*e*S	**Sn**	**13 32 47.8**	**-1.2**
JNSB	**Nemuroshibetsu**	**1.39**	**292**	*e*P	**Pn**	**13 32 30.0**	**-0.9**
JNSB				*e*S	**Sn**	**13 32 47.9**	**-1.2**
RUSJ	**Misakicho**	**1.40**	**308**	*e*PN	**Pn**	**13 32 30.9**	**-0.1**
RUSJ				*i* S	**Sb**	**13 32 50.4**	**+1.0**
AKK	**Akkeshi**	**1.44**	**261**	*e*P	**Pn**	**13 32 30.6**	**-1.0**
JNK	**Nakash**	**1.54**	**283**	*e*P	**Pn**	**13 32 31.7**	**-1.2**
JNK				*e*S	**Sn**	**13 32 50.5**	**-2.3**
JAK	**Akkeshi**	**1.55**	**261**	*e*P	**Pn**	**13 32 32.3**	**-0.8**
KUR	**Kuril'sk**	**2.12**	**21**	*e*PN	**Pn**	**13 32 40.9**	**0.0**
KUR				*e*S	**Sn**	**13 33 06.7**	**-0.4**
KUR				pmax	pmax		
comp=Z,98nm,0.5s							
KUR				pmax	pmax		
comp=N,57nm,0.8s							
KUR				pmax	pmax		
comp=E,46nm,0.2s							
KUR				smax	smax		
comp=N,177nm,0.2s							
KUR				smax	smax		
comp=E,133nm,0.2s							
KUR	**Kuril'sk**	**2.12**	**21**	*e*P	**Pn**	**13 32 39.5**	**-1.4**
KUR				AMB	AMB	13 32 48.3	
comp=E,110nm,0.5s							
KUR				*e*S	**Sn**	**13 33 03.9**	**-3.2**
KUR				A	A	13 33 10.9	
comp=E,190nm,0.2s							
KUR				A	A	13 33 10.9	
comp=E,160nm,0.2s							
JOB	**Onbets**	**2.19**	**262**	*e*P	**Pn**	**13 32 41.6**	**-0.3**
JAR	**Ashorobuto**	**2.20**	**272**	*e*P	**Pn**	**13 32 41.5**	**-0.6**
JAR				*e*S	**Sn**	**13 33 07.2**	**-1.9**
JTKR	**Abashiri--Toko**	**2.20**	**290**	*e*P	**Pn**	**13 32 42.3**	**+0.2**
JCH	**Churui**	**2.59**	**257**	*e*P	**Pn**	**13 32 47.3**	**-0.2**
JCH				*e*S	**Sn**	**13 33 17.8**	**-1.0**
JKA	**Kamikawa-asahi**	**3.15**	**287**	*e*P	**Pn**	**13 32 57.0**	**+1.9**
ASAJ	**Asahikawa**	**3.15**	**287**	PN	**Pn**	**13 32 57.0**	**+1.8**
ASAJ						13 33 35.0	
ASAJ	**Asahikawa**	**3.15**	**287**	Pn	**Pn**	**13 32 57.0**	**+1.8**
comp=E,1.4nm,0.3s,baz=138,slow=7.0,SNR=13							
ASAJ				Sn	**Sn**	**13 33 35.0**	**+2.3**
comp=E,2.0nm,0.3s,baz=53,slow=22,SNR=1.6							
comp=E,5.8nm,0.5s							
YSS	**Yuzh-Sakhalins**	**4.66**	**324**	*e*PN	**Pn**	**13 33 17.2**	**+1.3**
YSS				*e*S	**Sn**	**13 34 11.3**	**+1.5**
YSS				pmax	pmax		
comp=Z,10.0nm,1.0s							
YSS				smax	smax		
comp=N,10.0nm,1.1s							
YSS				smax	smax		
comp=E,10.0nm,1.0s							
YSS	**Yuzh-Sakhalins**	**4.66**	**324**	*e*P	**Pn**	**13 33 15.8**	**-0.1**
YSS				AMB	AMB	13 33 20.5	
comp=E,20nm,0.7s							
YSS				*e*S	**Sn**	**13 34 08.3**	**-1.5**
YSS				A	A	13 34 15.1	
comp=E,40nm,0.4s							
YSS				A	A	13 34 15.1	
comp=E,10.0nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.91**	**138**	T	T	14 08 42.6	
baz=329,slow=75,SNR=143							
H11N1	**WAKE ISLAND Hy**	**28.93**	**138**	T	T	14 08 40.7	
baz=329,slow=75,SNR=148							
H11N3	**WAKE ISLAND Hy**	**28.93**	**138**	T	T	14 08 44.4	
baz=329,slow=75,SNR=132							
H11S1	**WAKE ISLAND Hy**	**29.87**	**140**	T	T	14 09 51.0	
baz=330,slow=76,SNR=315							
H11S3	**WAKE ISLAND Hy**	**29.87**	**140**	T	T	14 09 53.9	
baz=330,slow=76,SNR=307							
H11S2	**WAKE ISLAND Hy**	**29.88**	**140**	T	T	14 09 50.4	
baz=330,slow=76,SNR=264							
ILAR	**Eielson Array**	**42.04**	**36**	P	**P**	**13 39 56.9**	**+0.2**
comp=E,0.2nm,0.5s,baz=267,slow=7.9,SNR=6.4							
comp=E,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**56.35**	**33**	P	**P**	**13 41 47.0**	**+0.9**
YKA	**Yellowknife Ar**	**56.35**	**33**	P	**P**	**13 41 47.0**	**+0.9**
comp=E,0.3nm,0.9s,baz=301,slow=6.8,SNR=4.6							
comp=E,0.3nm,0.9s							
TXAR	**Lajitas Array**	**83.14**	**56**	P	**P**	**13 44 32.4**	**+0.6**
comp=E,0.2nm,0.6s,baz=284,slow=3.5,SNR=4.3							
comp=E,0.2nm,0.6s							

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*SJA **17** 13:38:31.6±0.7, 31.°46S×72.°05W, h10km, ML3.7, MW3.4*
*IDC **17** 13:38:35.1±5.9, 30.°53S×70.°83W, h0km, mb5.0/1, mbtmp4.4/2, ML4.2/1, Error ellipse: s-maj=475.2km s-min=61.2km az=174.0*
*GUC **17** 13:38:36.9±0.8, 31.°51S×71.°66W, h33km±3km, ML3.8*
ISC 17 13:38:34.2±1.7, 31.°46S±0.°02×71.°74W±0.°05, h12km±11km, n62, σ1.°38/80, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.69**	**68**	*e*P	**Pn**	**13 38 49.7**	**-0.2**
CO02				*e*S	**Sn**	**13 39 02.7**	**+2.2**
CO02				IAML		13 39 02.9	
comp=Z,2μm,0.6s							
CO02	**Combarbal**	**0.69**	**68**	⇓*i*P	**Pn**	**13 38 49.6**	**-0.2**
CO02				*i* S	**Sb**	**13 38 58.1**	**+0.4**
CO02				IAML		13 39 04.2	
comp=N,7μm,0.2s							
CO06	**Fray Jorge**	**0.79**	**7**	⇓*i*P	**Pn**	**13 38 52.0**	**+0.8**
CO06				*i* S	**Sn**	**13 39 02.8**	**-0.1**
CO03	**El Pedregal**	**1.10**	**56**	*e*P	**Pn**	**13 38 56.2**	**+0.7**
CO03				IAML		13 39 16.8	
comp=Z,621nm,0.8s							
CO03	**El Pedregal**	**1.10**	**56**	⇓*i*P	**Pn**	**13 38 56.0**	**+0.5**
CO03				*i* S	**Sn**	**13 39 10.0**	**-0.7**
VA06	**Catapilco**	**1.16**	**161**	*e*P	**Pb**	**13 38 56.5**	**+0.3**
VA06				*i* S	**Sb**	**13 39 10.6**	**-0.6**
VA06				IAML		13 39 13.1	
comp=N,6μm,0.2s							
GO04	**Tololo Observa**	**1.52**	**33**	*e*P	**Pb**	**13 39 02.8**	**+0.3**
GO04				*e*S	**Sg**	**13 39 25.1**	**+1.9**
GO04				IAML		13 39 26.7	
comp=Z,2μm,0.4s							
CO05	**La Serena**	**1.60**	**16**	*e*P	**Pb**	**13 39 04.1**	**+0.5**
ROCH	**El Roble**	**1.63**	**158**	*e*P	**Pn**	**13 39 03.7**	**+0.7**
ROCH				*i* S	**Sn**	**13 39 22.8**	**-1.2**
ROCH				IAML		13 39 28.6	
comp=N,1μm,0.2s							
VA03	**San Esteban**	**1.65**	**142**	*e*P	**Pb**	**13 39 04.7**	**+0.2**
VA03				*e*S	**Sg**	**13 39 26.8**	**-0.4**
VA03				IAML		13 39 28.7	
comp=Z,1μm,0.2s							
VA03	**San Esteban**	**1.65**	**142**	*e*P	**Pb**	**13 39 04.5**	**-0.1**
VA03				*i* S	**Sn**	**13 39 24.4**	**+0.2**
VA03				IAML		13 39 27.9	
comp=E,3μm,0.2s							
MT02	**Curacav**	**1.86**	**164**	*e*P	**Pn**	**13 39 06.5**	**+0.6**
MT02				*e*S	**Sg**	**13 39 34.1**	**-0.1**
MT02	**Curacav**	**1.86**	**164**	⇑*e*P	**Pn**	**13 39 06.5**	**+0.6**
PEL	**Peldehue**	**1.90**	**152**	*e*P	**Pn**	**13 39 07.8**	**+1.3**
PEL				*i* S	**Sn**	**13 39 31.4**	**+0.9**
CO01	**Juntas del Tor**	**2.05**	**44**	*e*P	**Pb**	**13 39 11.6**	**+0.1**
CO01				*e*S	**Sg**	**13 39 38.9**	**-1.4**
CO01				IAML		13 39 40.2	
comp=Z,401nm,0.6s							
CO01	**Juntas del Tor**	**2.05**	**44**	⇑*e*P	**Pb**	**13 39 11.4**	**-0.2**
CO01				*i* S	**Sb**	**13 39 37.4**	**+0.2**
CO01				IAML		13 39 40.4	
comp=E,448nm,0.2s							
MT10	**Hacienda Santa**	**2.08**	**151**	⇑*e*P	**Pn**	**13 39 10.8**	**+1.8**
MT10				*i* S	**Sn**	**13 39 35.5**	**+0.6**
MT10				IAML		13 39 44.6	
comp=N,2μm,0.5s							
MT05	**Renca**	**2.10**	**156**	*e*P	**Pn**	**13 39 10.9**	**+1.6**
MT05				*e*P	**Pn**	**13 39 10.9**	**+1.6**
MT05				*e*S	**Sg**	**13 39 41.2**	**-0.7**
MT05				IAML		13 39 44.6	
comp=Z,476nm,1.0s							
MT05	**Renca**	**2.10**	**156**	*e*P	**Pn**	**13 39 10.8**	**+1.4**
RTLS	**Leoncito**	**2.11**	**100**	*e*P	**Pb**	**13 39 13.3**	**+0.7**
RTLS				IAML		13 39 49.6	
comp=Z,434nm,0.5s							
MT14	**Cerro Cal¡n**	**2.18**	**152**	*e*P	**Pn**	**13 39 12.2**	**+1.8**
MT14				*i* S	**Sn**	**13 39 38.8**	**+1.4**
MT14				IAML		13 39 48.3	
comp=E,1μm,0.8s							
FCH	**Farellones**	**2.23**	**147**	*e*P	**Pn**	**13 39 12.8**	**+1.5**
MT03	**Universidad Ad**	**2.28**	**153**	*e*P	**Pn**	**13 39 13.5**	**+1.8**
MT03				*e*S	**Sb**	**13 39 45.5**	**+2.0**
MT03				IAML		13 39 50.5	
comp=Z,437nm,0.1s							
AROD	**Rodeo**	**2.34**	**57**	*e*P	**Pb**	**13 39 17.6**	**+1.0**
AROD				*e*S	**Sg**	**13 39 50.7**	**+1.2**
MT15	**Las Vizcachas**	**2.37**	**154**	*e*P	**Pn**	**13 39 14.2**	**+1.2**
MT01	**Popeta**	**2.43**	**170**	*e*P	**Pn**	**13 39 14.7**	**+0.9**
MT01				*e*S	**Sb**	**13 39 49.7**	**+1.8**
ACCO	**Cerro Coronel**	**2.46**	**70**	*e*P	**Pb**	**13 39 19.2**	**+0.7**
ACCO				*e*S	**Sg**	**13 39 54.2**	**+0.9**
ACDV	**Cuesta del Vie**	**2.60**	**61**	*e*P	**Pb**	**13 39 20.6**	**-0.2**
ACDV				*e*S	**Sg**	**13 39 58.2**	**+0.5**
ACDV				IAML		13 40 06.4	
comp=Z,119nm,0.8s							
LCO	**Las Campanas**	**2.60**	**21**	*e*P	**Pn**	**13 39 18.0**	**+1.6**
LCO				*e*S	**Sb**	**13 39 53.5**	**+0.5**
LCO				IAML		13 40 01.5	
comp=Z,963nm,0.4s							
BO04	**La Punta**	**2.69**	**160**	*e*P	**Pn**	**13 39 18.9**	**+1.4**
ASAL	**Salagasta**	**2.71**	**115**	*e*P	**Pb**	**13 39 22.8**	**0.0**
ASAL				*e*S	**Sg**	**13 39 59.9**	**-1.6**
RTLL	**Cerro Villicun**	**2.80**	**88**	*e*P	**Pb**	**13 39 22.6**	**-1.5**
AC05	**El Transito**	**2.91**	**26**	*e*P	**Pn**	**13 39 22.5**	**+2.0**
AC05				*e*S	**Sn**	**13 39 56.4**	**+1.0**
AC05				IAML		13 40 07.3	
comp=Z,121nm,0.3s							
AC05	**El Transito**	**2.91**	**26**	*e*P	**Pn**	**13 39 23.2**	**+2.7**
AAGR	**Agrelo**	**2.95**

GO05	**Huala**	**3.54**	**182**	*eP*	**Pn**	**13 39 29.6**	**+0.5**
GO05				*eS*	**Sg**	**13 40 26.9**	**-1.1**
GO05				IAML		13 40 32.7	
	comp=Z,67nm,0.6s						
AVFE	**Valle Fertil**	**3.77**	**79**	*eP*	**Pn**	**13 39 35.9**	**+3.7**
AVFE				*eS*	**Sb**	**13 40 24.4**	**-1.9**
AVFE				IAML		13 40 38.0	
	comp=Z,164nm,1.0s						
VCA	**Vinchina**	**4.10**	**49**	*eP*	**Pb**	**13 39 42.5**	**-3.9**
VCA				IAML		13 40 57.5	
	comp=Z,129nm,0.7s						
H03N1	**Juan Fernandez**	**6.37**	**250**	T	T	13 46 47.8	
	baz=79,slow=72,SNR=4264						
H03N3	**Juan Fernandez**	**6.38**	**250**	T	T	13 46 48.3	
	baz=79,slow=72,SNR=3366						
H03N2	**Juan Fernandez**	**6.39**	**250**	T	T	13 46 49.6	
	baz=79,slow=72,SNR=3244						
H03S3	**Juan Fernandez**	**6.49**	**247**	T	T	13 47 04.2	
	baz=80						
H03S1	**Juan Fernandez**	**6.49**	**247**	T	T	13 47 08.4	
	baz=80						
H03S2	**Juan Fernandez**	**6.50**	**247**	T	T	13 47 05.3	
	baz=80						
CPUP	**Villa Florida**	**13.62**	**72**	Pn	Pn	13 41 35.3	-12
	comp=Z,0.3nm,0.3s,baz=245,slow=17,SNR=3.6						
	comp=Z,0.9nm,0.3s						
TORD	**Torodi Ar. Bea**	**83.11**	**70**	P	**P**	**13 50 57.9**	**-2.4**
	comp=Z,4.2nm,0.3s,baz=237,slow=4.8,SNR=3.9						
	comp=Z,4.2nm,0.3s						
H11S2	**WAKE ISLAND Hyl**	**26.02**	**271**	T	T	16 16 30.2	
	baz=117,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hyl**	**26.03**	**271**	T	T	16 16 31.1	
	baz=117,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hyl**	**26.04**	**271**	T	T	16 16 31.5	
	baz=117,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hyl**	**26.37**	**272**	T	T	16 16 54.2	
	baz=115,slow=74,SNR=8.7						
H11N1	**WAKE ISLAND Hyl**	**26.38**	**272**	T	T	16 16 53.2	
	baz=115						
H11N2	**WAKE ISLAND Hyl**	**26.39**	**272**	T	T	16 16 53.2	
	baz=115,slow=74,SNR=16						
BVAR	**Borovoye Array**	**145.23**	**41**	PKP	**PKPbc**	**13 58 10.9**	**0.0**
	comp=Z,0.5nm,0.3s,baz=315,slow=2.0,SNR=6.5						
KURBB	**Kurchatov Arra**	**150.82**	**40**	PKPbc	**PKPbc**	**13 58 25.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=305,slow=3.0,SNR=7.2						
ZALV	**Zalesovo Beam**	**151.93**	**30**	PKPbc	**PKPbc**	**13 58 28.4**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=288,slow=3.5,SNR=10						

IDC ***17*** *13:44:57.2±1.4, 0.°81N×123.°99E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=236.4km s-min=21.1km az=63.0*
DJA ***17*** *13:45:00.5±0.3, 1°S±3°×12°0E±°, h10km, M3.9/7, MLv3.9/7*
ISC 17 13:44:59.9±1.0, 1°26S±0.°06×120°44E±0.°09, h10km, n9, σ1§23/11, mb3.5/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.68**	**341**	P	**Pn**	**13 45 29.2**	**-0.1**
MPSI				S	**Sn**	**13 45 52.6**	**+1.7**
TTSI	**Tana Toraja**	**1.88**	**199**	P	**Pn**	**13 45 33.1**	**+1.0**
MRSI	**Marisa**	**2.29**	**41**	P	**Pn**	**13 45 38.1**	**+0.4**
LUWI	**Luwuk**	**2.34**	**85**	P	**Pn**	**13 45 38.9**	**+0.4**
BKSI	**Bulukumba**	**4.05**	**184**	P	**Pn**	**13 46 01.7**	**-0.2**
WRA	**Warramunga Arr**	**23.01**	**145**	P	**P**	**13 50 04.5**	**-0.8**
	1.3nm,0.9s,baz=333,slow=11,SNR=6.7						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**25.82**	**151**	P	**P**	**13 50 33.4**	**+1.9**
	0.7nm,0.8s,baz=332,slow=12,SNR=12						
ASAR				PcP	**PcP**	**13 53 59.8**	**-1.4**
	0.7nm,1.1s,baz=350,slow=2.4,SNR=3.4						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**58.38**	**330**	P	**P**	**13 54 55.2**	**-0.4**
	0.4nm,0.7s,baz=141,slow=7.6,SNR=6.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**62.80**	**331**	P	**P**	**13 55 24.4**	**-1.2**
	0.4nm,0.6s,baz=128,slow=6.4,SNR=5.2						
	0.4nm,0.6s						

IDC ***17*** *13:47:46.1±7.0, 4.°39N×95.°72E, h0km, mb3.3/4, mbtmp3.3/4, MS3.1/1, Error ellipse: s-maj=348.7km s-min=25.6km az=57.0*
DJA ***17*** *13:47:53.2±1.6, 4°N±4°×97°6E±°, h18km±11km, M3.8/6, mb4.1/3, MLv3.6/6*
ISC 17 13:47:50.7±1.4, 4.°17N±0.°08×95.°3E±0.°1, h35km, n13, σ1§53/11, mb3.3/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**1.10**	**85**	P	**Pn**	**13 48 09.8**	**+0.2**
MLSI				S	**Sn**	**13 48 22.5**	**-1.1**
LHMI	**Lhok Sumawe**	**1.95**	**57**	P	**Pn**	**13 48 23.5**	**+2.2**
LHMI				S	**Sn**	**13 48 45.7**	**+1.2**
SNSI	**Sinabang, Aceh**	**2.02**	**150**	P	**Pn**	**13 48 23.4**	**+1.1**
KCSI	**Kotacane, Aceh**	**2.54**	**105**	P	**Pn**	**13 48 30.1**	**+0.6**
GSI	**Gunungsitoli**	**3.64**	**141**	P	**Pn**	**13 48 47.1**	**+2.5**
MKAR	**Makanchi Array**	**43.94**	**347**	P	**P**	**13 55 53.7**	**-0.5**
	0.2nm,0.5s,baz=166,slow=7.6,SNR=5.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**45.22**	**123**	P	**P**	**13 56 03.7**	**-1.2**
	0.4nm,0.6s,baz=302,slow=9.2,SNR=4.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**46.70**	**128**	P	**P**	**13 56 15.5**	**-1.0**
	0.2nm,0.7s,baz=299,slow=8.0,SNR=4.2						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**50.36**	**352**	P	**P**	**13 56 43.5**	**-0.6**
	0.3nm,0.3s,baz=150,slow=12,SNR=2.0						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**52.85**	**341**	LR	LR	14 21 26.2	
	comp=Z,17nm,19.8s,baz=319,slow=38						
H04N2	**CROZET ISLANDS**	**63.20**	**212**	T	T	15 06 23.2	
	baz=51						
H04N1	**CROZET ISLANDS**	**63.21**	**212**	T	T	15 06 22.6	
	baz=51						
H04N3	**CROZET ISLANDS**	**63.22**	**212**	T	T	15 06 19.2	
	baz=51						

IDC ***17*** *13:57:35.7±2.3, 36.°93N×141.°41E, h0km, mb3.2/3, mbtmp3.1/4, ML2.1/1, Error ellipse: s-maj=45.2km s-min=34.4km az=49.0*
JMA ***17*** *13:57:37.7±0.2, 36.°7N±0.°5×14.°1E±°, h49km±2km, MV2.5/34, E OFF IBARAKI PREF*
ISC 17 13:57:36.8±2.1, 36.°76N±0.°05×141.°45E±0.°08, h13km±11km, n16, σ1§12/21, mb3.1/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.63**	**303**	P	**Pb**	**13 57 50.4**	**+0.7**
ONAJ				*eS*	**Sb**	**13 57 58.8**	**+0.4**
JHO	**Hitachi**	**0.73**	**259**	P	**Pb**	**13 57 50.8**	**-0.6**
JHO				*eS*	**Sg**	**13 57 59.8**	**-0.8**
JFK	**Kawauchi**	**0.77**	**323**	P	**Pg**	**13 57 52.5**	**+0.8**
JFK				S	**Sn**	**13 58 03.7**	**-1.0**
JFFD	**Fukushimafurud**	**0.79**	**295**	P	**Pb**	**13 57 52.4**	**0.0**
JHYU	**Hitachinakayam**	**0.81**	**240**	P	**Pb**	**13 57 51.7**	**-1.0**
JHYU				*eS*	**Sb**	**13 58 02.5**	**-1.1**
JOTO	**OTAMA OYAMA**	**1.20**	**312**	P	**Pb**	**13 57 59.9**	**+0.4**
JOTO				*eS*	**Sg**	**13 58 15.3**	**-0.3**
JMM	**Marumori**	**1.23**	**335**	P	**Pn**	**13 57 59.1**	**-0.6**
JMM				*eS*	**Sb**	**13 58 14.9**	**-0.7**
JAG	**Ashikaga**	**1.64**	**259**	*eP*	**Pn**	**13 58 04.1**	**-1.3**
JIO	**Ouri**	**1.70**	**357**	*eP*	**Pn**	**13 58 05.1**	**-0.9**
JIO				S	**Sn**	**13 58 25.4**	**-2.2**
MJAR	**Matsushiro Arr**	**2.62**	**266**	Pn	**Pn**	**13 58 18.7**	**-0.1**
	0.4nm,0.3s,baz=84,slow=13,SNR=27						
MJAR				Sn	**Sn**	**13 58 52.0**	**+1.5**
	0.3nm,0.3s,baz=40,slow=21,SNR=2.6						
	1.6nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.98**	**120**	T	T	14 32 38.0	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	14 32 44.1	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**28.00**	**120**	T	T	14 32 44.3	
	baz=313						
MKAR	**Makanchi Array**	**44.29**	**302**	P	**P**	**14 05 46.3**	**+0.2**
	0.2nm,0.9s,baz=96,slow=6.7,SNR=1.8						
	0.2nm,0.9s						
KURBB	**Kurchatov Arra**	**46.20**	**308**	P	**P**	**14 06 00.6**	**-0.6**
	0.1nm,0.5s,baz=75,slow=7.0,SNR=2.1						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**56.79**	**188**	P	**P**	**14 07 22.9**	**+2.2**
	0.5nm,0.9s,baz=359,slow=7.1,SNR=1.8						

IDC ***17*** *14:07:31.9±4.2, 16.°08N×98.°09W, h0km, mb3.5/5, mbtmp3.5/7, ML3.3/2, MS3.1/7, Error ellipse: s-maj=76.8km s-min=17.5km az=3.0*
NEIC ***17*** *14:07:33.0±1.6, 16.°47N±0.°10×97.°91W±0.°03, h10km±2km, mb4.1/51, Md4.3/29(MEX), Error ellipse: s-maj=17.2km s-min=3.5km az=196.0*
MEX ***17*** *14:07:37.0±1.2, 16.°22N×98.°06W, h9km±4km, MD4.2*
ISC 17 14:07:34.3±0.8, 16°40N±0.°03×97°94W±0.°02, h16km±5km, n121, σ2§40/137, mb4.1/15, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.18**	**268**		**Pg**	**14 07 40.1**	**+1.4**
PNIG					**Sg**	**14 07 43.0**	**+1.2**
PNIG	**Pinotepa**	**0.18**	**268**	*i* P	**Pg**	**14 07 40.1**	**+1.4**
PNIG				*i* S	**Sg**	**14 07 43.0**	**+1.2**
YOIG	**Yosondua**	**0.59**	**39**		**Pn**	**14 07 50.4**	**+2.1**
YOIG	**Yosondua**	**0.59**	**39**	*i* P	**Pn**	**14 07 50.4**	**+2.1**
YOIG				*i* S	**Sn**	**14 08 00.6**	**+2.8**
PEIG	**Puerto Escondi**	**0.86**	**118**		**Pn**	**14 07 51.9**	**+0.2**
PEIG					**Sn**	**14 08 03.9**	**-0.1**
PEIG	**Puerto Escondi**	**0.86**	**118**	*i* P	**Pn**	**14 07 51.9**	**+0.2**
PEIG				*eS*	**Sn**	**14 08 03.9**	**-0.1**
TXIG	**Tlaxiaco**	**0.87**	**11**		**Pn**	**14 07 54.6**	**+2.5**
TXIG	**Tlaxiaco**	**0.87**	**11**	*i* P	**Pn**	**14 07 54.6**	**+2.5**
TXIG				*eS*	**Sn**	**14 08 07.8**	**+3.3**
MGIG	**Malinaltepec**	**1.07**	**321**	*eP*	**Pn**	**14 07 55.7**	**+1.0**
MGIG				*i* S	**Sn**	**14 08 10.6**	**+1.3**
CRIG	**Cruz Grande**	**1.19**	**287**		**Pb**	**14 07 54.9**	**-1.7**
CRIG	**Cruz Grande**	**1.19**	**287**	*i* P	**Pb**	**14 07 54.9**	**-1.7**
CRIG				*eS*	**Sb**	**14 08 08.8**	**-3.0**
TLIG	**Tlapa**	**1.31**	**333**		**Pg**	**14 08 00.2**	**+0.7**
TLIG				Sn	**Sn**	**14 08 17.8**	**+2.6**
TLIG	**Tlapa**	**1.31**	**333**	*i* P	**Pg**	**14 08 00.2**	**+0.7**
TLIG				*eS*	**Sn**	**14 08 17.1**	**+1.9**
VHO	**Vista Hermosa**	**1.33**	**60**	*i* P	**Pg**	**14 08 01.7**	**+1.7**
VHO				*eS*	**Sn**	**14 08 22.0**	**+5.9**
OXIG	**Oaxaca**	**1.34**	**60**		**Pg**	**14 08 01.7**	**+1.7**
OXIG					**Sn**	**14 08 22.0**	**+5.9**
HLIG	**Huajuapan de L**	**1.43**	**5**		**Pg**	**14 08 03.1**	**+1.2**
HLIG	**Huajuapan de L**	**1.43**	**5**	*i* P	**Pg**	**14 08 03.1**	**+1.2**
HLIG				*eS*	**Sg**	**14 08 21.4**	**+0.8**
FTIG	**Fresnillo de T**	**1.51**	**353**		**Pg**	**14 08 04.1**	**+0.6**
FTIG	**Fresnillo de T**	**1.51**	**353**	*i* P	**Pg**	**14 08 04.1**	**+0.6**
FTIG				*eS*	**Sg**	**14 08 22.4**	**-0.8**
DAIG	**Los Arroyos**	**1.75**	**291**		**Pn**	**14 08 03.4**	**-0.7**
DAIG					**Sb**	**14 08 27.1**	**-0.8**
DAIG	**Los Arroyos**	**1.75**	**291**	*i* P	**Pn**	**14 08 03.4**	**-0.7**
DAIG				*eS*	**Sn**	**14 08 23.5**	**-2.6**
HUIG	**Huatulco**	**1.87**	**109**		**Pb**	**14 08 06.4**	**-1.6**
HUIG	**Huatulco**	**1.87**	**109**	*eP*	**Pb**	**14 08 06.4**	**-1.6**
HUIG				*eS*	**Sn**	**14 08 29.2**	**+0.3**
TOIG	**Toxpalan**	**1.88**	**26**		**Pg**	**14 08 09.3**	**-1.2**
TOIG	**Toxpalan**	**1.88**	**26**	*i* P	**Pg**	**14 08 09.3**	**-1.2**
TPIG	**Tehuac#an**	**2.08**	**15**		**Pg**	**14 08 13.2**	**-1.2**
TPIG	**Tehuac#an**	**2.08**	**15**	*eP*	**Pg**	**14 08 13.2**	**-1.2**
MEIG	**Mezcala**	**2.21**	**314**		**Pb**	**14 08 13.5**	**-0.5**
MEIG	**Mezcala**	**2.21**	**314**	*eP*	**Pb**	**14 08 13.5**	**-0.5**
MEIG				*eS*	**Sg**	**14 08 43.2**	**-2.3**
CAIG	**El Cayaco**	**2.32**	**286**		**Pn**	**14 08 11.1**	**-0.8**
CAIG	**El Cayaco**	**2.32**	**286**	*eP*	**Pn**	**14 08 11.1**	**-0.8**
CAIG				*eS*	**Sn**	**14 08 41.7**	**+1.6**
NEUV	**Arroyo Zacate**	**2.43**	**57**	*eP*	**Pb**	**14 08 16.4**	**-1.2**
NEUV				*eS*	**Sg**	**14 08 49.3**	**-3.0**
PLIG	**Platanillo**	**2.48**	**323**		**Pb**	**14 08 17.9**	**-0.7**
PLIG	**Platanillo**	**2.48**	**323**	*eP*	**Pb**	**14 08 17.9**	**-0.7**
YAIG	**Yautepec**	**2.68**	**336**		**Pg**	**14 08 22.5**	**-3.2**
YAIG	**Yautepec**	**2.68**	**336**	*i* P	**Pg**	**14 08 22.5**	**-3.2**
PPIG	**Popocatepetl**	**2.73**	**346**		**Pg**	**14 08 22.9**	**-3.9**
PPM	**Popocatepetl**	**2.73**	**346**	*eP*	**Pg**	**14 08 22.9**	**-3.9**
PPM				*eS*	**Sb**	**14 08 52.8**	**-3.9**
ARIG	**Puente Sto Nin**	**2.97**	**309**		**Pb**	**14 08 25.4**	**-1.4**
ARIG					**Sb**	**14 09 04.0**	**+1.2**
ARIG	**Puente Sto Nin**	**2.97**	**309**	*eP*	**Pb**	**14 08 25.4**	**-1.4**
ARIG				*eS*	**Sn**	**14 08 55.8**	**-0.3**
CMIG	**Matias Romero**	**3.01**	**76**		**Pb**	**14 08 23.6**	**-3.8**
CMIG	**Matias Romero**	**3.01**	**76**	Pn	**Pb**	**14 08 23.9**	**-3.6**
	3.7nm,0.3s,baz=257,slow=13,SNR=10						
CMIG				Pg	**Pg**	**14 08 30.6**	**-1.3**
	11nm,0.3s,baz=253,slow=17,SNR=13						
CMIG				Lg	Lg	14 09 15.5	
	51nm,0.3s,baz=225,slow=5.7,SNR=16						
CMIG				LR	LR	14 10 00.4	
	comp=Z,221nm,20.8s,baz=238,slow=46						
	10nm,0.3s						
CMIG	**Matias Romero**	**3.01**	**76**	*eP*	**Pb**	**14 08 23.6**	**-3.8**
JAUV	**Jalcomulco**	**3.14**	**20**	*eP*	**Pb**	**14 08 28.6**	**-1.3**
JAUV				*eS*	**Sb**	**14 09 05.6**	**-2.4**
UNM	**Universidad Na**	**3.15**	**338**	Pn	**Pn**	**14 08 23.1**	**-0.4**
DEIG	**Demacu**	**4.02**	**345**	*eP*	**Pb**	**14 08 41.3**	**-3.6**
DEIG				*eS*	**Sn**	**14 09 24.6**	**+2.2**
MOIG	**Morelia**	**4.50**	**317**	Pn	**Pn**	**14 08 44.0**	**+2.0**
JRQG	**Juriquilla Cam**	**4.90**	**331**	Pn	**Pn**	**14 08 46.2**	**-1.4**
PETF	**Flores**	**7.75**	**85**	Pn	**Pn**	**14 09 22.9**	**-3.6**
TEIG	**Tepich**	**9.93**	**66**	LR	LR	14 14 04.1	
	comp=Z,532nm,19.8s,baz=4.5,slow=38						
CRIN	**San Cristobal**	**11.16**	**108**	Pn	**Pn**	**14 10 09.5**	**-3.9**
HPIG		**12.71**	**327**	Pn	**Pn**	**14 10 30.9**	**-3.7**
ACON	**Acoyapa**	**13.13**	**108**	Pn	**Pn**	**14 10 36.9**	**-3.5**
LPIG	**La Paz**	**13.90**	**305**	LR	LR	14 14 60.0	
	comp=Z,29nm,19.4s,baz=24,slow=32						
TXAR	**Lajitas Array**	**13.91**	**339**	Pn	**P**	**14 10 55.8**	**-3.3**
	baz=155,slow=18,SNR=4.4						
TXAR				LR	LR	14 17 08.1	
	comp=Z,44nm,19.4s,baz=80,slow=41						
	0.8nm,1.0s						
TX31	**Lajitas Ar. Si**	**13.91**	**339**	Pn	**Pn**	**14 10 47.0**	**-3.9**
SAND	**Sanderson**	**14.03**	**345**	Pn	**Pn**	**14 10 50.4**	**-2.2**
SOCE	**Pocosol**	**14.27**	**113**	Pn	**Pn**	**14 10 53.4**	**-2.5**
OZNA	**Ozona**	**14.75**	**349**		**P**	**14 11 04.1**	**-4.3**
BRDY	**Brady**	**14.85**	**356**	Pn	**Pn**	**14 11 03.4**	**-0.4**
ALPN	**Alpine**	**14.86**	**340**	Pn	**Pn**	**14 11 02.8**	**-1.2**
441A	**DeRidder**	**14.93**	**16**	Pn	**Pn**	**14 11 01.6**	**-3.2**
MNHN	**Monahans**	**15.51**	**344**	Pn	**Pn**	**14 11 08.9**	**-3.6**
MNHN				IAmb	IAmb	14 11 22.1	
	comp=Z,8.4nm,1.0s						
WHTX	**Lake Whitney,**	**15.53**	**2**	Pn	**Pn**	**14 11 12.2**	**-0.5**
WHTX				IAmb	IAmb	14 11 21.3	
	comp=Z,14nm,0.9s						
SGCY	**Sterling City**	**15.72**	**350**		**Pn**	**14 11 14.9**	**-0.3**
PECS	**Pecos**	**15.86**	**341**		**Pn**	**14 11 13.7**	**-3.3**
SRBA	**San Rafael, Bu**	**15.89**	**115**	Pn	**Pn**	**14 11 16.7**	**-0.9**
SRBA				IAmb	IAmb	14 11 24.5	
	comp=Z,17nm,1.3s						
DRK0	**Durika**	**15.98**	**115**	Pn	**Pn**	**14 11 17.6**	**-1.1**
ABTX	**Abilene, Hawle**	**16.23**	**355**		**Pn**	**14 11 18.1**	**-3.6**
ABTX				IAmb	IAmb	14 11 30.0	
	comp=Z,18nm,0.9s						
PLPT	**Palo Pinto**	**16.35**	**359**		**Pn**	**14 11 21.3**	**-1.9**
PLPT				IAmb	IAmb	14 11 31.2	
	comp=Z,15nm,0.9s						
FW03	**Perrin-Whitt E**	**16.57**	**360**	Pn	**Pn**	**14 11 23.4**	**-2.7**
FW03				IAmb	IAmb	14 11 40.9	
	comp=Z,7.1nm,0.7s						
GDL2	**Guadalupe Moun**	**16.78**	**341**		**P**	**14 11 30.4**	**-0.5**
SN07	**Snyder 07**	**16.84**	**351**		**Pn**	**14 11 29.1**	**-0.3**
POST	**Post**	**16.91**	**350**		**Pn**	**14 11 26.9**	**-3.4**
POST				IAmb	IAmb	14 11 37.5	
	comp=Z,14nm,0.8s						
DKNS	**Dickens**	**17.41**	**352**	P	**P**	**14 11 38.0**	**+0.2**
DKNS				IAmb	IAmb	14 11 43.5	
	comp=Z,12nm,0.7s						
WMOK	**Wichita Mounta**	**18.28**	**358**	P	**Pn**	**14 11 44.1**	**-3.3**
MIAR	**Mount Ida**	**18.49**	**11**	P	**Pn**	**14 11 51.9**	**+2.1**
AMTX	**Amarillo**	**18.71**	**350**	P	**P**	**14 11 50.1**	**-2.2**
SMWD	**Samnorwood**	**18.74**	**354**	P	**Pn**	**14 11 52.4**	**-0.6**
LRAL	**Lakeview Retre**	**19.29**	**29**	P	**P**	**14 11 56.2**	**-2.3**
BNM	**Barren Site**	**19.33**	**338**	P	**Pn**	**14 11 59.1**	**-1.2**
DEOK	**Depew**	**19.41**	**4**	P	**Pn**	**14 12 01.6**	**+0.6**
DEOK				IAmb	IAmb	14 12 12.4	
	comp=Z,9.3nm,0.9s						
WHAR	**Wooly Hollow**	**19.48**	**14**	P	**P**	**14 11 58.6**	**-1.9**
TUL3	**Leonard**	**19.53**	**5**	P	**Pn**	**14 12 02.9**	**+0.5**
TUL3				IAmb	IAmb	14 12 22.8	
	comp=Z,8.3nm,0.6s						
OK052	**Battle Ridge R**	**19.54**	**3**	P	**Pn**	**14 12 00.8**	**-1.8**
OK052				IAmb	IAmb	14 12 05.7	
	comp=Z,16nm,1.2s						
OK033	**Mehan**	**19.59**	**2**	P	**Pn**	**14 12 03.0**	**-0.1**
ANMO	**Albuquerque**	**19.99**	**339**	P	**Pn**	**14 12 06.6**	**-1.5**
ANMO	**Albuquerque**	**19.99**	**339**	P	**Pn**	**14 12 08.8**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=235,slow=11,SNR=7.2						
ANMO				LR	LR	14 20 34.9	
	comp=Z,85nm,19.3s,baz=251,slow=39						
	comp=Z,2.4nm,1.0s						
OK051	**E0350 and S346**	**20.05**	**3**	P	**Pn**	**14 12 07.4**	**-1.2**
OK051				IAmb	IAmb	14 12 09.7	
	comp=Z,7.2nm,0.7s						
T35A	**Sooner Cattle**	**20.48**	**3**	P	Pn	14 12 12.7	-0.9
T35A				IAmb	IAmb	14 12 21.9	
	comp=Z,6.2nm,0.8s						
MGMO	**Mountain Grove**	**21.28**	**13**	P	**P**	**14 12 23.6**	**+3.5**
MGMO				IAmb	IAmb	14 12 27.4	
	comp=Z,7.3nm,0.9s						
Y52A	**Lilburn**	**21.41**	**33**	P	**P**	**14 12 22.8**	**+1.3**
T25A	**Trinidad**	**21.44**	**346**	P	**P**	**14 12 24.8**	**+2.7**
SWET	**Sewanee**	**21.60**	**28**	P	**P**	**14 12 26.6**	**+3.0**
SWET				IAmb	IAmb	14 12 35.4	
	comp=Z,15nm,1.0s						
WVT	**Waverly**	**21.61**	**23**	P	**P**	**14 12 21.9**	**-1.8**
WVT				IAmb	IAmb	14 12 36.8	
	comp=Z,6.6nm,1.0s						
X16A	**Lo Mia Camp, P**	**21.66**	**328**	P	**P**	**14 12 28.7**	**+4.3**
X16A				IAmb	IAmb	14 12 37.7	
	comp=Z,4.7nm,0.9s						
Y14A	**Wickenburg**	**22.11**	**325**	P	**P**	**14 12 32.3**	**+3.2**
SDCO	**Great Sand Dun**	**22.29**	**344**	P	**P**	**14 12 35.6**	**+4.4**
S22A	**4UR Ranch, Cre**	**22.67**	**341**	P	**P**	**14 12 38.7**	**+3.4**
S22A				IAmb	IAmb	14 12 42.6	
	comp=Z,6.4nm,1.1s						
MVCO	**Mesa Verde**	**22.74**	**338**	P	**P**	**14 12 39.2**	**+3.2**
MVCO				IAmb	IAmb	14 12 41.3	
	comp=Z,16nm,1.5s						
P40A	**Paris**	**23.61**	**11**	P	**P**	**14 12 43.8**	**-0.8**
HMU	**Henry Mountain**	**24.24**	**335**	P	**P**	**14 12 54.5**	**+3.6**
HMU				IAmb	IAmb	14 12 56.8	
	comp=Z,7.9nm,0.9s						
ISCO	**Idaho Springs**	**24.26**	**345**	P	**P**	**14 12 54.3**	**+3.3**
ISCO				IAmb	IAmb	14 12 56.4	
	comp=Z,5.5nm,0.8s						
N38A	**Joes South For**	**24.65**	**9**	P	**P**	**14 12 51.9**	**-2.3**
MTPU	**Mount Pierson**	**24.95**	**333**	P	**P**	**14 13 02.0**	**+4.6**
MTPU				IAmb	IAmb	14 13 06.3	
	comp=Z,4.4nm,0.9s						
COHC	**Cochancay**	**26.31**	**134**	P	**P**	**14 13 08.6**	**-0.8**
SDV	**Santo Domingo**	**27.64**	**102**	P	**P**	**14 13 24.4**	**+2.6**
SDV				IAmb	IAmb	14 13 33.3	
	comp=Z,5.2nm,1.1s						
SDV	**Santo Domingo**	**27.64**	**102**	LR	LR	14 25 09.1	
	comp=Z,32nm,18.3s,baz=200,slow=38						
PDAR	**Pinedale Array**	**28.10**	**342**	P	**P**	**14 13 28.6**	**+3.0**
	comp=Z,0.4nm,0.7s,baz=151,slow=9.6,SNR=2.3						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**28.31**	**325**	P	**P**	**14 13 30.3**	**+2.8**
	comp=Z,0.9nm,0.9s,baz=153,slow=10,SNR=6.1						
	comp=Z,0.9nm,0.9s						
MACA	**Manacapuru-AM**	**41.63**	**115**	P	P	14 15 29.8	+7.7
YKA	**Yellowknife Ar**	**47.51**	**350**	P	**P**	**14 16 09.4**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=156,slow=7.2,SNR=7.5						
	comp=Z,0.5nm,0.8s						
GO02	**Mina Guanaco**	**49.69**	**146**	P	**P**	**14 16 29.7**	**+3.6**
FRB	**Frobisher Bay**	**51.45**	**16**	LR	LR	14 43 53.9	
	comp=Z,25nm,19.6s,baz=172,slow=42						
H03N2	**Juan Fernandez**	**52.77**	**160**	T	T	15 13 25.4	
	baz=338,slow=77,SNR=252						
H03N1	**Juan Fernandez**	**52.78**	**160**	T	T	15 13 26.6	
	baz=338,slow=77,SNR=334						
H03N3	**Juan Fernandez**	**52.79**	**160**	T	T	15 13 25.4	
	baz=338,slow=77,SNR=325						
BO04	**La Punta**	**56.47**	**153**	P	P	14 17 20.7	+5.1
INK	**Inuvik**	**56.59**	**345**	P	**P**	**14 17 16.3**	**+0.4**
A36M	**Sachs Harbour**	**57.86**	**350**	P	**P**	**14 17 26.8**	**

KEV			MSG			14 11 46.8
	comp=Z,3.6nm,0.2s					
KEV			SG	**Sb**	**14 11 50.7**	**+1.5**
ARA0	**ARCESS Array S**	**3.17 300**	PN	**Pn**	**14 11 15.2**	**+0.8**
	baz=115					
ARA0			SN	**Sn**	**14 11 54.5**	**+1.6**
ARCES	**ARCESS Array B**	**3.17 300**	P	**Pn**	**14 11 15.3**	**+0.9**
ARCES			S	**Sn**	**14 11 53.3**	**+0.4**
ARCES	**ARCESS Array B**	**3.17 300**	Pn	**Pn**	**14 11 15.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=119,slow=13,SNR=17					
ARCES			Sn	**Sn**	**14 11 52.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=118,slow=23,SNR=1.2					
ARCES			Lg	Lg	14 12 00.6	
	comp=Z,0.4nm,0.3s,baz=113,slow=35,SNR=3.3					
	comp=Z,0.7nm,0.5s					
RNF	**Rovaniemi**	**3.20 245**	PN	**Pn**	**14 11 15.3**	**+0.5**
RANF	**Ranua**	**3.31 233**	SG	**Pn**	**14 11 16.7**	**+0.3**
RANF	**Ranua**	**3.31 233**	PN	**Pn**	**14 11 16.7**	**+0.3**
RANF			SG	**Sb**	**14 12 05.8**	**+2.2**
HEF	**Hetta**	**3.60 279**	PN	**Pn**	**14 11 20.8**	**+0.4**
HEF			SG	**Sb**	**14 12 15.2**	**+3.2**
KLF	**Kolari**	**3.67 260**	PN	**Pn**	**14 11 21.3**	**0.0**
	baz=74					
KTK1	**Kautokeino**	**3.80 288**	PN	**Pn**	**14 11 23.8**	**+0.6**
KTK1			SG	**Sg**	**14 12 22.6**	**-2.9**
PAJU	**Pajala**	**4.06 259**	P	**Pn**	**14 11 26.5**	**-0.1**
PAJU			S	**Sn**	**14 12 14.9**	**+0.2**
PAJU	**Pajala**	**4.06 259**	PN	**Pn**	**14 11 26.6**	**-0.1**
TOF	**Tornio**	**4.06 244**	PN	**Pn**	**14 11 26.2**	**-0.5**
	baz=53					
TOF			SN	**Sn**	**14 12 14.2**	**-0.6**
RMF	**Romuvaara**	**4.15 201**	PN	**Pn**	**14 11 29.2**	**+1.4**
LANU	**Lannavaara**	**4.24 274**	P	**Pn**	**14 11 28.8**	**-0.3**
LANU	**Lannavaara**	**4.24 274**	PN	**Pn**	**14 11 28.9**	**-0.3**
LANU			SG	**Sb**	**14 12 34.5**	**+4.1**
OUL	**Oulu**	**4.24 228**	SG	**Pn**	**14 11 30.7**	**+1.6**
OUL	**Oulu**	**4.24 228**	PN	**Pn**	**14 11 30.7**	**+1.6**
MASU	**Masugnsbyn**	**4.34 267**	P	**Pn**	**14 11 30.3**	**-0.3**
OBF4	**Vikkela, Lumij**	**4.67 229**	SG	**Pn**	**14 11 35.2**	**+0.3**
OBF4	**Vikkela, Lumij**	**4.67 229**	PN	**Pn**	**14 11 35.2**	**+0.3**
KIF	**Kilpisjarvi**	**4.67 287**	PN	**Pn**	**14 11 35.4**	**+0.3**
KIF			SG	**Sb**	**14 12 47.4**	**+4.6**
KUA	**Kurravaara**	**4.87 274**	P	**Pn**	**14 11 37.7**	**-0.1**
KOVU	**Salmi**	**4.91 277**	P	**Pn**	**14 11 38.5**	**+0.2**
RATU	**Laukkuluspa**	**5.17 273**	P	**Pn**	**14 11 41.8**	**-0.1**
HARU	**Harads**	**5.19 254**	P	**Pn**	**14 11 40.6**	**-1.5**
I37NO	**I37NO**	**5.47 287**	I	I	14 45 20.0	
	baz=93,slow=330,SNR=6.3					
FAUS	**Fauske**	**6.88 272**	S	**Sn**	**14 13 20.2**	**-3.9**
FINES	**FINESS Array B**	**7.37 208**	Pn	**Pn**	**14 12 10.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=27,slow=16,SNR=2.1					
FINES			Lg	Lg	14 14 08.0	
	comp=Z,0.1nm,0.3s,baz=22,slow=30,SNR=1.3					
	comp=Z,1.7nm,1.0s					

IDC ***17*** *14:31:03.2±0.8,51.61°N×3.89°W,h0km,mb3.6/14, mbtmp3.8/20,ML4.3/6,MS3.3/8,Error ellipse: s-maj=19.0km s-min=15.0km az=20.0*

MOS ***17*** *14:31:03.3±1.0,51.61°N×3.87°W,h10km,mb4.3/14,Error ellipse: s-maj=6.1km s-min=5.4km az=36.5*

NEIC ***17*** *14:31:05.1±2.3,51.72°N±0.04°×3.99°W±0.1°,h12km±5km, mb4.3/26,Error ellipse: s-maj=12.3km s-min=6.2km az=81.0*

LDG ***17*** *14:31:06.0±0.0,51.72°N×3.87°W,h10km,Ml5.1/58,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*

MED_RC ***17*** *14:31:06.0±0.8,51.72°N×3.90°W,h24km±3km,MW4.2/14, Moment Tensor Solution.Mantle waves: s14,c17; Duration: t1≈0 Moment tensor: Scale 10^15Nm; Mrr=0.25±.52; Mθθ=1.69±.33; Mφφ=1.94±.36; Mrθ=0.40±.24; Mθφ=-1.28±.19; Mrφ=0.52±.22; Best double couple: M=2.30000×10^15 NP1:φs297.00000°,δ86.00000°, λ166.00000°. NP2:φs28.00000°,δ76.00000°,λ4.00000°. Principal axes: T 2.4800, Plg13.0000°, Azm252.0000°; N -0.3600, Plg75.0000°, Azm102.0000°; P -2.1200, Plg7.0000°, Azm343.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

BGR ***17*** *14:31:06.7±0.5,51.71°N×3.92°W,h10km,ML5.0 Error ellipse: s-maj=8.9km s-min=8.9km az=158.0*

BGS ***17*** *14:31:07.6±0.9,51.77°N×3.83°W,h8km±9km,ML4.6*

STR ***17*** *14:31:08.6±1.0,52°N±8′×±°,h5km,MLv5.1/13,Error ellipse: s-maj=0.0km s-min=0.0km az=144.7,preliminary*

BER ***17*** *14:31:08.2±0.8,51.76°N×3.82°W,h8km±4km,ML4.2, ML4.4(BGS),Confirmed Earthquake*

NAO ***17*** *14:31:12.2±6.8,52.13°N×3.00°W,h12km±82km,ML3.5*

ISC 17 14:31:04.5±0.3,51.67°N±0.02°×3.83°W±0.02°,h10km,ns03, σ2=42/630,mb4.0/31,MS3.5/5,42C-64D,United Kingdom

Code	Station Name	Δ°	Az°	Phase	ID	ISC	Time h m s	Res ISC
MCH1	**Michaelchurch**	**0.61**	**58**	⇑*iP*		**Pg**	**14 31 18.2**	**+1.9**
MCH1				*eS*		**Sg**	**14 31 25.7**	**+1.3**
MCH1				IAML			14 31 26.2	
	comp=N,14μm,0.3s							
MCH1				IAML			14 31 26.4	
	comp=E,12μm,0.2s							
MCH1	**Michaelchurch**	**0.61**	**58**	⇑*iP*		**Pg**	**14 31 18.2**	**+1.9**
MCH1				*eS*		**Sg**	**14 31 25.7**	**+1.3**
MCH1				IAML			14 31 26.2	
	comp=N,14μm,0.3s							
MCH1				IAML			14 31 26.4	
	comp=E,12μm,0.2s							
MCH1	**Michaelchurch**	**0.61**	**58**	Sg		**Sg**	**14 31 25.8**	**+1.4**
MCH1	**Michaelchurch**	**0.61**	**58**	Pg		**Pg**	**14 31 18.1**	**+1.8**
RSBS	**Rosebush, Pemb**	**0.63**	**297**	⇑*iP*		**Pb**	**14 31 18.9**	**+1.3**
RSBS				*eS*		**Sg**	**14 31 26.4**	**+1.4**
RSBS				IAML			14 31 28.5	
	comp=N,13μm,0.3s							
RSBS				IAML			14 31 29.2	
	comp=E,13μm,0.3s							
RSBS	**Rosebush, Pemb**	**0.63**	**297**	⇑*iP*		**Pb**	**14 31 18.9**	**+1.3**
RSBS				*eS*		**Sg**	**14 31 26.4**	**+1.4**
RSBS				IAML			14 31 28.5	
	comp=N,13μm,0.3s							
RSBS				IAML			14 31 29.2	
	comp=E,13μm,0.3s							
MONM	**Monmouth**	**0.66**	**75**	⇑*iP*		**Pb**	**14 31 19.6**	**+1.6**
MONM				*eS*		**Sb**	**14 31 28.4**	**+1.1**
MONM				IAML			14 31 28.5	
	comp=E,19μm,0.2s							
MONM				IAML			14 31 31.7	
	comp=N,14μm,0.5s							
MONM	**Monmouth**	**0.66**	**75**	⇑*iP*		**Pb**	**14 31 19.6**	**+1.6**
MONM				*eS*		**Sb**	**14 31 28.4**	**+1.1**
MONM				IAML			14 31 28.5	
	comp=E,19μm,0.2s							
MONM				IAML			14 31 31.7	
	comp=N,14μm,0.5s							
HTL	**Hartland**	**0.79**	**211**	⇓*iP*		**Pn**	**14 31 24.5**	**+2.8**
HTL				*eS*		**Sn**	**14 31 34.7**	**+1.2**
HTL				IAML			14 31 35.8	
	comp=E,5μm,0.4s							
HTL				IAML			14 31 36.7	
	comp=N,8μm,0.2s							
HTL	**Hartland**	**0.79**	**211**	⇓*iP*		**Pn**	**14 31 24.5**	**+2.8**
HTL				*eS*		**Sn**	**14 31 34.7**	**+1.2**
HTL				IAML			14 31 35.8	
	comp=E,5μm,0.4s							
HTL				IAML			14 31 36.7	
	comp=N,8μm,0.2s							
HTL	**Hartland**	**0.79**	**211**	Sg		**Sn**	**14 31 35.1**	**+1.5**
HTL	**Hartland**	**0.79**	**211**	Pg		**Pn**	**14 31 23.3**	**+1.7**
OLDB	**Oldbury-Upon-S**	**0.80**	**90**	⇑*iP*		**Pb**	**14 31 22.4**	**+2.0**
OLDB				*eS*		**Sb**	**14 31 33.1**	**+1.9**
OLDB				IAML			14 31 33.6	
	comp=E,103μm,0.4s							
OLDB				IAML			14 31 33.7	
	comp=N,175μm,0.3s							
OLDB	**Oldbury-Upon-S**	**0.80**	**90**	⇑*iP*		**Pb**	**14 31 22.4**	**+2.0**
OLDB				*eS*		**Sb**	**14 31 33.1**	**+1.9**
OLDB				IAML			14 31 33.6	
	comp=E,103μm,0.4s							
OLDB				IAML			14 31 33.7	
	comp=N,175μm,0.3s							
HLM1	**Long Mynd**	**1.03**	**34**	⇑*iP*		**Pg**	**14 31 24.8**	**+0.5**
HLM1				*eS*		**Sg**	**14 31 37.5**	**-0.2**
HLM1				IAML			14 31 39.9	
	comp=E,15μm,0.3s							
HLM1				IAML			14 31 41.1	
	comp=N,14μm,0.2s							
STRD	**Stroud**	**1.04**	**84**	⇑*iP*		**Pn**	**14 31 26.5**	**+1.4**
STRD				*eS*		**Sg**	**14 31 39.7**	**+1.7**
STRD				IAML			14 31 40.8	
	comp=E,33μm,0.3s							
STRD				IAML			14 31 42.3	
	comp=N,47μm,0.4s							
STRD	**Stroud**	**1.04**	**84**	⇑*iP*		**Pn**	**14 31 26.5**	**+1.4**
STRD				*eS*		**Sg**	**14 31 39.7**	**+1.7**
STRD				IAML			14 31 40.8	
	comp=E,33μm,0.3s							
STRD				IAML			14 31 42.3	
	comp=N,47μm,0.4s							
DYA	**Yadsworthy**	**1.24**	**183**	⇓*iP*		**Pb**	**14 31 30.2**	**+2.2**
DYA				IAML			14 31 48.6	
	comp=E,10μm,0.2s							
DYA				IAML			14 31 49.2	
	comp=N,10μm,0.1s							
DYA	**Yadsworthy**	**1.24**	**183**	⇓*iP*		**Pb**	**14 31 30.2**	**+2.2**
DYA				IAML			14 31 48.6	
	comp=E,10μm,0.2s							
DYA				IAML			14 31 49.2	
	comp=N,10μm,0.1s							
DYA	**Yadsworthy**	**1.24**	**183**	Pg		**Pb**	**14 31 30.0**	**+2.1**
DYA	**Yadsworthy**	**1.24**	**183**	Sg		**Sg**	**14 31 46.5**	**+2.2**
DYA	**Yadsworthy**	**1.24**	**183**	Pn		**Pg**	**14 31 31.3**	**+3.0**
SWN1	**Swindon**	**1.28**	**96**	⇑*iP*		**Pg**	**14 31 31.3**	**+2.3**
SWN1				IAML			14 31 50.5	
	comp=E,26μm,0.3s							
SWN1				IAML			14 31 50.6	
	comp=N,35μm,0.3s							
SWN1	**Swindon**	**1.28**	**96**	⇑*iP*		**Pg**	**14 31 31.3**	**+2.3**
SWN1				IAML			14 31 50.5	
	comp=E,26μm,0.3s							
SWN1				IAML			14 31 50.6	
	comp=N,35μm,0.3s							
SWN1	**Swindon**	**1.28**	**96**	Pg		**Pg**	**14 31 31.2**	**+2.3**
SWN1	**Swindon**	**1.28**	**96**	Sg		**Sg**	**14 31 49.0**	**+3.5**
FOEL	**Foel Wylfa**	**1.28**	**17**	⇓*iP*		**Pn**	**14 31 29.5**	**+1.0**
FOEL				*eS*		**Sb**	**14 31 45.1**	**0.0**
FOEL				IAML			14 31 47.3	
	comp=N,13μm,0.2s							
FOEL				IAML			14 31 47.3	
	comp=E,16μm,0.4s							
FOEL	**Foel Wylfa**	**1.28**	**17**	⇓*iP*		**Pn**	**14 31 29.5**	**+1.0**
FOEL				*eS*		**Sb**	**14 31 45.1**	**0.0**
FOEL				IAML			14 31 47.3	
	comp=N,13μm,0.2s							
FOEL				IAML			14 31 47.3	
	comp=E,16μm,0.4s							
YRC	**Rhoscolyn**	**1.64**	**344**	⇑*iP*		**Pn**	**14 31 34.8**	**+1.4**
YRC	**Rhoscolyn**	**1.64**	**344**	⇑*iP*		**Pn**	**14 31 34.8**	**+1.4**
WLF1	**Llynfaes**	**1.66**	**348**	⇓*iP*		**Pn**	**14 31 34.5**	**+0.9**
WLF1				IAML			14 31 56.9	
	comp=E,17μm,0.3s							
WLF1				IAML			14 31 57.0	
	comp=N,7μm,0.2s							
WLF1	**Llynfaes**	**1.66**	**348**	⇓*iP*		**Pn**	**14 31 34.5**	**+0.9**
WLF1				IAML			14 31 56.9	
	comp=E,17μm,0.3s							
WLF1				IAML			14 31 57.0	
	comp=N,7μm,0.2s							
CCA1	**Carnmenellis**	**1.73**	**211**	⇑*iP*		**Pn**	**14 31 36.5**	**+2.0**
CCA1				IAML			14 32 02.7	
	comp=E,6μm,0.3s							
CCA1				IAML			14 32 02.8	
	comp=N,6μm,0.4s							
CCA1	**Carnmenellis**	**1.73**	**211**	⇑*iP*		**Pn**	**14 31 36.5**	**+2.0**
CCA1				IAML			14 32 02.7	
	comp=E,6μm,0.3s							
CCA1				IAML			14 32 02.8	
	comp=N,6μm,0.4s							
CCA1	**Carnmenellis**	**1.73**	**211**	Pn		**Pn**	**14 31 36.6**	**+2.0**
CCA1				Pg		**Pg**	**14 31 39.2**	**+1.5**
STNC	**Stoke**	**1.73**	**34**	*eP*		**Pn**	**14 31 36.2**	**+1.6**
STNC				IAML			14 32 01.0	
	comp=E,16μm,0.2s							
STNC				IAML			14 32 02.9	
	comp=N,18μm,0.3s							
STNC	**Stoke**	**1.73**	**34**	*eP*		**Pn**	**14 31 36.2**	**+1.6**
STNC				IAML			14 32 01.0	
	comp=E,16μm,0.2s							
STNC				IAML			14 32 02.9	
	comp=N,18μm,0.3s							
WPS	**Cemaes, Angles**	**1.78**	**347**	⇓*iP*		**Pn**	**14 31 36.5**	**+1.3**
WPS				*eS*		**Sn**	**14 31 59.1**	**+1.2**
WPS				IAML			14 32 02.6	
	comp=E,2μm,0.2s							
WPS				IAML			14 32 03.4	
	comp=N,2μm,0.2s							
WPS	**Cemaes, Angles**	**1.78**	**347**	⇓*iP*		**Pn**	**14 31 36.5**	**+1.3**
WPS				IAML			14 32 02.6	
	comp=E,2μm,0.2s							
WPS				IAML			14 32 03.4	
	comp=N,2μm,0.2s							
CWF	**Charnwood Fore**	**1.89**	**55**	⇑*iP*		**Pn**	**14 31 37.8**	**+1.1**
CWF	**Charnwood Fore**	**1.89**	**55**	⇑*iP*		**Pn**	**14 31 37.8**	**+1.1**
LBWR	**Ladybower, Pea**	**2.16**	**36**	⇑*iP*		**Pn**	**14 31 42.0**	**+1.5**
LBWR	**Ladybower, Pea**	**2.16**	**36**	⇑*iP*		**Pn**	**14 31 42.0**	**+1.5**
DSB	**Dublin**	**2.21**	**316**			**Pn**	**14 31 42.3**	**+1.1**
DSB				Sn		**Sn**	**14 32 02.2**	**-6.4**
IOMK	**Kirk Michael**	**2.63**	**351**	⇓*iP*		**Pn**	**14 31 47.8**	**+0.9**
IOMK	**Kirk Michael**	**2.63**	**351**	⇓*iP*		**Pn**	**14 31 47.8**	**+0.9**
HPK	**Haverah Park**	**2.65**	**29**	*eP*		**Pn**	**14 31 48.4**	**+1.1**
HPK	**Haverah Park**	**2.65**	**29**	*eP*		**Pn**	**14 31 48.4**	**+1.1**
JLP	**Les Platons**	**2.67**	**155**	*eP*		**Pn**	**14 31 49.2**	**+1.7**
JLP	**Les Platons**	**2.67**	**155**	*eP*		**Pn**	**14 31 49.2**	**+1.7**
JSA	**Saint Aubin**	**2.71**	**156**	⇓*iP*		**Pn**	**14 31 49.7**	**+1.7**
JSA				IAML			14 32 39.7	
	comp=E,1μm,0.5s							
JSA				IAML			14 32 45.1	
	comp=N,680nm,0.3s							
JSA	**Saint Aubin**	**2.71**	**156**	⇓*iP*		**Pn**	**14 31 49.7**	**+1.7**
JSA				IAML			14 32 39.7	
	comp=E,1μm,0.5s							
JSA				IAML			14 32 45.1	
	comp=N,680nm,0.3s							
JSA	**Saint Aubin**	**2.71**	**156**	Pn		**Pn**	**14 31 49.5**	**+1.6**
HMNX	**Herstmonceux**	**2.74**	**105**	⇑*iP*		**Pn**	**14 31 51.3**	**+2.9**
HMNX	**Herstmonceux**	**2.74**	**105**	⇑*iP*		**Pn**	**14 31 51.3**	**+2.9**
HMNX	**Herstmonceux**	**2.74**	**105**	Pn		**Pn**	**14 31 51.3**	**+2.9**
LMK	**Market Rasen**	**2.79**	**49**	*eP*		**Pn**	**14 31 50.5**	**+1.4**
LMK	**Market Rasen**	**2.79**	**49**	*eP*		**Pn**	**14 31 50.5**	**+1.4**
WACR	**West Acre**	**2.94**	**67**	⇑*iP*		**Pn**	**14 31 52.7**	**+1.5**
WACR	**West Acre**	**2.94**	**67**	⇑*iP*		**Pn**	**14 31 52.7**	**+1.5**
KESW	**Keswick, Cumbr**	**2.95**	**8**	⇓*iP*		**Pn**	**14 31 52.2**	**+0.8**
KESW	**Keswick, Cumbr**	**2.95**	**8**	⇓*iP*		**Pn**	**14 31 52.2**	**+0.8**
ELMS	**Elmsett, Ipswi**	**3.02**	**80**	*eP*		**Pn**	**14 31 53.7**	**+1.5**
ELSH	**Elham, Standar**	**3.15**	**98**	⇑*iP*		**Pn**	**14 31 56.8**	**+2.7**
ELSH	**Elham, Standar**	**3.15**	**98**	⇑*iP*		**Pn**	**14 31 56.8**	**+2.7**
ELSH	**Elham, Standar**	**3.15**	**98**	Sn		**Sn**	**14 32 33.7**	**+1.9**
ELSH	**Elham, Standar**	**3.15**	**98**	Pn		**Pn**	**14 31 56.8**	**+2.7**
GAL1	**Galloway**	**3.24**	**351**	⇓*iP*		**Pn**	**14 31 55.9**	**+0.6**
GAL1				IAML			14 32 47.1	
	comp=E,643nm,0.3s							
GAL1				IAML			14 32 49.2	
	comp=N,497nm,0.5s							
GAL1	**Galloway**	**3.24**	**351**	⇓*iP*		**Pn**	**14 31 55.9**	**+0.6**
GAL1				IAML			14 32 47.1	
	comp=E,643nm,0.3s							
GAL1				IAML			14 32 49.2	
	comp=N,497nm,0.5s							
GDLE	**Glaisdale, N Y**	**3.30**	**32**	⇓*iP*		**Pn**	**14 31 57.5**	**+1.4**
GDLE	**Glaisdale, N Y**	**3.30**	**32**	⇓*iP*		**Pn**	**14 31 57.5**	**+1.4**
EDMD	**Edmundbyers**	**3.36**	**19**	⇓*iP*		**Pn**	**14 31 57.5**	**+0.6**
EDMD	**Edmundbyers**	**3.36**	**19**	⇓*iP*		**Pn**	**14 31 57.5**	**+0.6**
ROSF	**Rostrenen**	**3.36**	**174**	*ePn*		**Pn**	**14 31 59.0**	**+2.0**
ROSF				*eSn*		**Sn**	**14 32 37.6**	**+0.7**
	comp=N,538nm,0.2s							
ROSF				*eSg*		**Sg**	**14 32 53.4**	**+1.1**
	comp=N,1μm,0.4s							
ROSF	**Rostrenen**	**3.36**	**174**	Pn		**Pn**	**14 31 59.0**	**+2.0**
ROSF	**Rostrenen**	**3.36**	**174**	P		**Pn**	**14 31 57.5**	**+0.5**
ROSF				SN		**Sn**	**14 32 36.1**	**-0.8**
CAMF	**Camaret-sur-Me**	**3.44**	**189**	Pn		**Pn**	**14 31 59.9**	**+1.8**
NEWG	**New Galloway**	**3.46**	**356**	⇓*iP*		**Pn**	**14 31 59.1**	**+0.8**
NEWG	**New Galloway**	**3.46**	**356**	⇓*iP*		**Pn**	**14 31 59.1**	**+0.8**
SGMF	**Saint Gilles**	**3.52**	**166**	*ePn*		**Pn**	**14 32 01.0**	**+1.8**
SGMF				*eSn*		**Sn**	**14 32 41.4**	**+0.6**
	comp=N,442nm,0.3s							
SGMF				*eSg*		**Sg**	**14 32 58.9**	**+1.5**
	comp=N,560nm,0.4s							
FLN	**La Foliniere**	**3.62**	**142**	*ePn*		**Pn**	**14 32 02.1**	**+1.5**
	baz=326							
FLN	**La Foliniere**	**3.62**	**142**	*ePg*		**Pg**	**14 32 15.0**	**+1.2**
	baz=325							
FLN				*eSn*		**Sn**	**14 32 44.0**	**+0.7**
FLN				*eSg*		**Sg**	**14 33 01.8**	**+1.1**
	comp=N,1μm,0.5s,baz=325							
FLN	**La Foliniere**	**3.62**	**142**	P		**Pn**	**14 32 01.7**	**+1.1**
ESK	**Eskdalemuir**	**3.67**	**6**			**Pn**	**14 32 01.8**	**+0.5**
ESK				Sn		**Sn**	**14 32 41.3**	**-3.2**
ESK	**Eskdalemuir**	**3.67**	**6**	*eP*		**Pn**	**14 32 01.7**	**+0.5**
ESK	**Eskdalemuir**	**3.67**	**6**	*eP*		**Pn**	**14 32 01.7**	**+0.5**
ESK	**Eskdalemuir**	**3.67**	**6**	P		**Pn**	**14 32 01.7**	**+0.5**
ESK				SN		**Sn**	**14 32 41.3**	**-3.2**
CLGH	**Cloghs, Cushen**	**3.68**	**339**	*eP*		**Pn**	**14 32 02.3**	**+0.9**
CLGH	**Cloghs, Cushen**	**3.68**	**339**	*eP*		**Pn**	**14 32 02.3**	**+0.9**
EKB	**Eskdalemuir**	**3.69**	**6**	Pn		**Pn**	**14 32 01.8**	**+0.3**
EKA	**Eskdalemuir Ar**	**3.69**	**6**	Pn		**Pn**	**14 32 02.1**	**+0.6**
EKA				Sn		**Sn**	**14 32 42.8**	**-2.2**
EKA	**Eskdalemuir Ar**	**3.69**	**6**	P		**Pn**	**14 32 01.5**	**0.0**
EKA				SN		**Sn**	**14 32 42.3**	**-2.7**
EKA	**Eskdalemuir Ar**	**3.69**	**6**	Pn		**Pn**	**14 32 01.9**	**+0.4**
	baz=191,slow=13							
EKA				Lg		Lg	14 32 55.6	
	baz=177,slow=29							
	comp=N,17nm,0.3s							
EKA	**Eskdalemuir Ar**	**3.69**	**6**	Pn		**Pn**	**14 32 02.1**	**+0.6**
EKA				Sn		**Sn**	**14 32 42.8**	**-2.2**
QUIF	**Quistinic**	**3.79**	**173**	*ePn*		**Pn**	**14 32 04.6**	**+1.8**
QUIF				*eSn*		**Sn**	**14 32 47.7**	**+0.3**
	comp=N,702nm,0.3s							
QUIF				*eSg*		**Sg**	**14 33 06.4**	**+0.5**
	comp=N,901nm,0.4s							
GRR	**Gorron**	**3.81**	**149**	*ePn*		**Pn**	**14 32 04.5**	**+1.4**
GRR	**Gorron**	**3.81**	**149**	*ePg*		**Pg**	**14 32 18.3**	**+1.0**
GRR				*eSn*		**Sn**	**14 32 48.1**	**+0.2**
	comp=N,913nm,0.3s							
GRR				*eSg*		**Sg**	**14 33 07.5**	**+0.9**
	comp=N,1μm,0.4s							
LDF	**La Druitiere**	**3.90**	**141**	*ePn*		**Pn**	**14 32 05.5**	**+1.1**
LDF	**La Druitiere**	**3.90**	**141**	*ePg*		**Pg**	**14 32 20.4**	**+1.3**
LDF				*eSn*		**Sn**	**14 32 50.5**	**+0.3**
LDF				*eSg*		**Sg**	**14 33 09.6**	**0.0**
	comp=N,537nm,0.3s							
VAL	**Valentia**	**3.99**	**276**	P		**Pn**	**14 32 07.0**	**+1.4**
PGBU	**Glenifferbraes**	**4.17**	**355**	*eP*		**Pn**	**14 32 08.7**	**+0.7**
PGBU	**Glenifferbraes**	**4.17**	**355**	*eP*		**Pn**	**14 32 08.7**	**+0.7**
EDI	**Edinburgh**	**4.28**	**5**	⇓*iP*		**Pn**	**14 32 10.4**	**+0.9**
EDI	**Edinburgh**	**4.28**	**5**	⇓*iP*		**Pn**	**14 32 10.4**	**+0.9**
EDI	**Edinburgh**	**4.28**	**5**	Pn		**Pn**	**14 32 10.6**	**+1.0**
EDI				Sn		**Sn**	**14 32 57.0**	**-2.5**
LAWE	**Loch Awe, Argy**	**4.69**	**349**	*eP*		**Pn**	**14 32 16.0**	**+0.8**
LAWE	**Loch Awe, Argy**	**4.69**	**349**	*eP*		**Pn**	**14 32 16.0**	**+0.8**
INVG	**Invergeldie, C**	**4.77**	**359**	⇓*iP*		**Pn**	**14 32 16.4**	**+0.1**
INVG	**Invergeldie, C**	**4.77**	**359**	⇓*iP*		**Pn**	**14 32 16.4**	**+0.1**
DRUM	**Mains of Drumt**	**5.31**	**8**	*eP*		**Pn**	**14 32 24.3**	**+0.5**
DRUM	**Mains of Drumt**	**5.31**	**8**	*eP*		**Pn**	**14 32 24.3**	**+0.5**
BAIF	**Baives**	**5.34**	**104**	*ePn*		**Pn**	**14 32 25.6**	**+1.4**
BAIF				*eSn*		**Sn**	**14 33 24.3**	**-1.4**
BAIF				*eSg*		**Sg**	**14 33 54.9**	**-0.9**
	comp=N,772nm,0.7s							
CLF	**Chambon-Foret**	**5.37**	**130**	Pn		**Pn**	**14 32 26.3**	**+1.7**
CLF				Sn		**Sn**	**14 33 23.6**	**-2.8**
CLF	**Chambon-Foret**	**5.37**	**130**	Pn		**Pn**	**14 32 26.6**	**+2.0**
CLF	**Chambon-Foret**	**5.37**	**130**	*ePn*		**Pn**	**14 32 26.5**	**+1.9**
CLF				*eSn*		**Sn**	**14 33 24.4**	**-2.0**
DOU	**Dourbes**	**5.56**	**103**	*dP*		**Pn**	**14 32 28.4**	**+1.2**
DOU				*dS*		**Sn**	**14 33 29.0**	**-2.2**
DOU	**Dourbes**	**5.56**	**103**	Pn		**Pn**	**14 32 29.4**	**+2.2**
BMRD	**Maredsous**	**5.60**	**101**	*dP*		**Pn**	**14 32 29.1**	**+1.4**
BMRD				*dS*		**Sn**	**14 33 30.6**	**-1.5**
MFF	**Saint Martin d**	**5.62**	**153**	*ePn*		**Pn**	**14 32 28.9**	**+0.8**
MFF				*eSn*		**Sn**	**14 33 30.7**	**-1.9**
	comp=N,362nm,0.4s							
MFF				*eSg*		**Sg**	**14 34 04.8**	**0.0**
	comp=N,296nm,0.5s							
MFF	**Saint Martin d**	**5.62**	**153**	Pn		**Pn**	**14 32 28.7**	**+0.7**
MFF	**Saint Martin d**	**5.62**	**153**	P		**Pn**	**14 32 28.8**	**+0.7**
GIVF	**Givet**	**5.70**	**103**	*ePn*		**

IBBN eSn Sn 14 34 08.9 -2.2
RJF Les Rejaudoux 7.29 149 ePn Pn 14 32 51.9 +0.9
LFF La Frestale 7.39 154 ePn Pn 14 32 53.2 +0.8
LFF eSn Sn 14 34 13.5 -2.8
LFF eSg Sg 14 34 59.8 -1.8
comp=N,706nm,0.7s
LFF La Frestale 7.39 154 P Pn 14 32 53.1 +0.7
ABH Alteburg 7.44 100 ePn Pn 14 32 54.0 +1.1
ABH eSn Sn 14 34 13.0 -4.3
HLG Helgoland 7.51 66 ePn Pn 14 32 54.5 +0.5
HLG eSn Sn 14 34 14.1 -5.0
HAU Haudompre 7.54 115 ePn Pn 14 32 54.8 +0.5
HAU eSn Sn 14 34 12.8 -7.0
comp=N,695nm,0.3s
KASTN Kahler Asten 7.67 89 ePn Pn 14 32 56.5 +0.3
KASTN eSn Sn 14 34 19.1 -4.0
CAF Calviac 7.81 148 ePn Pn 14 32 59.0 +0.9
CAF eSn Sn 14 34 22.8 -3.8
CAF eSg Sg 14 35 13.9 -1.1
comp=N,369nm,0.8s
CAF Calviac 7.81 148 P Pn 14 32 58.8 +0.7
CDF Champ du Feu 7.86 110 ePn Pn 14 32 59.3 +0.4
CDF eSn Sn 14 34 23.1 -4.8
comp=N,332nm,0.4s
ECH Echery 7.89 112 Pn 14 32 59.6 +0.4
ECH Echery 7.89 112 P Pn 14 32 59.6 +0.4
ECH Echery 7.89 112 ePn Pn 14 32 59.8 +0.6
ECH eSn Sn 14 34 24.6 -3.9
TNS Taunus Mts 7.89 96 ePn Pn 14 33 01.0 +1.7
TNS eSn Sn 14 34 25.9 -2.7
HINF Hinteralfeld 7.92 115 ePn Pn 14 33 00.2 +0.5
HINF eSn Sn 14 34 21.3 -8.0
comp=N,204nm,0.3s
KTD Kalmit 7.96 103 eSn Sn 14 34 29.1 -1.0
RETH Rethem/Aller, 8.18 77 ePn Pn 14 33 04.6 +1.5
CABF La Chapelle 8.24 124 ePn Pn 14 33 05.2 +1.1
CABF eSn Sn 14 34 34.2 -3.0
comp=N,169nm,0.3s
SSB Saint Sauveur 8.47 136 Pn 14 33 07.7 +0.4
SSB Saint Sauveur 8.47 136 P Pn 14 33 07.7 +0.4
SSB Saint Sauveur 8.47 136 ePn Pn 14 33 08.1 +0.8
BFO Black Forest 8.52 108 Pn Pn 14 33 08.1 +0.3
BFO Black Forest 8.52 108 P Pn 14 33 08.1 +0.3
BFO Black Forest 8.52 108 ePn Pn 14 33 08.4 +0.6
BFO eSn Sn 14 34 35.9 -8.0
GTTG Gottingen 8.59 85 ePn Pn 14 33 12.5 +3.7
GTTG eSn Sn 14 34 40.6 -5.1
LRW Lerwick 8.61 9 eP Pn 14 33 09.3 +0.3
LRW eS Sn 14 34 41.1 -5.0
LRW Lerwick 8.61 9 Pn Pn 14 33 09.3 +0.3
LRW Sn Sn 14 34 40.6 -5.5
NRDL Niedersach Rie 8.63 79 ePn Pn 14 33 10.9 +1.7
NRDL eSn Sn 14 34 43.3 -3.1
UBBA Unterbreizbach 8.72 90 ePn Pn 14 33 12.3 +1.8
SJPF Ste Jean 8.74 167 ePn Pn 14 33 11.6 +0.7
SJPF eSn Sn 14 34 43.0 -6.5
comp=N,84nm,0.3s
CLZ Clausthal 8.82 83 ePn Pn 14 33 12.1 +0.2
CLZ eSn Sn 14 34 46.4 -4.9
STU Stuttgart 8.84 104 Pn 14 33 12.4 +0.2
STU Stuttgart 8.84 104 P Pn 14 33 12.4 +0.2
STU Stuttgart 8.84 104 eSn Sn 14 34 48.0 -3.9
VIVF Saint-Julien-l 8.87 137 ePn Pn 14 33 13.8 +1.2
VIVF eSn Sn 14 34 48.6 -3.9
VIVF eSg Sg 14 35 45.0 -3.8
comp=N,177nm,0.8s
BSEG Bad Segeberg 8.87 70 ePn Pn 14 33 12.7 +0.2
BSEG eSn Sn 14 34 46.9 -5.5
SSRD Sdr. Stenderup 8.87 59 eP Pn 14 33 13.6 +1.1
SSRD IAML 14 35 07.9
comp=Z,82nm,0.8s
SLE Schleitheim 8.89 111 eSn Sn 14 34 46.9 -6.2
ASSE Asse, Remlinge 8.98 81 ePn Pn 14 33 16.5 +2.4
ASSE eSn Sn 14 34 50.3 -4.9
MUD Monsted U'grnd 9.02 53 i P Pn 14 33 13.4 -1.2
MUD IAML 14 35 09.5
comp=Z,33nm,1.1s
SENIN Lac Senin/Sane 9.04 122 Pn Pn 14 33 16.1 +1.0
ETSF Etsaut 9.05 165 ePn Pn 14 33 15.1 -0.1
ETSF eSn Sn 14 34 53.6 -3.6
comp=Z,71nm,0.3s
STAV Stavanger 9.08 33 Pn Pn 14 33 14.0 -1.3
STAV Sn Sn 14 34 49.4 -8.1
EPF Esparros 9.10 160 ePn Pn 14 33 16.0 +0.2
EPF eSn Sn 14 34 52.6 -5.6
comp=Z,75nm,0.2s
LASF Ste Croix 9.19 143 ePn Pn 14 33 18.0 +1.0
LASF eSn Sn 14 34 56.7 -3.7
comp=Z,47nm,0.6s
LASF eSg 14 35 55.6
comp=Z,322nm,0.9s
SNART Snartemo 9.20 39 eP Pn 14 33 15.7 -1.4
SNART eS Sn 14 34 51.7 -8.8
SNART IAML 14 34 55.3
comp=Z,149nm,0.3s
SNART Snartemo 9.20 39 eP Pn 14 33 15.4 -1.7
SNART eS Sn 14 34 51.7 -8.9
MTLF Montolieu 9.28 152 ePn Pn 14 33 18.5 +0.2
MTLF eSn Sn 14 34 59.1 -3.6
comp=Z,105nm,0.4s
MTLF eSg 14 35 58.3
comp=Z,263nm,1.0s
LPL La Plagne 9.32 127 ePn Pn 14 33 21.2 +2.2
LPL eSn Sn 14 34 59.8 -4.1
comp=Z,150nm,0.3s
FLTG Flechtingen 9.32 80 ePn Pn 14 33 19.9 +1.1
FLTG eSn Sn 14 34 56.5 -7.0
LPG La Plagne 9.34 127 ePn Pn 14 33 21.0 +1.6
LPG eSn Sn 14 35 00.3 -4.3
comp=Z,266nm,0.5s
ORIF Oris-en-Rattie 9.35 132 ePn Pn 14 33 20.5 +1.2
ORIF eSn Sn 14 35 00.5 -4.0
comp=Z,142nm,0.2s
BNI Bardonecchia 9.63 129 Pn Pn 14 33 25.0 +1.9
BNI Bardonecchia 9.63 129 P Pn 14 33 25.0 +1.9
BLS5 Blasjo 9.70 33 eP Pn 14 33 22.9 -1.0
BLS5 eS Sn 14 35 04.0 -8.8
BLS5 IAML 14 35 10.0
comp=Z,35nm,0.7s
GRFO Grafenberg 9.76 96 Pn Pn 14 33 24.9 +0.1
GRFO Grafenberg 9.76 96 P Pn 14 33 24.9 +0.1
GRA1 Grafenberg Arr 9.76 96 Pn Pn 14 33 25.4 +0.6
GRF Grafenberg Arr 9.76 96 P Pn 14 33 25.4 +0.6
MOX Moxa 9.76 90 P Pn 14 33 27.1 +2.3
MOX Moxa 9.76 90 ePn Pn 14 33 27.1 +2.3
UBR Ueberruh 9.88 108 eSn Sn 14 35 13.8 -3.5
MBDF Montbardon 9.91 130 ePn Pn 14 33 28.3 +1.2
MBDF eSn Sn 14 35 14.1 -4.3
comp=Z,56nm,0.3s
MBDF eSg 14 36 17.9
comp=Z,130nm,0.8s
DAVA Damuels 9.94 111 i Pn Pn 14 33 29.8 +2.3
comp=Z,9.3nm,0.3s,SNR=6.7
DAVA eSn Sn 14 35 14.3 -4.8
comp=Z,154nm,0.6s
SMRF Simiane la Rot 9.96 137 ePn Pn 14 33 29.1 +1.5
SMRF eSn Sn 14 35 15.7 -3.6
comp=Z,199nm,1.1s
PBRG Braganca 10.07 193 eP Pn 14 33 31.3 +2.2
PBRG eS Sn 14 35 14.2 -7.9
TUE Stuetta 10.09 116 Pn 14 33 31.2 +1.7
BER Bergen 10.12 27 eP Pn 14 33 28.9 -0.7
BER eS Sn 14 35 11.1 -12
BER IAML 14 35 18.1
comp=Z,18nm,0.3s
ODD1 Odda 10.13 31 eP Pn 14 33 28.9 -1.0
ODD1 eS Sn 14 35 14.1 -9.3
ODD1 IAML 14 35 29.3
comp=Z,38nm,0.4s
PLN Plauen 10.14 90 ePn Pn 14 33 32.4 +2.5
ASK Askoy 10.16 26 eP Pn 14 33 30.7 +0.5
ASK eS Sn 14 35 15.5 -8.5
ASK IAML 14 35 22.8
comp=Z,45nm,0.3s
PGAV Gavieira, Arco 10.17 199 eP Pn 14 33 32.7 +2.1
PGAV eS Sn 14 35 16.7 -8.0
DAVOX Davos/Dischmat 10.21 113 Pn Pn 14 33 32.8 +1.6
comp=Z,3.8nm,0.3s,baz=263,slow=6.0,SNR=40
DAVOX Sn Sn 14 35 20.9 -4.9
comp=Z,14nm,0.3s,baz=27,slow=1.8,SNR=8.4
comp=Z,17nm,0.5s
TANN Tannenbergstha 10.34 91 ePn Pn 14 33 34.3 +1.5
ROTZ Rotzenmuhle 10.35 94 ePn Pn 14 33 38.4 +5.5

RETA Reutte 10.36 108 ePn Pn 14 33 35.2 +2.1
comp=Z,2.4nm,0.2s,SNR=9.6
RETA eSn Sn 14 35 24.6 -4.6
comp=Z,21nm,0.4s
NKC Novy Kostel 10.38 92 ePN Pn 14 33 36.6 +3.4
NKC Novy Kostel 10.38 92 eP Pn 14 33 36.6 +3.4
CLL Collm 10.51 85 Pn 14 33 35.9 +0.9
CLL Collm 10.51 85 eP Pn 14 33 38.0 +3.0
CLL e 14 35 29.0
CLL Collm 10.51 85 ePn Pn 14 33 38.0 +3.0
CLL ex x 14 33 41.0
CLL ex x 14 33 59.0
CLL ePg 14 34 25.0
CLL eSn Sn 14 35 29.0 -3.7
CLL ex x 14 36 00.0
CLL ex x 14 36 26.0
CLL eSg 14 36 40.0
CLL Collm 10.51 85 ePn Pn 14 33 38.0 +3.0
FUORN Ofenpass-Fuorn 10.52 113 Pn Pn 14 33 36.9 +1.4
SUE Sulen 10.53 23 eP Pn 14 33 34.1 -1.1
SUE eS Sn 14 35 21.4 -12
SUE IAML 14 35 31.0
comp=Z,22nm,0.4s
FETA Feichten 10.57 110 ePn Pn 14 33 38.7 +2.6
comp=Z,1.6nm,0.3s,SNR=8.7
FETA eSn Sn 14 35 29.6 -5.0
comp=Z,47nm,0.7s
MOTA Moosalm 10.63 108 ePn Pn 14 33 39.3 +2.4
comp=Z,1.7nm,0.1s,SNR=6.2
MOTA eSn Sn 14 35 31.2 -4.8
comp=Z,56nm,0.3s
POLO Lamas de Olo 10.65 196 eP Pn 14 33 40.6 +3.4
POLO eS Sn 14 35 29.6 -6.9
RGN Rugen 10.70 68 Pn Pn 14 33 37.6 0.0
PVRL Vila Real 10.74 196 eP Pn 14 33 39.8 +1.6
PVRL eS Sn 14 35 31.7 -6.8
MVO Moncorvo 10.74 193 eP Pn 14 33 40.5 +2.2
MVO eS Sn 14 35 31.7 -6.8
SQTA Sankt Quirin 10.76 109 i Pn Pn 14 33 41.3 +2.8
comp=Z,7.6nm,0.3s,SNR=12
SQTA eSn Sn 14 35 34.6 -4.4
comp=Z,71nm,0.5s
ONAU Onsala 10.79 52 eP Pn 14 33 36.3 -2.4
ONAU eS Sn 14 35 28.8 -11
BJUU Bjuv 10.88 60 eP Pn 14 33 38.7 -1.3
LMR La Mourre 10.88 136 ePn Pn 14 33 41.2 +1.1
LMR eSn Sn 14 35 36.9 -4.9
comp=Z,24nm,0.4s
SBF Sospel 10.88 132 ePn Pn 14 33 42.3 +2.1
SBF eSn Sn 14 35 37.2 -4.7
comp=Z,266nm,0.5s
HSKC Hora Svate Kat 10.90 89 ePN Pn 14 33 43.3 +2.9
WATA Walderalm 10.92 107 i Pn Pn 14 33 43.9 +3.1
comp=Z,1.8nm,0.2s
WATA i Sn Sn 14 35 37.6 -5.3
comp=Z,14nm,0.2s
TJOU Tjoern 10.94 48 eP Pn 14 33 38.1 -2.7
WET Wettzell 10.96 97 ePn Pn 14 33 44.0 +2.8
WTTA Wattenberg 10.99 108 i Pn Pn 14 33 44.4 +2.7
comp=Z,3.0nm,0.3s
WTTA eSn Sn 14 35 42.3 -2.4
comp=Z,44nm,0.4s
LUNU Lund 10.99 62 eP Pn 14 33 39.3 -2.2
HYA Hoyanger 11.00 26 eP Pn 14 33 41.1 -0.6
HYA eS Sn 14 35 34.0 -11
HYA IAML 14 35 47.3
comp=Z,18nm,0.5s
KON Kongsberg 11.00 38 Pn Pn 14 33 40.0 -1.6
KON Sn Sn 14 35 36.7 -7.9
KONO Kongsberg 11.00 38 Pn Pn 14 33 39.2 -2.4
KONO Kongsberg 11.00 38 eP Pn 14 33 40.2 -1.5
KONO eS Sn 14 35 35.1 -9.5
KONO IAML 14 35 43.4
comp=Z,17nm,0.5s
KONO Kongsberg 11.00 38 i P Pn 14 33 39.9 -1.8
FABU Falkenberg 11.03 55 eP Pn 14 33 40.5 -1.5
BRG Berggiesshubel 11.17 87 i P Pn 14 33 46.7 +2.7
BRG Amp 14 33 53.9
comp=Z,6.8nm,0.6s
BRG r 14 37 17.3
BRG Amp 14 37 34.7
comp=Z,21nm,1.0s
BRG Berggiesshubel 11.17 87 i P Pn 14 33 46.7 +2.7
BRG pmax pmax
comp=Z,7.0nm,0.6s
BRG Berggiesshubel 11.17 87 ePn Pn 14 33 46.7 +2.7
SALO Salr 11.26 117 Pn Pn 14 33 47.2 +1.8
SKAR Skarslia 11.26 32 eP Pn 14 33 44.8 -0.5
SKAR eS Sn 14 35 40.5 -11
SKAR IAML 14 36 02.3
comp=Z,22nm,0.4s
STRU Stroemstad 11.27 43 eP Pn 14 33 44.0 -1.3
STRU eS Sn 14 35 40.4 -11
STRU Stroemstad 11.27 43 eP Pn 14 33 42.9 -2.4
BORU Boraas 11.30 52 eP Pn 14 33 42.3 -3.5
PVIS Viseu 11.31 196 eP Pn 14 33 47.7 +1.6
PVIS eS Sn 14 35 44.5 -8.1
RICC Richard 11.33 89 ePN Pn 14 33 49.2 +2.9
KHC Kasperske Hory 11.40 96 Pn Pn 14 33 49.1 +1.9
KHC Kasperske Hory 11.40 96 ePN Pn 14 33 50.4 +3.1
KHC eSN Sn 14 35 51.1 -3.5
KHC Kasperske Hory 11.40 96 eP Pn 14 33 50.4 +3.1
KHC e 14 35 51.1
DEL Delary 11.44 58 eP Pn 14 33 45.9 -1.9
RJOB Jochberg 11.46 104 ePn Pn 14 33 52.1 +4.0
LESA Schwarzleotal 11.53 105 i Pn Pn 14 33 52.5 +3.3
comp=Z,2.3nm,0.3s
LESA i Sn Sn 14 35 51.2 -6.8
comp=Z,7.2nm,0.3s
MTE Manteigas 11.56 194 eP Pn 14 33 51.2 +1.6
MTE eS Sn 14 35 51.6 -7.1
MTE Manteigas 11.56 194 Pn Pn 14 33 49.3 -0.3
MSSA Maissana 11.57 124 Pn Pn 14 33 50.3 +0.6
GEC2 GERESS Array S 11.57 97 ePn Pn 14 33 52.8 +3.1
GERES GERESS Array B 11.57 97 Pn Pn 14 33 49.9 +0.1
comp=Z,2.0nm,0.3s,baz=294,slow=14,SNR=17
GERES Sn Sn 14 35 51.6 -7.3
comp=Z,1.2nm,0.3s,baz=305,slow=32,SNR=2.5
GERES LR LR 14 38 55.5
comp=Z,77nm,18.1s,baz=330,slow=41
comp=Z,2.0nm,0.4s
CTI Castel Tesino 11.64 113 Pn Pn 14 33 52.2 +1.6
CTI Castel Tesino 11.64 113 P Pn 14 33 52.2 +1.6
ZVC Zvikov 11.68 94 ePN Pn 14 33 54.9 +3.8
BSD Bornholm Skovb 11.70 66 eP Pn 14 33 48.3 -3.0
PRU Pruhonice 11.74 91 ePN Pn 14 33 55.4 +3.5
PRU Pruhonice 11.74 91 eP Pn 14 33 55.4 +3.5
ABTA Abfaltersbach 11.76 108 i Pn Pn 14 33 54.6 +2.3
comp=Z,5.5nm,0.4s,SNR=7.4
ABTA Sn Sn 14 35 58.3 -5.3
comp=Z,30nm,0.3s
GOPC GO Pecny, Ondr 11.91 91 ePN Pn 14 33 57.7 +3.4
GOPC GO Pecny, Ondr 11.91 91 eP Pn 14 33 57.7 +3.4
CIMO Cimolais 11.95 110 Pn 14 33 59.0 +4.2
CKRC Cesky Krumlov 11.96 97 ePN Pn 14 34 01.4 +6.5
CKRC Cesky Krumlov 11.96 97 eP Pn 14 34 01.4 +6.5
BIOA Bad Ischl, Aus 11.99 103 i Pn Pn 14 33 58.9 +3.5
comp=Z,0.6nm,0.1s
BIOA i Sn Sn 14 36 04.3 -4.8
comp=Z,22nm,0.5s
ESDC Sonseca Array 12.00 180 Pn Pn 14 33 54.2 -1.3
comp=Z,1.7nm,0.3s,baz=358,slow=12,SNR=51
ESDC Sn Sn 14 35 59.3 -10
comp=Z,1.8nm,0.3s,baz=2.5,slow=23,SNR=13
comp=Z,2.8nm,0.3s
TEOL Teolo 12.05 116 Pn 14 33 55.9 -0.3
AKN Aaknes 12.06 25 eP Pn 14 33 55.1 -1.0
AKN eS Sn 14 35 59.4 -11
AKN IAML 14 36 06.1
comp=Z,12nm,0.4s
AKN Aaknes 12.06 25 Pn Pn 14 33 55.4 -0.7
PCAS Casmilo, Conde 12.06 197 eP Pn 14 33 58.2 +1.8
PCAS eS Sn 14 36 04.9 -6.0
KBA Koelnbreinsper 12.10 106 i Pn Pn 14 34 01.1 +4.2
comp=Z,17nm,0.6s
KBA i Sn Sn 14 36 06.9 -5.0
comp=Z,38nm,0.7s
PCBR Castelo Branco 12.10 194 eP Pn 14 33 59.0 +2.1
PCBR eS Sn 14 36 04.3 -7.5
PAB San Pablo 12.13 182 Pn Pn 14 33 57.4 0.0
PAB San Pablo 12.13 182 P Pn 14 33 57.4 0.0
NAO01 NORSAR Array S 12.27 36 eP Pn 14 33 57.4 -1.8
MOA Molln 12.31 101 i Pn Pn 14 34 03.4 +3.8
comp=Z,1.1nm,0.2s
MOA i Sn Sn 14 36 12.0 -4.8
comp=Z,6.9nm,0.3s
ZCCA Zocca 12.31 121 Pn Pn 14 34 00.4 +0.6
BLEU Blekinge 12.44 60 eP Pn 14 34 00.2 -1.2
NRA0 NORESS Array S 12.44 37 Pn Pn 14 33 59.1 -2.3
baz=230,slow=14
NRA0 Sn Sn 14 36 09.5 -10
baz=233,slow=18
NRA0 NORESS Array S 12.44 37 Pn Pn 14 33 59.1 -2.3
baz=230,slow=14
NRA0 Sn Sn 14 36 09.5 -10
baz=233,slow=18
MYKA Terra Mystica 12.49 107 i Pn Pn 14 34 05.5 +3.2
comp=Z,2.5nm,0.3s
MYKA i Sn Sn 14 36 18.1 -3.4
comp=Z,12nm,0.4s
PMRV Marv??o 12.49 193 eP Pn 14 34 04.1 +1.8
PMRV eS Sn 14 36 13.9 -7.5
NB2 NORSAR Subarra 12.52 36 Pn Pn 14 34 00.2 -2.3
NB2 Sn Sn 14 36 11.9 -10
baz=231,slow=28
NB2 NORSAR Subarra 12.52 36 Pn Pn 14 34 00.2 -2.3
NB2 Sn Sn 14 36 11.9 -10
baz=231,slow=28
NOA NORSAR Array B 12.52 36 eP Pn 14 34 01.0 -1.6
NOA NORSAR Array B 12.52 36 Pn Pn 14 33 59.2 -3.4
comp=Z,0.1nm,0.3s,baz=227,slow=12,SNR=14
NOA Sn Sn 14 36 07.0 -15
comp=Z,0.1nm,0.3s,baz=223,slow=24,SNR=1.5
NOA LR LR 14 38 44.7
comp=Z,33nm,18.6s,baz=340,slow=37
comp=Z,1.5nm,0.6s
UPC Upice 12.53 88 ePN Pn 14 34 05.2 +2.5
UPC Upice 12.53 88 eP Pn 14 34 05.2 +2.5
DOMB Dombas 12.53 29 eP Pn 14 34 01.8 -0.8
DOMB eS Sn 14 36 14.8 -7.4
DOMB IAML 14 36 40.3
comp=Z,8.0nm,0.5s
CHVC Chvalec 12.54 87 ePN Pn 14 34 06.9 +4.1
CHVC Chvalec 12.54 87 eP Pn 14 34 06.9 +4.1
PRED Cave del Predi 12.54 108 Pn 14 34 03.1 +0.2
PGF Pioggiola 12.62 131 ePn Pn 14 34 04.9 +0.9
PGF eSn Sn 14 36 18.7 -5.9
comp=Z,8.6nm,0.2s
OSTC Ostas 12.65 87 ePN Pn 14 34 06.5 +2.2
OSTC Ostas 12.65 87 eP Pn 14 34 06.5 +2.2
DPC Dobruska-Polom 12.76 88 ePN Pn 14 34 08.8 +3.0
DPC Dobruska-Polom 12.76 88 eP Pn 14 34 08.8 +3.0
SABO M.te Sabotino 12.81 110 Pn Pn 14 34 07.2 +0.7
HFS Hagfors 12.94 42 Pn Pn 14 34 06.4 -1.8
baz=231,slow=14
HFS Sn Sn 14 36 21.7 -10
baz=238,slow=28
HFS Hagfors 12.94 42 Pn Pn 14 34 04.0 -4.2
comp=Z,0.4nm,0.3s,baz=231,slow=13,SNR=17
HFS Sn Sn 14 36 18.0 -14
comp=Z,1.0nm,0.3s,baz=229,slow=24,SNR=2.7
HFS Hagfors 12.94 42 Pn Pn 14 34 06.4 -1.8
baz=231,slow=14
HFS Sn Sn 14 36 21.7 -10
baz=238,slow=28
PMTG Montargil 12.97 195 eP Pn 14 34 11.0 +2.2
PMTG eS Sn 14 36 25.6 -7.5
OSSC Osservatorio P 13.02 123 Pn Pn 14 34 10.6 +1.2
MAHO Mahon 13.05 151 Pn Pn 14 34 10.3 +0.5
PESTR Estremoz 13.07 193 eP Pn 14 34 14.4 +4.2
PESTR eS Sn 14 36 32.2 -3.4
PESTR Estremoz 13.07 193 Pn Pn 14 34 11.8 +1.6
OBKA Obir 13.10 106 i Pn Pn 14 34 14.3 +3.8
comp=Z,2.0nm,0.3s
OBKA i Sn Sn 14 36 28.6 -7.6
comp=Z,18nm,0.5s
KRLC Kraliky 13.11 89 ePN Pn 14 34 14.2 +3.5
KRLC Kraliky 13.11 89 eP Pn 14 34 14.2 +3.5
KRUC Moravsky 13.17 93 ePN Pn 14 34 15.1 +3.7
KRUC Moravsky 13.17 93 eSN Sn 14 36 40.0 +2.2
VRAC Vranov 13.21 92 ⇑P Pn 14 34 17.2 +5.1
VRAC Vranov 13.21 92 ePN Pn 14 34 16.2 +4.2
VRAC Vranov 13.21 92 eSN Sn 14 36 41.8 +2.9
VRAC Vranov 13.21 92 Pn Pn 14 34 08.9 -3.2
comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=1.7
VRAC Lg Lg 14 38 02.3
comp=Z,0.3nm,0.3s,baz=198,slow=19,SNR=1.7
VRAC LR LR 14 39 55.2
comp=Z,65nm,19.9s,baz=203,slow=40
CONA Conrad Observa 13.25 99 i Pn Pn 14 34 16.1 +3.5
comp=Z,2.7nm,0.4s
CONA i Sn Sn 14 36 36.2 -3.8
comp=Z,4.4nm,0.5s
PMAFR Mafra 13.28 199 eP Pn 14 34 15.8 +2.9
PMAFR eS Sn 14 36 33.9 -6.6
SOKA Soboth 13.30 105 i Pn Pn 14 34 17.9 +4.6
comp=Z,1.0nm,0.2s,SNR=5.1
SOKA i Sn Sn 14 36 35.3 -5.9
comp=Z,4.7nm,0.3s
ARSA Arzberg 13.34 102 i Pn Pn 14 34 16.8 +3.1
comp=Z,1.9nm,0.5s
ARSA i Sn Sn 14 36 37.5 -4.4
comp=Z,2.2nm,0.3s
CASP Castiglione de 13.35 126 Pn Pn 14 34 14.3 +0.5
EVO Evora 13.46 194 eP Pn 14 34 20.3 +4.8
EVO eS Sn 14 36 36.5 -8.6
RONA Rosalia, Austr 13.62 99 i Sn Sn 14 36 45.2 -3.6
comp=Z,5.4nm,0.5s
MORC Moravsky Berou 13.67 90 ⇑P Pn 14 34 19.5 +1.2
MORC Moravsky Berou 13.67 90 Pn Pn 14 34 19.9 +1.6
MORC Moravsky Berou 13.67 90 ePN Pn 14 34 20.9 +2.7
MORC Moravsky Berou 13.67 90 eSN Sn 14 36 49.7 -0.3
MORC Moravsky Berou 13.67 90 P Pn 14 34 19.9 +1.6
PBAR Barrancos 13.69 191 eP Pn 14 34 20.0 +1.5
PBAR eS Sn 14 36 41.5 -9.0
MURB Monte Urbino 13.87 121 Pn Pn 14 34 20.2 -0.9
MODS Modra-Piesok 13.96 95 eP Pn 14 34 27.3 +5.1
MODS Modra-Piesok 13.96 95 eP Pn 14 34 27.3 +5.1
PNCL Nicolau / Gran 13.96 196 eP Pn 14 34 27.1 +4.9
PNCL eS Sn 14 36 50.0 -7.1
MAUC Maruska 13.96 91 ePN Pn 14 34 25.6 +3.3
JAVC Velka Javorina 14.03 93 ePN Pn 14 34 25.1 +1.9
MESJ Messejana 14.17 194 eP Pn 14 34 26.9 +1.7
MESJ eS Sn 14 36 56.3 -6.1
MESJ Messejana 14.17 194 Pn Pn 14 34 23.7 -1.5
MESJ Messejana 14.17 194 P Pn 14 34 23.7 -1.5
CART Cartagena 14.23 171 Pn Pn 14 34 22.4 -3.4
PCVE Castro Verde 14.35 194 eP Pn 14 34 30.3 +2.7
PCVE eS Sn 14 37 00.3 -6.4
NRCA Norcia 14.48 121 Pn Pn 14 34 30.6 +1.2
PVAQ Vaqueiros 14.53 192 eP Pn 14 34 32.7 +2.7
PVAQ eS Sn 14 37 02.2 -8.9
PVAQ Vaqueiros 14.53 192 Pn Pn 14 34 32.0 +1.9
KLNR Kaliningrad 14.70 69 i P Pn 14 34 33.8 +1.5
KLNR pmax pmax
comp=Z,12nm,0.2s
PBDV Barranco-do-Ve 14.72 193 eS Sn 14 37 09.8 -5.9
MORF Marmelete 14.77 195 eS Sn 14 37 13.4 -3.5
CAMP Campotosto 14.85 121 Pn Pn 14 34 34.1 -0.4
VYHS Vyhne 14.88 93 eP P 14 34 40.9 +0.4
VYHS Vyhne 14.88 93 eP P 14 34 40.9 +0.4
MORH Mrgy, Hungar 15.72 101 ⇑P 14 34 50.3 +0.5
PSZ Piszkesteto 15.75 94 P Pn 14 34 45.1 -1.1
PSZ Piszkesteto 15.75 94 P Pn 14 34 45.2 -1.1
PSZ pmax pmax
comp=Z,9.0nm,1.0s
PBUR Paburge 15.77 64 eP P 14 34 52.1 +1.8
CRVS Cervenica-Dubn 16.38 90 eP P 14 35 00.1 +3.0
CRVS Cervenica-Dubn 16.38 90 eP P 14 35 00.1 +3.0
SUW Suwalki 16.45 71 P Pn 14 34 50.9 -4.2
SUW IAmb IAmb 14 35 00.2
comp=Z,38nm,0.9s
SUW Suwalki 16.45 71 P Pn 14 34 50.9 -4.2
SUW pmax pmax
comp=Z,38nm,0.9s
SUW Suwalki 16.45 71 eP P 14 34 59.7 +1.9
SGRT San Giovanni R 16.64 119 Pn Pn 14 34 57.5 -0.3
SGRT IAmb IAmb 14 35 32.5
comp=Z,25nm,1.5s
KOLS Kolonicke sedl 16.87 89 eP P 14 35 06.1 +3.5
KOLS Kolonicke sedl 16.87 89 eP P 14 35 06.1 +3.5
RAF Rauma 16.89 46 eP P 14 35 03.9 +1.3
VSVD Vaisvydziai 16.89 64 eP P 14 35 05.1 +2.4
PABE Paberze 16.89 66 P Pn 14 34 59.3 -1.4
PABE IAmb IAmb 14 35 05.8
comp=Z,37nm,0.7s
PABE Paberze 16.89 66 eP P 14 35 04.8 +2.1

KWP	**Kalwaria Pacla**	**16.92**	**86**	P	**P**	**14 35 04.3 +1.1**		
KWP	**Kalwaria Pacla**	**16.92**	**86**	P	**P**	**14 35 04.3 +1.1**		
KWP				pmax	pmax			
	comp=Z,8.0nm,0.9s							
MTSE	**Matsula**	**17.19**	**55**	*e*P	**P**	**14 35 08.4 +2.3**		
SIRR	**Siria**	**17.54**	**98**	⇓P	**Pn**	**14 35 10.2 +1.3**		
BZS	**Buzias**	**17.82**	**100**	⇓P	**P**	**14 35 15.2 +2.1**		
BZS	**Buzias**	**17.82**	**100**	⇓P	**P**	**14 35 15.2 +2.1**		
MEF	**Metsahovi**	**17.85**	**50**	*e*P	**Pn**	**14 35 13.9 +1.3**		
ISAL	**Salakas**	**18.12**	**66**	*e*P	**P**	**14 35 18.8 +2.6**		
IIGN	**Ignalina**	**18.17**	**67**	*e*P	**P**	**14 35 18.7 +1.8**		
IDID	**Didziasalis**	**18.47**	**67**	*e*P	**Pn**	**14 35 22.1 +1.8**		
NACGM	**Naroch**	**18.51**	**68**	*e*P	**Pn**	**14 35 22.5 +1.8**		
	comp=Z,9.0nm,1.0s,baz=273							
KEST	**Kesra**	**18.52**	**144**	LR	LR	14 42 39.9		
	comp=Z,73nm,18.7s,baz=288,slow=38							
CLTB	**Caltabellotta**	**18.53**	**133**	P	**P**	**14 35 17.6 -3.5**		
GZR	**Gura Zlata**	**18.64**	**99**	⇓P	**Pn**	**14 35 25.4 +2.8**		
VSU	**Vasula**	**18.65**	**57**	*i* P	**P**	**14 35 23.2 +1.1**		
VSU				pmax	pmax			
	comp=Z,20nm,0.9s							
VSU	**Vasula**	**18.65**	**57**	*e*P	**P**	**14 35 22.1 -0.1**		
MDT	**Midelt**	**18.86**	**182**	Sn	Sn	14 38 43.2 -13		
	comp=Z,0.1nm,0.3s,baz=6.7,slow=13,SNR=1.4							
FIA0	**FINESS Array S**	**18.99**	**47**	P	**P**	**14 35 26.5 +0.6**		
	baz=234,slow=12							
FIA0	**FINESS Array S**	**18.99**	**47**	P	**P**	**14 35 26.5 +0.6**		
	baz=234,slow=12							
FINES	**FINESS Array B**	**18.99**	**47**	*e*P	**P**	**14 35 26.4 +0.6**		
FINES				pmax	pmax			
	comp=Z,1.0nm,0.3s							
FINES	**FINESS Array B**	**18.99**	**47**	P	**P**	**14 35 26.2 +0.4**		
	comp=Z,0.7nm,0.3s,baz=248,slow=10,SNR=28							
FINES				Sn	Sn	14 38 41.9 -17		
	comp=Z,0.2nm,0.3s,baz=250,slow=20,SNR=2.0							
	comp=Z,2.8nm,0.3s							
FIA1	**FINESS Array S**	**18.99**	**47**	P	**P**	**14 35 25.2 -0.6**		
FIA1				IAmb	IAmb	14 35 49.1		
	comp=Z,30nm,1.2s							
BUR08	**Bucovina Ar. S**	**19.16**	**91**	Pn	**P**	**14 35 29.4 +1.5**		
MNK	**Minsk**	**19.17**	**69**	*i* P	**P**	**14 35 27.0 -0.9**		
	comp=E,3.0nm,0.7s,baz=69							
MNK				*i* P	**P**	**14 35 27.0 -0.9**		
	comp=N,8.0nm,0.8s,baz=69							
MNK				*i* P	**P**	**14 35 27.0 -0.9**		
	comp=Z,10.0nm,0.7s,baz=69							
MNK				*i* PP	**PnPn**	**14 35 40.5 -0.8**		
	baz=69							
MNK				*i* PPP	PPP	14 35 48.3		
	baz=69							
MNK				*i* S	**Sn**	**14 39 02.9 -0.5**		
	baz=69							
MNK				*i* SS	**SnSn**	**14 39 18.6 +1.4**		
	baz=69							
MNK				*i* SSS	SSS	14 39 31.5		
	baz=69							
MNK				*i* LQ	LQ	14 41 20.7		
	baz=69							
MNK				*i* LR	LR	14 42 38.8		
	baz=69							
MNK				*i* LRM	MLR	14 43 40.6		
	comp=Z,26nm,7.2s,baz=69							
MNK				*i* LRM	MLR	14 43 41.2		
	comp=E,15nm,8.7s,baz=69							
MNK				*i* LRM	MLR	14 44 02.2		
	comp=N,104nm,14.1s,baz=69							
MNK	**Minsk**	**19.17**	**69**	*i* P	**P**	**14 35 26.9 -0.9**		
MNK				*i* S	**Sn**	**14 39 02.9 -0.5**		
MNK				pmax	pmax			
	comp=E,3.0nm,0.7s							
MNK				pmax	pmax			
	comp=N,8.0nm,0.8s							
MNK				pmax	pmax			
	comp=Z,10.0nm,0.7s							
MNK				MLR	MLR			
	comp=Z,26nm,7.0s							
MNK				MLR	MLR			
	comp=E,15nm,9.0s							
MNK				MLR	MLR			
	comp=N,104nm,14.0s							
BURAR	**Bucovina Array**	**19.18**	**91**	⇓P	**Pn**	**14 35 30.4 +1.3**		
BURAR	**Bucovina Array**	**19.18**	**91**	⇓P	**Pn**	**14 35 30.4 +1.3**		
BLKB	**Belogradchik**	**19.51**	**104**	⇓P	**Pn**	**14 35 34.8 +1.9**		
ARR	**Arges**	**19.80**	**97**	⇑P	**Pn**	**14 35 38.6 +2.1**		
DOPR	**Dopca**	**19.99**	**95**	⇓P	**Pn**	**14 35 41.1 +2.5**		
VOIR		**20.03**	**97**	⇑P	Pn	14 35 40.7 +1.6		
VOIR		**20.03**	**97**	⇑P	Pn	14 35 40.7 +1.6		
KEK	**Kerkira**	**20.28**	**117**	P	**P**	**14 35 37.0 -3.1**		
KEK				IAmb	IAmb	14 35 54.6		
	comp=Z,13nm,1.1s							
MLR	**Muntele Rosu**	**20.55**	**96**	⇑P	**P**	**14 35 44.2 +1.1**		
MLR	**Muntele Rosu**	**20.55**	**96**	P	**P**	**14 35 40.2 -3.0**		
MLR				IAmb	IAmb	14 36 05.1		
	comp=Z,13nm,1.3s							
MLR	**Muntele Rosu**	**20.55**	**96**	P	**P**	**14 35 40.2 -3.0**		
MLR				pmax	pmax			
	comp=Z,13nm,1.3s							
MLR	**Muntele Rosu**	**20.55**	**96**	P	**P**	**14 35 42.6 -0.5**		
	comp=Z,1.3nm,0.7s,baz=162,slow=4.4,SNR=3.1							
MLR				LR	LR	14 44 51.4		
	comp=Z,92nm,18.8s,baz=248,slow=40							
	comp=Z,1.3nm,0.7s							
KIEV	**Kiev**	**20.64**	**80**	⇓P	**P**	**14 35 44.6 +0.7**		
KIEV	**Kiev**	**20.64**	**80**	P	**P**	**14 35 39.5 -4.3**		
KIEV				IAmb	IAmb	14 36 03.4		
	comp=Z,7.5nm,0.8s							
KIEV	**Kiev**	**20.64**	**80**	P	**P**	**14 35 39.6 -4.3**		
KIEV				pmax	pmax			
	comp=Z,7.0nm,0.8s							
AKASG	**Malin Array Be**	**20.65**	**80**	*e*P	**P**	**14 35 43.9 -0.1**		
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**20.65**	**80**	P	**P**	**14 35 43.7 -0.3**		
	comp=Z,0.9nm,0.4s,baz=287,slow=11,SNR=4.8							
	comp=Z,0.9nm,0.4s							
AKBB	**Malin Array Si**	**20.65**	**80**	P	**P**	**14 35 39.8 -4.2**		
AKBB				IAmb	IAmb	14 36 03.4		
	comp=Z,8.3nm,0.8s							
AKBB	**Malin Array Si**	**20.65**	**80**	*i* P	**P**	**14 35 44.8 +0.8**		
AKBB				pmax	pmax			
	comp=Z,11nm,1.5s							
CMLA	**Cha da Macela**	**20.65**	**236**	P	**P**	**14 35 40.7 -3.4**		
CMLA	**Cha da Macela**	**20.65**	**236**	P	**P**	**14 35 40.7 -3.4**		
CMLA				pmax	pmax			
	comp=Z,69nm,0.8s							
PLOR	**Plostina**	**20.82**	**94**	⇓P	**P**	**14 35 48.4 +2.4**		
PLOR	**Plostina**	**20.82**	**94**	⇓P	**P**	**14 35 48.4 +2.4**		
VRI	**Vrincioaia**	**20.86**	**94**	⇑P	**P**	**14 35 48.1 +1.7**		
VRI	**Vrincioaia**	**20.86**	**94**	⇑P	**P**	**14 35 48.1 +1.7**		
SORM	**Soroca**	**20.93**	**87**	⇑P	**P**	**14 35 48.4 +1.3**		
SORM	**Soroca**	**20.93**	**87**	⇑P	**P**	**14 35 48.4 +1.3**		
CFR	**Carcaliu**	**22.06**	**94**	⇓P	**P**	**14 36 01.3 +2.1**		
CFR	**Carcaliu**	**22.06**	**94**	⇓P	**P**	**14 36 01.3 +2.1**		
AGG	**Agios Georgios**	**22.18**	**115**	P	**P**	**14 36 01.3 +0.7**		
AGG	**Agios Georgios**	**22.18**	**115**	P	**P**	**14 36 01.3 +0.7**		
AGG				pmax	pmax			
	comp=Z,8.0nm,1.3s							
ARA0	**ARCESS Array S**	**22.57**	**27**	P	**P**	**14 36 04.7 +0.2**		
	baz=228,slow=11							
ARA0	**ARCESS Array S**	**22.57**	**27**	P	**P**	**14 36 04.7 +0.2**		
	baz=228,slow=11							
ARCES	**ARCESS Array B**	**22.57**	**27**	P	**P**	**14 36 04.7 +0.2**		
	comp=Z,2.4nm,0.5s,baz=228,slow=11,SNR=19							
	comp=Z,2.4nm,0.5s							
KEV	**Kevo**	**23.13**	**27**	P	**P**	**14 36 10.5 +0.2**		
KEV	**Kevo**	**23.13**	**27**	P	**P**	**14 36 10.5 +0.2**		
KEV				pmax	pmax			
	comp=Z,35nm,1.3s							
OBN	**Obninsk**	**24.09**	**66**	⇑*e*P	**P**	**14 36 22.8 +3.0**		
OBN				*e*		14 36 51.4		
OBN				*e*S	**S**	**14 40 32.7 -4.4**		
OBN				pmax	pmax			
	comp=Z,9.0nm,0.4s							
OBN				MLR	MLR			
	comp=Z,56nm,16.0s							
KLMR	**Klimovskoe**	**25.32**	**52**	*e*P	**P**	**14 36 28.5 -2.4**		
KLMR				pmax	pmax			
	comp=Z,15nm,1.1s							
APE	**Apeiranthos**	**25.35**	**114**	*i* P	**P**	**14 36 33.7 +2.2**		
APE				pmax	pmax			
	comp=Z,41nm,1.1s							
KARP	**Karpathos**	**27.36**	**114**	P	**P**	**14 36 48.6 -1.0**		
BRTR	**Keskin Array B**	**28.45**	**100**	P	**P**	**14 36 59.7 +0.3**		
	comp=Z,0.4nm,0.6s,baz=288,slow=13,SNR=2.1							
	comp=Z,0.4nm,0.6s							

BELG	**Belogornoye**	**31.12**	**68**	*i* P	**P**	**14 37 25.9 +3.1**		
BELG				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KBZ	**Khabaz**	**31.96**	**86**	*i* P	**P**	**14 37 32.2 +1.9**		
KBZ				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ONI	**Oni**	**32.91**	**87**	P	**P**	**14 37 36.6 -2.1**		
ONI				IAmb	IAmb	14 37 37.9		
	comp=Z,5.6nm,1.3s							
ONI	**Oni**	**32.91**	**87**	P	**P**	**14 37 36.6 -2.1**		
ONI				pmax	pmax			
	comp=Z,6.0nm,1.3s							
TULEG	**Thule**	**34.68**	**338**	P	**P**	**14 37 52.6 -1.0**		
ARU	**Arti**	**35.82**	**57**	*d* iP	**P**	**14 38 04.7 +1.1**		
ARU				S	**S**	**14 43 42.3 +1.5**		
ARU				SS	**SnSn**	**14 46 00.7 -2.2**		
ARU				pmax	pmax			
	comp=Z,6.0nm,1.4s							
SCHQ	**Schefferville**	**36.70**	**300**	P	**P**	**14 38 09.9 -1.3**		
	comp=Z,2.2nm,0.9s,baz=96,slow=17,SNR=1.4							
	comp=Z,2.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**38.68**	**171**	P	**P**	**14 38 27.7 -0.6**		
	comp=Z,0.5nm,0.9s,baz=355,slow=7.3,SNR=1.5							
ABKAR	**Akbulak array**	**39.52**	**67**	P	**P**	**14 38 33.1 -1.9**		
LMN	**Caledonia Moun**	**39.58**	**286**	P	**P**	**14 38 33.2 -2.4**		
BRVK	**Borovoye**	**43.39**	**58**	*i* P	**P**	**14 39 08.4 +1.7**		
BRVK				pmax	pmax			
	comp=Z,6.0nm,2.0s							
NRIK	**Noril'sk**	**43.43**	**31**	*i* P	**P**	**14 39 08.0 +1.1**		
NRIK				pmax	pmax			
	comp=Z,1.0nm,1.1s							
BVAR	**Borovoye Array**	**43.46**	**58**	P	**P**	**14 39 08.4 +1.1**		
	comp=Z,0.5nm,0.7s,baz=284,slow=9.2,SNR=2.7							
	comp=Z,0.5nm,0.7s							
KURK	**Kurchatov**	**49.01**	**57**	P	**P**	**14 39 51.0 0.0**		
KURK				IAmb	IAmb	14 39 52.8		
	comp=Z,3.6nm,1.3s							
KURK	**Kurchatov**	**49.01**	**57**	P	**P**	**14 39 51.0 0.0**		
KURK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
KURBB	**Kurchatov Arra**	**49.01**	**57**	P	**P**	**14 39 50.8 -0.2**		
	comp=Z,0.4nm,0.7s,baz=308,slow=8.4,SNR=5.8							
	comp=Z,0.4nm,0.7s							
ZALV	**Zalesovo Beam**	**50.22**	**50**	*e*P	**P**	**14 40 01.3 +1.2**		
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**50.22**	**50**	P	**P**	**14 40 01.4 +1.2**		
	comp=Z,1.7nm,0.6s,baz=327,slow=7.1,SNR=7.1							
	comp=Z,1.7nm,0.6s							
MKAR	**Makanchi Array**	**53.31**	**59**	*e*P	**P**	**14 40 24.5 +1.1**		
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**53.31**	**59**	P	**P**	**14 40 24.2 +0.9**		
	comp=Z,0.9nm,0.7s,baz=314,slow=6.0,SNR=13							
MKAR				LR	LR	15 05 49.6		
	comp=Z,40nm,19.2s,baz=7.5,slow=39							
	comp=Z,0.9nm,0.7s							
YKA	**Yellowknife Ar**	**53.81**	**327**	*i* P	**P**	**14 40 28.0 +1.3**		
YKA	**Yellowknife Ar**	**53.81**	**327**	P	**P**	**14 40 26.6 -0.1**		
	comp=Z,0.3nm,0.6s,baz=47,slow=7.6,SNR=9.7							
	comp=Z,0.3nm,0.6s							
F31M	**Tsiigehtchic**	**55.41**	**339**	P	**P**	**14 40 38.8 +0.6**		
F31M				IAmb	IAmb	14 40 40.6		
	comp=Z,4.4nm,0.8s							
E29M	**Blow River**	**55.50**	**341**	P	**P**	**14 40 40.3 +1.4**		
E29M				IAmb	IAmb	14 40 41.9		
	comp=Z,3.9nm,0.8s							
E28M	**Babbage River**	**55.64**	**342**	P	**P**	**14 40 40.1 +0.1**		
E28M				IAmb	IAmb	14 40 51.4		
	comp=Z,1.3nm,0.8s							
G31M	**Satah River**	**55.95**	**339**	P	**P**	**14 40 42.5 +0.4**		
G31M				IAmb	IAmb	14 40 44.2		
	comp=Z,3.2nm,0.9s							
G30M	**tAoh Zraii Nji**	**56.34**	**340**	P	**P**	**14 40 45.8 +0.8**		
ILAR	**Eielson Array**	**60.42**	**343**	P	**P**	**14 41 15.2 +1.8**		
	comp=Z,1.0nm,0.8s,baz=13,slow=5.7,SNR=11							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**64.33**	**45**	P	**P**	**14 41 41.7 +1.6**		
	comp=Z,0.2nm,0.4s,baz=314,slow=6.8,SNR=2.1							
	comp=Z,0.2nm,0.4s							
PDAR	**Pinedale Array**	**66.10**	**309**	P	**P**	**14 41 52.6 +0.8**		
	comp=Z,0.1nm,0.4s,baz=50,slow=6.0,SNR=1.3							
	comp=Z,0.1nm,0.4s							
ANMO	**Albuquerque**	**70.47**	**302**	LR	LR	15 11 18.2		
	comp=Z,40nm,18.4s,baz=165,slow=34							
HHC	**Hu-ho-hao-te**	**72.11**	**46**	*e*P	**P**	**14 42 27.4 -1.5**		
HHC				PP	**PP**	**14 45 15.8 +7.3**		
HHC				pmax	pmax			
	comp=Z,6.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,53nm,5.6s							
TXAR	**Lajitas Array**	**73.23**	**296**	P	**P**	**14 42 37.5 +1.8**		
	comp=Z,0.2nm,0.6s,baz=62,slow=4.2,SNR=2.4							
	comp=Z,0.2nm,0.6s							
PZH	**PanZhiHua**	**78.61**	**62**	P	**P**	**14 43 07.0 +0.4**		
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
PZH				pmax	pmax			
	comp=Z,100nm,4.5s							
JCJ	**Chichijima**	**96.08**	**30**	LR	LR	15 33 47.3		
	comp=Z,91nm,20.8s,baz=322,slow=39							
ASAR	**Alice Springs**	**137.29**	**65**	PKP	**PKPdf**	**14 50 27.5 -0.5**		
	comp=Z,0.2nm,0.8s,baz=324,slow=2.8,SNR=1.7							
QSPA	**South Pole Qui**	**141.55**	**180**	PKP	**PKPdf**	**14 50 33.6 -0.8**		
	comp=Z,0.9nm,1.1s,baz=57,slow=19,SNR=1.9							
STKA	**Stephens Creek**	**147.93**	**65**	PKPbc	**PKPdf**	**14 50 49.2 +2.7**		
	comp=Z,0.8nm,0.7s,baz=338,slow=5.4,SNR=1.4							

*IDC **17** 14:36:20.6±1.3,3°.49N×127°.24E, h0km, mb3.6/6, mbtmp3.6/6, MS3.3/2, Error ellipse: s-maj=140.4km s-min=17.8km az=68.0*

ISC 17 14:36:27.0±1.5,3°.6N±0°.5×12°.8E±°, h50km, n9, σ0°.63/6, mb3.7/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**23.43**	**124**	LR	LR			14 51 17.7	
	comp=Z,58nm,19.3s,baz=288,slow=38								
WRA	**Warramunga Arr**	**24.32**	**164**	P	**P**			**14 41 39.4 -0.9**	
	1.5nm,0.9s,baz=344,slow=9.8,SNR=9.7								
	1.5nm,0.9s								
JCJ	**Chichijima**	**27.25**	**29**	LR	LR			14 53 00.6	
	comp=Z,81nm,18.2s,baz=288,slow=36								
ASAR	**Alice Springs**	**27.79**	**167**	P	**P**			**14 42 11.6 0.0**	
	0.3nm,0.6s,baz=344,slow=7.8,SNR=7.5								
	0.3nm,0.6s								
LYN	**LuoYang**	**33.84**	**337**	*e*P	P			14 43 10.3 +5.6	
LYN				pmax	pmax				
	comp=Z,9.0nm,0.6s								
STKA	**Stephens Creek**	**37.72**	**160**	P	**P**			**14 43 38.5 +0.5**	
	comp=Z,2.3nm,0.7s,baz=342,slow=3.9,SNR=5.5								
	comp=Z,2.3nm,0.7s								
SONM	**Songino Array**	**47.69**	**341**	P	**P**			**14 44 58.7 0.0**	
	comp=Z,0.2nm,0.4s,baz=160,slow=8.8,SNR=1.6								
	comp=Z,0.2nm,0.4s								
MKAR	**Makanchi Array**	**58.13**	**325**	P	**P**			**14 46 16.0 +0.3**	
	comp=Z,0.3nm,0.5s,baz=117,slow=7.5,SNR=5.8								
	comp=Z,0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**62.29**	**327**	P	**P**			**14 46 43.7 -0.3**	
	comp=Z,0.7nm,0.8s,baz=123,slow=6.5,SNR=7.3								
	comp=Z,0.7nm,0.8s								

*IPEC **17** 14:40:24.4±0.2,50°.36N×18°.87E, h1km, ML2.5/5, Error ellipse: s-maj=1.8km s-min=1.1km az=166.0*
*VIE **17** 14:40:24.4±0.5,49°.69N×19°.21E, h0km, mb2.4/2, ml2.5/6, Error ellipse: s-maj=6.0km s-min=2.3km az=145.0, Suspected Mining induced.*
*PRU **17** 14:40:24.7,50°.41N×18°.80E, h0km*
*IDC **17** 14:40:25.4±1.0,50°.29N×18°.73E, h0km, mbtmp3.3/4, ML2.9/4, Error ellipse: s-maj=18.2km s-min=8.4km az=146.0*

ISC 17 14:40:23.5±0.7,50°.34N±0°.03×18°.81E±0°.02, h0km, n46, σ1°43/80, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.47**	**237**	*e*PG			**Pb**	**14 40 35.5 +0.8**	
RAC				*e*SG			**Sb**	**14 40 43.4 +1.1**	
OJC	**Ojcow**	**0.65**	**101**	*e*Pg			**Pg**	**14 40 36.5 +0.6**	
OJC				*e*Sg			**Sg**	**14 40 45.5 +1.3**	
OKC	**Ostrava-Krasne**	**0.66**	**220**	*e*PG			**Pb**	**14 40 38.4 +0.5**	
OKC				*e*SG			**Sb**	**14 40 48.1 +0.4**	
	comp=Z,74nm,0.4s								
MORC	**Moravsky Berou**	**1.00**	**236**	*e*Pg			**Pb**	**14 40 44.1 +0.5**	
	baz=55								
MORC				*e*Sg			**Sg**	**14 40 56.8 +1.3**	
	137nm,0.6s,baz=55								
MAUC	**Maruska**	**1.17**	**213**	*e*SG			**Sn**	**14 41 04.3 +0.5**	
LANS	**Liptovska Anna**	**1.27**	**160**	*e*PG			**Pn**	**14 40 49.3 +0.8**	
LANS				*e*SG			**Sn**	**14 41 06.6 +0.4**	
LANS				*e*LG			Lg	14 41 09.5	
KRLC	**Kraliky**	**1.33**	**259**	*e*PG			**Pg**	**14 40 49.4 +0.4**	
KRLC				*e*SG			**Sb**	**14 41 07.9 +0.9**	
	comp=Z,83nm,0.4s								
NIE	**Niedzica**	**1.34**	**133**	*e*Pg			**Pb**	**14 40 50.0 +0.5**	
NIE				*e*Sg			**Sn**	**14 41 08.3 +0.4**	
DPC	**Dobruska-Polom**	**1.59**	**271**	*e*PG			**Pn**	**14 40 53.9 +0.9**	
DPC				*e*SG			**Sg**	**14 41 16.0 +1.3**	
	comp=Z,43nm,0.4s								
JAVC	**Velka Javorina**	**1.66**	**207**	*e*Pn			**Pn**	**14 40 54.8 +0.9**	
	baz=27								
JAVC				*e*Sg			**Sg**	**14 41 17.3 +0.5**	
	21nm,0.5s,baz=27								
OSTC	**Ostas**	**1.67**	**278**	*e*PG			**Pn**	**14 40 55.0 +0.9**	
OSTC				*e*SG			**Sg**	**14 41 18.0 +0.8**	
	comp=Z,33nm,0.4s								
KSP	**Ksiaz**	**1.68**	**288**	*e*Pg			**Pn**	**14 40 55.4 +1.3**	
KSP				*e*Sg			**Sb**	**14 41 17.9 +0.9**	
VRAC	**Vranov**	**1.77**	**235**	*e*Pn			**Pn**	**14 40 56.4 +1.0**	
	baz=53								
VRAC				*e*Sg			**Sg**	**14 41 21.1 +0.7**	
	38nm,0.4s,baz=53								
VRAC	**Vranov**	**1.77**	**235**	*e*PN			**Pn**	**14 40 56.5 +1.0**	
VRAC				*e*SG			**Sg**	**14 41 21.2 +0.8**	
VRAC	**Vranov**	**1.77**	**235**	Pn			**Pn**	**14 40 56.0 +0.6**	
	10.0nm,0.3s,baz=52,slow=14,SNR=36								
VRAC				Lg			Lg	14 41 20.2	
	11nm,0.3s,baz=319,slow=20,SNR=10.0								
CHVC	**Chvalec**	**1.78**	**279**	*e*PG			**Pn**	**14 40 56.4 +0.9**	
CHVC				*e*SG			**Sn**	**14 41 19.6 +0.7**	
	comp=Z,43nm,0.6s								
UPC	**Upice**	**1.80**	**276**	*e*PG			**Pb**	**14 40 57.9 +0.6**	
UPC				*e*SG			**Sb**	**14 41 21.3 +0.9**	
STHS	**Stebnicka Huta**	**1.83**	**120**	*e*PN			**Pb**	**14 40 58.1 +0.3**	
VYHS	**Vyhne**	**1.85**	**180**	*e*PN			**Pn**	**14 40 57.3 +0.8**	
VYHS				*e*SN			**Sn**	**14 41 21.1 +0.5**	
KRUC	**Moravsky**	**2.03**	**232**	*e*Pn			**Pn**	**14 41 00.0 +1.2**	
	baz=50								
KRUC				*e*Sg			**Sg**	**14 41 29.4 +0.9**	
	31nm,0.6s,baz=50								
KRUC	**Moravsky**	**2.03**	**232**	*e*PN			**Pn**	**14 41 00.1 +1.2**	
KRUC				*e*SG			**Sg**	**14 41 29.5 +0.9**	
KECS	**Kecovo**	**2.16**	**149**	*e*SN			**Sn**	**14 41 27.4 -0.8**	
KECS				*e*LG			Lg	14 41 35.8	
MODS	**Modra-Piesok**	**2.21**	**208**	*e*PN			**Pn**	**14 41 02.9 +1.4**	
CRVS	**Cervenica-Dubn**	**2.25**	**129**	*e*PG			**Pg**	**14 41 06.5 0.0**	
CRVS				*e*SG			**Sg**	**14 41 37.9 +2.3**	
TREC	**Trest**	**2.40**	**245**	*e*PN			**Pn**	**14 41 04.9 +0.9**	
TREC				*e*PG			**Pb**	**14 41 07.7 +0.2**	
TREC				*e*SG			**Sg**	**14 41 40.0 -0.4**	
ZST	**Bratislava**	**2.42**	**208**	*e*SN			**Sn**	**14 41 33.9 -0.8**	
GOPC	**GO Pecny, Ondr**	**2.63**	**262**	*e*PG			**Pb**	**14 41 11.7 +0.3**	
GOPC				*e*SG			**Sg**	**14 41 47.4 -0.4**	
KOLS	**Kolonicke sedl**	**2.66**	**121**	*e*PN			**Pn**	**14 41 08.5 +0.9**	
KOLS				*e*SN			**Sn**	**14 41 42.1 +1.7**	
KOLS				*e*LG			Lg	14 42 04.0	
PRU	**Pruhonice**	**2.77**	**264**	*e*PN			**Pn**	**14 41 09.2 +0.1**	
PRU				*e*PG			**Pb**	**14 41 14.7 +0.9**	
PRU				*e*SG			**Sg**	**14 41 52.1 -0.3**	
	comp=Z,16nm,0.6s								
CONA	**Conrad Observa**	**3.10**	**220**	Pn			**Pn**	**14 41 14.0 +0.3**	
	2.4nm,0.3s								
CONA				Sn			**Sn**	**14 41 45.2 -6.3**	
	3.7nm,0.3s								
RONA	**Rosalia, Austr**	**3.12**	**213**	*e*Pn			**Pn**	**14 41 10.5 -3.5**	
	1.0nm,0.1s								
BRG	**Berggiesshubel**	**3.15**	**282**	Pg			**Pg**	**14 41 23.0 -0.8**	
BRG				Sg			**Sg**	**14 42 06.4 +1.9**	
BRG				Amp				14 42 09.9	
	comp=Z,13nm,0.5s								
CKRC	**Cesky Krumlov**	**3.30**	**244**	*e*PN			**Pn**	**14 41 18.1 +1.6**	
CKRC				*e*PG			**Pb**	**14 41 24.4 +1.4**	
CKRC				*e*SG			**Sg**	**14 42 10.4 +0.8**	
	comp=Z,35nm,0.9s								
HSKC	**Hora Svate Kat**	**3.45**	**276**	*e*PN			**Pn**	**14 41 20.0 +1.6**	
KHC	**Kasperske Hory**	**3.61**	**252**	*e*PN			**Pn**	**14 41 21.4 +0.8**	
KHC				*e*PG			**Pb**	**14 41 28.7 +0.6**	
KHC				*e*SG			**Sg**

BVAR			S	Sn	14 48 40.4	-2.5	
	0.9nm,0.5s,baz=164,slow=22,SNR=4.5						
AKTO	**Aktyubinsk**	**16.20**	**326** ⇑P	**P**	**14 46 05.3**	**+1.6**	
	2.0nm,0.5s						
AKTO			⇑S	S	14 48 59.9	-3.3	
	2.8nm,0.7s						
AKTO	**Aktyubinsk**	**16.20**	**326** P	**P**	**14 46 06.5**	**+2.8**	
	4.6nm,0.4s,baz=134,slow=7.5,SNR=14						
AKTO			S	S	14 48 59.7	-3.5	
	1.8nm,0.4s,baz=191,slow=5.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**18.40**	**24** P	**Pn**	**14 46 28.4**	**-1.4**	
	0.8nm,0.5s,baz=224,slow=10,SNR=5.5						
ARU	**Arti**	**20.77**	**338** P	**P**	**14 46 55.2**	**+1.9**	
	1.8nm,0.3s,baz=152,slow=4.4,SNR=4.6						
	1.8nm,0.3s						
FINES	**FINESS Array B**	**36.96**	**325** P	**P**	**14 49 21.2**	**+2.4**	
	0.6nm,0.4s,baz=114,slow=9.2,SNR=7.7						
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**40.34**	**337** P	**P**	**14 49 49.2**	**+2.3**	
	1.0nm,0.4s,baz=112,slow=8.2,SNR=16						
	1.0nm,0.4s						
HFS	**Hagfors**	**42.65**	**321** P	**P**	**14 50 06.3**	**+0.5**	
	1.3nm,0.7s,baz=118,slow=8.3,SNR=2.2						
	1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.65**	**269** P	**P**	**14 52 58.6**	**-0.6**	
	0.4nm,0.8s,baz=46,slow=7.3,SNR=2.6						
WRA	**Warramunga Arr**	**81.90**	**123** P	**P**	**14 54 24.6**	**-2.7**	
	0.4nm,0.7s,baz=328,slow=5.7,SNR=5.3						
	0.4nm,0.7s						
PLCA	**Paso Flores**	**151.08**	**252** PKPbc	**PKPbc**	**15 01 56.0**	**-3.6**	
	2.5nm,1.1s,baz=354,slow=3.2,SNR=3.4						

NEIC ***17*** *14:45:36.4±1.7, 38°.36N±0°.01×118°.30W±0°.02, h13km±6km, Error ellipse: s-maj=2.5km s-min=1.3km az=69.0*

REN 17 14:45:36.7±2.5, 38°.36N±0°.01×118°.32W±0°.02, h10km±7km, ML2.8/9, ML2.8/72(NEIC), Error ellipse: s-maj=2.4km s-min=1.2km az=59.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NV08	**Mina Array Sit**	**0.05**	**359**		Pg	14 45 40.9	+2.0
NV09	**Mina Array Sit**	**0.08**	**350**		Pg	14 45 41.5	+2.2
NV11	**Mina Array Sit**	**0.15**	**59**		Pg	14 45 41.3	+1.2
NV11					Sg	14 45 43.8	+1.2
NV11	**Mina Array Sit**	**0.15**	**59**	IAML		14 45 44.1	
	comp=N,3μm,0.5s						
NV11				IAML		14 45 44.4	
	comp=E,2μm,0.2s						
LHV	**Little Huntoon**	**0.18**	**235**		Pg	14 45 41.2	+0.7
LHV					Sg	14 45 44.4	+1.2
LHV	**Little Huntoon**	**0.18**	**235**	IAML		14 45 44.7	
	comp=N,7μm,0.4s						
LHV				IAML		14 45 45.3	
	comp=E,6μm,0.4s						
RYN	**Ryan**	**0.32**	**329**		Pg	14 45 43.5	+0.4
RYN					Sg	14 45 48.3	+0.9
RYN	**Ryan**	**0.32**	**329**	IAML		14 45 48.4	
	comp=E,2μm,0.3s						
RYN				IAML		14 45 49.6	
	comp=N,2μm,0.2s						
TVH1	**TV Hill, Hawth**	**0.37**	**286**		Pg	14 45 44.5	+0.3
TVH1					Sg	14 45 50.2	+1.2
BENR	**Benton**	**0.67**	**198**		Pg	14 45 49.8	+0.1
KVN	**Kaiserville**	**0.72**	**14**		Pg	14 45 50.6	0.0
ORC	**Owens River**	**0.77**	**201**		Pg	14 45 51.7	+0.1
CASR	**Casa Diablo Mo**	**0.80**	**193**		Pg	14 45 52.1	0.0
MLAC	**Mammoth, Mammo**	**0.83**	**210**		Pg	14 45 53.0	+0.2
MCBM	**Casa Benchmark**	**0.84**	**213**		Pg	14 45 53.2	+0.2
WAKR	**Walker**	**0.89**	**280**		Pg	14 45 53.7	-0.2
TPH	**Tonopah**	**0.91**	**108**		Pg	14 45 54.2	0.0
RCCR	**Rock Creek Can**	**0.92**	**200**		Pg	14 45 54.6	-0.1
MDPB	**Devils Postpil**	**0.94**	**220**		Pg	14 45 54.6	-0.2
YERR	**Yerington**	**0.96**	**311**		Pg	14 45 54.8	-0.3
YERR					Sb	14 46 08.8	+0.4
MZP	**Montezuma Peak**	**0.98**	**131**		Pg	14 45 55.1	-0.6
MZP				IAML		14 46 12.8	
	comp=N,243nm,0.4s						
POCCA	**Poleta Canyon**	**0.99**	**178**		Pg	14 45 55.8	0.0
Q09A	**Carvers**	**1.01**	**61**		Pb	14 45 56.4	-0.1
DSP	**Deep Springs**	**1.02**	**164**		Pb	14 45 56.5	+0.1
DSP					Sb	14 46 10.2	+0.3
SCHCA	**Scheelite**	**1.04**	**197**		Pg	14 45 56.5	-0.2
LCH	**Last Change Ra**	**1.24**	**154**		Pg	14 46 00.5	0.0
LCH					Sg	14 46 16.9	+0.2
LCH	**Last Change Ra**	**1.24**	**154**	IAML		14 46 19.7	
	comp=N,157nm,0.3s						
LCH				IAML		14 46 20.6	
	comp=E,238nm,0.3s						
PNTR	**Pine Nut**	**1.24**	**307**		Pn	14 46 00.0	-0.4
PNTR					Sn	14 46 17.4	0.0
PNTR	**Pine Nut**	**1.24**	**307**	IAML		14 46 20.7	
	comp=N,235nm,0.7s						
GMN	**Gold Mountain**	**1.34**	**141**		Pb	14 46 02.2	0.0
GMN	**Gold Mountain**	**1.34**	**141**	IAML		14 46 21.1	
	comp=N,234nm,0.4s						
GMN				IAML		14 46 23.9	
	comp=E,134nm,0.3s						
EMB	**Emerald Bay**	**1.53**	**294**		Pn	14 46 04.5	+0.2
EMB				IAML		14 46 31.8	
	comp=N,90nm,0.5s						
GRAC	**Grapevine Rang**	**1.55**	**151**		Pn	14 46 04.8	+0.3
GRAC				IAML		14 46 30.0	
	comp=N,169nm,0.4s						
PAHR	**Pah Rah Range**	**1.58**	**329**		Pn	14 46 05.0	-0.1
PAHR				IAML		14 46 28.9	
	comp=E,157nm,0.9s						
PAHR				IAML		14 46 29.3	
	comp=N,93nm,0.3s						
MPK	**Martis Peak**	**1.64**	**306**		Pn	14 46 05.6	-0.3
MPK				IAML		14 46 33.4	
	comp=E,96nm,0.9s						
MPK				IAML		14 46 33.6	
	comp=N,111nm,0.8s						
CMB	**Columbia Colle**	**1.66**	**260**		Pn	14 46 06.0	0.0
CMB				IAML		14 46 31.9	
	comp=N,67nm,0.8s						
WCT	**Wildcat Mounta**	**2.06**	**139**	Pn	Pn	14 46 11.7	+0.2
WCT				IAML		14 46 46.0	
	comp=N,88nm,0.5s						
R11B	**Troy Canyon, C**	**2.15**	**89**		Pn	14 46 12.3	-0.5
R11B				IAML		14 46 45.4	
	comp=N,44nm,0.9s						
S11A	**Rachel**	**2.15**	**108**		Pn	14 46 12.6	-0.2
TPNV	**Topopah Spring**	**2.16**	**130**		Pn	14 46 12.0	-0.9
TPNV				IAML		14 46 51.6	
	comp=N,69nm,0.8s						
TPNV				IAML		14 46 57.2	
	comp=N,68nm,0.7s						
AFDM	**Forest Hills D**	**2.16**	**287**		Pn	14 46 13.1	+0.3
BMN	**Battle Mountai**	**2.24**	**22**		Pn	14 46 12.0	-2.0
BMN				IAML		14 46 50.0	
	comp=N,46nm,0.3s						
GWY	**Greenwater Val**	**2.53**	**148**	Pn	Pn	14 46 17.2	-0.9
GWY				IAML		14 47 03.8	
	comp=E,34nm,0.9s						
GWY				IAML		14 47 09.0	
	comp=N,35nm,0.5s						
PRN	**Pahroc Range**	**2.75**	**109**	Pn	Pn	14 46 20.9	-0.1
PRN				IAML		14 47 12.2	
	comp=E,45nm,0.4s						
PRN				IAML		14 47 17.3	
	comp=N,41nm,0.7s						
BBGB	**Big Mountain B**	**2.80**	**232**	Pn	Pn	14 46 21.3	-0.4
SHPR	**Sheep Range**	**3.12**	**125**		Pn	14 46 23.4	-2.8
SPR3	**Spring Creek 3**	**3.19**	**77**	Pn	Pn	14 46 24.4	-2.8
ELK	**Elko**	**3.37**	**44**		Pn	14 46 29.7	0.0
ELK				IAML		14 47 25.1	
	comp=N,17nm,0.6s						
ELK				IAML		14 47 25.6	
	comp=N,17nm,0.4s						

UPP ***17*** *14:53:23.7±0.0, 67°.86N×20°.15E, h0km, ML2.4, Confirmed Induced event*

BER ***17*** *14:53:24.2±1.1, 67°.67N×20°.42E, h0km, ML2.1, Suspected explosion*

IDC ***17*** *14:53:25.9±1.0, 67°.65N×20°.96E, h0km, mbtmp3.2/5, ML2.0/4, Error ellipse: s-maj=18.8km s-min=8.6km az=114.0*

ISC 17 14:53:23.2±0.8, 67°.74N±0°.03×20°.55E±0°.05, h0km, n21, σ1s73/25, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.23**	**339**	P	**Pg**	**14 53 26.2**	**-1.3**
KUA				S	**Sg**	**14 53 28.2**	**-2.3**
RATU	**Laukkuluspa**	**0.38**	**283**	P	**Pg**	**14 53 28.0**	**-2.3**
KOVU	**Salmi**	**0.50**	**343**	P	**Pg**	**14 53 30.9**	**-1.9**
DUNU	**Dundret**	**0.62**	**179**	P	**Pb**	**14 53 38.2**	**+1.3**
MASU	**Masugnsbyn**	**0.62**	**117**	P	**Pn**	**14 53 39.5**	**+0.2**
LANU	**Lannavaara**	**0.63**	**60**	P	**Pb**	**14 53 37.2**	**+0.3**
SALU	**Saltoluokta**	**0.87**	**246**	*eP*	**Pg**	**14 53 38.4**	**-1.3**
SALU	**Saltoluokta**	**0.87**	**246**	P	**Pg**	**14 53 38.4**	**-1.3**
PAJU	**Pajala**	**1.23**	**125**	P	**Pn**	**14 53 48.9**	**+1.3**
KIF	**Kilpisjarvi**	**1.27**	**4**	*eP*	**Pn**	**14 53 48.8**	**+0.7**
KIF				*eS*	**Sn**	**14 53 46.6**	**+0.8**
HEF	**Hetta**	**1.34**	**59**	*eP*	**Pb**	**14 53 49.7**	**+0.5**
I37NO	**I37NO**	**1.52**	**333**	I	I	15 02 11.2	
	baz=154,slow=334,SNR=7.0						
KTK1	**Kautokeino**	**1.62**	**37**	*eP*	**Pn**	**14 53 53.2**	**+0.3**
KTK1				IAML		14 54 23.8	
	comp=Z,19nm,0.2s						
JETT	**Jettan, Norway**	**1.82**	**358**	*eP*	**Pn**	**14 53 55.1**	**-0.7**
JETT				*eS*	**Sn**	**14 54 20.2**	**+0.6**
JETT				IAML		14 54 25.4	
	comp=Z,46nm,0.3s						
FAUS	**Fauske**	**2.05**	**262**	*e*	**Pn**	**14 54 00.0**	**+1.2**
ARCES	**ARCESS Array B**	**2.56**	**43**	Pn	**Pn**	**14 54 07.3**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=223,slow=14,SNR=63						
ARCES				Sn	**Sb**	**14 54 41.7**	**0.0**
	comp=Z,2.3nm,0.3s,baz=223,slow=20,SNR=11						
	comp=Z,1.3nm,0.3s						
KEV	**Kevo**	**3.10**	**46**	*e*	**Pb**	**14 54 20.0**	**+0.9**
FINES	**FINESS Array B**	**6.75**	**157**	Pn	**Pn**	**14 55 04.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=349,slow=13,SNR=1.6						
FINES				Sn	**Sn**	**14 56 16.4**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=349,slow=22,SNR=1.1						
FINES				Lg		14 56 53.8	
	comp=Z,0.1nm,0.3s,baz=346,slow=27,SNR=1.5						
	comp=Z,1.0nm,0.9s						
NOA	**NORSAR Array B**	**7.84**	**215**	Pn	**Pn**	**14 55 19.2**	**+0.9**
	baz=25,slow=11,SNR=1.5						
	comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**8.21**	**205**	Pn	**Pn**	**14 55 25.5**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=2.8						
HFS				Lg		14 57 41.7	
	comp=Z,0.1nm,0.3s,baz=22,slow=27,SNR=2.1						
	comp=Z,1.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**10.56**	**355**	Pn	**Pn**	**14 55 58.4**	**+3.0**
	comp=Z,5.0nm,0.9s,baz=191,slow=7.0,SNR=1.5						

IDC ***17*** *14:57:01.0±4.0, 15°.91N×99°.99W, h0km, mb3.6/2, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=62.7km s-min=25.3km az=12.0*

NEIC ***17*** *14:57:07.4±1.9, 16°.48N±0°.06×99°.95W±0°.04, h29km±10km, mb4.3/9, Md4.3/41(MEX), Error ellipse: s-maj=10.1km s-min=3.8km az=203.0*

MEX ***17*** *14:57:08.3±0.7, 16°.44N×99°.98W, h12km±18km, MD4.3*

ISC 17 14:57:06.1±1.0, 16°.44N±0°.05×100°.00W±0°.04, h19km, n60, σ1s98/91, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.44**	**14**		**Pg**	**14 57 15.8**	**+0.6**
ACP2					**Sg**	**14 57 22.0**	**+0.6**
ACP2	**Acapulco**	**0.44**	**14**	*i* P	**Pg**	**14 57 15.8**	**+0.6**
ACP2				*i* S	**Sg**	**14 57 22.0**	**+0.6**
VNTA	**La Mica**	**0.50**	**20**	*i* P	**Pg**	**14 57 16.6**	**+0.3**
VNTA				*i* S	**Sg**	**14 57 23.0**	**-0.1**
CAIG	**El Cayaco**	**0.65**	**337**		**Pb**	**14 57 19.5**	**+0.6**
CAIG					**Sb**	**14 57 28.2**	**+0.7**
CAIG	**El Cayaco**	**0.65**	**337**	*i* P	**Pb**	**14 57 19.5**	**+0.6**
CAIG				*eS*	**Sb**	**14 57 28.2**	**+0.7**
DAIG	**Los Arroyos**	**0.67**	**30**		**Pb**	**14 57 19.0**	**-0.1**
DAIG					**Sb**	**14 57 27.9**	**0.0**
DAIG	**Los Arroyos**	**0.67**	**30**	*i* P	**Pb**	**14 57 19.0**	**-0.1**
DAIG				*i* S	**Sb**	**14 57 27.9**	**0.0**
ATYC	**Atoyac**	**0.87**	**332**	*eP*	**Pb**	**14 57 23.0**	**+0.4**
ATYC				*eS*	**Sb**	**14 57 33.9**	**+0.1**
CRIG	**Cruz Grande**	**0.88**	**71**		**Pb**	**14 57 22.1**	**-0.8**
CRIG					**Sb**	**14 57 32.9**	**-1.4**
CRIG	**Cruz Grande**	**0.88**	**71**	*i* P	**Pb**	**14 57 22.1**	**-0.8**
CRIG				*eS*	**Sb**	**14 57 32.9**	**-1.4**
MEIG	**Mezcala**	**1.52**	**14**		**Pn**	**14 57 32.3**	**-0.1**
MEIG					**Sn**	**14 57 52.0**	**+0.3**
MEIG	**Mezcala**	**1.52**	**14**	*eP*	**Pn**	**14 57 32.3**	**-0.1**
MEIG				*eS*	**Sn**	**14 57 52.0**	**+0.3**
TLIG	**Tlapa**	**1.77**	**51**		**Pn**	**14 57 35.4**	**-0.5**
TLIG	**Tlapa**	**1.77**	**51**	*eP*	**Pn**	**14 57 35.6**	**-0.2**
TLIG				*eS*	**Sb**	**14 58 01.5**	**+1.6**
PNIG	**Pinotepa**	**1.80**	**91**		**Pb**	**14 57 40.2**	**+1.8**
PNIG					**Sg**	**14 58 04.2**	**0.0**
PNIG	**Pinotepa**	**1.80**	**91**	*eP*	**Pb**	**14 57 40.2**	**+1.8**
PNIG				*eS*	**Sg**	**14 58 04.2**	**0.0**
ARIG	**Puente Sto Nin**	**1.86**	**350**		**Pn**	**14 57 37.8**	**+0.9**
ARIG					**Sb**	**14 58 03.6**	**+1.2**
ARIG	**Puente Sto Nin**	**1.86**	**350**	*eP*	**Pn**	**14 57 37.8**	**+0.9**
ARIG				*eS*	**Sb**	**14 58 03.6**	**+1.2**
PLIG	**Platanillo**	**2.00**	**14**		**Pn**	**14 57 39.5**	**+0.6**
PLIG					**Sb**	**14 58 08.7**	**+2.3**
PLIG	**Platanillo**	**2.00**	**14**	*eP*	**Pn**	**14 57 39.5**	**+0.6**
PLIG				*eS*	**Sb**	**14 58 08.7**	**+2.3**
TXIG	**Tlaxiaco**	**2.29**	**69**		**Pn**	**14 57 43.1**	**0.0**
TXIG					**Sb**	**14 58 17.2**	**+2.3**
TXIG	**Tlaxiaco**	**2.29**	**69**	*eP*	**Pn**	**14 57 43.1**	**0.0**
TXIG				*eS*	**Sb**	**14 58 17.2**	**+2.3**
FTIG	**Fresnillo de T**	**2.31**	**51**		**Pn**	**14 57 43.0**	**-0.2**
FTIG					**Sb**	**14 58 17.7**	**+2.4**
FTIG	**Fresnillo de T**	**2.31**	**51**	*eP*	**Pn**	**14 57 43.0**	**-0.2**
FTIG				*eS*	**Sb**	**14 58 17.7**	**+2.4**
YOIG	**Yosondua**	**2.39**	**80**		**Pn**	**14 57 44.0**	**-0.5**
YOIG					**Sb**	**14 58 20.6**	**+2.7**
YOIG	**Yosondua**	**2.39**	**80**	*eP*	**Pn**	**14 57 44.0**	**-0.5**
YOIG				*eS*	**Sb**	**14 58 20.6**	**+2.7**
HLIG	**Huajuapan de L**	**2.51**	**56**		**Pn**	**14 57 45.9**	**-0.3**
HLIG					**Sb**	**14 58 23.6**	**+2.1**
HLIG	**Huajuapan de L**	**2.51**	**56**	*eP*	**Pn**	**14 57 45.9**	**-0.3**
HLIG				*eS*	**Sb**	**14 58 23.6**	**+2.1**
YAIG	**Yautepec**	**2.57**	**20**		**Pn**	**14 57 46.9**	**+0.1**
YAIG					**Sb**	**14 58 24.2**	**+1.3**
YAIG	**Yautepec**	**2.57**	**20**	*eP*	**Pn**	**14 57 46.9**	**+0.1**
YAIG				*eS*	**Sb**	**14 58 24.2**	**+1.3**
PEIG	**Puerto Escondi**	**2.78**	**99**		**Sg**	**14 58 40.8**	**+5.4**
PEIG	**Puerto Escondi**	**2.78**	**99**	*eS*	**Sg**	**14 58 40.8**	**+5.4**
PPIG	**Popocatepetl**	**2.92**	**26**		**Pn**	**14 57 52.3**	**+0.3**
PPIG					**Sb**	**14 58 37.9**	**+4.5**
PPM	**Popocatepetl**	**2.92**	**26**	*eP*	**Pn**	**14 57 52.3**	**+0.3**
PPM				*eS*	**Sb**	**14 58 37.9**	**+4.5**
UNM	**Universidad Na**	**2.98**	**15**	*eS*	**Sg**	**14 58 40.8**	**-1.0**
TOIG	**Toxpalan**	**3.25**	**59**		**Pn**	**14 57 56.0**	**+0.2**
TOIG					**Sb**	**14 58 44.0**	**+1.3**
TOIG	**Toxpalan**	**3.25**	**59**	*eP*	**Pn**	**14 57 56.4**	**+0.2**
TOIG				*eS*	**Sb**	**14 58 44.0**	**+1.3**
MOIG	**Morelia**	**3.41**	**341**	Pn	**Pn**	**14 57 58.3**	**-0.2**
MOIG	**Morelia**	**3.41**	**341**	*eS*	**Sb**	**14 58 52.4**	**+5.2**
DHIG	**Demacu**	**3.94**	**13**		**Pb**	**14 58 17.0**	**+1.8**
DHIG					**Sb**	**14 59 05.6**	**+2.9**
DEIG	**Demacu**	**3.95**	**13**	*eP*	**Pb**	**14 58 17.0**	**+1.8**
DEIG				*eS*	**Sb**	**14 59 05.6**	**+2.9**
CMIG	**Matias Romero**	**4.95**	**82**	Pn	**Pn**	**14 58 19.3**	**-0.1**
	0.6nm,0.3s,baz=259,slow=13,SNR=3.4						
CMIG				Sn	**Sn**	**14 59 13.4**	**-2.7**
	1.9nm,0.3s,baz=300,slow=12,SNR=2.8						
CMIG				Lg	Lg	14 59 40.0	
	2.0nm,0.3s,baz=310,slow=15,SNR=4.1						
	1.7nm,0.4s						
H06E1	**SOCORRO T-PHAS**	**10.67**	**284**	T	T	15 10 38.4	
	SNR=13						
TEIG	**Tepich**	**11.75**	**70**	Pn	Pn	14 59 49.0	-3.8
HNDO	**Hondo**	**13.04**	**3**	Pn	**Pn**	**15 00 10.0**	**-0.4**
TXAR	**Lajitas Array**	**13.27**	**346**	Pn	**P**	**15 00 20.6**	**-2.7**
	baz=167,slow=13,SNR=1.4						
TXAR				Lg	Lg	15 04 17.8	
	baz=164,slow=24,SNR=3.3						
WTFS	**Witchita Falls**	**17.30**	**4**	Pn	**Pn**	**15 01 05.2**	**-1.5**
LOOK	**Love County**	**17.66**	**8**		**Pn**	**15 01 12.7**	**+1.6**
Z41A	**Richland Creek**	**17.96**	**20**	Pn	**Pn**	**15 01 11.0**	**-3.8**
Z41A				IAmb	IAmb	15 01 28.7	
	comp=Z,11nm,0.8s						
WLAR	**White Oak Lake**	**18.26**	**19**	P	**Pn**	**15 01 18.2**	**-0.3**
WLAR				IAmb	IAmb	15 01 20.3	
	comp=Z,14nm,0.4s						
OK033	**Mehan**	**19.71**	**7**	P	**P**	**15 01 30.6**	**-3.9**
OK033				IAmb	IAmb	15 01 59.2	
	comp=Z,9.9nm,1.0s						
Z47A	**Carrollton**	**19.86**	**31**	P	**P**	**15 01 33.2**	**-2.9**
Z47A				IAmb	IAmb	15 01 55.7	
	comp=Z,15nm,1.1s						
061Z	**Ochoppi**	**20.10**	**59**	P	**P**	**15 01 35.0**	**-3.9**
061Z				IAmb	IAmb	15 01 55.7	
	comp=Z,50nm,0.9s						
KAN14	**Manchester OK**	**20.51**	**5**	P	**P**	**15 01 38.5**	**-4.7**
060A	**Indiantown**	**21.04**	**57**	P	**P**	**15 01 47.3**	**-1.7**
PDAR	**Pinedale Array**	**27.48**	**345**	P	**P**	**15 02 54.4**	**+3.0**
	comp=Z,0.8nm,0.8s,baz=144,slow=10,SNR=6.6						
	comp=Z,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**47.13**	**351**	P	**P**	**15 05 37.9**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=159,slow=7.3,SNR=9.4						
	comp=Z,0.5nm,0.7s						
H03N2	**Juan Fernandez**	**53.53**	**158**	T	T	16 04 14.5	
	baz=338,slow=78,SNR=6.3						
H03N1	**Juan Fernandez**	**53.53**	**158**	T	T	16 04 14.5	
	baz=338,slow=78,SNR=8.4						
H03N3	**Juan Fernandez**	**53.54**	**158**	T	T	16 04 15.7	
	baz=338,slow=78,SNR=8.2						

VAO ***17*** *15:07:35.3±1.1, 18°.83S×69°.17W, h10km, mb4.2*

SCB ***17*** *15:07:55.7±1.3, 18°.98S×68°.25W, h165km±9km, ML2.6/1, MW3.7, Error ellipse: s-maj=5.9km s-min=4.4km az=2.0*

GUC ***17*** *15:07:56.1±0.6, 19°.02S×68°.42W, h184km±3km, ML3.3*

ISC 17 15:07:54.7±1.0, 19°.03S±0°.06×68°.25W±0°.06, h174km±9km, n29, σ1s42/35, 1C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEO	**Opoqueri**	**0.57**	**37**	Pg	**Pn**	**15 08 19.5**	**-0.3**
SOEO				Sg	**Sn**	**15 08 38.6**	**-0.3**
GO01	**Chusmiza**	**1.10**	**234**	ǁ*iP*	**Pn**	**15 08 24.0**	**+0.9**
GO01				*eS*	**Sn**	**15 08 45.9**	**+0.9**
GO01				IAML		15 08 51.2	
	comp=E,201nm,0.1s						
GO01	**Chusmiza**	**1.10**	**234**	Pg	**Pn**	**15 08 24.1**	**+0.9**
PB08	**IPOC Station P**	**1.40**	**217**	ǁ*iP*	**Pn**	**15 08 27.0**	**+1.3**
PB08				*eS*	**Sn**	**15 08 50.5**	**+0.9**
PB08				IAML		15 08 55.3	
	comp=E,112nm,0.3s						
PB08	**IPOC Station P**	**1.40**	**217**	Pg	**Pn**	**15 08 27.0**	**+1.3**
PB11	**IPOC Station P**	**1.52**	**241**	ǁ*iP*	**Pn**	**15 08 26.7**	**+0.2**
PB11				IAML		15 08 52.0	
	comp=N,604nm,0.2s						
PB11	**IPOC Station P**	**1.52**	**241**	Pg	**Pn**	**15 08 27.0**	**+0.5**
PB18	**Visviri**	**1.85**	**320**	⇑*iP*	**Pn**	**15 08 31.9**	**+1.5**
HMBC	**Humberstone**	**1.98**	**231**	ǁ*iP*	**Pn**	**15 08 31.0**	**-0.3**
HMBC				*eS*	**Sn**	**15 08 58.5**	**-1.2**
HMBC				IAML		15 09 04.4	
	comp=N,302nm,0.5s						
SOEJ	**Jacaque**	**2.04**	**1**	Pg	**Pn**	**15 08 33.0**	**+0.6**
TA02	**Huaiquique**	**2.16**	**235**	*eP*	**Pn**	**15 08 32.7**	**-0.5**
TA02				*eS*	**Sn**	**15 09 00.9**	**-2.1**
TA02				IAML		15 09 02.4	
	comp=E,270nm,0.2s						
BBOE	**La Paz, Chanca**	**2.22**	**7**	Pg	**Pn**	**15 08 35.2**	**+0.8**
TA01	**Diego Aracena**	**2.38**	**230**	*eP*	**Pn**	**15 08 35.3**	**-0.4**
TA01				*eS*	**Sn**	**15 09 05.5**	**-1.9**
TA01				IAML		15 09 07.3	
	comp=E,130nm,0.4s						
BBOD	**La Paz, Gloria**	**2.40**	**352**	Pg	**Pn**	**15 08 37.6**	**+1.1**
SOET	**ToroToro**	**2.48**	**69**	Pn	**Pn**	**15 08 36.8**	**-0.4**
PATCX	**Punta Patache**	**2.53**	**225**	*eP*	**Pn**	**15 08 37.5**	**0.0**
AOEA	**Aiquile**	**2.98**	**74**	Pg	**Pn**	**15 08 43.5**	**+0.4**
AOEA				Sg	**Sn**	**15 09 20.7**	**0.0**
AOEA				IAML		15 09 21.6	
	comp=E,15nm,0.4s						
MOCB	**Mochara**	**3.30**	**133**	Pg	**Pn**	**15 08 49.9**	**+2.7**
PB15	**IPOC Station P**	**4.31**	**195**	Pg	**Pn**	**15 09 01.9**	**+2.0**
BBRB	**Robore, Bolivi**	**8.03**	**86**	*eP*	**Pn**	**15 09 44.7**	**-3.8**
VILB	**Vilhena**	**9.81**	**53**	*eP*	Pn	15 10 05.0	-7.0
ESFA	**Espinillo Form**	**10.80**	**125**	*eP*	**Pn**	**15 10 22.2**	**-2.6**
FRBT	**Francisco Belt**	**15.63**	**119**	*eP*	**P**	**15 11 27.1**	**+0.6**
PTGB	**Pitanga**	**16.05**	**114**	*eP*	**P**	**15 11 32.9**	**+1.8**
RODS	**Rosario do Sul**	**16.34**	**136**	*eP*	**P**	**15 11 34.5**	**+0.3**
ITAB	**Concordia**	**16.91**	**122**	*eP*	**Pn**	**15 11 41.8**	**+0.5**
ALGR	**Alto Alegre (B**	**16.96**	**128**	*eP*	**Pn**	**15 11 42.8**	**+0.8**
PLTB	**Pedras Altas**	**18.30**	**137**	*eP*	**P**	**15 11 56.6**	**+1.0**
ITTB	**Itaituba**	**19.02**	**42**	*eP*	**P**	**15 12 02.2**	**-1.3**

GUC 17 15:08:11.2±0.6, 21°.57S×68°.46W, h111km±5km, ML2.7, 2C, Chile-Bolivia border region

baz=123,slow=312,SNR=1.3
HNR Honiara 6.29 119 Pn Pn 15 15 30.9 +4.3
HNR Honiara 6.29 119 P Pn 15 15 30.9 +4.3
HNR Honiara 6.29 119 LR LR 15 18 11.8
comp=Z,55µm,18.0s,baz=274,slow=42
PMG Port Moresby 7.73 247 Pn **Pn** **15 15 47.6 +1.2**
14nm,0.3s,baz=47,slow=8.2,SNR=35
PMG Sn **Sn** **15 17 16.6 +3.9**
9.9nm,0.3s,baz=62,slow=23,SNR=14
PMG LR LR 15 19 11.7
comp=Z,3µm,18.3s,baz=40,slow=41
62nm,0.6s
MANU Manus Island 8.21 302 Pn **Pn** **15 15 54.0 +1.0**
COEN Coen 13.32 235 Pn **Pn** **15 17 01.8 -1.1**
PATS Pohnpei 13.74 17 Pn **Pn** **15 17 07.4 -1.2**
CTA Charters Tower 15.71 209 Pn **P** **15 17 37.2 -1.5**
0.3nm,0.3s,baz=30,slow=12,SNR=18
CTA LR LR 15 23 50.5
comp=Z,1µm,18.0s,baz=24,slow=38
23nm,1.0s
CTAO Charters Tower 15.71 209 Pn **P** **15 17 35.0 -3.6**
CTAO Charters Tower 15.71 209 P **P** **15 17 35.1 -3.6**
CTAO pmax pmax
comp=Z,32nm,1.0s
EIDS Eidsvold 19.11 189 P **P** **15 18 13.9 -2.3**
DZM Mont Dzumac 19.46 144 P **P** **15 18 18.0 -2.1**
DZM Mont Dzumac 19.46 144 *eP* **Pn** **15 18 25.6 +4.1**
comp=Z,117nm,1.4s
DZM *e*LR LR 15 22 56.5
comp=Z,860nm,22.1s
DZM Mont Dzumac 19.46 144 Pn **Pn** **15 18 19.9 -1.6**
comp=Z,0.1nm,0.3s,baz=330,slow=20,SNR=3.2
DZM LR LR 15 24 52.9
comp=Z,668nm,20.3s,baz=290,slow=34
comp=Z,22nm,1.1s
GUMO Guam 21.99 335 LR LR 15 27 05.0
comp=Z,269nm,18.8s,baz=153,slow=36
FAKI Fak Fak 22.31 278 P P 15 18 55.4 +4.5
comp=Z,36nm,1.1s
SAUI Saumlaki 22.93 265 P **P** **15 18 55.0 -2.5**
SAUI Saumlaki 22.93 265 P P 15 19 22.7 +25
WR0 Warramunga Arr 23.49 233 P **P** **15 19 02.0 -1.0**
WB0 Warramunga Arr 23.51 234 P **P** **15 19 03.7 +0.5**
WB0 IAmb IAmb 15 19 19.5
comp=Z,55nm,1.4s
WRAB Tennant Creek 23.63 233 P **P** **15 19 03.7 -0.7**
WRAB IAmb IAmb 15 19 20.7
comp=Z,64nm,1.5s
WRAB Tennant Creek 23.63 233 P **P** **15 19 03.7 -0.7**
WRAB pmax pmax
comp=Z,64nm,1.5s
WB2 Warramunga Arr 23.63 233 P **P** **15 19 03.0 -1.4**
WB2 IAmb IAmb 15 19 19.8
comp=Z,106nm,1.8s
WRA Warramunga Arr 23.64 233 *ce*P **P** **15 19 04.5 0.0**
WRA pmax pmax
comp=Z,13nm,0.8s
WRA Warramunga Arr 23.64 233 P **P** **15 19 04.8 +0.3**
comp=Z,13nm,0.8s,baz=56,slow=10.0,SNR=36
WRA PcP **PcP** **15 22 48.2 -0.5**
comp=Z,1.7nm,0.8s,baz=60,slow=2.3,SNR=4.9
WRA ScP **ScP** **15 26 26.9 +2.3**
comp=Z,1.1nm,0.8s,baz=64,slow=3.1,SNR=4.4
comp=Z,13nm,0.8s
SWI Sorong 23.70 283 P P 15 19 20.0 +15
BNDI Bandanaira 24.42 273 P P 15 19 16.3 +4.5
comp=Z,80nm,1.0s,comp=Z,12µm
AS31 Alice Springs 26.10 227 P **P** **15 19 27.3 +0.3**
ASAR Alice Springs 26.10 227 P **P** **15 19 27.5 +0.5**
comp=Z,3.1nm,0.6s,baz=61,slow=8.6,SNR=26
ASAR PcP **PcP** **15 22 53.1 -1.1**
comp=Z,0.7nm,0.6s,baz=53,slow=3.6,SNR=2.2
ASAR ScP **ScP** **15 26 34.9 +3.5**
comp=Z,0.3nm,0.6s,baz=50,slow=2.9,SNR=1.9
ASAR LR LR 15 30 09.3
comp=Z,814nm,18.7s,baz=95,slow=37
comp=Z,3.1nm,0.6s
LBMI Labuha 27.41 281 P **P** **15 19 42.1 +3.3**
comp=Z,89nm,1.1s,comp=Z,2µm
STKA Stephens Creek 28.00 204 *i* P P 15 19 46.3 +2.4
STKA Stephens Creek 28.00 204 P **P** **15 19 44.4 +0.4**
comp=Z,4.3nm,0.7s,baz=20,slow=10,SNR=9.6
STKA ScP **ScP** **15 26 40.9 +3.9**
comp=Z,5.4nm,0.9s,baz=316,slow=4.3,SNR=6.8
STKA LR LR 15 31 39.0
comp=Z,566nm,18.1s,baz=16,slow=38
comp=Z,4.3nm,0.7s
SANI Sanana 28.62 277 P P 15 19 55.4 +5.8
comp=Z,22nm,1.2s
FITZ Fitzroy Crossi 30.32 245 P **P** **15 20 05.2 +0.6**
DAV Davao City (W) 31.69 295 LR LR 15 33 04.9
comp=Z,194nm,18.8s,baz=99,slow=36
TOO Toolangi 32.05 193 P **P** **15 20 21.3 +1.6**
TOO IAmb IAmb 15 20 51.7
comp=Z,34nm,1.6s
TOO Toolangi 32.05 193 P **P** **15 20 21.3 +1.6**
TOO pmax pmax
comp=Z,35nm,1.6s
TOLI2 Tolitoli 34.34 281 P **P** **15 20 38.4 -1.6**
TOLI2 IAmb IAmb 15 20 58.0
comp=Z,14nm,0.9s
URZ Urewera 37.82 150 LR LR 15 33 51.3
comp=Z,270nm,20.4s,baz=105,slow=32
QRZ Quartz Range 37.92 157 P **P** **15 21 09.3 -1.0**
RTZ Ruatahuna 38.04 151 P **P** **15 21 12.1 +0.8**
RTZ IAmb IAmb 15 21 18.7
comp=Z,35nm,1.1s
THZ Tophouse 38.88 158 P **P** **15 21 19.6 +1.3**
TGY Tagaytay City 38.93 302 LR LR 15 35 37.0
comp=Z,316nm,21.0s,baz=107,slow=34
TCW Tory Channel 38.94 156 P **P** **15 21 18.3 -0.5**
PLWZ Palliser 39.64 155 P **P** **15 21 25.4 +0.6**
KHZ Kahutara 39.68 158 P **P** **15 21 26.3 +1.4**
JAGI Jajag, Banyuwa 39.91 264 P **P** **15 21 27.8 +0.4**
JAGI IAmb IAmb 15 21 38.8
comp=Z,45nm,1.1s
RPZ Rata Peaks 39.95 161 LR LR 15 37 44.3
comp=Z,504nm,18.5s,baz=322,slow=36
GVZ Greta Valley S 39.97 159 P **P** **15 21 27.6 +0.2**
JOW Kunigami 41.60 324 LR LR 15 36 26.0
comp=Z,243nm,20.5s,baz=108,slow=32
SBUM Sibu 42.98 281 P **P** **15 21 51.6 -0.9**
NWAO Narrogin (SRO) 43.41 228 LR LR 15 40 49.1
comp=Z,649nm,18.7s,baz=50,slow=37
YULB Yu-li 43.83 314 P **P** **15 21 58.3 -0.8**
YULB IAmb IAmb 15 22 02.8
comp=Z,31nm,1.0s
NACB Ninganchiao 44.10 315 P **P** **15 22 02.1 +0.7**
TPUB Ta-pu 44.25 313 P **P** **15 22 01.2 -1.4**
SSLB Suanglung 44.32 314 P **P** **15 22 03.3 +0.2**
JMN Monobe 44.39 335 P **P** **15 22 02.1 -1.5**
YHNB Yeheng 44.57 315 P **P** **15 22 03.8 -1.4**
KSM Kuching 44.67 279 P **P** **15 22 06.9 +0.8**
KSM IAmb IAmb 15 22 24.1
comp=Z,24nm,1.4s
JNU Nakatsue 45.20 332 P **P** **15 22 08.9 -1.1**
JNU Nakatsue 45.20 332 LR LR 15 38 34.1
comp=Z,91nm,19.1s,baz=132,slow=33
MJAR Matsushiro Arr 45.33 342 P **P** **15 22 08.9 -2.0**
comp=Z,2.9nm,0.8s,baz=172,slow=7.7,SNR=4.6
MJAR LR LR 15 39 15.9
comp=Z,157nm,18.8s,baz=169,slow=34
comp=Z,2.9nm,0.8s
LEM Lembang 46.42 267 LR LR 15 44 49.7
comp=Z,36nm,20.0s,baz=75,slow=40
RAR Rarotonga 46.72 113 LR LR 15 41 37.2
comp=Z,95nm,18.4s,baz=306,slow=36
QZH Quanzhou 46.73 313 ⇑*i*P P 15 22 24.3 +2.2
DLV T Lat 49.13 292 P **P** **15 22 39.2 -1.9**
ERM Erimo 49.27 349 P **P** **15 22 40.5 -1.0**
ERM Erimo 49.27 349 P **P** **15 22 40.5 -1.0**
KSRS Korea Array 50.13 333 P **P** **15 22 48.3 +0.2**
comp=Z,4.7nm,0.9s,baz=146,slow=8.1,SNR=13
KSRS LR LR 15 42 50.3
comp=Z,64nm,18.5s,baz=140,slow=35
comp=Z,4.7nm,0.9s
QIZ Qiongzhong 50.62 301 P **P** **15 22 53.3 +1.1**
QIZ S **S** **15 30 05.9 +1.0**
QIZ SS **SS** **15 33 39.5 -0.2**
QIZ pmax pmax
comp=Z,170nm,4.4s
QIZ LR LR
comp=Z,130nm,12.7s
QIZ LR LR
comp=Z,220nm,22.1s
QIZ LR LR
comp=Z,280nm,18.5s
NJ2 Nanjing 51.07 321 *e*P P 15 22 58.4 +3.1
NJ2 pP pwP 15 23 07.0 -4.3
NJ2 sP sP 15 23 10.8 +3.2
NJ2 pmax pmax
comp=Z,6.0nm,1.2s
NJ2 pmax pmax
comp=Z,160nm,4.4s
ASAJ Asahikawa 51.40 349 LR LR 15 42 05.2
comp=Z,89nm,20.9s,baz=161,slow=33
WHN Wuhan 53.09 316 P P 15 23 13.1 +2.7
WHN pmax pmax
comp=Z,62nm,1.0s
GULI GuiLin 53.12 308 ⇑P P 15 23 12.4 +1.6
GULI pmax pmax
comp=Z,20nm,0.8s
MSHR Mys Shultsa 53.14 339 *i* P **P** **15 23 10.6 +0.1**
MSHR pmax pmax
comp=Z,12nm,0.9s
YSS Yuzh-Sakhalins 54.12 350 *e*P **P** **15 23 17.8 +0.2**
YSS pmax pmax
comp=Z,10.0nm,1.7s
YSS MLR MLR
comp=Z,400nm,15.0s
USRK Ussuriysk Ar. 54.27 340 P **P** **15 23 19.0 +0.2**
comp=Z,0.9nm,0.5s,baz=152,slow=6.1,SNR=6.0
comp=Z,0.9nm,0.5s
MDJ Mudanjiang 55.47 339 P P 15 23 29.8 +2.3
MDJ pP pwP 15 23 45.3 +1.6
MDJ PP **PP** **15 25 34.8 +3.0**
MDJ PcS **PcS** **15 28 29.1 +1.8**
MDJ S **S** **15 31 11.3 +1.2**
MDJ ScS **ScS** **15 33 13.0 -1.0**
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,680nm,5.2s
PPT Papeete 55.77 107 LR LR 15 44 12.2
comp=Z,87nm,18.8s,baz=323,slow=33
PPT2 Papeete2 55.77 107 *e*P P 15 23 22.9 -7.3
comp=Z,27nm,21.5s
PPT2 *e*S **S** **15 31 19.2 +4.0**
comp=Z,71nm,25.0s
PPT2 *e*SS **SS** **15 35 01.5 +0.3**
comp=Z,48nm,27.5s
PPT2 *e*LQ LQ 15 37 23.3
comp=Z,291nm,29.0s
PPT2 *e*LR LR 15 39 43.5
comp=Z,113nm,27.2s
PPT2 *e*LR LR 15 39 47.6
comp=Z,102nm,21.0s
PPTF Pamatai, Papee 55.78 107 P **P** **15 23 30.5 +0.2**
ENH Enshi 56.38 313 P **P** **15 23 35.4 +1.0**
TBI Tubuai 56.49 114 *e*LQ LQ 15 37 43.2
comp=Z,2µm,29.8s
TBI *e*LR LR 15 40 06.6
comp=Z,818nm,30.2s
GYA Guiyang 56.60 307 *e*P P 15 23 39.4 +3.3
GYA pmax pmax
comp=Z,4.0nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.6s
GYA LR LR
comp=Z,360nm,20.6s
LYN LuoYang 56.77 319 ⇑P P 15 23 39.3 +2.3
LYN pmax pmax
comp=Z,16nm,0.9s
LYN LR LR
comp=Z,360nm,17.5s
LYN LR LR
comp=Z,350nm,17.9s
LYN LR LR
comp=Z,490nm,17.2s
HNS HongShan 57.16 323 ⇑P P 15 23 41.9 +2.2
HNS S **S** **15 31 34.4 +1.6**
HNS pmax pmax
comp=Z,7.0nm,1.3s
HNS LR LR
comp=Z,240nm,14.3s
HNS LR LR
comp=Z,280nm,13.1s
BNX BinXian 57.23 338 ⇑P **P** **15 23 40.8 +0.8**
BNX pmax pmax
comp=Z,11nm,0.8s
BNX pmax pmax
comp=Z,180nm,5.9s
KLR Kul'dur 58.83 343 *ce*P **P** **15 23 50.0 -1.1**
KLR pmax pmax
comp=Z,10.0nm,0.9s
KLR Kul'dur 58.83 343 LR LR 15 47 24.0
comp=Z,50nm,22.0s,baz=161,slow=34
XAN Xi'an 58.85 316 ⇑P **P** **15 23 52.6 +0.9**
XAN pP pwP 15 24 05.9 -1.8
XAN pmax pmax
comp=Z,36nm,1.2s
XAN LR LR
comp=Z,330nm,17.2s
XAN LR LR
comp=Z,280nm,19.9s
XAN LR LR
comp=Z,510nm,19.9s
KMI Kunming 59.17 304 ⇑P **P** **15 23 55.3 +1.0**
KMI pP pwP 15 24 06.8 -4.0
KMI sP sP 15 24 12.5 +6.0
KMI pmax pmax
comp=Z,11nm,1.0s
KMI LR LR
comp=Z,130nm,28.5s
KMI LR LR
comp=Z,190nm,21.9s
KMI LR LR
comp=Z,210nm,26.0s
CRAI Chiangrai 59.30 298 P **P** **15 23 54.2 -0.8**
CRAI IAmb IAmb 15 24 11.3
comp=Z,14nm,1.2s
PETK Petropavlovsk- 59.36 2 P **P** **15 23 54.8 0.0**
comp=Z,1.7nm,0.7s,baz=140,slow=7.0,SNR=5.7
PETK LR LR 15 46 05.3
comp=Z,93nm,21.8s,baz=184,slow=33
comp=Z,1.7nm,0.7s
CM31 Chiang Mai Arr 59.97 295 P **P** **15 23 58.9 -0.7**
CM31 IAmb IAmb 15 24 16.1
comp=Z,9.3nm,0.9s
CMAR Chiang Mai Arr 59.97 295 *ce*P P 15 24 02.2 +2.6
CMAR pmax pmax
comp=Z,4.0nm,1.0s
CMAR Chiang Mai Arr 59.97 295 P P 15 24 01.9 +2.2
comp=Z,2.9nm,1.0s,baz=112,slow=5.1,SNR=25
comp=Z,2.9nm,1.0s
CHTO Chiang Mai 60.08 296 P **P** **15 24 00.1 -0.3**
CHTO Chiang Mai 60.08 296 P **P** **15 24 00.1 -0.3**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
PZH PanZhiHua 60.56 305 P P 15 24 05.3 +1.6
PZH S **S** **15 32 20.8 +3.1**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,110nm,4.5s
PZH LR LR
comp=Z,150nm,20.2s
PZH LR LR
comp=Z,130nm,18.0s
PZH LR LR
comp=Z,210nm,20.1s
XLT XiLinHaoTe 60.84 329 *e*P **P** **15 24 05.8 +0.6**
XLT pmax pmax
comp=Z,22nm,0.7s
XLT pmax pmax
comp=Z,130nm,4.5s
CD2 Chengdu 60.96 311 P P 15 24 07.8 +1.6
CD2 sP pwP 15 24 21.3 -0.9
CD2 S **S** **15 32 24.3 +1.9**
CD2 pmax pmax
comp=Z,50nm,0.5s
CD2 LR LR
comp=Z,210nm,16.6s
CD2 LR LR
comp=Z,340nm,18.1s
CD2 LR LR
comp=Z,280nm,17.0s
HEH HeiHe 61.08 341 *e*P **P** **15 24 06.3 -0.2**
HEH pmax pmax
comp=Z,7.0nm,0.7s
HHC Hu-ho-hao-te 61.26 324 *e*P P 15 24 11.8 +3.7
HHC pP pwP 15 24 21.6 -2.7
HHC PP PP 15 26 31.3 +7.9
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,140nm,4.7s
HHC LR LR
comp=Z,150nm,14.1s
HHC LR LR
comp=Z,300nm,19.6s
SHEM Shemya Is, Ala 61.26 14 LR LR 15 49 47.9
comp=Z,307nm,18.5s,baz=160,slow=35
BTO Baotou 62.02 323 *e*P P 15 24 18.3 +5.1
BTO pP pwP 15 24 31.3 +1.9
BTO sP PcP 15 24 36.4 -17
BTO PP **PP** **15 26 30.9 +0.8**
BTO SS SS 15 36 34.8 -4.0
BTO pmax pmax
comp=Z,15nm,0.8s
BTO pmax pmax
comp=Z,210nm,5.1s
BTO LR LR
comp=Z,430nm,4.3s
BTO LR LR
comp=Z,140nm,5.4s
BTO LR LR
comp=Z,300nm,5.1s
TNCH TengChong 62.64 302 *e*P P 15 24 19.9 +2.1
TNCH pP pwP 15 24 31.8 -2.6
TNCH pmax pmax
comp=Z,8.0nm,0.8s
HIA Hailar 63.13 335 P **P** **15 24 20.0 -0.4**
HIA IAmb IAmb 15 24 22.6
comp=Z,12nm,1.1s
HIA Hailar 63.13 335 *i* P **P** **15 24 21.0 +0.6**
HIA pmax pmax
comp=Z,10.0nm,1.1s
LZH Lanzhou 63.46 316 ⇑P P 15 24 25.3 +2.3
LZH sP pwP 15 24 37.3 -1.8
LZH pmax pmax
comp=Z,32nm,1.4s
LZH LR LR
comp=Z,170nm,16.1s
LZH LR LR
comp=Z,190nm,17.3s
LZH LR LR
comp=Z,250nm,18.3s
ZEA Zeya 64.13 342 *e*P **P** **15 24 27.9 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
TAOE Nuku Hiva Isla 64.89 97 *e*LR LR 15 43 50.1
comp=Z,127nm,24.0s
MA2 Magadan 65.84 358 *ce*P **P** **15 24 37.8 0.0**
MA2 pmax pmax
comp=Z,10.0nm,1.7s
MA2 Magadan 65.84 358 LR LR 15 53 45.9
comp=Z,68nm,19.0s,baz=164,slow=36
GTA Gaotai 67.89 317 *e*P P 15 24 53.3 +1.8
GTA sP pwP 15 25 04.3 -3.4
GTA pmax pmax
comp=Z,16nm,1.3s
ULN Ulaanbaatar 68.18 328 P **P** **15 24 51.8 -1.4**
ULN Ulaanbaatar 68.18 328 *ce*P **P** **15 24 54.5 +1.3**
ULN pmax pmax
comp=Z,9.0nm,1.7s
SHL Shillong 68.46 301 P **P** **15 24 56.2 +0.8**
SHL Shillong 68.46 301 P **P** **15 24 56.2 +0.8**
SHL pmax pmax
comp=Z,30nm,1.0s
SONM Songino Array 68.51 327 P **P** **15 24 55.9 +0.6**
comp=Z,1.2nm,0.6s,baz=135,slow=4.9,SNR=9.6
SONM LR LR 15 57 05.4
comp=Z,154nm,18.2s,baz=144,slow=38
comp=Z,1.2nm,0.6s
SEY Seymchan 69.16 359 *i* P **P** **15 25 00.0 +1.2**
SEY pmax pmax
comp=Z,2.0nm,1.3s
GOMU GeErMu 69.99 312 P P 15 25 06.9 +2.0
GOMU pP pwP 15 25 16.1 -5.6
GOMU sP PcP 15 25 21.3 -5.8
GOMU S **S** **15 34 09.9 -3.5**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU LR LR
comp=Z,130nm,17.3s
GOMU LR LR
comp=Z,190nm,17.8s
GOMU LR LR
comp=Z,220nm,17.5s
LSA Lhasa 70.43 304 P **P** **15 25 06.7 -1.2**
LSA IAmb IAmb 15 25 24.7
comp=Z,7.5nm,0.7s
LSA Lhasa 70.43 304 P **P** **15 25 06.7 -1.2**
LSA pmax pmax
comp=Z,8.0nm,0.7s
YAK Yakutsk 70.86 348 P **P** **15 25 09.1 -0.1**
YAK IAmb IAmb 15 25 11.0
comp=Z,7.4nm,0.7s
YAK Yakutsk 70.86 348 *e*P **P** **15 25 09.3 +0.1**
YAK *e**PP **pwP** **15 25 22.9 -1.9**
YAK *e* 15 25 33.4
YAK *e* 15 27 43.7
YAK *e*S **S** **15 34 21.8 +0.1**
YAK *e**SS **SKiKP** **15 34 44.7 -4.3**
YAK *e* 15 35 11.8
YAK *e*SS **SS** **15 38 57.9 +3.0**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=Z,167nm,5.7s
YAK pmax pmax
comp=N,151nm,4.8s
YAK smax smax
comp=E,175nm,3.8s
YAK smax smax
comp=N,95nm,3.8s
YAK Yakutsk 70.86 348 LR LR 15 58 28.2
comp=N,71nm,18.0s,baz=124,slow=38
ZAK Zakamensk 71.67 328 *eP* **P** **15 25 14.3 -0.2**
ZAK pmax pmax
comp=Z,9.0nm,1.3s
SBA Scott Base 71.70 177 P **P** **15 25 13.3 -0.8**
SBA Scott Base 71.70 177 P **P** **15 25 13.3 -0.8**
SBA pmax pmax
comp=Z,92nm,1.6s
CHGN Chignik 73.49 25 P **P** **15 25 24.1 -1.0**
MOY Mondy 73.59 329 *eP* **P** **15 25 26.3 +0.4**
N14K Kuskokwak Cree 74.66 21 P **P** **15 25 32.2 +0.4**
baz=226
BILL Bilibino 74.75 5 *i* P **P** **15 25 33.3 +1.1**
BILL pmax pmax
comp=Z,17nm,3.0s
L14K Kuka Creek 75.32 20 P **P** **15 25 36.0 +0.5**
baz=224
N15K Kwethluk River 75.41 22 P **P** **15 25 36.2 0.0**
baz=227
Q17K Contact Creek 75.81 25 P **P** **15 25 38.1 -0.5**
baz=232
J14K Nanvaranak Lak 76.05 19 P **P** **15 25 39.7 0.0**
baz=223
N16K Nishlik Lake 76.10 22 P **P** **15 25 40.4 +0.2**
baz=228
O17K Koliganek Bris 76.28 23 P **P** **15 25 41.4 +0.3**
baz=230
OHAK Old Harbor 76.28 26 P **P** **15 25 41.3 +0.1**
baz=234
K15K Wolf Creek Mou 76.38 20 P **P** **15 25 40.6 -1.0**
baz=225
M16K Timber Creek 76.40 21 P **P** **15 25 41.1 -0.7**
baz=228
L16K Owhat River 76.68 21 P **P** **15 25 42.7 -0.7**
baz=227
N17K Nushagak Hills 76.73 22 P **P** **15 25 43.3 -0.4**
baz=230
P18K Big Mountain, 76.78 24 P **P** **15 25 43.6 -0.4**
baz=232
ANM Nome 76.85 17 P **P** **15 25 42.9 -1.4**
ANM Nome 76.85 17 P **P** **15 25 44.1 -0.2**
baz=221
ANM Nome 76.85 17 P **P** **15 25 42.9 -1.4**
ANM pmax pmax
comp=Z,41nm,1.7s
KDAK Kodiak Island 76.92 26 LR LR 15 54 42.9
comp=Z,118nm,21.2s,baz=259,slow=32
O18K Koktuh Hills 77.07 24 P **P** **15 25 45.9 +0.3**
baz=232
N18K Kilae Creek 77.32 23 P **P** **15 25 47.4 +0.4**

baz=231
L17K **Donlin** 77.38 21 P P 15 25 47.7 +0.4
baz=228
J16K **Anvik River** 77.38 19 P P 15 25 47.7 +0.5
baz=226
P19K **Oil Pt** 77.74 24 P P 15 25 49.3 -0.1
baz=234
K17K **Iditarod** 77.77 20 P P 15 25 49.4 0.0
baz=228
I17K **Unalakleet** 77.77 19 P P 15 25 49.6 +0.2
baz=226
H16K **Elim** 77.83 18 P P 15 25 50.1 +0.4
baz=224
M18K **Stony River** 77.86 22 P P 15 25 50.2 +0.3
baz=231
F15K **North Star Dit** 77.92 16 P P 15 25 50.9 +0.7
baz=222
N19K **Bonanza Creek** 77.94 23 P P 15 25 51.1 +0.5
baz=232
WMQ **Urumqi** 77.97 317 *e*P P 15 25 52.0 +0.9
WMQ pP sP 15 26 02.0 -1.4
WMQ pmax pmax
comp=Z,9.0nm,1.1s
L18K **Granite Mounta** 78.01 21 P P 15 25 51.6 +0.8
L18K IAmb IAmb 15 25 53.7
comp=Z,16nm,1.2s
L18K **Granite Mounta** 78.01 21 P P 15 25 51.6 +0.8
baz=230
O20K **Slope Mountain** 78.25 24 P P 15 25 51.9 -0.3
baz=234
G16K **Koyuk River** 78.34 17 P P 15 25 53.0 +0.4
G16K IAmb IAmb 15 26 00.1
comp=Z,26nm,1.7s
G16K **Koyuk River** 78.34 17 P P 15 25 53.1 +0.6
baz=224
HYB **Hyderabad** 78.49 289 *e*P P 15 25 54.7 +0.3
HYB *e*pP PcP 15 25 59.6 -3.9
CNPM **China Poot** 78.50 25 P P 15 25 53.4 -0.2
L19K **White Mountain** 78.65 22 P P 15 25 55.1 +0.7
L19K **White Mountain** 78.65 22 P P 15 25 54.4 0.0
baz=232
M19K **Big River Lodg** 78.65 22 P P 15 25 54.6 +0.2
M19K IAmb IAmb 15 26 11.8
comp=Z,36nm,1.6s
M19K **Big River Lodg** 78.65 22 P P 15 25 54.3 0.0
baz=232
TTA **Tatalina** 78.70 21 P P 15 25 54.6 -0.1
TTA IAmb IAmb 15 26 19.5
comp=Z,47nm,1.9s
TTA **Tatalina** 78.70 21 P P 15 25 55.0 +0.3
baz=230
TTA **Tatalina** 78.70 21 P P 15 25 54.6 -0.1
TTA pmax pmax
comp=Z,47nm,1.9s
H17K **Granite Mounta** 78.75 18 P P 15 25 54.9 +0.1
H17K **Granite Mounta** 78.75 18 P P 15 25 55.5 +0.7
baz=226
J18K **Innoko River** 78.80 20 P P 15 25 55.4 +0.3
J18K IAmb IAmb 15 26 01.3
comp=Z,26nm,1.7s
J18K **Innoko River** 78.80 20 P P 15 25 55.5 +0.3
baz=230
BRSE **Bradley Lake S** 78.83 25 P P 15 25 55.3 -0.1
baz=236
G17K **Kiwalik Mounta** 78.92 17 P P 15 25 56.9 +1.2
baz=226
M20K **Styx River** 79.11 23 P P 15 25 56.7 -0.3
baz=233
L20K **Farewell, AK** 79.19 22 P P 15 25 57.8 +0.4
baz=233
H18K **Honhosa River** 79.38 18 P P 15 25 57.4 -0.9
H18K IAmb IAmb 15 27 16.1
comp=Z,46nm,1.8s
F17K **Baldwin Pennin** 79.40 17 P P 15 25 58.1 -0.2
F17K IAmb IAmb 15 27 54.0
comp=Z,22nm,1.8s
F17K **Baldwin Pennin** 79.40 17 P P 15 25 59.6 +1.3
baz=225
J19K **Poorman** 79.52 20 P P 15 25 59.9 +0.8
J19K **Poorman** 79.52 20 P P 15 25 59.6 +0.6
baz=231
GCSA **Galena City Sc** 79.58 19 P P 15 25 59.3 -0.1
baz=229
K20K **Telida** 79.66 21 P P 15 26 00.1 +0.3
K20K IAmb IAmb 15 27 03.5
comp=Z,26nm,1.9s
K20K **Telida** 79.66 21 P P 15 25 59.4 -0.4
baz=232
TIXI **Tiksi** 79.69 352 *ce*P P 15 26 01.7 +1.9
TIXI pmax pmax
comp=Z,7.0nm,1.7s
E17K **Hotham Inlet** 79.70 16 P P 15 26 00.0 +0.1
baz=224
SKT **Skwentna** 79.78 23 P P 15 26 00.2 -0.4
baz=235
G18K **Tagagawik** 79.79 18 P P 15 25 59.2 -1.3
G18K IAmb IAmb 15 26 16.6
comp=Z,21nm,1.6s
G18K **Tagagawik** 79.79 18 P P 15 26 01.0 +0.5
baz=228
SUA **Susitna One** 79.80 24 P P 15 26 00.5 -0.2
baz=236
D17K **Noatak River** 79.81 15 P P 15 26 00.7 +0.2
baz=223
FIS **Fire Island** 79.83 24 P P 15 26 01.0 +0.3
F18K **Selawik** 79.97 17 P P 15 26 01.4 0.0
baz=226
RC01 **Rabbit Creek A** 79.99 24 P P 15 26 01.0 -0.6
RC01 IAmb IAmb 15 26 07.2
comp=Z,30nm,1.6s
RC01 **Rabbit Creek A** 79.99 24 P P 15 26 01.1 -0.6
baz=237
J20K **Nowinta River** 80.14 20 P P 15 26 03.0 +0.7
J20K **Nowinta River** 80.14 20 P P 15 26 02.3 -0.1
baz=232
H19K **Roundabout Mou** 80.23 19 P P 15 26 02.8 -0.1
H19K **Roundabout Mou** 80.23 19 P P 15 26 03.5 +0.7
baz=230
E18K **Tukpahlearik C** 80.28 16 P P 15 26 02.4 -0.7
E18K **Tukpahlearik C** 80.28 16 P P 15 26 03.5 +0.4
baz=226
DGZ **Jazzator, Alta** 80.30 323 *i* P P 15 26 04.3 +0.5
DGZ pmax pmax
comp=Z,4.0nm,0.8s
C17K **DeLong Mountai** 80.36 15 P P 15 26 04.0 +0.4
baz=223
I20K **Naaghedeneel** 80.41 20 P P 15 26 04.1 +0.3
baz=232
CAST **Castle Rocks** 80.41 22 P P 15 26 03.7 -0.3
CAST **Castle Rocks** 80.41 22 P P 15 26 03.8 -0.1
baz=234
G19K **Purcell Mounta** 80.43 18 P P 15 26 04.9 +0.9
G19K IAmb IAmb 15 27 13.5
comp=Z,29nm,1.9s
G19K **Purcell Mounta** 80.43 18 P P 15 26 03.6 -0.3
baz=229
PMR **Palmer** 80.51 24 P P 15 26 03.9 -0.6
baz=237
CUT **Chulitna** 80.51 23 P P 15 26 04.1 -0.3
baz=236
CHUM **Lake Minchumin** 80.60 21 P P 15 26 05.3 +0.4
baz=234
F19K **Shaleruckik Mo** 80.68 17 P P 15 26 05.5 +0.3
baz=228
KNK **Knik Glacier** 80.69 24 P P 15 26 05.0 -0.4
baz=238
H20K **Anotleneega Mo** 80.71 19 P P 15 26 05.6 +0.1
baz=231
SML **Sawmill** 80.95 24 P P 15 26 06.2 -0.7
SML **Sawmill** 80.95 24 P P 15 26 06.6 -0.3
baz=238
C18K **Utukok River** 80.99 15 P P 15 26 07.4 +0.4
baz=225
TRF **Thorofare Moun** 81.09 22 P P 15 26 07.7 0.0
TRF IAmb IAmb 15 27 58.8
comp=Z,34nm,1.8s
TRF **Thorofare Moun** 81.09 22 P P 15 26 07.3 -0.5
baz=236
BPAW **Bear Paw Mtn.** 81.21 21 P P 15 26 08.2 0.0
baz=235
B18K **Kokolik River** 81.35 14 P P 15 26 08.9 +0.1
baz=224
EYAK **Cordova Ski Ar** 81.38 26 P P 15 26 08.0 -1.1
baz=240
WAT1 **Susitna Watana** 81.41 23 P P 15 26 09.4 +0.1
baz=238
F20K **Avaraart Lake** 81.44 18 P P 15 26 09.4 +0.1
baz=230
I21K **Tanana** 81.49 20 P P 15 26 09.1 -0.5
I21K IAmb IAmb 15 26 50.9
comp=Z,46nm,2.0s
I21K **Tanana** 81.49 20 P P 15 26 08.9 -0.6
baz=234
H21K **Melozitna Rive** 81.49 20 P P 15 26 09.3 -0.4
H21K **Melozitna Rive** 81.49 20 P P 15 26 10.2 +0.5
baz=233
WAT6 **Susitna Watana** 81.59 23 P P 15 26 10.1 -0.4
baz=238
RND **Reindeer** 81.61 22 P P 15 26 10.0 -0.4
RND IAmb IAmb 15 27 04.8
comp=Z,37nm,2.0s
RND **Reindeer** 81.61 22 P P 15 26 10.0 -0.4
RND pmax pmax
comp=Z,37nm,2.0s
KAIM **Kayak Island** 81.66 26 P P 15 26 10.3 -0.3
baz=242
D19K **Kuna River** 81.70 16 P P 15 26 10.2 -0.5
D19K IAmb IAmb 15 26 57.4
comp=Z,21nm,1.6s
D19K **Kuna River** 81.70 16 P P 15 26 10.4 -0.4
baz=228
C19K **Lookout Ridge** 81.73 15 P P 15 26 10.7 -0.2
baz=226
MCK **McKinley** 81.75 22 P P 15 26 10.3 -0.8
baz=237
KLU **Klutina** 81.77 25 P P 15 26 10.1 -1.2
baz=240
G21K **Allakaket** 81.79 19 P P 15 26 11.5 +0.3
G21K IAmb IAmb 15 26 43.5
comp=Z,20nm,1.7s
G21K **Allakaket** 81.79 19 P P 15 26 11.2 0.0
baz=232
MLY **Manley** 81.83 21 P P 15 26 11.0 -0.5
MLY **Manley** 81.83 21 P P 15 26 11.0 -0.5
baz=235
M24K **Tolsona, Glenn** 81.98 24 P P 15 26 12.5 +0.2
baz=240
DHY **Denali Highway** 82.00 23 P P 15 26 11.6 -0.9
baz=239
E20K **Nigu River** 82.08 17 P P 15 26 12.4 -0.3
baz=230
H22K **Ishtalitna Cre** 82.11 20 P P 15 26 13.0 +0.1
baz=234
F21K **Alatna River** 82.23 18 P P 15 26 13.6 +0.1
baz=232
D20K **Etivluk River** 82.26 16 P P 15 26 13.0 -0.7
baz=229
I23K **Minto, Yukon-K** 82.38 21 P P 15 26 13.5 -0.8
I23K IAmb IAmb 15 28 04.7
comp=Z,35nm,2.0s
I23K **Minto, Yukon-K** 82.38 21 P P 15 26 13.2 -1.1
baz=236
N25K **Chitina, Valde** 82.38 25 P P 15 26 12.9 -1.6
baz=241
WRH **Wood River Hil** 82.47 22 P P 15 26 14.0 -0.8
MK31 **Makanchi Array** 82.55 319 P P 15 26 16.7 +1.1
MK31 IAmb IAmb 15 26 36.9
comp=Z,9.2nm,0.9s
MK31 **Makanchi Array** 82.55 319 P P 15 26 16.7 +1.1
MK31 pmax pmax
comp=Z,9.0nm,0.9s
MKAR **Makanchi Array** 82.55 319 *ce*P P 15 26 18.0 +2.3
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR **Makanchi Array** 82.55 319 P P 15 26 17.1 +1.4
comp=Z,4.0nm,0.8s,baz=104,slow=5.6,SNR=42
MKAR LR LR 16 05 08.3
comp=Z,90nm,18.4s,baz=80,slow=37
comp=Z,4.0nm,0.8s
CCB **Clear Creek Bu** 82.67 22 P P 15 26 14.8 -0.9
CCB IAmb IAmb 15 29 15.2
comp=Z,18nm,1.7s
G22K **Bettles** 82.67 19 P P 15 26 16.1 +0.4
baz=234
PAX **Paxson** 82.69 24 P P 15 26 15.4 -0.7
baz=240
MAKZ **Makanchi** 82.76 319 P P 15 26 17.7 +1.0
MAKZ IAmb IAmb 15 26 37.9
comp=Z,17nm,1.0s
MAKZ **Makanchi** 82.76 319 P P 15 26 17.7 +1.0
MAKZ pmax pmax
comp=Z,17nm,1.0s
HDA **Harding Lake** 82.86 22 P P 15 26 15.9 -0.9
HDA IAmb IAmb 15 28 45.0
comp=Z,21nm,1.8s
HDA **Harding Lake** 82.86 22 P P 15 26 16.1 -0.7
baz=239
MCARA **McCarthy VSAT** 82.94 26 P P 15 26 16.0 -1.4
baz=243
K24K **Donnelly Dome** 82.99 23 P P 15 26 15.8 -1.7
baz=240
G23K **Bananza Creek** 83.03 19 P P 15 26 17.9 +0.2
G23K **Bananza Creek** 83.03 19 P P 15 26 17.0 -0.7
baz=236
C21K **Knifeblade Rid** 83.05 16 P P 15 26 17.9 +0.2
baz=231
ILAR **Eielson Array** 83.07 22 P P 15 26 16.5 -1.4
comp=Z,1.7nm,0.8s,baz=243,slow=5.5,SNR=17
ILAR LR LR 16 02 01.4
comp=Z,338nm,19.2s,baz=243,slow=35
comp=Z,1.7nm,0.8s
COLD **Coldfoot** 83.26 19 P P 15 26 18.6 -0.2
baz=236
H24K **Noodor Dome** 83.27 21 P P 15 26 18.5 -0.5
H24K **Noodor Dome** 83.27 21 P P 15 26 18.2 -0.8
baz=238
ZALV **Zalesovo Beam** 83.35 326 *i* P P 15 26 19.8 +0.3
ZALV pmax pmax
comp=Z,3.0nm,0.7s
ZALV **Zalesovo Beam** 83.35 326 P P 15 26 19.9 +0.4
comp=Z,2.6nm,0.6s,baz=115,slow=6.4,SNR=12
ZALV LR LR 16 05 57.6
comp=Z,54nm,18.1s,baz=100,slow=38
comp=Z,2.6nm,0.6s
MENT **Mentasta** 83.38 24 P P 15 26 19.8 +0.2
MENT IAmb IAmb 15 27 25.2
comp=Z,16nm,1.7s
B21K **Ikpikpuk River** 83.39 16 P P 15 26 19.7 +0.3
baz=231
D22K **Ayikyak River** 83.48 17 P P 15 26 20.6 +0.6
D22K IAmb IAmb 15 26 48.3
comp=Z,12nm,1.4s
D22K **Ayikyak River** 83.48 17 P P 15 26 19.2 -0.8
baz=233
CTG **Chitna Glacier** 83.49 26 P P 15 26 19.2 -1.1
baz=244
J25K **Salcha River,** 83.55 22 P P 15 26 19.0 -1.4
J25K IAmb IAmb 15 26 36.0
comp=Z,12nm,1.4s
J25K **Salcha River,** 83.55 22 P P 15 26 19.8 -0.6
baz=240
QSPA **South Pole Qui** 83.56 180 P P 15 26 21.9 +1.3
QSPA IAmb IAmb 15 26 35.4
comp=Z,12nm,0.9s
QSPA **South Pole Qui** 83.56 180 P P 15 26 22.0 +1.3
comp=Z,6.2nm,0.9s,baz=280,slow=0.5,SNR=19
QSPA LR LR 16 02 28.7
comp=Z,59nm,18.1s,baz=350,slow=35
comp=Z,6.2nm,0.9s
L26K **Log Cabin Wild** 83.57 24 P P 15 26 20.3 -0.2
baz=242
PINM **Pinnacle** 83.60 27 P P 15 26 20.2 -0.7
baz=245
SCRK **Sand Creek** 83.77 23 P P 15 26 21.8 +0.1
SCRK IAmb IAmb 15 27 12.6
comp=Z,13nm,1.5s
SCRK **Sand Creek** 83.77 23 P P 15 26 21.1 -0.6
baz=242
M27K **Edge Creek, AK** 83.87 25 IAmb IAmb 15 27 07.0
comp=Z,12nm,1.1s
M27K **Edge Creek, AK** 83.87 25 P P 15 26 21.4 -0.9
baz=244
E23K **Chandalar** 83.92 18 P P 15 26 22.2 -0.1
baz=236
D23K **Nanushuk River** 84.11 17 P P 15 26 23.2 +0.1
baz=235
F24K **Squaw Lake** 84.17 19 IAmb IAmb 15 26 30.3
comp=Z,24nm,1.8s
F24K **Squaw Lake** 84.17 19 P P 15 26 23.2 -0.4
baz=238
J26L **Joseph Creek** 84.18 23 P P 15 26 23.6 -0.1
baz=242
L27K **Beaver Creek,** 84.20 24 P P 15 26 23.1 -0.7
baz=244
TOLK **Toolik Lake Re** 84.26 18 P P 15 26 24.1 +0.1
TOLK IAmb IAmb 15 29 24.0
comp=Z,27nm,1.9s
TOLK **Toolik Lake Re** 84.26 18 P P 15 26 23.6 -0.4
baz=236
YUK8 **Steele Glacier** 84.32 26 P P 15 26 24.1 -0.6
baz=246
O29M **Mount Kennedy** 84.45 27 P P 15 26 24.3 -0.9
baz=247
K27K **Chicken** 84.54 23 P P 15 26 25.7 +0.3
K27K **Chicken** 84.54 23 P P 15 26 24.9 -0.6
baz=243
D24K **Happy Valley** 84.77 18 P P 15 26 26.8 +0.3
baz=237
YUK6 **Outpost Mounta** 84.80 27 P P 15 26 26.1 -1.0
baz=247
YUK4 **Talbot Arm** 84.83 26 P P 15 26 27.6 +0.4
baz=247
SIT **Sitka** 84.84 31 P P 15 26 25.8 -1.2
baz=250
F25K **Christian Rive** 84.95 19 P P 15 26 27.5 0.0
baz=240
C24K **Franklin Bluff** 85.12 17 P P 15 26 28.6 +0.4
baz=237
HYT **Haines Junctio** 85.14 27 P P 15 26 28.2 -0.5
baz=248
KSH **Kashi** 85.16 310 P P 15 26 32.1 +2.8
KSH pP pwP 15 26 43.8 -2.4
KSH pmax pmax
comp=Z,18nm,1.3s
EGAK **Eagle** 85.23 23 P P 15 26 27.8 -1.1
EGAK **Eagle** 85.23 23 P P 15 26 28.3 -0.6
baz=244
E25K **Arctic Village** 85.24 19 P P 15 26 28.9 0.0
baz=240
G26K **Porcupine Rive** 85.26 20 P P 15 26 28.9 -0.1
baz=242
M29M **Somme Creek** 85.35 25 P P 15 26 29.4 -0.3
baz=247
I27K **Kandik River** 85.42 22 P P 15 26 29.9 0.0
baz=244
F26K **Sheenjek River** 85.50 20 P P 15 26 30.2 0.0
baz=241
D25K **Kavik River** 85.60 18 P P 15 26 31.5 +0.8
baz=239
DAWY **Dawson** 85.62 24 P P 15 26 30.9 0.0
baz=246
H27K **Steamboat Moun** 85.73 21 P P 15 26 31.6 +0.1
baz=244
I28M **Miner Creek** 85.98 22 P P 15 26 33.2 +0.5
baz=245
KURK **Kurchatov** 85.99 322 P P 15 26 34.3 +1.4
KURK IAmb IAmb 15 26 54.2
comp=Z,13nm,1.2s
KURK **Kurchatov** 85.99 322 *ce*P P 15 26 34.3 +1.4
KURK pmax pmax
comp=Z,5.0nm,1.3s
KURBB **Kurchatov Arra** 86.02 322 P P 15 26 33.0 -0.1
comp=Z,0.3nm,0.2s,baz=105,slow=4.6,SNR=6.2
KURBB LR LR 16 05 34.7
comp=Z,70nm,20.4s,baz=173,slow=36
comp=Z,0.3nm,0.2s
M30M **Minto, Yukon** 86.12 26 P P 15 26 33.6 +0.2
baz=248
K29M **Barlow Dome** 86.29 24 P P 15 26 34.6 +0.3
K29M **Barlow Dome** 86.29 24 P P 15 26 34.0 -0.3
baz=248
AAK **Ala-Archa** 86.90 313 *i* P P 15 26 38.2 +0.4
AAK pmax pmax
comp=Z,3.0nm,0.9s
AAK **Ala-Archa** 86.90 313 LR LR 16 06 30.8
comp=Z,116nm,20.3s,baz=110,slow=36
F28M **Old Crow** 86.92 20 P P 15 26 38.2 +1.0
F28M IAmb IAmb 15 27 06.0
comp=Z,17nm,1.6s
F28M **Old Crow** 86.92 20 P P 15 26 37.7 +0.6
baz=245
J30M **Hart River** 87.05 24 P P 15 26 38.0 0.0
J30M **Hart River** 87.05 24 P P 15 26 38.1 +0.1
baz=249
S34M **Telegraph Cree** 87.25 31 P P 15 26 38.6 -0.3
baz=254
I30M **Mount Dempster** 87.27 23 P P 15 26 38.9 -0.2
I30M IAmb IAmb 15 29 13.0
comp=Z,19nm,1.9s
I30M **Mount Dempster** 87.27 23 P P 15 26 38.9 -0.2
baz=248
BBB **Bella Bella** 87.44 37 LR LR 15 59 07.9
comp=Z,112nm,19.9s,baz=284,slow=31
E28M **Babbage River** 87.45 20 P P 15 26 40.1 +0.3
baz=245
FARO **Faro, Yukon** 87.50 27 P P 15 26 39.9 -0.3
baz=251
EPYK **Eagle Plains** 87.56 22 P P 15 26 41.2 +0.9
EPYK IAmb IAmb 15 26 42.3
comp=Z,12nm,1.1s
EPYK **Eagle Plains** 87.56 22 P P 15 26 40.5 +0.2
baz=248
E29M **Blow River** 87.91 20 P P 15 26 40.6 -1.4
E29M IAmb IAmb 15 27 23.0
comp=Z,18nm,1.9s
E29M **Blow River** 87.91 20 P P 15 26 42.1 +0.2
baz=247
DLBC **Dease Lake** 87.96 31 P P 15 26 41.9 -0.6
baz=254
DLBC **Dease Lake** 87.96 31 LR LR 16 04 50.7
comp=Z,87nm,18.6s,baz=284,slow=35
G30M **tAoh Zraii Nji** 87.97 22 P P 15 26 42.3 0.0
baz=249
NRIK **Noril'sk** 87.98 341 *ce*P P 15 26 41.8 -0.4
NRIK **Noril'sk** 87.98 341 P P 15 26 40.8 -1.4
comp=Z,2.5nm,0.4s,baz=83,slow=4.1,SNR=5.0
NRIK LR LR 16 05 28.1
comp=Z,79nm,20.5s,baz=82,slow=35
comp=Z,2.5nm,0.4s
H31M **Peel River** 88.27 23 P P 15 26 42.7 -1.0
H31M **Peel River** 88.27 23 P P 15 26 43.7 0.0
baz=250
F30M **Barrier River** 88.36 21 P P 15 26 44.9 +0.8
baz=249
G31M **Satah River** 88.67 22 P P 15 26 44.6 -0.9
baz=250
YBH **Yreka Blue Hor** 88.97 48 LR LR 16 02 24.1
comp=Z,308nm,19.4s,baz=284,slow=33
F31M **Tsiigehtchic** 89.04 22 P P 15 26 47.2 0.0
baz=251
INK **Inuvik** 89.40 21 P P 15 26 49.3 +0.4
baz=251
INK **Inuvik** 89.40 21 LR LR 16 06 00.5
comp=Z,268nm,19.5s,baz=180,slow=35
SIMJ **Simiganj** 90.34 309 P P 15 26 54.1 -0.1
MPK **Martis Peak** 90.63 51 P P 15 26 55.6 -0.1
MPK IAmb IAmb 15 26 58.8
comp=Z,7.4nm,0.9s
PNTR **Pine Nut** 90.93 51 P P 15 26 57.0 0.0
PNTR IAmb IAmb 15 27 00.5
comp=Z,6.5nm,0.9s
SCI2 **San Clemente I** 91.02 57 P P 15 26 58.6 +1.3
baz=263
CIS **Catalina Islan** 91.17 57 P P 15 26 58.7 +0.7
baz=263
ISA **Isabella, Lake** 91.39 54 P P 15 26 60.0 +0.9
baz=263
BVAR **Borovoye Array** 91.45 323 P P 15 26 58.4 -0.5
comp=Z,1.7nm,0.7s,baz=138,slow=7.0,SNR=7.6
comp=Z,1.7nm,0.7s
BRVK **Borovoye** 91.52 323 *i* P P 15 26 57.6 -1.6
BRVK pmax pmax
comp=Z,4.0nm,1.1s
LHV **Little Huntoon** 91.68 52 IAmb IAmb 15 27 03.6
comp=Z,7.5nm,0.9s
EDW2 **Edwards Air Fo** 91.69 55 P P 15 27 01.5 +1.0
baz=263,SNR=5.8
CWC **Cottonwood Cre** 91.80 54 P P 15 27 02.6 +1.5
baz=263
NVAR **Mina Array Bea** 91.86 52 P P 15 27 02.1 +0.7
comp=Z,5.3nm,0.9s,baz=253,slow=6.3,SNR=27
NVAR LR LR 16 04 34.1
comp=Z,194nm,18.7s,baz=292,slow=33
comp=Z,5.3nm,0.9s
BFSC **Mount Baldy Ra** 91.90 56 P P 15 27 02.6 +1.1
baz=264,SNR=6.9
LRMC **Laurel Mtn Rad** 92.02 55 P P 15 27 03.5 +1.4
baz=264,SNR=6.5
KVN **Kaiserville** 92.08 51 IAmb IAmb 15 27 04.6
comp=Z,6.2nm,1.1s
MURC **Murrieta** 92.21 57 P P 15 27 04.4 +1.5
baz=264

PNT	**Penticton**	**92.22**	**41**	P	P	15 26 57.0	-5.5		
PNT				pmax	pmax				
	comp=Z,7.0nm,0.9s								
MPMC	**Manual Prospec**	**92.23**	**54**	P	**P**	**15 27 03.9**	**+0.7**		
	baz=264,SNR=5.2								
GRAC	**Grapevine Rang**	**92.44**	**53**	P	**P**	**15 27 04.8**	**+0.9**		
	baz=264								
BBRC	**Big Bear Solar**	**92.51**	**56**	P	P	15 27 06.2	+1.7		
	baz=264								
RRX	**Edison Barstow**	**92.51**	**55**	P	**P**	**15 27 05.5**	**+1.3**		
	baz=264								
RPN	**Rapa Nui**	**92.69**	**118**	LR	LR	16 00 46.0			
	comp=Z,97nm,21.6s,baz=258,slow=30								
GSC	**Goldstone, Bar**	**92.71**	**55**	P	P	15 27 06.9	+1.7		
	baz=264								
FURC	**Furnace Creek,**	**92.78**	**54**	P	P	15 27 07.5	+2.2		
	baz=264								
MONP2	**Monument Peak**	**92.78**	**57**	P	P	15 27 07.4	+1.6		
	baz=264,SNR=7.9								
PFO	**Pinyon Flats O**	**92.82**	**57**	P	**P**	**15 27 07.1**	**+1.3**		
	baz=264,SNR=5.3								
PFO	**Pinyon Flats O**	**92.82**	**57**	*i* P	**P**	**15 27 06.0**	**+0.2**		
PFO				pmax	pmax				
	comp=Z,16nm,1.1s								
PFO	**Pinyon Flats O**	**92.82**	**57**	LR	LR	16 04 22.7			
	comp=Z,136nm,18.4s,baz=277,slow=33								
TPFO	**Pinon Flats**	**92.83**	**57**	P	**P**	**15 27 07.0**	**+1.2**		
	baz=264,SNR=5.3								
PMD	**Palm Desert**	**92.89**	**57**	IAmb	IAmb	15 27 08.7			
	comp=Z,5.7nm,0.8s								
C36M	**Paulatuk**	**92.98**	**21**	P	**P**	**15 27 05.5**	**0.0**		
	baz=260								
WCT	**Wildcat Mounta**	**93.00**	**53**	IAmb	IAmb	15 27 09.0			
	comp=Z,6.2nm,1.0s								
IKP	**In-Ko-Pah, Jac**	**93.02**	**58**	P	P	15 27 08.6	+2.0		
	baz=264								
HEC	**Hector Ludlow**	**93.05**	**55**	P	**P**	**15 27 08.1**	**+1.4**		
	baz=264								
A36M	**Sachs Harbour**	**93.08**	**18**	P	**P**	**15 27 03.2**	**-2.7**		
A36M	**Sachs Harbour**	**93.08**	**18**	P	**P**	**15 27 06.3**	**+0.4**		
	baz=259								
SHOC	**Shoshone, Teco**	**93.20**	**54**	P	P	15 27 09.1	+1.8		
	baz=264								
BELC	**Belle Mtn. Jos**	**93.24**	**56**	P	**P**	**15 27 08.8**	**+1.0**		
	baz=264,SNR=12								
SWSC	**Sam W. Stewart**	**93.31**	**57**	P	**P**	**15 27 09.2**	**+1.4**		
	baz=265								
TPNV	**Topopah Spring**	**93.32**	**53**	P	**P**	**15 27 08.6**	**+0.6**		
	baz=265								
TUQ	**Turquoise Moun**	**93.44**	**55**	P	P	15 27 10.4	+1.8		
	baz=265								
GMRC	**Granite Mounta**	**93.59**	**56**	P	P	15 27 11.2	+1.9		
	baz=265								
BC3	**Big Chuckawall**	**93.66**	**57**	P	**P**	**15 27 11.2**	**+1.6**		
	baz=265,SNR=8.0								
NEW	**Newport**	**93.75**	**42**	P	**P**	**15 27 10.1**	**+0.5**		
	baz=265								
NEW	**Newport**	**93.75**	**42**	LR	LR	16 05 24.7			
	comp=Z,331nm,19.1s,baz=261,slow=33								
IRM	**Iron Mountain**	**93.96**	**56**	P	**P**	**15 27 11.6**	**+0.7**		
	baz=265,SNR=8.8								
R11B	**Troy Canyon, C**	**93.97**	**52**	P	**P**	**15 27 11.8**	**+0.7**		
	baz=265,SNR=6.6								
ELK	**Elko**	**94.44**	**50**	LR	LR	16 06 26.5			
	comp=Z,108nm,18.5s,baz=288,slow=34								
PDMCI	**Parker Dam,Lak**	**94.80**	**56**	P	**P**	**15 27 16.0**	**+1.3**		
	baz=266								
SPR3	**Spring Creek 3**	**95.00**	**51**	P	P	15 27 17.8	+1.8		
SPR3				IAmb	IAmb	15 27 31.6			
	comp=Z,15nm,1.5s								
W13A	**Hualapai Mount**	**95.07**	**55**	P	P	15 27 18.3	+2.1		
HLID	**Hailey**	**95.26**	**47**	P	**P**	**15 27 17.5**	**+0.7**		
	baz=266								
LCMT	**Little Creek M**	**95.72**	**53**	P	**P**	**15 27 20.0**	**+1.0**		
LCMT				IAmb	IAmb	15 27 22.0			
	comp=Z,9.0nm,1.5s								
YKA	**Yellowknife Ar**	**96.12**	**28**	P	**P**	**15 27 19.5**	**-0.5**		
	comp=Z,0.6nm,0.9s,baz=262,slow=4.1,SNR=8.4								
YKA				LR	LR	16 10 30.7			
	comp=Z,58nm,18.1s,baz=277,slow=35								
	comp=Z,0.6nm,0.9s								
WUAZ	**Wupatki**	**97.15**	**55**	P	Pdif	15 27 26.6	+0.8		
	baz=267								
LPIG	**La Paz**	**97.44**	**67**	LR	LR	16 05 53.8			
	comp=Z,100nm,18.7s,baz=236,slow=32								
ARU	**Arti**	**98.51**	**326**	*i* P	Pdif	15 27 29.9	-1.1		
ARU				pmax	pmax				
	comp=Z,2.0nm,1.1s								
ARU	**Arti**	**98.51**	**326**	LR	LR	16 13 14.5			
	comp=Z,112nm,20.6s,baz=105,slow=36								
EGMT	**Eagleton**	**98.66**	**42**	P	Pdif	15 27 32.1	0.0		
	baz=270								
BW06	**Boulder Array**	**98.78**	**48**	P	Pdif	15 27 33.4	+0.5		
	baz=269								
PDAR	**Pinedale Array**	**98.78**	**48**	P	Pdif	15 27 32.3	-0.6		
	comp=Z,0.8nm,0.6s,baz=252,slow=2.8,SNR=8.7								
PDAR				LR	LR	16 09 56.4			
	comp=Z,74nm,18.3s,baz=284,slow=34								
	comp=Z,0.8nm,0.6s								
AKTO	**Aktyubinsk**	**98.95**	**320**	LR	LR	16 16 37.2			
	baz=269								
MVCO	**Mesa Verde**	**99.52**	**53**	P	**Pdif**	**15 27 37.1**	**+0.8**		
OBN	**Obninsk**	**110.92**	**327**	⇑*i* PKIKP	**PKiKP**	**15 32 27.4**	**+1.8**		
OBN				*e*		15 33 05.9			
OBN				pmax	pmax				
	comp=Z,3.0nm,0.9s								
OBN				MLR	MLR				
	comp=Z,113nm,21.0s								
BIM	**Bigot**	**144.28**	**74**	PKPdf	**PKiKP**	**15 33 30.2**	**-3.0**		
BOAV	**Boa Vista**	**145.00**	**95**	PKPdf	**PKiKP**	**15 33 31.3**	**-3.5**		
BDFB	**Brasilia**	**148.83**	**135**	PKPbc	**PKiKP**	**15 33 40.9**	**-1.9**		
	comp=Z,4.0nm,0.6s,baz=211,slow=18,SNR=3.5								
TORD	**Torodi Ar. Bea**	**152.26**	**286**	PKPbc	**PKiKP**	**15 33 49.9**	**+0.3**		
	comp=Z,2.6nm,0.5s,baz=31,slow=1.2,SNR=6.1								

FUNV ***17*** *15:27:06.8,10.60N×61.98W,h109km,MW3.3*
TRN ***17*** *15:27:11.3,10.86N×61.95W,h100km,MD3.0,North of Paria peninsula.*

ISC 17 15:27:09.5±3.5,10.8N±0.1°×62.16W±0.08°,h100km±29km, n12,σ0.98°/14,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCE	**Chacachacare**	**0.42**	**109**	*e*P	**Pn**	**15 27 26.3**	**+1.5**
TCE				*e*S	**Sn**	**15 27 36.1**	**-0.1**
TRN	**Trinidad (W)**	**0.77**	**104**	*e*P	**Pn**	**15 27 27.8**	**+0.3**
TRN				*e*S	**Sn**	**15 27 38.9**	**-2.1**
CRUV	**Carupano**	**1.07**	**261**	*e*P	**Pn**	**15 27 31.0**	**+0.4**
CRUV				*e*S	**Sn**	**15 27 45.8**	**-0.8**
GRFF	**Grenada Fort F**	**1.28**	**19**	*e*P	**Pn**	**15 27 33.3**	**+0.2**
GRFF				*e*S	**Sn**	**15 27 49.8**	**-1.0**
GRGR	**Grenville**	**1.38**	**21**	*e*P	**Pn**	**15 27 34.9**	**+0.5**
GRGR				*e*S	**Sn**	**15 27 53.0**	**-0.1**
GRHS	**Sauteurs**	**1.47**	**20**	*e*P	**Pn**	**15 27 35.5**	**+0.1**
GRHS				*e*S	**Sn**	**15 27 54.9**	**-0.1**
GCMP	**Grenada, Carri**	**1.79**	**24**	*e*P	**Pn**	**15 27 40.0**	**+0.7**
GCMP				*e*S	**Sn**	**15 28 01.8**	**-0.3**
PCRV	**Puerto La Cruz**	**2.52**	**255**	*e*P	Pn	15 27 46.8	-2.1
PCRV				*e*S	Sn	15 28 16.5	-2.7
LUEV	**Luepa**	**5.01**	**172**	*e*P	Pn	15 28 14.7	-7.8
LUEV				*e*S	Sn	15 29 05.2	-14
CACV	**CAICARA DEL OR**	**5.41**	**233**	*e*P	Pn	15 28 18.2	-10
CACV				*e*S	Sn	15 29 11.0	-18
BENV	**Beln**	**5.42**	**261**	*e*P	Pn	15 28 25.4	-2.6
BENV				*e*S	Sn	15 29 23.8	-5.3
BAUV	**El Baul**	**6.09**	**253**	*e*P	Pn	15 28 33.3	-3.8
BAUV				*e*S	Sn	15 29 37.7	-7.7

IDC 17 15:31:29.0±11.0,35.61N×71.11E,h0km,mb3.6/2, mbtmp3.4/4,ML2.4/2,Error ellipse: s-maj=195.2km s-min=48.3km az=160.0,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.97**	**33**	Pn	Pn	15 34 48.7	+0.5
	baz=220,slow=9.0,SNR=1.6						
	0.2nm,0.9s						
BVAR	**Borovoye Array**	**17.42**	**359**	P	Pn	15 35 33.5	+0.1
	baz=183,slow=10,SNR=3.5						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**20.69**	**23**	P	P	15 36 10.8	+0.2
	1.4nm,0.5s,baz=215,slow=12,SNR=6.5						
	1.4nm,0.5s						

FINES	**FINESS Array B**	**38.28**	**327**	P	P	15 38 50.6	-0.1
	0.8nm,0.7s,baz=115,slow=8.6,SNR=4.5						
	0.8nm,0.7s						

SCB ***17*** *15:40:19.6±1.4,21.65S×66.79W,h208km±10km,ML3.4/3, MW3.6,Error ellipse: s-maj=5.8km s-min=4.5km az=0.0*

ISC 17 15:40:20.3±2.3,21.62S±0.06°×66.80W±0.06°, h207km±18km,n27,σ0.79°/38,1C-1D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.14**	**72**	Pg	**Pn**	**15 40 52.6**	**+0.3**
MOCB				Sg	**S**	**15 41 16.0**	**-0.9**
MOCB				IAML		15 41 17.5	
	126nm,0.7s						
LVC	**Limon Verde**	**2.19**	**243**	Pg	**Pn**	**15 41 01.8**	**+0.1**
PB09	**IPOC Station P**	**2.28**	**265**	Pg	**Pn**	**15 41 03.4**	**+0.9**
PB01	**IPOC Station P**	**2.57**	**282**	*e*P	**Pn**	**15 41 05.7**	**+0.2**
PB01				*i* S	**S**	**15 41 40.6**	**+0.3**
PB01				IAML		15 41 42.4	
	comp=N,78nm,0.4s						
PB01	**IPOC Station P**	**2.57**	**282**	Pg	**Pn**	**15 41 05.1**	**-0.4**
PB01				Sg	**S**	**15 41 40.9**	**+0.6**
PB01				IAML		15 41 42.4	
	comp=N,65nm,0.2s						
PB08	**IPOC Station P**	**2.65**	**303**	*e*P	**Pn**	**15 41 07.6**	**+0.9**
PB08				*i* S	**S**	**15 41 43.5**	**+1.1**
PB08				IAML		15 41 45.9	
	comp=E,19nm,0.2s						
PB08	**IPOC Station P**	**2.65**	**303**	Pg	**Pn**	**15 41 06.8**	**+0.1**
PB06	**IPOC Station P**	**2.79**	**247**	*e*P	**Pn**	**15 41 10.1**	**+2.1**
PB06				*i* S	**S**	**15 41 45.1**	**+0.2**
PB06				IAML		15 41 46.9	
	comp=E,74nm,0.2s						
PB06	**IPOC Station P**	**2.79**	**247**	Pg	**Pn**	**15 41 08.2**	**+0.1**
PB07	**IPOC Station P**	**2.88**	**267**	*e*P	**Pn**	**15 41 09.5**	**+0.4**
PB07				*i* S	**S**	**15 41 45.7**	**-0.9**
PB07				IAML		15 41 46.8	
	comp=N,145nm,0.4s						
PB07	**IPOC Station P**	**2.88**	**267**	Pg	**Pn**	**15 41 09.1**	**0.0**
PB02	**IPOC Station P**	**2.90**	**275**	*e*P	**Pn**	**15 41 09.4**	**+0.2**
PB02				*i* S	**S**	**15 41 46.2**	**-0.8**
PB02				IAML		15 41 47.0	
	comp=N,279nm,0.3s						
PB02	**IPOC Station P**	**2.90**	**275**	Pg	**Pn**	**15 41 09.3**	**0.0**
PB02				Sg	**S**	**15 41 46.5**	**-0.5**
PB02				IAML		15 41 47.0	
	comp=N,229nm,0.3s						
PB15	**IPOC Station P**	**2.94**	**237**	*e*P	**Pn**	**15 41 11.1**	**+1.3**
PB15				*i* S	**S**	**15 41 48.6**	**+0.5**
PB15	**IPOC Station P**	**2.94**	**237**	Pg	**Pn**	**15 41 09.7**	**-0.1**
GO01	**Chusmiza**	**2.96**	**310**	Pg	**Pn**	**15 41 10.8**	**+0.4**
HMBC	**Humberstone**	**3.18**	**294**	Pg	**Pn**	**15 41 12.4**	**-0.2**
PB04	**IPOC Station P**	**3.19**	**256**	Pg	**Pn**	**15 41 12.9**	**+0.2**
SOEO	**Opoqueri**	**3.20**	**341**	Pg	**Pn**	**15 41 14.2**	**+0.9**
PATCX	**Punta Patache**	**3.23**	**284**	*e*P	**Pn**	**15 41 13.0**	**-0.1**
PATCX				*i* S	**S**	**15 41 52.3**	**-1.6**
PB11	**IPOC Station P**	**3.25**	**304**	⇓*i* P	**Pn**	**15 41 13.2**	**-0.2**
PB11				*i* S	**S**	**15 41 53.2**	**-1.3**
PB11	**IPOC Station P**	**3.25**	**304**	Pg	**Pn**	**15 41 12.9**	**-0.6**
TA01	**Diego Aracena**	**3.33**	**288**	Pg	**Pn**	**15 41 13.6**	**-0.6**
SOET	**ToroToro**	**3.60**	**15**	Pg	**Pn**	**15 41 17.6**	**-0.3**
GO02	**Mina Guanaco**	**4.37**	**215**	Pg	**Pn**	**15 41 26.7**	**-0.5**
SOEJ	**Jacaque**	**4.80**	**344**	Pg	**Pn**	**15 41 33.8**	**+0.9**
BBOE	**La Paz, Chanca**	**4.91**	**347**	Pg	**Pn**	**15 41 35.3**	**+1.0**

IDC ***17*** *15:46:55.3±1.0,16.38S×173.18W,h0km,mb3.8/7, mbtmp3.8/7,Error ellipse: s-maj=56.9km s-min=22.5km az=153.0*

ISC 17 15:47:00.6±0.9,16.4S±0.3°×173.3W±0.2°,h35km,n15, σ0.95°/10,mb3.7/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S2	**WAKE ISLAND Hy**	**39.86**	**330**	T	T	16 35 52.8	
	baz=146,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**39.88**	**329**	T	T	16 35 48.8	
	baz=146,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**39.88**	**330**	T	T	16 35 53.9	
	baz=146,slow=76,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**40.82**	**331**	T	T	16 37 18.4	
	baz=151						
H11N1	**WAKE ISLAND Hy**	**40.82**	**331**	T	T	16 37 10.7	
	baz=151						
H11N2	**WAKE ISLAND Hy**	**40.84**	**331**	T	T	16 37 05.8	
	baz=151						
WRA	**Warramunga Arr**	**49.77**	**258**	P	**P**	**15 55 50.6**	**+0.6**
	1.0nm,0.7s,baz=95,slow=7.4,SNR=27						
WRA				PcP	**PcP**	**15 57 10.4**	**-0.4**
	0.3nm,0.9s,baz=98,slow=3.3,SNR=1.9						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**49.95**	**253**	P	**P**	**15 55 52.2**	**+0.7**
	4.7nm,0.4s,baz=89,slow=7.3,SNR=144						
	4.7nm,0.4s						
NVAR	**Mina Array Bea**	**74.95**	**42**	P	**P**	**15 58 39.8**	**+1.3**
	0.7nm,0.9s,baz=220,slow=8.8,SNR=3.8						
	0.7nm,0.9s						
TXAR	**Lajitas Array**	**81.03**	**56**	P	**P**	**15 59 13.5**	**+1.2**
	0.2nm,0.6s,baz=207,slow=8.1,SNR=3.7						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**82.89**	**42**	P	**P**	**15 59 21.3**	**-0.7**
	0.2nm,0.5s,baz=222,slow=1.2,SNR=2.9						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**83.36**	**11**	P	**P**	**15 59 22.7**	**-0.9**
	0.2nm,0.6s,baz=203,slow=4.8,SNR=7.1						
	0.2nm,0.6s						
PLCA	**Paso Flores**	**88.76**	**132**	P	**P**	**15 59 50.5**	**-0.6**
	1.6nm,1.0s,baz=268,slow=11,SNR=3.0						
	1.6nm,1.0s						
ARCES	**ARCESS Array B**	**125.58**	**352**	PKP	**PKPdf**	**16 05 56.9**	**-0.7**
	6.9nm,1.3s,baz=45,slow=1.4,SNR=3.6						
BRTR	**Keskin Array B**	**146.99**	**320**	PKPbc	**PKPab**	**16 06 41.1**	**-0.4**
	0.5nm,0.6s,baz=24,slow=1.1,SNR=2.9						

IDC 17 16:02:01.3±2.1,9.19S×125.36E,h0km,mb3.1/1, mbtmp3.0/3,ML2.9/2,Error ellipse: s-maj=172.4km s-min=34.3km az=58.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.78**	**142**	Pn	Pn	16 05 19.3	+1.2
	0.1nm,0.3s,baz=317,slow=13,SNR=6.6						
WRA				Sn	Sn	16 07 44.9	-7.1
	0.2nm,0.3s,baz=228,slow=9.8,SNR=9.2						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**16.56**	**151**	Pn	Pn	16 05 53.9	-1.2
	baz=323,slow=14,SNR=4.3						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**67.64**	**330**	P	P	16 13 00.2	0.0
	0.1nm,0.6s,baz=142,slow=7.3,SNR=1.6						
	0.1nm,0.6s						

IDC ***17*** *16:11:06.6±1.1,1.64S×120.05E,h0km,mb3.6/7, mbtmp3.6/7,Error ellipse: s-maj=118.0km s-min=18.6km az=58.0*
DJA ***17*** *16:11:09.1±0.3,1°S±2°×120°E±°,h10km,M3.8/8,mb3.8/2, MLv3.8/8*

ISC 17 16:11:09.9±0.8,1.30S±0.05°×120.49E±0.08°,h23km,n13, σ1.9°/17,mb3.6/7,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.73**	**340**	P	**Pn**	**16 11 37.2**	**-1.4**
TTSI	**Tana Toraja**	**1.86**	**201**	P	**Pb**	**16 11 41.6**	**-1.6**
TTSI				S	**Sb**	**16 12 06.1**	**+0.1**
MRSI	**Marisa**	**2.29**	**39**	P	**Pn**	**16 11 45.1**	**-1.1**
LUWI	**Luwuk**	**2.30**	**84**	P	**Pn**	**16 11 46.4**	**0.0**
BKSI	**Bulukumba**	**4.01**	**185**	P	**Pn**	**16 12 10.3**	**+0.3**
SANI	**Sanana**	**5.55**	**98**	P	**Pn**	**16 12 30.2**	**-0.9**
	6.7nm,0.8s,0.0nm						
WRA	**Warramunga Arr**	**22.95**	**145**	P	**P**	**16 16 12.1**	**-0.7**
	1.6nm,1.0s,baz=326,slow=11,SNR=3.2						
	1.6nm,1.0s						
ASAR	**Alice Springs**	**25.76**	**151**	P	**P**	**16 16 38.9**	**-0.2**
	0.5nm,0.6s,baz=342,slow=14,SNR=2.7						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.89**	**314**	P	**P**	**16 17 07.2**	**0.0**
	0.4nm,0.7s,baz=112,slow=7.1,SNR=4.2						
	0.4nm,0.7s						
STKA	**Stephens Creek**	**36.36**	**149**	P	**P**	**16 18 12.3**	**-0.1**
	0.9nm,0.7s,baz=333,slow=16,SNR=2.2						
	0.9nm,0.7s						

SONM	**Songino Array**	**50.46**	**348**	P	**P**	**16 20 08.8**	**+2.8**
	0.5nm,0.5s,baz=168,slow=9.6,SNR=2.5						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**58.44**	**330**	P	**P**	**16 21 04.4**	**+0.5**
	0.4nm,0.5s,baz=138,slow=7.5,SNR=4.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**62.86**	**331**	P	**P**	**16 21 33.8**	**-0.1**
	0.3nm,0.5s,baz=139,slow=6.2,SNR=2.0						
	0.3nm,0.5s						

IDC ***17*** *16:11:39.9±1.4,30.71N×57.35E,h0km,mb3.6/7, mbtmp3.6/10,ML3.4/3,Error ellipse: s-maj=29.2km s-min=21.1km az=71.0*
TEH ***17*** *16:11:40.1,30.77N×57.42E,h8km±41km,ML3.8*
OMAN ***17*** *16:11:45.9±0.1,30.55N×58.09E,h10km,mb4.2/22, ml2.5/2,Error ellipse: s-maj=2.2km s-min=1.9km az=346.0*

ISC 17 16:11:42.0±0.6,30.75N±0.03°×57.42E±0.04°,h15km,n66, σ2.6°/57,mb3.5/7,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRM1	**Kerman Provinc**	**0.27**	**207**	Pg	**Pg**	**16 11 46.5**	**-1.5**
ZRDN	**Zarand Kerman**	**0.79**	**286**	Pg	**Pg**	**16 11 55.3**	**-2.1**
CHMN	**Cheshme madani**	**0.89**	**173**	Pg	**Pb**	**16 11 57.6**	**-1.7**
KHGB	**Koh Gabri**	**0.89**	**246**	Pg	**Pg**	**16 11 57.1**	**-2.3**
TVBK	**TV Kerman**	**0.95**	**217**	Pg	**Pn**	**16 11 59.2**	**-1.9**
NGRK	**Negar Kerman**	**1.25**	**209**	Pg	**Pg**	**16 12 04.7**	**-1.5**
IBAF	**Bafgh**	**1.79**	**298**	Pg	**Pb**	**16 12 13.3**	**-1.3**
KBAM	**BAM**	**1.84**	**151**	Pn	**Pb**	**16 12 14.0**	**-1.4**
BSRN	**Basiran**	**1.90**	**50**	Pn	**Pb**	**16 12 14.6**	**-1.9**
IKOO	**Kooshah**	**2.15**	**39**	Pn	**Pb**	**16 12 18.5**	**-2.3**
NHDN	**Nehbandan**	**2.35**	**73**	Pn	**Pn**	**16 12 21.1**	**+0.9**
TPRV	**Parvadeh(Tabas**	**2.36**	**345**	Pn	**Pn**	**16 12 20.9**	**+0.6**
ITEG	**Tejag**	**2.42**	**28**	Pn	**Pn**	**16 12 21.8**	**+0.5**
TKDS	**Koohdasht(Taba**	**2.87**	**355**	Pn	**Pn**	**16 12 27.8**	**+0.5**
IDAH	**Dahanechah**	**2.88**	**46**	Pn	**Pn**	**16 12 28.2**	**+0.5**
AFRZ	**Afriz**	**3.00**	**26**	Pn	**Pn**	**16 12 29.7**	**+0.6**
SHRT	**Shahrakht**	**3.78**	**39**	Pn	**Pn**	**16 12 41.3**	**+1.5**
ANAR	**Anarak**	**3.97**	**309**	Pn	**Pn**	**16 12 43.1**	**+0.6**
IRAM	**Ramesheh**	**4.44**	**285**	Pn	**Pn**	**16 12 50.3**	**+1.3**
SHME	**Shamm**	**4.81**	**194**	P	Pb	16 12 58.7	-7.3
SHME				S	**Sn**	**16 13 53.5**	**+4.0**
IZEF	**Zefreh**	**4.83**	**298**	Pn	**Pn**	**16 12 55.3**	**+0.8**
JASK	**Jask - Hormozg**	**4.88**	**175**	P	**Pn**	**16 12 57.8**	**+2.9**
BANOM	**Banah**	**4.91**	**192**	P	Pn	16 12 58.7	+3.4
BANOM				S	**Sb**	**16 13 58.3**	**-8.2**
UMQ	**Umm Al-Quwin**	**5.43**	**197**	P	**Pn**	**16 13 04.8**	**+2.4**
MASF	**Masafi**	**5.47**	**192**	P	Pn	16 13 06.6	+3.5
	SNR=5.7						
MASF				S	**Sn**	**16 14 09.8**	**+4.1**
KRSH	**Karshahi**	**5.50**	**307**	Pn	**Pn**	**16 13 04.9**	**+1.3**
MDH	**Madha**	**5.52**	**191**	P	Pn	16 13 08.5	+4.9
SBZV	**Sabzevar**	**5.63**	**2**	Pn	**Pn**	**16 13 06.7**	**+1.3**
ISFB	**Sefidab**	**5.66**	**311**	Pn	**Pn**	**16 13 07.1**	**+1.4**
UOSS	**Minazif**	**5.88**	**191**	P	Pn	16 13 12.6	+4.0
UOSS				S	**Sn**	**16 14 19.6**	**+3.8**
NAZ	**Nazwa, Dubai**	**5.94**	**196**	P	Pb	16 13 16.6	-8.7
HATD	**Hatta, Dubai**	**6.01**	**191**	P	Pb	16 13 16.8	-10
ASHO	**Ashiyiah**	**6.16**	**192**	P	Pn	16 13 15.8	+3.3
	SNR=13						
FAQ	**Al Faqa, Dubai**	**6.19**	**196**	P	Pn	16 13 18.5	+5.6
IFIR	**Firoozkooh**	**6.25**	**323**	Pn	**Pn**	**16 13 14.9**	**+0.9**
ISFR	**Sfrayin**	**6.31**	**4**	Pn	**Pn**	**16 13 16.1**	**+1.4**
ASUD	**Al Ashush, Dub**	**6.37**	**197**	P	Pn	16 13 21.4	+6.0
ASUD				S	**Sn**	**16 14 32.8**	**+4.9**
IGLO	**Ghaloghah**	**6.47**	**333**	Pn	**Pn**	**16 13 16.9**	**0.0**
IDMV	**Damavand**	**6.60**	**318**	Pn	**Pn**	**16 13 19.8**	**+1.0**
SOHO	**SOHO**	**6.63**	**187**	P	Pn	16 13 22.3	+3.3
ALNE	**Al Ain**	**6.83**	**193**	P	Pn	16 13 26.7	+5.0
GEYT	**Alibeck**	**7.19**	**4**	Pn	**Pn**	**16 13 28.2**	**+1.6**
	0.2nm,0.3s,baz=186,slow=12,SNR=2.0						
	0.6nm,0.4s						
ARQ	**Araqi**	**7.42**	**186**	P	**Pn**	**16 13 32.8**	**+2.9**
	SNR=7.7						
WSAR	**Wadi Sarin**	**7.56**	**171**	Pn	**Pn**	**16 13 32.5**	**+0.8**
	1.5nm,0.3s,baz=7.4,slow=11,SNR=28						
WSAR				Sn	**Sn**	**16 14 56.8**	**-0.3**
	baz=14,slow=8.3						
	7.9nm,0.5s						
WSAR	**Wadi Sarin**	**7.56**	**171**	P	**Pn**	**16 13 34.0**	**+2.3**
	SNR=11						
WSAR				S	**Sn**	**16 14 57.8**	**+0.7**
MZWR	**Madinat Zayed**	**7.64**	**205**	P	Pn	16 13 38.4	+5.7
SMDO	**Samad**	**7.68**	**176**	P

	0.4nm,0.5s								
STKA	**Stephens Creek**	**42.55**	**132**	P		**P**		**16 25 24.9**	**+0.9**
	1.3nm,0.5s,baz=308,slow=8.0,SNR=5.8								
	1.3nm,0.5s								
MKAR	**Makanchi Array**	**56.32**	**341**	P		**P**		**16 27 07.9**	**-0.8**
	0.5nm,0.9s,baz=140,slow=9.6,SNR=5.1								
	0.5nm,0.9s								
KURBB	**Kurchatov Arra**	**60.88**	**341**	P		**P**		**16 27 38.6**	**-1.8**
	0.4nm,0.9s,baz=156,slow=6.2,SNR=4.1								
	0.4nm,0.9s								
GEYT	**Alibeck**	**61.89**	**319**	P		**P**		**16 27 47.4**	**-0.2**
	1.5nm,0.7s,baz=210,slow=8.6,SNR=3.6								
	1.5nm,0.7s								
ZALV	**Zalesovo Beam**	**62.07**	**346**	P		**P**		**16 27 47.3**	**-1.1**
	0.7nm,0.6s,baz=151,slow=6.8,SNR=4.4								
	0.7nm,0.6s								
BVAR	**Borovoye Array**	**65.74**	**338**	P		**P**		**16 28 11.8**	**-0.8**
	0.3nm,0.4s								
	0.3nm,0.4s								
KBZ	**Khabaz**	**74.77**	**318**	P		**P**		**16 29 07.3**	**-0.7**
	2.8nm,0.9s,baz=241,slow=8.8,SNR=3.9								
	2.8nm,0.9s								
BRTR	**Keskin Array B**	**79.92**	**312**	P		**P**		**16 29 37.3**	**+0.1**
	0.8nm,0.7s,baz=134,slow=4.4,SNR=3.8								
	0.8nm,0.7s								
FINES	**FINESS Array B**	**90.05**	**332**	P		**P**		**16 30 27.9**	**+0.6**
	2.0nm,0.9s,baz=104,slow=9.4,SNR=4.5								
	2.0nm,0.9s								
TXAR	**Lajitas Array**	**143.97**	**46**	PKP		**PKPdf**		**16 37 03.0**	**-1.2**
	0.1nm,0.4s,baz=300,slow=1.8,SNR=2.7								

IDC ***17*** *16:20:22.7±8.8,26°.06S×28°.96E,h0km,mbtmp2.7/1, ML2.5/1,Error ellipse: s-maj=100.6km s-min=56.2km az=141.0*
BUL ***17*** *16:20:24.5±0.8,26°.03S×29°.22E,h10km,MD3.9*
EAF ***17*** *16:20:24.3±0.6,26°.04S×29°.38E,h10km,MD3.7*
ISC 17 16:20:10.0±1.5,26°.4S±0°.1×29°.1E±0°.1,h10km,n11, σ0s95/13,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MOPA	**Mopani**	**3.59**	**37**	*i* P		**Pb**		**16 21 12.8**	**-0.7**
MOPA				*i* S		**Sn**		**16 21 49.0**	**+0.9**
MOPA	**Mopani**	**3.59**	**37**	*i* P		**Pb**		**16 21 12.8**	**-0.7**
MOPA				*i* S		**Sn**		**16 21 49.0**	**+0.9**
BOSA	**Boshof**	**4.02**	**236**	Pn		**Pg**		**16 21 27.3**	**+0.3**
	0.2nm,0.3s,baz=48,slow=12,SNR=1.6								
BOSA				Lg		Lg		16 22 35.9	
	13nm,0.3s,baz=323,slow=21,SNR=20								
	1.5nm,0.8s								
I47ZA	**BOSHOF INFRASO**	**4.04**	**236**	I		I		16 45 00.0	
	0.3nm,0.7s,baz=53,slow=311,SNR=3.6								
MUSN	**Musina, Limpop**	**4.18**	**10**	*i* P		**Pb**		**16 21 22.4**	**-1.2**
MUSN				*i* S		**Sn**		**16 22 03.9**	**+1.1**
MUSN	**Musina, Limpop**	**4.18**	**10**	*i* P		**Pb**		**16 21 22.4**	**-1.2**
MUSN				*i* S		**Sn**		**16 22 03.9**	**+1.1**
BLWY	**Bulawayo**	**6.26**	**356**	*i* P		Pb		16 21 51.1	-8.2
BLWY				*i* S		**Sn**		**16 22 55.1**	**+0.7**
BLWY	**Bulawayo**	**6.26**	**356**	*i* P		Pb		16 21 51.1	-8.2
BLWY				*i* S		**Sn**		**16 22 55.1**	**+0.7**
KRI	**Karoi**	**9.56**	**3**	*i* P		**Pn**		**16 22 27.9**	**0.0**
KRI				*i* S		Sn		16 23 57.4	-18
KRI	**Karoi**	**9.56**	**3**	*i* P		**Pn**		**16 22 27.9**	**0.0**
KRI				*i* S		Sn		16 23 57.4	-18
I35NA	**TSUMEB INFRASO**	**12.80**	**302**	I		I		17 35 40.0	
	baz=128,slow=316,SNR=3.7								

IDC ***17*** *16:20:06.7±2.1,6°.05S×104°.46E,h0km,mb3.5/5, mbtmp3.6/6,ML3.9/1,Error ellipse: s-maj=92.8km s-min=22.3km az=49.0*
DJA ***17*** *16:20:15.8±0.3,6°.S±6°×10°.5E±°,h10km,M3.2/7,MLv3.2/7*
ISC 17 16:20:15.3±0.9,6°.0S±0°.1×105°.42E±0°.06,h10km,n15, σ1s72/16,mb3.5/5,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
BLSI	**Bandar Lampung**	**0.61**	**344**	P		**Pn**		**16 20 29.5**	**-0.6**
SBJI	**Serang**	**0.72**	**103**	P		**Pg**		**16 20 29.2**	**-0.1**
SBJI				S		**Sg**		**16 20 38.4**	**-0.4**
KASI	**Kota Agung**	**1.01**	**295**	P		**Pg**		**16 20 35.0**	**+0.2**
KASI				S		**Sg**		**16 20 48.9**	**+0.8**
DBJI	**Dramaga**	**1.45**	**114**	P		**Pn**		**16 20 41.8**	**+0.2**
CBJI	**Citeko**	**1.49**	**108**	P		**Pg**		**16 20 45.3**	**+1.3**
SKJI	**Sukabumi**	**1.54**	**133**	P		**Pn**		**16 20 42.3**	**-0.4**
LWLI	**Liwa**	**1.65**	**305**	P		**Pn**		**16 20 46.5**	**+2.1**
CNJI	**Cibinong**	**2.16**	**128**	P		**Pn**		**16 20 51.5**	**+0.1**
LEM	**Lembang**	**2.35**	**112**	Pn		**Pg**		**16 21 00.1**	**-0.3**
	13nm,0.3s,baz=291,slow=8.6,SNR=6.1								
LEM				Sn		**Sg**		**16 21 36.0**	**+5.1**
	2.0nm,0.3s,baz=18,slow=19,SNR=1.5								
	47nm,0.6s								
LEM	**Lembang**	**2.35**	**112**	P		**Pn**		**16 20 54.0**	**-0.1**
WRA	**Warramunga Arr**	**31.35**	**119**	P		**P**		**16 26 35.6**	**-0.7**
	0.3nm,0.4s,baz=294,slow=9.9,SNR=5.1								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**32.57**	**126**	P		**P**		**16 26 46.4**	**-0.7**
	0.2nm,0.5s,baz=300,slow=8.1,SNR=13								
	0.2nm,0.5s								
STKA	**Stephens Creek**	**42.50**	**132**	P		**P**		**16 28 09.2**	**-1.9**
	1.1nm,0.4s,baz=313,slow=8.6,SNR=5.5								
	1.1nm,0.4s								
MKAR	**Makanchi Array**	**56.39**	**341**	P		P		16 29 48.8	-8.1
	0.2nm,0.8s,baz=169,slow=8.7,SNR=1.6								
	0.2nm,0.8s								
ZALV	**Zalesovo Beam**	**62.15**	**346**	P		P		16 30 28.1	-8.4
	0.2nm,0.3s,baz=156,slow=11,SNR=1.8								
	0.2nm,0.3s								

IDC 17 16:21:54.4±2.2,24°.53N×94°.05E,h0km,mb3.6/4, mbtmp3.5/5,ML3.5/1,Error ellipse: s-maj=87.2km s-min=23.4km az=72.0,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CMAR	**Chiang Mai Arr**	**7.57**	**142**	Pn		Pn		16 23 47.0	+0.9
	0.2nm,0.3s,baz=320,slow=13,SNR=2.0								
	0.5nm,0.3s								
SONM	**Songino Array**	**25.23**	**20**	P		P		16 27 22.7	+0.6
	0.9nm,0.8s,baz=206,slow=9.6,SNR=3.1								
	0.9nm,0.8s								
ZALV	**Zalesovo Beam**	**30.18**	**349**	P		P		16 28 05.8	-0.4
	0.3nm,0.3s,baz=171,slow=10,SNR=1.8								
	0.3nm,0.3s								
WRA	**Warramunga Arr**	**59.10**	**135**	P		P		16 31 56.5	-0.4
	0.3nm,0.3s,baz=321,slow=7.5,SNR=11								
	0.3nm,0.3s								
ASAR	**Alice Springs**	**61.56**	**138**	P		P		16 32 13.8	+0.1
	0.3nm,0.3s,baz=315,slow=6.6,SNR=14								
	0.3nm,0.3s								

IDC ***17*** *16:23:16.8±36.0,4°.37S×102°.95E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=638.9km s-min=194.2km az=133.0*
DJA ***17*** *16:23:20.9±0.4,5°.S±3°×10°.3E±°,h26km±4km,M4.1/9, mb4.6/1,MLv3.9/9*
ISC 17 16:23:21.1±1.1,4°.61S±0°.09×102°.60E±0°.07,h35km,n14, σ0s74/13,mb3.5/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MNAI	**Manna**	**0.43**	**56**	P		**Pn**		**16 23 31.1**	**+0.2**
MNAI				S		**Sn**		**16 23 38.2**	**+0.6**
LWLI	**Liwa**	**1.51**	**106**	P		**Pn**		**16 23 46.6**	**+0.8**
LWLI				S		**Sn**		**16 24 05.0**	**+0.6**
KASI	**Kota Agung**	**2.10**	**116**	P		**Pn**		**16 23 54.5**	**+0.7**
KRJI	**Kerinci**	**2.75**	**336**	P		**Pn**		**16 24 03.2**	**+0.4**
PPSI	**Pulau Pagai**	**3.17**	**305**	P		**Pn**		**16 24 09.6**	**+1.1**
PDSI	**Padang**	**4.25**	**330**	P		**Pn**		**16 24 23.8**	**+0.4**
SISI	**Saibi**	**4.78**	**313**	P		**Pn**		**16 24 31.1**	**+0.4**
PBSI	**Pulau Batu**	**6.25**	**316**	P		**Pn**		**16 24 51.0**	**+0.1**
H01W3	**Cape Leeuwin H**	**31.97**	**162**	T		T		17 03 29.4	
	baz=339,slow=76,SNR=5.1								
H01W2	**Cape Leeuwin H**	**31.98**	**162**	T		T		17 03 28.8	
	baz=339,slow=76,SNR=6.3								
H01W1	**Cape Leeuwin H**	**31.98**	**162**	T		T		17 03 26.3	
	baz=339,slow=76,SNR=5.9								
WRA	**Warramunga Arr**	**34.46**	**119**	P		**P**		**16 30 04.6**	**-1.3**
	0.2nm,0.4s,baz=294,slow=9.2,SNR=6.0								
	0.2nm,0.4s								
ASAR	**Alice Springs**	**35.64**	**125**	P		**P**		**16 30 15.4**	**-0.6**
	0.2nm,0.3s,baz=299,slow=7.9,SNR=26								
	0.2nm,0.3s								
STKA	**Stephens Creek**	**45.49**	**131**	P		**P**		**16 31 37.1**	**-0.2**
	1.9nm,0.8s,baz=285,slow=12,SNR=3.5								
	1.9nm,0.8s								

SJA 17 16:25:47.3±0.7,31°.36S×68°.78W,h106km±2km,ML3.5, MW3.5,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SJA	**San Juan**	**0.24**	**132**	*e*P		Pn		16 26 03.5	+1.0
SJA					IAML			16 26 17.4	
	comp=Z,693nm,0.2s								
RTLL	**Cerro Villicun**	**0.26**	**82**	*e*P		Pn		16 26 03.1	+0.5
RTLL					IAML			16 26 16.2	
	comp=Z,962nm,0.3s								
DOCA	**Reserva Natura**	**0.49**	**327**	*e*P		Pn		16 26 04.7	+0.5
DOCA				*e*S		Sn		16 26 17.8	+1.0
RTCV	**Cerro Valdivia**	**0.54**	**158**	*e*P		Pn		16 26 04.9	+0.8
RTLS	**Leoncito**	**0.62**	**226**	*e*P		Pn		16 26 06.0	+0.9
RTLS				*e*S		Sn		16 26 19.8	+1.4
RTLS					IAML			16 26 20.1	
	comp=Z,2μm,0.8s								
ASAL	**Salagasta**	**1.22**	**182**	*e*P		Pn		16 26 12.1	+1.3
ASAL					IAML			16 26 31.4	
	comp=Z,781nm,0.6s								
AVFE	**Valle Fertil**	**1.33**	**59**	*e*P		Pn		16 26 13.1	+1.1
AVFE				*e*S		Sn		16 26 32.1	+1.4
AVFE					IAML			16 26 32.6	
	comp=Z,319nm,0.3s								
ARCO	**CERRO ARCO**	**1.48**	**185**	*e*P		Pn		16 26 15.2	+1.4
ARCO				*e*S		Sn		16 26 36.6	+2.7
ARCO					IAML			16 26 37.3	
	comp=Z,733nm,0.4s								
AAGR	**Agrelo**	**1.72**	**181**	*e*P		Pn		16 26 17.9	+1.3
AAGR				*e*P				16 26 18.1	
AAGR				*e*S		Sn		16 26 40.6	+1.6
AAGR					IAML			16 26 43.1	
	comp=Z,428nm,0.4s								
CO03	**El Pedregal**	**1.72**	**287**	*e*P		Pn		16 26 18.1	+1.3
CO03				*e*S		Sn		16 26 41.5	+2.3
CO03					IAML			16 26 41.9	
	comp=Z,526nm,0.4s								
CO01	**Juntas del Tor**	**1.79**	**320**	*e*P		Pn		16 26 19.6	+1.9
ACHE	**Chepes**	**1.82**	**84**	*e*P		Pn		16 26 19.1	+1.1
ACHE				*e*S		Sn		16 26 42.7	+1.3
AGUA	**GUANDACOL**	**1.89**	**8**	*e*P		Pn		16 26 20.2	+1.4
AGUA				*e*S		Sn		16 26 45.4	+2.5
AGUA					IAML			16 26 46.7	
	comp=Z,372nm,0.3s								
CO02	**Combarbal**	**1.91**	**274**	*e*P		Pn		16 26 20.1	+1.0
CO02				*e*S		Sn		16 26 44.7	+1.3
CO02					IAML			16 26 45.9	
	comp=Z,461nm,0.3s								
VA03	**San Esteban**	**2.05**	**227**	*e*P		Pn		16 26 22.6	+1.6
VA03					IAML			16 26 53.8	
	comp=Z,198nm,0.6s								
GO04	**Tololo Observa**	**2.11**	**304**	*e*P		Pn		16 26 22.9	+1.1
AVIZ	**Vizcacheras**	**2.11**	**174**	*e*P		Pn		16 26 23.0	+1.3
PEL	**Peldehue**	**2.40**	**222**	*e*P		Pn		16 26 26.1	+0.7
ROC1	**El Roble**	**2.49**	**229**	*e*P		Pn		16 26 26.8	+0.1
ROC1				*e*S		Sn		16 26 57.8	+0.9
ACLC	**CERRO LA CRUZ**	**2.49**	**40**	*e*P		Pn		16 26 27.6	+0.9
ACLC				*e*S		Sn		16 26 58.2	+1.3
ACLC					IAML			16 27 27.4	
	comp=Z,210nm,0.7s								
MT03	**Universidad Ad**	**2.58**	**214**	*e*P		Pn		16 26 29.4	+1.7
MT03				*e*S		Sn		16 27 02.4	+3.6
MT03					IAML			16 27 04.7	
	comp=Z,97nm,0.5s								
MT05	**Renca**	**2.62**	**219**	*e*P		Pn		16 26 29.3	+1.1
MT05					IAML			16 27 05.6	
	comp=Z,95nm,0.8s								
VCA	**Vinchina**	**2.67**	**11**	*e*P		Pn		16 26 30.3	+1.3
VCA				*e*S		Sn		16 27 03.1	+2.2
VCA					IAML			16 27 05.0	
	comp=Z,168nm,0.2s								
MT02	**Curacav**	**2.75**	**226**	*e*P		Pn		16 26 29.9	0.0
AC05	**El Transito**	**2.83**	**332**	*e*P		Pn		16 26 32.7	+1.6
LCO	**Las Campanas**	**2.88**	**324**	*e*P		Pn		16 26 32.8	+1.0
LCO					IAML			16 27 10.1	
	comp=Z,171nm,0.3s								
MT01	**Popeta**	**3.25**	**219**	*e*P		Pn		16 26 36.1	-0.4
RFA	**San Rafael**	**3.41**	**176**	*e*P		Pn		16 26 38.9	+0.2
TCA	**Tanti**	**3.58**	**91**	*e*P		Pn		16 26 41.7	+0.8
AC02	**Maricunga**	**4.52**	**356**	*e*P		Pn		16 26 55.6	+1.5

IDC ***17*** *16:33:40.1±1.2,6°.33S×132°.71E,h0km,mb3.6/5, mbtmp3.6/8,ML3.5/3,MS2.7/1,Error ellipse: s-maj=89.3km s-min=20.6km az=68.0*
DJA ***17*** *16:33:44.4±0.4,6°.S±3°×13°.3E±°,h47km±20km,M4.6/9, mB5.3/5,mb4.4/9,MLv4.5/8,Mw(mB)4.8/5*
ISC 17 16:33:44.1±0.8,6°.42S±0°.07×133°.0E±0°.1,h35km,n17, σ2s98/16,mb3.5/5,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SAUI	**Saumlaki**	**2.31**	**228**	P		Pn		16 34 24.4	+4.7
KMPI	**Kaimana, Papua**	**2.83**	**14**	P		**Pn**		**16 34 24.4**	**-2.4**
FAKI	**Fak Fak**	**3.57**	**347**	P		**Pn**		**16 34 35.3**	**-1.7**
BNDI	**Bandanaira**	**3.64**	**301**	P		Pn		16 34 40.1	+2.1
SWI	**Sorong**	**5.80**	**342**	P		**Pn**		**16 35 05.3**	**-2.4**
LBMI	**Labuha**	**7.96**	**316**	P		**Pn**		**16 35 37.7**	**+0.2**
	54nm,0.9s,0.2nm								
SANI	**Sanana**	**8.26**	**301**	P		**Pn**		**16 35 41.0**	**-0.5**
	20nm,0.7s,621nm								
WRA	**Warramunga Arr**	**13.50**	**175**	Pn		**Pn**		**16 36 54.0**	**+0.8**
	0.2nm,0.3s,baz=354,slow=13,SNR=19								
WRA				Sn		**Sn**		**16 39 17.6**	**-4.6**
	0.5nm,0.3s,baz=1.6,slow=23,SNR=4.8								
	0.2nm,0.3s								
PLAI	**Plampang**	**15.30**	**260**	P		**P**		**16 37 20.8**	**-1.3**
	27nm,1.2s								
ASAR	**Alice Springs**	**17.16**	**177**	P		**P**		**16 37 44.0**	**+1.3**
	0.3nm,0.3s,baz=354,slow=13,SNR=23								
ASAR				S		**Sn**		**16 40 44.0**	**-7.3**
	0.7nm,0.5s,baz=357,slow=28,SNR=4.3								
	0.8nm,0.7s								
CTA	**Charters Tower**	**18.69**	**138**	P		**Pn**		**16 38 03.4**	**+3.2**
	0.1nm,0.3s,baz=315,slow=7.1,SNR=1.6								
	2.0nm,1.0s								
STKA	**Stephens Creek**	**26.56**	**164**	P		**P**		**16 39 21.4**	**+2.5**
	0.6nm,0.4s,baz=339,slow=18,SNR=1.6								
	0.6nm,0.4s								
KSRS	**Korea Array**	**43.91**	**354**	LR		LR		16 56 39.5	
	comp=Z,10.0nm,21.6s,baz=95,slow=32								
MKAR	**Makanchi Array**	**69.43**	**325**	P		**P**		**16 44 48.9**	**+0.2**
	0.2nm,0.6s,baz=114,slow=7.3,SNR=3.9								
	0.2nm,0.6s								
ZALV	**Zalesovo Beam**	**72.43**	**332**	P		**P**		**16 45 07.4**	**+0.6**
	0.3nm,0.3s,baz=114,slow=4.9,SNR=1.8								
	0.3nm,0.3s								
KURBB	**Kurchatov Arra**	**73.62**	**327**	P		**P**		**16 45 12.9**	**-1.0**
	0.2nm,0.6s,baz=121,slow=4.8,SNR=2.1								
	0.2nm,0.6s								
QSPA	**South Pole Qui**	**83.55**	**180**	P		**P**		**16 46 10.5**	**+2.0**
	0.9nm,0.8s,baz=73,slow=7.1,SNR=2.8								
	0.9nm,0.8s								

IDC 17 16:41:54.0±4.9,26°.09S×28°.99E,h0km,mbtmp3.2/3, ML2.4/3,Error ellipse: s-maj=40.2km s-min=25.2km az=71.0,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
LBTB	**Lobatse**	**3.24**	**288**	Pn		Pn		16 42 46.9	+0.6
	0.5nm,0.3s,baz=90,slow=9.9,SNR=9.7								
LBTB				Pg		Pb		16 42 53.2	+0.6
	2.9nm,0.3s,baz=106,slow=18,SNR=61								
LBTB				Lg		Lg		16 43 37.3	
	8.1nm,0.3s,baz=194,slow=22,SNR=16								
	1.9nm,0.5s								
BOSA	**Boshof**	**4.17**	**232**	Pn		Pn		16 42 57.2	-1.8
	0.1nm,0.3s,baz=55,slow=12,SNR=1.8								
BOSA				Pg		Pg		16 43 11.3	-2.6
	0.7nm,0.3s,baz=50,slow=15,SNR=11								
BOSA				Lg		Lg		16 44 06.2	
	0.8nm,0.3s,baz=144,slow=19,SNR=6.8								
	2.0nm,1.0s								
I47ZA	**BOSHOF INFRASO**	**4.18**	**232**	I		I		17 07 00.0	
	0.1nm,0.6s,baz=51,slow=314,SNR=3.0								
SUR	**Sutherland**	**9.50**	**227**	Pn		Pn		16 44 12.3	-0.1
	0.1nm,0.3s,baz=50,slow=7.9,SNR=6.7								
SUR				Sn		Sn		16 45 57.0	-3.0
	0.1nm,0.3s,baz=186,slow=8.9,SNR=1.3								
SUR				Lg		Lg		16 46 48.8	
	0.3nm,0.3s,baz=143,slow=20,SNR=2.0								
	5.8nm,1.0s								
I35NA	**TSUMEB INFRASO**	**12.57**	**301**	I		I		18 00 00.0	
	baz=127,slow=322,SNR=0.5								

TAP 17 17:05:49.8,24°.17N×121°.65E,h10km,ML1.0,1C-2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ETL	**Fush Village**	**0.03**	**242**	⇑*i* P			Pg	17 05 52.0	+0.4
	baz=241								
ETL				S			Sg	17 05 53.7	+0.7
	baz=241								
NACB	**Ninganchiao**	**0.05**	**270**	⇓*e*P			Pg	17 05 52.4	+0.5
	baz=270								
NACB				S			Sg	17 05 54.1	+0.8
	baz=270								
TWD	**Chiawan**	**0.11**	**210**	⇓P			Pg	17 05 53.1	+0.6
	baz=205								
TWD				*e*S			Sg	17 05 55.5	+1.2
	baz=205								
EHP	**Heping Village**	**0.16**	**30**	*e*P			Pb	17 05 54.1	-0.7
	baz=33								
ETLH	**Xiulin Townshi**	**0.16**	**282**	P			Pb	17 05 54.1	-0.8
	baz=281								
ETLH				*i* S			Sg	17 05 57.3	+1.4
	baz=281								
EAHA	**Aohua**	**0.17**	**27**	P			Pb	17 05 54.3	-0.8
	baz=26								
ETM	**Tongmen**	**0.26**	**215**	*e*P			Pb	17 05 55.8	-0.7
	baz=215								
ETM				*e*S			Sb	17 06 00.1	-0.8
	baz=215								

TAP 17 17:05:54.8,24°.20N×121°.72E,h7km,ML1.2,7C-6D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ETL	**Fush Village**	**0.10**	**247**	⇑*i* P			Pg	17 05 57.1	0.0
	baz=247								
ETL				*i* S			Sg	17 05 58.8	+0.1
	baz=247								
EHP	**Heping Village**	**0.12**	**10**	*e*S			Sg	17 05 59.4	+0.2
	baz=13								
NACB	**Ninganchiao**	**0.12**	**259**	⇑*i* P			Pg	17 05 57.4	0.0
	baz=259								
NACB				S			Sg	17 05 59.1	-0.1
	baz=259								
EAHA	**Aohua**	**0.13**	**8**	*i* P			Pg	17 05 57.7	0.0
	baz=7.0								
EAHA				S			Sg	17 05 59.7	0.0
	baz=7.0								
EAHA	**Aohua**	**0.13**	**8**	*i* S			Pg	17 05 57.7	0.0
	baz=26								
TWD	**Chiawan**	**0.16**	**224**	⇓P			Pg	17 05 58.1	0.0
	baz=222								
TWD				S			Sg	17 06 00.5	+0.1
	baz=222								
ETLH	**Xiulin Townshi**	**0.22**	**273**	⇓*i* P			Pg	17 05 59.1	-0.1
	baz=272								
ETLH				*i* S			Sg	17 06 02.3	+0.1
	baz=272								
ENA	**Nanau**	**0.23**	**5**	⇓*i* P			Pg	17 05 59.4	-0.1
	baz=6.0								
ENA				S			Sg	17 06 02.5	-0.1
	baz=6.0								
EWUT	**Wuta**	**0.25**	**12**	*i* P			Pg	17 05 59.9	0.0
	baz=12								
EWUT				*e*S			Sg	17 06 03.1	-0.2
	baz=12								
ETM	**Tongmen**	**0.31**	**222**	⇑*i* P			Pg	17 06 00.8	-0.1
	baz=222								
ETM				S			Sg	17 06 05.0	0.0
	baz=222								
LXIB	**Xiulin Townshi**	**0.33**	**238**	*i* P			Pg	17 06 01.3	-0.1
	baz=238								
LXIB				*i* S			Sg	17 06 05.9	+0.2
	baz=238								
LATG	**Datong**	**0.38**	**332**	⇑P			Pg	17 06 02.4	+0.1
	baz=332								
LATG				S			Sg	17 06 07.5	+0.2
	baz=332								
NNSB	**Datong**	**0.39**	**307**	⇑P			Pg	17 06 02.5	+0.1
	baz=306								
NNSB				*e*S			Sg	17 06 07.5	0.0
	baz=306								
NNS	**Nan Shan**	**0.40**	**308**	P			Pg	17 06 02.7	+0.1
	baz=307								
NNS				*i* S			Sg	17 06 08.0	+0.1
	baz=307								
WHF	**Hehuan Shan**	**0.42**	**263**	*e*P			Pg	17 06 02.5	-0.6
	baz=262								
WHF				*i* S			Sg	17 06 08.8	+0.1
	baz=262								
SHUL	**Shoufeng**	**0.43**	**200**	*i* P			Pg	17 06 03.3	+0.1
	baz=199								
SHUL				*e*S			Sg	17 06 10.1	+1.3
	baz=199								
NDS	**Dongshan**	**0.44**	**360**	*e*P			Pg	17 06 02.9	-0.4
	baz=359								
NDS				*e*S			Sg	17 06 09.0	0.0
	baz=359								
FUSS	**Fushou**	**0.44**	**277**	⇑*e*P			Pg	17 06 03.7	+0.3

baz=249
TYC eS Sg 17 06 19.8 -2.1
baz=249
NHY Taipei 0.85 351 P Pg 17 06 10.6 -0.6
baz=350
YULB Yu-li 0.89 206 eP Pg 17 06 11.0 -0.9
baz=205
YULB S Sg 17 06 23.6 +0.2
baz=205
LDUT Ludao 1.53 189 eP Pn 17 06 21.6 -0.9
baz=188
LDUT eS Sn 17 06 41.0 -1.7
baz=188

HVO ***17*** *17:10:42.9±0.5, 18°.97N±0'.06×155°.92W±0'.05, h24km±7km, Error ellipse: s-maj=9.0km s-min=5.6km az=205.0*
NEIC 17 17:10:42.1±0.4**, 19°.05N**±0'.02×**155°.85W**±0'.03**, h36**km±3km**, ML2.4**/34**, Md2.1**/6(HVO)**, Error ellipse: s-maj=5.2km s-min=1.0km az=128.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.30**	**48**		Pn	17 10 50.5	0.0
KHU	**Kahuku**	**0.30**	**48**		Sn	17 10 55.9	-1.7
KHU				IAML		17 10 56.3	
	comp=N,266nm,1.5s						
KHU				IAML		17 11 00.5	
	comp=E,203nm,1.3s						
CPH	**Captain Cook**	**0.44**	**351**		Pn	17 10 51.7	-0.1
HTC	**Hot Caves**	**0.47**	**66**		Pn	17 10 52.6	+0.4
MWH	**Moku'aweowe**	**0.50**	**29**		Pn	17 10 53.0	-0.2
MWH	**Moku'aweowe**	**0.50**	**29**	IAML		17 11 12.1	
	comp=E,158nm,1.2s						
ALEP	**Alea Permanent**	**0.53**	**21**		Pn	17 10 53.6	+0.1
KHLU	**Kahalu`u**	**0.54**	**356**		Pn	17 10 53.1	-0.4
KHLU	**Kahalu`u**	**0.54**	**356**	Sn	Sn	17 11 00.1	-1.3
KHLU				IAML		17 11 00.3	
	comp=E,86nm,0.5s						
KHLU				IAML		17 11 00.8	
	comp=N,110nm,0.1s						
MLOA	**Mauna Loa Obse**	**0.55**	**28**	Pn	Pn	17 10 53.8	-0.2
HLP	**Hilina Pali**	**0.57**	**64**	Pn	Pn	17 10 54.0	+0.1
HLP					Sn	17 11 02.0	0.0
HLP				IAML		17 11 05.2	
	comp=E,242nm,1.2s						
HLP				IAML		17 11 10.3	
	comp=N,206nm,1.3s						
MLH	**Mauna Loa**	**0.62**	**44**		Pn	17 10 54.7	-0.1
MLH	**Mauna Loa**	**0.62**	**44**	Sn	Sn	17 11 03.2	-0.3
MLH				IAML		17 11 10.4	
	comp=N,156nm,1.4s						
MLH				IAML		17 11 14.0	
	comp=E,53nm,1.4s						
SDHHI	**Sand Hill**	**0.62**	**57**	Pn	Pn	17 10 54.5	-0.2
SDHHI				IAML		17 11 01.4	
	comp=N,434nm,0.9s						
WRMHI	**West Rim**	**0.63**	**55**		Pn	17 10 54.6	-0.1
WRMHI	**West Rim**	**0.63**	**55**	Sn	Sn	17 11 03.3	-0.2
WRMHI				IAML		17 11 04.6	
	comp=E,900nm,1.2s						
WRMHI				IAML		17 11 12.8	
	comp=N,870nm,1.4s						
HUH	**Hualalai**	**0.63**	**1**	Pn	Pn	17 10 54.8	-0.2
HUH				IAML		17 11 16.4	
	comp=N,120nm,1.5s						
UWE	**Uwekahuna**	**0.64**	**55**		Pn	17 10 54.9	-0.1
HMH	**Humu'ula Sheep**	**0.65**	**32**		Pn	17 10 55.1	-0.1
KKO	**Keanakako`i**	**0.65**	**58**	Pn	Pn	17 10 54.9	-0.1
UWB	**Uwekahuna B**	**0.66**	**55**		Pn	17 10 54.9	-0.2
UWB				IAML		17 10 58.4	
	comp=N,261nm,1.4s						
UWB				IAML		17 11 14.4	
	comp=E,111nm,1.5s						
SBLHI	**Steaming Bluff**	**0.67**	**55**	Pn	Pn	17 10 55.0	-0.3
SBLHI				IAML		17 11 00.1	
	comp=N,321nm,1.5s						
SBLHI				IAML		17 11 18.2	
	comp=E,194nm,0.9s						
HATHI	**Halema'uma'u T**	**0.67**	**56**		Pn	17 10 55.0	-0.2
HATHI				IAML		17 11 13.6	
	comp=N,328nm,1.2s						
PUH	**Pauahi**	**0.68**	**61**		Pn	17 10 55.1	-0.2
PUH					Sn	17 11 04.0	-0.8
PUH	**Pauahi**	**0.68**	**61**	IAML		17 11 06.7	
	comp=N,242nm,1.4s						
PUH				IAML		17 11 15.5	
	comp=E,131nm,1.4s						
KNHH	**Kane Nui o Ham**	**0.72**	**63**		Pn	17 10 55.7	-0.2
STCH	**Steam Cracks**	**0.76**	**64**		Sn	17 11 06.5	-0.2
STCH	**Steam Cracks**	**0.76**	**64**	Pn	Pn	17 10 56.4	0.0
STCH				IAML		17 11 03.0	
	comp=N,196nm,1.0s						
STCH				IAML		17 11 17.0	
	comp=E,152nm,1.0s						

IDC ***17*** *17:13:32.8±7.3, 17°.19S×178°.83W, h563km±83km, mb3.2/7, mbtmp4.0/7, Error ellipse: s-maj=56.8km s-min=25.4km az=145.0*
ISC 17 17:13:29.9±1.4**, 17°.2S**±0'.4×**178°.8W**±0'.3**, h533**km**, n19, σ0s66/20, mb3.6/7, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**17 20 53.6**	**+0.2**
	0.6nm,0.5s,baz=96,slow=6.9,SNR=14						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**17 20 56.0**	**+0.7**
	3.4nm,0.5s,baz=89,slow=7.9,SNR=113						
ASAR				PcP	**PcP**	**17 22 26.0**	**-0.6**
	0.2nm,0.6s,baz=96,slow=4.7,SNR=1.9						
	3.4nm,0.5s						
PETK	**Petropavlovsk-**	**72.90**	**345**	P	**P**	**17 24 05.5**	**+1.0**
	2.7nm,0.8s,baz=125,slow=7.6,SNR=5.7						
	2.7nm,0.8s						
NVAR	**Mina Aray Bea**	**79.17**	**44**	P	**P**	**17 24 40.4**	**+0.6**
	0.9nm,0.7s,baz=226,slow=8.9,SNR=8.2						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**85.28**	**13**	P	**P**	**17 25 09.3**	**-0.6**
	0.6nm,0.3s,baz=223,slow=5.2,SNR=26						
	0.6nm,0.3s						
TXAR	**Lajitas Array**	**85.93**	**58**	P	**P**	**17 25 14.8**	**+0.8**
	0.5nm,0.7s,baz=217,slow=6.0,SNR=7.3						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**93.84**	**25**	P	**P**	**17 25 48.9**	**-0.8**
	0.4nm,0.8s,baz=247,slow=4.5,SNR=5.9						
	0.4nm,0.8s						
BRTR	**Keskin Array B**	**144.02**	**315**	PKP	**PKPab**	**17 32 04.4**	**-0.3**
	0.5nm,0.4s,baz=73,slow=3.0,SNR=5.3						
GERES	**GERESS Array B**	**146.83**	**345**	PKPbc	**PKPbc**	**17 32 12.2**	**-0.1**
	0.5nm,0.7s,baz=355,slow=3.9,SNR=4.1						
CONA	**Conrad Observa**	**147.07**	**342**	*i* PKP	**PKiKP**	**17 32 14.2**	**-0.7**
	2.1nm,0.6s						
RONA	**Rosalia, Austr**	**147.14**	**341**	*i* PKP	**PKiKP**	**17 32 14.2**	**-0.8**
	3.2nm,0.9s						
BIOA	**Bad Ischl, Aus**	**147.91**	**344**	*i* PKP	**PKPbc**	**17 32 15.4**	**+0.2**
	2.5nm,0.8s						
LESA	**Schwarzleotal**	**148.40**	**345**	*i* PKP	**PKiKP**	**17 32 17.0**	**-0.6**
	0.9nm,0.4s						
WATA	**Walderalm**	**148.75**	**346**	*i* PKP	**PKiKP**	**17 32 17.7**	**-0.8**
	1.4nm,0.5s						
RETA	**Reutte**	**148.78**	**347**	*i* PKP	**PKiKP**	**17 32 18.2**	**-0.3**
	1.2nm,0.7s						
WTTA	**Wattenberg**	**148.80**	**346**	*i* PKP	**PKiKP**	**17 32 18.1**	**-0.5**
	3.2nm,0.5s						
MOTA	**Moosalm**	**148.84**	**347**	*i* PKP	**PKiKP**	**17 32 17.9**	**-0.8**
	3.8nm,1.0s						
SQTA	**Sankt Quirin**	**148.94**	**347**	*i* PKP	**PKiKP**	**17 32 18.3**	**-0.5**
	2.6nm,0.6s						
ABTA	**Abfaltersbach**	**149.08**	**345**	*i* PKP	**PKPbc**	**17 32 18.0**	**-0.1**
	2.6nm,0.6s						

IDC ***17*** *17:22:16.9±2.5, 43°.17N×105°.18W, h0km, mb2.7/1, mbtmp3.1/3, ML3.2/2, MS3.0/8, Error ellipse: s-maj=50.4km s-min=8.9km az=154.0*
NEIC ***17*** *17:22:18.1±1.9, 43°.64N±0'.04×105°.32W±0'.05, h0km±1km, ML3.2/70, Error ellipse: s-maj=9.8km s-min=2.7km az=41.0*
ISC 17 17:22:19.0±0.9**, 43°.55N**±0'.04×**105°.25W**±0'.05**, h0**km**, n61, σ1s20/54, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.05**	**57**	Pg	**Pb**	**17 22 40.4**	**+0.2**
K22A	**Casper**	**1.29**	**226**		**Pg**	**17 22 43.4**	**-0.4**
K22A				IAML		17 23 09.6	
	comp=E,302nm,0.4s						
PHWY	**Pilot Hill**	**2.25**	**184**		**Pb**	**17 23 00.2**	**-0.4**
RWWY	**Rawlins**	**2.35**	**219**		**Pn**	**17 23 00.8**	**+1.7**
RWWY				IAML		17 23 35.2	
	comp=E,171nm,0.9s						
RWWY				IAML		17 23 40.9	
	comp=E,140nm,1.0s						
N23A	**Red Feather La**	**2.70**	**191**		**Pb**	**17 23 07.0**	**-1.3**
N23A				IAML		17 23 50.8	
	comp=E,96nm,1.0s						
BRIGG	**Briggsdale**	**3.05**	**167**		**Pb**	**17 23 12.1**	**-2.0**
LAO	**LASA Array**	**3.21**	**348**		**Pn**	**17 23 11.3**	**+0.6**
PDAR	**Pinedale Array**	**3.25**	**258**	Pn	**Pn**	**17 23 11.7**	**+0.3**
	comp=E,1.8nm,0.3s,baz=90,slow=14,SNR=24						
PDAR				Pg	**Pb**	**17 23 19.7**	**+2.1**
	comp=E,5.9nm,0.3s,baz=89,slow=13,SNR=25						
PDAR				Lg	Lg	17 23 56.3	
	comp=E,3.1nm,0.3s,baz=97,slow=33,SNR=4.1						
	comp=E,1.2nm,0.4s						
RLMT	**Red Lodge**	**3.28**	**300**		**Pn**	**17 23 12.0**	**+0.2**
RLMT				IAML		17 24 04.4	
	comp=E,50nm,0.4s						
RLMT				IAML		17 24 15.8	
	comp=E,43nm,0.6s						
OGNE	**Ogallala**	**3.53**	**136**		**Pn**	**17 23 17.6**	**+2.4**
ISCO	**Idaho Springs**	**3.76**	**184**		**Pn**	**17 23 20.4**	**+1.9**
LKWY	**Lake**	**3.85**	**287**		**Pn**	**17 23 19.4**	**-0.2**
LKWY				IAML		17 23 44.5	
	comp=E,28nm,0.8s						
LOHW	**Long Hollow**	**3.89**	**273**		**Pn**	**17 23 20.5**	**+0.3**
LOHW				IAML		17 24 42.8	
	comp=E,23nm,1.1s						
H17A	**Grant Village**	**3.94**	**284**		**Pn**	**17 23 20.7**	**-0.1**
FLWY	**Flagg Ranch**	**3.98**	**280**		**Pn**	**17 23 21.9**	**+0.5**
FLWY				IAML		17 23 52.9	
	comp=E,47nm,1.5s						
FLWY				IAML		17 24 44.8	
	comp=E,43nm,1.3s						
MOOW	**Moose Ponds**	**3.99**	**275**		**Pn**	**17 23 22.3**	**+0.7**
SNOW	**Snow King Moun**	**4.00**	**271**		**Pn**	**17 23 22.4**	**+0.6**
SNOW				IAML		17 24 41.8	
	comp=E,46nm,1.2s						
SNOW				IAML		17 25 05.1	
	comp=E,43nm,1.5s						
O20A	**White River Ci**	**4.08**	**214**	Pn	**Pn**	**17 23 23.9**	**+1.2**
O20A				IAML		17 24 59.5	
	comp=N,39nm,1.4s						
REDW	**Red Top Meadow**	**4.08**	**269**		**Pn**	**17 23 23.5**	**+0.7**
YFT	**Old Faithful**	**4.13**	**285**		**Pb**	**17 23 32.6**	**0.0**
YFT				IAML		17 23 55.9	
	comp=E,36nm,1.1s						
YFT				IAML		17 23 56.3	
	comp=N,24nm,1.3s						
IMW	**Indian Meadow**	**4.14**	**277**		**Pn**	**17 23 23.5**	**-0.2**
IMW				IAML		17 23 51.4	
	comp=N,24nm,0.6s						
TPAW	**Teton Pass**	**4.15**	**271**		**Pn**	**17 23 23.7**	**-0.1**
TPAW				IAML		17 24 43.8	
	comp=N,24nm,0.8s						
YHH	**Holmes Hill**	**4.21**	**289**		**Pn**	**17 23 24.9**	**+0.2**
K30B	**Basset**	**4.22**	**100**		**Pn**	**17 23 25.8**	**+1.2**
AHID	**Auburn Hatcher**	**4.35**	**262**		**Pn**	**17 23 25.8**	**-0.7**
AHID				IAML		17 24 41.8	
	comp=N,28nm,1.0s						
AHID				IAML		17 24 51.8	
	comp=N,35nm,0.8s						
RDMU	**Red Mountain**	**4.38**	**229**		**Pn**	**17 23 27.6**	**+0.6**
RDMU				IAML		17 26 11.5	
	comp=N,25nm,4.3s						
E28A	**Huff**	**4.42**	**45**		**Pn**	**17 23 27.9**	**+0.5**
Q24A	**Divide**	**4.58**	**179**		**Pn**	**17 23 30.4**	**+0.6**
KSCO	**Kaye Shedlock'**	**4.95**	**156**		**Pn**	**17 23 36.8**	**+2.1**
BOZ	**Bozeman (W)**	**5.00**	**296**		**Pn**	**17 23 32.8**	**-2.5**
BOZ				IAML		17 25 00.6	
	comp=N,13nm,1.2s						
BOZ				IAML		17 25 07.2	
	comp=N,11nm,0.8s						
HWUT	**Hardware Ranch**	**5.05**	**250**	Pn	**Pn**	**17 23 38.1**	**+2.0**
BSUT	**Blindstream Ca**	**5.09**	**236**		**Pn**	**17 23 39.0**	**+2.2**
BSUT				IAML		17 25 10.5	
	comp=N,13nm,1.1s						
BSUT				IAML		17 25 18.2	
	comp=E,20nm,1.4s						
EGMT	**Eagleton**	**5.47**	**326**		**Pn**	**17 23 41.7**	**-0.1**
CTU	**Camp Tracy**	**5.61**	**242**		**Pn**	**17 23 43.9**	**+0.1**
SPUT	**South Promonto**	**5.78**	**250**		**Pn**	**17 23 45.5**	**-0.6**
HVU	**Hansel Valley**	**5.82**	**255**		**Pn**	**17 23 46.3**	**-0.4**
S22A	**4UR Ranch, Cre**	**5.92**	**192**		**Pn**	**17 23 49.7**	**+1.5**
MPU	**Maple Canyon**	**5.93**	**236**		**Pn**	**17 23 48.6**	**+0.3**
SRU	**San Rafael Swe**	**5.95**	**224**		**Pn**	**17 23 49.8**	**+1.3**
LYMT	**Lyon Mountain**	**6.03**	**307**	Pn	**Pn**	**17 23 50.0**	**+0.4**
TMUT	**Trail Mountain**	**6.17**	**229**		**Pn**	**17 23 52.8**	**+1.2**
NLU	**North Lily Min**	**6.24**	**237**		**Pn**	**17 23 54.0**	**+1.5**
ECSD	**EROS Data Cent**	**6.27**	**85**		**Pn**	**17 23 54.0**	**+1.3**
BGU	**Big Grassy Mou**	**6.34**	**248**		**Pn**	**17 23 54.5**	**+0.7**
Q16A	**Castle Valley**	**6.43**	**226**		**Pn**	**17 23 56.4**	**+1.3**
T25A	**Trinidad**	**6.44**	**174**		**Pn**	**17 23 56.0**	**+0.9**
DUG	**Dugway, Tooele**	**6.56**	**242**		**Pn**	**17 23 56.1**	**-0.7**
HLID	**Hailey**	**6.66**	**273**		**Pn**	**17 23 55.7**	**-2.5**
MVCO	**Mesa Verde**	**6.80**	**202**		**Pn**	**17 24 00.8**	**+0.7**
HMU	**Henry Mountain**	**6.98**	**218**	Pn	**Pn**	**17 24 02.2**	**-0.6**
MTPU	**Mount Pierson**	**7.61**	**226**		**Pn**	**17 24 10.5**	**-0.9**
ELK	**Elko**	**7.93**	**253**	Lg	Lg	17 26 18.9	
	comp=E,0.1nm,0.3s,baz=184,slow=23,SNR=1.6						
ELK				LR	LR	17 27 36.6	
	comp=E,168nm,20.2s,baz=68,slow=41						
ANMO	**Albuquerque**	**8.64**	**187**	LR	LR	17 27 49.3	
	comp=E,41nm,19.2s,baz=125,slow=40						
I10CA	**LAC DU BONNET**	**9.17**	**40**	I	I	18 15 50.0	
	comp=E,0.1nm,1.2s,baz=215,slow=326,SNR=7.1						
ULM	**Lac du Bonnet**	**9.27**	**40**	Pn	**Pn**	**17 24 32.9**	**-1.0**
	comp=E,0.7nm,0.3s,baz=234,slow=14,SNR=8.7						
ULM				Lg	Lg	17 27 07.3	
	comp=E,0.1nm,0.3s,baz=162,slow=20,SNR=1.5						
ULM				LR	LR	17 28 13.6	
	comp=E,121nm,19.4s,baz=229,slow=37						
	comp=E,1.4nm,0.3s						
YBH	**Yreka Blue Hor**	**12.99**	**268**	LR	LR	17 30 52.5	
	comp=E,100nm,19.1s,baz=73,slow=40						
PFO	**Pinyon Flats O**	**13.23**	**225**	LR	LR	17 30 50.2	
	comp=E,104nm,19.1s,baz=36,slow=40						
TXAR	**Lajitas Array**	**14.24**	**174**	LR	LR	17 30 51.5	
	comp=E,23nm,20.9s,baz=237,slow=37						
SADO	**Sadowa**	**18.75**	**77**	LR	LR	17 33 28.8	
	comp=E,74nm,20.2s,baz=138,slow=36						
YKA	**Yellowknife Ar**	**19.75**	**347**	P	**Pn**	**17 26 53.1**	**+1.6**
	comp=E,0.2nm,0.4s,baz=151,slow=11,SNR=4.9						
	comp=E,0.2nm,0.4s						
LPIG	**La Paz**	**19.84**	**194**	LR	LR	17 34 57.1	
	comp=E,44nm,19.5s,baz=355,slow=39						

NEIC ***17*** *17:25:36.3±0.6, 36°.696N±0'.007×97°.674W±0'.009, h2km±2km, Error ellipse: s-maj=1.2km s-min=0.8km az=134.0*
TUL 17 17:25:36.8±0.8**, 36°.701N**±0'.009×**97°.68W**±0'.01**, h8**km±4km**, ML2.6, mb_Lg2.6**/10(NEIC)**, ML2.4**/52(NEIC)**, Error ellipse: s-maj=1.4km s-min=1.2km az=57.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.21**	**315**		Pg	17 25 41.4	+0.3
GC02				Sg	Sg	17 25 44.5	+0.6
CROK	**Carrier**	**0.32**	**232**		Pg	17 25 43.1	+0.1
CROK				Sg	Sg	17 25 47.7	+0.5
KAN14	**Manchester OK**	**0.34**	**318**		Pg	17 25 43.8	+0.3
KAN14				Sg	Sg	17 25 48.7	+0.6
KAN13	**South Haven SW**	**0.35**	**27**	Pg	Pg	17 25 44.0	+0.3
KAN13				Sg	Sg	17 25 48.3	0.0
KAN13				IAML		17 25 49.4	
	comp=N,292nm,0.3s						
KAN17	**Caldwell West**	**0.35**	**348**	Pg	Pg	17 25 44.0	+0.3
KAN17				Sg	Sg	17 25 48.5	+0.2
KAN17				IAML		17 25 51.0	
	comp=E,540nm,0.3s						
KAN17				IAML		17 25 54.5	
	comp=N,288nm,0.3s						
BLOK	**Blackwell**	**0.37**	**81**	Pg	Pg	17 25 44.3	+0.2
BLOK				Sg	Sg	17 25 49.3	+0.3
BLOK				IAML		17 25 50.6	
	comp=E,421nm,0.2s						
BLOK				IAML		17 25 54.4	
	comp=N,414nm,0.2s						
KAN05	**Bluff City Nor**	**0.44**	**339**	Pg	Pg	17 25 45.2	-0.1
KAN05				Sg	Sg	17 25 51.8	+0.7
KAN05				IAML		17 25 54.8	
	comp=E,313nm,0.2s						
KAN05				IAML		17 25 56.0	
	comp=N,226nm,2.3s						
KAN09	**Caldwell North**	**0.44**	**6**	Pg	Pg	17 25 45.6	+0.3
KAN09				Sg	Sg	17 25 51.7	+0.7
KAN09				IAML		17 25 58.5	
	comp=N,343nm,0.2s						
OK032	**Salt Plains WL**	**0.44**	**284**		Pg	17 25 45.5	+0.1
OK032				Sg	Sg	17 25 51.6	+0.4
OK032				IAML		17 25 52.0	
	comp=N,236nm,0.2s						
OK032				IAML		17 25 52.2	
	comp=N,370nm,0.2s						
KAN01	**Argonia South**	**0.46**	**352**	Pg	Pg	17 25 45.8	+0.1
KAN01					Sg	17 25 52.4	+0.8
KAN10	**Anthony SW Sta**	**0.54**	**322**	Pg	Pg	17 25 46.4	-0.9
KAN10				Sg	Sg	17 25 55.0	+0.7
KAN06	**Argonia West S**	**0.56**	**345**	Pg	Pg	17 25 48.3	+0.6
KAN06				Sg	Sg	17 25 55.9	+0.8
KAN06				IAML		17 25 58.4	
	comp=E,213nm,0.1s						
KAN06				IAML		17 26 00.8	
	comp=N,157nm,0.1s						
KAN08	**Anthony NE Sta**	**0.58**	**336**	Pg	Pg	17 25 46.0	-2.0
KAN08				Sg	Sg	17 25 56.4	+0.9
KAN08				IAML		17 26 01.8	
	comp=N,247nm,4.5s						
KS21	**Milan North St**	**0.58**	**1**	IAML		17 25 56.7	
	comp=N,202nm,0.3s						
KS21				IAML		17 25 58.0	
	comp=N,229nm,0.1s						
KS21	**Milan North St**	**0.58**	**1**	Pg	Pg	17 25 48.2	+0.1
KS21				Sg	Sg	17 25 56.3	+0.5
KAN12	**Harper NE Stat**	**0.65**	**337**	Pg	Pg	17 25 49.5	+0.2
KAN12				Sg	Sg	17 25 58.5	+0.7
OK048	**Pawnee Station**	**0.65**	**116**		Pg	17 25 48.8	-0.6
OK048				Sg	Sg	17 25 58.3	+0.4
OK051	**E0350 and S346**	**0.70**	**106**	Pg	Pg	17 25 50.2	-0.1
OK051				Sg	Sg	17 25 59.9	+0.4
OK051				IAML		17 26 06.7	
	comp=N,194nm,0.1s						
OK051				IAML		17 26 09.4	
	comp=N,141nm,0.2s						
OK035	**E0210 Rd and N**	**0.83**	**271**	Pg	Pb	17 25 53.3	-0.2
OK035				Sg	Sg	17 26 03.6	0.0
OK035				IAML		17 26 10.9	
	comp=N,128nm,0.2s						
OK033	**Mehan**	**0.89**	**138**	Pg	Pg	17 25 53.1	-0.7
OK033				IAML		17 26 07.2	
	comp=N,94nm,0.1s						
QUOK	**Quay**	**0.94**	**124**	Pg	Pg	17 25 54.5	-0.4
T35A	**Sooner Cattle**	**0.96**	**77**	Pg	Pg	17 25 54.9	-0.3
T35A				IAML		17 26 08.1	
	comp=N,70nm,0.3s						
T35A				IAML		17 26 09.6	
	comp=E,85nm,0.1s						
OK052	**Battle Ridge R**	**1.00**	**135**		Pg	17 25 55.2	-0.7
OK052				IAML		17 26 14.9	
	comp=E,104nm,0.2s						
OK052				IAML		17 26 15.5	
	comp=E,83nm,0.1s						
DEOK	**Depew**	**1.28**	**132**	Pg	Pn	17 26 00.3	-0.8
DEOK				IAML		17 26 21.2	
	comp=E,70nm,0.3s						
DEOK				IAML		17 26 21.3	
	comp=N,65nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**1.31**	**171**		Pn	17 26 00.4	-1.0
CSTR	**Hydro, Custer**	**1.33**	**218**	Pg	Pn	17 26 00.7	-1.1
FNO	**Franklin**	**1.46**	**171**		Pn	17 26 02.8	-0.7
ELIS	**Ellis County**	**1.54**	**246**		Pn	17 26 04.1	-0.6
TUL3	**Leonard**	**1.71**	**117**	Pn	Pn	17 26 06.3	-0.7
R32A	**Long Quarter,**	**1.91**	**335**	Pn	Pn	17 26 08.9	-0.8
R32A				IAmb_Lg		17 26 36.0	
	comp=Z,18nm,1.0s						
X34A	**Smith Ranch, M**	**2.10**	**184**	Pn	Pn	17 26 11.1	-1.2
WMOK	**Wichita Mounta**	**2.16**	**205**	Pn	Pn	17 26 12.4	-0.7
RLO	**Rose Lookout**	**2.21**	**103**	Pn	Pn	17 26 12.6	-1.2
SMWD	**Samnorwood**	**2.62**	**233**	Pn	Pn	17 26 17.5	-2.1
U38A	**Gravette**	**2.66**	**95**	Pn	Pn	17 26 18.6	-1.5
X37A	**Clayton**	**2.82**	**138**	Pn	Pn	17 26 20.6	-1.7
WTFS	**Witchita Falls**	**3.00**	**193**	Pn	Pn	17 26 23.4	-1.2
HHAR	**Hobbs**	**3.04**	**97**	IAmb_Lg		17 27 19.3	
	comp=Z,11nm,1.1s						
S39A	**Bolivar**	**3.61**	**73**	Pn	Pn	17 26 32.8	-0.3
AMTX	**Amarillo**	**3.73**	**242**	IAmb_Lg		17 27 35.1	
	comp=Z,19nm,1.1s						
APMT	**Aspermont**	**3.92**	**212**	Pn	Pn	17 26 39.2	+1.9
P38A	**Dawn**	**4.38**	**47**	Pn	Pn	17 26 44.4	+0.8
FCAR	**Ozark Folk Cen**	**4.56**	**99**	Pn	Pn	17 26 45.6	-0.4
R40A	**Maddies Statio**	**4.58**	**68**	Pn	Pn	17 26 46.4	-0.1
P40A	**Paris**	**5.26**	**56**	IAmb_Lg		17 28 37.6	
	comp=Z,14nm,1.1s						

MOS ***17*** *17:26:26.8±0.9, 39°.02N×72°.32E, h12km, mb4.1/3, Error ellipse: s-maj=9.8km s-min=4.9km az=81.3*
IDC ***17*** *17:26:27.1±1.4, 39°.28N×72°.61E, h0km, mb3.8/6, mbtmp3.6/15, ML2.8/7, MS3.3/6, Error ellipse: s-maj=25.0km s-min=13.0km az=137.0*
KRNET ***17*** *17:26:30.8±0.1, 39°.44N×72°.38E, h15km, mb4.0*
NNC ***17*** *17:26:41.2±2.1, 39°.90N×72°.36E, h5km±8km, mb4.3, mpv4.0, Error ellipse: s-maj=15.4km s-min=7.7km az=7.0*
SOME ***17*** *17:26:42.7, 40°.07N×72°.23E, h5km*
ISC 17 17:26:29.0±1.2**, 39°.24N**±0'.04×**72°.40E**±0'.02**, h9**km±7km**, n124, σ2s47/178, mb3.8**/10**, MS3.4**/6**, 31C-23D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.52**	**297**	⇑*i*P	**Pg**	**17 26 39.7**	**+0.5**
	baz=75						
DRK				⇑*i*S	**Sg**	**17 26 45.9**	**-0.2**
	baz=75						
SFK	**Sufi-Kurgan**	**1.15**	**48**	*i* PG	**Pg**	**17 26 50.3**	**-0.8**
SFK	**Sufi-Kurgan**	**1.15**	**48**	⇑*i*P	**Pg**	**17 26 50.3**	**-0.8**
	baz=56						
SFK				⇑*i*S	**Sg**	**17 27 04.8**	**-1.2**
	baz=56						
OHH	**Osh**	**1

MNAS				⇑*i*	S		**Sn**	**17 27 59.2**	**+0.2**
	baz=2.0								
UCH	**Uchtor**	**3.39**	**28**		P		**Pn**	**17 27 26.4**	**+3.9**
	SNR=13								
UCH	**Uchtor**	**3.39**	**28**	*i*	PN		**Pn**	**17 27 24.3**	**+1.8**
UCH	**Uchtor**	**3.39**	**28**	⇑*i*	P		**Pn**	**17 27 24.3**	**+1.8**
	baz=30								
UCH				⇑*i*	S		**Sn**	**17 28 03.5**	**+0.5**
	baz=30								
IUG	**Iuzhnay**	**3.41**	**329**		Pg		**Pb**	**17 27 31.9**	**+2.2**
	comp=E,878nm,0.6s								
IUG					Lg		Lg	17 28 05.3	
	comp=E,541nm,0.5s								
IUG	**Iuzhnay**	**3.41**	**329**	*eP*			**Pb**	**17 27 31.9**	**+2.2**
	comp=E,878nm,0.6s								
IUG					*e*S		**Sn**	**17 28 07.1**	**+3.9**
	comp=E,541nm,0.5s								
NRN	**Naryn**	**3.52**	**50**	*i*	PN		**Pn**	**17 27 26.7**	**+2.6**
NRN				*i*	S		**Sn**	**17 28 07.3**	**+1.3**
NRN	**Naryn**	**3.52**	**50**	⇓*i*	P		**Pn**	**17 27 26.2**	**+2.1**
	baz=53								
NRN				⇓*i*	S		**Sn**	**17 28 06.8**	**+0.8**
	baz=53								
MRKS	**Merke**	**3.55**	**10**		Pg		**Pb**	**17 27 34.3**	**+2.1**
	comp=E,155nm,0.4s								
MRKS					Lg		Lg	17 28 10.5	
	comp=E,141nm,0.7s								
MRKS	**Merke**	**3.55**	**10**	*eP*			**Pb**	**17 27 34.3**	**+2.1**
	comp=E,155nm,0.4s								
MRKS					*e*S		**Sn**	**17 28 10.6**	**+3.9**
	comp=E,134nm,0.4s								
EKS2	**Erkin-Say**	**3.57**	**17**		P		**Pn**	**17 27 28.3**	**+3.6**
	SNR=35								
EKS2	**Erkin-Say**	**3.57**	**17**	*i*	PN		**Pn**	**17 27 26.5**	**+1.8**
EKS2	**Erkin-Say**	**3.57**	**17**	⇑*i*	P		**Pn**	**17 27 26.5**	**+1.8**
	baz=18								
EKS2				⇑*i*	S		**Sn**	**17 28 07.3**	**+0.2**
	baz=18								
DZA	**Taraz**	**3.73**	**348**		Pg		**Pb**	**17 27 36.9**	**+1.8**
	comp=E,168nm,0.5s								
DZA					Lg		Lg	17 28 14.3	
	comp=E,201nm,0.8s								
DZA	**Taraz**	**3.73**	**348**	*eP*			**Pb**	**17 27 36.0**	**+0.9**
	comp=E,168nm,0.5s								
DZA					*e*S		**Sn**	**17 28 14.3**	**+3.3**
	comp=E,201nm,0.8s								
CHM	**Chimkent**	**3.73**	**326**	*eP*			**Pg**	**17 27 39.4**	**-1.1**
	comp=E,162nm,0.4s								
CHM					*e*S		**Sb**	**17 28 19.7**	**-0.9**
	comp=E,1μm,0.4s								
AAK	**Ala-Archa**	**3.74**	**24**		P		**Pn**	**17 27 31.1**	**+4.0**
	SNR=9.3								
AAK	**Ala-Archa**	**3.74**	**24**	*i*	PN		**Pn**	**17 27 30.8**	**+3.7**
AAK	**Ala-Archa**	**3.74**	**24**		Pn		**Pn**	**17 27 26.9**	**-0.2**
	comp=E,0.3nm,0.3s,baz=262,slow=6.6,SNR=15								
AAK					Lg		Lg	17 28 22.1	
	comp=E,9.2nm,0.3s,baz=192,slow=17,SNR=4.0								
AAK					LR		LR	17 28 42.6	
	comp=E,26nm,21.4s,baz=218,slow=37								
	comp=E,7.3nm,0.4s								
AAK	**Ala-Archa**	**3.74**	**24**	⇑*i*	P		**Pn**	**17 27 29.2**	**+2.1**
	baz=26								
AAK				⇑*i*	S		**Sn**	**17 28 11.7**	**+0.3**
	baz=26								
KBK	**Karagaybulak**	**3.92**	**29**		P		**Pn**	**17 27 33.8**	**+4.2**
	SNR=8.9								
KBK	**Karagaybulak**	**3.92**	**29**	*i*	PN		**Pn**	**17 27 31.6**	**+2.1**
KBK	**Karagaybulak**	**3.92**	**29**	⇑*i*	P		**Pn**	**17 27 31.6**	**+2.1**
	baz=30								
KBK				⇑*i*	S		**Sn**	**17 28 16.0**	**+0.2**
	baz=30								
FRU1	**Bishkek**	**3.94**	**25**	*i*	PN		**Pn**	**17 27 31.9**	**+2.1**
FRU1	**Bishkek**	**3.94**	**25**	⇑*i*	P		**Pn**	**17 27 31.9**	**+2.1**
	baz=26								
FRU1				⇑*i*	S		**Sn**	**17 28 16.8**	**+0.6**
	baz=26								
KK31	**Karatay Array**	**4.11**	**340**		Pn		**Pn**	**17 27 34.3**	**+2.2**
	comp=E,4.1nm,0.3s,baz=150,slow=12,SNR=249								
KK31				⇓Pg			**Pb**	**17 27 42.5**	**+0.9**
	comp=E,20nm,0.5s,baz=162,slow=17,SNR=9.2								
KK31				⇑Sn			**Sn**	**17 28 20.8**	**+0.5**
	comp=E,58nm,0.7s,baz=154,slow=24,SNR=4.9								
KK31				⇓Lg			Lg	17 28 34.9	
	comp=E,83nm,0.7s								
KK31	**Karatay Array**	**4.11**	**340**		PN		**Pn**	**17 27 34.3**	**+2.2**
KK31					PG		**Pb**	**17 27 42.5**	**+0.9**
KK31					LG		Lg	17 28 34.9	
KKAR	**Karatay Array**	**4.11**	**340**	*i*	PN		**Pn**	**17 27 33.9**	**+1.8**
KKAR	**Karatay Array**	**4.11**	**340**	⇑*i*	P		**Pn**	**17 27 33.9**	**+1.8**
	baz=40								
KKAR				⇑*i*	S		**Sn**	**17 28 19.9**	**-0.4**
	baz=40								
CHMS	**Chumysh**	**4.15**	**25**		Pg		**Pb**	**17 27 43.0**	**+0.7**
	comp=E,162nm,0.4s								
CHMS					Lg		Lg	17 28 26.2	
	comp=E,1μm,0.4s								
ULHL	**Ulahol**	**4.18**	**43**		P		**Pn**	**17 27 37.7**	**+4.4**
	SNR=11								
ULHL	**Ulahol**	**4.18**	**43**	*i*	PN		**Pn**	**17 27 35.7**	**+2.5**
ULHL	**Ulahol**	**4.18**	**43**	⇑*i*	P		**Pn**	**17 27 35.7**	**+2.5**
	baz=45								
ULHL				⇑*i*	S		**Sn**	**17 28 23.2**	**+0.8**
	baz=45								
BRLS	**Boroldaу**	**4.25**	**334**		Pg		**Pb**	**17 27 46.6**	**+2.7**
	comp=E,21nm,0.3s								
BRLS					Lg		Lg	17 28 31.4	
	comp=E,95nm,0.5s								
BRLS	**Boroldaу**	**4.25**	**334**	*eP*			**Pb**	**17 27 46.6**	**+2.7**
	comp=E,21nm,0.3s								
BRLS					*e*S		**Sb**	**17 28 32.5**	**-2.9**
	comp=E,95nm,0.5s								
USP	**Ospenovka**	**4.32**	**21**		P		**Pn**	**17 27 38.8**	**+3.8**
	SNR=16								
USP	**Ospenovka**	**4.32**	**21**	*i*	PN		**Pn**	**17 27 36.8**	**+1.8**
USP	**Ospenovka**	**4.32**	**21**	⇓*eP*			**Pn**	**17 27 36.8**	**+1.8**
	baz=22								
USP				⇓*i*	S		**Sn**	**17 28 25.1**	**-0.4**
	baz=22								
TKM2	**Tokmak 2**	**4.40**	**32**		P		Pn	17 27 41.2	+5.1
	SNR=5.2								
TKM2	**Tokmak 2**	**4.40**	**32**	⇑Pn			**Pn**	**17 27 39.4**	**+3.2**
	comp=E,1.0nm,0.3s								
TKM2				⇑Lg			Lg	17 28 44.4	
	comp=E,54nm,0.7s								
TKM2	**Tokmak 2**	**4.40**	**32**	*i*	PN		**Pn**	**17 27 38.5**	**+2.3**
TKM2	**Tokmak 2**	**4.40**	**32**	⇓*i*	P		**Pn**	**17 27 38.5**	**+2.3**
	baz=34								
TKM2				⇓*i*	S		**Sn**	**17 28 28.0**	**+0.4**
	baz=34								
SGDS	**Sogindy**	**4.53**	**21**		Pg		**Pg**	**17 27 56.2**	**+0.5**
	comp=E,9.9nm,0.3s								
SGDS					Lg		Lg	17 28 48.3	
	comp=E,90nm,1.4s								
KDJ	**Kajisay**	**4.64**	**50**	*i*	PN		**Pn**	**17 27 42.8**	**+3.3**
KDJ				*i*	S		**Sn**	**17 28 35.1**	**+1.5**
KDJ	**Kajisay**	**4.64**	**50**	⇓*i*	P		**Pn**	**17 27 42.8**	**+3.3**
	baz=52								
KDJ				⇓*i*	S		**Sn**	**17 28 35.1**	**+1.5**
	baz=52								
KST	**Kastek**	**4.65**	**34**		Pg		**Pg**	**17 27 59.5**	**+1.4**
	comp=E,10nm,0.7s								
KST					Lg		Lg	17 28 53.6	
	comp=E,82nm,0.8s								
KST	**Kastek**	**4.65**	**34**	*eP*			**Pg**	**17 27 59.5**	**+1.4**
	comp=E,10nm,0.7s								
KST					*e*S		**Sg**	**17 28 54.3**	**-4.1**
	comp=E,82nm,0.8s								
DGS	**Degeres**	**4.74**	**31**		Pg		**Pg**	**17 28 00.5**	**+0.8**
	comp=E,49nm,0.5s								
DGS					Lg		Lg	17 28 55.3	
	comp=E,113nm,0.8s								
DGS	**Degeres**	**4.74**	**31**	*eP*			**Pg**	**17 28 00.1**	**+0.4**
	comp=E,49nm,0.5s								
DGS					*e*S		**Sg**	**17 28 55.3**	**-5.7**
	comp=E,113nm,0.8s								
MTBS	**Maitube**	**4.93**	**37**		Pg		**Pg**	**17 28 03.1**	**-0.3**
	comp=E,11nm,0.4s								
MTBS					Lg		Lg	17 29 02.4	
	comp=E,66nm,0.9s								
MTBS	**Maitube**	**4.93**	**37**	*eP*			**Pg**	**17 28 02.9**	**-0.5**
	comp=E,11nm,0.4s								
MTBS					*e*S		**Sb**	**17 29 00.1**	**+5.1**
	comp=E,66nm,0.9s								
IZV	**Izvestkoviy**	**4.95**	**39**		Pg		**Pg**	**17 28 04.9**	**+1.2**
	comp=E,6.4nm,0.4s								
IZV					Lg		Lg	17 29 03.0	
	comp=E,109nm,0.6s								
IZV	**Izvestkoviy**	**4.95**	**39**	*eP*			**Pg**	**17 28 04.9**	**+1.2**
	comp=E,6.4nm,0.4s								
IZV					*e*S		**Sg**	**17 29 03.6**	**-4.2**
	comp=E,109nm,0.6s								
KRBS	**Karabastau**	**5.08**	**28**		Pg		**Pg**	**17 28 05.7**	**-0.6**
	comp=E,13nm,0.8s								
KRBS					Lg		Lg	17 29 05.1	
	comp=E,50nm,0.7s								
KRBS	**Karabastau**	**5.08**	**28**	*eP*			**Pg**	**17 28 05.7**	**-0.6**
	comp=E,13nm,0.8s								
KRBS					*e*S		**Sb**	**17 29 05.1**	**+5.8**
	comp=E,50nm,0.7s								
TNSS	**Tian-Shan**	**5.11**	**41**		Pg		**Pg**	**17 28 07.5**	**+0.5**
	comp=E,11nm,0.6s								
TNSS					Lg		Lg	17 29 09.1	
	comp=E,25nm,0.5s								
TNSS	**Tian-Shan**	**5.11**	**41**	*eP*			**Pg**	**17 28 07.5**	**+0.5**
	comp=E,11nm,0.6s								
TNSS					*e*S		**Sg**	**17 29 09.1**	**-4.1**
	comp=E,25nm,0.5s								
KNDC	**Almaty**	**5.25**	**39**	⇓Pg			**Pg**	**17 28 06.7**	**-2.9**
	comp=E,4.5nm,0.3s								
KNDC				⇓Lg			Lg	17 29 11.5	
	comp=E,271nm,0.8s								
MDOK	**Medeo**	**5.26**	**40**		Pg		**Pb**	**17 28 05.2**	**+4.0**
	comp=E,1.2nm,0.4s								
MDOK					Pg		**Pg**	**17 28 09.7**	**0.0**
	comp=E,18nm,1.1s								
MDOK					Lg		Lg	17 29 11.0	
	comp=E,116nm,0.9s								
MDOK					Lg		Lg	17 29 12.7	
	comp=E,78nm,0.8s								
MDOK	**Medeo**	**5.26**	**40**	*eP*			**Pg**	**17 28 09.7**	**0.0**
	comp=E,18nm,1.1s								
MDOK					*e*S		**Sg**	**17 29 11.8**	**-5.9**
	comp=E,78nm,0.8s								
KOTS	**Kotyrbulak**	**5.34**	**40**		Pg		**Pg**	**17 28 12.2**	**+1.0**
	comp=E,22nm,0.4s								
KOTS					Lg		Lg	17 29 15.5	
	comp=E,119nm,0.9s								
KOTS	**Kotyrbulak**	**5.34**	**40**	*eP*			**Pg**	**17 28 11.8**	**+0.6**
	comp=E,22nm,0.4s								
KOTS					*e*S		**Sg**	**17 29 15.5**	**-4.9**
	comp=E,119nm,0.9s								
KTBS	**Karatobe**	**5.50**	**34**		Pg		**Pg**	**17 28 12.3**	**-2.1**
	comp=E,13nm,0.5s								
KTBS					Lg		Lg	17 29 19.1	
	comp=E,114nm,0.8s								
KTBS	**Karatobe**	**5.50**	**34**	*eP*			**Pg**	**17 28 12.3**	**-2.1**
	comp=E,13nm,0.5s								
KTBS					*e*S		**Sb**	**17 29 15.9**	**+4.5**
	comp=E,114nm,0.8s								
KUU	**Kurty**	**5.50**	**31**		Pg		**Pg**	**17 28 12.8**	**-1.6**
	comp=E,9.1nm,0.3s								
KUU					Lg		Lg	17 29 16.5	
	comp=E,78nm,1.1s								
KUU	**Kurty**	**5.50**	**31**	*eP*			**Pg**	**17 28 12.8**	**-1.6**
	comp=E,9.1nm,0.3s								
KUU					*e*S		**Sb**	**17 29 17.0**	**+5.5**
	comp=E,78nm,1.1s								
CHKK	**Chushkaly**	**5.75**	**35**		Pg		**Pg**	**17 28 18.3**	**-0.8**
	comp=E,8.0nm,0.6s								
CHKK					Lg		Lg	17 29 26.0	
	comp=E,34nm,0.5s								
CHKK	**Chushkaly**	**5.75**	**35**	*eP*			**Pg**	**17 28 18.3**	**-0.8**
	comp=E,8.0nm,0.6s								
CHKK					*e*S		**Sg**	**17 29 26.3**	**-7.2**
	comp=E,34nm,0.5s								
BTLS	**Baital**	**5.92**	**11**		Pg		Pb	17 28 16.9	+4.5
	comp=E,16nm,0.4s								
BTLS					Lg		Lg	17 29 24.9	
	comp=E,25nm,0.9s								
BTLS	**Baital**	**5.92**	**11**	*eP*			Pb	17 28 17.8	+5.4
	comp=E,16nm,0.4s								
BTLS					*e*S		**Sb**	**17 29 26.0**	**+2.6**
	comp=E,25nm,0.9s								
ARXS	**Arharly**	**6.41**	**38**		Pg		**Pg**	**17 28 30.7**	**-1.0**
	comp=E,11nm,0.6s								
ARXS					Lg		Lg	17 29 47.5	
	comp=E,36nm,0.8s								
ARXS	**Arharly**	**6.41**	**38**	*eP*			**Pg**	**17 28 30.7**	**-1.0**
	comp=E,11nm,0.6s								
ARXS					*e*S		**Sg**	**17 29 47.5**	**-7.3**
	comp=E,36nm,0.8s								
BLB	**Baldybastay**	**6.65**	**41**		Pg		**Pg**	**17 28 35.0**	**-1.3**
	comp=E,11nm,0.4s								
BLB					Lg		Lg	17 29 54.8	
	comp=E,33nm,0.9s								
PDGK	**Podgornoye**	**6.72**	**50**	⇓Pn			Pn	17 28 16.1	+8.1
	comp=E,0.6nm,0.5s								
PDGK				⇓Lg			Lg	17 29 57.9	
	comp=E,37nm,0.8s								
PDGK	**Podgornoye**	**6.72**	**50**	PN			Pn	17 28 16.5	+8.5
PDGK				LG			Lg	17 29 57.9	
MK31	**Makanchi Array**	**10.45**	**41**	*i*	P		Pn	17 29 03.9	+4.9
MKAR	**Makanchi Array**	**10.45**	**41**		Pn		**Pn**	**17 28 57.4**	**-1.7**
	baz=316,slow=3.3,SNR=1.8								
MKAR					Lg		Lg	17 31 53.1	
	comp=E,0.1nm,0.3s,baz=262,slow=17,SNR=2.6								
	comp=E,0.3nm,1.0s								
GEYT	**Alibeck**	**11.26**	**268**		Pn		**Pn**	**17 29 09.5**	**-0.6**
	comp=E,0.5nm,0.3s,baz=93,slow=12,SNR=6.9								
GEYT					Sn		**Sn**	**17 31 11.9**	**-4.2**
	comp=E,0.5nm,0.3s,baz=106,slow=16,SNR=1.7								
GEYT					LR		LR	17 34 15.0	
	comp=E,56nm,20.0s,baz=156,slow=41								
	comp=E,1.6nm,0.5s								
KURBB	**Kurchatov Arra**	**12.17**	**19**		Pn		**Pn**	**17 29 20.7**	**-1.8**
	baz=214,slow=13,SNR=10								
KURBB					Lg		Lg	17 32 47.4	
	comp=E,0.1nm,0.3s,baz=204,slow=29,SNR=5.3								
	comp=E,0.8nm,0.8s								
KURK	**Kurchatov**	**12.28**	**19**		P		**Pn**	**17 29 20.7**	**-3.3**
AB31	**Akbulak array**	**13.39**	**322**	⇓Pn			**Pn**	**17 29 42.3**	**+3.1**
	comp=E,0.6nm,0.3s,baz=139,slow=12,SNR=70								
AB31				⇑Sn			**Sn**	**17 32 07.2**	**-0.9**
	comp=E,6.9nm,0.7s,baz=133,slow=24,SNR=8.0								
AB31	**Akbulak array**	**13.39**	**322**		P		**Pn**	**17 29 42.3**	**+3.1**
AB31					SN		**Sn**	**17 32 07.2**	**-0.9**
BVAR	**Borovoye Array**	**13.86**	**355**		Pn		**Pn**	**17 29 43.5**	**-1.9**
	comp=E,0.7nm,0.4s								
BVAR					Sn		**Sn**	**17 32 12.3**	**-7.1**
BVAR					LR		LR	17 35 18.0	
	comp=E,83nm,20.8s,baz=196,slow=38								
BRVK	**Borovoye**	**13.89**	**355**	*i*	P		**Pn**	**17 29 45.2**	**-0.8**
BRVK					pmax		pmax		
	comp=E,6.0nm,1.6s								
DGZ	**Jazzator, Alta**	**14.95**	**41**	*i*	P		**P**	**17 30 05.3**	**-1.0**
DGZ					pmax		pmax		
	comp=E,2.0nm,0.4s								
AKTO	**Aktyubinsk**	**15.11**	**322**	⇑Pn			**P**	**17 30 09.3**	**+1.4**
	comp=E,0.7nm,0.5s								
AKTO				⇓Sn			**Sn**	**17 32 50.6**	**+0.6**
	comp=E,2.0nm,0.7s								
AKTO	**Aktyubinsk**	**15.11**	**322**		P		**P**	**17 30 09.3**	**+1.4**
AKTO					SN		**Sn**	**17 32 50.6**	**+0.6**
AKTO	**Aktyubinsk**	**15.11**	**322**		Pn		**Pn**	**17 30 00.6**	**-2.0**
	comp=E,0.2nm,0.3s,baz=137,slow=12,SNR=5.5								
AKTO					Sn		Sn	17 32 37.1	-13
	comp=E,0.1nm,0.3s,baz=72,slow=20,SNR=2.1								
	comp=E,0.8nm,0.4s								
ZALV	**Zalesovo Beam**	**16.97**	**26**	*eP*			**P**	**17 30 29.5**	**+1.1**
ZALV	**Zalesovo Beam**	**16.97**	**26**		Pn		**Pn**	**17 30 24.1**	**-2.3**
	comp=E,0.1nm,0.3s,baz=226,slow=8.1,SNR=3.5								
	comp=E,0.7nm,0.7s								
ARU	**Arti**	**19.48**	**337**		P		**P**	**17 30 56.8**	**+0.8**
ARU					S		**S**	**17 34 39.6**	**+3.6**
ARU	**Arti**	**19.48**	**337**		P		**P**	**17 30 55.3**	**-0.7**
	comp=E,1.1nm,0.6s,baz=170,slow=6.1,SNR=1.2								
WSAR	**Wadi Sarin**	**19.79**	**220**		P		**P**	**17 31 00.8**	**+1.1**
	comp=E,0.1nm,0.3s,baz=57,slow=17,SNR=1.9								
	comp=E,1.1nm,0.7s								
BELG	**Belogornoye**	**21.57**	**316**		P		**P**	**17 31 18.0**	**-0.7**
	comp=E,6.3nm,0.7s,baz=175,slow=2.3,SNR=5.0								
	comp=E,6.3nm,0.7s								
KBZ	**Khabaz**	**22.49**	**291**	*i*	P		**P**	**17 31 30.0**	**+1.4**
KBZ					pmax		pmax		
	comp=E,3.0nm,1.0s								
KIV	**Kislovodsk**	**22.65**	**292**	*eP*			**P**	**17 31 28.1**	**-2.4**
KIV					pmax		pmax		
	comp=E,4.0nm,1.0s								
SONM	**Songino Array**	**25.93**	**60**		P		**P**	**17 32 00.1**	**-1.5**
	comp=E,2.0nm,0.4s,baz=221,slow=11,SNR=2.6								
	comp=E,2.0nm,0.4s								
OBN	**Obninsk**	**28.67**	**315**	⇓*eP*			**P**	**17 32 25.5**	**-0.4**
OBN				*e*				17 33 13.1	
OBN				*e*S			**S**	**17 37 16.4**	**+1.8**
OBN				pmax			pmax		
	comp=E,3.0nm,0.8s								
OBN					MLR		MLR		
	comp=Z,94nm,17.0s								
MNK	**Minsk**	**33.41**	**312**	*i*	P		**P**	**17 33 04.6**	**-3.1**
	comp=E,2.0nm,0.7s,baz=312								
MNK				*i*	P		**P**	**17 33 04.6**	**-3.1**
	comp=N,8.0nm,0.8s,baz=312								
MNK				*i*	P		**P**	**17 33 04.6**	**-3.1**
	comp=Z,18nm,0.7s,baz=312								
MNK				*i*	PP		**PnPn**	**17 34 15.1**	**-3.2**
	baz=312								
MNK				*i*	PPP		PPP	17 34 25.8	
	baz=312								
MNK				*i*	S		**S**	**17 38 25.4**	**-3.5**
	baz=312								
MNK				*i*	SS		**SnSn**	**17 40 27.3**	**-2.6**
	baz=312								
MNK				*i*	SSS		SSS	17 40 42.9	
	baz=312								
MNK				*i*	LQ		LQ	17 44 05.4	
	baz=312								
MNK				*i*	LR		LR	17 46 37.5	
	baz=312								
MNK				*i*	LRM		MLR	17 48 17.0	
	comp=N,81nm,17.6s,baz=312								
MNK				*i*	LRM		MLR	17 48 55.0	
	comp=E,31nm,14.6s,baz=312								
MNK				*i*	LRM		MLR	17 49 07.9	
	comp=Z,41nm,11.2s,baz=312								
MNK	**Minsk**	**33.41**	**312**	*i*	P		**P**	**17 33 04.6**	**-3.1**
MNK				*i*				17 34 15.1	
MNK				*i*				17 35 46.3	
MNK				*i*	S		**S**	**17 38 25.3**	**-3.5**
MNK				*i*	SS		**SnSn**	**17 40 27.2**	**-2.6**
MNK				*i*				17 43 30.9	
MNK					pmax		pmax		
	comp=N,8.0nm,0.8s								
MNK					pmax		pmax		
	comp=E,2.0nm,0.6s								
MNK					MLR		MLR		
	comp=N,81nm,18.0s								
MNK					MLR		MLR		
	comp=E,31nm,15.0s								
MNK					MLR		MLR		
	comp=Z,41nm,11.0s								
MLR	**Muntele Rosu**	**34.50**	**296**		LR		LR	17 48 31.1	
	comp=Z,50nm,18.9s,baz=18,slow=38								
FINES	**FINESS Array B**	**35.88**	**324**		P		**P**	**17 33 29.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=125,slow=8.7,SNR=1.5								
	comp=Z,0.5nm,0.6s								
HFS	**Hagfors**	**41.64**	**320**		P		**P**	**17 34 16.9**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=96,slow=14,SNR=5.9								
	comp=Z,0.8nm,0.4s								
NOA	**NORSAR Array B**	**42.90**	**321**		LR		LR	17 53 01.4	
	comp=Z,24nm,19.5s,baz=10.0,slow=37								
USRK	**Ussuriysk Ar.**	**43.91**	**63**		LR		LR	17 55 01.7	
	comp=Z,49nm,18.1s,baz=177,slow=39								
TORD	**Torodi Ar. Bea**	**66.90**	**268**		P		**P**	**17 37 22.3**	**+0.4**
	comp=Z,2.1nm,0.3s,baz=41,slow=7.4,SNR=3.8								
	comp=Z,2.1nm,0.3s								
DBIC	**Dimbokro**	**75.94**	**267**		LR		LR	18 16 27.3	
	comp=Z,65nm,18.9s,baz=193,slow=39								
YKA	**Yellowknife Ar**	**78.45**	**3**		P		**P**	**17 38 29.3**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=38,slow=12,SNR=3.4								
	comp=Z,0.2nm,0.7s								

NNC ***17*** *17:35:03.0±2.9,54.06N×81.19E, h9km±21km, mb3.8, mpv3.5, Error ellipse: s-maj=14.6km s-min=9.9km az=8.0*
IDC ***17*** *17:35:02.6±0.8,54.02N×81.29E, h0km, mb3.5/4, mbtmp3.6/11, ML3.2/7, MS3.3/1, Error ellipse: s-maj=11.2km s-min=9.5km az=150.0*
ASRS ***17*** *17:35:05.5±0.3,54°N±1°×8°2E±°, h10km, MLh4.3/21, Error ellipse: s-maj=3.3km s-min=2.3km az=119.0, confirmed*

ISC 17 17:35:02.9±1.5, 54.12N±0.03×81.34E±0.04, h9km±10km, n53, σ2s12/100, mb3.5/4, 10C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVS	**Novosibirsk**	**1.32**	**56**	Pg	**Pn**	**17 35 26.4**	**-1.1**
NVS				Sg	**Sb**	**17 35 44.0**	**-0.8**
NVSII	**Novosibirsk**	**1.32**	**56**	Pg	**Pn**	**17 35 26.4**	**-1.1**
NVSII				Sg	**Sb**	**17 35 44.1**	**-0.7**
KHAR	**Kharino, NSO,**	**1.41**	**69**	Pg	**Pn**	**17 35 28.6**	**0.0**
KHAR				Sg	**Sb**	**17 35 47.8**	**+0.5**
ZAA0	**Zalesovo Array**	**2.06**	**93**	⇓Pn		**Pb**	**17 35 39.5**	**-0.9**
	1.2nm,0.2s							
ZAA0				⇑Lg		Lg	17 36 07.9	
	26nm,0.6s							
ZALV	**Zalesovo Beam**	**2.06**	**93**	Pn		**Pn**	**17 35 37.9**	**+0.2**
	12nm,0.3s,baz=280,slow=17,SNR=150							
ZALV				Lg		Lg	17 36 08.1	
	74nm,0.3s,baz=280,slow=25,SNR=20							
	25nm,0.3s							
SALR	**Pechorkino, Sa**	**2.58**	**82**	Pn		**Pn**	**17 35 44.7**	**-0.1**
SALR				Sg		**Sb**	**17 36 21.8**	**+0.8**
BJR1	**Bachatsky 1, K**	**2.77**	**

1.8nm,0.3s,baz=78,slow=14,SNR=54
BVA0 ⇑Sn **Sn** 17 37 52.8 -2.8
8.6nm,0.4s,baz=67,slow=24,SNR=8.7
BVAR Borovoye Array 6.61 265 Pn **Pn** 17 36 39.4 -0.8
0.5nm,0.3s,baz=70,slow=14,SNR=33
BVAR Sn **Sn** 17 37 48.9 -6.7
0.9nm,0.3s,baz=64,slow=23,SNR=8.7
BVAR Lg Lg 17 38 31.2
baz=67,slow=26
4.9nm,0.3s
BRVK Borovoye 6.67 265 ⇑Pn **Pn** 17 36 40.1 -0.8
0.7nm,0.3s
BRVK ⇑Sn **Sn** 17 37 54.9 -2.0
9.3nm,0.5s
MAKZ Makanchi 7.33 177 ⇓Pn **Pn** 17 36 51.5 +1.4
2.4nm,0.4s
MAKZ ⇓Sn **Sn** 17 38 11.3 -2.1
8.7nm,0.5s
MAKZ ⇓Lg Lg 17 38 55.2
16nm,0.6s
MAKZ Makanchi 7.33 177 Pn **Pn** 17 36 51.1 +0.9
MK31 Makanchi Array 7.36 175 ⇑Pn **Pn** 17 36 51.1 +0.6
1.0nm,0.3s,baz=0.3,slow=13,SNR=24
MK31 ⇑Sn **Sn** 17 38 14.1 0.0
5.3nm,0.6s,baz=0.6,slow=24,SNR=5.5
MK31 ⇑Lg Lg 17 38 56.0
16nm,0.7s,baz=360,slow=27,SNR=6.2
MKAR Makanchi Array 7.36 175 Pn **Pn** 17 36 50.8 +0.2
2.3nm,0.3s,baz=355,slow=13,SNR=17
MKAR Sn **Sn** 17 38 10.0 -4.2
0.4nm,0.3s,baz=348,slow=11,SNR=2.3
MKAR Lg Lg 17 38 54.6
2.8nm,0.3s,baz=1.9,slow=22,SNR=4.2
3.5nm,0.3s
MKAR Makanchi Array 7.36 175 Pn **Pn** 17 36 52.3 +1.8
MKAR Sg **Sg** 17 38 57.1 -2.0
GZLN Zheleznogorsk 7.46 67 Pn **Pn** 17 36 50.7 -1.0
GZLN Sg **Sg** 17 39 03.8 +1.8
MINR Mina 7.53 79 Pn **Pn** 17 36 54.7 +1.9
MINR Sg **Sg** 17 39 01.9 -2.5
OTUK Ortayu 8.16 227 ⇓Pn **Pn** 17 37 01.4 0.0
3.3nm,0.4s
OTUK ⇑Sn **Sn** 17 38 31.0 -2.7
2.4nm,0.6s
OTUK ⇑Lg Lg 17 39 16.5
7.2nm,0.6s
AAK Ala-Archa 12.35 204 Pn **Pn** 17 37 55.7 -3.3
0.4nm,0.3s,baz=74,slow=5.7,SNR=7.0
AAK Sn **Sn** 17 40 11.3 -5.4
0.2nm,0.3s,baz=107,slow=19,SNR=2.0
AAK Lg Lg 17 41 34.9
0.1nm,0.3s,baz=342,slow=20,SNR=1.8
1.1nm,0.3s
AKTO Aktyubinsk 14.72 265 Pn Pn 17 38 26.4 -4.7
0.1nm,0.3s,baz=56,slow=11,SNR=1.6
AKTO Sn Sn 17 41 00.2 -14
0.2nm,0.3s,baz=54,slow=18,SNR=1.9
0.4nm,0.3s
SONM Songino Array 16.93 102 Pn **P** 17 39 01.5 -0.5
0.1nm,0.3s,baz=288,slow=12,SNR=6.6
1.1nm,0.7s
FINES FINESS Array B 29.52 307 P **P** 17 41 08.8 +1.7
1.0nm,0.9s,baz=69,slow=7.6,SNR=1.5
1.0nm,0.9s
CMAR Chiang Mai Arr 38.10 152 P **P** 17 42 20.9 -1.0
0.6nm,0.5s,baz=340,slow=7.7,SNR=5.2
0.6nm,0.5s
EIL Elat 41.28 253 LR LR 18 03 35.7
comp=Z,34nm,18.1s,baz=247,slow=42
ILAR Eielson Array 55.78 23 P **P** 17 44 42.9 +3.3
0.3nm,0.7s,baz=318,slow=4.6,SNR=2.3
0.3nm,0.7s
YKA Yellowknife Ar 63.05 8 P **P** 17 45 32.9 +3.2
0.2nm,0.8s,baz=342,slow=7.4,SNR=3.0
0.2nm,0.8s

*NNC **17** 17:35:05.3±1.2, 47°.42N×81°.44E, h7km±25km, mb4.3, mpv2.9, Error ellipse: s-maj=9.5km s-min=7.6km az=43.0*
*SOME **17** 17:35:06.4, 47°.38N×81°.03E, h0km*
ISC 17 17:35:06.0±1.1, 47°.35N±0°.05×81°.22E±0°.05, h10km, n6, σ1s45/10, 5C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MAKZ	**Makanchi**	**0.75**	**136**	⇓P		**Pg**	**17 35 19.3**	**-1.1**
	1.8nm,0.3s							
MAKZ				⇓S		**Sg**	**17 35 30.1**	**-0.1**
	3.8nm,0.6s							
MK31	**Makanchi Array**	**0.92**	**127**	⇑P		**Pg**	**17 35 22.0**	**-1.7**
	0.4nm,0.3s,baz=314,slow=14,SNR=33							
MK31				⇑S		**Sg**	**17 35 34.4**	**-1.1**
	2.8nm,0.6s,baz=319,slow=28,SNR=22							
KAPS	**Kapalarasan**	**2.44**	**213**	*e*P		**Pb**	**17 35 51.4**	**+1.4**
	0.7nm,0.1s							
KAPS				*e*S		**Sg**	**17 36 23.9**	**-0.4**
	4.1nm,0.1s							
ZSN	**Zaisan**	**2.48**	**86**	*e*P		**Pb**	**17 35 51.7**	**+1.1**
	0.9nm,0.2s							
ZSN				*e*S		**Sb**	**17 36 22.8**	**+1.7**
	1.8nm,0.3s							
KURBB	**Kurchatov Arra**	**3.73**	**333**	⇑Pg		**Pg**	**17 36 15.8**	**-1.5**
	21nm,0.5s							
KURBB				⇑Lg		Lg	17 37 06.1	
	140nm,0.7s							
KURK	**Kurchatov**	**3.78**	**334**	⇑Pg		**Pb**	**17 36 13.8**	**+1.0**
	11nm,0.4s							

*NEIC **17** 17:39:04.0±1.5, 55°.97N±0°.07×149°.76W±0°.09, h7km±7km, ML3.4/50, ML3.1(AEIC), Error ellipse: s-maj=10.5km s-min=7.4km az=172.0*
*AEIC **17** 17:39:09.5±1.4, 55°.99N±0°.09×149°.7W±0°.1, h8km±7km, Error ellipse: s-maj=13.2km s-min=8.3km az=173.0*
*IDC **17** 17:39:15.4±3.1, 56°.47N×149°.92W, h0km, mb3.1/1, mbtmp3.0/3, ML2.5/2, Error ellipse: s-maj=53.6km s-min=37.9km az=127.0*
ISC 17 17:39:03.9±1.6, 56°.00N±0°.09×149°.77W±0°.06, h10km, n183, σ1s20/188, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
OHAK	**Old Harbor**	**2.30**	**304**			**Pn**	**17 39 42.5**	**+0.7**
OHAK	**Old Harbor**	**2.30**	**304**			**Sn**	**17 40 08.7**	**-1.4**
OHAK	**Old Harbor**	**2.30**	**304**	P		**Pn**	**17 39 43.2**	**+1.4**
	baz=121							
OHAK				S		**Sn**	**17 40 08.7**	**-1.4**
	baz=121							
KDAK	**Kodiak Island**	**2.36**	**320**			**Pn**	**17 39 43.9**	**+1.2**
KDAK	**Kodiak Island**	**2.36**	**320**			**Sn**	**17 40 10.7**	**-1.0**
KDAK	**Kodiak Island**	**2.36**	**320**	S		**Sn**	**17 40 10.7**	**-1.0**
	baz=138							
KDAK	**Kodiak Island**	**2.36**	**320**	LR		LR	17 40 37.2	
	comp=Z,75nm,20.1s,baz=178,slow=42							
SII	**Sitkinak Islan**	**2.52**	**285**			**Sn**	**17 40 15.0**	**-0.7**
SII	**Sitkinak Islan**	**2.52**	**285**			**Pn**	**17 39 45.6**	**+0.7**
SII				IAML			17 40 16.0	
	comp=E,206nm,0.6s							
SII				IAML			17 40 17.2	
	comp=N,116nm,0.5s							
SII	**Sitkinak Islan**	**2.52**	**285**	P		**Pn**	**17 39 45.9**	**+1.0**
	baz=101							
SII				S		**Sn**	**17 40 15.0**	**-0.7**
	baz=101							
SYI	**Shuyak Island**	**2.98**	**333**			**Pn**	**17 39 52.6**	**+1.5**
SYI	**Shuyak Island**	**2.98**	**333**			**Sn**	**17 40 27.3**	**+0.4**
Q20K	**Shuyak Island**	**2.98**	**333**	P		**Pn**	**17 39 52.7**	**+1.6**
	baz=150							
Q20K				S		**Sn**	**17 40 27.3**	**+0.3**
	baz=150							
CHIR	**Chirikof Islan**	**3.30**	**269**			**Pn**	**17 39 56.1**	**+0.6**
CHIR				IAML			17 40 33.5	
	comp=N,81nm,0.5s							
CHIR				IAML			17 40 34.0	
	comp=E,69nm,0.4s							
CHIR	**Chirikof Islan**	**3.30**	**269**			**Sn**	**17 40 32.7**	**-2.0**
CHIR	**Chirikof Islan**	**3.30**	**269**	P		**Pn**	**17 39 56.6**	**+1.1**
	baz=85							
CHIR				S		**Sn**	**17 40 32.7**	**-2.0**
	baz=85							
Q19K	**Cape Douglas,**	**3.61**	**326**			**Pn**	**17 40 01.0**	**+1.2**
Q19K				IAML			17 40 58.2	
	comp=N,106nm,0.9s							
CNPM	**China Poot**	**3.63**	**348**			**Pn**	**17 40 01.0**	**+0.9**
CNPM						**Sn**	**17 40 42.0**	**-0.9**
BRSE	**Bradley Lake S**	**3.79**	**353**			**Pn**	**17 40 03.2**	**+0.8**
BRSE						**Sn**	**17 40 46.0**	**-1.0**
BRSE	**Bradley Lake S**	**3.79**	**353**	P		**Pn**	**17 40 03.2**	**+0.8**
	baz=172							
BRSE				S		**Sn**	**17 40 46.0**	**-1.0**
	baz=172							
BRLK	**Bradley Lake**	**3.83**	**352**			**Pn**	**17 40 03.0**	**+0.2**
BRLK				IAML			17 40 52.0	
	comp=E,31nm,1.2s							
BRLK	**Bradley Lake**	**3.83**	**352**			**Sn**	**17 40 46.9**	**-0.9**
Q23K	**Middleton Isla**	**3.90**	**27**			**Pn**	**17 40 04.3**	**+0.5**
Q23K	**Middleton Isla**	**3.90**	**27**	P		**Pn**	**17 40 04.4**	**+0.6**
	baz=209							
MID	**Middleton Isla**	**3.90**	**27**			**Pn**	**17 40 04.3**	**+0.5**
CNTC	**Contact Creek**	**4.03**	**307**			**Pn**	**17 40 07.8**	**+2.0**
Q17K	**Contact Creek**	**4.03**	**307**	P		**Pn**	**17 40 07.8**	**+2.0**
	baz=122							
P19K	**Oil Pt**	**4.11**	**335**			**Pn**	**17 40 07.2**	**+0.5**
P19K				IAML			17 41 00.8	
	comp=E,58nm,0.6s							
P19K				IAML			17 41 00.8	
	comp=N,71nm,0.6s							
P19K	**Oil Pt**	**4.11**	**335**	P		**Pn**	**17 40 08.3**	**+1.7**
	baz=152							
SEW	**Seward**	**4.12**	**2**			**Pn**	**17 40 07.1**	**+0.2**
SEW	**Seward**	**4.12**	**2**	P		**Pn**	**17 40 07.6**	**+0.7**
	baz=182							
P23K	**Montague Islan**	**4.21**	**16**			**Pn**	**17 40 09.0**	**+1.0**
P23K	**Montague Islan**	**4.21**	**16**	P		**Pn**	**17 40 09.0**	**+1.0**
	baz=198							
O20K	**Slope Mountain**	**4.37**	**341**			**Pn**	**17 40 11.5**	**+1.2**
O20K	**Slope Mountain**	**4.37**	**341**	P		**Pn**	**17 40 11.5**	**+1.2**
	baz=158							
ILSW	**Iliamna Southw**	**4.38**	**337**			**Pn**	**17 40 11.1**	**+0.6**
ILSW				IAML			17 41 03.2	
	comp=N,23nm,0.3s							
ILSW				IAML			17 41 03.2	
	comp=E,26nm,1.0s							
P18K	**Big Mountain,**	**4.49**	**322**			**Pn**	**17 40 13.1**	**+1.1**
P18K	**Big Mountain,**	**4.49**	**322**	P		**Pn**	**17 40 13.1**	**+1.1**
	baz=137							
O22K	**Cooper Landing**	**4.50**	**0**	Pn		**Pn**	**17 40 12.8**	**+0.8**
O22K				IAML			17 41 10.1	
	comp=N,46nm,0.9s							
SLKM	**Skilak Lake**	**4.53**	**357**			**Pn**	**17 40 13.0**	**+0.5**
HIN	**Hinchinbrook I**	**4.74**	**20**			**Pn**	**17 40 16.4**	**+1.0**
HIN	**Hinchinbrook I**	**4.74**	**20**	IAML			17 41 12.5	
	comp=E,32nm,1.3s							
HIN				IAML			17 41 15.1	
	comp=N,22nm,1.2s							
RSO	**Redoubt South**	**4.75**	**342**	Pn		**Pn**	**17 40 15.8**	**+0.1**
P17K	**Kvichak River**	**4.81**	**315**			**Pn**	**17 40 18.5**	**+2.2**
P17K	**Kvichak River**	**4.81**	**315**	P		**Pn**	**17 40 18.5**	**+2.2**
	baz=129							
O18K	**Koktuh Hills**	**4.83**	**325**			**Pn**	**17 40 17.8**	**+1.2**
O18K	**Koktuh Hills**	**4.83**	**325**	IAML			17 41 15.0	
	comp=N,18nm,1.1s							
O18K	**Koktuh Hills**	**4.83**	**325**	P		**Pn**	**17 40 17.8**	**+1.2**
	baz=141							
CAPN	**Captain Cook N**	**4.84**	**352**	Pn		**Pn**	**17 40 16.9**	**+0.2**
CHGN	**Chignik**	**4.84**	**277**	Pn		**Pn**	**17 40 18.5**	**+1.8**
CHGN				IAML			17 41 12.2	
	comp=N,23nm,1.2s							
CHGN				IAML			17 43 15.0	
	comp=E,24nm,1.2s							
O19K	**Port Alsworth**	**4.85**	**332**	Pn		**Pn**	**17 40 18.5**	**+1.7**
O19K				IAML			17 41 17.1	
	comp=N,48nm,0.5s							
KAIM	**Kayak Island**	**4.86**	**34**			**Pn**	**17 40 17.8**	**+0.7**
KAIM				IAML			17 41 20.1	
	comp=E,40nm,1.2s							
KAIM				IAML			17 41 31.4	
	comp=N,33nm,1.5s							
KAIM	**Kayak Island**	**4.86**	**34**	P		**Pn**	**17 40 18.2**	**+1.2**
	baz=218							
EYAK	**Cordova Ski Ar**	**5.03**	**23**			**Pn**	**17 40 19.7**	**+0.4**
EYAK	**Cordova Ski Ar**	**5.03**	**23**	P		**Pn**	**17 40 20.3**	**+0.9**
	baz=206							
FID	**Port Fidalgo**	**5.07**	**19**	Pn		**Pn**	**17 40 19.7**	**-0.2**
FID				IAML			17 41 19.4	
	comp=N,20nm,0.9s							
FID				IAML			17 41 22.4	
	comp=E,17nm,1.4s							
RC01	**Rabbit Creek A**	**5.11**	**0**	Pn		**Pn**	**17 40 20.8**	**+0.4**
RC01				IAML			17 41 21.0	
	comp=N,22nm,0.4s							
RC01				IAML			17 41 27.7	
	comp=E,14nm,1.3s							
RAGM	**Ragged Mountai**	**5.16**	**29**			**Pn**	**17 40 21.2**	**+0.1**
RAGM				IAML			17 41 36.8	
	comp=E,34nm,1.3s							
SUCK	**Suckling Hills**	**5.18**	**35**			**Pn**	**17 40 21.9**	**+0.5**
SUCK				IAML			17 41 22.4	
	comp=N,23nm,1.3s							
SUCK				IAML			17 41 27.4	
	comp=E,20nm,1.2s							
HMT	**Hamilton**	**5.24**	**32**	Pn		**Pn**	**17 40 23.2**	**+1.0**
NICHA	**Nichawak Mount**	**5.25**	**33**			**Pn**	**17 40 24.0**	**+1.7**
BGLC	**Bering Glacier**	**5.38**	**37**			**Pn**	**17 40 25.6**	**+1.5**
BGLC	**Bering Glacier**	**5.38**	**37**	P		**Pn**	**17 40 25.6**	**+1.5**
	baz=222							
N19K	**Bonanza Creek**	**5.43**	**335**			**Pn**	**17 40 25.3**	**+0.4**
N19K	**Bonanza Creek**	**5.43**	**335**	P		**Pn**	**17 40 25.7**	**+0.8**
	baz=151							
BERG	**Berg Lake**	**5.45**	**34**			**Pn**	**17 40 25.4**	**+0.3**
KNK	**Knik Glacier**	**5.48**	**7**	Pn		**Pn**	**17 40 26.0**	**+0.6**
GRIN	**Grindle Hills**	**5.49**	**36**			**Pn**	**17 40 27.0**	**+1.3**
SUA	**Susitna One**	**5.51**	**355**	Pn		**Pn**	**17 40 26.5**	**+0.6**
SNH	**Sunshine Point**	**5.58**	**38**	Pn		**Pn**	**17 40 27.1**	**+0.2**
PMR	**Palmer**	**5.62**	**3**	Pn		**Pn**	**17 40 27.4**	**0.0**
BMRM	**Bremner River**	**5.67**	**26**			**Pn**	**17 40 28.6**	**+0.4**
BMRM	**Bremner River**	**5.67**	**26**	P		**Pn**	**17 40 29.5**	**+1.3**
	baz=210							
N18K	**Kilae Creek**	**5.69**	**328**			**Pn**	**17 40 29.0**	**+0.5**
N18K	**Kilae Creek**	**5.69**	**328**	P		**Pn**	**17 40 29.6**	**+1.2**
	baz=143							
CNBA	**Chernabura Isl**	**5.72**	**262**	Pn		**Pn**	**17 40 28.9**	**+0.2**
O16K	**Kokwok River B**	**5.73**	**312**			**Pn**	**17 40 30.1**	**+1.2**
GHO	**Glory Hole Cre**	**5.81**	**4**			**Pn**	**17 40 31.0**	**+0.9**
KLU	**Klutina**	**5.87**	**18**			**Pn**	**17 40 31.4**	**+0.6**
KLU	**Klutina**	**5.87**	**18**	P		**Pn**	**17 40 32.2**	**+1.3**
	baz=201							
SML	**Sawmill**	**5.88**	**7**	Pn		**Pn**	**17 40 31.8**	**+0.8**
MESA	**MESA**	**5.90**	**41**	Pn		**Pn**	**17 40 31.8**	**+0.4**
M23K	**Glacier View**	**5.91**	**9**			**Pn**	**17 40 33.1**	**+1.7**
M23K	**Glacier View**	**5.91**	**9**	P		**Pn**	**17 40 33.1**	**+1.7**
	baz=191							
CRQM	**Cirque**	**5.91**	**33**			**Pn**	**17 40 31.8**	**+0.2**
CRQE	**Cirque**	**5.92**	**34**	P		**Pn**	**17 40 32.9**	**+1.3**
	baz=219							
SVW2	**Sparrevohn**	**5.95**	**332**	Pn		**Pn**	**17 40 32.3**	**+0.3**
SCM	**Sheep Creek Mo**	**5.99**	**11**	Pn		**Pn**	**17 40 32.6**	**0.0**
N17K	**Nushagak Hills**	**5.99**	**322**	Pn		**Pn**	**17 40 33.4**	**+0.9**
TGL	**Tana Glacier**	**6.01**	**35**			**Pn**	**17 40 32.5**	**-0.3**
ISLE	**Juniper Island**	**6.05**	**37**			**Pn**	**17 40 33.7**	**+0.2**
BAGL	**Bagley Icefiel**	**6.06**	**39**			**Pn**	**17 40 34.6**	**+1.2**
SKT	**Skwentna**	**6.07**	**352**	Pn		**Pn**	**17 40 34.8**	**+1.2**
SKT						**Sn**	**17 41 43.9**	**+0.9**
M20K	**Styx River**	**6.15**	**345**	Pn		**Pn**	**17 40 35.1**	**+0.3**
VRDI	**Verde Repeater**	**6.20**	**30**	Pn		**Pn**	**17 40 35.5**	**0.0**
N25K	**Chitina, Valde**	**6.23**	**23**			**Pn**	**17 40 36.9**	**+0.9**
N25K						**Sn**	**17 41 45.6**	**-1.6**
GLB	**Gilahina Butte**	**6.28**	**27**			**Pn**	**17 40 37.1**	**+0.6**
KIAG	**Kiagna River**	**6.29**	**35**			**Pn**	**17 40 37.7**	**+1.0**
M18K	**Stony River**	**6.34**	**333**			**Pn**	**17 40 38.4**	**+1.0**
M18K	**Stony River**	**6.34**	**333**	P		**Pn**	**17 40 38.3**	**+1.0**
	baz=148							
GRNC	**Granite Creek**	**6.35**	**38**			**Pn**	**17 40 37.9**	**+0.2**
TABL	**Table Mountain**	**6.37**	**42**			**Pn**	**17 40 38.2**	**+0.3**
M19K	**Big River Lodg**	**6.39**	**340**	Pn		**Pn**	**17 40 39.0**	**+1.0**
M24K	**Tolsona, Glenn**	**6.40**	**15**	Pn		**Pn**	**17 40 40.0**	**+1.8**
MCARA	**McCarthy VSAT**	**6.44**	**30**			**Pn**	**17 40 40.1**	**+1.4**
PTPK	**Patty Peak**	**6.45**	**33**			**Pn**	**17 40 40.7**	**+1.6**
PCA	**Pinnacle**	**6.51**	**47**			**Pn**	**17 40 38.3**	**-1.4**
PINM	**Pinnacle**	**6.51**	**47**	P		**Pn**	**17 40 41.0**	**+1.3**
	baz=235							
BARN	**Barnard Glacie**	**6.62**	**37**			**Pn**	**17 40 41.0**	**-0.2**
PNL	**Peninsula**	**6.65**	**52**			**Pn**	**17 40 43.0**	**+1.4**
PNL	**Peninsula**	**6.65**	**52**	P		**Pn**	**17 40 42.9**	**+1.4**
	baz=241							
CTG	**Chitna Glacier**	**6.66**	**38**	P		**Pn**	**17 40 42.8**	**+1.0**
	baz=225							
CTGM	**Chitina Glacie**	**6.66**	**38**			**Pn**	**17 40 41.1**	**-0.7**
LOGN	**Logan Glacier**	**6.68**	**40**	Pn		**Pn**	**17 40 41.5**	**-0.6**
BCPM	**Bancas Point**	**6.69**	**49**			**Pn**	**17 40 41.8**	**-0.3**
M17K	**Holitna River**	**6.73**	**327**	Pn		**Pn**	**17 40 42.8**	**+0.2**
L19K	**White Mountain**	**6.73**	**339**	Pn		**Pn**	**17 40 42.0**	**-0.6**
HARP	**HAARP**	**6.84**	**18**			**Pn**	**17 40 45.7**	**+1.5**
HARP	**HAARP**	**6.84**	**18**	P		**Pn**	**17 40 45.7**	**+1.5**
	baz=202							
N15K	**Kwethluk River**	**6.88**	**312**	Pn		**Pn**	**17 40 45.6**	**+0.8**
M16K	**Timber Creek**	**6.96**	**320**	Pn		**Pn**	**17 40 46.2**	**+0.3**
O14K	**Tigyukauivet M**	**6.98**	**303**	Pn		**Pn**	**17 40 47.0**	**+1.0**
L18K	**Granite Mounta**	**7.18**	**333**	Pn		**Pn**	**17 40 49.3**	**+0.5**
DHY	**Denali Highway**	**7.21**	**9**	Pn		**Pn**	**17 40 48.6**	**-0.7**
O29M	**Mount Kennedy**	**7.33**	**49**			**Pn**	**17 40 50.9**	**-0.1**
O29M	**Mount Kennedy**	**7.33**	**49**	P		**Pn**	**17 40 52.4**	**+1.5**
	baz=239							
P29M	**Windy Craggy**	**7.38**	**55**			**Pn**	**17 40 50.1**	**-1.6**
P29M	**Windy Craggy**	**7.38**	**55**	P		**Pn**	**17 40 52.9**	**+1.2**
	baz=246							
RND	**Reindeer**	**7.45**	**3**	Pn		**Pn**	**17 40 51.7**	**-0.9**
TRF	**Thorofare Moun**	**7.48**	**358**	Pn		**Pn**	**17 40 52.5**	**-0.7**
M27K	**Edge Creek, AK**	**7.55**	**29**	Pn		**Pn**	**17 40 53.2**	**-0.8**
KTH	**Kantishna Hill**	**7.60**	**356**	Pn		**Pn**	**17 40 56.7**	**+2.0**
MENT	**Mentasta**	**7.61**	**21**	Pn		**Pn**	**17 40 55.8**	**+1.1**
L16K	**Owhat River**	**7.62**	**323**	Pn		**Pn**	**17 40 56.1**	**+1.3**
TTA	**Tatalina**	**7.64**	**338**	Pn		**Pn**	**17 40 54.7**	**-0.5**
S31K	**Pelican**	**7.66**	**70**			**Pn**	**17 40 55.2**	**-0.1**
S31K	**Pelican**	**7.66**	**70**	P		**Pn**	**17 40 55.6**	**+0.3**
	baz=261							
K20K	**Telida**	**7.70**	**345**	Pn		**Pn**	**17 40 56.2**	**+0.3**
YUK4	**Talbot Arm**	**7.89**	**43**	P		**Pn**	**17 41 02.8**	**+4.0**
	baz=232							
M14K	**Bethel**	**7.98**	**312**	Pn		**Pn**	**17 41 00.7**	**+1.0**
K17K	**Iditarod**	**8.02**	**331**	Pn		**Pn**	**17 41 00.6**	**+0.3**
HYT	**Haines Junctio**	**8.05**	**48**	Pn		**Pn**	**17 41 00.5**	**-0.4**
L27K	**Beaver Creek,**	**8.15**	**26**	Pn		**Pn**	**17 41 02.4**	**+0.3**
BPAW	**Bear Paw Mtn.**	**8.15**	**356**	Pn		**Pn**	**17 41 02.6**	**+0.5**
J20K	**Nowinta River**	**8.49**	**347**	Pn		**Pn**	**17 41 08.7**	**+1.9**
SCRK	**Sand Creek**	**8.51**	**17**	Pn		**Pn**	**17 41 08.1**	**+0.9**
J19K	**Poorman**	**8.54**	**342**	Pn		**Pn**	**17 41 07.8**	**+0.4**
WRH	**Wood River Hil**	**8.54**	**5**	Pn		**Pn**	**17 41 07.3**	**-0.1**
HDA	**Harding Lake**	**8.56**	**8**	Pn		**Pn**	**17 41 08.4**	**+0.8**
L14K	**Kuka Creek**	**8.59**	**314**	Pn		**Pn**	**17 41 10.4**	**+2.2**
R32K	**Eaglecrest**	**8.60**	**68**	Pn		**Pn**	**17 41 06.8**	**-1.5**
O30N	**Mendenhall**	**8.63**	**51**	Pn		**Pn**	**17 41 09.1**	**+0.4**
M29M	**Somme Creek**	**8.67**	**37**	Pn		**Pn**	**17 41 11.0**	**+1.6**
K15K	**Wolf Creek Mou**	**8.73**	**321**	Pn		**Pn**	**17 41 11.6**	**+1.5**
CCB	**Clear Creek Bu**	**8.73**	**6**	Pn		**Pn**	**17 41 12.2**	**+2.2**
J25K	**Salcha River,**	**8.91**	**12**	Pn		**Pn**	**17 41 13.8**	**+1.2**
IL31		**8.92**	**8**	Pn		**Pn**	**17 41 14.3**	**+1.7**
ILAR	**Eielson Array**	**8.92**	**8**	Pn		**Pn**	**17 41 14.0**	**+1.4**
	comp=E,0.1nm,0.3s,baz=192,slow=13,SNR=7.4							
ILAR				Sn		**Sn**	**17 42 48.9**	**-4.2**
	comp=E,0.1nm,0.3s,baz=197,slow=24,SNR=4.6							
	comp=E,0.3nm,0.4s							
K27K	**Chicken**	**8.93**	**22**	Pn		**Pn**	**17 41 13.5**	**+0.8**
J26L	**Joseph Creek**	**9.07**	**17**	Pn		**Pn**	**17 41 15.5**	**+0.7**
J16K	**Anvik River**	**9.12**	**328**	Pn		**Pn**	**17 41 15.7**	**+0.2**
I23K	**Minto, Yukon-K**	**9.19**	**1**	Pn		**Pn**	**17 41 17.3**	**+1.0**
L29M	**L29M**	**9.25**	**35**			**Pn**	**17 41 19.1**	**+1.9**
I21K	**Tanana**	**9.28**	**354**	Pn		**Pn**	**17 41 19.4**	**+1.9**
P32M	**Atlin**	**9.29**	**61**	Pn		**Pn**	**17 41 18.4**	**+0.6**
U33K	**Whale Pass**	**9.32**	**82**	Pn		**Pn**	**17 41 18.7**	**+0.6**
M30M	**Minto, Yukon**	**9.35**	**40**	Pn		**Pn**	**17 41 19.4**	**+0.8**
DAWY	**Dawson**	**9.60**	**28**	Pn		**Pn**	**17 41 23.6**	**+1.6**
J14K	**Nanvaranak Lak**	**9.74**	**320**	Pn		**Pn**	**17 41 24.4**	**+0.5**
PRP	**Porcupine Dome**	**9.77**	**10**	Pn		**Pn**	**17 41 24.3**	**-0.2**
H21K	**Melozitna Rive**	**9.80**	**353**	Pn		**Pn**	**17 41 25.2**	**+0.4**
I26K	**Coal Creek Min**	**9.88**	**16**	Pn		**Pn**	**17 41 28.0**	**+2.2**
P33M	**Teslin, Yukon**	**9.91**	**58**	Pn		**Pn**	**17 41 27.2**	**+1.0**
H24K	**Noodor Dome**	**9.92**	**5**	Pn		**Pn**	**17 41 29.2**	**+2.9**
K29M	**Barlow Dome**	**9.97**	**33**	Pn		**Pn**	**17 41 28.4**	**+1.2**
M31M	**Drury Creek, Y**	**10.05**	**45**	Pn		**Pn**	**17 41 30.1**	**+2.0**
H18K	**Honhosa River**	**10.10**	**339**	Pn		**Pn**	**17 41 30.5**	**+1.7**
FARO	**Faro, Yukon**	**10.48**	**47**	Pn		**Pn**	**17 41 34.5**	**+0.5**
R33M	**Jennings River**	**10.62**	**64**	Pn		**Pn**	**17 41 36.2**	**+0.2**
G23K	**Bananza Creek**	**10.75**	**359**	Pn		**Pn**	**17 41 39.5**	**+1.7**
J30M	**Hart River**	**10.86**	**32**	Pn		**Pn**	**17 41 41.8**	**+2.5**
YKA	**Yellowknife Ar**	**18.93**	**56**	P		Pn	17 43 34.7	+10
	baz=260,slow=11,SNR=3.6							
	comp=E,0.5nm,1.0s							
MKAR	**Makanchi Array**	**68.67**	**324**	P		P	17 50 17.9	+11
	comp=E,0.1nm,0.5s,baz=20,slow=5.3,SNR=4.5							
	comp=E,0.1nm,0.5s							

*IDC **17** 17:44:51.7±3.5, 30°.85S×138°.82E, h0km, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=76

JAGI	**Jajag, Banyuwa**	**2.67**	**81**	P		Pn	17 55 37.6	+0.2
KPJI	**Karang Pucung**	**2.96**	**301**	P		Pn	17 55 43.6	+2.3
CMJI	**Cimerak**	**3.19**	**290**	P		Pn	17 55 43.9	-0.6
SRBI	**Singaraja**	**3.78**	**78**	P		Pn	17 55 52.3	-0.2
TWSI	**Taliwang, Sumb**	**5.34**	**89**	P		Pn	17 56 13.9	-0.1

NEIC ***17*** *17:56:02.7±0.4, 36°.04N±0°.01×97°.90W±0°.01, h4km±5km, Error ellipse: s-maj=1.8km s-min=1.4km az=50.0*

TUL 17 17:56:03.3±0.6, 36°.04N±0°.01×97°.90W±0°.01, h8km±5km, ML2.5, mb_Lg2.1/12(NEIC), **ML2.5**/43(NEIC), **Error ellipse: s-maj=1.8km s-min=1.4km az=49.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.43**	**124**		Pg	17 56 11.8	0.0
OK029				Sg	Sg	17 56 18.0	+0.6
OK029				IAML		17 56 18.3	
	427nm,0.5s						
CROK	**Carrier**	**0.47**	**352**	Pg	Pg	17 56 12.5	0.0
CROK				Sg	Sg	17 56 19.0	+0.4
CROK				IAML		17 56 19.6	
	comp=E,337nm,0.3s						
ADOK	**Arcadia Dam**	**0.58**	**132**	Pg	Pg	17 56 14.5	+0.1
OKCSW	**OKLAHOMA CITY**	**0.73**	**149**	Pg	Pg	17 56 17.0	-0.5
OKCSW				Sg	Sg	17 56 27.2	+0.1
OKCSW				IAML		17 56 30.1	
	comp=E,167nm,0.2s						
CSTR	**Hydro, Custer**	**0.75**	**239**	Pg	Pg	17 56 17.6	-0.1
OK033	**Mehan**	**0.78**	**89**	Pg	Pg	17 56 18.0	-0.3
OK033				IAML		17 56 32.7	
	comp=E,117nm,0.1s						
OK032	**Salt Plains WL**	**0.80**	**342**	Pg	Pg	17 56 18.3	-0.5
OK032				Sg	Sg	17 56 29.1	-0.1
OK032				IAML		17 56 37.2	
	comp=E,251nm,0.2s						
OK038	**West end E0370**	**0.81**	**303**	Pg	Pg	17 56 18.3	-0.6
OK038				Sg	Sg	17 56 29.5	+0.1
GC02	**Grant County #**	**0.81**	**2**	Pg	Pg	17 56 18.5	-0.5
OK048	**Pawnee Station**	**0.86**	**64**	Pg	Pg	17 56 19.3	-0.6
OK048				Sg	Sg	17 56 30.7	-0.4
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	17 56 19.6	-0.6
FNO				Sg	Sg	17 56 31.5	-0.1
FNO				IAML		17 56 33.3	
	comp=E,137nm,0.1s						
OK052	**Battle Ridge R**	**0.89**	**93**	Pg	Pg	17 56 20.0	-0.4
OK052				Sg	Sg	17 56 32.3	+0.3
OK052				IAML		17 56 35.2	
	comp=E,96nm,0.1s						
OK052				IAML		17 56 39.0	
	comp=E,98nm,0.2s						
BLOK	**Blackwell**	**0.91**	**37**	Pg	Pg	17 56 20.1	-0.7
BLOK				Sg	Sg	17 56 32.5	-0.1
KAN14	**Manchester OK**	**0.92**	**357**	Pg	Pg	17 56 20.1	-0.9
KAN14				IAML		17 56 40.3	
	comp=N,104nm,0.1s						
KAN14				IAML		17 56 42.4	
	comp=E,144nm,0.1s						
OK035	**E0210 Rd and N**	**0.93**	**316**	Pg	Pg	17 56 20.3	-1.0
OK035				Sg	Sg	17 56 33.4	0.0
OK035				IAML		17 56 36.8	
	comp=E,191nm,0.3s						
U32A	**Winter Ranch,**	**0.95**	**291**	Pg	Pg	17 56 20.8	-0.8
U32A				Sg	Sg	17 56 33.9	-0.1
U32A				IAML		17 56 35.8	
	comp=E,94nm,0.1s						
U32A				IAML		17 56 36.1	
	comp=N,184nm,0.1s						
QUOK	**Quay**	**0.97**	**82**	Pg	Pg	17 56 21.4	-0.6
QUOK				IAML		17 56 36.3	
	comp=N,126nm,0.2s						
QUOK				IAML		17 56 41.7	
	comp=E,102nm,0.2s						
OK051	**E0350 and S346**	**0.98**	**61**	Pg	Pg	17 56 21.6	-0.5
KAN17	**Caldwell West**	**1.01**	**6**	Pg	Pg	17 56 21.8	-0.9
KAN13	**South Haven SW**	**1.03**	**19**	Pg	Pg	17 56 22.5	-0.6
KAN01	**Argonia South**	**1.12**	**6**	Pg	Pg	17 56 23.9	-0.9
KAN09	**Caldwell North**	**1.12**	**12**	Pg	Pg	17 56 23.7	-1.1
DEOK	**Depew**	**1.16**	**99**	Pg	Pg	17 56 24.4	-1.1
DEOK				IAML		17 56 42.2	
	comp=E,76nm,0.1s						
DEOK				IAML		17 56 45.6	
	comp=N,64nm,0.2s						
KAN06	**Argonia West S**	**1.21**	**2**	Pg	Pb	17 56 25.4	-1.1
ELIS	**Ellis County**	**1.23**	**272**		Pb	17 56 25.8	-1.0
ELIS				IAML		17 56 58.2	
	comp=N,133nm,0.1s						
KS21	**Milan North St**	**1.26**	**9**		Pn	17 56 26.6	-0.6
T35A	**Sooner Cattle**	**1.42**	**52**		Pn	17 56 29.5	0.0
X34A	**Smith Ranch, M**	**1.44**	**178**		Pn	17 56 29.6	0.0
WMOK	**Wichita Mounta**	**1.48**	**209**		Pn	17 56 29.6	-0.7
WMOK				IAmb_Lg		17 56 52.1	
	comp=Z,7.6nm,0.7s						
TUL3	**Leonard**	**1.72**	**94**	Pn	Pn	17 56 33.3	-0.2
SMWD	**Samnorwood**	**2.12**	**245**	Pn	Pn	17 56 39.5	+0.4
LOOK	**Love County**	**2.12**	**164**	Pn	Pn	17 56 40.2	+1.1
RLO	**Rose Lookout**	**2.33**	**86**	Pn	Pn	17 56 43.3	+1.3
X37A	**Clayton**	**2.52**	**124**	Pn	Pn	17 56 45.7	+1.1
X37A				IAmb_Lg		17 57 28.3	
	comp=Z,7.2nm,0.9s						
U38A	**Gravette**	**2.87**	**81**	Pn	Pn	17 56 49.3	-0.1
HHAR	**Hobbs**	**3.21**	**85**	Pn	Pn	17 56 54.0	-0.1
PLPT	**Palo Pinto**	**3.24**	**186**	Pn	Pn	17 56 54.3	-0.1
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		17 57 51.0	
	comp=Z,5.1nm,0.8s						
MIAR	**Mount Ida**	**3.84**	**112**	Pn	Pn	17 57 03.0	+0.4
RTBA	**Rita Blanca**	**3.93**	**277**	Pn	Pn	17 57 02.6	-1.4
S39A	**Bolivar**	**4.03**	**64**	Pn	Pn	17 57 04.4	-0.8
S39A				IAmb_Lg		17 58 09.8	
	comp=Z,4.9nm,1.0s						
POST	**Post**	**4.20**	**226**	Pn	Pn	17 57 06.1	-1.6
POST				IAmb_Lg		17 58 27.5	
	comp=Z,6.5nm,0.8s						
X40A	**Basin Creek Fa**	**4.42**	**109**	Pn	Pn	17 57 10.1	-0.7
WHAR	**Wooly Hollow**	**4.63**	**98**	Pn	Pn	17 57 11.9	-1.7
FCAR	**Ozark Folk Cen**	**4.69**	**90**	Pn	Pn	17 57 13.4	-0.9
BRDY	**Brady**	**4.83**	**191**	Pn	Pn	17 57 14.6	-1.7
R40A	**Maddies Statio**	**5.03**	**62**	Pn	Pn	17 57 15.9	-3.1
T25A	**Trinidad**	**5.35**	**284**	IAmb_Lg		17 58 54.9	
	comp=Z,3.5nm,0.8s						
LCAR	**Lake Charles**	**5.47**	**88**	Pn	Pn	17 57 25.4	+0.3
ODSA	**Odessa**	**5.49**	**226**	Pn	Pn	17 57 24.3	-1.1
HNVL	**Huntsville, TX**	**5.65**	**158**	Pn	Pn	17 57 28.0	+0.4
CCM	**Cathedral Cave**	**5.69**	**67**	Pn	Pn	17 57 27.7	-0.4
P40A	**Paris**	**5.80**	**51**	Pn	Pn	17 57 28.6	-1.0
PBMO	**Poplar Bluff**	**6.07**	**81**	Pn	Pn	17 57 31.4	-1.9
Q24A	**Divide**	**6.46**	**299**	Pn	Pn	17 57 38.5	-0.5

IDC 17 18:20:01.8±1.8, 1°.57N×124°.99E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=196.4km s-min=23.7km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.26**	**157**	P	P	18 25 10.7	-0.4
	0.3nm,0.4s,baz=335,slow=10,SNR=10.0 0.3nm,0.4s						
ASAR	**Alice Springs**	**26.54**	**161**	P	P	18 25 42.4	+1.0
	0.1nm,0.4s,baz=338,slow=7.6,SNR=1.2 0.1nm,0.4s						
STKA	**Stephens Creek**	**36.80**	**156**	P	P	18 27 10.8	-0.7
	0.5nm,0.4s,baz=340,slow=8.2,SNR=1.9 0.5nm,0.4s						
MKAR	**Makanchi Array**	**58.37**	**327**	P	P	18 29 59.0	0.0
	0.1nm,0.4s,baz=118,slow=7.9,SNR=8.0 0.1nm,0.4s						

IDC ***17*** *18:25:04.4±0.9, 24°.18N×123°.19E, h0km, mb3.5/7, mbtmp3.6/8, ML3.1/1, MS3.3/1, Error ellipse: s-maj=30.3km s-min=20.3km az=67.0*

JMA ***17*** *18:25:10.7±0.2, 24°.1N×123°.2E±0°.4, h54km±1km, MV3.2/11, NEAR ISHIGAKIJIMA ISLAND*

ISC 17 18:25:10.9±0.9, 24°.11N±0°.07×123°.25E±0°.03, h50km±7km, n27, σ1§71/35, mb3.6/8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.41**	**328**	P	**Pn**	**18 25 21.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.41**	**328**	P	**Pn**	**18 25 21.1**	**-0.1**
YOJ				S	**Sn**	**18 25 28.6**	**+0.2**
JYNG	**Yonagunijimaku**	**0.43**	**321**	*i* P	**Pn**	**18 25 21.4**	**0.0**
JYNG				*e*S	**Sn**	**18 25 29.3**	**+0.4**
IRIF	**Iriomote-Funau**	**0.49**	**63**	P	**Pn**	**18 25 21.9**	**-0.2**
IRIF				*e*S	**Sn**	**18 25 30.4**	**+0.3**
HATJ	**Hateruma jima**	**0.51**	**96**	P	**Pn**	**18 25 22.2**	**-0.1**
HATJ				S	**Sn**	**18 25 30.9**	**+0.4**
JKRS	**Kuro-shima**	**0.71**	**80**	P	**Pn**	**18 25 25.2**	**+0.4**
JKRS				*e*S	**Sn**	**18 25 35.9**	**+1.1**
JIJ	**Ishigaki jima**	**0.86**	**73**	P	**Pn**	**18 25 26.6**	**-0.1**
JIJ				S	**Sn**	**18 25 38.5**	**+0.2**
JISG	**Ishigakijimahi**	**1.08**	**64**	*i* P	**Pn**	**18 25 29.6**	**-0.1**
JISG				*e*S	**Sn**	**18 25 43.8**	**+0.1**
JTJ	**Tarama**	**1.43**	**68**	*e*P	**Pn**	**18 25 34.6**	**+0.2**
JTJ				*e*S	**Sn**	**18 25 52.4**	**+0.3**
NACB	**Ninganchiao**	**1.51**	**273**	P	**Pn**	**18 25 35.6**	**0.0**
YHNB	**Yeheng**	**1.79**	**288**	P	**Pn**	**18 25 40.9**	**+1.4**
TATO	**Taipei**	**1.82**	**299**	P	**Pn**	**18 25 40.9**	**+1.1**
YULB	**Yu-li**	**1.92**	**248**	P	**Pn**	**18 25 40.7**	**-0.6**
JMJ	**Miyako jima 2**	**1.99**	**69**	P	**Pn**	**18 25 44.3**	**+2.1**
SSLB	**Suanglung**	**2.12**	**262**	P	**Pn**	**18 25 44.1**	**+0.1**
TWGBT	**Beinan**	**2.37**	**237**	P	**Pn**	**18 25 46.7**	**-0.7**
TPUB	**Ta-pu**	**2.53**	**252**	P	**Pn**	**18 25 50.5**	**+0.9**
JOW	**Kunigami**	**5.29**	**58**	Pn	**Pn**	**18 26 26.2**	**-1.2**
	1.4nm,0.3s,baz=150,slow=18,SNR=5.7						
JOW				Sn	**Sn**	**18 27 27.3**	**+0.2**
	0.6nm,0.3s,baz=150,slow=16,SNR=1.4 11nm,0.6s						
SONM	**Songjin Array**	**27.20**	**335**	P	**P**	**18 30 49.7**	**-0.3**
	0.3nm,0.5s,baz=156,slow=7.9,SNR=2.2 0.3nm,0.5s						
MKAR	**Makanchi Array**	**39.71**	**315**	P	**P**	**18 32 38.5**	**+0.1**
	0.2nm,0.5s,baz=100,slow=9.6,SNR=8.6 0.2nm,0.5s						
WRA	**Warramunga Arr**	**45.10**	**165**	P	**P**	**18 33 22.7**	**+0.3**
	0.8nm,0.8s,baz=345,slow=8.1,SNR=4.7 0.8nm,0.8s						
ASAR	**Alice Springs**	**48.61**	**167**	P	**P**	**18 33 50.9**	**+1.1**
	0.4nm,0.5s,baz=354,slow=16,SNR=5.7 0.4nm,0.5s						
BVAR	**Borovoye Array**	**48.92**	**320**	P	**P**	**18 33 50.8**	**-1.1**
	0.3nm,0.5s,baz=108,slow=9.3,SNR=2.5 0.3nm,0.5s						
WSAR	**Wadi Sarin**	**58.69**	**283**	LR	LR	19 02 04.2	
	comp=Z,22nm,18.2s,baz=39,slow=38						
SPITS	**Spitsbergen Ar**	**69.95**	**348**	P	**P**	**18 36 16.3**	**-0.2**
	20nm,1.2s,baz=92,slow=8.3,SNR=2.3						
FINES	**FINESS Array B**	**72.45**	**330**	P	**P**	**18 36 31.6**	**-0.3**
	1.1nm,0.8s,baz=35,slow=7.0,SNR=1.5 1.1nm,0.8s						
YKA	**Yellowknife Ar**	**82.30**	**23**	P	**P**	**18 37 27.0**	**+0.1**
	0.3nm,0.6s,baz=310,slow=5.2,SNR=7.1 0.3nm,0.6s						

AEIC ***17*** *18:31:29.1±0.7, 56°.2N±0°.1×149°.25W±0°.03, h5km±9km, Error ellipse: s-maj=17.8km s-min=2.4km az=176.0*

NEIC 17 18:31:26.7±0.8, 56°.2N±0°.1×149°.3W±0°.1, h21km±11km, ML2.8/34, **ML2.8**(AEIC), **Error ellipse: s-maj=17.4km s-min=8.6km az=161.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.40**	**312**		Pn	18 32 04.7	0.0
KDAK	**Kodiak Island**	**2.40**	**312**		Sn	18 32 32.4	-1.0
OHAK	**Old Harbor**	**2.44**	**296**		Pn	18 32 04.7	-0.4
OHAK	**Old Harbor**	**2.44**	**296**		Sn	18 32 32.6	-1.6
SII	**Sitkinak Islan**	**2.75**	**279**		Pn	18 32 09.4	-0.1
SII	**Sitkinak Islan**	**2.75**	**279**	IAML		18 33 26.8	
	comp=E,29nm,1.4s						
SII				IAML		18 33 29.8	
	comp=N,31nm,1.4s						
SYI	**Shuyak Island**	**2.94**	**326**		Pn	18 32 12.3	+0.2
SYI					Sn	18 32 46.9	+0.2
SYI	**Shuyak Island**	**2.94**	**326**	IAML		18 33 30.5	
	comp=E,18nm,1.5s						
SYI				IAML		18 33 58.4	
	comp=N,27nm,1.5s						
R18K	**Karluk**	**3.15**	**298**		Pn	18 32 14.8	-0.1
R18K	**Karluk**	**3.15**	**298**	IAML		18 32 55.1	
	comp=N,16nm,0.7s						
R18K				IAML		18 34 15.8	
	comp=E,16nm,1.4s						
CNPM	**China Poot**	**3.49**	**343**		Pn	18 32 19.7	+0.1
CNPM	**China Poot**	**3.49**	**343**	IAML		18 33 02.7	
	comp=E,12nm,1.1s						
Q19K	**Cape Douglas,**	**3.60**	**321**		Pn	18 32 21.1	-0.1
BRSE	**Bradley Lake S**	**3.63**	**348**		Pn	18 32 21.6	0.0
BRSE					Sn	18 33 04.0	+0.3
BRLK	**Bradley Lake**	**3.67**	**347**		Pn	18 32 21.9	-0.2
BRLK					Sn	18 33 04.7	+0.1
BRLK	**Bradley Lake**	**3.67**	**347**	IAML		18 34 31.4	
	comp=E,9.8nm,1.3s						
P23K	**Montague Islan**	**3.92**	**14**		Pn	18 32 26.0	+0.4
P23K					Sn	18 33 08.9	-2.0
P19K	**Oil Pt**	**4.04**	**330**		Pn	18 32 27.4	+0.2
P19K	**Oil Pt**	**4.04**	**330**	IAML		18 33 27.4	
	comp=N,20nm,0.8s						
P19K				IAML		18 33 54.8	
	comp=E,21nm,1.4s						
CNTC	**Contact Creek**	**4.14**	**303**		Pn	18 32 28.4	-0.3
ILSW	**Iliamna Southw**	**4.30**	**333**		Pn	18 32 30.9	0.0
ILSW	**Iliamna Southw**	**4.30**	**333**	IAML		18 34 18.8	
	comp=E,10nm,1.2s						
ILSW				IAML		18 34 20.1	
	comp=N,14nm,1.5s						
SLKM	**Skilak Lake**	**4.34**	**354**		Pn	18 32 31.5	+0.1
SLKM					Sn	18 33 18.9	-2.4
HIN	**Hinchinbrook I**	**4.45**	**18**		Pn	18 32 33.0	+0.2
P18K	**Big Mountain,**	**4.51**	**317**		Pn	18 32 33.6	-0.1
KAIM	**Kayak Island**	**4.53**	**33**	Pn	Pn	18 32 33.9	0.0
FID	**Port Fidalgo**	**4.78**	**17**	Pn	Pn	18 32 37.2	-0.2
O18K	**Koktuh Hills**	**4.83**	**322**		Pn	18 32 37.9	-0.1
O18K	**Koktuh Hills**	**4.83**	**322**	IAML		18 35 05.8	
	comp=E,4.2nm,1.4s						
O18K				IAML		18 35 38.5	
	comp=N,4.0nm,1.0s						
SUCK	**Suckling Hills**	**4.84**	**35**		Pn	18 32 38.6	+0.4
SUCK	**Suckling Hills**	**4.84**	**35**	IAML		18 35 40.5	
	comp=N,15nm,0.5s						
SUCK				IAML		18 35 43.1	
	comp=E,11nm,1.0s						
BERG	**Berg Lake**	**5.12**	**33**		Pn	18 32 41.4	-0.6
PMR	**Palmer**	**5.40**	**1**	Pn	Pn	18 32 45.4	-0.4
WAX	**Waxell Ridge**	**5.43**	**36**	Pn	Pn	18 32 46.7	+0.3
TGL	**Tana Glacier**	**5.67**	**34**		Pn	18 32 49.4	-0.3
ISLE	**Juniper Island**	**5.71**	**37**	Pn	Pn	18 32 50.0	-0.3
SCM	**Sheep Creek Mo**	**5.73**	**9**		Pn	18 32 50.5	+0.1
O16K	**Kokwok River B**	**5.80**	**309**	Pn	Pn	18 32 50.6	-0.7
SVW2	**Sparrevohn**	**5.90**	**329**	Pn	Pn	18 32 52.2	-0.6
GRNC	**Granite Creek**	**6.01**	**38**		Pn	18 32 54.3	0.0
TABL	**Table Mountain**	**6.02**	**42**		Pn	18 32 54.6	0.0
M24K	**Tolsona, Glenn**	**6.12**	**14**	Pn	Pn	18 32 54.4	-1.5
BARN	**Barnard Glacie**	**6.28**	**36**		Pn	18 32 56.7	-1.3
M18K	**Stony River**	**6.29**	**330**		Pn	18 32 58.0	-0.1
PNL	**Peninsula**	**6.30**	**53**		Pn	18 32 58.5	+0.3
CTGM	**Chitina Glacie**	**6.32**	**38**	Pn	Pn	18 32 54.4	-4.1
L19K	**White Mountain**	**6.64**	**337**	Pn	Pn	18 33 02.4	-0.4
M17K	**Holitna River**	**6.71**	**324**	Pn	Pn	18 33 04.3	+0.4
RND	**Reindeer**	**7.22**	**1**	Pn	Pn	18 33 09.1	-1.8

KEA ***17*** *18:34:20.9, 36°.08N×129°.21E, h1km, ML2.7/1*

JMA ***17*** *18:34:27.1±0.5, 36°.N±2°.×12°.9E±°, h14km, MV3.0/6, S KOREAN PENINSULA REG*

ISC 17 18:34:32.0±2.8, 35°.8N±0°.2×129°.2E±0°.4, h10km, n6, σ1§18/10, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTU	**Tsushima**	**1.31**	**172**	P	**Pn**	**18 34 55.0**	**-1.4**
JTU				*e*S	**Sn**	**18 35 15.3**	**+1.3**
JTSM	**Tsushimamitsus**	**1.50**	**173**	P	**Pn**	**18 34 58.0**	**-0.8**
JTSM				*e*S	**Sn**	**18 35 19.4**	**+1.0**
JII	**Iki**	**2.08**	**167**	*e*P	**Pn**	**18 35 06.1**	**-0.8**
JII				*e*S	**Sb**	**18 35 36.4**	**+0.7**
HJU	**Haeju**	**3.53**	**310**	Pg	**Pn**	**18 35 27.0**	**+0.2**
HJU				Sg	**Sb**	**18 36 16.1**	**-1.4**
HJU				AML	AML		
	comp=N,46nm,0.7s						
HJU				AML	AML		
	comp=E,16nm,0.7s						
HJU				AML	AML		
	comp=Z,12nm,0.4s						
PYAG	**Pyongyang**	**4.21**	**321**	Sg	**Sb**	**18 36 37.9**	**+1.1**
PYS	**Pyongsong**	**4.31**	**323**	Sg	**Sb**	**18 36 39.8**	**-0.1**

IDC ***17*** *18:56:20.2±0.5, 8°.67S×110°.97E, h0km, mb4.6/27, mbtmp4.6/27, MS3.4/23, Error ellipse: s-maj=18.9km s-min=11.7km az=52.0*

MOS ***17*** *18:56:24.2±1.0, 8°.58S×111°.11E, h37km, mb5.1/35, Error ellipse: s-maj=12.1km s-min=6.4km az=114.5*

BJI ***17*** *18:56:26.0±0.0, 8°.90S×111°.00E, h69km, mb4.6/47, mb5.2/20, Ms4.9/4, Ms7 4.3/5*

NEIC ***17*** *18:56:27.1±1.6, 8°.95S±0°.06×110°.99E±0°.06, h63km±6km, mb4.9/56, Error ellipse: s-maj=9.6km s-min=7.0km az=213.0*

DJA ***17*** *18:56:28.1±0.2, 9°S±3°×11°1E±°, h53km±4km, M5.0/33, mb4.8/33, mB5.5/9, MLv5.1/24, Mw(mB)5.0/9, MwMwp6.4/1, Mwp6.3/1*

ISC 17 18:56:27.3±0.4, 8°.86S±0°.04×110°.98E±0°.04, h62km±3km, h62km:pP-P, n320, σ1§71/357, mb4.8/90, **18C-2D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.04**	**334**	Pn	**Pn**	**18 56 46.6**	**+0.7**
UGM				Sn	**Sn**	**18 57 01.2**	**+1.4**
UGM	**Wanagama**	**1.04**	**334**	P	**Pn**	**18 56 47.6**	**+1.6**
UGM	**Wanagama**	**1.04**	**334**	P	**Pn**	**18 56 47.5**	**+1.6**
UGM				S	**Sn**	**18 57 01.4**	**+1.6**
PWJI	**Pagerwojo**	**1.17**	**45**	P	**Pn**	**18 56 48.4**	**+0.8**
PWJI				S	**Sn**	**18 57 03.1**	**+0.4**
NGJI	**Ngawi**	**1.56**	**18**	P	**Pn**	**18 56 57.2**	**+4.4**
SMRI	**Semarang**	**1.87**	**343**		**Pn**	**18 56 59.8**	**+2.7**
SMRI	**Semarang**	**1.87**	**343**	P	**Pn**	**18 57 00.3**	**+3.2**
SMRI	**Semarang**	**1.87**	**343**	P	**Pn**	**18 57 00.4**	**+3.3**
GRJI	**Gresik**	**2.44**	**38**	P	**Pn**	**18 57 07.3**	**+2.6**
GMJI	**Gumukmas**	**2.51**	**77**	P	**Pn**	**18 57 06.9**	**+1.2**
KPJI	**Karang Pucung**	**2.53**	**307**	P	**Pn**	**18 57 08.0**	**+2.0**
CMJI	**Cimerak**	**2.72**	**293**	P	**Pn**	**18 57 08.9**	**+0.3**
BLJI	**Banyuglugur**	**2.82**	**67**	P	**Pn**	**18 57 11.9**	**+2.0**
JAGI	**Jajag, Banyuwa**	**3.16**	**83**	Pn	**Pn**	**18 57 15.7**	**+1.1**
JAGI				Sn	**Sn**	**18 57 50.0**	**-1.3**
JAGI	**Jajag, Banyuwa**	**3.16**	**83**	P	**Pn**	**18 57 15.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.16**	**83**	P	**Pn**	**18 57 15.8**	**+1.1**
BWJI	**Bawean**	**3.42**	**29**	P	**Pn**	**18 57 20.9**	**+2.7**
JCJI	**Jatiwangi**	**3.57**	**311**	P	**Pn**	**18 57 20.2**	**0.0**
BBJI	**Bungbulang**	**3.57**	**293**	P	**Pn**	**18 57 21.0**	**+0.7**
LEM	**Lembang**	**3.89**	**301**	Pg	**Pn**	**18 57 27.7**	**+2.9**
	38nm,0.3s,baz=32,slow=5.6,SNR=48						
LEM				Sn	**Sn**	**18 58 08.4**	**-1.0**
	32nm,0.3s,baz=96,slow=21,SNR=2.1						
LEM				LR	LR	18 59 14.9	
	comp=Z,539nm,19.1s,baz=116,slow=46						
LEM	**Lembang**	**3.89**	**301**	P	**Pn**	**18 57 27.1**	**+2.3**
CNJI	**Cibinong**	**4.11**	**292**	P	**Pn**	**18 57 28.0**	**+0.4**
DNP	**Denpasar**	**4.19**	**88**	P	**Pn**	**18 57 30.2**	**+1.5**
SRBI	**Singaraja**	**4.26**	**80**	P	**Pn**	**18 57 31.1**	**+1.4**
SKJI	**Sukabumi**	**4.75**	**292**	P	**Pn**	**18 57 37.7**	**+1.3**
DBJI	**Dramaga**	**4.77**	**298**	P	**Pn**	**18 57 38.1**	**+1.4**
XMI	**Christmas Isla**	**5.45**	**253**	P	**Pn**	**18 57 45.3**	**-0.7**
XMIS	**Christmas Isla**	**5.49**	**252**	Pn	**Pn**	**18 57 46.2**	**-0.5**
XMIS	**Christmas Isla**	**5.49**	**252**	P	**Pn**	**18 57 46.1**	**-0.5**
TWSI	**Taliwang, Sumb**	**5.84**	**89**	P	**Pn**	**18 57 52.7**	**+1.4**
	104nm,0.7s,2µm0.8nm						
PLAI	**Plampang**	**6.72**	**90**	P	**Pn**	**18 58 06.3**	**+2.9**
PLAI	**Plampang**	**6.72**	**90**	P	**Pn**	**18 58 05.8**	**+2.4**
	145nm,0.7s,2µm0.8nm						
KASI	**Kota Agung**	**7.23**	**297**	P	**Pn**	**18 58 12.5**	**+2.1**
	51nm,1.1s,0.4nm						
LWLI	**Liwa**	**7.86**	**299**	P	**Pn**	**18 58 21.6**	**+2.5**
	58nm,0.7s,2µm0.4nm						
PPBI	**Pangkal Pinang**	**8.21**	**324**	P	**Pn**	**18 58 25.9**	**+2.1**
	81nm,0.6s,4µm						
MTKI	**Muara Teweh, K**	**8.78**	**27**	P	**Pn**	**18 58 33.8**	**+2.2**
	55nm,0.5s,2µm						
STKI	**Sintang**	**8.88**	**3**	P	**Pn**	**18 58 35.6**	**+2.6**
	41nm,0.8s						
MNAI	**Manna**	**9.13**	**299**	Pn	**Pn**	**18 58 37.5**	**+1.0**
MNAI				Sn	**Sn**	**19 00 13.9**	**-3.9**
MNAI	**Manna**	**9.13**	**299**	P	**Pn**	**18 58 38.5**	**+2.0**
MNAI	**Manna**	**9.13**	**299**	P	**Pn**	**18 58 37.9**	**+1.4**
	143nm,1.0s						
BASI	**Baing, Sumba**	**9.57**	**99**	P	**Pn**	**18 58 42.6**	**+0.2**
	111nm,1.4s						
BKSI	**Bulukumba**	**9.73**	**69**	P	**Pn**	**18 58 46.2**	**+1.6**
	16nm,0.6s						
KSM	**Kuching**	**10.28**	**356**	Pn	**Pn**	**18 58 52.9**	**+0.7**
DSRI	**Dabo**	**10.48**	**322**	P	**Pn**	**18 58 57.0**	**+2.1**
	28nm,1.2s						
TTSI	**Tana Toraja**	**10.52**	**57**	P	**Pn**	**18 58 58.4**	**+3.0**
	19nm,0.9s						
MMRI	**

CMAR Chiang Mai Arr 29.62 336 P **P** **19 02 27.3 +0.3**
comp=Z,1.1nm,0.6s,baz=172,slow=8.5,SNR=12
CMAR PcP **PcP** **19 05 33.3 +2.7**
comp=Z,3.1nm,0.7s,baz=192,slow=3.1,SNR=20
CMAR LR LR 19 15 27.1
comp=Z,85nm,19.1s,baz=165,slow=39
comp=Z,1.1nm,0.6s
OOD Oodnadatta 29.97 132 P **P** **19 02 31.8 +1.8**
QIS Mount Isa 29.98 116 P **P** **19 02 32.1 +1.9**
COEN Coen 31.95 102 P **P** **19 02 48.6 +1.0**
COEN IAmb IAmb 19 02 55.9
comp=Z,8.4nm,0.7s
COEN Coen 31.95 102 P **P** **19 02 49.3 +1.7**
TWG Pinlang 33.00 17 P **P** **19 02 56.2 -0.4**
TPUB Ta-pu 33.33 16 P **P** **19 02 58.3 -1.2**
YULB Yu-li 33.60 17 P **P** **19 03 01.7 -0.2**
YULB IAmb IAmb 19 03 30.7
comp=Z,47nm,1.4s
YULB Yu-li 33.60 17 P **P** **19 03 04.6 +2.7**
MTSU Mount Surprise 33.65 109 P **P** **19 03 05.2 +2.7**
SSLB Suanglung 33.88 17 P **P** **19 03 02.5 -1.8**
PALK Pallekele 34.16 297 P **P** **19 03 05.3 -1.7**
PALK IAmb IAmb 19 03 49.5
comp=Z,17nm,1.1s
PALK Pallekele 34.16 297 P **P** **19 03 05.3 -1.7**
PALK pmax pmax
comp=Z,17nm,1.2s
PALK Pallekele 34.16 297 LR LR 19 17 04.1
comp=Z,23nm,18.3s,baz=247,slow=36
NACB Ninganchiao 34.43 17 **P** **19 03 08.5 -0.5**
NACB IAmb IAmb 19 03 32.0
comp=Z,56nm,1.5s
YHNB Yeheng 34.83 17 P **P** **19 03 12.2 -0.4**
TATO Taipei 35.15 17 P **P** **19 03 14.6 -0.7**
GYA Guiyang 35.35 353 *eP* **P** **19 03 17.6 +0.5**
GYA pmax pmax
comp=Z,4.0nm,0.5s
PMG Port Moresby 35.72 94 LR LR 19 20 18.6
comp=Z,50nm,18.4s,baz=268,slow=40
TNCH TengChong 35.80 340 *eP* **P** **19 03 23.6 +2.5**
TNCH pP pP 19 03 38.4 +2.2
TNCH pmax pmax
comp=Z,5.0nm,0.8s
CTA Charters Tower 35.85 112 P **P** **19 03 21.4 -0.1**
comp=Z,1.6nm,0.6s,baz=279,slow=8.8,SNR=2.1
CTA LR LR 19 19 16.1
comp=Z,81nm,18.1s,baz=281,slow=38
comp=Z,1.6nm,0.6s
CTAO Charters Tower 35.85 112 P **P** **19 03 18.8 -2.7**
CTAO IAmb IAmb 19 03 26.5
comp=Z,26nm,1.7s
CTAO Charters Tower 35.85 112 P **P** **19 03 18.8 -2.7**
CTAO pmax pmax
comp=Z,26nm,1.7s
STKA Stephens Creek 36.49 133 P **P** **19 03 28.1 +1.3**
comp=Z,2.3nm,0.6s,baz=326,slow=12,SNR=2.7
STKA PcP **PcP** **19 05 52.0 +2.4**
comp=Z,3.1nm,0.5s,baz=318,slow=2.8,SNR=5.4
STKA LR LR 19 18 54.5
comp=Z,59nm,21.5s,baz=222,slow=37
comp=Z,2.3nm,0.6s
ENH Enshi 38.93 358 P **P** **19 03 47.0 -0.3**
ENH IAmb IAmb 19 03 50.0
comp=Z,6.4nm,0.5s
ENH Enshi 38.93 358 P **P** **19 03 49.0 +1.7**
ENH Enshi 38.93 358 P **P** **19 03 47.9 +0.6**
ENH PcP **PcP** **19 05 58.6 +1.6**
SHL Shillong 38.94 332 P **P** **19 03 45.7 -1.9**
SHL IAmb IAmb 19 03 48.2
comp=Z,6.9nm,0.5s
SHL Shillong 38.94 332 P **P** **19 03 45.7 -1.9**
SHL pmax pmax
comp=Z,7.0nm,0.5s
SHL Shillong 38.94 332 P **P** **19 03 47.3 -0.4**
JOW Kunigami 39.25 25 LR LR 19 20 35.6
comp=Z,31nm,20.6s,baz=186,slow=37
GUMO Guam 40.36 57 P **P** **19 03 58.0 -1.4**
GUMO Guam 40.36 57 P **P** **19 03 58.0 -1.4**
GUMO pmax pmax
comp=Z,121nm,1.0s
NJ2 Nanjing 41.37 10 *e*P **P** **19 04 10.4 +3.0**
NJ2 pP **pP** **19 04 23.8 +1.0**
NJ2 sP **sP** **19 04 33.4 +3.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.7s
NJ2 pmax pmax
comp=Z,160nm,4.5s
XAN Xi'an 42.70 357 ⇑P **P** **19 04 19.9 +1.6**
XAN pmax pmax
comp=Z,16nm,0.8s
XAN Xi'an 42.70 357 P **P** **19 04 19.1 +0.8**
XAN PcP **PcP** **19 06 10.5 +1.3**
LSA Lhasa 42.82 334 P **P** **19 04 18.6 -1.3**
LSA Lhasa 42.82 334 P **P** **19 04 18.6 -1.3**
LSA pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 42.82 334 P **P** **19 04 20.1 +0.2**
LSA P **P** **19 04 20.1 +0.2**
LSA Lhasa 42.82 334 P **P** **19 04 20.9 +1.0**
LYN LuoYang 43.19 2 *e*P **P** **19 04 22.5 +0.3**
LYN pmax pmax
comp=Z,8.0nm,0.8s
LZH Lanzhou 45.20 352 *e*P **P** **19 04 39.4 +0.9**
LZH pmax pmax
comp=Z,19nm,1.5s
JNU Nakatsue 45.84 23 P **P** **19 04 43.0 -0.4**
comp=Z,18nm,1.3s,baz=153,slow=2.3,SNR=2.2
JNU LR LR 19 24 19.5
comp=Z,32nm,21.8s,baz=164,slow=37
comp=Z,18nm,1.3s
HNS HongShan 46.14 4 ⇑P **P** **19 04 45.4 -0.3**
HNS pmax pmax
comp=Z,4.0nm,0.9s
KSRS Korea Array 48.73 18 P **P** **19 05 05.8 +0.1**
comp=Z,5.9nm,0.7s,baz=198,slow=7.9,SNR=24
KSRS LR LR 19 26 41.5
comp=Z,8.2nm,19.4s,baz=210,slow=38
comp=Z,5.9nm,0.7s
BJT Baijiatuau 48.86 5 P **P** **19 05 06.8 +0.1**
BJT PcP **PcP** **19 06 31.2 +0.7**
BJT Baijiatuau 48.86 5 P **P** **19 05 06.8 +0.1**
BJT PCP **PcP** **19 06 31.2 +0.7**
BJT pmax pmax
comp=Z,5.0nm,0.7s
BJT Baijiatuau 48.86 5 P **P** **19 05 07.0 +0.2**
BJT pP **pP** **19 05 21.4 -1.2**
BJT PcP **PcP** **19 06 31.6 +1.1**
BJI Beijing 48.89 5 P **P** **19 05 07.0 +0.1**
BJI pP **pP** **19 05 21.6 -1.1**
BJI PcP **PcP** **19 06 32.5 +1.9**
BJI pmax pmax
comp=Z,3.0nm,0.7s
GTA Gaotai 49.13 349 *e*P **P** **19 05 10.1 +1.1**
GTA pP pP 19 05 26.5 +1.7
GTA PcP **PcP** **19 06 33.8 +2.1**
GTA pmax pmax
comp=Z,3.0nm,0.9s
BTO Baotou 49.22 359 *e*P **P** **19 05 11.4 +1.8**
BTO pP **sP** **19 05 29.4 -3.0**
BTO sP pP 19 05 38.8 +13
BTO PP **PP** **19 07 01.6 -2.5**
BTO S **S** **19 12 12.3 +1.2**
BTO SS **SS** **19 15 35.5 -7.9**
BTO pmax pmax
comp=Z,12nm,1.0s
BTO pmax pmax
comp=Z,250nm,5.3s
BTO LR LR
comp=Z,310nm,4.4s
BTO LR LR
comp=Z,290nm,4.7s
BTO LR LR
comp=Z,180nm,4.4s
HHC Hu-ho-hao-te 49.46 1 *e*P **P** **19 05 15.9 +4.5**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.8s
MJAR Matsushiro Arr 51.91 28 P **P** **19 05 29.0 -0.8**
comp=Z,3.0nm,0.6s,baz=200,slow=8.7,SNR=5.9
MJAR LR LR 19 26 39.8
comp=Z,22nm,21.2s,baz=202,slow=35
comp=Z,3.0nm,0.6s
XLT XiLinHaoTe 52.71 5 *e*P **P** **19 05 32.4 -3.3**
XLT pP pP 19 05 51.3 -0.4
XLT sP sP 19 06 03.3 +4.6
XLT pmax pmax
comp=Z,3.0nm,0.7s
XLT pmax pmax
comp=Z,140nm,3.9s
DZM Mont Dzumac 54.77 111 *e*LR LR 19 21 40.0
comp=Z,47nm,22.8s
MDJ Mudanjiang 55.82 16 P **P** **19 05 58.3 +0.1**
MDJ pP pP 19 06 12.8 -1.5
MDJ sP sP 19 06 20.8 -0.4
MDJ PcP **PcP** **19 06 56.3 -0.2**
MDJ PP **PP** **19 08 03.0 -0.5**
MDJ ScP **ScP** **19 10 47.5 -2.9**
MDJ PcS **PcS** **19 10 55.4 -1.3**
MDJ sS sS 19 14 11.1 +2.8
MDJ ScS **ScS** **19 15 42.4 +0.5**
MDJ pmax pmax
comp=Z,9.0nm,0.6s
MDJ pmax pmax
comp=Z,250nm,5.1s
MDJ Mudanjiang 55.82 16 P **P** **19 05 58.3 +0.1**
USRK Ussuriysk Ar. 56.13 18 P **P** **19 06 00.7 +0.2**
comp=Z,4.2nm,0.5s,baz=200,slow=3.2,SNR=29
USRK LR LR 19 31 57.9
comp=Z,21nm,18.7s,baz=196,slow=38
comp=Z,4.2nm,0.5s
BNX BinXian 56.31 14 ⇓P **P** **19 06 01.8 +0.1**
BNX pmax pmax
comp=Z,18nm,0.7s
BNX pmax pmax
comp=Z,230nm,4.2s
WMQ Urumqi 56.53 340 *eP* **P** **19 06 05.8 +2.4**
ULN Ulaanbaatar 56.58 357 P **P** **19 06 03.4 -0.4**
ULN PcP **PcP** **19 07 00.6 +1.0**
ULN Ulaanbaatar 56.58 357 P **P** **19 06 03.4 -0.4**
ULN 19 07 00.6
ULN pmax pmax
comp=Z,6.0nm,1.2s
ULN Ulaanbaatar 56.58 357 P **P** **19 06 04.1 +0.3**
ULN Ulaanbaatar 56.58 357 P **P** **19 06 03.8 +0.1**
ULN PcP **PcP** **19 07 00.6 +1.0**
SONM Songino Array 56.59 356 P **P** **19 06 04.0 +0.2**
comp=Z,1.8nm,0.5s,baz=173,slow=8.9,SNR=18
SONM PcP **PcP** **19 07 00.8 +1.2**
comp=Z,3.6nm,0.6s,baz=175,slow=4.3,SNR=12
comp=Z,1.8nm,0.5s
WUS Wushi 57.74 332 P **P** **19 06 12.4 +0.3**
KSH Kashi 58.05 328 P **P** **19 06 13.1 -1.2**
KSH pmax pmax
comp=Z,5.0nm,0.7s
JLN Jalan Bani Buh 59.19 302 P **P** **19 06 23.3 +0.9**
NGCH Negor - Chabah 59.24 306 P **P** **19 06 22.1 -0.5**
WBK Wadi Bani Khal 59.76 303 P **P** **19 06 26.9 +0.6**
DQM DQM 59.87 299 P **P** **19 06 28.5 +1.4**
MHTO MHTO 59.92 300 P **P** **19 06 27.8 +0.4**
ASAJ Asahikawa 60.00 26 P **P** **19 06 27.2 -0.3**
ASAJ pmax pmax
comp=Z,96nm,1.7s
JKA Kamikawa-asahi 60.00 26 P **P** **19 06 27.2 -0.3**
WSAR Wadi Sarin 60.31 303 P **P** **19 06 31.1 +1.0**
JMDO Jabal Madar 60.38 302 P **P** **19 06 31.5 +0.9**
HEH HeiHe 60.58 12 *e*P **P** **19 06 31.0 -0.4**
HEH pmax pmax
comp=Z,15nm,0.7s
KLR Kul'dur 60.65 15 *ce*P **P** **19 06 31.9 +0.1**
KLR pmax pmax
comp=Z,13nm,1.7s
KLR Kul'dur 60.65 15 P **P** **19 06 31.6 -0.2**
comp=Z,4.5nm,0.5s,baz=192,slow=5.2,SNR=32
KLR LR LR 19 33 35.2
comp=Z,17nm,19.6s,baz=98,slow=37
comp=Z,4.5nm,0.5s
SMDO Samad 60.72 303 P **P** **19 06 34.0 +1.0**
SHAO Shalim 60.82 296 P **P** **19 06 32.8 -0.9**
BIDO Bidbid 60.85 303 P **P** **19 06 35.1 +1.3**
ARSB Arslanbob 60.92 328 P **P** **19 06 33.6 -0.5**
ARSB PcP **PcP** **19 07 18.8 +1.7**
ARSB Arslanbob 60.92 328 P **P** **19 06 33.6 -0.5**
ARSB 19 07 18.8
ARSB pmax pmax
comp=Z,5.0nm,1.7s
MK31 Makanchi Array 61.02 338 *ce*P **P** **19 06 34.8 +0.3**
MKAR Makanchi Array 61.02 338 P **P** **19 06 34.2 -0.2**
comp=Z,9.6nm,0.6s,baz=150,slow=7.4,SNR=168
MKAR LR LR 19 35 36.5
comp=Z,36nm,19.3s,baz=3.5,slow=39
comp=Z,9.6nm,0.6s
AAK Ala-Archa 61.11 330 P **P** **19 06 35.3 -0.1**
AAK IAmb IAmb 19 07 20.6
comp=Z,5.6nm,1.0s
AAK Ala-Archa 61.11 330 P **P** **19 06 35.3 -0.1**
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 61.11 330 LR LR 19 35 04.2
comp=Z,29nm,18.8s,baz=23,slow=38
AAK Ala-Archa 61.11 330 P **P** **19 06 36.1 +0.7**
AAK Ala-Archa 61.11 330 P **P** **19 06 35.9 +0.5**
AAK sP **sP** **19 06 56.7 -1.6**
MAKZ Makanchi 61.15 338 P **P** **19 06 34.7 -0.6**
MAKZ Makanchi 61.15 338 P **P** **19 06 34.7 -0.6**
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
MAKZ Makanchi 61.15 338 P **P** **19 06 35.2 -0.1**
BSY Bisya 61.30 302 P **P** **19 06 37.7 +0.9**
SIMJ Simiganj 61.31 323 P **P** **19 06 34.3 -2.4**
SIMJ Simiganj 61.31 323 P **P** **19 06 36.1 -0.7**
SIMJ PcP **PcP** **19 07 19.8 +1.2**
DMTO DMTO 61.31 296 P **P** **19 06 37.8 +0.8**
HOQ Hoqain 61.55 303 P **P** **19 06 39.6 +1.1**
DGZ Jazzator, Alta 61.84 343 *i* P **P** **19 06 40.3 +0.2**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
RBK Rabkut 61.90 295 P **P** **19 06 41.7 +0.7**
JASK Jask - Hormozg 62.09 305 P **P** **19 06 42.5 +0.5**
ARQ Araqi 62.11 302 P **P** **19 06 42.9 +0.6**
YSS Yuzh-Sakhalins 62.35 24 P **P** **19 06 42.6 -0.7**
YSS IAmb IAmb 19 06 45.0
comp=Z,29nm,1.2s
YSS Yuzh-Sakhalins 62.35 24 *ce*P **P** **19 06 43.5 +0.2**
YSS pmax pmax
comp=Z,16nm,1.0s
YSS Yuzh-Sakhalins 62.35 24 P **P** **19 06 43.9 +0.6**
DOK Doka 62.36 296 P **P** **19 06 44.6 +0.6**
SNR=10
SOHO SOHO 62.43 303 P **P** **19 06 44.8 +0.5**
WHFO Wadi Hawf 62.43 295 P **P** **19 06 45.0 +0.5**
RPZ Rata Peaks 62.43 135 LR LR 19 34 14.9
comp=Z,100nm,18.0s,baz=260,slow=36
H04N2 CROZET ISLANDS 62.49 222 T T 20 15 02.7
baz=70,slow=75,SNR=61
H04N1 CROZET ISLANDS 62.50 222 T T 20 15 17.1
baz=70,slow=75,SNR=36
H04N3 CROZET ISLANDS 62.51 222 T T 20 15 21.9
baz=70,slow=75,SNR=37
ABTO Aybut 62.66 295 P **P** **19 06 47.2 +1.1**
SNR=5.7
VOI Vohitsoka 62.84 250 P **P** **19 06 45.7 -1.7**
VOI IAmb IAmb 19 08 34.2
comp=Z,22nm,1.5s
UOSS Minazif 63.04 304 P **P** **19 06 46.4 -2.0**
UOSS IAmb IAmb 19 06 49.5
comp=Z,22nm,1.4s
UOSS Minazif 63.04 304 P **P** **19 06 48.9 +0.4**
ALNE Al Ain 63.05 303 P **P** **19 06 49.5 +0.9**
HATD Hatta, Dubai 63.05 304 P **P** **19 06 50.0 +1.5**
SNR=7.2
MDH Madha 63.12 304 P **P** **19 06 48.8 -0.1**
MASF Masafi 63.26 304 P **P** **19 06 50.7 +0.8**
FAQ Al Faqa, Dubai 63.46 303 P **P** **19 06 52.3 +1.0**
SHME Shamm 63.56 305 P **P** **19 06 52.7 +0.8**
SNR=6.3
ASUD Al Ashush, Dub 63.63 303 P **P** **19 06 53.5 +1.1**
ZEA Zeya 63.86 11 *e*P **P** **19 06 53.3 +0.1**
ZEA *e* 19 07 09.1
ZEA pmax pmax
comp=Z,10.0nm,1.3s
BHW Baring Head 64.67 132 P **P** **19 06 56.4 -2.5**
GHWR Ruwais 65.42 301 P **P** **19 07 05.0 +1.0**
BFZ Birch Farm 65.56 131 P **P** **19 07 03.8 -0.9**
KURBB Kurchatov Arra 65.59 338 P **P** **19 07 03.9 -0.6**
comp=Z,3.7nm,0.4s,baz=151,slow=6.1,SNR=41
KURBB PcP **PcP** **19 07 36.5 +0.9**
comp=Z,2.1nm,0.6s,baz=156,slow=3.7,SNR=10.0
comp=Z,3.7nm,0.4s
KURK Kurchatov 65.63 338 P **P** **19 07 04.5 -0.3**
KURK IAmb IAmb 19 07 05.7
comp=Z,4.4nm,0.5s
KURK PcP **PcP** **19 07 36.6 +0.8**
KURK Kurchatov 65.63 338 *ce*P **P** **19 07 05.9 +1.1**
KURK pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 65.63 338 P **P** **19 07 04.9 +0.1**
KURK Kurchatov 65.63 338 P **P** **19 07 04.9 +0.1**
KURK PcP **PcP** **19 07 36.7 +0.8**
RTZ Ruatahuna 65.80 128 P **P** **19 07 05.4 -1.0**
RTZ IAmb IAmb 19 07 12.6
comp=Z,28nm,1.4s
RTZ PcP **PcP** **19 07 38.4 +1.2**
JRN Qarnain Island 65.82 302 P **P** **19 07 07.1 +0.6**
URZ Urewera 65.85 128 LR LR 19 34 34.0
comp=Z,40nm,21.8s,baz=303,slow=35
ZALV Zalesovo Beam 66.36 343 P **P** **19 07 08.8 -0.7**
comp=Z,6.6nm,0.4s,baz=155,slow=6.3,SNR=50
ZALV LR LR 19 37 29.7
comp=Z,40nm,18.1s,baz=160,slow=37
comp=Z,6.6nm,0.4s
SLWR Sila 66.46 301 P **P** **19 07 11.8 +1.1**
TRNA Turayna 67.12 301 P **P** **19 07 15.4 +0.6**
SMRA Abu-Samra 67.45 301 P **P** **19 07 17.4 +0.4**
GEYT Alibeck 67.78 317 P **P** **19 07 18.9 +0.1**
comp=Z,2.3nm,0.7s,baz=142,slow=7.4,SNR=9.4
comp=Z,2.3nm,0.7s
BVAR Borovoye Array 70.64 335 P **P** **19 07 36.2 0.0**
comp=Z,6.7nm,0.8s,baz=134,slow=8.5,SNR=35
comp=Z,6.7nm,0.8s
BRVK Borovoye 70.71 335 P **P** **19 07 36.3 -0.3**
BRVK Borovoye 70.71 335 *ce*P **P** **19 07 37.0 +0.4**
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK Borovoye 70.71 335 P **P** **19 07 36.7 +0.1**
BRVK Borovoye 70.71 335 P **P** **19 07 36.7 +0.1**
RAYN Ar Rayn 71.59 298 P **P** **19 07 43.1 +0.5**
RAYN IAmb IAmb 19 07 44.2
comp=Z,12nm,1.2s
RAYN Ar Rayn 71.59 298 P **P** **19 07 43.1 +0.5**
RAYN pmax pmax
comp=Z,13nm,1.3s
RAYN Ar Rayn 71.59 298 P **P** **19 07 43.3 +0.7**
RAYN Ar Rayn 71.59 298 P **P** **19 07 43.3 +0.7**
RAYN pP **pP** **19 07 59.4 +0.2**
YAK Yakutsk 72.16 9 P **P** **19 07 44.8 -0.3**
YAK Yakutsk 72.16 9 *eP* **P** **19 07 44.5 -0.6**
YAK *e* 19 07 59.8
YAK *e* 19 10 25.2
YAK *eS* **S** **19 17 01.5 -1.0**
YAK *e**SS **SKSac** **19 17 37.6 -6.1**
YAK *e* 19 17 46.0
YAK *eSS* **SS** **19 21 44.3 +3.0**
YAK pmax pmax
comp=Z,34nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=Z,107nm,4.1s
YAK pmax pmax
comp=E,57nm,4.0s
YAK pmax pmax
comp=N,88nm,4.1s
YAK smax smax
comp=N,117nm,4.5s
YAK smax smax
comp=E,107nm,4.3s
ABKAR Akbulak array 73.04 328 P **P** **19 07 50.7 0.0**
PETK Petropavlovsk- 73.36 27 P **P** **19 07 53.0 +0.5**
PETK Petropavlovsk- 73.36 27 P **P** **19 07 53.0 +0.5**
comp=E,7.3nm,0.7s,baz=242,slow=0.8,SNR=20
comp=E,7.3nm,0.7s
LKRN Lenkeran, Azer 74.61 314 P **P** **19 08 03.3 +3.2**
MA2 Magadan 75.24 20 P **P** **19 08 03.6 +0.4**
MA2 IAmb IAmb 19 08 04.9
comp=Z,13nm,0.8s
MA2 Magadan 75.24 20 *ce*P **P** **19 08 04.2 +1.0**
MA2 pmax pmax
comp=Z,15nm,1.0s
MNGR Mingechevir, A 76.66 316 P **P** **19 08 14.9 +3.2**
SEKA Sheki 76.76 316 P **P** **19 08 15.1 +2.7**
GANJ Ganja 77.14 315 P **P** **19 08 17.6 +3.1**
NAX Nakhchivan 77.14 313 P **P** **19 08 17.6 +3.0**
ZKTA Zakatala 77.33 316 P **P** **19 08 18.7 +3.2**
SVE Sverdlovsk 77.35 334 *eP* **P** **19 08 15.9 +0.6**
SVE pmax pmax
comp=Z,11nm,0.9s
ARU Arti 78.01 333 P **P** **19 08 18.5 -0.4**
ARU IAmb IAmb 19 08 20.4
comp=Z,7.7nm,1.0s
ARU Arti 78.01 333 *c i*P **P** **19 08 18.8 -0.2**
ARU 19 11 10.6
ARU S **S** **19 18 08.5 +0.7**
ARU pmax pmax
comp=Z,8.0nm,1.0s
GNI Garni 78.05 314 P **P** **19 08 19.2 -0.5**
GNI IAmb IAmb 19 08 28.4
comp=Z,7.7nm,0.7s
GNI Garni 78.05 314 *ce*P **P** **19 08 20.3 +0.5**
GNI pmax pmax
comp=Z,9.0nm,1.0s
GNI Garni 78.05 314 P **P** **19 08 21.2 +1.4**
SEY Seymchan 78.28 18 *ce*P **P** **19 08 21.3 +1.0**
SEY pmax pmax
comp=Z,12nm,1.0s
AKH Akhalkalaki 79.41 315 P **P** **19 08 26.3 -0.9**
AKH IAmb IAmb 19 08 29.7
comp=Z,53nm,1.5s
AKH Akhalkalaki 79.41 315 P **P** **19 08 26.3 -0.9**
AKH pmax pmax
comp=Z,53nm,1.5s
KARS Kars 79.41 314 P **P** **19 08 26.9 -0.3**
KARS Kars 79.41 314 P **P** **19 08 26.9 -0.3**
GURO Guroymak-BITLI 79.43 312 P **P** **19 08 27.5 +0.2**
GURO IAmb IAmb 19 08 29.6
comp=Z,14nm,1.2s
ZEI Tsey 79.64 316 *eP* **P** **19 08 29.0 +0.5**
ZEI pmax pmax
comp=Z,7.0nm,0.8s
NRIK Noril'sk 79.70 352 *ce*P **P** **19 08 28.3 +0.4**
NRIK pmax pmax
comp=Z,6.0nm,1.1s
NRIK Noril'sk 79.70 352 P **P** **19 08 27.8 -0.2**
comp=Z,3.0nm,0.4s,baz=127,slow=3.0,SNR=3.9
comp=Z,3.0nm,0.4s
MBAR Mbarara 80.26 271 P **P** **19 08 35.6 +3.1**
KBZ Khabaz 80.67 317 *ce*P **P** **19 08 34.0 +0.3**
KBZ pmax pmax
comp=Z,11nm,0.9s
KBZ Khabaz 80.67 317 P **P** **19 08 35.0 +1.3**
comp=Z,9.5nm,0.8s,baz=181,slow=3.2,SNR=19
comp=Z,9.5nm,0.8s
LSZ Lusaka 80.81 256 P **P** **19 08 36.7 +1.5**
LSZ Lusaka 80.81 256 P **P** **19 08 36.7 +1.5**
LSZ pmax pmax
comp=Z,4.0nm,0.6s
LSZ Lusaka 80.81 256 LR LR 19 39 00.4
comp=Z,33nm,20.4s,baz=153,slow=32
KIV Kislovodsk 80.90 317 P **P** **19 08 36.0 +1.0**
KIV IAmb IAmb 19 08 39.4
comp=Z,16nm,0.6s
KIV Kislovodsk 80.90 317 *eP* **P** **19 08 36.9 +1.8**
KIV pmax pmax
comp=Z,15nm,0.9s
KIV Kislovodsk 80.90 317 P **P** **19 08 36.6 +1.6**
QSPA South Pole Qui 81.14 180 P **P** **19 08 38.3 +2.3**
comp=Z,1.6nm,0.6s,baz=303,slow=0.3,SNR=24
comp=Z,1.6nm,0.6s
TIXI Tiksi 81.21 6 P **P** **19 08 35.0 -0.9**
TIXI IAmb IAmb 19 08 36.5
comp=Z,18nm,0.8s
TIXI Tiksi 81.21 6 *ce*P **P** **19 08 35.6 -0.4**
TIXI pmax pmax
comp=Z,18nm,0.7s
BELG Belogornoye 81.33 326 *i* P **P** **19 08 37.3 +0.3**
BELG pmax pmax
comp=Z,5.0nm,0.9s
BELG Belogornoye 81.33 326 LR LR 19 53 03.0
comp=Z,20nm,19.0s,baz=118,slow=42
BOSA Boshof 82.08 242 P **P** **19 08 44.6 +2.8**
comp=Z,1.8nm,0.8s,baz=256,slow=7.0,SNR=2.0
comp=Z,1.8nm,0.8s

ARPR	**Arapgir-MALATY**	**82.33**	**311**	P	**P**	**19 08 43.1**	**+0.2**
ARPR				IAmb	IAmb	19 08 45.8	
	comp=Z,20nm,1.1s						
SOC	**Sochi**	**82.78**	**316**	*e*P	**P**	**19 08 44.1**	**-0.7**
SOC				*e*		19 11 53.6	
SOC				*e*PPP	PPP	19 13 45.0	
SOC				*e*S	**S**	**19 18 58.0**	**-0.3**
SOC				*e*SS	**SS**	**19 24 21.3**	**-1.0**
SOC				*e*SSS	SSS	19 27 51.6	
SOC				pmax	pmax		
	comp=Z,31nm,0.7s						
MMAI	**Mount Meron Ar**	**82.88**	**305**	P	**P**	**19 08 47.9**	**+2.2**
	comp=Z,2.7nm,0.6s,baz=83,slow=7.8,SNR=6.9						
	comp=Z,2.7nm,0.6s						
KIRV	**Kirov**	**83.33**	**332**	*ce*P	**P**	**19 08 47.3**	**0.0**
VRH	**Novokhopyorsk**	**84.18**	**324**	*e*P	**P**	**19 08 52.1**	**+0.3**
VRH				pmax	pmax		
	comp=Z,21nm,0.8s						
VORD	**Divnogorie**	**85.53**	**323**	*e*P	**P**	**19 08 58.3**	**-0.3**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**85.69**	**323**	*e*P	**P**	**19 08 58.7**	**-0.7**
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VORR	**Voronezh**	**85.82**	**324**	P	**P**	**19 09 01.3**	**+1.3**
VORR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BILL	**Bilibino**	**85.99**	**18**	*i* P	**P**	**19 09 00.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,11nm,2.1s						
BR131	**Keskin Array S**	**86.00**	**311**	*i* P	**P**	**19 09 01.1**	**-0.3**
BR131	**Keskin Array S**	**86.00**	**311**	P	**P**	**19 09 03.1**	**+1.6**
	SNR=9.3						
BRTR	**Keskin Array B**	**86.00**	**311**	*ce*P	**P**	**19 09 02.5**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	**Keskin Array B**	**86.00**	**311**	P	**P**	**19 09 01.9**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=131,slow=6.8,SNR=32						
	comp=Z,5.8nm,0.8s						
LPSR	**Galich'ya Gora**	**86.30**	**324**	*e*P	**P**	**19 09 01.6**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
ELL	**Elmali**	**88.16**	**307**	P	**P**	**19 09 13.0**	**+1.1**
ELL	**Elmali**	**88.16**	**307**	P	**P**	**19 09 13.0**	**+1.1**
OBN	**Obninsk**	**88.43**	**326**	*de*P	**P**	**19 09 12.9**	**+0.4**
OBN				*e*		19 12 37.8	
OBN				*e*PPP	PPP	19 14 40.8	
OBN				pmax	pmax		
	comp=Z,34nm,1.7s						
OBN				MLR	MLR		
	comp=Z,51nm,14.0s						
KLMR	**Klimovskoe**	**88.83**	**332**	*e*P	**P**	**19 09 12.5**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
SNAA	**Sanae**	**88.92**	**197**	P	**P**	**19 09 17.2**	**+2.4**
SNAA				IAmb	IAmb	19 11 04.9	
	comp=Z,34nm,2.0s						
SNAA	**Sanae**	**88.92**	**197**	P	**P**	**19 09 17.2**	**+2.4**
SNAA				pmax	pmax		
	comp=Z,34nm,2.0s						
SNAA	**Sanae**	**88.92**	**197**	LR	LR	19 43 12.4	
	comp=Z,42nm,18.6s,baz=110,slow=32						
AKASG	**Malin Array Be**	**91.60**	**321**	*ce*P	**P**	**19 09 29.2**	**+1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**91.60**	**321**	P	**P**	**19 09 27.8**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=86,slow=5.0,SNR=5.2						
	comp=Z,2.3nm,0.8s						
MNK	**Minsk**	**93.15**	**325**	*i* P	**P**	**19 09 32.0**	**-2.6**
MNK				*i* *PP	**pP**	**19 09 49.0**	**-2.6**
MNK				*i*		19 13 15.7	
MNK				*i* PPP	PPP	19 15 15.9	
MNK				*i* S	**SKSac**	**19 20 00.3**	**-3.0**
MNK				*i* *SS	**S**	**19 20 30.8**	**-5.6**
MNK				*i* PS	**PS**	**19 21 54.8**	**-2.2**
MNK				*i* SS	**SS**	**19 26 51.3**	**-1.5**
MNK				*i* SSS	SSS	19 30 31.7	
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,28nm,15.0s						
KIP	**Kipapa**	**94.11**	**69**	*ce*P	**P**	**19 09 39.0**	**-0.8**
FINES	**FINESS Array B**	**95.27**	**331**	P	**P**	**19 09 44.0**	**-0.2**
FINES	**FINESS Array B**	**95.27**	**331**	P	**P**	**19 09 44.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=97,slow=9.8,SNR=8.0						
FINES				PKiKP	**PKiKP**	**19 14 26.7**	**+2.0**
	comp=Z,1.3nm,1.0s,baz=107,slow=6.4,SNR=3.8						
	comp=Z,1.1nm,0.6s						
PPT2	**Papeete2**	**96.24**	**109**	*e*LR	LR	19 40 59.1	
	comp=Z,42nm,27.0s						
CRVS	**Cervenica-Dubn**	**96.28**	**318**	*e*PP	**PP**	**19 13 44.6**	**+1.4**
ARCES	**ARCESS Array B**	**96.65**	**339**	P	**P**	**19 09 50.0**	**-0.3**
ARCES	**ARCESS Array B**	**96.65**	**339**	P	**P**	**19 09 50.0**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=88,slow=4.1,SNR=5.9						
	comp=Z,2.9nm,1.0s						
SPITS	**Spitsbergen Ar**	**99.56**	**348**	P	**Pdif**	**19 10 03.0**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=96,slow=8.6,SNR=6.9						
	comp=Z,5.8nm,0.8s						
YKA	**Yellowknife Ar**	**117.17**	**22**	PKP	**PKiKP**	**19 15 05.9**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=306,slow=1.8,SNR=12						
NVAR	**Mina Array Bea**	**126.94**	**48**	PKP	**PKiKP**	**19 15 26.1**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=269,slow=2.0,SNR=6.5						
PDAR	**Pinedale Array**	**131.04**	**39**	PKP	**PKiKP**	**19 15 34.9**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=308,slow=0.3,SNR=4.0						
TXAR	**Lajitas Array**	**141.67**	**53**	PKhKP	PKPpre	19 15 48.4	
	comp=Z,0.5nm,0.7s,baz=299,slow=1.3,SNR=7.1						
BDFB	**Brasilia**	**147.98**	**221**	PKPbc	**PKiKP**	**19 16 09.1**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=113,slow=5.3,SNR=4.5						

ZUR ***17*** *19:02:55.0, 45˚.68N ×10˚.16E, h40km ± 1km, MLh2.5/24, Error ellipse: s-maj=2392.8km s-min=1136.0km az=74.0*
ROM ***17*** *19:02:54.8 ± 0.1, 45˚.672N ± 0˚.007 × 10˚.180E ± 0˚.006, h38km, ML2.7/92, Error ellipse: s-maj=0.7km s-min=0.4km az=177.0*
STR ***17*** *19:02:54.9 ± 0.5, 46˚.N ± 2˚ × 1˚.0E ± °, h2km, MLv2.2/9, Error ellipse: s-maj=0.0km s-min=0.0km az=97.6, preliminary*
LDG ***17*** *19:02:55.0 ± 0.2, 45˚.71N × 10˚.19E, h36km, Ml2.7/29, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
PRU ***17*** *19:03:11.2, 46˚.45N × 10˚.83E, h10km*

ISC 17 19:02:54.2 ± 1.1, **45˚.69N** ± 0˚.02 × **10˚.10E** ± 0˚.02, **h44** km ± 4km, **n155**, σ1$50/233, **2C-23D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZONE	**Zone**	**0.07**	**12**	P	**Pn**	**19 03 01.2**	**-0.2**
ZONE				S	**Sn**	**19 03 06.3**	**-0.1**
ZONE				AML	AML		
	comp=E,2455μm,0.2s						
ZONE				AML	AML		
	comp=E,10040μm,0.2s						
ZONE				AML	AML		
	comp=N,4765μm,0.3s						
ZONE				AML	AML		
	comp=N,1080μm,0.3s						
CNCS	**Concesio**	**0.12**	**135**	P	**Pn**	**19 03 01.5**	**+0.1**
CNCS				S	**Sn**	**19 03 06.1**	**-0.3**
CAPR	**Capriolo**	**0.12**	**244**	P	**Pn**	**19 03 02.0**	**+0.6**
CAPR				AML	AML		
	comp=E,1045μm,0.3s						
CAPR				AML	AML		
	comp=N,981μm,0.7s						
MDI	**Monti di Nese**	**0.28**	**288**	↑Pg	**Pn**	**19 03 03.5**	**+0.7**
MDI				Sg	**Sn**	**19 03 09.9**	**+1.1**
MDI	**Monti di Nese**	**0.28**	**288**	↑P	**Pn**	**19 03 03.5**	**+0.7**
MDI				S	**Sn**	**19 03 09.9**	**+1.1**
MDI				AML	AML		
	comp=E,1920μm,0.3s						
MDI				AML	AML		
	comp=N,1605μm,0.3s						
MDI				AML	AML		
	comp=N,1390μm,0.2s						
MDI				AML	AML		
	comp=E,1905μm,0.3s						
BAG8	**Bagolino**	**0.29**	**63**	↓P	**Pn**	**19 03 02.9**	**0.0**
BAG8				S	**Sn**	**19 03 08.3**	**-0.6**
BAG8				AML	AML		
	comp=E,2135μm,0.4s						
BAG8				AML	AML		
	comp=N,1780μm,0.1s						
BAG8				AML	AML		
	comp=E,2130μm,0.4s						
VOBA	**Vobarno**	**0.29**	**100**	↓P	**Pn**	**19 03 02.6**	**-0.1**
VOBA				S	**Sn**	**19 03 08.2**	**-0.6**
VOBA				AML	AML		
	comp=E,1030μm,0.7s						
VOBA				AML	AML		
	comp=E,1034μm,0.7s						
VOBA				AML	AML		
	comp=E,1034μm,0.7s						
VOBA				AML	AML		
	comp=N,1270μm,1.5s						
SALO	**Salr**	**0.31**	**104**	↓Pg	**Pn**	**19 03 03.1**	**+0.1**
SALO	**Salr**	**0.31**	**104**	↓P	**Pn**	**19 03 03.1**	**+0.1**
SALO				S	**Sn**	**19 03 09.1**	**0.0**
SALO				AML	AML		
	comp=E,1990μm,0.8s						
SALO				AML	AML		
	comp=N,1160μm,0.9s						
SALO				AML	AML		
	comp=E,1955μm,0.3s						
SALO				AML	AML		
	comp=N,1135μm,0.9s						
GAVI	**Passo Gaver BS**	**0.34**	**48**	↓*e*Pg	**Pn**	**19 03 03.8**	**+0.3**
GAVI				*e*Sg	**Sn**	**19 03 09.5**	**-0.5**
QUINZ	**Quinzano d'Ogl**	**0.40**	**186**	*e*Pg	**Pn**	**19 03 06.2**	**+2.3**
GARGN	**Gargnano BS**	**0.40**	**90**	↓*e*Pg	**Pn**	**19 03 03.8**	**-0.2**
GARGN				*e*Sg	**Sn**	**19 03 09.7**	**-1.2**
ZEN8	**San Zeno di Mo**	**0.45**	**97**	P	**Pn**	**19 03 04.4**	**-0.2**
ZEN8				S	**Sn**	**19 03 11.1**	**-0.8**
MABI	**Malga Bissina**	**0.47**	**39**	↓Pg	**Pn**	**19 03 05.1**	**+0.2**
MABI				Sg	**Sn**	**19 03 12.1**	**-0.4**
MABI	**Malga Bissina**	**0.47**	**39**	P	**Pn**	**19 03 05.1**	**+0.2**
MABI				S	**Sn**	**19 03 12.2**	**-0.4**
MABI				AML	AML		
	comp=E,716μm,0.6s						
MABI				AML	AML		
	comp=N,927μm,0.1s						
RONC	**Roncone**	**0.47**	**52**	↓*e*Pg	**Pn**	**19 03 05.3**	**+0.4**
RONC				*e*Sg	**Sn**	**19 03 12.0**	**-0.5**
RONC	**Roncone**	**0.47**	**52**	↓P	**Pn**	**19 03 05.3**	**+0.4**
RONC				S	**Sn**	**19 03 12.2**	**-0.3**
RONC				AML	AML		
	comp=E,2700μm,1.4s						
RONC				AML	AML		
	comp=E,1955μm,0.5s						
RONC				AML	AML		
	comp=N,2575μm,0.2s						
RONC				AML	AML		
	comp=E,2695μm,1.4s						
RONC				AML	AML		
	comp=N,2870μm,0.1s						
RONC				AML	AML		
	comp=N,2575μm,1.8s						
RONC				AML	AML		
	comp=E,1955μm,1.5s						
RONC				AML	AML		
	comp=E,2695μm,0.6s						
MERA	**Merate**	**0.47**	**268**	↓P	**Pn**	**19 03 05.8**	**+1.0**
MERA				AML	AML		
	comp=E,2100μm,0.4s						
MERA				AML	AML		
	comp=N,1685μm,0.4s						
BALD	**Monte Baldo**	**0.51**	**91**	↓*e*Pg	**Pn**	**19 03 05.3**	**-0.1**
BALD				*e*Sg	**Sn**	**19 03 12.4**	**-1.0**
MBAL	**Monte Baldo -**	**0.54**	**89**	↓P	**Pn**	**19 03 05.5**	**-0.2**
MBAL				S	**Sn**	**19 03 13.0**	**-0.8**
MBAL				AML	AML		
	comp=N,3140μm,0.3s						
MBAL				AML	AML		
	comp=E,2480μm,0.5s						
MBAL				AML	AML		
	comp=E,2480μm,1.5s						
VARA	**Varagna**	**0.58**	**76**	↓*e*Pg	**Pn**	**19 03 06.2**	**-0.1**
VARA				*e*Sg	**Sn**	**19 03 13.5**	**-1.5**
VARA	**Varagna**	**0.58**	**76**	↓P	**Pn**	**19 03 06.2**	**-0.1**
VARA				S	**Sn**	**19 03 14.0**	**-0.9**
VARA				AML	AML		
	comp=N,1490μm,1.4s						
VARA				AML	AML		
	comp=N,1075μm,0.3s						
VARA				AML	AML		
	comp=E,1460μm,1.4s						
VARA				AML	AML		
	comp=E,1075μm,0.4s						
VARA				AML	AML		
	comp=N,1485μm,1.4s						
VARA				AML	AML		
	comp=E,1465μm,1.4s						
VARA				AML	AML		
	comp=E,1465μm,0.6s						
VARA				AML	AML		
	comp=N,1485μm,0.6s						
LUSI	**Trento, Gardas**	**0.65**	**65**	↓Pg	**Pn**	**19 03 07.1**	**0.0**
LUSI				Sg	**Sn**	**19 03 15.9**	**-0.6**
LUSI	**Trento, Gardas**	**0.65**	**65**	P	**Pn**	**19 03 07.2**	**0.0**
LUSI				S	**Sn**	**19 03 15.9**	**-0.6**
LUSI				AML	AML		
	comp=E,883μm,0.3s						
LUSI				AML	AML		
	comp=N,1585μm,0.2s						
ROVR	**Rover Verones**	**0.69**	**93**	↓P	**Pn**	**19 03 07.5**	**-0.3**
ROVR				S	**Sn**	**19 03 16.2**	**-1.2**
ROVR				AML	AML		
	comp=E,860μm,0.5s						
ROVR				AML	AML		
	comp=E,335μm,0.6s						
ROVR				AML	AML		
	comp=N,500μm,0.2s						
ROVR				AML	AML		
	comp=E,335μm,1.4s						
ROVR				AML	AML		
	comp=E,860μm,0.5s						
ROVR				AML	AML		
	comp=N,1215μm,0.2s						
GAGG	**Gaggia**	**0.72**	**57**	↓*e*Pg	**Pn**	**19 03 08.4**	**+0.2**
GAGG				*e*Sg	**Sn**	**19 03 17.9**	**-0.4**
GAGG	**Gaggia**	**0.72**	**57**	↓P	**Pn**	**19 03 08.4**	**+0.2**
GAGG				S	**Sn**	**19 03 18.4**	**+0.1**
GAGG				AML	AML		
	comp=E,214μm,0.3s						
GAGG				AML	AML		
	comp=E,214μm,0.3s						
GAGG				AML	AML		
	comp=E,347μm,0.7s						
GAGG				AML	AML		
	comp=N,225μm,1.1s						
GAGG				AML	AML		
	comp=N,288μm,0.7s						
BERNI	**Berninapass**	**0.72**	**356**	Sg	**Sn**	**19 03 19.6**	**+1.1**
TREG	**Tregnago**	**0.77**	**102**	P	**Pn**	**19 03 08.6**	**-0.1**
MUGIO	**Muggio**	**0.77**	**288**	↓Pg	**Pn**	**19 03 09.8**	**+1.0**
MUGIO	**Muggio**	**0.77**	**288**	AML	AML		
	comp=N,130μm,0.2s						
MUGIO				AML	AML		
	comp=E,106μm,1.5s						
MUGIO				AML	AML		
	comp=N,130μm,1.8s						
MARN	**Marana (Italy)**	**0.78**	**94**	↓*e*Pg	**Pn**	**19 03 08.7**	**-0.2**
MARN				*e*Sg	**Sn**	**19 03 18.5**	**-1.1**
DOSS	**Dosso del Somm**	**0.79**	**76**	↓*e*Pg	**Pn**	**19 03 09.0**	**-0.1**
DOSS				*e*Sg	**Sn**	**19 03 19.1**	**-0.8**
DOSS	**Dosso del Somm**	**0.79**	**76**	P	**Pn**	**19 03 09.0**	**-0.1**
DOSS				S	**Sn**	**19 03 19.1**	**-0.8**
DOSS				AML	AML		
	comp=E,464μm,0.9s						
DOSS				AML	AML		
	comp=N,460μm,0.8s						
DOSS				AML	AML		
	comp=N,530μm,1.6s						
DOSS				AML	AML		
	comp=E,552μm,0.7s						
DOSS				AML	AML		
	comp=E,464μm,1.1s						
DOSS				AML	AML		
	comp=N,460μm,1.2s						
DOSS				AML	AML		
	comp=N,530μm,0.4s						
BRMO	**Bormio**	**0.81**	**14**	P	**Pn**	**19 03 10.9**	**+1.5**
BRMO				S	**Sn**	**19 03 21.8**	**+1.5**
BRMO				AML	AML		
	comp=E,52μm,0.2s						
BRMO				AML	AML		
	comp=N,37μm,0.8s						
CARE	**Lago del Cares**	**0.84**	**29**	↓*e*Pg	**Pn**	**19 03 10.8**	**+0.8**
CARE				*e*Sg	**Sn**	**19 03 21.4**	**-0.1**
CARE	**Lago del Cares**	**0.84**	**29**	P	**Pn**	**19 03 10.8**	**+0.8**
CARE				S	**Sn**	**19 03 21.6**	**+0.2**
CARE				AML	AML		
	comp=N,90μm,0.6s						
CARE				AML	AML		
	comp=N,90μm,1.4s						
CARE				AML	AML		
	comp=E,99μm,0.4s						
OPPE	**Oppeano**	**0.85**	**116**	P	**Pn**	**19 03 09.8**	**0.0**
OPPE				S	**Sn**	**19 03 21.3**	**+0.2**
VDL	**Val di Lei**	**0.91**	**331**	Pg	**Pn**	**19 03 13.1**	**+2.3**
VDL				Sg	**Sn**	**19 03 25.2**	**+2.2**
PANI	**Panarotta**	**0.94**	**67**	*e*Pg	**Pn**	**19 03 11.5**	**+0.3**
PANI				*e*Sg	**Sn**	**19 03 23.0**	**-0.5**
PANI	**Panarotta**	**0.94**	**67**	P	**Pn**	**19 03 11.5**	**+0.3**
PANI				S	**Sn**	**19 03 23.2**	**-0.3**
PANI				AML	AML		
	comp=E,266μm,0.2s						
PANI				AML	AML		
	comp=N,376μm,0.2s						
TUE	**Stuetta**	**0.94**	**327**	Pn	**Pn**	**19 03 13.2**	**+2.0**
TUE	**Stuetta**	**0.94**	**327**	P	**Pn**	**19 03 13.2**	**+2.0**
TUE				S	**Sn**	**19 03 25.8**	**+2.2**
TUE				AML	AML		
	comp=N,166μm,0.6s						
TUE				AML	AML		
	comp=N,131μm,0.6s						
TUE				AML	AML		
	comp=E,194μm,0.5s						
TUE				AML	AML		
	comp=E,176μm,0.5s						
VARE	**Varese**	**0.94**	**281**	Pn	**Pn**	**19 03 12.7**	**+1.5**
VARE	**Varese**	**0.94**	**281**	P	**Pn**	**19 03 12.7**	**+1.5**
VARE				AML	AML		
	comp=N,431μm,0.3s						
VARE				AML	AML		
	comp=E,276μm,0.3s						
OZOL	**Ozolo**	**0.98**	**43**	*e*Pg	**Pn**	**19 03 12.4**	**+0.7**
OZOL	**Ozolo**	**0.98**	**43**	P	**Pn**	**19 03 12.7**	**+1.1**
OZOL				S	**Sn**	**19 03 25.6**	**+1.2**
OZOL				AML	AML		
	comp=E,404μm,1.5s						
OZOL				AML	AML		
	comp=E,404μm,1.5s						
OZOL				AML	AML		
	comp=N,257μm,0.4s						
OZOL				AML	AML		
	comp=E,404μm,0.5s						
MOSI	**Grossmontoni**	**0.98**	**19**	P	**Pn**	**19 03 13.5**	**+1.8**
MOSI				AML	AML		
	comp=E,82μm,1.2s						
MOSI				AML	AML		
	comp=E,82μm,0.8s						
MOSI				AML	AML		
	comp=N,148μm,0.3s						
ZOVE	**Zovencedo**	**1.01**	**103**	P	**Pn**	**19 03 11.7**	**-0.2**
CTI	**Castel Tesino**	**1.14**	**71**	P	**Pn**	**19 03 14.6**	**+0.7**
CTI				S	**Sn**	**19 03 28.4**	**0.0**
CTI				AML	AML		
	comp=E,372μm,1.5s						
CTI				AML	AML		
	comp=N,356μm,1.5s						
CTI				AML	AML		
	comp=N,356μm,0.5s						
TEOL	**Teolo**	**1.16**	**106**	P	**Pn**	**19 03 13.9**	**0.0**
TEOL				S	**Sn**	**19 03 27.5**	**-1.1**
TEOL				AML	AML		
	comp=E,308μm,0.6s						
TEOL				AML	AML		
	comp=N,318μm,0.4s						
ZIAN	**Ziano**	**1.18**	**60**	P	**Pn**	**19 03 15.1**	**+0.8**
ZIAN				S	**Sn**	**19 03 29.9**	**+0.6**
CGRP	**Cima Grappa**	**1.21**	**80**	↓Pn	**Pn**	**19 03 15.1**	**+0.2**
FUSIO	**Fusio**	**1.25**	**308**	AML	AML		
	comp=N,40μm,0.1s						
FUSIO				AML	AML		
	comp=E,99μm,0.2s						
FETA	**Feichten**	**1.40**	**18**	*e*Pn	**Pn**	**19 03 18.1**	**+0.6**
FETA				*e*Sn	**Sn**	**19 03 36.0**	**+1.1**
	comp=E,0.7nm,0.2s						
RNCA	**Ronca, Sant'Ol**	**1.47**	**214**	Pn	**Pn**	**19 03 21.4**	**+3.2**
PCP	**Piancastagn**	**1.59**	**224**	Pn	**Pn**	**19 03 22.1**	**+2.1**
PCP	**Piancastagn**	**1.59**	**224**	Sn	**Sn**	**19 03 42.1**	**+2.7**
DAVA	**Damuels**	**1.60**	**355**	*e*Pn	**Pn**	**19 03 21.2**	**+1.0**
	comp=E,0.6nm,0.2s						
DAVA				Sn	**Sn**	**19 03 41.0**	**+1.2**
	comp=E,3.7nm,0.3s						
TRAV	**Traversella**	**1.66**	**265**	Pg	**Pn**	**19 03 18.9**	**-2.0**
TRAV	**Traversella**	**1.66**	**265**	Sg	**Sn**	**19 03 35.6**	**-5.4**
EMBD	**Embd, Matterta**	**1.66**	**289**	Pg	**Pn**	**19 03 17.6**	**-3.4**
EMBD	**Embd, Matterta**	**1.66**	**289**	Sg	**Sn**	**19 03 34.8**	**-6.5**
SQTA	**Sankt Quirin**	**1.71**	**26**	*i* Pn	**Pn**	**19 03 24.0**	**+2.3**
	comp=E,0.8nm,0.2s						
SQTA				*i* Sn	**Sn**	**19 03 43.7**	**+1.2**
	comp=E,4.0nm,0.2s						
MOTA	**Moosalm**	**1.79**	**22**	*e*Pn	**Pn**	**19 03 25.0**	**+2.1**
	comp=E,0.4nm,0.1s						
MOTA				*i* Sn	**Sn**	**19 03 45.3**	**+0.8**
	comp=E,0.9nm,0.2s						
RETA	**Reutte**	**1.85**	**14**	*i* Sn	**Sn**	**19 03 46.5**	**+0.7**
	comp=E,1.2nm,0.2s						
WTTA	**Wattenberg**	**1.90**	**34**	*i* Pn	**Pn**	**19 03 26.9**	**+2.6**
	comp=E,0.5nm,0.1s						
WTTA				*e*Sn	**Sn**	**19 03 48.0**	**+0.9**
	comp=E,2.0nm,0.2s						
WATA	**Walderalm**	**1.94**	**31**	*e*Pn	**Pn**	**19 03 26.6**	**+1.8**
	comp=E,0.5nm,0.1s						
WATA				*e*Sn	**Sn**	**19 03 49.2**	**+1.2**
	comp=E,2.4nm,0.2s						
ABTA	**Abfaltersbach**	**1.98**	**57**	*e*Pn	**Pn**	**19 03 27.2**	**+1.8**
	comp=E,0.2nm,0.1s						
ABTA				*e*Sn	**Sn**	**19 03 50.2**	**+1.1**
	comp=E,2.0nm,0.2s						
CANO	**Canova, Maglio**	**1.99**	**222**	Pn	**Pn**	**19 03 27.4**	**+2.0**
CANO	**Canova, Maglio**	**1.99**	**222**	Sn	**Sn**	**19 03 51.2**	**+2.2**
RSP	**Reno Superiore**	**2.07**	**256**	Pn	**Pn**	**19 03 25.7**	**-0.9**
RSP	**Reno Superiore**	**2.07**	**256**	Sn	**Sn**	**19 03 48.3**	**-2.8**
RORO	**Rocca Rossa**	**2.14**	**223**	Pn	**Pn**	**19 03 29.7**	**+2.3**
GBOS	**Grotte di Boss**	**2.16**	**229**	Pn	**Pn**	**19 03 29.7**	**+1.9**
GBOS	**Grotte di Boss**	**2.16**	**229**	Sn	**Sn**	**19 03 54.9**	**+1.5**
BHB	**Bricherasio**	**2.17**	**248**	Sn	**Sn**	**19 03 50.8**	**-2.8**
BHB	**Bricherasio**	**2.17**	**248**	Pn	**Pn**	**19 03 28.0**	**0.0**
SULZ	**Cheisacher**	**2.29**	**324**	Pn	**Pn**	**19 03 29.3**	**-0.2**
SULZ	**Cheisacher**	**2.29**	**324**	Sn	**Sn**	**19 03 54.1**	**-2.4**
BALST	**Balsthal**	**2.33**	**316**	Pn	**Pn**	**19 03 29.0**	**-1.2**
BALST	**Balsthal**	**2.33**	**316**	Pg	**Pn**	**19 03 31.6**	**+1.4**
BALST	**Balsthal**	**2.33**	**316**	Sn	**Sn**	**19 03 53.9**	**-3.8**
BALST	**Balsthal**	**2.33**	**316**	Sg	**Sn**	**19 03 57.6**	**-0.1**
SLE	**Schleitheim**	**2.35**	**333**	Sn	**Sn**	**19 03 56.5**	**-1.4**
SLE	**Schleitheim**	**2.35**	**333**	Pn	**Pn**	**19 03 31.2**	**+0.9**
LPG	**La Plagne**	**2.36**	**266**	*e*P	**Pn**	**19 03 32.1**	**+1.4**
LPG				*e*Sn	**Sn**	**19 03 58.9**	**+0.4**
	comp=E,7.0nm,0.3s						
OGSI	**Sixt**	**2.36**	**280**	Pn	**Pn**	**19 03 28.8**	**-1.8**
LPL	**La Plagne**	**2.37**	**267**	*e*P	**Pn**	**19 03 33.6**	**+2.8**
LPL				*e*Sn	**Sn**	**19 03 59.2**	**+0.5**
	comp=E,12nm,0.4s						
PZZ	**Stroppo**	**2.42**	**242**	Pn	**Pn**	**19 03 31.4**	**-0.1**
PZZ	**Stroppo**	**2.42**	**242**	Sn	**Sn**	**19 03 58.3**	**-1.5**
TORNY	**Torny/Romont**	**2.43**	**298**	Pn	**Pn**	**19 03 29.9**	**-1.6**
RSL	**Roselend**	**2.43**	**271**	Pn	**Pn**	**19 03 29.9**	**-1.7**
STV	**Sant Anna di V**	**2.44**	**235**	Pn	**Pn**	**19 03 32.4**	**+0.7**
STV	**Sant Anna di V**	**2.44**	**235**	Sn	**Sn**	**19 04 00.1**	**-0.2**
OGMO	**Fort Saint-Gob**	**2.45**	**260**	Pn	**

FELD	**Feldberg im Sc**	**2.62**	**327**	Sn	**Sn**	19 04 02.4	-2.3
SURF	**Saint Ours**	**2.62**	**244**	Pn	**Pn**	19 03 34.6	+0.4
SURF				Sn	**Sn**	19 04 03.1	-1.8
SBF	**Sospel**	**2.63**	**227**	*e*P	**Pn**	19 03 36.5	+2.2
SBF				*e*Sn	**Sn**	19 04 05.1	+0.1
	comp=E,9.8nm,0.3s						
JAUF	**Jausiers**	**2.69**	**243**	Pn	**Pn**	19 03 35.2	+0.1
JAUF				Sn	**Sn**	19 04 04.6	-1.8
ESCA	**l'Escarene**	**2.69**	**227**	Pn	**Pn**	19 03 37.0	+2.1
ESCA				Sn	**Sn**	19 04 06.9	+0.6
BRJN	**Brijuni**	**2.70**	**106**	*e*Pn	**Pn**	19 03 34.7	-0.4
KIZ	**Kirchzarten**	**2.71**	**327**	Pn	**Pn**	19 03 35.3	0.0
KIZ	**Kirchzarten**	**2.71**	**327**	Sn	**Sn**	19 04 04.3	-2.6
MVIF	**Mont Vial**	**2.76**	**230**	Pn	**Pn**	19 03 37.7	+1.6
MVIF				Sn	**Sn**	19 04 08.1	-0.1
OGAG	**Argentiere**	**2.81**	**245**	Pn	**Pn**	19 03 34.5	-2.2
ENAUX	**Enaux**	**2.84**	**237**	Pn	**Pn**	19 03 38.1	+0.9
ENAUX				Sn	**Sn**	19 04 09.1	-1.1
VOGT	**Vogtsburg - To**	**2.91**	**326**	Pn	**Pn**	19 03 38.2	+0.2
VOGT	**Vogtsburg - To**	**2.91**	**326**	Sn	**Sn**	19 04 09.1	-2.7
CABF	**La Chapelle**	**2.93**	**290**	*e*Pn	**Pn**	19 03 39.4	+1.0
CABF				*e*Sn	**Sn**	19 04 12.2	-0.2
	comp=E,2.5nm,0.2s						
SMRN	**Sveta Marina**	**2.94**	**101**	*e*Pn	**Pn**	19 03 37.8	-0.5
ORIF	**Oris-en-Rattie**	**3.07**	**257**	*e*P	**Pn**	19 03 43.6	+3.3
ORIF				*e*Sn	**Sn**	19 04 15.8	-0.1
	comp=E,7.3nm,0.5s						
HINF	**Hinteralfeld**	**3.08**	**315**	*e*Pn	**Pn**	19 03 41.3	+0.9
HINF				*e*Sn	**Sn**	19 04 14.7	-1.3
	comp=E,2.7nm,0.2s						
PGF	**Pioggiola**	**3.24**	**194**	*e*P	**Pn**	19 03 45.1	+2.4
PGF				*e*Sn	**Sn**	19 04 19.1	-0.9
	comp=E,1.4nm,0.2s						
CDF	**Champ du Feu**	**3.33**	**326**	*e*Pn	**Pn**	19 03 45.0	+1.1
CDF				*e*Sn	**Sn**	19 04 21.0	-1.3
	comp=E,2.4nm,0.2s						
RABC	**Rab**	**3.44**	**104**	*e*Pn	**Pn**	19 03 45.4	+0.1
HAU	**Haudompre**	**3.46**	**313**	*e*Pn	**Pn**	19 03 46.7	+1.1
HAU				*e*Sn	**Sn**	19 04 24.1	-1.2
	comp=E,19nm,0.4s						
LMR	**La Mourre**	**3.48**	**229**	*e*P	**Pn**	19 03 46.7	+0.8
LMR				*e*Sn	**Sn**	19 04 25.2	-0.7
	comp=E,3.7nm,0.3s						
NVLJ	**Novalja**	**3.56**	**107**	*e*Pn	**Pn**	19 03 47.1	+0.1
NVLJ				Sn	**Sn**	19 04 25.0	-2.7
SMRF	**Simiane la Rot**	**3.65**	**244**	*e*P	**Pn**	19 03 51.3	+3.2
SMRF				*e*Sn	**Sn**	19 04 29.4	-0.5
	comp=E,4.0nm,0.3s						
VIRC	**Vir**	**3.79**	**110**	*e*Pn	**Pn**	19 03 50.5	+0.5
VIRC				Sn	**Sn**	19 04 30.5	-2.8
DUGI	**Dugi Otok**	**3.92**	**114**	*e*Pn	**Pn**	19 03 51.8	0.0
VIVF	**Saint-Julien-l**	**3.92**	**260**	*e*P	**Pn**	19 03 54.7	+2.8
VIVF				*e*Sn	**Sn**	19 04 35.9	-0.7
	comp=E,1.8nm,0.3s						
PAGF	**Fort de Pagny**	**4.13**	**315**	*e*Pn	**Pn**	19 03 55.5	+0.7
PAGF				*e*Sn	**Sn**	19 04 40.3	-1.6
	comp=E,3.5nm,0.3s						
KHC	**Kasperske Hory**	**4.17**	**33**	*e*SN	**Sn**	19 04 41.2	-1.7
CKRC	**Cesky Krumlov**	**4.25**	**41**	*e*SN	**Sn**	19 04 42.8	-1.8
SFTF	**Sexfontaines**	**4.28**	**308**	*e*Pn	**Pn**	19 03 57.8	+1.0
SFTF				*e*Sn	**Sn**	19 04 44.6	-0.8
	comp=E,4.3nm,0.2s						
MORI	**Morici**	**4.39**	**113**	*e*Pn	**Pn**	19 03 58.7	+0.4
MEZF	**Maizieres J'vi**	**4.45**	**311**	*e*Pn	**Pn**	19 03 59.5	+0.4
MEZF				*e*Sn	**Sn**	19 04 47.7	-1.8
	comp=E,2.9nm,0.3s						
SMF	**Signal de Mont**	**4.45**	**285**	*e*Pn	**Pn**	19 04 00.5	+1.4
SMF				*e*Sn	**Sn**	19 04 48.1	-1.5
	comp=E,8.5nm,0.2s						
ZIRJ	**Zirje**	**4.45**	**115**	*e*Pn	**Pn**	19 03 59.3	+0.2
ZIRJ				Sn	**Sn**	19 04 45.7	-3.9
SAVF	**Savonnieres en**	**4.48**	**313**	*e*Sn	**Sn**	19 04 50.7	+0.4
	comp=E,2.5nm,0.3s						
LOR	**Lormes**	**4.59**	**292**	*e*Pn	**Pn**	19 04 02.0	+0.9
LOR				*e*Sn	**Sn**	19 04 51.5	-1.6
	comp=E,3.8nm,0.3s						
LASF	**Ste Croix**	**4.72**	**252**	*e*Pn	**Pn**	19 04 03.7	+0.8
LASF				*e*Sn	**Sn**	19 04 55.0	-1.3
	comp=E,1.4nm,0.3s						
SSF	**Saint Saulge**	**4.76**	**289**	*e*Pn	**Pn**	19 04 04.7	+1.3
SSF				*e*Sn	**Sn**	19 04 55.6	-1.7
	comp=E,1.6nm,0.3s						
KIJV	**Kijevo**	**4.79**	**108**	*e*Pn	**Pn**	19 04 04.5	+0.7
AVF	**Avril sur Loir**	**4.80**	**286**	*e*Pn	**Pn**	19 04 04.8	+0.8
AVF				*e*Sn	**Sn**	19 04 56.2	-2.2
	comp=E,1.1nm,0.3s						
BGF	**Bois d'Agland**	**5.11**	**282**	*e*Pn	**Pn**	19 04 09.0	+0.7
BGF				*e*Sn	**Sn**	19 05 04.1	-1.9
	comp=E,3.8nm,0.3s						
HYF	**Humbligny**	**5.39**	**290**	*e*Pn	**Pn**	19 04 12.7	+0.7
HYF				*e*Sn	**Sn**	19 05 10.5	-2.2
RICI	**Ricice**	**5.49**	**111**	*e*Pn	**Pn**	19 04 13.2	-0.2
TCF	**Toulx Ste Croi**	**5.53**	**279**	*e*Pn	**Pn**	19 04 14.7	+0.7
TCF				*e*Sn	**Sn**	19 05 14.0	-2.2
	comp=E,1.0nm,0.2s						
LSTV	**Lastovo**	**5.69**	**118**	*e*Pn	**Pn**	19 04 15.5	-0.7
CAF	**Calviac**	**5.72**	**265**	*e*Pn	**Pn**	19 04 17.3	+0.7

*IDC **17** 19:08:13.4±0.7,33°.12N×139°.63E,h0km,mb3.5/12, mbtmp3.5/14,ML3.0/2,MS3.0/5,Error ellipse: s-maj=18.4km s-min=7.1km az=10.0*
*JMA **17** 19:08:16.1±0.1,33°.38N±0°.4×14°.0E±°,h36km±1km, MV3.1/25,NEAR HACHIJOJIMA ISLAND*
ISC 17 19:08:16.1±1.1,**33°.38N**±0°.03×**139°.55E**±0°.05,**h12**km±7km, **n40**,σ1°**18**/40,**mb3.5**/12,**MS2.7**/3,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.33**	**142**	Pn	**Pg**	**19 08 22.8**	**+0.1**
	734nm,0.3s,baz=80,slow=23,SNR=84						
JHJ				Sn	**Sb**	**19 08 29.8**	**+0.7**
	514nm,0.3s,baz=74,slow=22,SNR=12						
JHJ2	**Mitsune**	**0.35**	**139**	P	**Pb**	**19 08 23.6**	**-0.6**
JHJ2	**Mitsune**	**0.35**	**139**	*e*P	**Pg**	**19 08 23.1**	**0.0**
JHCJ	**Hachijojimakas**	**0.37**	**145**	P	**Pg**	**19 08 23.5**	**0.0**
JHCJ				S	**Sg**	**19 08 28.8**	**+0.3**
JMKN	**Mikurajimanish**	**0.51**	**4**	*e*P	**Pn**	**19 08 28.1**	**-1.1**
JMKN				S	**Sn**	**19 08 36.6**	**-1.3**
JMYK	**Miyake Tsubota**	**0.68**	**0**	*e*P	**Pn**	**19 08 30.5**	**-1.0**
JMYK				*e*S	**Sn**	**19 08 40.5**	**-1.5**
JKO	**Kozu shima**	**0.88**	**337**	*e*P	**Pn**	**19 08 33.5**	**-0.7**
JKO				*e*S	**Sn**	**19 08 47.3**	**+0.4**
JTHY	**Toshimahigashi**	**1.16**	**349**	*e*P	**Pg**	**19 08 38.5**	**+0.1**
JTHY				*e*S	**Sg**	**19 08 54.3**	**+0.7**
JIM2	**Oshima 3**	**1.34**	**356**	P	**Pb**	**19 08 41.0**	**-0.1**
JIZS	**Izushimoda**	**1.45**	**338**	*e*P	**Pb**	**19 08 42.2**	**-0.7**
JIZS				*e*S	**Sg**	**19 09 01.9**	**-0.8**
TK02	**Tokai 2**	**1.59**	**291**	P	**Pn**	**19 08 43.5**	**-0.3**
TK02				S	**Sn**	**19 09 04.5**	**+0.2**
BSO3	**Boso 3**	**1.63**	**29**	*e*S	**Sb**	**19 09 04.3**	**-2.0**
JGF	**Kuroka**	**2.86**	**321**	P	**Pn**	**19 09 02.7**	**+1.2**
INU	**Inuyama**	**2.87**	**314**	P	**Pn**	**19 09 02.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.34**	**341**	Pn	**Pn**	**19 09 11.1**	**+3.0**
	0.2nm,0.3s,baz=165,slow=13,SNR=10						
MJAR				Sn	**Sb**	**19 09 55.6**	**-0.2**
	0.1nm,0.3s,baz=120,slow=11,SNR=1.5						
MJAR				LR	LR	19 10 37.8	
	comp=Z,90nm,18.6s,baz=142,slow=40 2.1nm,0.5s						
JMM	**Marumori**	**4.59**	**12**	P	**Pn**	**19 09 27.7**	**+2.4**
JMN	**Monobe**	**4.74**	**276**	P	**Pn**	**19 09 27.6**	**+0.2**
JNU	**Nakatsue**	**7.26**	**270**	Pn	**Pn**	**19 10 01.9**	**-0.2**
	0.5nm,0.3s,baz=23,slow=2.4,SNR=9.2 5.9nm,0.9s						
ASAJ	**Asahikawa**	**10.98**	**12**	LR	LR	19 16 08.5	
	comp=Z,43nm,20.9s,baz=184,slow=42						
GUMO	**Guam**	**20.29**	**165**	LR	LR	19 19 06.9	
	comp=Z,35nm,18.4s,baz=34,slow=33						
PETK	**Petropavlovsk-**	**23.62**	**28**	LR	LR	19 24 43.5	
	comp=Z,18nm,18.6s,baz=299,slow=42						
H11N2	**WAKE ISLAND Hy**	**27.89**	**112**	T	T	19 43 13.2	
	baz=305,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**27.89**	**112**	T	T	19 43 13.6	
	baz=305,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**27.91**	**112**	T	T	19 43 14.7	
	baz=305,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**28.45**	**115**	T	T	19 43 54.9	
	baz=307,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.45**	**115**	T	T	19 43 55.2	
	baz=307,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**28.46**	**115**	T	T	19 43 56.1	
	baz=307,slow=75,SNR=28						

SONM	**Songino Array**	**28.76**	**310**	P	**P**	**19 14 13.0**	**-0.6**
	0.5nm,0.7s,baz=106,slow=11,SNR=1.9 0.5nm,0.7s						
MKAR	**Makanchi Array**	**44.86**	**305**	P	**P**	**19 16 30.6**	**+0.5**
	0.3nm,0.7s,baz=90,slow=7.3,SNR=3.0 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**47.12**	**311**	P	**P**	**19 16 47.3**	**-0.6**
	0.2nm,0.4s,baz=82,slow=6.9,SNR=1.9 0.2nm,0.4s						
BVAR	**Borovoye Array**	**51.96**	**314**	P	**P**	**19 17 25.4**	**+0.7**
	0.2nm,0.4s,baz=74,slow=11,SNR=1.8 0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.25**	**186**	P	**P**	**19 17 31.5**	**-3.1**
	0.3nm,0.4s,baz=1.5,slow=7.9,SNR=10 0.3nm,0.4s						
ILAR	**Eielson Array**	**53.40**	**31**	P	**P**	**19 17 36.3**	**+1.0**
	0.7nm,0.7s,baz=270,slow=6.6,SNR=2.3 0.7nm,0.7s						
ASAR	**Alice Springs**	**56.98**	**186**	P	**P**	**19 17 59.8**	**-1.8**
	0.2nm,0.5s,baz=16,slow=13,SNR=7.7 0.2nm,0.5s						
YKA	**Yellowknife Ar**	**67.73**	**29**	P	**P**	**19 19 14.4**	**+1.3**
	0.2nm,0.8s,baz=237,slow=2.1,SNR=2.7						
YKA				LR	LR	19 51 23.3	
	comp=Z,70nm,19.9s,baz=303,slow=38 0.2nm,0.8s						
NOA	**NORSAR Array B**	**76.95**	**337**	P	**P**	**19 20 09.0**	**+0.8**
	0.2nm,0.5s,baz=56,slow=7.4,SNR=1.6 0.2nm,0.5s						
NVAR	**Mina Array Bea**	**78.43**	**52**	P	**P**	**19 20 18.6**	**+1.5**
	0.5nm,0.7s,baz=281,slow=5.2,SNR=2.7 0.5nm,0.7s						
PDAR	**Pinedale Array**	**81.33**	**44**	P	**P**	**19 20 32.6**	**-0.1**
	0.1nm,0.5s,baz=343,slow=8.8,SNR=1.8 0.1nm,0.5s						
TXAR	**Lajitas Array**	**93.58**	**51**	P	**P**	**19 21 32.9**	**+0.5**
	0.2nm,0.6s,baz=319,slow=4.0,SNR=2.3 0.2nm,0.6s						
QSPA	**South Pole Qui**	**123.13**	**180**	PKP	**PKiKP**	**19 27 11.6**	**-0.3**
	1.1nm,0.8s,baz=326,slow=1.4,SNR=5.6						

MEX 17 19:23:05.3±0.3,**15°.94N×97°.89W,h10**km,**MD2.3,2C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.51**	**333**	↑*i*P	Pg	19 23 14.5	-0.7
	baz=153,slow=6.5						
PNIG				*i* S	Sg	19 23 21.7	-0.3
PNIG	**Pinotepa**	**0.51**	**333**	↑*i*P	Pn	19 23 19.0	+0.4
	baz=153,slow=6.5						
PNIG				*i* S	Sg	19 23 21.7	-0.3

IDC 17 19:29:58.9±2.0,**8°.18S×125°.85E,h0**km,**mb3.1**/1, **mbtmp3.8**/3,**ML4.0**/2,**Error ellipse: s-maj=262.0km s-min=32.3km az=60.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.29**	**146**	Pn	Pn	19 33 21.1	-1.6
	0.5nm,0.3s,baz=320,slow=14,SNR=21						
WRA				Sn	Sn	19 35 45.5	-17
	1.8nm,0.3s,baz=334,slow=22,SNR=14 1.5nm,0.5s						
ASAR	**Alice Springs**	**17.22**	**154**	P	P	19 34 02.3	-0.4
	1.0nm,0.3s,baz=338,slow=11,SNR=99						
ASAR				S	Sn	19 36 59.9	-14
	0.3nm,0.4s,baz=337,slow=16,SNR=3.7 5.2nm,0.7s						
MKAR	**Makanchi Array**	**67.04**	**329**	P	P	19 40 53.9	0.0
	0.1nm,0.4s,baz=114,slow=6.5,SNR=4.3 0.1nm,0.4s						

*NEIC **17** 19:42:44.6±1.5,16°.19N±0°.04×98°.13W±0°.02,h19km±8km, mb4.0/11,Md4.4/19(MEX),Error ellipse: s-maj=6.7km s-min=3.1km az=186.0*
*MEX **17** 19:42:46.7±0.8,16°.20N×98°.11W,h8km±3km,MD4.3*
ISC 17 19:42:43.1±1.5,**16°.13N**±0°.05×**98°.13W**±0°.03,**h17**km±8km, **n52**,σ1°**55**/85,**mb4.0**/3,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.26**	**1**		**Pb**	**19 42 50.2**	**+0.8**
PNIG					**Sg**	**19 42 53.0**	**+0.2**
PNIG	**Pinotepa**	**0.26**	**1**	*i* P	**Pb**	**19 42 50.2**	**+0.8**
PNIG				*i* S	**Sg**	**19 42 53.0**	**+0.2**
YOIG	**Yosondua**	**0.92**	**38**		**Pb**	**19 43 00.8**	**+0.1**
YOIG					**Sg**	**19 43 11.7**	**-1.4**
YOIG	**Yosondua**	**0.92**	**38**	*i* P	**Pb**	**19 43 00.8**	**+0.1**
YOIG				*i* S	**Sg**	**19 43 11.7**	**-1.4**
PEIG	**Puerto Escondi**	**0.96**	**98**		**Pn**	**19 43 02.2**	**+0.4**
PEIG					**Sn**	**19 43 14.5**	**-0.6**
PEIG	**Puerto Escondi**	**0.96**	**98**	*i* P	**Pn**	**19 43 02.2**	**+0.4**
PEIG				*i* S	**Sn**	**19 43 14.5**	**-0.6**
CRIG	**Cruz Grande**	**1.13**	**302**		**Pn**	**19 43 04.8**	**+0.6**
CRIG					**Sb**	**19 43 18.2**	**-0.5**
CRIG	**Cruz Grande**	**1.13**	**302**	*i* P	**Pn**	**19 43 04.8**	**+0.6**
CRIG				*i* S	**Sb**	**19 43 18.2**	**-0.5**
TXIG	**Tlaxiaco**	**1.17**	**17**		**Pb**	**19 43 05.1**	**0.0**
TXIG					**Sb**	**19 43 18.6**	**-1.5**
TXIG	**Tlaxiaco**	**1.17**	**17**	*i* P	**Pb**	**19 43 05.1**	**0.0**
TXIG				*i* S	**Sb**	**19 43 18.6**	**-1.5**
MGIG	**Malinaltepec**	**1.20**	**336**		**Pn**	**19 43 05.7**	**+0.4**
MGIG					**Sb**	**19 43 20.0**	**-0.8**
MGIG	**Malinaltepec**	**1.20**	**336**	*i* P	**Pn**	**19 43 05.7**	**+0.4**
MGIG				*i* S	**Sb**	**19 43 20.0**	**-0.8**
TLIG	**Tlapa**	**1.48**	**344**		**Pn**	**19 43 10.1**	**+1.0**
TLIG					**Sn**	**19 43 28.0**	**-0.3**
TLIG	**Tlapa**	**1.48**	**344**	*e*P	**Pn**	**19 43 10.1**	**+1.0**
TLIG				*i* S	**Sn**	**19 43 25.6**	**-2.6**
VHO	**Vista Hermosa**	**1.64**	**55**	*e*P	**Pn**	**19 43 11.9**	**+0.6**
VHO				*e*S	**Sn**	**19 43 31.9**	**-0.2**
DAIG	**Los Arroyos**	**1.70**	**301**		**Pn**	**19 43 13.2**	**+1.1**
DAIG	**Los Arroyos**	**1.70**	**301**	*e*P	**Pn**	**19 43 13.2**	**+1.1**
DAIG				*e*S	**Sn**	**19 43 33.0**	**-0.5**
HLIG	**Huajuapan de L**	**1.72**	**11**		**Pn**	**19 43 13.5**	**+1.0**
HLIG	**Huajuapan de L**	**1.72**	**11**	*e*P	**Pn**	**19 43 13.5**	**+1.0**
HLIG				*e*S	**Sn**	**19 43 33.4**	**-0.8**
FTIG	**Fresnillo de T**	**1.77**	**0**	*e*P	**Pn**	**19 43 14.3**	**+1.2**
FTIG				*e*S	**Sn**	**19 43 35.6**	**+0.4**
HUIG	**Huatulco**	**1.98**	**100**	*e*P	**Pn**	**19 43 34.8**	**+0.8**
HUIG				*e*S	**Sn**	**19 43 37.2**	**-3.2**
TOIG	**Toxpalan**	**2.20**	**27**		**Pn**	**19 43 19.6**	**+0.5**
TOIG	**Toxpalan**	**2.20**	**27**	*e*P	**Pn**	**19 43 19.6**	**+0.5**
TOIG				*e*S	**Sn**	**19 43 43.2**	**-2.8**
CAIG	**El Cayaco**	**2.24**	**294**	*e*P	**Pn**	**19 43 19.9**	**+0.4**
CAIG				*i* S	**Sn**	**19 43 44.7**	**-2.0**
MEIG	**Mezcala**	**2.28**	**322**	*e*P	**Pn**	**19 43 22.2**	**+2.1**
MEIG				*e*S	**Sn**	**19 43 50.0**	**+2.1**
TPIG	**Tehuac#an**	**2.39**	**18**	*e*P	**Pn**	**19 43 23.1**	**+1.3**
TPIG				*e*S	**Sn**	**19 43 46.1**	**-4.7**
PLIG	**Platanillo**	**2.60**	**330**	*e*P	**Pn**	**19 43 26.9**	**+2.4**
PLIG				*e*S	**Sn**	**19 43 56.4**	**+0.6**
NEUV	**Arroyo Zacate**	**2.73**	**55**	*e*P	**Pn**	**19 43 27.1**	**+0.9**
NEUV				*e*S	**Sn**	**19 43 55.9**	**-2.9**
YAIG	**Yautepec**	**2.86**	**342**	*e*P	**Pn**	**19 43 31.4**	**+3.2**
YAIG				*e*S	**Sn**	**19 44 01.6**	**-0.6**
PPM	**Popocatepetl**	**2.96**	**351**	*e*P	**Pn**	**19 43 32.2**	**+2.4**
PPM				*i* S	**Sn**	**19 44 05.1**	**0.0**
ARIG	**Puente Sto Nin**	**3.01**	**316**		**Pb**	**19 43 35.3**	**-1.0**
ARIG	**Puente Sto Nin**	**3.01**	**316**	*e*P	**Pb**	**19 43 35.3**	**-1.0**
ARIG				*e*S	**Sn**	**19 44 01.8**	**-4.0**
CMIG	**Matias Romero**	**3.26**	**73**	*e*P	**Pn**	**19 43 33.9**	**+0.4**
CMIG				*e*S	**Sn**	**19 44 13.2**	**+1.3**
UNM	**Universidad Na**	**3.33**	**343**	Pn	**Pn**	**19 43 35.4**	**+0.6**
JAUV	**Jalcomulco**	**3.46**	**21**	*e*P	**Pn**	**19 43 37.6**	**+1.4**
JAUV				*e*S	**Sn**	**19 44 15.8**	**-1.1**
PMUV	**Sontecomapan**	**3.75**	**50**	*e*P	**Pn**	**19 43 39.3**	**-1.0**
PMUV				*e*S	**Sn**	**19 44 27.1**	**+3.1**
LVIG	**Laguna Verde**	**3.93**	**24**	*e*P	**Pn**	**19 43 41.6**	**-1.1**
LVIG				*e*S	**Sn**	**19 44 30.1**	**+1.7**
DEIG	**Demacu**	**4.23**	**348**	*e*P	**Pn**	**19 43 49.2**	**+2.1**
DEIG				*e*S	**Sn**	**19 44 32.4**	**-4.0**
MOIG	**Morelia**	**4.57**	**321**	Pn	**Pn**	**19 43 49.8**	**-2.0**
CCIG	**Comitan**	**5.76**	**88**	Pn	**Pn**	**19 44 08.1**	**0.0**
TEIG	**Tepich**	**10.21**	**65**	Pn	**Pn**	**19 45 09.7**	**+0.6**
BRDY	**Brady**	**15.11**	**357**		**P**	**19 46 19.9**	**-1.1**
BRDY				IAmb	IAmb	19 46 23.9	
	comp=Z,5.0nm,0.8s						
SGCY	**Sterling City**	**15.95**	**351**		**P**	**19 46 30.1**	**-0.3**
ABTX	**Abilene, Hawle**	**16.48**	**356**		**P**	**19 46 35.7**	**-0.6**
ABTX				IAmb	IAmb	19 46 40.2	
	comp=Z,16nm,0.9s						
ANMO	**Albuquerque**	**20.17**	**340**	P	**P**	**19 47 18.6**	**+1.6**
RTBA	**Rita Blanca**	**20.64**	**349**		**P**	**19 47 22.9**	**+0.9**
RTBA				IAmb	IAmb	19 47 25.4	
	comp=Z,5.9nm,0.8s						
T35A	**Sooner Cattle**	**20.75**	**4**	P	**P**	**19 47 23.3**	**+0.2**
T35A				IAmb	IAmb	19 47 29.9	
	comp=Z,6.2nm,0.8s						
X18A	**Snowflake**	**21.17**	**332**	P	**P**	**19 47 28.3**	**+0.4**
X18A				IAmb	IAmb	19 47 33.8	
	comp=Z,7.0nm,1.2s						
PBMO	**Poplar Bluff**	**21.67**	**17**	P	**P**	**19 47 34.7**	**+1.7**
PBMO				IAmb	IAmb	19 47 37.6	
	comp=Z,9.0nm,1.0s						
S22A	**4UR Ranch, Cre**	**22.86**	**342**	P	**P**	**19 47 48.1**	**+2.0**
MVCO	**Mesa Verde**	**22.91**	**338**	P	**P**	**19 47 46.3**	**-0.2**
MVCO				IAmb	IAmb	19 47 55.0	
	comp=Z,4.6nm,1.0s						
ISCO	**Idaho Springs**	**24.47**	**346**		**P**	**19 48 03.6**	**+2.0**

*IDC **17** 19:52:11.2±0.8,5°.90S×102°.81E,h0km,mb4.1/15, mbtmp4.1/16,ML4.3/1,MS3.0/4,Error ellipse: s-maj=27.8km s-min=15.2km az=46.0*
*NEIC **17** 19:52:15.2±1.3,5°.95S±0°.04×102°.81E±0°.07,h22km±4km, mb4.2/25,Error ellipse: s-maj=10.6km s-min=5.6km az=67.0*
*DJA **17** 19:52:17.3±0.4,6°.5S±5°×10°.3E±°,h48km±12km,M4.5/15, mb4.5/7,MLv4.5/15*
ISC 17 19:52:16.1±0.5,**5°.89S**±0°.06×**102°.82E**±0°.06,**h33**km,**n82**, σ1°**04**/72,**mb4.2**/26,**MS3.0**/3,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.51**	**55**	P	**Pn**	**19 52 41.2**	**+0.2**
MNAI	**Manna**	**1.53**	**5**		**Pn**	**19 52 42.6**	**+1.4**
MNAI				Sn	**Sb**	**19 53 02.5**	**-0.4**
MNAI	**Manna**	**1.53**	**5**	P	**Pb**	**19 52 42.7**	**-1.2**
MNAI	**Manna**	**1.53**	**5**	P	**Pn**	**19 52 42.6**	**+1.4**
KASI	**Kota Agung**	**1.71**	**78**	P	**Pn**	**19 52 43.0**	**-0.6**
KASI				S	**Sn**	**19 53 03.5**	**-0.8**
PMBI	**Palembang**	**3.53**	**34**	Pn	**Pn**	**19 53 07.9**	**-0.8**
PMBI	**Palembang**	**3.53**	**34**	P	**Pn**	**19 53 09.6**	**+0.9**
DBJI	**Dramaga**	**3.96**	**100**	P	**Pn**	**19 53 16.7**	**+2.1**
KRJI	**Kerinci**	**4.01**	**340**	P	**Pn**	**19 53 17.7**	**+2.3**
CBJI	**Citeko**	**4.04**	**98**	P	**Pn**	**19 53 18.8**	**+3.1**
PPSI	**Pulau Pagai**	**4.19**	**318**	P	**Pn**	**19 53 19.1**	**+1.4**
CNJI	**Cibinong**	**4.51**	**108**	P	**Pn**	**19 53 21.2**	**-0.9**
LEM	**Lembang**	**4.86**	**101**	Pn	**Pn**	**19 53 27.0**	**-0.1**
	11nm,0.3s,baz=318,slow=9.1,SNR=12						
LEM				Sn	**Sn**	**19 54 24.2**	**+1.9**
	7.3nm,0.3s,baz=339,slow=15,SNR=4.4						
LEM				LR	LR	19 55 48.4	
	comp=Z,181nm,19.9s,baz=225,slow=45 35nm,0.6s						
BBJI	**Bungbulang**	**5.04**	**108**	P	**Pn**	**19 53 29.6**	**0.0**
XMI	**Christmas Isla**	**5.34**	**148**	P	Pn	19 53 28.3	-5.4
XMIS	**Christmas Isla**	**5.35**	**149**	P	Pn	19 53 28.1	-5.6
PDSI	**Padang**	**5.48**	**334**	P	**Pn**	**19 53 36.3**	**+0.8**
	16nm,0.6s,0.2nm						
SISI	**Saibi**	**5.87**	**320**	P	**Pn**	**19 53 41.3**	**+0.5**
	32nm,0.6s,0.2nm						
CMJI	**Cimerak**	**5.90**	**109**	P	**Pn**	**19 53 40.5**	**-0.7**
	61nm,0.9s,0.4nm						
KPJI	**Karang Pucung**	**6.24**	**104**	P	**Pn**	**19 53 48.1**	**+2.2**
	20nm,1.2s,0.1nm						
PBSI	**Pulau Batu**	**7.36**	**322**	P	**Pn**	**19 54 01.4**	**+0.1**
	80nm,1.1s,0.3n

	baz=62,slow=75,SNR=92								
KURBB	**Kurchatov Arra**	**60.07**	**342**	P		**P**		**20 02 19.8**	**0.0**
	comp=Z,1.3nm,0.8s,baz=160,slow=6.3,SNR=8.5								
	comp=Z,1.3nm,0.8s								
KURK	**Kurchatov**	**60.12**	**343**	P		**P**		**20 02 20.7**	**+0.4**
KURK				IAmb		IAmb		20 02 22.1	
	comp=Z,2.6nm,0.9s								
ZAA0	**Zalesovo Array**	**61.51**	**348**	P		**P**		**20 02 29.5**	**-0.1**
ZAA0				IAmb		IAmb		20 02 31.3	
	comp=Z,2.4nm,0.7s								
ZALV	**Zalesovo Beam**	**61.51**	**348**	P		**P**		**20 02 29.4**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=169,slow=4.6,SNR=17								
	comp=Z,2.8nm,0.6s								
BVAR	**Borovoye Array**	**64.79**	**339**	P		**P**		**20 02 50.5**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=135,slow=9.9,SNR=9.7								
	comp=Z,1.2nm,0.5s								
ABKAR	**Akbulak array**	**66.39**	**331**	P		**P**		**20 03 02.1**	**+0.3**
ABKAR				IAmb		IAmb		20 03 02.8	
	comp=Z,1.6nm,0.7s								
KBZ	**Khabaz**	**73.07**	**319**	P		**P**		**20 03 44.2**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=171,slow=4.7,SNR=2.4								
	comp=Z,1.3nm,0.7s								
BOSA	**Boshof**	**76.29**	**242**	P		**P**		**20 04 02.9**	**+0.6**
	comp=Z,3.6nm,1.0s,baz=140,slow=8.2,SNR=3.0								
	comp=Z,3.6nm,1.0s								
BRTR	**Keskin Array B**	**78.01**	**313**	P		**P**		**20 04 11.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=151,slow=3.3,SNR=2.5								
	comp=Z,0.5nm,0.7s								
QSPA	**South Pole Qui**	**84.09**	**180**	P		**P**		**20 04 44.9**	**+1.3**
QSPA				IAmb		IAmb		20 04 52.7	
	comp=Z,2.6nm,1.3s								
FINES	**FINESS Array B**	**88.84**	**332**	P		**P**		**20 05 07.8**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=103,slow=8.6,SNR=4.3								
	comp=Z,1.0nm,0.8s								
H09N1	**TRISTAN DA CUN**	**06.07**	**229**	T		T		22 05 31.7	
	SNR=25								
TXAR	**Lajitas Array**	**145.81**	**44**	PKPbc		**PKPab**		**20 11 53.8**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=232,slow=1.3,SNR=11								

*IDC **17** 20:14:50.0±0.9, 19°.60N×145°.37E, h0km, mb3.5/9, mbtmp3.5/9, Error ellipse: s-maj=36.6km s-min=21.8km az=98.0*

ISC 17 20:15:07.6±0.9, 19°.5N±0°.2×145°.2E±0°.2, h150km, n9, σ1§14/9, mb3.2/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.62**	**196**	P	**P**	**20 22 34.1**	**+1.1**
	0.3nm,0.5s,baz=20,slow=8.6,SNR=7.3						
	0.3nm,0.5s						
SONM	**Songino Array**	**42.25**	**321**	P	**P**	**20 22 46.5**	**+0.3**
	0.6nm,0.7s,baz=99,slow=8.9,SNR=2.3						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**44.30**	**195**	P	**P**	**20 23 01.6**	**-1.0**
	0.1nm,0.4s,baz=14,slow=7.0,SNR=4.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**57.60**	**314**	P	**P**	**20 24 40.6**	**-1.3**
	0.2nm,0.6s,baz=77,slow=6.4,SNR=3.0						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**63.13**	**26**	P	**P**	**20 25 18.8**	**-0.3**
	0.2nm,0.4s,baz=259,slow=5.6,SNR=7.4						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**65.59**	**320**	P	**P**	**20 25 36.6**	**+1.4**
	0.2nm,0.3s,baz=100,slow=7.9,SNR=2.7						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**77.49**	**28**	P	**P**	**20 26 47.3**	**+1.0**
	0.2nm,0.6s,baz=284,slow=5.1,SNR=2.4						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**82.99**	**52**	P	**P**	**20 27 16.0**	**-0.5**
	0.1nm,0.3s,baz=266,slow=5.4,SNR=1.8						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**85.98**	**335**	P	**P**	**20 27 30.0**	**-0.8**
	2.2nm,1.1s,baz=46,slow=8.7,SNR=4.5						
	2.2nm,1.1s						

*AEIC **17** 20:15:22.9±1.5, 56°.2N±0°.1×148°.6W±0°.1, h12km±8km, Error ellipse: s-maj=17.7km s-min=9.2km az=167.0*

NEIC 17 20:15:19.3±1.3, 56°.2N±0°.1×148°.6W±0°.1, h21km±11km, ML3.0/40, ML3.0(AEIC), **Error ellipse: s-maj=17.2km s-min=9.2km az=167.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.68**	**307**		Pn	20 16 01.4	+0.3
KDAK	**Kodiak Island**	**2.68**	**307**		Sn	20 16 31.4	-1.4
OHAK	**Old Harbor**	**2.77**	**293**		Pn	20 16 02.2	-0.2
OHAK					Sn	20 16 32.8	-2.3
SII	**Sitkinak Islan**	**3.12**	**278**		Pn	20 16 08.3	+1.0
SII				IAML		20 16 42.6	
	comp=N,33nm,1.5s						
SII				IAML		20 17 18.8	
	comp=E,33nm,1.4s						
SYI	**Shuyak Island**	**3.14**	**321**		Pn	20 16 08.0	+0.5
SYI					Sn	20 16 43.4	-1.0
SYI				IAML		20 17 37.7	
	comp=N,18nm,1.5s						
SYI				IAML		20 17 45.1	
	comp=E,25nm,1.4s						
Q23K	**Middleton Isla**	**3.42**	**20**		Pn	20 16 10.7	-0.6
MID	**Middleton Isla**	**3.42**	**20**		Pn	20 16 10.8	-0.5
R18K	**Karluk**	**3.48**	**295**		Pn	20 16 12.8	+0.7
R18K				IAML		20 18 08.9	
	comp=N,20nm,0.9s						
R18K				IAML		20 18 13.5	
	comp=E,21nm,1.2s						
CNPM	**China Poot**	**3.59**	**338**		Pn	20 16 13.7	+0.1
CNPM					Sn	20 16 53.4	-2.0
BRSE	**Bradley Lake S**	**3.70**	**343**		Pn	20 16 15.6	+0.4
BRSE					Sn	20 16 56.7	-1.4
BRLK	**Bradley Lake**	**3.74**	**342**		Pn	20 16 15.6	-0.2
P23K	**Montague Islan**	**3.83**	**9**		Pn	20 16 16.6	-0.3
P23K					Sn	20 16 58.0	-3.2
Q19K	**Cape Douglas,**	**3.83**	**317**	Pn	Pn	20 16 18.2	+1.2
Q19K				IAML		20 17 56.6	
	comp=N,50nm,1.5s						
P19K	**Oil Pt**	**4.22**	**326**	Pn	Pn	20 16 23.2	+0.8
P19K				IAML		20 17 15.6	
	comp=E,28nm,1.3s						
KAIM	**Kayak Island**	**4.32**	**29**		Pn	20 16 23.5	-0.1
HIN	**Hinchinbrook I**	**4.32**	**14**		Pn	20 16 23.6	-0.1
HIN				IAML		20 18 05.0	
	comp=E,34nm,1.5s						
SLKM	**Skilak Lake**	**4.37**	**349**		Pn	20 16 24.4	0.0
EYAK	**Cordova Ski Ar**	**4.58**	**18**		Pn	20 16 27.1	-0.1
SUCK	**Suckling Hills**	**4.62**	**32**		Pn	20 16 27.9	+0.2
SUCK				IAML		20 18 12.8	
	comp=E,13nm,1.5s						
SUCK				IAML		20 19 16.1	
	comp=N,15nm,1.3s						
NICHA	**Nichawak Mount**	**4.70**	**29**		Pn	20 16 29.2	+0.3
HMT	**Hamilton**	**4.71**	**27**	Pn	Pn	20 16 28.8	-0.2
HMT				IAML		20 17 24.4	
	comp=N,24nm,1.1s						
P18K	**Big Mountain,**	**4.75**	**314**	Pn	Pn	20 16 29.4	-0.3
BERG	**Berg Lake**	**4.90**	**30**		Pn	20 16 31.6	0.0
GRIN	**Grindle Hills**	**4.92**	**32**		Pn	20 16 32.2	+0.2
O18K	**Koktuh Hills**	**5.05**	**319**	Pn	Pn	20 16 33.8	0.0
O18K				IAML		20 18 30.2	
	comp=N,4.8nm,1.3s						
O18K				IAML		20 18 50.3	
	comp=E,4.5nm,1.4s						
KHIT	**Khitrov Hills**	**5.07**	**31**		Pn	20 16 33.9	-0.2
WAX	**Waxell Ridge**	**5.20**	**33**		Pn	20 16 35.5	-0.3
WAX				IAML		20 17 34.0	
	comp=E,13nm,1.4s						
CRQM	**Cirque**	**5.36**	**30**		Pn	20 16 38.1	0.0
CRQM				IAML		20 17 43.4	
	comp=N,11nm,1.5s						
CRQM				IAML		20 19 14.3	
	comp=E,11nm,1.4s						
TGL	**Tana Glacier**	**5.45**	**31**		Pn	20 16 39.4	+0.1
ISLE	**Juniper Island**	**5.47**	**34**	Pn	Pn	20 16 39.5	-0.1
VRDI	**Verde Repeater**	**5.68**	**26**		Pn	20 16 42.4	-0.1
TABL	**Table Mountain**	**5.76**	**40**	Pn	Pn	20 16 44.0	+0.4
PCA	**Pinnacle**	**5.87**	**45**		Pn	20 16 45.3	+0.3
N18K	**Kilae Creek**	**5.87**	**322**	Pn	Pn	20 16 44.5	-0.5
PNL	**Peninsula**	**5.98**	**51**		Pn	20 16 47.2	+0.6
BCPM	**Bancas Point**	**6.04**	**48**	Pn	Pn	20 16 47.8	+0.6
BARN	**Barnard Glacie**	**6.04**	**34**		Pn	20 16 47.8	+0.4
O16K	**Kokwok River B**	**6.08**	**308**	Pn	Pn	20 16 48.5	+0.8
O29M	**Mount Kennedy**	**6.67**	**48**		Pn	20 16 56.8	+0.7
P29M	**Windy Craggy**	**6.71**	**55**		Pn	20 16 56.7	+0.2
L19K	**White Mountain**	**6.77**	**334**	Pn	Pn	20 16 57.0	-0.3
M17K	**Holitna River**	**6.92**	**322**	Pn	Pn	20 16 59.7	+0.3
S31K	**Pelican**	**6.96**	**70**	Pn	Pn	20 16 57.9	-1.9
P30M	**Million Dollar**	**7.28**	**53**		Pn	20 17 06.0	+1.6
N30M	**Aishikik Lake**	**7.93**	**44**	Pn	Pn	20 17 14.0	+0.7
M29M	**Somme Creek**	**8.09**	**36**	Pn	Pn	20 17 16.1	+0.6

*AEIC **17** 20:35:41.8±1.6, 55°.9N±0°.1×149°.2W±0°.1, h12km±8km, Error ellipse: s-maj=15.3km s-min=9.3km az=166.0*

NEIC 17 20:35:37.5±1.1, 55°.92N±0°.06×149°.3W±0°.1, h10km±5km, ML3.0/30, **ML2.9**(AEIC), **Error ellipse: s-maj=10.0km s-min=9.0km az=53.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.56**	**302**		Pn	20 36 18.9	0.0
OHAK					Sn	20 36 47.8	-2.1
KDAK	**Kodiak Island**	**2.59**	**317**		Pn	20 36 19.5	+0.2
KDAK	**Kodiak Island**	**2.59**	**317**		Sn	20 36 48.6	-2.2
SII	**Sitkinak Islan**	**2.79**	**285**		Pn	20 36 21.9	-0.2
SII					Sn	20 36 54.1	-1.7
SII				IAML		20 36 54.8	
	comp=E,56nm,1.0s						
SII				IAML		20 37 12.2	
	comp=N,40nm,1.5s						
SYI	**Shuyak Island**	**3.17**	**330**		Pn	20 36 27.4	+0.1
SYI				IAML		20 36 49.2	
	comp=E,24nm,1.4s						
SYI				IAML		20 37 15.7	
	comp=N,20nm,1.5s						
R18K	**Karluk**	**3.27**	**302**		Pn	20 36 29.3	+0.6
R18K					Sn	20 37 06.1	-1.6
Q19K	**Cape Douglas,**	**3.82**	**324**	Pn	Pn	20 36 37.4	+1.1
Q19K				IAML		20 38 45.4	
	comp=N,44nm,1.5s						
MID	**Middleton Isla**	**3.86**	**23**	Pn	Pn	20 36 36.3	-0.5
BRSE	**Bradley Lake S**	**3.91**	**349**		Pn	20 36 37.0	-0.5
BRLK	**Bradley Lake**	**3.94**	**348**		Pn	20 36 37.6	-0.5
P23K	**Montague Islan**	**4.21**	**13**		Pn	20 36 41.2	-0.5
P19K	**Oil Pt**	**4.29**	**332**	Pn	Pn	20 36 43.4	+0.6
P19K				IAML		20 37 21.0	
	comp=N,19nm,0.8s						
ILSW	**Iliamna Southw**	**4.55**	**335**	Pn	Pn	20 36 46.2	-0.3
ILSW				IAML		20 39 03.1	
	comp=E,8.0nm,1.4s						
SLKM	**Skilak Lake**	**4.62**	**354**		Pn	20 36 46.9	-0.5
P18K	**Big Mountain,**	**4.71**	**320**		Pn	20 36 48.6	+0.1
HIN	**Hinchinbrook I**	**4.73**	**17**		Pn	20 36 48.4	-0.4
HIN				IAML		20 38 55.5	
	comp=E,22nm,1.3s						
HIN				IAML		20 39 14.8	
	comp=N,23nm,1.4s						
KAIM	**Kayak Island**	**4.79**	**31**		Pn	20 36 49.7	+0.1
P17K	**Kvichak River**	**5.05**	**314**		Pn	20 36 54.1	+1.0
FID	**Port Fidalgo**	**5.07**	**16**		Pn	20 36 53.1	-0.4
FID				IAML		20 38 20.1	
	comp=E,11nm,1.4s						
FID				IAML		20 39 15.2	
	comp=N,9.6nm,1.4s						
HMT	**Hamilton**	**5.17**	**29**	Pn	Pn	20 36 55.6	+0.7
HMT				IAML		20 38 56.9	
	comp=N,16nm,1.5s						
BERG	**Berg Lake**	**5.38**	**31**		Pn	20 36 57.6	-0.1
BERG				IAML		20 39 09.8	
	comp=N,16nm,1.4s						
KNK	**Knik Glacier**	**5.53**	**4**	Pn	Pn	20 36 59.7	0.0
N19K	**Bonanza Creek**	**5.61**	**333**	Pn	Pn	20 37 00.5	-0.5
SUA	**Susitna One**	**5.61**	**353**	Pn	Pn	20 37 00.5	-0.4
BMRM	**Bremner River**	**5.63**	**24**		Pn	20 37 01.1	-0.1
KLU	**Klutina**	**5.86**	**16**		Pn	20 37 04.6	+0.2
N18K	**Kilae Creek**	**5.89**	**327**		Pn	20 37 04.3	-0.5
SML	**Sawmill**	**5.93**	**5**	Pn	Pn	20 37 05.6	+0.3
TGL	**Tana Glacier**	**5.93**	**32**	Pn	Pn	20 37 05.1	-0.3
ISLE	**Juniper Island**	**5.96**	**35**	Pn	Pn	20 37 05.8	0.0
O16K	**Kokwok River B**	**5.97**	**312**		Pn	20 37 06.5	+0.8
SCM	**Sheep Creek Mo**	**6.02**	**9**	Pn	Pn	20 37 06.8	+0.3
N25K	**Chitina, Valde**	**6.21**	**21**		Pn	20 37 09.3	+0.2
GLB	**Gilahina Butte**	**6.24**	**25**	Pn	Pn	20 37 10.1	+0.6
PNL	**Peninsula**	**6.50**	**51**		Pn	20 37 13.0	-0.1
L19K	**White Mountain**	**6.89**	**338**	Pn	Pn	20 37 18.4	-0.2
N15K	**Kwethluk River**	**7.13**	**311**	Pn	Pn	20 37 20.7	-0.9
O29M	**Mount Kennedy**	**7.18**	**48**	Pn	Pn	20 37 23.4	+0.8
P29M	**Windy Craggy**	**7.22**	**54**		Pn	20 37 23.2	+0.2
S31K	**Pelican**	**7.45**	**69**	Pn	Pn	20 37 23.9	-2.1
L16K	**Owhat River**	**7.83**	**322**	Pn	Pn	20 37 31.6	+0.3
BPAW	**Bear Paw Mtn.**	**8.25**	**355**	Pn	Pn	20 37 36.4	-0.6

*IDC **17** 21:26:52.9±1.8, 27°.91N×142°.63E, h0km, mb3.7/8, mbtmp3.7/10, ML3.1/2, Error ellipse: s-maj=51.1km s-min=14.5km az=88.0*

*JMA **17** 21:26:56.6±0.1, 28°.2N±0°.3×142°.2E±°, h32km±2km, MV4.0/22, NEAR CHICHIJIMA ISLAND*

ISC 17 21:26:56.5±1.5, 28°.11N±0°.05×142°.7E±0°.2, h25km, n18, σ1§93/22, mb3.8/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.09**	**202**	eP	**Pb**	**21 27 17.3**	**+0.7**
CBIJ				S	**Sn**	**21 27 32.3**	**+2.0**
JCJ	**Chichijima**	**1.09**	**202**	Pn	**Pn**	**21 27 11.9**	**-4.2**
	15nm,0.3s,baz=288,slow=18,SNR=2.3						
JCJ				Sn	**Sb**	**21 27 27.4**	**-3.0**
	79nm,0.3s,baz=101,slow=24,SNR=10						
JHH2	**Haha-jima-NKT2**	**1.52**	**196**	eS	**Sb**	**21 27 44.1**	**+1.1**
BSO3	**Boso 3**	**6.92**	**345**	eP	**Pn**	**21 28 36.7**	**+0.6**
JOD2	**Odawara 2**	**7.75**	**338**	eP	**Pn**	**21 28 48.8**	**+1.0**
JHU	**Hanno**	**8.23**	**341**	eP	**Pn**	**21 28 54.5**	**+0.1**
JRY	**Ryogami san**	**8.50**	**339**	eP	**Pn**	**21 28 59.1**	**+1.0**
JRY				eS	**Sn**	**21 30 32.6**	**-0.6**
JHO	**Hitachi**	**8.66**	**349**	eP	**Pn**	**21 28 58.2**	**-2.0**
MJAR	**Matsushiro Arr**	**9.21**	**337**	Pn	**Pn**	**21 29 07.7**	**-0.1**
	0.2nm,0.3s,baz=170,slow=14,SNR=8.5						
MJAR				Sn	**Sn**	**21 30 46.6**	**-4.0**
	baz=169,slow=16,SNR=1.1						
	2.9nm,0.6s						
KSRS	**Korea Array**	**15.48**	**311**	Pn	**P**	**21 30 36.2**	**-1.2**
	0.1nm,0.3s,baz=125,slow=10,SNR=5.8						
	1.1nm,0.7s						
SONM	**Songino Array**	**34.28**	**315**	P	**P**	**21 33 43.2**	**+2.4**
	0.6nm,0.6s,baz=117,slow=8.9,SNR=5.1						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**48.44**	**190**	P	**P**	**21 35 36.7**	**-0.2**
	1.9nm,0.7s,baz=12,slow=8.3,SNR=18						
	1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**49.00**	**318**	P	**P**	**21 35 42.1**	**+1.1**
	0.4nm,0.5s,baz=96,slow=10,SNR=1.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**50.16**	**309**	P	**P**	**21 35 50.2**	**+0.3**
	0.2nm,0.5s,baz=83,slow=10,SNR=6.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**52.16**	**190**	P	**P**	**21 36 03.1**	**-2.0**
	0.2nm,0.6s,baz=6.7,slow=5.0,SNR=2.2						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**52.63**	**314**	P	**P**	**21 36 09.6**	**+1.2**
	2.1nm,0.8s,baz=89,slow=7.4,SNR=22						
	2.1nm,0.8s						
BVAR	**Borovoye Array**	**57.58**	**317**	P	**P**	**21 36 45.3**	**+1.3**
	1.1nm,0.7s,baz=97,slow=8.7,SNR=12						
	1.1nm,0.7s						
FINES	**FINESS Array B**	**77.22**	**334**	P	**P**	**21 38 48.6**	**+0.5**
	1.4nm,1.0s,baz=80,slow=7.6,SNR=1.8						
	1.4nm,1.0s						

*IDC **17** 21:30:38.9±0.6, 16°.36N×97°.78W, h0km, mb4.9/22, mbtmp4.8/24, ML3.8/2, MS4.5/56, Error ellipse: s-maj=26.4km s-min=12.2km az=60.0*

*MOS **17** 21:30:40.7±0.9, 16°.48N×97°.81W, h16km, mb5.4/50, MS4.6/15, Error ellipse: s-maj=8.4km s-min=4.8km az=103.7*

*NEIC **17** 21:30:41.6, 16°.50N×97°.87W, h26km*

*NEIC **17** 21:30:41.6, 16°.20N×97°.77W, h26km, Moment Tensor Solution. Duration: 29s0 Moment tensor: Scale 10**16**Nm; Mrr=4.84; Mθθ=-4.63; Mφφ=-0.21; Mrθ=4.91; Mθφ=2.16; Mφr=2.46; Fault plane solution: M0 7.54000×10**16** NP1: φs=115.60000°, δ68.39000°, λ92.86000°. NP2: φs=287.86000°, δ21.79000°, λ82.81000°. Principal axes: T 7.2157, Plg66.0000°, Azm31.0000°; N 0.6501, Plg3.0000°, Azm295.0000°; P -7.8658, Plg23.0000°, Azm203.0000°;*

*NEIC **17** 21:30:43.8±1.4, 16°.51N±0°.07×97°.88W±0°.07, h19km±3km, mb5.2/198, Ms_20 4.9/179, Mww5.2/31, Md5.3/11(MEX)*

Error ellipse: s-maj=12.8km s-min=5.9km az=224.0

*MEX **17** 21:30:43.4±1.1, 16°.26N×98°.11W, h12km±3km, MD5.3*

*GCMT **17** 21:30:45.8±0.2, 16°.53N±0°.01×97°.89W±0°.01, h24km, MW5.2/127, Moment Tensor Solution. s106,c154; s127,c204; Duration: 1§0 Moment tensor: Scale 10**17** Nm; Mrr=0.58±.02; Mθθ=0.51±.01; Mφφ=-0.07±.01; Mrθ=0.47±.02; Mθφ=0.16±.01; Mφr=0.39±.02; Best double couple: M0=0.83500×10**17** NP1:φs=123.00000°, δ69.00000°, λ100.00000°. NP2:φs=276.00000°, δ24.00000°, λ65.00000°. Principal axes: T 0.8630, Plg65.0000°, Azm250.0000°; N -0.0570, Plg10.0000°, Azm299.0000°; P -0.8070, Plg23.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 21:30:42.7±0.7, 16°.40N±0°.03×97°.99W±0°.02, h23km±4km, n1016, σ1§59/948, mb5.2/156, **MS4.8**/156, **23C-19D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.13**	**267**		**Pb**	**21 30 45.8**	**-1.6**
PNIG					**Sb**	**21 30 48.6**	**-1.9**
PNIG	**Pinotepa**	**0.13**	**267**	eP	**Pb**	**21 30 45.8**	**-1.6**
PNIG				i S	**Sb**	**21 30 48.8**	**-1.7**
YOIG	**Yosondua**	**0.62**	**43**	↓eP	**Pn**	**21 30 56.0**	**-0.5**
	baz=227,slow=16						
YOIG				eS	**Sn**	**21 31 06.2**	**+0.2**
TXIG	**Tlaxiaco**	**0.88**	**14**		**Pn**	**21 30 60.0**	**0.0**
TXIG	**Tlaxiaco**	**0.88**	**14**	↓eP	**Pn**	**21 30 59.9**	**0.0**
TXIG				eS	**Sn**	**21 31 13.2**	**+1.0**
PEIG	**Puerto Escondi**	**0.91**	**116**		**Pb**	**21 30 58.3**	**-1.4**
PEIG	**Puerto Escondi**	**0.91**	**116**	eP	**Pb**	**21 30 58.4**	**-1.4**
PEIG				eS	**Sn**	**21 31 11.7**	**-0.8**
MGIG	**Malinaltepec**	**1.03**	**324**		**Pn**	**21 31 00.9**	**-1.1**
MGIG	**Malinaltepec**	**1.03**	**324**	eP	**Pn**	**21 31 00.9**	**-1.1**
CRIG	**Cruz Grande**	**1.14**	**287**	↓eP	Pn	21 31 00.5	-2.9
CRIG				eS	Sn	21 31 13.9	-4.4
TLIG	**Tlapa**	**1.28**	**335**		**Pn**	**21 31 05.2**	**-0.2**
TLIG				Sg	**Sn**	**21 31 23.0**	**+1.1**
TLIG	**Tlapa**	**1.28**	**335**	↑eP	**Pn**	**21 31 05.5**	**+0.1**
TLIG				i S	**Sn**	**21 31 22.3**	**+0.4**
VHO	**Vista Hermosa**	**1.38**	**61**	↓eP	**Pb**	**21 31 07.5**	**-0.5**
VHO				eS	**Sb**	**21 31 27.3**	**+2.0**
OXBJ	**Oaxaca**	**1.39**	**61**	eP	**Pb**	**21 31 07.5**	**-0.6**
OXBJ				eS	**Sb**	**21 31 27.4**	**+1.9**
HLIG	**Huajuapan de L**	**1.44**	**7**	↓eP	**Pb**	**21 31 08.7**	**-0.3**
HLIG				eS	**Sb**	**21 31 28.9**	**+2.0**
FTIG	**Fresnillo de T**	**1.51**	**355**	↓eP	**Pn**	**21 31 09.5**	**+1.0**
FTIG				eS	**Sn**	**21 31 26.8**	**-0.8**
PANG	**Puerto Angel**	**1.63**	**116**	eP	**Pn**	**21 31 10.4**	**+0.3**
PANG				i S	**Sn**	**21 31 27.7**	**-2.6**
DAIG	**Los Arroyos**	**1.71**	**292**	eP	Pn	21 31 09.0	-2.2
DAIG				eS	Sn	21 31 27.3	-5.0
TOIG	**Toxpalan**	**1.91**	**28**	↑eP	**Pn**	**21 31 15.0**	**+1.0**
TOIG				eS	**Sb**	**21 31 39.6**	**-0.8**
HUIG	**Huatulco**	**1.92**	**109**	↑eP	**Pn**	**21 31 12.9**	**-1.1**
HUIG				eS	**Sn**	**21 31 35.2**	**-2.3**
TPIG	**Tehuac#an**	**2.10**	**17**	↑eP	**Pn**	**21 31 18.3**	**+1.6**
TPIG				eS	**Sn**	**21 31 42.2**	**0.0**
MEIG	**Mezcala**	**2.17**	**315**	eP	**Pn**	**21 31 16.9**	**-0.8**
MEIG				eS	**Sn**	**21 31 43.8**	**-0.1**
CAIG	**El Cayaco**	**2.27**	**287**	↓eP	Pn	21 31 16.6	-2.3
CAIG				eS	Sn	21 31 40.1	-5.6
PLIG	**Platanillo**	**2.45**	**324**	↑eP	**Pn**	**21 31 22.3**	**+0.9**
PLIG				eS	**Sn**	**21 31 54.6**	**+3.8**
NEUV	**Arroyo Zacate**	**2.47**	**58**	↑eP	**Pn**	**21 31 22.6**	**+1.0**
NEUV				eS	**Sb**	**21 31 54.1**	**-2.3**
YAIG	**Yautepec**	**2.66**	**337**	↑eP	**Pn**	**21 31 25.3**	**+1.0**
YAIG				eS	**Sn**	**21 31 57.3**	**+1.4**
PPM	**Popocatepetl**	**2.72**	**347**	↑eP	**Pn**	**21 31 27.2**	**+1.6**
PPM				eS	**Sn**	**21 31 56.0**	**-2.0**
ARIG	**Puente Sto Nin**	**2.93**	**310**	↑eP	**Pn**	**21 31 28.1**	**+0.2**
ARIG				eS	**Sn**	**21 32 00.7**	**-1.7**
CMIG	**Matias Romero**	**3.06**	**77**	Pn	**Pn**	**21 31 29.5**	**-0.2**
	27nm,0.3s,baz=248,slow=11,SNR=206						
CMIG				Pg	**Pb**	**21 31 38.7**	**+2.2**
	78nm,0.3s,baz=264,slow=16,SNR=39						
CMIG				LR	LR	21 32 04.8	
	comp=Z,3μm,20.5s,baz=229,slow=30						
CMIG				Sn	**Sn**	**21 32 06.4**	**+0.8**
	100nm,0.3s,baz=259,slow=12,SNR=5.2						
CMIG				Lg	Lg	21 32 18.3	
	352nm,0.3s,baz=175,slow=20,SNR=7.5						
CMIG	**Matias Romero**	**3.06**	**77**	‖eP	**Pn**	**21 31 29.4**	**-0.4**
CMIG				eS	**Sn**	**21 32 07.9**	**+2.3**
CNCY	**Coyoacan**	**3.11**	**339**	eP	**Pb**	**21 31 36.8**	**-0.8**
CNCY				eS	**Sb**	**21 32 12.8**	**-2.4**
UNM	**Universidad Na**	**3.13**	**339**		**Pn**	**21 31 28.5**	**-2.4**
UNM	**Universidad Na**	**3.13**	**339**	P	**Pn**	**21 31 28.5**	**-2.4**
UNM	**Universidad Na**	**3.13**	**339**	eP	**Pn**	**21 31 33.0**	**+2.1**
UNM				eS	**Sn**	**21 32 09.7**	**+2.0**
JAUV	**Jalcomulco**	**3.16**	**21**	↑eP	**Pn**	**21 31 31.1**	**-0.1**
JAUV				eS	**Sb**	**21 32 15.3**	**-1.1**
NILT	**Santiago Nilte**	**3.24**	**87**	eP	**Pn**	**21 31 33.5**	**+1.3**
NILT				i S	**Sn**	**21 32 12.5**	**+2.3**
PMUV	**Sontecomapan**	**3.47**	**52**	eP	**Pn**	**21 31 35.1**	**-0.4**
PMUV				i S

CNGN Cerro Negro 11.60 108 Pn Pn 21 33 26.6 -0.6
833A Chaparral WMA, 11.94 354 Pn Pn 21 33 32.8 +1.2
833A Chaparral WMA, 11.94 354 P Pn 21 33 33.2 +1.5
baz=173
MATN Matagalpa 12.17 105 Pn 21 33 35.4 +0.4
BOAB BOACO BROADBAN 12.57 107 Pn Pn 21 33 38.9 -1.4
HPIG 12.68 327 Pn Pn 21 33 41.9 0.0
HNDO Hondo 13.12 355 Pn 21 33 46.5 -1.3
ACON Acoyapa 13.19 108 Pn 21 33 48.0 -0.7
ACON Acoyapa 13.19 108 eP Pn 21 33 50.6 +1.9
DRIO Del Rio 13.19 350 Pn Pn 21 33 49.9 +1.2
HZTE Horizontes, Gu 13.31 114 Pn 21 33 49.9 -0.5
SLBS Sierra La Lagu 13.36 305 Pn Pn 21 33 52.6 +1.4
ORTG Ortega, Santa 13.59 115 Pn Pn 21 33 54.8 +0.6
DUNO Dulce Nombre, 13.69 116 Pn Pn 21 33 55.8 +0.2
LPIG La Paz 13.86 306 LR LR 21 38 18.9
comp=Z,1µm,19.2s,baz=123,slow=33
TXAR Lajitas Array 13.89 339 Pn Pn 21 34 00.7 +2.3
0.1nm,0.3s,baz=159,slow=12,SNR=22
TXAR Lg Lg 21 38 02.4
baz=160,slow=21
TXAR LR LR 21 39 21.0
comp=Z,1µm,21.8s,baz=146,slow=37
5.4nm,1.0s
ESPN Las Esperanzas 13.91 106 Pn Pn 21 33 58.4 -0.2
JTS Las Juntas de 14.06 114 Pn Pn 21 34 02.5 +1.8
JTS Las Juntas de 14.06 114 Pn Pn 21 33 58.6 -2.2
0.4nm,0.3s,baz=286,slow=23,SNR=1.5
1.7nm,0.3s
JTS Las Juntas de 14.06 114 eP P 21 34 04.5 -3.9
JCT Junction City 14.11 354 Pn Pn 21 34 02.2 +0.8
JCT Junction City 14.11 354 P Pn 21 34 02.1 +0.7
baz=172,SNR=8.3
JCT Junction City 14.11 354 P Pn 21 34 02.2 +0.8
ARE1 Arenal 1 14.19 113 Pn 21 34 03.6 +1.0
435B Jarrell 14.32 1 Pn Pn 21 34 03.8 -0.4
435B Jarrell 14.32 1 P Pn 21 34 03.9 -0.4
baz=181
JACO JACO, Garabito 14.61 116 Pn 21 34 06.1 -2.1
ALPN Alpine 14.84 341 Pn Pn 21 34 10.6 -0.8
HDC Heredia 14.93 113 Pn 21 34 11.3 -1.4
441A DeRidder 14.95 16 Pn 21 34 09.9 -2.7
LCR2 La Lucha 2 15.14 114 Pn Pn 21 34 15.9 +0.3
LCR2 IAmb IAmb 21 34 19.9
comp=Z,83nm,0.9s
SOR Soroa 15.48 63 Pn Pn 21 34 18.3 -1.5
SOR Soroa 15.48 63 P Pn 21 34 18.3 -1.5
SOR pmax pmax
comp=Z,9.0nm,1.1s
MNHN Monahans 15.50 345 Pn 21 34 19.9 -0.1
WHTX Lake Whitney, 15.53 2 Pn Pn 21 34 19.3 -1.1
WHTX IAmb IAmb 21 34 27.1
comp=Z,214nm,1.1s
WHTX Lake Whitney, 15.53 2 P Pn 21 34 20.3 -0.1
baz=182,SNR=48
NATX Nacogdoches 15.59 11 Pn 21 34 18.4 -2.8
NATX IAmb IAmb 21 34 27.9
comp=Z,169nm,1.1s
NATX Nacogdoches 15.59 11 P Pn 21 34 20.8 -0.3
baz=192,SNR=9.2
PEZE Perez Zeledon, 15.59 115 Pn 21 34 19.3 -2.0
PECS Pecos 15.84 341 Pn 21 34 23.7 -0.7
SRBA San Rafael, Bu 15.94 115 Pn 21 34 25.6 -0.2
FW14 Alvarado 15.95 2 Pn 21 34 24.2 -1.5
DRK0 Durika 16.03 114 Pn 21 34 26.6 -0.4
DRK0 IAmb IAmb 21 34 34.8
comp=Z,104nm,0.9s
ABTX Abilene, Hawle 16.22 355 Pn 21 34 28.8 -0.6
ABTX IAmb IAmb 21 34 35.9
comp=Z,354nm,1.1s
ABTX Abilene, Hawle 16.22 355 P Pn 21 34 29.5 +0.2
baz=174,SNR=51
FW07 Weatherford 16.23 1 Pn 21 34 28.8 -0.6
FW07 IAmb IAmb 21 34 35.6
comp=Z,282nm,1.3s
PLPT Palo Pinto 16.35 359 P Pn 21 34 30.5 -0.4
FW06 Azle 16.51 1 Pn 21 34 32.6 -0.2
FW06 IAmb IAmb 21 34 37.8
comp=Z,172nm,1.0s
MNTX Cornudas Mount 16.65 338 P Pn 21 34 36.2 +1.5
baz=154,SNR=34
CDITO Canoas 16.68 116 Pn 21 34 34.9 -0.3
CDITO IAmb IAmb 21 34 44.4
comp=Z,211nm,1.8s
BRU2 Volcan 16.73 115 Pn 21 34 36.1 +0.2
Z35A Perchaven, San 16.87 2 Pn 21 34 36.4 -1.1
Z35A IAmb IAmb 21 34 41.6
comp=Z,168nm,1.1s
VBMS Vicksburg 17.15 22 Pn 21 34 39.5 -1.4
VBMS IAmb IAmb 21 34 44.6
comp=Z,293nm,1.1s
VBMS Vicksburg 17.15 22 P Pn 21 34 39.6 -1.4
baz=205,SNR=6.7
EPT El Paso 17.15 335 Pn 21 34 40.7 -0.4
HSIG 17.32 319 Pn Pn 21 34 43.4 +0.2
Z41A Richland Creek 17.43 15 Pn 21 34 43.6 -0.8
Z41A IAmb IAmb 21 34 47.8
comp=Z,214nm,1.3s
LOOK Love County 17.54 2 Pn 21 34 44.6 -1.2
BRAL Brewton 17.77 32 P Pn 21 34 46.8 -1.8
BRAL Brewton 17.77 32 P Pn 21 34 47.1 -1.5
baz=216
MSTX Muleshoe 18.02 347 P Pn 21 34 51.0 -0.9
MSTX Muleshoe 18.02 347 P Pn 21 34 52.2 +0.3
baz=165,SNR=26
WMOK Wichita Mounta 18.28 358 Pn 21 34 54.2 -0.7
WMOK Wichita Mounta 18.28 358 P Pn 21 34 54.7 -0.2
baz=177,SNR=41
WMOK Wichita Mounta 18.28 358 P Pn 21 34 54.2 -0.7
WMOK pmax pmax
comp=Z,65nm,1.2s
121A Cookes Peak, D 18.35 333 P P 21 34 56.7 +0.7
121A Cookes Peak, D 18.35 333 P Pn 21 34 58.0 +2.0
baz=148,SNR=11
GMAL Guarumal, Vera 18.49 116 eP Pn 21 34 59.7 +2.1
MIAR Mount Ida 18.50 12 P P 21 34 56.3 -1.1
MIAR IAmb IAmb 21 35 08.0
comp=Z,239nm,1.6s
MIAR Mount Ida 18.50 12 P P 21 34 56.2 -1.1
baz=193,SNR=32
MIAR Mount Ida 18.50 12 P P 21 34 56.3 -1.1
MIAR pmax pmax
comp=Z,239nm,1.6s
AMTX Amarillo 18.70 351 P P 21 34 59.8 0.0
AMTX Amarillo 18.70 351 P P 21 34 59.7 -0.1
baz=168
UALR University of 18.99 14 P P 21 35 02.5 -0.3
BCIP Isla Barro Col 19.10 110 Pn Pn 21 35 05.5 +0.5
BCIP Isla Barro Col 19.10 110 P Pn 21 35 05.5 +0.5
BCIP pmax pmax
comp=Z,57nm,1.2s
DWPF Disney Wildern 19.23 50 P P 21 35 04.8 -0.7
DWPF IAmb IAmb 21 35 17.6
comp=Z,162nm,1.7s
DWPF Disney Wildern 19.23 50 P P 21 35 03.3 -2.2
baz=236
LRAL Lakeview Retre 19.32 29 P P 21 35 05.8 -0.5
LRAL Lakeview Retre 19.32 29 P Pn 21 35 06.9 -0.6
baz=213,SNR=24
Y22D IRIS PASSCAL I 19.35 337 P 21 35 07.7 +0.9
Y22D IAmb IAmb 21 35 17.8
comp=Z,139nm,1.0s
Y22D IRIS PASSCAL I 19.35 337 P P 21 35 06.9 +0.1
baz=153
Y22F Passcal Instru 19.35 337 P P 21 35 07.1 +0.3
baz=153
TUL3 Leonard 19.53 5 P Pn 21 35 08.1 -0.6
TUL3 IAmb IAmb 21 35 16.7
comp=Z,134nm,0.9s
TUL3 Leonard 19.53 5 P P 21 35 08.8 +0.1
baz=186,SNR=36
OXF Oxford 19.61 22 P P 21 35 08.1 -1.5
OXF IAmb IAmb 21 35 17.3
comp=Z,121nm,1.1s
OXF Oxford 19.61 22 P P 21 35 09.3 -0.2
baz=205,SNR=10
OXF Oxford 19.61 22 P P 21 35 08.1 -1.5
OXF pmax pmax
comp=Z,121nm,1.2s
TUC Tucson 19.64 326 P P 21 35 11.1 +1.1
TUC Tucson 19.64 326 P Pn 21 35 12.6 +1.2
baz=140
TUC Tucson 19.64 326 P P 21 35 11.1 +1.1
TUC pmax pmax
comp=Z,50nm,1.3s
TIGA Tifton 19.91 39 P P 21 35 11.8 -0.9
TIGA Tifton 19.91 39 P P 21 35 11.8 -0.9
baz=224
ANMO Albuquerque 19.97 339 P P 21 35 14.4 +0.7
ANMO IAmb IAmb 21 35 27.8
comp=Z,131nm,1.4s
ANMO Albuquerque 19.97 339 P Pn 21 35 15.6 +0.2
baz=155
ANMO Albuquerque 19.97 339 P P 21 35 14.4 +0.7
ANMO pmax pmax
comp=Z,131nm,1.5s
ANMO Albuquerque 19.97 339 P P 21 35 14.9 +1.3
comp=Z,38nm,1.0s,baz=240,slow=12,SNR=43
ANMO Lg Lg 21 41 18.8
comp=Z,0.1nm,0.3s,baz=227,slow=18,SNR=1.0
ANMO LR LR 21 43 48.5
comp=Z,4µm,19.9s,baz=248,slow=39
comp=Z,38nm,1.0s
OK038 West end E0370 20.01 358 P P 21 35 12.9 -1.0
OK038 IAmb IAmb 21 35 25.0
comp=Z,337nm,1.8s
HHAR Hobbs 20.13 10 P P 21 35 13.7 -1.5
HHAR IAmb IAmb 21 35 22.4
comp=Z,157nm,1.3s
214A Organ Pipe Nat 20.52 322 P P 21 35 20.1 +0.5
214A IAmb IAmb 21 35 23.9
comp=Z,116nm,1.7s
214A Organ Pipe Nat 20.52 322 P Pn 21 35 22.4 +0.6
baz=135,SNR=8.3
KAN17 Caldwell West 20.57 1 P P 21 35 19.2 -0.8
PIX Pinacate 20.64 320 P P 21 35 21.1 +0.3
X18A Snowflake 21.00 331 P P 21 35 24.7 -0.2
X18A IAmb IAmb 21 35 29.4
comp=Z,153nm,1.2s
LNXT Lenox 21.03 19 P P 21 35 24.8 -0.1
FPAL Fort Paine 21.21 29 P P 21 35 25.7 -1.3
FPAL IAmb IAmb 21 35 36.7
comp=Z,65nm,1.1s
W18A Petrified Fore 21.40 333 P P 21 35 29.9 +0.8
W18A Petrified Fore 21.40 333 P P 21 35 31.5 +2.4
baz=147,SNR=15
GOGA Godfrey 21.42 35 P P 21 35 27.9 -1.2
GOGA IAmb IAmb 21 35 39.3
comp=Z,191nm,1.4s
GOGA Godfrey 21.42 35 P P 21 35 28.8 -0.3
baz=221,SNR=28
GOGA Godfrey 21.42 35 P P 21 35 28.0 -1.2
GOGA pmax pmax
comp=Z,191nm,1.4s
T25A Trinidad 21.43 346 P P 21 35 29.9 +0.4
T25A Trinidad 21.43 346 P P 21 35 31.9 +2.4
baz=183,SNR=198
SPIG San Pedro Mart 21.60 316 eP P 21 35 33.3 +1.8
WVT Waverly 21.63 23 P P 21 35 30.2 -1.2
WVT IAmb IAmb 21 35 35.2
comp=Z,160nm,1.1s
WVT Waverly 21.63 23 P P 21 35 30.7 -0.8
baz=207
WVT Waverly 21.63 23 P P 21 35 30.2 -1.2
WVT pmax pmax
comp=Z,160nm,1.1s
PTAC Punta Ardita, 21.77 113 eP P 21 35 34.3 +1.1
GTBY Guantanamo Bay 22.02 77 P P 21 35 34.4 -1.3
GTBY Guantanamo Bay 22.02 77 eP P 21 35 36.5 +0.8
VTX Valle De La Tr 22.03 316 P P 21 35 36.4 +0.6
SDCO Great Sand Dun 22.27 344 P P 21 35 38.7 +0.1
SDCO IAmb IAmb 21 35 44.3
comp=Z,67nm,1.2s
SDCO Great Sand Dun 22.27 344 P P 21 35 40.1 +1.5
baz=160,SNR=57
CCM Cathedral Cave 22.38 14 P P 21 35 38.2 -1.2
CCM IAmb IAmb 21 35 45.5
comp=Z,111nm,1.1s
CCM Cathedral Cave 22.38 14 P P 21 35 38.8 -0.6
baz=197
CCM Cathedral Cave 22.38 14 P P 21 35 38.2 -1.2
CCM pmax pmax
comp=Z,111nm,1.1s
CBKS Cedar Bluff 22.38 356 P P 21 35 39.4 -0.1
CBKS Cedar Bluff 22.38 356 P P 21 35 39.9 +0.3
baz=175,SNR=15
CBKS Cedar Bluff 22.38 356 P P 21 35 39.4 -0.1
CBKS pmax pmax
comp=Z,404nm,1.7s
WUAZ Wupatki 22.48 330 P P 21 35 41.6 +0.9
WUAZ IAmb IAmb 21 35 46.6
comp=Z,101nm,0.9s
WUAZ Wupatki 22.48 330 P P 21 35 42.9 +2.2
baz=144,SNR=64
GLA Glamis 22.50 321 P P 21 35 41.5 +0.6
GLA IAmb IAmb 21 35 54.3
comp=Z,74nm,1.1s
GLA Glamis 22.50 321 P P 21 35 42.9 +2.0
baz=133
GLA Glamis 22.50 321 P P 21 35 41.5 +0.6
GLA pmax pmax
comp=Z,75nm,1.1s
ESJX Sierra Juarez 22.52 317 P P 21 35 42.4 +1.2
APAC Apartado, Choc 22.55 109 eP P 21 35 43.5 +2.0
S22A 4UR Ranch, Cre 22.65 342 P P 21 35 42.8 +0.2
S22A IAmb IAmb 21 35 47.5
comp=Z,56nm,0.9s
S22A 4UR Ranch, Cre 22.65 342 P P 21 35 44.0 +1.4
baz=157,SNR=73
KSU1 Kansas State U 22.65 3 P P 21 35 41.6 -0.7
KSU1 IAmb IAmb 21 35 45.0
comp=Z,168nm,1.2s
KSU1 Kansas State U 22.65 3 P P 21 35 41.9 -0.4
baz=183,SNR=24
MVCO Mesa Verde 22.72 338 P P 21 35 44.1 +0.8
MVCO IAMs_20 IAMs_20 21 45 34.6
comp=Z,3µm,21.0s
MVCO Mesa Verde 22.72 338 P P 21 35 44.8 +1.4
baz=153,SNR=86
BLYC Blythe 22.81 322 P P 21 35 44.9 +0.9
KSCO Kaye Shedlock' 22.89 351 P P 21 35 45.1 +0.1
KSCO IAmb IAmb 21 35 47.2
comp=Z,169nm,1.4s
KSCO Kaye Shedlock' 22.89 351 P P 21 35 46.2 +1.1
baz=168,SNR=10
PDMCI Parker Dam,Lak 22.98 324 P P 21 35 48.2 +2.3
baz=137,SNR=13
SWSC Sam W. Stewart 23.03 319 P P 21 35 48.9 +2.5
baz=131,SNR=8.9
IKP In-Ko-Pah, Jac 23.04 318 P P 21 35 49.3 +2.7
baz=130,SNR=9.5
SJCC San Jacinto, C 23.12 103 eP P 21 35 51.0 +3.5
NHSC New Hope 23.14 41 P P 21 35 47.8 +0.3
NHSC New Hope 23.14 41 P P 21 35 47.7 +0.2
baz=228,SNR=13
DBBC Dabeiba 23.25 111 eP P 21 35 51.5 +2.6
BC3 Big Chuckawall 23.30 321 P P 21 35 51.2 +2.1
baz=133,SNR=32
JSC Jenkinsville 23.30 37 P P 21 35 48.2 -0.9
JSC Jenkinsville 23.30 37 P P 21 35 48.2 -0.9
JSC pmax pmax
comp=Z,216nm,1.6s
TKX Tecate 23.31 317 P P 21 35 50.3 +1.1
TKX IAmb IAmb 21 35 54.2
comp=Z,100nm,1.8s
Q24A Divide 23.34 346 P P 21 35 49.0 -0.8
Q24A IAmb IAmb 21 35 53.5
comp=Z,117nm,1.3s
Q24A Divide 23.34 346 P P 21 35 51.2 +1.4
baz=162,SNR=31
MONP2 Monument Peak 23.39 318 P P 21 35 52.0 +1.8
baz=130,SNR=13
IRM Iron Mountain 23.46 322 P P 21 35 53.1 +2.4
baz=134,SNR=29
UREC San Jos de Ur 23.56 109 eP P 21 35 53.3 +1.4
NEE2 Needles Airpor 23.59 324 P P 21 35 54.1 +2.2
baz=136
TZTN Tazewell 23.81 30 P P 21 35 53.3 -0.8
TZTN Tazewell 23.81 30 P P 21 35 54.2 +0.1
baz=216,SNR=25
109C Camp Elliot, M 23.84 317 P P 21 35 55.8 +1.5
baz=129
BELC Belle Mtn. Jos 23.86 321 P P 21 35 56.9 +2.2
baz=133,SNR=22
TPFO Pinon Flats 23.88 319 P P 21 35 57.1 +2.3
baz=131,SNR=10.0
KMSC Kings Mountain 23.88 35 P P 21 35 54.1 -0.6
KMSC IAmb IAmb 21 36 06.4
comp=Z,140nm,1.2s
KMSC Kings Mountain 23.88 35 P P 21 35 54.8 +0.1
baz=223,SNR=8.4
PFO Pinyon Flats O 23.89 319 P P 21 35 54.8 -0.1
PFO Pinyon Flats O 23.89 319 P P 21 35 57.4 +2.5
baz=131,SNR=8.3
PFO Pinyon Flats O 23.89 319 i P P 21 35 57.0 +2.1
PFO pmax pmax
comp=Z,56nm,1.6s
PFO Pinyon Flats O 23.89 319 LR LR 21 44 38.7
comp=Z,938nm,18.2s,baz=138,slow=35
CBOC Ciudad Bolivar 23.94 113 eP P 21 35 58.3 +2.6
SMCO Snowmass 24.02 343 P P 21 35 57.2 +0.8
SMCO IAmb IAmb 21 36 03.3
comp=Z,133nm,1.2s
WCI Wyandotte Cave 24.06 23 P P 21 35 55.8 -0.5
WCI Wyandotte Cave 24.06 23 P P 21 35 56.3 -0.1
baz=208
WCI Wyandotte Cave 24.06 23 P P 21 35 55.8 -0.5
WCI pmax pmax
comp=Z,205nm,1.3s
PLMC San Jos del P 24.17 116 eP P 21 35 57.2 -0.4
GMRC Granite Mounta 24.20 322 P P 21 35 59.7 +1.9
baz=134,SNR=10
HMU Henry Mountain 24.22 335 P P 21 35 58.6 +0.5
HELC Santa Helena 24.22 112 eP P 21 36 02.6 +4.1
ISCO Idaho Springs 24.24 346 P P 21 35 59.0 +0.6
ISCO IAmb IAmb 21 36 01.7
comp=Z,94nm,0.9s
ISCO Idaho Springs 24.24 346 P P 21 36 00.1 +1.7
baz=162,SNR=86
ISCO Idaho Springs 24.24 346 P P 21 35 59.0 +0.6
ISCO pmax pmax
comp=Z,94nm,0.9s
ISCO MLR MLR
comp=Z,2µm,18.0s
MURC Murrieta 24.35 318 P P 21 36 01.6 +2.6
baz=130,SNR=5.8
V12A Nelson 24.42 325 P P 21 36 01.1 +1.2
YOTC Yotoco, Valle 24.58 118 eP P 21 36 00.6 -0.9
BBRC Big Bear Solar 24.61 320 P P 21 36 04.1 +2.4
baz=131
HEC Hector,Ludlow 24.63 322 P P 21 36 04.1 +2.4
baz=133,SNR=22
OGNE Ogallala 24.71 353 P P 21 36 02.9 +0.6
OGNE Ogallala 24.71 353 P P 21 36 04.3 +1.9
baz=170,SNR=9.6
JAMC Jamundi, Valle 24.72 120 eP P 21 36 03.6 +0.8
GUY2C Guyana, Caldas 24.81 114 eP P 21 36 05.1 +1.2
TUQ Turquoise Moun 24.81 323 P P 21 36 05.1 +1.6
baz=135,SNR=25
SCI2 San Clemente I 24.85 315 P P 21 36 06.3 +2.7
baz=126
WTNK Soaring Height 24.85 326 P P 21 36 04.2 +0.5
R50A Paris 24.89 26 P P 21 36 03.5 -0.5
R50A IAmb IAmb 21 36 06.0
comp=Z,99nm,1.1s
BBAC Balboa, Cauca 24.92 123 eP P 21 36 06.8 +2.1
BGNE Belgrade 24.92 360 P P 21 36 04.2 0.0
BGNE IAmb IAmb 21 36 06.8
comp=Z,85nm,1.0s
BGNE Belgrade 24.92 360 P P 21 36 05.1 +0.9
baz=179
CIS Catalina Islan 25.02 316 P P 21 36 06.9 +1.7
baz=127
PTBC PUERTO BERRIO, 25.03 110 eP P 21 36 07.0 +1.6
BFSC Mount Baldy Ra 25.05 319 P P 21 36 05.5 0.0
baz=130
RRX Edison Barstow 25.06 321 P P 21 36 06.1 +0.6
baz=132
OTAV Otavalo 25.08 128 P P 21 36 06.7 +0.3
OTAV Otavalo 25.08 128 P P 21 36 06.7 +0.3
OTAV pmax pmax
comp=Z,21nm,1.1s
OTAV MLR MLR
comp=Z,800nm,22.0s
OTAV Otavalo 25.08 128 eP P 21 36 07.1 +0.8
POPC Popayan, Colom 25.09 121 eP P 21 36 08.8 +2.6
FMP Fort Macarthur 25.13 317 P P 21 36 07.5 +1.4
baz=128
PULU Pululahua 25.18 128 P P 21 36 08.5 +1.2
HDIL Hopedale 25.23 16 P P 21 36 06.8 -0.2
HDIL Hopedale 25.23 16 P P 21 36 07.5 +0.6
baz=200,SNR=20
GSC Goldstone, Bar 25.24 322 P P 21 36 09.3 +2.1
baz=133
IMBA Imbabura, San 25.25 127 P P 21 36 08.7 +0.8
O20A White River Ci 25.27 341 P P 21 36 09.5 +1.9
baz=156,SNR=59
TULM Tulcn-Chalpat 25.29 126 P P 21 36 08.6 +0.3
TULM IAmb IAmb 21 36 19.9
comp=Z,102nm,1.1s
MVU Marysvale 25.32 333 P P 21 36 09.4 +1.4
SHOC Shoshone, Teco 25.34 323 P P 21 36 09.2 +1.1
baz=135
N23A Red Feather La 25.36 346 P P 21 36 10.7 +2.2
baz=162,SNR=74
DECC Green Verdugo 25.49 318 P P 21 36 10.8 +1.4
baz=129
ORTC Ortega, Tolima 25.56 117 eP P 21 36 12.6 +2.3
SDDR Presa de Saban 25.56 80 P P 21 36 09.8 -0.5
SDDR Presa de Saban 25.56 80 eP P 21 36 09.8 -0.5
URIC Uribia, Colomb 25.64 97 P P 21 36 11.8 +0.9
URIC IAmb IAmb 21 36 27.2
comp=Z,97nm,1.1s
SNCC San Nicolas Is 25.67 315 P P 21 36 13.7 +2.6
baz=125
EDW2 Edwards Air Fo 25.68 320 P P 21 36 13.2 +2.0
baz=130,SNR=17
SLOR San Lorenzo - 25.69 130 P P 21 36 12.6 +0.7
SFIN Lafayette 25.70 19 P P 21 36 10.8 -0.4
SFIN Lafayette 25.70 19 P P 21 36 11.8 +0.5
baz=204,SNR=47
SCIA State Center 25.75 8 P P 21 36 11.4 -0.3
SCIA State Center 25.75 8 P P 21 36 12.6 +0.9
baz=190,SNR=19
GWY Greenwater Val 25.77 323 P P 21 36 13.3 +1.2
P49A Miami Univ. Ec 25.80 24 P P 21 36 12.2 +0.1
baz=210,SNR=38
LRMC Laurel Mtn Rad 25.88 321 P P 21 36 14.8 +1.7
baz=132,SNR=13
BLA Blacksburg 25.91 33 P P 21 36 13.0 -0.3
baz=221,SNR=17
ROSC El Rosal 25.91 114 P P 21 36 13.6 -0.2
ROSC IAmb IAmb 21 36 31.2
comp=Z,92nm,1.2s
ROSC El Rosal 25.91 114 P P 21 36 13.6 -0.2
ROSC pmax pmax
comp=Z,92nm,1.3s
ROSC El Rosal 25.91 114 eP P 21 36 20.9 +7.1
PRAC Prado 25.97 117 P P 21 36 13.9 0.0
PRAC IAmb IAmb 21 36 33.9
comp=Z,94nm,1.5s
PRAC Prado 25.97 117 eP P 21 36 15.9 +1.9
OSI Osito Audit: C 25.97 318 P P 21 36 16.0 +2.2
baz=129
CNNC Cliffs of the 25.98 40 P P 21 36 13.8 0.0
baz=229,SNR=6.0
PIAT Ana Tenorio 26.04 130 eP P 21 36 15.8 +0.9
FURC Furnace Creek, 26.08 324 P P 21 36 16.7 +2.0
baz=135
TPNV Topopah Spring 26.08 325 P P 21 36 15.7 +0.8
TPNV IAmb IAmb 21 36 30.8
comp=Z,46nm,1.3s
TPNV Topopah Spring 26.08 325 P P 21 36 17.4 +2.5
baz=137
TPNV Topopah Spring 26.08 325 P P 21 36 15.7 +0.8
TPNV pmax pmax
comp=Z,46nm,1.3s
TPNV MLR MLR
comp=Z,1µm,19.0s
SC01 Santiago de lo 26.11 79 P P 21 36 15.6 +0.4
MPMC Manual Prospec 26.16 322 P P 21 36 17.8 +2.1
baz=133,SNR=15
BARC Barichara 26.16 109 eP P 21 36 17.7 +1.8
O48B Farmland 26.26 23 P P 21 36 15.6 -0.7
O48B Farmland 26.26 23 P P 21 36 16.0 -0.3
baz=209,SNR=31
CVER Cruz Verde, Cu 26.27 114 eP P 21 36 16.1 -1.1
PAMC Pamplona, Colo 26.31 107 eP P 21 36 19.0 +1.4
COHC Cochancay 26.34 134 P P 21 36 17.6 +0.3
ARVC Arvin 26.36 319 P P 21 36 19.1 +1.8
baz=130
RWWY Rawlins 26.43 344 IAMs_20 IAMs_20 21 47 27.6
comp=Z,3µm,18.0s
FLOC Florencia 26.47 122 eP P 21 36 23.4 +4.9
ISA Isabella, Lake 26.48 320 P P 21 36 20.9 +2.4
baz=131

SBC Santa Barbara 26.50 317 P **P** 21 36 20.8 +2.2
baz=127
CHIC Chingaza 26.52 113 *e*P **P** 21 36 22.5 +3.1
ARNL Arenillas 26.59 137 P **P** 21 36 21.2 +1.7
ARNL IAmb IAmb 21 36 31.4
comp=Z,82nm,1.6s
GRAC Grapevine Rang 26.74 324 P **P** 21 36 23.4 +2.7
baz=135
CWC Cottonwood Cre 26.77 322 P **P** 21 36 23.3 +2.1
baz=133
HQIL Hanson Quary C 26.78 17 P **P** 21 36 20.8 -0.1
R11B Troy Canyon, C 26.78 328 P **P** 21 36 22.5 +1.3
R11B Troy Canyon, C 26.78 328 P **P** 21 36 23.7 +2.5
baz=140,SNR=12
PKM Mcpherson Peak 26.84 317 P **P** 21 36 24.8 +3.0
baz=128
SDD Santo Domingo 26.86 81 P **P** 21 36 22.4 +0.5
P52A Corning 26.97 28 P **P** 21 36 23.0 +0.3
baz=215,SNR=5.9
VES Vestal, Richgr 26.98 320 P **P** 21 36 25.2 +2.4
baz=130,SNR=8.1
DUG Dugway, Tooele 26.98 334 P **P** 21 36 24.4 +1.4
DUG IAmb IAmb 21 36 26.9
comp=Z,40nm,1.1s
DUG Dugway, Tooele 26.98 334 P **P** 21 36 25.7 +2.6
baz=147,SNR=31
DUG Dugway, Tooele 26.98 334 P **P** 21 36 24.4 +1.4
DUG pmax pmax
comp=Z,40nm,1.1s
DUG MLR MLR
comp=Z,1µm,20.0s
ACSO Alum Creek Sta 27.09 26 P **P** 21 36 23.7 -0.2
ACSO IAmb IAmb 21 36 37.9
comp=Z,55nm,0.9s
L44A Lake County Fo 27.11 17 P **P** 21 36 24.8 +0.9
baz=201,SNR=16
K22A Casper 27.16 346 P **P** 21 36 26.0 +1.4
baz=162,SNR=9.8
SMMC Simmler 27.22 318 P **P** 21 36 27.9 +2.8
baz=128
JFWS Jewell Farm 27.24 12 P **P** 21 36 24.3 -0.8
JFWS IAmb IAmb 21 36 26.7
comp=Z,89nm,1.1s
JFWS Jewell Farm 27.24 12 P **P** 21 36 25.0 -0.1
baz=196,SNR=16
JFWS Jewell Farm 27.24 12 P **P** 21 36 24.3 -0.8
JFWS pmax pmax
comp=Z,89nm,1.1s
JFWS MLR MLR
comp=Z,500nm,20.0s
ECSD EROS Data Cent 27.27 2 P **P** 21 36 24.7 -0.7
TIN Tinemaha, Big 27.28 323 P **P** 21 36 27.8 +2.2
baz=133
MCRA Macar, Loja 27.28 138 P **P** 21 36 25.9 +0.2
BOSC San Juan Bosco 27.36 134 P **P** 21 36 27.8 +1.1
TPH Tonopah 27.43 326 P **P** 21 36 28.2 +1.1
TPH IAmb IAmb 21 36 30.5
comp=Z,93nm,1.3s
TPH Tonopah 27.43 326 P **P** 21 36 28.2 +1.1
TPH pmax pmax
comp=Z,93nm,1.3s
VOG Valley Oaks Go 27.47 320 P **P** 21 36 28.9 +1.7
baz=130
TAMC Tame, Arauca 27.49 108 *e*P **P** 21 36 23.6 -4.2
SDV Santo Domingo 27.70 102 P **P** 21 36 30.3 +0.6
SDV Santo Domingo 27.70 102 LR LR 21 48 59.1
comp=Z,509nm,19.8s,baz=312,slow=40
SDV Santo Domingo 27.70 102 *e*P **P** 21 36 31.2 +1.5
HWUT Hardware Ranch 27.71 338 P **P** 21 36 30.1 +0.5
O53A New Philadelph 27.88 28 P **P** 21 36 31.7 +0.8
baz=216,SNR=6.3
SUSD Miller 27.97 359 P **P** 21 36 32.1 +0.4
baz=178
MLAC Mammoth, Mammo 28.02 323 P **P** 21 36 34.5 +2.0
baz=133
MCWV Mont Chateau 28.06 31 P **P** 21 36 30.4 -2.1
MCWV IAmb IAmb 21 36 47.6
comp=Z,95nm,1.2s
MCWV Mont Chateau 28.06 31 P **P** 21 36 33.0 +0.5
baz=219
PDAR Pinedale Array 28.08 342 P **P** 21 36 34.5 +1.5
comp=Z,24nm,1.2s,baz=134,slow=8.5,SNR=35
PDAR PcP **PcP** 21 39 47.0 -0.2
comp=Z,1.8nm,0.9s,baz=128,slow=3.4,SNR=3.9
PDAR LR LR 21 49 00.7
comp=Z,2µm,19.8s,baz=166,slow=39
comp=Z,24nm,1.2s
BW06 Boulder Array 28.08 342 P **P** 21 36 34.6 +1.7
baz=156,SNR=25
RSSD Black Hills 28.11 351 P **P** 21 36 33.4 +0.3
RSSD Black Hills 28.11 351 P **P** 21 36 34.5 +1.4
baz=167
RSSD Black Hills 28.11 351 P **P** 21 36 33.4 +0.3
RSSD pmax pmax
comp=Z,37nm,1.6s
RSSD MLR MLR
comp=Z,800nm,18.0s
NVAR Mina Arroyo Bea 28.28 325 P **P** 21 36 36.8 +2.1
comp=Z,15nm,0.9s,baz=148,slow=9.5,SNR=85
NVAR PcP **PcP** 21 39 48.0 +0.3
comp=Z,2.1nm,0.8s,baz=150,slow=2.9,SNR=3.6
NVAR LR LR 21 48 17.4
comp=Z,1µm,18.4s,baz=134,slow=37
comp=Z,15nm,0.9s
PMPB Monarch Peak 28.29 319 P **P** 21 36 36.6 +1.9
PMPB IAmb IAmb 21 36 51.5
comp=Z,39nm,1.2s
CBN Corbin Frederi 28.29 36 P **P** 21 36 34.8 +0.3
baz=225
ELK Elko 28.49 332 P **P** 21 36 37.6 +1.0
ELK IAMs_20 IAMs_20 21 47 41.1
comp=Z,3µm,18.0s
ELK Elko 28.49 332 P **P** 21 36 37.6 +1.0
ELK pmax pmax
comp=Z,31nm,1.4s
ELK MLR MLR
comp=Z,3µm,18.0s
ELK Elko 28.49 332 LR LR 21 48 00.9
comp=Z,2µm,19.1s,baz=158,slow=36
AHID Auburn Hatcher 28.57 340 P **P** 21 36 37.9 +0.7
AHID IAMs_20 IAMs_20 21 49 08.7
comp=Z,2µm,18.0s
AAM Ann Arbor 28.59 23 P **P** 21 36 36.9 -0.3
AAM IAmb IAmb 21 37 18.4
comp=Z,86nm,1.5s
AAM Ann Arbor 28.59 23 P **P** 21 36 37.2 0.0
baz=210
AAM Ann Arbor 28.59 23 P **P** 21 36 36.9 -0.3
AAM pmax pmax
comp=Z,86nm,1.5s
SPMN Marine on St. 29.07 8 P **P** 21 36 41.9 +0.5
baz=190,SNR=10
M53A WI Miller and 29.08 27 P **P** 21 36 41.0 -0.6
baz=216
SNOW Snow King Moun 29.08 341 IAMs_20 IAMs_20 21 50 05.1
comp=Z,2µm,18.0s
LOHW Long Hollow 29.17 341 IAMs_20 IAMs_20 21 49 27.4
comp=Z,2µm,20.0s
BMN Battle Mountai 29.19 329 P **P** 21 36 43.0 +0.3
BMN Battle Mountai 29.19 329 P **P** 21 36 43.0 +0.3
BMN pmax pmax
comp=Z,28nm,1.3s
CMB Columbia Colle 29.20 322 P **P** 21 36 43.6 +0.9
CMB Columbia Colle 29.20 322 P **P** 21 36 43.6 +0.9
CMB pmax pmax
comp=Z,8.0nm,1.2s
CMB MLR MLR
comp=Z,500nm,20.0s
MOOW Moose Ponds 29.34 341 IAMs_20 IAMs_20 21 49 32.9
comp=Z,2µm,19.0s
FLWY Flagg Ranch 29.62 341 IAMs_20 IAMs_20 21 49 31.4
comp=Z,2µm,18.0s
SSPA Standing Stone 29.78 32 P **P** 21 36 47.4 -0.3
SSPA IAmb IAmb 21 36 59.8
comp=Z,46nm,1.3s
SSPA Standing Stone 29.78 32 P **P** 21 36 47.5 -0.3
baz=221
UUPR Utuado, UPR, P 29.89 82 P **P** 21 36 48.1 -0.9
UUPR IAmb IAmb 21 36 50.3
comp=Z,65nm,1.2s
ERPA Erie 29.93 27 P **P** 21 36 49.3 +0.3
baz=216
BAUV El Baul 30.12 101 P **P** 21 36 50.5 -0.5
RLMT Red Lodge 30.17 344 P **P** 21 36 52.2 +0.9
RLMT IAmb IAmb 21 37 04.3
comp=Z,69nm,1.3s

RLMT Red Lodge 30.17 344 P **P** 21 36 52.9 +1.5
baz=158
ATAH Atahualpa 30.38 139 LR LR 21 47 05.6
comp=Z,1µm,18.2s,baz=324,slow=33
SJG San Juan 30.44 82 P **P** 21 36 53.2 -0.6
SJG IAmb IAmb 21 36 54.7
comp=Z,43nm,0.9s
SJG San Juan 30.44 82 P **P** 21 36 53.2 -0.6
SJG pmax pmax
comp=Z,43nm,1.0s
SJG MLR MLR
comp=Z,900nm,22.0s
SJG San Juan 30.44 82 LR LR 21 50 26.7
comp=Z,728nm,21.1s,baz=274,slow=39
HLID Hailey 30.46 336 P **P** 21 36 54.8 +0.8
HLID Hailey 30.46 336 P **P** 21 36 56.0 +2.0
baz=147,SNR=11
WUPA West Chester U 30.48 35 P **P** 21 36 54.3 +0.3
GLMI Grayling 30.50 19 P **P** 21 36 54.1 +0.1
GLMI IAmb IAmb 21 37 04.1
comp=Z,55nm,0.9s
GLMI Grayling 30.50 19 P **P** 21 36 53.9 -0.2
baz=206
COWI Conover 30.52 12 P **P** 21 36 54.1 -0.2
COWI IAmb IAmb 21 36 55.4
comp=Z,30nm,1.1s
MFID Camas Ranch 30.91 334 IAMs_20 IAMs_20 21 50 11.0
comp=Z,2µm,22.0s
LAO LASA Array 30.97 349 P **P** 21 36 58.9 +0.6
LAO IAmb IAmb 21 37 00.9
comp=Z,68nm,1.4s
LAO LASA Array 30.97 349 P **P** 21 36 59.9 +1.7
baz=164,SNR=8.8
BOZ Bozeman (W) 31.27 341 IAMs_20 IAMs_20 21 50 29.1
comp=Z,2µm,22.0s
BOZ Bozeman (W) 31.27 341 P **P** 21 37 02.9 +1.8
baz=154
MDND Maddock 31.39 358 P **P** 21 37 02.8 +0.9
baz=177,SNR=20
WVOR Wild Horse Val 31.40 330 P **P** 21 37 03.2 +1.0
WVOR Wild Horse Val 31.40 330 P **P** 21 37 03.2 +1.0
WVOR pmax pmax
comp=Z,79nm,1.2s
WVOR MLR MLR
comp=Z,900nm,20.0s
LRM Limekiln Ridge 31.73 341 P **P** 21 37 07.2 +2.0
AGMN Agassiz Nation 31.86 3 P **P** 21 37 05.9 -0.1
AGMN Agassiz Nation 31.86 3 P **P** 21 37 06.5 +0.5
baz=184,SNR=24
BINY Binghamton 31.90 32 P **P** 21 37 06.2 -0.3
baz=223
EYMN Ely 31.91 8 IAMs_20 IAMs_20 21 51 27.5
comp=Z,2µm,20.0s
EYMN Ely 31.91 8 P **P** 21 37 06.4 -0.1
baz=192,SNR=6.0
J08A Circle Bar Ran 32.03 331 P **P** 21 37 09.2 +1.5
PAL Palisades 32.16 35 P **P** 21 37 07.9 -0.9
baz=227
DGMT Dagmar 32.39 352 P **P** 21 37 11.9 +1.2
baz=169,SNR=8.7
SADO Sadowa 32.44 25 LR LR 21 54 52.4
comp=Z,232nm,18.1s,baz=232,slow=45
BMO Blue Mountains 32.70 334 P **P** 21 37 13.9 +0.3
BMO IAmb IAmb 21 37 16.2
comp=Z,59nm,1.8s
BMO IAMs_20 IAMs_20 21 51 26.4
comp=Z,2µm,19.0s
BMO Blue Mountains 32.70 334 P **P** 21 37 13.9 +0.3
BMO pmax pmax
comp=Z,59nm,1.8s
BMO MLR MLR
comp=Z,2µm,19.0s
EGMT Eagleton 32.99 345 P **P** 21 37 16.2 +0.1
EGMT Eagleton 32.99 345 P **P** 21 37 17.2 +1.2
baz=159,SNR=8.0
YBH Yreka Blue Hor 33.00 325 LR LR 21 50 48.9
comp=Z,589nm,18.5s,baz=158,slow=36
PCRV Puerto La Cruz 33.02 97 LR LR 21 51 28.4
comp=Z,257nm,20.4s,slow=38
ULM Lac du Bonnet 33.81 2 P **P** 21 37 22.6 -0.4
ULM IAmb IAmb 21 37 24.2
comp=Z,42nm,1.1s
ULM Lac du Bonnet 33.81 2 P **P** 21 37 22.7 -0.4
ULM pmax pmax
comp=Z,42nm,1.1s
ULM Lac du Bonnet 33.81 2 P **P** 21 37 22.1 -0.9
comp=Z,33nm,1.1s,baz=184,slow=9.2,SNR=22
ULM LR LR 21 51 57.5
comp=Z,537nm,20.2s,baz=186,slow=38
comp=Z,33nm,1.1s
L61B Northampton 33.81 35 P **P** 21 37 24.0 +0.8
baz=227
LONY Lake Ozonia 34.37 30 P **P** 21 37 28.3 +0.3
baz=222
HRV Adam Dziewonsk 34.47 36 P **P** 21 37 29.2 +0.3
baz=229
J01E Myrtle Point 34.63 326 P **P** 21 37 32.5 +2.3
CZSB Cruzeiro do Su 34.66 132 P **P** 21 37 32.2 +1.4
HAWA Hanford 34.87 334 IAMs_20 IAMs_20 21 52 52.8
comp=Z,1µm,18.0s
NNA Nana 35.11 142 *i*P **P** 21 37 39.3 +4.5
NNA pmax pmax
comp=Z,19nm,1.1s
NNA Nana 35.11 142 LR LR 21 49 11.4
comp=Z,680nm,19.4s,baz=332,slow=32
LBNH Lisbon 35.43 33 P **P** 21 37 37.8 +0.6
baz=226
NEW Newport 35.45 338 P **P** 21 37 37.9 +0.6
NEW Newport 35.45 338 P **P** 21 37 38.5 +1.2
baz=147,SNR=10
NEW Newport 35.45 338 P **P** 21 37 37.9 +0.6
NEW pmax pmax
comp=Z,11nm,0.9s
NEW MLR MLR
comp=Z,4µm,18.0s
NEW Newport 35.45 338 LR LR 21 53 31.3
comp=Z,3µm,18.6s,baz=156,slow=39
TRQ Mont Tremblant 35.58 28 P **P** 21 37 38.6 +0.1
FFC Flin Flon 38.37 356 P **P** 21 38 02.7 +0.7
FFC IAmb IAmb 21 38 04.1
comp=Z,70nm,1.1s
FFC Flin Flon 38.37 356 P **P** 21 38 02.7 +0.7
FFC pmax pmax
comp=Z,70nm,1.1s
EDM Edmonton 38.67 345 P **P** 21 38 04.9 +0.3
EDM IAmb IAmb 21 38 06.9
comp=Z,100nm,1.3s
EDM Edmonton 38.67 345 P **P** 21 38 04.9 +0.3
EDM pmax pmax
comp=Z,100nm,1.3s
BOAV Boa Vista 39.40 107 P **P** 21 38 11.1 0.0
ETMB Extrema 40.83 127 P **P** 21 38 22.5 -0.5
ETMB IAmb IAmb 21 38 30.1
comp=Z,56nm,1.1s
MACA Manacapuru-AM 41.68 114 P **P** 21 38 29.6 -0.4
MACA IAmb IAmb 21 39 59.3
comp=Z,26nm,0.7s
SAML Samuel 42.67 124 P **P** 21 38 36.3 -1.7
SAML Samuel 42.67 124 P **P** 21 38 36.3 -1.7
SAML pmax pmax
comp=Z,14nm,1.1s
SAML Samuel 42.67 124 *e*P **P** 21 38 35.5 -2.6
BBB Bella Bella 42.92 333 LR LR 21 59 16.8
comp=Z,576nm,19.7s,baz=148,slow=40
RPN Rapa Nui 44.64 194 LR LR 21 52 59.2
comp=Z,454nm,21.9s,baz=62,slow=30
SCHQ Schefferville 45.25 25 P **P** 21 38 57.6 -0.7
comp=Z,11nm,1.0s,baz=250,slow=8.9,SNR=7.2
SCHQ LR LR 22 02 00.6
comp=Z,658nm,18.6s,baz=223,slow=42
comp=Z,11nm,1.0s
PB11 IPOC Station P 45.46 141 P **P** 21 39 00.4 -0.2
PB11 IAmb IAmb 21 39 08.2
comp=Z,42nm,1.1s
GO01 Chusmiza 45.67 141 P **P** 21 39 02.8 +0.2
GO01 IAmb IAmb 21 39 11.1
comp=Z,41nm,1.4s
TA01 Diego Aracena 45.77 142 P **P** 21 39 03.2 +0.4
TA01 IAmb IAmb 21 39 10.7
comp=Z,47nm,1.1s
PB02 IPOC Station P 46.52 143 P **P** 21 39 09.3 +0.5
PB02 IAmb IAmb 21 39 16.8
comp=Z,35nm,1.0s
T35M Bob Quinn 47.22 337 IAMs_20 IAMs_20 21 58 09.3
comp=Z,1µm,18.0s
T35M Bob Quinn 47.22 337 P **P** 21 39 15.9 +2.1
baz=136
PB09 IPOC Station P 47.27 143 P **P** 21 39 15.5 +0.7
PB09 IAmb IAmb 21 39 23.3
comp=Z,28nm,1.0s
CRAG Craig 47.34 334 P **P** 21 39 17.0 +2.3
baz=131
VILB Vilhena 47.39 126 P **P** 21 39 15.0 -0.7
VILB IAmb IAmb 21 39 22.3
comp=Z,38nm,1.2s
YKA Yellowknife Ar 47.50 350 P **P** 21 39 16.2 +0.4
comp=Z,13nm,1.0s,baz=157,slow=7.5,SNR=78
YKA PcP **PcP** 21 40 45.2 -0.5
YKA comp=Z,3.5nm,0.9s,baz=156,slow=6.7,SNR=6.1
LR LR 21 58 52.9
comp=Z,407nm,19.1s,baz=152,slow=36
comp=Z,13nm,1.0s
KOTAN Kotaneelee Air 47.59 343 P **P** 21 39 18.2 +1.7
baz=145
WRAK Wrangell Islan 47.65 335 IAMs_20 IAMs_20 21 59 35.9
comp=Z,945nm,18.0s
WRAK Wrangell Islan 47.65 335 P **P** 21 39 19.1 +2.0
baz=133
U33K Whale Pass 47.77 334 P **P** 21 39 21.0 +3.0
baz=132
LVC Limon Verde 48.10 143 LR LR 21 55 34.9
comp=Z,312nm,20.3s,baz=339,slow=31
DLBC Dease Lake 48.19 338 P **P** 21 39 23.1 +1.8
DLBC IAmb IAmb 21 39 25.9
comp=Z,46nm,1.2s
DLBC Dease Lake 48.19 338 P **P** 21 39 24.3 +2.9
baz=137,SNR=12
DLBC Dease Lake 48.19 338 P **P** 21 39 23.4 +2.1
comp=Z,22nm,1.0s,baz=139,slow=6.5,SNR=17
DLBC LR LR 22 01 30.6
comp=Z,2µm,18.3s,baz=131,slow=38
comp=Z,22nm,1.0s
S34M Telegraph Cree 48.22 337 IAMs_20 IAMs_20 21 58 50.7
comp=Z,728nm,18.0s
S34M Telegraph Cree 48.22 337 P **P** 21 39 24.1 +2.6
baz=135
SIV San Ignacio 48.61 130 LR LR 21 57 52.4
comp=Z,351nm,21.6s,baz=325,slow=34
WTLY Watson Lake, Y 49.02 340 P **P** 21 39 29.8 +2.1
baz=139
R33M Jennings River 49.23 338 IAMs_20 IAMs_20 22 02 00.2
comp=Z,1µm,18.0s
R33M Jennings River 49.23 338 P **P** 21 39 32.0 +2.6
baz=136,SNR=11
S32K Killisnoo 49.27 335 P **P** 21 39 31.6 +2.1
baz=131
SIT Sitka 49.31 334 P **P** 21 39 31.9 +2.1
baz=130
Q32M Nakina River 49.39 337 IAMs_20 IAMs_20 22 03 19.5
comp=Z,998nm,18.0s
Q32M Nakina River 49.39 337 P **P** 21 39 33.1 +2.4
baz=134
PTLB Pontes e Lacer 49.72 128 P **P** 21 39 32.6 -0.9
PTLB IAmb IAmb 21 39 40.1
comp=Z,27nm,1.3s
GO02 Mina Guanaco 49.73 146 P **P** 21 39 34.0 +0.2
GO02 IAmb IAmb 21 39 42.0
comp=Z,36nm,1.1s
R32K Eaglecrest 49.78 336 P **P** 21 39 35.8 +2.4
baz=131
TGTN Hyland Airport 49.95 342 P **P** 21 39 37.3 +2.5
baz=141,SNR=6.0
WRGLY Wrigley 50.02 345 P **P** 21 39 36.4 +1.3
baz=147
S31K Pelican 50.26 335 IAMs_20 IAMs_20 22 01 49.9
comp=Z,828nm,21.0s
S31K Pelican 50.26 335 P **P** 21 39 39.5 +2.4
baz=129
P32M Atlin 50.36 337 P **P** 21 39 40.5 +2.6
baz=133,SNR=9.3
P33M Teslin, Yukon 50.47 338 P **P** 21 39 41.6 +2.9
baz=135,SNR=7.7
SKAG Skagway 50.88 336 P **P** 21 39 44.1 +2.4
baz=131
N32M Quiet Lake 51.22 339 IAMs_20 IAMs_20 22 03 26.9
comp=Z,1µm,20.0s
N32M Quiet Lake 51.22 339 P **P** 21 39 46.7 +2.3
baz=135
PLBC Pleasant Camp 51.28 336 P **P** 21 39 46.8 +2.1
baz=130
AC02 Maricunga 51.31 146 P **P** 21 39 46.4 +0.4
AC02 IAmb IAmb 21 39 54.7
comp=Z,19nm,1.1s
FRB Frobisher Bay 51.46 16 LR LR 22 03 24.8
comp=Z,479nm,20.9s,baz=192,slow=38
WHY Whitehorse 51.52 338 P **P** 21 39 48.4 +1.7
baz=132
MMPY Sheldon Lake, 51.70 341 P **P** 21 39 50.9 +3.0
baz=138,SNR=22
P29M Windy Craggy 51.93 336 IAMs_20 IAMs_20 22 03 43.8
comp=Z,1µm,19.0s
P29M Windy Craggy 51.93 336 P **P** 21 39 52.3 +2.6
baz=129
P30M Million Dollar 51.94 336 P **P** 21 39 51.6 +1.9
baz=130
O30N Mendenhall 52.03 337 P **P** 21 39 53.1 +2.6
baz=131,SNR=8.3
FARO Faro, Yukon 52.08 340 P **P** 21 39 53.1 +2.3
baz=135,SNR=8.7
M31M Drury Creek, Y 52.41 339 IAMs_20 IAMs_20 22 01 51.2
comp=Z,908nm,18.0s
M31M Drury Creek, Y 52.41 339 P **P** 21 39 55.8 +2.6
baz=134,SNR=8.2
HYT Haines Junctio 52.60 337 P **P** 21 39 57.5 +2.8
baz=130,SNR=9.6
PNL Peninsula 52.62 335 P **P** 21 39 57.4 +2.7
baz=127
O29M Mount Kennedy 52.68 336 P **P** 21 39 57.5 +2.2
baz=128
H03N2 Juan Fernandez 52.79 160 T T 22 36 28.6
baz=337,slow=77,SNR=2449
H03N1 Juan Fernandez 52.80 160 T T 22 36 29.8
baz=337,slow=77,SNR=2723
H03N3 Juan Fernandez 52.81 160 T T 22 36 28.8
baz=337,slow=77,SNR=2868
N30M Aishikik Lake 52.85 338 P **P** 21 39 59.1 +2.5
baz=130
BCPM Bancas Point 52.88 335 IAMs_20 IAMs_20 22 04 26.2
comp=Z,1µm,20.0s
YUK6 Outpost Mounta 53.00 337 P **P** 21 40 01.0 +3.2
baz=129,SNR=7.1
PINM Pinnacle 53.22 335 P **P** 21 40 01.9 +2.7
baz=126
YUK4 Talbot Arm 53.36 337 P **P** 21 40 03.9 +3.5
baz=125,SNR=8.9
M30M Minto, Yukon 53.48 339 P **P** 21 40 03.1 +2.0
baz=131,SNR=7.1
YUK8 Steele Glacier 53.74 336 P **P** 21 40 05.6 +2.3
baz=127,SNR=15
TABL Table Mountain 53.78 335 IAMs_20 IAMs_20 22 05 06.9
comp=Z,1µm,18.0s
MAYO Mayo, Yukon 53.87 340 P **P** 21 40 06.0 +2.1
baz=133
LOGN Logan Glacier 53.95 336 IAMs_20 IAMs_20 22 03 59.3
comp=Z,801nm,19.0s
MESA MESA 53.96 335 P **P** 21 40 07.2 +2.4
baz=124
M29M Somme Creek 53.99 338 IAMs_20 IAMs_20 22 05 52.0
comp=Z,1µm,19.0s
M29M Somme Creek 53.99 338 P **P** 21 40 07.6 +2.7
baz=130,SNR=18
CTGM Chitina Glacie 54.16 336 IAMs_20 IAMs_20 22 03 43.0
comp=Z,849nm,22.0s
CTG Chitna Glacier 54.17 336 P **P** 21 40 08.5 +2.2
baz=126
GRNC Granite Creek 54.20 335 P **P** 21 40 08.2 +1.7
GRNC IAMs_20 IAMs_20 22 04 15.8
comp=Z,845nm,19.0s
L29M L29M 54.30 339 P **P** 21 40 09.0 +2.0
baz=130
YUK3 Moose Creek 54.31 337 P **P** 21 40 09.6 +2.2
baz=127,SNR=9.4
BARN Barnard Glacie 54.35 336 IAMs_20 IAMs_20 22 05 11.8
comp=Z,1µm,18.0s
BGLC Bering Glacier 54.48 334 P **P** 21 40 10.7 +2.4
baz=123
WAX Waxell Ridge 54.48 335 IAMs_20 IAMs_20 22 05 54.5
comp=Z,1µm,20.0s
K29M Barlow Dome 54.58 340 IAMs_20 IAMs_20 22 06 11.4
comp=Z,942nm,19.0s
K29M Barlow Dome 54.58 340 P **P** 21 40 11.1 +2.0
baz=131
TGL Tana Glacier 54.65 335 P **P** 21 40 11.4 +1.7
TGL IAmb IAmb 21 40 13.5

comp=Z,32nm,1.2s
TGL IAMs_20 IAMs_20 22 05 42.7
comp=Z,1µm,19.0s
J30M Hart River **54.68 341** IAMs_20 IAMs_20 22 05 42.2
comp=Z,1µm,22.0s
J30M Hart River **54.68 341** P **P** **21 40 11.9 +1.9**
baz=133
CRQE Cirque **54.75 335** P **P** **21 40 12.5 +2.0**
baz=124
CRQM Cirque **54.77 335** IAMs_20 IAMs_20 22 05 47.5
comp=Z,1µm,20.0s
BERG Berg Lake **54.80 334** P **P** **21 40 12.3 +1.5**
BVCY Beaver Creek **54.84 337** P **P** **21 40 13.0 +2.0**
baz=127,SNR=5.6
KAIM Kayak Island **54.86 334** P **P** **21 40 13.7 +2.6**
baz=122
H31M Peel River **54.95 343** P **P** **21 40 13.1 +1.4**
baz=136
MCARA McCarthy VSAT **55.08 335** IAMs_20 IAMs_20 22 05 51.1
comp=Z,1µm,21.0s
MCARA McCarthy VSAT **55.08 335** P **P** **21 40 15.7 +3.0**
baz=124,SNR=6.1
I30M Mount Dempster **55.14 341** IAMs_20 IAMs_20 22 03 59.4
comp=Z,1µm,22.0s
I30M Mount Dempster **55.14 341** P **P** **21 40 14.9 +1.6**
baz=133
VRDI Verde Repeater **55.16 335** IAMs_20 IAMs_20 22 05 43.3
comp=Z,778nm,20.0s
M27K Edge Creek, AK **55.19 337** P **P** **21 40 16.0 +2.3**
baz=126
J29N Klondike Camp **55.21 340** IAMs_20 IAMs_20 22 02 16.1
comp=Z,876nm,22.0s
J29N Klondike Camp **55.21 340** P **P** **21 40 15.3 +1.7**
baz=131
DAWY Dawson **55.35 339** P **P** **21 40 15.8 +1.2**
baz=129,SNR=7.4
C36M Paulatuk **55.38 349** P **P** **21 40 15.5 +0.9**
baz=149
AQDB Aquidauana **55.38 130** P **P** **21 40 14.3 -1.1**
AQDB IAmb IAmb 21 40 21.8
comp=Z,19nm,1.3s
GLB Gilahina Butte **55.42 335** IAMs_20 IAMs_20 22 05 52.3
comp=Z,1µm,18.0s
BMRM Bremner River **55.49 335** P **P** **21 40 18.3 +2.6**
baz=122,SNR=10.0
L27K Beaver Creek, **55.59 338** IAMs_20 IAMs_20 22 02 35.4
comp=Z,1µm,18.0s
L27K Beaver Creek, **55.59 338** P **P** **21 40 18.4 +2.0**
baz=126
M26K Nabesna, AK **55.64 336** IAMs_20 IAMs_20 22 05 54.9
comp=Z,1µm,19.0s
M26K Nabesna, AK **55.64 336** P **P** **21 40 19.4 +2.5**
baz=125
G31M Satah River **55.74 344** P **P** **21 40 18.5 +1.2**
baz=136,SNR=28
EYAK Cordova Ski Ar **55.75 334** P **P** **21 40 19.7 +2.2**
baz=121
N25K Chitina, Valde **55.83 335** IAMs_20 IAMs_20 22 06 05.0
comp=Z,1µm,18.0s
N25K Chitina, Valde **55.83 335** P **P** **21 40 21.1 +2.9**
baz=122,SNR=7.5
F31M Tsiigehtchic **55.98 344** P **P** **21 40 20.2 +1.2**
baz=137,SNR=14
HIN Hinchinbrook I **55.99 333** P **P** **21 40 20.4 +1.0**
EPYK Eagle Plains **56.04 342** P **P** **21 40 20.7 +1.1**
baz=134
L26K Log Cabin Wild **56.13 337** P **P** **21 40 22.6 +2.3**
baz=124,SNR=10
FID Port Fidalgo **56.16 334** IAMs_20 IAMs_20 22 07 11.0
comp=Z,846nm,18.0s
P23K Montague Islan **56.19 333** P **P** **21 40 22.5 +1.8**
baz=118
MENT Mentasta **56.22 337** P **P** **21 40 22.4 +1.5**
K27K Chicken **56.26 338** IAMs_20 IAMs_20 22 04 56.0
comp=Z,938nm,20.0s
K27K Chicken **56.26 338** P **P** **21 40 23.2 +2.1**
baz=126
KLU Klutina **56.31 335** IAMs_20 IAMs_20 22 03 29.7
comp=Z,810nm,22.0s
KLU Klutina **56.31 335** P **P** **21 40 23.6 +2.0**
baz=121,SNR=10
G30M tAoh Zraii Nji **56.33 343** P **P** **21 40 22.2 +0.6**
baz=134
EGAK Eagle **56.39 339** P **P** **21 40 22.8 +0.8**
EGAK IAmb IAmb 21 40 24.4
comp=Z,27nm,1.2s
EGAK Eagle **56.39 339** P **P** **21 40 22.8 +0.8**
baz=128,SNR=13
I28M Miner Creek **56.41 340** IAMs_20 IAMs_20 22 07 22.0
comp=Z,890nm,18.0s
I28M Miner Creek **56.41 340** P **P** **21 40 23.4 +1.1**
baz=130
H29M Whitestone **56.43 342** P **P** **21 40 23.5 +1.2**
baz=132
HARP HAARP **56.48 336** P **P** **21 40 25.2 +2.5**
baz=122,SNR=6.1
GLI Glacier Island **56.49 334** P **P** **21 40 24.4 +1.6**
baz=119
INK Inuvik **56.57 345** P **P** **21 40 24.1 +0.9**
INK Inuvik **56.57 345** P **P** **21 40 24.4 +1.2**
baz=138,SNR=41
INK Inuvik **56.57 345** P **P** **21 40 24.1 +0.9**
INK pmax pmax
comp=Z,47nm,1.1s
INK Inuvik **56.57 345** P **P** **21 40 24.1 +0.9**
comp=Z,34nm,0.9s,baz=127,slow=7.2,SNR=70
INK LR LR 22 07 15.8
comp=Z,565nm,20.1s,baz=174,slow=39
comp=Z,34nm,0.9s
F30M Barrier River **56.65 344** P **P** **21 40 24.9 +1.0**
baz=135
M24K Tolsona, Glenn **56.73 335** P **P** **21 40 26.6 +2.0**
baz=121
PAX Paxson **56.91 336** P **P** **21 40 27.6 +1.7**
baz=122,SNR=16
SCRK Sand Creek **56.91 338** IAMs_20 IAMs_20 22 03 17.4
comp=Z,792nm,18.0s
SCRK Sand Creek **56.91 338** P **P** **21 40 28.0 +2.1**
baz=124,SNR=23
I27K Kandik River **57.06 340** P **P** **21 40 28.5 +1.7**
baz=128,SNR=7.1
J26L Joseph Creek **57.06 338** IAMs_20 IAMs_20 22 05 09.2
comp=Z,849nm,18.0s
J26L Joseph Creek **57.06 338** P **P** **21 40 29.0 +2.1**
baz=125
SCM Sheep Creek Mo **57.06 335** P **P** **21 40 28.7 +1.7**
baz=120
NUUK Nuuk **57.12 22** *i* P **P** **21 40 28.6 +1.4**
NUUK IAmb IAmb 21 40 29.7
comp=Z,44nm,1.3s
SEW Seward **57.15 332** P **P** **21 40 28.6 +1.1**
baz=116
M23K Glacier View **57.20 334** P **P** **21 40 28.6 +0.7**
baz=119
KNK Knik Glacier **57.33 334** IAMs_20 IAMs_20 22 07 47.7
comp=Z,755nm,19.0s
KNK Knik Glacier **57.33 334** P **P** **21 40 30.4 +1.6**
baz=118,SNR=5.7
I26K Coal Creek Min **57.39 339** IAMs_20 IAMs_20 22 07 08.9
comp=Z,877nm,20.0s
I26K Coal Creek Min **57.39 339** P **P** **21 40 30.3 +1.2**
baz=126
H27K Steamboat Moun **57.42 341** P **P** **21 40 30.5 +1.1**
baz=128
O22K Cooper Landing **57.44 333** P **P** **21 40 30.8 +1.2**
baz=116
SML Sawmill **57.46 334** P **P** **21 40 31.2 +1.4**
baz=119,SNR=9.9
K24K Donnelly Dome **57.48 337** P **P** **21 40 31.6 +1.9**
baz=122,SNR=9.9
BRSE Bradley Lake S **57.58 331** P **P** **21 40 32.2 +1.6**
baz=115,SNR=5.2
WAT6 Susitna Watana **57.60 335** P **P** **21 40 32.6 +1.8**
baz=120,SNR=17
KDAK Kodiak Island **57.67 329** P **P** **21 40 33.0 +1.8**
baz=112
KDAK Kodiak Island **57.67 329** LR LR 22 05 31.1
comp=Z,1µm,18.3s,baz=129,slow=36
GHO Glory Hole Cre **57.69 334** IAMs_20 IAMs_20 22 03 52.4
comp=Z,671nm,20.0s
PMR Palmer **57.70 334** P **P** **21 40 32.6 +1.3**
PMR Palmer **57.70 334** P **P** **21 40 33.0 +1.8**
baz=118,SNR=12
DHY Denali Highway **57.71 336** P **P** **21 40 33.1 +1.5**
baz=120
RC01 Rabbit Creek A **57.72 333** P **P** **21 40 33.1 +1.5**
baz=117,SNR=8.7
E29M Blow River **57.77 344** P **P** **21 40 33.2 +1.5**
baz=133
J25K Salcha River, **57.77 338** P **P** **21 40 33.2 +1.4**
baz=123
F28M Old Crow **57.80 342** P **P** **21 40 33.6 +1.6**
baz=131,SNR=40
OHAK Old Harbor **57.81 328** P **P** **21 40 34.3 +2.1**
OHAK Old Harbor **57.81 328** P **P** **21 40 33.9 +1.7**
baz=111
A36M Sachs Harbour **57.85 350** IAMs_20 IAMs_20 22 07 14.2
comp=Z,688nm,19.0s
A36M Sachs Harbour **57.85 350** P **P** **21 40 32.9 +0.7**
baz=149,SNR=27
Q20K Shuyak Island **57.89 330** P **P** **21 40 34.0 +1.3**
baz=113
HOM Homer **57.96 331** P **P** **21 40 33.9 +0.7**
baz=114
CPUP Villa Florida **58.02 136** P **P** **21 40 33.0 -1.1**
CPUP Villa Florida **58.02 136** P **P** **21 40 33.0 -1.1**
CPUP pmax pmax
comp=Z,16nm,1.3s
CPUP Villa Florida **58.02 136** P **P** **21 40 32.9 -1.1**
comp=Z,3.5nm,0.9s,baz=324,slow=9.0,SNR=8.0
CPUP LR LR 22 04 46.2
comp=Z,312nm,21.8s,baz=331,slow=35
comp=Z,3.5nm,0.9s
SII Sitkinak Islan **58.04 327** P **P** **21 40 35.0 +1.1**
baz=110
WAT1 Susitna Watana **58.05 335** P **P** **21 40 34.7 +0.9**
baz=119
NRS Narsarsuaq **58.12 27** *i* P **P** **21 40 35.0 +0.8**
NRS IAmb IAmb 21 40 35.6
comp=Z,54nm,1.1s
CAPN Captain Cook N **58.20 332** P **P** **21 40 36.4 +1.6**
baz=115
HDA Harding Lake **58.23 337** P **P** **21 40 36.3 +1.2**
baz=122,SNR=15
PRP Porcupine Dome **58.32 339** IAMs_20 IAMs_20 22 06 33.6
comp=Z,774nm,21.0s
PRP Porcupine Dome **58.32 339** P **P** **21 40 37.2 +1.4**
baz=124,SNR=18
SUA Susitna One **58.33 333** P **P** **21 40 37.5 +1.6**
baz=116,SNR=30
ILAR Eielson Array **58.40 338** P **P** **21 40 37.4 +1.1**
comp=Z,20nm,1.1s,baz=138,slow=4.7,SNR=81
ILAR LR LR 22 07 00.4
comp=Z,337nm,18.7s,baz=116,slow=37
comp=Z,20nm,1.1s
RND Reindeer **58.45 336** IAMs_20 IAMs_20 22 05 42.3
comp=Z,845nm,19.0s
R18K Karluk **58.52 328** P **P** **21 40 38.2 +1.1**
baz=110
CUT Chulitna **58.55 334** IAMs_20 IAMs_20 22 08 09.9
comp=Z,969nm,19.0s
CUT Chulitna **58.55 334** P **P** **21 40 38.7 +1.4**
baz=117,SNR=11
CHIR Chirikof Islan **58.56 326** P **P** **21 40 38.3 +0.8**
baz=108
G26K Porcupine Rive **58.57 341** P **P** **21 40 38.4 +1.1**
baz=126
O20K Slope Mountain **58.58 331** P **P** **21 40 38.1 +0.4**
baz=113
Q19K Cape Douglas, **58.62 330** P **P** **21 40 38.7 +0.8**
baz=112
D28M Stoke Point **58.63 344** P **P** **21 40 38.9 +1.2**
baz=133
MCK McKinley **58.64 336** P **P** **21 40 39.4 +1.4**
baz=119,SNR=13
CCB Clear Creek Bu **58.67 337** IAMs_20 IAMs_20 22 06 34.0
comp=Z,660nm,18.0s
WRH Wood River Hil **58.69 337** IAMs_20 IAMs_20 22 06 33.5
comp=Z,850nm,18.0s
P19K Oil Pt **58.70 331** P **P** **21 40 39.8 +1.4**
baz=112
BDFB Brasilia **58.70 120** P **P** **21 40 38.7 -0.5**
BDFB IAmb IAmb 21 40 40.4
comp=Z,26nm,0.9s
BDFB Brasilia **58.70 120** P **P** **21 40 38.7 -0.5**
BDFB pmax pmax
comp=Z,26nm,0.9s
BDFB Brasilia **58.70 120** P **P** **21 40 39.2 0.0**
comp=Z,20nm,0.8s,baz=283,slow=7.3,SNR=33
comp=Z,20nm,0.8s
POKR Poker Flat Res **58.78 338** P **P** **21 40 39.9 +1.0**
baz=121,SNR=8.5
COLA College **58.81 338** P **P** **21 40 39.4 +0.4**
COLA IAmb IAmb 21 40 41.1
comp=Z,27nm,0.9s
COLA College **58.81 338** IAMs_20 IAMs_20 22 04 34.6
comp=Z,580nm,19.0s
COLA College **58.81 338** P **P** **21 40 40.2 +1.2**
COLA College **58.81 338** P **P** **21 40 40.0 +1.0**
baz=121
COLA College **58.81 338** P **P** **21 40 39.4 +0.4**
COLA pmax pmax
comp=Z,27nm,0.9s
COLA MLR MLR
comp=Z,600nm,19.0s
N20K Mount Spurr **58.85 333** P **P** **21 40 40.9 +1.4**
baz=114,SNR=12
SKT Skwentna **58.89 334** P **P** **21 40 41.0 +1.3**
SKT Skwentna **58.89 334** P **P** **21 40 40.9 +1.3**
baz=116,SNR=19
TRF Thorofare Moun **59.04 336** P **P** **21 40 41.9 +1.0**
TRF Thorofare Moun **59.04 336** P **P** **21 40 42.2 +1.3**
baz=118,SNR=29
BWN Browne **59.06 336** IAMs_20 IAMs_20 22 03 43.6
comp=Z,707nm,22.0s
SFJD Kangerlussuaq **59.10 20** P **P** **21 40 41.0 -0.1**
SFJD Kangerlussuaq **59.10 20** P **P** **21 40 41.0 -0.1**
SFJD pmax pmax
comp=Z,46nm,1.1s
SFJD Kangerlussuaq **59.10 20** *i* P **P** **21 40 41.7 +0.7**
SFJD IAmb IAmb 21 40 42.6
comp=Z,42nm,1.1s
SFJD Kangerlussuaq **59.10 20** LR LR 22 08 00.9
comp=Z,710nm,21.5s,baz=234,slow=38
NEA2 Nenana **59.12 337** P **P** **21 40 42.1 +0.9**
baz=119
F26K Sheenjek River **59.13 341** P **P** **21 40 42.6 +1.3**
baz=126,SNR=15
D27M Malcolm River **59.17 344** P **P** **21 40 42.6 +1.0**
baz=130
H24K Noodor Dome **59.32 339** IAMs_20 IAMs_20 22 08 35.9
comp=Z,750nm,20.0s
H24K Noodor Dome **59.32 339** P **P** **21 40 44.1 +1.5**
baz=121
KTH Kantishna Hill **59.34 335** P **P** **21 40 43.5 +0.7**
KTH IAMs_20 IAMs_20 22 08 31.8
comp=Z,762nm,20.0s
O19K Port Alsworth **59.41 331** P **P** **21 40 44.3 +1.0**
baz=112,SNR=5.4
Q17K Contact Creek **59.48 329** P **P** **21 40 44.9 +1.0**
baz=109
I23K Minto, Yukon-K **59.50 337** IAMs_20 IAMs_20 22 06 59.8
comp=Z,792nm,19.0s
I23K Minto, Yukon-K **59.50 337** P **P** **21 40 45.3 +1.5**
baz=119,SNR=20
F25K Christian Rive **59.53 341** P **P** **21 40 45.5 +1.4**
baz=124
M20K Styx River **59.54 333** P **P** **21 40 45.6 +1.4**
baz=114
P18K Big Mountain, **59.55 330** P **P** **21 40 45.5 +1.2**
baz=110,SNR=6.4
PPLA Purkeypile **59.56 334** P **P** **21 40 45.8 +1.3**
baz=115,SNR=6.5
BPAW Bear Paw Mtn. **59.62 336** P **P** **21 40 45.6 +0.9**
baz=117,SNR=8.9
G24K Hadweenzic Riv **59.64 339** IAMs_20 IAMs_20 22 08 48.3
comp=Z,979nm,22.0s
G24K Hadweenzic Riv **59.64 339** P **P** **21 40 46.3 +1.5**
baz=122
O18K Koktuh Hills **59.70 331** P **P** **21 40 46.7 +1.4**
baz=111,SNR=7.8
N19K Bonanza Creek **59.72 332** P **P** **21 40 46.5 +0.9**
baz=112,SNR=16
CAST Castle Rocks **59.75 335** P **P** **21 40 46.2 +0.6**
CAST Castle Rocks **59.75 335** P **P** **21 40 46.6 +1.0**
baz=116,SNR=37
E25K Arctic Village **59.81 341** IAMs_20 IAMs_20 22 09 33.8
comp=Z,995nm,18.0s
E25K Arctic Village **59.81 341** P **P** **21 40 47.6 +1.6**
baz=125,SNR=7.6
MLY Manley **59.96 337** P **P** **21 40 48.0 +1.0**
MLY Manley **59.96 337** P **P** **21 40 48.4 +1.4**
baz=118,SNR=28
Q16K King Salmon **60.00 329** P **P** **21 40 48.3 +0.9**
baz=109
CHUM Lake Minchumin **60.04 335** P **P** **21 40 48.4 +0.8**
baz=116,SNR=5.8
P17K Kvichak River **60.06 330** P **P** **21 40 48.6 +0.8**
baz=109
M19K Big River Lodg **60.09 333** P **P** **21 40 49.7 +1.7**
baz=113
L20K Farewell, AK **60.10 334** P **P** **21 40 48.8 +0.8**
baz=113
R16K Pilot Point **60.12 328** P **P** **21 40 49.3 +1.2**
baz=107
CHGN Chignik **60.20 326** P **P** **21 40 48.4 -0.3**
baz=106
F24K Squaw Lake **60.21 340** P **P** **21 40 50.1 +1.3**
baz=122
ILULI Ilulissat **60.25 17** P **P** **21 40 49.4 +0.5**
ILULI IAmb IAmb 21 40 50.7
comp=Z,33nm,1.4s
ILULI Ilulissat **60.25 17** P **P** **21 40 49.4 +0.5**
ILULI pmax pmax
comp=Z,33nm,1.4s
DY2G Dye2 **60.29 21** *i* P **P** **21 40 50.4 +0.8**
DY2G IAmb IAmb 21 40 51.0
comp=Z,127nm,1.4s
N18K Kilae Creek **60.31 331** P **P** **21 40 50.1 +0.6**
baz=110
SVW2 Sparrevohn **60.32 332** P **P** **21 40 50.3 +0.7**
L19K White Mountain **60.40 333** P **P** **21 40 51.1 +1.0**
baz=112,SNR=7.8
CHNA Chernabura Isl **60.46 324** P **P** **21 40 51.6 +1.0**
baz=104
I21K Tanana **60.49 337** P **P** **21 40 51.5 +0.9**
baz=117,SNR=13
G23K Bananza Creek **60.51 339** P **P** **21 40 51.8 +1.0**
baz=120
K20K Telida **60.53 335** P **P** **21 40 51.7 +0.8**
baz=114
O17K Koliganek Bris **60.57 330** P **P** **21 40 52.6 +1.3**
baz=109
M18K Stony River **60.57 332** P **P** **21 40 51.8 +0.6**
baz=111
H22K Ishtalitna Cre **60.60 338** P **P** **21 40 52.3 +0.9**
baz=118
C26K Camden Bay **60.68 343** P **P** **21 40 53.1 +1.3**
baz=126
D25K Kavik River **60.74 342** IAMs_20 IAMs_20 22 08 50.3
comp=Z,1µm,21.0s
D25K Kavik River **60.74 342** P **P** **21 40 53.9 +1.5**
baz=124,SNR=11
ITQB Itaqui **60.74 139** P **P** **21 40 52.5 -0.3**
ITQB IAmb IAmb 21 40 59.6
comp=Z,28nm,1.0s
COLD Coldfoot **60.83 339** P **P** **21 40 55.0 +2.0**
baz=120,SNR=15
UMMG Uummannaq **60.85 16** *i* P **P** **21 40 54.6 +1.6**
UMMG IAmb IAmb 21 40 55.0
comp=Z,46nm,1.2s
N17K Nushagak Hills **60.86 331** P **P** **21 40 54.4 +1.2**
baz=109
J20K Nowinta River **60.90 335** P **P** **21 40 54.0 +0.6**
baz=114,SNR=25
O16K Kokwok River B **60.99 330** P **P** **21 40 55.1 +1.0**
baz=108
PPT Papeete **61.00 239** LR LR 22 00 55.2
comp=Z,368nm,18.0s,baz=16,slow=30
H21K Melozitna Rive **61.01 337** P **P** **21 40 54.7 +0.5**
baz=116
E23K Chandalar **61.06 340** P **P** **21 40 55.9 +1.4**
baz=121
SDPT Sand Point **61.08 325** P **P** **21 40 56.2 +1.4**
baz=103
NUUG Nuugaatsiaq **61.12 15** *i* P **P** **21 40 56.1 +1.3**
NUUG IAmb IAmb 21 40 57.1
comp=Z,49nm,1.2s
G22K Bettles **61.13 339** P **P** **21 40 55.8 +0.9**
baz=118
TTA Tatalina **61.18 334** P **P** **21 40 55.9 +0.4**
TTA Tatalina **61.18 334** P **P** **21 40 56.1 +0.7**
baz=112,SNR=12
L18K Granite Mounta **61.21 333** P **P** **21 40 56.6 +1.0**
baz=110
M17K Holitna River **61.27 332** P **P** **21 40 56.6 +0.6**
baz=109
UPNV Upernavik **61.27 13** *i* P **P** **21 40 56.8 +1.1**
UPNV IAmb IAmb 21 40 57.6
comp=Z,46nm,1.2s
I20K Naaghedeneel **61.28 336** IAMs_20 IAMs_20 22 09 16.1
comp=Z,593nm,20.0s
I20K Naaghedeneel **61.28 336** P **P** **21 40 57.1 +1.1**
baz=114,SNR=15
TOLK Toolik Lake Re **61.34 341** IAMs_20 IAMs_20 22 09 43.2
comp=Z,898nm,21.0s
TOLK Toolik Lake Re **61.34 341** P **P** **21 40 57.6 +1.2**
baz=121,SNR=14
D24K Happy Valley **61.38 342** P **P** **21 40 57.5 +0.9**
baz=122
J19K Poorman **61.42 335** P **P** **21 40 57.6 +0.7**
baz=112
N16K Nishlik Lake **61.59 331** P **P** **21 40 59.6 +1.4**
baz=108,SNR=6.2
C24K Franklin Bluff **61.65 342** P **P** **21 40 59.4 +1.1**
baz=122
G21K Allakaket **61.65 338** IAMs_20 IAMs_20 22 08 04.6
comp=Z,748nm,21.0s
G21K Allakaket **61.65 338** P **P** **21 40 59.6 +1.1**
baz=116
J18K Innoko River **61.67 334** P **P** **21 40 59.2 +0.5**
J18K IAmb IAmb 21 41 00.6
comp=Z,16nm,0.9s
J18K Innoko River **61.67 334** P **P** **21 40 59.7 +1.0**
baz=111
O15K Ungalikthiuk R **61.72 329** P **P** **21 40 58.3 -0.7**
baz=106
H20K Anotleneega Mo **61.72 337** P **P** **21 40 59.8 +0.7**
baz=114
E22K Anaktuvuk Pass **61.81 340** P **P** **21 41 00.7 +1.1**
baz=118
M16K Timber Creek **61.84 331** P **P** **21 41 00.9 +1.1**
baz=108
D23K Nanushuk River **61.85 341** P **P** **21 41 01.3 +1.5**
baz=120
L17K Donlin **61.90 332** P **P** **21 41 01.1 +0.9**
baz=109
F21K Alatna River **61.95 339** P **P** **21 41 01.7 +1.2**
F21K IAMs_20 IAMs_20 22 10 19.6
comp=Z,908nm,21.0s
F21K Alatna River **61.95 339** P **P** **21 41 01.8 +1.2**
baz=116
K17K Iditarod **62.09 333** P **P** **21 41 02.2 +0.7**
baz=109,SNR=7.0
N15K Kwethluk River **62.12 330** P **P** **21 41 02.5 +0.7**
baz=106
GCSA Galena City Sc **62.21 335** P **P** **21 41 03.1 +0.8**
baz=112
C23K Itkillik River **62.27 342** P **P** **21 41 03.5 +0.9**
baz=120
L16K Owhat River **62.29 332** P **P** **21 41 03.8 +1.0**
baz=108
PLCA Paso Flores **62.29 157** P **P** **21 41 03.4 +0.2**
PLCA IAmb IAmb 21 41 10.7
comp=Z,28nm,1.2s
PLCA Paso Flores **62.29 157** P **P** **21 41 03.4 +0.2**
PLCA pmax pmax
comp=Z,28nm,1.3s
PLCA Paso Flores **62.29 157** P **P** **21 41 03.0 -0.2**
comp=Z,3.7nm,0.9s,baz=326,slow=7.2,SNR=7.6
PLCA LR LR 22 03 15.9
comp=Z,580nm,18.3s,baz=331,slow=32
comp=Z,3.7nm,0.9s
H19K Roundabout Mou **62.34 336** P **P** **21 41 03.8 +0.7**
baz=112
D22K Ayikyak River **62.45 341** P **P** **21 41 05.1 +1.2**
baz=118
O14K Tigyukauivet M **62.45 329** P **P** **21 41 04.4 +0.4**
baz=105
M15K Kasigluk River **62.56 330** P **P** **21 41 05.0 +0.4**
baz=106
FALS False Pass **62.63 324** P **P** **21 41 06.6 +1.4**
baz=100
E21K Killik River **62.66 340** P **P** **21 41 06.2 +0.9**
baz=116
F20K Avaraart Lake **62.67 338** IAMs_20 IAMs_20 22 08 48.6
comp=Z,908nm,21.0s
F20K Avaraart Lake **62.67 338** P **P** **21 41 06.2 +0.9**
baz=114
G19K Purcell Mounta **62.82 337** P **P** **21 41 07.4 +1.1**
baz=112
N14K Kuskokwak Cree **62.83 330** P **P** **21 41 06.9 +0.4**
baz=105
H18K Honhosa River **62.95 336** P **P** **21 41 08.0 +0.7**

baz=110
M14K Bethel 63.17 330 P **P** **21 41 09.8 +1.1**
baz=105
L15K Ungalak Mounta 63.20 331 P **P** **21 41 10.0 +1.1**
baz=106
C21K Knifeblade Rid 63.25 340 P **P** **21 41 10.5 +1.4**
baz=116
J16K Anvik River 63.27 333 P **P** **21 41 11.0 +1.7**
baz=107,SNR=12
G18K Tagagawik 63.32 336 IAMs_20 IAMs_20 22 08 28.9
comp=Z,627nm,18.0s
G18K Tagagawik 63.32 336 P **P** **21 41 11.1 +1.4**
baz=110,SNR=10
E20K Nigu River 63.33 339 P **P** **21 41 11.0 +1.2**
baz=114
F19K Shaleruckik Mo 63.33 338 IAMs_20 IAMs_20 22 11 08.1
comp=Z,832nm,18.0s
F19K Shaleruckik Mo 63.33 338 P **P** **21 41 10.9 +1.2**
baz=112
E19K Redstone River 63.37 338 IAMs_20 IAMs_20 22 11 12.1
comp=Z,888nm,19.0s
E19K Redstone River 63.37 338 P **P** **21 41 11.3 +1.3**
baz=112
K15K Wolf Creek Mou 63.39 332 P **P** **21 41 11.9 +1.7**
baz=106
B21K Ikpikpuk River 63.40 341 IAMs_20 IAMs_20 22 09 26.5
comp=Z,985nm,20.0s
B21K Ikpikpuk River 63.40 341 P **P** **21 41 11.0 +0.9**
baz=116
I17K Unalakleet 63.49 334 P **P** **21 41 12.4 +1.6**
baz=108,SNR=6.4
H17K Granite Mounta 63.49 335 P **P** **21 41 12.3 +1.4**
baz=109
D20K Etivluk River 63.66 340 P **P** **21 41 12.9 +1.0**
baz=114
L14K Kuka Creek 63.66 331 P **P** **21 41 13.2 +1.2**
baz=104
ICESG Greenland Ices 63.72 20 *i* P **P** **21 41 13.3 +0.7**
ICESG IAmb IAmb 21 41 14.2
comp=Z,77nm,1.2s
M13K Dall Lake 63.76 330 P **P** **21 41 13.8 +1.2**
baz=103
EUNU Eureka 63.91 2 P **P** **21 41 13.9 +0.5**
F18K Selawik 63.95 337 P **P** **21 41 15.0 +1.3**
baz=110,SNR=7.6
G17K Kiwalik Mounta 63.97 336 P **P** **21 41 15.6 +1.7**
baz=108
PLTB Pedras Altas 64.07 139 P **P** **21 41 14.4 -0.7**
PLTB IAmb IAmb 21 41 21.8
comp=Z,26nm,1.1s
D19K Kuna River 64.08 339 P **P** **21 41 15.3 +0.6**
baz=112
UNV Unalaska Valle 64.26 322 P **P** **21 41 17.9 +1.9**
baz=97
H16K Elim 64.35 335 P **P** **21 41 18.3 +1.9**
baz=106,SNR=12
B20K Meade River 64.36 341 IAMs_20 IAMs_20 22 10 34.1
comp=Z,876nm,18.0s
B20K Meade River 64.36 341 P **P** **21 41 17.9 +1.5**
baz=114,SNR=31
J14K Nanvaranak Lak 64.41 332 P **P** **21 41 18.7 +1.9**
baz=104
F17K Baldwin Pennin 64.50 337 P **P** **21 41 18.4 +1.0**
baz=108
E18K Tukpahlearik C 64.58 338 IAMs_20 IAMs_20 22 08 54.9
comp=Z,618nm,21.0s
E18K Tukpahlearik C 64.58 338 P **P** **21 41 18.7 +0.8**
baz=109
G16K Koyuk River 64.62 335 P **P** **21 41 19.5 +1.3**
baz=107
A21K Barrow 64.75 342 P **P** **21 41 20.0 +1.1**
baz=115,SNR=6.4
C19K Lookout Ridge 64.81 340 P **P** **21 41 20.7 +1.3**
baz=111
E17K Hotham Inlet 64.92 337 P **P** **21 41 21.6 +1.5**
baz=108,SNR=43
M11K Mekoryuk 65.13 329 P **P** **21 41 22.2 +0.7**
baz=101
G15K Niukluk 65.19 335 P **P** **21 41 22.9 +1.0**
baz=105
C18K Utukok River 65.19 339 IAMs_20 IAMs_20 22 12 26.1
comp=Z,925nm,19.0s
C18K Utukok River 65.19 339 P **P** **21 41 22.4 +0.4**
baz=109
RCBR Riachuelo 65.25 105 P **P** **21 41 23.3 +0.1**
RCBR Riachuelo 65.25 105 P **P** **21 41 23.3 +0.1**
RCBR pmax pmax
comp=Z,43nm,1.2s
RCBR Riachuelo 65.25 105 LR LR 22 11 18.0
comp=Z,210nm,18.7s,baz=298,slow=38
NEEM North Greenlan 65.34 10 *e*P **P** **21 41 23.8 +0.7**
NEEM IVmB_BB 21 41 24.4
comp=Z,1μm,2.6s
NEEM IAmb IAmb 21 41 24.8
comp=Z,126nm,1.2s
SUMG Summit 65.53 17 P **P** **21 41 24.8 +0.3**
SUMG IAmb IAmb 21 41 26.2
comp=Z,31nm,1.0s
SUMG Summit 65.53 17 P **P** **21 41 24.8 +0.3**
SUMG pmax pmax
comp=Z,31nm,1.0s
SUMG Summit 65.53 17 *i* P **P** **21 41 25.3 +0.7**
SUMG IAmb IAmb 21 41 25.9
comp=Z,40nm,1.1s
NIKH Nikolski High 65.56 321 P **P** **21 41 26.4 +1.9**
baz=95
D17K Noatak River 65.57 338 P **P** **21 41 25.6 +1.3**
baz=107,SNR=20
F15K North Star Dit 65.62 335 P **P** **21 41 25.9 +1.2**
baz=104
B18K Kokolik River 65.64 340 P **P** **21 41 26.0 +1.3**
baz=109
ANM Nome 65.64 334 P **P** **21 41 26.2 +1.3**
baz=103,SNR=5.9
C17K DeLong Mountai 65.83 338 P **P** **21 41 26.7 +0.7**
baz=107
F14K Arctic Creek 66.24 335 P **P** **21 41 30.1 +1.4**
baz=103
C16K Lisburne Hills 66.55 338 P **P** **21 41 31.4 +0.8**
baz=105
TNA Tin City 66.91 335 P **P** **21 41 34.3 +1.3**
baz=101
BORG Borgarnes 69.61 26 LR LR 22 14 20.7
comp=Z,268nm,18.3s,baz=279,slow=38
RAR Rarotonga 71.18 240 LR LR 22 04 39.9
comp=Z,287nm,18.2s,baz=90,slow=29
PMAR Madeira 73.95 60 *e*P **P** **21 42 18.2 +1.3**
comp=Z,100nm,2.1s
BILL Bilibino 77.06 337 P **P** **21 42 34.4 +0.6**
BILL IAmb IAmb 21 42 36.2
comp=Z,33nm,1.3s
BILL Bilibino 77.06 337 IAMs_20 IAMs_20 22 20 56.1
comp=Z,634nm,18.0s
BILL Bilibino 77.06 337 *e*P **P** **21 42 34.9 +1.1**
BILL pmax pmax
comp=Z,37nm,1.7s
BBTS Babate 77.96 78 LR LR 22 10 46.3
comp=Z,266nm,21.8s,baz=162,slow=31
SPITS Spitsbergen Ar 78.88 11 LR LR 22 19 26.2
comp=Z,524nm,21.2s,baz=268,slow=37
PGAV Gavieira, Arco 79.03 49 *e*P **P** **21 42 45.8 +0.5**
comp=Z,68nm,2.0s
PCAS Casmilo, Conde 79.26 51 *e*P **P** **21 42 47.3 +0.8**
comp=Z,81nm,1.2s
EKA Eskdalemuir Ar 79.39 35 P **P** **21 42 46.6 -0.3**
comp=Z,6.0nm,0.9s,baz=288,slow=6.0,SNR=8.5
comp=Z,6.0nm,0.9s
POLO Lamas de Olo 79.50 50 *e*P **P** **21 42 48.5 +0.6**
comp=Z,18nm,1.8s
PVRL Vila Real 79.58 50 *e*P **P** **21 42 48.8 +0.5**
comp=Z,48nm,1.6s
PTEO Sao Teotonio 79.63 54 *e*P **P** **21 42 49.3 +0.7**
comp=Z,88nm,1.6s
PFVI Vila Bisbo 79.64 54 *e*P **P** **21 42 49.6 +0.9**
PMTG Montargil 79.68 52 *e*P **P** **21 42 49.3 +0.5**
comp=Z,45nm,1.6s
MORF Marmelete 79.74 54 *e*P **P** **21 42 50.3 +1.1**
MTE Manteigas 79.90 51 *e*P **P** **21 42 50.2 +0.1**
MTE Manteigas 79.90 51 P **P** **21 42 49.8 -0.3**
MTE IAmb IAmb 21 42 51.7
comp=Z,38nm,1.1s
MESJ Messejana 79.96 54 *e*P **P** **21 42 50.8 +0.4**
comp=Z,37nm,1.6s
MESJ Messejana 79.96 54 *e*P **P** **21 42 50.9 +0.5**
MESJ IAmb IAmb 21 42 52.6
comp=Z,29nm,1.2s
MESJ Messejana 79.96 54 *e*P **P** **21 42 50.9 +0.5**
EVO Evora 79.96 53 *e*P **P** **21 42 50.9 +0.5**

PCBR Castelo Branco 80.07 51 *e*P **P** **21 42 51.8 +0.9**
comp=Z,42nm,1.2s
MVO Moncorvo 80.11 50 *e*P **P** **21 42 51.4 +0.2**
comp=Z,37nm,1.7s
PCVE Castro Verde 80.14 54 *e*P **P** **21 42 52.5 +1.1**
PBEJ Beja 80.19 53 *e*P **P** **21 42 52.3 +0.7**
comp=Z,33nm,1.6s
PESTR Estremoz 80.21 52 *e*P **P** **21 42 52.0 +0.3**
PESTR Estremoz 80.21 52 P **P** **21 42 51.6 -0.2**
PESTR IAmb IAmb 21 42 53.4
comp=Z,28nm,1.1s
PMRV Marv??o 80.23 52 *e*P **P** **21 42 52.1 +0.3**
comp=Z,58nm,1.7s
PBDV Barranco-do-Ve 80.31 54 *e*P **P** **21 42 53.4 +1.1**
comp=Z,53nm,1.5s
PVAQ Vaqueiros 80.44 54 P **P** **21 42 52.8 -0.2**
PBAR Barrancos 80.79 53 *e*P **P** **21 42 55.3 +0.5**
comp=Z,33nm,1.4s
PAB San Pablo 82.49 51 P **P** **21 43 03.9 0.0**
PAB IAmb IAmb 21 43 06.1
comp=Z,32nm,1.2s
PAB San Pablo 82.49 51 P **P** **21 43 03.9 0.0**
PAB pmax pmax
comp=Z,32nm,1.2s
ESDC Sonseca Array 82.74 51 P **P** **21 43 04.8 -0.4**
comp=Z,6.7nm,1.1s,baz=294,slow=5.0,SNR=21
ESDC LR LR 22 15 14.6
comp=Z,257nm,21.0s,baz=278,slow=32
comp=Z,6.7nm,1.1s
ESBB Sonseca Array 82.74 51 P **P** **21 43 05.0 -0.2**
ESBB IAmb IAmb 21 43 16.3
comp=Z,27nm,1.4s
MDT Midelt 84.05 58 LR LR 22 16 16.6
comp=Z,404nm,20.8s,baz=302,slow=33
SEY Seymchan 84.14 334 *ce*P **P** **21 43 13.4 +1.6**
SEY pmax pmax
comp=Z,21nm,1.7s
SEY Seymchan 84.14 334 LR LR 22 25 09.9
comp=Z,385nm,19.6s,baz=56,slow=39
KONO Kongsberg 84.58 29 *ce*P **P** **21 43 16.8 +2.7**
KONO pmax pmax
comp=Z,26nm,1.7s
NB2 NORSAR Subarra 84.75 27 P **P** **21 43 16.2 +1.2**
comp=Z,53nm,1.7s,baz=303,slow=5.3
NB2 NORSAR Subarra 84.75 27 P **P** **21 43 16.2 +1.2**
baz=303,slow=5.3
NOA NORSAR Array B 84.75 27 P **P** **21 43 14.9 -0.1**
comp=Z,6.0nm,1.1s,baz=294,slow=5.0,SNR=5.8
comp=Z,6.0nm,1.1s
PMSA Palmer Station 84.97 166 LR LR 22 13 12.7
comp=Z,200nm,18.1s,baz=327,slow=30
PEA0B Petropavlovsk- 85.36 324 P **P** **21 43 19.5 +1.3**
PEA0B Petropavlovsk- 85.36 324 P **P** **21 43 19.5 +1.3**
PEA0B pmax pmax
comp=Z,46nm,1.4s
PETK Petropavlovsk- 85.36 324 P **P** **21 43 18.4 +0.2**
comp=Z,8.6nm,0.8s,baz=72,slow=9.7,SNR=14
comp=Z,8.6nm,0.8s
DOU Dourbes 85.42 39 *d*P **P** **21 43 19.2 +0.7**
comp=Z,6.6nm,1.3s
BMRD Maredsous 85.45 39 *d*P **P** **21 43 19.7 +1.0**
comp=Z,9.7nm,1.2s
BGES Gesves 85.61 39 *d*P **P** **21 43 19.8 +0.3**
comp=Z,11nm,1.2s
ARCES ARCESS Array B 85.62 17 P **P** **21 43 17.1 -2.1**
comp=Z,11nm,1.0s,baz=304,slow=8.6,SNR=9.3
ARCES LR LR 22 24 03.4
comp=Z,166nm,19.9s,baz=309,slow=37
comp=Z,11nm,1.0s
BCLA Clavier 85.73 39 *d*P **P** **21 43 21.0 +1.0**
comp=Z,7.6nm,1.4s
SSF Saint Saulge 85.76 42 *e*P **P** **21 43 20.1 -0.2**
SSF pmax pmax
comp=Z,28nm,1.2s
RCHB Rochefort 85.78 39 *d*P **P** **21 43 21.0 +0.8**
comp=Z,6.8nm,1.3s
BSTI Sart Tilman 85.83 38 *d*P **P** **21 43 21.6 +1.0**
MEM Membach 86.08 38 *d*P **P** **21 43 20.9 -0.9**
comp=Z,7.9nm,1.3s
BTNL Ternell 86.17 38 *d*P **P** **21 43 23.6 +1.3**
BHOU Houvegnez 86.17 39 *d*P **P** **21 43 23.6 +1.3**
comp=Z,5.2nm,1.4s
HFS Hagfors 86.25 28 LR LR 22 22 32.8
comp=Z,177nm,20.6s,baz=282,slow=36
MA2 Magadan 86.30 332 P **P** **21 43 23.3 +0.6**
MA2 IAmb IAmb 21 43 37.5
comp=Z,27nm,1.6s
MA2 Magadan 86.30 332 P **P** **21 43 24.1 +1.4**
MA2 Magadan 86.30 332 *ce*P **P** **21 43 24.2 +1.5**
MA2 pmax pmax
comp=Z,31nm,2.5s
WLF Walferdange 86.51 39 *d*P **P** **21 43 25.4 +1.5**
TIXI Tiksi 86.66 347 P **P** **21 43 23.9 -0.3**
TIXI IAmb IAmb 21 43 25.7
comp=Z,29nm,1.2s
TIXI Tiksi 86.66 347 *ce*P **P** **21 43 24.8 +0.6**
TIXI pmax pmax
comp=Z,60nm,2.5s
TIXI Tiksi 86.66 347 LR LR 22 27 53.8
comp=Z,202nm,18.1s,baz=45,slow=40
RAO Raoul Island 89.41 239 LR LR 22 13 53.7
comp=Z,166nm,22.0s,baz=109,slow=29
TUE Stuetta 89.71 41 IAMs_20 IAMs_20 22 28 07.0
comp=Z,408nm,20.0s
DAVA Damuels 89.72 40 *i* P **P** **21 43 39.9 +0.4**
comp=Z,10nm,1.1s
CLL Collm 89.85 36 *e*P **P** **21 43 40.0 +0.2**
CLL *e*S **S** **21 54 24.0 -6.8**
CLL Collm 89.85 36 *e*P **P** **21 43 40.0 +0.2**
CLL *e*PP **PP** **21 47 18.0 +6.0**
CLL *e*SKKSac **S** **21 54 24.0 -6.8**
CLL *ex* x 21 55 10.0
CLL *e*PS **PnS** **21 55 36.0 -2.6**
CLL *e*PPS PPS 21 56 06.0
CLL *e*SS **SS** **22 00 27.0 -0.5**
CLL AMS AMS 22 29 00.0
comp=N,100nm,19.3s
CLL AMS AMS 22 29 00.0
comp=E,200nm,18.7s
CLL AMS AMS 22 29 00.0
comp=Z,200nm,18.8s
RETA Reutte 90.18 40 *e*P **P** **21 43 41.5 0.0**
comp=Z,8.3nm,1.2s
MOTA Moosalm 90.45 40 *i* P **P** **21 43 43.3 +0.4**
comp=Z,8.3nm,1.5s
BRG Berggiesshubel 90.58 36 *e*P **P** **21 43 43.9 +0.6**
BRG Amp 21 43 45.7
comp=Z,3.6nm,1.1s
BRG Berggiesshubel 90.58 36 P P 21 43 50.3 +7.1
BRG Amp 21 43 56.6
comp=Z,6.8nm,1.4s
BRG Berggiesshubel 90.58 36 *e*P **P** **21 43 43.8 +0.6**
BRG 21 43 50.3
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG MLR MLR
comp=Z,380nm,21.0s
BRG MLR MLR
comp=E,230nm,15.9s
FINES FINESS Array B 90.70 23 P **P** **21 43 41.4 -2.2**
comp=E,5.6nm,1.1s,baz=347,slow=7.8,SNR=7.4
FINES LR LR 22 28 09.2
comp=E,233nm,19.3s,baz=339,slow=38
comp=E,5.6nm,1.1s
WATA Walderalm 90.74 40 *i* P **P** **21 43 44.4 +0.1**
comp=E,6.1nm,1.4s
DBIC Dimbokro 91.13 83 P **P** **21 43 44.7 -1.7**
comp=E,10nm,1.0s,baz=269,slow=3.3,SNR=4.6
DBIC LR LR 22 21 12.4
comp=E,138nm,21.8s,baz=280,slow=33
comp=E,10nm,1.0s
KHC Kasperske Hory 91.16 38 *ce*P **P** **21 43 48.2 +2.2**
KHC pmax pmax
comp=Z,17nm,2.5s
LESA Schwarzleotal 91.38 39 *i* P **P** **21 43 46.7 -0.4**
comp=Z,4.4nm,1.3s
ABTA Abfaltersbach 91.58 40 *i* P **P** **21 43 48.4 +0.4**
comp=Z,9.9nm,1.4s
CIMO Cimolais 91.72 41 P **P** **21 43 48.2 -0.5**
CIMO IAmb IAmb 21 43 49.9
comp=Z,10nm,1.4s
BIOA Bad Ischl, Aus 91.84 39 *i* P **P** **21 43 49.4 +0.2**
comp=Z,5.3nm,1.2s
KBA Koelnbreinsper 91.94 40 *i* PcP **P** **21 43 50.3 +0.4**
comp=Z,6.2nm,1.2s
MOA Molln 92.15 39 *e*PcP **P** **21 43 51.6 +1.0**
comp=Z,5.9nm,1.5s

CADS Cadrg 92.56 40 *i* P **P** **21 43 52.7 +0.1**
VRAC Vranov 92.82 37 LR LR 22 29 01.6
comp=Z,150nm,18.8s,baz=308,slow=38
OBKA Obir 92.94 40 *i* P **P** **21 43 54.0 -0.4**
comp=Z,4.4nm,1.1s
CONA Conrad Observa 93.06 38 *i* P **P** **21 43 54.2 -0.7**
comp=Z,6.4nm,1.5s
SOKA Soboth 93.15 39 *i* P **P** **21 43 55.0 -0.3**
comp=Z,6.2nm,1.2s
ARSA Arzberg 93.18 39 *e*P **P** **21 43 54.8 -0.6**
comp=Z,4.0nm,1.3s
CEY Cerknica 93.22 40 *i* P **P** **21 43 55.6 0.0**
YAK Yakutsk 93.28 340 P **P** **21 43 55.6 +0.1**
YAK Yakutsk 93.28 340 IAMs_20 IAMs_20 22 30 36.4
comp=Z,466nm,20.0s
YAK Yakutsk 93.28 340 *c* P **P** **21 43 55.9 +0.5**
YAK *e* 21 47 42.9
YAK *e*S **SKSac** **21 54 25.2 -3.0**
YAK *e* 21 55 03.9
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.4s
YAK pmax pmax
comp=Z,241nm,5.1s
YAK pmax pmax
comp=N,77nm,5.2s
YAK smax smax
comp=N,116nm,4.1s
YAK smax smax
comp=E,55nm,5.2s
YAK Yakutsk 93.28 340 LR LR 22 30 44.2
comp=E,340nm,18.6s,baz=46,slow=39
RONA Rosalia, Austr 93.43 38 *e*PcP **P** **21 43 57.8 +1.3**
comp=E,2.3nm,1.1s
KEST Kesra 93.99 51 P **P** **21 43 58.5 -1.0**
comp=E,4.0nm,1.0s,baz=329,slow=10,SNR=3.3
KEST LR LR 22 24 18.7
comp=E,205nm,19.1s,baz=261,slow=34
comp=E,4.0nm,1.0s
NRIK Noril'sk 94.40 358 *ce*P **P** **21 44 01.1 +0.6**
NRIK pmax pmax
comp=Z,14nm,1.2s
NRIK Noril'sk 94.40 358 P **P** **21 44 00.6 +0.1**
comp=Z,5.5nm,0.8s,baz=25,slow=2.2,SNR=8.4
NRIK LR LR 22 30 29.4
comp=Z,166nm,19.1s,baz=37,slow=38
comp=Z,5.5nm,0.8s
TORD Torodi Ar. Bea 95.39 75 P **P** **21 44 04.8 -1.3**
comp=Z,1.0nm,0.4s,baz=324,slow=7.1,SNR=3.3
TORD LR LR 22 25 27.4
comp=Z,271nm,19.0s,baz=304,slow=34
comp=Z,1.0nm,0.4s
TAM Tamanrasset 95.68 64 P **P** **21 44 07.3 -0.2**
TAM IAmb IAmb 21 44 09.7
comp=Z,12nm,1.5s
TAM IAMs_20 IAMs_20 22 21 24.3
comp=Z,429nm,22.0s
TAM Tamanrasset 95.68 64 P **P** **21 44 07.3 -0.2**
TAM pmax pmax
comp=Z,12nm,1.5s
TAM MLR MLR
comp=Z,400nm,22.0s
MNK Minsk 95.75 28 *i* P P 21 44 00.3 -6.6
MNK *i* S **SKSac** **21 54 36.0 -5.8**
MNK *i* PS **PS** **21 56 35.9 -8.0**
MNK *i* SS **SS** **22 01 45.4 -6.2**
MNK *i* SSS SSS 22 05 28.4
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=N,11nm,0.9s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK MLR MLR
comp=E,151nm,15.0s
MNK MLR MLR
comp=N,2μm,17.0s
MNK MLR MLR
comp=Z,531nm,18.0s
KLMR Klimovskoe 95.84 19 *e*P **P** **21 44 05.6 -1.6**
KLMR *e* 21 47 55.1
KLMR pmax pmax
comp=Z,22nm,1.3s
URZ Urewera 96.07 232 LR LR 22 17 14.5
comp=Z,260nm,21.8s,baz=121,slow=29
VAE Valguarnera 96.95 48 LR LR 22 26 11.7
comp=Z,119nm,19.0s,baz=325,slow=34
AKASG Malin Array Be 98.78 31 LR LR 22 31 34.0
comp=Z,206nm,18.9s,baz=296,slow=37
OBN Obninsk 99.05 24 *e*P Pdif 21 44 25.3 +3.5
OBN *e* 21 48 29.2
OBN *e*SS SS 22 02 51.5 +14
OBN pmax pmax
comp=Z,2.0nm,1.0s
OBN MLR MLR
comp=Z,297nm,18.0s
OBN Obninsk 99.05 24 LR LR 22 32 17.8
comp=Z,257nm,19.3s,baz=353,slow=37
KIRV Kirov 100.64 17 *ce*P **Pdif** **21 44 28.5 -0.3**
VSR Storozhevoye 102.97 26 *e*P **Pdif** **21 44 34.9 -4.5**
VSR pmax pmax
comp=Z,10.0nm,1.4s
VORD Divnogorie 103.21 26 *e*P **Pdif** **21 44 35.2 -5.2**
VORD pmax pmax
comp=Z,3.0nm,0.7s
MDJ Mudanjiang 105.42 327 Pdif **Pdif** **21 44 51.1 +0.7**
MDJ SS SS 22 04 10.8 +4.2
MDJ AMB AMB
comp=Z,380nm,4.7s
ZALV Zalesovo Beam 109.90 358 PP **PP** **21 49 42.1 -1.5**
comp=Z,1.5nm,0.9s,baz=10,slow=9.0,SNR=5.3
BVAR Borovoye Array 110.14 7 PP **PP** **21 49 44.1 -1.2**
comp=Z,3.5nm,1.0s,baz=348,slow=6.4,SNR=8.2
ARPR Arapgir-MALATY 111.35 35 IAMs_20 IAMs_20 22 46 19.2
comp=Z,219nm,21.0s
ULN Ulaanbaatar 112.22 342 IAMs_20 IAMs_20 22 39 06.8
comp=Z,354nm,21.0s
XLT XiLinHaoTe 112.39 334 *e*PKP **PKiKP** **21 49 14.3 -3.0**
XLT AMB AMB
comp=Z,140nm,4.7s
MAK Makhachkala 112.96 27 *i* P **Pdif** **21 45 22.6 -1.4**
MAK *i* 21 49 15.3
MAK *e* 21 55 53.2
MAK *e*SS SS 22 05 46.7 -0.9
MAK pmax pmax
comp=Z,253nm,1.0s
MAK MLR MLR
comp=Z,303nm,21.0s
KURK Kurchatov 113.11 2 *i* PKiKP **PKiKP** **21 49 17.9 -0.4**
KURBB Kurchatov Arra 113.20 2 PKiKP **PKiKP** **21 49 17.9 -0.6**
comp=Z,0.5nm,0.9s,baz=351,slow=2.0,SNR=6.3
KURBB PP **PP** **21 50 05.5 -1.8**
comp=Z,1.9nm,1.1s,baz=353,slow=6.7,SNR=7.3
GNI Garni 113.91 31 IAMs_20 IAMs_20 22 38 49.6
comp=Z,338nm,18.0s
ELIB Princess Elisa 114.98 163 *d*PKiKP **PKPdf** **21 49 24.2 +2.9**
HHC Hu-ho-hao-te 116.78 335 *e*PKP **PKPdf** **21 49 26.3 +0.5**
HHC LR LR
comp=Z,190nm,16.7s
HHC LR LR
comp=Z,200nm,16.3s
HHC LR LR
comp=Z,290nm,21.1s
MAKZ Makanchi 117.09 0 IAMs_20 IAMs_20 22 46 16.2
comp=Z,342nm,20.0s
MKAR Makanchi Array 117.10 360 PKP **PKPdf** **21 49 24.8 -1.4**
comp=Z,0.6nm,0.8s,baz=31,slow=2.7,SNR=7.2
MKAR PP **PP** **21 50 31.7 -3.1**
comp=Z,1.0nm,1.0s,baz=346,slow=4.4,SNR=3.9
WMQ Urumqi 119.85 355 *e*PKP **PKiKP** **21 49 33.6 +1.9**
WMQ LR LR
comp=Z,620nm,23.9s
WMQ LR LR
comp=Z,230nm,24.0s
NJ2 Nanjing 120.27 324 *e*PKP **PKiKP** **21 49 34.3 +1.6**
GEYT Alibeck 121.48 22 PKP **PKPdf** **21 49 33.4 -1.5**
comp=Z,2.3nm,0.7s,baz=269,slow=10,SNR=6.0
XAN Xi'an 123.67 333 PKP **PKPdf** **21 49 38.8 -0.4**
XAN LR LR
comp=Z,390nm,16.2s
XAN LR LR
comp=Z,310nm,16.8s
XAN LR LR
comp=Z,490nm,16.5s

LZH	Lanzhou	123.86	339	⇑PKP	PKPdf	21 49 39.8	+0.1		
LZH				LR	LR				
	comp=Z,210nm,12.0s								
LZH				LR	LR				
	comp=Z,170nm,12.0s								
LZH				LR	LR				
	comp=Z,340nm,13.4s								
SIMJ	Simiganj	123.89	12	PKPdf	PKPdf	21 49 39.2	-0.4		
STKA	Stephens Creek	124.11	242	P	PKPdf	21 49 40.0	+0.1		
STKA	Stephens Creek	124.11	242	PKP	PKPdf	21 49 39.8	-0.2		
	comp=Z,3.9nm,0.7s,baz=355,slow=5.0,SNR=8.7								
QIS	Mount Isa	125.44	256	P	PKPdf	21 49 42.4	-0.4		
HRA	Herat	126.11	20	PKPdf	PKPdf	21 49 44.0	-0.1		
ENH	Enshi	126.58	330		PKPdf	21 49 44.5	-0.3		
BOSA	Boshof	126.61	114	PKP	PKPdf	21 49 44.2	-0.8		
	comp=Z,7.6nm,0.9s,baz=356,slow=2.3,SNR=7.9								
MBAR	Mbarara	127.12	78 *i*	PKIKP	PKiKP	21 49 47.7	+0.8		
LSZ	Lusaka	128.34	97	PKPdf	PKPdf	21 49 48.2	-0.4		
LSZ	Lusaka	128.34	97	PKIKP	PKPdf	21 49 48.2	-0.4		
CD2	Chengdu	128.52	336	PKP	PKPdf	21 49 49.3	+0.7		
LODK	Lodwar	129.88	71	IAMs_20	IAMs_20	22 43 06.1			
	comp=Z,288nm,22.0s								
WRA	Warramunga Arr	130.31	258 *c i*	PKIKP	PKiKP	21 49 59.0	+6.1		
WRA				pmax	pmax				
	comp=Z,7.0nm,1.0s								
WRA	Warramunga Arr	130.31	258	PKP	PKPdf	21 49 51.2	-0.9		
	comp=Z,2.3nm,0.7s,baz=86,slow=2.5,SNR=17								
ASAR	Alice Springs	130.92	253	PKP	PKPdf	21 49 52.3	-0.9		
	comp=Z,1.6nm,0.7s,baz=97,slow=1.8,SNR=18								
PZH	PanZhiHua	133.24	335	PKP	PKPdf	21 49 58.0	+0.3		
LSA	Lhasa	133.33	349		PKPdf	21 49 57.7	-0.5		
LSA	Lhasa	133.33	349	PKIKP	PKPdf	21 49 57.7	-0.5		
KMI	Kunming	134.05	333	⇓PKP	PKPdf	21 49 56.8	-2.6		
KMI				sPKP		21 50 07.8			
KMI				LR	LR				
	comp=Z,160nm,25.6s								
KMI				LR	LR				
	comp=Z,210nm,20.0s								
KMI				LR	LR				
	comp=Z,250nm,19.2s								
QIZ	Qiongzhong	135.40	321	PKP	PKPdf	21 50 02.8	+1.0		
QIZ				PP	PP	21 52 40.3	+3.1		
QIZ				SS	SS	22 10 34.8	+2.9		
QIZ				LR	LR				
	comp=Z,120nm,17.7s								
QIZ				LR	LR				
	comp=Z,130nm,16.7s								
QIZ				LR	LR				
	comp=Z,220nm,16.0s								
DLV	T Lat	141.54	315	IAMs_20	IAMs_20	23 00 58.9			
	comp=Z,183nm,20.0s								
CMAR	Chiang Mai Arr	141.56	334 *c i*	PKIKP	PKiKP	21 50 21.7	+5.8		
CMAR				pmax	pmax				
	comp=Z,3.0nm,1.0s								
FOMA	Nahampoana Res	146.22	110	PKPdf	PKPdf	21 50 20.6	-0.3		
HYB	Hyderabad	146.23	6 *e*	PKPab	PKPbc	21 50 22.5	+0.2		
MORW	Morawa	146.30	242	PKPdf	PKPdf	21 50 21.4	+0.4		
VOI	Vohitsoka	146.34	105	PKPdf	PKPdf	21 50 21.2	-0.2		
KSM	Kuching	146.89	300		PKPdf	21 50 23.2	+0.8		
SRIT	Nakonsritamara	149.67	324		PKPbc	21 50 30.8	-0.8		
KULM	Kulim	151.64	318		PKPbc	21 50 35.6	-0.7		
IPM	Ipoh	152.00	316		PKPbc	21 50 36.6	-0.6		
PMBI	Palembang	153.92	298	IAMs_20	IAMs_20	23 02 57.4			
	comp=Z,150nm,20.0s								

DJA 17 21:40:40.1±0.3, 2°S±3°×12°2E±°, h10km, M4.1/12, mb4.5/3, MLv4.0/12, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.26	15	P	Pn	21 41 03.2	-0.6
LUWI				S	Sb	21 41 20.2	-0.1
TTSI	Tana Toraja	2.74	254	P	Pn	21 41 24.3	+0.2
MRSI	Marisa	2.78	349	P	Pn	21 41 24.6	-0.1
KMSI	Cibinong	3.21	28	P	Pn	21 41 29.8	-0.9
SANI	Sanana	3.54	87	P	Pn	21 41 34.2	-1.0
MPSI	Mapaga	3.64	315	P	Pn	21 41 37.0	+0.5
BKSI	Bulukumba	3.82	217	P	Pn	21 41 39.5	+0.5
LBMI	Labuha	5.30	72	P	Pn	21 41 59.7	+0.3
	60nm,0.8s,0.2nm						

IDC 17 21:41:39.2±1.6, 56.00N×150.25W, h0km, mb3.4/4, mbtmp3.5/8, ML3.4/4, MS2.7/1, Error ellipse: s-maj=30.9km s-min=22.4km az=45.0

NEIC 17 21:41:39.0±1.2, 55.91N±0.08×150.13W±0.09, h12km±7km, mb3.9/2, ML3.8/50, ML3.6(AEIC), Error ellipse: s-maj=11.8km s-min=6.6km az=155.0

AEIC 17 21:41:43.4±1.2, 55.92N±0.08×150.11W±0.09, h12km±7km, Error ellipse: s-maj=12.3km s-min=7.3km az=165.0

ISC 17 21:41:40.1±1.0, 56.07N±0.07×150.18W±0.05, h10km, n209, σ0.95/215, mb3.3/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.07	305	Pn	Pn	21 42 14.6	-0.2
OHAK					Sn	21 42 39.0	-1.5
OHAK	Old Harbor	2.07	305	P	Pn	21 42 14.5	-0.2
OHAK	Old Harbor	2.07	305	P	Pn	21 42 14.6	-0.2
	baz=125						
OHAK				S	Sn	21 42 39.1	-1.5
	baz=125						
KDAK	Kodiak Island	2.16	323	Pn	Pn	21 42 16.5	+0.4
KDAK					Sn	21 42 42.4	-0.6
KDAK	Kodiak Island	2.16	323	S	Sn	21 42 42.0	-1.0
	baz=143						
KDAK	Kodiak Island	2.16	323	Pn	Pn	21 42 16.6	+0.4
	14nm,0.3s,baz=137,slow=4.6,SNR=255						
KDAK					Sn	21 42 41.5	-1.5
	6.8nm,0.3s,baz=120,slow=20,SNR=16						
KDAK				LR	LR	21 43 18.3	
	comp=Z,204nm,21.8s,baz=188,slow=45						
	32nm,0.2s						
SII	Sitkinak Islan	2.28	284	Pn	Pn	21 42 17.0	-0.8
SII					Sn	21 42 43.5	-2.5
SII				IAML		21 42 52.0	
	comp=E,577nm,0.6s						
SII				IAML		21 42 53.8	
	comp=N,504nm,0.7s						
SII	Sitkinak Islan	2.28	284	P	Pn	21 42 17.0	-0.8
SII	Sitkinak Islan	2.28	284	P	Pn	21 42 17.0	-0.8
	baz=104						
R18K	Karluk	2.79	304		Pn	21 42 25.1	+0.4
R18K					Sn	21 42 57.4	-0.9
R18K				IAML		21 42 59.5	
	comp=N,249nm,0.6s						
R18K	Karluk	2.79	304	P	Pn	21 42 25.0	+0.4
	baz=123						
R18K				S	Sn	21 42 57.1	-1.2
	baz=123						
SYI	Shuyak Island	2.81	336		Pn	21 42 25.8	+0.8
Q20K	Shuyak Island	2.81	336	P	Pn	21 42 25.8	+0.7
	baz=154						
CHIR	Chirikof Islan	3.07	268	Pn	Pn	21 42 27.2	-1.3
CHIR				IAML		21 43 02.1	
	comp=N,259nm,0.8s						
CHIR				IAML		21 43 08.9	
	comp=E,217nm,0.9s						
CHIR	Chirikof Islan	3.07	268	P	Pn	21 42 27.5	-1.1
	baz=86						
CHIR				S	Sn	21 43 01.4	-3.9
	baz=86						
KAHG	Katmai Hook Gl	3.39	318		Pn	21 42 34.8	+1.7
Q19K	Cape Douglas,	3.42	328		Pn	21 42 34.8	+1.4
Q19K	Cape Douglas,	3.42	328	P	Pn	21 42 34.9	+1.4
	baz=146						
KAKN	Katmai Knife C	3.47	312		Pn	21 42 35.5	+1.3
CNPM	China Poot	3.51	351	Pn	Pn	21 42 34.8	+0.1
CNPM					Sn	21 43 15.3	-1.0
CNPM				IAML		21 43 18.1	
	comp=E,151nm,1.0s						
CNPM				IAML		21 43 18.4	
	comp=N,125nm,0.6s						
ACHA	Angle Creek He	3.53	310		Pn	21 42 35.9	+0.9
ANCK	Angle Creek	3.60	309		Pn	21 42 37.1	+1.2
BRSE	Bradley Lake S	3.69	356		Pn	21 42 37.2	0.0
BRSE					Sn	21 43 19.8	-0.9
BRSE	Bradley Lake S	3.69	356	P	Pn	21 42 37.2	0.0
	baz=175						
BRSE				S	Sn	21 43 19.8	-0.9
	baz=175						
PLK3	Peulik 3	3.71	298		Pn	21 42 38.3	+0.8
BRLK	Bradley Lake	3.72	354	Pn	Pn	21 42 37.4	-0.2
BRLK					Sn	21 43 20.4	-1.1
CNTC	Contact Creek	3.80	308		Pn	21 42 39.7	+0.9
P19K	Oil Pt	3.94	337		Pn	21 42 42.1	+1.5
P19K				IAML		21 43 42.5	
	comp=E,169nm,0.7s						
P19K	Oil Pt	3.94	337	P	Pn	21 42 41.9	+1.3
	baz=155						
Q23K	Middleton Isla	3.94	30	Pn	Pn	21 42 40.2	-0.3
Q23K				IAML		21 43 33.9	
	comp=E,179nm,2.6s						
Q23K				IAML		21 45 06.8	
	comp=N,145nm,2.9s						
Q23K	Middleton Isla	3.94	30	P	Pn	21 42 40.4	-0.1
	baz=212						
MID	Middleton Isla	3.94	30	Pn	Pn	21 42 40.3	-0.3
MID				IAML		21 45 06.8	
	comp=N,155nm,2.6s						
MID	Middleton Isla	3.94	30	P	Pn	21 42 40.6	0.0
SEW	Seward	4.06	5		Pn	21 42 41.8	-0.4
SEW	Seward	4.06	5	P	Pn	21 42 41.8	-0.4
	baz=185						
SEW				S	Sn	21 43 27.5	-2.3
	baz=185						
P23K	Montague Islan	4.21	19		Pn	21 42 44.1	0.0
P23K	Montague Islan	4.21	19	P	Pn	21 42 44.1	0.0
	baz=201						
P23K				S	Sn	21 43 30.5	-2.8
	baz=201						
O20K	Slope Mountain	4.22	343		Pn	21 42 45.1	+0.6
O20K	Slope Mountain	4.22	343	P	Pn	21 42 45.1	+0.6
	baz=161						
ILSW	Iliamna Southw	4.23	339		Pn	21 42 44.8	+0.2
ILSW				IAML		21 43 36.7	
	comp=E,92nm,0.8s						
ILSW				IAML		21 43 37.5	
	comp=N,90nm,0.7s						
IVE	Iliamna Volcan	4.23	340		Pn	21 42 44.9	+0.2
P18K	Big Mountain,	4.29	323		Pn	21 42 46.2	+0.8
P18K	Big Mountain,	4.29	323	P	Pn	21 42 46.2	+0.8
	baz=140						
Q16K	King Salmon	4.37	309		Pn	21 42 46.9	+0.4
Q16K	King Salmon	4.37	309	P	Pn	21 42 46.9	+0.4
	baz=125						
O22K	Cooper Landing	4.43	3		Pn	21 42 47.2	-0.1
P17K	Kvichak River	4.59	316		Pn	21 42 50.8	+1.3
P17K	Kvichak River	4.59	316	P	Pn	21 42 50.8	+1.3
	baz=131						
CHGN	Chignik	4.61	276	Pn	Pn	21 42 48.3	-1.3
CHGN				IAML		21 43 47.8	
	comp=N,69nm,0.6s						
CHGN				IAML		21 43 49.4	
	comp=E,81nm,0.7s						
RSO	Redoubt South	4.61	344	Pn	Pn	21 42 49.5	-0.4
O18K	Koktuh Hills	4.64	327	Pn	Pn	21 42 50.7	+0.5
O18K				IAML		21 43 47.6	
	comp=E,57nm,0.8s						
O18K				IAML		21 44 01.9	
	comp=N,57nm,0.9s						
O18K	Koktuh Hills	4.64	327	P	Pn	21 42 50.7	+0.5
	baz=143						
O19K	Port Alsworth	4.68	334		Pn	21 42 51.6	+1.0
O19K				IAML		21 43 46.7	
	comp=N,98nm,0.5s						
O19K	Port Alsworth	4.68	334	P	Pn	21 42 51.9	+1.2
	baz=151						
DFR	Drift River	4.72	345		Pn	21 42 52.7	+1.4
CAPN	Captain Cook N	4.74	354	Pn	Pn	21 42 52.5	+1.0
HIN	Hinchinbrook I	4.75	23	Pn	Pn	21 42 52.0	+0.3
HIN				IAML		21 43 47.4	
	comp=N,64nm,0.9s						
HIN				IAML		21 43 48.4	
	comp=E,96nm,1.1s						
KAIM	Kayak Island	4.93	36	Pn	Pn	21 42 54.2	0.0
KAIM	Kayak Island	4.93	36	P	Pn	21 42 54.2	0.0
	baz=220						
RC01	Rabbit Creek A	5.04	2		Pn	21 42 55.5	-0.1
RC01				IAML		21 43 57.1	
	comp=E,54nm,0.6s						
RC01				IAML		21 44 00.1	
	comp=N,42nm,0.5s						
EYAK	Cordova Ski Ar	5.06	26		Pn	21 42 56.2	+0.3
EYAK	Cordova Ski Ar	5.06	26	P	Pn	21 42 56.5	+0.6
EYAK	Cordova Ski Ar	5.06	26	P	Pn	21 42 56.2	+0.3
	baz=208						
FID	Port Fidalgo	5.08	21		Pn	21 42 56.0	-0.2
FID				IAML		21 43 53.5	
	comp=N,40nm,0.2s						
FID				IAML		21 43 57.0	
	comp=E,65nm,0.7s						
GLI	Glacier Island	5.09	17	Pn	Pn	21 42 56.5	+0.2
GLI				IAML		21 43 59.8	
	comp=N,42nm,0.8s						
GLI	Glacier Island	5.09	17	P	Pn	21 42 56.6	+0.3
	baz=199						
P16K	Nushagak River	5.15	308		Pn	21 42 58.0	+0.9
P16K	Nushagak River	5.15	308	P	Pn	21 42 58.0	+0.9
	baz=123						
SUCK	Suckling Hills	5.26	38		Pn	21 42 58.9	+0.2
SUCK				IAML		21 43 56.6	
	comp=E,70nm,3.1s						
N19K	Bonanza Creek	5.26	336	Pn	Pn	21 42 59.1	+0.3
N19K	Bonanza Creek	5.26	336	P	Pn	21 42 59.8	+0.9
	baz=153						
HMT	Hamilton	5.30	34		Pn	21 42 59.7	+0.5
SUA	Susitna One	5.42	357	Pn	Pn	21 43 00.9	-0.1
KNIK	Knik Glacier	5.43	9	Pn	Pn	21 43 01.1	0.0
O16K	Kokwok River B	5.51	313	Pn	Pn	21 43 03.3	+1.2
N18K	Kilae Creek	5.51	329		Pn	21 43 02.7	+0.6
BERG	Berg Lake	5.52	36		Pn	21 43 02.2	-0.1
PMR	Palmer	5.56	5	Pn	Pn	21 43 02.9	+0.1
PMR	Palmer	5.56	5	P	Pn	21 43 04.0	+1.2
GRIN	Grindle Hills	5.57	38		Pn	21 43 03.3	+0.4
DIV	Divide	5.57	23		Pn	21 43 03.4	+0.4
SNH	Sunshine Point	5.67	40		Pn	21 43 04.5	+0.2
BMRM	Bremner River	5.71	28		Pn	21 43 05.2	+0.3
BMRM	Bremner River	5.71	28	P	Pn	21 43 05.3	+0.3
	baz=212						
GHO	Glory Hole Cre	5.75	6		Pn	21 43 06.3	+0.8
SVW2	Sparrevohn	5.78	333	Pn	Pn	21 43 05.9	+0.1
SVW2	Sparrevohn	5.78	333	P	Pn	21 43 06.0	+0.2
N17K	Nushagak Hills	5.79	323		Pn	21 43 06.4	+0.4
N17K	Nushagak Hills	5.79	323	P	Pn	21 43 06.6	+0.6
	baz=138						
SML	Sawmill	5.83	9	Pn	Pn	21 43 07.2	+0.7
SML	Sawmill	5.83	9	P	Pn	21 43 07.3	+0.7
	baz=190						
WAX	Waxell Ridge	5.85	38		Pn	21 43 06.8	0.0
SDPT	Sand Point	5.87	267	Pn	Pn	21 43 06.8	-0.1
SDPT	Sand Point	5.87	267	P	Pn	21 43 06.6	-0.4
KLU	Klutina	5.87	20		Pn	21 43 07.6	+0.6
KLU	Klutina	5.87	20	P	Pn	21 43 07.7	+0.6
	baz=203						
SKT	Skwentna	5.97	354	Pn	Pn	21 43 09.2	+0.8
CRQM	Cirque	5.98	35		Pn	21 43 08.7	0.0
CRQE	Cirque	5.99	36	P	Pn	21 43 08.9	+0.1
	baz=220						
MESA	MESA	6.00	43		Pn	21 43 08.9	-0.1
MESA	MESA	6.00	43	P	Pn	21 43 08.9	-0.1
	baz=229						
M20K	Styx River	6.03	347		Pn	21 43 09.2	0.0
M20K	Styx River	6.03	347	P	Pn	21 43 09.4	+0.2
	baz=164						
TGL	Tana Glacier	6.08	36		Pn	21 43 10.3	+0.3
ISLE	Juniper Island	6.14	39	Pn	Pn	21 43 10.9	+0.1
BAGL	Bagley Icefiel	6.15	41		Pn	21 43 10.6	-0.2
M18K	Stony River	6.17	334		Pn	21 43 11.4	+0.2
M18K	Stony River	6.17	334	P	Pn	21 43 11.4	+0.2
	baz=150						
M19K	Big River Lodg	6.24	341	Pn	Pn	21 43 12.6	+0.4
VRDI	Verde Repeater	6.25	31		Pn	21 43 12.7	+0.3
N25K	Chitina, Valde	6.26	25		Pn	21 43 13.1	+0.7
N25K	Chitina, Valde	6.26	25	P	Pn	21 43 13.4	+1.0
	baz=209						
GLB	Gilahina Butte	6.32	29		Pn	21 43 13.6	+0.3
N16K	Nishlik Lake	6.32	318	P	Pn	21 43 14.7	+1.4
	baz=131						
M24K	Tolsona, Glenn	6.39	17		Pn	21 43 15.5	+1.2
GRNC	Granite Creek	6.44	40	Pn	Pn	21 43 15.0	0.0
TABL	Table Mountain	6.47	44		Pn	21 43 15.7	+0.2
MCARA	McCarthy VSAT	6.50	32		Pn	21 43 16.1	+0.4
MCARA	McCarthy VSAT	6.50	32	P	Pn	21 43 15.9	+0.2
	baz=217						
M17K	Holitna River	6.54	328		Pn	21 43 17.3	+1.0
M17K	Holitna River	6.54	328	P	Pn	21 43 17.2	+1.0
	baz=142						
L19K	White Mountain	6.58	341	Pn	Pn	21 43 16.7	-0.1
L19K	White Mountain	6.58	341	P	Pn	21 43 17.2	+0.4
	baz=157						
PCA	Pinnacle	6.63	48		Pn	21 43 17.3	-0.2
PINM	Pinnacle	6.63	48	P	Pn	21 43 17.7	+0.2
	baz=236						
N15K	Kwethluk River	6.66	312		Pn	21 43 19.5	+1.6
BARN	Barnard Glacie	6.70	38		Pn	21 43 19.0	+0.4
CTG	Chitna Glacier	6.74	40	P	Pn	21 43 19.4	+0.3
	baz=226						
O14K	Tigyukauivet M	6.75	303	Pn	Pn	21 43 20.2	+1.2
M16K	Timber Creek	6.76	321		Pn	21 43 20.7	+1.4
LOGN	Logan Glacier	6.77	42		Pn	21 43 19.6	+0.1
PNL	Peninsula	6.79	53		Pn	21 43 19.9	+0.2
PNL	Peninsula	6.79	53	P	Pn	21 43 20.2	+0.6
PNL	Peninsula	6.79	53	P	Pn	21 43 19.9	+0.2
	baz=241						
WAT7	Susitna Watana	6.82	5		Pn	21 43 21.3	+1.2
BCPM	Bancas Point	6.82	51	Pn	Pn	21 43 20.1	+0.1
HARP	HAARP	6.85	20		Pn	21 43 21.7	+1.3
HARP	HAARP	6.85	20	P	Pn	21 43 21.7	+1.3
	baz=204						
L18K	Granite Mounta	7.01	334	Pn	Pn	21 43 24.2	+1.5
PAX	Paxson	7.32	17		Pn	21 43 28.2	+1.2
PAX	Paxson	7.32	17	P	Pn	21 43 28.2	+1.2
	baz=200						
M26K	Nabesna, AK	7.34	27		Pn	21 43 28.7	+1.5
TRF	Thorofare Moun	7.40	360	Pn	Pn	21 43 30.2	+2.0
L16K	Owhat River	7.42	323	Pn	Pn	21 43 29.2	+0.9
CAST	Castle Rocks	7.43	353	Pn	Pn	21 43 29.8	+1.3
O29M	Mount Kennedy	7.45	51		Pn	21 43 29.5	+0.6
O29M	Mount Kennedy	7.45	51	P	Pn	21 43 29.5	+0.6
	baz=239						
KTH	Kantishna Hill	7.52	357	Pn	Pn	21 43 31.0	+1.4
P29M	Windy Craggy	7.53	57		Pn	21 43 29.5	-0.4
P29M	Windy Craggy	7.53	57	P	Pn	21 43 29.4	-0.5
	baz=246						
M27K	Edge Creek, AK	7.60	31	Pn	Pn	21 43 31.7	+0.7
M27K	Edge Creek, AK	7.60	31	P	Pn	21 43 31.6	+0.7
	baz=217						
M14K	Bethel	7.76	312		Pn	21 43 33.1	+0.3
M14K	Bethel	7.76	312	P	Pn	21 43 33.3	+0.4
	baz=123						
K17K	Iditarod	7.84	332	Pn	Pn	21 43 35.0	+1.0
S31K	Pelican	7.85	70	Pn	Pn	21 43 31.8	-2.3
S31K	Pelican	7.85	70	P	Pn	21 43 32.3	-1.8
	baz=261						
BPAW	Bear Paw Mtn.	8.06	357	Pn	Pn	21 43 37.2	+0.1
HYT	Haines Junctio	8.17	49		Pn	21 43 39.0	+0.2
L27K	Beaver Creek,	8.19	28		Pn	21 43 39.4	+0.6
M13K	Dall Lake	8.19	307	Pn	Pn	21 43 39.7	+0.9
SIT	Sitka	8.27	77	Pn	Pn	21 43 36.6	-3.3
L14K	Kuka Creek	8.37	314		Pn	21 43 42.5	+1.1
L14K	Kuka Creek	8.37	314	P	Pn	21 43 42.3	+0.9
	baz=124						
J19K	Poorman	8.40	343	Pn	Pn	21 43 42.8	+1.1
SKAG	Skagway	8.63	61	Pn	Pn	21 43 44.7	-0.2
SKAG	Skagway	8.63	61	P	Pn	21 43 45.2	+0.3
N30M	Aishikik Lake	8.68	46		Pn	21 43 45.8	+0.3
N30M	Aishikik Lake	8.68	46	P	Pn	21 43 46.0	+0.4
	baz=236						
S32K	Killisnoo	8.69	74	Pn	Pn	21 43 43.5	-2.1
M29M	Somme Creek	8.76	38	P	Pn	21 43 47.5	+0.8
	baz=228						
O30N	Mendenhall	8.76	52	Pn	Pn	21 43 46.4	-0.3
O30N	Mendenhall	8.76	52	P	Pn	21 43 47.0	+0.3
	baz=243						
JIS	Juneau Island	8.86	69	P	Pn	21 43 48.4	+0.4
ILAR	Eielson Array	8.88	9	Pn	Pn	21 43 46.8	-1.5
	comp=E,0.1nm,0.3s,baz=186,slow=14,SNR=4.0						
ILAR				Sn	Sn	21 45 23.4	-4.8
	comp=E,0.2nm,0.3s,baz=218,slow=15,SNR=4.8						
	comp=E,0.3nm,0.3s						
J25K	Salcha River,	8.89	14	Pn	Pn	21 43 48.9	+0.4
J16K	Anvik River	8.94	328	Pn	Pn	21 43 49.7	+0.6
K27K	Chicken	8.95	24	Pn	Pn	21 43 49.8	+0.6
I23K	Minto, Yukon-K	9.12	2	Pn	Pn	21 43 51.3	-0.2
I21K	Tanana	9.18	355	Pn	Pn	21 43 53.1	+0.7
WHY	Whitehorse	9.25	54		Pn	21 43 53.0	-0.6
L29M	L29M	9.32	36		Pn	21 43 54.7	+0.3
P32M	Atlin	9.46	61	Pn	Pn	21 43 55.8	-0.5
P32M	Atlin	9.46	61	P	Pn	21 43 56.1	-0.2
	baz=254						
U33K	Whale Pass	9.54	83	Pn	Pn	21 43 54.0	-3.3
H21K	Melozitna Rive	9.70	354	Pn	Pn	21 44 01.2	+1.6
P33M	Teslin, Yukon	10.06	59		Pn	21 44 03.8	-0.7
R33M	Jennings River	10.79	64	Pn	Pn	21 44 13.7	-0.9
J30M	Hart River	10.92	33		Pn	21 44 16.8	+0.5
H29M	Whitestone	11.64	24	Pn	Pn	21 44 27.3	+1.2
G31M	Satah River	13.21	28		Pn	21 44 48.1	+0.6
F31M	Tsiigehtchic	13.74	27	Pn	Pn	21 44 54.4	-0.3
B20K	Meade River	14.33	350	Pn	Pn	21 45 03.6	+0.9
INK	Inuvik	14.45	25		Pn	21 45 05.0	+0.6
INK	Inuvik	14.45	25	Pn	Pn	21 45 05.5	+1.2
	comp=E,0.1nm,0.3s,baz=207,slow=9.8,SNR=4.9						
	comp=E,7.2nm,1.2s						
FLDN	Fort Liard	14.65	62		Pn	21 45 06.6	-0.5
C36M	Paulatuk	17.68	31	P	Pn	21 45 46.0	-0.1
C36M				IAmb	IAmb	21 45 50.0	
	comp=Z,5.1nm,0.8s						
A36M	Sachs Harbour	19.07	24	P	P	21 46 02.8	+0.6
A36M				IAmb	IAmb	21 46 16.8	
	comp=Z,11nm,0.9s						
YKA	Yellowknife Ar	19.07	56	P	P	21 46 03.4	+1.0
	comp=Z,0.2nm,0.3s,baz=266,slow=10.0,SNR=16						
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	27.56	116	P	P	21 47 28.5	+1.3
	comp=Z,0.3nm,0.5s,baz=320,slow=14,SNR=2.6						
	comp=Z,0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	48.34	239	T	T	22 42 59.2	
	baz=29						
H11N3	WAKE ISLAND Hy

OK048	**Pawnee Station**	**0.86**	**64**		**Pg**	21 59 19.7	-0.3
FNO	**Franklin**	**0.88**	**152**	Pg	Pg	21 59 19.9	-0.4
FNO				IAML		21 59 33.0	
	comp=E,99nm,0.1s						
OK052	**Battle Ridge R**	**0.89**	**92**		**Pg**	21 59 20.3	-0.3
OK052				IAML		21 59 39.9	
	comp=E,103nm,0.2s						
OK052				IAML		21 59 42.0	
	comp=E,100nm,0.2s						
BLOK	**Blackwell**	**0.91**	**37**		**Pg**	21 59 20.4	-0.6
KAN14	**Manchester OK**	**0.92**	**357**		**Pg**	21 59 20.4	-0.8
KAN14				IAML		21 59 35.6	
	comp=N,132nm,0.1s						
KAN14				IAML		21 59 39.6	
	comp=E,142nm,0.1s						
U32A	**Winter Ranch,**	**0.95**	**291**		**Pg**	21 59 21.4	-0.4
U32A				IAML		21 59 37.4	
	comp=N,174nm,0.3s						
U32A				IAML		21 59 40.7	
	comp=E,103nm,0.1s						
QUOK	**Quay**	**0.97**	**82**		**Pg**	21 59 21.9	-0.4
QUOK				IAML		21 59 38.8	
	comp=E,115nm,0.2s						
QUOK				IAML		21 59 41.0	
	comp=N,108nm,0.2s						
OK051	**E0350 and S346**	**0.98**	**61**		**Pg**	21 59 21.9	-0.4
OK051				IAML		21 59 45.1	
	comp=N,181nm,0.2s						
KAN17	**Caldwell West**	**1.01**	**6**		**Pg**	21 59 22.4	-0.5
KAN17				IAML		21 59 38.3	
	comp=N,195nm,0.2s						
KAN01	**Argonia South**	**1.12**	**6**		**Pg**	21 59 24.1	-0.9
KAN01				IAML		21 59 40.0	
	comp=E,146nm,0.2s						
KAN01				IAML		21 59 40.9	
	comp=N,85nm,0.3s						
DEOK	**Depew**	**1.15**	**99**	Pg	Pg	21 59 24.7	-0.9
DEOK				IAML		21 59 45.3	
	comp=E,104nm,0.2s						
DEOK				IAML		21 59 45.9	
	comp=N,103nm,0.2s						
W35A	**Tecumseh**	**1.22**	**136**		Pb	21 59 25.7	-1.1
W35A				IAML		21 59 44.0	
	comp=N,106nm,0.3s						
KAN12	**Harper NE Stat**	**1.26**	**356**		Pn	21 59 26.8	-0.8
KAN12				IAML		22 00 04.3	
	comp=N,105nm,0.4s						
KS21	**Milan North St**	**1.26**	**9**	IAML		21 59 45.3	
	comp=N,129nm,0.1s						
KS21	**Milan North St**	**1.26**	**9**		Pn	21 59 26.9	-0.6
T35A	**Sooner Cattle**	**1.42**	**51**		Pn	21 59 29.9	+0.1
X34A	**Smith Ranch, M**	**1.43**	**178**		Pb	21 59 30.3	-0.2
WM0K	**Wichita Mounta**	**1.48**	**209**	Pg	Pn	21 59 30.2	-0.4
TUL3	**Leonard**	**1.71**	**94**		Pn	21 59 34.1	+0.3
TUL3				IAmb_Lg		21 59 58.6	
	comp=Z,25nm,1.1s						
RLO	**Rose Lookout**	**2.33**	**86**	Pn	Pn	21 59 43.5	+1.2
X37A	**Clayton**	**2.52**	**124**	Pn	Pn	21 59 45.4	+0.5
U38A	**Gravette**	**2.87**	**81**		Pn	21 59 50.2	+0.6
CBKS	**Cedar Bluff**	**3.13**	**333**	IAmb_Lg		22 00 41.3	
	comp=Z,5.6nm,0.8s						
HHAR	**Hobbs**	**3.21**	**84**	IAmb_Lg		22 00 47.9	
	comp=Z,4.9nm,1.0s						
PLPT	**Palo Pinto**	**3.23**	**186**	Pn	Pn	21 59 56.4	+1.7
DKNS	**Dickens**	**3.43**	**227**	IAmb_Lg		22 00 54.2	
	comp=Z,8.1nm,0.8s						
MIAR	**Mount Ida**	**3.84**	**112**	Pn	Pn	22 00 04.0	+1.0
RTBA	**Rita Blanca**	**3.93**	**277**	Pn	Pn	22 00 04.6	+0.2
S39A	**Bolivar**	**4.02**	**64**	Pn	Pn	22 00 05.9	+0.4
S39A				IAmb_Lg		22 01 10.4	
	comp=Z,4.6nm,0.7s						
N35A	**Tabor**	**5.13**	**20**	IAmb_Lg		22 01 56.0	
	comp=Z,10nm,0.9s						
PHWY	**Pilot Hill**	**7.91**	**314**	IAmb_Lg		22 03 21.4	
	comp=Z,6.7nm,0.9s						

WEL ***17*** *22:01:41.7±0.3, 42˚S±2˚×17˚4E±˚, h14km±2km, M3.1/21, ML3.3/25, MLv3.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=140.7, confirmed*
NOU ***17*** *22:01:42.1, 42˚16S×174˚09E, h24km, MLv3.6/7, Off E. Coast of S. Island, N.Z.*

ISC 17 22:01:41.8±1.1, 41˚99S±0˚03×173˚88E±0˚03, h18km±3km, n79, σ1§14/92, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEKS	**Kekerengu Vall**	**0.08**	**64**	P	**Pb**	**22 01 45.4**	**+0.1**
KEKS				S	**Sb**	**22 01 48.0**	**+0.4**
WDFS	**Ward Fire Stat**	**0.25**	**49**	P	**Pb**	**22 01 48.2**	**+0.4**
WDFS				S	**Sb**	**22 01 52.7**	**+1.0**
BSWZ	**Blackbirch Sta**	**0.28**	**359**	P	**Pb**	**22 01 47.7**	**-0.5**
BSWZ				S	**Sb**	**22 01 51.6**	**-0.9**
CMWZ	**Cape Campbell**	**0.35**	**46**	P	**Pb**	**22 01 49.9**	**+0.4**
CMWZ				S	**Sb**	**22 01 56.2**	**+1.6**
SEDS	**Seddon Fire St**	**0.35**	**25**	P	**Pb**	**22 01 49.4**	**-0.1**
SEDS				S	**Sb**	**22 01 55.2**	**+0.4**
KIKS	**Kaikoura**	**0.46**	**199**	P	**Pn**	**22 01 52.8**	**-0.7**
KIKS				S	**Sn**	**22 02 01.1**	**-0.1**
MOLW	**Molesworth Sta**	**0.47**	**258**	P	**Pb**	**22 01 51.6**	**0.0**
MOLW				S	**Sb**	**22 01 58.9**	**+0.6**
KHZ	**Kahutara**	**0.49**	**211**	P	**Pn**	**22 01 53.1**	**-0.8**
KHZ	**Kahutara**	**0.49**	**211**	P	**Pb**	**22 01 52.6**	**+0.7**
TUWZ	**Tuamarina**	**0.56**	**5**	P	**Pb**	**22 01 52.8**	**-0.3**
THZ	**Tophouse**	**0.76**	**287**	P	**Pb**	**22 01 56.7**	**+0.1**
THZ				S	**Sb**	**22 02 06.7**	**+0.1**
TCW	**Tory Channel**	**0.84**	**21**	P	**Pb**	**22 01 57.3**	**-0.4**
NNZ	**Nelson**	**0.86**	**334**	P	**Pb**	**22 01 57.8**	**-0.4**
NNZ				S	**Sb**	**22 02 09.1**	**-0.3**
SNZO	**South Karori**	**0.92**	**42**	P	**Pn**	**22 02 00.0**	**+0.2**
BHW	**Baring Head**	**0.94**	**52**	P	**Pn**	**22 02 00.0**	**-0.1**
WEL	**Wellington**	**0.97**	**44**	P	**Pn**	**22 02 00.7**	**+0.2**
WEL				S	**Sn**	**22 02 14.7**	**+0.9**
MRNZ	**Matariki Terra**	**1.03**	**305**	P	**Pn**	**22 02 01.5**	**+0.2**
MRNZ				S	**Sn**	**22 02 15.4**	**+0.1**
PLWZ	**Palliser**	**1.11**	**68**	P	**Pn**	**22 02 01.8**	**-0.7**
GVZ	**Greta Valley S**	**1.16**	**212**	P	**Pb**	**22 02 03.8**	**+0.5**
TKNZ	**Takaka Hill**	**1.18**	**324**	P	**Pn**	**22 02 03.7**	**+0.2**
DUWZ	**D'Urville Isla**	**1.19**	**2**	P	**Pn**	**22 02 03.5**	**0.0**
DUWZ				S	**Sb**	**22 02 18.9**	**0.0**
CAW	**Cannon Point**	**1.25**	**46**	P	**Pn**	**22 02 04.3**	**-0.1**
PAWZ	**Paruwai Farm**	**1.31**	**63**	P	**Pn**	**22 02 04.5**	**-0.7**
KIW	**Kapiti Island**	**1.37**	**35**	P	**Pn**	**22 02 06.3**	**+0.3**
KIW				S	**Sb**	**22 02 24.7**	**+0.7**
LTZ	**Lake Taylor**	**1.43**	**236**	P	**Pb**	**22 02 07.8**	**-0.2**
MTW	**Mount Morrison**	**1.48**	**56**	P	**Pn**	**22 02 06.6**	**-0.9**
TRWZ	**Traveller**	**1.48**	**67**	P	**Pn**	**22 02 06.5**	**-1.1**
AMCZ	**Amberley**	**1.49**	**217**	P	**Pn**	**22 02 08.0**	**+0.3**
OGWZ	**Otaki Gorge**	**1.52**	**40**	P	**Pn**	**22 02 08.0**	**-0.1**
QRZ	**Quartz Range**	**1.55**	**318**	P	**Pb**	**22 02 10.2**	**+0.3**
QRZ	**Quartz Range**	**1.55**	**318**	P	**Pb**	**22 02 10.0**	**+0.2**
DSZ	**Denniston Nort**	**1.57**	**278**	P	**Pb**	**22 02 10.8**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.65**	**49**	P	**Pn**	**22 02 09.1**	**-0.8**
TMWZ	**Te Maipa**	**1.75**	**60**	P	**Pn**	**22 02 10.1**	**-1.2**
MRZ	**Mangatainoka R**	**1.85**	**44**	P	**Pn**	**22 02 12.0**	**-0.6**
OXZ	**Oxford**	**1.90**	**225**	P	**Pn**	**22 02 12.9**	**-0.4**
MQZ	**McQueen's Vall**	**1.94**	**207**	P	**Pn**	**22 02 12.7**	**-1.1**
INZ	**Inchbonnie**	**1.95**	**247**	P	**Pb**	**22 02 15.3**	**-1.4**
AKCZ	**Akaroa Harbour**	**2.01**	**200**	P	**Pn**	**22 02 14.7**	**-0.2**
PRWZ	**Pori Road**	**2.13**	**48**	P	**Pb**	**22 02 21.9**	**+2.0**
POWZ	**Post Office Ro**	**2.14**	**42**	P	**Pn**	**22 02 16.3**	**-0.3**
RACZ	**Rakaia**	**2.15**	**216**	P	**Pn**	**22 02 16.2**	**-0.6**
BFZ	**Birch Farm**	**2.21**	**54**	P	**Pn**	**22 02 16.3**	**-1.3**
BFZ	**Birch Farm**	**2.21**	**54**	P	**Pn**	**22 02 15.9**	**-1.6**
MHCZ	**Mount Hutt**	**2.29**	**227**	P	**Pn**	**22 02 18.3**	**-0.4**
WAZ	**Wanganui**	**2.39**	**21**	P	**Pb**	**22 02 22.5**	**-1.7**
DVHZ	**Dannevirke**	**2.42**	**46**	P	**Pb**	**22 02 26.0**	**+1.3**
WACZ	**Wakanui South**	**2.46**	**217**	P	**Pn**	**22 02 20.6**	**-0.3**
LREZ	**Lake Rotokare**	**2.56**	**9**	P	**Pb**	**22 02 26.9**	**-0.2**
WVZ	**Waitaha Valley**	**2.56**	**244**	P	**Pn**	**22 02 24.1**	**+1.7**
KHEZ	**Kahui Hut**	**2.70**	**2**	P	**Pb**	**22 02 27.5**	**-2.1**
KHEZ	**Kahui Hut**	**2.70**	**2**	P	**Pb**	**22 02 28.0**	**-1.5**
RPZ	**Rata Peaks**	**2.70**	**229**	P	**Pn**	**22 02 24.3**	**0.0**
RPZ	**Rata Peaks**	**2.70**	**229**	P	**Pn**	**22 02 24.2**	**0.0**
PNHZ	**Pukenui**	**2.72**	**41**	P	**Pn**	**22 02 23.5**	**-1.1**
ARCZ	**Arundel**	**2.78**	**225**	P	**Pn**	**22 02 25.4**	**-0.1**
PKE	**Pukeiti**	**2.80**	**2**	P	**Pb**	**22 02 29.3**	**-2.0**
VRZ	**Vera Road**	**2.94**	**13**	P	**Pb**	**22 02 31.7**	**-2.0**
MOVZ	**Moawhango**	**2.95**	**29**	P	**Pb**	**22 02 32.5**	**-1.4**
WNVZ	**Wahianoa**	**2.97**	**27**	P	**Pn**	**22 02 31.2**	**+3.0**
TRVZ	**Turoa**	**2.98**	**26**	P	**Pb**	**22 02 33.5**	**-0.9**
BHHZ	**Black Hill Sta**	**3.00**	**34**	P	**Pn**	**22 02 28.1**	**-0.4**
KRHZ	**Kereru**	**3.01**	**40**	P	**Pn**	**22 02 27.1**	**-1.5**
FWVZ	**Far West T-bar**	**3.02**	**26**	P	**Pb**	**22 02 33.2**	**-1.9**
NGZ	**Ngauruhoe**	**3.10**	**26**	P	**Pb**	**22 02 35.7**	**-0.8**
SNVZ	**South Ngauruho**	**3.11**	**26**	P	**Pb**	**22 02 35.6**	**-1.0**
OTVZ	**Oturere**	**3.14**	**26**	P	**Pn**	**22 02 31.6**	**+1.1**
NNVZ	**North Ngauruho**	**3.15**	**25**	P	**Pn**	**22 02 32.1**	**+1.4**
TWVZ	**Taurewa**	**3.15**	**23**	P	**Pb**	**22 02 36.8**	**-0.5**
WTVZ	**West Tongariro**	**3.16**	**25**	P	**Pb**	**22 02 36.2**	**-1.2**
ETVZ	**East Tongariro**	**3.18**	**27**	P	**Pb**	**22 02 36.4**	**-1.4**
TMZ	**Timaru**	**3.18**	**220**	P	**Pn**	**22 02 31.1**	**+0.2**
TMVZ	**Te Maari**	**3.19**	**26**	P	**Pb**	**22 02 34.8**	**-3.2**
NTVZ	**North Tongarir**	**3.20**	**26**	P	**Pb**	**22 02 36.7**	**-1.4**
KATZ	**Kakaramea**	**3.32**	**25**	P	**Pb**	**22 02 39.5**	**-0.6**
HIZ	**Hauiti**	**3.56**	**12**	P	**Pb**	**22 02 40.8**	**-3.4**
ODZ	**Otahua Downs**	**3.85**	**217**	P	**Pn**	**22 02 39.5**	**-0.6**
ODZ	**Otahua Downs**	**3.85**	**217**	P	**Pn**	**22 02 39.4**	**-0.7**
MKAZ	**Moumakai**	**4.98**	**12**	P	**Pn**	**22 02 59.1**	**+3.5**

RSNC 17 22:20:14.9±1.7, 4˚18N×73˚95W, h0km±5km, ML3.1, Mw3.5, 2C-3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VILC	**Villavicencio,**	**0.26**	**104**	*e*P	Pg	22 20 19.1	-0.8
VILC				*e*S	Sg	22 20 23.9	+0.5
VILC				*i*		22 20 27.9	
	comp=Z,3μm,0.2s						
CVER	**Cruz Verde, Cu**	**0.36**	**340**	↑*i*P	Pg	22 20 22.5	+0.6
CVER				*e*S	Sg	22 20 27.8	+1.1
CVER				*i*		22 20 30.5	
	comp=Z,1μm,0.8s						
CHIC	**Chingaza**	**0.50**	**26**	↓*i*P	Pg	22 20 24.7	+0.1
CHIC				*e*S	Sg	22 20 31.5	+0.5
CHIC				*i*		22 20 36.3	
	comp=Z,658nm,0.5s						
ROSC	**El Rosal**	**0.76**	**331**	↑*i*P	Pb	22 20 30.5	-0.7
ROSC				*e*S	Sb	22 20 43.6	+1.4
ROSC				*i*		22 20 46.3	
	comp=Z,283nm,0.4s						
PRAC	**Prado**	**1.04**	**244**	*e*P	Pg	22 20 32.0	-2.9
PRAC				*e*S	Sg	22 20 46.7	-1.7
PRAC				*i*		22 20 56.6	
	comp=Z,336nm,0.2s						
ORTC	**Ortega, Tolima**	**1.32**	**258**	↓*i*P	Pg	22 20 37.5	-2.7
ORTC				*e*S	Sg	22 20 55.6	-1.7
ORTC				*i*		22 21 00.4	
	comp=Z,368nm,0.2s						
SPBC	**San Pablo de B**	**1.47**	**355**	*e*P	Pb	22 20 43.3	+0.1
SPBC				*e*S	Sn	22 21 03.4	+0.6
SPBC				*i*		22 21 11.3	
	comp=Z,228nm,0.2s						
NORC	**Norcasia**	**1.66**	**326**	*e*P	Pn	22 20 44.6	-0.7
NORC				*e*S	Sg	22 21 08.4	+0.2
NIZA	**Niza - Manizal**	**1.75**	**300**	*e*P	Pn	22 20 46.6	-0.2
NIZA				*e*S	Sn	22 21 10.2	+0.3
GUY2C	**Guyana, Caldas**	**1.75**	**306**	*e*P	Pn	22 20 46.1	-0.9
GUY2C				*e*S	Sn	22 21 09.7	-0.6
GUY2C				*i*		22 21 13.6	
	comp=Z,251nm,0.3s						
PTGC	**Puerto Gaitan,**	**1.81**	**89**	↓*e*P	Pn	22 20 46.8	-0.5
PTGC				*e*S	Sn	22 21 11.4	+0.4
PTGC				*i*		22 21 15.3	
	comp=Z,358nm,0.4s						
BETC	**Betania**	**2.10**	**225**	*e*P	Pn	22 20 50.0	-1.4
BETC				*e*S	Sn	22 21 16.7	-1.6
BETC				*i*		22 21 18.2	
	comp=Z,102nm,0.7s						
YOTC	**Yotoco, Valle**	**2.40**	**266**	*e*P	Pn	22 20 53.8	-1.7
YOTC				*e*S	Sn	22 21 23.7	-2.0
YOTC				*i*		22 21 27.8	
	comp=Z,130nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.40**	**348**	*e*P	Pn	22 20 53.9	-1.6
PTBC				*e*S	Sn	22 21 26.8	+1.1
PTBC				*i*		22 21 36.9	
	comp=Z,47nm,0.6s						
PLMC	**San Jos del P**	**2.44**	**287**	*e*P	Pn	22 20 57.1	+1.0
PLMC				*e*S	Sb	22 21 29.7	-0.6
PLMC				*i*		22 21 30.6	
	comp=Z,61nm,0.4s						
GARC	**Garzon, Huila**	**2.50**	**218**	*e*P	Pn	22 20 56.9	-0.3
GARC				*e*S	Sn	22 21 29.3	+0.7
BARC	**Barichara**	**2.52**	**18**	*e*P	Pn	22 20 58.4	+1.0
BARC				*e*S	Sn	22 21 30.3	+1.4
BARC				*i*		22 21 40.1	
	comp=Z,73nm,0.4s						
HELC	**Santa Helena**	**2.54**	**322**	*e*P	Pn	22 20 58.0	+0.2
HELC				*e*S	Sb	22 21 32.3	-1.4
HELC				*i*		22 21 33.3	
	comp=Z,83nm,0.4s						
CBOC	**Ciudad Bolivar**	**2.65**	**309**	*e*P	Pn	22 20 59.5	+0.4
CBOC				*e*S	Sb	22 21 36.1	-0.5
CBOC				*i*		22 21 40.8	
	comp=Z,40nm,0.7s						
JAMC	**Jamundi, Valle**	**2.88**	**251**	*e*P	Pn	22 21 01.2	-1.1
JAMC				*e*S	Sb	22 21 42.2	-1.1
JAMC				*i*		22 21 42.9	
	comp=Z,66nm,0.4s						
FLOC	**Florencia**	**3.09**	**213**	*e*P	Pn	22 21 04.6	-0.4
FLOC				*e*S	Sn	22 21 45.7	+3.0
FLOC				*i*		22 21 47.2	
	comp=Z,52nm,0.3s						
TAMC	**Tame, Arauca**	**3.11**	**44**	*e*P	Pn	22 21 05.7	+0.5
TAMC				*i*		22 22 09.8	
	comp=Z,47nm,0.5s						
POPC	**Popayan, Colom**	**3.17**	**239**	*e*P	Pn	22 21 06.8	+0.5
POPC				*e*S	Sb	22 21 49.7	-1.9
POPC				*i*		22 21 51.1	
	comp=Z,22nm,0.3s						
PAMC	**Pamplona, Colo**	**3.38**	**22**	*e*P	Pn	22 21 11.7	+2.3
PAMC				*e*S	Sn	22 21 52.3	+1.8
PAMC				*i*		22 22 12.5	
	comp=Z,27nm,0.5s						
MALC	**Bahia Malaga**	**3.38**	**267**	*e*S	Sn	22 21 50.2	+0.4
DBBC	**Dabeiba**	**3.61**	**322**	*e*P	Pn	22 21 12.2	0.0
UREC	**San Jos de Ur**	**3.88**	**336**	*e*P	Pn	22 21 15.2	-0.8
PTLC	**Puerto Leguiza**	**4.07**	**192**	*e*P	Pb	22 21 26.0	-1.4
PTLC				*e*S	Sb	22 22 16.4	-0.8
PTLC				*i*		22 22 29.6	
	comp=Z,68nm,0.5s						
OCAC	**Ocana**	**4.08**	**9**	*e*P	Pn	22 21 19.3	+0.5
OCAC				*e*S	Sn	22 22 10.9	+3.5
OCAC				*i*		22 22 15.4	
	comp=Z,42nm,0.4s						
SDV	**Santo Domingo**	**5.72**	**35**	*e*P	Pn	22 21 40.7	-0.7
SDV				*e*S	Sn	22 22 42.1	-5.8
SDV				*i*		22 22 49.9	
	comp=Z,13nm,0.5s						

IDC ***17*** *22:25:01.8±5.9, 7˚01S×105˚79E, h92km±47km, mb3.7/8, mbtmp4.0/8, MS3.3/1, Error ellipse: s-maj=64.1km s-min=15.4km az=55.0*
NEIC ***17*** *22:25:02.9±2.4, 6˚9S±0˚2×106˚0E±0˚1, h88km±11km, mb4.1/14, Error ellipse: s-maj=30.0km s-min=9.4km az=212.0*
DJA ***17*** *22:25:02.3±0.2, 7˚S±3˚×10˚6E±˚, h42km±12km, M4.6/19, mB5.4/6, mb4.7/6, MLv4.4/19, Mw(mB)4.9/6*

ISC 17 22:25:00.6±0.8, 7˚18S±0˚05×105˚80E±0˚05, h79km±9km, n67, σ1§67/70, mb4.2/14, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.77**	**77**	P	**Pn**	**22 25 17.3**	**+0.4**
SKJI				S	**Sn**	**22 25 28.4**	**-0.6**
SBJI	**Serang**	**1.10**	**17**	P	**Pn**	**22 25 22.0**	**+1.2**
DBJI	**Dramaga**	**1.13**	**56**	P	**Pn**	**22 25 21.9**	**+0.8**
DBJI				S	**Sn**	**22 25 36.0**	**-0.5**
CBJI	**Citeko**	**1.28**	**54**	P	**Pn**	**22 25 23.2**	**+0.1**
CBJI				S	**Sn**	**22 25 38.7**	**-1.3**
TNG	**Tangerang**	**1.30**	**40**	P	**Pn**	**22 25 23.8**	**+0.4**
TNG				S	**Sn**	**22 25 39.3**	**-1.2**
CNJI	**Cibinong**	**1.32**	**96**	P	**Pn**	**22 25 23.6**	**+0.1**
CNJI				S	**Sn**	**22 25 38.7**	**-2.1**
LEM	**Lembang**	**1.83**	**79**	P	**Pn**	**22 25 31.6**	**+1.2**
	185nm,0.3s,baz=276,slow=5.9,SNR=25						
LEM				S	**Sn**	**22 25 55.2**	**+2.2**
	284nm,0.3s,baz=244,slow=11,SNR=13						
LEM	**Lembang**	**1.83**	**79**	P	**Pn**	**22 25 32.0**	**+1.6**
LEM				S	**Sn**	**22 25 53.5**	**+0.5**
BBJI	**Bungbulang**	**1.85**	**99**	P	**Pn**	**22 25 30.8**	**+0.3**
KASI	**Kota Agung**	**2.10**	**322**	P	**Pn**	**22 25 37.2**	**+3.4**
KASI				S	**Sn**	**22 26 01.3**	**+2.2**
JCJI	**Jatiwangi**	**2.54**	**74**	P	**Pn**	**22 25 39.0**	**-0.7**
CMJI	**Cimerak**	**2.69**	**103**	P	**Pn**	**22 25 41.9**	**+0.2**
LWLI	**Liwa**	**2.76**	**321**	P	**Pn**	**22 25 45.8**	**+3.0**
KPJI	**Karang Pucung**	**3.11**	**93**	P	**Pn**	**22 25 48.0**	**+0.7**
XMI	**Christmas Isla**	**3.25**	**182**	P	**Pn**	**22 25 49.9**	**+0.6**
XMIS	**Christmas Isla**	**3.28**	**183**			**22 25 49.9**	**+0.1**
XMIS				Sn	**Sn**	**22 26 25.8**	**-1.9**
XMIS	**Christmas Isla**	**3.28**	**183**	P	Pn	**22 25 50.1**	**+0.3**
MNAI	**Manna**	**3.98**	**315**	Pn	Pn	**22 26 02.9**	**+3.6**
MNAI				Sn	**Sn**	**22 26 44.9**	**0.0**
MNAI	**Manna**	**3.98**	**315**	P	Pn	**22 26 02.6**	**+3.3**
MNAI	**Manna**	**3.98**	**315**	P	Pn	**22 26 02.7**	**+3.4**
UGM	**Wanagama**	**4.74**	**99**	Pn	Pn	**22 26 10.4**	**+0.8**
UGM	**Wanagama**	**4.74**	**99**	P	Pn	**22 26 10.6**	**+1.0**
UGM	**Wanagama**	**4.74**	**99**	P	Pn	**22 26 10.0**	**+0.4**
PWJI	**Pagerwojo**	**6.01**	**98**	P	Pn	**22 26 28.5**	**+1.6**
	28nm,0.8s,0.3nm						
PPSI	**Pulau Pagai**	**7.25**	**307**	P	Pn	**22 26 45.7**	**+1.8**
	127nm,0.7s,5μm0.8nm						
GMJI	**Gumukmas**	**7.65**	**99**	P	Pn	**22 26 49.9**	**+0.6**
BLJI	**Banyuglugur**	**7.75**	**95**	P	Pn	**22 26 54.8**	**+4.1**
JAGI	**Jajag, Banyuwa**	**8.37**	**99**		Pn	**22 27 00.1**	**+1.0**
JAGI	**Jajag, Banyuwa**	**8.37**	**99**	P	Pn	**22 27 00.2**	**+1.0**
JAGI	**Jajag, Banyuwa**	**8.37**	**99**	P	Pn	**22 27 00.7**	**+1.5**
	82nm,0.9s,3μm						
SISI	**Saibi**	**8.87**	**311**	P	Pn	**22 27 05.9**	**-0.1**
	26nm,0.6s,1μm						
SRBI	**Singaraja**	**9.37**	**96**	P	Pn	**22 27 14.5**	**+1.7**
PBSI	**Pulau Batu**	**10.32**	**313**	P	Pn	**22 27 24.7**	**-1.1**
TWSI	**Taliwang, Sumb**	**11.08**	**99**	P	Pn	**22 27 33.9**	**-2.3**
GSI	**Gunungsitoli**	**11.77**	**315**		Pn	**22 27 42.5**	**-3.0**
GSI	**Gunungsitoli**	**11.77**	**315**	P	Pn	**22 27 43.6**	**-1.9**
GSI	**Gunungsitoli**	**11.77**	**315**	P	Pn	**22 27 43.3**	**-2.2**
PLAI	**Plampang**	**11.97**	**99**	P	Pn	**22 27 46.6**	**-1.7**
PLAI	**Plampang**	**11.97**	**99**	P	Pn	**22 27 46.1**	**-2.2**
TOLI2	**Tolitoli**	**17.06**	**62**		Pn	**22 28 52.8**	**-1.5**
GIRL	**Giralia**	**17.39**	**153**	P	**P**	**22 29 01.0**	**+2.7**
SOEI	**Soe**	**18.44**	**99**	P	**P**	**22 29 09.6**	**-0.6**
NWAO	**Narrogin (SRO)**	**27.73**	**159**	LR	LR	22 41 14.7	
	comp=Z,61nm,20.9s,baz=46,slow=35						
H01W3	**Cape Leeuwin H**	**28.62**	**166**	T	T	23 00 38.9	
	baz=343,slow=77,SNR=30						
H01W1	**Cape Leeuwin H**	**28.63**	**166**	T	T	23 00 40.3	
	baz=343,slow=77,SNR=20						
H01W2	**Cape Leeuwin H**	**28.63**	**166**	T	T	23 00 41.5	
	baz=343,slow=77,SNR=32						
WB0	**Warramunga Arr**	**30.42**	**117**	P	**P**	**22 31 06.5**	**+0.7**
WB0				IAmb	IAmb	22 31 18.6	
	comp=Z,7.1nm,1.2s						
WRA	**Warramunga Arr**	**30.44**	**117**	P	**P**	**22 31 06.0**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=290,slow=11,SNR=12						
	comp=Z,0.7nm,0.4s						
AS31	**Alice Springs**	**31.56**	**124**	P	**P**	**22 31 16.5**	**+0.8**
ASAR	**Alice Springs**	**31.56**	**124**	P	**P**	**22 31 16.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=308,slow=8.5,SNR=11						
	comp=Z,0.4nm,0.5s						
COEN	**Coen**	**37.31**	**104**	P	**P**	**22 32 06.7**	**+1.2**
STKA	**Stephens Creek**	**41.41**	**131**	P	**P**	**22 32 40.9**	**+1.5**
STKA	**Stephens Creek**	**41.41**	**131**	P	**P**	**22 32 40.9**	**+1.5**
	comp=Z,2.4nm,0.5s,baz=305,slow=7.4,SNR=7.0						
	comp=Z,2.4nm,0.5s						
SONM	**Songino Array**	**54.78**	**0**	P	**P**	**22 34 21.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=184,slow=8.8,SNR=2.6						
	comp=Z,0.3nm,0.3s						
ARSB	**Arslanbob**	**56.88**	**331**	P	**P**	**22 34 36.4**	**-1.1**
BTK	**Batken**	**57.02**	**328**	P	**P**	**22 34 38.1**	**-0.3**
BTK				IAmb	IAmb	22 34 39.1	
	comp=Z,1.9nm,0.4s						
MK31	**Makanchi Array**	**57.66**	**341**	P	**P**	**22 34 41.3**	**-1.4**
MK31				IAmb	IAmb	22 34 41.8	
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**57.66**	**341**

IRAM Rameshe 5.62 205 Pn **Pn 22 33 36.9 0.0**
BSRN Basiran 5.93 146 Pn **Pn 22 33 40.0 -1.0**
HRA Herat 6.27 112 Pn **Pn 22 33 44.0 -1.9**
KHGB Koh Gabri 6.63 170 Pn **Pn 22 33 50.0 -0.8**
KRM1 Kerman Provinc 6.65 164 Pn **Pn 22 33 50.5 -0.5**
NHDN Nehbandan 6.84 143 Pn **Pn 22 33 52.6 -0.9**
CHMN Cheshme madani 7.32 164 Pn **Pn 22 33 59.9 -0.5**
NGRK Negar Kerman 7.39 170 Pn **Pn 22 34 00.7 -0.5**
SEKA Sheki 7.54 307 P **Pn 22 34 02.9 -0.2**
IMRD Marand 7.72 286 Pn **Pn 22 34 06.9 +1.2**
GANJ Ganja 7.86 301 P **Pn 22 34 06.0 -1.4**
NAX Nakhchivan 7.97 289 P **Pn 22 34 09.3 +0.2**
ZKTA Zakatala 8.14 308 P **Pn 22 34 11.2 0.0**
KBAM BAM 8.24 160 Pn **Pn 22 34 12.4 -0.4**
QIR1 Qir 8.63 193 Pn **Pn 22 34 17.9 -0.2**
GNI Garni 8.80 295 P **Pn 22 34 20.7 +0.3**
GNI Garni 8.80 295 *ce*P **Pn 22 34 22.9 +2.5**
GNI pmax pmax
comp=Z,20nm,1.3s
GNI Garni 8.80 295 Pn **Pn 22 34 21.5 +1.1**
comp=Z,0.2nm,0.3s,baz=96,slow=19,SNR=2.2
GNI LR LR 22 39 02.4
comp=Z,254nm,19.0s,baz=320,slow=47
comp=Z,7.1nm,0.8s
AKH Akhalkalaki 10.12 300 **Pn 22 34 39.5 +0.9**
AKH Akhalkalaki 10.12 300 P **Pn 22 34 39.5 +0.9**
ZEI Tsey 10.46 307 *e*P **Pn 22 34 45.9 +2.6**
ZEI pmax pmax
comp=Z,4.0nm,0.7s
GURO Guroymak-BITLI 10.55 283 Pn **Pn 22 34 43.4 -1.0**
ONI Oni 10.65 306 **Pn 22 34 45.1 -0.7**
ONI Oni 10.65 306 P **Pn 22 34 45.1 -0.7**
SIMJ Simiganj 11.06 77 Pn **Pn 22 34 49.6 -1.8**
KBL Kabul 11.50 98 Pn **Pn 22 34 56.3 -1.3**
KBL Kabul 11.50 98 P **Pn 22 34 56.3 -1.3**
KBZ Khabaz 11.57 310 *i* P **Pn 22 35 01.5 +3.3**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 11.57 310 Pn **Pn 22 34 56.9 -1.4**
comp=Z,0.4nm,0.3s,baz=131,slow=2.6,SNR=14
KBZ Sn **Sn 22 37 04.3 -2.9**
comp=Z,0.2nm,0.3s,baz=157,slow=16,SNR=1.6
comp=Z,1.9nm,0.3s
KVAR Kislovodsk Arr 11.82 310 Sn Sn 22 37 04.7 -8.7
baz=168,slow=13
KIV Kislovodsk 11.82 310 **Pn 22 35 00.9 -0.9**
KIV Kislovodsk 11.82 310 *e*P **Pn 22 35 02.3 +0.5**
KIV *e*S **Sn 22 37 15.9 +2.4**
KIV pmax pmax
comp=Z,11nm,1.1s
UOSS Minazif 11.98 176 Pn Pn 22 34 58.9 -5.1
BTK Batken 12.63 71 Pn **Pn 22 35 10.2 -2.6**
BTK Batken 12.63 71 P **Pn 22 35 10.2 -2.6**
AB31 Akbulak array 12.79 14 ⇓P **Pn 22 35 13.1 -1.7**
comp=Z,1.8nm,0.5s,baz=198,slow=13,SNR=33
AB31 ⇑S **Sn 22 37 36.1 -0.7**
comp=Z,4.7nm,0.6s,baz=204,slow=24,SNR=13
AB31 Akbulak array 12.79 14 P **Pn 22 35 13.7 -1.1**
AB31 S **Sn 22 37 36.5 -0.3**
ABKAR Akbulak array 12.79 14 Pn **Pn 22 35 13.7 -1.1**
KK31 Karatay Array 13.25 58 ⇑P **Pn 22 35 17.7 -3.4**
comp=Z,1.5nm,0.5s,baz=239,slow=15,SNR=41
KK31 ⇓S **Sn 22 37 48.5 +0.3**
comp=Z,5.0nm,0.8s
KK31 Karatay Array 13.25 58 P **Pn 22 35 17.7 -3.4**
KK31 S **Sn 22 37 48.5 +0.3**
KKAR Karatay Array 13.25 58 **Pn 22 35 18.6 -2.6**
KKAR Karatay Array 13.25 58 P **Pn 22 35 18.6 -2.6**
LABN Labinsk 13.38 310 *i* P **Pn 22 35 21.1 -1.9**
LABN pmax pmax
comp=Z,27nm,1.4s
ARPR Arapgir-MALATY 13.47 284 Pn **Pn 22 35 21.5 -2.9**
SOC Sochi 13.55 304 *e*P **Pn 22 35 23.9 -1.3**
SOC *e* 22 37 55.4
SOC pmax pmax
comp=Z,13nm,0.9s
AKTO Aktyubinsk 13.64 8 ⇑P **Pn 22 35 22.2 -4.3**
comp=Z,2.3nm,0.5s
AKTO ⇓S **Sn 22 37 56.9 -0.9**
comp=Z,7.8nm,0.9s
AKTO Aktyubinsk 13.64 8 Pn **Pn 22 35 24.2 -2.3**
comp=Z,1.0nm,0.3s,baz=179,slow=12,SNR=22
AKTO Sn **Sn 22 37 51.3 -6.4**
comp=Z,0.5nm,0.3s,baz=266,slow=19,SNR=2.3
AKTO LR LR 22 42 29.7
comp=Z,421nm,18.3s,baz=270,slow=45
comp=Z,7.8nm,0.6s
ARK Arkit 13.84 64 P **Pn 22 35 28.1 -1.3**
ERBR Yeremizino-Bor 14.09 313 *e*P **Pn 22 35 33.7 +1.0**
ERBR pmax pmax
comp=Z,15nm,0.8s
ARSB Arslanbob 14.48 67 Pn **Pn 22 35 35.2 -2.9**
ARSB Arslanbob 14.48 67 P **Pn 22 35 35.2 -2.9**
NIL Nilore 15.10 97 **Pn 22 35 44.9 -1.6**
NIL IAmb IAmb 22 36 04.0
comp=Z,9.9nm,0.9s
NIL Nilore 15.10 97 P **Pn 22 35 44.9 -1.6**
NIL pmax pmax
comp=Z,10.0nm,1.0s
ANN Anapa 15.55 306 *e*P **Pn 22 35 52.7 +0.5**
ANN pmax pmax
comp=Z,95nm,1.7s
ARLS Aral 15.57 66 P **P 22 35 57.1 +0.1**
RAYN Ar Rayn 15.76 215 Pn **Pn 22 35 51.0 -4.2**
RAYN Ar Rayn 15.76 215 P **Pn 22 35 51.0 -4.2**
RAYN pmax pmax
comp=Z,30nm,1.0s
AAK Ala-Archa 15.88 63 **Pn 22 35 54.0 -2.7**
AAK Ala-Archa 15.88 63 Pn **Pn 22 35 54.1 -2.6**
comp=Z,0.3nm,0.3s,baz=214,slow=7.3,SNR=10
AAK Sn **Sn 22 38 44.3 -8.1**
comp=Z,0.1nm,0.3s,baz=271,slow=20,SNR=1.6
comp=Z,1.8nm,0.5s
BELG Belogornoye 16.35 343 *i* P **P 22 36 05.8 +0.5**
BELG pmax pmax
comp=Z,9.0nm,0.9s
BELG Belogornoye 16.35 343 Pn **Pn 22 36 00.6 -1.9**
comp=Z,1.2nm,0.3s,baz=204,slow=0.7,SNR=11
BELG Sn Sn 22 38 50.4 -13
comp=Z,0.3nm,0.3s,baz=60,slow=22,SNR=1.5
comp=Z,11nm,0.6s
KSH Kashi 16.52 75 P **Pn 22 35 59.1 -5.9**
KSH sP P 22 36 06.3 -1.2
KSH S Sn 22 38 55.3 -13
KSH pmax pmax
comp=Z,4.0nm,0.6s
KSH LR LR
comp=N,460nm,11.0s
KSH LR LR
comp=E,410nm,11.3s
KSH LR LR
comp=Z,480nm,19.9s
MMAI Mount Meron Ar 16.69 262 LR LR 22 43 23.2
comp=Z,110nm,18.1s,baz=162,slow=40
NRN Naryn 16.73 68 **Pn 22 36 05.0 -2.8**
NRN Naryn 16.73 68 P **Pn 22 36 05.0 -2.8**
NRN pmax pmax
comp=Z,9.0nm,0.8s
BRTR Keskin Array B 17.14 286 P **Pn 22 36 10.7 -2.0**
baz=60,slow=8.7,SNR=2.4
BRTR LR LR 22 44 20.5
comp=Z,189nm,18.4s,baz=22,slow=43
comp=Z,0.4nm,0.8s
VRH Novokhopyorsk 17.20 330 *e*P **Pn 22 36 14.0 +0.8**
VRH pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 18.28 326 *e*P **Pn 22 36 21.5 -5.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 18.59 327 P **P 22 36 27.3 -2.8**
VORR S **Sn 22 39 47.6 -10**
VORR pmax pmax
comp=Z,25nm,1.4s
BRVK Borovoye 19.26 28 **P 22 36 37.0 -0.5**
BRVK IAmb IAmb 22 36 49.2
comp=Z,7.6nm,0.8s
BRVK Borovoye 19.26 28 *ce*P **Pn 22 36 38.2 -0.3**
BRVK pmax pmax
comp=Z,17nm,2.5s
BVAR Borovoye Array 19.28 29 P **P 22 36 37.8 +0.2**
comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=33
BVAR S Sn 22 40 00.8 -14
comp=Z,0.7nm,0.7s,baz=240,slow=20,SNR=1.4
comp=Z,2.8nm,0.4s
LPSR Galich'ya Gora 19.39 329 *e*P **P 22 36 36.9 -1.9**
LPSR pmax pmax
comp=Z,40nm,0.8s
ARU Arti 19.63 6 **P 22 36 41.7 +0.3**
ARU IAmb IAmb 22 36 56.9
comp=Z,5.9nm,0.7s
ARU Arti 19.63 6 *c i*P **Pn 22 36 44.5 +1.7**
ARU pmax pmax
comp=Z,7.0nm,0.9s
ARU Arti 19.63 6 P **P 22 36 41.7 +0.3**
comp=Z,0.3nm,0.3s,baz=181,slow=7.3,SNR=4.4
ARU S S 22 40 09.9 -12
comp=Z,1.2nm,0.6s,baz=108,slow=20,SNR=1.6
comp=Z,4.7nm,0.8s
ELL Elmali 20.23 277 P **P 22 36 48.9 +0.6**
ELL Elmali 20.23 277 P **P 22 36 48.9 +0.6**
ELL pmax pmax
comp=Z,46nm,1.0s
KURBB Kurchatov Arra 21.58 43 P **P 22 37 03.5 +0.9**
comp=Z,1.4nm,0.9s,baz=244,slow=12,SNR=11
comp=Z,1.4nm,0.9s
TIRR Tirgusor 21.59 299 ⇑P **P 22 37 07.1 +4.4**
TIRR Tirgusor 21.59 299 P **P 22 37 02.9 +0.2**
TIRR Tirgusor 21.59 299 P **P 22 37 02.9 +0.2**
TIRR pmax pmax
comp=Z,41nm,1.4s
TPGR Topolog 21.66 300 ⇓P **P 22 37 03.8 +0.2**
KURK Kurchatov 21.68 43 P **P 22 37 03.0 -0.6**
KURK IAmb IAmb 22 37 13.1
comp=Z,15nm,1.1s
KURK Kurchatov 21.68 43 *ce*P **P 22 37 05.1 +1.5**
KURK pmax pmax
comp=Z,15nm,1.3s
TLBR Topalu 21.86 299 ⇓P **P 22 37 06.9 +1.3**
MILM Milestii Mici 21.93 305 ⇑P **P 22 37 09.9 +3.6**
MILM Milestii Mici 21.93 305 ⇑P **P 22 37 09.9 +3.6**
HARR Harsova 21.97 299 ⇓P **P 22 37 08.7 +1.8**
HARR Harsova 21.97 299 ⇓P **P 22 37 08.7 +1.8**
KIRV Kirov 21.99 352 *ce*P **P 22 37 09.4 +2.5**
KIRV Kirov 21.99 352 P **P 22 37 07.0 +0.1**
comp=Z,10nm,0.7s,baz=148,slow=3.2,SNR=5.9
comp=Z,10nm,0.7s
VLDR Vladesti 22.12 302 ⇑P **P 22 37 12.1 +3.6**
SCTR Scanteiesti 22.14 302 ⇓P **P 22 37 15.7 +7.0**
MAKZ Makanchi 22.15 55 P **P 22 37 09.4 +0.6**
MAKZ IAmb IAmb 22 37 12.3
comp=Z,19nm,1.1s
MAKZ Makanchi 22.15 55 P **P 22 37 09.4 +0.6**
MAKZ pmax pmax
comp=Z,19nm,1.1s
OBN Obninsk 22.19 331 *de*P **P 22 37 09.8 +0.8**
OBN *e* 22 37 33.9
OBN pmax pmax
comp=Z,27nm,1.7s
OBN MLR MLR
comp=Z,59nm,14.0s
OBN Obninsk 22.19 331 P **P 22 37 10.1 +1.0**
comp=Z,12nm,0.5s,baz=177,slow=6.9,SNR=3.5
comp=Z,12nm,0.5s
MOS Moscow 22.26 333 *e*P **P 22 37 16.1 +6.3**
MOS *e* 22 37 39.7
MK31 Makanchi Array 22.35 55 *ce*P **P 22 37 11.7 +0.7**
MKAR Makanchi Array 22.35 55 *ce*P **P 22 37 12.1 +1.1**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 22.35 55 P **P 22 37 11.3 +0.3**
comp=Z,5.8nm,0.8s,baz=248,slow=12,SNR=45
comp=Z,5.8nm,0.8s
SORM Soroca 22.61 308 ⇑P **P 22 37 15.3 +1.6**
SORM Soroca 22.61 308 ⇑P **P 22 37 15.3 +1.6**
PLOR Plostina 23.10 302 ⇑P **P 22 37 22.0 +3.2**
PLOR Plostina 23.10 302 ⇑P **P 22 37 22.0 +3.2**
AKASG Malin Array Be 23.10 315 *ce*P **P 22 37 20.7 +2.0**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 23.10 315 P **P 22 37 17.8 -0.9**
comp=Z,6.8nm,0.8s,baz=120,slow=9.0,SNR=8.4
comp=Z,6.8nm,0.8s
AKBB Malin Array Si 23.10 315 *i* P **P 22 37 18.6 -0.1**
AKBB pmax pmax
comp=Z,17nm,0.9s
KIEV Kiev 23.10 315 ⇑P **P 22 37 18.4 -0.3**
KIEV Kiev 23.10 315 P **P 22 37 18.4 -0.3**
KIEV Kiev 23.10 315 P **P 22 37 18.5 -0.3**
KIEV pmax pmax
comp=Z,13nm,0.9s
ELND Elena 23.20 294 ⇑P **P 22 37 25.6 +5.7**
RDO Rodhopi 23.36 290 P **P 22 37 21.0 -0.5**
RDO IAmb IAmb 22 37 44.0
comp=Z,6.0nm,0.9s
COVR Voineasa-Covas 23.40 301 ⇑P **P 22 37 25.3 +3.4**
MLR Muntele Rosu 23.51 300 ⇓P **P 22 37 25.5 +2.5**
MLR Muntele Rosu 23.51 300 P **P 22 37 24.8 +1.8**
MLR IAmb IAmb 22 37 41.1
comp=Z,5.8nm,0.8s
MLR Muntele Rosu 23.51 300 P **P 22 37 24.8 +1.8**
MLR pmax pmax
comp=Z,6.0nm,0.8s
TURR Turia 23.57 302 ⇑P **P 22 37 25.2 +1.6**
DOPR Dopca 23.98 301 ⇑P **P 22 37 28.7 +1.2**
VOIR 24.12 300 ⇑P **P 22 37 36.0 +7.2**
VOIR 24.12 300 ⇑P **P 22 37 36.0 +7.2**
ARR Arges 24.39 300 ⇓P **P 22 37 33.2 +1.9**
BURAR Bucovina Array 24.47 305 ⇑P **P 22 37 34.2 +2.1**
BURAR Bucovina Array 24.47 305 ⇑P **P 22 37 34.2 +2.1**
BUR08 Bucovina Ar. S 24.49 305 P **P 22 37 33.3 +1.0**
BUR08 IAmb IAmb 22 37 49.5
comp=Z,9.1nm,1.1s
LOT Lotru 25.01 300 ⇓P **P 22 37 42.7 +5.8**
WMQ Urumqi 25.58 64 *e*P **P 22 37 45.3 +3.2**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ LR LR
comp=Z,170nm,19.1s
BLKB Belogradchik 25.58 295 ⇑P **P 22 37 44.1 +1.9**
MARR Marisel-Cluj 25.66 302 ⇓P **P 22 37 44.8 +1.9**
MNK Minsk 25.68 322 *i* P **P 22 37 42.3 -0.5**
comp=E,5.0nm,0.9s,baz=322
MNK *i* P **P 22 37 42.3 -0.5**
comp=N,4.0nm,0.8s,baz=322
MNK *i* P **P 22 37 42.3 -0.5**
comp=Z,5.0nm,0.8s,baz=322
MNK *i* PP **PnPn 22 38 18.7 -0.4**
baz=322
MNK *i* PPP PPP 22 38 26.7
baz=322
MNK *i* S **S 22 42 12.1 +1.4**
baz=322
MNK *i* SS **SnSn 22 43 08.1 +3.0**
baz=322
MNK *i* SSS SSS 22 43 21.9
baz=322
MNK *i* LR LR 22 48 14.6
baz=322
MNK *i* LRM MLR 22 50 35.8
comp=N,649nm,20.2s,baz=322
MNK *i* LRM MLR 22 50 50.6
comp=Z,123nm,18.6s,baz=322
MNK *i* LRM MLR 22 50 52.5
comp=E,262nm,21.9s,baz=322
MNK Minsk 25.68 322 *i* P **P 22 37 42.2 -0.5**
MNK *i* PPP PPP 22 38 26.6
MNK *i* 22 41 16.6
MNK *i* S **S 22 42 12.0 +1.4**
MNK *i* SS **SnSn 22 43 08.1 +3.0**
MNK pmax pmax
comp=N,4.0nm,0.8s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK MLR MLR
comp=N,649nm,20.0s
MNK MLR MLR
comp=Z,123nm,19.0s
MNK MLR MLR
comp=E,262nm,22.0s
GZR Gura Zlata 25.69 299 ⇑P **P 22 37 46.0 +2.9**
HERR Herculane 25.88 298 ⇑P **P 22 37 44.5 -0.2**
KLMR Klimovskoe 25.92 342 *e*P **P 22 37 46.2 +1.3**
KLMR pmax pmax
comp=Z,17nm,1.8s
DGZ Jazzator, Alta 26.47 51 *i* P **P 22 37 51.9 +1.6**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
BZS Buzias 26.53 300 ⇑P **P 22 37 50.5 -0.1**
BZS Buzias 26.53 300 ⇑P **P 22 37 50.5 -0.1**
ZAA0 Zalesovo Array 26.57 41 P **P 22 37 50.5 -0.4**
ZALV Zalesovo Beam 26.57 41 *i* P **P 22 37 53.4 +2.5**
ZALV pmax pmax
comp=Z,2.0nm,0.9s
ZALV Zalesovo Beam 26.57 41 P **P 22 37 50.6 -0.3**
comp=Z,2.4nm,1.0s,baz=266,slow=11,SNR=6.7
comp=Z,2.4nm,1.0s
CRVS Cervenica-Dubn 27.22 307 *e*P **P 22 38 02.1 +5.2**
CRVS Cervenica-Dubn 27.22 307 *e*P **P 22 38 02.0 +5.2**
PUK Puka 27.59 292 P **P 22 37 59.6 -0.7**
KEK Kerkira 27.80 287 P **P 22 38 01.6 -0.5**
VYHS Vyhne 28.84 305 *e*P **P 22 38 13.9 +2.6**
VYHS Vyhne 28.84 305 *e*P **P 22 38 13.9 +2.6**
FINES FINESS Array B 30.56 333 P **P 22 38 26.9 +0.5**
comp=Z,1.3nm,0.9s,baz=150,slow=9.3,SNR=1.6
comp=Z,1.3nm,0.9s
ARSA Arzberg 30.89 302 *e*pP **P 22 38 31.3 +1.8**
comp=Z,2.2nm,0.8s
DRE Drenchia 32.12 300 *e*Pg **P 22 38 36.7 -3.7**
GERES GERESS Array B 32.26 305 P **P 22 38 41.6 0.0**
comp=Z,0.5nm,0.6s,baz=93,slow=8.0,SNR=4.1
comp=Z,0.5nm,0.6s
COLI Coloredo 32.30 300 *e*Pg P 22 38 37.1 -4.8
BOO Bordano 32.50 300 *e*Pg P 22 38 36.1 -7.5
LESA Schwarzleotal 32.83 302 *i* pP **P 22 38 47.4 +0.8**
comp=Z,2.6nm,0.5s
CLL Collm 33.03 309 *e*P **P 22 38 48.0 -0.2**
CLL Collm 33.03 309 *e*P **P 22 38 48.0 -0.2**
CLL *e*PPP PPP 22 40 08.0
WTTA Wattenberg 33.53 302 *i* pP **P 22 38 53.3 +0.5**
comp=Z,1.9nm,0.4s
WATA Walderalm 33.58 302 *e*P **P 22 38 51.7 -1.4**
comp=Z,0.9nm,0.4s
RETA Reutte 34.13 302 *i* P **P 22 38 58.4 +0.5**
comp=Z,0.3nm,0.3s
FUORN Ofenpass-Fuorn 34.47 301 P **P 22 39 00.9 -0.1**
FUORN IAmb IAmb 22 39 13.3
comp=Z,2.0nm,0.8s
GTA Gaotai 34.89 72 *e*P **P 22 39 06.6 +1.9**
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA LR LR
comp=N,190nm,15.6s
GTA LR LR
comp=E,130nm,13.5s
GTA LR LR
comp=Z,270nm,15.3s
HFS Hagfors 35.08 325 P **P 22 39 06.1 +0.2**
comp=Z,1.7nm,0.7s,baz=110,slow=8.1,SNR=4.5
comp=Z,1.7nm,0.7s
ARCES ARCESS Array B 36.40 343 P **P 22 39 17.0 0.0**
comp=Z,4.4nm,1.1s,baz=41,slow=11,SNR=2.0
comp=Z,4.4nm,1.1s
NOA NORSAR Array B 36.55 325 P **P 22 39 17.6 -1.0**
comp=Z,1.1nm,0.9s,baz=176,slow=12,SNR=2.7
NOA LR LR 22 55 33.1
comp=Z,18nm,18.1s,baz=30,slow=38
comp=Z,1.1nm,0.9s
NRIK Noril'sk 36.91 18 LR LR 22 57 26.8
comp=Z,106nm,20.0s,baz=319,slow=41
SONM Songino Array 38.70 57 P **P 22 39 36.8 -0.1**
comp=Z,0.3nm,0.6s,baz=268,slow=7.2,SNR=1.6
comp=Z,0.3nm,0.6s
ULN Ulaanbaatar 39.14 57 P **P 22 39 40.3 -0.4**
ULN Ulaanbaatar 39.14 57 *ce*P **P 22 39 43.0 +2.3**
ULN pmax pmax
comp=Z,4.0nm,1.0s
PZH PanZhiHua 40.59 91 P **P 22 39 53.4 +0.5**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,110nm,4.7s
KMI Kunming 42.02 92 ⇑P **P 22 40 06.0 +1.2**
KMI pmax pmax
comp=Z,7.0nm,0.7s
KMI LR LR
comp=N,170nm,8.6s
KMI LR LR
comp=E,180nm,12.9s
KMI LR LR
comp=Z,250nm,15.2s
CHTO Chiang Mai 42.26 103 P **P 22 40 04.7 -1.9**
CHTO IAmb IAmb 22 40 08.9
comp=Z,7.7nm,1.3s
CHTO Chiang Mai 42.26 103 P **P 22 40 04.7 -1.9**
CHTO pmax pmax
comp=Z,8.0nm,1.3s
CMAR Chiang Mai Arr 42.46 104 P **P 22 40 07.2 -1.0**
comp=Z,2.6nm,0.7s,baz=270,slow=10,SNR=4.2
comp=Z,2.6nm,0.7s
EKA Eskdalemuir Ar 43.01 315 P **P 22 40 10.9 -1.3**
comp=Z,0.2nm,0.3s,baz=28,slow=25,SNR=1.9
comp=Z,0.2nm,0.3s
XAN Xi'an 43.36 77 ⇑P **P 22 40 17.9 +2.5**
XAN pmax pmax
comp=Z,9.0nm,1.8s
HHC Hu-ho-hao-te 43.40 67 *e*P **P 22 40 14.9 -0.9**
HHC sP sP 22 40 23.3 +0.5
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,180nm,4.9s
ESDC Sonseca Array 45.77 292 P **P 22 40 34.3 -0.3**
comp=Z,2.5nm,1.1s,baz=67,slow=7.4,SNR=11
comp=Z,2.5nm,1.1s
LYN LuoYang 45.94 75 ⇑P **P 22 40 39.5 +3.6**
LYN pmax pmax
comp=Z,6.0nm,0.8s
XLT XiLinHaoTe 45.95 61 *e*P **P 22 40 39.5 +3.5**
XLT pP sP 22 40 43.8 +0.7
XLT sP pP 22 40 46.5 +5.4
XLT pmax pmax
comp=Z,3.0nm,0.7s
XLT pmax pmax
comp=Z,79nm,4.6s
TIXI Tiksi 50.29 23 P **P 22 41 09.6 +0.6**
TIXI IAmb IAmb 22 41 12.4
comp=Z,6.1nm,1.4s
TIXI Tiksi 50.29 23 *ce*P **P 22 41 11.1 +2.1**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 50.29 23 LR LR 23 05 42.0
comp=Z,71nm,19.4s,baz=5.0,slow=40
YAK Yakutsk 51.04 36 *i* P **P 22 41 18.4 +3.6**
YAK pmax pmax
comp=Z,4.0nm,0.8s
KSRS Korea Array 56.52 66 P **P 22 41 54.9 -0.4**
comp=Z,1.2nm,0.6s,baz=284,slow=6.9,SNR=6.9
KSRS LR LR 23 06 30.9
comp=Z,39nm,20.5s,baz=65,slow=36
comp=Z,1.2nm,0.6s
LSZ Lusaka 57.84 211 LR LR 23 08 03.1
comp=Z,86nm,18.9s,baz=22,slow=37
BILL Bilibino 63.51 23 *i* P **P 22 42 44.3 +1.5**
BILL pmax pmax
comp=Z,2.0nm,1.2s
ASAJ Asahikawa 63.81 53 LR LR 23 11 38.4
comp=Z,59nm,18.8s,baz=26,slow=37
BBTS Babate 66.82 271 LR LR 23 17 13.9
comp=Z,56nm,18.6s,baz=134,slow=40
ILAR Eielson Array 77.15 10 P **P 22 44 07.0 +0.8**
comp=Z,0.4nm,0.8s,baz=316,slow=4.0,SNR=3.4
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 80.57 355 *ce*P **P 22 44 29.0 +4.0**
YKA Yellowknife Ar 80.57 355 P **P 22 44 25.4 +0.4**
comp=Z,0.2nm,0.6s,baz=0.6,slow=6.3,SNR=4.5
comp=Z,0.2nm,0.6s
DLBC Dease Lake 84.88 3 LR LR 23 29 08.3
comp=Z,48nm,19.1s,baz=114,slow=40
WRA Warramunga Arr 93.49 112 *ce*P **P 22 45 33.2 +4.2**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 93.49 112 P **P 22 45 28.6 -0.4**
comp=Z,0.4nm,0.7s,baz=345,slow=9.0,SNR=1.6
comp=Z,0.4nm,0.7s
ASAR Alice Springs 95.45 115 P **P 22 45 36.6 -1.4**
comp=Z,0.1nm,0.7s,baz=337,slow=7.0,SNR=1.6
comp=Z,0.1nm,0.7s

*IDC **17**22:42:18.8≤3.4,56.05N×148.83W,h0km,mb3.5/1, mbtmp3.3/3,ML2.7/2, Error ellipse: s-maj=55.5km s-min=42.8km az=122.0*
*NEIC **17**22:42:19.9≤1.2,56.15N≤0.09×148.58W≤0.01,h20km≤9km, mb3.7/1,ML3.5/50,ML3.2(AEIC), Error ellipse:*

s-maj=13.3km s-min=0.9km az=182.0
AEIC ***17*** *22:42:22.4±1.1,56˚.15N×0˚.09×148˚.6W±0˚.1,h3km±7km,*
Error ellipse: s-maj=13.6km s-min=8.9km az=163.0
ISC 17 22:42:19.8±1.3,**56˚25N**±0˚.08×**148˚.64W**±0˚.05,**h10**km,
n151,σ0ᵉ**75**/153,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.65**	**307**	Pn	**Pn**	**22 43 02.6**	**+0.1**
KDAK	**Kodiak Island**	**2.65**	**307**		**Sn**	**22 43 33.8**	**-0.9**
KDAK	**Kodiak Island**	**2.65**	**307**	IAML		22 43 39.0	
	33nm,1.4s						
KDAK				IAML		22 43 42.3	
	34nm,1.2s						
KDAK	**Kodiak Island**	**2.65**	**307**	S	**Sn**	**22 43 33.8**	**-0.9**
	baz=125						
OHAK	**Old Harbor**	**2.74**	**293**	Pn	**Pn**	**22 43 03.1**	**-0.7**
OHAK	**Old Harbor**	**2.74**	**293**		**Sn**	**22 43 34.9**	**-2.0**
OHAK	**Old Harbor**	**2.74**	**293**	IAML		22 43 41.7	
	comp=N,41nm,0.3s						
OHAK				IAML		22 43 42.5	
	comp=E,50nm,0.4s						
OHAK	**Old Harbor**	**2.74**	**293**	P	**Pn**	**22 43 03.1**	**-0.7**
	baz=111						
OHAK				S	**Sn**	**22 43 34.9**	**-2.0**
	baz=111						
SII	**Sitkinak Islan**	**3.10**	**278**	Pn	**Pn**	**22 43 08.1**	**-0.6**
SII				IAML		22 43 47.0	
	comp=E,101nm,1.3s						
SII				IAML		22 43 49.7	
	comp=N,100nm,1.1s						
SII	**Sitkinak Islan**	**3.10**	**278**		**Sn**	**22 43 44.1**	**-1.7**
SII	**Sitkinak Islan**	**3.10**	**278**	P	**Pn**	**22 43 08.1**	**-0.6**
	baz=95						
SII				S	**Sn**	**22 43 44.1**	**-1.7**
	baz=95						
SYI	**Shuyak Island**	**3.12**	**321**	Pn	**Pn**	**22 43 09.2**	**+0.1**
SYI	**Shuyak Island**	**3.12**	**321**		**Sn**	**22 43 46.4**	**+0.1**
Q20K	**Shuyak Island**	**3.12**	**321**	P	**Pn**	**22 43 09.4**	**+0.4**
	baz=138						
Q20K				S	**Sn**	**22 43 46.4**	**+0.1**
	baz=138						
Q23K	**Middleton Isla**	**3.42**	**20**	Pn	**Pn**	**22 43 12.3**	**-0.9**
Q23K				IAML		22 43 53.9	
	comp=N,94nm,1.2s						
Q23K				IAML		22 43 56.3	
	comp=E,105nm,1.2s						
Q23K	**Middleton Isla**	**3.42**	**20**	P	**Pn**	**22 43 12.5**	**-0.6**
	baz=201						
MID	**Middleton Isla**	**3.42**	**20**	Pn	**Pn**	**22 43 12.5**	**-0.6**
MID				IAML		22 44 52.4	
	comp=N,98nm,1.3s						
MID				IAML		22 44 54.0	
	comp=E,143nm,1.5s						
MID	**Middleton Isla**	**3.42**	**20**		**Sn**	**22 43 51.9**	**-1.8**
R18K	**Karluk**	**3.45**	**295**		**Pn**	**22 43 13.6**	**+0.1**
R18K	**Karluk**	**3.45**	**295**	IAML		22 43 59.2	
	comp=E,76nm,0.3s						
R18K				IAML		22 44 03.5	
	comp=N,72nm,0.5s						
R18K	**Karluk**	**3.45**	**295**	P	**Pn**	**22 43 13.6**	**+0.1**
	baz=111						
CNPM	**China Poot**	**3.57**	**338**	Pn	**Pn**	**22 43 15.4**	**+0.1**
CNPM				IAML		22 44 02.6	
	comp=E,37nm,0.4s						
CNPM	**China Poot**	**3.57**	**338**		**Sn**	**22 43 56.8**	**-0.6**
BRSE	**Bradley Lake S**	**3.68**	**343**		**Pn**	**22 43 16.7**	**-0.1**
BRSE					**Sn**	**22 43 59.0**	**-1.2**
BRSE	**Bradley Lake S**	**3.68**	**343**	P	**Pn**	**22 43 16.7**	**-0.1**
	baz=161						
BRSE				S	**Sn**	**22 43 59.0**	**-1.2**
	baz=161						
BRLK	**Bradley Lake**	**3.73**	**342**	Pn	**Pn**	**22 43 17.2**	**-0.2**
BRLK	**Bradley Lake**	**3.73**	**342**		**Sn**	**22 44 00.8**	**-0.4**
BRLK	**Bradley Lake**	**3.73**	**342**	IAML		22 44 06.1	
	comp=N,32nm,0.3s						
BRLK				IAML		22 44 06.2	
	comp=E,41nm,0.4s						
Q19K	**Cape Douglas,**	**3.81**	**317**		**Pn**	**22 43 19.1**	**+0.6**
Q19K				IAML		22 44 12.6	
	comp=N,80nm,1.2s						
Q19K	**Cape Douglas,**	**3.81**	**317**	P	**Pn**	**22 43 18.9**	**+0.4**
	baz=134						
P23K	**Montague Islan**	**3.82**	**9**		**Pn**	**22 43 18.4**	**-0.2**
P23K					**Sn**	**22 44 02.5**	**-1.1**
P23K	**Montague Islan**	**3.82**	**9**	P	**Pn**	**22 43 18.4**	**-0.2**
	baz=190						
P23K				S	**Sn**	**22 44 02.5**	**-1.1**
	baz=190						
SEW	**Seward**	**3.89**	**354**		**Pn**	**22 43 19.4**	**-0.2**
SEW					**Sn**	**22 44 04.1**	**-1.2**
SEW	**Seward**	**3.89**	**354**	P	**Pn**	**22 43 19.4**	**-0.2**
	baz=173						
SEW				S	**Sn**	**22 44 04.1**	**-1.2**
	baz=173						
P19K	**Oil Pt**	**4.20**	**326**	Pn	**Pn**	**22 43 24.4**	**+0.4**
P19K				IAML		22 44 19.1	
	comp=N,59nm,0.5s						
P19K	**Oil Pt**	**4.20**	**326**	P	**Pn**	**22 43 24.3**	**+0.4**
	baz=143						
O22K	**Cooper Landing**	**4.29**	**353**		**Pn**	**22 43 24.5**	**-0.5**
HIN	**Hinchinbrook I**	**4.31**	**14**	Pn	**Pn**	**22 43 25.4**	**-0.1**
HIN				IAML		22 44 15.7	
	comp=N,69nm,1.1s						
HIN				IAML		22 44 17.8	
	comp=E,68nm,1.0s						
KAIM	**Kayak Island**	**4.32**	**30**	Pn	**Pn**	**22 43 25.3**	**-0.2**
KAIM				IAML		22 44 22.9	
	comp=N,76nm,1.4s						
KAIM				IAML		22 44 24.1	
	comp=E,50nm,0.8s						
KAIM	**Kayak Island**	**4.32**	**30**	P	**Pn**	**22 43 25.3**	**-0.2**
	baz=212						
SLKM	**Skilak Lake**	**4.36**	**350**		**Pn**	**22 43 26.1**	**0.0**
O20K	**Slope Mountain**	**4.39**	**333**		**Pn**	**22 43 26.6**	**+0.1**
O20K	**Slope Mountain**	**4.39**	**333**	P	**Pn**	**22 43 26.6**	**+0.1**
	baz=150						
IVE	**Iliamna Volcan**	**4.44**	**330**		**Pn**	**22 43 27.1**	**-0.1**
ILSW	**Iliamna Southw**	**4.44**	**329**		**Pn**	**22 43 27.2**	**-0.1**
ILSW	**Iliamna Southw**	**4.44**	**329**	IAML		22 44 21.3	
	comp=N,25nm,0.9s						
ILSW				IAML		22 44 23.7	
	comp=E,20nm,1.3s						
EYAK	**Cordova Ski Ar**	**4.58**	**18**		**Pn**	**22 43 29.1**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.58**	**18**	P	**Pn**	**22 43 29.1**	**+0.1**
	baz=200						
SUCK	**Suckling Hills**	**4.62**	**32**		**Pn**	**22 43 29.7**	**0.0**
SUCK	**Suckling Hills**	**4.62**	**32**	IAML		22 44 23.8	
	comp=N,50nm,1.3s						
SUCK				IAML		22 44 35.6	
	comp=E,49nm,1.2s						
HMT	**Hamilton**	**4.71**	**28**	Pn	**Pn**	**22 43 29.6**	**-1.3**
RED	**Redoubt Volcan**	**4.72**	**334**		**Pn**	**22 43 30.6**	**-0.4**
CAPN	**Captain Cook N**	**4.72**	**345**	Pn	**Pn**	**22 43 32.5**	**+1.5**
P18K	**Big Mountain,**	**4.73**	**315**	Pn	**Pn**	**22 43 31.1**	**-0.1**
P18K	**Big Mountain,**	**4.73**	**315**	P	**Pn**	**22 43 31.0**	**-0.1**
	baz=130						
RSO	**Redoubt South**	**4.75**	**335**		**Pn**	**22 43 31.5**	**-0.1**
RDWB	**Redoubt West**	**4.79**	**334**		**Pn**	**22 43 31.6**	**-0.5**
NCT	**North Crescent**	**4.88**	**334**		**Pn**	**22 43 33.1**	**-0.2**
RC01	**Rabbit Creek A**	**4.89**	**354**		**Pn**	**22 43 33.7**	**+0.4**
RC01				IAML		22 44 32.5	
	comp=N,27nm,0.5s						
RC01				IAML		22 44 38.1	
	comp=E,28nm,0.4s						
RC01	**Rabbit Creek A**	**4.89**	**354**	P	**Pn**	**22 43 33.6**	**+0.2**
	baz=172						
BERG	**Berg Lake**	**4.91**	**30**		**Pn**	**22 43 33.4**	**-0.2**
BERG				IAML		22 46 42.0	
	comp=N,47nm,0.6s						
GRIN	**Grindle Hills**	**4.93**	**33**		**Pn**	**22 43 33.9**	**0.0**
O19K	**Port Alsworth**	**4.97**	**325**		**Pn**	**22 43 34.7**	**+0.3**
SNH	**Sunshine Point**	**5.00**	**35**	Pn	**Pn**	**22 43 34.5**	**-0.4**
SNH				IAML		22 44 56.8	
	comp=N,42nm,1.5s						
SNH				IAML		22 46 33.0	
	comp=E,26nm,1.2s						
O18K	**Koktuh Hills**	**5.03**	**319**		**Pn**	**22 43 34.9**	**-0.3**
O18K	**Koktuh Hills**	**5.03**	**319**	P	**Pn**	**22 43 34.9**	**-0.3**
	baz=134						
BMRM	**Bremner River**	**5.18**	**22**		**Pn**	**22 43 37.5**	**+0.1**
BMRM	**Bremner River**	**5.18**	**22**	P	**Pn**	**22 43 37.5**	**+0.1**
	baz=205						
WAX	**Waxell Ridge**	**5.20**	**33**		**Pn**	**22 43 37.3**	**-0.4**
WAX				IAML		22 44 35.1	
	comp=E,42nm,0.4s						
N20K	**Mount Spurr**	**5.30**	**341**	P	**Pn**	**22 43 38.6**	**-0.5**
	baz=158						
SPCR	**Spurr Chakacha**	**5.30**	**341**		**Pn**	**22 43 38.6**	**-0.5**
SUA	**Susitna One**	**5.35**	**349**		**Pn**	**22 43 39.6**	**-0.1**
SPCP	**Crater Peak Br**	**5.36**	**342**		**Pn**	**22 43 39.1**	**-0.8**
CRQM	**Cirque**	**5.37**	**30**		**Pn**	**22 43 39.7**	**-0.4**
PMR	**Palmer**	**5.37**	**358**	Pn	**Pn**	**22 43 40.1**	**+0.2**
CRQE	**Cirque**	**5.37**	**30**	P	**Pn**	**22 43 39.8**	**-0.3**
	baz=214						
CHGN	**Chignik**	**5.45**	**275**	Pn	**Pn**	**22 43 40.6**	**-0.4**
KLU	**Klutina**	**5.45**	**14**		**Pn**	**22 43 41.6**	**+0.5**
KLU	**Klutina**	**5.45**	**14**	P	**Pn**	**22 43 41.3**	**+0.2**
	baz=196						
TGL	**Tana Glacier**	**5.45**	**32**		**Pn**	**22 43 41.0**	**-0.2**
BAGL	**Bagley Icefiel**	**5.48**	**36**		**Pn**	**22 43 41.2**	**-0.2**
ISLE	**Juniper Island**	**5.48**	**35**	Pn	**Pn**	**22 43 41.1**	**-0.5**
N19K	**Bonanza Creek**	**5.51**	**329**		**Pn**	**22 43 41.9**	**0.0**
N19K	**Bonanza Creek**	**5.51**	**329**	P	**Pn**	**22 43 42.0**	**+0.1**
	baz=144						
STLK	**Strandline Lak**	**5.52**	**344**		**Pn**	**22 43 42.2**	**+0.1**
GHO	**Glory Hole Cre**	**5.55**	**359**		**Pn**	**22 43 43.3**	**+0.9**
SML	**Sawmill**	**5.58**	**2**	Pn	**Pn**	**22 43 43.5**	**+0.6**
SML	**Sawmill**	**5.58**	**2**	P	**Pn**	**22 43 43.6**	**+0.7**
	baz=181						
VRDI	**Verde Repeater**	**5.68**	**26**	Pn	**Pn**	**22 43 43.9**	**-0.5**
TABL	**Table Mountain**	**5.77**	**40**		**Pn**	**22 43 45.5**	**-0.1**
N25K	**Chitina, Valde**	**5.77**	**20**		**Pn**	**22 43 46.0**	**+0.5**
N25K	**Chitina, Valde**	**5.77**	**20**	P	**Pn**	**22 43 46.0**	**+0.5**
	baz=202						
GLB	**Gilahina Butte**	**5.78**	**24**		**Pn**	**22 43 45.6**	**-0.1**
N18K	**Kilae Creek**	**5.85**	**322**		**Pn**	**22 43 46.5**	**0.0**
N18K	**Kilae Creek**	**5.85**	**322**	P	**Pn**	**22 43 46.5**	**0.0**
	baz=137						
PCA	**Pinnacle**	**5.88**	**45**		**Pn**	**22 43 47.2**	**+0.2**
PINM	**Pinnacle**	**5.88**	**46**	P	**Pn**	**22 43 47.2**	**+0.2**
	baz=232						
PTPK	**Patty Peak**	**5.91**	**30**		**Pn**	**22 43 47.6**	**+0.1**
MCARA	**McCarthy VSAT**	**5.92**	**27**	Pn	**Pn**	**22 43 48.3**	**+0.8**
MCARA	**McCarthy VSAT**	**5.92**	**27**	P	**Pn**	**22 43 48.1**	**+0.7**
	baz=211						
SKT	**Skwentna**	**5.94**	**347**	Pn	**Pn**	**22 43 48.6**	**+0.9**
PNL	**Peninsula**	**6.00**	**51**		**Pn**	**22 43 48.4**	**-0.2**
PNL	**Peninsula**	**6.00**	**51**	P	**Pn**	**22 43 48.4**	**-0.2**
	baz=238						
M24K	**Tolsona, Glenn**	**6.01**	**11**		**Pn**	**22 43 50.0**	**+1.2**
M24K	**Tolsona, Glenn**	**6.01**	**11**	P	**Pn**	**22 43 49.8**	**+1.0**
	baz=193						
BARN	**Barnard Glacie**	**6.05**	**34**		**Pn**	**22 43 49.4**	**0.0**
BCPM	**Bancas Point**	**6.05**	**48**		**Pn**	**22 43 48.9**	**-0.3**
SVW2	**Sparrevohn**	**6.06**	**326**	Pn	**Pn**	**22 43 49.0**	**-0.4**
CTG	**Chitna Glacier**	**6.08**	**36**	P	**Pn**	**22 43 49.7**	**0.0**
	baz=221						
LOGN	**Logan Glacier**	**6.09**	**38**		**Pn**	**22 43 49.6**	**-0.3**
M20K	**Styx River**	**6.11**	**340**		**Pn**	**22 43 50.2**	**+0.1**
M20K	**Styx River**	**6.11**	**340**	P	**Pn**	**22 43 50.2**	**+0.1**
	baz=156						
WAT6	**Susitna Watana**	**6.37**	**4**		**Pn**	**22 43 54.1**	**+0.3**
WAT6	**Susitna Watana**	**6.37**	**4**	P	**Pn**	**22 43 54.1**	**+0.3**
	baz=184						
M19K	**Big River Lodg**	**6.40**	**335**		**Pn**	**22 43 53.9**	**-0.2**
M19K	**Big River Lodg**	**6.40**	**335**	P	**Pn**	**22 43 53.8**	**-0.2**
	baz=150						
M18K	**Stony River**	**6.44**	**328**		**Pn**	**22 43 54.5**	**-0.2**
M18K	**Stony River**	**6.44**	**328**	P	**Pn**	**22 43 54.5**	**-0.2**
	baz=142						
WAT7	**Susitna Watana**	**6.61**	**359**		**Pn**	**22 43 57.3**	**+0.3**
O29M	**Mount Kennedy**	**6.69**	**48**		**Pn**	**22 43 58.6**	**+0.5**
O29M	**Mount Kennedy**	**6.69**	**48**	P	**Pn**	**22 43 58.6**	**+0.5**
	baz=236						
P29M	**Windy Craggy**	**6.72**	**55**		**Pn**	**22 43 58.0**	**-0.5**
P29M	**Windy Craggy**	**6.72**	**55**	P	**Pn**	**22 43 58.0**	**-0.5**
	baz=244						
L19K	**White Mountain**	**6.75**	**334**	P	**Pn**	**22 43 58.6**	**-0.3**
	baz=149						
S31K	**Pelican**	**6.98**	**71**	Pn	Pn	22 43 58.8	-3.1
S31K	**Pelican**	**6.98**	**71**	P	**Pn**	**22 43 59.9**	**-2.0**
	baz=260						
RND	**Reindeer**	**7.18**	**359**	Pn	**Pn**	**22 44 06.6**	**+1.7**
TRF	**Thorofare Moun**	**7.28**	**354**	Pn	**Pn**	**22 44 07.7**	**+1.5**
TRF	**Thorofare Moun**	**7.28**	**354**	P	**Pn**	**22 44 07.0**	**+0.8**
	baz=172						
CAST	**Castle Rocks**	**7.40**	**348**	Pn	**Pn**	**22 44 08.8**	**+1.0**
KTH	**Kantishna Hill**	**7.42**	**352**	Pn	**Pn**	**22 44 08.8**	**+0.7**
S32K	**Killisnoo**	**7.81**	**75**	Pn	Pn	22 44 10.8	-2.5
S32K	**Killisnoo**	**7.81**	**75**	P	**Pn**	**22 44 11.7**	**-1.7**
	baz=266						
L16K	**Owhat River**	**7.83**	**319**	Pn	**Pn**	**22 44 13.9**	**+0.3**
N30M	**Aishikik Lake**	**7.94**	**44**		**Pn**	**22 44 15.7**	**+0.4**
BPAW	**Bear Paw Mtn.**	**7.97**	**353**		**Pn**	**22 44 15.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**7.97**	**353**	P	**Pn**	**22 44 15.7**	**+0.2**
	baz=170						
JIS	**Juneau Island**	**7.99**	**69**	Pn	**Pn**	**22 44 14.6**	**-1.3**
M29M	**Somme Creek**	**8.10**	**36**		**Pn**	**22 44 17.5**	**0.0**
M29M	**Somme Creek**	**8.10**	**36**	P	**Pn**	**22 44 17.5**	**0.0**
	baz=224						
J20K	**Nowinta River**	**8.41**	**343**	Pn	**Pn**	**22 44 22.2**	**+0.6**
ILAR	**Eielson Array**	**8.60**	**5**	Pn	**Pn**	**22 44 25.4**	**+1.3**
	comp=E,0.2nm,0.3s,baz=193,slow=13,SNR=10						
ILAR				Sn	**Sn**	**22 45 58.2**	**-2.9**
	comp=E,0.2nm,0.3s,baz=140,slow=11,SNR=5.7						
	comp=E,0.3nm,0.3s						
P32M	**Atlin**	**8.62**	**61**	Pn	**Pn**	**22 44 23.7**	**-0.8**
MLY	**Manley**	**8.88**	**354**	Pn	**Pn**	**22 44 28.1**	**0.0**
P33M	**Teslin, Yukon**	**9.24**	**58**	Pn	**Pn**	**22 44 32.4**	**-0.7**
H21K	**Melozitna Rive**	**9.66**	**350**		**Pn**	**22 44 38.7**	**0.0**
INK	**Inuvik**	**13.93**	**24**	Pn	**Pn**	**22 45 35.7**	**-1.3**
B20K	**Meade River**	**14.32**	**348**	Pn	**Pn**	**22 45 41.1**	**-1.1**
YKA	**Yellowknife Ar**	**18.27**	**56**	P	**Pn**	**22 46 34.9**	**+1.9**
	baz=262,slow=11,SNR=5.8						
	comp=E,0.8nm,0.9s						
A36M	**Sachs Harbour**	**18.57**	**23**		**P**	**22 46 37.2**	**+0.7**
A36M				IAmb	IAmb	22 46 40.4	
	comp=Z,4.5nm,0.8s						
MKAR	**Makanchi Array**	**68.83**	**325**	P	**P**	**22 53 25.2**	**+1.2**
	comp=Z,0.6nm,1.1s,baz=34,slow=6.1,SNR=2.5						
	comp=Z,0.6nm,1.1s						

AEIC ***17*** *22:44:35.6±1.2,56˚.14N×0˚.10×148˚.6W±0˚.1,h7km±8km,*
Error ellipse: s-maj=14.1km s-min=8.8km az=166.0
NEIC 17 22:44:32.5±1.1,**56˚1N**±0˚.1×**148˚.6W**±0˚.1,**h23**km±10km,
ML3.4/46,**ML3.1**(AEIC),**Error ellipse: s-maj=15.4km**
s-min=9.1km az=171.0,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.75**	**309**		Pn	22 45 15.0	0.0
KDAK					Sn	22 45 45.0	-2.5
OHAK	**Old Harbor**	**2.82**	**295**		Pn	22 45 15.6	-0.5
OHAK	**Old Harbor**	**2.82**	**295**	P	Pn	22 45 15.8	-0.3
	baz=111						
SII	**Sitkinak Islan**	**3.15**	**280**		Pn	22 45 20.6	0.0
SII					Sn	22 45 55.0	-2.5
SII				IAML		22 46 04.1	
	comp=E,106nm,1.2s						
SII				IAML		22 46 08.7	
	comp=N,128nm,0.9s						
SII	**Sitkinak Islan**	**3.15**	**280**	P	Pn	22 45 20.9	+0.2
	baz=95						
SII				S	Sn	22 45 55.3	-2.2
	baz=95						
SYI	**Shuyak Island**	**3.23**	**322**		Pn	22 45 21.8	+0.1
SYI					Sn	22 45 59.3	0.0
Q20K	**Shuyak Island**	**3.23**	**322**	P	Pn	22 45 21.8	+0.1
	baz=138						
Q20K				S	Sn	22 45 59.4	0.0
	baz=138						
Q23K	**Middleton Isla**	**3.51**	**19**		Pn	22 45 23.8	-1.7
Q23K				IAML		22 46 42.8	
	comp=N,103nm,1.5s						
Q23K				IAML		22 47 13.6	
	comp=E,101nm,1.3s						
Q23K	**Middleton Isla**	**3.51**	**19**	P	Pn	22 45 25.4	-0.2
	baz=201						
MID	**Middleton Isla**	**3.51**	**19**		Pn	22 45 24.4	-1.2
MID				IAML		22 47 06.8	
	comp=N,96nm,1.2s						
MID				IAML		22 47 13.6	
	comp=E,110nm,1.4s						
R18K	**Karluk**	**3.53**	**296**		Pn	22 45 25.6	-0.3
R18K					Sn	22 46 05.4	-1.5
R18K				IAML		22 46 09.0	
	comp=N,64nm,0.5s						
R18K				IAML		22 46 11.5	
	comp=E,92nm,0.4s						
R18K	**Karluk**	**3.53**	**296**	P	Pn	22 45 26.1	+0.2
	baz=111						
R18K				S	Sn	22 46 05.8	-1.1
	baz=111						
CNPM	**China Poot**	**3.69**	**338**		Pn	22 45 27.9	-0.1
CNPM				IAML		22 46 15.2	
	comp=E,30nm,0.4s						
CNPM				IAML		22 46 20.0	
	comp=N,35nm,1.4s						
BRSE	**Bradley Lake S**	**3.80**	**343**		Pn	22 45 29.6	0.0
BRSE					Sn	22 46 11.6	-1.9
BRSE	**Bradley Lake S**	**3.80**	**343**	P	Pn	22 45 29.6	0.0
	baz=161						
BRSE				S	Sn	22 46 11.5	-1.9
	baz=161						
BRLK	**Bradley Lake**	**3.84**	**342**		Pn	22 45 29.6	-0.5
BRLK				IAML		22 46 22.7	
	comp=E,26nm,1.0s						
Q19K	**Cape Douglas,**	**3.91**	**318**		Pn	22 45 31.6	+0.5
Q19K				IAML		22 47 49.2	
	comp=N,74nm,1.4s						
Q19K	**Cape Douglas,**	**3.91**	**318**	P	Pn	22 45 31.3	+0.2
	baz=134						
P23K	**Montague Islan**	**3.92**	**9**		Pn	22 45 31.0	-0.2
P23K					Sn	22 46 13.6	-2.9
P23K	**Montague Islan**	**3.92**	**9**	P	Pn	22 45 31.0	-0.2
	baz=190						
P23K				S	Sn	22 46 13.6	-2.9
	baz=190						
SEW	**Seward**	**4.01**	**354**		Pn	22 45 32.2	-0.1
SEW	**Seward**	**4.01**	**354**	P	Pn	22 45 32.3	-0.1
	baz=173						
P19K	**Oil Pt**	**4.32**	**327**		Pn	22 45 37.2	+0.6
P19K				IAML		22 46 30.3	
	comp=N,48nm,0.6s						
P19K	**Oil Pt**	**4.32**	**327**	P	Pn	22 45 37.0	+0.3
	baz=143						
KAIM	**Kayak Island**	**4.40**	**28**		Pn	22 45 37.2	-0.6
KAIM				IAML		22 46 34.1	
	comp=E,52nm,1.2s						
KAIM				IAML		22 46 41.0	
	comp=N,61nm,1.4s						
KAIM	**Kayak Island**	**4.40**	**28**	P	Pn	22 45 37.6	-0.1
	baz=212						
HIN	**Hinchinbrook I**	**4.41**	**13**		Pn	22 45 37.9	-0.1
HIN				IAML		22 46 41.9	
	comp=E,64nm,1.0s						
SLKM	**Skilak Lake**	**4.47**	**349**		Pn	22 45 38.8	0.0
O20K	**Slope Mountain**	**4.50**	**333**		Pn	22 45 39.1	-0.1
O20K	**Slope Mountain**	**4.50**	**333**	P	Pn	22 45 39.1	-0.1
	baz=150						
ILSW	**Iliamna Southw**	**4.56**	**330**		Pn	22 45 39.9	-0.2
ILSW				IAML		22 46 38.9	
	comp=E,26nm,1.0s						
ILSW				IAML		22 46 40.5	
	comp=N,25nm,1.1s						
EYAK	**Cordova Ski Ar**	**4.67**	**17**		Pn	22 45 41.2	-0.3
EYAK	**Cordova Ski Ar**	**4.67**	**17**	P	Pn	22 45 41.3	-0.1
	baz=200						
SUCK	**Suckling Hills**	**4.70**	**31**		Pn	22 45 42.0	+0.2
SUCK				IAML		22 46 50.9	
	comp=E,47nm,1.4s						
FID	**Port Fidalgo**	**4.76**	**12**	Pn	Pn	22 45 42.6	-0.1
FID				IAML		22 46 38.1	
	comp=N,25nm,1.1s						
FID				IAML		22 46 39.4	
	comp=E,21nm,0.4s						
NICHA	**Nichawak Mount**	**4.78**	**29**		Pn	22 45 43.2	+0.1
HMT	**Hamilton**	**4.79**	**27**	Pn	Pn	22 45 42.9	-0.3
P18K	**Big Mountain,**	**4.83**	**315**		Pn	22 45 43.4	-0.4
P18K	**Big Mountain,**	**4.83**	**315**	P	Pn	22 45 43.5	-0.3
	baz=130						
RED	**Redoubt Volcan**	**4.83**	**334**		Pn	22 45 43.5	-0.4
RDSO	**Redoubt South**	**4.86**	**335**		Pn	22 45 43.8	-0.4
RSO	**Redoubt South**	**4.87**	**335**	Pn	Pn	22 45 44.2	-0.1
RDT	**Redoubt**	**4.89**	**337**		Pn	22 45 44.2	-0.4
BERG	**Berg Lake**	**4.98**	**29**		Pn	22 45 45.7	-0.1
NCT	**North Crescent**	**5.00**	**334**		Pn	22 45 45.7	-0.3
SNH	**Sunshine Point**	**5.07**	**34**	Pn	Pn	22 45 46.9	0.0
SNH				IAML		22 47 17.0	
	comp=N,28nm,1.2s						
O19K	**Port Alsworth**	**5.08**	**326**		Pn	22 45 47.0	-0.1
O19K	**Port Alsworth**	**5.08**	**326**	P	Pn	22 45 47.0	-0.1
	baz=141						
O18K	**Koktuh Hills**	**5.13**	**319**		Pn	22 45 47.6	-0.2
O18K	**Koktuh Hills**	**5.13**	**319**	P	Pn	22 45 47.8	-0.1
	baz=134						
MESA	**MESA**	**5.36**	**38**	Pn	Pn	22 45 51.4	+0.3
MESA				IAML		22 48 22.0	
	comp=E,22nm,1.3s						
N20K	**Mount Spurr**	**5.42**	**341**	P	Pn	22 45 51.7	-0.1
	baz=158						
SPCR	**Spurr Chakacha**	**5.42**	**341**		Pn	22 45 51.7	-0.1
CRQM	**Cirque**	**5.44**	**29**	Pn	Pn	22 45 51.9	-0.4
SUA	**Susitna One**	**5.46**	**349**	Pn	Pn	22 45 51.4	-1.1
BAGL	**Bagley Icefiel**	**5.54**	**35**		Pn	22 45 53.5	+0.1
KLU	**Klutina**	**5.55**	**13**	Pn	Pn	22 45 54.4	+0.8
N19K	**Bonanza Creek**	**5.62**	**329**		Pn	22 45 54.2	-0.5
N19K	**Bonanza Creek**	**5.62**	**329**	P	Pn	22 45 54.4	-0.3
	baz=144						
STLK	**Strandline Lak**	**5.64**	**344**		Pn	22 45 54.8	-

SVKR				Pmax				
	3μm,0.1s							
SVKR				Smax				
	31μm,0.3s							
SVKR	**Severomuysk**	**0.31**	**122**⇓	*i*PG	**Pg**	**22 54 33.6**	**+1.2**	
SVKR				*e*SG	**Sg**	**22 54 38.2**	**+1.7**	
YOA	**Uoyan**	**0.78**	**260**	*e*Pg	**Pb**	**22 54 43.7**	**+1.9**	
YOA				*e*Sg	**Sb**	**22 54 54.3**	**+1.9**	
YOA				Pmax				
	298nm,0.2s							
YOA				Smax				
	2μm,0.3s							
YOA	**Uoyan**	**0.78**	**260**	*e*PG	**Pb**	**22 54 43.3**	**+1.5**	
YOA				*e*SG	**Sn**	**22 54 56.6**	**+1.6**	
UKT	**Uakit**	**0.85**	**159**⇑	*i*Pg	**Pb**	**22 54 44.6**	**+1.6**	
UKT				*e*Pb	**Pn**	**22 54 45.8**	**+1.5**	
UKT				*e*Sg	**Sn**	**22 54 57.2**	**+0.4**	
UKT				max				
	210nm,0.2s							
UKT				Smax				
	676nm,0.3s							
UKT	**Uakit**	**0.85**	**159**⇑	*i*PG	**Pb**	**22 54 44.6**	**+1.6**	
UKT				*e*SG	**Sn**	**22 54 57.2**	**+0.4**	
KMO	**Kumora**	**1.13**	**250**⇓	*i*Pg	**Pn**	**22 54 50.0**	**+1.9**	
KMO				*e*Pb	**Pb**	**22 54 51.1**	**+3.3**	
KMO				*e*Sg	**Sn**	**22 55 07.1**	**+3.5**	
KMO				max				
	111nm,0.4s							
KMO				Smax				
	814nm,0.6s							
KMO	**Kumora**	**1.13**	**250**⇑	*i*PG	**Pn**	**22 54 49.9**	**+1.9**	
KMO				*e*SG	**Sn**	**22 55 05.3**	**+1.7**	
NLYR	**Nelyaty**	**1.47**	**81**⇑	*i*Pg	**Pn**	**22 54 52.1**	**-0.6**	
NLYR				*e*Sg	**Sn**	**22 55 10.2**	**-1.7**	
NLYR				Pmax				
	128nm,0.3s							
NLYR				Smax				
	2μm,0.8s							
NLYR	**Nelyaty**	**1.47**	**81**⇑	*i*PG	**Pn**	**22 54 52.1**	**-0.6**	
NLYR				*e*SG	**Sn**	**22 55 10.1**	**-1.8**	
BOD	**Bodaibo**	**1.62**	**18**⇓	*i*Pg	**Pn**	**22 54 53.6**	**-1.2**	
BOD				*e*Sg	**Sn**	**22 55 12.5**	**-3.2**	
BOD				Pmax				
	139nm,0.3s							
BOD				Smax				
	2μm,0.3s							
BOD	**Bodaibo**	**1.62**	**18**⇓	*i*PN	**Pn**	**22 54 53.5**	**-1.2**	
BOD				*e*SG	**Sn**	**22 55 12.2**	**-3.5**	
YLYR	**Ulyunkhan**	**1.78**	**219**⇑	*i*Pn	**Pg**	**22 55 00.6**	**+0.2**	
YLYR				*e*Pg	**Pb**	**22 55 02.0**	**+3.1**	
YLYR				*e*Sn	**Sg**	**22 55 25.8**	**+2.3**	
YLYR				*e*Sg	**Sb**	**22 55 27.3**	**+6.0**	
YLYR				Pmax				
	64nm,0.3s							
YLYR				Smax				
	557nm,0.3s							
YLYR	**Ulyunkhan**	**1.78**	**219**⇑	*i*PN	**Pg**	**22 55 00.6**	**+0.2**	
YLYR				*e*SG	Sn	22 55 02.0	-18	
YLYR				*e*S	**Sg**	**22 55 25.1**	**+1.6**	
YLYR				*e*SG	**Sb**	**22 55 27.6**	**+6.3**	
NIZB	**Nizh Angarsk**	**2.06**	**257**	*e*Pn	**Pb**	**22 55 04.1**	**+0.5**	
NIZB				*e*Pg	**Pg**	**22 55 06.3**	**+0.7**	
NIZB				*e*		22 55 10.2		
NIZB				*e*Sg	**Sg**	**22 55 33.4**	**+1.2**	
NIZB				*e*		22 55 35.8		
NIZB				max				
	45nm,0.2s							
NIZB				max				
	356nm,0.4s							
CRS	**Chara**	**2.93**	**76**	*e*Pn	**Pn**	**22 55 12.8**	**0.0**	
CRS				*e*Pg	**Pb**	**22 55 18.4**	**-0.1**	
CRS				*e*PgPg	**PnPn**	**22 55 21.7**	**+1.8**	
CRS				*e*Sn	**Sn**	**22 55 45.8**	**-2.2**	
CRS				*e*Sg	**Sb**	**22 55 54.9**	**+0.6**	
CRS				*e*SgSg	**Sg**	**22 56 08.2**	**+8.0**	
CRS				max				
	105nm,0.8s							
CRS				max				
	172nm,1.1s							
CRS	**Chara**	**2.93**	**76**	*e*PN	**Pn**	**22 55 12.6**	**-0.2**	
CRS				*e*PG	**Pb**	**22 55 18.3**	**-0.2**	
CRS				*e*SG	**Sb**	**22 55 54.5**	**+0.2**	
SYVR	**Suvo**	**3.18**	**215**	*e*Pn	**Pn**	**22 55 19.1**	**+2.9**	
SYVR				*e*		22 55 23.6		
SYVR				*e*Pg	**Pg**	**22 55 27.6**	**+0.6**	
SYVR				*e*Sg	**Sg**	**22 56 10.1**	**+2.0**	
SYVR				Pmax				
	16nm,0.7s							
SYVR				Smax				
	137nm,1.2s							
VTMR	**Vitim**	**3.18**	**355**	*e*Pn	**Pn**	**22 55 15.0**	**-1.2**	
VTMR				*e*Sg	**Sn**	**22 55 59.7**	**+5.6**	
MXMB	**Maximikha**	**3.93**	**222**	*e*Sg	**Sg**	**22 56 33.4**	**+1.0**	
OGRR	**Ongureny**	**4.12**	**232**	*e*Pn	**Pn**	**22 55 32.4**	**+3.2**	
OGRR				*e*		22 55 38.2		
OGRR				*e*Pg	**Pg**	**22 55 43.8**	**-1.4**	
OGRR				*e*Sn	**Sn**	**22 56 21.0**	**+3.5**	
OGRR				*e*Sg	**Sg**	**22 56 38.5**	**-0.1**	
OGRR				Pmax				
	18nm,0.8s							
OGRR				Smax				
	46nm,0.7s							
CIT	**Chita**	**4.28**	**176**	*e*Sg	**Sg**	**22 56 43.1**	**-0.3**	
CIT				Smax				
	517nm,0.3s							
UZR	**Uzur**	**4.29**	**228**	*e*Pn	**Pn**	**22 55 34.6**	**+3.2**	
UZR				*e*Pg	**Pg**	**22 55 47.1**	**-1.1**	
UZR				*e*Sg	**Sg**	**22 56 44.3**	**+0.6**	
UZR				Pmax				
	28nm,1.1s							
UZR				Smax				
	50nm,0.6s							
GORB	**Goryachinsk**	**4.32**	**222**	*e*Pn	**Pn**	**22 55 34.6**	**+2.7**	
GORB				*e*Pg	**Pg**	**22 55 46.7**	**-2.2**	
GORB				*e*Sg	**Sg**	**22 56 45.6**	**+0.7**	
TUP	**Tupik**	**4.33**	**113**⇑	*i*Pn	**Pn**	**22 55 32.3**	**+0.2**	
TUP				*e*Pg	**Pb**	**22 55 43.5**	**+1.1**	
TUP				*e*Sn	**Sn**	**22 56 20.5**	**-2.1**	
TUP				*e*Sg	**Sb**	**22 56 39.9**	**+5.2**	
TUP				Pmax				
	42nm,0.1s							
TUP				Smax				
	137nm,1.0s							
TUP	**Tupik**	**4.33**	**113**⇑	*i*PN	**Pn**	**22 55 32.2**	**+0.2**	
TUP				*e*PG	**Pb**	**22 55 44.6**	**+2.2**	
TUP				*e*S	**Sn**	**22 56 20.6**	**-2.1**	
TUP				*e*SG	**Sb**	**22 56 39.5**	**+4.8**	
KELR	**Kotokel**	**4.58**	**222**	*e*Sg	**Sg**	**22 56 52.0**	**-1.1**	
YKLR	**Yuktali**	**4.76**	**83**	*e*Pn	**Pn**	**22 55 37.3**	**-0.6**	
YKLR				*e*Pg	**Pb**	**22 55 50.4**	**+0.7**	
YKLR				*e*Sg	**Sb**	**22 56 50.9**	**+3.9**	
ZRHB	**Zarechye**	**5.09**	**225**	*e*Pg	**Pg**	**22 56 01.5**	**-2.2**	
ZRHB				*e*Sg	**Sg**	**22 57 09.2**	**-0.4**	
ZRHB				Pmax				
	34nm,1.4s							
ZRHB				Smax				
	101nm,1.5s							
TRG	**Tyrgan**	**5.28**	**231**	*e*Pn	**Pn**	**22 55 49.2**	**+4.1**	
TRG				*e*		22 55 59.7		
TRG				*e*Pg	**Pg**	**22 56 04.1**	**-3.1**	
TRG				*e*Sn	**Sn**	**22 56 47.8**	**+1.9**	
TRG				*e*Sg	**Sg**	**22 57 14.4**	**-1.1**	
TRG				Pmax				
	7.0nm,0.4s							
TRG				Smax				
	23nm,0.4s							
UUDB	**Ulan-Yde**	**5.46**	**218**	*e*Pg	**Pg**	**22 56 08.5**	**-2.1**	
UUDB				*e*Sg	**Sg**	**22 57 20.8**	**-0.4**	
UUDB				Pmax				
	8.0nm,1.0s							
UUDB				Smax				
	60nm,1.4s							
HRMR	**Khuramsha**	**5.90**	**220**	*e*Pg	**Pg**	**22 56 16.7**	**-2.4**	
HRMR				*e*Sg	**Sg**	**22 57 35.1**	**-0.4**	
HRMR				Pmax				
	12nm,0.5s							
HRMR				Smax				
	86nm,1.0s							
BGT	**Bolshoye Golou**	**6.19**	**230**	*e*Sn	**Sn**	**22 57 10.8**	**+2.4**	
BGT				*e*Sg	**Sg**	**22 57 43.7**	**-1.1**	
BGT				Smax				
	23nm,1.3s							
CLNS	**Chul'man**	**6.55**	**80**	*e*Sg	**Sb**	**22 57 46.6**	**+8.3**	
LSTR	**Listvyanka**	**6.57**	**231**	*e*Pn	**Pn**	**22 56 05.2**	**+2.5**	
LSTR				*e*Sn	**Sn**	**22 57 18.9**	**+1.3**	
LSTR				*e*Sg	**Sg**	**22 57 53.6**	**-3.2**	
LSTR				max				
	4.0nm,0.5s							
LSTR				Smax				
	25nm,1.6s							
KPC	**Khapcheranga**	**6.60**	**184**	*e*Pn	**Pn**	**22 56 07.1**	**+3.8**	
KPC				*e*Pg	**Pg**	**22 56 29.4**	**-3.1**	
KPC				*e*		22 57 36.0		
KPC				*e*Sg	**Sg**	**22 57 56.2**	**-1.8**	
KPC				Pmax				
	5.0nm,0.4s							
KPC				Smax				
	52nm,1.0s							
KPC	**Khapcheranga**	**6.60**	**184**	*e*PN	**Pn**	**22 56 04.5**	**+1.2**	
KPC				*e*PG	Pb	22 56 26.6	+5.6	
KPC				*e*SG	**Sg**	**22 57 54.8**	**-3.2**	
IVK	**Ivanovka**	**6.80**	**232**	*e*Sg	**Sg**	**22 58 02.0**	**-2.2**	
IVK				Smax				
	19nm,1.2s							
TLY	**Talaya**	**7.23**	**234**	*e*Sg	**Sg**	**22 58 14.6**	**-3.3**	
TLY				Smax				
	16nm,0.8s							
ARS	**Arshan**	**7.64**	**240**	*e*	Pb	22 56 31.9	-6.8	
ARS				*e*Pg	Pg	22 56 47.2	-5.1	
ARS				*e*		22 57 39.3		
ARS				*e*Sg	Sg	22 58 28.4	-2.8	
ARS				Pmax				
	11nm,0.6s							
ARS				Smax				
	85nm,1.0s							
HIA	**Hailar**	**8.10**	**147**	*i* PN	**Pn**	**22 56 22.7**	**-1.0**	
HIA				pmax	pmax			
	comp=Z,2.0nm,0.2s							
ZAK	**Zakamensk**	**8.32**	**229**	*e*Sg	Sg	22 58 48.9	-4.2	
ZAK				Smax				
	comp=Z,13nm,1.9s							
MOY	**Mondy**	**8.49**	**242**	*e*Pn	**Pn**	**22 56 32.6**	**+3.4**	
MOY				*e*Pg	Pg	22 57 02.6	-6.1	
MOY				*e*		22 57 07.0		
MOY				*e*		22 58 25.7		
MOY				*e*Sg	Sg	22 58 54.1	-4.5	
MOY				max				
	comp=Z,13nm,1.1s							
MOY				Smax				
	comp=Z,31nm,1.4s							
ORL	**Orlik**	**8.60**	**250**	*e*Pn	**Pn**	**22 56 33.2**	**+2.5**	
ORL				*e*Pg	Pg	22 57 04.6	-6.2	
ORL				*e*Sn	**Sn**	**22 58 06.5**	**-1.3**	
ORL				*e*Sg	Sg	22 58 56.6	-5.4	
ORL				*e*		23 00 00.7		
ORL				Pmax				
	comp=Z,4.0nm,0.6s							
ORL				Smax				
	comp=Z,25nm,1.6s							
ULN	**Ulaanbaatar**	**9.21**	**206**	*i* P	**Pn**	**22 56 40.4**	**+1.3**	
ULN				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**9.41**	**209**	Pn	Pn	22 56 37.9	-3.8	
	comp=Z,0.1nm,0.3s,baz=46,slow=9.4,SNR=1.4							
SONM				Lg	Lg	22 59 25.3		
	comp=Z,0.5nm,0.3s,baz=22,slow=27,SNR=7.6							
	comp=Z,0.1nm,0.4s							
YAK	**Yakutsk**	**10.27**	**49**	*i* P	**Pn**	**22 56 51.3**	**-2.0**	
YAK				pmax	pmax			
	comp=Z,6.0nm,0.4s							
DGZ	**Jazzator, Alta**	**16.73**	**258**	*i* P	**Pn**	**22 58 17.7**	**-2.9**	
DGZ				pmax	pmax			
	comp=Z,5.0nm,2.3s							
TIXI	**Tiksi**	**16.80**	**17**	*i* P	**Pn**	**22 58 19.2**	**-2.0**	
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.9s							
NRIK	**Noril'sk**	**17.33**	**329**	*i* P	**Pn**	**22 58 26.2**	**-1.6**	
NRIK				pmax	pmax			
	comp=Z,4.0nm,1.4s							
MSHR	**Mys Shultsa**	**17.98**	**132**	*i* P	**Pn**	**22 58 37.7**	**+1.8**	
MSHR				pmax	pmax			
	comp=Z,9.0nm,1.1s							
KURK	**Kurchatov**	**21.09**	**269**	*i* P	**P**	**22 59 12.2**	**+1.8**	
KURK				pmax	pmax			
	comp=Z,4.0nm,1.7s							
KURBB	**Kurchatov Arra**	**21.19**	**269**	P	**P**	**22 59 11.9**	**+0.5**	
	comp=Z,0.5nm,0.2s,baz=62,slow=12,SNR=3.4							
	comp=Z,0.5nm,0.2s							
MK31	**Makanchi Array**	**21.21**	**256**	*i* P	**P**	**22 59 13.4**	**+1.6**	
MKAR	**Makanchi Array**	**21.21**	**256**	*i* P	**P**	**22 59 13.8**	**+2.0**	
MKAR	**Makanchi Array**	**21.21**	**256**	P	**P**	**22 59 13.5**	**+1.7**	
	comp=Z,0.4nm,0.6s,baz=55,slow=10,SNR=6.8							
	comp=Z,0.4nm,0.6s							
BVAR	**Borovoye Array**	**24.62**	**281**	P	**P**	**22 59 47.8**	**+1.3**	
	comp=Z,0.8nm,0.6s,baz=63,slow=10.0,SNR=5.7							
	comp=Z,0.8nm,0.6s							
BRVK	**Borovoye**	**24.67**	**281**	*i* P	**P**	**22 59 47.1**	**+0.3**	
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.7s							
OBN	**Obninsk**	**41.06**	**302**⇑	*e*P	**P**	**23 02 09.0**	**-0.3**	
OBN				*e*		23 03 46.4		
OBN				*e*S	**S**	**23 08 15.4**	**-6.0**	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,60nm,19.0s							
FINES	**FINESS Array B**	**42.11**	**314**	*i* P	**P**	**23 02 17.7**	**-0.1**	
FINES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**42.11**	**314**	P	**P**	**23 02 16.9**	**-0.9**	
	comp=Z,0.7nm,0.6s,baz=72,slow=8.9,SNR=9.3							
	comp=Z,0.7nm,0.6s							
ESDC	**Sonseca Array**	**70.61**	**313**	P	**P**	**23 05 41.6**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=26,slow=5.6,SNR=4.9							
	comp=Z,0.4nm,0.7s							

LDG 17 23:03:54.7±0.1, 43°56N×6°65E, h18km, Ml1.6/2, Error ellipse: s-maj=2.9km s-min=1.8km az=142.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMR	**La Mourre**	**0.24**	**204**	*e*Pg	Pg	23 04 00.3	0.0
LMR				*e*Sg	Sb	23 04 04.4	+0.1
	13nm,0.2s						
LMR	**La Mourre**	**0.24**	**204**	*e*Pg	Pb	23 04 00.5	0.0
LMR				*e*Sg	Sb	23 04 04.3	0.0
	9.1nm,0.2s						
LMR	**La Mourre**	**0.24**	**204**	*e*Pg	Pb	23 04 04.0	+3.5
LMR				*e*Sg	Sb	23 04 07.9	+3.6
SBF	**Sospel**	**0.65**	**62**	*e*Pg	Pb	23 04 07.3	-0.2
SBF				*e*Sg	Sb	23 04 16.8	+0.6
	5.3nm,0.3s						
SBF	**Sospel**	**0.65**	**62**	*e*Pg	Pb	23 04 07.3	-0.2
SBF				*e*Sg	Sb	23 04 16.6	+0.4
	2.5nm,0.2s						
SBF	**Sospel**	**0.65**	**62**	*e*Sg	Sn	23 04 20.3	+1.4
	5.0nm,0.2s						
SMRF	**Simiane la Rot**	**0.88**	**299**	*e*Sg	Sg	23 04 23.7	+0.1
	2.2nm,0.2s						
SMRF	**Simiane la Rot**	**0.88**	**299**	*e*Sg	Sg	23 04 23.8	+0.2
	1.3nm,0.2s						
SMRF	**Simiane la Rot**	**0.88**	**299**	*e*Sg	Sg	23 04 23.8	+0.2
	1.2nm,0.2s						
MBDF	**Montbardon**	**1.17**	**4**	*e*Sg	Sn	23 04 31.9	-0.1
	0.7nm,0.2s						
PGF	**Pioggiola**	**2.00**	**120**	*e*Sn	Sn	23 04 49.1	-3.1

IDC 17 23:14:27.8±2.1, 49°52N×94°64E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=38.3km s-min=18.5km az=10.0
ASRS 17 23:14:40.7±0.4, 50°N±2°×9°4E±°, h9km, MLh3.5/14, Error ellipse: s-maj=4.8km s-min=3.6km az=138.5, confirmed

ISC 17 23:14:42.4±1.4, 49°69N±0°06×93°79E±0°05, h10km, n25, σ2s52/52, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARDR	**Aradan**	**2.91**	**356**	Pg	**Pn**	**23 15 27.7**	**-1.1**
ARDR				Sg	**Sb**	**23 16 10.9**	**+0.9**
DJO	**Djoy, Khakassi**	**3.50**	**333**	Pg	**Pb**	**23 15 45.4**	**+1.1**
DJO				Sg	**Sb**	**23 16 31.8**	**+5.0**
CERR	**Cheremushki**	**3.50**	**336**	Pn	**Pn**	**23 15 34.6**	**-2.3**
CERR				Pg	**Pb**	**23 15 47.9**	**+3.4**
CERR				Sg	**Sg**	**23 16 33.4**	**-1.5**
CUR	**Chagan-Uzun**	**3.54**	**279**	Pg	**Pg**	**23 15 49.4**	**-0.8**
CUR				Sg	**Sg**	**23 16 37.9**	**+1.9**
ULGR	**Ulagan, Altay**	**3.86**	**286**	Pn	**Pn**	**23 15 41.4**	**-0.5**
ULGR				Pg	**Pg**	**23 15 54.2**	**-2.2**
ULGR				Sg	**Sg**	**23 16 49.3**	**+2.9**
AKAR	**Aktash**	**4.03**	**281**	Pn	**Pn**	**23 15 44.1**	**-0.1**
AKAR				Pg	**Pg**	**23 15 56.9**	**-2.7**
AKAR				Sg	**Sg**	**23 16 54.2**	**+2.5**
CHBI	**Chibit, Altay**	**4.10**	**281**	Pn	**Pn**	**23 15 42.5**	**-2.7**
CHBI				Pg	**Pb**	**23 15 56.3**	**+1.5**
CHBI				Sg	**Sg**	**23 16 56.3**	**+2.3**
DGZ	**Jazzator, Alta**	**4.12**	**273**	Pn	**Pn**	**23 15 42.5**	**-3.1**
DGZ				Pg	**Pb**	**23 15 56.0**	**+0.8**
DGZ				Sg	**Sg**	**23 16 57.4**	**+2.6**
YALR	**Yailyu, Altay**	**4.44**	**300**	Pn	**Pn**	**23 15 47.6**	**-2.2**
YALR				Pg	**Pb**	**23 16 02.1**	**+1.6**
YALR				Sg	**Sg**	**23 17 07.5**	**+2.5**
ARTR	**Artybash**	**4.64**	**300**	Pn	**Pn**	**23 15 51.8**	**-0.7**
ARTR				Pg	**Pg**	**23 16 08.7**	**-2.6**
ARTR				Sg	**Sg**	**23 17 13.2**	**+1.9**
TASR	**Tashtagol**	**4.82**	**312**	Pn	**Pn**	**23 15 52.0**	**-3.0**
TASR				Pg	**Pb**	**23 16 09.1**	**+2.1**
TASR				Sg	**Sg**	**23 17 15.9**	**-1.3**
MOY	**Mondy**	**4.99**	**64**	Pg	**Pn**	**23 15 55.7**	**-1.8**
MOY				Sg	**Sn**	**23 16 54.1**	**-1.2**
LUZB	**Luzhba, Kemero**	**5.01**	**325**	Pg	**Pb**	**23 16 12.0**	**+1.8**
LUZB				Sg	**Sg**	**23 17 18.5**	**-4.6**
ELDR	**Elanda**	**5.15**	**290**	Pn	**Pn**	**23 15 57.9**	**-1.7**
ELDR				Pg	**Pg**	**23 16 18.8**	**-2.2**
ELDR				Sg	**Sg**	**23 17 28.1**	**+0.4**
MINR	**Mina**	**5.23**	**3**	Pn	**Pn**	**23 16 02.0**	**+1.4**
MINR				Pg	**Pb**	**23 16 17.8**	**+3.9**
MINR				Sg	**Sg**	**23 17 27.8**	**-2.3**
GALT	**Gorno-Altaysk,**	**5.46**	**298**	Pn	**Pn**	**23 16 01.5**	**-2.4**
GALT				Pg	**Pg**	**23 16 25.2**	**-1.8**
GALT				Sg	**Sg**	**23 17 40.7**	**+2.9**
UKR	**Ust'-Kan**	**5.91**	**286**	Pn	**Pn**	**23 16 08.8**	**-1.2**
UKR				Pg	**Pb**	**23 16 28.5**	**+3.0**
UKR				Sg	**Sg**	**23 17 54.3**	**+2.3**
ELT	**Eltsovka**	**5.92**	**310**	Pn	**Pn**	**23 16 09.3**	**-0.7**
ELT				Pg	Pb	23 16 31.4	+5.8
ELT				Sg	**Sg**	**23 17 52.8**	**+0.5**
GZLN	**Zheleznogorsk**	**6.71**	**360**	Sg	Sb	23 18 11.0	+12
BRCR	**Berchikul'**	**6.83**	**333**	Pg	**Pb**	**23 16 44.5**	**+3.4**
BRCR				Sg	**Sg**	**23 18 16.0**	**-5.4**
ZALV	**Zalesovo Beam**	**7.01**	**311**	Pg	**Pb**	**23 16 44.6**	**+0.5**
	0.1nm,0.3s,baz=120,slow=19,SNR=2.2						
ZALV				Lg	Lg	23 18 23.7	
	0.3nm,0.3s,baz=119,slow=26,SNR=5.7						
MKAR	**Makanchi Array**	**8.20**	**254**	Pn	Pn	23 16 35.0	-6.4
	0.1nm,0.3s,baz=74,slow=5.1,SNR=2.2						
MKAR				Pg	Pb	23 16 56.3	-8.2
	baz=82,slow=15,SNR=2.1						
MKAR				Lg	Lg	23 18 59.8	
	0.1nm,0.3s,baz=70,slow=30,SNR=7.4						
	0.3nm,0.9s						
MAKZ	**Makanchi**	**8.39**	**254**	Sg	**Sg**	**23 19 06.4**	**-5.1**
SONM	**Songino Array**	**8.54**	**98**	Pg	Pn	23 16 53.7	+7.6
	0.2nm,0.3s,baz=282,slow=16,SNR=2.5						
SONM				Lg	Lg	23 18 37.7	
	0.3nm,0.3s,baz=285,slow=28,SNR=7.6						
KURBB	**Kurchatov Arra**	**9.84**	**281**	Pn	Pn	23 16 58.5	-5.4
	0.1nm,0.3s,baz=95,slow=14,SNR=6.8						
KURBB				Lg	Lg	23 19 58.5	
	baz=90,slow=34,SNR=4.2						
	0.4nm,0.5s						

LDG 17 23:17:05.3±0.1, 43°56N×6°64E, h21km, Md1.9/1, Ml2.7/5, Error ellipse: s-maj=1.7km s-min=1.3km az=154.0
STR 17 23:17:05.4±0.4, 44°N±2°×±°, h20km±2km, MLv2.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=173.3, preliminary
GEN 17 23:17:06.0, 43°65N×6°65E, h19km±1km, Ml2.0

ISC 17 23:17:05.4±1.0, 43°55N±0°02×6°65E±0°02, h18km±2km, n56, σ1s09/93, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMR	**La Mourre**	**0.24**	**205**	*e*Pg	**Pg**	**23 17 11.3**	**+0.3**
LMR				*e*Sg	**Sb**	**23 17 15.2**	**+0.5**
	173nm,0.2s						
TRIGF	**Trigance**	**0.26**	**318**	Pg	**Pg**	**23 17 11.5**	**+0.1**
TRIGF				Sg	**Sg**	**23 17 15.2**	**-0.3**
CALF	**Calern**	**0.28**	**45**	Pg	**Pg**	**23 17 11.9**	**+0.1**
CALF				Sg	**Sg**	**23 17 16.4**	**+0.4**
SALSA	**La sagne**	**0.33**	**5**	Pg	**Pb**	**23 17 12.4**	**-0.4**
SALSA				Sg	**Sg**	**23 17 17.5**	**+0.2**
FLAF	**Flassans-sur-I**	**0.33**	**239**	Pg	**Pg**	**23 17 12.7**	**+0.2**
FLAF				Sg	**Sg**	**23 17 17.5**	**+0.2**
EILF	**Villa Eilenroc**	**0.35**	**91**	Pg	**Pb**	**23 17 13.5**	**+0.4**
EILF				Sg	**Sb**	**23 17 18.6**	**+0.3**
EILF	**Villa Eilenroc**	**0.35**	**91**	S	**Sb**	**23 17 19.0**	**+0.7**
MVIF	**Mont Vial**	**0.50**	**47**	Pg	**Pb**	**23 17 15.6**	**-0.1**
MVIF				Sg	**Sb**	**23 17 22.9**	**+0.1**
MVIF	**Mont Vial**	**0.50**	**47**	P	**Pb**	**23 17 16.2**	**+0.4**
MVIF				S	**Sb**	**23 17 23.2**	**+0.5**
ENAUX	**Enaux**	**0.56**	**9**	Pg	**Pb**	**23 17 16.4**	**-0.4**
ENAUX				Sg	**Sg**	**23 17 24.6**	**+0.3**
BLAF	**les Blancs**	**0.59**	**313**	Pg	**Pg**	**23 17 16.9**	**-0.2**
BLAF				Sg	**Sg**	**23 17 25.0**	**-0.1**
MON	**Monaco**	**0.59**	**72**	Pg	**Pg**	**23 17 17.4**	**+0.2**
MON				Sg	**Sg**	**23 17 25.9**	**+0.8**
MON	**Monaco**	**0.59**	**72**	P	**Pg**	**23 17 17.8**	**+0.6**
MON				S	**Sn**	**23 17 27.2**	**-0.8**
ESCA	**l'Escarene**	**0.60**	**62**	Pg	**Pb**	**23 17 17.2**	**0.0**
ESCA				Sg	**Sg**	**23 17 25.7**	**+0.4**
ESCA	**l'Escarene**	**0.60**	**62**	P	**Pg**	**23 17 17.7**	**+0.4**
ESCA				S	**Sg**	**23 17 26.2**	**+0.9**
OGDI	**Digne**	**0.61**	**336**	Pg	**Pg**	**23 17 17.8**	**+0.2**
OGDI				Sg	**Sg**	**23 17 26.4**	**+0.6**
OGDI	**Digne**	**0.61**	**336**	P	**Pg**	**23 17 17.8**	**+0.2**
OGDI				S	**Sg**	**23 17 26.3**	**+0.5**
ARTF	**Artigues**	**0.61**	**273**	Pg	**Pb**	**23 17 17.4**	**-0.1**
ARTF				Sg	**Sb**	**23 17 25.4**	**-0.4**
SBF	**Sospel**	**0.65**	**61**	*e*Pg	**Pb**	**23 17 18.0**	**-0.2**
SBF				*e*Sg	**Sg**	**

GBOS	**Grotte di Boss**	**1.10**	**51**	P	**Pb**	**23 17 25.9**	**-0.1**
GBOS				S	**Sn**	**23 17 40.5**	**-0.3**
RORO	**Rocca Rossa**	**1.17**	**61**	Pn	**Pn**	**23 17 26.6**	**-0.2**
RORO	**Rocca Rossa**	**1.17**	**61**	Sn	**Sn**	**23 17 42.2**	**-0.1**
MBDF	**Montbardon**	**1.18**	**4**	*e*Sn	**Sb**	**23 17 39.5**	**-2.7**
MBDF				*e*Sg	**Sg**	**23 17 42.8**	**-0.8**
	38nm,0.5s						
CANO	**Canova, Maglio**	**1.32**	**60**	Pn	**Pn**	**23 17 29.1**	**+0.1**
CANO	**Canova, Maglio**	**1.32**	**60**	Sn	**Sb**	**23 17 46.1**	**-0.2**
BHB	**Bricherasio**	**1.36**	**19**	Sn	**Sn**	**23 17 46.5**	**-0.6**
BHB	**Bricherasio**	**1.36**	**19**	Pn	**Pn**	**23 17 29.0**	**-0.5**
RRL	**Rocca Remolon**	**1.37**	**4**	Pn	**Pn**	**23 17 29.3**	**-0.5**
RRL	**Rocca Remolon**	**1.37**	**4**	Sn	**Sb**	**23 17 47.2**	**-0.7**
PGF	**Pioggiola**	**2.00**	**119**	*e*Sn	**Sn**	**23 17 59.1**	**-3.7**
	5.7nm,0.2s						

IDC 17 23:28:51.0±2.5,3°**99S**×129°**73E**,**h0**km,**mb3.3**/1,
mbtmp3.1/3,**ML2.9**/2,**Error ellipse: s-maj=175.4km**
s-min=29.4km az=70.0,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.48**	**165**	Pn	Pn	23 32 43.5	-0.2
	baz=344,slow=10,SNR=2.5						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**19.97**	**169**	P	P	23 33 25.1	+0.1
	0.1nm,0.3s,baz=351,slow=10,SNR=6.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**65.58**	**326**	P	P	23 39 36.7	0.0
	0.1nm,0.4s,baz=133,slow=8.1,SNR=7.2						
	0.1nm,0.4s						

*IDC **17** 23:33:08.2*±*3.1*,*43.16N*×*105.21W*,*h0*km,*mbtmp3.0/2,*
ML2.6/2,Error ellipse: s-maj=62.0km s-min=10.7km
az=157.0
*NEIC **17** 23:33:11.6*±*1.3*,*43.78N*±*0.05*×*105.34W*±*0.06*,*h0*km±*1km,*
ML2.8/28,Error ellipse: s-maj=12.8km s-min=8.0km
az=74.0
ISC 17 23:33:12.2±1.1,**43.78N**±0.06×**105.34W**±0.06,**h0**km,**n18,**
σ1§**15**/17,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**70**	Pg	**Pb**	**23 33 32.3**	**-0.3**
K22A	**Casper**	**1.42**	**218**		**Pg**	**23 33 38.2**	**-1.3**
K22A				IAML		23 34 01.2	
	comp=N,126nm,0.3s						
K22A				IAML		23 34 01.6	
	comp=E,142nm,0.9s						
PHWY	**Pilot Hill**	**2.48**	**182**	Pn	**Pn**	**23 33 55.1**	**+0.9**
LAO	**LASA Array**	**2.97**	**348**	Pn	**Pn**	**23 34 00.9**	**+0.2**
RLMT	**Red Lodge**	**3.11**	**297**	Pn	**Pn**	**23 34 03.0**	**+0.3**
RLMT				IAML		23 34 49.0	
	comp=E,20nm,3.5s						
RLMT				IAML		23 35 01.9	
	comp=E,25nm,3.5s						
PD31	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**23 34 05.6**	**+1.1**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**23 34 05.4**	**+0.9**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**23 34 03.5**	**-1.0**
	comp=E,0.5nm,0.3s,baz=75,slow=17,SNR=11						
PDAR				Lg	Lg	23 34 48.0	
	comp=E,3.5nm,0.3s,baz=78,slow=30,SNR=9.5						
	comp=E,0.9nm,0.3s						
OGNE	**Ogallala**	**3.75**	**138**	Pn	**Pn**	**23 34 11.6**	**+0.2**
H17A	**Grant Village**	**3.82**	**281**	Pn	**Pn**	**23 34 12.9**	**+0.4**
H17A				IAML		23 35 40.4	
	comp=E,13nm,3.8s						
REDW	**Red Top Meadow**	**4.03**	**266**		**Pn**	**23 34 16.1**	**+0.8**
TPAW	**Teton Pass**	**4.08**	**268**		**Pn**	**23 34 16.9**	**+0.8**
TPAW				IAML		23 35 10.9	
	comp=E,14nm,5.0s						
FXWY	**Fox Creek**	**4.12**	**270**	Pn	**Pn**	**23 34 18.0**	**+1.3**
FXWY				IAML		23 35 52.6	
	comp=E,13nm,4.7s						
FXWY				IAML		23 36 02.7	
	comp=E,15nm,4.8s						
O20A	**White River Ci**	**4.24**	**212**	Pn	**Pn**	**23 34 19.7**	**+1.5**
AHID	**Auburn Hatcher**	**4.33**	**258**		**Pn**	**23 34 20.9**	**+1.5**
AHID				IAML		23 34 59.9	
	comp=E,11nm,3.8s						
AHID				IAML		23 35 29.9	
	comp=E,13nm,3.8s						
DGMT	**Dagmar**	**4.75**	**9**	Pn	**Pn**	**23 34 27.4**	**+2.2**
I10CA	**LAC DU BONNET**	**9.04**	**41**	I	I	00 27 40.0	
	baz=216,slow=326,SNR=0.8						
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**23 35 24.9**	**-0.4**
	comp=E,0.2nm,0.3s,baz=230,slow=12,SNR=1.9						
ULM				Lg	Lg	23 38 00.9	
	comp=E,0.1nm,0.3s,baz=311,slow=22,SNR=3.4						
	comp=E,1.0nm,0.7s						

*STR **17** 23:37:39.6*±*0.3,44°N*±*2°×*±*°,h21km*±*1km,MLv2.4/18,*
Error ellipse: s-maj=0.0km s-min=0.0km az=179.5,
preliminary
*GEN **17** 23:37:40.7,43.64N×6.64E,h19km*±*2km,Ml2.2*
*LDG **17** 23:37:40.3*±*0.1,43.58N×6.64E,h13km,Md2.2/1,Ml2.7/10,*
Error ellipse: s-maj=2.5km s-min=1.9km az=173.0
ISC 17 23:37:39.6±0.9,**43.55N**±0.02×**6.64E**±0.01,**h19**km±2km,
n92,σ1§**08**/142,**Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMR	**La Mourre**	**0.24**	**204**	*e*Pg	**Pb**	**23 37 46.0**	**+0.9**
LMR				*e*Sg	**Sb**	**23 37 50.0**	**+1.3**
	258nm,0.2s						
TRIGF	**Trigance**	**0.26**	**319**	Pg	**Pg**	**23 37 46.1**	**+0.5**
TRIGF				Sg	**Sb**	**23 37 49.5**	**0.0**
CALF	**Calern**	**0.28**	**46**	Pg	**Pb**	**23 37 46.1**	**-0.1**
CALF				Sg	**Sg**	**23 37 50.8**	**+0.3**
SALSA	**La sagne**	**0.33**	**6**	Pg	**Pg**	**23 37 47.1**	**+0.3**
SALSA				Sg	**Sb**	**23 37 52.0**	**+0.1**
FLAF	**Flassans-sur-I**	**0.33**	**239**	Pg	**Pg**	**23 37 47.2**	**+0.5**
FLAF				Sg	**Sg**	**23 37 52.2**	**+0.6**
EILF	**Villa Eilenroc**	**0.35**	**91**	Pg	**Pg**	**23 37 47.8**	**+0.6**
EILF				Sg	**Sb**	**23 37 53.2**	**+0.5**
EILF	**Villa Eilenroc**	**0.35**	**91**	P	**Pb**	**23 37 48.5**	**+1.1**
EILF				S	**Sb**	**23 37 53.8**	**+1.1**
MVIF	**Mont Vial**	**0.50**	**47**	Pg	**Pb**	**23 37 50.4**	**+0.4**
MVIF				Sg	**Sb**	**23 37 57.5**	**+0.5**
MVIF	**Mont Vial**	**0.50**	**47**	P	**Pb**	**23 37 50.8**	**+0.9**
MVIF				S	**Sb**	**23 37 58.1**	**+1.1**
ENAUX	**Enaux**	**0.56**	**10**	Pg	**Pb**	**23 37 51.1**	**+0.2**
ENAUX				Sg	**Sg**	**23 37 58.9**	**+0.3**
BLAF	**les Blancs**	**0.59**	**313**	Pg	**Pb**	**23 37 51.4**	**+0.1**
BLAF				Sg	**Sg**	**23 37 59.5**	**+0.2**
MON	**Monaco**	**0.59**	**72**	Pg	**Pb**	**23 37 51.9**	**+0.6**
MON				Sg	**Sg**	**23 38 00.1**	**+0.6**
MON	**Monaco**	**0.59**	**72**	P	**Pg**	**23 37 52.5**	**+1.0**
MON				S	**Sg**	**23 38 00.8**	**+1.4**
ESCA	**l'Escarene**	**0.60**	**62**	Pg	**Pb**	**23 37 51.9**	**+0.5**
ESCA				Sg	**Sg**	**23 38 00.3**	**+0.6**
ESCA	**l'Escarene**	**0.60**	**62**	P	**Pg**	**23 37 52.4**	**+0.8**
ESCA				S	**Sg**	**23 38 01.1**	**+1.5**
OGDI	**Digne**	**0.61**	**336**	Pg	**Pg**	**23 37 52.5**	**+0.7**
OGDI				Sg	**Sg**	**23 38 01.3**	**+1.3**
OGDI	**Digne**	**0.61**	**336**	P	**Pg**	**23 37 52.5**	**+0.7**
OGDI				S	**Sg**	**23 38 01.1**	**+1.1**
ARTF	**Artigues**	**0.61**	**273**	Pg	**Pb**	**23 37 52.1**	**+0.5**
ARTF				Sg	**Sb**	**23 38 00.4**	**+0.6**
SBF	**Sospel**	**0.65**	**61**	*e*Pg	**Pb**	**23 37 52.8**	**+0.4**
SBF				*e*Sg	**Sg**	**23 38 02.0**	**+0.7**
	94nm,0.2s						
SPIF	**crte de Spivo**	**0.66**	**40**	Pg	**Pb**	**23 37 52.9**	**+0.4**
SPIF				Sg	**Sg**	**23 38 02.1**	**+0.4**
LEPF	**PUYLOUBIER**	**0.69**	**268**	Pg	**Pb**	**23 37 53.4**	**+0.5**
LEPF				Sg	**Sb**	**23 38 02.5**	**+0.5**
ISO	**Isola**	**0.69**	**25**	Pg	**Pb**	**23 37 53.4**	**+0.2**
ISO				Sg	**Sb**	**23 38 02.4**	**0.0**
ISO	**Isola**	**0.69**	**25**	P	**Pg**	**23 37 53.8**	**+0.5**
ISO				S	**Sg**	**23 38 03.1**	**+0.4**
BURY	**Giardini Botan**	**0.70**	**71**	Pg	**Pb**	**23 37 53.6**	**+0.4**
BURY	**Giardini Botan**	**0.70**	**71**	Sg	**Sg**	**23 38 03.4**	**+0.6**
BURY	**Giardini Botan**	**0.70**	**71**	P	**Pg**	**23 37 53.6**	**+0.4**
BURY				S	**Sg**	**23 38 03.7**	**+0.9**
MLYF	**Mely**	**0.77**	**305**	Pg	**Pb**	**23 37 54.9**	**+0.5**
MLYF				Sg	**Sg**	**23 38 05.1**	**+0.1**
SAOF	**Saorge**	**0.79**	**57**	Pg	**Pb**	**23 37 54.9**	**+0.1**
SAOF				Sg	**Sb**	**23 38 05.6**	**+0.5**
SAOF	**Saorge**	**0.79**	**57**	P	**Pb**	**23 37 54.9**	**+0.1**
SAOF				S	**Sb**	**23 38 05.6**	**+0.5**
BSTF	**la Bastide-des**	**0.79**	**295**	Pg	**Pb**	**23 37 54.7**	**-0.1**
BSTF				Sg	**Sb**	**23 38 04.8**	**-0.4**
STV	**Sant Anna di V**	**0.85**	**35**	Pg	**Pb**	**23 37 56.0**	**+0.2**
STV	**Sant Anna di V**	**0.85**	**35**	Sg	**Sb**	**23 38 07.2**	**+0.3**
STV	**Sant Anna di V**	**0.85**	**35**	P	**Pb**	**23 37 56.0**	**+0.2**
STV				S	**Sg**	**23 38 07.4**	**-0.2**
JAUF	**Jausiers**	**0.88**	**5**	Pg	**Pb**	**23 37 56.7**	**+0.4**
JAUF				Sg	**Sg**	**23 38 08.5**	**0.0**
SMRF	**Simiane la Rot**	**0.88**	**299**	*e*Pg	**Pb**	**23 37 57.0**	**+0.7**
SMRF				*e*Sg	**Sb**	**23 38 07.3**	**-0.5**
	51nm,0.2s						
OGAG	**Argentiere**	**0.90**	**355**	Pn	**Pn**	**23 38 01.2**	**+3.7**
OGAG				Sn	**Sn**	**23 38 17.9**	**+7.9**
OGAG	**Argentiere**	**0.90**	**355**	P	Pn	23 38 03.0	+5.6
RUSF	**Rustrel**	**0.92**	**295**	Pg	**Pb**	**23 37 57.6**	**+0.5**
RUSF				Sg	**Sg**	**23 38 10.5**	**+0.6**
SURF	**Saint Ours**	**0.94**	**7**	Pg	**Pb**	**23 37 57.8**	**+0.5**
SURF	**Saint Ours**	**0.94**	**7**	P	**Pb**	**23 37 57.9**	**+0.5**
IMI	**Imperia**	**0.97**	**68**	P	**Pb**	**23 37 57.5**	**-0.4**
IMI				S	**Sb**	**23 38 10.3**	**-0.1**
CREF	**Crivoux**	**0.99**	**359**	Pg	**Pn**	**23 37 59.0**	**+0.2**
CREF				Sg	**Sg**	**23 38 12.0**	**-0.2**
PZZ	**Stroppo**	**1.01**	**20**	Pg	**Pb**	**23 37 59.0**	**+0.4**
PZZ	**Stroppo**	**1.01**	**20**	Sg	**Sg**	**23 38 12.5**	**-0.2**
PZZ	**Stroppo**	**1.01**	**20**	P	**Pb**	**23 37 59.0**	**+0.4**
PZZ				S	**Sg**	**23 38 12.4**	**-0.2**
GBOS	**Grotte di Boss**	**1.10**	**51**	Sg	**Sb**	**23 38 14.8**	**+0.5**
GBOS	**Grotte di Boss**	**1.10**	**51**	Pg	**Pb**	**23 38 00.4**	**+0.2**
GBOS	**Grotte di Boss**	**1.10**	**51**	P	**Pb**	**23 38 00.5**	**+0.3**
RORO	**Rocca Rossa**	**1.17**	**61**	Sn	**Sb**	**23 38 16.2**	**+0.2**
RORO	**Rocca Rossa**	**1.17**	**61**	Pn	**Pn**	**23 38 00.7**	**-0.3**
RORO	**Rocca Rossa**	**1.17**	**61**	P	**Pn**	**23 38 00.7**	**-0.3**
MBDF	**Montbardon**	**1.18**	**4**	*e*Pn	**Pb**	**23 38 01.9**	**+0.4**
MBDF				*e*Sg	**Sb**	**23 38 16.4**	**0.0**
	25nm,0.2s						
SAUF	**chteau de Sau**	**1.18**	**290**	Pn	**Pn**	**23 38 01.7**	**+0.6**
SAUF				Sn	**Sb**	**23 38 16.8**	**+0.6**
CANO	**Canova, Maglio**	**1.32**	**60**	Sn	**Sn**	**23 38 20.1**	**-0.2**
CANO	**Canova, Maglio**	**1.32**	**60**	Pn	**Pn**	**23 38 02.9**	**-0.3**
CANO	**Canova, Maglio**	**1.32**	**60**	P	**Pn**	**23 38 03.3**	**+0.1**
BHB	**Bricherasio**	**1.36**	**19**	Pn	**Pn**	**23 38 03.3**	**-0.4**
BHB	**Bricherasio**	**1.36**	**19**	Sn	**Sn**	**23 38 20.7**	**-0.6**
RRL	**Rocca Remolon**	**1.37**	**4**	Sn	**Sn**	**23 38 21.1**	**-0.6**
RRL	**Rocca Remolon**	**1.37**	**4**	Pn	**Pn**	**23 38 03.3**	**-0.6**
RRL	**Rocca Remolon**	**1.37**	**4**	P	**Pb**	**23 38 04.8**	**0.0**
QLNO	**Quiliano**	**1.45**	**57**	P	**Pb**	**23 38 06.3**	**+0.2**
ORIF	**Oris-en-Rattie**	**1.47**	**338**	*e*Pn	**Pn**	**23 38 05.1**	**-0.1**
ORIF				*e*Sn	**Sn**	**23 38 23.2**	**-0.8**
	11nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.47**	**338**	Pn	**Pn**	**23 38 04.5**	**-0.7**
BNI	**Bardonecchia**	**1.50**	**1**	P	**Pb**	**23 38 07.4**	**+0.5**
OGMO	**Fort Saint-Gob**	**1.65**	**1**	Pn	**Pn**	**23 38 07.6**	**-0.1**
OGMO				Sn	**Sn**	**23 38 27.7**	**-0.9**
RSP	**Reno Superiore**	**1.66**	**15**	Pn	**Pn**	**23 38 07.6**	**-0.2**
RSP	**Reno Superiore**	**1.66**	**15**	Sn	**Sn**	**23 38 28.0**	**-0.6**
PCP	**Piancastagn**	**1.69**	**54**	Pn	**Pn**	**23 38 07.9**	**-0.3**
PCP	**Piancastagn**	**1.69**	**54**	Sn	**Sn**	**23 38 29.0**	**-0.4**
VIVF	**Saint-Julien-l**	**1.92**	**313**	*e*Pn	**Pn**	**23 38 11.2**	**-0.2**
VIVF	**Saint-Julien-l**	**1.92**	**313**	*e*Pg	**Pg**	**23 38 15.9**	**-0.7**
VIVF				*e*Sn	**Sn**	**23 38 33.9**	**-1.2**
	5.5nm,0.2s						
LPG	**La Plagne**	**1.94**	**2**	*e*Pn	**Pn**	**23 38 11.9**	**0.0**
LPG				*e*Sg	**Sg**	**23 38 40.5**	**-1.9**
	15nm,0.5s						
LPL	**La Plagne**	**1.96**	**2**	*e*Pn	**Pn**	**23 38 12.0**	**-0.1**
LPL	**La Plagne**	**1.96**	**2**	*e*Pg	**Pb**	**23 38 16.1**	**+1.2**
LPL				*e*Sg	**Sg**	**23 38 41.0**	**-1.9**
	16nm,0.5s						
PGF	**Pioggiola**	**2.00**	**119**	*e*Pn	**Pn**	**23 38 11.6**	**-0.9**
PGF				*e*Sn	**Sn**	**23 38 34.2**	**-2.8**
	7.9nm,0.2s						
PGF	**Pioggiola**	**2.00**	**119**	Pn	**Pn**	**23 38 11.6**	**-0.9**
MORSI	**Morsiglia**	**2.08**	**106**	Pn	**Pn**	**23 38 12.6**	**-0.9**
MORSI				Sn	**Sn**	**23 38 36.4**	**-2.3**
LASF	**Ste Croix**	**2.08**	**285**	*e*Pn	**Pn**	**23 38 13.4**	**-0.2**
LASF				*e*Sn	**Sn**	**23 38 37.9**	**-1.1**
	4.5nm,0.4s						
TRAV	**Traversella**	**2.11**	**22**	Pn	**Pn**	**23 38 13.8**	**-0.3**
TRAV	**Traversella**	**2.11**	**22**	Sn	**Sn**	**23 38 39.0**	**-0.8**
CIRO	**Champorcher**	**2.15**	**18**	Pn	**Pn**	**23 38 14.2**	**-0.6**
CIRO	**Champorcher**	**2.15**	**18**	Sn	**Sn**	**23 38 40.0**	**-1.1**
OGSM	**Saint Maurice**	**2.16**	**342**	Pn	**Pn**	**23 38 14.5**	**-0.2**
OGSM				Sn	**Sn**	**23 38 40.0**	**-1.0**
SSB	**Saint Sauveur**	**2.29**	**320**	Pn	**Pn**	**23 38 15.9**	**-0.5**
SSB				Sn	**Sn**	**23 38 42.8**	**-1.3**
SMPL	**Sampolo**	**2.43**	**126**	Pn	**Pn**	**23 38 18.1**	**-0.2**
SMPL				Sn	**Sn**	**23 38 45.0**	**-2.5**
OGSI	**Sixt**	**2.51**	**2**	Pn	**Pn**	**23 38 18.9**	**-0.6**
OGSI				Sn	**Sn**	**23 38 48.1**	**-1.6**
DIX	**Grande Dixence**	**2.58**	**12**	Pn	**Pn**	**23 38 20.1**	**-0.5**
DIX	**Grande Dixence**	**2.58**	**12**	Sn	**Sn**	**23 38 49.9**	**-1.8**
OG35	**Corcelles**	**2.60**	**343**	Pn	**Pn**	**23 38 20.3**	**-0.5**
COLF	**Collangettes**	**2.88**	**314**	Pn	**Pn**	**23 38 24.1**	**-0.5**
LBL	**Lubilhac**	**2.96**	**306**	Pn	**Pn**	**23 38 25.3**	**-0.3**
LBL				Sn	**Sn**	**23 38 58.4**	**-2.2**

*NEIC **17** 23:57:02.0*±*1.3,52.1N*±*0.2×171.6W*±*0.1,h60km*±*13km,*
mb3.8/8,ML3.9/6,ML3.3(AEIC),Error ellipse:
s-maj=31.4km s-min=4.9km az=165.0
*AEIC **17** 23:57:02.5*±*3.2,51.8N*±*0.2×171.47W*±*0.07,h10km*±*8km,*
Error ellipse: s-maj=27.0km s-min=2.7km az=168.0
*IDC **17** 23:57:06.4*±*10.0,52.13N×171.73W,h95km*±*98km,mb3.3/6,*
mbtmp3.7/7,ML2.6/1,MS3.4/1,Error ellipse: s-maj=44.0km
s-min=22.2km az=6.0
ISC 17 23:57:00.6±0.9,**52.0N**±0.2×**171.56W**±0.05,**h44**km,**n47,**
σ1§**24**/41,**mb3.8**/8,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.59**	**281**		**Pn**	**23 57 27.2**	**+0.9**
KOFP					**Sn**	**23 57 47.1**	**+1.5**
ATKA	**Atka Island**	**1.64**	**278**		**Pn**	**23 57 27.1**	**+0.2**
ATKA					**Sn**	**23 57 47.8**	**+1.1**
ATKA				IAML		23 57 53.1	
	comp=N,429nm,0.8s						
KOWE	**Korovin West**	**1.70**	**284**		**Pn**	**23 57 29.0**	**+1.3**
NIKH	**Nikolski High**	**1.92**	**58**		**Pn**	**23 57 30.1**	**-0.6**
NIKH	**Nikolski High**	**1.92**	**58**		**Sn**	**23 57 53.2**	**-0.5**
OKCE	**Okmok Cone E**	**2.51**	**54**		**Pn**	**23 57 40.2**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**2.55**	**56**		**Pn**	**23 57 40.8**	**+1.3**
OKRE	**Okmok R'deer P**	**2.56**	**52**		**Pn**	**23 57 41.1**	**+1.5**
OKFG	**Magazine Ridge**	**2.63**	**56**		**Pn**	**23 57 41.6**	**+1.1**
OKFG					**Sn**	**23 58 12.3**	**+1.2**
GSTR	**Great Sitkin T**	**2.78**	**274**		**Sn**	**23 58 16.5**	**+1.6**
ADK	**Adak**	**3.17**	**270**		**Pn**	**23 57 48.4**	**+0.4**
ADK	**Adak**	**3.17**	**270**	IAML		23 58 35.4	
	comp=N,336nm,0.6s						
ADK				IAML		23 58 35.5	
	comp=N,371nm,0.7s						
MAPS	**Pakushin South**	**3.33**	**55**		**Pn**	**23 57 51.0**	**+0.9**
MGOD	**Makushin Gods**	**3.36**	**56**		**Pn**	**23 57 51.2**	**+0.7**
KIWB	**Kanaga Island**	**3.46**	**270**	Pn	**Pn**	**23 57 53.5**	**+1.6**
MSW	**Makushin Switc**	**3.47**	**55**		**Pn**	**23 57 53.0**	**+1.0**
MNAT	**Makushin Natee**	**3.50**	**55**		**Pn**	**23 57 53.4**	**+0.9**
UNV	**Unalaska Valle**	**3.57**	**57**		**Pn**	**23 57 54.1**	**+0.6**
UNV	**Unalaska Valle**	**3.57**	**57**		**Sn**	**23 58 36.3**	**+1.9**
AKUT	**Akutan**	**4.09**	**56**	Pn	**Pn**	**23 58 03.3**	**+2.7**
AKUT				IAML		23 59 05.2	
	comp=E,235nm,3.5s						
SDPT	**Sand Point**	**7.39**	**59**	Pn	**Pn**	**23 58 46.6**	**+0.9**
P18K	**Big Mountain,**	**11.79**	**45**	Pn	**Pn**	**23 59 47.3**	**+1.3**
OHAK	**Old Harbor**	**11.80**	**57**	Pn	**Pn**	**23 59 44.8**	**-1.2**
BARN	**Barnard Glacie**	**18.66**	**49**		**P**	**00 01 14.9**	**+0.2**
BARN				IAmb	IAmb	00 01 36.0	
	comp=Z,12nm,1.5s						
PETK	**Petropavlovsk-**	**18.66**	**286**	P	**Pn**	**00 01 15.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=49,slow=14,SNR=2.4						
	comp=Z,2.5nm,0.9s						
CTGM	**Chitina Glacie**	**18.79**	**50**	P	**Pn**	**00 01 17.0**	**+0.1**
B21K	**Ikpikpuk River**	**19.38**	**18**	P	**Pn**	**00 01 22.9**	**-0.8**
BMAR	**Burnt Mountain**	**20.32**	**30**	P	Pn	00 01 33.6	-1.3
HYT	**Haines Junctio**	**20.59**	**51**	P	Pn	00 01 36.9	-1.3
HYT				IAmb	IAmb	00 01 48.7	
	comp=Z,6.3nm,1.3s						
INK	**Inuvik**	**24.40**	**34**	P	**P**	**00 02 12.1**	**-2.2**
H11N2	**WAKE ISLAND Hy**	**36.34**	**216**	T	T	00 42 38.4	
	baz=21,slow=76,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**36.35**	**216**	T	T	00 42 33.7	
	baz=21,slow=76,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**36.36**	**216**	T	T	00 42 40.6	
	baz=21,slow=76,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**37.54**	**215**	T	T	00 43 59.9	
	baz=22						
H11S2	**WAKE ISLAND Hy**	**37.55**	**215**	T	T	00 44 05.5	
	baz=22,slow=74,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**37.56**	**215**	T	T	00 44 01.1	
	baz=22,slow=74,SNR=3.9						
PDAR	**Pinedale Array**	**41.80**	**77**	P	**P**	**00 04 47.3**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=284,slow=4.5,SNR=2.7						
PDAR				LR	LR	00 21 23.4	
	comp=Z,46nm,20.0s,baz=142,slow=35						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**54.11**	**87**	P	**P**	**00 06 22.2**	**+1.2**
	comp=Z,0.5nm,1.0s,baz=259,slow=2.0,SNR=2.9						
	comp=Z,0.5nm,1.0s						
KURK	**Kurchatov**	**61.74**	**317**	P	**P**	**00 07 13.1**	**-1.0**
MK31	**Makanchi Array**	**63.07**	**312**	P	**P**	**00 07 21.8**	**-1.2**
MK31				IAmb	IAmb	00 07 35.9	
	comp=Z,0.9nm,1.3s						
MKAR	**Makanchi Array**	**63.07**	**312**	P	**P**	**00 07 21.7**	**-1.3**
MKAR	**Makanchi Array**	**63.07**	**312**	P	**P**	**00 07 21.6**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=42,slow=5.4,SNR=11						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**66.03**	**351**	P	**P**	**00 07 41.2**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=356,slow=8.9,SNR=3.4						
	comp=Z,0.6nm,0.7s						
ABKAR	**Akbulak array**	**70.02**	**327**	P	**P**	**00 08 06.2**	**-1.2**
ABKAR	**Akbulak array**	**70.02**	**327**	P	**P**	**00 08 06.3**	**-1.1**
ABKAR				IAmb	IAmb	00 08 29.1	
	comp=Z,1.9nm,1.3s						
CMAR	**Chiang Mai Arr**	**75.38**	**281**	P	**P**	**00 08 40.4**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=18,slow=8.8,SNR=4.6						
	comp=Z,1.4nm,0.3s						
ASAR	**Alice Springs**	**89.13**	**228**	P	**P**	**00 09 50.0**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=28,slow=4.9,SNR=6.2						
	comp=Z,0.4nm,0.7s						

*TEH **18** 00:23:52.2,34.79N×45.60E,h10km*±*510km,ML2.8*
*ISN **18** 00:23:52.7*±*0.9,34.80N×45.51E,h10km,ML2.8*
ISC 18 00:23:51.9±1.1,**34.78N**±0.06×**45.58E**±0.06,**h10**km,**n6,**
σ0§**51**/7,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.28**	**178**	Pg	**Pb**	**00 23 58.7**	**-0.2**
IDHR	**Dehrash**	**0.67**	**97**	Pg	**Pb**	**00 24 05.7**	**-0.2**
IKRK	**Kirkuk**	**1.19**	**302**	*e*Pg	**Pb**	**00 24 14.0**	**-0.6**
	baz=122						
IKRK				*e*Sg	**Sg**	**00 24 31.0**	**+0.8**
IKRK				AML	AML	00 24 34.1	
	comp=E,194nm,0.4s						
IKRK				AML	AML	00 24 34.1	
	comp=N,216nm,0.3s						
ILBA	**Ilam Banvizeh**	**1.27**	**156**	Pg	**Pn**	**00 24 15.8**	**+0.1**
KCHF	**Cheshme Sefid,**	**1.31**	**112**	Pg	**Pg**	**00 24 17.0**	**-0.1**
SDS1	**Sardasht. Az.**	**1.37**	**357**	Pg	**Pg**	**00 24 18.2**	**0.0**

*IDC **18** 00:25:32.5*±*1.3,35.11N×97.48E,h0km,mb3.6/6,*
mbtmp3.7/9,ML4.0/3,MS3.1/2,Error ellipse: s-maj=37.6km
s-min=21.1km az=54.0
ISC 18 00:25:32.9±1.0,**35.0N**±0.1×**97.3E**±0.2,**h10**km,**n10,**
σ1§**11**/7,**mb3.8**/4,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**14.50**	**25**	Pn	**Pn**	**00 28

comp=Z,1.7nm,0.9s,baz=192,slow=14,SNR=1.8
STKA ScP **ScP** **00 38 26.2 -0.5**
comp=Z,1.3nm,0.3s,baz=331,slow=5.4,SNR=5.8
STKA LR LR 00 43 25.4
comp=Z,169nm,18.3s,baz=24,slow=38
comp=Z,1.7nm,0.9s
FITZ Fitzroy Crossi 30.36 245 P **P** **00 31 49.6 -1.6**
DAV Davao City (W) 31.63 294 LR LR 00 44 50.7
comp=Z,48nm,18.0s,baz=354,slow=36
RTZ Ruatahuna 38.14 151 P **P** **00 32 58.8 +0.3**
RTZ IAmb IAmb 00 33 13.3
comp=Z,11nm,0.9s
THZ Tophouse 38.98 158 P **P** **00 33 06.7 +1.2**
THZ IAmb IAmb 00 33 24.8
comp=Z,36nm,1.4s
JAGI Jajag, Banyuwa 39.91 264 P **P** **00 33 13.3 -0.3**
NWAO Narrogin (SRO) 43.48 228 LR LR 00 52 25.6
comp=Z,144nm,18.1s,baz=147,slow=37
YULB Yu-li 43.74 314 P **P** **00 33 45.0 +0.3**
YULB IAmb IAmb 00 33 49.6
comp=Z,14nm,0.8s
NACB Ninganchiao 44.02 315 P **P** **00 33 46.6 -0.3**
SSLB Suanglung 44.23 314 P **P** **00 33 49.0 +0.2**
YHNB Yeheng 44.48 315 P **P** **00 33 51.2 +0.4**
JNU Nakatsue 45.10 332 P **P** **00 33 55.4 -0.1**
JNU IAmb IAmb 00 33 56.8
comp=Z,17nm,1.0s
RAR Rarotonga 46.77 113 LR LR 00 51 13.6
comp=Z,183nm,18.1s,baz=280,slow=33
KSRS Korea Array 50.03 332 P **P** **00 34 33.6 -0.1**
comp=Z,2.4nm,0.9s,baz=149,slow=9.8,SNR=9.8
comp=Z,2.4nm,0.9s
NJ2 Nanjing 50.98 321 *e*P **P** **00 34 42.3 +1.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
MDJ Mudanjiang 55.36 339 P **P** **00 35 15.6 +2.5**
MDJ pmax pmax
comp=Z,9.0nm,1.4s
MDJ pmax pmax
comp=Z,350nm,4.5s
ENH Enshi 56.30 313 P **P** **00 35 20.2 +0.1**
BNX BinXian 57.13 338 ⇑P **P** **00 35 25.9 +0.2**
BNX pmax pmax
comp=Z,7.0nm,0.7s
BNX pmax pmax
comp=Z,300nm,4.1s
XAN Xi'an 58.77 316 ⇑P **P** **00 35 38.3 +0.8**
XAN sP pwP 00 35 45.3 -1.1
XAN pmax pmax
comp=Z,14nm,0.8s
PETK Petropavlovsk- 59.25 2 LR LR 00 56 10.6
comp=Z,26nm,21.1s,baz=137,slow=31
CMAR Chiang Mai Arr 59.91 295 P **P** **00 35 46.6 +1.0**
CMAR Chiang Mai Arr 59.91 295 P **P** **00 35 46.1 +0.5**
comp=Z,0.6nm,0.3s,baz=115,slow=4.6,SNR=6.7
CMAR LR LR 01 00 24.6
comp=Z,23nm,21.0s,baz=335,slow=35
comp=Z,0.6nm,0.3s
PZH PanZhiHua 60.49 305 P **P** **00 35 53.3 +3.7**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,60nm,5.1s
XLT XiLinHaoTe 60.74 329 *e*P **P** **00 35 51.3 +0.4**
XLT pP sP 00 35 55.9 +2.8
XLT pmax pmax
comp=Z,10.0nm,0.9s
XLT pmax pmax
comp=Z,77nm,4.2s
CD2 Chengdu 60.88 311 P **P** **00 35 53.1 +1.0**
CD2 pP sP 00 35 55.8 +1.8
CD2 sP pP 00 35 58.0 +4.5
CD2 pmax pmax
comp=Z,30nm,0.6s
HEH HeiHe 60.97 341 *e*P **P** **00 35 51.5 -0.7**
HEH pmax pmax
comp=Z,5.0nm,0.8s
SHEM Shemya Is, Ala 61.15 14 LR LR 01 01 14.2
comp=Z,60nm,18.5s,baz=315,slow=35
HHC Hu-ho-hao-te 61.16 324 *e*P **P** **00 35 56.0 +2.1**
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,65nm,5.4s
LZH Lanzhou 63.37 316 ⇑P **P** **00 36 10.5 +1.6**
LZH pP sP 00 36 14.8 +4.0
LZH pmax pmax
comp=Z,19nm,1.4s
MA2 Magadan 65.72 358 LR LR 01 05 00.5
comp=Z,18nm,19.4s,baz=88,slow=36
GTA Gaotai 67.80 317 *e*P **P** **00 36 38.9 +1.5**
GTA pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 68.08 328 P **P** **00 36 39.3 +0.3**
ULN IAmb IAmb 00 36 46.2
comp=Z,4.8nm,1.2s
SHL Shillong 68.39 301 P **P** **00 36 41.5 +0.1**
SONM Songino Array 68.41 327 P **P** **00 36 41.6 +0.6**
SONM IAmb IAmb 00 37 01.3
comp=Z,5.3nm,1.5s
SONM Songino Array 68.41 327 P **P** **00 36 41.1 +0.1**
comp=Z,1.3nm,0.9s,baz=124,slow=7.4,SNR=6.7
comp=Z,1.3nm,0.9s
LSA Lhasa 70.35 304 P **P** **00 36 54.6 +0.7**
LSA IAmb IAmb 00 36 57.1
comp=Z,5.1nm,0.8s
WMQ Urumqi 77.88 317 *e*P **P** **00 37 39.3 +2.2**
MK31 Makanchi Array 82.46 319 P **P** **00 38 01.8 +0.1**
MKAR Makanchi Array 82.46 319 P **P** **00 38 01.4 -0.3**
MKAR Makanchi Array 82.46 319 P **P** **00 38 02.1 +0.4**
comp=Z,2.0nm,0.8s,baz=105,slow=5.2,SNR=25
MKAR LR LR 01 16 25.8
comp=Z,33nm,19.0s,baz=54,slow=37
comp=Z,2.0nm,0.8s
MAKZ Makanchi 82.67 319 P **P** **00 38 02.1 -0.7**
MAKZ IAmb IAmb 00 38 23.4
comp=Z,4.0nm,1.1s
ILAR Eielson Array 82.97 22 P **P** **00 38 01.2 -2.7**
comp=Z,1.2nm,0.8s,baz=242,slow=5.7,SNR=12
ILAR LR LR 01 12 57.6
comp=Z,77nm,18.5s,baz=226,slow=34
comp=Z,1.2nm,0.8s
ZALV Zalesovo Beam 83.25 326 P **P** **00 38 03.8 -1.7**
comp=Z,1.0nm,0.5s,baz=106,slow=4.7,SNR=5.5
comp=Z,1.0nm,0.5s
QSPA South Pole Qui 83.67 180 P **P** **00 38 07.2 -0.5**
QSPA IAmb IAmb 00 38 10.9
comp=Z,10.0nm,1.3s
QSPA South Pole Qui 83.67 180 P **P** **00 38 06.9 -0.8**
comp=Z,3.5nm,1.0s,baz=269,slow=0.9,SNR=11
comp=Z,3.5nm,1.0s
KSH Kashi 85.08 310 P **P** **00 38 18.1 +2.7**
KSH sP pwP 00 38 29.9 +6.2
KSH pmax pmax
comp=Z,6.0nm,1.2s
KURBB Kurchatov Arra 85.92 322 P **P** **00 38 17.0 -2.2**
comp=Z,0.3nm,0.5s,baz=105,slow=4.0,SNR=3.0
comp=Z,0.3nm,0.5s
NIL Nilore 86.09 304 P **P** **00 38 20.3 -0.1**
NIL IAmb IAmb 00 38 21.4
comp=Z,7.4nm,0.7s
AAK Ala-Archa 86.81 313 P **P** **00 38 22.2 -1.8**
comp=Z,2.1nm,1.1s,baz=67,slow=19,SNR=3.8
comp=Z,2.1nm,1.1s
NRIK Noril'sk 87.87 341 P **P** **00 38 26.4 -1.9**
comp=Z,0.9nm,0.3s,baz=164,slow=1.5,SNR=5.0
comp=Z,0.9nm,0.3s
YBH Yreka Blue Hor 88.90 48 LR LR 01 14 28.8
comp=Z,65nm,18.7s,baz=246,slow=33
BTK Batken 89.08 310 P **P** **00 38 34.7 -0.1**
BTK IAmb IAmb 00 38 36.0
comp=Z,3.2nm,0.8s
INK Inuvik 89.30 21 LR LR 01 16 05.0
comp=Z,58nm,18.8s,baz=180,slow=34
BVAR Borovoye Array 91.36 323 P **P** **00 38 43.4 -1.6**
comp=Z,0.7nm,0.6s,baz=134,slow=8.4,SNR=4.4
comp=Z,0.7nm,0.6s
NVAR Mina Array Bea 91.79 52 P **P** **00 38 47.6 -0.1**
NVAR Mina Array Bea 91.79 52 P **P** **00 38 48.1 +0.5**
comp=Z,3.1nm,0.8s,baz=251,slow=6.7,SNR=19
NVAR LR LR 01 15 59.8
comp=Z,56nm,18.4s,baz=66,slow=33
comp=Z,3.1nm,0.8s
NEW Newport 93.67 42 LR LR 01 16 51.3
comp=Z,69nm,19.2s,baz=199,slow=33
W13A Hualapai Mount 95.02 55 P **P** **00 39 03.2 +0.6**
W13A IAmb IAmb 00 39 04.2
comp=Z,2.3nm,0.9s
YKA Yellowknife Ar 96.02 28 P **P** **00 39 05.9 -0.3**
comp=Z,0.5nm,0.8s,baz=270,slow=4.8,SNR=5.6
comp=Z,0.5nm,0.8s
ARU Arti 98.41 326 LR LR 01 24 48.4
comp=Z,39nm,20.3s,baz=311,slow=36
PDAR Pinedale Array 98.71 48 P **P** **00 39 17.6 -1.5**
comp=Z,0.5nm,0.7s,baz=284,slow=0.7,SNR=4.8
comp=Z,0.5nm,0.7s
BDFB Brasilia 148.92 135 PKPbc **PKPdf** **00 45 26.4 +2.1**
comp=Z,2.9nm,0.8s,baz=150,slow=12,SNR=4.5
TORD Torodi Ar. Bea 152.22 286 PKPbc **PKPbc** **00 45 35.0 -1.0**
comp=Z,4.5nm,0.7s,baz=47,slow=4.6,SNR=12

*IDC **18** 00:44:14.0±0.8, 16°.18S×173°.32W, h0km, mb4.0/8, mbtmp4.0/8, MS3.3/4, Error ellipse: s-maj=41.0km s-min=19.9km az=142.0*
*NEIC **18** 00:44:18.6±2.7, 16°.24S±0°.07×173°.1W±0°.1, h35km±2km, mb4.5/12, Error ellipse: s-maj=22.9km s-min=12.3km az=98.0*
ISC 18 00:44:19.6±0.5, 16°.24S±0°.08×173°.1W±0°.1, h50km, n48, σ1s95/38, mb4.2/14, MS3.4/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.63**	**28**		**Pn**	**00 44 56.2**	**-3.5**
AFI				Sn	**Sn**	**00 45 27.5**	**-3.0**
NIUE	**Niue**	**4.11**	**134**		**Pn**	**00 45 15.9**	**-4.0**
DZM	**Mont Dzumac**	**20.20**	**250**	LR	LR	00 55 08.7	
	comp=Z,126nm,19.2s,baz=75,slow=33						
PPT	**Papeete**	**22.51**	**97**	LR	LR	00 56 19.6	
	comp=Z,26nm,19.3s,baz=233,slow=32						
RTZ	**Ruatahuna**	**23.94**	**200**	P	**P**	**00 49 29.7**	**+0.5**
RTZ				IAmb	IAmb	00 49 50.8	
	comp=Z,18nm,1.3s						
QRZ	**Quartz Range**	**27.49**	**204**	P	**P**	**00 50 02.4**	**+1.2**
ARMA	**Armidale**	**35.20**	**240**	P	**P**	**00 51 07.9**	**-1.4**
CTA	**Charters Tower**	**38.78**	**258**	LR	LR	01 06 07.4	
	comp=Z,60nm,18.4s,baz=82,slow=34						
CTAO	**Charters Tower**	**38.78**	**258**	P	**P**	**00 51 37.4**	**-2.2**
CTAO				IAmb	IAmb	00 52 02.2	
	comp=Z,11nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**39.85**	**329**	T	T	01 34 02.2	
	baz=151						
H11S3	**WAKE ISLAND Hy**	**39.87**	**329**	T	T	01 34 01.0	
	baz=151						
H11S1	**WAKE ISLAND Hy**	**39.87**	**329**	T	T	01 34 06.8	
	baz=151						
H11N3	**WAKE ISLAND Hy**	**40.80**	**330**	T	T	01 35 09.4	
	baz=150,slow=76,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**40.81**	**330**	T	T	01 35 07.1	
	baz=150,slow=76,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**40.82**	**330**	T	T	01 35 06.5	
	baz=150,slow=76,SNR=6.0						
TOO	**Toolangi**	**42.19**	**232**	P	**P**	**00 52 07.0**	**-0.7**
TOO				IAmb	IAmb	00 52 12.8	
	comp=Z,20nm,1.5s						
STKA	**Stephens Creek**	**43.91**	**241**	P	**P**	**00 52 20.8**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=42,slow=9.6,SNR=4.6						
	comp=Z,1.9nm,0.5s						
BBOO	**Buckleboo**	**48.68**	**240**	P	**P**	**00 52 58.1**	**-0.9**
WB0	**Warramunga Arr**	**49.94**	**258**	P	**P**	**00 53 07.8**	**-1.0**
WB0				IAmb	IAmb	00 53 12.4	
	comp=Z,6.1nm,1.2s						
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**00 53 07.7**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=92,slow=6.5,SNR=11						
WRA				PcP	**PcP**	**00 54 31.1**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=99,slow=3.6,SNR=1.1						
	comp=Z,0.6nm,0.5s						
AS31	**Alice Springs**	**50.16**	**253**	P	**P**	**00 53 10.1**	**-0.5**
AS31				IAmb	IAmb	00 53 14.1	
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**50.17**	**253**	P	**P**	**00 53 09.8**	**-0.8**
	comp=Z,7.7nm,0.6s,baz=88,slow=8.2,SNR=57						
ASAR				PcP	**PcP**	**00 54 31.8**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=106,slow=3.5,SNR=1.3						
ASAR				LR	LR	01 13 28.3	
	comp=Z,54nm,18.3s,baz=112,slow=35						
	comp=Z,7.7nm,0.6s						
QSPA	**South Pole Qui**	**73.81**	**180**		**P**	**00 55 50.2**	**+1.6**
QSPA	**South Pole Qui**	**73.81**	**180**	P	**P**	**00 55 50.5**	**+1.8**
	comp=Z,1.1nm,1.0s,baz=58,slow=4.9,SNR=10						
	comp=Z,2.1nm,1.0s						
NVAR	**Mina Array Bea**	**74.74**	**42**	P	**P**	**00 55 56.6**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=217,slow=8.9,SNR=2.9						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**80.81**	**56**	P	**P**	**00 56 31.6**	**+3.2**
	comp=Z,0.3nm,0.9s,baz=177,slow=7.2,SNR=3.8						
	comp=Z,0.3nm,0.9s						
PDAR	**Pinedale Array**	**82.67**	**42**	P	**P**	**00 56 39.5**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=209,slow=3.0,SNR=6.2						
	comp=Z,0.7nm,0.8s						
WRH	**Wood River Hil**	**82.72**	**11**	P	**P**	**00 56 38.3**	**+0.7**
WRH				IAmb	IAmb	00 56 52.4	
	comp=Z,7.8nm,1.4s						
CCB	**Clear Creek Bu**	**82.93**	**11**	P	**P**	**00 56 40.0**	**+1.4**
ILAR	**Eielson Array**	**83.21**	**11**	P	**P**	**00 56 41.3**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=224,slow=5.9,SNR=8.2						
	comp=Z,0.6nm,0.8s						
IMAR	**Indian Mountai**	**83.26**	**8**	P	**P**	**00 56 42.1**	**+1.8**
J25K	**Salcha River,**	**83.35**	**12**	P	**P**	**00 56 42.8**	**+1.9**
BMAR	**Burnt Mountain**	**86.02**	**11**	P	**P**	**00 56 56.7**	**+2.4**
BRTR	**Keskin Array B**	**147.01**	**320**	PKPbc	**PKiKP**	**01 03 58.4**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=26,slow=4.1,SNR=2.8						
GERES	**GERESS Array B**	**147.02**	**352**	PKPbc	**PKiKP**	**01 03 58.5**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=46,slow=2.8,SNR=4.4						
CONA	**Conrad Observa**	**147.56**	**349**	*e*PKiKP	**PKPab**	**01 04 04.0**	**+3.4**
	comp=Z,1.0nm,0.6s						
CONA				*e*pPKP	**pPKPab**	**01 04 13.3**	**-1.2**
	comp=Z,2.8nm,0.8s						
RONA	**Rosalia, Austr**	**147.70**	**348**	*e*pPKP	pPKPdf	01 04 13.6	+3.3
	comp=Z,5.6nm,1.1s						
MOA	**Molln**	**147.91**	**351**	*e*pPKP	pPKPdf	01 04 14.5	+3.9
	comp=Z,3.0nm,0.9s						
ARSA	**Arzberg**	**148.28**	**349**	*i* PKP	**PKPab**	**01 04 05.4**	**+2.0**
	comp=Z,0.7nm,0.4s						
RETA	**Reutte**	**148.69**	**355**	*e*pPKP	pPKPdf	01 04 16.0	+4.1
	comp=Z,4.1nm,1.1s						
WATA	**Walderalm**	**148.76**	**354**	*e*pPKP	pPKPdf	01 04 19.1	+6.9
	comp=Z,4.2nm,1.2s						
WTTA	**Wattenberg**	**148.83**	**354**	*e*PKiKP	**PKPab**	**01 04 04.9**	**-0.9**
	comp=Z,0.4nm,0.3s						
WTTA				*e*pPKP	**sPKPdf**	**01 04 16.5**	**-1.0**
	comp=Z,3.7nm,0.7s						
SQTA	**Sankt Quirin**	**148.91**	**354**	*e*pPKP	pPKPdf	01 04 16.7	+4.3
	comp=Z,0.5nm,0.3s						
SOKA	**Soboth**	**148.92**	**349**	*e*pPKP	pPKPdf	01 04 15.9	+3.6
	comp=Z,1.9nm,0.9s						
DAVA	**Damuels**	**148.95**	**356**	*e*pPKP	pPKPdf	01 04 17.1	+4.6
	comp=Z,2.4nm,0.7s						
FETA	**Feichten**	**149.15**	**355**	*e*pPKP	pPKPdf	01 04 20.4	+7.6
	comp=Z,3.9nm,1.1s						
OBKA	**Obir**	**149.16**	**350**	*e*PKP	**PKPab**	**01 04 08.8**	**+1.7**
	comp=Z,1.2nm,0.7s						
OBKA				*e*pPKP	**pPKPbc**	**01 04 16.4**	**-0.5**
	comp=Z,3.4nm,0.9s						
ABTA	**Abfaltersbach**	**149.24**	**352**	*e*PKP	**PKPab**	**01 04 09.9**	**+2.5**
	comp=Z,1.8nm,0.9s						
ABTA				*e*pPKP	**sPKPdf**	**01 04 16.8**	**-1.2**
	comp=Z,2.9nm,0.8s						

*IDC **18** 01:06:06.5±1.1, 54°.14N×162°.90W, h0km, mb3.8/17, mbtmp3.8/20, ML3.7/3, MS3.2/3, Error ellipse: s-maj=28.2km s-min=14.0km az=168.0*
*AEIC **18** 01:06:09.8±2.9, 54°.07N±0°.05×162°.67W±0°.07, h14km±5km, Error ellipse: s-maj=7.3km s-min=5.6km az=190.0*
*NEIC **18** 01:06:10.7±2.7, 54°.00N±0°.08×162°.66W±0°.07, h36km±10km, mb3.8/46, ML3.8/14, ML3.7(AEIC), Error ellipse: s-maj=11.3km s-min=6.0km az=174.0*
ISC 18 01:06:08.7±0.6, 54°.08N±0°.07×162°.60W±0°.04, h13km, n238, σ1s71/232, mb4.0/25, MS3.2/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRPK	**Brown Peak**	**0.88**	**311**		**Pg**	**01 06 26.0**	**+0.4**
FALS	**False Pass**	**0.91**	**329**		**Pg**	**01 06 26.7**	**+0.4**
FALS	**False Pass**	**0.91**	**329**		**Sg**	**01 06 37.9**	**-0.3**
ISLZ	**Isanotski Laza**	**0.92**	**316**		**Pg**	**01 06 26.6**	**+0.2**
ISLZ					**Sg**	**01 06 37.0**	**-1.4**
SSLS	**Shishaldin Sou**	**1.03**	**308**		**Pb**	**01 06 29.0**	**+0.6**
SSLS					**Sg**	**01 06 42.6**	**+0.5**
DT1	**Dutton Round H**	**1.05**	**10**		**Pb**	**01 06 28.5**	**-0.2**
WESE	**West Dahl East**	**1.23**	**290**		**Pn**	**01 06 31.2**	**-0.4**
WECS	**Westdahl Cape**	**1.35**	**291**		**Pn**	**01 06 32.8**	**-0.4**
PN7A	**Pavlof North-7**	**1.40**	**14**		**Pn**	**01 06 35.3**	**+1.3**
PS1A	**Pavlof South-1**	**1.44**	**20**		**Pn**	**01 06 35.1**	**+0.7**
SDPT	**Sand Point**	**1.77**	**43**	Pn	**Pn**	**01 06 40.2**	**+1.2**
SDPT				IAML		01 07 12.1	
	comp=E,1μm,0.6s						
SDPT	**Sand Point**	**1.77**	**43**	P	**Pn**	**01 06 40.5**	**+1.5**
AKUT	**Akutan**	**1.87**	**273**	Pn	**Pn**	**01 06 39.1**	**-1.2**
AKUT				IAML		01 07 09.7	
	comp=E,658nm,0.4s						
AKUT				IAML		01 07 16.1	
	comp=N,665nm,0.6s						
AKUT	**Akutan**	**1.87**	**273**	P	**Pn**	**01 06 40.9**	**+0.7**
AHB	**Akutan Harbor**	**1.89**	**272**		**Pn**	**01 06 40.6**	**-0.1**
CNBA	**Chernabura Isl**	**1.91**	**66**		**Pn**	**01 06 41.5**	**+0.6**
ZRO	**Akutan Zero**	**1.99**	**272**		**Pn**	**01 06 42.5**	**+0.6**
AKRB	**Akutan Reef Bi**	**2.04**	**273**		**Pn**	**01 06 43.2**	**+0.5**
UNV	**Unalaska Valle**	**2.32**	**266**		**Pn**	**01 06 46.4**	**0.0**
UNV					**Sn**	**01 07 14.7**	**0.0**
UNV	**Unalaska Valle**	**2.32**	**266**	P	**Pn**	**01 06 46.5**	**0.0**
MNAT	**Makushin Natee**	**2.42**	**267**		**Pn**	**01 06 48.2**	**+0.4**
MSW	**Makushin Switc**	**2.47**	**268**		**Pn**	**01 06 49.0**	**+0.4**
MGOD	**Makushin Gods**	**2.54**	**265**		**Pn**	**01 06 49.9**	**+0.4**
MGOD					**Sn**	**01 07 20.9**	**+0.5**
MAPS	**Pakushin South**	**2.58**	**266**		**Pn**	**01 06 50.5**	**+0.5**
VNFG	**Fog Glacier, M**	**2.82**	**37**		**Pn**	**01 06 55.1**	**+1.6**
CHGN	**Chignik**	**3.28**	**45**		**Pn**	**01 07 01.6**	**+2.0**
CHGN				IAML		01 07 54.5	
	comp=E,236nm,1.0s						
CHGN				IAML		01 07 59.8	
	comp=N,166nm,1.0s						
OKER	**Okmok East Rim**	**3.29**	**261**		**Pn**	**01 07 00.8**	**+0.8**
NIKH	**Nikolski High**	**3.89**	**256**	P	**Pn**	**01 07 08.5**	**+0.4**
CHIR	**Chirikof Islan**	**4.39**	**64**	Pn	**Pn**	**01 07 15.4**	**+0.5**
CHIR				IAML		01 08 43.9	
	comp=N,111nm,1.4s						
CHIR				IAML		01 08 47.8	
	comp=E,95nm,1.0s						
O14K	**Tigyukauivet M**	**5.24**	**8**	Pn	**Pn**	**01 07 29.0**	**+2.4**
O14K				IAML		01 09 00.7	
	comp=N,34nm,1.3s						
SII	**Sitkinak Islan**	**5.41**	**59**	Pn	**Pn**	**01 07 28.8**	**-0.2**
ANCK	**Angle Creek**	**5.73**	**41**		**Pn**	**01 07 35.4**	**+2.0**
O16K	**Kokwok River B**	**6.06**	**22**	Pn	**Pn**	**01 07 40.0**	**+2.2**
OHAK	**Old Harbor**	**6.14**	**55**	Pn	**Pn**	**01 07 38.9**	**-0.1**
OHAK	**Old Harbor**	**6.14**	**55**	P	**Pn**	**01 07 38.7**	**-0.3**
N15K	**Kwethluk River**	**6.26**	**12**	Pn	**Pn**	**01 07 42.6**	**+2.0**
M13K	**Dall Lake**	**6.37**	**357**		**Pn**	**01 07 45.0**	**+3.0**
P18K	**Big Mountain,**	**6.69**	**34**	Pn	**Pn**	**01 07 48.9**	**+2.3**
M14K	**Bethel**	**6.70**	**3**	Pn	**Pn**	**01 07 50.2**	**+3.6**
N16K	**Nishlik Lake**	**6.74**	**16**		**Pn**	**01 07 49.5**	**+2.3**
KDAK	**Kodiak Island**	**6.74**	**53**	Pn	**Pn**	**01 07 47.2**	**+0.1**
KDAK	**Kodiak Island**	**6.74**	**53**	Pn	**Pn**	**01 07 47.4**	**+0.2**
	comp=N,1.5nm,0.3s,baz=233,slow=3.5,SNR=32						
KDAK				Sn	**Sn**	**01 08 59.2**	**-4.5**
	baz=0.0,slow=20						
	comp=N,5.3nm,0.4s						
Q19K	**Cape Douglas,**	**6.94**	**42**		**Pn**	**01 07 51.6**	**+1.6**
O18K	**Koktuh Hills**	**7.06**	**32**	Pn	**Pn**	**01 07 54.1**	**+2.5**
M16K	**Timber Creek**	**7.23**	**14**		**Pn**	**01 07 56.7**	**+2.8**
SYI	**Shuyak Island**	**7.27**	**47**		**Pn**	**01 07 55.8**	**+1.4**
P19K	**Oil Pt**	**7.58**	**39**	Pn	**Pn**	**01 08 00.8**	**+2.0**
L16K	**Owhat River**	**7.83**	**11**		**Pn**	**01 08 05.3**	**+3.2**
M17K	**Holitna River**	**7.84**	**19**	Pn	**Pn**	**01 08 04.5**	**+2.2**
ILSW	**Iliamna Southw**	**7.85**	**37**		**Pn**	**01 08 04.1**	**+1.6**
IVE	**Iliamna Volcan**	**7.92**	**37**		**Pn**	**01 08 05.6**	**+2.2**
SVW2	**Sparrevohn**	**7.98**	**25**	Pn	**Pn**	**01 08 06.5**	**+2.3**
N19K	**Bonanza Creek**	**8.04**	**30**	Pn	**Pn**	**01 08 07.1**	**+2.0**
K15K	**Wolf Creek Mou**	**8.26**	**3**		**Pn**	**01 08 10.2**	**+2.2**
CNPM	**China Poot**	**8.28**	**44**	Pn	**Pn**	**01 08 10.1**	**+1.8**
RSO	**Redoubt South**	**8.33**	**36**		**Pn**	**01 08 12.6**	**+3.4**
NCT	**North Crescent**	**8.34**	**35**		**Pn**	**01 08 11.5**	**+2.3**
BRLK	**Bradley Lake**	**8.57**	**44**	Pn	**Pn**	**01 08 12.7**	**+0.4**
SPNN	**North Nagishla**	**9.02**	**32**		**Pn**	**01 08 21.6**	**+3.1**
J16K	**Anvik River**	**9.29**	**6**	Pn	**Pn**	**01 08 24.8**	**+2.7**
M20K	**Styx River**	**9.29**	**29**	Pn	**Pn**	**01 08 25.3**	**+3.1**
O22K	**Cooper Landing**	**9.47**	**42**		**Pn**	**01 08 25.4**	**+0.9**
TTA	**Tatalina**	**9.52**	**19**	Pn	**Pn**	**01 08 27.2**	**+1.9**
TTA	**Tatalina**	**9.52**	**19**	P	**Pn**	**01 08 26.2**	**+0.9**
SUA	**Susitna One**	**9.73**	**36**	Pn	**Pn**	**01 08 29.5**	**+1.3**
RC01	**Rabbit Creek A**	**9.84**	**39**		**Pn**	**01 08 30.6**	**+1.0**
SKT	**Skwentna**	**9.85**	**32**		**Pn**	**01 08 32.7**	**+2.9**
I17K	**Unalakeet**	**9.89**	**5**	Pn	**Pn**	**01 08 32.8**	**+2.6**
J18K	**Innoko River**	**9.89**	**16**	Pn	**Pn**	**01 08 33.2**	**+2.8**
K20K	**Telida**	**10.30**	**22**	Pn	**Pn**	**01 08 38.7**	**+2.8**
PMR	**Palmer**	**10.39**	**38**	Pn	**Pn**	**01 08 37.5**	**+0.4**
KNK	**Knik Glacier**	**10.53**	**40**		**Pn**	**01 08 39.2**	**+0.2**
J19K	**Poorman**	**10.57**	**17**	Pn	**Pn**	**01 08 41.4**	**+1.8**
GHO	**Glory Hole Cre**	**10.58**	**38**		**Pn**	**01 08 39.7**	**-0.1**
ANM	**Nome**	**10.61**	**353**	Pn	**Pn**	**01 08 42.9**	**+2.7**
GLI	**Glacier Island**	**10.76**	**44**	Pn	**Pn**	**01 08 42.9**	**+0.7**
HIN	**Hinchinbrook I**	**10.76**	**48**		**Pn**	**01 08 42.5**	**+0.2**
SML	**Sawmill**	**10.82**	**39**	Pn	**Pn**	**01 08 42.3**	**-0.8**
CAST	**Castle Rocks**	**10.83**	**26**		**Pn**	**01 08 45.1**	**+2.0**
FID	**Port Fidalgo**	**10.95**	**46**	Pn	**Pn**	**01 08 44.0**	**-0.8**
H17K	**Granite Mounta**	**10.98**	**6**		**Pn**	**01 08 48.0**	**+2.8**
J20K	**Nowinta River**	**11.01**	**20**	Pn	**Pn**	**01 08 48.1**	**+2.5**
SCM	**Sheep Creek Mo**	**11.21**	**40**		**Pn**	**01 08 47.6**	**-0.9**
KTH	**Kantishna Hill**	**11.24**	**28**		**Pn**	**01 08 51.7**	**+2.8**
H15K	**Honhosa River**	**11.31**	**9**	Pn	**Pn**	**01 08 53.3**	**+3.7**
TRF	**Thorofare Moun**	**11.34**	**29**	Pn	**Pn**	**01 08 51.8**	**+1.5**
G16K	**Koyuk River**	**11.35**	**1**		**Pn**	**01 08 53.6**	**+3.3**
KAIM	**Kayak Island**	**11.49**	**52**	Pn	**Pn**	**01 08 53.3**	**+1.0**
I20K	**Naaghedeneel**	**11.51**	**18**	Pn	**Pn**	**01 08 55.8**	**+3.4**
RAGM	**Ragged Mountai**	**11.56**	**50**		**Pn**	**01 08 51.2**	**-2.0**
BPAW	**Bear Paw Mtn.**	**11.67**	**26**	Pn	**Pn**	**01 08 56.2**	**+1.6**
HMT	**Hamilton**	**11.73**	**50**		**Pn**	**01 08 55.6**	**+0.1**
RND	**Reindeer**	**11.74**	**32**		**Pn**	**01 08 56.0**	**+0.3**
M24K	**Tolsona, Glenn**	**11.81**	**41**	Pn	**Pn**	**01 08 56.5**	**-0.2**
SUCK	**Suckling Hills**	**11.85**	**52**	Pn	**Pn**	**01 08 58.0**	**+0.9**
H19K	**Roundabout Mou**	**11.89**	**13**	Pn	**Pn**	**01 09 00.6**	**+3.0**
BERG	**Berg Lake**	**12.01**	**51**	Pn	**Pn**	**01 08

J26L Joseph Creek 14.20 35 Pn **Pn 01 09 28.5 -0.8**
C16K Lisburne Hills 14.31 356 Pn **Pn 01 09 34.1 +3.5**
O29M Mount Kennedy 14.38 55 Pn **Pn 01 09 33.0 +1.1**
K27K Chicken 14.45 38 Pn **Pn 01 09 32.4 -0.2**
D19K Kuna River 14.62 7 **Pn 01 09 39.0 +4.1**
C18K Utukok River 14.64 2 Pn **Pn 01 09 38.6 +3.4**
G24K Hadweenzic Riv 14.64 24 Pn **Pn 01 09 32.8 -2.4**
P29M Windy Craggy 14.64 58 Pn **Pn 01 09 36.4 +1.1**
I26K Coal Creek Min 14.85 33 Pn **Pn 01 09 38.6 +0.6**
E22K Anaktuvuk Pass 15.00 16 Pn **Pn 01 09 43.1 +3.1**
E22K IAmb IAmb 01 09 47.8
comp=Z,5.5nm,0.8s
HYT Haines Junctio 15.03 53 Pn **Pn 01 09 40.3 -0.4**
HYT IAmb IAmb 01 09 50.9
comp=Z,7.1nm,0.9s
FYU Fort Yukon 15.11 27 **Pn 01 09 43.8 +2.3**
M29M Somme Creek 15.13 47 Pn **Pn 01 09 42.3 +0.4**
C19K Lookout Ridge 15.15 4 P **P 01 09 47.4 +0.2**
C19K IAmb IAmb 01 09 54.7
comp=Z,9.4nm,1.4s
EGAK Eagle 15.20 37 **Pn 01 09 42.9 +0.2**
EGAK IAmb IAmb 01 09 59.1
comp=Z,9.4nm,1.4s
S31K Pelican 15.20 65 Pn **Pn 01 09 42.3 -0.4**
F24K Squaw Lake 15.21 22 Pn **Pn 01 09 43.4 +0.5**
N30M Aishikik Lake 15.41 51 Pn **Pn 01 09 45.8 +0.3**
N30M IAmb IAmb 01 09 54.5
comp=Z,5.2nm,0.8s
DAWY Dawson 15.47 41 Pn **Pn 01 09 45.3 -1.0**
DAWY IAmb IAmb 01 09 54.8
comp=Z,4.7nm,0.7s
L29M L29M 15.54 45 Pn **Pn 01 09 47.6 +0.4**
L29M IAmb IAmb 01 09 56.3
comp=Z,6.0nm,0.7s
D22K Ayikyak River 15.55 13 **Pn 01 09 50.5 +3.2**
D22K IAmb IAmb 01 09 54.3
comp=Z,5.1nm,0.7s
O30N Mendenhall 15.69 54 Pn **Pn 01 09 50.4 +1.2**
O30N IAmb IAmb 01 09 57.8
comp=Z,4.7nm,0.7s
SKAG Skagway 15.82 59 P **Pn 01 09 53.3 +2.5**
SKAG IAmb IAmb 01 10 09.2
comp=Z,5.3nm,0.7s
TOLK Toolik Lake Re 15.83 18 P **P 01 09 56.1 +1.4**
M30M Minto, Yukon 15.90 47 **Pn 01 09 53.1 +1.2**
M30M IAmb IAmb 01 10 10.0
comp=Z,9.7nm,1.5s
BMAR Burnt Mountain 15.93 26 Pn **Pn 01 09 53.0 +0.8**
I28M Miner Creek 16.01 36 Pn **Pn 01 09 54.0 +0.6**
B21K Ikpikpuk River 16.02 10 **Pn 01 09 56.1 +2.8**
J29N Klondike Camp 16.11 40 P **P 01 09 58.1 +0.3**
J29N IAmb IAmb 01 10 02.1
comp=Z,14nm,0.5s
R32K Eaglecrest 16.13 64 Pn **Pn 01 09 52.0 -2.8**
R32K IAmb IAmb 01 09 58.9
comp=Z,12nm,1.2s
E25K Arctic Village 16.22 23 Pn **Pn 01 09 57.3 +1.4**
D24K Happy Valley 16.41 18 **Pn 01 10 00.6 +2.3**
D24K IAmb IAmb 01 10 07.5
comp=Z,6.1nm,0.7s
MAYO Mayo, Yukon 16.66 45 P **Pn 01 10 03.8 +2.2**
C23K Itkillik River 16.73 14 P **Pn 01 10 04.1 +1.8**
C23K IAmb IAmb 01 10 07.0
comp=Z,6.6nm,0.6s
M31M Drury Creek, Y 16.85 50 P **P 01 10 08.0 +2.0**
M31M IAmb IAmb 01 10 14.7
comp=Z,9.1nm,0.9s
J30M Hart River 16.89 41 P **Pn 01 10 06.1 +1.6**
J30M IAmb IAmb 01 10 09.8
comp=Z,16nm,1.4s
H29M Whitestone 16.98 35 P **Pn 01 10 06.2 +0.7**
H29M IAmb IAmb 01 10 23.8
comp=Z,8.0nm,1.2s
D25K Kavik River 17.02 20 P **P 01 10 08.5 +0.6**
I30M Mount Dempster 17.17 39 Pn **Pn 01 10 08.3 +0.3**
I30M IAmb IAmb 01 10 16.3
comp=Z,4.6nm,0.6s
P33M Teslin, Yukon 17.18 57 P **Pn 01 10 09.3 +1.1**
P33M IAmb IAmb 01 10 14.6
comp=Z,4.7nm,0.7s
FARO Faro, Yukon 17.32 50 P **P 01 10 12.5 +1.2**
FARO IAmb IAmb 01 10 20.5
comp=Z,8.1nm,1.1s
Q32M Nakina River 17.34 61 Pn **Pn 01 10 08.7 -1.6**
Q32M IAmb IAmb 01 10 17.8
comp=Z,7.0nm,1.0s
F28M Old Crow 17.35 30 **Pn 01 10 11.8 +1.6**
EPYK Eagle Plains 17.62 36 P **Pn 01 10 13.0 -0.6**
EPYK IAmb IAmb 01 10 30.2
comp=Z,5.6nm,0.9s
EPYK Eagle Plains 17.62 36 Pn **Pn 01 10 12.7 -0.8**
EPYK IAmb IAmb 01 10 30.2
comp=Z,5.6nm,0.9s
V35K Ketchikan 17.88 73 **Pn 01 10 13.8 -3.0**
G30M tAoh Zraii Nji 18.11 34 P **Pn 01 10 19.8 +0.2**
H31M Peel River 18.19 39 P **P 01 10 22.5 +1.7**
MMPY Sheldon Lake, 18.36 50 P **P 01 10 23.0 +0.3**
E29M Blow River 18.42 29 P **P 01 10 22.4 -0.9**
G31M Satah River 18.74 36 P **P 01 10 26.4 -0.4**
F31M Tsiigehtchic 19.18 35 P **P 01 10 30.5 -1.1**
F31M IAmb IAmb 01 10 40.5
comp=Z,8.0nm,1.4s
INK Inuvik 19.70 32 P **P 01 10 37.1 -0.1**
INK Inuvik 19.70 32 P **P 01 10 36.6 -0.6**
comp=Z,0.4nm,0.3s,baz=258,slow=11,SNR=13
comp=Z,1.5nm,0.5s
C36M Paulatuk 23.23 34 P **P 01 11 15.4 +0.4**
PEA0B Petropavlovsk- 23.37 284 P **P 01 11 15.6 -1.1**
PETK Petropavlovsk- 23.37 284 P **P 01 11 15.3 -1.4**
PETK Petropavlovsk- 23.37 284 P **P 01 11 15.7 -1.0**
comp=Z,6.1nm,0.6s,baz=79,slow=13,SNR=25
comp=Z,6.1nm,0.6s
A36M Sachs Harbour 24.00 28 P **P 01 11 21.6 -0.9**
YKA Yellowknife Ar 26.02 52 P **P 01 11 41.9 +0.9**
comp=Z,0.5nm,0.4s,baz=274,slow=9.6,SNR=11
YKA LR LR 01 24 15.8
comp=Z,68nm,19.0s,baz=308,slow=42
comp=Z,0.5nm,0.4s
NVAR Mina Array Bea 33.76 99 P **P 01 12 52.3 +2.2**
comp=Z,0.1nm,0.3s,baz=330,slow=10,SNR=1.1
comp=Z,0.1nm,0.3s
ULM Lac du Bonnet 39.74 67 P **P 01 13 41.2 +0.6**
comp=Z,0.7nm,0.4s,baz=312,slow=8.3,SNR=2.2
comp=Z,0.7nm,0.4s
H11N2 WAKE ISLAND Hy 41.46 226 T T 01 58 12.0
baz=27,slow=76,SNR=162
H11N3 WAKE ISLAND Hy 41.47 226 T T 01 58 10.8
baz=27,slow=76,SNR=152
H11N1 WAKE ISLAND Hy 41.48 226 T T 01 58 13.1
baz=27,slow=76,SNR=139
H11S1 WAKE ISLAND Hy 42.63 226 T T 01 59 48.7
baz=26,slow=76,SNR=162
H11S2 WAKE ISLAND Hy 42.64 226 T T 01 59 48.7
baz=26,slow=76,SNR=103
H11S3 WAKE ISLAND Hy 42.65 226 T T 01 59 45.3
baz=26,slow=76,SNR=72
MJAR Matsushiro Arr 43.78 271 P **P 01 14 12.3 -1.4**
comp=Z,1.7nm,0.9s,baz=49,slow=11,SNR=1.7
comp=Z,1.7nm,0.9s
TXAR Lajitas Array 48.76 96 P **P 01 14 53.9 +0.8**
comp=Z,0.2nm,0.6s,baz=324,slow=6.2,SNR=3.7
comp=Z,0.2nm,0.6s
LPIG La Paz 48.90 106 LR LR 01 31 04.4
comp=Z,38nm,20.2s,baz=46,slow=30
KSRS Korea Array 49.18 280 P **P 01 14 54.9 -1.3**
comp=Z,1.8nm,0.7s,baz=48,slow=7.9,SNR=9.2
comp=Z,1.8nm,0.7s
JNU Nakatsue 50.47 274 LR LR 01 34 35.4
comp=Z,18nm,21.7s,baz=87,slow=34
SONM Songino Array 53.84 303 P **P 01 15 30.1 -0.9**
comp=Z,0.4nm,0.6s,baz=36,slow=5.6,SNR=2.9
comp=Z,0.4nm,0.6s
BVAR Borovoye Array 64.56 328 P **P 01 16 43.4 -1.6**
comp=Z,0.3nm,0.4s,baz=65,slow=8.6,SNR=3.1
comp=Z,0.3nm,0.4s
FINES FINESS Array B 64.62 355 P **P 01 16 44.1 -1.0**
comp=Z,0.8nm,0.7s,baz=358,slow=9.5,SNR=4.5
comp=Z,0.8nm,0.7s
NOA NORSAR Array B 65.12 3 P **P 01 16 48.2 -0.4**
comp=Z,0.4nm,0.7s,baz=344,slow=5.5,SNR=1.8
comp=Z,0.4nm,0.7s
MKAR Makanchi Array 65.47 317 P **P 01 16 49.1 -1.9**
comp=Z,0.4nm,0.7s,baz=45,slow=5.5,SNR=6.7
comp=Z,0.4nm,0.7s
HFS Hagfors 66.10 2 P **P 01 16 54.1 -0.7**
comp=Z,2.2nm,0.5s,baz=27,slow=5.0,SNR=20
comp=Z,2.2nm,0.5s
EKA Eskdalemuir Ar 69.65 12 P **P 01 17 18.2 +1.0**
comp=Z,0.7nm,0.5s,baz=352,slow=3.8,SNR=8.8
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 75.12 352 P **P 01 17 49.2 -0.7**
comp=Z,0.7nm,0.4s,baz=7.7,slow=5.8,SNR=2.5
comp=Z,0.7nm,0.4s
GERES GERESS Array B 77.40 2 P **P 01 18 02.4 -0.7**
comp=Z,0.5nm,0.6s,baz=19,slow=5.7,SNR=4.0
comp=Z,0.5nm,0.6s
RETA Reutte 78.65 5 *i* P **P 01 18 11.4 +1.3**
comp=Z,0.2nm,0.2s
MOTA Moosalm 78.81 4 *i* P **P 01 18 12.1 +1.1**
comp=Z,0.6nm,0.4s
WATA Walderalm 78.84 4 *i* P **P 01 18 11.9 +0.8**
comp=Z,1.5nm,0.6s
WTTA Wattenberg 78.92 4 *i* P **P 01 18 12.3 +0.7**
comp=Z,0.7nm,0.4s
SQTA Sankt Quirin 78.94 4 *i* P **P 01 18 12.1 +0.5**
comp=Z,0.7nm,0.3s
KBA Koelnbreinsper 79.16 3 *i* PcP **P 01 18 14.3 +1.3**
comp=Z,1.6nm,0.5s
SOKA Soboth 79.60 2 *i* PcP **P 01 18 16.7 +1.5**
comp=Z,0.2nm,0.2s
OBKA Obir 79.76 2 *i* PcP **P 01 18 17.1 +1.0**
comp=Z,1.8nm,0.4s
CMAR Chiang Mai Arr 80.09 288 P **P 01 18 17.3 -0.9**
comp=Z,0.6nm,0.3s,baz=18,slow=5.4,SNR=4.1
comp=Z,0.6nm,0.3s
H03N2 Juan Fernandez 112.88 116 T T 03 27 34.7
baz=323,slow=77,SNR=29
H03N1 Juan Fernandez 112.89 116 T T 03 27 36.0
baz=323,slow=77,SNR=52
H03N3 Juan Fernandez 112.90 116 T T 03 27 35.2
baz=323,slow=77,SNR=46

IDC 18 01:20:30.2±2.0, 8°81S×125°09E, h0km, mb3.3/1, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=258.1km s-min=33.3km az=58.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.23**	**142**	Pn	**Pn**	01 23 52.4	-0.8
	0.1nm,0.3s,baz=318,slow=15,SNR=6.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.01**	**151**	P	Pn	01 24 30.4	+0.7
	baz=334,slow=9.6,SNR=1.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.19**	**330**	P	P	01 31 26.2	0.0
	0.2nm,0.6s,baz=126,slow=5.8,SNR=5.2						
	0.2nm,0.6s						

*IDC **18** 01:21:59.1±0.8, 6°48S×130°49E, h0km, mb4.2/10, mbtmp4.2/12, ML4.7/2, Error ellipse: s-maj=68.1km s-min=16.7km az=60.0*
*NEIC **18** 01:22:08.2±1.1, 7°2S±0°1×129°6E±0°1, h66km±15km, mb4.4/5, Error ellipse: s-maj=21.6km s-min=14.3km az=174.0*
*DJA **18** 01:22:10.2±0.3, 6°S±3°×13°1E±°, h102km±10km, M4.5/7, mb4.4/5, mB5.2/3, MLv4.6/7, Mw(mB)4.6/3*
ISC 18 01:22:09.7±0.6, 6°50S±0°05×130°80E±0°06, h100km, n43, σ1°56/38, mb4.0/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.56**	**162**		**Pn**	**01 22 38.3**	**+1.5**
SAUI	**Saumlaki**	**1.56**	**162**	P	**Pn**	**01 22 38.2**	**+1.5**
SAUI	**Saumlaki**	**1.56**	**162**	P	**Pn**	**01 22 37.9**	**+1.2**
BNDI	**Bandanaira**	**2.16**	**335**	P	**Pn**	**01 22 44.9**	**+0.5**
BNDI	**Bandanaira**	**2.16**	**335**	P	**Pn**	**01 22 44.8**	**+0.4**
FAKI	**Fak Fak**	**3.84**	**22**	P	**Pn**	**01 23 06.5**	**-0.2**
FAKI	**Fak Fak**	**3.84**	**22**	P	**Pn**	**01 23 06.3**	**-0.4**
FAKI				S	**Sn**	**01 23 48.5**	**-2.4**
KMPI	**Kaimana, Papua**	**4.04**	**46**	P	**Pn**	**01 23 09.1**	**-0.3**
KMPI				S	**Sn**	**01 23 53.6**	**-2.1**
SWI	**Sorong**	**5.62**	**5**	P	**Pn**	**01 23 29.8**	**-1.0**
KDU	**Kakadu**	**6.37**	**165**	P	**Pn**	**01 23 40.0**	**-1.0**
SOEI	**Soe**	**7.24**	**243**	P	**Pn**	**01 23 54.0**	**+1.0**
	29nm,1.0s,0.3nm						
SOEI				S	**Sn**	**01 25 08.5**	**-5.2**
	29nm,1.0s,0.3nm						
KNRA	**Kununurra**	**9.34**	**192**		Pn	01 24 08.7	-13
WB0	**Warramunga Arr**	**13.64**	**166**		Pn	01 25 13.5	-5.7
WRAB	**Tennant Creek**	**13.79**	**166**	Pn	Pn	01 25 16.0	-5.1
WRA	**Warramunga Arr**	**13.80**	**166**		Pn	01 25 16.4	-4.8
WRA	**Warramunga Arr**	**13.80**	**166**	Pn	Pn	01 25 16.1	-5.0
	3.7nm,0.3s,baz=350,slow=13,SNR=46						
WRA				Sn	Sn	01 27 41.0	-12
	3.1nm,0.3s,baz=352,slow=23,SNR=7.7						
	9.8nm,0.5s						
WB2	**Warramunga Arr**	**13.80**	**166**		Pn	01 25 16.1	-5.1
WR0	**Warramunga Arr**	**13.87**	**165**		Pn	01 25 17.3	-4.7
COEN	**Coen**	**14.25**	**122**	P	**Pn**	**01 25 26.8**	**-0.2**
QIS	**Mount Isa**	**16.38**	**149**	P	**Pn**	**01 25 51.8**	**-2.0**
AS31	**Alice Springs**	**17.33**	**170**		**P**	**01 26 03.3**	**-2.0**
ASAR	**Alice Springs**	**17.33**	**170**	P	**P**	**01 26 03.0**	**-2.4**
ASAR	**Alice Springs**	**17.33**	**170**	P	**P**	**01 26 04.0**	**-1.4**
	2.7nm,0.3s,baz=349,slow=9.4,SNR=93						
ASAR				S	Sn	01 29 05.8	-13
	2.1nm,0.7s,baz=347,slow=24,SNR=6.6						
	7.1nm,0.6s						
AS01	**Alice Springs**	**17.34**	**170**	P	**P**	**01 26 03.3**	**-2.1**
	14nm,0.8s						
MTSU	**Mount Surprise**	**17.54**	**132**	P	**P**	**01 26 07.7**	**+0.1**
WRKA	**Warakurna**	**18.59**	**187**	P	**P**	**01 26 19.5**	**+0.3**
CTA	**Charters Tower**	**20.19**	**133**	P	Pn	01 26 39.7	+0.3
	5.0nm,0.7s,baz=308,slow=11,SNR=9.2						
	5.0nm,0.7s						
OOD	**Oodnadatta**	**21.68**	**168**	P	**P**	**01 26 51.8**	**-0.7**
INKA	**Innaminka**	**23.14**	**157**	P	**P**	**01 27 05.7**	**-1.7**
FORT	**Forrest**	**24.29**	**186**	P	**P**	**01 27 17.5**	**-0.3**
STKA	**Stephens Creek**	**27.19**	**160**	P	**P**	**01 27 45.1**	**+1.1**
	0.5nm,0.3s,baz=336,slow=12,SNR=5.4						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**40.03**	**309**	P	**P**	**01 29 35.4**	**+0.1**
	1.8nm,0.3s,baz=135,slow=7.6,SNR=4.4						
	1.8nm,0.3s						
SONM	**Songino Array**	**58.23**	**341**	P	**P**	**01 31 55.4**	**+1.7**
	0.3nm,0.5s,baz=170,slow=6.4,SNR=5.0						
	0.3nm,0.5s						
MK31	**Makanchi Array**	**68.25**	**326**	P	**P**	**01 33 00.9**	**+1.1**
MK31				IAmb	IAmb	01 33 01.5	
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**68.25**	**326**	P	**P**	**01 33 00.8**	**+1.0**
	comp=Z,5.7nm,0.4s,baz=114,slow=8.2,SNR=232						
	comp=Z,5.7nm,0.4s						
MAKZ	**Makanchi**	**68.43**	**326**	P	**P**	**01 33 01.9**	**+0.9**
AAK	**Ala-Archa**	**70.68**	**319**	P	**P**	**01 33 16.6**	**+1.6**
	comp=Z,1.1nm,0.3s,baz=123,slow=5.4,SNR=7.2						
	comp=Z,1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**71.49**	**333**	P	**P**	**01 33 19.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=101,slow=8.0,SNR=6.1						
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**72.50**	**328**	P	**P**	**01 33 26.1**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=127,slow=4.8,SNR=21						
	comp=Z,1.4nm,0.5s						
SIMJ	**Simiganj**	**72.68**	**314**	P	**P**	**01 33 27.8**	**+0.8**
SIMJ				IAmb	IAmb	01 33 28.3	
	comp=Z,3.5nm,0.9s						
BVAR	**Borovoye Array**	**78.07**	**328**	P	**P**	**01 33 58.0**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=122,slow=9.5,SNR=10						
	comp=Z,0.7nm,0.4s						
AKTO	**Aktyubinsk**	**84.17**	**322**	P	**P**	**01 34 30.8**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=117,slow=2.3,SNR=2.3						
	comp=Z,1.1nm,0.6s						
CMIG	**Matias Romero**	**134.16**	**73**	PKP	**PKiKP**	**01 41 19.5**	**+1.6**
	comp=Z,4.5nm,0.6s,baz=349,slow=5.2,SNR=3.6						

*NEIC **18** 01:33:11.8±1.0, 2°4S±0°1×151°1E±0°1, h10km±2km, mb4.1/6, Error ellipse: s-maj=23.6km s-min=18.1km az=301.0*
*IDC **18** 01:33:21.4±7.1, 6°58S×154°38E, h63km±59km, mb3.5/6, mbtmp3.8/7, ML2.2/1, MS3.5/4, Error ellipse: s-maj=46.8km s-min=32.9km az=99.0*
ISC 18 01:33:19.8±1.0, 6°5S±0°2×154°4E±0°1, h48km, n16, σ1°46/17, mb3.9/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.19**	**119**	LR	LR	01 37 00.6	
	comp=Z,2μm,20.1s,baz=228,slow=35						
PMG	**Port Moresby**	**7.78**	**248**	Pn	**Pn**	**01 35 07.8**	**-2.6**
PMG				Sn	**Sn**	**01 36 38.9**	**+1.6**
PMG	**Port Moresby**	**7.78**	**248**	P	**Pn**	**01 35 10.6**	**+0.1**
	2.0nm,0.3s,baz=30,slow=12,SNR=5.5						
PMG				S	**Sn**	**01 36 39.1**	**+1.8**
	34nm,1.2s,baz=68,slow=23,SNR=4.8						
PMG				LR	LR	01 38 32.0	
	comp=Z,156nm,18.4s,baz=44,slow=40						
	20nm,0.7s						
CTA	**Charters Tower**	**15.70**	**210**	P	**P**	**01 37 02.2**	**+1.1**
	1.4nm,0.7s,baz=45,slow=9.8,SNR=5.3						
CTA				LR	LR	01 42 20.6	
	comp=Z,70nm,18.7s,baz=83,slow=35						
WR0	**Warramunga Arr**	**23.52**	**233**	P	**P**	**01 38 24.8**	**-1.0**
WR0				IAmb	IAmb	01 38 30.1	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**23.54**	**234**	P	**P**	**01 38 24.4**	**-1.6**
WB0				IAmb	IAmb	01 38 30.3	
	comp=Z,6.2nm,1.1s						
WB2	**Warramunga Arr**	**23.66**	**234**	P	**P**	**01 38 25.4**	**-1.7**
WB2				IAmb	IAmb	01 38 35.5	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**23.67**	**234**	P	**P**	**01 38 26.2**	**-1.0**
WRA	**Warramunga Arr**	**23.67**	**234**	P	**P**	**01 38 25.4**	**-1.8**
	comp=Z,1.8nm,0.8s,baz=59,slow=9.9,SNR=8.0						
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**26.11**	**227**	P	**P**	**01 38 47.6**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=61,slow=9.6,SNR=2.7						
ASAR				LR	LR	01 48 37.1	
	comp=Z,75nm,19.4s,baz=122,slow=35						
	comp=Z,0.3nm,0.5s						
GTA	**Gaotai**	**67.99**	**317**	P	**P**	**01 44 14.3**	**0.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**68.61**	**327**	P	**P**	**01 44 18.0**	**0.0**
	comp=Z,0.2nm,0.4s,baz=106,slow=4.7,SNR=2.2						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**82.66**	**319**	P	**P**	**01 45 38.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=109,slow=6.3,SNR=7.5						
	comp=Z,0.7nm,0.8s						
QSPA	**South Pole Qui**	**83.50**	**180**	P	**P**	**01 45 43.2**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=152,slow=2.6,SNR=2.0						
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**91.83**	**52**	P	**P**	**01 46 23.6**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=247,slow=7.2,SNR=4.3						
	comp=Z,0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**152.36**	**286**	PKPbc	**PKPbc**	**01 53 11.1**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=52,slow=2.9,SNR=3.1						

*IDC **18** 01:44:25.0±0.6, 56°38N×148°73W, h0km, mb4.3/26, mbtmp4.3/31, ML3.9/5, MS3.4/21, Error ellipse: s-maj=17.6km s-min=10.6km az=34.0*
*NEIC **18** 01:44:26.9±1.7, 56°37N±0°06×148°74W±0°09, h20km±4km, mb4.4/92, ML4.2/77, ML4.0(AEIC), Error ellipse: s-maj=9.1km s-min=6.6km az=160.0*
*MOS **18** 01:44:27.1±1.1, 56°50N×148°60W, h23km, mb4.7/53, Error ellipse: s-maj=11.8km s-min=4.3km az=93.9*
*AEIC **18** 01:44:29.9±1.4, 56°38N±0°07×148°77W±0°10, h10km±4km, Error ellipse: s-maj=9.8km s-min=7.8km az=188.0*
ISC 18 01:44:26.0±0.4, 56°43N±0°05×148°71W±0°04, h10km, n598, σ1°22/596, mb4.5/131, MS3.5/15, 54C-4D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.51**	**304**	Pn	**Pn**	**01 45 05.6**	**-1.2**
KDAK	**Kodiak Island**	**2.51**	**304**		**Sn**	**01 45 33.9**	**-3.6**
KDAK	**Kodiak Island**	**2.51**	**304**	Pn	**Pn**	**01 45 05.8**	**-1.0**
	11nm,0.3s,baz=135,slow=6.0,SNR=283						
KDAK				Sn	**Sn**	**01 45 34.1**	**-3.4**
	25nm,0.3s,baz=355,slow=19,SNR=12						
KDAK				LR	LR	01 46 20.8	
	comp=Z,157nm,18.3s,baz=145,slow=46						
	22nm,0.3s						
OHAK	**Old Harbor**	**2.64**	**290**	Pn	**Pn**	**01 45 06.9**	**-1.6**
OHAK	**Old Harbor**	**2.64**	**290**		**Sn**	**01 45 36.1**	**-4.5**
OHAK	**Old Harbor**	**2.64**	**290**	P	**Pn**	**01 45 07.0**	**-1.6**
OHAK	**Old Harbor**	**2.64**	**290**	P	**Pn**	**01 45 06.9**	**-1.6**
	baz=107						
OHAK				S	**Sn**	**01 45 36.1**	**-4.5**
	baz=107						
SYI	**Shuyak Island**	**2.96**	**319**	Pn	**Pn**	**01 45 12.8**	**-0.1**
SYI	**Shuyak Island**	**2.96**	**319**		**Sn**	**01 45 44.6**	**-3.8**
Q20K	**Shuyak Island**	**2.96**	**319**	P	**Pn**	**01 45 12.4**	**-0.5**
	baz=137						
Q20K				S	**Sn**	**01 45 44.6**	**-3.8**
	baz=137						
SII	**Sitkinak Islan**	**3.04**	**275**	Pn	**Pn**	**01 45 13.4**	**-0.7**
SII				IAML		01 45 49.0	
	comp=E,392nm,1.1s						
SII	**Sitkinak Islan**	**3.04**	**275**		**Sn**	**01 45 46.3**	**-4.2**
SII	**Sitkinak Islan**	**3.04**	**275**	P	**Pn**	**01 45 12.1**	**-1.9**
	baz=91						
SII				S	**Sn**	**01 45 46.3**	**-4.2**
	baz=91						
MID	**Middleton Isla**	**3.27**	**22**		**Pn**	**01 45 16.4**	**-0.7**
MID				IAML		01 45 53.8	
	comp=E,380nm,0.9s						
MID	**Middleton Isla**	**3.27**	**22**	P	**Pn**	**01 45 16.4**	**-0.7**
MID	**Middleton Isla**	**3.27**	**22**	P	**Pn**	**01 45 16.4**	**-0.7**
Q23K	**Middleton Isla**	**3.27**	**22**		**Pn**	**01 45 16.4**	**-0.8**
Q23K				IAML		01 45 54.4	
	comp=N,534nm,0.7s						
Q23K				IAML		01 45 54.6	
	comp=E,410nm,0.8s						
Q23K	**Middleton Isla**	**3.27**	**22**	P	**Pn**	**01 45 16.3**	**-0.8**
	baz=204						
Q23K				S	**Sn**	**01 45 51.6**	**-4.3**
	baz=204						
R18K	**Karluk**	**3.34**	**292**	P	**Pn**	**01 45 17.1**	**-1.1**
	baz=108						
CNPM	**China Poot**	**3.39**	**338**	Pn	**Pn**	**01 45 18.1**	**-0.8**
CNPM	**China Poot**	**3.39**	**338**		**Sn**	**01 45 55.7**	**-3.3**
BRSE	**Bradley Lake S**	**3.50**	**343**		**Pn**	**01 45 19.5**	**-0.8**
BRSE					**Sn**	**01 45 59.2**	**-2.5**
BRSE	**Bradley Lake S**	**3.50**	**343**	P	**Pn**	**01 45 19.5**	**-0.8**
	baz=162						
BRSE				S	**Sn**	**01 45 59.2**	**-2.5**
	baz=162						
BRLK	**Bradley Lake**	**3.54**	**342**	Pn	**Pn**	**01 45 20.1**	**-0.9**
HOM	**Homer**	**3.60**	**336**		**Pn**	**01 45 21.2**	**-0.5**
HOM				IAML		01 46 12.5	
	comp=E,637nm,0.8s						
HOM				IAML		01 46 19.5	
	comp=N,551nm,0.7s						
HOM	**Homer**	**3.60**	**336**	P	**Pn**	**01 45 22.1**	**+0.4**
	baz=154						
P23K	**Montague Islan**	**3.65**	**10**	P	**Pn**	**01 45 21.8**	**-0.7**
	baz=192						
P23K				S	**Sn**	**01 46 02.4**	**-3.1**
	baz=192						
Q19K	**Cape Douglas,**	**3.65**	**316**	Pn	**Pn**	**01 45 22.8**	**+0.3**
Q19K				IAML		01 46 12.9	
	comp=E,719nm,1.1s						
Q19K				IAML		01 46 13.4	
	comp=N,445nm,1.1s						
Q19K	**Cape Douglas,**	**3.65**	**316**	P	**Pn**	**01 45 22.7**	**+0.3**
	baz=132						
SEW	**Seward**	**3.71**	**354**	P	**Pn**	**01 45 22.5**	**-0.8**
	baz=174						
SEW				S	**Sn**	**01 46 04.2**	**-2.8**
	baz=174						
CHIR	**Chirikof Islan**	**3.92**	**264**	Pn	**Pn**	**01 45 24.4**	**-1.7**
CHIR	**Chirikof Islan**	**3.92**	**264**	P	**Pn**	**01 45 25.6**	**-0.5**
	baz=79						
P19K	**Oil Pt**	**4.03**	**325**		**Pn**	**01 45 27.5**	**-0.3**
P19K				IAML		01 46 20.5	
	comp=N,387nm,0.9s						
P19K				IAML		01 46 20.9	
	comp=E,420nm,0.7s						
P19K

comp=N,214nm,0.7s
ILSW IAML 01 46 31.2
comp=E,179nm,1.2s
Q17K Contact Creek 4.30 298 P Pn 01 45 30.9 -0.6
baz=113
KELA Mount Kelaz 4.30 301 Pn 01 45 31.7 +0.3
EYAK Cordova Ski Ar 4.42 19 P Pn 01 45 33.2 +0.2
EYAK Cordova Ski Ar 4.42 19 P Pn 01 45 32.8 -0.1
baz=202
SUCK Suckling Hills 4.49 33 Pn 01 45 34.1 +0.1
SUCK IAML 01 46 36.9
comp=N,389nm,1.0s
SUCK IAML 01 46 42.3
comp=E,264nm,1.0s
FID Port Fidalgo 4.49 14 Pn Pn 01 45 33.1 -0.9
FID IAML 01 46 25.1
comp=N,169nm,0.4s
FID IAML 01 46 27.1
comp=E,317nm,0.7s
RAGM Ragged Mountai 4.50 26 Pn 01 45 33.5 -0.7
CAPN Captain Cook N 4.54 345 Pn Pn 01 45 34.4 -0.3
GLI Glacier Island 4.55 10 Pn 01 45 34.4 -0.4
GLI IAML 01 46 25.8
comp=E,284nm,0.7s
GLI IAML 01 46 26.8
comp=N,180nm,0.9s
GLI Glacier Island 4.55 10 P Pn 01 45 34.3 -0.4
baz=192
HMT Hamilton 4.57 29 Pn 01 45 35.2 +0.1
RSO Redoubt South 4.57 334 Pn 01 45 34.3 -1.0
P18K Big Mountain, 4.58 313 P Pn 01 45 34.4 -0.8
baz=128
RC01 Rabbit Creek A 4.71 354 Pn 01 45 36.8 -0.2
RC01 IAML 01 46 32.3
comp=E,256nm,0.7s
RC01 IAML 01 46 37.4
comp=N,143nm,1.0s
RC01 Rabbit Creek A 4.71 354 P Pn 01 45 37.0 0.0
baz=174
BERG Berg Lake 4.77 31 Pn 01 45 37.7 -0.2
FIS Fire Island 4.80 351 Pn 01 45 38.3 +0.2
FIS IAML 01 46 43.2
comp=N,290nm,0.9s
O19K Port Alsworth 4.80 324 Pn Pn 01 45 37.4 -0.7
O19K IAML 01 46 40.2
comp=N,276nm,0.5s
O19K Port Alsworth 4.80 324 P Pn 01 45 37.5 -0.7
baz=140
Q16K King Salmon 4.84 301 P Pn 01 45 38.8 0.0
baz=115
O18K Koktuh Hills 4.86 318 P Pn 01 45 38.4 -0.8
baz=133
SNH Sunshine Point 4.87 37 Pn 01 45 39.4 +0.1
SNH IAML 01 46 53.7
comp=E,198nm,1.0s
SNH IAML 01 46 55.5
comp=N,167nm,0.9s
KNK Knik Glacier 5.00 1 Pn 01 45 41.0 0.0
KNK IAML 01 46 47.9
comp=E,161nm,0.9s
KNK IAML 01 46 49.9
comp=N,108nm,0.8s
KNK Knik Glacier 5.00 1 P Pn 01 45 41.4 +0.3
baz=182
BMRM Bremner River 5.03 23 P Pn 01 45 41.3 -0.2
baz=207
N20K Mount Spurr 5.12 341 P Pn 01 45 42.4 -0.4
baz=158
SUA Susitna One 5.16 349 IAML 01 46 54.4
comp=E,85nm,1.1s
SUA IAML 01 46 56.8
comp=N,73nm,1.0s
SUA Susitna One 5.16 349 P Pn 01 45 43.1 -0.2
baz=168
MESA MESA 5.18 41 Pn 01 45 44.2 +0.6
MESA IAML 01 46 51.1
comp=E,147nm,0.9s
MESA IAML 01 46 57.9
comp=N,198nm,0.7s
MESA MESA 5.18 41 P Pn 01 45 44.5 +0.8
baz=226
PMR Palmer 5.19 358 Pn Pn 01 45 43.5 +0.1
PMR IAML 01 46 41.8
comp=N,111nm,0.7s
PMR IAML 01 46 41.9
comp=E,133nm,0.8s
PMR Palmer 5.19 358 P Pn 01 45 43.7 +0.2
PMR Palmer 5.19 358 P Pn 01 45 44.2 +0.7
baz=178
PMR Palmer 5.19 358 P Pn 01 45 43.6 +0.1
CRQM Cirque 5.23 32 IAML 01 47 00.5
comp=E,196nm,0.8s
CRQE Cirque 5.24 32 P Pn 01 45 44.2 -0.2
baz=217
KLU Klutina 5.28 15 IAML 01 46 48.3
comp=N,162nm,0.6s
KLU IAML 01 47 02.1
comp=E,104nm,0.7s
KLU Klutina 5.28 15 P Pn 01 45 44.9 0.0
baz=197
TGL Tana Glacier 5.32 33 IAML 01 46 47.6
comp=E,207nm,0.6s
TGL IAML 01 46 49.7
comp=N,127nm,0.5s
N19K Bonanza Creek 5.33 328 P Pn 01 45 44.7 -1.0
baz=144
ISLE Juniper Island 5.36 36 Pn Pn 01 45 45.7 -0.3
CHGN Chignik 5.40 273 Pn 01 45 45.7 -0.7
CHGN IAML 01 49 21.2
comp=N,100nm,0.1s
CHGN IAML 01 49 21.8
comp=E,77nm,0.1s
SML Sawmill 5.40 2 Pn Pn 01 45 46.8 +0.2
SML Sawmill 5.40 2 P Pn 01 45 46.7 +0.2
baz=183
SML Sawmill 5.40 2 P Pn 01 45 46.7 +0.1
M23K Glacier View 5.41 5 P Pn 01 45 47.2 +0.6
baz=186
SCM Sheep Creek Mo 5.47 7 P Pn 01 45 47.9 +0.3
baz=188
VRDI Verde Repeater 5.54 27 Pn 01 45 48.3 -0.2
N25K Chitina, Valde 5.61 21 P Pn 01 45 49.6 +0.1
baz=204
P16K Nushagak River 5.62 302 P Pn 01 45 49.5 +0.1
baz=114
GLB Gilahina Butte 5.63 25 Pn 01 45 49.5 -0.2
GRNC Granite Creek 5.64 37 Pn 01 45 49.8 -0.2
TABL Table Mountain 5.66 42 Pn 01 45 50.2 0.0
N18K Kilae Creek 5.68 322 Pn Pn 01 45 49.9 -0.4
SKT Skwentna 5.76 347 Pn Pn 01 45 50.9 -0.4
SKT Skwentna 5.76 347 P Pn 01 45 50.8 -0.6
baz=165
MCARA McCarthy VSAT 5.78 28 Pn Pn 01 45 51.7 0.0
MCARA McCarthy VSAT 5.78 28 P Pn 01 45 51.6 0.0
baz=213
PINM Pinnacle 5.78 47 P Pn 01 45 52.0 +0.2
baz=234
M24K Tolsona, Glenn 5.84 12 P Pn 01 45 53.3 +0.7
baz=194
SVW2 Sparrevohn 5.89 326 Pn Pn 01 45 52.2 -1.0
SVW2 Sparrevohn 5.89 326 P Pn 01 45 52.3 -1.0
PNL Peninsula 5.92 53 P Pn 01 45 53.8 +0.2
PNL Peninsula 5.92 53 P Pn 01 45 53.5 -0.1
baz=241
BARN Barnard Glacie 5.92 35 Pn Pn 01 45 54.1 +0.3
CTG Chitna Glacier 5.95 37 P Pn 01 45 53.9 -0.3
baz=223
BCPM Bancas Point 5.96 50 Pn 01 45 54.2 0.0
CUT Chulitna 6.05 353 P Pn 01 45 55.0 -0.3
baz=172
N17K Nushagak Hills 6.05 316 Pn Pn 01 45 55.0 -0.5
WAT6 Susitna Watana 6.20 4 P Pn 01 45 57.6 0.0
baz=185
M19K Big River Lodg 6.22 334 Pn Pn 01 45 56.8 -1.0
HARP HAARP 6.26 15 P Pn 01 45 58.8 +0.5
baz=199
CNBA Chernabura Isl 6.37 260 Pn Pn 01 45 58.1 -1.7
WAT1 Susitna Watana 6.42 1 P Pn 01 46 01.0 +0.4
baz=181
L19K White Mountain 6.57 334 P Pn 01 46 01.6 -1.0
baz=149
O29M Mount Kennedy 6.60 50 Pn Pn 01 46 03.5 +0.5
P29M Windy Craggy 6.65 57 Pn Pn 01 46 03.2 -0.5
DHY Denali Highway 6.71 5 P Pn 01 46 05.0 +0.5
baz=187
SDPT Sand Point 6.71 266 Pn Pn 01 46 03.6 -0.8
SDPT Sand Point 6.71 266 P Pn 01 46 04.2 -0.2
YUK8 Steele Glacier 6.72 40 P Pn 01 46 05.7 +0.8
baz=228
M17K Holitna River 6.73 321 Pn Pn 01 46 04.5 -0.2
PAX Paxson 6.77 13 P Pn 01 46 05.4 +0.1
baz=196
YUK3 Moose Creek 6.84 35 P Pn 01 46 07.3 +0.8
baz=222
M27K Edge Creek, AK 6.89 28 P Pn 01 46 07.5 +0.4
baz=214
MENT Mentasta 7.00 19 P Pn 01 46 10.0 +1.5
M16K Timber Creek 7.05 315 Pn Pn 01 46 09.0 -0.1
N15K Kwethluk River 7.07 307 Pn Pn 01 46 10.2 +0.8
TRF Thorofare Moun 7.09 354 P Pn 01 46 09.4 -0.4
baz=173
YUK4 Talbot Arm 7.17 42 P Pn 01 46 13.1 +2.1
baz=231
BVCY Beaver Creek 7.21 30 P Pn 01 46 11.8 +0.4
baz=217
CAST Castle Rocks 7.22 348 P Pn 01 46 11.6 +0.2
baz=165
PLBC Pleasant Camp 7.24 60 P Pn 01 46 12.2 +0.6
baz=250
O14K Tigyukauivet M 7.27 298 Pn Pn 01 46 12.8 +0.7
HYT Haines Junctio 7.32 48 Pn 01 46 12.6 -0.4
HYT Haines Junctio 7.32 48 P Pn 01 46 13.4 +0.5
baz=238
MCK McKinley 7.33 359 Pn Pn 01 46 13.5 +0.5
MCK McKinley 7.33 359 P Pn 01 46 14.0 +1.0
baz=179
MCK McKinley 7.33 359 P Pn 01 46 13.5 +0.5
SIT Sitka 7.39 80 Pn Pn 01 46 10.5 -3.3
SIT Sitka 7.39 80 P Pn 01 46 10.5 -3.3
K20K Telida 7.46 341 Pn Pn 01 46 14.6 -0.1
TTA Tatalina 7.49 334 Pn 01 46 15.1 -0.2
TTA Tatalina 7.49 334 P Pn 01 46 14.1 -1.1
TTA Tatalina 7.49 334 P Pn 01 46 15.1 -0.2
L27K Beaver Creek, 7.50 25 Pn Pn 01 46 15.6 +0.2
BCAR Beaver Creek A 7.52 25 Pn 01 46 15.7 +0.1
K24K Donnelly Dome 7.54 10 P Pn 01 46 16.7 +0.7
baz=193
L16K Owhat River 7.67 318 P Pn 01 46 17.4 -0.1
baz=129
SKAG Skagway 7.74 61 Pn Pn 01 46 18.9 +0.3
SKAG Skagway 7.74 61 P Pn 01 46 19.0 +0.4
SKAG Skagway 7.74 61 P Pn 01 46 18.9 +0.3
baz=253
BPAW Bear Paw Mtn. 7.78 353 P Pn 01 46 19.1 0.0
baz=171
S32K Killisnoo 7.80 76 Pn Pn 01 46 17.5 -1.9
N30M Aishikik Lake 7.84 45 Pn Pn 01 46 19.9 -0.1
O30N Mendenhall 7.89 51 P Pn 01 46 21.1 +0.4
baz=242
R32K Eaglecrest 7.90 71 P Pn 01 46 21.1 +0.3
baz=262
SCRK Sand Creek 7.93 15 P Pn 01 46 21.7 +0.4
baz=200
K17K Iditarod 7.96 326 P Pn 01 46 20.7 -0.9
baz=138
JIS Juneau Island 7.97 71 P Pn 01 46 20.8 -0.9
M29M Somme Creek 7.97 37 Pn 01 46 22.5 +0.7
M29M Somme Creek 7.97 37 P Pn 01 46 22.4 +0.5
baz=226
WRH Wood River Hil 8.08 2 Pn 01 46 23.4 +0.2
M14K Bethel 8.16 308 Pn Pn 01 46 24.9 +0.6
J20K Nowinta River 8.23 343 Pn Pn 01 46 25.0 -0.2
J20K Nowinta River 8.23 343 P Pn 01 46 25.1 -0.1
baz=159
CCB Clear Creek Bu 8.26 3 Pn Pn 01 46 26.6 +1.0
K27K Chicken 8.31 21 Pn Pn 01 46 27.3 +1.0
J19K Poorman 8.33 339 Pn Pn 01 46 25.8 -0.9
J25K Salcha River, 8.38 10 Pn Pn 01 46 27.4 0.0
WHY Whitehorse 8.38 54 Pn Pn 01 46 28.0 +0.6
IL31 8.42 5 01 46 28.0 +0.2
ILAR Eielson Array 8.42 5 Pn 01 46 28.4 +0.5
ILAR Eielson Array 8.42 5 Pn Pn 01 46 27.6 -0.3
comp=E,0.9nm,0.3s,baz=189,slow=13,SNR=34
ILAR Sn Sn 01 47 59.2 -3.7
comp=E,1.1nm,0.3s,baz=187,slow=21,SNR=7.7
ILAR LR LR 01 49 53.7
comp=E,324nm,18.8s,baz=158,slow=39
comp=E,2.9nm,0.5s
COLA College 8.49 2 Pn 01 46 29.3 +0.5
COLA College 8.49 2 P Pn 01 46 29.3 +0.5
J26L Joseph Creek 8.49 15 Pn Pn 01 46 29.9 +1.0
L29M L29M 8.56 34 Pn Pn 01 46 30.7 +0.9
P32M Atlin 8.57 62 P Pn 01 46 29.8 -0.2
baz=255
M30M Minto, Yukon 8.64 40 Pn Pn 01 46 31.2 +0.3
M30M Minto, Yukon 8.64 40 P Pn 01 46 30.8 -0.1
baz=230
M13K Dall Lake 8.65 304 Pn Pn 01 46 32.4 +1.3
U33K Whale Pass 8.68 86 Pn Pn 01 46 28.5 -3.0
MLY Manley 8.69 354 P Pn 01 46 32.0 +0.4
baz=173
POKR Poker Plat Res 8.74 4 Pn Pn 01 46 33.7 +1.4
L14K Kuka Creek 8.74 310 Pn Pn 01 46 33.1 +0.8
I23K Minto, Yukon-K 8.76 358 P Pn 01 46 32.4 -0.1
baz=178
K15K Wolf Creek Mou 8.79 317 Pn Pn 01 46 32.9 -0.1
CRAG Craig 8.80 90 Pn Pn 01 46 29.6 -3.5
I20K Naaghedeneel 8.86 344 Pn 01 46 34.9 +1.0
I21K Tanana 8.93 351 Pn Pn 01 46 36.0 +1.2
WRAK Wrangell Islan 9.07 83 Pn Pn 01 46 38.5 +1.7
EGAK Eagle 9.16 21 P Pn 01 46 38.5 +0.5
baz=207
Q32M Nakina River 9.16 67 P Pn 01 46 38.5 +0.3
baz=261
P33M Teslin, Yukon 9.18 59 P Pn 01 46 38.2 -0.1
baz=252
PRP Porcupine Dome 9.25 8 Pn Pn 01 46 40.0 +0.6
K29M Barlow Dome 9.29 32 P Pn 01 46 40.1 +0.2
baz=222
I26K Coal Creek Min 9.31 15 Pn Pn 01 46 40.9 +0.9
M31M Drury Creek, Y 9.32 46 P Pn 01 46 41.0 +0.7
baz=238
N32M Quiet Lake 9.38 53 Pn Pn 01 46 42.3 +1.1
H24K Noodor Dome 9.45 2 Pn Pn 01 46 43.6 +1.6
H21K Melozitna Rive 9.47 350 Pn Pn 01 46 42.3 0.0
I17K Unalakleet 9.56 326 Pn Pn 01 46 42.8 -0.6
S34M Telegraph Cree 9.66 74 Pn 01 46 43.8 -1.1
V35K Ketchikan 9.67 89 Pn Pn 01 46 42.5 -2.5
FARO Faro, Yukon 9.75 47 Pn 01 46 46.9 +0.7
J14K Nanvaranak Lak 9.82 316 Pn Pn 01 46 47.1 +0.1
H19K Roundabout Mou 9.87 341 Pn Pn 01 46 48.5 +0.9
IMAR Indian Mountai 9.89 348 Pn Pn 01 46 48.8 +0.8
R33M Jennings River 9.89 65 Pn 01 46 48.0 -0.2
DIB Dawson Inlet, 9.91 102 Pn Pn 01 46 48.9 +0.7
H18K Honsosa River 9.93 336 Pn Pn 01 46 47.7 -0.8
I28M Miner Creek 9.99 22 Pn Pn 01 46 51.5 +2.0
H17K Granite Mounta 10.13 332 Pn Pn 01 46 50.6 -0.7
T35M Bob Quinn 10.17 79 Pn Pn 01 46 52.5 +0.6
J30M Hart River 10.18 32 Pn Pn 01 46 53.8 +1.7
DLBC Dease Lake 10.27 71 P Pn 01 46 53.0 -0.2
baz=267
DLBC Dease Lake 10.27 71 Pn Pn 01 46 53.4 +0.1
comp=E,1.7nm,0.3s,baz=264,slow=9.3,SNR=23
DLBC Sn Sn 01 48 43.9 -4.5
comp=E,0.6nm,0.3s,baz=247,slow=15,SNR=1.5
DLBC LR LR 01 49 42.2
comp=E,113nm,18.6s,baz=290,slow=31
comp=E,4.7nm,0.3s
FYU Fort Yukon 10.31 8 Pn 01 46 54.3 +0.6
G24K Hadweenzic Riv 10.33 3 Pn Pn 01 46 54.5 +0.5
G24K Hadweenzic Riv 10.33 3 P Pn 01 46 54.4 +0.4
baz=184
G23K Bananza Creek 10.34 357 Pn Pn 01 46 54.5 +0.2
G21K Allakaket 10.38 349 Pn Pn 01 46 55.4 +0.8
G19K Purcell Mounta 10.54 341 Pn Pn 01 46 56.7 -0.1
G18K Tagagawik 10.63 337 Pn Pn 01 46 56.6 -1.4
I30M Mount Dempster 10.66 29 Pn Pn 01 46 59.0 +0.4
RUBB Prince Rupert 10.71 94 Pn Pn 01 46 56.7 -2.5
MMPY Sheldon Lake, 10.79 48 Pn 01 47 01.4 +1.0
COLD Coldfoot 10.86 357 P Pn 01 47 01.4 +0.1
baz=176
H29M Whitestone 10.99 22 Pn Pn 01 47 03.6 +0.6
F21K Alatna River 11.06 350 P Pn 01 47 04.1 +0.1
baz=166
F24K Squaw Lake 11.14 2 Pn Pn 01 47 06.7 +1.6
G16K Koyuk River 11.15 329 Pn Pn 01 47 04.7 -0.5
F20K Avaraart Lake 11.16 346 Pn Pn 01 47 05.5 +0.2
BMAR Burnt Mountain 11.21 8 Pn Pn 01 47 05.6 -0.5
F19K Shaleruckik Mo 11.28 341 Pn Pn 01 47 04.9 -2.1
EPYK Eagle Plains 11.48 25 Pn 01 47 10.1 +0.2
ANM Nome 11.54 322 Pn Pn 01 47 09.0 -1.6
ANM Nome 11.54 322 P Pn 01 47 09.0 -1.6
F17K Baldwin Pennin 11.67 334 Pn 01 47 11.6 -0.7
E19K Redstone River 11.76 344 Pn Pn 01 47 12.9 -0.6
E25K Arctic Village 11.83 6 Pn 01 47 16.0 +1.5
E22K Anaktuvuk Pass 11.84 354 Pn Pn 01 47 16.0 +1.4
F28M Old Crow 11.95 17 Pn Pn 01 47 17.3 +1.1
F15K North Star Dit 12.05 327 Pn Pn 01 47 18.2 +0.7
G30M tAoh Zrail Nji 12.10 24 Pn Pn 01 47 20.4 +2.2
TOLK Toolik Lake Re 12.27 359 Pn Pn 01 47 20.8 +0.3
E21K Killik River 12.30 351 Pn Pn 01 47 21.0 +0.1
E18K Tukpahlearik C 12.34 338 Pn Pn 01 47 21.7 +0.3
G31M Satah River 12.52 27 Pn 01 47 24.2 +0.3
D22K Ayikyak River 12.63 353 Pn Pn 01 47 26.8 +1.4
BBB Bella Bella 12.74 101 LR LR 01 51 06.4
comp=E,54nm,20.8s,baz=10,slow=32
D24K Happy Valley 12.78 360 Pn Pn 01 47 28.1 +0.7
D19K Kuna River 12.85 344 Pn Pn 01 47 29.4 +1.0
E29M Blow River 12.98 18 Pn Pn 01 47 32.3 +2.2
D25K Kavik River 12.99 4 Pn 01 47 31.1 +0.8
F31M Tsiigehtchic 13.05 26 Pn 01 47 32.1 +1.0
B21K Ikpikpuk River 13.50 351 Pn 01 47 37.1 -0.2
C19K Lookout Ridge 13.63 343 Pn Pn 01 47 39.1 0.0
INK Inuvik 13.78 24 Pn 01 47 42.4 +1.3
INK Inuvik 13.78 24 Pn Pn 01 47 42.6 +1.5
comp=E,0.2nm,0.3s,baz=203,slow=15,SNR=34
INK LR LR 01 53 00.1
comp=E,141nm,20.6s,baz=176,slow=37
comp=E,8.5nm,0.8s
C16K Lisburne Hills 14.10 334 Pn 01 47 45.9 +0.4
C16K P P 01 47 55.3 +2.1
C36M Paulatuk 16.96 30 Pn 01 48 21.8 -1.1
C36M IAmb IAmb 01 48 35.0
comp=Z,24nm,1.0s
BRLDA Berland Lookou 17.91 84 P Pn 01 48 34.6 -0.4
BRLDA IAmb IAmb 01 48 39.3
comp=Z,18nm,0.9s
YKAB2 New Yellowknif 18.19 57 Pn 01 48 38.5 +0.2
YKA Yellowknife Ar 18.20 56 Pn 01 48 36.8 -1.6
YKA Yellowknife Ar 18.20 56 P Pn 01 48 39.0 +0.7
comp=Z,0.3nm,0.3s,baz=263,slow=11,SNR=48
YKA PcP PcP 01 53 09.6 -1.0
comp=Z,0.4nm,0.8s,baz=276,slow=1.7,SNR=4.1
YKA LR LR 01 55 26.5
comp=Z,115nm,18.8s,baz=40,slow=36
comp=Z,6.7nm,0.8s
A36M Sachs Harbour 18.42 23 P P 01 48 41.1 +0.1
LTY Liberty 19.48 106 P P 01 48 52.8 -0.1
MXC Moxie City 20.11 107 P P 01 48 58.4 -1.3
EDM Edmonton 20.48 84 P P 01 49 02.9 -0.8
EDM IAmb IAmb 01 49 07.5
comp=Z,11nm,1.0s
EDM Edmonton 20.48 84 P P 01 49 02.9 -0.8
EDM pmax pmax
comp=Z,11nm,1.0s
NEW Newport 20.80 100 P P 01 49 08.3 +1.1
comp=Z,4.0nm,0.9s,baz=301,slow=8.9,SNR=4.2
comp=Z,4.0nm,0.9s
YBH Yreka Blue Hor 22.31 120 P P 01 49 25.1 +1.6
comp=Z,3.3nm,1.0s,baz=282,slow=9.3,SNR=3.4
comp=Z,3.3nm,1.0s
BMO Blue Mountains 22.82 107 P P 01 49 28.0 -0.9
BMO Blue Mountains 22.82 107 P P 01 49 28.0 -0.9
BMO pmax pmax
comp=Z,4.0nm,1.1s
BILL Bilibino 23.35 318 P P 01 49 33.4 -0.6
BILL IAmb IAmb 01 49 37.0
comp=Z,24nm,1.1s
BILL Bilibino 23.35 318 *eP* P 01 49 35.7 +1.7
BILL pmax pmax
comp=Z,36nm,1.7s
LYMT Lyon Mountain 24.21 97 P P 01 49 43.3 +0.5
MFID Camas Ranch 24.58 108 P P 01 49 46.0 0.0
AFDM Forest Hills D 25.31 122 P P 01 49 52.9 +0.4
AFDM IAmb IAmb 01 50 02.7
comp=Z,6.8nm,1.2s
BOZ Bozeman (W) 25.41 99 P P 01 49 54.0 +0.5
BOZ Bozeman (W) 25.41 99 P P 01 49 54.1 +0.5
BOZ pmax pmax
comp=Z,5.0nm,1.0s
PAHR Pah Rah Range 25.48 119 P P 01 49 53.5 -0.7
YERR Yerington 26.11 119 P P 01 49 58.6 -1.4
YERR IAmb IAmb 01 50 16.3
comp=Z,6.4nm,1.1s
CMB Columbia Colle 26.32 122 P P 01 49 59.3 -2.4
CMB Columbia Colle 26.32 122 P P 01 49 59.3 -2.4
CMB pmax pmax
comp=Z,3.0nm,0.6s
KVN Kaiserville 26.62 118 P P 01 50 03.9 -0.7
KVN Kaiserville 26.62 118 P P 01 50 03.9 -0.7
KVN pmax pmax
comp=Z,3.0nm,0.9s
RYN Ryan 26.74 119 P P 01 50 04.7 -1.0
ELK Elko 26.78 112 P P 01 50 04.8 -1.3
ELK Elko 26.78 112 P P 01 50 04.8 -1.3
ELK pmax pmax
comp=Z,3.0nm,1.2s
ELK Elko 26.78 112 P P 01 50 06.5 +0.4
comp=Z,1.9nm,1.0s,baz=321,slow=8.1,SNR=6.8
comp=Z,1.9nm,1.0s
NVAR Mina Array Bea 27.00 119 P P 01 50 06.4 -1.6
NVAR Mina Array Bea 27.00 119 P P 01 50 08.2 +0.1
comp=Z,1.8nm,0.9s,baz=312,slow=8.5,SNR=8.0
NVAR PcP PcP 01 53 30.9 +1.6
comp=Z,0.5nm,0.7s,baz=334,slow=1.2,SNR=4.2
comp=Z,1.8nm,0.9s
RES Resolute Bay 27.29 28 P P 01 50 09.4 -0.6
RES IAmb IAmb 01 50 19.7
comp=Z,5.7nm,0.9s
RES Resolute Bay 27.29 28 P P 01 50 09.4 -0.6
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 27.29 28 LR LR 02 01 41.7
comp=Z,90nm,18.5s,baz=264,slow=38
PDAR Pinedale Array 28.38 102 P P 01 50 20.4 -0.1
comp=Z,0.7nm,0.7s,baz=328,slow=5.3,SNR=7.1
comp=Z,0.7nm,0.7s
R11B Troy Canyon, C 28.41 115 P P 01 50 18.9 -1.7
SPR3 Spring Creek 3 28.55 113 P P 01 50 21.3 -0.7
FCC Fort Churchill 28.69 62 P P 01 50 21.3 -1.4
FCC Fort Churchill 28.69 62 P P 01 50 21.3 -1.4
FCC pmax pmax
comp=Z,4.0nm,1.1s
WCT Wildcat Mounta 29.11 119 P P 01 50 26.8 +0.1
BCW Bitter Crk WRg 29.30 125 P P 01 50 27.5 -1.0
PRN Pahroc Range 29.40 116 P P 01 50 28.3 -1.1
PRN IAmb IAmb 01 50 39.4
comp=Z,8.3nm,1.2s
SEY Seymchan 29.47 307 *ceP* P 01 50 30.5 +0.9
SEY pmax pmax
comp=Z,7.0nm,1.3s
GWY Greenwater Val 29.57 120 P P 01 50 29.9 -1.0
GWY IAmb IAmb 01 50 32.9
comp=Z,4.9nm,1.1s
QSM Queen of Sheba 29.65 120 P P 01 50 30.6 -0.9
QSM IAmb IAmb 01 50 35.4
comp=Z,4.9nm,1.1s
MVU Marysvale 30.01 111 P P 01 50 34.0 -0.9
PETK Petropavlovsk- 30.44 287 P P 01 50 38.7 +0.4
comp=Z,3.9nm,1.1s,baz=68,slow=10,SNR=1.7
comp=Z,3.9nm,1.1s
SRU San Rafael Swe 30.44 108 P P 01 50 37.8 -0.9
SRU IAmb IAmb 01 50 41.2
comp=Z,6.2nm,1.0s
SRU San Rafael Swe 30.44 108 P P 01 50 37.8 -0.9
SRU pmax pmax
comp=Z,6.0nm,1.0s
RSSD Black Hills 30.53 95 P P 01 50 38.6 -0.8
RSSD IAmb IAmb 01 50 41.5
comp=Z,5.6nm,0.8s
RSSD Black Hills 30.53 95 P P 01 50 38.6 -0.8
RSSD pmax pmax
comp=Z,6.0nm,0.9s
LCMT Little Creek M 30.62 114 P P 01 50 39.3 -0.9
V12A Nelson 30.82 118 P P 01 50 41.9 -0.1
V12A IAmb IAmb 01 50 44.9
comp=Z,5.1nm,1.1s
O20A White River Ci 30.92 104 P P 01 50 42.2 -0.7
MA2 Magadan 31.25 301 *i* P P 01 50 46.5 +1.1
ULM Lac du Bonnet 31.46 79 P P 01 50 48.3 +1.0
comp=Z,3.7nm,0.9s,baz=286,slow=9.3,SNR=7.1
comp=Z,3.7nm,0.9s
W13A Hualapai Mount 31.80 117 P P 01 50 48.7 -2.0
BLYC Blythe 32.57 120 P P 01 50 57.8 +0.6
BLYC IAmb IAmb 01 51 07.2

comp=Z,5.6nm,0.7s
WUAZ Wupatki 32.73 114 P P 01 50 57.3 -1.5
WUAZ IAmb IAmb 01 51 10.2
comp=Z,6.1nm,1.1s
X16A Lo Mia Camp, P 33.56 115 P P 01 51 05.7 -0.4
X16A IAmb IAmb 01 51 16.4
comp=Z,2.7nm,0.8s
113A Mohawk Valley, 33.74 120 P P 01 51 06.9 -0.5
F33A 5 Mile Ranch, 33.76 86 P P 01 51 07.2 -0.2
F33A IAmb IAmb 01 51 23.7
comp=Z,5.7nm,1.1s
TIXI Tiksi 35.72 327 P P 01 51 24.1 0.0
TIXI IAmb IAmb 01 51 26.3
comp=Z,6.2nm,1.1s
TIXI Tiksi 35.72 327 *ce*P P 01 51 25.4 +1.3
TIXI pmax pmax
comp=Z,9.0nm,2.5s
E38A The Farm, Brul 35.90 81 P P 01 51 25.4 -0.6
E38A IAmb IAmb 01 51 35.5
comp=Z,8.2nm,1.1s
FRB Frobisher Bay 38.10 45 LR LR 02 07 26.0
comp=Z,138nm,18.6s,baz=320,slow=36
ELIS Ellis County 38.66 100 P P 01 51 48.8 -0.7
P38A Dawn 39.36 91 P P 01 51 54.1 -1.1
P38A IAmb IAmb 01 51 56.8
comp=Z,6.6nm,0.9s
YAK Yakutsk 39.51 313 *ce*P P 01 51 56.3 0.0
YAK pmax pmax
comp=Z,6.0nm,0.7s
WMOK Wichita Mounta 39.99 101 P P 01 52 00.1 -0.5
WMOK IAmb IAmb 01 52 02.8
comp=Z,4.8nm,1.0s
WMOK Wichita Mounta 39.99 101 P P 01 52 00.1 -0.5
WMOK pmax pmax
comp=Z,5.0nm,1.0s
HDIL Hopedale 41.07 87 P P 01 52 08.9 -0.5
TXAR Lajitas Array 41.58 111 P P 01 52 15.5 +1.6
comp=Z,1.4nm,1.0s,baz=327,slow=9.0,SNR=8.4
TXAR PcP PcP 01 54 10.8 -0.1
comp=Z,0.1nm,0.5s,baz=199,slow=2.5,SNR=2.4
comp=Z,1.4nm,1.0s
OZNA Ozona 41.65 107 P P 01 52 14.4 0.0
OZNA IAmb IAmb 01 52 15.9
comp=Z,3.6nm,0.8s
SUMG Summit 42.70 25 P P 01 52 22.9 0.0
SUMG Summit 42.70 25 P P 01 52 22.9 0.0
SUMG pmax pmax
comp=Z,15nm,0.8s
SUMG Summit 42.70 25 *i* P P 01 52 24.0 +1.1
WHTX Lake Whitney, 42.79 103 P P 01 52 23.3 -0.3
WHTX IAmb IAmb 01 52 24.8
comp=Z,6.4nm,1.1s
SFJD Kangerlussuaq 42.79 35 P P 01 52 22.6 -0.6
SFJD IAmb IAmb 01 52 33.4
comp=Z,13nm,1.1s
SFJD Kangerlussuaq 42.79 35 P P 01 52 22.6 -0.6
SFJD pmax pmax
comp=Z,13nm,1.2s
SFJD Kangerlussuaq 42.79 35 LR LR 02 10 08.0
comp=Z,72nm,18.1s,baz=340,slow=36
FCAR Ozark Folk Cen 42.80 94 P P 01 52 22.2 -1.4
FCAR IAmb IAmb 01 52 23.7
comp=Z,8.0nm,1.1s
DRIO Del Rio 43.10 108 P P 01 52 25.8 -0.3
DRIO IAmb IAmb 01 52 27.4
comp=Z,4.7nm,0.8s
SCHQ Schefferville 43.65 56 P P 01 52 30.1 -0.2
SCHQ Schefferville 43.65 56 P P 01 52 30.6 +0.3
comp=Z,7.8nm,0.9s,baz=328,slow=9.4,SNR=7.0
comp=Z,7.8nm,0.9s
SPITS Spitsbergen Ar 45.34 4 P P 01 52 44.2 +0.7
comp=Z,5.4nm,0.9s,baz=248,slow=7.4,SNR=1.4
comp=Z,5.4nm,0.9s
KLR Kul'dur 46.05 296 *ce*P P 01 52 49.5 0.0
KLR pmax pmax
comp=Z,9.0nm,2.5s
X48A Hartselle 46.68 91 P P 01 52 54.3 -0.2
X48A IAmb IAmb 01 52 55.9
comp=Z,7.7nm,1.0s
SWET Sewanee 46.73 89 P P 01 52 55.4 +0.3
X51A Calhoun 47.81 89 P P 01 53 02.9 -0.5
NRIK Noril'sk 48.10 337 P P 01 53 05.0 -0.1
NRIK Noril'sk 48.10 337 *ce*P P 01 53 06.3 +1.1
NRIK pmax pmax
comp=Z,17nm,1.2s
NRIK Noril'sk 48.10 337 P P 01 53 05.7 +0.5
comp=Z,12nm,1.0s,baz=52,slow=6.8,SNR=11
comp=Z,12nm,1.0s
BOD Bodaibo 48.34 315 *e*P P 01 53 07.7 +0.5
BOD pmax pmax
comp=Z,9.0nm,1.5s
Z51A Franklin 48.56 90 P P 01 53 08.9 -0.3
Y52A Lilburn 48.77 89 P P 01 53 09.8 -1.0
BATG Bathurst New B 48.90 64 P P 01 53 11.4 -0.2
250A Grady 48.95 93 P P 01 53 12.1 -0.2
H11N2 WAKE ISLAND Hy 49.23 240 T T 02 46 15.1
baz=31,slow=76,SNR=13
H11N3 WAKE ISLAND Hy 49.23 240 T T 02 46 16.2
baz=31,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 49.25 240 T T 02 46 17.4
baz=31,slow=76,SNR=13
JMIC Jan Mayen 49.79 16 LR LR 02 15 52.7
comp=Z,23nm,19.0s,baz=260,slow=38
H11S1 WAKE ISLAND Hy 50.37 240 T T 02 48 16.4
baz=46,slow=74,SNR=18
H11S2 WAKE ISLAND Hy 50.38 240 T T 02 48 13.0
SNR=14
H11S3 WAKE ISLAND Hy 50.39 240 T T 02 48 17.5
baz=40,slow=74,SNR=12
MSHR Mys Shultsa 50.89 290 *i* P P 01 53 25.2 -1.6
MSHR pmax pmax
comp=Z,7.0nm,1.1s
ULN Ulaanbaatar 58.49 310 P P 01 54 21.8 -0.2
ULN IAmb IAmb 01 54 24.4
comp=Z,4.7nm,0.9s
ULN Ulaanbaatar 58.49 310 *ce*P P 01 54 22.6 +0.6
ULN pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 58.79 310 P P 01 54 24.2 +0.1
SONM Songino Array 58.79 310 P P 01 54 24.2 +0.1
SONM pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 58.79 310 P P 01 54 25.8 +1.7
comp=Z,5.4nm,0.8s,baz=44,slow=7.3,SNR=36
comp=Z,5.4nm,0.8s
ZAA0 Zalesovo Array 61.61 327 P P 01 54 43.6 +0.5
ZAA0 IAmb IAmb 01 54 46.3
comp=Z,4.7nm,0.9s
ZALV Zalesovo Beam 61.61 327 P P 01 54 43.6 +0.4
ZALV Zalesovo Beam 61.61 327 *i* P P 01 54 44.0 +0.9
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZALV Zalesovo Beam 61.61 327 P P 01 54 44.3 +1.2
comp=Z,4.5nm,0.9s,baz=24,slow=6.2,SNR=19
comp=Z,4.5nm,0.8s
NB2 NORSAR Subarra 61.81 11 P P 01 54 44.8 +0.3
comp=Z,2.0nm,0.8s,baz=347,slow=6.9
NOA NORSAR Array B 61.81 11 P P 01 54 45.0 +0.5
NOA NORSAR Array B 61.81 11 P P 01 54 45.0 +0.5
comp=Z,2.0nm,0.8s,baz=348,slow=6.9,SNR=5.1
NOA LR LR 02 23 25.1
comp=Z,18nm,19.4s,baz=285,slow=38
comp=Z,2.0nm,0.8s
HHC Hu-ho-hao-te 61.93 302 *e*P P 01 54 47.0 +1.3
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,210nm,4.7s
FINES FINESS Array B 62.40 3 P P 01 54 48.9 +0.6
comp=Z,3.8nm,0.8s,baz=355,slow=6.5,SNR=13
comp=Z,3.8nm,0.8s
KLMR Klimovskoe 62.88 355 *e*P P 01 54 50.6 -0.9
KLMR pmax pmax
comp=Z,23nm,1.2s
HFS Hagfors 62.95 10 LR LR 02 25 02.6
comp=Z,35nm,18.2s,baz=290,slow=39
KIRV Kirov 64.42 350 *ce*P P 01 55 02.0 +0.3
DGZ Jazzator, Alta 64.45 323 *i* P P 01 55 02.7 +0.4
DGZ pmax pmax
comp=Z,7.0nm,1.2s
SVE Sverdlovsk 64.64 343 *e*P P 01 55 04.4 +1.2
SVE pmax pmax
comp=Z,17nm,1.1s
EKA Eskdalemuir Ar 65.13 21 P P 01 55 06.9 +0.5
comp=Z,2.6nm,0.8s,baz=343,slow=5.4,SNR=6.1
comp=Z,2.6nm,0.8s
ARU Arti 65.36 344 P P 01 55 08.1 +0.2
ARU Arti 65.36 344 *c i* P P 01 55 08.6 +0.8
ARU 01 55 37.1
ARU 01 57 28.8
ARU S S 02 03 55.5 +4.1
ARU SS SS 02 08 02.2 -1.0
ARU pmax pmax
comp=Z,15nm,0.9s
VSU Vasula 65.40 3 *ce*P P 01 55 10.1 +2.0
VSU pmax pmax
comp=Z,13nm,1.3s
VSU Vasula 65.40 3 *e*P P 01 55 09.5 +1.4
KURK Kurchatov 66.27 329 *ce*P P 01 55 14.5 +0.7
KURK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 66.28 335 P P 01 55 13.6 -0.3
BRVK Borovoye 66.28 335 *ce*P P 01 55 15.0 +1.1
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 66.29 335 P P 01 55 14.7 +0.8
comp=Z,5.4nm,0.8s,baz=38,slow=7.5,SNR=28
BVAR LR LR 02 27 38.6
comp=Z,45nm,18.2s,baz=7.2,slow=39
comp=Z,5.4nm,0.8s
KURBB Kurchatov Arra 66.38 329 P P 01 55 15.0 +0.5
comp=Z,1.3nm,0.7s,baz=24,slow=6.0,SNR=11
KURBB PP PP 01 57 37.8 -2.3
comp=Z,0.6nm,0.8s,baz=36,slow=9.6,SNR=2.9
comp=Z,1.3nm,0.7s
PABE Paberze 68.27 4 *e*P P 01 55 28.1 +1.7
GTA Gaotai 68.40 309 *e*P P 01 55 28.9 +1.2
GTA pmax pmax
comp=Z,3.0nm,1.3s
IIGN Ignalina 68.50 3 *e*P P 01 55 25.4 -2.5
IDID Didziasalis 68.56 3 *e*P P 01 55 25.0 -3.2
XAN Xi'an 68.63 299 ⇓P P 01 55 30.0 +0.9
XAN sP pwP 01 55 37.5 +0.9
XAN pmax pmax
comp=Z,8.0nm,0.8s
MK31 Makanchi Array 68.66 325 P P 01 55 28.0 -1.1
MK31 IAmb IAmb 01 55 30.6
comp=Z,3.8nm,1.1s
MK31 Makanchi Array 68.66 325 P P 01 55 28.0 -1.1
MK31 pmax pmax
comp=Z,4.0nm,1.1s
MKAR Makanchi Array 68.66 325 P P 01 55 29.0 0.0
MKAR Makanchi Array 68.66 325 P P 01 55 29.6 +0.5
comp=Z,2.3nm,0.9s,baz=46,slow=5.2,SNR=14
MKAR PP PP 01 57 56.9 -3.1
comp=Z,0.9nm,0.9s,baz=45,slow=7.0,SNR=4.1
comp=Z,2.3nm,0.9s
BSEG Bad Segeberg 68.67 13 *e*P P 01 55 30.6 +1.7
comp=Z,5.0nm,1.1s,baz=348,slow=6.1
OBN Obninsk 68.74 357 P P 01 55 29.0 -0.3
OBN Obninsk 68.74 357 ⇑ *e*P P 01 55 29.9 +0.6
OBN *e* 01 55 55.1
OBN pmax pmax
comp=Z,36nm,2.5s
MAKZ Makanchi 68.75 325 P P 01 55 29.3 -0.3
MAKZ IAmb IAmb 01 55 31.2
comp=Z,3.4nm,0.9s
MAKZ Makanchi 68.75 325 P P 01 55 29.3 -0.3
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 69.35 304 ⇑P P 01 55 35.6 +1.9
LZH sP pwP 01 55 42.8 +1.6
LZH pmax pmax
comp=Z,13nm,1.4s
WMQ Urumqi 69.44 320 *e*P P 01 55 36.1 +2.1
SUW Suwalki 69.72 5 *e*P P 01 55 35.8 +0.3
NRDL Niedersach Rie 70.05 14 *e*P P 01 55 39.0 +1.6
comp=Z,4.5nm,1.0s,baz=348,slow=6.1
FLTG Flechtingen 70.36 13 *e*P P 01 55 40.3 +0.9
comp=Z,4.7nm,1.0s,baz=348,slow=6.1
ASSE Asse, Remlinge 70.48 13 *e*P P 01 55 41.6 +1.5
comp=Z,4.7nm,1.1s,baz=348,slow=6.1
BUG Bochum--Univer 70.68 16 *e*P P 01 55 42.7 +1.3
comp=Z,6.4nm,0.7s,baz=348,slow=6.1
BELG Belogornoye 70.71 349 *i* P P 01 55 42.4 +0.9
BELG pmax pmax
comp=Z,6.0nm,0.9s
CLZ Clausthal 70.72 14 *e*P P 01 55 43.6 +1.9
comp=Z,5.3nm,1.1s,baz=348,slow=6.1
LPSR Galich'ya Gora 71.16 355 *e*P P 01 55 43.6 -0.6
LPSR pmax pmax
comp=Z,10.0nm,1.0s
NEUB Neuenburg 71.52 13 *e*P P 01 55 48.1 +1.6
comp=Z,12nm,1.2s,baz=348,slow=6.1
CLL Collm 71.57 12 *i* P P 01 55 47.6 +0.8
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 71.57 12 *i* P P 01 55 47.6 +0.8
comp=Z,4.0nm,1.0s
CLL Collm 71.57 12 *e*P P 01 55 47.9 +1.2
comp=Z,3.4nm,0.9s,baz=348,slow=6.1
ABKAR Akkulak array 72.02 341 P P 01 55 49.9 +0.3
MOX Moxa 72.06 13 *e*P P 01 55 51.2 +1.4
comp=Z,5.7nm,1.2s,baz=348,slow=6.1
VORR Voronezh 72.07 355 *e*P P 01 55 49.8 0.0
VORR pmax pmax
comp=Z,10.0nm,0.3s
BRG Berggiesshubel 72.11 11 *e*P P 01 55 51.5 +1.4
BRG Amp 01 55 52.4
comp=Z,3.9nm,1.0s
BRG Berggiesshubel 72.11 11 *e*P P 01 55 51.4 +1.4
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG Berggiesshubel 72.11 11 *e*P P 01 55 51.4 +1.4
comp=Z,3.9nm,1.0s,baz=348,slow=6.1
WLF Walferdange 72.23 17 *e*P P 01 55 57.4 +6.6
comp=Z,5.7nm,1.0s,baz=348,slow=6.1
HSKC Hora Svate Kat 72.31 12 *e*P P 01 55 52.9 +1.6
TANN Tannenbergstha 72.39 13 *e*P P 01 55 53.4 +1.6
comp=Z,3.2nm,1.0s,baz=348,slow=6.1
VRH Novokhopyorsk 72.39 353 *e*P P 01 55 50.9 -0.8
VRH pmax pmax
comp=Z,8.0nm,0.9s
PVCC Panska Ves 72.51 11 *e*P P 01 55 54.2 +1.7
PVCC Panska Ves 72.51 11 *e*P P 01 55 54.2 +1.7
VSR Storozhevoye 72.53 355 *e*P P 01 55 51.7 -0.8
VSR pmax pmax
comp=Z,8.0nm,0.7s
CHVC Chvalec 72.61 10 *e*P P 01 55 54.6 +1.5
CHVC Chvalec 72.61 10 *e*P P 01 55 54.6 +1.5
OSTC Ostas 72.65 10 *e*P P 01 55 55.0 +1.7
OSTC Ostas 72.65 10 *e*P P 01 55 55.0 +1.7
MANZ Manzenberg 72.77 13 *e*P P 01 55 55.4 +1.4
comp=Z,1.0nm,1.3s,baz=348,slow=6.1
VORD Divnogorie 72.77 355 *e*P P 01 55 53.6 -0.3
VORD pmax pmax
comp=Z,10.0nm,0.8s
DPC Dobruska-Polom 72.87 10 *e*P P 01 55 56.5 +1.9
DPC Dobruska-Polom 72.87 10 *e*P P 01 55 56.5 +1.9
GRF Grafenberg Arr 72.94 13 *e*P P 01 55 56.8 +1.8
comp=Z,4.9nm,0.8s,baz=348,slow=6.1
ROTZ Rotzenmuhle 72.99 13 *e*P P 01 55 56.9 +1.6
comp=Z,0.8nm,0.8s,baz=348,slow=6.1
PRU Pruhonice 73.04 11 *e*P P 01 55 56.7 +1.1
PRU Pruhonice 73.04 11 *e*P P 01 55 56.7 +1.1
KRLC Kraliky 73.18 10 *e*P P 01 55 58.2 +1.7
KRLC Kraliky 73.18 10 *e*P P 01 55 58.2 +1.7
AKASG Malin Array Be 73.23 1 P P 01 55 57.2 +0.6
comp=Z,8.3nm,0.7s,baz=359,slow=5.8,SNR=19
AKASG LR LR 02 29 03.8
comp=Z,18nm,20.7s,baz=340,slow=37
comp=Z,8.3nm,0.7s
AKBB Malin Array Si 73.23 1 P P 01 55 55.7 -1.0
AKBB Malin Array Si 73.23 1 *ce*P P 01 55 56.3 -0.3
AKBB pmax pmax
comp=Z,17nm,0.9s
KIEV Kiev 73.23 1 ⇑P P 01 55 57.4 +0.7
KIEV Kiev 73.23 1 P P 01 55 56.8 +0.1
KIEV Kiev 73.23 1 P P 01 55 56.8 +0.1
KIEV pmax pmax
comp=Z,12nm,0.8s
OJC Ojcow 73.29 8 P 01 55 56.7 -0.4
OJC IAmb IAmb 01 56 02.9
comp=Z,2.3nm,0.6s
OJC Ojcow 73.29 8 P P 01 55 56.7 -0.4
OJC pmax pmax
comp=Z,2.0nm,0.6s
ZVC Zvikov 73.55 12 *e*P P 01 55 59.9 +1.3
MORC Moravsky Berou 73.55 9 ⇓P P 01 56 00.2 +1.6
MORC Moravsky Berou 73.55 9 P P 01 55 59.0 +0.3
MORC IAmb IAmb 01 56 00.4
comp=Z,3.3nm,0.9s
MORC Moravsky Berou 73.55 9 *e*P P 01 55 59.5 +0.8
MORC Moravsky Berou 73.55 9 P P 01 55 59.0 +0.3
MORC pmax pmax
comp=Z,3.0nm,0.9s
WET Wettzell 73.69 12 *e*P P 01 56 01.2 +1.7
comp=Z,5.4nm,1.2s,baz=348,slow=6.1
PPT Papeete 73.71 181 LR LR 02 18 35.4
comp=Z,28nm,21.1s,baz=346,slow=28
KHC Kasperske Hory 73.78 12 P P 01 56 00.4 +0.3
KHC IAmb IAmb 01 56 02.7
comp=Z,3.8nm,0.9s
KHC Kasperske Hory 73.78 12 *e*P P 01 56 01.5 +1.5
KHC Kasperske Hory 73.78 12 *ce*P P 01 56 01.7 +1.7
KHC pmax pmax
comp=Z,12nm,1.7s
BFO Black Forest 73.87 16 *e*P P 01 56 01.7 +1.1
comp=Z,4.1nm,1.2s,baz=348,slow=6.1
VRAC Vranov 73.93 10 *e*P P 01 56 02.0 +1.2
VRAC Vranov 73.93 10 LR LR 02 30 24.8
comp=Z,30nm,19.2s,baz=340,slow=37
MAUC Maruska 73.98 9 *e*P P 01 56 02.9 +1.7
GEC2 GERESS Array S 74.08 12 P P 01 56 02.0 +0.1
GEC2 IAmb IAmb 01 56 05.2
comp=Z,3.9nm,1.2s
GEC2 GERESS Array S 74.08 12 *e*P P 01 56 03.2 +1.4
comp=Z,3.7nm,1.1s,baz=348,slow=6.1
GERES GERESS Array B 74.08 12 P P 01 56 01.6 -0.3
GERES GERESS Array B 74.08 12 P P 01 56 02.9 +1.1
comp=Z,1.5nm,0.7s,baz=28,slow=6.0,SNR=8.2
GERES LR LR 02 29 39.6
comp=Z,25nm,21.3s,baz=288,slow=37
comp=Z,1.5nm,0.7s
KRUC Moravsky 74.15 10 *e*P P 01 56 03.0 +0.9
CKRC Cesky Krumlov 74.17 12 *e*P P 01 56 03.6 +1.3
CKRC Cesky Krumlov 74.17 12 *e*P P 01 56 03.6 +1.3
FUR Furstenfeldbru 74.45 14 *e*P P 01 56 05.4 +1.5
comp=Z,6.6nm,0.8s,baz=348,slow=6.1
JAVC Velka Javorina 74.47 9 *e*P P 01 56 06.1 +2.0
AAK Ala-Archa 74.79 328 *ce*P P 01 56 08.6 +2.4
AAK pmax pmax
comp=Z,3.0nm,1.3s
MODS Modra-Piesok 74.92 10 *e*P P 01 56 08.3 +1.7
MODS Modra-Piesok 74.92 10 *e*P P 01 56 08.3 +1.7
VYHS Vyhne 74.93 9 *e*P P 01 56 08.2 +1.5
VYHS Vyhne 74.93 9 *e*P P 01 56 08.2 +1.5
ZST Bratislava 75.08 10 *e*P P 01 56 09.5 +2.0
ZST Bratislava 75.08 10 *e*P P 01 56 09.5 +2.0
BIOA Bad Ischl, Aus 75.21 12 *e*P P 01 56 09.1 +0.8
comp=Z,1.3nm,0.6s
CONA Conrad Observa 75.22 11 *e*pP P 01 56 09.8 +1.4
comp=Z,5.1nm,0.9s,SNR=5.8
MOTA Moosalm 75.23 14 *e*P P 01 56 09.1 +0.5
comp=Z,4.5nm,1.3s
WATA Walderalm 75.30 14 *e*pP P 01 56 09.7 +0.7
comp=Z,2.8nm,0.7s
SQTA Sankt Quirin 75.36 14 *e*P P 01 56 10.0 +0.7
comp=Z,4.0nm,1.2s
WTTA Wattenberg 75.38 14 *e*pP P 01 56 10.6 +1.1
comp=Z,11nm,1.4s
KK31 Karatay Array 75.47 331 P P 01 56 10.0 +0.1
KK31 IAmb IAmb 01 56 11.9
comp=Z,2.1nm,0.9s
KK31 Karatay Array 75.47 331 P P 01 56 10.0 +0.1
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 75.47 331 P P 01 56 09.7 -0.2
KKAR Karatay Array 75.47 331 P P 01 56 09.7 -0.2
FETA Feichten 75.49 14 *e*pP P 01 56 11.4 +1.3
comp=Z,4.6nm,1.0s
PSZ Piszkesteto 75.59 8 ⇑P P 01 56 11.8 +1.3
PSZ Piszkesteto 75.59 8 P P 01 56 10.5 -0.1
PSZ Piszkesteto 75.59 8 P P 01 56 10.5 -0.1
PSZ pmax pmax
comp=Z,7.0nm,1.0s
DAVOX Davos/Dischmat 75.61 15 LR LR 02 37 59.1
comp=Z,14nm,18.4s,baz=252,slow=42
KBA Koelnbreinsper 75.78 13 *i* pP P 01 56 13.3 +1.5
comp=Z,6.7nm,0.9s
SORM Soroca 75.78 2 ⇑P P 01 56 12.3 +0.7
SORM Soroca 75.78 2 P P 01 56 12.2 +0.7
ARSA Arzberg 75.85 11 *e*pP P 01 56 13.4 +1.4
comp=Z,2.4nm,0.8s
BUR08 Bucovina Ar. S 76.17 4 P P 01 56 14.6 +0.6
BUR08 IAmb IAmb 01 56 16.3
comp=Z,3.7nm,0.8s
BURAR Bucovina Array 76.20 4 ⇑P P 01 56 15.3 +1.1
BURAR Bucovina Array 76.20 4 P P 01 56 14.2 +0.1
BURAR Bucovina Array 76.20 4 P P 01 56 15.2 +1.1
SOKA Soboth 76.37 11 *i* pP P 01 56 16.2 +1.2
comp=Z,5.4nm,1.0s,SNR=6.6
PRED Cave del Predi 76.43 13 P P 01 56 15.8 +0.4
PRED IAmb IAmb 01 56 34.6
comp=Z,2.9nm,1.2s
OBKA Obir 76.48 12 *e*pP P 01 56 16.7 +1.0
comp=Z,9.5nm,0.8s,SNR=1
DRGR 76.90 6 ⇑P P 01 56 18.7 +0.6
DRGR 76.90 6 P P 01 56 18.6 +0.6
MILM Milestii Mici 77.00 2 ⇑P P 01 56 19.1 +0.6
MILM Milestii Mici 77.00 2 P P 01 56 19.1 +0.6
MARR Marisel-Cluj 77.04 6 ⇑P P 01 56 19.6 +0.8
MORH Mrgy, Hungar 77.18 9 ⇑P P 01 56 20.5 +1.0
KSH Kashi 77.21 326 P P 01 56 24.5 +4.5
KSH pmax pmax
comp=Z,3.0nm,0.8s
VASR Vaslui 77.26 2 ⇑P P 01 56 21.2 +1.2
SIRR Siria 77.36 7 ⇑P P 01 56 22.5 +2.0
PURM Purcari 77.41 1 ⇑P P 01 56 22.4 +1.6
LEOM Leova 77.44 2 ⇑P P 01 56 21.4 +0.4
LEOM Leova 77.44 2 P P 01 56 21.3 +0.4
OZUR 77.74 4 ⇑P P 01 56 24.6 +1.9
BOSR Bodos 77.76 4 ⇑P P 01 56 24.7 +1.9
TURR Turia 77.79 4 ⇑P P 01 56 24.7 +1.7
GHRR 77.83 3 ⇑P P 01 56 25.2 +2.0
DOPR Dopca 77.86 4 ⇑P P 01 56 25.1 +1.7
RAR Rarotonga 77.90 191 LR LR 02 22 02.5
comp=Z,57nm,20.6s,baz=26,slow=29
SURR Surduc 77.90 7 ⇑P P 01 56 25.0 +1.5
BZS Buzias 78.00 7 ⇑P P 01 56 25.3 +1.1
BZS Buzias 78.00 7 P P 01 56 25.2 +1.1
VRI Vrincioaia 78.01 3 ⇑P P 01 56 25.4 +1.2
VRI Vrincioaia 78.01 3 P P 01 56 25.4 +1.2
COVR Voineasa-Covas 78.01 4 ⇑P P 01 56 26.1 +1.9
PLOR Plostina 78.02 3 ⇑P P 01 56 25.8 +1.5
PLOR Plostina 78.02 3 P P 01 56 25.7 +1.5
VLDR Vladesti 78.06 2 ⇑P P 01 56 26.0 +1.6
GZR Gura Zlata 78.30 6 ⇑P P 01 56 27.8 +1.9
GZR Gura Zlata 78.30 6 P P 01 56 27.8 +1.9
PZH PanZhiHua 78.32 300 P P 01 56 26.0 -0.3
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,4.5s
MLR Muntele Rosu 78.35 4 ⇓P P 01 56 27.0 +0.8
MLR Muntele Rosu 78.35 4 P P 01 56 27.0 +0.8
VOIR 78.37 4 ⇑P P 01 56 28.4 +2.1
VOIR 78.37 4 P P 01 56 28.3 +2.1
ARR Arges 78.42 5 ⇓P P 01 56 27.7 +1.2
CFR Carcaliu 78.73 2 ⇑P P 01 56 29.5 +1.3
CFR Carcaliu 78.73 2 P P 01 56 29.4 +1.3
TLCR 78.74 2 ⇑P P 01 56 30.0 +1.8
TLCR 78.74 2 P P 01 56 29.9 +1.8
TPGR Topolog 79.06 2 ⇑P P 01 56 31.5 +1.5
HARR Harsova 79.22 2 ⇑P P 01 56 32.2 +1.4
HARR Harsova 79.22 2 P P 01 56 32.2 +1.4
TIRR Tirgusor 79.46 2 ⇑P P 01 56 33.6 +1.5
TIRR Tirgusor 79.46 2 P P 01 56 33.6 +1.5
KIV Kislovodsk 79.53 352 ⇑P P 01 56 33.4 +0.7
KIV Kislovodsk 79.53 352 P P 01 56 31.3 -1.3
KIV Kislovodsk 79.53 352 *e*P P 01 56 33.5 +0.8
KIV pmax pmax
comp=Z,12nm,1.1s
ESDC Sonseca Array 79.72 27 P P 01 56 34.0 +0.3
ESDC IAmb IAmb 01 56 36.2
comp=Z,5.3nm,0.9s
ESDC Sonseca Array 79.72 27 P P 01 56 35.3 +1.6
comp=Z,4.7nm,0.9s,baz=335,slow=5.5,SNR=24
ESDC LR LR 02 32 20.0
comp=Z,27nm,19.0s,baz=314,slow=36
comp=Z,4.7nm,0.9s
KBZ Khabaz 79.74 351 *ce*P P 01 56 34.9 +1.3
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 79.74 351 P P 01 56 35.3 +1.6

comp=Z,7.5nm,0.8s,baz=341,slow=5.9,SNR=13
comp=Z,7.5nm,0.8s
NCK Nalchik 79.91 351 *i* P **P 01 56 35.3 +0.6**
NCK pmax pmax
comp=Z,17nm,0.9s
BOVS Bovan 79.98 7 ⇑P **P 01 56 35.6 +0.6**
SIMJ Simiganj 80.03 331 P **P 01 56 34.6 -0.9**
SIMJ IAmb IAmb 01 56 37.4
comp=Z,5.9nm,1.1s
BLKB Belogradchik 80.06 6 ⇑P **P 01 56 36.2 +0.7**
PLVB Pleven 80.40 5 ⇑P **P 01 56 37.8 +0.6**
ZEI Tsey 80.58 351 *e*P P 01 56 28.7 -10
ZEI pmax pmax
comp=Z,5.0nm,1.1s
FNA Florina 82.80 8 P **P 01 56 50.1 0.0**
FNA IAmb IAmb 01 56 52.2
comp=Z,3.1nm,1.1s
FNA Florina 82.80 8 P **P 01 56 50.1 0.0**
FNA pmax pmax
comp=Z,3.0nm,1.1s
ALN Alexandroupoli 82.94 4 P **P 01 56 51.1 +0.4**
ALN Alexandroupoli 82.94 4 P **P 01 56 51.1 +0.4**
ALN pmax pmax
comp=Z,13nm,1.0s
CUC Castrocucco 83.06 12 P **P 01 56 50.4 -1.0**
CUC IAmb IAmb 01 56 52.4
comp=Z,5.8nm,1.1s
GNI Garni 83.12 350 *ce*P **P 01 56 53.4 +1.5**
GNI pmax pmax
comp=Z,6.0nm,1.0s
GEYT Alibeck 83.29 339 P **P 01 56 51.4 -1.2**
GEYT Alibeck 83.29 339 P **P 01 56 54.1 +1.5**
comp=Z,3.1nm,0.7s,baz=293,slow=7.9,SNR=8.5
comp=Z,3.1nm,0.7s
BR131 Keskin Array S 84.19 358 P **P 01 56 57.4 0.0**
BR131 Keskin Array S 84.19 358 P **P 01 56 57.4 0.0**
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 84.19 358 P **P 01 56 57.4 0.0**
BRTR Keskin Array B 84.19 358 P **P 01 56 58.7 +1.3**
comp=Z,3.8nm,0.8s,baz=19,slow=2.7,SNR=23
comp=Z,3.8nm,0.8s
CRAI Chiangrai 84.29 298 P **P 01 56 57.3 -0.6**
CRAI IAmb IAmb 01 57 07.1
comp=Z,1.7nm,0.8s
AGG Agios Georgios 84.61 7 P **P 01 56 58.5 -0.9**
AGG IAmb IAmb 01 57 00.8
comp=Z,3.6nm,0.9s
AGG Agios Georgios 84.61 7 P **P 01 56 58.5 -0.9**
AGG pmax pmax
comp=Z,4.0nm,0.9s
BNN Bunyan 85.01 356 P **P 01 57 00.1 -1.4**
CMAR Chiang Mai Arr 86.50 298 *ce*P **P 01 57 10.0 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 86.50 298 P **P 01 57 09.7 +0.7**
comp=Z,1.1nm,0.4s,baz=12,slow=5.0,SNR=10
CMAR LR LR 02 37 22.9
comp=Z,8.2nm,21.6s,baz=195,slow=37
comp=Z,1.1nm,0.4s
DGAR Diego Garcia 121.42 310 *c* PKIKP **PKPdf 02 03 19.3 -0.2**
QSPA South Pole Qui 146.22 180 PKPbc **PKPbc 02 04 05.3 +0.3**
comp=Z,4.0nm,0.8s,baz=94,slow=0.7,SNR=20
BOSA Boshof 151.87 11 PKPbc **PKPbc 02 04 20.8 0.0**
comp=Z,2.5nm,0.9s,baz=5.9,slow=2.7,SNR=6.4
BOSA PKPab **PKPab 02 04 28.0 -1.8**
comp=Z,3.7nm,0.8s,baz=320,slow=5.0,SNR=8.7

*DJA **18** 01:48:10.7±0.5,6˚S±5˚×12˚7E±˚, h454km±9km, M4.5/12, mb4.3/9, mB5.1/4, MLv4.6/12, Mw(mB)4.4/4*
*NEIC **18** 01:48:12.3±1.2,6˚.25S±0˚.07×127˚.4E±0˚.1, h436km±14km, mb4.1/15, Error ellipse: s-maj=17.1km s-min=9.7km az=70.0*
*IDC **18** 01:48:13.6±2.6,6˚.04S×127˚.90E, h467km±29km, mb3.1/6, mbtmp4.0/8, Error ellipse: s-maj=78.2km s-min=10.8km az=64.0*
ISC 18 01:48:12.2±0.6,**6˚26S**±0˚.07×**127˚.37E**±0˚.07,**h450**km,**n60,** σ1**$23**/65,**mb3.9**/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.02**	**355**	P	**P**	**01 49 18.2**	**-1.2**
BNDI	**Bandanaira**	**3.06**	**56**	P	**P**	**01 49 19.3**	**-0.4**
BNDI	**Bandanaira**	**3.06**	**56**	P	**P**	**01 49 18.8**	**-0.9**
SAUI	**Saumlaki**	**4.26**	**114**	P	**P**	**01 49 29.1**	**-0.5**
SAUI				S	**S**	**01 50 30.6**	**-2.1**
SAUI	**Saumlaki**	**4.26**	**114**	P	**P**	**01 49 29.4**	**-0.2**
SAUI	**Saumlaki**	**4.26**	**114**	P	**P**	**01 49 29.2**	**-0.5**
SANI	**Sanana**	**4.41**	**342**	P	**P**	**01 49 28.3**	**-2.7**
SANI	**Sanana**	**4.41**	**342**	P	**P**	**01 49 28.3**	**-2.7**
SOEI	**Soe**	**4.63**	**221**	P	**P**	**01 49 33.8**	**+0.6**
SOEI				S	**S**	**01 50 37.0**	**-2.2**
SOEI	**Soe**	**4.63**	**221**	P	**P**	**01 49 34.7**	**+1.5**
SOEI	**Soe**	**4.63**	**221**	P	**P**	**01 49 32.4**	**-0.8**
MMRI	**Maumere**	**5.61**	**245**	P	**P**	**01 49 40.9**	**-1.6**
MMRI	**Maumere**	**5.61**	**245**	P	**P**	**01 49 40.5**	**-2.0**
	61nm,0.7s,0.4nm						
FAKI	**Fak Fak**	**5.89**	**56**	P	**P**	**01 49 44.3**	**-1.1**
FAKI	**Fak Fak**	**5.89**	**56**	P	**P**	**01 49 44.3**	**-1.1**
FAKI	**Fak Fak**	**5.89**	**56**	P	**P**	**01 49 44.3**	**-1.1**
	140nm,0.6s,2μm0.7nm						
SWI	**Sorong**	**6.62**	**36**	P	**P**	**01 49 52.2**	**-0.8**
	48nm,0.6s,0.5nm						
KMPI	**Kaimana, Papua**	**6.82**	**68**	P	**P**	**01 49 54.9**	**-0.2**
	217nm,0.5s,3μm1.0nm						
KAPI	**Kappang**	**7.68**	**279**	P	**P**	**01 50 04.8**	**+0.6**
BASI	**Baing, Sumba**	**7.79**	**239**	P	**P**	**01 50 02.8**	**-2.5**
	124nm,1.1s,0.7nm						
KDU	**Kakadu**	**8.13**	**142**	P	**P**	**01 50 09.4**	**+0.4**
TOLI2	**Tolitoli**	**9.84**	**318**	P	**P**	**01 50 27.7**	**0.0**
TOLI2	**Tolitoli**	**9.84**	**318**	P	**P**	**01 50 28.0**	**+0.3**
PLAI	**Plampang**	**9.84**	**254**	P	**P**	**01 50 25.0**	**-2.7**
	38nm,0.8s						
TWSI	**Taliwang, Sumb**	**10.68**	**256**	P	**P**	**01 50 34.7**	**-2.1**
	22nm,1.1s						
FITZ	**Fitzroy Crossi**	**11.88**	**188**	P	**P**	**01 50 50.1**	**+0.3**
JAGI	**Jajag, Banyuwa**	**13.29**	**260**	P	**P**	**01 51 04.3**	**-0.8**
JAGI	**Jajag, Banyuwa**	**13.29**	**260**	P	**P**	**01 51 04.4**	**-0.7**
JAGI	**Jajag, Banyuwa**	**13.29**	**260**	P	**P**	**01 51 03.7**	**-1.4**
WB0	**Warramunga Arr**	**15.06**	**154**	P	**P**	**01 51 24.1**	**+0.1**
WRA	**Warramunga Arr**	**15.19**	**154**	P	**P**	**01 51 24.4**	**-1.1**
WRA	**Warramunga Arr**	**15.19**	**154**	P	**P**	**01 51 25.3**	**-0.1**
	2.6nm,0.5s,baz=330,slow=11,SNR=27						
WRA				S	**S**	**01 54 03.4**	**-1.7**
	3.7nm,0.8s,baz=318,slow=24,SNR=5.6						
WB2	**Warramunga Arr**	**15.20**	**154**	P	**P**	**01 51 25.5**	**+0.1**
WR0	**Warramunga Arr**	**15.30**	**154**	P	**P**	**01 51 26.6**	**0.0**
WR0				IAmb	IAmb	01 51 27.1	
	comp=Z,5.2nm,0.6s						
MBWA	**Marble Bar**	**16.55**	**206**	P	**P**	**01 51 41.4**	**+1.6**
PSA00	**Pilbara Seismi**	**16.87**	**205**	P	**P**	**01 51 42.7**	**-0.5**
PSA00				IAmb	IAmb	01 52 18.8	
	comp=Z,12nm,1.4s						
COEN	**Coen**	**17.33**	**117**	P	**P**	**01 51 47.7**	**-0.4**
COEN				IAmb	IAmb	01 52 03.6	
	comp=Z,8.7nm,1.1s						
COEN	**Coen**	**17.33**	**117**	P	**P**	**01 51 48.5**	**+0.4**
SBUM	**Sibu**	**17.43**	**299**	P	**P**	**01 51 49.9**	**+0.8**
AS31	**Alice Springs**	**18.41**	**161**	P	**P**	**01 51 59.4**	**+0.4**
AS31				IAmb	IAmb	01 52 00.4	
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**18.41**	**161**	P	**P**	**01 51 59.4**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=346,slow=11,SNR=74						
ASAR				S	**S**	**01 55 05.1**	**+0.4**
	comp=Z,4.5nm,0.9s,baz=349,slow=21,SNR=21						
ASAR				PcP	**PcP**	**01 56 06.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=358,slow=1.4,SNR=4.5						
AS01	**Alice Springs**	**18.43**	**161**	P	**P**	**01 51 59.4**	**+0.3**
QIS	**Mount Isa**	**18.52**	**141**	P	**P**	**01 52 00.8**	**+0.8**
WRKA	**Warakurna**	**18.69**	**177**	P	**P**	**01 52 02.8**	**+1.2**
OOD	**Oodnadatta**	**22.83**	**161**	P	**P**	**01 52 40.2**	**+1.0**
FORT	**Forrest**	**24.40**	**179**	P	**P**	**01 52 53.6**	**+0.4**
FORT				IAmb	IAmb	01 52 54.1	
	comp=Z,12nm,1.0s						
FORT	**Forrest**	**24.40**	**179**	P	**P**	**01 52 54.3**	**+1.1**
MULG	**Mulgathing**	**24.71**	**166**	P	**P**	**01 52 57.4**	**+1.4**
BBOO	**Buckleboo**	**27.63**	**164**	P	**P**	**01 53 22.6**	**+0.7**
BBOO				IAmb	IAmb	01 53 22.9	
	comp=Z,6.5nm,0.7s						
STKA	**Stephens Creek**	**28.75**	**154**	P	**P**	**01 53 32.6**	**+1.0**
STKA	**Stephens Creek**	**28.75**	**154**	P	**P**	**01 53 32.6**	**+1.0**
	comp=Z,4.1nm,0.5s,baz=332,slow=8.9,SNR=12						
	comp=Z,4.1nm,0.5s						

CAN Canberra 35.11 148 P **P 01 54 28.1 +1.7**
CAN IAmb IAmb 01 55 07.6
comp=Z,14nm,1.3s
TOO Toolangi 35.27 155 P **P 01 54 27.9 +0.4**
TOO IAmb IAmb 01 54 35.1
comp=Z,12nm,1.4s
CMAR Chiang Mai Arr 37.27 312 P **P 01 54 47.4 +2.9**
comp=Z,0.8nm,0.3s,baz=149,slow=6.5,SNR=6.9
comp=Z,0.8nm,0.3s
MKAR Makanchi Array 66.20 328 P **P 01 58 13.7 -0.4**
comp=Z,0.4nm,0.8s,baz=124,slow=7.1,SNR=1.6
comp=Z,0.4nm,0.8s
ZALV Zalesovo Beam 69.79 335 P **P 01 58 35.0 -0.9**
comp=Z,0.5nm,0.4s,baz=130,slow=5.4,SNR=2.8
comp=Z,0.5nm,0.4s
KURBB Kurchatov Arra 70.53 329 P **P 01 58 40.5 +0.1**
comp=Z,0.3nm,0.3s,baz=110,slow=5.0,SNR=4.5
comp=Z,0.3nm,0.3s
QSPA South Pole Qui 83.71 180 P **P 01 59 52.9 +0.4**
QSPA IAmb IAmb 01 59 56.7
comp=Z,2.9nm,1.3s
QSPA South Pole Qui 83.71 180 P **P 01 59 52.8 +0.4**
comp=Z,0.7nm,0.6s,baz=140,slow=2.2,SNR=16
comp=Z,0.7nm,0.6s
CPUP Villa Florida 147.28 172 PKPbc **PKiKP 02 07 05.6 -1.1**
comp=Z,1.6nm,0.8s,baz=105,slow=2.7,SNR=3.7

*IDC **18** 01:50:13.9±5.0,56˚.07N×161˚.26E, h0km, mb3.7/3, mbtmp3.6/4, ML1.8/1, MS3.5/3, Error ellipse: s-maj=131.4km s-min=32.7km az=112.0*
*KRSC **18** 01:50:13.1±0.5,55˚.58N×162˚.41E, h24km±22km, Ml3.9*
ISC 18 01:50:13.5±1.8,**55˚.69N**±0˚.04×**162˚.26E**±0˚.04,**h17**km±13km, **n34,**σ1**$81**/37,**mb3.9**/3,**MS3.7**/3,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.62**	**23**	*e*P	**Pb**	**01 50 27.1**	**+1.3**
KBG				*e*S	**Sb**	**01 50 36.1**	**+1.8**
ZLN	**Zelenaya**	**0.89**	**293**	*e*P	**Pn**	**01 50 32.2**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**0.92**	**287**	*e*P	**Pn**	**01 50 32.4**	**+0.7**
SMKR	**Semkarok**	**1.00**	**334**	*e*P	**Pn**	**01 50 33.4**	**+0.6**
SMKR				*e*S	**Sn**	**01 50 47.6**	**+1.1**
BZMR	**Bezymyannaya**	**1.03**	**285**	*e*P	**Pn**	**01 50 33.9**	**+0.7**
BZWR	**Bezymyannyi-We**	**1.03**	**286**	*e*P	**Pn**	**01 50 34.3**	**+1.0**
BDR	**Baidarnaya**	**1.06**	**327**	*e*P	**Pn**	**01 50 34.7**	**+1.1**
KLY	**Klyuchi**	**1.10**	**306**	*e*P	**Pn**	**01 50 33.5**	**-0.6**
KIRR	**Kirishev**	**1.12**	**285**	*e*P	**Pn**	**01 50 35.6**	**+1.2**
KMNR	**Kamenistaya**	**1.15**	**274**	*e*P	**Pn**	**01 50 36.6**	**+1.8**
KMNR				*e*S	**Sn**	**01 50 52.9**	**+2.8**
TUMD	**Tumrok D**	**1.17**	**246**	*e*P	**Pn**	**01 50 35.9**	**+1.0**
TUMD				*e*S	**Sn**	**01 50 51.6**	**+1.1**
KPT	**Kopyto**	**1.18**	**285**	*e*P	**Pn**	**01 50 36.7**	**+1.4**
TUMR	**Tumrok**	**1.27**	**252**	*e*P	**Pn**	**01 50 38.3**	**+1.8**
KOZ	**Kozyrevsk**	**1.40**	**287**	*e*P	Pg	01 50 40.3	-0.1
KOZ				*e*S	Sn	01 50 59.9	+3.7
SRDR	**Sredinnyy**	**1.56**	**295**	*e*P	**Pg**	**01 50 42.5**	**-1.0**
BKI	**Bering**	**2.17**	**101**	*e*P	**Pn**	**01 50 49.3**	**+0.6**
BKI				*e*S	**Sn**	**01 51 15.3**	**+0.1**
KII	**Karymskiy**	**2.32**	**226**	*e*P	**Pn**	**01 50 52.3**	**+1.4**
SPN	**Mys Shipunski**	**2.90**	**208**	*e*P	**Pn**	**01 50 59.1**	**+0.3**
SPN				*e*S	**Sn**	**01 51 31.6**	**-1.7**
SMAR	**Somma**	**3.16**	**221**	*e*P	**Pn**	**01 51 04.2**	**+1.7**
AVH	**Avacha**	**3.18**	**222**	*e*P	**Pn**	**01 51 04.6**	**+2.0**
PET	**Petropavlovsk**	**3.40**	**220**	*e*P	**Pn**	**01 51 07.8**	**+2.2**
PETK	**Petropavlovsk-**	**3.71**	**228**	Pn	**Pn**	**01 51 11.3**	**+1.3**
	0.4nm,0.3s,baz=79,slow=15,SNR=16						
PETK				Sn	**Sb**	**01 52 00.7**	**-2.4**
	0.7nm,0.3s,baz=74,slow=21,SNR=1.7						
	1.7nm,0.6s						
KRMR	**Karymshinskiy**	**3.75**	**222**	*e*P	**Pn**	**01 51 13.5**	**+3.1**
RUS	**Russkaya**	**3.94**	**216**	*e*P	**Pn**	**01 51 14.8**	**+1.9**
GRL	**Gorelyy**	**3.99**	**220**	*e*P	**Pn**	**01 51 16.3**	**+2.5**
MTVR	**Mutnovka**	**4.01**	**218**	*e*P	**Pn**	**01 51 16.4**	**+2.2**
ASAK	**Asacha**	**4.19**	**220**	*e*P	**Pn**	**01 51 19.4**	**+2.9**
KDTR	**Khodutka, Kamc**	**4.61**	**214**	*e*P	**Pn**	**01 51 25.9**	**+3.7**
SPITS	**Spitsbergen Ar**	**44.78**	**351**	P	**P**	**01 58 25.0**	**-0.5**
	4.5nm,0.9s,baz=28,slow=6.5,SNR=5.7						
	4.5nm,0.9s						
MKAR	**Makanchi Array**	**48.19**	**295**	P	**P**	**01 58 50.6**	**-2.0**
	0.1nm,0.4s,baz=56,slow=7.8,SNR=0.9						
	0.1nm,0.4s						
KIRV	**Kirov**	**54.06**	**323**	LR	LR	02 25 55.9	
	comp=Z,34nm,20.6s,baz=4.9,slow=40						
FINES	**FINESS Array B**	**58.23**	**337**	P	**P**	**02 00 05.0**	**-1.1**
	0.5nm,0.4s,baz=33,slow=6.9,SNR=12						
	0.5nm,0.4s						
PPT	**Papeete**	**83.51**	**134**	LR	LR	02 30 16.0	
	comp=Z,36nm,20.8s,baz=244,slow=28						
STKA	**Stephens Creek**	**88.99**	**197**	LR	LR	02 38 03.9	
	comp=Z,32nm,21.3s,baz=31,slow=32						

*IDC **18** 01:50:32.6±1.1, 18˚.79N×73˚.69W, h0km, mb3.9/2, mbtmp4.2/5, ML3.7/3, MS3.1/3, Error ellipse: s-maj=42.3km s-min=22.1km az=44.0*
*SDD **18** 01:50:34.6±2.2, 18˚.83N×73˚.59W, h19km±108km, MD4.2, ML4.3, MW4.3*
*SSNC **18** 01:50:35.2±1.6, 18˚.59N×73˚.73W, h7km±22km, MD3.7, ML3.7, MW3.6*
*OSPL **18** 01:50:36.4±2.8, 18˚.92N×73˚.58W, h0km±16km, ML3.9*
ISC 18 01:50:32.4±1.3,**18˚.78N**±0˚.04×**73˚.63W**±0˚.02,**h5**km±9km, **n60,**σ2**$12**/88,**14C-6D**,**Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAPH	**Port-au-Prince**	**1.29**	**101**	⇑*e*Pg	**Pg**	**01 50 57.0**	**-0.1**
PAPH				⇑*e*Sg	**Sb**	**01 51 13.3**	**-0.6**
PAPH				IAML		01 51 16.1	
	comp=N,10μm,0.6s						
PAPH				IAML		01 51 21.5	
	comp=E,10μm,0.7s						
PAPH	**Port-au-Prince**	**1.29**	**101**	*e*P	**Pb**	**01 50 56.7**	**-0.4**
PAPH				*e*S	**Sn**	**01 51 14.3**	**-0.4**
PAPH				IAML		01 51 16.1	
	comp=N,4μm,0.3s						
PAPH				IAML		01 51 17.4	
	comp=E,5μm,0.4s						
PAPH	**Port-au-Prince**	**1.29**	**101**	*i* P	**Pg**	**01 50 57.3**	**+0.2**
PAPH				*e*S	**Sn**	**01 51 14.5**	**-0.2**
GTBY	**Guantanamo Bay**	**1.81**	**310**	*i* P	**Pb**	**01 51 05.5**	**-0.4**
GTBY	**Guantanamo Bay**	**1.81**	**310**	⇑*e*Pg	**Pb**	**01 51 05.5**	**-0.4**
GTBY				⇓*e*Sg	**Sg**	**01 51 29.7**	**-0.8**
GTBY				IAML		01 51 42.9	
	comp=N,413nm,0.6s						
GTBY				IAML		01 51 46.1	
	comp=E,425nm,1.4s						
GTBY	**Guantanamo Bay**	**1.81**	**310**	*e*P	**Pb**	**01 51 05.3**	**-0.6**
GTBY				*e*S	**Sn**	**01 51 27.1**	**-0.3**
GTBY				IAML		01 51 43.0	
	comp=E,421nm,0.5s						
GTBY				IAML		01 51 46.2	
	comp=E,391nm,0.3s						
GTBY	**Guantanamo Bay**	**1.81**	**310**	*e*P	**Pb**	**01 51 05.5**	**-0.4**
GTBY				*e*S	**Sn**	**01 51 27.1**	**-0.3**
GTBY	**Guantanamo Bay**	**1.81**	**310**	*i* P	**Pb**	**01 51 06.0**	**0.0**
GTBY				*e*S	**Sb**	**01 51 29.1**	**+0.2**
GTBY				IAML		01 51 37.4	
	comp=Z,145nm,0.8s						
LOPE2	**Hotel El Peder**	**1.94**	**112**	*i* P	**Pb**	**01 51 07.6**	**-0.5**
LOPE2				*e*S	**Sg**	**01 51 33.6**	**-1.0**
LOPE2				IAML		01 51 35.0	
	comp=Z,1μm,0.5s						
LODA1	**ITESIL, Dajabo**	**1.98**	**67**	*i* P	**Pb**	**01 51 07.5**	**-1.3**
LODA1				*e*S	**Sn**	**01 51 30.3**	**-1.3**
LODA1				IAML		01 51 32.8	
	comp=Z,3μm,0.8s						
NEDR	**Neiba UASD**	**2.12**	**98**	⇓*e*Pg	**Pb**	**01 51 10.6**	**-0.7**
NEDR				⇑*e*Sg	**Sb**	**01 51 36.0**	**-1.9**
NEDR				IAML		01 51 42.3	
	comp=N,2μm,0.5s						
NEDR				IAML		01 51 50.5	
	comp=E,2μm,0.8s						
SDDR	**Presa de Saban**	**2.23**	**84**	⇑*e*Pg	**Pb**	**01 51 12.1**	**-1.1**
SDDR				⇓*e*Sg	**Sb**	**01 51 40.6**	**-0.5**
SDDR				IAML		01 51 47.4	
	comp=E,1μm,0.7s						
SDDR				IAML		01 51 48.1	
	comp=N,2μm,0.6s						
SDDR	**Presa de Saban**	**2.23**	**84**	*e*P	**Pb**	**01 51 11.7**	**-1.5**
SDDR				*e*S	**Sb**	**01 51 39.0**	**-2.1**
SDDR				IAML		01 51 47.8	
	comp=N,1μm,1.0s						
SDDR				IAML		01 51 48.4	
	comp=N,2μm,0.6s						
SDDR	**Presa de Saban**	**2.23**	**84**	*e*P	**Pb**	**01 51 11.8**	**-1.4**
SDDR				*e*S	**Sb**	**01 51 39.5**	**-1.6**
SDDR				*i*		01 51 45.9	
	comp=Z,587nm,0.6s						
SDDR	**Presa de Saban**	**2.23**	**84**	*i* P	**Pb**	**01 51 12.2**	**-1.0**
SDDR				*e*S	**Sb**	**01 51 39.7**	**-1.4**
SDDR				IAML		01 51 56.1	
	comp=Z,659nm,0.6s						
SABCS	**La Quijada**	**2.24**	**315**	*e*P	**Pn**	**01 51 10.8**	**+0.6**
SABCS				*e*S	**Sb**	**01 51 40.8**	**-0.5**
SABCS				IAML		01 51 44.0	
	comp=N,369nm,0.5s						
SABCS				IAML		01 51 44.5	
	comp=E,452nm,0.7s						
MOAC	**Moa**	**2.25**	**326**	*e*P	**Pb**	**01 51 12.3**	**-1.3**
MOAC				IAML		01 51 45.0	
	comp=E,193nm,0.5s						
MOAC				IAML		01 51 46.8	
	comp=N,168nm,0.6s						
RCC	**Rio Carpintero**	**2.29**	**302**	*e*P	**Pn**	**01 51 11.3**	**+0.5**
RCC				*e*S	**Sn**	**01 51 37.5**	**-2.0**
RCC				*e*Sg	**Sb**	**01 51 41.2**	**-1.7**
RCC				IAML		01 51 47.1	
	comp=E,220nm,0.5s						
RCC				IAML		01 51 58.1	
	comp=N,264nm,0.5s						
MARVS	**Santiago de Cu**	**2.46**	**300**	*e*P	**Pn**	**01 51 14.7**	**+1.5**
MARVS				*e*S	**Sb**	**01 51 46.4**	**-1.4**
MARVS				IAML		01 51 51.7	
	comp=N,219nm,0.7s						
MARVS				IAML		01 51 58.6	
	comp=E,261nm,0.9s						
MADR	**Mao Valverde**	**2.52**	**71**	⇑*e*Pg	**Pb**	**01 51 16.6**	**-1.5**
MADR				⇑*e*Sg	**Sb**	**01 51 48.5**	**-0.9**
MADR				IAML		01 52 00.4	
	comp=N,2μm,1.1s						
MADR				IAML		01 52 07.1	
	comp=E,2μm,0.7s						
PINC	**Pinares de May**	**2.65**	**310**	*e*P	**Pn**	**01 51 16.2**	**+0.4**
LUDR	**Luperon**	**2.76**	**66**	⇓*e*Pg	**Pb**	**01 51 20.8**	**-1.4**
LUDR				⇑*e*Sg	**Sb**	**01 51 54.3**	**-2.1**
LUDR				IAML		01 52 05.0	
	comp=E,2μm,0.8s						
LUDR				IAML		01 52 07.1	
	comp=N,3μm,0.5s						
SC01	**Santiago de Io**	**2.82**	**76**	⇑*e*Pg	**Pb**	**01 51 22.2**	**-1.1**
SC01				⇓*e*Sg	**Sb**	**01 51 56.8**	**-1.3**
SC01				IAML		01 52 10.4	
	comp=N,794nm,0.7s						
SC01				IAML		01 52 12.0	
	comp=E,1μm,22.2s						
ABDR	**Alto Bandera**	**2.85**	**89**	⇑*e*Pg	**Pb**	**01 51 21.3**	**-2.6**
ABDR				⇓*e*Sg	**Sb**	**01 51 59.8**	**+0.6**
ABDR				IAML		01 52 08.2	
	comp=E,944nm,0.7s						
ABDR				IAML		01 52 18.2	
	comp=N,688nm,0.9s						
CHIV	**Chivirico**	**2.89**	**295**	*e*P	**Pn**	**01 51 19.9**	**+0.9**
CHIV				IAML		01 52 04.1	
	comp=E,74nm,0.4s						
CHIV				IAML		01 52 05.1	
	comp=N,72nm,0.3s						
HOJ	**Hope**	**3.06**	**256**	*i* P	**Pb**	**01 51 26.6**	**-0.7**
STH	**Stony Hill**	**3.10**	**258**	*i* P	**Pb**	**01 51 25.9**	**-2.1**
HLGC	**Holguin**	**3.11**	**313**	*e*P	**Pb**	**01 51 26.0**	**-2.2**
HLGC				*e*S	**Sb**	**01 52 05.6**	**-0.7**
HLGC				IAML		01 52 20.2	
	comp=N,115nm,0.7s						
HLGC				IAML		01 52 29.0	
	comp=E,138nm,0.8s						
BANI	**BANI**	**3.13**	**96**	⇑*e*Pg	**Pb**	**01 51 25.7**	**-2.8**
BANI				⇑*e*Sg	**Sb**	**01 52 05.8**	**-1.2**
BANI				IAML		01 52 18.1	
	comp=E,800nm,0.7s						
BANI				IAML		01 52 25.6	
	comp=N,985nm,0.8s						
LMGC	**Las Mercedes**	**3.43**	**292**	*e*P	**Pn**	**01 51 27.1**	**+0.5**
LMGC				IAML		01 52 07.6	
	comp=N,37nm,0.1s						
LMGC				IAML		01 52 07.7	
	comp=E,32nm,0.3s						
NADR	**Nagua**	**3.62**	**80**	⇑*e*Pg	**Pb**	**01 51 33.9**	**-3.0**
NADR				⇑*e*Sg	**Sb**	**01 52 20.2**	**-0.8**
NADR				IAML		01 52 27.5	
	comp=E,1μm,0.7s						
NADR				IAML		01 52 35.5	
	comp=N,1μm,0.5s						
PILO	**Pilon**	**3.74**	**288**	*e*P	**Pn**	**01 51 30.0**	**-0.8**
PILO				*e*S	**Sn**	**01 51 11.8**	**-3.4**
PILO				IAML		01 52 14.6	
	comp=E,66nm,0.2s						
PILO				IAML		01 52 14.9	
	comp=N,71nm,0.4s						
MGV	**Manicaragua**	**6.81**	**300**	*e*P	**Pn**	**01 52 15.5**	**+2.5**
MGV				*e*S	**Sn**	**01 53 31.5**	**+0.5**
SJG	**San Juan**	**7.13**	**94**	Pn	**Pn**	**01 52 17.9**	**+0.5**
	comp=N,0.6nm,0.3s,baz=3.6,slow=19,SNR=2.1						
SJG				Sn	**Sn**	**01 53 43.5**	**+4.6**
	baz=288,slow=20						
	comp=N,5.2nm,0.5s						
CRJC	**Cerrejon, Guaj**	**7.74**	**175**	*e*P	**Pn**	**01 52 29.5**	**+3.5**
CRJC				*e*S	**Sn**	**01 53 52.2**	**-1.8**
SDV	**Santo Domingo**	**10.25**	**163**	Pn	**Pn**	**01 53 01.9**	**+1.5**
	comp=N,1.5nm,0.3s,baz=21,slow=8.2,SNR=12						
SDV				Sn	**Sn**	**01 54 51.8**	**-4.1**
	comp=N,1.1nm,0.3s,baz=248,slow=19,SNR=2.0						
	comp=N,10nm,0.7s						
SDV	**Santo Domingo**	**10.25**	**163**	*e*P	**Pn**	**01 53 02.9**	**+2.5**
UPD2	**Meteti**	**11.02**	**203**	*e*P	**Pn**	**01 53 09.8**	**-1.0**
APAC	**Apartado, Choc**	**11.18**	**195**	*e*P	**Pn**	**01 53 17.3**	**+4.3**
PAMC	**Pamplona, Colo**	**11.40**	**175**	*e*P	**Pn**	**01 53 20.9**	**+4.5**
PAMC				*e*S	**Sn**	**01 55 19.5**	**-5.0**
PAMC				*i*		01 55 32.4	
	comp=Z,8.2nm,0.6s						
DBBC	**Dabeiba**	**11.95**	**192

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.49**	**304**		**Pn**	**01 59 39.9**	**-0.9**
KDAK				Sn	**Sn**	**02 00 08.7**	**-2.5**
KDAK	**Kodiak Island**	**2.49**	**304**	Pn	**Pn**	**01 59 39.9**	**-0.9**
	8.3nm,0.3s,baz=139,slow=5.1,SNR=117						
KDAK				Sn	**Sn**	**02 00 07.4**	**-3.8**
	7.3nm,0.3s,baz=120,slow=9.0,SNR=6.7						
KDAK				LR	LR	02 00 45.0	
	comp=Z,257nm,18.5s,baz=170,slow=42						
	23nm,0.4s						
OHAK	**Old Harbor**	**2.62**	**289**	Pn	**Pn**	**01 59 41.1**	**-1.4**
OHAK				Sn	**Sn**	**02 00 10.8**	**-3.6**
OHAK	**Old Harbor**	**2.62**	**289**	P	**Pn**	**01 59 40.9**	**-1.6**
OHAK	**Old Harbor**	**2.62**	**289**	P	**Pn**	**01 59 40.7**	**-1.8**
	baz=108						
OHAK				S	**Sn**	**02 00 09.7**	**-4.6**
	baz=108						
Q20K	**Shuyak Island**	**2.94**	**319**	P	**Pn**	**01 59 46.2**	**-0.7**
	baz=138						
Q20K				S	**Sn**	**02 00 20.4**	**-1.7**
	baz=138						
SYI	**Shuyak Island**	**2.94**	**319**	Pn	**Pn**	**01 59 46.6**	**-0.2**
SYI				Sn	**Sn**	**02 00 20.4**	**-1.7**
SII	**Sitkinak Islan**	**3.02**	**274**		**Pn**	**01 59 47.3**	**-0.8**
SII				Sn	**Sn**	**02 00 22.5**	**-1.9**
SII	**Sitkinak Islan**	**3.02**	**274**	P	**Pn**	**01 59 46.0**	**-2.1**
	baz=92						
SII				S	**Sn**	**02 00 20.0**	**-4.3**
	baz=92						
Q23K	**Middleton Isla**	**3.25**	**22**	Pn	**Pn**	**01 59 50.8**	**-0.4**
Q23K				Sn	**Sn**	**02 00 26.0**	**-4.0**
Q23K				IAML		02 00 28.0	
	comp=N,223nm,1.3s						
Q23K				IAML		02 00 28.7	
	comp=E,271nm,0.6s						
Q23K	**Middleton Isla**	**3.25**	**22**	P	**Pn**	**01 59 50.3**	**-0.9**
	baz=204						
Q23K				S	**Sn**	**02 00 26.6**	**-3.3**
	baz=204						
MID	**Middleton Isla**	**3.25**	**22**	Pn	**Pn**	**01 59 49.9**	**-1.3**
MID				Sn	**Sn**	**02 00 26.1**	**-3.9**
MID				IAML		02 00 28.3	
	comp=N,223nm,0.7s						
MID				IAML		02 00 35.3	
	comp=E,249nm,1.3s						
MID	**Middleton Isla**	**3.25**	**22**	P	**Pn**	**01 59 50.5**	**-0.7**
R18K	**Karluk**	**3.32**	**292**		**Pn**	**01 59 50.1**	**-2.1**
R18K					**Sn**	**02 00 27.9**	**-3.8**
R18K	**Karluk**	**3.32**	**292**	IAML		02 00 35.9	
	comp=N,355nm,0.4s						
R18K				IAML		02 00 36.6	
	comp=E,222nm,0.3s						
R18K	**Karluk**	**3.32**	**292**	P	**Pn**	**01 59 50.1**	**-2.1**
	baz=109						
R18K				S	**Sn**	**02 00 27.9**	**-3.8**
	baz=109						
CNPM	**China Poot**	**3.37**	**338**	Pn	**Pn**	**01 59 52.3**	**-0.5**
CNPM	**China Poot**	**3.37**	**338**		**Sn**	**02 00 30.8**	**-2.0**
CNPM	**China Poot**	**3.37**	**338**	IAML		02 00 35.7	
	comp=N,114nm,0.4s						
CNPM				IAML		02 00 39.9	
	comp=E,141nm,0.6s						
BRSE	**Bradley Lake S**	**3.48**	**343**		**Sn**	**02 00 33.3**	**-2.2**
BRSE	**Bradley Lake S**	**3.48**	**343**	P	**Pn**	**01 59 53.5**	**-0.8**
	baz=162						
BRSE				S	**Sn**	**02 00 33.3**	**-2.2**
	baz=162						
BRLK	**Bradley Lake**	**3.52**	**342**	Pn	**Pn**	**01 59 54.0**	**-0.9**
HOM	**Homer**	**3.58**	**336**		**Pn**	**01 59 54.0**	**-1.6**
HOM				IAML		02 00 45.8	
	comp=N,348nm,0.9s						
HOM				IAML		02 00 46.7	
	comp=E,420nm,0.8s						
Q19K	**Cape Douglas,**	**3.63**	**315**		**Pn**	**01 59 56.3**	**-0.1**
Q19K				IAML		02 00 53.2	
	comp=N,252nm,0.8s						
Q19K				IAML		02 01 00.4	
	comp=E,331nm,1.2s						
Q19K	**Cape Douglas,**	**3.63**	**315**	P	**Pn**	**01 59 56.1**	**-0.3**
	baz=133						
P23K	**Montague Islan**	**3.63**	**11**		**Pn**	**01 59 55.8**	**-0.7**
P23K					**Sn**	**02 00 36.7**	**-2.7**
P23K	**Montague Islan**	**3.63**	**11**	P	**Pn**	**01 59 55.8**	**-0.7**
	baz=192						
P23K				S	**Sn**	**02 00 36.7**	**-2.7**
	baz=192						
SEW	**Seward**	**3.69**	**354**	Pn	**Pn**	**01 59 56.0**	**-1.3**
SEW	**Seward**	**3.69**	**354**		**Sn**	**02 00 37.3**	**-3.4**
SEW	**Seward**	**3.69**	**354**	P	**Pn**	**01 59 56.5**	**-0.8**
	baz=174						
SEW				S	**Sn**	**02 00 37.3**	**-3.4**
	baz=174						
P19K	**Oil Pt**	**4.01**	**325**		**Pn**	**02 00 01.8**	**+0.2**
P19K				IAML		02 00 53.2	
	comp=E,227nm,0.5s						
P19K				IAML		02 00 53.2	
	comp=N,249nm,0.4s						
P19K	**Oil Pt**	**4.01**	**325**	P	**Pn**	**02 00 01.9**	**+0.2**
	baz=142						
KAHC	**Katmai Hardscr**	**4.04**	**306**		**Pn**	**02 00 02.1**	**-0.1**
KAHC	**Katmai Hardscr**	**4.04**	**306**	P	**Pn**	**02 00 02.1**	**-0.1**
	baz=122						
O22K	**Cooper Landing**	**4.08**	**353**		**Pn**	**02 00 02.1**	**-0.6**
O22K	**Cooper Landing**	**4.08**	**353**		**Sn**	**02 00 47.4**	**-3.0**
O22K	**Cooper Landing**	**4.08**	**353**	P	**Pn**	**02 00 02.2**	**-0.4**
	baz=173						
O22K				S	**Sn**	**02 00 47.4**	**-3.0**
	baz=173						
HIN	**Hinchinbrook I**	**4.14**	**16**	Pn	**Pn**	**02 00 03.0**	**-0.4**
HIN				IAML		02 00 55.7	
	comp=E,252nm,0.7s						
HIN	**Hinchinbrook I**	**4.14**	**16**		**Sn**	**02 00 48.6**	**-3.2**
KAIM	**Kayak Island**	**4.17**	**31**	Pn	**Pn**	**02 00 03.5**	**-0.4**
KAIM	**Kayak Island**	**4.17**	**31**	P	**Pn**	**02 00 03.3**	**-0.6**
	baz=214						
O20K	**Slope Mountain**	**4.19**	**332**		**Pn**	**02 00 03.7**	**-0.5**
O20K	**Slope Mountain**	**4.19**	**332**	P	**Pn**	**02 00 03.7**	**-0.5**
	baz=150						
ILSW	**Iliamna Southw**	**4.25**	**329**		**Pn**	**02 00 04.3**	**-0.8**
ILSW				IAML		02 00 56.6	
	comp=N,102nm,0.6s						
ILSW				IAML		02 01 01.5	
	comp=E,97nm,0.8s						
CNTC	**Contact Creek**	**4.28**	**298**		**Pn**	**02 00 05.5**	**0.0**
Q17K	**Contact Creek**	**4.28**	**298**	P	**Pn**	**02 00 05.5**	**0.0**
	baz=114						
EYAK	**Cordova Ski Ar**	**4.41**	**20**	P	**Pn**	**02 00 06.9**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.41**	**20**	P	**Pn**	**02 00 06.8**	**-0.2**
	baz=202						
FID	**Port Fidalgo**	**4.48**	**14**	Pn	**Pn**	**02 00 07.1**	**-1.0**
FID				IAML		02 00 57.7	
	comp=E,121nm,0.3s						
FID				IAML		02 01 01.3	
	comp=N,99nm,0.4s						
SUCK	**Suckling Hills**	**4.48**	**34**		**Pn**	**02 00 07.8**	**-0.4**
SUCK				IAML		02 01 04.7	
	comp=E,111nm,0.6s						
SUCK				IAML		02 01 16.6	
	comp=N,164nm,0.7s						
RAGM	**Ragged Mountai**	**4.50**	**27**	Pn	**Pn**	**02 00 07.4**	**-0.9**
RED	**Redoubt Volcan**	**4.52**	**334**		**Pn**	**02 00 07.5**	**-1.2**
CAPN	**Captain Cook N**	**4.52**	**345**	Pn	**Pn**	**02 00 07.2**	**-1.4**
GLI	**Glacier Island**	**4.53**	**10**		**Pn**	**02 00 08.6**	**-0.2**
GLI				IAML		02 00 59.8	
	comp=E,135nm,0.6s						
GLI				IAML		02 01 00.7	
	comp=N,104nm,0.9s						
GLI	**Glacier Island**	**4.53**	**10**	P	**Pn**	**02 00 08.2**	**-0.6**
	baz=192						
RDSO	**Redoubt South**	**4.54**	**334**		**Pn**	**02 00 07.8**	**-1.3**
RSO	**Redoubt South**	**4.55**	**334**		**Pn**	**02 00 08.3**	**-0.9**
P18K	**Big Mountain,**	**4.55**	**313**	Pn	**Pn**	**02 00 08.3**	**-0.9**
P18K	**Big Mountain,**	**4.55**	**313**	P	**Pn**	**02 00 08.3**	**-0.9**
	baz=129						
HMT	**Hamilton**	**4.56**	**29**		**Pn**	**02 00 09.0**	**-0.2**
RDWB	**Redoubt West**	**4.59**	**334**		**Pn**	**02 00 08.4**	**-1.4**
DFR	**Drift River**	**4.65**	**335**		**Pn**	**02 00 09.3**	**-1.2**
NCT	**North Crescent**	**4.68**	**334**		**Pn**	**02 00 09.9**	**-1.0**
RC01	**Rabbit Creek A**	**4.69**	**354**		**Pn**	**02 00 10.5**	**-0.4**
RC01				IAML		02 01 04.7	
	comp=E,132nm,0.6s						
RC01				IAML		02 01 07.9	
	comp=N,86nm,0.4s						
RC01	**Rabbit Creek A**	**4.69**	**354**	P	**Pn**	**02 00 10.9**	**-0.1**
	baz=174						
O19K	**Port Alsworth**	**4.78**	**324**	Pn	**Pn**	**02 00 10.4**	**-1.7**
O19K	**Port Alsworth**	**4.78**	**324**	P	**Pn**	**02 00 10.2**	**-1.9**
	baz=140						
FIS	**Fire Island**	**4.78**	**351**		**Pn**	**02 00 11.3**	**-0.9**
FIS				IAML		02 01 13.0	
	comp=N,166nm,0.3s						
GRIN	**Grindle Hills**	**4.79**	**34**		**Pn**	**02 00 12.3**	**0.0**
O18K	**Koktuh Hills**	**4.84**	**318**	Pn	**Pn**	**02 00 12.2**	**-0.9**
O18K	**Koktuh Hills**	**4.84**	**318**	P	**Pn**	**02 00 12.4**	**-0.7**
	baz=133						
SNH	**Sunshine Point**	**4.87**	**37**		**Pn**	**02 00 13.5**	**0.0**
SNH				IAML		02 01 11.7	
	comp=E,80nm,0.9s						
SNH				IAML		02 01 29.5	
	comp=N,67nm,1.1s						
DIV	**Divide**	**4.95**	**17**		**Pn**	**02 00 14.3**	**-0.3**
KNK	**Knik Glacier**	**4.99**	**2**		**Pn**	**02 00 15.4**	**+0.3**
KNK				IAML		02 01 15.0	
	comp=E,62nm,0.6s						
KNK	**Knik Glacier**	**4.99**	**2**	P	**Pn**	**02 00 15.0**	**-0.1**
	baz=182						
BMRM	**Bremner River**	**5.02**	**24**		**Pn**	**02 00 15.4**	**-0.2**
BMRM	**Bremner River**	**5.02**	**24**	P	**Pn**	**02 00 15.4**	**-0.2**
	baz=207						
WAX	**Waxell Ridge**	**5.07**	**35**		**Pn**	**02 00 15.7**	**-0.5**
N20K	**Mount Spurr**	**5.10**	**341**	P	**Pn**	**02 00 15.7**	**-1.0**
	baz=158						
SPCR	**Spurr Chakacha**	**5.10**	**341**		**Pn**	**02 00 15.7**	**-1.0**
SPCN	**Chakachatna No**	**5.12**	**341**		**Pn**	**02 00 16.9**	**0.0**
SUA	**Susitna One**	**5.14**	**349**		**Pn**	**02 00 16.5**	**-0.8**
SUA	**Susitna One**	**5.14**	**349**	P	**Pn**	**02 00 16.3**	**-1.0**
	baz=168						
SPCP	**Crater Peak Br**	**5.15**	**341**		**Pn**	**02 00 17.3**	**-0.2**
SPCG	**Spurr Capps Gl**	**5.15**	**342**		**Pn**	**02 00 17.1**	**-0.4**
PMR	**Palmer**	**5.17**	**358**	Pn	**Pn**	**02 00 17.7**	**+0.2**
PMR				IAML		02 01 15.7	
	comp=N,49nm,0.8s						
PMR				IAML		02 01 16.2	
	comp=E,62nm,1.1s						
PMR	**Palmer**	**5.17**	**358**	P	**Pn**	**02 00 18.3**	**+0.8**
PMR	**Palmer**	**5.17**	**358**	P	**Pn**	**02 00 17.8**	**+0.2**
	baz=178						
MESA	**MESA**	**5.18**	**41**		**Pn**	**02 00 18.0**	**+0.1**
MESA				IAML		02 01 19.9	
	comp=E,58nm,1.1s						
MESA				IAML		02 01 26.3	
	comp=N,96nm,0.4s						
MESA	**MESA**	**5.18**	**41**	P	**Pn**	**02 00 17.6**	**-0.3**
	baz=226						
SPBG	**Spurr Blockage**	**5.19**	**340**		**Pn**	**02 00 17.4**	**-0.5**
CRQM	**Cirque**	**5.22**	**32**		**Pn**	**02 00 17.9**	**-0.6**
CRQM				IAML		02 01 18.0	
	comp=E,104nm,0.4s						
CRQE	**Cirque**	**5.23**	**32**	P	**Pn**	**02 00 18.1**	**-0.4**
	baz=216						
KLU	**Klutina**	**5.27**	**15**		**Pn**	**02 00 18.7**	**-0.3**
KLU				IAML		02 01 22.0	
	comp=N,112nm,0.5s						
KLU				IAML		02 01 23.3	
	comp=E,78nm,0.8s						
KLU	**Klutina**	**5.27**	**15**	P	**Pn**	**02 00 18.9**	**-0.1**
	baz=197						
N19K	**Bonanza Creek**	**5.31**	**328**	Pn	**Pn**	**02 00 18.3**	**-1.3**
N19K	**Bonanza Creek**	**5.31**	**328**	P	**Pn**	**02 00 18.7**	**-0.9**
	baz=144						
TGL	**Tana Glacier**	**5.31**	**33**		**Pn**	**02 00 18.8**	**-0.9**
TGL				IAML		02 01 21.6	
	comp=E,103nm,0.5s						
TGL				IAML		02 01 23.6	
	comp=N,67nm,0.4s						
GHO	**Glory Hole Cre**	**5.35**	**359**		**Pn**	**02 00 20.6**	**+0.5**
SPNN	**North Nagishla**	**5.35**	**339**		**Pn**	**02 00 19.9**	**-0.3**
ISLE	**Juniper Island**	**5.35**	**36**	Pn	**Pn**	**02 00 19.8**	**-0.4**
ISLE				IAML		02 01 21.3	
	comp=N,72nm,0.9s						
ISLE				IAML		02 01 23.8	
	comp=E,53nm,0.6s						
M22K	**Willow**	**5.38**	**353**	Pn	**Pn**	**02 00 20.1**	**-0.2**
SML	**Sawmill**	**5.39**	**2**	Pn	**Pn**	**02 00 20.5**	**-0.1**
SML	**Sawmill**	**5.39**	**2**	P	**Pn**	**02 00 21.0**	**+0.4**
	baz=182						
SCM	**Sheep Creek Mo**	**5.46**	**7**		**Pn**	**02 00 21.6**	**+0.1**
SCM	**Sheep Creek Mo**	**5.46**	**7**	P	**Pn**	**02 00 21.9**	**+0.3**
	baz=188						
VRDI	**Verde Repeater**	**5.53**	**28**	Pn	**Pn**	**02 00 22.1**	**-0.6**
O17K	**Koliganek Bris**	**5.55**	**310**		**Pn**	**02 00 22.3**	**-0.5**
O17K	**Koliganek Bris**	**5.55**	**310**	P	**Pn**	**02 00 22.3**	**-0.5**
	baz=124						
SAMH	**Samovar Hills**	**5.59**	**45**		**Pn**	**02 00 23.6**	**+0.1**
N25K	**Chitina, Valde**	**5.60**	**21**		**Pn**	**02 00 23.2**	**-0.4**
N25K	**Chitina, Valde**	**5.60**	**21**	P	**Pn**	**02 00 23.5**	**0.0**
	baz=204						
GLB	**Gilahina Butte**	**5.62**	**25**		**Pn**	**02 00 23.4**	**-0.4**
GRNC	**Granite Creek**	**5.64**	**37**		**Pn**	**02 00 23.7**	**-0.6**
TABL	**Table Mountain**	**5.65**	**42**		**Pn**	**02 00 23.8**	**-0.6**
N18K	**Kilae Creek**	**5.66**	**322**	Pn	**Pn**	**02 00 24.0**	**-0.3**
N18K	**Kilae Creek**	**5.66**	**322**	P	**Pn**	**02 00 23.4**	**-0.9**
	baz=136						
YKU2	**Yakutat**	**5.72**	**54**	Pn	**Pn**	**02 00 23.3**	**-1.7**
SKT	**Skwentna**	**5.74**	**347**	Pn	**Pn**	**02 00 25.4**	**+0.1**
SKT	**Skwentna**	**5.74**	**347**	P	**Pn**	**02 00 25.1**	**-0.3**
	baz=165						
PTPK	**Patty Peak**	**5.76**	**32**		**Pn**	**02 00 25.6**	**-0.3**
MCARA	**McCarthy VSAT**	**5.77**	**28**	Pn	**Pn**	**02 00 25.4**	**-0.4**
MCARA	**McCarthy VSAT**	**5.77**	**28**	P	**Pn**	**02 00 25.7**	**-0.1**
	baz=213						
PCA	**Pinnacle**	**5.78**	**47**		**Pn**	**02 00 25.6**	**-0.4**
PINM	**Pinnacle**	**5.78**	**47**	P	**Pn**	**02 00 25.6**	**-0.4**
	baz=234						
M24K	**Tolsona, Glenn**	**5.83**	**12**		**Pn**	**02 00 26.6**	**-0.1**
M24K	**Tolsona, Glenn**	**5.83**	**12**	P	**Pn**	**02 00 27.2**	**+0.5**
	baz=194						
SVW2	**Sparrevohn**	**5.87**	**326**	Pn	**Pn**	**02 00 26.6**	**-0.6**
SVW2	**Sparrevohn**	**5.87**	**326**	P	**Pn**	**02 00 26.4**	**-0.8**
O16K	**Kokwok River B**	**5.89**	**306**		**Pn**	**02 00 26.8**	**-0.6**
M20K	**Styx River**	**5.91**	**339**	Pn	**Pn**	**02 00 27.2**	**-0.5**
M20K	**Styx River**	**5.91**	**339**	P	**Pn**	**02 00 27.0**	**-0.7**
	baz=156						
BARN	**Barnard Glacie**	**5.91**	**36**		**Pn**	**02 00 27.8**	**-0.1**
PNL	**Peninsula**	**5.92**	**53**		**Pn**	**02 00 27.4**	**-0.5**
PNL	**Peninsula**	**5.92**	**53**	P	**Pn**	**02 00 27.7**	**-0.1**
PNL	**Peninsula**	**5.92**	**53**	P	**Pn**	**02 00 27.4**	**-0.5**
	baz=240						
CTG	**Chitna Glacier**	**5.95**	**37**	P	**Pn**	**02 00 28.0**	**-0.3**
	baz=223						
CTGM	**Chitina Glacie**	**5.95**	**37**	Pn	**Pn**	**02 00 28.2**	**-0.2**
BCPM	**Bancas Point**	**5.96**	**50**		**Pn**	**02 00 28.2**	**-0.2**
LOGN	**Logan Glacier**	**5.96**	**39**		**Pn**	**02 00 27.9**	**-0.7**
WACK	**Wrangell Chich**	**6.00**	**20**		**Pn**	**02 00 29.3**	**+0.1**
CUT	**Chulitna**	**6.03**	**353**		**Pn**	**02 00 28.6**	**-0.8**
N17K	**Nushagak Hills**	**6.03**	**316**		**Pn**	**02 00 28.6**	**-0.8**
N17K	**Nushagak Hills**	**6.03**	**316**	P	**Pn**	**02 00 28.6**	**-0.8**
	baz=130						
WAT6	**Susitna Watana**	**6.18**	**4**	P	**Pn**	**02 00 31.8**	**+0.2**
	baz=185						
M19K	**Big River Lodg**	**6.20**	**334**	P	**Pn**	**02 00 30.5**	**-1.2**
	baz=150						
HARP	**HAARP**	**6.25**	**15**		**Pn**	**02 00 32.8**	**+0.5**
HARP	**HAARP**	**6.25**	**15**	P	**Pn**	**02 00 32.8**	**+0.5**
	baz=198						
M18K	**Stony River**	**6.25**	**327**		**Pn**	**02 00 30.9**	**-1.4**
M18K	**Stony River**	**6.25**	**327**	P	**Pn**	**02 00 30.9**	**-1.4**
	baz=142						
WAT1	**Susitna Watana**	**6.41**	**1**		**Pn**	**02 00 35.0**	**+0.5**
WAT1	**Susitna Watana**	**6.41**	**1**	P	**Pn**	**02 00 35.1**	**+0.5**
	baz=181						
WAT7	**Susitna Watana**	**6.41**	**360**		**Pn**	**02 00 34.6**	**-0.1**
L19K	**White Mountain**	**6.55**	**334**	Pn	**Pn**	**02 00 36.2**	**-0.3**
L19K	**White Mountain**	**6.55**	**334**	P	**Pn**	**02 00 35.4**	**-1.2**
	baz=149						
O29M	**Mount Kennedy**	**6.59**	**50**	Pn	**Pn**	**02 00 36.2**	**-1.0**
L20K	**Farewell, AK**	**6.60**	**339**		**Pn**	**02 00 36.0**	**-1.1**
L20K	**Farewell, AK**	**6.60**	**339**	P	**Pn**	**02 00 36.0**	**-1.1**
	baz=155						
N16K	**Nishlik Lake**	**6.63**	**312**		**Pn**	**02 00 37.3**	**-0.4**
N16K	**Nishlik Lake**	**6.63**	**312**	P	**Pn**	**02 00 37.3**	**-0.4**
	baz=124						
P29M	**Windy Craggy**	**6.66**	**57**		**Pn**	**02 00 38.0**	**+0.1**
P29M	**Windy Craggy**	**6.66**	**57**	P	**Pn**	**02 00 37.3**	**-0.7**
	baz=245						
DHY	**Denali Highway**	**6.69**	**5**		**Pn**	**02 00 38.6**	**+0.1**
DHY	**Denali Highway**	**6.69**	**5**	P	**Pn**	**02 00 39.1**	**+0.5**
	baz=187						
SDPT	**Sand Point**	**6.70**	**265**	P	Pn	02 00 34.1	-4.4
M17K	**Holitna River**	**6.71**	**321**	Pn	**Pn**	**02 00 37.5**	**-1.1**
M17K	**Holitna River**	**6.71**	**321**	P	**Pn**	**02 00 37.8**	**-0.8**
	baz=135						
YUK2	**White River**	**6.72**	**34**		**Pn**	**02 00 39.2**	**+0.3**
PAX	**Paxson**	**6.75**	**13**		**Pn**	**02 00 39.8**	**+0.5**
PAX	**Paxson**	**6.75**	**13**	P	**Pn**	**02 00 39.8**	**+0.5**
	baz=196						
YUK3	**Moose Creek**	**6.83**	**35**		**Pn**	**02 00 41.0**	**+0.4**
YUK3	**Moose Creek**	**6.83**	**35**	P	**Pn**	**02 00 41.0**	**+0.4**
	baz=222						
M27K	**Edge Creek, AK**	**6.88**	**28**	Pn	**Pn**	**02 00 41.6**	**+0.3**
M27K	**Edge Creek, AK**	**6.88**	**28**	P	**Pn**	**02 00 41.3**	**0.0**
	baz=213						
YUK7	**Dusty Glacier**	**6.90**	**49**		**Pn**	**02 00 41.4**	**-0.1**
S31K	**Pelican**	**6.96**	**72**		**Pn**	**02 00 39.4**	**-2.8**
RND	**Reindeer**	**6.99**	**360**		**Pn**	**02 00 43.5**	**+0.9**
MENT	**Mentasta**	**6.99**	**19**		**Pn**	**02 00 43.3**	**+0.7**
M16K	**Timber Creek**	**7.03**	**315**	Pn	**Pn**	**02 00 42.5**	**-0.5**
M16K	**Timber Creek**	**7.03**	**315**	P	**Pn**	**02 00 42.1**	**-0.9**
	baz=127						
YUK6	**Outpost Mounta**	**7.04**	**46**		**Pn**	**02 00 43.8**	**+0.4**
YUK6	**Outpost Mounta**	**7.04**	**46**	P	**Pn**	**02 00 43.8**	**+0.4**
	baz=234						
N15K	**Kwethluk River**	**7.05**	**307**	Pn	**Pn**	**02 00 43.2**	**-0.2**
TRF	**Thorofare Moun**	**7.07**	**354**		**Pn**	**02 00 44.2**	**+0.3**
TRF	**Thorofare Moun**	**7.07**	**354**	P	**Pn**	**02 00 44.0**	**+0.2**
	baz=173						
L18K	**Granite Mounta**	**7.08**	**328**	Pn	**Pn**	**02 00 44.0**	**+0.3**
L26K	**Log Cabin Wild**	**7.14**	**20**	Pn	**Pn**	**02 00 43.9**	**-0.7**
YUK4	**Talbot Arm**	**7.17**	**43**	P	**Pn**	**02 00 47.0**	**+1.8**
	baz=230						
CAST	**Castle Rocks**	**7.20**	**348**		**Pn**	**02 00 45.5**	**+0.1**
CAST	**Castle Rocks**	**7.20**	**348**	P	**Pn**	**02 00 45.1**	**-0.3**
	baz=165						
BVCY	**Beaver Creek**	**7.21**	**31**		**Pn**	**02 00 46.1**	**+0.5**
BVCY	**Beaver Creek**	**7.21**	**31**	P	**Pn**	**02 00 46.1**	**+0.5**
	baz=217						
KTH	**Kantishna Hill**	**7.22**	**352**		**Pn**	**02 00 46.1**	**+0.4**
MCK	**McKinley**	**7.32**	**359**	Pn	**Pn**	**02 00 48.1**	**+1.1**
HYT	**Haines Junctio**	**7.32**	**48**		**Pn**	**02 00 47.1**	**-0.1**
SIT	**Sitka**	**7.40**	**80**	P	**Pn**	**02 00 44.2**	**-3.9**
K20K	**Telida**	**7.43**	**341**	Pn	**Pn**	**02 00 48.6**	**0.0**
TTA	**Tatalina**	**7.47**	**334**	P	**Pn**	**02 00 48.2**	**-1.0**
L27K	**Beaver Creek,**	**7.50**	**25**	Pn	**Pn**	**02 00 49.3**	**-0.2**
BCAR	**Beaver Creek A**	**7.51**	**25**	Pn	**Pn**	**02 00 49.5**	**-0.2**
SKAG	**Skagway**	**7.75**	**61**		**Pn**	**02 00 52.6**	**-0.3**
SKAG	**Skagway**	**7.75**	**61**	P	**Pn**	**02 00 53.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**7.76**	**353**		**Pn**	**02 00 52.6**	**-0.6**
BPAW	**Bear Paw Mtn.**	**7.76**	**353**	P	**Pn**	**02 00 52.6**	**-0.6**
	baz=171						
BWN	**Browne**	**7.76**	**358**		**Pn**	**02 00 53.0**	**-0.1**
BESE	**Bessie Mountai**	**7.78**	**68**	Pn	**Pn**	**02 00 51.4**	**-2.0**
S32K	**Killisnoo**	**7.81**	**77**	Pn	**Pn**	**02 00 51.4**	**-2.3**
O30N	**Mendenhall**	**7.89**	**51**		**Pn**	**02 00 54.3**	**-0.7**
R32K	**Eaglecrest**	**7.90**	**71**		**Pn**	**02 00 53.7**	**-1.4**
SCRK	**Sand Creek**	**7.92**	**15**		**Pn**	**02 00 54.0**	**-1.4**
K17K	**Iditarod**	**7.94**	**326**	Pn	**Pn**	**02 00 56.0**	**+0.5**
M29M	**Somme Creek**	**7.97**	**37**	Pn	**Pn**	**02 00 55.0**	**-1.0**
JIS	**Juneau Island**	**7.97**	**71**		**Pn**	**02 00 55.1**	**-0.9**
JIS	**Juneau Island**	**7.97**	**71**	P	**Pn**	**02 00 55.0**	**-1.0**
HDA	**Harding Lake**	**8.04**	**6**		**Pn**	**02 00 55.9**	**-1.0**
WRH	**Wood River Hil**	**8.06**	**2**		**Pn**	**02 00 58.4**	**+1.1**
J18K	**Innoko River**	**8.10**	**334**		**Pn**	**02 00 57.7**	**0.0**
M14K	**Bethel**	**8.14**	**307**	Pn	**Pn**	**02 00 58.6**	**+0.4**
NEA2	**Nenana**	**8.18**	**359**		**Pn**	**02 00 59.0**	**+0.1**
J20K	**Nowinta River**	**8.21**	**343**	Pn	**Pn**	**02 01 00.5**	**+1.3**
CCB	**Clear Creek Bu**	**8.24**	**3**		**Pn**	**02 01 00.8**	**+1.1**
K27K	**Chicken**	**8.29**	**21**	Pn	**Pn**	**02 01 00.3**	**-0.1**
J19K	**Poorman**	**8.31**	**339**	Pn	**Pn**	**02 00 59.4**	**-1.2**
J25K	**Salcha River,**	**8.36**	**10**	Pn	**Pn**	**02 01 02.1**	**+0.7**
WHY	**Whitehorse**	**8.38**	**54**		**Pn**	**02 01 00.8**	**-0.9**
IL31		**8.41**	**5**		**Pn**	**02 01 02.2**	**+0.3**
ILAR	**Eielson Array**	**8.41**	**5**	Pn	**Pn**	**02 01 01.9**	**0.0**
ILAR	**Eielson Array**	**8.41**	**5**	Pn	**Pn**	**02 01 02.0**	**0.0**
	comp=E,0.6nm,0.3s,baz=187,slow=14,SNR=29						
ILAR				Sn	**Sn**	**02 02 34.0**	**-2.8**
	comp=E,0.9nm,0.3s,baz=188,slow=20,SNR=7.9						
ILAR				LR	L

NRIK	**Noril'sk**	**48.08**	**337**	P		**P**	**02 07 40.4**	**+1.1**
	comp=Z,2.8nm,0.4s,baz=57,slow=5.8,SNR=5.5							
	comp=Z,2.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**49.23**	**240**	T		T	03 00 50.1	
	baz=31,slow=76,SNR=7.7							
H11N3	**WAKE ISLAND Hy**	**49.23**	**240**	T		T	03 00 50.6	
	baz=31,slow=76,SNR=8.2							
H11N1	**WAKE ISLAND Hy**	**49.24**	**240**	T		T	03 00 52.9	
	baz=31,slow=76,SNR=6.6							
JMIC	**Jan Mayen**	**49.78**	**16**	LR		LR	02 30 26.6	
	comp=Z,30nm,18.7s,baz=296,slow=38							
H11S1	**WAKE ISLAND Hy**	**50.37**	**240**	T		T	03 03 01.1	
	baz=28,slow=76,SNR=7.3							
H11S2	**WAKE ISLAND Hy**	**50.38**	**240**	T		T	03 03 06.8	
	baz=28,slow=76,SNR=5.3							
H11S3	**WAKE ISLAND Hy**	**50.39**	**240**	T		T	03 03 00.4	
	baz=28,slow=76,SNR=4.3							
ARCES	**ARCESS Array B**	**54.26**	**2**	P		**P**	**02 08 25.6**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=356,slow=8.5,SNR=4.7							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**58.77**	**310**	P		**P**	**02 08 59.8**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=46,slow=7.4,SNR=15							
	comp=Z,2.1nm,0.8s							
ZALV	**Zalesovo Beam**	**61.59**	**327**	P		**P**	**02 09 17.9**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=17,slow=7.0,SNR=7.4							
	comp=Z,1.5nm,0.6s							
FINES	**FINESS Array B**	**62.38**	**3**	P		**P**	**02 09 22.6**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=14,slow=8.5,SNR=8.8							
	comp=Z,1.8nm,0.8s							
EKA	**Eskdalemuir Ar**	**65.12**	**21**	P		**P**	**02 09 41.4**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=317,slow=6.1,SNR=3.7							
	comp=Z,0.4nm,0.6s							
BVAR	**Borovoye Array**	**66.27**	**335**	P		**P**	**02 09 48.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=38,slow=7.5,SNR=11							
	comp=Z,1.8nm,0.8s							
KURBB	**Kurchatov Arra**	**66.36**	**329**	P		**P**	**02 09 49.2**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=35,slow=5.0,SNR=5.5							
	comp=Z,1.1nm,0.3s							
MKAR	**Makanchi Array**	**68.64**	**325**	P		**P**	**02 10 03.4**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=32,slow=6.0,SNR=7.1							
	comp=Z,0.4nm,0.5s							
AKASG	**Malin Array Be**	**73.21**	**1**	P		**P**	**02 10 31.1**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=0.0,slow=5.9,SNR=8.7							
	comp=Z,2.9nm,0.6s							
GERES	**GERESS Array B**	**74.06**	**12**	P		**P**	**02 10 37.5**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=359,slow=8.1,SNR=3.6							
	comp=Z,0.7nm,0.7s							
MOA	**Molln**	**75.11**	**12**	*i* P		**P**	**02 10 42.6**	**+0.6**
	comp=Z,0.6nm,0.4s							
CONA	**Conrad Observa**	**75.20**	**11**	*i* pP		**P**	**02 10 43.7**	**+1.1**
	comp=Z,0.4nm,0.3s							
KBA	**Koelnbreinsper**	**75.76**	**13**	*i* pP		**P**	**02 10 47.2**	**+1.3**
	comp=Z,1.2nm,0.6s							
ARSA	**Arzberg**	**75.84**	**11**	*i* pP		pP	02 10 48.9	+0.8
	comp=Z,0.4nm,0.3s							
SOKA	**Soboth**	**76.35**	**11**	*i* pP		**P**	**02 10 50.3**	**+1.1**
	comp=Z,0.2nm,0.2s							
OBKA	**Obir**	**76.47**	**12**	*e*P		**P**	**02 10 50.4**	**+0.6**
	comp=Z,2.8nm,0.6s							
PZH	**PanZhiHua**	**78.30**	**300**	P		**P**	**02 10 59.3**	**-1.2**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
PZH				pmax		pmax		
	comp=Z,100nm,4.9s							
ESDC	**Sonseca Array**	**79.71**	**27**	P		**P**	**02 11 08.8**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=343,slow=5.3,SNR=9.6							
	comp=Z,1.6nm,0.8s							
KBZ	**Khabaz**	**79.72**	**351**	P		**P**	**02 11 09.2**	**+1.4**
	comp=Z,3.2nm,0.9s,baz=18,slow=3.8,SNR=5.6							
	comp=Z,3.2nm,0.9s							
GEYT	**Alibeck**	**83.27**	**339**	P		**P**	**02 11 28.3**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=305,slow=16,SNR=3.9							
	comp=Z,1.5nm,0.7s							
BRTR	**Keskin Array B**	**84.18**	**358**	P		**P**	**02 11 32.5**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=326,slow=1.1,SNR=7.4							
	comp=Z,1.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**86.47**	**298**	P		**P**	**02 11 43.4**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=18,slow=5.0,SNR=4.4							
	comp=Z,1.0nm,0.3s							
QSPA	**South Pole Qui**	**146.24**	**180**	PKPbc		**PKPbc**	**02 18 39.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=131,slow=1.5,SNR=11							
BOSA	**Boshof**	**151.86**	**11**	PKPbc		**PKPbc**	**02 18 55.0**	**0.0**
	comp=Z,1.1nm,0.8s,baz=44,slow=2.5,SNR=6.0							

IDC ***18*** *02:01:46.9±0.9, 67.14N×20.90E, h0km, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=15.6km s-min=7.8km az=114.0*

UPP ***18*** *02:01:46.5±0.0, 67.18N×20.63E, h0km, ML2.2, Confirmed Induced event*

HEL ***18*** *02:01:47.1±0.0, 67.17N×20.62E, h1km, ML1.5, ML2.2(UPP), Confirmed Induced event*

BER ***18*** *02:01:48.3±1.4, 67.06N×20.90E, h0km±17km, ML1.9, Confirmed Induced event*

ISC 18 02:01:46.0±0.7, 67.17N±0.02×20.66E±0.02, h0km, n37, σ0s89/51, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.06**	**217**	P	**Pg**	**02 01 48.0**	**+0.9**
DUNU				S	**Sg**	**02 01 49.0**	**+1.1**
DUNU	**Dundret**	**0.06**	**217**	*i* P	**Pg**	**02 01 48.0**	**+0.9**
DUNU				*i* S	**Sg**	**02 01 49.0**	**+1.1**
MASU	**Masugnsbyn**	**0.59**	**60**	P	**Pg**	**02 01 58.0**	**+0.6**
MASU				S	**Sg**	**02 02 06.0**	**+0.9**
MASU	**Masugnsbyn**	**0.59**	**60**	*i* P	**Pg**	**02 01 58.0**	**+0.6**
MASU				*i* S	**Sg**	**02 02 06.0**	**+0.9**
RATU	**Laukkuluspa**	**0.78**	**328**	P	**Pg**	**02 02 00.9**	**0.0**
RATU	**Laukkuluspa**	**0.78**	**328**	*i* P	**Pg**	**02 02 00.9**	**0.0**
KUA	**Kurravaara**	**0.80**	**351**	P	**Pg**	**02 02 01.1**	**-0.2**
KUA	**Kurravaara**	**0.80**	**351**	*i* P	**Pg**	**02 02 01.1**	**-0.2**
SALU	**Saltoluokta**	**0.86**	**285**	P	**Pg**	**02 02 02.6**	**+0.1**
SALU	**Saltoluokta**	**0.86**	**285**	*i* P	**Pg**	**02 02 02.6**	**+0.1**
PAJU	**Pajala**	**0.97**	**97**	P	**Pg**	**02 02 04.6**	**0.0**
PAJU	**Pajala**	**0.97**	**97**	*e*P	**Pg**	**02 02 04.5**	**-0.1**
PAJU				*e*S	**Sg**	**02 02 17.7**	**+0.6**
HARU	**Harads**	**1.02**	**173**	P	**Pg**	**02 02 05.1**	**-0.4**
HARU	**Harads**	**1.02**	**173**	*e*P	**Pg**	**02 02 05.1**	**-0.4**
LANU	**Lannavaara**	**1.02**	**29**	P	**Pg**	**02 02 05.3**	**-0.2**
LANU	**Lannavaara**	**1.02**	**29**	*e*P	**Pg**	**02 02 05.3**	**-0.2**
KLF	**Kolari**	**1.29**	**86**	*e*P	**Pg**	**02 02 10.3**	**-0.3**
KLF				*e*S	**Sg**	**02 02 27.5**	**+0.2**
KLF				MSG		02 02 31.3	
	comp=Z,2.2nm,0.1s						
HEF	**Hetta**	**1.69**	**41**	*e*P	**Pn**	**02 02 17.1**	**+0.3**
HEF				*e*S	**Sb**	**02 02 39.4**	**-0.3**
HEF	**Hetta**	**1.69**	**41**	*e*P	**Pn**	**02 02 16.9**	**+0.1**
HEF				*e*S	**Sn**	**02 02 38.9**	**-0.2**
HEF				MSG		02 02 42.6	
	comp=Z,4.1nm,0.1s						
KALU	**Kalix**	**1.70**	**139**	P	**Pn**	**02 02 17.4**	**+0.6**
KALU	**Kalix**	**1.70**	**139**	*e*P	**Pn**	**02 02 17.5**	**+0.6**
KALU				*e*S	**Sn**	**02 02 40.0**	**+0.7**
SJUU	**Sjulsmark**	**1.71**	**167**	P	**Pn**	**02 02 17.5**	**+0.5**
SJUU	**Sjulsmark**	**1.71**	**167**	*e*P	**Pn**	**02 02 17.5**	**+0.5**
TOF	**Tornio**	**1.82**	**125**	*e*P	**Pn**	**02 02 19.6**	**+1.0**
TOF				*e*S	**Sn**	**02 02 43.6**	**+1.2**
TOF				MSG		02 02 45.8	
	comp=Z,5.4nm,0.2s						
KIF	**Kilpisjarvi**	**1.85**	**2**	*e*P	**Pb**	**02 02 20.4**	**-0.2**
KIF	**Kilpisjarvi**	**1.85**	**2**	*e*PG	**Pg**	**02 02 20.8**	**-0.5**
KTK1	**Kautokeino**	**2.09**	**26**	*e*P	**Pb**	**02 02 24.2**	**-0.6**
KTK1				IAML		02 02 53.2	
	comp=Z,20nm,0.6s						
KTK1	**Kautokeino**	**2.09**	**26**	*e*PB	**Pb**	**02 02 24.0**	**-0.8**
FAUS	**Fauske**	**2.10**	**278**	*e*P	**Pb**	**02 02 24.0**	**-0.9**
FAUS				*e*S	**Sb**	**02 02 51.4**	**0.0**
FAUS				IAML		02 02 55.1	
	comp=Z,21nm,0.7s						
RNF	**Rovaniemi**	**2.19**	**102**	MSG		02 02 57.7	
	comp=Z,2.0nm,0.2s						
JETT	**Jettan, Norway**	**2.40**	**358**	*e*P	**Pn**	**02 02 28.0**	**+1.4**
JETT				IAML		02 03 02.8	
	comp=Z,16nm,0.4s						
ARA0	**ARCESS Array S**	**2.98**	**35**	*e*P	**Pn**	**02 02 35.7**	**+1.2**
ARA0				IAML		02 03 27.2	
	comp=Z,3.9nm,0.7s						
ARCES	**ARCESS Array B**	**2.98**	**35**	Pn	**Pn**	**02 02 35.3**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=216,slow=13,SNR=23						
ARCES				Sn	**Sn**	**02 03 11.6**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=216,slow=22,SNR=7.7						
	comp=Z,0.5nm,0.3s						
KONS	**Konsvik**	**3.06**	**261**	*e*P	**Pn**	**02 02 36.9**	**+1.4**
KONS				IAML		02 03 33.8	
	comp=Z,9.8nm,0.5s						
FINES	**FINESS Array B**	**6.21**	**155**	Pn	**Pn**	**02 03 20.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=5.9						
FINES				Sn	**Sn**	**02 04 28.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=5.7						
FINES				Lg	Lg	02 04 58.3	
	comp=Z,0.2nm,0.3s,baz=338,slow=26,SNR=2.6						
	comp=Z,1.2nm,0.7s						
NOA	**NORSAR Array B**	**7.40**	**218**	Pn	**Pn**	**02 03 33.1**	**-2.2**
	baz=24,slow=10,SNR=3.9						
NOA				Sn	**Sn**	**02 04 59.4**	**-0.5**
	baz=32,slow=21,SNR=1.8						
	comp=Z,0.5nm,0.9s						
HFS	**Hagfors**	**7.71**	**207**	Pn	**Pn**	**02 03 38.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=9.6						
HFS				Sn	**Sn**	**02 05 04.3**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=19,slow=23,SNR=4.8						
	comp=Z,1.4nm,0.7s						

IDC 18 02:11:39.6±2.4, 1.80N×127.41E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=190.8km s-min=27.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.65**	**163**	P	P	02 16 40.7	-1.8
	0.7nm,0.7s,baz=340,slow=9.7,SNR=8.1						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**26.09**	**166**	P	P	02 17 15.3	+0.1
	0.2nm,0.5s,baz=343,slow=8.1,SNR=2.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.52**	**326**	P	P	02 21 46.0	+1.2
	0.1nm,0.4s,baz=123,slow=6.4,SNR=4.2						
	0.1nm,0.4s						

CATAC ***18*** *02:17:42.2±0.8, 14.32N×92.38W, h20km±4km, ML3.9*

GCG ***18*** *02:17:45.3±0.4, 14.65N×92.20W, h57km±10km, MD3.8*

ISC 18 02:17:42.9±2.6, 14.3N±0.1×92.4W±0.1, h21km±6km, n17, σ0s79/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.59**	**27**	*i* P	**Pb**	**02 17 54.2**	**-0.4**
SMCA				IAML		02 18 03.3	
	comp=Z,6μm,1.0s						
RTAL	**Retalhuleu**	**0.66**	**73**	*i* P	**Pb**	**02 17 56.2**	**+0.4**
RTAL				*i* S	**Sn**	**02 18 08.1**	**+1.3**
RTAL				IAML		02 18 14.0	
	comp=Z,1μm,1.0s						
SULM	**Suchitepequez,**	**0.76**	**92**	*e*P	**Pn**	**02 17 59.4**	**+1.1**
STG3	**Santiaguito 3,**	**0.84**	**63**	*e*P	**Pb**	**02 17 59.0**	**0.0**
SMSP	**San Marcos**	**0.84**	**40**	*i* P	**Pb**	**02 17 58.1**	**-1.0**
SMSP				*i* S	**Sb**	**02 18 09.7**	**-0.4**
SMSP				IAML		02 18 11.1	
	comp=Z,11μm,1.0s						
HUEH	**Huehuetenango**	**1.28**	**40**	*i* P	**Pn**	**02 18 04.8**	**-1.0**
HUEH				*i* S	**Sn**	**02 18 21.7**	**-0.7**
HUEH				IAML		02 18 30.0	
	comp=Z,2μm,1.0s						
FUG	**Fuego 3**	**1.46**	**85**	*e*P	**Pn**	**02 18 08.2**	**0.0**
PCG	**Pacaya**	**1.69**	**88**	*e*P	**Pn**	**02 18 11.8**	**+0.4**
PCG				*e*S	**Sn**	**02 18 32.4**	**-0.1**
CCIG	**Comitan**	**1.95**	**6**	*i* P	**Pn**	**02 18 15.2**	**+0.2**
CCIG				*i* S	**Sn**	**02 18 39.8**	**+0.8**
CCIG				IAML		02 18 46.6	
	comp=Z,300nm,1.0s						
NBG	**Las Nubes**	**1.96**	**82**	*e*P	**Pn**	**02 18 16.1**	**+1.0**
GUNB	**GUNB**	**1.96**	**82**	*i* P	**Pn**	**02 18 15.1**	**-0.1**
GUNB				IAML		02 18 16.0	
	comp=Z,470nm,1.0s						
GUNB				*i* S	**Sb**	**02 18 41.4**	**-0.7**
NUBE	**Las Nubes**	**2.53**	**99**	*i* P	**Pn**	**02 18 21.9**	**-1.0**
NUBE				*i* S	**Sn**	**02 18 51.8**	**-1.3**
NUBE				IAML		02 18 56.3	
	comp=Z,300nm,1.0s						
CEVE	**Cerro Verde**	**2.69**	**100**	*i* P	**Pn**	**02 18 25.2**	**0.0**
CEVE				IAML		02 19 08.7	
	comp=Z,580nm,1.0s						
JAYA	**Jayaque - finc**	**2.89**	**103**	*i* P	**Pn**	**02 18 27.1**	**-0.8**
JAYA				IAML		02 19 09.5	
	comp=Z,740nm,1.0s						
MTO3	**Montecristo**	**2.90**	**88**	*i* P	**Pn**	**02 18 26.8**	**-1.2**
MTO3				IAML		02 19 14.6	
	comp=Z,47nm,1.0s						
PMON	**Piamonte**	**3.01**	**101**	*i* P	**Pn**	**02 18 29.4**	**0.0**
PMON				IAML		02 19 12.2	
	comp=Z,530nm,1.0s						
SCLA	**Alcaldia de Sa**	**3.57**	**100**	*i* P	**Pn**	**02 18 37.2**	**+0.1**
SCLA				IAML		02 19 46.3	
	comp=Z,42nm,1.0s						

IDC ***18*** *02:17:40.1±4.0, 24.67S×175.65W, h0km, mb4.0/3, mbtmp4.0/3, MS3.0/1, Error ellipse: s-maj=236.6km s-min=41.0km az=157.0*

NEIC ***18*** *02:17:44.3±1.1, 24.15S±0.2×175.5W±0.2, h33km±6km, mb4.4/11, Error ellipse: s-maj=31.0km s-min=7.7km az=139.0*

ISC 18 02:17:43.8±0.8, 24.15S±0.2×175.5W±0.2, h28km, n21, σ1s09/20, mb4.3/7, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.22**	**47**	Pn	**Pn**	**02 19 26.9**	**-0.6**
DZM	**Mont Dzumac**	**16.73**	**273**	LR	LR	02 26 53.1	
	comp=Z,54nm,18.8s,baz=48,slow=33						
MRZ	**Mangatainoka R**	**18.12**	**202**	P	**P**	**02 21 53.6**	**+0.1**
MRZ				IAmb	IAmb	02 22 04.7	
	comp=Z,40nm,1.4s						
TUWZ	**Tuamarina**	**19.38**	**205**	P	**P**	**02 22 07.0**	**-0.5**
THZ	**Tophouse**	**20.07**	**206**	P	**P**	**02 22 14.1**	**-1.0**
THZ				IAmb	IAmb	02 22 47.5	
	comp=Z,30nm,1.4s						
KHZ	**Kahutara**	**20.39**	**204**	P	**P**	**02 22 18.9**	**+0.6**
KHZ				IAmb	IAmb	02 22 26.8	
	comp=Z,28nm,1.3s						
CTAO	**Charters Tower**	**35.58**	**269**	P	**P**	**02 24 38.2**	**-0.9**
CTAO				IAmb	IAmb	02 24 49.5	
	comp=Z,3.4nm,0.8s						
BBOO	**Buckleboo**	**43.14**	**247**	P	**P**	**02 25 43.0**	**+0.9**
AS31	**Alice Springs**	**46.05**	**260**	P	**P**	**02 26 05.6**	**+0.2**
ASAR	**Alice Springs**	**46.05**	**260**	P	**P**	**02 26 04.8**	**-0.7**
ASAR	**Alice Springs**	**46.05**	**260**	P	**P**	**02 26 03.9**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=93,slow=7.2,SNR=15						
	comp=Z,0.9nm,0.8s						
WR0	**Warramunga Arr**	**46.30**	**265**	P	**P**	**02 26 06.2**	**-1.2**
WR0				IAmb	IAmb	02 26 18.6	
	comp=Z,8.9nm,1.3s						
WB2	**Warramunga Arr**	**46.48**	**265**	P	**P**	**02 26 07.6**	**-1.2**
WB0	**Warramunga Arr**	**46.48**	**265**	P	**P**	**02 26 07.5**	**-1.4**
WB0				IAmb	IAmb	02 26 51.0	
	comp=Z,8.9nm,1.4s						
WRA	**Warramunga Arr**	**46.49**	**265**	P	**P**	**02 26 07.4**	**-1.5**
WRA	**Warramunga Arr**	**46.49**	**265**	P	**P**	**02 26 07.6**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=105,slow=8.5,SNR=24						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**65.97**	**180**	P	**P**	**02 28 27.3**	**-0.2**
QSPA				IAmb	IAmb	02 29 09.3	
	comp=Z,3.8nm,1.3s						
CMAR	**Chiang Mai Arr**	**93.47**	**289**	P	**P**	**02 30 59.5**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=132,slow=3.4,SNR=6.0						
	comp=Z,0.6nm,0.3s						
BVAR	**Borovoye Array**	**123.31**	**319**	PKP	**PKiKP**	**02 36 38.8**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=72,slow=4.7,SNR=2.3						
EKA	**Eskdalemuir Ar**	**148.31**	**8**	PKPbc	**PKiKP**	**02 37 28.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=298,slow=1.5,SNR=4.1						
BRTR	**Keskin Array B**	**150.94**	**309**	PKPbc	**PKiKP**	**02 37 35.3**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=43,slow=6.5,SNR=2.7						

TEH ***18*** *02:26:56.8, 27.83N×57.05E, h18km±25km, ML2.9*

OMAN ***18*** *02:27:03.2±0.1, 27.48N×57.42E, h10km, mb4.2/2, ml2.5/12, Error ellipse: s-maj=1.5km s-min=1.3km az=16.0*

ISC 18 02:26:55.8±1.5, 27.82N±0.03×57.11E±0.04, h6km±12km, n28, σ1s72/47, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.55**	**76**	Pg	**Pb**	**02 27 08.5**	**+0.7**
IBND	**Bandar-abas**	**0.62**	**234**	Pg	**Pb**	**02 27 08.4**	**-0.6**
GENO	**Geno**	**0.93**	**244**	Pg	**Pb**	**02 27 13.9**	**-0.4**
KBAM	**BAM**	**1.77**	**42**	Pg	**Pb**	**02 27 28.5**	**-0.2**
NGRK	**Negar Kerman**	**1.85**	**350**	Pn	**Pn**	**02 27 28.7**	**+0.3**
SHME	**Shamm**	**1.96**	**206**	P	**Pg**	**02 27 34.8**	**+1.4**
	SNR=8.2						
SHME				S	**Sg**	**02 27 58.4**	**-0.3**
BANOM	**Banah**	**2.02**	**201**	P	**Pg**	**02 27 35.3**	**+0.8**
BANOM				S	**Sb**	**02 27 59.6**	**+1.3**
JASK	**Jask - Hormozg**	**2.06**	**161**	Pn	**Pb**	**02 27 32.6**	**-1.0**
JASK	**Jask - Hormozg**	**2.06**	**161**	P	**Pb**	**02 27 32.7**	**-0.8**
	SNR=13						
JASK				S	**Sn**	**02 27 55.2**	**-1.7**
CHMN	**Cheshme madani**	**2.07**	**10**	Pn	**Pb**	**02 27 33.0**	**-1.1**
TVBK	**TV Kerman**	**2.18**	**352**	Pn	**Pb**	**02 27 34.1**	**-1.8**
MASF	**Masafi**	**2.58**	**199**	P	**Pg**	**02 27 44.9**	**-0.3**
MASF				S	**Sb**	**02 28 13.5**	**-0.9**
KHGB	**Koh Gabri**	**2.61**	**348**	Pn	**Pn**	**02 27 40.0**	**+1.3**
MDH	**Madha**	**2.61**	**196**	P	**Pb**	**02 27 42.8**	**-0.1**
MDH				S	**Sn**	**02 28 11.9**	**+1.4**
UOSS	**Minazif**	**2.97**	**196**	P	**Pb**	**02 27 47.8**	**-1.4**
UOSS				S	**Sb**	**02 28 21.7**	**-4.0**
NAZ	**Nazwa, Dubai**	**3.10**	**205**	P	**Pb**	**02 27 48.9**	**-2.4**
NAZ				S	**Sb**	**02 28 26.4**	**-3.0**
HATD	**Hatta, Dubai**	**3.10**	**197**	P	**Pb**	**02 27 49.8**	**-1.6**
HATD				S	**Sn**	**02 28 25.2**	**+2.5**
ASHO	**Ashiyiah**	**3.26**	**197**	P	**Pb**	**02 27 52.8**	**-1.3**
ASHO				S	**Sn**	**02 28 28.7**	**+2.2**
FAQ	**Al Faqa, Dubai**	**3.35**	**204**	P	**Pb**	**02 27 52.9**	**-2.7**
FAQ				S	**Sn**	**02 28 30.0**	**+1.3**
ASUD	**Al Ashush, Dub**	**3.56**	**207**	P	**Pn**	**02 27 53.2**	**+1.7**
ASUD				S	**Sn**	**02 28 35.5**	**+1.6**
HOQ	**Hoqain**	**4.22**	**177**	P	**Pn**	**02 28 00.4**	**-0.3**
HOQ				S	**Sn**	**02 28 49.7**	**-0.6**
ARQ	**Araqi**	**4.49**	**187**	P	**Pn**	**02 28 07.8**	**+3.4**
ARQ				S	**Sn**	**02 28 58.6**	**+1.6**
WSAR	**Wadi Sarin**	**4.76**	**163**	P	**Pn**	**02 28 09.4**	**+1.3**
	SNR=28						
WSAR				S	**Sn**	**02 29 02.5**	**-1.2**
SMDO	**Samad**	**4.81**	**170**	P	**Pn**	**02 28 10.1**	**+1.2**
	SNR=6.0						
SMDO				S	**Sn**	**02 29 06.7**	**+1.6**
BSY	**Bisya**	**5.05**	**179**	P	**Pn**	**02 28 14.9**	**+2.8**
BSY				S	**Sn**	**02 29 12.5**	**+1.7**
WBK	**Wadi Bani Khal**	**5.45**	**162**	P	**Pn**	**02 28 19.2**	**+1.6**
	SNR=11						
WBK				S	**Sn**	**02 29 18.6**	**-2.1**
JLN	**Jalan Bani Buh**	**6.02**	**159**	P	**Pn**	**02 28 26.4**	**+1.0**
JLN				S	**Sn**	**02 29 32.6**	**-2.0**
MHTO	**MHTO**	**6.84**	**173**	P	**Pn**	**02 28 38.1**	**+1.4**
	SNR=13						
MHTO				S	**Sn**	**02 29 54.2**	**-0.8**

MOS ***18*** *02:54:50.6±0.8, 58.48S×25.87W, h44km, mb5.5/28, Error ellipse: s-maj=17.1km s-min=10.3km az=106.1*

BJI ***18*** *02:54:51.7±0.0, 57.68S×25.65W, h63km, mB5.5/8, Ms7.4.6/2*

NEIC ***18*** *02:54:54.5±1.6, 58.58S±0.09×25.9W±0.2, h62km±4km, mb5.3/127, Error ellipse: s-maj=12.9km s-min=11.1km az=212.0*

GCMT ***18*** *02:54:55.5±0.2, 58.90S±0.01×25.24W±0.02, h62km±1km, MW5.1/127, Moment Tensor Solution. s83,c114; s127,c194; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.65±.13; Mθθ-4.44±.12; Mϕϕ0.79±.12; Mrθ2.83±.09; Mθϕ0.67±.11; Mϕr-2.97±.08; Best double couple: M◎5.83800×10^16 NP1:ϕs123.00000°, δ69.00000°, λ113.00000°. NP2:ϕs253.00000°, δ31.00000°, λ44.00000°. Principal axes: T 5.9420, Plg59.0000°, Azm66.0000°; N -0.2090, Plg22.0000°, Azm294.0000°; P -5.7330, Plg21.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***18*** *02:54:56.5±1.1, 58.51S×25.88W, h82km±8km, mb4.9/13, mbtmp5.3/15, MS4.1/36 Error ellipse: s-maj=14.5km s-min=12.7km az=74.0*

ISC 18 02:54:54.2±0.3, 58.52S±0.04×25.87W±0.05, h68km±2km, h68km:pP-P, n841, σ1s40/851, mb5.4/114, 54C-6D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.26**	**301**	Pn	**Pn**	**02 56 36.3**	**-1.2**
HOPE	**Hope Point**	**7.26**	**301**	P	**Pn**	**02 56 36.3**	**-1.2**
ORCD	**Orcadas**	**9.81**	**249**		**Pn**	**02 57 09.8**	**-2.5**
VNA1	**Neumayer--Stat**	**14.24**	**156**	⇑P	**Pn**	**02 58 10.4**	**-1.6**
	comp=Z,87nm,0.3s						
VNA1				⇑S	Sn	03 00 35.4	-13
	comp=Z,37nm,0.5s						
VNA3	**Neumayer Olymp**	**14.42**	**159**	⇑P	**Pn**	**02 58 12.1**	**-2.4**
	comp=Z,254nm,0.6s						
VNA3				⇓S	Sn	03 00 37.1	-16
	comp=Z,1.2n

QSPA IAmb IAmb 03 01 12.9
comp=Z,112nm,1.4s
QSPA South Pole Qui 31.73 180 P **P** **03 01 12.3 +0.9**
comp=Z,29nm,0.6s,baz=214,slow=0.9,SNR=485
QSPA ScP **ScP** **03 07 37.1 -0.8**
comp=Z,9.8nm,0.7s,baz=223,slow=2.7,SNR=11
QSPA LR LR 03 13 24.5
comp=Z,741nm,20.9s,baz=198,slow=35
comp=Z,29nm,0.6s
QSPA South Pole Qui 31.73 180 ‖P **P** **03 01 11.9 +0.6**
QSPA pP **pwP** **03 01 29.9 +0.3**
QSPA ScP **ScP** **03 07 36.9 -1.1**
LL02 Futaleuf 32.09 278 P **P** **03 01 15.6 +1.1**
PLTB Pedras Altas 32.69 313 P **P** **03 01 19.6 -0.2**
PLTB Pedras Altas 32.69 313 *eP* **P** **03 01 20.0 +0.1**
PLCA Paso Flores 33.19 283 P **P** **03 01 24.6 +0.4**
PLCA IAmb IAmb 03 01 27.3
comp=Z,55nm,0.9s
PLCA Paso Flores 33.19 283 P **P** **03 01 24.6 +0.4**
PLCA pmax pmax
comp=Z,55nm,0.9s
PLCA Paso Flores 33.19 283 P **P** **03 01 25.2 +1.0**
comp=Z,38nm,0.8s,baz=140,slow=7.4,SNR=77
PLCA ScP **ScP** **03 07 41.9 -1.5**
comp=Z,2.3nm,0.8s,baz=134,slow=2.6,SNR=5.3
comp=Z,38nm,0.8s
PLCA Paso Flores 33.19 283 *eP* **P** **03 01 25.0 +0.8**
PLCA Paso Flores 33.19 283 P **P** **03 01 25.3 +1.0**
PLCA pP **sP** **03 01 44.4 -3.7**
TBOT Tacuaremb 33.68 310 *eP* **P** **03 01 28.8 +0.3**
CPSB Cacapava Do Su 33.84 314 *eP* **P** **03 01 30.8 +0.9**
CNB Canela 33.89 319 *eP* **P** **03 01 31.4 +1.1**
TER01 Tubaro-SC 34.03 322 *eP* **P** **03 01 32.8 +1.2**
LR05 Currie 34.31 282 P **P** **03 01 33.8 0.0**
LR05 IAmb IAmb 03 01 38.7
comp=Z,36nm,0.7s
GO06 Curarrehue 34.52 283 P **P** **03 01 36.0 +0.2**
RODS Rosario do Sul 34.57 312 *eP* **P** **03 01 37.8 +1.6**
PSAL Palomas, Salto 34.89 308 *eP* **P** **03 01 39.4 +0.5**
LR03 Panguipulli 34.93 282 P **P** **03 01 40.0 +0.8**
LR03 IAmb IAmb 03 01 53.1
comp=Z,33nm,0.7s
ALGR Alto Alegre (B 35.14 316 *eP* **P** **03 01 41.4 +0.3**
LR04 Corral 35.30 281 P **P** **03 01 43.1 +0.8**
UNIS Unistalda (Bra 35.66 313 *eP* **P** **03 01 47.4 +1.8**
ITQB Itaqui 35.73 310 P **P** **03 01 45.8 -0.3**
ITQB IAmb IAmb 03 01 47.3
comp=Z,28nm,0.9s
ITQB Itaqui 35.73 310 *eP* **P** **03 01 45.9 -0.3**
ITAB Concordia 36.24 318 P **P** **03 01 51.1 +0.6**
ITAB Concordia 36.24 318 *eP* **P** **03 01 51.4 +0.8**
CRSM Crissiumal (Br 36.69 315 *eP* **P** **03 01 54.4 0.0**
ML02 Panimavida 37.42 287 P **P** **03 02 00.0 -0.5**
BI05 Punta Hualpn 37.55 284 P **P** **03 02 02.7 +1.2**
FRBT Francisco Belt 37.72 318 *eP* **P** **03 02 03.1 0.0**
BO02 Sierra Bellavi 37.87 289 P **P** **03 02 04.5 +0.1**
BO02 IAmb IAmb 03 02 09.9
comp=Z,39nm,0.7s
BO02 Sierra Bellavi 37.87 289 *eP* **P** **03 02 06.4 +2.0**
PARB Paraibuna 37.88 330 *eP* **P** **03 02 06.8 +2.3**
MAN01 Angra dos Reis 37.91 332 *eP* **P** **03 02 07.3 +2.5**
SPB Sao Paulo 38.14 327 P **P** **03 02 07.1 +0.5**
SPB Sao Paulo 38.14 327 *eP* **P** **03 02 08.4 +1.9**
GO05 Huala 38.27 287 P **P** **03 02 08.0 +0.3**
GO05 IAmb IAmb 03 02 11.4
comp=Z,53nm,0.8s
DUB01 Friburgo-RJ 38.29 335 *eP* **P** **03 02 10.1 +2.1**
BO01 Tunca 38.34 289 P **P** **03 02 08.5 +0.2**
BO01 IAmb IAmb 03 02 12.0
comp=Z,50nm,0.9s
BO01 Tunca 38.34 289 *eP* **P** **03 02 10.0 +1.7**
LMEL Las Melosas 38.34 290 P **P** **03 02 10.3 +1.9**
LMEL IAmb IAmb 03 02 25.6
comp=Z,25nm,0.7s
VAS01 Vassouras-RJ 38.34 333 *eP* **P** **03 02 10.4 +2.1**
CAM01 Campos-RJ 38.38 336 *eP* **P** **03 02 10.9 +2.3**
BO04 La Punta 38.43 290 P **P** **03 02 09.4 +0.4**
BO04 La Punta 38.43 290 *eP* **P** **03 02 09.1 0.0**
MT13 San Alfonso 38.47 290 P **P** **03 02 10.8 +1.4**
MT13 IAmb IAmb 03 02 34.0
comp=Z,43nm,0.8s
MT13 San Alfonso 38.47 290 *eP* **P** **03 02 12.1 +2.6**
PTGB Pitanga 38.54 320 *eP* **P** **03 02 10.3 +0.2**
MT12 Pirque 38.60 290 *eP* **P** **03 02 12.2 +1.6**
MT04 Ro Olivares 38.67 291 *eP* **P** **03 02 15.2 +4.0**
MT15 Las Vizcachas 38.69 290 *eP* **P** **03 02 13.0 +1.8**
BO03 Pichilemu 38.70 288 *eP* **P** **03 02 11.5 +0.3**
MT03 Universidad Ad 38.78 290 P **P** **03 02 13.4 +1.4**
MT03 Universidad Ad 38.78 290 *eP* **P** **03 02 13.2 +1.1**
MT09 Talagante 38.79 290 P **P** **03 02 12.2 +0.1**
MT09 Talagante 38.79 290 *eP* **P** **03 02 12.9 +0.7**
FCH Farellones 38.80 291 *eP* **P** **03 02 13.9 +1.3**
MT16 CCHEN 38.84 290 P **P** **03 02 13.6 +1.2**
MT16 CCHEN 38.84 290 *eP* **P** **03 02 13.7 +1.2**
MT01 Popeta 38.85 289 P **P** **03 02 12.3 -0.2**
MT01 Popeta 38.85 289 *eP* **P** **03 02 12.8 +0.3**
MT14 Cerro Cal¡n 38.87 290 *eP* **P** **03 02 14.4 +1.6**
MT10 Hacienda Santa 38.97 291 *eP* **P** **03 02 15.6 +1.9**
MT05 Renca 38.97 290 P **P** **03 02 14.8 +1.2**
MT05 Renca 38.97 290 *eP* **P** **03 02 15.1 +1.4**
CPUP Villa Florida 38.99 312 P **P** **03 02 13.5 -0.2**
CPUP Villa Florida 38.99 312 P **P** **03 02 13.5 -0.2**
CPUP pmax pmax
comp=Z,10.0nm,0.9s
CPUP Villa Florida 38.99 312 P **P** **03 02 13.7 -0.1**
comp=Z,4.9nm,0.8s,baz=160,slow=7.3,SNR=13
CPUP ScP **ScP** **03 08 03.6 -1.1**
comp=Z,2.1nm,0.6s,baz=174,slow=2.3,SNR=6.6
CPUP LR LR 03 17 07.9
comp=Z,117nm,20.4s,baz=156,slow=34
comp=Z,4.9nm,0.8s
CPUP Villa Florida 38.99 312 *eP* **P** **03 02 13.3 -0.4**
CPUP Villa Florida 38.99 312 P **P** **03 02 13.9 -0.3**
CPUP PcP **PcP** **03 04 23.4 +0.6**
CER Ceres 39.14 70⇑*iP* **P** **03 02 15.8 +0.9**
CER IAmb IAmb 03 02 16.7
comp=Z,32nm,0.8s
PEL Peldehue 39.15 290 P **P** **03 02 15.2 +0.2**
PEL Peldehue 39.15 290 P **P** **03 02 15.2 +0.2**
PEL pmax pmax
comp=Z,169nm,0.6s
PEL Peldehue 39.15 290 P **P** **03 02 16.6 +1.6**
VA05 Santo Domingo 39.19 289 P **P** **03 02 15.9 +0.6**
MT02 Curacav 39.28 290 P **P** **03 02 16.9 +0.8**
MT02 Curacav 39.28 290 *eP* **P** **03 02 15.8 -0.3**
VA03 San Esteban 39.39 291 P **P** **03 02 17.8 +0.7**
ROCH El Roble 39.45 290 *eP* **P** **03 02 18.1 +1.3**
LDASE Londrina, Braz 39.45 322 *eP* **P** **03 02 18.9 +1.2**
VA01 Torpederas 39.72 290 P **P** **03 02 20.2 +0.5**
VA01 IAmb IAmb 03 02 26.5
comp=Z,55nm,0.8s
MATJ Matjiesfontein 39.85 71⇑*iP* **P** **03 02 22.0 +1.0**
MATJ IAmb IAmb 03 02 22.8
comp=Z,144nm,0.9s
BSCB Bom Sucesso 39.90 332 *eP* **P** **03 02 23.3 +1.8**
VA06 Catapilco 39.92 290 P **P** **03 02 22.0 +0.6**
TICA Tres Isletas 40.17 308 *eP* **P** **03 02 23.8 +0.3**
TRCB Terra Rica 40.51 320 P **P** **03 02 26.6 +0.2**
TRCB IAmb IAmb 03 02 27.5
comp=Z,35nm,0.7s
TRCB Terra Rica 40.51 320 *eP* **P** **03 02 26.6 +0.2**
RIB01 Linhares ES 40.57 339 *eP* **P** **03 02 28.8 +2.0**
ESFA Espinillo Form 40.67 311 *eP* **P** **03 02 27.3 -0.4**
SUR Sutherland 40.68 71 P **P** **03 02 28.9 +0.9**
SUR IAmb IAmb 03 02 30.4
comp=Z,80nm,1.0s
SUR Sutherland 40.68 71⇑*iP* **P** **03 02 29.5 +1.5**
SUR IAmb IAmb 03 02 30.0
comp=Z,80nm,1.0s
SUR Sutherland 40.68 71 LR LR 03 15 12.3
comp=Z,657nm,21.8s,baz=230,slow=30
SUR Sutherland 40.68 71 P **P** **03 02 29.3 +1.3**
SUR PcP **PcP** **03 04 30.1 +1.8**
MERW Merweville 40.80 72⇑*iP* **P** **03 02 29.8 +1.0**
MERW IAmb IAmb 03 02 30.4
comp=Z,111nm,1.0s
CO02 Combarbal 40.88 292 P **P** **03 02 30.2 +0.7**
CO02 IAmb IAmb 03 02 53.1
comp=Z,46nm,0.8s
CVNA Calvinia 40.89 69⇑*iP* **P** **03 02 31.5 +1.9**
CVNA IAmb IAmb 03 02 32.0
comp=Z,127nm,0.8s
CO03 El Pedregal 41.03 293 P **P** **03 02 32.3 +1.6**
CO03 IAmb IAmb 03 02 52.8
comp=Z,35nm,0.9s
PCMB Pacaembu 41.16 323 *eP* **P** **03 02 32.3 +0.5**
KOMG Komaggas 41.19 65⇑*iP* **P** **03 02 33.2 +1.3**
KOMG IAmb IAmb 03 02 34.1
comp=Z,95nm,0.9s
BUFB Buffelsbos 41.25 76 *eP* **P** **03 02 33.0 +0.6**
BUFB IAmb IAmb 03 02 33.7
comp=Z,1.7nm,0.9s
FRAZ Fraserburg 41.34 71 *iP* **P** **03 02 34.3 +1.0**
FRAZ IAmb IAmb 03 02 35.3
comp=Z,87nm,0.9s
GRAN Grantham 41.42 72 *eP* **P** **03 02 34.9 +1.0**
GRAN IAmb IAmb 03 02 35.3
comp=Z,66nm,0.6s
CO01 Juntas del Tor 41.45 294 P **P** **03 02 35.4 +1.0**
CO01 IAmb IAmb 03 02 40.1
comp=Z,48nm,0.7s
ABR01 Abrolhos, BA 41.58 341 *eP* **P** **03 02 37.0 +1.8**
CO06 Fray Jorge 41.62 292 P **P** **03 02 37.5 +2.0**
CO06 IAmb IAmb 03 02 58.8
comp=Z,54nm,1.1s
GO04 Tololo Observa 41.63 293 P **P** **03 02 37.1 +1.3**
GO04 IAmb IAmb 03 02 58.4
comp=Z,47nm,0.7s
NAN01 Guarapari, ES 41.95 339 *eP* **P** **03 02 39.1 +0.9**
ROOI Rooidraai Farm 41.96 74 *eP* **P** **03 02 38.4 +0.1**
ROOI IAmb IAmb 03 02 38.9
comp=Z,32nm,0.9s
CO05 La Serena 42.05 293 P **P** **03 02 40.1 +1.1**
BRAK Brakfontein 42.20 72⇑*iP* **P** **03 02 40.9 +0.6**
BRAK IAmb IAmb 03 02 41.7
comp=Z,56nm,0.8s
DIAM Diamantina, MG 42.24 334 *eP* **P** **03 02 42.3 +1.5**
ANTJ Antonio Joao (42.42 316 *eP* **P** **03 02 43.1 +1.1**
AC05 El Transito 42.49 295 P **P** **03 02 43.3 +0.6**
LCO Las Campanas 42.55 294 P **P** **03 02 43.9 +0.6**
LCO IAmb IAmb 03 03 06.6
comp=Z,48nm,0.9s
LCO Las Campanas 42.55 294 P **P** **03 02 43.9 +0.6**
LCO pmax pmax
comp=Z,48nm,0.9s
BFON Badsfontein, M 42.59 73⇑*iP* **P** **03 02 44.0 +0.6**
BFON IAmb IAmb 03 02 44.3
comp=Z,38nm,0.7s
GRAF Camdeboo Natio 42.60 74⇑*iP* **P** **03 02 44.6 +1.1**
GRAF IAmb IAmb 03 02 45.3
comp=Z,112nm,0.8s
ITRB Iturama 42.67 325 *eP* **P** **03 02 44.9 +0.8**
PMNB Patos De Minas 42.68 331 *eP* **P** **03 02 45.5 +1.3**
GRHM Grahamstown, E 42.77 77 *eP* **P** **03 02 44.4 -0.5**
GRHM IAmb IAmb 03 02 46.2
comp=Z,35nm,0.9s
SOE Somerset East 42.80 76 P **P** **03 02 44.8 -0.3**
SOE IAmb IAmb 03 02 47.1
comp=Z,80nm,1.2s
SOE Somerset East 42.80 76 *eP* **P** **03 02 44.6 -0.5**
SOE IAmb IAmb 03 02 46.0
comp=Z,67nm,1.1s
VA04 Juan Fernndez 42.85 282 P **P** **03 02 47.2 +1.8**
RPRD Ribas do Rio P 43.01 320 *eP* **P** **03 02 47.0 +0.2**
GUA01 Guaratinga, BA 43.12 340 *eP* **P** **03 02 49.3 +1.6**
MURT Porto Murtinho 43.32 314 *eP* **P** **03 02 48.1 -1.1**
AC04 Llanos de Chal 43.40 294 P **P** **03 02 50.8 +0.9**
GO03 Copiap 43.52 296 P **P** **03 02 51.0 +0.1**
GO03 IAmb IAmb 03 03 12.4
comp=Z,30nm,0.8s
AC02 Maricunga 43.64 297 P **P** **03 02 52.7 +0.3**
AC02 IAmb IAmb 03 03 15.1
comp=Z,38nm,0.9s
IPMB Ipameri, GO 43.68 328 *eP* **P** **03 02 53.4 +1.1**
AQDB Aquidauana 43.71 318 P **P** **03 02 51.8 -0.6**
AQDB Aquidauana 43.71 318 *eP* **P** **03 02 51.6 -0.8**
BDQN Bodoquena, MS 44.11 316 *eP* **P** **03 02 54.4 -1.2**
VNDA Vanda 44.14 182 P **P** **03 02 55.7 +0.5**
VNDA IAmb IAmb 03 03 15.4
comp=Z,32nm,0.8s
VNDA Vanda 44.14 182 P **P** **03 02 55.7 +0.5**
VNDA pmax pmax
comp=Z,32nm,0.8s
VNDA Vanda 44.14 182 P **P** **03 02 56.9 +1.7**
comp=Z,25nm,0.9s,baz=190,slow=6.7,SNR=42
VNDA LR LR 03 21 23.3
comp=Z,80nm,18.9s,baz=172,slow=36
comp=Z,25nm,0.9s
VNDA Vanda 44.14 182 P **P** **03 02 56.4 +1.2**
VNDA pP **pwP** **03 03 15.1 +0.9**
VNDA sP **sP** **03 03 24.1 +5.0**
UPI Upington 44.19 68⇑*iP* **P** **03 02 57.3 +1.0**
UPI IAmb IAmb 03 02 58.1
comp=Z,128nm,1.1s
CMC01 Camacan, BA 44.27 341 *eP* **P** **03 02 58.4 +1.5**
HVD Gariep Dam 44.46 74⇑*iP* **P** **03 02 59.5 +0.9**
HVD IAmb IAmb 03 02 59.9
comp=Z,62nm,0.9s
SHEL Horse Pasture 45.04 28 P **P** **03 03 04.6 +1.5**
SHEL Horse Pasture 45.04 28 *eP* **P** **03 03 05.2 +2.1**
SHEL Horse Pasture 45.04 28 P **P** **03 03 04.6 +1.5**
SHEL pmax pmax
comp=Z,191nm,1.0s
SHEL Horse Pasture 45.04 28 P **P** **03 03 04.8 +1.7**
CCD Concordia, Ant 45.12 169 P **P** **03 03 03.5 0.0**
CCD pP **pwP** **03 03 21.4 -1.2**
CCD sP **sP** **03 03 31.1 +3.6**
GO02 Mina Guanaco 45.28 298 P **P** **03 03 05.1 -0.2**
GO02 IAmb IAmb 03 03 27.2
comp=Z,24nm,0.8s
JANB Januaria 45.51 335 *eP* **P** **03 03 08.1 +1.2**
BDFB Brasilia 45.86 330 P **P** **03 03 10.8 +1.1**
BDFB Brasilia 45.86 330 P **P** **03 03 10.8 +1.1**
BDFB pmax pmax
comp=Z,8.0nm,0.7s
BDFB Brasilia 45.86 330 P **P** **03 03 11.1 +1.4**
comp=Z,8.2nm,0.7s,baz=157,slow=8.9,SNR=25
BDFB ScP **ScP** **03 08 32.4 -0.1**
comp=Z,2.7nm,0.6s,baz=25,slow=1.3,SNR=3.9
BDFB LR LR 03 19 17.8
comp=Z,192nm,20.5s,baz=148,slow=32
comp=Z,8.2nm,0.7s
GDU01 Guandu, BA 45.88 341 *eP* **P** **03 03 10.4 +0.7**
H04S2 CROZET ISLANDS 45.94 111 T T 03 53 23.2
baz=225,slow=75,SNR=122
H04S3 CROZET ISLANDS 45.95 111 T T 03 53 30.2
baz=225,slow=75,SNR=108
H04S1 CROZET ISLANDS 45.95 111 T T 03 53 30.2
baz=225,slow=75,SNR=116
BOSA Boshof 45.96 72 P **P** **03 03 10.1 -0.3**
BOSA IAmb IAmb 03 03 11.5
comp=Z,71nm,0.9s
BOSA Boshof 45.96 72 *iP* **P** **03 03 11.4 +1.0**
BOSA Boshof 45.96 72⇑*iP* **P** **03 03 10.2 -0.2**
BOSA IAmb IAmb 03 03 11.3
comp=Z,67nm,0.8s
BOSA Boshof 45.96 72 P **P** **03 03 10.1 -0.3**
BOSA pmax pmax
comp=Z,71nm,0.9s
BOSA Boshof 45.96 72 P **P** **03 03 10.6 +0.2**
comp=Z,53nm,0.8s,baz=208,slow=7.8,SNR=82
BOSA PcP **PcP** **03 04 47.1 +1.0**
comp=Z,6.5nm,0.9s,baz=180,slow=3.0,SNR=2.1
BOSA ScP **ScP** **03 08 31.1 -1.8**
comp=Z,2.9nm,0.9s,baz=113,slow=5.8,SNR=3.2
BOSA LR LR 03 18 28.7
comp=Z,265nm,21.2s,baz=212,slow=31
comp=Z,53nm,0.8s
BOSA Boshof 45.96 72 *iP* **P** **03 03 11.4 +1.0**
BOSA Boshof 45.96 72 P **P** **03 03 10.4 0.0**
BOSA pP **pwP** **03 03 30.4 +0.4**
BOSA PcP **PcP** **03 04 47.0 +0.8**
BOSA ScP **ScP** **03 08 31.0 -1.8**
PB14 IPOC Station P 46.12 298 P **P** **03 03 12.1 +0.2**
KSTD Kokstad 46.39 78⇑*iP* **P** **03 03 15.0 +1.2**
KSTD IAmb IAmb 03 03 15.7
comp=Z,360nm,2.6s
ARAG Araguaiana, MT 46.88 325 *eP* **P** **03 03 18.8 +1.2**
LVC Limon Verde 47.17 301 P **P** **03 03 20.2 0.0**
LVC Limon Verde 47.17 301 P **P** **03 03 20.2 0.0**
LVC pmax pmax
comp=Z,10.0nm,0.9s
LVC Limon Verde 47.17 301 LR LR 03 23 29.5
comp=Z,83nm,21.2s,baz=153,slow=36
LVC Limon Verde 47.17 301 *eP* **P** **03 03 17.9 -2.3**
WIN Windhoek 47.17 59 P **P** **03 03 20.5 +0.5**
WIN IAmb IAmb 03 03 23.1
comp=Z,74nm,1.1s
WIN Windhoek 47.17 59 P **P** **03 03 20.5 +0.5**
WIN pmax pmax
comp=Z,74nm,1.1s
SWZ Schweizer 47.18 71 *eP* **P** **03 03 19.9 -0.1**
SWZ IAmb IAmb 03 03 20.5
comp=Z,120nm,1.2s
BBRB Robore, Bolivi 47.23 314 *eP* **P** **03 03 19.8 -0.4**
SNKL Senekal, Frees 47.50 74⇑*iP* **P** **03 03 23.1 +0.6**
SNKL IAmb IAmb 03 03 23.7
comp=Z,82nm,1.0s
SALV Santo Antonio 47.94 320 *eP* **P** **03 03 26.1 +0.3**
PB04 IPOC Station P 47.97 300 P **P** **03 03 26.0 -0.1**
PB04 IAmb IAmb 03 03 30.2
comp=Z,30nm,0.8s
PB09 IPOC Station P 48.03 301 P **P** **03 03 27.3 +0.7**
PB09 IAmb IAmb 03 03 50.4
comp=Z,39nm,1.3s
SDBA SAO DESIDERIO 48.21 335 *eP* **P** **03 03 28.9 +1.0**
PB07 IPOC Station P 48.38 300 P **P** **03 03 28.6 -0.7**
PB07 IAmb IAmb 03 03 51.7
comp=Z,51nm,1.4s
PRYS Parys 48.40 73⇑*iP* **P** **03 03 29.0 -0.4**
PRYS IAmb IAmb 03 03 30.0
comp=Z,124nm,1.2s
BBSD Serra de San D 48.53 313 *eP* **P** **03 03 29.6 -0.7**
PB02 IPOC Station P 48.74 300 P **P** **03 03 32.3 +0.4**
PB01 IPOC Station P 48.79 301 P **P** **03 03 32.2 -0.2**
WDLM Western Deep L 48.85 73 *eP* **P** **03 03 32.8 -0.1**
WDLM IAmb IAmb 03 03 33.5
comp=Z,87nm,1.4s
NWCL Newcastle 49.02 76⇑*iP* **P** **03 03 34.4 +0.3**
NWCL IAmb IAmb 03 03 35.0
comp=Z,35nm,0.8s
KSR Koster 49.06 72⇑*iP* **P** **03 03 34.6 +0.1**
KSR IAmb IAmb 03 03 35.3
comp=Z,192nm,1.3s
LBTB Lobatse 49.11 70 P **P** **03 03 34.4 -0.4**
LBTB Lobatse 49.11 70 *iP* **P** **03 03 36.0 +1.2**
LBTB Lobatse 49.11 70⇑*iP* **P** **03 03 35.2 +0.4**
LBTB IAmb IAmb 03 03 35.6
comp=Z,108nm,1.2s
LBTB Lobatse 49.11 70 P **P** **03 03 34.4 -0.4**
LBTB pmax pmax
comp=Z,92nm,1.2s
LBTB Lobatse 49.11 70 LR LR 03 19 58.8
comp=Z,632nm,21.7s,baz=209,slow=31
LBTB Lobatse 49.11 70 *iP* **P** **03 03 36.0 +1.2**
LBTB Lobatse 49.11 70 P **P** **03 03 34.8 0.0**
LBTB PcP **PcP** **03 04 58.2 +0.8**
PATCX Punta Patache 49.29 300 P **P** **03 03 36.1 -0.1**
PATCX IAmb IAmb 03 03 40.2
comp=Z,16nm,0.8s
HRAO HartRAO 49.42 73⇑*iP* **P** **03 03 36.6 -0.6**
PTLB Pontes e Lacer 49.57 316 P **P** **03 03 37.8 -0.4**
PTLB IAmb IAmb 03 03 42.6
comp=Z,20nm,0.7s
PTLB Pontes e Lacer 49.57 316 *eP* **P** **03 03 38.0 -0.2**
NYAT Nyati, Northwe 49.79 72⇑*iP* **P** **03 03 40.0 0.0**
NYAT IAmb IAmb 03 03 40.7
comp=Z,105nm,1.4s
SIV San Ignacio 49.80 313 LR LR 03 25 27.0
comp=Z,75nm,20.4s,baz=154,slow=37
GO01 Chusmiza 49.87 302 P **P** **03 03 41.1 +0.1**
PB11 IPOC Station P 49.99 302 P **P** **03 03 41.0 -0.6**
TSWA Tswaing Meteor 50.01 73⇑*iP* **P** **03 03 41.8 +0.1**
TSWA IAmb IAmb 03 03 42.3
comp=Z,284nm,1.4s
NHAM Northam, North 50.05 71⇑*iP* **P** **03 03 41.9 0.0**
NHAM IAmb IAmb 03 03 42.8
comp=Z,170nm,1.5s
H10S2 ASCENSION HYDR 50.19 14 T T 03 58 15.9
baz=33,slow=74,SNR=21
H10S3 ASCENSION HYDR 50.19 14 T T 03 58 15.8
baz=187,slow=74,SNR=259
SNDB Serra Nova Dou 50.26 327 *eP* **P** **03 03 44.4 +0.9**
TSUM Tsumeb 50.33 58 P **P** **03 03 44.7 +0.5**
TSUM Tsumeb 50.33 58⇑*iP* **P** **03 03 45.4 +1.2**
TSUM IAmb IAmb 03 03 46.1
comp=Z,81nm,0.9s
TSUM Tsumeb 50.33 58 LR LR 03 20 34.9
comp=Z,297nm,21.6s,baz=198,slow=31
TSUM Tsumeb 50.33 58 P **P** **03 03 45.2 +1.1**
TSUM PcP **PcP** **03 05 04.0 +2.0**
RUST Rust De Winter 50.38 73⇑*iP* **P** **03 03 44.6 +0.1**
RUST IAmb IAmb 03 03 45.3
comp=Z,49nm,0.6s
CRLN Carolina, Mapu 50.51 75⇑*iP* **P** **03 03 45.4 -0.1**
CRLN IAmb IAmb 03 03 46.0
comp=Z,22nm,0.6s
HAGI HAGI 51.00 76 *eP* **P** **03 03 49.4 +0.2**
HAGI IAmb IAmb 03 03 49.9
comp=Z,49nm,1.1s
LEPH Lephalale, Lim 51.17 71⇑*iP* **P** **03 03 50.1 -0.2**
LEPH IAmb IAmb 03 03 51.0
comp=Z,139nm,1.4s
H10N1 ASCENSION HYDR 51.30 15 T T 03 59 39.3
SNR=20
H10N3 ASCENSION HYDR 51.31 14 T T 03 59 40.1
SNR=66
H10N2 ASCENSION HYDR 51.32 15 T T 03 59 41.0
SNR=69
WTBG Waterberg Wild 51.41 73⇑*iP* **P** **03 03 51.5 -0.8**
WTBG IAmb IAmb 03 03 52.0
comp=Z,19nm,0.7s
PILG Pilgrimsrest, 51.73 75⇑*iP* **P** **03 03 54.6 -0.1**
PILG IAmb IAmb 03 03 55.4
comp=Z,167nm,1.7s
SMTB Santa Maria do 52.26 332 *eP* **P** **03 03 58.9 +0.5**
VILB Vilhena 52.26 316 P **P** **03 03 57.6 -0.9**
VILB IAmb IAmb 03 04 20.7
comp=Z,21nm,0.7s
VILB Vilhena 52.26 316 *eP* **P** **03 03 58.2 -0.3**
HOED Hoedspruit, Li 52.28 75 *iP* **P** **03 03 58.4 -0.1**
HOED IAmb IAmb 03 03 59.3
comp=Z,48nm,1.1s
PDRB Porto dos Gac 52.29 321 *eP* **P** **03 03 58.2 -0.4**
LPAZ La Paz 52.39 305 P **P** **03 04 00.1 0.0**
LPAZ La Paz 52.39 305 P **P** **03 04 00.2 0.0**
RCBR Riachuelo 53.13 347 P **P** **03 04 04.5 -0.3**
RCBR IAmb IAmb 03 04 07.0
comp=Z,33nm,1.2s
RCBR Riachuelo 53.13 347 P **P** **03 04 04.6 -0.3**
RCBR pmax pmax
comp=Z,33nm,1.2s
RCBR Riachuelo 53.13 347 LR LR 03 22 00.6
comp=Z,122nm,22.0s,baz=172,slow=31
MPHEP Siloam, Limpop 53.15 73⇑*iP* **P** **03 04 05.2 +0.1**
MPHEP IAmb IAmb 03 04 05.5
comp=Z,43nm,0.8s
MOPA Mopani 53.26 74 *iP* **P** **03 04 06.3 +0.6**
MOPA Mopani 53.26 74⇑*iP* **P** **03 04 05.9 +0.1**
MOPA IAmb IAmb 03 04 06.8
comp=Z,116nm,1.0s
MOPA Mopani 53.26 74 *iP* **P** **03 04 07.2 +1.4**
MUSN Musina, Limpop 53.51 72 *iP* **P** **03 04 08.2 +0.6**
MUSN Musina, Limpop 53.51 72⇑*iP* **P** **03 04 07.5 -0.2**
MUSN IAmb IAmb 03 04 08.6
comp=Z,68nm,0.8s
MUSN Musina, Limpop 53.51 72 *iP* **P** **03 04 09.7 +2.1**
DRV Dumont d'Urvil 54.69 173 P **P** **03 04 15.6 0.0**
DRV pP **pwP** **03 04 35.4 +0.3**
BLWY Bulawayo 54.70 70 *iP* **P** **03 04 16.8 +0.4**
BLWY Bulawayo 54.70 70 *iP* **P** **03 04 16.8 +0.4**
NPGB Novo Progresso 56.14 324 *eP* **P** **03 04 26.4 -0.3**
SAML Samuel 57.05 314 P **P** **03 04 32.0 -1.1**
SAML IAmb IAmb 03 04 35.8
comp=Z,14nm,0.8s
SAML Samuel 57.05 314 P **P** **03 04 32.0 -1.1**
SAML pmax pmax
comp=Z,14nm,0.8s
SAML Samuel 57.05 314 *eP* **P** **03 04 32.2 -0.9**
SAML Samuel 57.05 314 P **P** **03 04 32.6 -0.5**
ETMB Extrema 57.42 311 P **P** **03 04 34.6 -1.1**
ETMB Extrema 57.42 311 *eP* **P** **03 04 35.1 -0.7**
KRI Karoi 58.01 68 *iP* **P** **03 04 39.9 -0.1**
KRI Karoi 58.01 68⇑*iP* **P** **03 04 40.0 0.0**
KRI Karoi 58.01 68 *iP* **P** **03 04 41.3 +1.2**
TMAB Tom-Au,PA,Br 58.64 334 *eP* **P** **03 04 46.0 +1.7**
LSZ Lusaka 58.65 66 P **P** **03 04 43.7 -0.8**
LSZ IAmb IAmb 03 04 46.0
comp=Z,50nm,0.9s
LSZ Lusaka 58.65 66 P **P** **03 04 43.7 -0.8**
LSZ pmax pmax

comp=Z,50nm,0.9s
LSZ Lusaka 58.65 66 LR LR 03 26 20.1
comp=Z,560nm,20.1s,baz=210,slow=32
LSZ Lusaka 58.65 66 P **P** **03 04 44.7 +0.2**
ITTB Itaituba 58.79 325 *eP* **P** **03 04 45.2 0.0**
NNA Nana 60.07 299 *i* P **P** **03 04 53.8 -0.3**
NNA pmax pmax
comp=Z,11nm,0.9s
NNA Nana 60.07 299 LR LR 03 34 12.1
comp=Z,76nm,18.4s,baz=144,slow=39
FOMA Nahampoana Res 60.14 90 P **P** **03 04 54.2 -0.2**
FOMA IAmb IAmb 03 04 56.2
comp=Z,38nm,1.2s
MALB Monte Alegre 60.74 327 *eP* **P** **03 04 59.3 +0.7**
MACA Manacapuru-AM 61.52 320 *eP* **P** **03 05 05.4 +1.4**
MCPB Macapa, AP 61.56 330 *eP* **P** **03 05 05.5 +1.3**
CZSB Cruzeiro do Su 62.00 305 P **P** **03 05 07.2 +0.1**
CZSB IAmb IAmb 03 05 09.6
comp=Z,12nm,0.8s
CZSB Cruzeiro do Su 62.00 305 *eP* **P** **03 05 06.5 -0.6**
VOI Vohitsoka 62.55 87 P **P** **03 05 11.4 +0.5**
VOI IAmb IAmb 03 05 13.3
comp=Z,22nm,0.8s
VOI Vohitsoka 62.55 87 P **P** **03 05 12.5 +1.6**
VOI Vohitsoka 62.55 87⇑ *iP* **P** **03 05 12.1 +1.1**
TEFE Tefe 62.60 315 *eP* **P** **03 05 10.4 -0.7**
ATAH Atahualpa 65.05 300 LR LR 03 37 35.8
comp=Z,48nm,18.5s,baz=143,slow=39
ABPO Ambohimpanom 65.16 86 P **P** **03 05 28.8 +0.6**
ABPO IAmb IAmb 03 05 31.1
comp=Z,25nm,1.0s
ABPO Ambohimpanom 65.16 86 *eP* **P** **03 05 29.6 +1.4**
ABPO IAmb IAmb 03 05 30.8
comp=Z,25nm,1.0s
ABPO Ambohimpanom 65.16 86 P **P** **03 05 28.8 +0.6**
ABPO pmax pmax
comp=Z,25nm,1.0s
ABPO Ambohimpanom 65.16 86 P **P** **03 05 29.7 +1.5**
OPO Ambohidratompo 65.51 86 P **P** **03 05 32.3 +1.9**
comp=Z,21nm,0.8s,baz=210,slow=5.9,SNR=21
OPO LR LR 03 29 54.9
comp=Z,91nm,19.0s,baz=360,slow=32
comp=Z,21nm,0.8s
BOAV Boa Vista 66.67 322 P **P** **03 05 37.0 -0.7**
BOAV IAmb IAmb 03 05 40.4
comp=Z,16nm,0.8s
BOAV Boa Vista 66.67 322 *eP* **P** **03 05 37.0 -0.7**
LIC Lamto 66.67 23⇑ *iP* **P** **03 05 38.8 +1.2**
comp=Z,234nm,0.5s
KIC Kosan Boka 66.86 23⇑ *iP* **P** **03 05 39.8 +1.0**
comp=Z,235nm,0.7s
MDP Montagnes des 66.95 331 LR LR 03 32 01.8
comp=Z,111nm,21.0s,baz=131,slow=33
TIC Toumodi 67.08 23⇑ *eP* **P** **03 05 41.0 +0.8**
comp=Z,79nm,0.7s
DBIC Dimbokro 67.14 23 P **P** **03 05 41.1 +0.6**
DBIC Dimbokro 67.14 23⇑ *iP* **P** **03 05 41.8 +1.2**
DBIC IAmb IAmb 03 05 42.3
comp=Z,102nm,0.8s
DBIC Dimbokro 67.14 23 P **P** **03 05 41.2 +0.6**
DBIC pmax pmax
comp=Z,102nm,0.9s
DBIC Dimbokro 67.14 23 P **P** **03 05 41.5 +0.9**
comp=Z,104nm,0.8s,baz=176,slow=6.0,SNR=99
DBIC LR LR 03 28 05.6
comp=Z,209nm,20.9s,baz=166,slow=30
comp=Z,104nm,0.8s
DBIC Dimbokro 67.14 23 P **P** **03 05 41.8 +1.2**
DBIC pP **pwP** **03 06 01.0 -0.1**
RER Riviere de l'E 67.86 94 P **P** **03 05 44.7 -0.6**
RER IAmb IAmb 03 05 48.5
comp=Z,68nm,1.0s
MCRA Macar, Loja 68.20 300 P **P** **03 05 46.6 -0.8**
MCRA Macar, Loja 68.20 300 *eP* **P** **03 05 47.1 -0.3**
ARNL Arenillas 68.98 300 P **P** **03 05 53.1 +1.0**
ARNL IAmb IAmb 03 05 56.7
comp=Z,31nm,0.7s
COHC Cochancay 69.57 301 P **P** **03 05 56.0 +0.2**
COHC Cochancay 69.57 301 *eP* **P** **03 05 56.8 +1.0**
CHSH Refugio Sur-Vo 70.26 302 P **P** **03 06 00.7 -0.1**
CHSH IAmb IAmb 03 06 06.8
comp=Z,21nm,0.7s
SLOR San Lorenzo - 70.77 303 P **P** **03 06 04.1 +0.3**
PULU Pululahua 71.45 303 P **P** **03 06 07.8 0.0**
IMBA Imbabura, San 71.54 303 P **P** **03 06 09.0 +0.7**
IMBA IAmb IAmb 03 06 21.0
comp=Z,19nm,0.8s
OTAV Otavalo 71.62 303 P **P** **03 06 09.3 +0.5**
OTAV Otavalo 71.62 303 P **P** **03 06 09.3 +0.5**
OTAV pmax pmax
comp=Z,9.0nm,0.9s
OTAV Otavalo 71.62 303 *eP* **P** **03 06 09.6 +0.7**
OTAV Otavalo 71.62 303 *eP* **P** **03 06 09.0 +0.2**
OTAV Otavalo 71.62 303 P **P** **03 06 10.4 +1.6**
OTAV pP **sP** **03 06 31.2 -3.2**
TULM Tulcn-Chalpat 71.75 304 P **P** **03 06 09.9 +0.2**
TULM IAmb IAmb 03 06 14.1
comp=Z,26nm,0.7s
CMBC Cumbal 71.97 304 *eP* **P** **03 06 12.2 +1.3**
MBAR Mbarara 72.68 61 P **P** **03 06 16.7 +1.9**
MBAR IAmb IAmb 03 06 19.3
comp=Z,89nm,1.5s
MBAR Mbarara 72.68 61⇑ *iP* **P** **03 06 17.7 +2.9**
MBAR IAmb IAmb 03 06 19.0
comp=Z,92nm,1.5s
MBAR Mbarara 72.68 61 P **P** **03 06 16.7 +1.9**
MBAR pmax pmax
comp=Z,89nm,1.5s
MBAR Mbarara 72.68 61 LR LR 03 36 15.4
comp=Z,159nm,18.2s,baz=194,slow=34
BBAC Balboa, Cauca 72.69 305 *eP* **P** **03 06 14.5 -0.4**
POPC Popayan, Colom 72.91 306 *eP* **P** **03 06 16.9 +0.7**
MBO M'Bour 73.01 9 P **P** **03 06 17.5 +1.1**
MBO IAmb IAmb 03 06 19.7
comp=Z,82nm,0.9s
PRAC Prado 73.22 308 *eP* **P** **03 06 17.5 -0.4**
JAMC Jamundi, Valle 73.52 306 *eP* **P** **03 06 21.2 +1.4**
ORTC Ortega, Tolima 73.55 308 *eP* **P** **03 06 19.2 -0.5**
CHIC Chingaza 73.58 310 *eP* **P** **03 06 19.4 -1.0**
ROSC El Rosal 74.01 309 P **P** **03 06 24.3 +1.4**
ROSC El Rosal 74.01 309 P **P** **03 06 24.3 +1.4**
ROSC pmax pmax
comp=Z,10.0nm,0.9s
ROSC El Rosal 74.01 309 P **P** **03 06 26.1 +3.2**
comp=Z,5.6nm,0.6s,baz=25,slow=19,SNR=6.5
ROSC LR LR 03 39 46.9
comp=Z,129nm,20.8s,baz=234,slow=36
YOTC Yotoco, Valle 74.07 307 *eP* **P** **03 06 23.8 +0.9**
KIBK Kibwezi 74.63 69 P **P** **03 06 28.5 +2.3**
KIBK IAmb IAmb 03 06 31.3
comp=Z,51nm,1.1s
GUY2C Guyana, Caldas 74.78 308 *eP* **P** **03 06 26.5 -1.0**
PLMC San Jos del P 74.88 307 *eP* **P** **03 06 26.9 -0.6**
TOA0 Torodi Ar. Sit 74.88 28 P **P** **03 06 28.2 +0.8**
TORD Torodi Ar. Bea 74.88 28 P **P** **03 06 28.0 +0.7**
TORD Torodi Ar. Bea 74.88 28 P **P** **03 06 28.6 +1.2**
comp=Z,108nm,0.8s,baz=187,slow=4.5,SNR=110
TORD LR LR 03 34 48.8
comp=Z,73nm,18.4s,baz=160,slow=32
comp=Z,108nm,0.8s
KMBO Kilima Mbogo 75.29 67 P **P** **03 06 31.6 +1.4**
KMBO Kilima Mbogo 75.29 67 P **P** **03 06 31.6 +1.4**
KMBO pmax pmax
comp=Z,20nm,1.2s
PCRV Puerto La Cruz 75.32 320 LR LR 03 40 07.4
comp=Z,149nm,20.6s,slow=36
BAUV El Baul 75.36 317 P **P** **03 06 31.1 +1.0**
BAUV IAmb IAmb 03 06 33.6
comp=Z,22nm,0.9s
PTBC PUERTO BERRIO, 75.60 310 *eP* **P** **03 06 28.9 -2.8**
SDV Santo Domingo 76.26 314 P **P** **03 06 35.8 +0.3**
SDV Santo Domingo 76.26 314 LR LR 03 40 04.4
comp=Z,260nm,21.1s,baz=130,slow=36
SDV Santo Domingo 76.26 314 *eP* **P** **03 06 35.3 -0.2**
SDV Santo Domingo 76.26 314 *eP* **P** **03 06 38.0 +2.5**
DBBC Dabeiba 76.75 308 *eP* **P** **03 06 40.2 +2.0**
UREC San Jos de Ur 77.14 309 *eP* **P** **03 06 39.6 -0.7**
RPZ Rata Peaks 77.17 193 LR LR 03 36 10.3
comp=Z,71nm,20.8s,baz=170,slow=32
BIM Bigot 78.27 325 P **P** **03 06 47.5 +1.0**
LODK Lodwar 78.36 63 P **P** **03 06 49.3 +2.1**
MRNZ Matariki Terra 79.25 194 P **P** **03 06 52.6 +0.9**
RTZ Ruatahuna 81.36 198 P **P** **03 07 04.5 +1.3**
RTZ IAmb IAmb 03 07 24.6
comp=Z,39nm,0.8s
URZ Urewera 81.69 198 LR LR 03 38 37.5
comp=Z,121nm,21.7s,baz=300,slow=32
TOZ Tahuroa Road 82.46 197 P **P** **03 07 08.5 -0.4**
TOZ IAmb IAmb 03 07 28.4
comp=Z,23nm,0.8s
LCR2 La Lucha 2 82.53 302 P **P** **03 07 10.1 +0.4**
SJG San Juan 83.24 322 LR LR 03 43 47.8
comp=Z,47nm,21.7s,baz=163,slow=35
NWAO Narrogin (SRO) 83.83 149 LR LR 03 41 18.1
comp=Z,65nm,19.9s,baz=43,slow=33
TAM Tamanrasset 85.09 29 P **P** **03 07 23.8 +1.4**
TAM Tamanrasset 85.09 29 P **P** **03 07 23.8 +1.4**
TAM pmax pmax
comp=Z,18nm,1.2s
TBI Tubuai 86.07 230 *eS* **S** **03 17 55.1 -0.9**
comp=Z,806nm,34.2s
TBI Tubuai 86.07 230 *e*LR LR 03 34 39.3
comp=Z,1µm,26.8s
MATN Matagalpa 86.21 302 P **P** **03 07 28.6 +0.6**
BBOO Buckleboo 87.77 165 P **P** **03 07 35.4 -0.1**
BBOO IAmb IAmb 03 07 36.0
comp=Z,32nm,1.4s
FORT Forrest 88.41 158 P **P** **03 07 38.8 +0.3**
FORT IAmb IAmb 03 07 39.7
comp=Z,38nm,0.8s
ATD Arta Tunnel 88.99 66 P **P** **03 07 41.9 +0.5**
ATD IAmb IAmb 03 07 46.4
comp=Z,29nm,1.0s
ATD Arta Tunnel 88.99 66 LR LR 03 45 36.7
comp=Z,14nm,19.2s,baz=172,slow=34
MTO3 Montecristo 89.05 300 P **P** **03 07 42.2 +0.4**
MTO3 IAmb IAmb 03 07 45.1
comp=Z,8.6nm,0.7s
STKA Stephens Creek 89.34 169 P **P** **03 07 43.6 +0.7**
STKA Stephens Creek 89.34 169 P **P** **03 07 43.6 +0.7**
STKA pmax pmax
comp=Z,3.0nm,0.7s
STKA Stephens Creek 89.34 169 P **P** **03 07 44.0 +1.1**
comp=Z,7.9nm,0.8s,baz=147,slow=5.8,SNR=18
STKA LR LR 03 46 46.8
comp=Z,196nm,19.0s,baz=203,slow=35
comp=Z,7.9nm,0.8s
LHI Lord Howe Isla 90.21 184 P **P** **03 07 47.7 +0.7**
PPT2 Papeete2 91.27 233 *eP* **P** **03 07 53.2 +1.0**
comp=Z,33nm,24.0s
PPT2 Papeete2 91.27 233 *eS* **S** **03 18 38.2 -7.1**
comp=Z,107nm,30.8s
PPT2 Papeete2 91.27 233 *e*LR LR 03 37 08.4
comp=Z,685nm,30.0s
PPT2 *e*LR LR 03 37 17.1
comp=Z,478nm,33.0s
PPT Papeete 91.29 233 LR LR 03 40 48.0
comp=Z,177nm,20.1s,baz=182,slow=30
RAR Rarotonga 91.91 222 LR LR 03 40 31.2
comp=Z,45nm,21.9s,baz=186,slow=30
MDT Midelt 92.71 18 LR LR 03 44 49.6
comp=Z,142nm,20.1s,baz=187,slow=32
TAOE Nuku Hiva Isla 94.77 245 *e*LR LR 03 38 42.3
comp=Z,562nm,27.8s
ASAR Alice Springs 96.42 161 P **P** **03 08 14.3 -1.4**
ASAR Alice Springs 96.42 161 P **P** **03 08 15.1 -0.6**
comp=Z,4.9nm,0.7s,baz=187,slow=3.6,SNR=46
ASAR PKKP **PKKPbc** **03 24 60.0 +2.7**
comp=Z,2.1nm,0.6s,baz=12,slow=2.2,SNR=42
ASAR LR LR 03 48 43.9
comp=Z,230nm,21.3s,baz=212,slow=34
comp=Z,4.9nm,0.7s
AS31 Alice Springs 96.42 161 P **P** **03 08 15.0 -0.7**
KEST Kesra 98.40 28 P Pdif 03 08 26.1 +1.9
comp=Z,2.9nm,0.9s,baz=303,slow=3.5,SNR=4.2
KEST LR LR 03 48 09.4
comp=Z,63nm,19.9s,baz=253,slow=32
comp=Z,2.9nm,0.9s
DZM Mont Dzumac 99.07 192 *eS* **S** **03 20 01.5 +8.4**
comp=Z,89nm,26.2s
DZM Mont Dzumac 99.07 192 *e*LR LR 03 40 41.0
comp=Z,208nm,23.7s
ESDC Sonseca Array 99.52 17 P **Pdif** **03 08 30.8 +1.8**
comp=Z,1.1nm,0.7s,baz=188,slow=4.0,SNR=11
ESDC LR LR 03 49 58.9
comp=Z,70nm,18.5s,baz=168,slow=33
comp=Z,1.1nm,0.7s
MTE Manteigas 99.73 14 Pdif **Pdif** **03 08 32.6 +2.7**
WRA Warramunga Arr 100.14 161 P **Pdif** **03 08 31.2 -1.2**
comp=Z,1.0nm,0.7s,baz=195,slow=4.1,SNR=6.3
WRA PKKP **PKKPdf** **03 24 49.2 -1.2**
comp=Z,2.5nm,0.8s,baz=359,slow=3.1,SNR=14
L61B Northampton 107.85 325 P **PKiKP** **03 13 15.0 +2.2**
baz=156
P52A Corning 108.40 317 P **PKiKP** **03 13 15.8 +1.9**
baz=153
TXAR Lajitas Array 108.54 296 PP **PP** **03 13 35.9 -5.5**
comp=Z,0.5nm,0.9s,baz=141,slow=5.8,SNR=3.8
O53A New Philadelph 108.63 318 P **PKiKP** **03 13 15.9 +1.6**
baz=153
FETA Feichten 109.42 26 *e*PP **PP** **03 13 44.3 -3.3**
comp=Z,4.3nm,1.1s
M53A WI Miller and 109.50 319 P **PKiKP** **03 13 16.3 +0.4**
baz=153
BRTR Keskin Array B 109.66 45 PKiKP **PKiKP** **03 13 16.3 -0.2**
comp=Z,0.4nm,0.6s,baz=196,slow=4.9,SNR=2.0
BRTR PP **PP** **03 13 45.3 -4.1**
comp=Z,1.9nm,0.9s,baz=171,slow=6.1,SNR=6.4
SQTA Sankt Quirin 109.72 26 *e*PP **PP** **03 13 46.1 -3.6**
comp=Z,5.0nm,1.0s
MOTA Moosalm 109.81 26 *e*PP **PP** **03 13 48.4 -2.0**
comp=Z,5.9nm,1.1s
OBKA Obir 109.85 28 *e*PP **PP** **03 13 48.8 -1.8**
comp=Z,7.8nm,1.6s
WTTA Wattenberg 109.86 26 *e*PP **PP** **03 13 49.6 -1.1**
comp=Z,5.4nm,0.9s
WATA Walderalm 109.91 26 *e*PP **PP** **03 13 49.1 -2.0**
comp=Z,12nm,2.2s
KBA Kienbreinsper 110.09 27 *e*PP **PP** **03 13 52.5 +0.1**
comp=Z,5.2nm,1.4s
LESA Schwarzleotal 110.25 27 *e*PP **PP** **03 13 48.9 -4.6**
comp=Z,3.7nm,1.1s
CCM Cathedral Cave 110.48 310 P **PKiKP** **03 13 18.6 +0.7**
baz=150
BIOA Bad Ischl, Aus 110.73 27 *e*PP **PP** **03 13 55.3 -1.6**
comp=Z,3.2nm,1.3s
WMOK Wichita Mounta 110.84 303 P **PKiKP** **03 13 19.4 +0.7**
baz=148
MOA Molln 111.03 28 *e*PP **PP** **03 13 57.6 -1.4**
comp=Z,7.6nm,1.4s
RONA Rosalia, Austr 111.40 29 *e*PP **PP** **03 14 01.5 -0.2**
comp=Z,10nm,1.5s
CONA Conrad Observa 111.50 29 *e*PP **PP** **03 14 01.9 -0.5**
comp=Z,4.7nm,1.4s
GERES GERESS Array B 111.83 27 PKiKP **PKiKP** **03 13 19.5 -0.7**
comp=Z,0.3nm,0.5s,baz=317,slow=4.0,SNR=2.5
GERES PP **PP** **03 14 00.7 -4.1**
comp=Z,1.9nm,0.8s,baz=204,slow=5.9,SNR=6.7
MODS Modra-Piesok 112.28 30 *e*PP **PP** **03 14 08.3 +0.4**
121A Cookes Peak, D 113.16 295 P **PKiKP** **03 13 23.7 +0.3**
baz=146
TUC Tucson 114.42 292 P **PKiKP** **03 13 26.1 +0.4**
baz=145
ANMO Albuquerque 114.51 297 P **PKiKP** **03 13 26.9 +1.0**
baz=146
SCIA State Center 114.55 311 P **PKiKP** **03 13 26.7 +1.2**
baz=148
EKA Eskdalemuir Ar 114.96 14 PKiKP **PKiKP** **03 13 26.0 +0.2**
EKA Eskdalemuir Ar 114.96 14 PKP **PKiKP** **03 13 25.9 +0.2**
comp=Z,0.2nm,0.4s,baz=228,slow=1.8,SNR=3.8
EKA PKKP **PKKPdf** **03 24 21.5 -4.6**
comp=Z,0.2nm,0.4s,baz=4.3,slow=2.8,SNR=4.2
BGNE Belgrade 116.15 307 P **PKiKP** **03 13 29.9 +1.3**
baz=146
W18A Petrified Fore 116.20 295 P **PKiKP** **03 13 29.9 +0.7**
SDCO Great Sand Dun 116.36 300 P **PKiKP** **03 13 30.3 +0.7**
baz=145
KBZ Khabaz 116.65 49 PKP **PKiKP** **03 13 29.8 +0.3**
comp=Z,2.1nm,0.8s,baz=266,slow=2.1,SNR=3.6
KIV Kislovodsk 116.75 49 *i* PKiKP **PKPdf** **03 13 29.4 -0.4**
KIV pmax pmax
comp=Z,7.0nm,1.0s
S22A 4UR Ranch, Cre 116.97 299 P **PKiKP** **03 13 31.4 +0.7**
baz=145
GLA Glamis 117.00 290 P **PKiKP** **03 13 31.6 +1.0**
baz=144
WUAZ Wupatki 117.31 294 P **PKiKP** **03 13 32.3 +1.1**
baz=144
IKP In-Ko-Pah, Jac 117.32 288 P **PKiKP** **03 13 32.3 +1.0**
baz=144
ECSD EROS Data Cent 117.45 310 PKPdf **PKiKP** **03 13 31.2 +0.1**
MONP2 Monument Peak 117.67 288 P **PKiKP** **03 13 32.7 +0.5**
baz=144
PDMCI Parker Dam,Lak 117.67 291 P **PKiKP** **03 13 33.2 +1.4**
baz=144
SCHQ Schefferville 117.71 335 PKP **PKiKP** **03 13 31.3 +0.1**
comp=Z,8.8nm,0.6s,baz=130,slow=1.3,SNR=28
AKASG Malin Array Be 117.77 36 PKP **PKPdf** **03 13 30.7 -0.7**
comp=Z,1.9nm,0.5s,baz=237,slow=1.6,SNR=4.8
AKASG PP **PP** **03 14 41.6 -5.0**
comp=Z,0.2nm,0.2s,baz=218,slow=7.0,SNR=4.6
AKBB Malin Array Si 117.77 36*c* *i*PKiKP **PKPdf** **03 13 30.9 -0.5**
BC3 Big Chuckawall 117.80 289 P **PKiKP** **03 13 32.9 +0.7**
baz=144
IRM Iron Mountain 118.05 290 P **PKiKP** **03 13 33.5 +0.9**
baz=144
ISCO Idaho Springs 118.08 301 P **PKiKP** **03 13 33.8 +0.9**
baz=144
PFO Pinyon Flats O 118.26 289 P **PKiKP** **03 13 34.2 +1.1**
baz=144
BELC Belle Mtn. Jos 118.35 289 P **PKiKP** **03 13 34.6 +1.3**
baz=144
GMRC Granite Mounta 118.81 290 P **PKiKP** **03 13 35.0 +0.9**
baz=143
EYMN Ely 118.98 316 P **PKiKP** **03 13 35.4 +1.5**
baz=147
N23A Red Feather La 119.11 301 P **PKiKP** **03 13 36.0 +1.2**
baz=144
O20A White River Ci 119.55 299 P **PKiKP** **03 13 36.8 +1.2**
baz=144
GSC Goldstone, Bar 119.78 290 P **PKiKP** **03 13 36.7 +0.7**
baz=143
EDW2 Edwards Air Fo 120.04 288 P **PKiKP** **03 13 37.6 +1.1**
baz=143,SNR=5.3
MNK Minsk 120.69 33 *i* PKiKP **PKPdf** **03 13 35.8 -1.1**
MNK *i* 03 13 53.4
MNK *i* PPP PPP 03 17 37.3
MNK *i* SS SS 03 31 30.1 -1.4
MNK pmax pmax
comp=Z,14nm,0.9s
MNK pmax pmax
comp=N,4.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.9s
MPMC Manual Prospec 120.72 290 P **PKiKP** **03 13 38.8 +0.9**
baz=143
FURC Furnace Creek, 120.74 290 P **PKiKP** **03 13 38.7 +1.1**
baz=143
TPNV Topopah Spring 120.81 291 P **PKiKP** **03 13 39.2 +1.1**
baz=142
RSSD Black Hills 120.87 305 PKPdf **PKiKP** **03 13 38.1 +0.1**
RSSD Black Hills 120.87 305 P **PKiKP** **03 13 38.4 +0.4**
baz=143
RSSD Black Hills 120.87 305 PKiKP **PKiKP** **03 13 38.1 +0.1**
ISA Isabella, Lake 120.90 289 P **PKiKP** **03 13 39.1 +1.0**
baz=142
AGMN Agassiz Nation 120.91 313 P **PKiKP** **03 13 38.3 +0.7**
baz=145,SNR=5.3
CWC Cottonwood Cre 121.31 289 P **PKiKP** **03 13 39.2 +0.2**
baz=142
VORD Divnogorie 121.33 42 *e*PKiKP **PKPdf** **03 13 36.5 -1.7**
VORD pmax pmax
comp=Z,9.0nm,0.6s
VES Vestal, Richgr 121.34 288 P **PKiKP** **03 13 39.6 +0.7**
baz=142
VSR Storozhevoye 121.50 42 *e*PKiKP **PKPdf** **03 13 36.5 -2.0**
VSR *e**PP **pPKPdf** **03 13 55.8 -1.6**
VSR pmax pmax
comp=Z,8.0nm,0.6s
SPR3 Spring Creek 3 121.50 294 PKPdf **PKPdf** **03 13 39.5 0.0**
SPR3 pPKPdf **pPKPdf** **03 13 58.2 -0.2**
R11B Troy Canyon, C 121.59 293 PKPdf **PKiKP** **03 13 41.0 +1.4**
R11B pPKPdf **pPKPdf** **03 13 59.1 +0.7**
R11B Troy Canyon, C 121.59 293 P **PKiKP** **03 13 40.0 +0.4**
baz=142
CTU Camp Tracy 121.61 297 PKPdf **PKPdf** **03 13 39.4 0.0**
CTU pPKPdf **pPKPdf** **03 13 59.7 +1.3**
DUG Dugway, Tooele 121.72 296 P **PKiKP** **03 13 40.3 +0.5**
baz=142
VOG Valley Oaks Go 121.87 288 P **PKiKP** **03 13 41.0 +1.1**
baz=142
VORR Voronezh 121.89 42 *e*PKiKP **PKPdf** **03 13 37.4 -1.9**
VORR pmax pmax
comp=Z,30nm,0.4s
PDAR Pinedale Array 122.24 300 PKP **PKPdf** **03 13 40.2 -0.3**
comp=Z,1.0nm,0.5s,baz=140,slow=4.8,SNR=11
PDAR SKP **SKPdf** **03 17 07.0 -2.6**
comp=Z,0.2nm,0.3s,baz=225,slow=0.8,SNR=2.9
BW06 Boulder Array 122.24 300 P **PKiKP** **03 13 41.7 +0.9**
baz=142
HFS Hagfors 122.30 22 PKP **PKPdf** **03 13 38.2 -1.6**
comp=Z,2.4nm,0.7s,baz=149,slow=6.9,SNR=6.3
HFS PP **PP** **03 15 11.7 -5.8**
comp=Z,3.3nm,0.8s,baz=206,slow=9.5,SNR=4.2
HFS PKKPab **PKKPbc** **03 23 35.7 +0.5**
comp=Z,1.0nm,0.6s,baz=83,slow=4.5,SNR=4.6
VRH Novokhoyorsk 122.40 44 *e*PKiKP **PKPdf** **03 13 38.0 -2.2**
VRH pmax pmax
comp=Z,20nm,0.8s
ULM Lac du Bonnet 122.51 314 PKP **PKPdf** **03 13 40.4 -0.1**
comp=Z,7.8nm,0.6s,baz=167,slow=0.7,SNR=22
ULM SKP **SKPdf** **03 17 07.8 -1.7**
comp=Z,4.1nm,0.8s,baz=94,slow=1.8,SNR=6.4
LPSR Galich'ya Gora 122.56 41 *e*PKiKP **PKPdf** **03 13 38.8 -1.7**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
NIL Nilore 122.61 78 PKPdf **PKiKP** **03 13 42.0 +0.5**
NIL Nilore 122.61 78 PKiKP **PKiKP** **03 13 42.0 +0.5**
MLAC Mammoth, Mammt 122.62 290 P **PKiKP** **03 13 42.2 +0.5**
baz=142
NB2 NORSAR Subarra 122.67 20 PKPdf **PKPdf** **03 13 40.5 -0.1**
comp=Z,14nm,1.4s,baz=202,slow=1.9
NB2 PKKP PKKPdf 03 23 53.1 -18
comp=Z,0.6nm,0.7s,baz=27,slow=4.6
NB2 NORSAR Subarra 122.67 20 PKPdf **PKPdf** **03 13 40.5 -0.1**
baz=202,slow=1.9
NOA NORSAR Array B 122.67 20 PKP **PKPdf** **03 13 39.7 -0.8**
comp=Z,1.7nm,1.0s,baz=83,slow=3.1,SNR=6.7
NVAR Mina Array Bea 122.98 291 PKP **PKiKP** **03 13 44.0 +1.6**
comp=Z,1.5nm,0.7s,baz=138,slow=3.1,SNR=13
MTSE Matsula 123.29 28 *eP* **PKPdf** **03 13 41.8 +0.1**
CMAR Chiang Mai Arr 123.52 111 PKP **PKiKP** **03 13 43.9 +0.2**
comp=Z,18nm,0.7s,baz=231,slow=3.8,SNR=66
VSU Vasula 123.82 30*c* *i*PKiKP **PKiKP** **03 13 43.3 +0.3**
VSU pmax pmax
comp=Z,21nm,1.7s
VSU Vasula 123.82 30 *eP* **PKPdf** **03 13 42.7 -0.1**
CHTO Chiang Mai 123.83 111 PKPdf **PKiKP** **03 13 44.3 0.0**
CHTO Chiang Mai 123.83 111 PKiKP **PKiKP** **03 13 44.3 0.0**
LAO LASA Array 123.84 305 P **PKiKP** **03 13 44.7 +1.1**
baz=142
OBN Obninsk 123.86 38*c* *i*PKiKP **PKPdf** **03 13 42.4 -0.5**
OBN pmax pmax
comp=Z,7.0nm,0.5s
H17A Grant Village 123.97 301 P **PKiKP** **03 13 45.1 +0.9**
baz=141
DAV Davao City (W) 124.17 145 **PKiKP** **03 13 45.1 -0.1**
SIMJ Simiganj 124.37 71 PKPdf **PKiKP** **03 13 45.4 +0.4**
DGMT Dagmar 124.38 308 P **PKiKP** **03 13 45.8 +1.3**
baz=142
MEF Metsahovi 124.75 28 *eP* **PKPdf** **03 13 44.2 -0.2**
RAF Rauma 124.84 26 *eP* **PKPdf** **03 13 43.8 -0.8**
HLID Hailey 125.09 297 P **PKiKP** **03 13 47.6 +1.3**
baz=140
BOZ Bozeman (W) 125.37 301 P **PKiKP** **03 13 48.3 +1.5**
baz=140
FINES FINESS Array B 126.23 28 PKP **PKPdf** **03 13 47.4 +0.1**
comp=Z,6.3nm,0.6s,baz=154,slow=1.6,SNR=58
FINES SKP **SKPdf** **03 17 20.6 +4.4**
comp=Z,0.8nm,0.5s,baz=147,slow=2.8,SNR=4.3
FIA1 FINESS Array S 126.23 28 PKPdf **PKiKP** **03 13 47.6 -0.2**
SFJD Kangerlussuaq 126.54 348 PKPdf **PKiKP** **03 13 48.4 +0.2**
SFJD pPKPdf **pPKPdf** **03 14 06.3 -0.3**
SFJD Kangerlussuaq 126.54 348 PKiKP **PKiKP** **03 13 48.4 +0.2**
SFJD 03 14 06.3
MLH Mauna Loa 126.69 245 pPKPdf pPKPdf 03 14 07.2 -1.6
VALR Valaam 127.39 30 *i* PKiKP **PKPdf** **03 13 49.3 -0.2**
VALR pmax pmax
comp=Z,37nm,0.9s
CHM Chimkent 127.45 68 *e*PKP **PKPdf** **03 13 50.3 -0.1**
baz=68
CHM Chimkent 127.45 68 *e*PKiKP **PKPdf** **03 13 50.2 -0.1**
IUG Iuzhnay 127.53 69 *e*PKP **PKPdf** **03 13 50.3 -0.3**
baz=69
IUG Iuzhnay 127.53 69 *e*PKiKP **PKPdf** **03 13 50.2 -0.3**
BRLS Borolday 128.10 68 *i* PKP **PKPdf** **03 13 50.3 -1.3**
baz=68

BRLS	Boroldaу	128.10	68	*i* PKIKP	PKPdf	03 13 50.2	-1.3		
FFC	Flin Flon	128.34	314	PKPdf	PKiKP	03 13 51.9	-0.2		
FFC	Flin Flon	128.34	314	PKIKP	PKiKP	03 13 51.9	-0.2		
KSH	Kashi	128.52	75	PKP	PKPdf	03 13 52.8	+0.2		
LSA	Lhasa	128.83	96	PKPdf	PKPdf	03 13 54.0	+0.1		
LSA	Lhasa	128.83	96	PKIKP	PKPdf	03 13 54.0	+0.1		
TNCH	TengChong	128.83	106	*eP*	PKPdf	03 13 54.0	+0.3		
TNCH				pP	sPKPdf	03 14 18.3	-1.2		
TNCH				pmax	pmax				
	comp=Z,23nm,0.6s								
KLMR	Klimovskoe	129.44	35	*e*PKIKP	PKPdf	03 13 51.7	-1.7		
KLMR				*e*		03 14 10.4			
KLMR				*e*		03 16 02.0			
KLMR				pmax	pmax				
	comp=Z,42nm,1.2s								
EKS2	Erkin-Say	129.76	71	P	PKPdf	03 13 54.8	0.0		
	SNR=14								
UCH	Uchtor	129.81	72	P	PKiKP	03 13 55.9	-0.2		
	SNR=11								
NEW	Newport	129.87	300	P	PKiKP	03 13 56.7	+1.1		
	baz=137								
AAK	Ala-Archa	130.10	72	P	PKiKP	03 13 56.1	-0.3		
	SNR=13								
AAK	Ala-Archa	130.10	72	PKPdf	PKiKP	03 13 56.0	-0.3		
AAK	Ala-Archa	130.10	72	*c i* PKIKP	PKiKP	03 13 56.2	-0.2		
AAK				pmax	pmax				
	comp=Z,13nm,0.7s								
KBK	Karagaybulak	130.34	72	P	PKPdf	03 13 56.4	+0.4		
	SNR=6.9								
USP	Ospenovka	130.57	71	P	PKPdf	03 13 56.3	+0.1		
	SNR=8.5								
KIRV	Kirov	130.94	42	*c i* PKIKP	PKiKP	03 13 57.0	-0.2		
KMI	Kunming	131.02	110	⇓PKP	PKiKP	03 13 58.8	0.0		
KMI				SKP		03 17 15.3			
TNSS	Tian-Shan	131.62	73	*e*PKP	PKPdf	03 13 58.3	-0.4		
	baz=73								
TNSS	Tian-Shan	131.62	73	*e*PKIKP	PKPdf	03 13 58.3	-0.4		
BTLS	Baital	131.63	69	*e*PKP	PKPdf	03 13 57.7	-0.5		
	baz=69								
BTLS	Baital	131.63	69	*e*PKIKP	PKPdf	03 13 57.6	-0.5		
PZH	PanZhiHua	131.67	108	PKP	PKPdf	03 13 58.8	-0.2		
MDOK	Medeo	131.76	73	*e*PKP	PKPdf	03 13 58.1	-0.6		
	baz=73								
MDOK	Medeo	131.76	73	*e*PKIKP	PKPdf	03 13 58.1	-0.6		
KUU	Kurty	131.94	72	*e*PKP	PKPdf	03 13 57.8	-1.1		
	baz=72								
KUU	Kurty	131.94	72	*e*PKIKP	PKPdf	03 13 57.7	-1.1		
CHKK	Chushkaly	132.23	72	*e*PKP	PKPdf	03 13 58.3	-1.0		
	baz=72								
CHKK	Chushkaly	132.23	72	*e*PKIKP	PKPdf	03 13 58.3	-1.0		
UZB	Uzynbulak	132.75	74	*e*PKP	PKPdf	03 13 59.5	-1.0		
	baz=74								
UZB	Uzynbulak	132.75	74	*e*PKIKP	PKPdf	03 13 59.5	-1.0		
ARU	Arti	132.80	49		PKPdf	03 14 00.4	+0.4		
ARU	Arti	132.80	49	*i* PKIKP	PKiKP	03 14 00.9	-0.2		
ARU						03 16 24.4			
KPKS	Kokpek	132.80	74	*e*PKP	PKPdf	03 13 59.7	-0.8		
	baz=74								
KPKS	Kokpek	132.80	74	*e*PKIKP	PKPdf	03 13 59.7	-0.8		
ARCES	ARCESS Array B	132.97	22	PKhKP	PKPpre	03 13 44.6			
	comp=Z,1.3nm,0.5s,baz=147,slow=1.8,SNR=7.8								
ARCES				PKP	PKPdf	03 13 59.2	-0.7		
	comp=Z,5.1nm,0.7s,baz=186,slow=1.8,SNR=7.4								
ARCES				PP	PP	03 16 25.9	-1.6		
	comp=Z,5.2nm,0.9s,baz=204,slow=5.5,SNR=7.6								
ARCES				SKPbc	SKPbc	03 17 19.8	-1.5		
	comp=Z,3.4nm,0.6s,baz=225,slow=1.5,SNR=8.5								
TDK	Taldyqorghan	133.76	72	*e*PKP	PKPdf	03 14 00.8	-1.4		
	baz=72								
TDK	Taldyqorghan	133.76	72	*e*PKIKP	PKPdf	03 14 00.8	-1.4		
SVE	Sverdlovsk	133.90	50	*e*PKIKP	PKPdf	03 14 02.6	+0.6		
SVE				pmax	pmax				
	comp=Z,13nm,0.9s								
GYA	Guiyang	134.05	113	*e*PKP	PKiKP	03 14 04.3	-0.5		
BRZS	Berezniki	134.46	63	*e*PKP	PKPdf	03 14 02.6	-0.8		
	baz=63								
BRZS	Berezniki	134.46	63	*e*PKIKP	PKPdf	03 14 02.5	-0.8		
BRVK	Borovoye	135.45	59	PKPdf	PKPdf	03 14 01.6	-3.4		
BRVK	Borovoye	135.45	59	*i* PKIKP	PKPdf	03 14 04.7	-0.3		
BVAR	Borovoye Array	135.47	59	PKhKP	PKPpre	03 13 51.5			
	comp=Z,1.7nm,0.7s,baz=200,slow=2.8,SNR=10								
BVAR				PKP	PKPdf	03 14 05.6	+0.5		
	comp=Z,15nm,0.6s,baz=193,slow=1.6,SNR=34								
BVAR				PP	PP	03 16 39.5	-4.2		
	comp=Z,1.6nm,0.8s,baz=112,slow=6.7,SNR=3.6								
BVAR				SKPbc	SKPbc	03 17 28.7	-1.2		
	comp=Z,3.7nm,0.9s,baz=222,slow=2.0,SNR=5.8								
GOMU	GeErMu	135.82	94	Pdif	Pdif	03 11 13.9	+3.0		
CD2	Chengdu	136.28	107	PKP	PKiKP	03 14 08.5	-0.6		
MAKZ	Makanchi	136.81	73		PKPpre	03 13 56.6			
MAKZ	Makanchi	136.81	73	PKHKP	PKPpre	03 13 56.6			
MK31	Makanchi Array	136.96	73	*i* PKIKP	PKPdf	03 14 07.1	-1.0		
MKAR	Makanchi Array	136.96	73	PKhKP	PKPpre	03 13 56.0			
	comp=Z,1.9nm,0.6s,baz=236,slow=3.8,SNR=16								
MKAR				PKP	PKPdf	03 14 07.7	-0.4		
	comp=Z,5.2nm,0.7s,baz=215,slow=3.9,SNR=16								
MKAR				SKPbc	SKPbc	03 17 33.1	-1.7		
	comp=Z,0.7nm,0.7s,baz=268,slow=2.9,SNR=2.8								
WMQ	Urumqi	137.66	80	*e*PKP	PKPdf	03 14 10.3	+0.7		
KURBB	Kurchatov Arra	137.67	66	PKhKP	PKPpre	03 14 00.6			
	comp=Z,2.5nm,0.7s,baz=234,slow=3.5,SNR=17								
KURBB				PKP	PKPdf	03 14 09.2	0.0		
	comp=Z,10.0nm,0.9s,baz=233,slow=2.4,SNR=16								
KURBB				PP	PP	03 16 59.4	+1.9		
	comp=Z,0.7nm,0.2s,baz=235,slow=6.5,SNR=9.9								
KURBB				SKPbc	SKPbc	03 17 35.4	-1.3		
	comp=Z,0.6nm,0.2s,baz=239,slow=3.4,SNR=7.2								
KURK	Kurchatov	137.78	66		PKPpre	03 14 01.3			
KURK	Kurchatov	137.78	66	PKHKP	PKPpre	03 14 01.3			
YKA	Yellowknife Ar	138.46	316	PKhKP	PKPpre	03 14 01.9			
	comp=Z,0.6nm,0.5s,baz=82,slow=6.2,SNR=9.1								
YKA				PKP	PKPdf	03 14 10.7	+0.4		
	comp=Z,20nm,0.7s,baz=126,slow=2.3,SNR=130								
YKA				PP	PP	03 16 58.4	-3.8		
	comp=Z,0.6nm,0.8s,baz=127,slow=5.5,SNR=3.5								
YKA				SKPbc	SKPbc	03 17 37.4	-1.1		
	comp=Z,3.4nm,0.7s,baz=133,slow=3.0,SNR=11								
ZSN	Zaisan	138.70	74	*e*PKP	PKPdf	03 14 11.6	+0.3		
	baz=74								
ZSN	Zaisan	138.70	74	*e*PKIKP	PKPdf	03 14 11.6	+0.3		
SPITS	Spitsbergen Ar	138.83	12	PKhKP	PKPpre	03 14 01.9			
	comp=Z,4.4nm,0.8s,baz=176,slow=5.6,SNR=9.5								
LZH	Lanzhou	140.42	102	⇑PKP	PKiKP	03 14 18.3	+0.8		
LZH				sPKP		03 14 38.8			
GTA	Gaotai	140.84	95	*eP*	PKPdf	03 14 09.1	-6.5		
GTA				pP	PKiKP	03 14 13.8	-4.4		
GTA				pmax	pmax				
	comp=Z,3.0nm,1.0s								
V35K	Ketchikan	141.25	299	P	PKiKP	03 14 17.5	-0.8		
	baz=126								
XAN	Xi'an	141.38	109	PKP	PKPdf	03 14 10.5	-6.1		
DGZ	Jazzator, Alta	141.46	73	*i* PKHKP	PKPpre	03 14 11.6			
DGZ				pmax	pmax				
	comp=Z,6.0nm,0.7s								
T35M	Bob Quinn	141.60	301	P	PKiKP	03 14 18.2	-0.9		
	baz=125								
ZALV	Zalesovo Beam	142.77	66		PKPpre	03 14 13.8			
ZALV	Zalesovo Beam	142.77	66	PKHKP	PKPpre	03 14 13.8			
ZALV	Zalesovo Beam	142.77	66	PKhKP	PKPpre	03 14 14.0			
	comp=Z,7.6nm,0.5s,baz=241,slow=3.8,SNR=35								
ZALV				SKPbc	SKPbc	03 17 48.2	-1.8		
	comp=Z,0.7nm,0.5s,baz=236,slow=4.4,SNR=2.3								
LYN	LuoYang	143.53	113	⇓PKP	PKPbc	03 14 17.6	-0.3		
R32K	Eaglecrest	144.23	301	P	PKPdf	03 14 21.6	+0.8		
	baz=122								
NJ2	Nanjing	144.43	123	*i* PKP	PKPbc	03 14 21.3	+0.7		
NJ2				sPKP		03 14 42.3			
P33M	Teslin, Yukon	144.48	305	P	PKPdf	03 14 20.8	-0.5		
	baz=120,SNR=22								
P32M	Atlin	144.55	303	P	PKPdf	03 14 21.3	0.0		
	baz=121,SNR=7.8								
N32M	Quiet Lake	145.06	306	P	PKPdf	03 14 23.0	+0.8		
	baz=119								
SKAG	Skagway	145.20	302	P	PKPab	03 14 23.2	+0.8		
	baz=120								
C36M	Paulatuk	145.33	322		PKPdf	03 14 21.2	-1.1		
C36M	Paulatuk	145.33	322	P	PKPab	03 14 23.3	+0.7		
	baz=114,SNR=19								
WHY	Whitehorse	145.59	305	P	PKPab	03 14 24.0	0.0		
	baz=119								
PLBC	Pleasant Camp	145.66	302	P	PKPab	03 14 24.8	+0.7		
	baz=120								
FARO	Faro, Yukon	145.68	308	P	PKPab	03 14 24.2	0.0		
	baz=118								
TIY	Taiyuan	146.02	109	*e*PKPbc	PKPbc	03 14 25.4	-0.2		
M31M	Drury Creek, Y	146.10	307	P	PKPab	03 14 25.7	-0.1		
	baz=117,SNR=5.8								
O30N	Mendenhall	146.17	304	P	PKPab	03 14 26.1	0.0		
	baz=118								
P30M	Million Dollar	146.24	303	P	PKPab	03 14 26.0	-0.4		
	baz=118								
P29M	Windy Craggy	146.35	302	P	PKPab	03 14 26.5	-0.4		
	baz=119								
A36M	Sachs Harbour	146.68	326	P	PKPab	03 14 27.1	-0.6		
	baz=110								
HYT	Haines Junctio	146.81	304	P	PKPbc	03 14 27.8	+0.5		
	baz=117								
HNS	HongShan	146.89	112	⇑PKPbc	PKPbc	03 14 28.3	+0.3		
N30M	Aishikik Lake	146.91	305	P	PKPab	03 14 28.4	-0.7		
	baz=116								
BTO	Baotou	147.01	103	*e*PKPbc	PKPbc	03 14 29.0	+0.6		
BTO				PKPab	PKiKP	03 14 35.3	+4.5		
BTO				pPKP	pPKPdf	03 14 40.0	-5.2		
O29M	Mount Kennedy	147.04	302	P	PKPbc	03 14 27.8	-0.1		
	baz=117								
TIA	Tai'an	147.10	116	*e*PKPbc	PKPdf	03 14 26.4	0.0		
PNL	Peninsula	147.12	301	P	PKPbc	03 14 28.1	+0.1		
	baz=118								
YUK6	Outpost Mounta	147.24	304	P	PKPbc	03 14 28.1	-0.5		
	baz=116								
M30M	Minto, Yukon	147.27	307	P	PKPbc	03 14 28.5	+0.1		
	baz=115,SNR=17								
MAYO	Mayo, Yukon	147.32	309	PKPbc	PKPab	03 14 30.1	-0.4		
MAYO	Mayo, Yukon	147.32	309	P	PKPbc	03 14 28.7	+0.3		
BCPM	Bancas Point	147.35	301	PKPdf	PKPdf	03 14 24.4	-1.7		
YUK4	Talbot Arm	147.54	304	P	PKPbc	03 14 29.4	0.0		
	baz=116,SNR=16								
PINM	Pinnacle	147.69	301	P	PKPbc	03 14 29.5	-0.1		
	baz=117								
J30M	Hart River	147.89	310	P	PKPbc	03 14 30.8	+0.7		
	baz=112								
M29M	Somme Creek	147.92	306	P	PKPbc	03 14 30.8	+0.6		
	baz=114								
F31M	Tsiigehtchic	147.94	316	P	PKPbc	03 14 30.1	+0.1		
	baz=110,SNR=17								
G31M	Satah River	147.95	315	P	PKPbc	03 14 30.5	+0.5		
	baz=110,SNR=28								
HHC	Hu-ho-hao-te	147.98	105	*e*PKPbc	PKPbc	03 14 31.3	+0.2		
HHC				AMB	AMB				
	comp=Z,130nm,4.4s								
YUK8	Steele Glacier	148.00	304	P	PKPbc	03 14 31.4	+0.7		
	baz=115,SNR=5.4								
L29M	L29M	148.05	307	P	PKPbc	03 14 31.2	+0.7		
	baz=114,SNR=18								
K29M	Barlow Dome	148.09	309	P	PKPbc	03 14 31.3	+0.7		
	baz=113								
INK	Inuvik	148.14	318	PKPbc	PKiKP	03 14 31.4	-0.7		
INK	Inuvik	148.14	318	P	PKPbc	03 14 30.6	+0.2		
	baz=109,SNR=29								
INK	Inuvik	148.14	318	PKP2	PKiKP	03 14 31.4	-0.7		
I30M	Mount Dempster	148.15	312	P	PKPbc	03 14 31.2	+0.5		
	baz=112								
MESA	MESA	148.50	301	P	PKPbc	03 14 32.1	+0.2		
	baz=116,SNR=5.1								
YUK3	Moose Creek	148.51	304	P	PKPbc	03 14 32.1	+0.2		
	baz=114,SNR=12								
CTG	Chitna Glacier	148.56	302	P	PKPbc	03 14 32.4	+0.4		
	baz=115,SNR=18								
J29N	Klondike Camp	148.60	310	PKPbc	PKiKP	03 14 33.4	+0.1		
J29N	Klondike Camp	148.60	310	P	PKPbc	03 14 31.9	0.0		
	baz=112								
EPYK	Eagle Plains	148.68	314	PKPbc	PKiKP	03 14 32.8	-0.6		
EPYK	Eagle Plains	148.68	314	P	PKPbc	03 14 32.4	+0.4		
	baz=110,SNR=38								
G30M	tAoh Zraii Nji	148.69	315	P	PKiKP	03 14 32.7	-0.7		
	baz=109								
F30M	Barrier River	148.73	316	P	PKPbc	03 14 32.6	+0.5		
	baz=108,SNR=21								
BARN	Barnard Glacie	148.74	302	PKPdf	PKPdf	03 14 28.1	-0.5		
BARN				PKPbc	PKiKP	03 14 34.1	+0.3		
ISLE	Juniper Island	148.85	301	PKPbc	PKiKP	03 14 34.8	+0.7		
BVCY	Beaver Creek	148.93	305	P	PKiKP	03 14 33.4	-0.6		
	baz=113,SNR=13								
DAWY	Dawson	148.94	309	PKPbc	PKiKP	03 14 33.4	-0.6		
DAWY	Dawson	148.94	309	P	PKPbc	03 14 32.7	0.0		
	baz=111,SNR=21								
CRQE	Cirque	149.25	301	P	PKPbc	03 14 33.7	0.0		
	baz=114								
H29M	Whitestone	149.26	313	P	PKiKP	03 14 34.5	-0.1		
	baz=109,SNR=6.0								
M27K	Edge Creek, AK	149.35	305	P	PKiKP	03 14 34.7	-0.3		
	baz=112								
BERG	Berg Lake	149.38	300	PKPbc	PKiKP	03 14 35.6	+0.7		
MCARA	McCarthy VSAT	149.47	303	P	PKiKP	03 14 34.9	-0.2		
	baz=113,SNR=9.0								
KAIM	Kayak Island	149.51	299	P	PKiKP	03 14 35.0	-0.2		
	baz=115								
MOY	Mondy	149.55	79	*e*PKP2	PKPbc	03 14 34.9	+0.2		
MOY				pmax	pmax				
	comp=Z,89nm,1.6s								
L27K	Beaver Creek,	149.59	306	P	PKiKP	03 14 35.5	+0.2		
	baz=111								
VRDI	Verde Repeater	149.60	302	PKPbc	PKiKP	03 14 36.6	+1.0		
I28M	Miner Creek	149.63	311	P	PKiKP	03 14 35.4	-0.1		
	baz=109								
BJI	Beijing	149.67	111	PKPbc	PKPdf	03 14 30.4	-0.1		
E29M	Blow River	149.72	317	P	PKiKP	03 14 35.0	-0.4		
	baz=105								
GLB	Gilahina Butte	149.84	302	PKPbc	PKiKP	03 14 36.7	+0.7		
EGAK	Eagle	149.90	309	PKPbc	PKiKP	03 14 36.1	+0.2		
EGAK	Eagle	149.90	309	P	PKiKP	03 14 35.6	-0.3		
	baz=109,SNR=8.6								
ZAK	Zakamensk	150.00	83	*e*PKIKP	PKPdf	03 14 29.9	-0.9		
ZAK				pmax	pmax				
	comp=Z,80nm,1.1s								
BMRM	Bremner River	150.01	301	P	PKiKP	03 14 36.4	+0.1		
	baz=113								
K27K	Chicken	150.03	308	P	PKiKP	03 14 36.9	+0.7		
	baz=110								
SONM	Songino Array	150.09	90	PKPbc	PKPbc	03 14 36.4	+0.2		
SONM	Songino Array	150.09	90	PKP	PKPdf	03 14 31.2	+0.1		
	comp=Z,2.2nm,0.8s,baz=212,slow=2.9,SNR=20								
SONM				PKPbc	PKPbc	03 14 36.1	0.0		
	comp=Z,74nm,0.8s,baz=222,slow=2.7,SNR=182								
L26K	Log Cabin Wild	150.23	305	PKPbc	PKiKP	03 14 37.0	+0.4		
L26K	Log Cabin Wild	150.23	305	P	PKiKP	03 14 37.2	+0.6		
	baz=110								
F28M	Old Crow	150.24	315	PKPbc	PKiKP	03 14 36.8	+0.2		
F28M	Old Crow	150.24	315	P	PKiKP	03 14 37.1	+0.6		
	baz=105								
D28M	Stokes Point	150.25	319	P	PKiKP	03 14 37.2	+0.8		
	baz=103								
N25K	Chitina, Valde	150.26	302	PKPbc	PKiKP	03 14 37.1	+0.2		
N25K	Chitina, Valde	150.26	302	P	PKiKP	03 14 37.3	+0.5		
	baz=112								
I27K	Kandik River	150.34	311	P	PKiKP	03 14 37.5	+0.6		
	baz=107								
MENT	Mentasta	150.35	305	PKPbc	PKiKP	03 14 37.6	+0.7		
EYAK	Cordova Ski Ar	150.37	300	P	PKiKP	03 14 37.7	+0.8		
	baz=113								
NRIK	Noril'sk	150.44	41	PKPbc	PKiKP	03 14 36.6	-0.3		
	comp=Z,20nm,0.8s,baz=113,slow=0.7,SNR=20								
ULN	Ulaanbaatar	150.46	90	PKPdf	PKPdf	03 14 31.5	-0.2		
ULN	Ulaanbaatar	150.46	90	PKIKP	PKPdf	03 14 31.5	-0.2		
H27K	Steamboat Moun	150.49	312	P	PKiKP	03 14 37.5	+0.4		
	baz=106								
HARP	HAARP	150.79	304	P	PKiKP	03 14 38.9	+1.1		
	baz=110								
J26L	Joseph Creek	150.80	308	P	PKiKP	03 14 38.7	+0.8		
	baz=108								
KLU	Klutina	150.80	302	P	PKiKP	03 14 38.8	+0.8		
	baz=112								
SCRK	Sand Creek	150.81	307	P	PKiKP	03 14 38.3	+0.3		
	baz=108,SNR=29								
I26K	Coal Creek Min	150.87	310	P	PKiKP	03 14 38.3	+0.4		
	baz=107								
P23K	Montague Islan	150.91	298	P	PKiKP	03 14 38.6	+0.5		
	baz=113								
GLI	Glacier Island	151.11	300	PKPbc	PKiKP	03 14 39.2	+0.7		
GLI	Glacier Island	151.11	300	P	PKiKP	03 14 38.9	+0.4		
	baz=112								
PAX	Paxson	151.12	305	P	PKiKP	03 14 38.5	-0.1		
	baz=109,SNR=16								
M24K	Tolsona, Glenn	151.13	303	P	PKiKP	03 14 39.1	+0.5		
	baz=110								
K24K	Donnelly Dome	151.51	306	P	PKiKP	03 14 40.4	+1.1		
	baz=108,SNR=5.6								
G26K	Porcupine Rive	151.55	313	P	PKiKP	03 14 39.9	+0.7		
	baz=103								
SCM	Sheep Creek Mo	151.55	302	P	PKiKP	03 14 39.9	+0.4		
	baz=110,SNR=9.5								
IRK	Irkutsk	151.56	81	*e*PKIKP	PKPbc	03 14 38.6	-0.7		
IRK				pmax	pmax				
	comp=Z,65nm,1.3s								
J25K	Salcha River,	151.58	308	P	PKiKP	03 14 39.9	+0.4		
	baz=106								
M23K	Glacier View	151.72	302	P	PKiKP	03 14 40.4	+0.6		
	baz=110,SNR=9.6								
F26K	Sheenjek River	151.84	315	P	PKiKP	03 14 40.8	+0.9		
	baz=102								
PRP	Porcupine Dome	151.88	310	P	PKiKP	03 14 40.6	+0.5		
	baz=105,SNR=11								
SEW	Seward	151.90	298	P	PKiKP	03 14 41.4	+1.3		
	baz=112								
KNK	Knik Glacier	151.91	301	P	PKiKP	03 14 40.6	+0.4		
	baz=110,SNR=6.8								
DHY	Denali Highway	151.98	304	P	PKiKP	03 14 41.2	+0.8		
	baz=108,SNR=11								
WAT6	Susitna Watana	151.98	303	P	PKiKP	03 14 40.9	+0.4		
	baz=109,SNR=12								
SML	Sawmill	151.99	301	P	PKiKP	03 14 41.2	+0.8		
	baz=110,SNR=10								
FYU	Fort Yukon	152.02	312	PKPdf	PKPdf	03 14 33.7	+0.5		
O22K	Cooper Landing	152.17	298	P	PKiKP	03 14 41.3	+0.7		
	baz=111								
HDA	Harding Lake	152.18	307	P	PKiKP	03 14 41.7	+1.1		
	baz=106,SNR=10.0								
ILAR	Eielson Array	152.25	308	PKP	PKPdf	03 14 30.1	-3.6		
	comp=Z,1.4nm,0.8s,baz=260,slow=1.1,SNR=11								
ILAR				PKPbc	PKPbc	03 14 40.5	0.0		
	comp=Z,22nm,0.9s,baz=107,slow=1.2,SNR=7.8								
PMR	Palmer	152.28	301	P	PKiKP	03 14 41.6	+0.8		
	baz=110								
BRSE	Bradley Lake S	152.37	296	P	PKiKP	03 14 41.5	+0.4		
	baz=112								
RC01	Rabbit Creek A	152.38	299	P	PKiKP	03 14 41.5	+0.3		
	baz=110,SNR=5.1								
F25K	Christian Rive	152.39	314	P	PKiKP	03 14 42.0	+1.0		
	baz=101								
INCN	Inchon	152.39	128		PKPbc	03 14 41.8	+0.1		
INCN	Inchon	152.39	128	PKIKP	PKPbc	03 14 41.8	+0.1		
WAT1	Susitna Watana	152.41	303	P	PKiKP	03 14 42.1	+0.9		
	baz=108								
E25K	Arctic Village	152.45	315	PKPbc	PKiKP	03 14 42.1	+1.0		
E25K	Arctic Village	152.45	315	P	PKiKP	03 14 41.8	+0.7		
	baz=100								
C26K	Camden Bay	152.48	319	P	PKiKP	03 14 42.7	+1.6		
	baz=97								
KDAK	Kodiak Island	152.48	292		PKiKP	03 14 42.2	+0.8		
KDAK	Kodiak Island	152.48	292	P	PKiKP	03 14 41.9	+0.5		
	baz=115								
KDAK	Kodiak Island	152.48	292	PKIKP	PKiKP	03 14 42.2	+0.8		
XLT	XiLinHaoTe	152.49	105	*e*PKPbc	PKiKP	03 14 42.3	+0.3		
XLT				pPKP	PKPab	03 14 52.5	+0.1		
POKR	Poker Plat Res	152.56	309	P	PKiKP	03 14 42.2	+0.8		
	baz=104								
OHAK	Old Harbor	152.59	290	P	PKiKP	03 14 42.4	+0.7		
	baz=115								
WRH	Wood River Hil	152.67	307	PKPbc	PKiKP	03 14 42.1	+0.5		
COLA	College	152.68	308		PKiKP	03 14 42.0	+0.4		
COLA	College	152.68	308	P	PKiKP	03 14 42.1	+0.6		
	baz=104								
COLA	College	152.68	308	PKIKP	PKiKP	03 14 42.0	+0.4		
Q20K	Shuyak Island	152.72	293	P	PKiKP	03 14 42.2	+0.4		
	baz=113								
SII	Sitkinak Islan	152.75	288	P	PKiKP	03 14 42.4	+0.3		
	baz=116								
HOM	Homer	152.76	296	P	PKiKP	03 14 42.3	+0.4		
	baz=112								
M22K	Willow	152.78	301	P	PKiKP	03 14 42.5	+0.6		
	baz=109,SNR=6.4								
MCK	McKinley	152.84	305	P	PKiKP	03 14 42.3	+0.3		
	baz=106,SNR=12								
KSRS	Korea Array	152.89	130	PK

baz=92
J20K Nowinta River 155.18 305 P PKPdf 03 14 49.0 +11
baz=101
G21K Allakaket 155.27 311 P **PKPab 03 15 06.0 +2.5**
baz=97
F21K Alatna River 155.34 312 P **PKPab 03 15 06.3 +2.5**
baz=95
O17K Koliganek Bris 155.40 294 P **PKPab 03 15 06.8 +2.5**
baz=109
SDPT Sand Point 155.40 282 P **PKPab 03 15 05.7 +1.4**
baz=116
I20K Naaghedeneel 155.43 306 P **PKPab 03 15 07.3 +3.1**
baz=100
MJAR Matsushiro Arr 155.65 148 PKPab **PKPab 03 15 06.0 +0.1**
comp=Z,4.0nm,0.7s,baz=172,slow=5.1,SNR=8.6
N17K Nushagak Hills 155.67 296 P **PKPab 03 15 06.7 +1.3**
baz=107
H20K Anotleneega Mo 155.70 308 P **PKPab 03 15 07.4 +2.0**
baz=98
TTA Tatalina 155.74 302 P **PKPab 03 15 07.7 +2.0**
baz=103
J19K Poorman 155.78 304 P **PKPab 03 15 08.0 +2.2**
baz=101
O16K Kokwok River B 155.82 293 P **PKPab 03 15 08.3 +2.2**
baz=109
B21K Ikpikpuk River 155.83 318 P **PKPab 03 15 08.3 +2.5**
baz=89
L18K Granite Mounta 155.89 300 P **PKPab 03 15 08.4 +2.1**
baz=104
C21K Knifeblade Rid 155.90 317 P **PKPab 03 15 07.8 +1.6**
baz=90
M17K Holitna River 156.03 298 P **PKPab 03 15 08.3 +1.4**
baz=105
J18K Innoko River 156.16 303 P **PKPab 03 15 08.2 +0.7**
baz=101
F20K Avaraaart Lake 156.20 312 P **PKPab 03 15 09.2 +1.8**
baz=94
H19K Roundabout Mou 156.36 308 P **PKPab 03 15 10.0 +1.9**
baz=96
A21K Barrow 156.38 322 P **PKPab 03 15 10.6 +2.5**
baz=83
N16K Nishlik Lake 156.41 295 P **PKPab 03 15 09.9 +1.2**
baz=106
E20K Nigu River 156.41 315 P **PKPab 03 15 10.7 +2.2**
baz=90
GCSA Galena City Sc 156.44 306 P **PKPab 03 15 11.4 +2.8**
baz=98
O15K Ungalikthiuk R 156.53 291 P **PKPab 03 15 11.6 +2.5**
baz=109
L17K Donlin 156.60 299 P **PKPab 03 15 11.6 +2.2**
baz=103
M16K Timber Creek 156.65 296 P **PKPab 03 15 11.6 +2.0**
baz=105
G19K Purcell Mounta 156.68 309 P **PKPab 03 15 10.9 +1.3**
baz=95
K17K Iditarod 156.73 301 P **PKPab 03 15 12.1 +2.2**
baz=102
E19K Redstone River 156.80 313 P **PKPab 03 15 12.6 +2.5**
baz=91
CN2 Changchun 157.00 117 *e*PKP **PKPdf 03 14 41.0 +0.1**
H18K Honhosa River 157.12 307 P **PKPab 03 15 13.6 +2.1**
baz=96
D19K Kuna River 157.12 315 P **PKPab 03 15 14.5 +3.0**
baz=88
G18K Tagagawik 157.30 309 P **PKPab 03 15 14.4 +2.1**
baz=94
M15K Kasigluk River 157.38 295 P **PKPab 03 15 15.6 +2.9**
baz=105
C19K Lookout Ridge 157.62 317 P **PKPab 03 15 16.0 +2.3**
baz=85
N14K Kuskokwak Cree 157.66 293 P **PKPab 03 15 15.6 +1.7**
baz=106
F18K Selawik 157.73 310 P **PKPab 03 15 16.4 +2.3**
baz=91
J16K Anvik River 157.86 302 P **PKPab 03 15 18.1 +3.3**
baz=99
L15K Ungalak Mounta 157.98 297 P **PKPab 03 15 17.3 +2.0**
baz=102
M14K Bethel 158.00 295 P **PKPab 03 15 17.8 +2.4**
baz=104
G17K Kiwalik Mounta 158.10 307 P **PKPab 03 15 17.6 +1.8**
baz=93
C18K Utukok River 158.24 316 P **PKPab 03 15 17.8 +1.5**
baz=85
F17K Baldwin Pennin 158.37 310 P **PKPab 03 15 18.8 +2.0**
baz=90
E17K Hotham Inlet 158.59 312 P **PKPab 03 15 19.8 +2.0**
baz=88
M13K Dall Lake 158.59 293 P **PKPab 03 15 19.1 +1.1**
baz=104
NIKH Nikolski High 158.65 271 P **PKPab 03 15 19.4 +0.9**
baz=120
G16K Koyuk River 158.81 307 P **PKPab 03 15 20.7 +1.9**
baz=92
C17K DeLong Mountai 158.99 316 P **PKPab 03 15 21.7 +2.2**
baz=83
D17K Noatak River 159.03 314 P **PKPab 03 15 23.3 +3.5**
baz=85
BOD Bodaibo 159.04 75 *e*PKIKP **PKPdf 03 14 41.1 -1.8**
BOD pmax pmax
comp=Z,8.0nm,1.3s
J14K Nanvaranak Lak 159.12 300 P **PKPab 03 15 23.5 +3.3**
baz=98
BNX BinXian 159.37 117 PKP **PKPdf 03 14 42.0 -1.7**
BNX AMB AMB
comp=Z,230nm,6.0s
G15K Niukluk 159.51 306 P **PKPab 03 15 23.8 +1.9**
baz=92
MDJ Mudanjiang 159.52 122 PKP **PKPdf 03 14 46.1 +2.2**
F15K North Star Dit 159.76 308 P **PKPab 03 15 25.1 +2.1**
baz=89
C16K Lisburne Hills 159.81 316 P **PKPab 03 15 26.9 +3.8**
baz=81
USRK Ussuriysk Ar. 160.22 127 PKPab **PKPab 03 15 24.7 -0.8**
comp=Z,2.1nm,0.6s,baz=208,slow=3.8,SNR=6.9
F14K Arctic Creek 160.47 307 P **PKPab 03 15 28.2 +2.1**
baz=88
TNA Tin City 161.13 308 P **PKPab 03 15 34.0 +5.1**
baz=86
SPIA Saint Paul Isl 161.13 281 P **PKPab 03 15 33.3 +4.1**
baz=109
HEH HeiHe 162.48 107 *e*PKP **PKPdf 03 14 45.6 -1.3**
TIXI Tiksi 163.28 28 PKPab **PKPab 03 15 39.0 +0.8**
TIXI Tiksi 163.28 28 PKP2 **PKPab 03 15 39.0 +0.8**
ZEA Zeya 164.33 96 *e*PKP2 **PKPab 03 15 42.3 -1.0**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
PETK Petropavlovsk- 174.22 202 PKP **PKPdf 03 14 53.8 -0.8**
comp=Z,3.4nm,0.9s,baz=113,slow=3.4,SNR=4.0
PETK PKPab **PKPab 03 16 28.1 +1.1**
comp=Z,5.7nm,0.8s,baz=115,slow=7.0,SNR=7.0

*DJA **18** 02:57:40.0±0.5, 1°N±5°×12°2E±°, h82km±8km, M4.2/9, mb4.3/1, mb4.8/1, MLv4.1/9, Mw(mB)4.0/1*
*IDC **18** 02:57:41.4±9.3, 0.50N×122.29E, h130km±83km, mb3.3/4, mbtmp3.6/4, Error ellipse: s-maj=386.3km s-min=22.5km az=61.0*

ISC 18 02:57:39.5±0.9, 0.55N±0.09×122.22E±0.06, h100km, n12, σ1§99/15, mb3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.67**	**161**	P	**Pn**	**02 58 09.3**	**+1.4**
KMSI	**Cibinong**	**1.77**	**89**	P	**Pn**	**02 58 09.9**	**+0.9**
KMSI				S	**Sn**	**02 58 32.3**	**+0.7**
MPSI	**Mapaga**	**2.33**	**265**	P	**Pn**	**02 58 16.5**	**+0.2**
TTSI	**Tana Toraja**	**4.30**	**214**	P	**Pn**	**02 58 43.6**	**+0.9**
SANI	**Sanana**	**4.57**	**124**	P	**Pn**	**02 58 47.5**	**+1.1**
TNTI	**Ternate**	**5.16**	**87**	P	**Pn**	**02 58 54.6**	**+0.3**
BBSI	**Bau Bau**	**6.00**	**177**	P	**Pn**	**02 59 07.6**	**+1.7**
WRA	**Warramunga Arr**	**23.57**	**150**	P	**P**	**03 02 39.1**	**-2.2**
	1.2nm,1.0s,baz=319,slow=8.9,SNR=8.6						
WRA				PcP	**PcP**	**03 06 21.4**	**-2.5**
	0.2nm,0.5s,baz=325,slow=2.0,SNR=5.1						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**26.61**	**156**	P	**P**	**03 03 07.5**	**-1.2**
	0.5nm,0.7s,baz=334,slow=8.2,SNR=11						
ASAR				PcP	**PcP**	**03 06 28.4**	**-2.2**
	0.7nm,0.3s,baz=344,slow=2.0,SNR=15						
	0.5nm,0.7s						
STKA	**Stephens Creek**	**37.10**	**152**	P	**P**	**03 04 38.8**	**-1.6**
	1.3nm,0.7s,baz=340,slow=5.6,SNR=3.8						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**57.74**	**329**	P	**P**	**03 07 19.2**	**-0.8**
	0.6nm,0.7s,baz=118,slow=8.5,SNR=7.5						
	0.6nm,0.7s						

FINES FINESS Array B 92.47 331 P **P 03 10 43.4 +4.3**
4.7nm,1.2s,baz=46,slow=4.0,SNR=5.3

IDC 18 03:24:51.5±2.1, 7.63S×126.59E, h0km, mb3.2/1, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=216.6km s-min=32.9km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.37**	**149**	Pn	Pn	03 28 14.9	-1.4
	0.4nm,0.3s,baz=321,slow=13,SNR=20						
WRA				Sn	Sn	03 30 40.0	-17
	0.3nm,0.3s,baz=330,slow=22,SNR=7.6						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.43**	**157**	P	P	03 28 57.2	-0.3
	0.2nm,0.3s,baz=344,slow=13,SNR=13						
ASAR				S	Sn	03 31 55.6	-15
	0.1nm,0.3s,baz=335,slow=19,SNR=2.7						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**66.94**	**329**	P	P	03 35 45.8	0.0
	0.2nm,0.7s,baz=137,slow=7.1,SNR=2.0						
	0.2nm,0.7s						

IDC 18 03:27:27.0±9.9, 4.78S×153.04E, h156km±65km, mb3.0/3, mbtmp3.6/4, Error ellipse: s-maj=111.7km s-min=40.1km az=102.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.42**	**231**	P	Pn	03 29 12.1	-0.7
	16nm,0.6s,baz=47,slow=8.9,SNR=5.1						
PMG				S	Sn	03 30 37.4	+1.5
	9.7nm,0.4s,baz=184,slow=19,SNR=2.4						
WRA	**Warramunga Arr**	**23.63**	**229**	P	P	03 32 24.3	+0.1
	1.2nm,0.5s,baz=54,slow=10,SNR=10.0						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.32**	**223**	P	P	03 32 48.4	-0.1
	0.2nm,0.4s,baz=55,slow=9.2,SNR=5.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**80.47**	**319**	P	P	03 39 21.7	+0.1
	0.2nm,0.6s,baz=118,slow=5.7,SNR=4.6						
	0.2nm,0.6s						

*IDC **18** 03:44:10.0±0.5, 32.25N×105.10E, h0km, mb4.3/25, mbtmp4.3/28, ML4.1/3, MS3.2/6, Error ellipse: s-maj=16.4km s-min=11.0km az=38.0*
*MOS **18** 03:44:09.8±1.0, 32.22N×105.21E, h11km, mb4.7/48, Error ellipse: s-maj=6.2km s-min=4.5km az=120.0*
*NEIC **18** 03:44:11.9±1.4, 32.34N±0.08×105.19E±0.09, h10km±1km, mb4.8/142, Error ellipse: s-maj=12.9km s-min=12.3km az=201.0*
*BJI **18** 03:44:12.8±0.0, 32.28N×105.02E, h20km, mb4.4/40, mB5.0/19, ML4.5/26, Ms4.1/39, Ms7.3/39*

ISC 18 03:44:11.8±0.3, 32.21N±0.03×105.19E±0.03, h10km, n541, σ1§29/548, mb4.7/139, MS3.0/3, 27C-10D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.78**	**224**	Pn	**Pn**	**03 44 43.0**	**+0.4**
CD2				Pg	**Pb**	**03 44 45.1**	**+0.6**
CD2				smax	smax		
	comp=N,10μm,0.6s						
CD2				smax	smax		
	comp=E,9μm,0.7s						
XAN	**Xi'an**	**3.63**	**59**	Pn	**Pn**	**03 45 09.5**	**+1.5**
XAN				Sn	**Sn**	**03 45 54.3**	**+3.4**
XAN				Sg	**Sg**	**03 46 16.3**	**+8.0**
XAN				smax	smax		
	comp=N,3μm,0.8s						
XAN				smax	smax		
	comp=E,3μm,0.8s						
XAN				LR	LR		
	comp=N,3μm,5.7s						
XAN				LR	LR		
	comp=E,3μm,6.8s						
XAN				LR	LR		
	comp=Z,3μm,7.5s						
LZH	**Lanzhou**	**4.02**	**344**	Pn	**Pn**	**03 45 15.3**	**+1.7**
LZH				Pg	**Pb**	**03 45 24.5**	**+1.7**
LZH				Sn	**Sn**	**03 45 59.8**	**-1.1**
LZH				Sg	**Sb**	**03 46 13.9**	**+2.3**
LZH				smax	smax		
	comp=N,780nm,1.4s						
LZH				smax	smax		
	comp=E,890nm,1.5s						
LZH				LR	LR		
	comp=N,3μm,5.2s						
LZH				LR	LR		
	comp=E,4μm,6.2s						
LZH				LR	LR		
	comp=Z,950nm,5.8s						
ENH	**Enshi**	**4.16**	**117**	Pn	**Pn**	**03 45 17.3**	**+1.9**
GYA	**Guiyang**	**5.88**	**167**	⇓Pn	**Pn**	**03 45 40.8**	**+1.8**
GYA				Sn	**Sn**	**03 46 50.3**	**+3.8**
GYA				smax	smax		
	comp=N,240nm,0.6s						
GYA				smax	smax		
	comp=E,630nm,0.8s						
GYA				LR	LR		
	comp=N,700nm,4.9s						
GYA				LR	LR		
	comp=E,580nm,4.5s						
GYA				LR	LR		
	comp=Z,410nm,5.0s						
PZH	**PanZhiHua**	**6.43**	**209**	Pn	**Pn**	**03 45 47.3**	**+0.6**
PZH				Sn	**Sn**	**03 47 00.9**	**+0.7**
PZH				Sg	**Sg**	**03 47 38.9**	**+0.7**
PZH				LR	LR		
	comp=N,800nm,7.1s						
PZH				LR	LR		
	comp=E,1μm,8.1s						
PZH				LR	LR		
	comp=Z,770nm,11.6s						
LYN	**LuoYang**	**6.52**	**67**	*e*Pn	**Pn**	**03 45 48.3**	**+0.5**
LYN				Pg	Pb	03 46 10.8	+5.5
LYN				Sn	**Sn**	**03 47 01.9**	**-0.4**
LYN				Sg	**Sg**	**03 47 34.9**	**-6.3**
LYN				smax	smax		
	comp=N,730nm,0.9s						
LYN				smax	smax		
	comp=E,590nm,0.9s						
LYN				LR	LR		
	comp=Z,2μm,8.6s						
KMI	**Kunming**	**7.38**	**198**	⇑Pn	**Pn**	**03 46 04.0**	**+4.2**
KMI				Sn	**Sn**	**03 47 29.0**	**+5.3**
KMI				smax	smax		
	comp=N,52nm,1.0s						
KMI				smax	smax		
	comp=E,56nm,0.8s						
KMI				LR	LR		
	comp=N,600nm,6.9s						
KMI				LR	LR		
	comp=E,560nm,7.4s						
KMI				LR	LR		
	comp=Z,340nm,12.4s						
CNSH	**ChangSha**	**7.81**	**119**	⇑P	**Pn**	**03 46 04.6**	**-0.9**
CNSH				S	**Sn**	**03 47 31.0**	**-3.0**
CNSH				smax	smax		
	comp=N,340nm,0.9s						
CNSH				smax	smax		
	comp=E,270nm,0.7s						
CNSH				LR	LR		
	comp=N,640nm,7.1s						
CNSH				LR	LR		
	comp=E,490nm,5.7s						
WHN	**Wuhan**	**8.01**	**100**	P	**Pn**	**03 46 09.8**	**+1.6**
WHN				S	**Sn**	**03 47 39.6**	**+0.7**
WHN				LR	LR		
	comp=E,3μm,7.4s						
WHN				LR	LR		
	comp=E,2μm,4.2s						
WHN				LR	LR		
	comp=E,2μm,6.6s						
TIY	**Taiyuan**	**8.09**	**45**	*e*Pg	Pg	03 46 41.4	-5.3
TIY				Sg	Sg	03 48 22.3	-9.2
TIY				smax	smax		
	comp=N,270nm,0.7s						
TIY				smax	smax		
	comp=E,280nm,0.7s						
GULI	**GuiLin**	**8.26**	**145**	P	**Pn**	**03 46 12.5**	**+0.9**
GULI				smax	smax		
	comp=E,100nm,0.8s						
GULI				smax	smax		
	comp=E,140nm,0.8s						
GTA	**Gaotai**	**8.40**	**330**	P	**Pn**	**03 46 12.8**	**-0.9**
GTA				smax	smax		
	comp=E,36nm,1.2s						
GTA				smax	smax		
	comp=E,41nm,0.8s						
GTA				LR	LR		
	comp=E,570nm,8.7s						
GTA				LR	LR		
	comp=E,450nm,7.6s						
GTA				LR	LR		
	comp=E,520nm,8.4s						
BTO	**Baotou**	**9.24**	**24**	*e*P	**Pn**	**03 46 26.3**	**+1.2**
BTO				pP		03 46 29.5	
BTO				sP		03 46 32.8	
BTO				S	**Sn**	**03 48 12.5**	**+3.3**
BTO				pmax	pmax		
	comp=E,28nm,0.7s						
BTO				pmax	pmax		
	comp=E,500nm,4.6s						
BTO				LR	LR		
	comp=E,1μm,9.6s						
BTO				LR	LR		
	comp=E,1μm,7.5s						
BTO				LR	LR		
	comp=E,1μm,11.8s						
TNCH	**TengChong**	**9.24**	**221**	*e*P	**Pn**	**03 46 26.1**	**+0.8**
TNCH				pP		03 46 30.1	
TNCH				S	**Sn**	**03 48 10.6**	**+1.1**
TNCH				pmax	pmax		
	comp=E,11nm,0.5s						
TNCH				LR	LR		
	comp=E,340nm,5.7s						
TNCH				LR	LR		
	comp=E,280nm,5.2s						
HNS	**HongShan**	**9.38**	**54**	⇓P	Pn	03 46 34.8	+7.8
HNS				smax	smax		
	comp=E,140nm,1.0s						
HNS				smax	smax		
	comp=E,89nm,0.9s						
GOMU	**GeErMu**	**9.46**	**298**	P	**Pn**	**03 46 29.3**	**+0.8**
GOMU				S	**Sn**	**03 48 13.9**	**-1.2**
GOMU				smax	smax		
	comp=E,7.0nm,1.0s						
GOMU				smax	smax		
	comp=E,10.0nm,0.9s						
GOMU				LR	LR		
	comp=E,510nm,9.2s						
GOMU				LR	LR		
	comp=E,770nm,9.6s						
GOMU				LR	LR		
	comp=E,1μm,9.7s						
HHC	**Hu-ho-hao-te**	**10.03**	**29**	*e*P	**Pn**	**03 46 36.3**	**+0.3**
HHC				LR	LR		
	comp=E,340nm,6.9s						
HHC				LR	LR		
	comp=E,410nm,7.3s						
HHC				LR	LR		
	comp=E,400nm,7.7s						
TIA	**Tai'an**	**10.66**	**65**	*e*P	**Pn**	**03 46 44.1**	**-0.4**
TIA				LR	LR		
	comp=E,180nm,10.8s						
TIA				LR	LR		
	comp=E,130nm,9.1s						
TIA				LR	LR		
	comp=E,200nm,11.3s						
SLVN	**Son La**	**10.89**	**186**	Pn	**Pn**	**03 46 49.1**	**+1.2**
NJ2	**Nanjing**	**11.59**	**87**	*e*P	**Pn**	**03 46 57.3**	**0.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	**11.81**	**46**	Pn	**Pn**	**03 46 56.7**	**-3.5**
BJT	**Baijiatuau**	**11.81**	**46**	P	**Pn**	**03 46 56.7**	**-3.5**
BJI	**Beijing**	**11.82**	**46**	P	**Pn**	**03 47 02.4**	**+2.0**
BJI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BJI				LR	LR		
	comp=Z,190nm,5.5s						
BJI				LR	LR		
	comp=Z,80nm,4.1s						
BJI				LR	LR		
	comp=Z,200nm,6.6s						
LSA	**Lhasa**	**12.30**	**262**	Pn	**Pn**	**03 47 07.4**	**-0.1**
LSA	**Lhasa**	**12.30**	**262**	P	**Pn**	**03 47 07.4**	**-0.1**
SHL	**Shillong**	**13.39**	**244**	Pn	**Pn**	**03 47 19.0**	**-3.1**
SHL	**Shillong**	**13.39**	**244**	P	**Pn**	**03 47 20.7**	**-1.4**
QIZ	**Qiongzhong**	**13.78**	**161**	P	**Pn**	**03 47 30.8**	**+3.6**
QIZ				S	**Sn**	**03 50 05.9**	**+5.5**
QIZ				LR	LR		
	comp=Z,630nm,9.3s						
XLT	**XiLinHaoTe**	**14.47**	**33**	*e*P	**Pn**	**03 47 36.8**	**+0.1**
XLT				sP	P	03 47 42.8	-0.7
XLT				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XLT				pmax	pmax		
	comp=Z,190nm,4.5s						
XLT				LR	LR		
	comp=N,33nm,8.5s						
XLT				LR	LR		
	comp=E,220nm,8.2s						
XLT				LR	LR		
	comp=Z,380nm,10.5s						
XLT	**XiLinHaoTe**	**14.47**	**33**	*e*P	**Pn**	**03 47 37.1**	**+0.4**
XLT				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XLT				pmax	pmax		
	comp=Z,190nm,5.3s						
XLT				LR	LR		
	comp=Z,33nm,8.5s						
XLT				LR	LR		
	comp=Z,270nm,5.6s						
XLT				LR	LR		
	comp=Z,380nm,10.1s						
CHTO	**Chiang Mai**	**14.47**	**204**	Pn	**Pn**	**03 47 37.6**	**+0.8**
CHTO	**Chiang Mai**	**14.47**	**204**	P	**Pn**	**03 47 37.6**	**+0.8**
CM31	**Chiang Mai Arr**	**14.80**	**204**	P	**P**	**03 47 47.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**14.80**	**204**	P	**P**	**03 47 45.4**	**-1.8**
CMAR	**Chiang Mai Arr**	**14.80**	**204**	P	**Pn**	**03 47 43.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**14.80**	**204**	Pn	**Pn**	**03 47 43.0**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=11,slow=10,SNR=2.1						
CMAR				LR	LR	03 54 07.8	
	comp=Z,120nm,19.7s,baz=220,slow=40						
	comp=Z,1.1nm,0.2s						
DL2	**Dalian**	**14.95**	**59**	*e*P	**P**	**03 47 49.3**	**+0.6**
DL2				pmax	pmax		
	comp=Z,30nm,1.1s						
DL2				LR	LR		
	comp=Z,240nm,11.2s						
DL2				LR	LR		
	comp=Z,220nm,12.9s						
DL2				LR	LR		
	comp=Z,320nm,13.8s						
SONM	**Songino Array**	**15.63**	**3**		**Pn**	**03 47 51.0**	**-1.3**
SONM	**Songino Array**	**15.63**	**3**	Pn	**Pn**	**03 47 52.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=183,slow=15,SNR=17						
SONM				Lg	Lg	03 52 24.3	
	comp=Z,0.5nm,0.3s,baz=190,slow=33,SNR=4.1						
SONM				LR	LR	03 54 31.1	
	comp=Z,79nm,20.1s,baz=126,slow=40						
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.70**	**5**		**Pn**	**03 47 51.2**	**-1.9**
ULN	**Ulaanbaatar**	**15.70**	**5**	P	**Pn**	**03 47 51.2**	**-1.9**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SSLB	**Suanglung**	**16.25**	**117**	Pn	**Pn**	**03 48 00.7**	**+0.5**
UBPT	**Khong Chiam**	**16.86**	**179**		**Pn**	**03 48 08.5**	**+0.6**
TWG	**Pinlang**	**16.90**	**120**	Pn	**Pn**	**03 48 07.1**	**-1.3**
WMQ	**Urumqi**	**17.97**	**315**	*e*P	**Pn**	**03 48 21.6**	**-0.1**
WMQ				PP	**PnPn**	**03 48 36.3**	**+3.8**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,440nm,15.9s						
WMQ				LR	LR		
	comp=Z,84nm,8.7s						
ZAK	**Zakamensk**	**18.21**	**356**	*e*P	**Pn**	**03 48 24.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INCN	**Inchon**	**18.36**	**67**	Pn	**Pn**	**03 48 23.2**	**-3.3**
INCN	**Inchon**	**18.36**	**67**	P	**Pn**	**03 48 24.2**	**-2.3**
TJN	**Taejon**	**18.78**	**71**	P	**P**	**03 48 29.0**	**-2.2**
TJN				IAmb	IAmb	03 48 33.8	
	comp=Z,68nm,1.0s						
TJN	**Taejon**	**18.78**	**71**	P	**P**	**03 48 29.0**	**-2.2**
TJN				pmax	pmax		
	comp=Z,68nm,1.0s						
KS19	**Wonju Array Si**	**19.33**	**68**	P	**P**	**03 48 34.1**	**-3.1**

KSAR **Wonju Array Be** 19.34 68 P **P** 03 48 32.6 -4.6
KSAR **Wonju Array Be** 19.34 68 P **P** 03 48 35.2 -2.0
KSRS **Korea Array** 19.37 68 P **Pn** 03 48 39.4 +0.7
comp=Z,0.6nm,0.3s,baz=255,slow=10,SNR=24
KSRS LR LR 03 55 40.9
comp=Z,29nm,19.7s,baz=245,slow=36
comp=Z,9.2nm,0.7s
CN2 **Changchun** 19.66 48 *e*P **Pn** 03 48 42.3 +0.1
CN2 pmax pmax
comp=Z,20nm,1.0s
MOY **Mondy** 19.68 352 *e*P **Pn** 03 48 47.8 +5.3
HIA **Hailar** 20.24 28 P **P** 03 48 43.5 -3.5
HIA **Hailar** 20.24 28 P **P** 03 48 46.2 -0.8
JOW **Kunigami** 20.78 99 P **P** 03 48 54.5 +1.5
comp=Z,6.6nm,0.3s,baz=144,slow=22,SNR=12
comp=Z,6.6nm,0.3s
JNU **Nakatsue** 21.64 81 P **P** 03 49 02.7 +0.4
comp=Z,11nm,1.0s,baz=294,slow=5.9,SNR=4.2
JNU LR LR 03 58 42.7
comp=Z,49nm,21.4s,baz=222,slow=40
comp=Z,11nm,1.0s
ZSN **Zaisan** 21.70 320 *e*P **P** 03 49 03.3 +0.5
baz=320
ZSN **Zaisan** 21.70 320 *e*P **P** 03 49 03.3 +0.5
BNX **BinXian** 21.84 45 ⇓P **P** 03 49 05.4 +1.1
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,230nm,3.8s
DGZ **Jazzator, Alta** 21.93 328 *i* P **P** 03 49 06.6 +1.2
DGZ pmax pmax
comp=Z,8.0nm,0.7s
MDJ **Mudanjiang** 22.69 50 P **P** 03 49 12.8 -0.6
MDJ pmax pmax
comp=Z,6.0nm,1.6s
MDJ pmax pmax
comp=Z,340nm,5.8s
MDJ **Mudanjiang** 22.69 50 P **P** 03 49 12.9 -0.6
MDJ IAmb IAmb 03 49 16.7
comp=Z,14nm,0.8s
MK31 **Makanchi Array** 22.78 316 P **P** 03 49 13.7 -0.7
MK31 IAmb IAmb 03 49 19.6
comp=Z,20nm,1.1s
MK31 **Makanchi Array** 22.78 316 P **P** 03 49 13.7 -0.7
MK31 pmax pmax
comp=Z,20nm,1.1s
MKAR **Makanchi Array** 22.78 316 P **P** 03 49 13.4 -1.0
MKAR **Makanchi Array** 22.78 316 P **P** 03 49 14.1 -0.4
comp=Z,9.7nm,0.8s,baz=114,slow=10,SNR=37
MKAR PcP **PcP** 03 53 04.7 -1.1
comp=Z,0.7nm,0.8s,baz=124,slow=4.2,SNR=2.8
comp=Z,9.7nm,0.8s
MAKZ **Makanchi** 22.97 316 P **P** 03 49 15.1 -1.3
MAKZ IAmb IAmb 03 49 22.3
comp=Z,22nm,1.2s
MAKZ **Makanchi** 22.97 316 P **P** 03 49 15.1 -1.3
MAKZ pmax pmax
comp=Z,22nm,1.3s
SHLS **Shalkode** 23.02 306 *e*P **P** 03 49 14.2 -2.8
baz=306
SHLS **Shalkode** 23.02 306 *e*P **P** 03 49 14.2 -2.8
UZB **Uzynbulak** 23.32 305 *e*P **P** 03 49 20.2 +0.1
baz=306
UZB **Uzynbulak** 23.32 305 *e*P **P** 03 49 20.2 +0.1
KPKS **Kokpek** 23.66 306 *e*P **P** 03 49 23.1 -0.3
baz=306
KPKS **Kokpek** 23.66 306 *e*P **P** 03 49 23.1 -0.3
TARG **Taragay, Kyrgy** 23.77 301 P **P** 03 49 23.6 -1.2
TARG **Taragay, Kyrgy** 23.77 301 P **P** 03 49 23.7 -1.2
TARG pmax pmax
comp=Z,17nm,1.3s
USRK **Ussuriysk Ar.** 24.11 53 P **P** 03 49 26.8 -0.8
USRK **Ussuriysk Ar.** 24.11 53 P **P** 03 49 28.2 +0.6
comp=Z,4.6nm,0.8s,baz=253,slow=13,SNR=9.2
comp=Z,4.6nm,0.8s
TDK **Taldyqorghan** 24.39 309 *e*P **P** 03 49 30.1 -0.1
baz=309
TDK **Taldyqorghan** 24.39 309 *e*P **P** 03 49 30.1 -0.1
HEH **HeiHe** 24.43 36 *e*P **P** 03 49 30.8 +0.4
HEH pmax pmax
comp=Z,19nm,0.8s
HEH LR LR
comp=Z,210nm,7.0s
HEH LR LR
comp=Z,380nm,7.1s
HEH LR LR
comp=Z,290nm,8.5s
MDOK **Medeo** 24.70 304 *e*P **P** 03 49 32.9 -0.2
baz=304
MDOK **Medeo** 24.70 304 *e*P **P** 03 49 32.9 -0.2
KSH **Kashi** 24.70 295 P **P** 03 49 39.8 +6.6
KSH pP sP 03 49 41.8 +3.9
KSH pmax pmax
comp=Z,20nm,0.8s
TNSS **Tian-Shan** 24.73 304 *e*P **P** 03 49 34.0 +0.3
baz=304
TNSS **Tian-Shan** 24.73 304 *e*P **P** 03 49 34.0 +0.3
CHKK **Chushkaly** 24.95 306 *e*P **P** 03 49 34.6 -0.6
baz=306
CHKK **Chushkaly** 24.95 306 *e*P **P** 03 49 34.6 -0.6
NRN **Naryn** 25.01 300 P **P** 03 49 35.1 -1.1
NRN IAmb IAmb 03 49 43.1
comp=Z,18nm,0.9s
NRN **Naryn** 25.01 300 P **P** 03 49 35.1 -1.1
NRN pmax pmax
comp=Z,18nm,0.9s
BOOM **Boomskoye usch** 25.30 302 P **P** 03 49 36.1 -2.5
BOOM **Boomskoye usch** 25.30 302 P **P** 03 49 36.1 -2.5
BOOM pmax pmax
comp=Z,7.0nm,0.7s
ZAA0 **Zalesovo Array** 26.15 332 P **P** 03 49 44.0 -2.0
ZALV **Zalesovo Beam** 26.15 332 P **P** 03 49 45.0 -1.0
ZALV **Zalesovo Beam** 26.15 332 *i* P **P** 03 49 45.2 -0.8
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV **Zalesovo Beam** 26.15 332 P **P** 03 49 45.8 -0.2
comp=Z,2.3nm,0.5s,baz=140,slow=9.6,SNR=11
comp=Z,2.3nm,0.5s
KLR **Kul'dur** 26.15 42 *ce*P **P** 03 49 46.3 +0.2
KLR pmax pmax
comp=Z,16nm,1.3s
KLR **Kul'dur** 26.15 42 LR LR 04 01 09.2
comp=Z,46nm,18.8s,baz=228,slow=39
AAK **Ala-Archa** 26.37 302 P **P** 03 49 48.3 0.0
AAK **Ala-Archa** 26.37 302 *ce*P **P** 03 49 48.4 +0.1
AAK pmax pmax
comp=Z,15nm,2.5s
ZEA **Zeya** 26.69 30 *i* P **P** 03 49 51.7 +0.8
NIL **Nilore** 26.79 282 P **P** 03 49 50.7 -1.3
NIL IAmb IAmb 03 49 58.2
comp=Z,14nm,0.7s
NIL **Nilore** 26.79 282 P **P** 03 49 50.7 -1.3
NIL pmax pmax
comp=Z,14nm,0.7s
KURBB **Kurchatov Arra** 26.94 321 P **P** 03 49 52.7 -0.4
comp=Z,7.4nm,0.9s,baz=127,slow=9.2,SNR=30
KURBB PcP **PcP** 03 53 14.1 -0.7
comp=Z,1.7nm,0.5s,baz=113,slow=2.0,SNR=8.6
comp=Z,7.4nm,0.9s
KURK **Kurchatov** 26.94 321 P **P** 03 49 52.4 -0.7
KURK IAmb IAmb 03 49 59.3
comp=Z,11nm,0.9s
KURK **Kurchatov** 26.94 321 *ce*P **P** 03 49 52.8 -0.3
KURK pmax pmax
comp=Z,7.0nm,0.8s
MJAR **Matsushiro Arr** 27.52 72 P **P** 03 49 58.5 -0.1
comp=Z,2.6nm,0.8s,baz=64,slow=39,SNR=6.5
comp=Z,2.6nm,0.8s
BTK **Batken** 28.71 296 P **P** 03 50 09.3 +0.1
BTK **Batken** 28.71 296 P **P** 03 50 09.3 +0.1
BTK pmax pmax
comp=Z,3.0nm,0.8s
KK31 **Karatay Array** 29.33 302 P **P** 03 50 12.9 -1.8
KK31 **Karatay Array** 29.33 302 P **P** 03 50 12.9 -1.8
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR **Karatay Array** 29.33 302 P **P** 03 50 13.2 -1.4
KKAR **Karatay Array** 29.33 302 P **P** 03 50 13.2 -1.4
BRZS **Berezniki** 29.93 316 *e*P **P** 03 50 19.6 -0.2
baz=316
BRZS **Berezniki** 29.93 316 *e*P **P** 03 50 19.6 -0.2
KBL **Kabul** 30.17 284 P **P** 03 50 22.4 0.0
KBL IAmb IAmb 03 50 29.6
comp=Z,5.5nm,0.7s
KBL **Kabul** 30.17 284 P **P** 03 50 22.4 0.0
KBL pmax pmax
comp=Z,6.0nm,0.7s
YSS **Yuzh-Sakhalins** 32.14 52 *ce*P **P** 03 50 39.7 +0.4
YSS pmax pmax
comp=Z,24nm,2.5s
BVAR **Borovoye Array** 32.52 320 P **P** 03 50 42.3 -0.3
comp=Z,2.9nm,0.6s,baz=110,slow=10,SNR=11
BVAR PcP **PcP** 03 53 28.3 -0.8
comp=Z,1.6nm,0.7s,baz=106,slow=3.1,SNR=5.9
comp=Z,2.9nm,0.6s
BRVK **Borovoye** 32.59 320 P **P** 03 50 42.2 -1.0
BRVK **Borovoye** 32.59 320 *ce*P **P** 03 50 43.1 -0.1
BRVK pmax pmax
comp=Z,5.0nm,0.8s
TYV **Tymovskoe** 33.21 45 *e*P **P** 03 50 49.7 +1.1
TYV pmax pmax
comp=Z,5.0nm,0.6s
TYV pmax pmax
comp=Z,100nm,2.8s
YAK **Yakutsk** 33.75 21 P **P** 03 50 52.1 -1.1
YAK **Yakutsk** 33.75 21 *ce*P **P** 03 50 52.7 -0.5
YAK pmax pmax
comp=Z,8.0nm,0.7s
HRA **Herat** 35.76 285 P **P** 03 51 09.9 -1.3
ABKAR **Akbulak array** 37.64 310 P **P** 03 51 25.8 -1.0
NRIK **Noril'sk** 38.49 350 P **P** 03 51 32.5 -1.3
NRIK IAmb IAmb 03 51 39.8
comp=Z,8.3nm,0.8s
NRIK **Noril'sk** 38.49 350 *ce*P **P** 03 51 33.6 -0.1
NRIK pmax pmax
comp=Z,9.0nm,0.8s
NRIK **Noril'sk** 38.49 350 P **P** 03 51 33.4 -0.4
comp=Z,2.3nm,0.4s,baz=149,slow=7.8,SNR=4.1
comp=Z,2.3nm,0.4s
GEYT **Alibeck** 38.62 292 P **P** 03 51 35.3 +0.1
GEYT **Alibeck** 38.62 292 P **P** 03 51 35.3 +0.1
GEYT pmax pmax
comp=Z,6.0nm,0.8s
GEYT **Alibeck** 38.62 292 P **P** 03 51 35.8 +0.5
comp=Z,4.7nm,0.8s,baz=220,slow=5.8,SNR=4.6
comp=Z,4.7nm,0.8s
LEM **Lembang** 38.89 176 LR LR 04 08 25.7
comp=Z,66nm,18.3s,baz=202,slow=37
ARU **Arti** 40.14 321 P **P** 03 51 47.0 -0.6
ARU IAmb IAmb 03 51 53.3
comp=Z,16nm,0.8s
ARU **Arti** 40.14 321 *c i*P **P** 03 51 47.1 -0.5
ARU 03 53 17.3
ARU 03 53 48.7
ARU S **S** 03 57 56.7 +2.8
ARU pmax pmax
comp=Z,18nm,0.8s
MA2 **Magadan** 40.66 34 *ce*P **P** 03 51 51.2 -0.7
MA2 pmax pmax
comp=Z,6.0nm,1.3s
TIXI **Tiksi** 41.49 11 P **P** 03 51 56.9 -1.6
TIXI **Tiksi** 41.49 11 *ce*P **P** 03 51 58.2 -0.3
TIXI pmax pmax
comp=Z,11nm,2.5s
SEY **Seymchan** 42.68 30 *ce*P **P** 03 52 08.4 +0.1
SEY pmax pmax
comp=Z,8.0nm,1.7s
PETK **Petropavlovsk-** 42.76 45 P **P** 03 52 08.4 -0.7
PETK **Petropavlovsk-** 42.76 45 P **P** 03 52 09.7 +0.5
comp=Z,9.7nm,0.9s,baz=320,slow=2.7,SNR=14
comp=Z,9.7nm,0.9s
KIRV **Kirov** 45.44 323 *ce*P **P** 03 52 32.5 +2.0
BELG **Belogornoye** 45.75 314 *i* P **P** 03 52 31.6 -1.4
BELG pmax pmax
comp=Z,2.0nm,1.0s
ZEI **Tsey** 48.79 301 *e*P **P** 03 52 59.3 +2.1
ZEI pmax pmax
comp=Z,3.0nm,0.6s
GOF **Gofitskoye** 49.08 304 *ce*P **P** 03 53 02.8 +3.6
ONI **Oni** 49.14 301 P **P** 03 53 00.2 +0.4
ONI **Oni** 49.14 301 P **P** 03 53 00.2 +0.4
ONI pmax pmax
comp=Z,4.0nm,0.8s
AKH **Akhalkalaki** 49.31 299 P **P** 03 53 01.4 +0.2
AKH **Akhalkalaki** 49.31 299 P **P** 03 53 01.4 +0.2
AKH pmax pmax
comp=Z,20nm,0.8s
KBZ **Khabaz** 49.37 302 P **P** 03 53 00.7 -0.6
comp=Z,1.2nm,0.6s,baz=205,slow=4.3,SNR=8.4
comp=Z,1.2nm,0.6s
VRH **Novokhopyorsk** 49.41 312 *e*P **P** 03 53 03.6 +2.0
VRH pmax pmax
comp=Z,4.0nm,0.8s
KIV **Kislovodsk** 49.49 303 P **P** 03 53 02.0 -0.4
KIV IAmb IAmb 03 53 13.8
comp=Z,10.0nm,0.8s
KIV **Kislovodsk** 49.49 303 *e*P **P** 03 53 02.2 -0.2
KIV pmax pmax
comp=Z,8.0nm,1.0s
KARS **Kars** 49.77 298 P **P** 03 53 04.8 +0.2
KARS **Kars** 49.77 298 P **P** 03 53 04.8 +0.2
KARS pmax pmax
comp=Z,27nm,1.0s
BILL **Bilibino** 49.78 26 P **P** 03 53 03.2 -1.0
BILL IAmb IAmb 03 53 04.7
comp=Z,7.9nm,0.5s
BILL **Bilibino** 49.78 26 *e*P **P** 03 53 04.7 +0.5
BILL pmax pmax
comp=Z,11nm,1.7s
KLMR **Klimovskoe** 50.69 325 *e*P **P** 03 53 09.0 -2.1
KLMR pmax pmax
comp=Z,11nm,0.8s
GURO **Guroymak-BITLI** 50.99 296 P **P** 03 53 14.3 +0.4
VSR **Storozhevoye** 51.02 312 *e*P **P** 03 53 13.4 -0.3
VSR pmax pmax
comp=Z,4.0nm,0.9s
LPSR **Galich'ya Gora** 51.06 314 *e*P **P** 03 53 14.2 +0.2
LPSR pmax pmax
comp=Z,6.0nm,0.8s
MOS **Moscow** 51.65 318 *e*P **P** 03 53 19.9 +1.5
MOS pmax pmax
comp=Z,28nm,0.8s
OBN **Obninsk** 52.28 317 *e*P **P** 03 53 23.0 -0.1
OBN *e* 03 55 22.8
OBN pmax pmax
comp=Z,7.0nm,1.4s
LVZ **Lovozero** 53.28 334 P **P** 03 53 29.9 -0.5
LVZ **Lovozero** 53.28 334 P **P** 03 53 29.9 -0.5
LVZ pmax pmax
comp=Z,63nm,1.4s
ARCES **ARCESS Array B** 56.63 336 P **P** 03 53 53.7 -0.9
comp=Z,2.5nm,0.7s,baz=81,slow=7.5,SNR=9.0
comp=Z,2.5nm,0.7s
BR131 **Keskin Array S** 57.00 299 P **P** 03 53 57.3 -0.6
BR131 **Keskin Array S** 57.00 299 P **P** 03 53 57.3 -0.6
BR131 pmax pmax
comp=Z,3.0nm,0.8s
BRTR **Keskin Array B** 57.00 299 P **P** 03 53 57.2 -0.6
comp=Z,1.1nm,0.7s,baz=90,slow=5.7,SNR=6.0
comp=Z,1.1nm,0.7s
FIA1 **FINESS Array S** 57.17 326 P **P** 03 53 58.9 +0.5
FINES **FINESS Array B** 57.17 326 P **P** 03 53 57.7 -0.8
FINES **FINESS Array B** 57.17 326 P **P** 03 53 57.7 -0.8
FINES **FINESS Array B** 57.17 326 P **P** 03 53 57.5 -1.0
comp=Z,5.3nm,0.8s,baz=91,slow=7.0,SNR=22
comp=Z,5.3nm,0.8s
VSU **Vasula** 57.28 322 *ce*P **P** 03 54 00.8 +1.5
VSU pmax pmax
comp=Z,10.0nm,0.7s
VSU **Vasula** 57.28 322 *e*P **P** 03 53 58.8 -0.5
AKASG **Malin Array Be** 57.30 313 P **P** 03 53 58.4 -1.2
comp=Z,0.7nm,0.5s,baz=67,slow=7.5,SNR=3.1
comp=Z,0.7nm,0.5s
AKBB **Malin Array Si** 57.30 313 *ce*P **P** 03 54 00.0 +0.4
AKBB pmax pmax
comp=Z,3.0nm,1.0s
KIEV **Kiev** 57.32 313 P **P** 03 53 58.7 -1.0
KIEV **Kiev** 57.32 313 P **P** 03 53 58.7 -1.0
KIEV pmax pmax
comp=Z,3.0nm,0.8s
PURM **Purcari** 57.85 308 ⇑P **P** 03 54 05.2 +1.7
IIGN **Ignalina** 58.12 319 *e*P **P** 03 54 02.7 -2.5
MEF **Metsahovi** 58.17 325 *e*P **P** 03 54 05.6 +0.1
SORM **Soroca** 58.45 310 ⇓P **P** 03 54 09.2 +1.5
COEN **Coen** 58.57 136 P **P** 03 54 07.5 -1.4
MTSE **Matsula** 58.74 323 *e*P **P** 03 54 08.8 -0.7
WB0 **Warramunga Arr** 58.77 147 P **P** 03 54 09.8 -0.4
WB0 IAmb IAmb 03 54 15.3
comp=Z,5.6nm,0.7s
WRAB **Tennant Creek** 58.89 148 P **P** 03 54 11.4 +0.4
WRAB **Tennant Creek** 58.89 148 P **P** 03 54 11.4 +0.4
WRAB pmax pmax
comp=Z,10.0nm,0.8s
WRA **Warramunga Arr** 58.90 148 P **P** 03 54 11.5 +0.4
WRA **Warramunga Arr** 58.90 148 P **P** 03 54 11.5 +0.4
WRA **Warramunga Arr** 58.90 148 P **P** 03 54 11.6 +0.6
comp=Z,6.5nm,0.8s,baz=340,slow=7.5,SNR=42
comp=Z,6.5nm,0.8s
WB2 **Warramunga Arr** 58.90 148 P **P** 03 54 11.1 0.0
WR0 **Warramunga Arr** 59.00 147 P **P** 03 54 11.7 -0.1
RAF **Rauma** 59.30 326 *e*P **P** 03 54 15.3 +2.0
PABE **Paberze** 59.34 319 P **P** 03 54 14.3 +0.5
PABE **Paberze** 59.34 319 *e*P **P** 03 54 13.0 -0.8
TIRR **Tirgusor** 59.39 306 P **P** 03 54 15.2 +0.9
TIRR IAmb IAmb 03 54 19.6
comp=Z,11nm,1.0s
TIRR **Tirgusor** 59.39 306 P **P** 03 54 15.2 +0.9
TIRR pmax pmax
comp=Z,11nm,1.0s
TNA **Tin City** 59.90 29 P **P** 03 54 16.3 -1.1
baz=282
VRI **Vrincioaia** 60.13 308 ⇑P **P** 03 54 19.5 +0.1
VRI **Vrincioaia** 60.13 308 ⇑P **P** 03 54 19.5 +0.1
PLOR **Plostina** 60.19 308 ⇓P **P** 03 54 21.1 +1.2
PLOR **Plostina** 60.19 308 ⇓P **P** 03 54 21.1 +1.2
C16K **Lisburne Hills** 60.31 25 P **P** 03 54 19.5 -0.8
baz=283
F14K **Arctic Creek** 60.57 29 P **P** 03 54 20.8 -1.3
baz=283
MLR **Muntele Rosu** 60.77 308 ⇑P **P** 03 54 24.4 +0.5
MLR **Muntele Rosu** 60.77 308 P **P** 03 54 23.9 0.0
MLR **Muntele Rosu** 60.77 308 P **P** 03 54 23.9 0.0
MLR pmax pmax
comp=Z,3.0nm,0.9s
DOPR **Dopca** 61.00 308 ⇑P **P** 03 54 26.3 +1.0
C17K **DeLong Mountai** 61.05 25 P **P** 03 54 24.6 -0.7
baz=284
D17K **Noatak River** 61.28 26 P **P** 03 54 26.3 -0.6
baz=285
B18K **Kokolik River** 61.30 24 P **P** 03 54 27.2 +0.2
baz=285
VOIR 61.38 308 ⇓P **P** 03 54 29.2 +1.2
VOIR 61.38 308 ⇓P **P** 03 54 29.2 +1.2
G15K **Niukluk** 61.62 29 P **P** 03 54 28.4 -0.8
baz=286
KWP **Kalwaria Pacla** 61.63 313 P **P** 03 54 28.7 -0.8
KWP IAmb IAmb 03 54 35.9
comp=Z,8.7nm,0.8s
KWP **Kalwaria Pacla** 61.63 313 P **P** 03 54 28.7 -0.8
KWP pmax pmax
comp=Z,9.0nm,0.8s
ARR **Arges** 61.68 308 ⇓P **P** 03 54 29.9 -0.2
C18K **Utukok River** 61.71 25 P **P** 03 54 29.7 -0.1
baz=286
E17K **Hotham Inlet** 61.91 26 P **P** 03 54 31.1 0.0
baz=286
AS31 **Alice Springs** 61.97 150 P **P** 03 54 32.2 +0.2
ASAR **Alice Springs** 61.97 150 P **P** 03 54 32.1 0.0
ASAR **Alice Springs** 61.97 150 P **P** 03 54 32.8 +0.7
comp=Z,3.5nm,0.7s,baz=335,slow=6.9,SNR=34
comp=Z,3.5nm,0.7s
C19K **Lookout Ridge** 62.13 24 P **P** 03 54 31.8 -0.9
C19K IAmb IAmb 03 54 33.6
comp=Z,7.8nm,0.8s
C19K **Lookout Ridge** 62.13 24 P **P** 03 54 32.8 +0.1
baz=287
ALN **Alexandroupoli** 62.16 303 P **P** 03 54 33.3 +0.1
ALN IAmb IAmb 03 54 42.9
comp=Z,9.7nm,1.2s
ALN **Alexandroupoli** 62.16 303 P **P** 03 54 33.3 +0.1
ALN pmax pmax
comp=Z,10.0nm,1.2s
G16K **Koyuk River** 62.19 28 P **P** 03 54 32.5 -0.5
baz=287
E18K **Tukpahlearik C** 62.27 26 P **P** 03 54 33.2 -0.4
baz=287
MARR **Marisel-Cluj** 62.27 310 ⇑P **P** 03 54 33.8 -0.2
F17K **Baldwin Pennin** 62.32 27 P **P** 03 54 32.8 -1.1
F17K IAmb IAmb 03 54 34.7
comp=Z,7.5nm,0.8s
F17K **Baldwin Pennin** 62.32 27 P **P** 03 54 33.9 +0.1
baz=287
A21K **Barrow** 62.40 21 P **P** 03 54 34.2 -0.2
baz=289
H16K **Elim** 62.46 29 P **P** 03 54 34.6 -0.3
baz=287
DRGR 62.50 310 ⇑P **P** 03 54 39.0 +3.5
DRGR 62.50 310 ⇑P **P** 03 54 39.0 +3.5
D19K **Kuna River** 62.83 24 P **P** 03 54 36.6 -0.7
D19K **Kuna River** 62.83 24 P **P** 03 54 37.1 -0.2
baz=289
OJC **Ojcow** 63.23 314 P **P** 03 54 39.9 -0.3
OJC IAmb IAmb 03 54 45.8
comp=Z,6.3nm,1.1s
OJC **Ojcow** 63.23 314 P **P** 03 54 39.9 -0.3
OJC pmax pmax
comp=Z,6.0nm,1.1s
D20K **Etivluk River** 63.28 24 P **P** 03 54 40.2 -0.1
baz=290
L14K **Kuka Creek** 63.28 33 P **P** 03 54 40.4 +0.1
baz=289
H17K **Granite Mounta** 63.32 28 P **P** 03 54 40.4 -0.2
baz=289
HERR **Herculane** 63.33 308 ⇑P **P** 03 54 41.2 +0.2
I17K **Unalakleet** 63.34 30 P **P** 03 54 40.0 -0.6
baz=289
HFS **Hagfors** 63.37 326 P **P** 03 54 39.9 -1.0
comp=Z,3.7nm,0.8s,baz=94,slow=5.9,SNR=10
comp=Z,3.7nm,0.8s
E19K **Redstone River** 63.49 25 IAmb IAmb 03 54 42.5
comp=Z,11nm,1.5s
E19K **Redstone River** 63.49 25 P **P** 03 54 41.6 -0.1
baz=290
F19K **Shaleruckik Mo** 63.51 26 P **P** 03 54 41.1 -0.7
baz=290
J16K **Anvik River** 63.57 30 P **P** 03 54 42.2 -0.1
baz=289
BLKB **Belogradchik** 63.58 306 ⇑P **P** 03 54 42.3 -0.5
E20K **Nigu River** 63.58 24 P **P** 03 54 42.2 -0.1
baz=291
B21K **Ikpikpuk River** 63.62 23 P **P** 03 54 42.0 -0.5
B21K **Ikpikpuk River** 63.62 23 P **P** 03 54 42.8 +0.4
baz=291
L15K **Ungalak Mounta** 63.72 32 P **P** 03 54 43.3 0.0
baz=289
C21K **Knifeblade Rid** 63.74 23 P **P** 03 54 43.6 +0.3
baz=292
M14K **Bethel** 63.81 33 P **P** 03 54 44.1 +0.3
baz=289
NB2 **NORSAR Subarra** 64.22 327 P **P** 03 54 44.8 -1.8
comp=Z,1.8nm,0.6s,baz=71,slow=6.9
NOA **NORSAR Array B** 64.22 327 P **P** 03 54 45.1 -1.5
comp=Z,1.9nm,0.7s,baz=71,slow=6.6,SNR=12
comp=Z,1.9nm,0.7s
NC204 **NORSAR Array S** 64.35 328 P **P** 03 54 45.8 -1.6
VYHS **Vyhne** 64.41 313 *e*P **P** 03 54 51.4 +3.4
VYHS **Vyhne** 64.41 313 *e*P **P** 03 54 51.4 +3.4
H19K **Roundabout Mou** 64.48 27 P **P** 03 54 48.0 -0.1
baz=292
D22K **Ayikyak River** 64.54 23 P **P** 03 54 47.4 -1.2
D22K IAmb IAmb 03 54 58.9
comp=Z,5.6nm,1.1s
D22K **Ayikyak River** 64.54 23 P **P** 03 54 48.4 -0.2
baz=293
MORC **Moravsky Berou** 64.75 314 *e*P **P** 03 54 54.9 +4.6
K17K **Iditarod** 64.76 30 P **P** 03 54 50.1 0.0
baz=292
F21K **Alatna River** 64.93 25 P **P** 03 54 50.1 -1.0
F21K IAmb IAmb 03 54 51.7
comp=Z,2.3nm,0.7s
F21K **Alatna River** 64.93 25 P **P** 03 54 50.6 -0.5
baz=294
JAVC **Velka Javorina** 65.00 313 *e*P P 03 54 57.4 +5.5
M16K **Timber Creek** 65.09 32 P **P** 03 54 52.1 -0.1
baz=292
H20K **Anotleneega Mo** 65.10 27 P **P** 03 54 52.0 -0.2
baz=293
E22K **Anaktuvuk Pass** 65.14 24 IAmb IAmb 03 54 53.1
comp=Z,4.2nm,0.8s
E22K **Anaktuvuk Pass** 65.14 24 P **P** 03 54 52.2 -0.3
baz=294
J18K **Innoko River** 65.15 29 P **P** 03 54 51.4 -1.2
J18K IAmb IAmb 03 54 53.6
comp=Z,8.7nm,0.9s
J18K **Innoko River** 65.15 29 P **P** 03 54 52.5 -0.1
baz=292
D23K **Nanushuk River** 65.17 23 P P 03 54 52.9 +0.3

baz=295
G21K Allakaket 65.20 26 P P 03 54 52.1 -0.8
G21K IAmb IAmb 03 54 53.3
comp=Z,3.6nm,0.7s
G21K Allakaket 65.20 26 P P 03 54 52.8 -0.1
baz=294
IMAR Indian Mountai 65.33 26 P P 03 54 52.5 -1.2
MORH Mrgy, Hungar 65.34 310 ⇓P P 03 54 53.4 -0.7
O15K Ungalikthiuk R 65.37 34 P P 03 54 54.0 -0.1
baz=292
N16K Nishlik Lake 65.38 33 P P 03 54 54.8 +0.7
baz=292
J19K Poorman 65.39 29 P P 03 54 54.6 +0.5
baz=293
C24K Franklin Bluff 65.47 22 P P 03 54 54.8 +0.2
baz=296
VRAC Vranov 65.50 314 *e*P P 03 54 58.1 +3.0
FNA Florina 65.51 304 P P 03 54 55.5 +0.1
FNA Florina 65.51 304 P P 03 54 55.5 +0.1
FNA pmax pmax
comp=Z,1.0nm,0.8s
I20K Naaghedeneel 65.53 28 P P 03 54 55.0 +0.1
baz=294
M17K Holitna River 65.63 32 P P 03 54 56.6 +0.9
baz=293
L18K Granite Mounta 65.64 31 P P 03 54 56.2 +0.5
baz=293
TTA Tatalina 65.65 30 P P 03 54 56.2 +0.3
baz=293
TOLK Toolik Lake Re 65.67 23 P P 03 54 55.4 -0.6
TOLK IAmb IAmb 03 54 56.5
comp=Z,8.0nm,1.2s
TOLK Toolik Lake Re 65.67 23 P P 03 54 56.0 0.0
baz=296
D24K Happy Valley 65.69 22 P P 03 54 55.4 -0.6
D24K IAmb IAmb 03 54 56.6
comp=Z,5.8nm,0.6s
D24K Happy Valley 65.69 22 P P 03 54 55.9 -0.1
baz=297,SNR=5.4
G22K Bettles 65.76 25 P P 03 54 56.1 -0.4
baz=295
H21K Melozitna Rive 65.82 26 P P 03 54 55.8 -1.1
H21K IAmb IAmb 03 54 58.3
comp=Z,3.9nm,1.0s
H21K Melozitna Rive 65.82 26 P P 03 54 56.7 -0.2
baz=295
J20K Nowinta River 65.91 28 P P 03 54 56.8 -0.7
J20K IAmb IAmb 03 54 58.6
comp=Z,7.7nm,0.8s
J20K Nowinta River 65.91 28 P P 03 54 57.4 -0.1
baz=294
E23K Chandalar 65.92 23 P P 03 54 57.3 -0.3
baz=296
O16K Kokwok River B 66.03 34 P P 03 54 57.4 -0.9
O16K Kokwok River B 66.03 34 P P 03 54 58.3 0.0
baz=293
N17K Nushagak Hills 66.08 32 P P 03 54 59.3 +0.7
baz=293
COLD Coldfoot 66.09 24 P P 03 54 58.2 -0.4
baz=296
H22K Ishtalitna Cre 66.25 26 P P 03 54 59.8 +0.1
baz=296
RONA Rosalia, Austr 66.28 312 *i* pP pP 03 55 03.6 -0.2
comp=Z,0.3nm,0.2s
K20K Telida 66.28 29 P P 03 55 00.1 +0.2
baz=295
P16K Nushagak River 66.30 34 P P 03 55 00.8 +0.7
baz=293
M18K Stony River 66.31 31 P P 03 54 59.8 -0.2
baz=294
I21K Tanana 66.33 27 P P 03 54 60.0 -0.2
baz=296
G23K Bananza Creek 66.38 25 P P 03 54 59.8 -0.7
G23K IAmb IAmb 03 55 07.9
comp=Z,4.2nm,1.2s
G23K Bananza Creek 66.38 25 P P 03 55 00.2 -0.4
baz=297
D25K Kavik River 66.38 22 P P 03 55 00.2 -0.3
baz=299
O17K Koliganek Bris 66.43 33 P P 03 55 01.0 +0.1
baz=294
L19K White Mountain 66.44 30 P P 03 55 01.1 +0.1
baz=294
CONA Conrad Observa 66.47 313 *e*pP pP 03 55 04.3 -0.8
comp=Z,0.2nm,0.2s
C26K Camden Bay 66.54 21 P P 03 55 01.5 +0.1
baz=300
N18K Kilae Creek 66.61 32 P P 03 55 02.0 0.0
baz=294
L20K Farewell, AK 66.73 30 P P 03 55 02.7 -0.2
baz=295
F24K Squaw Lake 66.75 24 P P 03 55 02.2 -0.7
F24K Squaw Lake 66.75 24 P P 03 55 02.9 0.0
baz=298
M19K Big River Lodg 66.76 30 P P 03 55 03.5 +0.5
baz=295
CHUM Lake Minchumin 66.77 28 P P 03 55 02.8 -0.2
baz=296,SNR=5.6
MLY Manley 66.87 27 P P 03 55 03.5 -0.2
MLY IAmb IAmb 03 55 05.4
comp=Z,12nm,1.4s
MLY Manley 66.87 27 P P 03 55 03.8 +0.1
baz=297,SNR=7.4
CAST Castle Rocks 67.06 28 P P 03 55 04.2 -0.7
CAST IAmb IAmb 03 55 05.8
comp=Z,5.4nm,0.8s
CAST Castle Rocks 67.06 28 P P 03 55 05.0 +0.1
baz=296
N19K Bonanza Creek 67.18 32 P P 03 55 06.1 +0.3
baz=295
BPAW Bear Paw Mtn. 67.20 28 P P 03 55 05.4 -0.3
BPAW IAmb IAmb 03 55 08.2
comp=Z,7.2nm,0.8s
BPAW Bear Paw Mtn. 67.20 28 P P 03 55 06.0 +0.2
baz=297,SNR=7.0
E25K Arctic Village 67.23 23 P P 03 55 04.7 -1.2
E25K IAmb IAmb 03 55 21.1
comp=Z,5.1nm,1.4s
E25K Arctic Village 67.23 23 P P 03 55 05.5 -0.5
baz=300
PPLA Purkeypile 67.25 29 P P 03 55 06.0 -0.3
baz=296
O18K Koktuh Hills 67.26 33 P P 03 55 06.2 0.0
baz=295
G24K Hadweenzic Riv 67.28 24 P P 03 55 05.3 -0.9
G24K IAmb IAmb 03 55 07.7
comp=Z,6.2nm,0.9s
G24K Hadweenzic Riv 67.28 24 P P 03 55 06.3 0.0
baz=299
M20K Styx River 67.31 30 P P 03 55 05.6 -1.0
M20K IAmb IAmb 03 55 08.0
comp=Z,6.8nm,0.8s
M20K Styx River 67.31 30 P P 03 55 06.9 +0.3
baz=296
I23K Minto, Yukon-K 67.34 26 P P 03 55 07.0 +0.4
baz=298
GERES GERESS Array B 67.43 314 P P 03 55 06.4 -1.2
GERES GERESS Array B 67.43 314 P P 03 55 07.4 -0.2
comp=Z,0.7nm,0.7s,baz=18,slow=7.4,SNR=2.4
comp=Z,0.7nm,0.7s
P18K Big Mountain, 67.45 33 P P 03 55 07.9 +0.5
baz=295
F25K Christian Rive 67.47 23 P P 03 55 07.2 -0.3
baz=300,SNR=6.4
KTH Kantishna Hill 67.47 28 P P 03 55 05.5 -2.1
KTH IAmb IAmb 03 55 09.1
comp=Z,4.8nm,0.8s
MOA Molln 67.48 313 *e*pP pP 03 55 11.2 -0.3
comp=Z,0.5nm,0.3s
O19K Port Alsworth 67.52 32 P P 03 55 08.0 +0.3
baz=296
H24K Noodor Dome 67.56 25 P P 03 55 07.2 -0.9
H24K IAmb IAmb 03 55 09.1
comp=Z,3.2nm,0.8s
H24K Noodor Dome 67.56 25 P P 03 55 08.3 +0.3
baz=299
NEA2 Nenana 67.71 27 P P 03 55 08.8 -0.1
NEA2 IAmb IAmb 03 55 10.3
comp=Z,5.8nm,0.8s
NEA2 Nenana 67.71 27 P P 03 55 09.3 +0.4
baz=298,SNR=6.2
TRF Thorofare Moun 67.77 28 P P 03 55 09.2 -0.3
baz=298
BMAR Burnt Mountain 67.90 23 P P 03 55 09.9 -0.3
F26K Sheenjek River 67.91 23 P P 03 55 10.1 -0.1
baz=301
SKT Skwentna 67.94 30 P P 03 55 09.2 -1.3
baz=297
COLA College 68.03 26 P P 03 55 10.3 -0.6
COLA College 68.03 26 P P 03 55 10.7 -0.2
baz=299
COLA College 68.03 26 P P 03 55 10.3 -0.6
COLA pmax pmax
comp=Z,11nm,0.6s
POKR Poker Plat Res 68.07 26 P P 03 55 10.5 -0.8
POKR Poker Plat Res 68.07 26 P P 03 55 10.7 -0.6
baz=299,SNR=5.4
RSO Redoubt South 68.10 31 P P 03 55 10.7 -1.0
CCB Clear Creek Bu 68.16 26 P P 03 55 10.5 -1.2
MCK McKinley 68.17 27 P P 03 55 11.3 -0.6
baz=299
P19K Oil Pt 68.25 32 P P 03 55 12.4 -0.1
baz=297
CUT Chulitna 68.27 29 P P 03 55 11.7 -0.8
baz=298
RND Reindeer 68.36 28 P P 03 55 11.5 -1.7
RND IAmb IAmb 03 55 13.4
comp=Z,4.4nm,0.6s
RND Reindeer 68.36 28 P P 03 55 11.5 -1.7
RND pmax pmax
comp=Z,4.0nm,0.6s
KBA Koelnbreinsper 68.37 313 *e*pP pP 03 55 16.5 -0.7
comp=Z,0.7nm,0.3s
G26K Porcupine Rive 68.42 23 P P 03 55 13.2 -0.2
baz=302
IL31 68.44 26 P P 03 55 11.9 -1.6
ILAR Eielson Array 68.44 26 P P 03 55 10.8 -2.8
ILAR Eielson Array 68.44 26 P P 03 55 12.3 -1.2
comp=Z,0.9nm,0.6s,baz=292,slow=4.2,SNR=22
comp=Z,0.9nm,0.6s
SUA Susitna One 68.51 30 P P 03 55 13.6 -0.6
SUA Susitna One 68.51 30 P P 03 55 13.7 -0.4
baz=298,SNR=9.2
PRP Porcupine Dome 68.56 25 P P 03 55 14.3 -0.1
PRP Porcupine Dome 68.56 25 P P 03 55 14.9 +0.5
baz=301,SNR=7.3
HDA Harding Lake 68.60 26 P P 03 55 13.3 -1.2
baz=300
M22K Willow 68.64 30 P P 03 55 14.3 -0.4
baz=298
LESA Schwarzleotal 68.64 313 *e*pP pP 03 55 18.5 -0.3
comp=Z,3.0nm,0.5s
D28M Stokes Point 68.68 20 P P 03 55 14.7 -0.2
baz=305
WAT1 Susitna Watana 68.76 28 P P 03 55 14.2 -1.4
baz=299
J25K Salcha River, 69.08 26 P P 03 55 16.0 -1.7
baz=301
DHY Denali Highway 69.11 28 P P 03 55 16.8 -1.1
DHY IAmb IAmb 03 55 20.0
comp=Z,6.1nm,0.8s
DHY Denali Highway 69.11 28 P P 03 55 16.8 -1.1
baz=300
RC01 Rabbit Creek A 69.12 30 P P 03 55 16.9 -0.9
baz=299
PMR Palmer 69.13 30 P P 03 55 17.0 -0.8
PMR Palmer 69.13 30 P P 03 55 17.3 -0.5
baz=299,SNR=8.2
PMR Palmer 69.13 30 P P 03 55 17.0 -0.8
WAT6 Susitna Watana 69.21 28 P P 03 55 18.6 0.0
baz=300
F28M Old Crow 69.33 22 P P 03 55 18.6 -0.4
F28M IAmb IAmb 03 55 19.9
comp=Z,4.6nm,0.9s
F28M Old Crow 69.33 22 P P 03 55 18.6 -0.4
baz=305,SNR=5.7
BRSE Bradley Lake S 69.33 32 P P 03 55 18.2 -1.0
baz=299
OHAK Old Harbor 69.33 35 P P 03 55 19.1 -0.1
baz=298
WTTA Wattenberg 69.35 313 *e*pP pP 03 55 22.7 -0.7
comp=Z,0.9nm,0.4s
K24K Donnelly Dome 69.35 27 P P 03 55 18.5 -0.7
baz=301
SML Sawmill 69.35 29 P P 03 55 17.7 -1.6
SML Sawmill 69.35 29 P P 03 55 19.4 +0.1
baz=300,SNR=5.0
SML Sawmill 69.35 29 P P 03 55 17.7 -1.6
SML pmax pmax
comp=Z,11nm,0.7s
KDAK Kodiak Island 69.41 34 P P 03 55 19.1 -0.6
baz=298
O22K Cooper Landing 69.42 31 P P 03 55 18.6 -1.0
baz=299
E29M Blow River 69.48 21 P P 03 55 19.5 -0.5
E29M IAmb IAmb 03 55 21.0
comp=Z,10nm,1.0s
E29M Blow River 69.48 21 P P 03 55 20.2 +0.3
baz=306
KNK Knik Glacier 69.50 30 P P 03 55 19.9 -0.3
baz=300
I26K Coal Creek Min 69.52 25 IAmb IAmb 03 55 20.6
comp=Z,5.8nm,0.8s
I26K Coal Creek Min 69.52 25 P P 03 55 20.1 -0.1
baz=303
H27K Steamboat Moun 69.57 23 P P 03 55 21.1 +0.5
baz=304,SNR=12
M23K Glacier View 69.61 29 P P 03 55 20.5 -0.4
baz=300
SEW Seward 69.72 31 P P 03 55 21.2 -0.3
baz=300
SCM Sheep Creek Mo 69.75 29 P P 03 55 20.9 -1.0
SCM Sheep Creek Mo 69.75 29 P P 03 55 21.8 0.0
baz=301
SCM Sheep Creek Mo 69.75 29 P P 03 55 20.9 -1.0
SCM pmax pmax
comp=Z,9.0nm,0.7s
RETA Reutte 69.79 314 *i* pP pP 03 55 25.5 -0.5
comp=Z,0.4nm,0.4s
J26L Joseph Creek 69.81 25 P P 03 55 20.6 -1.5
J26L IAmb IAmb 03 55 22.4
comp=Z,7.1nm,0.8s
J26L Joseph Creek 69.81 25 P P 03 55 21.2 -0.9
baz=303
I27K Kandik River 69.89 24 P P 03 55 22.5 -0.1
baz=304
PAX Paxson 69.91 27 P P 03 55 21.9 -0.9
baz=302
SCRK Sand Creek 69.94 26 P P 03 55 21.7 -1.3
SCRK IAmb IAmb 03 55 22.9
comp=Z,5.3nm,0.8s
SCRK Sand Creek 69.94 26 P P 03 55 22.3 -0.7
baz=303,SNR=8.1
FETA Feichten 70.01 313 *e*pP pP 03 55 27.5 +0.1
comp=Z,2.4nm,0.9s
M24K Tolsona, Glenn 70.08 28 P P 03 55 23.3 -0.5
M24K Tolsona, Glenn 70.08 28 P P 03 55 24.0 +0.1
baz=301
HARP HAARP 70.33 28 P P 03 55 25.1 -0.2
baz=302
A36M Sachs Harbour 70.36 15 P P 03 55 24.2 -1.0
A36M Sachs Harbour 70.36 15 P P 03 55 25.1 -0.1
baz=316,SNR=18
KLU Klutina 70.50 29 P P 03 55 25.9 -0.6
KLU Klutina 70.50 29 P P 03 55 26.7 +0.2
baz=302,SNR=10.0
EGAK Eagle 70.52 25 P P 03 55 25.7 -0.6
EGAK Eagle 70.52 25 P P 03 55 25.9 -0.4
baz=305
I28M Miner Creek 70.55 24 P P 03 55 26.4 -0.4
I28M IAmb IAmb 03 55 27.5
comp=Z,5.5nm,0.8s
I28M Miner Creek 70.55 24 P P 03 55 26.5 -0.2
baz=305
F30M Barrier River 70.58 21 P P 03 55 26.7 -0.1
baz=308
K27K Chicken 70.61 25 IAmb IAmb 03 55 27.9
comp=Z,6.1nm,0.8s
K27K Chicken 70.61 25 P P 03 55 27.1 +0.1
baz=304
H29M Whitestone 70.62 23 P P 03 55 26.6 -0.5
baz=306
P23K Montague Islan 70.66 31 P P 03 55 27.1 -0.2
baz=301
L26K Log Cabin Wild 70.69 27 P P 03 55 26.2 -1.3
baz=303
INK Inuvik 70.81 20 P P 03 55 26.9 -1.1
INK IAmb IAmb 03 55 28.4
comp=Z,9.4nm,0.9s
INK Inuvik 70.81 20 P P 03 55 27.7 -0.3
baz=310,SNR=8.3
INK Inuvik 70.81 20 P P 03 55 26.9 -1.1
INK pmax pmax
comp=Z,9.0nm,1.0s
G30M tAoh Zrail Nji 70.84 21 P P 03 55 27.3 -1.1
G30M tAoh Zrail Nji 70.84 21 P P 03 55 28.0 -0.4
baz=308
N25K Chitina, Valde 70.98 28 P P 03 55 29.1 -0.3
N25K Chitina, Valde 70.98 28 P P 03 55 29.3 0.0
baz=303,SNR=6.6
EPYK Eagle Plains 71.06 22 P P 03 55 27.9 -1.8
EPYK Eagle Plains 71.06 22 P P 03 55 28.8 -0.9
baz=308,SNR=6.0
EYAK Cordova Ski Ar 71.08 30 P P 03 55 30.0 +0.2
baz=302
L27K Beaver Creek, 71.25 26 P P 03 55 31.2 +0.3
L27K IAmb IAmb 03 55 31.8
comp=Z,5.3nm,0.7s
L27K Beaver Creek, 71.25 26 P P 03 55 31.6 +0.7
baz=305
BCAR Beaver Creek A 71.26 26 P P 03 55 31.4 +0.3
F31M Tsiigehtchic 71.30 20 P P 03 55 29.7 -1.4
F31M IAmb IAmb 03 55 30.9
comp=Z,5.1nm,0.7s
F31M Tsiigehtchic 71.30 20 P P 03 55 30.4 -0.6
baz=310
BMRM Bremner River 71.32 29 P P 03 55 31.4 0.0
BMRM Bremner River 71.32 29 P P 03 55 31.7 +0.2
baz=303,SNR=5.3
GLB Gilahina Butte 71.39 28 P P 03 55 31.8 0.0
Q23K Middleton Isla 71.42 31 P P 03 55 31.3 -0.5
baz=302
G31M Satah River 71.48 21 P P 03 55 31.2 -0.9
G31M Satah River 71.48 21 P P 03 55 31.0 -1.1
baz=310,SNR=8.9
DAWY Dawson 71.56 25 P P 03 55 31.9 -0.8
DAWY IAmb IAmb 03 55 32.9
comp=Z,5.7nm,0.7s
DAWY Dawson 71.56 25 P P 03 55 32.0 -0.8
baz=306,SNR=5.7
M27K Edge Creek, AK 71.63 27 P P 03 55 33.4 +0.1
M27K IAmb IAmb 03 55 35.2
comp=Z,5.8nm,0.8s
M27K Edge Creek, AK 71.63 27 P P 03 55 33.6 +0.2
baz=305
VRDI Verde Repeater 71.65 28 P P 03 55 33.4 -0.2
VRDI IAmb IAmb 03 55 34.4
comp=Z,8.0nm,1.0s
MCARA McCarthy VSAT 71.73 28 P P 03 55 33.1 -0.7
MCARA McCarthy VSAT 71.73 28 P P 03 55 34.0 +0.2
baz=304
J29N Klondike Camp 71.73 24 P P 03 55 34.3 +0.4
baz=307,SNR=7.2
I30M Mount Dempster 71.89 23 P P 03 55 32.9 -1.9
I30M IAmb IAmb 03 55 34.9
comp=Z,5.2nm,0.8s
I30M Mount Dempster 71.89 23 P P 03 55 33.8 -1.0
baz=308
BVCY Beaver Creek 71.99 27 P P 03 55 36.0 +0.6
baz=306
BERG Berg Lake 72.01 29 P P 03 55 35.8 +0.3
CRQM Cirque 72.04 29 P P 03 55 35.9 0.0
CRQE Cirque 72.06 29 P P 03 55 35.5 -0.4
baz=304
TGL Tana Glacier 72.17 29 P P 03 55 35.8 -0.7
TGL IAmb IAmb 03 55 37.8
comp=Z,7.8nm,0.8s
J30M Hart River 72.30 23 P P 03 55 37.0 -0.4
J30M IAmb IAmb 03 55 37.7
comp=Z,5.1nm,0.7s
J30M Hart River 72.30 23 P P 03 55 37.3 -0.1
baz=309
WAX Waxell Ridge 72.33 29 P P 03 55 37.6 +0.2
K29M Barlow Dome 72.35 24 P P 03 55 37.6 0.0
K29M IAmb IAmb 03 55 38.4
comp=Z,6.8nm,0.8s
K29M Barlow Dome 72.35 24 P P 03 55 37.9 +0.3
baz=308,SNR=8.5
STKA Stephens Creek 72.44 148 P P 03 55 38.2 -0.1
STKA Stephens Creek 72.44 148 P P 03 55 38.2 -0.1
STKA pmax pmax
comp=Z,1.0nm,1.0s
STKA Stephens Creek 72.44 148 P P 03 55 38.0 -0.3
comp=Z,1.8nm,0.5s,baz=297,slow=7.9,SNR=6.9
comp=Z,1.8nm,0.5s
ISLE Juniper Island 72.45 29 P P 03 55 38.0 -0.2
ISLE IAmb IAmb 03 55 55.9
comp=Z,8.5nm,1.1s
BARN Barnard Glacie 72.46 28 P P 03 55 38.5 +0.1
BARN IAmb IAmb 03 55 39.3
comp=Z,6.3nm,0.9s
YUK3 Moose Creek 72.51 27 P P 03 55 39.2 +0.5
baz=306
RES Resolute Bay 72.55 5 P P 03 55 38.0 -0.5
RES IAmb IAmb 03 55 39.1
comp=Z,7.2nm,1.2s
RES Resolute Bay 72.55 5 P P 03 55 38.0 -0.5
RES pmax pmax
comp=Z,7.0nm,1.2s
C36M Paulatuk 72.56 16 P P 03 55 37.0 -1.6
C36M Paulatuk 72.56 16 P P 03 55 37.8 -0.8
baz=318,SNR=13
L29M L29M 72.58 25 P P 03 55 39.4 +0.4
L29M IAmb IAmb 03 55 40.2
comp=Z,12nm,0.9s
L29M L29M 72.58 25 P P 03 55 39.2 +0.3
baz=308
GRNC Granite Creek 72.61 28 P P 03 55 39.3 0.0
GRNC IAmb IAmb 03 55 42.2
comp=Z,4.7nm,0.9s
CTG Chitna Glacier 72.64 28 P P 03 55 39.6 +0.1
baz=306,SNR=5.3
CTGM Chitina Glacie 72.65 28 P P 03 55 39.6 +0.1
CTGM IAmb IAmb 03 55 40.7
comp=Z,7.6nm,0.6s
MESA MESA 72.85 29 P P 03 55 41.3 +0.5
baz=305
LOGN Logan Glacier 72.86 28 P P 03 55 40.6 -0.1
LOGN IAmb IAmb 03 55 43.9
comp=Z,4.7nm,0.9s
M29M Somme Creek 72.87 26 P P 03 55 40.5 -0.2
M29M Somme Creek 72.87 26 P P 03 55 41.3 +0.6
baz=307
YUK8 Steele Glacier 73.07 27 P P 03 55 42.0 -0.1
baz=307,SNR=5.4
M30M Minto, Yukon 73.39 25 P P 03 55 42.4 -1.3
M30M IAmb IAmb 03 55 45.1
comp=Z,5.3nm,0.8s
M30M Minto, Yukon 73.39 25 P P 03 55 43.9 +0.1
baz=309
YUK4 Talbot Arm 73.47 27 P P 03 55 44.3 -0.1
baz=308
PINM Pinnacle 73.59 28 P P 03 55 45.3 +0.3
baz=307
YUK6 Outpost Mounta 73.82 27 P P 03 55 46.7 +0.2
baz=308
N30M Aishikik Lake 73.99 26 P P 03 55 47.1 -0.2
N30M IAmb IAmb 03 55 48.6
comp=Z,8.3nm,0.8s
N30M Aishikik Lake 73.99 26 P P 03 55 48.2 +0.9
baz=309
O29M Mount Kennedy 74.13 28 P P 03 55 48.7 +0.5
baz=308
PNL Peninsula 74.19 28 P P 03 55 48.7 +0.3
baz=307
HYT Haines Junctio 74.23 27 P P 03 55 48.6 -0.2
HYT IAmb IAmb 03 55 49.9
comp=Z,9.9nm,0.9s
HYT Haines Junctio 74.23 27 P P 03 55 49.2 +0.5
baz=309,SNR=5.0
M31M Drury Creek, Y 74.50 25 P P 03 55 50.3 +0.2
baz=311
O30N Mendenhall 74.80 26 P P 03 55 52.1 +0.1
O30N IAmb IAmb 03 55 53.1
comp=Z,9.4nm,0.7s
O30N Mendenhall 74.80 26 P P 03 55 52.3 +0.3
baz=310,SNR=7.8
FARO Faro, Yukon 74.85 24 P P 03 55 52.1 -0.1
baz=312
P30M Million Dollar 74.88 27 P P 03 55 53.1 +0.7
baz=309
P29M Windy Craggy 74.88 28 P P 03 55 52.4 -0.1
baz=309
WHY Whitehorse 75.33 26 P P 03 55 54.0 -1.1
baz=311
N32M Quiet Lake 75.66 25 P P 03 55 56.6 -0.3
baz=312
SKAG Skagway 75.94 27 P P 03 55 57.8 -0.6
SKAG IAmb IAmb 03 55 59.9
comp=Z,11nm,0.8s

SKAG	**Skagway**	**75.94**	**27**	P	**P**	**03 55 58.8**	**+0.3**
	baz=311						
P33M	**Teslin, Yukon**	**76.39**	**26**	P	**P**	**03 56 01.0**	**-0.2**
	baz=312						
P32M	**Atlin**	**76.47**	**27**	P	**P**	**03 56 01.6**	**0.0**
	baz=312						
TGTN	**Hyland Airport**	**77.07**	**23**	P	**P**	**03 56 05.1**	**+0.1**
	baz=316						
R33M	**Jennings River**	**77.63**	**26**	P	**P**	**03 56 08.1**	**-0.1**
	baz=314						
WTLY	**Watson Lake, Y**	**77.91**	**24**	P	**P**	**03 56 09.2**	**-0.4**
	baz=316						
S34M	**Telegraph Cree**	**78.60**	**27**	P	**P**	**03 56 13.2**	**-0.3**
	baz=314						
T35M	**Bob Quinn**	**79.60**	**27**	P	**P**	**03 56 18.7**	**-0.2**
	baz=315						
YKA	**Yellowknife Ar**	**80.36**	**18**	P	**P**	**03 56 22.8**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=327,slow=5.2,SNR=78						
YKA				PKKPbc	**PKKPbc**	**04 15 02.4**	**-3.0**
	comp=Z,0.1nm,0.6s,baz=140,slow=2.2,SNR=5.0						
	comp=Z,3.6nm,0.6s						
EDM	**Edmonton**	**88.56**	**22**	P	**P**	**03 57 04.6**	**-0.1**
EDM				IAmb	IAmb	03 57 09.3	
	comp=Z,9.1nm,1.4s						
EDM	**Edmonton**	**88.56**	**22**	P	**P**	**03 57 04.6**	**-0.1**
EDM				pmax	pmax		
	comp=Z,9.0nm,1.4s						
FFC	**Flin Flon**	**90.31**	**15**	P	**P**	**03 57 10.7**	**-2.1**
FFC				IAmb	IAmb	03 57 13.5	
	comp=Z,6.2nm,0.9s						
FFC	**Flin Flon**	**90.31**	**15**	P	**P**	**03 57 10.7**	**-2.1**
FFC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEW	**Newport**	**91.39**	**27**	P	**P**	**03 57 17.9**	**0.0**
	baz=325						
SCHQ	**Schefferville**	**93.04**	**355**	P	**P**	**03 57 24.1**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=44,slow=8.0,SNR=4.7						
	comp=Z,2.6nm,0.8s						
RLMT	**Red Lodge**	**96.91**	**24**	P	**P**	**03 57 43.2**	**-0.3**
	baz=331						
QSPA	**South Pole Qui**	**121.98**	**180**	PKP	**PKPdf**	**04 03 04.7**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=288,slow=1.1,SNR=14						
BDFB	**Brasilia**	**150.59**	**298**	PKPbc	**PKPbc**	**04 04 02.8**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=135,slow=4.3,SNR=1.4						

VIE 18 03:53:19.8±0.3, 47°.83N×16°.17E, h5km±4km, mlO.1/2, Error ellipse: s-maj=2.5km s-min=1.5km az=59.0, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RONA	**Rosalia, Austr**	**0.15**	**147**	*e*Pg	Pg	03 53 22.9	+0.1
	0.4nm,0.1s						
RONA				*e*Sg	Sg	03 53 25.1	+0.3
	0.9nm,0.1s						
CONA	**Conrad Observa**	**0.23**	**296**	*e*Pg	Pg	03 53 24.9	+0.5
	0.1nm,0.2s						
CONA				*e*Sg	Sg	03 53 28.8	+1.3
	0.7nm,0.2s						

IDC 18 04:03:52.5±1.3, 1°.65N×125°.46E, h0km, mb3.2/5, mbtmp3.2/5, Error ellipse: s-maj=151.3km s-min=20.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**158**	P	P	04 08 58.9	-1.9
	0.2nm,0.4s,baz=336,slow=11,SNR=6.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**26.47**	**162**	P	P	04 09 33.0	+1.5
	0.3nm,0.7s,baz=347,slow=12,SNR=4.1						
	0.3nm,0.7s						
SONM	**Songino Array**	**48.88**	**343**	P	P	04 12 40.6	+0.4
	0.2nm,0.5s,baz=151,slow=6.3,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.56**	**327**	P	P	04 13 51.1	+0.1
	0.1nm,0.4s,baz=121,slow=7.2,SNR=4.8						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**62.82**	**328**	P	P	04 14 19.4	-0.5
	0.2nm,0.5s,baz=124,slow=6.0,SNR=3.3						
	0.2nm,0.5s						

IDC 18 04:05:54.2±1.3, 0°.05S×125°.52E, h0km, mb3.9/5, mbtmp4.0/5, MS3.3/1, Error ellipse: s-maj=159.7km s-min=18.7km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.57**	**157**	P	P	04 10 44.8	-0.8
	2.9nm,0.6s,baz=335,slow=11,SNR=20						
	2.9nm,0.6s						
ASAR	**Alice Springs**	**24.84**	**161**	P	P	04 11 18.8	+0.2
	1.6nm,0.6s,baz=343,slow=7.8,SNR=47						
	1.6nm,0.6s						
JOW	**Kunigami**	**26.86**	**5**	LR	LR	04 22 15.2	
	comp=Z,65nm,21.0s,baz=270,slow=36						
STKA	**Stephens Creek**	**35.11**	**156**	P	P	04 12 49.7	+0.2
	2.0nm,0.5s,baz=338,slow=9.4,SNR=9.1						
	2.0nm,0.5s						
MKAR	**Makanchi Array**	**60.01**	**327**	P	P	04 16 02.1	-0.6
	0.7nm,0.4s,baz=126,slow=7.8,SNR=22						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**64.29**	**329**	P	P	04 16 32.2	+0.8
	0.4nm,0.5s,baz=132,slow=6.6,SNR=4.8						
	0.4nm,0.5s						

*SJA **18** 04:31:12.2±0.7, 22°.29S×68°.53W, h116km±4km, ML3.4, MW3.5*
*GUC **18** 04:31:14.1±0.9, 22°.26S×68°.60W, h105km±4km, ML3.1*
ISC 18 04:31:13.6±1.6, 22°.31S±0°.04×68°.62W±0°.07, h117km±9km, n25, σ0s90/41, 2C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.40**	**222**	*e*P	**Pn**	**04 31 30.6**	**-0.5**
LVC				*e*S	**Sn**	**04 31 44.0**	**-0.2**
LVC				IAML		04 31 44.5	
	comp=Z,528nm,0.3s						
LVC	**Limon Verde**	**0.40**	**222**	*e*P	**Pn**	**04 31 30.3**	**-0.8**
LVC				*e*S	**Sn**	**04 31 42.9**	**-1.3**
AF01	**San Pedro de A**	**0.76**	**148**	⇓*i*P	**Pn**	**04 31 33.7**	**+0.3**
AF01				*e*S	**Sn**	**04 31 48.4**	**0.0**
AF01				IAML		04 31 49.6	
	comp=N,1μm,0.3s						
PB09	**IPOC Station P**	**0.77**	**311**	*e*P	**Pn**	**04 31 33.1**	**-0.3**
PB09				*e*S	**Sn**	**04 31 48.8**	**+0.4**
PB09				IAML		04 31 49.4	
	comp=Z,516nm,0.6s						
PB09	**IPOC Station P**	**0.77**	**311**	⇓*i*P	**Pn**	**04 31 33.5**	**0.0**
PB09				*e*S	**Sn**	**04 31 48.1**	**-0.3**
PB06	**IPOC Station P**	**0.97**	**246**	*e*P	**Pn**	**04 31 35.6**	**+0.4**
PB06				IAML		04 31 55.4	
	comp=Z,524nm,0.5s						
PB06	**IPOC Station P**	**0.97**	**246**	⇑*i*P	**Pn**	**04 31 35.5**	**+0.4**
PB06				*e*S	**Sn**	**04 31 52.1**	**+0.6**
PB06				IAML		04 31 57.1	
	comp=N,752nm,0.3s						
PB15	**IPOC Station P**	**1.19**	**221**	*e*P	**Pn**	**04 31 38.5**	**+0.9**
PB15				*e*S	**Sn**	**04 31 57.5**	**+1.8**
PB15				IAML		04 32 01.5	
	comp=Z,2μm,0.1s						
PB15	**IPOC Station P**	**1.19**	**221**	⇑*i*P	**Pn**	**04 31 38.4**	**+0.9**
PB15				*e*S	**Sn**	**04 31 57.2**	**+1.5**
PB07	**IPOC Station P**	**1.31**	**296**	*e*P	**Pn**	**04 31 39.2**	**+0.4**
PB07				IAML		04 32 00.4	
	comp=Z,332nm,0.5s						
PB07	**IPOC Station P**	**1.31**	**296**	⇓*i*P	**Pn**	**04 31 39.0**	**+0.2**
PB07				*e*S	**Sn**	**04 31 57.9**	**-0.1**
PB07				IAML		04 32 00.2	
	comp=E,570nm,0.3s						
PB04	**IPOC Station P**	**1.42**	**269**	*e*P	**Pn**	**04 31 40.4**	**+0.4**
PB04				IAML		04 32 03.6	
	comp=Z,393nm,0.1s						
PB04	**IPOC Station P**	**1.42**	**269**	*e*P	**Pn**	**04 31 40.4**	**+0.4**
PB04				*e*S	**Sn**	**04 31 59.8**	**-0.3**
PB04				IAML		04 32 05.1	
	comp=N,487nm,0.1s						
PB01	**IPOC Station P**	**1.50**	**327**	*e*P	**Pn**	**04 31 40.9**	**0.0**
PB01	**IPOC Station P**	**1.50**	**327**	⇓*i*P	**Pn**	**04 31 40.6**	**-0.3**
PB01				*e*S	**Sn**	**04 32 01.2**	**-0.5**
PB01				IAML		04 32 02.8	
	comp=N,160nm,0.3s						
PB02	**IPOC Station P**	**1.54**	**309**	*e*P	**Pn**	**04 31 41.4**	**0.0**
PB02				*e*S	**Sn**	**04 32 03.0**	**+0.4**
PB02				IAML		04 32 10.4	
	comp=Z,301nm,0.5s						
PB02	**IPOC Station P**	**1.54**	**309**	⇓*i*P	**Pn**	**04 31 41.4**	**0.0**
PB02				*e*S	**Sn**	**04 32 02.1**	**-0.5**
PB02				IAML		04 32 03.7	
	comp=E,512nm,0.4s						
PB08	**IPOC Station P**	**2.22**	**347**	*e*P	**Pn**	**04 31 50.7**	**+0.7**
PB08	**IPOC Station P**	**2.22**	**347**	*e*P	**Pn**	**04 31 51.0**	**+1.0**
PB08				*e*S	**Sn**	**04 32 18.4**	**+0.6**
PB08				IAML		04 32 21.7	
	comp=E,66nm,0.4s						
HMBC	**Humberstone**	**2.34**	**329**	*e*P	**Pn**	**04 31 50.7**	**-0.7**
GO01	**Chusmiza**	**2.69**	**348**	*e*P	**Pn**	**04 31 56.7**	**+0.6**
PB11	**IPOC Station P**	**2.72**	**339**	*e*P	**Pn**	**04 31 55.5**	**-0.8**
PB14	**IPOC Station P**	**2.83**	**215**	*e*P	**Pn**	**04 31 58.1**	**+0.3**
PB14				*e*S	**Sn**	**04 32 28.4**	**-3.5**
PB14				IAML		04 32 42.9	
	comp=Z,116nm,0.3s						
GO02	**Mina Guanaco**	**2.98**	**197**	*e*P	**Pn**	**04 32 00.2**	**+0.5**
GO02				*e*S	**Sn**	**04 32 34.0**	**-1.3**
AC02	**Maricunga**	**4.53**	**186**	*e*P	**Pn**	**04 32 21.2**	**+0.6**

*CNRM **18** 04:38:37.8, 35°.53N×3°.77W, h24km, ML2.7*
*INMG **18** 04:38:38.9±1.4, 35°.46N×3°.79W, h21km±7km, ML2.4, Error ellipse: s-maj=5.7km s-min=3.4km az=161.0*
*MDD **18** 04:38:38.1±0.3, 35°.47N×3°.78W, h12km, mb_Lg2.9/36, Error ellipse: s-maj=2.7km s-min=2.0km az=0.0*
*SFS **18** 04:38:38.6, 35°.45N×3°.75W, h21km, ML3.2/15, ML3.3/15, MLv3.2/15*
*IGIL **18** 04:38:40.5, 35°.46N×3°.78W, h18km, ML2.0*
ISC 18 04:38:37.7±1.0, 35°.49N±0°.02×3°.77W±0°.02, h26km±11km, n92, σ1s33/142, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.30**	**208**	P	**Pb**	**04 38 44.8**	**-0.1**
PALE	**Palemas**	**0.30**	**208**	S	**Sn**	**04 38 50.8**	**-1.3**
GOG	**Mont Gurugu**	**0.68**	**112**	P	**Pn**	**04 38 51.4**	**-0.4**
GOG	**Mont Gurugu**	**0.68**	**112**	S	**Sn**	**04 39 00.8**	**-0.9**
EMEL	**Melilla**	**0.69**	**105**	Pg	**Pn**	**04 38 51.7**	**-0.1**
EMEL				Sg	**Sn**	**04 39 01.4**	**-0.3**
EMLI	**Melilla**	**0.69**	**105**	Pg	**Pn**	**04 38 51.6**	**-0.3**
EMLI				Sg	**Sn**	**04 39 01.6**	**-0.2**
EALB	**Alboran**	**0.75**	**53**	Pg	**Pb**	**04 38 52.0**	**-0.3**
EALB				Sg	**Sb**	**04 39 02.0**	**0.0**
EALB	**Alboran**	**0.75**	**53**	Pg	**Pb**	**04 38 51.9**	**-0.3**
EALB				Sg	**Sb**	**04 39 02.0**	**0.0**
EALB				*i* Vmb_Lg		04 39 06.3	
AKLM	**AKL**	**0.97**	**185**	P	**Pb**	**04 38 57.1**	**+1.1**
AKLM	**AKL**	**0.97**	**185**	S	**Sn**	**04 39 08.5**	**-0.4**
CHAS	**Isla Isabel II**	**1.13**	**105**	Sn	**Sn**	**04 39 12.0**	**-0.6**
CHAS				Pg	**Pn**	**04 38 57.7**	**-0.2**
TAF	**Taforalt**	**1.30**	**121**	P	**Pb**	**04 39 00.7**	**-0.8**
TAF	**Taforalt**	**1.30**	**121**	S	**Sb**	**04 39 17.6**	**-0.1**
SMIR	**Smir Dam**	**1.33**	**279**	P	**Pn**	**04 38 59.4**	**-1.2**
SMIR	**Smir Dam**	**1.33**	**279**	S	**Sb**	**04 39 17.7**	**-0.9**
CHEFC	**Chefchaouen**	**1.34**	**254**	P	**Pb**	**04 39 02.6**	**+0.4**
CHEFC	**Chefchaouen**	**1.34**	**254**	S	**Sb**	**04 39 19.5**	**+0.5**
EMIJ	**Mijas**	**1.35**	**323**	Pn	**Pn**	**04 39 00.6**	**-0.3**
EMIJ	**Mijas**	**1.35**	**323**	Pn	**Pn**	**04 39 01.4**	**+0.4**
EMIJ				Sn	**Sb**	**04 39 18.7**	**-0.6**
EMIJ				*i* Vmb_Lg		04 39 22.2	
CEU	**Ceuta**	**1.37**	**288**	Pn	**Pn**	**04 39 00.1**	**-1.0**
ECEU	**Ceuta**	**1.37**	**288**	Pn	**Pn**	**04 39 01.3**	**0.0**
ECEU				Sn	**Sn**	**04 39 17.1**	**-1.4**
EMAL	**Malaga-Limoner**	**1.38**	**337**	Pn	**Pn**	**04 39 01.6**	**+0.2**
ELGU	**Los Guajares,**	**1.39**	**5**	Pn	**Pn**	**04 39 00.8**	**-0.7**
ELGU				Sn	**Sn**	**04 39 19.1**	**+0.1**
ELGU	**Los Guajares,**	**1.39**	**5**	Pn	**Pn**	**04 39 01.9**	**+0.4**
ELGU				Sn	**Sn**	**04 39 19.2**	**+0.2**
ELGU				*i* Vmb_Lg		04 39 23.0	
JBK	**JBK**	**1.51**	**139**	P	**Pn**	**04 39 03.7**	**+0.3**
JBK	**JBK**	**1.51**	**139**	S	**Sb**	**04 39 23.4**	**-0.7**
EBER	**Berja**	**1.58**	**26**	Pn	**Pn**	**04 39 03.7**	**-0.5**
EBER	**Berja**	**1.58**	**26**	Pn	**Pn**	**04 39 03.9**	**-0.3**
EBER				Sn	**Sn**	**04 39 24.6**	**+0.6**
EBER				*i* Vmb_Lg		04 39 30.4	
EGOR	**Sierra Gorda,**	**1.65**	**350**	Pn	**Pb**	**04 39 06.5**	**-1.0**
EGOR				Sn	**Sn**	**04 39 26.2**	**+0.6**
EGOR	**Sierra Gorda,**	**1.65**	**350**	Pn	**Pn**	**04 39 05.1**	**-0.1**
EGOR				Sn	**Sn**	**04 39 26.3**	**+1.1**
EGOR				*i* Vmb_Lg		04 39 32.1	
EQUE	**Quentar**	**1.74**	**9**	Pn	**Pn**	**04 39 06.8**	**+0.4**
EQUE				Sn	**Sn**	**04 39 28.6**	**+0.8**
EQUE				*i* Vmb_Lg		04 39 33.8	
EQTA	**Presa de Quent**	**1.74**	**9**	Pn	**Pn**	**04 39 06.9**	**+0.5**
RSA	**Sarsar**	**1.79**	**251**	P	**Pn**	**04 39 07.5**	**+0.6**
RSA	**Sarsar**	**1.79**	**251**	S	**Sb**	**04 39 29.4**	**-2.4**
ENIJ	**Nijar**	**1.95**	**40**	Pn	**Pn**	**04 39 08.6**	**-0.6**
ENIJ	**Nijar**	**1.95**	**40**	Pn	**Pn**	**04 39 08.6**	**-0.6**
ENIJ				Sn	**Sn**	**04 39 32.3**	**-0.5**
ENIJ				*i* Vmb_Lg		04 39 34.4	
LCRM	**LCR**	**2.01**	**207**	P	**Pb**	**04 39 12.6**	**-1.1**
ESPR	**Espera**	**2.18**	**310**	Pn	**Pn**	**04 39 12.5**	**+0.1**
ESPR				Sn	**Sn**	**04 39 38.0**	**-0.5**
ESPR				*i* Vmb_Lg		04 39 48.1	
EQES	**Quesada**	**2.38**	**13**	Pn	**Pn**	**04 39 17.5**	**+2.3**
EQES				Sn	**Sn**	**04 39 45.4**	**+1.8**
EQES				*i* Vmb_Lg		04 39 49.7	
MD31	**MD31**	**2.74**	**198**	P	**Pn**	**04 39 21.4**	**+1.3**
MDT	**Midelt**	**2.75**	**195**	P	**Pb**	**04 39 27.4**	**+1.1**
EADA	**Adamuz**	**2.75**	**347**	Pn	**Pn**	**04 39 22.2**	**+1.9**
EADA				Sn	**Sn**	**04 39 54.0**	**+1.3**
EADA	**Adamuz**	**2.75**	**347**	Pn	**Pn**	**04 39 22.2**	**+1.9**
EADA				Sn	**Sn**	**04 39 53.9**	**+1.1**
EADA				*i* Vmb_Lg		04 40 03.1	
ECAB	**El Cabril**	**2.91**	**333**	Pn	**Pn**	**04 39 24.7**	**+2.3**
ECAB	**El Cabril**	**2.91**	**333**	Pn	**Pn**	**04 39 23.6**	**+1.2**
ECAB				Sn	**Sn**	**04 39 56.7**	**+0.2**
ECAB				*i* Vmb_Lg		04 40 08.5	
EZAR	**Zarzadilla de**	**2.91**	**34**	Pn	**Pn**	**04 39 22.6**	**+0.1**
EZAR				Sn	**Sn**	**04 39 57.1**	**+0.5**
EZAR				*i* Vmb_Lg		04 40 05.8	
CART	**Cartagena**	**3.06**	**46**	P	**Pn**	**04 39 25.0**	**+0.6**
EMUR	**La Murta**	**3.11**	**40**	Pn	**Pn**	**04 39 26.2**	**+1.0**
EMUR				Sn	**Sn**	**04 40 00.7**	**-0.8**
EMUR				*i* Vmb_Lg		04 40 13.0	
ZHG	**ZHG**	**3.13**	**230**	P	**Pn**	**04 39 28.1**	**+2.7**
E1002	**Yechar (Murcia**	**3.19**	**35**	Pn	**Pn**	**04 39 26.6**	**+0.4**
E1002				Sn	**Sn**	**04 40 03.9**	**+0.5**
PSIM	**Granatula de C**	**3.33**	**0**	Pn	**Pn**	**04 39 30.1**	**+1.9**
PSIM				Sn	**Sn**	**04 40 07.0**	**+0.1**
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**04 39 34.4**	**+2.2**
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**04 39 34.3**	**+2.1**
ETOB				Sn	**Sn**	**04 40 14.6**	**+0.4**
ETOB				*i* Vmb_Lg		04 40 22.8	
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**04 39 33.1**	**+0.9**
EGRO				Sn	**Sn**	**04 40 13.0**	**-1.1**
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**04 39 33.2**	**+1.0**
EGRO				Sn	**Sn**	**04 40 13.4**	**-0.8**
EGRO				*i* Vmb_Lg		04 40 14.1	
PVAQ	**Vaqueiros**	**3.71**	**302**	*e*Pn	**Pn**	**04 39 35.2**	**+1.8**
PVAQ				*e*Sn	**Sn**	**04 40 15.5**	**-0.9**
PVAQ	**Vaqueiros**	**3.71**	**302**	P	**Pn**	**04 39 33.8**	**+0.4**
PBAR	**Barrancos**	**3.75**	**317**	*e*Pn	**Pn**	**04 39 34.8**	**+0.8**
PBAR				*e*Sn	**Sn**	**04 40 16.1**	**-1.2**
PBAR				A	A	04 40 23.8	
	5.0nm,2.0s						
PBAR	**Barrancos**	**3.75**	**317**	Pn	**Pn**	**04 39 34.8**	**+0.8**
PBAR				Sn	**Sn**	**04 40 15.8**	**-1.5**
PBDV	**Barranco-do-Ve**	**3.79**	**299**	*e*Pn	**Pn**	**04 39 36.0**	**+1.5**
PBDV				*e*Sn	**Sn**	**04 40 17.5**	**-0.8**
PBDV				A	A	04 40 24.8	
	4.1nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.79**	**299**	Pn	**Pn**	**04 39 35.4**	**+0.9**
PBDV				Sn	**Sn**	**04 40 16.7**	**-1.6**
FIGM	**Figuig**	**3.94**	**147**	P	**Pn**	**04 39 37.6**	**+0.9**
PCVE	**Castro Verde**	**4.05**	**303**	*e*Pn	**Pn**	**04 39 36.9**	**+1.8**
PCVE				*e*Sn	**Sn**	**04 40 24.1**	**-0.6**
PCVE				A	A	04 40 29.0	
	4.7nm,0.8s						
PAB	**San Pablo**	**4.08**	**354**	Pn	**Pn**	**04 39 40.4**	**+1.9**
PAB				Sn	**Sn**	**04 40 25.3**	**-0.2**
PAB				*i* Vmb_Lg		04 40 52.8	
PBEJ	**Beja**	**4.16**	**309**	*e*Sn	**Sn**	**04 40 26.7**	**-0.5**
PBEJ				A	A	04 40 29.5	
	2.8nm,0.5s						
EBAD	**Badajoz**	**4.17**	**323**	Pn	**Pn**	**04 39 40.2**	**+0.5**
EBAD				Sn	**Sn**	**04 40 26.0**	**-1.5**
EBAD	**Badajoz**	**4.17**	**323**	Pn	**Pn**	**04 39 40.3**	**+0.6**
EBAD				Sn	**Sn**	**04 40 26.7**	**-0.9**
EBAD				*i* Vmb_Lg		04 40 31.2	
MESJ	**Messejana**	**4.28**	**305**	*e*Sn	**Sn**	**04 40 29.9**	**-0.4**
MESJ				A	A	04 40 34.4	
	3.9nm,0.3s						
MESJ	**Messejana**	**4.28**	**305**	*e*P	**Pn**	**04 39 43.1**	**+1.9**
MESJ				*e*S	**Sn**	**04 40 29.0**	**-1.3**
MESJ				IAML		04 40 30.2	
	comp=N,2.7nm,0.2s						
TISM	**Timmit**	**4.37**	**211**	P	**Pn**	**04 39 44.1**	**+1.7**
PFVI	**Vila Bisbo**	**4.40**	**293**	*e*Sn	**Sn**	**04 40 34.5**	**+1.1**
PTEO	**Sao Teotonio**	**4.49**	**299**	*e*Pn	**Pn**	**04 39 46.9**	**+2.8**
PTEO				*e*Sn	**Sn**	**04 40 35.3**	**-0.2**
PESTR	**Estremoz**	**4.55**	**319**	*e*Pn	Pn	04 39 50.0	+5.0
PESTR				*e*Sn	**Sn**	**04 40 35.6**	**-1.4**
EVO	**Evora**	**4.56**	**313**	*e*Pn	**Pn**	**04 39 46.3**	**+1.3**
EVO				*e*Sn	**Sn**	**04 40 35.9**	**-1.3**
EVO				A	A	04 40 37.7	
	comp=N,4.8nm,0.5s						
PNCL	**Nicolau / Gran**	**4.63**	**306**	*e*Pn	**Pn**	**04 39 47.8**	**+1.7**
PNCL				*e*Sn	**Sn**	**04 40 37.6**	**-1.4**
PNCL				A	A	04 40 38.9	
	comp=N,2.8nm,0.6s						
PNCL	**Nicolau / Gran**	**4.63**	**306**	Pn	**Pn**	**04 39 47.4**	**+1.3**
PNCL				Sn	**Sn**	**04 40 37.1**	**-1.8**
PMRV	**Marv??o**	**4.88**	**325**	*e*Pn	**Pn**	**04 39 51.0**	**+1.5**
PMRV				*e*Sn	**Sn**	**04 40 44.7**	**-0.4**
EPLA	**Plasencia**	**4.92**	**339**	Pn	**Pn**	**04 39 51.9**	**+1.8**
EPLA				Sn	**Sn**	**04 40 45.2**	**-1.0**
EPLA				*i* Vmb_Lg		04 40 55.8	
PMTG	**Montargil**	**5.04**	**317**	*e*Pn	**Pn**	**04 39 53.4**	**+1.7**
PMTG				*e*Sn	**Sn**	**04 40 48.1**	**-1.0**
PMTG				A	A	04 40 48.8	
	comp=N,3.5nm,0.4s						
GUD	**Guadarrama**	**5.16**	**357**	Pn	**Pn**	**04 39 55.3**	**+1.9**
GUD				Sn	**Sn**	**04 40 50.8**	**-1.3**
GUD				*i* Vmb_Lg		04 41 15.5	
OUM	**OUZ**	**5.21**	**210**	P	**Pn**	**04 39 57.5**	**+3.4**
PCBR	**Castelo Branco**	**5.25**	**327**	*e*Pn	Pn	04 39 59.1	+4.6
PCBR				*e*Sn	**Sn**	**04 40 52.4**	**-1.8**
EIBI	**Ibiza**	**5.40**	**48**	Pn	**Pn**	**04 39 57.6**	**+1.0**
EIBI				Sn	**Sn**	**04 40 55.2**	**-2.7**
EIBI				*i* Vmb_Lg		04 41 44.9	
ETOR	**Torete**	**5.49**	**14**	Pn	**Pn**	**04 39 58.8**	**+0.8**
ETOR				Sn	**Sn**	**04 40 58.8**	**-1.6**
PMAFR	**Mafra**	**5.60**	**310**	*e*Sn	**Sn**	**04 41 01.6**	**-1.2**
MTE	**Manteigas**	**5.74**	**330**	*e*Sn	**Sn**	**04 41 05.1**	**-1.3**
PVIS	**Viseu**	**6.15**	**329**	*e*Sn	**Sn**	**04 41 15.6**	**-0.9**
MVO	**Moncorvo**	**6.22**	**337**	*e*Pn	**Pn**	**04 40 10.4**	**+2.4**
MVO				*e*Sn	**Sn**	**04 41 17.6**	**-0.7**
PVRL	**Vila Real**	**6.56**	**333**	*e*Pn	**Pn**	**04 40 14.6**	**+2.0**
PVRL				*e*Sn	**Sn**	**04 41 24.4**	**-2.1**
PVRL				A	A	04 41 28.6	
	comp=N,3.1nm,0.5s						
POLO	**Lamas de Olo**	**6.67**	**333**	*e*Sn	**Sn**	**04 41 27.6**	**-1.8**
PBRG	**Braganca**	**6.72**	**341**	*e*Pn	**Pn**	**04 40 18.4**	**+3.6**
PBRG				*e*Sn	**Sn**	**04 41 29.2**	**-1.4**
ELOB	**Lobios**	**7.20**	**334**	Pn	**Pn**	**04 40 22.8**	**+1.4**
ELOB				Sn	**Sn**	**04 41 37.9**	**-4.5**
ELOB				*i* Vmb_Lg		04 42 43.3	

*IDC **18** 04:40:10.5±5.8, 7°.32S×106°.43E, h35km±42km, mb3.6/9, mbtmp3.8/9, Error ellipse: s-maj=48.6km s-min=16.5km az=57.0*
*NEIC **18** 04:40:11.6±1.7, 7°.26S±0°.08×106°.49E±0°.07, h42km±4km, mb4.4/15, Error ellipse: s-maj=12.5km s-min=8.3km az=219.0*
*DJA **18** 04:40:14.7±0.5, 8°S±3°×10°7E±°, h29km±5km, M4.4/15, MLv4.4/15*
ISC 18 04:40:12.6±0.5, 7°.52S±0°.04×106°.65E±0°.05, h50km, n70, σ2s42/61, mb4.0/16, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.52**	**350**	P	**Pn**	**04 40 27.3**	**+3.1**
CNJI	**Cibinong**	**0.52**	**66**	P	**Pn**	**04 40 26.3**	**+2.1**
CNJI				S	**Sn**	**04 40 34.2**	**+1.8**
DBJI	**Dramaga**	**0.97**	**6**	P	**Pn**	**04 40 32.9**	**+2.9**
DBJI				S	**Sn**	**04 40 45.8**	**+3.1**
BBJI	**Bungbulang**	**0.99**	**87**	P	**Pn**	**04 40 32.4**	**+2.0**
LEM	**Lembang**	**1.19**	**54**	Pg	**Pn**	**04 40 35.7**	**+2.7**
	1μm,0.3s,baz=286,slow=6.4,SNR=262						
LEM				Lg	Lg	04 40 52.5	
	390nm,0.3s,baz=300,slow=17,SNR=10						
LEM	**Lembang**	**1.19**	**54**

baz=67,slow=75,SNR=81
H04N1 CROZET ISLANDS 60.65 221 T T 05 56 22.1
baz=67,slow=75,SNR=129
H04N3 CROZET ISLANDS 60.66 221 T T 05 56 23.9
baz=67,slow=75,SNR=76
H04S1 CROZET ISLANDS 60.82 220 T T 05 56 31.4
baz=69,slow=76,SNR=9.6
H04S3 CROZET ISLANDS 60.84 220 T T 05 56 31.9
baz=69,slow=76,SNR=3.8
H04S2 CROZET ISLANDS 60.84 220 T T 05 56 32.2
baz=69,slow=76,SNR=4.7
KURBB Kurchatov Arra 62.82 340 P **P 04 50 30.6 -2.4**
comp=Z,0.4nm,0.6s,baz=154,slow=6.0,SNR=4.4
comp=Z,0.4nm,0.6s
KURK Kurchatov 62.87 340 P **P 04 50 30.4 -2.9**
KURK IAmb IAmb 04 50 41.1
comp=Z,2.3nm,1.2s
BVAR Borovoye Array 67.71 337 P **P 04 51 02.1 -2.6**
comp=Z,0.6nm,0.5s,baz=140,slow=9.2,SNR=4.9
comp=Z,0.6nm,0.5s
ABKAR Akbulak array 69.68 329 P **P 04 51 15.5 -1.5**
BRTR Keskin Array B 81.91 312 P **P 04 52 27.1 -0.2**
comp=Z,0.8nm,0.8s,baz=134,slow=7.2,SNR=4.3
comp=Z,0.8nm,0.8s
QSPA South Pole Qui 82.47 180 P **P 04 52 31.1 +1.4**
QSPA IAmb IAmb 04 52 50.5
comp=Z,6.4nm,1.4s
TXAR Lajitas Array 144.17 49 PKP **PKPab 04 59 42.2 +0.7**
comp=Z,0.3nm,0.5s,baz=334,slow=2.0,SNR=10.0
R40A Maddies Statio 144.92 26 PKPab 04 59 42.4 -1.5
MGMO Mountain Grove 145.85 27 PKPdf **PKPdf 04 59 45.1 -1.3**
BDFB Brasilia 145.95 227 PKPbc **PKPdf 04 59 46.7 -0.5**
comp=Z,1.2nm,0.7s,baz=162,slow=3.2,SNR=3.1
WVT Waverly 148.60 23 PKPdf 04 59 53.7 +2.8

NEIC ***18*** *04:44:48.0±1.0, 35.78N±0.01×98.57W±0.01, h5km±1km, Error ellipse: s-maj=3.1km s-min=2.2km az=221.0*
TUL 18 04:44:48.6±1.1, 35.79N±0.01×98.58W±0.02, h2km±4km, ML3.2, mb_Lg3.0/87(NEIC), **ML3.2**/32(NEIC), **Error ellipse: s-maj=2.2km s-min=1.8km az=224.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSTR	**Hydro, Custer**	**0.17**	**213**	Pg	Pg	04 44 52.4	+0.5
CSTR				Sg	Sg	04 44 55.4	+1.2
U32A	**Winter Ranch,**	**0.68**	**330**	Pg	Pg	04 45 01.8	+0.1
U32A				Sg	Sg	04 45 11.2	+0.7
U32A				IAML		04 45 26.4	
	comp=E,1μm,0.7s						
OK038	**West end E0370**	**0.70**	**349**	Pg	Pg	04 45 02.2	+0.2
OK038				IAML		04 45 20.3	
	comp=E,1μm,0.2s						
OK038				IAML		04 45 22.0	
	comp=E,1μm,0.3s						
ELIS	**Ellis County**	**0.74**	**292**		Pg	04 45 02.6	-0.1
ELIS				IAML		04 45 25.0	
	comp=N,1μm,0.3s						
ELIS				IAML		04 45 26.3	
	comp=E,768nm,0.5s						
CROK	**Carrier**	**0.86**	**34**		Pg	04 45 05.1	+0.1
OK029	**Liberty Lake**	**0.91**	**89**	Pg	Pg	04 45 05.6	-0.5
OK035	**E0210 Rd and N**	**0.92**	**353**	Pg	Pg	04 45 05.3	-0.9
OK035				IAML		04 45 24.9	
	comp=E,651nm,0.3s						
OK035				IAML		04 45 33.9	
	comp=E,703nm,0.2s						
ADOK	**Arcadia Dam**	**0.99**	**98**		Pg	04 45 07.4	-0.1
OKCSW	**OKLAHOMA CITY**	**1.00**	**112**	Pg	Pg	04 45 06.7	-1.2
OK032	**Salt Plains WL**	**1.05**	**16**	Pg	Pg	04 45 08.0	-0.8
FNO	**Franklin**	**1.10**	**119**	Pg	Pg	04 45 08.7	-0.9
FNO				IAML		04 45 24.5	
	comp=E,510nm,0.3s						
GC02	**Grant County #**	**1.21**	**28**	Pg	Pg	04 45 11.0	-0.8
KAN14	**Manchester OK**	**1.26**	**23**	Pg	Pg	04 45 11.8	-1.1
KAN14				IAML		04 45 30.3	
	comp=N,485nm,0.4s						
X34A	**Smith Ranch, M**	**1.33**	**153**	Pg	Pg	04 45 13.3	-0.9
X34A				IAML		04 45 32.6	
	comp=N,277nm,0.4s						
X34A				IAML		04 45 33.2	
	comp=E,396nm,0.3s						
OK033	**Mehan**	**1.35**	**79**		Pn	04 45 12.8	-1.6
KAN10	**Anthony SW Sta**	**1.39**	**16**		Pn	04 45 13.8	-1.1
KAN17	**Caldwell West**	**1.41**	**27**		Pn	04 45 14.3	-1.0
KAN05	**Bluff City Nor**	**1.43**	**23**		Pn	04 45 14.6	-1.0
OK052	**Battle Ridge R**	**1.45**	**82**		Pn	04 45 14.4	-1.5
OK048	**Pawnee Station**	**1.46**	**64**		Pn	04 45 14.8	-1.2
BLOK	**Blackwell**	**1.46**	**48**		Pn	04 45 15.3	-0.7
KAN13	**South Haven SW**	**1.51**	**36**		Pn	04 45 15.8	-0.8
KAN01	**Argonia South**	**1.51**	**26**		Pn	04 45 16.5	-0.2
KAN08	**Anthony NE Sta**	**1.51**	**19**		Pn	04 45 15.7	-1.0
SMWD	**Samnorwood**	**1.52**	**244**		Pn	04 45 15.8	-1.1
W35A	**Tecumseh**	**1.53**	**114**		Pn	04 45 16.1	-0.8
KAN09	**Caldwell North**	**1.55**	**30**		Pn	04 45 16.9	-0.3
QUOK	**Quay**	**1.56**	**75**		Pn	04 45 16.3	-1.1
KAN06	**Argonia West S**	**1.56**	**21**		Pn	04 45 16.7	-0.7
KAN12	**Harper NE Stat**	**1.57**	**17**		Pn	04 45 17.1	-0.4
OK051	**E0350 and S346**	**1.58**	**63**		Pn	04 45 16.5	-1.1
KS21	**Milan North St**	**1.66**	**26**		Pn	04 45 18.6	-0.1
DEOK	**Depew**	**1.69**	**88**		Pn	04 45 18.6	-0.5
T35A	**Sooner Cattle**	**2.01**	**55**	Pn	Pn	04 45 22.0	-1.5
WTFS	**Witchita Falls**	**2.02**	**177**	Pn	Pn	04 45 23.4	-0.3
LOOK	**Love County**	**2.13**	**147**	Pn	Pn	04 45 24.1	-1.1
TUL3	**Leonard**	**2.26**	**86**	Pn	Pn	04 45 26.1	-0.9
R32A	**Long Quarter,**	**2.63**	**358**	Pn	Pn	04 45 30.4	-1.7
Z35A	**Perchaven, San**	**2.69**	**156**	Pn	Pn	04 45 32.7	-0.1
AMTX	**Amarillo**	**2.70**	**251**	Pn	Pn	04 45 33.0	-0.1
AMTX				IAmb_Lg		04 46 18.8	
	comp=Z,49nm,0.8s						
APMT	**Aspermont**	**2.77**	**208**	Pn	Pn	04 45 33.6	-0.4
FW03	**Perrin-Whitt E**	**2.78**	**171**	Pn	Pn	04 45 34.1	0.0
FW03				IAmb_Lg		04 46 19.6	
	comp=Z,39nm,0.8s						
DKNS	**Dickens**	**2.87**	**223**		Pn	04 45 35.5	0.0
DKNS				IAmb_Lg		04 46 26.0	
	comp=Z,35nm,0.8s						
X37A	**Clayton**	**2.88**	**114**		Pn	04 45 35.1	-0.5
X37A				IAmb_Lg		04 46 24.1	
	comp=Z,56nm,0.8s						
RLO	**Rose Lookout**	**2.91**	**82**		Pn	04 45 35.2	-0.6
RLO				IAmb_Lg		04 46 27.4	
	comp=Z,21nm,0.7s						
FW06	**Azle**	**2.94**	**163**		Pn	04 45 36.8	+0.6
PLPT	**Palo Pinto**	**2.98**	**176**		Pn	04 45 37.6	+0.8
FW07	**Weatherford**	**3.15**	**168**	Pn	Pn	04 45 38.5	-0.7
CBKS	**Cedar Bluff**	**3.16**	**343**	Pn	Pn	04 45 38.8	-0.6
ABTX	**Abilene, Hawle**	**3.28**	**196**		Pn	04 45 41.0	0.0
SN07	**Snyder 07**	**3.31**	**216**		Pn	04 45 40.5	-0.9
SN07				IAmb_Lg		04 46 38.7	
	comp=Z,36nm,0.9s						
RTBA	**Rita Blanca**	**3.43**	**282**	Pn	Pn	04 45 43.5	+0.3
U38A	**Gravette**	**3.45**	**78**		Pn	04 45 43.1	-0.3
U38A				IAmb_Lg		04 46 41.1	
	comp=Z,33nm,0.7s						
SN05	**Snyder 5**	**3.48**	**214**	IAmb_Lg		04 46 40.2	
	comp=Z,32nm,0.8s						
FW13	**Cleburne**	**3.56**	**164**		Pn	04 45 45.2	+0.4
FW16	**Waxahatchie**	**3.58**	**157**	Pn	Pn	04 45 43.2	-1.9
POST	**Post**	**3.64**	**222**	IAmb_Lg		04 46 50.1	
	comp=Z,26nm,0.8s						
KSU1	**Kansas State U**	**3.66**	**25**		Pn	04 45 46.8	+0.6
HHAR	**Hobbs**	**3.79**	**81**	Pn	Pn	04 45 47.9	-0.1
Z38A	**Mt. Pleasant**	**3.89**	**129**	Pn	Pn	04 45 47.0	-2.4
Z38A				IAmb_Lg		04 47 02.4	
	comp=Z,43nm,0.7s						
MSTX	**Muleshoe**	**3.90**	**243**		Pn	04 45 49.6	0.0
WHTX	**Lake Whitney,**	**3.90**	**166**	Pn	Pn	04 45 49.6	+0.1
MIAR	**Mount Ida**	**4.28**	**105**	Pn	Pn	04 45 54.9	+0.2
MIAR				IAmb_Lg		04 47 11.0	
	comp=Z,41nm,0.8s						
SGCY	**Sterling City**	**4.41**	**209**	Pn	Pn	04 45 55.9	-0.7
237A	**Washetta, Mont**	**4.42**	**148**	Pn	Pn	04 45 54.8	-1.9
BRDY	**Brady**	**4.51**	**185**	Pn	Pn	04 45 56.9	-1.0
KSCO	**Kaye Shedlock'**	**4.55**	**316**	IAmb_Lg		04 47 13.8	
	comp=Z,31nm,0.7s						
S39A	**Bolivar**	**4.62**	**64**		Pn	04 45 58.8	-0.7
S39A				IAmb_Lg		04 47 23.3	
	comp=Z,33nm,0.8s						
X40A	**Basin Creek Fa**	**4.88**	**104**		Pn	04 46 02.5	-0.5
X40A				IAmb_Lg		04 47 32.5	
	comp=Z,26nm,0.9s						
T25A	**Trinidad**	**4.89**	**288**	IAmb_Lg		04 47 28.8	
	comp=Z,35nm,0.8s						
WLAR	**White Oak Lake**	**4.96**	**113**	IAmb_Lg		04 47 28.7	
	comp=Z,36nm,1.2s						
435B	**Jarrell**	**5.06**	**170**	IAmb_Lg		04 47 32.4	
	comp=Z,33nm,0.8s						
WHAR	**Wooly Hollow**	**5.15**	**94**	Pn	Pn	04 46 06.0	-0.7
WHAR				IAmb_Lg		04 47 39.0	
	comp=Z,20nm,0.9s						
UALR	**University of**	**5.20**	**99**	Pn	Pn	04 46 05.7	-1.6
UALR				IAmb_Lg		04 47 47.6	
	comp=Z,25nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.24**	**87**	Pn	Pn	04 46 06.5	-1.5
MGMO	**Mountain Grove**	**5.26**	**73**	IAmb_Lg		04 47 39.3	
	comp=Z,34nm,0.9s						
OZNA	**Ozona**	**5.30**	**204**	Pn	Pn	04 46 06.9	-2.0
OZNA				IAmb_Lg		04 47 47.4	
	comp=Z,21nm,0.9s						
JCT	**Junction City**	**5.40**	**191**	Pn	Pn	04 46 06.8	-3.3
R40A	**Maddies Statio**	**5.63**	**62**	Pn	Pn	04 46 12.4	-0.8
R40A				IAmb_Lg		04 47 49.6	
	comp=Z,28nm,0.8s						
OGNE	**Ogallala**	**5.82**	**333**	IAmb_Lg		04 48 04.4	
	comp=Z,32nm,0.8s						
SDCO	**Great Sand Dun**	**5.89**	**291**		Pn	04 46 18.2	+1.0
LCAR	**Lake Charles**	**6.03**	**85**	IAmb_Lg		04 48 01.7	
	comp=Z,17nm,0.9s						
CCM	**Cathedral Cave**	**6.29**	**67**	IAmb_Lg		04 48 10.4	
	comp=Z,32nm,0.9s						
HBAR	**Harrisburg**	**6.45**	**90**	IAmb_Lg		04 48 25.7	
	comp=Z,33nm,0.8s						
ANMO	**Albuquerque**	**6.50**	**265**	Pn	Pn	04 46 24.6	-0.7
SAND	**Sanderson**	**6.54**	**208**	Pn	Pn	04 46 23.8	-2.1
DRIO	**Del Rio**	**6.58**	**196**	Pn	Pn	04 46 24.6	-1.8
EF01	**Eagle Ford 01**	**6.65**	**179**	IAmb_Lg		04 48 27.2	
	comp=Z,17nm,0.8s						
PBMO	**Poplar Bluff**	**6.65**	**79**	IAmb_Lg		04 48 21.9	
	comp=Z,27nm,0.8s						
143A	**Socs Landing,**	**6.69**	**115**	IAmb_Lg		04 48 27.9	
	comp=Z,17nm,1.0s						
ISCO	**Idaho Springs**	**6.86**	**308**	Pn	Pn	04 46 29.5	-1.0
ISCO				IAmb_Lg		04 48 29.4	
	comp=Z,22nm,1.0s						
FVM	**French Village**	**6.89**	**69**	IAmb_Lg		04 48 41.0	
	comp=Z,26nm,1.1s						
K30B	**Basset**	**6.92**	**354**	IAmb_Lg		04 48 44.5	
	comp=Z,27nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.07**	**258**	IAmb_Lg		04 48 41.1	
	comp=Z,16nm,0.9s						
VHRN	**Van Horn**	**7.33**	**229**	Pn	Pn	04 46 36.1	-0.7
CGM3	**Cape Girardeau**	**7.33**	**76**	IAmb_Lg		04 48 50.1	
	comp=Z,17nm,0.9s						
833A	**Chaparral WMA,**	**7.48**	**186**	IAmb_Lg		04 48 57.9	
	comp=Z,14nm,1.0s						
Y45A	**Yeager Farm, C**	**7.67**	**102**	Pn	Pn	04 46 40.1	-1.2
S44A	**Carbondale**	**7.72**	**73**	IAmb_Lg		04 49 14.7	
	comp=Z,21nm,0.8s						
TXAR	**Lajitas Array**	**7.74**	**215**	Pn	Pn	04 46 41.5	-0.9
SIUC	**Southern Illin**	**7.75**	**73**	IAmb_Lg		04 49 08.0	
	comp=Z,25nm,0.8s						
ECSD	**EROS Data Cent**	**8.07**	**10**	Pn	Pn	04 46 44.1	-2.7
L40A	**Anamosa**	**8.48**	**40**	IAmb_Lg		04 49 36.6	
	comp=Z,22nm,0.9s						
K22A	**Casper**	**9.21**	**320**	IAmb_Lg		04 49 59.4	
	comp=Z,12nm,0.9s						
JFWS	**Jewell Farm**	**9.60**	**40**	IAmb_Lg		04 49 59.0	
	comp=Z,19nm,0.7s						

IDC 18 04:45:36.9±4.0, 41.69N×127.08E, h0km, mbtmp2.6/2, ML2.5/2, **Error ellipse: s-maj=49.6km s-min=16.9km az=113.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**4.29**	**171**	Pn	Pn	04 46 42.5	-0.9
KSRS	0.2nm,0.3s,baz=356,slow=13,SNR=2.4			Pg	Pb	04 46 55.7	+2.6
KSRS	1.0nm,0.3s,baz=352,slow=18,SNR=9.8			Lg	Lg	04 47 53.9	
	3.1nm,0.3s,baz=350,slow=29,SNR=14						
I45RU	0.4nm,0.4s **USSURIYSK INFR**	**4.38**	**54**	I	I	05 10 50.0	
	0.1nm,0.9s,baz=234,slow=328,SNR=1.9						
USRK	**Ussuriysk Ar.**	**4.39**	**54**	Pn	Pn	04 46 44.4	-0.4
	0.2nm,0.3s,baz=254,slow=16,SNR=5.3						
USRK				Pg	Pb	04 46 57.8	+2.9
	0.6nm,0.3s,baz=241,slow=16,SNR=9.7						
USRK				Lg	Lg	04 47 56.4	
	0.9nm,0.3s,baz=237,slow=28,SNR=6.2						
	1.2nm,0.6s						

BJI ***18*** *04:47:17.5±0.0, 5.15S×130.74E, h118km, mb5.1/78, mB5.3/34*
MOS ***18*** *04:47:18.4±0.9, 4.92S×130.41E, h103km, mb5.3/65, Error ellipse: s-maj=8.5km s-min=4.3km az=117.5*
GCMT ***18*** *04:47:21.9±0.2, 4.84S±0.01×130.48E±0.01, h127km±2km, MW5.0/114, Moment Tensor Solution. s41,c46; s114,c173; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr1.63±.10; Mθθ-3.24±.10; Mϕϕ 1.61±.11; Mrθ-1.36±.07; Mθϕ0.60±.12; Mrϕ2.23±.07; Best double couple: Mo3.88000×10[16] NP1:ϕs313.00000°, δ73.00000°, λ130.00000°. NP2:ϕs62.00000°, δ42.00000°, λ25.00000°. Principal axes: T 3.8940, Plg46.0000°, Azm263.0000°; N -0.0280, Plg38.0000°, Azm119.0000°; P -3.8660, Plg19.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***18*** *04:47:21.2, 5.10S×130.69E, h160km, Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10[16]Nm; Mrr1.77; Mθθ-3.14; Mϕϕ 1.37; Mrθ-2.17; Mθϕ-1.02; Mrϕ2.59; Fault plane solution: Mo4.40000×10[16] NP1: ϕs296.95000°, δ74.51000°, λ127.80000°. NP2: ϕs45.95000°, δ40.41000°, λ24.34000°. Principal axes: T 4.8350, Plg47.0000°, Azm246.0000°; N -0.8725, Plg36.0000°, Azm105.0000°; P -3.9624, Plg20.0000°, Azm359.0000°;*
NEIC ***18*** *04:47:21.9±1.8, 4.90S±0.05×130.47E±0.07, h115km±4km, mb5.2/169, Mww5.0/19 Error ellipse: s-maj=9.5km s-min=7.8km az=95.0*
NEIC ***18*** *04:47:21.2, 4.90S×130.49E, h160km*
DJA ***18*** *04:47:22.3±0.2, 5.2S×13.0E±., h130km±2km, M5.2/78, mb5.3/78, mB5.7/41, MLv5.7/12, Mw(mB)5.2/41, MwMwp4.7/2, Mwp5.0/2*
IDC ***18*** *04:47:23.5±1.4, 5.00S×130.44E, h138km±11km, mb4.8/32, mbtmp5.2/35, MS3.6/18, Error ellipse: s-maj=14.5km s-min=7.6km az=80.0*
ISC 18 04:47:21.3±0.3, 4.99S±0.03×130.51E±0.04, h123km±2km, h123km:pP-P, n832, σ1940, mb5.1/182, **46C-7D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.76**	**307**	P	**Pn**	**04 47 43.2**	**+1.7**
BNDI	**Bandanaira**	**0.76**	**307**	P	**Pn**	**04 47 43.1**	**+1.6**
BNDI				S	**Sn**	**04 47 58.9**	**+2.2**
FAKI	**Fak Fak**	**2.69**	**40**	Pn	**Pn**	**04 48 03.0**	**-0.6**
FAKI				Sn	**Sn**	**04 48 33.4**	**-2.9**
FAKI	**Fak Fak**	**2.69**	**40**	P	**Pn**	**04 48 03.2**	**-0.5**
FAKI	**Fak Fak**	**2.69**	**40**	P	**Pn**	**04 48 03.1**	**-0.6**
FAKI				S	**Sn**	**04 48 33.6**	**-2.7**
SAUI	**Saumlaki**	**3.08**	**165**	Pn	**Pn**	**04 48 10.7**	**+2.0**
SAUI				Sn	**Sn**	**04 48 46.3**	**+1.0**
SAUI	**Saumlaki**	**3.08**	**165**	P	**Pn**	**04 48 11.1**	**+2.4**
SAUI	**Saumlaki**	**3.08**	**165**	P	**Pn**	**04 48 10.7**	**+2.0**
KMPI	**Kaimana, Papua**	**3.44**	**68**	P	**Pn**	**04 48 13.7**	**+0.1**
NLAI	**Namlea**	**3.82**	**297**	P	**Pn**	**04 48 19.8**	**+1.2**
SWI	**Sorong**	**4.17**	**10**	P	**Pn**	**04 48 22.1**	**-1.1**
LBMI	**Labuha**	**5.26**	**325**	P	**Pn**	**04 48 38.2**	**+0.3**
	1μm,0.9s,31μm16nm						
SANI	**Sanana**	**5.38**	**303**	P	**Pn**	**04 48 39.9**	**+0.5**
SANI	**Sanana**	**5.38**	**303**	P	**Pn**	**04 48 38.4**	**-1.0**
	775nm,0.5s,9μm3μm3.2nm						
TNTI	**Ternate**	**6.53**	**331**	Pn	**Pn**	**04 48 54.4**	**-0.6**
TNTI	**Ternate**	**6.53**	**331**	P	**Pn**	**04 48 56.0**	**+1.0**
TNTI	**Ternate**	**6.53**	**331**	P	**Pn**	**04 48 55.3**	**+0.3**
	226nm,0.8s,2μm0.7nm						
SOEI	**Soe**	**7.80**	**232**	Pn	**Pn**	**04 49 14.7**	**+2.5**
SOEI	**Soe**	**7.80**	**232**	P	**Pn**	**04 49 15.0**	**+2.8**
	505nm,1.1s,6μm3μm3.1nm						
KDU	**Kakadu**	**7.89**	**166**	P	**Pn**	**04 49 12.2**	**-1.2**
	baz=8.0,SNR=429						
KDU	**Kakadu**	**7.89**	**166**	P	**Pn**	**04 49 12.8**	**-0.5**
BBSI	**Bau Bau**	**7.92**	**266**	P	**Pn**	**04 49 18.5**	**+4.7**
KMSI	**Cibinong**	**8.55**	**310**	P	**Pn**	**04 49 22.9**	**+0.6**
	260nm,0.5s,8μm						
LUWI	**Luwuk**	**8.67**	**297**	Pn	**Pn**	**04 49 23.8**	**-0.1**
LUWI	**Luwuk**	**8.67**	**297**	P	**Pn**	**04 49 24.8**	**+1.0**
LUWI	**Luwuk**	**8.67**	**297**	P	**Pn**	**04 49 24.6**	**+0.8**
	254nm,1.4s,3μm						
SMPI	**Sarmi**	**8.71**	**70**	P	**Pn**	**04 49 25.4**	**+1.0**
	155nm,0.9s						
MMRI	**Maumere**	**8.98**	**246**	Pn	**Pn**	**04 49 30.7**	**+2.6**
MMRI	**Maumere**	**8.98**	**246**	P	**Pn**	**04 49 28.2**	**+0.1**
MMRI	**Maumere**	**8.98**	**246**	P	**Pn**	**04 49 29.3**	**+1.2**
	245nm,0.9s,6μm						
EDFI	**Ende, Flores**	**9.52**	**246**	P	**Pn**	**04 49 38.3**	**+2.8**
	270nm,1.6s,4μm						
GENI	**Genyem**	**9.92**	**76**	P	**Pn**	**04 49 42.3**	**+1.5**
GENI	**Genyem**	**9.92**	**76**	P	**Pn**	**04 49 41.9**	**+1.1**
	361nm,0.7s,8μm						
MRSI	**Marisa**	**10.14**	**302**	P	**Pn**	**04 49 44.1**	**+0.4**
	451nm,0.9s,4μm						
TABU	**Tabubil**	**10.67**	**92**	P	**Pn**	**04 49 51.3**	**+0.4**
KAPI	**Kappang**	**10.72**	**269**	Pn	**Pn**	**04 49 52.2**	**+0.7**
KAPI	**Kappang**	**10.72**	**269**	P	**Pn**	**04 49 52.2**	**+0.7**
KNRA	**Kununurra**	**10.76**	**189**	P	**Pn**	**04 49 50.2**	**-1.8**
	baz=11						
KNRA	**Kununurra**	**10.76**	**189**	Pn	**Pn**	**04 49 49.9**	**-2.1**
KNRA	**Kununurra**	**10.76**	**189**	P	**Pn**	**04 49 51.5**	**-0.5**
TTSI	**Tana Toraja**	**10.84**	**280**	P	**Pn**	**04 49 54.8**	**+1.7**
	150nm,1.0s,1μm						
BASI	**Baing, Sumba**	**11.13**	**242**	P	**Pn**	**04 49 57.5**	**+0.5**
	322nm,0.4s						
TOLI2	**Tolitoli**	**11.46**	**302**	Pn	**Pn**	**04 50 00.7**	**-0.7**
TOLI2	**Tolitoli**	**11.46**	**302**	P	**Pn**	**04 50 01.8**	**+0.5**
MPSI	**Mapaga**	**11.85**	**296**	P	**Pn**	**04 50 07.3**	**+0.8**
	124nm,0.8s,2μm						
DAV	**Davao City (W)**	**12.95**	**338**	Pn	**Pn**	**04 50 21.2**	**+0.2**
DAV	**Davao City (W)**	**12.95**	**338**	P	**Pn**	**04 50 21.3**	**+0.4**
	175nm,0.4s,baz=256,slow=4.2,SNR=2.5						
PLAI	**Plampang**	**13.21**	**253**	P	**Pn**	**04 50 24.9**	**+0.7**
PLAI	**Plampang**	**13.21**	**253**	P	**Pn**	**04 50 24.5**	**+0.3**
	357nm,0.5s,4μm						
FITZ	**Fitzroy Crossi**	**13.87**	**200**	P	**Pn**	**04 50 30.1**	**-2.7**
	baz=14,SNR=35						
FITZ	**Fitzroy Crossi**	**13.87**	**200**	P	**Pn**	**04 50 32.3**	**-0.5**
TWSI	**Taliwang, Sumb**	**14.03**	**254**	P	**Pn**	**04 50 35.1**	**+0.2**
	177nm,0.6s,2μm						
BKB	**Balikpapan**	**14.09**	**285**		**Pn**	**04 50 35.6**	**0.0**
BKB	**Balikpapan**	**14.09**	**285**	P	**Pn**	**04 50 36.1**	**+0.5**
WRAB	**Tennant Creek**	**15.32**	**166**	Pn	**Pn**	**04 50 49.5**	**-1.6**
WRAB	**Tennant Creek**	**15.32**	**166**	P	**Pn**	**04 50 49.5**	**-1.6**
WRA	**Warramunga Arr**	**15.32**	**166**	Pn	**Pn**	**04 50 48.5**	**-2.7**
WRA	**Warramunga Arr**	**15.32**	**166**	P	**Pn**	**04 50 48.5**	**-2.7**
WRA	**Warramunga Arr**	**15.32**	**166**	P	**Pn**	**04 50 47.5**	**-3.6**
	111nm,0.5s,baz=338,slow=14,SNR=125						
WRA					S	**Sn**	**04 53 31.4**	**-10**
	104nm,0.5s,baz=338,slow=21,SNR=11						
WB2	**Warramunga Arr**	**15.33**	**166**	P	**Pn**	**04 50 47.6**	**-3.6**
	baz=15						
WB2	**Warramunga Arr**	**15.33**	**166**	Pn	**Pn**	**04 50 48.7**	**-2.5**
COEN	**Coen**	**15.33**	**126**	P	**Pn**	**04 50 50.3**	**-1.0**
	baz=15,SNR=84						
COEN	**Coen**	**15.33**	**126**	Pn	**Pn**	**04 50 51.8**	**+0.5**
COEN	**Coen**	**15.33**	**126**	P	**Pn**	**04 50 51.8**	**+0.5**
WR0	**Warramunga Arr**	**15.39**	**166**		**Pn**	**04 50 50.1**	**-1.9**
SRBI	**Singaraja**	**15.51**	**258**	P	**Pn**	**04 50 53.2**	**-0.3**
	229nm,1.4s,3μm						
MTKI	**Muara Teweh, K**	**16.10**	**284**	P	**P**	**04 51 01.4**	**-0.4**
	82nm,1.0s,13μm						
JAGI	**Jajag, Banyuwa**	**16.61**	**257**		**Pn**	**04 51 05.7**	**-1.4**
JAGI	**Jajag, Banyuwa**	**16.61**	**257**	P	**Pn**	**04 51 06.6**	**-0.5**
JAGI	**Jajag, Banyuwa**	**16.61**	**257**	P	**Pn**	**04 51 05.5**	**-1.6**
	162nm,0.5s,3μm						
BLJI	**Banyuglugur**	**17.03**	**260**	P	**Pn**	**04 51 12.7**	**+0.5**
	846nm,1.0s,7μm						
MANU	**Manus Island**	**17.07**	**81**	P	**Pn**	**04 51 13.3**	**+0.6**
MANU	**Manus Island**	**17.07**	**81**	P	**Pn**	**04 51 16.3**	**+3.6**
PMG	**Port Moresby**	**17.09**	**106**	P	**Pn**	**04 51 13.9**	**+1.0**
PMG	**Port Moresby**	**17.09**	**106**	P	**Pn**	**04 51 15.8**	**+2.9**
PMG	**Port Moresby**	**17.09**	**106**	P	**Pn**	**04 51 15.9**	**+3.0**
PMG	**Port Moresby**	**17.09**	**106**	P	**Pn**	**04 51 13.9**	**+1.0**
PMG	**Port Moresby**	**17.09**	**106**	P	**Pn**	**04 51 13.2**	**+0.3**
	22nm,0.8s,baz=282,slow=9.3,SNR=4.9						
PMG					LR	LR	04 59 12.6
	comp=Z,268nm,19.4s,baz=300,slow=41						
GMJI	**Gumukmas**	**17.26**	**258**	P	**P**	**04 51 13.9**	**-0.7**
QIS	**Mount Isa**	**17.82**	**151**	P	**Pn**	**04 51 21.5**	**-0.2**
	baz=18,SNR=115						
QIS	**Mount Isa**	**17.82**	**151**	P	**Pn**	**04 51 21.7**	**0.0**
KKM	**Kota Kinabalu**	**18.00**	**307**	P	**P**	**04 51 22.9**	**+0.1**
KKM	**Kota K

baz=24,SNR=69
MEEK Meekatharra 24.34 207 P P 04 52 28.0 +0.1
INKA Innaminka 24.64 158 P P 04 52 32.1 +1.6
QLP Quilpie 25.16 150 P P 04 52 36.2 +1.0
baz=25,SNR=18
QLP Quilpie 25.16 150 P P 04 52 37.1 +1.8
XMI Christmas Isla 25.18 256 P P 04 52 34.9 -0.7
XMIS Christmas Isla 25.22 256 P P 04 52 34.6 -1.4
XMIS IAmb IAmb 04 52 36.8
comp=Z,72nm,0.8s
XMIS Christmas Isla 25.22 256 P P 04 52 35.1 -0.9
MULG Mulgathing 25.38 173 P P 04 52 38.4 +1.2
FORT Forrest 25.76 185 P P 04 52 41.3 +0.7
baz=26,SNR=71
FORT Forrest 25.76 185 P P 04 52 40.9 +0.3
FORT Forrest 25.76 185 P P 04 52 41.9 +1.3
KASI Kota Agung 25.91 268 P P 04 52 39.2 -3.0
LCRK Leigh Creek 26.34 165 P P 04 52 47.6 +1.7
RK1H Rockhampton Ha 26.57 135 P P 04 52 49.8 +1.7
KMBL Kambalda 27.46 196 P P 04 52 56.4 +0.5
baz=28,SNR=54
KMBL Kambalda 27.46 196 P P 04 52 56.5 +0.5
MNAI Manna 27.47 270 P P 04 52 54.3 -2.0
MYKOM Kota Tinggi 27.47 284 P P 04 52 56.0 -0.3
MORW Morawa 27.60 208 P P 04 52 57.1 -0.1
baz=28,SNR=22
MORW Morawa 27.60 208 P P 04 52 57.0 -0.2
MORW IAmb IAmb 04 52 58.1
comp=Z,59nm,0.9s
MORW Morawa 27.60 208 P P 04 52 57.1 -0.1
DLV T Lat 27.62 308 P P 04 52 57.9 +0.2
DLV T Lat 27.62 308 P P 04 52 59.1 +1.4
BBOO Buckleboo 28.16 170 P P 04 53 02.8 +0.7
baz=28,SNR=32
BBOO Buckleboo 28.16 170 P P 04 53 02.7 +0.5
BBOO IAmb IAmb 04 53 38.1
comp=Z,44nm,0.5s
BBOO Buckleboo 28.16 170 P P 04 53 03.4 +1.3
EIDS Eidsvold 28.28 138 P P 04 53 03.9 +0.6
baz=28,SNR=3.5
EIDS Eidsvold 28.28 138 P P 04 53 03.4 +0.1
BLDU Ballidu 28.62 205 P P 04 53 06.3 +0.1
baz=29,SNR=138
BLDU Ballidu 28.62 205 P P 04 53 06.6 +0.4
STKA Stephens Creek 28.70 160 P P 04 53 08.1 +1.1
baz=29,SNR=74
STKA Stephens Creek 28.70 160 P P 04 53 08.1 +1.1
STKA Stephens Creek 28.70 160 P P 04 53 08.0 +1.1
STKA Stephens Creek 28.70 160 *i* P P 04 53 08.3 +1.4
STKA Stephens Creek 28.70 160 P P 04 53 08.1 +1.1
comp=Z,13nm,0.4s,baz=343,slow=7.9,SNR=82
comp=Z,13nm,0.4s
KLBR Kellerberrin 29.05 203 P P 04 53 10.5 +0.5
baz=29,SNR=72
KLBR Kellerberrin 29.05 203 P P 04 53 10.4 +0.4
TWG Pinlang 29.14 342 P P 04 53 08.1 -2.8
TWG IAmb IAmb 04 53 53.2
comp=Z,59nm,1.5s
HTT Hallett 29.36 166 P P 04 53 14.3 +1.4
baz=30,SNR=7.5
HTT Hallett 29.36 166 P P 04 53 14.3 +1.4
AULRC Lightning Ridg 29.39 148 P P 04 53 14.8 +1.7
HNR Honiara 29.52 100 LR LR 05 07 18.2
comp=Z,2µm,18.4s,baz=303,slow=40
YULB Yu-li 29.61 343 P P 04 53 12.5 -2.6
TPUB Ta-pu 29.73 341 P P 04 53 14.7 -1.4
TPUB IAmb IAmb 04 54 19.2
comp=Z,154nm,1.9s
CMSA Cobar Meteorol 30.01 153 P P 04 53 19.8 +1.2
baz=30,SNR=53
CMSA Cobar Meteorol 30.01 153 P P 04 53 20.1 +1.6
MUN Mundaring 30.01 205 P P 04 53 18.6 +0.1
baz=30,SNR=32
MUN Mundaring 30.01 205 P P 04 53 18.9 +0.4
NACB Ninganchiao 30.26 344 P P 04 53 19.1 -1.7
PDSI Padang 30.28 277 P P 04 53 17.9 -3.3
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.7 +0.5
baz=31,SNR=106
NWAO P P 04 53 22.7 +0.5
baz=31,SNR=106
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.4 +0.1
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.4 +0.1
NWAO Narrogin (SRO) 30.43 202 P P 04 53 23.0 +0.7
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.9 +0.7
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.4 +0.1
NWAO pmax pmax
comp=Z,67nm,0.6s
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.8 +0.5
comp=Z,60nm,0.5s,baz=34,slow=7.1,SNR=132
NWAO LR LR 05 06 41.4
comp=Z,184nm,19.5s,baz=80,slow=38
comp=Z,60nm,0.5s
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.9 +0.6
NWAO Narrogin (SRO) 30.43 202 P P 04 53 22.7 +0.5
YHNB Yeheng 30.79 344 P P 04 53 25.0 -0.6
YHNB IAmb IAmb 04 53 32.8
comp=Z,49nm,1.2s
IPM Ipoh 30.92 287 P P 04 53 25.9 -0.9
IPM IAmb IAmb 04 53 27.9
comp=Z,49nm,0.9s
IPM Ipoh 30.92 287 P P 04 53 26.7 -0.1
QIZ Qiongzhong 31.37 320 P P 04 53 30.4 -0.2
QIZ S S 04 58 28.1 -1.1
QIZ sS sS 04 59 14.4 +1.0
QIZ pmax pmax
comp=Z,13nm,1.1s
QIZ pmax pmax
comp=Z,230nm,4.7s
QIZ LR LR
comp=Z,150nm,12.9s
QIZ LR LR
comp=Z,120nm,14.4s
QIZ LR LR
comp=Z,110nm,15.9s
QIZ Qiongzhong 31.37 320 P P 04 53 30.4 -0.2
KULM Kulim 31.52 288 P P 04 53 30.4 -1.7
KULM IAmb IAmb 04 53 32.5
comp=Z,54nm,0.9s
KNMB Chin-men Tao 31.57 339 P P 04 53 32.5 +0.2
KNMB IAmb IAmb 04 54 33.7
comp=Z,75nm,1.4s
SISI Saibi 31.58 276 P P 04 53 29.2 -3.4
JOW Kunigami 31.71 356 P P 04 53 34.0 +0.5
JOW IAmb IAmb 04 53 35.6
comp=Z,61nm,0.9s
JOW Kunigami 31.71 356 P P 04 53 34.9 +1.4
JOW Kunigami 31.71 356 P P 04 53 34.6 +1.1
comp=Z,52nm,0.9s,baz=169,slow=8.0,SNR=12
comp=Z,52nm,0.9s
UBPT Khong Chiam 31.95 309 P P 04 53 35.6 -0.2
UBPT IAmb IAmb 04 53 37.2
comp=Z,97nm,1.3s
UBPT Khong Chiam 31.95 309 P P 04 53 36.7 +0.9
AUDCS Dubbo College 31.97 150 P P 04 53 37.4 +1.6
RKGY Rocky Gully 32.03 201 P P 04 53 38.1 +1.8
baz=32,SNR=103
RKGY Rocky Gully 32.03 201 P P 04 53 38.2 +1.9
ARMA Armidale 32.19 144 P P 04 53 39.4 +1.6
baz=32,SNR=14
ARMA Armidale 32.19 144 P P 04 53 40.1 +2.3
RPSI Rantau Prapat 32.47 283 P P 04 53 38.1 -2.2
PSI Prapat 32.49 283 P P 04 53 39.1 -1.6
PSI Prapat 32.49 283 P P 04 53 38.1 -2.6
PSI pmax pmax
comp=Z,23nm,1.0s
ARPS Mount Arapiles 33.29 163 P P 04 53 49.2 +1.9
baz=34,SNR=30
ARPS Mount Arapiles 33.29 163 P P 04 53 48.9 +1.7
H01W3 Cape Leeuwin H 33.38 205 P P 04 53 50.1 +2.3
baz=52,slow=6.0,SNR=5.4
H01W1 Cape Leeuwin H 33.39 205 P P 04 53 50.0 +2.2
baz=52,slow=6.0,SNR=4.8
H01W2 Cape Leeuwin H 33.40 205 P P 04 53 50.6 +2.7
baz=52,slow=6.0,SNR=3.8
GSI Gunungsitoli 33.49 280 P P 04 53 47.1 -2.2
GSI Gunungsitoli 33.49 280 P P 04 53 48.4 -0.9
GSI Gunungsitoli 33.49 280 P P 04 53 46.4 -2.9
YNG Young 33.55 153 P P 04 53 51.5 +2.0
baz=34,SNR=28
YNG Young 33.55 153 P P 04 53 51.7 +2.1
SRIT Nakonsritamara 33.65 294 P P 04 53 50.3 -0.3
SRIT Nakonsritamara 33.65 294 P P 04 53 51.4 +0.8
KCSI Kotacane, Aceh 33.78 284 P P 04 53 50.9 -0.9
comp=Z,23nm,0.8s,comp=Z,2µm
SURA Surathani 33.84 294 P P 04 52 52.9 +0.6

BRAT Ballarat 34.65 161 P P 04 54 00.9 +2.0
CAN Canberra 34.68 153 P P 04 54 01.4 +2.1
CAN IAmb IAmb 04 54 02.3
comp=Z,38nm,0.8s
CAN Canberra 34.68 153 P P 04 54 01.6 +2.3
CAN Canberra 34.68 153 P P 04 54 01.4 +2.1
CAN pmax pmax
comp=Z,38nm,0.8s
CAN Canberra 34.68 153 P P 04 54 01.4 +2.1
CAN pP pP 04 54 25.1 +0.8
CAN sP sP 04 54 36.2 -1.3
CAN ScP ScP 05 00 04.8 -0.2
NAYO Nakonayok 34.73 304 P P 04 54 00.5 +0.6
CNB Canberra Magne 34.84 152 P P 04 54 02.7 +2.0
baz=35,SNR=24
CNB Canberra Magne 34.84 152 P P 04 54 03.0 +2.3
LHMI Lhok Sumawe 35.02 286 P P 04 54 01.3 -1.2
TOO Toolangi 35.20 159 P P 04 54 06.5 +2.7
baz=35,SNR=48
TOO Toolangi 35.20 159 P P 04 54 06.3 +2.6
TOO IAmb IAmb 04 54 07.6
comp=Z,49nm,1.4s
TOO Toolangi 35.20 159 P P 04 54 06.6 +2.9
TOO Toolangi 35.20 159 P P 04 54 06.3 +2.6
TOO pmax pmax
comp=Z,49nm,1.4s
MLSI Meulaboh, Aceh 35.29 285 P P 04 54 02.6 -2.2
comp=Z,100nm,0.8s
NONG Nongkai 35.41 311 P P 04 54 05.8 +0.1
GULI GuiLin 35.91 328 ⇑P P 04 54 08.4 -1.5
GULI pmax pmax
comp=Z,10.0nm,1.1s
SLVN Son La 36.95 316 P P 04 54 19.6 +0.7
SLVN IAmb IAmb 04 54 21.0
comp=Z,37nm,1.4s
SSE Sheshan 36.97 347 P P 04 54 19.6 +0.8
JNU Nakatsue 37.90 0 P P 04 54 26.6 -0.1
JNU Nakatsue 37.90 0 P P 04 54 27.4 +0.7
JNU Nakatsue 37.90 0 P P 04 54 27.4 +0.7
comp=Z,46nm,0.8s,baz=194,slow=1.0,SNR=27
comp=Z,46nm,0.8s
NJ2 Nanjing 38.47 344 ⇑P P 04 54 32.8 +1.4
NJ2 pP pP 04 54 58.4 +1.1
NJ2 pmax pmax
comp=Z,18nm,0.9s
NJ2 pmax pmax
comp=Z,400nm,3.8s
WHN Wuhan 38.57 337 P P 04 54 34.0 +1.7
WHN pmax pmax
comp=Z,62nm,1.2s
JMN Monobe 38.64 4 P P 04 54 33.7 +0.8
JMN IAmb IAmb 04 54 35.1
comp=Z,45nm,0.9s
JMN Monobe 38.64 4 P P 04 54 34.5 +1.6
DZM Mont Dzumac 38.69 119 *e*LR LR 05 05 16.5
comp=Z,141nm,25.4s
CRAI Chiangrai 38.80 311 P P 04 54 34.6 +0.2
CRAI IAmb IAmb 04 54 36.0
comp=Z,34nm,1.1s
GYA Guiyang 38.87 325 ⇑*i*P P 04 54 35.5 +0.5
GYA pmax pmax
comp=Z,61nm,0.8s
GYA pmax pmax
comp=Z,210nm,5.5s
CMAR Chiang Mai Arr 38.88 308 P P 04 54 34.7 -0.3
CMAR PcP PcP 04 56 45.1 +1.4
CMAR Chiang Mai Arr 38.88 308 *ce*P P 04 54 35.7 +0.7
CMAR pmax pmax
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 38.88 308 P P 04 54 35.5 +0.5
comp=Z,24nm,0.9s,baz=138,slow=7.5,SNR=99
CMAR PcP PcP 04 56 44.9 +1.1
comp=Z,8.4nm,0.9s,baz=167,slow=3.0,SNR=9.6
CMAR ScP ScP 05 00 20.9 0.0
comp=Z,10.0nm,0.8s,baz=156,slow=3.3,SNR=28
comp=Z,24nm,0.9s
CM31 Chiang Mai Arr 38.88 308 P P 04 54 35.3 +0.2
CM31 IAmb IAmb 04 54 36.9
comp=Z,62nm,1.1s
CM31 Chiang Mai Arr 38.88 308 P P 04 54 36.0 +1.0
SNR=19
JHJ2 Mitsune 38.91 12 P P 04 54 34.3 -0.7
CHTO Chiang Mai 39.07 308 P P 04 54 37.2 +0.6
CHTO IAmb IAmb 04 54 38.3
comp=Z,67nm,1.1s
CHTO Chiang Mai 39.07 308 P P 04 54 37.1 +0.4
CHTO Chiang Mai 39.07 308 P P 04 54 37.2 +0.6
CHTO pmax pmax
comp=Z,67nm,1.1s
CHTO Chiang Mai 39.07 308 P P 04 54 37.2 +0.6
CHTO Chiang Mai 39.07 308 ⇑P P 04 54 37.3 +0.6
CHTO PcP PcP 04 56 45.8 +1.4
CHTO ScP ScP 05 00 21.5 0.0
MOO Moorlands 40.14 161 P P 04 54 47.8 +2.7
baz=40,SNR=6.1
KMI Kunming 40.31 319 ⇑P P 04 54 48.3 +1.3
KMI sP sP 04 55 25.0 -2.4
KMI PcP PcP 04 56 48.8 +0.4
KMI ScP ScP 05 00 25.4 -1.1
KMI S S 05 00 40.8 -5.1
KMI pmax pmax
comp=Z,43nm,1.1s
KMI Kunming 40.31 319 P P 04 54 48.4 +1.3
KMI PcP PcP 04 56 49.9 +1.5
ENH Enshi 40.43 331 P P 04 54 47.3 -0.5
ENH IAmb IAmb 04 54 48.7
comp=Z,22nm,0.7s
ENH Enshi 40.43 331 P P 04 54 48.0 +0.1
ENH pP pP 04 55 14.7 +0.2
ENH PcP PcP 04 56 49.2 +0.7
INU Inuyama 40.59 8 P P 04 54 49.1 +0.2
INU Inuyama 40.59 8 P P 04 54 49.9 +1.0
INU Inuyama 40.59 8 P P 04 54 49.4 +0.5
INU sP sP 04 55 25.7 -3.0
JGF Kuroka 40.88 9 P P 04 54 51.1 -0.3
JGF Kuroka 40.88 9 P P 04 54 52.5 +1.1
TJN Taejon 41.26 356 P P 04 54 55.3 +0.9
TJN Taejon 41.26 356 P P 04 54 55.7 +1.3
TJN Taejon 41.26 356 P P 04 54 55.3 +0.9
TJN pmax pmax
comp=Z,245nm,1.5s
PZH PanZhiHua 41.91 320 P P 04 54 59.8 -0.3
PZH pmax pmax
comp=Z,40nm,0.9s
MAJO Matsushiro 41.94 9 P P 04 54 59.6 -0.4
MAJO Matsushiro 41.94 9 P P 04 54 59.8 -0.2
MAJO Matsushiro 41.94 9 P P 04 54 59.6 -0.4
MAJO pmax pmax
comp=Z,65nm,0.9s
MAJO Matsushiro 41.94 9 P P 04 54 59.5 -0.5
MAJO PcP PcP 04 56 52.9 -0.4
MJAR Matsushiro Arr 41.94 9 P P 04 54 59.4 -0.6
comp=Z,35nm,0.8s,baz=189,slow=9.3,SNR=59
comp=Z,35nm,0.8s
MJB9 Matsu-Tunnel 41.94 9 P P 04 54 59.5 -0.5
KSAR Wonju Array Be 42.28 357 P P 04 55 03.3 +0.6
KSAR Wonju Array Be 42.28 357 P P 04 55 03.3 +0.6
KSRS Korea Array 42.29 357 P P 04 55 03.9 +1.1
comp=Z,6.1nm,0.6s,baz=173,slow=9.3,SNR=35
KSRS LR LR 05 11 19.4
comp=Z,70nm,21.4s,baz=185,slow=34
comp=Z,6.1nm,0.6s
KS19 Wonju Array Si 42.34 357 P P 04 55 03.7 +0.4
INCN Inchon 42.41 355 P P 04 55 03.5 -0.2
INCN Inchon 42.41 355 P P 04 55 03.6 -0.2
INCN pmax pmax
comp=Z,23nm,1.1s
LYN LuoYang 42.85 338 ⇓P P 04 55 08.3 +0.9
LYN sP sP 04 55 46.9 -0.6
LYN PcP PcP 04 56 57.6 +1.3
LYN S S 05 01 15.1 -7.7
LYN SS SS 05 04 33.3 -5.7
LYN pmax pmax
comp=Z,18nm,0.6s
LYN pmax pmax
comp=Z,190nm,4.7s
MND Mandalay 43.06 310 P P 04 55 09.4 +0.1
TNCH TengChong 43.10 315 P P 04 55 10.3 +0.5
TNCH pP pP 04 55 39.1 +1.5
TNCH pmax pmax
comp=Z,31nm,0.4s
JMM Marumori 43.70 12 P P 04 55 13.1 -1.0
JMM Marumori 43.70 12 P P 04 55 15.7 +1.6
XAN Xi'an 43.85 334 ⇑P P 04 55 15.4 -0.1

XAN pP pP 04 55 41.5 -0.7
XAN PcP PP 04 57 00.8 +0.6
XAN ScP ScP 05 00 40.8 +0.5
XAN pmax pmax
comp=Z,45nm,0.6s
XAN Xi'an 43.85 334 P P 04 55 15.2 -0.3
XAN ScP ScP 05 00 40.4 0.0
CD2 Chengdu 43.91 326 P P 04 55 15.8 -0.2
CD2 pP pP 04 55 43.8 +0.7
CD2 pmax pmax
comp=Z,30nm,0.9s
HNS HongShan 44.67 342 ⇓P P 04 55 22.1 +0.2
HNS pmax pmax
comp=Z,25nm,0.8s
TIY Taiyuan 45.70 340 *e*P P 04 55 30.5 +0.4
TIY pmax pmax
comp=Z,18nm,0.6s
BJT Baijiatuao 46.69 345 P P 04 55 38.1 +0.4
BJT IAmb IAmb 04 55 39.0
comp=Z,32nm,0.6s
BJT Baijiatuao 46.69 345 P P 04 55 38.1 +0.4
BJT pmax pmax
comp=Z,32nm,0.6s
BJT Baijiatuao 46.69 345 P P 04 55 38.1 +0.4
BJT PcP PcP 04 57 10.7 +1.2
BJI Beijing 46.71 345 P P 04 55 38.3 +0.4
BJI PcP PcP 04 57 10.3 +0.8
BJI pmax pmax
comp=Z,23nm,0.7s
MSHR Mys Shultsa 47.35 1 *ce*P P 04 55 42.7 -0.1
MSHR pmax pmax
comp=Z,25nm,2.5s
LZH Lanzhou 47.90 331 ⇑P P 04 55 48.4 +1.0
LZH pP pwP 04 56 19.1 +0.4
LZH S S 05 02 32.8 -2.8
LZH pmax pmax
comp=Z,25nm,1.4s
SHL Shillong 48.25 311 P P 04 55 49.6 -0.7
SHL IAmb IAmb 04 55 50.7
comp=Z,39nm,0.7s
SHL Shillong 48.25 311 P P 04 55 49.6 -0.7
SHL pmax pmax
comp=Z,39nm,0.7s
SHL Shillong 48.25 311 P P 04 55 50.0 -0.3
SNR=10
CN2 Changchun 48.78 355 *e*P P 04 55 53.9 +0.1
CN2 *e*S S 05 02 48.0 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,900nm,12.0s
CN2 LR LR
comp=Z,600nm,12.0s
CN2 LR LR
comp=Z,700nm,10.0s
HHC Hu-ho-hao-te 48.81 341 *e*P P 04 55 57.9 +3.6
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,70nm,4.1s
USA0B Ussuriysk Arra 48.98 1 P P 04 55 55.0 -0.2
USA0B IAmb IAmb 04 55 56.9
comp=Z,19nm,0.7s
USA0B Ussuriysk Arra 48.98 1 P P 04 55 55.1 -0.2
USA0B pmax pmax
comp=Z,19nm,0.7s
USRK Ussuriysk Ar. 48.98 1 P P 04 55 55.9 +0.6
USRK Ussuriysk Ar. 48.98 1 P P 04 55 56.4 +1.1
comp=Z,19nm,0.6s,baz=184,slow=7.1,SNR=38
comp=Z,19nm,0.6s
BTO Baotou 49.12 339 *e*P P 04 56 01.1 +4.5
BTO pP pP 04 56 26.4 +2.4
BTO sP sP 04 56 36.5 -0.8
BTO S S 05 03 01.3 +8.8
BTO SS SS 05 06 23.8 -1.7
BTO pmax pmax
comp=Z,12nm,0.6s
BTO pmax pmax
comp=Z,500nm,4.8s
BTO LR LR
comp=Z,300nm,5.2s
BTO LR LR
comp=Z,210nm,4.3s
BTO LR LR
comp=Z,340nm,5.0s
MDJ Mudanjiang 49.39 359 P P 04 55 58.9 +0.5
MDJ pmax pmax
comp=Z,31nm,1.0s
MDJ pmax pmax
comp=Z,130nm,4.0s
MDJ Mudanjiang 49.39 359 P P 04 55 58.9 +0.5
MDJ IAmb IAmb 04 56 00.2
comp=Z,21nm,0.8s
MDJ Mudanjiang 49.39 359 P P 04 55 59.1 +0.7
MDJ pP pP 04 56 25.9 +0.5
ASAJ Asahikawa 50.08 11 P P 04 56 04.5 +0.9
ASAJ pmax pmax
comp=Z,134nm,2.0s
ASAJ Asahikawa 50.08 11 P P 04 56 04.5 +0.9
comp=Z,9.6nm,0.8s,baz=250,slow=12,SNR=5.9
comp=Z,9.6nm,0.8s
JKA Kamikawa-asahi 50.08 11 P P 04 56 04.5 +0.8
XLT XiLinHaoTe 50.38 346 ⇑*i*P P 04 56 06.8 +0.8
XLT pP pP 04 56 34.6 +1.5
XLT pmax pmax
comp=Z,11nm,1.0s
XLT pmax pmax
comp=Z,160nm,4.2s
BNX BinXian 50.58 357 ⇑P P 04 56 07.4 0.0
BNX pmax pmax
comp=Z,17nm,0.9s
BNX pmax pmax
comp=Z,310nm,5.2s
LSA Lhasa 51.13 315 P P 04 56 12.8 +0.4
LSA Lhasa 51.13 315 P P 04 56 13.3 +0.9
LSA Lhasa 51.13 315 P P 04 56 12.8 +0.4
LSA pmax pmax
comp=Z,42nm,0.8s
LSA Lhasa 51.13 315 P P 04 56 13.3 +0.9
PALK Pallekele 51.17 283 P P 04 56 11.9 -0.6
PALK IAmb IAmb 04 56 13.7
comp=Z,33nm,1.0s
PALK Pallekele 51.17 283 P P 04 56 11.9 -0.6
PALK pmax pmax
comp=Z,33nm,1.0s
PALK Pallekele 51.17 283 LR LR 05 18 52.6
comp=Z,46nm,20.6s,baz=213,slow=37
PALK Pallekele 51.17 283 P P 04 56 12.1 -0.4
PALK Pallekele 51.17 283 P P 04 56 11.7 -0.8
PALK PcP PcP 04 57 27.0 +0.6
QRZ Quartz Range 51.83 140 P P 04 56 19.4 +2.5
MRNZ Matariki Terra 52.28 140 P P 04 56 21.5 +1.2
GTA Gaotai 52.48 330 *e*P P 04 56 22.6 +0.7
GTA pP pwP 04 56 53.8 -0.5
GTA PcP PcP 04 57 31.9 +1.1
GTA ScS ScS 05 05 58.3 -1.4
GTA pmax pmax
comp=Z,17nm,1.2s
THZ Tophouse 52.57 141 P P 04 56 23.7 +1.2
THZ Tophouse 52.57 141 P P 04 56 23.6 +1.2
NNZ Nelson 52.59 140 P P 04 56 23.1 +0.6
LTZ Lake Taylor 52.73 142 P P 04 56 24.5 +0.9
LTZ IAmb IAmb 04 57 07.8
comp=Z,61nm,1.5s
YSS Yuzh-Sakhalins 52.84 11 P P 04 56 24.6 +0.5
YSS IAmb IAmb 04 56 25.4
comp=Z,18nm,0.7s
YSS Yuzh-Sakhalins 52.84 11 *e*P P 04 56 24.5 +0.3
YSS pmax pmax
comp=Z,20nm,0.7s
GOMU GeErMu 52.87 324 P P 04 56 25.9 +0.8
GOMU pP pP 04 56 52.1 -1.2
GOMU sP sP 04 57 05.3 -1.4
GOMU pmax pmax
comp=Z,8.0nm,0.8s
WAZ Wanganui 52.91 137 P P 04 56 27.7 +2.8
NGZ Ngauruhoe 53.05 136 P P 04 56 28.3 +2.2
ODZ Otahua Downs 53.06 145 P P 04 56 26.6 +0.6
OTVZ Oturere 53.09 136 P P 04 56 29.4 +3.0
WNVZ Wahianoa 53.12 137 P P 04 56 28.4 +1.7
TCW Tory Channel 53.16 139 P P 04 56 27.1 +0.4
BSWZ Blackbirch Sta 53.16 140 P P 04 56 27.5 +0.8

MOVZ	**Moawhango**	**53.27**	**137**	P		**P**	**04 56 28.9**	**+1.3**
GVZ	**Greta Valley S**	**53.30**	**142**	P		**P**	**04 56 29.3**	**+1.6**
KHZ	**Kahutara**	**53.32**	**141**	P		**P**	**04 56 28.8**	**+1.0**
KHZ				IAmb		IAmb	04 57 05.5	
	comp=Z,33nm,0.9s							
KIW	**Kapiti Island**	**53.40**	**139**	P		**P**	**04 56 29.2**	**+0.8**
MQZ	**McQueen's Vall**	**53.47**	**143**	P		**P**	**04 56 30.0**	**+1.1**
SNZO	**South Karori**	**53.49**	**139**	P		**P**	**04 56 29.3**	**+0.2**
BHHZ	**Black Hill Sta**	**53.52**	**137**	P		**P**	**04 56 30.2**	**+0.8**
OGWZ	**Otaki Gorge**	**53.55**	**138**	P		**P**	**04 56 29.9**	**+0.3**
BHW	**Baring Head**	**53.65**	**139**	P		**P**	**04 56 30.4**	**+0.1**
BHW	**Baring Head**	**53.65**	**139**	P		**P**	**04 56 30.3**	**+0.1**
BKZ	**Black Stump Fm**	**53.66**	**136**	P		**P**	**04 56 31.5**	**+1.0**
BKZ				IAmb		IAmb	04 56 32.9	
	comp=Z,18nm,0.4s							
BKZ	**Black Stump Fm**	**53.66**	**136**	P		**P**	**04 56 31.5**	**+1.0**
TSZ	**Takapari Road**	**53.72**	**137**	P		P	04 56 36.7	+5.9
KWHZ	**Kaweka Forest**	**53.73**	**136**	P		**P**	**04 56 32.4**	**+1.4**
MRZ	**Mangatainoka R**	**53.75**	**138**	P		**P**	**04 56 31.5**	**+0.5**
MRZ				IAmb		IAmb	04 57 10.4	
	comp=Z,24nm,1.1s							
MRZ	**Mangatainoka R**	**53.75**	**138**	P		**P**	**04 56 31.5**	**+0.5**
RTZ	**Ruatahuna**	**53.76**	**135**	P		**P**	**04 56 32.4**	**+1.2**
RTZ				IAmb		IAmb	04 56 32.7	
	comp=Z,15nm,0.7s							
MTHZ	**Maungataniwha**	**53.76**	**136**	P		**P**	**04 56 32.7**	**+1.5**
KRHZ	**Kereru**	**53.80**	**137**	P		**P**	**04 56 32.3**	**+0.9**
PNHZ	**Pukenui**	**53.81**	**137**	P		**P**	**04 56 32.3**	**+0.7**
HOWZ	**Holdsworth Sta**	**53.82**	**138**	P		**P**	**04 56 31.8**	**+0.3**
NMHZ	**Naumai**	**53.85**	**136**	P		**P**	**04 56 33.8**	**+2.0**
MCHZ	**McNeill Hill**	**53.93**	**136**	P		**P**	**04 56 34.0**	**+1.6**
MTW	**Mount Morrison**	**53.94**	**139**	P		**P**	**04 56 32.4**	**0.0**
PRWZ	**Pori Road**	**53.96**	**138**	P		**P**	**04 56 33.2**	**+0.7**
DVHZ	**Dannevirke**	**53.97**	**137**	P		**P**	**04 56 33.3**	**+0.7**
PLWZ	**Palliser**	**53.98**	**139**	P		P	04 56 38.8	+6.1
KLR	**Kul'dur**	**54.01**	**1**	*ce*P		**P**	**04 56 32.6**	**0.0**
KLR				pmax		pmax		
	comp=Z,25nm,1.3s							
KLR	**Kul'dur**	**54.01**	**1**	P		**P**	**04 56 33.6**	**+0.9**
	comp=Z,13nm,0.9s,baz=202,slow=4.1,SNR=37							
KLR				LR		LR	05 19 57.3	
	comp=Z,38nm,19.7s,baz=203,slow=36							
	comp=Z,13nm,0.9s							
ARHZ	**Aropaoanui**	**54.06**	**136**	P		**P**	**04 56 33.1**	**-0.2**
TMWZ	**Te Maipa**	**54.17**	**138**	P		**P**	**04 56 34.7**	**+0.6**
TRWZ	**Traveller**	**54.18**	**139**	P		**P**	**04 56 34.8**	**+0.7**
BFZ	**Birch Farm**	**54.20**	**138**	P		**P**	**04 56 34.8**	**+0.5**
BFZ				IAmb		IAmb	04 57 30.5	
	comp=Z,60nm,1.4s							
BFZ	**Birch Farm**	**54.20**	**138**	P		**P**	**04 56 34.8**	**+0.5**
KAHZ	**Kahuranaki**	**54.22**	**137**	P		**P**	**04 56 35.7**	**+1.2**
MHGZ	**Mahia Peninsul**	**54.64**	**135**	P		**P**	**04 56 38.9**	**+1.4**
HEH	**HeiHe**	**55.09**	**358**	*e*P		**P**	**04 56 40.8**	**+0.4**
HEH				pmax		pmax		
	comp=Z,18nm,0.9s							
GRNR	**Gornyy**	**55.77**	**5**	⇓*i*P		**P**	**04 56 46.0**	**+0.7**
GRNR				pmax		pmax		
	comp=Z,8.0nm,1.2s							
HYB	**Hyderabad**	**55.91**	**295**	*e*P		**P**	**04 56 48.5**	**+1.4**
ULN	**Ulaanbaatar**	**56.53**	**341**	P		**P**	**04 56 52.2**	**+1.2**
ULN	**Ulaanbaatar**	**56.53**	**341**	*ce*P		**P**	**04 56 51.3**	**+0.3**
ULN				pmax		pmax		
	comp=Z,11nm,0.8s							
ULN	**Ulaanbaatar**	**56.53**	**341**	P		**P**	**04 56 52.3**	**+1.3**
ULN	**Ulaanbaatar**	**56.53**	**341**	P		**P**	**04 56 52.3**	**+1.3**
ULN				PcP		**PcP**	**04 57 47.1**	**+0.9**
TYV	**Tymovskoe**	**56.60**	**9**	*e*P		**P**	**04 56 52.9**	**+1.7**
TYV				pmax		pmax		
	comp=Z,100nm,3.0s							
TYV				pmax		pmax		
	comp=Z,5.0nm,0.9s							
SONM	**Songino Array**	**56.72**	**341**	P		**P**	**04 56 53.6**	**+1.3**
SONM	**Songino Array**	**56.72**	**341**	P		**P**	**04 56 53.5**	**+1.3**
	comp=Z,8.1nm,0.6s,baz=159,slow=6.9,SNR=51							
SONM				PcP		**PcP**	**04 57 47.6**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=154,slow=5.1,SNR=3.8							
SONM				ScP		**ScP**	**05 01 35.1**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=176,slow=3.8,SNR=2.0							
	comp=Z,8.1nm,0.6s							
KAAM	**Kaadhehdhoo**	**57.70**	**274**	P		**P**	**04 56 59.3**	**-0.4**
DGAR	**Diego Garcia**	**57.74**	**264**	P		**P**	**04 56 59.5**	**-0.5**
DGAR	**Diego Garcia**	**57.74**	**264**	P		**P**	**04 56 59.5**	**-0.5**
DGAR				pmax		pmax		
	comp=Z,72nm,0.7s							
DGAR	**Diego Garcia**	**57.74**	**264**	P		**P**	**04 56 59.7**	**-0.3**
DGAR	**Diego Garcia**	**57.74**	**264**	P		**P**	**04 56 59.9**	**0.0**
ZEA	**Zeya**	**58.57**	**358**	*e*P		**P**	**04 57 05.4**	**+0.4**
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.1s							
MNCI	**Minicoy**	**58.79**	**283**	P		**P**	**04 57 07.6**	**+0.3**
ZAK	**Zakamensk**	**59.95**	**340**	*e*P		**P**	**04 57 15.1**	**+0.4**
ZAK				pmax		pmax		
	comp=Z,5.0nm,1.1s							
MOY	**Mondy**	**61.81**	**340**	*e*P		**P**	**04 57 29.0**	**+1.7**
MOY				pmax		pmax		
	comp=Z,24nm,1.9s							
DRV	**Dumont d'Urvil**	**61.92**	**176**	P		**P**	**04 57 28.4**	**+0.9**
DRV				sP		**PcP**	**04 58 06.6**	**-0.6**
WMQ	**Urumqi**	**62.01**	**326**	*e*P		**P**	**04 57 29.9**	**+1.2**
WMQ				pP		pP	04 57 56.9	-1.0
WMQ				sP		sP	04 58 12.1	+1.0
WMQ				PP		**PP**	**04 59 52.0**	**+5.3**
WMQ				PcS		**PcS**	**05 02 12.5**	**+1.2**
WMQ				pmax		pmax		
	comp=Z,130nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,190nm,3.7s							
PEA0B	**Petropavlovsk-**	**62.27**	**18**	P		**P**	**04 57 31.3**	**+1.2**
PEA0B				IAmb		IAmb	04 58 57.9	
	comp=Z,54nm,1.4s							
PEA0B	**Petropavlovsk-**	**62.27**	**18**	P		**P**	**04 57 31.3**	**+1.2**
PEA0B				pmax		pmax		
	comp=Z,54nm,1.4s							
PETK	**Petropavlovsk-**	**62.27**	**18**	P		**P**	**04 57 30.6**	**+0.5**
PETK	**Petropavlovsk-**	**62.27**	**18**	P		**P**	**04 57 31.3**	**+1.2**
	comp=Z,8.6nm,0.8s,baz=174,slow=4.7,SNR=9.6							
PETK				PcP		**PcP**	**04 58 09.3**	**+0.5**
	comp=Z,8.3nm,1.1s,baz=134,slow=4.2,SNR=3.6							
PETK				LR		LR	05 20 40.3	
	comp=Z,19nm,21.6s,baz=245,slow=32							
	comp=Z,8.6nm,0.8s							
PET	**Petropavlovsk**	**62.49**	**19**	*i* P		**P**	**04 57 30.6**	**-1.0**
PET				pmax		pmax		
	comp=Z,29nm,1.0s							
CASY	**Casey**	**62.76**	**189**	P		**P**	**04 57 33.5**	**+0.3**
WUS	**Wushi**	**65.58**	**320**	P		**P**	**04 57 53.3**	**+1.0**
WUS				PcP		**PcP**	**04 58 23.9**	**+1.0**
WUS				sP		**sP**	**04 58 33.4**	**-1.7**
ZSN	**Zaisan**	**65.84**	**328**	*e*P		**P**	**04 57 54.5**	**+0.8**
	comp=Z,27nm,1.1s,baz=328							
ZSN				*e*S		**S**	**05 06 31.9**	**+1.0**
	baz=328							
ZSN	**Zaisan**	**65.84**	**328**	*e*P		**P**	**04 57 54.4**	**+0.8**
ZSN				*e*S		**S**	**05 06 31.8**	**+1.0**
ZSN				pmax		pmax		
	comp=Z,27nm,1.1s							
DGZ	**Jazzator, Alta**	**66.00**	**331**	*i* P		**P**	**04 57 54.9**	**+0.1**
DGZ				pmax		pmax		
	comp=Z,47nm,1.4s							
NIL	**Nilore**	**66.31**	**310**	P		**P**	**04 57 57.2**	**+0.3**
NIL	**Nilore**	**66.31**	**310**	P		**P**	**04 57 57.2**	**+0.3**
NIL				pmax		pmax		
	comp=Z,49nm,0.8s							
NIL	**Nilore**	**66.31**	**310**	P		**P**	**04 57 57.2**	**+0.3**
MA2	**Magadan**	**66.34**	**11**	*ce*P		**P**	**04 57 58.2**	**+1.7**
MA2				pmax		pmax		
	comp=Z,16nm,2.5s							
MA2	**Magadan**	**66.34**	**11**	LR		LR	05 26 03.6	
	comp=Z,23nm,20.4s,baz=201,slow=35							
SHLS	**Shalkode**	**66.46**	**322**	⇑*i*P		**P**	**04 57 57.4**	**-0.4**
	baz=322							
SHLS	**Shalkode**	**66.46**	**322**	*e*P		**P**	**04 57 57.5**	**-0.3**
SHLS				pmax		pmax		
	comp=Z,18nm,0.4s							
PDGK	**Podgornoye**	**66.53**	**322**	P		**P**	**04 57 58.5**	**+0.2**
UZB	**Uzynbulak**	**66.72**	**321**	⇑*i*P		**P**	**04 58 00.5**	**+1.0**
	comp=Z,32nm,1.0s,baz=321							
UZB	**Uzynbulak**	**66.72**	**321**	*c i*P		**P**	**04 58 00.5**	**+1.0**
UZB				pmax		pmax		
	comp=Z,32nm,1.0s							
TARG	**Taragay, Kyrgy**	**66.76**	**320**	P		**P**	**04 58 01.1**	**+1.0**
TARG				IAmb		IAmb	04 58 10.1	
	comp=Z,24nm,0.7s							
TARG	**Taragay, Kyrgy**	**66.76**	**320**	P		**P**	**04 58 01.1**	**+1.0**
TARG				pmax		pmax		
	comp=Z,24nm,0.7s							
PRZ	**Przheval'sk**	**66.77**	**321**	P		**P**	**04 58 01.0**	**+1.1**
PRZ	**Przheval'sk**	**66.77**	**321**	P		**P**	**04 58 01.0**	**+1.1**
PRZ				pmax		pmax		
	comp=Z,101nm,1.2s							
YAK	**Yakutsk**	**66.83**	**360**	P		**P**	**04 57 59.7**	**+0.2**
YAK	**Yakutsk**	**66.83**	**360**	*e*P		**P**	**04 58 00.1**	**+0.6**
YAK				*e*			04 58 27.7	
YAK				*e**PP		**pwP**	**04 58 35.3**	**0.0**
YAK				*e*			05 00 28.5	
YAK				*e*S		**S**	**05 06 42.6**	**+0.5**
YAK				*e*SS		**SS**	**05 11 02.0**	**-0.7**
YAK				pmax		pmax		
	comp=Z,38nm,0.6s							
YAK				pmax		pmax		
	comp=N,8.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,2.0nm,0.6s							
YAK				pmax		pmax		
	comp=Z,88nm,2.8s							
YAK				smax		smax		
	comp=E,59nm,3.2s							
YAK				smax		smax		
	comp=N,52nm,3.0s							
YAK	**Yakutsk**	**66.83**	**360**	P		**P**	**04 58 00.1**	**+0.6**
	comp=N,54nm,0.7s,baz=28,slow=1.9,SNR=17							
YAK				PcP		**PcP**	**04 58 27.6**	**+0.2**
	comp=N,44nm,0.7s,baz=26,slow=0.7,SNR=7.2							
YAK				LR		LR	05 25 35.6	
	comp=N,32nm,21.6s,baz=248,slow=34							
	comp=N,54nm,0.7s							
YAK	**Yakutsk**	**66.83**	**360**	P		**P**	**04 58 00.2**	**+0.6**
YAK				PcP		**PcP**	**04 58 27.6**	**+0.2**
MK31	**Makanchi Array**	**66.84**	**326**	P		**P**	**04 58 01.1**	**+1.1**
MK31	**Makanchi Array**	**66.84**	**326**	P		**P**	**04 58 01.1**	**+1.1**
MK31				pmax		pmax		
	comp=Z,51nm,0.8s							
MKAR	**Makanchi Array**	**66.84**	**326**	P		**P**	**04 58 01.1**	**+1.1**
MKAR	**Makanchi Array**	**66.84**	**326**	P		**P**	**04 58 01.1**	**+1.0**
	comp=Z,49nm,0.6s,baz=128,slow=7.7,SNR=662							
MKAR				S		**S**	**05 06 42.4**	**-0.5**
	comp=Z,1.5nm,1.1s,baz=130,slow=13,SNR=4.3							
	comp=Z,49nm,0.6s							
KSH	**Kashi**	**66.90**	**317**	P		**P**	**04 58 02.3**	**+1.6**
KSH				pmax		pmax		
	comp=Z,84nm,0.8s							
MAKZ	**Makanchi**	**67.02**	**326**	P		**P**	**04 58 02.2**	**+1.0**
MAKZ	**Makanchi**	**67.02**	**326**	P		**P**	**04 58 02.2**	**+1.0**
MAKZ				pmax		pmax		
	comp=Z,76nm,1.0s							
MAKZ	**Makanchi**	**67.02**	**326**	⇑P		**P**	**04 58 02.1**	**+1.0**
MAKZ				PcP		**PcP**	**04 58 28.8**	**+0.1**
SATY	**Saty**	**67.06**	**321**	⇑*i*P		**P**	**04 58 02.9**	**+1.2**
	baz=321							
SATY	**Saty**	**67.06**	**321**	*c i*P		**P**	**04 58 02.8**	**+1.2**
ZHN	**Zhinishke**	**67.10**	**321**	⇑*i*P		**P**	**04 58 02.9**	**+0.9**
	comp=Z,14nm,0.5s,baz=321							
ZHN	**Zhinishke**	**67.10**	**321**	*c i*P		**P**	**04 58 02.8**	**+0.9**
ZHN				pmax		pmax		
	comp=Z,14nm,0.5s							
KPKS	**Kokpek**	**67.10**	**322**	⇑*i*P		**P**	**04 58 02.8**	**+1.0**
	baz=322							
KPKS	**Kokpek**	**67.10**	**322**	*e*P		**P**	**04 58 02.8**	**+1.0**
KPKS				pmax		pmax		
	comp=Z,37nm,0.6s							
NRN	**Naryn**	**67.79**	**319**	P		**P**	**04 58 07.3**	**+0.8**
NRN				IAmb		IAmb	04 58 08.1	
	comp=Z,33nm,0.8s							
NRN	**Naryn**	**67.79**	**319**	P		**P**	**04 58 07.3**	**+0.8**
NRN				pmax		pmax		
	comp=Z,33nm,0.8s							
MDOK	**Medeo**	**67.97**	**321**	*i* P		**P**	**04 58 08.6**	**+1.2**
	baz=321							
MDOK	**Medeo**	**67.97**	**321**	*i* P		**P**	**04 58 08.6**	**+1.2**
TNSS	**Tian-Shan**	**67.97**	**320**	⇑*i*P		**P**	**04 58 09.1**	**+1.3**
	baz=320							
TNSS	**Tian-Shan**	**67.97**	**320**	⇑*i*P		**P**	**04 58 09.0**	**+1.3**
ARXS	**Arharly**	**68.02**	**322**	*e*P		**P**	**04 58 08.0**	**+0.4**
ULHL	**Ulahol**	**68.03**	**319**	P		**P**	**04 58 09.0**	**+1.1**
	SNR=9.5							
AAA	**Alma-Ata**	**68.08**	**321**	*e*P		**P**	**04 58 09.2**	**+1.2**
	baz=321							
AAA	**Alma-Ata**	**68.08**	**321**	*e*P		**P**	**04 58 09.2**	**+1.2**
TDK	**Taldyqorghan**	**68.08**	**323**	*e*P		**P**	**04 58 09.1**	**+1.1**
	comp=Z,21nm,0.7s,baz=323							
TDK	**Taldyqorghan**	**68.08**	**323**	*e*P		**P**	**04 58 09.0**	**+1.1**
TDK				pmax		pmax		
	comp=Z,21nm,0.7s							
BOOM	**Boomskoye usch**	**68.34**	**320**	P		**P**	**04 58 10.8**	**+1.1**
BOOM				IAmb		IAmb	04 58 11.9	
	comp=Z,45nm,1.0s							
BOOM	**Boomskoye usch**	**68.34**	**320**	P		**P**	**04 58 10.9**	**+1.1**
BOOM				pmax		pmax		
	comp=Z,45nm,1.0s							
CHKK	**Chushkaly**	**68.36**	**321**	⇑*i*P		**P**	**04 58 10.4**	**+0.7**
	baz=321							
CHKK	**Chushkaly**	**68.36**	**321**	⇑*i*P		**P**	**04 58 10.3**	**+0.7**
TKM2	**Tokmak 2**	**68.78**	**320**	P		**P**	**04 58 13.6**	**+1.1**
	SNR=39							
TKM2	**Tokmak 2**	**68.78**	**320**	P		**P**	**04 58 13.4**	**+0.9**
KUU	**Kurty**	**68.78**	**321**	⇑*i*P		**P**	**04 58 13.1**	**+0.8**
	baz=321							
KUU				*e*S		**S**	**05 07 07.2**	**+1.0**
	baz=321							
KUU	**Kurty**	**68.78**	**321**	*c i*P		**P**	**04 58 13.0**	**+0.8**
KUU				*e*S		**S**	**05 07 07.1**	**+1.0**
KBK	**Karagaybulak**	**69.07**	**319**	P		**P**	**04 58 15.6**	**+1.4**
	SNR=19							
UCH	**Uchtor**	**69.15**	**319**	P		**P**	**04 58 16.6**	**+1.5**
	SNR=60							
AAK	**Ala-Archa**	**69.35**	**319**	P		**P**	**04 58 17.4**	**+1.4**
	SNR=29							
AAK	**Ala-Archa**	**69.35**	**319**	P		**P**	**04 58 16.9**	**+0.9**
AAK				IAmb		IAmb	04 58 18.4	
	comp=Z,46nm,1.1s							
AAK	**Ala-Archa**	**69.35**	**319**	*i* P		**P**	**04 58 17.2**	**+1.2**
	SNR=43							
AAK	**Ala-Archa**	**69.35**	**319**	*ce*P		**P**	**04 58 17.2**	**+1.2**
AAK				pmax		pmax		
	comp=Z,60nm,1.3s							
AAK	**Ala-Archa**	**69.35**	**319**	P		**P**	**04 58 17.1**	**+1.1**
AAK	**Ala-Archa**	**69.35**	**319**	P		**P**	**04 58 17.3**	**+1.2**
USP	**Ospenovka**	**69.65**	**320**	P		**P**	**04 58 18.8**	**+1.1**
	SNR=70							
SEY	**Seymchan**	**69.75**	**10**	*ce*P		**P**	**04 58 19.0**	**+1.3**
SEY				pmax		pmax		
	comp=Z,15nm,1.3s							
SEY	**Seymchan**	**69.75**	**10**	P		**P**	**04 58 19.1**	**+1.3**
	comp=Z,7.0nm,0.9s,baz=199,slow=4.3,SNR=14							
	comp=Z,7.0nm,0.9s							
EKS2	**Erkin-Say**	**69.83**	**319**	P		**P**	**04 58 20.4**	**+1.5**
	SNR=52							
ZAA0	**Zalesovo Array**	**70.02**	**333**	P		**P**	**04 58 19.2**	**-0.4**
ZAA0				IAmb		IAmb	04 58 20.7	
	comp=Z,32nm,0.8s							
ZALV	**Zalesovo Beam**	**70.02**	**333**	P		**P**	**04 58 20.0**	**+0.4**
ZALV	**Zalesovo Beam**	**70.02**	**333**	*i* P		**P**	**04 58 19.6**	**0.0**
ZALV				pmax		pmax		
	comp=Z,29nm,0.7s							
ZALV	**Zalesovo Beam**	**70.02**	**333**	P		**P**	**04 58 20.0**	**+0.4**
	comp=Z,29nm,0.7s,baz=117,slow=5.2,SNR=129							
ZALV				S		**S**	**05 07 16.0**	**-4.2**
	comp=Z,0.8nm,0.7s,baz=127,slow=11,SNR=4.2							
	comp=Z,29nm,0.7s							
CCD	**Concordia, Ant**	**70.18**	**182**	⇑P		**P**	**04 58 22.0**	**+1.2**
CCD				sP		**sP**	**04 59 00.8**	**-2.9**
BTK	**Batken**	**70.70**	**315**	P		**P**	**04 58 24.4**	**+0.2**
BTK	**Batken**	**70.70**	**315**	P		**P**	**04 58 24.4**	**+0.2**
BTK				pmax		pmax		
	comp=Z,139nm,1.7s							
BTLS	**Baital**	**70.78**	**321**	⇑*i*P		**P**	**04 58 25.1**	**+0.7**
	comp=Z,12nm,0.7s,baz=321							
BTLS	**Baital**	**70.78**	**321**	*c i*P		**P**	**04 58 25.1**	**+0.7**
BTLS				pmax		pmax		
	comp=Z,12nm,0.7s							
KURBB	**Kurchatov Arra**	**71.08**	**328**	P		**P**	**04 58 26.4**	**+0.3**
KURBB	**Kurchatov Arra**	**71.08**	**328**	P		**P**	**04 58 26.9**	**+0.7**
	comp=Z,64nm,0.9s,baz=129,slow=5.2,SNR=456							
KURBB				S		**S**	**05 07 30.0**	**-2.6**
	comp=Z,1.2nm,1.1s,baz=134,slow=9.6,SNR=9.9							
	comp=Z,64nm,0.9s							
KURK	**Kurchatov**	**71.08**	**328**	P		**P**	**04 58 26.6**	**+0.4**
KURK	**Kurchatov**	**71.08**	**328**	P		**P**	**04 58 26.9**	**+0.8**
KURK				S		**S**	**05 07 30.0**	**-2.7**
KURK	**Kurchatov**	**71.08**	**328**	P		**P**	**04 58 27.0**	**+0.8**
KURK				pP		**pP**	**04 58 54.5**	**-1.6**
SIMJ	**Simiganj**	**71.43**	**313**	P		**P**	**04 58 28.6**	**-0.1**
SIMJ	**Simiganj**	**71.43**	**313**	P		**P**	**04 58 29.0**	**+0.3**
SIMJ				pP		**pP**	**04 58 58.3**	**-0.6**
DZA	**Taraz**	**71.55**	**318**	*e*P		**P**	**04 58 29.9**	**+0.7**
	comp=Z,27nm,0.8s,baz=318							
DZA	**Taraz**	**71.55**	**318**	*e*P		**P**	**04 58 29.9**	**+0.7**
DZA				pmax		pmax		
	comp=Z,27nm,0.8s							
IUG	**luzhnay**	**72.10**	**317**	⇑*i*P		**P**	**04 58 33.8**	**+1.2**
	baz=317							
IUG	**luzhnay**	**72.10**	**317**	*e*P		**P**	**04 58 33.8**	**+1.2**
IUG				pmax		pmax		
	comp=Z,52nm,0.8s							
KK31	**Karatay Array**	**72.18**	**318**	P		**P**	**04 58 33.2**	**+0.2**
KK31				IAmb		IAmb	04 58 34.7	
	comp=Z,61nm,0.9s							
KK31	**Karatay Array**	**72.18**	**318**	P		**P**	**04 58 33.2**	**+0.2**
KK31				pmax		pmax		
	comp=Z,61nm,0.9s							
KKAR	**Karatay Array**	**72.18**	**318**	P		**P**	**04 58 33.3**	**+0.4**
KKAR	**Karatay Array**	**72.18**	**318**	P		**P**	**04 58 33.3**	**+0.4**
CHM	**Chimkent**	**72.47**	**317**	*e*P		**P**	**04 58 35.8**	**+1.1**
	comp=Z,25nm,0.7s,baz=317							
CHM	**Chimkent**	**72.47**	**317**	*e*P		**P**	**04 58 35.7**	**+1.1**
CHM				pmax		pmax		
	comp=Z,25nm,0.7s							
BRLS	**Borolday**	**72.60**	**318**	⇑*i*P		**P**	**04 58 36.3**	**+0.9**
	baz=318							
BRLS	**Borolday**	**72.60**	**318**	*e*P		**P**	**04 58 36.2**	**+0.8**
BRLS				pmax		pmax		
	comp=Z,37nm,0.7s							
OTUK	**Ortayu**	**73.33**	**324**	P		**P**	**04 58 40.0**	**+0.4**
BRZS	**Berezniki**	**73.95**	**325**	⇑*i*P		**P**	**04 58 44.0**	**+0.7**
	comp=Z,11nm,0.7s,baz=325							
BRZS	**Berezniki**	**73.95**	**325**	*c i*P		**P**	**04 58 43.9**	**+0.7**
BRZS				pmax		pmax		
	comp=Z,11nm,0.7s							
RER	**Riviere de l'E**	**74.02**	**250**	P		**P**	**04 58 45.3**	**+1.0**
VNDA	**Vanda**	**74.37**	**173**	P		**P**	**04 58 45.4**	**+0.2**
VNDA	**Vanda**	**74.37**	**173**	P		**P**	**04 58 45.4**	**+0.2**
VNDA				pmax		pmax		
	comp=Z,22nm,1.2s							
VNDA	**Vanda**	**74.37**	**173**	P		**P**	**04 58 46.0**	**+0.9**
	comp=Z,11nm,0.7s,baz=321,slow=6.6,SNR=44							
VNDA				LR		LR	05 30 51.4	
	comp=Z,58nm,19.9s,baz=309,slow=35							
	comp=Z,11nm,0.7s							
JLN	**Jalan Bani Buh**	**74.53**	**294**	P		**P**	**04 58 47.3**	**+0.2**
	SNR=9.9							
HON	**Honolulu**	**74.71**	**66**	P		**P**	**04 58 47.9**	**-0.2**
HON	**Honolulu**	**74.71**	**66**	P		**P**	**04 58 47.9**	**-0.2**
MSEY	**Mahe Island**	**74.73**	**267**	P		**P**	**04 58 47.7**	**-0.8**
MSEY				IAmb		IAmb	04 58 49.8	
	comp=Z,20nm,0.7s							
MSEY	**Mahe Island**	**74.73**	**267**	P		**P**	**04 58 49.4**	**+0.9**
MSEY	**Mahe Island**	**74.73**	**267**	P		**P**	**04 58 47.7**	**-0.8**
MSEY				pmax		pmax		
	comp=Z,20nm,0.7s							
MSEY	**Mahe Island**	**74.73**	**267**	P		**P**	**04 58 49.2**	**+0.7**
WBK	**Wadi Bani Khal**	**75.02**	**295**	P		**P**	**04 58 50.7**	**+0.7**
	SNR=14							
WSAR	**Wadi Sarin**	**75.46**	**295**	P		**P**	**04 58 53.2**	**+0.7**
	SNR=16							
MHTO	**MHTO**	**75.61**	**293**	P		**P**	**04 58 53.3**	**0.0**
	SNR=15							
JMDO	**Jabal Madar**	**75.76**	**294**	P		**P**	**04 58 54.4**	**+0.2**
	SNR=9.7							
DQM	**DQM**	**75.81**	**292**	P		**P**	**04 58 54.9**	**+0.4**
	SNR=7.5							
SMDO	**Samad**	**75.94**	**295**	P		**P**	**04 58 55.9**	**+0.6**
	SNR=21							
BIDO	**Bidbid**	**75.97**	**296**	P		**P**	**04 58 56.0**	**+0.7**
	SNR=42							
TIXI	**Tiksi**	**76.50**	**359**	P		**P**	**04 58 56.8**	**-0.5**
TIXI	**Tiksi**	**76.50**	**359**	*ce*P		**P**	**04 58 57.3**	**0.0**
TIXI				pmax		pmax		
	comp=Z,12nm,1.0s							
TIXI	**Tiksi**	**76.50**	**359**	P		**P**	**04 58 57.6**	**+0.3**
	comp=Z,6.6nm,0.5s,baz=164,slow=5.4,SNR=25							
TIXI				LR		LR	05 31 50.2	
	comp=Z,50nm,21.3s,baz=200,slow=35							
	comp=Z,6.6nm,0.5s							
BVA0	**Borovoye Array**	**

SNR=7.5
AJN Ajban 78.99 296 *i* P **P** **04 59 12.5 +0.4**
SNR=6.9
AJN Ajban 78.99 296 P **P** **04 59 12.5 +0.4**
SNR=12
GEYT Alibeck 79.32 310 P **P** **04 59 14.1 +0.4**
GEYT IAmb IAmb 04 59 15.8
comp=Z,51nm,0.9s
GEYT Alibeck 79.32 310 P **P** **04 59 14.1 +0.4**
GEYT pmax pmax
comp=Z,51nm,0.9s
GEYT Alibeck 79.32 310 P **P** **04 59 14.8 +1.1**
comp=Z,38nm,0.7s,baz=134,slow=4.3,SNR=64
comp=Z,38nm,0.7s
GYA0 ALIBECK ARRAY 79.32 310 P **P** **04 59 14.7 +1.0**
GYA0 pmax pmax
comp=Z,43nm,0.9s
GYA0B ALIBECK ARRAY 79.32 310 P **P** **04 59 14.7 +1.0**
GYA0B IAmb IAmb 04 59 15.8
comp=Z,43nm,0.9s
ABTO Aybut 79.34 289 P **P** **04 59 14.6 +0.4**
SNR=8.8
NRIK Noril'sk 79.75 346 *ce*P **P** **04 59 15.3 0.0**
NRIK pmax pmax
comp=Z,17nm,1.2s
NRIK Noril'sk 79.75 346 P **P** **04 59 16.1 +0.9**
comp=Z,11nm,1.0s,baz=124,slow=4.6,SNR=10
comp=Z,11nm,1.0s
GHWR Ruwais 80.78 295 P **P** **04 59 22.5 +0.7**
JRN Qarnain Island 80.97 296 P **P** **04 59 23.0 +0.3**
SNR=8.4
AB31 Akbulak array 81.26 321 *i* P **P** **04 59 23.7 -0.1**
ABKAR Akbulak array 81.26 321 P **P** **04 59 23.4 -0.4**
SLWR Sila 81.86 295 P **P** **04 59 28.2 +0.7**
ABPO Ambohimpanom 82.06 252 P **P** **04 59 28.9 0.0**
ABPO Ambohimpanom 82.06 252 P **P** **04 59 28.9 0.0**
ABPO pmax pmax
comp=Z,36nm,1.7s
FOMA Nahampoana Res 82.06 246 P **P** **04 59 28.6 +0.1**
FOMA IAmb IAmb 04 59 29.7
comp=Z,25nm,1.0s
FOMA Nahampoana Res 82.06 246 P **P** **04 59 29.4 +0.8**
VOI Vohitsoka 82.34 249 P **P** **04 59 30.6 +0.3**
VOI IAmb IAmb 04 59 30.8
comp=Z,26nm,0.6s
VOI Vohitsoka 82.34 249 P **P** **04 59 30.2 0.0**
VOI Vohitsoka 82.34 249 P **P** **04 59 30.5 +0.3**
TRNA Turayna 82.40 296 P **P** **04 59 30.9 +0.6**
SMRA Abu-Samra 82.75 296 P **P** **04 59 32.5 +0.5**
SNR=6.5
SHMA Al-Shehemyia 82.80 297 P **P** **04 59 32.9 +0.6**
AKTO Aktyubinsk 82.81 322 P **P** **04 59 32.2 +0.3**
SVE Sverdlovsk 83.32 329 *d i*P **P** **04 59 34.9 +0.6**
SVE pmax pmax
comp=Z,46nm,0.9s
L14K Kuka Creek 83.48 26 P **P** **04 59 36.7 +1.7**
M14K Bethel 83.58 27 P **P** **04 59 37.1 +1.6**
ARU Arti 84.28 328 P **P** **04 59 39.1 -0.1**
ARU IAmb IAmb 04 59 40.2
comp=Z,22nm,0.8s
ARU Arti 84.28 328 *d i*P **P** **04 59 39.1 -0.1**
ARU *PP **pwP** **05 00 13.1 0.0**
ARU 05 02 49.8
ARU S **SKSac** **05 09 50.9 -0.4**
ARU SS **SS** **05 15 25.6 -1.3**
ARU pmax pmax
comp=Z,37nm,1.1s
K15K Wolf Creek Mou 84.35 26 P **P** **04 59 41.4 +1.9**
K15K IAmb IAmb 05 00 30.2
comp=Z,104nm,1.9s
F15K North Star Dit 84.46 22 P **P** **04 59 40.7 +0.8**
F15K IAmb IAmb 05 02 11.8
comp=Z,71nm,1.9s
QSPA South Pole Qui 84.97 180 P **P** **04 59 42.9 +0.1**
QSPA IAmb IAmb 04 59 43.2
comp=Z,16nm,0.6s
QSPA South Pole Qui 84.97 180 P **P** **04 59 42.8 0.0**
comp=Z,9.7nm,0.4s,baz=159,slow=1.9,SNR=212
comp=Z,9.7nm,0.4s
M16K Timber Creek 85.05 27 P **P** **04 59 44.5 +1.4**
M16K IAmb IAmb 05 00 14.5
comp=Z,35nm,1.3s
J16K Anvik River 85.11 25 P **P** **04 59 45.1 +1.8**
G16K Koyuk River 85.20 23 P **P** **04 59 44.5 +0.9**
C16K Lisburne Hills 85.32 20 P **P** **04 59 44.8 +0.6**
N17K Nushagak Hills 85.72 28 P **P** **04 59 47.8 +1.5**
N17K IAmb IAmb 05 01 55.9
comp=Z,33nm,1.4s
K17K Iditarod 85.91 26 P **P** **04 59 49.0 +1.8**
K17K IAmb IAmb 05 00 25.6
comp=Z,28nm,0.9s
L18K Granite Mounta 86.46 27 P **P** **04 59 51.4 +1.5**
O18K Koktuh Hills 86.46 29 P **P** **04 59 50.5 +0.5**
O18K IAmb IAmb 05 00 34.2
comp=Z,68nm,1.8s
E18K Tukpahlearik C 86.62 21 P **P** **04 59 51.8 +1.1**
SVW2 Sparrevohn 86.64 28 P **P** **04 59 51.5 +0.7**
SVW2 IAmb IAmb 05 00 52.9
comp=Z,34nm,1.7s
LKRN Lenkeran, Azer 86.66 309 P **P** **04 59 51.9 +0.5**
H18K Honhosa River 86.68 24 P **P** **04 59 52.0 +1.0**
H18K IAmb IAmb 05 00 56.4
comp=Z,55nm,2.0s
OHAK Old Harbor 86.75 32 P **P** **04 59 52.4 +1.0**
OHAK IAmb IAmb 05 00 20.7
comp=Z,17nm,1.1s
J18K Innoko River 86.83 25 P **P** **04 59 52.7 +1.0**
J18K IAmb IAmb 05 00 30.3
comp=Z,48nm,2.0s
C18K Utukok River 86.87 20 P **P** **04 59 52.3 +0.4**
TTA Tatalina 86.97 26 P **P** **04 59 53.6 +1.1**
TTA Tatalina 86.97 26 P **P** **04 59 53.6 +1.1**
TTA pmax pmax
comp=Z,16nm,1.1s
KDAK Kodiak Island 87.25 31 LR LR 05 33 48.2
comp=Z,43nm,20.6s,baz=258,slow=32
L19K White Mountain 87.27 27 P **P** **04 59 55.1 +1.2**
L19K IAmb IAmb 05 00 32.1
comp=Z,17nm,1.0s
RAYN Ar Rayn 87.41 294 P **P** **04 59 55.9 +0.4**
RAYN Ar Rayn 87.41 294 *i* P **P** **04 59 55.8 +0.4**
SNR=40
RAYN Ar Rayn 87.41 294 P **P** **04 59 55.9 +0.4**
RAYN pmax pmax
comp=Z,64nm,0.8s
RAYN Ar Rayn 87.41 294 P **P** **04 59 56.0 +0.6**
M19K Big River Lodg 87.41 27 P **P** **04 59 56.2 +1.6**
M19K IAmb IAmb 05 00 25.5
comp=Z,28nm,1.1s
J19K Poorman 87.45 25 P **P** **04 59 55.8 +1.1**
G19K Purcell Mounta 87.50 23 P **P** **04 59 56.0 +1.1**
G19K IAmb IAmb 05 02 28.2
comp=Z,28nm,1.9s
H19K Roundabout Mou 87.56 24 P **P** **04 59 55.9 +0.8**
H19K IAmb IAmb 05 00 50.3
comp=Z,40nm,1.9s
C19K Lookout Ridge 87.58 20 P **P** **04 59 55.6 +0.3**
C19K IAmb IAmb 05 00 26.1
comp=Z,23nm,1.5s
RSO Redoubt South 87.81 29 P **P** **04 59 57.5 +0.8**
E19K Redstone River 87.86 22 P **P** **04 59 57.3 +0.7**
D19K Kuna River 87.88 20 P **P** **04 59 57.1 +0.4**
K20K Telida 87.94 26 P **P** **04 59 57.9 +0.8**
K20K IAmb IAmb 05 02 01.6
comp=Z,28nm,1.8s
M20K Styx River 87.98 27 P **P** **04 59 57.9 +0.5**
M20K IAmb IAmb 05 00 28.1
comp=Z,19nm,1.2s
J20K Nowinta River 88.12 25 P **P** **04 59 58.6 +0.7**
J20K IAmb IAmb 05 02 58.6
comp=Z,35nm,1.8s
SEKA Sheki 88.23 311 P **P** **04 59 59.1 +0.1**
MNGR Mingechevir, A 88.26 311 P **P** **04 59 59.5 +0.5**
CNPM China Poot 88.33 30 P **P** **04 59 59.9 +0.9**
CNPM IAmb IAmb 05 01 28.5
comp=Z,46nm,1.4s
BRLK Bradley Lake 88.56 30 P **P** **05 00 00.6 +0.5**
BRLK IAmb IAmb 05 02 20.7
comp=Z,58nm,1.8s
ZKTA Zakatala 88.72 312 P **P** **05 00 01.7 +0.4**
SKT Skwentna 88.74 28 P **P** **05 00 01.7 +0.8**
IMAR Indian Mountai 88.76 23 P **P** **05 00 01.9 +1.0**
GANJ Ganja 88.81 311 P **P** **05 00 02.1 +0.4**
CAST Castle Rocks 88.82 26 P **P** **05 00 02.3 +1.0**

CAST IAmb IAmb 05 02 48.1
comp=Z,27nm,2.0s
SUA Susitna One 88.99 28 P **P** **05 00 02.8 +0.6**
SUA IAmb IAmb 05 00 39.5
comp=Z,14nm,1.0s
NAX Nakhchivan 89.26 309 P **P** **05 00 04.2 +0.3**
I21K Tanana 89.27 24 P **P** **05 00 04.1 +0.8**
I21K IAmb IAmb 05 02 04.7
comp=Z,39nm,2.0s
KTH Kantishna Hill 89.36 26 P **P** **05 00 04.5 +0.7**
KTH IAmb IAmb 05 01 57.2
comp=Z,36nm,1.8s
RC01 Rabbit Creek A 89.39 29 P **P** **05 00 04.6 +0.7**
RC01 IAmb IAmb 05 00 45.6
comp=Z,41nm,1.8s
B21K Ikpikpuk River 89.42 20 P **P** **05 00 04.2 +0.4**
BPAW Bear Paw Mtn. 89.45 25 P **P** **05 00 04.0 -0.2**
BPAW IAmb IAmb 05 00 56.7
comp=Z,25nm,1.8s
KIRV Kirov 89.59 329 *ce*P **P** **05 00 02.6 -2.2**
MLY Manley 89.75 25 P **P** **05 00 06.0 +0.4**
MLY IAmb IAmb 05 00 54.6
comp=Z,26nm,1.9s
GNI Garni 89.95 310 *ce*P **P** **05 00 07.9 +0.7**
GNI pmax pmax
comp=Z,11nm,1.0s
E22K Anaktuvuk Pass 90.03 21 P **P** **05 00 07.5 +0.7**
KNK Knik Glacier 90.06 28 P **P** **05 00 09.1 +2.0**
KNK IAmb IAmb 05 01 28.1
comp=Z,47nm,1.8s
SML Sawmill 90.19 28 P **P** **05 00 07.7 0.0**
RND Reindeer 90.24 26 P **P** **05 00 07.6 -0.3**
RND IAmb IAmb 05 00 44.1
comp=Z,10nm,0.9s
RND Reindeer 90.24 26 P **P** **05 00 07.6 -0.3**
RND pmax pmax
comp=Z,10.0nm,0.9s
G23K Bananza Creek 90.39 23 P **P** **05 00 09.3 +0.8**
ELIB Princess Elisa 90.55 197 *d*P **P** **05 00 10.5 +1.1**
comp=Z,13nm,0.7s
ZEI Tsey 90.87 313 *e*P **P** **05 00 11.3 -0.2**
ZEI pmax pmax
comp=Z,18nm,1.3s
CCB Clear Creek Bu 90.91 25 P **P** **05 00 10.3 -0.6**
AKH Akhalkalaki 91.03 311 P **P** **05 00 12.5 +0.3**
AKH Akhalkalaki 91.03 311 P **P** **05 00 12.5 +0.3**
AKH pmax pmax
comp=Z,60nm,0.9s
NCK Nalchik 91.16 313 *i* P **P** **05 00 12.8 +0.2**
NCK pmax pmax
comp=Z,11nm,0.8s
ONI Oni 91.17 312 P **P** **05 00 12.7 0.0**
ONI Oni 91.17 312 P **P** **05 00 12.7 0.0**
ONI pmax pmax
comp=Z,5.0nm,0.7s
ILAR Eielson Array 91.32 25 P **P** **05 00 11.9 -0.9**
comp=Z,0.7nm,0.6s,baz=252,slow=4.4,SNR=13
comp=Z,0.7nm,0.6s
F24K Squaw Lake 91.36 22 P **P** **05 00 13.5 +0.5**
F24K IAmb IAmb 05 00 48.6
comp=Z,22nm,1.9s
KBZ Khabaz 91.69 314 *ce*P **P** **05 00 15.4 +0.5**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 91.69 314 P **P** **05 00 14.4 -0.5**
comp=Z,4.8nm,0.8s,baz=60,slow=3.3,SNR=9.9
comp=Z,4.8nm,0.8s
KIV Kislovodsk 91.86 314 *e*P **P** **05 00 17.7 +1.8**
KIV pmax pmax
comp=Z,7.0nm,1.0s
GURO Guroymak-BITLI 91.89 308 P **P** **05 00 17.2 +1.0**
KIBK Kibwezi 92.25 267 P **P** **05 00 18.1 -0.3**
J26L Joseph Creek 92.71 26 P **P** **05 00 19.4 +0.1**
KMBO Kilima Mbogo 93.15 269 P **P** **05 00 23.2 +0.5**
KMBO Kilima Mbogo 93.15 269 *i* P **P** **05 00 23.2 +0.5**
SNR=8.1
KMBO Kilima Mbogo 93.15 269 P **P** **05 00 23.2 +0.5**
KMBO pmax pmax
comp=Z,7.0nm,1.0s
L27K Beaver Creek, 93.35 27 P **P** **05 00 23.0 +0.7**
BCAR Beaver Creek A 93.37 27 P **P** **05 00 22.9 +0.5**
SOC Sochi 93.98 313 *e*P **P** **05 00 26.2 +0.7**
SOC *e* 05 04 12.7
SOC *e*PPP PPP 05 06 11.7
SOC *e*S **SKSac** **05 10 49.6 +0.5**
SOC *e*SSS SSS 05 21 27.0
I28M Miner Creek 94.31 25 P **P** **05 00 27.4 +0.6**
F28M Old Crow 94.43 23 P **P** **05 00 27.6 +0.5**
DAWY Dawson 94.49 26 P **P** **05 00 28.0 +0.5**
DAWY IAmb IAmb 05 01 05.1
comp=Z,8.3nm,1.0s
VSR Storozhevoye 94.70 321 *e*P **P** **05 00 24.9 -3.7**
VSR pmax pmax
comp=Z,10.0nm,1.5s
KLMR Klimovskoe 94.81 331 *e*P P 05 00 23.5 -5.4
KLMR pmax pmax
comp=Z,8.0nm,0.6s
K29M Barlow Dome 95.31 26 P **P** **05 00 32.9 +1.5**
K29M IAmb IAmb 05 01 09.1
comp=Z,8.0nm,1.1s
OBN Obninsk 96.32 325 ⇓ *i*P **P** **05 00 34.6 -1.3**
OBN pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 96.81 22 PKKPbc PKKPbc 05 17 19.4 -3.3
comp=Z,1.0nm,0.4s,baz=110,slow=2.1,SNR=12
BELA Belgrano 2 96.84 183 P **P** **05 00 37.9 -0.1**
BELA IAmb IAmb 05 00 38.2
comp=Z,8.0nm,0.6s
MMAI Mount Meron Ar 96.97 303 P **P** **05 00 40.1 +0.5**
comp=Z,2.4nm,0.5s,baz=79,slow=7.5,SNR=1.9
comp=Z,2.4nm,0.5s
EIL Elat 97.27 299 LR LR 05 51 51.5
comp=Z,19nm,18.1s,baz=68,slow=40
SNAA Sanae 97.73 193 P Pdif 05 00 42.8 +0.6
comp=Z,4.8nm,0.8s,baz=189,slow=5.6,SNR=9.3
SNAA LR LR 05 43 48.5
comp=Z,60nm,20.7s,baz=63,slow=35
comp=Z,4.8nm,0.8s
BR131 Keskin Array S 98.45 309 P **P** **05 00 43.7 -2.4**
BR131 IAmb IAmb 05 04 42.2
comp=Z,16nm,1.8s
BR131 Keskin Array S 98.45 309 P **P** **05 00 43.7 -2.4**
BR131 pmax pmax
comp=Z,16nm,1.8s
BRTR Keskin Array B 98.45 309 P **P** **05 00 44.2 -1.9**
BRTR Keskin Array B 98.45 309 *ce*P **P** **05 00 45.2 -0.9**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 98.45 309 P **P** **05 00 44.9 -1.3**
comp=Z,2.5nm,0.9s,baz=115,slow=5.7,SNR=14
comp=Z,2.5nm,0.9s
VALR Valaam 98.97 331 *i* P **P** **05 00 46.3 -1.4**
VALR pmax pmax
comp=Z,16nm,1.0s
MBAR Mbarara 99.68 269 LR LR 05 42 50.2
comp=Z,14nm,18.3s,baz=170,slow=33
SPITS Spitsbergen Ar 99.70 349 P **Pdif** **05 00 51.0 +0.2**
SPITS Spitsbergen Ar 99.70 349 P **Pdif** **05 00 51.0 +0.2**
comp=Z,5.9nm,0.9s,baz=116,slow=6.6,SNR=1.5
SPITS LR LR 05 55 20.9
comp=Z,32nm,18.0s,baz=54,slow=41
comp=Z,5.9nm,0.9s
ARCES ARCESS Array B 99.88 340 P **Pdif** **05 00 51.4 -0.2**
comp=Z,7.2nm,1.0s,baz=75,slow=3.7,SNR=11
ARCES PKiKP **PKiKP** **05 05 18.4 -0.8**
comp=Z,2.1nm,0.9s,baz=108,slow=2.9,SNR=2.1
comp=Z,7.2nm,1.0s
BOSA Boshof 100.91 240 P **Pdif** **05 00 57.1 -0.2**
comp=Z,4.0nm,1.0s,baz=192,slow=3.6,SNR=5.0
AKASG Malin Array Be 100.99 321 P **Pdif** **05 00 55.4 -1.6**
comp=Z,0.4nm,0.4s,baz=73,slow=4.2,SNR=2.0
FINES FINESS Array B 101.25 332 *i* P **Pdif** **05 00 56.7 -1.2**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 101.25 332 P **Pdif** **05 00 56.6 -1.3**
comp=Z,2.3nm,0.7s,baz=62,slow=5.4,SNR=16
FINES PKiKP **PKiKP** **05 05 21.8 -0.1**
comp=Z,0.7nm,0.6s,baz=47,slow=1.8,SNR=4.7
FINES PKKPbc **PKKPbc** **05 17 07.5 -2.5**
comp=Z,0.6nm,0.6s,baz=282,slow=1.8,SNR=3.9
MNK Minsk 101.37 325 *i* P **Pdif** **05 00 57.6 -1.0**
comp=E,4.0nm,0.9s
MNK *i* P **Pdif** **05 00 57.6 -1.0**
comp=N,5.0nm,0.8s,baz=82
MNK *i* P **Pdif** **05 00 57.6 -1.0**
comp=Z,8.0nm,0.8s

MNK *i* pP **pPdif** **05 01 27.2 -2.2**
MNK *i* sP **sPdif** **05 01 40.1 -1.9**
MNK *i* PPP PPP 05 06 24.5
MNK *i* S **Sdif** **05 12 25.1 -2.8**
MNK *i* SP SP 05 13 42.8 -17
MNK *i* PS **PS** **05 14 20.8 +5.3**
MNK *i* SS **SKKPbc** **05 20 31.4 -8.5**
MNK Minsk 101.37 325 *i* P **Pdif** **05 00 57.5 -1.0**
MNK *i* S **Sdif** **05 12 25.1 -2.8**
MNK *i* PS **PS** **05 14 20.8 +5.3**
MNK pmax pmax
comp=N,5.0nm,0.8s
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK pmax pmax
comp=E,4.0nm,0.9s
SORM Soroca 101.81 318 P **Pdif** **05 00 59.5 -1.2**
BURAR Bucovina Array 103.97 318 Pdif **Pdif** **05 01 10.0 -0.4**
BURAR Bucovina Array 103.97 318 P **Pdif** **05 01 10.4 -0.1**
BUR08 Bucovina Ar. S 103.98 318 Pdif **Pdif** **05 01 09.5 -1.0**
YKA Yellowknife Ar 105.73 26 PKiKP **PKiKP** **05 05 30.1 +0.1**
comp=E,0.8nm,0.7s,baz=294,slow=1.8,SNR=10
YKA PKKPbc **PKKPbc** **05 16 53.5 -3.1**
comp=E,0.9nm,0.7s,baz=108,slow=3.0,SNR=16
YKA PKKPab **PKKPab** **05 17 10.6 -0.9**
comp=E,0.7nm,0.9s,baz=96,slow=4.4,SNR=6.0
DRGR 105.78 317 P **Pdif** **05 01 18.5 0.0**
HFS Hagfors 107.44 332 Pdiff **Pdif** **05 01 24.0 -1.5**
comp=E,1.0nm,0.7s,baz=100,slow=3.6,SNR=6.0
NOA NORSAR Array B 108.22 333 Pdiff **Pdif** **05 01 27.8 -1.2**
comp=E,0.5nm,0.6s,baz=69,slow=1.8,SNR=3.8
NVAR Mina Array Bea 109.65 51 PKKPbc PKKPbc 05 16 43.0 -0.8
comp=E,0.1nm,0.3s,baz=114,slow=2.2,SNR=4.1
NVAR PKKPab **PKKPab** **05 16 54.1 -0.6**
comp=E,0.8nm,0.8s,baz=118,slow=5.1,SNR=6.2
RONA Rosalia, Austr 109.86 319 *e*PKiKP **PKiKP** **05 05 38.0 -0.2**
comp=E,0.3nm,0.2s
CONA Conrad Observa 110.08 319 *i* PKiKP **PKiKP** **05 05 38.5 -0.2**
comp=E,0.4nm,0.3s
SOKA Soboth 110.96 318 *i* PKiKP **PKiKP** **05 05 40.3 -0.1**
comp=E,1.3nm,0.6s
MOA Molln 111.14 320 *e*PKiKP **PKiKP** **05 05 40.9 +0.2**
comp=E,0.3nm,0.2s
GERES GERESS Array B 111.20 321 PKiKP **PKiKP** **05 05 40.6 -0.2**
comp=E,1.9nm,0.6s,baz=55,slow=3.2,SNR=9.1
BIOA Bad Ischl, Aus 111.59 320 *e*PKiKP **PKiKP** **05 05 41.0 -0.5**
comp=E,2.1nm,0.6s
KBA Koelnbreinsper 111.96 319 *i* PKiKP **PKiKP** **05 05 41.7 -0.7**
comp=E,2.2nm,0.7s
LESA Schwarzleotal 112.29 320 *i* PKiKP **PKiKP** **05 05 42.3 -0.6**
comp=E,1.9nm,0.6s
ABTA Abfaltersbach 112.60 319 *e*PKiKP **PKiKP** **05 05 43.0 -0.5**
comp=E,4.6nm,0.7s
WTTA Wattenberg 113.01 320 *i* PKiKP **PKiKP** **05 05 44.4 0.0**
comp=E,6.6nm,0.4s
WATA Walderalm 113.03 320 *i* PKiKP **PKiKP** **05 05 44.0 -0.4**
comp=E,1.2nm,0.3s
SQTA Sankt Quirin 113.30 320 *i* PKiKP **PKiKP** **05 05 44.6 -0.2**
comp=E,1.2nm,0.5s
MOTA Moosalm 113.33 320 *i* PKiKP **PKiKP** **05 05 44.7 -0.3**
comp=E,1.2nm,0.4s
RETA Reutte 113.50 320 *e*PKiKP **PKiKP** **05 05 44.6 -0.6**
comp=E,1.6nm,0.6s
FETA Feichten 113.68 320 *e*PKiKP **PKiKP** **05 05 45.4 -0.3**
comp=E,0.8nm,0.4s
DAVA Damuels 114.13 320 *i* PKP **PKiKP** **05 05 46.6 +0.1**
comp=E,2.1nm,0.3s
PDAR Pinedale Array 115.12 45 PKP **PKiKP** **05 05 48.2 -0.4**
comp=E,0.4nm,0.6s,baz=112,slow=1.6,SNR=5.2
PDAR PKKPbc **PKKPbc** **05 16 24.4 -1.4**
comp=E,1.1nm,0.5s,baz=111,slow=5.5,SNR=9.6
O20A White River Ci 116.85 47 PKP **PKiKP** **05 05 52.1 0.0**
EKA Eskdalemuir Ar 117.64 332 PKP **PKiKP** **05 05 53.0 +0.2**
comp=E,0.7nm,0.4s,baz=34,slow=3.1,SNR=13
EKA PKKPbc **PKKPbc** **05 16 15.8 -1.2**
comp=E,0.6nm,0.5s,baz=232,slow=4.4,SNR=4.0
KEST Kesra 118.02 308 PKP **PKiKP** **05 05 54.9 +0.6**
comp=E,4.5nm,0.8s,baz=190,slow=2.9,SNR=6.2
KEST PP **PP** **05 07 07.3 -3.0**
comp=E,6.0nm,0.9s,baz=34,slow=3.6,SNR=5.5
ANMO Albuquerque 119.69 52 PKPdif **PKiKP** **05 05 58.0 +0.2**
ANMO Albuquerque 119.69 52 PKIKP **PKiKP** **05 05 58.0 +0.2**
ULM Lac du Bonnet 120.49 33 PKP **PKPdf** **05 05 58.0 -0.4**
comp=E,2.7nm,0.5s,baz=270,slow=2.0,SNR=7.4
ULM PKKPbc **PKKPab** **05 16 04.2 -2.2**
comp=E,1.8nm,0.6s,baz=149,slow=6.3,SNR=5.6
ULM PKKP **PKKPdf** **05 16 37.6 -1.4**
comp=E,2.0nm,1.0s,baz=18,slow=5.9,SNR=3.1
ECSD EROS Data Cent 123.43 40 PKPdf **PKPdf** **05 06 03.3 -1.1**
TXAR Lajitas Array 123.45 58 PKP **PKPdf** **05 06 04.8 -0.1**
comp=E,1.0nm,0.8s,baz=245,slow=1.4,SNR=10
TXAR PKKPbc **PKKPab** **05 15 54.4 +0.2**
comp=E,0.8nm,0.8s,baz=118,slow=4.5,SNR=6.9
F36A Milaca 124.21 36 PKPdf **PKPdf** **05 06 05.0 -0.7**
DKNS Dickens 124.44 52 PKPdf **PKiKP** **05 06 07.4 +0.4**
SMWD Samnorwood 124.49 50 PKPdf **PKiKP** **05 06 07.2 +0.2**
SGCY Sterling City 124.84 54 **PKiKP** **05 06 08.3 +0.5**
ESDC Sonseca Array 126.42 317 PKP **PKiKP** **05 06 10.8 0.0**
comp=E,1.8nm,1.0s,baz=16,slow=2.7,SNR=10
ESDC PP **PP** **05 08 07.9 +1.2**
comp=E,1.1nm,0.7s,baz=62,slow=6.9,SNR=6.5
T35A Sooner Cattle 126.58 47 PKPdf **PKPdf** **05 06 09.7 -0.8**
MVO Moncorvo 127.70 320 *e*PKPdf **PKiKP** **05 06 14.3 +1.1**
POLO Lamas de Olo 128.08 321 *e*PKPdf **PKiKP** **05 06 14.9 +0.9**
PVRL Vila Real 128.08 320 *e*PKPdf **PKiKP** **05 06 14.9 +0.9**
SCHQ Schefferville 128.36 13 PKP **PKPdf** **05 06 12.8 -0.7**
comp=E,5.4nm,0.9s,baz=233,slow=1.4,SNR=6.7
MTE Manteigas 128.44 319 *e*PKPdf **PKiKP** **05 06 15.6 +0.9**
PCBR Castelo Branco 128.69 319 *e*PKPdf **PKiKP** **05 06 15.8 +0.7**
PMRV Marv??o 128.84 318 *e*PKPdf **PKiKP** **05 06 16.3 +0.8**
TOA0 Torodi Ar. Sit 128.89 283 PKPdf **PKPdf** **05 06 14.9 -0.6**
TORD Torodi Ar. Bea 128.89 283 PKP **PKPdf** **05 06 15.1 -0.4**
comp=E,3.0nm,0.3s,baz=54,slow=2.3,SNR=5.5
COI Coimbra 129.10 320 *e*PKPdf **PKiKP** **05 06 16.0 0.0**
PBAR Barrancos 129.24 317 *e*PKPdf **PKiKP** **05 06 17.3 +1.0**
PMTG Montargil 129.58 318 *e*PKPdf **PKPdf** **05 06 16.1 -0.1**
EVO Evora 129.72 318 *e*PKPdf **PKiKP** **05 06 17.8 +0.5**
EVO *e*SKPbc SKPab 05 09 26.9 -0.2
PBEJ Beja 129.88 317 *e*SKPbc SKPab 05 09 27.7 -0.1
PCVE Castro Verde 130.19 317 *e*PKPdf **PKiKP** **05 06 18.9 +0.6**
PCVE *e*SKPbc **SKPab** **05 09 28.6 -0.6**
MESJ Messejana 130.21 317 *e*PKPdf **PKiKP** **05 06 19.3 +1.0**
MESJ *e*SKPbc **SKPab** **05 09 29.0 -0.3**
PNCL Nicolau / Gran 130.28 317 *e*PKPdf **PKiKP** **05 06 19.1 +0.7**
PNCL *e*SKPbc **SKPab** **05 09 29.3 -0.2**
PBDV Barranco-do-Ve 130.31 316 *e*SKPbc **SKPbc** **05 09 29.8 -0.1**
PLCA Paso Flores 130.57 159 PKP **PKiKP** **05 06 19.6 +0.6**
comp=E,2.4nm,0.8s,baz=273,slow=1.7,SNR=6.5
MORF Marmelete 130.78 316 *e*SKPbc **SKPbc** **05 09 31.4 -0.2**
PFVI Vila Bisbo 130.99 316 *e*PKPdf **PKiKP** **05 06 20.5 +0.6**
PFVI *e*SKPbc **SKPbc** **05 09 32.3 0.0**
OLIL Olney 131.50 41 PKPdf **PKPdf** **05 06 19.8 -0.1**
DBIC Dimbokro 135.58 274 PKIKP **PKPdf** **05 06 28.0 -0.2**
DBIC Dimbokro 135.58 274 PKP **PKPdf** **05 06 28.0 -0.2**
comp=E,4.7nm,0.6s,baz=98,slow=1.5,SNR=8.3
DBIC SKPbc **SKPbc** **05 09 46.6 -1.9**
comp=E,3.8nm,0.6s,baz=97,slow=2.9,SNR=7.9
PB14 IPOC Station P 144.21 146 PKPdf **PKPdf** **05 06 43.5 -0.5**
JTS Las Juntas de 144.48 79 PKPdf PKPbc 05 06 43.4 +0.2
JTS Las Juntas de 144.48 79 PKIKP PKPbc 05 06 43.4 +0.2
JTS Las Juntas de 144.48 79 *eP* PKPbc 05 06 43.5 +0.3
ARE1 Arenal 1 144.69 79 PKPdf **PKPdf** **05 06 44.9 +0.2**
ITQB Itaqui 144.86 169 **PKPdf** **05 06 44.4 -0.2**
HDC Heredia 145.33 80 **PKPab** **05 06 46.7 +0.5**
LCR2 La Lucha 2 145.46 80 PKPbc **PKPab** **05 06 46.7 -0.1**
RIMA Rio Macho 145.59 80 PKPbc **PKPab** **05 06 47.9 +0.5**
PEZE Perez Zeledon, 145.81 81 PKPbc **PKPab** **05 06 47.8 -0.2**
PB15 IPOC Station P 145.85 146 PKPbc **PKPab** **05 06 48.3 +0.3**
PB04 IPOC Station P 146.15 144 PKPbc **PKPab** **05 06 49.1 0.0**
PB06 IPOC Station P 146.19 145 PKPbc **PKPab** **05 06 49.3 0.0**
LVC Limon Verde 146.64 146 PKPbc **PKPbc** **05 06 49.9 -0.1**
LVC Limon Verde 146.64 146 PKP2 **PKPbc** **05 06 49.9 -0.1**
AF01 San Pedro de A 146.76 147 PKPbc **PKPbc** **05 06 50.8 +0.6**
PB07 IPOC Station P 146.77 144 PKPbc **PKPbc** **05 06 50.0 -0.2**
PB02 IPOC Station P 147.07 143 PKPbc **PKPbc** **05 06 50.9 0.0**
PB09 IPOC Station P 147.09 145 PKPbc **PKPbc** **05 06 50.2 -0.8**
PATCX Punta Patache 147.30 142 PKPbc **PKPbc** **05 06 50.6 -0.9**
TA01 Diego Aracena 147.47 142 PKPbc **PKPbc** **05 06 51.7 -0.2**
CPUP Villa Florida 147.95 167 PKPbc **PKPbc** **05 06 51.5 -1.5**
comp=E,27nm,0.9s,baz=192,slow=2.0,SNR=43
NNA Nana 147.99 122 PKPbc **PKPbc** **05 06 54.0 +0.5**
NNA Nana 147.99 122 PKP2 **PKPbc** **05 06 54.0 +0.5**
NNA Nana 147.99 122 *eP* **PKiKP** **05 06 55.0 -0.3**
MCRA Macar, Loja 148.18 106 *eP* **PKPbc** **05 06 54.8 +0.7**

ATAH	**Atahualpa**	**148.74**	**112**	PKPbc	**PKPbc**	**05 06 54.9**	**-1.0**
	comp=E,17nm,0.8s,baz=272,slow=5.7,SNR=12						
OTAV	**Otavalo**	**150.69**	**98**	*eP*	**PKPdf**	**05 06 55.8**	**+0.6**
TULM	**Tulcn-Chalpat**	**151.43**	**98**	*eP*	**PKiKP**	**05 07 04.2**	**+1.3**
GCUF	**Volcan Galeras**	**151.94**	**97**	*eP*	**PKiKP**	**05 07 05.1**	**+1.0**
BBAC	**Balboa, Cauca**	**152.14**	**95**	*eP*	**PKiKP**	**05 07 04.2**	**+0.1**
POPC	**Popayan, Colom**	**152.76**	**94**	*eP*	**PKiKP**	**05 07 05.5**	**+0.1**
JAMC	**Jamundi, Valle**	**152.83**	**93**	*eP*	**PKiKP**	**05 07 06.0**	**+0.5**
YOTC	**Yotoco, Valle**	**153.21**	**91**	*eP*	**PKiKP**	**05 07 06.3**	**+0.2**
CZSB	**Cruzeiro do Su**	**153.62**	**118**	*eP*	**PKPbc**	**05 07 06.7**	**-0.1**
GUY2C	**Guyana, Caldas**	**154.22**	**88**	*eP*	**PKiKP**	**05 07 09.4**	**+0.7**
ORTC	**Ortega, Tolima**	**154.30**	**91**	*eP*	**PKPdf**	**05 07 00.5**	**+0.5**
SDV	**Santo Domingo**	**158.66**	**78**	PKPdf	**PKPdf**	**05 07 04.3**	**-1.5**
SDV	**Santo Domingo**	**158.66**	**78**	PKP	**PKPdf**	**05 07 06.5**	**+0.7**
	comp=E,8.0nm,0.9s,baz=265,slow=7.6,SNR=8.0						
CELP	**Cerrillos**	**158.83**	**51**	PKPdf	**PKPdf**	**05 07 04.3**	**-1.3**
VILB	**Vilhena**	**159.24**	**149**	PKPdf	**PKPdf**	**05 07 05.3**	**-0.9**
BDFB	**Brasilia**	**159.45**	**184**	PKPdf	**PKPdf**	**05 07 05.6**	**-1.0**
BDFB	**Brasilia**	**159.45**	**184**	PKP	**PKPdf**	**05 07 07.2**	**+0.7**
	comp=E,3.0nm,0.8s,baz=162,slow=4.0,SNR=6.7						
BDFB				PKPab	**PKPab**	**05 07 44.5**	**-0.1**
	comp=E,1.8nm,0.6s,baz=225,slow=2.9,SNR=2.4						
SAML	**Samuel**	**160.56**	**135**	PKPdf	**PKPdf**	**05 07 07.5**	**-0.2**
SAML				PKPab	**PKPab**	**05 07 49.8**	**+0.2**
SAML	**Samuel**	**160.56**	**135**	PKIKP	**PKPdf**	**05 07 07.5**	**-0.2**
SAML						05 07 49.8	

ATH 18 04:55:05.7, 38°56N × 21°82E, h17km, ML1.1/4, Manual Solution by A.Andreou This location: 2020/05/21 07:17:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANX	**Ano Chora**	**0.09**	**69**	P	Pg	04 55 09.5	+0.2
ANX				S	Sg	04 55 12.1	+0.4
EFP	**Efpalio**	**0.15**	**152**	P	Pb	04 55 10.0	-0.1
EFP				S	Sb	04 55 13.3	+0.3
PVO	**Paravola**	**0.23**	**284**	P	Pg	04 55 11.0	0.0
PVO				S	Sb	04 55 15.2	-0.2
EVR	**Evrytania**	**0.35**	**359**	P	Pb	04 55 13.8	+0.1
EVR				S	Sb	04 55 18.9	-0.1
MAKR	**Makrakomi, Fth**	**0.51**	**29**	P	Pb	04 55 16.2	-0.1
MAKR				S	Sb	04 55 23.7	+0.2
RLS	**Riolos of Patr**	**0.57**	**209**	P	Pb	04 55 17.3	0.0
RLS				S	Sb	04 55 25.7	+0.6
KLV	**Kalavryta, Ach**	**0.58**	**153**	P	Pg	04 55 17.0	-0.2
KLV				S	Sb	04 55 25.5	+0.1
AGG	**Agios Georgios**	**0.61**	**41**	P	Pb	04 55 17.9	-0.1
AGG				S	Sb	04 55 26.6	+0.3
DRO	**Drossia**	**0.61**	**188**	P	Pg	04 55 17.8	-0.1
DRO				S	Sb	04 55 26.7	+0.4
GUR	**Goura**	**0.75**	**146**	P	Pg	04 55 20.9	+0.5
GUR				S	Sg	04 55 31.0	+0.7
VLS	**Valsamata**	**1.04**	**249**	P	Pb	04 55 25.0	-0.2
VLS				S	Sg	04 55 39.4	0.0

ATH 18 04:55:40.2, 39°91N × 22°46E, h10km ± 2km, ML1.5/6, Error ellipse: s-maj=2.1km s-min=0.7km az=219.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYRN	**Tyrnavos**	**0.26**	**221**	P	Pg	04 55 45.2	-0.3
TYRN				S	Sg	04 55 49.2	+0.1
TYRN				AML	AML	04 55 49.7	
	comp=N,373μm,0.3s						
TYRN				AML	AML	04 55 50.5	
	comp=E,276μm,0.2s						
THL	**Klokotos Trika**	**0.48**	**225**	P	Pg	04 55 49.1	-0.5
THL				S	Sg	04 55 56.4	+0.3
THL				AML	AML	04 55 58.5	
	comp=E,72μm,0.3s						
THL				AML	AML	04 55 59.7	
	comp=N,90μm,0.4s						
XOR	**Xorichti**	**0.79**	**133**	P	Pg	04 55 55.5	+0.1
XOR				S	Sg	04 56 05.8	+0.2
XOR				AML	AML	04 56 08.6	
	comp=E,50μm,0.3s						
XOR				AML	AML	04 56 08.6	
	comp=N,110μm,0.3s						
KPRO	**Kipourio**	**0.84**	**273**	P	Pg	04 55 56.4	-0.1
KPRO				S	Sg	04 56 07.3	0.0
KPRO				AML	AML	04 56 10.9	
	comp=N,40μm,0.4s						
KPRO				AML	AML	04 56 11.8	
	comp=E,77μm,0.4s						
HORT	**Hortiatis**	**0.85**	**35**	P	Pg	04 55 56.0	-0.5
HORT				S	Sg	04 56 07.5	-0.1
AGG	**Agios Georgios**	**0.89**	**186**	P	Pg	04 55 57.3	-0.1
AGG				S	Sb	04 56 09.6	-0.2
AGG				AML	AML	04 56 14.5	
	comp=E,63μm,0.3s						
AGG				AML	AML	04 56 14.6	
	comp=N,62μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.93**	**196**	P	Pg	04 55 57.8	-0.3
MAKR				S	Sg	04 56 09.9	-0.3
MAKR				AML	AML	04 56 15.8	
	comp=E,259μm,0.3s						
MAKR				AML	AML	04 56 16.7	
	comp=N,194μm,0.5s						
GRG	**Griva**	**1.05**	**358**	P	Pg	04 55 59.8	-0.6
GRG				S	Sb	04 56 14.4	+0.2
PENT	**Pentalofos**	**1.05**	**286**	P	Pg	04 55 60.0	-0.5
SOH	**Sokhos**	**1.14**	**37**	P	Pb	04 56 01.4	-0.7
SOH				S	Sg	04 56 16.6	-0.4
NEST	**Nestorio**	**1.19**	**296**	P	Pb	04 56 02.3	-0.6
FNA	**Florina**	**1.20**	**317**	P	Pb	04 56 02.2	-0.9
OUR	**Ouranopolis**	**1.25**	**70**	P	Pn	04 56 02.6	-1.1
KNT	**Kendrikon**	**1.29**	**15**	P	Pn	04 56 03.5	-1.0
NVR	**Nevrokopi**	**1.79**	**36**	P	Pn	04 56 10.8	-0.5

*TEH **18** 05:03:47.8, 33°.62N × 45°.66E, h8km ± 57km, ML3.3*
*ISN **18** 05:03:48.2 ± 0.5, 33°.67N × 45°.70E, h8km ± 2km, ML3.2*
ISC 18 05:03:48.2 ± 1.5, 33°.64N ± 0°.03 × 45°.70E ± 0°.03, h0km ± 14km, n16, σ1≤03°/22, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.42**	**92**	Pg	**Pg**	**05 03 57.4**	**+1.1**
ILBA				Sg	**Sb**	**05 04 03.6**	**-1.9**
IBDR	**Badra**	**0.56**	**160**	*e*Pg	**Pb**	**05 04 00.0**	**-0.9**
IBDR				*e*Sg	**Sb**	**05 04 08.0**	**-1.4**
KGS1	**Ghasr-e-Shirin**	**0.87**	**354**	Pg	**Pg**	**05 04 05.0**	**+0.1**
BHD	**Baghdad**	**1.17**	**252**	*e*Pg	**Pg**	**05 04 11.0**	**+0.5**
BHD				*e*Sg	**Sb**	**05 04 27.0**	**+0.2**
BHD				AML	AML	05 04 34.8	
	comp=E,2μm,0.3s						
IDHR	**Dehrash**	**1.20**	**28**	Pg	**Pg**	**05 04 11.4**	**+0.2**
IDHR				Sg	**Sn**	**05 04 30.2**	**+0.6**
KCHF	**Cheshme Sefid,**	**1.28**	**60**	Pg	**Pg**	**05 04 13.0**	**+0.2**
ILIN	**Lien**	**1.65**	**39**	Pg	**Pb**	**05 04 19.4**	**-0.3**
RAFI	**Al-Rafai**	**1.94**	**170**	*e*Pn	**Pb**	**05 04 24.0**	**-0.4**
RAFI				*e*Sn	**Sg**	**05 04 50.0**	**-0.6**
IDOB	**Doab**	**2.07**	**85**	Pn	**Pb**	**05 04 25.8**	**-1.0**
IKRK	**Kirkuk**	**2.09**	**328**	*e*Pn	**Pn**	**05 04 25.0**	**+0.5**
IKRK				*e*Sn	**Sb**	**05 04 52.0**	**-1.5**
IKRK				AML	AML	05 04 58.4	
	comp=N,136nm,0.5s						
IKRK				AML	AML	05 05 06.3	
	comp=E,158nm,0.6s						
SDS1	**Sardasht. Az.**	**2.51**	**356**	Pn	**Pn**	**05 04 31.3**	**+0.9**
IRAZ	**Razeghan**	**3.91**	**62**	Pn	**Pn**	**05 04 51.0**	**+1.2**
QAMS	**Qamsar**	**4.75**	**87**	Pn	**Pn**	**05 05 02.6**	**+1.3**
IKLH	**Kolahrood**	**4.92**	**92**	Pn	**Pn**	**05 05 04.9**	**+1.3**
KLST	**Kelardasht - M**	**5.25**	**55**	Pn	**Pn**	**05 05 08.7**	**+0.5**
KRSH	**Karshahi**	**5.37**	**85**	Pn	**Pn**	**05 05 10.8**	**+1.1**

*MDD **18** 05:04:20.4 ± 0.9, 35°.50N × 3°.83W, h0km ± 4km, mb_Lg2.1/7, Error ellipse: s-maj=8.6km s-min=3.4km az=32.0*
*CNRM **18** 05:04:22.4, 35°.49N × 3°.74W, h22km, ML1.8*
*SFS **18** 05:04:23.1, 35°.43N × 3°.71W, h25km, ML2.4/7, ML2.5/7, MLv2.4/7*
ISC 18 05:04:19.4 ± 1.6, 35°.51N ± 0°.02 × 3°.72W ± 0°.02, h1km ± 13km, n40, σ1≤02/59, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.34**	**212**	P	**Pb**	**05 04 28.8**	**+0.4**
PALE	**Palemas**	**0.34**	**212**	S	**Sb**	**05 04 34.2**	**-0.1**
EMEL	**Melilla**	**0.66**	**108**	Pg	**Pn**	**05 04 35.2**	**-0.7**
EMEL				Sg	**Sb**	**05 04 43.7**	**+0.3**
GOG	**Mont Gurugu**	**0.66**	**116**	P	**Pn**	**05 04 35.6**	**-0.4**
GOG	**Mont Gurugu**	**0.66**	**116**	S	**Sb**	**05 04 44.4**	**+0.9**
EMLI	**Melilla**	**0.66**	**108**	Sg	**Sb**	**05 04 44.5**	**+1.0**
EMLI				Pg	**Pn**	**05 04 35.2**	**-0.7**
EALB	**Alboran**	**0.70**	**52**	Pg	**Pn**	**05 04 36.0**	**-0.6**
EALB				Sg	**Sn**	**05 04 46.8**	**-1.2**
EALB				*i* Vmb_Lg		05 04 49.8	
AKLM	**AKL**	**1.00**	**187**	P	**Pn**	**05 04 41.1**	**+0.4**
AKLM	**AKL**	**1.00**	**187**	S	**Sg**	**05 04 51.5**	**-0.2**
CHAS	**Isla Isabel II**	**1.10**	**107**	Pg	**Pb**	**05 04 41.4**	**+0.1**
CHAS				Sg	**Sb**	**05 04 56.0**	**-0.2**
TAF	**Taforalt**	**1.27**	**123**	P	**Pn**	**05 04 44.5**	**0.0**
TAF	**Taforalt**	**1.27**	**123**	S	**Sn**	**05 05 01.9**	**-0.4**
EMIJ	**Mijas**	**1.35**	**321**	Pn	**Pb**	**05 04 46.7**	**+1.1**
EMIJ	**Mijas**	**1.35**	**321**	Pg	**Pn**	**05 04 45.2**	**-0.4**
EMIJ				Sg	**Sg**	**05 05 00.5**	**-2.5**
EMIJ				*i* Vmb_Lg		05 05 09.5	
ELGU	**Los Guajares,**	**1.36**	**3**	Pn	**Pn**	**05 04 45.6**	**0.0**
ELGU				Sn	**Sn**	**05 05 04.6**	**+0.3**
ELGU	**Los Guajares,**	**1.36**	**3**	Pn	**Pn**	**05 04 45.3**	**-0.3**
ELGU				Sn	**Sg**	**05 05 02.8**	**-0.2**
ELGU				*i* Vmb_Lg		05 05 06.3	
SMIR	**Smir Dam**	**1.36**	**278**	P	**Pb**	**05 04 46.6**	**+0.8**
SMIR	**Smir Dam**	**1.36**	**278**	S	**Sb**	**05 04 04.4**	**+0.6**
EMAL	**Malaga-Limoner**	**1.38**	**335**	Pn	**Pb**	**05 04 47.5**	**+1.5**
EMAL				Sn	**Sg**	**05 05 03.2**	**-0.4**
CHEFC	**Chefchaouen**	**1.39**	**254**	P	**Pb**	**05 04 46.6**	**+0.5**
CHEFC	**Chefchaouen**	**1.39**	**254**	S	**Sg**	**05 05 03.8**	**-0.1**
JBK	**JBK**	**1.51**	**141**	P	**Pn**	**05 04 47.8**	**0.0**
JBK	**JBK**	**1.51**	**141**	S	**Sg**	**05 05 07.6**	**-0.2**
EBER	**Berja**	**1.54**	**26**	Pn	**Pn**	**05 04 47.6**	**-0.6**
EBER				Sn	**Sn**	**05 05 08.6**	**-0.4**
EBER	**Berja**	**1.54**	**26**	Pn	**Pn**	**05 04 48.1**	**-0.1**
EBER				Sn	**Sn**	**05 05 08.5**	**-0.5**
EBER				*i* Vmb_Lg		05 05 30.0	
EGOR	**Sierra Gorda,**	**1.63**	**349**	Pn	**Pb**	**05 04 50.7**	**+0.3**
EGOR				Sn	**Sn**	**05 05 11.3**	**+0.2**
EGOR	**Sierra Gorda,**	**1.63**	**349**	Pn	**Pn**	**05 04 50.0**	**+0.5**
EGOR				Sn	**Sn**	**05 05 10.1**	**-1.0**
EGOR				*i* Vmb_Lg		05 05 18.3	
EQUE	**Quentar**	**1.71**	**8**	Pn	**Pn**	**05 04 50.2**	**-0.3**
EQUE				Sn	**Sn**	**05 05 12.8**	**-0.2**
EQUE				*i* Vmb_Lg		05 05 29.1	
EQTA	**Presa de Quent**	**1.71**	**7**	Pn	**Pn**	**05 04 50.7**	**+0.2**
EQES	**Quesada**	**2.35**	**13**	Pn	**Pn**	**05 04 59.3**	**0.0**
EQES				Pg	**Pb**	**05 05 02.2**	**-0.4**
EQES				Sn	**Sn**	**05 05 27.8**	**-1.1**
EQES				Sg	**Sb**	**05 05 31.9**	**-0.2**
EQES				*i* Vmb_Lg		05 05 37.9	
EADA	**Adamuz**	**2.74**	**346**	Pn	**Pn**	**05 05 05.8**	**+1.2**
EADA				Sg	**Sn**	**05 05 41.5**	**+3.1**
MD31	**MD31**	**2.77**	**198**	P	**Pn**	**05 05 05.8**	**+0.7**
MD31	**MD31**	**2.77**	**198**	S	**Sn**	**05 05 38.9**	**-0.4**
MDT	**Midelt**	**2.79**	**196**	P	**Pn**	**05 05 05.9**	**+0.6**
MDT	**Midelt**	**2.79**	**196**	S	**Sn**	**05 05 38.8**	**-0.9**
ECAB	**El Cabril**	**2.90**	**332**	Sn	**Sn**	**05 05 40.5**	**-1.9**
ETOB	**Tobarra**	**3.58**	**28**	Pn	**Pn**	**05 05 17.6**	**+1.4**
ETOB				Sn	**Sn**	**05 05 59.9**	**+0.8**
ETOB				Sg	**Sb**	**05 06 08.9**	**+1.3**
PVAQ	**Vaqueiros**	**3.74**	**302**	*e*Sn	**Sn**	**05 05 59.7**	**-3.2**
PBAR	**Barrancos**	**3.76**	**316**	*e*Sn	**Sn**	**05 06 01.9**	**-1.7**
PBDV	**Barranco-do-Ve**	**3.81**	**298**	*e*Sn	**Sn**	**05 06 03.5**	**-1.4**

*KRNET **18** 05:10:33.6 ± 0.1, 40°.76N × 74°.11E, h15km, mb3.4*
*KNET **18** 05:10:37.2 ± 1.1, 40°.86N × 74°.14E, h17km ± 12km, ml2.9, Error ellipse: s-maj=10.7km s-min=5.3km az=81.0*
*NNC **18** 05:10:37.9 ± 1.2, 40°.87N × 74°.22E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=9.7km s-min=5.8km az=173.0*
*SOME **18** 05:10:39.0, 40°.97N × 74°.18E, h10km*
ISC 18 05:10:32.7 ± 1.1, 40°.72N ± 0°.03 × 74°.17E ± 0°.02, h13km ± 10km, n80, σ1≤50/130, 34C-23D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.87**	**216**	⇓*iP*	**Pg**	**05 10 50.2**	**+0.7**
	baz=13						
SFK				⇓*iS*	**Sb**	**05 11 02.8**	**+1.4**
OHH	**Osh**	**1.07**	**260**	⇑*iP*	**Pb**	**05 10 53.5**	**+0.3**
	baz=58						
OHH				⇑*iS*	**Sn**	**05 11 08.0**	**-0.4**
	baz=58						
ARLS	**Aral**	**1.15**	**6**	⇓*iP*	**Pn**	**05 10 54.9**	**+0.2**
	baz=8.0						
ARLS				⇓*iS*	**Sn**	**05 11 10.4**	**0.0**
	baz=8.0						
UCH	**Uchtor**	**1.53**	**10**	⇑P	**Pg**	**05 11 02.5**	**+0.3**
	32nm,0.2s,SNR=69						
UCH				⇓S	**Sg**	**05 11 23.2**	**+1.0**
	108nm,0.3s						
UCH	**Uchtor**	**1.53**	**10**	⇑*iP*	**Pg**	**05 11 02.2**	**0.0**
	baz=11						
UCH				⇑*iS*	**Sg**	**05 11 22.8**	**+0.7**
	baz=11						
NRN	**Naryn**	**1.56**	**62**	⇓*iP*	**Pb**	**05 11 02.9**	**+1.3**
	baz=64						
NRN				⇓*iS*	**Sg**	**05 11 24.4**	**+1.5**
	baz=64						
AAK	**Ala-Archa**	**1.94**	**7**	⇑P	**Pg**	**05 11 10.1**	**+0.2**
	16nm,0.2s,SNR=42						
AAK				⇑S	**Sg**	**05 11 35.4**	**+0.4**
	48nm,0.2s						
AAK	**Ala-Archa**	**1.94**	**7**	⇓*iP*	**Pg**	**05 11 09.2**	**-0.7**
	baz=8.0						
AAK				⇓*iS*	**Sg**	**05 11 35.0**	**0.0**
	baz=8.0						
EKS2	**Erkin-Say**	**1.97**	**351**	⇓P	**Pg**	**05 11 10.2**	**-0.3**
	10nm,0.2s,SNR=13						
EKS2				⇓S	**Sg**	**05 11 35.0**	**-1.0**
	45nm,0.3s						
EKS2	**Erkin-Say**	**1.97**	**351**	⇑*iP*	**Pb**	**05 11 09.3**	**+0.8**
	baz=53						
EKS2				⇑*iS*	**Sn**	**05 11 35.5**	**-0.5**
	baz=53						
ARK	**Arkit**	**1.99**	**304**	⇑*iP*	**Pb**	**05 11 09.5**	**+0.7**
	baz=4.0						
ARK				⇑*iS*	**Sg**	**05 11 35.8**	**-0.8**
	baz=4.0						
KBK	**Karagaybulak**	**2.02**	**16**	⇓P	**Pg**	**05 11 12.0**	**+0.4**
	30nm,0.2s,SNR=43						
KBK				⇑S	**Sg**	**05 11 38.9**	**+1.1**
	163nm,0.4s						
KBK	**Karagaybulak**	**2.02**	**16**	⇑*iP*	**Pb**	**05 11 10.7**	**+1.2**
	baz=18						
KBK				⇑*iS*	**Sg**	**05 11 37.9**	**+0.1**
	baz=18						
FRU1	**Bishkek**	**2.12**	**9**	⇑*iP*	**Pb**	**05 11 12.2**	**+1.1**
	baz=10.0						
FRU1				⇑*iS*	**Sg**	**05 11 40.5**	**-0.4**
	baz=10.0						
MRKS	**Merke**	**2.15**	**341**	Pg	**Pg**	**05 11 15.4**	**+1.5**
	32nm,0.3s						
MRKS				Lg	Lg	05 11 42.0	
	204nm,0.5s						
MRKS	**Merke**	**2.15**	**341**	*e*P	**Pg**	**05 11 15.8**	**+1.9**
	32nm,0.3s						
MRKS				*e*S	**Sg**	**05 11 42.7**	**+0.9**
	204nm,0.2s						
MNAS	**Manas**	**2.17**	**325**	⇑*iP*	**Pb**	**05 11 12.4**	**+0.5**
	baz=26						
MNAS				⇑*iS*	**Sg**	**05 11 40.6**	**-1.8**
	baz=26						
ULHL	**Ulahol**	**2.18**	**45**	⇑P	**Pb**	**05 11 13.8**	**+1.6**
	31nm,0.2s,SNR=63						
ULHL				⇓S	**Sg**	**05 11 42.1**	**-0.7**
	53nm,0.3s						
ULHL	**Ulahol**	**2.18**	**45**	⇑*iP*	**Pb**	**05 11 13.3**	**+1.1**
	baz=46						
ULHL				⇑*iS*	**Sg**	**05 11 42.3**	**-0.5**
	baz=46						
DRK	**Karamyk**	**2.20**	**237**	⇑*iP*	**Pb**	**05 11 13.5**	**+1.0**
	baz=35						
DRK				⇑*iS*	**Sg**	**05 11 42.4**	**-1.0**
	baz=35						
BOOM	**Boomskoye usch**	**2.21**	**36**	⇑*iP*	**Pb**	**05 11 13.9**	**+1.2**
	baz=38						
BOOM				⇑*iS*	**Sg**	**05 11 43.0**	**-0.9**
	baz=38						
TRKS	**Terek-Say**	**2.43**	**291**	⇑*eP*	**Pb**	**05 11 15.5**	**-0.9**
	baz=89						
TRKS				⇑*eS*	**Sb**	**05 11 46.0**	**-0.4**
	baz=89						
TKM2	**Tokmak 2**	**2.45**	**25**	⇑P	**Pb**	**05 11 18.0**	**+1.2**
	20nm,0.2s,SNR=22						
TKM2	**Tokmak 2**	**2.45**	**25**	⇓Pg	**Pb**	**05 11 18.3**	**+1.6**
	5.8nm,0.3s						
TKM2				⇑Lg	Lg	05 11 52.6	
	96nm,0.5s						
TKM2	**Tokmak 2**	**2.45**	**25**	⇓*iP*	**Pb**	**05 11 16.8**	**+0.1**
	baz=27						
TKM2				⇓*iS*	**Sb**	**05 11 48.2**	**+1.3**
	baz=27						
USP	**Ospenovka**	**2.56**	**5**	⇓P	**Pb**	**05 11 19.4**	**+0.9**
	19nm,0.2s,SNR=28						
USP	**Ospenovka**	**2.56**	**5**	⇓*iP*	**Pb**	**05 11 18.1**	**-0.5**
	baz=6.0						
USP				⇓*iS*	**Sb**	**05 11 50.4**	**+0.4**
	baz=6.0						
BTK	**Batken**	**2.65**	**257**	⇑*iP*	**Pb**	**05 11 19.4**	**-0.6**
	baz=56						
BTK				⇑*iS*	**Sb**	**05 11 52.5**	**+0.1**
	baz=56						
KDJ	**Kajisay**	**2.67**	**57**	⇓*iP*	**Pb**	**05 11 20.5**	**+0.1**
	baz=58						
KDJ				⇓*iS*	**Sb**	**05 11 54.5**	**+1.3**
	baz=58						
KST	**Kastek**	**2.68**	**29**	Pg	**Pg**	**05 11 26.2**	**+2.1**
	12nm,0.4s						
KST				Lg	Lg	05 11 59.6	
	71nm,0.4s						
KST	**Kastek**	**2.68**	**29**	*e*P	**Pg**	**05 11 26.0**	**+1.9**
	12nm,0.4s						
KST				*e*S	**Sg**	**05 11 59.6**	**+0.7**
	70nm,0.2s						
DGS	**Degeres**	**2.79**	**25**	Pg	**Pg**	**05 11 27.5**	**+1.3**
	29nm,0.4s						
DGS				Lg	Lg	05 12 02.9	
	87nm,0.9s						
DGS	**Degeres**	**2.79**	**25**	*e*P	**Pg**	**05 11 27.9**	**+1.7**
	29nm,0.4s						
DGS				*e*S	**Sg**	**05 12 02.9**	**+0.5**
	86nm,0.4s						
MTBS	**Maitube**	**2.94**	**34**	Pg	**Pg**	**05 11 29.8**	**+0.7**
	9.7nm,0.2s						
MTBS				Lg	Lg	05 12 06.3	
	51nm,0.4s						
MTBS	**Maitube**	**2.94**	**34**	*e*P	**Pg**	**05 11 29.8**	**+0.7**
	9.7nm,0.2s						
MTBS				*e*S	**Sg**	**05 12 06.3**	**-1.0**
	51nm,0.4s						
DZA	**Taraz**	**3.04**	**317**	*e*P	**Pg**	**05 11 31.8**	**+0.8**
	39nm,0.1s						
DZA				*e*S	**Sg**	**05 12 09.6**	**-0.8**
	127nm,0.3s						
TNSS	**Tian-Shan**	**3.11**	**41**	Pg	**Pg**	**05 11 31.9**	**-0.5**
	15nm,0.2s						
TNSS				Lg	Lg	05 12 10.4	
	20nm,0.4s						
TNSS	**Tian-Shan**	**3.11**	**41**	*e*P	**Pg**	**05 11 31.9**	**-0.5**
	15nm,0.2s						
TNSS				*e*S	**Sg**	**05 12 10.2**	**-2.4**
	20nm,0.4s						
KRBS	**Karabastau**	**3.18**	**20**	Pg	**Pg**	**05 11 34.5**	**+0.8**
	6.6nm,0.3s						
KRBS				Lg	Lg	05 12 14.2	
	28nm,0.5s						
KRBS	**Karabastau**	**3.18**	**20**	*e*P	**Pg**	**05 11 34.5**	**+0.8**
	6.6nm,0.3s						
KRBS				*e*S	**Sg**	**05 12 14.2**	**-0.6**
	28nm,0.3s						
AAA	**Alma-Ata**	**3.22**	**38**	Pg	**Pg**	**05 11 35.9**	**+1.5**
	48nm,0.3s						
AAA				Lg	Lg	05 12 17.1	
	88nm,0.7s						
AAA	**Alma-Ata**	**3.22**	**38**	*e*P	**Pg**	**05 11 35.9**	**+1.5**
	38nm,0.1s						
AAA				*e*S	**Sg**	**05 12 17.1**	**+0.9**
	69nm,0.2s						
MDOK	**Medeo**	**3.25**	**40**	Pg	**Pb**	**05 11 33.5**	**+3.1**
	8.0nm,0.6s						
MDOK				Pg	**Pg**	**05 11 35.7**	**+0.6**
	9.8nm,0.4s						
MDOK				Lg	Lg	05 12 16.3	
	30nm,0.5s						
MDOK				Lg	Lg	05 12 16.7	
	25nm,0.6s						
MDOK	**Medeo**	**3.25**	**40**	*e*P	**Pg**	**05 11 35.7**	**+0.6**
	9.8nm,0.4s						
MDOK				*e*S	**Sg**	**05 12 16.3**	**-0.9**
	30nm,0.5s						
KOTS	**Kotyrbulak**	**3.34**	**40**	Pg	**Pg**	**05 11 36.5**	**-0.1**
	8.2nm,0.3s						
KOTS				Lg	Lg	05 12 18.3	
	86nm,0.8s						
KOTS	**Kotyrbulak**	**3.34**	**40**	*e*P	**Pg**	**05 11 36.5**	**-0.1**
	8.8nm,0.2s						
KOTS				*e*S	**Sg**	**05 12 18.3**	**-1.6**
	86nm,0.5s						
IUG	**Iuzhnay**	**3.43**	**296**	*e*P	**Pg**	**05 11 38.8**	**+0.5**
	15nm,0.1s						
IUG				*e*S	**Sg**	**05 12 21.8**	**-0.9**
	160nm,0.4s						
KTBS	**Karatobe**	**3.53**	**31**	Pg	**Pg**	**05 11 40.6**	**+0.4**
	8.2nm,0.4s						
KTBS				Lg	Lg	05 12 24.6	
	37nm,0.6s						
KTBS	**Karatobe**	**3.53**	**31**	*e*P	**Pg**	**05 11 40.6**	**+0.4**
	8.2nm,0.2s						
KTBS				*e*S	**Sg**	**05 12 24.6**	**-1.4**

BTLS					Lg	Lg	05 12 50.5		
	13nm,0.6s								
BTLS	**Baital**	**4.32**	**359**	*eP*	**Pg**	**Pg**	**05 11 55.6**	**+0.1**	
	1.5nm,0.2s								
BTLS				*eS*	**Sg**	**Sg**	**05 12 50.5**	**-1.0**	
	13nm,0.6s								
KPKS	**Kokpek**	**4.34**	**49**	Pg	**Pg**	**Pg**	**05 11 54.7**	**-1.1**	
	8.2nm,0.7s								
KPKS					Lg	Lg	05 12 48.7		
	20nm,0.7s								
KPKS	**Kokpek**	**4.34**	**49**	*eP*	**Pg**	**Pg**	**05 11 54.7**	**-1.1**	
	4.4nm,0.2s								
KPKS				*eS*	**Sg**	**Sg**	**05 12 48.7**	**-3.2**	
	20nm,0.2s								
UZB	**Uzynbulak**	**4.36**	**55**	Pg	**Pg**	**Pg**	**05 11 54.9**	**-1.3**	
	5.6nm,0.5s								
UZB					Lg	Lg	05 12 48.9		
	7.0nm,0.7s								
UZB	**Uzynbulak**	**4.36**	**55**	*eP*	**Pg**	**Pg**	**05 11 54.7**	**-1.4**	
	5.5nm,0.1s								
UZB				*eS*	**Sg**	**Sg**	**05 12 48.9**	**-3.7**	
	7.0nm,0.3s								
ARXS	**Arharly**	**4.42**	**37**	Pg	**Pg**	**Pg**	**05 11 56.0**	**-1.3**	
	5.1nm,0.3s								
ARXS					Lg	Lg	05 12 51.2		
	20nm,0.6s								
ARXS	**Arharly**	**4.42**	**37**	*eP*	**Pg**	**Pg**	**05 11 56.0**	**-1.3**	
	5.1nm,0.3s								
ARXS				*eS*	**Sg**	**Sg**	**05 12 51.2**	**-3.4**	
	20nm,0.2s								
BLB	**Baldybastay**	**4.64**	**42**	Pg	**Pg**	**Pg**	**05 12 00.9**	**-0.8**	
	7.7nm,0.7s								
BLB					Lg	Lg	05 12 59.6		
	15nm,0.7s								
PDGK	**Podgornoye**	**4.74**	**55**	Pg	**Pg**	**Pg**	**05 12 02.8**	**-0.8**	
	1.8nm,0.5s								
PDGK					Lg	Lg	05 13 02.8		
	4.6nm,0.6s								
PDGK	**Podgornoye**	**4.74**	**55**	⇓Pg	**Pg**	**Pg**	**05 12 02.4**	**-1.1**	
	2.2nm,0.5s								
PDGK				⇑Lg	Lg	Lg	05 13 02.8		
	20nm,1.1s								
KNOS	**Konyrlen**	**5.19**	**44**	Pg	**Pg**	**Pg**	**05 12 09.6**	**-2.4**	
	3.0nm,0.6s								
KNOS					Lg	Lg	05 13 14.4		
	6.2nm,0.8s								
KTMS	**Ketmen**	**5.35**	**57**	Pg	**Pg**	**Pg**	**05 12 13.7**	**-1.4**	
	1.4nm,0.5s								
KTMS					Lg	Lg	05 13 21.1		
	3.0nm,0.6s								
KTMS	**Ketmen**	**5.35**	**57**	*eP*	**Pg**	**Pg**	**05 12 13.7**	**-1.4**	
	0.9nm,0.1s								
KTMS				*eS*	**Sg**	**Sg**	**05 13 21.1**	**-3.1**	
	3.1nm,0.3s								
DJR	**Jarkent**	**5.50**	**47**	Pg	**Pg**	**Pg**	**05 12 15.5**	**-2.5**	
	1.7nm,0.9s								
DJR					Lg	Lg	05 13 24.9		
	5.2nm,0.5s								
DJR	**Jarkent**	**5.50**	**47**	*eP*	**Pg**	**Pg**	**05 12 15.5**	**-2.5**	
	1.2nm,0.2s								
DJR				*eS*	**Sg**	**Sg**	**05 13 24.9**	**-4.4**	
	5.2nm,0.3s								
KAPS	**Kapalarasan**	**5.94**	**38**	Pg	Pg	Pg	05 12 22.4	-4.0	
	1.9nm,0.5s								
KAPS					Lg	Lg	05 13 36.4		
	3.2nm,0.5s								
KAPS	**Kapalarasan**	**5.94**	**38**	*eP*	**Pg**	**Pg**	**05 12 24.8**	**-1.6**	
	2.2nm,0.3s								
KAPS				*eS*	**Sg**	**Sg**	**05 13 40.7**	**-2.6**	
	3.2nm,0.3s								

KRSC 18 05:29:35.5±0.9, 54°.92N×165°.59E, h31km±10km, MI3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.36**	**38**	*i* P		Pb	05 29 44.1	+0.2
BKI				*eS*		Sb	05 29 48.6	-0.9
KBG	**Krutoberegovo**	**2.12**	**310**	*eS*		Sn	05 30 35.0	+1.1
SMKR	**Semkarok**	**2.86**	**307**	*eP*		Pb	05 30 22.9	-3.0
SMKR				*eS*		Sn	05 30 56.0	+3.4
ZLN	**Zelenaya**	**2.94**	**294**	*eP*		Pn	05 30 23.6	+3.4
TUMD	**Tumrok D**	**3.00**	**278**	*eP*		Pb	05 30 24.8	-3.4
KLY	**Klyuchi**	**3.13**	**299**	*eP*		Pn	05 30 25.2	+2.5
KLY				*eS*		Sn	05 31 00.5	+1.6
KRSR	**Krestovskiy**	**3.13**	**297**	*eP*		Pb	05 30 26.7	-3.8
TUMR	**Tumrok**	**3.15**	**279**	*eP*		Pb	05 30 27.0	-3.8
KIRR	**Kirishev**	**3.16**	**291**	*eP*		Pb	05 30 27.2	-3.9
KMNR	**Kamenistaya**	**3.17**	**288**	*eP*		Pb	05 30 27.5	-3.6
KPT	**Kopyto**	**3.23**	**291**	*eP*		Pn	05 30 28.2	+4.0
SRDR	**Sredinnyy**	**3.61**	**295**	*eP*		Pn	05 30 33.9	+4.6
SRDR				*eS*		Sn	05 31 15.5	+4.6
KII	**Karymskiy**	**3.69**	**259**	*eP*		Pn	05 30 35.1	+4.6
SPN	**Mys Shipunski**	**3.75**	**243**	*eP*		Pn	05 30 34.9	+3.6
SMAR	**Somma**	**4.33**	**250**	*eP*		Pn	05 30 44.2	+4.9
AVH	**Avacha**	**4.36**	**250**	*eP*		Pn	05 30 45.0	+5.3
AVH				*eS*		Sn	05 31 33.4	+4.0
KRX	**Arik**	**4.37**	**252**	*eP*		Pn	05 30 44.8	+5.0
KOK	**Koryaka**	**4.40**	**251**	*eP*		Pn	05 30 45.3	+5.1
DALK	**Dalny**	**4.46**	**248**	*eP*		Pn	05 30 44.5	+3.6
GNL	**Ganaly**	**4.64**	**258**	*eP*		Pn	05 30 48.6	+5.0
KRMR	**Karymshinskiy**	**4.88**	**248**	*eP*		Pn	05 30 51.7	+4.9
KRMR				*eS*		Sn	05 31 45.9	+3.7
RUS	**Russkaya**	**4.89**	**242**	*eP*		Pn	05 30 51.7	+4.9
MTVR	**Mutnovka**	**5.03**	**244**	*eP*		Pn	05 30 53.9	+5.0
ASAK	**Asacha**	**5.23**	**244**	*eP*		Pn	05 30 57.0	+5.3
KDTR	**Khodutka, Kamc**	**5.47**	**238**	*eP*		Pn	05 30 58.7	+3.9

*NIC **18** 05:43:03.2, 35°.06N×32°.36E, h15km±1km, MI2.5/5*
*AFAD **18** 05:43:06.0±0.0, 35°.15N×32°.50E, h7km±65km, ML2.1*
ISC 18 05:43:02.7±0.9, 35°.06N±0°.04×32°.39E±0°.05, h17km±6km, n12, σ1°.34/20, 1C-3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.07**	**227**	⇓*i* P		**Pg**	**05 43 06.1**	**+0.2**
AKMS				S		**Sg**	**05 43 08.3**	**+0.1**
AKMS				AML	AML		05 43 08.8	
	5.6nm,0.3s							
AKMS				AML	AML		05 43 12.0	
	5.5nm,0.4s							
ALFC	**Alefka**	**0.19**	**61**	⇑*i* P		**Pb**	**05 43 08.6**	**+0.8**
ALFC				S		**Sb**	**05 43 12.3**	**+1.1**
ALFC				AML	AML		05 43 13.9	
	3.5nm,0.2s							
ALFC				AML	AML		05 43 14.8	
	5.1nm,0.4s							
NATA	**Nata**	**0.32**	**153**	⇓*i* P		**Pb**	**05 43 10.1**	**+0.2**
NATA				S		**Sb**	**05 43 15.9**	**+1.1**
NATA				AML	AML		05 43 18.1	
	6.6nm,0.7s							
NATA				AML	AML		05 43 18.7	
	10nm,0.7s							
TROD	**Troodos**	**0.41**	**107**	⇓*i* P		**Pb**	**05 43 11.0**	**-0.5**
TROD				S		**Sb**	**05 43 16.9**	**-0.5**
TROD				AML	AML		05 43 17.2	
	0.6nm,0.2s							
TROD				AML	AML		05 43 17.6	
	0.5nm,0.2s							
LEF	**Lefka**	**0.41**	**82**	P		**Pb**	**05 43 11.7**	**+0.2**
LEF				S		**Sg**	**05 43 15.9**	**-0.9**
ASGA	**Asgata**	**0.76**	**111**	P		**Pn**	**05 43 18.2**	**-0.4**
ASGA				S		**Sn**	**05 43 29.8**	**+0.3**
ASGA				AML	AML		05 43 32.7	
	0.3nm,0.5s							
ASGA				AML	AML		05 43 32.9	
	0.2nm,0.3s							
CSS	**Mathiatis**	**0.78**	**97**	P		**Pn**	**05 43 18.4**	**-0.4**
GAZI	**Gazipasa**	**1.17**	**357**	P		**Pn**	**05 43 24.1**	**-0.2**
KEPZ	**Antalya-Kepez**	**1.94**	**341**	P		**Pb**	**05 43 38.8**	**+1.2**
KEPZ				S		**Sn**	**05 43 55.9**	**-3.0**
KEPZ				*i* AML	AML		05 44 52.0	
	comp=E,13nm,2.1s							
KKBE	**Karaman, Kazim**	**2.20**	**11**	P		**Pb**	**05 43 42.7**	**+0.7**
KKBE				*i* AML	AML		05 44 34.0	
	comp=N,11nm,1.7s							
KKBE				*i* AML	AML		05 44 45.0	
	comp=E,15nm,2.3s							
SEDI	**Konya, Seydise**	**2.44**	**348**	P		**Pb**	**05 43 45.7**	**-0.4**
SEDI				*i* AML	AML		05 44 24.0	
	comp=E,8.7nm,1.5s							
SEDI				*i* AML	AML		05 44 47.0	
	comp=N,11nm,2.0s							
KERG	**Konya-Eregli**	**2.73**	**30**	P		**Pb**	**05 43 49.2**	**-1.9**
KERG				*i* AML	AML		05 44 21.0	
	comp=N,18nm,1.6s							
KERG				S		**Sn**	**05 44 21.5**	**+3.0**
KERG				*i* AML	AML		05 44 31.0	
	comp=E,9.4nm,1.6s							

*SJA **18** 05:45:38.4±0.6, 21°.65S×68°.71W, h120km±3km, ML3.5, MW3.6*
*GUC **18** 05:45:39.2±0.6, 21°.61S×68°.66W, h117km±3km, ML3.4*
ISC 18 05:45:39.8±1.5, 21°.64S±0°.03×68°.77W±0°.06, h120km±10km, n29, σ0°.50/48, 10C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.46**	**251**	*eP*		**Pn**	**05 45 57.2**	**-0.5**
PB09				*eS*		**Sn**	**05 46 11.2**	**+0.1**
PB09				IAML			05 46 11.5	
	comp=Z,741nm,0.4s							
PB09	**IPOC Station P**	**0.46**	**251**	*eP*		**Pn**	**05 45 57.5**	**-0.1**
PB09				*eS*		**Sn**	**05 46 11.0**	**-0.1**
PB09				IAML			05 46 15.1	
	comp=N,758nm,0.3s							
PB01	**IPOC Station P**	**0.90**	**312**	*eP*		**Pn**	**05 46 00.4**	**-0.5**
PB01				*eS*		**Sn**	**05 46 17.2**	**+0.4**
PB01				IAML			05 46 19.0	
	comp=Z,492nm,0.3s							
PB01	**IPOC Station P**	**0.90**	**312**	*eP*		**Pn**	**05 46 00.3**	**-0.6**
PB01				*eS*		**Sn**	**05 46 16.2**	**-0.6**
PB01				IAML			05 46 17.8	
	comp=E,1μm,0.2s							
LVC	**Limon Verde**	**0.97**	**188**	*eP*		**Pn**	**05 46 01.3**	**-0.6**
LVC				*eS*		**Sn**	**05 46 18.2**	**-0.4**
PB07	**IPOC Station P**	**1.04**	**265**	*eP*		**Pn**	**05 46 02.2**	**-0.1**
PB07				*eS*		**Sn**	**05 46 20.2**	**+0.8**
PB07				IAML			05 46 21.6	
	comp=Z,811nm,0.3s							
PB07	**IPOC Station P**	**1.04**	**265**	⇑*i* P		**Pn**	**05 46 02.5**	**+0.1**
PB07				*eS*		**Sn**	**05 46 19.9**	**+0.5**
PB07				IAML			05 46 20.8	
	comp=N,1μm,0.6s							
PB02	**IPOC Station P**	**1.10**	**287**	*eP*		**Pn**	**05 46 02.7**	**-0.1**
PB02				*eS*		**Sn**	**05 46 21.1**	**+0.8**
PB02				IAML			05 46 24.1	
	comp=Z,676nm,0.1s							
PB02	**IPOC Station P**	**1.10**	**287**	⇑*eP*		**Pn**	**05 46 02.8**	**-0.1**
PB02				*eS*		**Sn**	**05 46 20.7**	**+0.4**
PB02				IAML			05 46 24.4	
	comp=N,774nm,0.3s							
PB06	**IPOC Station P**	**1.29**	**215**	*eP*		**Pn**	**05 46 05.1**	**+0.1**
PB06				IAML			05 46 25.7	
	comp=Z,320nm,0.2s							
PB06	**IPOC Station P**	**1.29**	**215**	⇑*iP*		**Pn**	**05 46 05.1**	**+0.1**
PB06				*eS*		**Sn**	**05 46 24.8**	**+0.7**
PB06				IAML			05 46 25.8	
	comp=E,917nm,0.2s							
PB04	**IPOC Station P**	**1.45**	**242**	*eP*		**Pn**	**05 46 06.8**	**0.0**
PB04				IAML			05 46 37.4	
	comp=Z,284nm,0.6s							
PB04	**IPOC Station P**	**1.45**	**242**	⇑*iP*		**Pn**	**05 46 06.9**	**+0.1**
PB04				*eS*		**Sn**	**05 46 27.5**	**+0.2**
PB04				IAML			05 46 31.3	
	comp=N,268nm,0.2s							
PATCX	**Punta Patache**	**1.53**	**302**	⇑*eP*		**Pn**	**05 46 07.9**	**+0.3**
PATCX				*eS*		**Sn**	**05 46 29.2**	**+0.5**
PATCX				IAML			05 46 30.9	
	comp=E,1μm,0.2s							
PB08	**IPOC Station P**	**1.54**	**346**	*eP*		**Pn**	**05 46 08.0**	**0.0**
PB08				*eS*		**Sn**	**05 46 30.0**	**+0.6**
PB08				IAML			05 46 30.9	
	comp=Z,486nm,0.3s							
PB08	**IPOC Station P**	**1.54**	**346**	⇑*eP*		**Pn**	**05 46 08.1**	**0.0**
PB08				*eS*		**Sn**	**05 46 29.2**	**-0.3**
PB08				IAML			05 46 30.8	
	comp=E,1μm,0.5s							
PB15	**IPOC Station P**	**1.69**	**202**	*eP*		**Pn**	**05 46 09.8**	**+0.2**
PB15				IAML			05 46 36.7	
	comp=Z,1μm,0.2s							
PB15	**IPOC Station P**	**1.69**	**202**	⇑*iP*		**Pn**	**05 46 09.8**	**+0.2**
TA02	**Huaiquique**	**1.87**	**317**	*eP*		**Pn**	**05 46 11.5**	**-0.1**
TA02				*eS*		**Sn**	**05 46 36.5**	**+0.7**
TA02				IAML			05 46 39.8	
	comp=Z,417nm,0.6s							
TA02	**Huaiquique**	**1.87**	**317**	⇑*eP*		**Sn**	**05 46 11.1**	**-0.4**
TA02				*eS*		**Sn**	**05 46 35.5**	**-0.3**
GO01	**Chusmiza**	**2.00**	**349**	*eP*		**Pn**	**05 46 13.6**	**-0.2**
GO01				*eS*		**Sn**	**05 46 40.4**	**+0.7**
GO01	**Chusmiza**	**2.00**	**349**	⇑*eP*		**Pn**	**05 46 13.4**	**-0.4**
PB11	**IPOC Station P**	**2.05**	**336**	*eP*		**Pn**	**05 46 13.6**	**-0.5**
PB11				*eS*		**Sn**	**05 46 40.3**	**+0.2**
PB11				IAML			05 46 41.0	
	comp=Z,834nm,0.2s							
PB11	**IPOC Station P**	**2.05**	**336**	⇑*iP*		**Pn**	**05 46 13.5**	**-0.5**
PB11				*eS*		**Sn**	**05 46 39.6**	**-0.5**
YJA	**Yavi**	**3.07**	**101**	*eP*		**Pn**	**05 46 28.0**	**+0.6**
PB14	**IPOC Station P**	**3.33**	**207**	*eP*		**Pn**	**05 46 31.1**	**+0.4**
PB14				IAML			05 47 22.7	
	comp=Z,67nm,0.5s							
GO02	**Mina Guanaco**	**3.58**	**192**	*eP*		**Pn**	**05 46 33.9**	**-0.1**
AC01	**Pan de Azucar**	**4.79**	**200**	*eP*		**Pn**	**05 46 48.0**	**-1.8**
AC01				IAML			05 47 59.3	
	comp=Z,40nm,1.4s							
AC02	**Maricunga**	**5.18**	**184**	*eP*		**Pn**	**05 46 55.2**	**-0.4**
AC02				IAML			05 48 33.8	
	comp=Z,16nm,0.6s							

*PRE **18** 06:01:18.9±1.3, 28°.69S×20°.43E, h5km, ML3.4, Fault plane solution: NP1: φs153.00000°, δ72.00000°, λ-142.00000°.*
ISC 18 06:01:19.9±0.9, 28°.69S±0°.04×20°.48E±0°.05, h10km, n35, σ1°.95/68, 7C-3D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
UPI	**Upington**	**0.75**	**65**	⇑*i* P		**Pg**	**06 01 35.4**	**+0.9**
UPI				*eS*		**Sg**	**06 01 45.2**	**+0.9**
UPI				IAML			06 01 45.8	
	comp=Z,648nm,0.4s							
PKA	**Prieska**	**2.22**	**117**	⇑*iP*		**Pn**	**06 01 57.6**	**+0.7**
PKA				*eS*		**Sb**	**06 02 26.7**	**-1.0**
PKA				IAML			06 02 30.4	
	comp=Z,412nm,0.3s							
KOMG	**Komaggas**	**2.84**	**246**	⇑*iP*		**Pn**	**06 02 05.5**	**+0.1**
KOMG				*eS*		**Sn**	**06 02 39.0**	**-0.7**
KOMG				IAML			06 02 48.9	
	comp=Z,263nm,0.2s							
CVNA	**Calvinia**	**2.85**	**192**	⇑*iP*		**Pn**	**06 02 05.6**	**0.0**
CVNA				*eS*		**Sn**	**06 02 41.0**	**+0.9**
CVNA				IAML			06 02 50.2	
	comp=Z,379nm,0.3s							
FRAZ	**Fraserburg**	**3.33**	**166**	⇑*iP*		**Pn**	**06 02 11.9**	**-0.2**
FRAZ				*eS*		**Sn**	**06 02 51.9**	**+0.1**
FRAZ				IAML			06 03 05.3	
	comp=Z,207nm,0.6s							
SUR	**Sutherland**	**3.69**	**176**	⇓*iP*		**Pn**	**06 02 17.6**	**+0.4**
SUR				*eS*		**Sn**	**06 03 01.3**	**+0.4**
SUR				IAML			06 03 15.2	
	comp=Z,271nm,0.3s							
BRAK	**Brakfontein**	**3.72**	**146**	⇑*iP*		**Pn**	**06 02 17.0**	**-0.6**
BRAK				*eS*		**Sn**	**06 03 01.8**	**+0.3**
BRAK				IAML			06 03 17.1	
	comp=Z,271nm,0.3s							
GRAN	**Grantham**	**3.88**	**158**	*eP*		**Pn**	**06 02 20.9**	**+1.1**
GRAN				*eS*		**Sn**	**06 03 05.3**	**-0.2**
GRAN				IAML			06 03 22.9	
	comp=Z,199nm,0.4s							
BFON	**Badsfontein, M**	**4.16**	**139**	*eP*		**Pn**	**06 02 23.7**	**+0.1**
BFON				*eS*		**Sn**	**06 03 12.4**	**0.0**
BFON				IAML			06 03 29.7	
	comp=Z,249nm,0.5s							
BOSA	**Boshof**	**4.20**	**90**	⇓*iP*		**Pn**	**06 02 26.0**	**+1.9**
BOSA				*eS*		**Sn**	**06 03 13.0**	**-0.3**
BOSA				IAML			06 03 31.5	
	comp=Z,133nm,0.4s							
SWZ	**Schweizer**	**4.54**	**72**	*eP*		**Pn**	**06 02 30.2**	**+1.3**
SWZ				*eS*		**Sn**	**06 03 21.8**	**-0.2**
SWZ				IAML			06 03 44.9	
	comp=Z,60nm,0.6s							
ROOI	**Rooidraai Farm**	**4.62**	**146**	*eP*		**Pn**	**06 02 29.8**	**-0.2**
ROOI				*eS*		**Sn**	**06 03 22.0**	**-1.8**
ROOI				IAML			06 03 42.1	
	comp=Z,134nm,0.6s							
HVD	**Gariep Dam**	**4.76**	**115**	⇑*iP*		**Pn**	**06 02 32.0**	**0.0**
HVD				*eS*		**Sn**	**06 03 27.7**	**+0.4**
HVD				IAML			06 03 54.7	
	comp=Z,96nm,0.6s							
CER	**Ceres**	**4.77**	**192**	*eP*		**Pn**	**06 02 31.2**	**-0.6**
CER				*eS*		**Sn**	**06 03 24.3**	**-2.9**
CER				IAML			06 03 49.0	
	comp=Z,119nm,0.5s							
GRAF	**Camdeboo Natio**	**4.98**	**137**	*eP*		**Pn**	**06 02 35.0**	**+0.2**
GRAF				*eS*		**Sn**	**06 03 32.5**	**+0.1**
GRAF				IAML			06 04 03.4	
	comp=Z,124nm,0.5s							
LBTB	**Lobatse**	**5.85**	**52**	⇓*iP*		**Pn**	**06 02 48.0**	**+1.1**
LBTB				*eS*		**Sn**	**06 03 53.1**	**-1.0**
LBTB				IAML			06 04 24.9	
	comp=Z,70nm,0.6s							
SOE	**Somerset East**	**5.93**	**134**	*eP*		**Pn**	**06 02 49.4**	**+1.5**
SOE				*eS*		**Sn**	**06 03 56.0**	**0.0**
SOE				IAML			06 04 33.4	
	comp=Z,60nm,0.4s							
KSR	**Koster**	**6.37**	**65**	*eP*		**Pn**	**06 02 56.3**	**+2.3**
KSR				*eS*		**Sn**	**06 04 05.4**	**-1.6**
KSR				IAML			06 04 46.5	
	comp=Z,182nm,0.5s							
ROSN	**Rosenhof**	**6.42**	**148**	*eP*		**Pn**	**06 02 54.6**	**+0.1**
ROSN				*eS*		**Sn**	**06 04 05.9**	**-1.9**
ROSN				IAML			06 04 41.0	
	comp=Z,65nm,0.4s							
BUFB	**Buffelsbos**	**6.55**	**147**	*eP*		**Pn**	**06 02 58.9**	**+2.6**
BUFB				*eS*		**Sn**	**06 04 07.8**	**-3.3**
BUFB				IAML			06 04 46.7	
	comp=Z,6.8nm,0.3s							
WDLM	**Western Deep L**	**6.56**	**72**	*eP*		**Pn**	**06 02 57.9**	**+1.2**
WDLM				*eS*		**Sn**	**06 04 10.5**	**-1.2**
WDLM				IAML			06 04 45.6	
	comp=Z,123nm,0.3s							
NHAM	**Northam, North**	**7.17**	**60**	*eP*		**Pn**	**06 03 06.8**	**+1.9**
NHAM				*eS*		**Sn**	**06 04 24.1**	**-2.5**
NHAM				IAML			06 05 18.1	
	comp=Z,35nm,0.7s							
TSWA	**Tswaing Meteor**	**7.51**	**66**	*eP*		**Pn**	**06 03 11.4**	**+1.7**
TSWA				*eS*		**Sn**	**06 04 33.2**	**-1.9**
TSWA				IAML			06 05 19.9	
	comp=Z,27nm,0.5s							
HOCHN	**Hochfeld**	**7.55**	**341**	*i* P		**Pb**	**06 03 34.4**	**+3.3**
HOCHN				*i* S		**Sg**	**06 05 18.3**	**-4.2**
KSTD	**Kokstad**	**7.92**	**106**	*eP*		**Pn**	**06 03 16.0**	**+0.8**
KSTD				*eS*		**Sn**	**06 04 43.6**	**-1.5**
KSTD				IAML			06 05 31.9	
	comp=Z,9.5nm,0.4s							
RUST	**Rust De Winter**	**7.96**	**66**	*eP*		**Pn**	**06 03 18.0**	**+2.3**
RUST				*eS*		**Sn**	**06 04 43.0**	**-2.9**
RUST				IAML			06 05 34.1	
	comp=Z,29nm,0.6s							
LEPH	**Lephalale, Lim**	**8.14**	**55**	*eP*		**Pn**	**06 03 20.3**	**+2.0**
LEPH				*eS*		**Sn**	**06 04 47.2**	**-3.2**
LEPH				IAML			06 05 44.6	
	comp=Z,33nm,0.5s							
NWCL	**Newcastle**	**8.36**	**86**	*eP*		**Pn**	**06 03 23.0**	**+1.7**
NWCL				*eS*		**Sn**	**06 04 53.7**	**-2.1**
NWCL				IAML			06 05 48.4	
	comp=Z,36nm,0.5s							
GAMM	**Gam**	**8.41**	**2**	*i* P		Pn	06 03 30.2	+8.2
GAMM				*i* S		Sn	06 05 10.9	+14
WTBG	**Waterberg Wild**	**8.75**	**61**	*eP*		**Pn**	**06 03 28.1**	**+1.4**
WTBG				*eS*		**Sn**	**06 05 01.6**	**-3.9**
WTBG				IAML			06 06 00.9	
	comp=Z,32nm,0.5s							
DULL	**Dullstroom, Mp**	**9.26**	**71**	*eP*		**Pn**	**06 03 36.0**	**+2.3**
DULL				*eS*		**Sn**	**06 05 14.9**	**-3.1**
DULL				IAML			06 06 26.9	
	comp=Z,13nm,0.6s							
HAGI	**HAGI**	**9.85**	**77**	*eP*		**Pn**	**06 03 43.1**	**+1.3**
HAGI				*eS*		**Sn**	**06 05 30.3**	**-2.3**
HAGI				IAML			06 06 25.4	
	comp=Z,16nm,0.7s							
HOED	**Hoedspruit, Li**	**10.28**	**68**	*eP*		**Pn**	**06 03 48.8**	**+1.2**
HOED				*eS*		**Sn**	**06 05 38.0**	**-4.9**
HOED				IAML			06 06 40.5	
	comp=Z,17nm,0.6s							
MUSN	**Musina, Limpop**	**10.60**	**55**	*eP*		**Pn**	**06 03 53.2**	**+1.3**
MUSN				*eS*		**Sn**	**06 05 46.4**	**-4.4**
MUSN				IAML			06 06 58.4	
	comp=Z,11nm,0.5s							
TEMBE	**Tembe Elephant**	**10.70**	**84**	*eP*		**Pn**	**06 03 54.7**	**+1.5**
TEMBE				*eS*		**Sn**	**06 05 49.1**	**-3.9**
TEMBE				IAML			06 06 58.0	
	comp=Z,36nm,0.6s							

*STR **18** 06:14:20.6±1.2, 47°.N±13°×1°.2E±°, h10km, MLv3.0/12, Error ellipse: s-maj=0.0km s-min=0.0km az=12.6, preliminary*
*LDG **18** 06:14:22.0±0.3, 47°.32N×11°.21E, h10km, MI2.4/11, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*VIE **18** 06:14:22.4±0.2, 47°.28N×11°.13E, h9km±2km, mb1.7/12, ml2.4/17, Error ellipse: s-maj=1.3km s-min=0.9km az=5.0, felt 3-4 ems98 near Telfs / Tyrol*
*PRU **18** 06:14:23.9, 47°.32N×11°.19E, h10km*
*ROM **18** 06:14:24.1±0.4, 47°.18N±0°.02×11°.11E±0°.02, h4km, ML1.9/34, Error ellipse: s-maj=2.2km s-min=1.1km az=18.0*
*BGR **18** 06:14:24.0±0.2, 47°.31N×11°.13E, h2km±2km, ML2.2/14, Error ellipse: s-maj=4.4km s-min=2.2km az=3.0*
ISC 18 06:14:22.3±0.8, 47°.23N±0°.02×11°.12E±0°.01, h11km±5km, n103, σ1°.67/144, 1C-4D, Austria

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.06**	**97**

	comp=N,67µm,0.2s							
BRES					AML	AML		
	comp=E,66µm,0.2s							
MOSI	**Grossmontoni**	**0.72**	**213**	⇓	P	**Pn**	**06 14 37.7**	**-0.9**
MOSI					S	**Sb**	**06 14 47.6**	**+0.5**
MOSI					AML	AML		
	comp=E,142µm,1.0s							
MOSI					AML	AML		
	comp=N,167µm,1.2s							
MOSI					AML	AML		
	comp=N,167µm,0.8s							
MOSI					AML	AML		
	comp=N,165µm,0.3s							
MOSI					AML	AML		
	comp=E,135µm,0.3s							
UBR	**Ueberruh**	**0.82**	**304**	*e*Pg		**Pb**	**06 14 38.9**	**+0.3**
UBR				*e*Sg		**Sb**	**06 14 50.8**	**+1.0**
OZOL	**Ozolo**	**0.82**	**183**	⇑*i*P		**Pn**	**06 14 39.9**	**-0.1**
OZOL				S		**Sn**	**06 14 51.0**	**-1.2**
OZOL				AML	AML			
	comp=E,214µm,0.4s							
OZOL				AML	AML			
	comp=N,126µm,0.5s							
OZOL				AML	AML			
	comp=E,214µm,1.6s							
OZOL				AML	AML			
	comp=N,120µm,0.3s							
OZOL				AML	AML			
	comp=E,214µm,0.4s							
OZOL				AML	AML			
	comp=N,225µm,0.6s							
FUORN	**Ofenpass-Fuorn**	**0.84**	**224**	P		**Pb**	**06 14 39.7**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**0.84**	**224**	⇓P		**Pb**	**06 14 39.7**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**0.84**	**224**	AML	AML			
	comp=N,24µm,0.7s							
FUORN				AML	AML			
	comp=E,25µm,0.9s							
FUORN				AML	AML			
	comp=E,22µm,0.3s							
FUORN				AML	AML			
	comp=N,23µm,0.2s							
DAVA	**Damuels**	**0.84**	**274**	*e*Pg		**Pb**	**06 14 39.2**	**+0.1**
	comp=N,2.8nm,0.2s,SNR=8.0							
DAVA				*e*Sg		**Sb**	**06 14 51.9**	**+1.4**
	comp=N,63nm,0.6s,SNR=14							
DAVA	**Damuels**	**0.84**	**274**	*e*Pg		**Pb**	**06 14 39.8**	**+0.7**
CARE	**Lago del Cares**	**0.85**	**200**	P		**Pn**	**06 14 40.4**	**-0.1**
CARE				AML	AML			
	comp=N,106µm,1.1s							
CARE				AML	AML			
	comp=E,35µm,0.2s							
CARE				AML	AML			
	comp=N,39µm,0.3s							
BRMO	**Bormio**	**0.91**	**214**	P		**Pn**	**06 14 40.7**	**-0.5**
FUR	**Furstenfeldbru**	**0.94**	**7**	*e*Pg		**Pb**	**06 14 41.4**	**+0.7**
DAVOX	**Davos/Dischmat**	**0.96**	**243**	AML	AML			
	comp=N,100µm,0.5s							
DAVOX				AML	AML			
	comp=E,83µm,0.2s							
DAVOX				AML	AML			
	comp=N,100µm,0.5s							
DAVOX				AML	AML			
	comp=E,83µm,0.2s							
ZIAN	**Ziano**	**1.00**	**162**	⇓*e*P		**Pn**	**06 14 42.7**	**+0.3**
ZIAN				S		**Sn**	**06 14 56.1**	**-0.4**
ZIAN				AML	AML			
	comp=N,43µm,0.1s							
ZIAN				AML	AML			
	comp=E,44µm,0.2s							
ABTA	**Abfaltersbach**	**1.07**	**116**	*e*Pg		**Pn**	**06 14 43.2**	**-0.1**
	comp=E,1.4nm,0.1s,SNR=4.2							
ABTA				*e*Sg		**Sn**	**06 14 57.4**	**-0.8**
	comp=E,5.9nm,0.2s							
LESA	**Schwarzleotal**	**1.08**	**79**	*e*Pn		**Pb**	**06 14 42.5**	**-0.5**
	comp=E,1.0nm,0.1s							
LESA				*e*Sg		**Sb**	**06 14 57.8**	**+0.6**
	comp=E,5.6nm,0.2s							
PLONS	**Plons/SG**	**1.20**	**262**	AML	AML			
	comp=N,55µm,1.2s							
PLONS				AML	AML			
	comp=E,54µm,0.9s							
PLONS				AML	AML			
	comp=N,55µm,0.8s							
PLONS				AML	AML			
	comp=E,54µm,1.1s							
PLONS				AML	AML			
	comp=N,43µm,0.4s							
PLONS				AML	AML			
	comp=E,47µm,0.5s							
PLONS	**Plons/SG**	**1.20**	**262**	*e*Pg		**Pn**	**06 14 46.8**	**+1.8**
PLONS				*e*Sg		**Sn**	**06 15 03.3**	**+1.9**
MABI	**Malga Bissina**	**1.25**	**200**	P		**Pn**	**06 14 47.5**	**+1.7**
MABI				S		**Sn**	**06 15 03.3**	**+0.7**
MABI				AML	AML			
	comp=E,22µm,0.9s							
MABI				AML	AML			
	comp=N,24µm,1.2s							
MABI				AML	AML			
	comp=E,20µm,0.4s							
MABI				AML	AML			
	comp=N,23µm,0.4s							
DOSS	**Dosso del Somm**	**1.35**	**178**	P		**Pb**	**06 14 49.3**	**+1.6**
DOSS				S		**Sn**	**06 15 06.8**	**+1.6**
DOSS				AML	AML			
	comp=E,69µm,1.5s							
DOSS				AML	AML			
	comp=N,65µm,0.3s							
DOSS				AML	AML			
	comp=E,208µm,0.9s							
DOSS				AML	AML			
	comp=N,65µm,0.3s							
DOSS				AML	AML			
	comp=E,68µm,0.3s							
TUE	**Stuetta**	**1.43**	**239**	P		**Pg**	**06 14 50.0**	**+0.2**
TUE				AML	AML			
	comp=E,30µm,1.5s							
TUE				AML	AML			
	comp=E,30µm,0.5s							
TUE				AML	AML			
	comp=N,21µm,0.4s							
TUE				AML	AML			
	comp=N,21µm,0.4s							
TUE				AML	AML			
	comp=E,24µm,0.3s							
TUE				AML	AML			
	comp=E,25µm,0.5s							
WILA	**Wila**	**1.51**	**278**	*e*Pg		**Pg**	**06 14 52.1**	**+0.7**
KBA	**Koelnbreinsper**	**1.53**	**95**	*e*Pg		**Pg**	**06 14 51.3**	**-0.3**
	comp=E,0.1nm,0.1s							
KBA				*e*Sn		**Sg**	**06 15 11.0**	**-0.6**
	comp=E,3.6nm,0.2s							
KBA	**Koelnbreinsper**	**1.53**	**95**	*e*Pn		**Pg**	**06 14 51.4**	**-0.3**
KBA				*e*Pg		**Pb**	**06 14 53.0**	**+2.3**
KBA				*e*Sn		**Sg**	**06 15 11.9**	**+0.4**
KBA				*e*Sg		**Sb**	**06 15 14.2**	**+4.0**
NORI	**Noerdlinger Ri**	**1.53**	**348**	*e*Sn		**Sn**	**06 15 08.6**	**-0.8**
NORI				*e*Sg		**Sb**	**06 15 11.1**	**+1.1**
POLC	**Polcenigo**	**1.54**	**141**	AML	AML			
	comp=N,67µm,0.3s							
POLC				AML	AML			
	comp=E,80µm,0.6s							
POLC				AML	AML			
	comp=E,80µm,0.6s							
POLC				AML	AML			
	comp=N,67µm,0.3s							
GUT	**Gutenstein**	**1.59**	**303**	P		**Pb**	**06 14 52.4**	**+0.7**
GUT	**Gutenstein**	**1.59**	**303**	S		**Sg**	**06 15 14.2**	**+0.6**
ZUR	**Degenried**	**1.73**	**276**	P		**Pg**	**06 14 55.5**	**0.0**
ZUR	**Degenried**	**1.73**	**276**	S		**Sg**	**06 15 19.9**	**+2.0**
BIOA	**Bad Ischl, Aus**	**1.77**	**74**	*e*Pg		**Pg**	**06 14 56.0**	**-0.3**
	comp=N,3.3nm,0.2s							
BIOA				*e*Sg		**Sg**	**06 15 20.5**	**+1.2**
	comp=N,19nm,0.4s							
MYKA	**Terra Mystica**	**1.83**	**108**	*e*Pg		**Pg**	**06 14 57.1**	**-0.3**
	comp=N,0.9nm,0.2s							
MYKA				Sg		**Sg**	**06 15 23.5**	**+2.3**
	comp=N,4.5nm,0.3s							
FUSIO	**Fusio**	**1.85**	**246**	AML	AML			
	comp=E,29µm,0.3s							
FUSIO				AML	AML			
	comp=E,30µm,1.6s							
FUSIO				AML	AML			
	comp=N,37µm,0.4s							
FUSIO				AML	AML			
	comp=N,37µm,0.4s							
SLE	**Schleitheim**	**1.86**	**288**	P		**Pn**	**06 14 55.0**	**+0.9**
SLE	**Schleitheim**	**1.86**	**288**	S		**Sg**	**06 15 22.2**	**+0.2**
SLE	**Schleitheim**	**1.86**	**288**	*e*Pn		**Pn**	**06 14 55.8**	**+1.7**
SLE				*e*Pg		**Pg**	**06 14 57.8**	**-0.1**
SLE				*e*Sg		**Sg**	**06 15 22.3**	**+0.2**
SULZ	**Cheisacher**	**2.06**	**279**	P		**Pn**	**06 14 58.0**	**+1.1**
SULZ	**Cheisacher**	**2.06**	**279**	S		**Sg**	**06 15 28.9**	**+0.3**
SULZ	**Cheisacher**	**2.06**	**279**	*e*Sg		**Sg**	**06 15 28.9**	**+0.3**
BFO	**Black Forest**	**2.18**	**301**	*e*Sg		**Sb**	**06 15 31.4**	**+2.6**
FELD	**Feldberg im Sc**	**2.21**	**288**	S		**Sg**	**06 15 33.2**	**0.0**
FELD	**Feldberg im Sc**	**2.21**	**288**	P		**Pn**	**06 15 00.6**	**+1.6**
MOA	**Molln**	**2.22**	**73**	*e*Pg		**Pb**	**06 15 03.0**	**+0.5**
	comp=N,0.6nm,0.1s							
MOA				Sg		**Sg**	**06 15 32.9**	**-0.9**
	comp=N,6.6nm,0.3s							
WET	**Wettzell**	**2.25**	**31**	*e*Sg		**Sb**	**06 15 32.8**	**+1.9**
KIZ	**Kirchzarten**	**2.28**	**290**	S		**Sb**	**06 15 34.6**	**+2.9**
KIZ	**Kirchzarten**	**2.28**	**290**	P		**Pn**	**06 15 01.4**	**+1.5**
BALST	**Balsthal**	**2.33**	**274**	P		**Pn**	**06 15 02.4**	**+1.7**
BALST	**Balsthal**	**2.33**	**274**	S		**Sg**	**06 15 37.0**	**-0.2**
ENDD	**Endenburg**	**2.34**	**283**	P		**Pn**	**06 15 01.2**	**+0.4**
ENDD	**Endenburg**	**2.34**	**283**	S		**Sg**	**06 15 37.1**	**-0.5**
OPP	**Oppenau**	**2.35**	**304**	P		**Pn**	**06 15 02.5**	**+1.7**
OPP	**Oppenau**	**2.35**	**304**	S		**Sb**	**06 15 35.5**	**+2.0**
CAVE	**Cavezzo**	**2.36**	**182**	AML	AML			
	comp=N,364µm,1.4s							
CAVE				AML	AML			
	comp=E,550µm,0.9s							
CAVE				AML	AML			
	comp=N,364µm,0.6s							
OBKA	**Obir**	**2.46**	**106**	Sg		**Sg**	**06 15 39.9**	**-1.5**
	comp=N,3.4nm,0.3s							
BABA	**Baden-Baden-Ne**	**2.47**	**308**	P		**Pn**	**06 15 03.9**	**+1.5**
BABA	**Baden-Baden-Ne**	**2.47**	**308**	S		**Sg**	**06 15 40.5**	**-1.1**
VOGT	**Vogtsburg - To**	**2.48**	**291**	P		**Pn**	**06 15 03.9**	**+1.2**
VOGT	**Vogtsburg - To**	**2.48**	**291**	S		**Sg**	**06 15 41.7**	**-0.3**
KHC	**Kasperske Hory**	**2.52**	**40**	*e*PG		**Pb**	**06 15 08.2**	**+0.7**
KHC				*e*SG		**Sb**	**06 15 40.2**	**+1.7**
	comp=N,6.0nm,0.3s							
BOURR	**Bourrignon**	**2.65**	**275**	P		**Pn**	**06 15 05.6**	**+0.6**
BOURR	**Bourrignon**	**2.65**	**275**	S		**Sg**	**06 15 47.4**	**0.0**
NEEW	**Neewiller pres**	**2.66**	**312**	P		**Pn**	**06 15 06.5**	**+1.4**
CKRC	**Cesky Krumlov**	**2.67**	**52**	*e*PG		**Pb**	**06 15 10.2**	**+0.1**
CKRC				*e*SG		**Sg**	**06 15 46.3**	**-1.8**
	comp=N,4.3nm,0.3s							
CDF	**Champ du Feu**	**2.85**	**296**	*e*Pg		**Pg**	**06 15 16.3**	**-0.5**
CDF				*e*Sg		**Sg**	**06 15 53.1**	**-0.6**
	comp=N,2.6nm,0.2s							
ECH	**Echery**	**2.85**	**292**	P		**Pn**	**06 15 08.9**	**+1.2**
ECH				S		**Sg**	**06 15 53.1**	**-0.6**
LEMB	**Lembach**	**2.88**	**310**	P		**Pn**	**06 15 09.9**	**+1.8**
HINF	**Hinteralfeld**	**2.95**	**283**	*e*P		**Pn**	**06 15 11.4**	**+2.3**
HINF				*e*Sg		**Sg**	**06 15 55.7**	**-1.3**
AIGLE	**Aigle**	**2.99**	**254**	P		**Pn**	**06 15 12.4**	**+2.6**
ZVC	**Zvikov**	**3.02**	**42**	*e*PG		**Pb**	**06 15 17.0**	**+1.0**
ZVC				*e*SG		**Sg**	**06 15 56.5**	**-2.7**
RONF	**Ronchamp**	**3.07**	**281**	P		**Pn**	**06 15 11.8**	**+1.1**
NKC	**Novy Kostel**	**3.13**	**16**	*e*SG		**Sb**	**06 15 59.8**	**+3.6**
	comp=N,9.5nm,0.3s							
CONA	**Conrad Observa**	**3.29**	**76**	*e*Pn		**Pn**	**06 15 13.5**	**-0.3**
	comp=N,0.1nm,0.2s							
CONA				*e*Sn		**Sn**	**06 15 54.1**	**+1.2**
	comp=N,0.8nm,0.4s							
HAU	**Haudompre**	**3.32**	**285**	*e*Pn		**Pn**	**06 15 15.9**	**+1.8**
HAU	**Haudompre**	**3.32**	**285**	*e*Pg		**Pg**	**06 15 24.4**	**-1.5**
HAU				*e*Sg		**Sg**	**06 16 08.5**	**-0.3**
	comp=N,4.0nm,0.2s							
LPG	**La Plagne**	**3.48**	**242**	*e*P		**Pn**	**06 15 20.3**	**+3.6**
LPG				*e*Sn		**Sn**	**06 15 56.3**	**-1.7**
	comp=N,0.5nm,0.3s							
LPL	**La Plagne**	**3.48**	**242**	*e*P		**Pn**	**06 15 19.5**	**+2.9**
CABF	**La Chapelle**	**3.50**	**262**	*e*Pn		**Pn**	**06 15 16.3**	**-0.4**
CABF				*e*Sn		**Sn**	**06 15 55.0**	**-3.2**
CABF				*e*Sg		**Sg**	**06 16 13.8**	**-0.9**
	comp=N,9.1nm,0.8s							
ABH	**Alteburg**	**3.56**	**320**	P		**Pn**	**06 15 18.7**	**+1.3**
PRU	**Pruhonice**	**3.58**	**38**	*e*SG		**Sb**	**06 16 13.3**	**+4.4**
PAGF	**Fort de Pagny**	**3.86**	**292**	*e*Pg		**Pg**	**06 15 34.8**	**-1.5**
PAGF				*e*Sg		**Sg**	**06 16 24.2**	**-2.1**
	comp=N,5.5nm,0.3s							
MBDF	**Montbardon**	**3.93**	**232**	*e*P		**Pb**	**06 15 27.4**	**-4.2**
MBDF				*e*Sn		**Sn**	**06 16 06.3**	**-2.5**
	comp=N,1.7nm,0.4s							
KRUC	**Moravsky**	**3.98**	**61**	*e*PG		**Pb**	**06 15 34.9**	**+2.4**
KRUC				*e*SN		**Sn**	**06 16 09.5**	**-0.4**
KRUC				*e*SG		**Sg**	**06 16 25.8**	**-4.3**
SFTF	**Sexfontaines**	**4.22**	**286**	*e*Sg		**Sg**	**06 16 35.3**	**-2.4**
	comp=N,2.4nm,0.3s							
CLL	**Collm**	**4.27**	**16**	*e*Pn		**Pn**	**06 15 26.0**	**-1.1**
CLL				*e*Sg		**Sg**	**06 16 36.0**	**-3.2**
	comp=Z,3.0nm,0.5s							
MEZF	**Maizieres J'vi**	**4.28**	**290**	*e*Sn		**Sn**	**06 16 13.1**	**-4.0**
MEZF				*e*Sg		**Sg**	**06 16 37.2**	**-2.4**
	comp=Z,2.4nm,0.3s							
ORIF	**Oris-en-Rattie**	**4.31**	**240**	*e*P		**Pn**	**06 15 31.3**	**+3.4**
ORIF				*e*Sn		**Sn**	**06 16 14.9**	**-3.3**
	comp=Z,0.9nm,0.3s							
LOR	**Lormes**	**4.94**	**273**	*e*Pn		**Pn**	**06 15 36.6**	**+0.1**
LOR	**Lormes**	**4.94**	**273**	*e*Pg		**Pg**	**06 15 55.1**	**-1.8**
LOR				*e*Sg		**Sg**	**06 16 57.8**	**-3.1**
	comp=Z,1.5nm,0.4s							
SMF	**Signal de Mont**	**5.02**	**266**	*e*Sg		**Sg**	**06 17 00.5**	**-2.8**
	comp=Z,0.6nm,0.2s							
VIVF	**Saint-Julien-l**	**5.07**	**244**	*e*P		**Pn**	**06 15 40.1**	**+1.8**
AVF	**Avril sur Loir**	**5.33**	**268**	*e*P		**Pn**	**06 15 43.7**	**+2.0**
BGF	**Bois d'Agland**	**5.71**	**266**	*e*P		**Pn**	**06 15 49.3**	**+2.3**

*IDC **18** 06:17:46.8±3.1,3.°36N×79.°21W,h0km,mb3.7/2, mbtmp3.9/4,ML2.9/2,MS3.0/4,Error ellipse: s-maj=73.8km s-min=35.7km az=1.0*

ISC 18 06:17:50.2±1.1,3.°60N±0.°07×79.°1W±0.°1,h19km,n35, σt1.59/33,1C,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**1.79**	**77**	*i* P		**Pn**	**06 18 18.6**	**-1.5**
BBAC	**Balboa, Cauca**	**2.42**	**130**	*e*P		**Pn**	**06 18 27.2**	**-1.7**
JAMC	**Jamundi, Valle**	**2.44**	**99**	*e*P		**Pn**	**06 18 27.0**	**-2.3**
POPC	**Popayan, Colom**	**2.63**	**114**	⇑*e*P		**Pn**	**06 18 29.9**	**-1.9**
YOTC	**Yotoco, Valle**	**2.76**	**82**	*e*P		**Pn**	**06 18 31.5**	**-2.1**
CMBC	**Cumbal**	**2.93**	**154**	*e*P		**Pn**	**06 18 35.2**	**-1.0**
GCUF	**Volcan Galeras**	**2.93**	**144**	*e*P		**Pn**	**06 18 36.3**	**0.0**
CRUC	**La Cruz**	**2.94**	**133**	*e*P		**Pn**	**06 18 35.9**	**-0.3**
PLMC	**San Jos del P**	**3.08**	**65**	*e*P		**Pn**	**06 18 35.1**	**-2.9**
PAC1	**Pacto, Paraso**	**3.33**	**175**	*e*P		**Pn**	**06 18 42.1**	**+0.7**
OTAV	**Otavalo**	**3.40**	**169**	*e*P		**Pn**	**06 18 42.4**	**-0.3**
BETC	**Betania**	**3.75**	**104**	*e*P		**Pn**	**06 18 49.1**	**+2.0**
ANIL	**Santa Ana**	**3.78**	**76**	*e*P		**Pn**	**06 18 46.8**	**-1.0**
CBOC	**Ciudad Bolivar**	**3.80**	**54**	*e*P		**Pn**	**06 18 45.4**	**-2.5**
ORTC	**Ortega, Tolima**	**3.84**	**85**	*e*P		**Pn**	**06 18 48.7**	**+0.2**
GARC	**Garzon, Huila**	**3.85**	**111**	*e*P		**Pn**	**06 18 49.5**	**+0.7**
FLOC	**Florencia**	**3.97**	**120**	*e*P		**Pn**	**06 18 51.0**	**+0.8**
GUY2C	**Guyana, Caldas**	**4.05**	**66**	*e*P		**Pn**	**06 18 50.5**	**-1.1**
PRAC	**Prado**	**4.19**	**88**	*e*P		**Pn**	**06 18 53.9**	**+0.6**
DBBC	**Dabeiba**	**4.44**	**40**	*e*P		**Pn**	**06 18 57.7**	**+1.0**
ROSC	**El Rosal**	**4.91**	**75**	Pn		**Pn**	**06 19 05.7**	**+2.3**
	8.7nm,0.3s,baz=162,slow=6.1,SNR=20							
ROSC				LR		LR	06 21 23.0	
	comp=Z,133nm,18.8s,baz=220,slow=42 20nm,0.3s							
ROSC	**El Rosal**	**4.91**	**75**	*e*P		**Pn**	**06 19 05.4**	**+2.0**
SPBC	**San Pablo de B**	**5.40**	**68**	*e*P		**Pn**	**06 19 12.1**	**+2.3**
VILC	**Villavicencio,**	**5.41**	**84**	*e*P		**Pn**	**06 19 11.4**	**+1.4**
CHIC	**Chingaza**	**5.44**	**79**	*e*P		**Pn**	**06 19 11.7**	**+1.0**
PTBC	**PUERTO BERRIO,**	**5.46**	**57**	*e*P		**Pn**	**06 19 10.6**	**-0.1**
OCAC	**Ocana**	**7.36**	**51**	*e*P		**Pn**	**06 19 38.0**	**+1.2**
SDV	**Santo Domingo**	**9.91**	**58**	Pn		**Pn**	**06 20 13.0**	**+1.1**
	1.1nm,0.3s,baz=157,slow=1.8,SNR=11							
SDV				LR		LR	06 24 10.5	
	comp=Z,33nm,21.8s,baz=111,slow=38 2.2nm,0.3s							
SDV	**Santo Domingo**	**9.91**	**58**	*e*P		**Pn**	**06 20 12.1**	**+0.2**
MDP	**Montagnes des**	**26.41**	**86**	LR		LR	06 34 31.8	
	comp=Z,39nm,19.8s,baz=118,slow=38							
CPUP	**Villa Florida**	**36.45**	**146**	LR		LR	06 40 52.7	
	comp=Z,42nm,18.3s,baz=48,slow=38							
ULM	**Lac du Bonnet**	**48.60**	**346**	P		**P**	**06 26 32.8**	**+0.2**
	1.2nm,0.7s,baz=176,slow=13,SNR=2.9 1.2nm,0.7s							
YKA	**Yellowknife Ar**	**64.38**	**343**	P		**P**	**06 28 26.2**	**+1.5**
	0.4nm,0.8s,baz=132,slow=6.6,SNR=7.1 0.4nm,0.8s							
ASAR	**Alice Springs**	**142.41**	**235**	PKP		**PKPdf**	**06 37 19.8**	**-2.9**
	0.5nm,0.6s,baz=121,slow=3.6,SNR=6.4							
WRA	**Warramunga Arr**	**143.59**	**241**	PKP		**PKPdf**	**06 37 23.9**	**-0.9**
	1.4nm,0.8s,baz=113,slow=2.8,SNR=5.8							

*CATAC **18** 06:19:43.9±0.2, 12.°67N×88.°56W, h28km, ML3.6*
*SNET **18** 06:19:46.4±1.9, 12.°86N×88.°62W, h30km, ML3.5*

ISC 18 06:19:43.6±1.4,12.°66N±0.°05×88.°60W±0.°04,h28km±13km, n58,σ0.°74/76,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.82**	**22**	*e*P		**Pn**	**06 19 59.9**	**+0.5**
RANC	**El Ranchito**	**0.83**	**22**	*e*P		**Pn**	**06 19 60.0**	**+0.4**
RANC	**El Ranchito**	**0.83**	**22**	*i* P		**Pn**	**06 20 00.2**	**+0.6**
RANC				*i* S		**Sn**	**06 20 12.0**	**+1.1**
RANC				IAML			06 20 14.7	
	comp=Z,2µm,1.0s							
PACA	**Pacayal**	**0.85**	**19**	*e*P		**Pn**	**06 19 60.0**	**+0.1**
PACA	**Pacayal**	**0.85**	**19**	*i* P		**Pn**	**06 20 00.1**	**+0.3**
PACA				*i* S		**Sn**	**06 20 12.5**	**+1.1**
PACA				IAML			06 20 15.9	
	comp=Z,19µm,1.0s							
BLLM	**Bellamira**	**0.86**	**24**	*e*P		**Pb**	**06 20 00.1**	**+0.1**
TECO	**Alcaldia de Te**	**0.89**	**349**	*i* P		**Pn**	**06 19 59.8**	**-0.5**
TECO				*i* S		**Sn**	**06 20 12.2**	**-0.1**
TECO				IAML			06 20 18.0	
	comp=Z,900nm,1.0s							
LCND	**La Caada**	**0.95**	**47**	*e*P		**Pb**	**06 20 01.0**	**-0.4**
LCND				*e*S		**Sn**	**06 20 14.5**	**+0.8**
LCND	**La Caada**	**0.95**	**47**	*i* P		**Pb**	**06 20 00.9**	**-0.6**
LCND				IAML			06 20 18.1	
	comp=Z,2µm,1.0s							
PQSS	**Presa 15 de Se**	**0.96**	**2**	*e*P		**Pb**	**06 20 01.5**	**-0.2**
PQSS	**Presa 15 de Se**	**0.96**	**2**	*i* P		**Pb**	**06 20 01.4**	**-0.3**
PQSS				*i* S		**Sb**	**06 20 14.5**	**+0.5**
PQSS				IAML			06 20 15.0	
	comp=Z,4µm,1.0s							
CNCH	**Conchagua**	**0.97**	**51**	*e*P		**Pb**	**06 20 01.6**	**-0.3**
UESV	**Universidad de**	**0.99**	**350**	*i* P		**Pn**	**06 20 01.5**	**-0.1**
UESV				*i* S		**Sb**	**06 20 14.6**	**-0.3**
UESV				IAML			06 20 18.1	
	comp=Z,1µm,1.0s							
SJTE	**Alcalda de S**	**1.03**	**338**	*i* P		**Pn**	**06 20 01.8**	**-0.4**
SJTE				*i* S		**Sn**	**06 20 15.2**	**-0.6**
SJTE				IAML			06 20 19.7	
	comp=Z,1µm,1.0s							
SCLA	**Alcaldia de Sa**	**1.04**	**353**	*i* P		**Pb**	**06 20 02.6**	**-0.5**
SCLA				*i* S		**Sb**	**06 20 16.1**	**-0.4**
SCLA				IAML			06 20 21.3	
	comp=Z,520nm,1.0s							
LFRS	**El Faro**	**1.06**	**335**	*e*P		**Pn**	**06 20 02.4**	**-0.2**
CSGN	**Cosiguina Volc**	**1.07**	**73**	*i* P		**Pn**	**06 20 01.7**	**-1.0**
CSGN				IAML			06 20 21.2	
	comp=Z,4µm,1.0s							
LALI	**Alcalda de L**	**1.08**	**320**	*e*P		**Pn**	**06 20 02.5**	**-0.3**
LALI				*e*S		**Sn**	**06 20 15.6**	**-1.3**
PAVA	**Las Pavas**	**1.10**	**343**	*e*P		**Pn**	**06 20 03.4**	**+0.2**
PAVA				*e*S		**Sb**	**06 20 17.9**	**-0.1**
PAVA	**Las Pavas**	**1.10**	**343**	*i* P		**Pn**	**06 20 03.2**	**0.0**
PAVA				IAML			06 20 18.7	
	comp=Z,4µm,1.0s							
PANCS	**Alcalda de**	**1.10**	**329**	*i* P		**Pb**	**06 20 04.9**	**+0.8**
PANCS				IAML			06 20 22.6	
	comp=Z,3µm,1.0s							
AMPH	**Amapala**	**1.11**	**56**	*e*P		**Pb**	**06 20 03.7**	**-0.5**
AMPH				*e*S		**Sb**	**06 20 19.1**	**+0.8**
LOMA	**Loma Larga**	**1.13**	**331**	*i* P		**Pn**	**06 20 03.2**	**-0.4**
LOMA				IAML			06 20 21.5	
	comp=Z,2µm,1.0s							
AEIL	**Aeropuerto Ilo**	**1.15**	**334**	*e*P		**Pn**	**06 20 04.0**	**+0.2**
UDBS	**Universidad Do**	**1.18**	**333**	*i* P		**Pn**	**06 20 04.5**	**+0.2**
UDBS				IAML			06 20 25.5	
	comp=Z,1µm,1.0s							
UTEC	**Universidad Te**	**1.19**	**331**	*i* P		**Pn**	**06 20 04.7**	**+0.3**
UTEC				IAML			06 20 24.1	
	comp=Z,890nm,1.0s							
PIC2	**El Picacho**	**1.25**	**330**	*e*P		**Pn**	**06 20 05.7**	**+0.2**
PMON	**Piamonte**	**1.26**	**327**	*i* P		**Pn**	**06 20 05.2**	**-0.2**
PMON				IAML			06 20 26.4	
	comp=Z,2µm,1.0s							
BOQS	**Boqueron**	**1.26**	**328**	*e*P		**Pn**	**06 20 05.9**	**+0.4**
JAYA	**Jayaque - finc**	**1.29**	**320**	*i* P		**Pn**	**06 20 05.5**	**-0.4**
JAYA				*e*S		**Sn**	**06 20 21.7**	**-0.6**
JAYA	**Jayaque - finc**	**1.29**	**320**	*i* P		**Pn**	**06 20 05.4**	**-0.4**
JAYA				IAML			06 20 25.1	
	comp=Z,6µm,1.0s							
CRIN	**San Cristobal**	**1.52**	**88**	*e*P		**Pn**	**06 20 09.9**	**+1.0**
CRIN	**San Cristobal**	**1.52**	**88**	*e*P		**Pn**	**06 20 09.6**	**+0.6**
CRIN	**San Cristobal**	**1.52**	**88**	*i* P		**Pn

s-maj=22.8km s-min=12.2km az=44.0
BJI ***18*** *07:04:42.0±0.0,6˚.00S×100˚.80E, h6km, mb4.8/66, mB5.1/24, Ms4.5/5, Ms7 4.2/6*
MOS ***18*** *07:04:43.8±0.9,5˚.85S×100˚.94E, h19km, mb5.0/42, Error ellipse: s-maj=11.0km s-min=5.6km az=110.8*
NEIC ***18*** *07:04:43.9±1.5,6˚.04S±0˚.06×100˚.79E±0˚.04, h10km±1km, mb4.9/64, Error ellipse: s-maj=11.3km s-min=2.9km az=148.0*
DJA ***18*** *07:04:43.0±0.3,6˚S±3˚×10˚1E±˚, h10km, M5.2/34, mB5.7/13, mb5.2/34, MLv5.3/19, Mw(mB)5.2/13*
ISC 18 07:04:43.0±0.4, 6˚10S±0˚.05×100˚.83E±0˚.06, h10km, n294, σ1§22/294, mb4.9/102, MS3.6/17, 17C-30D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**2.74**	**51**	Pn	**Pn**	**07 05 26.3**	**-0.8**
MNAI	**Manna**	**2.74**	**51**	P	**Pn**	**07 05 28.3**	**+1.2**
MNAI	**Manna**	**2.74**	**51**	P	**Pn**	**07 05 26.3**	**-0.8**
LWLI	**Liwa**	**3.39**	**72**	P	**Pn**	**07 05 35.2**	**-1.0**
PPSI	**Pulau Pagai**	**3.42**	**346**	P	**Pn**	**07 05 35.2**	**-1.2**
KASI	**Kota Agung**	**3.70**	**81**	P	**Pn**	**07 05 39.5**	**-0.7**
KRJI	**Kerinci**	**4.04**	**9**	P	**Pn**	**07 05 43.9**	**-1.1**
PMBI	**Palembang**	**5.04**	**51**	Pn	**Pn**	**07 05 56.7**	**-2.1**
SISI	**Saibi**	**5.05**	**340**	P	**Pn**	**07 05 57.9**	**-1.0**
	424nm,0.7s,9μm2.1nm						
PDSI	**Padang**	**5.17**	**356**	P	**Pn**	**07 05 58.9**	**-1.7**
	3μm,0.5s,89μm20nm						
SKJI	**Sukabumi**	**5.76**	**99**	P	**Pn**	**07 06 07.8**	**-0.9**
	357nm,0.7s,5μm2.3nm						
DBJI	**Dramaga**	**5.90**	**95**	P	**Pn**	**07 06 09.8**	**-0.8**
	199nm,0.7s,1.0nm						
CBJI	**Citeko**	**6.00**	**93**	P	**Pn**	**07 06 14.1**	**+2.2**
	417nm,0.5s,2.3nm						
CNJI	**Cibinong**	**6.37**	**101**	P	**Pn**	**07 06 15.0**	**-2.1**
	96nm,0.6s,1μm0.5nm						
BKNI	**Bangkinang**	**6.39**	**2**		**Pn**	**07 06 15.2**	**-2.1**
BKNI	**Bangkinang**	**6.39**	**2**	P	**Pn**	**07 06 16.3**	**-1.0**
	400nm,0.7s,6μm2.2nm						
XMIS	**Christmas Isla**	**6.46**	**133**	Pn	Pn	07 06 13.7	-4.6
XMIS	**Christmas Isla**	**6.46**	**133**	P	Pn	07 06 13.9	-4.4
PBSI	**Pulau Batu**	**6.52**	**337**	P	**Pn**	**07 06 18.1**	**-1.0**
	204nm,0.7s,3μm0.8nm						
DSRI	**Dabo**	**6.72**	**34**	P	**Pn**	**07 06 21.0**	**-0.9**
	71nm,0.8s,0.3nm						
LEM	**Lembang**	**6.79**	**96**	Pn	**Pn**	**07 06 24.6**	**+1.7**
	21nm,0.3s,baz=201,slow=7.6,SNR=23						
LEM				Sn	**Sn**	**07 07 40.4**	**0.0**
	8.5nm,0.3s,baz=307,slow=20,SNR=1.0						
LEM				LR	LR	07 09 10.1	
	comp=Z,258nm,21.0s,baz=268,slow=40						
	177nm,0.8s						
LEM	**Lembang**	**6.79**	**96**	P	**Pn**	**07 06 22.0**	**-0.9**
	213nm,1.0s,2μm0.7nm						
BBJI	**Bungbulang**	**6.91**	**102**	P	**Pn**	**07 06 23.4**	**-1.1**
COCO	**West Island**	**7.22**	**213**	Pn	**Pn**	**07 06 28.2**	**-0.4**
COCO	**West Island**	**7.22**	**213**	P	**Pn**	**07 06 28.3**	**-0.4**
CMJI	**Cimerak**	**7.75**	**103**	P	**Pn**	**07 06 34.9**	**-1.1**
	178nm,0.6s,2μm0.8nm						
GSI	**Gunungsitoli**	**8.04**	**336**	Pn	**Pn**	**07 06 40.1**	**+0.1**
GSI	**Gunungsitoli**	**8.04**	**336**	P	**Pn**	**07 06 40.1**	**+0.1**
GSI	**Gunungsitoli**	**8.04**	**336**	P	**Pn**	**07 06 39.3**	**-0.7**
	323nm,0.7s,3μm0.9nm						
KPJI	**Karang Pucung**	**8.14**	**99**	P	**Pn**	**07 06 40.5**	**-0.9**
	71nm,0.9s						
MYKOM	**Kota Tinggi**	**8.40**	**21**	Pn	**Pn**	**07 06 44.7**	**-0.3**
RPSI	**Rantau Prapat**	**8.94**	**348**	Pn	**Pn**	**07 06 50.3**	**-2.1**
PSI	**Prapat**	**9.05**	**348**	P	**Pn**	**07 06 50.3**	**-3.6**
SNSI	**Sinabang, Aceh**	**9.57**	**332**	P	**Pn**	**07 07 01.4**	**+0.3**
	638nm,0.8s,6μm						
UGM	**Wanagama**	**9.79**	**101**	Pn	**Pn**	**07 07 03.2**	**-0.9**
UGM	**Wanagama**	**9.79**	**101**	P	**Pn**	**07 07 03.5**	**-0.5**
UGM	**Wanagama**	**9.79**	**101**	P	**Pn**	**07 07 03.0**	**-1.0**
	87nm,1.9s						
KCSI	**Kotacane, Aceh**	**10.04**	**342**	P	**Pn**	**07 07 05.8**	**-1.6**
	60nm,0.8s						
IPM	**Ipoh**	**10.51**	**1**		**Pn**	**07 07 14.1**	**+0.1**
IPM	**Ipoh**	**10.51**	**1**	P	**Pn**	**07 07 15.8**	**+1.8**
PWJI	**Pagerwojo**	**11.06**	**101**	P	**Pn**	**07 07 19.2**	**-2.2**
	43nm,0.8s						
MLSI	**Meulaboh, Aceh**	**11.21**	**337**	P	**Pn**	**07 07 23.4**	**0.0**
	311nm,0.7s,4μm						
KULM	**Kulim**	**11.32**	**359**	Pn	**Pn**	**07 07 23.9**	**-1.0**
LHMI	**Lhok Sumawe**	**11.90**	**341**	P	**Pn**	**07 07 33.0**	**0.0**
LHMI	**Lhok Sumawe**	**11.90**	**341**	P	**Pn**	**07 07 31.2**	**-1.8**
	109nm,0.8s						
SBUM	**Sibu**	**14.20**	**54**	Pn	**Pn**	**07 08 05.8**	**+1.4**
SRIT	**Nakonsritamara**	**14.65**	**355**	Pn	Pn	07 08 04.2	-6.4
PLAI	**Plampang**	**17.02**	**100**	P	**Pn**	**07 08 40.4**	**-1.0**
	54nm,1.1s						
EDFI	**Ende, Flores**	**20.85**	**99**	P	**P**	**07 09 25.0**	**-0.4**
	29nm,0.6s						
TOLI2	**Tolitoli**	**21.17**	**71**	P	**P**	**07 09 28.1**	**-0.7**
UBPT	**Khong Chiam**	**21.74**	**12**	P	**P**	**07 09 33.8**	**-0.9**
UBPT				IAmb	IAmb	07 09 35.4	
	comp=Z,45nm,1.0s						
LUWI	**Luwuk**	**22.46**	**78**	P	**P**	**07 09 43.3**	**+0.7**
LUWI				IAmb	IAmb	07 09 45.4	
	comp=Z,46nm,0.9s						
SOEI	**Soe**	**23.49**	**100**	P	**P**	**07 09 53.8**	**+0.3**
SOEI	**Soe**	**23.49**	**100**	P	**P**	**07 09 52.7**	**-0.7**
	comp=Z,137nm,1.0s						
PALK	**Pallekele**	**24.08**	**303**	LR	LR	07 17 38.3	
	comp=Z,77nm,19.5s,baz=226,slow=32						
CM31	**Chiang Mai Arr**	**24.48**	**356**	P	**P**	**07 10 03.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**24.48**	**356**	P	**P**	**07 10 02.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**24.48**	**356**	*i* P	**P**	**07 10 02.9**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**24.48**	**356**	P	**P**	**07 10 02.2**	**-0.3**
	comp=Z,9.0nm,0.8s,baz=189,slow=8.6,SNR=33						
CMAR				LR	LR	07 19 39.0	
	comp=Z,94nm,21.4s,baz=185,slow=37						
	comp=Z,9.0nm,0.8s						
CHTO	**Chiang Mai**	**24.83**	**356**	P	**P**	**07 10 05.2**	**-0.5**
CHTO	**Chiang Mai**	**24.83**	**356**	P	**P**	**07 10 05.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CRAI	**Chiangrai**	**26.17**	**359**	P	**P**	**07 10 17.8**	**-0.1**
CRAI				IAmb	IAmb	07 10 22.5	
	comp=Z,28nm,1.2s						
QIZ	**Qiongzhong**	**26.51**	**19**	P	**P**	**07 10 18.3**	**-2.6**
QIZ				S	**S**	**07 14 57.9**	**+2.7**
QIZ				pmax	pmax		
	comp=Z,11nm,1.2s						
QIZ				LR	LR		
	comp=Z,170nm,14.3s						
QIZ				LR	LR		
	comp=Z,180nm,14.3s						
QIZ				LR	LR		
	comp=Z,200nm,16.8s						
FITZ	**Fitzroy Crossi**	**26.99**	**118**	P	**P**	**07 10 26.2**	**+0.9**
SLVN	**Son La**	**27.43**	**6**	P	**P**	**07 10 29.5**	**+0.2**
SLVN				IAmb	IAmb	07 10 34.1	
	comp=Z,17nm,0.9s						
DAV	**Davao City (W)**	**27.95**	**62**	LR	LR	07 22 25.6	
	comp=Z,125nm,20.1s,baz=336,slow=38						
KNRA	**Kununurra**	**29.00**	**111**	P	**P**	**07 10 42.9**	**-0.4**
KNRA				IAmb	IAmb	07 11 05.8	
	comp=Z,28nm,1.2s						
NWAO	**Narrogin (SRO)**	**30.75**	**152**	LR	LR	07 21 54.2	
	comp=Z,112nm,20.5s,baz=350,slow=34						
KMI	**Kunming**	**31.09**	**3**	⇓P	**P**	**07 11 03.5**	**+1.5**
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
H01W3	**Cape Leeuwin H**	**31.16**	**159**	T	T	07 44 58.9	
	baz=336,slow=76,SNR=8.9						
H01W2	**Cape Leeuwin H**	**31.18**	**159**	T	T	07 45 00.4	
	baz=336,slow=76,SNR=8.2						
H01W1	**Cape Leeuwin H**	**31.18**	**159**	T	T	07 44 56.4	
	baz=336,slow=76,SNR=12						
PZH	**PanZhiHua**	**32.42**	**2**	P	**P**	**07 11 14.0**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
SHL	**Shillong**	**32.66**	**345**	P	**P**	**07 11 15.8**	**+0.2**
SHL	**Shillong**	**32.66**	**345**	P	**P**	**07 11 15.8**	**+0.2**
SHL				pmax	pmax		
	comp=Z,21nm,0.7s						
GYA	**Guiyang**	**32.86**	**10**	*i*P	**P**	**07 11 18.3**	**+1.0**
GYA				S	**S**	**07 16 40.3**	**+5.3**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,220nm,5.1s						
TPUB	**Ta-pu**	**35.05**	**33**	P	**P**	**07 11 37.0**	**+0.7**
TPUB				IAmb	IAmb	07 11 49.5	
	comp=Z,24nm,0.9s						
WB0	**Warramunga Arr**	**35.33**	**116**	P	**P**	**07 11 39.3**	**+0.5**
WRA	**Warramunga Arr**	**35.33**	**116**	P	**P**	**07 11 39.7**	**+0.8**
WRA	**Warramunga Arr**	**35.33**	**116**	P	**P**	**07 11 39.7**	**+0.8**
WRA	**Warramunga Arr**	**35.33**	**116**	P	**P**	**07 11 39.6**	**+0.7**
	comp=Z,3.3nm,0.9s,baz=289,slow=11,SNR=11						
WRA				PcP	**PcP**	**07 14 09.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=302,slow=1.9,SNR=2.3						
	comp=Z,3.3nm,0.9s						
WB2	**Warramunga Arr**	**35.34**	**116**	P	**P**	**07 11 37.3**	**-1.7**
	baz=36						
WR0	**Warramunga Arr**	**35.52**	**116**	P	**P**	**07 11 40.6**	**+0.2**
WR0				IAmb	IAmb	07 11 46.1	
	comp=Z,16nm,1.2s						
SSLB	**Suanglung**	**35.62**	**33**	P	**P**	**07 11 41.9**	**+0.7**
SSLB				IAmb	IAmb	07 11 42.6	
	comp=Z,15nm,1.0s						
AS31	**Alice Springs**	**36.28**	**122**	P	**P**	**07 11 47.0**	**0.0**
ASAR	**Alice Springs**	**36.28**	**122**	P	**P**	**07 11 47.1**	**+0.2**
ASAR	**Alice Springs**	**36.28**	**122**	P	**P**	**07 11 47.6**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=296,slow=7.6,SNR=23						
ASAR				PcP	**PcP**	**07 14 12.5**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=282,slow=4.5,SNR=4.7						
	comp=Z,0.7nm,0.5s						
LSA	**Lhasa**	**36.79**	**346**	P	**P**	**07 11 51.5**	**-0.2**
LSA				IAmb	IAmb	07 11 53.9	
	comp=Z,11nm,0.8s						
LSA	**Lhasa**	**36.79**	**346**	P	**P**	**07 11 51.5**	**-0.2**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
CD2	**Chengdu**	**36.91**	**4**	P	**P**	**07 11 52.3**	**+0.1**
CD2				S	**S**	**07 17 39.6**	**+2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=Z,310nm,12.4s						
CD2				LR	LR		
	comp=Z,250nm,17.1s						
CD2				LR	LR		
	comp=Z,220nm,12.7s						
ENH	**Enshi**	**37.11**	**12**	P	**P**	**07 11 53.5**	**-0.4**
ENH				IAmb	IAmb	07 11 54.7	
	comp=Z,33nm,1.1s						
WHN	**Wuhan**	**38.67**	**19**	P	**P**	**07 12 08.0**	**+1.0**
WHN				pmax	pmax		
	comp=Z,48nm,0.9s						
QIS	**Mount Isa**	**40.24**	**115**	P	**P**	**07 12 21.3**	**+0.9**
	baz=40,SNR=5.2						
XAN	**Xi'an**	**40.65**	**10**	⇓P	**P**	**07 12 23.3**	**-0.3**
XAN				pP	sP	07 12 27.8	+2.2
XAN				pmax	pmax		
	comp=Z,47nm,0.8s						
NJ2	**Nanjing**	**41.65**	**23**	*e*P	**P**	**07 12 32.9**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LYN	**LuoYang**	**41.90**	**14**	⇓P	**P**	**07 12 34.6**	**+0.8**
LYN				pmax	pmax		
	comp=Z,48nm,0.8s						
LZH	**Lanzhou**	**42.06**	**4**	⇓P	**P**	**07 12 35.8**	**+0.5**
LZH				sP	pwP	07 12 42.6	-1.3
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
MTSU	**Mount Surprise**	**44.05**	**110**	P	**P**	**07 12 52.6**	**+1.0**
	baz=44,SNR=5.8						
HNS	**HongShan**	**45.18**	**16**	⇓P	**P**	**07 13 00.5**	**+0.4**
HNS				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA	**Gaotai**	**45.29**	**359**	*e*P	**P**	**07 13 01.8**	**+0.6**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
STKA	**Stephens Creek**	**45.87**	**129**	P	**P**	**07 13 06.9**	**+1.1**
	baz=46,SNR=7.8						
STKA	**Stephens Creek**	**45.87**	**129**	P	**P**	**07 13 06.7**	**+0.9**
STKA	**Stephens Creek**	**45.87**	**129**	P	**P**	**07 13 06.7**	**+0.9**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**45.87**	**129**	P	**P**	**07 13 07.1**	**+1.3**
	comp=Z,2.7nm,0.6s,baz=295,slow=8.3,SNR=12						
	comp=Z,2.7nm,0.6s						
PMG	**Port Moresby**	**46.00**	**97**	⇑*e*P	**P**	**07 13 04.7**	**-2.4**
PMG				pmax	pmax		
	comp=Z,11nm,1.1s						
BTO	**Baotou**	**47.24**	**10**	*e*P	**P**	**07 13 17.9**	**+1.4**
BTO				pP	**pwP**	**07 13 22.3**	**-2.8**
BTO				sP	**sP**	**07 13 25.1**	**+6.6**
BTO				PP	**PP**	**07 15 03.1**	**-4.5**
BTO				S	**S**	**07 20 13.8**	**+4.1**
BTO				SS	**SS**	**07 23 33.8**	**-3.5**
BTO				pmax	pmax		
	comp=Z,20nm,0.9s						
BTO				pmax	pmax		
	comp=Z,650nm,5.9s						
BTO				LR	LR		
	comp=Z,500nm,5.6s						
BTO				LR	LR		
	comp=Z,520nm,5.0s						
BTO				LR	LR		
	comp=Z,270nm,5.1s						
HHC	**Hu-ho-hao-te**	**47.75**	**11**	*e*P	**P**	**07 13 21.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
BJT	**Baijiatuau**	**48.02**	**16**	P	**P**	**07 13 22.6**	**+0.1**
BJT				IAmb	IAmb	07 13 23.4	
	comp=Z,10nm,0.7s						
BJT	**Baijiatuau**	**48.02**	**16**	P	**P**	**07 13 22.6**	**+0.1**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	**Beijing**	**48.05**	**16**	P	**P**	**07 13 22.8**	**+0.2**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMSA	**Cobar Meteorol**	**48.95**	**127**	P	**P**	**07 13 31.2**	**+1.5**
	baz=49,SNR=20						
KSAR	**Wonju Array Be**	**50.14**	**28**	P	**P**	**07 13 37.8**	**-0.9**
KSAR	**Wonju Array Be**	**50.14**	**28**	P	**P**	**07 13 37.8**	**-0.9**
KSRS	**Korea Array**	**50.17**	**28**	P	**P**	**07 13 38.9**	**0.0**
	comp=Z,10.0nm,0.8s,baz=219,slow=7.6,SNR=59						
	comp=Z,10.0nm,0.8s						
KS19	**Wonju Array Si**	**50.18**	**28**	P	**P**	**07 13 38.7**	**-0.3**
KS19				IAmb	IAmb	07 13 39.4	
	comp=Z,21nm,1.3s						
KSH	**Kashi**	**50.87**	**335**	P	**P**	**07 13 43.4**	**-1.0**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMQ	**Urumqi**	**51.09**	**348**	*e*P	**P**	**07 13 47.1**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,28nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,76nm,3.7s						
XLT	**XiLinHaoTe**	**51.65**	**14**	*e*P	**P**	**07 13 50.8**	**+0.8**
XLT				pP	sP	07 13 55.0	+2.9
XLT				pmax	pmax		
	comp=Z,92nm,5.3s						
NRN	**Naryn**	**52.48**	**337**	P	**P**	**07 13 56.4**	**-0.2**
NRN	**Naryn**	**52.48**	**337**	P	**P**	**07 13 56.4**	**-0.2**
CAN	**Canberra**	**52.91**	**130**	P	**P**	**07 14 00.6**	**+1.0**
CAN				IAmb	IAmb	07 14 04.8	
	comp=Z,32nm,1.4s						
CAN	**Canberra**	**52.91**	**130**	P	**P**	**07 14 00.6**	**+1.0**
CAN				pmax	pmax		
	comp=Z,32nm,1.4s						
BOOM	**Boomskoye usch**	**53.41**	**337**	P	**P**	**07 14 02.9**	**-0.4**
BOOM	**Boomskoye usch**	**53.41**	**337**	P	**P**	**07 14 02.9**	**-0.4**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARSB	**Arslanbob**	**53.65**	**334**	P	**P**	**07 14 04.4**	**-0.6**
ARSB	**Arslanbob**	**53.65**	**334**	P	**P**	**07 14 04.4**	**-0.6**
ARSB				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SONM	**Songino Array**	**53.93**	**5**	P	**P**	**07 14 07.8**	**+0.8**
SONM				IAmb	IAmb	07 14 08.9	
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**53.93**	**5**	P	**P**	**07 14 07.8**	**+0.8**
SONM				pmax	pmax		
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**53.93**	**5**	P	**P**	**07 14 08.3**	**+1.4**
	comp=Z,23nm,1.0s,baz=186,slow=9.6,SNR=93						
	comp=Z,23nm,1.0s						
ULN	**Ulaanbaatar**	**54.02**	**5**	P	**P**	**07 14 08.1**	**+0.5**
ULN				IAmb	IAmb	07 14 09.5	
	comp=Z,14nm,0.9s						
ULN	**Ulaanbaatar**	**54.02**	**5**	P	**P**	**07 14 08.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
AAK	**Ala-Archa**	**54.10**	**336**	P	**P**	**07 14 08.4**	**+0.1**
AAK	**Ala-Archa**	**54.10**	**336**	⇓*e*P	**P**	**07 14 08.6**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
AAK	**Ala-Archa**	**54.10**	**336**	P	**P**	**07 14 08.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=172,slow=6.4,SNR=6.3						
AAK				LR	LR	07 39 10.2	
	comp=Z,45nm,18.9s,baz=146,slow=38						
	comp=Z,1.6nm,0.6s						
CN2	**Changchun**	**54.43**	**22**	*e*P	**P**	**07 14 09.9**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	**Matsushiro Arr**	**54.99**	**37**	P	**P**	**07 14 13.0**	**-1.7**
	comp=Z,3.1nm,0.7s,baz=220,slow=7.5,SNR=9.1						
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**55.18**	**345**	P	**P**	**07 14 15.8**	**-0.1**
MKAR	**Makanchi Array**	**55.18**	**345**	P	**P**	**07 14 16.1**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=146,slow=7.1,SNR=7.2						
MKAR				LR	LR	07 40 17.3	
	comp=Z,27nm,20.8s,baz=150,slow=39						
	comp=Z,3.2nm,0.6s						
KK31	**Karatay Array**	**56.16**	**334**	P	**P**	**07 14 21.5**	**-1.6**
KK31	**Karatay Array**	**56.16**	**334**	P	**P**	**07 14 21.5**	**-1.6**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KKAR	**Karatay Array**	**56.16**	**334**	P	**P**	**07 14 21.6**	**-1.4**
KKAR	**Karatay Array**	**56.16**	**334**	P	**P**	**07 14 21.6**	**-1.4**
ZAK	**Zakamensk**	**56.30**	**2**	*e*P	**P**	**07 14 23.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MDJ	**Mudanjiang**	**56.73**	**24**	P	**P**	**07 14 27.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.6s						
DGZ	**Jazzator, Alta**	**56.78**	**350**	*d*iP	**P**	**07 14 28.1**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,22nm,0.9s						
BNX	**BinXian**	**56.81**	**22**	⇓P	**P**	**07 14 27.5**	**0.0**
BNX				pmax	pmax		
	comp=Z,31nm,0.8s						
BNX				pmax	pmax		
	comp=Z,220nm,4.3s						
USA0B	**Ussuriysk Arra**	**57.41**	**26**	P	**P**	**07 14 31.8**	**0.0**
USA0B				IAmb	IAmb	07 14 32.7	
	comp=Z,13nm,0.8s						
USA0B	**Ussuriysk Arra**	**57.41**	**26**	P	**P**	**07 14 31.8**	**0.0**
USA0B				pmax	pmax		
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**57.41**	**26**	P	**P**	**07 14 31.8**	**0.0**
USRK	**Ussuriysk Ar.**	**57.41**	**26**	P	**P**	**07 14 32.0**	**+0.2**
	comp=Z,10nm,0.7s,baz=223,slow=5.9,SNR=26						
	comp=Z,10nm,0.7s						
H04N2	**CROZET ISLANDS**	**58.05**	**218**	T	T	08 19 37.4	
	baz=62,slow=75,SNR=14						
H04N1	**CROZET ISLANDS**	**58.07**	**218**	T	T	08 19 26.5	
	baz=62,slow=75,SNR=14						
H04N3	**CROZET ISLANDS**	**58.07**	**218**	T	T	08 19 39.3	
	baz=62,slow=75,SNR=15						
GEYT	**Alibeck**	**59.13**	**321**	P	**P**	**07 14 43.8**	**-0.2**
GEYT				IAmb	IAmb	07 14 46.2	
	comp=Z,5.5nm,0.8s						
GEYT	**Alibeck**	**59.13**	**321**	P	**P**	**07 14 43.8**	**-0.2**
GEYT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GEYT	**Alibeck**	**59.13**	**321**	P	**P**	**07 14 44.8**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=193,slow=6.1,SNR=8.9						
	comp=Z,4.0nm,0.7s						
GYA0	**ALIBECK ARRAY**	**59.13**	**321**	P	**P**	**07 14 43.9**	**-0.1**
GYA0				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**59.13**	**321**	P	**P**	**07 14 43.9**	**-0.1**
GYA0B				IAmb	IAmb	07 14 46.1	
	comp=Z,5.0nm,0.7s						
KURBB	**Kurchatov Arra**	**59.69**	**344**	P	**P**	**07 14 47.6**	**0.0**
	comp=Z,3.3nm,0.7s,baz=165,slow=6.5,SNR=15						
	comp=Z,3.3nm,0.7s						
KURK	**Kurchatov**	**59.75**	**344**	P	**P**	**07 14 47.3**	**-0.7**
KURK				IAmb	IAmb	07 14 48.8	
	comp=Z,8.4nm,0.8s						
KURK	**Kurchatov**	**59.75**	**344**	P	**P**	**07 14 47.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HEH	**HeiHe**	**60.67**	**19**	*e*P	**P**	**07 14 53.5**	**-0.8**
HEH				pmax	pmax		
	comp=Z,16nm,1.1s						
ZALV	**Zalesovo Beam**	**61.33**	**349**	P	**P**	**07 14 58.6**	**-0.1**
ZALV	**Zalesovo Beam**	**61.33**	**349**	*i* P	**P**	**07 14 58.5**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**61.33**	**349**	P	**P**	**07 14 58.8**	**+0.1**
	comp=Z,12nm,0.8s,baz=179,slow=4.8,SNR=41						
ZALV				LR	LR	07 44 18.5	
	comp=Z,38nm,19.4s,baz=146,slow=39						
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**61.35**	**23**	*de*P	**P**	**07 14 58.6**	**-0.4**
KLR				pmax	pmax		
	comp=Z,19nm,1.7s						
ZEA	**Zeya**	**63.64**	**17**	*e*P	**P**	**07 15 14.2**	**0.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVAR	**Borovoye Array**	**64.30**	**340**	P	**P**	**07 15 18.1**	**-0.4**
	comp=Z,5.4nm,0.6s,baz=143,slow=8.4,SNR=20						
	comp=Z,5.4nm,0.6s						
BRVK	**Borovoye**	**64.36**	**340**	P	**P**	**07 15 17.8**	**-1.1**
BRVK				IAmb	IAmb	07 15 18.8	
	comp=Z,3.9nm,0.7s						
BRVK	**Borovoye**	**64.36**	**340**	*de*P	**P**	**07 15 18.2**	**-0

comp=N,6.3nm,0.9s,baz=131,slow=5.4,SNR=8.3
comp=N,6.3nm,0.9s
KIV Kislovodsk 72.18 320 *e*P **P 07 16 09.1 +0.8**
KIV pmax pmax
comp=Z,8.0nm,1.0s
BELG Belogornoye 73.65 329*ce*P **P 07 16 16.1 -0.6**
BELG pmax pmax
comp=Z,4.0nm,1.2s
BELG Belogornoye 73.65 329 P **P 07 16 16.6 -0.1**
comp=Z,14nm,1.1s,baz=258,slow=2.5,SNR=4.4
comp=Z,14nm,1.1s
LBTB Lobatse 74.07 246 LR LR 07 43 03.0
comp=Z,47nm,20.9s,baz=96,slow=31
BOSA Boshof 74.44 242 LR LR 07 45 01.0
comp=Z,48nm,18.8s,baz=182,slow=32
RTZ Ruatahuna 75.40 128 P **P 07 16 27.5 +0.1**
RTZ IAmb IAmb 07 16 30.4
comp=Z,15nm,1.2s
NRIK Noril'sk 75.83 355 P **P 07 16 28.8 -0.2**
NRIK IAmb IAmb 07 16 29.6
comp=Z,9.4nm,0.9s
NRIK Noril'sk 75.83 355*de*P **P 07 16 28.4 -0.6**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
NRIK Noril'sk 75.83 355 P **P 07 16 28.9 -0.2**
comp=Z,3.5nm,0.5s,baz=164,slow=5.0,SNR=13
comp=Z,3.5nm,0.5s
PEA0B Petropavlovsk- 75.91 31 P **P 07 16 29.6 -0.3**
PEA0B Petropavlovsk- 75.91 31 P **P 07 16 29.6 -0.3**
PEA0B pmax pmax
comp=Z,21nm,1.1s
PETK Petropavlovsk- 75.91 31 P **P 07 16 29.7 -0.2**
PETK Petropavlovsk- 75.91 31 P **P 07 16 30.2 +0.3**
comp=Z,8.4nm,0.9s,baz=0.0,slow=0.6,SNR=7.4
comp=Z,8.4nm,0.9s
KIRV Kirov 76.41 335⇑*e*P **P 07 16 32.9 +0.4**
KIRV Kirov 76.41 335 P **P 07 16 33.1 +0.6**
comp=Z,5.6nm,0.5s,baz=334,slow=17,SNR=4.1
comp=Z,5.6nm,0.5s
MA2 Magadan 76.42 24 P **P 07 16 33.0 +0.4**
MA2 Magadan 76.42 24 P **P 07 16 33.0 +0.4**
MA2 pmax pmax
comp=Z,20nm,0.8s
BR131 Keskin Array S 76.70 313 P **P 07 16 34.2 -0.6**
BR131 IAmb IAmb 07 16 35.6
comp=Z,5.7nm,0.8s
BR131 Keskin Array S 76.70 313 P **P 07 16 34.2 -0.6**
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 76.70 313 P **P 07 16 34.5 -0.3**
BRTR Keskin Array B 76.70 313 P **P 07 16 34.8 0.0**
comp=Z,4.1nm,0.8s,baz=134,slow=7.1,SNR=22
comp=Z,4.1nm,0.8s
MDUB Mudurnu 78.71 313 P **P 07 16 46.1 +0.2**
SEY Seymchan 79.11 21⇓*e*P **P 07 16 48.1 +0.6**
SEY pmax pmax
comp=Z,10.0nm,0.8s
TIXI Tiksi 79.76 9 P **P 07 16 49.8 -1.0**
TIXI IAmb IAmb 07 16 50.2
comp=Z,6.3nm,0.8s
TIXI Tiksi 79.76 9⇓*e*P **P 07 16 49.7 -1.1**
TIXI pmax pmax
comp=Z,17nm,1.7s
TIXI Tiksi 79.76 9 LR LR 07 55 35.4
comp=Z,69nm,18.4s,baz=202,slow=38
OBN Obninsk 80.69 328 P **P 07 16 55.8 -0.4**
OBN Obninsk 80.69 328⇓*e*P **P 07 16 56.2 0.0**
OBN *e* 07 19 57.6
OBN pmax pmax
comp=Z,6.0nm,0.4s
TSUM Tsumeb 81.66 252 LR LR 07 49 49.8
comp=Z,31nm,18.7s,baz=151,slow=33
KLMR Klimovskoe 81.86 334 *e*P **P 07 17 00.8 -1.5**
KLMR pmax pmax
comp=Z,20nm,1.4s
TIRR Tirgusor 81.87 316⇓P **P 07 17 03.4 +0.7**
TIRR Tirgusor 81.87 316 P **P 07 17 02.9 +0.2**
TIRR Tirgusor 81.87 316 P **P 07 17 02.9 +0.2**
TIRR pmax pmax
comp=Z,26nm,0.9s
TPGR Topolog 81.98 317⇑P **P 07 17 03.3 -0.1**
CFR Carcaliu 82.26 317⇓P **P 07 17 05.2 +0.4**
CFR Carcaliu 82.26 317 P **P 07 17 05.1 +0.4**
HARR Harsova 82.27 317⇑P **P 07 17 05.8 +0.9**
HARR Harsova 82.27 317 P **P 07 17 05.7 +0.9**
MILM Milestii Mici 82.32 319⇑P **P 07 17 05.0 0.0**
MILM Milestii Mici 82.32 319 P **P 07 17 05.0 0.0**
LOZB Loznitsa 82.83 315⇓P **P 07 17 08.2 +0.4**
RAZG Razgrad 82.94 315⇓P **P 07 17 09.3 +0.9**
SORM Soroca 82.98 320⇑P **P 07 17 08.7 +0.3**
SORM Soroca 82.98 320 P **P 07 17 08.7 +0.3**
AKASG Malin Array Be 83.22 323 P **P 07 17 08.7 -0.9**
AKASG IAmb IAmb 07 17 10.3
comp=Z,7.2nm,1.2s
AKASG Malin Array Be 83.22 323 P **P 07 17 08.7 -0.9**
AKASG pmax pmax
comp=Z,7.0nm,1.2s
AKASG Malin Array Be 83.22 323 P **P 07 17 09.5 -0.1**
comp=Z,2.7nm,0.7s,baz=86,slow=4.6,SNR=9.6
comp=Z,2.7nm,0.7s
AKBB Malin Array Si 83.22 323 P **P 07 17 09.2 -0.4**
AKBB IAmb IAmb 07 17 10.1
comp=Z,5.5nm,0.8s
AKBB Malin Array Si 83.22 323 P **P 07 17 09.3 -0.4**
AKBB pmax pmax
comp=Z,6.0nm,0.8s
ELND Elena 83.23 314⇓P **P 07 17 10.4 +0.5**
KIEV Kiev 83.23 323⇑P **P 07 17 09.4 -0.2**
KIEV Kiev 83.23 323 P **P 07 17 09.0 -0.7**
KIEV IAmb IAmb 07 17 10.1
comp=Z,4.9nm,0.8s
KIEV Kiev 83.23 323 P **P 07 17 09.0 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
VRI Vrincioaia 83.41 317⇓P **P 07 17 12.2 +1.4**
VRI Vrincioaia 83.41 317 P **P 07 17 12.1 +1.4**
PLOR Plostina 83.46 317⇑P **P 07 17 12.0 +1.0**
PLOR Plostina 83.46 317 P **P 07 17 12.0 +1.0**
MLR Muntele Rosu 83.84 317⇑P **P 07 17 13.9 +0.8**
MLR Muntele Rosu 83.84 317 P **P 07 17 13.2 +0.1**
MLR IAmb IAmb 07 17 15.2
comp=Z,13nm,1.0s
MLR Muntele Rosu 83.84 317 P **P 07 17 13.3 +0.1**
MLR pmax pmax
comp=Z,13nm,1.0s
MLR Muntele Rosu 83.84 317⇑P **P 07 17 14.1 +1.0**
QSPA South Pole Qui 83.89 180 P **P 07 17 14.2 +1.2**
comp=Z,1.9nm,1.0s,baz=254,slow=5.4,SNR=3.1
comp=Z,1.9nm,1.0s
TURR Turia 83.94 317⇑P **P 07 17 14.4 +0.9**
DOPR Dopca 84.34 317⇓P **P 07 17 15.9 +0.4**
ARR Arges 84.70 317⇓P **P 07 17 17.6 +0.1**
BURAR Bucovina Array 84.87 319⇓P **P 07 17 19.8 +1.5**
BURAR Bucovina Array 84.87 319 P **P 07 17 19.8 +1.5**
BUR08 Bucovina Ar. S 84.89 319 IAmb IAmb 07 17 20.9
comp=Z,6.8nm,0.8s
MNK Minsk 85.16 326 *i* P **P 07 17 19.6 +0.1**
comp=E,5.0nm,0.9s
MNK *i* P **P 07 17 19.6 +0.1**
comp=N,11nm,0.8s
MNK *i* P **P 07 17 19.6 +0.1**
comp=Z,14nm,0.8s,baz=107
MNK *i* S **SKSac 07 27 43.5 -0.7**
MNK *i* PS **PnS 07 28 41.5 -3.3**
MNK Minsk 85.16 326 *i* P **P 07 17 19.5 +0.1**
MNK *i* S **SKSac 07 27 43.5 -0.7**
MNK *i* PS **PnS 07 28 41.5 -3.3**
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,14nm,0.9s
MNK pmax pmax
comp=N,11nm,0.9s
BLKB Belogradchik 85.66 315⇑P **P 07 17 22.7 +0.4**
VALR Valaam 85.89 333*c i*P **P 07 17 23.4 +0.6**
VALR pmax pmax
comp=Z,9.0nm,0.8s
MARR Marisel-Cluj 86.03 318⇓P **P 07 17 25.0 +0.9**
HERR Herculane 86.11 316⇓P **P 07 17 24.9 +0.5**
IIGN Ignalina 86.33 327 *e*P **P 07 17 24.0 -1.2**
BILL Bilibino 86.70 20 *e*P **P 07 17 26.7 -0.1**
BILL pmax pmax
comp=Z,16nm,2.5s
BZS Buzias 86.82 316⇑P **P 07 17 28.6 +0.7**
BZS Buzias 86.82 316 P **P 07 17 28.5 +0.7**
SIRR Siria 86.93 317⇓P **P 07 17 29.3 +0.9**
VSU Vasula 86.94 330*ce*P **P 07 17 29.0 +0.9**
VSU pmax pmax
comp=Z,8.0nm,0.8s
VSU Vasula 86.94 330 *e*P **P 07 17 28.0 -0.1**
KOLS Kolonicke sedl 87.09 320 *e*P **P 07 17 30.8 +1.7**
KOLS pmax pmax
comp=Z,13nm,0.9s
KOLS Kolonicke sedl 87.09 320 *e*P **P 07 17 30.8 +1.7**
PABE Paberze 87.61 326 *e*P **P 07 17 31.4 0.0**
SUW Suwalki 87.69 325 *e*P **P 07 17 31.9 0.0**
FIA1 FINESS Array S 88.11 332 P **P 07 17 34.1 +0.4**
FINES FINESS Array B 88.11 332 P **P 07 17 34.0 +0.3**
FINES FINESS Array B 88.11 332 P **P 07 17 34.3 +0.6**
comp=Z,4.0nm,0.6s,baz=110,slow=6.0,SNR=30
comp=Z,4.0nm,0.6s
MORH Mrgy, Hungar 88.97 317⇓P **P 07 17 38.5 +0.3**
VYHS Vyhne 89.24 319 *e*P **P 07 17 40.3 +0.9**
VYHS Vyhne 89.24 319 *e*P **P 07 17 40.3 +0.9**
MAUC Maruska 90.04 320 *e*P **P 07 17 44.0 +0.9**
MODS Modra-Piesok 90.24 319 *e*P **P 07 17 45.3 +1.2**
MODS pmax pmax
comp=Z,10.0nm,1.0s
MODS Modra-Piesok 90.24 319 *e*P **P 07 17 45.3 +1.2**
MORC Moravsky Berou 90.29 320⇓P **P 07 17 45.2 +0.9**
MORC Moravsky Berou 90.29 320 P **P 07 17 45.1 +0.9**
ARCES ARCESS Array B 90.59 340 P **P 07 17 46.2 +1.0**
comp=Z,11nm,0.9s,baz=101,slow=6.3,SNR=17
comp=Z,11nm,0.9s
KRLC Kraliky 90.82 320 *e*P **P 07 17 48.0 +1.2**
KRLC Kraliky 90.82 320 *e*P **P 07 17 48.0 +1.2**
DPC Dobruska-Polom 91.15 320 *e*P **P 07 17 49.3 +1.0**
DPC Dobruska-Polom 91.15 320 *e*P **P 07 17 49.3 +1.0**
GERES GERESS Array B 92.66 319 P **P 07 17 56.0 +0.7**
comp=Z,0.8nm,0.6s,baz=36,slow=7.2,SNR=3.7
comp=Z,0.8nm,0.6s
KHC Kasperske Hory 92.77 319 *e*P **P 07 17 59.7 +3.9**
KHC Kasperske Hory 92.77 319 *e*P **P 07 17 59.7 +3.9**
KEST Kesra 94.72 305 P **P 07 18 07.2 +2.0**
comp=Z,4.0nm,0.9s,baz=49,slow=1.1,SNR=4.4
comp=Z,4.0nm,0.9s
SPITS Spitsbergen Ar 94.79 348 LR LR 08 06 23.6
comp=Z,28nm,19.3s,baz=72,slow=39
NVAR Mina Array Bea 132.16 42 PKP **PKPdf 07 23 56.1 -1.8**
comp=Z,0.4nm,0.7s,baz=245,slow=3.6,SNR=3.1
BDFB Brasilia 142.33 235 PKP **PKPdf 07 24 18.1 +0.9**
comp=Z,0.9nm,0.7s,baz=124,slow=3.6,SNR=3.1
TXAR Lajitas Array 147.31 42 PKPbc **PKPbc 07 24 28.5 +0.7**
comp=Z,4.2nm,0.5s,baz=257,slow=1.5,SNR=67

*NNC **18** 07:11:44.3±0.7,50.09N×79.02E,h0km,mb3.4,mpv3.0, Error ellipse: s-maj=11.5km s-min=3.3km az=66.0, Suspected Mining explosion.*
*IDC **18** 07:11:45.0±1.0,50.03N×78.73E,h0km,mbtmp2.9/3, ML2.4/3,Error ellipse: s-maj=9.4km s-min=7.1km az=43.0*
ISC 18 07:11:39.6±0.9,50.13N±0.05×79.29E±0.05,h0km,n26, σ1§22/41,20C-12D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR14	**Kurchatov Arra**	**0.66**	**317**	⇓P		**Pn**		**07 11 55.9**	**-0.2**
KUR14				⇑S		**Sb**		**07 12 05.3**	**+1.6**
KUR07	**Kurchatov Arra**	**0.67**	**313**	⇑P		**Pn**		**07 11 55.8**	**-0.6**
KUR07				⇓S		**Sb**		**07 12 05.1**	**+1.0**
KUR15	**Kurchatov Arra**	**0.68**	**316**	⇑P		**Pn**		**07 11 56.1**	**-0.3**
KUR15				⇑S		**Sb**		**07 12 05.6**	**+1.4**
KUR06	**Kurchatov Arra**	**0.68**	**314**	⇑P		**Pn**		**07 11 55.9**	**-0.6**
KUR06				⇑S		**Sb**		**07 12 05.1**	**+0.7**
KURBB	**Kurchatov Arra** 27nm,0.3s	**0.69**	**316**	⇓P		**Pn**		**07 11 56.2**	**-0.4**
KURBB				⇓S		**Sb**		**07 12 05.3**	**+0.7**
	27nm,0.5s								
KURBB	**Kurchatov Arra** 4.2nm,0.3s,baz=166,slow=17,SNR=122	**0.69**	**316**	Pg		**Pn**		**07 11 56.3**	**-0.4**
KURBB				Lg		Lg		07 12 05.8	
	4.0nm,0.3s,baz=170,slow=32,SNR=7.9								
KUR05	**Kurchatov Arra**	**0.70**	**317**	⇑P		**Pn**		**07 11 56.5**	**-0.3**
KUR05				⇓S		**Sb**		**07 12 05.7**	**+0.7**
KUR16	**Kurchatov Arra**	**0.71**	**315**	⇓P		**Pn**		**07 11 56.5**	**-0.4**
KUR16				⇑S		**Sb**		**07 12 06.2**	**+1.1**
KUR04	**Kurchatov Arra**	**0.72**	**318**	⇑P		**Pn**		**07 11 56.8**	**-0.1**
KUR04				⇑S		**Sb**		**07 12 06.3**	**+1.0**
KURK	**Kurchatov** 13nm,0.4s	**0.73**	**324**	⇑P		**Pn**		**07 11 57.6**	**+0.5**
KURK				⇑S		**Sb**		**07 12 06.8**	**+1.2**
	15nm,0.4s								
KUR17	**Kurchatov Arra**	**0.73**	**314**	⇑P		**Pn**		**07 11 56.5**	**-0.6**
KUR17				⇑S		**Sb**		**07 12 06.3**	**+0.6**
MAKZ	**Makanchi** 0.2nm,0.2s	**3.77**	**151**	⇓Pn		**Pb**		**07 12 46.7**	**-0.3**
MAKZ				⇓Pg		**Pg**		**07 12 54.1**	**+2.2**
	1.1nm,0.5s								
MAKZ				⇑Lg		Lg		07 13 44.3	
MK31	**Makanchi Array** 0.2nm,0.2s,baz=339,slow=14,SNR=67	**3.89**	**148**	⇑Pn		**Pb**		**07 12 48.4**	**-0.6**
MK31				Pg		**Pg**		**07 12 55.5**	**+1.5**
	1.1nm,0.3s,baz=324,slow=13,SNR=31								
MK31				⇑Lg		Lg		07 13 51.3	
	5.3nm,0.4s,baz=337,slow=27,SNR=22								
MKAR	**Makanchi Array** 0.5nm,0.3s,baz=320,slow=10,SNR=65	**3.89**	**148**	Pn		**Pb**		**07 12 48.5**	**-0.5**
MKAR				Lg		Lg		07 13 48.7	
	3.2nm,0.3s,baz=331,slow=27,SNR=13								
	0.4nm,0.3s								
BRZS	**Berezniki** 3.5nm,0.2s	**4.26**	**271**	Pg		**Pb**		**07 12 56.2**	**+0.8**
BRZS				Lg		Lg		07 13 46.0	
	5.5nm,0.4s								
KAPS	**Kapalarasan** 1.6nm,0.2s	**4.85**	**179**	Pg		**Pg**		**07 13 13.6**	**+1.2**
KAPS				Lg		Lg		07 14 14.9	
	4.1nm,0.3s								
OTUK	**Ortayu** 0.9nm,0.4s	**4.94**	**250**	Pg		**Pb**		**07 13 08.2**	**+1.4**
OTUK				Lg		Lg		07 14 06.9	
	2.0nm,0.5s								
OTUK	**Ortayu** 0.5nm,0.3s	**4.94**	**250**	⇓Pn		**Pn**		**07 12 55.3**	**+0.3**
OTUK				⇓Pg		**Pb**		**07 13 07.4**	**+0.5**
	2.5nm,1.3s								
OTUK				⇓Lg		Lg		07 14 12.7	
	2.7nm,0.5s								
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=232,slow=14,SNR=14	**5.12**	**40**	Pn		**Pb**		**07 13 08.4**	**-1.6**
	1.9nm,0.3s								
I46RU	**ZALESOVO INFRA** baz=228,slow=336,SNR=3.6	**5.12**	**40**	I		I		07 44 08.6	
BVA0	**Borovoye Array** 2.0nm,1.1s,baz=103,slow=15,SNR=5.0	**6.26**	**301**	Pn		**Pn**		**07 13 15.4**	**+2.3**
BVA0				⇑Sn		**Sn**		**07 14 26.0**	**+0.6**
	0.8nm,0.5s								
BVA0				⇓Lg		Lg		07 14 59.8	
	3.1nm,1.1s								
BVAR	**Borovoye Array** baz=110,slow=13,SNR=2.8	**6.26**	**301**	Pn		**Pn**		**07 13 14.9**	**+1.8**
BVAR				Pg		**Pb**		**07 13 27.6**	**-1.8**
	0.1nm,0.3s,baz=116,slow=15,SNR=5.5								
BVAR				Sn		**Sn**		**07 14 22.6**	**-2.7**
	0.1nm,0.3s,baz=114,slow=23,SNR=3.7								
BVAR				Lg		Lg		07 14 56.9	
	0.1nm,0.3s,baz=112,slow=29,SNR=3.3								
	0.2nm,0.3s								
BRVK	**Borovoye** 0.9nm,0.6s	**6.33**	**301**	⇑Sn		**Sn**		**07 14 27.7**	**+0.6**
BRVK				⇑Lg		Lg		07 15 00.6	
	2.1nm,0.7s								
KTBS	**Karatobe** 1.0nm,0.7s	**6.67**	**197**	Pg		**Pg**		**07 13 46.0**	**-1.3**
KTBS				Lg		Lg		07 15 10.9	
	9.0nm,0.4s								
KPKS	**Kokpek** 1.4nm,0.4s	**6.68**	**184**	Pg		**Pg**		**07 13 46.2**	**-1.3**
KPKS				Lg		Lg		07 15 11.0	
	3.7nm,0.5s								
KST	**Kastek** 0.8nm,0.5s	**7.45**	**199**	Pg		**Pg**		**07 13 59.8**	**-2.4**
KST				Lg		Lg		07 15 34.9	
	4.6nm,0.7s								

*IDC **18** 07:14:32.0±0.9,7.35S×156.13E,h0km,mb4.1/11, mbtmp4.1/11,MS3.5/4,Error ellipse: s-maj=36.9km s-min=19.6km az=104.0*
ISC 18 07:14:38.5±1.0,7.4S±0.2×156.1E±0.3,h44km,n18, σ0§75/12,mb4.2/11,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.29**	**118**	LR		LR	LR	07 16 55.0	
	comp=Z,1μm,18.2s,baz=302,slow=33								
PMG	**Port Moresby**	**9.08**	**257**	LR		LR	LR	07 19 51.1	
	comp=Z,218nm,19.5s,baz=64,slow=35								
CTA	**Charters Tower**	**15.83**	**216**	LR		LR	LR	07 23 36.0	
	comp=Z,81nm,20.8s,baz=80,slow=34								
WRA	**Warramunga Arr** 2.4nm,0.8s,baz=62,slow=9.9,SNR=9.2	**24.52**	**237**	P		**P**		**07 19 54.4**	**+0.3**
	2.4nm,0.8s								
ASAR	**Alice Springs** 0.6nm,0.9s,baz=58,slow=11,SNR=4.1	**26.75**	**230**	P		**P**		**07 20 14.0**	**-0.4**
	0.6nm,0.9s								
H11S3	**WAKE ISLAND Hy** baz=202,slow=75,SNR=56	**27.77**	**22**	T		T		07 48 43.8	
H11S2	**WAKE ISLAND Hy** baz=202,slow=75,SNR=52	**27.77**	**22**	T		T		07 48 41.5	
H11S1	**WAKE ISLAND Hy** baz=202,slow=75,SNR=22	**27.78**	**22**	T		T		07 48 47.2	
STKA	**Stephens Creek** 1.3nm,0.8s,baz=11,slow=16,SNR=1.5	**27.86**	**207**	P		**P**		**07 20 24.1**	**0.0**
	1.3nm,0.8s								
PETK	**Petropavlovsk-** 2.7nm,1.0s,baz=139,slow=5.3,SNR=4.8	**60.29**	**1**	P		**P**		**07 24 43.4**	**+1.0**
	2.7nm,1.0s								
SONM	**Songino Array** 1.6nm,0.5s,baz=144,slow=6.8,SNR=10	**70.28**	**327**	P		**P**		**07 25 48.1**	**+0.7**
	1.6nm,0.5s								
QSPA	**South Pole Qui** 1.9nm,0.9s,baz=157,slow=1.4,SNR=9.9	**82.58**	**180**	P		**P**		**07 26 57.2**	**+0.4**
	1.9nm,0.9s								
ILAR	**Eielson Array** 0.3nm,0.6s,baz=247,slow=5.2,SNR=9.2	**83.34**	**21**	P		**P**		**07 26 59.8**	**-0.8**
ILAR				LR		LR		07 59 50.0	
	comp=Z,22nm,21.2s,baz=238,slow=33								
	0.3nm,0.6s								
MKAR	**Makanchi Array** 4.8nm,0.8s,baz=102,slow=6.2,SNR=54	**84.44**	**318**	P		**P**		**07 27 06.8**	**+0.1**
	4.8nm,0.8s								
ZALV	**Zalesovo Beam** 2.6nm,0.4s,baz=104,slow=5.8,SNR=15	**85.14**	**326**	P		**P**		**07 27 09.0**	**-0.9**
	2.6nm,0.4s								
KURBB	**Kurchatov Arra** 0.8nm,0.5s,baz=101,slow=3.9,SNR=12	**87.87**	**322**	P		**P**		**07 27 22.4**	**-0.9**
	0.8nm,0.5s								
BVAR	**Borovoye Array** 0.8nm,0.5s,baz=111,slow=6.3,SNR=7.5	**93.29**	**323**	P		**P**		**07 27 47.5**	**-1.0**
	0.8nm,0.5s								
BDFB	**Brasilia** 1.8nm,0.6s,baz=45,slow=0.7,SNR=5.4	**146.90**	**134**	PKPbc		**PKPbc**		**07 34 17.3**	**0.0**

*IDC **18** 07:26:54.3±0.7,5.94S×147.18E,h89km±6km,mb3.9/15, mbtmp4.3/18,MS3.2/15,Error ellipse: s-maj=20.4km s-min=8.0km az=101.0*
*DJA **18** 07:26:55.3±0.5,6.5S×14.7E±.,h78km±6km,M4.7/12, mB4.7/1,mb4.5/12,MLv4.7/2,Mw(mB)3.9/1*
*NEIC **18** 07:26:55.8±1.5,6.01S±0.07×147.36E±0.05,h93km±8km, mb4.5/28,Error ellipse: s-maj=9.8km s-min=7.0km az=182.0*
ISC 18 07:26:53.9±0.4,6.01S±0.05×147.35E±0.08,h77km,n94, σ1§37/90,mb4.5/28,1C-1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.38**	**183**	P		**Pn**		**07 27 44.9**	**+0.5**
PMG	**Port Moresby** 73nm,0.4s,baz=25,slow=5.6,SNR=39	**3.38**	**183**	P		**Pn**		**07 27 45.1**	**+0.8**
PMG				S		**Sn**		**07 28 25.0**	**+1.7**
	194nm,0.6s,baz=30,slow=20,SNR=2.7								
PMG				LR		LR		07 28 58.2	
	comp=Z,298nm,20.6s,baz=333,slow=36								
MANU	**Manus Island**	**3.94**	**0**			**Pn**		**07 27 53.3**	**+1.2**
KAVG	**Kavieng**	**4.85**	**45**	P		**Pn**		**07 28 07.7**	**+3.3**
RABL	**Rabaul**	**5.12**	**70**			**Pn**		**07 28 09.6**	**+1.4**
COEN	**Coen**	**8.90**	**207**	Pn		**Pn**		**07 29 00.6**	**+0.8**
SMPI	**Sarmi** 33nm,0.6s	**9.50**	**295**	P		**Pn**		**07 29 10.0**	**+2.0**
MTSU	**Mount Surprise**	**12.41**	**194**	P		**Pn**		**07 29 49.0**	**+1.4**
CTA	**Charters Tower** 5.1nm,0.8s,baz=358,slow=15,SNR=7.0	**14.03**	**184**	P		**Pn**		**07 30 10.7**	**+1.5**
CTA				LR		LR		07 35 31.8	
	comp=Z,59nm,18.0s,baz=322,slow=37								
CTAO	**Charters Tower**	**14.03**	**184**	Pn		**Pn**		**07 30 09.4**	**+0.2**
CTAO	**Charters Tower**	**14.03**	**184**	P		**Pn**		**07 30 11.3**	**+2.1**
QIS	**Mount Isa**	**16.30**	**207**	P		**P**		**07 30 39.2**	**-0.6**
WB0	**Warramunga Arr**	**18.59**	**221**	P		**P**		**07 31 05.2**	**+0.1**
WR0	**Warramunga Arr**	**18.63**	**221**	P		**Pn**		**07 31 06.5**	**-0.2**
WR0				IAmb		IAmb		07 31 09.5	
	comp=Z,31nm,0.8s								
WRAB	**Tennant Creek**	**18.74**	**221**	P		**P**		**07 31 07.2**	**+0.4**
WB2	**Warramunga Arr**	**18.75**	**221**	P		**P**		**07 31 07.4**	**+0.6**
WRA	**Warramunga Arr**	**18.75**	**221**	P		**P**		**07 31 06.6**	**-0.3**
WRA	**Warramunga Arr** comp=Z,36nm,0.7s,baz=42,slow=12,SNR=72	**18.75**	**221**	P		**P**		**07 31 07.1**	**+0.2**
WRA				S		**S**		**07 34 33.7**	**-2.5**
	comp=Z,0.9nm,0.7s,baz=48,slow=25,SNR=2.3								
WRA				PcP		**PcP**		**07 35 31.4**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=20,slow=1.5,SNR=6.6								
EIDS	**Eidsvold**	**19.58**	**170**	P		**P**		**07 31 16.6**	**+0.8**
EIDS				IAmb		IAmb		07 31 20.5	
	comp=Z,19nm,0.9s								
EIDS	**Eidsvold**	**19.58**	**170**	P		**Pn**		**07 31 17.6**	**-0.2**
GUMO	**Guam** comp=Z,56nm,20.0s,baz=94,slow=33	**19.63**	**353**	LR		LR		07 37 32.2	
QLP	**Quilpie**	**20.67**	**188**	P		Pn		07 31 29.6	-1.0
AS01	**Alice Springs**	**21.78**	**215**	P		**P**		**07 31 40.4**	**+0.8**
AS31	**Alice Springs**	**21.80**	**215**	P		**P**		**07 31 40.1**	**+0.2**
AS31				IAmb		IAmb		07 31 42.4	
	comp=Z,12nm,0.3s								
ASAR	**Alice Springs**	**21.81**	**215**	P		**P**		**07 31 40.1**	**+0.2**
ASAR	**Alice Springs** comp=Z,12nm,0.6s,baz=51,slow=9.1,SNR=279	**21.81**	**215**	P		**P**		**07 31 40.5**	**+0.6**
ASAR				S		**S**		**07 35 35.7**	**-1.2**
	comp=Z,3.6nm,0.9s,baz=36,slow=16,SNR=10								
ASAR				LR		LR		07 41 12.0	
	comp=Z,125nm,20.7s,baz=76,slow=39								
	comp=Z,12nm,0.6s								
KOUNC	**Koumac, New Ca**	**21.88**	**133**	P		**P**		**07 31 40.5**	**-0.2**
KOUNC				IAmb		IAmb		07 31 43.9	
	comp=Z,32nm,1.2s								
INKA	**Innaminka**	**22.50**	**195**	P		**P**		**07 31 47.8**	**+0.6**
OOD	**Oodnadatta**	**24.33**	**206**	P		**P**		**07 32 05.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**24.36**	**239**	P		**P**		**07 32 06.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**24.36**	**239**	P		**P**		**07 32 06.3**	**+1.4**
DZM	**Mont Dzumac** comp=Z,88nm,20.7s,baz=346,slow=34	**24.40**	**133**	LR		LR		07 40 41.6	
ARMA	**Armidale**	**24.61**	**171**	P		**P**		**07 32 08.1**	**+0.9**
ARMA				IAmb		IAmb		07 32 10.0	
	comp=Z,14nm,0.8s								
ARMA	**Armidale**	**24.61**	**171**	P		**P**		**07 32 08.3**	**+1.1**
CMSA	**Cobar Meteorol**	**25.44**	**183**	P		**P**		**07 32 16.6**	**+2.0**
EDFI	**Ende, Flores** comp=Z,16nm,0.6s	**25.59**	**262**	P		**P**		**07 32 15.7**	**-0.6**
LCRK	**Leigh Creek**	**25.78**	**198**	P		**P**		**07 32 18.3**	**+0.6**
STKA	**Stephens Creek**	**26.29**	**191**	P		**P**		**07 32 22.5**	**+0.2**
STKA	**Stephens Creek**	**26.29**	**191**	P		**P**		**07 32 22.7**	**+0.4**
STKA	**Stephens Creek** comp=Z,5.2nm,0.8s,baz=3.8,slow=8.3,SNR=13	**26.29**	**191**	P		**P**		**07 32 22.6**	**+0.2**
STKA				LR		LR		07 42 38.3	
	comp=Z,89nm,20.4s,baz=23,slow=36								
	comp=Z,5.2nm,0.8s								
WRKA	**Warakurna**	**26.29**	**222**	P		**P**		**07 32 22.8**	**+0.3**
MULG	**Mulgathing**	**27.19**	**206**	P		**P**		**07 32 30.7**	**+0.3**
HTT	**Hallett**	**28.38**	**195**	P		**P**		**07 32 41.9**	**+0.8**
BBOO	**Buckleboo**	**28.66**	**200**	P		**P**		**07 32 43.6**	**+0.1**

comp=Z,26nm,19.8s,baz=109,slow=33
YULB Yu-li 38.75 320 P **P** **07 34 10.6 -0.5**
NWAO Narrogin (SRO) 38.76 222 LR LR 07 51 55.4
comp=Z,76nm,20.2s,baz=275,slow=39
JNU Nakatsue 41.95 339 LR LR 07 50 14.8
comp=Z,26nm,21.4s,baz=164,slow=34
MJAR Matsushiro Arr 43.19 349 P **P** **07 34 45.9 -1.4**
comp=Z,0.8nm,0.5s,baz=188,slow=11,SNR=4.2
MJAR pP **pP** **07 35 06.4 +0.7**
comp=Z,1.8nm,0.9s,baz=158,slow=7.9,SNR=4.1
MJAR LR LR 07 50 43.4
comp=Z,28nm,19.3s,baz=150,slow=33
comp=Z,0.8nm,0.5s
NJ2 Nanjing 46.59 326 *eP* **P** **07 35 16.0 +1.7**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
KSRS Korea Array 46.89 339 P **P** **07 35 15.2 -1.4**
comp=Z,1.6nm,0.8s,baz=152,slow=10,SNR=8.0
KSRS LR LR 07 53 38.4
comp=Z,15nm,20.0s,baz=185,slow=34
comp=Z,1.6nm,0.8s
ASAJ Asahikawa 50.08 356 LR LR 07 57 22.0
comp=Z,16nm,18.9s,baz=136,slow=37
XAN Xi'an 53.91 320 ⇑P **P** **07 36 09.4 -0.4**
XAN pP pP 07 36 32.4 +3.6
PZH PanZhiHua 54.74 308 P **P** **07 36 19.3 +3.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.8s
HHC Hu-ho-hao-te 57.03 328 *eP* **P** **07 36 35.8 +3.8**
PETK Petropavlovsk- 59.55 7 P **P** **07 36 49.4 +0.2**
PETK Petropavlovsk- 59.55 7 P **P** **07 36 49.1 -0.1**
comp=Z,5.7nm,0.9s,baz=191,slow=7.0,SNR=4.5
PETK LR LR 08 00 53.9
comp=Z,16nm,19.4s,baz=54,slow=34
comp=Z,5.7nm,0.9s
SONM Songino Array 64.59 331 P **P** **07 37 21.7 -1.5**
comp=Z,0.5nm,0.5s,baz=138,slow=6.7,SNR=5.3
comp=Z,0.5nm,0.5s
MA2 Magadan 65.44 2 P **P** **07 37 28.2 -0.2**
MA2 IAmb IAmb 07 37 28.4
comp=Z,6.6nm,0.9s
MA2 Magadan 65.44 2 LR LR 08 08 36.4
comp=Z,11nm,18.1s,baz=143,slow=38
VNDA Vanda 71.88 17 pP pP 07 38 31.1 +1.7
comp=Z,4.2nm,0.9s,baz=340,slow=6.9,SNR=2.2
WMQ Urumqi 73.03 319 *eP* **P** **07 38 17.0 +1.3**
MK31 Makanchi Array 77.73 320 P **P** **07 38 41.5 -1.1**
MKAR Makanchi Array 77.73 320 P **P** **07 38 40.9 -1.7**
MKAR Makanchi Array 77.73 320 P **P** **07 38 40.5 -2.1**
comp=Z,0.7nm,0.7s,baz=95,slow=8.3,SNR=10
comp=Z,0.7nm,0.7s
MAKZ Makanchi 77.94 320 P **P** **07 38 41.6 -2.1**
ZALV Zalesovo Beam 79.21 328 P **P** **07 38 47.8 -2.7**
comp=Z,1.2nm,0.3s,baz=114,slow=6.6,SNR=5.1
comp=Z,1.2nm,0.3s
CNPM China Poot 81.20 27 P **P** **07 39 00.9 -0.1**
KURBB Kurchatov Arra 81.45 323 P **P** **07 38 59.7 -2.9**
comp=Z,0.3nm,0.5s,baz=111,slow=4.3,SNR=5.0
comp=Z,0.3nm,0.5s
SML Sawmill 83.50 26 P **P** **07 39 12.4 -0.7**
SML IAmb IAmb 07 39 13.1
comp=Z,6.6nm,1.0s
QSPA South Pole Qui 83.95 180 P **P** **07 39 15.3 -0.2**
QSPA IAmb IAmb 07 39 38.3
comp=Z,6.5nm,0.9s
QSPA South Pole Qui 83.95 180 P **P** **07 39 14.8 -0.7**
comp=Z,4.1nm,0.6s,baz=17,slow=1.0,SNR=43
QSPA pP **pP** **07 39 37.9 +0.9**
comp=Z,5.2nm,0.8s,baz=328,slow=3.1,SNR=6.9
comp=Z,4.1nm,0.6s
MLY Manley 84.00 22 P **P** **07 39 15.8 +0.2**
B21K Ikpikpuk River 85.01 17 P **P** **07 39 18.8 -1.7**
G23K Bananza Creek 85.05 21 P **P** **07 39 20.3 -0.5**
G23K IAmb IAmb 07 39 21.8
comp=Z,3.7nm,0.8s
IL31 85.36 23 IAmb IAmb 07 39 21.0
comp=Z,4.8nm,0.9s
ILAR Eielson Array 85.36 23 P **P** **07 39 19.9 -2.4**
comp=Z,3.5nm,0.8s,baz=254,slow=4.9,SNR=28
comp=Z,3.5nm,0.8s
NRIK Noril'sk 85.39 342 P **P** **07 39 19.6 -2.8**
comp=Z,2.2nm,0.4s,baz=109,slow=4.4,SNR=6.6
comp=Z,2.2nm,0.4s
BVAR Borovoye Array 86.99 324 P **P** **07 39 27.9 -2.8**
comp=Z,0.5nm,0.6s,baz=130,slow=6.0,SNR=3.5
BVAR pP **pP** **07 39 53.5 +2.4**
comp=Z,1.5nm,0.9s,baz=90,slow=5.8,SNR=4.4
comp=Z,0.5nm,0.6s
ELIB Princess Elisa 94.28 195 *dP* **P** **07 40 03.7 -0.8**
NVAR Mina Array Bea 97.10 52 P Pdif 07 40 18.5 +0.3
comp=Z,0.3nm,0.5s,baz=251,slow=5.6,SNR=2.5
comp=Z,0.3nm,0.5s
YKA Yellowknife Ar 99.02 28 P **Pdif** **07 40 25.4 -0.5**
comp=Z,0.4nm,0.8s,baz=276,slow=5.2,SNR=7.9
comp=Z,0.4nm,0.8s
KIRV Kirov 99.24 328 LR LR 08 27 01.7
comp=Z,17nm,18.6s,baz=90,slow=36
PLCA Paso Flores 121.92 147 PKP **PKPdf** **07 45 39.3 -0.6**
comp=Z,0.9nm,0.5s,baz=277,slow=3.2,SNR=4.2
CPUP Villa Florida 139.99 144 PKPKP PKPpre 07 46 04.1
comp=Z,2.1nm,1.1s,baz=162,slow=3.2,SNR=3.2
CPUP PKP **PKPdf** **07 46 13.8 -0.3**
comp=Z,1.2nm,0.7s,baz=222,slow=2.6,SNR=4.2
TORD Torodi Ar. Bea 145.43 284 PKPbc **PKPdf** **07 46 22.4 -1.7**
comp=Z,1.2nm,0.3s,baz=65,slow=5.3,SNR=1.6
BDFB Brasilia 153.65 145 PKP **PKPdf** **07 46 36.4 -0.9**
comp=Z,1.6nm,0.8s,baz=274,slow=7.4,SNR=4.0
BDFB PKPbc **PKPbc** **07 46 44.1 -1.0**
comp=Z,3.6nm,0.5s,baz=281,slow=1.6,SNR=13

*UCR **18** 07:33:01.0±0.9,9°.99N×86°.18W,h15km±7km,MW4.6*
*CATAC **18** 07:33:03.2±0.6,10°.08N×86°.09W,h21km±3km,ML3.9*
*IDC **18** 07:33:05.0±1.1,11°.01N×85°.56W,h0km,mb3.6/5, mbtmp3.7/6,ML3.6/1,MS3.1/3,Error ellipse: s-maj=57.6km s-min=13.7km az=51.0*

ISC 18 07:33:02.4±1.6,10°.04N±0°.04×86°.10W±0°.05,h17km±10km, n104,σ1$07/111,mb3.6/5,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DUNO	**Dulce Nombre,**	**0.60**	**87**	*eP*		**Pg**	**07 33 14.9**	**+0.6**
DUNO	**Dulce Nombre,**	**0.60**	**87**	*i* P		**Pb**	**07 33 15.1**	**+0.7**
DUNO				IAML			07 33 27.5	
	comp=Z,13μm,1.0s							
NICO	**Nicoya**	**0.65**	**82**	*eP*		**Pg**	**07 33 15.1**	**-0.1**
NICO				*eS*		**Sb**	**07 33 25.2**	**+1.1**
CMARA	**Lajas Hojancha**	**0.67**	**92**	*eP*		**Pg**	**07 33 15.1**	**-0.5**
CMARA				*eS*		**Sb**	**07 33 25.3**	**+0.7**
DELF	**Filadelfia**	**0.67**	**53**	*eP*		**Pb**	**07 33 16.0**	**+0.3**
DELF				*eS*		**Sn**	**07 33 27.1**	**-0.2**
ORTG	**Ortega, Santa**	**0.71**	**63**	*eP*		**Pg**	**07 33 16.0**	**-0.3**
ORTG				*eS*		**Sn**	**07 33 27.5**	**-0.7**
ORTG	**Ortega, Santa**	**0.71**	**63**	*i* P		**Pg**	**07 33 15.8**	**-0.5**
ORTG				*i* S		**Sn**	**07 33 27.8**	**-0.4**
ORTG				IAML			07 33 34.9	
	comp=Z,4μm,1.0s							
ALIBA	**Liberia Airpor**	**0.77**	**45**	*eP*		**Pb**	**07 33 17.8**	**+0.4**
PLVR	**Palo Verde**	**0.80**	**68**	*eP*		**Pg**	**07 33 17.7**	**-0.3**
ELI1	**Hacienda Flor**	**0.81**	**42**	*eP*		**Pb**	**07 33 18.6**	**+0.6**
HZTE	**Horizontes, Gu**	**0.83**	**37**	*eP*		**Pg**	**07 33 18.5**	**-0.1**
HZTE	**Horizontes, Gu**	**0.83**	**37**	*i* P		**Pg**	**07 33 18.3**	**-0.4**
HZTE				IAML			07 33 51.0	
	comp=Z,5μm,1.0s							
NYURE	**Nandayure**	**0.84**	**93**	*eP*		**Pb**	**07 33 17.5**	**-0.9**
ERIA	**Liberia**	**0.88**	**48**	*eP*		**Pb**	**07 33 19.5**	**+0.3**
BAGA	**Bagaces**	**0.96**	**60**	*eP*		**Pg**	**07 33 21.3**	**+0.3**
GPS3	**Bodega del ICE**	**1.01**	**46**	*eP*		**Pn**	**07 33 24.1**	**+2.3**
VRLE	**La Escondida,**	**1.03**	**44**	*eP*		**Pb**	**07 33 21.3**	**-0.7**
COLC	**Colonia**	**1.08**	**55**	*eP*		**Pb**	**07 33 21.9**	**-0.7**
CBL1	**Cabuya**	**1.09**	**114**	*eP*		**Pb**	**07 33 20.7**	**-2.2**
CUI	**Cuipilapa**	**1.10**	**56**	*eP*		**Pb**	**07 33 22.5**	**-0.6**
LCRUZ	**La Cruz**	**1.13**	**24**	*eP*		**Pb**	**07 33 23.9**	**+0.4**
JUNT	**Juntas**	**1.15**	**78**	*eP*		**Pb**	**07 33 22.5**	**-1.3**
JTS	**Las Juntas de**	**1.16**	**78**	Pg		**Pb**	**07 33 22.8**	**-1.2**
	comp=Z,12nm,0.3s,baz=68,slow=20,SNR=56							
JTS				LR		LR	07 33 28.4	
	comp=Z,26nm,18.9s,baz=206,slow=25							
JTS	**Las Juntas de**	**1.16**	**78**	*eP*		**Pb**	**07 33 22.6**	**-1.3**
ACAL	**Aguas Claras**	**1.20**	**61**	*eP*		**Pn**	**07 33 23.9**	**-0.6**
VMAR	**Armenia, Volca**	**1.24**	**52**	*eP*		**Pn**	**07 33 24.6**	**-0.3**
VMAR	**Armenia, Volca**	**1.24**	**52**	*i* P		**Pn**	**07 33 24.5**	**-0.5**
VMAR				IAML			07 34 09.0	
	comp=Z,3μm,1.0s							
ARZA	**Esparza**	**1.41**	**92**	*eP*		**Pn**	**07 33 27.1**	**-0.3**
ARE1	**Arenal 1**	**1.42**	**73**	*eP*		**Pn**	**07 33 27.4**	**-0.1**
CEDE	**Laguna Cedeo**	**1.44**	**72**	*eP*		**Pn**	**07 33 28.1**	**+0.2**
VACR	**Volcan Arenal**	**1.46**	**73**	*eP*		**Pn**	**07 33 28.2**	**+0.1**
JACO	**JACO, Garabito**	**1.47**	**105**	*eP*		**Pn**	**07 33 27.1**	**-1.1**
JACO	**JACO, Garabito**	**1.47**	**105**	*i* P		**Pn**	**07 33 26.9**	**-1.2**
JACO				IAML			07 34 02.6	
	comp=Z,840nm,1.0s							
SOCE	**Pocosol**	**1.50**	**77**	*eP*		**Pn**	**07 33 28.7**	**+0.2**
SOCE	**Pocosol**	**1.50**	**77**	*i* P		**Pn**	**07 33 28.0**	**-0.5**
SOCE				IAML			07 33 39.7	
	comp=Z,240nm,1.0s							
JAPN	**AI SSO del Vol**	**1.53**	**16**	*i* P		**Pn**	**07 33 29.1**	**+0.1**
JAPN				IAML			07 33 53.1	
	comp=Z,590nm,1.0s							
CONN	**Concepcion**	**1.58**	**17**	*i* P		**Pn**	**07 33 28.9**	**-0.8**
CONN				IAML			07 33 41.3	
	comp=Z,6μm,1.0s							
SRA1	**San Ramn**	**1.60**	**88**	*eP*		**Pn**	**07 33 29.1**	**-0.9**
RAMO	**San Ramon**	**1.61**	**88**	*eP*		**Pn**	**07 33 31.1**	**+1.0**
TRB2	**Turrubares**	**1.63**	**94**	*eP*		**Pn**	**07 33 30.1**	**-0.3**
CPMI	**Catarata Coope**	**1.71**	**82**	*eP*		**Pn**	**07 33 32.1**	**+0.5**
CPMI	**Catarata Coope**	**1.71**	**82**	*i* P		**Pn**	**07 33 31.5**	**-0.1**
CPMI				*i* S		**Sn**	**07 33 54.6**	**+1.4**
CPMI				IAML			07 34 07.7	
	comp=Z,1μm,1.0s							
ITAL	**Pital**	**1.84**	**77**	*eP*		**Pn**	**07 33 34.5**	**+1.3**
BELE	**Belen**	**1.89**	**92**	*eP*		**Pn**	**07 33 34.7**	**+0.8**
SANTA	**Santa Ana**	**1.89**	**93**	*eP*		**Pn**	**07 33 35.2**	**+1.2**
ACOS	**Acosta**	**1.92**	**97**	*eP*		**Pn**	**07 33 35.0**	**+0.5**
HDC	**Heredia**	**1.96**	**91**	*eP*		**Pn**	**07 33 35.4**	**+0.4**
HDC3	**Heredia 3**	**1.96**	**91**	*eP*		**Pn**	**07 33 36.5**	**+1.5**
HDC3	**Heredia 3**	**1.96**	**91**	*i* P		**Pn**	**07 33 34.9**	**-0.1**
HDC3				IAML			07 34 24.0	
	comp=Z,1μm,1.0s							
LUJA	**Lujan**	**2.00**	**93**	*eP*		**Pn**	**07 33 37.6**	**+2.1**
LLNJ	**Naranjito**	**2.05**	**106**	*eP*		**Pb**	**07 33 40.5**	**+1.3**
CORON	**Coronado**	**2.07**	**92**	*eP*		**Pn**	**07 33 38.8**	**+2.2**
LCR2	**La Lucha 2**	**2.09**	**98**	*eP*		**Pn**	**07 33 36.6**	**-0.2**
LCR2	**La Lucha 2**	**2.09**	**98**	*i* P		**Pn**	**07 33 36.4**	**-0.4**
LCR2				IAML			07 34 22.9	
	comp=Z,560nm,1.0s							
TISN	**Laguna Tiscapa**	**2.09**	**355**	*i* P		**Pn**	**07 33 36.0**	**-0.7**
TISN				IAML			07 34 20.1	
	comp=Z,27nm,1.0s							
OCM	**Ochomogo**	**2.11**	**94**	*eP*		**Pn**	**07 33 37.4**	**+0.2**
OCM	**Ochomogo**	**2.11**	**94**	*i* P		**Pn**	**07 33 37.8**	**+0.6**
OCM				*i* S		**Sn**	**07 34 05.1**	**+2.0**
OCM				IAML			07 34 21.7	
	comp=Z,490nm,1.0s							
ACON	**Acoyapa**	**2.12**	**25**	*eP*		**Pn**	**07 33 36.3**	**-0.8**
ACON	**Acoyapa**	**2.12**	**25**	*i* P		**Pn**	**07 33 36.3**	**-0.8**
ACON				IAML			07 34 27.4	
	comp=Z,420nm,1.0s							
CVIMO	**Finca Echandi**	**2.12**	**90**	*eP*		**Pn**	**07 33 38.8**	**+1.5**
SAPS	**Ciudad Sandino**	**2.13**	**352**	*i* P		**Pn**	**07 33 36.6**	**-0.7**
SAPS				*i* S		**Sn**	**07 34 03.5**	**+0.1**
SAPS				IAML			07 34 06.4	
	comp=Z,400nm,1.0s							
APQ2	**Apoyeque**	**2.15**	**354**	*i* P		**Pn**	**07 33 36.9**	**-0.6**
APQ2				IAML			07 34 55.8	
	comp=Z,380nm,1.0s							
RIFO	**Rio Frio, Sara**	**2.16**	**83**	*eP*		**Pn**	**07 33 38.5**	**+0.9**
RIFO	**Rio Frio, Sara**	**2.16**	**83**	*i* P		**Pn**	**07 33 38.8**	**+1.2**
RIFO				IAML			07 34 26.5	
	comp=Z,1μm,1.0s							
COPN	**Copaltepe**	**2.18**	**347**	*i* P		**Pn**	**07 33 37.6**	**-0.3**
COPN				IAML			07 34 06.9	
	comp=Z,690nm,1.0s							
VICA	**Volcano Irazu**	**2.22**	**91**	*eP*		**Pn**	**07 33 39.4**	**+0.5**
HAYA	**Volcan Irazu**	**2.22**	**91**	*i* P		**Pn**	**07 33 39.5**	**+0.6**
HAYA				IAML			07 34 40.2	
	comp=Z,570nm,1.0s							
ICR3	**Volcano Irazu**	**2.23**	**91**	*eP*		**Pn**	**07 33 40.4**	**+1.4**
VTRT	**Volcan Turrial**	**2.27**	**91**	*i* P		**Pn**	**07 33 42.0**	**+2.5**
VTRT				IAML			07 34 34.6	
	comp=Z,540nm,1.0s							
VTCV	**VTCV, Calle Va**	**2.34**	**91**	*eP*		**Pn**	**07 33 41.9**	**+1.6**
VTCV	**VTCV, Calle Va**	**2.34**	**91**	*i* P		**Pn**	**07 33 41.5**	**+1.2**
VTCV				IAML			07 34 43.4	
	comp=Z,500nm,1.0s							
CDM	**Cerro de Muert**	**2.35**	**102**	*eP*		**Pn**	**07 33 40.7**	**0.0**
CDM	**Cerro de Muert**	**2.35**	**102**	*i* P		**Pn**	**07 33 40.5**	**-0.2**
CDM				*i* S		**Sn**	**07 34 07.7**	**-1.7**
CDM				IAML			07 34 34.7	
	comp=Z,430nm,1.0s							
VERB	**Verbena**	**2.37**	**92**	*eP*		**Pn**	**07 33 42.5**	**+1.8**
RVSTA	**Santa Teresita**	**2.42**	**91**	*eP*		**Pn**	**07 33 42.8**	**+1.6**
BOAB	**BOACO BROADBAN**	**2.43**	**10**	*i* P		**Pn**	**07 33 41.0**	**-0.3**
BOAB				IAML			07 34 33.5	
	comp=Z,180nm,1.0s							
MACN	**El Madrono**	**2.47**	**347**	*i* P		**Pn**	**07 33 41.4**	**-0.6**
MACN				IAML			07 34 25.0	
	comp=Z,120nm,1.0s							
PEZE	**Perez Zeledon,**	**2.48**	**105**	*eP*		**Pn**	**07 33 42.2**	**+0.2**
PEZE	**Perez Zeledon,**	**2.48**	**105**	*i* S		**Sn**	**07 34 11.8**	**-0.2**
CNGA	**AI SSO del Vol**	**2.51**	**346**	*i* P		**Pn**	**07 33 42.2**	**-0.2**
CNGA				IAML			07 34 29.7	
	comp=Z,170nm,1.0s							
IRES	**Siquirres**	**2.56**	**89**	*eP*		**Pn**	**07 33 45.3**	**+2.2**
OCHAL	**Ojochal**	**2.60**	**111**	*i* S		**Sn**	**07 34 14.3**	**-0.5**
PLAN	**Los Planes de**	**2.75**	**120**	*i* P		**Pn**	**07 33 45.6**	**-0.1**
PLAN				IAML			07 34 18.6	
	comp=Z,490nm,1.0s							
DRK0	**Durika**	**2.92**	**105**	*eP*		**Pn**	**07 33 48.5**	**+0.3**
BLUN	**Bluefields**	**3.00**	**49**	*i* P		**Pn**	**07 33 47.3**	**-1.9**
BLUN				IAML			07 34 01.3	
	comp=Z,240nm,1.0s							
LIMN	**Finca el Limon**	**3.01**	**355**	*i* P		**Pn**	**07 33 49.4**	**0.0**
LIMN				IAML			07 35 01.6	
	comp=Z,120nm,1.0s							
POTG	**Potrero Grande**	**3.10**	**108**	*eP*		**Pn**	**07 33 51.2**	**+0.6**
POTG	**Potrero Grande**	**3.10**	**108**	*i* P		**Pn**	**07 33 51.8**	**+1.2**
POTG				IAML			07 34 33.4	
	comp=Z,390nm,1.0s							
PIRO	**Carate, Puerto**	**3.18**	**121**	*eP*		**Pn**	**07 33 52.0**	**+0.4**
EDAD	**Golfito**	**3.21**	**115**	*eP*		**Pn**	**07 33 52.3**	**+0.2**
CSGN	**Cosiguina Volc**	**3.25**	**334**	*i* P		**Pn**	**07 33 52.3**	**-0.4**
CSGN				IAML			07 34 38.2	
	comp=Z,690nm,1.0s							
RCPN	**Sur Rio San Ju**	**3.46**	**0**	*i* P		**Pn**	**07 33 55.8**	**+0.1**
RCPN				IAML			07 34 54.2	
	comp=Z,0.3nm,1.0s							
CDITO	**Canoas**	**3.50**	**114**	*i* P		**Pn**	**07 33 57.6**	**+1.5**
CDITO				IAML			07 35 38.6	
	comp=Z,440nm,1.0s							
LCND	**La Caada**	**3.69**	**332**	*i* P		**Pn**	**07 33 59.0**	**+0.3**
LCND				IAML			07 33 59.4	
	comp=Z,110nm,1.0s							
PACA	**Pacayal**	**4.04**	**328**	*i* P		**Pn**	**07 34 05.2**	**+1.6**
PACA				IAML			07 34 52.7	
	comp=Z,720nm,1.0s							
SCLA	**Alcaldia de Sa**	**4.45**	**325**	*i* P		**Pn**	**07 34 10.1**	**+0.9**
SCLA				IAML			07 35 02.2	
	comp=Z,41nm,1.0s							
TEIG	**Tepich**	**10.34**	**349**	LR		LR	07 39 41.3	
	comp=Z,646nm,19.3s,baz=154,slow=42							
CMIG	**Matias Romero**	**11.04**	**310**	Pn		**Pn**	**07 35 41.6**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=126,slow=4.4,SNR=6.2							
	comp=Z,2.2nm,0.4s							
ATAH	**Atahualpa**	**18.71**	**155**	LR		LR	07 43 28.9	
	comp=Z,37nm,21.8s,baz=4.1,slow=32							
TXAR	**Lajitas Array**	**25.27**	**322**	P		**P**	**07 38 29.5**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=137,slow=10,SNR=16							
TXAR				LR		LR	07 50 35.0	
	comp=Z,10nm,19.5s,baz=54,slow=42							
	comp=Z,0.9nm,0.7s							
PDAR	**Pinedale Array**	**38.51**	**332**	P		**P**	**07 40 24.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=131,slow=11,SNR=2.5							
	comp=Z,0.2nm,0.5s							
NVAR	**Mina Array Bea**	**40.38**	**320**	P		**P**	**07 40 42.5**	**+2.7**
	comp=Z,1.0nm,0.7s,baz=128,slow=7.3,SNR=7.8							
	comp=Z,1.0nm,0.7s							
SCHQ	**Schefferville**	**47.22**	**15**	P		**P**	**07 41 31.5**	**-2.7**
	comp=Z,3.1nm,1.0s,baz=221,slow=11,SNR=3.8							
	comp=Z,3.1nm,1.0s							
YKA	**Yellowknife Ar**	**56.27**	**345**	P		**P**	**07 42 39.9**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=149,slow=6.4,SNR=4.1							
	comp=Z,0.2nm,0.6s							

*NEIC **18** 07:43:46.6,40°.01S×176°.42E,h72km*
*NEIC **18** 07:43:46.2±2.2,39°.96S±0°.02×176°.35E±0°.05,h20km±4km, mb4.8/26,Mwr4.7/40,Error ellipse: s-maj=5.4km s-min=2.9km az=77.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.34; Mθθ 0.88; Mφφ 0.46; Mrθ 0.35; Mrφ 0.65; Mθφ=0.15; Fault plane solution: M₀ 1.40000×10¹⁶ NP1:φs 246.54000°,δ 50.57000°, λ -73.38000°. NP2:φs 41.37000°,δ 42.25000°, λ -109.18000°. Principal axes: T 1.3686, Plg 4.0000°, Azm 325.0000°; N 0.0603, Plg 13.0000°, Azm 56.0000°; P -1.4289, Plg 77.0000°, Azm 217.0000°,*
*NOU **18** 07:43:47.5,40°.06S×176°.42E,h37km,mb5.0/32,North Island, New Zealand*
*IDC **18** 07:43:48.2±0.6,39°.75S×176°.16E,h36km±4km,mb4.6/8, mbtmp4.7/9,ML3.5/1,MS4.0/34,Error ellipse: s-maj=18.0km s-min=13.0km az=33.0*
*WEL **18** 07:43:48.1±0.2,40°S±2°×17°E±°,h21km±2km,M5.2/30, ML5.5/29,MLv5.2/30,Error ellipse: s-maj=0.0km s-min=0.0km az=81.9,confirmed*

ISC 18 07:43:47.4±0.5,39°.95S±0°.02×176°.29E±0°.02,h32km±3km, n336,σ1$27/333,mb4.9/26,MS4.1/33,3C-1D,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PNHZ	**Pukenui**	**0.08**	**296**	P		**Pb**	**07 43 53.2**	**+0.2**
PNHZ				S		**Sb**	**07 43 57.9**	**+1.0**
WPHZ	**Waipukurau**	**0.16**	**136**	P		**Pb**	**07 43 54.1**	**+0.5**
WPHZ				S		**Sb**	**07 43 59.1**	**+1.3**
WPWS	**Waipawa Distri**	**0.22**	**89**	P		**Pn**	**07 43 54.5**	**0.0**
WPWS				S		**Sb**	**07 43 59.8**	**+1.1**
TSZ	**Takapari Road**	**0.28**	**247**	P		**Pn**	**07 43 55.4**	**+0.1**
TSZ				S		**Sb**	**07 44 01.2**	**+1.2**
DVHS	**Dannevirke Hig**	**0.29**	**210**	P		**Pn**	**07 43 55.0**	**-0.6**
DVHS				S		**Sn**	**07 44 01.4**	**+0.6**
KRHZ	**Kereru**	**0.31**	**11**	P		**Pn**	**07 43 55.5**	**-0.3**
KRHZ				S		**Sn**	**07 44 01.6**	**+0.3**
DVHZ	**Dannevirke**	**0.36**	**196**	P		**Pn**	**07 43 56.6**	**+0.1**
DVHZ				S		**Sn**	**07 44 03.5**	**+0.9**
PRHZ	**Porangahau**	**0.41**	**141**	P		**Pn**	**07 43 57.7**	**+0.6**
MNGS	**Mangaweka Scho**	**0.41**	**290**	P		**Pn**	**07 43 57.5**	**+0.3**
PGFS	**Porangahau Fir**	**0.43**	**146**	P		**Pn**	**07 43 58.1**	**+0.8**
PGFS				S		**Sn**	**07 44 06.2**	**+2.1**
PXZ	**Pawanui**	**0.44**	**101**	P		**Pn**	**07 43 57.9**	**+0.4**
PXZ				S		**Sn**	**07 44 07.0**	**+2.6**
KAHZ	**Kahuranaki**	**0.47**	**71**	P		**Pn**	**07 43 58.6**	**+0.6**
KAHZ				S		**Sn**	**07 44 07.9**	**+2.6**
BHHZ	**Black Hill Sta**	**0.49**	**339**	P		**Pn**	**07 43 58.3**	**+0.1**
BHHZ				S		**Sn**	**07 44 05.9**	**+0.1**
ANWZ	**Angora Road**	**0.53**	**165**	P		**Pn**	**07 43 59.6**	**+0.9**
ANWZ				S		**Sn**	**07 44 09.4**	**+2.9**
KWHZ	**Kaweka Forest**	**0.53**	**11**	P		**Pn**	**07 43 59.0**	**+0.1**
MCHZ	**McNeill Hill**	**0.59**	**32**	P		**Pn**	**07 44 00.6**	**+1.0**
POWZ	**Post Office Ro**	**0.60**	**222**	P		**Pn**	**07 44 00.6**	**+0.9**
POWZ				S		**Sn**	**07 44 11.6**	**+3.3**
PRWZ	**Pori Road**	**0.65**	**202**	P		**Pb**	**07 44 01.6**	**+1.1**
MOVZ	**Moawhango**	**0.68**	**322**	P		**Pb**	**07 44 01.6**	**+0.6**
BFZ	**Birch Farm**	**0.73**	**183**			**Pb**	**07 44 02.0**	**+0.2**
BFZ						**Sn**	**07 44 13.3**	**+1.7**
BFZ	**Birch Farm**	**0.73**	**183**	P		**Pb**	**07 44 02.6**	**+0.8**
BFZ	**Birch Farm**	**0.73**	**183**	P		**Pb**	**07 44 02.2**	**+0.3**
OHWZ	**Ohakea**	**0.79**	**251**	P		**Pb**	**07 44 04.5**	**+1.7**
BKZ	**Black Stump Fm**	**0.80**	**11**			**Pb**	**07 44 03.1**	**+0.2**
BKZ						**Sn**	**07 44 14.8**	**+1.4**
BKZ	**Black Stump Fm**	**0.80**	**11**	P		**Pb**	**07 44 03.6**	**+0.7**
BKZ	**Black Stump Fm**	**0.80**	**11**	P		**Pb**	**07 44 03.2**	**+0.2**
WNVZ	**Wahianoa**	**0.82**	**319**	P		**Pb**	**07 44 04.3**	**+0.9**
TUVZ	**Tukino**	**0.84**	**324**	P		**Pb**	**07 44 04.7**	**+1.0**
MTVZ	**Mangateitei**	**0.85**	**311**	P		**Pb**	**07 44 04.9**	**+1.1**
WHVZ	**Whangaehu Hut**	**0.86**	**320**	P		**Pb**	**07 44 05.0**	**+0.9**
TRVZ	**Turoa**	**0.87**	**318**	P		**Pb**	**07 44 05.1**	**+0.9**
ARHZ	**Aropaoanui**	**0.87**	**39**	P		**Pb**	**07 44 04.4**	**+0.2**
TIWZ	**Tintock**	**0.88**	**201**	P		**Pb**	**07 44 04.9**	**+0.5**
MAVZ	**Matarangi**	**0.89**	**320**	P		**Pb**	**07 44 05.3**	**+0.8**
MRZ	**Mangatainoka R**	**0.90**	**217**			**Pb**	**07 44 05.1**	**+0.6**
MRZ	**Mangatainoka R**	**0.90**	**217**	P		**Pb**	**07 44 04.7**	**+0.1**
FWVZ	**Far West T-bar**	**0.90**	**320**	P		**Pb**	**07 44 05.5**	**+0.8**
SNVZ	**South Ngauruho**	**0.91**	**326**	P		**Pb**	**07 44 05.8**	**+0.9**
OTVZ	**Oturere**	**0.92**	**328**	P		**Pb**	**07 44 06.0**	**+0.9**
ETVZ	**East Tongariro**	**0.93**	**331**	P		**Pb**	**07 44 06.0**	**

MWZ	Matawai	1.88	31	P	Pn	07 44 17.0	-0.3
KHEZ	Kahui Hut	1.88	290	P	Pb	07 44 20.8	-0.3
KHEZ	Kahui Hut	1.88	290	P	Pb	07 44 20.8	-0.3
KARZ	Kaharoa	1.93	359	P	Pn	07 44 18.9	+0.9
TKGZ	Te Karaka	1.93	39	P	Pn	07 44 17.7	-0.3
PKE	Pukeiti	1.94	292	P	Pb	07 44 21.3	-0.8
NMEZ	Namu Road	1.94	285	P	Pb	07 44 21.2	-0.9
MARZ	Manawahe	1.98	9	P	Pn	07 44 20.1	+1.3
TCW	Tory Channel	1.99	230		Pn	07 44 18.7	0.0
TCW	Tory Channel	1.99	230	P	Pn	07 44 18.8	0.0
NBEZ	Newall Road No	1.99	289	P	Pb	07 44 22.3	-0.8
DUWZ	D'Urville Isla	2.00	244	P	Pn	07 44 19.6	+0.6
CNGZ	Carnagh Statio	2.08	46	P	Pn	07 44 19.9	-0.2
KMRZ	Kaimai	2.12	352	P	Pn	07 44 21.6	+1.0
WHRZ	Whale Island	2.16	14	P	Pn	07 44 21.6	+0.5
TWGZ	Tauwhareparae	2.20	37	P	Pn	07 44 21.4	-0.4
TGRZ	Tauranga	2.22	359	P	Pn	07 44 22.7	+0.8
RUGZ	Raukumara Rang	2.25	29	P	Pn	07 44 22.1	-0.5
TOZ	Tahuroa Road	2.30	344		Pn	07 44 24.5	+1.4
TOZ	Tahuroa Road	2.30	344	P	Pn	07 44 24.1	+1.0
TUWZ	Tuamarina	2.32	230		Pn	07 44 23.0	-0.4
TUWZ	Tuamarina	2.32	230	P	Pn	07 44 22.8	-0.5
CMWZ	Cape Campbell	2.39	221		Pn	07 44 24.4	0.0
CMWZ	Cape Campbell	2.39	221	P	Pn	07 44 24.3	0.0
PUZ	Puketiti	2.42	40	P	Pn	07 44 23.5	-1.2
HAZ	Te Kaha	2.48	28	P	Pn	07 44 24.3	-1.3
PKGZ	Pakihiroa	2.48	35	P	Pn	07 44 25.1	-0.6
WIZ	White Island	2.52	16	P	Pn	07 44 25.8	-0.2
BSWZ	Blackbirch Sta	2.55	225		Pn	07 44 25.7	-0.7
BSWZ	Blackbirch Sta	2.55	225	P	Pn	07 44 25.8	-0.7
NNZ	Nelson	2.56	239		Pn	07 44 27.2	+0.6
NNZ	Nelson	2.56	239	P	Pn	07 44 26.7	+0.1
WMGZ	Waiomatatini S	2.69	39	P	Pn	07 44 27.4	-1.1
TKNZ	Takaka Hill	2.76	246		Pn	07 44 30.2	+0.7
TKNZ	Takaka Hill	2.76	246	P	Pn	07 44 30.1	+0.7
MXZ	Matakaoa Point	2.85	34	Pn	Pn	07 44 30.3	-0.5
MXZ	Matakaoa Point	2.85	34	P	Pn	07 44 30.2	-0.5
MXZ	Matakaoa Point	2.85	34	P	Pn	07 44 30.2	-0.5
MKAZ	Moumakai	2.98	342	P	Pn	07 44 33.6	+1.2
QRZ	Quartz Range	3.01	252		Pn	07 44 32.9	+0.1
QRZ	Quartz Range	3.01	252	P	Pn	07 44 33.1	+0.3
QRZ	Quartz Range	3.01	252	P	Pn	07 44 32.8	0.0
MRNZ	Matariki Terra	3.06	241		Pn	07 44 34.6	+1.1
MRNZ	Matariki Terra	3.06	241	P	Pn	07 44 33.6	+0.1
THZ	Tophouse	3.15	234	Pn	Pn	07 44 34.1	-0.7
THZ	Tophouse	3.15	234	P	Pn	07 44 33.9	-0.9
AWAZ	Awhitu Peninsu	3.16	335	P	Pn	07 44 36.8	+1.9
ETAZ	East Tamaki Re	3.18	340	P	Pn	07 44 36.6	+1.5
KHZ	Kahutara	3.23	219	Pn	Pn	07 44 34.1	-1.7
KHZ	Kahutara	3.23	219	P	Pn	07 44 34.2	-1.6
KHZ	Kahutara	3.23	219	P	Pn	07 44 33.9	-1.8
WIAZ	Waiheke Island	3.28	343	P	Pn	07 44 38.4	+1.8
EPAZ	Eden Park BICE	3.30	338	P	Pn	07 44 39.0	+2.2
WTAZ	Waiatarua	3.30	335	P	Pn	07 44 39.2	+2.4
HBAZ	Herne Bay Bore	3.33	338	P	Pn	07 44 39.5	+2.3
MBAZ	Motutapu North	3.36	340	P	Pn	07 44 39.4	+1.7
RVAZ	Riverhead Bore	3.45	336	P	Pn	07 44 41.0	+2.1
ABAZ	Army Bay	3.54	341	P	Pn	07 44 42.1	+2.1
GRZ	Great Barrier	3.75	350	P	Pn	07 44 44.3	+1.3
DSZ	Denniston Nort	3.85	241		Pn	07 44 44.0	-0.4
DSZ	Denniston Nort	3.85	241	P	Pn	07 44 43.8	-0.6
GVZ	Greta Valley S	3.88	218		Pn	07 44 43.2	-1.6
GVZ	Greta Valley S	3.88	218	P	Pn	07 44 42.8	-2.1
LTZ	Lake Taylor	4.14	226		Pn	07 44 46.6	-1.9
LTZ	Lake Taylor	4.14	226	P	Pn	07 44 46.5	-1.9
WCZ	Waipu Caves	4.29	338	P	Pn	07 44 53.4	+2.9
INZ	Inchbonnie	4.58	231		Pn	07 44 52.9	-1.6
INZ	Inchbonnie	4.58	231	P	Pn	07 44 52.8	-1.6
MQZ	McQueen's Vall	4.64	215		Pn	07 44 53.5	-1.7
OXZ	Oxford	4.64	222		Pn	07 44 52.7	-2.6
AKCZ	Akaroa Harbour	4.66	212	P	Pn	07 44 53.2	-2.3
OUZ	Omahuta	5.18	335	P	Pn	07 45 04.5	+1.8
OUZ	Omahuta	5.18	335	P	Pn	07 45 04.5	+1.8
WVZ	Waitaha Valley	5.21	231	P	Pn	07 45 01.2	-1.8
RPZ	Rata Peaks	5.43	224	P	Pn	07 45 05.3	-0.8
RPZ	Rata Peaks 4.8nm,0.3s,baz=16,slow=0.8,SNR=17	5.43	224	Pn	Pn	07 45 03.8	-2.3
RPZ	136nm,0.3s,baz=327,slow=21,SNR=28			Sn	Sn	07 46 01.7	-5.7
RPZ	comp=Z,3µm,19.4s,baz=62,slow=43			LR	LR	07 47 46.9	
ARCZ	Arundel	5.52	222	P	Pn	07 45 05.4	-2.0
LBZ	Lake Benmore	6.34	224		Pn	07 45 16.6	-2.0
CTZ	Chatham Island	6.51	128	P	Pn	07 45 20.3	-0.5
CTZ	Chatham Island	6.51	128	P	Pn	07 45 20.3	-0.5
ODZ	Otahua Downs	6.58	217		Pn	07 45 19.3	-2.6
ODZ	Otahua Downs	6.58	217	P	Pn	07 45 19.5	-2.4
JCZ	Jackson Bay	6.95	231	P	Pn	07 45 25.4	-1.6
HHSZ	Highcliff Hill	7.26	213	P	Pn	07 45 30.5	-0.7
WKZ	Wanaka	7.26	225	Pn	Pn	07 45 29.1	-2.2
WKZ	Wanaka	7.26	225	P	Pn	07 45 29.4	-1.8
TUZ	Tuapeka	7.74	217	P	Pn	07 45 36.0	-1.8
MLZ	Mavora Lakes	8.10	225	P	Pn	07 45 41.5	-1.3
SYZ	Scrubby Hill	8.40	216	P	Pn	07 45 45.7	-1.2
SYZ	Scrubby Hill	8.40	216	P	Pn	07 45 45.6	-1.2
WHZ	Wether Hill Ro	8.53	223	P	Pn	07 45 51.2	+2.6
DZM	Mont Dzumac	19.70	332	P	P	07 48 12.9	-1.2
DZM	Mont Dzumac 0.1nm,0.3s,baz=249,slow=17,SNR=2.0	19.70	332	P	P	07 48 12.4	-1.7
DZM	comp=Z,1µm,18.9s,baz=169,slow=36 5.8nm,0.9s			LR	LR	07 55 35.1	
MGCD	Mangrove Creek baz=21	21.27	281	P	P	07 48 34.0	+2.9
MGCD	Mangrove Creek	21.27	281	P	P	07 48 33.6	+2.5
MILA	Mila baz=21	21.41	269	P	P	07 48 33.6	+1.1
MOO	Moorlands	22.00	254	P	P	07 48 40.0	+1.3
CAN	Canberra	22.07	273	P	P	07 48 38.4	-1.2
CAN	comp=Z,30nm,1.3s			IAmb	IAmb	07 48 51.9	
ARMA	Armidale	22.23	288	P	P	07 48 41.4	-0.1
TOO	Toolangi baz=24,SNR=8.6	24.08	266	P	P	07 49 01.5	+1.5
TOO	Toolangi	24.08	266	P	P	07 49 00.2	+0.3
TOO	Toolangi	24.08	266	P	P	07 49 02.2	+2.3
EIDS	Eidsvold baz=26	25.61	297	P	P	07 49 15.9	+2.0
EIDS	Eidsvold	25.61	297	P	P	07 49 15.4	+1.5
EIDS	comp=Z,15nm,1.1s			IAmb	IAmb	07 49 20.4	
ARPS	Mount Arapiles	27.11	266	P	P	07 49 26.7	-0.6
RAR	Rarotonga	27.66	55	LR	LR	07 58 29.6	
STKA	comp=Z,232nm,21.6s,baz=194,slow=32 Stephens Creek baz=29,SNR=12	29.09	275	P	P	07 49 46.6	+1.5
STKA	Stephens Creek	29.09	275	P	P	07 49 46.4	+1.3
STKA	Stephens Creek	29.09	275	P	P	07 49 46.9	+1.8
STKA	Stephens Creek comp=Z,7.5nm,0.9s,baz=110,slow=11,SNR=17	29.09	275	P	P	07 49 46.0	+0.9
STKA	comp=Z,543nm,20.5s,baz=93,slow=35 comp=Z,7.5nm,0.9s			LR	LR	08 00 35.9	
HTT	Hallett baz=30,SNR=7.5	30.50	270	P	P	07 49 58.3	+0.7
HTT	Hallett	30.50	270	P	P	07 49 58.9	+1.3
LCRK	Leigh Creek	32.32	275	P	P	07 50 14.6	+1.0
CTA	Charters Tower comp=Z,368nm,21.7s,baz=124,slow=35	32.45	299	LR	LR	08 02 25.1	
CTAO	Charters Tower	32.45	299	P	P	07 50 15.5	+0.7
CTAO	comp=Z,10nm,1.1s			IAmb	IAmb	07 50 18.8	
BBOO	Buckleboo baz=33,SNR=20	32.95	270	P	P	07 50 19.2	+0.1
BBOO	Buckleboo	32.95	270	P	P	07 50 19.1	+0.1
BBOO	comp=Z,14nm,0.7s			IAmb	IAmb	07 50 30.0	
BBOO	Buckleboo	32.95	270	P	P	07 50 19.4	+0.3
HNR	Honiara comp=Z,6µm,21.9s,baz=156,slow=33	33.70	330	LR	LR	08 02 10.7	
MTSU	Mount Surprise baz=35,SNR=4.1	35.12	299	P	P	07 50 39.2	+1.2
OOD	Oodnadatta	35.54	277	P	P	07 50 42.4	+0.9
MULG	Mulgathing	35.59	272	P	P	07 50 42.0	+0.1
QIS	Mount Isa baz=37,SNR=12	36.78	291	P	P	07 50 52.7	+0.5
QIS	Mount Isa	36.78	291	P	P	07 50 53.1	+0.9
PPT	Papeete comp=Z,297nm,19.9s,baz=190,slow=29	36.98	63	LR	LR	08 01 54.2	
VNDA	Vanda comp=Z,121nm,18.4s,baz=24,slow=33	38.17	185	LR	LR	08 04 39.8	
COEN	Coen	38.89	302	P	P	07 51 10.7	+0.7
	baz=39,SNR=5.2						
COEN	Coen	38.89	302	P	P	07 51 10.6	+0.5
COEN	comp=Z,32nm,1.2s			IAmb	IAmb	07 51 13.3	
AS01	Alice Springs	39.08	282	P	P	07 51 11.3	-0.4
AS31	Alice Springs	39.12	282	P	P	07 51 12.0	+0.1
AS31	comp=Z,8.9nm,0.8s			IAmb	IAmb	07 51 22.8	
ASAR	Alice Springs	39.12	282	P	P	07 51 11.9	0.0
ASAR	Alice Springs comp=Z,13nm,0.6s,baz=121,slow=6.4,SNR=368	39.12	282	P	P	07 51 12.0	0.0
ASAR	comp=Z,19nm,0.7s,baz=131,slow=8.7,SNR=22			pP	pP	07 51 21.5	-0.1
ASAR	comp=Z,1.4nm,0.8s,baz=131,slow=15,SNR=9.3			S	S	07 57 06.1	-3.5
ASPA	Alice Springs baz=39	39.12	282	P	P	07 51 11.3	-0.7
PMG	Port Moresby	39.97	312	P	P	07 51 20.8	+1.8
PMG	comp=Z,21nm,1.0s			IAmb	IAmb	07 51 32.6	
PMG	Port Moresby comp=Z,659nm,18.1s,baz=150,slow=37	39.97	312	LR	LR	08 08 06.5	
FORT	Forrest baz=40	39.97	268	P	P	07 51 18.1	-0.9
FORT	Forrest	39.97	268	P	P	07 51 18.9	0.0
FORT	comp=Z,26nm,0.8s			IAmb	IAmb	07 51 28.8	
FORT	Forrest	39.97	268	P	P	07 51 18.9	0.0
WR0	Warramunga Arr	40.84	287	P	P	07 51 26.1	-0.1
WR0	comp=Z,24nm,1.1s			IAmb	IAmb	07 51 47.4	
WC3	Warramunga Arr baz=41	40.97	287	P	P	07 51 27.2	-0.1
WB2	Warramunga Arr	40.99	287	P	P	07 51 27.5	0.0
WRAB	Tennant Creek	41.00	287	P	P	07 51 27.3	-0.2
WRAB	comp=Z,23nm,0.7s			IAmb	IAmb	07 51 29.2	
WRA	Warramunga Arr	41.00	287	P	P	07 51 27.7	+0.1
WRA	Warramunga Arr comp=Z,13nm,0.5s,baz=128,slow=7.8,SNR=126	41.00	287	P	P	07 51 27.3	-0.3
WRA	comp=Z,13nm,0.7s,baz=128,slow=7.8,SNR=14 comp=Z,13nm,0.5s			pP	pP	07 51 36.8	-0.7
WB0	Warramunga Arr	41.07	287	P	P	07 51 28.0	-0.1
WB0	comp=Z,15nm,0.7s			IAmb	IAmb	07 51 29.8	
WRKA	Warakurna baz=42,SNR=15	42.62	275	P	P	07 51 39.7	-1.2
WRKA	Warakurna	42.62	275	P	P	07 51 39.6	-1.2
NWAO	Narrogin (SRO) comp=Z,237nm,21.1s,baz=100,slow=32	47.28	259	LR	LR	08 09 18.0	
KLBR	Kellerberrin	47.48	261	P	P	07 52 19.2	-0.2
FITZ	Fitzroy Crossi baz=48,SNR=8.0	48.62	281	P	P	07 52 28.0	-0.2
FITZ	Fitzroy Crossi	48.62	281	P	P	07 52 28.2	-0.1
MEEK	Meekatharra baz=49,SNR=17	49.23	267	P	P	07 52 31.6	-1.3
MEEK	Meekatharra	49.23	267	P	P	07 52 31.6	-1.3
MORW	Morawa	49.98	263	P	P	07 52 39.3	+0.7
MORW	comp=Z,16nm,1.3s			IAmb	IAmb	07 52 43.1	
QSPA	South Pole Qui	50.18	180	P	P	07 52 42.3	+2.6
QSPA	South Pole Qui comp=Z,12nm,0.7s,baz=6.5,slow=0.8,SNR=73	50.18	180	P	P	07 52 42.1	+2.4
QSPA	comp=Z,5.9nm,1.0s,baz=268,slow=3.7,SNR=4.5			pP	sP	07 52 52.3	-1.2
QSPA	comp=Z,59nm,18.9s,baz=44,slow=32 comp=Z,12nm,0.7s			LR	LR	08 10 40.3	
PSA00	Pilbara Seismi	51.01	274	P	P	07 52 45.5	-0.9
MBWA	Marble Bar	51.33	274	P	P	07 52 48.0	-0.8
MBWA	Marble Bar	51.33	274	P	P	07 52 47.8	-1.0
SWI	Sorong	56.44	302	P	P	07 53 37.4	+11
GUMO	Guam comp=Z,44nm,18.3s,baz=67,slow=37	60.76	324	LR	LR	08 21 13.9	
BELA	Belgrano 2	60.94	173	P	P	07 53 58.4	+1.7
PMSA	Palmer Station comp=Z,106nm,18.1s,baz=257,slow=34	65.49	156	LR	LR	08 20 28.3	
KPJI	Karang Pucung	68.00	279	P	P	07 54 54.6	+11
SNAA	Sanae comp=Z,130nm,19.4s,baz=229,slow=34	68.68	180	LR	LR	08 22 43.9	
LEM	Lembang comp=Z,104nm,21.4s,baz=175,slow=35	69.32	279	LR	LR	08 24 21.3	
VNA2	Neumayer--Watz baz=179,slow=5.9	69.40	179	⇓P	P	07 54 52.6	+1.0
JCJ	Chichijima comp=Z,91nm,21.1s,baz=4.0,slow=33	73.88	329	LR	LR	08 24 03.9	
PDSI	Padang	76.57	278	P	P	07 55 44.8	-1.3
PLCA	Para Flores comp=Z,5.5nm,0.9s,baz=207,slow=7.6,SNR=9.0	79.28	135	P	P	07 55 52.0	+2.3
PLCA	comp=Z,3.7nm,0.8s,baz=203,slow=4.5,SNR=5.3			pP	sP	07 56 02.3	-1.4
PLCA	comp=Z,70nm,18.2s,baz=210,slow=31 comp=Z,5.5nm,0.9s			LR	LR	08 24 38.6	
JOW	Kunigami comp=Z,95nm,21.3s,baz=182,slow=32	80.08	318	LR	LR	08 25 54.9	
RPSI	Rantau Prapat	82.07	280	P	P	07 56 02.8	-2.1
RPSI	comp=Z,10nm,1.0s			IAmb	IAmb	07 56 04.4	
GSI	Gunungsitoli	82.19	278	P	P	07 56 05.5	0.0
GSI	Gunungsitoli	82.19	278	P	P	07 56 06.3	+0.8
MJAR	Matsushiro Arr comp=Z,3.2nm,0.8s,baz=162,slow=5.9,SNR=8.4	83.79	330	P	P	07 56 12.5	-0.8
MJAR	comp=Z,39nm,19.8s,baz=162,slow=34 comp=Z,3.2nm,0.8s			LR	LR	08 31 26.8	
JNU	Natsuse comp=Z,43nm,22.0s,baz=166,slow=32	83.97	323	LR	LR	08 29 05.8	
KSRS	Korea Array comp=Z,4.6nm,0.8s,baz=143,slow=5.5,SNR=24	88.91	323	P	P	07 56 39.1	+0.9
KSRS	comp=Z,3.2nm,0.9s,baz=146,slow=5.5,SNR=6.8			pP	pP	07 56 48.4	-0.4
KSRS	comp=Z,39nm,19.0s,baz=140,slow=35 comp=Z,4.6nm,0.8s			LR	LR	08 35 47.6	
KS19	Wonju Array Si	88.97	323	P	P	07 56 38.9	+0.3
KS19	comp=Z,8.3nm,0.9s			IAmb	IAmb	07 56 39.3	
NJ2	Nanjing	89.22	314	eP	P	07 56 44.3	+4.4
NJ2	comp=Z,10.0nm,0.9s			pmax	pmax		
CMAR	Chiang Mai Arr	92.38	292	P	P	07 56 54.1	-0.8
CMAR	Chiang Mai Arr comp=Z,1.1nm,0.3s,baz=150,slow=3.1,SNR=13	92.38	292	P	P	07 56 55.1	+0.2
CMAR	comp=Z,1.7nm,0.8s,baz=145,slow=3.6,SNR=1.8			pP	pP	07 57 04.3	-1.0
CMAR	comp=Z,67nm,19.8s,baz=150,slow=38 comp=Z,1.1nm,0.3s			LR	LR	08 42 12.9	
GYA	Guiyang	92.50	303	eP	P	07 56 59.5	+4.1
GYA	comp=Z,15nm,0.7s			pmax	pmax		
LVC	Limon Verde comp=Z,131nm,21.9s,baz=236,slow=29	93.06	123	LR	LR	08 28 50.8	
LPIG	La Paz comp=Z,118nm,21.8s,baz=228,slow=30	93.38	61	LR	LR	08 29 41.0	
PETK	Petropavlovsk- comp=Z,71nm,18.8s,baz=142,slow=33	94.07	349	LR	LR	08 35 32.3	
NNA	Nana comp=Z,85nm,19.2s,baz=234,slow=31	94.95	110	LR	LR	08 32 14.1	
PZH	PanZhiHua	95.76	300	P	P	07 57 13.1	+2.7
PZH	comp=Z,10.0nm,0.5s			pmax	pmax		
PZH	comp=Z,110nm,5.0s			pmax	pmax		
PFO	Pinyon Flats O comp=Z,94nm,20.3s,baz=240,slow=30	95.98	51	LR	LR	08 31 55.0	
ATAH	Atahualpa comp=Z,80nm,18.5s,baz=217,slow=31	97.04	105	LR	LR	08 34 29.4	
KLR	Kul'dur comp=Z,23nm,18.1s,baz=85,slow=36	97.11	332	LR	LR	08 41 37.1	
CPUP	Villa Florida comp=Z,70nm,19.2s,baz=220,slow=31	97.30	133	LR	LR	08 34 12.9	
NVAR	Mina Array Bea comp=Z,62nm,21.6s,baz=271,slow=30	98.31	46	LR	LR	08 33 34.9	
YBH	Yreka Blue Hor comp=Z,67nm,19.7s,baz=188,slow=31	98.34	41	LR	LR	08 34 19.8	
PALK	Pallekele comp=Z,101nm,21.7s,baz=223,slow=32	98.90	272	LR	LR	08 37 13.1	
HHC	Hu-ho-hao-te	99.66	316	eP	Pdif	07 57 31.3	+3.7
HHC	comp=Z,4.0nm,0.7s			pmax	pmax		
HHC				pmax	pmax		
	comp=Z,81nm,5.1s						
CMIG	Matias Romero comp=Z,60nm,20.9s,baz=192,slow=30	99.89	76	LR	LR	08 33 21.7	
ILAR	Eielson Array comp=Z,0.7nm,0.9s,baz=269,slow=2.2,SNR=4.7	108.31	16	PKiKP	PKiKP	08 02 10.6	-0.6
WMQ	Urumqi	115.32	307	eP	PKiKP	08 02 26.6	+1.3
YKA	Yellowknife Ar comp=Z,1.7nm,0.8s,baz=256,slow=1.6,SNR=29	116.05	29	PKP	PKiKP	08 02 25.4	-0.6
YKA				PKKPbc	PKKPbc	08 12 55.6	-1.9
MKAR	comp=Z,0.1nm,0.3s,baz=45,slow=3.9,SNR=5.6 Makanchi Array	120.11	308	PKP	PKPdf	08 02 32.3	-2.1
ZALV	comp=Z,0.7nm,0.6s,baz=213,slow=1.4,SNR=11 Zalesovo Beam	121.84	316	PKP	PKPdf	08 02 35.3	-2.1
KURBB	comp=Z,0.6nm,0.4s,baz=179,slow=5.9,SNR=4.0 Kurchatov Arra	124.00	310	PKP	PKPdf	08 02 40.0	-1.7
BVAR	comp=Z,0.9nm,0.6s,baz=115,slow=1.7,SNR=11 Borovoye Array	129.56	311	PKP	PKPdf	08 02 51.5	-0.7
KBZ	comp=Z,1.0nm,0.8s,baz=46,slow=4.3,SNR=4.5 Khabaz	145.43	292	PKPbc	PKiKP	08 03 20.8	-0.8
LIC	comp=Z,6.9nm,0.9s,baz=73,slow=3.3,SNR=9.5 Lamto	146.40	178	⇑i/PKP1	PKPab	08 03 26.1	-0.2
KIC	comp=Z,61nm,1.0s Kosan Boka	146.55	178	⇑ePKP1	PKPbc	08 03 25.6	-0.3
ARCES	comp=Z,47nm,1.0s ARCESS Array B	146.58	342	PKPbc	PKPbc	08 03 23.7	-0.7
TIC	comp=Z,14nm,0.8s,baz=28,slow=5.5,SNR=17 Toumodi	146.82	178	⇑i/PKP1	PKPbc	08 03 26.3	-0.4
DBIC	comp=Z,4.4nm,0.4s Dimbokro	146.85	178	PKPbc	PKPab	08 03 27.2	-0.8
BRTR	comp=Z,15nm,1.1s,baz=111,slow=7.6,SNR=3.9 Keskin Array B	151.46	282	PKPbc	PKPbc	08 03 36.7	-1.2
FINES	comp=Z,2.3nm,0.8s,baz=146,slow=5.9,SNR=9.7 FINESS Array B	151.82	330	PKPbc	PKPbc	08 03 36.6	-1.2
TORD	comp=Z,4.4nm,0.7s,baz=17,slow=4.2,SNR=25 Torodi Ar. Bea	152.88	192	PKPbc	PKiKP	08 03 41.4	-0.4
TORD	comp=Z,2.3nm,0.6s,baz=116,slow=2.4,SNR=14			PKPab	PKPab	08 03 52.4	-0.2
AKASG	comp=Z,8.5nm,0.8s,baz=148,slow=2.3,SNR=21 Malin Array Be	154.68	306	PKPab	PKPab	08 03 58.3	-1.1
HFS	comp=Z,2.0nm,0.7s,baz=64,slow=4.6,SNR=3.8 Hagfors	157.05	337	PKPab	PKPab	08 04 08.2	-1.1
BRG	comp=Z,1.3nm,0.5s,baz=64,slow=6.6,SNR=5.9 Berggiesshubel	163.53	317	ePKP	PKPdf	08 03 45.1	-1.1
BRG				Amp		08 03 46.9	
CLL	comp=Z,3.2nm,1.2s Collm	163.75	320	ePKPab	PKPab	08 04 37.0	-1.8
CLL				AMS	AMS	09 20 00.0	
EKA	comp=Z,100nm,20.6s Eskdalemuir Ar	164.60	359	PKPab	PKPab	08 04 39.8	-2.6
GERES	comp=Z,1.2nm,0.8s,baz=339,slow=5.6,SNR=3.5 GERESS Array B	164.73	311	PKPab	PKPab	08 04 43.0	-0.4
ESDC	comp=Z,1.0nm,0.8s,baz=32,slow=7.8,SNR=5.1 Sonseca Array	179.66	144	PKP	PKPdf	08 03 54.0	-0.5
ESDC	comp=Z,3.1nm,1.4s,baz=338,slow=2.1,SNR=7.5			pPKPab	pPKPab	08 05 50.8	-9.3
	comp=Z,0.9nm,0.8s,baz=22,slow=0.4,SNR=7.7						

DJA 18 07:47:34.2±0.3,**7°S**±4°×**10°5E**±°,**h10**km,**M4.2**/12,**mb4.5**/1,
MLv4.1/12,**Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	Serang	1.01	43	P	Pg	07 47 51.8	-1.9
SKJI	Sukabumi	1.12	97	P	Pg	07 47 55.8	+0.1
SKJI				S	Sn	07 48 11.1	-0.3
DBJI	Dramaga	1.34	76	P	Pn	07 47 58.4	-0.6
DBJI				S	Sb	07 48 15.9	-0.7
TNG	Tangerang	1.39	60	P	Pn	07 47 58.2	-1.4
CBJI	Citeko	1.47	72	P	Pg	07 48 02.1	-0.3
KASI	Kota Agung	1.63	325	P	Pn	07 48 02.1	-0.9
CNJI	Cibinong	1.73	105	P	Pn	07 48 04.1	-0.3
LEM	Lembang	2.16	89	P	Pb	07 48 13.7	+0.1
LWLI	Liwa	2.30	323	P	Pn	07 48 12.8	+0.5
CMJI	Cimerak	3.12	107	P	Pn	07 48 24.0	+0.5
KPJI	Karang Pucung	3.50	98	P	Pn	07 48 28.7	+0.1
MNAI	Manna	3.51	315	P	Pn	07 48 28.8	-0.1
UGM	Wanagama	5.15	102	P	Pn	07 48 51.9	+0.5

NOU ***18*** *07:51:46.3,40°.17S×176°.81E,h94km,MLv3.5/7,North Island, New Zealand*
WEL ***18*** *07:51:50.2±0.4,40°.S±2°×17°.6E±°,h20km±4km,M3.5/51, ML3.8/19,MLv3.5/51,Error ellipse: s-maj=0.0km s-min=0.0km az=84.4,confirmed*

ISC 18 07:51:50.7±1.3,**39°.98S**±0°.03×**176°.39E**±0°.03,**h35**km,**n123,**
σ1s25/125,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.10	154	P	Pn	07 51 56.2	-0.6
WPHZ				S	Sn	07 52 00.8	-0.1
PNHZ	Pukenui	0.15	294	P	Pn	07 51 55.3	-1.9
KRHZ	Kereru	0.33	358	P	Pn	07 51 57.5	-1.6
KRHZ				S	Sn	07 52 03.3	-1.5
TSZ	Takapari Road	0.34	256	P	Pn	07 51 57.7	-1.6
PRHZ	Porangahau	0.35	147	P	Pn	07 51 59.8	+0.5
DVHZ	Dannevirke	0.36	207	P	Pn	07 51 58.8	-0.7
PXZ	Pawanui	0.37	99	P	Pn	07 51 59.9	+0.4
PXZ				S	Sn	07 52 08.6	+3.0
KAHZ	Kahuranaki	0.42	65	P	Pn	07 52 00.6	+0.4
ANWZ	Angora Road	0.49	172	P	Pn	07 52 01.7	+0.5
ANWZ				S	Sn	07 52 11.8	+3.3
BHHZ	Black Hill Sta	0.55	333	P	Pn	07 52 00.

TRWZ	Traveller	1.52	200	P		Pn	07 52 14.5	-0.8	
VRZ	Vera Road	1.52	304	P		Pn	07 52 15.5	+0.2	
MUGZ	Murupara	1.53	11	P		Pn	07 52 15.1	-0.3	
KUTZ	Kaahu Road	1.55	343	P		Pn	07 52 15.6	-0.1	
PRGZ	Paritu Road	1.57	48	P		Pn	07 52 14.2	-1.8	
HRRZ	Handcock Road	1.58	357	P		Pn	07 52 16.3	0.0	
LREZ	Lake Rotokare	1.61	288	P		Pn	07 52 18.2	+1.6	
RRRZ	Republican Roa	1.64	4	P		Pn	07 52 16.5	-0.5	
RIGZ	Rimuhau	1.66	41	P		Pn	07 52 16.3	-0.9	
HSRZ	Hossack Road	1.67	356	P		Pn	07 52 17.1	-0.3	
RAGZ	Rawiri	1.68	29	P		Pn	07 52 16.9	-0.8	
HLRZ	Highlands Stat	1.72	359	P		Pn	07 52 21.7	+3.6	
TARZ	Mount Tarawera	1.74	3	P		Pn	07 52 18.2	-0.3	
TLZ	Tolley Road	1.77	338	P		Pn	07 52 16.5	-2.3	
URZ	Urewera	1.81	18	P		Pn	07 52 18.1	-1.2	
URZ	Urewera	1.81	18	P		Pn	07 52 18.0	-1.3	
PLWZ	Palliser	1.81	208	P		Pn	07 52 17.7	-1.7	
MHEZ	Mangahewa	1.83	299	P		Pn	07 52 21.1	+1.5	
PREZ	Palmer Road	1.83	290	P		Pn	07 52 21.4	+1.7	
BHW	Baring Head	1.84	218	P		Pn	07 52 18.1	-1.6	
SNZO	South Karori	1.85	223	P		Pn	07 52 18.4	-1.4	
DREZ	Durham Road	1.86	294	P		Pn	07 52 21.4	+1.4	
MWZ	Matawai	1.86	29	P		Pn	07 52 19.0	-1.2	
OMRZ	Omania	1.87	360	P		Pn	07 52 26.6	+6.4	
HIZ	Hauiti	1.88	320	P		Pn	07 52 22.1	+1.8	
HIZ	Hauiti	1.88	320	P		Pn	07 52 23.4	+3.1	
NEZ	North Egmont	1.90	291	P		Pn	07 52 22.3	+1.6	
TKGZ	Te Karaka	1.91	37	P		Pn	07 52 19.6	-1.1	
KHEZ	Kahui Hut	1.95	290	P		Pn	07 52 23.8	+2.4	
KHEZ	Kahui Hut	1.95	290	P		Pn	07 52 23.6	+2.2	
KARZ	Kaharoa	1.96	357	P		Pn	07 52 21.4	0.0	
PKE	Pukeiti	2.01	292	P		Pn	07 52 24.0	+1.9	
TCW	Tory Channel	2.02	232	P		Pn	07 52 21.0	-1.3	
DUWZ	D'Urville Isla	2.05	246	P		Pn	07 52 23.4	+0.6	
NBEZ	Newall Road No	2.07	289	P		Pn	07 52 24.9	+2.0	
KMRZ	Kaimai	2.15	351	P		Pn	07 52 30.2	+6.1	
TWGZ	Tauwhareparae	2.18	35	P		Pn	07 52 23.3	-1.3	
RUGZ	Raukumara Rang	2.25	27	P		Pn	07 52 24.1	-1.4	
TOZ	Tahuroa Road	2.34	343	P		Pn	07 52 26.6	-0.1	
TUWZ	Tuamarina	2.36	231	P		Pn	07 52 25.0	-1.8	
PUZ	Puketiti	2.40	38	P		Pn	07 52 25.5	-1.9	
PKGZ	Pakihiroa	2.47	33	P		Pn	07 52 27.0	-1.4	
HAZ	Te Kaha	2.47	27	P		Pn	07 52 27.4	-1.0	
BSWZ	Blackbirch Sta	2.58	227	P		Pn	07 52 28.0	-1.9	
NNZ	Nelson	2.60	241	P		Pn	07 52 28.4	-1.8	
TKNZ	Takaka Hill	2.82	247	P		Pn	07 52 32.6	-0.6	
MKAZ	Moumakai	3.02	341	P		Pn	07 52 37.4	+1.3	
QRZ	Quartz Range	3.06	253	P		Pn	07 52 35.0	-1.6	
QRZ	Quartz Range	3.06	253	P		Pn	07 52 35.1	-1.6	
MRNZ	Matariki Terra	3.10	242	P		Pn	07 52 36.2	-1.0	
THZ	Tophouse	3.19	235	P		Pn	07 52 36.4	-1.9	
KHZ	Kahutara	3.25	220	P		Pn	07 52 36.2	-2.9	
DSZ	Denniston Nort	3.90	242	P		Pn	07 52 46.8	-1.2	
LTZ	Lake Taylor	4.18	226	P		Pn	07 52 48.8	-3.1	

*DJA **18** 07:58:59.1±0.4,0°N±4°×12°2E±°, h86km±6km, M4.1/9, mb4.4/3, MLv4.0/9*
*IDC **18** 07:59:01.4±3.4,0°29N×122°.35E, h163km±31km, mb3.0/5, mbtmp3.5/5, Error ellipse: s-maj=135.9km s-min=16.2km az=63.0*
ISC 18 07:58:56.5±0.9,**0°.37N**±0°.09×**122°.31E**±0°.06,**h114**km,**n12**, σ2^{s}**42**/15,**mb3.4**/5,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.38**	**287**	P		**Pn**	**07 59 14.2**	**+1.1**
MRSI				S		**Sn**	**07 59 26.6**	**+1.0**
LUWI	**Luwuk**	**1.47**	**162**	P		**Pn**	**07 59 24.7**	**+1.4**
KMSI	**Cibinong**	**1.69**	**83**	P		**Pn**	**07 59 27.3**	**+1.5**
MPSI	**Mapaga**	**2.41**	**269**	P		**Pn**	**07 59 36.4**	**+1.5**
TTSI	**Tana Toraja**	**4.20**	**216**	P		**Pn**	**08 00 00.9**	**+2.2**
LBMI	**Labuha**	**5.29**	**101**	P		**Pn**	**08 00 15.8**	**+2.5**
	70nm,0.5s,0.5nm							
NLAI	**Namlea**	**5.98**	**127**	P		**Pn**	**08 00 23.7**	**+1.1**
	18nm,0.8s,0.1nm							
WRA	**Warramunga Arr**	**23.37**	**150**	P		**P**	**08 03 54.2**	**-1.0**
	1.8nm,0.8s,baz=326,slow=11,SNR=12							
	1.8nm,0.8s							
ASAR	**Alice Springs**	**26.41**	**156**	P		**P**	**08 04 22.9**	**+0.3**
	0.3nm,0.8s,baz=342,slow=12,SNR=5.5							
ASAR				PcP		**PcP**	**08 07 44.0**	**-1.5**
	0.5nm,1.0s,baz=332,slow=1.6,SNR=2.1							
ASAR				ScP		**ScP**	**08 11 08.4**	**-6.7**
	0.3nm,0.6s,baz=339,slow=2.9,SNR=5.2							
	0.3nm,0.8s							
SONM	**Songino Array**	**49.26**	**346**	P		**P**	**08 07 34.2**	**+0.5**
	0.3nm,0.6s,baz=154,slow=7.7,SNR=2.5							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**57.94**	**329**	P		**P**	**08 08 37.5**	**+0.5**
	0.5nm,0.5s,baz=126,slow=8.7,SNR=12							
	0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**62.30**	**330**	P		**P**	**08 09 06.2**	**-0.3**
	0.1nm,0.4s,baz=121,slow=6.2,SNR=2.5							
	0.1nm,0.4s							

*IDC **18** 08:14:45.2±0.8,45°.63N×142°.36E, h315km±13km, mb2.9/7, mbtmp3.6/10, Error ellipse: s-maj=27.0km s-min=25.9km az=45.0*
*JMA **18** 08:14:45.6±0.4,46°N±2°×14°3E±°, h318km±2km, MV3.1/35, NE OFF HOKKAIDO*
*SKHL **18** 08:14:46.2±0.3,45°.60N×142°.90E, h321km±1km, mb4.1/6, msh4.6/6*
ISC 18 08:14:45.2±0.7,**45°.50N**±0°.07×**142°.65E**±0°.08,**h318**km±7km, **n29**,σ1^{s}**31**/41,**mb3.1**/7,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.55**	**185**	P		**Pn**	**08 15 26.5**	**+0.5**
JSE				*e*S		**S**	**08 15 58.8**	**+0.2**
JWK2	**Keihoku**	**0.56**	**251**	P		**Pn**	**08 15 26.8**	**+0.9**
JWK2				*e*S		**S**	**08 15 58.3**	**-0.2**
JRBN	**Rebuntou**	**1.12**	**267**	*e*P		**Pn**	**08 15 28.0**	**0.0**
JRBN				*e*S		**S**	**08 16 00.3**	**-1.8**
JSS	**Shosan**	**1.24**	**207**	*e*P		**Pn**	**08 15 29.7**	**+1.0**
JYG	**Yagishiri**	**1.38**	**219**	*e*P		**Pn**	**08 15 30.3**	**+0.9**
ASAJ	**Asahikawa**	**1.39**	**182**	P		**Pn**	**08 15 30.7**	**+1.2**
ASAJ	**Asahikawa**	**1.39**	**182**	P		**Pn**	**08 15 30.7**	**+1.2**
	56nm,0.7s,baz=333,slow=6.1,SNR=66							
ASAJ				S		**S**	**08 16 05.8**	**+0.9**
	8.3nm,0.8s,baz=247,slow=32,SNR=1.1							
YSS	**Yuzh-Sakhalins**	**1.45**	**3**	*i* P		**Pn**	**08 15 29.8**	**+0.1**
YSS				AMB		AMB	08 15 30.3	
	40nm,0.4s							
YSS				*e*S		**S**	**08 16 03.9**	**-1.4**
YSS				A		A	08 16 04.1	
	60nm,0.5s							
YSS				A		A	08 16 04.1	
	30nm,0.5s							
JMP	**Maruseppu**	**1.58**	**161**	P		**Pn**	**08 15 31.8**	**+1.0**
JKK2	**Kamakawa 2**	**1.63**	**178**	P		**Pn**	**08 15 32.3**	**+1.2**
JTKR	**Abashiri--Toko**	**1.77**	**149**	P		**Pn**	**08 15 33.2**	**+1.3**
JTKR				*e*S		**S**	**08 16 10.5**	**+1.2**
JAB	**Ashibetsu**	**2.02**	**189**	*e*P		**Pn**	**08 15 35.0**	**+1.2**
JAR	**Ashorobuto**	**2.35**	**160**	P		**Pn**	**08 15 37.7**	**+1.3**
JAR				*e*S		**S**	**08 16 18.0**	**+0.7**
JEW	**Eniwo**	**2.80**	**198**	P		**Pn**	**08 15 41.8**	**+1.5**
JAK	**Akkeshi**	**2.91**	**149**	*e*P		**Pn**	**08 15 42.2**	**+0.9**
JAK				*e*S		**S**	**08 16 24.9**	**-1.4**
JCH	**Churui**	**2.93**	**170**	*e*P		**Pn**	**08 15 41.3**	**-0.3**
JCH				*e*S		**S**	**08 16 23.4**	**-3.4**
AKK	**Akkeshi**	**2.94**	**147**	*e*P		**Pn**	**08 15 42.2**	**+0.5**
AKK				*e*S		**S**	**08 16 25.2**	**-1.7**
AKK				A		A	08 16 25.8	
	130nm,0.3s							
AKK				A		A	08 16 25.8	
	130nm,0.3s							
NMR	**Nemuro--Hokkai**	**3.07**	**133**	*e*P		**Pn**	**08 15 43.0**	**+0.2**
NMR				*e*S		**S**	**08 16 26.9**	**-2.1**
NMR				A		A	08 16 27.4	
	50nm,0.2s							
NMR				A		A	08 16 27.4	
	40nm,0.2s							
NEM2	**Nemuro 2**	**3.08**	**133**	*e*P		**Pn**	**08 15 43.1**	**+0.2**
NEM2				*e*S		**S**	**08 16 26.8**	**-2.4**
KLR	**Kul'dur**	**8.28**	**301**	P		**Pn**	**08 16 40.0**	**-2.2**
	1.2nm,0.6s,baz=122,slow=12,SNR=4.5							
MJAR	**Matsushiro Arr**	**9.56**	**202**	P		**Pn**	**08 16 57.6**	**-0.3**
	1.0nm,0.5s,baz=9.8,slow=13,SNR=4.7							
SEY	**Seymchan**	**18.33**	**14**	P		**P**	**08 18 36.5**	**-0.4**
	1.2nm,0.4s,baz=176,slow=11,SNR=11							

ILAR	**Eielson Array**	**42.00**	**37**	P		**P**	**08 22 05.3**	**-0.3**	
	0.6nm,0.7s,baz=273,slow=7.7,SNR=7.2								
	0.6nm,0.7s								
INK	**Inuvik**	**46.52**	**31**	P		**P**	**08 22 40.8**	**-0.2**	
	0.7nm,0.3s,baz=282,slow=6.5,SNR=10								
	0.7nm,0.3s								
RES	**Resolute Bay**	**54.19**	**16**	P		**P**	**08 23 37.1**	**-0.7**	
	1.0nm,0.5s,baz=287,slow=6.0,SNR=9.3								
	1.0nm,0.5s								
YKA	**Yellowknife Ar**	**56.11**	**33**	P		**P**	**08 23 51.9**	**+0.3**	
	0.3nm,0.6s,baz=303,slow=6.5,SNR=5.0								
	0.3nm,0.6s								
FINES	**FINESS Array B**	**61.82**	**331**	P		**P**	**08 24 29.4**	**-1.0**	
	0.6nm,0.7s,baz=44,slow=11,SNR=3.7								
	0.6nm,0.7s								
NVAR	**Mina Array Bea**	**69.32**	**56**	P		**P**	**08 25 20.9**	**+2.0**	
	0.2nm,0.5s,baz=299,slow=8.0,SNR=2.1								
	0.2nm,0.5s								
TXAR	**Lajitas Array**	**84.27**	**53**	P		**P**	**08 26 43.1**	**+1.4**	
	0.1nm,0.4s,baz=299,slow=6.0,SNR=2.5								
	0.1nm,0.4s								

*IDC **18** 08:20:02.4±1.4,55°.88N×150°.21W, h0km, mb3.5/7, mbtmp3.6/11, ML3.8/4, MS2.9/5, Error ellipse: s-maj=34.6km s-min=18.6km az=27.0*
*NEIC **18** 08:20:06.5±1.2,56°.24N±0°.07×150°.02W±0°.08, h10km±2km, mb3.8/5, ML3.9/62, ML3.8(AEIC), Error ellipse: s-maj=11.5km s-min=7.5km az=170.0*
*AEIC **18** 08:20:11.3±1.4,56°.26N±0°.07×149°.90W±0°.09, h12km±6km, Error ellipse: s-maj=10.0km s-min=6.9km az=169.0*
ISC 18 08:20:05.5±0.7,**56°.25N**±0°.06×**149°.92W**±0°.04,**h10**km, **n326**,σ1^{s}**50**/337,**mb3.6**/8,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.09**	**299**			**Pn**	**08 20 41.3**	**+0.8**
OHAK	**Old Harbor**	**2.09**	**299**			**Sn**	**08 21 04.8**	**-1.9**
OHAK	**Old Harbor**	**2.09**	**299**	IAML			08 21 05.3	
	comp=E,398nm,0.4s							
OHAK				IAML			08 21 05.7	
	comp=N,607nm,0.4s							
OHAK	**Old Harbor**	**2.09**	**299**	P		**Pn**	**08 20 41.4**	**+0.8**
OHAK	**Old Harbor**	**2.09**	**299**	P		**Pn**	**08 20 41.3**	**+0.8**
	baz=116							
OHAK				S		**Sn**	**08 21 04.8**	**-1.9**
	baz=116							
KDAK	**Kodiak Island**	**2.11**	**318**			**Pn**	**08 20 41.8**	**+0.9**
KDAK	**Kodiak Island**	**2.11**	**318**			**Sn**	**08 21 05.2**	**-2.0**
KDAK	**Kodiak Island**	**2.11**	**318**	Pn		**Pn**	**08 20 41.7**	**+0.9**
	comp=N,29nm,0.3s,baz=168,slow=5.0,SNR=819							
KDAK				Sn		**Sn**	**08 21 05.3**	**-1.9**
	comp=N,41nm,0.3s,baz=28,slow=22,SNR=42							
KDAK				LR		LR	08 21 24.2	
	comp=N,60nm,19.4s,baz=140,slow=35							
	comp=N,65nm,0.3s							
SII	**Sitkinak Islan**	**2.39**	**279**	Pn		**Pn**	**08 20 45.2**	**+0.5**
SII				Sn		**Sn**	**08 21 11.9**	**-2.1**
SII				IAML			08 21 13.0	
	comp=E,495nm,0.8s							
SII				IAML			08 21 18.5	
	comp=N,402nm,0.7s							
SII	**Sitkinak Islan**	**2.39**	**279**	P		**Pn**	**08 20 45.1**	**+0.5**
SII	**Sitkinak Islan**	**2.39**	**279**	P		**Pn**	**08 20 45.3**	**+0.5**
	baz=96							
SII				S		**Sn**	**08 21 11.8**	**-2.2**
	baz=96							
SYI	**Shuyak Island**	**2.71**	**332**			**Pn**	**08 20 50.1**	**+1.0**
SYI	**Shuyak Island**	**2.71**	**332**			**Sn**	**08 21 21.5**	**-0.5**
SYI	**Shuyak Island**	**2.71**	**332**	IAML			08 21 23.1	
	comp=E,234nm,0.4s							
SYI				IAML			08 21 23.2	
	comp=N,215nm,0.4s							
Q20K	**Shuyak Island**	**2.71**	**332**	P		**Pn**	**08 20 50.1**	**+1.0**
	baz=149							
Q20K				S		**Sn**	**08 21 21.5**	**-0.5**
	baz=149							
CHIR	**Chirikof Islan**	**3.23**	**265**	Pn		**Pn**	**08 20 56.5**	**+0.3**
CHIR				Sn		**Sn**	**08 21 31.9**	**-2.7**
CHIR				IAML			08 21 32.2	
	comp=E,250nm,0.6s							
CHIR				IAML			08 21 44.8	
	comp=N,223nm,1.8s							
Q19K	**Cape Douglas,**	**3.35**	**325**	Pn		**Pn**	**08 20 59.6**	**+1.7**
Q19K				IAML			08 21 45.8	
	comp=N,504nm,0.8s							
Q19K	**Cape Douglas,**	**3.35**	**325**	P		**Pn**	**08 20 59.6**	**+1.7**
	baz=142							
KAPH	**Katmai Pasha**	**3.35**	**316**			**Pn**	**08 20 59.9**	**+1.9**
KAPH						**Sn**	**08 21 37.3**	**-0.6**
CNPM	**China Poot**	**3.36**	**348**			**Pn**	**08 20 58.7**	**+0.7**
KCG	**Knife Ck. Glac**	**3.49**	**308**			**Pn**	**08 21 01.8**	**+2.0**
KCG						**Sn**	**08 21 40.2**	**-1.0**
BRSE	**Bradley Lake S**	**3.53**	**353**			**Pn**	**08 21 00.6**	**+0.3**
BRSE						**Sn**	**08 21 40.4**	**-1.7**
BRSE	**Bradley Lake S**	**3.53**	**353**	P		**Pn**	**08 21 00.6**	**+0.3**
	baz=172							
BRSE				S		**Sn**	**08 21 40.3**	**-1.7**
	baz=172							
HOM	**Homer**	**3.54**	**346**			**Pn**	**08 21 01.6**	**+1.2**
HOM						**Sn**	**08 21 42.3**	**+0.1**
HOM	**Homer**	**3.54**	**346**	IAML			08 21 45.2	
	comp=E,278nm,0.6s							
HOM				IAML			08 21 45.6	
	comp=N,318nm,0.7s							
HOM	**Homer**	**3.54**	**346**	P		**Pn**	**08 21 01.6**	**+1.2**
	baz=164							
HOM				S		**Sn**	**08 21 42.3**	**+0.1**
	baz=164							
BRLK	**Bradley Lake**	**3.56**	**352**			**Pn**	**08 21 01.0**	**+0.2**
ANCK	**Angle Creek**	**3.60**	**305**			**Pn**	**08 21 03.3**	**+1.9**
KVTA	**Katmai Vly 10**	**3.61**	**308**			**Pn**	**08 21 03.5**	**+2.0**
AU22	**Augustine Moun**	**3.63**	**331**			**Pn**	**08 21 03.2**	**+1.5**
KAHC	**Katmai Hardscr**	**3.65**	**313**	P		**Pn**	**08 21 04.1**	**+2.0**
	baz=129							
Q23K	**Middleton Isla**	**3.71**	**29**	Pn		**Pn**	**08 21 03.5**	**+0.7**
Q23K				IAML			08 21 48.4	
	comp=E,162nm,0.3s							
Q23K				IAML			08 21 52.7	
	comp=N,128nm,0.8s							
Q23K	**Middleton Isla**	**3.71**	**29**			**Sn**	**08 21 43.6**	**-3.0**
Q23K	**Middleton Isla**	**3.71**	**29**	P		**Pn**	**08 21 03.4**	**+0.5**
	baz=212							
Q23K				S		**Sn**	**08 21 43.6**	**-3.0**
	baz=212							
MID	**Middleton Isla**	**3.71**	**30**	Pn		**Pn**	**08 21 03.4**	**+0.6**
MID				IAML			08 21 48.4	
	comp=E,168nm,0.3s							
MID				IAML			08 21 52.7	
	comp=N,124nm,0.7s							
MID	**Middleton Isla**	**3.71**	**30**	P		**Pn**	**08 21 03.6**	**+0.8**
CNTC	**Contact Creek**	**3.81**	**304**			**Pn**	**08 21 05.5**	**+1.1**
CNTC						**Sn**	**08 21 47.4**	**-1.9**
Q17K	**Contact Creek**	**3.81**	**304**	P		**Pn**	**08 21 05.5**	**+1.1**
	baz=119							
Q17K				S		**Sn**	**08 21 47.4**	**-1.9**
	baz=119							
P19K	**Oil Pt**	**3.84**	**334**			**Pn**	**08 21 06.2**	**+1.6**
P19K				IAML			08 21 53.9	
	comp=E,372nm,0.5s							
P19K				IAML			08 21 53.9	
	comp=N,351nm,0.5s							
P19K	**Oil Pt**	**3.84**	**334**	P		**Pn**	**08 21 05.9**	**+1.3**
	baz=151							
KELA	**Mount Kelaz**	**3.84**	**307**			**Pn**	**08 21 06.5**	**+1.8**
SEW	**Seward**	**3.87**	**3**	Pn		**Pn**	**08 21 05.3**	**+0.3**
SEW	**Seward**	**3.87**	**3**	P		**Pn**	**08 21 04.8**	**-0.1**
	baz=184							
P23K	**Montague Islan**	**3.99**	**19**			**Pn**	**08 21 07.1**	**+0.5**
P23K	**Montague Islan**	**3.99**	**19**	P		**Pn**	**08 21 07.1**	**+0.5**
	baz=200							
O20K	**Slope Mountain**	**4.10**	**341**			**Pn**	**08 21 08.8**	**+0.6**
O20K	**Slope Mountain**	**4.10**	**341**	P		**Pn**	**08 21 08.8**	**+0.6**
	baz=158							
ILSW	**Iliamna Southw**	**4.11**	**337**			**Pn**	**08 21 09.2**	**+0.8**
ILSW				IAML			08 21 59.2	
	comp=N,101nm,0.6s							
ILSW				IAML			08 21 59.8	
	comp=E,94nm,0.6s							
P18K	**Big Mountain,**	**4.24**	**320**	Pn		**Pn**	**08 21 10.9**	**+0.9**
P18K	**Big Mountain,**	**4.24**	**320**			**Sn**	**08 21 56.8**	**-2.8**
P18K	**Big Mountain,**	**4.24**	**320**	P		**Pn**	**08 21 11.1**	**+0.9**
	baz=136							
P18K				S		**Sn**	**08 21 56.8**	**-2.8**
	baz=136							

O22K	**Cooper Landing**	**4.24**	**1**			**Pn**	**08 21 11.1**	**+1.0**	
O22K	**Cooper Landing**	**4.24**	**1**			**Sn**	**08 21 56.2**	**-3.4**	
O22K	**Cooper Landing**	**4.24**	**1**	IAML			08 22 02.6		
	comp=E,311nm,0.7s								
O22K				IAML			08 22 07.4		
	comp=N,291nm,0.6s								
O22K	**Cooper Landing**	**4.24**	**1**	P		**Pn**	**08 21 10.4**	**+0.4**	
	baz=181								
O22K				S		**Sn**	**08 21 56.2**	**-3.4**	
	baz=181								
Q16K	**King Salmon**	**4.37**	**307**			**Pn**	**08 21 13.8**	**+1.9**	
Q16K						**Sn**	**08 22 01.1**	**-1.7**	
Q16K	**King Salmon**	**4.37**	**307**	P		**Pn**	**08 21 13.8**	**+1.9**	
	baz=121								
Q16K				S		**Sn**	**08 22 01.1**	**-1.7**	
	baz=121								
RSO	**Redoubt South**	**4.48**	**342**			**Pn**	**08 21 13.5**	**0.0**	
HIN	**Hinchinbrook I**	**4.53**	**22**	Pn		**Pn**	**08 21 15.3**	**+1.2**	
HIN				IAML			08 22 10.5		
	comp=N,207nm,0.7s								
P17K	**Kvichak River**	**4.57**	**313**			**Pn**	**08 21 15.7**	**+1.1**	
P17K	**Kvichak River**	**4.57**	**313**	P		**Pn**	**08 21 15.7**	**+1.1**	
	baz=127								
O18K	**Koktuh Hills**	**4.57**	**324**	Pn		**Pn**	**08 21 15.5**	**+0.8**	
O18K				IAML			08 22 10.3		
	comp=N,86nm,0.8s								
O18K	**Koktuh Hills**	**4.57**	**324**	P		**Pn**	**08 21 15.7**	**+1.0**	
	baz=140								
CAPN	**Captain Cook N**	**4.57**	**352**			**Pn**	**08 21 16.2**	**+1.5**	
CAPN				IAML			08 22 15.4		
	comp=E,151nm,0.6s								
CAPN				IAML			08 22 25.7		
	comp=N,190nm,0.5s								
O19K	**Port Alsworth**	**4.59**	**331**			**Pn**	**08 21 15.4**	**+0.6**	
O19K	**Port Alsworth**	**4.59**	**331**	IAML			08 22 09.6		
	comp=N,227nm,0.4s								
O19K	**Port Alsworth**	**4.59**	**331**	P		**Pn**	**08 21 15.4**	**+0.6**	
	baz=148								
DFR	**Drift River**	**4.59**	**343**			**Pn**	**08 21 15.0**	**+0.1**	
NCT	**North Crescent**	**4.60**	**341**			**Pn**	**08 21 15.0**	**-0.2**	
KAIM	**Kayak Island**	**4.70**	**36**			**Pn**	**08 21 17.9**	**+1.4**	
KAIM	**Kayak Island**	**4.70**	**36**	P		**Pn**	**08 21 17.4**	**+1.0**	
	baz=221								
CHGN	**Chignik**	**4.73**	**274**	Pn		**Pn**	**08 21 18.3**	**+1.5**	
EYAK	**Cordova Ski Ar**	**4.83**	**25**	Pn		**Pn**	**08 21 19.5**	**+1.3**	
EYAK	**Cordova Ski Ar**	**4.83**	**25**	P		**Pn**	**08 21 19.4**	**+1.1**	
EYAK	**Cordova Ski Ar**	**4.83**	**25**	P		**Pn**	**08 21 19.3**	**+1.1**	
	baz=209								
RC01	**Rabbit Creek A**	**4.85**	**1**			**Pn**	**08 21 19.2**	**+0.7**	
RC01				IAML			08 22 15.9		
	comp=N,100nm,0.4s								
RC01				IAML			08 22 17.2		
	comp=E,80nm,0.3s								
RC01	**Rabbit Creek A**	**4.85**	**1**	P		**Pn**	**08 21 19.0**	**+0.5**	
	baz=181								
FID	**Port Fidalgo**	**4.86**	**20**			**Pn**	**08 21 19.3**	**+0.7**	
FID				IAML			08 22 13.4		
	comp=E,167nm,0.5s								
FID				IAML			08 22 16.4		
	comp=N,104nm,0.5s								
GLI	**Glacier Island**	**4.87**	**17**			**Pn**	**08 21 19.7**	**+0.9**	
GLI				IAML			08 22 14.3		
	comp=N,133nm,0.7s								
GLI				IAML			08 22 14.3		
	comp=E,136nm,0.5s								
GLI	**Glacier Island**	**4.87**	**17**	P		**Pn**	**08 21 19.5**	**+0.8**	
	baz=199								
RAGM	**Ragged Mountai**	**4.98**	**32**			**Pn**	**08 21 21.8**	**+1.5**	
SUCK	**Suckling Hills**	**5.02**	**38**			**Pn**	**08 21 22.4**	**+1.5**	
SUCK				IAML			08 22 23.6		
	comp=E,156nm,0.5s								
HMT	**Hamilton**	**5.07**	**34**			**Pn**	**08 21 23.2**	**+1.7**	
NICHA	**Nichawak Mount**	**5.08**	**36**			**Pn**	**08 21 23.5**	**+1.8**	
N20K	**Mount Spurr**	**5.10**	**347**	P		**Pn**	**08 21 21.8**	**-0.2**	
	baz=165								
SPCN	**Chakachatna No**	**5.12**	**348**			**Pn**	**08 21 23.2**	**+0.9**	
GOAT	**Goat Mountain**	**5.13**	**30**			**Pn**	**08 21 23.9**	**+1.6**	
P16K	**Nushagak River**	**5.15**	**306**			**Pn**	**08 21 23.9**	**+1.3**	
P16K	**Nushagak River**	**5.15**	**306**	P		**Pn**	**08 21 23.9**	**+1.3**	
	baz=119								
N19K	**Bonanza Creek**	**5.16**	**334**			**Pn**	**08 21 23.1**	**+0.3**	
N19K	**Bonanza Creek**	**5.16**	**334**	P		**Pn**	**08 21 23.1**	**+0.3**	
	baz=150				

CUT	Chulitna	6.17	358			Pn	08 21 38.3	+1.7
CUT	Chulitna	6.17	358	P		Pn	08 21 39.5	+2.9
	baz=178							
M24K	Tolsona, Glenn	6.18	17			Pn	08 21 38.8	+2.1
M24K	Tolsona, Glenn	6.18	17	P		Pn	08 21 38.5	+1.7
	baz=200							
SAMH	Samovar Hills	6.20	47			Pn	08 21 38.6	+1.6
TABL	Table Mountain	6.24	44			Pn	08 21 39.3	+1.5
MCARA	McCarthy VSAT	6.27	32			Pn	08 21 39.4	+1.5
MCARA	McCarthy VSAT	6.27	32	P		Pn	08 21 39.4	+1.5
	baz=218							
PTPK	Patty Peak	6.29	35			Pn	08 21 39.9	+1.5
N16K	Nishlik Lake	6.29	316			Pn	08 21 39.7	+1.5
N16K	Nishlik Lake	6.29	316	P		Pn	08 21 39.7	+1.5
	baz=128							
PCA	Pinnacle	6.40	49	Pn		Pn	08 21 42.1	+2.3
PINM	Pinnacle	6.40	49	P		Pn	08 21 41.1	+1.3
	baz=237							
WACK	Wrangell Chich	6.43	24			Pn	08 21 41.4	+1.1
WAT6	Susitna Watana	6.44	9			Pn	08 21 41.6	+1.1
WAT6	Susitna Watana	6.44	9	P		Pn	08 21 41.6	+1.1
	baz=191							
L19K	White Mountain	6.46	339			Pn	08 21 40.7	+0.1
L19K	White Mountain	6.46	339	P		Pn	08 21 40.7	+0.1
	baz=155							
M17K	Holitna River	6.47	326			Pn	08 21 41.6	+1.0
M17K	Holitna River	6.47	326	P		Pn	08 21 41.6	+1.0
	baz=140							
CTG	Chitna Glacier	6.51	40	P		Pn	08 21 42.6	+1.2
	baz=227							
CTGM	Chitina Glacie	6.51	40			Pn	08 21 42.6	+1.2
L20K	Farewell, AK	6.56	344			Pn	08 21 42.2	+0.2
L20K	Farewell, AK	6.56	344	P		Pn	08 21 42.2	+0.2
	baz=160							
PNL	Peninsula	6.56	54			Pn	08 21 43.7	+1.7
PNL	Peninsula	6.56	54	P		Pn	08 21 43.7	+1.7
PNL	Peninsula	6.56	54	P		Pn	08 21 43.7	+1.7
	baz=243							
BCPM	Bancas Point	6.59	52			Pn	08 21 43.9	+1.6
WAT7	Susitna Watana	6.62	4			Pn	08 21 44.5	+1.6
HARP	HAARP	6.63	20			Pn	08 21 44.8	+1.9
HARP	HAARP	6.63	20	P		Pn	08 21 44.8	+1.9
	baz=204							
WAT1	Susitna Watana	6.63	5			Pn	08 21 44.6	+1.6
WAT1	Susitna Watana	6.63	5	P		Pn	08 21 44.6	+1.6
	baz=186							
N15K	Kwethluk River	6.65	310			Pn	08 21 45.5	+2.3
N15K	Kwethluk River	6.65	310	P		Pn	08 21 45.5	+2.3
	baz=122							
M16K	Timber Creek	6.71	319			Pn	08 21 45.2	+1.2
M16K	Timber Creek	6.71	319	P		Pn	08 21 45.2	+1.2
	baz=131							
L18K	Granite Mounta	6.91	333			Pn	08 21 46.9	+0.1
L18K	Granite Mounta	6.91	333	P		Pn	08 21 46.9	+0.1
	baz=147							
DHY	Denali Highway	6.96	10			Pn	08 21 48.5	+0.9
DHY	Denali Highway	6.96	10	P		Pn	08 21 48.5	+0.9
	baz=192							
PAX	Paxson	7.10	17			Pn	08 21 50.8	+1.3
PAX	Paxson	7.10	17	P		Pn	08 21 50.8	+1.3
	baz=200							
RND	Reindeer	7.20	4			Pn	08 21 51.7	+1.0
TRF	Thorofare Moun	7.22	359			Pn	08 21 52.0	+0.9
TRF	Thorofare Moun	7.22	359	P		Pn	08 21 52.0	+0.9
	baz=178							
O29M	Mount Kennedy	7.23	51			Pn	08 21 52.8	+1.6
O29M	Mount Kennedy	7.23	51	P		Pn	08 21 52.8	+1.6
	baz=241							
YUK2	White River	7.26	36			Pn	08 21 53.8	+2.2
CAST	Castle Rocks	7.27	352			Pn	08 21 53.7	+2.0
CAST	Castle Rocks	7.27	352	P		Pn	08 21 53.7	+2.0
	baz=170							
YUK8	Steele Glacier	7.30	42			Pn	08 21 54.8	+2.5
YUK8	Steele Glacier	7.30	42	P		Pn	08 21 54.8	+2.5
	baz=231							
P29M	Windy Craggy	7.31	57			Pn	08 21 53.6	+1.3
P29M	Windy Craggy	7.31	57	P		Pn	08 21 53.6	+1.3
	baz=248							
TTA	Tatalina	7.37	338	P		Pn	08 21 53.5	+0.4
YUK3	Moose Creek	7.38	37			Pn	08 21 55.7	+2.3
YUK3	Moose Creek	7.38	37	P		Pn	08 21 55.7	+2.3
	baz=226							
MENT	Mentasta	7.40	23			Pn	08 21 55.7	+2.1
MCK	McKinley	7.52	3			Pn	08 21 57.2	+2.1
MCK	McKinley	7.52	3	P		Pn	08 21 57.2	+2.1
	baz=184							
YUK7	Dusty Glacier	7.53	50			Pn	08 21 57.7	+2.3
L26K	Log Cabin Wild	7.56	23			Pn	08 21 58.5	+2.8
L26K	Log Cabin Wild	7.56	23	P		Pn	08 21 58.5	+2.8
	baz=209							
YUK6	Outpost Mounta	7.65	47	P		Pn	08 21 59.6	+2.6
	baz=237							
K17K	Iditarod	7.75	330			Pn	08 21 59.0	+0.8
K17K	Iditarod	7.75	330	P		Pn	08 21 59.0	+0.8
	baz=143							
YUK4	Talbot Arm	7.76	44	P		Pn	08 22 02.5	+3.9
	baz=234							
K24K	Donnelly Dome	7.85	14	P		Pn	08 22 02.5	+2.9
	baz=197							
BPAW	Bear Paw Mtn.	7.89	357			Pn	08 22 01.5	+1.3
BPAW	Bear Paw Mtn.	7.89	357	P		Pn	08 22 01.5	+1.3
	baz=176							
HYT	Haines Junctio	7.95	50	Pn		Pn	08 22 03.1	+2.0
L15K	Ungalak Mounta	8.07	317			Pn	08 22 04.1	+1.5
L15K	Ungalak Mounta	8.07	317	P		Pn	08 22 04.1	+1.5
	baz=127							
SIT	Sitka	8.09	78	P		Pn	08 22 01.6	-1.2
J20K	Nowinta River	8.22	347			Pn	08 22 05.0	+0.3
J20K	Nowinta River	8.22	347	P		Pn	08 22 04.9	+0.3
	baz=163							
J19K	Poorman	8.27	342			Pn	08 22 05.3	0.0
J19K	Poorman	8.27	342	P		Pn	08 22 05.4	0.0
	baz=157							
SCRK	Sand Creek	8.29	18			Pn	08 22 07.0	+1.2
SCRK	Sand Creek	8.29	18	P		Pn	08 22 07.0	+1.2
	baz=204							
WRH	Wood River Hil	8.29	6			Pn	08 22 07.4	+1.7
HDA	Harding Lake	8.31	9			Pn	08 22 07.8	+1.8
HDA	Harding Lake	8.31	9	P		Pn	08 22 07.8	+1.8
	baz=192							
L14K	Kuka Creek	8.35	313			Pn	08 22 08.6	+2.1
L14K	Kuka Creek	8.35	313	P		Pn	08 22 08.6	+2.1
	baz=122							
NEA2	Nenana	8.38	3			Sn	08 23 42.2	+0.8
SKAG	Skagway	8.42	62	P		Pn	08 22 09.6	+2.2
CCB	Clear Creek Bu	8.49	6			Pn	08 22 10.5	+2.2
M29M	Somme Creek	8.52	39			Pn	08 22 10.6	+1.7
M29M	Somme Creek	8.52	39	P		Pn	08 22 10.6	+1.7
	baz=228							
O30N	Mendenhall	8.53	52			Pn	08 22 10.9	+1.9
O30N	Mendenhall	8.53	52	P		Pn	08 22 10.6	+1.6
	baz=244							
R32K	Eaglecrest	8.59	70			Pn	08 22 10.6	+0.9
R32K	Eaglecrest	8.59	70	P		Pn	08 22 10.6	+0.9
	baz=263							
JIS	Juneau Island	8.66	70			Pn	08 22 11.5	+0.9
JIS	Juneau Island	8.66	70	P		Pn	08 22 11.6	+0.9
IL31		8.68	9			Pn	08 22 12.4	+1.6
ILAR	Eielson Array	8.68	9	Pn		Pn	08 22 12.6	+1.6
	comp=N,1.4nm,0.3s,baz=190,slow=13,SNR=67							
ILAR				Sn		Sn	08 23 45.5	-3.1
	comp=N,0.9nm,0.3s,baz=198,slow=20,SNR=8.7							
ILAR				LR		LR	08 26 05.5	
	comp=N,50nm,18.5s,baz=216,slow=40							
	comp=N,2.8nm,0.3s							
J25K	Salcha River,	8.68	13			Pn	08 22 12.8	+1.8
COLA	College	8.71	6			Pn	08 22 14.3	+2.9
COLA	College	8.71	6	P		Pn	08 22 14.5	+3.2
MLY	Manley	8.82	358			Pn	08 22 13.3	+0.4
MLY	Manley	8.82	358	P		Pn	08 22 13.3	+0.4
	baz=177							
J26L	Joseph Creek	8.85	18			Pn	08 22 14.6	+1.2
I23K	Minto, Yukon-K	8.93	2			Pn	08 22 16.1	+1.7
I21K	Tanana	9.01	354			Pn	08 22 17.6	+2.0
WHY	Whitehorse	9.03	55			Pn	08 22 18.2	+2.4
L29M	L29M	9.09	36			Pn	08 22 18.2	+1.6
L29M	L29M	9.09	36	P		Pn	08 22 18.2	+1.6
	baz=226							
M30M	Minto, Yukon	9.21	41			Pn	08 22 20.7	+2.4
P32M	Atlin	9.24	62	Pn		Pn	08 22 20.3	+1.5
P32M	Atlin	9.24	62	P		Pn	08 22 20.0	+1.2
	baz=256							
U33K	Whale Pass	9.37	84			Pn	08 22 18.4	-2.1
U33K	Whale Pass	9.37	84	P		Pn	08 22 18.4	-2.1
	baz=278							
CRAG	Craig	9.48	88	P		Pn	08 22 21.9	0.0
PRP	Porcupine Dome	9.54	11			Pn	08 22 24.3	+1.5
PRP	Porcupine Dome	9.54	11	P		Pn	08 22 24.3	+1.5
	baz=195							
H21K	Melozitna Rive	9.54	353			Pn	08 22 22.5	-0.3
H21K	Melozitna Rive	9.54	353	P		Pn	08 22 22.5	-0.3
	baz=170							
EGAK	Eagle	9.57	23	Pn		Pn	08 22 24.6	+1.5
H24K	Noodor Dome	9.67	5			Pn	08 22 26.6	+2.1
H24K	Noodor Dome	9.67	5	P		Pn	08 22 26.6	+2.1
	baz=187							
K29M	Barlow Dome	9.80	34			Pn	08 22 28.2	+1.8
K29M	Barlow Dome	9.80	34	P		Pn	08 22 28.2	+1.8
	baz=225							
UNV	Unalaska Valle	9.82	263	P		Pn	08 22 26.5	0.0
H18K	Honhosa River	9.83	339			Pn	08 22 27.9	+1.2
H18K	Honhosa River	9.83	339	P		Pn	08 22 27.9	+1.2
	baz=151							
P33M	Teslin, Yukon	9.85	59	Pn		Pn	08 22 28.7	+1.6
P33M	Teslin, Yukon	9.85	59	P		Pn	08 22 28.3	+1.3
	baz=254							
Q32M	Nakina River	9.85	67			Pn	08 22 28.7	+1.5
Q32M	Nakina River	9.85	67	P		Pn	08 22 28.7	+1.5
	baz=262							
IMAR	Indian Mountai	9.94	351	Pn		Pn	08 22 28.1	-0.1
G23K	Bananza Creek	10.50	360	Pn		Pn	08 22 36.6	+0.7
G23K	Bananza Creek	10.50	360	P		Pn	08 22 36.7	+0.9
	baz=180							
G24K	Hadweenzic Riv	10.55	5			Pn	08 22 38.2	+1.7
R33M	Jennings River	10.58	65	Pn		Pn	08 22 38.7	+1.6
FYU	Fort Yukon	10.59	10	Pn		Pn	08 22 37.8	+0.8
J30M	Hart River	10.69	33	Pn		Pn	08 22 41.7	+3.1
DLBC	Dease Lake	10.96	70	Pn		Pn	08 22 43.6	+1.3
DLBC	Dease Lake	10.96	70	Pn		Pn	08 22 43.9	+1.6
	comp=N,0.5nm,0.3s,baz=262,slow=8.4,SNR=18							
DLBC				Sn		Sn	08 24 40.5	-4.4
	comp=N,0.5nm,0.3s,baz=351,slow=23,SNR=2.6							
	comp=N,3.7nm,0.8s							
F21K	Alatna River	11.13	353			Pn	08 22 44.9	+0.3
F24K	Squaw Lake	11.35	4			Pn	08 22 48.7	+1.2
BMAR	Burnt Mountain	11.49	10	Pn		Pn	08 22 50.9	+1.4
E19K	Redstone River	11.75	346	Pn		Pn	08 22 54.3	+1.4
E22K	Anaktuvuk Pass	11.96	357	Pn		Pn	08 22 58.6	+2.8
E18K	Ikpikpahlearik C	12.26	340	Pn		Pn	08 23 00.6	+0.6
F28M	Old Crow	12.32	18	Pn		Pn	08 23 01.7	+1.0
TOLK	Toolik Lake Re	12.44	1			Pn	08 23 03.7	+1.4
D22K	Ayikyak River	12.74	355	Pn		Pn	08 23 07.8	+1.4
D19K	Kuna River	12.84	346	Pn		Pn	08 23 08.6	+0.7
G31M	Satah River	12.98	28	Pn		Pn	08 23 11.8	+2.1
C18K	Utukok River	13.45	342	Pn		Pn	08 23 17.0	+0.8
B21K	Ikpikpuk River	13.58	353	Pn		Pn	08 23 19.1	+1.3
INK	Inuvik	14.22	25	Pn		Pn	08 23 29.4	+2.8
INK	Inuvik	14.22	25	Pn		Pn	08 23 28.9	+2.2
	comp=N,0.1nm,0.3s,baz=201,slow=15,SNR=9.1							
INK				LR		LR	08 29 05.3	
	comp=N,28nm,20.6s,baz=336,slow=37							
C36M	Paulatuk	17.45	31	P		Pn	08 24 09.6	+1.0
A36M	Sachs Harbour	18.85	24	P		Pn	08 24 27.0	+1.3
A36M				IAmb		IAmb	08 24 42.3	
	comp=Z,8.5nm,0.8s							
YKAB2	New Yellowknif	18.85	56	P		P	08 24 27.1	+1.8
YKA	Yellowknife Ar	18.85	56	P		P	08 24 26.0	+0.7
YKA	Yellowknife Ar	18.85	56	P		P	08 24 26.6	+1.2
	comp=Z,0.2nm,0.3s,baz=266,slow=9.8,SNR=35							
	comp=Z,1.6nm,0.7s							
F03A	Seaside	19.39	111	P		P	08 24 31.9	+0.5
EDM	Edmonton	21.17	83	P		P	08 24 52.2	+1.5
EDM				IAmb		IAmb	08 24 54.9	
	comp=Z,1.5nm,0.6s							
F07A	Phinny Hill Vi	21.34	106	P		P	08 24 52.8	+0.4
PDAR	Pinedale Array	29.01	100	P		P	08 26 05.5	0.0
	comp=Z,0.5nm,0.7s,baz=318,slow=5.7,SNR=4.6							
	comp=Z,0.5nm,0.7s							
TXAR	Lajitas Array	42.15	110	P		P	08 27 57.5	-0.5
	comp=Z,0.4nm,0.8s,baz=336,slow=2.7,SNR=4.5							
	comp=Z,0.4nm,0.8s							
H11N2	WAKE ISLAND Hy	48.56	239	T		T	09 20 23.7	
	baz=34,slow=74							
H11N3	WAKE ISLAND Hy	48.56	239	T		T	09 20 17.1	
	baz=34,slow=74							
H11N1	WAKE ISLAND Hy	48.58	239	T		T	09 20 21.6	
	baz=34							
SONM	Songino Array	58.38	310	P		P	08 30 00.8	-0.1
	comp=Z,0.3nm,0.5s,baz=44,slow=6.6,SNR=2.1							
	comp=Z,0.3nm,0.5s							
FINES	FINESS Array B	62.60	2	P		P	08 30 28.7	-0.5
	comp=Z,1.9nm,1.1s,baz=354,slow=15,SNR=0.8							
	comp=Z,1.9nm,1.1s							
ARU	Arti	65.33	343	LR		LR	09 01 39.8	
	comp=Z,47nm,21.8s,baz=99,slow=38							
BVAR	Borovoye Array	66.16	335	P		P	08 30 52.0	-0.6
	comp=Z,0.4nm,0.8s,baz=35,slow=3.5,SNR=1.9							
	comp=Z,0.4nm,0.8s							
KURBB	Kurchatov Arra	66.18	329	P		P	08 30 52.6	-0.2
	comp=Z,0.2nm,0.6s,baz=31,slow=7.5,SNR=1.7							
	comp=Z,0.2nm,0.6s							
MKAR	Makanchi Array	68.41	324	P		P	08 31 06.3	-0.8
	comp=Z,0.6nm,0.9s,baz=35,slow=3.5,SNR=3.6							
	comp=Z,0.6nm,0.9s							
AKTO	Aktyubinsk	71.18	342	LR		LR	09 02 46.4	
	comp=Z,27nm,21.7s,baz=196,slow=36							
BOSA	Boshof	152.16	9	PKPbc		PKPbc	08 40 00.4	-0.6
	comp=Z,1.6nm,0.7s,baz=93,slow=4.2,SNR=3.9							

*IDC **18** 08:28:10.9±2.4,31°.45S×68°.77W,h86km±20km,mb3.8/9, mbtmp4.1/13,Error ellipse: s-maj=25.0km s-min=15.7km az=82.0*

*SJA **18** 08:28:12.3±1.4,31°.44S×68°.86W,h112km±3km,ML3.9, MW3.9*

*GUC **18** 08:28:13.2±0.7,31°.44S×69°.06W,h146km±9km,ML4.2*

ISC 18 08:28:12.9±0.6,**31°.44S**±0°.03×**68°.81W**±0°.04,**h108**km±4km, **n71**,σ1°.22/93,**mb4.1**/9,**7C-5D**,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJA	San Juan	0.23	113	*i* P	Pn	08 28 29.2	+1.0
SJA				*e*S	Sn	08 28 41.6	+1.9
SJA				IAML		08 28 45.8	
	comp=Z,2μm,0.2s						
RTLL	Cerro Villicun	0.31	69	*i* P	Pn	08 28 28.3	-0.2
RTLL				⇓*e*S	Sn	08 28 41.2	+1.0
RTLL				IAML		08 28 41.7	
	comp=Z,5μm,0.5s						
RTLL	Cerro Villicun	0.31	69	⇓*i*P	Pn	08 28 29.1	+0.6
RTLL				*e*S	Sn	08 28 40.2	0.0
RTCV	Cerro Valdivia	0.48	152	*i* P	Pn	08 28 30.3	+0.8
RTCV				⇓*e*S	Sn	08 28 42.8	+0.9
RTCV				IAML		08 28 45.1	
	comp=Z,314nm,1.6s						
DOCA	Reserva Natura	0.54	334	*i* P	Pn	08 28 30.0	-0.3
DOCA				⇓*e*S	Sn	08 28 44.1	+0.8
RTLS	Leoncito	0.55	229	*i* P	Pn	08 28 30.9	+0.7
RTLS				*e*S	Sn	08 28 44.1	+0.8
RTLS				IAML		08 28 48.2	
	comp=Z,2μm,0.2s						
ACCO	Cerro Coronel	0.88	345	*i* P	Pn	08 28 34.3	+1.2
ACCO				*e*S	Sn	08 28 47.8	-0.5
ACCO				IAML		08 28 52.6	
	comp=Z,883nm,2.4s						
ASAL	Salagasta	1.15	181	*i* P	Pn	08 28 36.7	+1.1
ASAL				*e*S	Sn	08 28 54.8	+2.0
ASAL				IAML		08 28 55.2	
	comp=Z,1μm,0.6s						
ACDV	Cuesta del Vie	1.29	348	*i* P	Pn	08 28 38.8	+1.4
ACDV				*e*S	Sn	08 28 57.7	+1.9
ACDV				IAML		08 28 58.5	
	comp=Z,3μm,0.6s						
AROD	Rodeo	1.39	336	*i* P	Pn	08 28 40.2	+1.5
AROD				*e*S	Sn	08 28 59.4	+1.3
AVFE	Valle Fertil	1.40	57	*i* P	Pn	08 28 39.7	+1.2
AVFE				*e*S	Sn	08 28 59.3	+1.5
AVFE				IAML		08 28 60.0	
	comp=Z,1μm,0.6s						
ARCO	CERRO ARCO	1.40	184	*i* P	Pn	08 28 39.8	+1.2
ARCO				IAML		08 29 01.1	
	comp=Z,2μm,0.7s						
AAGR	Agrelo	1.64	181	*i* P	Pn	08 28 42.5	+1.1
AAGR				IAML		08 29 07.3	
	comp=Z,892nm,1.9s						
CO03	El Pedregal	1.72	290	*i* P	Pn	08 28 42.9	+0.5
CO03				IAML		08 29 07.7	
	comp=Z,886nm,1.0s						
CO03	El Pedregal	1.72	290	*e*P	Pn	08 28 43.5	+1.2
CO03				*e*S	Sn	08 29 06.0	+1.2
CO03				IAML		08 29 08.8	
	comp=E,2μm,0.1s						
CO01	Juntas del Tor	1.83	322	*i* P	Pn	08 28 45.4	+1.5
CO01				IAML		08 29 11.9	
	comp=Z,502nm,0.4s						
CO01	Juntas del Tor	1.83	322⇑	*i*P	Pn	08 28 46.1	+2.2
CO01				*e*S	Sn	08 29 10.5	+3.0
CO01				IAML		08 29 11.6	
	comp=E,2μm,0.5s						
ACHE	Chepes	1.86	82	*i* P	Pn	08 28 45.4	+1.3
CO02	Combarbal	1.89	277	*i* P	Pn	08 28 44.7	+0.2
CO02				IAML		08 29 11.1	
	comp=Z,726nm,0.5s						
CO02	Combarbal	1.89	277⇓	*i*P	Pn	08 28 45.4	+0.9
CO02				*i* S	Sn	08 29 09.9	+1.2
CO02				IAML		08 29 13.3	
	comp=N,2μm,0.2s						
AGUA	GUANDACOL	1.97	8	*i* P	Pn	08 28 47.3	+1.8
AGUA				IAML		08 29 16.2	
	comp=Z,281nm,0.3s						
VA03	San Esteban	1.98	228	*i* P	Pn	08 28 46.0	+0.3
VA03				IAML		08 29 16.9	
	comp=Z,741nm,0.1s						
VA03	San Esteban	1.98	228⇑	*i*P	Pn	08 28 46.6	+1.0
VA03				*i* S	Sn	08 29 12.2	+1.5
VA03				IAML		08 29 13.6	
	comp=E,2μm,0.3s						
AVIZ	Vizcacheras	2.04	173	*i* P	Pn	08 28 47.7	+1.2
GO04	Tololo Observa	2.13	306	*i* P	Pn	08 28 48.4	+0.7
GO04	Tololo Observa	2.13	306	*e*P	Pn	08 28 48.4	+0.7
GO04				*e*S	Sn	08 29 15.4	+1.2
FCH	Farellones	2.26	213⇑	*i*P	Pn	08 28 50.8	+1.4
FCH				*e*S	Sn	08 29 19.9	+2.4
MT10	Hacienda Santa	2.34	218⇑	*i*P	Pn	08 28 51.4	+1.1
MT10				*e*S	Sn	08 29 20.8	+1.8
MT10				IAML		08 29 23.5	
	comp=E,1μm,0.4s						
MT03	Universidad Ad	2.50	215	*i* P	Pn	08 28 52.9	+0.5
MT03				IAML		08 29 26.1	
	comp=Z,725nm,0.2s						
MT03	Universidad Ad	2.50	215⇑	*e*P	Pn	08 28 53.3	+0.9
MT03				*e*S	Sn	08 29 24.5	+1.8
MT03				IAML		08 29 26.2	
	comp=N,1μm,0.2s						
MT05	Renca	2.54	219	*i* P	Pn	08 28 52.9	0.0
MT05				IAML		08 29 30.4	
	comp=Z,409nm,0.2s						
MT05	Renca	2.54	219	*e*P	Pn	08 28 53.6	+0.8
MT05				*e*S	Sn	08 29 24.6	+1.2
MT05				IAML		08 29 28.7	
	comp=N,1μm,0.2s						
CO06	Fray Jorge	2.54	287	*e*P	Pn	08 28 52.1	-0.7
ACLC	CERRO LA CRUZ	2.57	39	*i* P	Pn	08 28 54.4	+1.1
ACLC				IAML		08 29 54.6	
	comp=Z,1μm,0.9s						
CO05	La Serena	2.58	305	*e*P	Pn	08 28 53.5	+0.1
CO05				IAML		08 29 24.9	
	comp=E,1μm,0.1s						
MT15	Las Vizcachas	2.59	213	*e*P	Pn	08 28 54.4	+1.0
LMEL	Las Melosas	2.67	206	*e*P	Pn	08 28 56.0	+1.4
MT02	Curacav	2.68	227	*i* P	Pn	08 28 54.2	-0.4
MT02				IAML		08 29 27.6	
	comp=Z,192nm,0.2s						
MT02	Curacav	2.68	227⇑	*e*P	Pn	08 28 53.9	-0.7
MT12	Pirque	2.72	212⇑	*i*P	Pn	08 28 55.8	+0.6
VCA	Vinchina	2.75	11	*i* P	Pn	08 28 56.6	+0.9
VCA				IAML		08 29 34.2	
	comp=Z,677nm,0.6s						
AC05	El Transito	2.89	334	*i* P	Pn	08 28 58.7	+1.2
AC05				IAML		08 29 43.2	
	comp=Z,341nm,0.5s						
LCO	Las Campanas	2.92	325	*i* P	Pn	08 28 58.1	0.0
LCO				IAML		08 29 36.5	
	comp=Z,2μm,0.4s						
MT01	Popeta	3.18	220	*i* P	Pn	08 29 00.2	-1.0
MT01				IAML		08 29 37.8	
	comp=Z,145nm,0.5s						
RFA	San Rafael	3.33	175	*i* P	Pn	08 29 03.3	-0.1
RFA				IAML		08 30 12.7	
	comp=Z,398nm,0.6s						
BO01	Tunca	3.51	212	*i* P	Pn	08 29 04.8	-0.8
BO01				IAML		08 29 48.5	
	comp=Z,92nm,0.8s						
TINO	Tinogasta	3.53	18	*i* P	Pn	08 29 08.3	+2.2
BO02	Sierra Bellavi	3.73	206	*i* P	Pn	08 29 08.2	-0.5
BO02				IAML		08 29 56.7	
	comp=Z,125nm,0.4s						
AC04	Llanos de Chal	3.78	328	*i* P	Pn	08 29 09.2	0.0
AC04				IAML		08 29 57.9	
	comp=Z,169nm,0.5s						
GO03	Copiap	4.03	342	*i* P	Pn	08 29 12.6	-0.1
EDS3	Malargue	4.35	186	*i* P	Pn	08 29 17.6	+0.6
AC02	Maricunga	4.60	356	*i* P	Pn	08 29 21.7	+1.0
AC02				IAML		08 30 17.9	
	comp=Z,86nm,0.7s						
LVC	Limon Verde	8.80	359	P	Pn	08 30 15.7	-1.8
	comp=Z,13nm,0.5s,baz=143,slow=14,SNR=48						
LV

WRA	**Warramunga Arr**	**29.86**	**164**	P		**P**	**08 41 51.2**	**-0.5**
	0.5nm,0.7s,baz=341,slow=8.1,SNR=6.4							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**33.32**	**167**	P		**P**	**08 42 22.7**	**+0.5**
	0.4nm,0.3s,baz=349,slow=7.2,SNR=24							
	0.4nm,0.3s							
USRK	**Ussuriysk Ar.**	**35.49**	**7**	P		**P**	**08 42 41.4**	**+0.7**
	1.5nm,0.6s,baz=193,slow=8.5,SNR=2.7							
	1.5nm,0.6s							
KLR	**Kul'dur**	**40.43**	**6**	P		**P**	**08 43 21.6**	**-0.6**
	0.5nm,0.5s,baz=179,slow=5.1,SNR=4.3							
	0.5nm,0.5s							
STKA	**Stephens Creek**	**43.24**	**161**	P		**P**	**08 43 45.5**	**+0.1**
	0.5nm,0.3s,baz=356,slow=8.4,SNR=4.7							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**52.94**	**323**	P		**P**	**08 45 00.3**	**+0.3**
	0.5nm,0.7s,baz=123,slow=7.7,SNR=5.9							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**57.02**	**326**	P		**P**	**08 45 29.8**	**+0.3**
	0.3nm,0.5s,baz=117,slow=6.6,SNR=4.0							
	0.3nm,0.5s							
FINES	**FINESS Array B**	**86.93**	**332**	P		**P**	**08 48 27.4**	**-0.6**
	1.2nm,0.9s,baz=68,slow=4.4,SNR=7.3							
	1.2nm,0.9s							

*MDD **18** 08:52:58.0±0.5, 35°.49N×3°.84W, h0km, mb_Lg2.5/13, Error ellipse: s-maj=4.6km s-min=2.8km az=11.0*
*CNRM **18** 08:53:00.8, 35°.31N×3°.77W, h26km, ML2.4*
ISC 18 08:52:58.9±1.0, 35°.49N±0°.02×3°.76W±0°.02, h24km±10km, n42, σ1°33/56, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.31**	**209**	P	**Pb**	**08 53 05.9**	**-0.1**
PALE	**Palemas**	**0.31**	**209**	S	**Sb**	**08 53 10.5**	**-0.3**
GOG	**Mont Gurugu**	**0.67**	**113**	P	**Pn**	**08 53 12.6**	**-0.4**
GOG	**Mont Gurugu**	**0.67**	**113**	S	**Sn**	**08 53 22.9**	**+0.1**
EMEL	**Melilla**	**0.68**	**106**	Pg	**Pb**	**08 53 12.3**	**+0.2**
EMEL				Sg	**Sb**	**08 53 21.4**	**+0.3**
EALB	**Alboran**	**0.74**	**52**	Pg	**Pb**	**08 53 12.8**	**-0.4**
EALB				Sg	**Sb**	**08 53 23.2**	**+0.3**
EALB				*i* Vmb_Lg		08 53 25.8	
TAF	**Taforalt**	**1.29**	**121**	P	**Pn**	**08 53 21.6**	**+0.2**
TAF	**Taforalt**	**1.29**	**121**	S	**Sb**	**08 53 38.3**	**-0.3**
SMIR	**Smir Dam**	**1.34**	**279**	P	**Pb**	**08 53 24.2**	**+0.9**
SMIR	**Smir Dam**	**1.34**	**279**	S	**Sb**	**08 53 43.5**	**+3.5**
CHEFC	**Chefchaouen**	**1.35**	**254**	P	**Pb**	**08 53 23.4**	**-0.1**
CHEFC	**Chefchaouen**	**1.35**	**254**	S	**Sn**	**08 53 39.4**	**-0.1**
EMIJ	**Mijas**	**1.36**	**323**	Pg	**Pn**	**08 53 21.9**	**-0.4**
EMIJ				Sg	**Sb**	**08 53 39.8**	**-0.8**
EMIJ				*i* Vmb_Lg		08 53 44.8	
ECEU	**Ceuta**	**1.38**	**288**	Pg	**Pn**	**08 53 22.2**	**-0.5**
ECEU				Sg	**Sn**	**08 53 38.3**	**-1.9**
ECEU				*i* Vmb_Lg		08 53 42.8	
ELGU	**Los Guajares,**	**1.38**	**4**	Pg	**Pn**	**08 53 22.9**	**+0.2**
ELGU				Sg	**Sb**	**08 53 41.3**	**-0.1**
ELGU				*i* Vmb_Lg		08 53 43.9	
JBK	**JBK**	**1.51**	**139**	P	**Pn**	**08 53 24.8**	**+0.3**
JBK	**JBK**	**1.51**	**139**	S	**Sn**	**08 53 43.5**	**0.0**
EBER	**Berja**	**1.57**	**26**	Pn	**Pn**	**08 53 25.1**	**-0.4**
EBER				Sn	**Sb**	**08 53 46.8**	**-0.2**
EBER				*i* Vmb_Lg		08 53 58.5	
EGOR	**Sierra Gorda,**	**1.65**	**350**	Pn	**Pn**	**08 53 26.7**	**+0.3**
EGOR				Sn	**Sb**	**08 53 48.6**	**-0.4**
EGOR				*i* Vmb_Lg		08 53 53.2	
EQUE	**Quentar**	**1.74**	**8**	Pn	**Pn**	**08 53 27.7**	**+0.1**
EQUE				Sn	**Sb**	**08 53 50.9**	**-0.6**
EQUE				*i* Vmb_Lg		08 53 59.9	
RSA	**Sarsar**	**1.79**	**251**	P	**Pb**	**08 53 30.3**	**-0.8**
RSA	**Sarsar**	**1.79**	**251**	S	**Sn**	**08 53 51.2**	**+0.8**
MD31	**MD31**	**2.74**	**198**	P	**Pn**	**08 53 41.7**	**+0.3**
MD31	**MD31**	**2.74**	**198**	S	**Sn**	**08 54 10.8**	**-3.0**
MDT	**Midelt**	**2.76**	**195**	P	**Pn**	**08 53 41.5**	**-0.1**
MDT	**Midelt**	**2.76**	**195**	S	**Sn**	**08 54 13.0**	**-1.2**
EADA	**Adamuz**	**2.76**	**346**	Pn	**Pn**	**08 53 41.6**	**0.0**
EADA				Sn	**Sn**	**08 54 15.2**	**+1.0**
EADA				*i* Vmb_Lg		08 54 29.5	
ECAB	**El Cabril**	**2.91**	**333**	Pn	**Pn**	**08 53 43.7**	**0.0**
ECAB				Sn	**Sn**	**08 54 18.3**	**+0.4**
ECAB				*i* Vmb_Lg		08 54 30.2	
ZHG	**ZHG**	**3.13**	**230**	P	**Pn**	**08 53 49.0**	**+2.2**
ZHG	**ZHG**	**3.13**	**230**	S	**Sb**	**08 54 27.3**	**-4.5**
PSIM	**Granatula de C**	**3.33**	**360**	Sn	**Sn**	**08 54 28.4**	**+0.2**
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**08 53 55.7**	**+2.3**
EGRO	**El Granado**	**3.63**	**305**	Pn	**Pn**	**08 53 54.2**	**+0.6**
EGRO				Sn	**Sn**	**08 54 34.8**	**-0.8**
EGRO				*i* Vmb_Lg		08 54 51.1	
PVAQ	**Vaqueiros**	**3.72**	**302**	*e*Sn	**Sn**	**08 54 36.4**	**-1.5**
PBAR	**Barrancos**	**3.76**	**317**	*e*Pn	**Pn**	**08 53 56.5**	**+1.2**
PBAR				*e*Sn	**Sn**	**08 54 38.6**	**-0.2**
PBAR				A	A	08 54 44.5	
	1.7nm,0.6s						
PAB	**San Pablo**	**4.08**	**354**	Pn	**Pn**	**08 54 00.2**	**+0.4**
PAB				Sn	**Sn**	**08 54 44.5**	**-2.3**
PAB				*i* Vmb_Lg		08 55 05.9	
EBAD	**Badajoz**	**4.17**	**322**	Sn	**Sn**	**08 54 48.2**	**-0.8**
EBAD				*i* Vmb_Lg		08 54 56.3	
MESJ	**Messejana**	**4.29**	**305**	*e*Pn	**Pn**	**08 54 04.4**	**+1.8**
MESJ				*e*Sn	**Sn**	**08 54 51.7**	**-0.2**
MESJ				A	A	08 54 58.8	
	2.8nm,0.5s						
EVO	**Evora**	**4.57**	**313**	*e*Sn	**Sn**	**08 54 57.2**	**-1.5**
PNCL	**Nicolau / Gran**	**4.64**	**306**	*e*Sn	**Sn**	**08 54 59.6**	**-0.9**
OUZM	**OUZ**	**5.21**	**210**	P	**Pn**	**08 54 17.4**	**+1.9**
OUZM	**OUZ**	**5.21**	**210**	S	**Sn**	**08 55 17.6**	**+2.8**

*RSPR **18** 09:08:13.8, 19°.14N×65°.01W, h84km±12km*
*SDD **18** 09:08:15.2±2.9, 19°.02N×65°.17W, h15km±25km, MD3.5, ML2.9, MW3.4*
ISC 18 09:08:11.9±3.2, 19°.2N±0°.1×65°.1W±0°.2, h25km, n29, σ1°31/32, 15C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.32**	**214**	⇑*e*P	**Pb**	**09 08 36.0**	**-0.1**
HUMP	**Col San Antoni**	**1.32**	**214**	*e*S	**Sb**	**09 08 53.1**	**+0.5**
GCPR	**Guaynabo City**	**1.34**	**226**	⇑*e*P	**Pn**	**09 08 35.6**	**+0.6**
GCPR	**Guaynabo City**	**1.34**	**226**	*e*S	**Sn**	**09 08 52.0**	**-0.1**
SJG	**San Juan**	**1.53**	**223**	⇑*e*P	**Pb**	**09 08 38.8**	**-0.7**
SJG	**San Juan**	**1.53**	**223**	*e*S	**Sb**	**09 08 59.8**	**+1.4**
SJG	**San Juan**	**1.53**	**223**	*i* P	**Pn**	**09 08 38.0**	**+0.4**
SJG				*e*Sg	**Sn**	**09 08 52.6**	**-4.0**
EMPR	**Esperanza - Ma**	**1.58**	**241**	⇑*e*P	**Pb**	**09 08 39.3**	**-1.2**
EMPR	**Esperanza - Ma**	**1.58**	**241**	*e*S	**Sb**	**09 09 00.7**	**+0.6**
AOPR	**Arecibo Observ**	**1.83**	**241**	⇑*e*P	**Pn**	**09 08 42.6**	**+0.8**
AOPR	**Arecibo Observ**	**1.83**	**241**	*e*S	**Sn**	**09 09 05.6**	**+1.4**
AOPR	**Arecibo Observ**	**1.83**	**241**	⇑*e*Pg	**Pn**	**09 08 42.6**	**+0.8**
AOPR				⇑*e*Sg	**Sn**	**09 09 05.2**	**+0.9**
AOPR				IAML		09 09 21.4	
	comp=N,115nm,0.3s						
CELP	**Cerrillos**	**1.85**	**231**	⇑*e*P	**Pn**	**09 08 43.3**	**+1.2**
CELP	**Cerrillos**	**1.85**	**231**	*e*S	**Sb**	**09 09 06.3**	**-1.4**
CELP	**Cerrillos**	**1.85**	**231**	⇓*e*Pg	**Pn**	**09 08 43.2**	**+1.2**
CELP				⇓*e*Sg	**Sn**	**09 09 05.6**	**+1.0**
UUPR	**Utuado, UPR, P**	**1.85**	**238**	⇑*e*P	**Pb**	**09 08 43.6**	**-1.5**
UUPR	**Utuado, UPR, P**	**1.85**	**238**	*e*S	**Sn**	**09 09 06.2**	**+1.4**
OBIP	**Obispado Ponce**	**1.89**	**231**	⇑*e*P	**Pn**	**09 08 42.9**	**+0.3**
OBIP	**Obispado Ponce**	**1.89**	**231**	*e*S	**Sn**	**09 09 05.8**	**+0.2**
AGPR	**Aguadilla, PR**	**2.09**	**249**	⇑*e*P	**Pn**	**09 08 46.4**	**+1.1**
AGPR	**Aguadilla, PR**	**2.09**	**249**	⇑*e*Pg	**Pb**	**09 08 47.6**	**-1.5**
AGPR				IAML		09 09 27.0	
	comp=N,99nm,2.1s						
LSP	**Las Mesas**	**2.19**	**241**	⇑*e*P	**Pn**	**09 08 48.5**	**+1.7**
PRSN	**Puerto Rico Se**	**2.22**	**243**	*i* P	**Pn**	**09 08 47.0**	**-0.2**
MLPR	**Magueyes Islan**	**2.27**	**236**	⇑*e*P	**Pn**	**09 08 48.6**	**+0.8**
MLPR	**Magueyes Islan**	**2.27**	**236**	*i* P	**Pn**	**09 08 47.2**	**-0.6**
CRPR	**Cabo Rojo, PR**	**2.30**	**238**	⇑*e*P	**Pn**	**09 08 49.6**	**+1.5**
CRPR	**Cabo Rojo, PR**	**2.30**	**238**	*i* P	**Pn**	**09 08 49.7**	**+1.5**
MIDR	**Miches**	**3.78**	**267**	*i* P	**Pn**	**09 09 10.0**	**+1.5**
DR08	**Loma La Naviza**	**4.70**	**267**	*i* P	**Pn**	**09 09 20.8**	**-0.4**

OTT 18 09:08:54.9±0.2, 38°.59N×62°.32W, h18km, ML3.8/6, Atlantic Ocean. 628km southeast from Shelburne, Ns, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAL	**Halifax**	**6.12**	**351**	PN	Pn	09 10 23.5	-0.9
HAL				SN	Sn	09 11 29.6	-4.3
HAL				Trac		09 11 40.8	
	comp=Z,3.2nm,0.0s						
GBN	**Guysborough**	**6.84**	**5**	PN	Pn	09 10 33.2	-1.1
GBN				SN	Sn	09 11 46.6	-5.1
GBN				Trac		09 11 51.0	
	comp=Z,64nm,0.8s						
GGN	**Saint George**	**7.35**	**334**	SN	Sn	09 11 58.6	-5.5
GGN				SN	Sn	09 12 00.5	-3.6
GGN				Trac		09 12 16.8	
	comp=Z,6.2nm,0.1s						
ELNB	**Elgin, New Bru**	**7.56**	**345**	PN	Pn	09 10 43.3	-0.9
ELNB				SN	Sn	09 12 03.5	-5.8
ELNB				Trac		09 12 16.7	
	comp=Z,0.3nm,0.1s						
HKNB	**Havelock Quarr**	**7.73**	**344**	PN	Pn	09 10 45.4	-1.0
HKNB				SN	Sn	09 12 07.4	-6.1
HKNB				Trac		09 12 16.9	
	comp=Z,946nm,3.6s						
SVNB	**Stilesville Qu**	**7.80**	**347**	PN	Pn	09 10 47.1	-0.4
SVNB				SN	Sn	09 12 09.3	-6.1
SVNB				Trac		09 12 16.4	
	comp=Z,6.9nm,0.3s						
MCNB	**McAdam**	**7.93**	**334**	PN	Pn	09 10 48.0	-1.2
MCNB				SN	Sn	09 12 13.1	-5.3
MCNB				Trac		09 12 21.0	
	comp=Z,3.6nm,0.2s						
CHEG	**Cheticamp, Nov**	**8.30**	**8**	PN	Pn	09 10 53.6	-0.8
CHEG				SN	Sn	09 12 21.8	-5.9
CHEG				Trac		09 12 30.0	
	comp=Z,38nm,0.8s						
PKME	**Peaks-Kenny Pk**	**8.46**	**324**	PN	Pn	09 10 55.2	-1.2
PKME				SN	Sn	09 12 24.7	-6.7
PKME				Trac		09 12 30.4	
	comp=Z,330nm,2.6s						

*NEIC **18** 09:09:35.6±1.3, 19°.5N±0°.1×64°.87W±0°.05, h35km±2km, ML3.1/28, Md3.7/11(RSPR), Error ellipse: s-maj=18.8km s-min=7.6km az=349.0*
*RSPR **18** 09:09:37.8, 19°.42N×65°.05W, h83km±12km, MD3.6/11*
*SDD **18** 09:09:38.7±2.4, 19°.49N×65°.06W, h60km±87km, MD3.6, ML3.2, MW3.4*
ISC 18 09:09:30.8±3.2, 19°.6N±0°.1×64°.92W±0°.07, h15km±24km, n50, σ1°47/58, 7C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**1.71**	**221**	⇑*e*P	**Pb**	**09 10 01.2**	**-0.6**
GCPR	**Guaynabo City**	**1.71**	**221**		**Pb**	**09 10 01.2**	**-0.6**
HUMP	**Col San Antoni**	**1.71**	**211**	⇓*e*P	**Pb**	**09 10 01.8**	**-0.1**
HUMP	**Col San Antoni**	**1.71**	**211**	*e*S	**Sn**	**09 10 22.1**	**+0.4**
HUMP	**Col San Antoni**	**1.71**	**211**		**Pb**	**09 10 01.8**	**-0.1**
HUMP					**Sn**	**09 10 22.1**	**+0.4**
HUMP	**Col San Antoni**	**1.71**	**211**	IAML		09 10 22.3	
	comp=E,219nm,0.2s						
HUMP				IAML		09 10 24.1	
	comp=N,174nm,0.2s						
SJG	**San Juan**	**1.90**	**218**	⇑*e*P	**Pb**	**09 10 04.6**	**-0.5**
SJG	**San Juan**	**1.90**	**218**		**Pb**	**09 10 04.6**	**-0.5**
SJG	**San Juan**	**1.90**	**218**	IAML		09 10 26.9	
	comp=N,157nm,0.2s						
SJG				IAML		09 10 34.4	
	comp=N,104nm,0.4s						
SJG	**San Juan**	**1.90**	**218**	*i* P	**Pb**	**09 10 04.7**	**-0.5**
SJG				*i* S	**Sn**	**09 10 24.4**	**-1.9**
EMPR	**Esperanza - Ma**	**1.90**	**234**	⇑*e*P	**Pb**	**09 10 04.9**	**-0.2**
EMPR	**Esperanza - Ma**	**1.90**	**234**	*e*S	**Sn**	**09 10 25.8**	**-0.5**
EMPR	**Esperanza - Ma**	**1.90**	**234**		**Pb**	**09 10 04.9**	**-0.2**
EMPR					**Sn**	**09 10 25.8**	**-0.5**
EMPR	**Esperanza - Ma**	**1.90**	**234**	IAML		09 10 29.0	
	comp=N,241nm,0.4s						
EMPR				IAML		09 10 32.9	
	comp=E,249nm,1.3s						
AOPR	**Arecibo Observ**	**2.15**	**234**	⇑*e*P	**Pb**	**09 10 08.3**	**-1.1**
AOPR	**Arecibo Observ**	**2.15**	**234**		**Pb**	**09 10 08.3**	**-1.1**
AOPR					**Sn**	**09 10 32.0**	**-0.6**
AOPR	**Arecibo Observ**	**2.15**	**234**	*i* P	**Pb**	**09 10 08.5**	**-0.9**
AOPR				*e*S	**Sn**	**09 10 31.7**	**-0.9**
AOPR				IAML		09 10 39.4	
	comp=N,243nm,0.3s						
UUPR	**Utuado, UPR, P**	**2.18**	**232**	⇑*e*P	**Pb**	**09 10 09.1**	**-0.9**
UUPR	**Utuado, UPR, P**	**2.18**	**232**	*e*S	**Sn**	**09 10 33.1**	**-0.2**
UUPR	**Utuado, UPR, P**	**2.18**	**232**		**Pb**	**09 10 09.1**	**-0.9**
UUPR					**Sn**	**09 10 33.1**	**-0.2**
CELP	**Cerrillos**	**2.20**	**226**	⇓*e*P	**Pb**	**09 10 08.9**	**-1.3**
CELP	**Cerrillos**	**2.20**	**226**		**Pb**	**09 10 08.9**	**-1.3**
CELP					**Sn**	**09 10 32.8**	**-0.9**
CELP	**Cerrillos**	**2.20**	**226**	IAML		09 10 36.7	
	comp=N,114nm,0.3s						
CELP	**Cerrillos**	**2.20**	**226**	*i* P	**Pb**	**09 10 09.2**	**-1.0**
CELP				*e*S	**Sn**	**09 10 32.6**	**-1.1**
CELP				IAML		09 10 36.6	
	comp=N,114nm,0.3s						
OBIP	**Obispado Ponce**	**2.24**	**226**	⇑*e*P	**Pn**	**09 10 08.6**	**+1.3**
OBIP	**Obispado Ponce**	**2.24**	**226**		**Pn**	**09 10 08.6**	**+1.3**
OBIP	**Obispado Ponce**	**2.24**	**226**	IAML		09 10 37.4	
	comp=E,95nm,0.7s						
OBIP				IAML		09 10 38.6	
	comp=N,92nm,0.6s						
SMRT	**St. Maarten**	**2.34**	**131**	Pn	**Pn**	**09 10 09.5**	**+0.8**
SMRT				IAML		09 11 00.1	
	comp=N,161nm,0.1s						
AGPR	**Aguadilla, PR**	**2.37**	**242**	⇓*e*P	**Pb**	**09 10 11.9**	**-1.3**
AGPR	**Aguadilla, PR**	**2.37**	**242**	*e*S	**Sn**	**09 10 38.0**	**0.0**
AGPR	**Aguadilla, PR**	**2.37**	**242**		**Pb**	**09 10 11.9**	**-1.3**
AGPR					**Sn**	**09 10 38.0**	**0.0**
AGPR	**Aguadilla, PR**	**2.37**	**242**	IAML		09 11 00.5	
	comp=N,113nm,1.8s						
AGPR				IAML		09 11 08.6	
	comp=E,129nm,2.9s						
AGPR	**Aguadilla, PR**	**2.37**	**242**	*i* P	**Pb**	**09 10 11.7**	**-1.5**
AGPR				*e*S	**Sn**	**09 10 34.5**	**-3.5**
AGPR				IAML		09 11 00.0	
	comp=N,106nm,1.6s						
LSP	**Las Mesas**	**2.50**	**235**	⇑*e*P	**Pb**	**09 10 13.7**	**-1.8**
LSP	**Las Mesas**	**2.50**	**235**	*e*S	**Sn**	**09 10 40.5**	**-0.9**
LSP	**Las Mesas**	**2.50**	**235**		**Pb**	**09 10 13.7**	**-1.8**
LSP					**Sn**	**09 10 40.5**	**-0.9**
PRSN	**Puerto Rico Se**	**2.53**	**237**	Pn	**Pn**	**09 10 13.0**	**+1.7**
PRSN				IAML		09 10 52.2	
	comp=N,128nm,0.3s						
PRSN				IAML		09 10 53.3	
	comp=E,119nm,0.3s						
PRSN	**Puerto Rico Se**	**2.53**	**237**	*i* P	**Pb**	**09 10 13.8**	**-2.1**
PRSN				IAML		09 10 58.8	
	comp=N,111nm,0.2s						
MLPR	**Magueyes Islan**	**2.60**	**231**	⇓*e*P	**Pn**	**09 10 14.2**	**+1.9**
MLPR	**Magueyes Islan**	**2.60**	**231**	*e*S	**Sn**	**09 10 44.2**	**+0.6**
MLPR	**Magueyes Islan**	**2.60**	**231**		**Pn**	**09 10 14.2**	**+1.9**
MLPR	**Magueyes Islan**	**2.60**	**231**		**Sn**	**09 10 44.2**	**+0.6**
MLPR	**Magueyes Islan**	**2.60**	**231**	*i* P	**Pn**	**09 10 14.2**	**+1.9**
MLPR				*e*S	**Sn**	**09 10 42.5**	**-1.0**
MLPR				IAML		09 10 48.1	
	comp=N,37nm,0.5s						
CRPR	**Cabo Rojo, PR**	**2.62**	**233**	⇓*e*P	**Pn**	**09 10 14.9**	**+2.3**
CRPR	**Cabo Rojo, PR**	**2.62**	**233**	*e*S	**Sn**	**09 10 44.2**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.62**	**233**		**Pn**	**09 10 14.9**	**+2.3**
CRPR					**Sn**	**09 10 44.2**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.62**	**233**	*i* P	**Pb**	**09 10 15.2**	**-2.2**
CRPR				*e*S	**Sn**	**09 10 39.9**	**-4.3**
CRPR				IAML		09 10 50.3	
	comp=N,50nm,0.5s						
SEUS	**St. Eustatius**	**2.80**	**139**	Pn	**Pn**	**09 10 16.0**	**+0.9**
DR08	**Loma La Naviza**	**4.86**	**263**	*i* P	**Pn**	**09 10 47.0**	**+3.5**
DR08				IAML		09 12 19.9	
	comp=N,84nm,0.1s						
SDDR	**Presa de Saban**	**6.05**	**265**	*i* P	**Pn**	**09 11 00.2**	**+0.4**
SDDR				IAML		09 13 28.4	
	comp=N,23nm,2.9s						

*IDC **18** 09:27:05.4±1.4, 7°.40N×78°.75W, h0km, mb3.4/5, mbtmp3.5/8, ML2.1/3, MS2.8/1, Error ellipse: s-maj=44.5km s-min=21.1km az=22.0*
*UPA **18** 09:27:07.4±1.4, 7°.53N×78°.82W, h1km±6km, MW3.7*
ISC 18 09:27:05.7±2.2, 7°.47N±0°.06×78°.83W±0°.03, h0km±14km, n30, σ1°43/46, mb3.5/5, 7C-1D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UPD2	**Meteti**	**1.34**	**37**	⇑*i*P	**Pb**	**09 27 31.7**	**0.0**
UPD2				*e*S	**Sg**	**09 27 49.8**	**+1.0**
AZU	**Azuero**	**1.47**	**283**	⇑*i*P	**Pn**	**09 27 32.5**	**-0.8**
AZU				*e*S	**Sn**	**09 27 51.5**	**-1.8**
TOTI	**Torti**	**1.54**	**19**	⇑*i*P	**Pn**	**09 27 34.4**	**-0.1**
TOTI				*e*S	**Sb**	**09 27 54.5**	**-0.7**
FLAM	**Flamenco Islan**	**1.60**	**334**	*e*S	**Sn**	**09 27 54.0**	**-2.6**
CHIT3	**Chitre**	**1.65**	**287**	⇑*i*P	**Pn**	**09 27 35.5**	**-0.4**
CHIT3				*e*S	**Sn**	**09 27 56.2**	**-1.5**
CNTA3	**Canitas, Panam**	**1.74**	**358**	*e*P	**Pn**	**09 27 36.8**	**-0.4**
CNTA3				*e*S	**Sn**	**09 27 58.8**	**-1.3**
PNME	**Penonome**	**1.79**	**304**	⇑*i*P	**Pn**	**09 27 38.0**	**+0.1**
PNME				*e*S	**Sn**	**09 28 00.1**	**-1.4**
ZANG	**Zanguenga, Cho**	**1.80**	**325**	⇑*i*P	**Pn**	**09 27 38.4**	**+0.4**
ZANG				*e*S	**Sg**	**09 28 03.1**	**-0.5**
CRIS3	**El Cristo, Coc**	**1.94**	**294**	*e*P	**Pn**	**09 27 40.2**	**+0.4**
BCIP	**Isla Barro Col**	**1.96**	**329**	⇓*i*P	**Pn**	**09 27 41.0**	**+0.9**
BCIP				*e*S	**Sb**	**09 28 06.5**	**-0.8**
CACAO	**El Cacao, Vera**	**2.02**	**267**	*e*P	**Pn**	**09 27 40.5**	**-0.5**
CACAO				*e*S	**Sn**	**09 28 08.1**	**+1.1**
CALO3	**Calobre, Verag**	**2.17**	**293**	*e*P	**Pn**	**09 27 43.7**	**+0.7**
GMAL	**Guarumal, Vera**	**2.40**	**277**	⇑*i*P	**Pn**	**09 27 46.8**	**+0.5**
GMAL				*e*S	**Sb**	**09 28 19.2**	**-0.8**
UREC	**San Jos de Ur**	**3.28**	**85**	*e*P	**Pn**	**09 28 00.3**	**+2.0**
UREC				*e*S	**Sn**	**09 28 38.4**	**+0.3**
CHGR2	**Aguacate**	**3.59**	**294**	*e*P	**Pn**	**09 28 01.6**	**-1.1**
CHGR2				*e*S	**Sb**	**09 28 52.4**	**-1.9**
DVD	**David**	**3.71**	**285**	*e*S	**Sb**	**09 29 00.9**	**+3.1**
BCO2	**Palmira**	**3.87**	**289**	*e*S	**Sb**	**09 29 01.5**	**-0.9**
BRU2	**Volcan**	**4.04**	**289**	*e*P	**Pb**	**09 28 17.1**	**-0.8**
BRU2				*e*S	**Sb**	**09 29 09.1**	**+1.7**
CNI2	**El Empalme, Bo**	**4.09**	**299**	*e*S	**Sb**	**09 29 09.4**	**+0.7**
CDITO	**Canoas**	**4.15**	**286**	*e*P	**Pb**	**09 28 18.8**	**-0.9**
CDITO				*e*S	**Sb**	**09 29 15.2**	**+4.8**
ROSC	**El Rosal**	**5.19**	**120**	Pn	**Pn**	**09 28 23.6**	**-1.4**
	0.5nm,0.3s,baz=313,slow=22,SNR=1.4						
	1.9nm,0.4s						
JTS	**Las Juntas de**	**6.67**	**295**	Pn	**Pn**	**09 28 45.6**	**+0.6**
	0.3nm,0.3s,baz=171,slow=20,SNR=1.8						
JTS				Sn	**Sn**	**09 30 03.7**	**+1.9**
	baz=276,slow=18,SNR=1.4						
JTS				LR	LR	09 31 21.5	
	comp=Z,73nm,18.8s,baz=120,slow=38						
	5.5nm,0.8s						
SDV	**Santo Domingo**	**8.23**	**80**	Pn	**Pn**	**09 29 05.5**	**-1.2**
	0.2nm,0.3s,baz=109,slow=21,SNR=2.4						
SDV				Sn	**Sn**	**09 30 38.3**	**-2.3**
	0.7nm,0.3s,baz=341,slow=17,SNR=2.1						
	2.3nm,0.6s						
TXAR	**Lajitas Array**	**31.93**	**316**	P	**P**	**09 33 33.7**	**+0.3**
	0.4nm,0.9s,baz=119,slow=7.3,SNR=2.9						
	0.4nm,0.9s						
PDAR	**Pinedale Array**	**44.35**	**327**	P	**P**	**09 35 18.9**	**+0.8**
	0.5nm,0.7s,baz=127,slow=11,SNR=5.5						
	0.5nm,0.7s						
NVAR	**Mina Array Bea**	**47.07**	**317**	P	**P**	**09 35 40.8**	**+1.2**
	0.4nm,0.7s,baz=123,slow=6.6,SNR=3.2						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**60.80**	**342**	P	**P**	**09 37 19.4**	**+0.1**
	0.5nm,0.7s,baz=132,slow=7.0,SNR=14						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**74.01**	**336**	P	**P**	**09 38 43.6**	**+0.6**
	0.3nm,0.9s,baz=119,slow=8.4,SNR=2.4						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**144.72**	**239**	PKP	**PKPab**	**09 46 44.1**	**-0.1**
	0.6nm,0.6s,baz=116,slow=4.0,SNR=11						
WRA	**Warramunga Arr**	**145.56**	**246**	PKPbc	**PKPdf**	**09 46 46.1**	**-0.8**
	0.5nm,0.8s,baz=103,slow=3.5,SNR=2.2						

*IDC **18** 09:30:32.8±2.2, 5°.56N×122°.79E, h

comp=Z,181nm,0.2s
PB04 IPOC Station P 1.96 295 *i* P **Pn 09 37 18.3 +0.1**
PB04 *e*S **Sn 09 37 44.9 +1.0**
PB04 IAML 09 37 48.3
comp=N,278nm,0.3s
PB07 IPOC Station P 2.10 313 *e*P **Pn 09 37 20.1 +0.2**
PB07 *e*S **Sn 09 37 46.7 -0.3**
PB07 IAML 09 37 48.8
comp=Z,190nm,0.3s
PB07 IPOC Station P 2.10 313 *e*P **Pn 09 37 20.1 +0.2**
PB07 *e*S **Sn 09 37 46.3 -0.7**
GO02 Mina Guanaco 2.35 212 *e*P **Pn 09 37 23.1 0.0**
GO02 *e*S **Sn 09 37 52.8 0.0**
GO02 Mina Guanaco 2.35 212 *e*P **Pn 09 37 23.1 0.0**
PB02 IPOC Station P 2.40 320 *e*P **Pn 09 37 23.3 -0.2**
PB02 *e*S **Sn 09 37 52.7 -0.9**
PB02 IAML 09 37 58.2
comp=Z,281nm,0.2s
PB02 IPOC Station P 2.40 320 *e*P **Pn 09 37 23.5 0.0**
PB02 *e*S **Sn 09 37 52.2 -1.4**
PB01 IPOC Station P 2.41 331 *e*P **Pn 09 37 23.8 +0.1**
PB01 *e*S **Sn 09 37 54.6 +0.7**
PB01 IAML 09 37 56.5
comp=Z,115nm,0.2s
PB01 IPOC Station P 2.41 331 *e*P **Pn 09 37 23.6 -0.1**
PB01 *e*S **Sn 09 37 53.5 -0.4**
PB01 IAML 09 37 55.5
comp=E,222nm,0.3s
PB14 IPOC Station P 2.47 233 *e*P **Pn 09 37 24.9 +0.3**
PB14 IAML 09 38 02.0
comp=Z,60nm,0.3s
YJA Yavi 2.69 69 *e*P **Pn 09 37 27.6 +0.1**
SLA San Lorenzo 2.93 122 *e*P **Pn 09 37 31.8 +1.5**
PB08 IPOC Station P 3.13 344 *e*P **Pn 09 37 33.6 +0.5**
PB08 IPOC Station P 3.13 344 *e*P **Pn 09 37 33.6 +0.5**
HMBC Humberstone 3.26 331 *e*P **Pn 09 37 34.1 -0.5**
GO01 Chusmiza 3.59 345 *e*P **Pn 09 37 39.2 -0.1**
PB11 IPOC Station P 3.64 338 *e*P **Pn 09 37 38.7 -0.9**
PB11 IAML 09 39 06.2
comp=Z,24nm,1.0s
AC01 Pan de Azucar 3.67 216 *e*P **Pn 09 37 39.0 -0.9**
AC01 IAML 09 38 24.6
comp=Z,28nm,0.7s
AC02 Maricunga 3.75 192 *e*P **Pn 09 37 41.2 -0.1**
GO03 Copiap 4.77 202 *e*P **Pn 09 37 52.8 -1.8**

IDC ***18*** *09:41:25.5±1.4,27.˝95N×127.˝78E, h0km, mb3.4/3, mbtmp3.4/4, ML2.5/1, MS2.8/2, Error ellipse: s-maj=59.0km s-min=17.9km az=72.0*
JMA ***18*** *09:41:25.6±0.2,28.˝1N±0.˝4×128.˝1E±0.˝5, h15km±2km, MV3.3/15, NW OFF OKINAWAJIMA IS*
ISC 18 09:41:25.4±1.9**,28˚06N**±0.˝05×**128˚06E**±0.˝07**, h4**km**±12km, n19,**σ1**°38/24, mb3.6/3, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JOKE	**Okinoerabujima**	**0.83**	**147**	P			**Pg**	**09 41 42.2**	**+0.8**
JOKE				*e*S			**Sg**	**09 41 53.6**	**+1.5**
JTK	**Tokunoshima**	**0.84**	**109**	P			**Pg**	**09 41 41.2**	**-0.3**
JTK				*e*S			**Sg**	**09 41 52.5**	**+0.2**
JAMN	**Amaminishikomi**	**1.00**	**79**	P			**Pg**	**09 41 43.8**	**-0.9**
JAMN				*e*S			**Sg**	**09 41 56.5**	**-1.1**
JIH	**Iheya**	**1.02**	**184**	P			**Pn**	**09 41 45.7**	**-0.8**
JIH				*e*S			**Sn**	**09 42 00.1**	**-1.3**
JYRO	**Yoronjima**	**1.09**	**161**	*e*P			**Pg**	**09 41 46.6**	**+0.3**
JYRO				*e*S			**Sb**	**09 42 01.5**	**+0.1**
JOW	**Kunigami**	**1.24**	**171**	*e*P			**Pb**	**09 41 49.1**	**-0.3**
JOW				*e*S			**Sn**	**09 42 06.3**	**-0.4**
JOW	**Kunigami**	**1.24**	**171**	Pn			**Pb**	**09 41 49.1**	**-0.3**
JOW	132nm,0.3s,baz=40,slow=11,SNR=304						**Sn**	**09 42 06.3**	**-0.4**
JAM	50nm,0.3s,baz=71,slow=30,SNR=16 **Amami Oshima**	**1.41**	**75**	*e*P			**Pn**	**09 41 50.5**	**-1.4**
JTAJ	**Takarajima**	**1.48**	**43**	*e*P			**Pn**	**09 41 50.8**	**-2.1**
JNTH	**Nagotoyohara**	**1.54**	**181**	*e*P			**Pb**	**09 41 53.7**	**-0.7**
JAGN	**Aguni-jima**	**1.64**	**206**	*e*P			**Pb**	**09 41 54.9**	**-1.2**
JZK	**Kikaishima**	**1.71**	**81**	*e*P			**Pn**	**09 41 58.1**	**+2.1**
JJT3	**Tamagusuku3**	**1.93**	**187**	*e*P			**Pb**	**09 42 00.3**	**-0.7**
JNU	**Nakatsue**	**5.60**	**25**	Pn			**Pn**	**09 42 53.2**	**+3.7**
	0.1nm,0.3s,baz=138,slow=12,SNR=1.9 2.9nm,0.6s								
MJAR	**Matsushiro Arr**	**12.04**	**43**	LR			LR	09 49 07.6	
SONM	comp=Z,45nm,19.5s,baz=180,slow=38 **Songino Array**	**25.95**	**325**	P			**P**	**09 46 58.8**	**-0.2**
	1.4nm,0.9s,baz=138,slow=10,SNR=7.1 1.4nm,0.9s								
CMAR	**Chiang Mai Arr**	**28.34**	**257**	LR			LR	09 59 46.1	
WRA	comp=Z,13nm,18.2s,baz=205,slow=39 **Warramunga Arr**	**48.11**	**172**	P			**P**	**09 50 08.2**	**+1.7**
	0.4nm,0.8s,baz=355,slow=8.3,SNR=2.0 0.4nm,0.8s								
ASAR	**Alice Springs**	**51.73**	**173**	P			**P**	**09 50 33.6**	**-0.4**
	0.3nm,1.1s,baz=355,slow=7.4,SNR=1.7 0.3nm,1.1s								

IDC ***18*** *09:47:50.8±0.5,48.˝23N×77.˝47E, h0km, mb3.8/13, mbtmp3.8/22, ML3.6/9, MS3.1/1, Error ellipse: s-maj=7.1km s-min=5.9km az=61.0*
MOS ***18*** *09:47:50.8±1.1,48.˝30N×77.˝46E, h10km, mb4.3/8, Error ellipse: s-maj=7.7km s-min=4.2km az=91.6*
NNC ***18*** *09:47:51.8±0.4,48.˝25N×77.˝49E, h0km, mb5.0, mpv4.6, Error ellipse: s-maj=4.6km s-min=3.4km az=77.0*
SOME ***18*** *09:47:55.8, 48.˝22N×77.˝60E, h20km, MS3.6*
ISC 18 09:47:53.2±0.3**,48˚27N**±0.˝02×**77˚54E**±0.˝02**, h10**km**, n164,** σ**2°61**/211**, mb3.8**/17**, 25C-18D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.44**	**15**	⇑Pn			**Pn**	**09 48 33.4**	**+0.3**
KURBB	243nm,0.5s			⇓Lg			Lg	09 49 09.2	
KURBB	2μm,0.7s **Kurchatov Arra**	**2.44**	**15**	PN			**Pn**	**09 48 33.4**	**+0.3**
KURBB				LG			Lg	09 49 09.2	
KURBB	**Kurchatov Arra**	**2.44**	**15**	Pn			**Pn**	**09 48 32.5**	**-0.6**
KURBB	2.2nm,0.3s,baz=167,slow=17,SNR=94			Pg			**Pb**	**09 48 36.1**	**-1.1**
KURBB	11nm,0.3s,baz=202,slow=17,SNR=51			Sn			**Sn**	**09 49 02.9**	**-0.1**
KURBB	17nm,0.3s,baz=332,slow=39,SNR=2.5			Lg			Lg	09 49 09.0	
KURK	78nm,0.3s,baz=202,slow=31,SNR=10.0 9.1nm,0.2s **Kurchatov**	**2.55**	**16**	⇑Pg			Pn	09 48 39.5	+5.0
KURK	117nm,0.4s			⇑Lg			Lg	09 49 13.0	
KURK	1μm,0.8s **Kurchatov**	**2.55**	**16**	PN			Pn	09 48 32.5	-2.0
KURK								09 48 36.1	
SEM	**Semipalatinsk**	**2.78**	**39**	*e*P			**Pb**	**09 48 46.6**	**+3.5**
SEM	29nm,0.1s			*e*S			**Sb**	**09 49 22.5**	**+5.2**
KAPS	342nm,0.1s **Kapalarasan**	**3.24**	**157**	Pg			**Pb**	**09 48 51.8**	**+1.1**
KAPS	223nm,0.4s			Lg			Lg	09 49 31.1	
KAPS	596nm,0.4s **Kapalarasan**	**3.24**	**157**	*e*P			**Pb**	**09 48 51.8**	**+1.1**
KAPS	221nm,0.2s			*e*S			**Sb**	**09 49 31.1**	**+0.9**
TDK	592nm,0.2s **Taldyqorghan**	**3.32**	**169**	*e*Pn			**Pn**	**09 48 45.9**	**+0.6**
TDK	baz=169			*e*Pg			**Pb**	**09 48 51.9**	**-0.3**
TDK	baz=169 **Taldyqorghan**	**3.32**	**169**	*e*P			**Pb**	**09 48 51.5**	**-0.7**
TDK	237nm,0.3s			*e*S			**Sb**	**09 49 30.9**	**-1.8**
TDK	554nm,0.2s **Taldyqorghan**	**3.32**	**169**	*e*PN			**Pn**	**09 48 45.8**	**+0.6**
TDK				*e*				09 48 51.8	
MAKZ	**Makanchi**	**3.34**	**114**	⇓Pn			**Pn**	**09 48 46.2**	**+0.7**
MAKZ	3.9nm,0.2s			⇑Pg			**Pb**	**09 48 52.4**	**-0.2**
MAKZ	74nm,0.8s			⇑Lg			Lg	09 49 38.1	
MAKZ	144nm,0.3s **Makanchi**	**3.34**	**114**	PN			**Pn**	**09 48 46.2**	**+0.7**
MAKZ				PG			**Pb**	**09 48 52.4**	**-0.2**
MAKZ				LG			Lg	09 49 38.9	
OTUK	**Ortayu**	**3.47**	**272**	⇑Pn			**Pn**	**09 48 47.7**	**+0.4**
	16nm,0.2s								

OTUK				⇑Sn			**Sn**	**09 49 28.8**	**+0.3**
OTUK	45nm,0.2s			⇑Lg			Lg	09 49 41.0	
OTUK	396nm,0.5s **Ortayu**	**3.47**	**272**	PN			**Pn**	**09 48 47.7**	**+0.4**
OTUK				SN			**Sn**	**09 49 28.8**	**+0.3**
MK31	**Makanchi Array**	**3.54**	**113**	⇑Pn			**Pn**	**09 48 48.8**	**+0.5**
MK31	3.0nm,0.2s,baz=285,slow=12,SNR=1899 43nm,0.3s			⇓Pg			**Pb**	**09 48 55.2**	**-0.8**
MK31				Lg			Lg	09 49 43.0	
MKAR	256nm,0.5s,baz=297,slow=29,SNR=9.9 **Makanchi Array**	**3.54**	**113**	*c i* PN			**Pn**	**09 48 48.8**	**+0.5**
MKAR	**Makanchi Array**	**3.54**	**113**	*i* PN			**Pn**	**09 48 49.0**	**+0.7**
MKAR	comp=Z,11nm,0.3s			pmax			pmax		
MKAR	**Makanchi Array**	**3.54**	**113**	Pn			**Pn**	**09 48 49.0**	**+0.7**
MKAR	comp=Z,7.1nm,0.3s,baz=284,slow=13,SNR=294			Pg			**Pb**	**09 48 54.7**	**-1.3**
MKAR	comp=Z,27nm,0.3s,baz=296,slow=11,SNR=49			Sn			**Sn**	**09 49 31.4**	**+1.2**
MKAR	comp=Z,45nm,0.3s,baz=279,slow=20,SNR=7.9			Lg			Lg	09 49 42.6	
BRZS	comp=Z,100nm,0.3s,baz=301,slow=27,SNR=17 comp=Z,11nm,0.4s **Berezniki**	**3.62**	**300**	*e*Pn			**Pn**	**09 48 50.2**	**+0.9**
BRZS	baz=300			*e*Pg			**Pb**	**09 48 56.6**	**-0.6**
BRZS	baz=300 **Berezniki**	**3.62**	**300**	*e*P			**Pb**	**09 48 59.8**	**+2.5**
BRZS	comp=Z,35nm,0.1s			*e*S			**Sb**	**09 49 45.2**	**+3.9**
BRZS	comp=Z,410nm,0.3s **Berezniki**	**3.62**	**300**	*e*PN			**Pn**	**09 48 50.1**	**+0.8**
BRZS				*e*				09 48 56.6	
BTLS	**Baital**	**4.02**	**218**	*e*Pn			**Pn**	**09 48 54.6**	**-0.2**
BTLS	baz=218 **Baital**	**4.02**	**218**	*e*P			**Pb**	**09 49 08.5**	**+4.4**
BTLS	comp=Z,17nm,0.1s			*e*S			**Sg**	**09 50 00.2**	**-2.1**
BTLS	comp=Z,344nm,0.4s **Baital**	**4.02**	**218**	*e*PN			**Pn**	**09 48 54.6**	**-0.2**
ARXS	**Arharly**	**4.06**	**177**	Pg			**Pb**	**09 49 07.6**	**+2.8**
ARXS	comp=Z,114nm,0.3s			Lg			Lg	09 49 57.9	
ARXS	comp=Z,370nm,0.3s **Arharly**	**4.06**	**177**	*e*P			**Pb**	**09 49 07.4**	**+2.6**
ARXS	comp=Z,109nm,0.2s			*e*S			**Sb**	**09 49 57.9**	**+3.9**
ARXS	comp=Z,617nm,0.2s **Arharly**	**4.06**	**177**	*e*PN			**Pn**	**09 48 56.2**	**+0.8**
KNOS	**Konyrlen**	**4.07**	**163**	Pg			**Pb**	**09 49 08.7**	**+3.6**
KNOS	comp=Z,217nm,0.2s			Lg			Lg	09 50 00.1	
BLB	comp=Z,350nm,0.5s **Baldybastay**	**4.22**	**171**	Pg			**Pb**	**09 49 10.2**	**+2.5**
BLB	comp=Z,178nm,0.4s			Lg			Lg	09 50 03.1	
DJR	comp=Z,979nm,0.6s **Jarkent**	**4.24**	**158**	Pg			**Pb**	**09 49 10.5**	**+2.7**
DJR	comp=Z,123nm,0.5s			Lg			Lg	09 50 03.9	
DJR	comp=Z,572nm,0.8s **Jarkent**	**4.24**	**158**	*e*P			**Pb**	**09 49 10.5**	**+2.7**
DJR	comp=Z,124nm,0.3s			*e*S			**Sb**	**09 50 03.0**	**+4.0**
CHKK	comp=Z,572nm,0.5s **Chushkaly**	**4.43**	**185**	Pg			**Pb**	**09 49 13.3**	**+2.2**
CHKK	comp=Z,32nm,0.6s			Lg			Lg	09 50 08.5	
CHKK	comp=Z,927nm,0.5s **Chushkaly**	**4.43**	**185**	*e*Pn			**Pn**	**09 49 00.2**	**-0.3**
CHKK	baz=185			*e*Pg			**Pb**	**09 49 13.2**	**+2.2**
CHKK	baz=185 **Chushkaly**	**4.43**	**185**	*e*P			**Pb**	**09 49 13.3**	**+2.2**
CHKK	comp=Z,40nm,0.1s			*e*S			**Sb**	**09 50 08.2**	**+3.6**
CHKK	comp=Z,927nm,0.2s **Chushkaly**	**4.43**	**185**	*e*PN			**Pn**	**09 49 00.2**	**-0.3**
CHKK				*e*				09 49 13.2	
KUU	**Kurty**	**4.46**	**191**	Pg			**Pb**	**09 49 14.0**	**+2.5**
KUU	comp=Z,52nm,0.2s			Lg			Lg	09 50 09.0	
KUU	comp=Z,500nm,0.5s **Kurty**	**4.46**	**191**	*e*Pn			**Pn**	**09 49 00.4**	**-0.4**
KUU	baz=191			*e*Pg			**Pb**	**09 49 13.6**	**+2.1**
KUU	baz=191 **Kurty**	**4.46**	**191**	*e*P			**Pb**	**09 49 14.0**	**+2.5**
KUU	comp=Z,49nm,0.1s			*e*S			**Sb**	**09 50 09.0**	**+3.8**
KUU	comp=Z,500nm,0.3s **Kurty**	**4.46**	**191**	*e*PN			**Pn**	**09 49 00.4**	**-0.4**
KUU				*e*				09 49 13.6	
KTBS	**Karatobe**	**4.60**	**188**	Pg			**Pb**	**09 49 17.2**	**+3.3**
KTBS	comp=Z,65nm,0.2s			Lg			Lg	09 50 14.5	
KTBS	comp=Z,669nm,0.6s **Karatobe**	**4.60**	**188**	*e*P			**Pb**	**09 49 17.2**	**+3.3**
KTBS	comp=Z,34nm,0.2s			*e*S			**Sb**	**09 50 14.6**	**+5.2**
KURS	comp=Z,669nm,0.6s **Kuram**	**4.80**	**174**	Pg			**Pb**	**09 49 21.5**	**+4.0**
KURS	comp=Z,82nm,0.3s			Lg			Lg	09 50 22.6	
KURS	comp=Z,182nm,0.6s **Kuram**	**4.80**	**174**	*e*P			**Pb**	**09 49 21.5**	**+4.0**
KURS	comp=Z,82nm,0.3s			*e*S			**Sb**	**09 50 22.6**	**+7.3**
KPKS	comp=Z,182nm,0.3s **Kokpek**	**4.87**	**170**	Pg			**Pb**	**09 49 21.8**	**+3.2**
KPKS	comp=Z,75nm,0.3s			Lg			Lg	09 50 22.5	
KPKS	comp=Z,456nm,0.4s **Kokpek**	**4.87**	**170**	*e*Pn			**Pn**	**09 49 07.1**	**+0.5**
KPKS	baz=170 **Kokpek**	**4.87**	**170**	*e*P			**Pb**	**09 49 21.8**	**+3.2**
KPKS	comp=Z,75nm,0.3s			*e*S			**Sb**	**09 50 22.5**	**+5.2**
KPKS	comp=Z,456nm,0.4s **Kokpek**	**4.87**	**170**	*e*PN			**Pn**	**09 49 07.1**	**+0.5**
ZSN	**Zaisan**	**5.00**	**97**	*e*Pn			**Pn**	**09 49 09.4**	**+1.0**
ZSN	baz=97			*e*Pg			**Pb**	**09 49 24.2**	**+3.4**
ZSN	baz=97 **Zaisan**	**5.00**	**97**	*e*P			**Pb**	**09 49 22.9**	**+2.1**
ZSN	comp=Z,130nm,0.4s			*e*S			**Sb**	**09 50 23.9**	**+2.9**
ZSN	comp=Z,160nm,0.4s **Zaisan**	**5.00**	**97**	*e*PN			**Pn**	**09 49 09.3**	**+1.0**
ZSN				*e*				09 49 24.1	
KOTS	**Kotyrbulak**	**5.04**	**184**	Pg			**Pb**	**09 49 26.1**	**+4.5**
KOTS	comp=Z,47nm,0.4s			Lg			Lg	09 50 30.0	
KOTS	comp=Z,418nm,0.5s **Kotyrbulak**	**5.04**	**184**	*e*P			**Pb**	**09 49 26.1**	**+4.5**
KOTS	comp=Z,38nm,0.2s			*e*S			**Sb**	**09 50 30.0**	**+7.6**
KNDC	comp=Z,418nm,0.5s **Almaty**	**5.07**	**185**	⇑Pn			**Pn**	**09 49 09.0**	**-0.2**
KNDC	comp=Z,221nm,0.7s			⇓Lg			Lg	09 50 32.3	
KNDC	comp=Z,1μm,1.0s **Almaty**	**5.07**	**185**	PN			**Pn**	**09 49 09.2**	**-0.1**
AAA	**Alma-Ata**	**5.08**	**185**	Pg			**Pb**	**09 49 26.3**	**+4.1**
AAA	comp=Z,116nm,0.3s			Lg			Lg	09 50 30.6	
AAA	comp=Z,390nm,0.7s **Alma-Ata**	**5.08**	**185**	*e*P			**Pb**	**09 49 26.3**	**+4.1**
AAA	comp=Z,116nm,0.2s			*e*S			**Sb**	**09 50 30.6**	**+7.3**
MDOK	comp=Z,390nm,0.4s **Medeo**	**5.12**	**184**	Pn			**Pn**	**09 49 09.9**	**-0.1**
MDOK	comp=Z,78nm,0.6s			Pg			**Pb**	**09 49 26.8**	**+3.9**
MDOK	comp=Z,43nm,0.6s			Sn			**Sn**	**09 50 07.7**	**-1.5**
MDOK	comp=Z,64nm,0.6s			Lg			Lg	09 50 31.0	
MDOK	comp=Z,267nm,0.6s			⇓Lg			Lg	09 50 32.7	
MDOK	comp=Z,224nm,0.6s **Medeo**	**5.12**	**184**	*e*Pn			**Pn**	**09 49 10.0**	**0.0**
MDOK	baz=184 **Medeo**	**5.12**	**184**	*e*P			**Pb**	**09 49 26.7**	**+3.9**
MDOK	comp=Z,43nm,0.2s			*e*S			**Sb**	**09 50 30.9**	**+6.5**

	comp=Z,267nm,0.6s								
MDOK	**Medeo**	**5.12**	**184**	PN			**Pn**	**09 49 09.9**	**-0.1**
MDOK				SN			**Sn**	**09 50 07.7**	**-1.5**
PDGK	**Podgornoye**	**5.13**	**164**	Pg			**Pb**	**09 49 26.6**	**+3.7**
PDGK	comp=Z,31nm,0.8s			Lg			Lg	09 50 30.7	
PDGK	comp=Z,123nm,0.8s **Podgornoye**	**5.13**	**164**	⇓Pn			**Pn**	**09 49 10.1**	**0.0**
PDGK	comp=Z,69nm,0.5s			⇓Lg			Lg	09 50 33.7	
PDGK	comp=Z,208nm,0.6s **Podgornoye**	**5.13**	**164**	PN			**Pn**	**09 49 10.1**	**0.0**
ZHN	**Zhinishke**	**5.14**	**173**	Pg			**Pb**	**09 49 25.9**	**+2.6**
ZHN	comp=Z,24nm,0.2s			Lg			Lg	09 50 29.6	
ZHN	comp=Z,189nm,0.3s **Zhinishke**	**5.14**	**173**	*e*Pn			**Pn**	**09 49 10.8**	**+0.4**
ZHN	baz=172 **Zhinishke**	**5.14**	**173**	*e*P			**Pb**	**09 49 25.9**	**+2.6**
ZHN	comp=Z,24nm,0.2s			*e*S			**Sb**	**09 50 29.6**	**+4.5**
ZHN	comp=Z,185nm,0.1s **Zhinishke**	**5.14**	**173**	*e*PN			**Pn**	**09 49 10.7**	**+0.4**
DGS	**Degeres**	**5.18**	**194**	Pg			**Pb**	**09 49 27.6**	**+3.7**
DGS	comp=Z,197nm,0.4s			Lg			Lg	09 50 32.7	
DGS	comp=Z,457nm,0.6s **Degeres**	**5.18**	**194**	*e*P			**Pb**	**09 49 27.6**	**+3.7**
DGS	comp=Z,196nm,0.2s			*e*S			**Sb**	**09 50 32.7**	**+6.6**
MTBS	comp=Z,457nm,0.6s **Maitube**	**5.20**	**189**	Pg			**Pb**	**09 49 27.6**	**+3.5**
MTBS	comp=Z,66nm,0.4s			Lg			Lg	09 50 32.4	
MTBS	comp=Z,260nm,0.7s **Maitube**	**5.20**	**189**	*e*P			**Pb**	**09 49 27.5**	**+3.3**
MTBS	comp=Z,28nm,0.2s			*e*S			**Sb**	**09 50 32.4**	**+5.7**
KTMS	comp=Z,278nm,0.2s **Ketmen**	**5.21**	**157**	Pg			**Pb**	**09 49 28.0**	**+3.6**
KTMS	comp=Z,24nm,0.4s			Lg			Lg	09 50 33.1	
KTMS	comp=Z,97nm,0.4s **Ketmen**	**5.21**	**157**	*e*P			**Pb**	**09 49 28.0**	**+3.6**
KTMS	comp=Z,21nm,0.2s			*e*S			**Sb**	**09 50 33.1**	**+6.0**
UZB	comp=Z,57nm,0.2s **Uzynbulak**	**5.23**	**168**	Pg			**Pb**	**09 49 27.8**	**+3.1**
UZB	comp=Z,38nm,0.6s			Lg			Lg	09 50 32.8	
UZB	comp=Z,160nm,0.7s **Uzynbulak**	**5.23**	**168**	*e*Pn			**Pn**	**09 49 12.0**	**+0.4**
UZB	baz=168 **Uzynbulak**	**5.23**	**168**	*e*P			**Pb**	**09 49 27.8**	**+3.1**
UZB	comp=Z,37nm,0.2s			*e*S			**Sb**	**09 50 32.8**	**+5.2**
UZB	comp=Z,160nm,0.7s **Uzynbulak**	**5.23**	**168**	*e*PN			**Pn**	**09 49 11.9**	**+0.4**
SATY	**Saty**	**5.25**	**173**	Pg			**Pb**	**09 49 28.1**	**+3.1**
SATY	comp=Z,30nm,0.3s			Lg			Lg	09 50 33.2	
SATY	comp=Z,256nm,0.3s **Saty**	**5.25**	**173**	*e*Pn			**Pn**	**09 49 12.4**	**+0.6**
SATY	baz=173 **Saty**	**5.25**	**173**	*e*P			**Pb**	**09 49 28.1**	**+3.1**
SATY	comp=Z,30nm,0.1s			*e*S			**Sb**	**09 50 33.2**	**+5.1**
SATY	comp=Z,256nm,0.3s **Saty**	**5.25**	**173**	*e*PN			**Pn**	**09 49 12.4**	**+0.6**
TNSS	**Tian-Shan**	**5.25**	**185**	Pg			Pb	09 49 30.6	+5.3
TNSS	comp=Z,49nm,0.6s			Lg			Lg	09 50 37.5	
TNSS	comp=Z,124nm,0.8s **Tian-Shan**	**5.25**	**185**	*e*Pn			**Pn**	**09 49 12.0**	**-0.1**
TNSS	baz=184 **Tian-Shan**	**5.25**	**185**	*e*P			Pb	09 49 30.6	+5.3
TNSS	comp=Z,48nm,0.3s			*e*S			**Sg**	**09 50 37.5**	**-4.1**
TNSS	comp=Z,123nm,0.2s **Tian-Shan**	**5.25**	**185**	*e*PN			**Pn**	**09 49 11.9**	**-0.1**
IZV	**Izvestkoviy**	**5.27**	**187**	Pg			**Pb**	**09 49 29.0**	**+3.5**
IZV	comp=Z,27nm,0.6s			Lg			Lg	09 50 34.9	
IZV	comp=Z,184nm,0.6s **Izvestkoviy**	**5.27**	**187**	*e*P			**Pb**	**09 49 29.0**	**+3.5**
IZV	comp=Z,21nm,0.3s			*e*S			**Sb**	**09 50 34.9**	**+6.0**
SHLS	comp=Z,184nm,0.2s **Shalkode**	**5.29**	**165**	Pg			**Pg**	**09 49 32.7**	**-1.7**
SHLS	comp=Z,104nm,0.5s			Lg			Lg	09 50 41.1	
SHLS	comp=Z,369nm,0.8s **Shalkode**	**5.29**	**165**	*e*Pn			**Pn**	**09 49 13.5**	**+1.1**
SHLS	baz=161 **Shalkode**	**5.29**	**165**	*e*P			**Pg**	**09 49 32.7**	**-1.7**
SHLS	comp=Z,104nm,0.5s			*e*S			**Sg**	**09 50 41.1**	**-1.8**
SHLS	comp=Z,369nm,0.2s **Shalkode**	**5.29**	**165**	*e*PN			**Pn**	**09 49 13.4**	**+1.1**
KST	**Kastek**	**5.34**	**192**	Pg			Pb	09 49 31.9	+5.3
KST	comp=Z,41nm,0.3s			Lg			Lg	09 50 39.8	
KST	comp=Z,471nm,0.6s **Kastek**	**5.34**	**192**	*e*P			Pb	09 49 31.9	+5.3
KST	comp=Z,42nm,0.2s			*e*S			**Sg**	**09 50 39.8**	**-4.8**
USP	comp=Z,471nm,0.6s **Ospenovka**	**5.43**	**204**	P			**Pn**	**09 49 14.3**	**0.0**
TKM2	SNR=52 **Tokmak 2**	**5.52**	**195**	P			**Pn**	**09 49 15.5**	**-0.1**
TKM2	SNR=31 **Tokmak 2**	**5.52**	**195**	⇓Pn			**Pn**	**09 49 14.8**	**-0.8**
TKM2	comp=Z,51nm,0.6s			⇓Lg			Lg	09 50 44.9	
TKM2	comp=Z,364nm,0.8s **Tokmak 2**	**5.52**	**195**	PN			**Pn**	**09 49 14.8**	**-0.8**
KBK	**Karagaybulak**	**5.90**	**199**	P			**Pn**	**09 49 20.9**	**+0.1**
AAK	SNR=12 **Ala-Archa**	**6.02**	**202**	P			**Pn**	**09 49 22.7**	**+0.2**
AAK	SNR=13 **Ala-Archa**	**6.02**	**202**	Pn			**Pn**	**09 49 22.6**	**+0.2**
AAK	comp=Z,4.7nm,0.3s,baz=98,slow=3.5,SNR=40			Sn			**Sn**	**09 50 29.0**	**-2.5**
AAK	comp=Z,5.5nm,0.3s,baz=318,slow=23,SNR=6.2			Lg			Lg	09 50 59.6	
ULHL	comp=Z,18nm,0.3s,baz=281,slow=24,SNR=10 comp=Z,15nm,0.3s **Ulahol**	**6.09**	**189**	P			**Pn**	**09 49 24.4**	**+1.0**
EKS2	SNR=9.7 **Erkin-Say**	**6.20**	**207**	P			**Pn**	**09 49 25.1**	**+0.3**
UCH	SNR=12 **Uchtor**	**6.41**	**201**	P			Pn	09 49 35.6	+7.6
BVA0	SNR=8.4 **Borovoye Array**	**6.58**	**319**	Pn			**Pn**	**09 49 30.9**	**+1.0**
BVA0	comp=Z,7.4nm,0.4s,baz=131,slow=13,SNR=80			⇑Sn			**Sn**	**09 50 47.1**	**+2.1**
BVA0	comp=Z,15nm,0.3s,baz=129,slow=21,SNR=3.1			⇓Lg			Lg	09 51 19.6	
BVA0	comp=Z,51nm,0.5s,baz=118,slow=25,SNR=3.8 **Borovoye Array**	**6.58**	**319**	PN			**Pn**	**09 49 30.9**	**+1.0**
BVA0				SN			**Sn**	**09 50 47.8**	**+2.9**
BVAR	**Borovoye Array**	**6.58**	**319**	Pn			**Pn**	**09 49 30.2**	**+0.3**
BVAR	comp=Z,0.4nm,0.3s,baz=124,slow=12,SNR=78			Sn			**Sn**	**09 50 42.7**	**-2.2**
BVAR	comp=Z,0.8nm,0.3s,baz=121,slow=17,SNR=4.2			Lg			Lg	09 51 19.2	
BRVK	comp=Z,3.4nm,0.3s,baz=113,slow=26,SNR=8.0 comp=Z,4.1nm,0.2s **Borovoye**	**6.65**	**319**	⇑Pn			**Pn**	**09 49 31.1**	**+0.2**
BRVK	comp=Z,12nm,0.5s			⇓Sn			**Sn**	**09 50 47.1**	**+0.5**
BRVK	comp=Z,64nm,0.6s			⇑Lg			Lg	09 51 22.3	
BRVK	comp=Z,85nm,0.8s **Borovoye**	**6.65**	**319**	PN			**Pn**	**09 49 31.7**	**+0.8**
BRVK				SN			**Sn**	**09 50 47

KK31 ⇑Lg Lg 09 51 35.6
comp=Z,42nm,0.6s,baz=43,slow=32,SNR=4.3
KK31 Karatay Array 7.13 226 PN **Pn 09 49 35.9 -1.6**
KK31 SN **Sn 09 50 56.9 -1.7**
ZAA0 Zalesovo Array 7.30 36 ⇑Pn **Pn 09 49 40.2 +0.4**
comp=Z,1.6nm,0.4s
ZAA0 ⇓Sn **Sn 09 50 58.9 -3.8**
comp=Z,8.9nm,0.8s
ZAA0 ⇓Lg Lg 09 51 39.7
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 7.30 36 Pn **Pn 09 49 40.3 +0.5**
comp=Z,4.9nm,0.3s,baz=226,slow=14,SNR=58
ZALV Sn **Sn 09 51 00.3 -2.4**
comp=Z,7.6nm,0.3s,baz=234,slow=25,SNR=6.0
ZALV Lg Lg 09 51 43.8
comp=Z,7.6nm,0.3s,baz=222,slow=27,SNR=6.2
comp=Z,8.8nm,0.3s
BRLS Borolday 7.52 229 *e*Pn **Pn 09 49 44.9 +2.1**
baz=226
BRLS Borolday 7.52 229 *e*P **Pn 09 49 44.9 +2.1**
IUG luzhnay 8.09 224 *e*Pn **Pn 09 49 50.9 +0.1**
baz=223
IUG luzhnay 8.09 224 *e*P **Pg 09 50 26.0 -2.1**
comp=Z,18nm,0.2s
IUG *e*S **Sg 09 52 12.5 -0.3**
comp=Z,238nm,0.6s
IUG luzhnay 8.09 224 *e*P **Pn 09 49 50.9 +0.1**
WMQ Urumqi 8.35 118 Pn **Pn 09 49 55.8 +1.5**
WMQ Sn **Sn 09 51 26.0 -2.6**
WMQ smax smax
comp=N,79nm,1.1s
WMQ smax smax
comp=E,61nm,1.1s
KSH Kashi 8.82 188 Pn Pg 09 50 31.9 -10
KSH Sn **Sg 09 52 37.8 +1.6**
KSH pmax pmax
comp=Z,9.0nm,0.8s
KSH smax smax
comp=N,35nm,0.9s
KSH smax smax
comp=E,39nm,0.8s
AB31 Akbulak array 11.66 281 ⇑Pn **Pn 09 50 36.8 -2.6**
comp=E,1.3nm,0.3s,baz=88,slow=12,SNR=83
AB31 ⇑Sn **Sn 09 52 48.1 -1.4**
comp=E,3.3nm,0.5s,baz=266,slow=37,SNR=5.2
AB31 ⇑Lg Lg 09 53 59.2
comp=E,36nm,0.8s
AB31 Akbulak array 11.66 281 P **Pn 09 50 36.8 -2.6**
AB31 SN **Sn 09 52 48.1 -1.4**
AKTO Aktyubinsk 12.91 287 ⇑Pn **Pn 09 50 54.6 -1.9**
comp=E,8.3nm,0.6s
AKTO ⇑Sn **Sn 09 53 19.2 -1.0**
comp=E,6.1nm,0.7s
AKTO ⇑Lg Lg 09 54 39.6
comp=E,15nm,1.0s
AKTO Aktyubinsk 12.91 287 P **Pn 09 50 54.6 -1.9**
AKTO SN **Sn 09 53 19.2 -1.0**
AKTO Aktyubinsk 12.91 287 Pn Pn 09 50 53.5 -3.1
comp=E,1.5nm,0.3s,baz=76,slow=10.0,SNR=13
AKTO Sn Sn 09 53 10.4 -10
comp=E,0.6nm,0.3s,baz=70,slow=12,SNR=1.6
AKTO Lg Lg 09 54 33.6
comp=E,0.4nm,0.3s,baz=188,slow=22,SNR=1.6
comp=E,3.0nm,0.3s
SVE Sverdlovsk 13.35 316 *e*P Pn 09 51 07.2 +4.6
ARU Arti 14.15 312 P **Pn 09 51 15.6 +2.2**
ARU S **Sn 09 53 55.5 +5.2**
ARU Arti 14.15 312 Pn **Pn 09 51 12.1 -1.3**
comp=E,0.6nm,0.3s,baz=96,slow=18,SNR=2.4
ARU Sn Sn 09 53 42.0 -8.3
comp=E,0.7nm,0.3s,baz=269,slow=23,SNR=1.6
ARU Lg Lg 09 55 13.7
comp=E,0.8nm,0.3s,baz=132,slow=23,SNR=3.0
ZAK Zakamensk 16.89 73 *e*P **P 09 51 55.5 +3.8**
ZAK pmax pmax
comp=Z,3.0nm,1.5s
GEYT Alibeck 17.50 241 P **Pn 09 51 54.2 -3.0**
comp=Z,0.2nm,0.3s,baz=207,slow=35,SNR=1.9
GEYT S Sn 09 54 58.9 -13
comp=Z,2.0nm,0.8s,baz=43,slow=47,SNR=1.9
comp=Z,0.9nm,0.4s
GOMU GeErMu 17.54 127 P **Pn 09 51 57.9 -0.1**
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GTA Gaotai 18.30 111 P **P 09 52 12.9 +5.6**
GTA pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 19.25 80 P **P 09 52 15.8 -1.9**
comp=Z,0.1nm,0.3s,baz=282,slow=11,SNR=3.3
SONM Lg Lg 09 57 54.2
baz=353,slow=17,SNR=1.8
comp=Z,0.3nm,0.4s
BELG Belogornoye 19.46 293 ⇓*e*P **P 09 52 20.4 +0.6**
BELG pmax pmax
comp=Z,3.0nm,0.9s
BELG Belogornoye 19.46 293 P **P 09 52 17.5 -2.2**
comp=Z,0.3nm,0.3s,baz=316,slow=23,SNR=1.5
comp=Z,8.7nm,0.8s
NRIK Noril'sk 21.70 10 ⇓*e*P **P 09 52 45.7 +1.8**
NRIK pmax pmax
comp=Z,5.0nm,1.3s
NRIK Noril'sk 21.70 10 P **P 09 52 42.4 -1.5**
comp=Z,2.3nm,0.8s,baz=42,slow=7.5,SNR=1.6
comp=Z,2.3nm,0.8s
KBZ Khabaz 24.35 272 *i* P **P 09 53 09.5 -1.6**
KBZ Khabaz 24.35 272 P **P 09 53 13.6 +2.5**
comp=Z,0.7nm,0.5s,baz=108,slow=20,SNR=1.1
GNI Garni 24.72 263 ⇑*e*P **P 09 53 12.7 -2.0**
GNI pmax pmax
comp=Z,17nm,1.3s
KLMR Klimovskoe 24.98 314 *e*P **P 09 53 16.0 -0.6**
KLMR pmax pmax
comp=Z,22nm,1.7s
FINES FINESS Array B 31.51 314 *i* P **P 09 54 14.6 -0.3**
FINES pmax pmax
comp=Z,2.0nm,1.0s
FINES FINESS Array B 31.51 314 P **P 09 54 14.0 -0.8**
comp=Z,2.0nm,1.0s,baz=165,slow=7.9,SNR=4.4
comp=Z,2.0nm,1.0s
YAK Yakutsk 31.85 45 ⇑*e*P **P 09 54 17.0 -0.8**
YAK pmax pmax
comp=Z,3.0nm,0.6s
TIXI Tiksi 33.07 27 ⇓*e*P **P 09 54 27.3 -1.2**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
CMAR Chiang Mai Arr 34.45 142 P **P 09 54 39.9 -1.1**
comp=Z,0.6nm,0.2s,baz=320,slow=8.5,SNR=5.4
comp=Z,0.6nm,0.2s
HFS Hagfors 37.67 313 P **P 09 55 06.4 -1.7**
comp=Z,1.0nm,0.5s,baz=87,slow=13,SNR=2.4
comp=Z,1.0nm,0.5s
KSRS Korea Array 37.85 87 P P 09 55 08.0 -1.9
KSRS Korea Array 37.85 87 P P 09 55 08.0 -1.9
comp=Z,0.4nm,0.5s,baz=302,slow=6.9,SNR=2.1
comp=Z,0.4nm,0.5s
NB2 NORSAR Subarra 38.69 315 P **P 09 55 16.2 -0.6**
comp=Z,2.0nm,0.7s,baz=80,slow=8.6
NOA NORSAR Array B 38.69 315 P **P 09 55 15.3 -1.5**
comp=Z,0.5nm,0.6s,baz=82,slow=7.1,SNR=2.6
comp=Z,0.5nm,0.6s
JMIC Jan Mayen 44.10 332 LR LR 10 13 36.0
comp=Z,22nm,19.3s,baz=84,slow=35
EKA Eskdalemuir Ar 47.75 310 P **P 09 56 28.5 -1.5**
comp=Z,0.4nm,0.5s,baz=68,slow=7.4,SNR=1.6
comp=Z,0.4nm,0.5s
ILAR Eielson Array 62.11 20 P **P 09 58 12.4 -1.3**
comp=Z,0.8nm,0.8s,baz=312,slow=4.8,SNR=8.7
comp=Z,0.8nm,0.8s
YKA Yellowknife Ar 69.16 6 P **P 09 58 58.0 -1.2**
comp=Z,0.9nm,0.8s,baz=350,slow=6.7,SNR=15
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 70.89 268 P **P 09 59 08.6 -2.0**
comp=Z,0.5nm,0.7s,baz=47,slow=4.9,SNR=2.2
comp=Z,0.5nm,0.7s
WRA Warramunga Arr 84.73 128 *e*P P 10 00 24.2 -3.2
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 84.73 128 P P 10 00 25.1 -2.3
comp=Z,1.5nm,0.8s,baz=336,slow=4.9,SNR=7.1
comp=Z,1.5nm,0.8s
ASAR Alice Springs 87.58 130 P **P 10 00 39.5 -1.9**
comp=Z,0.9nm,0.8s,baz=342,slow=4.7,SNR=11
comp=Z,0.9nm,0.8s
PDAR Pinedale Array 89.13 5 P **P 10 00 47.9 -1.0**
comp=Z,0.1nm,0.4s,baz=333,slow=3.3,SNR=1.9
comp=Z,0.1nm,0.4s

JMA 18 10:01:22.8±0.1, 39.5°N±0.3°×142.7°E±0.8, h31km±1km, MV1.6/32, E OFF IWATE PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.65**	**281**	*i* P		Pb	10 01 35.4	-0.4
MIYJ				*e*S		Sb	10 01 44.2	-0.5
JTH	**Tanohata**	**0.78**	**309**	*e*P		Pn	10 01 37.3	-0.3
JTH				*e*S		Sb	10 01 47.6	-0.5
OFUJ	**Ofunato**	**0.85**	**244**	P		Pn	10 01 38.4	-0.1
OFUJ				*e*S		Sn	10 01 49.6	-0.3
JOM	**Ohasama**	**1.05**	**272**	*i* P		Pn	10 01 41.7	+0.3
JOM				*e*S		Sn	10 01 55.2	+0.3
JKMT	**Kesennumamotoy**	**1.11**	**235**	*e*P		Pn	10 01 42.2	0.0
JKZ	**Kuzumaki**	**1.15**	**298**	*e*P		Pn	10 01 43.2	+0.4
JKZ				*e*S		Sn	10 01 57.6	+0.1
JMK	**Ichinoseki**	**1.22**	**246**	P		Pn	10 01 44.1	+0.4
JMK				*e*S		Sn	10 01 59.5	+0.5
JIO	**Ouri**	**1.42**	**226**	*e*P		Pn	10 01 46.8	+0.4
JIO				*e*S		Sn	10 02 04.2	+0.1

*MOS **18** 10:01:39.2±1.1, 37.°19N×140.°24E, h105km, mb4.5/35, Error ellipse: s-maj=6.9km s-min=4.9km az=92.7*
*IDC **18** 10:01:40.4±0.5, 37.°11N×140.°15E, h105km±4km, mb3.9/25, mbtmp4.2/31, MS3.1/5, Error ellipse: s-maj=11.5km s-min=10.3km az=130.0*
*NEIC **18** 10:01:41.6±1.5, 37.°14N±0.°06×140.°13E±0.°09, h106km±6km, mb4.5/82, Error ellipse: s-maj=10.5km s-min=8.3km az=113.0*
*NIED **18** 10:01:41.2, 37.°10N×140.°23E, h105km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}0.77; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-0.81; $M_{r\theta}$-0.74; $M_{\theta\phi}$-0.01; $M_{\phi r}$-2.19; Fault plane solution: $M_0$2.44000×10¹⁵ NP1: ϕ_s198.00000°, δ81.00000°, λ96.00000°. NP2: ϕ_s346.00000°, δ11.00000°, λ58.00000°.*
*JMA **18** 10:01:41.2±0.1, 37.°1N±0.°3×140.°2E±0.°5, h105km, MD4.1/40, MV4.3/40, MID FUKUSHIMA PREF*
JMA Felt II J1 at MID FUKUSHIMA PREF.

ISC 18 10:01:40.3±0.4, 37.°14N±0.°04×140.°28E±0.°04, h106km±3km, h106km:pP-P, n281, σ1.9/60/296, mb4.5/100, 17C-13D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFFD	**Fukushimafurud**	**0.23**	**103**	⇓*i*P		**Pn**	**10 01 56.2**	**+0.9**
JFFD				⇓S		**Sn**	**10 02 07.2**	**+0.6**
JFFD	**Fukushimafurud**	**0.23**	**103**	A		A	10 01 56.2	
	comp=E,25nm,0.6s,comp=N,34nm,0.4s							
JSB	**Shiboa**	**0.34**	**239**	*i* P		**Pn**	**10 01 56.5**	**+0.8**
JSB				S		**Sn**	**10 02 07.9**	**+0.6**
JSB	**Shiboa**	**0.34**	**239**	A		A	10 01 56.5	
	comp=E,59nm,0.9s,comp=N,42nm,0.8s							
ONAJ	**Iwakimizuishiy**	**0.42**	**95**	A		A	10 01 57.3	
	comp=E,71nm,0.3s,comp=N,29nm,0.3s							
JOTO	**OTAMA OYAMA**	**0.42**	**6**	*i* P		**Pn**	**10 01 57.5**	**+1.2**
JOTO				S		**Sn**	**10 02 09.3**	**+1.2**
JOTO	**OTAMA OYAMA**	**0.42**	**6**	A		A	10 01 57.5	
	comp=E,44nm,0.8s,comp=N,62nm,0.4s							
JFK	**Kawauchi**	**0.53**	**65**	⇓*i*P		**Pn**	**10 01 58.1**	**+1.2**
JFK				⇓S		**Sn**	**10 02 10.6**	**+1.2**
JFK	**Kawauchi**	**0.53**	**65**	A		A	10 01 58.1	
	comp=E,18nm,0.3s,comp=N,19nm,0.2s							
JFY	**Yanaizu**	**0.53**	**300**	*i* P		**Pn**	**10 01 57.7**	**+0.8**
JFY				S		**Sn**	**10 02 09.8**	**+0.4**
JFY	**Yanaizu**	**0.53**	**300**	A		A	10 01 57.7	
	comp=E,15nm,1.1s,comp=N,7.0nm,0.5s							
JHO	**Hitachi**	**0.58**	**156**	A		A	10 01 58.0	
	comp=E,23nm,1.4s,comp=N,8.0nm,0.4s							
JMST	**Minamisoumatoc**	**0.76**	**40**	A		A	10 02 00.3	
	comp=E,27nm,0.4s,comp=N,26nm,0.3s							
JYAR	**Yonezawaarcadi**	**0.78**	**352**	A		A	10 02 00.3	
	comp=E,27nm,1.2s,comp=N,29nm,1.2s							
JMM	**Marumori**	**0.83**	**29**	Pn		**Pn**	**10 02 00.9**	**+1.6**
JMM	**Marumori**	**0.83**	**29**	P		**Pn**	**10 02 01.1**	**+1.7**
JMM	**Marumori**	**0.83**	**29**	⇓*i*P		**Pn**	**10 02 01.0**	**+1.6**
JMM				⇓S		**Sn**	**10 02 15.7**	**+1.8**
JMM	**Marumori**	**0.83**	**29**	A		A	10 02 01.0	
	comp=E,27nm,0.5s,comp=N,25nm,1.2s							
JHYU	**Hitachinakayam**	**0.84**	**163**	A		A	10 02 00.2	
	comp=E,18nm,1.3s,comp=N,16nm,1.4s							
JKT	**Katashina**	**0.91**	**246**	*i* P		**Pn**	**10 02 00.8**	**+0.6**
JKT				*e*S		**Sn**	**10 02 14.8**	**-0.5**
JYT	**Yasato**	**0.92**	**184**	A		A	10 02 00.7	
	comp=E,23nm,0.7s,comp=N,13nm,0.4s							
JAG	**Ashikaga**	**0.97**	**223**	*i* P		**Pn**	**10 02 01.2**	**+0.4**
JAG				S		**Sn**	**10 02 16.0**	**-0.4**
JAG	**Ashikaga**	**0.97**	**223**	A		A	10 02 01.2	
	comp=E,3.0nm,1.7s,comp=N,13nm,1.9s							
JUON	**Uonuma**	**0.98**	**274**	*i* P		**Pn**	**10 02 01.3**	**+0.4**
JUON				*e*S		**Sn**	**10 02 16.4**	**-0.1**
JNS	**Sasagawa**	**1.02**	**312**	*i* P		**Pn**	**10 02 01.8**	**+0.4**
JNS				*e*S		**Sn**	**10 02 17.2**	**0.0**
JYS	**Shirataka**	**1.09**	**351**	P		**Pn**	**10 02 03.7**	**+1.6**
JYS				S		**Sn**	**10 02 20.7**	**+2.1**
JYS	**Shirataka**	**1.09**	**351**	A		A	10 02 03.7	
	comp=E,11nm,1.6s,comp=N,9.0nm,1.4s							
JOU	**Okura**	**1.26**	**14**	A		A	10 02 05.8	
	comp=E,6.0nm,2.2s,comp=N,7.0nm,0.8s							
JYA	**Atsumi**	**1.52**	**343**	A		A	10 02 08.6	
	comp=E,5.0nm,2.4s,comp=N,8.0nm,1.3s							
JAW	**Awa shima**	**1.54**	**328**	P		**Pn**	**10 02 08.2**	**+0.8**
JAW				S		**Sn**	**10 02 28.9**	**+1.0**
JRY	**Ryogami san**	**1.58**	**225**	*i* P		**Pn**	**10 02 08.0**	**+0.1**
JRY				S		**Sn**	**10 02 27.8**	**-0.9**
MJAR	**Matsushiro Arr**	**1.76**	**251**	P		**Pn**	**10 02 10.2**	**+0.1**
	comp=N,274nm,0.6s,baz=59,slow=11,SNR=581							
MAJO	**Matsushiro**	**1.77**	**251**			**Pn**	**10 02 10.3**	**+0.2**
MAJO	**Matsushiro**	**1.77**	**251**	P		**Pn**	**10 02 10.9**	**+0.8**
MAJO	**Matsushiro**	**1.77**	**251**	*c* iP		**Pn**	**10 02 10.4**	**+0.2**
MAT	**Matsushiro**	**1.77**	**251**	*i* P		**Pn**	**10 02 10.7**	**+0.6**
MAT				S		**Sn**	**10 02 33.9**	**+1.0**
JYK	**Kaneyama**	**1.77**	**2**	P		**Pn**	**10 02 12.1**	**+1.9**
JYK				*e*S		**Sn**	**10 02 34.9**	**+1.8**
JSD	**Sado**	**1.83**	**300**			**Pn**	**10 02 10.8**	**-0.2**
JSD	**Sado**	**1.83**	**300**	P		**Pn**	**10 02 11.2**	**+0.2**
JSD	**Sado**	**1.83**	**300**	*i* P		**Pn**	**10 02 11.1**	**+0.1**
JSD				S		**Sn**	**10 02 33.9**	**-0.4**
JGF	**Kuroka**	**2.81**	**238**			**Pn**	**10 02 24.5**	**+0.8**
JGF	**Kuroka**	**2.81**	**238**	P		**Pn**	**10 02 24.7**	**+1.0**
JSG	**Sagara**	**2.99**	**215**	Pn		**Pn**	**10 02 25.8**	**-0.3**
JSG	**Sagara**	**2.99**	**215**	P		**Pn**	**10 02 27.2**	**+1.2**
INU	**Inuyama**	**3.19**	**237**	Pn		**Pn**	**10 02 29.9**	**+1.3**
INU	**Inuyama**	**3.19**	**237**	P		**Pn**	**10 02 29.7**	**+1.1**
JTM	**Tenmabayashi**	**3.69**	**9**	Pn		**Pn**	**10 02 37.1**	**+1.7**
JTM	**Tenmabayashi**	**3.69**	**9**	P		**Pn**	**10 02 36.9**	**+1.6**
JHJ	**Hachijo jima 2**	**4.03**	**186**	P		**Pn**	**10 02 39.5**	**-0.6**
	comp=N,89nm,0.3s,baz=324,slow=22,SNR=11							
JHJ				S		**Sn**	**10 03 22.1**	**-4.2**
	comp=N,232nm,0.3s,baz=338,slow=22,SNR=12							
JHJ2	**Mitsune**	**4.04**	**186**	Pn		**Pn**	**10 02 39.4**	**-0.6**
JHJ	**Mitsune**	**4.04**	**186**	P		**Pn**	**10 02 40.4**	**+0.3**
ERM	**Erimo**	**5.35**	**24**			**Pn**	**10 02 59.1**	**+1.4**
ERM	**Erimo**	**5.35**	**24**	P		**Pn**	**10 02 58.2**	**+0.5**
ERM	**Erimo**	**5.35**	**24**	⇓*e*P		**Pn**	**10 02 57.1**	**-0.6**
JEM	**Erimo**	**5.35**	**24**	P		**Pn**	**10 02 58.3**	**+0.6**
JMN	**Monobe**	**6.24**	**239**	Pn		**Pn**	**10 03 09.3**	**-0.5**
JMN	**Monobe**	**6.24**	**239**	P		**Pn**	**10 03 09.5**	**-0.3**
ASAJ	**Asahikawa**	**7.19**	**13**	P		**Pn**	**10 03 20.7**	**-1.9**
ASAJ	**Asahikawa**	**7.19**	**13**	P		**Pn**	**10 03 22.4**	**-0.2**
	comp=N,4.1nm,0.5s,baz=209,slow=16,SNR=14							
ASAJ				S		**Sn**	**10 04 39.6**	**-3.0**
	comp=N,6.7nm,0.4s,baz=344,slow=10,SNR=1.5							
JKA	**Kamikawa-asahi**	**7.19**	**13**	Pn		**Pn**	**10 03 20.7**	**-1.9**
NMR	**Nemuro--Hokkai**	**7.49**	**32**	*e*P		**Pn**	**10 03 24.0**	**-2.6**
NMR				*e*S		**Sn**	**10 04 42.1**	**-7.8**
RUSJ	**Misakicho**	**7.91**	**27**	*e*P		**Pn**	**10 03 31.6**	**-0.9**
RUSJ				*e*S		**Sn**	**10 04 56.5**	**-3.8**
YUK	**Yuzh-Kuril'sk**	**8.09**	**30**	*e*P		**Pn**	**10 03 34.9**	**+0.1**
YUK				*i* S		**Sn**	**10 04 58.4**	**-6.1**
YUK				pmax	pmax			
	comp=Z,70nm,0.3s							
YUK				pmax	pmax			
	comp=E,24nm,0.2s							
SHO	**Shikotan**	**8.37**	**35**	P		**Pn**	**10 03 35.6**	**-3.0**
SHO				*e*S		**Sn**	**10 05 02.7**	**-8.6**
JNU	**Nakatsue**	**8.68**	**245**	Pn		**Pn**	**10 03 43.5**	**+0.5**
JNU	**Nakatsue**	**8.68**	**245**	P		**Pn**	**10 03 43.9**	**+0.9**
JNU	**Nakatsue**	**8.68**	**245**	P		**Pn**	**10 03 43.1**	**+0.1**
	comp=E,12nm,0.7s,baz=147,slow=4.3,SNR=14							
JNU				LR		LR	10 07 18.2	
	comp=E,102nm,20.1s,baz=50,slow=39							
MSHR	**Mys Shultsa**	**8.87**	**311**	⇑*e*P		**Pn**	**10 03 45.8**	**+0.4**
USA0B	**Ussuriysk Arra**	**9.45**	**321**	Pn		**Pn**	**10 03 54.1**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.45**	**321**	⇑*e*P		**Pn**	**10 03 54.2**	**+0.9**
USRK	**Ussuriysk Ar.**	**9.45**	**321**	Pn		**Pn**	**10 03 54.3**	**+1.0**
USRK	**Ussuriysk Ar.**	**9.45**	**321**	P		**Pn**	**10 03 54.8**	**+1.5**
	comp=E,7.1nm,0.4s,baz=139,slow=11,SNR=24							
KSRS	**Korea Array**	**9.85**	**276**	P		**Pn**	**10 03 59.0**	**+0.2**
KSRS	**Korea Array**	**9.85**	**276**	P		**Pn**	**10 03 59.0**	**+0.2**
	comp=E,29nm,0.8s,baz=90,slow=13,SNR=85							
KSRS				LR		LR	10 07 34.0	
	comp=E,71nm,19.2s,baz=70,slow=36							
KSAR	**Wonju Array Be**	**9.88**	**275**	Pn		**Pn**	**10 04 00.9**	**+1.7**
KSAR	**Wonju Array Be**	**9.88**	**275**	P		**Pn**	**10 04 00.9**	**+1.7**
KS19	**Wonju Array Si**	**9.89**	**276**	Pn		**Pn**	**10 04 00.3**	**+0.9**
KUR	**Kuril'sk**	**9.90**	**33**	P		**Pn**	**10 03 59.8**	**+0.4**
KUR				*i* S		**Sn**	**10 05 42.9**	**-5.6**
YSS	**Yuzh-Sakhalins**	**9.98**	**10**	*e*P		**Pn**	**10 04 00.9**	**+0.5**
YSS				*e*S		**Sn**	**10 05 50.0**	**-0.3**
YSS				pmax	pmax			
	comp=E,10.0nm,1.1s							
YSS				smax	smax			
	comp=E,10.0nm,1.0s							
TJN	**Taejon**	**10.39**	**270**	⇑*e*P		**Pn**	**10 04 06.5**	**+0.3**
MDJ	**Mudanjiang**	**11.00**	**316**	P		**Pn**	**10 04 16.3**	**+1.9**
MDJ				pmax	pmax			
	comp=Z,7.0nm,1.5s							
MDJ				pmax	pmax			
	comp=Z,220nm,4.1s							
MDJ	**Mudanjiang**	**11.00**	**316**	Pn		**Pn**	**10 04 12.0**	**-2.3**
BNX	**BinXian**	**12.91**	**316**	⇑P		**Pn**	**10 04 38.4**	**-1.3**
BNX				pmax	pmax			
	comp=Z,6.0nm,1.3s							
BNX				pmax	pmax			
	comp=Z,220nm,4.9s							
CN2	**Changchun**	**13.10**	**305**	*e*P		**Pn**	**10 04 42.8**	**+0.7**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
KLR	**Kul'dur**	**13.58**	**336**	⇑*e*P		**Pn**	**10 04 48.9**	**+0.6**
KLR				pmax	pmax			
	comp=Z,8.0nm,1.6s							
KLR	**Kul'dur**	**13.58**	**336**	P		**Pn**	**10 04 46.6**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=116,slow=12,SNR=3.2							
TYV	**Tymovskoe**	**13.82**	**6**	*e*P		**P**	**10 04 55.0**	**-1.3**
TYV				pmax	pmax			
	comp=Z,100nm,3.2s							
TYV				pmax	pmax			
	comp=Z,5.0nm,0.7s							
JOW	**Kunigami**	**14.46**	**228**	P		**P**	**10 05 01.9**	**-1.7**
	comp=Z,6.5nm,0.5s,baz=338,slow=9.1,SNR=4.5							
DL2	**Dalian**	**14.81**	**283**	P		**Pn**	**10 05 04.6**	**+0.4**
DL2				pmax	pmax			
	comp=Z,41nm,0.7s							
NJ2	**Nanjing**	**18.34**	**260**	*e*P		**P**	**10 05 45.3**	**-1.1**
NJ2				pP		**pP**	**10 06 05.3**	**-0.9**
NJ2				sP		**sP**	**10 06 17.8**	**-1.8**
NJ2				pmax	pmax			
	comp=Z,14nm,0.7s							
NJ2				pmax	pmax			
	comp=Z,200nm,7.1s							
TIA	**Tai'an**	**18.59**	**274**	*e*P		**P**	**10 05 48.8**	**-0.3**
TIA				pmax	pmax			
	comp=Z,8.0nm,0.6s							
ZEA	**Zeya**	**18.89**	**336**	*e*P		**P**	**10 05 49.5**	**-2.7**
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BJI	**Beijing**	**19.05**	**286**	P		**P**	**10 05 53.3**	**-0.7**
BJI				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BJT	**Baijiatuau**	**19.05**	**286**	P		**P**	**10 05 52.7**	**-1.4**
BJT	**Baijiatuau**	**19.05**	**286**	P		**P**	**10 05 52.7**	**-1.4**
BJT				pmax	pmax			
	comp=Z,9.0nm,1.0s							
XLT	**XiLinHaoTe**	**19.56**	**298**	⇑*i*P		**P**	**10 05 57.8**	**-1.8**
XLT				pmax	pmax			
	comp=Z,14nm,0.8s							
XLT				pmax	pmax			
	comp=Z,120nm,4.8s							
PEA0B	**Petropavlovsk-**	**20.06**	**32**	P		**P**	**10 06 06.0**	**+1.1**
PEA0B				IAmb	IAmb		10 06 30.0	
	comp=Z,40nm,1.4s							
PEA0B	**Petropavlovsk-**	**20.06**	**32**	P		**P**	**10 06 06.0**	**+1.1**
PEA0B				pmax	pmax			
	comp=Z,40nm,1.5s							
PETK	**Petropavlovsk-**	**20.06**	**32**	P		Pn	10 06 07.1	-0.6
PETK	**Petropavlovsk-**	**20.06**	**32**	P		**P**	**10 06 06.5**	**+1.6**
	comp=Z,2.6nm,0.8s,baz=218,slow=6.8,SNR=6.0							
	comp=Z,2.6nm,0.8s							
HNS	**HongShan**	**20.34**	**279**	⇑P		**P**	**10 06 05.3**	**-2.7**
HNS				pmax	pmax			
	comp=Z,47nm,0.8s							
PET	**Petropavlovsk**	**20.41**	**33**	⇑*e*P		Pn	10 06 10.9	-0.8
PET				pmax	pmax			
	comp=Z,20nm,1.4s							
HHC	**Hu-ho-hao-te**	**22.58**	**288**	*e*P		**P**	**10 06 30.3**	**-1.6**
HHC				pmax	pmax			
	comp=Z,9.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,120nm,5.4s							
LYN	**LuoYang**	**22.66**	**272**	*e*P		**P**	**10 06 29.0**	**-3.6**
LYN				pP		pP	10 06 53.3	0.0
LYN				PP		**PnPn**	**10 07 03.8**	**+1.5**
LYN				sP		sP	10 07 05.4	-1.0
LYN				pmax	pmax			
	comp=Z,14nm,0.6s							
MA2	**Magadan**	**23.45**	**13**	⇑*e*P		**P**	**10 06 41.6**	**+1.7**
MA2				pmax	pmax			
	comp=Z,2.0nm,0.3s							
XAN	**Xi'an**	**25.63**	**273**	⇑P		**P**	**10 06 58.3**	**-1.6**
YAK	**Yakutsk**	**25.77**	**348**	*e*P		**P**	**10 07 00.2**	**-0.6**
YAK				pmax	pmax			
	comp=Z,9.0nm,0.9s							
YAK				pmax	pmax			
	comp=N,3.0nm,0.9s							
ENH	**Enshi**	**26.44**	**264**	P		**P**	**10 07 06.1**	**-1.1**
ULN	**Ulaanbaatar**	**26.54**	**304**	P		**P**	**10 07 08.5**	**+0.4**
ULN				IAmb	IAmb		10 07 09.4	
	comp=Z,8.3nm,0.6s							
ULN	**Ulaanbaatar**	**26.54**	**304**	P		**P**	**10 07 08.5**	**+0.4**
ULN				pmax	pmax			
	comp=Z,8.0nm,0.6s							
SEY	**Seymchan**	**26.87**	**12**	⇓*e*P		**P**	**10 07 13.1**	**+2.4**
SEY				pmax	pmax			
	comp=Z,2.0nm,1.2s							
SONM	**Songino Array**	**26.

PZH	**PanZhiHua**	**34.21**	**263**	P	**P**	**10 08 15.3**	**-0.6**		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.6s								
PZH				pmax	pmax				
	comp=Z,100nm,5.2s								
TIXI	**Tiksi**	**35.08**	**354**	P	**P**	**10 08 21.8**	**-0.9**		
TIXI	**Tiksi**	**35.08**	**354**	*eP*	**P**	**10 08 22.7**	**0.0**		
TIXI				pmax	pmax				
	comp=Z,8.0nm,1.7s								
SLVN	**Son La**	**35.19**	**254**	P	**P**	**10 08 22.9**	**-1.3**		
GOMU	**GeErMu**	**36.21**	**283**	P	**P**	**10 08 33.1**	**-0.2**		
GOMU				pP	pP	10 08 55.4	-2.0		
GOMU				sP	sP	10 09 02.1	-7.5		
GOMU				pmax	pmax				
	comp=Z,7.0nm,0.7s								
CRAI	**Chiangrai**	**38.53**	**255**	P	**P**	**10 08 52.9**	**+0.3**		
CRAI				IAmb	IAmb	10 08 54.5			
	comp=Z,6.0nm,0.7s								
DGZ	**Jazzator, Alta**	**39.59**	**306**	*d iP*	**P**	**10 09 02.1**	**+0.8**		
DGZ				pmax	pmax				
	comp=Z,21nm,0.9s								
WMQ	**Urumqi**	**39.98**	**297**	*e*P	**P**	**10 09 05.9**	**+1.5**		
WMQ				PP	**PnPn**	**10 10 42.1**	**-0.5**		
WMQ				PcS	**PcS**	**10 14 59.5**	**+1.5**		
WMQ				pmax	pmax				
	comp=Z,18nm,0.9s								
CMAR	**Chiang Mai Arr**	**40.65**	**254**	P	**P**	**10 09 08.3**	**-1.8**		
	comp=Z,0.6nm,0.3s,baz=40,slow=7.4,SNR=5.5								
	comp=Z,0.6nm,0.3s								
ZAA0	**Zalesovo Array**	**41.17**	**312**	P	**P**	**10 09 14.0**	**0.0**		
ZALV	**Zalesovo Beam**	**41.17**	**312**	P	**P**	**10 09 13.9**	**-0.1**		
	comp=Z,12nm,0.5s,baz=93,slow=7.0,SNR=60								
	comp=Z,12nm,0.5s								
LSA	**Lhasa**	**41.30**	**274**	P	**P**	**10 09 15.7**	**-0.2**		
LSA				IAmb	IAmb	10 09 17.5			
	comp=Z,6.3nm,0.8s								
LSA	**Lhasa**	**41.30**	**274**	P	**P**	**10 09 15.7**	**-0.2**		
LSA				pmax	pmax				
	comp=Z,6.0nm,0.8s								
NRIK	**Noril'sk**	**42.79**	**335**	*de*P	**P**	**10 09 27.5**	**+0.6**		
NRIK				pmax	pmax				
	comp=Z,4.0nm,1.1s								
MK31	**Makanchi Array**	**43.29**	**302**	P	**P**	**10 09 31.8**	**+0.4**		
MK31				IAmb	IAmb	10 09 33.5			
	comp=Z,3.9nm,0.6s								
MK31	**Makanchi Array**	**43.29**	**302**	P	**P**	**10 09 31.8**	**+0.4**		
MK31				pmax	pmax				
	comp=Z,4.0nm,0.6s								
MKAR	**Makanchi Array**	**43.29**	**302**	P	**P**	**10 09 30.9**	**-0.5**		
MKAR	**Makanchi Array**	**43.29**	**302**	P	**P**	**10 09 31.4**	**+0.1**		
	comp=Z,4.2nm,0.6s,baz=84,slow=10,SNR=52								
MKAR				pP	**pP**	**10 09 55.7**	**-0.4**		
	comp=Z,1.3nm,0.6s,baz=79,slow=14,SNR=3.3								
MKAR				ScP	**ScP**	**10 14 59.0**	**-0.9**		
	comp=Z,0.2nm,0.6s,baz=72,slow=4.7,SNR=2.7								
MKAR				LR	LR	10 30 20.1			
	comp=Z,24nm,18.1s,baz=80,slow=40								
	comp=Z,4.2nm,0.6s								
MAKZ	**Makanchi**	**43.50**	**302**	P	**P**	**10 09 32.8**	**-0.2**		
MAKZ				IAmb	IAmb	10 09 35.3			
	comp=Z,4.8nm,0.7s								
MAKZ	**Makanchi**	**43.50**	**302**	P	**P**	**10 09 32.8**	**-0.2**		
MAKZ				pmax	pmax				
	comp=Z,5.0nm,0.7s								
KURK	**Kurchatov**	**45.15**	**308**	P	**P**	**10 09 45.7**	**-0.3**		
KURK	**Kurchatov**	**45.15**	**308**	*c iP*	**P**	**10 09 45.7**	**-0.3**		
KURK				pmax	pmax				
	comp=Z,53nm,0.8s								
KURBB	**Kurchatov Arra**	**45.22**	**308**	P	**P**	**10 09 46.3**	**-0.3**		
	comp=Z,28nm,0.5s,baz=84,slow=8.0,SNR=248								
D19K	**Kuna River**	**45.66**	**27**	P	**P**	**10 09 51.6**	**+1.8**		
D19K				IAmb	IAmb	10 10 28.7			
	comp=Z,10nm,1.2s								
E19K	**Redstone River**	**45.81**	**28**	P	**P**	**10 09 52.4**	**+1.4**		
SVW2	**Sparrevohn**	**45.99**	**37**	P	**P**	**10 09 55.1**	**+2.5**		
SVW2				IAmb	IAmb	10 10 23.3			
	comp=Z,17nm,1.4s								
Q19K	**Cape Douglas,**	**46.99**	**40**	P	**P**	**10 10 01.4**	**+1.0**		
B21K	**Ikpikpuk River**	**47.08**	**26**	P	**P**	**10 10 02.8**	**+1.8**		
B21K				IAmb	IAmb	10 10 40.4			
	comp=Z,10.0nm,1.1s								
RSO	**Redoubt South**	**47.38**	**38**	P	**P**	**10 10 04.8**	**+1.2**		
TARG	**Taragay, Kyrgy**	**47.54**	**296**	P	**P**	**10 10 05.5**	**+0.1**		
TARG	**Taragay, Kyrgy**	**47.54**	**296**	P	**P**	**10 10 05.5**	**+0.1**		
TARG				pmax	pmax				
	comp=Z,20nm,0.8s								
KDAK	**Kodiak Island**	**47.62**	**42**	P	**P**	**10 10 06.8**	**+1.5**		
KDAK	**Kodiak Island**	**47.62**	**42**	P	**P**	**10 10 06.8**	**+1.5**		
KDAK				pmax	pmax				
	comp=Z,33nm,1.5s								
D22K	**Ayikyak River**	**47.68**	**27**	P	**P**	**10 10 08.0**	**+2.4**		
D22K				IAmb	IAmb	10 10 08.9			
	comp=Z,5.7nm,0.7s								
E22K	**Anaktuvuk Pass**	**47.93**	**28**	P	**P**	**10 10 10.1**	**+2.5**		
SUA	**Susitna One**	**48.32**	**37**	P	**P**	**10 10 12.4**	**+1.7**		
SUA				IAmb	IAmb	10 10 14.8			
	comp=Z,4.9nm,0.9s								
BOOM	**Boomskoye usch**	**48.66**	**297**	P	**P**	**10 10 14.6**	**+0.9**		
BOOM				IAmb	IAmb	10 10 15.2			
	comp=Z,8.0nm,0.7s								
BOOM	**Boomskoye usch**	**48.66**	**297**	P	**P**	**10 10 14.6**	**+0.9**		
BOOM				pmax	pmax				
	comp=Z,8.0nm,0.7s								
TOLK	**Toolik Lake Re**	**48.79**	**27**	P	**P**	**10 10 15.3**	**+1.1**		
PMR	**Palmer**	**49.08**	**37**	P	**P**	**10 10 18.0**	**+1.6**		
PMR				IAmb	IAmb	10 10 32.9			
	comp=Z,9.4nm,1.4s								
PMR	**Palmer**	**49.08**	**37**	P	**P**	**10 10 18.0**	**+1.6**		
PMR				pmax	pmax				
	comp=Z,9.0nm,1.4s								
RND	**Reindeer**	**49.10**	**34**	P	**P**	**10 10 18.5**	**+1.9**		
RND	**Reindeer**	**49.10**	**34**	P	**P**	**10 10 18.5**	**+1.9**		
RND				pmax	pmax				
	comp=Z,3.0nm,1.0s								
GHO	**Glory Hole Cre**	**49.17**	**36**	P	**P**	**10 10 18.9**	**+1.7**		
GHO				IAmb	IAmb	10 10 43.7			
	comp=Z,16nm,1.4s								
SML	**Sawmill**	**49.44**	**36**	P	**P**	**10 10 21.2**	**+2.0**		
SML				IAmb	IAmb	10 10 23.1			
	comp=Z,7.1nm,0.9s								
SML	**Sawmill**	**49.44**	**36**	P	**P**	**10 10 21.2**	**+2.0**		
SML				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KSH	**Kashi**	**49.53**	**294**	P	**P**	**10 10 24.6**	**+4.3**		
KSH				pmax	pmax				
	comp=Z,9.0nm,0.7s								
AAK	**Ala-Archa**	**49.64**	**298**	P	**P**	**10 10 21.5**	**+0.4**		
AAK				IAmb	IAmb	10 10 21.9			
	comp=Z,3.7nm,0.6s								
AAK	**Ala-Archa**	**49.64**	**298**	P	**P**	**10 10 21.5**	**+0.4**		
AAK				pmax	pmax				
	comp=Z,4.0nm,0.6s								
AAK	**Ala-Archa**	**49.64**	**298**	LR	LR	10 32 34.6			
	comp=Z,30nm,18.7s,baz=93,slow=37								
BVAR	**Borovoye Array**	**49.83**	**312**	P	**P**	**10 10 22.2**	**0.0**		
	comp=Z,7.1nm,0.6s,baz=77,slow=6.9,SNR=45								
BVAR				PcP	**PcP**	**10 11 41.9**	**+0.6**		
	comp=Z,1.0nm,0.6s,baz=59,slow=5.6,SNR=1.8								
BVAR				pPcP		10 12 10.1			
	comp=Z,1.0nm,0.7s,baz=92,slow=7.2,SNR=2.5								
	comp=Z,7.1nm,0.6s								
BRVK	**Borovoye**	**49.88**	**312**	P	**P**	**10 10 22.8**	**+0.2**		
BRVK	**Borovoye**	**49.88**	**312**	*c iP*	**P**	**10 10 23.0**	**+0.4**		
BRVK				pmax	pmax				
	comp=Z,9.0nm,0.8s								
ILAR	**Eielson Array**	**49.89**	**32**	P	**P**	**10 10 24.0**	**+1.5**		
	comp=Z,1.3nm,0.8s,baz=274,slow=7.0,SNR=16								
ILAR				pP	**pP**	**10 10 47.5**	**-0.3**		
	comp=Z,0.9nm,0.6s,baz=267,slow=5.6,SNR=5.3								
ILAR				sP	**sP**	**10 11 00.3**	**+0.6**		
	comp=Z,2.4nm,0.6s,baz=268,slow=6.0,SNR=9.8								
	comp=Z,1.3nm,0.8s								
SCM	**Sheep Creek Mo**	**49.92**	**36**	P	**P**	**10 10 24.4**	**+1.5**		
SCM	**Sheep Creek Mo**	**49.92**	**36**	P	**P**	**10 10 24.4**	**+1.5**		
SCM				pmax	pmax				
	comp=Z,17nm,1.4s								
E25K	**Arctic Village**	**50.27**	**28**	P	**P**	**10 10 27.4**	**+2.0**		
E25K				IAmb	IAmb	10 10 57.5			
	comp=Z,6.4nm,1.4s								
KLU	**Klutina**	**50.62**	**37**	P	**P**	**10 10 30.3**	**+2.2**		
KLU				IAmb	IAmb	10 10 31.1			
	comp=Z,14nm,1.5s								
BMAR	**Burnt Mountain**	**50.68**	**29**	P	**P**	**10 10 31.1**	**+2.7**		
COEN	**Coen**	**50.90**	**176**	P	**P**	**10 10 31.5**	**+0.9**		
COEN				IAmb	IAmb	10 10 32.5			
	comp=Z,4.8nm,0.8s								
ARSB	**Arslanbob**	**51.11**	**297**	P	**P**	**10 10 32.6**	**+0.3**		
ARSB				IAmb	IAmb	10 10 34.1			
	comp=Z,3.3nm,0.8s								
ARSB	**Arslanbob**	**51.11**	**297**	P	**P**	**10 10 32.6**	**+0.3**		
ARSB				pmax	pmax				
	comp=Z,3.0nm,0.8s								
SCRK	**Sand Creek**	**51.22**	**33**	P	**P**	**10 10 34.2**	**+1.6**		
N25K	**Chitina, Valde**	**51.23**	**36**	P	**P**	**10 10 35.1**	**+2.4**		
N25K				IAmb	IAmb	10 10 35.9			
	comp=Z,3.8nm,0.8s								
MENT	**Mentasta**	**51.46**	**35**	P	**P**	**10 10 36.8**	**+2.4**		
MENT				IAmb	IAmb	10 10 38.1			
	comp=Z,7.5nm,1.3s								
L26K	**Log Cabin Wild**	**51.62**	**34**	P	**P**	**10 10 37.9**	**+2.4**		
L26K				IAmb	IAmb	10 10 39.0			
	comp=Z,3.8nm,0.7s								
MCARA	**McCarthy VSAT**	**52.01**	**36**	P	**P**	**10 10 41.1**	**+2.7**		
MCARA				IAmb	IAmb	10 10 48.0			
	comp=Z,8.8nm,1.2s								
KK31	**Karatay Array**	**52.28**	**300**	P	**P**	**10 10 40.9**	**+0.1**		
KK31				IAmb	IAmb	10 10 41.8			
	comp=Z,7.1nm,1.0s								
KK31	**Karatay Array**	**52.28**	**300**	P	**P**	**10 10 40.9**	**+0.1**		
KK31				pmax	pmax				
	comp=Z,7.0nm,1.0s								
KKAR	**Karatay Array**	**52.28**	**300**	P	**P**	**10 10 40.9**	**+0.1**		
KKAR				IAmb	IAmb	10 10 41.8			
	comp=Z,7.0nm,1.0s								
KKAR	**Karatay Array**	**52.28**	**300**	P	**P**	**10 10 40.7**	**-0.1**		
KKAR	**Karatay Array**	**52.28**	**300**	P	**P**	**10 10 40.7**	**-0.1**		
L27K	**Beaver Creek,**	**52.30**	**34**	P	**P**	**10 10 43.0**	**+2.4**		
L27K				IAmb	IAmb	10 11 20.4			
	comp=Z,4.4nm,1.0s								
BCAR	**Beaver Creek A**	**52.32**	**34**	P	**P**	**10 10 43.7**	**+3.0**		
EGAK	**Eagle**	**52.33**	**32**	P	**P**	**10 10 42.5**	**+1.8**		
M27K	**Edge Creek, AK**	**52.39**	**35**	P	**P**	**10 10 43.8**	**+2.4**		
M27K				IAmb	IAmb	10 11 25.6			
	comp=Z,6.9nm,1.2s								
F28M	**Old Crow**	**52.46**	**28**	P	**P**	**10 10 44.2**	**+2.5**		
I28M	**Miner Creek**	**52.74**	**31**	P	**P**	**10 10 46.1**	**+2.2**		
I28M				IAmb	IAmb	10 10 47.2			
	comp=Z,3.8nm,0.5s								
GSI	**Gunungsitoli**	**53.08**	**238**	P	**P**	**10 10 47.4**	**+0.4**		
DAWY	**Dawson**	**53.20**	**33**	P	**P**	**10 10 48.9**	**+1.7**		
DAWY				IAmb	IAmb	10 10 59.4			
	comp=Z,6.1nm,1.5s								
EPYK	**Eagle Plains**	**53.88**	**30**	P	**P**	**10 10 54.8**	**+2.6**		
G30M	**tAoh Zraii Nji**	**53.96**	**29**	P	**P**	**10 10 53.7**	**+1.0**		
G30M				IAmb	IAmb	10 10 55.7			
	comp=Z,7.7nm,1.3s								
K29M	**Barlow Dome**	**54.06**	**33**	P	**P**	**10 10 55.9**	**+2.4**		
K29M				IAmb	IAmb	10 11 22.5			
	comp=Z,7.4nm,1.5s								
I30M	**Mount Dempster**	**54.25**	**31**	P	**P**	**10 10 57.6**	**+2.6**		
J30M	**Hart River**	**54.41**	**32**	P	**P**	**10 10 57.6**	**+1.5**		
SVE	**Sverdlovsk**	**54.47**	**318**	*e*P	**P**	**10 10 57.0**	**+0.5**		
SVE				pmax	pmax				
	comp=Z,12nm,0.9s								
M30M	**Minto, Yukon**	**54.66**	**34**	P	**P**	**10 11 00.8**	**+3.0**		
INK	**Inuvik**	**54.70**	**27**	P	**P**	**10 10 59.6**	**+1.7**		
INK				IAmb	IAmb	10 11 29.4			
	comp=Z,8.5nm,1.3s								
INK	**Inuvik**	**54.70**	**27**	P	**P**	**10 10 59.6**	**+1.7**		
INK				pmax	pmax				
	comp=Z,9.0nm,1.3s								
G31M	**Satah River**	**54.73**	**29**	P	**P**	**10 10 59.9**	**+1.7**		
G31M				IAmb	IAmb	10 11 00.4			
	comp=Z,3.4nm,0.5s								
F31M	**Tsiigehtchic**	**54.81**	**28**	P	**P**	**10 11 00.2**	**+1.5**		
F31M				IAmb	IAmb	10 11 01.5			
	comp=Z,2.3nm,0.5s								
SIMJ	**Simiganj**	**54.91**	**295**	P	**P**	**10 10 59.8**	**-0.3**		
ARU	**Arti**	**55.68**	**318**	P	**P**	**10 11 05.3**	**+0.1**		
ARU	**Arti**	**55.68**	**318**	*d iP*	**P**	**10 11 05.1**	**-0.1**		
ARU				*PP	**pP**	**10 11 34.1**	**+3.3**		
ARU						10 13 12.4			
ARU				S	**S**	**10 18 44.9**	**+1.9**		
ARU				SS	**SS**	**10 22 29.6**	**+0.4**		
ARU				pmax	pmax				
	comp=Z,16nm,1.2s								
A36M	**Sachs Harbour**	**56.50**	**22**		**P**	**10 11 12.3**	**+1.6**		
WB0	**Warramunga Arr**	**56.87**	**187**	P	**P**	**10 11 14.2**	**+0.2**		
WB0				IAmb	IAmb	10 11 47.8			
	comp=Z,7.8nm,1.4s								
WB2	**Warramunga Arr**	**57.05**	**187**	P	**P**	**10 11 15.1**	**-0.2**		
WB2				IAmb	IAmb	10 11 45.3			
	comp=Z,4.2nm,1.0s								
WR0	**Warramunga Arr**	**57.05**	**186**	P	**P**	**10 11 14.4**	**-0.8**		
WR0				IAmb	IAmb	10 11 24.3			
	comp=Z,13nm,1.5s								
WRA	**Warramunga Arr**	**57.05**	**187**	P	**P**	**10 11 14.0**	**-1.3**		
WRA	**Warramunga Arr**	**57.05**	**187**	*i* P	**P**	**10 11 15.3**	**0.0**		
WRA				pmax	pmax				
	comp=Z,2.0nm,0.4s								
WRA	**Warramunga Arr**	**57.05**	**187**	P	**P**	**10 11 15.4**	**+0.1**		
	comp=Z,1.9nm,0.5s,baz=1.2,slow=7.5,SNR=27								
	comp=Z,1.9nm,0.5s								
ABKAR	**Akbulak array**	**57.17**	**310**	P	**P**	**10 11 15.6**	**-0.3**		
ABKAR	**Akbulak array**	**57.17**	**310**	P	**P**	**10 11 15.8**	**-0.1**		
ABKAR				IAmb	IAmb	10 11 17.2			
	comp=Z,8.0nm,0.8s								
C36M	**Paulatuk**	**57.71**	**25**	P	**P**	**10 11 20.5**	**+1.2**		
C36M				IAmb	IAmb	10 11 58.6			
	comp=Z,3.7nm,0.8s								
KIRV	**Kirov**	**59.61**	**323**	*ce*P	**P**	**10 11 32.9**	**+0.3**		
SPITS	**Spitsbergen Ar**	**60.24**	**349**	P	**P**	**10 11 37.4**	**+0.7**		
	comp=Z,3.0nm,0.7s,baz=84,slow=8.5,SNR=5.6								
	comp=Z,3.0nm,0.7s								
ASAR	**Alice Springs**	**60.78**	**187**	P	**P**	**10 11 42.1**	**+1.1**		
ASAR	**Alice Springs**	**60.78**	**187**	P	**P**	**10 11 42.1**	**+1.1**		
ASAR	**Alice Springs**	**60.78**	**187**	P	**P**	**10 11 40.1**	**-0.9**		
	comp=Z,0.6nm,0.8s,baz=360,slow=3.6,SNR=8.0								
	comp=Z,0.6nm,0.8s								
GEYT	**Alibeck**	**62.99**	**298**	P	**P**	**10 11 56.1**	**+0.3**		
	comp=Z,2.6nm,0.8s,baz=178,slow=4.5,SNR=5.6								
GEYT				LR	LR	10 39 11.0			
	comp=Z,13nm,19.2s,baz=263,slow=36								
	comp=Z,2.6nm,0.8s								
EIDS	**Eidsvold**	**63.00**	**169**	P	**P**	**10 11 57.2**	**+1.4**		
BELG	**Belogornoye**	**63.10**	**317**	*e*P	**P**	**10 11 56.5**	**+0.3**		
BELG				pmax	pmax				
	comp=Z,2.0nm,0.8s								
ARCES	**ARCESS Array B**	**63.57**	**339**	P	**P**	**10 11 58.9**	**-0.2**		
ARCES	**ARCESS Array B**	**63.57**	**339**	P	**P**	**10 11 58.9**	**-0.2**		
ARCES				pmax	pmax				
	comp=Z,36nm,1.5s								
ARCES	**ARCESS Array B**	**63.57**	**339**	P	**P**	**10 11 57.5**	**-1.6**		
	comp=Z,2.7nm,0.7s,baz=54,slow=7.6,SNR=8.0								
	comp=Z,2.7nm,0.7s								
YKA	**Yellowknife Ar**	**64.17**	**30**	P	**P**	**10 12 02.8**	**-0.3**		
	comp=Z,0.4nm,0.7s,baz=299,slow=6.7,SNR=5.6								
YKA				pP	**pP**	**10 12 29.7**	**+0.2**		
	comp=Z,0.2nm,0.5s,baz=72,slow=30,SNR=4.0								
YKA				sP	**sP**	**10 12 40.8**	**-0.2**		
	comp=Z,0.7nm,0.7s,baz=303,slow=6.8,SNR=7.1								
	comp=Z,0.4nm,0.7s								
LPSR	**Galich'ya Gora**	**67.64**	**320**	*e*P	**P**	**10 12 22.7**	**-2.8**		
LPSR				pmax	pmax				
	comp=Z,10.0nm,0.6s								
VSR	**Storozhevoye**	**68.25**	**318**	*e*P	**P**	**10 12 27.3**	**-2.1**		
VSR				pmax	pmax				
	comp=Z,10.0nm,0.7s								
FIA1	**FINESS Array S**	**68.29**	**332**	P	**P**	**10 12 29.5**	**0.0**		
FINES	**FINESS Array B**	**68.29**	**332**	P	**P**	**10 12 29.5**	**0.0**		
FINES	**FINESS Array B**	**68.29**	**332**	P	**P**	**10 12 29.7**	**+0.3**		
	comp=Z,3.1nm,0.7s,baz=57,slow=7.0,SNR=14								
	comp=Z,3.1nm,0.7s								
VORD	**Divnogorie**	**68.32**	**318**	*e*P	**P**	**10 12 27.3**	**-2.5**		
VORD				pmax	pmax				
	comp=Z,7.0nm,0.5s								
FORT	**Forrest**	**68.53**	**191**	P	**P**	**10 12 32.1**	**+0.9**		
STKA	**Stephens Creek**	**68.67**	**179**	P	**P**	**10 12 33.1**	**+1.0**		
STKA	**Stephens Creek**	**68.67**	**179**	P	**P**	**10 12 33.1**	**+1.0**		
STKA	**Stephens Creek**	**68.67**	**179**	P	**P**	**10 12 31.6**	**-0.4**		
	comp=Z,0.9nm,0.6s,baz=353,slow=6.8,SNR=3.5								
	comp=Z,0.9nm,0.6s								
KBZ	**Khabaz**	**70.14**	**310**	*e*P	**P**	**10 12 41.2**	**0.0**		
KBZ				pmax	pmax				
	comp=Z,3.0nm,0.7s								
KBZ	**Khabaz**	**70.14**	**310**	P	**P**	**10 12 41.0**	**-0.2**		
	comp=Z,3.0nm,0.7s,baz=22,slow=6.5,SNR=6.2								
	comp=Z,3.0nm,0.7s								
KIV	**Kislovodsk**	**70.15**	**310**	*e*P	**P**	**10 12 42.0**	**+0.6**		
KIV				pmax	pmax				
	comp=Z,11nm,1.0s								
ORV	**Oroville**	**72.96**	**53**	P	**P**	**10 12 59.7**	**+1.5**		
ORV	**Oroville**	**72.96**	**53**	P	**P**	**10 12 59.7**	**+1.5**		
ORV				pmax	pmax				
	comp=Z,4.0nm,1.4s								
NC405	**NORSAR Array S**	**73.52**	**337**	P	**P**	**10 13 01.0**	**-0.1**		
NC405				IAmb	IAmb	10 13 32.6			
	comp=Z,14nm,1.3s								
HFS	**Hagfors**	**73.61**	**335**	P	**P**	**10 13 01.4**	**-0.2**		
	comp=Z,1.4nm,0.4s,baz=63,slow=6.8,SNR=13								
	comp=Z,1.4nm,0.4s								
AKASG	**Malin Array Be**	**73.65**	**322**	P	**P**	**10 13 01.9**	**-0.2**		
	comp=Z,1.7nm,0.4s,baz=47,slow=6.2,SNR=6.2								
	comp=Z,1.7nm,0.4s								
NB2	**NORSAR Subarra**	**73.73**	**337**	P	**P**	**10 13 02.4**	**0.0**		
	comp=Z,0.7nm,0.5s,baz=41,slow=5.9								
NOA	**NORSAR Array B**	**73.73**	**337**	P	**P**	**10 13 02.7**	**+0.3**		
	comp=Z,1.9nm,0.7s,baz=39,slow=5.8,SNR=8.5								
	comp=Z,1.9nm,0.7s								
CMB	**Columbia Colle**	**74.54**	**54**	P	**P**	**10 13 09.6**	**+2.0**		
CMB	**Columbia Colle**	**74.54**	**54**	P	**P**	**10 13 09.6**	**+2.0**		
CMB				pmax	pmax				
	comp=Z,6.0nm,1.2s								
NVAR	**Mina Array Bea**	**75.65**	**53**	P	**P**	**10 13 16.7**	**+2.6**		
	comp=Z,2.6nm,0.7s,baz=286,slow=5.7,SNR=15								
	comp=Z,2.6nm,0.7s								
R11B	**Troy Canyon, C**	**77.41**	**51**	P	**P**	**10 13 26.4**	**+2.4**		
BUR08	**Bucovina Ar. S**	**77.65**	**321**	P	**P**	**10 13 25.5**	**+0.5**		
BURAR	**Bucovina Array**	**77.66**	**321**	P	**P**	**10 13 25.3**	**+0.2**		
BURAR	**Bucovina Array**	**77.66**	**321**	P	**P**	**10 13 25.3**	**+0.2**		
BURAR				pmax	pmax				
	comp=Z,3.0nm,1.0s								
QSM	**Queen of Sheba**	**78.03**	**54**	P	**P**	**10 13 29.1**	**+1.8**		
QSM				IAmb	IAmb	10 13 30.3			
	comp=Z,4.0nm,0.7s								
BRTR	**Keskin Array B**	**78.10**	**311**	P	**P**	**10 13 27.9**	**+0.2**		
	comp=Z,1.2nm,0.8s,baz=69,slow=6.4,SNR=5.1								
	comp=Z,1.2nm,0.8s								
PDAR	**Pinedale Array**	**78.23**	**45**	P	**P**	**10 13 29.6**	**+1.1**		
	comp=Z,0.8nm,0.6s,baz=279,slow=2.3,SNR=9.7								
PDAR				pP	**pP**	**10 13 55.5**	**-0.3**		
	comp=Z,0.1nm,0.3s,baz=294,slow=44,SNR=1.6								
	comp=Z,0.8nm,0.6s								
CLL	**Collm**	**80.55**	**330**	*i* P	**P**	**10 13 40.4**	**-0.2**		
CLL				*e*PP	**pP**	**10 14 09.0**	**+1.0**		
CLL				pmax	pmax				
	comp=Z,8.0nm,1.0s								
CLL	**Collm**	**80.55**	**330**	*i* P	**P**	**10 13 40.4**	**-0.2**		
	comp=Z,8.0nm,1.0s								
CLL				*e*pP	**pP**	**10 14 09.0**	**+1.0**		
GERES	**GERESS Array B**	**82.14**	**328**	P	**P**	**10 13 49.2**	**0.0**		
	comp=Z,1.2nm,0.5s,baz=40,slow=7.1,SNR=9.4								
	comp=Z,1.2nm,0.5s								
EKA	**Eskdalemuir Ar**	**82.72**	**340**	P	**P**	**10 13 50.9**	**-1.0**		
	comp=Z,0.6nm,0.5s,baz=39,slow=4.3,SNR=4.7								
	comp=Z,0.6nm,0.5s								
TXAR	**Lajitas Array**	**90.77**	**52**	P	**P**	**10 14 33.7**	**+1.9**		
	comp=Z,1.2nm,0.7s,baz=289,slow=3.2,SNR=16								
TXAR				pP	**pP**	**10 14 59.8**	**+0.1**		
	comp=Z,0.3nm,0.6s,baz=305,slow=3.1,SNR=2.9								
	comp=Z,1.2nm,0.7s								
QSPA	**South Pole Qui**	**126.88**	**180**	PKP	**PKPdf**	**10 20 29.0**	**-1.6**		
	comp=Z,0.7nm,0.9s,baz=291,slow=1.8,SNR=5.7								
H03N2	**Juan Fernandez**	**147.94**	**95**	T	T	13 06 42.1			
	baz=291,slow=76,SNR=11								
H03N3	**Juan Fernandez**	**147.95**	**95**	T	T	13 06 43.6			
	baz=291,slow=76,SNR=10								
H03N1	**Juan Fernandez**	**147.95**	**95**	T	T	13 06 42.0			
	baz=291,slow=76,SNR=11								

ISK ***18*** *10:21:07.4, 38.77N×26.

BUHA				S	Sg	10 21 35.4	-0.7	
BAYC	**CANAKKALE_Bayr**	**0.96**	**3**	P	Pg	**10 21 26.0**	**-0.8**	
BAYC				S	Sb	**10 21 39.2**	**+0.1**	
BAYC				*i* AML	AML	10 21 41.0		
	comp=E,604nm,0.2s							
EZN	**Ezine**	**1.05**	**354**	Pg	Pb	**10 21 28.2**	**+0.1**	
EZN				Sg	Sn	**10 21 43.3**	**+0.6**	
EZN	**Ezine**	**1.05**	**354**	P	Pg	**10 21 27.4**	**-1.1**	
EZN				S	Sn	**10 21 42.6**	**-0.1**	
	comp=E,818nm,0.4s							
AKS	**Akhisar**	**1.05**	**84**	Pg	Pg	**10 21 27.9**	**-0.6**	
AKS				Sg	Sn	**10 21 43.3**	**+0.4**	
AKHS	**Akhisar**	**1.05**	**84**	P	Pn	**10 21 28.3**	**-0.1**	
AKHS				S	Sn	**10 21 42.6**	**-0.3**	
BOZC	**Bozcaada**	**1.11**	**343**	P	Pb	**10 21 28.8**	**-0.3**	
BOZC				S	Sb	**10 21 42.8**	**-0.5**	
SMG	**Samos**	**1.11**	**165**	P	Pb	**10 21 28.5**	**-0.6**	
SMG				S	Sn	**10 21 44.8**	**+0.5**	
	comp=E,1μm,0.3s							
SMG	**Samos**	**1.11**	**165**	P	Pb	**10 21 28.5**	**-0.6**	
SMG				S	Sg	**10 21 43.9**	**-0.2**	
SMG				AML	AML	10 21 47.2		
	comp=N,2378μm,0.3s							
SMG				AML	AML	10 21 47.8		
	comp=E,2955μm,0.3s							
STEP	**BALIKESIR_Sava**	**1.14**	**58**	P	Pb	**10 21 29.5**	**-0.1**	
STEP				S	Sn	**10 21 45.1**	**+0.1**	
STEP				*i* AML	AML	10 21 47.0		
	comp=E,418nm,0.4s							
STEP				*i* AML	AML	10 21 47.0		
	comp=E,659nm,0.2s							
GCAM	**G?zelcaml?**	**1.24**	**151**	P	Pn	**10 21 31.0**	**+0.1**	
GCAM				S	Sb	**10 21 47.3**	**+0.3**	
ECEA	**Canakkale, Ece**	**1.28**	**350**	P	Pg	**10 21 32.6**	**-0.2**	
ECEA				S	Sg	**10 21 49.8**	**+0.2**	
ECEA				*i* AML	AML	10 21 51.0		
	comp=E,896nm,0.4s							
ECEA				*i* AML	AML	10 21 53.0		
	comp=E,675nm,0.3s							
CNKL	**anakkale-Mer**	**1.28**	**357**	P	Pb	**10 21 32.1**	**0.0**	
CNKL				S	Sb	**10 21 48.2**	**-0.2**	
BALY	**Balya**	**1.31**	**43**	P	Pn	**10 21 31.7**	**-0.3**	
BALY				S	Sg	**10 21 50.6**	**+0.2**	
COMU	**Canakkale**	**1.31**	**0**	Pn	Pg	**10 21 33.0**	**-0.5**	
COMU				Sn	Sg	**10 21 51.5**	**+0.8**	
IZMR	**zmir-demi**	**1.33**	**119**	P	Pb	**10 21 33.0**	**+0.2**	
IZMR				S	Sg	**10 21 50.3**	**-0.8**	
GOAD	**anakkale-G¶**	**1.44**	**343**	P	Pn	**10 21 34.4**	**+0.6**	
GOAD				S	Sn	**10 21 51.4**	**-1.1**	
GOAD				*i* AML	AML	10 21 55.0		
	comp=E,345nm,0.5s							
GOAD				*i* AML	AML	10 21 59.0		
	comp=E,289nm,0.4s							
DDIM	**Aydin, Didim**	**1.46**	**155**	P	Pn	**10 21 33.9**	**-0.1**	
DDIM				S	Sg	**10 21 55.0**	**-0.2**	
GADA	**Gvkgeada**	**1.47**	**343**	Pn	Pn	**10 21 34.9**	**+0.6**	
BKES	**Balkesir-Mer**	**1.48**	**50**	P	Pn	**10 21 34.3**	**0.0**	
BKES				S	Sn	**10 21 53.0**	**-0.4**	
LIA	**Limnos Island**	**1.50**	**318**	P	Pn	**10 21 34.1**	**-0.5**	
LIA	**Limnos Island**	**1.50**	**318**	P	Pn	**10 21 34.2**	**-0.3**	
LIA				S	Sn	**10 21 52.3**	**-1.5**	
LIA				AML	AML	10 21 58.3		
	comp=E,1466μm,0.4s							
LIA				AML	AML	10 21 58.6		
	comp=N,1355μm,0.5s							
GONE	**Gonen-Balikesi**	**1.57**	**36**	Pn	Pn	**10 21 35.9**	**+0.3**	
BLKS	**Balkesir-Sus**	**1.59**	**46**	P	Pn	**10 21 35.8**	**-0.1**	
BLKS				S	Sn	**10 21 55.3**	**-0.9**	
LPK	**Lapseki**	**1.60**	**8**	Pn	Pb	**10 21 36.9**	**-0.6**	
GELI	**Tayfur-Gelibol**	**1.61**	**0**	Pn	Pb	**10 21 37.2**	**-0.5**	
TNSA	**Tinos**	**1.61**	**220**	P	Pn	**10 21 35.5**	**-0.7**	
KIRA	**zmir-Kiraz**	**1.62**	**111**	P	Pn	**10 21 36.6**	**+0.2**	
KIRA				S	Sn	**10 21 57.2**	**+0.1**	
MANT	**Manisa**	**1.66**	**99**	P	Pb	**10 21 38.5**	**-0.1**	
MANT				S	Sg	**10 22 01.1**	**-0.6**	
KNL	**Balıkesir**	**1.69**	**28**	P	Pb	**10 21 39.3**	**+0.2**	
KNL				S	Sn	**10 21 57.7**	**-1.0**	
KRBG	**Karabiga-Canak**	**1.73**	**21**	Pn	Pn	**10 21 37.6**	**-0.2**	
KULA	**Kula-Manisa**	**1.73**	**98**	Pn	Pn	**10 21 38.7**	**+0.8**	
KULA	**Kula-Manisa**	**1.73**	**98**	P	Pn	**10 21 37.8**	**-0.1**	
KULA				S	Sb	**10 22 00.9**	**-0.6**	
DURS	**Dursunbey**	**1.76**	**62**	P	Pn	**10 21 39.0**	**+0.7**	
DURS				S	Sn	**10 21 59.4**	**-1.0**	
DEMI	**Demirci**	**1.77**	**81**	P	Pb	**10 21 40.3**	**-0.1**	
DEMI				S	Sb	**10 22 02.6**	**+0.1**	
ESEN	**Aydn-Nazilli**	**1.77**	**123**	P	Pn	**10 21 38.2**	**-0.1**	
ESEN				S	Sb	**10 22 03.6**	**+1.1**	
MLSB	**Milas**	**1.81**	**145**	Pn	Pn	**10 21 39.2**	**+0.3**	
SMTH	**Samothraki Isl**	**1.84**	**337**	P	Pn	**10 21 38.8**	**-0.5**	
SMTH				S	Sn	**10 22 03.6**	**+1.4**	
SMTH	**Samothraki Isl**	**1.84**	**337**	P	Pn	**10 21 38.7**	**-0.5**	
SMTH				S	Sn	**10 22 01.1**	**-1.2**	
SMTH				AML	AML	10 22 09.3		
	comp=E,198μm,0.4s							
SMTH				AML	AML	10 22 11.6		
	comp=N,229μm,0.4s							
ENZZ	**Sultanice-Enez**	**1.84**	**352**	Pn	Pn	**10 21 40.4**	**+1.1**	
BODT	**Bodrum**	**1.84**	**159**	Pn	Pn	**10 21 39.6**	**+0.3**	
DST	**Dursunbey**	**1.86**	**63**	Pn	Pn	**10 21 40.6**	**+1.0**	
APE	**Apeiranthos**	**1.87**	**204**	⇑P	Pn	**10 21 39.1**	**-0.6**	
APE	**Apeiranthos**	**1.87**	**204**	Pn	Pn	**10 21 39.7**	**0.0**	
APE	**Apeiranthos**	**1.87**	**204**	P	Pn	**10 21 38.6**	**-1.1**	
BDRM	**Kayabasi**	**1.88**	**156**	P	Pg	**10 21 44.0**	**-0.3**	
BDRM				S	Sg	**10 22 09.4**	**+0.7**	
ERIK	**Erikli-Kesan**	**1.89**	**1**	Pn	Pn	**10 21 41.1**	**+1.2**	
EDC	**Edincik**	**1.90**	**34**	Pn	Pn	**10 21 40.1**	**0.0**	
CAVK	**Edirne/Enez-Ca**	**1.92**	**353**	P	Pb	**10 21 43.8**	**+0.8**	
CAVK				S	Sg	**10 22 09.6**	**-0.4**	
ENEZ	**Enez**	**1.97**	**353**	Pn	Pn	**10 21 42.1**	**+1.1**	
ENEZ	**Enez**	**1.97**	**353**	P	Pn	**10 21 40.7**	**-0.3**	
ENEZ				S	Sn	**10 22 06.9**	**+1.5**	
	comp=N,362nm,0.3s							
RKY	**Sarkoy-Tekirda**	**1.98**	**16**	Pn	Pn	**10 21 42.5**	**+1.3**	
SART	**Tekirdag**	**1.98**	**16**	P	Pn	**10 21 42.0**	**+0.7**	
SART				S	Sb	**10 22 07.5**	**-1.0**	
SIMA	**Simav-Kutahya**	**1.98**	**81**	Pn	Pn	**10 21 42.5**	**+1.2**	
USAK	**Uak-Merkez**	**1.99**	**91**	P	Pn	**10 21 41.8**	**+0.4**	
USAK				S	Sg	**10 22 10.5**	**-1.8**	
BAND	**Balkesir-Ban**	**2.01**	**38**	P	Pn	**10 21 41.5**	**-0.2**	
BAND				S	Sn	**10 22 05.9**	**-0.7**	
MRMT	**Marmara Adasi**	**2.01**	**25**	Pn	Pn	**10 21 41.9**	**+0.2**	
KCTX	**Karacabey (Bur**	**2.08**	**44**	Pn	Pn	**10 21 43.4**	**+0.8**	
MULA	**Mugla, Merkez-**	**2.11**	**136**	P	Pn	**10 21 42.6**	**-0.5**	
MULA				S	Sg	**10 22 15.7**	**-0.4**	
DION	**Dionisos Attik**	**2.12**	**251**	P	Pn	**10 21 43.5**	**+0.4**	
ALN	**Alexandroupoli**	**2.14**	**351**	Pn	Pn	**10 21 44.6**	**+1.2**	
ALN	**Alexandroupoli**	**2.14**	**351**	P	Pn	**10 21 43.3**	**-0.1**	
ALN				S	Sn	**10 22 10.8**	**+1.2**	
	comp=N,182nm,0.5s							
ALN	**Alexandroupoli**	**2.14**	**351**	P	Pn	**10 21 43.5**	**+0.2**	
ALN				S	Sn	**10 22 07.6**	**-2.0**	
ALN				AML	AML	10 22 18.4		
	comp=N,356μm,0.6s							
ALN				AML	AML	10 22 18.6		
	comp=E,369μm,0.4s							
DAT	**Datca**	**2.23**	**157**	Pn	Pn	**10 21 45.5**	**+0.7**	
DAT	**Datca**	**2.23**	**157**	P	Pn	10 21 40.1	-4.7	
DAT				S	Sn	**10 22 08.3**	**-3.8**	
YAZI	**Mula-Dat§a-**	**2.24**	**159**	P	Pn	**10 21 43.1**	**-1.6**	
UKOP	**Uzunkopru-Edir**	**2.35**	**3**	Pn	Pn	**10 21 47.4**	**+1.2**	
GDZ	**Gediz**	**2.37**	**82**	P	Pn	**10 21 47.8**	**+1.1**	
GDZ				S	Sb	**10 22 20.2**	**+0.5**	
PASA	**Karahalli, USA**	**2.40**	**99**	P	Pn	**10 21 49.0**	**+1.9**	
PASA				S	Sb	**10 22 21.4**	**+0.7**	
TVSB	**Tavsanli**	**2.42**	**73**	Pn	Pn	**10 21 48.5**	**+1.2**	
MDNY	**Mudanya-Bursa**	**2.44**	**49**	Pn	Pn	**10 21 49.3**	**+1.7**	
PAIG	**Paliouri**	**2.45**	**299**	Pn	Pn	**10 21 48.7**	**+1.1**	
RDO	**Rodhopi**	**2.47**	**343**	Pn	Pn	**10 21 48.4**	**+0.5**	
RDO	**Rodhopi**	**2.47**	**343**	P	Pn	**10 21 47.6**	**-0.3**	
ULDT	**Uludag**	**2.47**	**56**	P	Pb	**10 21 53.5**	**+1.1**	
ULDT				S	Sn	**10 22 18.7**	**+0.6**	
OUR	**Ouranopolis**	**2.47**	**310**	Pn	Pn	**10 21 48.3**	**+0.4**	
DNZT	**Denizli-Tavas-**	**2.51**	**126**	P	Pn	**10 21 49.9**	**+1.3**	
DNZT				S	Sn	**10 22 20.5**	**+1.4**	
IGD	**Bursa**	**2.58**	**54**	P	Pg	**10 21 56.6**	**-0.2**	
IGD				S	Sg	**10 22 28.2**	**-2.8**	
APMY	**Acipayam-Deniz**	**2.59**	**120**	Pn	Pn	**10 21 50.9**	**+1.3**	
DALY	**Dalyan (Mula)**	**2.62**	**138**	Pn	Pn	**10 21 51.2**	**+1.3**	
BNAZ	**Uak-Banaz**	**2.67**	**91**	P	Pg	**10 21 59.3**	**-0.1**	
BNAZ				S	Sb	**10 22 30.0**	**+1.6**	
DOMA	**Ktahya-Doman**	**2.69**	**67**	P	Pg	**10 22 02.8**	**+2.9**	
DOMA				S	Sg	**10 22 35.0**	**+0.2**	
ANDZ	**Kutahya, Merke**	**2.76**	**74**	P	Pg	**10 22 01.9**	**+0.8**	
ANDZ				S	Sg	**10 22 34.1**	**-2.9**	
BILE	**Bilecik/Merkez**	**2.97**	**61**	P	Pb	**10 22 00.3**	**-0.6**	
BILE				S	Sg	**10 22 40.1**	**-3.5**	
VIZE	**Kirklareli, Vi**	**2.98**	**20**	P	Pn	**10 21 55.2**	**+0.2**	
VIZE				S	Sn	**10 22 28.3**	**-2.2**	
KIRK	**Kırklareli**	**3.03**	**9**	P	Pn	**10 21 57.0**	**+1.3**	
KIRK				S	Sg	**10 22 42.1**	**-3.5**	
ARMN	**Kirklareli, Me**	**3.16**	**13**	P	Pn	**10 21 57.6**	**+0.1**	
ARMN				S	Sn	**10 22 32.4**	**-2.6**	
ELND	**Elena**	**4.17**	**354**	⇑P	Pn	**10 22 15.3**	**+4.0**	
BLKB	**Belogradchik**	**5.62**	**331**	⇓P	Pn	**10 22 32.2**	**+0.9**	
BOVS	**Bovan**	**6.03**	**325**	⇑P	Pn	**10 22 37.9**	**+1.0**	
MLR	**Muntele Rosu**	**6.71**	**357**	⇓P	Pn	**10 22 49.1**	**+2.7**	
HERR	**Herculane**	**6.80**	**335**	⇑P	Pn	**10 22 48.3**	**+0.9**	
MDVR	**Moldovita**	**6.97**	**331**	⇑P	Pn	**10 22 50.2**	**+0.5**	
PLOR	**Plostina**	**7.06**	**1**	⇑P	Pn	10 22 56.6	+5.5	
VRI	**Vrincioaia**	**7.08**	**1**	⇑P	Pn	**10 22 56.0**	**+4.8**	
GZR	**Gura Zlata**	**7.15**	**339**	⇓P	Pn	**10 22 53.3**	**+0.9**	
DOPR	**Dopca**	**7.22**	**354**	⇓P	Pn	**10 22 56.4**	**+3.2**	
TURR	**Turia**	**7.28**	**357**	⇑P	Pn	**10 22 58.8**	**+4.8**	
BZS	**Buzias**	**7.72**	**334**	⇑P	Pn	**10 23 03.2**	**+3.1**	
MARR	**Marisel-Cluj**	**8.26**	**344**	⇑P	Pn	**10 23 11.7**	**+4.1**	

*IDC **18** 10:47:34.0±1.1, 29°.39S×72°.76W, h0km, mb3.6/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=39.4km s-min=24.2km az=137.0*
*SJA **18** 10:47:35.4±0.8, 29°.16S×72°.71W, h43km±14km, ML3.2, MW3.6*
*GUC **18** 10:47:39.0±0.4, 29°.30S×72°.45W, h39km±2km, ML3.4*
ISC 18 10:47:36.4±1.0, **29°.27S**±0°.04×**72°.55W**±0°.06, **h17**km, **n41**, σ1**s65**/47, **mb3.9**/3, **1D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.31**	**120**	*eP*	**Pg**	**10 48 00.6**	**-1.1**
CO05				IAML		10 48 21.1	
	comp=E,501nm,0.2s						
CO06	**Fray Jorge**	**1.61**	**151**	*i* P	**Pn**	**10 48 04.0**	**0.0**
CO06				*i* S	**Sn**	**10 48 23.5**	**-0.8**
LCO	**Las Campanas**	**1.64**	**81**	*eP*	**Pb**	**10 48 05.7**	**-0.6**
LCO				*eS*	**Sg**	**10 48 27.2**	**-2.1**
LCO	**Las Campanas**	**1.64**	**81**	*iP*	**Pb**	**10 48 05.7**	**-0.6**
AC04	**Llanos de Chal**	**1.68**	**51**	*eP*	**Pn**	**10 48 03.9**	**-1.1**
AC04				*eS*	**Sn**	**10 48 24.1**	**-2.0**
AC04				IAML		10 48 24.3	
	comp=Z,294nm,0.4s						
GO04	**Tololo Observa**	**1.77**	**121**	*eP*	**Pb**	**10 48 08.2**	**-0.3**
GO04				*eS*	**Sg**	**10 48 31.4**	**-2.0**
GO04	**Tololo Observa**	**1.77**	**121**	*eP*	**Pb**	**10 48 07.9**	**-0.6**
GO04				*i* S	**Sb**	**10 48 29.6**	**-0.9**
GO04				IAML		10 48 35.1	
	comp=E,2μm,0.4s						
AC05	**El Transito**	**2.04**	**78**	*eP*	**Pb**	**10 48 11.5**	**-1.6**
AC05				IAML		10 48 43.0	
	comp=Z,84nm,0.2s						
AC05	**El Transito**	**2.04**	**78**	*eP*	**Pb**	**10 48 11.6**	**-1.6**
AC05				*eS*	**Sb**	**10 48 36.5**	**-1.8**
AC05				IAML		10 48 41.1	
	comp=N,226nm,0.5s						
CO03	**El Pedregal**	**2.25**	**135**	*eP*	**Pb**	**10 48 14.6**	**-2.0**
CO03				IAML		10 48 45.3	
	comp=Z,117nm,0.6s						
CO03	**El Pedregal**	**2.25**	**135**	*i* P	**Pb**	**10 48 14.4**	**-2.1**
CO03				IAML		10 48 45.3	
	comp=E,272nm,0.3s						
CO01	**Juntas del Tor**	**2.25**	**109**	*eP*	**Pb**	**10 48 15.7**	**-1.1**
CO01				*eS*	**Sb**	**10 48 43.9**	**-0.5**
CO01				IAML		10 48 44.8	
	comp=Z,91nm,0.9s						
CO01	**Juntas del Tor**	**2.25**	**109**	*i* P	**Pb**	**10 48 15.6**	**-1.1**
CO01				IAML		10 48 44.5	
	comp=N,120nm,0.4s						
CO02	**Combarbal**	**2.35**	**146**	*eP*	**Pb**	**10 48 15.9**	**-2.4**
CO02				IAML		10 48 50.7	
	comp=Z,121nm,0.5s						
CO02	**Combarbal**	**2.35**	**146**	*eP*	**Pb**	**10 48 15.9**	**-2.4**
CO02				IAML		10 48 45.9	
	comp=N,668nm,0.2s						
GO03	**Copiap**	**2.64**	**51**	*eP*	**Pn**	**10 48 18.8**	**+0.5**
GO03				*eS*	**Sn**	**10 48 50.6**	**+0.7**
GO03	**Copiap**	**2.64**	**51**	*eP*	**Pn**	**10 48 18.8**	**+0.5**
GO03				IAML		10 48 50.6	
	comp=N,448nm,0.3s						
AROD	**Rodeo**	**2.82**	**109**	*eP*	**Pb**	**10 48 25.4**	**-1.1**
ACDV	**Cuesta del Vie**	**3.12**	**108**	*eP*	**Pb**	**10 48 30.1**	**-1.3**
ACDV				IAML		10 49 14.7	
	comp=Z,39nm,0.7s						
ACCO	**Cerro Coronel**	**3.30**	**114**	*eP*	**Pb**	**10 48 33.3**	**-1.3**
ACCO				IAML		10 49 25.4	
	comp=Z,41nm,0.5s						
AC02	**Maricunga**	**3.88**	**52**	*eP*	**Pn**	**10 48 37.0**	**+1.4**
AC02				*eS*	**Sn**	**10 49 22.4**	**+1.3**
AC02				IAML		10 49 24.6	
	comp=Z,70nm,0.4s						
AC02	**Maricunga**	**3.88**	**52**	*eP*	**Pn**	**10 48 37.1**	**+1.4**
AC02				*eS*	**Sn**	**10 49 22.2**	**+1.1**
VA03	**San Esteban**	**3.88**	**154**	*eP*	**Pn**	**10 48 37.8**	**+2.5**
VA03				IAML		10 49 37.6	
	comp=Z,32nm,0.5s						
MT02	**Curacav**	**4.15**	**163**	*eP*	**Pn**	**10 48 39.7**	**+0.6**
MT02				IAML		10 49 45.8	
	comp=Z,21nm,2.3s						
FCH	**Farellones**	**4.48**	**155**	*eP*	**Pn**	**10 48 45.8**	**+2.0**
MT03	**Universidad Ad**	**4.55**	**158**	*eP*	**Pn**	**10 48 46.5**	**+1.8**
MT03				IAML		10 49 42.1	
	comp=Z,33nm,0.4s						
MT01	**Popeta**	**4.71**	**167**	*eP*	**Pn**	**10 48 46.8**	**+0.1**
MT01				IAML		10 49 43.4	
	comp=Z,13nm,0.6s						
GO02	**Mina Guanaco**	**4.87**	**33**	*eP*	**Pn**	**10 48 47.8**	**-1.4**
GO02				*eS*	**Sn**	**10 49 43.8**	**-1.5**
ACLC	**CERRO LA CRUZ**	**4.89**	**93**	*eP*	**Pn**	**10 48 53.3**	**+3.9**
ACLC				*eS*	**Sn**	**10 49 50.1**	**+4.4**
ACLC				IAML		10 49 58.3	
	comp=Z,22nm,0.7s						
H03N1	**Juan Fernandez**	**6.84**	**231**	Pn	Pn	10 49 11.9	-3.9
	baz=108,slow=16						
H03N1				T	T	10 56 07.6	
	baz=55,slow=71,SNR=5.0						
H03N2	**Juan Fernandez**	**6.86**	**231**	Pn	Pn	10 49 11.9	-4.1
	baz=108,slow=16						
H03N2				T	T	10 56 08.0	
	baz=55,slow=71,SNR=5.7						
H03N3	**Juan Fernandez**	**6.86**	**231**	Pn	Pn	10 49 11.8	-4.2
	baz=108,slow=16						
H03N3				T	T	10 56 10.0	
	baz=55,slow=71,SNR=6.2						
H03S3	**Juan Fernandez**	**7.07**	**228**	Pn	Pn	10 49 13.7	-5.3
H03S1	**Juan Fernandez**	**7.08**	**228**	Pn	Pn	10 49 13.7	-5.4
H03S2	**Juan Fernandez**	**7.09**	**228**	Pn	Pn	10 49 13.7	-5.5
PLCA	**Paso Flores**	**11.55**	**172**	Pn	**Pn**	**10 50 21.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=346,slow=15,SNR=6.2						
	comp=Z,0.7nm,0.7s						
BDFB	**Brasilia**	**26.35**	**64**	P	**P**	**10 53 13.0**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=249,slow=8.6,SNR=4.4						
	comp=Z,1.3nm,0.5s						
TXAR	**Lajitas Array**	**65.42**	**330**	P	**P**	**10 58 19.3**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=146,slow=8.3,SNR=1.6						
	comp=Z,0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**83.04**	**71**	P	**P**	**11 00 02.8**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=267,slow=4.7,SNR=4.7						
	comp=Z,0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**150.35**	**27**	PKPbc	**PKiKP**	**11 07 27.3**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=304,slow=3.4,SNR=9.1						
MKAR	**Makanchi Array**	**153.74**	**41**	PKPbc	**PKiKP**	**11 07 35.4**	**+1.0**
	comp=Z,0.2nm,0.8s,baz=349,slow=2.9,SNR=2.3						

KRSC 18 11:04:13.2±1.6, **48°.45N**×**157°.37E**, **h16**km±37km, **Ml3.8**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.05**	**353**	*eS*	Sn	11 05 38.5	+1.9
KDTR	**Khodutka, Kamc**	**3.40**	**7**	*eP*	Pn	11 05 08.4	+3.0
KDTR				*eS*	Sb	11 05 50.2	-3.7
ASAK	**Asacha**	**3.96**	**5**	*eP*	Pn	11 05 17.2	+4.0
RUS	**Russkaya**	**4.06**	**10**	*eP*	Pn	11 05 18.2	+3.7
RUS				*eS*	Sn	11 06 06.6	+5.0
MTVR	**Mutnovka**	**4.08**	**7**	*eP*	Pn	11 05 18.7	+3.8
MTVR				*eS*	Sn	11 06 07.5	+5.2
DALK	**Dalny**	**4.67**	**10**	*eP*	Pn	11 05 26.9	+3.9
KOK	**Koryaka**	**4.92**	**9**	*eP*	Pn	11 05 31.8	+5.3
KRX	**Arik**	**4.99**	**9**	*eP*	Pn	11 05 32.0	+4.6

*IDC **18** 11:24:53.1±0.9, 12°.03N×143°.43E, h0km, mb3.8/11, mbtmp3.8/12, ML3.6/1, MS3.1/1, Error ellipse: s-maj=29.2km s-min=19.1km az=116.0*
ISC 18 11:24:57.0±0.9, **12°.0N**±0°.2×**143°.4E**±0°.2, **h25**km, **n19**, σ0**s55**/13, **mb4.0**/11, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.12**	**42**	Pn	**Pn**	**11 25 31.1**	**+0.2**
	21nm,0.3s,baz=350,slow=14,SNR=22						
GUMO				Sn	**Sn**	**11 25 56.3**	**-0.1**
	42nm,0.3s,baz=329,slow=19,SNR=6.2						
	49nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**23.35**	**71**	T	T	11 54 16.8	
	baz=88,slow=74,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**23.37**	**71**	T	T	11 54 15.2	
	baz=88,slow=74,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**23.37**	**71**	T	T	11 54 12.4	
	baz=88,slow=74,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**23.83**	**68**	T	T	11 54 55.3	
	baz=255,slow=75,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**23.84**	**68**	T	T	11 54 51.5	
	baz=255,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**23.85**	**68**	T	T	11 54 54.0	
	baz=255,slow=75,SNR=5.5						
WRA	**Warramunga Arr**	**32.99**	**196**	P	**P**	**11 31 29.8**	**-0.4**
	0.5nm,0.9s,baz=20,slow=10.0,SNR=1.8						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**36.66**	**195**	P	**P**	**11 32 02.2**	**+0.3**
	0.2nm,0.6s,baz=21,slow=13,SNR=5.5						
	0.2nm,0.6s						
KLR	**Kul'dur**	**38.34**	**348**	LR	LR	11 47 22.5	
	comp=Z,24nm,18.5s,baz=140,slow=35						
MKAR	**Makanchi Array**	**61.64**	**317**	P	**P**	**11 35 13.3**	**+0.5**
	0.4nm,0.8s,baz=91,slow=8.9,SNR=4.2						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**62.08**	**325**	P	**P**	**11 35 15.5**	**-0.1**
	0.6nm,0.4s,baz=109,slow=6.1,SNR=2.7						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**64.91**	**320**	P	**P**	**11 35 34.7**	**+0.4**
	1.3nm,0.3s,baz=106,slow=6.2,SNR=6.4						
	1.3nm,0.3s						
BVAR	**Borovoye Array**	**70.28**	**322**	P	**P**	**11 36 08.6**	**+0.4**
	1.5nm,0.4s,baz=100,slow=7.8,SNR=13						
	1.5nm,0.4s						
ILAR	**Eielson Array**	**70.59**	**25**	P	**P**	**11 36 08.9**	**-1.0**
	0.6nm,0.5s,baz=253,slow=5.8,SNR=11						
	0.6nm,0.5s						
YKA	**Yellowknife Ar**	**84.91**	**27**	P	**P**	**11 37 29.6**	**0.0**
	0.1nm,0.5s,baz=282,slow=5.0,SNR=2.4						
	0.1nm,0.5s						
ARCES	**ARCESS Array B**	**88.13**	**342**	P	**P**	**11 37 45.7**	**+0.4**
	0.5nm,0.5s,baz=70,slow=7.8,SNR=5.3						
	0.5nm,0.5s						
NVAR	**Mina Array Bea**	**89.01**	**51**	P	**P**	**11 37 51.1**	**+0.6**
	0.3nm,0.5s,baz=270,slow=5.4,SNR=2.6						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**91.97**	**335**	P	**P**	**11 38 02.6**	**-0.8**
	0.5nm,0.5s,baz=106,slow=4.2,SNR=6.2						
	0.5nm,0.5s						

*UCR **18** 11:30:39.0±0.9, 10°.88N×85°.19W, h165km±8km, MW3.7*
*CATAC **18** 11:30:40.7±0.5, 10°.85N×85°.14W, h152km±4km, ML3.3*
ISC 18 11:30:40.6±1.9, **10°.86N**±0°.06×**85°.13W**±0°.07, **h161**km±11km, **n62**, σ0**s65**/67, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMAR	**Armenia, Volca**	**0.05**	**163**	*eP*	**Pn**	**11 31 01.8**	**-0.2**
VMAR				*eS*	**Sn**	**11 31 19.1**	**+0.6**
VMAR	**Armenia, Volca**	**0.05**	**163**	*i* P	**Pn**	**11 31 01.4**	**-0.6**
VMAR				IAML		11 31 02.2	
	comp=Z,1μm,1.

BOAB	**BOACO BROADBAN**	**.67**	**342**	*i* P		**Pn**	**11 31 12.0**	**-0.7**
BOAB				IAML			11 31 38.5	
	comp=Z,58nm,1.0s							
CDM	**Cerro de Muert**	**1.87**	**134**	*e*P		**Pn**	**11 31 15.0**	**-0.4**
CDM	**Cerro de Muert**	**1.87**	**134**	*i* P		**Pn**	**11 31 14.7**	**-0.6**
CDM				IAML			11 31 45.1	
	comp=Z,370nm,1.0s							
PEZE	**Perez Zeledon,**	**2.05**	**136**	*i* P		**Pn**	**11 31 17.3**	**+0.3**
PEZE				IAML			11 31 48.6	
	comp=Z,200nm,1.0s							
MACN	**El Madrono**	**2.20**	**317**	*i* P		**Pn**	**11 31 19.0**	**+0.3**
MACN				IAML			11 31 54.1	
	comp=Z,160nm,1.0s							
OCHAL	**Ojochal**	**2.28**	**140**	*i* P		**Pn**	**11 31 19.8**	**+0.2**
OCHAL				IAML			11 31 54.0	
	comp=Z,3.1nm,1.0s							
PLAN	**Los Planes de**	**2.60**	**147**	*i* P		**Pn**	**11 31 23.2**	**-0.3**
PLAN				IAML			11 32 04.2	
	comp=Z,350nm,1.0s							
SIUN	**Universidad Ur**	**2.86**	**7**	*i* P		**Pn**	**11 31 26.1**	**-0.5**
SIUN				IAML			11 31 27.2	
	comp=Z,26nm,1.0s							
PIRO	**Carate, Puerto**	**3.01**	**144**	*e*P		**Pn**	**11 31 29.1**	**+0.6**
CSGN	**Cosiguina Volc**	**3.18**	**312**	*i* P		**Pn**	**11 31 30.8**	**+0.2**
CSGN				IAML			11 32 12.9	
	comp=Z,590nm,1.0s							

IDC ***18*** *11:48:26.4±5.2,37.˚41N×71.˚35E,h74km±35km,mb3.6/1, mbtmp3.5/7,ML3.1/6,MS3.7/4,Error ellipse: s-maj=69.6km s-min=23.5km az=145.0*

NNC ***18*** *11:48:26.5±8.1,37.˚70N×70.˚88E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=84.0km s-min=55.6km az=53.0*

ISC 18 11:48:27.3±1.8,37.5N±0.1×71.12E±0.09,h68km,n14, σ1§64/14,3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.60**	**355**	P		**Pn**	**11 49 50.7**	**+2.8**
	1.4nm,0.3s,baz=184,slow=14,SNR=48							
KK31				⇓S		**Sn**	**11 50 52.7**	**+1.8**
	10nm,0.7s,baz=176,slow=18,SNR=9.4							
AAK	**Ala-Archa**	**5.73**	**26**	P		**Pn**	**11 49 51.2**	**+1.3**
	1.2nm,0.3s,baz=195,slow=4.9,SNR=16							
AAK				S		**Sn**	**11 50 53.9**	**-0.5**
	4.3nm,0.5s,baz=337,slow=23,SNR=9.8							
	2.2nm,0.3s							
TKM2	**Tokmak 2**	**6.39**	**31**	⇓P		**Pn**	**11 49 59.8**	**+0.8**
	2.2nm,0.6s							
GEYT	**Alibeck**	**10.31**	**276**	P		**Pn**	**11 50 53.4**	**+1.1**
	1.0nm,0.3s,baz=96,slow=12,SNR=8.5							
GEYT				S		**Sn**	**11 52 44.5**	**-1.7**
	1.8nm,0.4s,baz=166,slow=19,SNR=6.5							
	1.7nm,0.4s							
MKAR	**Makanchi Array**	**12.42**	**38**	P		**Pn**	**11 51 20.5**	**-0.7**
	baz=225,slow=15,SNR=4.3							
	0.2nm,0.5s							
AB31	**Akbulak array**	**14.25**	**329**	P		**Pn**	**11 51 45.0**	**-0.5**
	0.2nm,0.3s,baz=135,slow=15,SNR=25							
AB31				⇓S		**Sn**	**11 54 19.6**	**-2.4**
	0.8nm,0.6s,baz=142,slow=24,SNR=2.8							
BVAR	**Borovoye Array**	**15.52**	**358**	P		**Pn**	**11 52 01.8**	**0.0**
	baz=183,slow=12,SNR=2.1							
	0.2nm,0.3s							
AKTO	**Aktyubinsk**	**15.96**	**328**	P		**Pn**	**11 52 08.2**	**+0.8**
	0.1nm,0.3s,baz=119,slow=8.2,SNR=2.4							
	1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**18.96**	**26**	P		**P**	**11 52 40.6**	**-2.2**
	0.1nm,0.3s,baz=219,slow=10,SNR=2.6							
	0.4nm,0.3s							
PALK	**Palkekele**	**31.34**	**161**	LR		LR	12 08 57.0	
	comp=Z,23nm,20.0s,baz=260,slow=40							
HFS	**Hagfors**	**42.33**	**321**	P		**P**	**11 56 14.6**	**+0.4**
	0.7nm,0.4s,baz=96,slow=13,SNR=6.4							
	0.7nm,0.4s							
MJAR	**Matsushiro Arr**	**52.50**	**69**	LR		LR	12 19 44.4	
	comp=Z,126nm,18.0s,baz=52,slow=36							
KDAK	**Kodiak Island**	**78.22**	**22**	LR		LR	12 36 07.5	
	comp=Z,97nm,18.1s,baz=226,slow=37							
DLBC	**Dease Lake**	**82.78**	**11**	LR		LR	12 42 46.5	
	comp=Z,49nm,18.3s,baz=281,slow=39							

IDC ***18*** *12:02:48.9±2.6,23.˚65S×179.˚87E,h538km±26km,mb3.2/6, mbtmp4.1/7,Error ellipse: s-maj=31.3km s-min=19.4km az=1.0*

ISC 18 12:02:48.2±1.0,23.7S±0.1×179.9E±0.2,h535km,n10, σ1§47/13,mb3.7/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.71**	**189**	P		**P**	**12 05 56.1**	**+1.5**
	2.7nm,0.5s,baz=22,slow=22,SNR=1.5							
URZ				S		**S**	**12 08 26.1**	**-2.3**
	3.8nm,0.8s,baz=126,slow=17,SNR=1.1							
STKA	**Stephens Creek**	**34.73**	**248**	P		**P**	**12 08 54.4**	**+0.7**
	1.1nm,0.6s,baz=69,slow=7.4,SNR=3.0							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**42.00**	**260**	P		**P**	**12 09 53.1**	**+0.2**
	2.2nm,0.5s,baz=95,slow=7.6,SNR=69							
ASAR				PcP		**PcP**	**12 11 35.0**	**-0.6**
	0.2nm,0.5s,baz=86,slow=6.0,SNR=1.8							
ASAR				ScP		**ScP**	**12 14 36.5**	**+1.4**
	0.5nm,0.7s,baz=99,slow=4.5,SNR=6.2							
ASAR				S		**S**	**12 15 31.5**	**-1.8**
	0.2nm,0.7s,baz=87,slow=17,SNR=1.6							
	2.2nm,0.5s							
WRA	**Warramunga Arr**	**42.35**	**266**	P		**P**	**12 09 55.5**	**-0.2**
	3.3nm,0.5s,baz=102,slow=8.0,SNR=126							
	3.3nm,0.5s							
QSPA	**South Pole Qui**	**66.38**	**180**	P		**P**	**12 12 44.7**	**+0.9**
	1.1nm,0.9s,baz=289,slow=2.5,SNR=7.2							
	1.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**89.40**	**290**	P		**P**	**12 14 49.8**	**+1.5**
	0.5nm,0.3s,baz=134,slow=5.2,SNR=1.8							
	0.5nm,0.3s							
TXAR	**Lajitas Array**	**90.39**	**58**	P		**P**	**12 14 51.9**	**-0.9**
	0.3nm,0.8s,baz=186,slow=5.0,SNR=4.1							
	0.3nm,0.8s							
HFS	**Hagfors**	**142.34**	**349**	PKhKP		PKPpre	12 21 14.1	
	1.1nm,0.3s,baz=45,slow=2.3,SNR=17							
AKASG	**Malin Array Be**	**144.77**	**327**	PKP		**PKPdf**	**12 21 21.9**	**-2.0**
	0.7nm,0.4s,baz=42,slow=3.9,SNR=2.7							
BRTR	**Keskin Array B**	**147.41**	**307**	PKPbc		**PKiKP**	**12 21 33.4**	**-0.5**
	0.6nm,0.5s,baz=113,slow=3.3,SNR=3.0							

HEL 18 12:04:47.4±0.2,65.74N×24.59E,h0km,ML1.0, Suspected explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOF	**Tornio**	**0.36**	**342**	PG		Pg	12 04 52.2	-2.1
KALU	**Kalix**	**0.52**	**284**	PG		Pg	12 04 57.2	-0.2
KALU				SG		Sg	12 05 04.8	+0.6
OUL	**Oulu**	**0.85**	**140**	PG		Pg	12 05 03.8	+0.1
OUL				SG		Sg	12 05 14.0	-0.8
RANF	**Ranua**	**0.94**	**72**	PG		Pg	12 05 02.9	-2.6
RANF				SG		Sg	12 05 16.4	-1.3
OBF4	**Vikkela, Lumij**	**0.96**	**167**	PG		Pg	12 05 04.2	-1.5
OBF4				MSG			12 05 16.7	
	comp=Z,1.1nm,0.2s							
RNF	**Rovaniemi**	**1.05**	**33**	PG		Pg	12 05 06.1	-1.3
	baz=218							
RNF				SB		Sb	12 05 21.9	-0.7
OBF0	**Syolatti, Pyha**	**1.26**	**187**	PG		Pg	12 05 10.5	-1.0
OBF0				MSG			12 05 25.5	
	comp=Z,1.7nm,0.2s							
OUF	**Merijarvi**	**1.38**	**177**	PG		Pg	12 05 11.7	-2.1
OUF				MSG			12 05 28.9	
	comp=Z,1.1nm,0.2s							
OUF				SN		Sn	12 05 33.4	+0.6
PAJU	**Pajala**	**1.42**	**336**	PN		Pn	12 05 13.5	-1.0
PAJU				SN		Sn	12 05 34.2	+0.3
OBF8	**Ulkokalla**	**1.50**	**199**	PB		Pn	12 05 13.4	-2.0
OBF8				MSG			12 05 32.2	
	comp=Z,1.1nm,0.2s							
KLF	**Kolari**	**1.52**	**351**	PG		Pn	12 05 14.4	-1.4
KLF				MSG			12 05 33.0	
	comp=Z,1.3nm,0.2s							
KLF				SN		Sg	12 05 34.3	-1.9
BURU	**Burvik**	**1.79**	**231**	PG		Pb	12 05 21.1	+0.1
MSF	**Maaselka**	**1.84**	**83**	PG		Pn	12 05 20.4	+0.2
	baz=271							
MSF				SG		Sn	12 05 44.2	0.0
MSF	**Maaselka**	**1.84**	**83**	PB		Sn	12 05 44.2	0.0
SGF	**Sodankyl**	**1.88**	**23**	SG		Sn	12 05 45.2	+0.2
SGF	**Sodankyl**	**1.88**	**23**	PB		Sn	12 05 45.2	+0.2
OLKF	**Oulanka, Finla**	**2.05**	**71**	MSG			12 05 48.3	
	comp=Z,0.9nm,0.2s							
OLKF				SG		Sb	12 05 50.5	-0.9
UMAU	**Umeaa**	**2.51**	**224**	PN		Pn	12 05 30.5	+1.2
LANU	**Lannavaara**	**2.53**	**337**	PG		Pb	12 05 32.5	-1.2
KIF	**Kilpisjarvi**	**3.59**	**338**	SN		Sn	12 06 22.9	-4.3
ARA0	**ARCESS Array S**	**3.83**	**5**	SN		Sn	12 06 34.1	+1.0

HEL 18 12:04:57.8±0.1,67.87N×33.60E,h0km,ML1.3, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.40**	**85**	PG		Pg	12 05 05.2	-0.2
LVZ				SG		Sg	12 05 10.0	-0.5
VRF	**Varrio**	**1.52**	**267**	PG		Pn	12 05 25.3	-0.9
VRF				MSG			12 05 43.4	
	comp=Z,2.8nm,0.2s							
VRF				SG		Sg	12 05 44.5	-2.1
RAJF	**Raja-Jooseppi**	**2.07**	**290**	PG		Pn	12 05 34.9	+1.1
OLKF	**Oulanka, Finla**	**2.26**	**229**	PB		Pn	12 05 37.0	+0.6
OLKF				MSG			12 06 04.7	
	comp=Z,1.2nm,0.2s							
OLKF				SB		Sn	12 06 05.6	+0.6
KU6	**Riekki**	**2.36**	**220**	PN		Pn	12 05 37.2	-0.5
KU6				SN		Sn	12 06 06.2	-1.1
KU6				MSG			12 06 07.5	
	comp=Z,0.8nm,0.2s							
MSF	**Maaselka**	**2.67**	**225**	SB		Sn	12 06 16.4	+1.5
SGF	**Sodankyl**	**2.74**	**264**	SB		Sb	12 06 20.3	-1.3
KMNF	**Kaamanen**	**2.75**	**301**	PB		Pb	12 05 48.1	+0.3
KMNF				SN		Sb	12 06 21.3	-0.7
KMNF	**Kaamanen**	**2.75**	**301**	PG		Pb	12 05 48.1	+0.3
KMNF				SG		Sb	12 06 21.3	-0.7
KEV	**Kevo**	**3.06**	**311**	PB		Pn	12 05 48.7	+1.4
KEV				SB		Sn	12 06 26.7	+2.2
KEV				MSG			12 06 27.7	
	comp=Z,0.8nm,0.2s							
RANF	**Ranua**	**3.26**	**238**	SB		Sb	12 06 34.2	-2.5

JMA ***18*** *12:11:20.8±1.0,45.˚7N×3.˚4E×14.˚9E±.˚,h30km,MV4.8/17,SE OFF ETOROFU*

NIED ***18*** *12:11:20.8,44.˚66N×149.˚34E,h30km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=-0.86; Mθθ5.42; Mφφ-4.56; Mrθ-0.86; Mθφ-1.87; Mφr2.23; Fault plane solution: M0.89000×10¹⁵ NP1: φs143.00000°,δ82.00000°,λ-24.00000°. NP2: φs237.00000°,δ66.00000°,λ-171.00000°.*

SKHL ***18*** *12:11:22.8±0.3,44.˚30N×149.˚30E,h55km±5km,mb5.3/5*

MOS ***18*** *12:11:23.3±1.1,44.˚44N×149.˚14E,h51km,mb4.5/19, MS3.5/4,Error ellipse: s-maj=6.7km s-min=5.7km az=90.4*

IDC ***18*** *12:11:24.7±2.0,44.˚52N×149.˚02E,h47km±18km,mb3.8/24, mbtmp4.1/32,ML3.6/7,MS3.5/38,Error ellipse: s-maj=15.0km s-min=11.5km az=136.0*

NEIC ***18*** *12:11:24.4±1.2,44.˚44N±0.˚09×149.˚1E±0.˚1,h41km±7km, mb4.4/100,Error ellipse: s-maj=15.8km s-min=10.2km az=133.0*

ISC 18 12:11:23.1±0.5,44.36N±0.05×149.20E±0.05,h36km±1km, n315,σ1§21/312,mb4.4/98,MS3.7/37,21C-18D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.29**	**313**	*d* iPN		**Pn**	**12 11 43.6**	**-0.9**
KUR				*i* S		**Sn**	**12 11 59.0**	**-1.5**
KUR				pmax	pmax			
	comp=E,3μm,0.6s							
KUR				pmax	pmax			
	comp=N,1μm,0.5s							
KUR				pmax	pmax			
	comp=E,278nm,0.5s							
KUR				pmax	pmax			
	comp=Z,5μm,1.6s							
KUR				smax	smax			
	comp=N,11μm,1.4s							
KUR				smax	smax			
	comp=E,14μm,1.4s							
KUR				smax	smax			
	comp=N,4μm,0.6s							
KUR				smax	smax			
	comp=E,10μm,0.6s							
KUR	**Kuril'sk**	**1.29**	**313**	*i* P		**Pn**	**12 11 43.7**	**-0.8**
KUR				AMB	AMB		12 11 44.2	
	comp=E,3μm,0.6s							
KUR				*i* S		**Sn**	**12 11 59.1**	**-1.5**
KUR				A	A		12 12 01.6	
	comp=E,4μm,0.6s							
KUR				A	A		12 12 01.6	
	comp=E,10μm,0.6s							
SHO	**Shikotan**	**1.77**	**255**	*e*PN		**Pn**	**12 11 51.2**	**0.0**
SHO				*e*S		**Sn**	**12 12 13.3**	**+0.8**
SHO				pmax	pmax			
	comp=Z,136nm,0.3s							
SHO				smax	smax			
	comp=N,782nm,0.4s							
SHO				smax	smax			
	comp=E,1μm,0.4s							
SHO	**Shikotan**	**1.77**	**255**	*e*P		**Pn**	**12 11 51.2**	**0.0**
SHO				AMB	AMB		12 11 55.9	
	comp=E,300nm,0.3s							
SHO				*e*S		**Sn**	**12 12 12.6**	**+0.1**
SHO				A	A		12 12 18.5	
	comp=E,780nm,0.4s							
SHO				A	A		12 12 18.5	
	comp=E,1μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.42**	**263**	*d* iPN		**Pn**	**12 12 00.9**	**+0.8**
YUK				*i* S		**Sn**	**12 12 29.4**	**+1.0**
YUK				pmax	pmax			
	comp=N,128nm,0.1s							
YUK				pmax	pmax			
	comp=Z,760nm,0.1s							
YUK				smax	smax			
	comp=N,2μm,0.4s							
YUK				smax	smax			
	comp=E,3μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.42**	**263**	*i* P		**Pn**	**12 12 00.9**	**+0.8**
YUK				AMB	AMB		12 12 04.5	
	comp=E,760nm,0.3s							
YUK				*i* S		**Sn**	**12 12 29.5**	**+1.0**
YUK				A	A		12 12 35.1	
	comp=E,2μm,0.4s							
YUK				A	A		12 12 35.1	
	comp=E,3μm,0.4s							
NEM2	**Nemuro 2**	**2.69**	**250**	*e*P		**Pn**	**12 12 04.0**	**+0.3**
NEM2				*e*S		**Sn**	**12 12 36.2**	**+1.2**
NMR	**Nemuro--Hokkai**	**2.70**	**250**	*e*PN		**Pn**	**12 12 03.4**	**-0.5**
NMR				*e*S		**Sn**	**12 12 37.2**	**+1.9**
NMR	**Nemuro--Hokkai**	**2.70**	**250**	*e*P		**Pn**	**12 12 04.2**	**+0.3**
NMR				*e*S		**Sn**	**12 12 36.3**	**+1.0**
RUSJ	**Misakicho**	**2.85**	**266**	*e*PN		**Pn**	**12 12 08.0**	**+2.0**
RUSJ				*e*S		**Sn**	**12 12 43.6**	**+4.6**
JRA	**Rausu**	**2.96**	**263**	*e*P		**Pn**	**12 12 08.8**	**+1.2**
JNK	**Nakash**	**3.33**	**258**	*e*P		**Pn**	**12 12 13.8**	**+1.3**
JNK				*e*S		**Sn**	**12 12 52.0**	**+1.3**
AKK	**Akkeshi**	**3.43**	**249**	*e*P		**Pn**	**12 12 14.5**	**+0.5**
JAK	**Akkeshi**	**3.54**	**249**	*e*P		**Pn**	**12 12 16.1**	**+0.6**
JAK				*e*S		**Sn**	**12 12 56.6**	**+0.6**
JTKR	**Abashiri--Toko**	**3.83**	**266**	*e*P		**Pn**	**12 12 21.5**	**+2.1**
JAR	**Ashorobuto**	**4.07**	**257**	*e*P		**Pn**	**12 12 24.6**	**+1.9**
JAR				*e*S		**Sn**	**12 13 11.7**	**+2.6**
JOB	**Onbets**	**4.16**	**251**	*e*P		**Pn**	**12 12 24.9**	**+1.0**
JCH	**Churui**	**4.59**	**250**	*e*P		**Pn**	**12 12 30.9**	**+1.0**
JCH				*e*S		**Sn**	**12 13 23.8**	**+1.9**
JKK2	**Kamakawa 2**	**4.67**	**266**	*e*P		**Pn**	**12 12 33.2**	**+2.2**
JKA	**Kamikawa-asahi**	**4.75**	**269**	Pn		**Pn**	**12 12 34.5**	**+2.5**
JKA	**Kamikawa-asahi**	**4.75**	**269**	*e*P		**Pn**	**12 12 34.6**	**+2.5**
ASAJ	**Asahikawa**	**4.75**	**269**	PN		**Pn**	**12 12 34.6**	**+2.5**
ASAJ	**Asahikawa**	**4.75**	**269**	P		**Pn**	**12 12 33.7**	**+1.6**
	comp=E,3.0nm,0.3s,baz=39,slow=3.1,SNR=20							
ASAJ				LR		LR	12 14 37.4	
	comp=E,1μm,18.3s,baz=148,slow=42							
	comp=E,25nm,0.7s							
ERM	**Erimo**	**5.00**	**244**	Pn		**Pn**	**12 12 37.8**	**+2.3**
ERM	**Erimo**	**5.00**	**244**	*ce*PN		**Pn**	**12 12 38.0**	**+2.5**
ERM				pmax	pmax			
	comp=Z,227nm,0.8s							
JAB	**Ashibetsu**	**5.11**	**263**	*e*P		**Pn**	**12 12 40.7**	**+3.7**
JNBK	**Urakawa-nobuka**	**5.14**	**248**	*e*P		**Pn**	**12 12 38.0**	**+0.6**
JNBK				*e*S		**Sn**	**12 13 38.1**	**+2.6**
YSS	**Yuzh-Sakhalins**	**5.21**	**302**	Pn		**Pn**	**12 12 38.8**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.21**	**302**	*e*PN		**Pn**	**12 12 39.3**	**+0.9**
YSS				*e*S		**Sn**	**12 13 38.4**	**+1.3**
YSS				pmax	pmax			
	comp=Z,18nm,0.8s							
YSS				MLR	MLR			
	comp=Z,900nm,14.0s							
YSS	**Yuzh-Sakhalins**	**5.21**	**302**	*e*P		**Pn**	**12 12 39.4**	**+1.0**
YSS				AMB	AMB		12 12 42.5	
	comp=Z,20nm,0.7s							
YSS				*e*S		**Sn**	**12 13 36.2**	**-0.9**
YSS				A	A		12 13 45.9	
	comp=Z,70nm,0.6s							
YSS				A	A		12 13 45.9	
	comp=Z,70nm,0.6s							
UGL	**Uglegorsk**	**6.80**	**316**	*e*PN		Pn	12 13 05.5	+5.3
UGL				pmax	pmax			
	comp=Z,40nm,0.5s							
UGL	**Uglegorsk**	**6.80**	**316**	*e*P		**Pn**	**12 13 03.7**	**+3.5**
UGL				AMB	AMB		12 13 09.3	
	comp=Z,40nm,0.6s							
JANG	**Nango**	**6.95**	**238**	*e*P		**Pn**	**12 13 00.8**	**-1.5**
JANG				*e*S		**Sn**	**12 14 14.0**	**-5.9**
JTM	**Tenmabayashi**	**6.98**	**242**	Pn		**Pn**	**12 13 02.9**	**+0.1**
JTH	**Tanohata**	**7.01**	**233**	*e*P		**Pn**	**12 13 01.7**	**-1.5**
JTH				*e*S		Sn	12 14 13.5	-8.2
TYV	**Tymovskoe**	**7.86**	**328**	*e*PN		**Pn**	**12 13 18.0**	**+3.2**
TYV				pmax	pmax			
	comp=Z,100nm,3.1s							
TYV				pmax	pmax			
	comp=Z,7.0nm,0.5s							
TYV	**Tymovskoe**	**7.86**	**328**	*e*P		**Pn**	**12 13 17.4**	**+2.6**
TYV				AMB	AMB		12 13 23.5	
	comp=Z,10.0nm,0.5s							
TYV				*e*S		**Sn**	**12 14 42.6**	**+0.2**
TYV				A	A		12 14 47.4	
SKR	**Severo-Kuril's**	**7.87**	**34**	*e*PN		**Pn**	**12 13 14.4**	**-0.4**
SKR				*e*S		**Sn**	**12 14 46.4**	**+3.9**
SKR				pmax	pmax			
	comp=Z,86nm,0.5s							
SKR				pmax	pmax			
	comp=Z,600nm,7.4s							
SKR				smax	smax			
	comp=E,122nm,0.8s							
SKR				smax	smax			
	comp=N,36nm,0.6s							
SKR				MLR	MLR			
	comp=Z,800nm,17.0s							
SKR	**Severo-Kuril's**	**7.87**	**34**	*e*P		**Pn**	**12 13 14.9**	**+0.1**
SKR				AMB	AMB		12 13 16.7	
	comp=Z,90nm,0.5s							
SKR				*e*S		**Sn**	**12 14 39.7**	**-2.8**
SKR				A	A		12 14 48.8	
	comp=Z,40nm,0.7s							
SKR				A	A		12 14 48.8	
	comp=Z,120nm,0.7s							
PAU	**Pauzhetka**	**8.75**	**33**	*e*P		**Pn**	**12 13 29.1**	**+2.1**
PAU				*e*S		**Sn**	**12 15 02.5**	**-1.8**
JMM	**Marumori**	**9.07**	**227**	Pn		**Pn**	**12 13 30.8**	**-0.6**
PEA0B	**Petropavlovsk-**	**10.39**	**30**	Pn		**Pn**	**12 13 50.2**	**+0.8**
PEA0B	**Petropavlovsk-**	**10.39**	**30**	PN		**Pn**	**12 13 50.2**	**+0.8**
PETK	**Petropavlovsk-**	**10.39**	**30**	Pn		**Pn**	**12 13 49.4**	**-0.1**
PETK	**Petropavlovsk-**	**10.39**	**30**	P		**Pn**	**12 13 49.6**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=208,slow=11,SNR=35							
PETK				LR		LR	12 17 39.7	
	comp=Z,371nm,21.1s,baz=220,slow=36							
	comp=Z,5.6nm,0.5s							
PET	**Petropavlovsk**	**10.68**	**32**	Pn		**Pn**	**12 13 52.7**	**-0.6**
PET	**Petropavlovsk**	**10.68**	**32**	*e*PN		**Pn**	**12 13 53.8**	**+0.5**
PET				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PET				MLR	MLR			
	comp=Z,400nm,7.0s							
PET	**Petropavlovsk**	**10.68**	**32**	*e*P		**Pn**	**12 13 53.5**	**+0.2**
PET				AMB	AMB		12 14 07.8	
	comp=Z,10.0nm,0.8s							
PET				*e*S		**Sn**	**12 15 48.9**	**-2.5**
MAJO	**Matsushiro**	**11.44**	**231**	*d* iPN		**Pn**	**12 14 03.3**	**-0.6**
MAJO				pmax	pmax			
	comp=Z,13nm,0.8s							
MJAR	**Matsushiro Arr**	**11.44**	**231**	P		**Pn**	**12 14 03.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=22							
	comp=Z,6.4nm,0.8s							
USA0B	**Ussuriysk Arra**	**12.34**	**275**	Pn		**Pn**	**12 14 17.2**	**+1.1**
USA0B	**Ussuriysk Arra**	**12.34**	**275**	PN		**Pn**	**12 14 17.2**	**+1.1**
USRK	**Ussuriysk Ar.**	**12.34**	**275**	PN		**Pn**	**12 14 17.7**	**+1.6**
USRK	**Ussuriysk Ar.**	**12.34**	**275**	P		**Pn**	**12 14 17.6**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=88,slow=13,SNR=13							
	comp=Z,9.9nm,0.8s							
JGF	**Kuroka**	**12.60**	**230**	Pn		**Pn**	**12 14 19.8**	**+0.1**
KLR	**Kul'dur**	**12.90**	**298**	⇑*e*PN		**Pn**	**12 14 26.5**	**+2.7**
KLR				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KLR	**Kul'dur**	**12.90**	**298**	P		**Pn**	**12 14 26.2**	**+2.4**
	comp=Z,4.5nm,0.9s,baz=102,slow=17,SNR=15							
KLR				LR		LR	12 19 43.4	
	comp=Z,182nm,19.0s,baz=112,slow=39							
KLR	**Kul'dur**	**12.90**	**298**	*e*P		**Pn**	**12 14 24.1**	**+0.3**
MA2	**Magadan**	**15.27**	**3**	Pn		**Pn**	**12 14 55.0**	**-0.7**
MA2	**Magadan**	**15.27**	**3**	⇑*e*P		**Pn**	**12 14 54.9**	**-0.8**
MA2				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MA2	**Magadan**	**15.27**	**3**	P		**Pn**	**12 14 55.3**	**-0.4**
	comp=Z,3.5nm,0.6s,baz=173,slow=8.1,SNR=9.0							
MA2	**Magadan**	**15.27**	**3**	*e*P		**Pn**	**12 14 54.9**	**-0.8**
BNX	**BinXian**	**15.46**	**283**	⇑P		**Pn**	**12 14 56.4**	**-1.9**
BNX				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BNX				pmax

comp=Z,140nm,4.7s
JOW Kunigami 24.29 231 P **P** **12 16 37.2 +0.2**
JOW IAmb IAmb 12 16 40.5
comp=Z,19nm,0.9s
JOW Kunigami 24.29 231 LR LR 12 26 31.3
comp=Z,91nm,21.8s,baz=33,slow=37
BJT Baijiatuau 24.76 271 P **P** **12 16 40.5 -0.5**
BJT Baijiatuau 24.76 271 P **P** **12 16 40.6 -0.5**
BJT pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 25.38 15 *e*P **P** **12 16 48.4 +1.9**
BILL pmax pmax
comp=Z,24nm,3.3s
BILL Bilibino 25.38 15 *e*P **P** **12 16 48.4 +1.9**
TIA Tai'an 25.66 263 *e*P **P** **12 16 49.6 +0.2**
TIA pmax pmax
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 27.76 276 *e*P **P** **12 17 09.8 +1.4**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.0s
HHC LR LR
comp=N,140nm,14.5s
HHC LR LR
comp=E,250nm,14.5s
HHC LR LR
comp=Z,250nm,13.8s
H11N2 WAKE ISLAND Hy 28.65 143 T T 12 48 12.5
baz=334,slow=76,SNR=436
H11N1 WAKE ISLAND Hy 28.66 143 T T 12 48 12.1
baz=334,slow=76,SNR=321
H11N3 WAKE ISLAND Hy 28.67 143 T T 12 48 11.0
baz=334,slow=76,SNR=416
TIXI Tiksi 29.08 347 LR LR 12 29 03.5
comp=Z,71nm,18.3s,baz=184,slow=37
ULN Ulaanbaatar 29.16 292 P **P** **12 17 20.7 -0.1**
ULN Ulaanbaatar 29.16 292⇓ *e*P **P** **12 17 20.8 0.0**
ULN Ulaanbaatar 29.16 292 *e*P **P** **12 17 20.8 0.0**
SONM Songino Array 29.61 292 P **P** **12 17 24.4 -0.3**
SONM Songino Array 29.61 292 P **P** **12 17 24.4 -0.3**
SONM pmax pmax
comp=Z,3.0nm,1.3s
SONM Songino Array 29.61 292 P **P** **12 17 24.7 0.0**
comp=Z,1.2nm,0.7s,baz=77,slow=8.4,SNR=9.2
SONM LR LR 12 30 15.5
comp=Z,169nm,18.3s,baz=100,slow=38
comp=Z,1.2nm,0.7s
H11S1 WAKE ISLAND Hy 29.66 145 T T 12 49 27.9
baz=334,slow=76,SNR=646
H11S3 WAKE ISLAND Hy 29.66 145 T T 12 49 26.3
baz=334,slow=76,SNR=438
H11S2 WAKE ISLAND Hy 29.68 145 T T 12 49 26.2
baz=334,slow=76,SNR=316
XAN Xi'an 32.58 266⇑P **P** **12 17 50.8 -0.1**
LZH Lanzhou 35.23 272⇓P **P** **12 18 15.3 +1.2**
LZH pP pwP 12 18 26.5 -0.7
LZH sP sP 12 18 31.5 +2.7
LZH pmax pmax
comp=Z,24nm,1.4s
H18K Honhosa River 35.29 35 P **P** **12 18 14.6 +0.5**
G18K Tagagawik 35.31 34 P **P** **12 18 14.2 0.0**
C19K Lookout Ridge 35.75 29 P **P** **12 18 17.5 -0.5**
C19K IAmb IAmb 12 18 21.7
comp=Z,4.5nm,0.8s
D19K Kuna River 36.10 30 P **P** **12 18 20.9 -0.1**
D19K IAmb IAmb 12 18 35.7
comp=Z,6.8nm,0.9s
H19K Roundabout Mou 36.14 35 P **P** **12 18 22.1 +0.8**
E19K Redstone River 36.18 32 P **P** **12 18 22.7 +1.0**
J19K Poorman 36.30 38 P **P** **12 18 22.9 +0.2**
J19K IAmb IAmb 12 18 25.1
comp=Z,8.7nm,1.0s
GTA Gaotai 36.65 280 P **P** **12 18 26.8 +0.7**
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA LR LR
comp=N,98nm,15.3s
GTA LR LR
comp=E,160nm,13.8s
GTA LR LR
comp=Z,130nm,17.1s
J20K Nowinta River 36.96 37 P **P** **12 18 29.4 +1.1**
J20K IAmb IAmb 12 18 43.8
comp=Z,6.0nm,0.8s
IMAR Indian Mountai 37.31 35 P **P** **12 18 31.7 +0.4**
M20K Styx River 37.31 41 P **P** **12 18 32.3 +0.8**
M20K IAmb IAmb 12 18 55.8
comp=Z,12nm,1.2s
G21K Allakaket 37.47 34 P **P** **12 18 33.8 +1.1**
G21K IAmb IAmb 12 18 47.5
comp=Z,9.4nm,1.0s
F21K Alatna River 37.57 33 P **P** **12 18 33.5 -0.1**
F21K IAmb IAmb 12 18 47.7
comp=Z,3.4nm,0.9s
B21K Ikpikpuk River 37.59 28 P **P** **12 18 34.1 +0.6**
H21K Melozitna Rive 37.66 35 P **P** **12 18 35.4 +1.1**
H21K IAmb IAmb 12 18 36.3
comp=Z,8.2nm,1.1s
KDAK Kodiak Island 37.74 48 P **P** **12 18 35.6 +0.6**
KDAK Kodiak Island 37.74 48 P **P** **12 18 35.6 +0.6**
KDAK pmax pmax
comp=Z,32nm,1.2s
CAST Castle Rocks 37.83 39 P **P** **12 18 36.4 +0.6**
CAST IAmb IAmb 12 18 38.6
comp=Z,5.5nm,1.1s
I21K Tanana 37.96 36 P **P** **12 18 37.5 +0.7**
I21K IAmb IAmb 12 18 40.1
comp=Z,4.3nm,0.8s
D22K Ayikyak River 38.12 30 P **P** **12 18 38.3 +0.1**
E22K Anaktuvuk Pass 38.33 31 P **P** **12 18 40.6 +0.7**
KTH Kantishna Hill 38.35 39 P **P** **12 18 41.7 +1.5**
SUA Susitna One 38.45 42 P **P** **12 18 41.1 -0.1**
SUA IAmb IAmb 12 19 07.8
comp=Z,11nm,1.4s
BRLK Bradley Lake 38.47 45 P **P** **12 18 41.8 +0.6**
MLY Manley 38.48 36 P **P** **12 18 42.7 +1.5**
MLY IAmb IAmb 12 18 55.6
comp=Z,5.9nm,1.0s
TRF Thorofare Moun 38.64 39 P **P** **12 18 43.6 +0.9**
TRF IAmb IAmb 12 19 01.6
comp=Z,12nm,1.4s
G23K Bananza Creek 38.87 34 P **P** **12 18 44.9 +0.4**
G23K IAmb IAmb 12 18 55.9
comp=Z,8.9nm,1.4s
I23K Minto, Yukon-K 39.07 36 P **P** **12 18 47.1 +1.0**
I23K IAmb IAmb 12 19 13.0
comp=Z,6.5nm,1.2s
TOLK Toolik Lake Re 39.21 31 P **P** **12 18 48.2 +0.8**
TOLK IAmb IAmb 12 19 11.9
comp=Z,12nm,1.4s
D24K Happy Valley 39.54 30 P **P** **12 18 51.6 +1.7**
SML Sawmill 39.59 41 P **P** **12 18 51.0 +0.5**
SML Sawmill 39.59 41 P **P** **12 18 51.0 +0.5**
SML pmax pmax
comp=Z,14nm,0.9s
COLA College 39.71 37 P **P** **12 18 51.9 +0.5**
COLA College 39.71 37 P **P** **12 18 51.9 +0.5**
COLA pmax pmax
comp=Z,20nm,1.4s
CCB Clear Creek Bu 39.73 37 P **P** **12 18 52.8 +1.2**
F24K Squaw Lake 39.76 32 P **P** **12 18 50.0 -1.9**
POKR Poker Plat Res 39.88 36 P **P** **12 18 53.5 +0.6**
G24K Hadweenzic Riv 39.88 34 P **P** **12 18 52.9 0.0**
G24K IAmb IAmb 12 19 12.7
comp=Z,6.1nm,0.8s
HDA Harding Lake 40.10 37 P **P** **12 18 54.8 +0.1**
HDA IAmb IAmb 12 18 58.3
comp=Z,3.5nm,0.6s
IL31 40.12 37 P **P** **12 18 55.5 +0.7**
ILAR Eielson Array 40.12 37 P **P** **12 18 54.8 -0.1**
ILAR Eielson Array 40.12 37 P **P** **12 18 55.0 +0.2**
comp=Z,3.0nm,0.9s,baz=256,slow=8.2,SNR=14
comp=Z,3.0nm,0.9s
PRP Porcupine Dome 40.68 36 P **P** **12 19 00.3 +0.7**
KLU Klutina 40.76 42 P **P** **12 19 00.3 0.0**
KLU IAmb IAmb 12 19 14.7
comp=Z,6.6nm,0.9s
J25K Salcha River, 40.78 37 P **P** **12 19 00.5 +0.2**
QIZ Qiongzhong 41.37 245 P **P** **12 19 04.5 -1.1**
QIZ S **S** **12 25 17.3 -0.5**
QIZ LR LR
comp=N,100nm,17.7s
QIZ LR LR
comp=E,140nm,22.6s
QIZ LR LR
comp=Z,130nm,20.2s
DGZ Jazzator, Alta 41.39 300⇑ *e*P **P** **12 19 05.7 0.0**
DGZ pmax pmax
comp=Z,4.0nm,1.7s
SCRK Sand Creek 41.42 38 P **P** **12 19 05.4 -0.3**
J26L Joseph Creek 41.56 37 P **P** **12 19 06.6 -0.3**
GOMU GeErMu 41.62 278 P **P** **12 19 08.8 +0.8**
GOMU pP pP 12 19 18.6 +0.8
GOMU sP sP 12 19 25.6 +2.8
GOMU S S 12 24 43.3 -39
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU LR LR
comp=N,130nm,16.3s
GOMU LR LR
comp=E,140nm,16.9s
GOMU LR LR
comp=Z,280nm,16.4s
L26K Log Cabin Wild 41.80 39 P **P** **12 19 09.5 +0.8**
ZALV Zalesovo Beam 41.81 307 PcP **PcP** **12 21 04.1 -0.2**
comp=Z,1.5nm,0.7s,baz=64,slow=3.4,SNR=7.5
ZALV LR LR 12 37 21.9
comp=Z,62nm,19.2s,baz=67,slow=37
VRDI Verde Repeater 41.98 42 P **P** **12 19 10.2 -0.2**
BERG Berg Lake 41.98 43 P **P** **12 19 10.7 +0.5**
BERG IAmb IAmb 12 19 16.2
comp=Z,5.2nm,0.8s
KMI Kunming 42.09 259⇑ P **P** **12 19 11.4 -0.4**
KMI pmax pmax
comp=Z,9.0nm,0.9s
CRQM Cirque 42.20 43 P **P** **12 19 13.5 +1.3**
CRQM IAmb IAmb 12 19 25.7
comp=Z,15nm,1.1s
K27K Chicken 42.25 38 P **P** **12 19 12.8 +0.5**
K27K IAmb IAmb 12 19 15.3
comp=Z,6.8nm,0.9s
WAX Waxell Ridge 42.39 43 P **P** **12 19 14.2 +0.6**
L27K Beaver Creek, 42.48 39 P **P** **12 19 15.8 +1.5**
L27K IAmb IAmb 12 19 26.6
comp=Z,5.4nm,0.8s
BCAR Beaver Creek A 42.50 39 P **P** **12 19 15.8 +1.3**
M27K Edge Creek, AK 42.55 40 P **P** **12 19 16.0 +1.0**
M27K IAmb IAmb 12 19 29.8
comp=Z,9.1nm,1.1s
EGAK Eagle 42.57 36 P **P** **12 19 15.3 +0.4**
EGAK IAmb IAmb 12 19 28.1
comp=Z,8.4nm,1.1s
BARN Barnard Glacie 42.86 42 P **P** **12 19 18.1 +0.5**
BARN IAmb IAmb 12 19 40.4
comp=Z,14nm,1.5s
GRNC Granite Creek 42.87 42 P **P** **12 19 18.6 +0.9**
GRNC IAmb IAmb 12 19 31.4
comp=Z,9.2nm,1.0s
I28M Miner Creek 43.01 35 P **P** **12 19 19.8 +1.2**
I28M IAmb IAmb 12 19 21.7
comp=Z,6.8nm,0.9s
CTGM Chitina Glacie 43.03 42 P **P** **12 19 19.4 +0.5**
CTGM IAmb IAmb 12 19 35.5
comp=Z,8.9nm,1.2s
LOGN Logan Glacier 43.22 42 P **P** **12 19 20.3 -0.1**
LOGN IAmb IAmb 12 19 34.1
comp=Z,7.9nm,1.1s
TABL Table Mountain 43.22 43 P **P** **12 19 20.4 -0.2**
TABL IAmb IAmb 12 19 41.7
comp=Z,14nm,1.2s
WMQ Urumqi 43.24 292 *e*P **P** **12 19 22.6 +1.8**
E29M Blow River 43.51 31 P **P** **12 19 24.1 +1.7**
H29M Whitestone 43.56 34 P **P** **12 19 22.7 -0.2**
H29M IAmb IAmb 12 19 43.4
comp=Z,8.1nm,1.1s
EPYK Eagle Plains 44.20 34 P **P** **12 19 28.9 +0.9**
EPYK IAmb IAmb 12 19 31.5
comp=Z,14nm,1.2s
G30M tAoh Zrail Nji 44.31 33 P **P** **12 19 29.9 +0.9**
G30M IAmb IAmb 12 19 40.9
comp=Z,13nm,1.4s
I30M Mount Dempster 44.52 35 P **P** **12 19 31.6 +0.9**
I30M IAmb IAmb 12 19 33.6
comp=Z,7.7nm,0.8s
J30M Hart River 44.65 36 P **P** **12 19 32.8 +1.0**
HYT Haines Junctio 44.90 42 P **P** **12 19 35.2 +1.4**
HYT IAmb IAmb 12 19 48.5
comp=Z,8.1nm,1.0s
P29M Windy Craggy 45.07 43 P **P** **12 19 37.1 +2.0**
G31M Satah River 45.07 33 P **P** **12 19 36.7 +1.7**
G31M IAmb IAmb 12 19 45.2
comp=Z,12nm,1.4s
INK Inuvik 45.13 31 P **P** **12 19 36.3 +0.9**
INK IAmb IAmb 12 19 41.7
comp=Z,3.8nm,0.8s
INK Inuvik 45.13 31 P **P** **12 19 36.3 +0.9**
INK pmax pmax
comp=Z,4.0nm,0.9s
F31M Tsiigehtchic 45.19 32 P **P** **12 19 36.3 +0.5**
F31M IAmb IAmb 12 19 49.9
comp=Z,7.3nm,1.2s
MK31 Makanchi Array 45.61 298 P **P** **12 19 39.3 -0.3**
MK31 Makanchi Array 45.61 298 P **P** **12 19 39.3 -0.3**
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 45.61 298 P **P** **12 19 39.4 -0.2**
MKAR Makanchi Array 45.61 298 P **P** **12 19 38.7 -0.8**
comp=Z,1.2nm,0.7s,baz=76,slow=8.0,SNR=14
MKAR PcP **PcP** **12 21 17.2 -0.2**
comp=Z,0.9nm,0.7s,baz=68,slow=5.4,SNR=4.0
MKAR LR LR 12 40 01.1
comp=Z,188nm,18.2s,baz=66,slow=38
comp=Z,1.2nm,0.7s
MAKZ Makanchi 45.80 298 P **P** **12 19 41.0 -0.1**
MAKZ Makanchi 45.80 298 P **P** **12 19 41.0 -0.1**
MAKZ pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 46.41 304 P **P** **12 19 44.9 -0.9**
KURK Kurchatov 46.41 304⇑ *e*P **P** **12 19 45.2 -0.6**
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURK Kurchatov 46.41 304 *e*P **P** **12 19 45.2 -0.6**
KURBB Kurchatov Arra 46.50 304 P **P** **12 19 45.3 -1.2**
comp=Z,1.8nm,0.7s,baz=70,slow=8.4,SNR=12
KURBB PcP **PcP** **12 21 20.6 +0.2**
comp=Z,0.8nm,0.7s,baz=78,slow=3.6,SNR=5.3
KURBB LR LR 12 40 20.2
comp=Z,50nm,18.1s,baz=195,slow=38
comp=Z,1.8nm,0.7s
A36M Sachs Harbour 47.20 25 P **P** **12 19 53.2 +1.6**
A36M IAmb IAmb 12 19 54.4
comp=Z,5.0nm,0.8s
C36M Paulatuk 48.24 28 P **P** **12 20 00.5 +0.8**
CMAR Chiang Mai Arr 49.11 255 P **P** **12 20 07.6 +0.5**
CMAR Chiang Mai Arr 49.11 255 P **P** **12 20 07.6 +0.5**
CMAR Chiang Mai Arr 49.11 255 P **P** **12 20 07.4 +0.3**
comp=Z,1.6nm,0.7s,baz=40,slow=7.4,SNR=14
CMAR LR LR 12 42 55.3
comp=Z,95nm,18.5s,baz=55,slow=39
comp=Z,1.6nm,0.7s
SHL Shillong 49.54 268 P **P** **12 20 10.0 -0.5**
SHL Shillong 49.54 268 P **P** **12 20 10.0 -0.5**
SHL pmax pmax
comp=Z,11nm,0.8s
BVAR Borovoye Array 50.26 310 P **P** **12 20 12.8 -2.6**
comp=Z,0.4nm,0.4s,baz=46,slow=10,SNR=4.8
BVAR PcP **PcP** **12 21 33.8 -0.2**
comp=Z,0.6nm,0.7s,baz=87,slow=5.9,SNR=2.0
BVAR LR LR 12 43 12.9
comp=Z,58nm,18.4s,baz=52,slow=38
comp=Z,0.4nm,0.4s
BRVK Borovoye 50.30 310⇓ *e*P **P** **12 20 16.0 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,1.7s
BRVK Borovoye 50.30 310 *e*P **P** **12 20 16.0 +0.3**
AAK Ala-Archa 52.42 296 P **P** **12 20 31.6 -0.3**
AAK IAmb IAmb 12 20 32.9
comp=Z,3.3nm,1.0s
AAK Ala-Archa 52.42 296⇓ *e*P **P** **12 20 31.7 -0.3**
AAK pmax pmax
comp=Z,4.0nm,1.1s
AAK Ala-Archa 52.42 296 LR LR 12 43 40.6
comp=Z,32nm,19.1s,baz=50,slow=37
AAK Ala-Archa 52.42 296 *e*P **P** **12 20 31.7 -0.3**
BBB Bella Bella 52.75 50 LR LR 12 44 32.3
comp=Z,29nm,19.1s,baz=308,slow=38
KSH Kashi 53.01 292 P **P** **12 20 39.8 +3.5**
KSH pmax pmax
comp=Z,4.0nm,0.8s
RES Resolute Bay 53.95 17 P **P** **12 20 42.4 -0.1**
RES Resolute Bay 53.95 17 P **P** **12 20 42.4 -0.1**
RES pmax pmax
comp=Z,7.0nm,0.9s
YKA Yellowknife Ar 54.47 35 P **P** **12 20 46.5 +0.1**
YKA Yellowknife Ar 54.47 35 P **P** **12 20 47.0 +0.5**
YKA Yellowknife Ar 54.47 35 P **P** **12 20 47.0 +0.5**
comp=Z,1.8nm,0.8s,baz=298,slow=7.0,SNR=21
comp=Z,1.8nm,0.8s
KK31 Karatay Array 54.73 298 P **P** **12 20 48.6 0.0**
KK31 Karatay Array 54.73 298 P **P** **12 20 48.7 0.0**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 54.73 298 P **P** **12 20 48.5 -0.2**
KKAR Karatay Array 54.73 298 P **P** **12 20 48.6 0.0**
KKAR IAmb IAmb 12 20 49.3
comp=Z,2.0nm,0.8s
KKAR Karatay Array 54.73 298 P **P** **12 20 48.5 -0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.8s
ABKAR Akbulak array 57.83 309 P **P** **12 21 10.3 -0.3**
ABKAR IAmb IAmb 12 21 10.8
comp=Z,1.8nm,0.7s
ABKAR Akbulak array 57.83 309 P **P** **12 21 10.3 -0.3**
KIRV Kirov 58.02 323 LR LR 12 47 15.0
comp=Z,60nm,18.1s,baz=48,slow=37
EDM Edmonton 59.95 44 P **P** **12 21 25.7 +0.4**
EDM Edmonton 59.95 44 P **P** **12 21 25.7 +0.4**
EDM pmax pmax
comp=Z,9.0nm,1.1s
NEW Newport 60.81 50 LR LR 12 47 42.7
comp=Z,24nm,20.3s,baz=336,slow=36
YBH Yreka Blue Hor 61.32 59 LR LR 12 44 19.5
comp=Z,21nm,22.0s,baz=2.0,slow=32
BELG Belogornoye 62.46 317 LR LR 12 50 38.3
comp=Z,60nm,19.9s,baz=346,slow=38
FFC Flin Flon 64.32 38 P **P** **12 21 54.9 +0.3**
FFC IAmb IAmb 12 21 56.7
comp=Z,2.9nm,0.8s
FFC Flin Flon 64.32 38 P **P** **12 21 54.9 +0.3**
FFC pmax pmax
comp=Z,3.0nm,0.9s
EGMT Eagleton 64.90 47 P **P** **12 21 59.3 +0.7**
EGMT IAmb IAmb 12 22 01.8
comp=Z,5.0nm,0.8s
FIA1 FINESS Array S 64.99 334 P **P** **12 21 59.9 +1.1**
FINES FINESS Array B 64.99 334 P **P** **12 21 58.2 -0.6**
FINES FINESS Array B 64.99 334 P **P** **12 21 58.2 -0.6**
FINES FINESS Array B 64.99 334 P **P** **12 21 57.3 -1.6**
comp=Z,0.9nm,0.5s,baz=24,slow=5.2,SNR=12
FINES LR LR 12 53 18.3
comp=Z,56nm,19.0s,baz=14,slow=39
comp=Z,0.9nm,0.5s
WR0 Warramunga Arr 65.40 195 P **P** **12 22 02.4 +0.6**
WR0 IAmb IAmb 12 22 04.9
comp=Z,2.8nm,1.1s
WB2 Warramunga Arr 65.42 195 P **P** **12 22 02.8 +0.8**
WRA Warramunga Arr 65.42 195 P **P** **12 22 03.0 +1.0**
WRA Warramunga Arr 65.42 195 P **P** **12 22 03.0 +1.0**
WRA Warramunga Arr 65.42 195 P **P** **12 22 02.9 +1.0**
comp=Z,2.6nm,0.7s,baz=16,slow=6.8,SNR=14
comp=Z,2.6nm,0.7s
BOZ Bozeman (W) 65.42 50 P **P** **12 22 02.6 +0.6**
BOZ IAmb IAmb 12 22 17.5
comp=Z,2.9nm,0.7s
BOZ Bozeman (W) 65.42 50 P **P** **12 22 02.7 +0.6**
BOZ pmax pmax
comp=Z,3.0nm,0.7s
GEYT Alibeck 65.43 300 P **P** **12 22 01.3 -0.8**
comp=Z,3.3nm,0.8s,baz=4.3,slow=5.9,SNR=6.4
GEYT LR LR 12 52 59.9
comp=Z,53nm,19.2s,baz=86,slow=38
comp=Z,3.3nm,0.8s
NVAR Mina Array Bea 66.00 59 P **P** **12 22 07.4 +1.4**
comp=Z,1.1nm,0.8s,baz=290,slow=7.1,SNR=6.3
comp=Z,1.1nm,0.8s
ELK Elko 66.41 56 LR LR 12 46 39.8
comp=Z,21nm,21.7s,baz=350,slow=32
PDAR Pinedale Array 68.38 51 P **P** **12 22 21.8 +0.7**
comp=Z,0.9nm,0.7s,baz=267,slow=2.2,SNR=9.4
comp=Z,0.9nm,0.7s
AS31 Alice Springs 69.13 195 P **P** **12 22 26.8 +1.4**
ASAR Alice Springs 69.13 195 P **P** **12 22 27.1 +1.6**
comp=Z,2.7nm,0.7s,baz=11,slow=5.1,SNR=40
comp=Z,2.7nm,0.7s
NC303 NORSAR Array S 69.36 340 P **P** **12 22 25.9 -0.6**
NC303 IAmb IAmb 12 23 08.1
comp=Z,5.8nm,1.0s
NB201 NORSAR Array S 69.53 340 P **P** **12 22 26.7 -0.9**
NB2 NORSAR Subarra 69.56 340 P **P** **12 22 26.3 -1.5**
comp=Z,1.5nm,0.6s,baz=30,slow=6.5
NOA NORSAR Array B 69.56 340 P **P** **12 22 26.4 -1.5**
comp=Z,1.0nm,0.7s,baz=30,slow=6.7,SNR=10.0
NOA LR LR 12 58 47.6
comp=Z,28nm,18.1s,baz=25,slow=41
comp=Z,1.0nm,0.7s
PALK Pallekele 69.61 260 LR LR 12 56 32.4
comp=Z,31nm,18.3s,baz=184,slow=39
HFS Hagfors 69.69 338 P **P** **12 22 26.9 -1.6**
comp=Z,1.9nm,0.7s,baz=69,slow=8.1,SNR=7.0
comp=Z,1.9nm,0.7s
ULM Lac du Bonnet 70.11 38 P **P** **12 22 30.8 -0.5**
comp=Z,1.1nm,0.5s,baz=336,slow=11,SNR=3.3
comp=Z,1.1nm,0.5s
KIV Kislovodsk 70.45 313 *e*P **P** **12 22 31.2 -2.4**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,44nm,18.0s
KBZ Khabaz 70.49 312⇓ *e*P **P** **12 22 34.6 +0.9**
KBZ Khabaz 70.49 312 P **P** **12 22 33.8 0.0**
comp=Z,3.3nm,0.8s,baz=85,slow=3.1,SNR=7.0
KBZ LR LR 12 58 03.0
comp=Z,77nm,18.6s,baz=33,slow=40
comp=Z,3.3nm,0.8s
KBZ Khabaz 70.49 312 *e*P **P** **12 22 34.6 +0.9**
AKASG Malin Array Be 71.95 325 P **P** **12 22 41.3 -1.2**
comp=Z,1.5nm,0.5s,baz=36,slow=5.5,SNR=5.0
comp=Z,1.5nm,0.5s
AKBB Malin Array Si 71.95 325 *d e*P **P** **12 22 41.8 -0.6**
SORM Soroca 74.28 323⇑P **P** **12 22 55.6 -0.6**
SORM Soroca 74.28 323⇑P **P** **12 22 55.6 -0.6**
ANMO Albuquerque 75.44 55 LR LR 12 57 40.5
comp=Z,16nm,18.2s,baz=86,slow=37
BUR08 Bucovina Ar. S 75.99 325 P **P** **12 23 05.9 -0.4**
BUR08 IAmb IAmb 12 23 09.1
comp=Z,3.1nm,1.0s
BURAR Bucovina Array 76.01 325⇓P **P** **12 23 06.6 +0.2**
BURAR Bucovina Array 76.01 325 P **P** **12 23 06.2 -0.1**
BURAR Bucovina Array 76.01 325⇓P **P** **12 23 06.6 +0.2**
STKA Stephens Creek 76.19 187 P **P** **12 23 08.1 +0.9**
comp=Z,1.5nm,0.7s,baz=333,slow=12,SNR=3.3
comp=Z,1.5nm,0.7s
SCHQ Schefferville 76.54 20 P **P** **12 23 09.0 -0.2**
SCHQ Schefferville 76.54 20 LR LR 13 02 24.4
comp=Z,38nm,18.6s,baz=250,slow=40
VRI Vrincioaia 76.74 323⇓P **P** **12 23 11.3 +0.9**
VRI Vrincioaia 76.74 323⇓P **P** **12 23 11.3 +0.9**
TPGR Topolog 76.78 321⇑P **P** **12 23 10.6 -0.1**
TURR Turia 76.90 323⇓P **P** **12 23 12.8 +1.4**
OZUR 76.97 323⇓P **P** **12 23 12.9 +1.2**
COVR Voineasa-Covas 76.98 323⇑P **P** **12 23 12.2 +0.4**
MORC Moravsky Berou 77.21 330⇑P **P** **12 23 14.1 +1.0**
MORC Moravsky Berou 77.21 330⇑P **P** **12 23 14.1 +1.0**
KRLC Kraliky 77.23 331 *e*P **P** **12 23 13.8 +0.7**
KRLC Kraliky 77.23 331 *e*P **P** **12 23 13.8 +0.7**
MLR Muntele Rosu 77.38 323⇑P **P** **12 23 16.1 +1.9**
MLR Muntele Rosu 77.38 323⇑P **P** **12 23 16.1 +1.9**
MLR Muntele Rosu 77.38 323 LR LR 13 01 20.2
comp=Z,31nm,18.0s,baz=44,slow=39
CLL Collm 77.44 334 *i* P **P** **12 23 13.8 -0.4**
CLL pmax pmax
comp=Z,6.0nm,0.8s
CLL Collm 77.44 334 *i* P **P** **12 23 13.8 -0.4**
comp=Z,6.0nm,0.8s
VOIR 77.80 323⇑P **P** **12 23 17.4 +0.9**
VOIR 77.80 323⇑P **P** **12 23 17.4 +0.9**
VYHS Vyhne 77.81 329 *e*P **P** **12 23 17.3 +0.9**
VYHS Vyhne 77.81 329 *e*P **P** **12 23 17.2 +0.9**
VRAC Vranov 77.94 330 P **P** **12 23 17.1 0.0**
comp=Z,2.1nm,0.8s,baz=60,slow=2.6,SNR=3.8
VRAC LR LR 13 01 40.0
comp=Z,30nm,18.5s,baz=16,slow=39
comp=Z,2.1nm,0.8s
EKA Eskdalemuir Ar 77.95 344 P **P** **12 23 16.6 -0.4**
comp=Z,0.3nm,0.3s,baz=10,slow=5.1,SNR=3.7

comp=Z,0.3nm,0.3s
ARR Arges 78.04 324 ⇓P **P 12 23 19.8 +2.1**
BRTR Keskin Array B 78.18 315 P **P 12 23 18.4 -0.3**
BRTR Keskin Array B 78.18 315 P **P 12 23 18.5 -0.3**
BRTR Keskin Array B 78.18 315 P **P 12 23 17.5 -1.3**
comp=Z,0.7nm,0.7s,baz=109,slow=3.1,SNR=3.9
comp=Z,0.7nm,0.7s
MODS Modra-Piesok 78.48 330 *e*P **P 12 23 21.7 +1.6**
MODS Modra-Piesok 78.48 330 ⇑P **P 12 23 21.6 +1.5**
GZR Gura Zlata 78.80 325 ⇑P **P 12 23 22.3 +0.3**
GZR Gura Zlata 78.80 325 ⇑P **P 12 23 22.3 +0.3**
KHC Kasperske Hory 79.13 332 *e*P **P 12 23 23.7 0.0**
KHC Kasperske Hory 79.13 332 ⇓*e*P **P 12 23 24.2 +0.5**
KHC pmax pmax
comp=Z,17nm,1.7s
GERES GERESS Array B 79.33 332 P **P 12 23 24.2 -0.7**
comp=Z,0.8nm,0.5s,baz=39,slow=5.4,SNR=5.0
comp=Z,0.8nm,0.5s
LPIG La Paz 80.59 66 LR LR 12 52 31.1
comp=Z,21nm,20.5s,baz=336,slow=31
TXAR Lajitas Array 81.08 58 P **P 12 23 35.5 +0.9**
comp=Z,1.6nm,0.7s,baz=300,slow=4.0,SNR=24
comp=Z,1.6nm,0.7s
MMAI Mount Meron Ar 82.26 309 LR LR 13 05 10.7
comp=Z,30nm,18.9s,baz=118,slow=39
PPT Papeete 83.09 123 LR LR 12 53 28.3
comp=Z,38nm,20.1s,baz=210,slow=30
TKL Tuckaleechee C 86.98 41 LR LR 13 02 37.1
comp=Z,34nm,21.7s,baz=354,slow=35
ESDC Sonseca Array 92.92 340 LR LR 13 10 56.2
comp=Z,26nm,19.4s,baz=220,slow=38
CMIG Matias Romero 95.53 60 LR LR 13 03 38.6
comp=Z,12nm,21.2s,baz=351,slow=33
MDT Midelt 99.57 338 LR LR 13 15 57.0
comp=Z,12nm,18.5s,baz=354,slow=39
H03N2 Juan Fernandez 141.49 90 T T 15 08 50.5
baz=305,slow=77,SNR=17
H03N3 Juan Fernandez 141.50 90 T T 15 08 55.7
baz=305,slow=77,SNR=20
H03N1 Juan Fernandez 141.50 90 T T 15 08 51.6
baz=305,slow=77,SNR=18
PLCA Paso Flores 150.69 97 PKPbc **PKPbc 12 31 09.8 -1.1**
comp=Z,1.9nm,1.0s,baz=260,slow=10,SNR=4.4

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*SNET **18** 12:14:20.1±0.7, 13°.48N×90°.75W, h19km±9km, ML2.5*
*GCG **18** 12:14:22.1±0.7, 13°.87N×90°.89W, h67km±23km, MD3.2*
ISC 18 12:14:19.0±3.1, 13°.5N±0°.1×90°.89W±0°.08, h31km±17km, n10, σ0960/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.89**	**18**	*e*P	**Pb**	**12 14 36.2**	**0.0**
PCG				*e*S	**Sb**	**12 14 48.0**	**+0.1**
FUG	**Fuego 3**	**0.90**	**3**	*e*P	**Pb**	**12 14 36.0**	**-0.3**
NUBE	**Las Nubes**	**1.14**	**71**	*e*P	**Pn**	**12 14 38.7**	**-0.3**
NUBE				*e*S	**Sn**	**12 14 53.0**	**-0.6**
NUBE				IAML		12 14 54.1	
	comp=Z,88nm,0.3s						
NBG	**Las Nubes**	**1.17**	**27**	*e*P	**Pn**	**12 14 40.0**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.18**	**66**	*e*P	**Pn**	**12 14 39.2**	**-0.2**
SLOZ				*e*S	**Sn**	**12 14 54.8**	**+0.4**
SLOZ				IAML		12 14 58.4	
	comp=Z,78nm,0.3s						
CEVE	**Cerro Verde**	**1.26**	**77**	*e*S	**Sn**	**12 14 57.4**	**+0.6**
SNJE	**San Jose**	**1.29**	**75**	*e*P	**Pn**	**12 14 41.2**	**+0.1**
STG3	**Santiaguito 3,**	**1.34**	**331**	*e*P	**Pn**	**12 14 42.6**	**+0.8**
STG3				*e*S	**Sn**	**12 14 57.3**	**-1.3**
JAYA	**Jayaque - finc**	**1.41**	**85**	*e*P	**Pn**	**12 14 42.7**	**+0.1**
JAYA				*e*S	**Sn**	**12 14 59.8**	**-0.4**
JAYA				IAML		12 15 02.3	
	comp=Z,168nm,0.2s						
LOMA	**Loma Large**	**1.68**	**86**	*e*P	**Pn**	**12 14 46.8**	**+0.5**

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*IDC **18** 12:30:16.4±5.0, 36°.94N×72°.21E, h168km±35km, mb3.0/2, mbtmp3.7/9, Error ellipse: s-maj=59.2km s-min=25.4km az=164.0*
ISC 18 12:30:17.5±1.6, 37°.2N±0°.1×72°.06E±0°.09, h150km, n11, σ1973/15, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.73**	**18**	P	**Pn**	**12 31 42.1**	**+1.4**
	1.7nm,0.3s,baz=182,slow=6.1,SNR=8.5						
AAK				S	**Sn**	**12 32 45.5**	**-0.2**
	6.9nm,0.7s,baz=111,slow=20,SNR=7.8						
KK31	**Karatay Array**	**6.00**	**349**	⇑Pn	**Pn**	**12 31 46.2**	**+2.0**
	0.8nm,0.3s,baz=166,slow=12,SNR=3.5						
KK31				⇓Sn	**Sn**	**12 32 49.5**	**-2.5**
	6.6nm,0.3s,baz=176,slow=23,SNR=7.3						
TKM2	**Tokmak 2**	**6.31**	**24**	⇓Pn	**Pn**	**12 31 50.2**	**+1.7**
	1.6nm,0.8s						
TKM2				⇑Sn	**Sn**	**12 32 58.9**	**-0.8**
	1.8nm,0.7s						
TKM2				⇑Lg	Lg	12 33 30.2	
	2.3nm,0.6s						
GEYT	**Alibeck**	**11.09**	**278**	P	**Pn**	**12 32 53.1**	**+1.3**
	1.5nm,0.5s,baz=103,slow=12,SNR=4.2						
GEYT				S	**Sn**	**12 34 52.8**	**-1.6**
	1.4nm,0.5s,baz=212,slow=30,SNR=2.1						
MKAR	**Makanchi Array**	**12.22**	**35**	P	**Pn**	**12 33 07.6**	**+1.1**
	0.2nm,0.4s,baz=218,slow=11,SNR=2.8						
KURBB	**Kurchatov Arra**	**14.18**	**17**	P	**Pn**	**12 33 33.1**	**+1.6**
	0.7nm,0.6s,baz=203,slow=11,SNR=5.3						
BVAR	**Borovoye Array**	**15.85**	**356**	P	**Pn**	**12 33 52.7**	**+0.5**
	0.4nm,0.4s,baz=159,slow=10,SNR=5.3						
AKTO	**Aktyubinsk**	**16.61**	**327**	P	**P**	**12 34 03.2**	**+1.9**
	5.5nm,0.5s,baz=125,slow=10,SNR=6.4						
ZALV	**Zalesovo Beam**	**18.92**	**24**	P	**P**	**12 34 25.2**	**-1.2**
	4.1nm,0.6s,baz=224,slow=9.8,SNR=27						
SONM	**Songino Array**	**27.23**	**56**	P	**P**	**12 35 46.2**	**-1.2**
	0.3nm,0.4s,baz=269,slow=8.8,SNR=4.9						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**80.49**	**3**	P	**P**	**12 42 10.2**	**-2.1**
	0.2nm,0.6s,baz=354,slow=5.9,SNR=4.5						
	0.2nm,0.6s						

IDC 18 12:32:37.9±4.9, 50°.54N×58°.89E, h0km, 4C, Error ellipse: s-maj=28.3km s-min=11.8km az=76.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**0.56**	**257**	I	I	12 36 10.0	
	1.2nm,0.7s,baz=76,slow=337,SNR=19						
AKTO	**Aktyubinsk**	**0.57**	**260**	⇑P	Pb	12 32 49.9	-0.8
	0.9nm,0.5s						
AKTO				⇑S	Sb	12 32 59.7	+0.3
	2.8nm,0.6s						
AKTO	**Aktyubinsk**	**0.57**	**260**	Pg	Pg	12 32 49.4	+0.7
	0.4nm,0.3s,baz=84,slow=16,SNR=7.6						
AKTO				Lg	Lg	12 32 56.8	
	0.8nm,0.3s,baz=90,slow=20,SNR=7.1						
AB31	**Akbulak array**	**1.45**	**152**	⇑P	Pn	12 33 03.2	-2.2
	0.2nm,0.2s,baz=347,slow=17,SNR=79						
AB31				⇑S	Sg	12 33 24.5	0.0
	1.8nm,0.4s,baz=341,slow=30,SNR=25						
I43RU	**DUBNA INFRASON**	**4.24**	**304**	I	I	14 02 30.0	
	baz=104,slow=329,SNR=1.6						
I46RU	**ZALESOVO INFRA**	**16.21**	**68**	I	I	14 17 40.0	
	baz=268,slow=338,SNR=1.9						

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*KRNET **18** 13:01:16.9±0.1, 39°.35N×72°.97E, h18km, mb3.0*
*SOME **18** 13:01:17.9, 39°.45N×72°.92E, h0km*
*NNC **18** 13:01:21.6±1.4, 39°.55N×72°.98E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.1km s-min=5.3km az=2.0*
*ISU **18** 13:01:22.2, 39°.63N×72°.97E, h30km*
ISC 18 13:01:19.0±1.1, 39°.43N±0°.05×72°.92E±0°.02, h10km, n51, σ2536/86, 25C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.73**	**38**	⇑*i*P	**Pg**	**13 01 31.8**	**-1.5**
	baz=32						
SFK				⇑*i*S	**Sg**	**13 01 42.5**	**-0.4**
	baz=32						
DRK	**Karamyk**	**0.87**	**274**	⇑*i*P	**Pg**	**13 01 34.4**	**-1.4**
	baz=79						
DRK				⇑*i*S	**Sb**	**13 01 47.0**	**-1.1**
	baz=79						
OHH	**Osh**	**1.09**	**355**	⇑*i*P	**Pg**	**13 01 39.1**	**-1.0**
	baz=53						
OHH				⇑*i*S	**Sn**	**13 01 55.4**	**-0.4**
	baz=53						
FRG	**Fergana**	**1.28**	**318**	P	**Pg**	**13 01 44.6**	**+0.9**
FRG				S	**Sn**	**13 02 01.9**	**+1.6**
CHMI	**Chimion**	**1.36**	**308**	P	**Pg**	**13 01 46.5**	**+1.3**
CHMI				S	**Sg**	**13 02 05.2**	**+2.4**
BTK	**Batken**	**1.73**	**292**	⇑*i*P	**Pb**	**13 01 50.2**	**-0.8**
	baz=94						
BTK				⇑*i*S	**Sg**	**13 02 14.3**	**-0.5**
	baz=94						
MINT	**Mingtut**	**1.81**	**305**	P	**Pg**	**13 01 54.0**	**+0.2**
MINT				S	**Sg**	**13 02 18.4**	**+1.0**
NAM	**Namangan**	**1.83**	**329**	P	**Pg**	**13 01 53.3**	**-0.8**
NAM				S	**Sg**	**13 02 17.0**	**-0.9**
ARSB	**Arslanbob**	**1.89**	**1**	⇓*i*P	**Pn**	**13 01 52.8**	**+1.3**
	baz=0.0						
ARSB				⇓*i*S	**Sg**	**13 02 19.2**	**-0.6**
	baz=0.0						
KSNS	**Kasansay**	**2.03**	**329**	P	**Pb**	**13 01 56.1**	**+0.1**
KSNS				S	**Sg**	**13 02 22.4**	**-1.8**
CHDK	**Chadak**	**2.26**	**314**	P	**Pb**	**13 01 59.9**	**-0.1**
CHDK				S	**Sg**	**13 02 29.7**	**-2.0**
ARK	**Arkit**	**2.47**	**343**	⇑*i*P	**Pn**	**13 02 01.1**	**+1.6**
	baz=43						
ARK				⇑*i*S	**Sb**	**13 02 33.4**	**-0.8**
	baz=43						
TRKS	**Terek-Say**	**2.50**	**328**	⇑*e*P	**Pn**	**13 02 00.6**	**+0.7**
	baz=27						
TRKS				⇑*e*S	**Sn**	**13 02 32.0**	**+1.5**
	baz=27						
ARLS	**Aral**	**2.65**	**23**	⇓*i*P	**Pn**	**13 02 02.9**	**+0.9**
	baz=22						
ARLS				⇓*i*S	**Sn**	**13 02 36.8**	**+2.5**
	baz=22						
UCH	**Uchtor**	**3.04**	**23**	⇓*i*P	**Pn**	**13 02 08.8**	**+1.1**
	baz=22						
UCH				⇓*i*S	**Sn**	**13 02 46.7**	**+2.3**
	baz=22						
MNAS	**Manas**	**3.07**	**354**	⇑*i*P	**Pn**	**13 02 09.3**	**+1.6**
	baz=54						
MNAS				⇑*i*S	**Sn**	**13 02 47.6**	**+3.1**
	baz=54						
NRN	**Naryn**	**3.09**	**49**	⇑*i*P	**Pn**	**13 02 08.4**	**+0.3**
	baz=47						
NRN				⇑*i*S	**Sn**	**13 02 46.0**	**+0.7**
	baz=47						
EKS2	**Erkin-Say**	**3.29**	**11**	⇑*i*P	**Pn**	**13 02 12.0**	**+1.2**
	baz=10.0						
EKS2				⇑*i*S	**Sn**	**13 02 52.6**	**+2.6**
	baz=10.0						
MRKS	**Merke**	**3.32**	**4**	Pg	**Pb**	**13 02 18.9**	**+0.9**
	9.1nm,0.7s						
MRKS				Lg	Lg	13 03 03.0	
	28nm,0.4s						
MRKS	**Merke**	**3.32**	**4**	*e*P	**Pb**	**13 02 18.9**	**+0.9**
	4.8nm,0.3s						
MRKS				*e*S	**Sg**	**13 03 03.0**	**-2.6**
	28nm,0.4s						
AAK	**Ala-Archa**	**3.42**	**20**	⇓*i*P	**Pn**	**13 02 13.8**	**+1.3**
	baz=19						
AAK				⇓*i*S	**Sn**	**13 02 55.5**	**+2.3**
	baz=19						
IUG	**Iuzhnay**	**3.49**	**322**	Pg	**Pb**	**13 02 22.6**	**+1.7**
	11nm,0.3s						
IUG				Lg	Lg	13 03 09.1	
	30nm,0.6s						
IUG	**Iuzhnay**	**3.49**	**322**	*e*P	**Pb**	**13 02 22.6**	**+1.7**
	11nm,0.3s						
IUG				*e*S	**Sg**	**13 03 09.1**	**-1.9**
	21nm,0.2s						
KBK	**Karagaybulak**	**3.57**	**25**	⇑*i*P	**Pn**	**13 02 15.7**	**+1.1**
	baz=24						
KBK				⇑*i*S	**Sn**	**13 02 58.9**	**+2.0**
	baz=24						
BXML	**Bakhmal**	**3.79**	**275**	P	**Pb**	**13 02 26.5**	**+0.5**
BXML				S	**Sg**	**13 03 19.4**	**-1.2**
USP	**Ospenovka**	**4.01**	**17**	⇓*i*P	**Pn**	**13 02 22.0**	**+1.4**
	baz=16						
USP				⇓*i*S	**Sn**	**13 03 09.5**	**+1.8**
	baz=16						
TKM2	**Tokmak 2**	**4.03**	**29**	⇓Pn	**Pn**	**13 02 24.2**	**+3.2**
	2.8nm,0.8s						
TKM2				⇑Lg	Lg	13 03 25.2	
	6.0nm,0.7s						
TKM2	**Tokmak 2**	**4.03**	**29**	⇑*i*P	**Pn**	**13 02 22.3**	**+1.3**
	baz=28						
TKM2				⇑*i*S	**Sn**	**13 03 09.9**	**+1.6**
	baz=28						
KRSA	**Karasay**	**4.05**	**281**	P	**Pb**	**13 02 27.1**	**-3.3**
KRSA				S	**Sb**	**13 03 20.7**	**+1.3**
KK31	**Karatay Array**	**4.09**	**334**	Pn	**Pn**	**13 02 24.8**	**+3.2**
	3.0nm,0.6s,baz=144,slow=12,SNR=29						
KK31				⇑Sn	**Sb**	**13 03 14.7**	**-5.9**
	4.7nm,0.5s,baz=149,slow=25,SNR=5.8						
KK31				⇑Lg	Lg	13 03 26.1	
	3.2nm,0.4s						
KST	**Kastek**	**4.28**	**31**	Pg	**Pb**	**13 02 37.6**	**+3.3**
	2.4nm,0.5s						
KST				Lg	Lg	13 03 35.3	
	7.7nm,0.6s						
KST	**Kastek**	**4.28**	**31**	*e*P	**Pb**	**13 02 37.6**	**+3.3**
	2.4nm,0.5s						
KST				*e*S	**Sg**	**13 03 35.3**	**-1.1**
	9.4nm,0.3s						
BRLS	**Borolday**	**4.28**	**328**	Pg	**Pb**	**13 02 34.8**	**+0.4**
	3.8nm,0.4s						
BRLS				Lg	Lg	13 03 30.2	
	0.6nm,0.7s						
BRLS	**Borolday**	**4.28**	**328**	*e*P	**Pb**	**13 02 34.8**	**+0.4**
	3.8nm,0.4s						
BRLS				*e*S	**Sb**	**13 03 30.2**	**+4.2**
	5.4nm,0.2s						
DGS	**Degeres**	**4.37**	**29**	Pg	**Pb**	**13 02 39.0**	**+3.1**
	2.0nm,0.6s						
DGS				Lg	Lg	13 03 37.2	
	10nm,0.8s						
DGS	**Degeres**	**4.37**	**29**	*e*P	**Pb**	**13 02 38.8**	**+2.9**
	2.0nm,0.6s						
DGS				*e*S	**Sg**	**13 03 37.2**	**-2.1**
	10nm,0.8s						
MTBS	**Maitube**	**4.54**	**34**	Pg	**Pb**	**13 02 42.1**	**+3.2**
	1.0nm,0.1s						
MTBS				Lg	Lg	13 03 42.7	
	7.1nm,0.5s						
MTBS	**Maitube**	**4.54**	**34**	*e*P	**Pb**	**13 02 42.1**	**+3.2**
	1.0nm,0.1s						
MTBS				*e*S	**Sg**	**13 03 42.7**	**-2.2**
	7.1nm,0.5s						
IZV	**Izvestkoviy**	**4.55**	**37**	Pg	**Pb**	**13 02 42.8**	**+3.7**
	0.7nm,0.1s						
IZV				Lg	Lg	13 03 43.9	
	14nm,0.3s						
TNSS	**Tian-Shan**	**4.71**	**39**	Pg	**Pb**	**13 02 44.2**	**+2.2**
	1.8nm,0.5s						
TNSS				Lg	Lg	13 03 46.2	
	7.9nm,0.7s						
TNSS	**Tian-Shan**	**4.71**	**39**	*e*P	**Pb**	**13 02 44.2**	**+2.2**
	1.8nm,0.5s						
TNSS				*e*S	**Sg**	**13 03 46.2**	**-4.1**
	7.9nm,0.7s						
MDOK	**Medeo**	**4.86**	**39**	Pg	**Pb**	**13 02 47.2**	**+2.9**
	1.9nm,0.4s						
MDOK				Lg	Lg	13 03 51.6	
	7.7nm,0.6s						
MDOK	**Medeo**	**4.86**	**39**	*e*P	**Pb**	**13 02 47.2**	**+2.9**
	1.9nm,0.4s						
MDOK				*e*S	**Sg**	**13 03 51.6**	**-3.3**
	7.7nm,0.6s						
KOTS	**Kotyrbulak**	**4.94**	**38**	Pg	**Pb**	**13 02 49.1**	**+3.4**
	2.1nm,0.5s						
KOTS				Lg	Lg	13 03 54.9	
	22nm,0.6s						
KOTS	**Kotyrbulak**	**4.94**	**38**	*e*P	**Pb**	**13 02 49.1**	**+3.4**
	2.0nm,0.2s						
KOTS				*e*S	**Sg**	**13 03 54.9**	**-2.7**
	22nm,0.6s						
KTBS	**Karatobe**	**5.12**	**32**	Pg	**Pb**	**13 02 52.3**	**+3.5**
	1.6nm,0.4s						
KTBS				Lg	Lg	13 03 59.9	
	5.7nm,0.4s						
KTBS	**Karatobe**	**5.12**	**32**	*e*P	**Pb**	**13 02 52.3**	**+3.5**
	1.6nm,0.4s						
KTBS				*e*S	**Sg**	**13 03 59.9**	**-3.6**
	7.8nm,0.2s						
KURS	**Kuram**	**5.66**	**43**	Pg	Pb	13 03 03.2	+5.4
	1.9nm,0.5s						
KURS				Lg	Lg	13 04 19.0	
	4.3nm,0.6s						
KURS	**Kuram**	**5.66**	**43**	*e*P	Pb	13 03 03.2	+5.4
	1.8nm,0.2s						
KURS				*e*S	**Sg**	**13 04 19.0**	**-1.5**
	2.5nm,0.5s						
KPKS	**Kokpek**	**5.92**	**45**	Pg	**Pb**	**13 03 06.5**	**+4.2**
	1.8nm,0.3s						
KPKS				Lg	Lg	13 04 25.2	
	5.6nm,0.7s						
KPKS	**Kokpek**	**5.92**	**45**	*e*P	**Pb**	**13 03 06.5**	**+4.2**
	1.8nm,0.3s						
KPKS				*e*S	**Sg**	**13 04 24.4**	**-4.5**
	4.3nm,0.2s						

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*NNC **18** 13:08:45.4±2.8, 42°.70N×84°.47E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=20.4km s-min=13.1km az=141.0*
*SOME **18** 13:08:46.6, 42°.48N×84°.37E, h20km*
ISC 18 13:08:48.6±2.7, 42°.7N±0°.1×84°.20E±0°.09, h10km, n25, σ2563/36, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.93**	**287**	Pg	**Pb**	**13 09 41.2**	**+0.3**
	1.1nm,0.2s						
KTMS				Lg	Lg	13 10 21.5	
	11nm,0.4s						
KTMS	**Ketmen**	**2.93**	**287**	*e*P	**Pb**	**13 09 42.5**	**+1.5**
	1.3nm,0.1s						
KTMS				*e*S	**Sg**	**13 10 23.1**	**+0.5**
	11nm,0.4s						
SHLS	**Shalkode**	**3.51**	**280**	Pg	**Pb**	**13 09 48.2**	**-2.7**
	5.1nm,0.2s						
SHLS				Lg	Lg	13 10 32.9	
	17nm,0.4s						
SHLS	**Shalkode**	**3.51**	**280**	*e*P	**Pb**	**13 09 48.2**	**-2.7**
	5.1nm,0.2s						
SHLS				*e*S	**Sb**	**13 10 32.9**	**-0.8**
	17nm,0.4s						
PDGK	**Podgornoye**	**3.52**	**283**	Pg	**Pb**	**13 09 53.3**	**+2.3**
	1.1nm,0.4s						
PDGK				Lg	Lg	13 10 41.8	
	4.5nm,0.6s						
PDGK	**Podgornoye**	**3.52**	**283**	⇓Pg	**Pb**	**13 09 51.5**	**+0.5**
	2.3nm,0.7s						
PDGK				⇑Lg	Lg	13 10 41.8	
	13nm,0.8s						
DJR	**Jarkent**	**3.62**	**299**	Pg	**Pb**	**13 09 55.3**	**+2.6**
	2.4nm,0.4s						
DJR				Lg	Lg	13 10 45.2	
	8.4nm,0.4s						
DJR	**Jarkent**	**3.62**	**299**	*e*P	**Pb**	**13 09 55.3**	**+2.6**
	2.4nm,0.4s						
DJR				*e*S	**Sg**	**13 10 45.2**	**+0.5**
	8.4nm,0.4s						
UZB	**Uzynbulak**	**3.83**	**279**	Pg	**Pb**	**13 09 59.2**	**+2.9**
	3.3nm,0.3s						
UZB				Lg	Lg	13 10 51.7	
	7.0nm,0.4s						
UZB	**Uzynbulak**	**3.83**	**279**	*e*P	**Pb**	**13 09 59.2**	**+2.9**
	3.3nm,0.3s						
UZB				*e*S	**Sg**	**13 10 51.7**	**0.0**
	7.0nm,0.4s						
KNOS	**Konyrlen**	**4.03**	**297**	Pg	**Pb**	**13 10 04.2**	**+4.5**
	2.1nm,0.2s						
KNOS				Lg	Lg	13 11 00.2	
	6.5nm,0.3s						
KPKS	**Kokpek**	**4.12**	**283**	*e*P	**Pb**	**13 10 04.8**	**+3.5**
	1.6nm,0.1s						
KPKS				*e*S	**Sg**	**13 11 01.0**	**+0.2**
	12nm,0.2s						
SATY	**Saty**	**4.28**	**277**	Pg	**Pg**	**13 10 08.3**	**-2.2**
	1.5nm,0.1s						
SATY				Lg	Lg	13 11 07.0	
	10nm,0.3s						
SATY	**Saty**	**4.28**	**277**	*e*P	**Pg**	**13 10 08.3**	**-2.2**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**13 11 07.0**	**+1.2**
	10nm,0.3s						
MK31	**Makanchi Array**	**4.35**	**342**	Pg	**Pb**	**13 10 02.8**	**-2.4**
	1.2nm,0.6s,baz=150,slow=16,SNR=13						
MK31				⇑Lg	Lg	13 11 06.9	
	1.3nm,0.3s,baz=155,slow=28,SNR=8.5						
KAPS	**Kapalarasan**	**4.37**	**309**	Pg	**Pg**	**13 10 10.9**	**-1.4**
	1.3nm,0.2s						
KAPS				Lg	Lg	13 11 12.2	
	8.2nm,0.5s						
KAPS	**Kapalarasan**	**4.37**	**309**	*e*P	**Pg**	**13 10 11.3**	**-1.0**
	1.3nm,0.2s						
KAPS				*e*S	**Sg**	**13 11 12.2**	**+3.3**
	8.2nm,0.5s						
MAKZ	**Makanchi**	**4.44**	**340**	⇑Pg	**Pb**	**13 10 04.7**	**-2.0**
	3.6nm,1.1s						
MAKZ				⇓Lg	Lg	13 11 09.8	
	4.8nm,0.9s						
KURS	**Kuram**	**4.49**	**283**	Pg	**Pb**	**13 10 11.9**	**+4.3**
	0.9nm,0.2s						
KURS				Lg	Lg	13 11 14.0	
	4.8nm,0.5s						
KURS	**Kuram**	**4.49**	**283**	*e*P	**Pg**	**13 10 12.2**	**-2.4**
	0.7nm,0.2s						
KURS				*e*S	**Sg**	**13 11 14.0**	**+1.2**
	4.8nm,0.5s						
ZSN	**Zaisan**	**4.82**	**5**	*e*P	**Pb**	**13 10 17.6**	**+4.5**
	1.7nm,0.2s						
ZSN				*e*S	**Sg**	**13 11 23.0**	**-0.2**
	6.7nm,0.3s						
KOTS	**Kotyrbulak**	**5.23**	**279**	Pg	**Pb**	**13 10 24.3**	**+4.0**
	1.4nm,0.3s						
KOTS				Lg	Lg	13 11 35.1	
	11nm,0.5s						
KOTS	**Kotyrbulak**	**5.23**	**279**	*e*P	**Pb**	**13 10 24.6**	**+4.4**
	1.4nm,0.3s						
KOTS				*e*S	**Sg**	**13 11 35.1**	**-1.4**
	11nm,0.5s						
KTBS	**Karatobe**	**5.59**	**283**	Pg	**Pg**	**13 10 32.3**	**-3.4**
	0.8nm,0.4s						
KTBS				Lg	Lg	13 11 48.5	
	4.4nm,0.6s						
KTBS	**Karatobe**	**5.59**	**283**	*e*P	**Pg**	**13 10 32.3**	**-3.4**
	0.8nm,0.4s						
KTBS				*e*S	**Sg**	**13 11 48.5**	**+0.4**
	4.4nm,0.6s						

WEL 18 13:28:33.2±1.0, 36°S±6°×177°E±1°, h33km, M3.7/19, ML4.0/25, MLv3.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=87.0, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.93**	**198**	P	Pn	13 29 05.0	+1.3
MXZ				S	Sn	13 29 28.2	+1.3
HAZ	**Te Kaha**	**2.27**	**207**	P	Pn	13 29 09.2	+0.8
PKGZ	**Pakihiroa**	**2.30**	**200**	P	Pn	13 29 10.5	+1.7
PUZ	**Puketiti**	**2.43**	**195**	P	Pn	13 29 11.9	+1.3
PUZ				S	Sn	13 29 39.2	0.0
RUGZ	**Raukumara Rang**	**2.50**	**206**	P	Pn	13 29 12.7	+1.1
RUGZ				S	Sb	13 29 44.4	-3.4
TWGZ	**Tauwhareparae**	**2.59**	**199**	P	Pn	13 29 14.1	+1.2
CNGZ	**Carnagh Statio**	**2.83**	**194**	P	Pn	13 29 17.2	+1.0
TKGZ	**Te Karaka**	**2.88**	**199**	P	Pn	13 29 17.2	+0.5
TKGZ				S	Sn	13 29 49.8	-0.4
MWZ	**Matawai**	**2.88**	**205**	P	Pn	13 29 17.5	+0.7
MWZ				S	Sn	13 29 53.0	+2.8
MARZ	**

NTVZ	**North Tongarir**	**4.31 218**	P	Pn	13 29 40.3	+3.7
ETVZ	**East Tongariro**	**4.32 217**	P	Pn	13 29 36.2	-0.6
KAHZ	**Kahuranaki**	**4.41 202**	P	Pn	13 29 36.3	-1.6
OUZ	**Omahuta**	**4.49 275**	P	Pn	13 29 39.0	+0.1
PXZ	**Pawanui**	**4.64 201**	P	Pn	13 29 38.2	-2.7

*IDC **18** 13:42:13.5±1.7, 16°.04N×88°.19W, h0km, mb3.1/1, mbtmp3.0/4, ML3.1/3, MS2.1/1, Error ellipse: s-maj=40.1km s-min=22.1km az=33.0*
*SNET **18** 13:42:13.9±2.1, 15°.39N×87°.68W, h0km±16km, ML4.1*
*CATAC **18** 13:42:15.7±0.4, 15°.44N×87°.81W, h10km, ML4.0*
*NEIC **18** 13:42:15.2±0.8, 15°.41N±0°.06×87°.86W±0°.04, h10km±2km, ML4.0/25, Error ellipse: s-maj=11.1km s-min=3.1km az=32.0*

ISC 18 13:42:10.9±1.5, 15°.50N±0°.04×87°.79W±0°.03, h5km±11km, n61, σ1§54/82, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZABA	**Izabal, Puerto**	**0.80**	**287**	*i* P	**Pn**	**13 42 30.0**	**+1.2**
IZABA				*i* S	**Sn**	**13 42 42.4**	**+1.3**
IZABA				IAML		13 42 46.5	
	comp=Z,93nm,1.0s						
TGUH	**Tegucigalpa,Un**	**1.51**	**161**	Pn	**Pg**	**13 42 39.8**	**-0.2**
TGUH				IAML		13 43 02.3	
	comp=Z,3μm,0.5s						
TGUH				IAML		13 43 03.5	
	comp=Z,2μm,0.8s						
TGUH	**Tegucigalpa,Un**	**1.51**	**161**	*i* P	**Pb**	**13 42 40.4**	**+0.8**
TGUH				*i* S	**Sn**	**13 43 00.1**	**+1.1**
TGUH				IAML		13 43 08.7	
	comp=Z,4μm,1.0s						
ESQI	**Esquipulas**	**1.76**	**238**	Pn	**Pb**	**13 42 43.8**	**0.0**
ESQI				IAML		13 43 12.6	
	comp=N,1μm,0.7s						
ESQI				IAML		13 43 15.7	
	comp=E,1μm,1.0s						
ESQI	**Esquipulas**	**1.76**	**238**	*i* P	**Pg**	**13 42 44.8**	**0.0**
ESQI				IAML		13 42 46.8	
	comp=Z,2μm,1.0s						
ESQI				*i* S	**Sg**	**13 43 09.3**	**+1.6**
YUSH	**Yuscaran**	**1.79**	**149**	*eP*	**Pb**	**13 42 44.5**	**+0.3**
YUSH				*eS*	**Sb**	**13 43 06.8**	**-0.1**
MTO3	**Montecristo**	**1.87**	**235**		**Pn**	**13 42 44.8**	**+1.1**
MTO3				IAML		13 43 13.4	
	comp=N,943nm,0.4s						
MTO3				IAML		13 43 14.4	
	comp=E,1μm,0.4s						
MTO3	**Montecristo**	**1.87**	**235**	*eP*	**Pb**	**13 42 46.4**	**+0.7**
MTO3	**Montecristo**	**1.87**	**235**	*i* P	**Pb**	**13 42 46.0**	**+0.3**
MTO3				IAML		13 42 46.7	
	comp=Z,1μm,1.0s						
MTO3				*i* S	**Sg**	**13 43 10.4**	**-0.7**
SCLA	**Alcaldia de Sa**	**2.00**	**207**	*eP*	**Pb**	**13 42 48.0**	**+0.1**
SCLA				*eS*	**Sg**	**13 43 14.1**	**-1.1**
SCLA	**Alcaldia de Sa**	**2.00**	**207**	*i* P	**Pb**	**13 42 48.3**	**+0.5**
SCLA				*i* S	**Sg**	**13 43 14.5**	**-0.8**
SCLA				IAML		13 43 22.3	
	comp=Z,600nm,1.0s						
PQSS	**Presa 15 de Se**	**2.00**	**202**	*eP*	**Pb**	**13 42 47.7**	**-0.1**
PQSS	**Presa 15 de Se**	**2.00**	**202**	*i* P	**Pb**	**13 42 47.5**	**-0.3**
PQSS				*i* S	**Sb**	**13 43 13.6**	**+0.5**
PQSS				IAML		13 43 17.2	
	comp=Z,390nm,1.0s						
PACA	**Pacayal**	**2.08**	**194**	*eP*	**Pb**	**13 42 49.3**	**+0.1**
PACA				*eS*	**Sb**	**13 43 15.9**	**+0.5**
PACA	**Pacayal**	**2.08**	**194**	*i* P	**Pb**	**13 42 49.0**	**-0.2**
PACA				*i* S	**Sb**	**13 43 16.3**	**+0.9**
PACA				IAML		13 43 23.1	
	comp=Z,8μm,1.0s						
BLLM	**Bellamira**	**2.09**	**192**	*eP*	**Pb**	**13 42 49.1**	**-0.2**
PAVA	**Las Pavas**	**2.09**	**212**	*eP*	**Pb**	**13 42 49.5**	**+0.1**
PAVA	**Las Pavas**	**2.09**	**212**	*i* P	**Pb**	**13 42 49.3**	**-0.1**
PAVA				IAML		13 42 49.9	
	comp=Z,2μm,1.0s						
PAVA				*i* S	**Sg**	**13 43 16.9**	**-1.3**
TECO	**Alcaldia de Te**	**2.17**	**206**	*i* P	**Pb**	**13 42 50.1**	**-0.6**
TECO				IAML		13 42 52.0	
	comp=Z,310nm,1.0s						
TECO				*i* S	**Sb**	**13 43 18.4**	**+0.5**
LCND	**La Caada**	**2.17**	**183**	*eP*	**Pb**	**13 42 50.5**	**-0.3**
LCND				*eS*	**Sb**	**13 43 18.6**	**+0.6**
LCND	**La Caada**	**2.17**	**183**	*i* P	**Pb**	**13 42 50.4**	**-0.3**
LCND				IAML		13 43 20.9	
	comp=Z,580nm,1.0s						
AMPH	**Amapala**	**2.20**	**177**	*eP*	**Pb**	**13 42 50.8**	**-0.4**
AMPH				*eS*	**Sb**	**13 43 19.5**	**+0.8**
CNCH	**Conchagua**	**2.21**	**181**	*eP*	**Pb**	**13 42 51.1**	**-0.2**
CNCH				*eS*	**Sb**	**13 43 19.4**	**+0.3**
CNCH				*eS*	**Sg**	**13 43 20.9**	**-1.0**
CNCH				IAML		13 43 22.4	
	comp=Z,3μm,0.5s						
CNCH	**Conchagua**	**2.21**	**181**	*i* P	**Pb**	**13 42 52.3**	**+0.9**
CNCH				IAML		13 43 24.5	
	comp=Z,2μm,1.0s						
SJTE	**Alcalda de S**	**2.21**	**212**	*eP*	**Pb**	**13 42 51.4**	**0.0**
SJTE				*eS*	**Sg**	**13 43 20.8**	**-1.2**
SJTE	**Alcalda de S**	**2.21**	**212**	*i* P	**Pb**	**13 42 51.4**	**0.0**
SJTE				IAML		13 43 27.7	
	comp=Z,350nm,1.0s						
PIC2	**El Picacho**	**2.25**	**219**	*eP*	**Pb**	**13 42 52.6**	**+0.5**
UNIC	**Universidad Ca**	**2.27**	**229**	*i* P	**Pb**	**13 42 53.8**	**+1.3**
UNIC				IAML		13 43 25.5	
	comp=Z,460nm,1.0s						
LOMA	**Loma Larga**	**2.27**	**216**	*eP*	**Pb**	**13 42 52.2**	**-0.3**
LOMA	**Loma Larga**	**2.27**	**216**	*i* P	**Pb**	**13 42 52.1**	**-0.4**
LOMA				IAML		13 43 26.9	
	comp=Z,460nm,1.0s						
SNET	**Serv Nac Est T**	**2.28**	**218**	Pn	**Pn**	**13 42 51.5**	**+2.2**
PMON	**Piamonte**	**2.31**	**220**	*i* P	**Pb**	**13 42 54.2**	**+1.1**
PMON				IAML		13 43 35.1	
	comp=Z,530nm,1.0s						
SNJE	**San Jose**	**2.39**	**228**	*eP*	**Pb**	**13 42 55.1**	**+0.6**
RTR	**El Retiro**	**2.40**	**229**	*eP*	**Pb**	**13 42 55.8**	**+1.1**
SLOZ	**Alcaldia de Sa**	**2.42**	**233**	*eP*	**Pb**	**13 42 55.6**	**+0.6**
SLOZ				*eS*	**Sg**	**13 43 27.8**	**-0.9**
CEVE	**Cerro Verde**	**2.43**	**227**	*eP*	**Pb**	**13 42 55.5**	**+0.3**
CEVE	**Cerro Verde**	**2.43**	**227**	*i* P	**Pb**	**13 42 55.7**	**+0.5**
CEVE				IAML		13 43 35.3	
	comp=Z,570nm,1.0s						
JAYA	**Jayaque - finc**	**2.44**	**221**	*eP*	**Pb**	**13 42 55.1**	**-0.2**
JAYA				*eS*	**Sb**	**13 43 27.4**	**+1.7**
JAYA				IAML		13 43 29.5	
	comp=Z,456nm,0.3s						
JAYA	**Jayaque - finc**	**2.44**	**221**	*i* P	**Pb**	**13 42 55.2**	**-0.1**
JAYA				IAML		13 43 29.2	
	comp=Z,1μm,1.0s						
PETF	**Flores**	**2.44**	**306**	Pn	**Pb**	**13 42 55.0**	**-0.4**
PETF				IAML		13 43 34.9	
	comp=E,872nm,0.5s						
PETF	**Flores**	**2.44**	**306**	*i* P	**Pb**	**13 42 56.9**	**+1.5**
PETF				IAML		13 43 37.0	
	comp=Z,650nm,1.0s						
NUBE	**Las Nubes**	**2.49**	**231**	*eP*	**Pb**	**13 42 56.5**	**+0.3**
NUBE				*eS*	**Sg**	**13 43 29.9**	**-1.2**
NUBE	**Las Nubes**	**2.49**	**231**	*i* P	**Pb**	**13 42 56.7**	**+0.4**
NUBE				IAML		13 43 04.9	
	comp=Z,520nm,1.0s						
CSGN	**Cosiguina Volc**	**2.51**	**175**	*i* P	**Pb**	**13 42 55.2**	**-1.4**
CSGN				IAML		13 43 38.2	
	comp=Z,1μm,1.0s						
RCPN	**Sur Rio San Ju**	**2.56**	**140**	*i* P	**Pb**	**13 42 57.2**	**-0.1**
RCPN				IAML		13 43 34.3	
	comp=Z,3.8nm,1.0s						
LIMN	**Finca el Limon**	**2.78**	**150**	*i* P	**Pb**	**13 43 01.3**	**+0.1**
LIMN				IAML		13 43 43.5	
	comp=Z,710nm,1.0s						
CRIN	**San Cristobal**	**2.87**	**165**	Pn	**Pn**	**13 43 00.1**	**+2.7**
CRIN	**San Cristobal**	**2.87**	**165**	*i* P	**Pb**	**13 43 03.1**	**+0.4**
CRIN				IAML		13 44 04.3	
	comp=Z,980nm,1.0s						
MATN	**Matagalpa**	**3.13**	**144**	Pn	**Pb**	**13 43 04.7**	**-2.4**
MATN				IAML		13 43 50.7	
	comp=E,462nm,0.6s						
MATN				IAML		13 43 51.4	
	comp=N,461nm,0.3s						
SIUN	**Universidad Ur**	**3.41**	**121**	*i* P	**Pn**	**13 43 06.5**	**+1.7**
HUEH	**Huehuetenango**	**3.58**	**268**	Pn	**Pn**	**13 43 10.0**	**+2.6**
BOAB	**BOACO BROADBAN**	**3.66**	**145**	Pn	**Pn**	**13 43 12.2**	**+4.0**
CCIG	**Comitan**	**4.25**	**281**	Pn	**Pn**	**13 43 19.6**	**+3.1**
ACON	**Acoyapa**	**4.33**	**144**		**Pn**	**13 43 20.6**	**+3.2**
ACON				IAML		13 44 38.6	
	comp=E,201nm,0.7s						
ACON				IAML		13 44 42.1	
	comp=N,190nm,1.0s						
ESPN	**Las Esperanzas**	**4.72**	**134**		**Pn**	**13 43 25.0**	**+2.3**
ESPN				IAML		13 44 43.0	
	comp=N,131nm,1.1s						
TEIG	**Tepich**	**4.73**	**354**	Pn	**Pn**	**13 43 26.5**	**+3.6**
JTS	**Las Juntas de**	**5.87**	**152**	Pn	**Pb**	**13 43 50.6**	**-3.1**
	comp=N,0.3nm,0.3s,baz=132,slow=18,SNR=1.5						
JTS				Sn	**Sb**	**13 45 07.4**	**+3.0**
	comp=N,0.9nm,0.3s,baz=175,slow=20,SNR=1.5						
	comp=N,5.0nm,0.8s						
CMIG	**Matias Romero**	**7.00**	**284**	Pn	Pn	13 43 49.8	-4.2
	comp=N,0.3nm,0.3s,baz=126,slow=11,SNR=2.4						
CMIG				Sn	**Sn**	**13 45 08.4**	**-5.6**
	comp=N,0.3nm,0.3s,baz=233,slow=11,SNR=2.2						
CMIG				Lg	Lg	13 45 39.4	
	comp=N,1.1nm,0.3s,baz=266,slow=14,SNR=4.1						
CMIG				LR	LR	13 46 11.2	
	comp=N,15nm,20.5s,baz=52,slow=37						
	comp=N,1.0nm,0.5s						
TXAR	**Lajitas Array**	**20.09**	**316**	P	**P**	**13 46 42.6**	**-3.0**
	baz=140,slow=13,SNR=1.8						
	comp=N,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**50.61**	**344**	P	**P**	**13 51 08.1**	**-2.4**
	comp=N,0.1nm,0.4s,baz=142,slow=7.3,SNR=2.3						
	comp=N,0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**145.62**	**349**	PKPbc	**PKPbc**	**14 01 53.0**	**+1.6**
	comp=N,0.3nm,0.5s,baz=337,slow=2.1,SNR=2.1						

*IDC **18** 13:53:19.6±1.1, 50°.70N×170°.84W, h0km, mb3.7/14, mbtmp3.7/16, ML3.1/2, MS2.9/2, Error ellipse: s-maj=30.8km s-min=17.0km az=176.0*
*NEIC **18** 13:53:23.7±1.9, 51°.0N±0°.1×170°.90W±0°.08, h15km±7km, mb3.9/53, ML3.5/6, ML3.2(AEIC), Error ellipse: s-maj=17.5km s-min=6.9km az=172.0*
*AEIC **18** 13:53:25.2±3.2, 50°.9N±0°.1×170°.9W±0°.1, h47km±8km, Error ellipse: s-maj=18.0km s-min=8.7km az=168.0*

ISC 18 13:53:23.5±0.8, 50°.85N±0°.10×170°.88W±0°.04, h23km, n112, σ0§93/111, mb3.7/18, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**2.46**	**307**		**Pn**	**13 54 01.9**	**-0.3**
KOFP					**Sn**	**13 54 30.4**	**-1.2**
NIKH	**Nikolski High**	**2.46**	**30**		**Pn**	**13 54 01.5**	**-0.8**
NIKH					**Sn**	**13 54 30.1**	**-1.6**
NIKH	**Nikolski High**	**2.46**	**30**	P	**Pn**	**13 54 02.1**	**-0.2**
ATKA	**Atka Island**	**2.47**	**304**	Pn	**Pn**	**13 54 01.4**	**-0.9**
ATKA				IAML		13 54 30.1	
	comp=N,171nm,0.6s						
ATKA	**Atka Island**	**2.47**	**304**	P	**Pn**	**13 54 00.8**	**-1.5**
KOSE	**Korovin Southe**	**2.48**	**308**		**Pn**	**13 54 02.2**	**-0.2**
KOSE					**Sn**	**13 54 30.7**	**-1.3**
KONE	**Korovin Northe**	**2.54**	**309**		**Pn**	**13 54 03.1**	**-0.2**
KONE					**Sn**	**13 54 32.3**	**-1.2**
KOWE	**Korovin West**	**2.59**	**307**		**Pn**	**13 54 04.1**	**+0.1**
KOWE					**Sn**	**13 54 33.7**	**-1.0**
OKWR	**Okmok West Rim**	**3.07**	**31**		**Pn**	**13 54 09.9**	**-0.7**
OKWE	**Okmok W'ng Wal**	**3.09**	**31**		**Pn**	**13 54 09.5**	**-1.4**
OKFG	**Magazine Ridge**	**3.15**	**34**		**Pn**	**13 54 11.3**	**-0.3**
OKFG					**Sn**	**13 54 45.7**	**-2.8**
GSMY	**Great Sitkin M**	**3.45**	**292**		**Pn**	**13 54 14.9**	**-0.9**
GSTR	**Great Sitkin T**	**3.47**	**293**	Pn	**Pn**	**13 54 16.3**	**+0.2**
GSCK	**Great Sitkin C**	**3.50**	**291**		**Pn**	**13 54 15.4**	**-1.1**
ADAG	**Mount Adagdak**	**3.75**	**290**		**Pn**	**13 54 19.2**	**-0.8**
ADK	**Adak**	**3.78**	**288**	Pn	**Pn**	**13 54 18.9**	**-1.3**
ADK				IAML		13 55 01.3	
	comp=N,129nm,0.5s						
ADK	**Adak**	**3.78**	**288**	P	**Pn**	**13 54 19.0**	**-1.3**
MAPS	**Pakushin South**	**3.82**	**38**		**Pn**	**13 54 20.7**	**-0.2**
MSW	**Makushin Switc**	**3.96**	**38**		**Pn**	**13 54 22.7**	**-0.2**
UNV	**Unalaska Valle**	**4.02**	**40**		**Pn**	**13 54 23.4**	**-0.2**
UNV	**Unalaska Valle**	**4.02**	**40**	P	**Pn**	**13 54 23.9**	**+0.3**
KIWB	**Kanaga Island**	**4.05**	**287**	Pn	**Pn**	**13 54 24.4**	**+0.3**
AKUT	**Akutan**	**4.53**	**42**	Pn	**Pn**	**13 54 31.3**	**+0.7**
AKUT				IAML		13 55 45.6	
	comp=N,48nm,1.4s						
AKUT				IAML		13 56 57.2	
	comp=E,37nm,1.5s						
AKUT	**Akutan**	**4.53**	**42**	P	**Pn**	**13 54 31.8**	**+1.2**
FALS	**False Pass**	**6.04**	**46**	P	**Pn**	**13 54 52.2**	**+0.9**
SDPT	**Sand Point**	**7.71**	**50**	P	**Pn**	**13 55 15.1**	**+0.9**
CNBA	**Chernabura Isl**	**7.91**	**55**	Pn	**Pn**	**13 55 17.7**	**+0.7**
CHGN	**Chignik**	**9.20**	**49**	Pn	**Pn**	**13 55 35.1**	**+0.4**
OHAK	**Old Harbor**	**12.13**	**51**	Pn	**Pn**	**13 56 13.4**	**-1.3**
OHAK	**Old Harbor**	**12.13**	**51**	P	**Pn**	**13 56 13.4**	**-1.3**
KDAK	**Kodiak Island**	**12.71**	**50**	Pn	**Pn**	**13 56 21.1**	**-1.5**
J19K	**Pomman**	**15.46**	**26**	Pn	**Pn**	**13 57 00.5**	**+0.6**
J20K	**Nowinta River**	**16.02**	**27**	Pn	**Pn**	**13 57 07.6**	**+0.6**
PMR	**Palmer**	**16.09**	**40**	Pn	**Pn**	**13 57 09.0**	**+1.1**
PMR				IAmb	IAmb	13 57 35.9	
	comp=Z,8.0nm,1.3s						
CAST	**Castle Rocks**	**16.11**	**31**	Pn	**Pn**	**13 57 07.5**	**-0.8**
GHO	**Glory Hole Cre**	**16.27**	**39**		**P**	**13 57 12.6**	**-0.7**
KNK	**Knik Glacier**	**16.27**	**41**		**P**	**13 57 12.7**	**-0.5**
KNK				IAmb	IAmb	13 57 15.2	
	comp=Z,4.4nm,0.6s						
SML	**Sawmill**	**16.53**	**40**		**Pn**	**13 57 15.2**	**+1.6**
SML				IAmb	IAmb	13 57 17.2	
	comp=Z,12nm,1.3s						
KTH	**Kantishna Hill**	**16.59**	**32**	Pn	**Pn**	**13 57 15.2**	**+0.7**
KTH				IAmb	IAmb	13 57 19.9	
	comp=Z,12nm,1.4s						
TRF	**Thorofare Moun**	**16.74**	**33**		**Pn**	**13 57 17.7**	**+1.3**
RND	**Reindeer**	**17.23**	**35**	Pn	**Pn**	**13 57 21.9**	**-0.6**
I21K	**Tanana**	**17.39**	**27**		**Pn**	**13 57 24.9**	**+0.6**
IMAR	**Indian Mountai**	**17.52**	**24**		**P**	**13 57 28.0**	**+1.1**
MLY	**Manley**	**17.65**	**29**		**P**	**13 57 28.7**	**+0.2**
MLY				IAmb	IAmb	13 57 32.1	
	comp=Z,7.9nm,1.1s						
E19K	**Redstone River**	**17.98**	**17**		**Pn**	**13 57 31.0**	**-0.7**
N25K	**Chitina, Valde**	**18.00**	**43**	P	**Pn**	**13 57 30.4**	**-1.7**
I23K	**Minto, Yukon-K**	**18.16**	**30**	P	**Pn**	**13 57 34.2**	**+0.4**
I23K				IAmb	IAmb	13 57 37.2	
	comp=Z,6.2nm,1.1s						
CRQM	**Cirque**	**18.33**	**47**	P	**Pn**	**13 57 36.6**	**+0.4**
CCB	**Clear Creek Bu**	**18.35**	**32**	P	**P**	**13 57 34.5**	**-1.6**
WAX	**Waxell Ridge**	**18.36**	**48**	P	**P**	**13 57 36.8**	**+0.5**
WAX				IAmb	IAmb	13 57 48.7	
	comp=Z,7.2nm,0.8s						
C18K	**Utukok River**	**18.46**	**11**	P	**P**	**13 57 37.8**	**+0.4**
C18K				IAmb	IAmb	13 58 20.5	
	comp=Z,9.7nm,1.4s						
HDA	**Harding Lake**	**18.50**	**34**	P	**P**	**13 57 36.9**	**-0.9**
HDA				IAmb	IAmb	13 58 11.2	
	comp=Z,8.5nm,1.5s						
MCARA	**McCarthy VSAT**	**18.61**	**45**	P	**P**	**13 57 39.2**	**+0.2**
MCARA				IAmb	IAmb	13 57 53.6	
	comp=Z,7.5nm,0.7s						
ISLE	**Juniper Island**	**18.65**	**47**	P	**P**	**13 57 39.4**	**-0.2**
ISLE				IAmb	IAmb	13 58 15.1	
	comp=Z,14nm,1.2s						
MESA	**MESA**	**18.70**	**49**	P	**P**	**13 57 40.2**	**0.0**
ILAR	**Eielson Array**	**18.74**	**33**	P	**P**	**13 57 39.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=235,slow=11,SNR=13						
	comp=Z,1.5nm,0.9s						
D19K	**Kuna River**	**18.76**	**15**	P	**Pn**	**13 57 41.3**	**+0.2**
D19K				IAmb	IAmb	13 57 52.4	
	comp=Z,7.7nm,1.4s						
GRNC	**Granite Creek**	**18.97**	**47**	P	**P**	**13 57 43.5**	**+0.4**
H24K	**Noodor Dome**	**19.08**	**29**	P	**P**	**13 57 44.9**	**+0.7**
H24K				IAmb	IAmb	13 57 48.4	
	comp=Z,5.7nm,0.9s						
BARN	**Barnard Glacie**	**19.11**	**46**	P	**P**	**13 57 45.6**	**+0.8**
L26K	**Log Cabin Wild**	**19.15**	**40**	P	**Pn**	**13 57 46.4**	**+0.5**
J25K	**Salcha River,**	**19.18**	**34**	P	**P**	**13 57 45.6**	**+0.3**
J25K				IAmb	IAmb	13 57 48.0	
	comp=Z,5.4nm,0.7s						
CTGM	**Chitina Glacie**	**19.23**	**47**	P	**P**	**13 57 46.5**	**+0.5**
LOGN	**Logan Glacier**	**19.34**	**47**	P	**P**	**13 57 47.5**	**+0.2**
SCRK	**Sand Creek**	**19.35**	**37**	P	**P**	**13 57 47.7**	**+0.4**
PETK	**Petropavlovsk-**	**19.41**	**289**	P	**Pn**	**13 57 49.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=85,slow=14,SNR=5.2						
	comp=Z,1.8nm,0.8s						
M27K	**Edge Creek, AK**	**19.48**	**43**	P	**P**	**13 57 49.0**	**+0.3**
PRP	**Porcupine Dome**	**19.65**	**32**	P	**P**	**13 57 49.8**	**-0.6**
G24K	**Hadweenzic Riv**	**19.78**	**28**	P	**P**	**13 57 52.8**	**+1.0**
G24K				IAmb	IAmb	13 58 05.0	
	comp=Z,8.0nm,0.9s						
J26L	**Joseph Creek**	**19.78**	**36**	P	**P**	**13 57 52.3**	**+0.5**
J26L				IAmb	IAmb	13 57 56.4	
	comp=Z,4.9nm,0.7s						
BCAR	**Beaver Creek A**	**19.81**	**41**	P	**P**	**13 57 53.0**	**+0.8**
D22K	**Ayikyak River**	**20.10**	**19**	P	**P**	**13 57 56.3**	**+1.1**
D22K				IAmb	IAmb	13 58 01.7	
	comp=Z,3.7nm,0.7s						
K27K	**Chicken**	**20.12**	**38**	P	**P**	**13 57 56.2**	**+0.8**
K27K				IAmb	IAmb	13 58 33.1	
	comp=Z,5.2nm,1.4s						
B21K	**Ikpikpuk River**	**20.35**	**16**	P	**P**	**13 57 58.6**	**+0.7**
B21K				IAmb	IAmb	13 57 59.4	
	comp=Z,8.2nm,1.2s						
I26K	**Coal Creek Min**	**20.35**	**34**	P	**P**	**13 57 57.8**	**-0.1**
I26K				IAmb	IAmb	13 58 09.7	
	comp=Z,5.4nm,0.7s						
BILL	**Bilibino**	**20.55**	**335**	P	**P**	**13 58 00.9**	**+0.9**
TOLK	**Toolik Lake Re**	**20.61**	**22**	P	**P**	**13 58 01.9**	**+1.1**
TOLK				IAmb	IAmb	13 58 12.6	
	comp=Z,9.7nm,1.4s						
P29M	**Windy Craggy**	**20.64**	**52**	P	**P**	**13 58 02.2**	**+1.1**
EGAK	**Eagle**	**20.82**	**37**	P	**P**	**13 58 04.0**	**+1.0**
EGAK				IAmb	IAmb	13 58 15.9	
	comp=Z,5.2nm,0.7s						
BMAR	**Burnt Mountain**	**21.11**	**28**	P	**P**	**13 58 07.1**	**+0.9**
DAWY	**Dawson**	**21.20**	**39**	P	**P**	**13 58 08.2**	**+1.1**
L29M	**L29M**	**21.37**	**42**		**P**	**13 58 10.0**	**+1.0**
I28M	**Miner Creek**	**21.59**	**36**	P	**P**	**13 58 12.3**	**+0.9**
I28M				IAmb	IAmb	13 58 25.1	
	comp=Z,4.5nm,0.7s						
SKAG	**Skagway**	**21.82**	**53**	P	**P**	**13 58 13.2**	**-0.6**
H29M	**Whitestone**	**22.52**	**35**	P	**P**	**13 58 22.0**	**+0.7**
F28M	**Old Crow**	**22.70**	**31**	P	**P**	**13 58 23.6**	**+0.5**
F28M				IAmb	IAmb	13 59 03.0	
	comp=Z,3.6nm,1.3s						
I30M	**Mount Dempster**	**22.85**	**38**	P	**P**	**13 58 25.4**	**+0.6**
I30M				IAmb	IAmb	13 58 26.3	
	comp=Z,4.1nm,0.8s						
SEY	**Seymchan**	**23.05**	**316**	P	**P**	**13 58 26.7**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=98,slow=16,SNR=5.9						
	comp=Z,2.0nm,1.0s						
MA2	**Magadan**	**23.25**	**307**	P	**P**	**13 58 29.1**	**+0.2**
	comp=Z,0.7nm,0.2s,baz=143,slow=10,SNR=1.9						
	comp=Z,0.7nm,0.2s						
E29M	**Blow River**	**23.74**	**30**		**P**	**13 58 35.0**	**+1.4**
G31M	**Satah River**	**24.30**	**35**	P	**P**	**13 58 39.7**	**+0.9**
G31M				IAmb	IAmb	13 58 56.3	
	comp=Z,5.1nm,1.1s						
INK	**Inuvik**	**25.13**	**32**	P	**P**	**13 58 47.2**	**+0.9**
INK				IAmb	IAmb	13 59 09.7	
	comp=Z,3.3nm,1.1s						
INK	**Inuvik**	**25.13**	**32**	P	**P**	**13 58 47.4**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=256,slow=8.8,SNR=5.9						
	comp=Z,2.1nm,0.7s						
YKA	**Yellowknife Ar**	**31.96**	**47**	P	**P**	**13 59 48.2**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=276,slow=7.5,SNR=5.8						
	comp=Z,0.3nm,0.7s						
YAK	**Yakutsk**	**33.48**	**313**	LR	LR	14 15 55.6	
	comp=Z,18nm,18.4s,baz=266,slow=40						
H11N2	**WAKE ISLAND Hy**	**35.68**	**218**	T	T	14 37 58.9	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**35.68**	**218**	T	T	14 37 58.0	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**35.70**	**218**	T	T	14 38 01.3	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**36.86**	**217**	T	T	14 39 26.4	
	baz=24,slow=76,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**36.88**	**217**	T	T	14 39 28.2	
	baz=24,slow=76,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**36.88**	**217**	T	T	14 39 29.1	
	baz=24,slow=76,SNR=3.9						
MJAR	**Matsushiro Arr**	**38.70**	**268**	P	**P**	**14 00 43.2**	**-2.3**
	comp=Z,0.8nm,0.8s,baz=107,slow=36,SNR=1.8						
	comp=Z,0.8nm,0.8s						
PDAR	**Pinedale Array**	**41.65**	**76**	P	**P**	**14 01 09.5**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=316,slow=6.2,SNR=2.4						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**51.27**	**301**	P	**P**	**14 02 27.0**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=48,slow=6.4,SNR=2.2						
SONM				LR	LR	14 25 35.6	
	comp=Z,12nm,19.2s,baz=345,slow=38						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**53.75**	**87**	P	**P**	**14 02 43.3**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=318,slow=6.7,SNR=3.4				

SNET ***18*** *14:29:22.2±1.0, 13°.17N×89°.60W, h42km±10km, ML3.2*
ISC 18 14:29:20.9±2.1, 13°.10N±0°.08×89°.63W±0°.06, h31km±11km, n47, σ0.38/72, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.49**	**38**	*eP*	**Pn**	**14 29 32.1**	**+0.3**
LALI				*eS*	**Sn**	**14 29 39.0**	**-0.1**
LALI	**Alcalda de L**	**0.49**	**38**	*i* P	**Pn**	**14 29 32.0**	**+0.3**
LALI				*i* S	**Sn**	**14 29 38.9**	**-0.3**
LALI				IAML		14 29 39.1	
	comp=Z,900nm,1.0s						
JAYA	**Jayaque - finc**	**0.58**	**18**	*eP*	**Pn**	**14 29 33.2**	**+0.1**
JAYA				*eS*	**Sn**	**14 29 41.6**	**-0.1**
JAYA				IAML		14 29 42.9	
	comp=Z,2μm,0.1s						
JAYA	**Jayaque - finc**	**0.58**	**18**	*i* P	**Pn**	**14 29 32.9**	**-0.2**
JAYA				IAML		14 29 42.8	
	comp=Z,6μm,1.0s						
ITCA	**Escuela Especi**	**0.66**	**31**	*i* P	**Pn**	**14 29 34.0**	**-0.2**
ITCA				*i* S	**Sn**	**14 29 44.4**	**+0.7**
ITCA				IAML		14 29 46.1	
	comp=Z,3μm,1.0s						
PANCS	**Alcalda de**	**0.67**	**41**	*i* P	**Pn**	**14 29 34.0**	**-0.3**
PANCS				*i* S	**Sn**	**14 29 43.1**	**-0.7**
PANCS				IAML		14 29 44.5	
	comp=Z,7μm,1.0s						
PMON	**Piamonte**	**0.68**	**27**	*i* P	**Pb**	**14 29 34.4**	**0.0**
PMON				*i* S	**Sn**	**14 29 44.6**	**+0.5**
PMON				IAML		14 29 49.2	
	comp=Z,2μm,1.0s						
SNET	**Serv Nac Est T**	**0.70**	**33**	*i* P	**Pb**	**14 29 34.7**	**0.0**
SNET				*i* S	**Sn**	**14 29 44.5**	**0.0**
SNET				IAML		14 29 45.4	
	comp=Z,2μm,1.0s						
LOMA	**Loma Larga**	**0.70**	**39**	*eP*	**Pb**	**14 29 34.8**	**0.0**
LOMA	**Loma Larga**	**0.70**	**39**	*i* P	**Pb**	**14 29 34.7**	**-0.1**
LOMA				*i* S	**Sn**	**14 29 44.7**	**+0.1**
LOMA				IAML		14 29 46.4	
	comp=Z,2μm,1.0s						
BOQS	**Boqueron**	**0.72**	**28**	*eP*	**Pb**	**14 29 35.2**	**+0.1**
UEES	**Universidad Ev**	**0.72**	**32**	*i* P	**Pn**	**14 29 34.7**	**-0.3**
UEES				*i* S	**Sn**	**14 29 45.2**	**+0.2**
UEES				IAML		14 29 49.2	
	comp=Z,1μm,1.0s						
CEVE	**Cerro Verde**	**0.72**	**0**	*eP*	**Pb**	**14 29 35.3**	**+0.1**
CEVE	**Cerro Verde**	**0.72**	**0**	*i* P	**Pb**	**14 29 35.4**	**+0.1**
CEVE				*i* S	**Sn**	**14 29 45.3**	**0.0**
CEVE				IAML		14 29 54.5	
	comp=Z,1μm,1.0s						
CEDA	**San Andres**	**0.73**	**18**	*i* P	**Pb**	**14 29 35.1**	**-0.2**
CEDA				*i* S	**Sn**	**14 29 45.5**	**+0.2**
CEDA				IAML		14 29 49.7	
	comp=Z,2μm,1.0s						
LFRS	**El Faro**	**0.76**	**47**	*eP*	**Pb**	**14 29 35.8**	**+0.1**
LFRS				IAML		14 29 51.4	
	comp=Z,577nm,0.5s						
SNJE	**San Jose**	**0.76**	**2**	*eP*	**Pb**	**14 29 35.9**	**0.0**
SJTE	**Alcalda de S**	**0.79**	**50**	*i* P	**Pb**	**14 29 36.3**	**0.0**
SJTE				*eS*	**Sb**	**14 29 47.1**	**+0.4**
SJTE	**Alcalda de S**	**0.79**	**50**	*i* P	**Pn**	**14 29 36.0**	**0.0**
SJTE				*i* S	**Sb**	**14 29 46.9**	**+0.2**
SJTE				IAML		14 29 47.9	
	comp=Z,2μm,1.0s						
QUEZ	**Alcaldia de Qu**	**0.81**	**25**	*i* P	**Pn**	**14 29 35.9**	**-0.3**
QUEZ				*i* S	**Sb**	**14 29 47.2**	**0.0**
QUEZ				IAML		14 29 51.9	
	comp=Z,3μm,1.0s						
NUBE	**Las Nubes**	**0.81**	**350**	*i* P	**Pn**	**14 29 36.3**	**0.0**
NUBE				*eS*	**Sn**	**14 29 46.5**	**-0.8**
NUBE	**Las Nubes**	**0.81**	**350**	*i* P	**Pn**	**14 29 36.0**	**-0.3**
NUBE				*i* S	**Sn**	**14 29 46.5**	**-0.8**
NUBE				IAML		14 29 49.1	
	comp=Z,1μm,1.0s						
LFU	**La Fuente**	**0.82**	**38**	*eP*	**Pb**	**14 29 36.7**	**0.0**
UNIC	**Universidad Ca**	**0.88**	**5**	*i* P	**Pb**	**14 29 37.6**	**-0.1**
UNIC				IAML		14 29 38.1	
	comp=Z,370nm,1.0s						
LOAL	**Lomas de Alarc**	**0.91**	**351**	*i* P	**Pn**	**14 29 37.9**	**+0.4**
LOAL				*i* S	**Sb**	**14 29 49.8**	**-0.1**
LOAL				IAML		14 29 54.6	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**0.91**	**48**	*eP*	**Pb**	**14 29 38.1**	**-0.1**
PAVA				*eS*	**Sb**	**14 29 50.7**	**+0.7**
PAVA	**Las Pavas**	**0.91**	**48**	*i* P	**Pb**	**14 29 38.2**	**-0.1**
PAVA				*i* S	**Sb**	**14 29 50.3**	**+0.3**
PAVA				IAML		14 29 51.5	
	comp=Z,4μm,1.0s						
TECO	**Alcaldia de Te**	**0.93**	**62**	*eP*	**Pn**	**14 29 37.7**	**-0.1**
TECO				*eS*	**Sb**	**14 29 50.0**	**-0.7**
TECO	**Alcaldia de Te**	**0.93**	**62**	*i* P	**Pn**	**14 29 37.5**	**-0.4**
TECO				*i* S	**Sb**	**14 29 49.9**	**-0.7**
TECO				IAML		14 29 50.4	
	comp=Z,740nm,1.0s						
SLOZ	**Alcaldia de Sa**	**0.93**	**351**	*eS*	**Sb**	**14 29 51.1**	**+0.4**
UESV	**Universidad de**	**0.98**	**57**	*i* P	**Pn**	**14 29 38.8**	**+0.3**
UESV				*i* S	**Sb**	**14 29 51.2**	**-0.7**
UESV				IAML		14 29 52.3	
	comp=Z,900nm,1.0s						
SCLA	**Alcaldia de Sa**	**1.06**	**56**	*eP*	**Pb**	**14 29 40.3**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.06**	**56**	*i* P	**Pb**	**14 29 40.3**	**-0.4**
SCLA				IAML		14 29 40.5	
	comp=Z,220nm,1.0s						
PQSS	**Presa 15 de Se**	**1.16**	**63**	*eP*	**Pn**	**14 29 41.2**	**+0.2**
PQSS				*eS*	**Sn**	**14 29 55.6**	**-0.2**
PQSS	**Presa 15 de Se**	**1.16**	**63**	*i* P	**Pn**	**14 29 41.2**	**+0.2**
PQSS				*i* S	**Sn**	**14 29 55.6**	**-0.2**
PQSS				IAML		14 29 58.2	
	comp=Z,540nm,1.0s						
LLGN	**La Laguna**	**1.25**	**32**	*i* P	**Pn**	**14 29 42.6**	**+0.3**
LLGN				IAML		14 29 47.9	
	comp=Z,740nm,1.0s						
MTO3	**Montecristo**	**1.32**	**11**	*eP*	**Pn**	**14 29 43.7**	**+0.3**
MTO3	**Montecristo**	**1.32**	**11**	*i* P	**Pn**	**14 29 43.7**	**+0.3**
MTO3				IAML		14 29 44.6	
	comp=Z,270nm,1.0s						
PACA	**Pacayal**	**1.32**	**74**	*eP*	**Pb**	**14 29 44.8**	**-0.4**
PACA	**Pacayal**	**1.32**	**74**	*i* P	**Pb**	**14 29 45.1**	**-0.1**
PACA				*i* S	**Sn**	**14 30 00.0**	**+0.1**
PACA				IAML		14 30 05.4	
	comp=Z,3μm,1.0s						
RANC	**El Ranchito**	**1.35**	**76**	*i* P	**Pn**	**14 29 44.1**	**+0.4**
RANC				IAML		14 30 07.1	
	comp=Z,520nm,1.0s						
ESQI	**Esquipulas**	**1.48**	**11**	*i* P	**Pn**	**14 29 46.1**	**+0.7**
ESQI				IAML		14 29 47.6	
	comp=Z,250nm,1.0s						
LCND	**La Caada**	**1.71**	**83**	*eP*	**Pn**	**14 29 49.1**	**+0.6**
LCND	**La Caada**	**1.71**	**83**	*i* P	**Pn**	**14 29 49.2**	**+0.7**
LCND				IAML		14 30 12.6	
	comp=Z,240nm,1.0s						
CNCH	**Conchagua**	**1.76**	**84**	*i* P	**Pn**	**14 29 49.9**	**+0.6**
CNCH				IAML		14 30 17.0	
	comp=Z,830nm,1.0s						
CSGN	**Cosiguina Volc**	**2.02**	**93**	*i* P	**Pn**	**14 29 52.8**	**-0.1**
CSGN				IAML		14 30 21.6	
	comp=Z,610nm,1.0s						
LIMN	**Finca el Limon**	**3.18**	**90**	*i* P	**Pn**	**14 30 09.3**	**+0.5**
LIMN				IAML		14 31 06.5	
	comp=Z,38nm,1.0s						

IDC ***18*** *14:55:30.8±0.4, 7°.49N×78°.92W, h0km, mb4.5/29, mbtmp4.5/37, ML3.9/7, MS3.8/39, Error ellipse: s-maj=15.9km s-min=10.0km az=47.0*
MOS ***18*** *14:55:31.3±1.0, 7°.47N×78°.97W, h10km, mb5.2/27, Error ellipse: s-maj=10.0km s-min=5.9km az=111.0*
RSNC ***18*** *14:55:32.8±1.6, 7°.44N×78°.84W, h7km±5km, ML3.7, Mw4.6*
UPA ***18*** *14:55:32.3±1.4, 7°.39N×78°.84W, h16km±9km, MW4.8, Fault plane solution: NP1:φs70.00000°, δ80.00000°, λ58.00000°.*
NEIC ***18*** *14:55:33.8±1.7, 7°.58N±0°.06×78°.83W±0°.04, h10km±1km, mb5.1/348, Error ellipse: s-maj=10.5km s-min=5.7km az=190.0*
GCMT ***18*** *14:55:35.8±0.3, 7°.62N±0°.04×78°.79W±0°.04, h13km±1km, MW4.7/70, Moment Tensor Solution. s12,c12; s70,c93; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.39±.13; Mθθ0.73±.08; Mφφ0.66±.10; Mrθ0.01±.30; Mθφ0.52±.05; Mφr-0.64±.27; Best double couple: Ms1.43500×10^16 NP1:φs31.00000°, δ56.00000°, λ-107.00000°. NP2: φs239.00000°, δ37.00000°, λ-67.00000°. Principal axes:*

T 1.2890, Plg10.0000°, Azm133.0000°; N 0.2970, Plg14.0000°, Azm40.0000°; P -1.5810, Plg73.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 18 14:55:31.6±1.1, 7°.50N±0°.02×78°.83W±0°.02, h5km±7km, n891, σ1.29/763, mb5.1/219, MS3.8/34, 30C-22D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**1.07**	**109**	⇓*iP*	**Pg**	**14 55 51.1**	**-1.1**
PTAC				*eS*	**Sg**	**14 56 04.5**	**+1.5**
PTAC	**Punta Ardita,**	**1.07**	**109**	⇓*iP*	**Pg**	**14 55 51.1**	**-1.1**
PTAC				*eS*	**Sg**	**14 56 05.0**	**-1.1**
PTAC				*i*		14 56 07.9	
	comp=Z,2μm,0.2s						
UPD2	**Meteti**	**1.31**	**38**	⇑*iP*	**Pb**	**14 55 56.2**	**-0.6**
UPD2				*eS*	**Sg**	**14 56 15.1**	**+1.2**
UPD2	**Meteti**	**1.31**	**38**	⇓*eP*	**Pg**	**14 55 56.5**	**-0.3**
UPD2				*eS*	**Sg**	**14 56 15.3**	**+1.4**
UPD2				*i*		14 56 21.9	
	comp=Z,5μm,0.5s						
AZU	**Azuero**	**1.46**	**281**	⇑*iP*	**Pn**	**14 55 57.1**	**-1.6**
AZU				*eS*	**Sb**	**14 56 17.0**	**-1.3**
AZU	**Azuero**	**1.46**	**281**	⇑*iP*	**Pn**	**14 55 57.0**	**-1.7**
AZU				*eS*	**Sb**	**14 56 17.0**	**-1.3**
TABO3	**Taboga, Panama**	**1.47**	**331**	⇓*eP*	**Pb**	**14 55 58.4**	**-1.1**
TABO3				*eS*	**Sn**	**14 56 17.1**	**-1.4**
TOTI	**Torti**	**1.51**	**20**	⇑*iP*	**Pn**	**14 55 58.8**	**-0.6**
TOTI				*eS*	**Sn**	**14 56 12.4**	**-7.1**
CHIT3	**Chitre**	**1.64**	**286**	⇑*iP*	**Pn**	**14 56 00.1**	**-1.1**
CHIT3				*eS*	**Sn**	**14 56 20.7**	**-1.9**
CNTA3	**Canitas, Panam**	**1.71**	**358**	⇑*iP*	**Pn**	**14 56 01.6**	**-0.5**
CNTA3				*eS*	**Sb**	**14 56 25.1**	**-0.3**
ZANG	**Zanguenga, Cho**	**1.77**	**325**	⇑*iP*	**Pn**	**14 56 02.7**	**-0.3**
ZANG				*eS*	**Sb**	**14 56 25.8**	**-1.4**
PNME	**Penonome**	**1.78**	**303**	⇑*iP*	**Pn**	**14 56 02.5**	**-0.5**
PNME				*eS*	**Sn**	**14 56 25.1**	**-0.9**
PNME	**Penonome**	**1.78**	**303**	⇑*eP*	**Pn**	**14 56 02.7**	**-0.3**
PNME				*eS*	**Sb**	**14 56 25.9**	**-1.5**
CAPC	**Capurgana**	**1.84**	**52**	*eP*	**Pb**	**14 56 04.4**	**-1.5**
CAPC				*eS*	**Sb**	**14 56 28.6**	**-0.7**
CAPC				*i*		14 56 37.0	
	comp=Z,2μm,0.6s						
SOLC	**Bahia Solano**	**1.90**	**132**	*eP*	**Pn**	**14 56 02.3**	**-2.4**
SOLC				*eS*	**Sn**	**14 56 26.2**	**-2.8**
BCIP	**Isla Barro Col**	**1.93**	**329**	Pn	**Pb**	**14 56 05.5**	**-1.9**
BCIP	**Isla Barro Col**	**1.93**	**329**	⇑*iP*	**Pn**	**14 56 04.9**	**-0.2**
BCIP				*eS*	**Sb**	**14 56 30.6**	**-1.1**
BCIP	**Isla Barro Col**	**1.93**	**329**	P	**Pb**	**14 56 05.5**	**-1.9**
BCIP	**Isla Barro Col**	**1.93**	**329**	⇑*eP*	**Pn**	**14 56 05.0**	**-0.2**
BCIP				*eS*	**Sb**	**14 56 30.7**	**-1.1**
MLIR	**Monte Lirio**	**2.00**	**330**	*eP*	**Pb**	**14 56 06.6**	**-2.0**
MLIR				*eS*	**Sb**	**14 56 33.2**	**-0.6**
CACAO	**El Cacao, Vera**	**2.02**	**266**	⇑*eP*	**Pn**	**14 56 04.2**	**-2.2**
CACAO	**El Cacao, Vera**	**2.02**	**266**	*eP*	**Pn**	**14 56 05.4**	**-1.0**
CACAO				*eS*	**Sb**	**14 56 33.1**	**-1.4**
CACAO				*i*		14 56 41.0	
	comp=Z,2μm,0.5s						
MARI3	**Mariato, Verag**	**2.15**	**274**	⇑*eP*	**Pn**	**14 56 07.7**	**-0.4**
STIA3	**Santiago, Vera**	**2.21**	**286**	⇑*eP*	**Pb**	**14 56 10.3**	**-1.7**
APAC	**Apartado, Choc**	**2.26**	**80**	*eP*	**Pb**	**14 56 11.9**	**-1.1**
APAC				*eS*	**Sb**	**14 56 38.9**	**-2.4**
APAC				*i*		14 56 51.1	
	comp=Z,846nm,0.7s						
GMAL	**Guarumal, Vera**	**2.40**	**276**	⇑*eP*	**Pn**	**14 56 11.8**	**+0.1**
GMAL				*eS*	**Sn**	**14 56 40.2**	**-1.2**
GMAL	**Guarumal, Vera**	**2.40**	**276**	*eP*	**Pn**	**14 56 11.7**	**+0.1**
GMAL				*eS*	**Sn**	**14 56 41.5**	**+0.1**
SAFE3	**Santa Fe, Vera**	**2.45**	**294**	*eP*	**Pb**	**14 56 14.3**	**-1.9**
DBBC	**Dabeiba**	**2.64**	**100**	*eP*	**Pn**	**14 56 16.2**	**+1.2**
DBBC				*eS*	**Sn**	**14 56 46.5**	**-1.1**
DBBC				*i*		14 56 57.1	
	comp=Z,226nm,0.7s						
PIZC	**Pizarro, Choco**	**2.91**	**150**	⇓*eP*	**Pn**	**14 56 16.2**	**-2.4**
PIZC				*eS*	**Sn**	**14 56 52.4**	**-1.7**
CBOC	**Ciudad Bolivar**	**3.24**	**120**	*eP*	**Pn**	**14 56 22.7**	**-0.6**
CBOC				*eS*	**Sn**	**14 56 58.1**	**-4.2**
CBOC				*i*		14 57 03.1	
	comp=Z,112nm,0.6s						
UREC	**San Jos de Ur**	**3.27**	**85**	⇓*eP*	**Pn**	**14 56 25.1**	**+1.4**
UREC				*eS*	**Sn**	**14 57 01.5**	**-1.6**
UREC	**San Jos de Ur**	**3.27**	**85**	*eP*	**Pn**	**14 56 25.6**	**+2.0**
UREC				*eS*	**Sn**	**14 57 03.5**	**+0.4**
UREC				*i*		14 57 11.4	
	comp=Z,124nm,0.5s						
HELC	**Santa Helena**	**3.52**	**111**	⇓*iP*	**Pn**	**14 56 27.9**	**+0.5**
HELC				*eS*	Sn	14 56 50.8	-19
HELC	**Santa Helena**	**3.52**	**111**	⇓*eP*	**Pn**	**14 56 27.9**	**+0.5**
HELC				*eS*	**Sn**	**14 57 07.0**	**-2.8**
HELC				*i*		14 57 24.0	
	comp=Z,76nm,0.8s						
PLMC	**San Jos del P**	**3.61**	**135**	*eP*	**Pn**	**14 56 25.7**	**-2.7**
PLMC				*i*		14 56 56.4	
	comp=Z,68nm,0.5s						
MALC	**Bahia Malaga**	**3.77**	**157**	*eP*	**Pn**	**14 56 29.0**	**-1.5**
MALC				*i*		14 56 54.1	
	comp=Z,85nm,0.6s						
BRU2	**Volcan**	**4.04**	**289**		**Pn**	**14 56 34.8**	**+0.6**
BRU2	**Volcan**	**4.04**	**289**	⇑*iP*	**Pb**	**14 56 41.9**	**-1.4**
BRU2	**Volcan**	**4.04**	**289**	*eP*	**Pb**	**14 56 40.3**	**-3.0**
PTPM	**Petroterminale**	**4.07**	**280**	⇑*iP*	**Pb**	**14 56 42.2**	**-1.7**
PTPM				*eS*	**Sb**	**14 57 35.6**	**+2.1**
GUY2C	**Guyana, Caldas**	**4.12**	**123**	*eP*	**Pn**	**14 56 36.3**	**+0.6**
GUY2C				*eS*	**Sn**	**14 57 21.4**	**-3.2**
CDITO	**Canoas**	**4.14**	**285**		**Pn**	**14 56 36.8**	**+1.2**
CDITO	**Canoas**	**4.14**	**285**	*eP*	**Pb**	**14 56 43.4**	**-1.7**
CCOL	**Caracol de Cor**	**4.20**	**283**	*eP*	**Pb**	**14 56 46.1**	**0.0**
YOTC	**Yotoco, Valle**	**4.28**	**145**	*eP*	**Pn**	**14 56 36.6**	**-1.0**
YOTC				*eS*	**Sn**	**14 57 24.7**	**-3.3**
YOTC				*i*		14 57 29.9	
	comp=Z,41nm,0.5s						
VITO	**San Vito**	**4.30**	**288**	*eP*	**Pb**	**14 56 47.9**	**-0.1**
SJCC	**San Jacinto, C**	**4.32**	**56**	⇑*eP*	**Pn**	**14 56 39.1**	**+1.0**
SJCC				*eS*	**Sn**	**14 57 28.4**	**-0.5**
SJCC	**San Jacinto, C**	**4.32**	**56**	*eP*	**Pn**	**14 56 40.5**	**+2.4**
SJCC				*eS*	**Sn**	**14 57 28.7**	**-0.3**
SJCC				*i*		14 57 52.9	
	comp=Z,48nm,0.6s						
FITO	**Golfito**	**4.43**	**285**	*eP*	Pb	14 56 45.2	-4.8
PTBC	**PUERTO BERRIO,**	**4.44**	**102**	*eP*	**Pn**	**14 56 42.1**	**+2.3**
PTBC				*eS*	**Sn**	**14 57 31.0**	**-1.0**
PTBC				*i*		14 57 41.1	
	comp=Z,51nm,0.7s						
EDAD	**Golfito**	**4.45**	**285**	*eP*	**Pn**	**14 56 41.4**	**+1.5**
POTG	**Potrero Grande**	**4.52**	**290**	*eP*	**Pn**	**14 56 41.5**	**+0.7**
ANIL	**Santa Ana**	**4.53**	**131**	*eP*	**Pn**	**14 56 42.0**	**+0.7**
ANIL				*eS*	**Sn**	**14 57 34.1**	**-0.4**
ANIL				*i*		14 57 40.5	
	comp=Z,68nm,0.4s						
PIRO	**Carate, Puerto**	**4.55**	**282**	*eP*	**Pn**	**14 56 44.6**	**+3.3**
JIME	**Puerto Jimenez**	**4.57**	**283**	*eP*	**Pb**	**14 56 50.9**	**-1.5**
EDBA	**Buenos Aires**	**4.70**	**291**	*eP*	**Pb**	**14 56 51.2**	**-3.4**
DRK0	**Durika**	**4.71**	**292**		**Pn**	**14 56 44.2**	**+0.6**
DRK0	**Durika**	**4.71**	**292**	*eP*	**Pn**	**14 56 44.9**	**+1.4**
BURE	**Buenos Aires**	**4.76**	**291**	*eP*	**Pb**	**14 56 51.4**	**-4.3**
JAMC	**Jamundi, Valle**	**4.77**	**153**	*eP*	**Pn**	**14 56 44.9**	**+0.5**
SRBA	**San Rafael, Bu**	**4.80**	**291**	Pn	**Pn**	**14 56 46.0**	**+1.2**
SRBA	**San Rafael, Bu**	**4.80**	**291**	*eP*	**Pn**	**14 56 45.7**	**+0.9**
EDPN	**Palmar Norte**	**4.81**	**288**	*eP*	**Pb**	**14 56 57.8**	**+1.4**
ORTC	**Ortega, Tolima**	**5.04**	**135**	*eP*	**Pn**	**14 56 49.2**	**+1.1**
ORTC				*eS*	**Sb**	**14 58 03.5**	**+2.0**
SPBC	**San Pablo de B**	**5.07**	**111**	*eP*	**Pn**	**14 56 50.7**	**+2.3**
SPBC				*eS*	**Sn**	**14 57 50.9**	**+3.4**
SPBC				*i*		14 58 05.3	
	comp=Z,24nm,0.7s						
ARGC	**Ariguani, Magd**	**5.10**	**62**	*eP*	**Pb**	**14 57 01.0**	**-0.4**
ARGC				*eS*	**Sn**	**14 57 49.4**	**+1.3**
ARGC				*i*		14 58 01.9	
	comp=Z,28nm,0.5s						
PEZE	**Perez Zeledon,**	**5.15**	**292**		**Pn**	**14 56 50.5**	**+1.0**
PEZE	**Perez Zeledon,**	**5.15**	**292**	*eP*	Pn	14 56 54.8	+5.2
ROSC	**El Rosal**	**5.20**	**120**	Pn	**Pn**	**14 56 53.0**	**+2.4**
ROSC	**El Rosal**	**5.20**	**120**	P	**Pn**	**14 56 53.0**	**+2.4**
ROSC	**El Rosal**	**5.20**	**120**	Pn	**Pn**	**14 56 52.3**	**+1.7**
	comp=Z,24nm,0.5s,baz=160,slow=19,SNR=9.6						
ROSC				Sn	**Sn**	**14 57 49.6**	**-1.6**
	comp=Z,2.6nm,0.3s,baz=11,slow=15,SNR=3.9						
ROSC				LR	LR	14 59 06.4	
	comp=Z,2μm,20.0s,baz=342,slow=41						
ROSC	**El Rosal**	**5.20**	**120**	*eP*	**Pn**	**14 56 53.2**	**+2.6**
ROSC				*eS*	**Sn**	**14 57 52.2**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDM	**Cerro de Muert**	**5.29**	**293**	*eP*	**Pn**	**14 56 52.4**	**+0.6**
POPC	**Popayan, Colom**	**5.38**	**156**	*eP*	**Pn**	**14 56 52.5**	**-0.3**
POPC				*eS*	**Sn**	**14 57 53.3**	**-2.0**
POPC				*i*		14 58 00.7	
	comp=Z,20nm,0.7s						
VERB	**Verbena**	**5.39**	**297**	*eP*	**Pn**	**14 56 55.3**	**+2.4**
VINA	**Juan Vinas**	**5.41**	**296**	*eP*	Pb	14 57 01.7	-5.1
VTCV	**VTCV, Calle Va**	**5.43**	**297**	*eP*	**Pn**	**14 56 56.4**	**+2.9**
VTLO	**VTLO**	**5.46**	**298**	*eP*	**Pn**	**14 56 56.7**	**+2.6**
CVTV	**Tajo**	**5.46**	**297**	*eP*	**Pn**	**14 56 54.4**	**+0.4**
RIMA	**Rio Macho**	**5.46**	**295**		**Pn**	**14 56 54.5**	**+0.5**
RIMA	**Rio Macho**	**5.46**	**295**	*eP*	**Pn**	**14 56 54.0**	**0.0**
CVTR	**Volcan Turrial**	**5.48**	**298**	*eP*	**Pn**	**14 56 56.5**	**+2.2**
VTR0	**Volcan Turrial**	**5.48**	**297**	*eP*	**Pn**	**14 56 55.6**	**+1.2**
PCAYA	**Pacayas**	**5.48**	**296**	*eP*	**Pn**	**14 56 56.4**	**+2.2**
VTLA	**Turrialba Volc**	**5.49**	**297**	*eP*	**Pn**	**14 56 57.0**	**+2.6**
REPA	**Paraso**	**5.49**	**295**	*eP*	Pb	14 57 02.2	-6.0
OCAC	**Ocana**	**5.50**	**82**	*eP*	**Pn**	**14 56 56.5**	**+2.0**
OCAC				*eS*	**Sn**	**14 57 57.1**	**-1.3**
VICA	**Volcano Irazu**	**5.54**	**297**	*eP*	**Pn**	**14 56 56.4**	**+1.2**
CVER	**Cruz Verde, Cu**	**5.58**	**122**	*eP*	**Pn**	**14 56 59.2**	**+3.4**
CVER				*i*		14 57 33.4	
	comp=Z,45nm,0.8s						
CVER				*eS*	**Sb**	**14 58 20.2**	**+2.9**
LCR2	**La Lucha 2**	**5.58**	**294**	Pn	**Pn**	**14 56 56.1**	**+0.5**
LCR2	**La Lucha 2**	**5.58**	**294**	*eP*	**Pn**	**14 56 56.5**	**+0.9**
OCM	**Ochomogo**	**5.60**	**295**	*eP*	Pn	14 57 01.7	+5.8
TRIO	**Tres Rios**	**5.64**	**295**	*eP*	Pb	14 57 03.0	-7.7
CVIMO	**Finca Echandi**	**5.64**	**297**	*eP*	**Pn**	**14 56 58.0**	**+1.5**
BBAC	**Balboa, Cauca**	**5.67**	**164**	*eP*	Pn	14 57 02.0	+5.2
BBAC				*eS*	**Sn**	**14 58 02.5**	**0.0**
BARC	**Barichara**	**5.67**	**99**	*eP*	**Pn**	**14 56 58.5**	**+1.6**
BARC				*eS*	**Sn**	**14 57 59.2**	**-3.5**
BARC				*i*		14 58 22.1	
	comp=Z,154nm,0.7s						
SJS3	**Mercedes San J**	**5.70**	**295**	*eP*	Pb	14 57 06.6	-5.1
RIFO	**Rio Frio, Sara**	**5.76**	**299**	*eP*	**Pn**	**14 56 58.8**	**+0.9**
HDC3	**Heredia 3**	**5.78**	**296**	*eP*	**Pn**	**14 56 59.1**	**+0.8**
HDC	**Heredia**	**5.79**	**296**		**Pn**	**14 56 59.1**	**+0.8**
HDC	**Heredia**	**5.79**	**296**	⇑*eP*	**Pn**	**14 56 59.6**	**+1.3**
HDC	**Heredia**	**5.79**	**296**	*eP*	**Pn**	**14 56 59.6**	**+1.3**
HDC	**Heredia**	**5.79**	**296**	*eP*	**Pn**	**14 56 59.4**	**+1.0**
CHIC	**Chingaza**	**5.81**	**119**	*eP*	**Pn**	**14 57 00.9**	**+1.9**
CHIC				*eS*	**Sg**	**14 58 34.9**	**-3.7**
CHIC				*i*		14 58 55.0	
	comp=Z,18nm,0.8s						
BELE	**Belen**	**5.84**	**295**	*eP*	Pb	14 57 08.3	-5.8
BETC	**Betania**	**5.86**	**145**	*eP*	**Pn**	**14 57 01.8**	**+2.5**
BETC				*eS*	**Sn**	**14 58 08.9**	**+2.0**
BETC				*i*		14 58 10.8	
	comp=Z,72nm,0.8s						
VPS6	**Volcano Poas**	**5.97**	**297**	*eP*	**Pn**	**14 57 00.1**	**-0.9**
TRB2	**Turrubares**	**6.05**	**294**	*eP*	**Pn**	**14 57 05.5**	**+3.6**
PAMC	**Pamplona, Colo**	**6.08**	**91**	*eP*	**Pn**	**14 57 05.0**	**+2.3**
PAMC				*eS*	**Sn**	**14 58 12.9**	**-0.1**
PAMC				*i*		14 58 23.2	
	comp=Z,46nm,0.8s						
VILC	**Villavicencio,**	**6.12**	**123**	*eP*	Pn	14 57 07.6	+4.7
VILC				*i*		14 59 05.2	
	comp=Z,20nm,0.7s						
CPMI	**Catarata Coope**	**6.14**	**297**	*eP*	**Pn**	**14 57 07.0**	**+3.7**
JACO	**JACO, Garabito**	**6.15**	**291**	Pn	**Pn**	**14 57 05.0**	**+1.8**
JACO

SAML **Samuel** 22.59 136 P **P** **15 00 32.8 -0.4**
SAML **Samuel** 22.59 136 P **P** **15 00 32.8 -0.4**
SAML pmax pmax
comp=Z,33nm,0.8s
SAML **Samuel** 22.59 136 *eP* **P** **15 00 32.1 -1.1**
TIGA **Tifton** 24.23 350 P **P** **15 00 49.7 +0.2**
baz=168
352A **Blakely** 24.53 347 IAmb IAmb 15 01 01.1
comp=Z,51nm,1.1s
BRAL **Brewton** 24.77 343 P **P** **15 00 54.8 +0.4**
baz=160
154A **Montrose** 25.30 352 IAmb IAmb 15 01 03.6
comp=Z,70nm,1.1s
250A **Grady** 25.32 345 IAmb IAmb 15 01 08.0
comp=Z,48nm,1.2s
NHSC **New Hope** 25.51 357 P **P** **15 01 01.9 +0.8**
baz=177
152A **Waverly Hall** 25.63 348 IAmb IAmb 15 01 10.8
comp=Z,39nm,1.1s
ITTB **Itaituba** 25.89 116 *eP* **P** **15 01 04.4 -0.4**
MDP **Montagnes des** 26.13 94 LR LR 15 11 58.2
comp=Z,496nm,18.9s,baz=268,slow=38
GOGA **Godfrey** 26.14 351 IAmb IAmb 15 01 14.8
comp=Z,90nm,1.9s
GOGA **Godfrey** 26.14 351 P **P** **15 01 08.4 +1.6**
baz=170
MALB **Monte Alegre** 26.21 110 *eP* **P** **15 01 07.6 -0.1**
LRAL **Lakeview Retre** 26.51 344 P **P** **15 01 11.1 +0.9**
baz=162
HODGE **Hodges** 26.79 354 IAmb IAmb 15 01 21.5
comp=Z,92nm,1.6s
VBMS **Vicksburg** 26.89 338 P **P** **15 01 14.4 +0.8**
baz=154
Z47A **Carrollton** 26.97 343 IAmb IAmb 15 01 22.3
comp=Z,80nm,1.3s
HKT **Hockley** 27.45 327 P **P** **15 01 19.2 +0.5**
HKT **Hockley** 27.45 327 P **P** **15 01 19.2 +0.5**
HKT pmax pmax
comp=Z,21nm,1.3s
VILB **Vilhena** 27.49 138 *eP* **P** **15 01 16.8 -2.4**
NPGB **Novo Progresso** 27.51 121 *eP* **P** **15 01 19.6 +0.2**
KMSC **Kings Mountain** 27.60 356 P **P** **15 01 20.7 +0.7**
baz=175
BG3 **Lake Jocassee** 27.62 353 IAmb IAmb 15 01 29.2
comp=Z,32nm,1.1s
FPAL **Fort Paine** 27.62 348 IAmb IAmb 15 01 27.8
comp=Z,32nm,1.2s
V58A **Windy Hill, Pi** 28.16 360 IAmb IAmb 15 02 00.8
comp=Z,100nm,1.9s
W50A **Signal Mountai** 28.20 349 IAmb IAmb 15 01 33.8
comp=Z,24nm,0.9s
NATX **Nacogdoches** 28.29 331 P **P** **15 01 26.4 +0.2**
baz=145
SWET **Sewanee** 28.34 348 IAmb IAmb 15 01 34.9
comp=Z,67nm,1.6s
TKL **Tuckaleechee C** 28.39 352 LR LR 15 14 09.2
comp=Z,138nm,18.5s,baz=161,slow=39
833A **Chaparral WMA,** 28.40 319 P **P** **15 01 28.1 +0.9**
baz=133
PB11 **IPOC Station P** 28.56 162 IAmb IAmb 15 01 34.1
comp=Z,39nm,0.9s
OXF **Oxford** 28.59 342 P **P** **15 01 30.4 +1.5**
baz=158
GO01 **Chusmiza** 28.62 161 IAmb IAmb 15 01 33.4
comp=Z,25nm,1.0s
U54A **Nelsons Funny** 29.01 355 IAmb IAmb 15 01 41.6
comp=Z,29nm,1.0s
V48A **Smith Brothers** 29.04 347 IAmb IAmb 15 01 41.1
comp=Z,68nm,1.3s
PDRB **Porto dos Gac** 29.05 131 *eP* **P** **15 01 31.1 -2.1**
435B **Jarrell** 29.06 325 P **P** **15 01 33.9 +0.8**
baz=139
PB08 **IPOC Station P** 29.07 161 IAmb IAmb 15 01 37.5
comp=Z,26nm,1.1s
SIV **San Ignacio** 29.22 143 LR LR 15 13 28.9
comp=Z,499nm,19.2s,baz=290,slow=37
TZTN **Tazewell** 29.23 352 P **P** **15 01 36.2 +1.7**
baz=170
T57A **Hurt** 29.36 359 IAmb IAmb 15 01 44.2
comp=Z,38nm,1.1s
U49A **Red Boiling Sp** 29.57 349 IAmb IAmb 15 01 45.0
comp=Z,32nm,1.4s
BLA **Blacksburg** 29.61 357 P **P** **15 01 39.6 +1.7**
baz=177
WVT **Waverly** 29.66 345 P **P** **15 01 39.0 +0.7**
WVT **Waverly** 29.66 345 P **P** **15 01 39.8 +1.5**
baz=162
WVT **Waverly** 29.66 345 P **P** **15 01 39.0 +0.7**
WVT pmax pmax
comp=Z,19nm,1.3s
T50A **Nancy** 29.89 350 IAmb IAmb 15 01 48.0
comp=Z,57nm,1.6s
WHTX **Lake Whitney,** 29.91 327 P **P** **15 01 40.9 +0.3**
baz=141
DRIO **Del Rio** 29.93 320 IAmb IAmb 15 01 47.3
comp=Z,45nm,1.9s
PB02 **IPOC Station P** 29.95 163 IAmb IAmb 15 01 51.9
comp=Z,31nm,1.4s
PTLB **Pontes e Lacer** 30.01 139 P **P** **15 01 41.4 -0.2**
PTLB **Pontes e Lacer** 30.01 139 *eP* **P** **15 01 41.3 -0.3**
JCT **Junction City** 30.15 322 P **P** **15 01 43.3 +0.6**
baz=135
MIAR **Mount Ida** 30.15 335 P **P** **15 01 44.0 +1.3**
baz=150
WHAR **Wooly Hollow** 30.29 338 IAmb IAmb 15 01 51.1
comp=Z,51nm,1.7s
T47A **Sharon Grove** 30.30 347 IAmb IAmb 15 01 51.8
comp=Z,53nm,1.2s
BBSD **Serra de San D** 30.43 144 *eP* **P** **15 01 44.5 -0.8**
LCAR **Lake Charles** 30.59 340 IAmb IAmb 15 01 53.6
comp=Z,41nm,1.3s
CBN **Corbin Frederi** 30.59 2 P **P** **15 01 47.1 +0.6**
baz=183
PBMO **Poplar Bluff** 31.00 342 IAmb IAmb 15 01 56.7
comp=Z,23nm,1.1s
PLPT **Palo Pinto** 31.01 327 IAmb IAmb 15 01 57.0
comp=Z,43nm,1.4s
CGM3 **Cape Girardeau** 31.25 343 IAmb IAmb 15 02 00.5
comp=Z,44nm,1.3s
SAND **Sanderson** 31.26 319 P **P** **15 01 52.8 +0.2**
WCI **Wyandotte Cave** 31.33 349 P **P** **15 01 53.8 +0.8**
WCI IAmb IAmb 15 02 00.2
comp=Z,45nm,1.1s
WCI **Wyandotte Cave** 31.33 349 P **P** **15 01 54.7 +1.6**
baz=166
WCI **Wyandotte Cave** 31.33 349 P **P** **15 01 53.8 +0.8**
WCI pmax pmax
comp=Z,45nm,1.1s
LVC **Limon Verde** 31.46 162 P **P** **15 01 56.3 +1.5**
LVC IAmb IAmb 15 01 58.6
comp=Z,24nm,1.1s
LVC **Limon Verde** 31.46 162 *eP* **P** **15 01 56.3 +1.5**
LVC **Limon Verde** 31.46 162 LR LR 15 16 47.1
comp=Z,150nm,19.8s,baz=330,slow=40
SIUC **Southern Illin** 31.52 344 IAmb IAmb 15 02 02.1
comp=Z,56nm,1.3s
ABTX **Abilene, Hawle** 31.60 325 P **P** **15 01 56.0 +0.4**
baz=138
Q51A **Peebles** 31.65 353 IAmb IAmb 15 02 04.5
comp=Z,40nm,1.1s
BBRB **Robore, Bolivi** 31.76 144 *eP* **P** **15 01 55.0 -2.0**
HHAR **Hobbs** 31.80 336 IAmb IAmb 15 02 03.2
comp=Z,28nm,1.3s
TXAR **Lajitas Array** 31.91 316 P **P** **15 01 57.8 -0.5**
comp=Z,1.4nm,0.8s,baz=135,slow=8.2,SNR=13
TXAR PcP **PcP** **15 04 48.0 -1.0**
comp=Z,1.3nm,1.1s,baz=165,slow=3.7,SNR=5.1
TXAR LR LR 15 16 50.5
comp=Z,57nm,20.3s,baz=104,slow=40
comp=Z,1.4nm,0.8s
P53A **Whipple** 31.93 356 IAmb IAmb 15 02 06.7
comp=Z,52nm,1.3s
MCWV **Mont Chateau** 32.03 359 P **P** **15 02 01.0 +1.8**
baz=178
P51A **Williamsport** 32.07 354 IAmb IAmb 15 02 07.4
comp=Z,17nm,0.8s
U38A **Gravette** 32.12 336 IAmb IAmb 15 02 06.4
comp=Z,45nm,1.6s
P52A **Corning** 32.13 355 P **P** **15 02 01.7 +1.7**
baz=174,SNR=13
TMAB **Tom-Au,PA,Br** 32.19 107 *eP* **P** **15 02 01.8 +0.9**
TUL3 **Leonard** 32.26 334 P **P** **15 02 02.6 +1.3**
baz=147
P49A **Miami Univ. Ec** 32.33 351 P **P** **15 02 03.2 +1.4**
baz=169,SNR=9.4
CCM **Cathedral Cave** 32.43 342 P **P** **15 02 02.8 +0.1**
CCM **Cathedral Cave** 32.43 342 P **P** **15 02 03.6 +0.9**
baz=157
CCM **Cathedral Cave** 32.43 342 P **P** **15 02 02.8 +0.1**
CCM pmax pmax
comp=Z,78nm,1.4s
SALV **Santo Antonio** 32.64 136 *eP* **P** **15 02 04.9 +0.1**
O53A **New Philadelph** 32.68 357 P **P** **15 02 06.3 +1.4**
baz=176
WMOK **Wichita Mounta** 32.74 329 P **P** **15 02 05.7 +0.1**
baz=141,SNR=5.3
S39A **Bolivar** 32.80 338 **PcP** **15 04 51.5 +0.3**
POST **Post** 33.00 324 IAmb IAmb 15 02 13.4
comp=Z,38nm,1.4s
SSPA **Standing Stone** 33.00 1 P **P** **15 02 08.8 +1.1**
baz=182
O48B **Farmland** 33.10 351 P **P** **15 02 09.7 +1.1**
baz=168,SNR=10.0
T35A **Sooner Cattle** 33.42 334 IAmb IAmb 15 02 17.4
comp=Z,97nm,1.1s
SNDB **Serra Nova Dou** 33.53 125 *eP* **P** **15 02 12.7 +0.1**
SFIN **Lafayette** 33.56 349 P **P** **15 02 13.4 +0.8**
baz=165
SMWD **Samnorwood** 33.79 327 IAmb IAmb 15 02 25.2
comp=Z,22nm,1.2s
M53A **WI Miller and** 33.84 358 P **P** **15 02 14.8 -0.2**
baz=177
M52A **Chesterland** 33.97 357 IAmb IAmb 15 02 20.7
comp=Z,23nm,0.9s
P40A **Paris** 34.03 342 IAmb IAmb 15 02 23.1
comp=Z,39nm,1.2s
HDIL **Hopedale** 34.22 346 P **P** **15 02 18.7 +0.5**
baz=161
LPIG **La Paz** 34.37 302 LR LR 15 17 22.0
comp=Z,122nm,19.3s,baz=132,slow=38
MSTX **Muleshoe** 34.38 323 IAmb IAmb 15 02 26.0
comp=Z,44nm,1.2s
MSTX **Muleshoe** 34.38 323 P **P** **15 02 19.8 -0.2**
baz=135,SNR=5.7
AMTX **Amarillo** 34.41 326 P **P** **15 02 20.6 +0.4**
baz=137
ERPA **Erie** 34.49 358 P **P** **15 02 21.4 +0.8**
baz=178
MNTX **Cornudas Mount** 34.53 318 P **P** **15 02 21.0 -0.2**
baz=129,SNR=33
P38A **Dawn** 34.60 340 IAmb IAmb 15 02 28.0
comp=Z,41nm,1.2s
BINY **Binghamton** 34.65 4 P **P** **15 02 23.4 +1.4**
baz=185
L48A **N Adams** 34.66 353 IAmb IAmb 15 02 29.9
comp=Z,52nm,1.2s
M65A **Busby, Falmout** 34.69 11 P **P** **15 02 22.7 +0.4**
baz=194
AAM **Ann Arbor** 34.92 354 P **P** **15 02 24.1 -0.3**
baz=172
SMTB **Santa Maria do** 35.12 117 *eP* **P** **15 02 26.2 -0.3**
L61B **Northampton** 35.23 8 P **P** **15 02 27.6 +0.6**
baz=191
BDQN **Bodoquena, MS** 35.25 142 *eP* **P** **15 02 26.8 -0.7**
KSU1 **Kansas State U** 35.30 336 P **P** **15 02 28.4 +0.7**
baz=148
ARAG **Araguaiana, MT** 35.32 131 *eP* **P** **15 02 27.3 -0.9**
RVDE **Rio Verde (Bra** 35.35 139 *eP* **P** **15 02 27.2 -1.2**
AC02 **Maricunga** 35.41 165 P **P** **15 02 31.9 +2.6**
AC02 IAmb IAmb 15 02 33.4
comp=Z,29nm,0.9s
MURT **Porto Murtinho** 35.68 145 *eP* **P** **15 02 29.7 -1.5**
AQDB **Aquidauana** 35.92 141 *eP* **P** **15 02 32.5 -0.7**
RTBA **Rita Blanca** 36.13 326 IAmb IAmb 15 02 41.8
comp=Z,56nm,1.4s
CBKS **Cedar Bluff** 36.43 332 P **P** **15 02 38.4 +0.9**
baz=144
SCIA **State Center** 36.56 342 P **P** **15 02 40.0 +1.5**
baz=156
121A **Cookes Peak, D** 36.65 317 P **P** **15 02 39.9 +0.3**
121A IAmb IAmb 15 02 47.2
comp=Z,33nm,1.4s
121A **Cookes Peak, D** 36.65 317 P **P** **15 02 39.5 -0.1**
baz=126
JFWS **Jewell Farm** 36.68 346 IAmb IAmb 15 02 45.0
comp=Z,38nm,1.2s
JFWS **Jewell Farm** 36.68 346 P **P** **15 02 40.0 +0.5**
baz=161
ANTJ **Antonio Joao (** 36.88 143 *eP* **P** **15 02 40.3 -1.2**
Y22D **IRIS PASSCAL I** 37.02 320 P **P** **15 02 43.6 +0.9**
baz=129
Y22F **Passcal Instru** 37.02 320 P **P** **15 02 42.9 +0.2**
baz=129
AC05 **El Transito** 37.06 167 P **P** **15 02 45.0 +2.1**
LBNH **Lisbon** 37.09 8 P **P** **15 02 44.3 +1.4**
baz=191
SADO **Sadowa** 37.12 360 IAmb IAmb 15 02 51.6
comp=Z,91nm,1.6s
SADO **Sadowa** 37.12 360 LR LR 15 19 01.1
comp=Z,88nm,18.6s,baz=150,slow=38
LONY **Lake Ozonia** 37.16 5 P **P** **15 02 44.1 +0.6**
baz=187
RPRD **Ribas do Rio P** 37.20 139 *eP* **P** **15 02 43.8 -0.4**
ANMO **Albuquerque** 37.29 321 P **P** **15 02 45.4 +0.4**
ANMO IAmb IAmb 15 02 51.7
comp=Z,52nm,1.6s
ANMO **Albuquerque** 37.29 321 P **P** **15 02 45.6 +0.6**
baz=131
ANMO **Albuquerque** 37.29 321 P **P** **15 02 45.4 +0.4**
ANMO pmax pmax
comp=Z,53nm,1.6s
ANMO **Albuquerque** 37.29 321 P **P** **15 02 45.3 +0.4**
comp=Z,6.7nm,0.8s,baz=241,slow=8.8,SNR=26
ANMO LR LR 15 22 21.8
comp=Z,100nm,18.8s,baz=211,slow=43
comp=Z,6.7nm,0.8s
GLMI **Grayling** 37.52 353 P **P** **15 02 48.0 +1.4**
baz=171
T25A **Trinidad** 37.56 326 P **P** **15 02 47.0 -0.3**
baz=135,SNR=7.5
ESFA **Espinillo Form** 37.86 149 *eP* **P** **15 02 48.8 -0.9**
BGNE **Belgrade** 37.88 336 P **P** **15 02 49.4 -0.3**
baz=148
KSCO **Kaye Shedlock'** 37.99 329 P **P** **15 02 50.1 -0.7**
baz=140
TICA **Tres Isletas** 38.15 153 *eP* **P** **15 02 52.3 +0.2**
BDFB **Brasilia** 38.22 127 P **P** **15 02 53.1 +0.2**
BDFB **Brasilia** 38.22 127 P **P** **15 02 53.1 +0.2**
BDFB pmax pmax
comp=Z,18nm,1.0s
BDFB **Brasilia** 38.22 127 P **P** **15 02 53.2 +0.2**
comp=Z,11nm,0.9s,baz=283,slow=8.2,SNR=20
BDFB LR LR 15 19 27.0
comp=Z,624nm,18.4s,baz=317,slow=38
comp=Z,11nm,0.9s
PKME **Peaks-Kenny Pk** 38.52 11 P **P** **15 02 55.4 +0.4**
baz=195
SDCO **Great Sand Dun** 38.61 325 IAmb IAmb 15 03 03.7
comp=Z,59nm,1.6s
SDCO **Great Sand Dun** 38.61 325 P **P** **15 02 56.5 +0.3**
baz=134,SNR=6.2
TUC **Tucson** 38.61 314 P **P** **15 02 56.5 +0.4**
TUC **Tucson** 38.61 314 P **P** **15 02 56.6 +0.4**
baz=133
TUC **Tucson** 38.61 314 P **P** **15 02 56.5 +0.4**
TUC pmax pmax
comp=Z,40nm,1.7s
ITRB **Iturama** 38.94 134 *eP* **P** **15 02 58.8 -0.2**
E46A **Sault Ste Mari** 39.01 354 IAmb IAmb 15 03 06.6
comp=Z,56nm,1.1s
SDBA **SAO DESIDERIO** 39.09 120 *eP* **P** **15 03 00.7 +0.4**
OGNE **Ogallala** 39.19 332 P **P** **15 03 00.3 -0.5**
baz=142
CO02 **Combarbal** 39.21 169 IAmb IAmb 15 03 04.2
comp=Z,44nm,1.0s
Q24A **Divide** 39.28 327 IAmb IAmb 15 03 09.7
comp=Z,66nm,1.8s
Q24A **Divide** 39.28 327 P **P** **15 03 01.0 -0.9**
baz=136
S22A **4UR Ranch, Cre** 39.37 324 P **P** **15 03 03.1 +0.4**
baz=133
IPMB **Ipameri, GO** 39.43 130 *eP* **P** **15 03 02.0 -1.1**
SPMN **Marine on St.** 39.49 344 IAmb IAmb 15 03 09.0
comp=Z,67nm,1.4s
SPMN **Marine on St.** 39.49 344 P **P** **15 03 02.8 -0.3**
baz=158
W18A **Petrified Fore** 39.49 319 IAmb IAmb 15 03 12.0
comp=Z,86nm,1.3s
W18A **Petrified Fore** 39.49 319 P **P** **15 03 04.2 +0.7**
baz=127,SNR=6.7
TRCB **Terra Rica** 39.55 140 *eP* **P** **15 03 02.5 -1.5**
CPUP **Villa Florida** 39.58 149 P **P** **15 03 02.7 -1.4**
comp=Z,1.7nm,0.8s,baz=356,slow=9.4,SNR=5.2
CPUP PcP **PcP** **15 05 11.7 +0.2**
comp=Z,2.9nm,0.9s,baz=304,slow=3.1,SNR=4.0
CPUP LR LR 15 20 42.6
comp=Z,197nm,18.4s,baz=332,slow=38
comp=Z,1.7nm,0.8s
PCMB **Pacaembu** 39.60 138 *eP* **P** **15 03 03.7 -0.7**
214A **Organ Pipe Nat** 39.90 312 IAmb IAmb 15 03 15.2
comp=Z,75nm,1.8s
214A **Organ Pipe Nat** 39.90 312 P **P** **15 03 06.5 -0.3**
baz=120
MVCO **Mesa Verde** 40.01 322 IAmb IAmb 15 03 14.9
comp=Z,88nm,1.9s
MVCO **Mesa Verde** 40.01 322 P **P** **15 03 06.6 -1.3**
baz=130,SNR=7.2
ISCO **Idaho Springs** 40.13 327 P **P** **15 03 08.9 0.0**
ISCO IAmb IAmb 15 03 17.0
comp=Z,70nm,1.6s
ISCO **Idaho Springs** 40.13 327 P **P** **15 03 08.6 -0.3**
baz=136,SNR=5.9
ISCO **Idaho Springs** 40.13 327 P **P** **15 03 08.9 0.0**
ISCO pmax pmax
comp=Z,70nm,1.6s
D41A **Chassel** 40.29 350 IAmb IAmb 15 03 17.1
comp=Z,101nm,1.4s
SUSD **Miller** 40.77 338 P **P** **15 03 13.5 -0.3**
baz=148
WUAZ **Wupatki** 40.81 318 P **P** **15 03 15.3 +0.9**
WUAZ **Wupatki** 40.81 318 P **P** **15 03 14.2 -0.2**
baz=125,SNR=12
VA03 **San Esteban** 40.81 169 IAmb IAmb 15 03 17.6
comp=Z,31nm,0.9s
SFX **San Felipe** 40.98 310 P **P** **15 03 14.1 -1.6**
N23A **Red Feather La** 41.09 328 P **P** **15 03 16.4 -0.5**
baz=137
EYMN **Ely** 41.72 347 P **P** **15 03 21.1 -0.5**
baz=161,SNR=5.6
MT09 **Talagante** 41.72 170 P **P** **15 03 22.7 +0.9**
O20A **White River Ci** 41.80 326 IAmb IAmb 15 03 32.0
comp=Z,48nm,1.6s
O20A **White River Ci** 41.80 326 P **P** **15 03 21.5 -1.1**
baz=133
GLA **Glamis** 41.92 312 P **P** **15 03 23.0 -0.5**
baz=119
LMEL **Las Melosas** 41.93 169 IAmb IAmb 15 03 55.4
comp=Z,19nm,0.5s
BO04 **La Punta** 41.99 170 P **P** **15 03 25.5 +1.5**
PDMCI **Parker Dam,Lak** 42.05 314 P **P** **15 03 24.1 -0.3**
baz=121
BO01 **Tunca** 42.31 170 P **P** **15 03 27.0 +0.5**
BO01 IAmb IAmb 15 03 29.4
comp=Z,54nm,1.6s
SRU **San Rafael Swe** 42.45 323 IAmb IAmb 15 03 35.5
comp=Z,43nm,1.2s
YUH **Yuha Desert** 42.53 311 IAmb IAmb 15 03 36.3
comp=Z,59nm,1.9s
SWSC **Sam W. Stewart** 42.58 312 P **P** **15 03 28.5 -0.3**
baz=118
RSSD **Black Hills** 42.60 333 P **P** **15 03 28.4 -0.7**
RSSD IAmb IAmb 15 03 36.8
comp=Z,67nm,1.4s
RSSD **Black Hills** 42.60 333 P **P** **15 03 28.8 -0.3**
baz=141
RSSD **Black Hills** 42.60 333 P **P** **15 03 28.4 -0.7**
RSSD pmax pmax
comp=Z,67nm,1.5s
NEE2 **Needles Airpor** 42.63 315 P **P** **15 03 28.8 -0.4**
baz=121
KNB **Kanab** 42.63 319 IAmb IAmb 15 03 37.0
comp=Z,46nm,1.6s
B35A **Bob, Littlefor** 42.63 345 IAmb IAmb 15 03 34.4
comp=Z,54nm,1.6s
BC3 **Big Chuckawall** 42.67 313 P **P** **15 03 29.3 -0.3**
baz=119
K22A **Casper** 42.67 330 IAmb IAmb 15 03 37.5
comp=Z,55nm,1.3s
K22A **Casper** 42.67 330 P **P** **15 03 30.0 +0.4**
baz=137
IKP **In-Ko-Pah, Jac** 42.67 311 P **P** **15 03 30.1 +0.4**
baz=118
IRM **Iron Mountain** 42.69 314 P **P** **15 03 30.2 +0.5**
baz=120,SNR=14
BO02 **Sierra Bellavi** 42.75 170 IAmb IAmb 15 03 33.3
comp=Z,62nm,1.6s
RDMU **Red Mountain** 42.84 325 IAmb IAmb 15 03 37.8
comp=Z,49nm,1.4s
CBX **Cerro Bola** 42.94 310 IAmb IAmb 15 03 39.8
comp=Z,78nm,1.6s
TMUT **Trail Mountain** 42.98 322 IAmb IAmb 15 03 39.3
comp=Z,59nm,1.8s
MONP2 **Monument Peak** 43.02 311 P **P** **15 03 32.0 -0.7**
baz=118
AGMN **Agassiz Nation** 43.15 343 IAmb IAmb 15 03 39.3
comp=Z,55nm,1.5s
AGMN **Agassiz Nation** 43.15 343 P **P** **15 03 32.7 -0.4**
baz=155,SNR=6.5
BELC **Belle Mtn. Jos** 43.23 313 P **P** **15 03 34.1 -0.1**
baz=119,SNR=13
GMRC **Granite Mounta** 43.37 314 P **P** **15 03 35.5 +0.1**
baz=120,SNR=6.8
TPFO **Pinon Flats** 43.38 312 P **P** **15 03 36.2 +0.8**
baz=118
PFO **Pinyon Flats O** 43.38 312 P **P** **15 03 36.1 +0.6**
PFO IAmb IAmb 15 03 43.9
comp=Z,32nm,1.2s
PFO **Pinyon Flats O** 43.38 312 P **P** **15 03 35.6 +0.1**
baz=118
PFO **Pinyon Flats O** 43.38 312 P **P** **15 03 36.1 +0.6**
PFO pmax pmax
comp=Z,32nm,1.3s
PFO **Pinyon Flats O** 43.38 312 P **P** **15 03 35.5 +0.1**
comp=Z,3.5nm,0.7s,baz=121,slow=8.1,SNR=8.4
PFO LR LR 15 23 39.9
comp=Z,139nm,18.7s,baz=146,slow=39
comp=Z,3.5nm,0.7s
BSUT **Blindstream Ca** 43.51 324 IAmb IAmb 15 03 44.5
comp=Z,51nm,1.3s
109C **Camp Elliot, M** 43.53 311 IAmb IAmb 15 03 44.7
comp=Z,36nm,1.2s
109C **Camp Elliot, M** 43.53 311 P **P** **15 03 37.0 +0.5**
baz=117
MPU **Maple Canyon** 43.69 323 IAmb IAmb 15 03 45.6
comp=Z,41nm,1.3s
HEC **Hector,Ludlow** 43.88 314 P **P** **15 03 39.9 +0.5**
baz=120,SNR=11
MDND **Maddock** 43.92 340 P **P** **15 03 39.5 +0.1**
baz=150
MURC **Murrieta** 43.92 312 P **P** **15 03 39.4 -0.3**
baz=118,SNR=11
BBRC **Big Bear Solar** 44.03 313 P **P** **15 03 40.5 -0.2**
baz=118
ELS **Elsinore Mount** 44.11 312 IAmb IAmb 15 03 48.9
comp=Z,61nm,1.8s
CTU **Camp Tracy** 44.18 324 IAmb IAmb 15 03 49.6
comp=Z,37nm,1.3s
BW06 **Boulder Array** 44.32 327 P **P** **15 03 43.0 0.0**
baz=134,SNR=32
PD31 **Pinedale Array** 44.32 327 IAmb IAmb 15 03 50.4
comp=Z,59nm,1.4s
PDAR **Pinedale Array** 44.32 327 P **P** **15 03 43.7 +0.6**
comp=Z,7.2nm,0.9s,baz=131,slow=11,SNR=46
PDAR PcP **PcP** **15 05 26.6 -0.7**
comp=Z,1.8nm,1.0s,baz=123,slow=3.3,SNR=2.5
PDAR LR LR 15 26 10.9
comp=Z,64nm,18.5s,baz=120,slow=42
comp=Z,7.2nm,0.9s
SHOC **Shoshone, Teco** 44.37 315 P **P** **15 03 43.9 +0.6**
baz=120,SNR=7.5
GSC **Goldstone, Bar** 44.45 314 IAmb IAmb 15 03 52.5
comp=Z,40nm,1.3s
GSC **Goldstone, Bar** 44.45 314 P **P** **15 03 44.8 +0.9**
baz=119,SNR=6.1
DUG **Dugway, Tooele** 44.51 322 IAmb IAmb 15 03 51.7
comp=Z,37nm,1.3s
DUG **Dugway, Tooele** 44.51 322 P **P** **15 03 45.1 +0.7**
baz=128,SNR=13
BFSC **Mount Baldy Ra** 44.56 312 P **P** **15 03 44.5 -0.4**
baz=118
SCI2 **San Clemente I** 44.66 310 P **P** **15 03 46.2 +0.7**
baz=116
HWUT **Hardware Ranch** 44.66 325 IAmb IAmb 15 03 53.2
comp=Z,52nm,1.4s
CIS **Catalina Islan** 44.74 311 P **P** **15 03 46.8 +0.5**
baz=116,SNR=5.5
SPR3 **Spring Creek 3** 44.74 320 IAmb IAmb 15 03 53.5
comp=Z,31nm,1.5s
FMP **Fort Macarthur** 44.79 311 P **P** **15 03 47.1 +0.5**
baz=117
GWY **Greenwater Val** 44.79 315 IAmb IAmb 15 03 54.0
comp=Z,28nm,1.5s

QSM	Queen of Sheba	44.82	315	IAmb	IAmb	15 03 54.2		
	comp=Z,28nm,1.4s							
RCBR	Riachuelo	44.83	106	LR	LR	15 24 07.2		
	comp=Z,205nm,19.6s,baz=284,slow=38							
TPNV	Topopah Spring	44.89	316	IAmb	IAmb	15 03 55.5		
	comp=Z,34nm,1.5s							
TPNV	Topopah Spring	44.89	316	P	P	15 03 48.5	+0.9	
	baz=121							
ULM	Lac du Bonnet	44.92	345	IAmb	IAmb	15 03 53.2		
	comp=Z,55nm,1.3s							
ULM	Lac du Bonnet	44.92	345	P	P	15 03 46.2	-1.2	
	comp=Z,11nm,0.8s,baz=152,slow=8.1,SNR=26							
ULM				LR	LR	15 24 50.6		
	comp=Z,117nm,18.2s,baz=132,slow=39							
	comp=Z,11nm,0.8s							
DECC	Green Verdugo	45.06	312	P	P	15 03 49.2	+0.4	
	baz=117							
FURC	Furnace Creek,	45.06	315	P	P	15 03 49.0	+0.3	
	baz=120							
Q12A	Willow Creek R	45.08	320	IAmb	IAmb	15 03 57.1		
	comp=Z,20nm,1.0s							
BGU	Big Grassy Mou	45.09	323	IAmb	IAmb	15 03 56.8		
	comp=Z,40nm,1.3s							
EDW2	Edwards Air Fo	45.10	313	P	P	15 03 49.1	0.0	
	baz=118,SNR=15							
LRMC	Laurel Mtn Rad	45.16	314	P	P	15 03 49.7	0.0	
	baz=119							
AHID	Auburn Hatcher	45.16	326	IAmb	IAmb	15 03 56.9		
	comp=Z,52nm,1.4s							
R11B	Troy Canyon, C	45.19	318	P	P	15 03 50.5	+0.5	
	baz=123,SNR=10							
MPMC	Manual Prospec	45.30	315	P	P	15 03 51.9	+1.0	
	baz=119,SNR=20							
RPN	Rapa Nui	45.37	219	LR	LR	15 18 12.7		
	comp=Z,67nm,19.1s,baz=88,slow=30							
OSI	Osito Audit: C	45.51	312	P	P	15 03 52.8	+0.4	
	baz=117							
SNCC	San Nicolas Is	45.51	310	P	P	15 03 52.5	+0.1	
	baz=115							
LAO	LASA Array	45.56	334	P	P	15 03 54.1	+1.5	
	baz=140							
GRAC	Grapevine Rang	45.68	316	P	P	15 03 54.5	+0.8	
	baz=120							
ISA	Isabella, Lake	45.81	314	P	P	15 03 54.8	-0.1	
	baz=118							
ARVC	Arvin	45.82	313	P	P	15 03 55.0	+0.3	
	baz=117							
RLMT	Red Lodge	45.83	330	P	P	15 03 54.5	-0.4	
	baz=136,SNR=21							
IMW	Indian Meadow	45.83	328	IAmb	IAmb	15 04 02.6		
	comp=Z,39nm,1.1s							
CWC	Cottonwood Cre	45.90	315	P	P	15 03 55.4	-0.3	
	baz=119							
H17A	Grant Village	45.98	328	IAmb	IAmb	15 04 06.3		
	comp=Z,37nm,1.5s							
H17A	Grant Village	45.98	328	P	P	15 03 55.7	-0.5	
	baz=134							
LCH	Last Change Ra	45.99	316	IAmb	IAmb	15 04 04.4		
	comp=Z,33nm,1.6s							
YMP	Mirror Lake Pl	46.00	329	IAmb	IAmb	15 04 14.7		
	comp=Z,31nm,1.4s							
DGMT	Dagmar	46.13	337	IAmb	IAmb	15 04 03.4		
	comp=Z,22nm,1.2s							
DGMT	Dagmar	46.13	337	P	P	15 03 56.0	-1.1	
	baz=144,SNR=6.3							
YFT	Old Faithful	46.16	328	IAmb	IAmb	15 04 06.5		
	comp=Z,27nm,1.2s							
SBC	Santa Barbara	46.17	311	P	P	15 03 56.4	-1.1	
	baz=116							
YNR	Norris Junctio	46.26	329	IAmb	IAmb	15 04 19.9		
	comp=Z,45nm,1.7s							
DSP	Deep Springs	46.28	316	IAmb	IAmb	15 04 06.9		
	comp=Z,30nm,1.4s							
TIN	Tinemaha, Big	46.31	315	P	P	15 03 58.1	-0.6	
	baz=120							
ELK	Elko	46.32	321	IAmb	IAmb	15 04 05.8		
	comp=Z,42nm,1.9s							
ELK	Elko	46.32	321	P	P	15 03 58.6	-0.3	
	comp=Z,1.9nm,0.9s,baz=109,slow=5.0,SNR=4.8							
ELK				LR	LR	15 26 58.7		
	comp=Z,94nm,18.7s,baz=150,slow=41							
	comp=Z,1.9nm,0.9s							
VES	Vestal, Richgr	46.34	313	P	P	15 03 58.6	-0.2	
	baz=118,SNR=8.7							
PKM	Mcpherson Peak	46.44	312	P	P	15 03 58.8	-1.0	
	baz=116							
SMMC	Simmler	46.76	312	P	P	15 04 01.3	-1.0	
	baz=116							
NV11	Mina Array Sit	46.95	317	IAmb	IAmb	15 04 13.2		
	comp=Z,33nm,1.3s							
NVAR	Mina Array Bea	47.05	317	P	P	15 04 05.4	+0.8	
	comp=Z,4.4nm,0.8s,baz=130,slow=7.1,SNR=23							
NVAR				PcP	PcP	15 05 37.2	+0.3	
	comp=Z,1.1nm,0.8s,baz=120,slow=5.3,SNR=4.3							
NVAR				LR	LR	15 27 43.5		
	comp=Z,90nm,18.7s,baz=109,slow=41							
	comp=Z,4.4nm,0.8s							
KVN	Kaiserville	47.23	318	IAmb	IAmb	15 04 13.7		
	comp=Z,19nm,1.2s							
RYN	Ryan	47.30	317	IAmb	IAmb	15 04 14.4		
	comp=Z,24nm,1.2s							
GO06	Curarrehue	47.34	172	IAmb	IAmb	15 04 08.2		
	comp=Z,14nm,1.0s							
BOZ	Bozeman (W)	47.35	329	P	P	15 04 06.5	-0.3	
	baz=133,SNR=15							
HLID	Hailey	47.53	325	P	P	15 04 08.1	-0.1	
	baz=129,SNR=16							
LR05	Currie	47.91	173	IAmb	IAmb	15 04 14.7		
	comp=Z,18nm,0.9s							
TRQA	Tornquist	47.97	162	P	P	15 04 12.5	+1.0	
TRQA				IAmb	IAmb	15 04 13.5		
	comp=Z,35nm,1.4s							
TRQA	Tornquist	47.97	162	P	P	15 04 12.5	+1.0	
TRQA				pmax	pmax			
	comp=Z,35nm,1.4s							
EGMT	Eagleton	48.15	332	P	P	15 04 12.9	0.0	
	baz=137							
SCHQ	Schefferville	48.17	9	P	P	15 04 13.9	+1.1	
	comp=Z,11nm,0.8s,baz=179,slow=7.2,SNR=12							
SCHQ				LR	LR	15 28 11.5		
	comp=Z,52nm,18.1s,baz=226,slow=41							
	comp=Z,11nm,0.8s							
MFID	Camas Ranch	48.25	324	IAmb	IAmb	15 04 21.5		
	comp=Z,23nm,1.1s							
PLCA	Paso Flores	48.60	172	IAmb	IAmb	15 04 18.6		
	comp=Z,22nm,0.9s							
PLCA	Paso Flores	48.60	172	P	P	15 04 17.2	+0.9	
	comp=Z,16nm,0.9s,baz=352,slow=8.6,SNR=26							
	comp=Z,16nm,0.9s							
ORV	Oroville	49.77	317	IAmb	IAmb	15 04 33.6		
	comp=Z,45nm,1.5s							
J08A	Circle Bar Ran	49.79	322	IAmb	IAmb	15 04 32.6		
	comp=Z,27nm,1.1s							
FFC	Flin Flon	50.62	343	P	P	15 04 30.6	-0.9	
FFC				IAmb	IAmb	15 04 37.7		
	comp=Z,54nm,1.8s							
FFC	Flin Flon	50.62	343	eP	P	15 04 30.6	-0.9	
LL02	Futaleuf	50.85	173	IAmb	IAmb	15 04 35.3		
	comp=Z,30nm,0.9s							
G08A	Pilot Rock	51.17	324	IAmb	IAmb	15 04 43.5		
	comp=Z,46nm,1.5s							
YBH	Yreka Blue Hor	51.62	319	P	P	15 04 37.5	-1.8	
	comp=Z,3.9nm,0.9s,baz=113,slow=7.3,SNR=3.6							
YBH				LR	LR	15 28 31.6		
	comp=Z,146nm,21.9s,baz=158,slow=38							
	comp=Z,3.9nm,0.9s							
NEW	Newport	51.94	328	P	P	15 04 41.2	-0.4	
	baz=129							
NEW	Newport	51.94	328	P	P	15 04 39.4	-2.3	
	comp=Z,5.3nm,1.0s,baz=148,slow=7.3,SNR=5.1							
NEW				LR	LR	15 31 29.0		
	comp=Z,35nm,18.0s,baz=148,slow=42							
	comp=Z,5.3nm,1.0s							
F07A	Phinny Hill Vi	52.07	324	IAmb	IAmb	15 04 50.2		
	comp=Z,35nm,1.1s							
C09A	Chrisman Ranch	52.26	327	IAmb	IAmb	15 04 51.6		
	comp=Z,34nm,1.4s							
FCC	Fort Churchill	52.47	350	IAmb	IAmb	15 04 51.0		
	comp=Z,33nm,1.4s							
MXC	Moxie City	52.67	325	IAmb	IAmb	15 04 55.0		
	comp=Z,36nm,1.3s							
COYC	Coyhaique	53.18	174	IAmb	IAmb	15 04 52.7		
	comp=Z,25nm,0.9s							
BRLDA	Berland Lookou	55.84	334	IAmb	IAmb	15 05 33.3		
	comp=Z,28nm,1.2s							
FRB	Frobisher Bay	56.63	5	LR	LR	15 32 30.1		
	comp=Z,78nm,18.0s,baz=236,slow=39							
BBB	Bella Bella	59.97	327	LR	LR	15 34 50.2		
	comp=Z,70nm,18.2s,baz=20,slow=39							

YKA	Yellowknife Ar	60.77	342	P	P	15 05 43.4	-0.8	
YKA	Yellowknife Ar	60.77	342	P	P	15 05 43.5	-0.7	
	comp=Z,7.9nm,0.8s,baz=130,slow=7.2,SNR=129							
	comp=Z,7.9nm,0.8s							
TOAD	Toad River Com	62.21	335	P	P	15 05 54.0	-0.2	
	baz=126							
FLDN	Fort Liard	62.33	337	P	P	15 05 55.3	+0.5	
	baz=128							
KOTAN	Kotaneelee Air	62.49	336	P	P	15 05 56.4	+0.4	
	baz=128							
TAOE	Nuku Hiva Isla	63.23	256	eLR	LR	15 24 45.3		
	comp=Z,143nm,25.1s							
T35M	Bob Quinn	63.45	331	P	P	15 06 03.8	+1.4	
	baz=120							
DLBC	Dease Lake	64.08	333	P	P	15 06 08.0	+1.4	
	baz=121							
DLBC	Dease Lake	64.08	333	P	P	15 06 05.8	-0.8	
	comp=Z,2.1nm,0.9s,baz=129,slow=6.3,SNR=4.2							
DLBC				LR	LR	15 38 48.2		
	comp=Z,69nm,18.5s,baz=102,slow=40							
	comp=Z,2.1nm,0.9s							
CRAG	Craig	64.14	329	P	P	15 06 07.3	+0.3	
	baz=116							
WRAK	Wrangell Islan	64.19	330	P	P	15 06 07.8	+0.6	
	baz=118							
WRGLY	Wrigley	64.20	339	IAmb	IAmb	15 06 14.1		
	comp=Z,24nm,1.4s							
WRGLY	Wrigley	64.20	339	P	P	15 06 07.0	-0.2	
	baz=129							
S34M	Telegraph Cree	64.32	332	P	P	15 06 09.5	+1.4	
	baz=120							
WTLY	Watson Lake, Y	64.43	335	P	P	15 06 10.8	+1.9	
	baz=123							
R33M	Jennings River	64.99	334	P	P	15 06 14.1	+1.4	
	baz=120							
TGTN	Hyland Airport	64.99	336	P	P	15 06 13.1	+0.5	
	baz=124							
Q32M	Nakina River	65.36	333	P	P	15 06 15.4	+0.3	
	baz=119							
S32K	Killisnoo	65.75	331	P	P	15 06 18.8	+1.4	
	baz=116							
SIT	Sitka	65.94	330	P	P	15 06 18.6	0.0	
	baz=115							
R32K	Eaglecrest	66.08	331	P	P	15 06 20.2	+0.6	
	baz=116							
P33M	Teslin, Yukon	66.20	334	P	P	15 06 21.9	+1.5	
	baz=119							
P32M	Atlin	66.31	333	P	P	15 06 21.7	+0.6	
	baz=118							
ICESG	Greenland Ices	66.61	14	iP	P	15 06 21.5	-1.7	
ICESG				IAmb	IAmb	15 06 46.0		
	comp=Z,8.0nm,0.9s							
R31K	City Hall, Gus	66.72	331	P	P	15 06 24.1	+0.4	
	baz=115							
S31K	Pelican	66.77	331	P	P	15 06 24.1	+0.2	
	baz=115							
N32M	Quiet Lake	66.77	335	P	P	15 06 25.3	+1.3	
	baz=119							
SKAG	Skagway	66.98	332	P	P	15 06 25.7	+0.4	
	baz=116							
WHY	Whitehorse	67.32	334	P	P	15 06 27.6	+0.1	
	baz=117							
FARO	Faro, Yukon	67.41	336	P	P	15 06 28.3	+0.3	
	baz=119							
RES	Resolute Bay	67.77	355	IAmb	IAmb	15 06 36.6		
	comp=Z,36nm,1.9s							
RES	Resolute Bay	67.77	355	LR	LR	15 37 28.3		
	comp=Z,71nm,19.7s,baz=55,slow=37							
M31M	Drury Creek, Y	67.83	335	P	P	15 06 31.9	+1.3	
	baz=118							
O30N	Mendenhall	67.90	334	IAmb	IAmb	15 06 38.5		
	comp=Z,19nm,1.4s							
O30N	Mendenhall	67.90	334	P	P	15 06 32.4	+1.3	
	baz=116							
P30M	Million Dollar	68.01	333	P	P	15 06 33.4	+1.4	
	baz=115							
P29M	Windy Craggy	68.17	332	P	P	15 06 33.2	+0.3	
	baz=114							
C36M	Paulatuk	68.35	344	P	P	15 06 33.2	-0.5	
	baz=131							
HYT	Haines Junctio	68.55	333	P	P	15 06 36.4	+1.0	
	baz=114							
O29M	Mount Kennedy	68.82	333	P	P	15 06 38.4	+1.3	
	baz=113							
PNL	Peninsula	68.96	332	P	P	15 06 39.2	+1.5	
	baz=112							
YUK6	Outpost Mounta	68.98	333	P	P	15 06 39.6	+1.5	
	baz=114							
M30M	Minto, Yukon	68.99	335	P	P	15 06 39.5	+1.6	
	baz=116,SNR=14							
MAYO	Mayo, Yukon	69.08	336	P	P	15 06 40.1	+1.7	
	baz=117							
YUK4	Talbot Arm	69.27	334	P	P	15 06 41.2	+1.3	
	baz=114							
SUMG	Summit	69.44	12	P	P	15 06 41.6	+0.6	
SUMG				IAmb	IAmb	15 06 42.6		
	comp=Z,15nm,0.9s							
SUMG	Summit	69.44	12	P	P	15 06 41.6	+0.6	
SUMG				pmax	pmax			
	comp=Z,15nm,0.9s							
SUMG	Summit	69.44	12	iP	P	15 06 41.0	0.0	
SUMG				IAmb	IAmb	15 06 43.0		
	comp=Z,8.3nm,0.7s							
PINM	Pinnacle	69.52	332	P	P	15 06 41.2	-0.1	
	baz=112							
H31M	Peel River	69.54	339	P	P	15 06 41.6	+0.3	
	baz=119							
M29M	Somme Creek	69.64	335	P	P	15 06 41.9	-0.2	
	baz=114							
J30M	Hart River	69.70	337	IAmb	IAmb	15 06 50.7		
	comp=Z,14nm,1.2s							
J30M	Hart River	69.70	337	P	P	15 06 42.3	-0.1	
	baz=117							
YUK8	Steele Glacier	69.75	333	P	P	15 06 43.3	+0.4	
	baz=112							
L29M	L29M	69.78	335	IAmb	IAmb	15 06 50.7		
	comp=Z,21nm,1.2s							
L29M	L29M	69.78	335	P	P	15 06 43.4	+0.6	
	baz=115							
K29M	Barlow Dome	69.84	336	IAmb	IAmb	15 06 51.0		
	comp=Z,14nm,1.2s							
K29M	Barlow Dome	69.84	336	P	P	15 06 44.6	+1.3	
	baz=116							
I30M	Mount Dempster	70.01	338	IAmb	IAmb	15 06 51.6		
	comp=Z,28nm,1.4s							
I30M	Mount Dempster	70.01	338	P	P	15 06 45.8	+1.5	
	baz=117							
G31M	Satah River	70.07	340	IAmb	IAmb	15 06 52.0		
	comp=Z,28nm,1.3s							
G31M	Satah River	70.07	340	P	P	15 06 44.3	-0.1	
	baz=120,SNR=7.6							
F31M	Tsiigehtchic	70.15	340	P	P	15 06 45.7	+0.8	
	baz=120							
YUK3	Moose Creek	70.24	334	P	P	15 06 45.9	0.0	
	baz=112,SNR=5.6							
CTG	Chitna Glacier	70.34	333	P	P	15 06 47.0	+0.6	
	baz=111							
MESA	MESA	70.34	332	P	P	15 06 46.3	-0.3	
	baz=110							
A36M	Sachs Harbour	70.37	346	IAmb	IAmb	15 06 46.6		
	comp=Z,16nm,0.8s							
A36M	Sachs Harbour	70.37	346	P	P	15 06 45.6	-0.5	
	baz=130,SNR=21							
J29N	Klondike Camp	70.38	337	IAmb	IAmb	15 06 54.6		
	comp=Z,8.8nm,1.0s							
J29N	Klondike Camp	70.38	337	P	P	15 06 45.8	-0.7	
	baz=115							
BARN	Barnard Glacie	70.52	333	IAmb	IAmb	15 06 55.4		
	comp=Z,24nm,1.4s							
INK	Inuvik	70.52	341	IAmb	IAmb	15 06 54.6		
	comp=Z,36nm,1.4s							
INK	Inuvik	70.52	341	P	P	15 06 48.0	+0.8	
	baz=121,SNR=10							
BVCY	Beaver Creek	70.65	334	P	P	15 06 48.4	+0.2	
	baz=112,SNR=5.4							
EPYK	Eagle Plains	70.66	339	IAmb	IAmb	15 06 55.9		
	comp=Z,28nm,1.4s							
EPYK	Eagle Plains	70.66	339	P	P	15 06 48.6	+0.4	
	baz=117							
DAWY	Dawson	70.68	336	P	P	15 06 48.4	0.0	
DAWY				IAmb	IAmb	15 06 55.0		
	comp=Z,29nm,1.8s							
DAWY	Dawson	70.68	336	P	P	15 06 48.2	-0.1	
	baz=114							
G30M	tAoh Zrail Nji	70.77	339	IAmb	IAmb	15 06 56.4		
	comp=Z,47nm,1.9s							
G30M	tAoh Zrail Nji	70.77	339	P	P	15 06 48.6	-0.2	
	baz=118							

F30M	Barrier River	70.92	340	P	P	15 06 50.1	+0.5	
	baz=118							
BGLC	Bering Glacier	70.95	331	P	P	15 06 50.0	0.0	
	baz=109							
HOPE	Hope Point	71.05	155	iP	P	15 06 50.4	-0.2	
CRQE	Cirque	71.07	332	P	P	15 06 49.9	-1.0	
	baz=109							
M27K	Edge Creek, AK	71.08	334	P	P	15 06 51.7	+0.9	
	baz=111							
H29M	Whitestone	71.19	338	P	P	15 06 52.0	+0.7	
	baz=116							
MCARA	McCarthy VSAT	71.25	333	P	P	15 06 51.7	-0.1	
MCARA				IAmb	IAmb	15 07 02.3		
	comp=Z,15nm,1.0s							
MCARA	McCarthy VSAT	71.25	333	P	P	15 06 52.7	+0.9	
	baz=110							
L27K	Beaver Creek,	71.31	335	IAmb	IAmb	15 07 00.6		
	comp=Z,38nm,1.4s							
L27K	Beaver Creek,	71.31	335	P	P	15 06 52.3	+0.2	
	baz=111							
VRDI	Verde Repeater	71.39	333	IAmb	IAmb	15 07 01.0		
	comp=Z,33nm,1.6s							
NEEM	North Greenlan	71.43	6	iP	P	15 06 52.4	-0.6	
NEEM				IAmb	IAmb	15 06 54.6		
	comp=Z,5.6nm,0.8s							
KAIM	Kayak Island	71.43	331	P	P	15 06 52.6	-0.3	
	baz=108							
I28M	Miner Creek	71.46	337	IAmb	IAmb	15 07 24.0		
	comp=Z,46nm,1.9s							
I28M	Miner Creek	71.46	337	P	P	15 06 53.0	-0.1	
	baz=114							
GLB	Gilahina Butte	71.62	333	IAmb	IAmb	15 07 02.6		
	comp=Z,37nm,1.6s							
EGAK	Eagle	71.67	336	IAmb	IAmb	15 07 01.6		
	comp=Z,22nm,1.6s							
EGAK	Eagle	71.67	336	P	P	15 06 54.6	+0.4	
	baz=112							
K27K	Chicken	71.76	336	P	P	15 06 56.0	+1.2	
	baz=111							
BMRM	Bremner River	71.84	332	P	P	15 06 55.2	-0.2	
	baz=108							
L26K	Log Cabin Wild	71.94	334	P	P	15 06 57.1	+1.1	
	baz=110							
E29M	Blow River	71.98	340	IAmb	IAmb	15 07 03.6		
	comp=Z,31nm,1.3s							
E29M	Blow River	71.98	340	P	P	15 06 55.7	-0.3	
	baz=117,SNR=11							
N25K	Chitina, Valde	72.03	333	P	P	15 06 56.4	-0.2	
	baz=108							
I27K	Kandik River	72.16	337	P	P	15 06 56.6	-0.7	
	baz=112							
Q23K	Middleton Isla	72.23	330	P	P	15 06 57.1	-0.5	
	baz=106							
EYAK	Cordova Ski Ar	72.25	331	P	P	15 06 58.6	+0.8	
	baz=107							
F28M	Old Crow	72.32	339	P	P	15 06 58.1	-0.1	
	baz=114							
H27K	Steamboat Moun	72.37	338	P	P	15 06 59.3	+0.8	
	baz=112							
HARP	HAARP	72.53	333	P	P	15 06 59.9	+0.4	
	baz=108							
SCRK	Sand Creek	72.53	335	IAmb	IAmb	15 07 07.2		
	comp=Z,39nm,1.6s							
SCRK	Sand Creek	72.53	335	P	P	15 07 00.6	+1.0	
	baz=109							
J26L	Joseph Creek	72.54	336	P	P	15 07 00.6	+1.0	
	baz=110							
KLU	Klutina	72.61	332	IAmb	IAmb	15 07 15.4		
	comp=Z,37nm,1.7s							
KLU	Klutina	72.61	332	P	P	15 07 00.2	+0.2	
	baz=107							
I26K	Coal Creek Min	72.65	337	P	P	15 06 59.9	-0.2	
	baz=111							
PAX	Paxson	72.84	334	P	P	15 07 02.3	+0.9	
	baz=108							
P23K	Montague Islan	72.89	331	P	P	15 07 02.3	+0.6	
	baz=105							
M24K	Tolsona, Glenn	72.90	333	P	P	15 07 03.0	+1.3	
	baz=107							
GLI	Glacier Island	72.98	332	P	P	15 07 02.7	+0.5	
	baz=106							
TIC	Toumodi	73.17	85⇓	iP	P	15 07 04.7	+0.5	
	comp=Z,3.4nm,0.2s							
LIC	Lamto	73.20	86⇓	iP	P	15 07 04.9	+0.5	
	comp=Z,36nm,0.7s							
K24K	Donnelly Dome	73.23	335	P	P	15 07 04.7	+1.1	
	baz=108							
J25K	Salcha River,	73.31	336	IAmb	IAmb	15 07 11.3		
	comp=Z,18nm,1.4s							
J25K	Salcha River,	73.31	336	P	P	15 07 04.3	+0.1	
	baz=108							
DBIC	Dimbokro	73.33	85	P	P	15 07 05.5	+0.4	
	comp=Z,8.1nm,0.7s,baz=253,slow=5.3,SNR=9.1							
DBIC				LR	LR	15 38 54.9		
	comp=Z,40nm,19.1s,baz=186,slow=36							
	comp=Z,8.1nm,0.7s							
SCM	Sheep Creek Mo	73.34	333	P	P	15 07 04.4	0.0	
	baz=106							
D27M	Malcolm River	73.36	341	P	P	15 07 05.1	+0.8	
	baz=114							
G26K	Porcupine Rive	73.47	338	P	P	15 07 06.1	+1.2	
	baz=110							
KIC	Kosan Boka	73.47	86⇑	iP	P	15 07 07.0	+1.0	
	comp=Z,27nm,0.8s							
M23K	Glacier View	73.52	332	P	P	15 07 05.4	0.0	
	baz=105							
ESDC	Sonseca Array	73.60	51	P	P	15 07 07.7	+1.4	
ESDC	Sonseca Array	73.60	51	P	P	15 07 07.1	+0.8	
	comp=Z,3.9nm,0.8s,baz=273,slow=5.8,SNR=26							
	comp=Z,3.9nm,0.8s							
PRP	Porcupine Dome	73.66	336	IAmb	IAmb	15 07 13.0		
	comp=Z,28nm,1.8s							
PRP	Porcupine Dome	73.66	336	P	P	15 07 06.9	+0.7	
	baz=108,SNR=6.5							
DHY	Denali Highway	73.71	334	P	P	15 07 06.6	0.0	
	baz=106							
WAT6	Susitna Watana	73.73	333	P	P	15 07 07.5	+0.7	
	baz=106,SNR=9.5							
KNK	Knik Glacier	73.76	332	IAmb	IAmb	15 07 13.8		
	comp=Z,39nm,1.4s							
KNK	Knik Glacier	73.76	332	P	P	15 07 07.7	+0.9	
	baz=104							
SML	Sawmill	73.80	332	P	P	15 07 06.6	-0.5	
	baz=105,SNR=5.3							
F26K	Sheenjek River	73.86	339	P	P	15 07 08.2	+0.9	
	baz=110							
FYU	Fort Yukon	73.88	338	IAmb	IAmb	15 07 15.9		
	comp=Z,36nm,1.6s							
HDA	Harding Lake	73.90	335	IAmb	IAmb	15 07 14.9		
	comp=Z,20nm,1.2s							
HDA	Harding Lake	73.90	335	P	P	15 07 08.2	+0.7	
	baz=107,SNR=7.0							
SEW	Seward	73.92	331	P	P	15 07 08.2	+0.5	
	baz=103							
ILAR	Eielson Array	73.98	336	P	P	15 07 07.5	-0.5	
	comp=Z,2.2nm,0.9s,baz=106,slow=4.1,SNR=21							
ILAR				LR	LR	15 43 18.7		
	comp=Z,75nm,18.1s,baz=70,slow=39							
	comp=Z,2.2nm,0.9s							
G

comp=Z,33nm,1.1s
M22K **Willow** 74.61 332 P P 15 07 12.4 +0.8
baz=103
H24K **Noodor Dome** 74.68 337 P P 15 07 11.8 -0.3
baz=106
G24K **Hadweenzic Riv** 74.78 337 P P 15 07 13.4 +0.8
baz=107
CUT **Chulitna** 74.83 333 P P 15 07 12.5 -0.4
baz=103
NEA2 **Nenana** 74.83 335 P P 15 07 12.9 0.0
baz=105
SUA **Susitna One** 74.84 332 IAmb IAmb 15 07 20.8
comp=Z,37nm,1.5s
SUA **Susitna One** 74.84 332 P P 15 07 14.0 +0.8
baz=102
CAPN **Captain Cook N** 74.88 331 P P 15 07 14.2 +1.0
baz=102
HOM **Homer** 74.90 330 P P 15 07 14.6 +1.2
baz=101
KDAK **Kodiak Island** 75.04 328 P P 15 07 14.0 -0.2
baz=100
KDAK **Kodiak Island** 75.04 328 LR LR 15 43 04.9
comp=Z,48nm,19.1s,baz=94,slow=38
TRF **Thorofare Moun** 75.08 334 IAmb IAmb 15 07 21.6
comp=Z,48nm,1.6s
TRF **Thorofare Moun** 75.08 334 P P 15 07 14.3 -0.3
baz=103
Q20K **Shuyak Island** 75.09 329 P P 15 07 14.3 -0.2
baz=100
I23K **Minto, Yukon-K** 75.10 336 P P 15 07 14.5 +0.1
baz=105
F24K **Squaw Lake** 75.17 338 P P 15 07 15.6 +0.8
baz=107
D25K **Kavik River** 75.18 340 P P 15 07 15.1 +0.2
baz=109
SKT **Skwentna** 75.31 332 IAmb IAmb 15 07 22.6
comp=Z,44nm,1.5s
SKT **Skwentna** 75.31 332 P P 15 07 16.2 +0.5
baz=102
OHAK **Old Harbor** 75.33 327 P P 15 07 16.1 +0.2
baz=99
N20K **Mount Spurr** 75.47 331 P P 15 07 16.3 -0.5
baz=101
BPAW **Bear Paw Mtn.** 75.53 334 IAmb IAmb 15 07 24.4
comp=Z,22nm,1.1s
BPAW **Bear Paw Mtn.** 75.53 334 P P 15 07 17.5 +0.5
baz=103
MLY **Manley** 75.63 335 P P 15 07 17.6 0.0
baz=103,SNR=6.4
SII **Sitkinak Islan** 75.71 326 P P 15 07 18.4 +0.2
baz=98
EKA **Eskdalemuir Ar** 75.72 35 P P 15 07 18.6 +0.4
comp=Z,5.5nm,0.8s,baz=253,slow=5.3,SNR=12
comp=Z,5.5nm,0.8s
G23K **Bananza Creek** 75.75 337 IAmb IAmb 15 07 26.6
comp=Z,28nm,1.4s
G23K **Bananza Creek** 75.75 337 P P 15 07 19.6 +1.3
baz=104
Q19K **Cape Douglas,** 75.78 329 P P 15 07 19.5 +0.9
baz=99
PPLA **Purkeypile** 75.80 333 P P 15 07 18.7 0.0
baz=102
CAST **Castle Rocks** 75.86 334 P P 15 07 18.9 0.0
baz=102
E23K **Chandalar** 75.95 339 P P 15 07 20.0 +0.6
baz=105
COLD **Coldfoot** 75.95 338 P P 15 07 20.2 +0.9
baz=104,SNR=6.7
D24K **Happy Valley** 75.96 340 P P 15 07 20.1 +0.7
baz=106
M20K **Styx River** 76.04 332 P P 15 07 19.9 -0.1
baz=100
CHUM **Lake Minchumin** 76.05 334 P P 15 07 19.9 0.0
baz=102
C24K **Franklin Bluff** 76.08 340 P P 15 07 20.3 +0.3
baz=106
TOLK **Toolik Lake Re** 76.08 339 P P 15 07 20.1 -0.1
baz=105
H22K **Ishtalitna Cre** 76.09 336 P P 15 07 20.3 +0.2
baz=103
I21K **Tanana** 76.18 335 IAmb IAmb 15 07 27.9
comp=Z,30nm,1.4s
I21K **Tanana** 76.18 335 P P 15 07 21.2 +0.5
baz=102
O19K **Port Alsworth** 76.32 330 P P 15 07 20.9 -0.7
baz=99
G22K **Bettles** 76.37 337 P P 15 07 22.0 +0.3
baz=103
CHIR **Chirikof Islan** 76.41 326 P P 15 07 22.6 +0.5
baz=97
L20K **Farewell, AK** 76.49 333 P P 15 07 23.1 +0.6
baz=100
N19K **Bonanza Creek** 76.50 331 P P 15 07 23.4 +0.8
baz=99
D23K **Nanushuk River** 76.56 339 P P 15 07 22.6 -0.1
baz=104
H21K **Melozitna Rive** 76.62 336 P P 15 07 23.4 +0.3
baz=102
M19K **Big River Lodg** 76.63 332 P P 15 07 23.5 +0.2
baz=99
P18K **Big Mountain,** 76.66 329 P P 15 07 22.5 -1.0
baz=98
O18K **Koktuh Hills** 76.71 330 P P 15 07 23.6 -0.2
baz=98
K20K **Telida** 76.72 333 IAmb IAmb 15 07 31.0
comp=Z,34nm,1.5s
K20K **Telida** 76.72 333 P P 15 07 23.9 +0.1
baz=100
MFF **Saint Martin d** 76.81 44 *e*P P 15 07 26.0 +1.4
MFF pmax pmax
comp=Z,64nm,2.0s
Q17K **Contact Creek** 76.85 328 P P 15 07 24.5 -0.2
baz=97
L19K **White Mountain** 76.89 332 P P 15 07 25.3 +0.5
baz=99
J20K **Nowinta River** 76.90 334 P P 15 07 25.8 +1.1
baz=100
G21K **Allakaket** 77.06 337 P P 15 07 26.4 +0.7
baz=101
I20K **Naaghedeneel** 77.15 335 P P 15 07 27.4 +1.3
baz=100
N18K **Kilae Creek** 77.16 331 P P 15 07 27.2 +0.8
baz=98
F21K **Alatna River** 77.19 337 P P 15 07 27.7 +1.3
baz=101
M18K **Stony River** 77.24 331 P P 15 07 27.3 +0.6
baz=98
D22K **Ayikyak River** 77.24 339 P P 15 07 27.6 +1.0
baz=102
P17K **Kvichak River** 77.25 329 P P 15 07 27.8 +1.0
baz=97
Q16K **King Salmon** 77.30 328 P P 15 07 28.2 +1.1
baz=96
H20K **Anotleneega Mo** 77.43 335 P P 15 07 28.8 +1.0
baz=100
J19K **Poorman** 77.51 334 P P 15 07 28.4 +0.2
baz=99
TTA **Tatalina** 77.53 333 P P 15 07 29.0 +0.6
baz=98
E21K **Killik River** 77.61 339 P P 15 07 29.0 +0.3
baz=101
O17K **Koliganek Bris** 77.65 330 P P 15 07 29.5 +0.5
baz=96
R16K **Pilot Point** 77.67 327 P P 15 07 29.3 +0.2
baz=95
N17K **Nushagak Hills** 77.78 330 P P 15 07 30.6 +0.9
baz=96
M17K **Holitna River** 78.00 331 P P 15 07 31.8 +0.9
baz=96
F20K **Avaraart Lake** 78.03 337 P P 15 07 31.7 +0.8
baz=99
P16K **Nushagak River** 78.03 329 P P 15 07 31.6 +0.5
baz=95
C21K **Knifeblade Rid** 78.04 339 P P 15 07 31.7 +0.6
baz=100
B21K **Ikpikpuk River** 78.07 340 P P 15 07 31.4 +0.2
baz=101
H19K **Roundabout Mou** 78.08 335 P P 15 07 32.1 +0.7
baz=98
O16K **Kokwok River B** 78.14 329 P P 15 07 31.6 -0.2
baz=95
GCSA **Galena City Sc** 78.16 335 P P 15 07 32.4 +0.6
baz=98
E20K **Nigu River** 78.39 338 P P 15 07 33.1 0.0
baz=99
G19K **Purcell Mounta** 78.43 336 P P 15 07 34.1 +0.8
baz=98
L17K **Donlin** 78.48 332 P P 15 07 33.9 +0.3
baz=96
CLF **Chambon-Foret** 78.51 43 P P 15 07 35.5 +1.5
K17K **Iditarod** 78.55 332 P P 15 07 34.7 +0.8
baz=96
N16K **Nishlik Lake** 78.55 330 P P 15 07 34.9 +0.8
baz=95
CHNA **Chernabura Isl** 78.59 324 P P 15 07 34.6 +0.3
baz=93
D20K **Etivluk River** 78.62 339 P P 15 07 35.8 +1.5
baz=99
S14K **Fog Glacier** 78.65 326 P P 15 07 35.8 +1.0
baz=94
E19K **Redstone River** 78.67 337 P P 15 07 35.8 +1.3
baz=98
F19K **Shaleruckik Mo** 78.79 337 P P 15 07 36.1 +0.9
baz=97
H18K **Honhosa River** 78.83 335 P P 15 07 37.2 +1.7
baz=96
O15K **Ungalikthiuk R** 78.98 329 P P 15 07 37.9 +1.5
baz=94
L16K **Owhat River** 79.00 331 P P 15 07 38.0 +1.6
baz=95
A21K **Barrow** 79.03 341 P P 15 07 37.9 +1.5
baz=99
G18K **Tagagawik** 79.04 336 IAmb IAmb 15 07 43.8
comp=Z,36nm,1.6s
G18K **Tagagawik** 79.04 336 P P 15 07 38.0 +1.3
baz=96
D19K **Kuna River** 79.13 338 IAmb IAmb 15 07 45.0
comp=Z,26nm,1.6s
D19K **Kuna River** 79.13 338 P P 15 07 38.5 +1.4
baz=97
TORD **Torodi Ar. Bea** 79.14 78 P P 15 07 38.5 +0.4
comp=Z,1.3nm,0.5s,baz=288,slow=6.9,SNR=6.3
comp=Z,1.3nm,0.5s
N15K **Kwethluk River** 79.19 330 P P 15 07 38.9 +1.4
baz=94
SSF **Saint Saulge** 79.33 44 *e*P P 15 07 39.0 +0.4
SSF pmax pmax
comp=Z,22nm,1.4s
H17K **Granite Mounta** 79.47 335 P P 15 07 40.7 +1.7
baz=95
M15K **Kasigluk River** 79.51 330 P P 15 07 40.7 +1.4
baz=93
J16K **Anvik River** 79.64 333 P P 15 07 41.6 +1.7
baz=94
I17K **Unalakleet** 79.72 334 P P 15 07 40.8 +0.4
baz=94
O14K **Tigyukauivet M** 79.73 329 P P 15 07 40.3 -0.2
baz=93
C19K **Lookout Ridge** 79.73 339 IAmb IAmb 15 07 48.8
comp=Z,57nm,1.6s
C19K **Lookout Ridge** 79.73 339 P P 15 07 41.6 +1.2
baz=96
G17K **Kiwalik Mounta** 79.82 335 P P 15 07 41.0 +0.1
baz=94
E18K **Tukpahlearik C** 79.95 337 P P 15 07 42.5 +0.9
baz=95
L15K **Ungalak Mounta** 79.95 331 P P 15 07 42.3 +0.6
baz=93
N14K **Kuskokwak Cree** 79.97 330 P P 15 07 42.8 +1.1
baz=92
K15K **Wolf Creek Mou** 80.01 332 P P 15 07 43.5 +1.5
baz=93
DOU **Dourbes** 80.07 41 *d*P P 15 07 43.2 +0.7
comp=Z,4.5nm,0.9s
F17K **Baldwin Pennin** 80.14 336 P P 15 07 43.3 +0.8
baz=94
M14K **Bethel** 80.14 330 P P 15 07 43.4 +0.7
baz=92
BMRD **Maredsous** 80.19 40 *d*P P 15 07 43.5 +0.3
C18K **Utukok River** 80.27 338 P P 15 07 44.2 +0.8
baz=94
BGES **Gesves** 80.39 40 *d*P P 15 07 46.0 +1.8
E17K **Hotham Inlet** 80.41 337 P P 15 07 44.3 +0.3
baz=94,SNR=6.2
H16K **Elim** 80.44 334 P P 15 07 45.2 +1.0
baz=93
RCHB **Rochefort** 80.48 40 *d*P P 15 07 46.2 +1.4
L14K **Kuka Creek** 80.51 331 P P 15 07 45.8 +1.2
baz=92
G16K **Koyuk River** 80.53 335 P P 15 07 45.3 +0.7
baz=93
B18K **Kokolik River** 80.55 339 P P 15 07 45.6 +0.9
baz=94
FALS **False Pass** 80.80 324 P P 15 07 47.3 +1.0
baz=90
M13K **Dall Lake** 80.82 330 P P 15 07 47.8 +1.5
baz=91
D17K **Noatak River** 80.92 337 P P 15 07 48.1 +1.4
baz=92
J14K **Nanvaranak Lak** 80.96 332 P P 15 07 48.3 +1.3
baz=91
MEM **Membach** 80.97 40 *d*P P 15 07 48.0 +0.6
C17K **DeLong Mountai** 80.99 338 P P 15 07 48.5 +1.3
baz=92
WLF **Walferdange** 81.08 41 *d*P P 15 07 48.7 +0.7
G15K **Niukluk** 81.22 335 P P 15 07 48.9 +0.5
baz=91
F15K **North Star Dit** 81.49 335 P P 15 07 51.1 +1.3
baz=91
C16K **Lisburne Hills** 81.79 338 P P 15 07 51.7 +0.3
baz=90
ANM **Nome** 81.79 334 P P 15 07 51.8 +0.4
baz=90
NB2 **NORSAR Subarra** 83.51 29 P P 15 08 01.8 +1.3
comp=Z,7.8nm,1.0s,baz=274,slow=5.1
NOA **NORSAR Array B** 83.51 29 P P 15 08 01.5 +1.0
comp=Z,3.1nm,0.8s,baz=275,slow=5.1,SNR=12
comp=Z,3.1nm,0.8s
SPITS **Spitsbergen Ar** 83.78 12 P P 15 08 01.8 +0.2
comp=Z,6.7nm,0.8s,baz=252,slow=8.9,SNR=4.2
SPITS LR LR 15 45 15.6
comp=Z,30nm,20.3s,baz=246,slow=36
comp=Z,6.7nm,0.8s
KEST **Kesra** 84.20 55 P P 15 08 05.5 +0.9
comp=Z,5.0nm,0.8s,baz=290,slow=6.2,SNR=6.0
comp=Z,5.0nm,0.8s
FETA **Feichten** 84.27 43 *e*P P 15 08 06.3 +1.5
comp=Z,4.6nm,1.0s
RAR **Rarotonga** 84.32 248 LR LR 15 37 38.8
comp=Z,35nm,20.2s,baz=172,slow=30
GRF **Grafenberg Arr** 84.37 41 *e*P P 15 08 05.6 +0.4
comp=Z,15nm,1.5s,baz=275,slow=5.8
HFS **Hagfors** 84.81 30 P P 15 08 07.9 +0.8
comp=Z,3.2nm,0.8s,baz=273,slow=5.6,SNR=4.3
comp=Z,3.2nm,0.8s
NKC **Novy Kostel** 85.11 40 *e*P P 15 08 10.6 +1.7
NKC **Novy Kostel** 85.11 40 *e*P P 15 08 10.6 +1.7
CLL **Collm** 85.35 39 *i* P P 15 08 10.9 +0.9
CLL *i* 15 08 16.9
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL **Collm** 85.35 39 *i* P P 15 08 10.9 +0.9
comp=Z,6.0nm,1.0s
CLL *i* x x 15 08 16.9
comp=Z,21nm,1.5s
CLL *e*PP PP 15 11 27.0 -0.7
LESA **Schwarzleotal** 85.55 43 *e*P P 15 08 12.3 +1.1
comp=Z,4.5nm,0.8s
KHC **Kasperske Hory** 85.96 41 IAmb IAmb 15 08 22.0
comp=Z,17nm,1.4s
KHC **Kasperske Hory** 85.96 41 *e*P P 15 08 14.6 +1.5
KHC **Kasperske Hory** 85.96 41 *ce*P P 15 08 13.7 +0.6
KHC pmax pmax
comp=Z,12nm,1.1s
BRG **Berggiesshubel** 85.99 39 *e*P P 15 08 15.1 +1.9
BRG Amp 15 08 15.4
comp=Z,3.7nm,0.8s
BRG **Berggiesshubel** 85.99 39 P P 15 08 20.8 +7.7
BRG Amp 15 08 22.1
comp=Z,25nm,1.7s
BRG **Berggiesshubel** 85.99 39 *e*P P 15 08 15.1 +1.9
BRG 15 08 20.8
BRG pmax pmax
comp=Z,4.0nm,0.8s
KBA **Koelnbreinsper** 86.04 43 *e*P P 15 08 14.5 +0.7
comp=Z,12nm,1.3s
GEC2 **GERESS Array S** 86.07 41 P P 15 08 14.4 +0.6
GEC2 IAmb IAmb 15 08 21.6
comp=Z,18nm,1.4s
GERES **GERESS Array B** 86.07 41 P P 15 08 14.5 +0.7
comp=Z,3.6nm,0.9s,baz=286,slow=8.8,SNR=12
GERES LR LR 15 43 39.1
comp=Z,33nm,21.2s,baz=302,slow=34
comp=Z,3.6nm,0.9s
RICC **Richard** 86.12 40 *e*P P 15 08 16.3 +2.4
BIOA **Bad Ischl, Aus** 86.17 43 *e*P P 15 08 15.4 +1.2
comp=Z,29nm,1.8s
PVCC **Panska Ves** 86.42 40 *e*P P 15 08 17.1 +1.8
PVCC **Panska Ves** 86.42 40 *e*P P 15 08 17.1 +1.8
CKRC **Cesky Krumlov** 86.47 41 *e*P P 15 08 16.4 +0.7
CKRC **Cesky Krumlov** 86.47 41 *e*P P 15 08 16.4 +0.7
PRU **Pruhonice** 86.48 40 *e*P P 15 08 17.4 +1.8
PRU **Pruhonice** 86.48 40 *e*P P 15 08 17.4 +1.8
MOA **Molln** 86.57 42 *e*P P 15 08 17.2 +1.0
comp=Z,3.8nm,0.9s
OBKA **Obir** 86.94 44 *e*P P 15 08 19.1 +1.0
comp=Z,31nm,2.0s
SOKA **Soboth** 87.24 43 *e*P P 15 08 20.6 +1.1
comp=Z,6.6nm,1.2s
UPC **Upice** 87.34 40 *e*P P 15 08 21.7 +1.9
UPC **Upice** 87.34 40 *e*P P 15 08 21.7 +1.9
OSTC **Ostas** 87.46 39 *e*P P 15 08 22.2 +1.8
OSTC **Ostas** 87.46 39 *e*P P 15 08 22.2 +1.8
CONA **Conrad Observa** 87.62 42 *e*P P 15 08 22.6 +1.2
comp=Z,5.3nm,0.8s
KRUC **Moravsky** 87.80 41 *e*P P 15 08 23.4 +1.3
VRAC **Vranov** 87.89 41 *e*P P 15 08 23.7 +1.2
VRAC **Vranov** 87.89 41 LR LR 15 43 04.5
comp=Z,44nm,19.3s,baz=306,slow=32
KRLC **Kraliky** 87.89 40 *e*P P 15 08 24.6 +2.0
KRLC **Kraliky** 87.89 40 *e*P P 15 08 24.6 +2.0
RONA **Rosalia, Austr** 87.95 42 *e*PcP PcP 15 08 24.4 -0.3
comp=Z,4.9nm,0.7s
ARCES **ARCESS Array B** 87.99 20 P P 15 08 22.1 -0.5
comp=Z,3.7nm,0.9s,baz=282,slow=2.4,SNR=4.6
ARCES LR LR 15 44 45.2
comp=Z,44nm,20.0s,baz=205,slow=34
comp=Z,3.7nm,0.9s
MORC **Moravsky Berou** 88.43 40 *e*P P 15 08 27.1 +2.0
JAVC **Velka Javorina** 88.67 41 *e*P P 15 08 29.1 +2.8
MAUC **Maruska** 88.68 41 *e*P P 15 08 28.9 +2.6
FINES **FINESS Array B** 90.50 28 P P 15 08 35.2 +0.8
comp=Z,2.6nm,0.8s,baz=307,slow=5.1,SNR=6.4
comp=Z,2.6nm,0.8s
APA **Apatity** 91.39 21 ||*i*P P 15 08 39.7 +1.2
APA pmax pmax
comp=Z,8.0nm,1.1s
VSU **Vasula** 91.69 30⇑*e*P P 15 08 40.4 +0.4
VSU pmax pmax
comp=Z,11nm,0.8s
BILL **Bilibino** 92.11 340 *e*P P 15 08 41.6 -0.2
BILL pmax pmax
comp=Z,1.0nm,0.8s
SNAA **Sanae** 92.70 162 *ce*P P 15 08 45.0 +0.5
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA **Sanae** 92.70 162 P P 15 08 44.4 -0.1
comp=Z,3.7nm,0.9s,baz=318,slow=5.2,SNR=5.8
comp=Z,3.7nm,0.9s
VALR **Valaam** 92.72 27 *de*P P 15 08 45.8 +1.1
VALR pmax pmax
comp=Z,11nm,1.0s
MLR **Muntele Rosu** 94.91 43 IAmb IAmb 15 08 58.0
comp=Z,6.1nm,1.0s
QSPA **South Pole Qui** 97.50 180 P Pdif 15 09 06.6 -0.1
comp=Z,3.0nm,0.9s,baz=65,slow=2.3,SNR=7.0
comp=Z,3.0nm,0.9s
OBN **Obninsk** 97.94 32 *e*P Pdif 15 09 12.7 +4.0
OBN pmax pmax
comp=Z,3.0nm,0.7s
TSUM **Tsumeb** 98.45 108 LR LR 15 51 54.7
comp=Z,62nm,18.8s,baz=332,slow=34
TIXI **Tiksi** 98.92 351⇑*e*P Pdif 15 09 12.1 -0.7
TIXI pmax pmax
comp=Z,2.0nm,0.9s
TIXI **Tiksi** 98.92 351 LR LR 15 58 11.9
comp=Z,24nm,18.3s,baz=20,slow=38
SEY **Seymchan** 99.72 339||*e*P Pdif 15 09 16.0 -0.5
SEY pmax pmax
comp=Z,2.0nm,1.3s
ELIB **Princess Elisa** 100.86 162 *d*PP PP 15 13 31.1 +2.0
BR131 **Keskin Array S** 102.10 47⇑*e*P Pdif 15 09 27.5 -0.3
ZALV **Zalesovo Beam** 117.24 11 PKP PKiKP 15 14 17.2 -1.0
comp=Z,1.0nm,0.8s,baz=321,slow=4.0,SNR=5.6
KURK **Kurchatov** 118.82 16⇑*i*PKIKP PKiKP 15 14 21.8 +0.5
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURBB **Kurchatov Arra** 118.88 16 PKP PKiKP 15 14 20.8 -0.6
comp=Z,1.1nm,0.7s,baz=323,slow=2.5,SNR=11
MDJ **Mudanjiang** 122.14 336 PKP PKiKP 15 14 27.3 -0.7
MK31 **Makanchi Array** 123.39 15 PKP PKiKP 15 14 29.6 -0.9
MK31 **Makanchi Array** 123.39 15⇑*i*PKIKP PKiKP 15 14 30.0 -0.5
MKAR **Makanchi Array** 123.39 15 PKP PKiKP 15 14 29.9 -0.6
comp=Z,1.0nm,0.8s,baz=0.5,slow=1.9,SNR=11
AAK **Ala-Archa** 124.49 24 PKPdf PKiKP 15 14 33.5 +0.5
AAK **Ala-Archa** 124.49 24⇑*i*PKIKP PKiKP 15 14 34.2 +1.2
AAK pmax pmax
comp=Z,4.0nm,1.3s
ULN **Ulaanbaatar** 124.63 355||*i*PKIKP PKiKP 15 14 33.3 +0.2
ULN pmax pmax
comp=Z,4.0nm,1.7s
SONM **Songino Array** 124.71 356 PKP PKiKP 15 14 32.0 -1.2
comp=Z,1.1nm,0.8s,baz=20,slow=1.1,SNR=8.6
WMQ **Urumqi** 127.48 12 *e*PKP PKiKP 15 14 39.4 +0.6
KSH **Kashi** 127.72 25 PKP PKiKP 15 14 40.6 +1.1
KSRS **Korea Array** 128.76 333 PKP PKiKP 15 14 39.9 -1.5
comp=Z,1.7nm,0.8s,baz=31,slow=0.8,SNR=8.7
KSAR **Wonju Array Be** 128.79 333 PKiKP 15 14 40.1 -1.3
KSAR **Wonju Array Be** 128.79 333 PKiKP PKiKP 15 14 40.2 -1.3
HHC **Hu-ho-hao-te** 130.94 350 *e*PKP PKPdf 15 14 39.3 -5.7
BTO **Baotou** 131.44 351 *e*PKP PKPdf 15 14 41.8 -4.1
BTO sPKP 15 14 55.8
BTO LR LR
comp=Z,240nm,5.3s
GTA **Gaotai** 133.31 1 PKP PKiKP 15 14 50.3 -0.4
STKA **Stephens Creek** 135.26 232 PKP PKiKP 15 14 52.8 -1.9
comp=Z,2.8nm,0.8s,baz=83,slow=8.1,SNR=6.3
NJ2 **Nanjing** 137.20 338 *e*PKP PKPdf 15 14 55.8 -1.0
CD2 **Chengdu** 141.73 356 PKP PKPdf 15 15 03.6 -1.6
AS31 **Alice Springs** 144.74 239 PKPdf PKPbc 15 15 08.5 -1.0
ASAR **Alice Springs** 144.74 239 PKPdf PKPab 15 15 08.0 -1.4
ASAR **Alice Springs** 144.74 239 PKP PKPbc 15 15 08.8 -0.7
comp=Z,20nm,0.9s,baz=118,slow=3.6,SNR=164
WB2 **Warramunga Arr** 145.56 246 PKPdf PKPab 15 15 11.3 -1.1
WRAB **Tennant Creek** 145.56 246 PKPdf PKPab 15 15 11.6 -0.8
WRAB **Tennant Creek** 145.56 246 PKiKP PKPab 15 15 11.6 -0.8
WB0 **Warramunga Arr** 145.57 246 PKPdf PKPab 15 15 11.8 -0.7
WRA **Warramunga Arr** 145.57 246 PKPbc PKPab 15 15 11.4 -1.1
comp=Z,9.7nm,0.8s,baz=103,slow=4.0,SNR=46
GYA **Guiyang** 145.82 351 PKPbc PKPdf 15 15 10.3 -2.2
PZH **PanZhiHua** 146.19 359 PKPbc PKPdf 15 15 12.1 -1.1
HYB **Hyderabad** 146.64 42 *e*PKPbc PKPbc 15 15 14.7 -0.8
KMI **Kunming** 147.53 357 ||PKPbc PKPbc 15 15 17.0 -1.1
TNCH **TengChong** 147.56 4 *e*PKPbc PKPab 15 15 18.1 -2.0
TNCH pPKP sPKPab 15 15 22.5 +0.8
CRAI **Chiangrai** 152.43 2 PKiKP 15 15 29.9 -0.3
CMAR **Chiang Mai Arr** 154.11 5 PKP PKPdf 15 15 25.5 -0.1
comp=Z,2.7nm,0.9s,baz=296,slow=2.3,SNR=17
CMAR PKPbc PKiKP 15 15 32.7 -1.1
comp=Z,5.3nm,0.9s,baz=326,slow=2.5,SNR=19

*IDC **18** 15:14:27.6±0.6, 7.°47N×78.°89W, h0km, mb4.0/13, mbtmp4.0/17, ML2.7/3, MS3.3/6, Error ellipse: s-maj=23.0km s-min=14.0km az=47.0*
*RSNC **18** 15:14:29.5±2.1, 7.°41N×78.°82W, h12km±9km, ML3.3, Mw3.7*
*UPA **18** 15:14:29.2±2.1, 7.°42N×78.°85W, h12km±13km, MW4.4, Fault plane solution: NP1:φ$_s$74.00000°, δ78.00000°, λ.58.00000°.*
*NEIC **18** 15:14:30.5±1.6, 7.°61N±0.°06×78.°78W±0.°07, h10km±1km, mb4.5/34, Error ellipse: s-maj=12.3km s-min=10.0km az=64.0*

ISC 18 15:14:28.8±0.4, **7.°47N**±0.°03×**78.°85W**±0.°02, **h10**km, **n128**, σ**1**^{s}**68**/167, **mb4.4**/30, **8C-5D, Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PTAC	**Punta Ardita,**	**1.08**	**107**	||*i*P	**Pg**	**15 14 47.8**	**-1.9**
PTAC				*e*S		**Sg**	**15 15 00.9**	**-2.8**
PTAC	**Punta Ardita,**	**1.08**	**107**	||*i*P	**Pg**	**15 14 47.8**	**-1.9**
PTAC				*e*S		**Sg**	**15 15 00.2**	**-3.6**
PTAC				*i*			15 15 02.5	
comp=Z,711nm,0.2s								
UPD2	**Meteti**	**1.36**	**38**	*i* P		**Pb**	**15 14 53.3**	**-1.1**
UPD2				*e*S		**Sg**	**15 15 11.6**	**-1.0**
UPD2	**Meteti**	**1.36**	**38**	||*i*P	**Pb**	**15 14 53.3**	**-1.1**
UPD2				*e*S		**Sg**	**15 15 11.6**	**-1.0**
UPD2				*i*			15 15 19.6	
comp=Z,2μm,0.7s								

AZU	**Azuero**	**1.45**	**283**	⇑	*iP*		**Pn**	**15 14 54.0**	**-1.1**
AZU					*eS*		**Sn**	**15 15 12.1**	**-2.0**
AZU	**Azuero**	**1.45**	**283**		*eP*		**Pn**	**15 14 54.1**	**-1.1**
AZU					*eS*		**Sn**	**15 15 12.6**	**-1.6**
TOTI	**Torti**	**1.55**	**20**	⇑	*iP*		**Pn**	**15 14 55.8**	**-0.8**
TOTI					*eS*		**Sb**	**15 15 16.2**	**-1.2**
CHIT3	**Chitre**	**1.63**	**287**	⇑	*iP*		**Pn**	**15 14 57.1**	**-0.5**
CHIT3					*eS*		**Sn**	**15 15 17.4**	**-1.2**
CNTA3	**Canitas, Panam**	**1.74**	**359**	⇑	*eP*		**Pn**	**15 14 58.4**	**-0.8**
CNTA3					*eS*		**Sb**	**15 15 22.8**	**-0.1**
PNME	**Penonome**	**1.78**	**305**	⇓	*iP*		**Pb**	**15 14 59.7**	**-1.9**
PNME					*eS*		**Sn**	**15 15 21.6**	**-0.7**
PNME	**Penonome**	**1.78**	**305**		*eP*		**Pn**	**15 14 59.5**	**-0.2**
PNME					*eS*		**Sn**	**15 15 21.7**	**-0.7**
ZANG	**Zanguenga, Cho**	**1.79**	**326**		*iP*		**Pb**	**15 14 59.8**	**-1.9**
ZANG					*eS*		**Sb**	**15 15 24.0**	**-0.2**
CAPC	**Capurgana**	**1.89**	**52**		*eP*		**Pn**	**15 15 00.8**	**-0.3**
CAPC					*eS*		**Sb**	**15 15 25.1**	**-2.0**
CAPC					*i*			15 15 33.2	
	comp=Z,718nm,0.7s								
SOLC	**Bahia Solano**	**1.89**	**131**		*eP*		**Pn**	**15 14 59.0**	**-2.3**
SOLC					*eS*		**Sn**	**15 15 21.9**	**-3.3**
BCIP	**Isla Barro Col**	**1.95**	**330**		Pn		**Pn**	**15 15 01.9**	**-0.1**
BCIP	**Isla Barro Col**	**1.95**	**330**	⇑	*eP*		**Pb**	**15 15 02.6**	**-1.9**
BCIP					*eS*		**Sb**	**15 15 26.9**	**-1.9**
BCIP	**Isla Barro Col**	**1.95**	**330**		*eP*		**Pb**	**15 15 02.6**	**-1.9**
BCIP					*eS*		**Sn**	**15 15 26.7**	**+0.1**
CACAO	**El Cacao, Vera**	**2.00**	**267**		*eP*		**Pn**	**15 15 00.6**	**-2.1**
CACAO					*eS*		**Sb**	**15 15 30.0**	**-0.2**
CACAO					*i*			15 15 37.9	
	comp=Z,932nm,0.6s								
APAC	**Apartado, Choc**	**2.29**	**79**		*eP*		**Pg**	**15 15 10.5**	**-2.3**
APAC					*eS*		**Sn**	**15 15 35.1**	**+0.1**
APAC					*i*			15 15 48.0	
	comp=Z,336nm,0.5s								
GMAL	**Guarumal, Vera**	**2.38**	**277**		*eP*		**Pn**	**15 15 08.5**	**+0.5**
GMAL					*eS*		**Sb**	**15 15 39.1**	**-2.2**
DBBC	**Dabeiba**	**2.66**	**100**		*eP*		**Pn**	**15 15 12.2**	**+0.3**
DBBC					*eS*		**Sn**	**15 15 43.2**	**-1.0**
DBBC					*i*			15 15 47.5	
	comp=Z,106nm,0.7s								
PIZC	**Pizarro, Choco**	**2.89**	**149**		*eP*		**Pn**	**15 15 12.7**	**-2.4**
PIZC					*eS*		**Sn**	**15 15 47.1**	**-2.9**
PIZC					*i*			15 15 54.4	
	comp=Z,88nm,0.6s								
CBOC	**Ciudad Bolivar**	**3.24**	**119**		*eP*		**Pn**	**15 15 19.6**	**-0.4**
CBOC					*eS*		**Sn**	**15 15 55.1**	**-3.6**
CBOC					*i*			15 15 58.3	
	comp=Z,39nm,0.7s								
UREC	**San Jos de Ur**	**3.30**	**85**	⇑	*iP*		**Pn**	**15 15 21.9**	**+1.2**
UREC					*eS*		**Sn**	**15 16 00.4**	**+0.4**
UREC	**San Jos de Ur**	**3.30**	**85**		*eP*		**Pn**	**15 15 21.8**	**+1.2**
UREC					*eS*		**Sn**	**15 16 00.4**	**+0.4**
UREC					*i*			15 16 01.3	
	comp=Z,41nm,0.6s								
HELC	**Santa Helena**	**3.53**	**111**	⇓	*iP*		**Pn**	**15 15 24.7**	**+0.5**
HELC					*eS*		**Sn**	**15 16 05.1**	**-1.1**
HELC	**Santa Helena**	**3.53**	**111**		*eP*		**Pn**	**15 15 24.7**	**+0.5**
HELC					*eS*		**Sn**	**15 16 01.8**	**-4.5**
HELC					*i*			15 16 07.5	
	comp=Z,31nm,0.5s								
PLMC	**San Jos del P**	**3.60**	**135**		*eP*		**Pn**	**15 15 22.7**	**-2.2**
PLMC					*i*			15 15 58.9	
	comp=Z,28nm,0.5s								
BRU2	**Volcan**	**4.02**	**289**		Pn		**Pn**	**15 15 32.1**	**+1.4**
PTPM	**Petroterminale**	**4.06**	**281**	⇑	*eP*		**Pb**	**15 15 39.4**	**-1.1**
PTPM					*eS*		**Sb**	**15 16 31.3**	**+1.7**
GUY2C	**Guyana, Caldas**	**4.12**	**123**		*eP*		**Pn**	**15 15 33.1**	**+0.8**
GUY2C					*eS*		**Sn**	**15 16 18.7**	**-2.2**
GUY2C					*i*			15 16 23.7	
	comp=Z,36nm,0.4s								
CDITO	**Canoas**	**4.13**	**286**				**Pn**	**15 15 32.7**	**+0.7**
YOTC	**Yotoco, Valle**	**4.27**	**144**		*eP*		**Pn**	**15 15 29.5**	**-4.5**
YOTC					*eS*		**Sn**	**15 16 21.9**	**-2.1**
SJCC	**San Jacinto, C**	**4.36**	**56**		*eS*		**Sn**	**15 16 23.4**	**-2.8**
SJCC					*i*			15 16 45.5	
	comp=Z,23nm,0.6s								
PTBC	**PUERTO BERRIO,**	**4.46**	**102**		*eP*		**Pn**	**15 15 38.6**	**+2.0**
PTBC					*eS*		**Sn**	**15 16 27.1**	**-1.4**
PTBC					*i*			15 16 51.2	
	comp=Z,15nm,0.5s								
ANIL	**Santa Ana**	**4.53**	**131**		*eP*		**Pn**	**15 15 37.8**	**0.0**
DRK0	**Durika**	**4.70**	**293**				**Pn**	**15 15 40.5**	**+0.4**
JAMC	**Jamundi, Valle**	**4.75**	**153**		*eP*		**Pn**	**15 15 40.0**	**-0.8**
SRBA	**San Rafael, Bu**	**4.79**	**292**		Pn		**Pn**	**15 15 41.9**	**+0.6**
ORTC	**Ortega, Tolima**	**5.04**	**134**		*eP*		**Pn**	**15 15 46.9**	**+2.3**
ORTC					*i*			15 16 50.1	
	comp=Z,9.6nm,0.6s								
SPBC	**San Pablo de B**	**5.08**	**111**		*eP*		**Pn**	**15 15 45.2**	**0.0**
PEZE	**Perez Zeledon,**	**5.14**	**292**				**Pn**	**15 15 47.0**	**+0.9**
ROSC	**El Rosal**	**5.21**	**120**		Pn		**Pn**	**15 15 47.1**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=311,slow=20,SNR=1.4								
ROSC					Sn		**Sn**	**15 16 52.1**	**+4.6**
	comp=Z,2.0nm,0.3s,baz=278,slow=23,SNR=1.9								
	comp=Z,5.1nm,0.5s								
POPC	**Popayan, Colom**	**5.35**	**156**		*eP*		**Pn**	**15 15 50.6**	**+1.5**
POPC					*eS*		**Sn**	**15 16 51.3**	**+0.4**
RIMA	**Rio Macho**	**5.46**	**295**				**Pn**	**15 15 51.2**	**+0.7**
OCAC	**Ocana**	**5.53**	**82**		*eP*		**Pn**	**15 15 53.1**	**+1.6**
OCAC					*eS*		**Sn**	**15 16 53.6**	**-1.7**
OCAC					*i*			15 17 01.9	
	comp=Z,75nm,0.6s								
LCR2	**La Lucha 2**	**5.58**	**294**		Pn		**Pn**	**15 15 53.1**	**+1.0**
BBAC	**Balboa, Cauca**	**5.64**	**163**		*eP*		**Pn**	**15 15 53.8**	**+0.8**
BBAC					*eS*		**Sn**	**15 16 59.7**	**+1.7**
BBAC					*i*			15 17 06.5	
	comp=Z,15nm,0.1s								
BARC	**Barichara**	**5.69**	**98**		*eP*		**Pn**	**15 15 55.4**	**+1.6**
BARC					*eS*		**Sn**	**15 16 55.3**	**-4.0**
HDC	**Heredia**	**5.78**	**296**		Pn		**Pn**	**15 15 56.7**	**+1.9**
HDC	**Heredia**	**5.78**	**296**		*eP*		Pb	15 16 04.3	-5.6
HDC					*eS*		**Sb**	**15 17 12.3**	**-7.1**
BETC	**Betania**	**5.84**	**144**		*eP*		**Pn**	**15 15 57.2**	**+1.6**
PAMC	**Pamplona, Colo**	**6.10**	**91**		*eP*		**Pn**	**15 16 01.1**	**+1.5**
PAMC					*eS*		**Sn**	**15 17 07.9**	**-1.9**
PAMC					*i*			15 17 29.9	
	comp=Z,22nm,0.6s								
JACO	**JACO, Garabito**	**6.14**	**291**		Pn		**Pn**	**15 16 02.0**	**+2.2**
GARC	**Garzon, Huila**	**6.22**	**147**		*eP*		**Pn**	**15 16 02.7**	**+1.6**
JTS	**Las Juntas de**	**6.65**	**295**	⇑	*eP*		**Pb**	**15 16 24.9**	**+0.3**
JTS					*eS*		**Sb**	**15 17 38.5**	**-5.8**
JTS	**Las Juntas de**	**6.65**	**295**		Pn		**Pn**	**15 16 05.5**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=126,slow=14,SNR=1.8								
JTS					Sn		**Sn**	**15 17 23.7**	**+1.1**
	baz=1.1,slow=2.3								
JTS					Lg		Lg	15 17 54.0	
	comp=Z,0.7nm,0.3s,baz=341,slow=19,SNR=4.5								
JTS					LR		LR	15 18 55.8	
	comp=Z,233nm,19.2s,baz=96,slow=41								
	comp=Z,9nm,0.4s								
JTS	**Las Juntas de**	**6.65**	**295**		*eP*		**Pn**	**15 16 06.6**	**-0.1**
JTS					*eS*		Sn	15 17 31.6	+9.0
BONI	**La Bonita**	**7.09**	**169**		*eP*		**Pn**	**15 16 12.1**	**-0.9**
BONI					*i*			15 18 22.3	
	comp=Z,6.2nm,0.3s								
ESPN	**Las Esperanzas**	**7.13**	**312**		Pn		**Pn**	**15 16 13.4**	**+0.1**
OTAV	**Otavalo**	**7.19**	**177**		Pn		**Pn**	**15 16 16.6**	**+2.0**
PULU	**Pululahua**	**7.40**	**177**				**Pn**	**15 16 20.3**	**+2.8**
ACON	**Acoyapa**	**7.67**	**306**		Pn		**Pn**	**15 16 20.7**	**0.0**
SLOR	**San Lorenzo -**	**8.15**	**178**		Pn		Pn	15 16 31.4	+3.6
SDV	**Santo Domingo**	**8.26**	**80**		Pn		**Pn**	**15 16 28.3**	**-0.6**
SDV	**Santo Domingo**	**8.26**	**80**		Pn		**Pn**	**15 16 29.8**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=259,slow=8.3,SNR=24								
SDV					Sn		**Sn**	**15 18 01.4**	**-1.1**
	comp=Z,2.2nm,0.3s,baz=332,slow=23,SNR=2.3								
	comp=Z,19nm,0.7s								
SDV	**Santo Domingo**	**8.26**	**80**		*eP*		**Pn**	**15 16 31.1**	**+2.2**
SDV					*eS*		**Sn**	**15 18 01.4**	**-1.1**
SDV					*i*			15 18 08.3	
	comp=Z,8.7nm,0.7s								
BOAB	**BOACO BROADBAN**	**8.34**	**307**		Pn		**Pn**	**15 16 30.4**	**+0.5**
GTBY	**Guantanamo Bay**	**12.91**	**16**		Pn		**Pn**	**15 17 31.0**	**-1.5**
TEIG	**Tepich**	**15.63**	**325**		LR		LR	15 24 26.3	
	comp=Z,656nm,18.2s,baz=218,slow=38								
CZSB	**Cruzeiro do Su**	**16.29**	**158**		P		**P**	**15 18 23.0**	**+2.0**
CMIG	**Matias Romero**	**18.34**	**303**		LR		LR	15 25 28.0	
	comp=Z,78nm,19.1s,baz=152,slow=36								
NNA	**Nana**	**19.43**	**174**		P		**Pn**	**15 18 55.4**	**-1.3**
NNA					LR		LR	15 27 11.8	
	comp=Z,4.8nm,0.3s,baz=5.8,slow=11,SNR=3.9								
	comp=Z,40nm,19.4s,baz=350,slow=39								
ETMB	**Extrema**	**21.29**	**144**		P		**P**	**15 19 16.2**	**+0.4**
ETMB					IAmb		IAmb	15 19 21.7	
	comp=Z,19nm,1.1s								
SAML	**Samuel**	**22.58**	**136**		P		**P**	**15 19 29.3**	**-0.4**
LPAZ	**La Paz**	**25.88**	**156**		P		**P**	**15 20 03.5**	**+1.8**
GOGA	**Godfrey**	**26.17**	**351**		P		**P**	**15 20 03.6**	**+0.1**
PB11	**IPOC Station P**	**28.53**	**162**		P		**P**	**15 20 27.2**	**+2.2**
PB11					IAmb		IAmb	15 20 33.8	
	comp=Z,14nm,1.1s								
GO01	**Chusmiza**	**28.59**	**161**		P		**P**	**15 20 27.9**	**+2.0**
GO01					IAmb		IAmb	15 20 40.8	
	comp=Z,9.6nm,0.8s								
V48A	**Smith Brothers**	**29.07**	**347**		P		**P**	**15 20 30.9**	**+1.3**
V48A					IAmb		IAmb	15 20 31.6	
	comp=Z,4.8nm,0.8s								
WCI	**Wyandotte Cave**	**31.36**	**349**		P		**P**	**15 20 50.1**	**+0.4**
USIN	**University of**	**31.39**	**347**		P		**P**	**15 20 50.4**	**+0.3**
LVC	**Limon Verde**	**31.44**	**162**		LR		LR	15 34 58.9	
	comp=Z,47nm,18.2s,baz=342,slow=39								
TXAR	**Lajitas Array**	**31.91**	**316**		P		**P**	**15 20 55.0**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=130,slow=6.8,SNR=4.8								
TXAR					PcP		**PcP**	**15 23 45.7**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=131,slow=2.7,SNR=2.5								
	comp=Z,0.4nm,0.7s								
BLO	**Bloomington**	**32.31**	**349**		P		**P**	**15 20 58.7**	**+0.6**
P48A	**Milroy**	**32.40**	**350**		P		**P**	**15 20 59.5**	**+0.6**
CCM	**Cathedral Cave**	**32.45**	**342**		P		**P**	**15 20 59.2**	**-0.1**
CCM					IAmb		IAmb	15 21 03.9	
	comp=Z,6.3nm,0.8s								
AC02	**Maricunga**	**35.38**	**165**		P		**P**	**15 21 28.0**	**+2.5**
AC02					IAmb		IAmb	15 21 29.3	
	comp=Z,6.3nm,0.9s								
AC05	**El Transito**	**37.03**	**167**		P		**P**	**15 21 41.9**	**+2.8**
AC05					IAmb		IAmb	15 22 10.8	
	comp=Z,9.2nm,1.1s								
SADO	**Sadowa**	**37.16**	**360**		P		**P**	**15 21 40.6**	**+0.6**
SADO					IAmb		IAmb	15 21 52.7	
	comp=Z,16nm,1.3s								
ANMO	**Albuquerque**	**37.30**	**321**		P		**P**	**15 21 41.9**	**+0.4**
I42A	**Draeger Farm,**	**37.34**	**348**		P		**P**	**15 21 41.5**	**+0.1**
BDFB	**Brasilia**	**38.21**	**127**		P		**P**	**15 21 49.5**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=271,slow=2.7,SNR=3.5								
	comp=Z,2.7nm,0.9s								
E43A	**Lone Tree Farm**	**39.40**	**351**		P		**P**	**15 21 59.1**	**+0.3**
SRU	**San Rafael Swe**	**42.47**	**323**		P		**P**	**15 22 25.0**	**+0.6**
PFO	**Pinyon Flats O**	**43.39**	**312**		P		**P**	**15 22 32.6**	**+0.7**
PFO					IAmb		IAmb	15 22 40.4	
	comp=Z,4.8nm,0.7s								
PDAR	**Pinedale Array**	**44.34**	**327**		P		**P**	**15 22 40.0**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=125,slow=12,SNR=11								
PDAR					PcP		**PcP**	**15 24 23.2**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=121,slow=3.5,SNR=2.2								
PDAR					LR		LR	15 44 04.9	
	comp=Z,21nm,19.3s,baz=95,slow=40								
	comp=Z,1.5nm,0.8s								
ULM	**Lac du Bonnet**	**44.95**	**345**		P		**P**	**15 22 43.5**	**-0.5**
ULM					IAmb		IAmb	15 22 44.7	
	comp=Z,11nm,1.5s								
ULM	**Lac du Bonnet**	**44.95**	**345**		P		**P**	**15 22 43.5**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=139,slow=7.7,SNR=6.4								
	comp=Z,2.3nm,0.6s								
RLMT	**Red Lodge**	**45.84**	**330**		P		**P**	**15 22 51.0**	**-0.4**
RLMT					IAmb		IAmb	15 22 58.9	
	comp=Z,8.6nm,1.1s								
NVAR	**Mina Array Bea**	**47.06**	**317**		P		**P**	**15 23 02.3**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=130,slow=6.7,SNR=4.0								
	comp=Z,0.8nm,0.6s								
HLID	**Hailey**	**47.54**	**325**		P		**P**	**15 23 05.3**	**+0.6**
HLID					IAmb		IAmb	15 23 06.3	
	comp=Z,2.6nm,0.8s								
SCHQ	**Schefferville**	**48.21**	**9**		P		**P**	**15 23 11.5**	**+2.0**
	comp=Z,3.3nm,0.8s,baz=161,slow=6.0,SNR=4.1								
	comp=Z,3.3nm,0.8s								
PLCA	**Paso Flores**	**48.57**	**172**		P		**P**	**15 23 14.2**	**+1.7**
PLCA	**Paso Flores**	**48.57**	**172**		P		**P**	**15 23 13.9**	**+1.3**
	comp=Z,5.2nm,0.9s,baz=352,slow=8.3,SNR=8.1								
	comp=Z,5.2nm,0.9s								
FCC	**Fort Churchill**	**52.50**	**350**		P		**P**	**15 23 42.1**	**+0.2**
YKA	**Yellowknife Ar**	**60.79**	**342**		P		**P**	**15 24 40.7**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=127,slow=7.6,SNR=24								
	comp=Z,1.9nm,0.9s								
T35M	**Bob Quinn**	**63.46**	**331**		P		**P**	**15 24 59.4**	**+0.4**
G31M	**Satah River**	**70.09**	**340**		P		**P**	**15 25 41.8**	**+0.8**
G31M					IAmb		IAmb	15 26 03.6	
	comp=Z,4.7nm,1.1s								
A36M	**Sachs Harbour**	**70.40**	**346**		P		**P**	**15 25 41.8**	**-0.9**
INK	**Inuvik**	**70.55**	**341**		P		**P**	**15 25 44.4**	**+0.7**
INK					IAmb		IAmb	15 26 10.2	
	comp=Z,5.3nm,1.4s								
BCAR	**Beaver Creek A**	**71.31**	**335**		P		**P**	**15 25 50.0**	**+1.4**
VRDI	**Verde Repeater**	**71.41**	**333**		P		**P**	**15 25 51.2**	**+1.9**
ESDC	**Sonseca Array**	**73.64**	**51**		P		**P**	**15 26 03.1**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=270,slow=7.6,SNR=2.6								
	comp=Z,0.6nm,0.8s								
BMAR	**Burnt Mountain**	**73.95**	**339**		P		**P**	**15 26 04.8**	**+0.6**
ILAR	**Eielson Array**	**74.00**	**336**		P		**P**	**15 26 04.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=110,slow=6.8,SNR=3.9								
	comp=Z,0.5nm,0.9s								
GHO	**Glory Hole Cre**	**74.08**	**332**		P		**P**	**15 26 06.5**	**+1.4**
GHO					IAmb		IAmb	15 26 14.8	
	comp=Z,9.3nm,1.3s								
SUA	**Susitna One**	**74.86**	**332**		P		**P**	**15 26 10.8**	**+1.2**
SUA					IAmb		IAmb	15 26 49.5	
	comp=Z,7.0nm,1.3s								
SKT	**Skwentna**	**75.33**	**332**		P		**P**	**15 26 13.5**	**+1.2**
SKT					IAmb		IAmb	15 26 46.2	
	comp=Z,9.3nm,1.4s								
EKA	**Eskdalemuir Ar**	**75.76**	**35**		P		**P**	**15 26 15.7**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=243,slow=3.1,SNR=3.6								
	comp=Z,0.6nm,0.6s								
G21K	**Allakaket**	**77.09**	**337**		P		**P**	**15 26 22.9**	**+0.8**
G21K					IAmb		IAmb	15 26 45.4	
	comp=Z,4.1nm,1.5s								
TORD	**Torodi Ar. Bea**	**79.17**	**78**		P		**P**	**15 26 34.9**	**+0.2**
	comp=Z,3.1nm,0.3s,baz=290,slow=5.8,SNR=2.1								
	comp=Z,3.1nm,0.3s								
NOA	**NORSAR Array B**	**83.56**	**29**		P		**P**	**15 26 58.2**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=126,slow=6.6,SNR=1.7								
	comp=Z,0.7nm,0.8s								
MKAR	**Makanchi Array**	**123.43**	**15**		PKP		**PKiKP**	**15 33 26.2**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=325,slow=1.8,SNR=1.9								
SONM	**Songino Array**	**124.74**	**356**		PKP		**PKiKP**	**15 33 28.6**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=20,slow=1.7,SNR=2.8								
ASAR	**Alice Springs**	**144.70**	**239**		PKP		**PKPdf**	**15 34 05.4**	**-1.5**
	comp=Z,4.1nm,0.8s,baz=119,slow=3.7,SNR=61								
WRA	**Warramunga Arr**	**145.53**	**246**		PKPbc		**PKPab**	**15 34 08.2**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=99,slow=3.5,SNR=12								
CMAR	**Chiang Mai Arr**	**154.15**	**5**		PKP		**PKPdf**	**15 34 22.4**	**+0.5**
	comp=Z,1.2nm,1.0s,baz=304,slow=1.6,SNR=4.5								
CMAR					PKPbc		**PKiKP**	**15 34 29.8**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=300,slow=2.0,SNR=6.5								

*JMA **18** 15:24:05.5±0.2,38.4N×0.6×143.8E±1.0,h36km,MV3.4/29, FAR E OFF MIYAGI PREF*
*IDC **18** 15:24:08.1±7.2,38.10N×143.52E,h0km,mb3.5/4, mbtmp3.4/5,ML2.3/1,MS2.5/1,Error ellipse: s-maj=126.1km s-min=42.9km az=131.0*
ISC 18 15:24:02.1±3.5,38.47N±0.07×143.8E±0.1,h2km±24km, n22,σ1°34/21,mb3.4/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**1.77**	**291**	*i*	**P**		**Pb**	**15 24 35.0**	**-0.2**
OFUJ				*eS*			**Sb**	**15 24 56.9**	**-1.1**
JIKH	**Ishinomakikobu**	**1.84**	**266**	*i*	**P**		Pn	15 24 35.4	+0.7
JKMT	**Kesennumamotoy**	**1.85**	**281**	*i*	**P**		**Pb**	**15 24 35.9**	**-0.8**
JKMT				*eS*			**Sn**	**15 24 58.4**	**-0.5**
MIYJ	**Miyakonagasawa**	**1.90**	**306**	*i*	**P**		**Pb**	**15 24 36.5**	**-0.9**
MIYJ				S			**Sn**	**15 24 59.9**	**0.0**
JMK	**Ichinoseki**	**2.08**	**284**	*i*	**P**		**Pb**	**15 24 39.4**	**-1.0**
JOM	**Ohasama**	**2.19**	**298**		P		**Pb**	**15 24 41.3**	**-1.2**
JOM				*eS*			**Sn**	**15 25 07.7**	**+0.4**
JYK	**Kaneyama**	**2.73**	**280**		P		**Pn**	**15 24 49.0**	**+2.1**
JYK				*eS*			**Sn**	**15 25 21.2**	**+0.8**
JOTO	**OTAMA OYAMA**	**2.89**	**253**		P		**Pn**	**15 24 50.8**	**+1.7**
JOTO				S			**Sn**	**15 25 24.6**	**+0.2**
JOT	**Ohata**	**3.59**	**325**	*eS*			**Sn**	**15 25 41.0**	**-0.8**
JNBK	**Urakawa-nobuka**	**3.88**	**348**	*eP*			**Pn**	**15 25 05.0**	**+2.2**
JNBK				S			**Sn**	**15 25 48.4**	**-0.5**
JAG	**Ashikaga**	**4.02**	**241**		P		**Pn**	**15 25 05.6**	**+1.0**
JAG				S			**Sn**	**15 25 50.2**	**-2.1**
JCH	**Churui**	**4.15**	**356**		P		Pn	15 25 06.7	+0.3
JCH				S			**Sn**	**15 25 53.2**	**-2.2**
JRY	**Ryogami san**	**4.61**	**239**	*eP*			**Pn**	**15 25 13.5**	**+0.7**
JRY				*eS*			Sn	15 26 02.9	-4.1
MJAR	**Matsushiro Arr**	**4.85**	**248**		Pn		Pn	15 25 16.7	+0.6
	0.1nm,0.3s,baz=67,slow=22,SNR=15								
MJAR					Sn		**Sn**	**15 26 13.1**	**+0.4**
	0.1nm,0.3s,baz=138,slow=42,SNR=2.2								
	1.4nm,0.6s								
KSRS	**Korea Array**	**12.57**	**270**		LR		LR	15 31 33.9	
	comp=Z,22nm,18.0s,baz=250,slow=36								
H11N2	**WAKE ISLAND Hy**	**27.37**	**127**		T		T	15 58 24.3	
	baz=318								
H11N1	**WAKE ISLAND Hy**	**27.38**	**127**		T		T	15 58 32.2	
	baz=318								
H11N3	**WAKE ISLAND Hy**	**27.39**	**127**		T		T	15 58 15.8	
	baz=318								
SONM	**Songino Array**	**28.61**	**301**		P		P	15 30 05.4	+5.6
	0.2nm,0.5s,baz=114,slow=9.9,SNR=1.6								
	0.2nm,0.5s								
ZALV	**Zalesovo Beam**	**42.37**	**311**		P		P	15 32 05.1	+7.7
	0.3nm,0.3s,baz=99,slow=8.9,SNR=2.0								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**44.97**	**301**		P		P	15 32 25.2	+6.6
	0.4nm,0.7s,baz=90,slow=7.3,SNR=5.0								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**46.62**	**307**		P		P	15 32 37.6	+6.1
	0.7nm,0.8s,baz=81,slow=8.6,SNR=2.0								
	0.7nm,0.8s								

*IDC **18** 15:35:56.4±1.3,41.85N×141.58E,h116km±11km, mb3.4/12,mbtmp3.8/16,MS2.1/1,Error ellipse: s-maj=16.2km s-min=11.1km az=128.0*
*JMA **18** 15:35:56.9±0.1,41.8N±0.3×141.6E±0.6,h116km±1km, MD3.8/38,MV3.5/38,S OFF TOMAKOMAI*
*NIED **18** 15:35:56.9,41.84N×141.55E,h116km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr-3.48; Mθθ-0.11; Mφφ3.60; Mrθ0.79; Mθφ-1.49; Mφr4.77; Fault plane solution: M0 6.18000×1014 NP1: φs183.00000°,δ72.00000°,λ-73.00000°. NP2: φs319.00000°,δ24.00000°,λ-131.00000°.*
*NEIC **18** 15:35:57.0±1.1,41.89N±0.07×141.5E±0.1,h110km±8km, mb4.2/52 Error ellipse: s-maj=15.1km s-min=8.7km az=107.0*
ISC 18 15:35:57.0±0.6,41.83N±0.04×141.55E±0.04,h118km±5km, n110,σ0°73/118,mb4.0/38,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.39**	**278**			P	**Pn**	**15 36 13.7**	**-0.4**
JKB						*eS*	**Sn**	**15 36 27.2**	**+0.3**
JOT	**Ohata**	**0.59**	**220**			P	**Pn**	**15 36 15.1**	**-0.1**

	comp=Z,0.5nm,0.6s							
CAST	**Castle Rocks**	**43.26**	**37**	P		**P**	**15 43 47.2**	**+0.8**
KURBB	**Kurchatov Arra**	**43.27**	**304**	P		**P**	**15 43 45.6**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=79,slow=8.7,SNR=12							
	comp=Z,1.7nm,0.4s							
SKT	**Skwentna**	**43.61**	**39**	P		**P**	**15 43 49.8**	**+0.7**
TOLK	**Toolik Lake Re**	**44.20**	**29**	P		**P**	**15 43 53.7**	**-0.1**
TOLK				IAmb		IAmb	15 44 02.4	
	comp=Z,5.0nm,1.4s							
I23K	**Minto, Yukon-K**	**44.36**	**34**	P		**P**	**15 43 55.5**	**+0.4**
RND	**Reindeer**	**44.71**	**37**	P		**P**	**15 43 58.1**	**+0.1**
RND				IAmb		IAmb	15 44 18.1	
	comp=Z,4.3nm,1.3s							
GHO	**Glory Hole Cre**	**44.86**	**39**	P		**P**	**15 43 59.5**	**+0.4**
GHO				IAmb		IAmb	15 44 07.2	
	comp=Z,3.1nm,1.1s							
KNK	**Knik Glacier**	**45.12**	**40**	P		**P**	**15 44 01.7**	**+0.5**
KNK				IAmb		IAmb	15 44 45.2	
	comp=Z,8.0nm,1.4s							
SML	**Sawmill**	**45.13**	**39**	P		**P**	**15 44 02.1**	**+0.8**
SML				IAmb		IAmb	15 44 16.9	
	comp=Z,8.1nm,1.3s							
IL31		**45.44**	**35**	P		**P**	**15 44 04.2**	**+0.6**
ILAR	**Eielson Array**	**45.44**	**35**	P		**P**	**15 44 03.6**	**-0.1**
ILAR	**Eielson Array**	**45.44**	**35**	P		**P**	**15 44 03.7**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=263,slow=5.0,SNR=17							
	comp=Z,1.0nm,0.8s							
HDA	**Harding Lake**	**45.45**	**35**	P		**P**	**15 44 04.3**	**+0.6**
HDA				IAmb		IAmb	15 44 05.7	
	comp=Z,4.5nm,1.0s							
PRP	**Porcupine Dome**	**45.94**	**34**	P		**P**	**15 44 08.3**	**+0.6**
PRP				IAmb		IAmb	15 44 09.8	
	comp=Z,5.2nm,1.1s							
BMAR	**Burnt Mountain**	**46.12**	**31**	P		**P**	**15 44 09.6**	**+0.6**
KLU	**Klutina**	**46.32**	**39**	P		**P**	**15 44 11.4**	**+0.7**
SCRK	**Sand Creek**	**46.79**	**36**	P		**P**	**15 44 14.3**	**-0.1**
SCRK				IAmb		IAmb	15 44 14.8	
	comp=Z,2.1nm,0.7s							
BVAR	**Borovoye Array**	**47.52**	**309**	P		**P**	**15 44 19.4**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=78,slow=10.0,SNR=11							
	comp=Z,0.8nm,0.3s							
K27K	**Chicken**	**47.61**	**35**	P		**P**	**15 44 21.4**	**+0.8**
K27K				IAmb		IAmb	15 44 23.0	
	comp=Z,4.4nm,1.4s							
L27K	**Beaver Creek,**	**47.91**	**37**	P		**P**	**15 44 23.9**	**+1.0**
BCAR	**Beaver Creek A**	**47.93**	**37**	P		**P**	**15 44 24.3**	**+1.2**
I28M	**Miner Creek**	**48.25**	**33**	P		**P**	**15 44 26.7**	**+1.1**
I28M				IAmb		IAmb	15 44 29.3	
	comp=Z,7.2nm,1.5s							
AAK	**Ala-Archa**	**48.44**	**295**	P		**P**	**15 44 27.0**	**-0.5**
E29M	**Blow River**	**48.50**	**29**	P		**P**	**15 44 27.8**	**+0.5**
H29M	**Whitestone**	**48.73**	**32**	P		**P**	**15 44 30.3**	**+1.1**
EPYK	**Eagle Plains**	**49.35**	**32**	P		**P**	**15 44 34.9**	**+1.0**
G30M	**tAoh Zraii Nji**	**49.41**	**31**	P		**P**	**15 44 34.8**	**+0.5**
G30M				IAmb		IAmb	15 44 41.9	
	comp=Z,2.7nm,1.4s							
K29M	**Barlow Dome**	**49.62**	**35**	P		**P**	**15 44 37.5**	**+1.4**
I30M	**Mount Dempster**	**49.76**	**33**	P		**P**	**15 44 38.1**	**+0.9**
I30M				IAmb		IAmb	15 44 38.8	
	comp=Z,2.7nm,0.8s							
ARSB	**Arslanbob**	**50.01**	**294**	P		**P**	**15 44 39.6**	**+0.3**
INK	**Inuvik**	**50.10**	**29**	P		**P**	**15 44 39.8**	**+0.3**
G31M	**Satah River**	**50.17**	**31**	P		**P**	**15 44 40.2**	**+0.2**
G31M				IAmb		IAmb	15 45 04.4	
	comp=Z,5.5nm,1.4s							
P29M	**Windy Craggy**	**50.68**	**40**	P		**P**	**15 44 45.9**	**+1.8**
WHY	**Whitehorse**	**51.72**	**39**	P		**P**	**15 44 53.1**	**+1.3**
WHY				IAmb		IAmb	15 45 03.5	
	comp=Z,1.8nm,1.0s							
P33M	**Teslin, Yukon**	**52.83**	**39**	P		**P**	**15 45 00.9**	**+0.8**
DLBC	**Dease Lake**	**54.83**	**40**	P		**P**	**15 45 16.2**	**+1.6**
COEN	**Coen**	**55.53**	**178**	P		**P**	**15 45 20.7**	**+0.8**
YKA	**Yellowknife Ar**	**59.64**	**31**	P		**P**	**15 45 47.6**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=308,slow=6.8,SNR=6.7							
	comp=Z,0.3nm,0.5s							
WR0	**Warramunga Arr**	**61.82**	**187**	P		**P**	**15 46 02.7**	**-0.7**
WB2	**Warramunga Arr**	**61.82**	**188**	P		**P**	**15 46 02.8**	**-0.7**
WRA	**Warramunga Arr**	**61.82**	**188**	P		**P**	**15 46 02.2**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=7.1,slow=7.1,SNR=7.0							
	comp=Z,0.5nm,0.6s							
FINES	**FINESS Array B**	**64.64**	**331**	P		**P**	**15 46 20.9**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=38,slow=7.0,SNR=4.3							
	comp=Z,0.9nm,0.7s							
ASAR	**Alice Springs**	**65.55**	**188**	P		**P**	**15 46 26.9**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=2.1,slow=7.4,SNR=5.9							
	comp=Z,0.3nm,0.8s							
KVN	**Kaiserville**	**71.80**	**54**	P		**P**	**15 47 07.3**	**+0.4**
KVN				IAmb		IAmb	15 47 08.2	
	comp=Z,2.5nm,0.7s							
NVAR	**Mina Array Bea**	**72.06**	**54**	P		**P**	**15 47 08.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=285,slow=6.4,SNR=4.7							
	comp=Z,0.8nm,0.6s							
P17A	**Butcher Ranch,**	**75.83**	**50**	P		**P**	**15 47 30.9**	**+0.6**
P17A				IAmb		IAmb	15 47 31.6	
	comp=Z,6.1nm,1.4s							
SRU	**San Rafael Swe**	**76.20**	**50**	P		**P**	**15 47 32.5**	**+0.1**
SRU				IAmb		IAmb	15 47 33.5	
	comp=Z,2.5nm,0.9s							
113A	**Mohawk Valley,**	**78.56**	**56**	P		**P**	**15 47 46.5**	**+1.0**

*DJA **18** 15:43:09.7±0.3,8°S±4′×12°0E±°, h177km±5km, M4.0/12, mB5.4/1, mb4.0/6, MLv4.0/12, Mw(mB)4.8/1*
*IDC **18** 15:43:12.0±3.5, 7°.94S×120°.36E, h208km±37km, mb3.1/4, mbtmp3.7/5, Error ellipse: s-maj=92.6km s-min=12.3km az=52.0*
ISC 18 15:43:09.5±0.7,**8°.39S**±0°.07×**119°.75E**±0°.06,**h200**km,**n31,**
σ1s51/35,mb3.4/3,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.95**	**101**	P	**Pn**	**15 43 45.6**	**-2.1**
BASI	**Baing, Sumba**	**1.99**	**156**	P	**Pn**	**15 43 46.7**	**-1.3**
BASI				S	**Sn**	**15 44 14.4**	**-3.6**
PLAI	**Plampang**	**2.00**	**257**	P	**Pn**	**15 43 47.0**	**-1.0**
PLAI	**Plampang**	**2.00**	**257**	P	**Pn**	**15 43 46.9**	**-1.0**
PLAI				S	**Sn**	**15 44 14.7**	**-3.2**
MMRI	**Maumere**	**2.48**	**96**	P	**Pn**	**15 43 52.5**	**-0.6**
MMRI	**Maumere**	**2.48**	**96**	P	**Pn**	**15 43 52.3**	**-0.8**
TWSI	**Taliwang, Sumb**	**2.85**	**263**	P	**Pn**	**15 43 56.9**	**-0.5**
BKSI	**Bulukumba**	**3.07**	**7**	P	**Pn**	**15 43 59.0**	**-1.0**
SRBI	**Singaraja**	**4.50**	**274**	P	**Pn**	**15 44 16.2**	**-1.4**
SOEI	**Soe**	**4.67**	**107**	P	**Pn**	**15 44 19.7**	**-0.1**
SOEI	**Soe**	**4.67**	**107**	P	**Pn**	**15 44 19.0**	**-0.8**
SOEI				S	**Sn**	**15 45 12.6**	**-2.5**
JAGI	**Jajag, Banyuwa**	**5.54**	**269**	P	**Pn**	**15 44 30.5**	**-0.3**
JAGI	**Jajag, Banyuwa**	**5.54**	**269**	P	**Pn**	**15 44 29.8**	**-1.0**
	48nm,1.5s,0.3nm						
GMJI	**Gumukmas**	**6.24**	**271**	P	**Pn**	**15 44 42.1**	**+2.2**
	29nm,1.3s						
PWJI	**Pagerwojo**	**7.87**	**272**	P	**Pn**	**15 45 01.6**	**+0.5**
	16nm,1.5s,0.2nm						
UGM	**Wanagama**	**9.14**	**272**	P	**Pn**	**15 45 17.4**	**-0.3**
UGM	**Wanagama**	**9.14**	**272**	P	**Pn**	**15 45 17.3**	**-0.4**
TOLI2	**Tolitoli**	**9.49**	**6**	P	Pn	15 45 16.4	-5.9
KDU	**Kakadu**	**13.22**	**110**	P	**Pn**	**15 46 10.0**	**+0.2**
FAKI	**Fak Fak**	**13.57**	**67**	P	**Pn**	**15 46 12.2**	**-2.1**
MEEK	**Meekatharra**	**18.18**	**183**	P	**Pn**	**15 47 10.3**	**+0.6**
WRA	**Warramunga Arr**	**18.20**	**131**	P	**P**	**15 47 07.9**	**+0.2**
	1.7nm,0.8s,baz=306,slow=12,SNR=21						
WRA				S	**S**	**15 50 25.2**	**-0.5**
	1.0nm,0.6s,baz=311,slow=24,SNR=6.4						
ASAR	**Alice Springs**	**20.36**	**140**	P	**P**	**15 47 32.1**	**+1.3**
	1.7nm,0.5s,baz=316,slow=9.7,SNR=53						
ASAR				S	**S**	**15 51 08.9**	**+0.9**
	0.6nm,0.8s,baz=332,slow=26,SNR=4.0						
	1.7nm,0.5s						
AS01	**Alice Springs**	**20.39**	**140**	P	**P**	**15 47 32.7**	**+1.5**
QIS	**Mount Isa**	**22.68**	**124**	P	**P**	**15 47 55.7**	**+1.5**
COEN	**Coen**	**23.63**	**106**	P	**P**	**15 48 03.6**	**+0.8**
OOD	**Oodnadatta**	**24.48**	**144**	P	**P**	**15 48 11.9**	**+1.5**
MTSU	**Mount Surprise**	**25.77**	**115**	P	**P**	**15 48 23.6**	**+1.4**
STKA	**Stephens Creek**	**30.96**	**142**	P	**P**	**15 49 10.2**	**+2.2**
	1.7nm,0.5s,baz=308,slow=10,SNR=7.5						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**64.26**	**332**	P	**P**	**15 53 23.0**	**-0.3**
	0.1nm,0.5s,baz=144,slow=7.5,SNR=2.0						
	0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**68.74**	**339**	P	**P**	**15 53 52.9**	**+1.5**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=1.8						
	0.3nm,0.4s						

*VAO **18** 16:07:39.9±0.6,21°.48S×68°.66W, h99km, mb4.2*

*SJA **18** 16:07:40.2±1.4,21°.76S×68°.35W, h100km, ML3.8, MW3.7*
*NEIC **18** 16:07:41.5±0.7,21°.79S±0°.04×68°.56W±0°.09, h124km±7km, mb4.1/3, Error ellipse: s-maj=11.8km s-min=4.4km az=75.0*
*GUC **18** 16:07:42.0±0.8,21°.80S×68°.51W, h117km±5km, ML3.9*
ISC 18 16:07:41.2±0.7,**21°.76S**±0.03×**68°.57W**±0°.06,**h123**km±7km,
n79,σ1s17/108,10C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.63**	**266**		**Pn**	**16 08 00.9**	**+0.3**
PB09				Sn	**Sn**	**16 08 16.1**	**+1.0**
PB09	**IPOC Station P**	**0.63**	**266**	*e*P	**Pn**	**16 08 01.1**	**+0.5**
PB09				*e*S	**Sn**	**16 08 16.3**	**+1.1**
PB09	**IPOC Station P**	**0.63**	**266**	⇑*i*P	**Pn**	**16 08 01.1**	**+0.5**
PB09				*i* S	**Sn**	**16 08 16.1**	**+1.0**
LVC	**Limon Verde**	**0.91**	**201**	Pn	**Pn**	**16 08 03.1**	**0.0**
LVC				Sn	**Sn**	**16 08 18.4**	**-1.2**
LVC	**Limon Verde**	**0.91**	**201**	*e*P	**Pn**	**16 08 03.1**	**0.0**
LVC				*e*S	**Sn**	**16 08 18.2**	**-1.4**
LVC	**Limon Verde**	**0.91**	**201**	⇑*e*P	**Pn**	**16 08 02.6**	**-0.5**
LVC				*i* S	**Sn**	**16 08 19.0**	**-0.6**
PB01	**IPOC Station P**	**1.11**	**309**		**Pn**	**16 08 04.9**	**+0.1**
PB01	**IPOC Station P**	**1.11**	**309**	*e*P	**Pn**	**16 08 05.3**	**+0.5**
PB01				*e*S	**Sn**	**16 08 23.6**	**+1.1**
PB01				IAML		16 08 24.9	
	comp=Z,920nm,0.2s						
PB01	**IPOC Station P**	**1.11**	**309**	⇑*i*P	**Pn**	**16 08 05.2**	**+0.4**
PB01				*i* S	**Sn**	**16 08 23.0**	**+0.4**
PB01				IAML		16 08 26.8	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**1.23**	**271**	Pn	**Pn**	**16 08 06.2**	**+0.2**
PB07	**IPOC Station P**	**1.23**	**271**	⇑*i*P	**Pn**	**16 08 06.4**	**+0.4**
PB07				*i* S	**Sn**	**16 08 24.8**	**0.0**
PB07				IAML		16 08 26.9	
	comp=N,1μm,0.3s						
AF01	**San Pedro de A**	**1.24**	**163**		**Pn**	**16 08 05.7**	**-0.6**
PB02	**IPOC Station P**	**1.31**	**289**	Pn	**Pn**	**16 08 07.2**	**+0.4**
PB02	**IPOC Station P**	**1.31**	**289**	*e*P	**Pn**	**16 08 07.0**	**+0.1**
PB02				*e*S	**Sn**	**16 08 27.7**	**+1.4**
PB02				IAML		16 08 28.2	
	comp=Z,2μm,0.3s						
PB02	**IPOC Station P**	**1.31**	**289**	⇑*i*P	**Pn**	**16 08 07.3**	**+0.5**
PB02				*i* S	**Sn**	**16 08 26.8**	**+0.4**
PB02				IAML		16 08 32.0	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**1.33**	**224**		**Pn**	**16 08 07.5**	**+0.4**
PB06	**IPOC Station P**	**1.33**	**224**	*e*P	**Pn**	**16 08 07.0**	**-0.1**
PB06				*e*S	**Sn**	**16 08 28.0**	**+1.2**
PB06				IAML		16 08 28.2	
	comp=Z,602nm,0.4s						
PB06	**IPOC Station P**	**1.33**	**224**	⇑*i*P	**Pn**	**16 08 07.6**	**+0.5**
PB06				*i* S	**Sn**	**16 08 27.1**	**+0.3**
PB06				IAML		16 08 28.1	
	comp=E,2μm,0.6s						
PB04	**IPOC Station P**	**1.58**	**248**	Pn	**Pn**	**16 08 10.2**	**+0.3**
PB04	**IPOC Station P**	**1.58**	**248**	*e*P	**Pn**	**16 08 10.0**	**+0.1**
PB04				*e*S	**Sn**	**16 08 32.4**	**+0.5**
PB04				IAML		16 08 33.7	
	comp=Z,411nm,0.2s						
PB04	**IPOC Station P**	**1.58**	**248**	⇑*i*P	**Pn**	**16 08 10.2**	**+0.3**
PB04				*i* S	**Sn**	**16 08 32.3**	**+0.5**
PB15	**IPOC Station P**	**1.67**	**210**		**Pn**	**16 08 11.5**	**+0.4**
PB15	**IPOC Station P**	**1.67**	**210**	*e*P	**Pn**	**16 08 11.5**	**+0.4**
PB15				*e*S	**Sn**	**16 08 35.1**	**+1.3**
PB15				IAML		16 08 39.0	
	comp=Z,2μm,0.3s						
PB15	**IPOC Station P**	**1.67**	**210**	*e*P	**Pn**	**16 08 11.5**	**+0.4**
PB15				*i* S	**Sn**	**16 08 33.8**	**0.0**
PX03	**IPOC Station P**	**1.67**	**323**	*e*P	**Pn**	**16 08 11.2**	**+0.2**
PB08	**IPOC Station P**	**1.70**	**341**		**Pn**	**16 08 12.8**	**+1.2**
PB08	**IPOC Station P**	**1.70**	**341**	*e*P	**Pn**	**16 08 12.8**	**+1.2**
PB08				*i* P		16 08 13.2	
PB08				*e*S	**Sn**	**16 08 36.7**	**+2.1**
PB08	**IPOC Station P**	**1.70**	**341**	⇓*i*P	**Pn**	**16 08 13.1**	**+1.6**
PB08				*i* S	**Sn**	**16 08 36.0**	**+1.4**
PB08				IAML		16 08 38.2	
	comp=N,769nm,0.2s						
PATCX	**Punta Patache**	**1.75**	**302**		**Pn**	**16 08 12.4**	**+0.6**
PATCX	**Punta Patache**	**1.75**	**302**	⇑*i*P	**Pn**	**16 08 12.6**	**+0.7**
PATCX				*i* S	**Sn**	**16 08 35.6**	**+0.4**
PATCX				IAML		16 08 37.4	
	comp=E,3μm,0.5s						
TA01	**Diego Aracena**	**1.92**	**308**	Pn	**Pn**	**16 08 14.2**	**+0.4**
TA01	**Diego Aracena**	**1.92**	**308**	⇑*e*P	**Pn**	**16 08 14.1**	**+0.4**
TA01				*i* S	**Sn**	**16 08 38.6**	**-0.1**
TA01				IAML		16 08 40.2	
	comp=E,2μm,0.3s						
HMBC	**Humberstone**	**1.92**	**320**	*e*P	**Pn**	**16 08 14.0**	**0.0**
HMBC				*e*S	**Sn**	**16 08 39.4**	**+0.3**
HMBC				IAML		16 08 40.5	
	comp=Z,1μm,0.2s						
HMBC	**Humberstone**	**1.92**	**320**	⇓*i*P	**Pn**	**16 08 14.3**	**+0.3**
HMBC				*i* S	**Sn**	**16 08 38.6**	**-0.4**
TA02	**Huaiquique**	**2.08**	**315**		**Pn**	**16 08 15.8**	**0.0**
TA02	**Huaiquique**	**2.08**	**315**	*e*P	**Pn**	**16 08 16.0**	**+0.2**
TA02				*i* S	**Sn**	**16 08 42.4**	**+0.1**
TA02				IAML		16 08 45.8	
	comp=N,1μm,0.4s						
GO01	**Chusmiza**	**2.16**	**344**		**Pn**	**16 08 18.0**	**+0.7**
GO01	**Chusmiza**	**2.16**	**344**	⇑*e*P	**Pn**	**16 08 18.3**	**+1.0**
GO01				*i* S	**Sn**	**16 08 46.3**	**+1.4**
PB11	**IPOC Station P**	**2.23**	**333**	Pn	**Pn**	**16 08 18.3**	**+0.4**
PB11	**IPOC Station P**	**2.23**	**333**	*e*P	**Pn**	**16 08 18.1**	**+0.2**
PB11				*e*S	**Sn**	**16 08 46.6**	**+0.7**
PB11				IAML		16 08 52.1	
	comp=Z,393nm,0.2s						
PB11	**IPOC Station P**	**2.23**	**333**	⇓*i*P	**Pn**	**16 08 18.4**	**+0.4**
PB11				*i* S	**Sn**	**16 08 45.9**	**-0.1**
YJA	**Yavi**	**2.86**	**99**	*e*P	**Pn**	**16 08 28.3**	**+2.1**
GO02	**Mina Guanaco**	**3.52**	**195**	Pn	**Pn**	**16 08 34.9**	**+0.2**
GO02	**Mina Guanaco**	**3.52**	**195**	*e*P	**Pn**	**16 08 34.9**	**+0.2**
GO02				*e*S	**Sn**	**16 09 16.6**	**+0.5**
GO02				IAML		16 09 43.3	
	comp=Z,139nm,0.3s						
AC01	**Pan de Azucar**	**4.75**	**203**	Pn	**Pn**	**16 08 49.4**	**-1.5**
AC01	**Pan de Azucar**	**4.75**	**203**	*e*S	**Sn**	**16 09 41.3**	**-3.8**
AC01				IAML		16 09 59.9	
	comp=Z,64nm,0.9s						
AC02	**Maricunga**	**5.08**	**186**	Pn	**Pn**	**16 08 55.4**	**-0.3**
AC02	**Maricunga**	**5.08**	**186**	*e*P	**Pn**	**16 08 55.2**	**-0.5**
AC02				*e*S	**Sn**	**16 10 00.7**	**+6.9**
GO03	**Copiap**	**6.01**	**194**	Pn	**Pn**	**16 09 07.7**	**-0.2**
BBSD	**Serra de San D**	**8.77**	**60**	*e*P	**Pn**	**16 09 42.1**	**-3.0**
CO03	**El Pedregal**	**9.24**	**191**	Pn	**Pn**	**16 09 51.5**	**-0.1**
PTLB	**Pontes e Lacer**	**10.92**	**57**	Pn	**Pn**	**16 10 12.1**	**-1.9**
BDQN	**Bodoquena, MS**	**11.11**	**85**	*e*P	**Pn**	**16 10 15.5**	**-1.1**
ANTJ	**Antonio Joao (**	**11.67**	**94**	*e*P	**Pn**	**16 10 24.6**	**+0.6**
VILB	**Vilhena**	**11.84**	**44**	*e*P	**Pn**	**16 10 23.1**	**-3.2**
AQDB	**Aquidauana**	**12.07**	**86**		**Pn**	**16 10 28.0**	**-1.3**
AQDB	**Aquidauana**	**12.07**	**86**	*e*P	**Pn**	**16 10 30.2**	**+0.9**
SALV	**Santo Antonio**	**13.50**	**67**	*e*P	**Pn**	**16 10 48.9**	**+1.0**
UNIS	**Unistalda (Bra**	**14.19**	**124**	*e*P	**P**	**16 11 00.3**	**0.0**
CRSM	**Crissiumal (Br**	**14.38**	**116**	*e*P	**P**	**16 11 02.8**	**+0.4**
RODS	**Rosario do Sul**	**14.74**	**128**	*e*P	**P**	**16 11 06.7**	**+0.4**
FRBT	**Francisco Belt**	**14.79**	**110**	*e*P	**P**	**16 11 07.6**	**+0.6**
TBOT	**Tacuaremb**	**14.99**	**134**	*e*P	**P**	**16 11 09.4**	**+0.3**
PTGB	**Pitanga**	**15.45**	**104**	*e*P	**P**	**16 11 14.9**	**+0.5**
ALGR	**Alto Alegre (B**	**15.70**	**120**	*e*P	**P**	**16 11 17.4**	**+0.3**
ITAB	**Concordia**	**15.92**	**113**		**P**	**16 11 18.9**	**-0.5**
ITAB				IAmb	IAmb	16 11 23.6	
	comp=Z,17nm,1.4s						
ITAB	**Concordia**	**15.92**	**113**	*e*P	**P**	**16 11 19.7**	**+0.3**
CPSB	**Cacapava Do Su**	**16.08**	**126**	*e*P	**P**	**16 11 21.3**	**+0.1**
PCMB	**Pacaembu**	**16.09**	**93**	*e*P	**P**	**16 11 22.4**	**+1.0**
LDASE	**Londrina, Braz**	**16.20**	**99**	*e*P	**P**	**16 11 23.4**	**+0.7**
PLTB	**Pedras Altas**	**16.65**	**130**		**Pn**	**16 11 26.9**	**-0.4**
PLTB				IAmb	IAmb	16 11 43.5	
	comp=Z,9.8nm,1.3s						
ITRB	**Iturama**	**17.15**	**86**	*e*P	**Pn**	**16 11 35.4**	**+1.9**
TRQA	**Tornquist**	**17.21**	**162**	Pn	**Pn**	**16 11 34.8**	**+0.8**
TRQA				IAmb	IAmb	16 11 37.4	
	comp=Z,18nm,1.5s						
BB19B	**Bebedouro**	**18.67**	**92**	*e*P	**P**	**16 11 49.8**	**-0.1**
SNDB	**Serra Nova Dou**	**19.16**	**62**	*e*P	**P**	**16 11 54.3**	**-0.9**
NPGB	**Novo Progresso**	**19.40**	**43**	*e*P	**P**	**16 11 57.3**	**-0.6**
ITTB	**Itaituba**	**21.30**	**38**	*e*P	**P**	**16 12 17.5**	**-0.7**
JANB	**Januaria**	**23.94**	**78**	*e*P	**P**	**16 12 44.2**	**+0.1**
MALB	**Monte Alegre**	**24.19**	**37**	*e*P	**P**	**16 12 46.0**	**-0.3**

*JMA **18** 16:09:27.5±0.1,24°.8N±0°.9×122°.2E±0°.4, h44km, MV2.1/11, TAIWAN REGION*
*TAP **18** 16:09:27.3,24°.84N×122°.17E, h13km, ML2.7, C*
ISC 18 16:09:25.1±1.2,**24°.81N**±0°.02×**122°.33E**±0°.02,**h3**km±10km,
n90,σ0s62/172,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.36**	**275**	*e*P	**Pg**	**16 09 32.5**	**+0.4**
	baz=265						
EGS				*e*S	**Sg**	**16 09 35.6**	**-1.1**
	baz=265						
TWB1	**Santiao Chiao**	**0.36**	**303**	*i* P	**Pg**	**16 09 32.6**	**+0.5**
	baz=315						
TWB1				*i* S	**Sg**	**16 09 36.3**	**-0.6**
	baz=315						
EOS2	**EOS2**	**0.40**	**192**	P	**Pb**	**16 09 35.9**	**+1.1**
	baz=192						
EOS2				*e*S	**Sb**	**16 09 41.5**	**+0.3**
	baz=192						
TWC	**Suao**	**0.48**	**245**	P	**Pg**	**16 09 35.0**	**+0.6**
	baz=231						
TWC				S	**Sg**	**16 09 40.1**	**-0.5**
	baz=231						
SXI1	**Grass Mountain**	**0.50**	**305**	P	**Pg**	**16 09 35.5**	**+0.8**
	baz=316						
SXI1				*e*S	**Sg**	**16 09 40.9**	**-0.2**
	baz=316						
ESAO	**Su ao**	**0.50**	**242**	P	**Pg**	**16 09 35.5**	**+0.8**
	baz=229						
ESAO				S	**Sg**	**16 09 40.7**	**-0.4**
	baz=229						
EOS3	**EOS3**	**0.52**	**181**	P	**Pn**	**16 09 38.4**	**-0.9**
	baz=182						
EOS3				S	**Sn**	**16 09 46.7**	**-1.9**
	baz=182						
NDS	**Dongshan**	**0.58**	**252**	*e*P	**Pg**	**16 09 36.9**	**+0.6**
	baz=238						
NDS				*e*S	**Sg**	**16 09 43.3**	**-0.5**
	baz=238						
TNOU	**National Taiwa**	**0.60**	**304**	*e*P	**Pb**	**16 09 37.6**	**-0.7**
	baz=309						
TNOU				*e*S	**Sg**	**16 09 45.1**	**+0.5**
	baz=309						
TWE	**Neicheng**	**0.61**	**262**	P	**Pg**	**16 09 37.3**	**+0.6**
	baz=246						
TWE				S	**Sg**	**16 09 43.7**	**-0.9**
	baz=246						
EWUT	**Wuta**	**0.62**	**234**	P	**Pg**	**16 09 37.7**	**+0.7**
	baz=214						
EWUT				*e*S	**Sg**	**16 09 44.7**	**-0.3**
	baz=214						
ENA	**Nanau**	**0.66**	**234**	P	**Pg**	**16 09 38.2**	**+0.5**
	baz=215						
ENA				S	**Sg**	**16 09 45.6**	**-0.6**
	baz=215						
JYNG	**Yonagunijimaku**	**0.67**	**122**	P	**Pn**	**16 09 41.2**	**-0.2**
JYNG				S	**Sn**	**16 09 52.0**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.67**	**266**	P	**Pg**	**16 09 38.4**	**+0.4**
	baz=261						
FUSB				*e*S	**Sg**	**16 09 45.9**	**-0.9**
	baz=261						
EOS4	**EOS4**	**0.69**	**181**	*e*P	**Pn**	**16 09 41.4**	**0.0**
	baz=170						
EOS4				*e*S	**Sn**	**16 09 51.2**	**-1.2**
	baz=170						
TWA	**Mucha**	**0.69**	**284**	P	**Pb**	**16 09 39.8**	**-0.1**
	baz=284						
TWA				*e*S	**Sg**	**16 09 46.6**	**-0.9**
	baz=284						
ENTT	**Nioudou**	**0.71**	**256**	*e*P	**Pg**	**16 09 39.3**	**+0.5**
	baz=249						
ENTT				*e*S	**Sg**	**16 09 47.7**	**-0.3**
	baz=249						
YOJ	**Yonaguni jima**	**0.71**	**119**	*e*P	**Pn**	**16 09 42.1**	**0.0**
	baz=118						
YOJ				*e*S	**Sn**	**16 09 53.4**	**-0.2**
	baz=118	

baz=257
NFF eS Sg 16 10 00.6 -0.4
baz=257
ETM Tongmen 1.14 222 eP Pg 16 09 46.9 0.0
baz=215
ETM eS Sg 16 10 01.6 0.0
baz=215
FUSS Fushou 1.14 241 P Pg 16 09 47.1 +0.2
baz=235
FUSS S Sg 16 10 00.5 -1.1
baz=235
LXIB Xiulin Townshi 1.15 227 P Pg 16 09 47.2 +0.1
baz=220
LXIB eS Sg 16 10 01.7 -0.2
baz=220
WHF Hehuan Shan 1.17 236 eP Pg 16 09 48.0 +0.4
baz=229
WHF eS Sg 16 10 02.2 -0.6
baz=229
TDCB Techi 1.20 243 eP Pn 16 09 49.1 +0.1
baz=230
TDCB eS Sg 16 10 02.7 -1.0
baz=230
LIOB Emei 1.20 262 eP Pn 16 09 49.2 +0.4
baz=259
LIOB eS Sg 16 10 03.8 0.0
baz=259
NSTT Nanjuang 1.22 262 eP Pn 16 09 49.1 +0.1
baz=258
NSTT eS Sg 16 10 04.2 -0.1
baz=258
SHUL Shoufeng 1.23 215 eP Pn 16 09 50.2 +0.9
baz=207
SHUL eS Sn 16 10 07.8 +1.3
baz=207
ESL Shilin 1.28 220 eP Pn 16 09 49.9 -0.1
baz=219
ESL eS Sg 16 10 06.7 +0.3
baz=219
CHGB Renai 1.29 235 eP Pg 16 09 50.0 +0.1
baz=229
CHGB eS Sg 16 10 06.2 -0.4
baz=229
WUSB Renai 1.37 234 P Pn 16 09 51.3 0.0
baz=228
WUSB S Sb 16 10 08.0 -1.5
baz=228
WARBT Fenglin Townsh 1.39 218 P Pb 16 09 51.6 -0.1
baz=218
WARBT eS Sb 16 10 09.6 -0.2
baz=218
NMLH Miaoli 1.42 259 eP Pb 16 09 52.4 +0.1
baz=255
NMLH eS Sb 16 10 10.4 -0.4
baz=255
NSY Sanyi 1.48 255 eP Pg 16 09 54.3 +0.9
baz=263
NSY eS Sn 16 10 12.4 -0.1
baz=263
TWQ1 Liyutan 1.49 252 eP Pg 16 09 54.2 +0.5
baz=266
TWQ1 eS Sn 16 10 12.0 -0.7
baz=266
WCS Beigang Elemen 1.49 240 eP Pg 16 09 54.1 +0.3
baz=235
WCS eS Sn 16 10 12.6 -0.3
baz=235
VWDT VWDT 1.51 226 eP Pg 16 09 54.2 +0.2
baz=228
VWDT eS Sn 16 10 13.2 0.0
baz=228
HGSD Ruisui 1.55 212 eP Pg 16 09 55.1 +0.2
baz=206
HGSD eS Sg 16 10 15.8 +0.8
baz=206
EHY Hungye 1.59 215 eP Pn 16 09 54.7 +0.5
baz=208
EHY eS Sb 16 10 15.7 0.0
baz=208
SMLT Sun Moon Lake 1.60 235 eP Pb 16 09 55.2 -0.1
baz=230
SMLT eS Sb 16 10 15.9 0.0
baz=230
SSLB Suanglung 1.61 231 P Pg 16 09 56.1 0.0
SSLB Suanglung 1.61 231 P Pb 16 09 55.8 +0.2
baz=226
SSLB eS Sn 16 10 15.2 -0.7
baz=226
TYC Yuchr 1.62 236 eP Pb 16 09 55.4 -0.1
baz=231
TYC eS Sn 16 10 15.1 -0.8
baz=231
JKRS Kuro-shima 1.64 110 P Pb 16 09 55.4 -0.6
JKRS S Sn 16 10 16.1 -0.3
YULB Yu-li 1.70 214 P Pb 16 09 56.6 -0.4
YULB Yu-li 1.70 214 eP Pn 16 09 56.1 +0.5
baz=207
YULB eS Sb 16 10 19.2 +0.4
baz=207
JIJ Ishigaki jima 1.71 105 eP Pb 16 09 57.3 +0.1
EYUL Yuli 1.72 212 eP Pb 16 09 57.1 -0.3
baz=223
EYUL eS Sn 16 10 19.0 +0.5
baz=223
TWF1 Yuli 1.73 213 eP Pn 16 09 56.3 +0.2
baz=206
TWF1 eS Sb 16 10 20.3 +0.6
baz=206
WJS Zhushan 1.76 236 eP Pg 16 09 59.0 +0.1
baz=231
WJS eS Sb 16 10 21.1 +0.5
baz=231
WNT Mingjian 1.76 239 eP Pg 16 09 59.8 +0.9
baz=234
WNT eS Sb 16 10 21.1 +0.4
baz=234
JISG Ishigakijimahi 1.82 97 eP Pb 16 09 59.4 +0.4
ALS Alishan 1.90 227 eP Pb 16 10 00.4 -0.2
baz=207
ALS eS Sg 16 10 26.1 -0.1
baz=207
EHD Haiduan 1.95 212 eP Pb 16 10 00.3 -1.0
baz=206
EHD eS Sn 16 10 24.8 +0.7
baz=206
WDLH Douliu 1.98 236 eP Pb 16 10 01.6 -0.1
baz=231
WDLH eS Sb 16 10 27.1 +0.3
baz=231
ELDTW Lidau 2.01 217 eP Pn 16 10 01.1 +1.1
baz=195
ELDTW eS Sn 16 10 25.9 +0.1
baz=195
WCKO Fanlu 2.08 229 eP Pn 16 10 02.1 +1.1
baz=209
WCKO eS Sb 16 10 29.8 -0.1
baz=209
WTK Tuku 2.09 238 eP Pb 16 10 02.4 -1.3
baz=233
WTK eS Sn 16 10 28.6 +0.9
baz=233
CHN4 Tsaushan 2.15 228 eP Pb 16 10 04.2 -0.5
baz=209
CHN4 eS Sb 16 10 31.7 -0.1
baz=209
TPUB Ta-pu 2.16 226 P Pb 16 10 04.9 0.0
TPUB Ta-pu 2.16 226 eP Pb 16 10 04.2 -0.7
baz=203
TPUB eS Sb 16 10 31.7 -0.4
baz=203
STYH Taoyuan 2.16 221 eP Pb 16 10 03.8 -1.1
baz=199
STYH eS Sn 16 10 30.8 +1.4
baz=199
WTP Ta-pu 2.21 225 eP Pb 16 10 04.9 -0.9
baz=202
WTP eS Sb 16 10 32.3 -1.2
baz=202
TWK Hsinying 2.28 228 eP Pb 16 10 06.1 -0.8
baz=223
TWK eS Sb 16 10 34.5 -1.0
baz=223
SNST Tainan City 2.30 227 eP Pb 16 10 06.2 -1.1
baz=222
SNST eS Sb 16 10 34.9 -1.3
baz=222
MASBT Mashibuluo 2.68 216 eP Pn 16 10 11.2 +2.0
baz=193
MASBT eS Sn 16 10 42.9 +0.7
baz=193

*IDC **18** 16:16:37.4±0.5,41˚.17S×42˚.89E,h0km,mb4.3/20, mbtmp4.3/22,ML4.1/2,MS4.1/46,Error ellipse: s-maj=17.7km s-min=15.3km az=65.0*
*NEIC **18** 16:16:38.6±1.6,41˚.1S±0˚.1×43˚.0E±0˚.1,h10km±1km, mb4.8/20,Error ellipse: s-maj=22.0km s-min=14.3km az=225.0*
*GCMT **18** 16:16:40.6±0.2,41˚.14S±0˚.01×42˚.84E±0˚.02,h17km±1km, MW5.0/108,Moment Tensor Solution. s36,c47; s108,c164; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.84±.12; $M_{\theta\theta}$1.57±.09; $M_{\phi\phi}$-0.72±.09; $M_{r\theta}$-0.09±.20; $M_{\theta\phi}$2.95±.08; $M_{\phi r}$-1.42±.25; Best double couple: M_o3.52300×10^{16} NP1:ϕ_s14.00000°,δ80.00000°, λ-153.00000°. NP2:ϕ_s279.00000°,δ64.00000°, λ-11.00000°. Principal axes: T 3.7590, Plg11.0000°, Azm144.0000°; N -0.4770, Plg62.0000°, Azm32.0000°; P -3.2870, Plg26.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 16:16:39.7±0.4,41˚.14S±0˚.08×42˚.82E±0˚.09,h16km,n104, σ1§17/68,mb4.5/31,MS4.1/45,7C-4D,Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**8.41**	**132**		Pn		**Pn**	**16 18 38.6**	**-2.2**
GRHM	**Grahamstown, E**	**15.26**	**296**		Pn		**Pn**	**16 20 09.8**	**-4.6**
GRHM					IAmb		IAmb	16 20 21.2	
	comp=Z,78nm,1.0s								
POGA	**Pongola**	**16.52**	**323**		Pn		**Pn**	**16 20 29.3**	**-1.5**
BOSA	**Boshof**	**19.03**	**306**				**P**	**16 20 58.7**	**-2.5**
BOSA					IAmb		IAmb	16 21 09.9	
	comp=Z,89nm,1.8s								
BOSA	**Boshof**	**19.03**	**306**		P		**P**	**16 21 01.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=139,slow=11,SNR=13								
BOSA					LR		LR	16 27 01.9	
	comp=Z,841nm,20.2s,baz=141,slow=33								
	comp=Z,11nm,1.0s								
SUR	**Sutherland**	**19.64**	**289**		P		**P**	**16 21 07.6**	**-0.3**
SUR					IAmb		IAmb	16 21 11.8	
	comp=Z,37nm,1.0s								
SUR	**Sutherland**	**19.64**	**289**		P		**Pn**	**16 21 09.0**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=126,slow=16,SNR=11								
SUR					LR		LR	16 27 30.1	
	comp=Z,317nm,18.0s,baz=116,slow=33								
	comp=Z,30nm,1.0s								
LBTB	**Lobatse**	**21.54**	**313**		P		**P**	**16 21 27.9**	**-0.5**
LBTB	**Lobatse**	**21.54**	**313**		LR		LR	16 28 30.7	
	comp=Z,601nm,21.7s,baz=147,slow=33								
OPO	**Ambohidratompo**	**22.80**	**11**		LR		LR	16 28 58.5	
	comp=Z,605nm,20.5s,baz=1,slow=32								
LSZ	**Lusaka**	**28.73**	**330**		P		**P**	**16 22 36.5**	**0.0**
LSZ	**Lusaka**	**28.73**	**330**		LR		LR	16 33 00.9	
	comp=Z,596nm,19.7s,baz=156,slow=34								
TSUM	**Tsumeb**	**30.69**	**308**		P		**P**	**16 22 53.3**	**-0.7**
TSUM					IAmb		IAmb	16 22 55.1	
	comp=Z,22nm,1.1s								
TSUM	**Tsumeb**	**30.69**	**308**		LR		LR	16 34 15.5	
	comp=Z,723nm,19.5s,baz=142,slow=34								
TROLL	**Troll, Antarti**	**36.68**	**200**		⇑P		**P**	**16 23 46.1**	**+0.6**
	comp=Z,246nm,0.8s								
SNAA	**Sanae**	**37.93**	**202**		P		**P**	**16 23 56.6**	**+0.7**
SNAA					IAmb		IAmb	16 23 57.9	
	comp=Z,13nm,1.0s								
SNAA	**Sanae**	**37.93**	**202**		⇑P		**P**	**16 23 56.7**	**+0.7**
	comp=Z,169nm,0.7s								
SNAA	**Sanae**	**37.93**	**202**		P		**P**	**16 23 55.9**	**-0.1**
	comp=Z,9.2nm,0.8s,baz=80,slow=4.7,SNR=15								
SNAA					LR		LR	16 36 32.6	
	comp=Z,304nm,19.7s,baz=42,slow=32								
	comp=Z,9.2nm,0.8s								
VNA2	**Neumayer--Watz**	**38.93**	**204**		⇑P		**P**	**16 24 05.4**	**+1.0**
	comp=Z,20nm,0.7s,baz=62,slow=8.1								
VNA3	**Neumayer Olymp**	**39.74**	**204**		⇑P		**P**	**16 24 11.7**	**+0.6**
	comp=Z,11nm,0.7s								
MBAR	**Mbarara**	**41.81**	**342**		LR		LR	16 41 06.5	
	comp=Z,394nm,18.1s,baz=145,slow=35								
QSPA	**South Pole Qui**	**49.07**	**180**		P		**P**	**16 25 25.0**	**-0.8**
	comp=Z,24nm,1.0s,baz=258,slow=5.1,SNR=33								
QSPA					LR		LR	16 45 12.5	
	comp=Z,125nm,18.6s,baz=254,slow=35								
	comp=Z,24nm,1.0s								
ATD	**Arta Tunnel**	**52.41**	**0**		LR		LR	16 46 17.7	
	comp=Z,8.1nm,19.4s,baz=179,slow=34								
H01W2	**Cape Leeuwin H**	**55.10**	**108**		T		T	17 25 23.8	
	baz=242,slow=75,SNR=251								
H01W3	**Cape Leeuwin H**	**55.11**	**108**		T		T	17 25 24.5	
	baz=242,slow=75,SNR=249								
H01W1	**Cape Leeuwin H**	**55.12**	**108**		T		T	17 25 25.1	
	baz=242,slow=75,SNR=260								
VNDA	**Vanda**	**55.95**	**167**		P		**P**	**16 26 16.7**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=235,slow=6.8,SNR=5.2								
VNDA					LR		LR	16 49 40.1	
	comp=Z,144nm,18.6s,baz=228,slow=36								
	comp=Z,2.8nm,0.8s								
NWAO	**Narrogin (SRO)**	**58.32**	**108**		LR		LR	16 45 33.2	
	comp=Z,187nm,21.1s,baz=238,slow=30								
SMAI	**San Martin Ant**	**59.26**	**204**		P		**P**	**16 26 41.5**	**+1.7**
PMSA	**Palmer Station**	**60.12**	**208**		LR		LR	16 46 18.6	
	comp=Z,152nm,21.9s,baz=122,slow=30								
DBIC	**Dimbokro**	**64.56**	**306**		P		**P**	**16 27 15.2**	**-1.0**
DBIC	**Dimbokro**	**64.56**	**306**		P		**P**	**16 27 18.1**	**+1.9**
	comp=Z,4.5nm,0.8s,baz=160,slow=6.2,SNR=3.7								
DBIC					LR		LR	16 53 52.1	
	comp=Z,113nm,18.8s,baz=130,slow=35								
	comp=Z,4.5nm,0.8s								
WSAR	**Wadi Sarin**	**65.71**	**16**		LR		LR	16 50 42.5	
	comp=Z,116nm,21.8s,baz=222,slow=31								
TORD	**Torodi Ar. Bea**	**66.04**	**315**		P		**P**	**16 27 26.1**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=142,slow=4.9,SNR=2.2								
TORD					LR		LR	16 56 11.6	
	comp=Z,189nm,18.9s,baz=136,slow=36								
	comp=Z,1.2nm,0.3s								
PSA00	**Pilbara Seismi**	**66.58**	**99**		P		**P**	**16 27 28.0**	**-1.4**
LEM	**Lembang**	**66.62**	**78**		LR		LR	16 51 36.6	
	comp=Z,46nm,18.1s,baz=299,slow=32								
PWJI	**Pagerwojo**	**68.95**	**82**		P		P	16 27 48.8	+4.5
	comp=Z,28nm,1.7s								
EIL	**Elat**	**70.83**	**353**		LR		LR	16 56 28.5	
	comp=Z,106nm,19.9s,baz=224,slow=34								
MMAI	**Mount Meron Ar**	**74.11**	**354**		LR		LR	16 58 33.3	
	comp=Z,138nm,20.8s,baz=141,slow=34								
TRQA	**Tornquist**	**75.52**	**232**		P		**P**	**16 28 24.2**	**+0.9**
ASAR	**Alice Springs**	**75.61**	**109**		P		**P**	**16 28 24.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=228,slow=5.3,SNR=11								
ASAR					LR		LR	16 57 10.0	
	comp=Z,270nm,18.4s,baz=242,slow=32								
	comp=Z,0.7nm,0.7s								
STKA	**Stephens Creek**	**75.73**	**120**		P		**P**	**16 28 23.7**	**-1.0**
STKA	**Stephens Creek**	**75.73**	**120**		P		**P**	**16 28 25.0**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=222,slow=4.0,SNR=12								
STKA					LR		LR	16 54 22.8	
	comp=Z,223nm,20.6s,baz=209,slow=30								
	comp=Z,4.7nm,0.7s								
WRA	**Warramunga Ar**	**78.27**	**106**		P		**P**	**16 28 38.8**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=224,slow=4.8,SNR=7.7								
	comp=Z,1.8nm,0.9s								
PLCA	**Paso Flores**	**78.56**	**225**		P		**P**	**16 28 41.1**	**+0.6**
PLCA	**Paso Flores**	**78.56**	**225**		P		**P**	**16 28 41.1**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=114,slow=3.6,SNR=16								
PLCA					LR		LR	16 55 19.3	
	comp=Z,72nm,21.7s,baz=150,slow=30								
	comp=Z,3.5nm,0.7s								
CMAR	**Chiang Mai Arr**	**78.85**	**53**		P		**P**	**16 28 42.1**	**0.0**
	comp=Z,1.0nm,0.9s,baz=227,slow=6.8,SNR=10								
CMAR					LR		LR	16 59 45.9	
	comp=Z,39nm,18.0s,baz=200,slow=33								
	comp=Z,1.0nm,0.9s								
NIL	**Nilore**	**79.53**	**25**		P		**P**	**16 28 44.3**	**-1.2**
GO06	**Curarrehue**	**79.87**	**226**		P		**P**	**16 28 47.4**	**-0.3**
GO06					IAmb		IAmb	16 28 56.9	
	comp=Z,18nm,1.6s								
GEYT	**Alibeck**	**79.93**	**12**		P		**P**	**16 28 48.2**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=290,slow=32,SNR=3.5								
GEYT					LR		LR	17 01 51.1	
	comp=Z,54nm,21.0s,baz=180,slow=34								
	comp=Z,1.2nm,0.7s								
CPUP	**Villa Florida**	**80.23**	**244**		P		**P**	**16 28 49.5**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=98,slow=9.6,SNR=2.5								
CPUP					LR		LR	16 58 16.4	
	comp=Z,68nm,18.8s,baz=166,slow=31								
	comp=Z,1.3nm,0.8s								
BDFB	**Brasilia**	**80.50**	**258**		P		**P**	**16 28 51.5**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=124,slow=4.7,SNR=1.8								
BDFB					LR		LR	16 57 16.1	
	comp=Z,113nm,19.4s,baz=139,slow=30								
	comp=Z,1.2nm,0.6s								
BRTR	**Keskin Array B**	**80.92**	**353**		P		**P**	**16 28 51.7**	**-1.2**
BRTR	**Keskin Array B**	**80.92**	**353**		P		**P**	**16 28 53.0**	**0.0**
	comp=Z,1.4nm,1.0s,baz=180,slow=5.8,SNR=6.9								
BRTR					LR		LR	17 03 15.0	
	comp=Z,109nm,20.6s,baz=170,slow=35								
	comp=Z,1.4nm,1.0s								
GNI	**Garni**	**80.93**	**1**		LR		LR	17 04 43.4	
	comp=Z,70nm,18.8s,baz=176,slow=36								
KEST	**Kesra**	**82.44**	**333**		P		**P**	**16 28 60.0**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=109,slow=2.6,SNR=2.0								
KEST					LR		LR	17 07 37.0	
	comp=Z,332nm,19.8s,baz=360,slow=37								
	comp=Z,2.2nm,0.7s								
VAE	**Valguarnera**	**82.45**	**338**		LR		LR	17 06 33.8	
	comp=Z,190nm,18.8s,baz=150,slow=36								
BO02	**Sierra Bellavi**	**82.91**	**229**		P		**P**	**16 29 03.6**	**-0.3**
BO02					IAmb		IAmb	16 29 08.1	
	comp=Z,8.4nm,0.7s								
RPZ	**Rata Peaks**	**83.55**	**145**		LR		LR	16 59 43.4	
	comp=Z,132nm,19.1s,baz=247,slow=31								
MT01	**Popeta**	**83.85**	**230**		P		**P**	**16 29 09.1**	**+0.5**
VA03	**San Esteban**	**84.23**	**231**		P		**P**	**16 29 10.3**	**-0.4**
VA03					IAmb		IAmb	16 29 17.3	
	comp=Z,9.3nm,0.9s								
KBZ	**Khabaz**	**84.49**	**0**		P		**P**	**16 29 10.6**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=207,slow=6.8,SNR=1.6								
KBZ					LR		LR	17 07 36.3	
	comp=Z,54nm,18.2s,baz=150,slow=36								
	comp=Z,1.1nm,0.8s								
KSH	**Kashi**	**85.77**	**25**		P		**P**	**16 29 17.3**	**-0.7**
KSH					sP		pwP	16 29 25.8	+3.0
KSH					pmax		pmax		
	comp=Z,3.0nm,0.9s								
KMI	**Kunming**	**86.19**	**52**		⇓P		**P**	**16 29 21.9**	**+1.4**
KMI					pmax		pmax		
	comp=Z,4.0nm,1.0s								
CTA	**Charters Tower**	**86.63**	**114**		LR		LR	17 04 07.1	
	comp=Z,127nm,19.6s,baz=239,slow=33								
PZH	**PanZhiHua**	**86.65**	**50**		P		**P**	**16 29 24.0**	**+1.4**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.5s								
PZH					pmax		pmax		
	comp=Z,150nm,3.5s								
CFR	**Carcaliu**	**86.94**	**350**		⇑P		**P**	**16 29 24.4**	**+1.1**
MLR	**Muntele Rosu**	**87.56**	**348**		⇓P		**P**	**16 29 28.0**	**+1.4**
ARR	**Arges**	**87.65**	**347**		⇓P		**P**	**16 29 28.5**	**+1.5**
PLOR	**Plostina**	**87.81**	**349**		⇓P		**P**	**16 29 29.3**	**+1.7**
VRI	**Vrincioaia**	**87.81**	**349**		⇑P		**P**	**16 29 28.8**	**+1.2**
AAK	**Ala-Archa**	**88.17**	**23**		LR		LR	17 05 59.3	
	comp=Z,32nm,20.2s,baz=218,slow=34								
SIV	**San Ignacio**	**89.71**	**249**		LR		LR	17 04 52.1	
	comp=Z,150nm,18.1s,baz=102,slow=32								
BURAR	**Bucovina Array**	**89.74**	**348**		⇑P		**P**	**16 29 39.6**	**+2.8**
LVC	**Limon Verde**	**90.45**	**239**		LR		LR	17 07 12.5	
	comp=Z,32nm,18.7s,baz=160,slow=34								
URZ	**Urewera**	**90.63**	**146**		LR		LR	17 06 08.8	
	comp=Z,98nm,18.4s,baz=301,slow=33								
ESDC	**Sonseca Array**	**91.01**	**326**		P		**P**	**16 29 43.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=142,slow=6.5,SNR=2.2								
	comp=Z,0.6nm,0.8s								
AKTO	**Aktyubinsk**	**92.16**	**10**		LR		LR	17 09 47.4	
	comp=Z,74nm,21.8s,baz=228,slow=35								
AKASG	**Malin Array Be**	**92.23**	**351**		LR		LR	17 13 29.7	
	comp=Z,44nm,18.4s,baz=224,slow=37								
DAVOX	**Davos/Dischmat**	**92.32**	**338**		LR		LR	17 15 46.9	
	comp=Z,127nm,18.4s,baz=166,slow=38								
VRAC	**Vranov**	**92.98**	**343**		LR		LR	17 14 54.6	
	comp=Z,55nm,19.0s,baz=178,slow=38								
GERES	**GERESS Array B**	**93.22**	**341**		LR		LR	17 16 19.2	
	comp=Z,66nm,18.8s,baz=165,slow=38								
WMQ	**Urumqi**	**93.72**	**31**		eP		**P**	**16 29 55.0**	**-0.3**
WMQ					pmax		pmax		
	comp=Z,6.0nm,1.9s								
MKAR	**Makanchi Array**	**94.34**	**26**		P		**P**	**16 29 58.1**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=227,slow=6.4,SNR=5.8								
	comp=Z,0.5nm,0.8s								
PMG	**Port Moresby**	**94.48**	**106**		LR		LR	17 06 12.3	
	comp=Z,125nm,21.4s,baz=203,slow=32								
KURBB	**Kurchatov Arra**	**96.58**	**22**		P		**P**	**16 30 10.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=222,slow=6.2,SNR=2.1								
KURBB					LR		LR	17 12 08.3	
	comp=Z,40nm,18.2s,baz=185,slow=34								
	comp=Z,0.1nm,0.3s								
BVAR	**Borovoye Array**	**96.77**	**16**		P		**P**	**16 30 09.9**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=216,slow=7.3,SNR=4.3								
BVAR					LR		LR	17 10 15.5	
	comp=Z,47nm,21.6s,baz=214,slow=33								
	comp=Z,0.7nm,0.7s								
ARU	**Arti**	**98.11**	**9**		LR		LR	17 17 29.3	
	comp=Z,29nm,18.2s,baz=202,slow=37								
DZM	**Mont Dzumac**	**98.23**	**129**		eLR		LR	17 02 03.8	
	comp=Z,238nm,23.7s								
DZM	**Mont Dzumac**	**98.23**	**129**		LR		LR	17 06 25.7	
	comp=Z,152nm,20.4s,baz=301,slow=30								
NJ2	**Nanjing**	**101.03**	**57**		eP		**Pdif**	**16 30 29.4**	**+0.9**
NJ2					pmax		pmax		
	comp=Z,4.0nm,0.9s								
ZALV	**Zalesovo Beam**	**101.35**	**24**		P		**Pdif**	**16 30 29.6**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=214,slow=4.9,SNR=1.4								
HHC	**Hu-ho-hao-te**	**102.67**	**46**		eP		**Pdif**	**16 30 37.0**	**+1.3**
HHC					pmax		pmax		
	comp=Z,5.0nm,0.7s								
HHC					pmax		pmax		
	comp=Z,64nm,4.8s								
TBI	**Tubuai**	**114.83**	**168**		eLR		LR	17 09 50.2	
	comp=Z,2μm,34.2s								
PPT2	**Papeete2**	**120.45**	**166**		eLR		LR	17 12 21.8	
	comp=Z,138nm,23.2s								
PPT2					eLR		LR	17 12 28.0	
	comp=Z,138nm,25.5s								
TAOE	**Nuku Hiva Isla**	**130.18**	**176**		eLR		LR	17 17 00.7	
	comp=Z,161nm,28.1s								
WHAR	**Wooly Hollow**	**144.55**	**275**		PKPdf		**PKPab**	**16 36 13.5**	**-0.3**
FCC	**Fort Churchill**	**147.86**	**318**		PKPdf		**PKPdf**	**16 36 20.3**	**+0.3**
A36M	**Sachs Harbour**	**148.51**	**353**		PKPdf		**PKPdf**	**16 36 21.5**	**+0.7**
ULM	**Lac du Bonnet**	**150.08**	**302**		PKPbc		**PKiKP**	**16 36 29.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=80,slow=4.5,SNR=6.0								
TXAR	**Lajitas Array**	**150.38**	**257**		PKPbc		**PKiKP**	**16 36 31.8**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=142,slow=4.8,SNR=15								
D19K	**Kuna River**	**150.38**	**15**		PKPdf		**PKPdf**	**16 36 24.4**	**+0.5**
C36M	**Paulatuk**	**150.90**	**350**				**PKPbc**	**16 36 29.7**	**-0.5**
YKA	**Yellowknife Ar**	**154.73**	**335**		PKPbc		**PKiKP**	**16 36 39.2**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=43,slow=2.3,SNR=5.8								

*IDC **18** 16:41:19.7±1.8,10˚.12N×56˚.97E,h0km,mb3.6/13, mbtmp3.6/14,ML3.1/1,MS3.5/4,Error ellipse: s-maj=45.6km s-min=22.2km az=50.0*

ISC 18 16:41:21.4±1.6,10˚.1N±0˚.2×56˚.9E±0˚.2,h13km,n17, σ1§03/14,mb3.6/13,MS3.6/4,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**13.20**	**7**		Pn		**Pn**	**16 44 29.4**	**+0.8**
	0.1nm,0.3s,baz=180,slow=4.0,SNR=2.2								
	1.7nm,0.7s								
GEYT	**Alibeck**	**27.76**	**2**		P		**P**	**16 47 10.2**	**+0.2**
	0.3nm,0.3s,baz=196,slow=9.0,SNR=1.7								
	0.3nm,0.3s								
MBAR	**Mbarara**	**28.13**	**249**		LR		LR	16 57 55.5	
	comp=Z,75nm,21.0s,baz=5.0,slow=35								
KBZ	**Khabaz**	**35.68**	**342**		P		**P**	**16 48 20.3**	**+0.9**
	1.6nm,0.8s,baz=169,slow=8.4,SNR=2.6								
	1.6nm,0.8s								
BRTR	**Keskin Array B**	**36.08**	**329**		P		**P**	**16 48 23.5**	**+0.4**
	0.4nm,0.7s,baz=134,slow=4.2,SNR=2.0								
	0.4nm,0.7s								
CMAR	**Chiang Mai Arr**	**41.49**	**74**		P		**P**	**16 49 08.9**	**+0.3**
	1.5nm,0.9s,baz=267,slow=8.5,SNR=18								
	1.5nm,0.9s								
MKAR	**Makanchi Array**	**42.48**	**26**		P		**P**	**16 49 15.6**	**-0.7**
	0.3nm,0.6s,baz=217,slow=8.2,SNR=3.8								
	0.3nm,0.6s								
BELG	**Belogornoye**	**42.88**	**352**		P		**P**	**16 49 18.4**	**-0.9**
	3.8nm,0.9s,baz=207,slow=11,SNR=2.1								
	3.8nm,0.9s								
KURBB	**Kurchatov Arra**	**44.19**	**20**		P		**P**	**16 49 28.7**	**-1.2**
	0.3nm,0.3s,baz=216,

0.3nm,0.5s,baz=211,slow=6.8,SNR=2.1
0.3nm,0.5s
SONM Songino Array 55.98 38 P **P** **16 50 59.3 -0.5**
0.4nm,1.0s,baz=228,slow=7.6,SNR=2.4
SONM LR LR 17 15 20.1
comp=Z,55nm,20.1s,baz=342,slow=36
0.4nm,1.0s
FINES FINESS Array B 56.04 343 P **P** **16 50 59.9 +0.1**
1.0nm,0.9s,baz=162,slow=9.6,SNR=2.3
1.0nm,0.9s
KLR Kul'dur 72.54 42 LR LR 17 23 37.2
comp=Z,37nm,20.2s,baz=248,slow=35
YAK Yakutsk 73.10 28 LR LR 17 25 48.5
comp=Z,39nm,22.0s,baz=278,slow=36
WRA Warramunga Arr 81.79 112 P **P** **16 53 41.5 +0.8**
0.4nm,0.8s,baz=292,slow=5.2,SNR=2.7
0.4nm,0.8s
ASAR Alice Springs 82.30 116 P **P** **16 53 43.1 -0.2**
0.4nm,0.8s,baz=296,slow=4.6,SNR=4.9
0.4nm,0.8s

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*REY **18** 16:43:37.7, 69°.64N × 14°.12W, h0km*
*IDC **18** 16:43:38.5±1.1, 69°.98N × 15°.47W, h0km, mb3.3/5, mbtmp3.5/9, ML3.3/3, MS2.8/3, Error ellipse: s-maj=24.1km s-min=20.1km az=7.0*
ISC 18 16:43:37.7±0.7, 69°.38N±0°.05 × 15°.59W±0°.07, h10km, n47, σ1§91/47, mb3.2/5, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**2.46**	**300**	*i* P	**Pn**	**16 44 15.0**	**-2.7**
SCO				*i* S	**Pb**	**16 44 22.1**	**+0.2**
JMIC	**Jan Mayen**	**2.90**	**53**	LR	LR	16 45 14.1	
	comp=Z,86nm,19.0s,baz=78,slow=38						
IGRI	**Grimsey**	**2.99**	**199**	P	**Pb**	**16 44 32.6**	**+1.6**
	baz=206						
IGRI	**Grimsey**	**2.99**	**199**	P	**Pb**	**16 44 32.6**	**+1.6**
	baz=207						
ILEI	**Leirhofn**	**3.01**	**187**	P	**Pb**	**16 44 31.6**	**+0.4**
	baz=196						
ILEI	**Leirhofn**	**3.01**	**187**	P	**Pb**	**16 44 31.6**	**+0.4**
	baz=196						
IGIL	**Gilhagi**	**3.33**	**185**	P	**Pb**	**16 44 36.0**	**-0.8**
	baz=194						
IGIL	**Gilhagi**	**3.33**	**185**	P	**Pb**	**16 44 36.0**	**-0.8**
	baz=194						
IHED	**Heoinshofoi**	**3.38**	**192**	P	**Pb**	**16 44 37.4**	**-0.2**
	baz=200						
IHED	**Heoinshofoi**	**3.38**	**192**	P	**Pb**	**16 44 37.3**	**-0.2**
	baz=200						
IBRE	**Brettingsstaoi**	**3.39**	**196**	P	**Pb**	**16 44 38.2**	**+0.5**
	baz=203						
IBRE	**Brettingsstaoi**	**3.39**	**196**	P	**Pb**	**16 44 38.2**	**+0.5**
	baz=204						
IDIM	**Dimmadalss**	**3.47**	**189**	P	**Pb**	**16 44 38.4**	**-0.7**
	baz=197						
IDIM	**Dimmadalss**	**3.47**	**189**	P	**Pb**	**16 44 38.4**	**-0.7**
	baz=197						
IDIM				S	**Sg**	**16 45 26.0**	**-3.0**
	baz=197						
ISIG	**Siglufjorour**	**3.50**	**203**	P	**Pb**	**16 44 40.1**	**+0.5**
	baz=209						
ISIG	**Siglufjorour**	**3.50**	**203**	P	**Pb**	**16 44 40.5**	**+1.0**
	baz=210						
IGRA	**Granastaoir**	**3.56**	**193**	P	**Pb**	**16 44 40.2**	**-0.4**
	baz=201						
IGRA	**Granastaoir**	**3.56**	**193**	P	**Pb**	**16 44 40.4**	**-0.2**
	baz=201						
ISKI	**Skildingahlsh**	**3.57**	**190**	P	**Pb**	**16 44 40.0**	**-0.8**
	baz=198						
ISKI	**Skildingahlsh**	**3.57**	**190**	P	**Pb**	**16 44 40.4**	**-0.4**
	baz=198						
IGHA	**Grjothals**	**3.58**	**187**	P	**Pb**	**16 44 39.9**	**-1.0**
	baz=195						
IGHA	**Grjothals**	**3.58**	**187**	P	**Pb**	**16 44 39.8**	**-1.1**
	baz=195						
IHLA	**Hella**	**3.61**	**199**	P	**Pb**	**16 44 41.6**	**+0.1**
	baz=205						
IHLA	**Hella**	**3.61**	**199**	P	**Pb**	**16 44 41.7**	**+0.1**
	baz=206						
IHRN	**Hraun**	**3.71**	**210**	P	**Pb**	**16 44 43.6**	**+0.4**
	baz=215						
IHRN	**Hraun**	**3.71**	**210**	P	**Pb**	**16 44 43.6**	**+0.4**
	baz=216						
IKVO	**Krokottuvotn**	**3.72**	**188**	P	**Pb**	**16 44 42.3**	**-1.0**
	baz=196						
IGRS	**Grimsstaoir**	**3.76**	**183**	P	**Pb**	**16 44 42.1**	**-2.0**
	baz=192						
IGRS	**Grimsstaoir**	**3.76**	**183**	P	**Pb**	**16 44 42.0**	**-2.1**
	baz=192						
IMEL	**Melhnausar**	**3.85**	**187**	P	**Pb**	**16 44 43.6**	**-2.0**
	baz=194						
IMEL	**Melhnausar**	**3.85**	**187**	P	**Pb**	**16 44 43.9**	**-1.7**
	baz=194						
ISVA	**Svartarkot**	**4.11**	**190**	P	**Pb**	**16 44 48.0**	**-2.1**
	baz=197						
ISVA	**Svartarkot**	**4.11**	**190**	P	**Pb**	**16 44 48.3**	**-1.8**
	baz=197						
IADA	**Aoalbol**	**4.38**	**180**	P	**Pb**	**16 44 50.7**	**-4.0**
	baz=188						
IADA	**Aoalbol**	**4.38**	**180**	P	**Pb**	**16 44 50.7**	**-4.0**
	baz=188						
BORG	**Borgarnes**	**5.16**	**208**	Pn	**Pb**	**16 45 04.6**	**-3.3**
	1.2nm,0.3s,baz=0.7,slow=7.8,SNR=8.5						
BORG					Sn	**Sb**	**16 46 12.9**	**+3.0**
	baz=244,slow=6.7						
	14nm,0.8s						
SUMG	**Summit**	**8.09**	**304**	*i* P	**Pn**	**16 45 33.0**	**-2.4**
SPITS	**Spitsbergen Ar**	**12.30**	**31**	Pn	Pn	16 46 26.8	-5.9
	baz=227,slow=13						
	3.5nm,0.6s						
NOA	**NORSAR Array B**	**13.88**	**114**	LR	LR	16 50 58.1	
	comp=Z,36nm,18.6s,baz=320,slow=31						
ARCES	**ARCESS Array B**	**14.23**	**70**	Pn	**Pn**	**16 46 58.0**	**-1.0**
	1.2nm,0.7s,baz=289,slow=12,SNR=1.2						
HFS	**Hagfors**	**15.37**	**113**	Pn	**P**	**16 47 21.9**	**+2.9**
	0.1nm,0.3s,baz=326,slow=9.3,SNR=5.5						
HFS					LR	16 51 56.6	
	comp=Z,66nm,21.0s,baz=260,slow=32						
FINES	**FINESS Array B**	**18.69**	**94**	P	**Pn**	**16 47 56.4**	**+0.4**
	0.1nm,0.3s,baz=324,slow=9.4,SNR=8.0						
	1.9nm,0.7s						
GERES	**GERESS Array B**	**25.02**	**130**	P	**P**	**16 49 07.5**	**+6.0**
	0.8nm,0.7s,baz=353,slow=6.9,SNR=3.6						
	0.8nm,0.7s						
YKA	**Yellowknife Ar**	**36.63**	**310**	P	**P**	**16 50 42.7**	**-0.9**
	0.4nm,0.8s,baz=36,slow=8.2,SNR=6.4						
	0.4nm,0.8s						
BVAR	**Borovoye Array**	**40.51**	**68**	P	**P**	**16 51 16.5**	**+0.2**
	0.2nm,0.4s,baz=338,slow=6.2,SNR=1.6						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**41.87**	**331**	P	**P**	**16 51 26.0**	**-1.3**
	0.2nm,0.9s,baz=7.8,slow=7.3,SNR=2.4						
	0.2nm,0.9s						
TXAR	**Lajitas Array**	**62.22**	**279**	P	**P**	**16 54 00.6**	**+1.4**
	0.1nm,0.5s,baz=50,slow=2.8,SNR=2.0						
	0.1nm,0.5s						

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*DJA **18** 16:44:44.2±0.3, 0°.5S × 3°.12E±°, h66km±15km, M4.1/12, mb4.2/4, mB5.5/1, MLv4.0/12, Mw(mB)5.0/1*
*IDC **18** 16:44:46.2±3.6, 0°.11S × 122°.96E, h98km±32km, mb3.2/6, mbtmp3.5/6, Error ellipse: s-maj=50.4km s-min=17.2km az=65.0*
ISC 18 16:44:45.6±0.8, 0°.14S±0°.08 × 123°.03E±0°.09, h100km, n17, σ1§82/17, mb3.5/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.94**	**196**	P	Pn	16 45 01.1	-4.3
KMSI	**Cibinong**	**1.19**	**53**	P	**Pn**	**16 45 06.5**	**-1.6**
MRSI	**Marisa**	**1.25**	**299**	P	**Pn**	**16 45 05.2**	**-3.6**
MPSI	**Mapaga**	**3.17**	**279**	P	**Pn**	**16 45 32.0**	**-1.6**
SANI	**Sanana**	**3.52**	**123**	P	Pn	16 45 34.2	-4.1
TTSI	**Tana Toraja**	**4.32**	**228**	P	**Pn**	**16 45 46.8**	**-2.3**
TNTI	**Ternate**	**4.43**	**78**	P	**Pn**	**16 45 49.6**	**-1.0**
LBMI	**Labuha**	**4.50**	**96**	P	**Pn**	**16 45 50.1**	**-1.5**
NLAI	**Namlea**	**5.11**	**127**	P	**Pn**	**16 45 58.0**	**-1.8**
BKSI	**Bulukumba**	**5.91**	**209**	P	**Pn**	**16 46 08.7**	**-2.0**
	8.6nm,0.9s,0.1nm						
BNDI	**Bandanaira**	**8.13**	**122**	P	**Pn**	**16 46 39.2**	**-1.8**
WRA	**Warramunga Arr**	**22.59**	**151**	P	**P**	**16 49 39.8**	**+1.8**
	0.5nm,0.5s,baz=327,slow=11,SNR=4.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**25.66**	**156**	P	**P**	**16 50 07.7**	**+1.4**
	0.3nm,0.7s,baz=341,slow=14,SNR=2.8						
ASAR				PcP	**PcP**	**16 53 34.0**	**-0.5**
	0.3nm,0.5s,baz=346,slow=2.1,SNR=11						
ASAR				ScP	**ScP**	**16 57 06.4**	**+1.3**
	0.3nm,0.7s,baz=342,slow=2.9,SNR=2.5						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.02**	**309**	P	**P**	**16 50 45.5**	**+0.2**
	0.2nm,0.4s,baz=143,slow=7.5,SNR=5.2						
	0.2nm,0.4s						
USRK	**Ussuriysk Ar.**	**44.86**	**9**	P	**P**	**16 52 50.0**	**+0.1**
	1.0nm,0.5s,baz=195,slow=7.1,SNR=7.7						
	1.0nm,0.5s						
SONM	**Songino Array**	**49.92**	**345**	P	**P**	**16 53 30.6**	**+1.4**
	0.4nm,0.4s,baz=158,slow=9.9,SNR=6.9						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.74**	**328**	P	**P**	**16 54 33.2**	**+0.1**
	0.3nm,0.3s,baz=126,slow=8.6,SNR=13						
	0.3nm,0.3s						

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*RSNC **18** 16:49:08.9±1.7, 7°.40N × 78°.86W, h5km±6km, ML3.2, Mw3.7*
*UPA **18** 16:49:10.3±0.9, 7°.37N × 78°.83W, h27km±35km, MW4.4*
ISC 18 16:49:08.0±3.1, 7°.41N±0°.04 × 78°.85W±0°.02, h8km±23km, n25, σ1§01/43, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**1.06**	**104**	*e*P	**Pb**	**16 49 28.4**	**-0.2**
PTAC				*e*S	**Sb**	**16 49 41.4**	**-1.3**
PTAC				*i*		16 49 43.2	
	comp=Z,174nm,0.2s						
UPD2	**Meteti**	**1.40**	**36**	*e*P	**Pn**	**16 49 33.5**	**-0.3**
UPD2				*e*S	**Sn**	**16 49 52.0**	**-0.4**
UPD2				*i*		16 50 00.3	
	comp=Z,316nm,0.7s						
AZU	**Azuero**	**1.46**	**285**	*i* P	**Pn**	**16 49 34.5**	**-0.2**
AZU				*e*S	**Sn**	**16 49 53.4**	**-0.7**
AZU	**Azuero**	**1.46**	**285**	*e*P	**Pn**	**16 49 34.4**	**-0.2**
AZU				*e*S	**Sn**	**16 49 52.4**	**-1.7**
TOTI	**Torti**	**1.60**	**19**	*e*P	**Pn**	**16 49 36.6**	**0.0**
FLAM	**Flamenco Islan**	**1.64**	**335**	*e*P	**Pn**	**16 49 37.4**	**+0.3**
FLAM				*e*S	**Sn**	**16 49 57.4**	**-1.0**
CHIT3	**Chitre**	**1.65**	**289**	*e*P	**Pn**	**16 49 37.7**	**+0.5**
CHIT3				*e*S	**Sn**	**16 49 58.0**	**-0.6**
CHPO	**Chepo, Panama**	**1.77**	**351**	*e*P	**Pn**	**16 49 39.3**	**+0.5**
CHPO				*e*S	**Sn**	**16 50 01.2**	**-0.3**
PNME	**Penonome**	**1.81**	**306**	*e*P	**Pn**	**16 49 40.0**	**+0.5**
PNME				*e*S	**Sn**	**16 50 02.8**	**+0.1**
PNME				*i*		16 50 03.3	
	comp=Z,588nm,0.2s						
CAPC	**Capurgana**	**1.92**	**51**	*e*P	**Pn**	**16 49 38.5**	**-2.5**
CAPC				*e*S	**Sn**	**16 50 05.1**	**-0.2**
CAPC				*i*		16 50 14.1	
	comp=Z,84nm,0.6s						
CACAO	**El Cacao, Vera**	**2.00**	**268**	*e*P	**Pn**	**16 49 41.6**	**-0.4**
CACAO				*e*S	**Sn**	**16 50 06.4**	**-0.8**
CACAO	**El Cacao, Vera**	**2.00**	**268**	*e*P	**Pn**	**16 49 41.5**	**-0.6**
CACAO				*e*S	**Sn**	**16 50 06.5**	**-0.8**
CACAO				*i*		16 50 14.6	
	comp=Z,209nm,0.6s						
FRIJ	**El Hiral**	**2.00**	**334**	*e*P	**Pn**	**16 49 43.0**	**+1.0**
BCIP	**Isla Barro Col**	**2.00**	**331**	*e*P	**Pn**	**16 49 43.1**	**+1.1**
BCIP				*e*S	**Sn**	**16 50 07.3**	**0.0**
BCIP	**Isla Barro Col**	**2.00**	**331**	*e*P	**Pn**	**16 49 43.1**	**+1.1**
BCIP				*e*S	**Sn**	**16 50 07.8**	**+0.5**
BCIP				*i*		16 50 13.8	
	comp=Z,364nm,0.6s						
CALO3	**Calobre, Verag**	**2.17**	**295**	*e*P	**Pb**	**16 49 47.5**	**-0.1**
APAC	**Apartado, Choc**	**2.30**	**78**	*e*P	**Pn**	**16 49 46.8**	**+0.6**
APAC				*e*S	**Sn**	**16 50 16.6**	**+2.0**
GMAL	**Guarumal, Vera**	**2.39**	**279**	*e*P	**Pn**	**16 49 48.9**	**+1.4**
GMAL				*e*S	**Sn**	**16 50 19.1**	**+2.2**
GMAL				*i*		16 50 26.0	
	comp=Z,229nm,0.3s						
DBBC	**Dabeiba**	**2.65**	**98**	*e*P	**Pn**	**16 49 52.1**	**+1.0**
DBBC				*e*S	**Sn**	**16 50 23.6**	**+0.2**
PIZC	**Pizarro, Choco**	**2.84**	**149**	*e*S	**Sn**	**16 50 27.7**	**-0.4**
UREC	**San Jos de Ur**	**3.30**	**84**	*e*P	**Pn**	**16 50 02.0**	**+2.0**
UREC				*e*S	**Sn**	**16 50 39.7**	**+0.2**
HELC	**Santa Helena**	**3.51**	**110**	*e*P	**Pn**	**16 50 03.2**	**-0.1**
HELC				*e*S	**Sn**	**16 50 45.6**	**+0.5**
CHGR2	**Aguacate**	**3.60**	**295**	*e*P	**Pn**	**16 50 06.1**	**+2.0**
BRU2	**Volcan**	**4.05**	**290**	*e*P	**Pb**	**16 50 19.6**	**0.0**
CDITO	**Canoas**	**4.15**	**286**	*e*P	**Pb**	**16 50 21.3**	**0.0**

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*IDC **18** 17:48:13.1±3.7, 55°.28N × 150°.09W, h0km, mb3.1/1, mbtmp3.3/6, ML3.2/5, Error ellipse: s-maj=57.8km s-min=31.9km az=5.0*
*NEIC **18** 17:48:21.3±2.8, 56°.12N±0°.07 × 149°.90W±0°.06, h22km±9km, ML3.7/56, ML3.4(AEIC), Error ellipse: s-maj=10.7km s-min=5.1km az=177.0*
*AEIC **18** 17:48:24.6±2.8, 56°.17N±0°.06 × 149°.9W±0°.1, h5km±7km, Error ellipse: s-maj=10.4km s-min=7.1km az=144.0*
ISC 18 17:48:20.0±1.2, 56°.19N±0°.07 × 149°.93W±0°.05, h10km, n163, σ1§12/162, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.12**	**301**		**Pn**	**17 48 56.6**	**+1.2**
OHAK					**Sn**	**17 49 21.1**	**-0.6**
OHAK	**Old Harbor**	**2.12**	**301**	P	**Pn**	**17 48 56.4**	**+1.0**
OHAK	**Old Harbor**	**2.12**	**301**	P	**Pn**	**17 48 56.6**	**+1.2**
	baz=118						
OHAK				S	**Sn**	**17 49 21.1**	**-0.6**
	baz=118						
KDAK	**Kodiak Island**	**2.16**	**319**	Pn	**Pn**	**17 48 57.4**	**+1.4**
	6.4nm,0.3s,baz=157,slow=4.7,SNR=123						
KDAK					Sn	**Sn**	**17 49 22.5**	**-0.2**
	29nm,0.3s,baz=217,slow=20,SNR=25						
	16nm,0.3s						
SII	**Sitkinak Islan**	**2.39**	**281**		**Pn**	**17 49 00.4**	**+1.2**
SII					**Sn**	**17 49 27.9**	**-0.8**
SII	**Sitkinak Islan**	**2.39**	**281**	P	**Pn**	**17 49 00.4**	**+1.2**
SII	**Sitkinak Islan**	**2.39**	**281**	P	**Pn**	**17 49 00.4**	**+1.2**
	baz=98						
SII				S	**Sn**	**17 49 27.9**	**-0.8**
	baz=98						
SYI	**Shuyak Island**	**2.77**	**332**		**Pn**	**17 49 05.8**	**+1.5**
SYI					**Sn**	**17 49 38.5**	**+0.8**
Q20K	**Shuyak Island**	**2.77**	**332**	P	**Pn**	**17 49 05.8**	**+1.5**
	baz=150						
Q20K				S	**Sn**	**17 49 38.5**	**+0.8**
	baz=150						
CHIR	**Chirikof Islan**	**3.22**	**266**		**Pn**	**17 49 11.1**	**+0.6**
CHIR					**Sn**	**17 49 46.7**	**-2.2**
CHIR	**Chirikof Islan**	**3.22**	**266**	IAML		17 49 58.7	
	comp=E,123nm,1.5s						
CHIR				IAML		17 50 19.8	
	comp=N,156nm,1.4s						
CHIR	**Chirikof Islan**	**3.22**	**266**	P	**Pn**	**17 49 11.1**	**+0.6**
	baz=82						
CHIR				S	**Sn**	**17 49 46.7**	**-2.2**
	baz=82						
Q19K	**Cape Douglas,**	**3.40**	**325**		**Pn**	**17 49 14.7**	**+1.7**
Q19K	**Cape Douglas,**	**3.40**	**325**	IAML		17 49 59.8	
	comp=E,287nm,1.1s						
Q19K				IAML		17 50 02.4	
	comp=N,218nm,1.0s						
Q19K	**Cape Douglas,**	**3.40**	**325**	P	**Pn**	**17 49 14.7**	**+1.7**
	baz=142						
Q19K				S	**Sn**	**17 49 53.6**	**+0.3**
	baz=142						
CNPM	**China Poot**	**3.42**	**349**		**Pn**	**17 49 14.0**	**+0.8**
CNPM					**Sn**	**17 49 53.4**	**-0.4**
CNPM	**China Poot**	**3.42**	**349**	IAML		17 49 54.9	
	comp=N,78nm,0.4s						
CNPM				IAML		17 49 55.0	
	comp=E,122nm,0.7s						
BRSE	**Bradley Lake S**	**3.59**	**353**		**Pn**	**17 49 16.1**	**+0.5**
BRSE					**Sn**	**17 49 56.8**	**-1.2**
BRSE	**Bradley Lake S**	**3.59**	**353**	P	**Pn**	**17 49 16.1**	**+0.5**
	baz=172						
BRSE				S	**Sn**	**17 49 56.8**	**-1.2**
	baz=172						
HOM	**Homer**	**3.59**	**346**		**Pn**	**17 49 15.9**	**+0.2**
HOM					**Sn**	**17 49 58.5**	**+0.3**
HOM	**Homer**	**3.59**	**346**	IAML		17 50 01.0	
	comp=E,178nm,0.4s						
HOM				IAML		17 50 04.3	
	comp=N,165nm,0.7s						
HOM	**Homer**	**3.59**	**346**	P	**Pn**	**17 49 15.9**	**+0.2**
	baz=164						
HOM				S	**Sn**	**17 49 58.4**	**+0.3**
	baz=164						
BRLK	**Bradley Lake**	**3.62**	**352**		**Pn**	**17 49 16.4**	**+0.3**
BRLK					**Sn**	**17 49 57.0**	**-1.8**
BRLK	**Bradley Lake**	**3.62**	**352**	IAML		17 50 00.7	
	comp=N,80nm,0.6s						
BRLK				IAML		17 50 00.9	
	comp=E,94nm,0.4s						
Q23K	**Middleton Isla**	**3.77**	**29**		**Pn**	**17 49 18.7**	**+0.6**
Q23K	**Middleton Isla**	**3.77**	**29**	IAML		17 50 09.8	
	comp=E,100nm,1.4s						
Q23K	**Middleton Isla**	**3.77**	**29**	P	**Pn**	**17 49 18.7**	**+0.6**
	baz=211						
MID	**Middleton Isla**	**3.77**	**29**		**Pn**	**17 49 18.7**	**+0.6**
MID	**Middleton Isla**	**3.77**	**29**	IAML		17 50 09.8	
	comp=E,84nm,1.4s						
MID				IAML		17 50 10.0	
	comp=N,76nm,1.4s						
MID	**Middleton Isla**	**3.77**	**29**	P	**Pn**	**17 49 18.9**	**+0.8**
CNTC	**Contact Creek**	**3.84**	**305**		**Pn**	**17 49 21.0**	**+1.8**
Q17K	**Contact Creek**	**3.84**	**305**	P	**Pn**	**17 49 21.0**	**+1.8**
	baz=120						
P19K	**Oil Pt**	**3.89**	**334**	Pn	**Pn**	**17 49 18.2**	**-1.6**
P19K				IAML		17 50 09.2	
	comp=N,164nm,0.6s						
P19K				IAML		17 50 11.6	
	comp=E,156nm,0.3s						
SEW	**Seward**	**3.93**	**4**		**Pn**	**17 49 20.4**	**+0.1**
SEW	**Seward**	**3.93**	**4**	P	**Pn**	**17 49 20.4**	**+0.1**
	baz=183						
P23K	**Montague Islan**	**4.04**	**18**	P	**Pn**	**17 49 22.4**	**+0.6**
	baz=200						
P18K	**Big Mountain,**	**4.28**	**321**	P	**Pn**	**17 49 26.6**	**+1.4**
	baz=136						
Q22K	**Cooper Landing**	**4.30**	**1**	Pn	**Pn**	**17 49 24.7**	**-0.7**
HIN	**Hinchinbrook I**	**4.59**	**22**		**Pn**	**17 49 30.0**	**+0.7**
HIN	**Hinchinbrook I**	**4.59**	**22**	IAML		17 50 23.3	
	comp=N,87nm,0.9s						
HIN				IAML		17 50 23.7	
	comp=E,78nm,0.5s						
CAPN	**Captain Cook N**	**4.63**	**353**	Pn	**Pn**	**17 49 29.0**	**-0.9**
Q19K	**Port Alsworth**	**4.64**	**332**		**Pn**	**17 49 29.1**	**-0.9**
KAIM	**Kayak Island**	**4.75**	**36**		**Pn**	**17 49 32.4**	**+0.8**
KAIM	**Kayak Island**	**4.75**	**36**	P	**Pn**	**17 49 32.4**	**+0.8**
	baz=220						
EYAK	**Cordova Ski Ar**	**4.89**	**25**	P	**Pn**	**17 49 34.4**	**+0.9**
EYAK	**Cordova Ski Ar**	**4.89**	**25**	P	**Pn**	**17 49 34.5**	**+1.0**
	baz=208						
RC01	**Rabbit Creek A**	**4.91**	**1**		**Pn**	**17 49 34.4**	**+0.6**
RC01	**Rabbit Creek A**	**4.91**	**1**	IAML		17 50 30.5	
	comp=E,62nm,0.3s						
RC01				IAML		17 50 32.9	
	comp=N,50nm,0.3s						
RC01	**Rabbit Creek A**	**4.91**	**1**	P	**Pn**	**17 49 34.4**	**+0.6**
	baz=181						
FID	**Port Fidalgo**	**4.92**	**20**		**Pn**	**17 49 34.0**	**+0.1**
FID	**Port Fidalgo**	**4.92**	**20**	IAML		17 50 27.6	
	comp=E,63nm,0.6s						
FID				IAML		17 50 28.3	
	comp=N,48nm,0.4s						
GLI	**Glacier Island**	**4.93**	**16**		**Pn**	**17 49 34.8**	**+0.7**
GLI	**Glacier Island**	**4.93**	**16**	IAML		17 50 30.6	
	comp=N,35nm,0.5s						
GLI				IAML		17 50 31.0	
	comp=E,47nm,0.3s						
GLI	**Glacier Island**	**4.93**	**16**	P	**Pn**	**17 49 34.8**	**+0.7**
	baz=198						
RAGM	**Ragged Mountai**	**5.04**	**31**		**Pn**	**17 49 36.5**	**+0.9**
RAGM	**Ragged Mountai**	**5.04**	**31**	IAML		17 50 39.6	
	comp=E,72nm,0.4s						
SUCK	**Suckling Hills**	**5.08**	**37**		**Pn**	**17 49 37.1**	**+1.1**
SUCK	**Suckling Hills**	**5.08**	**37**	IAML		17 50 37.2	
	comp=E,49nm,0.4s						
HMT	**Hamilton**	**5.12**	**33**		**Pn**	**17 49 37.8**	**+1.1**
N20K	**Mount Spurr**	**5.16**	**348**	P	**Pn**	**17 49 38.4**	**+1.1**
	baz=165						
SPCR	**Spurr Chakacha**	**5.16**	**348**		**Pn**	**17 49 38.4**	**+1.1**
GOAT	**Goat Mountain**	**5.18**	**30**		**Pn**	**17 49 38.7**	**+1.1**
N19K	**Bonanza Creek**	**5.21**	**335**		**Pn**	**17 49 38.8**	**+0.8**
N19K	**Bonanza Creek**	**5.21**	**335**	P	**Pn**	**17 49 38.8**	**+0.8**
	baz=151						
KNK	**Knik Glacier**	**5.29**	**8**	Pn	**Pn**	**17 49 39.6**	**+0.6**
KNK				IAML		17 50 44.5	
	comp=E,25nm,0.5s						
KNK				IAML		17 50 46.6	
	comp=N,20nm,0.8s						
SUA	**Susitna One**	**5.30**	**356**	Pn	**Pn**	**17 49 37.2**	**-2.1**
SUA				IAML		17 50 43.1	
	comp=E,20nm,1.2s						
DIV	**Divide**	**5.41**	**22**		**Pn**	**17 49 40.6**	**0.0**
PMR	**Palmer**	**5.43**	**4**		**Pn**	**17 49 41.9**	**+1.0**
PMR	**Palmer**	**5.43**	**4**	P	**Pn**	**17 49 42.7**	**+1.8**
PMR	**Palmer**	**5.43**	**4**	P	**Pn**	**17 49 41.9**	**+1.0**
	baz=184						
N18K	**Kilae Creek**	**5.48**	**328**		**Pn**	**17 49 42.7**	**+1.1**
N18K	**Kilae Creek**	**5.48**	**328**	P	**Pn**	**17 49 42.7**	**+1.1**
	baz=142						
SNH	**Sunshine Point**	**5.48**	**40**		**Pn**	**17 49 42.6**	**+0.9**
Q16K	**Kokwok River B**	**5.53**	**311**	Pn	**Pn**	**17 49 41.7**	**-0.6**
BMRM	**Bremner River**	**5.54**	**28**	P	**Pn**	**17 49 43.5**	**+1.1**
	baz=212						
GHO	**Glory Hole Cre**	**5.62**	**5**		**Pn**	**17 49 44.9**	**+1.3**
CNBA	**Chernabura Isl**	**5.66**	**260**	Pn	**Pn**	**17 49 43.8**	**-0.3**
WAX	**Waxell Ridge**	**5.67**	**38**		**Pn**	**17 49 45.1**	**+0.9**
SML	**Sawmill**	**5.69**	**8**	Pn	**Pn**	**17 49 45.1**	**+0.6**
KLU	**Klutina**	**5.71**	**20**		**Pn**	**17 49 45.7**	**+0.9**
KLU	**Klutina**	**5.71**	**20**	P	**Pn**	**17 49 45.7**	**+0.9**
	baz=203						
SVW2	**Sparrevohn**	**5.73**	**331**	Pn	**Pn**	**17 49 44.8**	**-0.3**
SVW2	**Sparrevohn**	**5.73**	**331**	P	**Pn**	**17 49 46.1**	**+1.0**
BARK	**Barkley Ridge**	**5.76**	**40**		**Pn**	**17 49 46.5**	**+0.9**
CRQM	**Cirque**	**5.80**

CAST	**Castle Rocks**	**7.33**	**352**	Pn	**Pn**	**17 50 07.3**	**+0.3**
P29M	**Windy Craggy**	**7.35**	**57**		**Pn**	**17 50 08.3**	**+1.0**
KTH	**Kantishna Hill**	**7.40**	**357**	Pn	**Pn**	**17 50 10.2**	**+2.2**
TTA	**Tatalina**	**7.43**	**338**	P	**Pn**	**17 50 09.0**	**+0.6**
S31K	**Pelican**	**7.67**	**71**	Pn	**Pn**	**17 50 09.9**	**-1.7**
K17K	**Iditarod**	**7.80**	**330**	Pn	**Pn**	**17 50 13.3**	**-0.1**
BPAW	**Bear Paw Mtn.**	**7.95**	**357**	Pn	**Pn**	**17 50 16.6**	**+1.1**
BCAR	**Beaver Creek A**	**8.03**	**28**	Pn	**Pn**	**17 50 18.1**	**+1.5**
SIT	**Sitka**	**8.10**	**78**	Pn	**Pn**	**17 50 14.9**	**-2.6**
SKAG	**Skagway**	**8.45**	**61**	P	**Pn**	**17 50 23.3**	**+1.0**
N30M	**Aishikik Lake**	**8.49**	**46**	Pn	**Pn**	**17 50 21.6**	**-1.4**
CCB	**Clear Creek Bu**	**8.55**	**6**	Pn	**Pn**	**17 50 23.9**	**+0.3**
M29M	**Somme Creek**	**8.57**	**38**	Pn	**Pn**	**17 50 25.8**	**+1.7**
JIS	**Juneau Island**	**8.69**	**70**	Pn	**Pn**	**17 50 21.4**	**-0.1**
IL31		**8.74**	**9**	Pn	**Pn**	**17 50 27.2**	**+1.1**
ILAR	**Eielson Array**	**8.74**	**9**	Pn	**Pn**	**17 50 29.5**	**+3.2**
	comp=E,0.2nm,0.3s,baz=191,slow=13,SNR=7.9						
ILAR				Sn	**Sn**	**17 52 01.8**	**-2.9**
	comp=E,0.5nm,0.3s,baz=200,slow=24,SNR=12						
	comp=E,0.4nm,0.5s						
J26L	**Joseph Creek**	**8.91**	**18**	Pn	**Pn**	**17 50 29.4**	**+0.8**
I21K	**Tanana**	**9.07**	**355**	Pn	**Pn**	**17 50 32.5**	**+1.7**
L29M	**L29M**	**9.14**	**36**	Pn	**Pn**	**17 50 33.2**	**+1.4**
AKUT	**Akutan**	**9.30**	**264**	Pn	Pn	17 50 29.2	-4.7
H21K	**Melozitna Rive**	**9.60**	**353**	Pn	**Pn**	**17 50 38.7**	**+0.7**
H24K	**Noodor Dome**	**9.73**	**5**	Pn	**Pn**	**17 50 42.0**	**+2.2**
WRAK	**Wrangell Islan**	**9.78**	**81**	Pn	**Pn**	**17 50 41.1**	**+0.7**
K29M	**Barlow Dome**	**9.85**	**34**	Pn	**Pn**	**17 50 43.2**	**+1.6**
M31M	**Drury Creek, Y**	**9.97**	**46**	Pn	Pn	17 50 37.2	-6.0
IMAR	**Indian Mountai**	**9.99**	**351**	Pn	**Pn**	**17 50 44.6**	**+1.2**
G24K	**Hadweenzic Riv**	**10.61**	**5**	Pn	**Pn**	**17 50 50.1**	**-1.8**
DLBC	**Dease Lake**	**10.99**	**70**	Pn	**Pn**	**17 50 58.0**	**+0.8**
	comp=E,0.1nm,0.3s,baz=225,slow=5.7,SNR=2.2						
	comp=E,1.8nm,1.1s						
INK	**Inuvik**	**14.28**	**25**	Pn	**P**	**17 51 48.7**	**-0.5**
	comp=E,0.1nm,0.3s,baz=156,slow=9.7,SNR=4.4						
	comp=E,0.9nm,0.7s						
YKA	**Yellowknife Ar**	**18.89**	**56**	P	**P**	**17 52 41.0**	**+0.8**
	comp=E,0.1nm,0.3s,baz=266,slow=9.6,SNR=7.4						
	comp=E,0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**48.52**	**239**	T	T	18 48 37.4	
	baz=37						
H11N3	**WAKE ISLAND Hy**	**48.53**	**239**	T	T	18 48 41.2	
	baz=37						
H11N1	**WAKE ISLAND Hy**	**48.54**	**239**	T	T	18 48 41.9	
	baz=37						
MKAR	**Makanchi Array**	**68.46**	**324**	P	**P**	**17 59 20.9**	**-1.0**
	comp=E,0.1nm,0.5s,baz=25,slow=7.4,SNR=2.2						
	comp=E,0.1nm,0.5s						

BER ***18*** *17:58:34.6±2.7, 77°.23N×38°.01E, h12km±13km, ML2.1, ML2.9(NAO), Confirmed Earthquake*
NAO ***18*** *17:58:35.5±7.7, 77°.16N×37°.14E, h14km±43km, ML2.9*
KOLA ***18*** *17:58:38.4, 77°.23N×33°.20E, h0km, ML2.1, Error ellipse: s-maj=73.0km s-min=22.8km az=110.0, Barentz Sea*
ISC 18 17:58:32.2±1.2, 77°.21N±0°.06×37°.49E±0°.06, h10km, n25, σ2s72/50, Barents Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPEN	**Hopen**	**2.93**	**262**	*eP*	**Pn**	**17 59 21.6**	**+2.8**
HOPEN				*ePg*	**Pb**	**17 59 24.9**	**+0.4**
HOPEN				*eS*	**Sn**	**17 59 55.1**	**+1.2**
HOPEN				*eSg*	**Sg**	**18 00 06.1**	**-0.1**
HOPEN				IAML		18 00 09.4	
	comp=Z,40nm,0.5s						
HOPEN	**Hopen**	**2.93**	**262**	Pn	**Pn**	**17 59 21.4**	**+2.7**
HOPEN				Sn	**Sn**	**17 59 55.7**	**+1.8**
HOPEN				Lg	Lg	18 00 06.0	
OMEGA	**Omega**	**4.09**	**24**	*eP*	**Pn**	**17 59 35.5**	**+0.9**
OMEGA				*eS*	**Sn**	**18 00 19.0**	**-3.4**
	comp=Z,21nm,2.2s						
ZFI2	**Zemlya Franca-**	**4.11**	**23**	*eP*	**Pn**	**17 59 35.7**	**+0.9**
ZFI2				*eS*	**Sn**	**18 00 19.2**	**-3.5**
SPA0	**Spitsbergen Ar**	**4.61**	**292**	Pn	**Pn**	**17 59 43.8**	**+2.1**
	baz=102,slow=18						
SPA0				Sn	**Sn**	**18 00 35.9**	**+0.6**
	baz=98,slow=22						
SPA0	**Spitsbergen Ar**	**4.61**	**292**	Pn	**Pn**	**17 59 43.8**	**+2.1**
	baz=102,slow=18						
SPA0				Sn	**Sn**	**18 00 35.9**	**+0.6**
	baz=98,slow=22						
SPITS	**Spitsbergen Ar**	**4.61**	**292**	P	**Pn**	**17 59 43.6**	**+1.9**
SPITS				S	**Sn**	**18 00 30.9**	**-4.3**
HSPB	**Hornsund (broa**	**4.91**	**278**	P	**Pn**	**17 59 49.6**	**+3.9**
HSPB				S	**Sn**	**18 00 42.2**	**-0.3**
HSPB	**Hornsund (broa**	**4.91**	**278**	*eP*	**Pn**	**17 59 46.9**	**+1.1**
HSPB				*eS*	**Sn**	**18 00 40.6**	**-1.9**
HSPB				IAML		18 01 09.5	
	comp=Z,2.8nm,0.6s						
BRBA	**Barentsburg A**	**5.05**	**291**	*eP*	**Pn**	**17 59 50.5**	**+2.6**
BRBA				*eS*	**Sn**	**18 00 44.9**	**-1.2**
BRBA				IAML		18 00 51.3	
	comp=Z,5.0nm,0.2s						
BRBA	**Barentsburg A**	**5.05**	**291**	Pn	**Pn**	**17 59 50.3**	**+2.5**
BRBA				Sn	**Sn**	**18 00 47.0**	**+0.9**
BRBB	**Barentsburg B**	**5.05**	**291**	P	**Pn**	**17 59 52.1**	**+4.2**
BRBB				S	**Sn**	**18 00 42.3**	**-3.8**
BRBB	**Barentsburg B**	**5.05**	**291**	*eP*	**Pn**	**17 59 49.9**	**+2.1**
BRBB				*eS*	**Sn**	**18 00 44.7**	**-1.5**
BRBB	**Barentsburg B**	**5.05**	**291**	Pn	**Pn**	**17 59 50.0**	**+2.1**
BRBB				Sn	**Sn**	**18 00 44.8**	**-1.3**
KBS	**Kingsbay**	**5.54**	**300**	P	**Pn**	**17 59 55.8**	**+1.4**
KBS				S	**Sn**	**18 00 53.8**	**-4.3**
KBS	**Kingsbay**	**5.54**	**300**	*eP*	**Pn**	**17 59 56.0**	**+1.5**
KBS				*eS*	**Sn**	**18 00 54.4**	**-3.7**
KBS				IAML		18 00 58.5	
	comp=Z,4.0nm,0.5s						
KBS	**Kingsbay**	**5.54**	**300**	Pn	**Pn**	**17 59 56.0**	**+1.5**
KBS				Sn	**Sn**	**18 00 54.8**	**-3.2**
VADS	**Vadso**	**7.47**	**202**	P	**Pn**	**18 00 22.8**	**+1.9**
VADS				S	**Sn**	**18 01 42.2**	**-3.4**
KEV	**Kevo**	**8.04**	**207**	Pn	**Pn**	**18 00 30.9**	**+2.1**
KEV	**Kevo**	**8.04**	**207**	Pn	Pn	**18 00 30.9**	**+2.1**
ARA0	**ARCESS Array S**	**8.41**	**210**	Pn	**Pn**	**18 00 34.3**	**+0.4**
ARA0				Sn	**Sn**	**18 02 06.5**	**-2.2**
	baz=21,slow=18						
ARA0	**ARCESS Array S**	**8.41**	**210**	Pn	**Pn**	**18 00 34.3**	**+0.4**
ARA0				Sn	**Sn**	**18 02 06.5**	**-2.2**
	baz=21,slow=18						
ARCES	**ARCESS Array B**	**8.41**	**210**	P	**Pn**	**18 00 34.2**	**+0.3**
ARCES				S	**Sn**	**18 02 00.7**	**-8.0**
JETT	**Jettan, Norway**	**9.05**	**221**	Pn	**Pn**	**18 00 45.5**	**+2.8**
JETT				Sn	**Sn**	**18 02 20.9**	**-3.6**
JETT	**Jettan, Norway**	**9.05**	**221**	Pn	**Pn**	**18 00 45.5**	**+2.8**
JETT				Sn	**Sn**	**18 02 20.9**	**-3.6**

NEIC ***18*** *17:59:45.0±2.1, 55°.68N±0°.08×151°.9W±0°.1, h10km±7km, ML3.5/42, ML3.2(AEIC), Error ellipse: s-maj=13.1km s-min=7.4km az=141.0*
AEIC ***18*** *17:59:48.8±2.4, 55°.71N±0°.07×152°.0W±0°.1, h0km±6km, Error ellipse: s-maj=12.2km s-min=7.2km az=145.0*
ISC 18 17:59:44.4±1.7, 55°.71N±0°.08×151°.90W±0°.06, h10km, n195, σ1s13/201, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SII	**Sitkinak Islan**	**1.54**	**305**		**Pn**	**18 00 12.5**	**+0.7**
SII				IAML		18 00 32.0	
	comp=N,657nm,0.7s						
SII				IAML		18 00 32.1	
	comp=E,450nm,0.6s						
SII	**Sitkinak Islan**	**1.54**	**305**	P	**Pn**	**18 00 12.4**	**+0.5**
SII	**Sitkinak Islan**	**1.54**	**305**	P	Pn	**18 00 12.3**	**+0.4**
	baz=124						
SII				S	**Sn**	**18 00 31.0**	**-0.9**
	baz=124						
OHAK	**Old Harbor**	**1.70**	**334**		**Pn**	**18 00 14.6**	**+0.5**
OHAK	**Old Harbor**	**1.70**	**334**		**Sn**	**18 00 34.6**	**-1.3**
OHAK	**Old Harbor**	**1.70**	**334**	P	**Pn**	**18 00 14.5**	**+0.5**
OHAK	**Old Harbor**	**1.70**	**334**	P	Pn	**18 00 14.6**	**+0.5**
	baz=154						
OHAK				S	**Sn**	**18 00 34.6**	**-1.3**
	baz=154						
CHIR	**Chirikof Islan**	**2.11**	**275**		**Pn**	**18 00 19.4**	**-0.3**
CHIR					**Sn**	**18 00 44.1**	**-1.8**
CHIR	**Chirikof Islan**	**2.11**	**275**	IAML		18 01 16.1	
	comp=E,157nm,2.8s						
CHIR				IAML		18 01 22.3	
	comp=N,204nm,2.7s						
CHIR	**Chirikof Islan**	**2.11**	**275**	P	**Pn**	**18 00 19.4**	**-0.3**
	baz=92						
CHIR				S	**Sn**	**18 00 44.1**	**-1.8**
	baz=92						
KDAK	**Kodiak Island**	**2.11**	**350**		**Pn**	**18 00 20.6**	**+0.9**
KDAK	**Kodiak Island**	**2.11**	**350**		**Sn**	**18 00 44.8**	**-1.3**
Q20K	**Shuyak Island**	**2.92**	**355**	P	**Pn**	**18 00 32.2**	**+1.3**
	baz=175						
Q20K				S	**Sn**	**18 01 06.0**	**+0.1**
	baz=175						
SYI	**Shuyak Island**	**2.92**	**355**	Pn	**Pn**	**18 00 32.2**	**+1.4**
SYI	**Shuyak Island**	**2.92**	**355**		**Sn**	**18 01 06.0**	**+0.1**
ACHA	**Angle Creek He**	**3.13**	**325**		**Pn**	**18 00 35.3**	**+1.5**
ANCK	**Angle Creek**	**3.18**	**323**		**Pn**	**18 00 35.9**	**+1.4**
ANCK					**Sn**	**18 01 12.4**	**-0.1**
CNTC	**Contact Creek**	**3.36**	**321**		**Pn**	**18 00 38.7**	**+1.7**
Q17K	**Contact Creek**	**3.37**	**321**	P	**Pn**	**18 00 38.7**	**+1.7**
	baz=139						
Q19K	**Cape Douglas,**	**3.37**	**344**		**Pn**	**18 00 39.5**	**+2.5**
Q19K				IAML		18 01 23.2	
	comp=N,141nm,1.1s						
Q19K	**Cape Douglas,**	**3.37**	**344**	P	**Pn**	**18 00 38.4**	**+1.5**
	baz=164						
R16K	**Pilot Point**	**3.65**	**303**		**Pn**	**18 00 42.0**	**+1.2**
R16K	**Pilot Point**	**3.65**	**303**	P	**Pn**	**18 00 42.0**	**+1.2**
	baz=119						
CHGN	**Chignik**	**3.71**	**282**		**Pn**	**18 00 42.5**	**+0.9**
CHGN					**Sn**	**18 01 23.8**	**-1.5**
CHGN	**Chignik**	**3.71**	**282**	IAML		18 01 25.2	
	comp=N,71nm,0.5s						
CHGN				IAML		18 02 47.9	
	comp=E,80nm,2.5s						
CHGN	**Chignik**	**3.71**	**282**	P	**Pn**	**18 00 42.5**	**+0.9**
	baz=97						
CHGN				S	**Sn**	**18 01 23.8**	**-1.5**
	baz=97						
CNPM	**China Poot**	**3.84**	**5**	Pn	**Pn**	**18 00 44.3**	**+0.7**
CNPM	**China Poot**	**3.84**	**5**		**Sn**	**18 01 26.8**	**-2.0**
CNPM	**China Poot**	**3.84**	**5**	IAML		18 01 30.9	
	comp=N,28nm,2.3s						
CNPM				IAML		18 01 33.6	
	comp=E,29nm,2.3s						
Q16K	**King Salmon**	**3.94**	**321**		**Sn**	**18 01 29.6**	**-1.6**
Q16K	**King Salmon**	**3.94**	**321**	S	**Sn**	**18 01 29.5**	**-1.6**
	baz=138						
HOM	**Homer**	**3.96**	**2**	Pn	**Pn**	**18 00 45.8**	**+0.6**
P19K	**Oil Pt**	**4.02**	**350**		**Pn**	**18 00 48.2**	**+2.2**
P19K	**Oil Pt**	**4.02**	**350**		**Sn**	**18 01 32.6**	**-0.4**
P19K	**Oil Pt**	**4.02**	**350**	IAML		18 01 38.8	
	comp=E,73nm,0.6s						
P19K				IAML		18 01 40.2	
	comp=N,126nm,2.2s						
P19K	**Oil Pt**	**4.02**	**350**	P	**Pn**	**18 00 47.1**	**+1.2**
	baz=170						
P19K				S	**Sn**	**18 01 32.7**	**-0.4**
	baz=170						
BRSE	**Bradley Lake S**	**4.09**	**8**		**Sn**	**18 01 33.1**	**-1.8**
BRSE	**Bradley Lake S**	**4.09**	**8**	P	**Pn**	**18 00 47.1**	**+0.2**
	baz=190						
BRSE				S	**Sn**	**18 01 33.1**	**-1.8**
	baz=190						
BRLK	**Bradley Lake**	**4.10**	**7**	Pn	**Pn**	**18 00 47.3**	**+0.2**
P18K	**Big Mountain,**	**4.11**	**335**		**Pn**	**18 00 48.6**	**+1.5**
P18K	**Big Mountain,**	**4.11**	**335**		**Sn**	**18 01 33.1**	**-2.1**
P18K	**Big Mountain,**	**4.11**	**335**	IAML		18 01 48.0	
	comp=N,28nm,4.1s						
P18K				IAML		18 02 35.7	
	comp=E,34nm,3.3s						
P18K	**Big Mountain,**	**4.11**	**335**	P	**Pn**	**18 00 48.7**	**+1.5**
	baz=153						
P18K				S	**Sn**	**18 01 33.1**	**-2.1**
	baz=153						
P17K	**Kvichak River**	**4.27**	**327**		**Pn**	**18 00 50.8**	**+1.5**
P17K	**Kvichak River**	**4.27**	**327**	P	**Pn**	**18 00 50.8**	**+1.5**
	baz=144						
S14K	**Fog Glacier**	**4.34**	**281**	P	**Pn**	**18 00 52.0**	**+1.7**
	baz=95						
VNFG	**Fog Glacier, M**	**4.34**	**281**		**Pn**	**18 00 52.0**	**+1.7**
ILSW	**Iliamna Southw**	**4.34**	**352**		**Pn**	**18 00 51.8**	**+1.4**
ILSW				IAML		18 02 18.6	
	comp=E,33nm,0.4s						
ILSW				IAML		18 03 24.7	
	comp=N,32nm,4.3s						
IVE	**Iliamna Volcan**	**4.36**	**353**		**Pn**	**18 00 51.7**	**+1.0**
O20K	**Slope Mountain**	**4.40**	**355**		**Pn**	**18 00 52.5**	**+1.2**
O20K	**Slope Mountain**	**4.40**	**355**	P	**Pn**	**18 00 52.5**	**+1.2**
	baz=175						
CNBA	**Chernabura Isl**	**4.49**	**262**	Pn	**Pn**	**18 00 51.7**	**-0.7**
CNBA				IAML		18 03 12.7	
	comp=N,90nm,3.9s						
CNBA				IAML		18 03 47.7	
	comp=E,91nm,2.6s						
O18K	**Koktuh Hills**	**4.52**	**338**	Pn	**Pn**	**18 00 54.4**	**+1.6**
O18K				IAML		18 03 26.9	
	comp=N,38nm,2.8s						
O18K				IAML		18 03 28.2	
	comp=E,36nm,3.6s						
O18K	**Koktuh Hills**	**4.52**	**338**	P	**Pn**	**18 00 54.1**	**+1.3**
	baz=156						
O19K	**Port Alsworth**	**4.68**	**345**	P	**Pn**	**18 00 55.7**	**+0.7**
	baz=164						
P16K	**Nushagak River**	**4.69**	**318**		**Pn**	**18 00 56.0**	**+1.0**
P16K	**Nushagak River**	**4.69**	**318**	P	**Pn**	**18 00 56.0**	**+1.0**
	baz=133						
RED	**Redoubt Volcan**	**4.75**	**355**		**Pn**	**18 00 56.8**	**+0.8**
RDSO	**Redoubt South**	**4.78**	**355**		**Pn**	**18 00 57.3**	**+0.7**
RSO	**Redoubt South**	**4.79**	**355**		**Pn**	**18 00 57.5**	**+0.8**
RDWB	**Redoubt West**	**4.82**	**354**		**Pn**	**18 00 57.4**	**+0.4**
RDT	**Redoubt**	**4.89**	**357**		**Pn**	**18 00 58.1**	**+0.2**
SDPT	**Sand Point**	**4.89**	**269**	P	**Pn**	**18 00 58.7**	**+0.9**
SLKM	**Skilak Lake**	**4.89**	**10**		**Pn**	**18 00 57.7**	**-0.3**
NCT	**North Crescent**	**4.90**	**354**		**Pn**	**18 00 58.4**	**+0.4**
DFR	**Drift River**	**4.92**	**355**		**Pn**	**18 00 59.4**	**+1.1**
O22K	**Cooper Landing**	**4.92**	**13**	Pn	**Pn**	**18 00 57.3**	**-1.0**
O22K				IAML		18 01 55.9	
	comp=N,32nm,1.2s						
O22K				IAML		18 02 12.0	
	comp=E,32nm,0.8s						
P23K	**Montague Islan**	**4.93**	**27**		**Pn**	**18 00 57.9**	**-0.5**
P23K	**Montague Islan**	**4.93**	**27**	P	**Pn**	**18 00 57.9**	**-0.5**
	baz=212						
O17K	**Koliganek Bris**	**4.94**	**328**		**Pn**	**18 00 59.9**	**+1.5**
O17K	**Koliganek Bris**	**4.94**	**328**	P	**Pn**	**18 00 59.9**	**+1.5**
	baz=144						
CAPN	**Captain Cook N**	**5.09**	**4**		**Pn**	**18 01 01.7**	**+1.1**
CAPN	**Captain Cook N**	**5.09**	**4**	P	**Pn**	**18 01 01.7**	**+1.1**
	baz=185						
O16K	**Kokwok River B**	**5.12**	**322**	Pn	**Pn**	**18 01 02.6**	**+1.5**
O16K				IAML		18 01 45.3	
	comp=N,53nm,3.6s						
O16K				IAML		18 03 46.8	
	comp=E,41nm,4.2s						
O16K	**Kokwok River B**	**5.12**	**322**	P	**Pn**	**18 01 02.5**	**+1.5**
	baz=137						
N19K	**Bonanza Creek**	**5.30**	**346**	Pn	**Pn**	**18 01 05.0**	**+1.4**
N19K				IAML		18 01 51.6	
	comp=E,27nm,4.4s						
N19K				IAML		18 02 19.7	
	comp=N,31nm,3.2s						
N19K	**Bonanza Creek**	**5.30**	**346**	P	**Pn**	**18 01 05.1**	**+1.6**
	baz=164						
N18K	**Kilae Creek**	**5.41**	**339**	Pn	**Pn**	**18 01 06.8**	**+1.7**
N18K	**Kilae Creek**	**5.41**	**339**	P	**Pn**	**18 01 06.0**	**+0.9**
	baz=156						
HIN	**Hinchinbrook I**	**5.50**	**29**		**Pn**	**18 01 06.0**	**-0.3**
N20K	**Mount Spurr**	**5.51**	**358**	P	**Pn**	**18 01 06.7**	**+0.2**
	baz=179						
SPCR	**Spurr Chakacha**	**5.51**	**358**		**Pn**	**18 01 06.7**	**+0.2**
RC01	**Rabbit Creek A**	**5.51**	**11**	Pn	**Pn**	**18 01 06.8**	**+0.4**
RC01	**Rabbit Creek A**	**5.51**	**11**	P	**Pn**	**18 01 06.7**	**+0.3**
	baz=193						
FIS	**Fire Island**	**5.52**	**9**	Pn	**Pn**	**18 01 06.2**	**-0.3**
SPCP	**Crater Peak Br**	**5.58**	**359**		**Pn**	**18 01 07.8**	**+0.3**
SPNN	**North Nagishla**	**5.69**	**356**		**Pn**	**18 01 09.7**	**+0.7**
PN7A	**Pavlof North-7**	**5.74**	**271**		**Pn**	**18 01 10.4**	**+0.8**
SVW2	**Sparrevohn**	**5.74**	**342**	Pn	**Pn**	**18 01 10.6**	**+1.1**
SVW2	**Sparrevohn**	**5.74**	**342**	P	**Pn**	**18 01 10.8**	**+1.2**
GLI	**Glacier Island**	**5.77**	**24**		**Pn**	**18 01 09.7**	**-0.3**
GLI	**Glacier Island**	**5.77**	**24**	P	**Pn**	**18 01 09.7**	**-0.3**
	baz=208						
SUA	**Susitna One**	**5.80**	**5**	Pn	**Pn**	**18 01 10.3**	**-0.2**
SUA	**Susitna One**	**5.80**	**5**	P	**Pn**	**18 01 10.5**	**0.0**
	baz=187						
FID	**Port Fidalgo**	**5.81**	**27**	Pn	**Pn**	**18 01 10.5**	**0.0**
KAIM	**Kayak Island**	**5.82**	**40**	Pn	**Pn**	**18 01 12.2**	**+1.6**
KAIM	**Kayak Island**	**5.82**	**40**	P	**Pn**	**18 01 10.9**	**+0.3**
	baz=227						
EYAK	**Cordova Ski Ar**	**5.84**	**31**		**Pn**	**18 01 11.1**	**+0.1**
EYAK	**Cordova Ski Ar**	**5.84**	**31**	P	**Pn**	**18 01 11.7**	**+0.8**
EYAK	**Cordova Ski Ar**	**5.84**	**31**	P	**Pn**	**18 01 11.1**	**+0.1**
	baz=217						
KNK	**Knik Glacier**	**6.00**	**16**		**Pn**	**18 01 13.8**	**+0.7**
KNK	**Knik Glacier**	**6.00**	**16**	P	**Pn**	**18 01 13.8**	**+0.7**
	baz=199						
N16K	**Nishlik Lake**	**6.01**	**326**	P	**Pn**	**18 01 15.2**	**+2.0**
	baz=140						
RAGM	**Ragged Mountai**	**6.06**	**36**	Pn	**Pn**	**18 01 14.4**	**+0.5**
M18K	**Stony River**	**6.15**	**342**		**Pn**	**18 01 16.2**	**+1.1**
M18K	**Stony River**	**6.15**	**342**	P	**Pn**	**18 01 16.3**	**+1.1**
	baz=159						
SUCK	**Suckling Hills**	**6.16**	**41**	Pn	**Pn**	**18 01 16.6**	**+1.3**
HMT	**Hamilton**	**6.16**	**38**	Pn	**Pn**	**18 01 16.1**	**+0.8**
O14K	**Tigyukauivet M**	**6.17**	**309**	Pn	**Pn**	**18 01 16.9**	**+1.4**
GOAT	**Goat Mountain**	**6.19**	**35**		**Pn**	**18 01 16.2**	**+0.5**
NICHA	**Nichawak Mount**	**6.20**	**40**		**Pn**	**18 01 16.4**	**+0.6**
M20K	**Styx River**	**6.23**	**355**		**Pn**	**18 01 16.7**	**+0.4**
M20K	**Styx River**	**6.23**	**355**	P	**Pn**	**18 01 16.7**	**+0.4**
	baz=174						
N15K	**Kwethluk River**	**6.25**	**319**	Pn	**Pn**	**18 01 18.5**	**+2.0**
N15K	**Kwethluk River**	**6.25**	**319**	P	**Pn**	**18 01 17.7**	**+1.2**
	baz=132						
GHO	**Glory Hole Cre**	**6.28**	**13**		**Pn**	**18 01 17.1**	**+0.2**
SKT	**Skwentna**	**6.29**	**2**		**Pn**	**18 01 17.5**	**+0.3**
SKT	**Skwentna**	**6.29**	**2**	P	**Pn**	**18 01 17.5**	**+0.3**
	baz=182						
M19K	**Big River Lodg**	**6.35**	**349**	Pn	**Pn**	**18 01 18.2**	**+0.3**
M19K	**Big River Lodg**	**6.35**	**349**	P	**Pn**	**18 01 18.9**	**+1.0**
	baz=168						
SML	**Sawmill**	**6.39**	**15**	Pn	**Pn**	**18 01 17.0**	**-1.5**
SML	**Sawmill**	**6.39**	**15**	P	**Pn**	**18 01 19.2**	**+0.7**
	baz=199						
BERG	**Berg Lake**	**6.40**	**39**		**Pn**	**18 01 19.1**	**+0.4**
M17K	**Holitna River**	**6.40**	**335**		**Pn**	**18 01 20.6**	**+2.0**
M17K	**Holitna River**	**6.40**	**335**	P	**Pn**	**18 01 20.2**	**+1.6**
	baz=151						
GRIN	**Grindle Hills**	**6.46**	**41**		**Pn**	**18 01 20.0**	**+0.5**
M16K	**Timber Creek**	**6.49**	**328**	Pn	**Pn**	**18 01 22.0**	**+2.2**
M16K	**Timber Creek**	**6.49**	**328**	P	**Pn**	**18 01 21.7**	**+1.8**
	baz=142						
BMRM	**Bremner River**	**6.52**	**33**		**Pn**	**18 01 20.5**	**+0.2**
BMRM	**Bremner River**	**6.52**	**33**	P	**Pn**	**18 01 20.5**	**+0.2**
	baz=220						
SNH	**Sunshine Point**	**6.58**	**43**	Pn	**Pn**	**18 01 23.0**	**+1.9**
KLU	**Klutina**	**6.59**	**26**		**Pn**	**18 01 22.1**	**+0.8**
KLU	**Klutina**	**6.59**	**26**	P	**Pn**	**18 01 22.1**	**+0.8**
	baz=211						
SCM	**Sheep Creek Mo**	**6.59**	**19**	Pn	**Pn**	**18 01 20.8**	**-0.4**
SCM	**Sheep Creek Mo**	**6.59**	**19**	P	**Pn**	**18 01 22.0**	**+0.8**
	baz=204						
KHIT	**Khitrov Hills**	**6.60**	**40**		**Pn**	**18 01 21.8**	**+0.4**
FALS	**False Pass**	**6.64**	**267**		**Pn**	**18 01 21.9**	**+0.1**
FALS	**False Pass**	**6.64**	**267**	P	**Pn**	**18 01 22.9**	**+1.1**
FALS	**False Pass**	**6.64**	**267**	P	**Pn**	**18 01 21.9**	**+0.1**
	baz=78						
L19K	**White Mountain**	**6.67**	**348**		**Pn**	**18 01 23.2**	**+0.9**
L19K	**White Mountain**	**6.67**	**348**	P	**Pn**	**18 01 23.3**	**+0.9**
	baz=166						
WAX	**Waxell Ridge**	**6.75**	**42**		**Pn**	**18 01 24.1**	**+0.6**
ISLZ	**Isanotski Laza**	**6.83**	**267**		**Pn**	**18 01 24.8**	**+0.2**
ISNN	**Isanotski Nort**	**6.85**	**268**		**Pn**	**18 01 25.6**	**+0.9**
CRQM	**Cirque**	**6.85**	**39**	Pn	**Pn**	**18 01 24.6**	**-0.4**
BARK	**Barkley Ridge**	**6.86**	**43**		**Pn**	**18 01 25.7**	**+0.7**
MESA	**MESA**	**6.93**	**46**	Pn	**Pn**	**18 01 25.1**	**-1.0**
TGL	**Tana Glacier**	**6.96**	**40**	Pn	**Pn**	**18 01 27.7**	**+1.2**
L18K	**Granite Mounta**	**6.98**	**341**	Pn	**Pn**	**18 01 28.4**	**+1.8**
N25K	**Chitina, Valde**	**7.03**	**30**	Pn	**Pn**	**18 01 27.6**	**+0.3**
N25K	**Chitina, Valde**	**7.03**	**30**	P	**Pn**	**18 01 27.6**	**+0.3**
	baz=216						
ISLE	**Juniper Island**	**7.04**	**42**	Pn	**Pn**	**18 01 29.2**	**+1.6**

ARTF				Sg		**Sb**	**18 25 30.8**	**-0.1**
BLAF	**les Blancs**	**0.62**	**315**	Pg		**Pb**	**18 25 22.0**	**-0.5**
BLAF				Sg		**Sb**	**18 25 29.9**	**-1.0**
OGDI	**Digne**	**0.65**	**337**	Pg		**Pb**	**18 25 22.8**	**-0.2**
OGDI	**Digne**	**0.65**	**337**	P		**Pb**	**18 25 22.9**	**-0.2**
OGDI				S		**Sb**	**18 25 31.5**	**-0.2**
SBF	**Sospel**	**0.67**	**58**	*e*Pg		**Pb**	**18 25 23.1**	**-0.4**
SBF				*e*Sg		**Sb**	**18 25 32.6**	**+0.2**
	99nm,0.2s							
LEPF	**PUYLOUBIER**	**0.69**	**271**	Pg		**Pb**	**18 25 23.7**	**-0.1**
LEPF				Sg		**Sb**	**18 25 32.9**	**+0.1**
SPIF	**crte de Spivo**	**0.69**	**38**	Pg		**Pb**	**18 25 23.1**	**-0.7**
SPIF				Sg		**Sb**	**18 25 32.2**	**-0.8**
BURY	**Giardini Botan**	**0.71**	**68**	P		**Pb**	**18 25 23.9**	**-0.3**
BURY				S		**Sb**	**18 25 33.6**	**+0.1**
BURY				AML	AML			
	comp=E,270µm,0.3s							
BURY				AML	AML			
	comp=N,496µm,0.4s							
BURY				AML	AML			
	comp=N,404µm,0.2s							
BURY				AML	AML			
	comp=E,259µm,0.1s							
BURY	**Giardini Botan**	**0.71**	**68**	Pg		**Pb**	**18 25 23.8**	**-0.4**
BURY	**Giardini Botan**	**0.71**	**68**	Sg		**Sb**	**18 25 33.7**	**+0.3**
BURY	**Giardini Botan**	**0.71**	**68**	P		**Pb**	**18 25 22.7**	**-1.4**
BURY				S		**Sb**	**18 25 33.8**	**+0.3**
ISO	**Isola**	**0.73**	**23**	Pg		**Pb**	**18 25 23.6**	**-0.8**
ISO				Sg		**Sb**	**18 25 32.6**	**-1.5**
ISO	**Isola**	**0.73**	**23**	P		**Pb**	**18 25 24.2**	**-0.3**
ISO				S		**Sb**	**18 25 32.8**	**-1.2**
MLYF	**Mely**	**0.79**	**307**	Pg		**Pb**	**18 25 25.3**	**-0.3**
MLYF				Sg		**Sb**	**18 25 36.0**	**+0.1**
SAOF	**Saorge**	**0.81**	**54**	Pg		**Pb**	**18 25 25.3**	**-0.6**
SAOF				Sg		**Sb**	**18 25 36.1**	**-0.2**
SAOF	**Saorge**	**0.81**	**54**	P		**Pb**	**18 25 25.2**	**-0.6**
SAOF				S		**Sb**	**18 25 36.2**	**-0.2**
BSTF	**la Bastide-des**	**0.81**	**297**	Pg		**Pb**	**18 25 24.9**	**-1.0**
BSTF				Sg		**Sb**	**18 25 35.1**	**-1.3**
STV	**Sant Anna di V**	**0.88**	**34**	Pg		**Pb**	**18 25 26.4**	**-0.7**
STV				S		**Sb**	**18 25 37.9**	**-0.5**
STV				AML	AML			
	comp=E,168µm,0.8s							
STV				AML	AML			
	comp=N,213µm,1.2s							
STV				AML	AML			
	comp=E,138µm,0.3s							
STV				AML	AML			
	comp=N,212µm,0.3s							
STV				AML	AML			
	comp=N,212µm,1.7s							
STV				AML	AML			
	comp=E,138µm,1.7s							
STV	**Sant Anna di V**	**0.88**	**34**	Pg		**Pb**	**18 25 26.4**	**-0.7**
STV	**Sant Anna di V**	**0.88**	**34**	Sg		**Sb**	**18 25 37.7**	**-0.8**
STV	**Sant Anna di V**	**0.88**	**34**	P		**Pb**	**18 25 26.4**	**-0.7**
STV				S		**Sb**	**18 25 37.4**	**-1.0**
SMRF	**Simiane la Rot**	**0.90**	**301**	*e*Pg		**Pb**	**18 25 27.5**	**+0.1**
SMRF				*e*Sg		**Sn**	**18 25 39.9**	**0.0**
	comp=E,57nm,0.2s							
JAUF	**Jausiers**	**0.92**	**5**	Pg		**Pb**	**18 25 26.9**	**-0.8**
JAUF				Sg		**Sb**	**18 25 38.9**	**-0.7**
OGAG	**Argentiere**	**0.94**	**355**	Pg		Pn	18 25 33.1	+4.9
OGAG				Sg		**Sn**	**18 25 49.1**	**+8.2**
OGAG	**Argentiere**	**0.94**	**355**	P		Pn	18 25 33.3	+5.1
SURF	**Saint Ours**	**0.97**	**7**	Pg		**Pb**	**18 25 28.1**	**-0.5**
SURF	**Saint Ours**	**0.97**	**7**	P		**Pb**	**18 25 28.2**	**-0.5**
SURF				S		**Sb**	**18 25 39.8**	**-1.3**
IMI	**Imperia**	**0.99**	**66**	P		**Pb**	**18 25 28.4**	**-0.5**
IMI				S		**Sb**	**18 25 41.6**	**+0.2**
IMI				AML	AML			
	comp=E,214µm,0.9s							
IMI				AML	AML			
	comp=N,196µm,0.7s							
IMI				AML	AML			
	comp=E,125µm,0.1s							
IMI				AML	AML			
	comp=N,181µm,0.2s							
IMI	**Imperia**	**0.99**	**66**	P		**Pb**	**18 25 28.0**	**-0.8**
IMI				S		**Sb**	**18 25 41.0**	**-0.4**
CREF	**Crivoux**	**1.03**	**359**	Pg		**Pb**	**18 25 29.3**	**-0.4**
CREF				Sg		**Sb**	**18 25 42.3**	**-0.6**
PZZ	**Stroppo**	**1.05**	**19**	P		**Pb**	**18 25 29.4**	**-0.5**
PZZ				S		**Sb**	**18 25 42.4**	**-0.9**
PZZ				AML	AML			
	comp=E,314µm,0.3s							
PZZ				AML	AML			
	comp=N,347µm,0.2s							
PZZ				AML	AML			
	comp=N,347µm,0.2s							
PZZ				AML	AML			
	comp=N,347µm,1.8s							
PZZ				AML	AML			
	comp=E,314µm,0.3s							
PZZ	**Stroppo**	**1.05**	**19**	Pg		**Pb**	**18 25 29.4**	**-0.5**
PZZ	**Stroppo**	**1.05**	**19**	Sg		**Sb**	**18 25 42.7**	**-0.7**
PZZ	**Stroppo**	**1.05**	**19**	P		**Pb**	**18 25 29.4**	**-0.5**
PZZ				S		**Sb**	**18 25 42.6**	**-0.7**
GBSS	**Grotte di Boss**	**1.13**	**50**	P		**Pn**	**18 25 31.0**	**+0.3**
GBOS				S		**Sb**	**18 25 45.3**	**-0.2**
GBOS				AML	AML			
	comp=E,146µm,0.2s							
GBOS				AML	AML			
	comp=N,152µm,1.2s							
GBOS				AML	AML			
	comp=E,146µm,0.2s							
GBOS				AML	AML			
	comp=N,136µm,0.2s							
GBOS	**Grotte di Boss**	**1.13**	**50**	Pg		**Pn**	**18 25 30.7**	**0.0**
GBOS	**Grotte di Boss**	**1.13**	**50**	Sg		**Sb**	**18 25 45.3**	**-0.2**
GBOS	**Grotte di Boss**	**1.13**	**50**	P		**Pn**	**18 25 30.8**	**0.0**
GBOS				S		**Sn**	**18 25 45.5**	**+0.1**
RORO	**Rocca Rossa**	**1.19**	**59**	P		**Pn**	**18 25 31.1**	**-0.4**
RORO				S		**Sn**	**18 25 47.0**	**+0.2**
RORO	**Rocca Rossa**	**1.19**	**59**	Pn		**Pn**	**18 25 31.0**	**-0.4**
RORO	**Rocca Rossa**	**1.19**	**59**	Sg		**Sn**	**18 25 47.3**	**+0.4**
MBDF	**Montbardon**	**1.21**	**4**	*e*Pg		**Pb**	**18 25 32.4**	**-0.4**
MBDF				*e*Sg		**Sn**	**18 25 47.8**	**+0.1**
	comp=N,48nm,0.4s							
CANO	**Canova, Maglio**	**1.34**	**58**	P		**Pb**	**18 25 34.6**	**-0.3**
CANO				S		**Sb**	**18 25 51.5**	**-0.1**
CANO	**Canova, Maglio**	**1.34**	**58**	Pn		**Pb**	**18 25 34.5**	**-0.3**
CANO	**Canova, Maglio**	**1.34**	**58**	Sg		**Sb**	**18 25 52.0**	**+0.4**
BHB	**Bricherasio**	**1.40**	**18**	Pn		**Pn**	**18 25 34.3**	**-0.1**
BHB	**Bricherasio**	**1.40**	**18**	Sg		**Sb**	**18 25 52.5**	**-0.7**
BHB	**Bricherasio**	**1.40**	**18**	P		**Pn**	**18 25 34.4**	**-0.1**
RRL	**Rocca Remolon**	**1.41**	**4**	Pg		**Pb**	**18 25 35.2**	**+0.5**
RRL	**Rocca Remolon**	**1.41**	**4**	Sn		**Sb**	**18 25 54.1**	**+0.4**
QLNO	**Quiliano**	**1.47**	**56**	P		**Pb**	**18 25 36.8**	**-0.2**
ORIF	**Oris-en-Rattie**	**1.51**	**339**	*e*Pg		**Pb**	**18 25 37.9**	**+0.2**
ORIF				*e*Sg		**Sb**	**18 25 56.1**	**-0.3**
	comp=N,10nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.51**	**339**	Pn		**Pn**	**18 25 36.1**	**+0.2**
RSP	**Reno Superiore**	**1.69**	**15**	P		**Pn**	**18 25 39.5**	**+1.0**
RSP				AML	AML			
	comp=E,44µm,0.6s							
RSP				AML	AML			
	comp=N,38µm,0.5s							
RSP				AML	AML			
	comp=N,35µm,0.3s							
RSP	**Reno Superiore**	**1.69**	**15**	Pn		**Pn**	**18 25 39.4**	**+0.9**
RSP	**Reno Superiore**	**1.69**	**15**	Sn		**Sb**	**18 26 01.1**	**-0.7**
PCP	**Piancastagn**	**1.71**	**53**	Pn		**Pn**	**18 25 38.8**	**+0.1**
VIVF	**Saint-Julien-l**	**1.95**	**314**	*e*Pn		**Pn**	**18 25 41.5**	**-0.5**
VIVF				*e*Sn		**Sn**	**18 26 03.3**	**-2.5**
	comp=N,4.3nm,0.2s							
LSD	**Lago del Serru**	**1.97**	**10**	Pn		**Pb**	**18 25 44.2**	**-1.6**
PGF	**Pioggiola**	**1.98**	**118**	*e*Pn		**Pn**	**18 25 42.0**	**-0.4**
PGF				*e*Sn		**Sn**	**18 26 04.4**	**-2.1**
	comp=N,10nm,0.2s							
LPG	**La Plagne**	**1.98**	**2**	*e*Pg		**Pb**	**18 25 46.4**	**+0.5**
LPG				*e*Sg		**Sb**	**18 26 11.6**	**+1.3**
	comp=N,19nm,0.6s							
LPL	**La Plagne**	**2.00**	**2**	*e*Pg		**Pb**	**18 25 46.1**	**-0.1**
LPL				*e*Sg		**Sb**	**18 26 11.6**	**+0.8**
	comp=N,12nm,0.4s							
LASF	**Ste Croix**	**2.10**	**286**	*e*Pn		**Pn**	**18 25 42.9**	**-1.1**
LASF	**Ste Croix**	**2.10**	**286**	*e*Pg		**Pb**	**18 25 49.3**	**+1.6**
LASF				*e*Sn		**Sn**	**18 26 06.4**	**-2.9**
	comp=N,6.0nm,0.3s							
OGSM	**Saint Maurice**	**2.20**	**342**	Pn		**Pn**	**18 25 45.2**	**-0.2**
CABF	**La Chapelle**	**3.12**	**353**	*e*Pg		**Pb**	**18 26 08.8**	**+3.6**
CABF				*e*Sg		**Sb**	**18 26 45.6**	**+2.8**
	comp=N,0.9nm,0.3s							

TEH ***18*** *18:26:40.5,33˚.67N×45˚.65E,h8km±91km,ML3.2*
ISN ***18*** *18:26:42.5±1.0,33˚.78N×45˚.81E,h11km±5km,ML3.0*
ISC 18 18:26:43.1±1.4,**33.77N**±0˚.03×**45.77E**±0˚.04,**h7**km±14km,
n14,σ1°**12**/19,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.39**	**112**	Pg		**Pg**	**18 26 50.2**	**-0.6**
ILBA				Sg		**Sg**	**18 26 56.5**	**+0.6**
IBDR	**Badra**	**0.67**	**169**	*e*Pg		**Pb**	**18 26 56.0**	**-1.2**
IBDR				*e*Sg		**Sb**	**18 27 05.0**	**-1.7**
KGS1	**Ghasr-e-Shirin**	**0.75**	**348**	Pg		**Pb**	**18 26 56.4**	**-2.2**
IGHG	**Ghaleghazi**	**0.86**	**50**	Pg		**Pb**	**18 27 00.6**	**0.0**
IDHR	**Dehrash**	**1.06**	**29**	Pg		**Pb**	**18 27 03.5**	**-0.4**
KCHF	**Cheshme Sefid,**	**1.17**	**64**	Pg		**Pn**	**18 27 06.0**	**-0.1**
BHD	**Baghdad**	**1.27**	**247**	*e*Pg		**Pb**	**18 27 08.0**	**+0.7**
BHD				*e*Sg		**Sg**	**18 27 25.0**	**+1.2**
BHD				AML	AML		18 27 27.2	
	comp=E,1µm,0.5s							
ILIN	**Lien**	**1.51**	**40**	Pg		**Pb**	**18 27 12.4**	**+0.8**
IKFM	**Kafar-mosalman**	**1.75**	**97**	Pn		**Pn**	**18 27 14.9**	**+1.0**
IBZA	**Bozab**	**1.87**	**67**	Pn		**Pn**	**18 27 17.2**	**+1.4**
IDOB	**Doab**	**2.00**	**89**	Pn		**Pn**	**18 27 18.3**	**+0.7**
IKRK	**Kirkuk**	**2.01**	**324**	*e*Pn		**Pn**	**18 27 18.0**	**+0.5**
IKRK				*e*Sn		**Sb**	**18 27 45.0**	**-0.3**
IKRK				AML	AML		18 27 55.3	
	comp=E,80nm,0.5s							
RAFI	**Al-Rafai**	**2.06**	**172**	*e*Pn		**Pn**	**18 27 19.0**	**+0.8**
RAFI				*e*Sn		**Sb**	**18 27 46.0**	**-0.7**
RAFI				AML	AML		18 27 49.4	
	comp=E,96nm,0.4s							
RAFI				AML	AML		18 27 50.0	
	comp=N,112nm,0.2s							
IKLH	**Kolahrood**	**4.87**	**94**	Pn		**Pn**	**18 27 58.2**	**+1.1**

MOS ***18*** *18:31:34.0±1.2,32˚.80N×132˚.05E,h40km,mb5.1/51, MS4.6/12,Error ellipse: s-maj=6.9km s-min=4.2km az=109.6*
NEIC ***18*** *18:31:36.4,32˚.78N×132˚.24E,h40km,Moment Tensor Solution. Duration: 19.6 Moment tensor: Scale 10¹⁶Nm; Mrr=3.61; Mθθ=0.76; Mϕϕ=4.37; Mrθ=1.54; Mθϕ=0.12; Mϕr=1.11; Fault plane solution: Mo=4.47000×10¹⁶ NP1: ϕs=200.07000°,δ56.74000°,λ-62.74000°. NP2: ϕs=336.86000°,δ41.98000°,λ-124.93000°. Principal axes: T 4.5240, Plg8.0000°, Azm271.0000°; N -0.1083, Plg23.0000°, Azm4.0000°; P -4.4157, Plg66.0000°, Azm163.0000°;*
NEIC ***18*** *18:31:36.4,32˚.78N×132˚.12E,h40km*
JMA ***18*** *18:31:36.5±0.0,32˚.9N±0˚.2×132˚.2E±0˚.1,h40km,MD5.0/39, MV5.2/39,BUNGO CHANNEL*
JMA Felt IV J1 at BUNGO CHANNEL .
NEIC ***18*** *18:31:36.4±2.7,32˚.80N±0˚.06×132˚.14E±0˚.07,h42km±5km, mb5.2/190,Mww5.0/28,Error ellipse: s-maj=9.5km s-min=8.2km az=155.0*
GCMT ***18*** *18:31:39.4±0.2,32˚.91N±0˚.01×132˚.03E±0˚.01,h38km, MW5.1/113,Moment Tensor Solution. s79,c109; s113,c191; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.53±.13; Mθθ-1.17±.09; Mϕϕ4.70±.09; Mrθ2.22±.10; Mθϕ-0.42±.07; Mϕr2.17±.09; Best double couple: Mo5.27000×10¹⁶ NP1:ϕs203.00000°,δ65.00000°, λ-59.00000°. NP2:ϕs329.00000°,δ39.00000°, λ-137.00000°. Principal axes: T 5.2400, Plg14.0000°, Azm271.0000°; N 0.0610, Plg27.0000°, Azm9.0000°; P -5.3000, Plg59.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***18*** *18:31:40.2±0.7,32˚.94N×131˚.82E,h78km±5km,mb4.2/35, mbtmp4.5/37,MS4.2/80 Error ellipse: s-maj=11.8km s-min=10.1km az=66.0*
NIED ***18*** *18:31:40.1,32˚.89N×132˚.15E,h39km,MW5.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr=3.42; Mθθ-0.38; Mϕϕ3.80; Mrθ1.78; Mθϕ-0.46; Mϕr1.52; Fault plane solution: Mo=4.33000×10¹⁶ NP1: ϕs198.00000°,δ60.00000°,λ-62.00000°. NP2: ϕs332.00000°,δ40.00000°,λ-129.00000°.*
ISC 18 18:31:36.5±0.3,**32.85N**±0˚.03×**132.16E**±0˚.02,**h46**km±2km,
h46km:**pP-P,n871**,σ1°**65**/830,**mb5.1**/206,**MS4.4**/102,
29C-23D,Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSKE	**Saikikamae**	**0.22**	**257**	⇓*i*P		**Pn**	**18 31 44.0**	**-0.5**
JSKE				⇓S		**Sn**	**18 31 49.5**	**-0.7**
JSKE	**Saikikamae**	**0.22**	**257**	A		A	18 31 44.0	
	comp=E,196nm,1.3s,comp=N,354nm,1.1s							
JUS	**Usuki**	**0.40**	**303**	⇓*i*P		**Pn**	**18 31 45.6**	**-0.8**
JUS				⇓S		**Sn**	**18 31 52.2**	**-1.2**
JUS	**Usuki**	**0.40**	**303**	A		A	18 31 45.6	
	comp=E,384nm,0.7s,comp=N,205nm,0.5s							
UWA2	**Uwa jima 2**	**0.54**	**47**	*i* P		**Pn**	**18 31 47.0**	**-1.1**
UWA2				S		**Sn**	**18 31 54.9**	**-1.4**
JTO	**Tosashimizu**	**0.55**	**88**	*i* P		**Pn**	**18 31 47.6**	**-0.6**
JTO				S		**Sn**	**18 31 55.9**	**-0.5**
JHHC	**Hyugahichiya**	**0.59**	**228**	A		A	18 31 49.0	
	comp=E,114nm,0.6s,comp=N,151nm,0.8s							
JNA	**Nagahama**	**0.76**	**21**	*i* P		**Pn**	**18 31 50.0**	**-0.9**
JNA				S		**Sn**	**18 31 59.6**	**-1.8**
JKU	**Kubokawa**	**0.89**	**59**	*i* P		**Pn**	**18 31 52.0**	**-0.8**
JKU				S		**Sn**	**18 32 03.4**	**-1.1**
JNU	**Nakatsue**	**1.11**	**285**			**Pn**	**18 31 55.6**	**-0.1**
JNU	**Nakatsue**	**1.11**	**285**	P		**Pn**	**18 31 55.8**	**+0.1**
JNU	**Nakatsue**	**1.11**	**285**	P		**Pn**	**18 31 56.1**	**+0.4**
	comp=N,13µm,0.8s,baz=103,slow=4.8							
JNU				S		**Sn**	**18 32 10.8**	**+1.0**
	comp=N,24µm,0.6s,baz=195,slow=12,SNR=14							
JIU3	**Izumi3**	**1.17**	**256**	*i* P		**Pn**	**18 31 57.4**	**+0.9**
JET	**Tanbara**	**1.19**	**39**	P		**Pn**	**18 31 56.5**	**-0.3**
JTZ	**Takazaki**	**1.30**	**224**	⇓*i*P		**Pn**	**18 31 59.3**	**+1.0**
JHM	**Kurahashi**	**1.33**	**14**	*i* P		**Pn**	**18 31 58.1**	**-0.5**
JMN	**Monobe**	**1.69**	**58**	Pn		**Pn**	**18 32 02.7**	**-1.0**
JMN	**Monobe**	**1.69**	**58**	P		**Pn**	**18 32 06.0**	**+2.4**
JTU	**Tsushima**	**2.84**	**307**	Pn		**Pn**	**18 32 18.7**	**-0.7**
JTU	**Tsushima**	**2.84**	**307**	P		**Pn**	**18 32 19.4**	**0.0**
INU	**Inuyama**	**4.74**	**57**	Pn		**Pn**	**18 32 46.0**	**+0.5**
INU	**Inuyama**	**4.74**	**57**	P		**Pn**	**18 32 46.4**	**+0.9**
JGF	**Kuroka**	**5.11**	**56**			**Pn**	**18 32 50.4**	**-0.2**
JGF	**Kuroka**	**5.11**	**56**	P		**Pn**	**18 32 50.7**	**+0.1**
TJN	**Taejon**	**5.29**	**313**	Pn		**Pn**	**18 32 52.7**	**-0.3**
TJN	**Taejon**	**5.29**	**313**	P		**Pn**	**18 32 53.0**	**0.0**
TJN	**Taejon**	**5.29**	**313**	*c* P		**Pn**	**18 32 52.7**	**-0.3**
JSG	**Sagara**	**5.34**	**68**			**Pn**	**18 32 54.4**	**+0.6**
JSG	**Sagara**	**5.34**	**68**	P		**Pn**	**18 32 54.5**	**+0.8**
KSRS	**Korea Array**	**5.76**	**324**			**Pn**	**18 32 59.6**	**+0.3**
KSRS	**Korea Array**	**5.76**	**324**	P		**Pn**	**18 32 59.7**	**+0.3**
KSRS				S		**Sn**	**18 34 02.5**	**-1.6**
KSRS	**Korea Array**	**5.76**	**324**	P		**Pn**	**18 32 59.6**	**+0.3**
	comp=N,20nm,0.4s,baz=143,slow=14,SNR=184							
KSRS				S		**Sn**	**18 34 02.5**	**-1.6**
	comp=N,101nm,0.8s,baz=143,slow=25,SNR=7.0							
KSRS				LR	LR		18 35 28.6	
	comp=N,4µm,21.5s,baz=140,slow=41							
KSAR	**Wonju Array Be**	**5.77**	**324**	Pn		**Pn**	**18 32 59.2**	**-0.3**
KSAR	**Wonju Array Be**	**5.77**	**324**	P		**Pn**	**18 32 59.2**	**-0.3**
KS19	**Wonju Array Si**	**5.82**	**324**	Pn		**Pn**	**18 32 59.4**	**-0.9**
MAJO	**Matsushiro**	**6.20**	**52**	Pn		**Pn**	**18 33 06.1**	**+0.6**
MAJO	**Matsushiro**	**6.20**	**52**	P		**Pn**	**18 33 06.3**	**+0.8**
MAJO	**Matsushiro**	**6.20**	**52**	*c* P		**Pn**	**18 33 05.9**	**+0.4**
MJB9	**Matsu-Tunnel**	**6.20**	**52**	Pn		**Pn**	**18 33 07.0**	**+1.5**
MJAR	**Matsushiro Arr**	**6.20**	**52**	P		**Pn**	**18 33 06.8**	**+1.3**
	comp=N,71nm,0.3s,baz=270,slow=19,SNR=1216							
MJAR				S		**Sn**	**18 34 14.0**	**-1.1**
	comp=N,41nm,0.7s,baz=226,slow=18,SNR=0.8							
MJAR				LR	LR		18 35 50.0	
	comp=N,5µm,18.8s,baz=241,slow=39							
JHJ	**Hachijo jima 2**	**6.42**	**86**			**Pn**	**18 33 08.7**	**+0.2**
JHJ	**Hachijo jima 2**	**6.42**	**86**	P		**Pn**	**18 33 08.7**	**+0.2**
	comp=N,570nm,0.3s,baz=308,slow=19,SNR=79							
JHJ				S		**Sn**	**18 34 21.0**	**+0.6**
	comp=N,194nm,0.5s,baz=272,slow=24,SNR=1.4							
JHJ				LR	LR		18 35 39.1	
	comp=N,3µm,20.8s,baz=306,slow=36							
JHJ2	**Mitsune**	**6.44**	**86**	Pn		**Pn**	**18 33 08.5**	**-0.3**
JHJ2	**Mitsune**	**6.44**	**86**	P		**Pn**	**18 33 08.5**	**-0.3**
INCN	**Inchon**	**6.47**	**317**	Pn		**Pn**	**18 33 09.1**	**-0.1**
INCN	**Inchon**	**6.47**	**317**	P		**Pn**	**18 33 09.1**	**-0.1**
JOW	**Kunigami**	**6.88**	**210**	Pn		**Pn**	**18 33 12.5**	**-2.3**
JOW	**Kunigami**	**6.88**	**210**	P		**Pn**	**18 33 14.6**	**-0.2**
JOW	**Kunigami**	**6.88**	**210**	P		**Pn**	**18 33 14.3**	**-0.5**
	comp=N,3.9nm,0.5s,baz=2.2,slow=11,SNR=1.6							
JOW				S		Sn	18 34 22.5	-9.3
	comp=N,30nm,0.7s,baz=119,slow=19,SNR=1.1							
JMZ	**Minamidaito 2**	**7.05**	**187**	P		**Pn**	**18 33 17.8**	**+0.6**
JMM	**Marumori**	**8.65**	**52**			**Pn**	**18 33 39.2**	**+0.2**
JMM	**Marumori**	**8.65**	**52**	P		**Pn**	**18 33 40.1**	**+1.0**
SSE	**Sheshan**	**9.48**	**262**	P		**Pn**	**18 33 50.1**	**-0.3**
SSE				S		**Sn**	**18 35 34.4**	**-1.2**
SSE				pmax	pmax			
	comp=N,18nm,1.4s							
SSE				LR	LR			
	comp=N,590nm,22.2s							
SSE				LR	LR			
	comp=N,830nm,22.2s							
MSHR	**Mys Shultsa**	**9.75**	**356**	⇑*e*P		**Pn**	**18 33 54.4**	**+0.3**
JCJ	**Chichijima**	**10.41**	**121**	P		**Pn**	**18 34 04.8**	**+1.5**
	comp=N,58nm,0.6s,baz=288,slow=23,SNR=1.7							
JCJ				S		**Sn**	**18 35 52.0**	**-6.5**
	comp=N,84nm,0.8s,baz=279,slow=18,SNR=1.9							
JCJ				LR	LR		18 37 29.4	
	comp=N,2µm,20.9s,baz=318,slow=33							
DL2	**Dalian**	**10.46**	**308**	P		**Pn**	**18 34 04.8**	**+1.0**
DL2				S		**Sn**	**18 36 03.5**	**+3.9**
DL2				pmax	pmax			
	comp=N,40nm,1.3s							
DL2				pmax	pmax			
	comp=N,170nm,3.6s							
DL2				LR	LR			
	comp=N,2µm,15.8s							
DL2				LR	LR			
	comp=N,2µm,15.1s							
DL2				LR	LR			
	comp=N,3µm,15.4s							
JTM	**Tenmabayashi**	**10.66**	**39**	Pn		**Pn**	**18 34 07.6**	**+1.0**
JTM	**Tenmabayashi**	**10.66**	**39**	P		**Pn**	**18 34 07.9**	**+1.3**
NJ2	**Nanjing**	**11.27**	**270**	*e*P		**Pn**	**18 34 17.0**	**+2.1**
NJ2				pP			18 34 23.3	
NJ2				PP		**PnPn**	**18 34 27.3**	**+4.7**
NJ2				sP			18 34 29.3	
NJ2				S		**Sn**	**18 36 22.4**	**+3.0**
NJ2				pmax	pmax			
	comp=N,51nm,1.4s							
NJ2				LR	LR			
	comp=N,890nm,5.7s							
NJ2				LR	LR			
	comp=N,3µm,9.0s							
NJ2				LR	LR			
	comp=N,3µm,15.6s							
USA0B	**Ussuriysk Arra**	**11.34**	**359**	Pn		**Pn**	**18 34 17.5**	**+1.7**
USA0B	**Ussuriysk Arra**	**11.34**	**359**	P		**Pn**	**18 34 17.5**	**+1.7**
USRK	**Ussuriysk Ar.**	**11.34**	**359**	P		Pn	18 34 20.5	+4.7
	comp=N,2.8nm,0.7s,baz=178,slow=13,SNR=5.1							
USRK				S		**Sn**	**18 36 21.4**	**+0.4**
	comp=N,1.5nm,0.6s,baz=202,slow=19,SNR=1.3							
USRK				LR	LR		18 38 20.8	
	comp=N,2µm,20.0s,baz=172,slow=36							
MDJ	**Mudanjiang**	**11.92**	**351**	P		**Pn**	**18 34 27.3**	**+3.5**
MDJ				PP		**PnPn**	**18 34 38.1**	**+6.4**
MDJ				pmax	pmax			
	comp=N,6.0nm,1.0s							
MDJ				pmax	pmax			
	comp=N,410nm,3.9s							
MDJ				LR	LR			
	comp=N,1µm,18.7s							
MDJ				LR	LR			
	comp=N,590nm,14.4s							
MDJ				LR	LR			
	comp=N,1µm,19.5s							
MDJ	**Mudanjiang**	**11.92**	**351**	Pn		**Pn**	**18 34 26.6**	**+2.8**
MDJ	**Mudanjiang**	**11.92**	**351**	P		**Pn**	**18 34 24.1**	**+0.3**
CN2	**Changchun**	**12.13**	**336**	*e*P		**Pn**	**18 34 27.5**	**+0.8**
CN2				*e*S		**Sn**	**18 36 41.3**	**+0.8**
CN2				pmax	pmax			
	comp=N,10.0nm,0.9s							
CN2				pmax	pmax			
	comp=N,100nm,3.0s							
CN2				LR	LR			
	comp=N,900nm,10.0s							
CN2				LR	LR			
	comp=N,800nm,10.0s							
CN2				LR	LR			
	comp=N,900nm,10.0s							
ERM	**Erimo**	**12.65**	**41**	Pn		**Pn**	**18 34 33.9**	**+0.2**
ERM	**Erimo**	**12.65**	**41**	P		**Pn**	**18 34 35.6**	**+1.9**
ERM	**Erimo**	**12.65**	**41**	⇑*e*P		**Pn**	**18 34 35.1**	**+1.4**
JEM	**Erimo**	**12.65**	**41**	P		**Pn**	**18 34 33

comp=Z,22nm,0.8s,baz=156,slow=10,SNR=44
KLR S **S** **18 38 33.2 -0.9**
comp=Z,2.6nm,1.0s,baz=30,slow=23,SNR=1.3
KLR LR LR 18 41 28.5
comp=Z,820nm,18.9s,baz=170,slow=36
LYN LuoYang 16.48 281 *e*P **P** **18 35 27.8 +1.3**
LYN SS **SnSn** **18 38 49.4 +10**
LYN pmax pmax
comp=Z,110nm,1.0s
LYN LR LR
comp=Z,2µm,16.8s
LYN LR LR
comp=Z,3µm,18.2s
XLT XiLinHaoTe 16.72 316 *e*P **P** **18 35 29.0 -0.3**
XLT pP pP 18 35 38.5 -1.5
XLT S **Sn** **18 38 28.4 -3.8**
XLT sS S 18 38 46.6 +5.1
XLT SS **SnSn** **18 38 52.6 +6.8**
XLT pmax pmax
comp=Z,22nm,1.2s
XLT pmax pmax
comp=Z,210nm,3.2s
XLT LR LR
comp=Z,2µm,12.0s
XLT LR LR
comp=Z,2µm,12.7s
TIY Taiyuan 16.81 292 *e*P **P** **18 35 32.4 +2.1**
TIY pP **pP** **18 35 38.4 -2.8**
TIY sP **sP** **18 35 43.3 -3.7**
TIY pmax pmax
comp=Z,19nm,1.1s
TIY pmax pmax
comp=Z,200nm,3.5s
TIY LR LR
comp=Z,580nm,10.2s
TIY LR LR
comp=Z,2µm,14.9s
TIY LR LR
comp=Z,3µm,14.5s
HEH HeiHe 17.74 350 *e*P **Pn** **18 35 39.0 -1.0**
HEH pP **pP** **18 35 49.3 -1.8**
HEH S **S** **18 39 00.6 -1.4**
HEH SS Sn 18 39 15.8 +19
HEH pmax pmax
comp=Z,21nm,0.9s
HEH pmax pmax
comp=Z,250nm,5.2s
HEH LR LR
comp=Z,660nm,22.9s
HEH LR LR
comp=Z,580nm,22.6s
HEH LR LR
comp=Z,1µm,22.9s
GRNR Gornyy 18.18 9⇓ *i*P **P** **18 35 44.5 -0.8**
GRNR pmax pmax
comp=E,1.0nm,1.1s
GRNR pmax pmax
comp=Z,4.0nm,1.1s
GRNR pmax pmax
comp=N,4.0nm,1.0s
GRNR MLR MLR
comp=E,440nm,16.0s
GRNR MLR MLR
comp=N,430nm,17.0s
GRNR MLR MLR
comp=Z,600nm,17.0s
HHC Hu-ho-hao-te 18.29 302 *e*P **Pn** **18 35 47.4 +0.5**
HHC pP pP 18 35 56.1 -1.3
HHC PP **sP** **18 36 03.4 +0.1**
HHC S **Sn** **18 39 08.5 -1.7**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,420nm,4.4s
HHC LR LR
comp=Z,790nm,12.6s
HHC LR LR
comp=Z,2µm,13.8s
HHC LR LR
comp=Z,2µm,14.5s
HIA Hailar 18.84 334 **Pn** **18 35 53.2 -0.2**
HIA Hailar 18.84 334 P **Pn** **18 35 53.2 -0.2**
HIA pmax pmax
comp=Z,55nm,1.9s
BTO Baotou 19.33 300 *e*P **Pn** **18 36 01.9 +2.5**
BTO pP **pP** **18 36 11.8 +2.9**
BTO sP **sP** **18 36 17.8 +3.1**
BTO PP pwP 18 36 20.4 +12
BTO pmax pmax
comp=Z,21nm,1.2s
BTO pmax pmax
comp=Z,810nm,4.7s
BTO LR LR
comp=Z,2µm,13.0s
BTO LR LR
comp=Z,2µm,15.3s
BTO LR LR
comp=Z,3µm,14.9s
XAN Xi'an 19.42 280 ⇑P **P** **18 35 58.6 -0.4**
XAN pP pP 18 36 08.4 -1.5
XAN sP sP 18 36 14.5 -1.3
XAN S **S** **18 39 34.3 -1.9**
XAN SS **SnSn** **18 40 02.3 +10**
XAN pmax pmax
comp=Z,17nm,1.2s
XAN pmax pmax
comp=Z,360nm,5.7s
XAN LR LR
comp=Z,2µm,12.7s
XAN LR LR
comp=Z,1µm,18.6s
XAN LR LR
comp=Z,2µm,16.1s
ENH Enshi 19.48 269 P **P** **18 35 56.5 -3.2**
ENH IAmb IAmb 18 36 13.2
comp=Z,188nm,1.9s
TYV Tymovskoe 19.59 20 *e*P **Pn** **18 36 06.5 +4.2**
TYV pmax pmax
comp=Z,100nm,2.6s
TYV pmax pmax
comp=Z,8.0nm,1.5s
GULI GuiLin 20.46 254⇓ *i*P Pn 18 36 20.1 +7.3
GULI S **S** **18 39 54.1 -2.7**
ZEA Zeya 21.18 352 *e*P **P** **18 36 18.6 +0.8**
ZEA pmax pmax
comp=N,100nm,1.1s
ZEA pmax pmax
comp=Z,200nm,1.2s
ZEA pmax pmax
comp=N,100nm,0.9s
ZEA pmax pmax
comp=Z,140nm,0.8s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
ZEA MLR MLR
comp=N,200nm,15.0s
TGY Tagaytay City 21.28 211 LR LR 18 44 47.1
comp=N,274nm,21.6s,baz=104,slow=37
GUMO Guam 22.41 146 LR LR 18 44 27.9
comp=N,411nm,19.8s,baz=348,slow=34
GYA Guiyang 23.02 261⇓ *i*P **P** **18 36 34.8 -3.0**
GYA sP sP 18 36 52.6 -2.2
GYA S **S** **18 40 41.4 -3.8**
GYA sS Sn 18 41 00.4 -3.7
GYA pmax pmax
comp=N,12nm,0.8s
GYA pmax pmax
comp=N,190nm,3.8s
GYA LR LR
comp=N,680nm,16.9s
GYA LR LR
comp=N,760nm,23.5s
GYA LR LR
comp=N,1µm,20.9s
CIT Chita 23.45 330 *e*P **P** **18 36 42.3 +0.6**
CIT *e* 18 36 56.2
CIT *e* 18 37 12.3
CIT *e* 18 37 23.4
CIT pmax pmax
comp=Z,52nm,1.2s
LZH Lanzhou 23.53 286 *e*P **P** **18 36 41.4 -1.4**
LZH pP pP 18 36 51.8 -2.6
LZH sP sP 18 36 57.5 -2.6
LZH S **S** **18 40 48.1 -5.4**
LZH sS sS 18 41 06.0 -7.6
LZH pmax pmax
comp=Z,8.0nm,1.5s
LZH pmax pmax
comp=Z,220nm,5.8s
LZH LR LR
comp=Z,580nm,13.7s
LZH LR LR
comp=Z,860nm,15.5s
LZH LR LR
comp=Z,1µm,15.1s
ULN Ulaanbaatar 24.16 316 P **P** **18 36 47.6 -0.9**
ULN IAmb IAmb 18 37 06.0
comp=Z,54nm,0.8s
ULN Ulaanbaatar 24.16 316 *de*P **P** **18 36 47.8 -0.7**
ULN pmax pmax
comp=Z,16nm,1.3s
CD2 Chengdu 24.16 273 P **P** **18 36 46.8 -1.8**
CD2 pP pP 18 36 59.0 -1.6
CD2 sP sP 18 37 03.3 -2.9
CD2 S **S** **18 41 00.8 -2.8**
CD2 sS sS 18 41 24.6 +1.0
CD2 pmax pmax
comp=Z,290nm,3.6s
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 LR LR
comp=Z,1µm,16.2s
CD2 LR LR
comp=Z,3µm,13.7s
CD2 LR LR
comp=Z,3µm,13.4s
QIZ Qiongzhong 24.26 241 P **P** **18 36 47.1 -2.4**
QIZ S **S** **18 41 06.8 +1.6**
QIZ pmax pmax
comp=Z,10.0nm,1.4s
QIZ LR LR
comp=Z,550nm,20.2s
QIZ LR LR
comp=Z,460nm,20.2s
QIZ LR LR
comp=Z,510nm,23.5s
SONM Songino Array 24.54 315 P **P** **18 36 50.6 -1.3**
SONM IAmb IAmb 18 37 07.1
comp=Z,57nm,1.0s
SONM Songino Array 24.54 315 P **P** **18 36 50.6 -1.3**
SONM pmax pmax
comp=Z,57nm,1.0s
SONM Songino Array 24.54 315 P **P** **18 36 50.2 -1.6**
comp=Z,11nm,0.9s,baz=120,slow=9.8,SNR=54
SONM PcP **PcP** **18 40 29.9 +0.8**
comp=Z,0.5nm,0.7s,baz=116,slow=3.4,SNR=1.0
SONM LR LR 18 47 49.5
comp=Z,1µm,18.5s,baz=118,slow=40
comp=Z,11nm,0.9s
DAV Davao City (W) 26.37 195 LR LR 18 48 05.5
comp=Z,214nm,19.6s,baz=28,slow=37
KMI Kunming 26.80 261 ⇑P **P** **18 37 11.8 -0.8**
KMI pP pP 18 37 25.3 +0.6
KMI S **S** **18 41 44.5 -1.3**
KMI pmax pmax
comp=Z,11nm,0.6s
KMI LR LR
comp=Z,310nm,15.6s
KMI LR LR
comp=Z,890nm,17.8s
KMI LR LR
comp=Z,1µm,17.7s
GTA Gaotai 26.84 293 *e*P **P** **18 37 11.0 -1.8**
GTA pP pP 18 37 25.3 +0.4
GTA S **S** **18 41 45.3 -0.8**
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA LR LR
comp=Z,810nm,15.3s
GTA LR LR
comp=Z,2µm,16.7s
GTA LR LR
comp=Z,2µm,16.4s
PZH PanZhiHua 27.11 265 P **P** **18 37 15.8 +0.4**
PZH S **S** **18 41 55.6 +5.0**
PZH pmax pmax
comp=Z,30nm,1.0s
PZH pmax pmax
comp=Z,150nm,3.5s
PZH LR LR
comp=Z,550nm,17.0s
PZH LR LR
comp=Z,620nm,17.4s
PZH LR LR
comp=Z,600nm,18.6s
PEA0B Petropavlovsk- 27.30 35⇑ *e*P **P** **18 37 16.5 -0.2**
PETK Petropavlovsk- 27.30 35 P **P** **18 37 15.3 -1.4**
PETK Petropavlovsk- 27.30 35 P **P** **18 37 17.4 +0.7**
PETK Petropavlovsk- 27.30 35 P **P** **18 37 17.4 +0.7**
comp=Z,7.5nm,1.0s,baz=232,slow=6.4,SNR=2.8
PETK LR LR 18 50 33.0
comp=Z,378nm,18.1s,baz=224,slow=41
comp=Z,7.5nm,1.0s
ZAK Zakamensk 27.55 318 *e*P **P** **18 37 20.0 +1.0**
ZAK pmax pmax
comp=Z,24nm,1.0s
PET Petropavlovsk 27.71 35 P **P** **18 37 17.5 -2.8**
PET Petropavlovsk 27.71 35 *e*P **P** **18 37 20.0 -0.3**
PET *e**PP **pP** **18 37 31.9 -0.5**
PET *e**SP **sP** **18 37 37.8 -0.1**
PET *e*S **S** **18 41 59.1 -0.2**
PET pmax pmax
comp=Z,15nm,0.6s
PET MLR MLR
comp=Z,600nm,20.0s
PET MLR MLR
comp=Z,600nm,18.0s
BOD Bodaibo 27.86 339 *e*P P 18 37 32.8 +11
BOD pmax pmax
comp=Z,13nm,1.8s
IRK Irkutsk 27.97 322 *e*P P 18 37 30.0 +7.4
IRK pmax pmax
comp=Z,39nm,2.5s
YAK Yakutsk 29.24 358 *e*P **P** **18 37 32.3 -1.5**
YAK *e* 18 38 25.6
YAK *e*S **S** **18 42 20.7 -2.4**
YAK *e**SS **sS** **18 42 41.7 -1.8**
YAK pmax pmax
comp=Z,29nm,0.8s
YAK pmax pmax
comp=N,12nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,28nm,1.8s
YAK pmax pmax
comp=N,63nm,2.5s
YAK smax smax
comp=N,104nm,3.8s
YAK smax smax
comp=E,77nm,3.8s
YAK MLR MLR
comp=Z,601nm,19.0s
YAK MLR MLR
comp=N,323nm,17.0s
YAK MLR MLR
comp=E,124nm,15.0s
YAK Yakutsk 29.24 358 LR LR 18 49 18.7
comp=E,599nm,18.8s,baz=152,slow=36
MA2 Magadan 29.46 19⇑ *e*P **P** **18 37 36.0 +0.2**
MA2 pmax pmax
comp=Z,17nm,1.7s
MA2 Magadan 29.46 19 LR LR 18 50 34.2
comp=Z,398nm,18.5s,baz=210,slow=38
UBPT Khong Chiam 29.86 241 P **P** **18 37 35.9 -3.8**
TNCH TengChong 30.35 264 *e*P **P** **18 37 44.8 +0.5**
TNCH pP pP 18 37 57.3 +0.9
TNCH sP sP 18 38 03.1 +1.2
TNCH S **S** **18 42 40.3 -1.4**
TNCH pmax pmax
comp=Z,6.0nm,0.9s
TNCH pmax pmax
comp=Z,120nm,4.8s
TNCH LR LR
comp=Z,320nm,20.4s
TNCH LR LR
comp=Z,230nm,19.8s
TNCH LR LR
comp=Z,830nm,23.4s
GOMU GeErMu 30.82 287 P **P** **18 37 48.8 +0.2**
GOMU pP pP 18 37 59.6 -1.1
GOMU PcP **PcP** **18 40 44.8 0.0**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
GOMU LR LR
comp=Z,320nm,12.2s
GOMU LR LR
comp=Z,450nm,12.0s
GOMU LR LR
comp=Z,450nm,12.3s
TNTI Ternate 32.22 189 P **P** **18 38 02.1 +1.6**
comp=Z,51nm,1.1s
SEY Seymchan 32.72 17⇓ *e*P **P** **18 38 04.7 +0.3**
SEY pmax pmax
comp=Z,17nm,2.5s
SEY Seymchan 32.72 17 LR LR 18 51 00.8
comp=Z,408nm,20.9s,baz=202,slow=36
CM31 Chiang Mai Arr 33.03 253 P **P** **18 38 05.2 -2.5**
CMAR Chiang Mai Arr 33.03 253 *i*P **P** **18 38 06.5 -1.2**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 33.03 253 P **P** **18 38 06.7 -1.0**
comp=Z,1.2nm,0.4s,baz=50,slow=7.5,SNR=13
CMAR PcP **PcP** **18 40 49.4 -1.3**
comp=Z,1.3nm,0.8s,baz=32,slow=2.5,SNR=5.6
CMAR ScP **ScP** **18 44 30.9 -0.1**
comp=Z,0.5nm,0.6s,baz=25,slow=2.7,SNR=5.2
CMAR LR LR 18 53 39.8
comp=Z,422nm,18.3s,baz=50,slow=40
comp=Z,1.2nm,0.4s
TOLI2 Tolitoli 33.33 201 P **P** **18 38 08.5 -1.7**
SWI Sorong 33.54 182 P **P** **18 38 11.8 -0.2**
comp=Z,39nm,0.9s
LBMI Labuha 33.59 188 P **P** **18 38 10.5 -2.0**
comp=Z,38nm,1.4s
H11N2 WAKE ISLAND Hy 33.62 104 T T 19 13 19.3
baz=300,slow=75,SNR=23
H11N1 WAKE ISLAND Hy 33.62 104 T T 19 13 12.2
baz=300,slow=75,SNR=23
H11N3 WAKE ISLAND Hy 33.63 104 T T 19 13 06.3
baz=300,slow=75,SNR=28
H11S3 WAKE ISLAND Hy 34.08 106 T T 19 13 42.7
baz=304,slow=75,SNR=27
H11S1 WAKE ISLAND Hy 34.08 106 T T 19 13 50.3
baz=304,slow=75,SNR=24
H11S2 WAKE ISLAND Hy 34.09 106 T T 19 13 52.3
baz=304,slow=75,SNR=25
LSA Lhasa 35.03 276 P **P** **18 38 25.8 +0.3**
LSA Lhasa 35.03 276 P **P** **18 38 25.8 +0.3**
LSA pmax pmax
comp=Z,10.0nm,1.1s
LSA Lhasa 35.03 276 P **P** **18 38 26.1 +0.6**
SANI Sanana 35.19 191 P **P** **18 38 25.7 -0.6**
SANI Sanana 35.19 191 P **P** **18 38 25.2 -1.1**
comp=Z,27nm,0.7s
SMPI Sarmi 35.20 169 P **P** **18 38 27.9 +1.5**
comp=Z,56nm,1.0s
SBUM Sibu 35.56 216 P **P** **18 38 28.7 -0.8**
FAKI Fak Fak 35.57 180 P **P** **18 38 30.0 +0.4**
FAKI Fak Fak 35.57 180 P **P** **18 38 30.7 +1.1**
FAKI Fak Fak 35.57 180 P **P** **18 38 30.0 +0.4**
comp=Z,149nm,0.9s,comp=Z,1µm
SHEM Shemya Is, Ala 35.97 44 LR LR 18 51 59.0
comp=Z,172nm,21.8s,baz=327,slow=34
GENI Genyem 36.05 166 P **P** **18 38 35.5 +1.8**
comp=Z,62nm,1.0s
WMQ Urumqi 36.16 301 *e*P **P** **18 38 33.8 -0.7**
WMQ pP pP 18 38 45.5 -1.4
WMQ sP sP 18 38 57.9 +5.6
WMQ PP **PP** **18 40 01.9 +4.6**
WMQ ScP **ScP** **18 44 43.1 +1.1**
WMQ pmax pmax
comp=Z,16nm,1.5s
WMQ LR LR
comp=Z,650nm,16.3s
WMQ LR LR
comp=Z,770nm,19.1s
WMQ LR LR
comp=Z,660nm,24.0s
DGZ Jazzator, Alta 36.98 311⇑ *e*P **P** **18 38 41.4 -0.1**
BNDI Bandanaira 37.23 184 P **P** **18 38 43.9 +0.2**
comp=Z,93nm,0.8s
TIXI Tiksi 38.90 358 P **P** **18 38 56.5 -0.7**
TIXI Tiksi 38.90 358⇑ *e*P **P** **18 38 58.9 +1.7**
TIXI pmax pmax
comp=Z,13nm,2.5s
TIXI Tiksi 38.90 358 LR LR 18 55 37.9
comp=Z,665nm,18.9s,baz=184,slow=37
ZALV Zalesovo Beam 39.41 317 P **P** **18 39 02.0 +0.3**
ZALV Zalesovo Beam 39.41 317 P **P** **18 39 00.3 -1.4**
ZALV 18 41 06.6
ZALV 18 44 50.9
ZALV Zalesovo Beam 39.41 317 P **P** **18 39 00.3 -1.4**
comp=Z,0.4nm,0.3s,baz=90,slow=8.6,SNR=3.0
ZALV PcP **PcP** **18 41 06.6 -2.5**
comp=Z,1.8nm,0.8s,baz=107,slow=4.8,SNR=3.1
ZALV ScP **ScP** **18 44 50.9 -3.0**
comp=Z,1.6nm,0.9s,baz=104,slow=1.8,SNR=5.1
ZALV LR LR 18 56 41.3
comp=Z,804nm,18.3s,baz=103,slow=38
comp=Z,0.4nm,0.3s
MK31 Makanchi Array 40.09 305 P **P** **18 39 05.4 -2.1**
MK31 Makanchi Array 40.09 305 P **P** **18 39 05.4 -2.1**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 40.09 305 P **P** **18 39 05.6 -1.9**
MKAR ScP **ScP** **18 44 56.8 +0.1**
MKAR Makanchi Array 40.09 305 *i*P **P** **18 39 05.6 -1.9**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 40.09 305 P **P** **18 39 05.7 -1.9**
comp=Z,1.3nm,0.6s,baz=90,slow=10,SNR=24
MKAR ScP **ScP** **18 44 53.7 -3.1**
comp=Z,2.7nm,0.9s,baz=81,slow=3.5,SNR=9.7
MKAR LR LR 18 56 58.8
comp=Z,711nm,19.5s,baz=100,slow=38
comp=Z,1.3nm,0.6s
KULM Kulim 40.17 234 P **P** **18 39 07.1 -1.4**
MAKZ Makanchi 40.31 305 P **P** **18 39 07.2 -2.1**
MAKZ Makanchi 40.31 305 P **P** **18 39 07.2 -2.1**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MAKZ Makanchi 40.31 305 P **P** **18 39 08.5 -0.8**
BILL Bilibino 40.33 19 P **P** **18 39 09.6 +0.4**
BILL IAmb IAmb 18 39 34.3
comp=Z,30nm,1.0s
BILL Bilibino 40.33 19 *i*P **P** **18 39 10.3 +1.1**
BILL pmax pmax
comp=Z,36nm,1.7s
BILL Bilibino 40.33 19 P **P** **18 39 10.3 +1.1**
BILL pP **pP** **18 39 22.5 +1.0**
GSTR Great Sitkin T 41.75 47 P **P** **18 39 20.1 -0.9**
WUS Wushi 42.52 297 P **P** **18 39 27.2 -0.5**
WUS pP **pP** **18 39 39.4 -0.8**
KURK Kurchatov 42.71 311⇑ *e*P **P** **18 39 29.2 +0.3**
KURK pmax pmax
comp=Z,12nm,1.2s
KURBB Kurchatov Arra 42.77 311 P **P** **18 39 26.9 -2.4**
comp=Z,0.9nm,0.5s,baz=97,slow=9.1,SNR=6.6
KURBB ScP **ScP** **18 45 03.7 -3.5**
comp=Z,0.1nm,0.3s,baz=93,slow=3.2,SNR=3.5
KURBB LR LR 18 58 39.2
comp=Z,838nm,19.5s,baz=114,slow=38
comp=Z,0.9nm,0.5s
PRZ Przheval'sk 43.00 299 P **P** **18 39 32.5 +0.9**
PRZ pmax pmax
comp=Z,36nm,1.1s
SOEI Soe 43.03 191 P **P** **18 39 29.4 -2.5**
SOEI IAmb IAmb 18 40 12.7
comp=Z,71nm,1.2s
SOEI Soe 43.03 191 P **P** **18 39 33.2 +1.3**
SOEI Soe 43.03 191 P **P** **18 39 30.6 -1.3**
comp=Z,41nm,1.0s
PSI Prapat 43.16 233 P **P** **18 39 32.3 -0.7**
PSI pmax pmax
comp=Z,10.0nm,0.8s
RPSI Rantau Prapat 43.23 233 P **P** **18 39 32.3 -1.2**
ARXS Arharly 43.27 302 *e*P **P** **18 39 32.6 -1.0**
PLAI Plampang 43.65 201 P **P** **18 39 37.7 +0.9**
NRIK Noril'sk 44.16 339 *ce*P **P** **18 39 42.3 +2.0**
NRIK pmax pmax
comp=Z,12nm,1.2s
NRIK Noril'sk 44.16 339 P **P** **18 39 38.2 -2.1**
comp=Z,2.1nm,0.6s,baz=122,slow=9.3,SNR=1.9
NRIK LR LR 18 59 28.1
comp=Z,786nm,18.8s,baz=142,slow=38

PMG **Port Moresby** **44.39 159**⇑ *e*P **P** **18 39 41.9 -0.8**
PMG pmax pmax
comp=Z,2.1nm,0.6s
comp=Z,26nm,1.3s
PMG **Port Moresby** **44.39 159** LR LR 18 57 15.8
comp=Z,372nm,18.8s,baz=314,slow=34
NRN **Naryn** **44.90 298** P **P** **18 39 46.3 -0.7**
NRN **Naryn** **44.90 298** P **P** **18 39 46.3 -0.7**
NRN pmax pmax
comp=Z,13nm,0.9s
GSI **Gunungsitoli** **45.16 233** P **P** **18 39 47.5 -1.4**
GSI IAmb IAmb 18 40 11.9
comp=Z,36nm,0.7s
GSI **Gunungsitoli** **45.16 233** P **P** **18 39 49.4 +0.4**
KSH **Kashi** **45.21 295** P **P** **18 39 52.6 +3.3**
KSH pP pP 18 40 03.3 +1.4
KSH pmax pmax
comp=Z,4.0nm,1.1s
KSH LR LR
comp=Z,470nm,15.5s
KSH LR LR
comp=Z,460nm,17.2s
KSH LR LR
comp=Z,740nm,16.5s
KPJI **Karang Pucung** **45.66 213** P **P** **18 39 52.1 -0.7**
comp=Z,31nm,1.0s,comp=Z,892nm
FRU1 **Bishkek** **45.72 300** P **P** **18 39 52.9 -0.3**
FRU1 pmax pmax
comp=Z,28nm,1.0s
LEM **Lembang** **45.84 215** LR LR 19 00 25.4
comp=Z,97nm,21.0s,baz=14,slow=38
LEM **Lembang** **45.84 215** P **P** **18 39 56.4 +2.0**
comp=Z,62nm,1.0s
AAK **Ala-Archa** **45.84 300** P **P** **18 39 53.3 -1.0**
AAK **Ala-Archa** **45.84 300**⇑ *e*P **P** **18 39 53.4 -0.9**
AAK pmax pmax
comp=Z,7.0nm,0.9s
AAK **Ala-Archa** **45.84 300** LR LR 19 00 42.3
comp=Z,444nm,18.9s,baz=79,slow=38
AAK **Ala-Archa** **45.84 300** P **P** **18 39 53.5 -0.8**
BTLS **Baital** **45.89 303** *e*P **P** **18 39 53.7 -0.7**
BTLS pmax pmax
comp=Z,1.0nm,0.4s
ARLS **Aral** **46.08 299** P **P** **18 39 55.5 -0.6**
ARLS pmax pmax
comp=Z,25nm,0.9s
SISI **Saibi** **46.14 229** P **P** **18 39 56.7 0.0**
comp=Z,34nm,0.7s
GAMB **Gambell** **46.21 31** P **P** **18 39 57.8 +1.2**
baz=256
ARSB **Arslanbob** **47.16 298** P **P** **18 40 05.1 +0.5**
ARSB **Arslanbob** **47.16 298** P **P** **18 40 05.1 +0.5**
ARSB pmax pmax
comp=Z,18nm,1.6s
OHH **Osh** **47.44 297** P **P** **18 40 08.6 +1.9**
OHH pmax pmax
comp=Z,22nm,0.7s
COEN **Coen** **47.72 165** P **P** **18 40 07.9 -0.9**
COEN IAmb IAmb 18 40 11.1
comp=Z,20nm,0.9s
COEN **Coen** **47.72 165** P **P** **18 40 10.2 +1.3**
ARK **Arkit** **47.83 299** P **P** **18 40 10.5 +0.7**
ARK pmax pmax
comp=Z,22nm,0.7s
BVAR **Borovoye Array** **47.88 314** P **P** **18 40 07.8 -2.0**
BVAR **Borovoye Array** **47.88 314** P **P** **18 40 07.8 -2.0**
comp=Z,3.6nm,0.7s,baz=97,slow=9.3,SNR=16
BVAR ScP **ScP** **18 45 24.5 -3.8**
comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=3.8
BVAR LR LR 19 01 57.8
comp=Z,384nm,19.6s,baz=84,slow=38
comp=Z,3.6nm,0.7s
BRVK **Borovoye** **47.94 314** P **P** **18 40 09.2 -1.1**
BRVK IAmb IAmb 18 40 33.6
comp=Z,13nm,0.7s
BRVK **Borovoye** **47.94 314** P **P** **18 40 09.2 -1.1**
BRVK pmax pmax
comp=Z,13nm,0.7s
BRVK **Borovoye** **47.94 314** P **P** **18 40 08.8 -1.5**
TNA **Tin City** **48.21 29** P **P** **18 40 14.0 +1.9**
baz=258
KK31 **Karatay Array** **48.67 301** IAmb IAmb 18 40 30.8
comp=Z,23nm,1.0s
KKAR **Karatay Array** **48.67 301** P **P** **18 40 15.0 -1.1**
KKAR IAmb IAmb 18 40 30.8
comp=Z,22nm,1.0s
KKAR **Karatay Array** **48.67 301** P **P** **18 40 15.0 -1.1**
KKAR pmax pmax
comp=Z,23nm,1.0s
F14K **Arctic Creek** **48.84 29** P **P** **18 40 18.8 +1.7**
baz=259
BTK **Batken** **49.01 297** IAmb IAmb 18 40 33.4
comp=Z,18nm,1.1s
BTK **Batken** **49.01 297** P **P** **18 40 19.5 +0.7**
BTK pmax pmax
comp=Z,16nm,0.9s
ANM **Nome** **49.09 30** P **P** **18 40 20.9 +1.9**
baz=261,SNR=7.7
BRLS **Boroldaу** **49.17 301** *e*P **P** **18 40 20.4 +0.4**
BRLS pmax pmax
comp=Z,1.0nm,0.5s
IUG **Iuzhnay** **49.19 300** *e*P **P** **18 40 20.2 0.0**
IUG pmax pmax
comp=Z,7.0nm,0.7s
M13K **Dall Lake** **49.57 36** P **P** **18 40 24.6 +2.0**
baz=266
F15K **North Star Dit** **49.57 29** P **P** **18 40 24.7 +2.0**
baz=261
J14K **Nanvaranak Lak** **49.66 33** P **P** **18 40 25.0 +1.7**
baz=264
HNR **Honiara** **49.70 143** P **P** **18 40 26.8 +2.7**
HNR **Honiara** **49.70 143** LR LR 18 59 42.9
comp=Z,1μm,21.5s,baz=290,slow=34
G15K **Niukluk** **49.72 30** P **P** **18 40 25.4 +1.7**
baz=262
C16K **Lisburne Hills** **49.78 26** IAmb IAmb 18 40 26.0
comp=Z,36nm,1.1s
C16K **Lisburne Hills** **49.78 26** P **P** **18 40 24.8 +0.7**
baz=258,SNR=6.6
L14K **Kuka Creek** **49.95 35** P **P** **18 40 27.0 +1.5**
baz=266
M14K **Bethel** **50.27 36** P **P** **18 40 28.2 +0.3**
M14K **Bethel** **50.27 36** P **P** **18 40 29.6 +1.6**
baz=267,SNR=5.6
N14K **Kuskokwak Cree** **50.38 37** P **P** **18 40 30.5 +1.7**
baz=268
HYB **Hyderabad** **50.40 266** *e*P **P** **18 40 30.8 +1.2**
HYB *es*P **sP** **18 40 46.3 -1.4**
H16K **Elim** **50.44 31** P **P** **18 40 30.4 +1.2**
baz=264
G16K **Koyuk River** **50.47 30** P **P** **18 40 30.8 +1.4**
baz=263
D17K **Noatak River** **50.51 27** P **P** **18 40 30.7 +1.1**
baz=261,SNR=6.4
L15K **Ungalak Mounta** **50.55 34** P **P** **18 40 31.4 +1.4**
baz=267
K15K **Wolf Creek Mou** **50.56 34** P **P** **18 40 31.6 +1.5**
baz=266
C17K **DeLong Mountai** **50.61 26** P **P** **18 40 31.5 +1.0**
baz=260
SIMJ **Simiganj** **50.69 295** P **P** **18 40 33.0 +1.3**
M15K **Kasigluk River** **50.90 36** P **P** **18 40 33.9 +1.2**
baz=269
E17K **Hotham Inlet** **50.90 27** P **P** **18 40 33.7 +1.1**
baz=262,SNR=5.8
FITZ **Fitzroy Crossi** **51.04 188** P **P** **18 40 33.4 -0.8**
FITZ **Fitzroy Crossi** **51.04 188** P **P** **18 40 35.3 +1.2**
I17K **Unalakleet** **51.04 32** P **P** **18 40 34.7 +1.0**
I17K IAmb IAmb 18 40 36.5
comp=Z,30nm,0.8s
I17K **Unalakleet** **51.04 32** P **P** **18 40 35.0 +1.3**
baz=266
J16K **Anvik River** **51.05 32** P **P** **18 40 35.3 +1.5**
baz=267
F17K **Baldwin Pennin** **51.05 28** P **P** **18 40 35.4 +1.7**
baz=263
N15K **Kwethluk River** **51.18 36** P **P** **18 40 36.2 +1.3**
baz=270
G17K **Kiwalik Mounta** **51.19 30** P **P** **18 40 36.6 +1.8**
baz=265,SNR=12
B18K **Kokolik River** **51.25 25** P **P** **18 40 36.5 +1.3**
baz=260
O15K **Ungalikthiuk R** **51.32 38** P **P** **18 40 36.7 +0.8**
baz=271
C18K **Utukok River** **51.35 25** IAmb IAmb 18 40 38.0
comp=Z,18nm,0.9s
C18K **Utukok River** **51.35 25** P **P** **18 40 37.2 +1.1**
baz=262,SNR=8.5
E18K **Tukpahlearik C** **51.41 27** P **P** **18 40 37.9 +1.5**
baz=263
H17K **Granite Mounta** **51.46 30** P **P** **18 40 38.0 +1.2**
baz=266
L16K **Owhat River** **51.51 34** P **P** **18 40 38.1 +0.9**
L16K IAmb IAmb 18 40 43.0
comp=Z,20nm,0.9s
L16K **Owhat River** **51.51 34** P **P** **18 40 38.5 +1.2**
baz=269
CHNA **Chernabura Isl** **51.63 43** P **P** **18 40 38.7 +0.4**
baz=274
CNBA **Chernabura Isl** **51.63 43** P **P** **18 40 37.3 -1.0**
F18K **Selawik** **51.70 28** P **P** **18 40 39.9 +1.4**
baz=265
M16K **Timber Creek** **51.74 35** P **P** **18 40 40.4 +1.3**
baz=270
N16K **Nishlik Lake** **51.84 36** P **P** **18 40 41.3 +1.5**
baz=270
C19K **Lookout Ridge** **51.99 25** P **P** **18 40 42.6 +1.7**
baz=263
MTSU **Mount Surprise** **52.01 165** P **P** **18 40 42.8 +1.3**
G18K **Tagagawik** **52.05 29** IAmb IAmb 18 40 43.5
comp=Z,32nm,1.1s
G18K **Tagagawik** **52.05 29** P **P** **18 40 42.4 +1.2**
baz=266
L17K **Donlin** **52.07 34** P **P** **18 40 43.4 +2.0**
baz=270
K17K **Iditarod** **52.07 33** P **P** **18 40 43.2 +1.8**
baz=269
H18K **Honhosa River** **52.12 30** P **P** **18 40 43.1 +1.2**
baz=267
O16K **Kokwok River B** **52.20 37** P **P** **18 40 43.6 +1.2**
baz=272
P16K **Nushagak River** **52.27 38** P **P** **18 40 43.8 +0.8**
baz=272
WB0 **Warramunga Arr** **52.36 177** IAmb IAmb 18 40 45.1
comp=Z,48nm,1.3s
D19K **Kuna River** **52.46 26** IAmb IAmb 18 41 10.4
comp=Z,33nm,0.8s
D19K **Kuna River** **52.46 26** P **P** **18 40 45.5 +1.2**
baz=265
F19K **Shaleruckik Mo** **52.46 28** P **P** **18 40 44.8 +0.5**
baz=266
M17K **Holitna River** **52.48 35** P **P** **18 40 45.7 +1.2**
baz=271,SNR=5.8
WRA **Warramunga Arr** **52.53 177** P **P** **18 40 42.6 -2.7**
WRA **Warramunga Arr** **52.53 177** *i* P **P** **18 40 45.4 +0.1**
WRA pmax pmax
comp=Z,18nm,0.8s
WRA **Warramunga Arr** **52.53 177** P **P** **18 40 45.7 +0.4**
comp=Z,16nm,0.8s,baz=354,slow=8.1,SNR=60
WRA PcP **PcP** **18 41 54.9 -0.3**
comp=Z,2.0nm,0.7s,baz=351,slow=4.5,SNR=1.6
comp=Z,16nm,0.8s
WB2 **Warramunga Arr** **52.53 177** P **P** **18 40 44.3 -1.0**
WB2 IAmb IAmb 18 40 46.4
comp=Z,24nm,0.8s
WR0 **Warramunga Arr** **52.56 177** P **P** **18 40 44.3 -1.2**
WR0 IAmb IAmb 18 40 49.7
comp=Z,30nm,0.8s
N17K **Nushagak Hills** **52.62 36** P **P** **18 40 46.8 +1.3**
baz=272
O17K **Koliganek Bris** **52.70 37** P **P** **18 40 47.4 +1.3**
baz=272
G19K **Purcell Mounta** **52.70 29** P **P** **18 40 46.9 +0.8**
baz=268
GCSA **Galena City Sc** **52.74 31** P **P** **18 40 47.7 +1.4**
baz=269
J18K **Innoko River** **52.80 32** P **P** **18 40 48.3 +1.4**
baz=270
L18K **Granite Mounta** **52.82 34** P **P** **18 40 48.9 +1.9**
baz=271
H19K **Roundabout Mou** **52.94 30** P **P** **18 40 49.4 +1.6**
baz=269
Q16K **King Salmon** **52.98 38** P **P** **18 40 49.5 +1.3**
baz=274
D20K **Etivluk River** **53.03 26** P **P** **18 40 49.7 +1.3**
baz=266
P17K **Kvichak River** **53.06 38** P **P** **18 40 50.2 +1.4**
baz=273
TTA **Tatalina** **53.12 33** P **P** **18 40 50.6 +1.3**
TTA **Tatalina** **53.12 33** P **P** **18 40 51.0 +1.7**
TTA **Tatalina** **53.12 33** P **P** **18 40 50.3 +1.0**
baz=271,SNR=7.7
TTA **Tatalina** **53.12 33** P **P** **18 40 50.6 +1.3**
TTA pmax pmax
comp=Z,13nm,0.8s
E20K **Nigu River** **53.16 26** P **P** **18 40 50.7 +1.2**
baz=267
A21K **Barrow** **53.25 22** P **P** **18 40 50.8 +0.8**
baz=264
M18K **Stony River** **53.25 35** P **P** **18 40 51.8 +1.6**
baz=272
N18K **Kilae Creek** **53.26 36** P **P** **18 40 52.1 +1.8**
baz=273
F20K **Avaraart Lake** **53.28 28** P **P** **18 40 51.6 +1.3**
baz=268
J19K **Poorman** **53.28 32** P **P** **18 40 51.4 +1.0**
baz=270,SNR=24
SVE **Sverdlovsk** **53.30 319** *e*P P 18 41 07.3 +17
SVE pmax pmax
comp=Z,22nm,1.0s
Q17K **Contact Creek** **53.41 39** P **P** **18 40 53.0 +1.4**
baz=275
QIS **Mount Isa** **53.58 171** P **P** **18 40 53.7 +0.7**
H20K **Anotleneega Mo** **53.59 30** P **P** **18 40 54.0 +1.3**
baz=270
O18K **Koktuh Hills** **53.64 37** P **P** **18 40 54.2 +1.1**
O18K **Koktuh Hills** **53.64 37** P **P** **18 40 54.7 +1.5**
baz=274
P18K **Big Mountain,** **53.67 37** P **P** **18 40 51.4 -1.9**
P18K **Big Mountain,** **53.67 37** P **P** **18 40 54.8 +1.5**
baz=274
L19K **White Mountain** **53.68 34** IAmb IAmb 18 40 56.7
comp=Z,42nm,1.4s
L19K **White Mountain** **53.68 34** P **P** **18 40 54.2 +0.8**
baz=272
C21K **Knifeblade Rid** **53.71 25** P **P** **18 40 54.5 +1.1**
baz=267
I20K **Naaghedeneel** **53.77 31** P **P** **18 40 54.7 +0.8**
baz=271
B21K **Ikpikpuk River** **53.79 25** IAmb IAmb 18 41 20.8
comp=Z,21nm,0.8s
B21K **Ikpikpuk River** **53.79 25** P **P** **18 40 55.4 +1.4**
baz=267,SNR=19
M19K **Big River Lodg** **53.91 34** P **P** **18 40 56.8 +1.7**
baz=273
J20K **Nowinta River** **53.93 31** P **P** **18 40 56.5 +1.4**
baz=272,SNR=35
N19K **Bonanza Creek** **53.94 36** P **P** **18 40 56.7 +1.3**
baz=274
PALK **Palekele** **53.97 254** LR LR 19 04 44.4
comp=Z,167nm,21.7s,baz=149,slow=37
E21K **Killik River** **53.98 26** P **P** **18 40 57.0 +1.5**
baz=269
K20K **Telida** **53.99 32** P **P** **18 40 57.0 +1.4**
baz=272
IMAR **Indian Mountai** **54.06 29** P **P** **18 40 55.3 -0.7**
O19K **Port Alsworth** **54.06 36** P **P** **18 40 58.1 +2.0**
baz=274,SNR=6.5
L20K **Farewell, AK** **54.12 33** P **P** **18 40 58.4 +1.8**
baz=273
G21K **Allakaket** **54.15 28** P **P** **18 40 58.3 +1.6**
baz=271,SNR=40
F21K **Alatna River** **54.16 28** P **P** **18 40 57.6 +0.9**
baz=270
R18K **Karluk** **54.24 40** P **P** **18 40 58.6 +1.2**
baz=276
CTA **Charters Tower** **54.34 164** P **P** **18 40 59.4 +0.9**
CTA pmax pmax
comp=Z,36nm,1.1s
CTA **Charters Tower** **54.34 164** LR LR 19 03 37.2
comp=Z,158nm,18.8s,baz=335,slow=35
CTAO **Charters Tower** **54.34 164** P **P** **18 40 59.5 +0.9**
CTAO pmax pmax
comp=Z,33nm,1.1s
CTAO **Charters Tower** **54.34 164** P **P** **18 40 59.7 +1.1**
H21K **Melozitna Rive** **54.45 29** P **P** **18 41 00.1 +1.2**
baz=272
D22K **Ayikyak River** **54.46 26** P **P** **18 41 00.2 +1.2**
baz=270
ARU **Arti** **54.48 319** *d* *i* P P 18 41 05.6 +6.4
ARU *PP sP 18 41 17.5 0.0
ARU 18 42 01.2
ARU 18 43 06.7
ARU S S 18 48 49.5 +15
ARU pmax pmax
ARU comp=Z,9.0nm,0.9s MLR MLR
comp=Z,221nm,16.0s
ARU **Arti** **54.48 319** LR LR 19 07 09.8
comp=Z,208nm,18.8s,baz=85,slow=39
M20K **Styx River** **54.51 34** P **P** **18 41 00.6 +1.1**
baz=274
Q19K **Cape Douglas,** **54.52 38** P **P** **18 41 00.5 +0.9**
baz=276
P19K **Oil Pt** **54.66 37** P **P** **18 41 01.3 +0.8**
baz=276
CHUM **Lake Minchumin** **54.75 32** P **P** **18 41 02.5 +1.4**
baz=274,SNR=29
ABKAR **Akbulak array** **54.81 310** P **P** **18 41 00.0 -1.7**
ABKAR **Akbulak array** **54.81 310** P **P** **18 41 00.1 -1.7**
I21K **Tanana** **54.82 30** P **P** **18 41 03.0 +1.4**
baz=273,SNR=19
PPLA **Purkeypile** **54.87 33** P **P** **18 41 03.6 +1.4**
baz=274,SNR=11
CAST **Castle Rocks** **54.88 32** P **P** **18 41 03.2 +1.1**
baz=274,SNR=22
OHAK **Old Harbor** **54.91 40** P **P** **18 41 01.9 -0.4**
OHAK **Old Harbor** **54.91 40** P **P** **18 41 03.3 +1.0**
OHAK **Old Harbor** **54.91 40** P **P** **18 41 03.2 +1.0**
baz=277
O20K **Slope Mountain** **54.92 36** P **P** **18 41 03.6 +1.1**
baz=276
G22K **Bettles** **54.94 28** P **P** **18 41 03.1 +0.8**
baz=272
MBWA **Marble Bar** **55.00 194** P **P** **18 41 00.9 -2.4**
MBWA IAmb IAmb 18 42 08.5
comp=Z,30nm,1.2s
MBWA **Marble Bar** **55.00 194** P **P** **18 41 03.6 +0.3**
MBWA **Marble Bar** **55.00 194** P **P** **18 41 03.3 +0.1**
N20K **Mount Spurr** **55.01 35** P **P** **18 41 04.7 +1.6**
baz=276,SNR=10.0
H22K **Ishtalitna Cre** **55.03 29** P **P** **18 41 05.1 +2.0**
baz=273
D23K **Nanushuk River** **55.19 25** P **P** **18 41 06.0 +1.8**
baz=271
Q20K **Shuyak Island** **55.20 38** P **P** **18 41 05.4 +1.0**
baz=277
KDAK **Kodiak Island** **55.21 39** P **P** **18 41 05.0 +0.5**
baz=278
KDAK **Kodiak Island** **55.21 39** *de*P **P** **18 41 04.5 0.0**
KDAK pmax pmax
comp=Z,29nm,0.9s
KDAK **Kodiak Island** **55.21 39** LR LR 19 07 30.2
comp=Z,123nm,19.5s,baz=261,slow=39
KDAK **Kodiak Island** **55.21 39** P **P** **18 41 05.2 +0.7**
SKT **Skwentna** **55.26 34** P **P** **18 41 05.2 +0.4**
SKT IAmb IAmb 18 41 10.0
comp=Z,20nm,1.0s
SKT **Skwentna** **55.26 34** P **P** **18 41 05.5 +0.7**
baz=276,SNR=7.7
BPAW **Bear Paw Mtn.** **55.32 31** P **P** **18 41 04.4 -0.8**
BPAW IAmb IAmb 18 41 11.1
comp=Z,25nm,0.8s
BPAW **Bear Paw Mtn.** **55.32 31** P **P** **18 41 06.7 +1.5**
baz=274,SNR=17
MLY **Manley** **55.35 30** P **P** **18 41 07.1 +1.6**
MLY IAmb IAmb 18 41 08.2
comp=Z,28nm,0.8s
MLY **Manley** **55.35 30** P **P** **18 41 07.1 +1.6**
baz=274,SNR=27
PSA00 **Pilbara Seismi** **55.38 194** P **P** **18 41 06.4 +0.4**
KTH **Kantishna Hill** **55.39 32** P **P** **18 41 07.2 +1.4**
KTH IAmb IAmb 18 41 11.8
comp=Z,31nm,0.9s
COLD **Coldfoot** **55.43 28** P **P** **18 41 06.9 +1.0**
baz=273
G23K **Bananza Creek** **55.53 28** P **P** **18 41 07.5 +0.8**
G23K IAmb IAmb 18 41 09.1
comp=Z,16nm,0.8s
G23K **Bananza Creek** **55.53 28** P **P** **18 41 08.1 +1.4**
baz=274
TOLK **Toolik Lake Re** **55.60 26** P **P** **18 41 07.8 +0.6**
TOLK **Toolik Lake Re** **55.60 26** P **P** **18 41 08.5 +1.3**
baz=273,SNR=6.4
E23K **Chandalar** **55.61 26** P **P** **18 41 08.2 +0.9**
baz=273
CNPM **China Poot** **55.68 37** P **P** **18 41 07.5 -0.3**
CNPM IAmb IAmb 18 41 26.4
comp=Z,26nm,0.9s
SUA **Susitna One** **55.68 35** P **P** **18 41 07.2 -0.8**
SUA **Susitna One** **55.68 35** P **P** **18 41 08.8 +0.8**
baz=277,SNR=22
TRF **Thorofare Moun** **55.68 32** P **P** **18 41 06.7 -1.3**
TRF IAmb IAmb 18 41 28.5
comp=Z,17nm,1.0s
TRF **Thorofare Moun** **55.68 32** P **P** **18 41 09.9 +1.8**
baz=276,SNR=8.3
AKTO **Aktyubinsk** **55.80 312** LR LR 19 06 32.1
comp=Z,443nm,18.0s,baz=2.0,slow=38
CUT **Chulitna** **55.80 33** P **P** **18 41 07.5 -1.1**
CUT IAmb IAmb 18 42 11.4
comp=Z,40nm,1.1s
CUT **Chulitna** **55.80 33** P **P** **18 41 08.8 +0.1**
baz=276,SNR=5.4
BRLK **Bradley Lake** **55.83 37** P **P** **18 41 06.2 -2.7**
D24K **Happy Valley** **55.84 25** P **P** **18 41 10.1 +1.2**
D24K IAmb IAmb 18 41 34.6
comp=Z,21nm,0.8s
D24K **Happy Valley** **55.84 25** P **P** **18 41 10.2 +1.4**
baz=273
C24K **Franklin Bluff** **55.86 24** P **P** **18 41 09.5 +0.6**
baz=273
BRSE **Bradley Lake S** **55.90 37** P **P** **18 41 11.1 +1.6**
baz=278
I23K **Minto, Yukon-K** **55.93 30** P **P** **18 41 10.2 +0.7**
I23K IAmb IAmb 18 41 15.1
comp=Z,38nm,1.4s
I23K **Minto, Yukon-K** **55.93 30** P **P** **18 41 10.6 +1.1**
baz=275,SNR=12
M22K **Willow** **55.95 34** P **P** **18 41 10.5 +0.8**
baz=277
FIS **Fire Island** **55.98 35** P **P** **18 41 08.7 -1.2**
BWN **Browne** **55.98 31** P **P** **18 41 12.2 +2.3**
NEA2 **Nenana** **56.10 31** P **P** **18 41 12.1 +1.3**
baz=276,SNR=11
RC01 **Rabbit Creek A** **56.21 35** P **P** **18 41 10.7 -1.0**
RC01 IAmb IAmb 18 41 13.1
comp=Z,30nm,1.2s
RC01 **Rabbit Creek A** **56.21 35** P **P** **18 41 12.2 +0.6**
baz=278,SNR=7.1
AS31 **Alice Springs** **56.22 178** P **P** **18 41 10.3 -1.8**
AS01 **Alice Springs** **56.22 178** P **P** **18 41 12.8 +0.7**
ASAR **Alice Springs** **56.22 178** P **P** **18 41 10.7 -1.4**
ASAR **Alice Springs** **56.22 178** P **P** **18 41 12.4 +0.3**
ASAR **Alice Springs** **56.22 178** P **P** **18 41 12.4 +0.3**
comp=Z,11nm,0.7s,baz=11,slow=13,SNR=169
comp=Z,11nm,0.7s
MCK **McKinley** **56.26 32** P **P** **18 41 12.3 +0.4**
baz=277,SNR=13
F24K **Squaw Lake** **56.31 27** P **P** **18 41 13.6 +1.4**
F24K IAmb IAmb 18 41 14.6
comp=Z,12nm,0.7s
F24K **Squaw Lake** **56.31 27** P **P** **18 41 13.3 +1.0**
baz=275
MDM **Murphy Dome** **56.42 30** P **P** **18 41 14.8 +1.7**
PMR **Palmer** **56.44 34** IAmb IAmb 18 41 30.6
comp=Z,25nm,0.9s
PMR **Palmer** **56.44 34** P **P** **18 41 13.8 +0.6**
baz=278,SNR=11
H24K **Noodor Dome** **56.47 29** P **P** **18 41 15.7 +2.3**
H24K IAmb IAmb 18 41 16.4
comp=Z,22nm,0.8s
H24K **Noodor Dome** **56.47 29** P **P** **18 41 15.0 +1.5**
baz=276
SEW **Seward** **56.49 36** P **P** **18 41 13.7 +0.1**
baz=278,SNR=14
GHO **Glory Hole Cre** **56.51 34** P **P** **18 41 14.1 +0.3**
WRH **Wood River Hil** **56.54 31** IAmb IAmb 18 41 17.5
comp=Z,20nm,0.7s
WAT1 **Susitna Watana** **56.54 33** P **P** **18 41 15.1 +1.2**
baz=278
G24K **Hadweenzic Riv** **56.54 28** IAmb IAmb 18 41 16.8
comp=Z,20nm,0.7s
G24K **Hadweenzic Riv** **56.54 28** P **P** **18 41 15.9 +2.0**
baz=276
COLA **College** **56.59 30** P **P** **18 41 16.6 +2.4**
COLA **College** **56.59 30** P **P** **18 41 15.5 +1.3**
baz=277
COLA **College** **56.59 30** P **P** **18 41 15.8 +1.6**

COLA College 56.59 30 P P 18 41 15.9 +1.6
COLA pP pP 18 41 28.9 +1.8
D25K Kavik River 56.70 25 P P 18 41 15.9 +0.8
baz=275
POKR Poker Plat Res 56.74 30 P P 18 41 16.9 +1.5
POKR Poker Plat Res 56.74 30 P P 18 41 17.3 +1.9
baz=277,SNR=25
KNK Knik Glacier 56.78 34 P P 18 41 15.6 -0.1
KNK IAmb IAmb 18 41 33.4
comp=Z,33nm,1.0s
KNK Knik Glacier 56.78 34 P P 18 41 16.2 +0.5
baz=278,SNR=13
SML Sawmill 56.78 34 IAmb IAmb 18 41 36.4
comp=Z,24nm,0.8s
SML Sawmill 56.78 34 P P 18 41 16.3 +0.6
baz=278,SNR=11
WAT6 Susitna Watana 56.94 33 P P 18 41 17.7 +0.7
baz=278,SNR=8.8
IL31 57.01 30 P P 18 41 17.8 +0.6
IL31 IAmb IAmb 18 41 20.2
comp=Z,15nm,0.7s
ILAR Eielson Array 57.01 30 P P 18 41 17.8 +0.5
ILAR Eielson Array 57.01 30 P P 18 41 17.8 +0.5
comp=Z,11nm,0.7s,baz=262,slow=6.3,SNR=178
ILAR LR LR 19 05 50.2
comp=Z,143nm,20.8s,baz=285,slow=36
comp=Z,11nm,0.7s
DHY Denali Highway 57.04 32 IAmb IAmb 18 41 20.0
comp=Z,18nm,0.7s
DHY Denali Highway 57.04 32 P P 18 41 18.7 +1.0
baz=278,SNR=13
HDA Harding Lake 57.04 31 P P 18 41 17.9 +0.4
baz=278,SNR=9.8
M23K Glacier View 57.07 34 P P 18 41 18.4 +0.7
baz=279
E25K Arctic Village 57.12 26 P P 18 41 19.3 +1.3
baz=277,SNR=7.0
C26K Camden Bay 57.16 24 P P 18 41 19.6 +1.5
baz=276
F25K Christian Rive 57.16 27 P P 18 41 19.9 +1.6
baz=277
SCM Sheep Creek Mo 57.25 34 P P 18 41 20.3 +1.2
SCM Sheep Creek Mo 57.25 34 P P 18 41 19.9 +0.9
baz=279,SNR=10
SCM Sheep Creek Mo 57.25 34 P P 18 41 20.3 +1.2
SCM pmax pmax
comp=Z,30nm,0.8s
FYU Fort Yukon 57.45 28 IAmb IAmb 18 41 23.4
comp=Z,26nm,0.8s
PRP Porcupine Dome 57.48 29 IAmb IAmb 18 41 23.4
comp=Z,21nm,0.7s
PRP Porcupine Dome 57.48 29 P P 18 41 21.7 +1.0
baz=278,SNR=36
GLI Glacier Island 57.52 35 P P 18 41 21.5 +0.6
baz=280
P23K Montague Islan 57.52 36 P P 18 41 21.7 +0.8
baz=280
K24K Donnelly Dome 57.63 31 P P 18 41 22.3 +0.6
baz=279,SNR=14
WRKA Warakurna 57.68 184 P P 18 41 23.0 +0.6
J25K Salcha River, 57.68 30 P P 18 41 21.6 -0.4
J25K Salcha River, 57.68 30 P P 18 41 22.2 +0.1
baz=279
F26K Sheenjek River 57.71 27 P P 18 41 23.4 +1.2
baz=278,SNR=19
M24K Tolsona, Glenn 57.74 33 IAmb IAmb 18 41 49.5
comp=Z,22nm,0.8s
M24K Tolsona, Glenn 57.74 33 P P 18 41 23.6 +1.1
baz=280
HIN Hinchinbrook I 57.89 35 P P 18 41 24.5 +0.9
PAX Paxson 57.91 32 P P 18 41 24.7 +1.0
baz=280
G26K Porcupine Rive 57.96 28 P P 18 41 25.0 +1.2
baz=279
KLU Klutina 57.97 34 P P 18 41 25.2 +1.0
KLU IAmb IAmb 18 41 29.5
comp=Z,20nm,1.2s
KLU Klutina 57.97 34 P P 18 41 25.0 +0.8
baz=281,SNR=8.1
HARP HAARP 58.16 33 P P 18 41 26.7 +1.4
baz=281,SNR=11
SCRK Sand Creek 58.39 31 P P 18 41 27.8 +0.7
baz=281,SNR=32
J26L Joseph Creek 58.47 30 P P 18 41 27.6 0.0
baz=281,SNR=17
I26K Coal Creek Min 58.49 29 P P 18 41 28.3 +0.7
baz=281,SNR=19
N25K Chitina, Valde 58.57 34 P P 18 41 30.1 +1.8
N25K IAmb IAmb 18 41 47.7
comp=Z,15nm,0.8s
N25K Chitina, Valde 58.57 34 P P 18 41 29.6 +1.3
baz=282,SNR=10
D27M Malcolm River 58.62 25 P P 18 41 30.2 +1.6
D27M Malcolm River 58.62 25 P P 18 41 29.5 +1.0
baz=280
BMRM Bremner River 58.70 35 P P 18 41 30.5 +1.3
baz=282,SNR=11
MENT Mentasta 58.70 32 P P 18 41 30.8 +1.6
RAGM Ragged Mountai 58.78 35 P P 18 41 31.5 +1.7
L26K Log Cabin Wild 58.85 32 P P 18 41 31.6 +1.4
baz=282
KIRV Kirov 58.97 323 LR LR 19 09 50.4
comp=Z,386nm,19.7s,baz=82,slow=39
GLB Gilahina Butte 58.97 34 P P 18 41 32.4 +1.3
GLB IAmb IAmb 18 41 49.5
comp=Z,14nm,1.0s
H27K Steamboat Moun 58.98 28 P P 18 41 32.7 +1.6
baz=281
HMT Hamilton 59.00 35 P P 18 41 32.9 +1.7
HMT IAmb IAmb 18 41 49.6
comp=Z,33nm,1.1s
I27K Kandik River 59.07 29 P P 18 41 33.5 +1.8
baz=282,SNR=29
GEYT Alibeck 59.10 298 P P 18 41 31.7 -0.7
GEYT Alibeck 59.10 298 P P 18 41 31.7 -0.7
comp=Z,1.8nm,0.7s,baz=42,slow=12,SNR=5.3
GEYT LR LR 19 09 29.9
comp=Z,372nm,21.8s,baz=72,slow=39
comp=Z,1.8nm,0.7s
M26K Nabesna, AK 59.14 33 P P 18 41 33.7 +1.5
M26K Nabesna, AK 59.14 33 P P 18 41 33.5 +1.2
baz=282
VRDI Verde Repeater 59.19 34 IAmb IAmb 18 41 55.3
comp=Z,13nm,0.8s
K27K Chicken 59.20 31 P P 18 41 33.9 +1.3
K27K IAmb IAmb 18 41 38.5
comp=Z,28nm,1.0s
K27K Chicken 59.20 31 P P 18 41 33.9 +1.3
baz=282
E28M Babbage River 59.25 25 P P 18 41 34.2 +1.4
BERG Berg Lake 59.26 35 P P 18 41 34.4 +1.4
SUCK Suckling Hills 59.29 35 P P 18 41 34.3 +1.0
F28M Old Crow 59.33 26 IAmb IAmb 18 41 52.9
comp=Z,22nm,1.1s
F28M Old Crow 59.33 26 P P 18 41 35.3 +1.9
baz=282,SNR=23
MCARA McCarthy VSAT 59.35 34 IAmb IAmb 18 41 55.1
comp=Z,23nm,0.9s
MCARA McCarthy VSAT 59.35 34 P P 18 41 35.1 +1.5
baz=283,SNR=9.1
EGAK Eagle 59.43 30 P P 18 41 34.7 +0.6
EGAK IAmb IAmb 18 41 36.4
comp=Z,9.7nm,0.7s
EGAK Eagle 59.43 30 P P 18 41 34.9 +0.8
baz=283,SNR=7.3
CRQM Cirque 59.44 35 P P 18 41 35.9 +1.4
CRQM IAmb IAmb 18 41 40.1
comp=Z,26nm,1.1s
CRQE Cirque 59.47 35 P P 18 41 35.6 +1.0
baz=283,SNR=7.2
L27K Beaver Creek, 59.52 32 IAmb IAmb 18 41 37.6
comp=Z,13nm,0.8s
L27K Beaver Creek, 59.52 32 P P 18 41 36.6 +1.8
baz=283
TGL Tana Glacier 59.59 35 P P 18 41 36.6 +1.2
TGL IAmb IAmb 18 41 56.9
comp=Z,23nm,0.9s
WAX Waxell Ridge 59.65 35 P P 18 41 37.2 +1.4
WAX IAmb IAmb 18 41 55.0
comp=Z,16nm,1.0s
M27K Edge Creek, AK 59.66 33 P P 18 41 37.1 +1.1
M27K IAmb IAmb 18 41 38.4
comp=Z,23nm,1.1s
M27K Edge Creek, AK 59.66 33 P P 18 41 37.0 +1.1
baz=283
I28M Miner Creek 59.78 29 P P 18 41 38.4 +1.8
baz=283

ISLE Juniper Island 59.86 35 IAmb IAmb 18 41 58.1
comp=Z,15nm,0.8s
E29M Blow River 59.89 25 IAmb IAmb 18 41 43.2
comp=Z,15nm,0.9s
E29M Blow River 59.89 25 P P 18 41 38.8 +1.6
baz=283
BARN Barnard Glacie 60.07 34 P P 18 41 39.8 +0.9
BARN IAmb IAmb 18 41 53.7
comp=Z,16nm,1.0s
BVCY Beaver Creek 60.11 32 P P 18 41 40.3 +1.4
baz=284
GRNC Granite Creek 60.11 34 P P 18 41 39.8 +0.6
MESA MESA 60.15 35 P P 18 41 40.5 +1.1
baz=284
H29M Whitestone 60.23 28 P P 18 41 41.3 +1.7
H29M IAmb IAmb 18 41 42.4
comp=Z,20nm,0.8s
H29M Whitestone 60.23 28 P P 18 41 40.8 +1.2
baz=284
CTG Chitna Glacier 60.25 34 P P 18 41 41.1 +1.2
baz=285,SNR=6.0
DAWY Dawson 60.34 30 P P 18 41 41.1 +0.7
DAWY Dawson 60.34 30 P P 18 41 41.9 +1.4
baz=284,SNR=10
OOD Oodnadatta 60.40 176 P P 18 41 42.3 +1.2
YUK3 Moose Creek 60.45 33 P P 18 41 42.7 +1.3
baz=285,SNR=8.4
MEEK Meekatharra 60.54 194 P P 18 41 43.3 +1.1
EIDS Eidsvold 60.64 160 IAmb IAmb 18 41 47.5
comp=Z,20nm,0.8s
EIDS Eidsvold 60.64 160 P P 18 41 43.8 +1.0
J29N Klondike Camp 60.74 30 P P 18 41 44.8 +1.6
baz=285,SNR=16
INKA Innaminka 60.80 171 P P 18 41 44.8 +0.9
EPYK Eagle Plains 60.83 27 P P 18 41 45.1 +1.3
EPYK Eagle Plains 60.83 27 P P 18 41 45.0 +1.3
baz=286,SNR=28
F30M Barrier River 60.85 26 P P 18 41 45.4 +1.5
baz=286
G30M tAoh Zraii Nji 60.86 27 P P 18 41 45.1 +1.1
baz=286
YUK8 Steele Glacier 60.90 34 P P 18 41 45.8 +1.2
baz=286
PINM Pinnacle 60.99 35 P P 18 41 46.7 +1.7
baz=286
L29M L29M 61.14 31 P P 18 41 47.9 +2.0
L29M IAmb IAmb 18 41 49.1
comp=Z,19nm,0.8s
L29M L29M 61.14 31 P P 18 41 47.9 +2.0
baz=286
M29M Somme Creek 61.18 32 P P 18 41 47.8 +1.6
M29M IAmb IAmb 18 41 52.7
comp=Z,16nm,1.0s
M29M Somme Creek 61.18 32 P P 18 41 48.3 +2.0
baz=286
K29M Barlow Dome 61.20 30 IAmb IAmb 18 41 52.4
comp=Z,19nm,0.8s
K29M Barlow Dome 61.20 30 P P 18 41 47.8 +1.4
baz=286
I30M Mount Dempster 61.28 29 P P 18 41 48.3 +1.3
I30M Mount Dempster 61.28 29 P P 18 41 48.6 +1.7
baz=286
KOUNC Koumac, New Ca 61.34 145 P P 18 41 47.8 +0.2
YUK4 Talbot Arm 61.40 33 P P 18 41 49.2 +1.3
baz=287,SNR=9.9
INK Inuvik 61.47 25 IAmb IAmb 18 41 53.2
comp=Z,15nm,0.8s
INK Inuvik 61.47 25 P P 18 41 48.5 +0.6
baz=287,SNR=17
INK Inuvik 61.47 25 P P 18 41 48.9 +0.9
INK pmax pmax
comp=Z,22nm,0.9s
INK Inuvik 61.47 25 LR LR 19 10 21.9
comp=Z,177nm,19.2s,baz=346,slow=38
J30M Hart River 61.49 29 P P 18 41 49.7 +1.3
J30M IAmb IAmb 18 41 56.7
comp=Z,10nm,0.8s
J30M Hart River 61.49 29 P P 18 41 49.8 +1.4
baz=287
PNL Peninsula 61.53 35 P P 18 41 50.1 +1.5
baz=287
BELG Belogornoye 61.59 316 LR LR 19 10 48.6
comp=Z,545nm,19.2s,baz=87,slow=38
G31M Satah River 61.61 27 IAmb IAmb 18 41 50.5
comp=Z,14nm,0.7s
G31M Satah River 61.61 27 P P 18 41 49.5 +0.5
baz=287,SNR=13
YUK6 Outpost Mounta 61.65 34 P P 18 41 51.1 +1.5
baz=287,SNR=6.4
F31M Tsiigehtchic 61.66 26 IAmb IAmb 18 42 07.6
comp=Z,16nm,0.9s
F31M Tsiigehtchic 61.66 26 P P 18 41 50.0 +0.8
baz=288,SNR=9.9
O29M Mount Kennedy 61.74 34 P P 18 41 51.9 +1.8
O29M IAmb IAmb 18 42 12.8
comp=Z,33nm,1.2s
O29M Mount Kennedy 61.74 34 P P 18 41 51.5 +1.4
baz=287
M30M Minto, Yukon 61.88 32 P P 18 41 51.8 +0.8
M30M IAmb IAmb 18 41 56.8
comp=Z,10nm,0.8s
M30M Minto, Yukon 61.88 32 P P 18 41 52.4 +1.5
baz=287,SNR=13
H31M Peel River 61.92 28 P P 18 41 52.6 +1.5
baz=288
N30M Aishikik Lake 62.09 33 P P 18 41 53.9 +1.6
baz=288
HYT Haines Junctio 62.09 34 IAmb IAmb 18 42 12.2
comp=Z,21nm,1.0s
HYT Haines Junctio 62.09 34 P P 18 41 54.5 +2.0
baz=288,SNR=16
P29M Windy Craggy 62.34 35 P P 18 41 56.0 +2.0
P29M IAmb IAmb 18 42 13.4
comp=Z,17nm,0.9s
P29M Windy Craggy 62.34 35 P P 18 41 56.0 +2.0
baz=288
P30M Million Dollar 62.56 34 P P 18 41 57.5 +2.0
baz=288
O30N Mendenhall 62.76 33 P P 18 41 57.8 +0.9
O30N Mendenhall 62.76 33 P P 18 41 59.5 +2.7
baz=289,SNR=7.2
MULG Mulgathing 62.81 178 P P 18 41 57.6 +0.3
A36M Sachs Harbour 62.88 20 P P 18 41 57.8 +0.5
baz=293,SNR=20
M31M Drury Creek, Y 63.06 32 P P 18 42 00.3 +1.5
M31M IAmb IAmb 18 42 04.6
comp=Z,12nm,0.9s
M31M Drury Creek, Y 63.06 32 P P 18 41 59.8 +1.1
baz=290,SNR=13
SPITS Spitsbergen Ar 63.08 348 P P 18 41 57.5 -1.1
SPITS Spitsbergen Ar 63.08 348 P P 18 41 57.5 -1.1
SPITS Spitsbergen Ar 63.08 348 P P 18 41 57.5 -1.1
comp=Z,12nm,1.1s,baz=44,slow=6.4,SNR=2.1
SPITS LR LR 19 11 09.9
comp=Z,300nm,19.9s,baz=10.0,slow=38
comp=Z,12nm,1.1s
KLMR Klimovskoe 63.14 327 eP P 18 41 54.6 -4.7
KLMR e 18 44 13.1
KLMR pmax pmax
comp=Z,18nm,1.6s
KLMR MLR MLR
comp=Z,497nm,14.0s
LCRK Leigh Creek 63.21 174 P P 18 42 02.1 +2.1
WHY Whitehorse 63.36 33 IAmb IAmb 18 42 07.0
comp=Z,20nm,1.0s
WHY Whitehorse 63.36 33 P P 18 42 02.0 +1.1
baz=290,SNR=16
FORT Forrest 63.40 184 P P 18 41 59.3 -1.9
FORT Forrest 63.40 184 P P 18 42 02.0 +0.8
FARO Faro, Yukon 63.51 31 P P 18 42 03.6 +1.9
FARO Faro, Yukon 63.51 31 P P 18 42 03.6 +1.9
baz=290,SNR=49
SKAG Skagway 63.56 35 P P 18 42 03.8 +1.8
baz=290
S31K Pelican 63.63 36 P P 18 42 04.6 +2.1
baz=290
DZM Mont Dzumac 63.67 144 P P 18 42 04.3 +1.0
DZM Mont Dzumac 63.67 144 P P 18 42 05.8 +2.5
DZM Mont Dzumac 63.67 144 LR LR 19 06 17.0
comp=Z,327nm,21.7s,baz=342,slow=32
DZM Mont Dzumac 63.67 144 P P 18 42 05.1 +1.8
N32M Quiet Lake 64.01 33 P P 18 42 06.5 +1.4
baz=291
MMPY Sheldon Lake, 64.28 31 IAmb IAmb 18 42 09.6
comp=Z,15nm,0.8s
MMPY Sheldon Lake, 64.28 31 P P 18 42 08.7 +1.9
baz=292,SNR=15

P32M Atlin 64.28 34 P P 18 42 08.7 +1.8
baz=291,SNR=5.8
C36M Paulatuk 64.30 22 P P 18 42 07.5 +0.8
baz=295,SNR=20
R32K Eaglecrest 64.37 36 P P 18 42 08.8 +1.4
baz=291
SIT Sitka 64.41 37 P P 18 42 09.2 +1.5
baz=291
WSAR Wadi Sarin 64.44 282 LR LR 19 13 25.8
comp=Z,146nm,21.5s,baz=89,slow=39
P33M Teslin, Yukon 64.48 33 P P 18 42 08.4 +0.2
P33M IAmb IAmb 18 42 27.1
comp=Z,33nm,1.0s
P33M Teslin, Yukon 64.48 33 P P 18 42 09.5 +1.3
baz=292,SNR=20
S32K Killisnoo 64.64 37 P P 18 42 11.1 +2.0
baz=292
ALE Alert 64.65 2 P P 18 42 09.8 +0.9
BLDU Ballidu 64.79 195 P P 18 42 10.3 -0.1
MAK Makhachkala 64.90 306 eP P 18 42 11.3 +0.2
MAK e*PP pP 18 42 21.0 -3.3
MAK e*SP sP 18 42 25.3 -4.2
MAK e 18 44 34.8
MAK eS S 18 50 50.2 +1.0
MAK e*SS pS 18 51 06.6 +1.6
MAK eSS SS 18 55 03.6 +2.8
MAK MLR MLR
comp=Z,577nm,19.0s
STKA Stephens Creek 64.99 171 P P 18 42 11.6 0.0
STKA Stephens Creek 64.99 171 P P 18 42 13.2 +1.6
STKA Stephens Creek 64.99 171 P P 18 42 11.6 0.0
STKA pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 64.99 171 P P 18 42 12.7 +1.1
comp=Z,29nm,0.7s,baz=341,slow=6.9,SNR=64
STKA LR LR 19 10 51.8
comp=Z,148nm,19.9s,baz=17,slow=36
comp=Z,29nm,0.7s
ARCES ARCESS Array B 65.13 338 P P 18 42 10.9 -1.3
ARCES ARCESS Array B 65.13 338 P P 18 42 10.9 -1.3
comp=Z,3.1nm,0.9s,baz=62,slow=5.6,SNR=6.1
ARCES LR LR 19 15 50.0
comp=Z,364nm,18.2s,baz=76,slow=41
comp=Z,3.1nm,0.9s
HMH Humu'ula Sheep 65.13 82 P P 18 42 11.8 -1.5
Q32M Nakina River 65.21 35 P P 18 42 15.2 +2.0
Q32M IAmb IAmb 18 42 38.0
comp=Z,63nm,1.9s
Q32M Nakina River 65.21 35 P P 18 42 15.0 +1.9
baz=293
MLH Mauna Loa 65.27 82 P P 18 42 12.3 -1.8
CMSA Cobar Meteorol 65.30 167 P P 18 42 15.5 +1.8
BBOO Buckleboo 65.41 176 P P 18 42 14.5 +0.2
BBOO IAmb IAmb 18 42 32.2
comp=Z,24nm,1.0s
BBOO Buckleboo 65.41 176 P P 18 42 14.8 +0.5
VRH Novokhopyorsk 65.44 316 eP P 18 42 13.4 -1.1
VRH pmax pmax
comp=Z,7.0nm,0.7s
R33M Jennings River 65.66 34 IAmb IAmb 18 42 35.6
comp=Z,55nm,1.9s
R33M Jennings River 65.66 34 P P 18 42 17.8 +1.9
baz=294,SNR=6.1
LKRN Lenkeran, Azer 65.66 301 P P 18 42 13.9 -2.2
SEKA Sheki 65.79 305 P P 18 42 14.2 -2.8
U33K Whale Pass 65.90 38 P P 18 42 19.2 +1.9
baz=293
MOS Moscow 65.95 322 eP P 18 42 20.1 +2.5
MOS e 18 42 49.9
MOS MLR MLR
comp=Z,700nm,17.0s
TGTN Hyland Airport 66.00 31 P P 18 42 20.1 +2.1
baz=295,SNR=25
ZKTA Zakatala 66.02 305 P P 18 42 16.1 -2.3
MNGR Mingechevir, A 66.04 304 P P 18 42 16.3 -2.2
CRAG Craig 66.15 38 P P 18 42 20.9 +1.9
baz=294
WRAK Wrangell Islan 66.17 37 P P 18 42 21.1 +2.0
baz=294
S34M Telegraph Cree 66.17 35 P P 18 42 20.5 +1.4
S34M Telegraph Cree 66.17 35 P P 18 42 21.2 +2.1
baz=294
HTT Hallett 66.23 174 P P 18 42 21.0 +1.3
WTLY Watson Lake, Y 66.36 33 P P 18 42 22.6 +2.3
baz=295
DLBC Dease Lake 66.49 35 P P 18 42 22.3 +1.1
DLBC Dease Lake 66.49 35 P P 18 42 22.9 +1.7
baz=295
DLBC Dease Lake 66.49 35 P P 18 42 22.4 +1.1
comp=Z,7.6nm,0.9s,baz=293,slow=5.8,SNR=10
DLBC LR LR 19 10 42.3
comp=Z,113nm,21.8s,baz=292,slow=35
comp=Z,7.6nm,0.9s
LPSR Galich'ya Gora 66.49 318 eP P 18 42 20.0 -1.2
LPSR pmax pmax
comp=Z,10.0nm,0.7s
GANJ Ganja 66.62 304 P P 18 42 20.0 -2.3
OBN Obninsk 66.75 322 eP P 18 42 23.7 +0.9
OBN e 18 44 51.5
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,430nm,17.0s
OBN Obninsk 66.75 322 LR LR 19 14 52.6
comp=Z,474nm,18.9s,baz=20,slow=39
VSR Storozhevoye 66.92 317 eP P 18 42 27.7 +3.8
VSR pmax pmax
comp=Z,8.0nm,0.7s
NWAO Narrogin (SRO) 66.92 194 P P 18 42 23.3 -0.7
NWAO Narrogin (SRO) 66.92 194 P P 18 42 24.2 +0.2
NWAO Narrogin (SRO) 66.92 194 P P 18 42 23.3 -0.7
NWAO Narrogin (SRO) 66.92 194 P P 18 42 23.3 -0.7
T35M Bob Quinn 67.00 36 P P 18 42 26.8 +2.4
baz=295
V35K Ketchikan 67.00 38 P P 18 42 26.1 +1.8
baz=295
WRGLY Wrigley 67.26 28 P P 18 42 27.5 +1.6
baz=296,SNR=6.3
ZEI Tsey 67.40 307 eP P 18 42 27.1 -0.4
ZEI pmax pmax
comp=Z,5.0nm,0.6s
KBZ Khabaz 67.68 308 eP P 18 42 28.1 -0.8
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 67.68 308 P P 18 42 27.0 -1.9
comp=Z,6.2nm,0.8s,baz=86,slow=3.8,SNR=11
KBZ LR LR 19 15 09.3
comp=Z,461nm,20.8s,baz=61,slow=39
comp=Z,6.2nm,0.8s
KIV Kislovodsk 67.73 309 eP P 18 42 27.5 -1.8
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,346nm,17.0s
KIV Kislovodsk 67.73 309 P P 18 42 31.9 +2.5
KIV pP pP 18 42 44.5 +2.0
NAX Nakhchivan 67.81 303 P P 18 42 27.6 -2.3
GNI Garni 67.93 304 LR LR 19 15 39.0
comp=Z,83nm,19.2s,baz=70,slow=39
MGCD Mangrove Creek 68.09 163 P P 18 42 32.8 +1.4
RES Resolute Bay 68.41 12 IAmb IAmb 18 42 49.2
comp=Z,21nm,0.9s
RES Resolute Bay 68.41 12 LR LR 19 16 44.8
comp=Z,100nm,18.7s,baz=338,slow=40
ERBR Yeremizino-Bor 68.41 311 eP P 18 42 43.3 +10
ERBR MLR MLR
comp=Z,600nm,14.0s
FIA1 FINESS Array S 68.81 330 P P 18 42 34.2 -1.4
FINES FINESS Array B 68.81 330 P P 18 42 34.2 -1.4
FINES FINESS Array B 68.81 330 P P 18 42 34.3 -1.4
FINES FINESS Array B 68.81 330 P P 18 42 33.7 -2.0
comp=Z,1.1nm,0.5s,baz=74,slow=7.6,SNR=12
FINES LR LR 19 14 32.7
comp=Z,190nm,19.9s,baz=66,slow=38
comp=Z,1.1nm,0.5s
CAN Canberra 69.63 165 P P 18 42 42.3 +1.3
SOC Sochi 69.83 309 eP P 18 42 40.0 -2.3
SOC eS S 18 51 46.1 -2.3
SOC eSS SS 18 56 16.4 -0.7
SOC MLR MLR
comp=Z,472nm,18.0s
ARPS Mount Arapiles 69.85 172 P P 18 42 43.3 +1.1
NEEM North Greenlan 69.95 1 eP P 18 42 43.2 +0.4
NEEM IAmb IAmb 18 43 02.3
comp=Z,21nm,0.9s

BBB	**Bella Bella**	**70.26**	**40**	LR	LR	19 11 54.2			
	comp=Z,57nm,21.9s,baz=332,slow=34								
ANN	**Anapa**	**70.75**	**311**	*e*P	P	18 42 57.9	+10		
ANN				MLR	MLR				
	comp=Z,403nm,18.0s								
YKA	**Yellowknife Ar**	**71.10**	**27**	P	**P**	**18 42 50.5**	**+0.8**		
YKA	**Yellowknife Ar**	**71.10**	**27**	P	**P**	**18 42 50.5**	**+0.8**		
	comp=Z,12nm,0.8s,baz=304,slow=6.1,SNR=149								
YKA				LR	LR	19 14 12.0			
	comp=Z,25nm,21.6s,baz=298,slow=36								
	comp=Z,12nm,0.8s								
YKAB2	**New Yellowknif**	**71.14**	**27**	P	**P**	**18 42 50.9**	**+1.0**		
TOO	**Toolangi**	**71.15**	**169**	P	**P**	**18 42 49.9**	**-0.3**		
TOO				IAmb	IAmb	18 43 10.1			
	comp=Z,30nm,1.1s								
TOO	**Toolangi**	**71.15**	**169**	P	**P**	**18 42 52.1**	**+1.9**		
TOO	**Toolangi**	**71.15**	**169**	P	**P**	**18 42 49.9**	**-0.3**		
TOO				pmax	pmax				
	comp=Z,30nm,1.1s								
NACGM	**Naroch**	**71.83**	**324**	*e*P	P	18 43 04.4	+10		
	comp=Z,11nm,0.8s,baz=59								
HILA	**High Level**	**72.37**	**31**	P	**P**	**18 42 57.6**	**+0.2**		
AKASG	**Malin Array Be**	**72.73**	**320**	P	**P**	**18 42 58.4**	**-1.3**		
AKASG	**Malin Array Be**	**72.73**	**320**	P	**P**	**18 42 58.4**	**-1.3**		
	comp=Z,0.9nm,0.4s,baz=56,slow=6.6,SNR=3.2								
AKASG				LR	LR	19 17 12.4			
	comp=Z,183nm,18.8s,baz=58,slow=38								
	comp=Z,0.9nm,0.4s								
AKBB	**Malin Array Si**	**72.73**	**320⇑**	*e*P	**P**	**18 42 59.5**	**-0.2**		
JMIC	**Jan Mayen**	**72.75**	**347**	LR	LR	19 15 25.1			
	comp=Z,90nm,21.8s,baz=46,slow=36								
SIM	**Simferopol'**	**72.75**	**313**	P	P	18 43 09.2	+9.3		
SIM				pmax	pmax				
	comp=Z,13nm,0.9s								
HFS	**Hagfors**	**74.54**	**333**	P	**P**	**18 43 08.3**	**-1.8**		
HFS	**Hagfors**	**74.54**	**333**	P	**P**	**18 43 08.3**	**-1.8**		
	comp=Z,1.2nm,0.5s,baz=57,slow=5.5,SNR=10								
HFS				LR	LR	19 20 41.1			
	comp=Z,218nm,18.3s,baz=58,slow=40								
	comp=Z,1.2nm,0.5s								
SUMG	**Summit**	**74.66**	**357**	*i* P	**P**	**18 43 11.0**	**-0.1**		
SUMG				IAmb	IAmb	18 43 27.2			
	comp=Z,24nm,1.0s								
NB2	**NORSAR Subarra**	**74.88**	**334**	P	**P**	**18 43 11.0**	**-1.1**		
	comp=Z,5.3nm,1.0s,baz=50,slow=5.9								
NOA	**NORSAR Array B**	**74.88**	**334**	P	**P**	**18 43 10.0**	**-2.1**		
NOA	**NORSAR Array B**	**74.88**	**334**	P	**P**	**18 43 10.0**	**-2.1**		
	comp=Z,1.6nm,0.8s,baz=48,slow=5.7,SNR=7.8								
NOA				LR	LR	19 19 07.6			
	comp=Z,196nm,19.8s,baz=85,slow=38								
	comp=Z,1.6nm,0.8s								
BR131	**Keskin Array S**	**75.67**	**308⇑**	*e*P	**P**	**18 43 15.8**	**-1.4**		
BRTR	**Keskin Array B**	**75.67**	**308**	P	**P**	**18 43 16.1**	**-1.1**		
BRTR	**Keskin Array B**	**75.67**	**308**	P	**P**	**18 43 16.1**	**-1.1**		
BRTR	**Keskin Array B**	**75.67**	**308**	P	**P**	**18 43 14.2**	**-3.0**		
	comp=Z,1.5nm,0.9s,baz=107,slow=3.2,SNR=5.5								
BRTR				LR	LR	19 21 28.9			
	comp=Z,136nm,18.7s,baz=60,slow=40								
	comp=Z,1.5nm,0.9s								
CFR	**Carcaliu**	**76.27**	**315**	⇑P	**P**	**18 43 22.5**	**+2.2**		
CFR	**Carcaliu**	**76.27**	**315**	⇑P	**P**	**18 43 22.5**	**+2.2**		
BURAR	**Bucovina Array**	**76.61**	**318**	P	**P**	**18 43 20.6**	**-1.8**		
BURAR	**Bucovina Array**	**76.61**	**318**	P	**P**	**18 43 20.6**	**-1.8**		
BURAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
VRI	**Vrincioaia**	**76.72**	**316**	⇓P	**P**	**18 43 23.7**	**+0.8**		
VRI	**Vrincioaia**	**76.72**	**316**	⇓P	**P**	**18 43 23.7**	**+0.8**		
PLOR	**Plostina**	**76.77**	**316**	⇑P	**P**	**18 43 25.7**	**+2.4**		
PLOR	**Plostina**	**76.77**	**316**	⇑P	**P**	**18 43 25.7**	**+2.4**		
TURR	**Turia**	**77.03**	**317**	⇑P	**P**	**18 43 26.2**	**+1.5**		
MLR	**Muntele Rosu**	**77.39**	**316**	LR	LR	19 21 03.9			
	comp=Z,422nm,18.6s,baz=60,slow=38								
DOPR	**Dopca**	**77.44**	**317**	⇓P	**P**	**18 43 29.1**	**+2.2**		
MMAI	**Mount Meron Ar**	**77.90**	**301**	LR	LR	19 23 04.2			
	comp=Z,136nm,18.9s,baz=20,slow=40								
VOIR		**77.94**	**317**	⇓P	**P**	**18 43 32.0**	**+2.2**		
VOIR		**77.94**	**317**	⇓P	**P**	**18 43 32.0**	**+2.2**		
D08A	**Wollman Farm,**	**78.04**	**41**	P	**P**	**18 43 29.4**	**-0.9**		
D08A				IAmb	IAmb	18 43 58.4			
	comp=Z,23nm,0.9s								
ARR	**Arges**	**78.22**	**317**	⇓P	**P**	**18 43 33.9**	**+2.6**		
NEW	**Newport**	**78.31**	**40**	P	**P**	**18 43 33.0**	**+1.3**		
	baz=307								
NEW	**Newport**	**78.31**	**40**	P	**P**	**18 43 32.8**	**+1.0**		
NEW	**Newport**	**78.31**	**40**	P	**P**	**18 43 32.8**	**+1.0**		
	comp=Z,9.1nm,0.8s,baz=317,slow=4.9,SNR=13								
NEW				LR	LR	19 18 07.3			
	comp=Z,48nm,21.9s,baz=300,slow=36								
	comp=Z,9.1nm,0.8s								
MARR	**Marisel-Cluj**	**78.32**	**318**	⇑P	**P**	**18 43 32.7**	**+0.8**		
PINE	**Pine Mountain**	**78.75**	**45**	IAmb	IAmb	18 44 03.1			
	comp=Z,27nm,0.8s								
YBH	**Yreka Blue Hor**	**78.84**	**47**	P	**P**	**18 43 36.1**	**+1.2**		
YBH	**Yreka Blue Hor**	**78.84**	**47**	P	**P**	**18 43 36.1**	**+1.2**		
	comp=Z,3.6nm,0.7s,baz=280,slow=6.1,SNR=7.7								
	comp=Z,3.6nm,0.7s								
GZR	**Gura Zlata**	**79.27**	**317**	⇑P	**P**	**18 43 38.3**	**+1.2**		
GZR	**Gura Zlata**	**79.27**	**317**	⇑P	**P**	**18 43 38.3**	**+1.2**		
KSP	**Ksiaz**	**79.36**	**325**	P	**P**	**18 43 38.8**	**+1.4**		
KSP				pmax	pmax				
	comp=Z,7.0nm,1.4s								
MORC	**Moravsky Berou**	**79.41**	**323**	⇑P	**P**	**18 43 39.9**	**+2.1**		
MORC	**Moravsky Berou**	**79.41**	**323**	*e*P	P	18 43 44.7	+6.9		
MORC	**Moravsky Berou**	**79.41**	**323**	P	**P**	**18 43 38.7**	**+0.9**		
MORC				pmax	pmax				
	comp=Z,5.0nm,1.0s								
SURR	**Surduc**	**79.42**	**318**	⇑P	**P**	**18 43 39.9**	**+2.1**		
VYHS	**Vyhne**	**79.55**	**322**	*e*P	P	18 43 50.2	+12		
VYHS	**Vyhne**	**79.55**	**322**	*e*P	P	18 43 50.2	+12		
OSTC	**Ostas**	**79.58**	**324**	AMS	AMS	19 23 10.0			
	comp=Z,600nm,17.4s								
KRLC	**Kraliky**	**79.61**	**324**	AMS	AMS	19 23 00.0			
	comp=Z,600nm,13.7s								
CHVC	**Chvalec**	**79.64**	**324**	AMS	AMS	19 22 40.0			
	comp=Z,500nm,19.4s								
DPC	**Dobruska-Polom**	**79.66**	**324**	AMS	AMS	19 22 30.0			
	comp=Z,600nm,19.9s								
JAVC	**Velka Javorina**	**79.92**	**322**	*e*P	P	18 43 49.5	+8.9		
VRAC	**Vranov**	**80.19**	**323**	*e*P	P	18 43 50.7	+8.7		
VRAC	**Vranov**	**80.19**	**323**	LR	LR	19 23 07.3			
	comp=Z,346nm,18.6s,baz=57,slow=39								
MODS	**Modra-Piesok**	**80.43**	**322**	*e*P	P	18 43 54.4	+11		
MODS	**Modra-Piesok**	**80.43**	**322**	*e*P	P	18 43 54.4	+11		
KRUC	**Moravsky**	**80.45**	**323**	*e*P	P	18 43 51.4	+8.1		
SFJD	**Kangerlussuaq**	**80.45**	**1**	LR	LR	19 21 47.6			
	comp=Z,209nm,18.5s,baz=345,slow=37								
BRG	**Berggiesshubel**	**80.47**	**326**	*e*P	P	18 43 51.1	+7.7		
BRG				Amp		18 43 55.5			
	comp=Z,2.6nm,0.9s								
BRG	**Berggiesshubel**	**80.47**	**326**	P	P	18 43 58.0	+15		
BRG				Amp		18 43 58.9			
	comp=Z,5.4nm,1.1s								
BRG				Amp		19 24 11.0			
	comp=E,0.5nm,10.4s								
BRG				Amp		19 24 15.0			
	comp=Z,0.7nm,12.8s								
BRG				Amp		19 24 18.0			
	comp=N,0.3nm,13.0s								
BRG	**Berggiesshubel**	**80.47**	**326**	*e*P	P	18 43 51.1	+7.7		
BRG						18 43 57.9			
BRG				pmax	pmax				
	comp=Z,3.0nm,0.9s								
BRG				MLR	MLR				
	comp=E,451nm,10.4s								
BRG				MLR	MLR				
	comp=Z,711nm,12.8s								
BRG				MLR	MLR				
	comp=N,296nm,13.0s								
BORG	**Borgarnes**	**80.53**	**349**	LR	LR	19 18 58.4			
	comp=N,51nm,21.5s,baz=3.1,slow=35								
CLL	**Collm**	**80.63**	**326**	*i* P	**P**	**18 43 43.1**	**-1.1**		
CLL				*i* *PP	**pP**	**18 43 57.8**	**+0.1**		
CLL				*e*S	**S**	**18 53 50.0**	**+2.1**		
CLL				pmax	pmax				
	comp=Z,5.0nm,1.2s								
CLL	**Collm**	**80.63**	**326**	*i* P	**P**	**18 43 43.1**	**-1.1**		
	comp=Z,5.0nm,1.2s								
CLL				*i* PcP	**PcP**	**18 43 50.9**	**-0.1**		
	comp=Z,8.0nm,1.1s								
CLL				*i* x	x	18 43 54.5			
	comp=Z,7.0nm,1.0s								
CLL				*i* pP	**pP**	**18 43 57.8**	**+0.1**		
CLL				*i* sP	**sP**	**18 44 02.6**	**-0.3**		
CLL				*ep*PP		18 47 02.0			
CLL				*e*S	**S**	**18 53 50.0**	**+2.1**		
CLL				*e*SS	**SS**	**18 58 54.0**	**-6.1**		
CLL				*e*SSS	SSS	19 02 54.0			
GOPC	**GO Pecny, Ondr**	**80.69**	**324**	AMS	AMS	19 23 30.0			
	comp=Z,500nm,17.4s								
PRU	**Pruhonice**	**80.77**	**325**	AMS	AMS	19 23 20.0			
	comp=Z,400nm,19.5s								
DY2G	**Dye2**	**80.99**	**359**	*e*P	**P**	**18 43 47.1**	**+0.9**		
FFC	**Flin Flon**	**81.16**	**28**	P	**P**	**18 43 47.6**	**+0.5**		
FFC				IAmb	IAmb	18 44 05.2			
	comp=Z,24nm,0.9s								
FFC	**Flin Flon**	**81.16**	**28**	P	**P**	**18 43 47.6**	**+0.5**		
FFC				pmax	pmax				
	comp=Z,24nm,1.0s								
ZVC	**Zvikov**	**81.30**	**324**	*e*P	**P**	**18 43 49.8**	**+1.9**		
RONA	**Rosalia, Austr**	**81.37**	**322**	*e*PcP	**P**	**18 43 50.7**	**+2.4**		
	comp=Z,0.4nm,0.3s								
RONA				*i* pP	**pP**	**18 43 59.5**	**-2.3**		
	comp=Z,1.6nm,0.5s								
CONA	**Conrad Observa**	**81.45**	**322**	*i* PcP	**P**	**18 43 51.4**	**+2.6**		
	comp=Z,0.4nm,0.4s								
CONA				*i* pP	**pP**	**18 44 00.2**	**-2.1**		
	comp=Z,2.3nm,0.7s								
CKRC	**Cesky Krumlov**	**81.65**	**324**	*e*P	**P**	**18 43 53.7**	**+3.9**		
CKRC				*ex*	x	18 44 11.8			
CKRC				*ex*	x	18 44 12.1			
CKRC				AMS	AMS	19 24 20.0			
	comp=Z,700nm,15.2s								
CKRC	**Cesky Krumlov**	**81.65**	**324**	*e*P	**P**	**18 43 53.7**	**+3.9**		
CKRC				*e*		18 44 11.8			
CKRC				MLR	MLR				
	comp=Z,700nm,15.2s								
KHC	**Kasperske Hory**	**81.80**	**324**	*e*P	**P**	**18 43 52.4**	**+1.8**		
KHC				*ep*P	**pP**	**18 44 01.4**	**-2.7**		
KHC				AMS	AMS	19 24 00.0			
	comp=Z,500nm,18.4s								
KHC	**Kasperske Hory**	**81.80**	**324**	*e*P	**P**	**18 43 52.4**	**+1.8**		
KHC				*e*		18 44 01.4			
KHC				MLR	MLR				
	comp=Z,500nm,18.4s								
GERES	**GERESS Array B**	**81.93**	**324**	P	**P**	**18 43 50.0**	**-1.4**		
GERES	**GERESS Array B**	**81.93**	**324**	P	**P**	**18 43 50.0**	**-1.4**		
	comp=Z,0.7nm,0.6s,baz=54,slow=5.0,SNR=3.6								
GERES				LR	LR	19 24 20.3			
	comp=Z,433nm,18.3s,baz=60,slow=39								
	comp=Z,0.7nm,0.6s								
ARSA	**Arzberg**	**82.06**	**322**	*i* pP	pP	18 44 02.8	-2.7		
	comp=Z,0.8nm,0.4s								
URZ	**Urewera**	**82.18**	**146**	LR	LR	19 15 26.0			
	comp=Z,128nm,21.8s,baz=121,slow=32								
EGMT	**Eagleton**	**82.30**	**37**	IAmb	IAmb	18 44 20.7			
	comp=Z,26nm,0.9s								
EGMT	**Eagleton**	**82.30**	**37**	P	**P**	**18 43 54.1**	**+0.8**		
	baz=312								
FRB	**Frobisher Bay**	**82.34**	**9**	LR	LR	19 23 14.2			
	comp=Z,162nm,18.7s,baz=356,slow=38								
RTZ	**Ruatahuna**	**82.40**	**146**	P	**P**	**18 43 51.9**	**-1.8**		
HLID	**Hailey**	**82.68**	**42**	P	**P**	**18 43 54.3**	**-1.2**		
HLID	**Hailey**	**82.68**	**42**	P	**P**	**18 43 56.6**	**+1.1**		
	baz=309								
SOKA	**Soboth**	**82.69**	**322**	*ep*P	pP	18 44 06.3	-2.6		
	comp=Z,3.5nm,0.6s								
BIOA	**Bad Ischl, Austa**	**82.73**	**323**	*ep*P	pP	18 44 06.5	-2.5		
	comp=Z,2.1nm,0.5s								
BOZ	**Bozeman (W)**	**82.92**	**39**	P	**P**	**18 43 57.7**	**+1.0**		
	baz=310								
LESA	**Schwarzleotal**	**83.40**	**323**	*ep*P	pP	18 44 09.9	-2.6		
	comp=Z,7.9nm,1.1s								
NVAR	**Mina Array Bea**	**83.51**	**48**	P	**P**	**18 44 01.2**	**+1.2**		
	comp=Z,4.7nm,0.7s,baz=297,slow=4.6,SNR=18								
NVAR				LR	LR	19 15 03.8			
	comp=Z,74nm,21.0s,baz=279,slow=31								
	comp=Z,4.7nm,0.7s								
IDI	**Anoyia**	**83.91**	**308**	LR	LR	19 25 55.3			
	comp=Z,87nm,19.8s,baz=40,slow=39								
ELK	**Elko**	**83.97**	**45**	P	**P**	**18 44 03.8**	**+1.5**		
ELK	**Elko**	**83.97**	**45**	P	**P**	**18 44 03.8**	**+1.5**		
	comp=Z,3.4nm,0.7s,baz=302,slow=6.1,SNR=16								
	comp=Z,3.4nm,0.7s								
RPZ	**Rata Peaks**	**84.07**	**153**	LR	LR	19 16 30.8			
	comp=Z,105nm,19.4s,baz=333,slow=32								
EKA	**Eskdalemuir Ar**	**84.20**	**336**	P	**P**	**18 44 01.9**	**-0.9**		
EKA	**Eskdalemuir Ar**	**84.20**	**336**	P	**P**	**18 44 01.9**	**-0.9**		
EKA	**Eskdalemuir Ar**	**84.20**	**336**	P	**P**	**18 44 01.9**	**-0.9**		
	comp=Z,0.9nm,0.8s,baz=46,slow=3.6,SNR=2.0								
	comp=Z,0.9nm,0.8s								
MOTA	**Moosalm**	**84.23**	**324**	*e*PcP	**P**	**18 44 04.3**	**+1.0**		
	comp=Z,3.4nm,0.9s								
MOTA				*ep*P	**pP**	**18 44 13.7**	**-3.2**		
	comp=Z,1.9nm,0.7s								
H17A	**Grant Village**	**84.27**	**40**	P	**P**	**18 44 04.9**	**+1.2**		
	baz=311								
SMMC	**Simmler**	**84.28**	**51**	P	**P**	**18 44 04.8**	**+1.1**		
	baz=306								
RAR	**Rarotonga**	**84.31**	**120**	LR	LR	19 14 30.0			
	comp=Z,174nm,21.5s,baz=302,slow=30								
DSP	**Deep Springs**	**84.36**	**49**	P	**P**	**18 44 01.7**	**-2.2**		
TIN	**Tinemaha, Big**	**84.39**	**49**	P	**P**	**18 44 05.1**	**+0.8**		
	baz=307								
RLMT	**Red Lodge**	**84.48**	**39**	P	**P**	**18 44 05.3**	**+0.6**		
	baz=312								
VES	**Vestal, Richgr**	**84.56**	**51**	P	**P**	**18 44 05.9**	**+0.9**		
	baz=307								
PKM	**Mcpherson Peak**	**84.65**	**52**	P	**P**	**18 44 06.4**	**+0.6**		
	baz=307								
DGMT	**Dagmar**	**84.69**	**34**	P	**P**	**18 44 06.3**	**+0.8**		
	baz=315								
CWC	**Cottonwood Cre**	**84.85**	**50**	P	**P**	**18 44 07.3**	**+0.6**		
	baz=307								
LAO	**LASA Array**	**84.97**	**36**	P	**P**	**18 44 07.7**	**+0.8**		
	baz=314								
ISA	**Isabella, Lake**	**85.07**	**50**	P	**P**	**18 44 08.2**	**+0.5**		
	baz=307								
ARVC	**Arvin**	**85.16**	**51**	P	**P**	**18 44 08.6**	**+0.5**		
	baz=307								
DAVOX	**Davos/Dischmat**	**85.23**	**324**	LR	LR	19 26 51.2			
	comp=Z,347nm,18.1s,baz=41,slow=39								
R11B	**Troy Canyon, C**	**85.25**	**47**	IAmb	IAmb	18 44 30.8			
	comp=Z,24nm,1.6s								
R11B	**Troy Canyon, C**	**85.25**	**47**	P	**P**	**18 44 09.6**	**+0.9**		
	baz=309								
MPMC	**Manual Prospec**	**85.46**	**50**	P	**P**	**18 44 10.6**	**+0.8**		
	baz=308								
HWUT	**Hardware Ranch**	**85.55**	**42**	IAmb	IAmb	18 44 38.5			
	comp=Z,17nm,1.2s								
SPR3	**Spring Creek 3**	**85.60**	**46**	IAmb	IAmb	18 44 17.2			
	comp=Z,40nm,2.0s								
FURC	**Furnace Creek,**	**85.61**	**49**	P	**P**	**18 44 11.5**	**+1.2**		
	baz=306								
LRMC	**Laurel Mtn Rad**	**85.69**	**50**	P	**P**	**18 44 12.1**	**+1.2**		
	baz=308								
TPNV	**Topopah Spring**	**85.70**	**48**	P	**P**	**18 44 12.0**	**+1.1**		
	baz=308								
DUG	**Dugway, Tooele**	**85.74**	**44**	IAmb	IAmb	18 44 16.4			
	comp=Z,8.8nm,0.8s								
DUG	**Dugway, Tooele**	**85.74**	**44**	P	**P**	**18 44 12.2**	**+1.1**		
	baz=310								
EDW2	**Edwards Air Fo**	**85.85**	**51**	P	**P**	**18 44 12.3**	**+0.8**		
	baz=308								
BW06	**Boulder Array**	**85.90**	**41**	P	**P**	**18 44 12.7**	**+0.7**		
	baz=312								
PDAR	**Pinedale Array**	**85.90**	**41**	P	**P**	**18 44 12.4**	**+0.5**		
	comp=Z,2.0nm,0.7s,baz=243,slow=0.2,SNR=21								
PDAR				LR	LR	19 23 04.1			
	comp=Z,87nm,21.3s,baz=342,slow=36								
	comp=Z,2.0nm,0.7s								
GWY	**Greenwater Val**	**85.91**	**49**	IAmb	IAmb	18 44 33.9			
	comp=Z,21nm,1.4s								
QSM	**Queen of Sheba**	**85.92**	**49**	IAmb	IAmb	18 44 33.7			
	comp=Z,22nm,1.2s								
NLU	**North Lily Min**	**86.33**	**44**	IAmb	IAmb	18 44 42.5			
	comp=Z,10.0nm,1.0s								
HEC	**Hector,Ludlow**	**86.96**	**50**	P	**P**	**18 44 18.1**	**+1.1**		
	baz=308								
ULM	**Lac du Bonnet**	**86.99**	**29**	P	**P**	**18 44 17.1**	**+0.3**		
ULM	**Lac du Bonnet**	**86.99**	**29**	P	**P**	**18 44 17.1**	**+0.3**		
	comp=Z,13nm,0.9s,baz=319,slow=5.2,SNR=26								
ULM				LR	LR	19 27 10.7			
	comp=Z,130nm,18.0s,baz=339,slow=38								
	comp=Z,13nm,0.9s								
MURC	**Murrieta**	**87.16**	**51**	P	**P**	**18 44 19.1**	**+1.1**		
	baz=308								
MDND	**Maddock**	**87.25**	**32**	P	**P**	**18 44 19.2**	**+1.1**		
	baz=319								
GMRC	**Granite Mounta**	**87.42**	**50**	P	**P**	**18 44 20.4**	**+1.0**		
	baz=309								
PFO	**Pinyon Flats O**	**87.63**	**51**	P	**P**	**18 44 21.1**	**+0.7**		
PFO	**Pinyon Flats O**	**87.63**	**51**	P	**P**	**18 44 21.1**	**+0.7**		
	comp=Z,4.1nm,0.8s,baz=324,slow=2.1,SNR=5.3								
PFO				LR	LR	19 16 21.7			
	comp=Z,162nm,20.9s,baz=266,slow=30								
	comp=Z,4.1nm,0.8s								
TPFO	**Pinon Flats**	**87.64**	**51**	P	**P**	**18 44 21.3**	**+0.9**		
	baz=308								
BELC	**Belle Mtn. Jos**	**87.69**	**51**	P	**P**	**18 44 21.2**	**+0.5**		
	baz=309								
RSSD	**Black Hills**	**87.87**	**37**	P	**P**	**18 44 21.8**	**+0.4**		
	baz=316								
MONP2	**Monument Peak**	**88.10**	**52**	P	**P**	**18 44 23.2**	**+0.4**		
	baz=308								
IRM	**Iron Mountain**	**88.15**	**50**	P	**P**	**18 44 23.3**	**+0.6**		
	baz=309								
AGMN	**Agassiz Nation**	**88.52**	**30**	P	**P**	**18 44 24.5**	**+0.3**		
	baz=321								
VAE	**Valguarnera**	**89.12**	**315**	LR	LR	19 28 45.8			
	comp=Z,131nm,18.9s,baz=76,slow=38								
WUAZ	**Wupatki**	**89.65**	**47**	P	**P**	**18 44 31.7**	**+1.8**		
	baz=311								
PPT	**Papeete**	**89.92**	**111**	LR	LR	19 17 29.5			
	comp=Z,104nm,21.5s,baz=275,slow=30								
ISCO	**Idaho Springs**	**90.10**	**41**	P	**P**	**18 44 33.1**	**+1.0**		
	baz=315								
SUSD	**Miller**	**90.11**	**34**	P	**P**	**18 44 33.2**	**+1.5**		
	baz=319								
MVCO	**Mesa Verde**	**90.25**	**44**	P	**P**	**18 44 34.3**	**+1.5**		
	baz=313								
EYMN	**Ely**	**90.57**	**28**	P	**P**	**18 44 35.0**	**+1.3**		
	baz=325								
S22A	**4UR Ranch, Cre**	**90.85**	**43**	P	**P**	**18 44 37.6**	**+1.9**		
	baz=314								
Q24A	**Divide**	**90.94**	**41**	P	**P**	**18 44 37.0**	**+0.9**		
	baz=315								
214A	**Orgain Pipe Nat**	**91.06**	**50**	P	**P**	**18 44 37.6**	**+1.3**		
	baz=310								
SCHQ	**Schefferville**	**91.16**	**11**	P	**P**	**18 44 35.6**	**-0.7**		
	comp=Z,3.1nm,0.8s,baz=335,slow=9.3,SNR=3.5								
SCHQ				LR	LR	19 26 26.8			
	comp=Z,160nm,21.9s,baz=326,slow=36								
	comp=Z,3.1nm,0.8s								
OGNE	**Ogallala**	**91.19**	**38**	P	**P**	**18 44 38.0**	**+1.2**		
	baz=317								
SDCO	**Great Sand Dun**	**91.60**	**42**	P	**P**	**18 44 40.6**	**+1.5**		
	baz=315								
TUC	**Tucson**	**92.13**	**49**	P	**P**	**18 44 43.4**	**+2.0**		
	baz=312								
TUC	**Tucson**	**92.13**	**49**	P	**P**	**18 44 43.1**	**+1.7**		
TUC				pmax	pmax				
	comp=Z,6.0nm,0.9s								
SPMN	**Marine on St.**	**92.24**	**30**	P	**P**	**18 44 42.5**	**+0.9**		
	baz=324								
KSCO	**Kaye Shedlock'**	**92.28**	**40**	P	**P**	**18 44 42.9**	**+0.9**		
	baz=317								
T25A	**Trinidad**	**92.64**	**42**	P	**P**	**18 44 45.4**	**+1.5**		
	baz=315								
ANMO	**Albuquerque**	**93.00**	**45**	P	**P**	**18 44 47.0**	**+1.5**		
	baz=314								
ANMO	**Albuquerque**	**93.00**	**45**	P	**P**	**18 44 45.7**	**+0.2**		
ANMO	**Albuquerque**	**93.00**	**45**	P	**P**	**18 44 45.7**	**+0.2**		
	comp=Z,2.0nm,0.8s,baz=301,slow=5.9,SNR=7.5								
	comp=Z,2.0nm,0.8s								
KEST	**Kesra**	**93.28**	**317**	LR	LR	19 32 40.2			
	comp=Z,245nm,18.0s,baz=321,slow=39								
121A	**Cookes Peak, D**	**93.86**	**47**	P	**P**	**18 44 51.1**	**+1.6**		
	baz=313								
JFWS	**Jewell Farm**	**95.19**	**30**	P	**P**	**18 44 56.5**	**+1.4**		
	baz=325								
MNTX	**Cornudas Mount**	**95.90**	**46**	P	**P**	**18 45 00.3**	**+1.6**		
	baz=315								
ESDC	**Sonseca Array**	**97.18**	**327**	LR	LR	19 35 08.1			
	comp=Z,173nm,18.5s,baz=34,slow=39								
SADO	**Sadowa**	**97.67**	**22**	LR	LR	19 31 33.3			
	comp=Z,74nm,21.2s,baz=320,slow=37								
LPIG	**La Paz**	**97.84**	**55**	LR	LR	19 20 14.1			
	comp=Z,57nm,21.9s,baz=240,slow=30								
TXAR	**Lajitas Array**	**98.61**	**47**	P	Pdif	18 45 11.9	+0.9		
TXAR	**Lajitas Array**	**98.61**	**47**	P	Pdif	18 45 11.8	+0.8		
	comp=Z,0.6nm,0.5s,baz=298,slow=2.8,SNR=12								
TXAR				LR	LR	19 27 42.5			
	comp=Z,23nm,20.4s,baz=239,slow=34								
	comp=Z,0.6nm,0.5s								
LONY	**Lake Ozonia**	**99.15**	**19**	P	**Pdif**	**18 45 12.6**	**-0.4**		
	baz=338								
O48B	**Farmland**	**99.49**	**28**	P

comp=E,40nm,1.3s,comp=N,44nm,2.3s
JFI Itaya 1.57 290 A A 18 32 06.4
comp=E,37nm,4.2s,comp=N,36nm,3.8s
JTY Toyota 1.64 327 A A 18 32 07.4
comp=E,29nm,3.7s,comp=N,29nm,1.2s
JHIK Hikimi 1.64 354 A A 18 32 07.4
comp=E,26nm,1.7s,comp=N,29nm,1.1s
JMN Monobe 1.67 60 A A 18 32 07.8
comp=E,52nm,1.3s,comp=N,36nm,1.6s
MRT2 Murotomisaki 2 1.74 73 A A 18 32 08.8
comp=E,36nm,4.5s,comp=N,33nm,3.9s
JHD Hondo 1.75 256 A A 18 32 08.9
comp=E,84nm,1.4s,comp=N,52nm,2.1s
JHT Toyohira 1.78 7 A A 18 32 09.4
comp=E,32nm,1.5s,comp=N,18nm,3.3s
JUR Ureshino 1.86 277 A A 18 32 10.5
comp=E,57nm,5.3s,comp=N,20nm,1.0s
JSU Suzuyama 1.99 227 A A 18 32 12.4
comp=E,33nm,4.6s,comp=N,19nm,5.4s
NGSJ Nagasakinomoza 2.00 263 A A 18 32 12.5
comp=E,18nm,2.4s,comp=N,31nm,2.0s
JTSR Tashiro 2 2.01 212 A A 18 32 12.7
comp=E,17nm,4.9s,comp=N,20nm,2.7s
JMAF Mimaanabuki 2.03 55 A A 18 32 13.0
comp=E,27nm,3.2s,comp=N,30nm,6.0s
JHGM Hagimishima 2.06 336 A A 18 32 13.4
comp=E,21nm,1.0s,comp=N,34nm,2.0s
JJS Sakaide 2.10 45 A A 18 32 13.9
comp=E,31nm,1.2s,comp=N,37nm,1.6s
JAI Aioi 2.13 64 A A 18 32 14.3
comp=E,13nm,1.7s,comp=N,23nm,1.7s
JGT2 ShimaneMisato 2.19 8 A A 18 32 15.2
comp=E,23nm,1.9s,comp=N,14nm,2.1s
JII Iki 2.21 295 A A 18 32 15.6
comp=E,37nm,3.8s,comp=N,63nm,2.4s
JHS Saijyo 2.25 21 A A 18 32 16.1
comp=E,34nm,4.1s,comp=N,28nm,0.8s
JSJ Shimokoshiki 2.39 240 A A 18 32 18.1
comp=E,18nm,2.9s,comp=N,50nm,4.8s
JTN Tanegashima 3 2.44 204 A A 18 32 18.8
comp=E,12nm,4.8s,comp=N,12nm,1.9s
JAD Aida 2.64 39 A A 18 32 21.7
comp=E,15nm,5.1s,comp=N,23nm,4.8s
JISK Izumosakaura 2.67 12 A A 18 32 22.0
comp=E,24nm,1.9s,comp=N,25nm,1.2s
JNM Ikuma 2.70 15 A A 18 32 22.5
comp=E,44nm,1.9s,comp=N,40nm,1.3s
JMTN Minamitane 2.71 203 A A 18 32 22.6
comp=E,11nm,2.4s,comp=N,18nm,2.6s
JTSM Tsushimamitsus 2.72 303 A A 18 32 22.8
comp=E,7.0nm,2.1s,comp=N,13nm,4.2s
JAWN Awajishima-nag 2.79 55 A A 18 32 23.8
comp=E,17nm,3.0s,comp=N,30nm,3.2s
JTU Tsushima 2.81 306 A A 18 32 24.1
comp=E,9.0nm,2.4s,comp=N,11nm,3.0s
JKR Kurayoshi 2.84 29 A A 18 32 24.5
comp=E,18nm,1.6s,comp=N,19nm,1.6s
JWM Minabe 2.85 70 A A 18 32 24.6
comp=E,10.0nm,2.2s,comp=N,10.0nm,2.1s
JFU Fukue jima 2 2.87 266 A A 18 32 25.0
comp=E,9.0nm,1.9s,comp=N,8.0nm,2.8s
JKC Kuchinoerabu 2.94 215 A A 18 32 25.9
comp=E,3.0nm,3.2s,comp=N,9.0nm,4.8s
JYAK Yakushimahirau 2.99 208 A A 18 32 26.7
comp=E,8.0nm,2.1s,comp=N,6.0nm,3.9s
JTNC Tanabenakahech 3.04 71 A A 18 32 27.4
comp=E,12nm,0.9s,comp=N,10.0nm,1.4s
JKS Kasai 3.06 46 A A 18 32 27.7
comp=E,11nm,3.6s,comp=N,11nm,4.3s
JWKM Wakayamakushim 3.08 79 A A 18 32 27.9
comp=E,10.0nm,2.9s,comp=N,15nm,2.8s
JMIK Miki 3.08 A A 18 32 27.9
comp=E,17nm,2.1s,comp=N,26nm,0.9s

*TAP **18** 18:36:48.7,24.°17N×121.°73E,h9km,ML2.9,D*
ISC 18 18:36:49.3±0.9,24.°17N±0.°02×121.°73E±0.°03,h11km±5km, n40,σ0§51/68,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**265**	*i* P	**Pg**	**18 36 52.1**	**+0.1**
	baz=262						
ETL				*e*S	**Sg**	**18 36 53.9**	**-0.2**
	baz=262						
NACB	**Ninganchiao**	**0.12**	**273**	P	**Pg**	**18 36 52.3**	**0.0**
NACB	**Ninganchiao**	**0.12**	**273**	*i* P	**Pg**	**18 36 52.3**	**0.0**
	baz=271						
NACB				S	**Sg**	**18 36 54.7**	**+0.2**
	baz=271						
TWD	**Chiawan**	**0.15**	**234**	P	**Pg**	**18 36 52.5**	**-0.2**
	baz=231						
TWD				S	**Sg**	**18 36 55.4**	**+0.3**
	baz=231						
EAHA	**Aohua**	**0.16**	**4**	P	**Pg**	**18 36 53.0**	**+0.1**
	baz=4.0						
EAHA				S	**Sg**	**18 36 56.2**	**+0.6**
	baz=4.0						
HWA	**Hwalien**	**0.22**	**210**	*e*P	**Pb**	**18 36 54.9**	**-0.4**
	baz=207						
ETLH	**Xiulin Townshi**	**0.23**	**280**	P	**Pg**	**18 36 54.4**	**+0.3**
	baz=279						
ETLH				*e*S	**Sg**	**18 36 58.5**	**+1.1**
	baz=279						
ENA	**Nanau**	**0.26**	**3**	*e*P	**Pg**	**18 36 54.8**	**+0.2**
	baz=4.0						
ENA				S	**Sb**	**18 36 59.2**	**-1.2**
	baz=4.0						
EWUT	**Wuta**	**0.28**	**10**	P	**Pg**	**18 36 55.1**	**+0.1**
	baz=9.0						
EWUT				*i* S	**Sg**	**18 36 59.5**	**+0.6**
	baz=9.0						
ETM	**Tongmen**	**0.29**	**227**	P	**Pg**	**18 36 55.0**	**-0.3**
	baz=226						
ETM				*i* S	**Sb**	**18 37 00.8**	**-0.6**
	baz=226						
LXIB	**Xiulin Townshi**	**0.32**	**243**	P	**Pg**	**18 36 55.8**	**-0.1**
	baz=242						
LXIB				*e*S	**Sb**	**18 37 02.3**	**0.0**
	baz=242						
SHUL	**Shoufeng**	**0.41**	**202**	*e*P	**Pg**	**18 36 58.0**	**+0.7**
	baz=201						
SHUL				*e*S	**Sb**	**18 37 05.0**	**+0.3**
	baz=201						
LATG	**Datong**	**0.41**	**333**	P	**Pg**	**18 36 57.8**	**+0.4**
	baz=333						
LATG				S	**Sb**	**18 37 03.9**	**-0.9**
	baz=333						
NNS	**Nan Shan**	**0.42**	**310**	*e*P	**Pg**	**18 36 58.1**	**+0.4**
	baz=310						
NNS				S	**Sb**	**18 37 04.5**	**-0.8**
	baz=310						
WHF	**Hehuan Shan**	**0.42**	**267**	*e*P	**Pg**	**18 36 57.9**	**+0.2**
	baz=266						
ESL	**Shilin**	**0.44**	**217**	*e*P	**Pg**	**18 36 57.7**	**-0.3**
	baz=216						
ESL				*e*S	**Sg**	**18 37 04.9**	**+1.0**
	baz=216						
FUSS	**Fushou**	**0.45**	**280**	*i* P	**Pg**	**18 36 58.6**	**+0.4**
	baz=279						
FUSS				S	**Sg**	**18 37 05.2**	**+1.1**
	baz=279						
NDS	**Dongshan**	**0.46**	**359**	*e*P	**Pg**	**18 36 58.7**	**+0.3**
	baz=359						
NDS				*e*S	**Sb**	**18 37 06.0**	**-0.3**
	baz=359						
NDT	**Datong Townshi**	**0.47**	**336**	P	**Pb**	**18 36 59.3**	**-0.4**
	baz=335						
NDT				*e*S	**Sb**	**18 37 06.7**	**0.0**
	baz=335						
ENTT	**Nioudou**	**0.49**	**343**	*e*P	**Pb**	**18 36 59.5**	**-0.4**
	baz=343						
ENTT				S	**Sb**	**18 37 06.9**	**-0.2**
	baz=343						
CHGB	**Renai**	**0.52**	**258**	P	**Pg**	**18 36 59.8**	**+0.3**
	baz=257						
CHGB				*e*S	**Sb**	**18 37 08.1**	**+0.1**
	baz=257						
TDCB	**Techi**	**0.53**	**279**	P	**Pg**	**18 37 00.2**	**+0.6**
	baz=278						
TDCB				*e*S	**Sg**	**18 37 07.6**	**+1.0**
	baz=278						
WARBT	**Fenglin Townsh**	**0.55**	**215**	P	**Pg**	**18 36 59.6**	**-0.3**
	baz=214						
WARBT				*e*S	**Sb**	**18 37 08.2**	**-0.4**
	baz=214						
TWE	**Neicheng**	**0.55**	**354**	*e*P	**Pb**	**18 37 00.6**	**-0.3**
	baz=355						
TWE				S	**Sb**	**18 37 08.8**	**-0.1**
	baz=355						
WUSB	**Renai**	**0.58**	**253**	*e*P	**Pg**	**18 37 01.0**	**+0.3**
	baz=252						
WUSB				S	**Sb**	**18 37 09.8**	**-0.1**
	baz=252						
YHNB	**Yeheng**	**0.59**	**327**	P	**Pb**	**18 37 01.7**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.60**	**348**	*i* P	**Pb**	**18 37 01.7**	**-0.2**
	baz=347						
FUSB				S	**Sb**	**18 37 10.2**	**-0.2**
	baz=347						
NSK	**Sanguang**	**0.61**	**326**	*e*P	**Pb**	**18 37 01.8**	**-0.1**
	baz=326						
NSK				S	**Sb**	**18 37 10.6**	**+0.1**
	baz=326						
NWLT	**Wulai**	**0.64**	**341**	P	**Pb**	**18 37 02.4**	**0.0**
	baz=341						
NWLT				*e*S	**Sb**	**18 37 11.0**	**-0.4**
	baz=341						
VWDT	**VWDT**	**0.68**	**233**	P	**Pg**	**18 37 02.5**	**+0.2**
	baz=232						
VWDT				S	**Sb**	**18 37 13.6**	**+1.2**
	baz=232						
HGSD	**Ruisui**	**0.73**	**202**	*e*P	**Pg**	**18 37 03.8**	**+0.4**
	baz=202						
EHY	**Hungye**	**0.76**	**209**	*e*S	**Sn**	**18 37 16.9**	**-0.3**
	baz=208						
SSLB	**Suanglung**	**0.80**	**242**	P	**Pg**	**18 37 04.8**	**0.0**
SSLB	**Suanglung**	**0.80**	**242**	*i* P	**Pg**	**18 37 04.7**	**0.0**
	baz=241						
SSLB				S	**Sg**	**18 37 15.1**	**-0.2**
	baz=241						
TATO	**Taipei**	**0.83**	**345**	P	**Pn**	**18 37 06.4**	**-0.5**
YULB	**Yu-li**	**0.87**	**207**	P	**Pg**	**18 37 05.6**	**-0.4**
YULB	**Yu-li**	**0.87**	**207**	*e*P	**Pg**	**18 37 05.0**	**-1.0**
	baz=206						
YULB				*e*S	**Sb**	**18 37 18.6**	**+0.7**
	baz=206						
YOJ	**Yonaguni jima**	**1.21**	**76**	P	**Pg**	**18 37 13.4**	**+0.9**
TPUB	**Ta-pu**	**1.33**	**230**	P	**Pb**	**18 37 14.4**	**+0.3**
TWGBT	**Beinan**	**1.47**	**204**	P	**Pg**	**18 37 17.7**	**+0.2**

DJA 18 18:37:28.8±0.4,8.°S±9.°×11.°1E±.°,h105km±8km,M3.7/11, mb3.9/4,MLv3.5/11,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.50**	**48**	P	Pn	18 37 45.9	+0.8
UGM	**Wanagama**	**1.00**	**296**	P	Pn	18 37 50.2	+0.5
UGM				S	Sn	18 38 07.6	+2.2
GRJI	**Gresik**	**1.77**	**36**	P	Pn	18 37 57.0	-1.7
GMJI	**Gumukmas**	**2.00**	**88**	P	Pn	18 38 02.1	+0.6
KPJI	**Karang Pucung**	**2.68**	**292**	P	Pn	18 38 10.8	+0.4
JAGI	**Jajag, Banyuwa**	**2.69**	**93**	P	Pn	18 38 12.2	+1.5
CMJI	**Cimerak**	**3.01**	**281**	P	Pn	18 38 14.5	-0.3
CNJI	**Cibinong**	**4.39**	**283**	P	Pn	18 38 34.2	+0.9
TWSI	**Taliwang, Sumb** 12nm,1.5s,0.1nm	**5.41**	**94**	P	Pn	18 38 47.3	+0.2
PLAI	**Plampang**	**6.29**	**95**	P	Pn	18 39 00.4	+1.2

*ISN **18** 18:39:39.6±0.5,34.°68N×45.°76E,h14km±25km,ML2.8*
*TEH **18** 18:39:40.3,34.°67N×45.°74E,h12km±8km,ML2.8*
ISC 18 18:39:40.5±1.0,34.°65N±0.°05×45.°76E±0.°04,h10km,n8, σ0§44/11,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.21**	**224**	Pg	**Pg**	**18 39 45.0**	**+0.2**
IDHR	**Dehrash**	**0.52**	**85**	Pg	**Pg**	**18 39 51.1**	**+0.5**
IGHG	**Ghaleghazi**	**0.74**	**116**	Pg	**Pg**	**18 39 55.3**	**+0.4**
KCHF	**Cheshme Sefid,**	**1.12**	**109**	Pg	**Pn**	**18 40 02.4**	**0.0**
IKRK	**Kirkuk**	**1.38**	**303**	*e*Pg	**Pb**	**18 40 06.0**	**-0.5**
IKRK				*e*Sg	**Sg**	**18 40 25.0**	**-0.1**
IKRK				AML	AML	18 40 32.1	
	comp=N,219nm,0.3s						
IKRK				AML	AML	18 40 32.2	
	comp=E,149nm,0.5s						
IBDR	**Badra**	**1.55**	**175**	*e*Pn	**Pb**	**18 40 09.0**	**-0.2**
IBDR				*e*Sn	**Sg**	**18 40 30.0**	**-0.2**
BHD	**Baghdad**	**1.80**	**220**	*e*Pn	**Pn**	**18 40 12.0**	**+0.5**
BHD				*e*Sn	**Sb**	**18 40 36.0**	**0.0**
IKFM	**Kafar-mosalman**	**2.06**	**122**	Pn	**Pb**	**18 40 17.4**	**-0.7**

IDC 18 18:55:26.5±2.1,1.°81N×125.°15E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=195.9km s-min=27.8km az=64.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=336,slow=11,SNR=10 0.4nm,0.4s	**23.42**	**158**	P	P	19 00 37.0	-0.5
ASAR	**Alice Springs** 0.1nm,0.4s,baz=342,slow=7.6,SNR=7.0 0.1nm,0.4s	**26.72**	**162**	P	P	19 01 08.3	+0.5
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=108,slow=7.0,SNR=1.7 0.2nm,0.6s	**58.25**	**327**	P	P	19 05 22.8	-0.1

*TIR **18** 18:56:49.6,40.°16N×19.°65E,h28km,MI3.1*
*ATH **18** 18:56:50.8,40.°16N×19.°60E,h8km±2km,ML3.1/15, Manual Solution by A.Papageorgiou This location: 2020/05/09 17:27:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*THE **18** 18:56:50.3,40.°14N×19.°60E,h7km,ML2.9/12,Error ellipse: s-maj=0.8km s-min=0.4km az=65.0*
ISC 18 18:56:50.1±1.0,40.°16N±0.°02×19.°58E±0.°02,h14km±7km, n90,σ1§24/140,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.31**	**347**	P	**Pg**	**18 56 57.1**	**+0.4**
VLO	baz=340			S	**Sb**	**18 57 03.9**	**+1.5**
	baz=340						
VLO				AMP			
	comp=N,20nm,0.3s,baz=340						
VLO	**Vlora**	**0.31**	**347**	P	**Pg**	**18 56 57.0**	**+0.4**
VLO				S	**Sb**	**18 57 02.3**	**-0.1**
	comp=N,5μm,0.3s						
SRN	**Sarande**	**0.43**	**131**	P	**Pg**	**18 56 58.2**	**-0.5**
	baz=135						
SRN				S	**Sg**	**18 57 04.0**	**-0.4**
	baz=135						
SRN				AMP			
	comp=N,7.0nm,0.4s,baz=135						
SRN	**Sarande**	**0.43**	**131**	P	**Pg**	**18 56 58.1**	**-0.5**
SRN				S	**Sg**	**18 57 04.0**	**-0.4**
	comp=N,1μm,0.4s						
KEK	**Kerkira**	**0.48**	**160**	P	**Pg**	**18 56 58.9**	**-0.7**
KEK				S	**Sg**	**18 57 06.2**	**+0.2**
KASA	**Kassiopi**	**0.50**	**147**	P	**Pg**	**18 56 59.6**	**-0.3**
KASA				S	**Sb**	**18 57 07.2**	**-0.5**
LSK	**Leskovik**	**0.78**	**91**	P	**Pg**	**18 57 04.2**	**-1.0**
LSK	baz=90			S	**Sg**	**18 57 13.5**	**-2.1**
	baz=90						
LSK	**Leskovik**	**0.78**	**91**	P	**Pg**	**18 57 03.8**	**-1.5**
LSK				S	**Sb**	**18 57 16.1**	**+0.2**
	comp=N,1μm,0.7s						
IGT	**Igoumenitsa**	**0.85**	**137**	P	**Pg**	**18 57 05.9**	**-0.8**
	baz=139						
IGT				S	**Sb**	**18 57 18.1**	**+0.1**
	baz=139						
IGT	**Igoumenitsa**	**0.85**	**137**	P	**Pg**	**18 57 05.8**	**-0.8**
IGT				S	**Sb**	**18 57 18.1**	**+0.1**
	comp=N,592nm,0.2s						
IGT	**Igoumenitsa**	**0.85**	**137**	P	**Pg**	**18 57 06.0**	**-0.6**
IGT				S	**Sb**	**18 57 18.1**	**+0.1**
SCTE	**Santa Cesarea**	**0.86**	**264**	P	**Pb**	**18 57 07.9**	**+1.1**
	baz=266						
SCTE				S	**Sb**	**18 57 20.6**	**+2.5**
	baz=266						
SCTE				AMP			
	comp=E,2.2nm,0.2s,baz=266						
SCTE	**Santa Cesarea**	**0.86**	**264**	P	**Pb**	**18 57 07.7**	**+0.9**
SCTE				S	**Sb**	**18 57 19.3**	**+1.1**
KBN	**Korca**	**1.03**	**63**	P	**Pg**	**18 57 08.8**	**-1.2**
	baz=61						
KBN				S	**Sg**	**18 57 23.0**	**-0.4**
	baz=61						
KBN	**Korca**	**1.03**	**63**	P	**Pg**	**18 57 08.2**	**-1.8**
KBN				S	**Sn**	**18 57 24.8**	**+0.4**
	comp=E,595nm,0.5s						
JAN	**Janina**	**1.10**	**117**	P	**Pg**	**18 57 10.5**	**-0.8**
JAN				S	**Sn**	**18 57 26.3**	**+0.3**
JAN	**Janina**	**1.10**	**117**	P	**Pn**	**18 57 12.3**	**+1.3**
JAN				S	**Sb**	**18 57 25.8**	**+0.8**
NEST	**Nestorio**	**1.15**	**77**	P	**Pg**	**18 57 11.4**	**-0.9**
NEST				S	**Sn**	**18 57 28.5**	**+1.1**
	comp=E,502nm,0.5s						
NEST	**Nestorio**	**1.15**	**77**	P	**Pg**	**18 57 11.8**	**-0.5**
PENT	**Pentalofos**	**1.19**	**88**	P	**Pg**	**18 57 12.2**	**-0.9**
PENT	**Pentalofos**	**1.19**	**88**	P	**Pn**	**18 57 13.1**	**+0.7**
PENT				S	**Sn**	**18 57 29.0**	**+0.6**
TIR	**Tirane**	**1.20**	**10**	P	**Pn**	**18 57 13.9**	**+1.4**
	baz=7.0						
TIR				S	**Sb**	**18 57 29.4**	**+1.4**
	baz=7.0						
TIR				AMP			
	comp=E,0.9nm,0.3s,baz=7.0						
OHR	**Ohrid**	**1.32**	**44**	*i* Pn	**Pb**	**18 57 15.2**	**+0.5**
KPRO	**Kipourio**	**1.38**	**98**	P	**Pn**	**18 57 14.9**	**-0.1**
KPRO				S	**Sg**	**18 57 34.2**	**-0.5**
	comp=E,818nm,0.5s						
KPRO	**Kipourio**	**1.38**	**98**	P	**Pg**	**18 57 16.5**	**-0.2**
KPRO				S	**Sg**	**18 57 34.7**	**+0.1**
FNA	**Florina**	**1.50**	**65**	P	**Pn**	**18 57 17.7**	**+1.0**
	baz=64						
FNA				S	**Sg**	**18 57 39.1**	**+0.6**
	baz=64						
FNA	**Florina**	**1.50**	**65**	P	**Pn**	**18 57 17.1**	**+0.5**
FNA				S	**Sb**	**18 57 37.7**	**+1.0**
	comp=E,665nm,0.7s						
FNA	**Florina**	**1.50**	**65**	P	**Pn**	**18 57 17.6**	**+1.0**
FNA				S	**Sg**	**18 57 38.2**	**-0.3**
TSLK	**Tsoukalades, L**	**1.57**	**148**	P	**Pn**	**18 57 17.9**	**+0.4**
TSLK				S	**Sn**	**18 57 38.6**	**+0.9**
	comp=E,350nm,0.3s						
TSLK	**Tsoukalades, L**	**1.57**	**148**	P	**Pn**	**18 57 18.2**	**+0.6**
TSLK				S	**Sb**	**18 57 39.2**	**+0.6**
LKD2	**Lefkada island**	**1.60**	**148**	P	**Pn**	**18 57 18.5**	**+0.5**
	baz=149						
LKD2				S	**Sg**	**18 57 42.1**	**+0.4**
	baz=149						
LKD2	**Lefkada island**	**1.60**	**148**	P	**Pn**	**18 57 18.2**	**+0.2**
LKD2				S	**Sn**	**18 57 39.5**	**+1.0**
	comp=E,322nm,0.4s						
LKD2	**Lefkada island**	**1.60**	**148**	P	**Pn**	**18 57 18.9**	**+0.9**
LKD2				S	**Sb**	**18 57 40.3**	**+0.7**
PHP	**Peshkopia**	**1.65**	**23**	P	**Pn**	**18 57 19.6**	**+0.9**
	baz=21						
PHP				S	**Sb**	**18 57 42.6**	**+1.6**
	baz=21						
PHP	**Peshkopia**	**1.65**	**23**	P	**Pn**	**18 57 19.1**	**+0.4**
PHP				S	**Sb**	**18 57 41.9**	**+0.9**
DRAG	**Dragano-Lefkad**	**1.67**	**152**	P	**Pn**	**18 57 18.7**	**-0.1**
DRAG				S	**Sn**	**18 57 40.7**	**+0.7**
DRAG	**Dragano-Lefkad**	**1.67**	**152**	P	**Pn**	**18 57 19.6**	**+0.8**
NYDR	**Nydri-Lefkada**	**1.69**	**149**	P	**Pn**	**18 57 19.1**	**0.0**
NYDR	**Nydri-Lefkada**	**1.69**	**149**	P	**Pn**	**18 57 19.9**	**+0.8**
NYDR				S	**Sb**	**18 57 42.2**	**+0.3**
EVGI	**Lefkada island**	**1.75**	**151**	P	**Pn**	**18 57 20.0**	**0.0**
EVGI				S	**Sn**	**18 57 43.0**	**+0.9**
EVGI	**Lefkada island**	**1.75**	**151**	P	**Pn**	**18 57 20.6**	**+0.6**
FSK	**Fiskardo**	**1.86**	**156**	P	**Pn**	**18 57 22.2**	**+0.7**
PUK	**Puka**	**1.89**	**7**	P	**Pn**	**18 57 22.9**	**+0.9**
	baz=5.0						
PUK				S	**Sb**	**18 57 49.5**	**+1.6**
	baz=5.0						
THL	**Klokotos Trika**	**1.96**	**107**	P	**Pn**	**18 57 23.3**	**+0.4**
THL				S	**Sn**	**18 57 48.4**	**+1.1**
	comp=E,170nm,0.5s						
THL	**Klokotos Trika**	**1.96**	**107**	P	**Pn**	**18 57 24.2**	**+1.3**
THL				S	**Sn**	**18 57 48.6**	**+1.3**
TYRN	**Tyrnavos**	**2.09**	**102**	P	**Pn**	**18 57 24.8**	**+0.2**
TYRN				S	**Sn**	**18 57 51.6**	**+1.3**
	comp=E,172nm,0.5s						
TYRN	**Tyrnavos**	**2.09**	**102**	P	**Pn**	**18 57 25.8**	**+1.2**
TYRN				S	**Sn**	**18 57 52.0**	**+1.6**
EVR	**Evrytania**	**2.12**	**125**	P	**Pn**	**18 57 27.2**	**+2.0**
EVR				S	**Sn**	**18 57 52.6**	**+1.2**
VLS	**Valsamata**	**2.13**	**158**	P	**Pn**	**18 57 24.6**	**-0.7**
PVO	**Paravola**	**2.16**	**135**	P	**Pn**	**18 57 26.5**	**+0.9**
PSDA	**Pessada-Kefalo**	**2.19**	**159**	P	**Pn**	**18 57 25.8**	**-0.2**
PSDA				S	**Sn**	**18 57 53.9**	**+1.0**
BCI	**Bajram Curri**	**2.23**	**9**	P	**Pn**	**18 57 28.0**	**+1.3**
	baz=8.0						
BCI				S	**Sn**	**18 57 57.0**	**+3.0**
	baz=8.0						
MAKR	**Makrakomi, Fth**	**2.28**	**119**	P	**Pn**	**18 57 27.6**	**+0.3**
MAKR				S	**Sn**	**18 57 56.4**	**+1.2**
MAKR	**Makrakomi, Fth**	**2.28**	**119**	P	**Pn**	**18 57 29.2**	**+1.9**
MAKR				S	**Sn**	**18 57 56.2**	**+1.0**
SKO	**Skopje**	**2.29**	**37**	*e*Pn	**Pn**	**18 57 28.1**	**+0.7**
GRG	**Griva**	**2.29**	**69**	P	**Pn**	**18 57 28.5**	**+1.0**
ANX	**Ano Chora**	**2.40**	**130**	P	**Pn**	**18 57 28.0**	**0.0**
ANX				S	**Sn**	**18 57 59.2**	**+1.1**
ANX	**Ano Chora**	**2.40**	**130**	P	**Pn**	**18 57 30.8**	**+1.8**
AGG	**Agios Georgios**	**2.41**	**117**	P	**Pn**	**18 57 29.6**	**+0.5**
AGG				S	**Sn**	**18 58 00.0**	**+1.6**
AGG	**Agios Georgios**	**2.41**	**117**	P	**Pn**	**18 57 30.7**	**+1.7**
EFP	**Efpalio**	**2.50**	**133**	P	**Pn**	**18 57 30.6**	**+0.3**
EFP	**Efpalio**	**2.50**	**133**	P	**Pn**	**18 57 31.8**	**+1.5**
VAY	**Valandovo**	**2.55**	**62**	*e*Pn	**Pb**	**18 57 34.4**	**-1.1**
KNT	**Kendrikon**	**2.71**	**67**	P	**Pn**	**18 57 34.1**	**+0.9**
DBRK	**Dubrovnik**	**2.73**	**337**	*e*Pn	**Pn**	**18 57 32.9**	**-0.5**
AXAR	**Agios Charalam**	**2.76**	**119**	P	**Pn**	**18 57 35.1**	**+1.2**
NEO	**Neokhori**	**2.93**	**106**	P	**Pn**	**18 57 37.4**	**+1.1**
STON	**Ston**	**3.05**	**333**	*e*Pn	**Pn**	**18 57 37.1**	**-0.8**
LSTV	**Lastovo**	**3.30**	**323**	*e*Pn	**Pn**	**18 57 40.1**	**-1.2**
MAKA	**Makarska**	**3.66**	**329**	*e*Pn	**Pn**	**18 57 46.1**	**-0.2**
RICI	**Ricice**	**3.80**	**332**	*e*Pn	**Pn**	**18 57 47.8**	**-0.4**
KIJV	**Kijevo**	**4.51**	**329**	*e*Pn	**Pn**	**18 57 57.5**	**-0.4**
ZIRJ	**Zirje**	**4.56**	**321**	*e*Pn	**Pn**	**18 57 57.9**	**-0.7**
ZIRJ					Sn	**18 58 48.7**	**-3.3**
MORI	**Morici**	**4.69**	**323**	*e*Pn	**Pn**	**18 58 00.3**	**-0.1**
DUGI	**Dugi Otok**	**5.10**	**320**	*e*Pn	**Pn**	**18 58 05.6**	**-0.4**
UDBI	**Udbina**	**5.20**	**328**	*e*Pn	**Pn**	**18 58 07.9**	**+0.4**
VIRC	**Vir**	**5.32**	**322**	*e*Pn	**Pn**	**18 58 09.3**	**+0.2**
NVLJ	**Novalja**	**5.61**	**323**	*e*Pn	**Pn**	**18 58 12.8**	**-0.2**
BOJS	**Bojanci**	**6.21**	**331**	*e*Pn	**Pn**	**18 58 21.6**	**+0.2**
GBRS	**Gornja Briga**	**6.41**	**328**	*i* Pn	**Pn**	**18 58 24.3**	**+0.3**
GBAS	**Gorenja Brezov**	**6.89**	**329**	*i* Pn	**Pn**	**18 58 30.4**	**-0.1**
SOKA	**Soboth**	**7.30**	**335**	*e*Pn	**Pn**	**18 58 36.2**	**-0.1**
	comp=E,0.8nm,0.3s						
SOKA				*e*Sn	**Sn**	**18 59 53.1**	**-5.9**
	comp=E,1.1nm,0.3s						
OBKA	**Obir**	**7.33**	**332**	*e*Pn	**Pn**	**18 58 37.3**	**+0.6**
	comp=E,1.1nm,0.3s						
OBKA				*e*Sn	**Sn**	**18 59 56.1**	**-3.5**
	comp=E,1.9nm,0.3s						
ABTA	**Abfaltersbach**	**8.35**	**324**	*e*Sn	**Sn**	**19 00 19.8**	**-5.0**
	comp=E,2.9nm,0.6s						
MOA	**Molln**	**8.58**	**335**	*e*Pn	**Pn**	**18 58 54.7**	**+0.8**
	comp=E,0.9nm,0.3s						
BIOA	**Bad Ischl, Aus**	**8.66**	**332**	*e*

	baz=198,slow=20							
DAV				LR	LR	19 00 19.8		
	comp=Z,193nm,18.4s,baz=146,slow=43							
	181nm,0.4s							
FAKI	**Fak Fak**	**8.74**	**131**	Pn	**Pn**	**18 59 27.1**	**-1.4**	
KKM	**Kota Kinabalu**	**9.91**	**289**	Pn	**Pn**	**18 59 44.0**	**-0.6**	
TWG	**Pinlang**	**20.35**	**348**	P	**P**	**19 01 56.9**	**-1.7**	
TWG				IAmb	IAmb	19 02 31.3		
	comp=Z,40nm,1.5s							
YULB	**Yu-li**	**20.86**	**349**	P	**P**	**19 01 58.8**	**-5.3**	
YULB				IAmb	IAmb	19 02 09.1		
	comp=Z,21nm,1.2s							
TPUB	**Ta-pu**	**20.91**	**347**	P	**P**	**19 02 01.6**	**-3.1**	
TPUB				IAmb	IAmb	19 02 31.9		
	comp=Z,28nm,1.2s							
YHNB	**Yeheng**	**22.09**	**350**	P	**P**	**19 02 13.0**	**-4.4**	
YHNB				IAmb	IAmb	19 02 16.9		
	comp=Z,29nm,1.3s							
KNMB	**Chin-men Tao**	**22.61**	**343**	P	**P**	**19 02 22.3**	**-0.5**	
KNMB				IAmb	IAmb	19 02 37.2		
	comp=Z,30nm,1.4s							
WB0	**Warramunga Arr**	**24.06**	**159**	P	**P**	**19 02 37.7**	**+0.2**	
WB0				IAmb	IAmb	19 02 41.2		
	comp=Z,8.8nm,0.8s							
WRAB	**Tennant Creek**	**24.20**	**160**	P	**P**	**19 02 37.8**	**-1.0**	
WRAB				IAmb	IAmb	19 02 55.5		
	comp=Z,8.7nm,0.8s							
WRA	**Warramunga Arr**	**24.20**	**160**	P	**P**	**19 02 40.4**	**+1.5**	
WRA	**Warramunga Arr**	**24.20**	**160**	P	**P**	**19 02 40.6**	**+1.8**	
	comp=Z,4.9nm,0.8s,baz=338,slow=11,SNR=15							
	comp=Z,4.9nm,0.8s							
WB2	**Warramunga Arr**	**24.20**	**160**	P	**P**	**19 02 36.9**	**-2.0**	
WB2				IAmb	IAmb	19 02 55.5		
	comp=Z,11nm,0.8s							
PSA00	**Pilbara Seismi**	**24.91**	**193**	P	**P**	**19 02 44.3**	**-0.9**	
AS31	**Alice Springs**	**27.55**	**163**	P	**P**	**19 03 07.8**	**-1.3**	
ASAR	**Alice Springs**	**27.55**	**163**	P	**P**	**19 03 07.1**	**-2.0**	
ASAR	**Alice Springs**	**27.55**	**163**	P	**P**	**19 03 11.9**	**+2.8**	
	comp=Z,0.7nm,0.8s,baz=344,slow=6.6,SNR=14							
	comp=Z,0.7nm,0.8s							
KSRS	**Korea Array**	**34.52**	**3**	P	**P**	**19 04 11.8**	**+1.6**	
	comp=Z,0.7nm,0.8s,baz=180,slow=8.9,SNR=3.1							
	comp=Z,0.7nm,0.8s							
BBOO	**Buckleboo**	**36.80**	**165**	P	**P**	**19 04 30.7**	**+0.7**	
EIDS	**Eidsvold**	**37.35**	**140**	P	**P**	**19 04 35.3**	**+0.5**	
EIDS				IAmb	IAmb	19 05 02.4		
	comp=Z,16nm,1.4s							
STKA	**Stephens Creek**	**37.71**	**158**	P	**P**	**19 04 38.7**	**+1.0**	
STKA	**Stephens Creek**	**37.71**	**158**	P	**P**	**19 04 39.6**	**+1.9**	
	comp=Z,1.7nm,0.4s,baz=325,slow=8.4,SNR=5.3							
	comp=Z,1.7nm,0.4s							
ARMA	**Armidale**	**41.35**	**145**	P	**P**	**19 05 07.6**	**-0.7**	
ARMA				IAmb	IAmb	19 05 45.0		
	comp=Z,7.3nm,1.1s							
ULN	**Ulaanbaatar**	**47.63**	**343**	P	**P**	**19 05 59.2**	**+0.8**	
ULN				IAmb	IAmb	19 06 22.0		
	comp=Z,6.9nm,1.4s							
SONM	**Songino Array**	**47.80**	**343**	P	**P**	**19 05 58.5**	**-1.1**	
SONM	**Songino Array**	**47.80**	**343**	P	**P**	**19 06 01.3**	**+1.7**	
	comp=Z,0.5nm,0.7s,baz=160,slow=9.2,SNR=4.4							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**57.67**	**326**	P	**P**	**19 07 12.6**	**+0.1**	
MKAR	**Makanchi Array**	**57.67**	**326**	P	**P**	**19 07 13.7**	**+1.1**	
	comp=Z,0.3nm,0.5s,baz=126,slow=7.8,SNR=4.5							
	comp=Z,0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**60.89**	**334**	P	**P**	**19 07 36.2**	**+1.6**	
	comp=Z,0.5nm,0.6s,baz=122,slow=11,SNR=2.0							
	comp=Z,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**61.90**	**328**	P	**P**	**19 07 43.5**	**+1.9**	
	comp=Z,0.7nm,0.6s,baz=125,slow=5.9,SNR=11							
	comp=Z,0.7nm,0.6s							
KURK	**Kurchatov**	**61.91**	**328**	P	**P**	**19 07 41.1**	**-0.5**	
TXAR	**Lajitas Array**	**123.01**	**52**	PKP	**PKiKP**	**19 16 21.6**	**+1.9**	
	comp=Z,0.2nm,0.6s,baz=254,slow=3.4,SNR=1.8							

IDC ***18*** *19:59:22.3±8.7, 32˚.27N×48˚.56E, h0km, mb3.7/8, mbtmp3.7/8, MS3.3/2, Error ellipse: s-maj=173.4km s-min=30.2km az=10.0*

TEH ***18*** *18:59:22.5, 31˚.91N×48˚.72E, h16km±39km, ML3.5*

ISC 18 18:59:22.0±0.8, 31˚.90N±0˚.06×48˚.69E±0˚.06, h10km, n37, σ1°20/35, mb3.6/8, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHWZ	**Ahwaz**	**0.57**	**184**	Pg	**Pg**	**18 59 34.3**	**+1.2**
JHBN	**Jahan bin**	**1.71**	**78**	Pg	**Pb**	**18 59 53.8**	**0.0**
IKFM	**Kafar-mosalman**	**1.77**	**337**	Pg	**Pb**	**18 59 54.4**	**-0.1**
ZNGN	**Zangian**	**1.85**	**83**	Pn	**Pb**	**18 59 55.3**	**-0.9**
ABEH	**Behbahan**	**1.86**	**134**	Pn	**Pb**	**18 59 55.9**	**-0.3**
IDOB	**Doab**	**1.93**	**347**	Pn	**Pn**	**18 59 56.6**	**+1.4**
IPIR	**Pirpir**	**2.02**	**67**	Pn	**Pn**	**18 59 57.8**	**+1.3**
IBRJ	**Brojen**	**2.19**	**89**	Pn	**Pn**	**18 59 59.5**	**+0.7**
KLNJ	**Kolanjah**	**2.64**	**109**	Pn	**Pn**	**19 00 05.8**	**+0.9**
ILBA	**Ilam Banvizeh**	**2.71**	**310**	Pn	**Pn**	**19 00 06.5**	**+0.8**
IKLH	**Kolahrood**	**2.82**	**59**	Pn	**Pn**	**19 00 09.4**	**+2.0**
IGAR	**Gharneh**	**2.89**	**79**	Pn	**Pn**	**19 00 09.7**	**+1.3**
QAMS	**Qamsar**	**2.93**	**50**	Pn	**Pn**	**19 00 10.8**	**+1.9**
HAGD	**Aghdareh**	**2.94**	**7**	Pn	**Pn**	**19 00 10.5**	**+1.5**
IRAM	**Ramesheh**	**3.15**	**91**	Pn	**Pn**	**19 00 12.4**	**+0.6**
IZEF	**Zefreh**	**3.24**	**71**	Pn	**Pn**	**19 00 14.3**	**+1.2**
IQOM	**Qom**	**3.55**	**34**	Pn	**Pn**	**19 00 18.9**	**+1.5**
KRSH	**Karshahi**	**3.56**	**54**	Pn	**Pn**	**19 00 19.2**	**+1.7**
IRAZ	**Razeghan**	**3.65**	**16**	Pn	**Pn**	**19 00 20.7**	**+2.0**
ISFB	**Sefidab**	**3.86**	**50**	Pn	**Pn**	**19 00 22.2**	**+0.7**
IVRN	**Varamin**	**4.00**	**39**	Pn	**Pn**	**19 00 24.7**	**+1.2**
ANAR	**Anarak**	**4.45**	**72**	Pn	**Pn**	**19 00 30.3**	**+0.6**
IDMV	**Damavand**	**4.61**	**36**	Pn	**Pn**	**19 00 32.5**	**+0.5**
ILAS	**Lasjerd**	**4.98**	**45**	Pn	**Pn**	**19 00 37.9**	**+0.9**
IFIR	**Firoozkooh**	**5.04**	**41**	Pn	**Pn**	**19 00 39.1**	**+1.1**
IPRN	**Peran**	**5.29**	**34**	Pn	**Pn**	**19 00 42.7**	**+1.5**
TKDS	**Koohdasht(Taba**	**7.31**	**74**	Pn	**Pn**	**19 01 09.8**	**+0.8**
EIL	**Elat**	**12.02**	**263**	LR	LR	19 08 03.9	
	comp=Z,24nm,20.7s,baz=73,slow=44						
BVAR	**Borovoye Array**	**26.31**	**30**	P	**P**	**19 04 56.9**	**-0.8**
	1.4nm,0.5s,baz=222,slow=7.2,SNR=12						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**28.92**	**41**	P	**P**	**19 05 21.0**	**-0.1**
	0.4nm,0.5s,baz=241,slow=9.4,SNR=2.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**29.68**	**50**	P	**P**	**19 05 28.6**	**+0.6**
	0.4nm,0.8s,baz=234,slow=8.7,SNR=2.8						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**33.02**	**340**	P	**P**	**19 05 55.4**	**-1.7**
	0.4nm,0.4s,baz=145,slow=8.5,SNR=7.4						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**33.88**	**39**	P	**P**	**19 06 04.4**	**-0.3**
	0.3nm,0.4s,baz=260,slow=10,SNR=2.4						
	0.3nm,0.4s						
HFS	**Hagfors**	**36.49**	**331**	P	**P**	**19 06 25.4**	**-1.7**
	0.3nm,0.3s,baz=129,slow=10,SNR=7.8						
	0.3nm,0.3s						
SONM	**Songino Array**	**45.99**	**52**	P	**P**	**19 07 46.0**	**+0.5**
	0.2nm,0.5s,baz=282,slow=8.7,SNR=2.3						
	0.2nm,0.5s						
SPITS	**Spitsbergen Ar**	**48.49**	**352**	P	**P**	**19 08 03.5**	**-0.9**
	1.4nm,0.5s,baz=153,slow=8.1,SNR=8.8						
	1.4nm,0.5s						
LBTB	**Lobatse**	**60.74**	**204**	LR	LR	19 37 16.0	
	comp=Z,138nm,20.9s,baz=76,slow=37						

IDC ***18*** *19:03:14.8±0.9, 36˚.66N×140˚.61E, h0km, mb3.5/13, mbtmp3.5/17, ML3.3/4, Error ellipse: s-maj=19.4km s-min=15.9km az=118.0*

JMA ***18*** *19:03:17.0±0.0, 36˚.69N±0˚.08×140˚.6E±0˚.1, h9km, MV3.7/20, NORTHERN IBARAKI PREF*

JMA Felt III J1 at NORTHERN IBARAKI PREF .

ISC 18 19:03:16.6±0.8, 36˚.68N±0˚.03×140˚.58E±0˚.04, h12km±5km, n37, σ0°51/41, mb3.5/13, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.07**	**189**	↓*i*P	**Pg**	**19 03 19.2**	**+0.3**
JHO				↓S	**Sg**	**19 03 20.9**	**+0.1**
JHYU	**Hitachinakayam**	**0.34**	**179**	*i*P	**Pb**	**19 03 24.0**	**-0.5**
JHYU				S	**Sb**	**19 03 29.0**	**-0.8**
JFFD	**Fukushimafurud**	**0.41**	**358**	*i*P	**Pg**	**19 03 24.8**	**0.0**
JFFD				S	**Sg**	**19 03 30.2**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.46**	**22**	*i*P	**Pb**	**19 03 25.7**	**-1.0**
ONAJ				S	**Sg**	**19 03 32.0**	**+0.2**
JYT	**Yasato**	**0.55**	**215**	*i*P	**Pb**	**19 03 27.7**	**-0.4**
JYT				*e*S	**Sb**	**19 03 35.3**	**-0.6**
JSB	**Shiboa**	**0.61**	**299**	*i*P	**Pb**	**19 03 29.1**	**-0.1**
JSB				*e*S	**Sb**	**19 03 37.5**	**-0.2**
JFK	**Kawauchi**	**0.73**	**19**	↓*i*P	**Pg**	**19 03 30.3**	**-0.4**
JFK				↓*e*S	**Sg**	**19 03 40.1**	**-0.2**
JOTO	**OTAMA OYAMA**	**0.90**	**347**	*i*P	**Pg**	**19 03 33.8**	**-0.2**
JOTO				S	**Sg**	**19 03 45.4**	**-0.4**
JAG	**Ashikaga**	**0.94**	**255**	*i*P	**Pg**	**19 03 34.1**	**-0.7**
JAG				*e*S	**Sg**	**19 03 46.7**	**-0.4**
JFY	**Yanaizu**	**1.01**	**316**	*i*P	**Pg**	**19 03 35.5**	**-0.5**
JFY				*e*S	**Sb**	**19 03 49.4**	**0.0**
MJAR	**Matsushiro Arr**	**1.91**	**267**	Pn	**Pn**	**19 03 49.7**	**+0.6**
	3.4nm,0.3s,baz=84,slow=14,SNR=209						
MJAR				Sn	**Sn**	**19 04 13.8**	**+0.7**
	7.7nm,0.3s,baz=109,slow=20,SNR=12						
JHJ	**Hachijo jima 2**	**3.61**	**191**	Pn	**Pn**	**19 04 12.1**	**-0.2**
	8.0nm,0.3s,baz=68,slow=18,SNR=1.6						
JHJ				Sn	**Sn**	**19 04 55.1**	**+0.2**
	5.8nm,0.3s,baz=49,slow=20,SNR=1.6						
	156nm,1.0s						
ASAJ	**Asahikawa**	**7.59**	**11**	Pn	**Pn**	**19 05 06.7**	**-0.3**
	0.6nm,0.3s,baz=221,slow=19,SNR=11						
ASAJ				Sn	**Sn**	**19 06 33.0**	**+0.1**
	0.1nm,0.3s,baz=94,slow=19,SNR=1.6						
	2.0nm,0.4s						
JNU	**Nakatsue**	**8.72**	**249**	Pn	**Pn**	**19 05 22.6**	**0.0**
	0.3nm,0.3s,baz=323,slow=19,SNR=7.2						
	1.1nm,0.4s						
KSRS	**Korea Array**	**10.15**	**278**	Pn	**Pn**	**19 05 42.6**	**+0.5**
	0.1nm,0.3s,baz=91,slow=14,SNR=3.1						
	0.9nm,0.9s						
SONM	**Songino Array**	**27.44**	**305**	P	**P**	**19 09 02.1**	**-0.2**
	0.4nm,0.7s,baz=116,slow=12,SNR=3.2						
	0.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.55**	**119**	T	T	19 38 56.7	
	baz=312,slow=75,SNR=182						
H11N1	**WAKE ISLAND Hy**	**28.55**	**119**	T	T	19 38 57.2	
	baz=312,slow=75,SNR=190						
H11N3	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	19 38 58.0	
	baz=312,slow=75,SNR=164						
H11S1	**WAKE ISLAND Hy**	**29.23**	**121**	T	T	19 39 47.6	
	baz=314,slow=76,SNR=526						
H11S3	**WAKE ISLAND Hy**	**29.23**	**121**	T	T	19 39 47.5	
	baz=314,slow=76,SNR=233						
H11S2	**WAKE ISLAND Hy**	**29.25**	**121**	T	T	19 39 48.7	
	baz=314,slow=76,SNR=344						
ZALV	**Zalesovo Beam**	**41.66**	**313**	P	**P**	**19 11 04.9**	**+0.2**
	0.6nm,0.5s,baz=92,slow=7.9,SNR=3.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**43.74**	**302**	P	**P**	**19 11 22.4**	**+0.6**
	0.1nm,0.6s,baz=93,slow=10,SNR=1.4						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**45.70**	**308**	P	**P**	**19 11 36.7**	**-0.5**
	1.0nm,0.5s,baz=84,slow=7.8,SNR=8.8						
	1.0nm,0.5s						
ILAR	**Eielson Array**	**50.15**	**32**	P	**P**	**19 12 12.1**	**+0.5**
	0.5nm,1.0s,baz=273,slow=6.9,SNR=2.6						
	0.5nm,1.0s						
BVAR	**Borovoye Array**	**50.32**	**312**	P	**P**	**19 12 14.1**	**+1.1**
	0.3nm,0.5s,baz=60,slow=7.0,SNR=2.0						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**56.62**	**187**	P	**P**	**19 12 58.9**	**-0.6**
	0.7nm,0.8s,baz=1.8,slow=7.4,SNR=2.5						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**60.35**	**187**	P	**P**	**19 13 25.3**	**-0.2**
	0.3nm,0.8s,baz=2.2,slow=7.5,SNR=2.6						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**64.45**	**30**	P	**P**	**19 13 52.8**	**+0.3**
	0.1nm,0.6s,baz=304,slow=6.6,SNR=2.3						
	0.1nm,0.6s						
FINES	**FINESS Array B**	**68.82**	**332**	P	**P**	**19 14 19.5**	**-0.9**
	1.4nm,0.9s,baz=59,slow=8.4,SNR=3.6						
	1.4nm,0.9s						
HFS	**Hagfors**	**74.14**	**335**	P	**P**	**19 14 52.7**	**+0.2**
	1.6nm,0.9s,baz=92,slow=9.1,SNR=1.5						
	1.6nm,0.9s						
NOA	**NORSAR Array B**	**74.26**	**337**	P	**P**	**19 14 54.0**	**+0.7**
	0.1nm,0.4s,baz=48,slow=4.9,SNR=1.4						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**78.39**	**45**	P	**P**	**19 15 18.1**	**+0.7**
	0.3nm,0.7s,baz=309,slow=3.0,SNR=1.8						
	0.3nm,0.7s						
H03N2	**Juan Fernandez**	**147.65**	**96**	T	T	22 07 54.2	
	baz=291,slow=76,SNR=33						
H03N3	**Juan Fernandez**	**147.66**	**96**	T	T	22 07 54.0	
	baz=291,slow=76,SNR=48						
H03N1	**Juan Fernandez**	**147.66**	**96**	T	T	22 07 54.1	
	baz=291,slow=76,SNR=34						

IDC ***18*** *19:19:52.9±2.0, 30˚.31S×177˚.70W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=48.8km s-min=24.9km az=103.0*

ISC 18 19:19:57.3±1.8, 30˚.3S±0˚.1×177˚.6W±0˚.3, h33km, n6, σ0°29/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.06**	**347**	Pn	**Pn**	**19 20 15.7**	**-0.2**
	89nm,0.3s,baz=219,slow=23,SNR=2.0						
RAO				Sn	**Sb**	**19 20 30.9**	**+0.1**
	253nm,0.3s,baz=99,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**43.43**	**267**	P	**P**	**19 27 57.4**	**+0.2**
	0.3nm,0.5s,baz=106,slow=7.1,SNR=12						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.41**	**272**	P	**P**	**19 28 04.9**	**-0.2**
	0.8nm,0.7s,baz=112,slow=8.0,SNR=11						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**117.94**	**310**	PKP	**PKPdf**	**19 38 39.9**	**-0.3**
	0.7nm,1.1s,baz=101,slow=2.9,SNR=2.9						
BVAR	**Borovoye Array**	**126.55**	**316**	PKP	**PKiKP**	**19 38 57.3**	**+0.3**
	0.2nm,0.4s,baz=116,slow=3.4,SNR=2.0						
FINES	**FINESS Array B**	**145.15**	**340**	PKPbc	**PKPdf**	**19 39 30.7**	**+0.1**
	0.9nm,0.3s,baz=57,slow=4.8,SNR=29						

IDC ***18*** *19:21:44.8±0.7, 23˚.65N×121˚.22E, h0km, mb3.7/12, mbtmp3.8/15, ML3.6/3, MS3.3/8, Error ellipse: s-maj=21.5km s-min=14.4km az=64.0*

BJI ***18*** *19:21:48.4±0.0, 23˚.90N×121˚.10E, h22km, mb3.7/16, mB4.6/7, ML3.9/5, Ms3.9/1, Ms7 4.0/1*

TAP ***18*** *19:21:49.7, 23˚.86N×121˚.10E, h28km, ML4.6, B*

ASIES ***18*** *19:21:49.7, 23˚.86N×121˚.10E, h28km, ML4.6, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.94; $M_{\theta\theta}$-1.23; $M_{\phi\phi}$-0.83; $M_{r\theta}$-2.97; $M_{\theta\phi}$-1.48; $M_{\phi r}$-7.43; Fault plane solution: $M_0$8.46050×10^{21} NP1: ϕ_s203.61000°, δ81.44000°, λ81.98000°. NP2:ϕ_s67.04000°, δ11.71000°, λ132.83000°. Principal axes: T Plg52.9050°, Azm104.1940°; N Plg7.9310°, Azm204.8100°; P Plg35.9540°, Azm300.6100°;*

JMA ***18*** *19:21:50.7±0.1, 23˚.9N±0˚.3×12˚.1E±˚, h27km±2km, MV4.1/25, TAIWAN REGION*

NIED ***18*** *19:21:50.7, 23˚.86N×121˚.16E, h27km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.08; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-0.55; $M_{r\theta}$-0.48; $M_{\theta\phi}$0.08; $M_{\phi r}$-0.94; Fault plane solution: $M_0$1.19000×10^{15} NP1:ϕ_s36.00000°, δ89.00000°, λ-119.00000°. NP2:ϕ_s303.00000°, δ29.00000°, λ-3.00000°.*

ISC 18 19:21:50.0±0.6, 23˚.85N±0˚.01×121˚.10E±0˚.01, h27km±4km, n234, σ0°84/322, mb3.7/14, MS3.7/5, 37C-62D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VWDT	**VWDT**	**0.10**	**157**	↓*i*P	**Pn**	**19 21 55.6**	**-0.4**
	baz=162						
VWDT				*i* S	**Sb**	**19 21 59.2**	**+0.9**
	baz=162						
WUSB	**Renai**	**0.14**	**8**	↑*i*P	**Pb**	**19 21 55.3**	**-0.2**
	baz=16						
WUSB				*i* S	**Sb**	**19 21 58.7**	**-0.4**
	baz=16						
SSLB	**Suanglung**	**0.14**	**244**	P	**Pb**	**19 21 55.2**	**-0.1**
SSLB	**Suanglung**	**0.14**	**244**	↑*i*P	**Pb**	**19 21 55.3**	**-0.1**
	baz=240						
SSLB				*i* S	**Sb**	**19 21 59.1**	**+0.1**
	baz=240						
SMLT	**Sun Moon Lake**	**0.18**	**280**	↑*i*P	**Pb**	**19 21 55.9**	**+0.1**
	baz=276						
SMLT				S	**Sb**	**19 22 00.2**	**+0.4**
	baz=276						
WPL	**Puli Township**	**0.21**	**321**	↑*i*P	**Pb**	**19 21 55.9**	**-0.1**
	baz=318						
WPL				S	**Sb**	**19 21 60.0**	**-0.1**
	baz=318						
CHGB	**Renai**	**0.22**	**19**	↑*i*P	**Pb**	**19 21 56.2**	**-0.2**
	baz=25						
CHGB				S	**Sb**	**19 22 00.8**	**+0.1**
	baz=25						
TYC	**Yuchr**	**0.23**	**284**	↑*i*P	**Pb**	**19 21 56.2**	**0.0**
	baz=281						
TYC				S	**Sb**	**19 22 00.8**	**+0.4**
	baz=281						
DPDB	**Guoxing**	**0.24**	**319**	↑*i*P	**Pb**	**19 21 56.4**	**0.0**
	baz=316						
DPDB				S	**Sb**	**19 22 01.0**	**+0.2**
	baz=316						
WCS	**Beigang Elemen**	**0.27**	**320**	↑*i*P	**Pb**	**19 21 56.7**	**0.0**
	baz=312						
WCS				*i* S	**Sb**	**19 22 01.4**	**+0.1**
	baz=312						
WARBT	**Fenglin Townsh**	**0.30**	**116**	↓*i*P	**Pb**	**19 21 57.1**	**0.0**
	baz=119						
WARBT				S	**Sb**	**19 22 02.3**	**+0.3**
	baz=119						
ESL	**Shilin**	**0.31**	**97**	↓*i*P	**Pb**	**19 21 57.5**	**+0.2**
	baz=91						
ESL				S	**Sb**	**19 22 02.5**	**+0.1**
	baz=91						
WHF	**Hehuan Shan**	**0.33**	**28**	↑P	**Pb**	**19 21 57.8**	**-0.2**
	baz=29						
WHF				*i* S	**Sb**	**19 22 03.0**	**-0.5**
	baz=29						
LXIB	**Xiulin Townshi**	**0.34**	**60**	↓*i*P	**Pb**	**19 21 57.6**	**-0.3**
	baz=57						
LXIB				S	**Sb**	**19 22 02.8**	**-0.4**
	baz=57						
WJS	**Zhushan**	**0.34**	**265**	↑*i*P	**Pn**	**19 21 58.3**	**-0.9**
	baz=263						
WJS				*i* S	**Sn**	**19 22 04.3**	**-0.9**
	baz=263						
WNT	**Mingjian**	**0.38**	**274**	↑*i*P	**Pn**	**19 21 59.0**	**-0.8**
	baz=272						
WNT				*i* S	**Sn**	**19 22 05.5**	**-0.7**
	baz=272						
ETM	**Tongmen**	**0.38**	**72**	↓*i*P	**Pb**	**19 21 58.2**	**-0.2**
	baz=75						
ETM				S	**Sb**	**19 22 04.1**	**0.0**
	baz=75						
WNT1	**Nantou City**	**0.39**	**278**	↑*i*P	**Pn**	**19 21 59.1**	**-0.7**
	baz=276						
WNT1				*i* S	**Sn**	**19 22 05.8**	**-0.6**
	baz=276						
EHY	**Hungye**	**0.40**	**149**	↓*i*P	**Pb**	**19 21 59.0**	**+0.3**
	baz=146						
EHY				S	**Sb**	**19 22 05.1**	**+0.4**
	baz=146						
TDCB	**Techi**	**0.41**	**8**	↑*i*P	**Pb**	**19 21 58.6**	**-0.4**
	baz=6.0						
TDCB				S	**Sb**	**19 22 04.4**	**-0.6**
	baz=6.0						
TWT	**Tachien**	**0.41**	**10**	↑*i*P	**Pb**	**19 21 58.6**	**-0.4**
	baz=6.0						
TWT				S	**Sb**	**19 22 04.5**	**-0.6**
	baz=6.0						
WWF	**Wufeng**	**0.41**	**298**	↑*i*P	**Pn**	**19 21 59.7**	**-0.5**
	baz=286						
WWF				S	**Sn**	**19 22 06.6**	**-0.4**
	baz=286						
FUSS	**Fushou**	**0.42**	**19**	↑*i*P	**Pb**	**19 21 58.9**	**-0.3**
	baz=21						
FUSS				S	**Sb**	**19 22 05.2**	**-0.2**
	baz=21						
TEGC	**Jichi Village**	**0.43**	**109**	↓*i*P	**Pn**	**19 21 59.6**	**-0.8**
	baz=111						
TEGC				S	**Sn**	**19 22 07.2**	**-0.2**
	baz=111						
SHUL	**Shoufeng**	**0.43**	**98**	↓*i*P	**Pn**	**19 21 59.6**	**-0.8**
	baz=98						
SHUL				*i* S	**Sn**	**19 22 06.2**	**-1.2**
	baz=98						
ALS	**Alishan**	**0.43**	**218**	↑*i*P	**Pb**	**19 21 59.7**	**+0.3**
	baz=219						
ALS				*i* S	**Sb**	**19 22 06.5**	**+0.7**
	baz=219						
CHN5	**Tsauling**	**0.46**	**237**	↑*i*P	**Pb**	**19 21 60.0**	**+0.3**
	baz=238						
CHN5				*i* S	**Sn**	**19 22 07.3**	**-1.0**
	baz=238						
HGSD	**Ruisui**	**0.47**	**140**	↓*i*P	**Pn**	**19 22 00.3**	**-0.6**
	baz=144						
HGSD				*i* S	**Sn**	**19 22 07.5**	**-0.8**
	baz=144						
HWA	**Hwalien**	**0.48**	**75**	↓*i*P	**Pn**	**19 22 00.3**	**-0.8**
	baz=78						
HWA				S	**Sn**	**19 22 07.8**	**-0.9**
	baz=78						
TCU	**Taichung**	**0.49**	**308**	↓P	**Pn**	**19 22 00.7**	**-0.5**
	baz=305						
TCU				*i* S	**Sn**	**19 22 08.6**	**-0.3**
	baz=305						
WYL	**Yuanlin Townsh**	**0.49**	**283**	↑*i*P	**Pn**	**19 22 00.7**	**-0.5**
	baz=280						
WYL				S	**Sn**	**19 22 08.6**	**-0.2**
	baz=280						
YULB	**Yu-li**	**0.49**	**158**	P	**Pb**	**19 22 00.4**	**+0.2**
**YUL

WRL				eS	Sn	19 22 13.6	+0.4				
	baz=273										
ELDTW	Lidau	0.66	186	⇓iP	Pn	19 22 03.3	-0.4				
	baz=197										
WTK	Tuku	0.67	256	eP	Pb	19 22 03.1	0.0				
WTK	baz=256			S	Sn	19 22 13.7	+0.3				
	baz=256										
RLNB	Erlin	0.68	274	⇓P	Pn	19 22 03.4	-0.4				
	baz=272										
RLNB				eS	Sn	19 22 13.4	-0.1				
	baz=272										
CHN4	Tsaushan	0.68	223	⇓P	Pb	19 22 03.3	0.0				
	baz=223										
TPUB	Ta-pu	0.70	218	P	Pn	19 22 04.1	0.0				
TPUB	Ta-pu	0.70	218	⇓eP	Pb	19 22 03.5	-0.1				
	baz=219										
TPUB				S	Sn	19 22 13.9	-0.1				
	baz=219										
EHD	Haiduan	0.71	172	⇓iP	Pn	19 22 04.1	-0.2				
	baz=177										
EHD				eS	Sn	19 22 13.8	-0.5				
	baz=177										
CHY	Chiayi	0.71	240	eP	Pn	19 22 04.4	+0.1				
	baz=240										
CHKH	Chenggong	0.71	157	eP	Pn	19 22 04.3	0.0				
	baz=144										
NMLH	Miaoli	0.74	338	⇓iP	Pn	19 22 05.1	+0.4				
	baz=335										
NMLH				eS	Sn	19 22 16.3	+1.2				
	baz=335										
STYH	Taoyuan	0.74	204	⇓eP	Pn	19 22 04.5	-0.2				
	baz=212										
STYH				S	Sn	19 22 14.6	-0.4				
	baz=212										
WTCT	Ta-ch'eng	0.75	271	⇓P	Pn	19 22 04.3	-0.5				
	baz=270										
WTCT				S	Sn	19 22 15.6	+0.4				
	baz=270										
WTP	Ta-pu	0.75	216	eP	Pb	19 22 04.3	-0.2				
	baz=222										
WTP				S	Sn	19 22 15.0	-0.4				
	baz=222										
STYT	Tauyuan	0.75	205	⇓iP	Pn	19 22 04.9	-0.1				
	baz=213										
STYT				iS	Sn	19 22 15.3	-0.2				
	baz=213										
EAHA	Aohua	0.76	51	eP	Pn	19 22 04.3	-0.7				
	baz=61										
ECS	Chishang	0.76	171	⇓iP	Pn	19 22 05.2	+0.2				
	baz=176										
ECS				eS	Sn	19 22 16.4	+0.8				
	baz=176										
NFF	Wufeng Townshi	0.78	1	eP	Pn	19 22 05.0	-0.4				
	baz=5.0										
NFF				eS	Sn	19 22 16.6	+0.4				
	baz=5.0										
NSTT	Nanjuang	0.78	354	⇓iP	Pn	19 22 05.5	+0.2				
	baz=353										
NSTT				iS	Sn	19 22 16.0	-0.2				
	baz=353										
LATG	Datong	0.79	30	⇑P	Pb	19 22 04.8	-0.4				
	baz=38										
CHKT	Chengkung	0.79	162	⇓P	Pn	19 22 05.5	+0.1				
	baz=149										
LIOB	Emei	0.80	355	⇓iP	Pn	19 22 05.8	+0.2				
	baz=353										
LIOB				S	Sn	19 22 17.5	+1.0				
	baz=353										
WMLT	Mailiao	0.80	267	eP	Pb	19 22 05.1	-0.3				
	baz=258										
WMLT				eS	Sn	19 22 17.0	+0.4				
	baz=258										
TWK	Hsinying	0.81	224	P	Pb	19 22 05.4	-0.1				
	baz=233										
TWK				S	Sn	19 22 17.4	+0.5				
	baz=233										
ENA	Nanau	0.82	46	P	Pn	19 22 05.5	-0.4				
	baz=41										
WSF	Szhu	0.83	255	⇓iP	Pb	19 22 05.5	-0.4				
	baz=255										
WSF				eS	Sn	19 22 17.4	+0.1				
	baz=255										
SNST	Tainan City	0.83	221	eP	Pn	19 22 06.0	-0.1				
	baz=229										
SNST				eS	Sn	19 22 18.6	+1.1				
	baz=229										
CHN1	Nanshi	0.84	218	eP	Pn	19 22 06.0	-0.1				
	baz=219										
CHN1				eS	Sn	19 22 18.4	+0.8				
	baz=219										
YHNB	Yeheng	0.85	17	P	Pn	19 22 06.5	+0.1				
YHNB	Yeheng	0.85	17	⇑P	Pn	19 22 06.1	-0.2				
	baz=16										
NJN	Zhunan	0.85	346	⇓P	Pn	19 22 06.5	+0.2				
	baz=344										
NJN				eS	Sn	19 22 18.6	+0.6				
	baz=344										
NSK	Sanguang	0.86	16	⇑P	Pn	19 22 06.2	-0.2				
	baz=10.0										
EWUT	Wuta	0.86	46	eP	Pn	19 22 06.0	-0.3				
	baz=44										
WSL	Shuilin Townsh	0.86	248	eP	Pn	19 22 06.4	0.0				
	baz=248										
NJD	Zhudong	0.88	359	eP	Pn	19 22 07.4	+0.8				
	baz=357										
NJD				eS	Sn	19 22 20.1	+1.5				
	baz=357										
ENTT	Nioudou	0.90	28	⇑P	Pb	19 22 06.9	0.0				
	baz=29										
ENTT				eS	Sn	19 22 19.8	+0.8				
	baz=29										
ICHU	Yijhu	0.90	237	⇓eP	Pb	19 22 07.2	+0.2				
	baz=238										
ICHU				eS	Sn	19 22 20.7	+1.8				
	baz=238										
SGST	Jiashian	0.90	212	eP	Pn	19 22 06.1	-0.8				
	baz=224										
SGST				eS	Sn	19 22 19.6	+0.6				
	baz=224										
HSN1	Hsinchu	0.93	356	⇓iP	Pb	19 22 07.6	+0.1				
	baz=353										
HSN1				eS	Sn	19 22 21.1	+1.4				
	baz=353										
LONT	Longtian	0.94	178	eP	Pb	19 22 07.8	+0.1				
	baz=179										
LONT				eS	Sn	19 22 21.5	+1.5				
	baz=179										
SBCB	Hsinchu	0.94	354	P	Pb	19 22 07.4	-0.4				
	baz=351										
SBCB				eS	Sn	19 22 20.9	+0.7				
	baz=351										
HSN	Hsinchu	0.95	353	⇓eP	Pb	19 22 08.3	+0.3				
	baz=353										
HSN				eS	Sn	19 22 21.9	+1.5				
	baz=353										
CHN8	Yiju	0.96	238	⇓iP	Pb	19 22 07.9	-0.1				
	baz=238										
NDS	Dongshan	0.96	36	eP	Pb	19 22 08.0	-0.1				
	baz=36										
ESAO	Su ao	0.99	43	eP	Pn	19 22 07.9	-0.3				
	baz=41										
NWLT	Wulai	0.99	22	eP	Pb	19 22 08.4	-0.3				
	baz=15										
FUSB	Fushanzhiwuyua	1.01	26	⇓eP	Pb	19 22 09.1	+0.2				
	baz=19										
TWE	Neicheng	1.01	31	⇑eP	Pb	19 22 08.9	0.0				
	baz=38										
TWC	Suao	1.02	42	eP	Pn	19 22 08.3	-0.3				
	baz=40										
CHN3	Shinhua	1.02	221	eP	Pb	19 22 09.7	+0.6				
	baz=234										
TWG	Pinlang	1.02	181	⇑iP	Pb	19 22 09.1	0.0				
	baz=174										
TWG				eS	Sb	19 22 23.6	+1.4				
	baz=174										
TWGBT	Beinan	1.03	181	P	Pb	19 22 09.3	+0.1				
TWGBT	Beinan	1.03	181	⇑iP	Pb	19 22 09.2	0.0				
	baz=174										
TWGBT				S	Sb	19 22 23.0	+0.7				
	baz=174										
SSHA	Shanhua	1.03	226	eP	Pb	19 22 09.6	+0.4				
	baz=227										
SCLT	Jiali	1.07	231	⇓P	Pb	19 22 09.8	-0.1				
	baz=219										
SCLT				eS	Sb	19 22 25.3	+1.9				
	baz=219										
SHHT	Tainan City	1.07	220	eP	Pb	19 22 10.4	+0.5				
	baz=221										
ILA	Ilan	1.09	33	eP	Pb	19 22 10.2	0.0				
	baz=39										
TTN	Taitung	1.09	178	eP	Pn	19 22 09.1	-0.5				
	baz=178										
SCST	Cishan	1.11	210	eP	Pb	19 22 10.9	+0.3				
	baz=211										
NCUH	Zhongli	1.11	4	⇓eP	Pb	19 22 10.2	-0.5				
	baz=3.0										
NCU	National Centr	1.12	4	eP	Pn	19 22 09.6	-0.3				
	baz=3.0										
TAI1	Yung-k'ang	1.14	225	eP	Pb	19 22 10.8	-0.1				
	baz=225										
EOS4	EOS4	1.15	76	eP	Pn	19 22 09.8	-0.2				
	baz=77										
NHW	Xinwu Township	1.15	358	eP	Pb	19 22 10.5	-0.8				
	baz=356										
NTY	Taoyuan	1.16	9	eP	Pb	19 22 10.8	-0.6				
	baz=8.0										
TSCK	Chigu Township	1.16	233	eP	Pn	19 22 10.4	-0.1				
	baz=234										
NHDH	Xindian Distri	1.17	19	⇓eP	Pb	19 22 11.5	-0.2				
	baz=2.0										
TATO	Taipei	1.18	18	P	Pb	19 22 11.8	+0.1				
TATO	Taipei	1.18	18	⇓P	Pb	19 22 11.4	-0.3				
	baz=360										
TATO				S	Sb	19 22 27.8	+1.3				
	baz=360										
SSD	Sandimen	1.18	201	eP	Pn	19 22 10.9	+0.2				
	baz=203										
EOS2	EOS2	1.18	61	eP	Pb	19 22 11.9	+0.2				
	baz=75										
TWM1	Shoushan	1.20	211	⇓eP	Pb	19 22 12.6	+0.5				
	baz=226										
EOS3	EOS3	1.20	68	eP	Pb	19 22 11.6	-0.3				
	baz=80										
TWA	Mucha	1.21	21	eP	Pb	19 22 12.1	-0.2				
	baz=6.0										
TWA				eS	Sb	19 22 29.6	+2.1				
	baz=6.0										
TSMG	Majia	1.21	200	eP	Pb	19 22 11.9	-0.4				
	baz=202										
LDUT	Ludao	1.22	164	⇑eP	Pn	19 22 10.8	-0.5				
	baz=152										
TAP	Taipei	1.24	17	eP	Pb	19 22 11.8	-1.0				
	baz=2.0										
EGS		1.25	37	eP	Pb	19 22 12.9	-0.1				
	baz=52										
SGLT	Jiouru	1.25	207	eP	Pb	19 22 13.7	+0.7				
	baz=208										
ECL	Taimali	1.25	186	⇑eP	Pn	19 22 12.1	+0.3				
	baz=174										
NHY	Taipei	1.26	20	eP	Pb	19 22 12.5	-0.6				
	baz=3.0										
TWS1	Kuanyinshan	1.28	13	⇓iP	Pb	19 22 12.9	-0.6				
	baz=355										
TSPT	Pingtung City	1.29	205	eP	Pb	19 22 14.7	+1.0				
	baz=207										
SNJT	Kaohsiung City	1.30	213	eP	Pb	19 22 13.5	-0.3				
	baz=228										
MASBT	Mashibuluo	1.30	199	⇑eP	Pb	19 22 13.6	-0.3				
	baz=201										
NTST	Danshui	1.35	14	eP	Pb	19 22 13.4	-1.2				
	baz=355										
YM01	YM01	1.36	18	⇓P	Pb	19 22 13.9	-1.0				
	baz=2.0										
YM01				eS	Sb	19 22 32.0	+0.1				
	baz=2.0										
NWF	Wu-fen Shan	1.36	27	eP	Pb	19 22 15.2	+0.2				
	baz=12										
NWF				eS	Sb	19 22 33.2	+1.1				
	baz=12										
WFSB	Wu-fen Shan	1.36	27	⇑eP	Pb	19 22 15.3	+0.4				
	baz=13										
WFSB				eS	Sb	19 22 33.3	+1.3				
	baz=13										
ANP	Anpu	1.39	16	eP	Pn	19 22 13.8	+0.1				
	baz=2.0										
YM08	YM08	1.41	19	eP	Pb	19 22 14.2	-1.4				
	baz=4.0										
TWB1	Santiao Chiao	1.41	35	eP	Pb	19 22 15.7	+0.1				
	baz=37										
TWB1				eS	Sb	19 22 33.7	+0.5				
	baz=37										
SXI1	Grass Mountain	1.43	30	eP	Pb	19 22 15.7	-0.4				
	baz=10.0										
TNOU	National Taiwa	1.43	25	eP	Pb	19 22 16.0	0.0				
	baz=7.0										
PHUB	P'eng-hu	1.44	257	⇓iP	Pn	19 22 14.1	-0.2				
	baz=269										
PHUB				S	Sn	19 22 32.6	+0.3				
	baz=269										
PNG	Penghu	1.44	259	⇓iP	Pn	19 22 14.2	-0.2				
	baz=260										
PNG				eS	Sn	19 22 32.8	+0.4				
	baz=260										
WDGT	Dungji	1.44	246	P	Pn	19 22 14.1	-0.3				
	baz=248										
WDGT				eS	Sb	19 22 33.6	-0.6				
	baz=248										
EAST	Anshuo	1.48	189	⇑eP	Pb	19 22 16.0	-0.9				
	baz=191										
TWY	Chenhua	1.49	18	eP	Pb	19 22 15.6	-1.4				
	baz=3.0										
TAW	Tawu	1.50	187	eP	Pn	19 22 16.0	+0.8				
	baz=174										
TAWH	Dawu Township	1.52	187	eP	Pn	19 22 16.1	+0.7				
	baz=174										
SCZT	Fangliau	1.54	197	eP	Pb	19 22 16.8	-1.1				
	baz=215										
TWP	Hsiaoliuchiu	1.64	204	eP	Pb	19 22 18.8	-0.8				
	baz=206										
SLIU	Shizi	1.65	190	eP	Pb	19 22 18.6	-1.2				
	baz=192										
VCHM	Qimei	1.66	248	eP	Pn	19 22 17.2	-0.1				
	baz=237										
VCHM				eS	Sb	19 22 39.3	-1.1				
	baz=237										
JYNG	Yonagunijimaku	1.79	70	P	Pn	19 22 19.8	+0.6				
JYNG				S	Sn	19 22 41.7	+0.6				
SMST	Manzhou Townsh	1.84	188	eP	Pn	19 22 20.7	+0.9				
	baz=190										
LAY	Lan-yu	1.85	167	eP	Pn	19 22 19.7	-0.4				
	baz=157										
YOJ	Yonaguni jima	1.85	70	P	Pn	19 22 20.6	+0.6				
YOJ	Yonaguni jima	1.85	70	⇑P	Pn	19 22 20.4	+0.4				
	baz=72										
YOJ				S	Sn	19 22 43.3	+0.8				
	baz=72										
YOJ	Yonaguni jima	1.85	70	P	Pn	19 22 20.5	+0.6				
YOJ				S	Sn	19 22 42.8	+0.3				
HEN	Hengchun	1.87	190	eP	Pn	19 22 20.6	+0.3				
	baz=192										
VWUC	VWUC	1.88	307	eP	Pn	19 22 19.3	-1.2				
	baz=317										
LYUB	Lan-yu	1.89	166	eP	Pn	19 22 19.4	-1.2				
	baz=157										
TWK1	Hengchun	1.92	188	eP	Pn	19 22 21.9	+0.9				
	baz=204										
TWKBT	Hengchun	1.92	188	eP	Pn	19 22 21.9	+0.9				
	baz=204										
TSEB	Hengchuen, Pin	1.95	185	eP	Pn	19 22 21.9	+0.5				
	baz=189										
PCYT	Pengchaiyu	1.98	26	eP	Pn	19 22 22.8	+1.0				
	baz=11										
PTMZ	Houxiangcun	2.16	304	⇓eP	Pn	19 22 23.2	-1.0				
	baz=302										
IRIF	Iriomote-Funau	2.45	78	P	Pn	19 22 29.2	+0.9				
IRIF				eS	Sn	19 22 57.8	+0.4				
HATJ	Hateruma jima	2.49	85	P	Pn	19 22 29.4	+0.7				
HATJ				eS	Sn	19 22 58.4	+0.2				
KNM	Kinmen	2.50	284	⇓eP	Pn	19 22 30.0	+1.1				
	baz=281										
MATB	Ma-tsu	2.52	336	⇓eP	Pn	19 22 28.0	-1.1				
	baz=332										
QZH	Quanzhou	2.53	296	⇓iPn	Pn	19 22 28.1	-1.2				
QZH				Sn	Sn	19 22 56.6	-2.7				
QZH				smax	smax						
	comp=N,800nm,0.3s										
QZH				smax	smax						
	comp=E,890nm,0.4s										
MSUT	Lienchiang	2.54	335	eP	Pn	19 22 28.4	-1.1				
	baz=332										
KNMB	Chin-men Tao	2.55	284	⇓eP	Pn	19 22 28.9	-0.7				
	baz=282										
JKRS	Kuro-shima	2.69	81	P	Pn	19 22 32.7	+1.1				
JKRS				S	Sn	19 23 04.5	+1.3				
JIJ	Ishigaki jima	2.83	79	P	Pn	19 22 33.8	+0.4				
JIJ				eS	Sn	19 23 06.5	-0.2				
MHZQ	Yeshan	2.92	320	eP	Pn	19 22 33.4	-1.3				
	baz=317										
LYJJ	Jianjiangzhen	2.95	336	⇓eP	Pn	19 22 33.9	-1.2				
	baz=333										
JISG	Ishigakijimahi	3.02	75	P	Pn	19 22 36.6	+0.4				
JISG				S	Sn	19 23 10.8	-0.7				
AXDP	Jialang	3.04	291	⇓eP	Pn	19 22 35.7	-0.6				
	baz=289										
ZPLA	Ao Xicun	3.06	272	⇓eP	Pn	19 22 36.2	-0.4				
	baz=270										
XPSS	Dashiqiu	3.17	345	eP	Pn	19 22 37.0	-1.2				
	baz=342										
DSXP	Dongshan	3.37	268	⇓eP	Pn	19 22 40.3	-0.5				
	baz=266										
JTJ	Tarama	3.38	76	P	Pn	19 22 41.8	+0.7				
JIRB	Irabujima	3.84	74	P	Pn	19 22 48.0	+0.6				
JIKM	Ikemajima	3.93	73	P	Pn	19 22 49.6	+1.0				
JMJ	Miyako jima 2	3.95	75	P	Pn	19 22 50.7	+1.9				
JMJ	Miyako jima 2	3.95	75	eP	Pn	19 22 49.2	+0.4				
	baz=75										
JMJ2	Miyako jima3	3.96	76	P	Pn	19 22 49.9	+0.8				
SXFK	Yanhouchang	4.03	310	eP	Pn	19 22 48.9	-1.1				
	baz=307										
JOGS	Gusukube	4.03	76	eP	Pn	19 22 51.0	+1.0				
JKE	Kume jima 2	5.72	63	P	Pn	19 23 14.0	+0.9				
JNTH	Nagotoyohara	6.81	66	eP	Pn	19 23 28.0	-0.2				
JOW	Kunigami	7.14	64	P	Pn	19 23 32.1	-0.6				
JOW	Kunigami	7.14	64	Pn	Pn	19 23 32.2	-0.5				
	7.8nm,0.3s,baz=178,slow=11,SNR=45										
JOW				Sn	Sn	19 24 52.2	-0.8				
	0.5nm,0.3s,baz=145,slow=24,SNR=0.9 20nm,0.4s										
GZH	Guangzhou	7.16	265	Pg	Pn	19 23 28.8	-4.2				
GZH				Sg	Sn	19 24 38.5	-15				
GZH				pmax	pmax						
	comp=Z,930nm,0.2s										
GZH				pmax	pmax						
	comp=Z,30nm,0.2s										
GZH				smax	smax						
	comp=N,120nm,0.9s										
GZH				smax	smax						
	comp=E,100nm,0.7s										
JYRO	Yoronjima	7.36	63	P	Pn	19 23 35.0	-0.8				
JTK	Tokunoshima	8.09	59	P	Pn	19 23 44.6	-1.1				
WHN	Wuhan	8.97	319	⇓P	Pn	19 23 57.5	-0.3				
TGY	Tagaytay City	9.70	181	LR	LR	19 28 19.4					
	comp=E,124nm,19.9s,baz=230,slow=42										
GYA	Guiyang	13.33	284	⇓P	Pn	19 24 54.8	-2.8				
GYA				pmax	pmax						
	comp=E,10.0nm,0.6s										
XAN	Xi'an	14.71	316	⇓P	P	19 25 24.0	+1.8				
XAN				pmax	pmax						
	comp=Z,11nm,0.8s										
KSRS	Korea Array	14.77	22	Pn	Pn	19 25 18.4	+1.3				
	comp=Z,0.1nm,0.3s,baz=199,slow=14,SNR=3.5										
KSRS				LR	LR	19 31 56.9					
	comp=Z,24nm,18.5s,baz=240,slow=41 comp=Z,1.1nm,0.9s										
KMI	Kunming	16.76	278	⇑P	Pn	19 25 43.8	+0.6				
KMI				pmax	pmax						
	comp=Z,4.0nm,1.2s										
DAV	Davao City (W)	17.23	165	LR	LR	19 32 08.4					
	comp=Z,60nm,18.8s,baz=329,slow=37										
PZH	PanZhiHua	17.72	283	P	Pn	19 25 45.8	-9.2				
PZH				pmax	pmax						
	comp=Z,10.0nm,1.3s										
PZH				pmax	pmax						
	comp=Z,220nm,4.7s										
LZH	Lanzhou	19.25	313	eP	Pn	19 26 15.8	+2.1				
LZH				pP	sP	19 26 24.1	+0.3				
LZH				pmax	pmax						
	comp=Z,18nm,1.4s										
MJAR	Matsushiro Arr	19.42	45	P	P	19 26 13.0	-1.3				
	baz=241,slow=9.3,SNR=4.5 comp=Z,0.7nm,0.7s										
CMAR	Chiang Mai Arr	21.34	260	P	P	19 26 35.3	+0.1				
	comp=Z,0.7nm,0.6s,baz=58,slow=8.1,SNR=8.1										
CMAR				LR	LR	19 35 27.2					
	comp=Z,40nm,18.1s,baz=90,slow=38 comp=Z,0.7nm,0.6s										
GTA	Gaotai	23.77	316	P	P	19 27 01.3	+0.8				
GTA				sP	sP	19 27 12.3	0.0				
GTA				pmax	pmax						
	comp=Z,3.0nm,1.5s										
SONM	Songino Array	26.64	338	P	P	19 27 27.0	+0.4				
	comp=Z,0.7nm,0.5s,baz=156,slow=10,SNR=6.7										
SONM				LR	LR	19 39 03.8					
	comp=Z,101nm,19.8s,baz=222,slow=39 comp=Z,0.7nm,0.5s										
MKAR	Makanchi Array	38.52	316	P	P	19 29 10.9	+0.8				
	comp=Z,1.0nm,0.4s,baz=104,slow=10,SNR=35										
MKAR				PcP	PcP	19 31 22.6	0.0				
	comp=Z,0.1nm,0.5s,baz=90,slow=4.3,SNR=1.7 comp=Z,1.0nm,0.4s										
ZALV	Zalesovo Beam	40.48	327	P	P	19 29 26.2	-0.2				
	comp=Z,0.8nm,0.4s,baz=114,slow=7.6,SNR=6.8 comp=Z,0.8nm,0.4s										
KURBB	Kurchatov Arra	42.31	320	P	P	19 29 41.5	+0.1				
	comp=Z,3nm,0.4s,baz=113,slow=9.1,SNR=4.3 comp=Z,0.3nm,0.4s										
H11N1	WAKE ISLAND Hy	42.59	86	T	T	20 14 55.2					
	baz=283,slow=75,SNR=6.3										
H11N2	WAKE ISLAND Hy	42.59	86	T	T	20 14 52.0					
	baz=283,slow=75,SNR=6.9										
H11N3	WAKE ISLAND Hy	42.60	86	T	T	20 14 56.7					
	baz=283,slow=75,SNR=6.3										
H11S3	WAKE ISLAND Hy	42.71	88	T	T	20 15 03.7					
	baz=284,slow=75,SNR=15										
H11S1	WAKE ISLAND Hy	42.72	88	T	T	20 15 04.5					
	baz=284,slow=75,SNR=5.3										
H11S2	WAKE ISLAND Hy	42.73	88	T	T	20 15 12.1					
	baz=284,slow=75,SNR=4.1										
WRA	Warramunga Arr	45.40	162	P	P	19 30 04.0	-2.5				
	comp=Z,0.7nm,0.4s,baz=345,slow=8.7,SNR=10.0 comp=Z,0.7nm,0.4s										
BVAR	Borovoye Array	47.88	321	P	P	19 30 26.4	+0.8				
	comp=Z,0.6nm,0.5s,baz=93,slow=7.0,SNR=5.4										
BVAR				PcP	PcP	19 31 54.0	+0.1				

89nm,0.6s
H11S3 WAKE ISLAND Hy 18.80 86 T T 19 56 46.4
baz=272,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 18.81 86 T T 19 56 43.6
baz=272,slow=75,SNR=6.0
H11S2 WAKE ISLAND Hy 18.82 86 T T 19 56 41.3
baz=272,slow=75,SNR=6.0
JGF Kuroka 19.15 336 P **P** **19 37 22.3 +1.0**
MJAR Matsushiro Arr 19.68 339 P **P** **19 37 28.2 +1.1**
0.1nm,0.3s,baz=211,slow=12,SNR=7.7
MJAR LR LR 19 45 11.9
comp=Z,21nm,20.1s,baz=148,slow=37
1.0nm,0.6s
MAJO Matsushiro 19.68 339 P **P** **19 37 25.3 -1.7**
MAJO IAmb IAmb 19 37 36.7
comp=Z,7.1nm,0.9s
MJB9 Matsu-Tunnel 19.68 339 P **P** **19 37 26.2 -0.9**
JNU Nakatsue 20.56 319 LR LR 19 44 58.6
comp=Z,46nm,19.5s,baz=137,slow=35
YOJ Yonaguni jima 23.02 289 P **P** **19 37 58.2 -4.8**
DAV Davao City (W) 23.57 244 LR LR 19 45 19.0
comp=Z,49nm,21.4s,baz=348,slow=31
KSRS Korea Array 25.27 323 P **P** **19 38 24.1 +0.5**
comp=Z,0.9nm,0.7s,baz=146,slow=8.6,SNR=5.9
KSRS LR LR 19 47 46.5
comp=Z,55nm,21.8s,baz=110,slow=35
comp=Z,0.9nm,0.7s
ASAJ Asahikawa 25.95 353 P **P** **19 38 29.3 -0.4**
comp=Z,9.7nm,1.1s,baz=113,slow=7.7,SNR=2.5
comp=Z,9.7nm,1.1s
USRK Ussuriysk Ar. 28.65 337 P **P** **19 38 54.1 +0.1**
comp=Z,1.4nm,0.7s,baz=138,slow=8.8,SNR=3.0
comp=Z,1.4nm,0.7s
HNR Honiara 30.46 154 LR LR 19 52 38.7
comp=Z,635nm,18.1s,baz=200,slow=39
COEN Coen 32.30 187 P **P** **19 39 26.4 0.0**
COEN IAmb IAmb 19 40 02.7
comp=Z,6.3nm,1.3s
PETK Petropavlovsk- 35.71 11 PcP **PcP** **19 42 21.2 -1.6**
comp=Z,3.6nm,0.9s,baz=224,slow=5.6,SNR=2.1
WB0 Warramunga Arr 39.80 199 P **P** **19 40 29.7 -0.9**
WB0 IAmb IAmb 19 40 33.1
comp=Z,3.8nm,0.8s
WRAB Tennant Creek 39.98 199 P **P** **19 40 31.8 -0.1**
WRAB IAmb IAmb 19 40 33.2
comp=Z,7.4nm,1.1s
WB2 Warramunga Arr 39.98 199 P **P** **19 40 30.6 -1.4**
WB2 IAmb IAmb 19 40 34.0
comp=Z,7.2nm,1.0s
WRA Warramunga Arr 39.99 199 P **P** **19 40 32.0 -0.1**
WRA Warramunga Arr 39.99 199 P **P** **19 40 31.4 -0.7**
comp=Z,3.2nm,0.8s,baz=28,slow=8.4,SNR=15
WRA PcP **PcP** **19 42 36.5 -0.1**
comp=Z,0.4nm,0.9s,baz=13,slow=3.2,SNR=1.5
comp=Z,3.2nm,0.8s
FITZ Fitzroy Crossi 41.80 211 P **P** **19 40 46.4 -0.5**
FITZ IAmb IAmb 19 40 57.5
comp=Z,5.8nm,1.5s
AS31 Alice Springs 43.63 197 P **P** **19 41 01.2 -0.6**
AS31 IAmb IAmb 19 41 04.6
comp=Z,1.0nm,0.4s
ASAR Alice Springs 43.63 197 P **P** **19 41 02.0 +0.2**
ASAR Alice Springs 43.63 197 P **P** **19 41 01.2 -0.6**
comp=Z,1.0nm,0.4s,baz=23,slow=6.8,SNR=42
ASAR PcP **PcP** **19 42 50.0 +1.5**
comp=Z,0.2nm,0.5s,baz=23,slow=3.0,SNR=1.6
comp=Z,1.0nm,0.4s
SONM Songino Array 44.12 321 P **P** **19 41 05.9 +0.2**
SONM Songino Array 44.12 321 P **P** **19 41 06.5 +0.8**
comp=Z,0.9nm,0.6s,baz=137,slow=8.8,SNR=11
SONM PcP **PP** **19 42 49.9 +0.7**
comp=Z,0.3nm,0.6s,baz=120,slow=2.5,SNR=3.0
comp=Z,0.9nm,0.6s
CMAR Chiang Mai Arr 45.38 278 P **P** **19 41 18.2 +2.3**
comp=Z,0.7nm,0.7s,baz=64,slow=7.1,SNR=3.0
CMAR LR LR 19 58 30.5
comp=Z,14nm,21.0s,baz=115,slow=34
comp=Z,0.7nm,0.7s
STKA Stephens Creek 50.19 186 P **P** **19 41 52.6 -0.2**
STKA Stephens Creek 50.19 186 P **P** **19 41 52.7 -0.1**
comp=Z,2.0nm,0.5s,baz=5.0,slow=5.5,SNR=9.9
comp=Z,2.0nm,0.5s
GSI Gunungsitoli 51.23 256 P **P** **19 41 59.9 -1.1**
BBOO Buckleboo 51.91 192 P **P** **19 42 05.3 -0.4**
MORW Morawa 55.75 213 P **P** **19 42 32.5 -1.4**
ZAA0 Zalesovo Array 58.98 322 P **P** **19 42 55.6 -0.7**
ZAA0 IAmb IAmb 19 42 57.7
comp=Z,2.3nm,0.8s
ZALV Zalesovo Beam 58.98 322 P **P** **19 42 54.2 -2.2**
ZALV Zalesovo Beam 58.98 322 P **P** **19 42 56.9 +0.5**
comp=Z,2.5nm,0.7s,baz=106,slow=7.5,SNR=12
ZALV PcP **PcP** **19 43 45.0 0.0**
comp=Z,0.5nm,0.6s,baz=151,slow=3.3,SNR=1.9
ZALV LR LR 20 09 03.8
comp=Z,28nm,18.7s,baz=69,slow=37
comp=Z,2.5nm,0.7s
MK31 Makanchi Array 59.51 314 P **P** **19 42 59.0 -1.2**
MK31 IAmb IAmb 19 43 02.5
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 59.51 314 P **P** **19 42 60.0 -0.3**
MKAR Makanchi Array 59.51 314 P **P** **19 43 01.3 +1.0**
comp=Z,1.3nm,0.6s,baz=88,slow=9.2,SNR=22
comp=Z,1.3nm,0.6s
MAKZ Makanchi 59.73 314 P **P** **19 43 01.2 -0.5**
MAKZ IAmb IAmb 19 43 04.1
comp=Z,2.1nm,0.7s
KURBB Kurchatov Arra 62.33 318 P **P** **19 43 20.6 +1.4**
comp=Z,2.2nm,0.5s,baz=92,slow=7.3,SNR=22
comp=Z,2.2nm,0.5s
ILAR Eielson Array 63.47 26 P **P** **19 43 25.5 -1.1**
comp=Z,0.3nm,0.7s,baz=261,slow=6.0,SNR=2.8
comp=Z,0.3nm,0.7s
BVAR Borovoye Array 67.46 321 P **P** **19 43 53.7 +1.1**
comp=Z,3.9nm,0.6s,baz=95,slow=8.0,SNR=26
comp=Z,3.9nm,0.6s
BRVK Borovoye 67.52 321 P **P** **19 43 53.4 +0.4**
BRVK IAmb IAmb 19 43 54.7
comp=Z,3.1nm,0.8s
KKAR Karatay Array 67.86 310 P **P** **19 43 56.5 +1.2**
YKA Yellowknife Ar 77.78 28 P **P** **19 44 53.6 0.0**
comp=Z,0.4nm,0.8s,baz=284,slow=5.4,SNR=4.0
comp=Z,0.4nm,0.8s
SPITS Spitsbergen Ar 79.70 351 P **P** **19 45 04.1 +0.2**
comp=Z,20nm,1.3s,baz=62,slow=3.7,SNR=5.8
comp=Z,20nm,1.3s
ARCES ARCESS Array B 83.17 342 P **P** **19 45 24.5 +2.0**
comp=Z,2.3nm,0.6s,baz=64,slow=8.2,SNR=14
comp=Z,2.3nm,0.6s
FINES FINESS Array B 87.67 336 P **P** **19 45 44.8 -0.2**
comp=Z,1.8nm,0.6s,baz=49,slow=4.5,SNR=14
FINES LR LR 20 27 48.8
comp=Z,22nm,19.5s,baz=316,slow=38
comp=Z,1.8nm,0.6s
HFS Hagfors 93.13 339 P **P** **19 46 10.4 -0.1**
comp=Z,1.2nm,0.7s,baz=86,slow=7.6,SNR=6.2
comp=Z,1.2nm,0.7s

DJA 18 19:36:03.9±0.3, 9°S±3°×111°E±°, h10km, M3.9/13, mb4.1/4, MLv3.8/13, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.08**	**337**	P	Pn	19 36 25.4	+0.3
UGM				S	Sb	19 36 39.4	+0.6
PWJI	**Pagerwojo**	**1.22**	**44**	P	Pn	19 36 26.3	-0.7
PWJI				S	Sb	19 36 41.3	-1.6
NGJI	**Ngawi**	**1.61**	**18**	P	Pg	19 36 38.4	+0.5
SMRI	**Semarang**	**1.92**	**345**	P	Pb	19 36 38.4	-0.6
KPJI	**Karang Pucung**	**2.54**	**308**	P	Pn	19 36 46.8	+1.6
GMJI	**Gumukmas**	**2.55**	**76**	P	Pn	19 36 45.1	-0.2
GMJI				S	Sn	19 37 14.2	-2.2
CMJI	**Cimerak**	**2.72**	**294**	P	Pn	19 36 47.0	-0.6
CMJI				S	Sn	19 37 17.2	-3.4
BLJI	**Banyuglugur**	**2.86**	**66**	P	Pn	19 36 49.1	-0.5
JAGI	**Jajag, Banyuwa**	**3.20**	**82**	P	Pn	19 36 54.2	0.0
JAGI				S	Sn	19 37 28.6	-3.8
CNJI	**Cibinong**	**4.10**	**293**	P	Pn	19 37 06.6	-0.1
CNJI				S	Sn	19 37 50.6	-4.2
TWSI	**Taliwang, Sumb**	**5.87**	**89**	P	Pn	19 37 30.8	-0.2
	18nm,1.2s,0.1nm						
PLAI	**Plampang**	**6.75**	**90**	P	Pn	19 37 44.5	+1.4

*NEIC **18** 19:48:10.4±0.7, 35°.33N±0°.01×97°.96W±0°.01, h5km±1km, Error ellipse: s-maj=3.0km s-min=2.5km az=209.0*
TUL 18 19:48:10.8±0.7, 35°.32N±0°.02×97°.96W±0°.02, h7km±4km,

ML2.9, mb_Lg2.9/79(NEIC), ML3.0/32(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=201.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCSW	**OKLAHOMA CITY**	**0.43**	**78**		Pg	19 48 19.0	-0.2
OKCSW				Sg	Sg	19 48 24.7	-0.2
OKCSW				IAML		19 48 34.6	
	comp=E,1μm,0.5s						
OKCSW				IAML		19 48 34.7	
	comp=N,825nm,0.6s						
FNO	**Franklin**	**0.46**	**98**		Pg	19 48 19.7	+0.1
ADOK	**Arcadia Dam**	**0.58**	**55**		Pg	19 48 22.1	+0.1
ADOK				Sg	Sg	19 48 29.8	+0.2
OK029	**Liberty Lake**	**0.63**	**40**		Pg	19 48 23.0	+0.1
OK029				IAML		19 48 35.1	
	comp=N,1μm,0.6s						
OK029				IAML		19 48 38.0	
	comp=N,932nm,0.5s						
CSTR	**Hydro, Custer**	**0.68**	**299**		Pg	19 48 23.8	-0.2
X34A	**Smith Ranch, M**	**0.72**	**172**		Pg	19 48 24.9	+0.2
X34A				IAML		19 48 49.8	
	comp=N,398nm,0.6s						
X34A				IAML		19 48 50.2	
	comp=E,386nm,0.9s						
WMOK	**Wichita Mounta**	**0.89**	**230**		Pg	19 48 27.2	-0.7
W35A	**Tecumseh**	**0.90**	**100**		Pg	19 48 27.5	-0.6
W35A				IAML		19 48 52.2	
	comp=E,262nm,0.3s						
W35A				IAML		19 48 56.1	
	comp=N,227nm,0.3s						
OK033	**Mehan**	**1.10**	**49**		Pg	19 48 30.7	-1.2
OK033				IAML		19 48 50.5	
	comp=N,514nm,0.3s						
OK033				IAML		19 48 51.5	
	comp=N,565nm,0.2s						
OK052	**Battle Ridge R**	**1.16**	**54**		Pg	19 48 31.6	-1.4
OK052				IAML		19 48 52.7	
	comp=N,618nm,0.3s						
OK052				IAML		19 48 54.9	
	comp=N,530nm,0.3s						
CROK	**Carrier**	**1.18**	**359**		Pg	19 48 32.4	-1.1
DEOK	**Depew**	**1.30**	**66**		Pn	19 48 34.4	-1.0
OK038	**West end E0370**	**1.32**	**331**		Pn	19 48 35.0	-0.7
QUOK	**Quay**	**1.32**	**50**		Pn	19 48 34.9	-0.8
U32A	**Winter Ranch,**	**1.36**	**322**		Pn	19 48 35.4	-0.9
OK048	**Pawnee Station**	**1.37**	**37**		Pn	19 48 36.0	-0.4
LOOK	**Love County**	**1.47**	**154**		Pn	19 48 37.8	0.0
OK051	**E0350 and S346**	**1.49**	**37**		Pb	19 48 38.7	-0.2
OK032	**Salt Plains WL**	**1.50**	**352**		Pn	19 48 37.6	-0.5
GC02	**Grant County #**	**1.53**	**3**		Pn	19 48 38.2	-0.4
WTFS	**Witchita Falls**	**1.60**	**195**		Pn	19 48 39.9	+0.3
KAN10	**Anthony SW Sta**	**1.81**	**356**		Pn	19 48 41.9	-0.5
TUL3	**Leonard**	**1.86**	**71**	Pn	Pn	19 48 43.4	+0.3
TUL3				IAmb_Lg		19 49 11.9	
	comp=Z,51nm,0.8s						
SMWD	**Samnorwood**	**1.89**	**264**	IAmb_Lg		19 49 11.0	
	comp=Z,49nm,0.8s						
T35A	**Sooner Cattle**	**1.98**	**36**		Pn	19 48 45.5	+0.8
Z35A	**Perchaven, San**	**2.07**	**163**		Pn	19 48 46.4	+0.4
X37A	**Clayton**	**2.24**	**108**		Pn	19 48 48.8	+0.4
X37A				IAmb_Lg		19 49 27.4	
	comp=Z,70nm,0.8s						
FW06	**Azle**	**2.36**	**172**	Pn	Pn	19 48 51.2	+1.2
FW06				IAmb_Lg		19 49 29.6	
	comp=Z,42nm,0.8s						
PLPT	**Palo Pinto**	**2.52**	**187**		Pn	19 48 53.4	+1.3
FW16	**Waxahatchie**	**2.96**	**162**	IAmb_Lg		19 49 47.5	
	comp=Z,32nm,0.8s						
ABTX	**Abilene, Hawle**	**3.03**	**208**		Pn	19 49 00.3	+1.1
AMTX	**Amarillo**	**3.09**	**263**	IAmb_Lg		19 49 50.0	
	comp=Z,36nm,0.9s						
U38A	**Gravette**	**3.11**	**68**		Pn	19 48 59.4	-0.9
Z38A	**Mt. Pleasant**	**3.20**	**129**	IAmb_Lg		19 49 59.8	
	comp=Z,22nm,0.8s						
WHTX	**Lake Whitney,**	**3.34**	**173**		Pn	19 49 04.5	+1.0
HHAR	**Hobbs**	**3.40**	**72**	Pn	Pn	19 49 04.9	+0.6
SN05	**Snyder 5**	**3.44**	**226**	IAmb_Lg		19 50 01.8	
	comp=Z,25nm,0.7s						
MIAR	**Mount Ida**	**3.68**	**101**		Pn	19 49 09.4	+1.3
MIAR				IAmb_Lg		19 50 13.0	
	comp=Z,20nm,0.8s						
CBKS	**Cedar Bluff**	**3.77**	**338**	Pn	Pn	19 49 10.1	+0.7
CBKS				IAmb_Lg		19 50 15.4	
	comp=Z,21nm,0.7s						
KSU1	**Kansas State U**	**3.92**	**15**	Pn	Pn	19 49 11.4	-0.1
BRDY	**Brady**	**4.12**	**193**		Pn	19 49 13.8	-0.3
BRDY				IAmb_Lg		19 50 24.8	
	comp=Z,22nm,0.9s						
X40A	**Basin Creek Fa**	**4.29**	**100**	IAmb_Lg		19 50 32.4	
	comp=Z,26nm,1.1s						
SGCY	**Sterling City**	**4.30**	**219**	IAmb_Lg		19 50 38.4	
	comp=Z,39nm,1.0s						
WLAR	**White Oak Lake**	**4.32**	**111**	IAmb_Lg		19 50 31.7	
	comp=Z,18nm,0.8s						
S39A	**Bolivar**	**4.42**	**56**		Pn	19 49 17.9	-0.4
S39A				IAmb_Lg		19 50 33.5	
	comp=Z,23nm,0.7s						
435B	**Jarrell**	**4.53**	**176**	IAmb_Lg		19 50 37.9	
	comp=Z,21nm,0.8s						
WHAR	**Wooly Hollow**	**4.63**	**89**		Pn	19 49 21.8	+0.6
WHAR				IAmb_Lg		19 50 43.2	
	comp=Z,17nm,0.8s						
Z41A	**Richland Creek**	**4.73**	**114**	IAmb_Lg		19 50 51.1	
	comp=Z,14nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.79**	**81**	Pn	Pn	19 49 23.1	-0.2
FCAR				IAmb_Lg		19 50 51.6	
	comp=Z,15nm,0.9s						
MGMO	**Mountain Grove**	**4.95**	**67**	IAmb_Lg		19 50 55.6	
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**5.07**	**198**	IAmb_Lg		19 51 03.0	
	comp=Z,20nm,0.8s						
OZNA	**Ozona**	**5.13**	**212**	IAmb_Lg		19 51 04.0	
	comp=Z,19nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.24**	**316**	IAmb_Lg		19 51 12.1	
	comp=Z,21nm,0.7s						
R40A	**Maddies Statio**	**5.44**	**55**	IAmb_Lg		19 51 05.8	
	comp=Z,26nm,0.9s						
P38A	**Dawn**	**5.55**	**38**	IAmb_Lg		19 51 18.2	
	comp=Z,14nm,0.7s						
LCAR	**Lake Charles**	**5.58**	**80**	IAmb_Lg		19 51 12.7	
	comp=Z,14nm,0.9s						
MNHN	**Monahans**	**5.65**	**227**	IAmb_Lg		19 51 19.3	
	comp=Z,16nm,0.8s						
HNDO	**Hondo**	**5.88**	**191**	IAmb_Lg		19 51 23.7	
	comp=Z,13nm,0.7s						
CCM	**Cathedral Cave**	**6.04**	**61**	IAmb_Lg		19 51 21.7	
	comp=Z,20nm,0.8s						
BGNE	**Belgrade**	**6.08**	**359**	IAmb_Lg		19 51 39.1	
	comp=Z,25nm,0.9s						
PBMO	**Poplar Bluff**	**6.27**	**74**	IAmb_Lg		19 51 32.9	
	comp=Z,19nm,0.7s						
SAND	**Sanderson**	**6.40**	**214**	IAmb_Lg		19 51 39.1	
	comp=Z,13nm,0.8s						
OGNE	**Ogallala**	**6.47**	**331**	IAmb_Lg		19 51 42.7	
	comp=Z,24nm,0.7s						
FVM	**French Village**	**6.61**	**64**	IAmb_Lg		19 51 53.8	
	comp=Z,19nm,0.8s						
ALPN	**Alpine**	**6.87**	**226**	IAmb_Lg		19 51 52.4	
	comp=Z,9.4nm,0.9s						
CGM3	**Cape Girardeau**	**6.98**	**71**	IAmb_Lg		19 51 54.2	
	comp=Z,21nm,0.7s						
SLM	**Saint Louis**	**7.01**	**60**	IAmb_Lg		19 52 03.9	
	comp=Z,23nm,0.9s						
BRIGG	**Briggsdale**	**7.27**	**318**	IAmb_Lg		19 52 04.8	
	comp=Z,20nm,0.8s						
K30B	**Basset**	**7.46**	**351**	IAmb_Lg		19 52 18.3	
	comp=Z,14nm,0.8s						
O44A	**Mansfield**	**8.93**	**54**	IAmb_Lg		19 52 58.9	
	comp=Z,18nm,0.8s						
L42A	**Oliver, Polo**	**9.30**	**42**	IAmb_Lg		19 53 10.2	
	comp=Z,17nm,0.9s						

IDC 18 20:22:47.9±87.0, 15°.03S×169°.17E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1469.0km s-min=136.4km az=67.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.22**	**231**	P	P	20 28 59.5	-0.8
	1.7nm,1.0s,baz=61,slow=13,SNR=1.7						
	1.7nm,1.0s						
WRA	**Warramunga Arr**	**33.54**	**257**	P	P	20 29 29.0	-0.7
	0.3nm,0.3s,baz=85,slow=8.6,SNR=4.7						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**34.29**	**250**	P	P	20 29 37.1	+0.9
	0.4nm,0.4s,baz=77,slow=9.8,SNR=13						
	0.4nm,0.4s						

*IDC **18** 20:24:03.5±0.9, 12°.73N×125°.32E, h0km, mb3.7/10, mbtmp3.7/10, ML4.5/1, MS3.0/7, Error ellipse: s-maj=28.0km s-min=14.4km az=57.0*
ISC 18 20:24:08.2±0.9, 12°.7N±0°.1×125°.3E±0°.1, h33km, n22, σ0°74/12, mb3.8/10, MS3.0/7, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**4.49**	**288**	Pn	**Pn**	**20 25 14.4**	**+0.3**
	22nm,0.3s,baz=114,slow=20,SNR=1.4						
TGY				Sn	**Sn**	**20 26 05.3**	**+0.1**
	64nm,0.3s,baz=24,slow=3.5,SNR=3.6						
TGY				Lg	Lg	20 26 26.8	
	114nm,0.3s,baz=218,slow=12,SNR=2.6						
GUMO	**Guam**	**19.04**	**85**	LR	LR	20 34 13.6	
	comp=Z,25nm,21.0s,baz=356,slow=32						
KSRS	**Korea Array**	**24.72**	**5**	P	**P**	**20 29 27.4**	**+1.0**
	1.5nm,0.9s,baz=181,slow=11,SNR=8.1						
KSRS				LR	LR	20 39 51.5	
	comp=Z,21nm,19.3s,baz=150,slow=38						
	1.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**26.03**	**286**	P	**P**	**20 29 38.0**	**-0.7**
	0.4nm,0.7s,baz=95,slow=8.2,SNR=2.7						
CMAR				LR	LR	20 41 17.3	
	comp=Z,30nm,19.0s,baz=250,slow=40						
	0.4nm,0.7s						
MJAR	**Matsushiro Arr**	**26.37**	**24**	LR	LR	20 39 02.1	
	comp=Z,30nm,18.6s,baz=223,slow=34						
WRA	**Warramunga Arr**	**33.66**	**165**	P	**P**	**20 30 45.2**	**-1.1**
	0.3nm,0.3s,baz=329,slow=8.8,SNR=5.2						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**37.14**	**167**	P	**P**	**20 31 16.6**	**+0.5**
	1.2nm,0.4s,baz=351,slow=7.7,SNR=46						
	1.2nm,0.4s						
SONM	**Songino Array**	**38.40**	**339**	P	**P**	**20 31 25.9**	**-0.8**
	1.2nm,1.1s,baz=150,slow=10,SNR=5.3						
SONM				LR	LR	20 46 40.3	
	comp=Z,25nm,20.1s,baz=192,slow=35						
	1.2nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**40.16**	**76**	T	T	21 14 40.1	
	baz=268,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**40.18**	**76**	T	T	21 14 45.3	
	baz=268,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**40.18**	**76**	T	T	21 14 44.0	
	baz=268,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**40.41**	**75**	T	T	21 14 58.2	
	baz=266,slow=75,SNR=43						
H11N2	**WAKE ISLAND Hy**	**40.42**	**75**	T	T	21 15 06.0	
	baz=266,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy**	**40.43**	**75**	T	T	21 14 59.5	
	baz=266,slow=75,SNR=56						
HNR	**Honiara**	**40.83**	**121**	LR	LR	20 45 57.5	
	comp=Z,642nm,21.0s,baz=198,slow=32						
STKA	**Stephens Creek**	**47.02**	**161**	P	**P**	**20 32 37.0**	**+0.5**
	1.1nm,0.6s,baz=332,slow=7.0,SNR=4.4						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**49.52**	**322**	P	**P**	**20 32 56.4**	**+0.6**
	0.9nm,0.8s,baz=112,slow=8.6,SNR=6.9						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**52.03**	**331**	P	**P**	**20 33 13.7**	**-0.8**
	0.4nm,0.4s,baz=106,slow=4.8,SNR=4.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**53.54**	**325**	P	**P**	**20 33 25.9**	**+0.3**
	0.9nm,0.6s,baz=120,slow=7.9,SNR=10						
	0.9nm,0.6s						
BVAR	**Borovoye Array**	**59.13**	**325**	P	**P**	**20 34 05.7**	**+0.2**
	0.5nm,0.6s,baz=75,slow=1.6,SNR=2.7						
	0.5nm,0.6s						
NOA	**NORSAR Array B**	**90.15**	**334**	LR	LR	21 19 06.5	
	comp=Z,16nm,18.8s,baz=340,slow=37						
DAVOX	**Davos/Dischmat**	**97.41**	**321**	LR	LR	21 27 30.6	
	comp=Z,16nm,18.9s,baz=271,slow=39						

*NDI **18** 20:33:18.6±2.4, 24°.71N×95°.00E, h23km±13km, ML2.8, MW3.0*
*NEIC **18** 20:33:29.4±2.2, 24°.53N±0°.08×94°.4E±0°.1, h49km±6km, mb4.1/9, Error ellipse: s-maj=16.8km s-min=7.3km az=56.0*
ISC 18 20:33:22.3±1.8, 24°.74N±0°.05×94°.67E±0°.07, h5km±12km, n13, σ2°77/18, mb4.1/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.67**	**278**	*eP*	**Pg**	**20 33 35.9**	**+0.8**
IMP				*eS*	**Sn**	**20 33 50.6**	**+1.3**
IMP				IAML		20 33 50.9	
	114nm,0.3s						
IMP				IAML		20 33 51.0	
	comp=E,101nm,0.3s						
KOHI	**KOHIMA**	**1.10**	**332**	*eP*	**Pg**	**20 33 42.8**	**-0.6**
KOHI				*eS*	**Sg**	**20 33 57.7**	**-0.1**
KOHI				IAML		20 34 03.4	
	comp=E,141nm,0.4s						
KOHI				IAML		20 34 07.8	
	comp=E,174nm,0.6s						
ITAN	**ITANAGAR**	**2.54**	**341**	*ex*	**Sn**	**20 34 36.6**	**+1.1**
ITAN				IAML		20 34 41.3	
	comp=E,100nm,0.4s						
ITAN				IAML		20 34 46.7	
	comp=E,151nm,0.1s						
SHL	**Shillong**	**2.66**	**289**	*eP*	**Pn**	**20 34 03.2**	**-2.7**
SHL				IAML		20 34 31.3	
	comp=E,50nm,0.2s						
SHL				IAML		20 34 31.3	
	comp=N,60nm,0.1s						
SHL				*eS*	**Sn**	**20 34 39.6**	**+1.0**
SAIH	**SAIHA**	**2.72**	**215**	*eP*	**Pn**	**20 34 04.1**	**-2.6**
SAIH				*eS*	**Sn**	**20 34 35.6**	**-4.5**
SAIH				IAML		20 34 40.6	
	comp=N,7.2nm,0.3s						
SAIH				IAML		20 34 44.5	
	comp=E,15nm,0.3s						
ZIRO	**ZIRO**	**2.87**	**345**	*eP*	**Pn**	**20 34 05.6**	**-3.2**
ZIRO				*eS*	**Sn**	**20 34 39.1**	**-4.8**
ZIRO				IAML		20 34 51.3	
	comp=E,76nm,0.4s						
ZIRO				IAML		20 34 53.1	
	comp=N,74nm,0.4s						
MND	**Mandalay**	**3.02**	**154**	Pn	**Pn**	**20 34 08.9**	**-1.8**
HYB	**Hyderabad**	**16.71**	**247**	*eP*	**Pn**	**20 37 18.4**	**+1.2**
KNMB	**Chin-men Tao**	**21.56**	**86**	P	**P**	**20 38 16.2**	**+3.5**
KNMB				IAmb	IAmb	20 38 23.3	
	comp=Z,10.0nm,1.1s						
TARG	**Taragay, Kyrgy**	**21.98**	**325**	P	**P**	**20 38 21.3**	**+3.7**
TARG				IAmb	IAmb	20 38 29.8	
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**24.25**	**338**	P	**P**	**20 38 41.4**	**+1.2**
KK31	**Karatay Array**	**27.00**	**319**	P	**P**	**20 39 06.1**	**+1.0**
KK31				IAmb	IAmb	20 39 09.8	
	comp=Z,2.9nm,0.6s						
KKAR	**Karatay Array**	**27.00**	**319**	P	**P**	**20 39 06.1**	**+1.0**
KKAR				IAmb	IAmb	20 39 09.8	
	comp=Z,2.9nm,0.6s						

*IDC **18** 20:39:15.5±2.4, 6°.19S×146°.98E, h96km±29km, mb3.3/8, mbtmp3.7/11, Error ellipse: s-maj=49.2km s-min=13.3km az=105.0*
ISC 18 20:39:16.1±0.8, 6°.19S±0°.07×146°.8E±0°.2, h100km, n26, σ19°61/27, mb3.5/8, Eastern New Guinea region

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

comp=Z,0.4nm,0.5s,baz=42,slow=23,SNR=2.6
WRA Warramunga Arr 18.28 220 P **P** **20 43 22.9 +0.6**
AS01 Alice Springs 21.34 214 P **P** **20 43 56.6 +1.2**
ASAR Alice Springs 21.37 214 P **P** **20 43 56.4 +0.7**
comp=Z,1.4nm,0.6s,baz=53,slow=8.9,SNR=30
ASAR S **S** **20 47 49.1 +1.7**
comp=Z,0.5nm,0.8s,baz=33,slow=18,SNR=3.2
comp=Z,1.4nm,0.6s
FITZ Fitzroy Crossi 23.83 238 P **P** **20 44 21.5 +1.3**
OOD Oodnadatta 23.95 205 P **P** **20 44 22.2 +1.0**
LCRK Leigh Creek 25.45 198 P **P** **20 44 36.3 +1.5**
WRKA Warakurna 25.82 221 P **P** **20 44 39.0 +0.7**
STKA Stephens Creek 26.02 190 P **P** **20 44 41.1 +1.2**
comp=Z,1.9nm,0.8s,baz=18,slow=8.9,SNR=4.3
comp=Z,1.9nm,0.8s
KSRS Korea Array 46.87 339 P **P** **20 47 36.7 +0.4**
comp=Z,0.3nm,0.3s,baz=160,slow=10,SNR=2.9
comp=Z,0.3nm,0.3s
USRK Ussuriysk Ar. 51.92 346 P **P** **20 48 14.8 +0.2**
comp=Z,0.5nm,0.5s,baz=107,slow=14,SNR=1.4
comp=Z,0.5nm,0.5s
SONM Songino Array 64.49 331 P **P** **20 49 42.7 +0.3**
comp=Z,0.2nm,0.6s,baz=130,slow=4.2,SNR=2.2
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 77.54 321 P **P** **20 51 01.2 0.0**
comp=Z,0.2nm,0.5s,baz=104,slow=8.5,SNR=4.7
comp=Z,0.2nm,0.5s
ZALV Zalesovo Beam 79.09 328 P **P** **20 51 07.8 -1.7**
comp=Z,0.3nm,0.3s,baz=119,slow=8.6,SNR=2.3
comp=Z,0.3nm,0.3s
ILAR Eielson Array 85.72 23 P **P** **20 51 42.2 -1.6**
comp=Z,0.2nm,0.7s,baz=250,slow=5.4,SNR=1.9
comp=Z,0.2nm,0.7s
TORD Torodi Ar. Bea 144.98 284 PKPbc **PKPdf** **20 58 43.3 +0.5**
comp=Z,1.7nm,0.6s,baz=76,slow=4.6,SNR=4.4

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*MDD **18** 20:41:35.9±0.6,35°.39N×3°.65W,h18km±5km,mb_Lg2.9/14, Error ellipse: s-maj=5.9km s-min=3.4km az=174.0*
*SFS **18** 20:41:35.9,35°.42N×3°.62W,h16km,ML3.1/12,ML3.2/12, MLv3.1/12*
*INMG **18** 20:41:36.4±1.2,35°.37N×3°.59W,h29km,ML2.4, Error ellipse: s-maj=4.2km s-min=2.6km az=20.0*
*IGIL **18** 20:41:37.2,35°.33N×3°.63W,h29km,ML2.2*
ISC 18 20:41:34.4±1.2,35°.45N±0°.05×3°.68W±0°.03,h16km±11km, n49,σ1§47/94,1C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EMEL	**Melilla**	**0.61**	**104**	Pg		**Pg**	**20 41 46.6**	**+0.2**
EMEL				Sg		**Sg**	**20 41 54.3**	**-0.3**
EMLI	**Melilla**	**0.62**	**104**	Sg		**Sg**	**20 41 54.3**	**-0.5**
EMLI				Pg		**Pg**	**20 41 46.9**	**+0.3**
EALB	**Alboran**	**0.72**	**47**	Sg		**Sb**	**20 41 58.6**	**+0.4**
EALB				Pg		**Pg**	**20 41 48.6**	**+0.1**
EALB	**Alboran**	**0.72**	**47**	⇑Pg		**Pb**	**20 41 49.1**	**+0.5**
EALB				Sg		**Sg**	**20 41 58.2**	**+0.2**
EALB				*i* Vmb_Lg			20 41 59.4	
ELGU	**Los Guajares,**	**1.42**	**2**	Pn		**Pn**	**20 41 59.4**	**-0.2**
ELGU				Sn		**Sb**	**20 42 16.5**	**-1.9**
ELGU	**Los Guajares,**	**1.42**	**2**	Pn		**Pn**	**20 41 59.5**	**-0.2**
ELGU				Sn		**Sb**	**20 42 16.7**	**-1.7**
ELGU				*i* Vmb_Lg			20 42 21.1	
EMIJ	**Mijas**	**1.42**	**322**	Pn		**Pn**	**20 41 59.4**	**-0.3**
EMIJ				Sn		**Sb**	**20 42 17.6**	**-0.9**
EMIJ				*i* Vmb_Lg			20 42 20.6	
EMAL	**Malaga-Limoner**	**1.44**	**335**	Pn		**Pn**	**20 41 59.8**	**-0.1**
EMAL				Sn		**Sb**	**20 42 17.5**	**-1.5**
CEU	**Ceuta**	**1.45**	**288**	Pn		**Pn**	**20 41 59.0**	**-1.0**
EBER	**Berja**	**1.58**	**24**	Pn		**Pn**	**20 42 01.5**	**-0.5**
EBER	**Berja**	**1.58**	**24**	Pn		**Pn**	**20 42 01.6**	**-0.3**
EBER				Sn		**Sn**	**20 42 21.8**	**-0.4**
EBER				*i* Vmb_Lg			20 42 29.3	
EGOR	**Sierra Gorda,**	**1.69**	**348**	Pn		**Pn**	**20 42 04.3**	**+0.8**
EGOR	**Sierra Gorda,**	**1.69**	**348**	Pn		**Pn**	**20 42 04.2**	**+0.8**
EGOR				Sn		**Sn**	**20 42 24.7**	**-0.3**
EGOR				*i* Vmb_Lg			20 42 31.6	
EQUE	**Quentar**	**1.76**	**6**	Pn		**Pn**	**20 42 05.1**	**+0.7**
EQUE				Sn		**Sn**	**20 42 25.9**	**-0.7**
EQUE				*i* Vmb_Lg			20 42 30.2	
EQTA	**Presa de Quent**	**1.76**	**6**	Pn		**Pn**	**20 42 05.0**	**+0.6**
EQTA				Sn		**Sn**	**20 42 26.0**	**-0.6**
ENIJ	**Nijar**	**1.93**	**38**	Pn		**Pn**	**20 42 05.3**	**-1.3**
ENIJ				Sn		**Sn**	**20 42 29.9**	**-0.7**
EQES	**Quesada**	**2.40**	**12**	Pn		**Pb**	**20 42 15.9**	**-1.4**
EQES				Sn		**Sn**	**20 42 44.4**	**+2.1**
EQES				*i* Vmb_Lg			20 42 47.1	
EADA	**Adamuz**	**2.81**	**345**	Pn		**Pn**	**20 42 21.2**	**+2.5**
EADA				Sn		**Sn**	**20 42 53.3**	**+1.0**
EADA	**Adamuz**	**2.81**	**345**	Pn		**Pb**	**20 42 21.7**	**-2.5**
EADA				Sn		**Sn**	**20 42 52.9**	**+0.6**
EADA				Sg		**Sb**	**20 42 59.1**	**+0.7**
EADA				*i* Vmb_Lg			20 43 00.5	
ECAB	**El Cabril**	**2.97**	**332**	Pn		**Pn**	**20 42 23.4**	**+2.5**
ECAB				Sn		**Sn**	**20 42 57.6**	**+1.3**
ECAB	**El Cabril**	**2.97**	**332**	Pn		**Pn**	**20 42 23.5**	**+2.6**
ECAB				Sn		**Sn**	**20 42 58.4**	**+2.1**
ECAB				*i* Vmb_Lg			20 43 06.8	
PSIM	**Granatula de C**	**3.36**	**359**	Pn		**Pn**	**20 42 29.7**	**+3.3**
PSIM				Sn		**Sn**	**20 43 05.9**	**-0.2**
ETOB	**Tobarra**	**3.62**	**28**	Pn		**Pn**	**20 42 31.4**	**+1.6**
ETOB				Sn		**Sn**	**20 43 11.2**	**-1.1**
ETOB	**Tobarra**	**3.62**	**28**	Pn		**Pn**	**20 42 32.3**	**+2.4**
ETOB				Sn		**Sn**	**20 43 11.0**	**-1.3**
ETOB				*i* Vmb_Lg			20 43 17.5	
EGRO	**El Granado**	**3.70**	**305**	Pn		**Pn**	**20 42 32.3**	**+1.3**
EGRO				Sn		**Sn**	**20 43 13.5**	**-0.8**
EGRO	**El Granado**	**3.70**	**305**	Pn		**Pn**	**20 42 32.4**	**+1.4**
EGRO				Sn		**Sn**	**20 43 12.3**	**-2.0**
EGRO				*i* Vmb_Lg			20 43 19.4	
PVAQ	**Vaqueiros**	**3.79**	**302**	*e*P		**Pn**	**20 42 33.7**	**+1.5**
PVAQ				*e*S		**Sn**	**20 43 16.4**	**-0.2**
PBAR	**Barrancos**	**3.83**	**316**	*e*P		**Pn**	**20 42 34.1**	**+1.4**
PBAR				*e*S		**Sn**	**20 43 17.5**	**+0.1**
PBAR				A		A	20 43 21.4	
	5.4nm,0.4s							
PBAR	**Barrancos**	**3.83**	**316**	Pn		**Pn**	**20 42 34.1**	**+1.4**
PBAR				Sn		**Sn**	**20 43 17.2**	**-0.2**
PBDV	**Barranco-do-Ve**	**3.87**	**299**	*e*P		**Pn**	**20 42 34.8**	**+1.5**
PBDV				*e*S		**Sn**	**20 43 17.8**	**-0.7**
PAB	**San Pablo**	**4.12**	**353**	Pn		**Pn**	**20 42 39.3**	**+2.5**
PAB				Sn		**Sn**	**20 43 22.6**	**-2.2**
PAB				Sg		**Sb**	**20 43 38.4**	**+2.2**
PAB				*i* Vmb_Lg			20 43 39.8	
PCVE	**Castro Verde**	**4.13**	**303**	*e*P		**Pn**	**20 42 38.6**	**+1.7**
PCVE				*e*S		**Sn**	**20 43 25.1**	**+0.2**
PCVE				A		A	20 43 25.6	
	3.3nm,0.4s							
EBAD	**Badajoz**	**4.24**	**322**	Pn		**Pn**	**20 42 39.5**	**+1.1**
EBAD				Sn		**Sn**	**20 43 27.1**	**-0.5**
EBAD	**Badajoz**	**4.24**	**322**	Pn		**Pn**	**20 42 39.7**	**+1.3**
EBAD				Sn		**Sn**	**20 43 25.8**	**-1.8**
EBAD				*i* Vmb_Lg			20 43 30.6	
MESJ	**Messejana**	**4.36**	**304**	*e*P		**Pn**	**20 42 41.7**	**+1.7**
MESJ				*e*S		**Sn**	**20 43 30.1**	**-0.4**
MESJ				A		A	20 43 34.5	
	4.7nm,0.5s							
MESJ	**Messejana**	**4.36**	**304**	*e*P		**Pn**	**20 42 41.4**	**+1.4**
MESJ				*e*S		**Sn**	**20 43 28.3**	**-2.2**
MESJ				IAML			20 43 31.9	
	comp=N,4.3nm,0.4s							
MORF	**Marmelete**	**4.42**	**296**	*e*P		**Pn**	**20 42 43.6**	**+2.7**
MORF				*e*S		**Sn**	**20 43 32.7**	**+0.7**
MORF				A		A	20 43 37.5	
	comp=N,3.4nm,0.2s							
PFVI	**Vila Bisbo**	**4.48**	**293**	*e*P		**Pn**	**20 42 44.5**	**+2.8**
PFVI				*e*S		**Sn**	**20 43 33.3**	**-0.3**
PFVI				A		A	20 43 35.2	
	comp=N,6.2nm,0.6s							
PTEO	**Sao Teotonio**	**4.57**	**299**	*e*S		**Sn**	**20 43 36.1**	**+0.4**
PESTR	**Estremoz**	**4.62**	**319**	*e*P		**Pn**	**20 42 45.6**	**+1.9**
PESTR				*e*S		**Sn**	**20 43 36.7**	**-0.4**
PESTR				A		A	20 43 43.8	
	comp=N,2.6nm,0.4s							
EVO	**Evora**	**4.63**	**313**	*e*P		**Pn**	**20 42 45.5**	**+1.7**
EVO				*e*S		**Sn**	**20 43 36.8**	**-0.5**
EVO				A		A	20 43 39.9	
	comp=N,4.4nm,0.2s							
PNCL	**Nicolau / Gran**	**4.71**	**306**	*e*P		**Pn**	**20 42 46.2**	**+1.4**
PNCL				*e*S		**Sn**	**20 43 38.7**	**-0.5**
PNCL				A		A	20 43 39.8	
	comp=N,2.8nm,0.2s							
PNCL	**Nicolau / Gran**	**4.71**	**306**	Pn		**Pn**	**20 42 45.8**	**+1.0**
PNCL				Sn		**Sn**	**20 43 37.5**	**-1.6**
PMRV	**Marv??o**	**4.95**	**324**	*e*P		**Pn**	**20 42 50.5**	**+2.4**
PMRV				*e*S		**Sn**	**20 43 44.4**	**-0.7**
PMRV				A		A	20 44 12.8	
	comp=N,4.2nm,0.5s							
PMTG	**Montargil**	**5.12**	**316**	*e*P		**Pn**	**20 42 52.7**	**+2.3**
PMTG				*e*S		**Sn**	**20 43 48.6**	**-0.6**
PMTG				A		A	20 43 53.0	
	comp=N,3.1nm,0.5s							
PCBR	**Castelo Branco**	**5.32**	**327**	*e*P		**Pn**	**20 42 55.3**	**+2.1**
MVO	**Moncorvo**	**6.28**	**336**	*e*P		**Pn**	**20 43 09.1**	**+2.6**
MVO				*e*S		**Sn**	**20 44 17.7**	**-0.3**
MVO				A		A	20 44 18.0	
	comp=N,2.6nm,0.6s							
PVRL	**Vila Real**	**6.62**	**333**	*e*P		**Pn**	**20 43 12.2**	**+1.0**
PVRL				*e*S		**Sn**	**20 44 25.0**	**-1.4**
PBRG	**Braganca**	**6.78**	**340**	*e*P		**Pn**	**20 43 16.3**	**+3.0**

IDC 18 20:57:29.4±9.4,1°.91N×126°.96E,h291km±96km,mb3.2/5, mbtmp3.9/5,Error ellipse: s-maj=149.4km s-min=18.8km az=63.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.89**	**162**	P		P	21 02 08.4	0.0
	0.5nm,0.3s,baz=338,slow=10,SNR=28							
	0.5nm,0.3s							
ASAR	**Alice Springs**	**26.31**	**166**	P		P	21 02 40.2	+1.0
	1.3nm,0.5s,baz=353,slow=7.8,SNR=51							
ASAR				PcP		PcP	21 05 57.1	0.0
	0.3nm,0.4s,baz=340,slow=2.7,SNR=4.4							
	1.3nm,0.5s							
STKA	**Stephens Creek**	**36.36**	**159**	P		P	21 04 05.3	-1.1
	1.6nm,0.3s,baz=349,slow=8.9,SNR=12							
	1.6nm,0.3s							
MKAR	**Makanchi Array**	**59.17**	**326**	P		P	21 07 00.7	+0.4
	0.4nm,0.5s,baz=113,slow=8.8,SNR=10							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**63.39**	**328**	P		P	21 07 27.5	-0.7
	0.6nm,0.5s,baz=126,slow=6.2,SNR=5.3							
	0.6nm,0.5s							

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*IDC **18** 21:02:56.0±2.4,30°.14N×130°.43E,h0km,mb3.3/4, mbtmp3.3/5,ML2.7/1,Error ellipse: s-maj=65.7km s-min=24.3km az=81.0*
*JMA **18** 21:02:55.6±0.1,29°.9N±0°.5×130°.8E±0°.3,h12km±1km, MV2.8/19,NEAR AMAMI-OSHIMA ISLAND*
ISC 18 21:02:56.5±0.9,29°.99N±0°.05×130°.76E±0°.06,h10km,n15, σ1§37/17,mb3.2/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYAK	**Yakushimahirau**	**0.33**	**319**	*i* P		**Pg**	**21 03 03.6**	**+0.5**
JYAK				*e*S		**Sg**	**21 03 09.2**	**+1.7**
JMTN	**Minamitane**	**0.43**	**17**	*i* P		**Pg**	**21 03 05.2**	**+0.3**
JMTN				*e*S		**Sg**	**21 03 12.3**	**+1.7**
JKC	**Kuchinoerabu**	**0.68**	**314**	P		**Pg**	**21 03 10.1**	**+0.5**
JKC				S		**Sg**	**21 03 20.3**	**+1.7**
JTN	**Tanegashima 3**	**0.69**	**16**	P		**Pg**	**21 03 09.9**	**0.0**
JNN	**Nakanoshima**	**0.78**	**259**	*e*P		**Pg**	**21 03 11.1**	**-0.5**
JTSR	**Tashiro 2**	**1.18**	**7**	*e*P		**Pn**	**21 03 18.4**	**-0.8**
JTSR				*e*S		**Sb**	**21 03 35.2**	**+0.7**
JSU	**Suzuyama**	**1.54**	**350**	P		**Pn**	**21 03 23.3**	**-0.7**
JOW	**Kunigami**	**3.83**	**215**	Pn		**Pn**	**21 03 55.5**	**0.0**
	1.2nm,0.3s,baz=83,slow=23,SNR=1.6							
JOW				Sn		**Sn**	**21 04 41.5**	**+0.8**
	1.0nm,0.3s,baz=341,slow=25,SNR=1.5							
	3.7nm,0.4s							
SONM	**Songino Array**	**25.85**	**320**	P		**P**	**21 08 26.0**	**-2.2**
	0.1nm,0.5s,baz=134,slow=8.3,SNR=1.7							
	0.1nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**34.22**	**99**	T		T	21 45 45.2	
	baz=299							
H11N1	**WAKE ISLAND Hy**	**34.22**	**99**	T		T	21 45 47.3	
	baz=298							
H11N3	**WAKE ISLAND Hy**	**34.23**	**99**	T		T	21 45 50.4	
	baz=298							
MKAR	**Makanchi Array**	**40.84**	**308**	P		**P**	**21 10 37.3**	**-1.1**
	0.4nm,0.7s,baz=106,slow=9.2,SNR=4.8							
	0.4nm,0.7s							
BVAR	**Borovoye Array**	**49.05**	**316**	P		**P**	**21 11 41.9**	**-1.7**
	0.7nm,0.6s,baz=87,slow=7.4,SNR=6.2							
	0.7nm,0.6s							
WRA	**Warramunga Arr**	**49.76**	**176**	P		**P**	**21 11 51.6**	**+2.3**
	0.2nm,0.7s,baz=355,slow=7.6,SNR=1.3							
	0.2nm,0.7s							

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*IDC **18** 21:08:20.1±1.4,21°.30S×68°.26W,h111km±19km,mb3.4/5, mbtmp3.9/6,Error ellipse: s-maj=36.6km s-min=15.7km az=146.0*
*SJA **18** 21:08:20.9±1.7,21°.59S×68°.13W,h100km,ML3.9,MW3.8*
*GUC **18** 21:08:22.8±0.7,21°.57S×68°.39W,h132km±4km,ML4.1*
ISC 18 21:08:21.2±0.8,21°.54S±0°.04×68°.29W±0°.07,h135km±7km, n40,σ1§29/62,mb3.5/4,1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.92**	**254**	*e*P		**Pn**	**21 08 43.2**	**-0.8**
PB09				*e*S		**Sn**	**21 09 02.0**	**+0.7**
PB09				IAML			21 09 04.0	
	comp=Z,998nm,0.3s							
PB09	**IPOC Station P**	**0.92**	**254**	*e*P		**Pn**	**21 08 44.7**	**+0.7**
PB09				*e*S		**Sn**	**21 09 01.1**	**-0.2**
LVC	**Limon Verde**	**1.21**	**208**	*e*P		**Pn**	**21 08 47.0**	**+0.1**
LVC				*e*S		**Sn**	**21 09 05.4**	**-1.2**
LVC	**Limon Verde**	**1.21**	**208**	P		**Pn**	**21 08 47.3**	**+0.4**
	comp=Z,413nm,0.4s,baz=10,slow=7.4,SNR=251							
LVC				S		**Sn**	**21 09 06.6**	**0.0**
	comp=Z,240nm,0.3s,baz=106,slow=18,SNR=39							
LVC	**Limon Verde**	**1.21**	**208**	*e*P		**Pn**	**21 08 47.0**	**+0.1**
LVC				*e*S		**Sn**	**21 09 06.2**	**-0.3**
LVC				IAML			21 09 07.2	
	comp=Z,4μm,0.4s							
PB01	**IPOC Station P**	**1.22**	**294**	*e*S		**Sn**	**21 09 06.4**	**+0.2**
PB01				IAML			21 09 07.5	
	comp=Z,2μm,0.2s							
PB01	**IPOC Station P**	**1.22**	**294**	*e*P		**Pn**	**21 08 47.1**	**+0.4**
PB01				*e*S		**Sn**	**21 09 05.3**	**-0.9**
PB01				IAML			21 09 06.7	
	comp=N,3μm,0.5s							
PB07	**IPOC Station P**	**1.50**	**263**	*e*S		**Sn**	**21 09 10.8**	**-0.8**
PB07				IAML			21 09 13.1	
	comp=Z,1μm,0.4s							
PB07	**IPOC Station P**	**1.50**	**263**	*e*P		**Pn**	**21 08 49.7**	**0.0**
PB07				*e*S		**Sn**	**21 09 10.2**	**-1.3**
PB07				IAML			21 09 11.2	
	comp=E,3μm,0.3s							
PB02	**IPOC Station P**	**1.51**	**278**	*e*S		**Sn**	**21 09 11.2**	**-0.5**
PB02				IAML			21 09 11.7	
	comp=Z,2μm,0.4s							
PB02	**IPOC Station P**	**1.51**	**278**	*e*S		**Sn**	**21 09 10.4**	**-1.3**
PB02				IAML			21 09 11.3	
	comp=N,6μm,0.2s							
PB08	**IPOC Station P**	**1.61**	**330**	*e*P		**Pn**	**21 08 52.5**	**+1.3**
PB08				*e*S		**Sn**	**21 09 15.9**	**+1.7**
PB08	**IPOC Station P**	**1.61**	**330**	⇓*i*P		**Pn**	**21 08 52.5**	**+1.3**
PB08				*e*S		**Sn**	**21 09 15.2**	**+1.0**
PB06	**IPOC Station P**	**1.66**	**226**	*e*P		**Pn**	**21 08 51.9**	**+0.3**
PB06				*e*S		**Sn**	**21 09 14.8**	**0.0**
PB06				IAML			21 09 15.3	
	comp=Z,663nm,0.2s							
PB06	**IPOC Station P**	**1.66**	**226**	*e*P		**Pn**	**21 08 51.8**	**+0.3**
PB06				*e*S		**Sn**	**21 09 13.9**	**-0.9**
PB06				IAML			21 09 15.8	
	comp=E,1μm,0.1s							
PATCX	**Punta Patache**	**1.88**	**292**	*e*S		**Sn**	**21 09 17.9**	**-1.3**
PATCX				IAML			21 09 20.1	
	comp=N,3μm,0.3s							
PB04	**IPOC Station P**	**1.90**	**245**	*e*S		**Sn**	**21 09 19.9**	**+0.1**
PB04				IAML			21 09 20.5	
	comp=Z,446nm,0.3s							
PB04	**IPOC Station P**	**1.90**	**245**	*e*S		**Sn**	**21 09 18.0**	**-1.8**
PB04				IAML			21 09 24.9	
	comp=N,867nm,0.2s							
HMBC	**Humberstone**	**1.95**	**310**	*e*P		**Pn**	**21 08 54.8**	**-0.2**
HMBC				*e*S		**Sn**	**21 09 20.2**	**-0.6**
HMBC				IAML			21 09 21.3	
	comp=Z,2μm,0.3s							
HMBC	**Humberstone**	**1.95**	**310**	*e*P		**Pn**	**21 08 54.9**	**-0.1**
HMBC				*e*S		**Sn**	**21 09 19.2**	**-1.6**
HMBC				IAML			21 09 21.6	
	comp=N,2μm,0.4s							
PB15	**IPOC Station P**	**1.99**	**213**	*e*P		**Pn**	**21 08 55.7**	**+0.3**
PB15				*e*S		**Sn**	**21 09 22.4**	**+0.7**
PB15	**IPOC Station P**	**1.99**	**213**	*e*P		**Pn**	**21 08 55.7**	**+0.3**
PB15	**IPOC Station P**	**1.99**	**213**	*e*P		**Pn**	**21 08 55.7**	**+0.3**
PB15				*e*S		**Sn**	**21 09 21.4**	**-0.3**
TA01	**Diego Aracena**	**2.02**	**298**	*e*P		**Pn**	**21 08 55.5**	**-0.2**
TA01				*e*S		**Sn**	**21 09 20.7**	**-1.2**
TA01				IAML			21 09 21.3	
	comp=Z,481nm,0.5s							
TA01	**Diego Aracena**	**2.02**	**298**	*e*P		**Pn**	**21 08 55.4**	**-0.2**
TA01				*e*S		**Sn**	**21 09 20.2**	**-1.8**
TA01				IAML			21 09 22.2	
	comp=E,2μm,0.2s							
TA01	**Diego Aracena**	**2.02**	**298**	*e*S		**Pn**	**21 08 55.7**	**+0.1**
GO01	**Chusmiza**	**2.05**	**335**	*e*P		**Pn**	**21 08 57.0**	**+0.5**
GO01				*e*S		**Sn**	**21 09 25.8**	**+2.3**
GO01	**Chusmiza**	**2.05**	**335**	*e*P		**Pn**	**21 08 57.4**	**+0.9**
GO01				IAML			21 09 27.4	
	comp=N,905nm,0.2s							
TA02	**Huaiquique**	**2.14**	**306**	*e*S		**Sn**	**21 09 26.5**	**+2.0**
TA02				IAML			21 09 27.9	
	comp=Z,422nm,0.1s							
PB11	**IPOC Station P**	**2.19**	**324**	*e*P		**Pn**	**21 08 56.7**	**-1.1**
PB11				*e*S		**Sn**	**21 09 25.7**	**-0.2**
PB11				IAML			21 09 30.6	
	comp=Z,465nm,0.4s							
PB11	**IPOC Station P**	**2.19**	**324**	*e*S		**Sn**	**21 09 25.2**	**-0.7**
PB11				IAML			21 09 27.3	
	comp=N,1μm,0.3s							
PB14	**IPOC Station P**	**3.63**	**212**	*e*P		**Pn**	**21 09 15.6**	**-0.9**
PB14				*e*S		**Sn**	**21 09 57.0**	**-2.4**
GO02	**Mina Guanaco**	**3.80**	**198**	*e*P		**Pn**	**21 09 18.1**	**-0.6**
GO02				*e*S		**Sn**	**21 10 03.4**	**+0.3**
SIV	**San Ignacio**	**8.79**	**52**	P		**Pn**	**21 10 23.4**	**-1.9**
	comp=N,15nm,0.3s,baz=243,slow=11,SNR=81							
SIV				S		**Sn**	**21 11 56.4**	**-6.3**
	comp=N,1.8nm,0.5s,baz=162,slow=20,SNR=2.3							
BDFB	**Brasilia**	**20.09**	**76**	P		**P**	**21 12 44.1**	**-0.3**
	comp=N,2.4nm,0.4s,baz=239,slow=7.8,SNR=8.7							
	comp=N,2.4nm,0.4s							
TXAR	**Lajitas Array**	**60.99**	**325**	P		**P**	**21 18 20.7**	**+0.1**
	comp=N,0.2nm,0.6s,baz=152,slow=4.1,SNR=2.3							
	comp=N,0.2nm,0.6s							
PDAR	**Pinedale Array**	**74.44**	**330**	P		**P**	**21 19 44.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=139,slow=5.9,SNR=2.7							
	comp=N,0.1nm,0.3s							
TORD	**Torodi Ar. Bea**	**76.83**	**70**	P		**P**	**21 19 59.1**	**+0.5**
	comp=N,0.8nm,0.4s,baz=251,slow=6.5,SNR=4.1							
	comp=N,0.8nm,0.4s							
YKA	**Yellowknife Ar**	**91.42**	**340**	P		**P**	**21 21 12.4**	**+1.0**
	comp=N,0.7nm,0.7s,baz=133,slow=4.6,SNR=15							
	comp=N,0.7nm,0.7s							
MKAR	**Makanchi Array**	**145.33**	**36**	PKPbc		**PKPab**	**21 27 44.8**	**+1.4**
	comp=N,0.1nm,0.4s,baz=325,slow=2.3,SNR=3.2							

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*GUC **18** 21:08:26.5±0.5,21°.54S×70°.21W,h35km±3km,ML2.7*
ISC 18 21:08:24.8±1.4,21°.54S±0°.04×70°.2W±0°.1,h56km,n15, σ1§48/18,1C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB07	**IPOC Station P**	**0.30**	**127**	*i* P		**Pn**	**21 08 34.7**	**0.0**
PB07				*e*S		**Sn**	**21 08 40.6**	**-1.3**
PB07				IAML			21 08 41.2	
	comp=N,2μm,0.1s							
PB07	**IPOC Station P**	**0.30**	**127**	*e*P		**Pn**	**21 08 38.8**	**+4.0**
PB02	**IPOC Station P**	**0.32**	**47**	⇓*i*P		**Pn**	**21 08 34.7**	**-0.1**
PB02				*e*S		**Sn**	**21 08 40.5**	**-1.6**
PB02				IAML			21 08 41.2	
	comp=E,1μm,0.2s							
PB02	**IPOC Station P**	**0.32**	**47**	*e*P		**Pn**	**21 08 34.0**	**-0.8**
PATCX	**Punta Patache**	**0.72**	**360**	⇓*i*P		**Pn**	**21 08 39.3**	**+0.1**
PATCX				*e*S		**Sn**	**21 08 48.9**	**-0.7**
PATCX				IAML			21 08 50.1	
	comp=E,418nm,0.2s							
PB04	**IPOC Station P**	**0.79**	**180**	⇑*i*P		**Pn**	**21 08 40.7**	**+0.6**
PB04				*e*S		**Sn**	**21 08 51.4**	**+0.1**
PB04	**IPOC Station P**	**0.79**	**180**	*e*P		**Pn**	**21 08 38.8**	**-1.3**
PB04	**IPOC Station P**	**0.79**	**180**	*e*P		**Pn**	**21 08 40.5**	**+0.4**
PB01	**IPOC Station P**	**0.79**	**51**	⇓*i*P		**Pn**	**21 08 41.1**	**+1.0**
PB01	**IPOC Station P**	**0.79**	**51**	*e*P		**Pn**	**21 08 38.8**	**-1.3**
PB01	**IPOC Station P**	**0.79**	**51**	*e*P		**Pn**	**21 08 41.0**	**+1.0**
TA01	**Diego Aracena**	**0.97**	**358**	*e*P		**Pn**	**21 08 42.9**	**+0.5**
TA02	**Huaiquique**	**1.27**	**1**	*e*P		Pn

BURY				AML	AML			
	comp=E,226μm,0.3s							
BURY				AML	AML			
	comp=N,428μm,0.4s							
BURY				AML	AML			
	comp=E,203μm,0.1s							
BURY				AML	AML			
	comp=N,350μm,0.2s							
BURY	**Giardini Botan**	**0.71**	**69**	Pg	**Pb**	**21 19 22.3**	**+0.4**	
BURY	**Giardini Botan**	**0.71**	**69**	Sg	**Sn**	**21 19 32.4**	**-0.2**	
BURY	**Giardini Botan**	**0.71**	**69**	P	**Pb**	**21 19 21.5**	**-0.4**	
BURY				S	**Sn**	**21 19 32.4**	**-0.2**	
ISO	**Isola**	**0.71**	**24**	Pg	**Pb**	**21 19 21.9**	**-0.1**	
ISO				Sg	**Sb**	**21 19 30.9**	**-0.6**	
ISO	**Isola**	**0.71**	**24**	P	**Pb**	**21 19 22.5**	**+0.4**	
ISO				S	**Sb**	**21 19 31.6**	**+0.1**	
MLYF	**Mely**	**0.78**	**306**	Pg	**Pb**	**21 19 23.5**	**+0.4**	
MLYF				Sg	**Sn**	**21 19 34.2**	**-0.2**	
BSTF	**la Bastide-des**	**0.80**	**296**	Pg	**Pb**	**21 19 23.3**	**-0.3**	
BSTF				Sg	**Sb**	**21 19 33.5**	**-0.4**	
SAOF	**Saorge**	**0.80**	**55**	Pg	**Pb**	**21 19 23.5**	**0.0**	
SAOF				Sg	**Sb**	**21 19 34.4**	**+0.5**	
SAOF	**Saorge**	**0.80**	**55**	P	**Pb**	**21 19 23.8**	**+0.2**	
SAOF				S	**Sb**	**21 19 34.5**	**+0.5**	
STV	**Sant Anna di V**	**0.87**	**35**	P	**Pb**	**21 19 24.7**	**0.0**	
STV				S	**Sb**	**21 19 35.7**	**-0.2**	
STV				AML	AML			
	comp=E,168μm,0.5s							
STV				AML	AML			
	comp=N,190μm,1.5s							
STV				AML	AML			
	comp=E,133μm,0.3s							
STV				AML	AML			
	comp=N,182μm,0.3s							
STV	**Sant Anna di V**	**0.87**	**35**	Pg	**Pb**	**21 19 24.6**	**0.0**	
STV	**Sant Anna di V**	**0.87**	**35**	Sg	**Sb**	**21 19 35.9**	**0.0**	
STV	**Sant Anna di V**	**0.87**	**35**	P	**Pb**	**21 19 24.7**	**0.0**	
STV				S	**Sb**	**21 19 35.6**	**-0.2**	
SMRF	**Simiane la Rot**	**0.89**	**300**	*e*Pg	**Pn**	**21 19 25.7**	**+0.6**	
SMRF				*e*Sg	**Sn**	**21 19 38.0**	**+0.8**	
	comp=N,72nm,0.3s							
JAUF	**Jausiers**	**0.90**	**5**	Pg	**Pb**	**21 19 25.4**	**+0.2**	
OGAG	**Argentiere**	**0.92**	**356**	Pn	Pb	21 19 31.5	+5.9	
OGAG				Sg	Sn	21 19 48.1	+10	
OGAG	**Argentiere**	**0.92**	**356**	P	Pb	21 19 31.6	+6.0	
SURF	**Saint Ours**	**0.95**	**7**	Pg	**Pb**	**21 19 26.4**	**+0.2**	
SURF	**Saint Ours**	**0.95**	**7**	P	**Pb**	**21 19 26.4**	**+0.2**	
SURF				S	**Sn**	**21 19 39.9**	**+1.0**	
IMI	**Imperia**	**0.98**	**67**	P	**Pn**	**21 19 26.6**	**+0.3**	
IMI				S	**Sn**	**21 19 39.9**	**+0.5**	
IMI				AML	AML			
	comp=E,90μm,0.1s							
IMI				AML	AML			
	comp=N,147μm,0.2s							
IMI	**Imperia**	**0.98**	**67**	P	**Pn**	**21 19 26.3**	**-0.1**	
IMI				S	**Sn**	**21 19 40.0**	**+0.5**	
CREF	**Crivoux**	**1.01**	**359**	Pg	**Pb**	**21 19 27.5**	**+0.3**	
CREF				Sg	**Sn**	**21 19 41.0**	**+0.5**	
PZZ	**Stroppo**	**1.03**	**19**	P	**Pb**	**21 19 27.6**	**+0.2**	
PZZ				S	**Sn**	**21 19 40.8**	**+0.1**	
PZZ	**Stroppo**	**1.03**	**19**	Pg	**Pb**	**21 19 28.1**	**+0.6**	
PZZ	**Stroppo**	**1.03**	**19**	Sg	**Sn**	**21 19 40.9**	**+0.1**	
PZZ	**Stroppo**	**1.03**	**19**	P	**Pb**	**21 19 27.6**	**+0.2**	
PZZ				S	**Sn**	**21 19 41.0**	**+0.2**	
GBOS	**Grotte di Boss**	**1.12**	**50**	P	**Pb**	**21 19 29.1**	**+0.2**	
GBOS				S	**Sb**	**21 19 43.5**	**+0.4**	
GBOS	**Grotte di Boss**	**1.12**	**50**	Pg	**Pb**	**21 19 29.3**	**+0.4**	
GBOS	**Grotte di Boss**	**1.12**	**50**	Sg	**Sb**	**21 19 43.5**	**+0.4**	
GBOS	**Grotte di Boss**	**1.12**	**50**	P	**Pb**	**21 19 29.0**	**+0.1**	
GBOS				S	**Sb**	**21 19 43.8**	**+0.7**	
RORO	**Rocca Rossa**	**1.18**	**60**	P	**Pn**	**21 19 29.3**	**+0.2**	
RORO				S	**Sb**	**21 19 45.4**	**+0.6**	
RORO	**Rocca Rossa**	**1.18**	**60**	P	**Pn**	**21 19 29.2**	**+0.2**	
RORO				S	**Sb**	**21 19 45.5**	**+0.7**	
MBDF	**Montbardon**	**1.20**	**4**	*e*Pg	**Pb**	**21 19 30.2**	**-0.1**	
MBDF				*e*Sg	**Sb**	**21 19 45.6**	**+0.2**	
	comp=N,22nm,0.2s							
CANO	**Canova, Maglio**	**1.33**	**59**	Pn	**Pb**	**21 19 32.9**	**+0.4**	
CANO	**Canova, Maglio**	**1.33**	**59**	Sn	**Sb**	**21 19 50.3**	**+1.1**	
CANO	**Canova, Maglio**	**1.33**	**59**	P	**Pb**	**21 19 32.8**	**+0.2**	
BHB	**Bricherasio**	**1.38**	**19**	P	**Pn**	**21 19 32.6**	**+0.8**	
BHB				S	**Sb**	**21 19 50.6**	**0.0**	
BHB	**Bricherasio**	**1.38**	**19**	Pn	**Pn**	**21 19 32.5**	**+0.7**	
BHB	**Bricherasio**	**1.38**	**19**	Sn	**Sb**	**21 19 51.0**	**+0.4**	
RRL	**Rocca Remolon**	**1.39**	**4**	Pn	**Pb**	**21 19 34.4**	**+0.8**	
RRL	**Rocca Remolon**	**1.39**	**4**	Sn	**Sb**	**21 19 52.4**	**+1.4**	
RRL	**Rocca Remolon**	**1.39**	**4**	P	**Pb**	**21 19 33.5**	**-0.1**	
ORIF	**Oris-en-Rattie**	**1.49**	**339**	*e*Pg	**Pb**	**21 19 35.5**	**+0.3**	
ORIF				*e*Sn	**Sn**	**21 19 49.8**	**-2.2**	
	comp=N,11nm,0.2s							
ORIF	**Oris-en-Rattie**	**1.49**	**339**	Pn	**Pb**	**21 19 34.7**	**-0.5**	
BNI	**Bardonecchia**	**1.52**	**1**	P	**Pb**	**21 19 36.0**	**+0.3**	
BNI				S	**Sb**	**21 19 55.1**	**+0.5**	
OGMO	**Fort Saint-Gob**	**1.67**	**1**	Pg	**Pb**	**21 19 39.8**	**+1.4**	
OGMO				Sn	**Sb**	**21 20 00.3**	**+1.3**	
RSP	**Reno Superiore**	**1.67**	**15**	P	**Pb**	**21 19 37.8**	**-0.6**	
RSP				S	**Sb**	**21 19 58.9**	**-0.2**	
VIVF	**Saint-Julien-l**	**1.94**	**314**	*e*Pn	**Pn**	**21 19 39.6**	**+0.1**	
VIVF				*e*Sn	**Sn**	**21 20 00.6**	**-2.4**	
	comp=N,4.1nm,0.2s							
LPG	**La Plagne**	**1.96**	**2**	*e*Pg	**Pb**	**21 19 44.4**	**+1.0**	
LPG				*e*Sg	**Sb**	**21 20 09.5**	**+1.9**	
	comp=N,13nm,0.5s							
LPL	**La Plagne**	**1.98**	**2**	*e*Pg	**Pb**	**21 19 44.2**	**+0.5**	
LPL				*e*Sg	**Sb**	**21 20 10.0**	**+1.9**	
	comp=N,10.0nm,0.4s							
PGF	**Pioggiola**	**1.99**	**119**	*e*Pn	**Pn**	**21 19 40.1**	**-0.2**	
PGF				*e*Sn	**Sn**	**21 20 02.7**	**-1.7**	
	comp=N,6.2nm,0.2s							
PGF	**Pioggiola**	**1.99**	**119**	Pn	**Pn**	**21 19 39.9**	**-0.3**	
MORSI	**Morsiglia**	**2.07**	**105**	Pn	**Pn**	**21 19 40.8**	**-0.5**	
MORSI				Sn	**Sn**	**21 20 04.0**	**-2.2**	
LASF	**Ste Croix**	**2.09**	**286**	*e*Pn	**Pn**	**21 19 40.7**	**-0.8**	
LASF	**Ste Croix**	**2.09**	**286**	*e*Pg	**Pb**	**21 19 47.7**	**+2.3**	
LASF				*e*Sn	**Sn**	**21 20 04.5**	**-2.2**	
	comp=N,3.5nm,0.3s							
OGSM	**Saint Maurice**	**2.18**	**342**	Pn	**Pn**	**21 19 43.4**	**+0.5**	
OGSM				Sn	**Sn**	**21 20 08.6**	**-0.4**	
LBL	**Lubilhac**	**2.97**	**306**	Pn	**Pn**	**21 19 54.2**	**+0.5**	
LBL				Sn	**Sn**	**21 20 27.9**	**-0.5**	
CABF	**La Chapelle**	**3.10**	**353**	*e*Sn	**Sn**	**21 20 27.7**	**-4.1**	
	comp=N,1.2nm,0.3s							
SMF	**Signal de Mont**	**3.69**	**328**	*e*Sn	**Sn**	**21 20 42.1**	**-4.0**	
	comp=N,1.6nm,0.3s							

*IDC **18** 21:32:49.0±2.6,55˚.80N×148˚.69W,h0km,mb3.8/1, mbtmp3.3/6,ML3.2/5,MS2.6/1,Error ellipse: s-maj=46.6km s-min=24.9km az=168.0*

*NEIC **18** 21:32:55.2±1.0,56˚.32N±0˚.09×148˚.6W±0˚.1,h21km±9km, ML3.2/16,ML3.1(AEIC),Error ellipse: s-maj=12.9km s-min=8.6km az=169.0*

*AEIC **18** 21:32:57.6±1.2,56˚.31N±0˚.09×148˚.6W±0˚.1,h6km±7km, Error ellipse: s-maj=13.2km s-min=9.3km az=172.0*

ISC 18 21:32:52.7±1.2,56˚30N±0˚.08×148˚68W±0˚.05,h10km, n165,σ1§26/167,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.60**	**307**		**Pn**	**21 33 35.9**	**+1.0**
KDAK					**Sn**	**21 34 05.2**	**-1.3**
KDAK	**Kodiak Island**	**2.60**	**307**	Pn	**Pn**	**21 33 36.2**	**+1.4**
	2.0nm,0.3s,baz=125,slow=5.8,SNR=30						
KDAK					**Sn**	**21 34 05.1**	**-1.3**
	3.8nm,0.3s,baz=204,slow=19,SNR=15						
KDAK				LR	LR	21 34 59.2	
	comp=Z,90nm,18.5s,baz=149,slow=44 5.3nm,0.3s						
OHAK	**Old Harbor**	**2.70**	**292**		**Pn**	**21 33 37.1**	**+1.0**
OHAK					**Sn**	**21 34 07.1**	**-1.8**
OHAK	**Old Harbor**	**2.70**	**292**	P	**Pn**	**21 33 37.3**	**+1.1**
OHAK	**Old Harbor**	**2.70**	**292**	P	**Pn**	**21 33 37.1**	**+1.0**
	baz=108						
OHAK				S	**Sn**	**21 34 07.1**	**-1.8**
	baz=108						
SYI	**Shuyak Island**	**3.07**	**321**		**Pn**	**21 33 42.8**	**+1.6**
SYI					**Sn**	**21 34 18.0**	**+0.1**
SYI	**Shuyak Island**	**3.07**	**321**	IAML		21 34 19.9	
	comp=N,44nm,0.5s						
SYI				IAML		21 35 21.6	
	comp=E,43nm,2.6s						
Q20K	**Shuyak Island**	**3.07**	**321**	P	**Pn**	**21 33 42.8**	**+1.6**
	baz=137						
Q20K				S	**Sn**	**21 34 18.0**	**0.0**
	baz=137						
SII	**Sitkinak Islan**	**3.07**	**277**		**Pn**	**21 33 42.8**	**+1.6**
SII					**Sn**	**21 34 17.3**	**-0.7**
SII	**Sitkinak Islan**	**3.07**	**277**	P	**Pn**	**21 33 43.8**	**+2.5**
SII	**Sitkinak Islan**	**3.07**	**277**	P	**Pn**	**21 33 42.8**	**+1.6**
	baz=92						
SII				S	**Sn**	**21 34 17.3**	**-0.7**
	baz=92						
MID	**Middleton Isla**	**3.38**	**21**		**Pn**	**21 33 45.4**	**-0.1**
MID	**Middleton Isla**	**3.38**	**21**	IAML		21 35 41.5	
	comp=N,73nm,1.7s						
MID	**Middleton Isla**	**3.38**	**21**	P	**Pn**	**21 33 45.7**	**+0.2**
Q23K	**Middleton Isla**	**3.38**	**21**		**Pn**	**21 33 45.4**	**0.0**
Q23K	**Middleton Isla**	**3.38**	**21**	IAML		21 35 41.5	
	comp=N,83nm,1.8s						
Q23K	**Middleton Isla**	**3.38**	**21**	P	**Pn**	**21 33 45.4**	**0.0**
	baz=202						
R18K	**Karluk**	**3.41**	**294**		**Pn**	**21 33 47.0**	**+1.1**
R18K	**Karluk**	**3.41**	**294**	IAML		21 34 34.8	
	comp=E,70nm,0.4s						
R18K				IAML		21 34 36.2	
	comp=N,61nm,0.7s						
R18K	**Karluk**	**3.41**	**294**	P	**Pn**	**21 33 47.0**	**+1.1**
	baz=109						
CNPM	**China Poot**	**3.52**	**338**		**Pn**	**21 33 46.9**	**-0.5**
CNPM	**China Poot**	**3.52**	**338**	IAML		21 34 32.8	
	comp=N,34nm,0.9s						
CNPM				IAML		21 34 33.5	
	comp=E,41nm,1.1s						
BRSE	**Bradley Lake S**	**3.63**	**343**		**Pn**	**21 33 48.3**	**-0.6**
BRSE	**Bradley Lake S**	**3.63**	**343**	P	**Pn**	**21 33 48.3**	**-0.6**
	baz=161						
BRLK	**Bradley Lake**	**3.67**	**342**		**Pn**	**21 33 48.8**	**-0.8**
Q19K	**Cape Douglas,**	**3.75**	**317**		**Pn**	**21 33 51.4**	**+0.7**
Q19K	**Cape Douglas,**	**3.75**	**317**	P	**Pn**	**21 33 51.4**	**+0.7**
	baz=132						
P23K	**Montague Islan**	**3.77**	**10**		**Pn**	**21 33 51.3**	**+0.4**
P23K	**Montague Islan**	**3.77**	**10**	P	**Pn**	**21 33 51.3**	**+0.4**
	baz=190						
SEW	**Seward**	**3.84**	**354**		**Pn**	**21 33 52.0**	**+0.1**
SEW	**Seward**	**3.84**	**354**	P	**Pn**	**21 33 51.9**	**+0.1**
	baz=173						
KAHG	**Katmai Hook Gl**	**3.87**	**307**		**Pn**	**21 33 54.0**	**+1.7**
CHIR	**Chirikof Islan**	**3.92**	**266**		**Pn**	**21 33 54.4**	**+1.5**
CHIR	**Chirikof Islan**	**3.92**	**266**	P	**Pn**	**21 33 54.4**	**+1.5**
	baz=80						
AUL	**Augustine Lava**	**4.00**	**323**		**Pn**	**21 33 55.6**	**+1.5**
ACHA	**Angle Creek He**	**4.09**	**301**		**Pn**	**21 33 58.1**	**+2.7**
P19K	**Oil Pt**	**4.15**	**326**		**Pn**	**21 33 57.9**	**+1.8**
P19K	**Oil Pt**	**4.15**	**326**	P	**Pn**	**21 33 57.9**	**+1.8**
	baz=142						
O22K	**Cooper Landing**	**4.23**	**353**	Pn	**Pn**	**21 33 58.1**	**+0.9**
HIN	**Hinchinbrook I**	**4.27**	**15**		**Pn**	**21 33 58.1**	**+0.4**
KAIM	**Kayak Island**	**4.29**	**30**		**Pn**	**21 33 58.4**	**+0.5**
KAIM	**Kayak Island**	**4.29**	**30**	P	**Pn**	**21 33 58.4**	**+0.5**
	baz=213						
SLKM	**Skilak Lake**	**4.30**	**350**		**Pn**	**21 33 58.6**	**+0.4**
O20K	**Slope Mountain**	**4.33**	**333**		**Pn**	**21 33 59.9**	**+1.2**
O20K	**Slope Mountain**	**4.33**	**333**	P	**Pn**	**21 33 59.9**	**+1.2**
	baz=149						
CNTC	**Contact Creek**	**4.38**	**300**		**Pn**	**21 34 01.9**	**+2.6**
Q17K	**Contact Creek**	**4.38**	**300**	P	**Pn**	**21 34 01.9**	**+2.5**
	baz=113						
EYAK	**Cordova Ski Ar**	**4.54**	**19**		**Pn**	**21 34 00.8**	**-0.5**
EYAK	**Cordova Ski Ar**	**4.54**	**19**	P	**Pn**	**21 34 02.2**	**+0.9**
EYAK	**Cordova Ski Ar**	**4.54**	**19**	P	**Pn**	**21 34 00.8**	**-0.5**
	baz=200						
SUCK	**Suckling Hills**	**4.59**	**32**		**Pn**	**21 34 02.8**	**+0.7**
RAGM	**Ragged Mountai**	**4.61**	**26**		**Pn**	**21 34 02.8**	**+0.3**
FID	**Port Fidalgo**	**4.61**	**14**		**Pn**	**21 34 02.7**	**+0.2**
RED	**Redoubt Volcan**	**4.66**	**334**		**Pn**	**21 34 03.6**	**+0.4**
NICHA	**Nichawak Mount**	**4.67**	**30**		**Pn**	**21 34 03.9**	**+0.7**
GLI	**Glacier Island**	**4.67**	**10**		**Pn**	**21 34 03.7**	**+0.4**
GLI	**Glacier Island**	**4.67**	**10**	P	**Pn**	**21 34 03.7**	**+0.4**
	baz=190						
HMT	**Hamilton**	**4.67**	**28**		**Pn**	**21 34 04.0**	**+0.7**
P18K	**Big Mountain,**	**4.68**	**314**		**Pn**	**21 34 04.6**	**+1.2**
P18K	**Big Mountain,**	**4.68**	**314**	P	**Pn**	**21 34 04.6**	**+1.2**
	baz=128						
RDSO	**Redoubt South**	**4.69**	**335**		**Pn**	**21 34 04.1**	**+0.5**
RSO	**Redoubt South**	**4.70**	**335**	Pn	**Pn**	**21 34 04.7**	**+0.9**
RSO					**Sn**	**21 35 00.9**	**+2.6**
RDWB	**Redoubt West**	**4.74**	**334**		**Pn**	**21 34 04.6**	**+0.2**
GOAT	**Goat Mountain**	**4.77**	**24**		**Pn**	**21 34 05.4**	**+0.7**
NCT	**North Crescent**	**4.83**	**334**		**Pn**	**21 34 06.0**	**+0.5**
RC01	**Rabbit Creek A**	**4.84**	**354**	Pn	**Pn**	**21 34 06.2**	**+0.7**
BERG	**Berg Lake**	**4.87**	**30**		**Pn**	**21 34 06.3**	**+0.3**
GRIN	**Grindle Hills**	**4.89**	**33**		**Pn**	**21 34 07.2**	**+0.8**
O19K	**Port Alsworth**	**4.92**	**325**	Pn	**Pn**	**21 34 08.2**	**+1.7**
SNH	**Sunshine Point**	**4.97**	**36**		**Pn**	**21 34 07.9**	**+0.5**
O18K	**Koktuh Hills**	**4.97**	**319**		**Pn**	**21 34 08.6**	**+1.2**
O18K	**Koktuh Hills**	**4.97**	**319**	P	**Pn**	**21 34 08.6**	**+1.2**
	baz=132						
KHIT	**Khitrov Hills**	**5.04**	**32**		**Pn**	**21 34 09.0**	**+0.5**
BMRM	**Bremner River**	**5.15**	**23**		**Pn**	**21 34 10.5**	**+0.7**
BMRM	**Bremner River**	**5.15**	**23**	P	**Pn**	**21 34 10.5**	**+0.7**
	baz=206						
WAX	**Waxell Ridge**	**5.17**	**34**		**Pn**	**21 34 10.6**	**+0.4**
BARK	**Barkley Ridge**	**5.25**	**36**		**Pn**	**21 34 12.0**	**+0.7**
MESA	**MESA**	**5.27**	**40**		**Pn**	**21 34 12.8**	**+1.2**
MESA	**MESA**	**5.27**	**40**	P	**Pn**	**21 34 12.8**	**+1.2**
	baz=225						
SUA	**Susitna One**	**5.29**	**349**		**Pn**	**21 34 12.8**	**+0.9**
SUA	**Susitna One**	**5.29**	**349**	P	**Pn**	**21 34 12.8**	**+0.9**
	baz=167						
PMR	**Palmer**	**5.32**	**358**	P	**Pn**	**21 34 14.0**	**+1.9**
CRQM	**Cirque**	**5.33**	**31**		**Pn**	**21 34 13.0**	**+0.5**
CRQE	**Cirque**	**5.34**	**31**	P	**Pn**	**21 34 13.0**	**+0.4**
	baz=215						
KLU	**Klutina**	**5.40**	**14**		**Pn**	**21 34 14.3**	**+0.9**
KLU	**Klutina**	**5.40**	**14**	P	**Pn**	**21 34 14.3**	**+0.9**
	baz=196						
TGL	**Tana Glacier**	**5.42**	**32**		**Pn**	**21 34 14.2**	**+0.6**
BAGL	**Bagley Icefiel**	**5.45**	**37**		**Pn**	**21 34 14.2**	**+0.4**
ISLE	**Juniper Island**	**5.45**	**35**		**Pn**	**21 34 14.6**	**+0.5**
N19K	**Bonanza Creek**	**5.45**	**329**		**Pn**	**21 34 15.0**	**+1.0**
N19K	**Bonanza Creek**	**5.45**	**329**	P	**Pn**	**21 34 15.0**	**+1.0**
	baz=143						
STLK	**Strandline Lak**	**5.47**	**344**		**Pn**	**21 34 15.3**	**+1.1**
GHO	**Glory Hole Cre**	**5.50**	**359**		**Pn**	**21 34 16.7**	**+2.0**
SPNN	**North Nagishla**	**5.50**	**339**		**Pn**	**21 34 15.5**	**+0.8**
SML	**Sawmill**	**5.53**	**2**		**Pn**	**21 34 14.7**	**-0.4**
SML	**Sawmill**	**5.53**	**2**	P	**Pn**	**21 34 14.7**	**-0.4**
	baz=181						
SCM	**Sheep Creek Mo**	**5.60**	**7**	Pn	**Pn**	**21 34 17.5**	**+1.5**
VRDI	**Verde Repeater**	**5.64**	**27**		**Pn**	**21 34 17.2**	**+0.4**
O17K	**Koliganek Bris**	**5.67**	**311**		**Pn**	**21 34 18.8**	**+1.8**
O17K	**Koliganek Bris**	**5.67**	**311**	P	**Pn**	**21 34 18.7**	**+1.8**
	baz=124						
SAMH	**Samovar Hills**	**5.67**	**44**		**Pn**	**21 34 18.4**	**+1.3**
KIAG	**Kiagna River**	**5.70**	**33**		**Pn**	**21 34 18.0**	**+0.5**
N25K	**Chitina, Valde**	**5.73**	**20**		**Pn**	**21 34 18.9**	**+1.0**
N25K	**Chitina, Valde**	**5.73**	**20**	P	**Pn**	**21 34 18.9**	**+1.0**
	baz=203						
GRNC	**Granite Creek**	**5.74**	**36**		**Pn**	**21 34 18.8**	**+0.7**
TABL	**Table Mountain**	**5.74**	**41**		**Pn**	**21 34 19.1**	**+0.9**
GLB	**Gilahina Butte**	**5.75**	**24**		**Pn**	**21 34 18.8**	**+0.7**
N18K	**Kilae Creek**	**5.80**	**322**		**Pn**	**21 34 19.7**	**+1.0**
N18K	**Kilae Creek**	**5.80**	**322**	P	**Pn**	**21 34 19.7**	**+1.0**
	baz=136						
PCA	**Pinnacle**	**5.86**	**46**		**Pn**	**21 34 20.1**	**+0.5**
PINM	**Pinnacle**	**5.86**	**46**	P	**Pn**	**21 34 20.1**	**+0.5**
	baz=233						
PTPK	**Patty Peak**	**5.87**	**31**		**Pn**	**21 34 20.4**	**+0.5**
MCARA	**McCarthy VSAT**	**5.88**	**28**		**Pn**	**21 34 21.0**	**+1.1**
MCARA	**McCarthy VSAT**	**5.88**	**28**	P	**Pn**	**21 34 21.0**	**+1.1**
	baz=212						
SKT	**Skwentna**	**5.89**	**347**	Pn	**Pn**	**21 34 21.1**	**+1.1**
PNL	**Peninsula**	**5.98**	**52**		**Pn**	**21 34 22.1**	**+0.9**
PNL	**Peninsula**	**5.98**	**52**	P	**Pn**	**21 34 22.4**	**+1.1**
PNL	**Peninsula**	**5.98**	**52**	P	**Pn**	**21 34 22.1**	**+0.9**
	baz=239						
BARN	**Barnard Glacie**	**6.02**	**35**		**Pn**	**21 34 22.5**	**+0.6**
BCPM	**Bancas Point**	**6.03**	**49**		**Pn**	**21 34 23.1**	**+1.2**
CTG	**Chitina Glacier**	**6.05**	**36**	P	**Pn**	**21 34 22.6**	**+0.3**
	baz=222						
CTGM	**Chitina Glacie**	**6.05**	**36**		**Pn**	**21 34 22.6**	**+0.3**
M20K	**Styx River**	**6.05**	**340**		**Pn**	**21 34 23.3**	**+1.0**
M20K	**Styx River**	**6.05**	**340**	P	**Pn**	**21 34 23.3**	**+1.0**
	baz=155						
LOGN	**Logan Glacier**	**6.06**	**38**		**Pn**	**21 34 22.9**	**+0.5**
N17K	**Nushagak Hills**	**6.16**	**317**		**Pn**	**21 34 25.1**	**+1.4**
	baz=129						
N17K	**Nushagak Hills**	**6.16**	**317**	P	**Pn**	**21 34 25.1**	**+1.4**
M19K	**Big River Lodg**	**6.35**	**335**		**Pn**	**21 34 27.0**	**+0.8**
M19K	**Big River Lodg**	**6.35**	**335**	P	**Pn**	**21 34 27.0**	**+0.8**
	baz=149						
O29M	**Mount Kennedy**	**6.67**	**49**		**Pn**	**21 34 32.0**	**+1.3**
O29M	**Mount Kennedy**	**6.67**	**49**	P	**Pn**	**21 34 32.0**	**+1.3**
	baz=237						
P29M	**Windy Craggy**	**6.71**	**56**		**Pn**	**21 34 31.5**	**+0.2**
SDPT	**Sand Point**	**6.72**	**267**	P	**Pn**	**21 34 34.3**	**+3.0**
DHY	**Denali Highway**	**6.83**	**5**		**Pn**	**21 34 35.0**	**+1.9**
DHY	**Denali Highway**	**6.83**	**5**	P	**Pn**	**21 34 35.0**	**+1.9**
	baz=186						
M17K	**Holitna River**	**6.84**	**322**		**Pn**	**21 34 34.5**	**+1.5**
M17K	**Holitna River**	**6.84**	**322**	P	**Pn**	**21 34 34.5**	**+1.5**
	baz=134						
YUK7	**Dusty Glacier**	**6.97**	**48**		**Pn**	**21 34 36.9**	**+1.8**
S31K	**Pelican**	**6.98**	**71**		**Pn**	**21 34 33.1**	**-1.8**
S31K	**Pelican**	**6.98**	**71**	P	**Pn**	**21 34 33.1**	**-1.8**
	baz=261						
YUK6	**Outpost Mounta**	**7.12**	**45**		**Pn**	**21 34 38.9**	**+1.8**
YUK6	**Outpost Mounta**	**7.12**	**45**	P	**Pn**	**21 34 38.9**	**+1.8**
	baz=233						
M16K	**Timber Creek**	**7.15**	**316**		**Pn**	**21 34 39.2**	**+1.9**
M16K	**Timber Creek**	**7.15**	**316**	P	**Pn**	**21 34 39.2**	**+1.9**
	baz=127						
YUK4	**Talbot Arm**	**7.26**	**42**	P	**Pn**	**21 34 42.1**	**+3.1**
	baz=230						
P30M	**Million Dollar**	**7.28**	**53**		**Pn**	**21 34 40.6**	**+1.6**
P30M	**Million Dollar**	**7.28**	**53**	P	**Pn**	**21 34 40.6**	**+1.6**
	baz=243						
SKAG	**Skagway**	**7.79**	**60**	P	**Pn**	**21 34 47.5**	**+1.5**
BESE	**Bessie Mountai**	**7.80**	**67**		**Pn**	**21 34 46.7**	**+0.4**
JIS	**Juneau Island**	**8.00**	**70**	P	**Pn**	**21 34 49.4**	**+0.6**
	comp=E,6.9nm,1.7s						
M29M	**Somme Creek**	**8.07**	**36**		**Pn**	**21 34 51.3**	**+1.4**
K17K	**Iditarod**	**8.08**	**327**		**Pn**	**21 34 50.7**	**+0.7**
K17K	**Iditarod**	**8.08**	**327**	P	**Pn**	**21 34 50.7**	**+0.7**
	baz=138						
ILAR	**Eielson Array**	**8.55**	**5**	Pn	**Pn**	**21 34 57.9**	**+1.5**
	comp=E,0.1nm,0.3s,baz=189,slow=14,SNR=5.6						
ILAR				Sn	**Sn**	**21 36 29.4**	**-3.4**
	comp=E,0.2nm,0.3s,baz=188,slow=22,SNR=6.6 comp=E,0.2nm,0.6s						
P32M	**Atlin**	**8.61**	**61**		**Pn**	**21 34 58.4**	**+1.0**
P32M	**Atlin**	**8.61**	**61**	P	**Pn**	**21 34 58.4**	**+1.0**
	baz=254						
U33K	**Whale Pass**	**8.68**	**85**		**Pn**	**21 34 56.6**	**-1.5**
U33K	**Whale Pass**	**8.68**	**85**	P	**Pn**	**21 34 56.6**	**-1.5**
	baz=278						
DLBC	**Dease Lake**	**10.30**	**70**	Pn	**Pn**	**21 35 21.8**	**+1.4**
	comp=E,0.3nm,0.3s,baz=259,slow=10,SNR=5.6 comp=E,0.5nm,0.3s						
INK	**Inuvik**	**13.89**	**24**	Pn	**Pn**	**21 36 12.4**	**+3.0**
	baz=208,slow=12,SNR=1.4 comp=E,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**18.25**	**56**	P	**Pn**	**21 37 05.7**	**-0.1**
	comp=E,0.1nm,0.3s,baz=263,slow=10,SNR=3.9 comp=E,0.7nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**50.32**	**240**	T	T	22 37 00.7	
	baz=36						
H11S2	**WAKE ISLAND Hy**	**50.33

3µm,0.6s
BOD Bodaibo 1.55 17⇑ *i*PN **Pb 21 36 26.4 0.0**
BOD *e*SG **Sg 21 36 47.1 0.0**
YLYR Ulyunkhan 1.86 219⇓ *i*Pg **Pn 21 36 30.6 +0.9**
YLYR *e* 21 36 35.6
YLYR *e*Sg **Sb 21 36 55.5 +0.3**
YLYR max
218nm,0.5s
YLYR Smax
2µm,0.5s
YLYR Ulyunkhan 1.86 219 *e*PN **Pn 21 36 30.8 +1.1**
YLYR *e*PG **Pb 21 36 31.8 +0.1**
YLYR *e*SG **Sn 21 36 55.3 +1.8**
NIZB Nizh Angarsk 2.11 256 *e*Pn **Pn 21 36 33.8 +0.6**
NIZB *e* 21 36 34.7
NIZB *e*Pg **Pb 21 36 35.9 -0.1**
NIZB *e* 21 36 40.8
NIZB *e*Sg **Sg 21 37 04.8 -0.4**
NIZB *e*SgSg **SnSn 21 37 12.1 +1.9**
NIZB max
119nm,0.7s
NIZB Smax
715nm,0.7s
CRS Chara 2.87 77 *e*Pn **Pn 21 36 44.3 +0.7**
CRS *e*Pg **Pb 21 36 49.9 +0.9**
CRS *e*Sn **Sn 21 37 18.0 -0.4**
CRS *e*Sg **Sb 21 37 27.1 +2.8**
CRS *e*SgSg Sg 21 37 40.2 +11
CRS Pmax
164nm,0.6s
CRS Smax
362nm,0.9s
CRS Chara 2.87 77 *e*PN **Pn 21 36 44.1 +0.5**
CRS *e*PG **Pb 21 36 49.6 +0.6**
CRS *e*SG **Sb 21 37 26.8 +2.5**
VTMR Vitim 3.12 354 *e*Pn **Pn 21 36 47.7 +0.7**
VTMR *e*Pg **Pb 21 36 54.6 +1.4**
VTMR *e*Sn **Sn 21 37 23.8 -0.7**
VTMR *e*Sg **Sg 21 37 34.8 -2.8**
SYVR Suvo 3.25 215⇓ *i*Pn **Pn 21 36 49.2 +0.4**
SYVR *e* 21 36 53.5
SYVR *e*Pg **Pb 21 36 56.0 +0.6**
SYVR *e* 21 37 02.6
SYVR *e*Sn **Sn 21 37 26.7 -1.1**
SYVR *e*Sg **Sb 21 37 37.4 +2.2**
SYVR *e*SgSg **Sg 21 37 46.0 +4.2**
SYVR max
369nm,0.3s
SYVR max
224nm,0.7s
SYVR Suvo 3.25 215 *e*PN **Pn 21 36 48.9 +0.1**
SYVR *e*PG **Pb 21 36 54.0 -1.4**
SYVR *e*SG **Sb 21 37 36.9 +1.7**
MXMB Maximikha 4.01 221 *e*Sg **Sb 21 38 01.8 +4.8**
OGRR Ongureny 4.20 232 *e*Pn **Pn 21 37 02.5 +0.7**
OGRR *e* 21 37 07.4
OGRR *e*Pg **Pb 21 37 12.4 +0.9**
OGRR *e* 21 37 18.4
OGRR *e*Sn **Sn 21 37 48.6 -2.5**
OGRR *e*Sg **Sb 21 38 07.1 +4.7**
OGRR max
42nm,0.8s
OGRR Smax
95nm,0.8s
OGRR Ongureny 4.20 232 *e*PN **Pn 21 37 02.6 +0.7**
OGRR *e*PG **Pb 21 37 13.4 +1.9**
OGRR *e*SG **Sb 21 38 07.2 +4.8**
TUP Tupik 4.32 114 *e*Pn **Pn 21 37 03.0 -0.6**
TUP *e* 21 37 06.2
TUP *e*Pg **Pb 21 37 14.9 +1.3**
TUP *e* 21 37 19.7
TUP *e*Sn **Sn 21 37 51.1 -3.0**
TUP *e*Sg **Sb 21 38 10.0 +4.0**
TUP *e* 21 38 22.2
TUP max
53nm,0.6s
TUP Smax
309nm,0.9s
TUP Tupik 4.32 114⇑ *i*PN **Pn 21 37 02.9 -0.6**
TUP *e*PG **Pb 21 37 13.6 0.0**
TUP *e*SG **Sb 21 38 10.6 +4.6**
CIT Chita 4.34 177 *e*Sg **Sb 21 38 11.1 +4.6**
CIT Smax
622nm,0.4s
CIT Chita 4.34 177 *e*PN **Pn 21 37 02.8 -1.0**
CIT *e*PG **Pb 21 37 15.1 +1.1**
CIT *e*SG **Sb 21 38 12.0 +5.5**
UZR Uzur 4.36 228 *e*Pn **Pn 21 37 04.0 0.0**
UZR *e*Pg **Pb 21 37 15.9 +1.6**
UZR *e*Sn **Sn 21 37 52.8 -2.3**
UZR *e*Sg **Sb 21 38 12.1 +5.0**
UZR *e* 21 38 25.2
UZR Pmax
24nm,0.9s
UZR Smax
155nm,0.9s
GORB Goryachinsk 4.40 222 *e*Pn **Pn 21 37 04.8 +0.2**
GORB *e*Pg **Pb 21 37 16.5 +1.5**
GORB *e* 21 37 20.6
GORB *e*Sg **Sb 21 38 13.0 +4.8**
GORB *e* 21 38 17.6
KELR Kotokel 4.66 222 *e*Pn **Pn 21 37 07.3 -0.8**
KELR *e*Pg **Pb 21 37 21.1 +1.8**
KELR *e*Sn **Sn 21 38 00.1 -2.2**
KELR *e*Sg **Sb 21 38 21.4 +5.9**
YKLR Yuktali 4.71 83 *e*Pn **Pn 21 37 09.4 +0.5**
YKLR *e* 21 37 20.6
YKLR *e* 21 37 57.8
YKLR *e*Sg **Sb 21 38 21.9 +4.7**
TRG Tyrgan 5.35 231 *e*Pn **Pn 21 37 18.1 +0.4**
TRG *e*Pg **Pb 21 37 33.4 +2.2**
TRG *e*Sn **Sn 21 38 17.6 -1.9**
TRG *e*Sg **Sb 21 38 42.8 +7.2**
TRG Pmax
10.0nm,0.5s
TRG Smax
66nm,0.7s
TRG Tyrgan 5.35 231 *e*PN **Pn 21 37 17.7 0.0**
TRG *e*PG **Pb 21 37 33.8 +2.6**
TRG *e*SG **Sg 21 38 44.0 -5.1**
UUDB Ulan-Yde 5.53 218 *e*Pg **Pb 21 37 36.7 +2.4**
UUDB *e* 21 38 19.0
UUDB *e*Sg **Sg 21 38 48.8 -6.1**
UUDB Pmax
18nm,0.6s
UUDB Smax
101nm,1.6s
FFNB Fofonovo 5.71 224 *e*Sg **Sb 21 38 53.5 +7.5**
KAB Kabansk 5.75 224 *e*Pn **Pn 21 37 24.3 +1.1**
KAB *e*Pg **Pb 21 37 40.6 +2.5**
KAB *e*Sn **Sn 21 38 26.1 -3.3**
KAB *e*Sg **Sg 21 38 55.6 -6.4**
KAB *e* 21 39 20.0
KAB Pmax
97nm,0.8s
KAB max
302nm,1.1s
STDB Stepnoy Dvoret 5.78 226 *e*Sg **Sg 21 38 56.7 -6.1**
HRMR Khuramsha 5.98 220 *e*Pn **Pn 21 37 27.0 +0.7**
HRMR *e* 21 37 36.5
HRMR *e*Pg **Pb 21 37 44.4 +2.5**
HRMR *e* 21 37 48.9
HRMR *e*Sn **Sn 21 38 31.5 -3.5**
HRMR *e*Sg **Sg 21 39 02.9 -6.3**
HRMR max
24nm,0.6s
HRMR Smax
241nm,0.7s
BGT Bolshoye Golou 6.27 230 *e*Sn **Sn 21 38 37.2 -4.8**
BGT *e*Sg **Sb 21 39 10.6 +8.7**
BGT Smax
48nm,0.6s
CLNS Chul'man 6.50 81 *e*Pn **Pn 21 37 33.7 +0.3**
CLNS *e*Pg **Pb 21 37 53.8 +3.1**
CLNS *e* 21 38 46.7
CLNS *e*Sg **Sb 21 39 17.0 +8.5**
CLNS *e* 21 39 25.4
IRK Irkutsk 6.63 235 *e*Sg Sb 21 39 21.5 +9.1
IRK Smax
258nm,0.5s
KPC Khapcheranga 6.67 184 *e*Pn **Pn 21 37 34.0 -1.8**
KPC *e*Pg **Pb 21 37 58.3 +4.6**
KPC *e*Sn **Sn 21 38 46.2 -5.9**
KPC *e*Sg **Sg 21 39 24.3 -7.1**
KPC Pmax
20nm,1.3s
KPC Smax
113nm,0.8s
KPC Khapcheranga 6.67 184 *e*PN **Pn 21 37 34.8 -1.0**
KPC *e*PG **Pb 21 37 56.5 +2.8**
KPC *e*SG Sb 21 39 22.6 +9.1
IVK Ivanovka 6.87 232 *e*Pg Pb 21 38 02.7 +5.6
IVK *e* 21 39 15.8
IVK *e*Sg **Sg 21 39 31.4 -6.4**
IVK Pmax
6.0nm,0.6s
IVK Smax
43nm,0.7s
TLY Talaya 7.30 234 *e*Pn **Pn 21 37 43.6 -0.8**
TLY *e*Pg **Pb 21 38 08.6 +4.3**
TLY *e* 21 38 23.7
TLY *e*Sg Sg 21 39 42.3 -9.2
TLY *e* 21 39 57.6
TLY Pmax
8.0nm,1.1s
TLY Smax
40nm,0.6s
ARS Arshan 7.71 239 *e*Pn **Pn 21 37 50.6 +0.5**
ARS *e*Pg Pb 21 38 16.4 +5.1
ARS *e*Sn **Sn 21 39 14.9 -2.7**
ARS *e*Sg Sb 21 39 54.6 +11
ARS Pmax
21nm,1.0s
ARS Smax
188nm,0.6s
ARS Arshan 7.71 239 *e*PG Pb 21 38 18.6 +7.3
HIA Hailar 8.13 148 *d*ePN **Pn 21 37 53.6 -2.2**
ZAK Zakamensk 8.40 229 *e*PG Pg 21 38 32.7 -5.4
ZAK pmax pmax
comp=Z,4.0nm,0.6s
ZEA Zeya 8.50 102 *e*PN **Pn 21 38 01.6 +0.8**
MOY Mondy 8.56 242 *e*Pn **Pn 21 38 02.2 +0.4**
MOY *e*Pg Pg 21 38 31.6 -10
MOY *e* 21 38 39.1
MOY *e*Sn **Sn 21 39 34.0 -4.6**
MOY *e*Sg Sg 21 40 21.3 -11
MOY max
comp=Z,25nm,1.0s
MOY Smax
comp=Z,62nm,1.4s
MOY Mondy 8.56 242 *e*PN **Pn 21 38 03.1 +1.3**
MOY *e*S **Sg 21 40 23.9 -8.1**
ORL Orlik 8.67 249 *e*Pn **Pn 21 38 03.7 +0.5**
ORL *e* 21 38 15.0
ORL *e*Pg Pg 21 38 34.4 -8.8
ORL *e*Sn **Sn 21 39 37.4 -3.8**
ORL *e*Sg Sg 21 40 25.3 -10
ORL Pmax
comp=Z,10.0nm,0.8s
ORL Smax
comp=Z,76nm,1.3s
ULN Ulaanbaatar 9.29 206⇑ *e*P **Pn 21 38 08.8 -2.9**
SONM Songino Array 9.48 209 *e*P **Pn 21 38 15.4 +1.0**
SONM Songino Array 9.48 209 Pn **Pn 21 38 14.7 +0.2**
comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=8.9
SONM Sn **Sn 21 39 57.1 -4.1**
comp=Z,0.2nm,0.3s,baz=20,slow=17,SNR=1.5
SONM Lg Lg 21 40 52.8
comp=Z,1.8nm,0.3s,baz=23,slow=31,SNR=13
comp=Z,0.3nm,0.4s
YAK Yakutsk 10.19 49 Pn Pn 21 38 19.3 -4.6
comp=Z,1.2nm,0.3s,baz=288,slow=11,SNR=1.7
YAK Sn Sn 21 40 08.2 -10
comp=Z,1.7nm,0.3s,baz=324,slow=16,SNR=1.4
YAK Lg Lg 21 41 08.9
comp=Z,1.5nm,0.3s,baz=196,slow=22,SNR=7.2
comp=Z,5.4nm,0.4s
KLR Kul'dur 13.28 115⇑ *e*P **Pn 21 39 04.8 -1.4**
KLR Kul'dur 13.28 115 Pn **Pn 21 39 05.9 -0.3**
comp=Z,0.3nm,0.3s,baz=314,slow=13,SNR=10
KLR Lg Lg 21 42 48.4
comp=Z,0.1nm,0.3s,baz=297,slow=13,SNR=1.5
comp=Z,1.5nm,0.5s
ZALV Zalesovo Beam 16.33 273 Pn **Pn 21 39 46.7 -0.3**
comp=Z,0.3nm,0.4s,baz=72,slow=18,SNR=1.5
ZALV Lg Lg 21 44 28.3
baz=88,slow=12
TIXI Tiksi 16.73 17 *i* P **Pn 21 39 48.6 -3.3**
TIXI Tiksi 16.73 17 Pn **Pn 21 39 46.7 -5.1**
comp=Z,0.4nm,0.3s,baz=251,slow=7.9,SNR=8.5
TIXI Sn Sn 21 42 41.0 -17
baz=270,slow=6.8
TIXI Lg Lg 21 44 42.4
baz=178,slow=24
DGZ Jazzator, Alta 16.79 258⇑ *e*P **Pn 21 39 53.6 +0.7**
DGZ pmax pmax
comp=Z,5.0nm,2.2s
USA0B Ussuriysk Arra 17.03 128⇓ *e*P **Pn 21 39 55.9 +0.1**
USRK Ussuriysk Ar. 17.03 128 Lg Lg 21 44 51.5
comp=Z,0.1nm,0.3s,baz=283,slow=34,SNR=2.3
NRIK Noril'sk 17.30 329⇑ *e*P **P 21 40 02.1 +1.6**
NRIK pmax pmax
comp=Z,9.0nm,2.1s
NRIK Noril'sk 17.30 329 P **Pn 21 39 58.9 -0.2**
comp=Z,0.7nm,0.3s,baz=114,slow=15,SNR=1.9
NRIK S Sn 21 42 56.0 -15
comp=Z,2.2nm,0.3s,baz=162,slow=3.2,SNR=1.7
NRIK Lg Lg 21 44 55.5
comp=Z,0.4nm,0.3s,baz=40,slow=19,SNR=1.2
comp=Z,1.3nm,0.3s
SEY Senchan 20.61 55 P **P 21 40 35.9 -0.9**
comp=Z,0.3nm,0.2s,baz=180,slow=20,SNR=1.6
SEY Lg Lg 21 46 45.3
comp=Z,0.1nm,0.3s,baz=262,slow=5.1,SNR=4.0
comp=Z,0.3nm,0.2s
KURK Kurchatov 21.13 269 P **P 21 40 43.0 +0.4**
KURBB Kurchatov Arra 21.23 269 P **P 21 40 43.0 -0.5**
comp=Z,1.2nm,0.6s,baz=61,slow=12,SNR=7.9
KURBB Lg Lg 21 47 12.5
comp=Z,0.1nm,0.3s,baz=63,slow=32,SNR=5.0
comp=Z,1.2nm,0.6s
MK31 Makanchi Array 21.27 256*c* *i*P **P 21 40 44.1 0.0**
MKAR Makanchi Array 21.27 256 *e*P **P 21 40 44.4 +0.3**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 21.27 256 P **P 21 40 44.1 -0.1**
comp=Z,2.6nm,0.8s,baz=54,slow=9.0,SNR=30
MKAR Lg Lg 21 47 13.3
baz=57,slow=34
comp=Z,2.6nm,0.8s
KSRS Korea Array 21.33 146 LR LR 21 50 00.4
comp=Z,15nm,19.2s,baz=155,slow=40
BVAR Borovoye Array 24.65 280 P **P 21 41 17.6 -0.8**
comp=Z,1.1nm,0.6s,baz=74,slow=12,SNR=8.0
comp=Z,1.1nm,0.6s
BRVK Borovoye 24.70 281⇑ *e*P **P 21 41 19.2 +0.4**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
AAK Ala-Archa 28.19 257⇑ *e*P **P 21 41 49.8 -0.8**
AAK pmax pmax
comp=Z,1.0nm,1.0s
FINES FINESS Array B 42.09 314 P **P 21 43 48.8 -0.6**
comp=Z,1.2nm,0.9s,baz=76,slow=10.0,SNR=4.4
comp=Z,1.2nm,0.9s
HFS Hagfors 47.68 318 P **P 21 44 34.2 +0.3**
comp=Z,1.4nm,0.9s,baz=46,slow=9.1,SNR=1.8
comp=Z,1.4nm,0.9s
NOA NORSAR Array B 47.97 320 P **P 21 44 37.7 +1.4**
comp=Z,0.5nm,0.9s,baz=71,slow=5.3,SNR=1.2
comp=Z,0.5nm,0.9s
SCHQ Schefferville 69.18 0 P **P 21 47 04.7 +0.6**
comp=Z,2.6nm,0.9s,baz=289,slow=18,SNR=3.6
comp=Z,2.6nm,0.9s
ESDC Sonseca Array 70.59 313 P **P 21 47 11.9 -1.2**
comp=Z,0.5nm,0.7s,baz=30,slow=6.9,SNR=6.0
comp=Z,0.5nm,0.7s

NEIC ***18*** *21:39:11.9±0.8, 19.0°N±0.1°×64.7°W±0.1, h35km±2km, ML2.5/16, Md3.5/4(RSPR), Error ellipse: s-maj=21.3km s-min=14.4km az=142.0*

RSPR 18 21:39:11.9, 18.77N×64.68W, h99km±5km, MD3.5/4, 5C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.27 241⇑**		*e*P	Pn	21 39 34.8	-0.6
HUMP				*e*S	Sn	21 39 52.9	-0.2
HUMP	**Col San Antoni**	**1.27 241**		IAML		21 39 58.7	
	comp=N,72nm,0.2s						
HUMP				IAML		21 40 01.2	
	comp=E,57nm,0.2s						
GCPR	**Guaynabo City**	**1.41 251⇓**		*e*P	Pn	21 39 36.5	-0.5
GCPR	**Guaynabo City**	**1.41 251**		*e*S	Sn	21 39 54.4	-1.5
GCPR	**Guaynabo City**	**1.41 251**			Pn	21 39 36.5	-0.5
GCPR					Sn	21 39 54.4	-1.5
CELP	**Cerrillos**	**1.93 249⇑**		*e*P	Pn	21 39 43.3	-0.3
CELP	**Cerrillos**	**1.93 249**		*e*S	Sn	21 40 07.4	-0.2
CELP	**Cerrillos**	**1.93 249**			Pn	21 39 43.3	-0.3
CELP					Sn	21 40 07.4	-0.2
CELP	**Cerrillos**	**1.93 249**		IAML		21 40 17.2	
	comp=N,26nm,2.5s						
OBIP	**Obispado Ponce**	**1.96 249⇓**		*e*P	Pn	21 39 42.9	-1.1
OBIP	**Obispado Ponce**	**1.96 249**			Pn	21 39 42.9	-1.1
OBIP	**Obispado Ponce**	**1.96 249**		IAML		21 40 22.6	
	comp=N,29nm,3.4s						
UUPR	**Utuado, UPR, P**	**2.00 255**		Pn	Pn	21 39 44.1	-0.4
UUPR					Sn	21 40 07.5	-1.8
AOPR	**Arecibo Observ**	**2.01 258⇑**		*e*P	Pn	21 39 44.1	-0.5
AOPR	**Arecibo Observ**	**2.01 258**		*e*S	Sn	21 40 09.4	-0.2
AOPR	**Arecibo Observ**	**2.01 258**			Pn	21 39 44.1	-0.5
AOPR					Sn	21 40 09.4	-0.2
AOPR	**Arecibo Observ**	**2.01 258**		IAML		21 40 18.3	
	comp=N,46nm,0.3s						
LSP	**Las Mesas**	**2.36 256⇓**		*e*P	Pn	21 39 49.2	0.0
LSP	**Las Mesas**	**2.36 256**			Pn	21 39 49.2	0.0
MLPR	**Magueyes Islan**	**2.38 251⇑**		*e*P	Pn	21 39 48.9	-0.5
MLPR	**Magueyes Islan**	**2.38 251**			Pn	21 39 48.9	-0.5
MLPR	**Magueyes Islan**	**2.38 251**		IAML		21 40 43.9	
	comp=N,32nm,2.4s						
CRPR	**Cabo Rojo, PR**	**2.43 252⇑**		*e*P	Pn	21 39 51.6	+1.6
CRPR	**Cabo Rojo, PR**	**2.43 252**			Pn	21 39 51.6	+1.6
CRPR	**Cabo Rojo, PR**	**2.43 252**		IAML		21 40 09.7	
	comp=E,32nm,2.6s						
CRPR				IAML		21 41 28.8	
	comp=N,29nm,2.6s						

ISK ***18*** *21:41:43.4, 38.71N×43.64E, h5km, ML2.6/10*
AFAD ***18*** *21:41:44.9±0.0, 38.72N×43.62E, h7km±5km, ML2.5*

ISC 18 21:41:45.0±1.1, 38.72N±0.03×43.63E±0.04, h15km±9km, n17, σ1.3 15/27, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.22 237**		Pg	**Pb**	**21 41 50.4**	**-0.5**
TVAN	**Van**	**0.26 222**		P	**Pb**	**21 41 50.4**	**-1.1**
TVAN				S	**Sb**	**21 41 55.3**	**-0.5**
TVAN				*i* AML	AML	21 41 57.0	
	comp=N,2µm,0.7s						
TVAN				*i* AML	AML	21 42 00.0	
	comp=E,1µm,0.3s						
VMUR	**Van-Muradiye**	**0.27 351**		P	**Pg**	**21 41 50.2**	**-0.8**
VMUR				S	**Sb**	**21 41 55.5**	**-0.8**
VMUR				*i* AML	AML	21 41 57.0	
	comp=E,554nm,0.2s						
OZAP	**Van, Ozalp-Mer**	**0.29 101**		P	**Pg**	**21 41 51.3**	**0.0**
OZAP				S	**Sn**	**21 42 01.1**	**-0.1**
OZAP				*i* AML	AML	21 42 04.0	
	comp=E,573nm,1.2s						
OZAP				*i* AML	AML	21 42 05.0	
	comp=N,588nm,0.8s						
ERCV	**ERCIS-VAN**	**0.38 323**		Pg	**Pg**	**21 41 51.8**	**-1.0**
ERCV				Sg	**Sg**	**21 41 58.9**	**+0.8**
GEVA	**Gevas**	**0.60 228**		P	**Pb**	**21 41 56.1**	**-1.3**
GEVA				S	**Sb**	**21 42 03.9**	**-1.8**
AKDM	**Akdamar-Van**	**0.64 233**		Pg	**Pb**	**21 41 56.8**	**-1.2**
AKDM				Sg	**Sb**	**21 42 06.9**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.71 277**		P	**Pb**	**21 41 57.9**	**-1.3**
ADCV				S	**Sg**	**21 42 09.8**	**+1.5**
DYDN	**Diyadin**	**0.82 3**		P	**Pb**	**21 42 00.3**	**-0.8**
DYDN				S	**Sb**	**21 42 12.1**	**-0.1**
DORK	**Agr/Tutak/Do**	**0.94 316**		P	**Pb**	**21 42 01.7**	**-1.4**
DORK				S	**Sb**	**21 42 14.2**	**-1.2**
MLAZ	**Malazgirt-MUS**	**0.94 297**		Pg	**Pb**	**21 42 02.3**	**-0.8**
MLAZ				Sg	**Sg**	**21 42 16.7**	**+1.1**
TASB	**TASBURUN-IGDIR**	**1.35 20**		Pn	**Pn**	**21 42 10.2**	**+0.8**
CUKT	**Cukurca**	**1.47 181**		Pn	**Pn**	**21 42 11.8**	**+0.7**
KOPR	**Koprukoy-ERZUR**	**1.87 313**		Pn	**Pb**	**21 42 18.8**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.09 332**		Pn	**Pn**	**21 42 21.1**	**+1.5**
BNGB	**Bingl**	**2.32 278**		Pn	**Pn**	**21 42 24.4**	**+1.7**
MAZI	**Mazidag**	**2.81 244**		Pn	**Pn**	**21 42 31.3**	**+1.9**

NEIC ***18*** *21:41:54.1±2.2, 39.01N±0.02×116.09W±0.02, h10km±11km, Error ellipse: s-maj=3.4km s-min=1.8km az=207.0*

REN 18 21:41:53.6±2.2, 38.97N±0.02×116.11W±0.02, h1km±2km, ML2.7/16, ML2.4/56(NEIC), Error ellipse: s-maj=3.0km s-min=2.0km az=178.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
R11B	**Troy Canyon, C**	**0.74 146**		Pg	Pg	21 42 07.4	-0.4
Q09A	**Carvers**	**0.85 261**			Pb	21 42 10.6	-0.7
Q09A					Sb	21 42 22.8	-0.4
Q09A	**Carvers**	**0.85 261**		IAML		21 42 28.3	
	comp=E,236nm,0.4s						
Q09A				IAML		21 42 29.5	
	comp=N,185nm,0.5s						
Q12A	**Willow Creek R**	**1.00 85**			Pg	21 42 12.9	+0.2
Q12A	**Willow Creek R**	**1.00 85**		IAML		21 42 29.5	
	comp=N,178nm,0.4s						
Q12A				IAML		21 42 30.8	
	comp=E,100nm,0.3s						
TPH	**Tonopah**	**1.25 225**			Pg	21 42 17.4	-0.1
TPH					Sb	21 42 34.7	0.0
S11A	**Rachel**	**1.35 168**			Pb	21 42 19.8	0.0
S11A					Sn	21 42 38.3	-0.1
SPR3	**Spring Creek 3**	**1.38 88**			Pb	21 42 20.4	0.0
SPR3					Sg	21 42 38.2	+0.1
SPR3	**Spring Creek 3**	**1.38 88**		IAML		21 42 41.7	
	comp=N,69nm,0.2s						
SPR3				IAML		21 42 42.1	
	comp=E,66nm,0.3s						
KVN	**Kaiserville**	**1.56 274**			Pn	21 42 22.3	-0.3
KVN				IAML		21 42 48.7	
	comp=N,33nm,0.8s						
MZP	**Montezuma Peak**	**1.61 219**			Pn	21 42 23.7	+0.2
MZP				IAML		21 42 47.7	
	comp=E,46nm,0.4s						
MZP				IAML		21 42 49.5	
	comp=N,33nm,0.6s						
NV11	**Mina Array Sit**	**1.69 252**			Pg	21 42 25.8	-0.2
BMN	**Battle Mountai**	**1.70 330**			Pb	21 42 25.2	-0.4
BMN	**Battle Mountai**	**1.70 330**		IAML		21 42 50.3	
	comp=N,37nm,0.7s						
PRN	**Pahroc Range**	**1.77 152**			Pb	21 42 26.7	-0.1
PRN	**Pahroc Range**	**1.77 152**		IAML		21 42 54.1	
	comp=E,68nm,0.3s						
NVAR	**Mina Array Bea**	**1.80 253**			Pn	21 42 25.7	-0.3
NV08	**Mina Array Sit**	**1.82 253**			Pb	21 42 27.6	-0.2
NV09	**Mina Array Sit**	**1.82 254**			Pb	21 42 27.9	+0.1
GMN	**Gold Mountain**	**1.90 209**			Pb	21 42 29.1	0.0
ELK	**Elko**	**1.90 20**			Pn	21 42 26.3	-1.0
ELK	**Elko**	**1.90 20**		IAML		21 42 54.2	
	comp=E,41nm,0.3s						
ELK				IAML		21 42 54.3	
	comp=E,32nm,0.2s						
RYN	**Ryan**	**1.92 261**			Pb	21 42 29.5	0.0
TPNV	**Topopah Spring**	**2.02 183**		Pn	Pn	21 42 28.8	-0.2
TPNV				IAML		21 43 02.9	
	comp=E,28nm,0.4s						
TPNV				IAML		21 43 07.1	
	comp=E,26nm,0.6s						
LCH	**Last Change Ra**	**2.11 216**			Pb	21 42 33.2	+0.4
LCH	**Last Change Ra**	**2.11 216**		IAML		21 43 04.3	
	comp=N,31nm,0.6s						
LCH				IAML		21 43 04.6	
	comp=E,38nm,0.2s						
SGV	**South Grapevin**	**2.11 201**			Pb	21 42 32.8	0.0
DSP	**Deep Springs**	**2.17 223**			Pb	21 42 33.4	-0.2
DSP	**Deep Springs**	**2.17 223**		IAML		21 43 05.2	
	comp=N,25nm,0.4s						
DSP				IAML		21 43 05.8	
	comp=E,32nm,0.4s						
GRAC	**Grapevine Rang**	**2.21 207**		Pn	Pn	21 42 31.4	0.0
WCT	**Wildcat Mounta**	**2.21 191**			Pn	21 42 31.7	+0.2
WCT	**Wildcat Mounta**	**2.21 191**		IAML		21 43 06.3	

comp=N,19nm,0.7s
WCT IAML 21 43 07.2
comp=E,31nm,0.4s
MCY Mercury 2.30 177 Pn Pn 21 42 34.0 +1.2
SHPR Sheep Range 2.57 163 Pn Pn 21 42 36.3 -0.2
CCUT Cedar City 2.58 122 Pn Pn 21 42 35.7 -1.1
CCUT IAML 21 43 26.0
comp=N,12nm,3.1s
CCUT IAML 21 43 47.3
comp=E,13nm,4.9s
GWY Greenwater Val 2.81 189 Pn Pn 21 42 40.5 +0.6
GWY IAML 21 43 33.5
comp=N,23nm,0.5s
GWY IAML 21 43 37.4
comp=E,19nm,1.1s
DUG Dugway, Tooele 2.83 63 Pn Pn 21 42 40.2 +0.2
DUG IAML 21 43 20.4
comp=E,11nm,4.8s
BGU Big Grassy Mou 3.07 49 Pn 21 42 42.8 -0.6
BGU IAML 21 43 24.0
comp=E,7.5nm,3.4s

*IDC **18** 21:42:50.7±3.2,55°.80N×150°.52W,h0km,mb3.3/1, mbtmp3.2/4,ML3.1/3,MS2.7/2,Error ellipse: s-maj=53.3km s-min=38.7km az=134.0*
*NEIC **18** 21:42:57.3±1.1,56°.06N±0°.08×149°.9W±0°.1,h21km±9km, ML3.3/26,ML3.3(AEIC),Error ellipse: s-maj=12.3km s-min=8.4km az=152.0*
*AEIC **18** 21:42:59.2±1.3,56°.05N±0°.10×149°.9W±0°.1,h2km±8km, Error ellipse: s-maj=14.5km s-min=10.0km az=172.0*
ISC 18 21:42:55.5±1.8,56°.1N±0°.1×149°.90W±0°.06,h10km,n163, σ1§05/158,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.19**	**303**			**Pn**		**21 43 31.6**	**-0.4**
OHAK						**Sn**		**21 43 56.7**	**-2.4**
OHAK	**Old Harbor** baz=120	**2.19**	**303**	P		**Pn**		**21 43 31.6**	**-0.4**
OHAK	baz=120			S		**Sn**		**21 43 56.7**	**-2.4**
KDAK	**Kodiak Island**	**2.25**	**320**	Pn		**Pn**		**21 43 33.1**	**+0.3**
KDAK	**Kodiak Island**	**2.25**	**320**			**Sn**		**21 43 59.4**	**-1.1**
KDAK	**Kodiak Island** baz=138	**2.25**	**320**	S		**Sn**		**21 43 59.4**	**-1.1**
KDAK	**Kodiak Island** comp=Z,165nm,19.4s,baz=205,slow=46	**2.25**	**320**	LR		LR		21 44 34.8	
SYI	**Shuyak Island**	**2.87**	**333**			**Pn**		**21 43 41.8**	**+0.5**
SYI						**Sn**		**21 44 15.8**	**0.0**
SYI	**Shuyak Island** comp=E,78nm,0.9s	**2.87**	**333**	IAML				21 44 17.5	
Q20K	**Shuyak Island** baz=151	**2.87**	**333**	P		**Pn**		**21 43 41.8**	**+0.5**
Q20K	baz=151			S		**Sn**		**21 44 15.8**	**-0.1**
R18K	**Karluk**	**2.91**	**303**			**Pn**		**21 43 42.0**	**+0.2**
R18K	**Karluk** comp=N,102nm,0.5s	**2.91**	**303**	IAML				21 44 18.1	
R18K	comp=E,94nm,0.6s			IAML				21 44 27.7	
R18K	**Karluk** baz=119	**2.91**	**303**	P		**Pn**		**21 43 42.0**	**+0.2**
KAHG	**Katmai Hook Gl**	**3.49**	**316**			**Pn**		**21 43 51.3**	**+1.4**
Q19K	**Cape Douglas,**	**3.50**	**326**			**Pn**		**21 43 51.2**	**+1.3**
Q19K	**Cape Douglas,** baz=143	**3.50**	**326**	P		**Pn**		**21 43 51.2**	**+1.3**
CNPM	**China Poot**	**3.53**	**349**			**Pn**		**21 43 50.5**	**+0.2**
CNPM	**China Poot** comp=E,54nm,1.3s	**3.53**	**349**	IAML				21 44 36.2	
ACHA	**Angle Creek He**	**3.65**	**308**			**Pn**		**21 43 52.3**	**+0.3**
BRSE	**Bradley Lake S**	**3.70**	**353**			**Pn**		**21 43 52.4**	**-0.3**
BRSE	**Bradley Lake S** baz=172	**3.70**	**353**	P		**Pn**		**21 43 52.4**	**-0.3**
ANCK	**Angle Creek**	**3.71**	**307**			**Pn**		**21 43 53.7**	**+0.8**
BRLK	**Bradley Lake**	**3.73**	**352**			**Pn**		**21 43 52.9**	**-0.3**
BRLK	**Bradley Lake** comp=N,46nm,1.0s	**3.73**	**352**	IAML				21 44 39.3	
BRLK	comp=E,38nm,0.6s			IAML				21 44 43.8	
KAHC	**Katmai Hardscr**	**3.78**	**315**			**Pn**		**21 43 55.1**	**+1.2**
KAHC	**Katmai Hardscr** baz=131	**3.78**	**315**	P		**Pn**		**21 43 55.1**	**+1.2**
Q23K	**Middleton Isla**	**3.86**	**28**			**Pn**		**21 43 54.4**	**-0.4**
Q23K	**Middleton Isla** comp=N,65nm,1.9s	**3.86**	**28**	IAML				21 45 05.7	
Q23K	comp=E,82nm,2.2s			IAML				21 46 01.4	
Q23K	**Middleton Isla** baz=211	**3.86**	**28**	P		**Pn**		**21 43 54.4**	**-0.4**
MID	**Middleton Isla**	**3.86**	**28**			**Pn**		**21 43 54.3**	**-0.5**
MID	**Middleton Isla** comp=N,61nm,1.1s	**3.86**	**28**	IAML				21 44 43.4	
MID	comp=E,84nm,1.4s			IAML				21 46 03.5	
CNTC	**Contact Creek**	**3.92**	**306**			**Pn**		**21 43 56.4**	**+0.5**
Q17K	**Contact Creek** baz=122	**3.92**	**306**	P		**Pn**		**21 43 56.4**	**+0.5**
P19K	**Oil Pt**	**4.00**	**335**			**Pn**		**21 43 57.1**	**+0.3**
P19K	**Oil Pt** baz=152	**4.00**	**335**	P		**Pn**		**21 43 57.1**	**+0.3**
SEW	**Seward**	**4.04**	**3**			**Pn**		**21 43 57.0**	**-0.3**
SEW	**Seward** baz=183	**4.04**	**3**	P		**Pn**		**21 43 57.0**	**-0.3**
P23K	**Montague Islan**	**4.14**	**18**			**Pn**		**21 43 59.0**	**+0.2**
P23K	**Montague Islan** baz=199	**4.14**	**18**	P		**Pn**		**21 43 59.0**	**+0.2**
ILSW	**Iliamna Southw**	**4.28**	**338**	Pn		Pn		21 43 54.8	-5.9
ILSW	comp=E,45nm,0.8s			IAML				21 44 54.6	
ILSW	comp=N,42nm,0.6s			IAML				21 44 56.0	
P18K	**Big Mountain,**	**4.38**	**321**			**Pn**		**21 44 02.4**	**+0.3**
P18K	**Big Mountain,** comp=E,27nm,3.4s	**4.38**	**321**	IAML				21 45 21.8	
P18K	comp=N,24nm,3.3s			IAML				21 45 49.2	
P18K	**Big Mountain,** baz=137	**4.38**	**321**	P		**Pn**		**21 44 02.4**	**+0.3**
O22K	**Cooper Landing**	**4.41**	**1**	Pn		**Pn**		**21 44 02.7**	**+0.2**
SLKM	**Skilak Lake**	**4.44**	**358**			**Pn**		**21 44 02.7**	**-0.2**
RSO	**Redoubt South**	**4.64**	**342**			**Pn**		**21 44 05.7**	**-0.1**
HIN	**Hinchinbrook I**	**4.69**	**21**			**Pn**		**21 44 06.6**	**+0.4**
P17K	**Kvichak River**	**4.70**	**314**			**Pn**		**21 44 06.9**	**+0.5**
P17K	**Kvichak River** baz=129	**4.70**	**314**	P		**Pn**		**21 44 06.9**	**+0.5**
O18K	**Koktuh Hills**	**4.72**	**325**			**Pn**		**21 44 07.2**	**+0.4**
O18K	**Koktuh Hills** baz=141	**4.72**	**325**	P		**Pn**		**21 44 07.2**	**+0.4**
O19K	**Port Alsworth**	**4.74**	**332**			**Pn**		**21 44 07.9**	**+0.9**
KAIM	**Kayak Island**	**4.83**	**35**			**Pn**		**21 44 08.7**	**+0.5**
KAIM	**Kayak Island** baz=219	**4.83**	**35**	P		**Pn**		**21 44 08.7**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.99**	**24**			**Pn**		**21 44 10.7**	**+0.4**
EYAK	**Cordova Ski Ar** baz=207	**4.99**	**24**	P		**Pn**		**21 44 10.7**	**+0.4**
FID	**Port Fidalgo**	**5.01**	**20**			**Pn**		**21 44 10.9**	**+0.2**
RC01	**Rabbit Creek A**	**5.02**	**1**			**Pn**		**21 44 11.1**	**+0.2**
GLI	**Glacier Island**	**5.03**	**16**			**Pn**		**21 44 11.5**	**+0.5**
GLI	**Glacier Island** baz=198	**5.03**	**16**	P		**Pn**		**21 44 11.5**	**+0.5**
RAGM	**Ragged Mountai**	**5.12**	**30**			**Pn**		**21 44 12.7**	**+0.4**
SUCK	**Suckling Hills**	**5.15**	**37**			**Pn**		**21 44 13.4**	**+0.8**
VNHG	**Veniaminof 1**	**5.18**	**275**			**Pn**		**21 44 13.2**	**0.0**
HMT	**Hamilton**	**5.20**	**33**			**Pn**		**21 44 13.9**	**+0.5**
NICHA	**Nichawak Mount**	**5.22**	**35**			**Pn**		**21 44 14.3**	**+0.8**
P16K	**Nushagak River**	**5.26**	**308**			**Pn**		**21 44 15.1**	**+0.9**
P16K	**Nushagak River** baz=127	**5.26**	**308**	P		**Pn**		**21 44 15.1**	**+0.9**
GOAT	**Goat Mountain**	**5.27**	**29**			**Pn**		**21 44 15.1**	**+0.8**
O17K	**Koliganek Bris**	**5.33**	**317**			**Pn**		**21 44 15.4**	**+0.4**
O17K	**Koliganek Bris** baz=131	**5.33**	**317**	P		**Pn**		**21 44 15.4**	**+0.4**
KNK	**Knik Glacier**	**5.40**	**7**	Pn		**Pn**		**21 44 16.1**	**+0.1**
BERG	**Berg Lake**	**5.42**	**35**			**Pn**		**21 44 16.7**	**+0.4**
GRIN	**Grindle Hills**	**5.46**	**37**			**Pn**		**21 44 17.7**	**+0.8**
PMR	**Palmer**	**5.54**	**4**	Pn		**Pn**		**21 44 19.0**	**+1.1**
SNH	**Sunshine Point**	**5.56**	**39**			**Pn**		**21 44 18.9**	**+0.8**
KHIT	**Khitrov Hills**	**5.61**	**36**			**Pn**		**21 44 19.4**	**+0.5**
O16K	**Kokwok River B**	**5.62**	**312**			**Pn**		**21 44 19.9**	**+1.0**
O16K	**Kokwok River B** baz=125	**5.62**	**312**	P		**Pn**		**21 44 20.0**	**+1.0**
BMRM	**Bremner River**	**5.63**	**27**			**Pn**		**21 44 19.9**	**+0.7**
BMRM	**Bremner River**	**5.63**	**27**	P		**Pn**		**21 44 19.9**	**+0.7**
	baz=211								
GHO	**Glory Hole Cre**	**5.73**	**5**			**Pn**		**21 44 21.7**	**+1.1**
WAX	**Waxell Ridge**	**5.74**	**37**			**Pn**		**21 44 21.2**	**+0.4**
SML	**Sawmill**	**5.80**	**7**			**Pn**		**21 44 21.8**	**+0.2**
SML	**Sawmill** baz=188	**5.80**	**7**	P		**Pn**		**21 44 21.8**	**+0.2**
KLU	**Klutina**	**5.81**	**19**			**Pn**		**21 44 22.8**	**+1.1**
KLU	**Klutina** baz=202	**5.81**	**19**	P		**Pn**		**21 44 22.6**	**+0.9**
BARK	**Barkley Ridge**	**5.84**	**39**			**Pn**		**21 44 22.8**	**+0.7**
CRQM	**Cirque**	**5.88**	**34**			**Pn**		**21 44 23.3**	**+0.5**
MESA	**MESA**	**5.88**	**42**			**Pn**		**21 44 23.2**	**+0.4**
MESA	**MESA** baz=229	**5.88**	**42**	P		**Pn**		**21 44 23.2**	**+0.4**
N17K	**Nushagak Hills**	**5.88**	**322**			**Pn**		**21 44 23.1**	**+0.4**
N17K	**Nushagak Hills** baz=136	**5.88**	**322**	P		**Pn**		**21 44 23.1**	**+0.4**
CRQE	**Cirque** baz=220	**5.89**	**35**	P		**Pn**		**21 44 23.3**	**+0.4**
SCM	**Sheep Creek Mo**	**5.92**	**12**	Pn		**Pn**		**21 44 24.8**	**+1.5**
SKT	**Skwentna**	**5.98**	**353**	Pn		**Pn**		**21 44 24.6**	**+0.7**
TGL	**Tana Glacier**	**5.98**	**35**			**Pn**		**21 44 25.0**	**+0.9**
ISLE	**Juniper Island**	**6.03**	**38**			**Pn**		**21 44 25.4**	**+0.6**
BAGL	**Bagley Icefiel**	**6.04**	**40**			**Pn**		**21 44 25.4**	**+0.6**
VRDI	**Verde Repeater**	**6.16**	**30**			**Pn**		**21 44 27.0**	**+0.4**
O15K	**Ungalikthiuk R**	**6.17**	**304**			**Pn**		**21 44 27.1**	**+0.5**
O15K	**Ungalikthiuk R** baz=116	**6.17**	**304**	P		**Pn**		**21 44 27.1**	**+0.5**
N25K	**Chitina, Valde**	**6.18**	**24**			**Pn**		**21 44 27.3**	**+0.4**
N25K	**Chitina, Valde** baz=208	**6.18**	**24**	P		**Pn**		**21 44 27.3**	**+0.4**
GLB	**Gilahina Butte**	**6.24**	**28**			**Pn**		**21 44 28.0**	**+0.5**
KIAG	**Kiagna River**	**6.26**	**36**			**Pn**		**21 44 28.7**	**+0.7**
SAMH	**Samovar Hills**	**6.31**	**46**			**Pn**		**21 44 29.7**	**+1.2**
GRNC	**Granite Creek**	**6.33**	**39**			**Pn**		**21 44 29.7**	**+0.8**
M24K	**Tolsona, Glenn**	**6.34**	**16**	Pn		**Pn**		**21 44 30.9**	**+1.9**
TABL	**Table Mountain**	**6.36**	**43**			**Pn**		**21 44 30.2**	**+0.9**
MCARA	**McCarthy VSAT**	**6.41**	**31**			**Pn**		**21 44 30.9**	**+1.0**
MCARA	**McCarthy VSAT** baz=217	**6.41**	**31**	P		**Pn**		**21 44 30.8**	**+1.0**
N16K	**Nishlik Lake**	**6.42**	**317**			**Pn**		**21 44 31.0**	**+1.0**
N16K	**Nishlik Lake** baz=130	**6.42**	**317**	P		**Pn**		**21 44 31.0**	**+1.0**
PTPK	**Patty Peak**	**6.42**	**34**			**Pn**		**21 44 31.2**	**+1.0**
PCA	**Pinnacle**	**6.50**	**48**			**Pn**		**21 44 32.1**	**+0.9**
PINM	**Pinnacle** baz=236	**6.51**	**48**	P		**Pn**		**21 44 32.1**	**+0.9**
BARN	**Barnard Glacie**	**6.59**	**37**			**Pn**		**21 44 33.4**	**+0.9**
WAT6	**Susitna Watana**	**6.61**	**9**			**Pn**		**21 44 33.5**	**+0.7**
WAT6	**Susitna Watana** baz=190	**6.61**	**9**	P		**Pn**		**21 44 33.5**	**+0.7**
M17K	**Holitna River**	**6.62**	**327**			**Pn**		**21 44 33.5**	**+0.8**
M17K	**Holitna River** baz=140	**6.62**	**327**	P		**Pn**		**21 44 33.5**	**+0.8**
L19K	**White Mountain**	**6.63**	**339**	Pn		**Pn**		**21 44 32.9**	**0.0**
CTG	**Chitna Glacier** baz=226	**6.63**	**39**	P		**Pn**		**21 44 33.3**	**+0.2**
CTGM	**Chitina Glacie**	**6.64**	**39**			**Pn**		**21 44 33.3**	**+0.2**
PNL	**Peninsula**	**6.65**	**53**			**Pn**		**21 44 34.0**	**+0.8**
PNL	**Peninsula** baz=242	**6.65**	**53**	P		**Pn**		**21 44 34.0**	**+0.8**
LOGN	**Logan Glacier**	**6.66**	**41**			**Pn**		**21 44 33.9**	**+0.5**
BCPM	**Bancas Point**	**6.69**	**50**			**Pn**		**21 44 34.7**	**+1.0**
N15K	**Kwethluk River**	**6.77**	**311**			**Pn**		**21 44 36.4**	**+1.5**
N15K	**Kwethluk River** baz=123	**6.77**	**311**	P		**Pn**		**21 44 36.4**	**+1.5**
M16K	**Timber Creek**	**6.85**	**320**			**Pn**		**21 44 37.1**	**+1.1**
M16K	**Timber Creek** baz=132	**6.85**	**320**	P		**Pn**		**21 44 37.1**	**+1.1**
PN7A	**Pavlof North-7**	**6.86**	**270**			**Pn**		**21 44 35.5**	**-0.6**
DHY	**Denali Highway**	**7.13**	**9**	Pn		**Pn**		**21 44 40.6**	**+0.7**
O29M	**Mount Kennedy**	**7.33**	**50**			**Pn**		**21 44 43.7**	**+1.2**
O29M	**Mount Kennedy** baz=239	**7.33**	**50**	P		**Pn**		**21 44 43.7**	**+1.2**
RND	**Reindeer**	**7.37**	**4**			**Pn**		**21 44 44.6**	**+1.6**
YUK2	**White River**	**7.39**	**36**			**Pn**		**21 44 45.3**	**+1.9**
P29M	**Windy Craggy**	**7.40**	**56**			**Pn**		**21 44 43.7**	**+0.3**
P29M	**Windy Craggy** baz=246	**7.40**	**56**	P		**Pn**		**21 44 43.7**	**+0.3**
YUK8	**Steele Glacier**	**7.42**	**41**			**Pn**		**21 44 46.3**	**+2.4**
YUK8	**Steele Glacier** baz=230	**7.42**	**41**	P		**Pn**		**21 44 46.3**	**+2.4**
YUK3	**Moose Creek**	**7.51**	**37**			**Pn**		**21 44 47.1**	**+2.0**
YUK3	**Moose Creek** baz=224	**7.51**	**37**	P		**Pn**		**21 44 47.1**	**+2.0**
KTH	**Kantishna Hill**	**7.51**	**356**	Pn		**Pn**		**21 44 46.3**	**+1.2**
M27K	**Edge Creek, AK**	**7.51**	**30**			**Pn**		**21 44 46.2**	**+1.1**
M27K	**Edge Creek, AK** baz=216	**7.51**	**30**	P		**Pn**		**21 44 46.2**	**+1.1**
MENT	**Mentasta**	**7.56**	**22**			**Pn**		**21 44 47.0**	**+1.3**
YUK7	**Dusty Glacier**	**7.63**	**49**			**Pn**		**21 44 48.1**	**+1.4**
S31K	**Pelican**	**7.69**	**70**			**Pn**		**21 44 45.5**	**-2.0**
S31K	**Pelican** baz=261	**7.69**	**70**	P		**Pn**		**21 44 45.5**	**-2.0**
YUK4	**Talbot Arm** baz=232	**7.88**	**43**	P		**Pn**		**21 44 53.4**	**+3.2**
L15K	**Ungalak Mounta**	**8.21**	**318**			**Pn**		**21 44 55.9**	**+1.4**
L15K	**Ungalak Mounta** baz=128	**8.21**	**318**	P		**Pn**		**21 44 55.9**	**+1.4**
M13K	**Dall Lake**	**8.31**	**307**			**Pn**		**21 44 57.2**	**+1.3**
M13K	**Dall Lake** baz=116	**8.31**	**307**	P		**Pn**		**21 44 57.2**	**+1.3**
N30M	**Aishikik Lake**	**8.56**	**46**			**Pn**		**21 45 00.5**	**+1.1**
N30M	**Aishikik Lake** baz=236	**8.56**	**46**	P		**Pn**		**21 45 00.4**	**+1.1**
M29M	**Somme Creek**	**8.65**	**38**			**Pn**		**21 45 02.1**	**+1.4**
M29M	**Somme Creek** baz=227	**8.65**	**38**	P		**Pn**		**21 45 02.1**	**+1.4**
ILAR	**Eielson Array** comp=N,0.1nm,0.3s,baz=190,slow=13,SNR=2.3	**8.84**	**8**	Pn		**Pn**		**21 45 00.6**	**-2.7**
ILAR	comp=N,0.3nm,0.3s,baz=197,slow=20,SNR=7.3			Sn		**Sn**		**21 46 39.5**	**-3.3**
ILAR	comp=N,49nm,18.2s,baz=285,slow=41 comp=N,0.2nm,0.6s			LR		LR		21 49 07.0	
INK	**Inuvik** comp=N,0.1nm,0.3s,baz=219,slow=9.1,SNR=4.0 comp=N,1.1nm,0.8s	**14.37**	**25**	Pn		**Pn**		**21 46 20.6**	**+1.9**
YKA	**Yellowknife Ar** comp=N,0.1nm,0.3s,baz=267,slow=10,SNR=10 comp=N,0.6nm,0.8s	**18.94**	**56**	P		**P**		**21 47 17.9**	**+1.7**
MKAR	**Makanchi Array** comp=N,0.3nm,0.9s,baz=44,slow=5.0,SNR=2.2 comp=N,0.3nm,0.9s	**68.56**	**324**	P		P		21 53 55.0	-3.0

*IDC **18** 21:47:35.6±0.8,22°.86S×69°.16E,h0km,mb3.9/14, mbtmp3.9/14,MS3.7/23,Error ellipse: s-maj=25.8km s-min=24.1km az=52.0*
*NEIC **18** 21:47:42.9±1.9,21°.64S±0°.08×69°.1E±0°.1,h10km±1km, mb4.5/13,Error ellipse: s-maj=18.1km s-min=13.0km az=116.0*
ISC 18 21:47:37.3±0.7,22°.7S±0°.1×69°.1E±0°.1,h10km,n55, σ1§50/26,mb4.0/20,MS3.6/23,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**6.08**	**298**		Pn		**Pn**	**21 49 05.3**	**-1.9**
H04N2	**CROZET ISLANDS** baz=38,slow=75	**27.26**	**207**	T	T		T	22 21 58.1	
H04N1	**CROZET ISLANDS** baz=38,slow=75	**27.27**	**207**	T	T		T	22 21 57.9	
H04N3	**CROZET ISLANDS** baz=38,slow=75	**27.28**	**207**	T	T		T	22 22 01.9	
PALK	**Pallekele** comp=Z,79nm,19.0s,baz=306,slow=30	**31.91**	**22**	LR	LR		LR	22 03 48.2	
KMBO	**Kilima Mbogo**	**37.63**	**300**	P	P		**P**	**21 54 53.2**	**+0.2**
LSZ	**Lusaka** comp=Z,151nm,19.4s,baz=140,slow=32	**39.26**	**273**	LR	LR		LR	22 08 29.3	
LBTB	**Lobatse** comp=Z,65nm,19.0s,baz=104,slow=32	**39.70**	**258**	LR	LR		LR	22 09 03.9	
BOSA	**Boshof** 1.4nm,0.8s,baz=159,slow=8.1,SNR=1.6	**39.76**	**252**	P			**P**	**21 55 09.5**	**-1.1**
BOSA	comp=Z,118nm,19.2s,baz=116,slow=32 1.4nm,0.8s			LR			LR	22 08 29.4	
LEM	**Lembang** comp=Z,58nm,18.4s,baz=184,slow=32	**40.33**	**73**	LR			LR	22 09 03.1	
H01W2	**Cape Leeuwin H** baz=274,slow=75,SNR=102	**41.00**	**118**	T			T	22 38 43.5	
H01W3	**Cape Leeuwin H** baz=274,slow=75,SNR=97	**41.00**	**117**	T			T	22 38 43.3	
H01W1	**Cape Leeuwin H** baz=274,slow=75,SNR=84	**41.01**	**117**	T			T	22 38 43.0	
MBAR	**Mbarara**	**43.26**	**295**	LR			LR	22 12 11.8	
	comp=Z,65nm,18.1s,baz=113,slow=34								
NWAO	**Narrogin (SRO)** comp=Z,123nm,18.8s,baz=141,slow=32	**43.47**	**114**	LR			LR	22 11 05.6	
TSUM	**Tsumeb** comp=Z,100nm,19.8s,baz=141,slow=33	**48.02**	**264**	LR			LR	22 14 03.8	
CMAR	**Chiang Mai Arr** 1.3nm,0.3s,baz=237,slow=7.8,SNR=4.3 1.3nm,0.3s	**50.28**	**38**	P			**P**	**21 56 34.1**	**-0.1**
SHL	**Shillong**	**52.85**	**26**	P			**P**	**21 56 50.9**	**-2.6**
SHL	comp=Z,5.9nm,1.1s			IAmb			IAmb	21 57 01.4	
TOLI2	**Tolitoli**	**55.63**	**72**	P			**P**	**21 57 15.3**	**+1.5**
ASAR	**Alice Springs** comp=Z,0.9nm,0.9s,baz=252,slow=5.0,SNR=5.5	**59.12**	**105**	P			**P**	**21 57 37.5**	**-1.0**
ASAR	comp=Z,133nm,19.9s,baz=266,slow=33 comp=Z,0.9nm,0.9s			LR			LR	22 20 07.1	
WRA	**Warramunga Arr** comp=Z,1.5nm,1.0s,baz=254,slow=6.7,SNR=5.2 comp=Z,1.5nm,1.0s	**60.42**	**101**	P			**P**	**21 57 46.4**	**-1.0**
WB2	**Warramunga Arr**	**60.44**	**101**	P			P	21 57 52.3	+4.8
WB2	comp=Z,3.7nm,0.9s			IAmb			IAmb	21 57 52.9	
WB0	**Warramunga Arr**	**60.52**	**101**	P			P	21 57 52.8	+4.7
WB0	comp=Z,2.7nm,0.9s			IAmb			IAmb	21 57 53.4	
GEYT	**Alibeck** comp=Z,34nm,21.9s,baz=316,slow=33	**61.20**	**350**	LR			LR	22 21 20.6	
EIL	**Elat** comp=Z,39nm,21.8s,baz=246,slow=31	**61.57**	**326**	LR			LR	22 19 45.8	
SNAA	**Sanae**	**62.93**	**200**	P			P	21 58 15.5	+12
SNAA	comp=Z,6.6nm,1.4s			IAmb			IAmb	21 58 32.3	
STKA	**Stephens Creek**	**64.04**	**116**	P			P	21 58 20.9	+9.4
STKA	**Stephens Creek** comp=Z,90nm,19.2s,baz=205,slow=33	**64.04**	**116**	LR			LR	22 22 38.6	
AAK	**Ala-Archa** comp=Z,32nm,19.2s,baz=213,slow=34	**65.22**	**4**	LR			LR	22 24 27.1	
GNI	**Garni** comp=Z,24nm,18.2s,baz=199,slow=35	**66.53**	**340**	LR			LR	22 26 54.0	
QSPA	**South Pole Qui** comp=Z,1.8nm,0.8s,baz=300,slow=1.7,SNR=2.5 comp=Z,1.8nm,0.8s	**67.40**	**180**	P			**P**	**21 58 32.0**	**-0.8**
ELL	**Elmali**	**69.74**	**327**	P			**P**	**21 58 47.1**	**-0.6**
MKAR	**Makanchi Array**	**70.21**	**10**	P			**P**	**21 58 49.6**	**-0.7**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=194,slow=4.6,SNR=5.1 comp=Z,0.5nm,0.8s	**70.21**	**10**	P			**P**	**21 58 50.6**	**+0.3**
MK31	**Makanchi Array**	**70.21**	**10**	P			**P**	**21 58 47.9**	**-2.4**
BRTR	**Keskin Array B** comp=Z,0.8nm,1.0s,baz=185,slow=13,SNR=3.2	**70.38**	**332**	P			**P**	**21 58 53.3**	**+1.7**
BRTR	comp=Z,21nm,18.1s,baz=168,slow=34 comp=Z,0.8nm,1.0s			LR			LR	22 28 02.4	
CTA	**Charters Tower** comp=Z,89nm,21.1s,baz=264,slow=33	**71.12**	**104**	LR			LR	22 26 26.3	
ABKAR	**Akbulak array**	**72.11**	**354**	P			**P**	**21 59 01.6**	**-0.1**
ABKAR	**Akbulak array**	**72.11**	**354**	P			**P**	**21 59 00.8**	**-0.9**
ABKAR	comp=Z,1.7nm,0.7s			IAmb			IAmb	21 59 08.4	
KURBB	**Kurchatov Arra** comp=Z,2.3nm,0.2s,baz=207,slow=6.7,SNR=1.1 comp=Z,2.3nm,0.2s	**73.50**	**6**	P			**P**	**21 59 10.0**	**+0.2**
TORD	**Torodi Ar. Bea** comp=Z,56nm,18.1s,baz=108,slow=35	**74.98**	**291**	LR			LR	22 31 53.9	
BVAR	**Borovoye Array** comp=Z,0.5nm,0.6s,baz=158,slow=8.9,SNR=3.0	**75.43**	**1**	P			**P**	**21 59 20.4**	**-0.6**
BVAR	comp=Z,34nm,19.8s,baz=212,slow=34 comp=Z,0.5nm,0.6s			LR			LR	22 30 44.9	
PMG	**Port Moresby**	**75.50**	**94**	P			P	21 59 28.1	+5.7
PMG	**Port Moresby** comp=Z,36nm,18.6s,baz=314,slow=36	**75.50**	**94**	LR			LR	22 33 12.7	
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.7s,baz=231,slow=0.9,SNR=2.5	**77.56**	**9**	P			**P**	**21 59 33.4**	**+0.3**
ZALV	comp=Z,25nm,18.3s,baz=123,slow=34 comp=Z,0.8nm,0.7s			LR			LR	22 31 04.9	
SONM	**Songino Array** comp=Z,0.7nm,1.0s,baz=213,slow=5.8,SNR=4.8 comp=Z,0.7nm,1.0s	**77.83**	**25**	P			**P**	**21 59 34.8**	**-0.1**
DBIC	**Dimbokro**	**77.90**	**283**	P			**P**	**21 59 39.2**	**+3.2**
DBIC	comp=Z,9.0nm,1.2s			IAmb			IAmb	21 59 54.4	
DBIC	**Dimbokro** comp=Z,103nm,18.8s,baz=163,slow=34	**77.90**	**283**	LR			LR	22 31 56.1	
ARU	**Arti** comp=Z,24nm,18.0s,baz=50,slow=35	**79.34**	**354**	LR			LR	22 34 07.9	
KEST	**Kesra** comp=Z,34nm,19.3s,baz=268,slow=35	**81.06**	**315**	LR			LR	22 35 18.0	
AKASG	**Malin Array Be** comp=Z,0.5nm,0.6s,baz=110,slow=4.5,SNR=2.1 comp=Z,0.5nm,0.6s	**81.12**	**336**	P			**P**	**21 59 53.7**	**+1.1**
KSRS	**Korea Array** comp=Z,0.4nm,0.4s,baz=230,slow=5.8,SNR=2.0 comp=Z,0.4nm,0.4s	**81.52**	**44**	P			**P**	**21 59 56.8**	**+1.7**
ESDC	**Sonseca Array** comp=Z,0.3nm,0.9s,baz=117,slow=5.8,SNR=2.5 comp=Z,0.3nm,0.9s	**92.08**	**312**	P			**P**	**22 00 49.0**	**+2.2**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.5s,baz=339,slow=2.8,SNR=1.8	**140.17**	**3**	PKP			**PKPdf**	**22 07 03.6**	**-2.1**
ULM	**Lac du Bonnet** comp=Z,0.6nm,0.4s,baz=352,slow=7.1,SNR=2.3	**150.09**	**340**	PKPbc			**PKiKP**	**22 07 29.0**	**0.0**

DJA 18 22:05:17.4±0.4,9°S±5°×11°2E±°,h10km,M3.9/12,mb4.1/4, mB5.1/1,MLv3.9/12,Mw(mB)4.4/1,South of Jawa

h42km±10km, ML3.0, ML3.2/26(NEIC), Error ellipse: s-maj=12.1km s-min=7.0km az=158.0
IDC 18 22:37:34.9±6.3, 56°.32N×151°.87W, h0km, mb3.2/1, mbtmp2.9/3, ML2.9/2, MS2.8/1, Error ellipse: s-maj=115.5km s-min=26.7km az=80.0
ISC 18 22:37:24.8±1.2, 56°.34N±0°.08×154°.94W±0°.05, h35km, n69, σ1§27/65, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
R18K	**Karluk**	**1.26**	**12**		**Pn**	**22 37 46.4**	**+0.6**
R18K					Sn	**22 38 01.7**	**+0.2**
R18K	**Karluk** baz=191	**1.26**	**12**	P	**Pn**	**22 37 46.4**	**+0.6**
R18K	baz=191			S	**Sn**	**22 38 01.7**	**+0.2**
OHAK	**Old Harbor**	**1.27**	**45**	Pn	**Pn**	**22 37 46.4**	**+0.4**
OHAK	**Old Harbor**	**1.27**	**45**		**Sn**	**22 38 02.2**	**+0.4**
OHAK	**Old Harbor** baz=223	**1.27**	**45**	P	**Pn**	**22 37 46.3**	**+0.4**
OHAK	baz=223			S	**Sn**	**22 38 02.2**	**+0.4**
PLK3	**Peulik 3**	**1.53**	**332**		**Pn**	**22 37 50.2**	**+0.5**
PLK3					**Sn**	**22 38 09.1**	**+0.7**
PLK1	**Peulik 1**	**1.73**	**329**		**Pn**	**22 37 53.3**	**+1.0**
ANNE	**Aniakchak Nort**	**1.81**	**290**		**Pn**	**22 37 52.7**	**-0.9**
ACHA	**Angle Creek He**	**1.89**	**354**		**Pn**	**22 37 55.4**	**+0.8**
ANCK	**Angle Creek**	**1.89**	**351**		**Pn**	**22 37 55.0**	**+0.5**
R16K	**Pilot Point**	**1.90**	**312**		**Pn**	**22 37 55.2**	**+0.6**
R16K	**Pilot Point** comp=N,345nm,0.9s	**1.90**	**312**	IAML		22 38 29.9	
R16K	**Pilot Point** baz=131	**1.90**	**312**	P	**Pn**	**22 37 55.2**	**+0.6**
ANNW	**Aniakchak Nort**	**1.91**	**291**		**Pn**	**22 37 54.7**	**-0.2**
CHGN	**Chignik**	**1.93**	**270**		**Pn**	**22 37 53.7**	**-1.4**
CHGN	**Chignik** comp=N,254nm,0.8s	**1.93**	**270**	IAML		22 38 26.9	
CHGN	comp=E,169nm,0.4s			IAML		22 38 29.6	
CHGN	**Chignik** baz=90	**1.93**	**270**	P	**Pn**	**22 37 53.7**	**-1.4**
KDAK	**Kodiak Island**	**1.94**	**41**		**Pn**	**22 37 55.1**	**-0.1**
CNTC	**Contact Creek**	**2.00**	**346**		**Pn**	**22 37 56.4**	**+0.3**
Q17K	**Contact Creek** baz=165	**2.00**	**346**	P	**Pn**	**22 37 56.4**	**+0.4**
KELA	**Mount Kelaz**	**2.15**	**349**		**Pn**	**22 37 58.9**	**+0.8**
KAHG	**Katmai Hook Gl**	**2.17**	**6**		**Pn**	**22 37 59.7**	**+1.2**
VNHG	**Veniaminof 1**	**2.36**	**269**		**Pn**	**22 38 00.4**	**-0.6**
S14K	**Fog Glacier** baz=89	**2.57**	**271**	P	**Pn**	**22 38 03.0**	**-1.0**
VNFG	**Fog Glacier, M**	**2.57**	**271**		**Pn**	**22 38 03.0**	**-1.0**
Q20K	**Shuyak Island** baz=211	**2.66**	**30**	P	**Pn**	**22 38 05.5**	**+0.4**
SYI	**Shuyak Island**	**2.66**	**30**		**Pn**	**22 38 05.5**	**+0.4**
SYI	**Shuyak Island** comp=N,62nm,0.7s	**2.66**	**30**	IAML		22 38 57.9	
SYI	comp=E,55nm,1.6s			IAML		22 38 58.1	
Q19K	**Cape Douglas,**	**2.69**	**15**		**Pn**	**22 38 06.2**	**+0.7**
Q19K	**Cape Douglas,** comp=N,163nm,0.9s	**2.69**	**15**	IAML		22 39 01.7	
Q19K	**Cape Douglas,** baz=195	**2.69**	**15**	P	**Pn**	**22 38 06.2**	**+0.7**
P18K	**Big Mountain,**	**3.06**	**357**		**Pn**	**22 38 10.2**	**-0.5**
P18K	**Big Mountain,** baz=177	**3.06**	**357**	P	**Pn**	**22 38 10.3**	**-0.5**
P16K	**Nushagak River**	**3.16**	**330**		**Pn**	**22 38 11.3**	**-0.6**
P16K	**Nushagak River** baz=148	**3.16**	**330**	P	**Pn**	**22 38 11.3**	**-0.6**
O18K	**Koktuh Hills**	**3.53**	**358**		**Pn**	**22 38 16.6**	**-0.4**
O18K	**Koktuh Hills** comp=E,42nm,3.3s	**3.53**	**358**	IAML		22 39 37.5	
O18K	comp=N,38nm,4.0s			IAML		22 40 33.3	
O18K	**Koktuh Hills** baz=177	**3.53**	**358**	P	**Pn**	**22 38 16.6**	**-0.4**
O17K	**Koliganek Bris**	**3.63**	**343**		**Pn**	**22 38 17.9**	**-0.4**
O17K	**Koliganek Bris** baz=161	**3.63**	**343**	P	**Pn**	**22 38 17.9**	**-0.4**
O16K	**Kokwok River B**	**3.67**	**334**		**Pn**	**22 38 18.9**	**0.0**
O16K	**Kokwok River B** comp=E,40nm,2.9s	**3.67**	**334**	IAML		22 39 27.2	
O16K	comp=N,42nm,3.1s			IAML		22 39 27.8	
O16K	**Kokwok River B** baz=152	**3.67**	**334**	P	**Pn**	**22 38 18.9**	**0.0**
CNPM	**China Poot**	**3.76**	**30**		**Pn**	**22 38 20.3**	**+0.1**
CNPM	**China Poot** comp=N,33nm,2.9s	**3.76**	**30**	IAML		22 38 53.3	
CNPM	comp=E,46nm,1.7s			IAML		22 39 30.0	
O15K	**Ungalikthiuk R**	**3.86**	**319**		**Pn**	**22 38 21.1**	**-0.5**
O15K	**Ungalikthiuk R** baz=136	**3.86**	**319**	P	**Pn**	**22 38 21.1**	**-0.5**
BRLK	**Bradley Lake**	**4.05**	**30**		**Pn**	**22 38 23.9**	**-0.4**
BRLK	**Bradley Lake** comp=N,22nm,4.1s	**4.05**	**30**	IAML		22 40 01.5	
BRLK	comp=E,21nm,3.9s			IAML		22 40 47.6	
PN7A	**Pavlof North-7**	**4.08**	**260**		**Pn**	**22 38 23.3**	**-1.3**
BRSE	**Bradley Lake S**	**4.08**	**31**		**Pn**	**22 38 24.3**	**-0.2**
BRSE	**Bradley Lake S** baz=214	**4.08**	**31**	P	**Pn**	**22 38 24.3**	**-0.2**
O14K	**Tigyukauivet M**	**4.47**	**313**		**Pn**	**22 38 29.7**	**-0.2**
O14K	**Tigyukauivet M** baz=129	**4.47**	**313**	P	**Pn**	**22 38 29.7**	**-0.2**
N15K	**Kwethluk River**	**4.70**	**327**		**Pn**	**22 38 33.8**	**+0.6**
N15K	**Kwethluk River** baz=143	**4.70**	**327**	P	**Pn**	**22 38 33.8**	**+0.6**
SLKM	**Skilak Lake**	**4.86**	**29**		**Pn**	**22 38 35.0**	**-0.3**
M16K	**Timber Creek**	**5.14**	**338**		**Pn**	**22 38 38.9**	**-0.2**
M16K	**Timber Creek** baz=154	**5.14**	**338**	P	**Pn**	**22 38 38.9**	**-0.2**
ISLZ	**Isanotski Laza**	**5.24**	**256**		**Pn**	**22 38 39.4**	**-1.1**
SUA	**Susitna One**	**5.58**	**21**	Pn	**Pn**	**22 38 45.9**	**+0.6**
M14K	**Bethel**	**5.75**	**323**		**Pn**	**22 38 49.5**	**+2.0**
L19K	**White Mountain**	**5.86**	**0**	Pn	**Pn**	**22 38 50.1**	**+1.1**
L14K	**Kuka Creek**	**6.42**	**325**		**Pn**	**22 38 58.1**	**+1.4**
K17K	**Iditarod**	**6.62**	**346**		**Pn**	**22 39 01.1**	**+1.7**
ILAR	**Eielson Array** comp=E,0.1nm,0.3s,baz=209,slow=14,SNR=6.4	**9.33**	**22**	Pn	**Pn**	**22 39 37.2**	**+0.6**
ILAR	baz=199,slow=15,SNR=1.0 comp=E,0.3nm,0.5s			Sn	**Sn**	**22 41 12.1**	**-8.1**
BBB	**Bella Bella** comp=E,32nm,18.2s,baz=354,slow=29	**16.17**	**94**	LR	LR	22 44 37.9	
YKA	**Yellowknife Ar** baz=272,slow=9.9,SNR=4.3 comp=E,0.2nm,0.6s	**21.14**	**56**	P	**P**	**22 42 05.7**	**-0.5**
TXAR	**Lajitas Array** comp=E,0.2nm,0.7s,baz=301,slow=7.0,SNR=3.0 comp=E,0.2nm,0.7s	**44.85**	**105**	P	**P**	**22 45 37.1**	**+1.6**

AZER 18 22:48:43.1, 38°.35N×47°.42E, h10km, ml2.5, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LRK	**Lerik**	**0.78**	**67**	P	Pn	22 49 00.1	-0.1
LRK				S	Sn	22 49 11.8	-0.3
YRD	**Yardimli**	**0.86**	**48**	P	Pn	22 49 01.6	+0.2
YRD				S	Sn	22 49 14.3	+0.2
ASTR	**Astara**	**1.09**	**78**	P	Pn	22 49 06.0	+1.6
ASTR				S	Sn	22 49 21.6	+2.0
QRD	**Qoradiz**	**1.12**	**356**	P	Pn	22 49 06.2	+1.5
QRD				S	Sn	22 49 23.2	+3.0
GLBA	**Clilabad**	**1.17**	**40**	P	Pg	22 49 08.3	+2.7
ORD	**Ordubad**	**1.26**	**298**	P	Pg	22 49 07.8	+0.5
ORD				S	Sn	22 49 24.9	+1.0
NAX	**Nakhchivan**	**1.72**	**299**	P	Pg	22 49 15.5	-0.5
AGDM	**Agdam**	**1.78**	**352**	P	Pg	22 49 17.7	+0.5
SBZ	**Shahbuz**	**1.80**	**306**	P	Pg	22 49 17.6	0.0
GANJ	**Ganja**	**2.45**	**340**	P	Pb	22 49 27.2	0.0

TEH 18 22:49:09.5, 38°.31N×47°.39E, h6km±45km, ML3.2
NSSP 18 22:49:10.1, 38°.38N×47°.25E, h10km, Ms3.5
ISC 18 22:49:08.2±1.4, 38°.32N±0°.03×47°.40E±0°.03, h2km±18km, n18, σ1§48/27, 1C-1D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISRB	**Sarab**	**0.54**	**157**	Pg	**Pb**	**22 49 19.7**	**-0.8**
ISRB				Sg	**Sb**	**22 49 27.4**	**-1.4**
GRMI	**Germi**	**0.63**	**38**	Pg	**Pb**	**22 49 21.7**	**-0.3**
GRMI				Sg	**Sb**	**22 49 30.6**	**-0.7**
IHSH	**Hashtrud**	**1.02**	**186**	Pg	**Pb**	**22 49 28.0**	**-0.8**
GAS1	**Astara - Iran**	**1.14**	**86**	Pg	**Pg**	**22 49 31.1**	**+1.1**
IMRD	**Marand**	**1.39**	**287**	Pg	**Pg**	**22 49 35.9**	**+1.1**
ISHB	**Shabestar**	**1.40**	**269**	Pg	**Pg**	**22 49 35.6**	**+0.5**
CSN1	**Caspian**	**1.54**	**119**	Pg	**Pg**	**22 49 38.9**	**+1.2**
MAHB	**Mahabad**	**2.05**	**221**	Pn	**Pb**	**22 49 46.4**	**+0.1**
MAKU	**Maku**	**2.36**	**297**	Pn	**Pb**	**22 49 50.9**	**-0.7**
NRKZ	**NAREK**	**2.71**	**309**	*eP*	**Pg**	**22 49 59.9**	**-0.3**
NRKZ				*eS*	**Sg**	**22 50 36.2**	**+0.9**
GNI	**Garni**	**2.76**	**312**	*iP*	**Pg**	**22 50 00.7**	**-0.4**
GNI				*iS*	**Sg**	**22 50 39.5**	**+2.7**
KAPZ	**Kaputan**	**2.90**	**315**	*eP*	**Pg**	**22 50 04.3**	**+0.5**
KAPZ				*eS*	**Sg**	**22 50 41.4**	**+0.1**
VSHL	**Vashlovani**	**3.01**	**346**	P	**Pb**	**22 50 02.2**	**-0.4**
VSHL				S	**Sb**	**22 50 41.4**	**+1.6**
AMBZ	**Amberd**	**3.19**	**311**	*eP*	**Pb**	**22 50 05.1**	**-0.8**
AMBZ				*eS*	**Sg**	**22 50 48.9**	**-1.9**
STEZ	**Stepenevan**	**3.54**	**320**	*eP*	**Pg**	**22 50 14.6**	**-1.5**
STEZ				*eS*	**Sg**	**22 51 01.5**	**-0.5**
CHRG	**Chargali**	**4.43**	**336**	P	**Pb**	**22 50 25.5**	**-1.4**
CHRG				S	**Sb**	**22 51 24.6**	**+3.8**
MTEO	**Meteo**	**4.87**	**334**	S	**Sg**	**22 51 42.0**	**-2.8**
MTEO	**Meteo**	**4.87**	**334**	P	**Pb**	**22 50 33.9**	**-0.7**

ISK 18 22:49:31.5, 38°.72N×43°.51E, h6km, ML2.3/8
AFAD 18 22:49:31.6±0.0, 38°.75N×43°.55E, h7km±5km, ML2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.20**	**220**	Pg	Pg	22 49 36.9	+1.3
VMUR	**Van-Muradiye**	**0.24**	**4**	P	Pg	22 49 36.9	+0.4
VMUR				S	Sg	22 49 42.4	+2.7
VMUR	comp=N,430nm,0.3s			*i* AML	AML	22 49 44.0	
VMUR	comp=E,333nm,0.5s			*i* AML	AML	22 49 46.0	
TVAN	**Van**	**0.25**	**208**	P	Pg	22 49 37.0	+0.5
TVAN				S	Sg	22 49 42.0	+2.1
TVAN	comp=N,515nm,0.3s			*i* AML	AML	22 49 43.0	
TVAN	comp=E,647nm,0.7s			*i* AML	AML	22 49 44.0	
ERCV	**ERCIS-VAN**	**0.32**	**328**	Pg	Pg	22 49 38.3	+0.4
OZAP	**Van, Ozalp-Mer**	**0.36**	**104**	P	Pg	22 49 37.9	-0.8
OZAP				S	Sb	22 49 46.2	-0.1
OZAP	comp=E,399nm,0.8s			*i* AML	AML	22 49 50.0	
OZAP	comp=N,295nm,0.6s			*i* AML	AML	22 49 52.0	
GEVA	**Gevas**	**0.58**	**222**	P	Pg	22 49 42.5	-0.3
GEVA				S	Sg	22 49 48.8	-1.7
GEVA	comp=E,63nm,0.6s			*i* AML	AML	22 49 57.0	
GEVA	comp=N,47nm,0.3s			*i* AML	AML	22 49 57.0	
AKDM	**Akdamar-Van**	**0.61**	**227**	Pg	Pg	22 49 43.1	-0.4
AKDM				Sg	Sg	22 49 51.2	-0.3
ADCV	**BITLIS_Adilcev**	**0.65**	**276**	P	Pb	22 49 45.0	-0.4
ADCV				S	Sb	22 49 56.2	+1.5
ADCV	comp=N,75nm,0.3s			*i* AML	AML	22 49 58.0	
ADCV	comp=E,77nm,0.5s			*i* AML	AML	22 49 58.0	
DYDN	**Diyadin**	**0.80**	**8**	P	Pg	22 49 46.9	-0.2
DYDN				S	Sb	22 49 58.8	-0.4
DYDN	comp=N,40nm,0.5s			*i* AML	AML	22 50 01.0	
DYDN	comp=E,48nm,0.4s			*i* AML	AML	22 50 04.0	
MLAZ	**Malazgirt-MUS**	**0.88**	**297**	Pg	Pg	22 49 48.5	+0.1
MLAZ				Sg	Sb	22 50 00.9	-0.3
DORK	**Agr/Tutak/Do**	**0.88**	**317**	P	Pg	22 49 48.4	-0.1
DORK				S	Sb	22 50 00.6	-0.6
DORK	comp=E,33nm,0.4s			*i* AML	AML	22 50 03.0	
DORK	comp=N,43nm,0.4s			*i* AML	AML	22 50 03.0	
PERV	**Siirt/Pervari-**	**1.13**	**225**	P	Pn	22 49 55.7	+1.7
PERV				S	Sn	22 50 13.8	+4.1
BLIS	**Bitlis-Merkez**	**1.17**	**254**	P	Pg	22 49 53.1	-1.0
BLIS				S	Sg	22 50 09.0	-0.4
BLIS	comp=N,60nm,0.4s			*i* AML	AML	22 50 11.0	
BLIS	comp=E,36nm,0.4s			*i* AML	AML	22 50 11.0	
GURO	**Guroymak-BITLI**	**1.21**	**261**	Pn	Pg	22 49 53.9	-0.8
GURO				Sn	Sb	22 50 10.8	+0.1
TASB	**TASBURUN-IGDIR**	**1.34**	**23**	Pn	Pg	22 49 57.4	0.0
CUKT	**Cukurca**	**1.50**	**178**	Pn	Pn	22 49 59.1	+0.1
VRTB	**Varto-Mus**	**1.69**	**285**	Pn	Pn	22 50 02.3	+0.7
KOPR	**Koprukoy-ERZUR**	**1.81**	**314**	Pn	Pb	22 50 04.3	-0.9

PGC 18 22:49:38.0±4.2, 50°.68N×130°.57W, h10km, MLSn2.9/14, Mw3.5/14, 221km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.55**	**91**	Pn	Pn	22 50 03.5	-2.1
HOLB				Sn	Sn	22 50 21.1	-4.7
PHC	**Port Hardy**	**1.99**	**88**	Pn	Pn	22 50 09.9	-1.7
PHC				Sn	Sn	22 50 31.9	-4.7
BAIB	**Barry Inlet**	**2.04**	**339**	Pn	Pn	22 50 10.4	-2.0
BAIB				Sn	Sn	22 50 32.6	-5.3
BNB	**Barry Inlet**	**2.04**	**339**	Pn	Pn	22 50 10.0	-2.4
BBB	**Bella Bella**	**2.15**	**45**	Pn	Pn	22 50 12.1	-1.7
MAYB	**Maynard**	**2.18**	**96**	Pn	Pn	22 50 12.5	-1.9
EDB	**Eliza Dome**	**2.35**	**109**	Pn	Pn	22 50 14.9	-1.8
WOSB	**Woss**	**2.61**	**100**	Pn	Pn	22 50 18.9	-1.4
BUTB	**Butedale**	**2.72**	**28**	Pn	Pn	22 50 20.4	-1.4
DIB	**Dawson Inlet,**	**2.79**	**336**	Pn	Pn	22 50 21.3	-1.3
GRIB	**Gribbell Islan**	**2.80**	**18**	Pn	Pn	22 50 21.2	-1.7
BNAB	**Bonilla**	**2.82**	**359**	Pn	Pn	22 50 19.7	-3.3
NCSB	**Newcastle Ridg**	**2.89**	**94**	Pn	Pn	22 50 22.3	-1.9
HWKB	**Hawksbury Isla**	**3.05**	**16**	Pn	Pn	22 50 24.7	-1.6
GRNB	**Grenville Isla**	**3.19**	**6**	Pn	Pn	22 50 26.8	-1.4
GRNB				Sn	Sn	22 51 02.4	-4.0
KITB	**Kitimat**	**3.60**	**18**	Pn	Pn	22 50 32.8	-1.0
KITB				Sn	Sn	22 51 13.2	-3.1
RUBB	**Prince Rupert**	**3.66**	**3**	Pn	Pn	22 50 34.0	-0.6
FSJB	**Fort St James**	**5.38**	**43**	Pn	Pn	22 50 58.0	-0.3
FSJB				Sn	Sn	22 51 56.0	-4.3
U33K	**Whale Pass**	**5.65**	**345**	Pn	Pn	22 51 01.5	-0.4

IDC 18 23:19:22.4±1.3, 17°.75S×167°.85E, h0km, mb4.0/8, mbtmp4.0/9, ML3.6/1, MS3.7/11, Error ellipse: s-maj=40.7km s-min=23.2km az=122.0
NOU 18 23:19:25.3, 17°.68S×167°.71E, h0km, MLv5.0/10, Vanuatu Islands
NEIC 18 23:19:28.4±1.4, 17°.9S±0°.1×167°.6E±0°.1, h10km±2km, mb4.4/10, Error ellipse: s-maj=22.6km s-min=18.5km az=49.0
ISC 18 23:19:24.7±0.7, 17°.69S±0°.08×167°.8E±0°.1, h10km, n49, σ1§29/42, mb4.4/12, MS3.5/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**4.36**	**229**		**Pn**	**23 20 30.9**	**-0.1**
KOUNC	**Koumac, New Ca**	**4.36**	**229**	P	**Pn**	**23 20 32.1**	**+1.1**
YATNC	**Mamie plateau,**	**4.42**	**191**	P	**Pn**	**23 20 33.4**	**+1.4**
DZM	**Mont Dzumac**	**4.54**	**196**	P	**Pn**	**23 20 33.5**	**-0.1**
DZM	**Mont Dzumac** 2.8nm,0.3s,baz=314,slow=10,SNR=18	**4.54**	**196**	Pn	**Pn**	**23 20 33.3**	**-0.3**
DZM	6.3nm,0.3s,baz=289,slow=21,SNR=5.0			Sn	**Sn**	**23 21 23.8**	**-2.7**
DZM	comp=Z,268nm,18.1s,baz=34,slow=29 8.3nm,0.4s			LR	LR	23 21 34.6	
ONTNC	**Ouen Toro**	**4.76**	**195**	Pn	**Pn**	**23 20 35.5**	**-1.1**
OUENC	**Ouen Island, N**	**4.79**	**190**	Pn	**Pn**	**23 20 36.9**	**0.0**
OUENC	**Ouen Island, N**	**4.79**	**190**	P	**Pn**	**23 20 40.5**	**+3.6**
PINNC	**Pines Island,**	**4.91**	**184**	Pn	**Pn**	**23 20 37.8**	**-0.8**
HNR	**Honiara** comp=Z,3μm,19.2s,baz=148,slow=36	**11.19**	**316**	LR	LR	23 26 09.4	
CTA	**Charters Tower** 2.4nm,0.7s,baz=61,slow=13,SNR=4.5	**20.50**	**260**	P	**P**	**23 24 04.3**	**+1.1**
CTA	comp=Z,176nm,19.5s,baz=85,slow=34 2.4nm,0.7s			LR	LR	23 31 09.1	
PMG	**Port Moresby** comp=Z,112nm,19.1s,baz=115,slow=34	**21.65**	**290**	LR	LR	23 31 51.9	
RTZ	**Ruatahuna**	**22.34**	**161**	P	**P**	**23 24 23.9**	**+1.0**
RTZ	comp=Z,19nm,1.1s			IAmb	IAmb	23 24 28.6	
BKZ	**Black Stump Fm**	**22.70**	**162**	P	**P**	**23 24 29.0**	**+2.3**
QRZ	**Quartz Range**	**23.42**	**171**	P	**P**	**23 24 35.2**	**+1.2**
QRZ	comp=Z,17nm,1.1s			IAmb	IAmb	23 24 39.1	
MRZ	**Mangatainoka R**	**23.86**	**165**	P	**P**	**23 24 39.3**	**+0.9**
TUWZ	**Tuamarina**	**24.25**	**169**	P	**P**	**23 24 43.6**	**+1.7**
THZ	**Tophouse**	**24.39**	**171**	P	**P**	**23 24 46.0**	**+2.7**
THZ	comp=Z,13nm,0.9s			IAmb	IAmb	23 24 55.7	
LTZ	**Lake Taylor**	**25.30**	**172**	P	**P**	**23 24 52.1**	**+0.6**
LTZ	comp=Z,12nm,1.2s			IAmb	IAmb	23 24 52.3	
STKA	**Stephens Creek** comp=Z,128nm,18.5s,baz=30,slow=36	**27.56**	**234**	LR	LR	23 36 01.7	
TOO	**Toolangi**	**27.84**	**220**	P	**P**	**23 25 13.9**	**-0.6**
TOO	comp=Z,4.9nm,0.8s			IAmb	IAmb	23 25 18.2	
WR0	**Warramunga Arr**	**31.51**	**261**	P	**P**	**23 25 47.0**	**-0.2**
WB0	**Warramunga Arr**	**31.66**	**261**	P	**P**	**23 25 49.0**	**+0.5**
WB0	comp=Z,4.3nm,1.1s			IAmb	IAmb	23 25 53.7	
WB2	**Warramunga Arr**	**31.69**	**261**	P	**P**	**23 25 49.8**	**+0.9**
WRA	**Warramunga Arr** comp=Z,1.0nm,1.0s,baz=82,slow=6.1,SNR=3.1 comp=Z,1.0nm,1.0s	**31.70**	**261**	P	**P**	**23 25 47.1**	**-1.8**
ASAR	**Alice Springs** comp=Z,1.3nm,0.8s,baz=80,slow=9.3,SNR=11	**32.19**	**254**	P	**P**	**23 25 52.1**	**-1.1**
ASAR				LR	LR	23 38 11.1	
BBOO	**Buckleboo**	**32.24**	**236**	P	**P**	**23 25 54.0**	**+0.4**
MJAR	**Matsushiro Arr** comp=Z,3.0nm,1.0s,baz=172,slow=6.4,SNR=4.3 comp=Z,3.0nm,1.0s	**60.74**	**333**	P	**P**	**23 29 36.4**	**-0.3**
JNU	**Nakatsue** comp=Z,28nm,18.0s,baz=164,slow=37	**61.61**	**325**	LR	LR	23 57 08.6	
SHEM	**Shemya Is, Ala** comp=Z,80nm,20.1s,baz=144,slow=30	**70.34**	**4**	LR	LR	23 55 04.1	
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,baz=120,slow=5.3,SNR=1.4 comp=Z,1.1nm,0.3s	**76.60**	**295**	P	**P**	**23 31 16.3**	**+0.2**
SONM	**Songino Array** comp=Z,1.7nm,0.9s,baz=152,slow=5.0,SNR=12	**85.16**	**324**	P	**P**	**23 32 02.2**	**+0.9**
SONM	comp=Z,20nm,18.1s,baz=322,slow=36 comp=Z,1.7nm,0.9s			LR	LR	00 11 06.7	
ILAR	**Eielson Array** comp=Z,0.4nm,0.9s,baz=253,slow=4.6,SNR=4.4 comp=Z,0.4nm,0.9s	**89.18**	**18**	P	**P**	**23 32 18.0**	**-2.2**
LPIG	**La Paz** comp=Z,28nm,18.5s,baz=52,slow=32	**90.01**	**65**	LR	LR	00 07 27.8	
TXAR	**Lajitas Array** comp=Z,15nm,18.5s,baz=54,slow=33	**97.25**	**62**	LR	LR	00 13 16.6	
MKAR	**Makanchi Array** comp=Z,0.1nm,0.7s,baz=93,slow=4.9,SNR=2.0 comp=Z,0.1nm,0.7s	**99.67**	**316**	P	**Pdif**	**23 33 06.7**	**-2.0**
ARCES	**ARCESS Array B** comp=Z,4.3nm,0.9s,baz=46,slow=3.5,SNR=10	**123.22**	**345**	PKP	**PKPdf**	**23 38 20.8**	**-0.5**
FINES	**FINESS Array B** comp=Z,2.2nm,1.1s,baz=357,slow=4.0,SNR=5.1	**128.63**	**338**	PKP	**PKPdf**	**23 38 31.3**	**-0.4**
NOA	**NORSAR Array B** comp=Z,0.2nm,0.8s,baz=38,slow=2.2,SNR=2.2	**133.59**	**344**	PKP	**PKPdf**	**23 38 41.4**	**+0.1**
EKA	**Eskdalemuir Ar** comp=Z,2.4nm,1.0s,baz=354,slow=2.1,SNR=3.6	**141.79**	**352**	PKP	**PKPdf**	**23 38 55.6**	**-0.8**
LESA	**Schwarzleotal** comp=Z,2.1nm,0.6s	**143.99**	**331**	*i* PKP	PKPab	23 38 58.9	+0.9
WATA	**Walderalm** comp=Z,1.3nm,0.5s	**144.55**	**332**	*e*PKP	**PKPab**	**23 39 00.7**	**+0.5**
ABTA	**Abfaltersbach** comp=Z,2.5nm,0.6s	**144.56**	**330**	*i* PKP	**PKPab**	**23 39 00.3**	**+0.2**
WTTA	**Wattenberg** comp=Z,0.7nm,0.3s	**144.58**	**332**	*i* PKP	**PKPab**	**23 39 01.2**	**+0.8**
MOTA	**Moosalm** comp=Z,1.6nm,0.7s	**144.76**	**332**	*e*PKP	**PKPab**	**23 39 01.5**	**+0.5**
RETA	**Reutte** comp=Z,0.5nm,0.3s	**144.80**	**333**	*i* PKP	**PKPab**	**23 39 01.7**	**+0.7**
SQTA	**Sankt Quirin** comp=Z,5.1nm,1.2s	**144.81**	**332**	*e*PKP	**PKPab**	**23 39 01.9**	**+0.8**
FETA	**Feichten** comp=Z,2.9nm,0.5s	**145.17**	**332**	*i* PKP	**PKPbc**	**23 39 03.0**	**+0.6**
DAVA	**Damuels** comp=Z,2.5nm,0.5s	**145.34**	**333**	*e*PKP	**PKPbc**	**23 39 03.0**	**0.0**

CATAC 18 23:27:33.3±1.0, 13°.63N×90°.90W, h8km±7km, ML2.9
GCG 18 23:27:44.7±0.7, 14°.50N×90°.85W, h42km±11km, MD3.3
ISC 18 23:27:29.6±2.5, 13°.5N±0°.1×91°.01W±0°.07, h2km±13km, n10, σ1§17/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.94**	**10**	*eP*	**Pn**	**23 27 51.5**	**+1.5**
SULM	**Suchitepequez,**	**0.95**	**326**	*eP*	**Sg**	**23 27 58.6**	**-1.6**
NBG	**Las Nubes**	**1.25**	**31**	*eP*	**Pn**	**23 27 56.4**	**+2.2**
GUNB	**GUNB**	**1.25**	**31**	*i* P	**Pb**	**23 27 54.8**	**+0.6**
GUNB				*i* S	**Sg**	**23 28 09.0**	**-0.9**
GUNB	comp=Z,120nm,1.0s			IAML		23 28 20.2	
NUBE	**Las Nubes**	**1.26**	**72**	*i* P	**Pg**	**23 27 54.2**	**+0.5**
NUBE				*i* S	**Sg**	**23 28 08.9**	**-1.2**
NUBE	comp=Z,190nm,1.0s			IAML		23 28 51.0	
LOAL	**Lomas de Alarc** comp=Z,2μm,1.0s	**1.29**	**68**	IAML		23 27 50.5	
LOAL				*i* P	**Pg**	**23 27 54.8**	**+0.5**
LOAL				*i* S	**Sb**	**23 28 10.8**	**-0.9**
STG3	**Santiaguito 3,**	**1.30**	**336**	*eP*	**Pn**	**23 27 55.5**	**+0.5**
STG3				*eS*	**Sg**	**23 28 10.4**	**-1.2**
JAYA	**Jayaque - finc**	**1.53**	**85**	*i* P	**Pn**	**23 27 58.1**	**+0.1**
JAYA				*i* S	**Sg**	**23 28 18.6**	**+0.1**
JAYA	comp=Z,420nm,1.0s			IAML		23 28 20.5	
PMON

COEN					IAmb	IAmb	23 40 19.0		
	comp=Z,9.7nm,1.4s								
BBOO	**Buckleboo**	**40.72**	**251**		P	**P**	**23 40 15.8**	**+1.1**	
ASAR	**Alice Springs**	**44.34**	**264**		P	**P**	**23 40 43.2**	**-1.1**	
	comp=Z,1.5nm,0.8s,baz=115,slow=7.9,SNR=10								
ASAR					PcP	**PcP**	**23 42 28.2**	**+0.4**	
	comp=Z,0.5nm,0.4s,baz=115,slow=3.9,SNR=1.6								
	comp=Z,1.5nm,0.8s								
WR0	**Warramunga Arr**	**44.91**	**269**		P	**P**	**23 40 48.7**	**-0.2**	
WB2	**Warramunga Arr**	**45.09**	**269**		P	**P**	**23 40 50.1**	**-0.2**	
WB2					IAmb	IAmb	23 41 21.3		
	comp=Z,12nm,1.4s								
WRA	**Warramunga Arr**	**45.10**	**269**		P	**P**	**23 40 50.0**	**-0.4**	
WRA	**Warramunga Arr**	**45.10**	**269**		P	**P**	**23 40 49.4**	**-1.0**	
	comp=Z,2.1nm,0.8s,baz=109,slow=6.3,SNR=18								
WRA					PcP	**PcP**	**23 42 31.1**	**+0.7**	
	comp=Z,0.7nm,0.8s,baz=112,slow=3.4,SNR=2.0								
	comp=Z,2.1nm,0.8s								
WB0	**Warramunga Arr**	**45.11**	**269**		P	**P**	**23 40 50.1**	**-0.4**	
WB0					IAmb	IAmb	23 41 15.6		
	comp=Z,5.1nm,1.0s								
FORT	**Forrest**	**47.75**	**253**		P	**P**	**23 41 10.1**	**-0.9**	
VNDA	**Vanda**	**50.76**	**186**		LR	LR	00 00 04.9		
	comp=Z,67nm,20.5s,baz=248,slow=32								
QSPA	**South Pole Qui**	**62.29**	**180**		P	**P**	**23 42 58.1**	**+2.5**	
	comp=Z,1.2nm,0.6s,baz=28,slow=12,SNR=3.2								
	comp=Z,1.2nm,0.6s								
MJAR	**Matsushiro Arr**	**76.73**	**324**		P	**P**	**23 44 24.5**	**-0.2**	
	comp=Z,1.9nm,0.9s,baz=170,slow=8.3,SNR=4.2								
	comp=Z,1.9nm,0.9s								
SNAA	**Sanae**	**80.70**	**178**		P	**P**	**23 44 48.7**	**+2.5**	
	comp=Z,1.3nm,0.9s,baz=237,slow=15,SNR=1.8								
	comp=Z,1.3nm,0.9s								
H03S2	**Juan Fernandez**	**81.03**	**123**		T	T	01 14 54.8		
	baz=240,slow=74,SNR=3.9								
H03S1	**Juan Fernandez**	**81.04**	**123**		T	T	01 14 54.1		
	baz=240,slow=74,SNR=4.0								
H03S3	**Juan Fernandez**	**81.05**	**123**		T	T	01 14 57.1		
	baz=240,slow=74,SNR=4.7								
KSRS	**Korea Array**	**83.06**	**319**		P	**P**	**23 44 59.5**	**+0.5**	
	comp=Z,0.7nm,0.5s,baz=132,slow=5.9,SNR=1.9								
	comp=Z,0.7nm,0.5s								
TXAR	**Lajitas Array**	**90.12**	**57**		P	**P**	**23 45 32.9**	**-0.9**	
	comp=Z,0.3nm,0.8s,baz=234,slow=7.6,SNR=1.8								
	comp=Z,0.3nm,0.8s								
ILAR	**Eielson Array**	**95.19**	**12**		P	**P**	**23 45 56.8**	**+0.6**	
	comp=Z,0.2nm,0.7s,baz=218,slow=5.7,SNR=1.9								
	comp=Z,0.2nm,0.7s								
ZALV	**Zalesovo Beam**	**116.77**	**319**		PKP	**PKPdf**	**23 51 15.4**	**-1.7**	
	comp=Z,0.2nm,0.4s,baz=123,slow=5.3,SNR=2.0								
MKAR	**Makanchi Array**	**116.88**	**311**		PKP	**PKPdf**	**23 51 17.3**	**-0.3**	
	comp=Z,0.5nm,0.6s,baz=89,slow=2.6,SNR=10.0								
KURBB	**Kurchatov Arra**	**120.03**	**315**		PKP	**PKPdf**	**23 51 23.1**	**-0.4**	
	comp=Z,0.9nm,0.8s,baz=109,slow=2.3,SNR=9.3								
BVAR	**Borovoye Array**	**125.25**	**317**		PKP	**PKiKP**	**23 51 34.2**	**+0.4**	
	comp=Z,0.9nm,0.5s,baz=129,slow=1.7,SNR=11								
ARCES	**ARCESS Array B**	**136.27**	**349**		PKP	**PKPdf**	**23 51 52.7**	**-1.2**	
	comp=Z,2.0nm,0.8s,baz=20,slow=2.9,SNR=1.3								
FINES	**FINESS Array B**	**143.04**	**342**		PKhKP	PKPpre	23 52 02.9		
	comp=Z,0.9nm,0.5s,baz=46,slow=5.0,SNR=15								
NC303	**NORSAR Array S**	**146.14**	**353**		PKPdf	**PKPab**	**23 52 13.8**	**+0.2**	
NC405	**NORSAR Array S**	**146.21**	**353**		PKPdf	**PKPab**	**23 52 14.6**	**+0.8**	
NB201	**NORSAR Array S**	**146.32**	**353**		PKPdf	**PKPab**	**23 52 14.4**	**+0.1**	
NB2	**NORSAR Subarra**	**146.34**	**353**		PKP	**PKPbc**	**23 52 14.4**	**+0.9**	
	comp=Z,3.2nm,0.9s,baz=16,slow=2.9								
NOA	**NORSAR Array B**	**146.34**	**353**		PKPbc	**PKPbc**	**23 52 13.9**	**+0.5**	
	comp=Z,0.5nm,0.6s,baz=59,slow=1.5,SNR=9.0								
NC602	**NORSAR Array S**	**146.60**	**353**		PKPdf	**PKPbc**	**23 52 15.0**	**+0.8**	
HFS	**Hagfors**	**146.90**	**350**		PKPbc	**PKPbc**	**23 52 15.5**	**+0.4**	
	comp=Z,2.4nm,0.6s,baz=48,slow=2.2,SNR=8.6								
PABE	**Paberze**	**148.52**	**337**		PKPbc	**PKPbc**	**23 52 20.8**	**+1.3**	
AKASG	**Malin Array Be**	**149.79**	**326**		PKPbc	**PKPbc**	**23 52 23.0**	**+0.1**	
	comp=Z,3.1nm,0.7s,baz=46,slow=2.8,SNR=7.9								
MMAI	**Mount Meron Ar**	**151.78**	**289**		PKPbc	**PKiKP**	**23 52 30.3**	**+1.6**	
	comp=Z,2.9nm,0.5s,baz=91,slow=7.5,SNR=12								
BRTR	**Keskin Array B**	**152.16**	**303**		PKPbc	**PKPbc**	**23 52 29.5**	**+0.5**	
	comp=Z,1.5nm,0.7s,baz=140,slow=4.4,SNR=8.6								

*IDC **18** 23:41:26.9±2.2,5.5°S×152.9°E, h0km, mb3.5/6, mbtmp3.5/6,MS3.3/4, Error ellipse: s-maj=81.0km s-min=26.7km az=118.0*

ISC 18 23:41:32.5±2.1,5.6°S±0.3°×152.2°E±0.4, h35km, n10, σ0≥97/7, mb3.4/6, MS3.4/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.28**	**232**	Sn	**Sn**	**23 44 13.3**	**0.0**
	3.1nm,0.3s,baz=45,slow=20,SNR=2.9						
CTA	**Charters Tower**	**15.55**	**201**	LR	LR	23 49 40.2	
	comp=Z,69nm,20.0s,baz=86,slow=32						
WRA	**Warramunga Arr**	**22.48**	**229**	P	**P**	**23 46 28.8**	**-0.4**
	0.4nm,0.5s,baz=56,slow=10,SNR=4.7						
WRA				LR	LR	23 53 59.3	
	comp=Z,400nm,21.1s,baz=71,slow=33						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.18**	**223**	P	**P**	**23 46 55.6**	**+0.6**
	0.8nm,0.8s,baz=57,slow=9.2,SNR=5.7						
	0.8nm,0.8s						
TGY	**Tagaytay City**	**36.63**	**303**	LR	LR	00 04 01.4	
	comp=Z,19nm,19.4s,baz=248,slow=37						
PPT	**Papeete**	**58.09**	**107**	LR	LR	00 12 53.9	
	comp=Z,28nm,20.7s,baz=182,slow=32						
SONM	**Songino Array**	**66.63**	**328**	P	**P**	**23 52 20.8**	**+1.1**
	0.2nm,0.8s,baz=133,slow=8.1,SNR=1.9						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**23 53 54.4**	**0.0**
	0.7nm,0.9s,baz=244,slow=6.0,SNR=5.1						
	0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**84.00**	**322**	P	**P**	**23 53 58.1**	**-1.2**
	0.1nm,0.3s,baz=101,slow=3.9,SNR=1.5						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**89.47**	**323**	P	**P**	**23 54 25.3**	**-0.7**
	0.5nm,0.9s,baz=110,slow=3.8,SNR=2.3						
	0.5nm,0.9s						

IDC 19 00:08:36.2±1.6,3.00N×127.70E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=137.6km s-min=21.6km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.71**	**164**	P	P	00 13 50.2	+0.1
	0.3nm,0.3s,baz=344,slow=10,SNR=8.2						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**27.18**	**167**	P	P	00 14 21.4	-0.3
	0.3nm,0.5s,baz=354,slow=7.9,SNR=9.1						
	0.3nm,0.5s						
SONM	**Songino Array**	**48.30**	**341**	P	P	00 17 19.6	+0.2
	0.1nm,0.5s,baz=152,slow=6.5,SNR=1.5						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**58.70**	**325**	P	P	00 18 35.8	0.0
	0.5nm,0.6s,baz=122,slow=8.3,SNR=7.5						
	0.5nm,0.6s						

*CATAC **19** 00:15:14.9±0.7, 14.1°N×91.2°W, h74km±13km, ML3.8*
*SNET **19** 00:15:14.9±0.5, 14.0°N×91.2°W, h36km±107km, ML3.7*
*GCG **19** 00:15:16.4±0.7, 14.2°N×91.2°W, h54km±18km, MD3.7*

ISC 19 00:15:13.8±2.1,13.98N±0.09×91.35W±0.07, h63km±22km, n22, σ0≥91/32, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.39**	**327**	*e*P	**Pn**	**00 15 25.9**	**+0.9**
RTAL	**Retalhuleu**	**0.64**	**328**	⇑*i*P	**Pn**	**00 15 26.9**	**-0.6**
RTAL				*e*S	**Sn**	**00 15 36.6**	**-1.0**
FUG	**Fuego 3**	**0.68**	**46**	*e*P	**Pn**	**00 15 28.1**	**0.0**
STG3	**Santiaguito 3,**	**0.76**	**344**	*e*P	**Pn**	**00 15 29.0**	**-0.2**
PCG	**Pacaya**	**0.83**	**60**	*e*P	**Pn**	**00 15 30.1**	**+0.1**
GUMI	**Mixco**	**0.96**	**48**	*i*P	**Pn**	**00 15 31.5**	**-0.2**
GUMI				*i*S	**Sn**	**00 15 45.8**	**+0.8**
GUMI				IAML		00 15 47.0	
	comp=Z,6μm,1.0s						
SMSP	**San Marcos**	**1.07**	**337**	*i*P	**Pn**	**00 15 34.3**	**+1.1**
SMSP				*i*S	**Sn**	**00 15 47.1**	**-0.5**
SMSP				IAML		00 15 48.2	
	comp=Z,5μm,1.0s						
NBG	**Las Nubes**	**1.15**	**58**	*e*P	**Pn**	**00 15 35.0**	**+0.8**
NBG				*e*S	**Sn**	**00 15 51.5**	**+2.3**
GUNB	**GUNB**	**1.15**	**58**	*i*P	**Pn**	**00 15 34.0**	**-0.2**
GUNB				*i*S	**Sn**	**00 15 47.3**	**-2.1**
GUNB				IAML		00 15 51.5	
	comp=Z,2μm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.52**	**88**	*e*P	**Pn**	**00 15 38.5**	**-0.3**
LOAL	**Lomas de Alarc**	**1.52**	**89**	*i*P	**Pn**	**00 15 39.0**	**+0.1**
LOAL				*i*S	**Sn**	**00 15 58.2**	**+0.3**
LOAL				IAML		00 16 01.5	
	comp=Z,2μm,1.0s						
NUBE	**Las Nubes**	**1.53**	**93**	*e*P	**Pn**	**00 15 38.6**	**-0.5**
NUBE	**Las Nubes**	**1.53**	**93**	*i*P	**Pn**	**00 15 38.5**	**-0.5**
NUBE				*i*S	**Sn**	**00 15 57.4**	**-0.7**
NUBE				IAML		00 16 00.3	
	comp=Z,650nm,1.0s						
CEVE	**Cerro Verde**	**1.68**	**95**	*e*P	**Pn**	**00 15 41.3**	**+0.1**
CEVE				IAML		00 16 06.8	
	comp=Z,1μm,0.3s						
SNJE	**San Jose**	**1.70**	**93**	*e*P	**Pn**	**00 15 41.6**	**+0.2**
JAYA	**Jayaque - finc**	**1.87**	**100**	*e*P	**Pn**	**00 15 43.4**	**-0.4**
JAYA				*e*S	**Sn**	**00 16 05.2**	**-1.3**
JAYA				IAML		00 16 06.4	
	comp=Z,644nm,0.2s						
JAYA	**Jayaque - finc**	**1.87**	**100**	*i*P	**Pn**	**00 15 43.5**	**-0.2**
JAYA				IAML		00 16 06.3	
	comp=Z,2μm,1.0s						
JAYA				*i*S	**Sn**	**00 16 07.8**	**+1.3**
MRL	**Marmol**	**1.95**	**56**	*e*P	**Pn**	**00 15 45.1**	**+0.2**
MTO3	**Montecristo**	**1.97**	**78**	*i*P	**Pn**	**00 15 44.1**	**-1.1**
MTO3				IAML		00 16 02.8	
	comp=Z,110nm,1.0s						
MTO3				*i*S	**Sn**	**00 16 08.6**	**-0.4**
PMON	**Piamonte**	**1.99**	**97**	*i*P	**Pn**	**00 15 46.3**	**+1.0**
PMON				IAML		00 16 17.1	
	comp=Z,610nm,1.0s						
UDBS	**Universidad Do**	**2.15**	**97**	*i*P	**Pn**	**00 15 48.6**	**+1.2**
UDBS				IAML		00 15 53.7	
	comp=Z,800nm,1.0s						
SJTE	**Alcalda de S**	**2.30**	**99**	*e*P	**Pn**	**00 15 49.6**	**0.0**

*SJA **19** 00:21:02.8±0.7, 31.5°S×72.2°W, h5km±4km, ML4.5, MW4.1*
*IDC **19** 00:21:06.4±0.6, 31.5°S×71.5°W, h0km, mb4.3/9, mbtmp4.2/13, ML3.9/4, MS3.5/9, Error ellipse: s-maj=24.9km s-min=17.4km az=94.0*
*GUC **19** 00:21:09.0±0.9, 31.5°S×71.8°W, h32km±2km, ML4.4*
*NEIC **19** 00:21:10.1±1.0, 31.55S±0.03×71.90W±0.07, h31km±5km, mb4.5/14, Mwr4.3/79, Error ellipse: s-maj=9.1km s-min=3.7km az=90.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr2.55; Mθθ0.30; Mϕϕ-2.85; Mrθ0.85; Mθϕ0.53; Mϕr-1.44; Fault plane solution: M₀3.23000×10¹⁵ NP1:ϕ₁58.91000°, δ60.90000°, λ77.18000°. NP2:ϕ₂3.99000°, δ31.57000°, λ111.74000°. Principal axes: T 3.0838, Plg71.0000°, Azm40.0000°; N 0.2661, Plg11.0000°, Azm165.0000°; P -3.3499, Plg15.0000°, Azm258.0000°;*
*NEIC **19** 00:21:10.3, 31.55S×71.86W, h30km*

ISC 19 00:21:08.0±1.3, 31.58S±0.02×71.88W±0.04, h14km±8km, n143, σ1≥28/190, mb4.5/17, MS3.7/5, 18C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.84**	**64**		**Pg**	**00 21 24.3**	**0.0**
CO02				Sn	**Sg**	**00 21 35.4**	**+0.2**
CO02	**Combarbal**	**0.84**	**64**	*e*P	**Pg**	**00 21 24.8**	**+0.5**
CO02				*e*S	**Sg**	**00 21 30.4**	**-4.8**
CO02				IAML		00 21 37.6	
	comp=Z,24μm,0.4s						
CO02	**Combarbal**	**0.84**	**64**	⇓*i*P	**Pg**	**00 21 24.5**	**+0.2**
CO02				*i*S	**Sg**	**00 21 35.0**	**-0.3**
CO02				IAML		00 21 37.8	
	comp=N,36μm,0.3s						
CO06	**Fray Jorge**	**0.92**	**13**		**Pb**	**00 21 26.0**	**+0.2**
CO06				Sn	**Sb**	**00 21 38.4**	**+0.4**
CO06	**Fray Jorge**	**0.92**	**13**	⇓*i*P	**Pb**	**00 21 26.0**	**+0.2**
CO06				*i*S	**Sb**	**00 21 37.6**	**-0.3**
CO06				IAML		00 21 42.9	
	comp=E,14μm,0.3s						
VA06	**Catapilco**	**1.10**	**153**		**Pb**	**00 21 28.8**	**+0.1**
VA06				Sn	**Sb**	**00 21 43.4**	**+0.4**
VA06	**Catapilco**	**1.10**	**153**	⇓*i*P	**Pb**	**00 21 28.7**	**-0.1**
VA06				*i*S	**Sb**	**00 21 43.0**	**+0.1**
VA06				IAML		00 21 44.9	
	comp=E,19μm,0.5s						
CO03	**El Pedregal**	**1.26**	**54**		**Pn**	**00 21 31.2**	**0.0**
CO03				Sn	**Sb**	**00 21 47.1**	**-0.5**
CO03	**El Pedregal**	**1.26**	**54**	*e*P	**Pn**	**00 21 31.3**	**0.0**
CO03				*e*S	**Sg**	**00 21 49.8**	**+1.2**
CO03				IAML		00 21 50.0	
	comp=Z,5μm,0.8s						
CO03	**El Pedregal**	**1.26**	**54**	⇓*i*P	**Pn**	**00 21 31.1**	**0.0**
CO03				*i*S	**Sb**	**00 21 46.7**	**-0.9**
CO03				IAML		00 21 52.7	
	comp=E,9μm,0.4s						
VA01	**Torpederas**	**1.46**	**172**		**Pn**	**00 21 34.4**	**+0.5**
VA01				Sn	**Sn**	**00 21 50.9**	**-1.8**
VA01	**Torpederas**	**1.46**	**172**	*e*P	**Pn**	**00 21 34.0**	**+0.1**
ROCH	**El Roble**	**1.57**	**152**	⇑*i*P	**Pn**	**00 21 36.1**	**+0.4**
ROCH				*i*S	**Sn**	**00 21 56.3**	**+0.3**
ROCH				IAML		00 22 01.5	
	comp=N,7μm,0.6s						
VA03	**San Esteban**	**1.63**	**137**		**Pn**	**00 21 37.3**	**+0.8**
VA03				Sn	**Sb**	**00 21 58.4**	**0.0**
VA03	**San Esteban**	**1.63**	**137**	*e*P	**Pb**	**00 21 37.6**	**-0.3**
VA03				*e*S	**Sn**	**00 21 55.0**	**-2.4**
VA03				IAML		00 22 00.8	
	comp=Z,5μm,1.1s						
VA03	**San Esteban**	**1.63**	**137**	⇓*i*P	**Pn**	**00 21 37.0**	**+0.6**
VA03				*i*S	**Sb**	**00 21 58.5**	**0.0**
VA03				IAML		00 22 00.7	
	comp=N,7μm,0.4s						
GO04	**Tololo Observa**	**1.68**	**34**		**Pn**	**00 21 37.2**	**0.0**
GO04	**Tololo Observa**	**1.68**	**34**	*e*P	**Pn**	**00 21 38.1**	**+0.9**
GO04				*e*S	**Sn**	**00 21 56.5**	**-2.2**
GO04				IAML		00 22 04.6	
	comp=Z,12μm,0.4s						
GO04				*e*S	**Sg**	**00 22 08.2**	**+6.1**
GO04	**Tololo Observa**	**1.68**	**34**	⇑*i*P	**Pn**	**00 21 37.7**	**+0.5**
GO04				*i*S	**Sb**	**00 21 59.9**	**-0.1**
CO05	**La Serena**	**1.74**	**19**		**Pn**	**00 21 37.6**	**-0.2**
CO05				Sn	**Sb**	**00 22 01.3**	**-0.2**
CO05	**La Serena**	**1.74**	**19**	⇑*i*P	**Pn**	**00 21 37.9**	**+0.1**
CO05				*i*S	**Sn**	**00 22 01.0**	**+1.2**
CO05				IAML		00 22 09.7	
	comp=E,7μm,0.3s						
MT02	**Curacav**	**1.79**	**160**		**Pn**	**00 21 39.0**	**+0.5**
MT02				Sn	**Sn**	**00 22 01.7**	**+0.6**
MT02	**Curacav**	**1.79**	**160**	*e*P	**Pn**	**00 21 38.1**	**-0.4**
MT02	**Curacav**	**1.79**	**160**	*i*P	**Pn**	**00 21 38.8**	**+0.3**
MT02				*i*S	**Sb**	**00 22 02.6**	**-0.3**
PEL	**Peldehue**	**1.86**	**147**		**Pn**	**00 21 39.8**	**+0.3**
PEL				Sn	**Sn**	**00 22 03.4**	**+0.5**
PEL	**Peldehue**	**1.86**	**147**	⇑*i*P	**Pn**	**00 21 40.4**	**+0.9**
PEL				*i*S	**Sb**	**00 22 04.4**	**-0.6**
PEL				IAML		00 22 07.9	
	comp=N,3μm,0.3s						
MT10	**Hacienda Santa**	**2.04**	**147**	⇑*i*P	**Pn**	**00 21 42.9**	**+0.8**
MT10				*i*S	**Sb**	**00 22 09.0**	**-1.1**
MT10				IAML		00 22 14.5	
	comp=N,8μm,0.4s						
MT05	**Renca**	**2.05**	**152**		**Pn**	**00 21 42.7**	**+0.6**
MT05				Sn	**Sn**	**00 22 07.4**	**-0.1**
MT05	**Renca**	**2.05**	**152**	*e*P	**Pn**	**00 21 43.0**	**+0.9**
MT05				*e*S	**Sn**	**00 22 06.5**	**-1.1**
MT05				IAML		00 22 21.6	
	comp=Z,2μm,0.6s						
MT05	**Renca**	**2.05**	**152**	*i*P	**Pn**	**00 21 43.0**	**+0.9**
MT05				IAML		00 22 20.5	
	comp=E,5μm,0.4s						
VA05	**Santo Domingo**	**2.09**	**174**		**Pn**	**00 21 42.8**	**+0.2**
VA05				Sn	**Sb**	**00 22 10.8**	**-0.6**
MT14	**Cerro Cal¡n**	**2.14**	**148**	⇑*i*P	**Pn**	**00 21 44.5**	**+1.2**
MT14				*i*S	**Sb**	**00 22 12.2**	**-0.8**
MT14				IAML		00 22 16.3	
	comp=E,6μm,0.5s						
MT16	**CCHEN**	**2.17**	**149**		**Pn**	**00 21 44.6**	**+0.8**
MT16				Sn	**Sb**	**00 22 12.8**	**-1.2**
MT16	**CCHEN**	**2.17**	**149**	⇑*i*P	**Pn**	**00 21 45.0**	**+1.2**
MT16				*i*S	**Sn**	**00 22 11.8**	**+1.2**
MT16				IAML		00 22 21.1	
	comp=N,1μm,0.3s						
FCH	**Farellones**	**2.20**	**143**	⇑*i*P	**Pn**	**00 21 45.6**	**+1.1**
FCH				*i*S	**Sb**	**00 22 13.9**	**-1.1**
FCH				IAML		00 22 17.8	
	comp=N,1μm,0.6s						
RTLS	**Leoncito**	**2.21**	**96**	*e*P	**Pb**	**00 21 48.0**	**+0.1**
RTLS				*e*S	**Sn**	**00 22 11.9**	**+0.1**
RTLS				IAML		00 22 20.0	
	comp=Z,5μm,1.6s						
CO01	**Juntas del Tor**	**2.21**	**44**		**Pn**	**00 21 45.1**	**+0.6**
CO01	**Juntas del Tor**	**2.21**	**44**	*e*P	**Pn**	**00 21 46.2**	**+1.6**
CO01				*e*S	**Sb**	**00 22 16.8**	**+1.5**
CO01				IAML		00 22 21.2	
	comp=Z,2μm,0.8s						
CO01	**Juntas del Tor**	**2.21**	**44**	⇑*i*P	**Pn**	**00 21 46.1**	**+1.6**
CO01				*i*S	**Sn**	**00 22 14.0**	**+2.2**
CO01				IAML		00 22 17.9	
	comp=N,3μm,0.2s						
MT03	**Universidad Ad**	**2.23**	**149**		**Pn**	**00 21 45.6**	**+0.9**
MT03	**Universidad Ad**	**2.23**	**149**	*e*P	**Pn**	**00 21 46.0**	**+1.3**
MT03				*e*S	**Sb**	**00 22 16.4**	**+0.7**
MT03				IAML		00 22 23.6	
	comp=Z,2μm,0.6s						
MT03	**Universidad Ad**	**2.23**	**149**	⇑*i*P	**Pn**	**00 21 45.8**	**+1.1**
MT03				*i*S	**Sb**	**00 22 14.6**	**-1.2**
MT03				IAML		00 22 24.8	
	comp=E,4μm,0.3s						
MT09	**Talagante**	**2.32**	**161**		**Pn**	**00 21 46.8**	**+0.9**
MT09	**Talagante**	**2.32**	**161**	⇑*i*P	**Pn**	**00 21 46.9**	**+0.9**
MT09				*i*S	**Sn**	**00 22 15.8**	**+1.5**
MT09				IAML		00 22 26.9	
	comp=E,3μm,0.8s						
MT15	**Las Vizcachas**	**2.33**	**150**	*i*P	**Pn**	**00 21 46.5**	**+0.6**
MT15				*i*S	**Sn**	**00 22 15.4**	**+1.1**
MT15				IAML		00 22 24.8	
	comp=N,5μm,0.8s						
MT01	**Popeta**	**2.34**	**167**		**Pn**	**00 21 46.7**	**+0.6**
MT01	**Popeta**	**2.34**	**167**	*e*P	**Pn**	**00 21 46.6**	**+0.5**
MT01				*e*S	**Sn**	**00 22 16.4**	**+1.8**
MT01	**Popeta**	**2.34**	**167**	⇑*i*P	**Pn**	**00 21 46.4**	**+0.3**
MT01				IAML		00 22 26.5	
	comp=E,5μm,1.2s						
MT04	**Ro Olivares**	**2.34**	**142**	*i*P	**Pn**	**00 21 48.3**	**+2.0**
MT04				*i*S	**Sn**	**00 22 16.8**	**+1.8**
MT04				IAML		00 22 24.9	
	comp=E,2μm,0.3s						
MT12	**Pirque**	**2.42**	**153**	*i*P	**Pn**	**00 21 48.1**	**+0.8**
MT12				*i*S	**Sn**	**00 22 17.9**	**+1.2**
MT12				IAML		00 22 36.8	
	comp=N,4μm,0.6s						
DOCA	**Reserva Natura**	**2.47**	**76**	*e*P	**Pb**	**00 21 51.1**	**-1.3**
DOCA				*e*S	**Sg**	**00 22 27.5**	**-0.1**
DOCA				IAML		00 22 34.0	
	comp=Z,1μm,0.6s						
AROD	**Rodeo**	**2.50**	**56**	*e*P	**Pb**	**00 21 52.3**	**-0.6**
AROD				*e*S	**Sg**	**00 22 26.9**	**-1.6**
MT13	**San Alfonso**	**2.54**	**149**		**Pn**	**00 21 49.5**	**+0.5**
MT13	**San Alfonso**	**2.54**	**149**	*i*P	**Pn**	**00 21 50.4**	**+1.4**
MT13				*i*S	**Sn**	**00 22 21.4**	**+1.6**
MT13				IAML		00 22 31.6	
	comp=E,2μm,0.5s						
ACCO	**Cerro Coronel**	**2.61**	**68**	*e*P	**Pb**	**00 21 54.0**	**-0.7**
ACCO				*e*S	**Sg**	**00 22 31.1**	**-0.8**
BO04	**La Punta**	**2.63**	**156**	Pn	**Pn**	**00 21 51.2**	**+1.1**
BO04	**La Punta**	**2.63**	**156**	⇑*i*P	**Pn**	**00 21 51.2**	**+1.1**
BO04				*i*S	**Sn**	**00 22 23.9**	**+2.1**
LMEL	**Las Melosas**	**2.67**	**149**		**Pn**	**00 21 51.9**	**+1.2**
LMEL	**Las Melosas**	**2.67**	**149**	⇑*i*P	**Pn**	**00 21 52.2**	**+1.5**
LMEL				*i*S	**Sn**	**00 22 24.5**	**+1.5**
LMEL				IAML		00 22 34.2	
	comp=E,2μm,0.6s						
LCO	**Las Campanas**	**2.75**	**22**	Pn	**Pn**	**00 21 52.1**	**+0.1**
LCO	**Las Campanas**	**2.75**	**22**	*e*P	**Pn**	**00 21 52.2**	**+0.3**
LCO				*e*S	**Sb**	**00 22 29.6**	**-1.2**
LCO				IAML		00 22 40.2	
	comp=Z,2μm,0.6s						
LCO	**Las Campanas**	**2.75**	**22**	⇑*i*P	**Pn**	**00 21 52.3**	**+0.3**
LCO				*i*S	**Sn**	**00 22 25.5**	**+0.3**
ACDV	**Cuesta del Vie**	**2.75**	**60**	*e*P	**Pb**	**00 21 55.8**	**-1.3**
ACDV				*e*S	**Sb**	**00 22 30.4**	**-0.4**
ACDV				*e*S	**Sg**	**00 22 36.4**	**-0.2**
ACDV				IAML		00 22 45.8	
	comp=Z,1μm,1.2s						
ASAL	**Salagasta**	**2.77**	**112**	*e*P	**Pb**	**00 21 56.9**	**-0.5**
ASAL				*e*S	**Sg**	**00 22 35.0**	**-2.2**
ASAL				IAML		00 22 44.3	
	comp=Z,1μm,

	comp=Z,9.3nm,0.8s								
SPB	**Sao Paulo**	**23.05**	**76**	P		**P**		**00 26 11.7**	**-1.2**
SPB				IAmb		IAmb		00 26 14.1	
	comp=Z,22nm,0.8s								
CZSB	**Cruzeiro do Su**	**23.74**	**358**	P		**P**		**00 26 19.3**	**-0.6**
CZSB				IAmb		IAmb		00 26 26.0	
	comp=Z,13nm,0.7s								
SAML	**Samuel**	**23.92**	**22**	P		**P**		**00 26 20.7**	**-1.0**
SAML				IAmb		IAmb		00 26 22.6	
	comp=Z,4.9nm,0.8s								
BDFB	**Brasilia**	**26.92**	**59**	P		**P**		**00 26 47.9**	**-1.2**
BDFB				IAmb		IAmb		00 26 48.5	
	comp=Z,11nm,0.9s								
BDFB	**Brasilia**	**26.92**	**59**	P		**P**		**00 26 47.7**	**-1.4**
	comp=Z,12nm,0.9s,baz=233,slow=7.7,SNR=19								
BDFB				LR		LR		00 38 37.5	
	comp=Z,431nm,19.1s,baz=285,slow=39								
	comp=Z,12nm,0.9s								
TBTG	**Tabatinga, AM**	**27.31**	**4**	P		**P**		**00 26 51.2**	**-1.1**
MCRA	**Macar, Loja**	**28.11**	**343**	P		**P**		**00 26 59.0**	**-0.6**
RPN	**Rapa Nui**	**32.84**	**268**	LR		LR		00 37 07.9	
	comp=Z,85nm,19.9s,baz=130,slow=29								
PMSA	**Palmer Station**	**33.58**	**174**	LR		LR		00 41 33.7	
	comp=Z,147nm,18.8s,baz=300,slow=37								
MDP	**Montagnes des**	**40.83**	**30**	LR		LR		00 47 37.2	
	comp=Z,100nm,18.2s,baz=149,slow=39								
SNAA	**Sanae**	**53.78**	**159**	⇑P		**P**		**00 30 29.7**	**+0.1**
	comp=Z,83nm,0.8s								
SNAA	**Sanae**	**53.78**	**159**	P		**P**		**00 30 29.6**	**0.0**
	comp=Z,3.5nm,0.8s,baz=263,slow=5.9,SNR=6.7								
	comp=Z,3.5nm,0.8s								
TROLL	**Troll, Antarti**	**55.49**	**159**	⇑P		**P**		**00 30 42.4**	**+0.3**
	comp=Z,148nm,0.7s								
QSPA	**South Pole Qui**	**58.65**	**180**	P		**P**		**00 31 05.1**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=181,slow=8.9,SNR=6.1								
	comp=Z,2.8nm,0.9s								
TXAR	**Lajitas Array**	**67.70**	**330**	P		**P**		**00 32 06.0**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=146,slow=6.6,SNR=5.0								
	comp=Z,0.4nm,0.8s								
LIC	**Lamto**	**73.89**	**72**⇓	*iP*		**P**		**00 32 42.3**	**-0.6**
	comp=Z,34nm,0.8s								
TIC	**Toumodi**	**74.14**	**72**⇑	*eP*		**P**		**00 32 44.3**	**-0.1**
	comp=Z,8.7nm,0.5s								
KIC	**Kosan Boka**	**74.20**	**72**⇓	*iP*		**P**		**00 32 44.3**	**-0.4**
	comp=Z,28nm,0.8s								
DBIC	**Dimbokro**	**74.28**	**72**	P		**P**		**00 32 44.3**	**-0.9**
DBIC	**Dimbokro**	**74.28**	**72**	P		**P**		**00 32 44.6**	**-0.6**
	comp=Z,11nm,0.7s,baz=228,slow=6.8,SNR=14								
	comp=Z,11nm,0.7s								
BOSA	**Boshof**	**81.08**	**118**	P		**P**		**00 33 23.0**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=244,slow=5.0,SNR=6.2								
	comp=Z,3.5nm,0.8s								
PDAR	**Pinedale Array**	**81.67**	**333**	P		**P**		**00 33 27.4**	**+1.5**
	comp=Z,0.3nm,0.9s,baz=139,slow=5.4,SNR=2.5								
	comp=Z,0.3nm,0.9s								
NVAR	**Mina Array Bea**	**81.98**	**325**	P		**P**		**00 33 29.6**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=180,slow=8.1,SNR=2.3								
	comp=Z,0.4nm,0.3s								
TOA0	**Torodi Ar. Sit**	**83.26**	**70**	P		**P**		**00 33 34.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**83.26**	**70**	P		**P**		**00 33 34.1**	**-0.4**
TORD				IAmb		IAmb		00 33 35.3	
	comp=Z,7.4nm,0.7s								
TORD	**Torodi Ar. Bea**	**83.26**	**70**	P		**P**		**00 33 34.0**	**-0.5**
	comp=Z,7.9nm,0.7s,baz=262,slow=5.3,SNR=11								
	comp=Z,7.9nm,0.7s								
BRTR	**Keskin Array B**	**120.52**	**60**	PKP		**PKiKP**		**00 39 59.9**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=252,slow=3.3,SNR=1.9								
WRA	**Warramunga Arr**	**122.93**	**210**	PKP		**PKPdf**		**00 40 04.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=179,slow=1.5,SNR=2.1								
H11S2	**WAKE ISLAND Hyd**	**25.91**	**271**	T		T		02 58 52.8	
	baz=117,slow=75,SNR=45								
H11S1	**WAKE ISLAND Hyd**	**25.92**	**271**	T		T		02 59 00.4	
	baz=117,slow=75,SNR=66								
H11S3	**WAKE ISLAND Hyd**	**25.92**	**271**	T		T		02 58 55.4	
	baz=117,slow=75,SNR=36								
H11N3	**WAKE ISLAND Hyd**	**26.26**	**272**	T		T		02 59 31.3	
	baz=116,slow=75,SNR=21								
H11N1	**WAKE ISLAND Hyd**	**26.27**	**272**	T		T		02 59 25.0	
	baz=116,slow=75,SNR=12								
H11N2	**WAKE ISLAND Hyd**	**26.28**	**272**	T		T		02 59 32.6	
	baz=116,slow=75,SNR=62								
SEY	**Seymchan**	**137.99**	**332**	PKP		**PKPdf**		**00 40 32.3**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=45,slow=13,SNR=6.0								
BVAR	**Borovoye Array**	**145.39**	**41**	PKPbc		**PKPab**		**00 40 45.5**	**+0.3**
	comp=Z,12nm,0.5s,baz=299,slow=3.3,SNR=66								
KURBB	**Kurchatov Arra**	**150.98**	**40**	PKP		**PKPdf**		**00 40 54.8**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=298,slow=2.7,SNR=2.7								
KURBB				PKPbc		**PKPbc**		**00 40 59.8**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=299,slow=3.0,SNR=67								
KURBB				PKPab		**PKPab**		**00 41 07.5**	**0.0**
	comp=Z,1.3nm,0.8s,baz=300,slow=3.1,SNR=6.6								
ZALV	**Zalesovo Beam**	**152.09**	**30**	PKP		**PKPdf**		**00 40 56.6**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=339,slow=3.8,SNR=4.2								
ZALV				PKPbc		**PKPbc**		**00 41 02.4**	**0.0**
	comp=Z,13nm,0.5s,baz=318,slow=1.9,SNR=81								
MKAR	**Makanchi Array**	**155.02**	**45**	PKPbc		PKPdf		00 41 08.7	+8.4
	comp=Z,1.1nm,0.8s,baz=289,slow=1.3,SNR=13								
MKAR				PKPab		**PKPab**		**00 41 23.1**	**-1.5**
	comp=Z,1.2nm,0.9s,baz=294,slow=3.4,SNR=6.3								
SONM	**Songino Array**	**163.71**	**4**	PKPab		**PKPab**		**00 42 03.1**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=354,slow=3.6,SNR=4.8								

*IDC **19** 00:30:01.9±2.3, 43.˚35N×135.˚30E, h369km±15km, mb2.5/4, mbtmp3.3/7, Error ellipse: s-maj=58.1km s-min=21.0km az=176.0*

ISC 19 00:30:01.6±1.8, 43.˚4N±0.˚3×135.˚3E±0.˚1, h360km, n7, σ1°05/7, mb2.7/3, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.**	**2.55**	**290**	P	**Pn**	**00 30 59.2**	**+1.4**
	10nm,0.4s,baz=110,slow=6.6,SNR=42						
ASAJ	**Asahikawa**	**5.32**	**80**	P	**Pn**	**00 31 25.6**	**+0.6**
	6.1nm,0.5s,baz=12,slow=6.0,SNR=4.4						
KLR	**Kul'dur**	**6.35**	**338**	P	**Pn**	**00 31 37.4**	**+0.8**
	0.8nm,0.3s,baz=146,slow=13,SNR=6.6						
SONM	**Songino Array**	**20.66**	**293**	P	**P**	**00 34 13.9**	**-1.0**
	0.3nm,0.6s,baz=82,slow=7.8,SNR=2.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**37.01**	**294**	P	**P**	**00 36 37.5**	**-0.5**
	0.2nm,0.5s,baz=81,slow=8.5,SNR=6.4						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**38.56**	**301**	P	**P**	**00 36 50.1**	**-0.6**
	0.6nm,0.6s,baz=80,slow=9.0,SNR=6.1						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**46.80**	**35**	P	**P**	**00 37 55.9**	**0.0**
	0.2nm,0.6s,baz=279,slow=6.3,SNR=2.1						
	0.2nm,0.6s						

*IDC **19** 00:35:06.7±0.8, 48.˚06N×33.˚48E, h0km, mb3.6/1, mbtmp3.4/7, ML2.7/7, Error ellipse: s-maj=14.6km s-min=7.6km az=34.0*

*CFUSG **19** 00:35:10.1, 47.˚99N×33.˚43E, h20km, mb2.4/2, Ukraine*

ISC 19 00:35:07.0±0.8, 48.˚08N±0.˚04×33.˚54E±0.˚05, h10km, n33, σ0°94/38, 9C-7D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKV	**Nikolaev**	**1.54**	**224**	S	**Sn**	**00 35 53.0**	**-1.4**
NE58	**Poltava**	**1.66**	**23**	P	**Pg**	**00 35 39.6**	**+0.8**
NE58				S	**Sg**	**00 36 02.0**	**+1.7**
NE56	**Odesa**	**2.28**	**233**	P	**Pn**	**00 35 45.0**	**+0.4**
NE56				S	**Sn**	**00 36 11.5**	**-1.3**
TARU	**Tarkhankut**	**2.79**	**195**	*e*S	**Sb**	**00 36 33.1**	**+1.9**
TARU				Sm		00 36 42.7	
	comp=N,29nm,0.6s						
TARU				Sm		00 36 42.7	
	comp=E,19nm,0.3s						
PURM	**Purcari**	**2.94**	**239**	⇓P	**Pn**	**00 35 54.2**	**+0.5**
SIM	**Simferopol'**	**3.16**	**173**	*e*S	**Sn**	**00 36 34.8**	**+0.3**
SIM				Sm		00 36 38.2	
	comp=N,17nm,0.4s						
SIM				Sm		00 36 38.2	
	comp=E,3.0nm,0.3s						
SUDU	**Sudak**	**3.35**	**162**	*e*P	**Pn**	**00 35 59.3**	**-0.1**
SUDU				Pm		00 35 59.8	
	comp=Z,11nm,0.4s						
MILM	**Milestii Mici**	**3.41**	**252**	⇓P	**Pn**	**00 36 00.6**	**+0.5**
ALU	**Alushta**	**3.45**	**170**	*e*S	**Sn**	**00 36 41.8**	**+0.1**
ALU				Sm		00 36 43.8	
	comp=N,8.0nm,0.3s						
ALU				Sm		00 36 43.8	
	comp=E,2.0nm,0.3s						
SORM	**Soroca**	**3.48**	**273**	⇑P	**Pn**	**00 36 01.4**	**+0.3**
SEV	**Sevastopol'**	**3.54**	**178**	*e*P	**Pn**	**00 36 02.0**	**0.0**
SEV				Pm		00 36 11.6	
	comp=Z,3.0nm,0.2s						
YAL	**Yalta**	**3.62**	**173**	*e*S	**Sn**	**00 36 46.3**	**+0.4**
YAL				Sm		00 36 48.5	
	comp=N,1.0nm,0.1s						
YAL				Sm		00 36 48.5	
	comp=E,7.0nm,0.3s						
AKASG	**Malin Array Be**	**3.85**	**315**	Pn	**Pn**	**00 36 07.3**	**+1.1**
	comp=E,0.7nm,0.3s,baz=119,slow=13,SNR=2.3						
AKASG				Pg	**Pb**	**00 36 14.6**	**-0.4**
	comp=E,2.9nm,0.3s,baz=127,slow=17,SNR=7.5						
AKASG				Sn	**Sn**	**00 36 50.0**	**-1.4**
	comp=E,2.9nm,0.3s,baz=136,slow=16,SNR=5.3						
AKASG				Lg	Lg	00 37 03.5	
	comp=E,11nm,0.3s,baz=128,slow=29,SNR=13						
KIEV	**Kiev**	**3.85**	**314**	⇓P	**Pb**	**00 36 14.2**	**-0.7**
CFR	**Carcaliu**	**4.72**	**234**	⇑P	**Pn**	**00 36 17.8**	**-0.4**
TUDR		**4.74**	**240**	⇓P	**Pn**	**00 36 17.2**	**-1.2**
VRI	**Vrincioaia**	**5.16**	**247**	⇑P	**Pn**	**00 36 25.1**	**+0.8**
PLOR	**Plostina**	**5.22**	**247**	⇑P	**Pn**	**00 36 25.7**	**+0.7**
COVR	**Voineasa-Covas**	**5.50**	**249**	⇓P	**Pn**	**00 36 28.2**	**-0.7**
TURR	**Turia**	**5.53**	**251**	⇓P	**Pn**	**00 36 29.9**	**+0.6**
BURAR	**Bucovina Array**	**5.62**	**268**	⇑P	**Pn**	**00 36 31.9**	**+1.2**
MLR	**Muntele Rosu**	**5.82**	**246**	⇑P	**Pn**	**00 36 34.3**	**+0.8**
MLR	**Muntele Rosu**	**5.82**	**246**	Pn	**Pn**	**00 36 34.6**	**+1.1**
	comp=E,0.2nm,0.3s,baz=92,slow=8.6,SNR=3.6						
MLR				Sn	**Sn**	**00 37 40.4**	**+0.1**
	comp=E,0.2nm,0.3s,baz=143,slow=19,SNR=1.7						
	comp=E,1.4nm,0.6s						
DOPR	**Dopca**	**5.96**	**252**	⇑P	**Pn**	**00 36 35.4**	**+0.1**
VOIR		**6.40**	**249**	⇑P	**Pn**	**00 36 41.4**	**0.0**
MARR	**Marisel-Cluj**	**7.21**	**263**	⇓P	**Pn**	**00 36 52.4**	**-0.1**
DRGR		**7.46**	**264**	⇑P	**Pn**	**00 36 56.1**	**+0.2**
KVAR	**Kislovodsk Arr**	**7.59**	**120**	Pn	**Pn**	**00 36 57.9**	**+0.2**
	baz=257,slow=18						
KVAR				Sn	**Sn**	**00 38 22.0**	**-1.9**
	baz=97,slow=23						
KVAR				Lg	Lg	00 39 07.3	
	baz=39,slow=4.9						
	comp=E,1.8nm,1.0s						
KBZ	**Khabaz**	**7.84**	**120**	Pn	**Pn**	**00 37 00.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=284,slow=8.3,SNR=1.7						
KBZ				Sn	**Sn**	**00 38 27.9**	**-2.0**
	comp=E,0.1nm,0.3s,baz=316,slow=14,SNR=1.7						
KBZ				Lg	Lg	00 39 15.5	
	comp=E,0.1nm,0.3s,baz=278,slow=22,SNR=1.6						
	comp=E,1.2nm,0.8s						
FINES	**FINESS Array B**	**14.05**	**345**	Pn	Pn	00 38 20.4	-5.4
	comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=1.4						
FINES				Sn	Sn	00 40 48.5	-13
	comp=E,0.1nm,0.3s,baz=162,slow=19,SNR=1.5						
	comp=E,0.6nm,0.5s						
HFS	**Hagfors**	**16.68**	**324**	Pn	Pn	00 38 53.5	-7.0
	comp=E,0.1nm,0.3s,baz=120,slow=17,SNR=2.4						
	comp=E,1.2nm,0.7s						
NOA	**NORSAR Array B**	**18.20**	**324**	P	**Pn**	**00 39 18.7**	**-0.8**
	baz=132,slow=11,SNR=2.8						
	comp=E,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**21.88**	**352**	P	**P**	**00 39 59.5**	**-0.1**
	comp=E,1.4nm,0.5s,baz=176,slow=10,SNR=16						
	comp=E,1.4nm,0.5s						

GUC 19 00:37:05.8±0.6, 37.˚50S×74.˚10W, h34km±6km, ML3.7, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**0.93**	**170**	⇑*i*P	Pn	00 37 22.0	-0.4
BI04				*e*S	Sn	00 37 34.2	-0.3
BI04				IAML		00 37 41.6	
	comp=E,4μm,0.4s						
BI05	**Punta Hualpn**	**1.04**	**44**	*e*P	Pn	00 37 24.6	+0.5
BI05				IAML		00 37 45.7	
	comp=E,3μm,0.4s						
LC02	**Puerto Saavedr**	**1.41**	**157**	*e*P	Pn	00 37 29.1	+0.1
LC02				*e*S	Sn	00 37 46.8	+0.4
LC02				IAML		00 37 58.2	
	comp=E,7μm,0.5s						
BI02	**San Fabin de**	**2.41**	**71**⇑	*i*P	Pn	00 37 43.9	+1.0
BI02				*e*S	Sn	00 38 12.7	+1.5
BI02				IAML		00 38 29.8	
	comp=N,302nm,0.5s						
LR04	**Corral**	**2.43**	**168**	*e*P	Pn	00 37 43.6	+0.4
LR04				*e*S	Sn	00 38 10.6	-1.2
LR03	**Panguipulli**	**2.53**	**148**	*e*P	Pn	00 37 47.1	+2.5
GO06	**Curarrehue**	**2.93**	**136**	*e*P	Pn	00 37 51.7	+1.6
LR05	**Currie**	**3.18**	**150**	*e*P	Pn	00 37 54.7	+1.3
BO03	**Pichilemu**	**3.46**	**31**	*e*P	Pn	00 37 58.1	+0.8
BO02	**Sierra Bellavi**	**3.81**	**46**	*e*P	Pn	00 38 03.6	+1.4
MT01	**Popeta**	**4.30**	**33**	*e*P	Pn	00 38 09.2	+0.3
MT09	**Talagante**	**4.50**	**35**	*e*P	Pn	00 38 12.3	+0.6

*IDC **19** 00:56:40.1±0.7, 22.˚50N×45.˚15W, h0km, mb3.9/17, mbtmp3.9/17, MS4.0/77, Error ellipse: s-maj=19.3km s-min=17.7km az=34.0*

*NEIC **19** 00:56:42.6±1.5, 22.˚4N±0.˚1×45.˚12W±0.˚10, h10km±1km, mb4.9/110, Error ellipse: s-maj=17.5km s-min=14.6km az=162.0*

*GCMT **19** 00:56:43.6±0.2, 22.˚70N±0.˚02×44.˚96W±0.˚01, h12km, MW4.9/113, Moment Tensor Solution. s25,c29; s113,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-2.59±.14; $M_{\theta\theta}$-0.02±.08; $M_{\phi\phi}$2.61±.09; $M_{r\theta}$0.10±.31; $M_{\theta\phi}$-0.19±.05; $M_{\phi r}$-0.82±.23; Best double couple: M_o2.73500×10¹⁶ NP1:φs355.00000°, δ54.00000°, λ-91.00000°. NP2:φs177.00000°, δ36.00000°, λ-89.00000°. Principal axes: T 2.7510, Plg9.0000°, Azm86.0000°; N -0.0300, Plg1.0000°, Azm356.0000°; P -2.7180, Plg81.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 00:56:42.4±0.4, 22.˚45N±0.˚07×45.˚12W±0.˚06, h14km, n192, σ0°72/126, mb4.8/63, MS4.0/76, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDSD	**La Dsirade Is**	**16.23**	**251**	Pn	**Pn**	**01 00 30.6**	**+0.5**
GDSD				IAmb	IAmb	01 00 35.0	
	comp=Z,190nm,1.8s						
GDHS	**Morne Mazeau,**	**16.86**	**252**	Pn	**Pn**	**01 00 37.8**	**-0.3**
GDHS				IAmb	IAmb	01 00 40.3	
	comp=Z,143nm,1.4s						
H05S1	**Guadeloupe/Mar**	**16.90**	**245**	T	T	01 17 35.3	
	SNR=5.5						
FDF	**Fort de France**	**17.01**	**246**	Pn	**Pn**	**01 00 40.4**	**+0.3**
FDF				IAmb	IAmb	01 00 43.6	
	comp=Z,118nm,1.2s						
SMRT	**St. Maarten**	**17.40**	**259**	Pn	**Pn**	**01 00 44.5**	**-0.5**
SMRT				IAmb	IAmb	01 00 46.7	
	comp=Z,112nm,1.4s						
MDP	**Montagnes des**	**18.71**	**204**	LR	LR	01 06 48.2	
	comp=Z,206nm,18.0s,baz=34,slow=32						
HUMP	**Col San Antoni**	**19.91**	**261**	P	**Pn**	**01 01 15.6**	**+0.3**
HUMP				IAmb	IAmb	01 01 17.8	
	comp=Z,105nm,1.6s						
GCPR	**Guaynabo City**	**20.08**	**262**	P	**P**	**01 01 14.9**	**-0.6**
SJG	**San Juan**	**20.19**	**261**	LR	LR	01 07 24.4	
	comp=Z,549nm,21.6s,baz=81,slow=32						
OBIP	**Obispado Ponce**	**20.63**	**262**	P	**P**	**01 01 21.9**	**+0.4**
OBIP				IAmb	IAmb	01 01 27.5	
	comp=Z,143nm,1.7s						
UUPR	**Utuado, UPR, P**	**20.67**	**262**	P	**P**	**01 01 22.5**	**+0.5**
UUPR				IAmb	IAmb	01 01 29.4	
	comp=Z,73nm,1.6s						
AOPR	**Arecibo Observ**	**20.68**	**263**	P	**P**	**01 01 20.9**	**-1.2**
AOPR				IAmb	IAmb	01 01 21.8	
	comp=Z,128nm,1.7s						
PRSN	**Puerto Rico Se**	**21.07**	**262**	P	**P**	**01 01 26.0**	**-0.3**
SACV	**Santiago Islan**	**21.67**	**106**	P	**P**	**01 01 31.8**	**-1.1**
SACV				IAmb	IAmb	01 01 34.7	
	comp=Z,84nm,1.2s						
PCRV	**Puerto La Cruz**	**22.32**	**240**	LR	LR	01 09 05.6	
	comp=Z,276nm,21.1s,slow=33						
PAPH	**Port-au-Prince**	**25.74**	**266**	P	**P**	**01 02 11.6**	**-1.2**
MACI	**Morro de la Ar**	**26.46**	**71**	P	**P**	**01 02 19.2**	**-0.1**
GBN	**Guysborough**	**26.54**	**334**	P	**P**	**01 02 19.0**	**-0.5**
SDV	**Santo Domingo**	**27.96**	**245**	LR	LR	01 12 42.9	
	comp=Z,243nm,21.7s,baz=78,slow=34						
BBTS	**Babate**	**28.15**	**101**	LR	LR	01 10 48.4	
	comp=Z,577nm,19.7s,baz=167,slow=30						
RCBR	**Riachuelo**	**29.51**	**161**	P	**P**	**01 02 45.7**	**-0.8**
RCBR				IAmb	IAmb	01 03 15.2	
	comp=Z,30nm,1.3s						
RCBR	**Riachuelo**	**29.51**	**161**	LR	LR	01 12 08.0	
	comp=Z,91nm,21.0s,baz=335,slow=31						
I63A	**Otisfield**	**30.08**	**322**	P	**P**	**01 02 51.9**	**+0.7**
N62A	**Caumsett State**	**30.16**	**314**	P	**P**	**01 02 51.8**	**-0.2**
PAL	**Palisades**	**30.49**	**314**	P	**P**	**01 02 54.4**	**-0.5**
PAL				IAmb	IAmb	01 03 04.8	
	comp=Z,40nm,1.6s						
T60A	**Surry**	**30.93**	**305**	P	**P**	**01 02 58.1**	**-0.7**
WUPA	**West Chester U**	**31.16**	**311**	P	**P**	**01 03 01.9**	**+1.0**
T59A	**Double "B" Far**	**31.50**	**305**	P	**P**	**01 03 05.2**	**+1.4**
T59A				IAmb	IAmb	01 03 12.5	
	comp=Z,36nm,1.5s						
MVL	**Millersville**	**31.71**	**311**	P	**P**	**01 03 06.7**	**+1.0**
LMQ	**La Malbaie**	**32.19**	**327**	P	**P**	**01 03 09.8**	**0.0**
W57A	**Gilead**	**32.91**	**300**	P	**P**	**01 03 18.2**	**+1.9**
W57A				IAmb	IAmb	01 04 30.5	
	comp=Z,28nm,1.5s						
J57A	**Williamstown**	**33.01**	**317**	P	**P**	**01 03 17.1**	**+0.1**
ROSC	**El Rosal**	**33.22**	**243**	LR	LR	01 17 30.6	
	comp=Z,270nm,19.9s,baz=51,slow=38						
JSC	**Jenkinsville**	**33.75**	**298**	P	**P**	**01 03 24.6**	**+1.0**
JSC				IAmb	IAmb	01 03 28.6	
	comp=Z,20nm,1.3s						
WVNY	**West Valley, N**	**34.26**	**313**	P	**P**	**01 03 28.5**	**+0.6**
AVE	**Averroes**	**34.87**	**64**	P	**P**	**01 03 33.8**	**+0.5**
P53A	**Whipple**	**35.15**	**307**	P	**P**	**01 03 37.0**	**+1.3**
P53A				IAmb	IAmb	01 04 27.9	
	comp=Z,47nm,1.8s						
SADO	**Sadowa**	**35.65**	**317**	LR	LR	01 15 12.0	
	comp=Z,261nm,21.3s,baz=121,slow=31						
TKL	**Tuckaleechee C**	**36.03**	**300**	LR	LR	01 15 20.2	
	comp=Z,358nm,21.6s,baz=104,slow=31						
W52A	**Murphy**	**36.06**	**299**	P	**P**	**01 03 44.2**	**+0.6**
SCHQ	**Schefferville**	**36.20**	**339**	P	**P**	**01 03 44.4**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=132,slow=11,SNR=3.5						
SCHQ				LR	LR	01 16 25.5	
	comp=Z,144nm,21.5s,baz=125,slow=33						
	comp=Z,2.4nm,0.8s						
X51A	**Calhoun**	**36.73**	**298**	P	**P**	**01 03 50.3**	**+1.0**
X51A				IAmb	IAmb	01 04 43.1	
	comp=Z,39nm,1.5s						
Z51A	**Franklin**	**36.83**	**296**	P	**P**	**01 03 49.0**	**-1.1**
M50A	**Fremont**	**36.95**	**310**	P	**P**	**01 03 52.0**	**+0.9**
M50A				IAmb	IAmb	01 04 39.6	
	comp=Z,46nm,1.8s						
MDT	**Midelt**	**37.15**	**65**	LR	LR	01 15 52.0	
	comp=Z,318nm,19.9s,baz=288,slow=31						
FPAL	**Fort Paine**	**37.34**	**298**	P	**P**	**01 03 55.1**	**+0.5**
FPAL				IAmb	IAmb	01 04 13.1	
	comp=Z,37nm,1.8s						
BDFB	**Brasilia**	**37.96**	**185**		**P**	**01 04 00.1**	**+0.2**
BDFB	**Brasilia**	**37.96**	**185**	P	**P**	**01 04 00.3**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=8.7,slow=9.4,SNR=8.7						
BDFB				LR	LR	01 18 20.2	
	comp=Z,131nm,21.5s,baz=322,slow=34						
	comp=Z,3.3nm,0.7s						
P48A	**Milroy**	**38.14**	**306**	P	**P**	**01 04 02.6**	**+1.3**
P48A				IAmb	IAmb	01 05 17.4	
	comp=Z,29nm,1.6s						
ETMB	**Extrema**	**38.15**	**215**	P	**P**	**01 04 01.1**	**-0.4**
VILB	**Vilhena**	**38.16**	**204**	P	**P**	**01 04 03.0**	**+1.4**
TULM	**Tulcn-Chalpat**	**38.42**	**240**	P	**P**	**01 04 05.0**	**+0.6**
N47A	**Urbana**	**38.71**	**308**	P	**P**	**01 04 05.4**	**-0.6**
N47A				IAmb	IAmb	01 04 09.2	
	comp=Z,48nm,1.6s						
ESDC	**Sonseca Array**	**38.83**	**54**	P	**P**	**01 04 07.3**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=262,slow=7.6,SNR=5.7						
ESDC				LR	LR	01 17 38.6	
	comp=Z,300nm,18.3s,baz=262,slow=32						
	comp=Z,0.9nm,1.1s						
RIMA	**Rio Macho**	**39.18**	**258**	P	**P**	**01 04 10.9**	**+0.5**
OTAV	**Otavalo**	**39.24**	**240**	P	**P**	**01 04 10.9**	**-0.3**
P46A	**Rosedale**	**39.52**	**306**	P	**P**	**01 04 13.2**	**+0.5**
JTS	**Las Juntas de**	**39.96**	**259**	LR	LR	01 17 51.9	
	comp=Z,160nm,21.5s,baz=94,slow=32						
OLIL	**Olney**	**40.01**	**304**	P	**P**	**01 04 17.5**	**+0.6**
OLIL				IAmb	IAmb	01 04 34.7	
	comp=Z,65nm,1.9s						
146A

ECH Echery 48.64 45 P P 01 05 25.6 -0.2
ECH IAmb IAmb 01 06 07.6
comp=Z,12nm,1.4s
KEST Kesra 48.84 62 LR LR 01 23 21.2
comp=Z,262nm,21.0s,baz=272,slow=33
SUSD Miller 49.01 310 P P 01 05 27.5 -1.3
CBKS Cedar Bluff 49.05 302 P P 01 05 29.1 0.0
TA01 Diego Aracena 49.25 212 P P 01 05 31.0 +0.3
TA01 IAmb IAmb 01 05 31.6
comp=Z,28nm,1.6s
SMWD Samnorwood 49.38 298 P P 01 05 31.6 -0.2
SMWD IAmb IAmb 01 05 39.0
comp=Z,6.6nm,0.6s
BFO Black Forest 49.43 45 P P 01 05 31.6 -0.2
PB09 IPOC Station P 49.87 210 P P 01 05 36.1 +0.5
CPUP Villa Florida 49.91 194 P P 01 05 35.6 0.0
comp=Z,1.1nm,0.7s,baz=8.5,slow=12,SNR=3.4
CPUP LR LR 01 25 05.9
comp=Z,101nm,21.6s,baz=14,slow=34
comp=Z,1.1nm,0.7s
DRIO Del Rio 50.01 290 P P 01 05 36.6 0.0
FCC Fort Churchill 50.17 329 P P 01 05 37.3 +0.1
FCC IAmb IAmb 01 05 44.9
comp=Z,26nm,1.8s
DAVOX Davos/Dischmat 50.17 47 LR LR 01 22 54.7
comp=Z,164nm,22.0s,baz=255,slow=31
LVC Limon Verde 50.42 209 LR LR 01 27 16.7
comp=Z,115nm,19.2s,baz=12,slow=36
MURB Monte Urbino 51.62 52 P P 01 05 50.1 +1.6
MNHN Monahans 51.67 293 P P 01 05 49.0 -0.1
PRED Cave del Predi 52.65 48 P P 01 05 56.2 +0.1
TXAR Lajitas Array 52.66 290 P P 01 05 57.1 +0.5
TXAR Lajitas Array 52.66 290 P P 01 05 56.0 -0.6
comp=Z,0.3nm,0.7s,baz=97,slow=10,SNR=4.2
TXAR LR LR 01 27 32.8
comp=Z,83nm,20.7s,baz=60,slow=35
comp=Z,0.3nm,0.7s
TX31 Lajitas Ar. Si 52.66 290 P P 01 05 56.4 -0.2
ZAIG Zacatecas 52.73 282 P P 01 05 58.6 +1.2
VAE Valguarnera 52.90 59 LR LR 01 24 17.8
comp=Z,168nm,21.9s,baz=324,slow=31
KHC Kasperske Hory 52.99 45 P P 01 05 59.8 +1.2
PAOL Paolisi 53.02 55 P P 01 06 00.6 +1.6
GERES GERESS Array B 53.03 45 LR LR 01 26 21.3
comp=Z,105nm,18.3s,baz=265,slow=34
Q24A Divide 53.27 303 P P 01 06 01.1 -0.1
NOA NORSAR Array B 54.46 30 P P 01 06 09.4 +0.2
comp=Z,0.9nm,0.8s,baz=251,slow=7.6,SNR=4.0
NOA LR LR 01 25 06.5
comp=Z,250nm,20.5s,baz=250,slow=31
comp=Z,0.9nm,0.8s
ANMO Albuquerque 54.48 298 LR LR 01 29 04.0
comp=Z,71nm,18.7s,baz=190,slow=36
VRAC Vranov 54.97 45 LR LR 01 25 02.1
comp=Z,61nm,21.5s,baz=267,slow=31
HFS Hagfors 55.36 31 P P 01 06 15.4 -0.2
comp=Z,1.7nm,0.7s,baz=241,slow=9.0,SNR=2.3
HFS LR LR 01 26 48.4
comp=Z,177nm,18.0s,baz=252,slow=33
comp=Z,1.7nm,0.7s
PDAR Pinedale Array 56.58 307 P P 01 06 24.7 -0.3
comp=Z,1.3nm,1.0s,baz=111,slow=6.8,SNR=5.6
PDAR LR LR 01 30 02.8
comp=Z,92nm,18.1s,baz=96,slow=35
comp=Z,1.3nm,1.0s
RES Resolute Bay 58.35 346 LR LR 01 30 29.6
comp=Z,91nm,18.5s,baz=25,slow=35
LPIG La Paz 59.41 286 LR LR 01 31 36.7
comp=Z,76nm,21.9s,baz=38,slow=35
YKA Yellowknife Ar 60.87 330 P P 01 06 53.4 -0.9
comp=Z,0.4nm,0.6s,baz=96,slow=7.3,SNR=8.7
YKA LR LR 01 31 34.4
comp=Z,90nm,20.7s,baz=72,slow=34
comp=Z,0.4nm,0.6s
ELK Elko 60.93 305 LR LR 01 30 56.4
comp=Z,223nm,21.6s,baz=88,slow=34
MLR Muntele Rosu 61.25 49 P P 01 06 57.2 0.0
MLR IAmb IAmb 01 07 13.0
comp=Z,11nm,1.3s
IDI Anoyia 61.51 61 LR LR 01 33 13.9
comp=Z,45nm,19.6s,baz=298,slow=36
FINES FINESS Array B 61.56 31 P P 01 06 58.3 -0.5
comp=Z,0.9nm,0.7s,baz=260,slow=11,SNR=3.6
FINES LR LR 01 30 40.7
comp=Z,187nm,18.5s,baz=270,slow=33
comp=Z,0.9nm,0.7s
NEW Newport 61.74 314 LR LR 01 31 27.4
comp=Z,160nm,21.4s,baz=108,slow=34
ARCES ARCESS Array B 62.40 22 LR LR 01 29 14.8
comp=Z,80nm,20.4s,baz=214,slow=31
PFO Pinyon Flats O 62.86 297 LR LR 01 31 50.0
comp=Z,72nm,21.7s,baz=88,slow=34
MZP Montezuma Peak 62.95 302 P P 01 07 09.1 +0.1
MZP IAmb IAmb 01 07 19.2
comp=Z,6.9nm,0.9s
GRAC Grapevine Rang 63.04 301 P P 01 07 09.7 +0.3
AKASG Malin Array Be 63.14 43 P P 01 07 08.9 -0.8
comp=Z,0.4nm,0.5s,baz=267,slow=6.1,SNR=3.4
AKASG LR LR 01 30 41.5
comp=Z,74nm,21.3s,baz=239,slow=32
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 63.56 303 LR LR 01 32 51.6
comp=Z,273nm,20.8s,baz=94,slow=34
A36M Sachs Harbour 65.79 340 P P 01 07 26.8 +0.2
A36M IAmb IAmb 01 07 30.4
comp=Z,4.6nm,0.8s
YBH Yreka Blue Hor 66.39 307 LR LR 01 35 02.6
comp=Z,152nm,20.3s,baz=74,slow=35
H09N1 TRISTAN DA CUN 66.79 152 T T 02 20 15.2
SNR=8.8
H09W1 TRISTAN DA CUN 66.80 152 T T 02 20 15.2
SNR=7.1
PLCA Paso Flores 67.16 201 LR LR 01 38 30.8
comp=Z,81nm,18.2s,baz=28,slow=37
OBN Obninsk 67.20 38 LR LR 01 34 36.7
comp=Z,251nm,18.5s,baz=344,slow=34
BRTR Keskin Array B 67.62 55 P P 01 07 38.8 -0.3
comp=Z,0.8nm,0.9s,baz=264,slow=5.2,SNR=5.5
BRTR LR LR 01 36 52.9
comp=Z,42nm,18.8s,baz=1.0,slow=36
comp=Z,0.8nm,0.9s
BBB Bella Bella 68.37 319 LR LR 01 36 44.1
comp=Z,121nm,18.6s,baz=106,slow=35
DLBC Dease Lake 68.53 326 P P 01 07 44.4 +0.1
comp=Z,1.3nm,0.7s,baz=177,slow=8.4,SNR=3.1
DLBC LR LR 01 38 17.8
comp=Z,84nm,18.1s,baz=98,slow=36
comp=Z,1.3nm,0.7s
INK Inuvik 68.78 337 LR LR 01 36 05.8
comp=Z,164nm,21.3s,baz=10.0,slow=34
MMAI Mount Meron Ar 70.50 62 LR LR 01 42 40.9
comp=Z,30nm,18.2s,baz=252,slow=39
EIL Elat 70.98 65 LR LR 01 40 03.7
comp=Z,153nm,19.4s,baz=262,slow=37
BCPM Bancas Point 73.06 328 P P 01 08 10.8 -1.0
BCAR Beaver Creek A 73.20 332 P P 01 08 11.9 -0.8
E25K Arctic Village 73.20 337 P P 01 08 12.7 +0.2
E25K IAmb IAmb 01 09 12.6
comp=Z,18nm,1.9s
L27K Beaver Creek, 73.22 332 P P 01 08 12.7 0.0
L27K IAmb IAmb 01 08 56.9
comp=Z,15nm,1.8s
KIV Kislovodsk 73.25 49 P P 01 08 12.6 -0.7
KIV IAmb IAmb 01 08 56.4
comp=Z,8.5nm,1.1s
KIRV Kirov 73.44 33 LR LR 01 36 07.4
comp=Z,187nm,21.4s,baz=281,slow=32
KBZ Khabaz 73.46 49 LR LR 01 40 55.6
comp=Z,42nm,18.9s,baz=272,slow=36
J26L Joseph Creek 73.54 333 P P 01 08 14.6 0.0
TABL Table Mountain 73.65 329 P P 01 08 16.2 +0.6
GRNC Granite Creek 73.85 329 P P 01 08 16.7 -0.1
GRNC IAmb IAmb 01 08 18.7
comp=Z,34nm,2.0s
SCRK Sand Creek 73.87 333 P P 01 08 17.3 +0.7
SCRK IAmb IAmb 01 08 24.4
comp=Z,21nm,2.0s
TSUM Tsumeb 73.93 119 LR LR 01 33 12.2
comp=Z,153nm,21.7s,baz=333,slow=30
D24K Happy Valley 73.98 339 P P 01 08 18.2 +1.2
D24K IAmb IAmb 01 09 15.8
comp=Z,27nm,2.0s
PRP Porcupine Dome 74.01 335 P P 01 08 17.4 -0.1
PRP IAmb IAmb 01 08 26.0
comp=Z,23nm,1.9s
BELG Belogornoye 74.17 40 LR LR 01 38 40.2
comp=Z,190nm,19.1s,baz=247,slow=34

G24K Hadweenzic Riv 74.36 336 P P 01 08 19.9 +0.5
G24K IAmb IAmb 01 09 54.6
comp=Z,17nm,1.8s
TOLK Toolik Lake Re 74.42 338 P P 01 08 20.6 +0.9
TOLK IAmb IAmb 01 08 26.2
comp=Z,21nm,1.8s
IL03 Eielson Array 74.79 334 P P 01 08 21.7 -0.2
IL31 74.80 334 P P 01 08 21.2 -0.7
IL31 IAmb IAmb 01 08 30.6
comp=Z,26nm,1.9s
ILAR Eielson Array 74.80 334 P P 01 08 22.0 0.0
ILAR Eielson Array 74.80 334 P P 01 08 21.8 -0.2
comp=Z,1.7nm,0.8s,baz=73,slow=5.0,SNR=24
ILAR LR LR 01 40 41.6
comp=Z,143nm,20.1s,baz=67,slow=35
comp=Z,1.7nm,0.8s
POKR Poker Plat Res 74.90 335 P P 01 08 23.8 +1.3
POKR IAmb IAmb 01 08 30.7
comp=Z,21nm,1.8s
MBAR Mbarara 77.17 96 LR LR 01 40 19.6
comp=Z,237nm,20.7s,baz=280,slow=34
ARU Arti 78.81 33 LR LR 01 41 16.5
comp=Z,119nm,18.4s,baz=286,slow=34
RPN Rapa Nui 79.25 235 LR LR 01 39 45.4
comp=Z,21nm,20.6s,baz=189,slow=33
KDAK Kodiak Island 80.11 329 LR LR 01 43 43.6
comp=Z,80nm,21.0s,baz=84,slow=35
AKTO Aktyubinsk 80.94 39 P P 01 08 55.7 -0.6
comp=Z,1.7nm,0.8s,baz=266,slow=3.5,SNR=3.6
AKTO LR LR 01 41 49.7
comp=Z,123nm,21.5s,baz=303,slow=34
comp=Z,1.7nm,0.8s
LSZ Lusaka 80.96 111 LR LR 01 40 20.3
comp=Z,74nm,19.3s,baz=294,slow=32
LBTB Lobatse 83.25 120 LR LR 01 39 26.2
comp=Z,168nm,20.6s,baz=294,slow=31
SUR Sutherland 83.28 129 LR LR 01 39 47.6
comp=Z,90nm,19.5s,baz=325,slow=31
BOSA Boshof 84.70 124 LR LR 01 42 15.6
comp=Z,55nm,18.6s,baz=320,slow=32
BVAR Borovoye Array 86.45 33 LR LR 01 45 51.2
comp=Z,110nm,18.1s,baz=300,slow=34
PMSA Palmer Station 88.17 188 LR LR 01 50 22.2
comp=Z,51nm,18.9s,baz=307,slow=36
KURBB Kurchatov Arra 91.94 32 LR LR 01 48 46.5
comp=Z,79nm,20.3s,baz=177,slow=34
ZALV Zalesovo Beam 92.57 27 LR LR 01 49 21.8
comp=Z,77nm,19.5s,baz=316,slow=34
WSAR Wadi Sarin 93.06 63 LR LR 01 52 49.8
comp=Z,76nm,21.3s,baz=340,slow=36
AAK Ala-Archa 94.65 40 LR LR 01 52 38.4
comp=Z,73nm,18.2s,baz=312,slow=36
MKAR Makanchi Array 96.33 33 LR LR 01 51 27.4
comp=Z,124nm,19.5s,baz=280,slow=34
SHEM Shemya Is, Ala 97.73 337 LR LR 01 55 20.6
comp=Z,51nm,19.1s,baz=115,slow=36
CMAR Chiang Mai Arr 126.27 44 PKP PKPdf 01 15 45.9 +0.4
comp=Z,0.6nm,0.3s,baz=311,slow=2.4,SNR=4.3

*NNC **19** 01:01:44.8±0.2, 44.˚23N×79.˚07E, h0km, mb4.0, mpv4.2,*
Error ellipse: s-maj=1.6km s-min=1.5km az=129.0
*MOS **19** 01:01:44.7±0.8, 44.˚31N×79.˚03E, h13km, mb4.2/1, Error*
ellipse: s-maj=8.2km s-min=5.2km az=73.7
*SOME **19** 01:01:45.8, 44.˚27N×79.˚00E, h10km*
ISC 19 01:01:45.1±0.9, 44.˚29N±0.˚02×79.˚00E±0.˚02, h11km±6km, n129, σ1§60/202, 19C-24D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNOS	**Konyrlen**	**0.15**	**60**	P	**Pg**	**01 01 49.4**	**+0.7**
KNOS	1μm,0.1s			S	**Sg**	**01 01 51.9**	**+0.7**
	11μm,0.2s						
BLB	**Baldybastay**	**0.42**	**243**	P	**Pb**	**01 01 54.4**	**-0.2**
BLB	913nm,0.1s			S	**Sb**	**01 02 01.0**	**0.0**
	535nm,0.2s						
DJR	**Jarkent**	**0.57**	**85**	P	**Pg**	**01 01 55.4**	**-0.9**
DJR	733nm,0.1s			S	**Sg**	**01 02 02.3**	**-1.5**
	2μm,0.2s						
DJR	**Jarkent**	**0.57**	**85**	*e*P	**Pg**	**01 01 55.4**	**-0.9**
DJR	733nm,0.1s			*e*S	**Sg**	**01 02 02.3**	**-1.5**
	2μm,0.2s						
TDK	**Taldyqorghan**	**0.83**	**330**	P	**Pb**	**01 02 01.7**	**+0.1**
TDK	146nm,0.1s			S	**Sb**	**01 02 13.2**	**+0.3**
	2μm,0.3s						
TDK	**Taldyqorghan**	**0.83**	**330**	*e*P	**Pb**	**01 02 01.7**	**+0.1**
TDK	146nm,0.1s			*e*S	**Sb**	**01 02 13.2**	**+0.3**
	2μm,0.3s						
ARXS	**Arharly**	**0.84**	**265**	P	**Pb**	**01 02 02.1**	**+0.2**
ARXS	683nm,0.2s			S	**Sb**	**01 02 14.1**	**+0.8**
	1μm,0.2s						
ARXS	**Arharly**	**0.84**	**265**	*e*P	**Pb**	**01 02 02.1**	**+0.2**
ARXS	683nm,0.2s			*e*S	**Sb**	**01 02 14.1**	**+0.8**
	1μm,0.2s						
ARXS	**Arharly**	**0.84**	**265**	*e*PG	**Pb**	**01 02 02.1**	**+0.2**
KPKS	**Kokpek**	**0.85**	**196**	P	**Pg**	**01 02 01.1**	**-0.4**
KPKS	1μm,0.1s			S	**Sg**	**01 02 12.2**	**-0.4**
	1μm,0.2s						
KPKS	**Kokpek**	**0.85**	**196**	*e*P	**Pg**	**01 02 01.1**	**-0.4**
	baz=193						
KPKS	**Kokpek**	**0.85**	**196**	*e*P	**Pg**	**01 02 01.1**	**-0.4**
KPKS	1μm,0.1s			*e*S	**Sg**	**01 02 12.2**	**-0.4**
	1μm,0.2s						
KPKS	**Kokpek**	**0.85**	**196**	*e*PG	**Pg**	**01 02 01.1**	**-0.4**
KURS	**Kuram**	**1.00**	**217**	P	**Pg**	**01 02 04.3**	**0.0**
KURS	94nm,0.3s			S	**Sb**	**01 02 17.9**	**+0.3**
	526nm,0.3s						
KURS	**Kuram**	**1.00**	**217**	*e*P	**Pg**	**01 02 04.3**	**0.0**
KURS	94nm,0.3s			*e*S	**Sb**	**01 02 17.9**	**+0.3**
	526nm,0.3s						
PDGK	**Podgornoye**	**1.02**	**159**	P	**Pg**	**01 02 03.3**	**-1.4**
PDGK	131nm,0.1s			S	**Sg**	**01 02 16.1**	**-2.0**
	684nm,0.3s						
PDGK	**Podgornoye**	**1.02**	**159**	⇓P	**Pg**	**01 02 03.1**	**-1.7**
PDGK	73nm,0.3s			⇑S	**Sg**	**01 02 16.4**	**-1.6**
	656nm,0.7s						
PDGK	**Podgornoye**	**1.02**	**159**	PG	**Pg**	**01 02 03.5**	**-1.3**
PDGK				S	**Sg**	**01 02 16.4**	**-1.6**
KAPS	**Kapalarasan**	**1.03**	**14**	P	**Pb**	**01 02 04.7**	**-0.4**
KAPS	162nm,0.1s			S	**Sb**	**01 02 18.4**	**-0.2**
	652nm,0.1s						
KAPS	**Kapalarasan**	**1.03**	**14**	*e*P	**Pb**	**01 02 04.7**	**-0.4**
KAPS	162nm,0.1s			*e*S	**Sb**	**01 02 18.4**	**-0.2**
	652nm,0.1s						
UZB	**Uzunbulak**	**1.14**	**179**	P	**Pg**	**01 02 05.7**	**-1.3**
UZB	218nm,0.3s			S	**Sg**	**01 02 20.7**	**-1.1**
	339nm,0.3s						
UZB	**Uzunbulak**	**1.14**	**179**	⇓*i*P	**Pg**	**01 02 05.7**	**-1.3**
	baz=177						
UZB	**Uzunbulak**	**1.14**	**179**	⇓*i*P	**Pg**	**01 02 05.7**	**-1.3**
UZB	218nm,0.3s			⇓*i*S	**Sg**	**01 02 20.7**	**-1.1**
	339nm,0.3s						
UZB	**Uzunbulak**	**1.14**	**179**	*d i*PG	**Pg**	**01 02 05.6**	**-1.4**
SHLS	**Shalkode**	**1.18**	**163**	P	**Pn**	**01 02 08.0**	**+0.3**
SHLS	277nm,0.1s			S	**Sn**	**01 02 24.0**	**+0.3**
	5μm,0.1s						
SHLS	**Shalkode**	**1.18**	**163**	⇓*i*P	**Pn**	**01 02 07.9**	**+0.3**
	baz=150						
SHLS	**Shalkode**	**1.18**	**163**	*e*P	**Pn**	**01 02 09.0**	**+1.4**
SHLS	277nm,0.1s			*e*S	**Sn**	**01 02 25.5**	**+1.8**
	5μm,0.1s						
SHLS	**Shalkode**	**1.18**	**163**	*d i*PG	**Pn**	**01 02 07.9**	**+0.3**
ZHN	**Zhinishke**	**1.19**	**200**	P	**Pg**	**01 02 07.0**	**-1.0**
ZHN	165nm,0.1s			S	**Sg**	**01 02 22.3**	**-1.2**
	2μm,0.3s						
ZHN	**Zhinishke**	**1.19**	**200**	*d i*PG	**Pg**	**01 02 06.9**	**-1.0**
KTMS	**Ketmen**	**1.29**	**130**	P	**Pg**	**01 02 07.5**	**-2.4**
KTMS	59nm,0.1s			S	**Sg**	**01 02 23.4**	**-3.3**
	497nm,0.3s						
KTMS	**Ketmen**	**1.29**	**130**	*e*P	**Pg**	**01 02 08.9**	**-1.0**
KTMS	25nm,0.1s			*e*S	**Sg**	**01 02 25.4**	**-1.3**
	610nm,0.3s						
SATY	**Saty**	**1.30**	**200**	P	**Pg**	**01 02 09.0**	**-1.1**
SATY	319nm,0.1s			S	**Sg**	**01 02 25.8**	**-1.1**
	2μm,0.1s						
SATY	**Saty**	**1.30**	**200**	⇓*i*P	**Pg**	**01 02 08.9**	**-1.2**
	baz=198						
SATY	**Saty**	**1.30**	**200**	*e*P	**Pg**	**01 02 09.0**	**-1.1**
SATY	319nm,0.1s			*e*S	**Sg**	**01 02 25.8**	**-1.1**
	2μm,0.1s						
SATY	**Saty**	**1.30**	**200**	*d i*PG	**Pg**	**01 02 08.8**	**-1.2**
CHKK	**Chushkaly**	**1.51**	**254**	P	**Pn**	**01 02 12.8**	**+0.7**
CHKK	158nm,0.2s			S	**Sn**	**01 02 32.5**	**+0.7**
	900nm,0.3s						
CHKK	**Chushkaly**	**1.51**	**254**	*e*Pb	**Pn**	**01 02 12.8**	**+0.7**
	baz=252						
CHKK	**Chushkaly**	**1.51**	**254**	*e*P	**Pn**	**01 02 12.8**	**+0.7**
CHKK	158nm,0.2s			*e*S	**Sn**	**01 02 32.5**	**+0.7**
	900nm,0.3s						
CHKK	**Chushkaly**	**1.51**	**254**	*e*PG	**Pn**	**01 02 12.7**	**+0.5**
KOTS	**Kotyrbulak**	**1.73**	**233**	P	**Pb**	**01 02 16.8**	**-0.1**
KOTS	102nm,0.2s			S	**Sb**	**01 02 39.5**	**+0.9**
	979nm,0.3s						
KOTS	**Kotyrbulak**	**1.73**	**233**	*e*P	**Pb**	**01 02 16.8**	**-0.1**
KOTS	102nm,0.2s			*e*S	**Sb**	**01 02 39.5**	**+0.9**
	979nm,0.3s						
KTBS	**Karatobe**	**1.77**	**252**	P	**Pb**	**01 02 17.6**	**0.0**
KTBS	126nm,0.2s			S	**Sb**	**01 02 40.4**	**+0.6**
	944nm,0.3s						
KTBS	**Karatobe**	**1.77**	**252**	*e*P	**Pb**	**01 02 17.6**	**0.0**
KTBS	126nm,0.2s			*e*S	**Sb**	**01 02 40.4**	**+0.6**
	944nm,0.3s						
MDOK	**Medeo**	**1.81**	**232**	Pg	**Pb**	**01 02 17.8**	**-0.4**
MDOK	82nm,0.5s			⇓P	**Pb**	**01 02 17.9**	**-0.4**
MDOK	36nm,0.4s			Lg	Lg	01 02 41.0	
MDOK	897nm,0.4s			⇑S	**Sb**	**01 02 42.0**	**+1.0**
	492nm,1.2s						
MDOK	**Medeo**	**1.81**	**232**	*e*Pb	**Pn**	**01 02 17.2**	**+0.9**
	baz=231						
MDOK	**Medeo**	**1.81**	**232**	*e*P	**Pb**	**01 02 17.9**	**-0.4**
MDOK	82nm,0.5s			*e*S	**Sn**	**01 02 41.0**	**+1.7**
	897nm,0.4s						
MDOK	**Medeo**	**1.81**	**232**	PN	**Pb**	**01 02 17.9**	**-0.4**
MDOK				S	**Sb**	**01 02 41.9**	**+1.0**
KNDC	**Almaty**	**1.82**	**235**	⇑P	**Pb**	**01 02 18.1**	**-0.4**
KNDC	73nm,0.2s			⇓S	**Sg**	**01 02 43.6**	**0.0**
	1μm,0.8s						
KNDC	**Almaty**	**1.82**	**235**	PN	**Pb**	**01 02 18.9**	**+0.4**
KNDC				S	**Sg**	**01 02 43.6**	**0.0**
AAA	**Alma-Ata**	**1.85**	**235**	P	**Pb**	**01 02 19.2**	**+0.1**
AAA	204nm,0.2s			S	**Sb**	**01 02 43.4**	**+1.1**
	1μm,0.4s						
AAA	**Alma-Ata**	**1.85**	**235**	*e*Pb	**Pb**	**01 02 18.9**	**-0.2**
	baz=234						
AAA	**Alma-Ata**	**1.85**	**235**	*e*P	**Pb**	**01 02 19.2**	**+0.1**
AAA	204nm,0.2s			*e*S	**Sb**	**01 02 43.4**	**+1.1**
	1μm,0.4s						
AAA	**Alma-Ata**	**1.85**	**235**	*e*PN	**Pb**	**01 02 18.8**	**-0.2**
TNSS	**Tian-Shan**	**1.94**	**231**	P	**Pb**	**01 02 20.3**	**-0.4**
TNSS	32nm,0.1s			S	**Sb**	**01 02 45.4**	**+0.3**
	138nm,0.3s						
TNSS	**Tian-Shan**	**1.94**	**231**	*e*Pb	**Pn**	**01 02 19.4**	**+1.0**
	baz=229						
TNSS				*i* Pg	**Pb**	**01 02 20.1**	**-0.7**
	baz=229						
TNSS	**Tian-Shan**	**1.94**	**231**	*e*P	**Pb**	**01 02 20.3**	**-0.4**
TNSS	32nm,0.1s			*e*S	**Sb**	**01 02 45.4**	**+0.3**
	138nm,0.3s						
TNSS	**Tian-Shan**	**1.94**	**231**	*e*PN	**Pn**	**01 02 19.4**	**+1.0**
KUU	**Kurty**	**1.96**	**259**	P	**Pb**	**01 02 20.6**	**-0.1**
KUU	184nm,0.2s			S	**Sb**	**01 02 45.7**	**+0.5**
	1μm,0.3s						
KUU	**Kurty**	**1.96**	**259**	*e*Pb	**Pn**	**01 02 19.2**	**+0.9**
	baz=258						
KUU				*i* Pg	**Pb**	**01 02 20.1**	**-0.7**
	baz=258						
KUU	**Kurty**	**1.96**	**259**	*e*P	**Pg**	**01 02 22.0**	**-0.6**
KUU	108nm,0.2s			*e*S	**Sg**	**01 02 47.8**	**-0.2**
	1μm,0.3s						
KUU	**Kurty**	**1.96**	**259**	*e*PN	**Pn**	**01 02 19.1**	**+0.9**
KASK	**Kaskelen**	**2.01**	**239**	⇑Pn	**Pb**	**01 02 21.2**	**-0.5**
KASK				⇓Sn	**Sb**	**01 02 48.6**	**+1.7**
IZV	**Izvestkoviy**	**2.13**	**235**	Pg	**Pb**	**01 02 24.5**	**+0.6**
IZV	26nm,0.1s			Lg	Lg	01 02 52.3	
	546nm,0.4s						
IZV	**Izvestkoviy**	**2.13**	**235**	*e*P	**Pb**	**01 02 24.5**	**+0.6**
IZV	26nm,0.1s			*e*S	**Sb**	**01 02 52.3**	**+1.9**
	546nm,0.4s						
MTBS	**Maitube**	**2.19**	**239**	Pg	**Pb**	**01 02 25.3**	**+0.5**
MTBS	54nm,0.1s			Lg	Lg	01 02 53.8	
	736nm,0.4s						
MTBS	**Maitube**	**2.19**	**239**	*e*P	**Pb**	**01 02 25.3**	**+0.5**
MTBS	54nm,0.1s			*e*S	**Sb**	**01 02 53.8**	**+1.8**
	736nm,0.4s						
KRBS	**Karabastau**	**2.47**	**257**	Pg	**Pb**	**01 02 30.3**	**+0.7**
KRBS	23nm,0.2s			Lg	Lg	01 03 02.1	
	1.0nm,0.2s						
KRBS	**Karabastau**	**2.47**	**257**	*e*P	**Pb**	**01 02 30.3**	**+0.7**
KRBS	23nm,0.2s			*e*S	**Sb**	**01 03 02.1**	**+2.1**
	1.0nm,0.2s						
KST	**Kastek**	**2.53**	**242**	Pg	**Pb**	**01 02 31.1**	**+0.5**
KST	22nm,0.2s			Lg	Lg	01 03 03.5	
	204nm,0.3s						
KST	**Kastek**	**2.53**	**242**	*e*P	**Pb**	**01 02 31.1**	**+0.5**
KST	22nm,0.2s			*e*S	**Sb**	**01 03 03.5**	**+1.8**
	204nm,0.3s						
DGS	**Degeres**	**2.56**	**247**	Pg	**Pb**	**01 02 31.8**	**+0.7**
DGS	38nm,0.2s			Lg	Lg	01 03 04.6	
	217nm,0.5s						
DGS	**Degeres**	**2.56**	**247**	*e*P	**Pb**	**01 02 31.8**	**+0.7**
DGS	38nm,0.2s			*e*S	**Sb**	**01 03 04.6**	**+1.9**
	217nm,0.5s						
TKM2	**Tokmak 2**	**2.82**	**242**	P	**Pn**	**01 02 32.4**	**+2.0**
	SNR=11						
TKM2	**Tokmak 2**	**2.82**	**242**	⇓Pn	**Pn**	**01 02 32.2**	**+1.8**
	1.9nm,0.3s						
TKM2				⇑Pg	**Pg**	**01 02 38.0**	**-1.2**
	11nm,0.5s						
TKM2				⇑Lg	Lg	01 03 15.7	
	109nm,0.8s						
TKM2	**Tokmak 2**	**2.82**	**242**	PN	**Pn**	**01 02 32.2**	**+1.8**
TKM2				PG	**Pg**	**01 02 38.4**	**-0.8**
TKM2				LG	Lg	01 03 15.7	
ULHL	**Ulahol**	**2.87**	**226**	P	**Pn**	**01 02 33.4**	**+2.4**
	SNR=27						
MAKZ	**Makanchi**	**3.28**	**39**	⇑Pn	**Pn**	**01 02 37.9**	**+1.5**
	0.6nm,0.2s						

MAKZ				⇓Pg		**Pb**	**01 02 44.2**	**+0.9**
	9.2nm,0.7s							
MAKZ				⇑Lg		Lg	01 03 26.5	
	27nm,0.6s							
MAKZ	**Makanchi**	**3.28**	**39**	PN		**Pn**	**01 02 37.9**	**+1.5**
MAKZ				PG		**Pb**	**01 02 44.2**	**+0.9**
MAKZ				LG		Lg	01 03 21.4	
KBK	**Karagaybulak**	**3.37**	**242**	P		**Pn**	**01 02 39.9**	**+2.1**
	SNR=16							
MKAR	**Makanchi Array**	**3.41**	**42**	*i* PN		**Pn**	**01 02 39.7**	**+1.4**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.3s							
MK31	**Makanchi Array**	**3.41**	**42**	⇑Pn		**Pn**	**01 02 40.0**	**+1.7**
	comp=Z,2.3nm,0.3s,baz=213,slow=15,SNR=462							
MK31				⇑Pg		**Pg**	**01 02 48.6**	**-1.8**
	comp=Z,8.3nm,0.4s,baz=356,slow=33,SNR=18							
MK31				Sn		**Sn**	**01 03 21.4**	**+2.7**
	comp=Z,24nm,0.4s,baz=217,slow=25,SNR=11							
MK31				Lg		Lg	01 03 31.1	
	comp=Z,78nm,0.4s,baz=220,slow=30,SNR=12							
MK31	**Makanchi Array**	**3.41**	**42**	PN		**Pn**	**01 02 40.0**	**+1.7**
MK31				PG		**Pg**	**01 02 48.6**	**-1.8**
MK31				SN		**Sn**	**01 03 21.4**	**+2.7**
USP	**Ospenovka**	**3.41**	**254**	P		**Pn**	**01 02 40.0**	**+1.7**
	SNR=7.9							
BTLS	**Baital**	**3.61**	**284**	Pg		**Pg**	**01 02 51.6**	**-2.7**
	comp=Z,57nm,0.3s							
BTLS				Lg		Lg	01 03 39.0	
	comp=Z,25nm,0.2s							
BTLS	**Baital**	**3.61**	**284**	*e*P		**Pg**	**01 02 51.6**	**-2.7**
	comp=Z,57nm,0.3s							
BTLS				*e*S		**Sg**	**01 03 39.0**	**-2.1**
	comp=Z,25nm,0.2s							
BTLS	**Baital**	**3.61**	**284**	*e*PN		**Pn**	**01 02 42.5**	**+1.5**
AAK	**Ala-Archa**	**3.67**	**245**	P		**Pn**	**01 02 44.1**	**+2.2**
	SNR=6.6							
AAK	**Ala-Archa**	**3.67**	**245**	*ce*PN		**Pn**	**01 02 43.6**	**+1.7**
UCH	**Uchtor**	**3.87**	**239**	P		**Pn**	**01 02 47.6**	**+2.7**
	SNR=6.3							
MRKS	**Merke**	**4.47**	**252**	Pg		**Pb**	**01 03 07.1**	**+3.4**
	comp=Z,8.7nm,0.4s							
MRKS				Lg		Lg	01 04 05.3	
	comp=Z,66nm,0.6s							
MRKS	**Merke**	**4.47**	**252**	*e*P		**Pb**	**01 03 07.1**	**+3.4**
	comp=Z,8.7nm,0.4s							
MRKS				*e*S		**Sg**	**01 04 05.2**	**-3.4**
	comp=Z,66nm,0.6s							
ZSN	**Zaisan**	**5.18**	**50**	Pg		**Pb**	**01 03 15.7**	**+0.1**
	comp=Z,4.6nm,0.5s							
ZSN				Lg		Lg	01 04 20.1	
	comp=Z,17nm,0.7s							
ZSN	**Zaisan**	**5.18**	**50**	*e*Pn		**Pn**	**01 03 02.7**	**+0.1**
	baz=51							
ZSN	**Zaisan**	**5.18**	**50**	*e*P		**Pb**	**01 03 15.7**	**+0.1**
	comp=Z,4.6nm,0.5s							
ZSN				*e*S		**Sb**	**01 04 20.1**	**+2.3**
	comp=Z,17nm,0.7s							
ZSN	**Zaisan**	**5.18**	**50**	*e*PN		**Pn**	**01 03 02.6**	**+0.1**
KSH	**Kashi**	**5.27**	**206**	Pn		**Pb**	**01 03 13.4**	**-3.9**
KSH				Sn		**Sg**	**01 04 31.8**	**-2.6**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KSH				smax		smax		
	comp=N,15nm,0.9s							
KSH				smax		smax		
	comp=E,20nm,1.1s							
DZA	**Taraz**	**5.74**	**259**	Pg		**Pg**	**01 03 31.9**	**-3.1**
	comp=E,49nm,0.1s							
DZA				Lg		Lg	01 04 47.3	
	comp=E,60nm,0.2s							
DZA	**Taraz**	**5.74**	**259**	*e*P		**Pg**	**01 03 31.9**	**-3.1**
	comp=E,49nm,0.1s							
DZA				*e*S		**Sg**	**01 04 47.3**	**-2.0**
	comp=E,60nm,0.2s							
OTUK	**Ortayu**	**6.08**	**313**	Pg		**Pg**	**01 03 37.6**	**-4.0**
	comp=E,1.1nm,0.3s							
OTUK				Lg		Lg	01 04 57.5	
	comp=E,15nm,0.5s							
OTUK	**Ortayu**	**6.08**	**313**	⇑Pn		**Pn**	**01 03 15.4**	**+0.4**
	comp=E,1.0nm,0.4s							
OTUK				⇓Pg		**Pg**	**01 03 37.5**	**-4.0**
	comp=E,2.4nm,0.7s							
OTUK				⇓Lg		Lg	01 05 00.5	
	comp=E,43nm,0.7s							
OTUK	**Ortayu**	**6.08**	**313**	PN		**Pn**	**01 03 15.4**	**+0.4**
OTUK				PG		**Pg**	**01 03 37.5**	**-4.0**
SEM	**Semipalatinsk**	**6.18**	**7**	Pg		**Pg**	**01 03 39.6**	**-3.9**
	comp=E,3.6nm,0.1s							
SEM				Lg		Lg	01 05 01.5	
	comp=E,18nm,0.5s							
SEM	**Semipalatinsk**	**6.18**	**7**	*e*P		**Pg**	**01 03 41.2**	**-2.2**
	comp=E,3.0nm,0.1s							
SEM				*e*S		**Sg**	**01 05 03.6**	**+0.1**
	comp=E,18nm,0.5s							
KK31	**Karatay Array**	**6.27**	**262**	Pn		**Pn**	**01 03 19.0**	**+1.5**
	comp=E,0.3nm,0.3s,baz=154,slow=19,SNR=4.8							
KK31				⇑Pg		Pg	01 03 40.0	-5.0
	comp=E,2.6nm,0.5s,baz=72,slow=14,SNR=8.8							
KK31				Lg		Lg	01 05 05.1	
	comp=E,12nm,0.6s,baz=74,slow=26,SNR=14							
KK31	**Karatay Array**	**6.27**	**262**	PN		**Pn**	**01 03 19.0**	**+1.5**
KK31				PG		**Pg**	**01 03 40.4**	**-4.6**
KURBB	**Kurchatov Arra**	**6.35**	**357**	⇑Pn		**Pn**	**01 03 20.0**	**+1.5**
	comp=E,0.4nm,0.3s							
KURBB				⇓Pg		Pg	01 03 40.8	-5.8
	comp=E,3.7nm,0.5s							
KURBB				⇓Lg		Lg	01 05 07.3	
	comp=E,43nm,0.6s							
KURBB	**Kurchatov Arra**	**6.35**	**357**	PN		**Pn**	**01 03 20.3**	**+1.8**
KURBB				PG		Pg	01 03 40.8	-5.8
KURK	**Kurchatov**	**6.44**	**358**	⇑Pn		**Pn**	**01 03 20.7**	**+1.0**
	comp=E,3.9nm,1.3s							
KURK				⇓Pg		Pg	01 03 42.3	-6.0
	comp=E,3.7nm,0.7s							
KURK				⇑Lg		Lg	01 05 11.2	
	comp=E,28nm,0.6s							
KURK	**Kurchatov**	**6.44**	**358**	*ce*PN		**Pn**	**01 03 20.8**	**+1.0**
BRLS	**Borolday**	**6.76**	**262**	Pg		**Pg**	**01 03 54.5**	**0.0**
	comp=E,2.1nm,0.3s							
BRLS				Lg		Lg	01 05 25.8	
	comp=E,14nm,0.8s							
BRLS	**Borolday**	**6.76**	**262**	*e*P		**Pg**	**01 03 54.5**	**0.0**
	comp=E,2.1nm,0.3s							
BRLS				*e*S		**Sg**	**01 05 25.8**	**+3.7**
	comp=E,14nm,0.8s							
BRZS	**Berezniki**	**7.14**	**325**	Pg		**Pg**	**01 03 58.0**	**-3.8**
	comp=E,2.8nm,0.3s							
BRZS				Lg		Lg	01 05 33.0	
	comp=E,28nm,0.4s							
BRZS	**Berezniki**	**7.14**	**325**	*e*Pn		**Pn**	**01 03 29.0**	**-0.6**
	baz=325							
BRZS	**Berezniki**	**7.14**	**325**	*e*P		**Pg**	**01 03 58.0**	**-3.8**
	comp=E,2.8nm,0.3s							
BRZS				*e*S		**Sg**	**01 05 33.0**	**-1.2**
	comp=E,28nm,0.4s							
BRZS	**Berezniki**	**7.14**	**325**	*e*PN		**Pn**	**01 03 28.9**	**-0.6**
DGZ	**Jazzator, Alta**	**7.91**	**44**	⇑*e*P		**Pn**	**01 03 42.3**	**+2.2**
DGZ				pmax		pmax		
	comp=Z,1.0nm,0.2s							
BVA0	**Borovoye Array**	**10.43**	**330**	⇓Pn		**Pn**	**01 04 17.6**	**+3.1**
	comp=Z,1.0nm,0.8s							
BVA0				⇓Lg		Lg	01 07 19.8	
	comp=Z,8.5nm,0.8s,baz=128,slow=28,SNR=3.6							
BVA0	**Borovoye Array**	**10.43**	**330**	P		**Pn**	**01 04 17.6**	**+3.1**
BRVK	**Borovoye**	**10.49**	**330**	⇑Pn		**Pn**	**01 04 16.1**	**+0.8**
	comp=Z,1.7nm,1.0s							
BRVK				⇓Lg		Lg	01 07 19.5	
	comp=Z,29nm,1.3s							
BRVK	**Borovoye**	**10.49**	**330**	P		**Pn**	**01 04 16.1**	**+0.8**
ARU	**Arti**	**17.74**	**320**	P		**P**	**01 05 54.4**	**+1.7**
ARU				S		**S**	**01 09 14.6**	**-1.9**
KIV	**Kislovodsk**	**25.94**	**282**	*e*P		**P**	**01 07 17.3**	**-0.1**
KIV				pmax		pmax		
	comp=Z,4.0nm,1.1s							
NACGM	**Naroch**	**34.70**	**307**	*e*P		**P**	**01 08 34.8**	**+0.2**
	comp=Z,5.0nm,0.8s,baz=86							
MODS	**Modra-Piesok**	**41.80**	**298**	*e*P		**P**	**01 09 30.9**	**-3.6**
MODS	**Modra-Piesok**	**41.80**	**298**	*e*P		**P**	**01 09 30.9**	**-3.6**
BORG	**Borgarnes**	**55.02**	**329**	*i* P		**P**	**01 11 17.0**	**+0.9**

*KRSC **19** 01:04:19.5±1.1,53.87N×159.20E,h178km±9km,Ml3.6*
*IDC **19** 01:04:21.1±1.0,54.10N×158.68E,h168km±12km,*
mb3.1/13,mbtmp3.6/13,Error ellipse: s-maj=28.6km
s-min=20.3km az=8.0
ISC 19 01:04:20.7±0.7,**53.89N**±0.04×**159.11E**±0.06,**h175**km±5km,
n53,σ0**95/80**,**mb3.3**/13,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.25**	**53**	*e*P		**Pn**	**01 04 44.0**	**-0.2**
KRX	**Arik**	**0.59**	**207**	*e*P		**Pn**	**01 04 45.6**	**0.0**
KRX				*e*S		**Sn**	**01 05 04.8**	**+0.2**
SMAR	**Somma**	**0.65**	**196**	*e*P		**Pn**	**01 04 46.3**	**+0.4**
SMAR				*e*S		**Sn**	**01 05 05.5**	**+0.2**
KOK	**Koryaka**	**0.66**	**205**	*e*P		**Pn**	**01 04 46.2**	**+0.4**
KOK				*e*S		**Sn**	**01 05 05.7**	**+0.6**
AVH	**Avacha**	**0.66**	**200**	*e*P		**Pn**	**01 04 46.2**	**+0.4**
AVH				*e*S		**Sn**	**01 05 05.9**	**+0.9**
GNL	**Ganaly**	**0.72**	**255**	*e*P		**Pn**	**01 04 45.7**	**-0.4**
GNL				*e*S		**Sn**	**01 05 04.9**	**-0.8**
NLC	**Nalytchevo**	**0.73**	**169**	*e*P		**Pn**	**01 04 45.7**	**-0.4**
NLC				*e*S		**Sn**	**01 05 04.9**	**-0.6**
INSR	**Institute**	**0.87**	**200**	*e*S		**Sn**	**01 05 07.0**	**-0.2**
DALK	**Dalny**	**0.88**	**194**	*e*P		**Pn**	**01 04 46.8**	**-0.2**
DALK				*e*S		**Sn**	**01 05 06.4**	**-0.9**
PET	**Petropavlovsk**	**0.90**	**198**	*e*P		**Pn**	**01 04 47.2**	**0.0**
PET				*e*S		**Sn**	**01 05 07.2**	**-0.3**
SPN	**Mys Shipunski**	**0.96**	**145**	*e*P		**Pn**	**01 04 46.9**	**-0.7**
SPN				*e*S		**Sn**	**01 05 06.7**	**-1.6**
PETK	**Petropavlovsk-**	**1.15**	**228**	P		**Pn**	**01 04 47.8**	**-1.3**
	10nm,0.3s,baz=63,slow=13,SNR=119							
PETK				S		**Sn**	**01 05 10.6**	**-0.3**
	4.5nm,0.4s,baz=96,slow=15,SNR=4.7							
KRMR	**Karymshinskiy**	**1.21**	**209**	*e*P		**Pn**	**01 04 49.5**	**0.0**
KRMR				*e*S		**Sn**	**01 05 11.7**	**-0.1**
GRL	**Gorelyy**	**1.47**	**205**	*e*P		**Pn**	**01 04 52.7**	**+0.5**
GRL				*e*S		**Sn**	**01 05 17.9**	**+1.5**
RUS	**Russkaya**	**1.50**	**194**	*e*P		**Pn**	**01 04 51.8**	**-0.4**
RUS				*e*S		**Sn**	**01 05 15.0**	**-1.5**
MTVR	**Mutnovka**	**1.51**	**202**	*e*P		**Pn**	**01 04 53.0**	**+0.5**
MTVR				*e*S		**Sn**	**01 05 18.8**	**+1.7**
APC	**Apacha**	**1.51**	**231**	*e*P		**Pn**	**01 04 52.6**	**+0.3**
TUMD	**Tumrok D**	**1.52**	**29**	*e*P		**Pn**	**01 04 52.4**	**0.0**
TUMD				*e*S		**Sn**	**01 05 16.8**	**-0.2**
TUMR	**Tumrok**	**1.53**	**23**	*e*P		**Pn**	**01 04 53.0**	**+0.5**
TUMR				*e*S		**Sn**	**01 05 17.3**	**-0.1**
ASAK	**Asacha**	**1.67**	**206**	*e*P		**Pn**	**01 04 54.6**	**+0.6**
ASAK				*e*S		**Sn**	**01 05 21.2**	**+1.4**
KMNR	**Kamenistaya**	**1.99**	**19**	*e*P		**Pn**	**01 04 57.8**	**+0.5**
KMNR				*e*S		**Sn**	**01 05 26.4**	**+0.5**
ESO	**Esso**	**2.06**	**354**	*e*P		**Pn**	**01 04 57.6**	**-0.4**
ESO				*e*S		**Sn**	**01 05 26.4**	**-0.7**
KDTR	**Khodutka, Kamc**	**2.17**	**197**	*e*P		**Pn**	**01 04 58.4**	**-0.8**
KDTR				*e*S		**Sn**	**01 05 27.0**	**-2.1**
KPT	**Kopyto**	**2.18**	**17**	*e*P		**Pn**	**01 04 59.5**	**0.0**
KIRR	**Kirishev**	**2.19**	**18**	*e*S		**Sn**	**01 05 29.8**	**-0.2**
BZP	**Bezymyannyi-Pe**	**2.19**	**22**	*e*P		**Pn**	**01 05 00.1**	**+0.4**
BZP				*e*S		**Sn**	**01 05 30.1**	**0.0**
BZMR	**Bezymyannaya**	**2.21**	**21**	*e*P		**Pn**	**01 05 00.2**	**+0.4**
BZMR				*e*S		**Sn**	**01 05 30.8**	**+0.5**
KOZ	**Kozyrevsk**	**2.22**	**11**	*e*P		**Pn**	**01 04 59.8**	**-0.1**
KOZ				*e*S		**Sn**	**01 05 30.3**	**-0.1**
BZWR	**Bezymyannyi-We**	**2.23**	**20**	*e*P		**Pn**	**01 05 00.6**	**+0.4**
BZWR				*e*S		**Sn**	**01 05 31.0**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**2.25**	**23**	*e*P		**Pn**	**01 05 00.5**	**+0.2**
BZGR				*e*S		**Sn**	**01 05 31.1**	**-0.1**
SRDR	**Sredinnyy**	**2.46**	**8**	*e*P		**Pn**	**01 05 02.4**	**-0.2**
SRDR				*e*S		**Sn**	**01 05 35.9**	**+0.5**
KRSR	**Krestovskiy**	**2.48**	**19**	*e*P		**Pn**	**01 05 03.0**	**+0.1**
KRSR				*e*S		**Sn**	**01 05 35.8**	**-0.1**
KLY	**Klyuchi**	**2.59**	**19**	*e*S		**Sn**	**01 05 39.3**	**+1.4**
BDR	**Baidarnaya**	**2.95**	**23**	*e*P		**Pn**	**01 05 09.3**	**+0.8**
KBG	**Krutoberegovo**	**3.15**	**40**	*e*P		**Pn**	**01 05 11.2**	**+0.4**
KBG				*e*S		**Sn**	**01 05 48.5**	**-1.4**
BKI	**Bering**	**4.21**	**69**	*e*P		**Pn**	**01 05 23.8**	**-0.4**
BKI				*e*S		**Sn**	**01 06 11.3**	**-2.7**
SEY	**Seymchan**	**9.73**	**342**	P		**Pn**	**01 06 37.0**	**+0.5**
	1.3nm,0.8s,baz=179,slow=13,SNR=5.2							
SONM	**Songino Array**	**33.15**	**281**	P		**P**	**01 10 39.8**	**-0.5**
	0.2nm,0.5s,baz=50,slow=9.8,SNR=2.2							
SONM				PcP		**PcP**	**01 13 19.7**	**+0.8**
	0.4nm,0.6s,baz=89,slow=1.6,SNR=2.8							
	0.2nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**34.62**	**167**	T		T	01 47 11.4	
	baz=354,slow=74							
H11N3	**WAKE ISLAND Hy**	**34.63**	**167**	T		T	01 47 12.4	
	baz=354							
H11N1	**WAKE ISLAND Hy**	**34.63**	**167**	T		T	01 47 11.4	
	baz=354,slow=74							
ZALV	**Zalesovo Beam**	**41.85**	**301**	P		**P**	**01 11 50.9**	**-2.1**
	0.3nm,0.3s,baz=52,slow=8.7,SNR=2.2							
	0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**46.92**	**301**	P		**P**	**01 12 31.3**	**-1.9**
	0.4nm,0.3s,baz=56,slow=8.6,SNR=2.6							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**47.28**	**294**	P		**P**	**01 12 34.5**	**-1.6**
	0.3nm,0.5s,baz=56,slow=7.9,SNR=7.2							
	0.3nm,0.5s							
BVAR	**Borovoye Array**	**49.44**	**307**	P		**P**	**01 12 51.0**	**-1.4**
	0.5nm,0.6s,baz=55,slow=9.8,SNR=3.4							
	0.5nm,0.6s							
PDAR	**Pinedale Array**	**57.65**	**61**	P		**P**	**01 13 55.4**	**+2.9**
	0.3nm,0.6s,baz=325,slow=5.5,SNR=2.4							
	0.3nm,0.6s							
FINES	**FINESS Array B**	**59.16**	**336**	P		**P**	**01 14 01.6**	**-0.8**
	0.5nm,0.5s,baz=52,slow=12,SNR=4.6							
	0.5nm,0.5s							
NOA	**NORSAR Array B**	**62.61**	**343**	P		**P**	**01 14 25.2**	**-0.5**
	0.3nm,0.7s,baz=19,slow=6.0,SNR=1.8							
	0.3nm,0.7s							
HFS	**Hagfors**	**63.01**	**341**	P		**P**	**01 14 27.7**	**-0.6**
	1.7nm,1.0s,baz=54,slow=6.2,SNR=1.3							
	1.7nm,1.0s							
KBZ	**Khabaz**	**68.56**	**316**	P		**P**	**01 15 02.8**	**-1.2**
	1.5nm,0.8s,baz=11,slow=14,SNR=2.0							
	1.5nm,0.8s							
TXAR	**Lajitas Array**	**70.87**	**66**	P		**P**	**01 15 19.9**	**+1.4**
	0.1nm,0.4s,baz=301,slow=7.1,SNR=2.3							
	0.1nm,0.4s							
BRTR	**Keskin Array B**	**75.63**	**320**	P		**P**	**01 15 45.6**	**-0.7**
	0.4nm,0.8s,baz=90,slow=1.4,SNR=2.2							
	0.4nm,0.8s							
WRA	**Warramunga Arr**	**76.56**	**204**	P		**P**	**01 15 52.8**	**+1.4**
	0.5nm,0.8s,baz=25,slow=6.3,SNR=2.0							
	0.5nm,0.8s							

*NEIC **19** 01:09:39.4±2.6,1.33S±0.05×78.74W±0.07,d125km±6km,*
mb4.2/13,Error ellipse: s-maj=10.7km s-min=6.2km
az=107.0
ISC 19 01:09:38.7±0.7,**1.30S**±0.05×**78.78W**±0.08,**h125**km,**n66**,
σ1**35/68**,**mb4.2/5**,**Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CHSH	**Refugio Sur-Vo**	**0.22**	**205**			**Pn**	**01 09 57.4**	**+0.6**
CHSH						Sn	**01 10 11.0**	**+0.7**
PIAT	**Ana Tenorio**	**0.59**	**60**	*e*P		**Pn**	**01 09 58.5**	**+0.2**
SLOR	**San Lorenzo -**	**0.63**	**26**			**Pn**	**01 09 59.6**	**+0.9**
SLOR						Sn	**01 10 14.6**	**+1.0**
COHC	**Cochancay**	**1.26**	**202**	Pn		**Pn**	**01 10 03.6**	**-0.3**
COHC						Sn	**01 10 22.1**	**-0.8**
COHC	**Cochancay**	**1.26**	**202**	*e*P		**Pn**	**01 10 03.5**	**-0.3**
PULU	**Pululahua**	**1.34**	**12**			**Pn**	**01 10 05.9**	**+0.8**
PAC1	**Pacto, Paraso**	**1.55**	**359**	*e*P		**Pn**	**01 10 07.9**	**+0.7**
OTAV	**Otavalo**	**1.56**	**12**	Pn		**Pn**	**01 10 08.1**	**+0.4**
OTAV	**Otavalo**	**1.56**	**12**	*e*P		**Pn**	**01 10 09.2**	**+1.5**
CUSE	**Cuicocha Este**	**1.63**	**13**	*e*P		**Pn**	**01 10 10.3**	**+1.8**
IMBA	**Imbabura, San**	**1.66**	**20**			**Pn**	**01 10 10.8**	**+1.9**
BOSC	**San Juan Bosco**	**1.86**	**171**			**Pn**	**01 10 12.4**	**+1.4**
PPLP	**Puerto Lpez**	**2.01**	**263**	*e*P		**Pn**	**01 10 12.1**	**-0.5**
BONI	**La Bonita**	**2.14**	**36**	*e*P		**Pn**	**01 10 15.8**	**+1.4**
TULM	**Tulcn-Chalpat**	**2.23**	**26**			**Pn**	**01 10 17.0**	**+1.2**
TULM	**Tulcn-Chalpat**	**2.23**	**26**	*e*P		**Pn**	**01 10 17.1**	**+1.3**
SALI	**Salinas**	**2.38**	**248**	Pn		**Pn**	**01 10 16.9**	**-0.3**
ARNL	**Arenillas**	**2.58**	**210**			**Pn**	**01 10 18.9**	**-0.9**
GCUF	**Volcan Galeras**	**2.88**	**30**	*e*P		**Pn**	**01 10 26.0**	**+1.8**
TUMC	**Tumaco**	**3.10**	**1**	*e*P		**Pn**	**01 10 26.5**	**0.0**
MCRA	**Macar, Loja**	**3.27**	**201**	Pn		**Pn**	**01 10 28.2**	**-0.6**
MCRA	**Macar, Loja**	**3.27**	**201**	*e*P		**Pn**	**01 10 27.4**	**-1.5**
CRUC	**La Cruz**	**3.38**	**33**	*e*P		**Pn**	**01 10 32.3**	**+1.8**
BBAC	**Balboa, Cauca**	**3.63**	**25**	*e*P		**Pn**	**01 10 34.3**	**+0.6**
FLOC	**Florencia**	**4.23**	**48**	*e*P		**Pn**	**01 10 41.2**	**-0.4**
PTLC	**Puerto Leguiza**	**4.24**	**70**	*e*P		**Pn**	**01 10 40.5**	**-1.1**
GR1C	**Gorgona, Isla**	**4.31**	**8**	*e*P		**Pn**	**01 10 40.6**	**-2.0**
POPC	**Popayan, Colom**	**4.35**	**29**	*e*P		**Pn**	**01 10 43.3**	**0.0**
GARC	**Garzon, Huila**	**4.77**	**44**	*e*P		**Pn**	**01 10 49.6**	**+0.7**
JAMC	**Jamundi, Valle**	**4.95**	**25**	*e*P		**Pn**	**01 10 50.7**	**-0.6**
BETC	**Betania**	**5.17**	**40**	*e*P		**Pn**	**01 10 56.5**	**+2.4**
MALC	**Bahia Malaga**	**5.46**	**15**	*e*P		**Pn**	**01 10 57.3**	**-0.8**
YOTC	**Yotoco, Valle**	**5.78**	**25**	*e*P		**Pn**	**01 11 00.3**	**-2.1**
ORTC	**Ortega, Tolima**	**6.26**	**34**	*e*P		**Pn**	**01 11 08.2**	**-0.6**
PRAC	**Prado**	**6.31**	**38**	*e*P		**Pn**	**01 11 08.6**	**-0.9**
PLMC	**San Jos del P**	**6.64**	**22**	*e*P		Pn	01 11 10.1	-3.9
GUY2C	**Guyana, Caldas**	**7.32**	**28**	*e*P		**Pn**	**01 11 20.3**	**-3.2**
VILC	**Villavicencio,**	**7.39**	**43**	*e*P		**Pn**	**01 11 24.4**	**+0.2**
ROSC	**El Rosal**	**7.55**	**36**	Pn		**Pn**	**01 11 26.4**	**-0.1**
ROSC	**El Rosal**	**7.55**	**36**	*e*P		**Pn**	**01 11 24.6**	**-1.9**
CBOC	**Ciudad Bolivar**	**7.63**	**21**	*e*P		**Pn**	**01 11 25.7**	**-1.7**
CHIC	**Chingaza**	**7.75**	**41**	*e*P		**Pn**	**01 11 29.5**	**+0.3**
SPBC	**San Pablo de B**	**8.35**	**34**	*e*P		**Pn**	**01 11 34.5**	**-2.6**
PTAC	**Punta Ardita,**	**8.44**	**7**	*e*P		**Pn**	**01 11 37.1**	**-1.1**
DBBC	**Dabeiba**	**8.64**	**17**	*e*P		**Pn**	**01 11 43.0**	**+2.0**
CZSB	**Cruzeiro do Su**	**8.80**	**137**	Pn		**Pn**	**01 11 42.2**	**-0.9**
CZSB	**Cruzeiro do Su**	**8.80**	**137**	*e*P		**Pn**	**01 11 42.2**	**-0.9**
TBTG	**Tabatinga, AM**	**9.31**	**108**	Pn		**Pn**	**01 11 48.2**	**-1.8**
APAC	**Apartado, Choc**	**9.39**	**13**	*e*P		**Pn**	**01 11 52.1**	**+1.1**
NNA	**Nana**	**10.79**	**170**	Pn		**Pn**	**01 12 10.8**	**+0.9**
NNA	**Nana**	**10.79**	**170**	*e*P		**Pn**	**01 12 11.0**	**+1.0**
SDV	**Santo Domingo**	**12.97**	**39**	Pn		**Pn**	**01 12 37.0**	**-1.6**
BAUV	**El Baul**	**14.76**	**46**	Pn		**Pn**	**01 12 59.9**	**-1.6**
ETMB	**Extrema**	**15.09**	**125**	Pn		**Pn**	**01 13 02.6**	**-3.0**
SAML	**Samuel**	**17.28**	**117**	P		**P**	**01 13 31.5**	**-0.5**
TGUH	**Tegucigalpa,Un**	**17.42**	**331**	P		**P**	**01 13 35.1**	**+1.4**
TGUH				IAmb		IAmb	01 13 51.3	
	comp=Z,16nm,0.9s							
MACA	**Manacapuru-AM**	**18.17**	**96**	P		**P**	**01 13 41.2**	**-0.7**
MACA				IAmb		IAmb	01 14 08.5	
	comp=Z,11nm,0.7s							
TA02	**Huaiquique**	**20.67**	**156**	P		**P**	**01 14 08.2**	**-0.6**
PB02	**IPOC Station P**	**21.71**	**157**	P		**P**	**01 14 22.6**	**+2.6**
PB02				IAmb		IAmb	01 14 42.3	
	comp=Z,8.2nm,0.5s							
PB07	**IPOC Station P**	**22.08**	**158**	P		**P**	**01 14 25.2**	**+1.2**
PB07				IAmb		IAmb	01 14 41.9	
	comp=Z,13nm,1.1s							
CELP	**Cerrillos**	**22.68**	**31**	P		**P**	**01 14 30.5**	**+0.6**
AC02	**Maricunga**	**27.03**	**161**	P		**P**	**01 15 10.2**	**+0.3**
ITAB	**Concordia**	**36.31**	**138**	P		**P**	**01 16 30.1**	**-0.4**
ITAB				IAmb		IAmb	01 16 31.1	
	comp=Z,3.6nm,0.7s							
T59A	**Double "B" Far**	**38.09**	**2**	P		**P**	**01 16 46.1**	**+0.7**
WVT	**Waverly**	**38.18**	**348**	P		**P**	**01 16 44.6**	**-1.5**
WVT				IAmb		IAmb	01 16 48.2	
	comp=Z,3.1nm,1.1s							
PLCA	**Paso Flores**	**39.96**	**170**	P		**P**	**01 17 02.9**	**+1.9**
PLCA				IAmb		IAmb	01 17 29.5	
	comp=Z,4.6nm,1.1s							

IDC 19 01:31:05.8±1.8,**26.93N**×**102.51E**,**h0km**,**mb3.2**/4,
mbtmp3.2/4,**Error

comp=Z,932nm,0.4s
ROSC El Rosal 2.42 73 P Pn 01 51 17.1 +2.7
comp=Z,6µm,0.3s,baz=174,slow=5.7,SNR=2802
ROSC S Sn **01 51 45.9 +1.9**
comp=Z,1µm,0.4s,baz=289,slow=21,SNR=15
ROSC LR LR 01 52 37.4
comp=Z,566nm,21.1s,baz=234,slow=51
ROSC El Rosal 2.42 73⇑*iP* Pn 01 51 17.1 +2.7
ROSC *eS* Sn **01 51 46.9 +2.9**
ROSC *i* 01 51 50.4
comp=Z,875nm,0.3s
CRUC La Cruz 2.57 187 *eP* Pn 01 51 17.1 +0.7
CRUC *eS* Sn **01 51 48.7 +1.3**
CVER Cruz Verde, Cu 2.59 81⇑*eP* Pn 01 51 18.5 +1.7
CVER *eS* Sn **01 51 49.7 +1.6**
CVER *i* 01 51 53.4
comp=Z,2µm,0.8s
FLOC Florencia 2.72 159⇓*iP* Pn 01 51 19.1 +1.0
FLOC *eS* Sn **01 51 51.4 +0.9**
FLOC *i* 01 51 54.2
comp=Z,907nm,0.4s
DBBC Dabeiba 2.90 9⇓*eP* Pn 01 51 21.0 +0.5
DBBC *eS* Sn **01 51 54.9 +0.1**
DBBC *i* 01 52 01.7
comp=Z,737nm,0.7s
VILC Villavicencio, 2.94 90 *eP* Pn 01 51 23.2 +2.1
VILC *eS* Sn **01 52 00.1 +4.2**
VILC *i* 01 52 02.0
comp=Z,3µm,0.4s
CHIC Chingaza 2.94 80⇑*iP* Pn 01 51 23.3 +1.9
CHIC *eS* Sn **01 51 58.5 +2.1**
CHIC *i* 01 52 05.8
comp=Z,871nm,0.4s
GCUF Volcan Galeras 2.97 194 *eP* Pn 01 51 22.3 +0.4
GCUF *eS* Sn **01 51 58.9 +1.8**
GCUF *i* 01 52 05.2
comp=Z,941nm,0.5s
SPBC San Pablo de B 2.97 59 *eP* Pn 01 51 22.9 +1.4
SPBC *eS* Sn **01 51 57.9 +1.3**
SPBC *i* 01 52 01.8
comp=Z,415nm,0.3s
TUMC Tumaco 3.10 222 *eP* Pn 01 51 22.3 -0.8
TUMC *eS* Sn **01 51 58.9 -0.5**
TUMC *i* 01 52 13.6
comp=Z,1µm,0.4s
PTAC Punta Ardita, 3.21 339⇓*iP* Pn 01 51 24.2 -0.3
PTAC *eS* Sn **01 51 59.6 -2.5**
PTBC PUERTO BERRIO, 3.23 42⇓*eP* Pn 01 51 25.1 +0.2
PTBC *eS* Sn **01 52 02.8 +0.1**
PTBC *i* 01 52 07.5
comp=Z,535nm,0.4s
CMBC Cumbal 3.38 200 *eP* Pn 01 51 28.3 +1.0
CMBC *eS* Sn **01 52 07.7 +0.8**
TULM Tulcn-Chalpat 3.58 199 Pn 01 51 31.1 +1.2
TULM Tulcn-Chalpat 3.58 199⇓*eP* Pn 01 51 31.2 +1.2
APAC Apartado, Choc 3.74 1⇓*iP* Pn 01 51 33.4 +1.7
APAC *eS* Sn **01 52 18.9 +4.0**
APAC *i* 01 52 26.7
comp=Z,521nm,0.7s
UREC San Jos de Ur 3.76 17 *eP* Pn 01 51 33.1 +1.1
UREC San Jos de Ur 3.76 17⇓*eP* Pn 01 51 31.3 -0.6
UREC *eS* Sn **01 52 15.2 -0.1**
UREC *i* 01 52 21.7
comp=Z,296nm,0.3s
BONI La Bonita 3.76 194 *eP* Pn 01 51 33.2 +0.9
IMBA Imbabura, San 4.13 202 Pn 01 51 38.6 +1.1
CUSE Cuicocha Este 4.19 205 *eP* Pn 01 51 38.1 -0.1
CUSE *eS* Sn **01 52 26.3 0.0**
CUSE *i* 01 52 37.9
comp=Z,2µm,0.3s
BARC Barichara 4.22 55 *eP* Pn 01 51 39.6 +1.2
BARC *eS* Sn **01 52 28.0 +1.1**
BARC *i* 01 52 32.0
comp=Z,974nm,0.4s
OTAV Otavalo 4.27 205 Pn Pn 01 51 38.8 -0.6
OTAV Otavalo 4.27 205 *eP* Pn 01 51 38.9 -0.3
OTAV *eS* Sn **01 52 27.1 -1.2**
OTAV Otavalo 4.27 205 *eP* Pn 01 51 38.7 -0.6
OTAV *eS* Sn **01 52 25.0 -3.4**
PTLC Puerto Leguiza 4.35 155⇓*eP* Pn 01 51 44.7 +4.8
PTLC *i* 01 53 07.3
comp=Z,202nm,0.4s
PAC1 Pacto, Paraso 4.40 209 *eP* Pn 01 51 38.6 -2.1
PAC1 *eS* Sn **01 52 25.4 -5.7**
PAC1 *i* 01 52 31.2
comp=Z,1µm,0.2s
PULU Pululahua 4.49 204 Pn 01 51 42.5 +0.4
PTGC Puerto Gaitan, 4.50 89 *eP* Pn 01 51 42.3 +0.4
CAPC Capurgana 4.53 351 *eP* Pn 01 51 42.2 0.0
CAPC *eS* Sn **01 52 33.3 -0.5**
CAPC *i* 01 52 40.2
comp=Z,351nm,0.5s
UPD2 Meteti 4.59 343 *eP* Pn 01 51 44.5 +1.3
UPD2 *eS* Sn **01 52 35.4 -0.1**
UPD2 Meteti 4.59 343⇓*eP* Pn 01 51 44.2 +1.1
UPD2 *eS* Sn **01 52 35.2 -0.3**
TOTI Torti 5.04 341⇓*iP* Pn 01 51 49.4 +0.1
TOTI *eS* Sn **01 52 46.2 -0.2**
PAMC Pamplona, Colo 5.05 51 *eP* Pn 01 51 49.0 +0.1
PAMC *eS* Sn **01 52 47.0 -0.3**
PAMC *i* 01 52 52.1
comp=Z,266nm,0.3s
AZU Azuero 5.12 315 *eP* Pn 01 51 50.2 -0.2
AZU *eS* Sn **01 52 47.0 -1.3**
AZU Azuero 5.12 315 *eP* Pn 01 51 49.9 -0.4
AZU *eS* Sn **01 52 45.8 -2.5**
SLOR San Lorenzo - 5.17 201 Pn Pn 01 51 50.6 -0.9
OCAC Ocana 5.25 39 *eP* Pn 01 51 51.6 -0.6
OCAC *eS* Sn **01 52 50.4 -1.2**
OCAC *i* 01 52 57.9
comp=Z,1µm,0.4s
CACAO El Cacao, Vera 5.27 307⇑*eP* Pn 01 51 51.2 -1.1
CACAO *eS* Sn **01 52 49.2 -2.7**
CACAO El Cacao, Vera 5.27 307 *eP* Pn 01 51 51.2 -1.1
CACAO *eS* Sn **01 52 47.7 -4.2**
CACAO *i* 01 52 52.1
comp=Z,430nm,0.1s
CHIT3 Chitre 5.34 316 *eP* Pn 01 51 53.5 +0.2
CHIT3 *eS* Sn **01 52 51.5 -2.1**
TAMC Tame, Arauca 5.34 64 *eP* Pn 01 51 54.0 +0.6
TAMC *eS* Sn **01 52 54.0 +0.2**
PIAT Ana Tenorio 5.35 198 *eP* Pn 01 51 53.9 +0.2
CNTA3 Canitas, Panam 5.52 336 *eP* Pn 01 51 56.2 +0.4
MARI3 Mariato, Verag 5.56 309 *eP* Pn 01 51 56.3 +0.1
CHPO Chepo, Panama 5.57 334 *eP* Pn 01 51 56.4 -0.1
CHPO *eS* Sn **01 52 57.7 -1.5**
PNME Penonome 5.67 320 *eP* Pn 01 51 58.7 +1.0
PNME *eS* Sn **01 53 02.9 +1.5**
CRIS3 El Cristo, Coc 5.69 316 *eP* Pn 01 51 58.9 +0.9
ZANG Zanguenga, Cho 5.76 326 *eP* Pn 01 51 59.4 +0.4
ZANG *eS* Sn **01 53 06.0 +2.1**
GMAL Guarumal, Vera 5.82 309 *eP* Pn 01 52 00.4 +0.6
GMAL *eS* Sn **01 53 06.4 +1.2**
GMAL Guarumal, Vera 5.82 309 *eP* Pn 01 52 00.3 +0.6
GMAL *eS* Sn **01 53 06.4 +1.2**
GMAL *i* 01 53 09.5
comp=Z,277nm,0.2s
CALO3 Calobre, Verag 5.89 315 *eP* Pn 01 52 01.8 +1.0
SJCC San Jacinto, C 5.91 14 *eP* Pn 01 52 01.2 +0.2
FRIJ El Hiral 5.91 329 *eP* Pn 01 52 01.3 +0.2
BCIP Isla Barro Col 5.92 328 Pn Pn 01 52 01.2 0.0
BCIP Isla Barro Col 5.92 328 *eP* Pn 01 52 02.7 +1.5
BCIP *eS* Sn **01 53 06.4 -1.3**
BCIP Isla Barro Col 5.92 328 *eP* Pn 01 52 01.0 -0.2
BCIP *eS* Sn **01 53 05.7 -2.0**
BCIP *i* 01 53 14.4
comp=Z,339nm,0.5s
MLIR Monte Lirio 5.99 328 *eP* Pn 01 52 02.2 0.0
CHSH Refugio Sur-Vo 6.02 202 Pn Pn 01 52 03.1 +0.1
ARGC Ariguani, Magd 6.16 23 *eP* Pn 01 52 07.9 +3.4
ARGC *eS* Sn **01 53 17.4 +3.7**
LL6C La Loma 6 Bece 6.49 31 *eP* Pn 01 52 09.0 0.0
LL6C *eS* Sn **01 53 22.3 +0.6**
LL6C *i* 01 53 45.4
comp=Z,74nm,0.7s
PPLP Puerto Lpez 6.99 216 *eP* Pn 01 52 12.3 -3.4
PPLP *eS* Sn **01 53 30.0 -3.8**
COHC Cochancay 7.06 202 Pn 01 52 13.6 -3.1
COHC Cochancay 7.06 202 *eP* Pn 01 52 14.2 -2.4
DVD David 7.18 307 *eP* Pn 01 52 20.0 +1.7
CHGR2 Aguacate 7.25 311 *eP* Pn 01 52 21.0 +1.7
SMRC Santa Marta, M 7.38 19 *eP* Pn 01 52 21.4 +0.3
SMRC *eS* Sn **01 53 38.7 -4.6**
BCO2 Palmira 7.41 308 *eP* Pn 01 52 24.0 +2.4
BOSC San Juan Bosco 7.47 194 Pn 01 52 21.4 -1.0
BRU2 Volcan 7.58 308 Pn Pn 01 52 24.7 +0.8
BRU2 Volcan 7.58 308 *eP* Pn 01 52 25.6 +1.7
BRU2 *eS* Sn **01 53 46.9 -1.5**
CDITO Canoas 7.60 306 Pn 01 52 24.6 +0.6
SDV Santo Domingo 7.61 51 Pn Pn 01 52 24.6 +0.2
SDV Santo Domingo 7.61 51 P Pn 01 52 24.3 0.0
comp=Z,70nm,0.3s,baz=178,slow=5.5,SNR=81
SDV S Sn **01 53 43.9 -5.2**
comp=Z,74nm,0.4s,baz=240,slow=23,SNR=6.1
SDV LR LR 01 55 50.1
comp=Z,503nm,20.7s,baz=231,slow=41
SDV Santo Domingo 7.61 51 *eP* Pn 01 52 24.2 -0.1
SDV Santo Domingo 7.61 51 *eP* Pn 01 52 23.5 -0.8
SDV *eS* Sn **01 53 44.8 -4.4**
SDV *i* 01 53 50.7
comp=Z,66nm,0.6s
SALI Salinas 7.63 215 Pn Pn 01 52 21.0 -3.5
CRJC Cerrejon, Guaj 7.79 28 *eP* Pn 01 52 25.1 -1.6
CRJC *eS* Sn **01 53 47.7 -5.6**
DRK0 Durika 8.30 308 Pn 01 52 34.9 +1.1
PEZE Perez Zeledon, 8.71 307 Pn 01 52 39.7 +0.4
MCRA Macar, Loja 9.07 201 *eP* Pn 01 52 39.8 -4.3
MCRA *eS* Sn 01 54 14.9 -10
RIMA Rio Macho 9.09 308 Pn Pn 01 52 45.5 +1.1
LCR2 La Lucha 2 9.19 308 Pn Pn 01 52 46.6 +0.9
HDC Heredia 9.43 309 *eP* Pn 01 52 51.7 +2.7
BAUV El Baul 9.79 60 Pn Pn 01 52 49.9 -3.9
JTS Las Juntas de 10.26 307 Pn Pn 01 53 02.4 +2.1
JTS Las Juntas de 10.26 307 P Pn 01 53 03.4 +3.2
comp=Z,26nm,0.9s,baz=109,slow=10,SNR=14
JTS S Sn **01 54 57.6 +4.2**
comp=Z,10.0nm,1.0s,baz=278,slow=19,SNR=1.7
JTS LR LR 01 57 15.4
comp=Z,222nm,20.0s,baz=125,slow=39
AUA1 Aruba 10.59 38 Pn Pn 01 53 05.0 +0.3
TBTG Tabatinga, AM 10.66 141 Pn Pn 01 53 05.3 -0.3
TBTG Tabatinga, AM 10.66 141 *eP* Pn 01 53 02.8 -2.8
ORTG Ortega, Santa 10.71 306 Pn Pn 01 53 07.2 +0.8
ESPN Las Esperanzas 11.02 317 Pn Pn 01 53 12.1 +1.6
HATO Hato, Curacao 11.03 43 Pn Pn 01 53 10.9 +0.3
ATAH Atahualpa 11.33 189 P Pn 01 53 18.4 +3.4
comp=Z,8.5nm,0.8s,baz=360,slow=8.0,SNR=7.2
BOAB BOACO BROADBAND 12.16 313 Pn Pn 01 53 27.9 +2.2
CZSB Cruzeiro do Su 12.42 162 Pn Pn 01 53 27.1 -2.1
CZSB Cruzeiro do Su 12.42 162 *eP* Pn 01 53 27.5 -1.7
PCRV Puerto La Cruz 13.34 63 P Pn 01 53 42.0 +0.8
comp=Z,9.6nm,0.7s,baz=245,slow=4.2,SNR=6.3
PCRV S Sn 01 55 58.9 -9.2
comp=Z,9.9nm,0.8s,baz=94,slow=23,SNR=1.3
PCRV LR LR 02 00 06.0
comp=Z,189nm,18.3s,slow=43
TEFE Tefe 14.20 122 *eP* Pn 01 53 52.5 +0.1
PAYG Puerto Ayora 14.45 251 P P 01 54 00.7 +1.3
SDDR Presa de Saban 15.66 19 P P 01 54 12.6 -0.3
GTBY Guantanamo Bay 15.77 5 P P 01 54 13.6 -0.4
NNA Nana 16.02 181 P P 01 54 16.8 0.0
comp=Z,8.2nm,0.3s,baz=9.3,slow=10,SNR=9.6
NNA LR LR 02 01 04.5
comp=Z,144nm,21.9s,baz=344,slow=39
MTO3 Montecristo 16.16 310 Pn Pn 01 54 16.9 -0.4
BOAV Boa Vista 16.19 96 Pn 01 54 15.9 -1.6
BOAV Boa Vista 16.19 96 *eP* Pn 01 54 16.6 -0.8
OBIP Obispado Ponce 16.96 35 Pn 01 54 26.3 -0.6
CELP Cerrillos 17.00 35 Pn 01 54 26.8 -0.6
UUPR Utuado, UPR, P 17.06 34 P 01 54 28.6 +0.3
AOPR Arecibo Observ 17.12 34 Pn 01 54 28.7 -0.2
SJG San Juan 17.28 36 P P 01 54 29.3 -1.3
SJG San Juan 17.28 36 P P 01 54 29.1 -1.6
comp=Z,36nm,0.7s,baz=227,slow=11,SNR=12
ETMB Extrema 17.32 143 P P 01 54 30.1 -1.2
ETMB Extrema 17.32 143 *eP* P 01 54 30.8 -0.4
MACA Manacapuru-AM 17.52 114 P P 01 54 32.9 -0.5
MACA Manacapuru-AM 17.52 114 *eP* P 01 54 33.3 -0.1
PETF Flores 18.16 315 P Pn 01 54 42.1 +0.7
SAML Samuel 18.68 134 P P 01 54 46.2 0.0
SAML Samuel 18.68 134 *eP* P 01 54 46.0 -0.1
SMRT St. Maarten 19.18 43 P P 01 54 51.5 0.0
CCIG Comitan 19.43 310 P P 01 54 54.2 -0.2
CMIG Matias Romero 22.04 307 LR LR 02 04 49.6
comp=Z,95nm,18.4s,baz=128,slow=39
ITTB Itaituba 22.53 112 *eP* P 01 55 26.1 -1.4
MALB Monte Alegre 23.14 104 *eP* P 01 55 32.3 -1.2
VILB Vilhena 23.56 136 P P 01 55 37.2 0.0
VILB Vilhena 23.56 136 *eP* P 01 55 37.5 +0.2
NPGB Novo Progresso 23.97 118 *eP* P 01 55 39.7 -1.3
DWPF Disney Wildern 24.28 350 P P 01 55 45.1 +1.5
baz=169
PB11 IPOC Station P 24.72 164 P P 01 55 48.3 +0.5
GO01 Chusmiza 24.76 163 P P 01 55 49.1 +0.5
PDRB Porto dos Gac 25.24 128 *eP* P 01 55 52.2 -0.4
SIV San Ignacio 25.24 143 LR LR 02 05 53.1
comp=Z,67nm,19.5s,baz=295,slow=36
656A Willston 25.71 348 IAmb IAmb 01 55 59.5
comp=Z,36nm,1.0s
PB01 IPOC Station P 25.99 165 P P 01 55 59.8 +0.5
PB01 IAmb IAmb 01 56 01.5
comp=Z,36nm,0.8s
PTLB Pontes e Lacer 26.06 139 P P 01 55 59.1 -0.8
PTLB Pontes e Lacer 26.06 139 *eP* P 01 55 59.6 -0.3
PB02 IPOC Station P 26.15 166 IAmb IAmb 01 56 04.6
comp=Z,22nm,0.6s
BBSD Serra de San D 26.45 144 *eP* P 01 56 02.3 -1.1
PB09 IPOC Station P 26.77 165 IAmb IAmb 01 56 36.1
comp=Z,33nm,1.3s
LVC Limon Verde 27.63 164 P P 01 56 13.8 -0.5
LVC Limon Verde 27.63 164 LR LR 02 09 59.6
comp=Z,85nm,18.9s,baz=316,slow=42
LVC Limon Verde 27.63 164 *eP* P 01 56 14.7 +0.3
BBRB Robore, Bolivi 27.77 144 *eP* P 01 56 13.9 -1.4
TIGA Tifton 27.94 347 P P 01 56 18.2 +1.7
baz=165
BRAL Brewton 28.62 341 P P 01 56 25.1 +2.4
baz=158
SALV Santo Antonio 28.74 134 *eP* P 01 56 23.5 -0.4
NHSC New Hope 29.01 354 P P 01 56 28.7 +2.7
baz=173
250A Grady 29.14 343 IAmb IAmb 01 56 30.3
comp=Z,33nm,0.8s
152A Waverly Hall 29.38 346 IAmb IAmb 01 56 31.5
comp=Z,12nm,0.8s
GOGA Godfrey 29.82 348 P P 01 56 35.1 +1.9
baz=166
SNDB Serra Nova Dou 29.86 123 *eP* P 01 56 33.6 -0.2
GO02 Mina Guanaco 29.92 167 IAmb IAmb 01 56 37.2
comp=Z,13nm,0.8s
Z51A Franklin 30.11 346 IAmb IAmb 01 56 38.4
comp=Z,18nm,0.8s
LRAL Lakeview Retre 30.34 343 P P 01 56 39.0 +1.2
LRAL IAmb IAmb 01 56 40.2
comp=Z,22nm,0.9s
LRAL Lakeview Retre 30.34 343 P P 01 56 39.5 +1.7
baz=159,SNR=12
HODGE Hodges 30.40 351 P P 01 56 39.7 +1.4
HODGE IAmb IAmb 01 56 40.8
comp=Z,9.5nm,0.7s
BIRD Birdtown, Kers 30.57 354 IAmb IAmb 01 56 42.6
comp=Z,20nm,1.0s
VBMS Vicksburg 30.82 337 P P 01 56 43.2 +1.1
baz=152
Z47A Carrollton 30.82 341 IAmb IAmb 01 56 43.8
comp=Z,21nm,0.7s
CNNC Cliffs of the 30.97 358 P P 01 56 44.8 +1.4
baz=178
KMSC Kings Mountain 31.16 353 P P 01 56 45.6 +0.6
baz=171
X51A Calhoun 31.23 347 IAmb IAmb 01 56 48.4
comp=Z,12nm,0.9s
BG3 Lake Jocassee 31.25 350 P P 01 56 47.9 +2.0
BG3 IAmb IAmb 01 56 48.8
comp=Z,18nm,0.9s
BDQN Bodoquena, MS 31.28 142 *eP* P 01 56 44.9 -1.3
FPAL Fort Paine 31.38 346 P P 01 56 48.6 +1.5
RVDE Rio Verde (Bra 31.41 138 *eP* P 01 56 47.1 -0.3
AC02 Maricunga 31.63 167 IAmb IAmb 01 56 53.2
comp=Z,14nm,0.8s
X48A Hartselle 31.68 343 IAmb IAmb 01 56 51.5
comp=Z,14nm,0.7s
MURT Porto Murtinho 31.70 145 *eP* P 01 56 48.2 -1.7
SMTB Santa Maria do 31.71 114 *eP* P 01 56 49.6 -0.6
V53A Saluda 31.89 350 IAmb IAmb 01 56 53.8
comp=Z,10nm,0.8s
W50A Signal Mountai 31.94 347 P P 01 56 52.5 +0.6
W50A IAmb IAmb 01 56 54.5
comp=Z,27nm,1.1s
AQDB Aquidauana 31.95 141 IAmb IAmb 01 56 52.2
comp=Z,19nm,0.8s
AQDB Aquidauana 31.95 141 *eP* P 01 56 51.2 -0.9
TKL Tuckaleechee C 32.05 349 LR LR 02 09 49.6
comp=Z,38nm,21.2s,baz=148,slow=36
SWET Sewanee 32.10 346 IAmb IAmb 01 56 55.1
comp=Z,10nm,0.8s
V52A Sevierville 32.20 349 IAmb IAmb 01 57 54.1
comp=Z,47nm,1.8s
NATX Nacogdoches 32.27 330 P P 01 56 55.8 +1.0
baz=145
V51A Loudon 32.31 348 IAmb IAmb 01 56 57.3
comp=Z,24nm,1.2s
833A Chaparral WMA, 32.36 320 P P 01 56 56.1 +0.5
baz=134
T59A Double "B" Far 32.69 359 IAmb IAmb 01 57 00.7
comp=Z,17nm,0.8s
TZTN Tazewell 32.87 350 P P 01 57 02.0 +1.9
baz=167
ANTJ Antonio Joao (32.90 143 *eP* P 01 56 59.2 -1.3
CLTN Cedars of Leba 33.03 346 IAmb IAmb 01 57 03.6
comp=Z,11nm,0.8s
BLA Blacksburg 33.10 354 P P 01 57 04.4 +2.4
baz=173
HNDO Hondo 33.13 322 IAmb IAmb 01 57 03.2
comp=Z,8.3nm,0.8s
RPRD Ribas do Rio P 33.25 138 *eP* P 01 57 02.7 -0.8
AC05 El Transito 33.35 170 IAmb IAmb 01 57 06.7
comp=Z,8.9nm,0.9s
WVT Waverly 33.47 343 P P 01 57 05.6 +0.4
WVT IAmb IAmb 01 57 06.3
comp=Z,12nm,0.8s
WVT Waverly 33.47 343 P P 01 57 05.7 +0.5
baz=160
WVT Waverly 33.47 343 P P 01 57 05.3 +0.1
WVT PcP **PcP 01 59 43.6 -0.6**
T50A Nancy 33.58 348 IAmb IAmb 01 57 08.0
comp=Z,12nm,1.2s
S54A Dingess, Beckl 33.78 353 IAmb IAmb 01 57 10.7
comp=Z,29nm,1.3s
WHTX Lake Whitney, 33.90 327 P P 01 57 09.9 +0.9
baz=141
CBN Corbin Frederi 33.92 359 P P 01 57 09.7 +0.6
baz=179
S51A Beattyville 33.95 350 IAmb IAmb 01 57 12.2
comp=Z,16nm,0.9s
MIAR Mount Ida 34.10 335 P P 01 57 10.7 0.0
baz=149
LCAR Lake Charles 34.48 339 IAmb IAmb 01 57 15.1
comp=Z,22nm,1.5s
BDFB Brasilia 34.48 125 P P 01 57 13.1 -1.3
BDFB IAmb IAmb 01 57 14.9
comp=Z,10nm,0.9s
BDFB Brasilia 34.48 125 P P 01 57 13.5 -0.9
comp=Z,6.4nm,0.8s,baz=280,slow=8.9,SNR=11
BDFB LR LR 02 12 56.1
comp=Z,109nm,18.3s,baz=290,slow=39
comp=Z,6.4nm,0.8s
R50A Paris 34.70 349 IAmb IAmb 01 57 17.8
comp=Z,12nm,1.0s
PBMO Poplar Bluff 34.87 340 IAmb IAmb 01 57 17.9
comp=Z,13nm,0.7s
R49A Shelbyville 34.88 348 IAmb IAmb 01 57 19.2
comp=Z,9.7nm,0.8s
ITRB Iturama 35.06 133 *eP* P 01 57 17.8 -1.3
WCI Wyandotte Cave 35.06 347 P P 01 57 19.5 +0.6
WCI Wyandotte Cave 35.06 347 P P 01 57 19.8 +0.9
baz=163
WCI Wyandotte Cave 35.06 347 P P 01 57 19.6 +0.7
WCI PcP **PcP 01 59 48.5 -0.1**
CGM3 Cape Girardeau 35.10 342 IAmb IAmb 01 57 19.8
comp=Z,8.7nm,0.7s
SAND Sanderson 35.21 320 P P 01 57 20.8 +0.3
SAND PcP **PcP 01 59 50.5 +1.2**
Q51A Peebles 35.26 351 IAmb IAmb 01 57 22.9
comp=Z,16nm,0.8s
MCWV Mont Chateau 35.48 356 P P 01 57 24.8 +2.3
baz=174
SDBA SAO DESIDERIO 35.57 118 *eP* P 01 57 23.1 -0.6
ABTX Abilene, Hawle 35.59 325 IAmb IAmb 01 57 24.5
comp=Z,18nm,0.9s
ABTX Abilene, Hawle 35.59 325 P P 01 57 24.5 +0.9
baz=138
CPUP Villa Florida 35.59 149 P P 01 57 21.0 -2.6
comp=Z,1.6nm,0.9s,baz=338,slow=13,SNR=4.1
CPUP LR LR 02 13 56.8
comp=Z,50nm,19.1s,baz=336,slow=39
CPUP Villa Florida 35.59 149 *eP* P 01 57 20.9 -2.8
CPUP Villa Florida 35.59 149 P P 01 57 20.8 -2.8
IPMB Ipameri, GO 35.63 129 *eP* P 01 57 22.8 -1.3
PCMB Pacaembu 35.67 137 *eP* P 01 57 23.3 -1.1
P52A Corning 35.69 353 P P 01 57 26.1 +1.8
baz=171,SNR=5.8
MVL Millersville 35.70 0 P P 01 57 26.2 +1.8
MVL IAmb IAmb 01 57 27.4
comp=Z,16nm,0.9s
HHAR Hobbs 35.74 336 IAmb IAmb 01 57 25.5
comp=Z,18nm,1.0s
TX31 Lajitas Ar. Si 35.83 317 P P 01 57 26.3 +0.5
TX31 PcP **01 59 51.9 +0.6**
TXAR Lajitas Array 35.83 317 P P 01 57 26.0 +0.2
comp=Z,1.0nm,0.8s,baz=140,slow=10,SNR=9.8
TXAR PcP **PcP 01 59 52.4 +1.1**
comp=Z,2.1nm,0.5s,baz=148,slow=6.6,SNR=30
comp=Z,1.0nm,0.8s
MGMO Mountain Grove 35.85 338 IAmb IAmb 01 57 26.8
comp=Z,6.0nm,0.7s
P49A Miami Univ. Ec 35.99 349 IAmb IAmb 01 57 28.3
comp=Z,16nm,1.0s
P49A Miami Univ. Ec 35.99 349 P P 01 57 27.9 +1.0
baz=166
P48A Milroy 36.06 348 IAmb IAmb 01 57 28.5
comp=Z,23nm,1.1s
U38A Gravette 36.06 335 IAmb IAmb 01 57 28.0
comp=Z,16nm,0.8s
O53A New Philadelph 36.19 354 IAmb IAmb 01 57 31.1
comp=Z,15nm,0.8s
O53A New Philadelph 36.19 354 P P 01 57 30.6 +2.0
baz=172,SNR=5.1
TUL3 Leonard 36.22 333 P P 01 57 29.2 +0.3
baz=146,SNR=6.6
CCM Cathedral Cave 36.30 340 P P 01 57 29.4 -0.2
CCM IAmb IAmb 01 57 30.1
comp=Z,15nm,0.8s
CCM Cathedral Cave 36.30 340 P P 01 57 29.6 +0.1
baz=155
CCM Cathedral Cave 36.30 340 P P 01 57 29.2 -0.3
CCM PcP **PcP 01 59 52.5 +0.1**
SSPA Standing Stone 36.36 358 P P 01 57 30.9 +0.9
SSPA IAmb IAmb 01 57 32.9
comp=Z,15nm,0.9s
SSPA Standing Stone 36.36 358 P P 01 57 31.6 +1.6
baz=178
SSPA Standing Stone 36.36 358 P P 01 57 31.8 +1.9
SSPA PcP **PcP 01 59 52.2 -0.2**
S39A Bolivar 36.72 338 IAmb IAmb 01 57 33.7
comp=Z,11nm,0.7s
WMOK Wichita Mounta 36.73 329 IAmb IAmb 01 57 34.3
comp=Z,14nm,1.4s
WMOK Wichita Mounta 36.73 329 P P 01 57 33.9 +0.6
baz=141
O48B Farmland 36.77 349 P P 01 57 34.5 +1.0
baz=166
PAL Palisades 36.79 3 P P 01 57 35.1 +1.5
baz=184
OK033 Mehan 36.86 332 P P 01 57 34.6 +0.3
OK033 **pP 01 57 56.7 -1.2**
R40A Maddies Statio 36.86 339 IAmb IAmb 01 57 34.6
comp=Z,8.8nm,0.8s
POST Post 36.98 324 IAmb IAmb 01 57 36.6
comp=Z,10nm,0.8s
LDASE Londrina, Braz 36.99 139 *eP* P 01 57 33.8 -1.9
VA03 San Esteban 37.15 171 IAmb IAmb 01 57 39.3
comp=Z,10.0nm,0.8s
BB19B Bebedouro 37.24 133 *eP* P 01 57 36.8 -1.1
N49A Columbus Grove 37.25 351 IAmb IAmb 01 57 39.1
comp=Z,17nm,0.9s
KSPA Keystone Colle 37.27 1 P P 01 57 39.5 +1.8
JANB Januaria 37.27 121 *eP* P 01 57 37.6 -0.6
SFIN Lafayette 37.30 347 P P 01 57 37.8 -0.1
baz=163,SNR=5.5
M53A WI Miller and 37.32 355 IAmb IAmb 01 57 40.6
comp=Z,15nm,0.8s
M53A WI Miller and 37.32 355 P P 01 57 40.3 +2.2

baz=173
PMNB **Patos De Minas** 37.33 128 *e*P P 01 57 37.9 -0.7
PTGB **Pitanga** 37.33 141 *e*P P 01 57 36.2 -2.3
M52A **Chesterland** 37.48 354 IAmb IAmb 01 57 41.7
comp=Z,20nm,0.9s
VHRN **Van Horn** 37.63 318 P P 01 57 41.6 +0.5
VHRN IAmb IAmb 01 57 45.8
comp=Z,20nm,1.9s
FRBT **Francisco Belt** 37.66 144 *e*P P 01 57 39.0 -2.3
SMWD **Samnorwood** 37.78 328 IAmb IAmb 01 57 45.7
comp=Z,7.0nm,0.7s
P40A **Paris** 37.90 340 IAmb IAmb 01 57 43.3
comp=Z,12nm,1.1s
BINY **Binghamton** 37.91 1 IAmb IAmb 01 57 45.6
comp=Z,18nm,0.8s
BINY **Binghamton** 37.91 1 P P 01 57 45.1 +2.0
baz=181
ERPA **Erie** 37.94 356 P P 01 57 45.4 +2.1
baz=175
FRTB **Fartura** 38.00 137 *e*P P 01 57 42.3 -1.9
HDIL **Hopedale** 38.01 344 P P 01 57 43.4 -0.5
baz=159
CRSM **Crissiumal (Br** 38.27 147 *e*P P 01 57 43.6 -2.7
BO04 **La Punta** 38.34 172 IAmb IAmb 01 57 49.3
comp=Z,8.7nm,0.8s
MSTX **Muleshoe** 38.37 324 IAmb IAmb 01 57 48.7
comp=Z,16nm,0.9s
MSTX **Muleshoe** 38.37 324 P P 01 57 47.6 +0.4
baz=135,SNR=6.5
K57A **Scipio Center** 38.43 0 P P 01 57 48.3 +0.8
MNTX **Cornudas Mount** 38.47 319 P P 01 57 48.9 +0.8
baz=130,SNR=9.5
HRV **Adam Dziewonsk** 38.48 6 P P 01 57 49.1 +1.3
baz=188
AAM **Ann Arbor** 38.52 352 P P 01 57 49.8 +1.6
baz=169
ITQB **Itaqui** 38.71 152 *e*P P 01 57 47.5 -2.4
UNIS **Unistalda (Bra** 38.98 149 *e*P P 01 57 50.2 -2.0
J58A **Remsen** 39.08 2 IAmb IAmb 01 57 55.5
comp=Z,17nm,0.8s
ITAB **Concordia** 39.15 144 *e*P P 01 57 52.1 -1.5
KSU1 **Kansas State U** 39.25 335 P P 01 57 54.1 -0.2
baz=148,SNR=6.3
DIAM **Diamantina, MG** 39.41 125 *e*P P 01 57 55.4 -0.7
SPB **Sao Paulo** 39.63 135 *e*P P 01 57 56.3 -1.4
NCB **Newcomb** 39.73 3 IAmb IAmb 01 58 00.8
comp=Z,28nm,1.1s
ALGR **Alto Alegre (B** 39.84 147 *e*P P 01 57 57.1 -2.4
RODS **Rosario do Sul** 39.96 151 *e*P P 01 57 59.0 -1.3
RTBA **Rita Blanca** 40.12 327 IAmb IAmb 01 58 03.2
comp=Z,17nm,0.8s
LBNH **Lisbon** 40.16 5 P P 01 58 03.9 +2.1
baz=187
LONY **Lake Ozonia** 40.36 2 P P 01 58 05.3 +1.8
baz=183
CBKS **Cedar Bluff** 40.41 332 P P 01 58 04.7 +0.7
baz=143
JFWS **Jewell Farm** 40.47 345 P P 01 58 03.9 -0.5
baz=159,SNR=5.4
SADO **Sadowa** 40.53 357 IAmb IAmb 01 58 06.8
comp=Z,23nm,0.9s
SADO **Sadowa** 40.53 357 LR LR 02 15 22.2
comp=Z,35nm,21.7s,baz=244,slow=37
121A **Cookes Peak, D** 40.58 318 P P 01 58 06.8 +1.0
121A **Cookes Peak, D** 40.58 318 P P 01 58 08.3 +2.5
baz=128,SNR=32
FRNY **Flat Rock** 40.62 3 P P 01 58 06.7 +1.1
PARB **Paraibuna** 40.76 133 *e*P P 01 58 06.4 -0.7
CPSB **Cacapava Do Su** 40.89 149 *e*P P 01 58 05.6 -2.4
319A **Douglas** 40.93 315 IAmb IAmb 01 58 11.6
comp=Z,15nm,1.1s
ANMO **Albuquerque** 41.26 322 P P 01 58 11.8 +0.6
ANMO IAmb IAmb 01 58 13.7
comp=Z,10.0nm,0.9s
ANMO **Albuquerque** 41.26 322 P P 01 58 12.9 +1.6
baz=131
ANMO **Albuquerque** 41.26 322 P P 01 58 12.7 +1.5
PKME **Peaks-Kenny Pk** 41.47 8 P P 01 58 14.4 +1.9
baz=191
T25A **Trinidad** 41.55 326 IAmb IAmb 01 58 16.9
comp=Z,31nm,1.6s
T25A **Trinidad** 41.55 326 P P 01 58 15.2 +1.5
baz=136
VAS01 **Vassouras-RJ** 41.75 130 *e*P P 01 58 14.9 -0.3
BGNE **Belgrade** 41.82 336 P P 01 58 16.2 +0.6
baz=147
GUA01 **Guaratinga, BA** 41.83 120 *e*P P 01 58 15.3 -0.6
PLTB **Pedras Altas** 41.90 150 *e*P P 01 58 13.8 -2.5
DUB01 **Friburgo-RJ** 42.46 129 *e*P P 01 58 20.4 -0.7
TUC **Tucson** 42.51 315 P P 01 58 22.5 +1.1
TUC IAmb IAmb 01 58 23.9
comp=Z,10.0nm,0.9s
TUC **Tucson** 42.51 315 P P 01 58 22.8 +1.5
baz=124
TUC **Tucson** 42.51 315 P P 01 58 22.9 +1.5
TUC sP sP 01 58 58.7 +1.5
TUC PcP PcP 02 00 13.0 +0.6
SDCO **Great Sand Dun** 42.59 326 IAmb IAmb 01 58 24.6
comp=Z,8.9nm,0.7s
SDCO **Great Sand Dun** 42.59 326 P P 01 58 24.0 +1.8
baz=135,SNR=17
RIB01 **Linhares ES** 42.60 124 *e*P P 01 58 21.3 -0.8
ALF01 **Guarapari-ES** 42.98 126 *e*P P 01 58 24.3 -0.8
ECSD **EROS Data Cent** 43.21 339 P P 01 58 25.9 -0.8
ECSD IAmb IAmb 01 58 26.1
comp=Z,8.9nm,0.8s
D62A **Allapoint, All** 43.28 8 IAmb IAmb 01 58 30.0
comp=Z,18nm,0.9s
SPMN **Marine on St.** 43.30 343 IAmb IAmb 01 58 28.0
comp=Z,15nm,0.6s
SPMN **Marine on St.** 43.30 343 P P 01 58 26.9 -0.5
baz=156,SNR=7.2
S22A **4UR Ranch, Cre** 43.35 325 P P 01 58 30.1 +1.7
baz=133,SNR=5.4
W18A **Petrified Fore** 43.44 319 IAmb IAmb 01 58 31.8
comp=Z,17nm,0.8s
W18A **Petrified Fore** 43.44 319 P P 01 58 31.1 +2.1
baz=128,SNR=6.6
LMQ **La Malbaie** 43.59 6 P P 01 58 30.8 +1.1
LMQ IAmb IAmb 01 59 09.2
comp=Z,43nm,1.7s
214A **Organ Pipe Nat** 43.77 314 IAmb IAmb 01 58 34.1
comp=Z,13nm,0.9s
214A **Organ Pipe Nat** 43.77 314 P P 01 58 33.1 +1.7
baz=122,SNR=6.4
VLDQ **Val d'Or** 43.82 359 IAmb IAmb 01 58 33.8
comp=Z,19nm,0.8s
LDAQ **Lac Daran** 43.91 5 P P 01 58 33.2 +0.8
MVCO **Mesa Verde** 43.99 323 IAmb IAmb 01 58 35.7
comp=Z,24nm,1.6s
MVCO **Mesa Verde** 43.99 323 P P 01 58 34.6 +1.3
baz=131
F36A **Milaca** 44.09 343 IAmb IAmb 01 58 34.4
comp=Z,31nm,1.2s
ISCO **Idaho Springs** 44.12 328 P P 01 58 35.6 +1.2
baz=136,SNR=6.5
E38A **The Farm, Brul** 44.24 345 IAmb IAmb 01 58 35.2
comp=Z,17nm,0.7s
SMCO **Snowmass** 44.42 326 IAmb IAmb 01 58 41.0
comp=Z,14nm,0.7s
WUAZ **Wupatki** 44.75 319 P P 01 58 42.0 +2.5
baz=126
Y14A **Wickenburg** 44.96 316 IAmb IAmb 01 58 43.3
comp=Z,26nm,1.9s
PLCA **Paso Flores** 45.00 173 P P 01 58 41.4 +0.3
comp=Z,2.5nm,0.7s,baz=355,slow=8.6,SNR=10
comp=Z,2.5nm,0.7s
PLCA **Paso Flores** 45.00 173 *e*P P 01 58 40.8 -0.3
PLCA **Paso Flores** 45.00 173 P P 01 58 42.1 +1.0
PLCA sP sP 01 59 18.2 +0.7
EYMN **Ely** 45.48 346 P P 01 58 44.2 -0.5
EYMN IAmb IAmb 01 58 44.9
comp=Z,16nm,0.6s
EYMN **Ely** 45.48 346 P P 01 58 44.4 -0.4
baz=159,SNR=5.4
O20A **White River Ci** 45.79 326 P P 01 58 48.6 +1.0
baz=133
HMU **Henry Mountain** 45.82 322 IAmb IAmb 01 58 50.4
comp=Z,20nm,0.9s
BLYC **Blythe** 45.93 315 P P 01 58 49.5 +1.0
BLYC IAmb IAmb 01 58 51.0
comp=Z,17nm,1.2s
B35A **Bob, Littlefor** 46.43 344 IAmb IAmb 01 58 52.0
comp=Z,12nm,0.7s
BC3 **Big Chuckawall** 46.55 314 P P 01 58 55.2 +1.8
baz=121

RSSD **Black Hills** 46.57 333 P P 01 58 54.3 +0.7
RSSD IAmb IAmb 01 58 55.6
comp=Z,14nm,0.8s
RSSD **Black Hills** 46.57 333 P P 01 58 55.1 +1.5
baz=141
RSSD **Black Hills** 46.57 333 P P 01 58 54.8 +1.2
IRM **Iron Mountain** 46.58 315 P P 01 58 55.2 +1.5
baz=121
RDMU **Red Mountain** 46.83 325 IAmb IAmb 01 58 57.8
comp=Z,11nm,1.0s
MONP2 **Monument Peak** 46.87 312 P P 01 58 57.5 +1.4
baz=119
AGMN **Agassiz Nation** 46.98 343 P P 01 58 56.3 -0.2
baz=153
BELC **Belle Mtn. Jos** 47.11 314 P P 01 58 59.5 +1.6
baz=120
PFO **Pinyon Flats O** 47.25 313 LR LR 02 20 21.0
comp=Z,47nm,19.1s,baz=138,slow=38
GMRC **Granite Mounta** 47.27 315 P P 01 59 00.6 +1.4
baz=121
MPU **Maple Canyon** 47.67 323 P P 01 59 01.7 -0.5
HEC **Hector,Ludlow** 47.77 315 P P 01 59 04.6 +1.7
baz=121
MURC **Murrieta** 47.78 313 P P 01 59 04.7 +1.7
baz=119
MDND **Maddock** 47.81 339 P P 01 59 03.4 +0.4
baz=148
TCUT **Tone Canyon** 48.24 325 IAmb IAmb 01 59 08.5
comp=Z,16nm,0.6s
BW06 **Boulder Array** 48.31 328 P P 01 59 08.0 +0.8
baz=134
PDAR **Pinedale Array** 48.31 328 P P 01 59 07.2 0.0
comp=Z,1.7nm,0.6s,baz=128,slow=9.9,SNR=25
PDAR PcP PcP 02 00 32.2 -0.3
comp=Z,0.6nm,0.7s,baz=118,slow=5.3,SNR=1.7
PDAR LR LR 02 23 53.4
comp=Z,36nm,18.4s,baz=130,slow=41
comp=Z,1.7nm,0.6s
GSC **Goldstone, Bar** 48.34 315 IAmb IAmb 01 59 09.8
comp=Z,8.2nm,0.9s
GSC **Goldstone, Bar** 48.34 315 P P 01 59 09.0 +1.7
baz=121
DUG **Dugway, Tooele** 48.49 323 P P 01 59 09.7 +1.3
baz=128,SNR=8.4
ULM **Lac du Bonnet** 48.74 344 IAmb IAmb 01 59 09.8
comp=Z,16nm,0.9s
ULM **Lac du Bonnet** 48.74 344 P P 01 59 08.9 -1.1
comp=Z,9.6nm,0.5s,baz=150,slow=8.6,SNR=31
ULM PcP PcP 02 00 32.8 -0.8
comp=Z,3.4nm,0.5s,baz=144,slow=4.2,SNR=4.5
ULM LR LR 02 20 50.2
comp=Z,50nm,18.9s,baz=115,slow=37
comp=Z,9.6nm,0.5s
EDW2 **Edwards Air Fo** 48.98 314 P P 01 59 13.0 +0.8
baz=119
BGU **Big Grassy Mou** 49.07 323 P P 01 59 11.8 -1.1
R11B **Troy Canyon, C** 49.14 319 P P 01 59 14.3 +0.8
baz=124
MPMC **Manual Prospec** 49.20 316 P P 01 59 15.1 +1.0
baz=121
TPAW **Teton Pass** 49.55 327 IAmb IAmb 01 59 17.0
comp=Z,5.1nm,0.6s
GRAC **Grapevine Rang** 49.60 317 P P 01 59 18.4 +1.6
baz=121
MOOW **Moose Ponds** 49.62 328 P P 01 59 17.1 0.0
ARVC **Arvin** 49.70 314 P P 01 59 19.2 +1.6
baz=119
ISA **Isabella, Lake** 49.70 315 P P 01 59 19.3 +1.6
baz=119
RLMT **Red Lodge** 49.81 330 IAmb IAmb 01 59 20.9
comp=Z,5.2nm,0.6s
RLMT **Red Lodge** 49.81 330 P P 01 59 19.2 +0.6
baz=135,SNR=8.7
DGMT **Dagmar** 50.06 336 P P 01 59 20.9 +0.8
baz=143
VES **Vestal, Richgr** 50.22 314 P P 01 59 23.5 +2.0
baz=119
PKM **Mcpherson Peak** 50.30 313 P P 01 59 24.1 +1.7
baz=118
SMMC **Simmler** 50.63 313 P P 01 59 26.6 +1.9
baz=118
NV11 **Mina Array Sit** 50.88 318 IAmb IAmb 01 59 30.4
comp=Z,9.4nm,1.1s
NVAR **Mina Array Bea** 50.98 318 P P 01 59 28.6 +1.2
comp=Z,4.6nm,0.7s,baz=128,slow=7.0,SNR=18
NVAR PcP PcP 02 00 42.5 +0.1
comp=Z,3.8nm,0.6s,baz=130,slow=4.1,SNR=8.8
comp=Z,4.6nm,0.7s
LHV **Little Huntoon** 51.02 317 P P 01 59 28.4 +0.9
LHV IAmb IAmb 01 59 58.7
comp=Z,11nm,0.7s
SCHQ **Schefferville** 51.17 7 P P 01 59 29.1 +0.8
comp=Z,22nm,0.7s,baz=193,slow=7.0,SNR=54
SCHQ PcP PcP 02 00 42.0 -0.3
comp=Z,5.1nm,0.8s,baz=176,slow=3.7,SNR=4.4
comp=Z,22nm,0.7s
BOZ **Bozeman (W)** 51.34 329 IAmb IAmb 01 59 31.5
comp=Z,5.7nm,0.7s
BOZ **Bozeman (W)** 51.34 329 P P 01 59 30.1 +0.2
baz=133,SNR=7.7
BMN **Battle Mountai** 51.35 321 IAmb IAmb 01 59 32.0
comp=Z,12nm,1.1s
HLID **Hailey** 51.51 325 P P 01 59 32.3 +0.9
baz=129,SNR=7.4
EGMT **Eagleton** 52.13 332 P P 01 59 36.7 +1.0
baz=136
WVOR **Wild Horse Val** 53.35 322 IAmb IAmb 01 59 46.5
comp=Z,12nm,0.9s
PLID **Pearl Lake** 53.35 326 IAmb IAmb 01 59 46.4
comp=Z,8.1nm,1.2s
J08A **Cirle Bar Ran** 53.77 323 IAmb IAmb 01 59 49.6
comp=Z,12nm,1.1s
FFC **Flin Flon** 54.46 342 P P 01 59 52.2 -0.3
FFC IAmb IAmb 01 59 52.6
comp=Z,5.8nm,0.7s
FFC **Flin Flon** 54.46 342 P P 01 59 52.0 -0.5
F10A **Beach Ranch, E** 54.58 326 IAmb IAmb 02 01 06.3
comp=Z,17nm,1.6s
G08A **Pilot Rock** 55.16 325 IAmb IAmb 01 59 59.5
comp=Z,9.5nm,0.8s
NEW **Newport** 55.93 328 P P 02 00 03.6 +0.4
baz=129
FCC **Fort Churchill** 56.15 349 IAmb IAmb 02 00 04.4
comp=Z,13nm,0.8s
C09A **Chrisman Ranch** 56.25 327 IAmb IAmb 02 00 07.5
comp=Z,7.1nm,0.7s
EDM **Edmonton** 57.45 335 IAmb IAmb 02 00 13.9
comp=Z,8.6nm,0.7s
NUUK **Nuuk** 62.58 12 *e*P P 02 00 49.6 +1.0
HILA **High Level** 62.66 338 P P 02 00 49.0 -0.4
YKA **Yellowknife Ar** 64.62 342 P P 02 01 01.5 -0.7
comp=Z,7.3nm,0.6s,baz=134,slow=6.1,SNR=164
comp=Z,7.3nm,0.6s
SFJD **Kangerlussuaq** 65.28 11 *e*P P 02 01 05.3 -1.1
DY2G **Dye2** 65.73 13 *e*P P 02 01 09.5 0.0
DY2G IAmb IAmb 02 01 10.9
comp=Z,14nm,0.5s
ILULI **Ilulissat** 67.16 10 P P 02 01 18.5 +0.2
T35M **Bob Quinn** 67.42 331 P P 02 01 21.8 +1.5
baz=120
DLBC **Dease Lake** 68.05 333 P P 02 01 25.5 +1.3
baz=120,SNR=5.3
WRGLY **Wrigley** 68.10 339 P P 02 01 25.0 +0.6
baz=128
CRAG **Craig** 68.13 329 P P 02 01 26.0 +1.3
baz=116
S34M **Telegraph Cree** 68.30 332 IAmb IAmb 02 01 27.4
comp=Z,7.4nm,0.8s
S34M **Telegraph Cree** 68.30 332 P P 02 01 26.8 +1.2
baz=119,SNR=5.5
WTLY **Watson Lake, Y** 68.38 335 P P 02 01 27.1 +0.9
baz=122,SNR=8.3
TGTN **Hyland Airport** 68.93 336 P P 02 01 31.1 +1.4
baz=123,SNR=7.5
NUUG **Nuugaatsiaq** 68.94 8 *e*P P 02 01 29.4 0.0
NUUG IAmb IAmb 02 01 30.6
comp=Z,14nm,0.6s
R33M **Jennings River** 68.95 334 P P 02 01 30.9 +1.0
baz=120
Q32M **Nakina River** 69.33 333 P P 02 01 33.3 +1.0
baz=118
ICESG **Greenland Ices** 69.34 13 *i*P P 02 01 32.1 -0.2
ICESG IAmb IAmb 02 01 34.5
comp=Z,56nm,1.4s
S32K **Killisnoo** 69.73 331 P P 02 01 35.9 +1.3
baz=116
MORF **Marmelete** 70.05 52 *e*P P 02 01 38.3 +1.3
comp=Z,26nm,1.4s

R32K **Eaglecrest** 70.06 332 P P 02 01 37.4 +0.8
baz=116
P33M **Teslin, Yukon** 70.17 334 P P 02 01 38.4 +1.1
baz=118
P32M **Atlin** 70.28 333 P P 02 01 39.1 +1.1
baz=117
PNCL **Nicolau / Gran** 70.29 51 *e*P P 02 01 39.4 +1.0
comp=Z,21nm,1.9s
MESJ **Messejana** 70.48 51 *e*P P 02 01 39.4 -0.2
comp=Z,19nm,2.1s
PCVE **Castro Verde** 70.58 52 *e*P P 02 01 41.1 +0.9
comp=Z,14nm,2.0s
PBDV **Barranco-do-Ve** 70.60 52 *e*P P 02 01 40.9 +0.6
comp=Z,19nm,1.5s
PCAS **Casmilo, Conde** 70.68 49 *e*P P 02 01 41.7 +1.0
comp=Z,33nm,1.5s
MMPY **Sheldon Lake,** 70.70 336 P P 02 01 41.7 +1.2
baz=120,SNR=6.6
COI **Coimbra** 70.77 49 *e*P P 02 01 42.1 +0.8
comp=Z,29nm,1.6s
SKAG **Skagway** 70.96 333 P P 02 01 42.9 +1.0
baz=116
PESTR **Estremoz** 71.15 50 *e*P P 02 01 43.9 +0.3
comp=Z,18nm,1.6s
PESTR **Estremoz** 71.15 50 P P 02 01 43.8 +0.2
PVIS **Viseu** 71.26 48 *e*P P 02 01 44.6 +0.3
TIC **Toumodi** 71.30 84⇑ *e*P P 02 01 47.1 +2.1
comp=Z,35nm,1.0s
LIC **Lamto** 71.31 85⇑ *i*P P 02 01 43.9 -1.1
comp=Z,10nm,0.4s
FARO **Faro, Yukon** 71.35 336 P P 02 01 45.4 +1.0
baz=118,SNR=6.4
PCBR **Castelo Branco** 71.41 49 *e*P P 02 01 46.2 +1.1
comp=Z,14nm,1.7s
PBAR **Barrancos** 71.46 51 *e*P P 02 01 43.6 -1.8
comp=Z,12nm,1.8s
POLO **Lamas de Olo** 71.46 48 *e*P P 02 01 45.3 -0.2
comp=Z,13nm,1.4s
DBIC **Dimbokro** 71.46 84 P P 02 01 45.6 -0.3
comp=Z,4.4nm,0.4s,baz=268,slow=7.5,SNR=27
comp=Z,4.4nm,0.4s
DBIC **Dimbokro** 71.46 84 P P 02 01 45.3 -0.6
DBIC pP pP 02 02 11.2 -1.2
DBIC sP sP 02 02 23.1 -0.7
PVRL **Vila Real** 71.50 48 *e*P P 02 01 46.1 +0.4
comp=Z,11nm,1.9s
KIC **Kosan Boka** 71.59 85⇑ *e*P P 02 01 45.7 -1.0
comp=Z,15nm,0.5s
M31M **Drury Creek, Y** 71.77 335 P P 02 01 48.1 +1.2
baz=117,SNR=5.1
O30N **Mendenhall** 71.87 334 IAmb IAmb 02 01 49.2
comp=Z,9.5nm,0.7s
O30N **Mendenhall** 71.87 334 P P 02 01 48.6 +1.1
baz=115,SNR=11
P30M **Million Dollar** 71.98 333 P P 02 01 49.5 +1.3
baz=114
MVO **Moncorvo** 71.98 48 *e*P P 02 01 49.1 +0.4
comp=Z,19nm,1.2s
P29M **Windy Craggy** 72.14 332 P P 02 01 50.4 +1.2
baz=114
SUMG **Summit** 72.27 11 P P 02 01 50.5 +0.3
SUMG **Summit** 72.27 11 *i*P P 02 01 50.4 +0.2
SUMG IAmb IAmb 02 01 51.1
comp=Z,22nm,0.6s
PBRG **Braganca** 72.31 47 *e*P P 02 01 51.0 +0.4
comp=Z,18nm,1.8s
HYT **Haines Junctio** 72.52 333 P P 02 01 52.9 +1.4
baz=114
N30M **Aishikik Lake** 72.60 334 IAmb IAmb 02 01 53.9
comp=Z,12nm,0.7s
N30M **Aishikik Lake** 72.60 334 P P 02 01 53.5 +1.6
baz=115,SNR=13
O29M **Mount Kennedy** 72.80 333 P P 02 01 54.3 +1.2
baz=113
PNL **Peninsula** 72.94 332 P P 02 01 54.9 +1.1
baz=112
M30M **Minto, Yukon** 72.94 335 IAmb IAmb 02 03 40.4
comp=Z,11nm,0.7s
M30M **Minto, Yukon** 72.94 335 P P 02 01 54.7 +0.8
baz=115,SNR=17
YUK6 **Outpost Mounta** 72.95 333 P P 02 01 55.4 +1.2
baz=113
MAYO **Mayo, Yukon** 73.02 336 P P 02 01 56.1 +1.9
baz=116
YUK4 **Talbot Arm** 73.24 334 P P 02 01 57.4 +1.5
baz=113,SNR=7.5
H31M **Peel River** 73.45 339 P P 02 01 58.1 +1.3
baz=118
PINM **Pinnacle** 73.49 332 P P 02 01 58.4 +1.2
baz=111
M29M **Somme Creek** 73.59 335 P P 02 01 58.8 +1.0
baz=114
J30M **Hart River** 73.62 337 P P 02 01 59.4 +1.5
baz=116
YUK8 **Steele Glacier** 73.71 333 P P 02 02 00.0 +1.4
baz=112,SNR=6.1
L29M **L29M** 73.72 335 P P 02 01 59.8 +1.3
baz=114
K29M **Barlow Dome** 73.78 336 IAmb IAmb 02 02 00.0
comp=Z,9.4nm,0.6s
K29M **Barlow Dome** 73.78 336 P P 02 02 00.1 +1.3
baz=115
I30M **Mount Dempster** 73.93 338 P P 02 02 00.3 +0.6
baz=116
G31M **Satah River** 73.96 340 IAmb IAmb 02 02 00.5
comp=Z,9.6nm,0.8s
G31M **Satah River** 73.96 340 P P 02 02 00.0 +0.4
baz=119,SNR=8.1
F31M **Tsiigehtchic** 74.03 340 P P 02 01 60.0 -0.1
baz=119
TABL **Table Mountain** 74.03 332 IAmb IAmb 02 02 02.2
comp=Z,8.4nm,0.7s
ESDC **Sonseca Array** 74.06 50 P P 02 02 01.3 +0.5
ESDC **Sonseca Array** 74.06 50 P P 02 02 01.4 +0.5
comp=Z,3.6nm,0.5s,baz=269,slow=6.0,SNR=91
comp=Z,3.6nm,0.5s
A36M **Sachs Harbour** 74.14 346 IAmb IAmb 02 02 00.6
comp=Z,20nm,0.8s
A36M **Sachs Harbour** 74.14 346 P P 02 01 59.7 -0.9
baz=129,SNR=27
YUK3 **Moose Creek** 74.20 334 P P 02 02 02.7 +1.2
baz=112,SNR=9.3
CTGM **Chitina Glacie** 74.30 333 IAmb IAmb 02 02 03.9
comp=Z,7.9nm,0.7s
CTG **Chitna Glacier** 74.31 333 P P 02 02 03.5 +1.5
baz=110,SNR=5.3
J29N **Klondike Camp** 74.31 337 IAmb IAmb 02 03 40.9
comp=Z,37nm,0.3s
J29N **Klondike Camp** 74.31 337 P P 02 02 03.3 +1.4
baz=114
MESA **MESA** 74.32 332 P P 02 02 04.1 +2.0
baz=110
INK **Inuvik** 74.39 341 P P 02 02 02.3 +0.2
baz=120,SNR=6.0
NEEM **North Greenlan** 74.53 6 *e*P P 02 02 02.2 -1.0
NEEM IAmb IAmb 02 02 04.3
comp=Z,32nm,1.2s
EPYK **Eagle Plains** 74.57 339 IAmb IAmb 02 02 08.5
comp=Z,26nm,1.6s
EPYK **Eagle Plains** 74.57 339 P P 02 02 03.6 +0.4
baz=116
BVCY **Beaver Creek** 74.61 334 P P 02 02 04.6 +1.0
baz=111
DAWY **Dawson** 74.62 336 P P 02 02 04.3 +0.6
baz=113
G30M **tAoh Zraii Nji** 74.67 339 P P 02 02 04.2 +0.4
baz=117
F30M **Barrier River** 74.80 340 P P 02 02 05.5 +0.9
baz=118
WAX **Waxell Ridge** 74.83 332 P P 02 02 05.3 +0.3
WAX IAmb IAmb 02 02 06.8
comp=Z,7.4nm,0.7s
TGL **Tana Glacier** 74.92 332 IAmb IAmb 02 02 07.2
comp=Z,9.4nm,0.8s
BGLC **Bering Glacier** 74.93 332 P P 02 02 06.5 +1.1
baz=108
M27K **Edge Creek, AK** 75.04 334 P P 02 02 07.1 +0.9
baz=110
CRQE **Cirque** 75.04 332 P P 02 02 07.1 +0.9
baz=109
H29M **Whitestone** 75.11 338 P P 02 02 06.9 +0.6
baz=115
BERG **Berg Lake** 75.21 332 IAmb IAmb 02 02 09.0
comp=Z,14nm,0.7s
MCARA **McCarthy VSAT** 75.22 333 IAmb IAmb 02 02 09.6
comp=Z,11nm,1.0s
MCARA **McCarthy VSAT** 75.22 333 P P 02 02 08.6 +1.6
baz=109,SNR=6.9

L27K	Beaver Creek, baz=111	75.26	335	P	P	02 02 08.9 +1.5
VRDI	Verde Repeater	75.36	333	P	P	02 02 08.2 +0.1
I28M	Miner Creek comp=Z,17nm,1.5s	75.38	337	IAmb	IAmb	02 03 03.2
I28M	Miner Creek baz=113,SNR=8.0	75.38	337	P	P	02 02 08.7 +0.7
HMT	Hamilton comp=Z,13nm,0.6s	75.46	332	IAmb	IAmb	02 02 10.2
EGAK	Eagle baz=112	75.61	336	P	P	02 02 10.2 +1.0
K27K	Chicken baz=111	75.71	336	P	P	02 02 11.3 +1.5
BMRM	Bremner River baz=108,SNR=15	75.81	332	P	P	02 02 11.5 +0.9
E29M	Blow River comp=Z,16nm,1.1s	75.86	340	IAmb	IAmb	02 02 11.8
E29M	Blow River baz=116,SNR=16	75.86	340	P	P	02 02 10.7 +0.1
N25K	Chitina, Valde baz=108	76.00	333	P	P	02 02 12.6 +0.9
I27K	Kandik River baz=111	76.09	337	P	P	02 02 12.4 +0.4
F28M	Old Crow baz=114,SNR=8.5	76.22	339	P	P	02 02 12.8 +0.1
H27K	Steamboat Moun baz=112,SNR=5.7	76.29	338	P	P	02 02 13.3 +0.2
J26L	Joseph Creek baz=109	76.48	336	P	P	02 02 15.4 +1.1
SCRK	Sand Creek	76.48	335	P	P	02 02 15.0 +0.7
SCRK	Sand Creek baz=109,SNR=10	76.48	335	P	P	02 02 15.0 +0.7
HARP	HAARP baz=107	76.50	334	P	P	02 02 15.3 +0.9
D28M	Stokes Point baz=115	76.54	341	P	P	02 02 14.9 +0.5
KLU	Klutina baz=106	76.58	333	P	P	02 02 15.3 +0.4
I26K	Coal Creek Min baz=110	76.59	337	P	P	02 02 15.4 +0.7
PAX	Paxson baz=107	76.80	334	P	P	02 02 16.5 +0.4
M24K	Tolsona, Glenn baz=106	76.87	333	P	P	02 02 17.0 +0.5
GLI	Glacier Island baz=105	76.96	332	P	P	02 02 16.7 -0.3
K24K	Donnelly Dome baz=107	77.18	335	P	P	02 02 19.1 +0.9
D27M	Malcolm River baz=113	77.23	341	P	P	02 02 18.5 +0.1
EKA	Eskdalemuir Ar comp=Z,4.1nm,0.6s,baz=257,slow=4.5,SNR=25 comp=Z,4.1nm,0.6s	77.25	34	P	P	02 02 18.4 -0.3
J25K	Salcha River, baz=108	77.25	336	P	P	02 02 19.3 +0.6
SCM	Sheep Creek Mo baz=105	77.31	333	P	P	02 02 19.4 +0.3
G26K	Porcupine Rive baz=110	77.39	338	P	P	02 02 19.2 0.0
M23K	Glacier View baz=105	77.49	333	P	P	02 02 20.4 +0.5
PRP	Porcupine Dome	77.59	337	P	P	02 02 20.9 +0.3
PRP	Porcupine Dome baz=108,SNR=6.4	77.59	337	P	P	02 02 20.9 +0.3
WAT6	Susitna Watana baz=105	77.70	333	P	P	02 02 21.7 +0.5
TORD	Torodi Ar. Bea comp=Z,1.9nm,0.5s,baz=292,slow=5.4,SNR=5.1 comp=Z,1.9nm,0.5s	77.73	78	P	P	02 02 21.4 -0.7
KNK	Knik Glacier baz=104	77.73	332	P	P	02 02 22.0 +0.7
F26K	Sheenjek River baz=110,SNR=7.0	77.77	339	P	P	02 02 22.1 +0.7
SML	Sawmill baz=104	77.77	333	P	P	02 02 21.3 -0.2
BMAR	Burnt Mountain	77.84	339	P	P	02 02 22.1 +0.3
HDA	Harding Lake baz=106,SNR=27	77.85	335	P	P	02 02 21.6 -0.3
SEW	Seward baz=103	77.90	331	P	P	02 02 22.6 +0.4
IL31	comp=Z,8.2nm,0.6s	77.92	336	IAmb	IAmb	02 02 22.8
ILAR	Eielson Array comp=Z,6.1nm,0.6s,baz=115,slow=4.1,SNR=145	77.92	336	P	P	02 02 21.9 -0.3
ILAR	comp=Z,0.4nm,0.8s,baz=99,slow=8.3,SNR=3.6 comp=Z,6.1nm,0.6s			PP	PP	02 05 20.2 +0.8
WAT1	Susitna Watana baz=104	78.12	334	P	P	02 02 24.3 +0.8
POKR	Poker Plat Res baz=106	78.24	336	P	P	02 02 24.4 +0.3
RC01	Rabbit Creek A baz=103	78.26	332	P	P	02 02 24.6 +0.4
F25K	Christian Rive baz=108,SNR=6.0	78.28	339	P	P	02 02 25.1 +0.9
COLA	College baz=105	78.35	336	P	P	02 02 25.3 +0.8
RND	Reindeer comp=Z,11nm,0.8s	78.40	334	IAmb	IAmb	02 02 26.5
E25K	Arctic Village baz=108,SNR=6.5	78.42	339	P	P	02 02 25.8 +0.8
BRSE	Bradley Lake S baz=102	78.45	330	P	P	02 02 25.6 +0.3
MCK	McKinley baz=104	78.51	334	P	P	02 02 25.7 +0.2
MDM	Murphy Dome comp=Z,7.2nm,0.6s	78.53	336	IAmb	IAmb	02 02 26.3
M22K	Willow baz=103	78.58	332	P	P	02 02 26.6 +0.7
H24K	Noodor Dome baz=106	78.62	337	P	P	02 02 26.7 +0.5
G24K	Hadweenzic Riv	78.70	337	P	P	02 02 25.7 -0.8
G24K	Hadweenzic Riv baz=106,SNR=6.6	78.70	337	P	P	02 02 27.3 +0.8
C26K	Camden Bay baz=109	78.77	341	P	P	02 02 27.5 +0.7
NEA2	Nenana comp=Z,14nm,0.7s	78.78	335	IAmb	IAmb	02 02 27.7
NEA2	Nenana baz=104,SNR=7.7	78.78	335	P	P	02 02 27.0 0.0
CUT	Chulitna baz=103	78.80	333	P	P	02 02 27.3 +0.2
SUA	Susitna One baz=102	78.81	332	P	P	02 02 27.7 +0.3
BWN	Browne comp=Z,21nm,0.8s	78.85	335	IAmb	IAmb	02 02 28.3
KDAK	Kodiak Island baz=100	79.03	328	P	P	02 02 28.8 +0.3
TRF	Thorofare Moun comp=Z,37nm,1.8s	79.04	334	IAmb	IAmb	02 03 27.6
TRF	Thorofare Moun baz=103	79.04	334	P	P	02 02 28.7 +0.1
I23K	Minto, Yukon-K baz=104,SNR=7.1	79.04	336	P	P	02 02 28.8 +0.5
D25K	Kavik River baz=108	79.07	340	P	P	02 02 29.3 +0.8
F24K	Squaw Lake baz=106	79.08	338	P	P	02 02 29.4 +0.8
SKT	Skwentna comp=Z,42nm,2.0s	79.28	332	IAmb	IAmb	02 04 46.4
SKT	Skwentna baz=102	79.28	332	P	P	02 02 29.9 +0.1
O20K	Slope Mountain baz=100	79.45	330	P	P	02 02 30.5 -0.3
BPAW	Bear Paw Mtn. comp=Z,10.0nm,0.6s	79.48	335	IAmb	IAmb	02 02 31.4
BPAW	Bear Paw Mtn. baz=102,SNR=8.3	79.48	335	P	P	02 02 30.7 -0.1
MLY	Manley baz=103,SNR=8.4	79.58	335	P	P	02 02 31.3 -0.1
P19K	Oil Pt baz=100	79.68	330	P	P	02 02 32.2 +0.2
G23K	Bananza Creek baz=104	79.68	337	P	P	02 02 33.0 +1.1
PPLA	Purkeypile baz=101,SNR=5.3	79.77	333	P	P	02 02 32.6 0.0
CAST	Castle Rocks baz=101,SNR=5.3	79.82	334	P	P	02 02 32.4 -0.3
D24K	Happy Valley baz=105	79.86	340	P	P	02 02 32.8 0.0
E23K	Chandalar baz=104	79.86	339	P	P	02 02 33.3 +0.5
COLD	Coldfoot baz=104,SNR=10	79.87	338	P	P	02 02 33.8 +0.9
TOLK	Toolik Lake Re baz=104	79.98	339	P	P	02 02 33.4 -0.2
M20K	Styx River baz=100	80.01	332	P	P	02 02 33.7 -0.1
CHUM	Lake Minchumin baz=101	80.01	334	P	P	02 02 33.9 +0.3
H22K	Ishtalitna Cre baz=102	80.03	336	P	P	02 02 34.0 +0.3
I21K	Tanana baz=102	80.13	336	P	P	02 02 34.2 0.0
G22K	Bettles baz=102	80.30	337	P	P	02 02 36.6 +1.5
O19K	Port Alsworth baz=99	80.31	330	P	P	02 02 34.9 -0.3
D23K	Nanushuk River baz=104	80.45	339	P	P	02 02 36.6 +0.7
L20K	Farewell, AK baz=100	80.46	333	P	P	02 02 35.5 -0.6
N19K	Bonanza Creek baz=99	80.48	331	P	P	02 02 35.9 -0.5
H21K	Melozitna Rive baz=101	80.56	336	P	P	02 02 36.3 -0.3
M19K	Big River Lodg baz=99	80.60	332	P	P	02 02 37.0 +0.1
P18K	Big Mountain, baz=98	80.65	329	P	P	02 02 36.6 -0.6
E22K	Anaktuvuk Pass baz=102	80.67	338	P	P	02 02 37.4 +0.1
K20K	Telida comp=Z,31nm,1.9s	80.69	334	IAmb	IAmb	02 02 37.1
K20K	Telida baz=99	80.69	334	P	P	02 02 37.2 -0.1
O18K	Koktuh Hills baz=98	80.70	330	P	P	02 02 37.5 0.0
Q17K	Contact Creek baz=97	80.84	328	P	P	02 02 38.2 -0.1
J20K	Nowinta River baz=100	80.86	334	P	P	02 02 38.0 -0.2
L19K	White Mountain baz=98	80.86	332	P	P	02 02 38.9 +0.6
I20K	Naaghedeneel baz=99	81.10	335	P	P	02 02 39.9 +0.5
F21K	Alatna River baz=101	81.12	337	P	P	02 02 40.2 +0.6
D22K	Ayikyak River comp=Z,18nm,1.6s	81.14	339	IAmb	IAmb	02 02 41.6
D22K	Ayikyak River baz=102	81.14	339	P	P	02 02 40.4 +0.7
N18K	Kilae Creek baz=97	81.14	331	P	P	02 02 39.8 0.0
TAM	Tamanrasset	81.20	68	P	P	02 02 41.0 -0.1
M18K	Stony River baz=98	81.22	332	P	P	02 02 40.2 +0.1
Q16K	King Salmon baz=96	81.29	329	P	P	02 02 40.8 +0.3
H20K	Anotleneega Mo baz=99	81.38	336	P	P	02 02 40.7 -0.2
J19K	Poorman baz=98	81.47	334	P	P	02 02 41.4 0.0
TTA	Tatalina baz=98	81.50	333	P	P	02 02 41.3 -0.4
E21K	Killik River baz=100	81.52	339	P	P	02 02 41.9 +0.2
O17K	Koliganek Bris baz=96	81.64	330	P	P	02 02 42.5 +0.2
L18K	Granite Mounta baz=97	81.72	332	P	P	02 02 42.9 +0.2
C21K	Whiteblade Rid baz=100	81.94	339	P	P	02 02 44.6 +0.7
F20K	Avaraart Lake baz=98	81.95	337	P	P	02 02 44.2 +0.3
B21K	Ikpikpuk River baz=100	81.96	340	P	P	02 02 44.1 +0.2
M17K	Holitna River baz=96	81.98	331	P	P	02 02 44.2 0.0
P16K	Nushagak River baz=95	82.02	329	P	P	02 02 44.7 +0.4
H19K	Roundabout Mou baz=98	82.03	336	P	P	02 02 44.6 +0.3
GCSA	Galena City Sc baz=97	82.11	335	P	P	02 02 45.0 +0.3
WLF	Walferdange comp=Z,12nm,1.0s	82.20	41	IAmb	IAmb	02 02 47.4
E20K	Nigu River baz=98	82.31	338	P	P	02 02 46.8 +1.0
G19K	Purcell Mounta baz=97	82.37	336	P	P	02 02 46.6 +0.4
L17K	Donlin baz=96	82.46	332	P	P	02 02 47.0 +0.4
K17K	Iditarod baz=96	82.52	333	P	P	02 02 47.4 +0.5
D20K	Etivluk River baz=98	82.53	339	P	P	02 02 47.5 +0.6
N16K	Nishlik Lake baz=95	82.54	330	P	P	02 02 47.6 +0.5
CHNA	Chernabura Isl baz=93	82.57	325	P	P	02 02 47.8 +0.5
E19K	Redstone River baz=97	82.59	337	P	P	02 02 47.6 +0.3
M16K	Timber Creek baz=95	82.67	331	P	P	02 02 48.2 +0.4
F19K	Shaleruckik Mo baz=96	82.73	337	P	P	02 02 48.3 +0.4
H18K	Honhosa River baz=96	82.78	335	P	P	02 02 49.5 +1.2
B20K	Meade River baz=98	82.89	340	P	P	02 02 49.6 +0.9
A21K	Barrow baz=98	82.89	341	P	P	02 02 49.5 +0.8
L16K	Owhat River baz=94	82.98	332	P	P	02 02 50.6 +1.3
G18K	Tagagawik baz=96	82.98	336	P	P	02 02 49.9 +0.6
D19K	Kuna River baz=96	83.04	338	P	P	02 02 50.2 +0.6
M15K	Kasigluk River baz=93	83.50	330	P	P	02 02 52.9 +0.9
J16K	Anvik River baz=94	83.61	333	P	P	02 02 53.6 +1.0
C19K	Lookout Ridge baz=95	83.64	339	P	P	02 02 53.8 +1.2
G17K	Kiwalik Mounta baz=93	83.77	335	P	P	02 02 54.2 +0.8
E18K	Tukpahlearik C baz=94	83.88	337	P	P	02 02 54.6 +0.8
L15K	Ungalak Mounta baz=93	83.93	331	P	P	02 02 54.9 +0.7
N14K	Kuskokwak Cree baz=92	83.96	330	P	P	02 02 55.0 +0.7
K15K	Wolf Creek Mou baz=93	83.98	332	P	P	02 02 55.6 +1.1
F17K	Baldwin Pennin baz=93	84.07	336	P	P	02 02 55.7 +0.9
M14K	Bethel baz=92	84.12	331	P	P	02 02 56.1 +0.9
C18K	Utukok River baz=94	84.19	339	P	P	02 02 55.8 +0.3
E17K	Hotham Inlet baz=93,SNR=11	84.34	337	P	P	02 02 56.7 +0.5
KEST	Kesra comp=Z,3.0nm,0.6s,baz=297,slow=2.3,SNR=6.5 comp=Z,3.0nm,0.6s	84.35	55	P	P	02 02 57.5 +0.4
H16K	Elim baz=92	84.40	334	P	P	02 02 57.3 +0.8
B18K	Kokolik River baz=93	84.44	339	P	P	02 02 57.6 +0.9
G16K	Koyuk River baz=92	84.48	335	P	P	02 02 57.4 +0.5
L14K	Kuka Creek baz=92	84.49	331	P	P	02 02 57.6 +0.5
DAVA	Damuels comp=Z,1.4nm,0.5s	84.63	43	eP	P	02 02 58.8 +0.5
D17K	Noatak River baz=92	84.85	338	P	P	02 02 59.1 +0.4
C17K	DeLong Mountai baz=92	84.91	338	P	P	02 02 59.5 +0.5
J14K	Nanvaranak Lak baz=91	84.93	333	P	P	02 03 00.6 +1.4
G15K	Nulukluk baz=91	85.18	335	P	P	02 03 01.8 +1.4
NB2	NORSAR Subarra comp=Z,2.1nm,0.8s,baz=272,slow=4.8	85.37	29	P	P	02 03 01.6 +0.1
NOA	NORSAR Array B comp=Z,2.2nm,0.9s,baz=269,slow=4.9,SNR=5.1 comp=Z,2.2nm,0.9s	85.37	29	P	P	02 03 00.8 -0.7
F15K	North Star Dit baz=90	85.44	335	P	P	02 03 02.9 +1.2
MOTA	Moosalm comp=Z,1.0nm,0.5s	85.46	43	iP	P	02 03 02.6 +0.2
SQTA	Sankt Quirin comp=Z,0.7nm,0.3s	85.53	43	eP	P	02 03 03.0 +0.3
C16K	Lisburne Hills baz=90	85.70	338	P	P	02 03 03.7 +0.7
ANM	Nome baz=89	85.75	334	P	P	02 03 03.9 +0.6
WTTA	Wattenberg comp=Z,8.9nm,1.5s	85.82	43	iP	P	02 03 04.8 +0.5
M11K	Mekoryuk baz=88	86.22	330	P	P	02 03 06.2 +0.6
ABTA	Abfaltersbach comp=Z,3.5nm,0.8s	86.44	44	eP	P	02 03 07.6 +0.4
LESA	Schwarzleotal comp=Z,1.6nm,0.6s	86.53	43	iP	P	02 03 07.7 +0.1
CLL	Collm comp=Z,4.0nm,0.7s	86.58	39	iP	P	02 03 07.9 +0.3
SPITS	Spitsbergen Ar comp=Z,3.6nm,0.5s,baz=176,slow=2.5,SNR=22 comp=Z,3.6nm,0.5s	86.60	12	P	P	02 03 07.7 +0.4
HFS	Hagfors comp=Z,3.4nm,0.6s,baz=194,slow=0.6,SNR=20 comp=Z,3.4nm,0.6s	86.61	30	P	P	02 03 07.1 -0.5
TNA	Tin City baz=87	86.80	335	P	P	02 03 08.9 +0.5
KBA	Koelnbreinsper comp=Z,0.7nm,0.4s	87.00	43	eP	P	02 03 10.1 +0.1
GERES	GERESS Array B comp=Z,1.8nm,0.7s,baz=317,slow=5.5,SNR=5.8 comp=Z,1.8nm,0.7s	87.15	41	P	P	02 03 11.0 +0.4
MYKA	Terra Mystica comp=Z,0.4nm,0.3s	87.22	44	iP	P	02 03 11.2 +0.3
ARSA	Arzberg comp=Z,0.9nm,0.4s	88.47	43	eP	P	02 03 17.1 +0.3
GAMB	Gambell baz=84	88.56	334	P	P	02 03 17.4 +0.5
CONA	Conrad Observa comp=Z,0.6nm,0.4s	88.64	42	iP	P	02 03 18.1 +0.4
ARCES	ARCESS Array B comp=Z,3.2nm,0.9s,baz=256,slow=3.6,SNR=3.0 comp=Z,3.2nm,0.9s	90.39	20	P	P	02 03 25.0 -0.3
FINES	FINESS Array B comp=Z,1.5nm,0.6s,baz=264,slow=3.8,SNR=9.1 comp=Z,1.5nm,0.6s	92.45	28	P	P	02 03 34.6 -0.4
QSPA	South Pole Qui comp=Z,3.0nm,1.0s,baz=171,slow=4.4,SNR=4.9 comp=Z,3.0nm,1.0s	94.16	180	P	P	02 03 44.0 +1.2
BVAR	Borovoye Array comp=Z,0.6nm,0.6s,baz=325,slow=1.8,SNR=2.7	116.64	22	PKP	PKPdf	02 09 07.5 -0.5
ZALV	Zalesovo Beam comp=Z,1.0nm,0.4s,baz=280,slow=2.4,SNR=4.0	120.08	13	PKP	PKPdf	02 09 13.4 -1.2
KURBB	Kurchatov Arra comp=Z,1.9nm,0.5s,baz=322,slow=2.3,SNR=18	121.43	18	PKP	PKPdf	02 09 17.0 -0.3
USRK	Ussuriysk Ar. comp=Z,1.1nm,0.6s,baz=193,slow=2.5,SNR=4.2	125.44	335	PKP	PKPdf	02 09 23.9 -1.2
MKAR	Makanchi Array comp=Z,1.5nm,0.5s,baz=295,slow=2.7,SNR=43	125.98	18	PKP	PKPdf	02 09 25.3 -0.9
SONM	Songino Array comp=Z,1.1nm,0.7s,baz=338,slow=1.8,SNR=10	128.18	357	PKP	PKPdf	02 09 30.6 +0.2
CN2	Changchun	128.30	340	ePKP	PKPdf	02 09 29.8 -0.8
KSRS	Korea Array comp=Z,1.3nm,0.6s,baz=9.7,slow=1.2,SNR=6.6	132.73	333	PKP	PKPdf	02 09 39.1 0.0
HHC	Hu-ho-hao-te	134.61	351	eP	PKPdf	02 09 42.8 0.0
STKA	Stephens Creek comp=Z,1.7nm,0.5s,baz=102,slow=7.2,SNR=5.1	134.76	228	PKP	PKPdf	02 09 42.5 -0.7
NJ2	Nanjing	141.11	339	eP	PKPdf	02 09 54.8 0.0
NJ2	comp=Z,5.0nm,0.6s			pmax	pmax	
AS31	Alice Springs	144.71	234	PKPdf	PKPab	02 09 58.5 -1.9
ASAR	Alice Springs	144.71	234	PKPdf	PKPab	02 09 59.7 -0.7
ASAR	Alice Springs comp=Z,14nm,0.5s,baz=117,slow=3.9,SNR=191	144.71	234	PKPdf	PKPab	02 09 59.6 -0.9
CD2	Chengdu	145.15	359	PKPbc	PKPbc	02 10 01.3 -0.5
WB2	Warramunga Arr	145.96	240	PKPdf	PKPdf	02 10 03.2 -0.5
WRAB	Tennant Creek	145.97	240	PKPdf	PKPdf	02 10 03.1 -0.6
WRA	Warramunga Arr comp=Z,4.2nm,0.4s,baz=109,slow=3.0,SNR=38	145.97	240	PKPbc	PKPdf	02 10 03.0 -0.8
WB0	Warramunga Arr	145.99	240	PKPdf	PKPdf	02 10 03.0 -0.7
KMI	Kunming	150.91	1	↓PKPbc	PKPbc	02 10 17.6 0.0
CMAR	Chiang Mai Arr comp=Z,1.3nm,0.3s,baz=281,slow=0.5,SNR=1.9	157.13	11	PKP	PKPdf	02 10 20.7 +0.2
CMAR	comp=Z,3.1nm,0.3s,baz=318,slow=5.2,SNR=4.7			PKPab	pPKPdf	02 10 50.2 +1.0

IDC 19 02:04:26.8±757.0, 1°.36N×96°.95E, h0km, Error ellipse: s-maj=368.8km s-min=188.4km az=35.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I06AU	Cocos Islands baz=3.9,slow=316,SNR=1.2	13.42	181	I	I	03 28 10.0	
I52GB	DIEGO GARCIA I 0.2nm,1.2s,baz=71,slow=316,SNR=15	25.91	250	I	I	04 40 15.0	
I19DJ	I19DJ baz=100,slow=316,SNR=5.6	54.29	283	I	I	07 38 40.0	

RSNC ***19*** *02:12:50.3±1.0, 7°.29N×78°.87W, h4km±4km, ML2.4*
UPA ***19*** *02:12:50.1±1.2, 7°.39N×78°.87W, h17km±13km, MW4.5*
ISC 19 02:12:46.8±1.3, 7°.41N±0°.04×78°.87W±0°.02, h10km±10km, n19, σ1s14/34, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTAC	Punta Ardita,	1.08	104	eP	Pn	02 13 08.4	+0.3
PTAC				eS	Sg	02 13 21.5	-0.2
PTAC	comp=Z,151nm,0.1s			i		02 13 25.7	
UPD2	Meteti	1.41	37	eP	Pg	02 13 13.9	0.0
UPD2				eS	Sg	02 13 33.0	+0.8
UPD2	Meteti	1.41	37	eP	Pg	02 13 13.9	0.0
UPD2				eS	Sg	02 13 32.7	+0.5
UPD2	comp=Z,62nm,0.3s			i		02 13 36.5	
AZU	Azuero	1.45	285	eP	Pg	02 13 14.2	-0.4
AZU				eS	Sg	02 13 33.1	-0.3
AZU	Azuero	1.45	285	eP	Pb	02 13 13.5	-0.4
AZU				eS	Sn	02 13 32.6	+0.4
TOTI	Torti	1.60	20	eP	Pb	02 13 16.4	-0.3
TOTI				eS	Sn	02 13 32.3	-3.9
CHIT3	Chitre	1.63	289	eP	Pb	02 13 17.1	+0.1
CHIT3				eS	Sn	02 13 37.3	+0.5
CHPO	Chepo, Panama	1.76	352	eP	Pg	02 13 20.2	-0.5
CHPO				eS	Sb	02 13 41.2	-0.3
ZANG	Zanguenga, Cho	1.82	327	eP	Pb	02 13 20.2	-0.2
ZANG				eS	Sb	02 13 44.4	+1.0
CAPC	Capurgana	1.93	51	eP	Pb	02 13 21.4	-0.8
CAPC				eS	Sb	02 13 46.4	0.0
CAPC	comp=Z,23nm,0.1s			i		02 13 48.1	
CACAO	El Cacao, Vera	1.98	268	eP	Pb	02 13 22.6	-0.4
CACAO	El Cacao, Vera	1.98	268	eP	Pn	02 13 20.9	+0.4
CACAO	comp=Z,27nm,0.5s			i		02 13 56.6	
FRIJ	El Hiral	1.99	335	eP	Pb	02 13 23.1	-0.1
BCIP	Isla Barro Col	1.99	331	eP	Pb	02 13 23.0	-0.2
BCIP				eS	Sb	02 13 48.2	+0.1
APAC	Apartado, Choc	2.32	78	eP	Pn	02 13 26.6	+1.4
APAC				eS	Sn	02 13 54.4	+0.6
APAC	comp=Z,13nm,0.4s			i		02 14 08.1	
GMAL	Guarumal, Vera	2.37	279	eP	Pb	02 13 28.2	-1.5
GMAL				eS	Sb	02 14 00.1	+1.0
GMAL	comp=Z,34nm,0.3s			i		02 14 01.8	
DBBC	Dabeiba	2.67	98	eP	Pn	02 13 30.5	+0.5
DBBC				eS	Sn	02 14 02.1	-0.4
DBBC	comp=Z,4.5nm,0.3s			i		02 14 08.9	
CBOC	Ciudad Bolivar	3.23	118	eP	Pn	02 13 39.5	+1.7
CBOC				eS	Sn	02 14 13.5	-3.0
UREC	San Jos de Ur	3.32	84	eS	Sn	02 14 19.9	+1.3

IDC ***19*** *02:24:09.4±0.9, 66°.41N×17°.53W, h0km, mb3.5/10, mbtmp3.6/14, ML3.2/4, MS3.5/22, Error ellipse: s-maj=26.5km s-min=15.3km az=169.0*
REY ***19*** *02:24:09.3, 66°.57N×17°.69W, h15km*
ISC 19 02:24:10.0±1.2, 66°.49N±0°.03×17°.66W±0°.03, h3km±9km, n45, σ1s23/45, mb3.4/11, MS3.5/17, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	Grimsey baz=259	0.15	290	P	Pg	02 24 12.7	-0.2
IGRI	baz=259			S	Sg	02 24 15.1	+0.2
IBRE	Brettingsstaoi baz=191	0.39	196	P	Pg	02 24 17.8	+0.5

IBRE				S		Sb	02 24 24.1	-1.7
	baz=191							
IHED	**Heoinshofoi**	**0.44**	**161**	P		**Pg**	**02 24 18.3**	**0.0**
	baz=162							
IHED				S		**Sg**	**02 24 25.1**	**+1.2**
	baz=162							
ILEI	**Leirhofn**	**0.48**	**100**	S		**Sg**	**02 24 25.7**	**+0.5**
	baz=108							
ILEI				P		**Pg**	**02 24 18.6**	**-0.5**
	baz=108							
IGRA	**Granastaoir**	**0.58**	**177**	P		**Pg**	**02 24 20.8**	**-0.2**
	baz=176							
IGRA				S		**Sg**	**02 24 29.3**	**+0.8**
	baz=176							
IDIM	**Dimmadalss**	**0.61**	**151**	P		**Pg**	**02 24 21.1**	**-0.5**
	baz=153							
IDIM				S		**Sg**	**02 24 30.1**	**+0.7**
	baz=153							
ISIG	**Siglufjorour**	**0.62**	**235**	P		**Pg**	**02 24 20.6**	**-1.3**
	baz=229							
ISIG				S		**Sg**	**02 24 29.1**	**-0.9**
	baz=229							
IHLA	**Hella**	**0.63**	**209**	P		**Pg**	**02 24 21.4**	**-0.5**
	baz=204							
IHLA				S		**Sg**	**02 24 30.4**	**+0.4**
	baz=204							
IGIL	**Gilhagi**	**0.67**	**128**	P		**Pg**	**02 24 21.8**	**-1.0**
	baz=132							
IGIL				S		**Sg**	**02 24 31.7**	**+0.2**
	baz=132							
ISKI	**Skildingahlsh**	**0.68**	**158**	S		**Sg**	**02 24 32.1**	**+0.5**
	baz=158							
ISKI				P		**Pg**	**02 24 22.2**	**-0.7**
	baz=158							
IGHA	**Grjothals**	**0.77**	**148**	P		**Pg**	**02 24 23.6**	**-1.0**
	baz=150							
IGHA				S		**Sg**	**02 24 34.5**	**0.0**
	baz=150							
IKVO	**Krokottuvotn**	**0.84**	**158**	P		**Pg**	**02 24 25.0**	**-1.1**
	baz=158							
IKVO				S		**Sg**	**02 24 37.0**	**0.0**
	baz=158							
IREN	**Reynihlio**	**0.90**	**160**	P		**Pg**	**02 24 25.9**	**-1.3**
	baz=160							
IREN				S		**Sg**	**02 24 38.6**	**-0.3**
	baz=160							
BORG	**Borgarnes**	**2.32**	**223**	Pn		**Pn**	**02 24 47.6**	**-1.5**
	13nm,0.3s,baz=33,slow=7.1,SNR=48							
BORG				Sn		**Sn**	**02 25 18.1**	**0.0**
	18nm,0.3s,baz=209,slow=22,SNR=15							
BORG				LR		LR	02 25 46.0	
	comp=Z,667nm,19.6s,baz=3.6,slow=42							
	66nm,0.5s							
SCO	**Scoresbysund**	**4.31**	**340**	*i* P		**Pn**	**02 25 13.6**	**-2.8**
SOEG	**Soedalen**	**5.57**	**294**	*e*P		**Pn**	**02 25 34.5**	**+0.9**
NOA	**NORSAR Array B**	**13.79**	**100**	LR		LR	02 32 04.3	
	comp=Z,78nm,21.0s,baz=310,slow=35							
SPITS	**Spitsbergen Ar**	**15.23**	**26**	Pn		**Pn**	**02 27 47.3**	**+1.7**
	baz=234,slow=12							
	3.2nm,0.8s							
HFS	**Hagfors**	**15.31**	**100**	LR		LR	02 33 02.3	
	comp=Z,116nm,19.3s,baz=306,slow=35							
ARCES	**ARCESS Array B**	**16.18**	**60**	Pn		**Pn**	**02 27 57.9**	**-0.1**
	0.1nm,0.3s,baz=276,slow=13,SNR=0.9							
ARCES				LR		LR	02 32 24.3	
	comp=Z,75nm,21.8s,baz=209,slow=31							
	1.7nm,0.9s							
FINES	**FINESS Array B**	**19.50**	**84**	P		**P**	**02 28 38.3**	**+0.4**
	0.1nm,0.3s,baz=308,slow=12,SNR=5.2							
FINES				LR		LR	02 35 20.4	
	comp=Z,146nm,20.1s,baz=303,slow=34							
	1.1nm,0.6s							
FRB	**Frobisher Bay**	**21.10**	**287**	P		**P**	**02 28 55.9**	**+0.8**
	2.5nm,1.0s,baz=45,slow=7.1,SNR=4.0							
FRB				LR		LR	02 36 20.2	
	comp=Z,133nm,19.5s,baz=102,slow=34							
	2.5nm,1.0s							
CLL	**Collm**	**21.61**	**120**	*i* P		**P**	**02 29 01.1**	**+0.3**
	comp=Z,19nm,1.9s							
CLL				*i* x		x	02 29 09.6	
CLL				*e*PP		**PnPn**	**02 29 26.0**	**+5.0**
DAVOX	**Davos/Dischmat**	**24.51**	**130**	LR		LR	02 39 07.2	
	comp=Z,89nm,20.8s,baz=321,slow=37							
AKASG	**Malin Array Be**	**28.20**	**101**	LR		LR	02 40 42.4	
	comp=Z,102nm,18.8s,baz=324,slow=35							
BELG	**Belogornoye**	**34.24**	**82**	LR		LR	02 44 18.8	
	comp=Z,87nm,18.4s,baz=167,slow=35							
YKA	**Yellowknife Ar**	**37.93**	**311**	P		**P**	**02 31 28.4**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=38,slow=8.2,SNR=4.0							
	comp=Z,0.4nm,0.7s							
BRTR	**Keskin Array B**	**39.05**	**107**	P		**P**	**02 31 38.1**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=337,slow=6.0,SNR=3.9							
	comp=Z,0.7nm,0.7s							
AKTO	**Aktyubinsk**	**39.85**	**75**	P		**P**	**02 31 43.5**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=316,slow=9.0,SNR=4.2							
AKTO				LR		LR	02 47 17.6	
	comp=Z,59nm,19.5s,baz=207,slow=35							
	comp=Z,1.2nm,0.5s							
ULM	**Lac du Bonnet**	**40.98**	**287**	LR		LR	02 48 10.7	
	comp=Z,109nm,20.7s,baz=28,slow=35							
BVAR	**Borovoye Array**	**42.41**	**64**	P		**P**	**02 32 04.3**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=313,slow=4.9,SNR=2.2							
	comp=Z,0.4nm,0.5s							
ILAR	**Eielson Array**	**44.04**	**331**	P		**P**	**02 32 19.0**	**+0.7**
	comp=Z,0.7nm,1.1s,baz=20,slow=6.7,SNR=3.1							
ILAR				LR		LR	02 55 33.4	
	comp=Z,25nm,19.0s,baz=302,slow=43							
	comp=Z,0.7nm,1.1s							
MMAI	**Mount Meron Ar**	**45.63**	**110**	LR		LR	02 52 37.9	
	comp=Z,14nm,19.2s,baz=189,slow=38							
KURBB	**Kurchatov Arra**	**47.26**	**60**	P		**P**	**02 32 43.5**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=331,slow=6.7,SNR=4.2							
	comp=Z,0.3nm,0.4s							
GEYT	**Alibeck**	**50.31**	**85**	LR		LR	02 54 43.9	
	comp=Z,73nm,19.7s,baz=338,slow=36							
MKAR	**Makanchi Array**	**51.83**	**59**	P		**P**	**02 33 18.3**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=340,slow=6.0,SNR=4.8							
	comp=Z,0.6nm,0.9s							
PDAR	**Pinedale Array**	**52.42**	**292**	P		**P**	**02 33 24.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=64,slow=6.1,SNR=3.4							
PDAR				LR		LR	02 55 30.0	
	comp=Z,62nm,18.5s,baz=42,slow=36							
	comp=Z,0.3nm,0.7s							
AAK	**Ala-Archa**	**52.62**	**68**	LR		LR	02 55 27.3	
	comp=Z,36nm,18.3s,baz=320,slow=36							
YBH	**Yreka Blue Hor**	**58.03**	**302**	LR		LR	03 00 56.5	
	comp=Z,160nm,18.3s,baz=343,slow=38							
ANMO	**Albuquerque**	**58.05**	**285**	LR		LR	02 57 41.1	
	comp=Z,72nm,20.1s,baz=132,slow=35							
SONM	**Songino Array**	**58.29**	**41**	P		**P**	**02 34 04.1**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=328,slow=5.1,SNR=1.7							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**61.91**	**279**	LR		LR	03 01 35.4	
	comp=Z,53nm,18.1s,baz=16,slow=36							
CMIG	**Matias Romero**	**69.37**	**265**	LR		LR	03 05 01.3	
	comp=Z,18nm,20.8s,baz=80,slow=35							
KSRS	**Korea Array**	**73.06**	**28**	LR		LR	03 09 33.5	
	comp=Z,13nm,18.7s,baz=125,slow=37							
MBAR	**Mbarara**	**75.12**	**129**	LR		LR	03 11 54.9	
	comp=Z,50nm,18.0s,baz=162,slow=38							

*IDC **19** 02:24:27.1±1.3,27˚.19N×56˚.22E, h0km, mb3.7/8, mbtmp3.7/9, ML3.6/1, MS3.6/2, Error ellipse: s-maj=24.7km s-min=23.4km az=53.0*
*TEH **19** 02:24:28.3,27˚.35N×56˚.39E, h8km±21km, ML3.4*
*DSN **19** 02:24:29.1±1.4,27˚.40N×56˚.26E, h11km, ML3.3/5, Error ellipse: s-maj=49.0km s-min=11.9km az=89.0*
*OMAN **19** 02:24:29.1±0.2,27˚.41N×56˚.36E, h5km±3km, mb4.2/4, ml3.4/18, Error ellipse: s-maj=5.1km s-min=1.9km az=320.0*
ISC 19 02:24:29.4±1.2, 27˚.38N±0˚.03×56˚.40E±0˚.04, h7km±8km, n64, σ1s30/76, mb3.6/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.15**	**60**	Pg	**Pg**	**02 24 32.1**	**-0.4**
GENO	**Geno**	**0.20**	**277**	Pg	**Pg**	**02 24 32.8**	**-0.7**
KHNJ	**Kahnooj**	**1.29**	**64**	Pg	**Pn**	**02 24 52.9**	**-1.0**
SHME	**Shamm**	**1.34**	**190**	P	**Pn**	**02 24 53.6**	**-1.0**
SHME				S	**Sb**	**02 25 12.1**	**-0.1**
SHME	**Shamm**	**1.34**	**190**	P	**Pn**	**02 24 54.2**	**-0.3**
SHME				S	**Sn**	**02 25 14.6**	**+1.9**
BANOM	**Banah**	**1.45**	**183**	P	**Pn**	**02 24 54.4**	**-1.7**
BANOM				S	**Sg**	**02 25 16.7**	**+0.7**
BANOM	**Banah**	**1.45**	**183**	P	**Pg**	**02 24 57.6**	**+0.3**
BANOM				S	**Sg**	**02 25 16.8**	**+0.7**
LAR1	**LAR**	**1.82**	**280**	Pn	**Pn**	**02 25 01.7**	**+0.5**
UMQ	**Umm Al-Quwin**	**1.96**	**200**	P	**Pn**	**02 25 04.5**	**+1.4**
JASK	**Jask - Hormozg**	**2.00**	**138**	Pn	**Pn**	**02 25 04.1**	**+0.5**
JASK	**Jask - Hormozg**	**2.00**	**138**	P	**Pn**	**02 25 04.8**	**+1.2**
JASK				S	**Sn**	**02 25 30.1**	**+1.2**
MASF	**Masafi**	**2.01**	**186**	P	**Pn**	**02 25 05.4**	**+1.6**
	SNR=38						
MASF				S	**Sb**	**02 25 31.6**	**+0.1**
MSFE	**Esma-Masafi**	**2.02**	**186**	P	**Pn**	**02 25 03.4**	**-0.5**
MDH	**Madha**	**2.07**	**182**	P	**Pn**	**02 25 04.7**	**+0.1**
MDH	**Madha**	**2.07**	**182**	P	**Pn**	**02 25 05.9**	**+1.3**
	SNR=21						
UOSS	**Minazif**	**2.43**	**184**	P	**Pn**	**02 25 10.0**	**+0.5**
UOSS	**Minazif**	**2.43**	**184**	P	**Pn**	**02 25 10.5**	**+0.9**
NAZ	**Nazwa, Dubai**	**2.47**	**196**	P	**Pn**	**02 25 10.0**	**0.0**
NAZ	**Nazwa, Dubai**	**2.47**	**196**	P	**Pn**	**02 25 12.0**	**+1.9**
KBAM	**BAM**	**2.52**	**45**	Pn	**Pn**	**02 25 12.7**	**+1.8**
HATD	**Hatta, Dubai**	**2.55**	**185**	P	**Pn**	**02 25 13.6**	**+2.4**
HATD				S	**Sb**	**02 25 45.7**	**-1.4**
ASHO	**Ashiyiah**	**2.70**	**187**	P	**Pn**	**02 25 14.8**	**+1.5**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**2.72**	**196**	P	**Pn**	**02 25 15.1**	**+1.5**
ASUD	**Al Ashush, Dub**	**2.90**	**200**	P	**Pn**	**02 25 17.0**	**+1.0**
ASUD				S	**Sn**	**02 25 53.4**	**+2.2**
KHGB	**Koh Gabri**	**2.99**	**1**	Pn	**Pn**	**02 25 18.9**	**+1.5**
KRM1	**Kerman Provinc**	**3.21**	**14**	Pn	**Pn**	**02 25 21.9**	**+1.4**
SOHO	**SOHO**	**3.23**	**178**	P	**Pn**	**02 25 22.0**	**+1.4**
HOQ	**Hoqain**	**3.87**	**167**	Pn	**Pn**	**02 25 30.3**	**+1.0**
HOQ	**Hoqain**	**3.87**	**167**	P	**Pn**	**02 25 30.3**	**+1.0**
HOQ				S	**Sn**	**02 26 14.8**	**-0.2**
ARQ	**Araqi**	**4.02**	**178**	P	**Pn**	**02 25 33.0**	**+1.5**
IMEH	**Mehriz**	**4.29**	**339**	Pn	**Pn**	**02 25 36.8**	**+1.4**
SMDO	**Samad**	**4.55**	**160**	P	**Pn**	**02 25 40.0**	**+1.2**
SMDO				S	**Sn**	**02 26 31.5**	**-0.6**
WSAR	**Wadi Sarin**	**4.59**	**153**	Pn	**Pn**	**02 25 38.0**	**-1.2**
	2.9nm,0.3s,baz=356,slow=14,SNR=32						
WSAR				Sn	**Sn**	**02 26 28.6**	**-4.3**
	3.8nm,0.3s,baz=150,slow=18,SNR=11						
	11nm,0.5s						
WSAR	**Wadi Sarin**	**4.59**	**153**	P	**Pn**	**02 25 38.2**	**-1.0**
	SNR=7.8						
BSY	**Bisya**	**4.67**	**171**	P	**Pn**	**02 25 41.3**	**+0.9**
BSY				S	**Sn**	**02 26 37.4**	**+2.6**
NGCH	**Negor - Chabah**	**4.70**	**114**	Pn	**Pn**	**02 25 41.4**	**+0.6**
NGCH	**Negor - Chabah**	**4.70**	**114**	P	**Pn**	**02 25 41.1**	**+0.3**
NGCH				S	**Sn**	**02 26 37.7**	**+2.1**
NHDN	**Nehbandan**	**5.12**	**38**	Pn	**Pn**	**02 25 48.5**	**+1.9**
JMDO	**Jabal Madar**	**5.22**	**162**	P	**Pn**	**02 25 48.6**	**+0.6**
WBK	**Wadi Bani Khal**	**5.29**	**153**	P	**Pn**	**02 25 48.9**	**0.0**
	SNR=6.6						
WBK				S	**Sn**	**02 26 49.2**	**-0.9**
SRVN	**Saravan**	**5.33**	**88**	Pn	**Pn**	**02 25 50.9**	**+1.3**
KLNJ	**Kolanjah**	**5.54**	**312**	Pn	**Pn**	**02 25 52.9**	**+0.2**
IRAM	**Ramesheh**	**5.63**	**323**	Pn	**Pn**	**02 25 54.9**	**+1.1**
JLN	**Jalan Bani Buh**	**5.88**	**152**	P	**Pn**	**02 25 56.5**	**-0.5**
	SNR=7.0						
IBRJ	**Brojen**	**6.35**	**317**	Pn	**Pn**	**02 26 05.0**	**+1.2**
MHTO	**MHTO**	**6.52**	**167**	P	**Pn**	**02 26 05.8**	**0.0**
	SNR=6.4						
IZEF	**Zefreh**	**6.53**	**328**	Pn	**Pn**	**02 26 06.5**	**+0.3**
ZNGN	**Zangian**	**6.75**	**316**	Pn	**Pn**	**02 26 09.5**	**+0.3**
IPIR	**Pirpir**	**7.12**	**319**	Pn	**Pn**	**02 26 15.5**	**+1.1**
IKLH	**Kolahrood**	**7.24**	**326**	Pn	**Pn**	**02 26 16.9**	**+1.0**
DOK	**Doka**	**8.96**	**194**	P	**Pn**	**02 26 39.8**	**+0.4**
DMTO	**DMTO**	**9.71**	**188**	P	**Pn**	**02 26 50.5**	**+0.9**
WHFO	**Wadi Hawf**	**9.72**	**195**	P	**Pn**	**02 26 49.0**	**-0.8**
	SNR=10						
ABTO	**Aybut**	**10.38**	**197**	P	**Pn**	**02 26 58.8**	**-0.1**
BRTR	**Keskin Array B**	**22.54**	**309**	P	**P**	**02 29 29.5**	**-0.7**
	1.0nm,0.8s,baz=132,slow=12,SNR=8.4						
	1.0nm,0.8s						
AKTO	**Aktyubinsk**	**23.06**	**3**	P	**P**	**02 29 35.5**	**+0.2**
	1.8nm,0.7s,baz=169,slow=6.8,SNR=8.1						
	1.8nm,0.7s						
MKAR	**Makanchi Array**	**28.12**	**40**	P	**P**	**02 30 22.3**	**+0.3**
	0.1nm,0.6s,baz=223,slow=6.5,SNR=1.9						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**28.68**	**30**	P	**P**	**02 30 28.1**	**+1.3**
	1.0nm,0.2s,baz=230,slow=8.4,SNR=4.0						
	1.0nm,0.2s						
ZALV	**Zalesovo Beam**	**33.78**	**30**	P	**P**	**02 31 12.1**	**+0.4**
	0.9nm,0.6s,baz=240,slow=8.1,SNR=2.3						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**39.65**	**338**	P	**P**	**02 32 01.6**	**0.0**
	0.8nm,0.7s,baz=134,slow=8.0,SNR=1.8						
	0.8nm,0.7s						
SONM	**Songino Array**	**43.69**	**48**	P	**P**	**02 32 35.8**	**+0.7**
	0.3nm,0.8s,baz=274,slow=8.2,SNR=2.0						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**52.85**	**266**	P	**P**	**02 33 42.9**	**-3.2**
	0.7nm,0.3s,baz=65,slow=7.0,SNR=4.6						
	0.7nm,0.3s						
TSUM	**Tsumeb**	**59.65**	**223**	LR	LR	03 01 21.4	
	comp=Z,73nm,18.1s,baz=165,slow=37						
KLR	**Kul'dur**	**60.47**	**47**	LR	LR	03 04 14.1	
	comp=Z,33nm,20.2s,baz=358,slow=39						

*IDC **19** 02:50:09.8±1.7,4˚.24S×144˚.62E, h0km, mb3.6/3, mbtmp3.9/6, ML3.7/3, MS2.5/1, Error ellipse: s-maj=50.4km s-min=26.7km az=106.0*
ISC 19 02:50:22.8±1.5, 4˚.9S±0˚.1×144˚.9E±0˚.1, h100km, n6, σ2s15/8, mb3.3/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.98**	**154**	Pn	**Pn**	**02 51 34.7**	**-0.7**
	18nm,0.3s,baz=338,slow=10,SNR=21						
PMG				Sn	**Sn**	**02 52 30.9**	**-0.8**
	10nm,0.3s,baz=170,slow=24,SNR=11						
PMG				LR	LR	02 53 45.1	
	comp=Z,47nm,21.5s,baz=226,slow=38						
	46nm,0.3s						
CTA	**Charters Tower**	**15.14**	**175**	Pn	**P**	**02 53 56.0**	**+1.8**
	0.4nm,0.3s,baz=354,slow=16,SNR=3.7						
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**18.15**	**214**	P	**Pn**	**02 54 28.2**	**-0.3**
	0.5nm,0.3s,baz=30,slow=11,SNR=32						
WRA				S	**Sn**	**02 57 48.3**	**-3.0**
	0.2nm,0.6s,baz=38,slow=25,SNR=1.7						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**21.46**	**209**	P	**P**	**02 55 05.2**	**+1.9**
	1.1nm,0.7s,baz=39,slow=8.6,SNR=17						
ASAR				S	Sn	02 59 00.6	-10
	1.2nm,1.0s,baz=27,slow=19,SNR=5.1						
	1.1nm,0.7s						
STKA	**Stephens Creek**	**27.00**	**186**	P	**P**	**02 55 57.6**	**+2.1**
	1.2nm,0.7s,baz=356,slow=14,SNR=1.9						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**85.31**	**24**	P	**P**	**03 02 47.0**	**-1.4**
	0.2nm,0.7s,baz=260,slow=5.4,SNR=4.5						
	0.2nm,0.7s						

*IDC **19** 02:53:55.7±1.5, 35˚.60N×26˚.06E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=60.1km s-min=23.1km az=157.0*
*GII **19** 02:53:57.0±0.6, 35˚.30N±0˚.05×26˚.18E±0˚.02, h30km, Mws3.3, confirmed*
*ISK **19** 02:54:02.4, 35˚.75N×26˚.12E, h13km, ML3.1/23*
*ATH **19** 02:54:04.8, 35˚.62N×26˚.12E, h52km±5km, ML3.2/20, Error ellipse: s-maj=5.1km s-min=1.0km az=166.0*
*THE **19** 02:54:04.8, 35˚.61N×26˚.13E, h58km±3km, ML3.0/12, Error ellipse: s-maj=3.4km s-min=0.6km az=171.0*
*AFAD **19** 02:54:06.3±0.0, 35˚.87N×26˚.36E, h29km±1km, ML2.4*
ISC 19 02:54:02.7±1.1, 35˚.62N±0˚.02×26˚.14E±0˚.03, h31km±10km, n152, σ2s13/149, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.51**	**173**	Pg	**Pn**	**02 54 15.9**	**+2.0**
ZKR				Sg	**Sn**	**02 54 24.9**	**+3.3**
ZKR	**Zakros**	**0.51**	**173**	P	**Pn**	**02 54 16.1**	**+2.2**
ZKR				S	**Sn**	**02 54 25.0**	**+3.3**
	1µm,0.2s						
ZKR	**Zakros**	**0.51**	**173**	P	**Pn**	**02 54 16.2**	**+2.2**
ZKR				S	**Sn**	**02 54 24.7**	**+3.1**
				AML	AML	02 54 25.6	
ZKR	comp=N,2261µm,0.2s			AML	AML	02 54 30.7	
	comp=E,3045µm,0.3s						
FRMA	**Ierapetra Chan**	**0.69**	**209**	P	**Pn**	**02 54 18.2**	**+1.8**
FRMA				S	**Sn**	**02 54 28.3**	**+2.3**
	comp=E,820nm,0.4s						
FRMA	**Ierapetra Chan**	**0.69**	**209**	P	**Pn**	**02 54 18.1**	**+1.7**
FRMA				S	**Sb**	**02 54 27.4**	**+1.8**
FRMA				AML	AML	02 54 31.1	
	comp=N,5581µm,0.5s						
FRMA				AML	AML	02 54 32.1	
	comp=E,4057µm,0.3s						
KARP	**Karpathos**	**0.84**	**95**	Pg	**Pn**	**02 54 20.0**	**+1.6**
KARP				Sg	**Sn**	**02 54 31.9**	**+2.2**
KARP	**Karpathos**	**0.84**	**95**	P	**Pn**	**02 54 20.1**	**+1.6**
KARP				S	**Sn**	**02 54 31.5**	**+1.8**
	comp=E,2µm,0.5s						
KARP	**Karpathos**	**0.84**	**95**	P	**Pn**	**02 54 20.0**	**+1.6**
KARP				S	**Sn**	**02 54 31.2**	**+1.4**
KARP				AML	AML	02 54 33.7	
	comp=N,3426µm,0.2s						
KARP				AML	AML	02 54 34.9	
	comp=E,3508µm,0.3s						
SANT	**Santorini**	**0.93**	**324**	Pg	**Pb**	**02 54 20.7**	**+0.4**
SANT	**Santorini**	**0.93**	**324**	P	**Pn**	**02 54 21.7**	**+2.0**
SANT				S	**Sn**	**02 54 34.7**	**+2.8**
	comp=E,2µm,0.2s						
SANT	**Santorini**	**0.93**	**324**	P	**Pn**	**02 54 21.6**	**+2.0**
SANT				S	**Sn**	**02 54 33.8**	**+1.9**
SANT				AML	AML	02 54 35.9	
	comp=N,2580µm,0.2s						
SANT				AML	AML	02 54 36.8	
	comp=E,6594µm,0.4s						
IACM	**Heraklion**	**0.93**	**250**	P	**Pb**	**02 54 21.0**	**+0.8**
IACM	**Heraklion**	**0.93**	**250**	P	**Pb**	**02 54 21.2**	**+1.0**
KSTL	**Kastelli Herak**	**0.93**	**250**	P	**Pb**	**02 54 19.1**	**-1.1**
KSTL				S	**Sb**	**02 54 29.5**	**-2.7**
	comp=E,535nm,0.3s						
KSTL	**Kastelli Herak**	**0.93**	**250**	P	**Pb**	**02 54 19.1**	**-1.1**
KSTL				S	**Sb**	**02 54 29.0**	**-3.3**
KSTL				AML	AML	02 54 30.9	
	comp=N,3790µm,0.2s						
KSTL				AML	AML	02 54 31.3	
	comp=E,2495µm,0.4s						
THR6	**Thira Island,**	**0.95**	**321**	P	**Pn**	**02 54 21.9**	**+2.0**
THR8	**Santorini-Mono**	**0.95**	**326**	P	**Pn**	**02 54 21.9**	**+2.0**
THR9	**Santorini-Faro**	**0.97**	**319**	P	**Pn**	**02 54 22.2**	**+2.0**
SNT5	**Nea Kammeni, S**	**0.98**	**323**	P	**Pn**	**02 54 22.4**	**+2.0**
THR3	**Thira Island,**	**0.98**	**323**	P	**Pn**	**02 54 22.4**	**+2.0**
THT2	**Imerovigli**	**1.00**	**325**	P	**Pn**	**02 54 22.7**	**+2.1**
CMBO	**Columbo, Santo**	**1.03**	**325**	P	**Pn**	**02 54 23.1**	**+2.0**
CMBO				S	**Sn**	**02 54 37.0**	**+2.5**
	comp=E,5µm,0.5s						
CMBO	**Columbo, Santo**	**1.03**	**325**	P	**Pn**	**02 54 23.1**	**+2.0**
CMBO				S	**Sb**	**02 54 35.5**	**+0.2**
CMBO				AML	AML	02 54 38.4	
	comp=E,11393µm,0.4s						
CMBO				AML	AML	02 54 38.4	
	comp=N,13171µm,0.6s						
IDI	**Anoyia**	**1.07**	**252**	Pn	**Pn**	**02 54 22.8**	**+1.0**
IDI	**Anoyia**	**1.07**	**252**	P	**Pn**	**02 54 22.7**	**+1.0**
IDI				S	**Sb**	**02 54 36.1**	**-0.3**
	comp=N,565nm,0.2s						
IDI	**Anoyia**	**1.07**	**252**	P	**Pn**	**02 54 22.7**	**+1.0**
IDI				S	**Sb**	**02 54 35.5**	**-1.0**
IDI				AML	AML	02 54 37.1	
	comp=E,1452µm,0.2s						
IDI				AML	AML	02 54 39.1	
	comp=N,1236µm,0.2s						
TMBK	**Timbaki Herakl**	**1.25**	**244**	P	**Pn**	**02 54 26.0**	**+2.0**
TMBK	**Timbaki Herakl**	**1.25**	**244**	P	**Pn**	**02 54 26.1**	**+2.1**
TMBK				S	**Sn**	**02 54 41.7**	**+1.9**
NISR	**Nisiros**	**1.27**	**39**	P	**Pn**	**02 54 26.2**	**+1.8**
NISR				AML	AML	02 54 44.0	
	comp=N,1222µm,0.2s						
NISR				AML	AML	02 54 46.5	
	comp=E,1800µm,0.2s						
YAZI	**Mula-Dat§a-**	**1.50**	**45**	P	**Pn**	**02 54 28.9**	**+1.4**
YAZI				S	**Sn**	**02 54 45.6**	**-0.4**
APE	**Apeiranthos**	**1.52**	**341**	Pn	**Pn**	**02 54 28.8**	**+0.9**
APE	**Apeiranthos**	**1.52**	**341**	P	**Pn**	**02 54 29.7**	**+1.8**
APE				S	**Sn**	**02 54 48.6**	**+1.9**
	comp=E,705nm,0.2s						
APE	**Apeiranthos**	**1.52**	**341**	P	**Pn**	**02 54 29.3**	**+1.4**
APE				S	**Sn**	**02 54 48.7**	**+2.1**
APE	**Apeiranthos**	**1.52**	**341**	P	**Pn**	**02 54 29.7**	**+1.8**
APE				AML	AML	02 54 50.4	
	comp=N,1512µm,0.2s						
APE				AML	AML	02 54 51.0	
	comp=E,1247µm,0.2s						
DAT	**Datca**	**1.60**	**46**	Pn	**Pn**	**02 54 30.1**	**+1.0**
CHAN	**Chania**	**1.71**	**267**	P	**Pn**	**02 54 32.0**	**+1.6**
CHAN				S	**Sn**	**02 54 51.1**	**-0.1**
CHAN				AML	AML	02 54 54.4	
	comp=N,1575µm,0.4s						
CHAN				AML	AML	02 54 57.8	
	comp=E,796µm,0.4s						
ARG	**Arkhangelos**	**1.72**	**69**	Pn	**Pn**	**02 54 32.0**	**+1.5**
ARG	**Arkhangelos**	**1.72**	**69**

	comp=E,377μm,0.3s							
VLI					AML	AML	02 55 26.1	
	comp=N,320μm,0.4s							
BLCB	**Balcova**	**2.85**	**14**	Pn	**Pn**	**02 54 47.1**	**+1.0**
DNZT	**Denizli-Tavas-**	**2.85**	**54**	P	**Pn**	**02 54 49.0**	**+2.8**
DNZT				S	**Sn**	**02 55 21.9**	**+2.3**
DNZT				*i* AML	AML	02 55 28.0	
	comp=N,21nm,0.6s							
DNZT				*i* AML	AML	02 55 28.0	
	comp=N,20nm,0.7s							
CAME	**Cameli-Denizli**	**2.88**	**62**	Pn	**Pn**	**02 54 48.8**	**+2.2**
VLY	**Voula,Athens**	**2.91**	**320**	P	**Pn**	**02 54 49.6**	**+2.6**
VLY	**Voula,Athens**	**2.91**	**320**	P	**Pn**	**02 54 49.5**	**+2.6**
KRND	**KRANIDI**	**2.98**	**307**	P	**Pn**	**02 54 50.4**	**+2.6**
KRND	**KRANIDI**	**2.98**	**307**	P	**Pn**	**02 54 50.5**	**+2.6**
KRND				AML	AML	02 55 28.1	
	comp=E,262μm,0.6s							
KRND				AML	AML	02 55 29.9	
	comp=N,268μm,0.4s							
ATHU	**Athens Univers**	**3.00**	**322**	P	**Pn**	**02 54 51.0**	**+2.8**
DION	**Dionisos Attik**	**3.02**	**325**	P	**Pn**	**02 54 52.3**	**+3.9**
DION	**Dionisos Attik**	**3.02**	**325**	P	**Pn**	**02 54 51.5**	**+3.0**
PTL	**Penteli**	**3.03**	**324**	P	**Pn**	**02 54 52.5**	**+3.9**
ATH	**Athens Observa**	**3.04**	**321**	P	**Pn**	**02 54 51.8**	**+3.1**
EPID	**Epidavros**	**3.14**	**310**	P	**Pn**	**02 54 52.9**	**+2.9**
EPID	**Epidavros**	**3.14**	**310**	P	**Pn**	**02 54 52.6**	**+2.6**
APMY	**Acipayam-Deniz**	**3.15**	**53**	Pn	**Pn**	**02 54 52.2**	**+2.0**
RFT7	**Candarli**	**3.39**	**10**	Pn	**Pn**	**02 54 55.1**	**+1.7**
VILL	**Villia**	**3.40**	**319**	P	**Pn**	**02 54 56.6**	**+2.9**
KYMI	**Kymi, Euboea I**	**3.42**	**332**	P	**Pn**	**02 54 56.4**	**+2.6**
KYMI	**Kymi, Euboea I**	**3.42**	**332**	P	**Pn**	**02 54 56.5**	**+2.6**
VIL2	**Platees**	**3.46**	**319**	P	**Pn**	**02 54 56.4**	**+1.9**
LOUT	**Loutraki**	**3.46**	**314**	P	**Pn**	**02 54 57.7**	**+3.2**
DKL	**Dikili**	**3.50**	**10**	Pn	**Pn**	**02 54 56.5**	**+1.6**
SIGR	**SIGRI**	**3.59**	**356**	Pn	**Pn**	**02 54 57.3**	**+1.1**
PYL	**PYLOS**	**3.77**	**291**	P	**Pn**	**02 54 60.0**	**+1.2**
PYL				AML	AML	02 55 55.7	
	comp=N,68μm,0.8s							
PYL				AML	AML	02 56 01.8	
	comp=E,68μm,0.6s							
GUR	**Goura**	**3.82**	**308**	P	**Pn**	**02 55 02.1**	**+2.6**
GUR	**Goura**	**3.82**	**308**	P	**Pn**	**02 55 02.1**	**+2.6**
GUR				AML	AML	02 55 51.3	
	comp=N,209μm,0.4s							
GUR				AML	AML	02 55 53.5	
	comp=E,187μm,0.4s							
KLV	**Kalavryta, Ach**	**4.01**	**308**	P	**Pn**	**02 55 05.2**	**+3.2**
KLV	**Kalavryta, Ach**	**4.01**	**308**	P	**Pn**	**02 55 04.6**	**+2.6**
KLV				AML	AML	02 55 54.9	
	comp=N,70μm,0.8s							
KLV				AML	AML	02 55 55.4	
	comp=E,47μm,0.4s							
AXAR	**Agios Charalam**	**4.19**	**320**	P	**Pn**	**02 55 08.1**	**+3.6**
AXAR	**Agios Charalam**	**4.19**	**320**	P	**Pn**	**02 55 07.8**	**+3.3**
EZN	**Ezine**	**4.20**	**2**	Pn	**Pn**	**02 55 06.1**	**+1.5**
DRO	**Drossia**	**4.25**	**304**	P	**Pn**	**02 55 09.0**	**+3.7**
ANX	**Ano Chora**	**4.49**	**313**	P	**Pn**	**02 55 12.2**	**+3.5**
AGG	**Agios Georgios**	**4.55**	**319**	P	**Pn**	**02 55 13.3**	**+3.8**
MAKR	**Makrakomi, Fth**	**4.65**	**318**	P	Pn	02 55 15.4	+4.5
EVR	**Evrytania**	**4.77**	**315**	P	Pn	02 55 17.4	+4.9
EVGI	**Lefkada island**	**5.30**	**306**	P	**Pn**	**02 55 21.9**	**+2.1**
NYDR	**Nydri-Lefkada**	**5.33**	**307**	P	**Pn**	**02 55 21.7**	**+1.6**
DRAG	**Dragano-Lefkad**	**5.39**	**306**	P	**Pn**	**02 55 24.1**	**+3.1**
CSS	**Mathiatis**	**5.92**	**94**	S	Sn	02 56 27.6	-7.4
CSS	**Mathiatis**	**5.92**	**94**	S	Pn	02 55 20.4	-7.9
MMA0B	**Mount Meron ar**	**8.09**	**106**	P	Pn	02 55 51.1	-7.1
MMA0B	**Mount Meron ar**	**8.09**	**106**	S	Sn	02 57 20.0	-8.7
MMA2	**Mount Meron ar**	**8.10**	**106**	P	Pn	02 55 50.9	-7.3
MMA2	**Mount Meron ar**	**8.10**	**106**	S	Sn	02 57 20.7	-8.1
SLTI	**Sal'it**	**8.13**	**112**	S	Sn	02 57 21.5	-8.0
NATI	**Neve Ativ**	**8.27**	**104**	S	Sn	02 57 25.2	-7.7
MMLI	**Mount Malkishu**	**8.34**	**110**	P	Pn	02 55 53.9	-7.6
MMLI	**Mount Malkishu**	**8.34**	**110**	S	Sn	02 57 26.2	-8.4
KZIT	**Kziot**	**8.36**	**122**	S	Sn	02 57 25.6	-10
KZIT	**Kziot**	**8.36**	**122**	P	Pn	02 55 53.6	-8.2
AMAZ	**Amatzia**	**8.38**	**117**	P	**Pn**	**02 55 59.6**	**-2.5**
AMAZ	**Amatzia**	**8.38**	**117**	S	Sn	02 57 25.8	-10
AMAZ	**Amatzia**	**8.38**	**117**	P	Pn	02 55 54.6	-7.5
KSHT	**Keshet**	**8.43**	**105**	P	Pn	02 55 55.9	-6.9
KSHT	**Keshet**	**8.43**	**105**	S	Sn	02 57 29.5	-7.3
SHMJ	**Saham**	**8.48**	**107**	P	**Pn**	**02 56 02.0**	**-1.5**
HMDT	**Nahal Hemdat**	**8.49**	**111**	S	Sn	02 57 29.9	-8.5
HMDT	**Nahal Hemdat**	**8.49**	**111**	P	Pn	02 55 57.3	-6.3
UJAP	**Al Uja**	**8.58**	**113**	P	Pn	02 56 01.2	-3.6
DSI	**Dead Sea**	**8.70**	**115**	P	**Pn**	**02 56 04.0**	**-2.5**
DSI	**Dead Sea**	**8.70**	**115**	S	Sn	02 57 35.3	-8.3
MDBI	**Mazsada**	**8.82**	**117**	P	**Pn**	**02 56 06.2**	**-1.8**
MDBI	**Mazsada**	**8.82**	**117**	P	Pn	02 56 00.5	-7.5
MDBI	**Mazsada**	**8.82**	**117**	S	Sn	02 57 37.1	-9.2
MSBI	**Mazada**	**8.82**	**117**	P	**Pn**	**02 56 05.9**	**-2.1**
MSBI	**Mazada**	**8.82**	**117**	P	Pn	02 55 60.0	-8.1
MSBI	**Mazada**	**8.82**	**117**	S	Sn	02 57 37.2	-9.1
LISJ	**El Lisan**	**8.95**	**117**	P	**Pn**	**02 56 07.6**	**-2.2**
KRMI	**Paran Flat**	**9.07**	**125**	S	Sn	02 57 41.4	-11
KRMI	**Paran Flat**	**9.07**	**125**	P	Pn	02 56 04.0	-7.5
PRNI	**Paran**	**9.11**	**123**	P	Pn	02 56 08.8	-3.3
PRNI	**Paran**	**9.11**	**123**	S	Sn	02 57 43.1	-11
PRNI	**Paran**	**9.11**	**123**	P	Pn	02 56 03.9	-8.2
KARJ	**KARJ**	**9.14**	**117**	P	Pn	02 56 03.3	-9.1
HRFI	**Mount Harif**	**9.33**	**124**	P	Pn	02 56 11.8	-3.3
HRFI	**Mount Harif**	**9.33**	**124**	S	Sn	02 57 48.7	-10
HRFI	**Mount Harif**	**9.33**	**124**	P	Pn	02 56 06.6	-8.5
MBRI	**Mt Berech**	**9.40**	**126**	P	Pn	02 56 12.7	-3.5
MBRI	**Mt Berech**	**9.40**	**126**	S	Sn	02 57 50.5	-10
EIL	**Elat**	**9.51**	**126**	P	**Pn**	**02 56 15.0**	**-2.5**
EIL	**Elat**	**9.51**	**126**	S	Sn	02 57 53.0	-10
ESDC	**Sonseca Array**	**24.12**	**289**	P	**P**	**02 59 13.0**	**-2.8**
	comp=E,0.2nm,0.4s,baz=82,slow=9.8,SNR=6.6							
	comp=E,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**31.40**	**231**	P	P	03 00 17.9	-3.2	
	comp=E,0.4nm,0.3s,baz=32,slow=9.0,SNR=4.4							
	comp=E,0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**40.21**	**51**	P	**P**	**03 01 34.0**	**-2.2**	
	comp=E,0.4nm,0.4s,baz=276,slow=8.8,SNR=4.3							
	comp=E,0.4nm,0.4s							
MKAR	**Makanchi Array**	**42.85**	**57**	P	**P**	**03 01 56.0**	**-2.0**	
	comp=E,0.6nm,0.5s,baz=272,slow=7.9,SNR=19							
	comp=E,0.6nm,0.5s							

*IDC **19** 03:02:11.0±1.2,66°.37N×17°.64W,h0km,mb3.3/6, mbtmp3.4/8,ML3.5/1,Error ellipse: s-maj=31.4km s-min=19.2km az=161.0*
*REY **19** 03:02:11.3,66°.55N×17°.69W,h14km*
ISC 19 03:02:11.4±1.2,66°.44N±0'.04×17°.68W±0'.03,h3km±9km, n22,σ0s60/37,mb3.3/6,Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.17**	**308**	P	**Pg**	**03 02 14.6**	**-0.1**
	baz=265						
IGRI				S	**Sg**	**03 02 17.0**	**+0.1**
	baz=265						
IBRE	**Brettingsstaoi**	**0.33**	**197**	P	**Pb**	**03 02 19.5**	**-0.4**
	baz=192						
IBRE				S	**Sb**	**03 02 25.6**	**0.0**
	baz=192						
IHED	**Heoinshofoi**	**0.39**	**157**	P	**Pb**	**03 02 20.1**	**-0.8**
	baz=162						
IHED				S	**Sb**	**03 02 26.7**	**-0.6**
	baz=162						
ILEI	**Leirhofn**	**0.48**	**93**	S	**Sg**	**03 02 27.9**	**+1.1**
	baz=106						
ILEI				P	**Pg**	**03 02 20.4**	**-0.2**
	baz=106						
IGRA	**Granastaoir**	**0.53**	**176**	P	**Pb**	**03 02 22.5**	**-0.7**
	baz=176						
IGRA				S	**Sb**	**03 02 30.9**	**-0.3**
	baz=176						
IDIM	**Dimmadalss**	**0.57**	**147**	P	**Pg**	**03 02 22.9**	**+0.6**
	baz=152						
IDIM				S	**Sb**	**03 02 31.7**	**-0.7**
	baz=152						
IHLA	**Hella**	**0.57**	**210**	P	**Pg**	**03 02 23.1**	**+0.6**
	baz=205						
IHLA				S	**Sb**	**03 02 31.7**	**-0.9**
	baz=205						
ISIG	**Siglufjorour**	**0.59**	**239**	P	**Pg**	**03 02 22.4**	**-0.3**
	baz=230						
ISIG				S	**Sg**	**03 02 30.6**	**+0.3**
	baz=230						
ISKI	**Skildingahlsh**	**0.63**	**155**	S	**Sb**	**03 02 33.5**	**-0.7**
	baz=158						
ISKI				P	**Pg**	**03 02 24.0**	**+0.5**
	baz=158						
IGIL	**Gilhagi**	**0.65**	**124**	P	**Pg**	**03 02 23.6**	**-0.2**
	baz=131						
IGIL				S	**Sg**	**03 02 33.2**	**+0.9**
	baz=131						
IGHA	**Grjothals**	**0.73**	**145**	P	**Pg**	**03 02 25.3**	**0.0**
	baz=149						
IGHA				S	**Sb**	**03 02 36.3**	**-0.7**
	baz=149						
IKVO	**Krokottuvotn**	**0.80**	**156**	P	**Pg**	**03 02 26.7**	**0.0**
	baz=158						
IKVO				S	**Sb**	**03 02 38.4**	**-0.7**
	baz=158						
IREN	**Reynihlio**	**0.86**	**158**	P	**Pg**	**03 02 27.7**	**-0.1**
	baz=160						
IREN				S	**Sb**	**03 02 40.2**	**-0.5**
	baz=160						
IMEL	**Melhnausar**	**0.97**	**154**	S	**Sb**	**03 02 43.8**	**-0.1**
	baz=156						
IMEL				P	**Pg**	**03 02 29.5**	**-0.4**
	baz=156						
BORG	**Borgarnes**	**2.28**	**223**	Pn	**Pn**	**03 02 49.4**	**-0.4**
	15nm,0.3s,baz=44,slow=8.9,SNR=18						
BORG				Sn	**Sn**	**03 03 19.0**	**+0.7**
	25nm,0.3s,baz=71,slow=19,SNR=17						
	142nm,0.6s						
FINES	**FINESS Array B**	**19.52**	**84**	P	**Pn**	**03 06 40.1**	**-0.5**
	1.3nm,0.9s,baz=312,slow=8.4,SNR=1.8						
FRB	**Frobisher Bay**	**21.10**	**287**	P	**P**	**03 06 57.1**	**+0.6**
	1.5nm,0.8s,baz=49,slow=11,SNR=4.0						
	1.5nm,0.8s						
YKA	**Yellowknife Ar**	**37.96**	**311**	P	**P**	**03 09 30.0**	**+0.4**
	0.3nm,0.8s,baz=40,slow=8.9,SNR=4.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**44.08**	**331**	P	**P**	**03 10 21.1**	**+1.2**
	0.5nm,0.8s,baz=26,slow=5.0,SNR=4.9						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**47.30**	**60**	P	**P**	**03 10 45.6**	**+0.1**
	0.2nm,0.4s,baz=324,slow=7.2,SNR=2.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**51.87**	**59**	P	**P**	**03 11 20.2**	**-0.3**
	0.2nm,0.7s,baz=324,slow=7.9,SNR=2.8						
	0.2nm,0.7s						
PDAR	**Pinedale Array**	**52.43**	**292**	P	**P**	**03 11 24.4**	**-0.6**
	0.2nm,0.6s,baz=42,slow=4.1,SNR=2.5						
	0.2nm,0.6s						

*REY **19** 03:04:19.5,66°.56N×17°.68W,h13km*
*IDC **19** 03:04:20.0±0.6,66°.39N×17°.46W,h0km,mb3.8/17, mbtmp3.8/21,ML3.3/4,MS3.5/19,Error ellipse: s-maj=18.4km s-min=11.6km az=9.0*
*MOS **19** 03:04:20.5±1.2,66°.47N×17°.50W,h13km,mb4.3/20,Error ellipse: s-maj=14.1km s-min=8.3km az=99.9*
*NEIC **19** 03:04:21.3±0.4,66°.45N±0'.03×17°.67W±0'.03,h10km,n119, σ1s59/135,mb4.0/36,MS3.5/18,5C-5D,Iceland region*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.17**	**306**	S	**Sg**	**03 04 25.0**	**-2.4**
	baz=263						
IGRI				P	**Pg**	**03 04 22.7**	**-2.2**
	baz=263						
IBRE	**Brettingsstaoi**	**0.34**	**197**	P	**Pg**	**03 04 27.8**	**-0.2**
	baz=192						
IBRE				S	**Sb**	**03 04 34.2**	**-0.6**
	baz=192						
IHED	**Heoinshofoi**	**0.39**	**158**	S	**Sb**	**03 04 35.3**	**-1.2**
	baz=162						
IHED				P	**Pg**	**03 04 28.4**	**-0.7**
	baz=162						
ILEI	**Leirhofn**	**0.48**	**94**	S	**Sg**	**03 04 35.6**	**-1.3**
	baz=107						
ILEI				P	**Pg**	**03 04 28.5**	**-2.0**
	baz=107						
IGRA	**Granastaoir**	**0.53**	**176**	P	**Pg**	**03 04 30.8**	**-0.8**
	baz=176						
IGRA				S	**Sb**	**03 04 39.2**	**-1.1**
	baz=176						
IDIM	**Dimmadalss**	**0.57**	**148**	S	**Sb**	**03 04 40.3**	**-1.3**
	baz=153						
IDIM				P	**Pg**	**03 04 31.2**	**-1.2**
	baz=153						
IHLA	**Hella**	**0.58**	**210**	S	**Sb**	**03 04 40.4**	**-1.4**
	baz=205						
IHLA				P	**Pg**	**03 04 31.5**	**-1.1**
	baz=205						
ISIG	**Siglufjorour**	**0.59**	**239**	P	**Pg**	**03 04 30.9**	**-1.9**
	baz=230						
ISIG				S	**Sg**	**03 04 39.0**	**-1.6**
	baz=230						
ISKI	**Skildingahlsh**	**0.64**	**155**	S	**Sb**	**03 04 42.2**	**-1.2**
	baz=159						
ISKI				P	**Pg**	**03 04 32.3**	**-1.3**
	baz=159						
IGIL	**Gilhagi**	**0.65**	**124**	S	**Sb**	**03 04 41.7**	**-2.1**
	baz=131						
IGIL				P	**Pg**	**03 04 31.9**	**-1.9**
	baz=131						
IGHA	**Grjothals**	**0.73**	**145**	P	**Pg**	**03 04 33.7**	**-1.7**
	baz=150						
IGHA				S	**Sb**	**03 04 44.8**	**-1.4**
	baz=150						
IKVO	**Krokottuvotn**	**0.80**	**156**	S	**Sb**	**03 04 47.0**	**-1.2**
	baz=159						
IKVO				P	**Pg**	**03 04 35.0**	**-1.7**
	baz=159						
IREN	**Reynihlio**	**0.86**	**158**	S	**Sb**	**03 04 48.8**	**-1.1**
	baz=161						
IREN				P	**Pg**	**03 04 36.1**	**-1.8**
	baz=161						
BORG	**Borgarnes**	**2.28**	**223**	P	**Pn**	**03 04 57.6**	**-1.4**
BORG	**Borgarnes**	**2.28**	**223**	Pn	**Pn**	**03 04 57.5**	**-1.5**
	47nm,0.3s,baz=11,slow=5.0,SNR=12						
BORG				Sn	**Sn**	**03 05 26.1**	**-0.9**
	52nm,0.3s,baz=261,slow=20,SNR=17						
	475nm,0.8s						
SCO	**Scoresbysund**	**4.35**	**341**	*e*P	**Pn**	**03 05 24.1**	**-3.2**
SCO				*e*S	**Pn**	**03 05 29.0**	**+1.7**
EKA	**Eskdalemuir Ar**	**13.15**	**141**	Pn	**Pn**	**03 07 30.4**	**+2.6**
	baz=328,slow=15						
NBO00	**NORSAR Array S**	**13.62**	**100**	Pn	**Pn**	**03 07 32.5**	**-1.7**
NOA	**NORSAR Array B**	**13.79**	**99**	Pn	**P**	**03 07 42.2**	**-3.0**
	baz=298,slow=13,SNR=3.3						
KBS	**Kingsbay**	**14.99**	**22**	*i* P	**Pn**	**03 07 52.7**	**-0.1**
SPITS	**Spitsbergen Ar**	**15.27**	**26**	Pn	**Pn**	**03 07 58.7**	**+2.1**
	baz=300,slow=7.3						
	6.0nm,0.9s						
HFS	**Hagfors**	**15.31**	**99**	Pn	**P**	**03 08 02.2**	**+0.2**
	0.1nm,0.3s,baz=294,slow=4.7,SNR=6.2						
ARCES	**ARCESS Array B**	**16.21**	**60**	Pn	**Pn**	**03 08 06.9**	**-1.8**
	0.1nm,0.3s,baz=277,slow=11,SNR=3.3						
	3.6nm,0.9s						
FIA1	**FINESS Array S**	**19.52**	**84**	P	**Pn**	**03 08 49.6**	**0.0**
FIA1				IAmb	IAmb	03 09 10.5	
	comp=Z,36nm,1.4s						
FINES	**FINESS Array B**	**19.52**	**84**	*e*P	**Pn**	**03 08 49.4**	**-0.2**
FINES	**FINESS Array B**	**19.52**	**84**	P	**P**	**03 08 48.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=6.2						
FINES				LR	LR	03 15 06.0	
	comp=Z,165nm,21.4s,baz=306,slow=33						
	comp=Z,1.9nm,0.7s						
FRB	**Frobisher Bay**	**21.10**	**287**	P	**P**	**03 09 05.2**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=56,slow=14,SNR=5.5						
FRB				LR	LR	03 16 28.6	
	comp=Z,142nm,21.6s,baz=58,slow=34						
	comp=Z,2.1nm,1.0s						
VALR	**Valaam**	**21.48**	**81**	*e*P	**P**	**03 09 11.2**	**+1.7**
VALR				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	**Collm**	**21.60**	**120**	P	**P**	**03 09 10.3**	**-0.5**
CLL				IAmb	IAmb	03 09 11.6	
	comp=Z,6.9nm,1.0s						
CLL	**Collm**	**21.60**	**120**	*i* P	**P**	**03 09 10.4**	**-0.5**
CLL				*i*		03 09 13.6	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	**Collm**	**21.60**	**120**	*i* P	**P**	**03 09 10.4**	**-0.5**
	comp=Z,7.0nm,1.0s						
CLL				*i* x	x	03 09 13.6	
CLL				*e*SS	**SnSn**	**03 13 42.0**	**+8.8**
KLNR	**Kaliningrad**	**21.67**	**105**	*e*P	**P**	**03 09 14.2**	**+2.5**
KLNR				pmax	pmax		
	comp=Z,95nm,1.2s						
BRG	**Berggiesshubel**	**22.29**	**119**	*e*P	**P**	**03 09 18.6**	**+0.2**
BRG				Amp		03 09 19.5	
	comp=Z,4.5nm,1.1s						
BRG	**Berggiesshubel**	**22.29**	**119**	*e*P	**P**	**03 09 18.5**	**+0.2**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SUW	**Suwalki**	**23.28**	**102**	P	**P**	**03 09 27.3**	**-1.4**
SUW	**Suwalki**	**23.28**	**102**	P	**P**	**03 09 27.3**	**-1.4**
SUW				pmax	pmax		
	comp=Z,18nm,1.0s						
CHVC	**Chvalec**	**23.28**	**116**	*e*P	**P**	**03 09 28.3**	**-0.5**
CHVC	**Chvalec**	**23.28**	**116**	*e*P	**P**	**03 09 28.3**	**-0.5**
OSTC	**Ostas**	**23.36**	**116**	*e*P	**P**	**03 09 29.1**	**-0.5**
OSTC	**Ostas**	**23.36**	**116**	*e*P	**P**	**03 09 29.1**	**-0.5**
DPC	**Dobruska-Polom**	**23.57**	**116**	*e*P	**P**	**03 09 31.1**	**-0.6**
DPC	**Dobruska-Polom**	**23.57**	**116**	*e*P	**P**	**03 09 31.1**	**-0.6**
ZVC	**Zvikov**	**23.58**	**121**	*e*P	**P**	**03 09 31.7**	**-0.1**
KHC	**Kasperske Hory**	**23.63**	**122**	*e*P	**P**	**03 09 32.2**	**-0.1**
KHC	**Kasperske Hory**	**23.63**	**122**	*e*P	**P**	**03 09 32.9**	**+0.6**
KHC				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GERES	**GERESS Array B**	**23.92**	**122**	P	**P**	**03 09 34.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=338,slow=7.6,SNR=2.6						
GERES				LR	LR	03 19 37.9	
	comp=Z,64nm,18.3s,baz=318,slow=38						
	comp=Z,0.5nm,0.5s						
KRLC	**Kraliky**	**23.96**	**116**	*e*P	**P**	**03 09 35.2**	**-0.3**
KRLC	**Kraliky**	**23.96**	**116**	*e*P	**P**	**03 09 35.2**	**-0.3**
CKRC	**Cesky Krumlov**	**24.15**	**121**	*e*P	**P**	**03 09 37.1**	**-0.1**
CKRC	**Cesky Krumlov**	**24.15**	**121**	*e*P	**P**	**03 09 37.1**	**-0.1**
SSB	**Saint Sauveur**	**24.34**	**140**	P	**P**	**03 09 39.0**	**+0.1**
SSB	**Saint Sauveur**	**24.34**	**140**	P	**P**	**03 09 39.0**	**+0.1**
SSB				pmax	pmax		
	comp=Z,26nm,1.5s						
DAVOX	**Davos/Dischmat**	**24.49**	**130**	LR	LR	03 19 09.8	
	comp=Z,79nm,20.1s,baz=320,slow=36						
MORC	**Moravsky Berou**	**24.49**	**116**	P	**P**	**03 09 41.1**	**+0.8**
MORC	**Moravsky Berou**	**24.49**	**116**	*e*P	**P**	**03 09 40.0**	**-0.3**
MORC	**Moravsky Berou**	**24.49**	**116**	P	**P**	**03 09 41.1**	**+0.8**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRAC	**Vranov**	**24.54**	**117**	*e*P	**P**	**03 09 42.0**	**+1.3**
KRUC	**Moravsky**	**24.67**	**118**	*e*P	**P**	**03 09 43.0**	**+1.1**
MNK	**Minsk**	**24.78**	**97**	*i* P	**P**	**03 09 40.7**	**-2.1**
	comp=E,5.0nm,1.0s						
MNK				*i* P	**P**	**03 09 40.7**	**-2.1**
	comp=N,4.0nm,0.6s						
MNK				*i* P	**P**	**03 09 40.7**	**-2.1**
	comp=Z,5.0nm,0.9s,baz=317						
MNK				*i* PP	**PnPn**	**03 10 15.1**	**+0.4**
MNK				*i* S	**S**	**03 14 03.9**	**-0.8**
MNK				*i* SS	**SnSn**	**03 14 54.9**	**+3.9**
MNK				*i* LQ	LQ	03 17 25.5	
MNK				*i* LR	LR	03 19 18.6	
MNK	**Minsk**	**24.78**	**97**	*i* P	**P**	**03 09 40.7**	**-2.1**
MNK				*i*		03 10 15.0	
MNK				*i* S	**S**	**03 14 03.9**	**-0.8**
MNK				*i* SS	**SnSn**	**03 14 54.9**	**+3.9**
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,4.0nm,0.6s						
RES	**Resolute Bay**	**24.99**	**322**	P	**P**	**03 09 46.1**	**+1.6**
	comp=N,1.4nm,1.0s,baz=84,slow=8.7,SNR=2.5						
	comp=N,1.4nm,1.0s						
KLMR	**Klimovskoe**	**25.17**	**75**	*e*P	**P**	**03 09 43.9**	**-2.4**
KLMR				pmax	pmax		
	comp=Z,26nm,1.4s						
CTI	**Castel Tesino**	**25.69**	**128**	P	**P**	**03 09 52.1**	**+0.8**
CTI				IAmb	IAmb	03 10 16.9	
	comp=Z,9.1nm,1.1s						
CTI	**Castel Tesino**	**25.69**	**128**	P	**P**	**03 09 52.1**	**+0.8**
CTI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LANS	**Liptovska Anna**	**25.71**	**114**	*e*P	**P**	**03 09 51.9**	**+0.5**
LANS	**Liptovska Anna**	**25.71**	**114**	*e*P	**P**	**03 09 51.9**	**+0.5**
SCHQ	**Schefferville**	**25.98**	**268**	P	**P**	**03 09 54.6**	**+0.9**
	comp=Z,4.1nm,1.1s,baz=50,slow=14,SNR=3.4						
SCHQ				LR	LR	03 19 03.7	
	comp=Z,95nm,18.5s,baz=73,slow=34						
	comp=Z,4.1nm,1.1s						
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**03 09 54.6**	**+0.4**
VYHS	**Vyhne**	**26.03**	**116**	*e*P	**P**	**03 09 54.6**	**+0.4**
OBN	**Obninsk**	**27.82**	**87**	LR	LR	03 20 07.5	
	comp=Z,94nm,21.4s,baz=0.5,slow=34						
ESDC	**Sonseca Array**	**27.92**	**157**	P	**P**	**03 10 11.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=352,slow=10,SNR=4.3						
	comp=Z,0.4nm,0.8s						
AKASG	**Malin Array Be**	**28.20**	**101**	*e*P	**P**	**03 10 13.4**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**28.20**	**101**	P	**P**	**03 10 12.2**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=325,slow=9.5,SNR=6.9						
AKASG				LR	LR	03 20 16.7	
	comp=Z,99nm,18.7s,baz=3.5,slow=34						
	comp=Z,2.8nm,0.7s						

H21K	**Melozitna Rive**	**44.34**	**335**	P	**P**	**03 12 31.2**	**+0.3**
H21K				IAmb	IAmb	03 12 36.1	
	comp=Z,3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**46.59**	**53**	P	**P**	**03 12 48.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=330,slow=8.3,SNR=1.7						
ZALV				PcP	**PcP**	**03 14 22.5**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=353,slow=4.8,SNR=1.8						
	comp=Z,0.3nm,0.3s						
KURK	**Kurchatov**	**47.25**	**59**⇑	*e*P	**P**	**03 12 53.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KURBB	**Kurchatov Arra**	**47.29**	**60**	P	**P**	**03 12 53.1**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=327,slow=7.3,SNR=16						
	comp=Z,1.5nm,0.7s						
SUA	**Susitna One**	**47.82**	**332**	P	**P**	**03 12 58.4**	**-0.1**
SUA				IAmb	IAmb	03 13 03.7	
	comp=Z,2.7nm,1.0s						
M20K	**Styx River**	**47.88**	**333**	P	**P**	**03 12 57.2**	**-1.7**
TKL	**Tuckaleechee C**	**48.39**	**265**	LR	LR	03 32 04.1	
	comp=Z,64nm,18.1s,baz=18,slow=34						
SEY	**Seymchan**	**50.72**	**6**⇓	*e*P	**P**	**03 13 21.2**	**+0.8**
SEY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**51.86**	**59**	P	**P**	**03 13 27.7**	**-1.6**
MK31	**Makanchi Array**	**51.86**	**59**	P	**P**	**03 13 27.7**	**-1.6**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**51.86**	**59**	P	**P**	**03 13 29.3**	**0.0**
MKAR	**Makanchi Array**	**51.86**	**59**	P	**P**	**03 13 28.7**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=324,slow=6.7,SNR=11						
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**52.43**	**292**	P	**P**	**03 13 34.9**	**+1.1**
PDAR	**Pinedale Array**	**52.43**	**292**	P	**P**	**03 13 35.1**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=45,slow=5.8,SNR=6.3						
	comp=Z,0.6nm,0.7s						
TOA0	**Torodi Ar. Sit**	**54.81**	**157**	P	**P**	**03 13 50.9**	**-0.3**
TOA0				IAmb	IAmb	03 13 55.9	
	comp=Z,2.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**54.81**	**157**	P	**P**	**03 13 49.2**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=342,slow=9.3,SNR=3.7						
	comp=Z,0.5nm,0.3s						
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**03 14 41.9**	**+1.0**
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**03 14 43.5**	**+2.6**
	comp=Z,0.5nm,0.8s,baz=36,slow=6.5,SNR=6.2						
TXAR				LR	LR	03 40 58.3	
	comp=Z,61nm,18.1s,baz=23,slow=36						
	comp=Z,0.5nm,0.8s						
CMIG	**Matias Romero**	**69.36**	**265**	LR	LR	03 47 43.8	
	comp=Z,39nm,18.5s,baz=64,slow=38						
PALK	**Pallekele**	**86.73**	**79**	LR	LR	04 00 30.4	
	comp=Z,35nm,18.4s,baz=83,slow=39						

TAP 19 03:05:06.6, 24°23N×121°70E, h15km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.11**	**240**	*i* P	Pb	03 05 10.2	-0.2
NACB	baz=240			S	Sb	03 05 13.5	+0.5
TWD	**Chiawan**	**0.17**	**213**	*e*P	Pb	03 05 11.4	-0.1
TWD	baz=210			*e*S	Sb	03 05 14.5	-0.3
ETLH	**Xiulin Townshi**	**0.20**	**264**	P	Pb	03 05 11.8	-0.2
ETLH	baz=263			S	Sb	03 05 15.7	+0.1
LXIB	**Xiulin Townshi**	**0.33**	**232**	*e*P	Pb	03 05 15.2	+0.9
LXIB	baz=231			*e*S	Sb	03 05 19.7	+0.1
LATG	**Datong**	**0.34**	**333**	*e*P	Pb	03 05 15.2	+0.7
LATG	baz=332			*e*S	Sb	03 05 19.8	-0.1
NNSB	**Datong**	**0.35**	**305**	*e*P	Pb	03 05 14.3	-0.3
NNSB	baz=304			*e*S	Sb	03 05 20.4	+0.4
YHNB	**Yeheng**	**0.53**	**326**	*e*P	Pb	03 05 17.9	+0.3
	baz=326						

TAP 19 03:05:14.8, 24°23N×121°73E, h19km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAHA	**Aohua**	**0.10**	**3**	*e*P	Pg	03 05 18.6	0.0
EAHA	baz=1.0			*e*S	Sg	03 05 21.4	+0.2
NACB	**Ninganchiao**	**0.14**	**246**	*i* P	Pg	03 05 19.1	0.0
NACB	baz=248			S	Sg	03 05 22.3	+0.4
NACB	**Ninganchiao**	**0.14**	**246**	*e*P	Sg	03 05 22.4	+0.5
ENA	**Nanau**	**0.20**	**2**	P	Pg	03 05 20.0	+0.2
ENA	baz=2.0			*e*S	Sg	03 05 23.5	+0.3
TWD	**Chiawan**	**0.20**	**220**	*i* P	Pg	03 05 19.9	0.0
TWD	baz=227			S	Sg	03 05 23.5	+0.3
TWD	**Chiawan**	**0.20**	**220**	*e*P	Sg	03 05 23.6	+0.3
EWUT	**Wuta**	**0.22**	**11**	P	Pg	03 05 20.1	0.0
EWUT	baz=8.0			S	Sg	03 05 23.8	0.0
ETLH	**Xiulin Townshi**	**0.23**	**264**	P	Pg	03 05 20.7	+0.2
ETLH	baz=264			S	Sg	03 05 24.6	+0.4
ETLH	**Xiulin Townshi**	**0.23**	**264**	*e*P	Sg	03 05 24.8	+0.5
LATG	**Datong**	**0.36**	**328**	*e*P	Pb	03 05 22.9	+0.1
LATG	baz=327			*e*S	Sb	03 05 28.8	+0.7
LXIB	**Xiulin Townshi**	**0.36**	**234**	*e*P	Pb	03 05 23.4	+0.6
LXIB	baz=236			S	Sb	03 05 28.1	-0.1
NNSB	**Datong**	**0.38**	**301**	*e*P	Pb	03 05 23.5	+0.4
NNSB	baz=302			*e*S	Sb	03 05 29.3	+0.7
TWC	**Suao**	**0.39**	**16**	*e*P	Pb	03 05 23.9	+0.6
TWC	baz=12			*e*S	Sb	03 05 29.1	+0.1
NDT	**Datong Townshi**	**0.42**	**331**	*e*P	Pb	03 05 24.7	+0.9
NDT	baz=336			*e*S	Sb	03 05 30.5	+0.6
ENTT	**Nioudou**	**0.43**	**339**	*e*P	Pb	03 05 24.6	+0.5
ENTT	baz=338			*e*S	Sb	03 05 30.4	+0.2
WHF	**Hehuan Shan**	**0.44**	**259**	*e*P	Pb	03 05 24.4	+0.1
WHF	baz=260			*e*S	Sb	03 05 30.8	+0.1
FUSS	**Fushou**	**0.45**	**272**	P	Pb	03 05 25.2	+0.8
FUSS	baz=273			*e*S	Sb	03 05 31.5	+0.7
CHGB	**Renai**	**0.54**	**252**	*e*P	Pg	03 05 25.8	0.0
CHGB	baz=246			*e*S	Sb	03 05 34.1	+0.9
FUSB	**Fushanzhiwuyua**	**0.54**	**346**	*e*P	Pb	03 05 25.2	-0.6
FUSB	baz=344			*e*S	Sb	03 05 34.0	+0.8
YHNB	**Yeheng**	**0.55**	**323**	*e*P	Pg	03 05 25.9	0.0
YHNB	baz=322			*e*S	Sb	03 05 34.3	+1.1
YHNB	**Yeheng**	**0.55**	**323**	*e*S	Pg	03 05 25.7	-0.2
NSK	**Sanguang**	**0.56**	**322**	*e*P	Pg	03 05 26.7	+0.5
NSK	baz=322			*e*S	Sg	03 05 34.5	+0.9
NWLT	**Wulai**	**0.58**	**339**	*e*P	Pb	03 05 26.4	0.0
NWLT	baz=340			*e*S	Sg	03 05 35.0	+0.6
WUSB	**Renai**	**0.61**	**247**	*e*P	Pg	03 05 27.2	+0.1
WUSB	baz=241			*e*S	Sg	03 05 36.6	+1.3

TAP 19 03:05:19.0, 24°17N×121°66E, h23km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.06**	**270**	S	Sb	03 05 25.6	-0.3
TWD	**Chiawan**	**0.11**	**214**	*e*S	Sb	03 05 26.8	+0.3
ETLH	**Xiulin Townshi**	**0.17**	**281**	*e*S	Sb	03 05 28.0	+0.3
LXIB	**Xiulin Townshi**	**0.28**	**236**	*e*P	Pb	03 05 26.0	+0.3
LXIB	baz=238			*e*S	Sb	03 05 31.1	+1.0
NNSB	**Datong**	**0.36**	**315**	*e*P	Pb	03 05 26.9	-0.1
NNSB	baz=314			*e*S	Sb	03 05 32.5	+0.2

*IDC **19** 03:09:46.7±0.7, 66°40N×17°60W, h0km, mb3.6/13, mbtmp3.6/15, ML2.8/2, MS3.1/1, Error ellipse: s-maj=22.2km s-min=13.6km az=1.0*
*REY **19** 03:09:46.5, 66°55N×17°70W, h10km*
ISC 19 03:09:46.4±1.3, 66°48N±0°04×17°66W±0°03, h0km±9km, n28, σ1§13/37, mb3.5/13, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.15**	**293**	P	**Pg**	**03 09 49.5**	**+0.1**
IGRI	baz=268			S	**Sg**	**03 09 51.9**	**+0.6**
IBRE	**Brettingsstaoi**	**0.38**	**196**	P	**Pg**	**03 09 54.5**	**+1.0**
IBRE	baz=191			S	**Sb**	**03 10 01.0**	**-1.2**
IHED	**Heoinshofoi**	**0.43**	**161**	P	**Pg**	**03 09 55.5**	**+0.9**
IHED	baz=161			S	**Sb**	**03 10 02.6**	**-1.1**
ILEI	**Leirhofn**	**0.48**	**99**	S	**Sg**	**03 10 02.9**	**+1.2**
ILEI	baz=106			P	**Pg**	**03 09 55.7**	**+0.1**
IGRA	**Granastaoir**	**0.57**	**177**	P	**Pg**	**03 09 57.8**	**+0.5**
IGRA	baz=175			S	**Sb**	**03 10 06.5**	**-1.2**
IDIM	**Dimmadalss**	**0.60**	**150**	P	**Pg**	**03 09 58.1**	**+0.2**
IDIM	baz=152			S	**Sb**	**03 10 07.1**	**-1.6**
IHLA	**Hella**	**0.62**	**209**	P	**Pg**	**03 09 58.2**	**0.0**
IHLA	baz=205			S	**Sg**	**03 10 07.2**	**+1.1**
ISIG	**Siglufjorour**	**0.62**	**236**	P	**Pg**	**03 09 57.5**	**-0.8**
ISIG	baz=230			S	**Sg**	**03 10 05.7**	**-0.5**
ISKI	**Skildingahlsh**	**0.67**	**157**	P	**Pg**	**03 09 59.3**	**+0.1**
IGIL	**Gilhagi**	**0.67**	**127**	P	**Pg**	**03 09 58.9**	**-0.3**
IGIL	baz=130			S	**Sb**	**03 10 08.9**	**-1.8**
BORG	**Borgarnes**	**2.31**	**223**	Pn	**Pn**	**03 10 24.6**	**-1.0**
BORG	11nm,0.3s,baz=36,slow=5.5,SNR=17			Sn	**Sn**	**03 10 54.2**	**-0.6**
	36nm,0.3s,baz=53,slow=23,SNR=37						
	132nm,0.5s						
SCO	**Scoresbysund**	**4.32**	**340**	*i* P	**Pn**	**03 10 50.8**	**-2.4**
SCO				IAML		03 11 05.8	
	comp=Z,4.0nm,0.3s						
FINES	**FINESS Array B**	**19.51**	**84**	P	**Pn**	**03 14 15.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=331,slow=11,SNR=2.4						
	comp=Z,2.6nm,1.1s						
FRB	**Frobisher Bay**	**21.10**	**287**	P	**P**	**03 14 32.8**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=47,slow=13,SNR=4.2						
	comp=Z,1.6nm,0.8s						
CLL	**Collm**	**21.61**	**120**	*e*P	**P**	**03 14 36.0**	**-1.6**
CLL				*i* x	x	03 14 38.8	
	comp=Z,5.0nm,1.2s						
VRAC	**Vranov**	**24.55**	**118**	LR	LR	03 26 30.5	
	comp=Z,41nm,18.4s,baz=328,slow=41						
ESDC	**Sonseca Array**	**27.95**	**157**	P	**P**	**03 15 36.0**	**-2.3**
	comp=Z,0.4nm,1.0s,baz=349,slow=8.8,SNR=1.8						
	comp=Z,0.4nm,1.0s						
AKASG	**Malin Array Be**	**28.20**	**101**	P	**P**	**03 15 40.3**	**0.0**
	comp=Z,1.0nm,0.8s,baz=326,slow=9.7,SNR=1.5						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**37.94**	**311**	P	**P**	**03 17 04.8**	**0.0**
	comp=Z,0.5nm,0.8s,baz=39,slow=8.9,SNR=7.5						
	comp=Z,0.5nm,0.8s						
BRTR	**Keskin Array B**	**39.05**	**107**	P	**P**	**03 17 16.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=326,slow=5.7,SNR=3.6						
	comp=Z,0.5nm,0.7s						
AKTO	**Aktyubinsk**	**39.85**	**75**	P	**P**	**03 17 21.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=336,slow=4.1,SNR=2.2						
	comp=Z,1.3nm,0.5s						
ULM	**Lac du Bonnet**	**40.98**	**287**	P	**P**	**03 17 31.9**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=42,slow=11,SNR=4.1						
	comp=Z,2.2nm,0.7s						
BVAR	**Borovoye Array**	**42.42**	**64**	P	**P**	**03 17 41.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=355,slow=4.9,SNR=2.4						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**44.04**	**331**	P	**P**	**03 17 55.4**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=28,slow=8.4,SNR=6.3						
	comp=Z,0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**47.27**	**60**	P	**P**	**03 18 20.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=327,slow=7.3,SNR=4.9						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**51.84**	**59**	P	**P**	**03 18 55.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=335,slow=6.4,SNR=2.8						
	comp=Z,0.5nm,0.8s						
PDAR	**Pinedale Array**	**52.42**	**292**	P	**P**	**03 19 00.8**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=74,slow=5.3,SNR=5.0						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**61.91**	**279**	P	**P**	**03 20 09.9**	**+2.3**
	comp=Z,0.4nm,0.8s,baz=42,slow=4.2,SNR=4.3						
	comp=Z,0.4nm,0.8s						

*KRNET **19** 03:12:32.3±0.1, 39°33N×72°45E, h12km, mb3.2*
*SOME **19** 03:12:33.2, 39°55N×72°00E, h0km*
*IDC **19** 03:12:36.8±2.6, 39°38N×72°98E, h0km, mb3.2/1, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=31.0km s-min=24.9km az=137.0*
*NNC **19** 03:12:39.7±1.6, 39°57N×72°59E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=12.1km s-min=6.9km az=4.0*
ISC 19 03:12:33.6±1.3, 39°28N±0°07×72°45E±0°03, h10km, n54, σ2§18/86, 34C-17D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.55**	**292**⇑	*i*P	**Pg**	**03 12 42.4**	**-1.9**
DRK	baz=88			⇑*i*S	**Sg**	**03 12 49.7**	**-1.9**
SFK	**Sufi-Kurgan**	**1.09**	**47**⇑	*i*P	**Pb**	**03 12 52.4**	**-2.4**
SFK	baz=49			⇑*i*S	**Sg**	**03 13 07.3**	**-1.7**
OHH	**Osh**	**1.27**	**11**⇑	*i*P	**Pn**	**03 12 55.4**	**-2.2**
OHH	baz=12			⇑*i*S	**Sb**	**03 13 12.2**	**-2.0**
BTK	**Batken**	**1.48**	**302**⇑	*i*P	**Pn**	**03 12 59.6**	**-0.9**
BTK	baz=1.0			⇑*i*S	**Sn**	**03 13 19.2**	**-0.8**
ARSB	**Arslanbob**	**2.09**	**11**⇑	*i*P	**Pn**	**03 13 09.4**	**+0.6**
ARSB	baz=11			⇑*i*S	**Sn**	**03 13 36.4**	**+1.5**
TRKS	**Terek-Say**	**2.46**	**336**⇑	*e*P	**Pn**	**03 13 13.3**	**-0.8**
TRKS	baz=36			⇑*e*S	**Sn**	**03 13 44.3**	**0.0**
ARK	**Arkit**	**2.55**	**352**⇑	*i*P	**Pn**	**03 13 15.7**	**+0.6**
ARK	baz=52			⇑*i*S	**Sn**	**03 13 47.6**	**+1.3**
ARLS	**Aral**	**2.95**	**28**⇑	*i*P	**Pn**	**03 13 21.4**	**+0.7**
ARLS	baz=29			⇑*i*S	**Sn**	**03 13 57.3**	**+1.0**
MNAS	**Manas**	**3.21**	**1**⇑	*i*P	**Pn**	**03 13 25.0**	**+0.7**
MNAS	baz=1.0			⇑*i*S	**Sn**	**03 14 03.5**	**+0.9**
UCH	**Uchtor**	**3.34**	**27**⇑	*i*P	**Pn**	**03 13 27.1**	**+0.8**
UCH	baz=28			⇑*i*S	**Sn**	**03 14 07.1**	**+0.8**
NRN	**Naryn**	**3.46**	**50**⇑	*i*P	**Pn**	**03 13 28.6**	**+0.7**
NRN	baz=51			⇑*i*S	**Sn**	**03 14 09.4**	**+0.3**
MRKS	**Merke**	**3.52**	**9**	Pg	**Pn**	**03 13 31.8**	**+3.4**
	21nm,0.4s						
MRKS				Lg	Lg	03 14 13.8	
	49nm,0.2s						
MRKS	**Merke**	**3.52**	**9**	*e*P	**Pb**	**03 13 35.7**	**-0.3**
	7.5nm,0.3s						
MRKS				*e*S	**Sb**	**03 14 21.2**	**+2.4**
	73nm,0.4s						
EKS2	**Erkin-Say**	**3.53**	**16**⇓	*i*P	**Pn**	**03 13 29.5**	**+0.9**
EKS2	baz=16			⇓*i*S	**Sn**	**03 14 11.1**	**+0.6**
	baz=16						
AAK	**Ala-Archa**	**3.70**	**24**	pmax	pmax		
	comp=Z,3.0nm,0.5s						
AAK	**Ala-Archa**	**3.70**	**24**	Pn	**Pn**	**03 13 34.4**	**+3.4**
	comp=Z,2.2nm,0.3s,baz=219,slow=12,SNR=27						
AAK				Sn	**Sn**	**03 14 18.1**	**+3.4**
	comp=Z,2.6nm,0.3s,baz=4.2,slow=4.1,SNR=2.2						
AAK				Lg	Lg	03 14 27.7	
	comp=Z,4.5nm,0.3s,baz=109,slow=17,SNR=10.0						
	comp=Z,4.5nm,0.3s						
AAK	**Ala-Archa**	**3.70**	**24**⇓	*i*P	**Pn**	**03 13 31.9**	**+0.9**
	baz=24						
AAK				⇓*i*S	**Sn**	**03 14 15.3**	**+0.6**
	baz=24						
AAK	**Ala-Archa**	**3.70**	**24**⇓	*e*P	**Pn**	**03 13 34.3**	**+3.4**
KBK	**Karagaybulak**	**3.87**	**28**⇓	*i*P	**Pn**	**03 13 34.2**	**+0.8**
	baz=29						
KBK				⇓*i*S	**Sn**	**03 14 19.5**	**+0.5**
	baz=29						
FRU1	**Bishkek**	**3.90**	**24**⇑	*i*P	**Pn**	**03 13 34.6**	**+1.0**
	baz=25						
FRU1				⇑*i*S	**Sn**	**03 14 20.4**	**+0.9**
	baz=25						
KK31	**Karatay Array**	**4.09**	**340**	⇓Pn	**Pn**	**03 13 39.1**	**+2.8**
	comp=Z,2.1nm,0.3s,baz=142,slow=11,SNR=54						
KK31				⇑Pg	**Pg**	**03 13 52.6**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=169,slow=17,SNR=3.7						
KK31				⇓Sn	**Sn**	**03 14 26.8**	**+2.5**
	comp=Z,5.2nm,0.3s,baz=137,slow=22,SNR=4.1						
KK31				⇑Lg	Lg	03 14 42.3	
	comp=Z,5.5nm,0.3s,baz=152,slow=29,SNR=4.0						
CHMS	**Chumysh**	**4.10**	**24**	⇓Pn	**Pn**	**03 13 39.5**	**+3.1**
	comp=Z,4.2nm,0.4s						
CHMS				⇑Lg	Lg	03 14 39.6	
	comp=Z,14nm,0.6s						
CHMS	**Chumysh**	**4.10**	**24**⇑	*i*P	**Pn**	**03 13 37.2**	**+0.7**
	baz=25						
CHMS				⇑*i*S	**Sn**	**03 14 24.9**	**+0.4**
	baz=25						
ULHL	**Ulahol**	**4.13**	**43**⇓	*i*P	**Pn**	**03 13 38.1**	**+1.1**
	baz=43						
ULHL				⇓*i*S	**Sn**	**03 14 26.1**	**+0.6**
	baz=43						
BOOM	**Boomskoye usch**	**4.16**	**38**⇓	*i*P	**Pn**	**03 13 38.4**	**+1.1**
	baz=39						
BOOM				⇓*i*S	**Sn**	**03 14 26.7**	**+0.6**
	baz=39						
USP	**Ospenovka**	**4.28**	**20**⇓	*i*P	**Pn**	**03 13 39.7**	**+0.9**
	baz=21						
USP				⇓*i*S	**Sn**	**03 14 28.9**	**+0.1**
	baz=21						
TKM2	**Tokmak 2**	**4.35**	**32**	⇑Pn	**Pn**	**03 13 43.0**	**+3.0**
	comp=Z,2.1nm,0.5s						
TKM2				⇑Pg	**Pg**	**03 13 54.9**	**-2.0**
	comp=Z,4.1nm,0.5s						
TKM2				⇑Lg	Lg	03 14 47.7	
	comp=Z,16nm,0.8s						
TKM2	**Tokmak 2**	**4.35**	**32**⇑	*i*P	**Pn**	**03 13 41.0**	**+1.0**
	baz=32						
TKM2				⇑*i*S	**Sn**	**03 14 31.1**	**+0.3**
	baz=32						
KST	**Kastek**	**4.60**	**34**	Pg	**Pb**	**03 13 57.5**	**+3.0**
	comp=Z,5.1nm,0.6s						
KST				Lg	Lg	03 14 57.9	
	comp=Z,17nm,0.5s						
KST	**Kastek**	**4.60**	**34**	*e*P	**Pg**	**03 13 58.9**	**-2.9**
	comp=Z,2.2nm,0.3s						
KST				*e*S	**Sg**	**03 15 01.1**	**-0.3**
	comp=Z,17nm,0.5s						
DGS	**Degeres**	**4.69**	**31**	Pg	**Pb**	**03 13 58.9**	**+3.0**
	comp=Z,6.1nm,0.5s						
DGS				Lg	Lg	03 15 00.4	
	comp=Z,20nm,0.6s						
DGS	**Degeres**	**4.69**	**31**	*e*P	**Pg**	**03 14 00.1**	**-3.2**
	comp=Z,5.1nm,0.7s						
DGS				*e*S	**Sg**	**03 15 03.4**	**-0.7**
	comp=Z,9.3nm,0.6s						
MTBS	**Maitube**	**4.88**	**37**	Pg	**Pb**	**03 14 03.1**	**+3.8**
	comp=Z,3.1nm,0.3s						
MTBS				Lg	Lg	03 15 07.5	
	comp=Z,9.1nm,0.3s						
MTBS	**Maitube**	**4.88**	**37**	*e*P	**Pg**	**03 14 04.3**	**-2.8**
	comp=Z,2.7nm,0.3s						
MTBS				*e*S	**Sg**	**03 15 10.7**	**+0.4**
	comp=Z,9.3nm,0.4s						
KRBS	**Karabastau**	**5.04**	**28**	Pg	**Pb**	**03 14 03.7**	**+1.8**
	comp=Z,5.2nm,0.8s						
KRBS				Lg	Lg	03 15 08.7	
	comp=Z,9.2nm,0.4s						
KRBS	**Karabastau**	**5.04**	**28**	*e*P	**Pg**	**03 14 06.3**	**-3.8**
	comp=Z,2.4nm,0.5s						
KRBS				*e*S	**Sg**	**03 15 14.1**	**-1.2**
	comp=Z,7.8nm,0.6s						
MDOK	**Medeo**	**5.20**	**40**	Pg	**Pg**	**03 14 09.5**	**-3.8**
	comp=Z,8.5nm,0.7s						
MDOK				Lg	Lg	03 15 15.9	
	comp=Z,11nm,0.6s						
MDOK				Lg	Lg	03 15 18.4	
	comp=Z,8.7nm,0.6s						
MDOK	**Medeo**	**5.20**	**40**	*e*P	**Pg**	**03 14 11.2**	**-2.1**
	comp=Z,7.1nm,0.4s						
MDOK				*e*S	**Sg**	**03 15 22.6**	**+1.9**
	comp=Z,10nm,0.7s						
KTBS	**Karatobe**	**5.45**	**34**	Pg	**Pb**	**03 14 13.2**	**+4.3**
	comp=Z,2.6nm,0.7s						
KTBS				Lg	Lg	03 15 24.8	
	comp=Z,12nm,0.5s						
KTBS	**Karatobe**	**5.45**	**34**	*e*P	**Pg**	**03 14 14.1**	**-3.9**
	comp=Z,1.6nm,0.5s						
KTBS				*e*S	**Sg**	**03 15 27.4**	**-1.2**
	comp=Z,12nm,0.8s						
KUU	**Kurty**	**5.46**	**31**	Pg	**Pb**	**03 14 12.8**	**+3.8**
	comp=Z,3.2nm,0.5s						
KUU				Lg	Lg	03 15 24.2	
	comp=Z,8.5nm,1.0s						
KUU	**Kurty**	**5.46**	**31**	*e*P	**Pg**	**03 14 14.6**	**-3.5**
	comp=Z,2.7nm,0.3s						
KUU				*e*S	**Sg**	**03 15 28.1**	**-0.7**
	comp=Z,7.4nm,0.4s						
CHKK	**Chushkaly**	**5.70**	**35**	Pg	**Pb**	**03 14 17.8**	**+4.6**
	comp=Z,1.9nm,0.2s						
CHKK				Lg	Lg	03 15 32.7	
	comp=Z,6.6nm,0.5s						
CHKK	**Chushkaly**	**5.70**	**35**	*e*P	**Pg**	**03 14 18.9**	**-3.8**
	comp=Z,1.0nm,0.1s						
CHKK				*e*S	**Sg**	**03 15 35.5**	**-1.1**
	comp=Z,8.2nm,0.3s						
BTLS	**Baital**	**5.88**	**11**	Pg	**Pb**	**03 14 16.0**	**-0.2**
	comp=Z,1.6nm,0.3s						
BTLS				Lg	Lg	03 15 29.8	
	comp=Z,7.0nm,0.5s						
BTLS	**Baital**	**5.88**	**11**	*e*P	**Pb**	**03 14 19.2**	**+3.0**
	comp=Z,0.9nm,0.3s						
BTLS				*e*S	**Sg**	**03 15 36.2**	**-6.2**
	comp=Z,7.0nm,0.5s						

MKAR	**Makanchi Array**	**10.40**	**41**	Pn		**Pn**	**03 15 05.0**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=230,slow=11,SNR=5.7							
MKAR				Lg		Lg	03 17 57.0	
	comp=Z,0.1nm,0.3s,baz=226,slow=29,SNR=1.9 comp=Z,0.7nm,0.8s							
KURBB	**Kurchatov Arra**	**12.13**	**19**	Lg		Lg	03 18 53.7	
	comp=Z,0.1nm,0.3s,baz=206,slow=30,SNR=2.3							
BVA0	**Borovoye Array**	**13.83**	**355**	P		**P**	**03 15 55.8**	**-2.2**
	baz=0.0,slow=0.1,SNR=4.6							
BVAR	**Borovoye Array**	**13.83**	**355**	Pn		**P**	**03 15 58.6**	**+0.6**
	baz=154,slow=7.8,SNR=6.8							
AKTO	**Aktyubinsk**	**15.11**	**322**	⇓P		**P**	**03 16 12.2**	**-0.1**
	comp=Z,0.9nm,0.6s							
AKTO	**Aktyubinsk**	**15.11**	**322**	Pn		**P**	**03 16 12.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=109,slow=11,SNR=4.2 comp=Z,1.9nm,0.5s							
ZALV	**Zalesovo Beam**	**16.92**	**26**	Pn		**P**	**03 16 32.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=226,slow=10,SNR=5.9 comp=Z,0.8nm,0.4s							
SONM	**Songino Array**	**25.87**	**60**	P		**P**	**03 18 05.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=264,slow=9.4,SNR=1.6 comp=Z,0.2nm,0.3s							

*IDC **19** 03:30:28.6±6.8, 35°.55N×71°.14E, h70km±47km, mb3.5/4, mbtmp3.7/8, ML3.2/4, Error ellipse: s-maj=80.5km s-min=27.6km az=147.0*
*NNC **19** 03:30:43.6±1.8, 36°.74N×70°.72E, h121km±26km, mb3.3, mpv4.0, Error ellipse: s-maj=13.9km s-min=10.9km az=12.0*
ISC 19 03:30:41.4±1.5, 36°.6N±0°.1×70°.55E±0°.08, h150km, n21, σ2s 05/25, mb3.6/3, 3C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UCH	**Uchtor**	**6.44**	**27**	P		**Pn**	**03 32 14.4**	**+0.2**
	SNR=16							
KK31	**Karatay Array**	**6.53**	**360**	P		**Pn**	**03 32 14.7**	**-0.5**
	2.7nm,0.3s,baz=189,slow=15,SNR=40							
KK31				S		**Sn**	**03 33 27.1**	**-1.5**
	7.3nm,0.6s,baz=151,slow=13,SNR=9.3							
EKS2	**Erkin-Say**	**6.58**	**21**	P		**Pn**	**03 32 18.1**	**+2.2**
	SNR=6.1							
AAK	**Ala-Archa**	**6.79**	**25**	P		**Pn**	**03 32 18.9**	**+0.3**
	SNR=7.6							
KBK	**Karagaybulak**	**6.97**	**28**	P		**Pn**	**03 32 21.6**	**+0.5**
	SNR=6.6							
ULHL	**Ulahol**	**7.19**	**36**	P		**Pn**	**03 32 23.4**	**-0.6**
	SNR=7.2							
CHMS	**Chumysh**	**7.20**	**25**	⇓P		**Pn**	**03 32 23.6**	**-0.4**
	5.9nm,0.6s							
CHMS				⇑S		**Sn**	**03 33 41.1**	**-3.4**
	9.0nm,0.5s							
TKM2	**Tokmak 2**	**7.45**	**30**	P		**Pn**	**03 32 26.3**	**-1.2**
	SNR=13							
TKM2	**Tokmak 2**	**7.45**	**30**	⇑P		**Pn**	**03 32 26.5**	**-1.0**
	13nm,0.7s							
TKM2				⇓S		**Sn**	**03 33 47.9**	**-2.9**
	8.7nm,0.7s							
GEYT	**Alibeck**	**10.00**	**282**	P		**Pn**	**03 32 59.6**	**-1.8**
	0.4nm,0.3s,baz=129,slow=11,SNR=2.6							
GEYT				S		**Sn**	**03 34 49.0**	**-3.2**
	1.7nm,0.5s,baz=103,slow=16,SNR=2.4 1.0nm,0.5s							
MK31	**Makanchi Array**	**13.46**	**37**	P		**Pn**	**03 33 46.5**	**+0.2**
	2.9nm,0.9s,baz=223,slow=15,SNR=11							
MKAR	**Makanchi Array**	**13.46**	**37**	P		**Pn**	**03 33 44.4**	**-1.9**
	0.1nm,0.3s,baz=223,slow=14,SNR=11 0.8nm,0.6s							
AB31	**Akbulak array**	**14.86**	**332**	⇑P		**Pn**	**03 34 05.3**	**+1.5**
	2.5nm,0.3s,baz=157,slow=11,SNR=229							
AB31				S		**Sn**	**03 36 48.6**	**0.0**
	0.6nm,0.5s,baz=158,slow=22,SNR=4.0							
KURBB	**Kurchatov Arra**	**15.19**	**20**	P		**Pn**	**03 34 08.4**	**+0.5**
	0.1nm,0.3s,baz=208,slow=10,SNR=7.5 1.6nm,0.6s							
BVA0	**Borovoye Array**	**16.46**	**360**	P		**Pn**	**03 34 25.5**	**+2.0**
	0.1nm,0.6s,baz=156,slow=8.5,SNR=9.1							
BVAR	**Borovoye Array**	**16.46**	**360**	P		**Pn**	**03 34 25.6**	**+2.1**
	baz=161,slow=11,SNR=10 1.6nm,0.7s							
AKTO	**Aktyubinsk**	**16.55**	**331**	⇓P		**Pn**	**03 34 28.5**	**+3.9**
	3.8nm,0.8s							
ZALV	**Zalesovo Beam**	**20.01**	**25**	P		**P**	**03 35 03.6**	**+1.4**
	3.8nm,0.5s,baz=216,slow=12,SNR=21 3.8nm,0.5s							
FINES	**FINESS Array B**	**37.23**	**326**	P		P	03 37 43.2	+5.3
	1.0nm,0.9s,baz=127,slow=11,SNR=1.6 1.0nm,0.9s							
NOA	**NORSAR Array B**	**44.11**	**323**	P		**P**	**03 38 38.2**	**+3.7**
	0.3nm,0.6s,baz=96,slow=7.9,SNR=1.5 0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**65.35**	**268**	P		**P**	**03 41 06.5**	**-1.4**
	0.4nm,0.3s,baz=51,slow=5.7,SNR=2.8 0.4nm,0.3s							

*PNSN **19** 03:31:01.7, 45°.92N×120°.14W, h18km, MD2.3, Fault plane solution: NP1:ϕ=330.00000°, δ=70.00000°, λ=30.00000°.*
*NEIC **19** 03:31:01.7±2.0, 45°.91N±0°.02×120°.15W±0°.03, h20km±6km, Error ellipse: s-maj=3.1km s-min=2.2km az=89.0*
SEA 19 03:31:01.7±1.1, 45°.92N±0°.02×120°.14W±0°.03, h18km±3km, ML2.3/14, ML2.6/64(NEIC), Error ellipse: s-maj=3.7km s-min=0.6km az=125.0, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BLTW	**Bickleton**	**0.03**	**263**			Pg	03 31 04.9	0.0
F07A	**Phinny Hill Vi**	**0.15**	**99**	Pg		Pg	03 31 06.1	+0.2
F07A				IAML			03 31 09.6	
	comp=E,2μm,0.3s							
F07A				IAML			03 31 10.0	
	comp=N,2μm,0.7s							
PAT2	**Paterson 2**	**0.27**	**97**			Pb	03 31 08.2	+0.3
PAT2						Sb	03 31 12.3	+0.2
PRW	**Prosser**	**0.43**	**47**			Pb	03 31 10.9	0.0
PRW						Sb	03 31 17.3	+0.3
TRW	**Toppenish Ridg**	**0.47**	**323**			Pb	03 31 11.4	0.0
JBO	**Jordan Butte**	**0.50**	**155**			Pg	03 31 11.4	-0.5
VGB	**Gordon Butte**	**0.60**	**228**			Pb	03 31 11.4	-2.2
RSW	**Rattlesnake Hi**	**0.61**	**39**			Pg	03 31 13.8	0.0
HAWA	**Hanford**	**0.64**	**42**			Pb	03 31 13.9	-0.2
HAWA						Sg	03 31 22.8	+0.1
SNIWA	**Snively Ranch**	**0.64**	**31**			Pb	03 31 14.3	0.0
SNIWA						Sg	03 31 23.5	+0.6
YA2	**Yakima**	**0.67**	**336**			Pb	03 31 14.5	-0.2
YA2						Sg	03 31 24.3	+0.5
MXC	**Moxie City**	**0.67**	**351**			Pb	03 31 14.8	0.0
BENWA	**Benson Ranch**	**0.67**	**26**			Pb	03 31 14.8	0.0
E07A	**Sunnyside**	**0.67**	**17**	Pg		Pb	03 31 14.7	-0.1
E07A				Sg		Sb	03 31 22.1	-1.7
E07A				IAML			03 31 25.1	
	comp=N,166nm,0.4s							
H2OWA	**Water**	**0.69**	**46**			Pb	03 31 15.0	-0.1
MDW	**Midway**	**0.74**	**21**			Pb	03 31 15.9	-0.2
MDW						Sg	03 31 26.6	+0.4
G06A	**Carlson Farm,**	**0.77**	**207**			Pb	03 31 16.2	-0.3
G06A				Sg		Sb	03 31 26.0	-0.5
G06A				IAML			03 31 28.5	
	comp=N,151nm,0.3s							
GBB	**Gable Butte**	**0.78**	**27**			Pb	03 31 16.7	0.0
GBB						Sg	03 31 27.5	+0.3
WIW	**Wooded Island**	**0.78**	**49**			Pb	03 31 16.6	-0.1
GBL	**Gable Mountain**	**0.83**	**35**			Pb	03 31 17.6	+0.1
YPT	**Yellepit**	**0.83**	**81**			Pb	03 31 17.6	+0.1
MJ2	**May Junction 2**	**0.84**	**40**			Pb	03 31 17.7	0.0
BVW	**Beverly**	**0.91**	**11**			Pb	03 31 19.1	+0.2
WAH2	**Wahluke Slope**	**0.93**	**25**			Pb	03 31 18.5	-0.7
LOCW	**Locke Island**	**0.94**	**31**			Pb	03 31 19.6	+0.2
NAC	**Naches**	**0.94**	**330**			Pb	03 31 18.6	-0.9
E08A	**Dider Farm, El**	**0.94**	**52**			Pg	03 31 20.2	+0.2
E08A				IAML			03 31 35.5	
	comp=N,183nm,0.2s							
E08A				IAML			03 31 35.6	
	comp=E,175nm,0.1s							
OT3	**Othello 3**	**0.98**	**40**			Pb	03 31 20.3	+0.2
EBG	**Ellensburg**	**1.03**	**344**			Pb	03 31 20.7	-0.4
G08A	**Pilot Rock**	**1.04**	**127**			Pb	03 31 20.4	-0.8
G08A				IAML			03 31 35.4	
	comp=N,240nm,0.3s							
G08A				IAML			03 31 36.3	
	comp=E,245nm,0.2s							
CRF	**Corfu**	**1.05**	**30**			Pg	03 31 21.7	-0.3
G05A	**Wamic**	**1.07**	**231**			Pb	03 31 21.4	-0.2
G05A				IAML			03 31 41.9	
	comp=N,90nm,2.8s							
G05A				IAML			03 31 57.8	
	comp=E,86nm,4.4s							
HOOD	**Mount Hood Mea**	**1.22**	**241**	Pn		Pn	03 31 23.6	-0.3
HOOD				IAML			03 31 41.7	
	comp=E,68nm,0.9s							
TBM	**Table Mountain**	**1.29**	**346**			Pn	03 31 25.0	+0.1
LNOR	**Lincton Mounta**	**1.30**	**91**			Pn	03 31 24.6	-0.3
CDFW	**Cedar Flats**	**1.34**	**279**			Pb	03 31 26.2	-0.1
SR41	**SR410 Landslid**	**1.37**	**316**			Pn	03 31 25.8	-0.2
LTY	**Liberty**	**1.39**	**345**			Pn	03 31 25.1	-1.1
D08A	**Wollman Farm,**	**1.42**	**36**	Pn		Pn	03 31 25.9	-0.7
D08A				IAML			03 31 46.0	
	comp=N,50nm,0.1s							
D08A				IAML			03 31 48.3	
	comp=E,53nm,0.1s							
JLK	**June Lake**	**1.42**	**280**			Pn	03 31 26.9	+0.3
SOSW	**Source of Smit**	**1.43**	**284**			Pn	03 31 27.0	+0.2
VALT	**Mount Saint He**	**1.46**	**282**			Pn	03 31 27.6	+0.4
FMW	**Mount Fremont**	**1.47**	**314**			Pn	03 31 27.8	+0.4
REMR	**Mount Rainier-**	**1.48**	**308**			Pn	03 31 27.6	0.0
STD	**Studebaker Rid**	**1.48**	**283**			Pb	03 31 28.3	-0.4
TDL	**Tradedollar La**	**1.51**	**287**			Pn	03 31 28.1	+0.2
E09A	**Wood Farm, Sta**	**1.51**	**66**			Pn	03 31 27.5	-0.3
OBSR	**Observation Ro**	**1.52**	**311**			Pb	03 31 29.2	-0.3
B201	**Coldwater, Mou**	**1.53**	**285**			Pn	03 31 28.4	+0.4
F04A	**Amboy**	**1.59**	**271**	Pn		Pn	03 31 28.6	-0.2
F04A				IAML			03 31 51.4	
	comp=N,49nm,0.5s							
F04A				IAML			03 31 57.5	
	comp=E,46nm,4.5s							
RVC	**Mount Rainier-**	**1.63**	**310**			Pn	03 31 29.8	+0.3
ETW	**Entiat**	**1.69**	**356**			Pn	03 31 31.0	+0.6
B941	**Kapowsin**	**1.79**	**307**			Pn	03 31 32.0	+0.5
I05D	**Terrebonne, OR**	**1.79**	**209**	Pn		Pn	03 31 32.4	+0.7
I05D				IAML			03 31 42.4	
	comp=E,66nm,4.5s							
I05D				IAML			03 32 05.9	
	comp=N,75nm,4.4s							
D05A	**Enumclaw**	**1.80**	**316**	Pn		Pn	03 31 32.7	+1.0
D05A				IAML			03 32 20.2	
	comp=N,47nm,5.0s							
D05A				IAML			03 32 32.4	
	comp=E,44nm,4.1s							
I07A	**Izee**	**1.89**	**166**			Pn	03 31 33.6	+0.4
I07A				IAML			03 32 02.3	
	comp=N,35nm,1.3s							
RATT	**Rattlesnake La**	**1.89**	**323**			Pn	03 31 33.5	+0.4
H04A	**Detroit Lake**	**1.90**	**230**	Pn		Pn	03 31 34.1	+0.9
H04A				IAML			03 32 03.2	
	comp=E,39nm,2.2s							
H04A				IAML			03 32 37.1	
	comp=N,34nm,4.0s							
F10A	**Beach Ranch, E**	**2.03**	**87**	Pn		Pn	03 31 34.0	-1.0
F10A				IAML			03 32 05.7	
	comp=N,34nm,0.2s							
F10A				IAML			03 32 06.6	
	comp=E,39nm,0.3s							
C05A	**Tolt Reservoir**	**2.07**	**330**			Pn	03 31 36.0	+0.5
PINE	**Pine Mountain**	**2.20**	**195**	Pn		Pn	03 31 37.5	0.0
PINE				IAML			03 32 21.9	
	comp=E,48nm,4.3s							
PINE				IAML			03 32 29.4	
	comp=N,46nm,4.4s							
BMO	**Blue Mountains**	**2.26**	**117**	Pn		Pn	03 31 37.4	-0.9
C09A	**Chrisman Ranch**	**2.28**	**34**			Pn	03 31 37.7	-0.7
C09A				IAML			03 32 22.0	
	comp=E,80nm,0.3s							
G03D	**McMinnville, O**	**2.31**	**253**	Pn		Pn	03 31 38.6	-0.1
H04D	**Lebanon**	**2.31**	**234**	Pn		Pn	03 31 37.9	-0.8
F03A	**Seaside**	**2.39**	**272**	Pn		Pn	03 31 39.3	-0.5
B08A	**Colville Reser**	**2.50**	**12**	Pn		Pn	03 31 40.8	-0.7
BUCK	**Buck Mountain**	**2.65**	**231**	Pn		Pn	03 31 44.0	+0.5
J05D	**Fort Rock, OR**	**2.75**	**197**	Pn		Pn	03 31 43.9	-1.1
J05D				IAML			03 32 15.5	
	comp=N,38nm,4.4s							
WISH	**Wishkah**	**2.78**	**297**	Pn		Pn	03 31 44.6	-0.5
NLWA	**Neilton Lookou**	**2.96**	**301**	Pn		Pn	03 31 48.4	+0.7
NLWA				IAML			03 32 36.5	
	comp=N,43nm,3.8s							
PLID	**Pearl Lake**	**3.03**	**104**	Pn		Pn	03 31 46.4	-2.5
NEW	**Newport**	**3.12**	**40**	Pn		Pn	03 31 47.8	-2.2
NEW				IAML			03 32 55.7	
	comp=N,17nm,4.7s							
NEW				IAML			03 32 59.7	
	comp=N,11nm,4.5s							

*KRNET **19** 03:37:31.3±0.1, 39°.43N×72°.94E, h20km, mb3.2*
*SOME **19** 03:37:32.0, 39°.48N×72°.85E, h5km*
*NNC **19** 03:37:36.0±1.1, 39°.55N×73°.02E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=8.3km s-min=5.2km az=175.0*
ISC 19 03:37:31.8±1.3, 39°.50N±0°.06×72°.94E±0°.03, h10km, n42, σ1s 90/70, 26C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.68**	**40**	⇑*e*P		**Pg**	**03 37 45.1**	**+0.1**
	baz=37							
SFK				⇑*e*S		**Sg**	**03 37 55.3**	**+1.4**
	baz=37							
DRK	**Karamyk**	**0.88**	**269**	⇑*e*P		**Pg**	**03 37 47.9**	**-0.9**
	baz=74							
DRK				⇑*e*S		**Sb**	**03 38 00.0**	**-1.3**
	baz=74							
OHH	**Osh**	**1.03**	**354**	⇑*e*P		**Pg**	**03 37 51.6**	**-0.1**
	baz=54							
OHH				⇑*e*S		**Sn**	**03 38 06.7**	**-0.3**
	baz=54							
BTK	**Batken**	**1.73**	**290**	⇑*i*P		**Pb**	**03 38 03.2**	**-0.5**
	baz=92							
BTK				⇑*i*S		**Sg**	**03 38 26.6**	**-0.7**
	baz=92							
ARSB	**Arslanbob**	**1.83**	**1**	⇑*e*P		**Pb**	**03 38 05.3**	**-0.1**
	baz=1.0							
ARSB				⇑*e*S		**Sg**	**03 38 30.3**	**-0.2**
	baz=1.0							
ARK	**Arkit**	**2.42**	**342**	⇓*e*P		**Pb**	**03 38 13.5**	**-1.9**
	baz=43							
ARK				⇓*e*S		**Sb**	**03 38 44.4**	**-0.9**
	baz=43							
TRKS	**Terek-Say**	**2.45**	**327**	⇑*e*P		**Pn**	**03 38 13.1**	**+1.1**
	baz=27							
TRKS				⇑*e*S		**Sn**	**03 38 43.2**	**+1.1**
	baz=27							
ARLS	**Aral**	**2.59**	**24**	⇑*e*P		**Pn**	**03 38 15.9**	**+2.0**
	baz=23							
ARLS				⇑*i*S		**Sn**	**03 38 48.4**	**+2.9**
	baz=23							
UCH	**Uchtor**	**2.98**	**23**	⇓*e*P		**Pn**	**03 38 21.5**	**+2.0**
	baz=23							
UCH				⇓*e*S		**Sn**	**03 38 58.2**	**+2.6**
	baz=23							
MNAS	**Manas**	**3.01**	**354**	⇑*e*P		**Pn**	**03 38 21.9**	**+2.3**
	baz=54							
MNAS				⇑*e*S		**Sn**	**03 38 58.9**	**+3.1**
	baz=54							
NRN	**Naryn**	**3.04**	**49**	⇑*e*P		**Pn**	**03 38 21.5**	**+1.3**
	baz=48							
NRN				⇑*e*S		**Sn**	**03 38 58.2**	**+1.5**
	baz=48							
EKS2	**Erkin-Say**	**3.23**	**11**	*e*P		**Pn**	**03 38 24.8**	**+2.2**
	baz=11							
EKS2				*i* S		**Sn**	**03 39 04.0**	**+2.8**
	baz=11							
MRKS	**Merke**	**3.25**	**4**	Pg		**Pg**	**03 38 32.6**	**-1.5**
	16nm,0.5s							
MRKS				Lg		Lg	03 39 16.4	
	36nm,0.5s							
MRKS	**Merke**	**3.25**	**4**	*e*P		**Pg**	**03 38 32.6**	**-1.5**
	16nm,0.5s							
MRKS				*e*S		**Sg**	**03 39 16.4**	**+0.1**
	36nm,0.5s							
AAK	**Ala-Archa**	**3.35**	**20**	⇑*e*P		**Pn**	**03 38 26.5**	**+2.1**
	baz=20							
AAK				⇑*e*S		**Sn**	**03 39 06.8**	**+2.4**
	baz=20							
KBK	**Karagaybulak**	**3.50**	**25**	⇑*e*P		**Pn**	**03 38 28.5**	**+2.0**
	baz=25							
KBK				⇑*e*S		**Sn**	**03 39 10.6**	**+2.5**
	baz=25							
CHMS	**Chumysh**	**3.76**	**21**	⇑Pn		**Pb**	**03 38 35.4**	**-2.9**
	4.3nm,0.5s							
CHMS				⇑Lg		Lg	03 39 32.4	
	7.0nm,0.5s							

TKM2	**Tokmak 2**	**3.97**	**30**	⇑Pn		**Pb**	**03 38 38.0**	**-4.0**
	3.6nm,0.6s							
TKM2				⇑Lg		Lg	03 39 38.8	
	6.2nm,0.6s							
KK31	**Karatay Array**	**4.04**	**334**	⇓Pn		**Pn**	**03 38 38.0**	**+4.3**
	4.7nm,0.6s,baz=147,slow=11,SNR=41							
KK31				⇓Sn		**Sb**	**03 39 28.6**	**-3.3**
	6.8nm,0.4s,baz=154,slow=17,SNR=7.5							
KKAR	**Karatay Array**	**4.04**	**334**	⇓*e*P		**Pn**	**03 38 36.0**	**+2.3**
	baz=34							
KKAR				⇓*e*S		**Sn**	**03 39 23.2**	**+2.1**
	baz=34							
KST	**Kastek**	**4.21**	**32**	Pg		**Pg**	**03 38 51.1**	**-1.4**
	3.9nm,0.7s							
KST				Lg		Lg	03 39 48.2	
	12nm,0.4s							
KST	**Kastek**	**4.21**	**32**	*e*P		**Pg**	**03 38 51.1**	**-1.4**
	3.9nm,0.7s							
KST				*e*S		**Sg**	**03 39 48.2**	**+1.1**
	12nm,0.4s							
DGS	**Degeres**	**4.31**	**29**	Pg		**Pg**	**03 38 53.0**	**-1.3**
	7.1nm,0.8s							
DGS				Lg		Lg	03 39 51.2	
	13nm,1.0s							
DGS	**Degeres**	**4.31**	**29**	*e*P		**Pg**	**03 38 53.0**	**-1.3**
	7.1nm,0.8s							
DGS				*e*S		**Sg**	**03 39 51.2**	**+1.0**
	13nm,1.0s							
MTBS	**Maitube**	**4.48**	**35**	Pg		**Pg**	**03 38 56.1**	**-1.5**
	5.9nm,0.4s							
MTBS				Lg		Lg	03 39 56.7	
	8.2nm,0.3s							
MTBS	**Maitube**	**4.48**	**35**	*e*P		**Pg**	**03 38 56.1**	**-1.5**
	5.9nm,0.4s							
MTBS				*e*S		**Sg**	**03 39 56.7**	**+1.0**
	8.2nm,0.3s							
TNSS	**Tian-Shan**	**4.65**	**39**	Pg		**Pg**	**03 38 59.4**	**-1.5**
	6.3nm,0.4s							
TNSS				Lg		Lg	03 40 02.4	
	13nm,0.7s							
TNSS	**Tian-Shan**	**4.65**	**39**	*e*P		**Pg**	**03 38 59.5**	**-1.5**
	6.3nm,0.4s							
TNSS				*e*S		**Sg**	**03 40 02.4**	**+1.2**
	13nm,0.7s							
KRBS	**Karabastau**	**4.67**	**25**	Pg		**Pg**	**03 38 58.7**	**-2.6**
	4.2nm,0.6s							
KRBS				Lg		Lg	03 40 01.1	
	7.8nm,0.9s							
KRBS	**Karabastau**	**4.67**	**25**	*e*P		**Pg**	**03 38 58.7**	**-2.6**
	4.2nm,0.6s							
KRBS				*e*S		**Sg**	**03 40 01.1**	**-0.7**
	7.8nm,0.9s							
MDOK	**Medeo**	**4.80**	**39**	Pg		**Pg**	**03 39 02.1**	**-1.5**
	8.6nm,1.0s							
MDOK				Lg		Lg	03 40 06.9	
	10nm,0.5s							
MDOK	**Medeo**	**4.80**	**39**	*e*P		**Pg**	**03 39 02.1**	**-1.5**
	8.6nm,1.0s							
MDOK				*e*S		**Sg**	**03 40 06.9**	**+1.1**
	10nm,0.5s							
KOTS	**Kotyrbulak**	**4.88**	**39**	Pg		**Pg**	**03 39 02.8**	**-2.5**
	5.9nm,0.6s							
KOTS				Lg		Lg	03 40 08.1	
	28nm,0.7s							
KOTS	**Kotyrbulak**	**4.88**	**39**	*e*P		**Pg**	**03 39 02.8**	**-2.5**
	5.9nm,0.6s							
KOTS				*e*S		**Sg**	**03 40 08.1**	**-0.4**
	28nm,0.7s							
KTBS	**Karatobe**	**5.06**	**32**	Pg		**Pg**	**03 39 06.8**	**-2.0**
	5.1nm,0.6s							
KTBS				Lg		Lg	03 40 15.1	
	8.1nm,0.7s							
KTBS	**Karatobe**	**5.06**	**32**	*e*P		**Pg**	**03 39 06.8**	**-2.0**
	5.1nm,0.6s							
KTBS				*e*S		**Sg**	**03 40 15.1**	**+0.8**
	8.1nm,0.7s							
KUU	**Kurty**	**5.08**	**29**	Pg		**Pg**	**03 39 07.2**	**-1.8**
	3.7nm,0.7s							
KUU				Lg		Lg	03 40 15.9	
	10nm,0.7s							
KUU	**Kurty**	**5.08**	**29**	*e*P		**Pg**	**03 39 07.2**	**-1.8**
	3.7nm,0.7s							
KUU				*e*S		**Sg**	**03 40 15.9**	**+1.1**
	10nm,0.7s							
CHKK	**Chushkaly**	**5.31**	**34**	Pg		**Pg**	**03 39 11.4**	**-2.0**
	1.4nm,0.2s							
CHKK				Lg		Lg	03 40 22.7	
	7.2nm,0.7s							
CHKK	**Chushkaly**	**5.31**	**34**	*e*P		**Pg**	**03 39 11.4**	**-2.0**
	1.4nm,0.2s							
CHKK				*e*S		**Sg**	**03 40 22.7**	**+0.6**
	7.2nm,0.7s							
BTLS	**Baital**	**5.60**	**8**	Pg		**Pg**	**03 39 17.0**	**-2.0**
	3.3nm,1.0s							
BTLS				Lg		Lg	03 40 32.4	
	2.6nm,0.5s							
BTLS	**Baital**	**5.60**	**8**	*e*P		**Pg**	**03 39 17.0**	**-2.0**
	3.3nm,1.0s							
BTLS				*e*S		**Sg**	**03 40 32.5**	**+0.9**
	2.6nm,0.5s							

IDC 19 03:42:00.1±2.1, 15°.08S×179°.22W, h0km, mb3.6/5, mbtmp3.6/5, MS3.6/26, Error ellipse: s-maj=139.3km s-min=35.2km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.26**	**241**	LR		LR	03 50 28.7	
	comp=Z,559nm,18.5s,baz=17,slow=33							
RAR	**Rarotonga**	**19.45**	**111**	LR		LR	03 52 28.0	
	comp=Z,70nm,20.9s,baz=330,slow=32							
PMG	**Port Moresby**	**33.31**	**276**	LR		LR	03 59 26.4	
	comp=Z,106nm,21.8s,baz=66,slow=31							
STKA	**Stephens Creek**	**39.38**	**238**	LR		LR	04 04 25.4	
	comp=Z,64nm,18.4s,baz=29,slow=34							
ASAR	**Alice Springs**	**44.87**	**252**	P		P	03 50 16.7	0.0
	0.3nm,0.7s,baz=83,slow=7.9,SNR=2.9

CMIG	**Matias Romero**	**89.10**	**72**	LR	LR	04 27 56.6	
	comp=Z,23nm,18.7s,baz=171,slow=31						
SONM	**Songino Array**	**90.91**	**320**	LR	LR	04 33 39.6	
	comp=Z,24nm,18.2s,baz=82,slow=34						
TIXI	**Tiksi**	**93.24**	**346**	LR	LR	04 30 21.5	
	comp=Z,30nm,21.7s,baz=51,slow=31						

*NEIC **19** 03:42:12.4±1.0, 18°.82N±0°.04×67°.27W±0°.04, h23km±5km, ML2.0/24, Md3.1/10(RSPR), Error ellipse: s-maj=5.7km s-min=4.9km az=194.0*
*RSPR **19** 03:42:14.1, 18°.81N×67°.33W, h11km±1km, MD3.1/10*
*OSPL **19** 03:42:14.5±0.5, 18°.80N×67°.33W, h21km±5km, ML2.2*
ISC 19 03:42:13.1±1.4, 18°.79N±0°.07×67°.30W±0°.04, h31km±8km, n35, σ0s73/48, 8C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.37**	**151**	↑	*eP*	**Pb**	**03 42 21.8**	**+0.2**
AGPR	**Aguadilla, PR**	**0.37**	**151**			**Pb**	**03 42 21.3**	**-0.3**
AGPR						**Sb**	**03 42 27.5**	**+0.1**
AGPR					IAML		03 42 28.1	
	comp=E,200nm,0.5s							
AGPR					IAML		03 42 33.4	
	comp=N,111nm,1.0s							
AGPR	**Aguadilla, PR**	**0.37**	**151**	*i*	P	**Pb**	**03 42 21.9**	**+0.2**
AGPR					*eS*	**Sb**	**03 42 27.9**	**+0.4**
AGPR					IAML		03 42 33.6	
	comp=Z,94nm,1.4s							
PRSN	**Puerto Rico Se**	**0.59**	**165**		*eS*	**Sn**	**03 42 34.4**	**+0.6**
PRSN	**Puerto Rico Se**	**0.59**	**165**		Pg	**Pb**	**03 42 24.2**	**-0.8**
PRSN						**Pn**	**03 42 24.6**	**-0.7**
PRSN						**Sb**	**03 42 33.8**	**+0.6**
PRSN					IAML		03 42 34.4	
	comp=E,105nm,0.3s							
LSP	**Las Mesas**	**0.65**	**161**	↑	*eP*	**Pn**	**03 42 26.4**	**+0.3**
LSP	**Las Mesas**	**0.65**	**161**		*eS*	**Sn**	**03 42 36.3**	**+1.0**
LSP	**Las Mesas**	**0.65**	**161**			**Pn**	**03 42 26.4**	**+0.3**
LSP						**Sn**	**03 42 36.3**	**+1.0**
AOPR	**Arecibo Observ**	**0.68**	**130**	‖	*eP*	**Pb**	**03 42 26.4**	**-0.2**
AOPR	**Arecibo Observ**	**0.68**	**130**		*eS*	**Sn**	**03 42 36.8**	**+0.7**
AOPR	**Arecibo Observ**	**0.68**	**130**			**Pb**	**03 42 25.8**	**-0.8**
AOPR					Sg	**Sb**	**03 42 34.5**	**-1.2**
AOPR					IAML		03 42 41.0	
	comp=E,71nm,0.4s							
AOPR					IAML		03 42 42.1	
	comp=N,63nm,0.3s							
UUPR	**Utuado, UPR, P**	**0.77**	**134**	↑	*eP*	**Pn**	**03 42 28.2**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.77**	**134**		*eS*	**Sn**	**03 42 38.7**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.77**	**134**			**Pb**	**03 42 27.7**	**-0.3**
UUPR						**Sb**	**03 42 37.8**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.80**	**167**	↑	*eP*	**Pn**	**03 42 29.0**	**+0.8**
CRPR	**Cabo Rojo, PR**	**0.80**	**167**			**Pb**	**03 42 28.5**	**-0.1**
CRPR					Sg	**Sb**	**03 42 38.7**	**-0.4**
CRPR					IAML		03 42 40.1	
	comp=N,57nm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.80**	**167**	*i*	P	**Pn**	**03 42 29.0**	**+0.8**
CRPR					*eS*	**Sn**	**03 42 39.8**	**+0.7**
CRPR					IAML		03 42 41.2	
	comp=Z,84nm,0.2s							
MLPR	**Magueyes Islan**	**0.85**	**163**	↑	*eP*	**Pb**	**03 42 28.5**	**-0.9**
MLPR	**Magueyes Islan**	**0.85**	**163**		*eS*	**Sb**	**03 42 40.4**	**-0.2**
MLPR	**Magueyes Islan**	**0.85**	**163**			**Pb**	**03 42 28.2**	**-1.2**
MLPR					Sg	**Sb**	**03 42 40.0**	**-0.6**
MLPR					IAML		03 42 40.5	
	comp=E,62nm,0.8s							
CELP	**Cerrillos**	**0.99**	**136**	↑	*eP*	**Pn**	**03 42 31.1**	**+0.4**
CELP	**Cerrillos**	**0.99**	**136**		*eS*	**Sn**	**03 42 44.8**	**+1.1**
CELP	**Cerrillos**	**0.99**	**136**			**Pn**	**03 42 30.9**	**+0.1**
CELP						**Sn**	**03 42 44.3**	**+0.6**
OBIP	**Obispado Ponce**	**0.99**	**138**	↑	*eP*	**Pn**	**03 42 30.5**	**-0.4**
OBIP	**Obispado Ponce**	**0.99**	**138**		*eS*	**Sb**	**03 42 43.9**	**-0.7**
OBIP	**Obispado Ponce**	**0.99**	**138**			**Pn**	**03 42 30.1**	**-0.8**
OBIP					Sg	**Sb**	**03 42 42.2**	**-2.3**
PCDR	**Punta Cana, DR**	**1.06**	**255**			**Pn**	**03 42 32.0**	**+0.3**
PCDR	**Punta Cana, DR**	**1.06**	**255**	*i*	P	**Pb**	**03 42 32.5**	**-0.4**
PCDR					*eS*	**Sn**	**03 42 45.2**	**-0.2**
PCDR					IAML		03 42 52.0	
	comp=Z,121nm,1.0s							
GCPR	**Guaynabo City**	**1.25**	**112**		Pn	**Pn**	**03 42 34.7**	**+0.3**
GCPR					IAML		03 43 05.2	
	comp=E,22nm,2.6s							
SJG	**San Juan**	**1.28**	**122**	‖	*eP*	**Pn**	**03 42 35.6**	**+0.8**
SJG	**San Juan**	**1.28**	**122**		*eS*	**Sb**	**03 42 52.3**	**-0.5**
SJG	**San Juan**	**1.28**	**122**		Pn	**Pn**	**03 42 35.0**	**+0.2**
SJG					IAML		03 43 00.6	
	comp=E,21nm,1.4s							
SJG					IAML		03 43 17.8	
	comp=E,23nm,2.5s							
HUMP	**Col San Antoni**	**1.52**	**115**	↑	*eP*	**Pb**	**03 42 39.8**	**-0.9**
HUMP	**Col San Antoni**	**1.52**	**115**		*eS*	**Sb**	**03 43 00.2**	**+0.6**
HUMP	**Col San Antoni**	**1.52**	**115**		Pn	**Pn**	**03 42 38.7**	**+0.6**
HUMP					IAML		03 42 49.2	
	comp=N,18nm,2.9s							
HUMP					IAML		03 43 13.7	
	comp=E,20nm,2.7s							

*SJA **19** 03:53:14.5±0.9, 30°.68S×71°.66W, h16km±4km, ML3.6, MW3.6*
*GUC **19** 03:53:18.4±0.8, 30°.68S×71°.33W, h44km±3km, ML3.5*
ISC 19 03:53:20.7±0.9, 30°.69S±0°.02×71°.40W±0°.04, h29km±8km, n38, σ2s00/62, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.20**	**273**	↑	*iP*	**Pb**	**03 53 27.1**	**+0.2**
CO06					*eS*	**Sb**	**03 53 33.5**	**+2.4**
CO06					IAML		03 53 34.5	
	comp=E,10μm,0.1s							
CO02	**Combarbal**	**0.62**	**147**		*eP*	**Pb**	**03 53 30.4**	**-2.8**
CO02					*eS*	**Sb**	**03 53 40.4**	**-1.3**
CO02					IAML		03 53 41.2	
	comp=Z,8μm,0.1s							
CO02	**Combarbal**	**0.62**	**147**	↑	*iP*	**Pb**	**03 53 31.4**	**-1.8**
CO03	**El Pedregal**	**0.63**	**104**		*eP*	**Pb**	**03 53 30.8**	**-2.5**
CO03					*eS*	**Sb**	**03 53 40.8**	**-1.1**
CO03					IAML		03 53 41.0	
	comp=Z,2μm,0.3s							
CO03	**El Pedregal**	**0.63**	**104**	*i*	P	**Pb**	**03 53 31.6**	**-1.7**
CO03					*eS*	**Sb**	**03 53 41.1**	**-0.8**
CO03					IAML		03 53 41.4	
	comp=E,5μm,0.2s							
GO04	**Tololo Observa**	**0.73**	**46**		*eP*	**Pb**	**03 53 32.7**	**-2.3**
GO04					*eS*	**Sb**	**03 53 44.5**	**-0.2**
GO04					IAML		03 53 45.9	
	comp=Z,6μm,0.2s							
GO04	**Tololo Observa**	**0.73**	**46**	*i*	P	**Pb**	**03 53 33.4**	**-1.6**
GO04					*eS*	**Sb**	**03 53 44.8**	**+0.1**
GO04					IAML		03 53 46.0	
	comp=N,9μm,0.2s							
CO05	**La Serena**	**0.78**	**10**		*eP*	**Pb**	**03 53 33.8**	**-1.8**
CO05					*eS*	**Sb**	**03 53 45.4**	**-0.5**
CO05					IAML		03 53 46.3	
	comp=E,2μm,0.4s							
CO01	**Juntas del Tor**	**1.33**	**58**		*eP*	**Pn**	**03 53 42.5**	**-1.1**
CO01					*eS*	**Sn**	**03 54 00.4**	**-0.1**
CO01					IAML		03 54 04.1	
	comp=Z,490nm,0.3s							
CO01	**Juntas del Tor**	**1.33**	**58**		*eP*	**Pn**	**03 53 42.5**	**-1.1**
CO01					*eS*	**Sn**	**03 54 00.3**	**-0.1**
AROD	**Rodeo**	**1.74**	**73**		*eP*	**Pn**	**03 53 50.0**	**+0.7**
AROD					*eS*	**Sb**	**03 54 13.2**	**-0.6**
LCO	**Las Campanas**	**1.77**	**20**		*eP*	**Pn**	**03 53 48.4**	**-1.3**
LCO					*eS*	**Sn**	**03 54 11.7**	**+0.3**
LCO					IAML		03 54 14.6	
	comp=Z,2μm,0.2s							
LCO	**Las Campanas**	**1.77**	**20**		*eP*	**Pn**	**03 53 48.5**	**-1.3**
LCO					*eS*	**Sn**	**03 54 10.6**	**-0.8**
DOCA	**Reserva Natura**	**2.01**	**98**		*eP*	**Pn**	**03 53 53.4**	**+0.3**
DOCA					*eS*	Sn	03 54 07.5	-10
DOCA					*eS*	Sn	03 54 07.5	-10
ACCO	**Cerro Coronel**	**2.01**	**88**		*eP*	**Pn**	**03 53 54.0**	**+1.0**
ACDV	**Cuesta del Vie**	**2.03**	**76**		*eP*	**Pn**	**03 53 54.0**	**+0.8**
ACDV					*eS*	Sn	03 54 07.5	-10
AC05	**El Transito**	**2.08**	**28**		*eP*	**Pn**	**03 53 52.7**	**-1.2**
AC05					*eS*	Sn	03 54 08.6	-10
AC05					IAML		03 54 28.4	
	comp=Z,183nm,0.4s							
AC05	**El Transito**	**2.08**	**28**		*eP*	**Pn**	**03 53 53.4**	**-0.5**
AC05					IAML		03 54 28.9	
	comp=E,410nm,0.4s							
RTLS	**Leoncito**	**2.11**	**122**		*eP*	**Pn**	**03 53 55.0**	**+0.6**
RTLS					IAML		03 54 30.1	
	comp=Z,399nm,0.3s							
VA03	**San Esteban**	**2.19**	**161**		*eP*	**Pn**	**03 53 54.0**	**-1.4**
VA03					*eP*	**Pn**	**03 53 54.0**	**-1.4**
VA03					*eS*	**Sn**	**03 54 24.2**	**+2.6**
VA03					IAML		03 54 26.4	
	comp=Z,305nm,0.1s							
VA03	**San Esteban**	**2.19**	**161**		*eP*	**Pn**	**03 53 53.9**	**-1.4**
VA03					*eS*	**Sn**	**03 54 21.9**	**+0.2**
VA03					IAML		03 54 26.6	
	comp=N,728nm,0.4s							
AC04	**Llanos de Chal**	**2.49**	**7**		*eP*	**Pn**	**03 53 57.4**	**-1.9**
AC04					*eS*	**Sb**	**03 54 37.1**	**+2.1**
AC04					IAML		03 54 38.0	
	comp=Z,150nm,0.5s							
AC04	**Llanos de Chal**	**2.49**	**7**		*eP*	**Pn**	**03 53 58.1**	**-1.1**
PEL	**Peldehue**	**2.52**	**166**		*eP*	**Pn**	**03 53 58.6**	**-1.3**
PEL					IAML		03 54 36.7	
	comp=E,268nm,0.3s							
MT02	**Curacav**	**2.58**	**175**		*eP*	**Pn**	**03 53 58.4**	**-2.1**
MT02					*eS*	**Sn**	**03 54 33.7**	**+2.8**
MT02					IAML		03 54 33.9	
	comp=Z,168nm,0.5s							
MT05	**Renca**	**2.76**	**168**		*eP*	**Pn**	**03 54 01.6**	**-1.4**
MT05					*eS*	**Sn**	**03 54 37.7**	**+2.2**
MT05					IAML		03 54 49.4	
	comp=Z,138nm,0.3s							
AGUA	**GUANDACOL**	**2.79**	**65**		*eP*	Pn	03 54 05.8	+2.3
AGUA					*eP*		03 54 06.0	
AGUA					*eS*	**Sb**	**03 54 47.9**	**+4.2**
AGUA					IAML		03 54 49.7	
	comp=Z,222nm,0.2s							
ASAL	**Salagasta**	**2.90**	**132**		*eP*	**Pn**	**03 54 06.0**	**+1.0**
ASAL					*eS*	**Sb**	**03 54 51.4**	**+4.6**
ASAL					IAML		03 55 03.8	
	comp=Z,75nm,0.4s							
MT03	**Universidad Ad**	**2.90**	**165**		*eP*	**Pn**	**03 54 03.5**	**-1.6**
MT03					*eS*	**Sn**	**03 54 40.2**	**+1.1**
MT03					IAML		03 54 45.9	
	comp=Z,244nm,0.5s							
ARCO	**CERRO ARCO**	**3.00**	**136**		*eP*	**Pn**	**03 54 08.2**	**+1.6**
ARCO					IAML		03 54 55.5	
	comp=Z,170nm,0.5s							
MT01	**Popeta**	**3.17**	**178**		*eP*	**Pn**	**03 54 06.5**	**-2.2**
MT01					*eS*	**Sn**	**03 54 45.3**	**-0.3**
MT01					IAML		03 55 01.1	
	comp=Z,104nm,0.7s							
AAGR	**Agrelo**	**3.24**	**138**		*eP*	**Pn**	**03 54 11.1**	**+1.3**
AAGR					*eS*	**Sb**	**03 54 59.9**	**+3.2**
AAGR					IAML		03 55 01.5	
	comp=Z,73nm,0.4s							
GO03	**Copiap**	**3.24**	**19**		*eP*	**Pn**	**03 54 08.6**	**-1.2**
GO03					*eP*		03 54 09.1	
GO03					*eS*	**Sn**	**03 54 52.2**	**+4.7**
GO03					IAML		03 55 02.6	
	comp=E,168nm,0.2s							
LMEL	**Las Melosas**	**3.31**	**163**		*eP*	**Pn**	**03 54 10.2**	**-0.6**
BO04	**La Punta**	**3.36**	**169**		*eP*	**Pn**	**03 54 09.8**	**-1.6**
VCA	**Vinchina**	**3.39**	**56**		*eP*	**Pn**	**03 54 13.6**	**+1.7**
VCA					*eS*	**Sb**	**03 54 57.7**	**-3.3**
VCA					IAML		03 55 08.7	
	comp=Z,222nm,0.3s							
BO01	**Tunca**	**3.71**	**176**		*eP*	**Pn**	**03 54 14.2**	**-1.9**
BO01					*eP*		03 54 14.4	
BO01					IAML		03 55 14.8	
	comp=Z,49nm,0.2s							
AC02	**Maricunga**	**4.32**	**28**		*eS*	**Sn**	**03 55 20.2**	**+5.5**
AC02					IAML		03 55 35.2	
	comp=Z,38nm,0.5s							

*IDC **19** 04:34:32.6±2.3, 33°.04N×47°.35E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=61.8km s-min=25.7km az=159.0*
*TEH **19** 04:34:32.0, 32°.88N×47°.50E, h12km±47km, ML3.5*
*ISN **19** 04:34:32.9±1.0, 32°.85N×47°.57E, h19km±6km, ML3.3*
ISC 19 04:34:34.2±0.8, 32°.88N±0°.05×47°.52E±0°.04, h15km, n33, σ1s10/38, mb3.7/7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.70**	**23**		Pg	**Pg**	**04 34 45.6**	**-2.2**
IDOB	**Doab**	**1.06**	**31**		Pg	**Pb**	**04 34 53.5**	**-0.9**
ILBA	**Ilam Banvizeh**	**1.33**	**304**		Pg	**Pn**	**04 34 57.8**	**-0.5**
IBDR	**Badra**	**1.36**	**280**		*e*Pg	**Pn**	**04 34 58.0**	**-0.7**
IBDR					*e*Sg	**Sn**	**04 35 17.0**	**+0.6**
IBDR					AML	AML	04 35 30.5	
	comp=E,421nm,0.4s							
IBDR					AML	AML	04 35 39.9	
	comp=N,382nm,0.7s							
KCHF	**Cheshme Sefid,**	**1.45**	**344**		Pg	**Pn**	**04 35 00.2**	**+0.1**
IGHG	**Ghaleghazi**	**1.65**	**331**		Pg	**Pn**	**04 35 04.3**	**+1.4**
IGHG					Sg	**Sg**	**04 35 30.0**	**+2.5**
RAFI	**Al-Rafai**	**1.66**	**226**		*e*Pn	**Pn**	**04 35 04.0**	**+1.2**
RAFI					*e*Sn	**Sn**	**04 35 25.0**	**+1.2**
RAFI					AML	AML	04 35 44.4	
	comp=N,435nm,0.8s							
RAFI					AML	AML	04 35 45.1	
	comp=E,311nm,0.8s							
IDHR	**Dehrash**	**2.05**	**333**		Pn	**Pn**	**04 35 09.3**	**+0.9**
ILIN	**Lien**	**2.08**	**347**		Pn	**Pn**	**04 35 10.1**	**+1.2**
HAGD	**Aghdareh**	**2.36**	**34**		Pn	**Pn**	**04 35 14.0**	**+1.3**
BHD	**Baghdad**	**2.67**	**279**		*e*Pn	**Pn**	**04 35 17.0**	**+0.3**
BHD					*e*Sn	**Sn**	**04 35 50.0**	**+1.3**
BHD					AML	AML	04 36 11.7	
	comp=E,386nm,0.4s							
JHBN	**Jahan bin**	**2.73**	**103**		Pn	**Pn**	**04 35 18.5**	**+0.6**
IPIR	**Pirpir**	**2.84**	**93**		Pn	**Pn**	**04 35 20.5**	**+1.1**
ZNGN	**Zangian**	**2.92**	**104**		Pn	**Pn**	**04 35 21.1**	**+0.7**
IBRJ	**Brojen**	**3.31**	**106**		Pn	**Pn**	**04 35 25.9**	**+0.2**
QAMS	**Qamsar**	**3.35**	**74**		Pn	**Pn**	**04 35 27.5**	**+1.1**
IKLH	**Kolahrood**	**3.43**	**82**		Pn	**Pn**	**04 35 28.5**	**+1.0**
IKRK	**Kirkuk**	**3.64**	**314**		*e*Pn	**Pn**	**04 35 31.0**	**+0.9**
IKRK					*e*Sn	**Sn**	**04 36 14.0**	**+1.1**
IKRK					AML	AML	04 36 24.9	
	comp=N,77nm,0.5s							
IKRK					AML	AML	04 36 42.4	
	comp=E,88nm,0.9s							
KLNJ	**Kolanjah**	**3.93**	**117**		Pn	**Pn**	**04 35 35.0**	**+0.7**
KRSH	**Karshahi**	**4.01**	**73**		Pn	**Pn**	**04 35 36.2**	**+1.0**
IZEF	**Zefreh**	**4.04**	**88**		Pn	**Pn**	**04 35 37.0**	**+1.1**
IVRN	**Varamin**	**4.08**	**58**		Pn	**Pn**	**04 35 37.0**	**+0.8**
ISFB	**Sefidab**	**4.20**	**68**		Pn	**Pn**	**04 35 38.7**	**+0.8**
IRAM	**Ramesheh**	**4.25**	**103**		Pn	**Pn**	**04 35 39.3**	**+0.6**
IDMV	**Damavand**	**4.60**	**53**		Pn	**Pn**	**04 35 44.7**	**+1.1**
IFIR	**Firoozkooh**	**5.13**	**56**		Pn	**Pn**	**04 35 51.5**	**+0.6**
BVAR	**Borovoye Array**	**25.98**	**32**		P	**P**	**04 40 07.8**	**+1.6**
	comp=E,0.6nm,0.4s,baz=242,slow=11,SNR=4.4							
	comp=E,0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**28.85**	**43**		P	**P**	**04 40 32.2**	**+0.3**
	comp=E,0.3nm,0.7s,baz=249,slow=9.1,SNR=4.0							
	comp=E,0.3nm,0.7s							
MKAR	**Makanchi Array**	**29.83**	**52**		P	**P**	**04 40 41.1**	**+0.3**
	comp=E,0.3nm,0.6s,baz=257,slow=8.2,SNR=4.4							
	comp=E,0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**33.75**	**40**		P	**P**	**04 41 15.4**	**+0.4**
	comp=E,0.6nm,0.4s,baz=235,slow=5.1,SNR=2.4							
	comp=E,0.6nm,0.4s							
HFS	**Hagfors**	**35.15**	**331**		P	**P**	**04 41 26.0**	**-1.1**
	comp=E,0.9nm,0.5s,baz=125,slow=7.8,SNR=11							
	comp=E,0.9nm,0.5s							
TORD	**Torodi Ar. Bea**	**46.11**	**256**		P	**P**	**04 42 58.4**	**+0.3**
	comp=E,7.7nm,0.6s,baz=60,slow=7.6,SNR=1.2							
	comp=E,7.7nm,0.6s							
YKA	**Yellowknife Ar**	**83.87**	**352**		P	**P**	**04 47 01.7**	**-1.3**
	comp=E,0.2nm,0.4s,baz=14,slow=6.0,SNR=3.5							
	comp=E,0.2nm,0.4s							

*MOS **19** 04:40:49.7±1.0, 42°.04N×142°.62E, h73km, mb4.3/4, Error ellipse: s-maj=10.2km s-min=8.2km az=75.6*
*SKHL **19** 04:40:50.6±0.2, 42°.00N×142°.70E, h83km±2km, mb5.0/3, msha5.5/3*
*NEIC **19** 04:40:51.6±1.0, 42°.04N±0°.07×142°.75E±0°.10, h75km±6km, mb4.2/32, Error ellipse: s-maj=14.1km s-min=3.9km az=133.0*
*IDC **19** 04:40:52.6±2.5, 42°.16N×142°.56E, h78km±18km, mb3.5/13, mbtmp3.8/15, MS2.3/1, Error ellipse: s-maj=23.1km s-min=15.7km az=139.0*
*NIED **19** 04:40:52.1, 42°.17N×142°.64E, h56km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.05; Mθθ-0.09; Mφφ-2.96; Mrθ1.71; Mθφ-1.01; Mφr2.71;*
Fault plane solution: M0 4.51000×10¹⁴ NP1:φs 28.00000°, δ 68.00000°, λ 99.00000°. NP2:φs 186.00000°, δ 24.00000°, λ 70.00000°.
*JMA **19** 04:40:52.1±0.2, 42°.2N×0°.8×142°.6E±0°.7, h56km±1km, MD3.5/40, MV3.6/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .
ISC 19 04:40:51.0±0.7, 42°.08N±0°.04×142°.62E±0°.03, h66km±6km, n123, σ0s97/134, mb4.2/34, 9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.23**	**26**		*eP*	**Pn**	**04 41 00.7**	**-0.7**
JNBK	**Urakawa-nobuka**	**0.23**	**26**		A	A	04 41 00.7	
	comp=E,24nm,0.4s,comp=N,28nm,0.4s							
JSHD	**Hidakashinhida**	**0.35**	**341**		P	**Pn**	**04 41 01.7**	**-0.5**
JSHD	**Hidakashinhida**	**0.35**	**341**		A	A	04 41 01.7	
	comp=E,15nm,1.3s,comp=N,10.0nm,0.5s							
ERM	**Erimo**	**0.41**	**99**		Pn	**Pn**	**04 41 02.9**	**+0.3**
ERM					Sn	**Sn**	**04 41 12.0**	**+1.0**
ERM	**Erimo**	**0.41**	**99**		PN	**Pn**	**04 41 02.9**	**+0.3**
ERM							04 41 12.0	
JEM	**Erimo**	**0.41**	**98**		*eP*	**Pn**	**04 41 02.9**	**+0.3**
JTHR	**Tokachihiroo**	**0.55**	**67**		*eP*	**Pn**	**04 41 03.9**	**0.0**
JTHR	**Tokachihiroo**	**0.55**	**67**		A	A	04 41 03.9	
	comp=E,5.0nm,0.6s,comp=N,3.0nm,1.2s							
JBT2	**Biratori 2**	**0.73**	**345**	‖	*eP*	**Pn**	**04 41 05.2**	**-0.8**
JBT2				‖	*eS*	**Sn**	**04 41 15.4**	**-1.5**
JIAM	**Iburiatsuma**	**0.75**	**317**	‖	*iP*	**Pn**	**04 41 06.5**	**+0.2**
JIAM	**Iburiatsuma**	**0.75**	**317**		A	A	04 41 06.5	
	comp=E,9.0nm,1.1s,comp=N,8.0nm,0.4s							
JCH	**Churui**	**0.77**	**45**		*eP*	**Pn**	**04 41 06.1**	**-0.4**
JCH	**Churui**	**0.77**	**45**		A	A	04 41 06.1	
	comp=E,3.0nm,3.1s,comp=N,2.0nm,0.5s							
JFR	**Furan**	**1.09**	**359**		*eP*	**Pn**	**04 41 10.1**	**-0.4**
JEW	**Eniwo**	**1.15**	**312**	‖	*eP*	**Pn**	**04 41 11.0**	**-0.2**
JEW	**Eniwo**	**1.15**	**312**		A	A	04 41 11.0	
	comp=E,4.0nm,2.1s,comp=N,3.0nm,0.8s							
JKB	**Kayabe**	**1.20**	**261**	‖	*eP*	**Pn**	**04 41 11.4**	**-0.4**
JKB				‖	*eS*	**Sn**	**04 41 26.6**	**-0.8**
JOB	**Onbets**	**1.22**	**47**		*eP*	**Pn**	**04 41 12.8**	**+0.7**
JNB	**Noboribetsu**	**1.24**	**289**		*eP*	**Pn**	**04 41 11.2**	**-1.2**
JNB					*eS*	**Sn**	**04 41 26.7**	**-1.6**
JOT	**Ohata**	**1.36**	**240**	‖	*eP*	**Pn**	**04 41 13.7**	**-0.3**
JOT				‖	*eS*	**Sn**	**04 41 31.4**	**+0.1**
JAB	**Ashibetsu**	**1.46**	**349**		*eP*	**Pn**	**04 41 15.0**	**-0.2**
JAR	**Ashorobuto**	**1.49**	**34**		*eP*	**Pn**	**04 41 15.5**	**-0.1**
JAR					*eS*	**Sn**	**04 41 33.2**	**-1.0**
JAR	**Ashorobuto**	**1.49**	**34**		A	A	04 41 15.5	
	comp=E,2.0nm,1.1s,comp=N,1.0nm,1.1s							
JISS	**Ishikarishitsu**	**1.49**	**324**		*eP*	**Pn**	**04 41 15.4**	**-0.3**
JISS					*eS*	**Sn**	**04 41 33.6**	**-0.6**
JTM	**Tenmabayashi**	**1.74**	**223**		Pn	**Pn**	**04 41 19.8**	**+0.8**
AKK	**Akkeshi**	**1.89**	**59**		*eP*	**Pn**	**04 41 20.6**	**-0.5**
ASAJ	**Asahikawa**	**2.04**	**360**		P	**Pn**	**04 41 23.6**	**+0.5**
	comp=N,82nm,0.4s,baz=213,slow=12,SNR=74							
ASAJ					S	**Sn**	**04 41 48.1**	**+0.6**
	comp=N,43nm,0.3s,baz=233,slow=30,SNR=8.0							
JKA	**Kamikawa-asahi**	**2.04**	**360**		Pn	**Pn**	**04 41 23.7**	**+0.7**
JKA	**Kamikawa-asahi**	**2.04**	**360**		*eP*	**Pn**	**04 41 23.6**	**+0.5**
JKA					*eS*	**Sn**	**04 41 48.1**	**+0.6**
NMR	**Nemuro--Hokkai**	**2.63**	**60**	‖	*i*PN	**Pn**	**04 41 30.0**	**-1.1**
NMR					*eS*	**Sn**	**04 42 00.2**	**-1.7**
NMR	**Nemuro--Hokkai**	**2.63**	**60**		*i* P	**Pn**	**04 41 30.3**	**-0.8**
NMR					*eS*	**Sn**	**04 42 00.2**	**-1.7**
RUSJ	**Misakicho**	**2.80**	**43**		*e*PN	**Pn**	**04 41 34.7**	**+1.4**
RUSJ					*eS*	**Sn**	**04 42 08.2**	**+2.3**
YUK	**Yuzh-Kuril'sk**	**3.08**	**49**		*e*PN	**Pn**	**04 41 38.4**	**+1.2**
YUK					*i* S	**Sn**	**04 42 12.2**	**-0.6**
YUK					pmax	pmax		
	comp=E,25nm,0.2s							
YUK					pmax	pmax		
	comp=Z,166nm,0.2s							
YUK					smax	smax		
	comp=N,280nm,0.3s							
YUK					smax	smax		
	comp=E,329nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.08**	**49**		*e*P	**Pn**	**04 41 38.2**	**+1.0**
YUK					AMB	AMB	04 41 38.9

comp=Z,0.5nm,0.5s,baz=83,slow=11,SNR=14
MKAR PcP **PcP** **04 50 30.5 -0.4**
comp=Z,0.2nm,0.5s,baz=74,slow=4.8,SNR=2.2
comp=Z,0.5nm,0.5s
CAST Castle Rocks 42.59 37 P **P** **04 48 36.7 -3.4**
MAKZ Makanchi 42.61 298 P **P** **04 48 40.6 +0.1**
MAKZ Makanchi 42.61 298 P **P** **04 48 40.6 +0.1**
MAKZ pmax pmax
comp=Z,3.0nm,1.2s
BRLK Bradley Lake 43.44 42 P **P** **04 48 45.9 -1.1**
TOLK Toolik Lake Re 43.59 29 P **P** **04 48 47.3 -0.9**
TOLK IAmb IAmb 04 48 57.8
comp=Z,6.1nm,1.5s
KURK Kurchatov 43.71 304 P **P** **04 48 48.8 -0.5**
KURK IAmb IAmb 04 48 49.3
comp=Z,2.7nm,0.6s
KURK Kurchatov 43.71 304 P **P** **04 48 48.8 -0.5**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 43.71 304 *e*P **P** **04 48 48.8 -0.5**
KURBB Kurchatov Arra 43.79 304 P **P** **04 48 49.6 -0.2**
comp=Z,2.9nm,0.6s,baz=77,slow=8.9,SNR=22
comp=Z,2.9nm,0.6s
RND Reindeer 44.04 37 P **P** **04 48 51.5 -0.4**
RND Reindeer 44.04 37 P **P** **04 48 51.5 -0.4**
RND pmax pmax
comp=Z,3.0nm,1.5s
ILAR Eielson Array 44.78 35 P **P** **04 48 57.7 0.0**
comp=Z,0.3nm,0.9s,baz=256,slow=6.2,SNR=5.4
comp=Z,0.3nm,0.9s
KLU Klutina 45.62 40 P **P** **04 49 05.0 +0.5**
KLU IAmb IAmb 04 49 42.4
comp=Z,5.9nm,1.2s
SCRK Sand Creek 46.13 36 P **P** **04 49 08.1 -0.4**
SCRK IAmb IAmb 04 49 21.2
comp=Z,4.1nm,1.4s
VRDI Verde Repeater 46.84 40 P **P** **04 49 13.9 -0.3**
CRQM Cirque 47.09 40 P **P** **04 49 13.4 -2.7**
TGL Tana Glacier 47.24 40 P **P** **04 49 16.4 -0.7**
BCAR Beaver Creek A 47.26 37 P **P** **04 49 16.8 -0.4**
M27K Edge Creek, AK 47.35 38 P **P** **04 49 19.0 +0.9**
M27K IAmb IAmb 04 49 41.8
comp=Z,6.9nm,1.5s
I28M Miner Creek 47.61 34 P **P** **04 49 20.3 +0.4**
CTGM Chitina Glacie 47.90 40 P **P** **04 49 22.7 +0.4**
CTGM IAmb IAmb 04 49 36.2
comp=Z,4.4nm,1.4s
BVAR Borovoye Array 47.98 309 P **P** **04 49 23.1 +0.2**
comp=Z,1.5nm,0.3s,baz=79,slow=10,SNR=25
comp=Z,1.5nm,0.3s
BRVK Borovoye 48.04 309 P **P** **04 49 23.4 +0.1**
BRVK IAmb IAmb 04 49 23.8
comp=Z,2.2nm,0.8s
BRVK Borovoye 48.04 309 P **P** **04 49 23.4 +0.1**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 48.04 309 *e*P **P** **04 49 23.4 +0.1**
BOOM Boomskoye usch 48.14 294 P **P** **04 49 24.6 +0.1**
BOOM Boomskoye usch 48.14 294 P **P** **04 49 24.6 +0.1**
BOOM pmax pmax
comp=Z,18nm,1.3s
AAK Ala-Archa 49.06 295 P **P** **04 49 31.2 -0.3**
AAK IAmb IAmb 04 50 01.3
comp=Z,3.3nm,1.2s
AAK Ala-Archa 49.06 295 P **P** **04 49 31.2 -0.3**
AAK pmax pmax
comp=Z,3.0nm,1.2s
AAK Ala-Archa 49.06 295 *e*P **P** **04 49 31.2 -0.3**
INK Inuvik 49.50 29 P **P** **04 49 34.1 -0.2**
INK IAmb IAmb 04 50 16.8
comp=Z,3.1nm,1.4s
INK Inuvik 49.50 29 P **P** **04 49 34.1 -0.2**
INK pmax pmax
comp=Z,3.0nm,1.4s
G31M Satah River 49.55 31 P **P** **04 49 34.2 -0.5**
G31M IAmb IAmb 04 50 04.3
comp=Z,3.9nm,1.4s
HYT Haines Junctio 49.75 39 P **P** **04 49 37.6 +1.2**
HYT IAmb IAmb 04 50 18.0
comp=Z,3.8nm,1.2s
SKAG Skagway 51.20 40 P **P** **04 49 48.3 +1.1**
SKAG IAmb IAmb 04 50 05.0
comp=Z,3.1nm,0.8s
KK31 Karatay Array 51.53 297 P **P** **04 49 49.7 -0.3**
KK31 IAmb IAmb 04 49 53.1
comp=Z,3.7nm,1.5s
KK31 Karatay Array 51.53 297 P **P** **04 49 49.7 -0.3**
KK31 pmax pmax
comp=Z,4.0nm,1.5s
KKAR Karatay Array 51.53 297 P **P** **04 49 49.6 -0.4**
KKAR Karatay Array 51.53 297 P **P** **04 49 49.6 -0.4**
C36M Paulatuk 52.49 27 P **P** **04 49 56.5 -0.2**
CRAG Craig 53.76 45 P **P** **04 50 05.3 -0.8**
ABKAR Akbulak array 55.49 308 P **P** **04 50 18.9 +0.1**
RES Resolute Bay 57.49 15 P **P** **04 50 32.0 -0.7**
RES IAmb IAmb 04 51 06.3
comp=Z,2.7nm,1.4s
RES Resolute Bay 57.49 15 P **P** **04 50 32.0 -0.7**
RES pmax pmax
comp=Z,3.0nm,1.4s
YKA Yellowknife Ar 59.01 32 P **P** **04 50 43.0 -0.4**
YKA Yellowknife Ar 59.01 32 P **P** **04 50 43.0 -0.4**
WRA Warramunga Arr 62.18 189 P **P** **04 51 05.4 0.0**
comp=Z,0.5nm,0.9s,baz=4.9,slow=6.5,SNR=1.8
comp=Z,0.5nm,0.9s
FINES FINESS Array B 64.81 332 P **P** **04 51 20.8 -1.5**
FINES FINESS Array B 64.81 332 P **P** **04 51 21.4 -0.9**
comp=Z,1.3nm,0.6s,baz=45,slow=8.6,SNR=8.1
comp=Z,1.3nm,0.6s
NC405 NORSAR Array S 69.70 337 P **P** **04 51 52.4 -0.9**
HFS Hagfors 69.89 336 P **P** **04 51 53.7 -0.7**
comp=Z,0.9nm,0.4s,baz=45,slow=6.7,SNR=14
comp=Z,0.9nm,0.4s
NB2 NORSAR Subarra 69.90 337 P **P** **04 51 53.5 -1.1**
comp=Z,0.7nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 69.90 337 P **P** **04 51 54.0 -0.6**
NOA NORSAR Array B 69.90 337 P **P** **04 51 54.0 -0.6**
comp=Z,0.7nm,0.7s,baz=40,slow=6.1,SNR=4.5
comp=Z,0.7nm,0.7s
AKASG Malin Array Be 70.90 322 P **P** **04 52 00.0 -0.7**
comp=Z,0.6nm,0.4s,baz=41,slow=6.3,SNR=2.1
comp=Z,0.6nm,0.4s
PDAR Pinedale Array 73.51 47 P **P** **04 52 17.6 +0.8**
comp=Z,0.2nm,0.7s,baz=343,slow=2.8,SNR=1.9
comp=Z,0.2nm,0.7s
BURAR Bucovina Array 74.94 322 P **P** **04 52 24.8 -0.1**
BURAR Bucovina Array 74.94 322 P **P** **04 52 24.8 -0.1**
TXAR Lajitas Array 86.33 53 P **P** **04 53 27.1 +1.1**
comp=Z,0.2nm,0.5s,baz=290,slow=4.1,SNR=3.5
comp=Z,0.2nm,0.5s
VNDA Vanda 119.92 175 PKPdf **PKPdf** **04 59 31.4 -1.0**
VNDA Vanda 119.92 175 PKIKP **PKPdf** **04 59 31.4 -1.0**
H03N2 Juan Fernandez 146.31 89 T T 07 43 43.9
baz=298,slow=76
H03N3 Juan Fernandez 146.32 89 T T 07 43 44.5
baz=298,slow=76
H03N1 Juan Fernandez 146.33 89 T T 07 43 45.0
baz=298,slow=76

IDC 19 04:59:43.2±3.7, 54.30N×87.42E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=32.6km s-min=20.7km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.57**	**258**	I	I	05 08 00.0	
	baz=78,slow=343,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.57**	**258**	Pg	Pn	05 00 10.4	-1.9
	0.4nm,0.3s,baz=71,slow=13,SNR=5.2						
ZALV				Lg	Lg	05 00 33.9	
	0.7nm,0.3s,baz=76,slow=25,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	05 01 21.3	+0.4
	baz=56,slow=14,SNR=4.2						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**8.19**	**206**	Pn	Pn	05 01 44.7	+1.5
	baz=25,slow=14,SNR=2.6						
	0.1nm,0.4s						

IDC 19 05:00:52.8±3.4, 54.31N×86.77E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=29.4km s-min=16.4km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**253**	I	I	05 08 30.0	
	baz=71,slow=344,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.21**	**253**	Pg	Pg	05 01 14.1	-1.8
	0.5nm,0.3s,baz=70,slow=16,SNR=5.3						
ZALV				Lg	Lg	05 01 32.6	
	0.6nm,0.3s,baz=74,slow=28,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.25**	**237**	Pn	Pn	05 02 27.2	+1.1
	baz=54,slow=14,SNR=6.3						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**8.05**	**203**	Pn	Pn	05 02 52.0	+1.1
	0.1nm,0.3s,baz=18,slow=10,SNR=3.1						
	0.2nm,0.5s						

*SJA **19** 05:21:34.9±1.0, 29.09S×73.07W, h32km±13km, ML4.0, MW4.0*
*IDC **19** 05:21:39.3±0.6, 29.22S×72.60W, h0km, mb4.4/10, mbtmp4.3/13, ML3.9/3, MS3.5/14, Error ellipse: s-maj=23.1km s-min=17.4km az=79.0*
*NEIC **19** 05:21:40.5±1.8, 29.18S±0.04×72.66W±0.05, h10km±1km, mb4.8/130, Mwr4.3/45, Error ellipse: s-maj=7.8km s-min=6.0km az=79.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.80; $M_{\theta\theta}$0.89; $M_{\phi\phi}$2.91; $M_{r\theta}$0.32; $M_{\theta\phi}$1.22; $M_{\phi r}$-0.25; Fault plane solution: M_o3.67000×10^{15} NP1,ϕ_s210.58000°, δ44.52000°, λ-82.20000°. NP2:ϕ_s19.71000°, δ46.00000°, λ-97.60000°. Principal axes: T 3.4826, Plg1.0000°, Azm115.0000°; N 0.3582, Plg5.0000°, Azm25.0000°; P -3.8408, Plg84.0000°, Azm213.0000°;*
*NEIC **19** 05:21:40.4, 29.21S×72.57W, h10km*
*GUC **19** 05:21:42.3±0.5, 29.36S×72.48W, h35km±5km, ML3.6*
ISC 19 05:21:39.2±1.1, 29.18S±0.03×72.53W±0.04, h4km±6km, n252, σ1s01/263, mb4.8/70, MS3.6/10, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**1.34**	**124**		**Pg**	**05 22 05.3**	**+0.4**
CO05					**Sg**	**05 22 22.5**	**+0.1**
CO05	**La Serena**	**1.34**	**124**	*e*P	**Pg**	**05 22 05.3**	**+0.4**
CO05				*e*S	**Sn**	**05 22 21.2**	**-1.8**
CO05				IAML		05 22 24.4	
	comp=N,1μm,0.2s						
AC04	**Llanos de Chal**	**1.60**	**53**		**Pn**	**05 22 07.7**	**-0.6**
AC04				Sn	**Sg**	**05 22 29.0**	**-1.7**
AC04	**Llanos de Chal**	**1.60**	**53**	*i* P	**Pn**	**05 22 07.0**	**-1.4**
AC04				IAML		05 22 32.7	
	comp=Z,287nm,0.8s						
LCO	**Las Campanas**	**1.61**	**85**		**Pg**	**05 22 09.5**	**-0.5**
LCO				Sn	**Sg**	**05 22 31.0**	**+0.2**
LCO	**Las Campanas**	**1.61**	**85**	*i* P	**Pb**	**05 22 09.0**	**-0.6**
LCO				*i* S	**Sg**	**05 22 30.6**	**-0.2**
LCO				IAML		05 22 31.6	
	comp=Z,8μm,0.7s						
LCO	**Las Campanas**	**1.61**	**85**	*e*P	**Pg**	**05 22 09.8**	**-0.2**
CO06	**Fray Jorge**	**1.68**	**153**		**Pn**	**05 22 08.7**	**-0.7**
CO06				Sn	**Sn**	**05 22 29.9**	**-1.4**
CO06	**Fray Jorge**	**1.68**	**153**	*e*P	**Pn**	**05 22 08.6**	**-0.7**
CO06				*e*S	**Sn**	**05 22 29.2**	**-2.2**
CO06				IAML		05 22 30.6	
	comp=N,539nm,0.2s						
GO04	**Tololo Observa**	**1.80**	**124**		**Pb**	**05 22 12.3**	**-0.6**
GO04				Sn	**Sb**	**05 22 35.3**	**-0.6**
GO04	**Tololo Observa**	**1.80**	**124**	*i* P	**Pb**	**05 22 11.9**	**-1.0**
GO04				*i* S	**Sg**	**05 22 36.3**	**-0.8**
GO04				IAML		05 22 37.7	
	comp=Z,3μm,0.7s						
GO04	**Tololo Observa**	**1.80**	**124**	*e*P	**Pb**	**05 22 12.2**	**-0.6**
GO04				*e*S	**Sb**	**05 22 35.2**	**-0.7**
AC05	**El Transito**	**2.00**	**81**		**Pb**	**05 22 15.5**	**-0.7**
AC05				Sn	**Sg**	**05 22 41.4**	**-2.1**
AC05	**El Transito**	**2.00**	**81**	*i* P	**Pb**	**05 22 15.0**	**-1.2**
AC05				IAML		05 22 50.8	
	comp=Z,520nm,0.6s						
CO01	**Juntas del Tor**	**2.26**	**111**		**Pb**	**05 22 19.8**	**-1.0**
CO01	**Juntas del Tor**	**2.26**	**111**	*i* P	**Pb**	**05 22 19.4**	**-1.3**
CO01				IAML		05 22 55.0	
	comp=Z,310nm,0.9s						
CO01	**Juntas del Tor**	**2.26**	**111**	*e*P	**Pb**	**05 22 19.8**	**-1.0**
CO01				*e*S	**Sb**	**05 22 48.0**	**-1.3**
CO01				IAML		05 22 51.7	
	comp=N,419nm,0.3s						
CO03	**El Pedregal**	**2.30**	**137**		**Pn**	**05 22 18.9**	**+0.9**
CO03	**El Pedregal**	**2.30**	**137**	*i* P	**Pn**	**05 22 18.4**	**+0.4**
CO03				IAML		05 22 55.1	
	comp=Z,277nm,0.7s						
CO03	**El Pedregal**	**2.30**	**137**	*e*P	**Pn**	**05 22 18.7**	**+0.8**
CO03				*e*S	**Sn**	**05 22 46.6**	**-0.2**
CO03				IAML		05 22 49.9	
	comp=E,733nm,0.4s						
CO02	**Combarbal**	**2.41**	**147**	Pn	**Pn**	**05 22 20.1**	**+0.6**
CO02	**Combarbal**	**2.41**	**147**	*i* P	**Pn**	**05 22 19.7**	**+0.1**
CO02				*i* S	**Sn**	**05 22 48.8**	**-0.8**
CO02				IAML		05 22 50.6	
	comp=Z,622nm,0.3s						
CO02	**Combarbal**	**2.41**	**147**	*e*P	**Pn**	**05 22 20.1**	**+0.6**
CO02				*e*S	**Sn**	**05 22 48.9**	**-0.7**
CO02				IAML		05 22 50.8	
	comp=E,2μm,0.5s						
GO03	**Copiap**	**2.56**	**53**		**Pn**	**05 22 22.1**	**+0.5**
GO03	**Copiap**	**2.56**	**53**	*i* P	**Pn**	**05 22 22.2**	**+0.6**
GO03				*i* S	**Sb**	**05 22 54.1**	**-3.6**
GO03				IAML		05 22 55.1	
	comp=Z,795nm,0.9s						
AROD	**Rodeo**	**2.83**	**111**	*i* P	**Pb**	**05 22 29.8**	**-0.7**
ACDV	**Cuesta del Vie**	**3.13**	**109**	*i* P	**Pb**	**05 22 34.2**	**-1.2**
ACDV				IAML		05 23 20.2	
	comp=Z,209nm,1.0s						
ACCO	**Cerro Coronel**	**3.32**	**116**	*i* P	**Pb**	**05 22 37.5**	**-1.4**
AC01	**Pan de Azucar**	**3.47**	**30**	Pn	**Pn**	**05 22 32.5**	**-1.5**
AC01	**Pan de Azucar**	**3.47**	**30**	*e*P	**Pn**	**05 22 32.4**	**-1.5**
AC01				*e*S	**Sn**	**05 23 14.9**	**-0.7**
AC01				IAML		05 23 16.5	
	comp=Z,58nm,1.0s						
DOCA	**Reserva Natura**	**3.47**	**121**	*i* P	**Pb**	**05 22 38.3**	**-3.1**
DOCA				*i* S	**Sb**	**05 23 22.5**	**-1.6**
DOCA				IAML		05 23 32.1	
	comp=Z,181nm,2.5s						
VA06	**Catapilco**	**3.53**	**163**	Pn	**Pn**	**05 22 34.4**	**-0.5**
VA06	**Catapilco**	**3.53**	**163**	*e*P	**Pn**	**05 22 34.4**	**-0.5**
VA06				IAML		05 23 19.8	
	comp=E,384nm,0.2s						
AGUA	**GUANDACOL**	**3.54**	**96**	*i* P	**Pb**	**05 22 41.1**	**-1.4**
AGUA				IAML		05 23 36.4	
	comp=Z,316nm,1.1s						
AC02	**Maricunga**	**3.80**	**53**		**Pn**	**05 22 41.1**	**+2.0**
AC02	**Maricunga**	**3.80**	**53**	*i* P	**Pn**	**05 22 40.4**	**+1.4**
AC02				IAML		05 23 30.3	
	comp=Z,87nm,0.3s						
VCA	**Vinchina**	**3.81**	**84**	*i* P	**Pb**	**05 22 44.7**	**-2.5**
VCA				*i* S	**Sb**	**05 23 31.9**	**-1.8**
VCA				IAML		05 23 48.3	
	comp=Z,328nm,2.0s						
RTLS	**Leoncito**	**3.82**	**134**	*i* P	**Pb**	**05 22 44.2**	**-3.1**
RTLS				*i* S	**Sb**	**05 23 30.4**	**-3.7**
RTLS				IAML		05 23 45.7	
	comp=Z,493nm,0.8s						
VA03	**San Esteban**	**3.96**	**155**		**Pn**	**05 22 41.8**	**+1.0**
VA03	**San Esteban**	**3.96**	**155**	*i* P	**Pn**	**05 22 41.3**	**+0.5**
VA03				IAML		05 23 42.4	
	comp=Z,213nm,0.8s						
VA03	**San Esteban**	**3.96**	**155**	*e*P	**Pn**	**05 22 41.2**	**+0.4**
VA03				*e*S	**Sn**	**05 23 26.1**	**-1.6**
ROCH	**El Roble**	**4.00**	**161**	*e*P	**Pn**	**05 22 41.3**	**-0.1**
MT02	**Curacav**	**4.24**	**164**		**Pn**	**05 22 43.9**	**-0.7**
MT02	**Curacav**	**4.24**	**164**	*i* P	**Pn**	**05 22 43.6**	**-0.9**
MT02				IAML		05 23 46.5	
	comp=Z,58nm,0.6s						
PEL	**Peldehue**	**4.26**	**159**		**Pn**	**05 22 45.6**	**+0.7**
PEL	**Peldehue**	**4.26**	**159**	*e*P	**Pn**	**05 22 45.3**	**+0.4**
MT05	**Renca**	**4.47**	**160**		**Pn**	**05 22 47.9**	**+0.1**
MT05	**Renca**	**4.47**	**160**	*i* P	**Pn**	**05 22 48.6**	**+0.8**
MT05				IAML		05 23 59.0	
	comp=Z,126nm,1.5s						
VA05	**Santo Domingo**	**4.53**	**170**	Pn	**Pn**	**05 22 47.8**	**-0.7**
FCH	**Farellones**	**4.56**	**156**	*e*P	**Pn**	**05 22 49.8**	**+0.5**
MT16	**CCHEN**	**4.57**	**158**		**Pn**	**05 22 49.7**	**+0.6**
MT03	**Universidad Ad**	**4.63**	**159**		**Pn**	**05 22 50.5**	**+0.4**
MT03	**Universidad Ad**	**4.63**	**159**	*i* P	**Pn**	**05 22 50.6**	**+0.4**
MT03				IAML		05 24 00.8	
	comp=Z,122nm,2.3s						
MT09	**Talagante**	**4.77**	**164**		**Pn**	**05 22 52.2**	**+0.2**
GO02	**Mina Guanaco**	**4.78**	**34**	Pn	**Pn**	**05 22 51.6**	**-0.6**
GO02	**Mina Guanaco**	**4.78**	**34**	*i* P	**Pn**	**05 22 51.8**	**-0.5**
GO02				*i* S	**Sn**	**05 23 47.8**	**-0.5**
GO02				IAML		05 24 25.7	
	comp=Z,53nm,0.8s						
MT01	**Popeta**	**4.80**	**167**		**Pn**	**05 22 51.4**	**-0.8**
MT01	**Popeta**	**4.80**	**167**	*i* P	**Pn**	**05 22 50.7**	**-1.6**
MT01				IAML		05 24 14.2	
	comp=Z,57nm,1.0s						
ACLC	**CERRO LA CRUZ**	**4.88**	**94**	*i* P	Pn	05 22 57.7	+4.2
ACLC				*i* S	**Sn**	**05 23 54.6**	**+4.1**
ACLC				IAML		05 24 22.0	
	comp=Z,224nm,1.8s						
PB14	**IPOC Station P**	**4.91**	**23**	Pn	**Pn**	**05 22 51.6**	**-2.5**
MT13	**San Alfonso**	**4.94**	**158**	Pn	**Pn**	**05 22 55.2**	**+1.0**
LMEL	**Las Melosas**	**5.06**	**158**		**Pn**	**05 22 57.3**	**+1.3**
BO04	**La Punta**	**5.07**	**162**	Pn	**Pn**	**05 22 56.5**	**+0.5**
BO01	**Tunca**	**5.34**	**167**	Pn	**Pn**	**05 22 59.3**	**-0.4**
BO02	**Sierra Bellavi**	**5.79**	**166**	Pn	**Pn**	**05 23 05.9**	**-0.1**
GO05	**Huala**	**5.84**	**175**	Pn	**Pn**	**05 23 05.1**	**-1.4**
PB10	**IPOC Station P**	**5.91**	**18**	Pn	**Pn**	**05 23 05.9**	**-1.7**
PB15	**IPOC Station P**	**6.55**	**25**		**Pn**	**05 23 15.7**	**-0.8**
H03N1	**Juan Fernandez**	**6.92**	**231**	Pn	Pn	05 23 16.8	-4.3
	baz=111,slow=17						
H03N1				T	T	05 30 16.7	
	baz=55						
H03N2	**Juan Fernandez**	**6.93**	**231**	Pn	Pn	05 23 16.8	-4.5
	baz=111,slow=17						
H03N2				T	T	05 30 13.8	
	baz=55						
H03N3	**Juan Fernandez**	**6.94**	**230**	Pn	Pn	05 23 16.6	-4.8
	baz=111,slow=17						
H03N3				T	T	05 30 14.7	
	baz=55						
PB06	**IPOC Station P**	**6.97**	**23**			**05 23 20.4**	**-1.9**
VA04	**Juan Fernndez**	**6.99**	**229**	Pn	Pn	05 23 17.4	-4.9
PB04	**IPOC Station P**	**7.14**	**18**	Pn	**Pn**	**05 23 22.7**	**-2.0**
H03S3	**Juan Fernandez**	**7.15**	**228**	Pn	Pn	05 23 19.5	-4.8
	baz=200,slow=74						
H03S1	**Juan Fernandez**	**7.16**	**228**	Pn	Pn	05 23 19.3	-5.1
	baz=200,slow=74						
H03S2	**Juan Fernandez**	**7.17**	**228**	Pn	Pn	05 23 19.5	-5.0
	baz=200,slow=74						
LVC	**Limon Verde**	**7.31**	**27**	Pn	**Pn**	**05 23 27.0**	**0.0**
LVC	**Limon Verde**	**7.31**	**27**	Pn	**Pn**	**05 23 26.6**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=175,slow=8.6,SNR=6.5						
LVC				Sn	**Sn**	**05 24 48.6**	**-2.0**
	comp=Z,2.1nm,0.3s,baz=333,slow=20,SNR=5.9						
LVC				LR	LR	05 26 07.7	
	comp=Z,212nm,20.9s,baz=210,slow=36						
	comp=Z,3.1nm,0.3s						
AF01	**San Pedro de A**	**7.33**	**33**	Pn	**Pn**	**05 23 28.0**	**+0.7**
PB07	**IPOC Station P**	**7.79**	**18**		**Pn**	**05 23 30.8**	**-2.8**
PB09	**IPOC Station P**	**7.93**	**23**		**Pn**	**05 23 34.9**	**-0.5**
PB02	**IPOC Station P**	**8.18**	**18**		**Pn**	**05 23 36.4**	**-2.4**
PB01	**IPOC Station P**	**8.55**	**19**		**Pn**	**05 23 41.7**	**-2.2**
PATCX	**Punta Patache**	**8.60**	**15**	Pn	**Pn**	**05 23 43.4**	**-1.1**
TA01	**Diego Aracena**	**8.84**	**14**	Pn	**Pn**	**05 23 46.9**	**-0.8**
PB08	**IPOC Station P**	**9.51**	**20**	Pn	**Pn**	**05 23 58.2**	**+1.0**
PB11	**IPOC Station P**	**9.73**	**16**	Pn	**Pn**	**05 23 59.5**	**-0.6**
GO01	**Chusmiza**	**9.94**	**19**	Pn	**Pn**	**05 24 03.0**	**-0.3**
GO06	**Curarrehue**	**10.42**	**175**	Pn	**Pn**	**05 24 09.0**	**-0.4**
PLCA	**Paso Flores**	**11.64**	**173**	Pn	**Pn**	**05 24 24.5**	**-1.7**
PLCA	**Paso Flores**	**11.64**	**173**	Pn	**Pn**	**05 24 25.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=337,slow=10,SNR=7.4						
PLCA				LR	LR	05 28 45.4	
	comp=Z,130nm,21.1s,baz=350,slow=37						
	comp=Z,0.8nm,0.4s						
TRQA	**Tornquist**	**12.47**	**138**	Pn	**Pn**	**05 24 37.5**	**+0.1**
LPAZ	**La Paz**	**13.45**	**18**	Pn	**Pn**	**05 24 50.2**	**-1.3**
ITQI	**Itaqui**	**13.87**	**96**	Pn	**Pn**	**05 24 57.1**	**+0.9**
COYC	**Coyhaique**	**16.37**	**179**	P	**Pn**	**05 25 31.3**	**+1.5**
PLTB	**Pedras Altas**	**16.52**	**104**	P	**P**	**05 25 34.5**	**0.0**
SIV	**San Ignacio**	**16.84**	**41**	Pn	**P**	**05 25 36.3**	**-1.8**
	baz=226,slow=13,SNR=9.5						
SIV				LR	LR	05 32 19.5	
	comp=Z,71nm,20.5s,baz=286,slow=38						
	comp=Z,21nm,0.8s						
NNA	**Nana**	**17.57**	**346**	LR	LR	05 30 47.3	
	comp=Z,211nm,21.7s,baz=168,slow=31						
ITAB	**Concordia**	**18.08**	**89**		**P**	**05 25 51.8**	**0.0**
PTLB	**Pontes e Lacer**	**18.42**	**45**	P	**P**	**05 25 54.9**	**-0.6**
TRCB	**Terra Rica**	**18.97**	**75**	P	**Pn**	**05 26 02.0**	**-0.2**
GO08	**Villa O'Higgin**	**19.26**	**180**	P	**P**	**05 26 04.2**	**-0.3**
VILB	**Vilhena**	**19.80**	**38**	P	**P**	**05 26 10.7**	**0.0**
ETMB	**Extrema**	**20.15**	**18**		**P**	**05 26 14.9**	**+0.3**
CZSB	**Cruzeiro do Su**	**21.34**	**360**	P	**P**	**05 26 28.2**	**+0.9**
CZSB				IAmb	IAmb	05 26 30.0	
	comp=Z,25nm,0.9s						
SAML	**Samuel**	**21.95**	**25**	P	**P**	**05 26 33.4**	**-0.6**
ATAH	**Atahualpa**	**22.61**	**345**	LR	LR	05 33 54.2	
	comp=Z,84nm,19.2s,baz=186,slow=32						
TBTG	**Tabatinga, AM**	**24.98**	**6**	P	**P**	**05 27 04.7**	**+0.7**
TBTG				IAmb	IAmb	05 27 06.4	
	comp=Z,16nm,0.7s						
MCRA	**Macar, Loja**	**25.66**	**343**	P	**P**	**05 27 09.9**	**-0.4**
BDFB	**Brasilia**	**26.29**	**64**	P	**P**	**05 27 17.0**	**+0.9**
BDFB				IAmb	IAmb	05 27 18.7	
	comp=Z,8.8nm,0.8s						
BDFB	**Brasilia**	**26.29**	**64**	P	**P**	**05 27 17.6**	**+1.5**
	comp=Z,8.4nm,0.8s,baz=234,slow=8.8,SNR=20						
BDFB				LR	LR	05 37 51.5	
	comp=Z,115nm,20.6s,baz=136,slow=37						
	comp=Z,8.4nm,0.8s						
COHC	**Cochancay**	**27.32**	**345**	P	**P**	**05 27 24.6**	**-0.6**
RPN	**Rapa Nui**	**32.44**	**265**	LR	LR	05 37 02.1	
	comp=Z,168nm,19.9s,baz=90,slow=28						
BOAV	**Boa Vista**	**33.44**	**22**	P	**P**	**05 28 20.1**	**+0.8**
BOAV				IAmb	IAmb	05 28 20.7	
	comp=Z,8.5nm,1.0s						
ROSC	**El Rosal**	**33.87**	**357**	LR	LR	05 42 17.0	
	comp=Z,98nm,18.2s,baz=240,slow=36						
BAUV	**El Baul**	**38.15**	**7**	P	**P**	**05 28 59.3**	**-0.4**
BAUV				IAmb	IAmb	05 29 02.1	
	comp=Z,19nm,0.9s						
MDP	**Montagnes des**	**39.08**	**33**	LR	LR	05 46 07.5	
	comp=Z,86nm,19.1s,baz=136,slow=38						
JTS	**Las Juntas de**	**41.03**	**341**	LR	LR	05 42 47.1	
	comp=Z,35nm,20.5s,baz=152,slow=31						
RCBR	**Riachuelo**	**41.65**	**63**	LR	LR	05 49 03.4	
	comp=Z,68nm,18.9s,baz=226,slow=39						
MLPR	**Magueyes Islan**	**47.17**	**7**	P	**P**	**05 30 12.4**	**-0.5**
OBIP	**Obispado Ponce**	**47.29**	**8**	P	**P**	**05 30 13.9**	**0.0**
CELP	**Cerrillos**	**47.33**	**8**	P	**P**	**05 30

comp=Z,8.2nm,0.8s
QSPA South Pole Qui 61.04 180 P **P** 05 31 54.6 +0.8
comp=Z,5.4nm,0.7s,baz=174,slow=1.5,SNR=24
comp=Z,5.4nm,0.7s
HNDO Hondo 63.72 334 P **P** 05 32 12.1 0.0
HNDO IAmb IAmb 05 32 23.8
comp=Z,4.7nm,0.7s
143A Socs Landing, 64.10 342 P **P** 05 32 14.2 -0.2
DRIO Del Rio 64.15 333 P **P** 05 32 14.5 -0.4
DRIO IAmb IAmb 05 32 17.3
comp=Z,4.1nm,1.2s
HPIG 64.20 327 P **P** 05 32 15.7 +0.2
X48A Hartselle 64.76 347 P **P** 05 32 18.4 -0.3
X48A IAmb IAmb 05 32 21.0
comp=Z,3.0nm,0.8s
JCT Junction City 64.77 334 P **P** 05 32 18.0 -1.0
JCT IAmb IAmb 05 32 21.3
comp=Z,5.3nm,0.9s
W50A Signal Mountai 65.16 348 P **P** 05 32 21.7 +0.3
W50A IAmb IAmb 05 32 41.2
comp=Z,15nm,1.4s
BRDY Brady 65.19 335 P **P** 05 32 21.6 -0.1
BRDY IAmb IAmb 05 32 24.8
comp=Z,6.4nm,0.9s
SAND Sanderson 65.23 332 P **P** 05 32 22.6 +0.6
SAND IAmb IAmb 05 32 25.7
comp=Z,8.0nm,1.2s
WHTX Lake Whitney, 65.28 337 P **P** 05 32 22.0 -0.2
WHTX IAmb IAmb 05 32 25.4
comp=Z,10nm,1.1s
TXAR Lajitas Array 65.34 330 P **P** 05 32 22.8 +0.1
TXAR Lajitas Array 65.34 330 P **P** 05 32 24.0 +1.2
comp=Z,0.8nm,0.7s,baz=153,slow=7.8,SNR=12
TXAR PcP **PcP** 05 32 56.1 +1.2
comp=Z,0.5nm,0.8s,baz=157,slow=4.9,SNR=3.5
comp=Z,0.8nm,0.7s
TX31 Lajitas Ar. Si 65.34 330 P **P** 05 32 23.1 +0.3
V52A Sevierville 65.51 350 P **P** 05 32 23.0 -0.6
V52A IAmb IAmb 05 32 24.0
comp=Z,9.8nm,1.1s
OZNA Ozona 65.68 333 P **P** 05 32 25.2 +0.3
OZNA IAmb IAmb 05 32 28.1
comp=Z,7.4nm,0.9s
V48A Smith Brothers 65.96 347 P **P** 05 32 26.9 +0.4
FW07 Weatherford 66.05 337 P **P** 05 32 27.2 +0.1
ALPN Alpine 66.23 331 P **P** 05 32 28.2 -0.3
ALPN IAmb IAmb 05 32 32.0
comp=Z,4.4nm,1.1s
PLPT Palo Pinto 66.33 336 P **P** 05 32 28.3 -0.6
PLPT IAmb IAmb 05 32 32.0
comp=Z,8.6nm,0.9s
Z35A Perchaven, San 66.44 338 P **P** 05 32 29.9 +0.3
ABTX Abilene, Hawle 66.63 335 P **P** 05 32 31.0 +0.1
ABTX IAmb IAmb 05 32 34.2
comp=Z,12nm,0.9s
MNHN Monahans 66.71 332 P **P** 05 32 31.3 -0.2
MNHN IAmb IAmb 05 32 34.7
comp=Z,8.9nm,0.9s
WHAR Wooly Hollow 66.78 342 P **P** 05 32 31.6 -0.1
WHAR IAmb IAmb 05 32 34.4
comp=Z,5.0nm,0.9s
X37A Clayton 67.00 340 P **P** 05 32 33.5 +0.4
X37A IAmb IAmb 05 32 49.5
comp=Z,4.6nm,0.9s
VHRN Van Horn 67.17 330 P **P** 05 32 34.1 -0.4
T47A Sharon Grove 67.23 347 P **P** 05 32 32.6 -1.9
T47A IAmb IAmb 05 32 36.5
comp=Z,7.4nm,0.9s
LCAR Lake Charles 67.23 344 P **P** 05 32 34.4 -0.1
LCAR IAmb IAmb 05 32 36.8
comp=Z,9.6nm,1.0s
ODSA Odessa 67.30 333 P **P** 05 32 35.8 +0.5
APMT Aspermont 67.44 335 P **P** 05 32 36.5 +0.5
T45A Paducah 67.56 346 P **P** 05 32 36.5 -0.2
PBMO Poplar Bluff 67.73 345 P **P** 05 32 38.2 +0.5
PBMO IAmb IAmb 05 32 40.2
comp=Z,8.1nm,0.9s
CGM3 Cape Girardeau 68.05 345 P **P** 05 32 40.3 +0.6
CGM3 IAmb IAmb 05 32 43.3
comp=Z,3.9nm,0.8s
HHAR Hobbs 68.16 341 P **P** 05 32 39.5 -0.9
HHAR IAmb IAmb 05 32 43.1
comp=Z,9.6nm,0.9s
WMOK Wichita Mounta 68.24 337 P **P** 05 32 40.8 -0.2
Q54A Coxs Mills 68.25 353 P **P** 05 32 40.3 -0.7
WCI Wyandotte Cave 68.28 348 P **P** 05 32 40.6 -0.5
WCI IAmb IAmb 05 32 56.1
comp=Z,17nm,1.5s
S44A Carbondale 68.34 346 P **P** 05 32 41.5 0.0
S44A IAmb IAmb 05 32 50.7
comp=Z,8.8nm,0.8s
TUL3 Leonard 68.35 340 P **P** 05 32 41.7 +0.1
SIUC Southern Illin 68.36 346 P **P** 05 32 41.0 -0.7
HSIG 68.53 324 P **P** 05 32 42.6 -0.3
HSIG IAmb IAmb 05 32 46.3
comp=Z,2.8nm,0.8s
FVM French Village 68.88 345 P **P** 05 32 45.6 +0.6
FVM IAmb IAmb 05 32 47.7
comp=Z,5.4nm,0.8s
MSTX Muleshoe 69.02 333 P **P** 05 32 46.6 +0.6
P52A Corning 69.04 352 P **P** 05 32 46.2 +0.3
P52A IAmb IAmb 05 32 47.4
comp=Z,6.2nm,0.8s
SMWD Samnorwood 69.08 336 P **P** 05 32 46.1 -0.2
SMWD IAmb IAmb 05 32 49.1
comp=Z,7.8nm,0.8s
CCM Cathedral Cave 69.14 344 P **P** 05 32 46.7 +0.1
CCM IAmb IAmb 05 32 56.2
comp=Z,2.7nm,0.8s
S39A Bolivar 69.31 342 P **P** 05 32 47.7 +0.1
S39A IAmb IAmb 05 32 49.0
comp=Z,7.0nm,0.9s
P48A Milroy 69.34 349 P **P** 05 32 46.7 -1.1
P48A IAmb IAmb 05 32 48.9
comp=Z,5.1nm,0.8s
R40A Maddies Statio 69.61 344 P **P** 05 32 49.6 +0.1
R40A IAmb IAmb 05 32 51.6
comp=Z,9.5nm,0.8s
319A Douglas 69.64 327 P **P** 05 32 50.0 +0.1
319A IAmb IAmb 05 32 53.8
comp=Z,6.5nm,0.9s
P46A Rosedale 69.80 348 P **P** 05 32 50.5 -0.1
O49A Covington 69.88 350 P **P** 05 32 51.1 +0.1
O49A IAmb IAmb 05 32 52.4
comp=Z,9.2nm,1.0s
KAN13 South Haven SW 69.88 339 P **P** 05 32 52.2 +1.0
OK032 Salt Plains WL 69.93 338 P **P** 05 32 52.1 +0.6
KAN17 Caldwell West 70.00 339 P **P** 05 32 52.7 +0.8
YLE Yale 70.14 360 P **P** 05 32 53.8 +1.2
KAN08 Anthony NE Sta 70.24 339 P **P** 05 32 54.5 +1.2
N49A Columbus Grove 70.58 351 P **P** 05 32 55.0 -0.3
PPT Papeete 70.58 260 LR LR 05 55 42.4
comp=Z,65nm,22.0s,baz=192,slow=29
P40A Paris 70.73 344 P **P** 05 32 56.3 0.0
RTBA Rita Blanca 71.18 335 P **P** 05 32 58.8 -0.4
RTBA IAmb IAmb 05 33 09.2
comp=Z,7.9nm,1.2s
P38A Dawn 71.19 343 P **P** 05 32 59.4 +0.3
P38A IAmb IAmb 05 33 01.3
comp=Z,5.6nm,0.8s
ANMO Albuquerque 71.37 331 P **P** 05 32 59.9 -0.6
L48A N Adams 71.62 351 P **P** 05 33 01.4 -0.2
214A Organ Pipe Nat 71.84 325 P **P** 05 33 03.0 -0.3
214A IAmb IAmb 05 33 07.2
comp=Z,7.6nm,1.1s
K50A Casco 72.20 352 P **P** 05 33 05.2 +0.1
N38A Joes South For 72.22 344 P **P** 05 33 05.1 -0.1
N38A IAmb IAmb 05 33 07.7
comp=Z,12nm,0.8s
W18A Petrified Fore 72.95 329 P **P** 05 33 10.2 +0.2
X16A Lo Mia Camp, P 73.17 327 P **P** 05 33 11.8 +0.6
CCX Cicese 73.79 322 P **P** 05 33 13.8 -0.9
SADO Sadowa 73.84 355 P **P** 05 33 14.9 +0.2
SADO IAmb IAmb 05 33 16.5
comp=Z,12nm,0.8s
DBIC Dimbokro 74.09 73 P **P** 05 33 18.2 +1.3
comp=Z,3.3nm,0.8s,baz=225,slow=13,SNR=4.1
comp=Z,3.3nm,0.8s
MVCO Mesa Verde 74.16 331 P **P** 05 33 16.1 -1.0
MVCO IAmb IAmb 05 33 20.3
comp=Z,8.0nm,1.0s
ISCO Idaho Springs 75.21 334 P **P** 05 33 23.3 0.0
G40A Rib Lake 75.82 347 P **P** 05 33 26.6 +0.4
G40A IAmb IAmb 05 33 39.0
comp=Z,13nm,1.3s

ECSD EROS Data Cent 75.84 342 P **P** 05 33 26.5 +0.1
ECSD IAmb IAmb 05 33 28.6
comp=Z,8.5nm,0.9s
KNB Kanab 75.93 328 P **P** 05 33 27.0 -0.3
KNB IAmb IAmb 05 33 31.6
comp=Z,8.2nm,1.2s
MTPU Mount Pierson 76.47 329 P **P** 05 33 29.1 -1.4
O20A White River Ci 76.53 333 P **P** 05 33 30.0 -0.6
O20A IAmb IAmb 05 33 47.7
comp=Z,3.7nm,0.8s
PRN Pahroc Range 77.30 327 P **P** 05 33 35.7 +0.7
PRN IAmb IAmb 05 33 39.2
comp=Z,5.0nm,1.0s
RWWY Rawlins 77.45 334 P **P** 05 33 35.7 -0.2
RWWY IAmb IAmb 05 33 38.8
comp=Z,12nm,1.1s
WCT Wildcat Mounta 77.59 325 P **P** 05 33 36.3 -0.2
RAR Rarotonga 77.66 253 LR LR 05 57 17.0
comp=Z,37nm,21.3s,baz=147,slow=28
MPU Maple Canyon 77.85 330 P **P** 05 33 38.5 +0.5
K22A Casper 78.03 335 P **P** 05 33 39.6 +0.7
K22A IAmb IAmb 05 33 42.5
comp=Z,7.3nm,0.8s
SPR3 Spring Creek 3 78.23 328 P **P** 05 33 40.1 -0.2
R11B Troy Canyon, C 78.31 327 P **P** 05 33 41.3 +0.6
DUG Dugway, Tooele 78.51 330 P **P** 05 33 42.5 +0.9
TCUT Toone Canyon 78.66 331 P **P** 05 33 42.1 -0.5
TCUT IAmb IAmb 05 33 47.0
comp=Z,5.9nm,0.9s
DSP Deep Springs 78.72 325 P **P** 05 33 42.4 -0.2
HWUT Hardware Ranch 79.13 331 P **P** 05 33 45.0 -0.1
HWUT IAmb IAmb 05 33 48.1
comp=Z,9.2nm,0.9s
DRLN Deer Lake 79.22 10 P **P** 05 33 46.1 +1.0
PDAR Pinedale Array 79.28 333 P **P** 05 33 46.0 +0.1
PDAR Pinedale Array 79.28 333 P **P** 05 33 46.3 +0.4
comp=Z,0.6nm,0.7s,baz=126,slow=4.6,SNR=6.4
comp=Z,0.6nm,0.7s
NVAR Mina Array Bea 79.70 325 P **P** 05 33 48.0 -0.3
NVAR Mina Array Bea 79.70 325 P **P** 05 33 48.7 +0.4
comp=Z,1.7nm,0.8s,baz=151,slow=6.9,SNR=7.9
comp=Z,1.7nm,0.8s
HVU Hansel Valley 79.79 331 P **P** 05 33 49.0 +0.3
AHID Auburn Hatcher 79.90 332 P **P** 05 33 49.3 0.0
ELK Elko 80.05 328 P **P** 05 33 50.5 +0.3
LOHW Long Hollow 80.41 333 P **P** 05 33 52.5 +0.5
TPAW Teton Pass 80.44 333 P **P** 05 33 51.5 -0.8
CMB Columbia Colle 80.46 324 P **P** 05 33 52.2 0.0
MOOW Moose Ponds 80.58 333 P **P** 05 33 52.7 -0.3
FLWY Flagg Ranch 80.84 333 P **P** 05 33 54.6 +0.3
FLWY IAmb IAmb 05 33 57.9
comp=Z,5.0nm,0.8s
ULM Lac du Bonnet 81.75 345 P **P** 05 33 58.9 +0.2
ULM IAmb IAmb 05 34 01.0
comp=Z,5.0nm,0.9s
ULM Lac du Bonnet 81.75 345 P **P** 05 33 58.8 +0.2
comp=Z,4.8nm,0.9s,baz=153,slow=3.4,SNR=8.6
comp=Z,4.8nm,0.9s
HLID Hailey 81.94 331 P **P** 05 34 00.1 0.0
HLID IAmb IAmb 05 34 03.2
comp=Z,4.1nm,0.9s
DGMT Dagmar 82.34 339 P **P** 05 34 02.4 +0.5
DGMT IAmb IAmb 05 34 04.0
comp=Z,13nm,0.9s
TOA0 Torodi Ar. Sit 82.99 71 P **P** 05 34 06.6 +0.6
TOA0 IAmb IAmb 05 34 08.5
comp=Z,4.4nm,0.8s
TORD Torodi Ar. Bea 82.99 71 P **P** 05 34 07.3 +1.3
comp=Z,5.3nm,0.3s,baz=257,slow=3.8,SNR=17
comp=Z,5.3nm,0.3s
J08A Circle Bar Ran 83.59 328 P **P** 05 34 09.2 +0.6
J08A IAmb IAmb 05 34 11.9
comp=Z,5.6nm,1.0s
PLID Pearl Lake 83.84 331 P **P** 05 34 09.2 -0.8
PLID IAmb IAmb 05 34 12.5
comp=Z,4.7nm,0.9s
EDM Edmonton 89.41 337 P **P** 05 34 35.2 -1.6
EDM IAmb IAmb 05 34 51.1
comp=Z,5.0nm,1.1s
FCC Fort Churchill 89.43 349 P **P** 05 34 36.7 0.0
FCC IAmb IAmb 05 34 38.5
comp=Z,6.9nm,1.0s
YKA Yellowknife Ar 97.37 342 P Pdif 05 35 13.1 -0.1
comp=Z,0.3nm,0.8s,baz=139,slow=4.5,SNR=6.8
comp=Z,0.3nm,0.8s
BRTR Keskin Array B 119.77 59 PKP **PKiKP** 05 40 30.5 -0.4
comp=Z,1.1nm,1.1s,baz=255,slow=2.8,SNR=3.6
BVAR Borovoye Array 143.90 38 PKP **PKPdf** 05 41 14.8 -0.6
comp=Z,1.1nm,0.8s,baz=292,slow=3.9,SNR=5.9
KURBB Kurchatov Arra 149.47 37 PKPbc **PKiKP** 05 41 30.4 -0.1
comp=Z,3.0nm,0.7s,baz=302,slow=3.2,SNR=36
ZALV Zalesovo Beam 150.26 27 PKP **PKPdf** 05 41 27.0 +1.0
comp=Z,2.5nm,0.8s,baz=276,slow=3.0,SNR=12
ZALV PKPbc **PKiKP** 05 41 32.3 +0.3
comp=Z,13nm,0.7s,baz=298,slow=3.2,SNR=47
ZALV PKPab **pPKPab** 05 41 39.3 +2.5
comp=Z,7.6nm,0.7s,baz=306,slow=3.5,SNR=10
MJAR Matsushiro Arr 153.24 294 PKPab **PKPab** 05 41 50.7 +0.3
comp=Z,1.3nm,0.6s,baz=104,slow=2.1,SNR=4.3
MKAR Makanchi Array 153.66 41 PKP **PKPdf** 05 41 30.8 -0.6
comp=Z,0.2nm,0.8s,baz=274,slow=2.3,SNR=2.4
MKAR PKPbc **PKiKP** 05 41 39.9 +0.6
comp=Z,1.6nm,0.8s,baz=307,slow=2.3,SNR=18
MKAR PKPab **pPKPab** 05 41 53.4 +2.0
comp=Z,1.1nm,0.9s,baz=312,slow=3.6,SNR=4.2
SONM Songino Array 161.35 2 PKPab **PKPab** 05 42 26.7 +1.7
comp=Z,0.6nm,0.8s,baz=352,slow=1.0,SNR=5.9

*BER **19** 05:34:13.8±3.2,66.03N×16.72W,h10km,ML3.2, mb4.4(CSEM)*
*REY **19** 05:34:13.4,66.56N×17.74W,h11km*
*IDC **19** 05:34:14.3±0.4,66.43N×17.75W,h0km,mb4.3/23, mbtmp4.3/30,ML3.4/7,Error ellipse: s-maj=13.5km s-min=9.4km az=11.0*
*GCMT **19** 05:34:14.4±0.2,66.66N±0.03×17.63W±0.03,h12km, MW4.9/111,Moment Tensor Solution. s38,c40; s111,c184; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.80±.09; Mθθ-0.06±. 10; Mϕϕ2.86±.07; Mrθ0.10±.44; Mθϕ0.03±.08; Mϕr-0.73±.26; Best double couple: M₀2.92600×10¹⁶ NP1:ϕs358.00000°,δ52.00000°, λ-93.00000°. NP2:ϕs183.00000°,δ38.00000°, λ-87.00000°. Principal axes: T 2.9540, Plg7.0000°, Azm90.0000°; N -0.0530, Plg2.0000°, Azm0.0000°; P -2.8970, Plg82.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **19** 05:34:14.2±1.3,66.51N×17.51W,h10km,mb4.7/69, MS4.3/4 Error ellipse: s-maj=9.4km s-min=5.0km az=105.5*
*NEIC **19** 05:34:16.4±2.0,66.41N±0.07×17.7W±0.2,h10km±1km, mb4.8/280,Error ellipse: s-maj=11.6km s-min=10.9km az=44.0*
*BGR **19** 05:34:21.9,67.44N×15.55W,h33km,mb4.3*
ISC 19 05:34:14.9±0.7, 66.49N±0.03×17.64W±0.02, h3km±4km, n798,σ1s73/798, mb4.7/242, MS4.5/6, 10C-11D, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey** baz=263	**0.16**	**289**	P	**Pg**	**05 34 16.2**	**-1.8**
IBRE	**Brettingsstaoi** baz=189	**0.39**	**197**	P	**Pg**	**05 34 21.6**	**-0.7**
IBRE	baz=189			S	**Sg**	**05 34 28.3**	**+1.0**
IHED	**Heoinshofoi** baz=160	**0.43**	**162**	P	**Pg**	**05 34 22.4**	**-0.8**
IHED	baz=160			S	**Sg**	**05 34 29.4**	**+0.7**
ILEI	**Leirhofn** baz=106	**0.47**	**100**	S	**Sg**	**05 34 29.9**	**0.0**
ILEI	baz=106			P	**Pg**	**05 34 22.9**	**-1.0**
IGRA	**Granastaoir** baz=174	**0.57**	**178**	P	**Pg**	**05 34 24.8**	**-1.1**
IGRA	baz=174			S	**Sg**	**05 34 33.6**	**+0.2**
IDIM	**Dimmadalss** baz=151	**0.60**	**151**	P	**Pg**	**05 34 25.2**	**-1.3**
IDIM	baz=151			S	**Sg**	**05 34 34.3**	**+0.1**

IHLA Hella 0.63 209 P **Pg** 05 34 25.2 -1.7
baz=204
IHLA S **Sg** 05 34 34.5 -0.5
baz=204
ISIG Siglufjorour 0.63 236 P **Pg** 05 34 24.6 -2.4
baz=229
ISIG S **Sg** 05 34 32.9 -2.1
baz=229
IGIL Gilhagi 0.67 128 P **Pg** 05 34 26.0 -1.6
baz=130
IGIL S **Sg** 05 34 36.0 -0.3
baz=130
ISKI Skildingahlsh 0.67 158 P **Pg** 05 34 26.3 -1.4
baz=157
ISKI S **Sg** 05 34 36.6 +0.1
baz=157
IGHA Grjothals 0.76 148 S **Sg** 05 34 39.1 -0.2
baz=148
IGHA P **Pg** 05 34 27.6 -1.9
baz=148
IKVO Krokottuvotn 0.84 158 P **Pg** 05 34 29.1 -1.8
baz=157
IKVO S **Sg** 05 34 41.3 -0.5
baz=157
IREN Reynihlio 0.90 160 P **Pg** 05 34 29.9 -2.2
baz=159
IREN S **Sg** 05 34 43.1 -0.6
baz=159
IMEL Melhnausar 1.01 156 P **Pg** 05 34 31.8 -2.4
baz=156
IGRS Grimsstaoir 1.06 143 P **Pg** 05 34 32.3 -2.9
baz=144
IGRS S **Sg** 05 34 47.9 -0.9
baz=144
IHRN Hraun 1.07 250 S **Sg** 05 34 44.4 -5.0
baz=246
IHRN P **Pg** 05 34 31.2 -4.2
baz=246
ISVA Svartarkot 1.17 172 P **Pg** 05 34 34.3 -3.0
baz=171
ISVA S **Sg** 05 34 50.8 -1.6
baz=171
IASK Askja 1.50 164 P **Pn** 05 34 39.6 -3.2
baz=163
IASK S **Sn** 05 35 00.4 -2.6
baz=163
IMKO Mokollar 1.61 160 S **Sn** 05 35 03.6 -2.0
baz=159
THOR Thorvaldshraun 1.61 165 P **Pn** 05 34 42.0 -2.4
baz=164
THOR S **Sn** 05 35 04.3 -1.4
baz=164
IURH Urdarhals 1.69 173 P **Pn** 05 34 42.2 -3.2
baz=172
IURH S **Sn** 05 35 05.9 -1.7
baz=172
IKRE Kreppuhraun 1.79 163 P **Pn** 05 34 43.5 -3.3
baz=162
BORG Borgarnes 2.33 223 **Pn** 05 34 51.7 -2.3
BORG Borgarnes 2.33 223 *eP* **Pn** 05 34 51.5 -2.5
BORG *eS* **Sn** 05 35 21.0 -2.1
BORG Borgarnes 2.33 223 Pn **Pn** 05 34 51.6 -2.5
93nm,0.3s,baz=42,slow=8.6,SNR=71
BORG Sn **Sn** 05 35 21.4 -1.7
125nm,0.3s,baz=30,slow=20,SNR=27
780nm,0.7s
SCO Scoresbysund 4.31 340 *e* **Pn** 05 35 17.3 -4.0
baz=172,slow=10
SCO *i* P **Pn** 05 35 17.9 -3.4
SOEG Soedalen 5.58 294 *i* P **Pn** 05 35 37.0 -1.7
SOEG *e* 05 36 10.2
JMIC Jan Mayen 5.60 32 Pn **Pn** 05 35 39.4 +0.4
9.6nm,0.3s,baz=217,slow=5.7,SNR=3.3
JMIC Sn **Sn** 05 36 36.9 -6.9
12nm,0.3s,baz=202,slow=17,SNR=1.6
28nm,0.4s
SUMG Summit 9.45 319 Pn **Pn** 05 36 30.9 -1.2
SUMG Summit 9.45 319 P **Pn** 05 36 30.9 -1.2
SUMG Summit 9.45 319 *i* P **Pn** 05 36 30.6 -1.5
LOF Lofoten 12.07 68 *eP* **Pn** 05 37 04.1 -3.5
LOF *eS* **Sn** 05 39 17.0 -5.6
LOF IAML 05 39 26.0
comp=Z,5.9nm,0.7s
KONS Konsvik 12.21 76 *eP* **Pn** 05 37 05.1 -4.4
KONS *eS* Sn 05 39 16.3 -10
KONS IAML 05 39 24.6
comp=Z,8.2nm,0.6s
STOK Stokkvaagen 12.21 77 *eP* **Pn** 05 37 05.1 -4.4
STOK *eS* Sn 05 39 14.9 -11
STOK IAML 05 39 26.7
comp=Z,9.4nm,0.8s
NSS Namsos 12.38 85 *eP* Pn 05 37 02.3 -9.4
NSS *eS* Sn 05 39 18.9 -11
NSS IAML 05 39 30.6
comp=Z,4.0nm,0.5s
STEI Steigen 12.74 69 *eP* Pn 05 37 10.8 -5.8
STEI *eS* Sn 05 39 29.4 -9.3
STEI IAML 05 39 45.9
comp=Z,3.6nm,0.7s
MOR8 Moi Rana 12.81 77 *eP* **Pn** 05 37 16.1 -1.6
MOR8 *eS* **Sn** 05 39 35.1 -5.5
MOR8 IAML 05 39 43.0
comp=Z,9.5nm,0.6s
FAUS Fauske 12.85 71 *eP* **Pn** 05 37 16.1 -2.1
FAUS *eS* **Sn** 05 39 32.8 -8.7
FAUS IAML 05 39 46.7
comp=Z,5.4nm,0.6s
EKB Eskdalemuir 13.16 141 Pn **Pn** 05 37 22.9 +0.3
EKA Eskdalemuir Ar 13.17 141 Pn **Pn** 05 37 23.9 +1.2
baz=336,slow=14
comp=Z,1.3nm,0.8s
ESK Eskdalemuir 13.18 141 Pn **Pn** 05 37 22.1 -0.5
ESK Eskdalemuir 13.18 141 P **Pn** 05 37 22.2 -0.5
NC204 NORSAR Array S 13.47 99 Pn **Pn** 05 37 25.6 -1.2
NBO00 NORSAR Array S 13.62 100 Pn **Pn** 05 37 26.7 -2.0
NC303 NORSAR Array S 13.74 99 **Pn** 05 37 32.1 +1.8
NAO01 NORSAR Array S 13.77 101 Pn **Pn** 05 37 31.6 +0.8
NOA NORSAR Array B 13.78 100 Pn **Pn** 05 37 30.6 -0.4
baz=307,slow=12,SNR=6.9
NOA Sn **Sn** 05 39 57.5 -6.9
baz=307,slow=18,SNR=1.6
comp=Z,1.4nm,0.8s
NB201 NORSAR Array S 13.81 100 Pn **Pn** 05 37 31.5 +0.1
NC405 NORSAR Array S 13.94 99 **Pn** 05 37 31.8 -1.3
NOD Norderasen 13.99 87 *eP* **Pn** 05 37 31.6 -2.2
NOD *eS* **Sn** 05 40 00.5 -8.8
SALU Saltoluokta 14.07 70 *eP* **Pn** 05 37 31.4 -3.4
NC602 NORSAR Array S 14.09 100 Pn **Pn** 05 37 36.7 +1.5
BJO1 Bjornoya 14.34 40 *eP* **P** 05 37 43.2 -2.5
JETT Jettan, Norway 14.40 61 *eP* **Pn** 05 37 37.4 -1.9
HSPB Hornsund (broa 14.48 30 *eP* **Pn** 05 37 42.2 +1.8
KIF Kilpisjarvi 14.60 63 *eP* Pn 05 37 36.7 -5.4
KBS Kingsbay 14.95 22 Pn **Pn** 05 37 49.4 +2.7
KBS IAmb IAmb 05 38 01.4
comp=Z,46nm,1.5s
KBS Kingsbay 14.95 22 *eP* **Pn** 05 37 47.0 +0.3
KBS Kingsbay 14.95 22 P **Pn** 05 37 49.4 +2.7
KBS pmax pmax
comp=Z,46nm,1.5s
SPA0 Spitsbergen Ar 15.23 26 *eP* **Pn** 05 37 52.5 +2.1
SPITS Spitsbergen Ar 15.23 26 Pn **Pn** 05 37 52.7 +2.3
baz=224,slow=12
comp=Z,1.3nm,0.3s
SPB2 Spitsbergen Ar 15.23 26 Pn **Pn** 05 37 52.7 +2.3
SPB2 IAmb IAmb 05 38 16.9
comp=Z,34nm,1.0s
HFS Hagfors 15.31 100 Pn **P** 05 37 56.9 +0.3
comp=Z,0.2nm,0.3s,baz=320,slow=6.6,SNR=16
HFS Sn **Sn** 05 40 38.1 -3.4
comp=Z,0.1nm,0.3s,baz=315,slow=23,SNR=1.7
KTK1 Kautokeino 15.47 62 *eP* **Pn** 05 37 51.1 -2.6
ARA0 ARCESS Array S 16.17 60 *eP* **Pn** 05 38 02.6 -0.3
ARCES ARCESS Array B 16.17 60 Pn **Pn** 05 38 03.6 +0.8
ARCES ARCESS Array B 16.17 60 P **Pn** 05 38 03.6 +0.8
ARCES pmax pmax
comp=Z,20nm,1.2s
ARCES ARCESS Array B 16.17 60 Pn **Pn** 05 38 02.9 +0.1
comp=Z,0.2nm,0.3s,baz=282,slow=7.3,SNR=11
comp=Z,9.8nm,0.8s
KEV Kevo 16.65 59 Pn **Pn** 05 38 08.2 -0.7
KEV Kevo 16.65 59 P **Pn** 05 38 08.2 -0.7
KEV pmax pmax
comp=Z,29nm,1.1s
SGF Sodankyl 17.04 67 P **Pn** 05 38 13.1 -0.7
OUL Oulu 17.64 74 P **Pn** 05 38 20.8 -0.5
RETH Rethem/Aller, 19.17 123 *eP* **Pn** 05 38 41.8 +1.8

comp=Z,13nm,1.3s,baz=333,slow=11
APA Apatity 19.50 63 ⇓*i*P **P 05 38 40.3 -2.4**
APA pmax pmax
comp=Z,10.0nm,0.8s
APA MLR MLR
comp=Z,2μm,17.0s
FINES FINESS Array B 19.50 84 P **P 05 38 42.3 -0.4**
comp=Z,0.2nm,0.3s,baz=306,slow=12,SNR=12
comp=Z,6.2nm,0.9s
FIA1 FINESS Array S 19.50 84 P **P 05 38 42.5 -0.2**
FIA1 IAmb IAmb 05 38 49.4
comp=Z,72nm,1.2s
MEF Metsahovi 19.54 89 *e*P **P 05 38 43.1 0.0**
NRDL Niedersach Rie 19.62 122 *e*P **P 05 38 44.2 +0.1**
comp=Z,13nm,1.0s,baz=333,slow=11
BSTI Sart Tilman 19.82 132 *d*P **P 05 38 46.6 +0.3**
LVZ Lovozero 19.82 62 *i*P **P 05 38 45.7 -0.6**
BMRD Maredsous 19.83 134 *d*P **Pn 05 38 48.0 0.0**
comp=Z,8.7nm,1.2s
BGES Gesves 19.85 133 *d*P **Pn 05 38 52.5 +4.2**
FLN La Foliniere 19.88 145 *e*P **P 05 38 45.9 -1.1**
FLN pmax pmax
comp=Z,25nm,1.1s
BCLA Clavier 19.88 133 *d*P **Pn 05 38 54.2 +5.6**
BCLA *d*PP **PnPn 05 39 02.3 0.0**
MEM Membach 19.93 131 *d*P **P 05 38 47.7 +0.2**
MEM Membach 19.93 131 P **P 05 38 47.9 +0.4**
MEM pmax pmax
comp=Z,15nm,1.4s
DOU Dourbes 19.97 134 *d*P **Pn 05 38 54.5 +4.9**
RCHB Rochefort 20.10 133 *d*P Pn 05 38 56.5 +5.4
BHOU Houvegnez 20.15 132 *d*P Pn 05 38 56.8 +5.0
MTSE Matsula 20.23 93 *e*P **P 05 38 50.5 -0.3**
CLZ Clausthal 20.26 123 *e*P **P 05 38 50.5 -0.7**
comp=Z,17nm,1.1s,baz=333,slow=11
GTTG Gottingen 20.37 124 *e*P **P 05 38 52.8 +0.5**
comp=Z,22nm,0.9s,baz=333,slow=11
WLF Walferdange 20.81 132 P **P 05 38 56.4 -0.7**
WLF Walferdange 20.81 132 P **P 05 38 56.4 -0.7**
WLF pmax pmax
comp=Z,15nm,1.2s
UBBA Unterbreizbach 21.00 125 *e*P 05 39 00.2
comp=Z,14nm,1.2s,baz=333,slow=11
TNS Taunus Mts 21.02 128 P **P 05 38 59.7 +0.2**
TNS pmax pmax
comp=Z,21nm,1.0s
TNS Taunus Mts 21.02 128 *e*P **P 05 38 59.6 +0.2**
comp=Z,18nm,1.0s,baz=333,slow=11
FRB Frobisher Bay 21.10 287 P **P 05 38 59.1 -1.1**
comp=Z,12nm,0.9s,baz=69,slow=12,SNR=15
comp=Z,12nm,0.9s
CLF Chambon-Foret 21.23 141 P **P 05 39 00.9 -0.7**
CLF IAmb IAmb 05 39 07.0
comp=Z,41nm,1.1s
NEUB Neuenburg 21.27 122 *e*P **P 05 39 01.6 -0.4**
comp=Z,21nm,0.9s,baz=333,slow=11
VALR Valaam 21.46 81⇑ *i*P **P 05 39 02.1 -1.9**
VALR pmax pmax
comp=Z,25nm,0.9s
VSU Vasula 21.57 90*c i*P **P 05 39 03.8 -1.4**
VSU pmax pmax
comp=Z,28nm,0.9s
VSU Vasula 21.57 90 *e*P **P 05 39 04.3 -0.9**
CLL Collm 21.61 120 P **P 05 39 03.7 -2.0**
CLL Collm 21.61 120 *i*P **P 05 39 04.9 -0.8**
CLL *i* 05 39 07.5
CLL *e*S **S 05 43 07.0 +1.7**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 21.61 120 *i*P **P 05 39 04.9 -0.8**
comp=Z,12nm,1.0s
CLL *i* x x 05 39 07.5
comp=Z,24nm,1.1s
CLL *e*S **S 05 43 07.0 +1.7**
CLL *e*SSS SSS 05 43 48.0
CLL Collm 21.61 120 *e*P **P 05 39 05.0 -0.7**
comp=Z,20nm,1.1s,baz=333,slow=11
KLNR Kaliningrad 21.67 105⇑ *i*P **P 05 39 05.1 -1.2**
KLNR pmax pmax
comp=Z,53nm,1.1s
MOX Moxa 21.69 123 P **P 05 39 06.2 -0.4**
MOX pmax pmax
comp=Z,13nm,1.3s
MOX Moxa 21.69 123 *e*P **P 05 39 06.9 +0.3**
comp=Z,12nm,1.2s,baz=333,slow=11
MFF Saint Martin d 21.99 146 *e*P **P 05 39 09.2 -0.6**
MFF pmax pmax
comp=Z,33nm,1.2s
PLN Plauen 22.01 122 *e*P **P 05 39 09.5 -0.5**
comp=Z,15nm,1.0s,baz=333,slow=11
VSVD Vaisvydziai 22.13 98 *e*P **P 05 39 11.2 0.0**
BRG Berggiesshubel 22.30 119 *i*P **P 05 39 13.0 -0.1**
BRG Amp 05 39 16.1
comp=Z,9.0nm,1.1s
BRG Berggiesshubel 22.30 119 *i*P **P 05 39 13.0 -0.1**
BRG 05 39 36.7
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG pmax pmax
comp=Z,7.0nm,1.0s
NKC Novy Kostel 22.32 122 *e*P **P 05 39 13.2 -0.2**
NKC Novy Kostel 22.32 122 *e*P **P 05 39 13.2 -0.2**
HSKC Hora Svate Kat 22.34 120 *e*P **P 05 39 12.8 -0.8**
GRA1 Grafenberg Arr 22.37 125 P **P 05 39 11.6 -2.3**
GRF Grafenberg Arr 22.37 125 P **P 05 39 11.6 -2.3**
GRF pmax pmax
comp=Z,24nm,1.2s
GRFO Grafenberg 22.37 125 P **P 05 39 11.8 -2.2**
GRFO Grafenberg 22.37 125 P **P 05 39 11.8 -2.2**
GRFO pmax pmax
comp=Z,21nm,1.1s
ECH Echery 22.40 133 P **P 05 39 13.9 -0.4**
ECH Echery 22.40 133 P **P 05 39 13.9 -0.4**
ECH pmax pmax
comp=Z,12nm,1.2s
SSF Saint Saulge 22.44 140 *e*P **P 05 39 13.8 -0.8**
SSF pmax pmax
comp=Z,28nm,1.1s
PABE Paberze 22.49 99 P **P 05 39 14.5 -0.5**
PABE Paberze 22.49 99 *e*P **P 05 39 14.6 -0.4**
ROTZ Rotzenmuhle 22.64 123 *e*P **P 05 39 16.6 -0.2**
comp=Z,5.1nm,1.5s,baz=333,slow=11
BFO Black Forest 22.65 131 P **P 05 39 16.9 0.0**
BFO Black Forest 22.65 131 P **P 05 39 16.9 0.0**
BFO pmax pmax
comp=Z,10.0nm,1.1s
BFO Black Forest 22.65 131 *e*P **P 05 39 18.1 +1.2**
comp=Z,37nm,1.8s,baz=333,slow=11
PRU Pruhonice 23.25 119 *e*P **P 05 39 22.6 -0.5**
PRU Pruhonice 23.25 119 *e*P **P 05 39 22.6 -0.5**
SUW Suwalki 23.27 102 P **P 05 39 21.6 -1.7**
SUW Suwalki 23.27 102 P **P 05 39 21.6 -1.7**
SUW pmax pmax
comp=Z,77nm,1.0s
SUW Suwalki 23.27 102 *e*P **P 05 39 21.9 -1.3**
CHVC Chvalec 23.29 117 *e*P **P 05 39 22.8 -0.7**
CHVC Chvalec 23.29 117 *e*P **P 05 39 22.8 -0.7**
WET Wettzell 23.40 123 *e*P **P 05 39 24.9 +0.2**
comp=Z,6.2nm,1.0s,baz=333,slow=11
DPC Dobruska-Polom 23.58 117 *e*P **P 05 39 25.0 -1.5**
DPC Dobruska-Polom 23.58 117 *e*P **P 05 39 25.0 -1.5**
ZVC Zvikov 23.59 121 *e*P **P 05 39 26.1 -0.5**
KHC Kasperske Hory 23.65 122 P **P 05 39 26.6 -0.6**
KHC Kasperske Hory 23.65 122 *e*P **P 05 39 27.3 +0.2**
KHC Kasperske Hory 23.65 122⇑ *i*P **P 05 39 26.5 -0.6**
KHC pmax pmax
comp=Z,19nm,1.0s
IDID Didziasalis 23.73 96 *e*P **P 05 39 25.0 -2.8**
LFF La Frestale 23.76 146 *e*P **P 05 39 30.4 +2.2**
LFF pmax pmax
comp=Z,22nm,1.2s
GEC2 GERESS Array S 23.93 122 P **P 05 39 27.8 -2.1**
GEC2 GERESS Array S 23.93 122 *e*P **P 05 39 30.0 0.0**
comp=Z,33nm,2.1s,baz=333,slow=11
GERES GERESS Array B 23.93 122 P **P 05 39 28.7 -1.3**
GERES GERESS Array B 23.93 122 P **P 05 39 29.3 -0.7**
comp=Z,2.7nm,0.9s,baz=332,slow=11,SNR=8.4
comp=Z,2.7nm,0.9s
KRLC Kraliky 23.97 116 *e*P **P 05 39 30.1 -0.2**
KRLC Kraliky 23.97 116 *e*P **P 05 39 30.1 -0.2**
KRLC *e* 05 39 30.2
DAVA Damuels 24.05 129 *i*pP pP 05 39 32.6 +0.7
comp=Z,8.4nm,1.3s
CAF Calviac 24.08 144 *e*P **P 05 39 33.0 +1.7**
CAF pmax pmax

comp=Z,11nm,0.9s
RETA Reutte 24.15 128 *e*pP pP 05 39 34.0 +1.3
comp=Z,3.8nm,0.9s
CKRC Cesky Krumlov 24.16 121 *e*P **P 05 39 31.9 -0.1**
CKRC Cesky Krumlov 24.16 121 *e*P **P 05 39 31.9 -0.1**
SSB Saint Sauveur 24.36 140 P **P 05 39 32.4 -1.5**
SSB Saint Sauveur 24.36 140 P **P 05 39 32.4 -1.5**
SSB pmax pmax
comp=Z,13nm,1.0s
MOTA Moosalm 24.39 128 *i*P **P 05 39 34.0 -0.3**
comp=Z,6.6nm,0.9s
MORC Moravsky Berou 24.50 116 P **P 05 39 35.0 -0.1**
MORC Moravsky Berou 24.50 116 *e*P **P 05 39 34.6 -0.5**
MORC Moravsky Berou 24.50 116 P **P 05 39 35.0 -0.1**
MORC pmax pmax
comp=Z,10.0nm,0.9s
DAVOX Davos/Dischmat 24.51 130 P **P 05 39 35.6 +0.2**
comp=Z,3.1nm,0.8s,baz=335,slow=18,SNR=5.0
comp=Z,3.1nm,0.8s
SQTA Sankt Quirin 24.53 128 *e*pP pP 05 39 36.9 +0.6
comp=Z,6.6nm,1.0s
WATA Walderalm 24.55 127 *i*pP pP 05 39 38.4 +1.9
comp=Z,12nm,1.2s
VRAC Vranov 24.55 118 *e*P **P 05 39 36.2 +0.7**
FETA Feichten 24.55 129 *e*P **P 05 39 34.4 -1.4**
comp=Z,5.1nm,1.3s
TUE Stuetta 24.62 131 P **P 05 39 35.6 -0.9**
WTTA Wattenberg 24.63 127 *e*pP pP 05 39 39.5 +2.3
comp=Z,11nm,1.3s
KRUC Moravsky 24.68 118 *e*P **P 05 39 36.9 +0.2**
LPL La Plagne 24.73 136 *e*P **P 05 39 37.3 -0.2**
LPL pmax pmax
comp=Z,13nm,0.9s
MNK Minsk 24.77 97 *i*P **P 05 39 35.8 -1.7**
comp=E,5.0nm,0.7s
MNK *i*P **P 05 39 35.8 -1.7**
comp=N,19nm,0.8s
MNK *i*P **P 05 39 35.8 -1.7**
comp=Z,8.0nm,0.6s,baz=317
MNK *i*PP sP 05 40 07.8 +29
MNK *i*S **S 05 43 59.0 -1.0**
MNK *i*SS **SnSn 05 44 46.9 +1.1**
MNK *i*LQ LQ 05 47 20.6
MNK *i*LR LR 05 48 03.3
MNK *i*LRM MLR 05 49 50.6
comp=Z,531nm,15.9s
MNK *i*LRM MLR 05 49 52.3
comp=E,181nm,15.5s
MNK *i*LRM MLR 05 49 55.9
comp=N,175nm,14.8s
MNK Minsk 24.77 97 *i*P **P 05 39 35.7 -1.7**
MNK *i* 05 40 07.7
MNK *i*S **S 05 43 59.0 -1.0**
MNK *i*SS **SnSn 05 44 46.9 +1.1**
MNK pmax pmax
comp=E,5.0nm,0.7s
MNK pmax pmax
comp=N,19nm,0.9s
MNK pmax pmax
comp=Z,8.0nm,0.6s
MNK MLR MLR
comp=Z,531nm,16.0s
MNK MLR MLR
comp=E,181nm,16.0s
MNK MLR MLR
comp=N,175nm,15.0s
LESA Schwarzleotal 24.82 125 *i*P **P 05 39 39.5 +1.3**
comp=N,15nm,1.1s
BIOA Bad Ischl, Aus 24.91 124 *e*pP pP 05 39 40.9 +1.3
comp=N,13nm,1.2s
MAUC Maruska 24.94 116 *e*P **P 05 39 39.2 +0.1**
RES Resolute Bay 24.96 322 P **P 05 39 38.7 -0.3**
RES Resolute Bay 24.96 322 P **P 05 39 38.7 -0.3**
RES pmax pmax
comp=Z,9.0nm,1.1s
MOA Molln 24.98 123 *e*P **P 05 39 40.2 +0.7**
comp=Z,6.3nm,1.4s
PGAV Gavieira, Arco 25.12 163 *e*P **P 05 39 42.2 +1.4**
comp=Z,43nm,1.4s
BNI Bardonecchia 25.14 137 P **P 05 39 42.0 +0.9**
BNI IAmb IAmb 05 39 45.5
comp=Z,13nm,0.9s
BNI Bardonecchia 25.14 137 P **P 05 39 42.0 +0.9**
BNI pmax pmax
comp=Z,13nm,1.0s
KLMR Klimovskoe 25.14 75 *e*P **P 05 39 37.8 -3.0**
KLMR pmax pmax
comp=Z,51nm,1.2s
JAVC Velka Javorina 25.31 117 *e*P **P 05 39 42.4 0.0**
KBA Koelnbreinsper 25.35 125 *i*P **P 05 39 44.5 +1.6**
comp=Z,10nm,1.1s
CONA Conrad Observa 25.46 120 *e*P **P 05 39 44.8 +0.9**
comp=Z,6.2nm,1.1s
PBRG Bragança 25.47 161 *e*P **P 05 39 46.7 +2.8**
comp=Z,27nm,1.5s
MODS Modra-Piesok 25.58 118 *e*P **P 05 39 44.4 -0.4**
MODS Modra-Piesok 25.58 118 *e*P **P 05 39 44.4 -0.4**
LANS Liptovska Anna 25.72 114 *e*P **P 05 39 48.3 +2.2**
LANS pmax pmax
comp=Z,7.0nm,1.2s
LANS Liptovska Anna 25.72 114 *e*P **P 05 39 48.3 +2.2**
CIMO Cimolais 25.73 127 P **P 05 39 45.9 -0.4**
CIMO IAmb IAmb 05 40 02.0
comp=Z,13nm,1.4s
POLO Lamas de Olo 25.76 163 *e*P **P 05 39 49.4 +2.8**
comp=Z,18nm,1.3s
RONA Rosalia, Austr 25.81 120 *i*P **P 05 39 47.3 +0.3**
comp=Z,9.8nm,1.3s
MYKA Terra Mystica 25.84 125 *e*P **P 05 39 49.0 +1.7**
comp=Z,10nm,1.1s
PVRL Vila Real 25.86 163 *e*P **P 05 39 49.7 +2.2**
comp=Z,28nm,1.4s
ARSA Arzberg 25.93 122 *i*P **P 05 39 49.2 +1.1**
comp=Z,4.1nm,1.0s
SCHQ Schefferville 26.00 267 P **P 05 39 47.5 -1.1**
SCHQ Schefferville 26.00 267 P **P 05 39 47.6 -1.1**
comp=Z,5.8nm,0.8s,baz=42,slow=12,SNR=14
comp=Z,5.8nm,0.8s
VYHS Vyhne 26.03 116 *e*P **P 05 39 49.0 0.0**
VYHS pmax pmax
comp=Z,8.0nm,0.9s
VYHS Vyhne 26.03 116 *e*P **P 05 39 49.0 0.0**
MVO Moncorvo 26.06 162 *e*P **P 05 39 50.1 +0.8**
comp=Z,29nm,1.5s
PVIS Viseu 26.40 163 *e*P **P 05 39 57.9 +5.5**
KWP Kalwaria Pacla 26.53 110 P **P 05 39 53.9 +0.5**
KWP IAmb IAmb 05 40 22.9
comp=Z,27nm,1.4s
KWP Kalwaria Pacla 26.53 110 P **P 05 39 53.9 +0.5**
KWP pmax pmax
comp=Z,27nm,1.4s
CRVS Cervenica-Dubn 26.66 112 *e*P **P 05 39 56.9 +2.3**
CRVS pmax pmax
comp=Z,36nm,1.6s
CRVS Cervenica-Dubn 26.66 112 *e*P **P 05 39 56.9 +2.3**
MTE Manteigas 26.75 163 *e*P **P 05 39 58.6 +3.0**
comp=Z,38nm,1.9s
LVV L'vov 26.88 108 *e*P **P 05 39 56.7 +0.1**
PSZ Piszkesteto 26.90 115 P **P 05 39 57.1 +0.2**
PSZ Piszkesteto 26.90 115 P **P 05 39 57.1 +0.2**
PSZ pmax pmax
comp=Z,13nm,1.0s
KOLS Kolonicke sedl 26.93 111 *e*P **P 05 39 59.3 +2.2**
KOLS Kolonicke sedl 26.93 111 *e*P **P 05 39 59.3 +2.2**
PCBR Castelo Branco 27.31 163 *e*P **P 05 40 00.3 -0.2**
comp=Z,19nm,1.4s
PMRV Marv??o 27.73 163 *e*P **P 05 40 07.4 +3.1**
comp=Z,20nm,2.0s
OBN Obninsk 27.81 87⇑ *e*P **P 05 40 05.2 +0.4**
OBN *e**PP **sP 05 40 06.5 +0.6**
OBN *SP **pP 05 40 09.0 +3.4**
OBN PPP PPP 05 40 57.0
OBN *i*S **S 05 44 48.9 +0.9**
OBN *e*SS **SnSn 05 45 58.0 -1.8**
OBN *e*SSS SSS 05 46 19.5
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,479nm,15.0s
ESDC Sonseca Array 27.96 157 P **P 05 40 06.3 -0.1**
comp=Z,1.6nm,0.8s,baz=349,slow=9.2,SNR=12
comp=Z,1.6nm,0.8s
PAB San Pablo 28.02 158 P **P 05 40 08.1 +1.1**
PAB San Pablo 28.02 158 P **P 05 40 08.1 +1.1**
PAB pmax pmax
comp=Z,5.0nm,1.0s

KIEV Kiev 28.19 101 P **P 05 40 06.5 -1.8**
KIEV IAmb IAmb 05 40 11.5
comp=Z,16nm,1.1s
KIEV Kiev 28.19 101 P **P 05 40 06.5 -1.8**
KIEV pmax pmax
comp=Z,16nm,1.2s
AKASG Malin Array Be 28.19 101 P **P 05 40 06.9 -1.4**
comp=Z,1.1nm,1.0s,baz=325,slow=9.4,SNR=12
comp=Z,1.1nm,1.0s
AKBB Malin Array Si 28.19 101 P **P 05 40 06.7 -1.6**
AKBB IAmb IAmb 05 40 11.4
comp=Z,17nm,1.1s
AKBB Malin Array Si 28.19 101 P **P 05 40 06.7 -1.6**
AKBB pmax pmax
comp=Z,17nm,1.2s
PESTR Estremoz 28.26 163 *e*P **P 05 40 12.3 +3.3**
comp=Z,10nm,1.3s
PESTR Estremoz 28.26 163 P **P 05 40 09.8 +0.8**
PBAR Barrancos 29.00 163 *e*P **P 05 40 17.7 +2.1**
comp=Z,22nm,2.0s
CESX Cesi 29.10 130 P **P 05 40 15.0 -1.5**
BUR08 Bucovina Ar. S 29.10 109 P **P 05 40 16.1 -0.4**
BURAR Bucovina Array 29.13 109 P **P 05 40 17.0 +0.1**
KIRV Kirov 30.43 72 *i*P **P 05 40 26.1 -2.0**
LPSR Galich'ya Gora 30.61 89 *e*P **P 05 40 26.0 -3.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 31.76 90 *e*P **P 05 40 35.7 -4.1**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VRH Novokhopyorsk 32.79 88 *e*P **P 05 40 46.0 -2.9**
VRH pmax pmax
comp=Z,10.0nm,0.8s
D62A Allapoint, All 32.89 260 P **P 05 40 49.2 -0.5**
A36M Sachs Harbour 33.61 328 P **P 05 40 56.3 +0.5**
A36M IAmb IAmb 05 41 00.4
comp=Z,16nm,0.9s
A36M Sachs Harbour 33.61 328 P **P 05 40 55.9 +0.1**
baz=44,SNR=14
FCC Fort Churchill 33.82 294 P **P 05 40 57.5 -0.3**
FCC IAmb IAmb 05 41 01.5
comp=Z,17nm,1.3s
FCC Fort Churchill 33.82 294 P **P 05 40 57.5 -0.3**
FCC pmax pmax
comp=Z,17nm,1.3s
CLTB Caltabellotta 33.91 133 P **P 05 40 57.9 -1.0**
CEL Celeste 34.09 129 P **P 05 40 59.2 -1.3**
CEL IAmb IAmb 05 41 09.2
comp=Z,10.0nm,1.1s
BELG Belogornoye 34.24 82*c i*P **P 05 41 00.1 -1.3**
BELG pmax pmax
comp=Z,3.0nm,1.1s
PKME Peaks-Kenny Pk 34.48 258 P **P 05 41 03.7 0.0**
PKME Peaks-Kenny Pk 34.48 258 P **P 05 41 04.1 +0.4**
baz=34
KEST Kesra 34.57 139 P **P 05 41 05.2 +0.6**
KEST Kesra 34.57 139 P **P 05 41 04.4 -0.2**
comp=Z,16nm,0.8s,baz=311,slow=5.3,SNR=11
comp=Z,16nm,0.8s
NRIK Noril'sk 35.01 37⇑ *i*P **P 05 41 06.6 -1.4**
NRIK pmax pmax
comp=Z,3.0nm,1.1s
C36M Paulatuk 35.30 324 P **P 05 41 11.0 +0.6**
C36M IAmb IAmb 05 41 14.9
comp=Z,23nm,1.1s
C36M Paulatuk 35.30 324 P **P 05 41 11.5 +1.1**
baz=42,SNR=22
ARU Arti 35.43 69*c i*P **P 05 41 11.1 -0.7**
ARU 05 42 30.0
ARU S **S 05 46 48.9 +2.0**
ARU SS **SnSn 05 49 05.0 -0.1**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU MLR MLR
comp=Z,894nm,19.0s
AGG Agios Georgios 35.52 121 P **P 05 41 12.6 -0.1**
AGG IAmb IAmb 05 41 15.6
comp=Z,10.0nm,1.0s
AGG Agios Georgios 35.52 121 P **P 05 41 12.6 -0.1**
AGG pmax pmax
comp=Z,10.0nm,1.0s
LBNH Lisbon 36.37 260 P **P 05 41 20.4 +0.4**
baz=33
YKA Yellowknife Ar 37.94 311 P **P 05 41 33.2 +0.2**
comp=Z,9.9nm,1.0s,baz=41,slow=8.2,SNR=48
YKA PcP **PcP 05 43 48.4 -0.2**
comp=Z,2.5nm,0.9s,baz=37,slow=3.0,SNR=13
comp=Z,9.9nm,1.0s
GUZR Guzeripl' 37.95 97 *e*P **P 05 41 31.2 -2.3**
YKAB2 New Yellowknif 37.99 311 P **P 05 41 32.8 -0.6**
L61B Northampton 38.18 259 P **P 05 41 36.3 +1.0**
baz=32
INK Inuvik 38.26 327 P **P 05 41 36.5 +0.9**
INK IAmb IAmb 05 41 39.4
comp=Z,19nm,1.3s
INK Inuvik 38.26 327 P **P 05 41 37.4 +1.7**
baz=36,SNR=8.8
INK Inuvik 38.26 327 P **P 05 41 36.5 +0.9**
INK pmax pmax
comp=Z,19nm,1.3s
D28M Stokes Point 38.49 331 P **P 05 41 39.3 +1.8**
baz=34
KIV Kislovodsk 39.01 95 *e*P **P 05 41 40.3 -2.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
F31M Tsiigehtchic 39.02 327 P **P 05 41 42.4 +0.4**
F31M IAmb IAmb 05 41 46.0
comp=Z,20nm,1.0s
F31M Tsiigehtchic 39.02 327 P **P 05 41 43.0 +1.0**
baz=35,SNR=15
BR131 Keskin Array S 39.05 107 P **P 05 41 42.2 -0.6**
BR131 Keskin Array S 39.05 107 P **P 05 41 42.2 -0.6**
BR131 pmax pmax
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 39.05 107 P **P 05 41 43.3 +0.5**
BRTR Keskin Array B 39.05 107 P **P 05 41 43.6 +0.9**
comp=Z,6.8nm,0.9s,baz=331,slow=6.2,SNR=18
BRTR PP **PP 05 43 13.0 +1.0**
comp=Z,0.9nm,0.9s,baz=324,slow=6.2,SNR=1.4
comp=Z,6.8nm,0.9s
E29M Blow River 39.11 330 P **P 05 41 44.3 +1.5**
E29M IAmb IAmb 05 41 47.9
comp=Z,23nm,1.2s
E29M Blow River 39.11 330 P **P 05 41 45.0 +2.2**
baz=34
C26K Camden Bay 39.13 334 P **P 05 41 43.3 +0.4**
baz=30
KBZ Khabaz 39.29 95 *i*P **P 05 41 44.5 0.0**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 39.29 95 P **P 05 41 46.0 +1.5**
comp=Z,5.4nm,0.9s,baz=330,slow=9.7,SNR=8.6
comp=Z,5.4nm,0.9s
F30M Barrier River 39.32 328 P **P 05 41 47.0 +2.4**
baz=34
G31M Satah River 39.56 326 P **P 05 41 45.8 -0.8**
G31M IAmb IAmb 05 41 50.2
comp=Z,27nm,0.9s
G31M Satah River 39.56 326 P **P 05 41 46.7 +0.2**
baz=34,SNR=20
E46A Sault Ste Mari 39.57 273 P **P 05 41 47.9 +1.0**
E46A IAmb IAmb 05 41 51.6
comp=Z,16nm,1.1s
A21K Barrow 39.68 341 P **P 05 41 47.5 0.0**
baz=24
BINY Binghamton 39.70 262 P **P 05 41 48.2 +0.2**
baz=32
FFC Flin Flon 39.73 295 P **P 05 41 48.9 +0.8**
FFC IAmb IAmb 05 41 52.9
comp=Z,21nm,1.0s
FFC Flin Flon 39.73 295 P **P 05 41 48.9 +0.8**
FFC pmax pmax
comp=Z,21nm,1.0s
WRGLY Wrigley 39.90 317 P **P 05 41 49.8 +0.4**
baz=37
D25K Kavik River 39.90 334 P **P 05 41 49.5 0.0**
D25K IAmb IAmb 05 41 54.3
comp=Z,23nm,0.9s
D25K Kavik River 39.90 334 P **P 05 41 49.5 0.0**
baz=29,SNR=11
G30M tAoh Zraii Nji 39.94 327 P **P 05 41 49.6 -0.3**
G30M IAmb IAmb 05 41 54.2
comp=Z,21nm,1.1s
G30M tAoh Zraii Nji 39.94 327 P **P 05 41 50.1 +0.3**
baz=33
C24K Franklin Bluff 39.95 336 P **P 05 41 51.1 +1.4**

baz=28
F28M **Old Crow** **40.16 330** P **P** **05 41 51.3 -0.3**
F28M IAmb IAmb 05 41 55.5
comp=Z,16nm,1.1s
F28M **Old Crow** **40.16 330** P **P** **05 41 52.8 +1.1**
baz=32,SNR=15
TIXI **Tiksi** **40.28 16** *i* P **P** **05 41 49.7 -2.8**
TIXI pmax pmax
comp=Z,3.0nm,1.2s
D24K **Happy Valley** **40.47 335** P **P** **05 41 54.9 +0.8**
D24K IAmb IAmb 05 41 59.0
comp=Z,27nm,1.0s
D24K **Happy Valley** **40.47 335** P **P** **05 41 54.3 +0.2**
baz=28
EPYK **Eagle Plains** **40.56 327** P **P** **05 41 56.7 +1.7**
EPYK IAmb IAmb 05 41 59.4
comp=Z,23nm,1.2s
EPYK **Eagle Plains** **40.56 327** P **P** **05 41 55.8 +0.8**
baz=33,SNR=9.3
D41A **Chassel** **40.70 278** P **P** **05 41 56.7 +0.4**
D41A IAmb IAmb 05 42 01.6
comp=Z,17nm,0.9s
E25K **Arctic Village** **40.82 333** P **P** **05 41 58.0 +0.9**
E25K IAmb IAmb 05 42 02.4
comp=Z,17nm,1.1s
E25K **Arctic Village** **40.82 333** P **P** **05 41 58.2 +1.2**
baz=29,SNR=13
F26K **Sheenjek River** **40.93 332** P **P** **05 41 59.1 +1.1**
baz=30
D23K **Nanushuk River** **40.94 336** P **P** **05 41 59.5 +1.5**
baz=27
B21K **Ikpikpuk River** **40.95 339** P **P** **05 41 59.1 +1.1**
B21K **Ikpikpuk River** **40.95 339** P **P** **05 41 59.0 +1.0**
baz=25
B20K **Meade River** **40.96 340** P **P** **05 41 59.6 +1.5**
B20K IAmb IAmb 05 42 03.1
comp=Z,16nm,1.2s
B20K **Meade River** **40.96 340** P **P** **05 42 00.3 +2.2**
baz=24
GLMI **Grayling** **40.96 272** P **P** **05 41 59.1 +0.7**
baz=34
ULM **Lac du Bonnet** **40.99 287** P **P** **05 41 58.4 -0.2**
ULM IAmb IAmb 05 42 01.1
comp=Z,13nm,0.8s
ULM **Lac du Bonnet** **40.99 287** P **P** **05 41 58.4 -0.2**
ULM pmax pmax
comp=Z,13nm,0.8s
ULM **Lac du Bonnet** **40.99 287** P **P** **05 41 57.9 -0.7**
comp=Z,14nm,0.7s,baz=39,slow=8.0,SNR=30
comp=Z,14nm,0.7s
H29M **Whitestone** **41.05 328** P **P** **05 42 00.3 +1.4**
H29M IAmb IAmb 05 42 03.3
comp=Z,32nm,1.5s
H29M **Whitestone** **41.05 328** P **P** **05 42 00.5 +1.6**
baz=32
TOLK **Toolik Lake Re** **41.05 335** P **P** **05 41 59.8 +0.8**
TOLK IAmb IAmb 05 42 03.4
comp=Z,20nm,0.9s
TOLK **Toolik Lake Re** **41.05 335** P **P** **05 42 00.6 +1.6**
baz=27,SNR=12
EYMN **Ely** **41.14 281** P **P** **05 42 00.0 +0.1**
EYMN IAmb IAmb 05 42 04.4
comp=Z,24nm,1.1s
EYMN **Ely** **41.14 281** P **P** **05 42 01.1 +1.2**
baz=36
BMAR **Burnt Mountain** **41.24 332** P **P** **05 42 01.2 +0.6**
F25K **Christian Rive** **41.29 333** P **P** **05 42 02.8 +1.7**
baz=29
D22K **Ayikyak River** **41.34 337** P **P** **05 42 03.4 +2.1**
D22K **Ayikyak River** **41.34 337** P **P** **05 42 02.8 +1.5**
baz=26
ERPA **Erie** **41.36 266** P **P** **05 42 03.1 +1.3**
baz=32
C21K **Knifeblade Rid** **41.40 338** P **P** **05 42 03.5 +1.7**
baz=24
I30M **Mount Dempster** **41.46 326** P **P** **05 42 02.2 -0.3**
I30M **Mount Dempster** **41.46 326** P **P** **05 42 03.8 +1.3**
baz=32,SNR=9.4
AKH **Akhalkalaki** **41.47 96** P **P** **05 42 02.1 -0.8**
AKH IAmb IAmb 05 42 07.5
comp=Z,31nm,1.0s
AKH **Akhalkalaki** **41.47 96** P **P** **05 42 02.1 -0.8**
AKH pmax pmax
comp=Z,31nm,1.0s
G26K **Porcupine Rive** **41.51 331** P **P** **05 42 03.4 +0.7**
baz=29
ABKAR **Akbulak array** **41.54 75** P **P** **05 42 02.7 -0.5**
E23K **Chandalar** **41.58 335** P **P** **05 42 04.4 +1.0**
baz=27
B35A **Bob, Littlefor** **41.68 283** P **P** **05 42 04.0 -0.3**
B35A IAmb IAmb 05 42 08.6
comp=Z,26nm,1.2s
H27K **Steamboat Moun** **41.69 330** P **P** **05 42 05.7 +1.4**
baz=30
F24K **Squaw Lake** **41.77 334** P **P** **05 42 06.0 +1.2**
F24K **Squaw Lake** **41.77 334** P **P** **05 42 05.4 +0.6**
baz=28
HILA **High Level** **41.77 309** P **P** **05 42 04.8 -0.2**
SSPA **Standing Stone** **41.78 263** P **P** **05 42 06.0 +0.8**
baz=32
E22K **Anaktuvuk Pass** **41.88 336** P **P** **05 42 07.2 +1.5**
E22K **Anaktuvuk Pass** **41.88 336** P **P** **05 42 06.8 +1.0**
baz=26
E21K **Killik River** **41.94 338** P **P** **05 42 07.0 +0.8**
E21K **Killik River** **41.94 338** P **P** **05 42 07.9 +1.6**
baz=25
J30M **Hart River** **42.00 326** P **P** **05 42 08.5 +1.6**
J30M IAmb IAmb 05 42 12.2
comp=Z,30nm,1.3s
J30M **Hart River** **42.00 326** P **P** **05 42 07.9 +1.0**
baz=32,SNR=12
I28M **Miner Creek** **42.04 328** P **P** **05 42 07.2 0.0**
I28M **Miner Creek** **42.04 328** P **P** **05 42 08.9 +1.7**
baz=30
D20K **Etivluk River** **42.08 339** P **P** **05 42 08.0 +0.6**
baz=23,SNR=5.4
C19K **Lookout Ridge** **42.12 341** P **P** **05 42 08.8 +1.1**
baz=22
FYU **Fort Yukon** **42.12 332** P **P** **05 42 08.8 +1.1**
B18K **Kokolik River** **42.16 342** P **P** **05 42 08.2 +0.2**
baz=21
M53A **WI Miller and** **42.21 266** P **P** **05 42 09.4 +0.7**
baz=32
I27K **Kandik River** **42.26 329** P **P** **05 42 10.2 +1.3**
baz=30,SNR=9.7
FLDN **Fort Liard** **42.33 315** P **P** **05 42 10.7 +1.2**
baz=35
BRVK **Borovoye** **42.34 64** *i* P **P** **05 42 06.6 -3.1**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
BVAR **Borovoye Array** **42.41 64** P **P** **05 42 09.8 -0.5**
comp=Z,2.3nm,0.9s,baz=322,slow=10,SNR=9.0
BVAR PP **PP** **05 43 47.2 -0.9**
comp=Z,1.9nm,0.9s,baz=313,slow=9.5,SNR=4.5
comp=Z,2.3nm,0.9s
G24K **Hadweenzic Riv** **42.42 333** P **P** **05 42 11.1 +0.9**
G24K IAmb IAmb 05 42 15.7
comp=Z,28nm,0.9s
G24K **Hadweenzic Riv** **42.42 333** P **P** **05 42 11.8 +1.6**
baz=27
COLD **Coldfoot** **42.43 335** P **P** **05 42 11.7 +1.5**
baz=26
E20K **Nigu River** **42.44 339** P **P** **05 42 11.7 +1.4**
baz=23
D19K **Kuna River** **42.49 340** P **P** **05 42 12.6 +1.8**
D19K IAmb IAmb 05 42 15.4
comp=Z,14nm,1.1s
D19K **Kuna River** **42.49 340** P **P** **05 42 11.6 +0.8**
baz=22
J29N **Klondike Camp** **42.53 326** IAmb IAmb 05 42 24.5
comp=Z,21nm,1.5s
AGMN **Agassiz Nation** **42.56 285** P **P** **05 42 11.7 +0.2**
AGMN IAmb IAmb 05 42 16.1
comp=Z,16nm,1.1s
TGTN **Hyland Airport** **42.59 318** P **P** **05 42 12.1 +0.4**
baz=34,SNR=5.3
AAM **Ann Arbor** **42.68 269** P **P** **05 42 13.3 +0.9**
baz=33
MAYO **Mayo, Yukon** **42.74 325** IAmb IAmb 05 42 17.3
comp=Z,16nm,0.8s
MAYO **Mayo, Yukon** **42.74 325** P **P** **05 42 14.6 +1.8**
baz=32
C18K **Utukok River** **42.76 341** P **P** **05 42 15.7 +2.8**
C18K **Utukok River** **42.76 341** P **P** **05 42 14.5 +1.5**
baz=21
I26K **Coal Creek Min** **42.83 330** P **P** **05 42 14.0 +0.5**
I26K IAmb IAmb 05 42 18.5
comp=Z,29nm,1.1s
I26K **Coal Creek Min** **42.83 330** P **P** **05 42 14.4 +0.9**
baz=29
G23K **Bananza Creek** **42.87 334** P **P** **05 42 15.6 +1.7**
baz=26
EGAK **Eagle** **42.88 328** IAmb IAmb 05 42 17.8
comp=Z,19nm,1.1s
EGAK **Eagle** **42.88 328** P **P** **05 42 15.5 +1.6**
baz=30,SNR=9.2
K29M **Barlow Dome** **42.90 326** IAmb IAmb 05 42 19.2
comp=Z,16nm,1.1s
K29M **Barlow Dome** **42.90 326** P **P** **05 42 14.8 +0.6**
baz=31
G22K **Bettles** **42.93 335** P **P** **05 42 15.7 +1.5**
baz=25
F21K **Alatna River** **42.98 337** P **P** **05 42 15.8 +1.1**
F21K **Alatna River** **42.98 337** P **P** **05 42 15.7 +1.1**
baz=24
PRP **Porcupine Dome** **43.11 331** P **P** **05 42 17.1 +1.2**
PRP IAmb IAmb 05 42 21.3
comp=Z,20nm,1.1s
PRP **Porcupine Dome** **43.11 331** P **P** **05 42 17.2 +1.2**
baz=28,SNR=12
DAWY **Dawson** **43.12 327** P **P** **05 42 16.7 +0.7**
DAWY IAmb IAmb 05 42 20.4
comp=Z,20nm,1.1s
DAWY **Dawson** **43.12 327** P **P** **05 42 17.3 +1.3**
baz=30,SNR=12
O54A **Avella** **43.16 265** P **P** **05 42 16.1 -0.3**
O54A IAmb IAmb 05 42 21.6
comp=Z,20nm,1.2s
C17K **DeLong Mountai** **43.17 342** P **P** **05 42 17.4 +1.1**
baz=20
H24K **Noodor Dome** **43.27 333** IAmb IAmb 05 42 21.9
comp=Z,12nm,0.9s
H24K **Noodor Dome** **43.27 333** P **P** **05 42 18.7 +1.6**
baz=27
FARO **Faro, Yukon** **43.30 322** P **P** **05 42 19.1 +1.8**
FARO IAmb IAmb 05 42 22.8
comp=Z,17nm,1.1s
FARO **Faro, Yukon** **43.30 322** P **P** **05 42 19.2 +1.8**
baz=32,SNR=11
E19K **Redstone River** **43.33 339** P **P** **05 42 17.7 +0.2**
E19K **Redstone River** **43.33 339** P **P** **05 42 19.4 +1.8**
baz=22
MCWV **Mont Chateau** **43.39 264** P **P** **05 42 20.6 +2.3**
baz=31
O53A **New Philadelph** **43.43 266** P **P** **05 42 20.9 +2.2**
baz=32
M31M **Drury Creek, Y** **43.58 323** P **P** **05 42 20.7 +1.1**
M31M **Drury Creek, Y** **43.58 323** P **P** **05 42 22.1 +2.6**
baz=31,SNR=9.7
J26L **Joseph Creek** **43.62 329** P **P** **05 42 21.1 +1.1**
J26L IAmb IAmb 05 42 24.7
comp=Z,19nm,1.0s
J26L **Joseph Creek** **43.62 329** P **P** **05 42 22.4 +2.3**
baz=28
CBN **Corbin Frederi** **43.66 260** P **P** **05 42 21.5 +1.1**
baz=30
L29M **L29M** **43.67 325** P **P** **05 42 20.6 +0.2**
L29M IAmb IAmb 05 42 25.1
comp=Z,14nm,1.0s
L29M **L29M** **43.67 325** P **P** **05 42 22.7 +2.3**
baz=30,SNR=11
K27K **Chicken** **43.73 328** IAmb IAmb 05 42 25.1
comp=Z,12nm,0.9s
K27K **Chicken** **43.73 328** P **P** **05 42 22.7 +1.9**
baz=29
M30M **Minto, Yukon** **43.83 324** P **P** **05 42 22.3 +0.6**
M30M IAmb IAmb 05 42 26.7
comp=Z,22nm,1.0s
M30M **Minto, Yukon** **43.83 324** P **P** **05 42 23.9 +2.3**
baz=30,SNR=21
POKR **Poker Plat Res** **43.83 332** P **P** **05 42 22.5 +0.9**
POKR IAmb IAmb 05 42 26.8
comp=Z,11nm,0.9s
POKR **Poker Plat Res** **43.83 332** P **P** **05 42 23.5 +1.9**
baz=26
E18K **Tukpahlearik C** **43.84 340** P **P** **05 42 23.3 +1.7**
baz=20
H22K **Ishtalitna Cre** **43.84 335** P **P** **05 42 23.3 +1.7**
baz=25
J25K **Salcha River,** **43.89 331** P **P** **05 42 23.0 +0.9**
J25K **Salcha River,** **43.89 331** P **P** **05 42 22.4 +0.3**
baz=27,SNR=25
SPMN **Marine on St.** **43.89 280** P **P** **05 42 23.0 +0.7**
baz=34
D17K **Noatak River** **43.90 342** P **P** **05 42 23.4 +1.4**
baz=19
WTLY **Watson Lake, Y** **43.92 318** P **P** **05 42 23.1 +0.7**
WTLY IAmb IAmb 05 42 28.4
comp=Z,29nm,1.4s
WTLY **Watson Lake, Y** **43.92 318** P **P** **05 42 24.2 +1.8**
baz=33,SNR=6.4
F19K **Shaleruckik Mo** **43.99 339** P **P** **05 42 24.7 +1.9**
baz=22
IL31 **44.04 331** P **P** **05 42 23.5 +0.3**
IL31 IAmb IAmb 05 42 28.1
comp=Z,25nm,1.2s
ILAR **Eielson Array** **44.04 331** P **P** **05 42 23.5 +0.2**
comp=Z,9.9nm,1.0s,baz=24,slow=6.7,SNR=42
ILAR PP **PP** **05 44 06.3 +1.0**
comp=Z,0.9nm,1.0s,baz=20,slow=5.8,SNR=2.2
comp=Z,9.9nm,1.0s
MDM **Murphy Dome** **44.13 332** P **P** **05 42 24.8 +0.9**
COLA **College** **44.13 332** P **P** **05 42 24.5 +0.6**
COLA **College** **44.13 332** P **P** **05 42 25.6 +1.6**
baz=26
COLA **College** **44.13 332** P **P** **05 42 24.5 +0.6**
COLA pmax pmax
comp=Z,28nm,0.9s
N32M **Quiet Lake** **44.15 321** IAmb IAmb 05 42 29.2
comp=Z,15nm,0.9s
N32M **Quiet Lake** **44.15 321** P **P** **05 42 25.1 +0.8**
baz=31
P53A **Whipple** **44.15 265** IAmb IAmb 05 42 30.1
comp=Z,12nm,0.9s
IMAR **Indian Mountai** **44.16 336** P **P** **05 42 25.0 +0.8**
I23K **Minto, Yukon-K** **44.16 333** P **P** **05 42 25.6 +1.4**
I23K IAmb IAmb 05 42 30.1
comp=Z,27nm,1.3s
I23K **Minto, Yukon-K** **44.16 333** P **P** **05 42 25.8 +1.6**
baz=26,SNR=8.5
SCRK **Sand Creek** **44.18 329** P **P** **05 42 25.8 +1.3**
baz=28,SNR=7.9
H21K **Melozitna Rive** **44.30 335** P **P** **05 42 26.4 +1.0**
H21K **Melozitna Rive** **44.30 335** P **P** **05 42 27.3 +1.9**
baz=24
E17K **Hotham Inlet** **44.32 341** P **P** **05 42 26.6 +1.1**
baz=20,SNR=6.3
P52A **Corning** **44.33 266** P **P** **05 42 27.5 +1.7**
baz=31
CCB **Clear Creek Bu** **44.33 332** P **P** **05 42 26.5 +0.9**
CCB IAmb IAmb 05 42 30.8
comp=Z,20nm,1.3s
M29M **Somme Creek** **44.33 325** P **P** **05 42 27.0 +1.2**
baz=33,SNR=38
MDND **Maddock** **44.37 287** P **P** **05 42 27.3 +1.2**
baz=35
HDA **Harding Lake** **44.38 331** IAmb IAmb 05 42 30.6
comp=Z,19nm,1.0s
HDA **Harding Lake** **44.38 331** P **P** **05 42 27.3 +1.3**
baz=26,SNR=12
F18K **Selawik** **44.48 339** P **P** **05 42 27.3 +0.6**
baz=21
L44A **Lake County Fo** **44.49 273** P **P** **05 42 27.4 +0.3**
baz=33
MLY **Manley** **44.52 334** IAmb IAmb 05 42 32.0
comp=Z,16nm,0.9s
MLY **Manley** **44.52 334** P **P** **05 42 27.9 +0.7**
baz=25,SNR=10.0
BCAR **Beaver Creek A** **44.52 327** P **P** **05 42 27.7 +0.5**
G19K **Purcell Mounta** **44.53 338** P **P** **05 42 27.8 +0.6**
G19K IAmb IAmb 05 42 32.2
comp=Z,16nm,1.2s
G19K **Purcell Mounta** **44.53 338** P **P** **05 42 27.5 +0.4**
baz=22
L27K **Beaver Creek,** **44.53 328** P **P** **05 42 28.5 +1.2**
baz=28
I21K **Tanana** **44.60 335** P **P** **05 42 27.9 +0.2**
baz=24
NEA2 **Nenana** **44.61 333** P **P** **05 42 27.8 0.0**
NEA2 **Nenana** **44.61 333** P **P** **05 42 28.1 +0.3**
baz=26,SNR=9.4
K24K **Donnelly Dome** **44.69 330** P **P** **05 42 29.2 +0.7**
baz=27,SNR=8.3
F33A **5 Mile Ranch,** **44.75 283** P **P** **05 42 30.0 +0.8**
F33A IAmb IAmb 05 42 34.0
comp=Z,18nm,1.0s
H20K **Anotleneega Mo** **44.79 336** P **P** **05 42 29.6 +0.3**
baz=23
JFWS **Jewell Farm** **44.80 276** P **P** **05 42 29.7 +0.1**
baz=33
F17K **Baldwin Pennin** **44.85 340** P **P** **05 42 29.3 -0.4**
baz=20
N30M **Aishikik Lake** **44.87 324** IAmb IAmb 05 42 35.2
comp=Z,9.8nm,0.9s
N30M **Aishikik Lake** **44.87 324** P **P** **05 42 29.0 -1.0**
baz=30
L26K **Log Cabin Wild** **44.89 328** P **P** **05 42 31.3 +1.2**
L26K IAmb IAmb 05 42 36.2
comp=Z,14nm,1.2s
L26K **Log Cabin Wild** **44.89 328** P **P** **05 42 29.5 -0.6**
baz=28
P33M **Teslin, Yukon** **44.89 320** P **P** **05 42 32.6 +2.4**
P33M IAmb IAmb 05 42 35.1
comp=Z,12nm,1.1s
P33M **Teslin, Yukon** **44.89 320** P **P** **05 42 30.1 -0.2**
baz=31,SNR=7.8
BVCY **Beaver Creek** **44.90 327** P **P** **05 42 30.7 +0.6**
baz=28
EDM **Edmonton** **44.94 302** P **P** **05 42 30.6 0.0**
EDM **Edmonton** **44.94 302** P **P** **05 42 30.6 0.0**
EDM pmax pmax
comp=Z,41nm,1.4s
G18K **Tagagawik** **45.00 339** P **P** **05 42 31.4 +0.4**
G18K IAmb IAmb 05 42 35.9
comp=Z,12nm,1.0s
G18K **Tagagawik** **45.00 339** P **P** **05 42 31.6 +0.7**
baz=21
H19K **Roundabout Mou** **45.01 337** P **P** **05 42 31.7 +0.7**
H19K IAmb IAmb 05 42 36.6
comp=Z,8.6nm,1.1s
H19K **Roundabout Mou** **45.01 337** P **P** **05 42 31.4 +0.5**
baz=22
WHY **Whitehorse** **45.03 322** P **P** **05 42 33.1 +1.8**
WHY IAmb IAmb 05 42 36.2
comp=Z,18nm,1.4s
WHY **Whitehorse** **45.03 322** P **P** **05 42 31.4 +0.1**
baz=30,SNR=7.8
MENT **Mentasta** **45.05 329** P **P** **05 42 35.9 +4.5**
R33M **Jennings River** **45.11 318** P **P** **05 42 33.6 +1.6**
R33M IAmb IAmb 05 42 37.1
comp=Z,10nm,1.1s
R33M **Jennings River** **45.11 318** P **P** **05 42 32.7 +0.7**
baz=31,SNR=9.8
M27K **Edge Creek, AK** **45.17 327** P **P** **05 42 33.6 +1.2**
M27K IAmb IAmb 05 42 37.7
comp=Z,9.0nm,1.1s
M27K **Edge Creek, AK** **45.17 327** P **P** **05 42 32.9 +0.4**
baz=28
O30N **Mendenhall** **45.23 323** IAmb IAmb 05 42 37.8
comp=Z,7.8nm,0.9s
O30N **Mendenhall** **45.23 323** P **P** **05 42 32.8 0.0**
baz=30,SNR=7.4
YUK4 **Talbot Arm** **45.34 324** P **P** **05 42 35.1 +1.2**
baz=29,SNR=6.7
MCK **McKinley** **45.37 332** P **P** **05 42 36.6 +2.7**
baz=25,SNR=5.4
YUK3 **Moose Creek** **45.37 326** P **P** **05 42 36.5 +2.3**
baz=28,SNR=11
I20K **Naaghedeneel** **45.37 336** P **P** **05 42 35.2 +1.4**
I20K **Naaghedeneel** **45.37 336** P **P** **05 42 36.5 +2.7**
baz=23
PAX **Paxson** **45.38 330** P **P** **05 42 37.1 +3.0**
baz=26,SNR=8.4
BPAW **Bear Paw Mtn.** **45.41 333** P **P** **05 42 36.9 +2.7**
BPAW IAmb IAmb 05 42 38.8
comp=Z,21nm,1.2s
BPAW **Bear Paw Mtn.** **45.41 333** P **P** **05 42 36.7 +2.4**
baz=24
HYT **Haines Junctio** **45.52 323** P **P** **05 42 35.7 +0.5**
HYT IAmb IAmb 05 42 40.6
comp=Z,17nm,1.1s
HYT **Haines Junctio** **45.52 323** P **P** **05 42 38.7 +3.5**
baz=29,SNR=10.0
BRLDA **Berland Lookou** **45.56 306** P **P** **05 42 37.1 +1.5**
DGMT **Dagmar** **45.59 292** IAmb IAmb 05 42 40.6
comp=Z,15nm,1.1s
DGMT **Dagmar** **45.59 292** P **P** **05 42 38.7 +2.8**
baz=34
YUK6 **Outpost Mounta** **45.62 324** P **P** **05 42 39.0 +2.8**
baz=29
YUK8 **Steele Glacier** **45.65 325** P **P** **05 42 39.1 +2.7**
baz=28,SNR=7.8
H18K **Honhosa River** **45.65 338** IAmb IAmb 05 42 41.4
comp=Z,9.6nm,1.1s
H18K **Honhosa River** **45.65 338** P **P** **05 42 38.0 +1.9**
baz=21
P32M **Atlin** **45.66 320** P **P** **05 42 38.3 +2.1**
baz=30
DHY **Denali Highway** **45.67 331** IAmb IAmb 05 42 41.8
comp=Z,12nm,1.2s
DLBC **Dease Lake** **45.68 317** P **P** **05 42 39.4 +2.9**
baz=31
GCSA **Galena City Sc** **45.81 337** P **P** **05 42 39.7 +2.5**
baz=22
Q32M **Nakina River** **45.83 319** P **P** **05 42 39.2 +1.4**
Q32M IAmb IAmb 05 42 45.7
comp=Z,16nm,1.4s
Q32M **Nakina River** **45.83 319** P **P** **05 42 40.3 +2.5**
baz=31
HARP **HAARP** **45.83 329** P **P** **05 42 39.9 +2.4**
baz=26,SNR=6.9
CHUM **Lake Minchumin** **45.85 334** P **P** **05 42 40.0 +2.4**
baz=24,SNR=5.5
TRF **Thorofare Moun** **45.88 333** P **P** **05 42 39.9 +1.8**
baz=24,SNR=5.2
J20K **Nowinta River** **45.89 335** P **P** **05 42 40.3 +2.3**
baz=23,SNR=7.5
F15K **North Star Dit** **45.99 342** P **P** **05 42 40.9 +2.1**
baz=18
G16K **Koyuk River** **45.99 340** P **P** **05 42 40.9 +2.2**
baz=19
P30M **Million Dollar** **46.01 323** P **P** **05 42 40.9 +1.9**
baz=29
H17K **Granite Mounta** **46.08 339** P **P** **05 42 41.6 +2.1**
baz=20
SKAG **Skagway** **46.18 321** IAmb IAmb 05 42 45.3
comp=Z,16nm,1.1s
SKAG **Skagway** **46.18 321** P **P** **05 42 43.4 +3.1**
SKAG **Skagway** **46.18 321** P **P** **05 42 42.1 +1.8**
baz=30,SNR=8.3
WAT6 **Susitna Watana** **46.19 331** P **P** **05 42 42.2 +1.7**
baz=25,SNR=6.9
O29M **Mount Kennedy** **46.24 324** IAmb IAmb 05 42 45.8
comp=Z,11nm,0.9s
O29M **Mount Kennedy** **46.24 324** P **P** **05 42 42.7 +1.8**
baz=29
BARN **Barnard Glacie** **46.28 326** P **P** **05 42 43.2 +1.9**
BARN IAmb IAmb 05 42 46.0
comp=Z,9.9nm,1.0s
CTGM **Chitina Glacie** **46.29 326** IAmb IAmb 05 42 46.1
comp=Z,10.0nm,1.0s
CTG **Chitna Glacier** **46.29 326** P **P** **05 42 42.9 +1.6**
baz=28,SNR=5.9
MCARA **McCarthy VSAT** **46.29 327** P **P** **05 42 43.4 +2.3**
MCARA IAmb IAmb 05 42 45.9
comp=Z,10.0nm,1.0s
MCARA **McCarthy VSAT** **46.29 327** P **P** **05 42 42.8 +1.6**
baz=27,SNR=5.1
J19K **Poorman** **46.31 336** P **P** **05 42 43.4 +2.2**
baz=22
LOGN **Logan Glacier** **46.34 326** IAmb IAmb 05 42 51.3
comp=Z,10nm,1.2s
GLB **Gilahina Butte** **46.41 328** P **P** **05 42 44.8 +2.7**
GLB IAmb IAmb 05 42 46.5
comp=Z,12nm,1.0s
F14K **Arctic Creek** **46.42 343** P **P** **05 42 44.6 +2.5**
baz=17
N25K **Chitina, Valde** **46.43 328** P **P** **05 42 44.3 +1.9**
N25K **Chitina, Valde** **46.43 328** P **P** **05 42 44.1 +1.8**
baz=26,SNR=9.6
CNNC **Cliffs of the** **46.44 259** P **P** **05 42 44.5 +1.9**
baz=29
VRDI **Verde Repeater** **46.52 327** P **P** **05 42 43.2 0.0**
VRDI IAmb IAmb 05 42 49.0
comp=Z,9.8nm,1.0s
TNA **Tin City** **46.53 343** P **P** **05 42 44.5 +1.6**
baz=16
ZAA0 **Zalesovo Array** **46.55 53** P **P** **05 42 44.6 +1.4**
ZALV **Zalesovo Beam** **46.55 53** P **P** **05 42 45.5 +2.2**
ZALV **Zalesovo Beam** **46.55 53** P **P** **05 42 45.0 +1.8**
comp=Z,1.6nm,0.7s,baz=338,slow=6.2,SNR=1.4

ZALV PcP **PcP** **05 44 18.0 +0.7**
comp=Z,1.1nm,0.7s,baz=335,slow=6.4,SNR=3.3
comp=Z,1.6nm,0.7s
GRNC **Granite Creek** **46.59 326** P **P**
GRNC IAmb IAmb 05 42 48.7
comp=Z,13nm,1.0s
G15K **Niukluk** **46.60 341** P **P** **05 42 44.2 +0.7**
baz=18
P29M **Windy Craggy** **46.63 323** IAmb IAmb 05 42 49.4
comp=Z,12nm,1.0s
P29M **Windy Craggy** **46.63 323** P **P** **05 42 45.4 +1.5**
baz=29
ECSD **EROS Data Cent** **46.64 282** P **P** **05 42 44.2 +0.1**
ECSD IAmb IAmb 05 42 47.0
comp=Z,7.7nm,0.9s
K20K **Telida** **46.64 335** P **P** **05 42 45.3 +1.5**
K20K **Telida** **46.64 335** P **P** **05 42 45.1 +1.2**
baz=22
H16K **Elim** **46.70 340** P **P** **05 42 45.5 +1.2**
baz=19
SCM **Sheep Creek Mo** **46.78 330** P **P** **05 42 46.4 +1.3**
SCM **Sheep Creek Mo** **46.78 330** P **P** **05 42 45.9 +0.7**
baz=25,SNR=7.3
SCM **Sheep Creek Mo** **46.78 330** P **P** **05 42 46.4 +1.3**
SCM pmax pmax
comp=Z,34nm,1.0s
KLU **Klutina** **46.81 329** P **P** **05 42 46.8 +1.5**
baz=26
TGL **Tana Glacier** **46.81 327** P **P** **05 42 47.4 +2.0**
PINM **Pinnacle** **46.81 325** P **P** **05 42 47.1 +1.7**
baz=28
ISLE **Juniper Island** **46.84 326** P **P** **05 42 47.6 +2.0**
CRQE **Cirque** **46.87 327** P **P** **05 42 48.1 +2.3**
baz=27,SNR=7.8
CRQM **Cirque** **46.88 327** P **P** **05 42 46.9 +0.9**
M23K **Glacier View** **46.90 330** P **P** **05 42 48.3 +2.3**
baz=25,SNR=5.3
J18K **Innoko River** **46.98 336** P **P** **05 42 48.6 +2.0**
baz=21
PNL **Peninnsula** **46.99 324** P **P** **05 42 48.5 +1.8**
baz=28
BMRM **Bremner River** **47.00 328** P **P** **05 42 48.9 +2.1**
baz=26,SNR=6.3
MESA **MESA** **47.13 326** P **P** **05 42 49.7 +1.7**
baz=27
ANM **Nome** **47.18 342** P **P** **05 42 50.3 +2.2**
baz=17
I17K **Unalakleet** **47.19 339** P **P** **05 42 50.3 +2.2**
baz=19
WCI **Wyandotte Cave** **47.20 269** P **P** **05 42 50.4 +1.9**
baz=31
KURK **Kurchatov** **47.21 59** P **P** **05 42 47.7 -0.8**
KURK IAmb IAmb 05 42 51.7
comp=Z,12nm,1.4s
KURK **Kurchatov** **47.21 59** P **P** **05 42 47.7 -0.8**
KURK pmax pmax
comp=Z,12nm,1.4s
KURBB **Kurchatov Arra** **47.26 60** P **P** **05 42 47.9 -0.9**
comp=Z,2.1nm,0.8s,baz=328,slow=7.0,SNR=9.9
KURBB PcP **PcP** **05 44 21.5 +1.7**
comp=Z,0.6nm,0.7s,baz=323,slow=3.1,SNR=4.0
KURBB PP **PP** **05 44 38.1 -1.3**
comp=Z,1.1nm,1.0s,baz=324,slow=11,SNR=4.1
comp=Z,2.1nm,0.8s
PMR **Palmer** **47.36 331** P **P** **05 42 50.8 +1.3**
PMR **Palmer** **47.36 331** P **P** **05 42 52.4 +2.9**
PMR **Palmer** **47.36 331** P **P** **05 42 51.6 +2.1**
baz=24
PMR **Palmer** **47.36 331** P **P** **05 42 50.8 +1.3**
PMR pmax pmax
comp=Z,27nm,1.4s
TTA **Tatalina** **47.36 336** P **P** **05 42 51.4 +1.8**
TTA **Tatalina** **47.36 336** P **P** **05 42 53.4 +3.8**
TTA **Tatalina** **47.36 336** P **P** **05 42 52.0 +2.4**
baz=21
TTA **Tatalina** **47.36 336** P **P** **05 42 51.4 +1.8**
TTA pmax pmax
comp=Z,21nm,1.4s
KNK **Knik Glacier** **47.39 330** P **P** **05 42 52.0 +2.2**
baz=24
M22K **Willow** **47.40 332** P **P** **05 42 52.6 +2.8**
baz=24
GLI **Glacier Island** **47.60 329** P **P** **05 42 54.4 +2.9**
baz=25
EYAK **Cordova Ski Ar** **47.62 328** P **P** **05 42 55.6 +4.1**
EYAK **Cordova Ski Ar** **47.62 328** P **P** **05 42 54.4 +2.8**
baz=25
S32K **Killisnoo** **47.73 319** P **P** **05 42 54.0 +1.6**
baz=29
J16K **Anvik River** **47.75 338** P **P** **05 42 54.9 +2.4**
baz=19
SUA **Susitna One** **47.79 332** P **P** **05 42 56.4 +3.4**
baz=23
LAO **LASA Array** **47.84 292** P **P** **05 42 56.9 +3.4**
baz=33
KMSC **Kings Mountain** **47.89 262** P **P** **05 42 56.5 +2.5**
baz=29
KAIM **Kayak Island** **47.90 327** P **P** **05 42 56.1 +2.4**
baz=26
RC01 **Rabbit Creek A** **47.94 331** P **P** **05 42 56.6 +2.6**
baz=24
EGMT **Eagleton** **48.01 296** P **P** **05 42 55.2 +0.4**
EGMT **Eagleton** **48.01 296** P **P** **05 42 56.3 +1.4**
baz=33,SNR=8.7
M19K **Big River Lodg** **48.05 334** P **P** **05 42 57.6 +2.8**
baz=22
SIT **Sitka** **48.29 320** P **P** **05 42 59.1 +2.3**
baz=28
N20K **Mount Spurr** **48.31 332** P **P** **05 42 58.3 +1.3**
baz=23
P23K **Montague Islan** **48.47 329** P **P** **05 43 00.7 +2.6**
baz=24
L17K **Donlin** **48.48 337** P **P** **05 43 00.3 +2.1**
baz=20
O22K **Cooper Landing** **48.50 331** P **P** **05 43 00.5 +2.2**
baz=24
CAPN **Captain Cook N** **48.51 332** P **P** **05 43 01.4 +3.0**
baz=23
U33K **Whale Pass** **48.53 318** P **P** **05 43 00.8 +2.1**
baz=29
T47A **Sharon Grove** **48.59 269** IAmb IAmb 05 43 04.2
comp=Z,9.7nm,1.0s
J14K **Nanvaranak Lak** **48.68 340** P **P** **05 43 02.2 +2.5**
baz=18
M18K **Stony River** **48.68 335** P **P** **05 43 01.8 +2.1**
baz=21
SEW **Seward** **48.79 330** P **P** **05 43 01.9 +1.3**
baz=24
K15K **Wolf Creek Mou** **48.83 339** P **P** **05 43 03.5 +2.7**
baz=18
M17K **Holitna River** **49.04 336** P **P** **05 43 05.1 +2.6**
baz=20
N19K **Bonanza Creek** **49.08 334** P **P** **05 43 03.8 +0.9**
N19K **Bonanza Creek** **49.08 334** P **P** **05 43 05.0 +2.1**
baz=21
RSSD **Black Hills** **49.18 288** P **P** **05 43 04.5 +0.4**
RSSD **Black Hills** **49.18 288** P **P** **05 43 06.2 +2.1**
baz=32
RSSD **Black Hills** **49.18 288** P **P** **05 43 04.5 +0.4**
RSSD pmax pmax
comp=Z,6.0nm,1.0s
NHSC **New Hope** **49.21 260** P **P** **05 43 05.7 +1.5**
baz=28
CCM **Cathedral Cave** **49.33 273** P **P** **05 43 06.2 +1.2**
baz=30
BRSE **Bradley Lake S** **49.38 331** P **P** **05 43 06.8 +1.6**
baz=23
L15K **Ungalak Mounta** **49.41 338** P **P** **05 43 07.2 +1.9**
baz=18
O20K **Slope Mountain** **49.42 332** P **P** **05 43 07.3 +1.8**
baz=22
V48A **Smith Brothers** **49.56 268** IAmb IAmb 05 43 11.0
comp=Z,12nm,1.2s
WVT **Waverly** **49.62 269** P **P** **05 43 09.8 +2.5**
baz=30
HOM **Homer** **49.63 331** P **P** **05 43 09.1 +2.1**
baz=22
M16K **Timber Creek** **49.64 336** P **P** **05 43 09.3 +2.3**
baz=19
N17K **Nushagak Hills** **49.82 335** P **P** **05 43 11.2 +2.8**
baz=20
L14K **Kuka Creek** **49.91 339** P **P** **05 43 11.8 +2.8**
baz=18
P19K **Oil Pt** **49.94 332** P **P** **05 43 11.4 +2.0**
baz=22
PBMO **Poplar Bluff** **50.11 272** P **P** **05 43 10.3 -0.6**
O18K **Koktuh Hills** **50.11 334** P **P** **05 43 12.3 +1.6**
baz=21
N16K **Nishlik Lake** **50.13 336** P **P** **05 43 12.3 +1.5**
baz=19
M15K **Kasigluk River** **50.23 337** P **P** **05 43 13.0 +1.6**
baz=18
GOGA **Godfrey** **50.25 263** P **P** **05 43 13.8 +1.8**
baz=28
RLMT **Red Lodge** **50.29 293** P **P** **05 43 13.1 +0.6**
RLMT **Red Lodge** **50.29 293** P **P** **05 43 13.9 +1.4**
baz=31
GEYT **Alibeck** **50.30 85** PP **PP** **05 45 11.0 +3.5**
comp=Z,1.0nm,0.4s,baz=316,slow=18,SNR=1.7
M14K **Bethel** **50.36 338** P **P** **05 43 15.0 +2.5**
baz=18
NEW **Newport** **50.41 301** P **P** **05 43 13.9 +0.8**
NEW IAmb IAmb 05 43 19.9
comp=Z,12nm,1.5s
NEW **Newport** **50.41 301** P **P** **05 43 14.5 +1.4**
baz=31
NEW **Newport** **50.41 301** P **P** **05 43 13.9 +0.8**
NEW pmax pmax
comp=Z,12nm,1.5s
S39A **Bolivar** **50.48 275** IAmb IAmb 05 43 16.7
comp=Z,10nm,1.1s
O17K **Koliganek Bris** **50.52 335** P **P** **05 43 15.6 +1.9**
baz=20
P18K **Big Mountain,** **50.55 333** IAmb IAmb 05 43 17.4
comp=Z,20nm,1.1s
P18K **Big Mountain,** **50.55 333** P **P** **05 43 15.6 +1.6**
baz=21
KSU1 **Kansas State U** **50.57 279** P **P** **05 43 15.9 +1.5**
baz=31
SEY **Seymchan** **50.67 6**⇑ *i*P **P** **05 43 13.9 -0.9**
SEY pmax pmax
comp=Z,19nm,3.7s
Q19K **Cape Douglas,** **50.69 332** P **P** **05 43 16.3 +1.2**
baz=21
KKAR **Karatay Array** **50.72 71** P **P** **05 43 17.9 +2.4**
KKAR **Karatay Array** **50.72 71** P **P** **05 43 17.9 +2.4**
KKAR pmax pmax
comp=Z,8.0nm,1.4s
BOZ **Bozeman (W)** **50.75 295** P **P** **05 43 16.3 +0.4**
BOZ IAmb IAmb 05 43 19.9
comp=Z,14nm,1.1s
BOZ **Bozeman (W)** **50.75 295** P **P** **05 43 17.1 +1.2**
baz=31,SNR=14
BOZ **Bozeman (W)** **50.75 295** P **P** **05 43 16.3 +0.4**
BOZ pmax pmax
comp=Z,14nm,1.1s
Q20K **Shuyak Island** **50.75 331** P **P** **05 43 17.7 +2.2**
baz=22
X48A **Hartselle** **50.77 267** IAmb IAmb 05 43 20.1
comp=Z,8.4nm,1.1s
O16K **Kokwok River B** **50.85 335** P **P** **05 43 18.3 +2.0**
baz=19
M13K **Dall Lake** **50.89 339** P **P** **05 43 19.3 +2.8**
baz=17
P17K **Kvichak River** **50.95 334** P **P** **05 43 19.3 +2.4**
baz=20
YMP **Mirror Lake Pl** **50.95 294** IAmb IAmb 05 43 21.2
comp=Z,8.2nm,0.9s
DGZ **Jazzator, Alta** **51.03 54**⇓ *i*P **P** **05 43 16.3 -1.6**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
N14K **Kuskokwak Cree** **51.11 338** P **P** **05 43 21.2 +3.0**
baz=18
C09A **Chrisman Ranch** **51.20 302** P **P** **05 43 19.3 +0.3**
C09A IAmb IAmb 05 43 21.5
comp=Z,7.0nm,0.8s
YHL **Hebgen Lake** **51.23 294** P **P** **05 43 21.7 +2.0**
M11K **Mekoryuk** **51.31 341** P **P** **05 43 22.4 +2.7**
baz=16
P16K **Nushagak River** **51.37 335** P **P** **05 43 22.7 +2.6**
baz=19
K22A **Casper** **51.38 289** IAmb IAmb 05 43 25.0
comp=Z,18nm,1.0s
K22A **Casper** **51.38 289** P **P** **05 43 23.4 +2.8**
baz=31,SNR=5.1
H17A **Grant Village** **51.40 294** P **P** **05 43 23.3 +2.4**
baz=31
KDAK **Kodiak Island** **51.56 331** P **P** **05 43 22.8 +1.2**
baz=21
OXF **Oxford** **51.66 269** P **P** **05 43 24.2 +1.5**
baz=29
MAKZ **Makanchi** **51.71 60** P **P** **05 43 22.4 -0.5**
MAKZ **Makanchi** **51.71 60** P **P** **05 43 22.4 -0.5**
MAKZ pmax pmax
comp=Z,8.0nm,1.4s
Q17K **Contact Creek** **51.73 333** P **P** **05 43 24.9 +1.9**
baz=20
MK31 **Makanchi Array** **51.83 59** P **P** **05 43 23.4 -0.4**
MK31 **Makanchi Array** **51.83 59** P **P** **05 43 23.4 -0.4**
MK31 pmax pmax
comp=Z,9.0nm,1.4s
MKAR **Makanchi Array** **51.83 59** P **P** **05 43 23.4 -0.4**
comp=Z,4.5nm,1.1s,baz=335,slow=6.4,SNR=11
MKAR PcP **PcP** **05 44 38.1 +1.5**
comp=Z,0.9nm,0.9s,baz=340,slow=3.8,SNR=2.1
comp=Z,4.5nm,1.1s
IMW **Indian Meadow** **51.96 294** P **P** **05 43 26.0 +0.9**
U38A **Gravette** **51.98 275** **P** **05 43 24.1 -1.0**
R32A **Long Quarter,** **51.99 280** P **P** **05 43 24.8 -0.3**
R32A IAmb IAmb 05 43 27.6
comp=Z,20nm,1.1s
LRAL **Lakeview Retre** **51.99 266** P **P** **05 43 26.6 +1.5**
baz=28
TIGA **Tifton** **52.03 262** P **P** **05 43 27.4 +1.9**
baz=28
CBKS **Cedar Bluff** **52.06 281** P **P** **05 43 27.1 +1.5**
baz=30
OHAK **Old Harbor** **52.22 331** P **P** **05 43 26.9 +0.4**
baz=21
T35A **Sooner Cattle** **52.42 277** **P** **05 43 28.2 -0.1**
T35A IAmb IAmb 05 43 30.3
comp=Z,21nm,1.1s
BW06 **Boulder Array** **52.42 292** P **P** **05 43 29.4 +0.9**
baz=30,SNR=9.0
PD31 **Pinedale Array** **52.42 292** P **P** **05 43 27.4 -1.1**
PD31 IAmb IAmb 05 43 32.3
comp=Z,10nm,1.1s
PDAR **Pinedale Array** **52.42 292** P **P** **05 43 27.8 -0.8**
PDAR **Pinedale Array** **52.42 292** P **P** **05 43 27.0 -1.5**
comp=Z,3.2nm,0.8s,baz=41,slow=5.4,SNR=26
PDAR PcP **PcP** **05 44 39.7 +0.5**
comp=Z,1.1nm,1.0s,baz=72,slow=2.9,SNR=1.5
PDAR PP **PP** **05 45 26.8 0.0**
comp=Z,0.8nm,1.0s,baz=57,slow=6.6,SNR=2.2
comp=Z,3.2nm,0.8s
AAK **Ala-Archa** **52.61 68** *i*P **P** **05 43 28.7 -1.2**
AAK pmax pmax
comp=Z,3.0nm,1.1s
N23A **Red Feather La** **52.67 288** P **P** **05 43 30.4 0.0**
baz=30,SNR=5.8
PLID **Pearl Lake** **52.76 298** IAmb IAmb 05 43 34.9
comp=Z,15nm,1.1s
KSCO **Kaye Shedlock'** **53.02 284** P **P** **05 43 33.0 +0.2**
baz=30
MIAR **Mount Ida** **53.31 273** P **P** **05 43 35.5 +0.7**
baz=29
MOY **Mondy** **53.35 43** *e*P **P** **05 43 38.6 +3.5**
MOY pmax pmax
comp=Z,24nm,2.0s
BMO **Blue Mountains** **53.42 299** P **P** **05 43 36.6 +1.0**
BMO IAmb IAmb 05 43 39.4
comp=Z,14nm,1.2s
BMO **Blue Mountains** **53.42 299** P **P** **05 43 36.7 +1.0**
BTK **Batken** **53.45 73** IAmb IAmb 05 43 39.9
comp=Z,22nm,1.5s
ISCO **Idaho Springs** **53.49 287** P **P** **05 43 38.2 +1.7**
ISCO IAmb IAmb 05 43 41.2
comp=Z,13nm,1.4s
ISCO **Idaho Springs** **53.49 287** P **P** **05 43 37.6 +1.1**
baz=30,SNR=5.5
ISCO **Idaho Springs** **53.49 287** P **P** **05 43 38.2 +1.7**
ISCO pmax pmax
comp=Z,13nm,1.5s
HLID **Hailey** **53.51 296** P **P** **05 43 37.5 +1.0**
baz=30
SIMJ **Simiganj** **53.97 75** P **P** **05 43 39.8 0.0**
SIMJ IAmb IAmb 05 43 43.4
comp=Z,6.6nm,0.9s
CHGN **Chignik** **54.03 334** P **P** **05 43 40.8 +1.0**
baz=18
O20A **White River Ci** **54.20 289** P **P** **05 43 42.3 +0.7**
baz=30
RDMU **Red Mountain** **54.33 290** P **P** **05 43 42.4 -0.1**
RDMU IAmb IAmb 05 43 47.1
comp=Z,12nm,1.0s
TOA0 **Torodi Ar. Sit** **54.85 157** P **P** **05 43 45.4 -0.8**
TORD **Torodi Ar. Bea** **54.85 157** P **P** **05 43 45.0 -1.2**
comp=Z,6.5nm,0.3s,baz=359,slow=9.3,SNR=19
comp=Z,6.5nm,0.3s
ZAK **Zakamensk** **55.13 42** *e*P **P** **05 43 48.1 0.0**
ZAK pmax pmax
comp=Z,4.0nm,1.5s
WMOK **Wichita Mounta** **55.22 278** IAmb IAmb 05 43 53.2
comp=Z,6.4nm,0.9s
WMOK **Wichita Mounta** **55.22 278** P **P** **05 43 50.1 +1.3**
baz=29,SNR=7.1
LOOK **Love County** **55.23 276** **P** **05 43 48.0 -0.9**
RTBA **Rita Blanca** **55.30 282** P **P** **05 43 49.4 -0.1**
RTBA IAmb IAmb 05 43 54.0
comp=Z,14nm,1.2s
T25A **Trinidad** **55.34 284** P **P** **05 43 51.0 +1.2**
baz=29
S22A **4UR Ranch, Cre** **55.74 286** P **P** **05 43 54.1 +1.2**
baz=29
Z35A **Perchaven, San** **55.84 276** P **P** **05 43 52.2 -1.0**
DUG **Dugway, Tooele** **55.86 293** P **P** **05 43 53.9 +0.3**
DUG **Dugway, Tooele** **55.86 293** P **P** **05 43 55.1 +1.5**
baz=29
DUG **Dugway, Tooele** **55.86 293** P **P** **05 43 53.9 +0.3**
DUG pmax pmax
comp=Z,5.0nm,1.1s
KSH **Kashi** **55.88 69** P **P** **05 43 56.8 +3.2**
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH LR LR
comp=N,820nm,15.5s
KSH LR LR
comp=E,470nm,17.2s
KSH LR LR
comp=Z,610nm,16.5s
SRU **San Rafael Swe** **55.96 290** IAmb IAmb 05 44 00.1
comp=Z,6.2nm,0.9s
J05D **Fort Rock, OR** **56.16 301** P **P** **05 43 57.4 +1.8**
FALS **False Pass** **56.25 337** P **P** **05 43 57.8 +1.9**
baz=16
ELK **Elko** **56.27 295** P **P** **05 43 58.6 +2.0**
ELK **Elko** **56.27 295** P **P** **05 43 58.6 +2.0**
ELK pmax pmax
comp=Z,3.0nm,1.0s
WMQ **Urumqi** **56.27 57** *e*P **P** **05 44 00.0 +3.7**
WMQ LR LR
comp=N,730nm,14.3s
WMQ LR LR
comp=Z,340nm,19.7s
PLPT **Palo Pinto** **56.72 276** IAmb IAmb 05 44 03.0
comp=Z,12nm,1.0s
MVCO **Mesa Verde** **56.85 288** P **P** **05 44 02.4 +1.7**
baz=29
APMT **Aspermont** **56.99 278** IAmb IAmb 05 44 03.5
comp=Z,7.7nm,0.8s
DKNS **Dickens** **57.01 279** P **P** **05 44 02.8 +1.2**
DKNS IAmb IAmb 05 44 05.4
comp=Z,15nm,1.0s
WHTX **Lake Whitney,** **57.10 275** P **P** **05 44 03.8 +1.6**
baz=28
ABTX **Abilene, Hawle** **57.41 277** P **P** **05 44 05.8 +1.3**
baz=28
MSTX **Muleshoe** **57.47 281** IAmb IAmb 05 44 09.2
comp=Z,6.4nm,0.9s
MSTX **Muleshoe** **57.47 281** P **P** **05 44 05.6 +0.6**
baz=28
SPR3 **Spring Creek 3** **57.47 293** P **P** **05 44 05.5 +0.2**
SPR3 IAmb IAmb 05 44 10.9
comp=Z,13nm,1.2s
Q12A **Willow Creek R** **57.62 294** P **P** **05 44 08.4 +2.4**
Q12A IAmb IAmb 05 44 14.1
comp=Z,11nm,1.1s
UNV **Unalaska Valle** **57.70 339** P **P** **05 44 06.9 +0.8**
baz=14
POST **Post** **57.76 279** P **P** **05 44 08.0 +1.0**
POST IAmb IAmb 05 44 08.9
comp=Z,11nm,0.8s
RAYN **Ar Rayn** **58.00 105** P **P** **05 44 10.1 +1.4**
RAYN IAmb IAmb 05 44 12.0
comp=Z,7.6nm,1.1s
RAYN **Ar Rayn** **58.00 105** P **P** **05 44 10.1 +1.4**
RAYN pmax pmax
comp=Z,8.0nm,1.2s
ANMO **Albuquerque** **58.05 285** P **P** **05 44 09.2 0.0**
ANMO **Albuquerque** **58.05 285** P **P** **05 44 09.8 +0.7**
baz=28
ANMO **Albuquerque** **58.05 285** P **P** **05 44 09.2 0.0**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
SONM **Songino Array** **58.29 41** P **P** **05 44 10.3 -0.2**
comp=Z,1.0nm,1.0s,baz=326,slow=6.6,SNR=6.3
comp=Z,1.0nm,1.0s
BRDY **Brady** **58.34 276** P **P** **05 44 10.3 -0.7**
BRDY IAmb IAmb 05 44 14.8
comp=Z,10nm,1.1s
R11B **Troy Canyon, C** **58.51 294** IAmb IAmb 05 44 16.5
comp=Z,17nm,1.3s
R11B **Troy Canyon, C** **58.51 294** P **P** **05 44 13.0 +0.7**
baz=28,SNR=12
PAHR **Pah Rah Range** **58.68 298** IAmb IAmb 05 44 17.6
comp=Z,14nm,1.2s
KVN **Kaiserville** **58.80 296** P **P** **05 44 14.7 +0.4**
KVN **Kaiserville** **58.80 296** P **P** **05 44 14.7 +0.4**
KVN pmax pmax
comp=Z,12nm,0.9s
NIKH **Nikolski High** **58.88 340** P **P** **05 44 15.5 +1.1**
baz=13
YERR **Yerington** **59.27 297** P **P** **05 44 18.0 +0.4**
TPH **Tonopah** **59.35 295** P **P** **05 44 18.2 0.0**
TPH **Tonopah** **59.35 295** P **P** **05 44 18.2 0.0**
TPH pmax pmax
comp=Z,50nm,1.3s
JCT **Junction City** **59.37 276** P **P** **05 44 17.5 -0.7**
JCT **Junction City** **59.37 276** P **P** **05 44 18.9 +0.7**
baz=28,SNR=7.0
JCT **Junction City** **59.37 276** P **P** **05 44 17.5 -0.7**
JCT pmax pmax
comp=Z,10.0nm,0.7s
NV11 **Mina Array Sit** **59.37 296** P **P** **05 44 19.2 +1.0**
NVAR **Mina Array Bea** **59.42 296** P **P** **05 44 19.3 +0.6**
comp=Z,3.8nm,1.0s,baz=36,slow=5.4,SNR=11
comp=Z,3.8nm,1.0s
OZNA **Ozona** **59.50 278** IAmb IAmb 05 44 22.8
comp=Z,6.0nm,1.0s
WAKR **Walker** **59.76 297** P **P** **05 44 22.6 +1.5**
AFDM **Forest Hills D** **59.91 299** P **P** **05 44 22.8 +0.9**
AFDM IAmb IAmb 05 44 25.0
comp=Z,9.4nm,1.4s
TPNV **Topopah Spring** **59.99 294** P **P** **05 44 23.6 +1.0**
baz=27
WCT **Wildcat Mounta** **60.27 294** P **P** **05 44 24.9 +0.5**
WCT IAmb IAmb 05 44 27.8
comp=Z,6.2nm,1.2s
GRAC **Grapevine Rang** **60.36 295** P **P** **05 44 26.2 +1.3**
baz=27
MNTX **Cornudas Mount** **60.50 282** P **P** **05 44 27.7 +1.8**
baz=27
121A **Cookes Peak, D** **60.70 284** P **P** **05 44 28.4 +1.0**
SAND **Sanderson** **60.76 278** P **P** **05 44 27.2 -0.5**
GWY **Greenwater Val** **60.82 294** P **P** **05 44 29.8 +1.5**
EPT **El Paso** **60.87 283** P **P** **05 44 30.0 +1.4**
ALPN **Alpine** **60.98 280** P **P** **05 44 28.5 -0.9**
ALPN IAmb IAmb 05 44 33.8
comp=Z,5.4nm,0.9s
DUN6 **Lazy B Ranch** **61.19 286** P **P** **05 44 31.4 +0.7**
PDMCI **Parker Dam,Lak** **61.56 291** P **P** **05 44 34.6 +1.6**
baz=27
GSC **Goldstone, Bar** **61.66 293** P **P** **05 44 35.5 +1.6**
baz=27
GMRC **Granite Mounta** **61.70 292** P **P** **05 44 36.0 +1.9**
baz=27
HEC **Hector,Ludlow** **61.91 293** P **P** **05 44 37.6 +2.1**
baz=27
TX31 **Lajitas Ar. Si** **61.92 279** P **P** **05 44 34.5 -1.1**
TX31 IAmb IAmb 05 44 39.8
comp=Z,6.9nm,1.1s
TXAR **Lajitas Array** **61.92 279** P **P** **05 44 35.2 -0.4**
TXAR **Lajitas Array** **61.92 279** P **P** **05 44 35.5 -0.2**
comp=Z,2.7nm,0.9s,baz=57,slow=5.2,SNR=23
TXAR PcP **PcP** **05 45 17.2 +0.8**
comp=Z,1.7nm,0.9s,baz=32,slow=4.3,SNR=5.4
comp=Z,2.7nm,0.9s
ISA **Isabella, Lake** **61.95 295** P **P** **05 44 35.3 -0.4**
ISA **Isabella, Lake** **61.95 295** P **P** **05 44 37.9 +2.1**
baz=26

ISA	**Isabella, Lake**	**61.95**	**295**		P	**P**	**05 44 35.3**	**-0.4**
ISA					pmax	pmax		
	comp=Z,16nm,1.2s							
VES	**Vestal, Richgr**	**62.01**	**296**		P	**P**	**05 44 38.3**	**+2.2**
	baz=26							
TUC	**Tucson**	**62.05**	**287**		P	**P**	**05 44 37.9**	**+1.4**
TUC	**Tucson**	**62.05**	**287**		P	**P**	**05 44 38.3**	**+1.8**
	baz=27							
TUC	**Tucson**	**62.05**	**287**		P	**P**	**05 44 37.9**	**+1.4**
TUC					pmax	pmax		
	comp=Z,4.0nm,1.1s							
IRM	**Iron Mountain**	**62.06**	**291**		P	**P**	**05 44 38.3**	**+1.8**
	baz=27							
RRX	**Edison Barstow**	**62.11**	**293**		P	**P**	**05 44 38.3**	**+1.5**
	baz=27							
319A	**Douglas**	**62.30**	**285**		P	**P**	**05 44 40.2**	**+1.9**
EDW2	**Edwards Air Fo**	**62.47**	**294**		P	**P**	**05 44 40.1**	**+0.9**
	baz=26							
BC3	**Big Chuckawall**	**62.63**	**291**		P	**P**	**05 44 41.2**	**+0.8**
	baz=27							
BBRC	**Big Bear Solar**	**62.63**	**293**		P	**P**	**05 44 41.2**	**+0.7**
	baz=26							
113A	**Mohawk Valley,**	**62.78**	**290**		P	**P**	**05 44 43.5**	**+2.2**
113A					IAmb	IAmb	05 44 45.8	
	comp=Z,7.0nm,1.3s							
BFSC	**Mount Baldy Ra**	**62.92**	**294**		P	**P**	**05 44 42.4**	**+0.1**
	baz=26							
MURC	**Murrieta**	**63.32**	**293**		P	**P**	**05 44 44.9**	**0.0**
	baz=26							
SBC	**Santa Barbara**	**63.49**	**295**		P	**P**	**05 44 45.0**	**-1.0**
	baz=26							
MONP2	**Monument Peak**	**63.67**	**292**		P	**P**	**05 44 45.8**	**-1.6**
	baz=26							
GTA	**Gaotai**	**64.16**	**50**	*e*	P	**P**	**05 44 52.9**	**+2.5**
GTA					pmax	pmax		
	comp=Z,3.0nm,1.2s							
GTA					LR	LR		
	comp=N,210nm,16.4s							
GTA					LR	LR		
	comp=E,230nm,17.1s							
GTA					LR	LR		
	comp=Z,280nm,15.6s							
SNCC	**San Nicolas Is**	**64.49**	**295**		P	**P**	**05 44 51.7**	**-0.8**
	baz=26							
BNX	**BinXian**	**64.94**	**26**	⇑	P	**P**	**05 44 54.8**	**-0.5**
BNX					pmax	pmax		
	comp=Z,3.0nm,1.2s							
BNX					pmax	pmax		
	comp=Z,230nm,5.2s							
HSIG		**65.05**	**285**		IAmb	IAmb	05 44 59.9	
	comp=Z,5.5nm,1.0s							
HHC	**Hu-ho-hao-te**	**66.14**	**40**	*e*	P	**P**	**05 45 04.8**	**+1.5**
HHC					pmax	pmax		
	comp=Z,6.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,110nm,5.9s							
ZAIG	**Zacatecas**	**67.34**	**275**		P	**P**	**05 45 11.6**	**+0.2**
ZAIG					IAmb	IAmb	05 45 16.9	
	comp=Z,6.0nm,1.0s							
LSA	**Lhasa**	**70.18**	**61**		P	**P**	**05 45 29.5**	**+0.3**
LSA					IAmb	IAmb	05 45 33.2	
	comp=Z,7.3nm,1.2s							
LSA	**Lhasa**	**70.18**	**61**		P	**P**	**05 45 29.5**	**+0.3**
LSA					pmax	pmax		
	comp=Z,7.0nm,1.2s							
ENH	**Enshi**	**75.52**	**45**		P	**P**	**05 46 03.3**	**+2.9**
MJAR	**Matsushiro Arr**	**75.63**	**20**		P	**P**	**05 46 00.3**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=6.2,slow=5.5,SNR=2.5							
	comp=Z,0.5nm,0.3s							
PZH	**PanZhiHua**	**76.69**	**53**		P	**P**	**05 46 08.8**	**+1.6**
PZH					pmax	pmax		
	comp=Z,6.0nm,0.8s							
PZH					pmax	pmax		
	comp=Z,110nm,4.6s							
TULM	**Tulcn-Chalpat**	**77.82**	**243**		P	**P**	**05 46 12.8**	**-1.2**
MND	**Mandalay**	**78.96**	**60**		P	**P**	**05 46 22.0**	**+2.3**
CHTO	**Chiang Mai**	**82.90**	**59**		P	**P**	**05 46 42.7**	**+1.9**
CHTO					IAmb	IAmb	05 46 43.7	
	comp=Z,5.3nm,0.9s							
CHTO	**Chiang Mai**	**82.90**	**59**		P	**P**	**05 46 42.7**	**+1.9**
CHTO	**Chiang Mai**	**82.90**	**59**		P	**P**	**05 46 42.7**	**+1.9**
CHTO					pmax	pmax		
	comp=Z,5.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**83.23**	**59**		P	**P**	**05 46 41.6**	**-1.0**
	comp=Z,1.7nm,0.3s,baz=332,slow=7.1,SNR=9.1							
	comp=Z,1.7nm,0.3s							
LBTB	**Lobatse**	**96.89**	**141**		P	**P**	**05 47 48.6**	**+1.5**
LBTB	**Lobatse**	**96.89**	**141**		P	**P**	**05 47 48.6**	**+1.5**
LBTB					pmax	pmax		
	comp=Z,8.0nm,0.6s							
TAOE	**Nuku Hiva Isla**	**110.68**	**297**	*e*	LR	LR	06 25 32.7	
	comp=Z,284nm,32.0s							
PPT2	**Papeete2**	**122.06**	**303**	*e*	SS	SS	06 11 20.5	-3.2
	comp=Z,50nm,26.2s							
PPT2	**Papeete2**	**122.06**	**303**	*e*	LR	LR	06 30 45.2	
PPT2					LR	LR	06 30 50.4	
	comp=Z,222nm,24.2s							
TBI	**Tubuai**	**127.36**	**300**		eLR	LR	06 33 13.4	
	comp=Z,169nm,24.0s							
	comp=Z,1μm,27.5s							
ASAR	**Alice Springs**	**133.55**	**37**		PKP	**PKPdf**	**05 53 32.2**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=353,slow=1.9,SNR=6.6							
QSPA	**South Pole Qui**	**156.42**	**180**		PKPab	**PKPab**	**05 54 37.0**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=191,slow=2.1,SNR=5.1							

IDC ***19*** *05:34:20.4±2.0,36°.44N×140°.30E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=42.9km s-min=26.9km az=46.0*

NIED ***19*** *05:34:27.9, 36°.05N×139°.89E, h43km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.85; Mθθ-1.72; Mφφ-0.13; Mrθ1.60; Mθφ-0.68; Mφr1.56; Fault plane solution: M₀2.94000×10¹⁴ NP1:φs52.00000°, δ70.00000°, λ77.00000°. NP2:φs266.00000°, δ23.00000°, λ122.00000°.*

JMA ***19*** *05:34:27.9±0.1, 36°.1N±0°.2×139°.9E±0°.3, h43km, MV3.5/38, SW IBARAKI PREF*

JMA Felt II J1 at SW IBARAKI PREF .

ISC 19 05:34:27.7±1.0,**36°.05N**±0°.05×**139°.89E**±0°.05,**h35**km,**n19**, σ1§**36**/16,**mb3.6/3**,**5D**,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.31**	**54**	*i* P		**Pn**	**05 34 36.5**	**+0.7**
JYT				S		**Sn**	**05 34 42.6**	**+1.4**
JAG	**Ashikaga**	**0.52**	**317**	⇓*i* P		**Pn**	**05 34 39.0**	**+0.4**
JRY	**Ryogami san**	**0.80**	**268**	⇓*i* P		**Pn**	**05 34 42.6**	**+0.1**
JRY				⇓*e* S		**Sn**	**05 34 52.9**	**-0.3**
JKT	**Katashina**	**0.88**	**325**	⇓*i* P		**Pn**	**05 34 43.7**	**0.0**
JOD2	**Odawara 2**	**1.02**	**220**	P		**Pn**	**05 34 45.9**	**+0.4**
JYN	**Shimob**	**1.22**	**244**	P		**Pn**	**05 34 49.9**	**+1.5**
JUON	**Uonuma**	**1.34**	**330**	P		**Pn**	**05 34 50.2**	**+0.3**
BSO3	**Boso 3**	**1.34**	**158**	P		**Pn**	**05 34 49.6**	**-0.1**
JFY	**Yanaizu**	**1.36**	**354**	⇓*i* P		**Pn**	**05 34 50.8**	**+0.5**
MJAR	**Matsushiro Arr**	**1.44**	**291**	Pn		**Pn**	**05 34 51.6**	**+0.2**
	1.5nm,0.3s,baz=88,slow=14,SNR=81							
MJAR					Sn	**Sn**	**05 35 12.3**	**+3.2**
	1.6nm,0.3s,baz=182,slow=7.3,SNR=4.2							
H11N2	**WAKE ISLAND Hy**	**28.75**	**117**	T		T	06 10 34.3	
	baz=313							
H11N1	**WAKE ISLAND Hy**	**28.75**	**117**	T		T	06 10 31.2	
	baz=313							
H11N3	**WAKE ISLAND Hy**	**28.76**	**117**	T		T	06 10 35.0	
	baz=313							
H11S1	**WAKE ISLAND Hy**	**29.40**	**119**	T		T	06 11 20.4	
	baz=314,slow=74							
H11S3	**WAKE ISLAND Hy**	**29.40**	**119**	T		T	06 11 22.0	
	baz=314,slow=74							
H11S2	**WAKE ISLAND Hy**	**29.42**	**119**	T		T	06 11 21.7	
	baz=314							
MKAR	**Makanchi Array**	**43.61**	**303**	P		**P**	**05 42 26.4**	**-2.1**
	0.4nm,0.6s,baz=86,slow=7.7,SNR=2.0							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**45.65**	**309**	P		**P**	**05 42 42.7**	**-1.9**
	0.9nm,0.6s,baz=83,slow=7.8,SNR=9.5							
	0.9nm,0.6s							
WRA	**Warramunga Ar**	**55.93**	**186**	P		**P**	**05 44 03.0**	**+0.6**
	0.3nm,0.5s,baz=359,slow=7.6,SNR=6.5							
	0.3nm,0.5s							

BJI ***19*** *05:38:48.0±0.0, 66°.81N×18°.02W, h5km, mb4.5/46, mB5.2/20, Ms4.9/21, Ms7 4.6/21*

REY ***19*** *05:38:49.9, 66°.59N×17°.71W, h11km*

IDC ***19*** *05:38:50.4±0.4, 66°.51N×17°.76W, h0km, mb4.6/30, mbtmp4.5/37, ML3.5/5, MS4.3/72, Error ellipse: s-maj=12.1km s-min=8.6km az=9.0*

MOS ***19*** *05:38:50.1±0.9, 66°.52N×17°.68W, h10km, mb5.0/99, MS4.4/13, Error ellipse: s-maj=8.4km s-min=4.7km az=105.6*

GCMT ***19*** *05:38:51.1±0.2, 66°.70N±0°.02×17°.70W±0°.02, h12km, MW5.0/127, Moment Tensor Solution. s33, c38; s127, c217; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.89±.09; Mθθ-0.28±.09; Mφφ4.17±.07; Mrθ0.47±.42; Mθφ0.04±.07; Mφr-0.43±.27; Best double couple: M₀4.08400×10¹⁶ NP1:φs353.00000°, δ48.00000°, λ-100.00000°. NP2:φs188.00000°, δ42.00000°, λ-79.00000°. Principal axes: T 4.1930, Plg3.0000°, Azm90.0000°; N -0.2200, Plg7.0000°, Azm360.0000°; P -3.9740, Plg82.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *05:38:52.2, 66°.70N×17°.71W, h12km, Moment Tensor Solution. Duration: 1§7 Moment tensor: Scale 10¹⁶Nm; Mrr-3.31; Mθθ0.51; Mφφ2.79; Mrθ-0.06; Mθφ0.01; Mφr0.02; Fault plane solution: M₀3.05000×10¹⁶ NP1: φs179.43000°, δ45.19000°, λ-91.26000°. NP2:φs1.22000°, δ44.82000°, λ-88.73000°. Principal axes: T 2.7950, Plg0.0000°, Azm270.0000°; N 0.5143, Plg1.0000°, Azm180.0000°; P -3.3093, Plg89.0000°, Azm12.0000°;*

NEIC ***19*** *05:38:52.1±1.5, 66°.50N±0°.06×17°.7W±0°.2, h10km±1km, mb5.0/512, Mww4.9/14 Error ellipse: s-maj=11.3km s-min=9.9km az=137.0*

NEIC ***19*** *05:38:52.2, 66°.50N×17°.71W, h12km*

DNK ***19*** *05:38:53.7±6.5, 66°.58N×18°.44W, h20km±487km, ML2.9*

BGR ***19*** *05:38:57.5, 67°.16N×15°.73W, h33km, mb4.5, Ms4.1*

ISC 19 05:38:51.5±0.5,**66°.55N**±0°.02×**17°.59W**±0°.02,**h10**km±3km, **n1201**,σ1§**35**/1133,**mb5.0**/385,**MS4.4**/91,**39C-23D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.17**	**266**	P		**Pg**	**05 38 52.9**	**-2.3**
	baz=250							
IGRI				S		**Sg**	**05 38 55.1**	**-2.6**
	baz=250							
IBRE	**Brettingsstaoi**	**0.45**	**197**	P		**Pg**	**05 38 58.5**	**-1.8**
	baz=190							
IBRE				S		**Sg**	**05 39 05.1**	**-1.2**
	baz=190							
ILEI	**Leirhofn**	**0.46**	**108**	S		**Sg**	**05 39 06.4**	**-0.3**
	baz=110							
ILEI				P		**Pg**	**05 38 59.2**	**-1.4**
	baz=110							
IHED	**Heoinshofoi**	**0.49**	**167**	P		**Pg**	**05 38 59.3**	**-1.7**
	baz=162							
IHED				S		**Sg**	**05 39 06.3**	**-1.1**
	baz=162							
IGRA	**Granastaoir**	**0.64**	**180**	P		**Pg**	**05 39 01.6**	**-2.2**
	baz=176							
IGRA				S		**Sg**	**05 39 10.4**	**-1.7**
	baz=176							
IDIM	**Dimmadalss**	**0.65**	**156**	P		**Pg**	**05 39 02.1**	**-2.0**
	baz=153							
IDIM				S		**Sg**	**05 39 11.3**	**-1.3**
	baz=153							
ISIG	**Siglufjorour**	**0.68**	**232**	S		**Sg**	**05 39 09.5**	**-4.1**
	baz=228							
ISIG				P		**Pg**	**05 39 01.4**	**-3.3**
	baz=228							
IGIL	**Gilhagi**	**0.69**	**133**	S		**Sg**	**05 39 12.7**	**-1.2**
	baz=132							
IGIL				P		**Pg**	**05 39 02.8**	**-2.0**
	baz=132							
IHLA	**Hella**	**0.69**	**208**	P		**Pg**	**05 39 02.2**	**-2.7**
	baz=203							
IHLA				S		**Sg**	**05 39 11.0**	**-3.0**
	baz=203							
ISKI	**Skildingahlsh**	**0.72**	**161**	P		**Pg**	**05 39 03.0**	**-2.5**
	baz=159							
ISKI				S		**Sg**	**05 39 13.1**	**-1.8**
	baz=159							
IGHA	**Grjothals**	**0.81**	**152**	P		**Pg**	**05 39 04.5**	**-2.5**
	baz=150							
IGHA				S		**Sg**	**05 39 15.6**	**-1.9**
	baz=150							
IKVO	**Krokottuvotn**	**0.89**	**161**	S		**Sg**	**05 39 18.1**	**-2.2**
	baz=159							
IKVO				P		**Pg**	**05 39 05.9**	**-2.7**
	baz=159							
IREN	**Reynihlio**	**0.95**	**163**	P		**Pg**	**05 39 06.9**	**-2.9**
	baz=160							
IREN				S		**Sg**	**05 39 19.6**	**-2.6**
	baz=160							
IMEL	**Melhnausar**	**1.06**	**159**	P		**Pg**	**05 39 08.7**	**-3.1**
	baz=157							
IMEL				S		**Sg**	**05 39 23.9**	**-1.7**
	baz=157							
IGRS	**Grimsstaoir**	**1.10**	**146**	P		**Pg**	**05 39 09.3**	**-3.2**
	baz=145							
IGRS				S		**Sg**	**05 39 24.0**	**-2.8**
	baz=145							
IHRN	**Hraun**	**1.12**	**248**	S		**Sg**	**05 39 20.9**	**-6.6**
	baz=245							
IHRN				P		Pb	05 39 07.5	-5.3
	baz=245							
ISVA	**Svartarkot**	**1.23**	**174**	P		**Pn**	**05 39 11.2**	**-3.5**
	baz=171							
ISVA				S		**Sb**	**05 39 27.5**	**-3.2**
	baz=171							
IASK	**Askja**	**1.56**	**165**	P		**Pn**	**05 39 16.6**	**-2.8**
	baz=164							
IASK				S		**Sn**	**05 39 37.6**	**-2.0**
	baz=164							
IMKO	**Mokollar**	**1.66**	**161**	P		**Pn**	**05 39 18.8**	**-2.0**
	baz=160							
IMKO				S		**Sn**	**05 39 40.2**	**-2.0**
	baz=160							
THOR	**Thorvaldshraun**	**1.67**	**167**	P		**Pn**	**05 39 18.6**	**-2.3**
	baz=165							
THOR				S		**Sn**	**05 39 41.1**	**-1.2**
	baz=165							
IADA	**Aoalbol**	**1.75**	**151**	P		**Pn**	**05 39 19.7**	**-2.2**
	baz=150							
IURH	**Urdarhals**	**1.75**	**174**	P		**Pn**	**05 39 19.2**	**-2.8**
	baz=172							
IURH				S		**Sn**	**05 39 42.7**	**-1.6**
	baz=172							
IKRE	**Kreppuhraun**	**1.85**	**164**	P		**Pn**	**05 39 21.4**	**-1.9**
	baz=162							
IKRE				S		**Sn**	**05 39 45.9**	**-0.8**
	baz=162							
IKIS	**Kista**	**1.89**	**180**	P		**Pn**	**05 39 21.2**	**-2.7**
	baz=178							
IKIS				S		**Sn**	**05 39 46.2**	**-1.7**
	baz=178							
IVON	**Vonarskard**	**1.89**	**182**	P		**Pn**	**05 39 21.1**	**-2.8**
	baz=181							
IVON				S		**Sn**	**05 39 45.3**	**-2.5**
	baz=181							
ISTE	**Stelbrattur**	**1.90**	**207**	P		**Pn**	**05 39 21.4**	**-2.7**
	baz=205							
ISTE				S		**Sn**	**05 39 45.4**	**-2.7**
	baz=205							
IVSH	**V-Sauoahnukur**	**1.92**	**155**	P		**Pn**	**05 39 23.1**	**-1.1**
	baz=154							
ISKR	**Skrokkalda**	**2.03**	**190**	P		**Pn**	**05 39 23.4**	**-2.4**
	baz=188							
ISKR				S		**Sn**	**05 39 49.0**	**-2.2**
	baz=188							
IDJK	**Dyngjujokull**	**2.06**	**176**	P		**Pn**	**05 39 23.8**	**-2.6**
	baz=174							
BORG	**Borgarnes**	**2.39**	**222**			**Pn**	**05 39 28.1**	**-2.5**
BORG					Sn	**Sn**	**05 39 57.8**	**-2.0**
BORG	**Borgarnes**	**2.39**	**222**	*e*	P	**Pn**	**05 39 28.0**	**-2.5**
BORG				*e*	S	**Sn**	**05 39 58.3**	**-1.6**
BORG	**Borgarnes**	**2.39**	**222**		P	**Pn**	**05 39 28.1**	**-2.5**
BORG							05 39 57.8	
BORG	**Borgarnes**	**2.39**	**222**	*i* P		**Pn**	**05 39 28.1**	**-2.5**
BORG	**Borgarnes**	**2.39**	**222**	Pn		**Pn**	**05 39 28.0**	**-2.7**
	3μm,0.8s,baz=45,slow=9.3,SNR=49							
BORG					LR	LR	05 39 53.2	
	comp=Z,1μm,20.8s,baz=26,slow=27							
BORG					Sn	**Sn**	**05 39 58.0**	**-1.9**
	256nn,0.3s,baz=63,slow=23,SNR=31							
SCO	**Scoresbysund**	**4.26**	**340**	*e*		**Pn**	**05 39 52.7**	**-3.6**
	baz=154,slow=10							
SCO				*i* P		Pb	05 39 53.8	-13
SCO				*e* P		Pg	05 39 54.4	-19
SCO				IAML			05 40 08.8	
	comp=Z,61nm,0.3s							
JMIC	**Jan Mayen**	**5.54**	**32**	*e*		**Pn**	**05 40 09.6**	**-4.3**
JMIC				*i*			05 41 12.1	
JMIC				IAML			05 41 23.1	
	comp=Z,53nm,0.5s							
JMIC	**Jan Mayen**	**5.54**	**32**	Pn		**Pn**	**05 40 10.3**	**-3.6**
	comp=Z,8.1nm,0.3s,baz=232,slow=9.3,SNR=1.7							
JMIC				Sn		**Sn**	**05 41 12.1**	**-5.4**
	comp=Z,14nm,0.3s,baz=202,slow=19,SNR=1.5							
SOEG	**Soedalen**	**5.57**	**294**	*i* P		**Pn**	**05 40 12.3**	**-2.1**
SUMG	**Summit**	**9.42**	**319**	Pn		**Pn**	**05 41 05.8**	**-1.6**
SUMG	**Summit**	**9.42**	**319**	P		**Pn**	**05 41 05.8**	**-1.6**
SUMG	**Summit**	**9.42**	**319**	*i* P		**Pn**	**05 41 05.6**	**-1.8**
FOO	**Floro**	**11.04**	**106**	*e* P		Pn	05 41 34.7	+5.5
AKN	**Aaknes**	**11.47**	**101**	*e* P		**Pn**	**05 41 34.5**	**-0.6**
AKN				*e* S		**Sn**	**05 43 37.7**	**-5.4**
HYA	**Hoyanger**	**11.74**	**106**	*e* P		**Pn**	**05 41 42.5**	**+3.7**
HYA				*e* S		**Sn**	**05 43 45.0**	**-4.7**
HYA				IAML			05 44 12.2	
	comp=Z,4.0nm,0.6s							
ASK	**Askoy**	**11.79**	**110**	*e* P		Pn	05 41 44.5	+5.0
LOF	**Lofoten**	**12.03**	**68**	*e* P		**Pn**	**05 41 42.5**	**-0.2**
LOF				*e* S		**Sn**	**05 43 54.0**	**-2.8**
KONS	**Konsvik**	**12.18**	**76**	*e* P		**Pn**	**05 41 43.7**	**-1.0**
NSS	**Namsos**	**12.35**	**86**	*e* P		**Pn**	**05 41 48.3**	**+1.2**
DOMB	**Dombas**	**12.36**	**99**	*e* P		**Pn**	**05 41 49.1**	**+1.9**
DOMB				*e* S		**Sn**	**05 43 57.0**	**-7.8**
DOMB				IAML			05 44 14.8	
	comp=Z,2.7nm,0.6s							
EDI	**Edinburgh**	**12.67**	**140**	*e* P		**PnPn**	**05 42 02.1**	**+3.0**
ILULI	**Ilulissat**	**12.80**	**297**	Pn		**Pn**	**05 41 51.4**	**-1.8**
ILULI	**Ilulissat**	**12.80**	**297**	P		**Pn**	**05 41 51.4**	**-1.8**
FAUS	**Fauske**	**12.81**	**71**	*e* P		**Pn**	**05 41 52.8**	**-0.6**
FAUS				*e* S		**Sn**	**05 44 13.4**	**-2.4**
FAUS				IAML			05 44 22.0	
	comp=Z,9.0nm,0.6s							
SFJD	**Kangerlussuaq**	**12.96**	**287**	Pn		**Pn**	**05 41 54.0**	**-1.3**
SFJD	**Kangerlussuaq**	**12.96**	**287**	Pn		**Pn**	**05 41 54.4**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=89,slow=9.2,SNR=5.8							
SFJD				LR		LR	05 46 25.3	
	comp=Z,4μm,18.6s,baz=76,slow=35							
	comp=Z,17nm,0.8s							
BLS5	**Blasjo**	**12.98**	**112**	*e* P		**Pn**	**05 41 56.9**	**+1.2**
BLS5				*e*			05 44 12.4	
BLS5				IAML			05 44 31.0	
	comp=Z,2.6nm,0.7s							
EKB	**Eskdalemuir**	**13.20**	**142**	Pn		**Pn**	**05 41 57.3**	**-1.5**
EKA	**Eskdalemuir Ar**	**13.21**	**141**	Pn		**Pn**	**05 42 00.2**	**+1.3**
	baz=334,slow=13							
	comp=Z,3.3nm,0.9s							
NC204	**NORSAR Array S**	**13.46**	**100**			**Pn**	**05 42 00.2**	**-2.1**
NBO00	**NORSAR Array S**	**13.61**	**101**	Pn		**Pn**	**05 42 05.0**	**+0.7**
NAO01	**NORSAR Array S**	**13.76**	**101**	Pn		**Pn**	**05 42 06.7**	**+0.3**
NOA	**NORSAR Array B**	**13.77**	**100**	P		**Pn**	**05 42 08.0**	**+1.4**
NOA	**NORSAR Array B**	**13.77**	**100**	Pn		**Pn**	**05 42 08.0**	**+1.4**
	baz=310,slow=12,SNR=3.6							
NOA				Sn		**Sn**	**05 44 32.0**	**-7.5**
	baz=107,slow=19,SNR=1.1							
NOA				LR		LR	05 47 06.5	
	comp=Z,1μm,20.8s,baz=305,slow=36							
	comp=Z,0.6nm,0.6s							
NB201	**NORSAR Array S**	**13.80**	**100**	Pn		**Pn**	**05 42 04.6**	**-2.3**
NC405	**NORSAR Array S**	**13.93**	**99**	Pn		**Pn**	**05 42 07.2**	**-1.5**
EDMD	**Edmundbyers**	**13.96**	**140**	*e* P		**P**	**05 42 18.2**	**+0.8**
NC602	**NORSAR Array S**	**14.08**	**101**	*e* P		**P**	**05 42 16.9**	**-1.7**
JETT	**Jettan, Norway**	**14.35**	**61**	*e* P		**Pn**	**05 42 12.4**	**-2.0**
JETT				*e* S		**Sn**	**05 44 48.1**	**-5.2**
JETT				IAML			05 44 59.6	
	comp=Z,7.9nm,0.7s							
IVI	**Ivigtut**	**14.38**	**263**	Pn		**Pn**	**05 42 13.7**	**-1.2**
DSB	**Dublin**	**14.45**	**152**	Pn		**Pn**	**05 42 15.5**	**-0.3**
NEEM	**North Greenlan**	**14.70**	**332**	*e* P		Pn	05 42 13.3	-6.1
KBS	**Kingsbay**	**14.88**	**22**	Pn		**Pn**	**05 42 20.3**	**-1.2**
KBS	**Kingsbay**	**14.88**	**22**	*e* P		**P**	**05 42 25.6**	**-1.8**
KBS	**Kingsbay**	**14.88**	**22**	⇑*e* P		**Pn**	**05 42 22.9**	**+1.4**
KBS				pmax		pmax		
	comp=Z,59nm,1.9s							
KBS	**Kingsbay**	**14.88**	**22**	*e* P		**P**	**05 42 26.2**	**-1.1**
SPB4	**Spitsbergen Ar**	**15.16**	**26**	Pn		**Pn**	**05 42 24.0**	**-1.3**
SPA0	**Spitsbergen Ar**	**15.16**	**26**	*e* P		**P**	**05 42 32.5**	**+2.0**
SPB2	**Spitsbergen Ar**	**15.16**	**26**			**Pn**	**05 42 24.7**	**-0.6**
SPB2				IAmb		IAmb	05 42 31.9	
	comp=Z,133nm,1.9s							
SPITS	**Spitsbergen Ar**	**15.16**	**26**	P		**Pn**	**05 42 25.0**	**-0.3**
SPITS				pmax		pmax		
	comp=Z,114nm,1.9s							
SPITS	**Spitsbergen Ar**	**15.16**	**26**	Pn		**P**	**05 42 28.0**	**-2.5**
	comp=Z,4.3nm,0.6s,baz=227,slow=12,SNR=29							
HFS	**Hagfors**	**15.30**	**100**	Pn		**P**	**05 42 33.7**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=308,slow=10,SNR=17							
HFS				Sn		**Sn**	**05 45 13.4**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=290,slow=22,SNR=1.4							
HFS				LR		LR	05 48 04.0	
	comp=Z,1μm,19.7s,baz=304,slow=36							
HAMF	**Hammerfest**	**15.36**	**56**	*e* P		**Pn**	**05 42 29.9**	**+2.0**
KTK1	**Kautokeino**	**15.42**	**62**	*e* P		**P**	**05 42 32.8**	**-0.6**
ARA0	**ARCESS Array S**	**16.12**	**60**	*e* P		**P**	**05 42 41.4**	**+0.2**
ARCES	**ARCESS Array B**	**16.12**	**60**			**Pn**	**05 42 37.3**	**-0.6**
ARCES	**ARCESS Array B**	**16.12**	**60**	Pn		**Pn**	**05 42 37.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=277,slow=9.7,SNR=14							
ARCES				Sn		**Sn**	**05 45 33.6**	**-2.8**
	baz=270,slow=25,SNR=1.8							
ARCES				LR		LR	05 47 29.9	
	comp=Z,1μm,21.1s,baz=261,slow=32							
	comp=Z,6.5nm,0.8s							
HOPEN	**Hopen**	**16.26**	**35**	*e* P		**P**	**05 42 43.9**	**+1.3**
KEV	**Kevo**	**16.60**	**59**			**Pn**	**05 42

KASTN **Kahler Asten** 20.18 127 *e*P Pn 05 43 30.4 +2.6
comp=Z,20nm,1.0s,baz=332,slow=11
MTSE **Matsula** 20.21 93 *e*P **P** **05 43 25.4 -0.8**
CLZ **Clausthal** 20.28 123 *e*P **P** **05 43 27.7 +0.7**
comp=Z,41nm,1.1s,baz=332,slow=11
GTTG **Gottingen** 20.39 124 *e*P Pn 05 43 29.1 -1.1
comp=Z,61nm,1.1s,baz=332,slow=11
WLF **Walferdange** 20.83 133 **P** **05 43 33.9 +0.9**
WLF **Walferdange** 20.83 133 *d*P **P** **05 43 33.9 +0.9**
comp=Z,9.4nm,0.9s
WLF **Walferdange** 20.83 133 P **P** **05 43 33.9 +0.9**
WLF pmax pmax
comp=Z,15nm,1.0s
UBBA **Unterbreizbach** 21.02 125 *e*P **P** **05 43 36.1 +1.2**
comp=Z,61nm,1.5s,baz=332,slow=11
TNS **Taunus Mts** 21.04 128 P **P** **05 43 36.0 +0.7**
TNS pmax pmax
comp=Z,30nm,1.0s
TNS **Taunus Mts** 21.04 128 *e*P **P** **05 43 36.0 +0.7**
comp=Z,27nm,0.9s,baz=332,slow=11
FRB **Frobisher Bay** 21.11 286 P **P** **05 43 35.2 -0.6**
comp=Z,65nm,1.1s,baz=62,slow=11,SNR=41
FRB LR LR 05 50 60.0
comp=Z,2µm,21.1s,baz=53,slow=35
comp=Z,65nm,1.1s
CLF **Chambon-Foret** 21.26 141 P **P** **05 43 37.6 0.0**
CLF IAmb IAmb 05 43 47.9
comp=Z,84nm,1.1s
NEUB **Neuenburg** 21.28 122 *e*P **P** **05 43 38.5 +0.7**
comp=Z,43nm,1.1s,baz=332,slow=11
PBUR **Paburge** 21.30 100 *e*P **P** **05 43 39.6 +1.7**
VALR **Valaam** 21.43 81 *de*P **P** **05 43 39.3 +0.1**
VALR pmax pmax
comp=Z,63nm,1.0s
VSU **Vasula** 21.55 91 *d i*P **P** **05 43 40.1 -0.4**
VSU pmax pmax
comp=Z,60nm,0.9s
VSU **Vasula** 21.55 91 *e*P **P** **05 43 40.5 -0.1**
GKP **Gorka Klasztor** 21.56 111 *e*P **P** **05 43 45.2 +4.4**
CLL **Collm** 21.62 120 P **P** **05 43 41.5 +0.1**
CLL **Collm** 21.62 120 *i*P **P** **05 43 41.2 -0.2**
CLL *i* 05 43 44.4
CLL pmax pmax
comp=Z,36nm,1.2s
CLL **Collm** 21.62 120 *i*P **P** **05 43 41.2 -0.2**
comp=Z,36nm,1.2s
CLL *i* x x 05 43 44.4
comp=Z,39nm,1.1s
CLL *e*PP **PnPn** **05 44 06.0 +4.2**
CLL *e*(sPP) 05 44 09.0
CLL AMS AMS 05 55 00.0
CLL **Collm** 21.62 120 *e*P **P** **05 43 41.6 +0.2**
comp=Z,36nm,1.0s,baz=332,slow=11
KLNR **Kaliningrad** 21.67 105 *ce*P **P** **05 43 42.3 +0.4**
KLNR pmax pmax
comp=Z,179nm,1.3s
MOX **Moxa** 21.71 123 P **P** **05 43 42.7 +0.4**
MOX pmax pmax
comp=Z,30nm,1.8s
MOX **Moxa** 21.71 123 *e*P **P** **05 43 42.8 +0.4**
comp=Z,21nm,1.0s,baz=332,slow=11
MOX *e*L L 05 50 33.0
comp=Z,957nm,20.8s
PLN **Plauen** 22.02 122 *e*P **P** **05 43 46.1 +0.3**
comp=Z,43nm,1.4s,baz=332,slow=11
MFF **Saint Martin d** 22.03 147 *e*P **P** **05 43 44.6 -1.2**
MFF pmax pmax
comp=Z,50nm,1.2s
VSVD **Vaisvydziai** 22.12 98 *e*P **P** **05 43 46.9 +0.2**
PUL **Pulkovo** 22.15 85 *e*P **P** **05 43 48.0 +1.0**
PUL pmax pmax
comp=Z,98nm,1.7s
TANN **Tannenbergstha** 22.19 122 *e*P **P** **05 43 48.0 +0.4**
comp=Z,23nm,1.5s,baz=332,slow=11
BRG **Berggiesshubel** 22.31 119 *i*P **P** **05 43 49.2 +0.4**
BRG Amp 05 43 50.8
comp=Z,20nm,1.2s
BRG **Berggiesshubel** 22.31 119 *i*P **P** **05 43 49.2 +0.4**
BRG 05 44 10.5
BRG pmax pmax
comp=Z,21nm,1.2s
BRG pmax pmax
comp=Z,12nm,1.1s
BRG MLR MLR
comp=N,827nm,11.8s
BRG MLR MLR
comp=Z,1µm,12.9s
BRG MLR MLR
comp=E,400nm,10.5s
BRG **Berggiesshubel** 22.31 119 *e*P **P** **05 43 49.1 +0.3**
comp=E,30nm,1.3s,baz=332,slow=11
HSKC **Hora Svate Kat** 22.36 120 *e*P **P** **05 43 49.1 -0.3**
GRA1 **Grafenberg Arr** 22.39 125 P **P** **05 43 49.5 -0.2**
GRF **Grafenberg Arr** 22.39 125 P **P** **05 43 49.6 -0.2**
GRF pmax pmax
comp=Z,27nm,1.1s
GRF **Grafenberg Arr** 22.39 125 *e*L L 05 50 53.2
comp=Z,820nm,22.0s
GRFO **Grafenberg** 22.39 125 P **P** **05 43 49.4 -0.3**
GRFO **Grafenberg** 22.39 125 P **P** **05 43 49.4 -0.3**
GRFO pmax pmax
comp=Z,28nm,1.1s
ECH **Echery** 22.43 133 P **P** **05 43 49.7 -0.4**
ECH **Echery** 22.43 133 P **P** **05 43 49.7 -0.4**
ECH pmax pmax
comp=Z,37nm,1.5s
PABE **Paberze** 22.48 99 P **P** **05 43 50.1 -0.5**
PABE **Paberze** 22.48 99 *e*P **P** **05 43 51.0 +0.4**
STU **Stuttgart** 22.55 129 P **P** **05 43 51.9 +0.5**
STU **Stuttgart** 22.55 129 P **P** **05 43 51.9 +0.5**
STU pmax pmax
comp=Z,32nm,1.0s
ROTZ **Rotzenmuhle** 22.66 123 *e*P **P** **05 43 53.2 +0.7**
comp=Z,6.9nm,1.3s,baz=332,slow=11
BFO **Black Forest** 22.67 131 P **P** **05 43 53.2 +0.4**
BFO **Black Forest** 22.67 131 P **P** **05 43 53.2 +0.4**
BFO pmax pmax
comp=Z,26nm,1.2s
BFO **Black Forest** 22.67 131 *e*P **P** **05 43 53.7 +0.9**
comp=Z,37nm,1.4s,baz=332,slow=11
TCF **Toulx Ste Croi** 22.87 143 *e*P **P** **05 43 54.0 -0.8**
TCF pmax pmax
comp=Z,16nm,1.0s
PRA **Prague** 23.16 120 AMS AMS 05 54 30.0
comp=Z,800nm,18.2s
PRU **Pruhonice** 23.26 120 *e*P **P** **05 43 58.7 -0.1**
PRU AMS AMS 05 55 30.0
comp=Z,900nm,16.2s
PRU **Pruhonice** 23.26 120 *e*P **P** **05 43 58.7 -0.1**
PRU MLR MLR
comp=Z,900nm,16.2s
SUW **Suwalki** 23.27 103 P **P** **05 43 57.6 -1.2**
SUW **Suwalki** 23.27 103 P **P** **05 43 57.6 -1.2**
SUW pmax pmax
comp=Z,121nm,1.2s
SUW **Suwalki** 23.27 103 *e*P **P** **05 43 58.8 0.0**
CHVC **Chvalec** 23.30 117 *e*P **P** **05 43 59.1 -0.1**
CHVC AMS AMS 05 56 30.0
comp=Z,1µm,14.1s
CHVC **Chvalec** 23.30 117 *e*P **P** **05 43 59.1 -0.1**
CHVC MLR MLR
comp=Z,1µm,14.1s
UPC **Upice** 23.35 117 AMS AMS 05 56 30.0
comp=Z,1µm,12.6s
OSTC **Ostas** 23.38 117 AMS AMS 05 56 30.0
comp=Z,1µm,13.2s
GOPC **GO Pecny, Ondr** 23.41 119 AMS AMS 05 55 40.0
comp=Z,900nm,19.1s
WET **Wettzell** 23.41 123 *e*P **P** **05 44 01.7 +1.3**
comp=Z,26nm,1.3s,baz=332,slow=11
IIGN **Ignalina** 23.48 97 *e*P **P** **05 44 00.4 -0.5**
DPC **Dobruska-Polom** 23.59 117 *e*P **P** **05 44 02.2 +0.1**
DPC AMS AMS 05 56 40.0
comp=Z,1µm,13.4s
DPC **Dobruska-Polom** 23.59 117 *e*P **P** **05 44 02.2 +0.1**
DPC MLR MLR
comp=Z,1µm,13.4s
ZVC **Zvikov** 23.61 121 *e*P **P** **05 44 02.4 +0.1**
KHC **Kasperske Hory** 23.66 122 P **P** **05 44 03.1 +0.2**
KHC IAmb IAmb 05 44 08.0
comp=Z,41nm,1.3s
KHC **Kasperske Hory** 23.66 122 *e*P **P** **05 44 02.9 +0.1**
KHC AMS AMS 05 56 00.0
comp=Z,1µm,12.4s
KHC **Kasperske Hory** 23.66 122 P **P** **05 44 03.1 +0.2**
KHC pmax pmax
comp=Z,41nm,1.3s
LFF **La Frestale** 23.80 146 *e*P **P** **05 44 04.2 0.0**
LFF pmax pmax
comp=Z,65nm,1.5s
GEC2 **GERESS Array S** 23.95 122 P **P** **05 44 06.2 +0.6**
GEC2 **GERESS Array S** 23.95 122 *e*P **P** **05 44 06.2 +0.6**
comp=Z,43nm,1.8s,baz=332,slow=11
GERES **GERESS Array B** 23.95 122 P **P** **05 44 05.1 -0.5**
GERES **GERESS Array B** 23.95 122 P **P** **05 44 06.2 +0.6**
comp=Z,6.3nm,0.9s,baz=335,slow=12,SNR=18
GERES LR LR 05 54 28.1
comp=Z,652nm,18.1s,baz=322,slow=39
comp=Z,6.3nm,0.9s
KRLC **Kraliky** 23.98 117 *e*P **P** **05 44 06.1 +0.2**
KRLC AMS AMS 05 56 40.0
comp=Z,800nm,14.8s
KRLC **Kraliky** 23.98 117 *e*P **P** **05 44 06.1 +0.2**
KRLC MLR MLR
comp=Z,800nm,14.8s
NACGM **Naroch** 24.03 97 *e*P **P** **05 44 08.0 +1.8**
comp=Z,21nm,0.9s,baz=317
DAVA **Damuels** 24.08 130 *e*P **P** **05 44 07.7 +0.7**
comp=Z,24nm,2.0s
CAF **Calviac** 24.12 144 *e*P **P** **05 44 06.8 -0.4**
CAF pmax pmax
comp=Z,21nm,1.1s
SENIN **Lac Senin/Sane** 24.14 135 P **P** **05 44 07.4 -0.2**
SENIN IAmb IAmb 05 44 31.2
comp=Z,55nm,1.1s
RETA **Reutte** 24.17 128 *e*P **P** **05 44 07.4 -0.4**
comp=Z,6.0nm,0.8s
CKRC **Cesky Krumlov** 24.18 121 AMS AMS 05 57 20.0
comp=Z,900nm,12.0s
SSB **Saint Sauveur** 24.39 140 P **P** **05 44 09.7 -0.1**
SSB **Saint Sauveur** 24.39 140 P **P** **05 44 09.7 -0.1**
SSB pmax pmax
comp=Z,15nm,0.9s
MOTA **Moosalm** 24.41 128 *e*P **P** **05 44 10.6 +0.6**
comp=Z,11nm,1.3s
MORC **Moravsky Berou** 24.50 116 ⇑P **P** **05 44 12.3 +1.6**
MORC **Moravsky Berou** 24.50 116 P **P** **05 44 10.9 +0.2**
MORC **Moravsky Berou** 24.50 116 *e*P **P** **05 44 10.7 0.0**
MORC **Moravsky Berou** 24.50 116 P **P** **05 44 10.9 +0.2**
MORC pmax pmax
comp=Z,18nm,1.1s
DAVOX **Davos/Dischmat** 24.53 130 P **P** **05 44 12.4 +1.3**
comp=Z,5.5nm,0.8s,baz=317,slow=16,SNR=7.6
DAVOX LR LR 05 53 39.9
comp=Z,1µm,20.8s,baz=322,slow=36
comp=Z,5.5nm,0.8s
SQTA **Sankt Quirin** 24.55 128 *e*P **P** **05 44 12.2 +0.9**
comp=Z,10nm,1.1s
VRAC **Vranov** 24.56 118 *e*P **P** **05 44 11.9 +0.8**
VRAC **Vranov** 24.56 118 P **P** **05 44 11.9 +0.8**
comp=Z,7.1nm,0.9s,baz=321,slow=12,SNR=7.1
VRAC LR LR 05 53 55.9
comp=Z,510nm,18.7s,baz=317,slow=37
comp=Z,7.1nm,0.9s
WATA **Walderalm** 24.57 127 *e*P **P** **05 44 10.7 -0.8**
comp=Z,8.5nm,0.8s
FETA **Feichten** 24.58 129 *i*P **P** **05 44 13.0 +1.4**
comp=Z,14nm,1.4s
TUE **Stuetta** 24.65 131 P **P** **05 44 12.5 +0.3**
WTTA **Wattenberg** 24.65 127 *i*P **P** **05 44 13.8 +1.6**
comp=Z,21nm,1.1s
KRUC **Moravsky** 24.69 118 *e*P **P** **05 44 13.1 +0.7**
MNK **Minsk** 24.76 97 *i*P **P** **05 44 11.8 -1.1**
comp=E,7.0nm,1.1s
MNK *i*P **P** **05 44 11.8 -1.1**
comp=N,21nm,0.7s
MNK *i*P **P** **05 44 11.8 -1.1**
comp=Z,19nm,0.9s,baz=317
MNK *i* PP **PnPn** **05 44 43.8 -0.8**
MNK *i* S **S** **05 48 34.5 -0.2**
MNK *i* SS **SnSn** **05 49 22.9 +2.2**
MNK *i* LQ LQ 05 51 56.7
MNK *i* LR LR 05 53 36.3
MNK *i* LRM MLR 05 54 24.2
comp=N,1µm,32.0s
MNK *i* LRM MLR 05 54 34.5
comp=Z,658nm,15.4s
MNK *i* LRM MLR 05 54 52.4
comp=E,302nm,15.6s
LESA **Schwarzleotal** 24.84 125 *e*P **P** **05 44 15.2 +1.3**
comp=E,24nm,1.3s
BIOA **Bad Ischl, Aus** 24.93 124 *e*P **P** **05 44 16.1 +1.5**
comp=E,18nm,1.4s
RES **Resolute Bay** 24.93 322 P **P** **05 44 15.0 +0.8**
RES **Resolute Bay** 24.93 322 P **P** **05 44 15.0 +0.8**
RES pmax pmax
comp=Z,20nm,1.2s
RES **Resolute Bay** 24.93 322 LR LR 05 53 07.8
comp=Z,558nm,20.4s,baz=54,slow=34
MAUC **Maruska** 24.95 116 *e*P **P** **05 44 15.4 +0.7**
OJC **Ojcow** 24.96 112 P **P** **05 44 14.7 -0.1**
OJC IAmb IAmb 05 44 17.8
comp=Z,42nm,1.8s
OJC **Ojcow** 24.96 112 P **P** **05 44 14.7 -0.1**
OJC pmax pmax
comp=Z,42nm,1.8s
MOA **Molln** 25.00 123 *i*P **P** **05 44 16.2 +1.0**
comp=Z,13nm,1.3s
KLMR **Klimovskoe** 25.11 76 *e*P **P** **05 44 14.3 -1.7**
KLMR pmax pmax
comp=Z,92nm,1.3s
BNI **Bardonecchia** 25.17 137 P **P** **05 44 18.3 +1.4**
BNI **Bardonecchia** 25.17 137 P **P** **05 44 18.3 +1.4**
BNI pmax pmax
comp=Z,18nm,1.0s
PGAV **Gavieira, Arco** 25.17 164 *e*P **P** **05 44 17.7 +0.8**
comp=Z,57nm,1.4s
JAVC **Velka Javorina** 25.32 117 *e*P **P** **05 44 17.9 -0.2**
KBA **Koelnbreinsper** 25.36 125 *e*P **P** **05 44 20.8 +2.2**
comp=Z,14nm,1.4s
ABTA **Abfaltersbach** 25.39 126 *e*pP pP 05 44 21.8 +0.2
comp=Z,21nm,1.2s
CONA **Conrad Observa** 25.48 120 *e*P **P** **05 44 20.3 +0.8**
comp=Z,16nm,1.2s
PBRG **Braganca** 25.52 161 *e*P **P** **05 44 22.7 +2.8**
comp=Z,37nm,1.3s
SMOL **Smolenice** 25.52 118 *e*P **P** **05 44 22.9 +3.0**
MODS **Modra-Piesok** 25.59 118 *e*P **P** **05 44 21.4 +0.9**
MODS **Modra-Piesok** 25.59 118 *e*P **P** **05 44 21.4 +0.9**
LANS **Liptovska Anna** 25.72 114 *e*P **P** **05 44 22.9 +1.2**
LANS pmax pmax
comp=Z,16nm,1.0s
LANS **Liptovska Anna** 25.72 114 *e*P **P** **05 44 22.9 +1.2**
CTI **Castel Tesino** 25.73 128 P **P** **05 44 23.0 +1.1**
CTI IAmb IAmb 05 44 31.1
comp=Z,42nm,1.4s
CTI **Castel Tesino** 25.73 128 P **P** **05 44 23.0 +1.1**
CTI pmax pmax
comp=Z,42nm,1.4s
CIMO **Cimolais** 25.75 127 **P** **05 44 22.9 +0.9**
CIMO IAmb IAmb 05 44 27.8
comp=Z,18nm,1.2s
POLO **Lamas de Olo** 25.81 163 *e*P **P** **05 44 24.0 +1.3**
comp=Z,18nm,1.1s
RONA **Rosalia, Austr** 25.82 120 *e*P **P** **05 44 23.9 +1.3**
comp=Z,9.1nm,1.2s
MYKA **Terra Mystica** 25.86 125 *i*P **P** **05 44 24.5 +1.6**
comp=Z,14nm,1.0s
PVRL **Vita Real** 25.92 163 *e*P **P** **05 44 24.7 +1.1**
comp=Z,40nm,1.2s
ARSA **Arzberg** 25.94 122 *e*P **P** **05 44 23.8 +0.1**
comp=Z,5.3nm,0.9s
PRED **Cave del Predi** 26.00 125 P **P** **05 44 25.2 +1.0**
PRED IAmb IAmb 05 44 31.7
comp=Z,35nm,1.2s
SCHQ **Schefferville** 26.02 267 P **P** **05 44 23.6 -0.8**
SCHQ IAmb IAmb 05 44 27.4
comp=Z,41nm,1.2s
SCHQ **Schefferville** 26.02 267 P **P** **05 44 22.9 -1.4**
comp=Z,37nm,1.2s,baz=40,slow=6.5,SNR=12
SCHQ LR LR 05 53 46.5
comp=Z,1µm,19.0s,baz=58,slow=34
comp=Z,37nm,1.2s
VYHS **Vyhne** 26.04 116 *e*P **P** **05 44 25.3 +0.7**
VYHS pmax pmax
comp=Z,14nm,1.0s
VYHS **Vyhne** 26.04 116 *e*P **P** **05 44 25.3 +0.7**
MVO **Moncorvo** 26.11 162 *e*P **P** **05 44 26.4 +1.1**
comp=Z,39nm,1.2s
SOKA **Soboth** 26.28 123 *e*P **P** **05 44 27.4 +0.6**
comp=Z,16nm,1.2s
PVIS **Viseu** 26.45 163 *e*P **P** **05 44 31.7 +3.3**
KWP **Kalwaria Pacla** 26.53 110 P **P** **05 44 30.1 +1.2**
KWP **Kalwaria Pacla** 26.53 110 P **P** **05 44 30.2 +1.2**
CRVS **Cervenica-Dubn** 26.66 112 *e*P **P** **05 44 31.1 +0.9**
CRVS pmax pmax
comp=Z,51nm,1.3s
CRVS **Cervenica-Dubn** 26.66 112 *e*P **P** **05 44 31.1 +0.9**
MTE **Manteigas** 26.80 163 *e*P **P** **05 44 35.9 +4.3**
comp=Z,33nm,0.9s
MTE **Manteigas** 26.80 163 P **P** **05 44 31.2 -0.4**
MTE IAmb IAmb 05 44 37.4
comp=Z,23nm,0.8s
LVV **L'vov** 26.88 108 *e*P **P** **05 44 32.7 +0.6**
LVV *e* 05 45 20.1
LVV *e*S **S** **05 49 06.3 -2.1**
LVV MLR MLR
comp=Z,600nm,13.0s
COI **Coimbra** 26.89 164 *e*P **P** **05 44 37.5 +5.2**
comp=Z,37nm,1.6s
COI **Coimbra** 26.89 164 P **P** **05 44 32.5 +0.2**
COI IAmb IAmb 05 44 41.7
comp=Z,32nm,1.0s
COI **Coimbra** 26.89 164 P **P** **05 44 32.5 +0.2**
COI pmax pmax
comp=Z,32nm,1.0s
PSZ **Piszkesteto** 26.91 115 ⇑P **P** **05 44 33.8 +1.3**
PSZ **Piszkesteto** 26.91 115 P **P** **05 44 33.5 +1.1**
PSZ **Piszkesteto** 26.91 115 P **P** **05 44 33.6 +1.1**
PSZ pmax pmax
comp=Z,23nm,1.1s
KOLS **Kolonicke sedl** 26.94 111 *e*P **P** **05 44 35.3 +2.6**
KOLS **Kolonicke sedl** 26.94 111 *e*P **P** **05 44 35.3 +2.6**
PCAS **Casmilo, Conde** 27.04 165 *e*P **P** **05 44 37.6 +4.0**
comp=Z,42nm,2.0s
PCBR **Castelo Branco** 27.36 163 *e*P **P** **05 44 42.5 +6.0**
comp=Z,17nm,1.2s
PSBE **So Bento** 27.54 165 *e*P **P** **05 44 39.3 +1.1**
comp=Z,27nm,2.6s
PMRV **Marv??o** 27.78 163 *e*P **P** **05 44 41.5 +1.2**
comp=Z,26nm,1.9s
OBN **Obninsk** 27.78 88 ⇓*e*P **P** **05 44 40.7 +0.6**
OBN *e* 05 45 28.4
OBN pmax pmax
comp=Z,43nm,1.7s
OBN MLR MLR
comp=Z,584nm,14.0s
OBN **Obninsk** 27.78 88 P **P** **05 44 40.4 +0.3**
comp=Z,17nm,0.4s,baz=292,slow=14,SNR=5.0
OBN LR LR 05 55 10.5
comp=Z,1µm,21.3s,baz=352,slow=35
comp=Z,17nm,0.4s
MORH **Mrgy, Hungar** 27.92 119 ⇑P **P** **05 44 43.0 +1.5**
ESDC **Sonseca Array** 28.01 157 P **P** **05 44 42.3 -0.1**
ESDC **Sonseca Array** 28.01 157 P **P** **05 44 42.5 +0.1**
comp=Z,4.7nm,0.9s,baz=349,slow=8.9,SNR=14
ESDC LR LR 05 55 21.6
comp=Z,361nm,19.1s,baz=346,slow=35
comp=Z,4.7nm,0.9s
PAB **San Pablo** 28.07 158 P **P** **05 44 42.3 -0.7**
PAB **San Pablo** 28.07 158 P **P** **05 44 42.3 -0.7**
PAB pmax pmax
comp=Z,8.0nm,1.0s
KIEV **Kiev** 28.18 101 ⇑P **P** **05 44 43.6 -0.2**
KIEV **Kiev** 28.18 101 P **P** **05 44 43.5 -0.2**
KIEV **Kiev** 28.18 101 P **P** **05 44 43.5 -0.2**
KIEV pmax pmax
comp=Z,11nm,0.9s
AKASG **Malin Array Be** 28.18 101 P **P** **05 44 43.2 -0.6**
comp=Z,7.3nm,0.8s,baz=326,slow=9.4,SNR=16
AKASG LR LR 05 55 44.9
comp=Z,1µm,20.7s,baz=309,slow=36
comp=Z,7.3nm,0.8s
AKBB **Malin Array Si** 28.18 101 P **P** **05 44 43.4 -0.4**
AKBB **Malin Array Si** 28.18 101 P **P** **05 44 43.4 -0.4**
AKBB pmax pmax
comp=Z,12nm,0.9s
PESTR **Estremoz** 28.31 163 *e*P **P** **05 44 45.2 +0.2**
comp=Z,15nm,1.7s
PESTR **Estremoz** 28.31 163 P **P** **05 44 44.7 -0.3**
SIRR **Siria** 28.95 115 ⇑P **P** **05 44 52.4 +1.7**
BUR08 **Bucovina Ar. S** 29.10 109 P **P** **05 44 52.4 +0.2**
PBEJ **Beja** 29.11 164 *e*P **P** **05 44 53.2 +1.1**
comp=Z,21nm,1.5s
BURAR **Bucovina Array** 29.13 109 ⇑P **P** **05 44 53.0 +0.6**
BURAR **Bucovina Array** 29.13 109 P **P** **05 44 53.2 +0.8**
BURAR **Bucovina Array** 29.13 109 ⇑P **P** **05 44 53.0 +0.6**
FRGS **Fruska Gora** 29.24 118 ⇓P **P** **05 44 55.0 +1.7**
PCVE **Castro Verde** 29.48 164 *e*P **P** **05 44 56.5 +1.1**
comp=Z,33nm,1.6s
BZS **Buzias** 29.49 116 ⇓P **P** **05 44 56.8 +1.4**
BZS **Buzias** 29.49 116 ⇓P **P** **05 44 56.8 +1.4**
SURR **Surduc** 29.56 115 ⇑P **P** **05 44 57.5 +1.5**
SORM **Soroca** 29.90 105 ⇑P **P** **05 44 58.8 -0.2**
SORM **Soroca** 29.90 105 ⇑P **P** **05 44 58.8 -0.2**
MDVR **Moldovita** 30.24 116 ⇑P **P** **05 45 03.3 +1.2**
KIRV **Kirov** 30.39 72 *ce*P **P** **05 45 03.4 +0.1**
KIRV **Kirov** 30.39 72 LR LR 05 56 17.2
comp=Z,923nm,19.4s,baz=316,slow=34
HERR **Herculane** 30.41 115 ⇑P **P** **05 45 04.1 +0.5**
LPSR **Galich'ya Gora** 30.58 89 *e*P **P** **05 45 03.0 -2.0**
LPSR pmax pmax
comp=Z,20nm,1.1s
ARR **Arges** 30.81 112 ⇑P **P** **05 45 08.2 +1.1**
VOIR 30.90 112 ⇑P **P** **05 45 09.1 +1.1**
VOIR 30.90 112 ⇑P **P** **05 45 09.1 +1.1**
PLOR **Plostina** 31.15 110 ⇓P **P** **05 45 10.9 +0.7**
PLOR **Plostina** 31.15 110 ⇓P **P** **05 45 10.9 +0.7**
VRI **Vrincioaia** 31.17 109 ⇑P **P** **05 45 11.2 +1.0**
VRI **Vrincioaia** 31.17 109 ⇑P **P** **05 45 11.2 +1.0**
MLR **Muntele Rosu** 31.19 111 ⇑P **P** **05 45 11.6 +1.0**
MLR **Muntele Rosu** 31.19 111 P **P** **05 45 10.7 +0.1**
MLR **Muntele Rosu** 31.19 111 P **P** **05 45 10.7 +0.1**
MLR pmax pmax
comp=Z,17nm,1.3s
MLR **Muntele Rosu** 31.19 111 LR LR 05 59 16.6
comp=Z,1µm,18.7s,baz=343,slow=39
BOVS **Bovan** 31.24 118 ⇑P **P** **05 45 12.1 +1.2**
VORR **Voronezh** 31.40 90 *e*P **P** **05 45 13.8 +1.6**
VORR pmax pmax
comp=Z,31nm,0.4s
BATG **Bathurst New B** 31.59 257 P **P** **05 45 14.6 +0.6**
VSR **Storozhevoye** 31.74 91 *e*P **P** **05 45 13.1 -2.1**
VSR pmax pmax
comp=Z,30nm,1.4s
VORD **Divnogorie** 31.98 91 *e*P **P** **05 45 13.0 -4.3**
VORD pmax pmax
comp=Z,10.0nm,0.7s
CFR **Carcaliu** 32.28 109 ⇑P **P** **05 45 19.9 -0.1**
CFR **Carcaliu** 32.28 109 ⇑P **P** **05 45 19.9 -0.1**
CUC **Castrocucco** 32.51 128 P **P** **05 45 21.6 -0.6**
VRH **Novokhopyorsk** 32.77 88 *e*P **P** **05 45 24.5 +0.3**
VRH pmax pmax
comp=Z,18nm,0.7s
LMQ **La Malbaie** 33.05 261 P **P** **05 45 27.2 +0.5**
A36M **Sachs Harbour** 33.57 328 P **P** **05 45 32.3 +1.3**
A36M IAmb IAmb 05 45 35.9
comp=Z,24nm,0.9s
A36M **Sachs Harbour** 33.57 328 P **P** **05 45 31.3 +0.3**
baz=44
FCC **Fort Churchill** 33.81 294 P **P** **05 45 33.9 +0.6**
FCC IAmb IAmb 05 45 37.5
comp=Z,25nm,1.2s
FCC PcP **PcP** **05 48 12.0 +0.1**
G65A **Princeton** 33.90 256 P **P** **05 45 34.0 -0.1**
CLTB **Caltabellotta** 33.94 133 P **P** **05 45 35.4 +0.7**
BELG **Belogornoye** 34.21 82 *c i*P **P** **05 45 36.7 0.0**
BELG pmax pmax
comp=Z,5.0nm,1.0s
BELG **Belogornoye** 34.21 82 LR LR 05 59 07.9
comp=Z,2µm,18.9s,baz=323,slow=36
VAE **Valguarnera** 34.39 132 LR LR 05 58 53.4
comp=Z,454nm,18.9s,baz=293,slow=35
PKME **Peaks-Kenny Pk** 34.52 258 P **P** **05 45 40.0 +0.5**
PKME **Peaks-Kenny Pk** 34.52 258 P **P** **05 45 38.5 -1.0**
baz=34
KEST **Kesra** 34.60 140 P **P** **05 45 41.4 +1.0**
KEST IAmb IAmb 05 45 44.2
comp=Z,23nm,0.9s
KEST **Kesra** 34.60 140 P **P** **05 45 41.2 +0.7**
comp=Z,20nm,0.9s,baz=309,slow=6.1,SNR=14
KEST LR LR 05 58 21.5
comp=Z,649nm,21.7s,baz=274,slow=34
comp=Z,20nm,0.9s
MDT **Midelt** 34.65 161 LR LR 05 58 54.2
comp=Z,172nm,20.5s,baz=7.0,slow=35

RDO	**Rodhopi**	**34.79**	**115**	P	**P**	**05 45 42.6**	**+0.8**
RDO				IAmb	IAmb	05 45 45.2	
	comp=Z,22nm,1.2s						
NRIK	**Noril'sk**	**34.95**	**37**‖	*e*P	**P**	**05 45 44.7**	**+1.7**
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
G62A	**West of Eustis**	**35.04**	**259**	P	**P**	**05 45 44.2**	**+0.2**
WVL	**Waterville**	**35.24**	**258**	P	**P**	**05 45 46.3**	**+0.6**
C36M	**Paulatuk**	**35.26**	**324**	P	**P**	**05 45 46.9**	**+1.3**
C36M				IAmb	IAmb	05 45 50.4	
	comp=Z,35nm,1.1s						
C36M	**Paulatuk**	**35.26**	**324**	P	**P**	**05 45 45.6**	**0.0**
	baz=42,SNR=21						
ARU	**Arti**	**35.39**	**69**	P	**P**	**05 45 46.8**	**-0.2**
ARU	**Arti**	**35.39**	**69***c i*	P	**P**	**05 45 46.7**	**-0.2**
ARU				S	**S**	**05 51 22.1**	**+1.1**
ARU				SS	**SnSn**	**05 53 36.7**	**-2.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ARU				MLR	MLR		
	comp=Z,1μm,20.0s						
ARU	**Arti**	**35.39**	**69**	LR	LR	05 59 22.8	
	comp=Z,1μm,19.7s,baz=312,slow=35						
VLDQ	**Val d'Or**	**35.43**	**269**	P	**P**	**05 45 47.6**	**+0.3**
VLDQ				IAmb	IAmb	05 45 51.8	
	comp=Z,68nm,1.7s						
AGG	**Agios Georgios**	**35.54**	**121**	P	**P**	**05 45 48.9**	**+0.5**
AGG				IAmb	IAmb	05 45 52.3	
	comp=Z,25nm,1.1s						
AGG	**Agios Georgios**	**35.54**	**121**	P	**P**	**05 45 48.9**	**+0.5**
AGG				pmax	pmax		
	comp=Z,25nm,1.1s						
TRQ	**Mont Tremblant**	**35.81**	**264**	P	**P**	**05 45 50.9**	**+0.2**
ANN	**Anapa**	**36.21**	**99**	*e*P	**P**	**05 45 55.9**	**+1.9**
ANN				pmax	pmax		
	comp=Z,34nm,1.0s						
ANN				MLR	MLR		
	comp=Z,1μm,16.0s						
FRNY	**Flat Rock**	**36.57**	**262**	P	**P**	**05 45 57.8**	**+0.7**
FRNY				IAmb	IAmb	05 46 01.6	
	comp=Z,53nm,1.4s						
ERBR	**Yeremizino-Bor**	**36.66**	**95**	*e*P	**P**	**05 45 59.4**	**+1.5**
ERBR				pmax	pmax		
	comp=Z,32nm,1.0s						
LONY	**Lake Ozonia**	**37.14**	**263**	P	**P**	**05 46 01.2**	**-0.8**
	baz=34						
LABN	**Labinsk**	**37.64**	**96**	*e*P	**P**	**05 46 08.0**	**+1.7**
LABN				pmax	pmax		
	comp=Z,23nm,0.4s						
HRV	**Adam Dziewonsk**	**37.72**	**258**	P	**P**	**05 46 05.8**	**-1.1**
	baz=32						
YKA	**Yellowknife Ar**	**37.91**	**311**	P	**P**	**05 46 08.7**	**+0.3**
	comp=Z,10nm,0.8s,baz=42,slow=8.3,SNR=98						
YKA				PcP	**PcP**	**05 48 23.9**	**0.0**
	comp=Z,3.7nm,1.0s,baz=33,slow=2.7,SNR=9.8						
YKA				LR	LR	06 01 37.2	
	comp=Z,598nm,18.1s,baz=48,slow=36						
	comp=Z,10nm,0.8s						
YKAB2	**New Yellowknif**	**37.96**	**311**	P	**P**	**05 46 09.2**	**+0.5**
SOC	**Sochi**	**38.13**	**98**	*e*P	**P**	**05 46 06.9**	**-3.4**
SOC				*e*		05 47 35.6	
SOC				*e*S	**S**	**05 51 59.6**	**-3.4**
SOC				*e*SS	**SnSn**	**05 54 45.7**	**-0.1**
SOC				MLR	MLR		
	comp=Z,470nm,18.0s						
L61B	**Northampton**	**38.21**	**259**	P	**P**	**05 46 11.2**	**+0.1**
L61B	**Northampton**	**38.21**	**259**	P	**P**	**05 46 09.9**	**-1.1**
	baz=32						
INK	**Inuvik**	**38.22**	**327**	P	**P**	**05 46 11.2**	**+0.4**
INK	**Inuvik**	**38.22**	**327**	P	**P**	**05 46 09.9**	**-0.9**
	baz=36						
INK	**Inuvik**	**38.22**	**327**	P	**P**	**05 46 11.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
GOF	**Gofitskoye**	**38.22**	**93***ce*	P	**P**	**05 46 12.3**	**+1.1**
D28M	**Stokes Point**	**38.44**	**331**	P	**P**	**05 46 12.0**	**-0.7**
	baz=34						
SADO	**Sadowa**	**38.83**	**267**	P	**P**	**05 46 16.3**	**0.0**
SADO				IAmb	IAmb	05 46 19.8	
	comp=Z,29nm,1.1s						
SADO	**Sadowa**	**38.83**	**267**	LR	LR	06 01 16.7	
	comp=Z,829nm,19.1s,baz=52,slow=35						
F31M	**Tsiigehtchic**	**38.97**	**327**	P	**P**	**05 46 17.8**	**+0.7**
F31M				IAmb	IAmb	05 46 22.0	
	comp=Z,30nm,1.1s						
F31M	**Tsiigehtchic**	**38.97**	**327**	P	**P**	**05 46 17.3**	**+0.1**
	baz=35						
KIV	**Kislovodsk**	**39.00**	**95**	*e*P	**P**	**05 46 18.5**	**+0.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,231nm,16.0s						
BR131	**Keskin Array S**	**39.05**	**107**	P	**P**	**05 46 19.8**	**+1.5**
BR131	**Keskin Array S**	**39.05**	**107**	P	**P**	**05 46 19.8**	**+1.5**
BR131				pmax	pmax		
	comp=Z,15nm,1.0s						
BRTR	**Keskin Array B**	**39.05**	**107**	P	**P**	**05 46 19.8**	**+1.5**
	comp=Z,6.3nm,0.8s,baz=334,slow=6.7,SNR=29						
BRTR				LR	LR	06 03 57.6	
	comp=Z,498nm,20.2s,baz=360,slow=38						
	comp=Z,6.3nm,0.8s						
E29M	**Blow River**	**39.06**	**330**	P	**P**	**05 46 19.0**	**+1.1**
E29M	**Blow River**	**39.06**	**330**	P	**P**	**05 46 17.7**	**-0.2**
	baz=33						
C26K	**Camden Bay**	**39.08**	**334**	P	**P**	**05 46 17.6**	**-0.5**
	baz=30						
KBZ	**Khabaz**	**39.27**	**95**‖	*e*P	**P**	**05 46 21.9**	**+2.0**
KBZ				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**39.27**	**95**	P	**P**	**05 46 21.8**	**+2.0**
	comp=Z,8.4nm,0.9s,baz=321,slow=8.7,SNR=11						
KBZ				LR	LR	06 02 27.9	
	comp=Z,609nm,21.2s,baz=291,slow=36						
	comp=Z,8.4nm,0.9s						
YLE	**Yale**	**39.27**	**258**	P	**P**	**05 46 19.8**	**-0.2**
F30M	**Barrier River**	**39.28**	**328**	P	**P**	**05 46 19.2**	**-0.5**
	baz=34						
G31M	**Satah River**	**39.52**	**326**	P	**P**	**05 46 22.1**	**+0.4**
G31M				IAmb	IAmb	05 46 25.7	
	comp=Z,47nm,1.0s						
G31M	**Satah River**	**39.52**	**326**	P	**P**	**05 46 21.2**	**-0.5**
	baz=34,SNR=30						
E46A	**Sault Ste Mari**	**39.59**	**273**	P	**P**	**05 46 23.2**	**+0.6**
E46A				IAmb	IAmb	05 46 26.3	
	comp=Z,42nm,1.1s						
A21K	**Barrow**	**39.62**	**341**	P	**P**	**05 46 22.4**	**-0.2**
	baz=24						
FFC	**Flin Flon**	**39.72**	**295**	P	**P**	**05 46 24.3**	**+0.7**
FFC				IAmb	IAmb	05 46 28.3	
	comp=Z,47nm,1.1s						
FFC	**Flin Flon**	**39.72**	**295**	P	**P**	**05 46 24.3**	**+0.7**
FFC				pmax	pmax		
	comp=Z,47nm,1.2s						
BINY	**Binghamton**	**39.73**	**262**	P	**P**	**05 46 22.6**	**-1.2**
	baz=32						
AKTO	**Aktyubinsk**	**39.81**	**75**	LR	LR	06 02 17.4	
	comp=Z,1μm,18.7s,baz=338,slow=35						
D25K	**Kavik River**	**39.86**	**334**	P	**P**	**05 46 26.2**	**+1.6**
D25K				IAmb	IAmb	05 46 30.3	
	comp=Z,24nm,0.8s						
D25K	**Kavik River**	**39.86**	**334**	P	**P**	**05 46 24.5**	**-0.1**
	baz=29						
WRGLY	**Wrigley**	**39.87**	**317**	P	**P**	**05 46 25.6**	**+1.0**
WRGLY				IAmb	IAmb	05 46 29.7	
	comp=Z,36nm,1.0s						
WRGLY	**Wrigley**	**39.87**	**317**	P	**P**	**05 46 24.1**	**-0.5**
	baz=37						
C24K	**Franklin Bluff**	**39.90**	**336**	P	**P**	**05 46 24.7**	**-0.1**
	baz=28						
G30M	**tAoh Zraii Nji**	**39.90**	**327**	P	**P**	**05 46 25.9**	**+1.0**
G30M	**tAoh Zraii Nji**	**39.90**	**327**	P	**P**	**05 46 25.2**	**+0.2**
	baz=33						
F28M	**Old Crow**	**40.12**	**330**	P	**P**	**05 46 26.5**	**-0.3**
	baz=32,SNR=18						
TIXI	**Tiksi**	**40.21**	**16**‖	*e*P	**P**	**05 46 28.2**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.7s						
D24K	**Happy Valley**	**40.42**	**335**	IAmb	IAmb	05 46 35.0	
	comp=Z,27nm,0.8s						
D24K	**Happy Valley**	**40.42**	**335**	P	**P**	**05 46 29.1**	**-0.1**
	baz=28						
EPYK	**Eagle Plains**	**40.52**	**327**	IAmb	IAmb	05 46 34.8	
	comp=Z,26nm,1.1s						
EPYK	**Eagle Plains**	**40.52**	**327**	P	**P**	**05 46 30.0**	**-0.2**
	baz=33,SNR=15						
WVNY	**West Valley, N**	**40.59**	**265**	P	**P**	**05 46 32.0**	**+1.0**
WVNY				IAmb	IAmb	05 46 35.8	
	comp=Z,90nm,1.6s						
D41A	**Chassel**	**40.71**	**278**	P	**P**	**05 46 32.0**	**+0.1**
D41A				IAmb	IAmb	05 46 36.6	
	comp=Z,32nm,0.9s						
E25K	**Arctic Village**	**40.77**	**333**	P	**P**	**05 46 32.3**	**+0.2**
	baz=29						
F26K	**Sheenjek River**	**40.88**	**332**	P	**P**	**05 46 33.6**	**+0.5**
	baz=30						
D23K	**Nanushuk River**	**40.89**	**336**	P	**P**	**05 46 33.7**	**+0.6**
	baz=27						
B21K	**Ikpikpuk River**	**40.90**	**339**	P	**P**	**05 46 33.4**	**+0.2**
	baz=25						
B20K	**Meade River**	**40.91**	**340**	P	**P**	**05 46 33.6**	**+0.4**
B20K	**Meade River**	**40.91**	**340**	P	**P**	**05 46 33.4**	**+0.2**
	baz=24						
M57A	**Sunshine Farm,**	**40.91**	**262**	IAmb	IAmb	05 46 39.2	
	comp=Z,28nm,1.1s						
GLMI	**Grayling**	**40.98**	**272**	P	**P**	**05 46 33.6**	**-0.5**
	baz=34						
ULM	**Lac du Bonnet**	**40.99**	**287**	P	**P**	**05 46 34.3**	**+0.2**
ULM				IAmb	IAmb	05 46 35.4	
	comp=Z,26nm,0.8s						
ULM	**Lac du Bonnet**	**40.99**	**287**‖	*e*P	**P**	**05 46 34.0**	**-0.1**
ULM	**Lac du Bonnet**	**40.99**	**287**	P	**P**	**05 46 34.3**	**+0.2**
	comp=Z,25nm,0.8s,baz=38,slow=8.1,SNR=48						
ULM				LR	LR	06 03 01.6	
	comp=Z,2μm,18.8s,baz=44,slow=36						
	comp=Z,25nm,0.8s						
TOLK	**Toolik Lake Re**	**41.00**	**335**	P	**P**	**05 46 35.5**	**+1.4**
TOLK				IAmb	IAmb	05 46 39.5	
	comp=Z,30nm,0.8s						
TOLK	**Toolik Lake Re**	**41.00**	**335**	P	**P**	**05 46 34.4**	**+0.3**
	baz=27						
H29M	**Whitestone**	**41.00**	**328**	IAmb	IAmb	05 46 56.0	
	comp=Z,42nm,1.7s						
H29M	**Whitestone**	**41.00**	**328**	P	**P**	**05 46 33.5**	**-0.6**
	baz=32						
EYMN	**Ely**	**41.15**	**281**	P	**P**	**05 46 35.9**	**+0.4**
EYMN				IAmb	IAmb	05 46 39.8	
	comp=Z,60nm,1.6s						
EYMN	**Ely**	**41.15**	**281**	P	**P**	**05 46 34.8**	**-0.7**
	baz=36						
N58A	**Sunbury**	**41.17**	**262**	IAmb	IAmb	05 46 39.7	
	comp=Z,28nm,1.0s						
BMAR	**Burnt Mountain**	**41.20**	**332**	P	**P**	**05 46 37.2**	**+1.5**
F25K	**Christian Rive**	**41.25**	**333**	P	**P**	**05 46 36.7**	**+0.6**
	baz=29						
D22K	**Ayikyak River**	**41.29**	**337**	P	**P**	**05 46 37.1**	**+0.7**
	baz=26						
C21K	**Knifeblade Rid**	**41.35**	**338**	P	**P**	**05 46 37.6**	**+0.7**
	baz=24						
ERPA	**Erie**	**41.39**	**266**	P	**P**	**05 46 37.5**	**0.0**
	baz=32						
ARPR	**Arapgir-MALATY**	**41.41**	**103**	P	**P**	**05 46 38.9**	**+1.0**
ARPR				IAmb	IAmb	05 46 43.1	
	comp=Z,25nm,1.1s						
I30M	**Mount Dempster**	**41.42**	**326**	P	**P**	**05 46 37.3**	**-0.4**
I30M	**Mount Dempster**	**41.42**	**326**	P	**P**	**05 46 37.8**	**+0.2**
	baz=32,SNR=20						
M55A	**Ridgway**	**41.45**	**264**	P	**P**	**05 46 38.0**	**0.0**
M55A				IAmb	IAmb	05 48 01.9	
	comp=Z,80nm,1.9s						
AKH	**Akhalkalaki**	**41.46**	**96**	P	**P**	**05 46 39.5**	**+1.2**
AKH				IAmb	IAmb	05 46 43.6	
	comp=Z,53nm,1.1s						
AKH	**Akhalkalaki**	**41.46**	**96**	P	**P**	**05 46 39.5**	**+1.2**
AKH				pmax	pmax		
	comp=Z,53nm,1.1s						
G26K	**Porcupine Rive**	**41.47**	**331**	P	**P**	**05 46 38.0**	**+0.2**
	baz=29						
ABKAR	**Akbulak array**	**41.50**	**75**	P	**P**	**05 46 39.1**	**+0.7**
E23K	**Chandalar**	**41.53**	**335**	P	**P**	**05 46 38.8**	**+0.3**
	baz=27						
H27K	**Steamboat Moun**	**41.65**	**330**	P	**P**	**05 46 39.5**	**+0.1**
	baz=30						
B35A	**Bob, Littlefor**	**41.69**	**283**	P	**P**	**05 46 40.6**	**+0.7**
B35A				IAmb	IAmb	05 46 41.4	
	comp=Z,19nm,0.8s						
F24K	**Squaw Lake**	**41.72**	**334**	P	**P**	**05 46 40.4**	**+0.5**
	baz=27						
HILA	**High Level**	**41.75**	**309**	P	**P**	**05 46 40.9**	**+0.6**
MAK	**Makhachkala**	**41.75**	**91***c i*	P	**P**	**05 46 36.2**	**-4.2**
MAK				*e*S	**S**	**05 52 52.4**	**-4.8**
MAK				*e*SS	**SS**	**05 56 02.9**	**+0.4**
MAK				pmax	pmax		
	comp=Z,213nm,1.8s						
MAK				MLR	MLR		
	comp=Z,833nm,16.0s						
SSPA	**Standing Stone**	**41.81**	**263**	P	**P**	**05 46 42.0**	**+1.1**
SSPA				IAmb	IAmb	05 46 45.8	
	comp=Z,32nm,1.1s						
SSPA	**Standing Stone**	**41.81**	**263**	P	**P**	**05 46 40.7**	**-0.2**
	baz=31						
E22K	**Anaktuvuk Pass**	**41.83**	**336**	P	**P**	**05 46 41.8**	**+0.9**
E22K	**Anaktuvuk Pass**	**41.83**	**336**	P	**P**	**05 46 40.7**	**-0.2**
	baz=26						
E21K	**Killik River**	**41.88**	**338**	P	**P**	**05 46 41.1**	**-0.3**
	baz=25						
J30M	**Hart River**	**41.96**	**326**	IAmb	IAmb	05 46 47.7	
	comp=Z,27nm,1.2s						
J30M	**Hart River**	**41.96**	**326**	P	**P**	**05 46 42.0**	**-0.1**
	baz=32						
I28M	**Miner Creek**	**42.00**	**328**	P	**P**	**05 46 42.2**	**-0.1**
	baz=30						
D20K	**Etivluk River**	**42.02**	**339**	P	**P**	**05 46 42.7**	**+0.2**
	baz=23						
C19K	**Lookout Ridge**	**42.07**	**341**	P	**P**	**05 46 42.9**	**+0.1**
	baz=22						
FYU	**Fort Yukon**	**42.08**	**332**	P	**P**	**05 46 45.0**	**+2.2**
B18K	**Kokolik River**	**42.11**	**342**	P	**P**	**05 46 43.1**	**0.0**
	baz=21						
I27K	**Kandik River**	**42.21**	**329**	P	**P**	**05 46 44.2**	**+0.1**
	baz=30						
M53A	**WI Miller and**	**42.23**	**266**	P	**P**	**05 46 45.4**	**+1.0**
M53A	**WI Miller and**	**42.23**	**266**	P	**P**	**05 46 43.8**	**-0.6**
	baz=32						
E38A	**The Farm, Brul**	**42.27**	**280**	P	**P**	**05 46 45.5**	**+0.9**
BRVK	**Borovoye**	**42.30**	**64**	P	**P**	**05 46 45.5**	**+0.7**
BRVK	**Borovoye**	**42.30**	**64**	P	**P**	**05 46 45.5**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,27nm,1.8s						
BVAR	**Borovoye Array**	**42.36**	**64**	P	**P**	**05 46 46.4**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=324,slow=8.3,SNR=18						
BVAR				PP	**PP**	**05 48 23.9**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=337,slow=9.4,SNR=5.1						
	comp=Z,3.1nm,0.6s						
G24K	**Hadweenzic Riv**	**42.38**	**333**	P	**P**	**05 46 47.7**	**+2.4**
G24K				IAmb	IAmb	05 46 51.8	
	comp=Z,33nm,0.9s						
G24K	**Hadweenzic Riv**	**42.38**	**333**	P	**P**	**05 46 45.2**	**-0.1**
	baz=27						
COLD	**Coldfoot**	**42.38**	**335**	P	**P**	**05 46 45.5**	**+0.2**
	baz=26						
E20K	**Nigu River**	**42.38**	**339**	P	**P**	**05 46 45.7**	**+0.3**
	baz=23						
M52A	**Chesterland**	**42.42**	**267**	IAmb	IAmb	05 46 49.8	
	comp=Z,22nm,0.9s						
D19K	**Kuna River**	**42.44**	**340**	P	**P**	**05 46 47.2**	**+1.4**
D19K	**Kuna River**	**42.44**	**340**	P	**P**	**05 46 45.8**	**0.0**
	baz=22						
J29N	**Klondike Camp**	**42.49**	**326**	IAmb	IAmb	05 46 51.3	
	comp=Z,17nm,1.1s						
J29N	**Klondike Camp**	**42.49**	**326**	P	**P**	**05 46 46.4**	**+0.1**
	baz=31						
TGTN	**Hyland Airport**	**42.56**	**318**	P	**P**	**05 46 46.4**	**-0.5**
	baz=34						
AAM	**Ann Arbor**	**42.70**	**269**	P	**P**	**05 46 47.6**	**-0.6**
	baz=33						
MAYO	**Mayo, Yukon**	**42.70**	**325**	IAmb	IAmb	05 47 18.1	
	comp=Z,20nm,0.7s						
MAYO	**Mayo, Yukon**	**42.70**	**325**	P	**P**	**05 46 47.8**	**-0.2**
	baz=31						
C18K	**Utukok River**	**42.71**	**341**	P	**P**	**05 46 49.5**	**+1.4**
C18K	**Utukok River**	**42.71**	**341**	P	**P**	**05 46 48.0**	**0.0**
	baz=21						
I26K	**Coal Creek Min**	**42.79**	**330**	P	**P**	**05 46 50.0**	**+1.3**
I26K				IAmb	IAmb	05 46 54.5	
	comp=Z,31nm,0.9s						
I26K	**Coal Creek Min**	**42.79**	**330**	P	**P**	**05 46 49.0**	**+0.3**
	baz=29						
G23K	**Bananza Creek**	**42.82**	**334**	P	**P**	**05 46 49.4**	**+0.5**
	baz=26						
G40A	**Rib Lake**	**42.84**	**278**	IAmb	IAmb	05 46 53.7	
	comp=Z,38nm,1.3s						
N53A	**Lisbon**	**42.84**	**266**	IAmb	IAmb	05 46 52.6	
	comp=Z,82nm,1.9s						
EGAK	**Eagle**	**42.84**	**328**	P	**P**	**05 46 49.8**	**+0.7**
EGAK	**Eagle**	**42.84**	**328**	P	**P**	**05 46 50.0**	**+0.9**
	baz=30,SNR=12						
P57A	**Homestead Farm**	**42.84**	**262**	P	**P**	**05 46 48.4**	**-0.9**
P57A				IAmb	IAmb	05 46 53.5	
	comp=Z,79nm,1.8s						
K29M	**Barlow Dome**	**42.86**	**326**	P	**P**	**05 46 49.2**	**-0.2**
	baz=31						
G22K	**Bettles**	**42.88**	**335**	P	**P**	**05 46 49.8**	**+0.4**
	baz=25						
F21K	**Alatna River**	**42.92**	**337**	P	**P**	**05 46 51.0**	**+1.2**
F21K	**Alatna River**	**42.92**	**337**	P	**P**	**05 46 49.9**	**+0.2**
	baz=24						
GNI	**Garni**	**43.03**	**96***ce*	P	**P**	**05 46 53.0**	**+1.9**
GNI				pmax	pmax		
	comp=Z,29nm,1.3s						
PRP	**Porcupine Dome**	**43.07**	**331**	P	**P**	**05 46 52.9**	**+1.8**
PRP				IAmb	IAmb	05 46 57.3	
	comp=Z,23nm,0.9s						
PRP	**Porcupine Dome**	**43.07**	**331**	P	**P**	**05 46 51.2**	**+0.2**
	baz=28						
DAWY	**Dawson**	**43.08**	**327**	P	**P**	**05 46 52.4**	**+1.3**
DAWY				IAmb	IAmb	05 46 56.4	
	comp=Z,24nm,1.1s						
DAWY	**Dawson**	**43.08**	**327**	P	**P**	**05 46 51.6**	**+0.5**
	baz=30,SNR=14						
C17K	**DeLong Mountai**	**43.12**	**342**	P	**P**	**05 46 51.8**	**+0.5**
	baz=19						
O54A	**Avella**	**43.18**	**265**	P	**P**	**05 46 53.1**	**+0.9**
H24K	**Noodor Dome**	**43.22**	**333**	P	**P**	**05 46 52.8**	**+0.5**
	baz=27						
FARO	**Faro, Yukon**	**43.26**	**322**	P	**P**	**05 46 53.0**	**+0.4**
	baz=32						
E19K	**Redstone River**	**43.28**	**339**	P	**P**	**05 46 53.9**	**+1.3**
E19K	**Redstone River**	**43.28**	**339**	P	**P**	**05 46 53.2**	**+0.5**
	baz=22						
L48A	**N Adams**	**43.31**	**270**	IAmb	IAmb	05 47 02.0	
	comp=Z,49nm,1.4s						
MCWV	**Mont Chateau**	**43.42**	**264**	IAmb	IAmb	05 46 58.2	
	comp=Z,24nm,1.0s						
O53A	**New Philadelph**	**43.46**	**265**	IAmb	IAmb	05 46 58.6	
	comp=Z,41nm,1.4s						
O53A	**New Philadelph**	**43.46**	**265**	P	**P**	**05 46 54.1**	**-0.2**
	baz=31						
M31M	**Drury Creek, Y**	**43.54**	**323**	P	**P**	**05 46 56.7**	**+1.9**
M31M	**Drury Creek, Y**	**43.54**	**323**	P	**P**	**05 46 55.1**	**+0.3**
	baz=31						
J26L	**Joseph Creek**	**43.58**	**329**	P	**P**	**05 46 56.5**	**+1.3**
J26L				IAmb	IAmb	05 47 00.8	
	comp=Z,25nm,0.9s						
J26L	**Joseph Creek**	**43.58**	**329**	P	**P**	**05 46 55.7**	**+0.5**
	baz=28,SNR=22						
L29M	**L29M**	**43.63**	**325**	P	**P**	**05 46 57.0**	**+1.4**
L29M				IAmb	IAmb	05 47 00.6	
	comp=Z,21nm,0.9s						
L29M	**L29M**	**43.63**	**325**	P	**P**	**05 46 55.8**	**+0.2**
	baz=30						
F36A	**Milaca**	**43.66**	**281**	P	**P**	**05 46 56.6**	**+0.7**
F36A				IAmb	IAmb	05 46 59.7	
	comp=Z,51nm,1.7s						
CBN	**Corbin Frederi**	**43.69**	**260**	P	**P**	**05 46 55.7**	**-0.5**
CBN				IAmb	IAmb	05 47 06.3	
	comp=Z,38nm,1.4s						
K27K	**Chicken**	**43.69**	**328**	P	**P**	**05 46 57.1**	**+1.2**
K27K				IAmb	IAmb	05 47 01.1	
	comp=Z,24nm,0.9s						
K27K	**Chicken**	**43.69**	**328**	P	**P**	**05 46 55.9**	**0.0**
	baz=29						
E18K	**Tukpahlearik C**	**43.78**	**340**	P	**P**	**05 46 56.0**	**-0.7**
	baz=20						
POKR	**Poker Plat Res**	**43.79**	**332**	P	**P**	**05 46 57.9**	**+1.1**
POKR	**Poker Plat Res**	**43.79**	**332**	P	**P**	**05 46 57.2**	**+0.4**
	baz=26						
M30M	**Minto, Yukon**	**43.79**	**324**	P	**P**	**05 46 58.4**	**+1.6**
M30M				IAmb	IAmb	05 47 02.2	
	comp=Z,31nm,1.1s						
M30M	**Minto, Yukon**	**43.79**	**324**	P	**P**	**05 46 57.5**	**+0.6**
	baz=30						
H22K	**Ishtalitna Cre**	**43.79**	**335**	P	**P**	**05 46 56.7**	**-0.1**
	baz=25						
O52A	**Adamsville**	**43.82**	**266**	P	**P**	**05 46 57.6**	**+0.3**
O52A				IAmb	IAmb	05 47 01.4	
	comp=Z,56nm,1.5s						
J25K	**Salcha River,**	**43.84**	**331**	IAmb	IAmb	05 47 03.1	
	comp=Z,23nm,0.9s						
J25K	**Salcha River,**	**43.84**	**331**	P	**P**	**05 46 56.4**	**-0.9**
	baz=27						
D17K	**Noatak River**	**43.84**	**342**	P	**P**	**05 46 57.5**	**+0.4**
	baz=19						
WTLY	**Watson Lake, Y**	**43.88**	**318**	IAmb	IAmb	05 47 03.9	
	comp=Z,38nm,1.2s						
WTLY	**Watson Lake, Y**	**43.88**	**318**	P	**P**	**05 46 57.9**	**+0.3**
	baz=33						
SPMN	**Marine on St.**	**43.90**	**280**	P	**P**	**05 46 57.9**	**+0.1**
SPMN	**Marine on St.**	**43.90**	**280**	P	**P**	**05 46 57.9**	**+0.1**
	baz=34						
F19K	**Shaleruckik Mo**	**43.94**	**339**	P	**P**	**05 46 58.7**	**+0.8**
F19K	**Shaleruckik Mo**	**43.94**	**339**	P	**P**	**05 46 58.6**	**+0.7**
	baz=22						
TOAD	**Toad River Com**	**43.96**	**314**	P	**P**	**05 46 58.4**	**+0.2**
	baz=33						
IL31		**43.99**	**331**	IAmb	IAmb	05 47 03.5	
	comp=Z,18nm,1.0s						
ILAR	**Eielson Array**	**43.99**	**331**	P	**P**	**05 46 59.5**	**+1.1**
	comp=Z,12nm,0.9s,baz=25,slow=7.3,SNR=64						
ILAR				PcP	**PcP**	**05 48 43.5**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=18,slow=2.8,SNR=5.0						
ILAR				LR	LR	06 07 32.5	
	comp=Z,284nm,18.3s,baz=12,slow=39						
	comp=Z,12nm,0.9s						
N49A	**Columbus Grove**	**44.07**	**269**	IAmb	IAmb	05 47 02.6	
	comp=Z,16nm,0.8s						
MDM	**Murphy Dome**	**44.08**	**332**	P	**P**	**05 47 00.8**	**+1.7**
MDM				IAmb	IAmb	05 47 05.1	
	comp=Z,36nm,1.2s						
COLA	**College**	**44.09**	**332**	P	**P**	**05 47 01.0**	**+1.9**
COLA				IAmb	IAmb	05 47 04.8	
	comp=Z,34nm,0.8s						
COLA	**College**	**44.09**	**332**	P	**P**	**05 47 01.0**	**+1.9**
COLA	**College**	**44.

L27K IAmb IAmb 05 47 08.8
comp=Z,31nm,1.1s
L27K Beaver Creek, 44.49 328 P **P** **05 47 02.5 +0.1**
baz=28
WRH Wood River Hil 44.49 332 IAmb IAmb 05 47 39.3
comp=Z,24nm,1.6s
I21K Tanana 44.55 335 P **P** **05 47 04.6 +1.8**
I21K Tanana 44.55 335 P **P** **05 47 02.7 -0.1**
baz=24
NEA2 Nenana 44.57 333 IAmb IAmb 05 47 08.5
comp=Z,34nm,0.9s
NEA2 Nenana 44.57 333 P **P** **05 47 02.4 -0.6**
baz=25,SNR=19
K24K Donnelly Dome 44.65 330 P **P** **05 47 03.6 -0.1**
baz=27,SNR=8.1
S57A Dark Hollow, R 44.70 261 IAmb IAmb 05 47 15.9
comp=Z,59nm,1.6s
H20K Anotleneega Mo 44.74 336 P **P** **05 47 04.3 -0.1**
baz=23
F33A 5 Mile Ranch, 44.76 283 P **P** **05 47 05.8 +1.0**
O49A Covington 44.76 268 IAmb IAmb 05 47 08.0
comp=Z,17nm,0.9s
F17K Baldwin Pennin 44.80 340 P **P** **05 47 06.0 +1.3**
F17K IAmb IAmb 05 47 09.6
comp=Z,14nm,0.9s
F17K Baldwin Pennin 44.80 340 P **P** **05 47 04.6 -0.1**
baz=20
JFWS Jewell Farm 44.82 276 P **P** **05 47 04.7 -0.5**
baz=33
N30M Aishikik Lake 44.83 324 P **P** **05 47 07.2 +2.0**
N30M IAmb IAmb 05 47 10.7
comp=Z,16nm,0.9s
N30M Aishikik Lake 44.83 324 P **P** **05 47 05.4 +0.2**
baz=30
T59A Double "B" Far 44.83 260 IAmb IAmb 05 47 15.3
comp=Z,24nm,1.1s
L26K Log Cabin Wild 44.85 328 P **P** **05 47 07.3 +2.1**
L26K IAmb IAmb 05 47 10.8
comp=Z,25nm,1.5s
L26K Log Cabin Wild 44.85 328 P **P** **05 47 06.0 +0.7**
baz=28
BVCY Beaver Creek 44.85 327 P **P** **05 47 05.9 +0.5**
baz=28
P33M Teslin, Yukon 44.86 320 P **P** **05 47 07.2 +1.7**
P33M Teslin, Yukon 44.86 320 P **P** **05 47 05.6 +0.2**
baz=31,SNR=9.1
EDM Edmonton 44.92 302 P **P** **05 47 06.7 +0.7**
EDM Edmonton 44.92 302 P **P** **05 47 06.7 +0.7**
EDM pmax pmax
comp=Z,72nm,1.3s
G18K Tagagawik 44.95 339 P **P** **05 47 05.9 -0.1**
baz=21
H19K Roundabout Mou 44.96 337 P **P** **05 47 05.9 -0.1**
baz=22
WHY Whitehorse 44.99 322 P **P** **05 47 07.8 +1.3**
WHY IAmb IAmb 05 47 11.6
comp=Z,16nm,1.1s
WHY Whitehorse 44.99 322 P **P** **05 47 06.7 +0.2**
baz=30
MENT Mentasta 45.00 329 P **P** **05 47 08.2 +1.7**
MENT Mentasta 45.00 329 P **P** **05 47 08.8 +2.3**
O48B Farmland 45.03 269 IAmb IAmb 05 47 10.2
comp=Z,16nm,0.9s
O48B Farmland 45.03 269 P **P** **05 47 06.6 -0.4**
baz=32
R33M Jennings River 45.08 318 P **P** **05 47 09.5 +2.2**
R33M IAmb IAmb 05 47 13.1
comp=Z,21nm,1.1s
R33M Jennings River 45.08 318 P **P** **05 47 07.4 +0.1**
baz=31
M27K Edge Creek, AK 45.13 327 P **P** **05 47 07.8 +0.2**
baz=28
O30N Mendenhall 45.19 323 P **P** **05 47 07.8 -0.2**
baz=30
YUK4 Talbot Arm 45.30 324 P **P** **05 47 07.4 -1.6**
baz=29
I20K Naaghedeneel 45.32 336 P **P** **05 47 10.5 +1.6**
I20K IAmb IAmb 05 47 14.9
comp=Z,24nm,1.0s
I20K Naaghedeneel 45.32 336 P **P** **05 47 09.2 +0.3**
baz=23
MCK McKinley 45.32 332 P **P** **05 47 08.9 -0.2**
baz=25
YUK3 Moose Creek 45.33 326 P **P** **05 47 09.2 -0.1**
baz=28
PAX Paxson 45.34 330 P **P** **05 47 09.6 +0.4**
baz=26
Q51A Peebles 45.36 267 P **P** **05 47 09.9 +0.3**
Q51A IAmb IAmb 05 47 13.0
comp=Z,15nm,1.0s
BPAW Bear Paw Mtn. 45.37 333 P **P** **05 47 10.7 +1.3**
BPAW IAmb IAmb 05 47 14.8
comp=Z,27nm,1.0s
BPAW Bear Paw Mtn. 45.37 333 P **P** **05 47 10.0 +0.6**
baz=24,SNR=14
P49A Miami Univ. Ec 45.47 268 P **P** **05 47 10.8 +0.3**
baz=31
HYT Haines Junctio 45.48 323 IAmb IAmb 05 47 16.1
comp=Z,19nm,1.0s
HYT Haines Junctio 45.48 323 P **P** **05 47 10.9 +0.5**
baz=29
BRLDA Berland Lookou 45.54 306 P **P** **05 47 12.1 +1.1**
YUK6 Outpost Mounta 45.58 324 P **P** **05 47 11.6 +0.3**
baz=29
DGMT Dagmar 45.59 292 P **P** **05 47 11.8 +0.5**
baz=34
H18K Honhosa River 45.60 338 P **P** **05 47 11.9 +0.7**
baz=21
G17K Kiwalik Mounta 45.60 339 P **P** **05 47 11.9 +0.8**
baz=20
RND Reindeer 45.60 332 IAmb IAmb 05 47 18.0
comp=Z,14nm,1.2s
YUK8 Steele Glacier 45.61 325 P **P** **05 47 11.9 +0.4**
baz=28,SNR=13
DHY Denali Highway 45.62 331 P **P** **05 47 12.0 +0.4**
baz=26
MMAI Mount Meron Ar 45.62 110 LR LR 06 09 56.3
comp=Z,130nm,18.6s,baz=319,slow=41
P32M Atlin 45.62 320 P **P** **05 47 11.9 +0.4**
baz=30
DLBC Dease Lake 45.65 317 IAmb IAmb 05 47 18.2
comp=Z,27nm,1.5s
DLBC Dease Lake 45.65 317 P **P** **05 47 12.4 +0.7**
baz=31
DLBC Dease Lake 45.65 317 LR LR 06 06 23.5
comp=Z,383nm,18.8s,baz=34,slow=36
BILL Bilibino 45.66 358 *e*P **P** **05 47 11.4 -0.2**
BILL pmax pmax
comp=Z,6.0nm,1.3s
SFIN Lafayette 45.70 271 P **P** **05 47 12.6 +0.3**
baz=32
GCSA Galena City Sc 45.76 337 P **P** **05 47 13.2 +0.9**
baz=22
BLA Blacksburg 45.76 263 P **P** **05 47 12.9 +0.1**
baz=30
HARP HAARP 45.79 329 P **P** **05 47 13.2 +0.5**
baz=26
Q32M Nakina River 45.80 319 IAmb IAmb 05 47 20.1
comp=Z,44nm,1.6s
Q32M Nakina River 45.80 319 P **P** **05 47 13.4 +0.4**
baz=31
CHUM Lake Minchumin 45.80 334 P **P** **05 47 13.4 +0.7**
baz=24
P48A Milroy 45.82 269 P **P** **05 47 13.5 +0.3**
P48A IAmb IAmb 05 48 03.9
comp=Z,23nm,1.4s
TRF Thorofare Moun 45.83 333 P **P** **05 47 13.4 +0.2**
baz=24
J20K Nowinta River 45.84 335 P **P** **05 47 13.4 +0.4**
baz=23
E28A Huff 45.84 287 P **P** **05 47 14.2 +0.9**
KTH Kantishna Hill 45.85 333 IAmb IAmb 05 47 21.6
comp=Z,12nm,1.0s
F15K North Star Dit 45.94 342 P **P** **05 47 13.9 +0.1**
baz=18
G16K Koyuk River 45.94 340 P **P** **05 47 13.9 +0.1**
baz=19
P30M Million Dollar 45.97 323 P **P** **05 47 14.4 +0.2**
baz=29
H17K Granite Mounta 46.03 339 P **P** **05 47 16.4 +1.8**
H17K Granite Mounta 46.03 339 P **P** **05 47 14.5 -0.1**
baz=20
WAT1 Susitna Watana 46.07 331 P **P** **05 47 15.3 +0.4**
baz=25
WAT6 Susitna Watana 46.14 331 P **P** **05 47 16.0 +0.3**
baz=25
SKAG Skagway 46.15 321 P **P** **05 47 16.5 +1.0**
SKAG IAmb IAmb 05 47 20.7
comp=Z,12nm,0.9s
SKAG Skagway 46.15 321 P **P** **05 47 17.3 +1.8**
SKAG Skagway 46.15 321 P **P** **05 47 15.8 +0.3**
baz=30
TAM Tamanrasset 46.16 150 P **P** **05 47 16.2 0.0**
TAM Tamanrasset 46.16 150 P **P** **05 47 16.2 0.0**
TAM pmax pmax
comp=Z,7.0nm,1.2s
CAST Castle Rocks 46.19 334 P **P** **05 47 16.4 +0.5**
CAST Castle Rocks 46.19 334 P **P** **05 47 15.8 -0.1**
baz=23
O29M Mount Kennedy 46.20 324 IAmb IAmb 05 47 21.9
comp=Z,21nm,1.0s
O29M Mount Kennedy 46.20 324 P **P** **05 47 16.0 -0.1**
baz=28
CTGM Chitina Glacie 46.25 326 P **P** **05 47 17.9 +1.4**
CTGM IAmb IAmb 05 47 21.7
comp=Z,15nm,1.0s
MCARA McCarthy VSAT 46.25 327 P **P** **05 47 17.9 +1.6**
MCARA IAmb IAmb 05 47 21.4
comp=Z,16nm,1.1s
MCARA McCarthy VSAT 46.25 327 P **P** **05 47 16.0 -0.3**
baz=27
CTG Chitna Glacier 46.25 326 P **P** **05 47 15.9 -0.6**
baz=28
J19K Poorman 46.26 336 P **P** **05 47 15.9 -0.5**
baz=22
M24K Tolsona, Glenn 46.26 329 P **P** **05 47 16.4 0.0**
baz=26
LOGN Logan Glacier 46.30 326 P **P** **05 47 18.7 +1.8**
LOGN IAmb IAmb 05 47 22.5
comp=Z,13nm,1.2s
GLB Gilahina Butte 46.36 328 IAmb IAmb 05 47 22.4
comp=Z,22nm,1.2s
N25K Chitina, Valde 46.38 328 IAmb IAmb 05 47 20.2
comp=Z,15nm,0.8s
N25K Chitina, Valde 46.38 328 P **P** **05 47 17.1 -0.4**
baz=26
S34M Telegraph Cree 46.40 317 P **P** **05 47 18.2 +0.7**
baz=30
HDIL Hopedale 46.43 273 P **P** **05 47 18.3 +0.3**
baz=32
O44A Mansfield 46.44 272 IAmb IAmb 05 47 22.2
comp=Z,25nm,1.1s
VRDI Verde Repeater 46.48 327 IAmb IAmb 05 47 25.0
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 46.50 53 *i* P **P** **05 47 19.7 +1.4**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 46.50 53 P **P** **05 47 18.8 +0.5**
comp=Z,2.5nm,0.7s,baz=332,slow=8.1,SNR=8.9
ZALV PcP **PcP** **05 48 53.1 +0.6**
comp=Z,0.8nm,0.4s,baz=323,slow=3.6,SNR=3.0
ZALV LR LR 06 08 08.9
comp=Z,195nm,20.8s,baz=303,slow=38
comp=Z,2.5nm,0.7s
G15K Niukluk 46.54 341 P **P** **05 47 19.6 +1.0**
baz=18
GRNC Granite Creek 46.55 326 P **P** **05 47 20.7 +1.7**
GRNC IAmb IAmb 05 47 24.2
comp=Z,16nm,0.9s
P29M Windy Craggy 46.59 323 IAmb IAmb 05 47 24.8
comp=Z,12nm,1.0s
P29M Windy Craggy 46.59 323 P **P** **05 47 19.5 +0.5**
baz=29
K20K Telida 46.59 335 P **P** **05 47 20.0 +1.0**
K20K IAmb IAmb 05 47 25.1
comp=Z,21nm,0.9s
K20K Telida 46.59 335 P **P** **05 47 19.6 +0.6**
baz=22
ECSD EROS Data Cent 46.64 282 P **P** **05 47 19.8 +0.1**
H16K Elim 46.64 340 P **P** **05 47 19.8 +0.4**
baz=19
PPLA Purkeypile 46.69 333 P **P** **05 47 20.1 +0.1**
baz=23
SCM Sheep Creek Mo 46.74 330 P **P** **05 47 21.9 +1.6**
SCM Sheep Creek Mo 46.74 330 P **P** **05 47 20.6 +0.3**
baz=25
SCM Sheep Creek Mo 46.74 330 P **P** **05 47 21.9 +1.6**
SCM pmax pmax
comp=Z,30nm,0.9s
KLU Klutina 46.76 329 IAmb IAmb 05 47 25.8
comp=Z,12nm,0.9s
KLU Klutina 46.76 329 P **P** **05 47 21.1 +0.6**
baz=26
TGL Tana Glacier 46.77 327 IAmb IAmb 05 47 25.7
comp=Z,18nm,0.9s
PINM Pinnacle 46.77 325 P **P** **05 47 21.0 +0.5**
baz=28
CRQE Cirque 46.83 327 P **P** **05 47 21.1 +0.1**
baz=27
CRQM Cirque 46.83 327 P **P** **05 47 20.9 -0.2**
SCIA State Center 46.84 278 P **P** **05 47 22.6 +1.3**
SCIA State Center 46.84 278 P **P** **05 47 21.1 -0.1**
baz=32
M23K Glacier View 46.86 330 P **P** **05 47 21.8 +0.7**
baz=25
U54A Nelsons Funny 46.91 263 IAmb IAmb 05 47 25.6
comp=Z,16nm,0.9s
J18K Innoko River 46.93 336 P **P** **05 47 22.0 +0.3**
baz=21
JIS Juneau Island 46.94 320 P **P** **05 47 21.0 -0.8**
JIS IAmb IAmb 05 47 28.1
comp=Z,14nm,1.0s
JIS Juneau Island 46.94 320 P **P** **05 47 24.4 +2.7**
PNL Peninsula 46.95 324 P **P** **05 47 22.1 +0.2**
baz=28
BMRM Bremner River 46.96 328 P **P** **05 47 22.1 +0.2**
baz=26
T35M Bob Quinn 46.96 316 IAmb IAmb 05 47 37.0
comp=Z,36nm,1.8s
T35M Bob Quinn 46.96 316 P **P** **05 47 22.2 +0.2**
baz=30
SML Sawmill 46.96 331 P **P** **05 47 22.0 0.0**
SML IAmb IAmb 05 47 28.4
comp=Z,16nm,0.9s
SML Sawmill 46.96 331 P **P** **05 47 22.5 +0.5**
baz=25
R32K Eaglecrest 46.98 320 P **P** **05 47 22.6 +0.5**
baz=29
WAX Waxell Ridge 47.05 326 P **P** **05 47 24.4 +1.7**
WAX IAmb IAmb 05 47 27.9
comp=Z,20nm,0.9s
MESA MESA 47.09 326 P **P** **05 47 24.9 +1.7**
MESA IAmb IAmb 05 47 29.1
comp=Z,17nm,1.0s
MESA MESA 47.09 326 P **P** **05 47 23.2 +0.1**
baz=27
GHO Glory Hole Cre 47.11 331 P **P** **05 47 24.6 +1.4**
ANM Nome 47.13 342 P **P** **05 47 24.7 +1.6**
baz=17
I17K Unalakleet 47.14 339 P **P** **05 47 24.3 +1.1**
baz=19
KURK Kurchatov 47.16 60 P **P** **05 47 23.9 +0.3**
KURK IAmb IAmb 05 47 29.4
comp=Z,9.3nm,0.8s
KURK Kurchatov 47.16 60 P **P** **05 47 23.9 +0.3**
KURK pmax pmax
comp=Z,9.0nm,0.8s
KURBB Kurchatov Arra 47.21 60 P **P** **05 47 24.5 +0.5**
comp=Z,5.5nm,0.7s,baz=327,slow=7.4,SNR=44
KURBB PcP **PcP** **05 48 55.7 +0.6**
comp=Z,0.9nm,0.9s,baz=317,slow=3.3,SNR=3.5
KURBB PP **PP** **05 49 15.4 +0.9**
comp=Z,2.0nm,1.0s,baz=325,slow=10,SNR=5.3
KURBB LR LR 06 07 09.5
comp=Z,458nm,19.9s,baz=333,slow=36
comp=Z,5.5nm,0.7s
WCI Wyandotte Cave 47.22 269 P **P** **05 47 24.8 +0.6**
WCI IAmb IAmb 05 47 27.2
comp=Z,13nm,0.8s
WCI Wyandotte Cave 47.22 269 P **P** **05 47 24.6 +0.4**
baz=30
WCI Wyandotte Cave 47.22 269 P **P** **05 47 24.8 +0.6**
WCI pmax pmax
comp=Z,13nm,0.8s
V55A Taylorsville 47.25 262 P **P** **05 47 23.8 -0.7**
BERG Berg Lake 47.28 327 P **P** **05 47 26.1 +1.7**
TTA Tatalina 47.31 336 P **P** **05 47 27.1 +2.4**
TTA IAmb IAmb 05 47 31.4
comp=Z,9.5nm,1.0s
TTA Tatalina 47.31 336 P **P** **05 47 28.0 +3.3**
TTA Tatalina 47.31 336 P **P** **05 47 24.7 0.0**
baz=21
TTA Tatalina 47.31 336 P **P** **05 47 27.1 +2.4**
TTA pmax pmax
comp=Z,9.0nm,1.0s
PMR Palmer 47.32 331 P **P** **05 47 25.9 +1.3**
PMR Palmer 47.32 331 P **P** **05 47 26.1 +1.5**
PMR Palmer 47.32 331 P **P** **05 47 25.3 +0.7**
baz=24
PMR Palmer 47.32 331 P **P** **05 47 25.9 +1.3**
KNK Knik Glacier 47.35 330 IAmb IAmb 05 47 31.7
comp=Z,9.9nm,0.8s
KNK Knik Glacier 47.35 330 P **P** **05 47 25.2 +0.2**
baz=24
M22K Willow 47.36 332 P **P** **05 47 25.5 +0.6**
baz=24
L20K Farewell, AK 47.37 334 P **P** **05 47 25.2 0.0**
baz=22
SKT Skwentna 47.41 332 IAmb IAmb 05 47 29.9
comp=Z,16nm,0.9s
SKT Skwentna 47.41 332 P **P** **05 47 25.6 +0.1**
baz=23
HMT Hamilton 47.46 327 P **P** **05 47 27.6 +1.8**
RAGM Ragged Mountai 47.50 327 P **P** **05 47 27.8 +1.7**
GLI Glacier Island 47.56 329 P **P** **05 47 26.7 +0.1**
baz=25
EYAK Cordova Ski Ar 47.58 328 P **P** **05 47 31.4 +4.7**
EYAK Cordova Ski Ar 47.58 328 P **P** **05 47 27.6 +0.8**
baz=25
S31K Pelican 47.69 321 P **P** **05 47 27.9 +0.3**
baz=28
J16K Anvik River 47.70 338 IAmb IAmb 05 47 33.4
comp=Z,14nm,0.9s
J16K Anvik River 47.70 338 P **P** **05 47 28.7 +1.0**
baz=19
S32K Killisnoo 47.70 319 P **P** **05 47 28.2 +0.5**
baz=29
SUA Susitna One 47.74 332 IAmb IAmb 05 47 32.5
comp=Z,20nm,0.8s
SUA Susitna One 47.74 332 P **P** **05 47 28.2 0.0**
baz=23
M20K Styx River 47.80 333 IAmb IAmb 05 47 32.1
comp=Z,20nm,0.8s
M20K Styx River 47.80 333 P **P** **05 47 27.9 -0.6**
baz=22
L19K White Mountain 47.82 335 P **P** **05 47 28.6 0.0**
baz=22
LAO LASA Array 47.83 292 P **P** **05 47 29.8 +0.8**
LAO LASA Array 47.83 292 P **P** **05 47 28.8 -0.1**
baz=33
KAIM Kayak Island 47.86 327 P **P** **05 47 28.8 -0.1**
baz=26
K17K Iditarod 47.89 337 P **P** **05 47 28.8 -0.2**
baz=20
RC01 Rabbit Creek A 47.90 331 P **P** **05 47 30.1 +0.9**
RC01 Rabbit Creek A 47.90 331 P **P** **05 47 28.6 -0.5**
baz=24
KMSC Kings Mountain 47.92 262 P **P** **05 47 29.4 -0.2**
baz=29
M19K Big River Lodg 48.00 334 P **P** **05 47 29.9 -0.1**
baz=22
EGMT Eagleton 48.00 295 P **P** **05 47 31.4 +1.2**
EGMT Eagleton 48.00 295 P **P** **05 47 29.9 -0.4**
baz=33,SNR=26
L18K Granite Mounta 48.09 336 P **P** **05 47 31.1 +0.4**
baz=21
SIT Sitka 48.26 320 P **P** **05 47 31.7 -0.3**
baz=28
N20K Mount Spurr 48.26 332 P **P** **05 47 31.1 -1.0**
baz=23
P40A Paris 48.40 275 P **P** **05 47 33.3 0.0**
P40A IAmb IAmb 05 47 36.8
comp=Z,42nm,1.8s
P23K Montague Islan 48.43 329 P **P** **05 47 33.3 0.0**
baz=24
L17K Donlin 48.43 337 P **P** **05 47 33.1 -0.2**
baz=20
TKL Tuckaleechee C 48.44 265 LR LR 06 06 35.3
comp=Z,753nm,20.4s,baz=36,slow=34
O22K Cooper Landing 48.45 331 P **P** **05 47 33.5 +0.1**
baz=24
EIL Elat 48.46 113 LR LR 06 10 48.5
comp=Z,130nm,20.0s,baz=336,slow=40
CAPN Captain Cook N 48.46 332 P **P** **05 47 32.5 -1.0**
CAPN Captain Cook N 48.46 332 P **P** **05 47 32.7 -0.8**
baz=23
U49A Red Boiling Sp 48.50 267 IAmb IAmb 05 47 39.3
comp=Z,19nm,1.4s
U33K Whale Pass 48.50 318 P **P** **05 47 33.2 -0.6**
baz=29
T47A Sharon Grove 48.62 269 P **P** **05 47 34.8 -0.2**
GAMB Gambell 48.62 345 P **P** **05 47 34.7 0.0**
baz=14
J14K Nanvaranak Lak 48.63 340 P **P** **05 47 34.1 -0.6**
baz=18
M18K Stony River 48.63 335 P **P** **05 47 34.2 -0.6**
baz=21
N35A Tabor 48.70 279 P **P** **05 47 35.6 0.0**
K30B Basset 48.71 284 P **P** **05 47 36.6 +0.9**
Q23K Middleton Isla 48.73 328 P **P** **05 47 35.5 -0.1**
baz=25
SEW Seward 48.75 330 P **P** **05 47 35.6 0.0**
baz=24
K15K Wolf Creek Mou 48.78 339 P **P** **05 47 36.1 +0.1**
baz=18
V35K Ketchikan 48.78 316 P **P** **05 47 35.8 -0.2**
baz=29
SIUC Southern Illin 48.83 271 P **P** **05 47 37.1 +0.5**
SIUC IAmb IAmb 05 47 40.1
comp=Z,21nm,0.9s
S44A Carbondale 48.87 271 P **P** **05 47 37.0 +0.1**
S44A IAmb IAmb 05 47 40.3
comp=Z,25nm,1.1s
CPCT Cooper Cave 48.92 265 P **P** **05 47 37.7 +0.4**
CPCT IAmb IAmb 05 47 49.0
comp=Z,33nm,1.7s
SVW2 Sparrevohn 48.96 334 P **P** **05 47 37.4 0.0**
SVW2 IAmb IAmb 05 47 42.7
comp=Z,10nm,0.8s
SVW2 Sparrevohn 48.96 334 P **P** **05 47 39.0 +1.6**
M17K Holitna River 48.99 336 P **P** **05 47 38.7 +1.1**
M17K IAmb IAmb 05 47 43.3
comp=Z,15nm,0.8s
M17K Holitna River 48.99 336 P **P** **05 47 38.2 +0.6**
baz=20
W52A Murphy 48.99 264 P **P** **05 47 38.0 +0.1**
W52A IAmb IAmb 05 47 50.8
comp=Z,17nm,1.2s
L16K Owhat River 49.02 337 P **P** **05 47 37.1 -0.7**
baz=19
N19K Bonanza Creek 49.03 334 P **P** **05 47 38.1 0.0**
N19K Bonanza Creek 49.03 334 P **P** **05 47 37.8 -0.3**
baz=21
CRAG Craig 49.07 317 P **P** **05 47 37.9 -0.3**
baz=29
HODGE Hodges 49.08 262 P **P** **05 47 38.3 -0.3**
HODGE IAmb IAmb 05 47 41.2
comp=Z,25nm,1.5s
FVM French Village 49.08 272 IAmb IAmb 05 47 41.8
comp=Z,18nm,0.9s
RSSD Black Hills 49.18 288 P **P** **05 47 40.5 +0.9**
RSSD IAmb IAmb 05 47 43.5
comp=Z,11nm,0.9s
RSSD Black Hills 49.18 288 P **P** **05 47 39.2 -0.4**
baz=32
RSSD Black Hills 49.18 288 P **P** **05 47 40.5 +0.9**
RSSD pmax pmax
comp=Z,11nm,0.9s
T45A Paducah 49.20 270 P **P** **05 47 39.9 +0.4**
NHSC New Hope 49.25 260 P **P** **05 47 40.0 +0.1**
baz=28
BRSE Bradley Lake S 49.34 331 P **P** **05 47 40.7 +0.5**
baz=23
BRLK Bradley Lake 49.34 331 P **P** **05 47 40.5 +0.2**
BRLK IAmb IAmb 05 47 45.5
comp=Z,26nm,1.0s
CCM Cathedral Cave 49.35 273 P **P** **05 47 40.6 0.0**
CCM IAmb IAmb 05 47 43.2
comp=Z,20nm,1.2s
CCM Cathedral Cave 49.35 273 P **P** **05 47 40.8 +0.2**
baz=30
CCM Cathedral Cave 49.35 273 P **P** **05 47 40.6 0.0**
CCM pmax pmax
comp=Z,20nm,1.2s
L15K Ungalak Mounta 49.36 338 P **P** **05 47 40.6 +0.2**
baz=18
CGM3 Cape Girardeau 49.37 271 P **P** **05 47 39.9 -0.9**
O20K Slope Mountain 49.38 332 P **P** **05 47 40.7 +0.1**
baz=22
N18K Kilae Creek 49.41 334 P **P** **05 47 41.7 +0.9**
N18K IAmb IAmb 05 47 46.0

comp=Z,34nm,1.6s
N18K Kilae Creek 49.41 334 P P 05 47 41.5 +0.7
baz=21
W50A Signal Mountai 49.45 266 P P 05 47 42.0 +0.5
W50A IAmb IAmb 05 47 45.3
comp=Z,25nm,1.1s
YAK Yakutsk 49.49 20 eP P 05 47 40.9 -0.5
YAK pmax pmax
comp=Z,5.0nm,0.7s
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK pmax pmax
comp=E,4.0nm,2.0s
N33A J Bar K, Exete 49.51 280 P P 05 47 42.3 +0.4
R40A Maddies Statio 49.55 274 P P 05 47 41.9 -0.3
R40A IAmb IAmb 05 47 44.8
comp=Z,23nm,1.2s
O19K Port Alsworth 49.58 333 IAmb IAmb 05 47 45.7
comp=Z,13nm,1.1s
O19K Port Alsworth 49.58 333 P P 05 47 42.4 +0.3
baz=21
V48A Smith Brothers 49.58 268 P P 05 47 43.1 +0.7
V48A IAmb IAmb 05 47 45.9
comp=Z,34nm,1.6s
M16K Timber Creek 49.59 336 IAmb IAmb 05 49 16.5
comp=Z,53nm,1.8s
M16K Timber Creek 49.59 336 P P 05 47 42.5 +0.3
baz=19
CNPM China Poot 49.63 331 P P 05 47 42.5 -0.1
WVT Waverly 49.65 269 P P 05 47 44.4 +1.5
WVT Waverly 49.65 269 P P 05 47 43.0 +0.1
baz=30
WVT Waverly 49.65 269 P P 05 47 44.4 +1.5
WVT pmax pmax
comp=Z,8.0nm,1.1s
N17K Nushagak Hills 49.77 335 P P 05 47 44.1 +0.5
N17K IAmb IAmb 05 47 50.1
comp=Z,30nm,1.4s
N17K Nushagak Hills 49.77 335 P P 05 47 44.3 +0.8
baz=20
X51A Calhoun 49.82 265 P P 05 47 45.4 +1.1
X51A IAmb IAmb 05 47 48.1
comp=Z,34nm,1.2s
L14K Kuka Creek 49.85 339 P P 05 47 44.9 +0.7
baz=18
UTMT University of 49.88 270 P P 05 47 45.1 +0.4
PARMO Parma 49.95 271 P P 05 47 44.9 -0.3
OVMT Ovando 49.98 297 P P 05 47 44.5 -1.0
O18K Koktuh Hills 50.06 334 P P 05 47 46.2 +0.4
O18K IAmb IAmb 05 47 49.9
comp=Z,19nm,1.2s
O18K Koktuh Hills 50.06 334 P P 05 47 46.1 +0.3
baz=21
N16K Nishlik Lake 50.08 336 P P 05 47 46.3 +0.4
baz=19
PBMO Poplar Bluff 50.13 272 P P 05 47 46.7 +0.2
PBMO IAmb IAmb 05 47 49.6
comp=Z,16nm,1.0s
FPAL Fort Paine 50.15 266 P P 05 47 47.3 +0.5
FPAL IAmb IAmb 05 47 50.1
comp=Z,22nm,1.2s
M15K Kasigluk River 50.17 337 P P 05 47 46.6 0.0
baz=18
GEYT Alibeck 50.27 85 P P 05 47 49.1 +1.4
comp=Z,1.7nm,0.5s,baz=288,slow=6.1,SNR=3.9
GEYT LR LR 06 09 25.3
comp=Z,1µm,21.5s,baz=354,slow=36
comp=Z,1.7nm,0.5s
GOGA Godfrey 50.28 263 P P 05 47 48.8 +1.1
GOGA IAmb IAmb 05 47 53.2
comp=Z,24nm,1.4s
GOGA Godfrey 50.28 263 P P 05 47 47.9 +0.2
baz=28
GOGA Godfrey 50.28 263 P P 05 47 48.8 +1.1
GOGA pmax pmax
comp=Z,25nm,1.4s
RLMT Red Lodge 50.29 293 P P 05 47 48.5 +0.5
RLMT IAmb IAmb 05 47 52.9
comp=Z,49nm,1.6s
RLMT Red Lodge 50.29 293 P P 05 47 47.7 -0.3
baz=31
M14K Bethel 50.31 338 P P 05 47 49.7 +2.1
M14K Bethel 50.31 338 P P 05 47 47.9 +0.3
baz=18
NEW Newport 50.39 301 P P 05 47 49.0 +0.5
NEW IAmb IAmb 05 47 51.8
comp=Z,14nm,1.1s
NEW Newport 50.39 301 P P 05 47 48.2 -0.3
baz=31
NEW Newport 50.39 301 P P 05 47 49.0 +0.5
NEW pmax pmax
comp=Z,14nm,1.1s
HALT Halls 50.44 270 P P 05 47 49.4 +0.4
O17K Koliganek Bris 50.47 335 P P 05 47 48.7 -0.1
baz=20
S39A Bolivar 50.49 275 P P 05 47 49.5 +0.2
S39A IAmb IAmb 05 47 51.7
comp=Z,18nm,0.9s
P18K Big Mountain, 50.50 333 P P 05 47 49.4 +0.2
P18K IAmb IAmb 05 47 53.4
comp=Z,16nm,1.1s
P18K Big Mountain, 50.50 333 P P 05 47 48.9 -0.2
baz=21
MGMO Mountain Grove 50.54 274 P P 05 47 50.0 +0.3
MGMO IAmb IAmb 05 47 52.7
comp=Z,23nm,1.3s
N15K Kwethluk River 50.58 337 P P 05 47 49.8 +0.1
baz=18
KSU1 Kansas State U 50.58 279 P P 05 47 49.7 -0.3
baz=31
SEY Seymchan 50.60 6⇑ eP P 05 47 50.7 +0.9
SEY pmax pmax
comp=Z,7.0nm,1.7s
Q19K Cape Douglas, 50.65 332 P P 05 47 49.4 -0.8
baz=21
KK31 Karatay Array 50.67 71 P P 05 47 51.5 +0.8
KK31 Karatay Array 50.67 71 P P 05 47 51.5 +0.8
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KKAR Karatay Array 50.67 71 P P 05 47 52.2 +1.5
KKAR Karatay Array 50.67 71 P P 05 47 52.2 +1.5
Q20K Shuyak Island 50.71 331 P P 05 47 50.5 -0.2
baz=22
BOZ Bozeman (W) 50.74 295 P P 05 47 51.9 +0.6
BOZ IAmb IAmb 05 47 55.4
comp=Z,31nm,1.1s
BOZ Bozeman (W) 50.74 295 P P 05 47 50.7 -0.7
baz=31
BOZ Bozeman (W) 50.74 295 P P 05 47 51.9 +0.6
BOZ pmax pmax
comp=Z,31nm,1.1s
X48A Hartselle 50.80 267 P P 05 47 52.1 +0.5
X48A IAmb IAmb 05 47 53.8
comp=Z,15nm,0.8s
O16K Kokwok River B 50.80 335 P P 05 47 53.3 +1.9
O16K Kokwok River B 50.80 335 P P 05 47 51.3 0.0
baz=19
M13K Dall Lake 50.84 339 P P 05 47 51.9 +0.3
baz=17
YMP Mirror Lake PI 50.94 294 P P 05 47 54.1 +1.1
YMP IAmb IAmb 05 47 57.1
comp=Z,22nm,0.8s
DGZ Jazzator, Alta 50.98 54⇑ eP P 05 47 54.5 +1.5
DGZ pmax pmax
comp=Z,5.0nm,1.0s
LCAR Lake Charles 51.03 272 P P 05 47 53.3 -0.1
B08A Colville Reser 51.06 303 IAmb IAmb 05 47 58.2
comp=Z,23nm,1.5s
Y49A Blount Mountai 51.06 266 P P 05 47 53.8 +0.1
Y49A IAmb IAmb 05 47 56.7
comp=Z,23nm,1.1s
N14K Kuskokwak Cree 51.06 338 P P 05 47 53.6 +0.4
baz=18
OGNE Ogallala 51.13 284 P P 05 47 56.0 +1.8
OGNE Ogallala 51.13 284 P P 05 47 54.4 +0.2
baz=31
C09A Chrisman Ranch 51.18 302 P P 05 47 55.0 +0.6
YHL Hebgen Lake 51.22 294 IAmb IAmb 05 47 59.4
comp=Z,15nm,1.0s
K22A Casper 51.38 289 P P 05 47 55.8 -0.3
baz=31
H17A Grant Village 51.39 294 P P 05 47 56.4 0.0
baz=31
Q16K King Salmon 51.43 334 P P 05 47 56.3 +0.3
baz=20
KDAK Kodiak Island 51.52 331 P P 05 47 56.5 -0.2
baz=21
KDAK Kodiak Island 51.52 331⇑ eP P 05 47 57.5 +0.8
KDAK pmax pmax
comp=Z,24nm,1.2s
KDAK Kodiak Island 51.52 331 LR LR 06 11 37.8
comp=Z,102nm,18.3s,baz=72,slow=38
FCAR Ozark Folk Cen 51.57 273 P P 05 47 57.0 -0.5
O14K Tigyukauivet M 51.64 337 P P 05 47 58.0 +0.3
baz=18
MAKZ Makanchi 51.66 60 P P 05 47 59.0 +1.0
MAKZ IAmb IAmb 05 48 01.5
comp=Z,33nm,1.9s
MAKZ Makanchi 51.66 60 P P 05 47 59.0 +1.0
MAKZ pmax pmax
comp=Z,33nm,2.0s
MK31 Makanchi Array 51.78 59 P P 05 47 59.2 +0.3
MK31 Makanchi Array 51.78 59 P P 05 47 59.2 +0.3
MK31 pmax pmax
comp=Z,4.0nm,1.0s
MKAR Makanchi Array 51.78 59 P P 05 47 59.4 +0.5
MKAR Makanchi Array 51.78 59 P P 05 47 59.4 +0.5
MKAR Makanchi Array 51.78 59 P P 05 47 59.2 +0.3
comp=Z,3.1nm,0.7s,baz=340,slow=6.0,SNR=28
MKAR LR LR 06 09 44.4
comp=Z,386nm,20.1s,baz=328,slow=36
comp=Z,3.1nm,0.7s
IMW Indian Meadow 51.95 294 P P 05 48 01.2 +0.6
HHAR Hobbs 51.96 274 P P 05 48 01.4 +1.1
R32A Long Quarter, 52.00 280 P P 05 48 00.6 -0.1
R32A IAmb IAmb 05 48 03.1
comp=Z,35nm,1.0s
U38A Gravette 52.00 275 P P 05 47 59.6 -1.0
U38A IAmb IAmb 05 48 03.5
comp=Z,33nm,1.6s
LRAL Lakeview Retre 52.02 266 P P 05 48 00.4 -0.4
LRAL Lakeview Retre 52.02 266 P P 05 48 00.7 -0.1
baz=28
D08A Wollman Farm, 52.05 302 P P 05 48 01.1 +0.2
D08A IAmb IAmb 05 48 04.7
comp=Z,31nm,1.3s
CBKS Cedar Bluff 52.06 281 P P 05 48 01.8 +0.6
CBKS Cedar Bluff 52.06 281 P P 05 47 59.9 -1.3
baz=30
CBKS Cedar Bluff 52.06 281 P P 05 48 01.8 +0.6
CBKS pmax pmax
comp=Z,52nm,1.1s
PHWY Pilot Hill 52.14 288 IAmb IAmb 05 48 06.2
comp=Z,28nm,1.1s
WHAR Wooly Hollow 52.16 272 P P 05 48 03.7 +1.8
WHAR IAmb IAmb 05 48 05.7
comp=Z,32nm,1.4s
SNOW Snow King Moun 52.26 293 P P 05 48 03.4 +0.6
Y45A Yeager Farm, C 52.31 269 IAmb IAmb 05 48 06.4
comp=Z,19nm,0.8s
TPAW Teton Pass 52.31 293 P P 05 48 03.2 0.0
F10A Beach Ranch, E 52.41 300 IAmb IAmb 05 48 13.5
comp=Z,51nm,1.9s
PD31 Pinedale Array 52.42 292 P P 05 48 03.8 -0.2
PD31 IAmb IAmb 05 48 07.8
comp=Z,19nm,1.0s
PDAR Pinedale Array 52.42 292 P P 05 48 03.5 -0.5
comp=Z,10nm,0.8s,baz=53,slow=6.0,SNR=45
PDAR PP PP 05 50 02.0 -0.3
comp=Z,1.6nm,0.9s,baz=52,slow=9.6,SNR=5.3
PDAR LR LR 06 10 11.6
comp=Z,484nm,19.1s,baz=32,slow=36
comp=Z,10nm,0.8s
BW06 Boulder Array 52.42 292 P P 05 48 03.0 -1.0
baz=30,SNR=31
T35A Sooner Cattle 52.43 277 P P 05 48 03.2 -0.6
RWWY Rawlins 52.47 289 P P 05 48 03.9 -0.5
AAK Ala-Archa 52.57 68 P P 05 48 06.6 +1.6
AAK Ala-Archa 52.57 68⇑ eP P 05 48 06.7 +1.7
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 52.57 68 LR LR 06 10 06.2
comp=Z,569nm,19.1s,baz=330,slow=36
UALR University of 52.63 272 P P 05 48 05.0 -0.4
UALR IAmb IAmb 05 48 08.6
comp=Z,48nm,1.8s
N23A Red Feather La 52.67 288 P P 05 48 07.0 +1.1
N23A Red Feather La 52.67 288 P P 05 48 05.4 -0.5
baz=30
PLID Pearl Lake 52.74 298 P P 05 48 05.9 -0.4
PLID IAmb IAmb 05 48 10.3
comp=Z,44nm,1.3s
E07A Sunnyside 52.80 302 P P 05 48 06.9 +0.4
HAWA Hanford 52.83 302 P P 05 48 07.5 +0.8
TUL3 Leonard 53.02 276 P P 05 48 08.5 +0.3
baz=29
KSCO Kaye Shedlock' 53.02 284 P P 05 48 07.7 -0.7
baz=30
X40A Basin Creek Fa 53.08 272 IAmb IAmb 05 48 10.5
comp=Z,20nm,1.4s
ARSB Arslanbob 53.14 70 P P 05 48 09.7 +0.5
ARSB Arslanbob 53.14 70 P P 05 48 09.7 +0.5
ARSB pmax pmax
comp=Z,3.0nm,1.2s
CCAR Cane Creek 53.15 271 P P 05 48 10.1 +0.9
QUOK Quay 53.16 277 P P 05 48 09.4 +0.2
QUOK IAmb IAmb 05 48 13.0
comp=Z,23nm,1.0s
146A Union 53.19 268 IAmb IAmb 05 48 11.4
comp=Z,20nm,1.0s
MOY Mondy 53.29 43 eP P 05 48 11.0 +0.9
MOY pmax pmax
comp=Z,42nm,1.4s
MIAR Mount Ida 53.33 273 P P 05 48 10.4 -0.1
MIAR IAmb IAmb 05 48 14.8
comp=Z,17nm,1.1s
MIAR Mount Ida 53.33 273 P P 05 48 09.8 -0.7
baz=29,SNR=6.2
MIAR Mount Ida 53.33 273 P P 05 48 10.4 -0.1
MIAR pmax pmax
comp=Z,17nm,1.2s
CROK Carrier 53.37 278 P P 05 48 10.5 -0.3
F07A Phinny Hill Vi 53.40 302 P P 05 48 10.9 +0.1
NLWA Neilton Lookou 53.40 306 P P 05 48 10.0 -1.0
BMO Blue Mountains 53.41 299 P P 05 48 10.6 -0.5
BMO IAmb IAmb 05 48 15.4
comp=Z,29nm,1.1s
BMO Blue Mountains 53.41 299 P P 05 48 10.6 -0.5
BMO pmax pmax
comp=Z,29nm,1.1s
BTK Batken 53.41 73 P P 05 48 12.3 +1.1
BTK Batken 53.41 73 P P 05 48 12.3 +1.1
BTK pmax pmax
comp=Z,10.0nm,0.9s
OK035 E0210 Rd and N 53.48 279 P 05 48 11.3 -0.3
ISCO Idaho Springs 53.49 287 P P 05 48 11.4 -0.7
ISCO Idaho Springs 53.49 287 P P 05 48 11.4 -0.7
baz=30
ISCO Idaho Springs 53.49 287 P P 05 48 11.4 -0.7
ISCO pmax pmax
comp=Z,13nm,1.2s
HLID Hailey 53.51 296 P P 05 48 11.5 -0.4
HLID Hailey 53.51 296 P P 05 48 11.9 0.0
baz=30
G08A Pilot Rock 53.60 301 P P 05 48 13.2 +0.7
G08A IAmb IAmb 05 48 17.2
comp=Z,25nm,1.6s
BRAL Brewton 53.68 265 P P 05 48 14.0 +0.9
baz=28
MA2 Magadan 53.88 7 P P 05 48 14.9 +0.7
MA2 IAmb IAmb 05 48 15.6
comp=Z,10nm,0.9s
MA2 Magadan 53.88 7 P P 05 48 15.3 +1.1
MA2 Magadan 53.88 7⇑ eP P 05 48 14.8 +0.6
MA2 pmax pmax
comp=Z,15nm,1.7s
WLAR White Oak Lake 53.89 272 P P 05 48 14.8 +0.2
WLAR IAmb IAmb 05 48 19.0
comp=Z,19nm,0.9s
SIMJ Simiganj 53.93 75 P P 05 48 15.9 +0.9
X37A Clayton 54.00 275 P P 05 48 15.9 +0.5
Q24A Divide 54.04 286 P P 05 48 16.9 +0.8
Q24A IAmb IAmb 05 48 19.5
comp=Z,12nm,1.1s
Q24A Divide 54.04 286 P P 05 48 16.1 0.0
baz=30
143A Socs Landing, 54.07 270 P P 05 48 16.2 +0.3
W35A Tecumseh 54.11 276 P P 05 48 16.0 -0.2
MFID Camas Ranch 54.14 297 P P 05 48 16.4 0.0
MFID IAmb IAmb 05 48 19.6
comp=Z,34nm,2.0s
Z41A Richland Creek 54.14 272 P P 05 48 15.0 -1.4
Z41A IAmb IAmb 05 48 19.9
comp=Z,25nm,0.9s
HWUT Hardware Ranch 54.17 293 P P 05 48 17.2 +0.4
HWUT IAmb IAmb 05 48 21.2
comp=Z,13nm,1.0s
O20A White River Ci 54.20 289 P P 05 48 17.3 +0.2
O20A White River Ci 54.20 289 P P 05 48 16.2 -0.9
baz=30
F04A Amboy 54.21 304 P P 05 48 17.9 +1.2
346A Big Creek Wild 54.45 267 P P 05 48 17.6 -1.1
HVU Hansel Valley 54.46 294 P P 05 48 18.9 0.0
HVU IAmb IAmb 05 48 22.6
comp=Z,34nm,1.9s
HVU Hansel Valley 54.46 294 P P 05 48 18.9 0.0
HVU pmax pmax
comp=Z,34nm,1.9s
TCUT Toone Canyon 54.53 292 P P 05 48 20.1 +0.6
I07A Izee 54.84 300 IAmb IAmb 05 48 25.9
comp=Z,23nm,1.2s
TOA0 Torodi Ar. Sit 54.90 157 P P 05 48 21.6 -0.4
TOA0 IAmb IAmb 05 48 22.9
comp=Z,11nm,0.9s
TORD Torodi Ar. Bea 54.90 157 P P 05 48 22.3 +0.2
TORD IAmb IAmb 05 49 26.4
comp=Z,12nm,0.9s
TORD Torodi Ar. Bea 54.90 157 P P 05 48 22.1 0.0
comp=Z,5.5nm,0.4s,baz=354,slow=11,SNR=37
TORD LR LR 06 13 37.1
comp=Z,160nm,19.0s,baz=0.5,slow=38
comp=Z,5.5nm,0.4s
Z38A Mt. Pleasant 55.01 274 P P 05 48 24.2 +1.4
CTU Camp Tracy 55.03 292 P P 05 48 23.9 +0.8
ZAK Zakamensk 55.07 42 eP P 05 48 23.8 +0.7
ZAK pmax pmax
comp=Z,7.0nm,1.3s
J08A Circle Bar Ran 55.12 299 IAmb IAmb 05 48 28.5
comp=Z,15nm,1.2s
WMOK Wichita Mounta 55.23 278 IAmb IAmb 05 48 27.8
comp=Z,20nm,0.9s
WMOK Wichita Mounta 55.23 278 P P 05 48 24.1 -0.2
baz=29
SDCO Great Sand Dun 55.24 285 P P 05 48 24.1 -0.6
baz=29
BGU Big Grassy Mou 55.30 293 IAmb IAmb 05 48 29.1
comp=Z,20nm,1.3s
RTBA Rita Blanca 55.30 282 P P 05 48 25.7 +0.7
RTBA IAmb IAmb 05 48 28.8
comp=Z,34nm,1.1s
T25A Trinidad 55.34 284 IAmb IAmb 05 48 31.0
comp=Z,26nm,1.2s
T25A Trinidad 55.34 284 P P 05 48 24.9 -0.5
baz=29
P18A Preston Nutter 55.40 290 IAmb IAmb 05 48 32.5
comp=Z,22nm,1.4s
SMWD Samnorwood 55.49 279 P P 05 48 26.8 +0.6
SMWD IAmb IAmb 05 48 30.6
comp=Z,13nm,0.9s
MPU Maple Canyon 55.58 292 P P 05 48 27.9 +0.9
CHNA Chernabura Isl 55.59 334 P P 05 48 27.2 +0.5
baz=18
P17A Butcher Ranch, 55.72 291 P P 05 48 28.1 +0.1
P17A IAmb IAmb 05 48 31.8
comp=Z,19nm,1.1s
S22A 4UR Ranch, Cre 55.75 286 IAmb IAmb 05 48 33.9
comp=Z,21nm,1.4s
S22A 4UR Ranch, Cre 55.75 286 P P 05 48 28.1 -0.3
baz=29
KSH Kashi 55.83 69 P P 05 48 32.4 +3.6
KSH pP sP 05 48 36.6 +3.6
KSH pmax pmax
comp=Z,18nm,0.9s
KSH LR LR
comp=Z,610nm,16.8s
KSH LR LR
comp=Z,580nm,18.6s
KSH LR LR
comp=Z,750nm,16.5s
DUG Dugway, Tooele 55.86 293 P P 05 48 28.8 -0.2
baz=29
SRU San Rafael Swe 55.96 290 P P 05 48 29.6 -0.2
SRU IAmb IAmb 05 48 33.2
comp=Z,13nm,1.0s
SRU San Rafael Swe 55.96 290 P P 05 48 29.6 -0.2
SRU pmax pmax
comp=Z,13nm,1.0s
WVOR Wild Horse Val 55.99 299 P P 05 48 30.4 +0.5
WVOR IAmb IAmb 05 48 33.7
comp=Z,26nm,1.6s
WVOR Wild Horse Val 55.99 299 P P 05 48 30.4 +0.5
WVOR pmax pmax
comp=Z,26nm,1.6s
NATX Nacogdoches 56.20 272 P P 05 48 30.9 -0.4
baz=28
WMQ Urumqi 56.22 57 eP P 05 48 35.3 +3.9
WMQ LR LR
comp=Z,730nm,15.3s
WMQ LR LR
comp=Z,340nm,21.7s
ELK Elko 56.26 295 IAmb IAmb 05 48 36.3
comp=Z,12nm,1.1s
ELK Elko 56.26 295 LR LR 06 12 28.7
comp=Z,621nm,18.2s,baz=32,slow=36
Q16A Castle Valley 56.37 291 P P 05 48 32.6 -0.2
Q16A IAmb IAmb 05 48 36.5
comp=Z,24nm,1.6s
FW16 Waxahatchie 56.46 275 P P 05 48 32.4 -0.8
FW07 Weatherford 56.62 276 P P 05 48 34.9 +0.6
FW07 IAmb IAmb 05 48 39.0
comp=Z,17nm,0.9s
FW13 Cleburne 56.79 275 P P 05 48 34.9 -0.6
MVCO Mesa Verde 56.85 288 P P 05 48 35.2 -1.1
MVCO IAmb IAmb 05 48 41.1
comp=Z,37nm,1.4s
MVCO Mesa Verde 56.85 288 P P 05 48 35.6 -0.6
baz=29
APMT Aspermont 57.00 278 IAmb IAmb 05 48 39.9
comp=Z,16nm,0.8s
WHTX Lake Whitney, 57.11 275 P P 05 48 37.8 0.0
baz=28
BMN Battle Mountai 57.25 297 P P 05 48 38.5 -0.4
BMN Battle Mountai 57.25 297 P P 05 48 38.5 -0.4
BMN pmax pmax
comp=Z,9.0nm,1.2s
ABTX Abilene, Hawle 57.43 277 P P 05 48 40.1 0.0
ABTX Abilene, Hawle 57.43 277 P P 05 48 40.1 0.0
baz=28
MSTX Muleshoe 57.48 281 P P 05 48 41.1 +0.6
MSTX IAmb IAmb 05 48 45.2
comp=Z,11nm,0.8s
MSTX Muleshoe 57.48 281 P P 05 48 40.1 -0.4
baz=28
Q12A Willow Creek R 57.62 294 IAmb IAmb 05 48 50.2
comp=Z,24nm,1.0s
SJG San Juan 57.66 238 LR LR 06 08 48.8
comp=Z,104nm,20.6s,baz=32,slow=31
POST Post 57.77 279 IAmb IAmb 05 48 45.0
comp=Z,21nm,0.8s
RAYN Ar Rayn 58.00 105 P P 05 48 44.8 +0.6
RAYN Ar Rayn 58.00 105 P P 05 48 44.8 +0.6
RAYN pmax pmax
comp=Z,7.0nm,1.0s
ANMO Albuquerque 58.06 285 P P 05 48 45.1 +0.4
ANMO IAmb IAmb 05 48 48.8
comp=Z,27nm,1.8s
ANMO Albuquerque 58.06 285 P P 05 48 45.0 +0.3
baz=28
ANMO Albuquerque 58.06 285 P P 05 48 45.1 +0.4
ANMO pmax pmax
comp=Z,27nm,1.8s
ANMO Albuquerque 58.06 285 LR LR 06 13 28.1
comp=Z,1µm,18.1s,baz=122,slow=36
SONM Songino Array 58.23 41 P P 05 48 44.9 -0.7
SONM Songino Array 58.23 41 P P 05 48 44.9 -0.7
SONM pmax pmax
comp=Z,13nm,1.8s
SONM Songino Array 58.23 41 P P 05 48 46.2 +0.6
comp=Z,1.3nm,0.8s,baz=323,slow=7.1,SNR=9.4
SONM LR LR 06 16 35.3
comp=Z,226nm,18.9s,baz=342,slow=39
comp=Z,1.3nm,0.8s
435B Jarrell 58.23 275 P P 05 48 46.1 +0.4
435B IAmb IAmb 05 48 48.9
comp=Z,37nm,1.4s
HKT Hockley 58.27 272 P P 05 48 45.8 0.0
HKT IAmb IAmb 05 48 50.4

comp=Z,16nm,1.2s
HKT Hockley 58.27 272 P **P** **05 48 45.8 0.0**
HKT pmax pmax
comp=Z,16nm,1.2s
BRDY Brady 58.35 276 P **P** **05 48 46.4 -0.2**
BRDY IAmb IAmb 05 48 50.3
comp=Z,35nm,1.3s
ULN Ulaanbaatar 58.37 41 P **P** **05 48 46.5 -0.1**
ULN Ulaanbaatar 58.37 41⇑ *e*P **P** **05 48 47.5 +0.8**
ULN pmax pmax
comp=Z,7.0nm,1.7s
CCUT Cedar City 58.39 292 P **P** **05 48 46.5 -0.5**
CCUT IAmb IAmb 05 48 52.2
comp=Z,18nm,1.2s
R11B Troy Canyon, C 58.50 294 P **P** **05 48 47.7 0.0**
R11B Troy Canyon, C 58.50 294 P **P** **05 48 47.7 0.0**
baz=28
KNB Kanab 58.66 291 P **P** **05 48 49.3 +0.5**
KNB IAmb IAmb 05 48 53.2
comp=Z,22nm,1.4s
KNB Kanab 58.66 291 P **P** **05 48 49.3 +0.5**
KNB pmax pmax
comp=Z,21nm,1.4s
LCMT Little Creek M 58.82 291 IAmb IAmb 05 48 53.8
comp=Z,25nm,1.6s
ODSA Odessa 59.02 280 P **P** **05 48 51.4 +0.1**
PRN Pahroc Range 59.14 293 IAmb IAmb 05 48 57.7
comp=Z,27nm,1.4s
YERR Yerington 59.26 297 P **P** **05 48 53.6 +0.6**
PNTR Pine Nut 59.29 298 P **P** **05 48 52.8 -0.5**
NV11 Mina Array Sit 59.36 296 P **P** **05 48 53.0 -0.6**
JCT Junction City 59.38 276 P **P** **05 48 53.3 -0.4**
JCT Junction City 59.38 276 P **P** **05 48 53.4 -0.4**
baz=27,SNR=15
JCT Junction City 59.38 276 P **P** **05 48 53.3 -0.4**
JCT pmax pmax
comp=Z,26nm,0.9s
NVAR Mina Array Bea 59.41 296 P **P** **05 48 54.0 -0.1**
NVAR Mina Array Bea 59.41 296 P **P** **05 48 54.5 +0.3**
comp=Z,7.7nm,1.1s,baz=53,slow=6.0,SNR=17
NVAR LR LR 06 14 48.3
comp=Z,756nm,19.1s,baz=68,slow=36
comp=Z,7.7nm,1.1s
WUAZ Wupatki 59.44 289 P **P** **05 48 54.6 +0.3**
baz=28
OZNA Ozona 59.52 278 P **P** **05 48 54.5 -0.2**
ORV Oroville 59.54 299 IAmb IAmb 05 48 58.7
comp=Z,23nm,1.6s
MZP Montezuma Peak 59.73 295 IAmb IAmb 05 49 00.6
comp=Z,15nm,1.3s
WAKR Walker 59.75 297 P **P** **05 48 56.7 +0.3**
WAKR IAmb IAmb 05 49 01.5
comp=Z,24nm,1.2s
MNHN Monahans 59.79 279 P **P** **05 48 56.6 0.0**
AFDM Forest Hills D 59.90 299 P **P** **05 48 56.9 -0.3**
AFDM IAmb IAmb 05 49 01.3
comp=Z,35nm,1.7s
SHPR Sheep Range 59.98 293 IAmb IAmb 05 49 03.3
comp=Z,11nm,1.2s
TPNV Topopah Spring 59.98 294 IAmb IAmb 05 49 01.8
comp=Z,19nm,1.2s
TPNV Topopah Spring 59.98 294 P **P** **05 48 57.6 -0.4**
baz=27
HNDO Hondo 60.02 275 IAmb IAmb 05 49 02.3
comp=Z,14nm,1.1s
GMN Gold Mountain 60.04 295 P **P** **05 48 58.9 +0.4**
GMN IAmb IAmb 05 51 03.2
comp=Z,8.3nm,0.9s
DSP Deep Springs 60.24 295 P **P** **05 49 00.1 +0.7**
WCT Wildcat Mounta 60.26 294 P **P** **05 49 00.0 +0.2**
WCT IAmb IAmb 05 49 04.0
comp=Z,12nm,1.1s
DBIC Dimbokro 60.43 165 P **P** **05 49 00.7 -0.3**
comp=Z,5.7nm,1.0s,baz=346,slow=12,SNR=4.0
comp=Z,5.7nm,1.0s
X16A Lo Mia Camp, P 60.44 289 IAmb IAmb 05 49 05.9
comp=Z,14nm,1.2s
MNTX Cornudas Mount 60.51 282 P **P** **05 49 01.6 +0.1**
baz=27
CMB Columbia Colle 60.51 298 P **P** **05 49 01.4 +0.1**
CMB IAmb IAmb 05 49 05.1
comp=Z,22nm,1.6s
CMB Columbia Colle 60.51 298 P **P** **05 49 01.5 +0.1**
CMB pmax pmax
comp=Z,22nm,1.6s
HEH HeiHe 60.51 25 *e*P **P** **05 49 01.6 +0.4**
HEH pmax pmax
comp=Z,5.0nm,0.8s
V12A Nelson 60.55 292 P **P** **05 49 00.9 -0.9**
V12A IAmb IAmb 05 49 06.5
comp=Z,12nm,1.1s
PETK Petropavlovsk- 60.61 3 LR LR 06 16 47.0
comp=Z,53nm,19.0s,baz=356,slow=38
DRIO Del Rio 60.64 276 P **P** **05 49 02.1 -0.3**
DRIO IAmb IAmb 05 49 07.7
comp=Z,8.5nm,1.0s
121A Cookes Peak, D 60.70 284 P **P** **05 49 03.8 +0.8**
121A IAmb IAmb 05 49 08.1
comp=Z,22nm,1.3s
121A Cookes Peak, D 60.70 284 P **P** **05 49 03.6 +0.6**
baz=27
SHEM Shemya Is, Ala 60.71 352 LR LR 06 13 35.6
comp=Z,70nm,21.9s,baz=317,slow=34
SAND Sanderson 60.77 278 P **P** **05 49 02.8 -0.5**
SAND IAmb IAmb 05 49 09.0
comp=Z,6.9nm,0.7s
UOSS Minazif 60.94 94 P **P** **05 49 03.5 -1.0**
ALPN Alpine 60.99 280 P **P** **05 49 05.1 +0.1**
ALPN IAmb IAmb 05 49 09.3
comp=Z,25nm,1.4s
CWC Cottonwood Cre 61.10 295 P **P** **05 49 06.0 +0.3**
baz=27
833A Chaparral WMA, 61.13 275 P **P** **05 49 04.6 -1.1**
833A Chaparral WMA, 61.13 275 P **P** **05 49 06.2 +0.5**
baz=27
VHRN Van Horn 61.16 281 P **P** **05 49 05.8 -0.3**
DUN6 Lazy B Ranch 61.19 286 P **P** **05 49 05.6 -0.6**
MPMC Manual Prospec 61.23 294 P **P** **05 49 07.1 +0.5**
baz=27
NEE2 Needles Airpor 61.32 291 P **P** **05 49 07.5 +0.6**
baz=27
Y14A Wickenburg 61.45 290 P **P** **05 49 07.0 -0.9**
PDMCI Parker Dam,Lak 61.56 291 P **P** **05 49 09.3 +0.8**
baz=27
GSC Goldstone, Bar 61.65 293 P **P** **05 49 08.0 -1.3**
GSC IAmb IAmb 05 49 13.7
comp=Z,16nm,1.3s
GSC Goldstone, Bar 61.65 293 P **P** **05 49 08.0 -1.3**
GSC pmax pmax
comp=Z,15nm,1.3s
GMRC Granite Mounta 61.69 292 P **P** **05 49 10.6 +1.0**
baz=27
LRMC Laurel Mtn Rad 61.82 294 P **P** **05 49 11.2 +0.7**
baz=27
HEC Hector,Ludlow 61.90 293 P **P** **05 49 12.0 +1.0**
baz=27
TX31 Lajitas Ar. Si 61.93 279 P **P** **05 49 10.4 -0.8**
TX31 IAmb IAmb 05 49 14.4
comp=Z,9.1nm,1.1s
TXAR Lajitas Array 61.93 279 P **P** **05 49 11.3 +0.1**
TXAR Lajitas Array 61.93 279 P **P** **05 49 11.7 +0.4**
comp=Z,4.3nm,0.9s,baz=50,slow=4.5,SNR=21
TXAR PcP **PcP** **05 49 51.9 0.0**
comp=Z,2.7nm,0.9s,baz=50,slow=3.9,SNR=4.4
TXAR LR LR 06 15 58.6
comp=Z,1μm,18.1s,baz=30,slow=36
comp=Z,4.3nm,0.9s
ISA Isabella, Lake 61.94 295 P **P** **05 49 10.7 -0.5**
ISA IAmb IAmb 05 49 16.2
comp=Z,19nm,1.1s
ISA Isabella, Lake 61.94 295 P **P** **05 49 11.8 +0.6**
baz=26
ISA Isabella, Lake 61.94 295 P **P** **05 49 10.7 -0.5**
ISA pmax pmax
comp=Z,19nm,1.1s
HBVL Hebbronville 61.96 274 P **P** **05 49 11.4 +0.1**
VES Vestal, Richgr 62.00 296 P **P** **05 49 12.4 +0.9**
baz=26
TUC Tucson 62.06 287 P **P** **05 49 12.2 +0.2**
TUC IAmb IAmb 05 49 17.1
comp=Z,25nm,1.6s
TUC Tucson 62.06 287 P **P** **05 49 13.3 +1.3**
baz=27
TUC Tucson 62.06 287 P **P** **05 49 12.2 +0.2**
TUC pmax pmax
comp=Z,25nm,1.7s

IRM Iron Mountain 62.06 291 P **P** **05 49 13.1 +1.1**
baz=27
RRX Edison Barstow 62.10 293 P **P** **05 49 13.9 +1.7**
baz=26
BLYC Blythe 62.19 291 P **P** **05 49 14.3 +1.5**
KLR Kul'dur 62.20 22 LR LR 06 16 01.2
comp=Z,64nm,19.8s,baz=2.5,slow=36
EDW2 Edwards Air Fo 62.47 294 P **P** **05 49 15.3 +0.6**
baz=26
BELC Belle Mtn. Jos 62.52 292 P **P** **05 49 16.1 +1.0**
baz=26
BC3 Big Chuckawall 62.62 291 P **P** **05 49 18.0 +2.2**
baz=26
113A Mohawk Valley, 62.78 290 IAmb IAmb 05 49 20.6
comp=Z,11nm,1.2s
BFSC Mount Baldy Ra 62.92 294 P **P** **05 49 18.8 +1.0**
baz=26
PFO Pinyon Flats O 63.03 292 P **P** **05 49 19.5 +0.9**
PFO IAmb IAmb 05 49 23.5
comp=Z,9.0nm,1.1s
PFO Pinyon Flats O 63.03 292 P **P** **05 49 19.5 +0.9**
PFO pmax pmax
comp=Z,9.0nm,1.1s
PFO Pinyon Flats O 63.03 292 LR LR 06 15 06.2
comp=Z,445nm,19.0s,baz=50,slow=34
TPFO Pinon Flats 63.04 292 P **P** **05 49 19.4 +0.8**
baz=26
PKM Mcpherson Peak 63.12 296 P **P** **05 49 20.6 +1.4**
baz=26
214A Organ Pipe Nat 63.15 288 P **P** **05 49 18.3 -0.9**
MURC Murrieta 63.32 293 P **P** **05 49 21.7 +1.4**
baz=26
SWSC Sam W. Stewart 63.39 291 P **P** **05 49 22.5 +1.8**
baz=26
TEIG Tepich 63.95 261 LR LR 06 16 39.1
comp=Z,4μm,18.2s,baz=179,slow=36
GTA Gaotai 64.10 50 *e*P **P** **05 49 26.3 +0.8**
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA LR LR
comp=Z,220nm,14.9s
GTA LR LR
comp=Z,120nm,14.9s
GTA LR LR
comp=Z,270nm,15.6s
PCRV Puerto La Cruz 64.58 233 LR LR 06 14 60.0
comp=Z,107nm,19.2s,slow=34
HPIG 64.86 280 P **P** **05 49 31.6 +0.9**
HPIG IAmb IAmb 05 49 51.5
comp=Z,11nm,0.8s
BNX BinXian 64.87 26 ⇑P **P** **05 49 29.4 -0.9**
BNX pmax pmax
comp=Z,4.0nm,0.7s
BNX pmax pmax
comp=Z,140nm,4.6s
HSIG 65.06 285 P **P** **05 49 32.8 +1.0**
HSIG IAmb IAmb 05 49 36.0
comp=Z,15nm,1.2s
BTO Baotou 65.91 41 *e*P **P** **05 49 35.9 -1.3**
BTO pP **pP** **05 49 40.6 +0.3**
BTO sP **sP** **05 49 43.8 +2.3**
BTO PP **PP** **05 51 58.9 -2.8**
BTO S **S** **05 58 22.8 -1.3**
BTO pmax pmax
comp=Z,15nm,0.6s
BTO pmax pmax
comp=Z,300nm,6.0s
BTO LR LR
comp=Z,280nm,7.6s
BTO LR LR
comp=Z,250nm,6.8s
BTO LR LR
comp=Z,270nm,11.7s
MDP Montagnes des 65.97 219 LR LR 06 11 21.7
comp=Z,82nm,21.7s,baz=80,slow=30
HHC Hu-ho-hao-te 66.08 40 *e*P **P** **05 49 40.3 +1.9**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,85nm,5.3s
HHC LR LR
comp=Z,250nm,19.1s
HHC LR LR
comp=Z,220nm,19.1s
HHC LR LR
comp=Z,220nm,20.6s
MDJ Mudanjiang 66.34 25 P **P** **05 49 40.0 +0.2**
MDJ pmax pmax
comp=Z,11nm,1.3s
MDJ pmax pmax
comp=Z,170nm,4.5s
CN2 Changchun 66.38 28 *e*P **P** **05 49 38.5 -1.6**
CN2 *e*S **S** **05 58 25.9 -3.7**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 LR LR
comp=Z,230nm,20.0s
CN2 LR LR
comp=Z,190nm,20.0s
ZAIG Zacatecas 67.36 275 IAmb IAmb 05 49 52.9
comp=Z,9.5nm,0.8s
PETF Flores 67.57 261 P **P** **05 49 47.5 -0.4**
PETF IAmb IAmb 05 49 57.0
comp=Z,14nm,0.9s
SDV Santo Domingo 67.77 239 LR LR 06 19 02.2
comp=Z,44nm,18.0s,baz=69,slow=36
LPIG La Paz 69.22 282 LR LR 06 20 15.1
comp=Z,467nm,18.8s,baz=17,slow=36
OCAC Ocana 69.30 241 *e*P **P** **05 49 56.8 -2.2**
CMIG Matias Romero 69.40 265 LR LR 06 21 57.0
comp=Z,293nm,19.8s,baz=48,slow=37
MTO3 Montecristo 69.65 259 P **P** **05 50 01.3 0.0**
MTO3 IAmb IAmb 05 50 09.5
comp=Z,17nm,1.1s
PAMC Pamplona, Colo 69.92 240 *e*P **P** **05 50 01.7 -1.5**
HNS HongShan 70.13 39 ⇓P **P** **05 50 04.5 +0.8**
HNS *e*S **S** **05 59 10.6 -3.9**
HNS pmax pmax
comp=Z,5.0nm,1.3s
HNS LR LR
comp=Z,340nm,15.1s
HNS LR LR
comp=Z,300nm,16.7s
BOAV Boa Vista 70.69 226 *e*P **P** **05 50 11.9 +4.6**
PTBC PUERTO BERRIO, 71.28 241 *e*P **P** **05 50 10.5 -0.5**
JTS Las Juntas de 71.69 253 LR LR 06 19 12.5
comp=Z,178nm,20.8s,baz=16,slow=34
ROSC El Rosal 72.81 241 P **P** **05 50 21.0 +0.4**
ROSC El Rosal 72.81 241 P **P** **05 50 20.9 +0.4**
comp=Z,10nm,0.8s,baz=337,slow=3.9,SNR=6.6
ROSC LR LR 06 18 23.5
comp=Z,109nm,21.7s,baz=290,slow=33
comp=Z,10nm,0.8s
GUY2C Guyana, Caldas 72.82 242 *e*P **P** **05 50 20.6 -0.2**
KSRS Korea Array 72.99 28 P **P** **05 50 21.6 +0.7**
comp=Z,0.5nm,0.3s,baz=358,slow=6.5,SNR=1.9
KSRS LR LR 06 24 44.6
comp=Z,102nm,18.9s,baz=335,slow=38
comp=Z,0.5nm,0.3s
CD2 Chengdu 73.17 50 P **P** **05 50 22.5 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,1.1s
VILC Villavicencio, 73.27 240 *e*P **P** **05 50 24.0 +1.0**
ORTC Ortega, Tolima 74.00 241 *e*P **P** **05 50 27.4 +0.3**
MBAR Mbarara 75.14 129 LR LR 06 26 01.1
comp=Z,117nm,19.5s,baz=317,slow=38
ENH Enshi 75.46 45 P **P** **05 50 34.8 -0.7**
MJAR Matsushiro Arr 75.56 20 P **P** **05 50 36.6 +0.7**
comp=Z,3.0nm,1.0s,baz=345,slow=4.4,SNR=4.6
comp=Z,3.0nm,1.0s
POPC Popayan, Colom 75.78 242 *e*P **P** **05 50 36.5 -1.2**
NJ2 Nanjing 76.25 37 *e*P **P** **05 50 40.3 +0.4**
NJ2 sP **sP** **05 50 44.9 +0.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
NJ2 pmax pmax
comp=Z,210nm,4.0s
HYB Hyderabad 76.60 77 *e*P **P** **05 50 43.3 +1.2**
PZH PanZhiHua 76.64 53 P **P** **05 50 44.3 +2.0**
PZH pmax pmax
comp=Z,5.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.3s
TNCH TengChong 76.95 57 *e*P **P** **05 50 45.6 +1.4**
TNCH pP pP 05 50 47.5 +0.2
TNCH pmax pmax

comp=Z,20nm,0.5s
TEFE Tefe 77.50 228 *e*P **P** **05 50 50.8 +3.7**
JNU Nakatsue 77.75 27 LR LR 06 26 46.8
comp=Z,104nm,19.4s,baz=344,slow=37
TULM Tulcn-Chalpat 77.86 243 P **P** **05 50 50.1 +0.4**
NPGB Novo Progresso 78.33 218 *e*P **P** **05 50 55.8 +4.1**
OTAV Otavalo 78.55 243 P **P** **05 50 54.6 +1.1**
OTAV IAmb IAmb 05 50 58.5
comp=Z,14nm,1.2s
OTAV Otavalo 78.55 243 P **P** **05 50 54.6 +1.1**
OTAV pmax pmax
comp=Z,14nm,1.3s
OTAV Otavalo 78.55 243 *e*P **P** **05 50 57.3 +3.8**
MND Mandalay 78.91 60 P **P** **05 50 55.6 +0.7**
JHJ Hachijo jima 2 79.14 19 LR LR 06 27 19.2
comp=Z,84nm,18.4s,baz=24,slow=37
TBTG Tabatinga, AM 79.78 233 *e*P **P** **05 51 03.4 +3.8**
BOSC San Juan Bosco 81.71 242 P **P** **05 51 09.9 -0.3**
CLDB Colider 82.12 218 *e*P **P** **05 51 16.6 +4.6**
SLVN Son La 82.15 53 P **P** **05 51 12.1 -0.3**
SAML Samuel 82.24 225 P **P** **05 51 12.6 -0.1**
SAML Samuel 82.24 225 P **P** **05 51 12.6 -0.1**
SAML pmax pmax
comp=Z,8.0nm,1.4s
SAML Samuel 82.24 225 *e*P **P** **05 51 17.0 +4.3**
CHTO Chiang Mai 82.85 59 P **P** **05 51 15.1 -0.9**
CHTO Chiang Mai 82.85 59 P **P** **05 51 16.3 +0.3**
CHTO Chiang Mai 82.85 59 P **P** **05 51 15.1 -0.9**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
PDRB Porto dos Gac 83.06 219 *e*P **P** **05 51 19.3 +2.3**
CMAR Chiang Mai Arr 83.18 59 P **P** **05 51 18.1 +0.4**
CMAR Chiang Mai Arr 83.18 59 P **P** **05 51 18.1 +0.4**
CMAR Chiang Mai Arr 83.18 59 P **P** **05 51 18.4 +0.7**
comp=Z,2.8nm,0.3s,baz=318,slow=6.9,SNR=10
CMAR LR LR 06 33 02.3
comp=Z,60nm,18.1s,baz=335,slow=39
comp=Z,2.8nm,0.3s
MCRA Macar, Loja 83.36 243 P **P** **05 51 18.8 +0.2**
JOW Kunigami 83.37 30 LR LR 06 33 41.6
comp=Z,81nm,18.3s,baz=302,slow=39
JANB Januaria 83.76 206 *e*P **P** **05 51 24.3 +3.7**
ETMB Extrema 83.95 228 P **P** **05 51 21.6 0.0**
ETMB IAmb IAmb 05 51 24.6
comp=Z,13nm,1.5s
CZSB Cruzeiro do Su 84.01 235 P **P** **05 51 22.3 +0.4**
CZSB IAmb IAmb 05 54 27.9
comp=Z,12nm,1.3s
CZSB Cruzeiro do Su 84.01 235 *e*P **P** **05 51 23.7 +1.8**
NONG Nongkai 84.96 55 P **P** **05 51 29.3 +2.6**
BDFB Brasilia 85.02 209 P **P** **05 51 27.1 +0.1**
comp=Z,3.7nm,1.0s,baz=0.0,slow=13,SNR=4.5
BDFB LR LR 06 22 42.1
comp=Z,197nm,21.6s,baz=324,slow=31
comp=Z,3.7nm,1.0s
ATAH Atahualpa 85.38 240 LR LR 06 26 04.9
comp=Z,106nm,21.8s,baz=12,slow=33
ARAG Araguaiana, MT 85.86 213 *e*P **P** **05 51 35.0 +3.9**
PALK Pallekele 86.67 80 LR LR 06 31 46.7
comp=Z,268nm,21.1s,baz=80,slow=37
DIAM Diamantina, MG 86.82 205 *e*P **P** **05 51 39.7 +3.8**
IPMB Ipameri, GO 87.33 209 *e*P **P** **05 51 41.9 +3.6**
PTLB Pontes e Lacer 87.35 220 *e*P **P** **05 51 41.6 +3.3**
PMNB Patos De Minas 87.54 207 *e*P **P** **05 51 43.7 +4.4**
LSZ Lusaka 88.31 136 LR LR 06 32 00.2
comp=Z,157nm,21.7s,baz=340,slow=36
SIV San Ignacio 88.38 221 LR LR 06 27 42.7
comp=Z,96nm,18.2s,baz=102,slow=33
NNA Nana 89.37 237 LR LR 06 32 13.2
comp=Z,58nm,19.4s,baz=359,slow=36
TSUM Tsumeb 89.46 147 LR LR 06 33 56.2
comp=Z,159nm,19.4s,baz=324,slow=37
LVC Limon Verde 96.85 227 *e*P **P** **05 52 24.4 +1.6**
LBTB Lobatse 96.93 141 LR LR 06 40 12.7
comp=Z,130nm,19.3s,baz=348,slow=38
ITAB Concordia 97.11 211 *e*P Pdif 05 52 26.8 +3.4
WRA Warramunga Arr 130.01 35 PKP **PKiKP** **05 58 01.7 -0.2**
comp=Z,2.0nm,1.0s,baz=346,slow=2.1,SNR=6.0
ASAR Alice Springs 133.49 37 PKP **PKPdf** **05 58 07.5 -0.1**
comp=Z,1.2nm,0.8s,baz=341,slow=2.2,SNR=10
QSPA South Pole Qui 156.48 180 PKP **PKPdf** **05 58 44.8 0.0**
comp=Z,2.9nm,1.1s,baz=271,slow=3.8,SNR=4.1
QSPA PKPab **pPKPab** **05 59 15.9 -1.0**
comp=Z,6.9nm,1.1s,baz=113,slow=0.5,SNR=5.9

IDC 19 05:46:24.9±6.5, 27.61S×23.24E, h0km, mbtmp2.1/1, ML2.2/1, Error ellipse: s-maj=42.6km s-min=39.7km az=27.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.03**	**120**	I	I		05 58 40.0	
	baz=300,slow=324,SNR=2.4							
BOSA	**Boshof**	**2.04**	**120**	Pn	Pn		05 47 00.7	0.0
	0.6nm,0.3s,baz=303,slow=17,SNR=15							
BOSA				Lg	Lg		05 47 29.9	
	2.0nm,0.3s,baz=227,slow=20,SNR=11							
	1.4nm,0.4s							
I35NA	**TSUMEB INFRASO**	**9.86**	**327**	I	I		06 46 00.0	
	baz=154,slow=312,SNR=2.7							

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*AUST **19** 05:52:11.4±1.7, 23.65S×118.26E, h10km, Error ellipse: s-maj=25.7km s-min=13.4km az=119.0*
*NOU **19** 05:52:11.9, 23.47S×117.97E, h0km, MLv3.7/4, Western Australia*
ISC 19 05:52:10.6±1.2, 23.64S±0.07×118.14E±0.08, h10km, n10, σ1§41/12, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PSA00	**Pilbara Seismi**	**2.59**	**38**	P	**Pn**		**05 52 54.7**	**+2.1**
MBWA	**Marble Bar**	**2.87**	**31**	P	**Pn**		**05 52 58.0**	**+1.5**
MEEK	**Meekatharra**	**3.02**	**172**	P	**Pb**		**05 53 02.9**	**-1.6**
	baz=3.0							
MEEK	**Meekatharra**	**3.02**	**172**	P	**Pb**		**05 53 03.5**	**-1.0**
GIRL	**Giralia**	**3.72**	**285**	P	**Pn**		**05 53 09.0**	**+0.9**
	baz=3.8							
GIRL	**Giralia**	**3.72**	**285**	P	**Pn**		**05 53 08.1**	**-0.1**
MORW	**Morawa**	**5.73**	**199**	P	**Pn**		**05 53 36.0**	**+0.2**
	baz=5.8							
BLDU	**Ballidu**	**7.07**	**190**	P	**Pn**		**05 53 55.1**	**+1.0**
	baz=7.1							
BLDU				S	**Sn**		**05 55 14.8**	**+0.2**
	baz=7.1							
FITZ	**Fitzroy Crossi**	**8.92**	**53**	P	**Pn**		**05 54 18.0**	**-1.6**
	baz=8.9							
FITZ				S	Sn		05 55 52.4	-7.8
	baz=8.9							
WRKA	**Warakurna**	**9.37**	**101**	P	**Pn**		**05 54 27.5**	**+1.7**
	baz=9.2							
WRKA				S	**Sn**		**05 56 10.9**	**-0.5**
	baz=9.2							

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*IDC **19** 05:56:38.9±0.8, 66.52N×17.71W, h0km, mb3.5/9, mbtmp3.6/11, ML3.0/2, Error ellipse: s-maj=24.9km s-min=15.4km az=177.0*
ISC 19 05:56:41.1±0.6, 66.57N±0.08×17.71W±0.07, h16km, n16, σ0§93/17, mb3.6/10, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**2.36**	**221**	Pn	**Pn**		**05 57 17.3**	**-1.9**
	20nm,0.3s,baz=43,slow=9.2,SNR=33							
BORG				Sn	**Sn**		**05 57 48.0**	**+0.3**
	19nm,0.3s,baz=348,slow=20,SNR=22							
	72nm,0.3s							
SCO	**Scoresbysund**	**4.23**	**340**	*i* P	**Pn**		**05 57 43.0**	**-1.8**
HFS	**Hagfors**	**15.35**	**100**	Pn	**P**		**06 00 22.2**	**+0.8**
	0.1nm,0.3s,baz=301,slow=11,SNR=4.3							
ARCES	**ARCESS Array B**	**16.16**	**60**	Pn	**P**		**06 00 30.6**	**+0.3**
	0.1nm,0.3s,baz=279,slow=13,SNR=1.6							
FINES	**FINESS Array B**	**19.52**	**84**	P	**Pn**		**06 01 07.8**	**-0.7**
	0.1nm,0.3s,baz=302,slow=11,SNR=4.9							
	1.3nm,0.7s							
FRB	**Frobisher Bay**	**21.05**	**286**	P	**P**		**06 01 24.6**	**+0.7**
	1.9nm,0.7s,baz=51,slow=13,SNR=4.6							
	1.9nm,0.7s							
CLL	**Collm**	**21.67**	**120**	*e*P	**P**		**06 01 30.0**	**-0.6**
CLL				*ex*	x		06 01 35.0	
CLL				*ex*	x		06 01 40.0	
CLL				*e*PPP	PPP		06 01 57.0	
SCHQ	**Schefferville**	**25.98**	**267**	P	**P**		**06 02 12.7**	**+0.1**
	1.0nm,0.7s,baz=41,slow=1.5,SNR=4.1							

1.0nm,0.7s
YKA **Yellowknife Ar 37.87 311** P **P** **06 03 56.0 -0.5**
0.4nm,0.8s,baz=42,slow=8.7,SNR=6.4
0.4nm,0.8s
BRTR **Keskin Array B 39.10 107** P **P** **06 04 08.1 +0.7**
0.6nm,0.6s,baz=333,slow=6.6,SNR=2.9
0.6nm,0.6s
ULM **Lac du Bonnet 40.94 286** P **P** **06 04 22.9 +0.6**
1.6nm,0.7s,baz=38,slow=11,SNR=4.4
1.6nm,0.7s
KURBB **Kurchatov Arra 47.24 60** P **P** **06 05 12.7 -0.1**
0.6nm,0.7s,baz=334,slow=7.2,SNR=3.7
0.6nm,0.7s
MKAR **Makanchi Array 51.81 59** P **P** **06 05 47.7 -0.1**
0.6nm,0.8s,baz=335,slow=6.4,SNR=4.6
0.6nm,0.8s
PDAR **Pinedale Array 52.37 292** P **P** **06 05 52.7 +0.5**
0.5nm,0.8s,baz=39,slow=7.4,SNR=4.9
0.5nm,0.8s
TORD **Torodi Ar. Bea 54.93 157** P **P** **06 06 10.6 -0.2**
0.6nm,0.9s,baz=359,slow=9.8,SNR=2.0
TXAR **Lajitas Array 61.88 279** P **P** **06 07 00.7 +1.2**
0.2nm,0.7s,baz=35,slow=4.6,SNR=3.5
0.2nm,0.7s

IDC 19 05:58:21.7±2.5, 53°92N×86°38E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=21.3km s-min=13.6km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**273**	I	I	06 05 10.0	
	baz=90,slow=344,SNR=3.1						
ZALV	**Zalesovo Beam**	**0.92**	**273**	Pg	Pg	05 58 39.0	-0.4
	0.8nm,0.3s,baz=91,slow=18,SNR=9.3						
ZALV				Lg	Lg	05 58 51.8	
	0.6nm,0.3s,baz=96,slow=28,SNR=3.7						
KURBB	**Kurchatov Arra**	**5.84**	**239**	Pn	Pn	05 59 50.9	+1.4
	0.1nm,0.3s,baz=56,slow=13,SNR=8.3						
KURBB				Lg	Lg	06 01 25.8	
	baz=59,slow=22,SNR=1.6						
	0.3nm,0.2s						
MKAR	**Makanchi Array**	**7.59**	**202**	Pn	Pn	06 00 14.0	+0.4
	0.1nm,0.3s,baz=26,slow=14,SNR=5.2						
	0.2nm,0.3s						

*IDC **19** 05:59:50.1±3.2, 22°46N×143°75E, h56km±28km, mb4.0/27, mbtmp4.3/29, ML4.0/2, MS2.9/1, Error ellipse: s-maj=22.8km s-min=12.6km az=78.0*
*NEIC **19** 05:59:51.1±1.8, 22°63N±0°08×144°4E±0°1, h80km±7km, mb4.6/52, Error ellipse: s-maj=17.2km s-min=12.1km az=77.0*
*JMA **19** 05:59:53.7±0.3, 23°N±2°×14°4E±°, h96km, MV5.4/26, IOTO ISLANDS REGION*
ISC 19 05:59:53.6±0.5, 22°65N±0°06×144°16E±0°10, h100km, n108, σ1$59/102, mb4.4/45, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.36**	**336**	P	**Pn**	**06 00 56.1**	**-1.6**
JHH2				S	**Sn**	**06 01 44.2**	**-3.2**
CBIJ	**Chichi jima**	**4.78**	**338**	P	**Pn**	**06 01 02.5**	**-0.9**
CBIJ				S	**Sn**	**06 01 55.5**	**-2.1**
JCJ	**Chichijima**	**4.78**	**338**	Pn	**Pn**	**06 01 02.3**	**-1.1**
JCJ				Sn	**Sn**	**06 01 56.0**	**-1.6**
JCJ	**Chichijima**	**4.78**	**338**	P	Pn	06 00 58.5	-4.9
	28nm,0.3s,baz=297,slow=23,SNR=15						
JCJ				S	Sn	06 01 50.2	-7.3
	738nm,0.4s,baz=250,slow=23,SNR=21						
	72nm,0.4s						
GUMO	**Guam**	**9.03**	**176**	LR	LR	06 04 59.3	
	comp=Z,80nm,19.3s,baz=74,slow=35						
JMZ	**Minamidaito 2**	**12.21**	**288**	Pn	**Pn**	**06 02 45.7**	**+1.5**
JMZ	**Minamidaito 2**	**12.21**	**288**	*eP*	**Pn**	**06 02 45.6**	**+1.5**
BSO3	**Boso 3**	**12.53**	**346**	*eS*	**Sn**	**06 05 01.0**	**-4.5**
BSO4	**Boso 4**	**12.74**	**346**	*eS*	**Sn**	**06 05 04.9**	**-6.2**
JOD2	**Odawara 2**	**13.33**	**342**	*eP*	**Pn**	**06 02 57.5**	**-1.4**
JTNC	**Tanabenakahech**	**13.43**	**328**	P	**Pn**	**06 02 59.0**	**-1.2**
JRY	**Ryogami san**	**14.09**	**342**	*eP*	**Pn**	**06 03 06.3**	**-2.3**
JRY				*eS*	Sn	06 05 35.4	-8.4
INU	**Inuyama**	**14.11**	**335**	Pn	**Pn**	**06 03 08.2**	**-0.7**
JGF	**Kuroka**	**14.20**	**337**		**Pn**	**06 03 09.8**	**-0.5**
JMN	**Monobe**	**14.27**	**323**	Pn	**Pn**	**06 03 11.6**	**+0.5**
MJAR	**Matsushiro Arr**	**14.78**	**341**	P	**Pn**	**06 03 17.6**	**+0.1**
	0.2nm,0.3s,baz=160,slow=7.9,SNR=4.5						
	2.4nm,0.5s						
JMM	**Marumori**	**15.44**	**350**		**Pn**	**06 03 26.8**	**+0.9**
JMM				IAmb	IAmb	06 03 29.6	
	comp=Z,66nm,1.4s						
JHS	**Saijyo**	**15.64**	**324**	*eP*	**P**	**06 03 32.9**	**+2.5**
JSJ	**Shimokoshiki**	**15.67**	**308**	*eP*	**P**	**06 03 33.5**	**+2.6**
JNU	**Nakatsue**	**15.69**	**315**	P	**Pn**	**06 03 30.5**	**+1.4**
JNU	**Nakatsue**	**15.69**	**315**	P	**Pn**	**06 03 30.2**	**+1.1**
	comp=Z,12nm,0.9s,baz=44,slow=9.7,SNR=3.1						
JSD	**Sado**	**16.16**	**343**	P	**Pn**	**06 03 36.0**	**+1.2**
JTU	**Tsushima**	**17.53**	**316**	P	**Pn**	**06 03 52.3**	**+0.7**
KSRS	**Korea Array**	**20.33**	**320**	P	**P**	**06 04 21.0**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=125,slow=10,SNR=9.3						
	comp=Z,1.9nm,0.8s						
KS19	**Wonju Array Si**	**20.40**	**320**	P	Pn	06 04 26.5	+1.0
KS19				IAmb	IAmb	06 04 27.8	
	comp=Z,17nm,0.8s						
NACB	**Ninganchiao**	**20.76**	**279**	P	**P**	**06 04 27.0**	**+0.4**
NACB				IAmb	IAmb	06 04 49.3	
	comp=Z,35nm,1.5s						
YHNB	**Yeheng**	**20.96**	**280**	P	**P**	**06 04 28.7**	**-0.2**
YHNB				IAmb	IAmb	06 04 30.1	
	comp=Z,17nm,0.9s						
YULB	**Yu-li**	**21.05**	**276**	P	**P**	**06 04 29.6**	**-0.2**
YULB				IAmb	IAmb	06 04 29.7	
	comp=Z,12nm,0.7s						
SSLB	**Suanglung**	**21.35**	**278**	P	**P**	**06 04 32.7**	**-0.3**
SSLB				IAmb	IAmb	06 04 34.8	
	comp=Z,34nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**21.40**	**94**	T	T	06 27 11.1	
	baz=286,slow=74						
H11N2	**WAKE ISLAND Hy**	**21.40**	**94**	T	T	06 27 17.4	
	baz=286						
H11N3	**WAKE ISLAND Hy**	**21.41**	**94**	T	T	06 27 06.0	
	baz=286,slow=74						
H11S3	**WAKE ISLAND Hy**	**21.49**	**97**	T	T	06 27 22.3	
	baz=283,slow=75						
H11S1	**WAKE ISLAND Hy**	**21.50**	**97**	T	T	06 27 23.1	
	baz=283,slow=75						
H11S2	**WAKE ISLAND Hy**	**21.51**	**97**	T	T	06 27 23.7	
	baz=283,slow=75						
SSE	**Sheshan**	**22.12**	**297**	P	**P**	**06 04 39.1**	**-1.9**
SSE				IAmb	IAmb	06 04 40.3	
	comp=Z,24nm,0.7s						
KNMB	**Chin-men Tao**	**23.68**	**279**	P	**P**	**06 04 55.2**	**-1.1**
USA0B	**Ussuriysk Arra**	**23.72**	**338**	P	**P**	**06 04 59.3**	**+2.8**
USA0B				IAmb	IAmb	06 05 01.1	
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**23.72**	**338**	P	**P**	**06 04 59.2**	**+2.8**
USRK	**Ussuriysk Ar.**	**23.72**	**338**	P	**P**	**06 04 59.1**	**+2.6**
	comp=Z,12nm,0.9s,baz=163,slow=8.6,SNR=16						
	comp=Z,12nm,0.9s						
BJT	**Baijiatuau**	**29.34**	**313**	P	**P**	**06 05 47.5**	**+0.4**
COEN	**Coen**	**36.39**	**182**	P	**P**	**06 06 48.2**	**-0.3**
COEN				IAmb	IAmb	06 07 06.9	
	comp=Z,3.9nm,0.8s						
SLVN	**Son La**	**37.27**	**276**	P	**P**	**06 06 55.1**	**-0.9**
SOEI	**Soe**	**37.64**	**213**	P	**P**	**06 06 57.7**	**-1.5**
ULN	**Ulaanbaatar**	**38.82**	**320**	P	**P**	**06 07 07.8**	**-1.1**
ULN				IAmb	IAmb	06 07 10.5	
	comp=Z,4.1nm,0.7s						
SONM	**Songino Array**	**39.20**	**319**	P	**P**	**06 07 12.7**	**+0.6**
SONM	**Songino Array**	**39.20**	**319**	P	**P**	**06 07 12.6**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=130,slow=7.6,SNR=20						
	comp=Z,2.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.42**	**273**	P	**P**	**06 07 37.7**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=74,slow=6.7,SNR=5.3						
	comp=Z,1.4nm,0.3s						
CTA	**Charters Tower**	**42.52**	**177**	P	**P**	**06 07 39.4**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=337,slow=7.7,SNR=4.1						
	comp=Z,1.8nm,0.5s						
WB0	**Warramunga Arr**	**43.22**	**193**	P	**P**	**06 07 43.9**	**-1.2**
WR0	**Warramunga Arr**	**43.37**	**193**	P	**P**	**06 07 45.9**	**-0.4**
WB2	**Warramunga Arr**	**43.40**	**193**	P	**P**	**06 07 45.6**	**-0.9**
WRA	**Warramunga Arr**	**43.40**	**193**	P	**P**	**06 07 44.2**	**-2.3**
WRA	**Warramunga Arr**	**43.40**	**193**	P	**P**	**06 07 45.2**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=8.9,slow=8.0,SNR=26						
	comp=Z,0.7nm,0.4s						
KULM	**Kulim**	**45.39**	**254**	P	**P**	**06 08 02.4**	**-0.1**
KULM				IAmb	IAmb	06 08 14.8	
	comp=Z,16nm,1.3s						
ASAR	**Alice Springs**	**47.10**	**193**	P	**P**	**06 08 14.0**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=12,slow=8.7,SNR=6.0						
	comp=Z,0.3nm,0.4s						
SHL	**Shillong**	**47.55**	**285**	P	**P**	**06 08 18.1**	**-1.4**
SHL				IAmb	IAmb	06 08 18.4	
	comp=Z,8.1nm,0.6s						
TIXI	**Tiksi**	**49.81**	**354**	P	**P**	**06 08 36.5**	**+0.6**
TIXI				IAmb	IAmb	06 08 37.1	
	comp=Z,3.7nm,0.5s						
GSI	**Gunungsitoli**	**49.95**	**252**	P	**P**	**06 08 36.6**	**-1.1**
ZAA0	**Zalesovo Array**	**54.04**	**321**	P	**P**	**06 09 07.7**	**+0.1**
ZAA0				IAmb	IAmb	06 09 08.3	
	comp=Z,3.8nm,0.6s						
ZALV	**Zalesovo Beam**	**54.04**	**321**	P	**P**	**06 09 07.7**	**+0.1**
ZALV	**Zalesovo Beam**	**54.04**	**321**	P	**P**	**06 09 07.8**	**+0.2**
	comp=Z,4.3nm,0.6s,baz=103,slow=6.8,SNR=9.9						
ZALV				PcP	**PcP**	**06 10 11.1**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=125,slow=4.0,SNR=2.5						
	comp=Z,4.3nm,0.6s						
STKA	**Stephens Creek**	**54.27**	**183**	P	**P**	**06 09 08.3**	**-1.1**
STKA	**Stephens Creek**	**54.27**	**183**	P	**P**	**06 09 08.3**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=322,slow=6.5,SNR=2.8						
	comp=Z,2.3nm,0.8s						
MK31	**Makanchi Array**	**54.73**	**312**	P	**P**	**06 09 13.4**	**+0.7**
MK31				IAmb	IAmb	06 09 14.1	
	comp=Z,7.3nm,0.8s						
MKAR	**Makanchi Array**	**54.73**	**312**	P	**P**	**06 09 13.5**	**+0.8**
MKAR	**Makanchi Array**	**54.73**	**312**	P	**P**	**06 09 13.3**	**+0.6**
	comp=Z,8.3nm,0.6s,baz=92,slow=9.1,SNR=109						
MKAR				PcP	**PcP**	**06 10 14.9**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=83,slow=2.6,SNR=5.7						
	comp=Z,8.3nm,0.6s						
MAKZ	**Makanchi**	**54.94**	**312**	P	**P**	**06 09 14.9**	**+0.6**
KURK	**Kurchatov**	**57.40**	**317**	P	**P**	**06 09 31.9**	**+0.3**
NRIK	**Noril'sk**	**57.43**	**339**	P	**P**	**06 09 32.8**	**+1.2**
	comp=Z,2.2nm,0.5s,baz=110,slow=8.8,SNR=4.5						
	comp=Z,2.2nm,0.5s						
KURBB	**Kurchatov Arra**	**57.45**	**317**	P	**P**	**06 09 32.4**	**+0.4**
	comp=Z,9.0nm,0.6s,baz=94,slow=7.7,SNR=81						
	comp=Z,9.0nm,0.6s						
BOOM	**Boomskoye usch**	**59.25**	**307**	P	**P**	**06 09 46.1**	**+1.2**
AAK	**Ala-Archa**	**60.31**	**307**	P	**P**	**06 09 52.9**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=131,slow=9.4,SNR=3.8						
	comp=Z,2.6nm,0.5s						
IL31		**60.79**	**27**	P	**P**	**06 09 51.9**	**-2.9**
IL31				IAmb	IAmb	06 10 14.4	
	comp=Z,4.1nm,1.4s						
ILAR	**Eielson Array**	**60.79**	**27**	P	**P**	**06 09 51.5**	**-3.3**
ILAR	**Eielson Array**	**60.79**	**27**	P	**P**	**06 09 58.2**	**+3.5**
	comp=Z,0.3nm,0.7s,baz=253,slow=5.0,SNR=5.1						
	comp=Z,0.3nm,0.7s						
ARSB	**Arslanbob**	**61.55**	**306**	P	**P**	**06 10 01.7**	**+1.1**
BVAR	**Borovoye Array**	**62.54**	**319**	P	**P**	**06 10 07.5**	**+0.7**
	comp=Z,8.1nm,0.5s,baz=88,slow=7.2,SNR=49						
	comp=Z,8.1nm,0.5s						
BRVK	**Borovoye**	**62.60**	**319**	P	**P**	**06 10 08.0**	**+0.8**
BRVK				IAmb	IAmb	06 10 08.8	
	comp=Z,7.7nm,0.8s						
KK31	**Karatay Array**	**63.18**	**308**		**P**	**06 10 12.3**	**+1.1**
KK31				IAmb	IAmb	06 10 12.6	
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	**63.18**	**308**		**P**	**06 10 12.0**	**+0.8**
KKAR				IAmb	IAmb	06 10 12.6	
	comp=Z,8.0nm,0.8s						
SIMJ	**Simiganj**	**64.94**	**303**		**P**	**06 10 23.5**	**+0.6**
SIMJ				IAmb	IAmb	06 10 23.9	
	comp=Z,9.4nm,1.2s						
KBL	**Kabul**	**65.67**	**299**	P	**P**	**06 10 28.1**	**+0.3**
G31M	**Satah River**	**66.10**	**25**	P	**P**	**06 10 30.0**	**+0.3**
ARU	**Arti**	**69.04**	**324**	P	**P**	**06 10 49.2**	**+0.8**
ARU				IAmb	IAmb	06 10 49.2	
	comp=Z,5.9nm,0.5s						
ARU	**Arti**	**69.04**	**324**	P	**P**	**06 10 48.9**	**+0.6**
	comp=Z,4.4nm,0.4s,baz=76,slow=3.3,SNR=7.6						
	comp=Z,4.4nm,0.4s						
ABKAR	**Akbulak array**	**69.50**	**316**	P	**P**	**06 10 51.7**	**+0.3**
AKTO	**Aktyubinsk**	**70.48**	**317**	P	**P**	**06 10 58.1**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=100,slow=7.9,SNR=4.2						
	comp=Z,1.5nm,0.7s						
GEYT	**Alibeck**	**73.45**	**305**	P	**P**	**06 11 16.4**	**+1.0**
GEYT				IAmb	IAmb	06 11 17.2	
	comp=Z,4.3nm,0.9s						
GEYT	**Alibeck**	**73.45**	**305**	P	**P**	**06 11 16.3**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=108,slow=3.8,SNR=4.6						
	comp=Z,2.1nm,0.7s						
YKA	**Yellowknife Ar**	**75.20**	**28**	P	**P**	**06 11 29.1**	**+4.2**
	comp=Z,0.4nm,0.7s,baz=294,slow=6.1,SNR=2.5						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**78.31**	**342**	P	**P**	**06 11 45.3**	**+2.9**
	comp=Z,2.9nm,0.8s,baz=61,slow=9.9,SNR=6.4						
	comp=Z,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**81.85**	**52**	P	P	06 12 07.4	+5.1
	comp=Z,0.5nm,0.6s,baz=300,slow=3.6,SNR=3.9						
	comp=Z,0.5nm,0.6s						
KBZ	**Khabaz**	**82.36**	**314**	P	**P**	**06 12 06.0**	**+1.5**
	comp=Z,6.8nm,0.8s,baz=111,slow=3.3,SNR=14						
	comp=Z,6.8nm,0.8s						
FIA1	**FINESS Array S**	**82.71**	**335**	P	**P**	**06 12 06.4**	**+0.4**
FINES	**FINESS Array B**	**82.72**	**335**	P	**P**	**06 12 06.4**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=66,slow=4.9,SNR=30						
	comp=Z,1.9nm,0.4s						
AKASG	**Malin Array Be**	**87.26**	**325**	P	**P**	**06 12 29.1**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=50,slow=5.4,SNR=7.6						
	comp=Z,1.2nm,0.4s						
AKBB	**Malin Array Si**	**87.26**	**325**	P	**P**	**06 12 28.8**	**-0.2**
AKBB				IAmb	IAmb	06 12 29.2	
	comp=Z,3.0nm,0.5s						
KIEV	**Kiev**	**87.27**	**325**	P	**P**	**06 12 28.7**	**-0.3**
KIEV				IAmb	IAmb	06 12 29.2	
	comp=Z,2.7nm,0.5s						
NC405	**NORSAR Array S**	**88.17**	**339**	P	**P**	**06 12 33.1**	**-0.1**
HFS	**Hagfors**	**88.20**	**338**	P	**P**	**06 12 33.5**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=73,slow=5.0,SNR=11						
	comp=Z,1.2nm,0.5s						
NB201	**NORSAR Array S**	**88.36**	**339**	P	**P**	**06 12 34.6**	**+0.5**
NOA	**NORSAR Array B**	**88.39**	**339**	P	**P**	**06 12 34.8**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=45,slow=4.6,SNR=3.5						
	comp=Z,1.1nm,0.9s						
RAYN	**Ar Rayn**	**88.60**	**295**	P	**P**	**06 12 35.7**	**-0.3**
RAYN				IAmb	IAmb	06 12 37.9	
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**90.34**	**314**	P	**P**	**06 12 44.2**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=46,slow=5.2,SNR=4.6						
	comp=Z,1.1nm,0.8s						
OK033	**Mehan**	**97.91**	**46**	P	P	06 13 13.6	-4.9
QUOK	**Quay**	**97.99**	**46**	P	**P**	**06 13 15.9**	**-3.0**
PLCA	**Paso Flores**	**145.69**	**130**	PKPbc	**PKiKP**	**06 19 24.1**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=252,slow=4.1,SNR=6.0						

*IDC **19** 06:01:57.2±1.0, 56°45N×149°18W, h0km, mb3.6/10, mbtmp3.7/15, ML3.6/5, MS3.6/3, Error ellipse: s-maj=20.7km s-min=14.9km az=17.0*
*NEIC **19** 06:02:00±1.2, 56°60N±0°08×149°29W±0°10, h25km±9km, mb3.9/2, ML3.9/80, ML3.7(AEIC), Error ellipse: s-maj=12.4km s-min=7.6km az=171.0*
*AEIC **19** 06:02:02.2±1.2, 56°64N±0°08×149°27W±0°09, h2km±7km, Error ellipse: s-maj=12.2km s-min=7.2km az=172.0*
ISC 19 06:01:58.3±0.7, 56°62N±0°07×149°21W±0°05, h10km, n329, σ1$01/333, mb3.7/10, MS3.6/3, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.17**	**304**		**Pn**	**06 02 33.2**	**-1.1**
KDAK					**Sn**	**06 02 58.7**	**-2.6**
KDAK	**Kodiak Island**	**2.17**	**304**	Pn	**Pn**	**06 02 33.4**	**-1.0**
	7.3nm,0.3s,baz=113,slow=5.1,SNR=205						
KDAK				Sn	**Sn**	**06 02 58.0**	**-3.3**
	22nm,0.3s,baz=215,slow=21,SNR=38						
	27nm,0.4s						
SYI	**Shuyak Island**	**2.62**	**321**		**Pn**	**06 02 40.3**	**-0.3**
SYI					**Sn**	**06 03 11.4**	**-1.0**
Q20K	**Shuyak Island**	**2.62**	**321**	P	**Pn**	**06 02 40.2**	**-0.5**
	baz=139						
Q20K				S	**Sn**	**06 03 11.4**	**-1.1**
	baz=139						
CNPM	**China Poot**	**3.10**	**341**		**Pn**	**06 02 47.1**	**-0.1**
CNPM					**Sn**	**06 03 22.4**	**-2.0**
Q23K	**Middleton Isla**	**3.20**	**27**		**Pn**	**06 02 48.4**	**-0.1**
Q23K					**Sn**	**06 03 25.1**	**-1.5**
Q23K				IAML		06 03 28.7	
	comp=N,203nm,0.8s						
Q23K				IAML		06 03 40.0	
	comp=E,226nm,1.0s						
Q23K	**Middleton Isla**	**3.20**	**27**	P	**Pn**	**06 02 48.1**	**-0.4**
	baz=210						
Q23K				S	**Sn**	**06 03 25.4**	**-1.2**
	baz=210						
MID	**Middleton Isla**	**3.20**	**27**		**Pn**	**06 02 48.4**	**-0.2**
MID				IAML		06 03 25.9	
	comp=N,214nm,0.9s						
MID				IAML		06 03 39.5	
	comp=E,218nm,1.4s						
MID	**Middleton Isla**	**3.20**	**27**	P	**Pn**	**06 02 48.5**	**0.0**
BRSE	**Bradley Lake S**	**3.23**	**346**		**Pn**	**06 02 48.8**	**-0.2**
BRSE	**Bradley Lake S**	**3.23**	**346**	P	**Pn**	**06 02 48.7**	**-0.2**
	baz=166						
BRLK	**Bradley Lake**	**3.27**	**345**		**Pn**	**06 02 49.2**	**-0.3**
BRLK					**Sn**	**06 03 27.1**	**-1.4**
HOM	**Homer**	**3.30**	**338**		**Pn**	**06 02 50.3**	**+0.3**
HOM				IAML		06 03 36.7	
	comp=E,423nm,0.8s						
HOM				IAML		06 03 42.1	
	comp=N,541nm,1.1s						
HOM	**Homer**	**3.30**	**338**	P	**Pn**	**06 02 50.5**	**+0.6**
	baz=157						
Q19K	**Cape Douglas,**	**3.31**	**316**		**Pn**	**06 02 50.6**	**+0.5**
Q19K				IAML		06 03 44.4	
	comp=N,506nm,1.0s						
Q19K	**Cape Douglas,**	**3.31**	**316**	P	**Pn**	**06 02 50.5**	**+0.5**
	baz=134						
KAHG	**Katmai Hook Gl**	**3.43**	**305**		**Pn**	**06 02 51.9**	**+0.1**
SEW	**Seward**	**3.49**	**358**		**Pn**	**06 02 51.9**	**-0.6**
SEW	**Seward**	**3.49**	**358**	P	**Pn**	**06 02 52.1**	**-0.4**
	baz=178						
P23K	**Montague Islan**	**3.52**	**15**		**Pn**	**06 02 52.7**	**-0.1**
P23K					**Sn**	**06 03 33.1**	**-1.4**
P23K	**Montague Islan**	**3.52**	**15**	P	**Pn**	**06 02 52.7**	**-0.1**
	baz=197						
P23K				S	**Sn**	**06 03 33.1**	**-1.4**
	baz=197						
ACHA	**Angle Creek He**	**3.67**	**298**		**Pn**	**06 02 54.9**	**-0.2**
P19K	**Oil Pt**	**3.71**	**327**		**Pn**	**06 02 56.1**	**+0.6**
P19K				IAML		06 03 41.4	
	comp=N,220nm,0.5s						
P19K				IAML		06 03 41.6	
	comp=E,266nm,0.5s						
P19K	**Oil Pt**	**3.71**	**327**	P	**Pn**	**06 02 55.9**	**+0.3**
	baz=144						
KAHC	**Katmai Hardscr**	**3.72**	**305**		**Pn**	**06 02 56.1**	**+0.4**
KAHC	**Katmai Hardscr**	**3.72**	**305**	P	**Pn**	**06 02 56.1**	**+0.4**
	baz=122						
KVTA	**Katmai Vly 10**	**3.72**	**301**		**Pn**	**06 02 56.3**	**+0.5**
O22K	**Cooper Landing**	**3.88**	**356**		**Pn**	**06 02 56.7**	**-1.1**
O22K	**Cooper Landing**	**3.88**	**356**	P	**Pn**	**06 02 57.7**	**-0.1**
	baz=176						
O20K	**Slope Mountain**	**3.91**	**334**		**Pn**	**06 02 57.8**	**-0.5**
O20K	**Slope Mountain**	**3.91**	**334**	P	**Pn**	**06 02 57.8**	**-0.5**
	baz=152						
SLKM	**Skilak Lake**	**3.93**	**353**		**Pn**	**06 02 58.3**	**-0.3**
IVE	**Iliamna Volcan**	**3.95**	**331**		**Pn**	**06 02 58.5**	**-0.5**
ILSW	**Iliamna Southw**	**3.96**	**330**		**Pn**	**06 02 58.5**	**-0.5**
ILSW				IAML		06 03 54.2	
	comp=N,117nm,0.7s						
ILSW				IAML		06 03 55.0	
	comp=E,139nm,0.9s						
CNTC	**Contact Creek**	**3.96**	**297**		**Pn**	**06 02 59.2**	**+0.1**
KELA	**Mount Kelaz**	**3.96**	**300**		**Pn**	**06 02 59.3**	**+0.2**
Q17K	**Contact Creek**	**3.96**	**297**	P	**Pn**	**06 02 59.2**	**+0.1**
	baz=113						
HIN	**Hinchinbrook I**	**4.04**	**19**		**Pn**	**06 03 00.6**	**+0.4**
HIN				IAML		06 03 48.7	
	comp=N,267nm,0.8s						
HIN				IAML		06 03 51.3	
	comp=E,236nm,0.9s						
KAIM	**Kayak Island**	**4.17**	**35**		**Pn**	**06 03 02.3**	**+0.5**
KAIM	**Kayak Island**	**4.17**	**35**	P	**Pn**	**06 03 02.0**	**+0.2**
	baz=219						
P18K	**Big Mountain,**	**4.24**	**313**		**Pn**	**06 03 02.2**	**-0.6**
P18K	**Big Mountain,**	**4.24**	**313**	P	**Pn**	**06 03 02.1**	**-0.6**
	baz=129						
RED	**Redoubt Volcan**	**4.24**	**335**		**Pn**	**06 03 02.1**	**-0.7**
RSO	**Redoubt South**	**4.27**	**336**		**Pn**	**06 03 03.1**	**-0.3**
CAPN	**Captain Cook N**	**4.28**	**347**	Pn	**Pn**	**06 03 04.3**	**+1.0**
RDT	**Redoubt**	**4.30**	**338**		**Pn**	**06 03 02.6**	**-1.1**
EYAK	**Cordova Ski Ar**	**4.33**	**23**		**Pn**	**06 03 04.6**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.33**	**23**	P	**Pn**	**06 03 04.6**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.33**	**23**	P	**Pn**	**06 03 04.3**	**+0.2**
	baz=206						
DFR	**Drift River**	**4.37**	**337**		**Pn**	**06 03 04.0**	**-0.7**
FID	**Port Fidalgo**	**4.38**	**18**		**Pn**	**06 03 04.6**	**-0.2**
FID				IAML		06 03 55.3	
	comp=E,129nm,0.5s						
FID				IAML		06 04 03.6	
	comp=N,84nm,0.5s						
NCT	**North Crescent**	**4.40**	**335**		**Pn**	**06 03 04.6**	**-0.5**
GLI	**Glacier Island**	**

PMR	Palmer	4.98	0	P	Pn	06 03 13.3	+0.3
PMR	Palmer baz=181	4.98	0	P	Pn	06 03 13.0	0.0
N19K	Bonanza Creek	5.02	329		Pn	06 03 13.5	-0.1
N19K	Bonanza Creek baz=145	5.02	329	P	Pn	06 03 13.1	-0.5
STLK	Strandline Lak	5.07	346		Pn	06 03 14.3	0.0
WAX	Waxell Ridge	5.08	38		Pn	06 03 14.8	+0.4
SPNN	North Nagishla	5.09	341		Pn	06 03 14.4	-0.2
CHGN	Chignik	5.11	270		Pn	06 03 11.6	-3.1
CHGN comp=N,69nm,0.7s				IAML		06 04 13.0	
CHGN comp=E,44nm,0.6s				IAML		06 04 17.9	
GHO	Glory Hole Cre	5.17	2		Pn	06 03 16.3	+0.6
GHO comp=E,63nm,0.5s				IAML		06 04 20.3	
GHO comp=N,97nm,0.6s				IAML		06 04 21.7	
KLU	Klutina	5.17	18		Pn	06 03 16.3	+0.6
KLU comp=E,60nm,0.5s				IAML		06 04 18.8	
KLU comp=N,81nm,0.5s				IAML		06 04 21.0	
KLU	Klutina baz=201	5.17	18	P	Pn	06 03 16.5	+0.8
BARK	Barkley Ridge	5.17	40		Pn	06 03 16.3	+0.5
CRQM	Cirque	5.21	35		Pn	06 03 17.2	+0.8
CRQM comp=E,97nm,0.8s				IAML		06 04 21.8	
SML	Sawmill	5.22	5		Pn	06 03 17.1	+0.8
SML comp=E,51nm,0.5s				IAML		06 04 20.9	
SML comp=N,66nm,0.6s				IAML		06 04 24.7	
SML	Sawmill baz=186	5.22	5	P	Pn	06 03 17.0	+0.8
MESA	MESA	5.22	44		Pn	06 03 16.8	+0.2
MESA comp=E,79nm,0.7s				IAML		06 04 19.4	
MESA comp=N,138nm,0.2s				IAML		06 05 02.3	
MESA	MESA baz=230	5.22	44	P	Pn	06 03 16.6	+0.1
CRQE	Cirque baz=220	5.23	35	P	Pn	06 03 16.9	+0.4
O17K	Koliganek Bris	5.23	310		Pn	06 03 16.0	-0.4
O17K	Koliganek Bris baz=124	5.23	310	P	Pn	06 03 16.0	-0.4
M23K	Glacier View	5.24	8		Pn	06 03 17.4	+0.8
M23K	Glacier View baz=189	5.24	8	P	Pn	06 03 17.4	+0.8
P16K	Nushagak River	5.27	301		Pn	06 03 17.2	+0.2
P16K	Nushagak River baz=114	5.27	301	P	Pn	06 03 17.2	+0.2
SCM	Sheep Creek Mo	5.31	10		Pn	06 03 18.4	+0.8
SCM comp=E,55nm,0.8s				IAML		06 04 25.6	
SCM comp=N,59nm,0.8s				IAML		06 04 39.8	
SCM	Sheep Creek Mo baz=182	5.31	10	P	Pn	06 03 18.3	+0.7
TGL	Tana Glacier	5.31	36		Pn	06 03 18.1	+0.5
TGL comp=N,101nm,0.5s				IAML		06 04 20.5	
N18K	Kilae Creek	5.36	322		Pn	06 03 17.6	-0.6
N18K	Kilae Creek baz=137	5.36	322	P	Pn	06 03 17.5	-0.7
ISLE	Juniper Island	5.37	39		Pn	06 03 18.9	+0.5
BAGL	Bagley Icefiel	5.38	41		Pn	06 03 18.9	+0.5
VRDI	Verde Repeater	5.50	30		Pn	06 03 20.8	+0.5
SKT	Skwentna	5.50	349	Pn	Pn	06 03 20.4	+0.2
SKT	Skwentna baz=167	5.50	349	P	Pn	06 03 19.9	-0.3
N25K	Chitina, Valde	5.53	24		Pn	06 03 21.3	+0.6
N25K	Chitina, Valde baz=208	5.53	24	P	Pn	06 03 21.3	+0.6
O16K	Kokwok River B	5.57	306		Pn	06 03 21.0	0.0
O16K	Kokwok River B baz=119	5.57	306	P	Pn	06 03 20.8	-0.2
SVW2	Sparrevohn	5.57	326	Pn	Pn	06 03 21.0	-0.1
SVW2	Sparrevohn	5.57	326	P	Pn	06 03 21.4	+0.3
GLB	Gilahina Butte	5.58	28		Pn	06 03 21.6	+0.4
KIAG	Kiagna River	5.59	37		Pn	06 03 21.8	+0.2
M20K	Styx River	5.64	341		Pn	06 03 20.4	-1.8
M20K	Styx River baz=158	5.64	341	P	Pn	06 03 21.6	-0.6
SAMH	Samovar Hills	5.66	48		Pn	06 03 23.1	+0.7
GRNC	Granite Creek	5.67	40		Pn	06 03 23.1	+0.5
TABL	Table Mountain	5.70	44		Pn	06 03 23.7	+0.6
M24K	Tolsona, Glenn	5.71	14		Pn	06 03 24.8	+1.6
M24K	Tolsona, Glenn baz=197	5.71	14	P	Pn	06 03 24.2	+1.1
N17K	Nushagak Hills	5.72	316	Pn	Pn	06 03 22.9	-0.2
N17K	Nushagak Hills baz=130	5.72	316	P	Pn	06 03 22.8	-0.3
MCARA	McCarthy VSAT	5.74	31		Pn	06 03 24.1	+0.7
MCARA	McCarthy VSAT baz=216	5.74	31	P	Pn	06 03 23.5	0.0
S14K	Fog Glacier baz=83	5.75	271	P	Pn	06 03 23.2	-0.4
VNFG	Fog Glacier, M	5.75	271		Pn	06 03 23.4	-0.2
PTPK	Patty Peak	5.76	35		Pn	06 03 24.5	+0.6
PCA	Pinnacle	5.86	50		Pn	06 03 25.7	+0.5
PINM	Pinnacle baz=237	5.86	50	P	Pn	06 03 25.6	+0.5
WASW	Wrangell South	5.91	24		Pn	06 03 26.7	+0.7
M19K	Big River Lodg	5.92	336		Pn	06 03 24.7	-1.2
M19K	Big River Lodg baz=152	5.92	336	P	Pn	06 03 25.5	-0.5
BARN	Barnard Glacie	5.93	38		Pn	06 03 26.6	+0.4
WACK	Wrangell Chich	5.93	23		Pn	06 03 27.1	+0.8
M18K	Stony River	5.95	328		Pn	06 03 25.7	-0.6
M18K	Stony River baz=143	5.95	328	P	Pn	06 03 25.7	-0.6
CTG	Chitna Glacier baz=226	5.97	40	P	Pn	06 03 27.5	+0.7
CTGM	Chitina Glacie	5.97	40	Pn	Pn	06 03 27.4	+0.6
LOGN	Logan Glacier	6.00	42		Pn	06 03 26.9	-0.2
WAT6	Susitna Watana	6.02	7		Pn	06 03 27.6	+0.1
WAT6	Susitna Watana baz=188	6.02	7	P	Pn	06 03 27.6	+0.1
PNL	Peninsula	6.03	56		Pn	06 03 27.9	+0.6
PNL	Peninsula	6.03	56	P	Pn	06 03 27.9	+0.6
PNL	Peninsula baz=244	6.03	56	P	Pn	06 03 27.9	+0.6
BCPM	Bancas Point	6.05	53		Pn	06 03 28.4	+0.7
HARP	HAARP	6.15	18		Pn	06 03 30.4	+1.4
HARP	HAARP baz=202	6.15	18	P	Pn	06 03 30.4	+1.4
O15K	Ungalikthiuk R	6.21	299		Pn	06 03 29.8	0.0
O15K	Ungalikthiuk R baz=110	6.21	299	P	Pn	06 03 29.8	0.0
WAT7	Susitna Watana	6.23	2		Pn	06 03 31.1	+0.9
L19K	White Mountain	6.27	335		Pn	06 03 29.9	-0.9
L19K	White Mountain baz=151	6.27	335	P	Pn	06 03 29.8	-0.9
L20K	Farewell, AK	6.33	340		Pn	06 03 31.1	-0.4
L20K	Farewell, AK baz=156	6.33	340	P	Pn	06 03 31.1	-0.4
M17K	Holitna River	6.40	322		Pn	06 03 31.9	-0.5
M17K	Holitna River baz=135	6.40	322	P	Pn	06 03 32.2	-0.3
SDPT	Sand Point	6.45	263	P	Pn	06 03 32.8	-0.3
DHY	Denali Highway	6.54	7		Pn	06 03 35.8	+1.3
DHY	Denali Highway baz=189	6.54	7	P	Pn	06 03 35.2	+0.7
PAX	Paxson	6.64	15		Pn	06 03 37.1	+1.2
PAX	Paxson baz=198	6.64	15	P	Pn	06 03 36.8	+1.0
O29M	Mount Kennedy	6.69	52		Pn	06 03 37.9	+1.4
O29M	Mount Kennedy baz=241	6.69	52	P	Pn	06 03 36.7	+0.2
M16K	Timber Creek	6.71	315		Pn	06 03 36.7	0.0
M16K	Timber Creek baz=127	6.71	315	P	Pn	06 03 36.7	0.0
N15K	Kwethluk River	6.73	306		Pn	06 03 38.3	+1.3
N15K	Kwethluk River baz=118	6.73	306	P	Pn	06 03 37.7	+0.7
L18K	Granite Mounta	6.78	329		Pn	06 03 36.3	-1.4
L18K	Granite Mounta baz=143	6.78	329	P	Pn	06 03 37.5	-0.2
P29M	Windy Craggy	6.78	59		Pn	06 03 38.6	+0.9
P29M	Windy Craggy baz=248	6.78	59	P	Pn	06 03 38.1	+0.4
RND	Reindeer	6.81	1		Pn	06 03 39.0	+0.9
M27K	Edge Creek, AK	6.85	30		Pn	06 03 39.0	+0.2
M27K	Edge Creek, AK baz=216	6.85	30	P	Pn	06 03 39.7	+0.9
MENT	Mentasta	6.91	21		Pn	06 03 38.7	-0.8
O14K	Tigyukauivet M	6.94	297		Pn	06 03 40.1	+0.3
O14K	Tigyukauivet M baz=108	6.94	297	P	Pn	06 03 40.5	+0.7
CAST	Castle Rocks	6.97	349		Pn	06 03 40.5	+0.3
CAST	Castle Rocks baz=167	6.97	349	P	Pn	06 03 40.6	+0.3
KTH	Kantishna Hill	7.00	354		Pn	06 03 41.5	+0.7
L26K	Log Cabin Wild	7.07	22	Pn	Pn	06 03 42.0	+0.3
MCK	McKinley	7.13	1	Pn	Pn	06 03 42.3	-0.2
S31K	Pelican	7.16	74	Pn	Pn	06 03 41.5	-1.4
K20K	Telida	7.18	342		Pn	06 03 44.3	+1.1
TTA	Tatalina	7.19	334	Pn	Pn	06 03 43.2	-0.2
PN7A	Pavlof North-7	7.26	266		Pn	06 03 43.2	-1.2
L16K	Owhat River	7.33	318	Pn	Pn	06 03 45.2	0.0
K24K	Donnelly Dome	7.40	12		Pn	06 03 47.6	+1.4
K24K	Donnelly Dome baz=195	7.40	12	P	Pn	06 03 47.6	+1.4
HYT	Haines Junctio	7.40	51	Pn	Pn	06 03 46.8	+0.5
HYT	Haines Junctio baz=240	7.40	51	P	Pn	06 03 47.7	+1.3
L27K	Beaver Creek,	7.45	27		Pn	06 03 48.0	+1.1
BCAR	Beaver Creek A	7.46	27	Pn	Pn	06 03 47.5	+0.4
BPAW	Bear Paw Mtn.	7.55	354		Pn	06 03 47.6	-0.6
BPAW	Bear Paw Mtn. baz=173	7.55	354	P	Pn	06 03 47.7	-0.6
SIT	Sitka	7.63	81		Pn	06 03 46.9	-2.4
SIT	Sitka	7.63	81	P	Pn	06 03 46.3	-3.0
K17K	Iditarod	7.64	327		Pn	06 03 49.1	-0.4
J18K	Innoko River	7.82	334	Pn	Pn	06 03 51.0	-0.9
SCRK	Sand Creek	7.82	17	Pn	Pn	06 03 52.4	+0.3
M14K	Bethel	7.82	307	Pn	Pn	06 03 51.2	-0.7
HDA	Harding Lake	7.89	7		Pn	06 03 53.5	+0.7
WRH	Wood River Hil	7.89	4		Pn	06 03 53.3	+0.3
SKAG	Skagway	7.89	63	Pn	Pn	06 03 55.0	+2.1
N30M	Aishikik Lake	7.91	47		Pn	06 03 54.1	+0.9
BESE	Bessie Mountai	7.96	70		Pn	06 03 54.4	+0.4
J20K	Nowinta River	7.96	344		Pn	06 03 55.4	+1.6
M29M	Somme Creek	7.99	39		Pn	06 03 55.0	+0.7
M29M	Somme Creek baz=228	7.99	39	P	Pn	06 03 55.3	+1.0
O30N	Mendenhall	7.99	53		Pn	06 03 55.3	+0.9
O30N	Mendenhall baz=244	7.99	53	P	Pn	06 03 55.3	+0.9
NEA2	Nenana	8.00	0		Pn	06 03 54.5	+0.1
S32K	Killisnoo	8.03	78	Pn	Pn	06 03 53.9	-0.9
J19K	Poorman	8.04	339		Pn	06 03 55.9	+0.9
CCB	Clear Creek Bu	8.08	4		Pn	06 03 55.9	+0.5
JIS	Juneau Island	8.17	72	Pn	Pn	06 03 56.7	0.0
JIS	Juneau Island	8.17	72	P	Pn	06 03 57.0	+0.3
FALS	False Pass	8.21	263	P	Pn	06 03 56.7	-0.6
K27K	Chicken	8.22	22		Pn	06 03 59.6	+2.1
J25K	Salcha River,	8.23	12		Pn	06 03 58.6	+0.9
IL31		8.25	7		Pn	06 03 58.4	+0.6
ILAR	Eielson Array	8.25	7	Pn	Pn	06 03 58.3	+0.4
ILAR	Eielson Array comp=N,0.8nm,0.3s,baz=186,slow=13,SNR=37	8.25	7	Pn	Pn	06 03 57.6	-0.2
ILAR	comp=N,0.6nm,0.3s,baz=201,slow=22,SNR=5.5 comp=N,1.9nm,0.4s			Sn	Sn	06 05 28.1	-3.0
IL03	Eielson Array	8.26	7	Pn	Pn	06 03 59.2	+1.3
COLA	College	8.30	4		Pn	06 03 58.9	+0.4
COLA	College	8.30	4	P	Pn	06 04 00.4	+1.9
J26L	Joseph Creek	8.37	17		Pn	06 04 00.4	+0.8
MDM	Murphy Dome	8.38	3		Pn	06 04 00.5	+0.9
L14K	Kuka Creek	8.40	310		Pn	06 04 01.8	+1.9
ISLZ	Isanotski Laza	8.41	263		Pn	06 03 58.5	-1.6
MLY	Manley	8.47	356	Pn	Pn	06 04 01.1	+0.3
MLY	Manley baz=174	8.47	356	P	Pn	06 04 01.2	+0.3
WHY	Whitehorse	8.49	56	Pn	Pn	06 04 02.5	+1.2
I23K	Minto, Yukon-K	8.55	360		Pn	06 04 01.6	-0.4
I23K	Minto, Yukon-K baz=180	8.55	360	P	Pn	06 04 02.2	+0.2
L29M	L29M	8.56	36		Pn	06 04 03.0	+1.0
M30M	Minto, Yukon	8.66	41	Pn	Pn	06 04 04.5	+0.9
M30M	Minto, Yukon baz=232	8.66	41	P	Pn	06 04 04.5	+0.9
I21K	Tanana	8.69	352		Pn	06 04 04.1	+0.3
I21K	Tanana baz=170	8.69	352	P	Pn	06 04 04.2	+0.3
P32M	Atlin	8.72	64		Pn	06 04 04.9	+0.5
P32M	Atlin baz=256	8.72	64	P	Pn	06 04 04.7	+0.3
J16K	Anvik River	8.78	324	Pn	Pn	06 04 05.5	+0.4
DAWY	Dawson	8.90	29	Pn	Pn	06 04 08.4	+1.6
CRAG	Craig	9.08	91	P	Pn	06 04 08.3	-3.9
PRP	Porcupine Dome	9.10	10	Pn	Pn	06 04 11.3	+1.7
I26K	Coal Creek Min	9.19	16		Pn	06 04 10.7	0.0
H21K	Melozitna Rive	9.23	351		Pn	06 04 10.8	-0.4
H24K	Noodor Dome	9.27	3	Pn	Pn	06 04 13.9	+2.1
K29M	Barlow Dome	9.27	34	Pn	Pn	06 04 13.0	+1.1
P33M	Teslin, Yukon	9.32	61	Pn	Pn	06 04 13.2	+0.6
Q32M	Nakina River	9.34	68	Pn	Pn	06 04 14.4	+1.4
M31M	Drury Creek, Y	9.39	47		Pn	06 04 14.4	+1.0
J29N	Klondike Camp	9.52	30	Pn	Pn	06 04 16.8	+1.5
IMAR	Indian Mountai	9.64	349	Pn	Pn	06 04 17.9	+1.0
FARO	Faro, Yukon	9.83	49		Pn	06 04 20.2	+0.8
I28M	Miner Creek	9.92	23	Pn	Pn	06 04 22.2	+1.4
R33M	Jennings River	10.07	66		Pn	06 04 23.9	+1.1
G23K	Bananza Creek	10.13	358	Pn	Pn	06 04 24.1	+0.5
G24K	Hadweenzic Riv	10.15	4		Pn	06 04 24.3	+0.5
FYU	Fort Yukon	10.15	9	Pn	Pn	06 04 24.3	+0.5
J30M	Hart River	10.16	33		Pn	06 04 26.1	+2.0
UNV	Unalaska Valle	10.26	262	P	Pn	06 04 24.4	-0.9
DLBC	Dease Lake	10.47	72	Pn	Pn	06 04 28.7	+0.4
DLBC	Dease Lake comp=N,1.1nm,0.3s,baz=256,slow=6.8,SNR=33	10.47	72	Pn	Pn	06 04 28.8	+0.5
DLBC	comp=N,0.3nm,0.3s,baz=211,slow=21,SNR=1.9 comp=N,2.3nm,0.3s			Sn	Sn	06 06 25.0	-0.6
I30M	Mount Dempster	10.62	31		Pn	06 04 31.7	+1.2
F21K	Alatna River	10.82	351	Pn	Pn	06 04 34.0	+1.0
F24K	Squaw Lake	10.95	3		Pn	06 04 36.4	+1.5
BMAR	Burnt Mountain	11.05	9	Pn	Pn	06 04 36.7	+0.5
F17K	Baldwin Pennin	11.37	335	Pn	Pn	06 04 36.3	-0.2
E19K	Redstone River	11.49	344	Pn	Pn	06 04 44.1	+1.9
E22K	Anaktuvuk Pass	11.61	355	Pn	Pn	06 04 44.4	+0.5
E25K	Arctic Village	11.66	7	Pn	Pn	06 04 46.2	+1.8
F28M	Old Crow	11.84	18	Pn	Pn	06 04 48.7	+1.7
G30M	tAoh Zraii Nji	12.03	25	Pn	Pn	06 04 52.9	+3.3
TOLK	Toolik Lake Re	12.06	359	Pn	Pn	06 04 52.1	+2.1
G31M	Satah River	12.47	28	Pn	Pn	06 04 56.8	+1.3
D24K	Happy Valley	12.58	1	Pn	Pn	06 04 58.9	+1.9
F31M	Tsiigehtchic	13.00	27	Pn	Pn	06 05 03.2	+0.5
B21K	Ikpikpuk River	13.26	352	Pn	Pn	06 05 05.7	-0.7
INK	Inuvik	13.72	25		Pn	06 05 15.2	+2.8
INK	Inuvik comp=N,0.1nm,0.3s,baz=206,slow=15,SNR=9.4	13.72	25	Pn	Pn	06 05 14.5	+2.0
INK	baz=126,slow=28,SNR=5.7 comp=N,2.9nm,0.9s			Sn	Sn	06 07 47.6	+3.0
B20K	Meade River	13.88	349	Pn	Pn	06 05 13.2	-1.5
C36M	Paulatuk	16.93	31	Pn	Pn	06 05 53.9	-0.9
C36M	comp=Z,4.8nm,0.9s			IAmb	IAmb	06 06 13.6	
YKAB2	New Yellowknif	18.32	57	P	Pn	06 06 10.0	-2.1
YKA	Yellowknife Ar	18.32	57	P	Pn	06 06 10.3	-1.8
YKA	Yellowknife Ar comp=Z,0.1nm,0.3s,baz=266,slow=10,SNR=7.8 comp=Z,1.0nm,1.0s	18.32	57	P	P	06 06 13.1	+0.8
A36M	Sachs Harbour	18.35	24	P	Pn	06 06 11.4	-1.0
A36M	comp=Z,15nm,0.8s			IAmb	IAmb	06 06 26.5	
NVAR	Mina Array Bea comp=Z,0.2nm,0.4s,baz=291,slow=10,SNR=1.8 comp=Z,0.2nm,0.4s	27.34	119	P	P	06 07 41.3	-2.1
PDAR	Pinedale Array comp=Z,0.2nm,0.7s,baz=336,slow=2.0,SNR=2.3 comp=Z,0.2nm,0.7s	28.70	102	P	P	06 07 55.6	+0.1
PETK	Petropavlovsk- comp=Z,0.8nm,0.5s,baz=70,slow=13,SNR=1.2 comp=Z,0.8nm,0.5s	30.11	286	P	P	06 08 09.8	+2.1
MA2	Magadan comp=Z,82nm,18.2s,baz=62,slow=36	30.91	301	LR	LR	06 20 40.0	
TXAR	Lajitas Array comp=Z,0.3nm,0.7s,baz=309,slow=6.0,SNR=4.0 comp=Z,0.3nm,0.7s	41.91	111	P	P	06 09 49.6	+0.8
SCO	Scoresbysund	47.74	21	*i* P	P	06 10 31.0	-3.7
NRIK	Noril'sk comp=Z,60nm,19.2s,baz=226,slow=38	47.81	336	LR	LR	06 32 46.3	
TKL	Tuckaleechee C comp=Z,90nm,18.6s,baz=243,slow=36	47.88	87	LR	LR	06 30 50.3	
H11N2	WAKE ISLAND Hy baz=30,slow=76,SNR=12	49.09	240	T	T	07 03 35.1	
H11N3	WAKE ISLAND Hy baz=30,slow=76,SNR=10	49.09	240	T	T	07 03 33.8	
H11N1	WAKE ISLAND Hy baz=30,slow=76,SNR=10.0	49.10	240	T	T	07 03 37.1	
H11S1	WAKE ISLAND Hy baz=29,slow=74	50.23	239	T	T	07 05 26.3	
H11S2	WAKE ISLAND Hy baz=29	50.24	239	T	T	07 05 27.7	
H11S3	WAKE ISLAND Hy baz=29,slow=74	50.25	239	T	T	07 05 36.3	
SONM	Songino Array comp=Z,0.5nm,0.6s,baz=90,slow=5.2,SNR=4.0 comp=Z,0.5nm,0.6s	58.45	310	P	P	06 11 54.5	+0.5
ZALV	Zalesovo Beam comp=Z,0.7nm,0.5s,baz=15,slow=6.0,SNR=2.6 comp=Z,0.7nm,0.5s	61.29	327	P	P	06 12 15.2	+1.9
KURBB	Kurchatov Arra comp=Z,0.2nm,0.4s,baz=38,slow=6.2,SNR=2.0 comp=Z,0.2nm,0.4s	66.06	329	P	P	06 12 46.1	+1.3
MKAR	Makanchi Array comp=Z,0.2nm,0.5s,baz=34,slow=6.9,SNR=2.9 comp=Z,0.2nm,0.5s	68.34	325	P	P	06 13 00.5	+1.1
ESDC	Sonseca Array comp=Z,0.9nm,1.1s,baz=336,slow=6.8,SNR=4.3 comp=Z,0.9nm,1.1s	79.66	27	P	P	06 14 07.8	+2.1
CMAR	Chiang Mai Arr comp=Z,1.0nm,0.3s,baz=3.6,slow=5.8,SNR=2.1 comp=Z,1.0nm,0.3s	86.16	298	P	P	06 14 41.1	+1.5
GSI	Gunungsitoli	101.47	290	P	Pdif	06 15 49.4	-0.8

INMG ***19*** *06:04:20.6±1.5, 36.79N×11.17W, h34km, ML1.8, Error ellipse: s-maj=7.9km s-min=5.2km az=100.0*
IGIL ***19*** *06:04:20.3, 36.75N×11.12W, h42km, ML1.5*
MDD ***19*** *06:04:20.1±1.1, 36.78N×11.14W, h30km, mb_Lg2.6/4, Error ellipse: s-maj=8.6km s-min=7.7km az=45.0*
CNRM ***19*** *06:04:24.2, 36.35N×10.43W, h85km, ML3.0*

ISC 19 06:04:20.8±3.9, 36.9N±0.1×11.0W±0.2, h35km, n47, σ0.88/60, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.78	81	⇑*eP*	Pn	Pn	06 04 48.9	-0.2
PFVI				*eS*	Sn	Sn	06 05 10.7	+0.3
PFVI				A	A	A	06 05 11.3	
	4.1nm,0.4s							
PFVI	Vila Bisbo	1.78	81	P	Pn	Pn	06 04 48.5	-0.5
PFVI				S	Sn	Sn	06 05 10.7	+0.3
PFVI	Vila Bisbo	1.78	81	P	Pn	Pn	06 04 49.2	+0.1
PFVI	Vila Bisbo	1.78	81	S	Sn	Sn	06 05 09.9	-0.5
MORF	Marmelete	1.94	77	*eP*	Pn	Pn	06 04 51.4	0.0
MORF				*eS*	Sn	Sn	06 05 15.2	+0.6
MORF				A	A	A	06 05 19.6	
	3.1nm,0.5s							
MORF	Marmelete	1.94	77	*eP*	Pn	Pn	06 04 51.3	0.0
MORF				*eS*	Sn	Sn	06 05 14.2	-0.4
MORF				IAML			06 05 15.8	
	comp=E,4.1nm,0.1s							
PTEO	Sao Teotonio	1.95	69	*eP*	Pn	Pn	06 04 51.9	+0.4
PTEO				*eS*	Sn	Sn	06 05 15.8	+1.0
PTEO				A	A	A	06 05 16.1	
	comp=E,4.5nm,0.9s							
PNCL	Nicolau / Gran	2.34	57	*eP*	Pn	Pn	06 04 57.3	+0.6
PNCL				*eS*	Sn	Sn	06 05 24.9	+0.7
PNCL				A	A	A	06 05 26.9	
	comp=E,2.2nm,0.3s							
PNCL	Nicolau / Gran	2.34	57	S	Sn	Sn	06 05 25.1	+0.8
PNCL				P	Pn	Pn	06 04 56.8	+0.1
MESJ	Messejana	2.43	66	*eP*	Pn	Pn	06 04 59.2	+1.1
MESJ				*eS*	Sn	Sn	06 05 26.6	0.0
MESJ				A	A	A	06 05 44.1	
	comp=E,1.8nm,0.8s							
MESJ	Messejana	2.43	66	*eS*	Sn	Sn	06 05 26.1	-0.5
MESJ				IAML			06 05 28.7	
	comp=N,1.4nm,0.1s							
PMAFR	Mafra	2.49	33	*eS*	Sn	Sn	06 05 28.1	0.0
PMAFR				A	A	A	06 05 35.0	
	comp=N,7.6nm,0.9s							
PMAFR	Mafra	2.49	33	P	Pn	Pn	06 04 59.0	+0.1
PMAFR				S	Sn	Sn	06 05 28.1	0.0
PCVE	Castro Verde	2.50	72	*eP*	Pn	Pn	06 04 59.1	+0.1
PCVE				*eS*	Sn	Sn	06 05 28.6	+0.4
PCVE				A	A	A	06 05 37.5	
	comp=N,2.0nm,0.7s							
PBDV	Barranco-do-Ve	2.50	81	*eP*	Pn	Pn	06 04 59.2	+0.2
PBDV				*eS*	Sn	Sn	06 05 29.2	+0.9
PBDV				A	A	A	06 05 49.3	
	comp=N,2.3nm,0.8s							
PBDV	Barranco-do-Ve	2.50	81	P	Pn	Pn	06 04 58.9	-0.1
PBDV				S	Sn	Sn	06 05 28.7	+0.4
PVAQ	Vaqueiros	2.69	78	*eP*	Pn	Pn	06 05 02.1	+0.4
PVAQ				*eS*	Sn	Sn	06 05 33.2	+0.2
PVAQ	Vaqueiros	2.69	78	S	Sn	Sn	06 05 33.0	-0.1
PBEJ	Beja	2.76	64	*eS*	Sn	Sn	06 05 35.0	+0.3
EGRO	El Granado	2.90	76	S	Sn	Sn	06 05 37.9	-0.3
EGRO	El Granado	2.90	76	P	Pn	Pn	06 05 04.6	+0.1
EGRO				S	Sn	Sn	06 05 38.4	+0.3
EGRO				*i* Vmb_Lg			06 05 43.8	
EVO	Evora	2.90	54	*eP*	Pn	Pn	06 05 05.5	+0.9
EVO				*eS*	Sn	Sn	06 05 38.1	-0.1
EVO				A	A	A	06 05 40.5	
	comp=N,3.5nm,0.4s							
EVO	Evora	2.90	54	P	Pn	Pn	06 05 05.0	+0.4
EVO				S	Sn	Sn	06 05 38.1	-0.1
PMTG	Montargil	3.11	44	*eP*	Pn	Pn	06 05 08.0	+

ZALV				Lg	Lg	06 07 20.1	
	1.5nm,0.3s,baz=80,slow=28,SNR=9.3						
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn	Pn	06 08 18.9	+1.0
	0.2nm,0.3s,baz=54,slow=13,SNR=17						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**7.77**	**201**	Pn	Pn	06 08 43.6	+0.8
	0.3nm,0.3s,baz=24,slow=13,SNR=18						
	0.3nm,0.3s						

CATAC ***19*** *06:07:48.0±0.8,8.25N×82.82W, h5km±3km, ML4.2*
UCR ***19*** *06:07:49.8±0.8,8.32N×82.84W, h15km±3km, MW4.1*
UPA ***19*** *06:07:49.8±1.6,8.35N×82.78W, h12km±3km, MW4.0,*
Fault plane solution: NP1φs59.00000°, δ29.00000°, λ78.00000°.

ISC 19 06:07:49.4±1.0, 8°30N±0°03×82°81W±0°02, h20km±4km, n87, σ1s03/109, 10C-11D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.12**	**218**	↑*i* P		**Pg**	**06 07 53.3**	**-0.3**
PTPM				*e*S		**Sg**	**06 07 57.5**	**+1.2**
CDITO	**Canoas**	**0.28**	**346**	↓*i* P		**Pg**	**06 07 55.5**	**-0.4**
CDITO				*e*S		**Sg**	**06 07 59.5**	**+0.3**
CDITO	**Canoas**	**0.28**	**346**	*i* P		**Pg**	**06 07 55.5**	**-0.4**
CDITO				*i* S		**Sg**	**06 08 00.4**	**+0.1**
CDITO					IAML		06 08 00.6	
	comp=Z,14μm,1.0s							
DVD	**David**	**0.38**	**68**	↓*i* P		**Pg**	**06 07 57.1**	**-0.3**
DVD				*e*S		**Sg**	**06 08 03.3**	**+0.4**
PEDE3	**Pedregal, Chir**	**0.39**	**77**	↓*i* P		**Pg**	**06 07 57.1**	**-0.6**
PEDE3				*e*S		**Sg**	**06 08 03.8**	**+0.6**
FITO	**Golfito**	**0.47**	**313**	↑*e*P		**Pg**	**06 07 57.5**	**-1.7**
FITO				*e*S		**Sg**	**06 08 04.3**	**-1.4**
MLIR3	**Monte Lirio, C**	**0.49**	**358**	↓*i* P		**Pg**	**06 07 59.5**	**-0.1**
MLIR3				*e*S		**Sg**	**06 08 06.8**	**+0.4**
BCO2	**Palmira**	**0.50**	**33**	↓*i* P		**Pg**	**06 07 59.4**	**-0.3**
BCO2				*e*S		**Sg**	**06 08 06.3**	**-0.3**
EDAD	**Golfito**	**0.50**	**315**	↑*e*P		**Pg**	**06 07 58.0**	**-1.6**
BRU2	**Volcan**	**0.51**	**13**	↓*i* P		**Pg**	**06 07 59.4**	**-0.4**
BRU2				*e*S		**Sg**	**06 08 07.0**	**+0.2**
BRU2	**Volcan**	**0.51**	**13**	*e*P		**Pg**	**06 07 59.3**	**-0.5**
BRU2	**Volcan**	**0.51**	**13**	*i* P		**Pg**	**06 07 59.4**	**-0.4**
BRU2				*i* S		**Sg**	**06 08 06.4**	**-0.4**
BRU2					IAML		06 08 14.3	
	comp=Z,6μm,1.0s							
PIRO	**Carate, Puerto**	**0.54**	**281**	*e*P		**Pb**	**06 07 58.8**	**-1.4**
VITO	**San Vito**	**0.54**	**343**	↓*i* P		**Pb**	**06 08 00.0**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.55**	**296**	↑*i* P		**Pb**	**06 07 59.5**	**-0.9**
BC3P	**Paso Ancho**	**0.55**	**20**	↓*i* P		**Pb**	**06 07 59.9**	**-0.6**
BC3P				*e*S		**Sb**	**06 08 08.0**	**-0.1**
JIME	**Puerto Jimenez**	**0.57**	**295**	↑*e*P		**Pb**	**06 07 59.7**	**-1.0**
LNBQ3	**Los Naranjos,**	**0.61**	**36**	↓*i* P		**Pb**	**06 08 00.7**	**-0.8**
LNBQ3				*e*S		**Sb**	**06 08 09.5**	**-0.2**
POTG	**Potrero Grande**	**0.81**	**338**	↓*i* P		**Pb**	**06 08 04.2**	**-0.7**
POTG	**Potrero Grande**	**0.81**	**338**	*i* P		**Pb**	**06 08 04.1**	**-0.9**
POTG				*i* S		**Sb**	**06 08 15.9**	**+0.3**
POTG					IAML		06 08 19.6	
	comp=Z,12μm,1.0s							
CHGR2	**Aguacate**	**0.91**	**46**	↓*i* P		**Pb**	**06 08 05.2**	**-1.5**
CHGR2				*e*S		**Sb**	**06 08 17.5**	**-0.9**
EDPN	**Palmar Norte**	**0.92**	**316**	*e*P		**Pb**	**06 08 05.4**	**-1.4**
PLAN	**Los Planes de**	**0.94**	**293**	*i* P		**Pb**	**06 08 05.7**	**-1.4**
PLAN				*i* S		**Sb**	**06 08 19.7**	**+0.5**
PLAN					IAML		06 08 21.3	
	comp=Z,11μm,1.0s							
EDBA	**Buenos Aires**	**0.98**	**332**	*e*P		**Pb**	**06 08 07.1**	**-0.7**
BURE	**Buenos Aires**	**1.02**	**329**	*e*P		**Pb**	**06 08 07.3**	**-1.1**
DRK0	**Durika**	**1.05**	**336**	↑*i* P		**Pb**	**06 08 07.7**	**-1.4**
OCHAL	**Ojochal**	**1.15**	**314**	*i* P		**Pn**	**06 08 09.1**	**-1.4**
OCHAL					IAML		06 08 29.8	
	comp=Z,43nm,1.0s							
CNI2	**El Empalme, Bo**	**1.17**	**16**	*e*P		**Pn**	**06 08 09.8**	**-0.9**
CNI2				*e*S		**Sb**	**06 08 25.2**	**-0.6**
PEZE	**Perez Zeledon,**	**1.38**	**321**	*e*P		**Pn**	**06 08 12.6**	**-1.1**
PEZE	**Perez Zeledon,**	**1.38**	**321**	*i* P		**Pn**	**06 08 13.4**	**-0.3**
PEZE				*i* S		**Sb**	**06 08 33.1**	**+1.1**
PEZE					IAML		06 08 39.0	
	comp=Z,2μm,1.0s							
ZELE	**Perez Zeledon**	**1.39**	**320**	*e*P		**Pn**	**06 08 12.9**	**-0.9**
CDM	**Cerro de Muert**	**1.57**	**323**	↑*i* P		**Pn**	**06 08 15.8**	**-0.9**
CDM	**Cerro de Muert**	**1.57**	**323**	*i* P		**Pn**	**06 08 15.6**	**-1.0**
CDM				*i* S		**Sn**	**06 08 38.0**	**+1.4**
CDM					IAML		06 08 43.7	
	comp=Z,1μm,1.0s							
GMAL	**Guarumal, Vera**	**1.65**	**109**	*e*P		**Pn**	**06 08 15.8**	**-1.5**
GMAL				*e*S		**Sn**	**06 08 38.6**	**+0.7**
SAFE3	**Santa Fe, Vera**	**1.72**	**83**	*e*P		**Pn**	**06 08 18.1**	**-0.3**
SAFE3				*e*S		**Sn**	**06 08 40.5**	**+0.7**
LLNJ	**Naranjito**	**1.73**	**313**	*e*P		**Pn**	**06 08 18.8**	**+0.3**
RIMA	**Rio Macho**	**1.80**	**324**	*e*P		**Pn**	**06 08 19.0**	**-0.5**
RIMA	**Rio Macho**	**1.80**	**324**	*i* P		**Pn**	**06 08 19.1**	**-0.5**
RIMA					IAML		06 08 48.4	
	comp=Z,930nm,1.0s							
RAZU	**San Marcos de**	**1.81**	**318**	*e*P		**Pn**	**06 08 20.5**	**+0.8**
TURIB	**Turrialba**	**1.82**	**332**	↑*i* P		**Pn**	**06 08 19.9**	**+0.1**
STIA3	**Santiago, Vera**	**1.82**	**96**	↑*i* P		**Pn**	**06 08 19.6**	**-0.2**
STIA3				*e*S		**Sn**	**06 08 42.**	**-0.2**
VINA	**Juan Vinas**	**1.84**	**330**	*e*P		**Pn**	**06 08 20.2**	**+0.1**
REPA	**Paraso**	**1.85**	**325**	*e*P		**Pn**	**06 08 21.0**	**+0.7**
TAAN	**Batan**	**1.86**	**343**	*e*P		**Pn**	**06 08 21.2**	**+1.0**
VERB	**Verbena**	**1.86**	**332**	*e*P		**Pn**	**06 08 20.6**	**+0.2**
LCR2	**La Lucha 2**	**1.86**	**321**	*e*P		**Pn**	**06 08 19.8**	**-0.6**
LCR2	**La Lucha 2**	**1.86**	**321**	*i* P		**Pn**	**06 08 20.8**	**+0.3**
LCR2					IAML		06 08 47.8	
	comp=Z,2μm,1.0s							
RVSTA	**Santa Teresita**	**1.86**	**334**	*e*P		**Pn**	**06 08 20.8**	**+0.4**
PCAYA	**Pacayas**	**1.89**	**328**	↑*e*P		**Pn**	**06 08 21.1**	**+0.2**
VTCV	**VTCV, Calle Va**	**1.91**	**332**	*e*P		**Pn**	**06 08 21.0**	**-0.1**
VTCV	**VTCV, Calle Va**	**1.91**	**332**	*i* P		**Pn**	**06 08 21.5**	**+0.4**
VTCV					IAML		06 08 50.2	
	comp=Z,3μm,1.0s							
IRES	**Siquirres**	**1.92**	**339**	*e*P		**Pn**	**06 08 22.0**	**+0.9**
LCOCO	**El Coco**	**1.93**	**337**	*e*P		**Pn**	**06 08 21.2**	**0.0**
CVTV	**Tajo**	**1.94**	**331**	*e*P		**Pn**	**06 08 21.9**	**+0.3**
RITA	**Parrita**	**1.94**	**309**	*e*P		**Pn**	**06 08 22.2**	**+0.9**
VTR0	**Volcan Turrial**	**1.95**	**331**	*e*P		**Pn**	**06 08 22.2**	**+0.3**
CVTR	**Volcan Turrial**	**1.95**	**331**	*e*P		**Pn**	**06 08 22.1**	**+0.2**
OCM	**Ochomogo**	**1.96**	**324**	*e*P		**Pn**	**06 08 21.6**	**-0.1**
OCM	**Ochomogo**	**1.96**	**324**	*i* P		**Pn**	**06 08 21.8**	**+0.1**
OCM					IAML		06 08 53.0	
	comp=Z,1μm,1.0s							
VTRT	**Volcan Turrial**	**1.96**	**330**	*e*P		**Pn**	**06 08 21.9**	**0.0**
VTRT	**Volcan Turrial**	**1.96**	**330**	*i* P		**Pn**	**06 08 22.3**	**+0.4**
VTRT					IAML		06 08 56.3	
	comp=Z,3μm,1.0s							
VTUC	**Crater, Volcan**	**1.96**	**331**	*i* P		**Pn**	**06 08 22.5**	**+0.5**
VTUC					IAML		06 08 54.1	
	comp=Z,2μm,1.0s							
VTUN	**Crater Central**	**1.96**	**331**	*i* P		**Pn**	**06 08 22.4**	**+0.4**
VTUN					IAML		06 08 52.7	
	comp=Z,2μm,1.0s							
VTLO	**VTLO**	**1.96**	**332**	*e*P		**Pn**	**06 08 22.4**	**+0.5**
HAYA	**Volcan Irazu**	**1.96**	**329**	*i* P		**Pn**	**06 08 22.3**	**+0.3**
HAYA					IAML		06 08 53.1	
	comp=Z,3μm,1.0s							
VICA	**Volcano Irazu**	**1.97**	**329**	*e*P		**Pn**	**06 08 22.1**	**0.0**
VIRE	**VIRE**	**1.98**	**327**	*i* P		**Pn**	**06 08 22.5**	**+0.3**
VIRE					IAML		06 08 53.6	
	comp=Z,3μm,1.0s							
TRIO	**Tres Rios**	**1.98**	**324**	*e*P		**Pn**	**06 08 23.1**	**+1.0**
ACOS	**Acosta**	**2.00**	**318**	*e*P		**Pn**	**06 08 22.0**	**-0.4**
HDC3	**Heredia 3**	**2.13**	**323**	*i* P		**Pn**	**06 08 25.5**	**+1.4**
HDC3					IAML		06 09 03.5	
	comp=Z,2μm,1.0s							
JACO	**JACO, Garabito**	**2.28**	**307**	*i* P		**Pn**	**06 08 24.9**	**-1.1**
JACO					IAML		06 09 06.4	
	comp=Z,470nm,1.0s							
RIFO	**Rio Frio, Sara**	**2.29**	**331**	*i* P		**Pn**	**06 08 27.4**	**+1.2**
RIFO					IAML		06 09 29.7	
	comp=Z,820nm,1.0s							
CPMI	**Catarata Coope**	**2.51**	**322**	*i* P		**Pn**	**06 08 31.3**	**+1.9**
CPMI					IAML		06 09 21.6	
	comp=Z,500nm,1.0s							
AZU	**Azuero**	**2.56**	**101**	*e*P		**Pn**	**06 08 30.5**	**+0.7**
AZU				*e*S		**Sn**	**06 09 02.1**	**+1.8**
SOCE	**Pocosol**	**2.74**	**319**	*i* P		**Pn**	**06 08 34.5**	**+2.1**
SOCE					IAML		06 08 37.8	
	comp=Z,460nm,1.0s							
BCIP	**Isla Barro Col**	**3.06**	**73**	*i* P		**Pn**	**06 08 37.3**	**+0.6**
BCIP					IAML		06 09 38.2	
	comp=Z,230nm,1.0s							
DUNO	**Dulce Nombre,**	**3.19**	**304**	*i* P		**Pn**	**06 08 38.7**	**+0.1**
DUNO					IAML		06 09 34.2	
	comp=Z,340nm,1.0s							
ORTG	**Ortega, Santa**	**3.33**	**308**	*i* P		**Pn**	**06 08 41.4**	**+0.9**
ORTG					IAML		06 09 41.3	
	comp=Z,120nm,1.0s							
VMAR	**Armenia, Volca**	**3.38**	**318**	*i* P		**Pn**	**06 08 44.0**	**+2.8**
VMAR					IAML		06 09 47.6	
	comp=Z,380nm,1.0s							
HZTE	**Horizontes, Gu**	**3.65**	**311**	*i* P		**Pn**	**06 08 47.2**	**+2.3**
HZTE					IAML		06 09 44.8	
	comp=Z,290nm,1.0s							
BLUN	**Bluefields**	**3.81**	**346**	*i* P		**Pn**	**06 08 46.7**	**-0.3**
BLUN					IAML		06 08 53.8	
	comp=Z,100nm,1.0s							
BOAB	**BOACO BROADBAN**	**5.00**	**326**	*i* P		**Pn**	**06 09 04.8**	**+1.4**
SAPS	**Ciudad Sandino**	**5.23**	**318**	*i* P		**Pn**	**06 09 09.2**	**+2.6**
COPN	**Copaltepe**	**5.36**	**316**	*i* P		**Pn**	**06 09 09.5**	**+1.0**
LIMN	**Finca el Limon**	**5.89**	**324**	*i* P		**Pn**	**06 09 17.7**	**+1.9**
SCLA	**Alcaldia de Sa**	**7.92**	**313**	*i* P		**Pn**	**06 09 46.5**	**+2.9**
JAYA	**Jayaque - finc**	**8.42**	**310**	*i* P		**Pn**	**06 09 53.3**	**+2.7**

REY ***19*** *06:12:38.3,66.56N×17.70W, h12km*
IDC ***19*** *06:12:40.7±0.8,66.37N×17.88W, h0km, mb3.7/8, mbtmp3.6/10, ML3.0/2, Error ellipse: s-maj=22.6km s-min=16.1km az=4.0*

ISC 19 06:12:40.6±0.6, 66°41N±0°03×17°76W±0°02, h10km, n41, σ1s85/61, mb3.6/9, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.16**	**322**	P		**Pg**	**06 12 41.4**	**-2.8**
	baz=264							
IGRI				S		**Sg**	**06 12 43.6**	**-2.9**
	baz=264							
IBRE	**Brettingsstaoi**	**0.30**	**192**	S		**Sb**	**06 12 52.8**	**-0.1**
	baz=191							
IBRE				P		**Pb**	**06 12 46.4**	**-1.6**
	baz=191							
IHED	**Heoinshofoi**	**0.38**	**151**	S		**Sb**	**06 12 54.0**	**-1.3**
	baz=161							
IHED				P		**Pg**	**06 12 47.2**	**-0.9**
	baz=161							
IGRA	**Granastaoir**	**0.50**	**172**	P		**Pg**	**06 12 49.6**	**-0.8**
	baz=176							
IGRA				S		**Sb**	**06 12 58.0**	**-0.8**
	baz=176							
ILEI	**Leirhofn**	**0.51**	**90**	P		**Pg**	**06 12 47.4**	**-3.1**
	baz=106							
ILEI				S		**Sg**	**06 12 54.5**	**-2.7**
	baz=106							
IHLA	**Hella**	**0.54**	**209**	P		**Pg**	**06 12 50.0**	**-0.9**
	baz=205							
IHLA				S		**Sb**	**06 12 59.0**	**-0.8**
	baz=205							
ISIG	**Siglufjorour**	**0.55**	**239**	P		**Pg**	**06 12 49.4**	**-1.7**
	baz=230							
ISIG				S		**Sg**	**06 12 57.7**	**-0.6**
	baz=230							
IDIM	**Dimmadalss**	**0.56**	**143**	P		**Pg**	**06 12 50.0**	**-1.5**
	baz=152							
IDIM				S		**Sb**	**06 12 58.8**	**-1.8**
	baz=152							
ISKI	**Skildingahlsh**	**0.62**	**151**	P		**Pg**	**06 12 51.0**	**-1.5**
	baz=158							
IGIL	**Gilhagi**	**0.66**	**120**	P		**Pg**	**06 12 50.8**	**-2.6**
	baz=131							
IGIL				S		**Sg**	**06 13 00.6**	**-1.5**
	baz=131							
IGHA	**Grjothals**	**0.73**	**142**	P		**Pg**	**06 12 52.5**	**-2.0**
	baz=149							
IGHA				S		**Sg**	**06 13 03.4**	**-0.7**
	baz=149							
IKVO	**Krokottuvotn**	**0.79**	**153**	P		**Pg**	**06 12 53.8**	**-1.9**
	baz=158							
IREN	**Reynihlio**	**0.84**	**155**	P		**Pg**	**06 12 54.8**	**-2.0**
	baz=160							
IREN				S		**Sg**	**06 13 07.4**	**-0.4**
	baz=160							
IMEL	**Melhnausar**	**0.96**	**152**	P		**Pg**	**06 12 56.7**	**-2.3**
	baz=156							
IHRN	**Hraun**	**1.00**	**253**	S		**Sg**	**06 13 09.2**	**-3.6**
	baz=246							
IHRN				P		**Pg**	**06 12 56.0**	**-3.8**
	baz=246							
IGRS	**Grimsstaoir**	**1.03**	**139**	P		**Pg**	**06 12 57.3**	**-3.0**
	baz=144							
IGRS				S		**Sg**	**06 13 12.3**	**-1.3**
	baz=144							
ISVA	**Svartarkot**	**1.10**	**169**	P		**Pb**	**06 12 59.1**	**-2.6**
	baz=171							
ISVA				S		**Sb**	**06 13 15.3**	**-0.8**
	baz=171							
IASK	**Askja**	**1.44**	**161**	P		**Pn**	**06 13 04.5**	**-2.3**
	baz=164							
IASK				S		**Sb**	**06 13 25.4**	**-0.6**
	baz=164							
THOR	**Thorvaldshraun**	**1.55**	**163**	P		**Pn**	**06 13 06.6**	**-1.7**
	baz=165							
THOR				S		**Sb**	**06 13 28.6**	**-0.4**
	baz=165							
IMKO	**Mokollar**	**1.56**	**157**	P		**Pn**	**06 13 06.5**	**-1.8**
	baz=160							
IMKO				S		**Sb**	**06 13 28.6**	**-0.6**
	baz=160							
IURH	**Urdarhals**	**1.62**	**171**	P		**Pn**	**06 13 07.1**	**-2.1**
	baz=172							
IADA	**Aoalbol**	**1.67**	**146**	P		**Pn**	**06 13 08.1**	**-1.7**
	baz=149							
ISTE	**Stelbrattur**	**1.75**	**207**	P		**Pn**	**06 13 09.5**	**-1.5**
	baz=206							
ISTE				S		**Sb**	**06 13 33.3**	**-1.3**
	baz=206							
IVON	**Vonarskard**	**1.75**	**180**	P		**Pn**	**06 13 09.0**	**-2.0**
	baz=181							
IVON				S		**Sb**	**06 13 33.7**	**-1.1**
	baz=181							
IKIS	**Kista**	**1.75**	**177**	P		**Pn**	**06 13 09.2**	**-1.9**
	baz=178							
IKIS				S		**Sb**	**06 13 34.2**	**-0.6**
	baz=178							
ISKR	**Skrokkalda**	**1.88**	**188**	P		**Pn**	**06 13 11.2**	**-1.6**
	baz=188							
IDJK	**Dyngjujokull**	**1.93**	**173**	P		**Pn**	**06 13 11.8**	**-1.7**
	baz=174							
IJOK	**Jokulheimar**	**2.12**	**186**	P		**Pn**	**06 13 14.6**	**-1.4**
	baz=186							
IHUS	**Husbondi**	**2.13**	**179**	P		**Pn**	**06 13 14.7**	**-1.5**
	baz=180							
IASB	**`sbjarnarst**	**2.23**	**223**	P		**Pn**	**06 13 16.3**	**-1.2**
	baz=221							
BORG	**Borgarnes**	**2.24**	**223**	Pn		**Pn**	**06 13 16.4**	**-1.2**
	17nm,0.3s,baz=37,slow=4.6,SNR=19							
BORG				Sn		**Sb**	**06 13 46.5**	**-2.2**
	36nm,0.3s,baz=285,slow=22,SNR=21							
	58nm,0.3s							
FINES	**FINESS Array B**	**19.55**	**84**	P		**Pn**	**06 17 09.5**	**+0.3**
	0.1nm,0.3s,baz=309,slow=12,SNR=1.8							
	0.5nm,0.6s							
YKA	**Yellowknife Ar**	**37.95**	**311**	P		**P**	**06 19 59.7**	**+2.0**
	0.7nm,0.8s,baz=41,slow=8.4,SNR=10.0							
	0.7nm,0.8s							
BRTR	**Keskin Array B**	**39.07**	**107**	P		P	06 20 10.3	+2.8
	1.0nm,0.8s,baz=349,slow=3.3,SNR=4.0							
	1.0nm,0.8s							
AKTO	**Aktyubinsk**	**39.91**	**75**	P		**P**	**06 20 16.4**	**+2.2**
	1.2nm,0.6s,baz=300,slow=8.1,SNR=2.0							
	1.2nm,0.6s							
ULM	**Lac du Bonnet**	**40.97**	**287**	P		**P**	**06 20 24.6**	**+1.6**
	2.4nm,0.8s,baz=35,slow=9.7,SNR=5.2							
	2.4nm,0.8s							
ILAR	**Eielson Array**	**44.09**	**331**	P		**P**	**06 20 50.1**	**+2.0**
	1.2nm,1.1s,baz=22,slow=6.3,SNR=5.4							
	1.2nm,1.1s							
MKAR	**Makanchi Array**	**51.91**	**59**	P		**P**	**06 21 49.3**	**+0.4**
	0.6nm,0.8s,baz=326,slow=7.8,SNR=4.3							
	0.6nm,0.8s							
PDAR	**Pinedale Array**	**52.41**	**292**	P		**P**	**06 21 54.0**	**+1.1**
	0.6nm,0.8s,baz=63,slow=6.8,SNR=8.1							
	0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**54.80**	**157**	P		**P**	**06 22 12.7**	**+2.3**
	0.9nm,1.0s,baz=340,slow=8.1,SNR=5.0							
TXAR	**Lajitas Array**	**61.88**	**279**	P		**P**	**06 23 01.2**	**+1.3**
	0.5nm,0.8s,baz=46,slow=3.6,SNR=4.8							
	0.5nm,0.8s							

JMA ***19*** *06:21:19.7±0.2,43.4N±0.6×14.6E±, h59km±1km, MV2.5/29, OFF NEMURO PENINSULA*
SKHL ***19*** *06:21:20.1±0.4,43.40N×146.30E, h45km±4km, mb3.7/2*

ISC 19 06:21:18.8±3.6, 43°37N±0°08×146°3E±0°2, h58km±15km, n12, σ0s46/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.38**	**269**	*e*P		**Pn**	**06 21 29.8**	**+0.4**
NEM2				*e*S		**Sn**	**06 21 37.1**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.39**	**270**	*e*P		**Pn**	**06 21 29.8**	**+0.3**
NMR					AMB	AMB	06 21 30.0	
	30nm,0.2s							
NMR				*e*S		**Sn**	**06 21 36.9**	**-0.3**
NMR				A		A	06 21 37.6	
	230nm,0.3s							
NMR				A		A	06 21 37.6	
	400nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**0.72**	**337**	*i* P		**Pn**	**06 21 33.1**	**-0.1**
YUK					AMB	AMB	06 21 33.5	
	50nm,0.3s							
YUK				*e*S		**Sn**	**06 21 43.3**	**-0.5**
YUK				A		A	06 21 44.9	
	90nm,0.2s							
YUK				A		A	06 21 44.9	
	180nm,0.2s							
JKHN	**Kushirohamanak**	**0.85**	**251**	*i* P		**Pn**	**06 21 35.4**	**+0.5**
JKHN				*e*S		**Sn**	**06 21 46.5**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.00**	**294**	P		**Pn**	**06 21 37.0**	**+0.2**
JNSB				*e*S		**Sn**	**06 21 49.9**	**-0.1**
JRA	**Rausu**	**1.00**	**305**	*e*P		**Pn**	**06 21 36.9**	**+0.2**
JRA				*e*S		**Sn**	**06 21 50.2**	**+0.1**
AKK	**Akkeshi**	**1.09**	**252**	*e*P		**Pn**	**06 21 37.9**	**-0.1**
AKK				*e*S		**Sn**	**06 21 51.2**	**-1.1**
JNK	**Nakash**	**1.14**	**281**	*e*P		**Pn**	**06 21 38.3**	**-0.3**
JAK	**Akkeshi**	**1.20**	**252**	*e*P		**Pn**	**06 21 39.5**	**0.0**
JAK				*e*S		**Sn**	**06 21 54.1**	**-0.7**
JTKR	**Abashiri--Toko**	**1.81**	**290**	*e*P		**Pn**	**06 21 48.2**	**+0.6**
JAR	**Ashorobuto**	**1.82**	**268**	*e*P		**Pn**	**06 21 48.3**	**+0.6**
JAR				*e*S		**Sn**	**06 22 09.5**	**-0.2**
JOB	**Onbets**	**1.83**	**256**	*e*P		**Pn**	**06 21 48.4**	**+0.4**
JOB				*e*S		**Sn**	**06 22 10.0**	**-0.1**

IDC ***19*** *06:23:18.8±2.9,56.27N×148.24W, h0km, mb4.1/2, mbtmp3.6/6, ML3.1/4, MS2.9/1, Error ellipse: s-maj=45.4km s-min=29.4km az=153.0*
NEIC ***19*** *06:23:21.6±1.8,56.36N±0.10×148.486W±0.008, h22km±10km, mb3.6/68, ML3.3(AEIC), Error ellipse: s-maj=14.0km s-min=0.2km az=182.0*
AEIC ***19*** *06:23:25.0±1.8,56.36N±0.08×148.44W±0.08, h12km±8km, Error ellipse: s-maj=13.1km s-min=2.1km az=152.0*

ISC 19 06:23:21.0±1.3, 56°48N±0°10×148°53W±0°05, h10km, n250, σ1s08/255, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.57**	**302**	Pn		**Pn**	**06 24 02.5**	**-0.2**
	4.6nm,0.3s,baz=119,slow=10,SNR=90							
KDAK				Sn		**Sn**	**06 24 32.5**	**-1.5**
	7.5nm,0.3s,baz=54,slow=22,SNR=16							
KDAK				LR		LR	06 25 19.4	
	comp=Z,237nm,21.6s,baz=125,slow=43							
	13nm,0.2s							
OHAK	**Old Harbor**	**2.72**	**288**	Pn		**Pn**	**06 24 03.9**	**-0.8**
OHAK						**Sn**	**06 24 34.3**	**-3.3**
OHAK	**Old Harbor**	**2.72**	**288**	P		**Pn**	**06 24 03.8**	**-0.9**
OHAK	**Old Harbor**	**2.72**	**288**	P		**Pn**	**06 24 03.9**	**-0.8**
	baz=106							
OHAK				S		**Sn**	**06 24 34.2**	**-3.3**
	baz=106							
SYI	**Shuyak Island**	**2.99**	**317**			**Pn**	**06 24 09.2**	**+0.8**
SYI						**Sn**	**06 24 44.2**	**0.0**
Q20K	**Shuyak Island**	**2.99**	**317**	P		**Pn**	**06 24 09.1**	**+0.7**
	baz=135							
Q20K				S		**Sn**	**06 24 44.0**	**-0.2**
	baz=135							
Q23K	**Middleton Isla**	**3.18**	**20**			**Pn**	**06 24 11.2**	**+0.1**
Q23K					IAML		06 25 01.0	
	comp=E,220nm,1.7s							
Q23K					IAML		06 25 45.0	
	comp=N,156nm,1.8s							
Q23K	**Middleton Isla**	**3.18**	**20**	P		**Pn**	**06 24 12.0**	**+0.9**
	baz=201							
Q23K				S		**Sn**	**06 24 46.9**	**-2.1**
	baz=201							
MID	**Middleton Isla**	**3.18**	**21**	Pn		**Pn**	**06 24 11.3**	**+0.2**
MID					IAML		06 24 55.4	
	comp=N,149nm,1.8s							
MID					IAML		06 24 58.6	
	comp=E,217nm,1.4s							
MID	**Middleton Isla**	**3.18**	**21**	P		**Pn**	**06 24 11.3**	**+0.2**
CNPM	**China Poot**	**3.38**	**336**			**Pn**	**06 24 14.3**	**+0.5**
CNPM						**Sn**	**06 24 54.0**	**0.0**
BRSE	**Bradley Lake S**	**3.48**	**341**			**Pn**	**06 24 15.5**	**+0.3**
BRSE	**Bradley Lake S**	**3.48**	**341**	P		**Pn**	**06 24 15.5**	**+0.3**
	baz=159							
BRLK	**Bradley Lake**	**3.53**	**340**			**Pn**	**06 24 15.8**	**0.0**
BRLK						**Sn**	**06 24 56.4**	**-1.2**

	comp=E,46nm,1.3s							
RAGM	Ragged Mountai	4.42	26			Pn	06 24 28.2	+0.2
FID	Port Fidalgo	4.42	13			Pn	06 24 26.9	-1.2
FID					IAML		06 25 17.5	
	comp=E,52nm,0.5s							
FID					IAML		06 25 18.2	
	comp=N,41nm,0.8s							
NICHA	Nichawak Mount	4.47	31			Pn	06 24 29.2	+0.4
HMT	Hamilton	4.47	28			Pn	06 24 28.2	-0.6
GLI	Glacier Island	4.48	9			Pn	06 24 28.8	-0.2
GLI					IAML		06 25 19.8	
	comp=E,61nm,0.6s							
GLI	Glacier Island	4.48	9	P		Pn	06 24 29.1	+0.2
	baz=189							
CAPN	Captain Cook N	4.52	343	Pn		Pn	06 24 28.9	-0.5
RED	Redoubt Volcan	4.54	332			Pn	06 24 29.3	-0.5
RDSO	Redoubt South	4.56	333			Pn	06 24 29.9	-0.3
RSO	Redoubt South	4.57	333			Pn	06 24 29.6	-0.8
GOAT	Goat Mountain	4.57	24			Pn	06 24 30.9	+0.6
BGLC	Bering Glacier	4.58	35			Pn	06 24 30.6	+0.3
BGLC	Bering Glacier	4.58	35	P		Pn	06 24 30.6	+0.3
	baz=218							
RDT	Redoubt	4.59	335			Pn	06 24 30.4	-0.1
P18K	Big Mountain,	4.62	312			Pn	06 24 30.7	-0.1
P18K	Big Mountain,	4.62	312	P		Pn	06 24 30.9	+0.1
	baz=127							
RDWB	Redoubt West	4.62	332			Pn	06 24 30.6	-0.3
DFR	Drift River	4.67	334			Pn	06 24 31.6	0.0
RC01	Rabbit Creek A	4.67	353			Pn	06 24 31.1	-0.4
RC01					IAML		06 25 27.3	
	comp=N,53nm,0.5s							
RC01					IAML		06 25 27.7	
	comp=E,38nm,0.6s							
RC01	Rabbit Creek A	4.67	353	P		Pn	06 24 32.3	+0.7
	baz=171							
BERG	Berg Lake	4.68	31			Pn	06 24 31.7	+0.1
BERG					IAML		06 25 35.7	
	comp=N,71nm,0.6s							
GRIN	Grindle Hills	4.70	34			Pn	06 24 32.1	+0.2
NCT	North Crescent	4.70	332			Pn	06 24 31.9	-0.2
SNH	Sunshine Point	4.77	37			Pn	06 24 33.2	+0.2
SNH					IAML		06 25 28.8	
	comp=E,35nm,0.8s							
O19K	Port Alsworth	4.82	323			Pn	06 24 33.7	+0.1
KHIT	Khitrov Hills	4.85	33			Pn	06 24 33.9	-0.2
DIV	Divide	4.88	16			Pn	06 24 34.0	-0.5
O18K	Koktuh Hills	4.90	317			Pn	06 24 34.7	0.0
O18K	Koktuh Hills	4.90	317	P		Pn	06 24 34.7	0.0
	baz=131							
BMRM	Bremner River	4.95	23			Pn	06 24 35.3	-0.1
BMRM	Bremner River	4.95	23	P		Pn	06 24 35.4	-0.1
	baz=205							
WAX	Waxell Ridge	4.98	34			Pn	06 24 35.0	-0.8
P17K	Kvichak River	5.03	306			Pn	06 24 36.9	+0.5
P17K	Kvichak River	5.03	306	P		Pn	06 24 36.9	+0.5
	baz=120							
BARK	Barkley Ridge	5.06	36			Pn	06 24 36.9	0.0
MESA	MESA	5.08	40			Pn	06 24 36.7	-0.6
MESA					IAML		06 25 43.0	
	comp=E,36nm,0.7s							
MESA					IAML		06 25 50.2	
	comp=N,30nm,0.8s							
MESA	MESA	5.08	40	P		Pn	06 24 36.8	-0.6
	baz=225							
N20K	Mount Spurr	5.11	340	P		Pn	06 24 37.4	-0.3
	baz=156							
SPCR	Spurr Chakacha	5.11	340			Pn	06 24 37.4	-0.3
CRQM	Cirque	5.13	31			Pn	06 24 36.9	-1.2
CRQM					IAML		06 25 39.0	
	comp=E,28nm,0.8s							
CRQM					IAML		06 25 46.9	
	comp=N,36nm,0.8s							
SUA	Susitna One	5.13	348			Pn	06 24 36.2	-1.8
SUA					IAML		06 27 45.3	
	comp=E,33nm,3.8s							
SUA	Susitna One	5.13	348	P		Pn	06 24 38.3	+0.3
	baz=166							
PMR	Palmer	5.14	357			Pn	06 24 38.0	0.0
PMR					IAML		06 25 43.3	
	comp=N,26nm,0.8s							
PMR					IAML		06 25 43.8	
	comp=E,25nm,0.8s							
PMR	Palmer	5.14	357	P		Pn	06 24 39.4	+1.4
CRQE	Cirque	5.14	31	P		Pn	06 24 37.8	-0.3
	baz=215							
KLU	Klutina	5.21	14			Pn	06 24 39.2	+0.2
KLU					IAML		06 25 41.7	
	comp=N,42nm,0.8s							
KLU					IAML		06 25 43.7	
	comp=E,48nm,0.7s							
KLU	Klutina	5.21	14	P		Pn	06 24 39.5	+0.5
	baz=195							
TGL	Tana Glacier	5.22	32			Pn	06 24 39.2	0.0
TGL					IAML		06 25 43.6	
	comp=E,34nm,0.7s							
TGL					IAML		06 25 43.7	
	comp=N,29nm,0.6s							
BAGL	Bagley Icefiel	5.25	37			Pn	06 24 39.4	-0.1
ISLE	Juniper Island	5.26	35			Pn	06 24 38.6	-1.1
ISLE					IAML		06 25 40.2	
	comp=N,29nm,0.9s							
ISLE					IAML		06 25 44.4	
	comp=E,30nm,1.1s							
GHO	Glory Hole Cre	5.32	358			Pn	06 24 41.5	+1.0
N19K	Bonanza Creek	5.35	327			Pn	06 24 41.7	+0.8
SML	Sawmill	5.35	1			Pn	06 24 42.4	+1.5
SML	Sawmill	5.35	1	P		Pn	06 24 41.8	+0.9
	baz=181							
SPNN	North Nagishla	5.36	338			Pn	06 24 42.0	+0.9
SCM	Sheep Creek Mo	5.41	6			Pn	06 24 42.8	+1.0
SCM	Sheep Creek Mo	5.41	6	P		Pn	06 24 43.1	+1.3
	baz=186							
VRDI	Verde Repeater	5.45	27			Pn	06 24 43.2	+0.9
SAMH	Samovar Hills	5.49	45			Pn	06 24 43.1	+0.3
KIAG	Kiagna River	5.50	33			Pn	06 24 43.1	0.0
N25K	Chitina, Valde	5.53	20			Pn	06 24 44.3	+0.9
N25K	Chitina, Valde	5.53	20	P		Pn	06 24 43.9	+0.5
	baz=202							
GRNC	Granite Creek	5.54	37			Pn	06 24 43.9	+0.2
GLB	Gilahina Butte	5.55	24			Pn	06 24 43.8	+0.2
TABL	Table Mountain	5.55	41			Pn	06 24 44.1	+0.3
O17K	Koliganek Bris	5.62	310			Pn	06 24 45.0	+0.5
O17K	Koliganek Bris	5.62	310	P		Pn	06 24 45.0	+0.5
	baz=123							
PCA	Pinnacle	5.67	47			Pn	06 24 46.0	+0.6
PINM	Pinnacle	5.68	47	P		Pn	06 24 45.7	+0.3
	baz=233							
PTPK	Patty Peak	5.68	31			Pn	06 24 45.6	+0.1
P16K	Nushagak River	5.68	301			Pn	06 24 46.5	+1.2
P16K	Nushagak River	5.68	301	P		Pn	06 24 46.5	+1.2
	baz=114							
MCARA	McCarthy VSAT	5.69	28			Pn	06 24 46.3	+0.8
N18K	Kilae Creek	5.71	321			Pn	06 24 46.6	+0.8
N18K	Kilae Creek	5.71	321	P		Pn	06 24 45.8	0.0
	baz=135							
SKT	Skwentna	5.73	346			Pn	06 24 48.9	+2.7
SKT	Skwentna	5.73	346	P		Pn	06 24 48.3	+2.2
	baz=163							
M24K	Tolsona, Glenn	5.78	11			Pn	06 24 48.6	+1.8
M24K	Tolsona, Glenn	5.78	11	P		Pn	06 24 48.5	+1.8
	baz=192							
PNL	Peninsula	5.81	53			Pn	06 24 46.6	-0.5
PNL	Peninsula	5.81	53	P		Pn	06 24 46.9	-0.2
PNL	Peninsula	5.81	53	P		Pn	06 24 46.6	-0.5
	baz=239							
BARN	Barnard Glacie	5.82	35			Pn	06 24 47.7	+0.2
BCPM	Bancas Point	5.85	50			Pn	06 24 47.9	+0.2
CTG	Chitna Glacier	5.85	37	P		Pn	06 24 47.8	-0.1
	baz=222							
CTGM	Chitina Glacie	5.86	37			Pn	06 24 47.3	-0.6
LOGN	Logan Glacier	5.87	39			Pn	06 24 47.2	-0.9
SVW2	Sparrevohn	5.91	325			Pn	06 24 48.9	+0.4
SVW2	Sparrevohn	5.91	325	P		Pn	06 24 48.6	+0.1
WASW	Wrangell South	5.91	20			Pn	06 24 49.5	+0.8
M20K	Styx River	5.92	338			Pn	06 24 49.6	+0.9
M20K	Styx River	5.92	338	P		Pn	06 24 49.2	+0.5
	baz=154							
WACK	Wrangell Chich	5.93	20			Pn	06 24 50.1	+1.0
O16K	Kokwok River B	5.96	306			Pn	06 24 49.6	+0.3
O16K	Kokwok River B	5.96	306	P		Pn	06 24 49.7	+0.5
	baz=118							
N17K	Nushagak Hills	6.09	315			Pn	06 24 51.4	+0.4
N17K	Nushagak Hills	6.09	315	P		Pn	06 24 51.2	+0.2
	baz=128							
WAT6	Susitna Watana	6.14	3			Pn	06 24 53.0	+1.2
WAT6	Susitna Watana	6.14	3	P		Pn	06 24 53.0	+1.2
	baz=184							
M19K	Big River Lodg	6.22	333			Pn	06 24 52.9	+0.1
M19K	Big River Lodg	6.22	333	P		Pn	06 24 52.9	+0.1
	baz=148							
M18K	Stony River	6.29	326			Pn	06 24 53.3	-0.3
M18K	Stony River	6.29	326	P		Pn	06 24 53.3	-0.3
	baz=140							
WAT1	Susitna Watana	6.38	360			Pn	06 24 56.3	+1.3
WAT1	Susitna Watana	6.38	360	P		Pn	06 24 56.3	+1.3
	baz=179							
WAT7	Susitna Watana	6.38	359			Pn	06 24 56.1	+1.0
O29M	Mount Kennedy	6.49	50			Pn	06 24 56.8	+0.3
O29M	Mount Kennedy	6.49	50	P		Pn	06 24 56.9	+0.3
	baz=237							
P29M	Windy Craggy	6.54	57			Pn	06 24 57.0	-0.3
P29M	Windy Craggy	6.54	57	P		Pn	06 24 56.6	-0.6
	baz=245							
L19K	White Mountain	6.57	333			Pn	06 24 57.6	0.0
L19K	White Mountain	6.57	333	P		Pn	06 24 57.5	-0.2
	baz=148							
O15K	Ungalikthiuk R	6.61	299			Pn	06 24 59.2	+1.0
O15K	Ungalikthiuk R	6.61	299	P		Pn	06 24 59.2	+1.0
	baz=110							
DHY	Denali Highway	6.65	5			Pn	06 24 59.9	+1.1
DHY	Denali Highway	6.65	5	P		Pn	06 24 60.0	+1.1
	baz=185							
N16K	Nishlik Lake	6.70	311			Pn	06 24 59.9	+0.5
N16K	Nishlik Lake	6.70	311	P		Pn	06 24 59.9	+0.5
	baz=123							
M17K	Holitna River	6.75	321			Pn	06 25 01.2	+1.1
M17K	Holitna River	6.75	321	P		Pn	06 25 00.7	+0.6
	baz=133							
SDPT	Sand Point	6.81	265	P		Pn	06 25 01.7	+0.8
	comp=E,61nm,1.4s							
S31K	Pelican	6.84	72	Pn		Pn	06 24 58.8	-2.5
RND	Reindeer	6.96	359			Pn	06 25 03.6	+0.6
TRF	Thorofare Moun	7.05	354	Pn		Pn	06 25 06.3	+1.9
M16K	Timber Creek	7.08	314			Pn	06 25 05.6	+1.0
M16K	Timber Creek	7.08	314	P		Pn	06 25 05.1	+0.5
	baz=126							
P30M	Million Dollar	7.11	54			Pn	06 25 05.7	+0.7
P30M	Million Dollar	7.11	54	P		Pn	06 25 05.4	+0.4
	baz=243							
L18K	Granite Mounta	7.11	327	Pn		Pn	06 25 07.0	+2.0
N15K	Kwethluk River	7.12	306			Pn	06 25 07.0	+1.8
CAST	Castle Rocks	7.19	347	Pn		Pn	06 25 07.7	+1.5
KTH	Kantishna Hill	7.20	351	Pn		Pn	06 25 07.7	+1.4
HYT	Haines Junctio	7.21	48			Pn	06 25 07.2	+0.7
SIT	Sitka	7.28	80	Pn		Pn	06 25 04.1	-3.2
SIT	Sitka	7.28	80	P		Pn	06 25 04.0	-3.3
O14K	Tigyukauivet M	7.34	298	Pn		Pn	06 25 10.3	+2.2
L27K	Beaver Creek,	7.42	24	Pn		Pn	06 25 10.5	+1.2
BCAR	Beaver Creek A	7.43	24	Pn		Pn	06 25 10.5	+1.1
K20K	Telida	7.44	340	Pn		Pn	06 25 09.3	-0.3
TTA	Tatalina	7.50	333	Pn		Pn	06 25 10.7	+0.3
SKAG	Skagway	7.63	61			Pn	06 25 13.1	+1.0
M15K	Kasigluk River	7.63	309			Pn	06 25 12.4	+0.3
M15K	Kasigluk River	7.63	309	P		Pn	06 25 12.4	+0.3
	baz=119							
BESE	Bessie Mountai	7.66	68			Pn	06 25 11.7	-0.9
S32K	Killisnoo	7.69	77	Pn		Pn	06 25 12.3	-0.7
L16K	Owhat River	7.70	318			Pn	06 25 14.3	+1.3
L16K	Owhat River	7.70	318	P		Pn	06 25 13.5	+0.5
	baz=128							
N30M	Aishikik Lake	7.74	45			Pn	06 25 14.4	+0.8
N30M	Aishikik Lake	7.74	45	P		Pn	06 25 14.1	+0.5
	baz=234							
BPAW	Bear Paw Mtn.	7.75	352	Pn		Pn	06 25 14.0	+0.3
O30N	Mendenhall	7.79	51	Pn		Pn	06 25 14.9	+0.6
JIS	Juneau Island	7.86	71	Pn		Pn	06 25 14.5	-0.7
JIS	Juneau Island	7.86	71	P		Pn	06 25 14.2	-1.0
M29M	Somme Creek	7.87	36			Pn	06 25 16.1	+0.5
M29M	Somme Creek	7.87	36	P		Pn	06 25 16.1	+0.5
	baz=224							
K17K	Iditarod	7.98	326			Pn	06 25 17.3	+0.4
HDA	Harding Lake	8.00	5	Pn		Pn	06 25 19.1	+2.0
WRH	Wood River Hil	8.03	1	Pn		Pn	06 25 20.6	+3.1
J18K	Innoko River	8.12	333	Pn		Pn	06 25 20.0	+1.1
CCB	Clear Creek Bu	8.21	2	Pn		Pn	06 25 22.5	+2.5
J20K	Nowinta River	8.21	343	Pn		Pn	06 25 21.5	+1.4
M14K	Bethel	8.21	307	Pn		Pn	06 25 19.7	-0.4
K27K	Chicken	8.22	20	Pn		Pn	06 25 20.5	+0.2
WHY	Whitehorse	8.27	54			Pn	06 25 21.4	+0.4
J25K	Salcha River,	8.31	9	Pn		Pn	06 25 21.4	-0.1
J19K	Poorman	8.32	338			Pn	06 25 22.3	+0.7
J19K	Poorman	8.32	338	P		Pn	06 25 21.9	+0.3
	baz=152							
ILAR	Eielson Array	8.36	5	Pn		Pn	06 25 24.3	+2.2
ILAR	Eielson Array	8.36	5	Pn		Pn	06 25 23.1	+0.9
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=6.3							
ILAR					Sn	Sn	06 26 53.3	-3.2
	comp=E,0.3nm,0.3s,baz=183,slow=22,SNR=6.7							
	comp=E,0.2nm,0.4s							
P32M	Atlin	8.45	62			Pn	06 25 23.1	-0.4
P32M	Atlin	8.45	62	P		Pn	06 25 22.8	-0.6
	baz=254							
L29M	L29M	8.46	34	Pn		Pn	06 25 24.6	+1.0
MDM	Murphy Dome	8.52	1	Pn		Pn	06 25 25.4	+1.1
M30M	Minto, Yukon	8.53	39	Pn		Pn	06 25 25.3	+0.7
I23K	Minto, Yukon-K	8.71	358	Pn		Pn	06 25 26.6	-0.3
L14K	Kuka Creek	8.79	310	Pn		Pn	06 25 28.6	+0.5
K15K	Wolf Creek Mou	8.82	317	Pn		Pn	06 25 29.8	+1.3
I21K	Tanana	8.89	351	Pn		Pn	06 25 31.2	+1.7
Q32M	Nakina River	9.05	67	Pn		Pn	06 25 32.7	+1.0
J16K	Anvik River	9.12	323	Pn		Pn	06 25 32.7	+0.2
K29M	Barlow Dome	9.19	32	Pn		Pn	06 25 34.8	+1.2
M31M	Drury Creek, Y	9.21	46	Pn		Pn	06 25 35.1	+1.3
N32M	Quiet Lake	9.27	53	Pn		Pn	06 25 34.8	+0.1
H21K	Melozitna Rive	9.44	349	Pn		Pn	06 25 38.2	+1.2
FARO	Faro, Yukon	9.65	47	Pn		Pn	06 25 41.2	+1.4
R32M	Jennings River	9.78	65	Pn		Pn	06 25 41.6	-0.1
IMAR	Indian Mountai	9.86	347	Pn		Pn	06 25 42.2	-0.4
I28M	Miner Creek	9.91	21	Pn		Pn	06 25 46.3	+2.8
H18K	Honhosa River	9.93	335	Pn		Pn	06 25 44.1	+0.5
J30M	Hart River	10.09	31	Pn		Pn	06 25 48.7	+2.8
G23K	Bananza Creek	10.30	357	Pn		Pn	06 25 51.1	+2.5
F21K	Alatna River	11.03	350	Pn		Pn	06 25 59.9	+1.2
BMAR	Burnt Mountain	11.15	8	Pn		Pn	06 26 03.0	+2.7
ANM	Nome	11.56	321	Pn		Pn	06 26 06.8	+0.9
E19K	Redstone River	11.74	343	Pn		Pn	06 26 10.2	+1.8
INK	Inuvik	13.70	24	Pn		Pn	06 26 35.3	+0.3
	comp=E,0.1nm,0.3s,baz=198,slow=9.6,SNR=5.5							
	comp=E,1.2nm,0.9s							
YKA	Yellowknife Ar	18.08	57	P		P	06 27 32.7	+0.3
	comp=E,0.1nm,0.3s,baz=267,slow=11,SNR=8.6							
	comp=E,0.7nm,0.9s							
SPITS	Spitsbergen Ar	45.28	4	P		P	06 31 37.1	-1.1
	comp=E,5.7nm,0.8s,baz=339,slow=7.7,SNR=13							
	comp=E,5.7nm,0.8s							
H11N2	WAKE ISLAND Hy	49.34	241	T		T	07 25 19.7	
	baz=33							
H11N3	WAKE ISLAND Hy	49.35	241	T		T	07 25 22.0	
	baz=33							
H11N1	WAKE ISLAND Hy	49.36	241	T		T	07 25 21.9	
	baz=33							
H11S1	WAKE ISLAND Hy	50.48	240	T		T	07 26 52.9	
	baz=29							
H11S2	WAKE ISLAND Hy	50.50	240	T		T	07 26 60.0	
	baz=29							
H11S3	WAKE ISLAND Hy	50.50	240	T		T	07 27 21.8	
	baz=29							
SONM	Songino Array	58.83	311	P		P	06 33 21.6	+2.1
	comp=E,0.7nm,0.8s,baz=46,slow=6.2,SNR=5.2							
	comp=E,0.7nm,0.8s							

*IDC **19** 06:24:28.9±1.2,36°.38N×141°.14E,h0km,mb3.6/7, mbtmp3.6/8,ML2.8/1,MS2.7/1,Error ellipse: s-maj=28.8km s-min=23.4km az=47.0*

*JMA **19** 06:24:33.9±0.1,36°.4N±0°.3×141°.1E±0°.8,h45km±1km, MV3.5/40,E OFF IBARAKI PREF*

ISC 19 06:24:33.8±1.5,36°.39N±0°.04×141°.16E±0°.08,h33km±8km, n27,σ0°99/31,mb3.5/7,11D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.46	264	⇓iP	Pb	06 24 43.8	+0.1
JHYU				⇓eS	Sb	06 24 50.7	+0.1
JHO	Hitachi	0.52	295	⇓iP	Pb	06 24 44.4	-0.4
JHO				⇓S	Sb	06 24 51.7	-0.6
JIHU	Itakohorinouch	0.66	231	⇓iP	Pn	06 24 47.0	+0.1
JIHU				⇓eS	Sb	06 24 56.2	+0.3
ONAJ	Iwakimizuishiy	0.77	338	⇓iP	Pn	06 24 48.0	-0.5
ONAJ				⇓S	Sn	06 24 57.6	-1.3
JYT	Yasato	0.79	259	⇓iP	Pn	06 24 47.9	-0.8
JYT				⇓S	Sn	06 24 57.5	-1.9
JSMT	Sammumatsuo	0.94	218	eP	Pn	06 24 50.5	-0.2
JSMT				S	Sn	06 25 02.9	-0.1
JFK	Kawauchi	1.00	347	⇓iP	Pn	06 24 51.2	-0.5
JOTO	OTAMA OYAMA	1.34	331	iP	Pn	06 24 57.2	+0.9
JOTO				S	Sn	06 25 13.3	+0.2
JAG	Ashikaga	1.38	272	iP	Pn	06 24 56.2	-0.5
JMM	Marumori	1.50	349	P	Pn	06 24 58.8	+0.3
JMM				S	Sn	06 25 16.7	-0.3
JFY	Yanaizu	1.55	312	P	Pn	06 24 59.6	+0.5
JKT	Katashina	1.58	284	P	Pn	06 24 59.9	+0.3
JKT				S	Sn	06 25 18.9	-0.1
MJAR	Matsushiro Arr	2.38	275	Pn	Pn	06 25 10.3	-0.3
	2.6nm,0.3s,baz=112,slow=8.9,SNR=56						
MJAR				Sn	Sn	06 25 40.2	+1.5
	1.5nm,0.3s,baz=86,slow=24,SNR=2.1						
MJAR				LR	LR	06 26 17.9	
	comp=Z,141nm,19.0s,baz=40,slow=46 15nm,0.3s						
KSRS	Korea Array	10.65	280	Pn	Pn	06 27 07.2	+3.2
	0.4nm,0.3s,baz=98,slow=15,SNR=6.3						
SONM	Songino Array	27.98	305	P	P	06 30 20.0	-1.5
	0.4nm,0.6s,baz=108,slow=9.5,SNR=3.5						
	0.4nm,0.6s						
H11N2	WAKE ISLAND Hy	28.00	119	T	T	06 59 44.0	
	baz=312,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	28.01	119	T	T	07 00 08.4	
	baz=312,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	28.02	119	T	T	06 59 45.3	
	baz=312,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	28.69	122	T	T	07 00 34.8	
	baz=314,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	28.69	122	T	T	07 00 34.3	
	baz=314,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	28.70	122	T	T	07 00 36.0	
	baz=314,slow=75,SNR=32						
ZALV	Zalesovo Beam	42.20	313	P	P	06 32 22.6	-0.7
	0.8nm,0.3s,baz=78,slow=6.5,SNR=4.4						
	0.8nm,0.3s						
MKAR	Makanchi Array	44.29	303	P	P	06 32 40.2	-0.2
	0.4nm,0.6s,baz=91,slow=8.6,SNR=4.9						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	46.24	308	P	P	06 32 55.4	-0.3
	2.3nm,0.4s,baz=84,slow=7.6,SNR=20						
	2.3nm,0.4s						
ILAR	Eielson Array	50.15	32	P	P	06 33 26.5	+0.8
	0.4nm,0.8s,baz=255,slow=5.7,SNR=4.4						
	0.4nm,0.8s						
WRA	Warramunga Arr	56.39	188	P	P	06 34 11.0	-1.1
	0.5nm,0.9s,baz=0.6,slow=7.6,SNR=2.1						
	0.5nm,0.9s						
ASAR	Alice Springs	60.12	188	P	P	06 34 38.8	+0.8
	0.1nm,0.4s,baz=9.6,slow=6.1,SNR=1.6						
	0.1nm,0.4s						

*GCMT **19** 06:32:24.7±0.3,66°.77N±0°.05×17°.61W±0°.05,h12km, MW4.7/62,Moment Tensor Solution. s14,c15; s62,c90; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr~1.20±.06; Mθθ0.04±.07; Mφφ1.16±.05; Mrθ0.75±.31; Mθφ-0.33±.05; Mφr~0.75±.18; Best double couple: M0 1.61700×10^16^ NP1:φs326.00000°,δ66.00000°,λ-106.00000°. NP2: φs181.00000°,δ29.00000°,λ-59.00000°. Principal axes: T 1.5700, Plg19.0000°, Azm68.0000°; N 0.0930, Plg14.0000°, Azm333.0000°; P -1.6630, Plg66.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*REY **19** 06:32:24.9,66°.60N×17°.71W,h14km*

*IDC **19** 06:32:25.2±0.5,66°.55N×17°.75W,h0km,mb3.9/20, mbtmp3.9/28,ML3.3/7,MS3.8/17,Error ellipse: s-maj=15.6km s-min=10.6km az=4.0*

*MOS **19** 06:32:25.0±0.9,66°.52N×17°.65W,h10km,mb4.5/13,Error ellipse: s-maj=15.9km s-min=9.4km az=104.2*

*NEIC **19** 06:32:26.7±1.8,66°.40N±0°.08×17°.6W±0°.2,h10km±1km, mb4.4/62,Error ellipse: s-maj=13.1km s-min=11.9km az=175.0*

ISC 19 06:32:25.7±0.7,66°.47N±0°.03×17°.71W±0°.02,h3km±4km, n203,σ1899/213,mb4.2/65,MS3.7/16,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	Grimsey	0.14	301	P	Pg	06 32 28.3	-0.1
	baz=246						
IGRI				S	Sg	06 32 30.7	+0.5
	baz=246						
IBRE	Brettingsstaoi	0.36	193	P	Pb	06 32 33.8	-0.9
	baz=190						
IBRE				S	Sb	06 32 40.5	-0.1
	baz=190						
IHED	Heoinshofoi	0.42	157	P	Pg	06 32 34.5	+0.7
	baz=163						
IHED				S	Sb	06 32 41.5	-1.0
	baz=163						
ILEI	Leirhofn	0.50	97	P	Pg	06 32 34.4	-0.8
	baz=111						
ILEI				S	Sg	06 32 41.4	-0.2
	baz=111						
IGRA	Granastaoir	0.56	174	P	Pb	06 32 36.9	-1.1

BORG Borgarnes 2.29 223 *i* P **Pn 06 33 02.1 -2.2**
BORG *i* S **Sg 06 33 35.8 -3.4**
BORG Borgarnes 2.29 223 Pn **Pn 06 33 03.3 -1.0**
1µm,0.7s,baz=38,slow=5.9,SNR=128
BORG Sn **Sb 06 33 34.1 -2.1**
123nm,0.3s,baz=204,slow=23,SNR=16
SCO Scoresbysund 4.32 341 *i* P **Pn 06 33 29.0 -3.1**
SCO *e*S **Sb 06 34 30.3 -4.3**
SOEG Soedalen 5.56 294 *e*P **Pn 06 33 53.6 +4.5**
SOEG IAML 06 35 37.5
comp=Z,54nm,1.7s
JMIC Jan Mayen 5.63 32 Pn **Pn 06 33 48.2 -1.9**
comp=Z,8.1nm,0.3s,baz=81,slow=5.4,SNR=1.6
JMIC LR LR 06 35 27.0
comp=Z,848nm,20.2s,baz=268,slow=33
comp=Z,26nm,0.4s
SUMG Summit 9.45 319 Pn **Pn 06 34 43.7 +0.9**
SUMG Summit 9.45 319 P **Pn 06 34 43.7 +0.9**
SUMG Summit 9.45 319 *i* P **Pn 06 34 43.2 +0.5**
FOO Floro 11.06 105 *e*S **Sn 06 37 03.6 -4.9**
SUE Sulen 11.28 108 *e*P Pn 06 35 13.5 +5.9
SUE *e*S **Sn 06 37 08.4 -5.5**
SUE IAML 06 37 23.8
comp=Z,3.8nm,0.6s
AKN Aaknes 11.50 100 *e*P **Pn 06 35 12.2 +1.6**
AKN *e*S Sn 06 37 12.5 -6.8
AKN IAML 06 37 25.9
comp=Z,6.0nm,0.5s
LOF Lofoten 12.11 68 *e*P **Pn 06 35 18.7 0.0**
KONS Konsvik 12.24 76 *e*P **Pn 06 35 18.2 -2.4**
KONS *e*S Sn 06 37 26.4 -11
KONS IAML 06 38 39.4
comp=Z,2.3nm,0.8s
STOK Stokkvaagen 12.25 77 *e*P **Pn 06 35 18.9 -1.8**
STOK *e*S Sn 06 37 27.4 -10
STOK IAML 06 37 45.5
comp=Z,3.5nm,0.5s
DOMB Dombas 12.39 98 *e*P **Pn 06 35 27.1 +4.4**
DOMB *e*S **Sn 06 37 34.9 -6.2**
DOMB IAML 06 38 02.6
comp=Z,2.2nm,0.5s
NSS Namsos 12.41 85 *e*P **Pn 06 35 21.2 -1.6**
NSS *e*S Sn 06 37 34.5 -6.9
NSS IAML 06 37 48.0
comp=Z,1.9nm,0.6s
FAUS Fauske 12.88 71 *e*P **Pn 06 35 27.3 -2.0**
EKA Eskdalemuir Ar 13.18 141 Pn **Pn 06 35 35.4 +2.0**
baz=335,slow=13
comp=Z,1.9nm,0.8s
NC204 NORSAR Array S 13.49 99 Pn **Pn 06 35 34.8 -3.0**
NOA NORSAR Array B 13.81 100 Pn **Pn 06 35 43.0 +1.0**
baz=312,slow=12,SNR=3.3
comp=Z,0.5nm,0.7s
NB201 NORSAR Array S 13.84 99 Pn **Pn 06 35 41.4 -1.0**
NC02 NORSAR Array S 14.12 100 Pn **Pn 06 35 45.5 -0.7**
BJO1 Bjornoya 14.38 40 *e*P **Pn 06 35 47.7 -2.0**
JETT Jettan, Norway 14.43 61 *e*P **Pn 06 35 47.5 -3.0**
SPA0 Spitsbergen Ar 15.26 26 *e*P **Pn 06 36 05.3 +3.7**
SPITS Spitsbergen Ar 15.26 26 Pn **Pn 06 36 01.4 -0.2**
baz=241,slow=20
comp=Z,9.9nm,1.1s
HFS Hagfors 15.33 100 Pn **Pn 06 36 01.5 -1.2**
comp=Z,0.1nm,0.3s,baz=316,slow=10,SNR=1.2
comp=Z,0.6nm,0.6s
KTK1 Kautokeino 15.50 62 *e*P **P 06 36 08.8 -0.6**
ARA0 ARCESS Array S 16.21 60 *e*P **Pn 06 36 16.4 +2.4**
ARCES ARCESS Array B 16.21 60 Pn **Pn 06 36 13.1 -0.9**
ARCES IAmb IAmb 06 36 27.4
comp=Z,32nm,1.5s
ARCES ARCESS Array B 16.21 60 P **Pn 06 36 13.1 -0.9**
ARCES pmax pmax
comp=Z,32nm,1.5s
ARCES ARCESS Array B 16.21 60 Pn **Pn 06 36 11.8 -2.2**
comp=Z,0.2nm,0.3s,baz=283,slow=11,SNR=12
comp=Z,1.7nm,0.8s
FINES FINESS Array B 19.53 84 P **P 06 36 52.6 -1.1**
FINES FINESS Array B 19.53 84 Pn **P 06 36 53.2 -0.6**
comp=Z,0.3nm,0.3s,baz=322,slow=12,SNR=10
comp=Z,3.7nm,0.9s
FRB Frobisher Bay 21.08 287 P **P 06 37 10.1 -0.5**
comp=Z,6.6nm,0.9s,baz=60,slow=11,SNR=6.6
comp=Z,6.6nm,0.9s
CLL Collm 21.62 120 *e*P **P 06 37 16.0 -0.6**
CLL *e* 06 37 19.0
CLL *e*S **S 06 41 15.0 -1.3**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 21.62 120 *e*P **P 06 37 16.0 -0.6**
comp=Z,8.0nm,0.9s
CLL *ex* x 06 37 19.0
CLL *e*PPP PPP 06 37 43.0
CLL *e*S **S 06 41 15.0 -1.3**
BRG Berggiesshubel 22.32 119 *e*P **P 06 37 24.9 +0.9**
BRG Amp 06 37 31.1
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 22.32 119 *e*P **P 06 37 24.9 +0.9**
BRG 06 38 00.9
BRG pmax pmax
comp=Z,6.0nm,1.0s
PABE Paberze 22.51 99 P **P 06 37 24.1 -2.0**
BFO Black Forest 22.66 130 P **P 06 37 24.6 -3.1**
BFO Black Forest 22.66 130 P **P 06 37 24.6 -3.1**
BFO pmax pmax
comp=Z,7.0nm,1.1s
KHC Kasperske Hory 23.66 122 P **P 06 37 37.3 -0.7**
KHC IAmb IAmb 06 37 47.0
comp=Z,8.6nm,1.3s
KHC Kasperske Hory 23.66 122 *e*P **P 06 37 39.1 +1.1**
KHC Kasperske Hory 23.66 122 P **P 06 37 37.3 -0.7**
KHC pmax pmax
comp=Z,9.0nm,1.3s
GERES GERESS Array B 23.95 122 P **P 06 37 40.3 -0.5**
comp=Z,1.3nm,0.8s,baz=341,slow=11,SNR=5.3
comp=Z,1.3nm,0.8s
KRLC Kraliky 23.99 116 *e*P **P 06 37 43.0 +1.9**
KRLC Kraliky 23.99 116 *e*P **P 06 37 43.0 +1.9**
DAVA Damuels 24.07 129 *e*P **P 06 37 48.5 +6.5**
comp=Z,5.1nm,0.9s
CKRC Cesky Krumlov 24.18 121 *e*P **P 06 37 43.6 +0.7**
CKRC Cesky Krumlov 24.18 121 *e*P **P 06 37 43.6 +0.7**
MORC Moravsky Berou 24.51 116 P **P 06 37 45.4 -0.6**
MORC Moravsky Berou 24.51 116 *e*P **P 06 37 45.6 -0.4**
MORC Moravsky Berou 24.51 116 P **P 06 37 45.4 -0.6**
MORC pmax pmax
comp=Z,4.0nm,1.1s
DAVOX Davos/Dischmat 24.52 130 LR LR 06 47 24.6
comp=Z,236nm,19.8s,baz=324,slow=37
VRAC Vranov 24.56 117 *e*P **P 06 37 48.5 +2.1**
WTTA Wattenberg 24.64 127 *i* P **P 06 37 51.8 +4.5**
comp=Z,6.4nm,1.1s
KRUC Moravsky 24.70 118 *e*P **P 06 37 49.0 +1.4**
LESA Schwarzleotal 24.84 125 *e*P **P 06 37 55.8 +6.9**
comp=Z,11nm,1.5s
RES Resolute Bay 24.96 322 LR LR 06 46 43.2
comp=Z,123nm,20.4s,baz=13,slow=34
KLMR Klimovskoe 25.18 75 *e*P **P 06 37 49.4 -2.3**
JAVC Velka Javorina 25.33 117 *e*P **P 06 37 56.6 +3.3**
KBA Koelnbreinsper 25.36 125 *e*P **P 06 38 00.1 +6.3**
comp=Z,12nm,1.6s
CONA Conrad Observa 25.48 120 *e*P **P 06 37 58.5 +3.8**
comp=Z,3.5nm,0.9s
LANS Liptovska Anna 25.73 114 *e*P **P 06 38 01.1 +4.1**
LANS Liptovska Anna 25.73 114 *e*P **P 06 38 01.1 +4.1**
RONA Rosalia, Austr 25.82 120 *i* P **P 06 38 04.4 +6.6**
comp=Z,6.7nm,1.4s
MYKA Terra Mystica 25.85 125 *i* P P 06 38 05.7 +7.6
comp=Z,20nm,1.6s
SCHQ Schefferville 25.97 267 P **P 06 37 58.7 -0.3**
SCHQ Schefferville 25.97 267 P **P 06 37 59.0 -0.1**
comp=Z,4.5nm,0.8s,baz=51,slow=11,SNR=7.5
SCHQ LR LR 06 47 21.6
comp=Z,351nm,18.9s,baz=48,slow=34
comp=Z,4.5nm,0.8s
VYHS Vyhne 26.05 116 *e*P **P 06 38 00.4 +0.5**
VYHS Vyhne 26.05 116 *e*P **P 06 38 00.4 +0.5**
CRVS Cervenica-Dubn 26.68 112 *e*P **P 06 38 11.1 +5.6**
CRVS Cervenica-Dubn 26.68 112 *e*P **P 06 38 11.1 +5.6**
ESDC Sonseca Array 27.95 157 P **P 06 38 18.3 +1.3**
comp=Z,0.6nm,0.7s,baz=0.5,slow=9.5,SNR=5.0
ESDC LR LR 06 48 55.5
comp=Z,72nm,19.1s,baz=342,slow=35
comp=Z,0.6nm,0.7s
AKASG Malin Array Be 28.22 101 P **P 06 38 18.4 -0.9**
comp=Z,1.0nm,0.5s,baz=327,slow=9.4,SNR=2.3
comp=Z,1.0nm,0.5s

MLR Muntele Rosu 31.21 110 LR LR 06 52 52.2
comp=Z,254nm,19.1s,baz=338,slow=39
A36M Sachs Harbour 33.61 328 P **P 06 39 08.6 +2.0**
A36M IAmb IAmb 06 39 14.3
comp=Z,4.1nm,1.0s
AVE Averroes 33.77 164 P **P 06 39 07.2 -1.1**
BELG Belogornoye 34.27 82 LR LR 06 52 33.5
comp=Z,481nm,20.2s,baz=322,slow=35
VAE Valguarnera 34.37 131 LR LR 06 54 38.9
comp=Z,114nm,18.8s,baz=342,slow=39
PKME Peaks-Kenny Pk 34.45 258 P **P 06 39 15.2 +1.1**
KEST Kesra 34.58 139 LR LR 06 54 23.0
comp=Z,98nm,18.3s,baz=289,slow=38
MDT Midelt 34.59 160 LR LR 06 52 15.9
comp=Z,45nm,18.9s,baz=324,slow=34
NRIK Noril'sk 35.04 37 LR LR 06 55 09.2
comp=Z,72nm,18.6s,baz=332,slow=39
ARU Arti 35.47 68 LR LR 06 52 57.7
comp=Z,430nm,19.4s,baz=314,slow=35
AGG Agios Georgios 35.54 120 P **P 06 39 24.1 +0.5**
AGG IAmb IAmb 06 39 28.5
comp=Z,6.3nm,1.1s
AGG Agios Georgios 35.54 120 P **P 06 39 24.1 +0.5**
AGG pmax pmax
comp=Z,6.0nm,1.1s
YKA Yellowknife Ar 37.93 311 P **P 06 39 44.8 +1.2**
YKA Yellowknife Ar 37.93 311 P **P 06 39 44.8 +1.2**
YKA Yellowknife Ar 37.93 311 P **P 06 39 43.6 0.0**
comp=Z,1.5nm,0.8s,baz=41,slow=8.3,SNR=11
comp=Z,1.5nm,0.8s
YKAB2 New Yellowknif 37.98 311 P **P 06 39 46.2 +2.1**
F31M Tsiigehtchic 39.01 327 P **P 06 39 53.8 +1.1**
F31M IAmb IAmb 06 39 54.5
comp=Z,6.2nm,1.3s
BRTR Keskin Array B 39.07 107 P **P 06 39 53.9 +0.2**
BRTR Keskin Array B 39.07 107 P **P 06 39 53.9 +0.2**
BRTR Keskin Array B 39.07 107 P **P 06 39 53.7 0.0**
comp=Z,2.3nm,0.8s,baz=320,slow=7.0,SNR=5.7
BRTR LR LR 06 57 10.2
comp=Z,124nm,20.4s,baz=0.0,slow=38
comp=Z,2.3nm,0.8s
KBZ Khabaz 39.31 94 P **P 06 39 57.5 +2.1**
comp=Z,3.4nm,1.0s,baz=315,slow=8.5,SNR=4.5
KBZ LR LR 06 56 58.8
comp=Z,76nm,21.1s,baz=301,slow=38
comp=Z,3.4nm,1.0s
G31M Satah River 39.56 326 P **P 06 39 57.1 -0.1**
FFC Flin Flon 39.71 295 P **P 06 39 59.8 +1.1**
FFC IAmb IAmb 06 40 03.0
comp=Z,6.8nm,0.9s
FFC Flin Flon 39.71 295 P **P 06 39 59.8 +1.1**
FFC pmax pmax
comp=Z,7.0nm,1.0s
AKTO Aktyubinsk 39.88 75 LR LR 06 55 52.4
comp=Z,294nm,19.0s,baz=282,slow=35
D25K Kavik River 39.91 334 P **P 06 40 00.8 +0.5**
D25K IAmb IAmb 06 40 10.7
comp=Z,8.7nm,1.2s
G30M tAoh Zraii Nji 39.94 327 P **P 06 40 01.2 +0.7**
F28M Old Crow 40.17 330 P **P 06 40 02.9 +0.5**
D24K Happy Valley 40.47 335 P **P 06 40 05.4 +0.5**
D24K IAmb IAmb 06 40 12.1
comp=Z,6.0nm,1.0s
B20K Meade River 40.97 340 P **P 06 40 11.0 +2.2**
ULM Lac du Bonnet 40.97 287 P **P 06 40 09.2 +0.1**
ULM IAmb IAmb 06 40 13.2
comp=Z,10nm,1.3s
ULM Lac du Bonnet 40.97 287 P **P 06 40 09.2 +0.1**
ULM pmax pmax
comp=Z,10.0nm,1.3s
ULM Lac du Bonnet 40.97 287 P **P 06 40 08.8 -0.3**
comp=Z,4.7nm,0.8s,baz=47,slow=8.0,SNR=8.1
comp=Z,4.7nm,0.8s
N58A Sunbury 41.11 262 P **P 06 40 12.1 +1.7**
N58A IAmb IAmb 06 40 12.2
comp=Z,15nm,1.2s
I30M Mount Dempster 41.46 326 P **P 06 40 13.2 0.0**
ABKAR Akbulak array 41.57 75 P **P 06 40 13.5 -0.6**
ABKAR Akbulak array 41.57 75 P **P 06 40 13.2 -0.8**
ABKAR IAmb IAmb 06 40 19.4
comp=Z,3.5nm,1.1s
I28M Miner Creek 42.04 328 P **P 06 40 20.1 +2.2**
FYU Fort Yukon 42.13 332 P **P 06 40 20.6 +2.2**
FYU IAmb IAmb 06 40 20.9
comp=Z,12nm,1.1s
BVAR Borovoye Array 42.44 63 P **P 06 40 20.4 -0.7**
comp=Z,0.6nm,0.5s,baz=334,slow=9.6,SNR=3.1
BVAR LR LR 06 58 57.9
comp=Z,51nm,18.6s,baz=329,slow=38
comp=Z,0.6nm,0.5s
I26K Coal Creek Min 42.83 330 P **P 06 40 25.5 +1.3**
I26K IAmb IAmb 06 40 52.0
comp=Z,7.4nm,1.4s
G23K Bananza Creek 42.87 334 P **P 06 40 25.3 +0.8**
F21K Alatna River 42.98 337 P **P 06 40 27.0 +1.6**
DAWY Dawson 43.12 327 P **P 06 40 27.9 +1.3**
H24K Noodor Dome 43.27 333 P **P 06 40 28.5 +0.7**
H24K IAmb IAmb 06 40 35.4
comp=Z,9.5nm,1.4s
K27K Chicken 43.73 328 P **P 06 40 32.7 +1.2**
M30M Minto, Yukon 43.83 324 P **P 06 40 33.1 +0.8**
M30M IAmb IAmb 06 40 39.9
comp=Z,5.1nm,1.1s
J25K Salcha River, 43.89 331 P **P 06 40 34.0 +1.2**
ILAR Eielson Array 44.04 331 P **P 06 40 33.3 -0.7**
comp=Z,0.8nm,0.9s,baz=24,slow=7.7,SNR=8.3
comp=Z,0.8nm,0.9s
IMAR Indian Mountai 44.16 336 P **P 06 40 36.3 +1.4**
H21K Melozitna Rive 44.30 335 P **P 06 40 38.0 +1.9**
H21K IAmb IAmb 06 40 41.4
comp=Z,4.3nm,0.9s
M29M Somme Creek 44.33 325 P **P 06 40 38.6 +2.1**
M29M IAmb IAmb 06 40 45.1
comp=Z,5.4nm,1.1s
HDA Harding Lake 44.38 331 P **P 06 40 37.0 +0.3**
HDA IAmb IAmb 06 40 41.6
comp=Z,3.3nm,0.8s
MLY Manley 44.52 334 P **P 06 40 39.1 +1.3**
MLY IAmb IAmb 06 40 42.6
comp=Z,5.9nm,1.0s
BCAR Beaver Creek A 44.52 327 P **P 06 40 39.5 +1.6**
L27K Beaver Creek, 44.53 327 P **P 06 40 39.2 +1.2**
L27K IAmb IAmb 06 40 46.4
comp=Z,13nm,1.4s
EDM Edmonton 44.92 302 P **P 06 40 41.7 +0.6**
EDM Edmonton 44.92 302 P **P 06 40 41.7 +0.6**
EDM pmax pmax
comp=Z,13nm,1.2s
GLB Gilahina Butte 46.41 328 P **P 06 40 52.9 +0.1**
GLB IAmb IAmb 06 40 54.3
comp=Z,4.7nm,1.2s
ZALV Zalesovo Beam 46.59 53 P **P 06 40 54.2 0.0**
comp=Z,0.3nm,0.3s,baz=323,slow=11,SNR=1.6
comp=Z,0.3nm,0.3s
KURK Kurchatov 47.25 59 P **P 06 40 58.6 -0.8**
KURBB Kurchatov Arra 47.29 60 P **P 06 40 58.6 -1.2**
comp=Z,1.7nm,0.9s,baz=328,slow=7.4,SNR=14
comp=Z,1.7nm,0.9s
RC01 Rabbit Creek A 47.94 331 P **P 06 41 04.7 0.0**
EGMT Eagleton 47.99 295 P **P 06 41 06.2 +0.8**
GEYT Alibeck 50.33 85 LR LR 07 03 00.4
comp=Z,293nm,22.0s,baz=348,slow=36
KSU1 Kansas State U 50.55 279 P **P 06 41 24.3 -0.7**
BOZ Bozeman (W) 50.73 295 P **P 06 41 27.1 +0.7**
BOZ IAmb IAmb 06 41 32.2
comp=Z,8.1nm,1.3s
BOZ Bozeman (W) 50.73 295 P **P 06 41 27.1 +0.7**
BOZ pmax pmax
comp=Z,8.0nm,1.3s
K22A Casper 51.36 289 P **P 06 41 31.6 +0.4**
MK31 Makanchi Array 51.86 59 P **P 06 41 33.7 -1.0**
MK31 Makanchi Array 51.86 59 P **P 06 41 33.7 -1.0**
MK31 pmax pmax
comp=Z,3.0nm,1.4s
MKAR Makanchi Array 51.86 59 P **P 06 41 33.5 -1.2**
MKAR Makanchi Array 51.86 59 P **P 06 41 33.6 -1.1**
comp=Z,1.7nm,0.9s,baz=328,slow=6.1,SNR=13
comp=Z,1.7nm,0.9s
PD31 Pinedale Array 52.40 292 P **P 06 41 38.8 -0.3**
PD31 IAmb IAmb 06 41 47.7
comp=Z,4.0nm,1.1s
PDAR Pinedale Array 52.40 292 P **P 06 41 38.9 -0.1**
PDAR Pinedale Array 52.40 292 P **P 06 41 38.7 -0.3**
comp=Z,1.1nm,0.7s,baz=52,slow=5.5,SNR=8.0
comp=Z,1.1nm,0.7s
N23A Red Feather La 52.65 288 P **P 06 41 39.4 -1.6**

PLID Pearl Lake 52.74 298 P **P 06 41 41.5 -0.1**
PLID IAmb IAmb 06 41 47.2
comp=Z,6.6nm,1.2s
MXC Moxie City 52.93 302 P **P 06 41 42.0 -0.7**
BMO Blue Mountains 53.40 299 P **P 06 41 46.6 +0.3**
BMO IAmb IAmb 06 41 47.5
comp=Z,7.9nm,1.4s
BMO Blue Mountains 53.40 299 P **P 06 41 46.6 +0.3**
BMO pmax pmax
comp=Z,8.0nm,1.5s
TORD Torodi Ar. Bea 54.84 157 P **P 06 41 57.8 +0.9**
comp=Z,4.1nm,0.3s,baz=339,slow=6.2,SNR=8.3
comp=Z,4.1nm,0.3s
S22A 4UR Ranch, Cre 55.72 286 P **P 06 42 03.4 -0.1**
S22A IAmb IAmb 06 42 06.6
comp=Z,6.9nm,1.4s
KSH Kashi 55.91 69 P **P 06 42 07.8 +3.2**
KSH pP sP 06 42 11.3 +5.5
KSH pmax pmax
comp=Z,2.0nm,0.9s
WMQ Urumqi 56.31 57 *e*P **P 06 42 10.3 +3.0**
PLPT Palo Pinto 56.69 276 P **P 06 42 09.3 -0.8**
SPR3 Spring Creek 3 57.45 293 P **P 06 42 15.7 -0.1**
SPR3 IAmb IAmb 06 42 21.2
comp=Z,4.0nm,1.1s
BRDY Brady 58.31 276 P **P 06 42 21.2 -0.3**
BRDY IAmb IAmb 06 42 24.4
comp=Z,4.6nm,0.9s
SONM Songino Array 58.32 41 P **P 06 42 21.9 +0.4**
comp=Z,0.5nm,0.9s,baz=323,slow=3.7,SNR=3.5
comp=Z,0.5nm,0.9s
R11B Troy Canyon, C 58.49 294 P **P 06 42 23.5 +0.6**
R11B IAmb IAmb 06 42 26.8
comp=Z,6.3nm,1.2s
KVN Kaiserville 58.78 296 P **P 06 42 24.9 0.0**
KVN IAmb IAmb 06 42 29.4
comp=Z,6.4nm,1.2s
KVN Kaiserville 58.78 296 P **P 06 42 24.9 0.0**
KVN pmax pmax
comp=Z,6.0nm,1.2s
YERR Yerington 59.25 297 P **P 06 42 27.9 -0.3**
JCT Junction City 59.34 276 P **P 06 42 28.8 +0.1**
JCT Junction City 59.34 276 P **P 06 42 28.8 +0.1**
JCT pmax pmax
comp=Z,8.0nm,0.8s
NVAR Mina Array Bea 59.41 296 P **P 06 42 27.7 -1.5**
comp=Z,0.2nm,0.3s,baz=27,slow=6.1,SNR=2.3
comp=Z,0.2nm,0.3s
SAND Sanderson 60.73 278 P **P 06 42 39.1 +0.9**
SAND IAmb IAmb 06 42 42.7
comp=Z,2.5nm,0.8s
TXAR Lajitas Array 61.89 279 P **P 06 42 46.5 +0.3**
comp=Z,0.8nm,0.8s,baz=47,slow=4.7,SNR=7.9
comp=Z,0.8nm,0.8s
HHC Hu-ho-hao-te 66.17 40 *e*P **P 06 43 14.3 +0.1**
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,86nm,5.1s
NJ2 Nanjing 76.34 37 *e*P **P 06 44 14.6 -1.0**
NJ2 sP **sP 06 44 18.3 +1.3**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
PZH PanZhiHua 76.72 53 P **P 06 44 18.4 +0.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,110nm,5.5s
CMAR Chiang Mai Arr 83.27 59 P **P 06 44 53.6 +0.2**
comp=Z,1.4nm,0.3s,baz=322,slow=7.2,SNR=6.1
comp=Z,1.4nm,0.3s

REY ***19*** *06:40:14.7, 66.57N×17.74W, h11km*
IDC ***19*** *06:40:15.8±0.5, 66.49N×17.95W, h0km, mb4.0/23, mbtmp4.0/29, ML3.0/5, MS3.6/1, Error ellipse: s-maj=14.5km s-min=9.9km az=14.0*
MOS ***19*** *06:40:15.4±1.3, 66.47N×17.86W, h10km, mb4.5/43, Error ellipse: s-maj=12.2km s-min=7.3km az=104.0*
NEIC ***19*** *06:40:17.1±1.7, 66.41N±0.02×17.7W±0.2, h10km±1km, mb4.3/99, Error ellipse: s-maj=11.7km s-min=3.6km az=99.0*
ISC 19 06:40:16.5±0.7, 66.47N±0.03×17.78W±0.02, h5km±4km, n251, σ1$44/279, mb4.3/106, MS3.4/3, 7C-1D, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.12**	**310**	P	**Pg**		**06 40 17.5**	**-1.5**
IGRI	baz=256			S	**Sg**		**06 40 19.7**	**-0.9**
IBRE	**Brettingsstaoi**	**0.35**	**189**	P	**Pg**		**06 40 22.9**	**-0.3**
IBRE	baz=189			S	**Sg**		**06 40 29.6**	**+1.8**
IHED	**Heoinshofoi**	**0.43**	**154**	P	**Pg**		**06 40 23.9**	**-0.8**
IHED	baz=160			S	**Sg**		**06 40 31.0**	**+0.6**
ILEI	**Leirhofn**	**0.52**	**96**	P	**Pg**		**06 40 24.2**	**-2.3**
ILEI	baz=107			S	**Sg**		**06 40 31.6**	**-1.7**
IGRA	**Granastaoir**	**0.56**	**172**	P	**Pg**		**06 40 26.2**	**-1.0**
IGRA	baz=174			S	**Sg**		**06 40 35.0**	**+0.7**
ISIG	**Siglufjorour**	**0.57**	**234**	P	**Pg**		**06 40 25.9**	**-1.5**
ISIG	baz=228			S	**Sg**		**06 40 34.1**	**-0.7**
IHLA	**Hella**	**0.58**	**206**	P	**Pg**		**06 40 26.6**	**-1.0**
IHLA	baz=203			S	**Sg**		**06 40 35.7**	**+0.6**
IDIM	**Dimmadalss**	**0.61**	**145**	P	**Pg**		**06 40 26.8**	**-1.4**
IDIM	baz=151			S	**Sg**		**06 40 35.9**	**-0.2**
ISKI	**Skildingahlsh**	**0.67**	**153**	P	**Pg**		**06 40 27.8**	**-1.5**
ISKI	baz=157			S	**Sg**		**06 40 38.0**	**-0.1**
IGIL	**Gilhagi**	**0.70**	**123**	P	**Pg**		**06 40 27.4**	**-2.4**
IGIL	baz=131			S	**Sg**		**06 40 37.6**	**-1.3**
IGHA	**Grjothals**	**0.77**	**144**	P	**Pg**		**06 40 29.2**	**-2.1**
IGHA	baz=148			S	**Sg**		**06 40 40.6**	**-0.6**
IKVO	**Krokottuvotn**	**0.84**	**154**	P	**Pg**		**06 40 30.6**	**-2.0**
IREN	**Reynihlio**	**0.90**	**156**	P	**Pg**		**06 40 31.4**	**-2.2**
IREN	baz=159			S	**Sg**		**06 40 44.5**	**-0.7**
IMEL	**Melhnausar**	**1.01**	**152**	P	**Pg**		**06 40 33.3**	**-2.5**
IHRN	**Hraun**	**1.01**	**250**	P	**Pg**		**06 40 32.3**	**-3.6**
IHRN	baz=246			S	**Sg**		**06 40 45.3**	**-3.7**
IGRS	**Grimsstaoir**	**1.07**	**140**	P	**Pg**		**06 40 34.0**	**-2.9**
IGRS	baz=144			S	**Sg**		**06 40 49.3**	**-1.5**
ISVA	**Svartarkot**	**1.15**	**169**	P	**Pg**		**06 40 35.9**	**-2.7**
ISVA	baz=171			S	**Sg**		**06 40 52.4**	**-1.1**
IASK	**Askja**	**1.50**	**161**	P	**Pn**		**06 40 41.3**	**-2.7**
IASK	baz=163			S	**Sn**		**06 41 02.2**	**-1.7**
THOR	**Thorvaldshraun**	**1.60**	**163**	P	**Pn**		**06 40 43.1**	**-2.4**
THOR	baz=164			S	**Sn**		**06 41 05.7**	**-0.8**
IMKO	**Mokollar**	**1.61**	**158**	P	**Pn**		**06 40 43.2**	**-2.3**
IMKO	baz=159			S	**Sn**		**06 41 05.4**	**-1.2**
IURH	**Urdarhals**	**1.67**	**171**	P	**Pn**		**06 40 43.7**	**-2.7**
	baz=172							

IURH S Sn 06 41 07.1 -1.2
baz=172
IADA Aoalbol 1.71 147 P Pn 06 40 44.9 -2.0
baz=149
IKRE Kreppuhraun 1.79 160 P Pn 06 40 45.8 -2.1
baz=162
ISTE Stelbrattur 1.79 206 P Pn 06 40 46.2 -1.8
baz=205
ISTE S Sn 06 41 09.8 -1.2
baz=205
IKIS Kista 1.80 177 P Pn 06 40 46.2 -2.1
baz=178
IKIS S Sn 06 41 10.3 -1.2
baz=178
BORG Borgarnes 2.27 222 Pn 06 40 52.8 -1.7
BORG Sn Sn 06 41 22.2 -0.6
BORG Borgarnes 2.27 222 P Pn 06 40 52.8 -1.7
BORG 06 41 22.2
BORG Borgarnes 2.27 222 Pn Pn 06 40 52.7 -1.7
463nm,0.6s,baz=50,slow=8.4,SNR=31
BORG Sn Sn 06 41 22.6 -0.2
53nm,0.3s,baz=65,slow=9.4,SNR=29
SCO Scoresbysund 4.32 341 *i* P Pn 06 41 18.0 -4.6
SOEG Soedalen 5.54 295 *e*P Pn 06 41 44.2 +4.8
SUMG Summit 9.44 320 Pn Pn 06 42 31.7 -1.5
SUMG Summit 9.44 320 P Pn 06 42 31.7 -1.5
EKB Eskdalemuir 13.18 141 Pn Pn 06 43 21.8 -2.2
EKA Eskdalemuir Ar 13.19 141 Pn Pn 06 43 25.1 +1.0
baz=310,slow=4.3
0.4nm,0.5s
NC204 NORSAR Array S 13.52 99 Pn Pn 06 43 26.9 -1.7
NBO00 NORSAR Array S 13.67 100 Pn Pn 06 43 29.9 -0.7
NOA NORSAR Array B 13.84 99 Pn Pn 06 43 33.7 +0.7
baz=310,slow=12,SNR=3.4
0.9nm,0.8s
NB201 NORSAR Array S 13.86 99 Pn Pn 06 43 33.0 -0.3
SPITS Spitsbergen Ar 15.27 26 P Pn 06 43 51.8 -0.6
SPITS pmax pmax
comp=Z,38nm,1.4s
SPITS Spitsbergen Ar 15.27 26 Pn P 06 43 54.9 -2.5
baz=248,slow=15
SPB2 Spitsbergen Ar 15.28 26 Pn Pn 06 43 51.0 -1.4
SPA1 Spitsbergen Ar 15.28 26 Pn Pn 06 43 52.4 0.0
HFS Hagfors 15.36 99 Pn Pn 06 43 54.5 +0.9
comp=Z,0.1nm,0.3s,baz=304,slow=14,SNR=2.6
comp=Z,2.8nm,1.0s
ARCES ARCESS Array B 16.23 60 Pn Pn 06 44 04.6 -0.2
comp=Z,0.1nm,0.3s,baz=281,slow=11,SNR=4.0
comp=Z,4.5nm,0.8s
FINES FINESS Array B 19.56 84 P P 06 44 43.4 -1.2
FINES FINESS Array B 19.56 84 P Pn 06 44 45.4 -0.5
comp=Z,0.1nm,0.3s,baz=320,slow=11,SNR=7.0
comp=Z,1.9nm,0.6s
LVZ Lovozero 19.89 62 P P 06 44 46.9 -1.3
LVZ Lovozero 19.89 62 P P 06 44 46.9 -1.3
LVZ pmax pmax
comp=Z,60nm,1.5s
FRB Frobisher Bay 21.06 287 P P 06 44 59.3 -1.5
comp=Z,5.4nm,1.0s,baz=80,slow=7.6,SNR=5.8
comp=Z,5.4nm,1.0s
CLF Chambon-Foret 21.24 141 P P 06 45 01.3 -1.7
VALR Valaam 21.52 81 *i* P P 06 45 05.3 -0.5
VALR pmax pmax
comp=Z,22nm,1.2s
VSU Vasula 21.62 90 *ce*P P 06 45 06.9 -0.1
VSU pmax pmax
comp=Z,46nm,1.7s
CLL Collm 21.64 119 P P 06 45 06.6 -0.7
CLL IAmb IAmb 06 45 09.8
comp=Z,13nm,1.0s
CLL Collm 21.64 119 *e*P P 06 45 07.0 -0.3
CLL *i* 06 45 11.1
CLL pmax pmax
comp=Z,22nm,1.2s
CLL Collm 21.64 119 *e*P P 06 45 07.0 -0.3
comp=Z,22nm,1.2s
CLL *i* x x 06 45 11.1
CLL *e*PP **PnPn** 06 45 28.0 +0.4
CLL *e*(PPP) 06 45 40.0
CLL *ex* x 06 45 46.0
BRG Berggiesshubel 22.34 119 *e*P P 06 45 14.3 -0.5
BRG Amp 06 45 17.7
comp=Z,11nm,1.1s
BRG Amp 06 47 21.0
comp=Z,0.4nm,17.7s
BRG Amp 06 47 24.0
comp=E,0.3nm,19.6s
BRG Amp 06 47 29.0
comp=N,0.2nm,15.2s
BRG Berggiesshubel 22.34 119 *e*P P 06 45 14.2 -0.5
BRG pmax pmax
comp=Z,11nm,1.1s
GRA1 Grafenberg Arr 22.41 124 P P 06 45 14.2 -1.3
GRF Grafenberg Arr 22.41 124 P P 06 45 14.2 -1.3
GRF pmax pmax
comp=Z,26nm,1.3s
GRF Grafenberg Arr 22.41 124 *e*P P 06 45 15.9 +0.4
comp=Z,13nm,1.1s,baz=330,slow=9.2
PABE Paberze 22.54 99 P P 06 45 16.0 -0.8
BFO Black Forest 22.68 130 P P 06 45 16.3 -2.1
BFO IAmb IAmb 06 45 23.1
comp=Z,17nm,1.3s
BFO Black Forest 22.68 130 P P 06 45 16.3 -2.1
BFO pmax pmax
comp=Z,17nm,1.3s
SUW Suwalki 23.32 102 P P 06 45 23.8 -1.2
SUW Suwalki 23.32 102 P P 06 45 23.8 -1.2
SUW pmax pmax
comp=Z,54nm,1.2s
KHC Kasperske Hory 23.68 122 P P 06 45 28.4 -0.2
KHC IAmb IAmb 06 45 32.9
comp=Z,19nm,1.3s
KHC Kasperske Hory 23.68 122 P P 06 45 28.4 -0.2
KHC pmax pmax
comp=Z,19nm,1.3s
GEC2 GERESS Array S 23.97 122 P P 06 45 30.5 -1.0
GERES GERESS Array B 23.97 122 P P 06 45 30.4 -1.1
GERES GERESS Array B 23.97 122 P P 06 45 32.6 +1.1
comp=Z,2.3nm,0.8s,baz=340,slow=12,SNR=9.5
comp=Z,2.3nm,0.8s
DAVA Damuels 24.08 129 *i* pP pP 06 45 35.0 +0.8
comp=Z,12nm,1.5s
SSB Saint Sauveur 24.38 139 P P 06 45 32.6 -2.6
SSB IAmb IAmb 06 45 37.8
comp=Z,6.6nm,0.9s
SSB Saint Sauveur 24.38 139 P P 06 45 32.7 -2.6
SSB pmax pmax
comp=Z,7.0nm,0.9s
MOTA Moosalm 24.41 127 *ep*P pP 06 45 37.8 +0.6
comp=Z,2.8nm,1.1s
DAVOX Davos/Dischmat 24.53 130 P P 06 45 37.9 +1.1
comp=Z,2.4nm,0.9s,baz=327,slow=16,SNR=2.6
DAVOX LR LR 06 55 56.1
comp=Z,143nm,21.2s,baz=326,slow=38
comp=Z,2.4nm,0.9s
MORC Moravsky Berou 24.53 115 P P 06 45 38.0 +1.3
MORC IAmb IAmb 06 45 40.6
comp=Z,9.3nm,0.9s
MORC Moravsky Berou 24.53 115 *e*P P 06 45 34.7 -1.9
MORC Moravsky Berou 24.53 115 P P 06 45 38.0 +1.3
MORC pmax pmax
comp=Z,9.0nm,0.9s
FETA Feichten 24.58 128 *ep*P P 06 45 37.0 -0.2
comp=Z,5.5nm,1.0s
VRAC Vranov 24.58 117 *e*P P 06 45 38.0 +1.0
VRAC Vranov 24.58 117 P P 06 45 37.6 +0.5
comp=Z,2.1nm,0.5s,baz=342,slow=11,SNR=5.4
comp=Z,2.1nm,0.5s
TUE Stuetta 24.65 131 P P 06 45 37.1 -0.7
WTTA Wattenberg 24.66 127 *ep*P pP 06 45 40.4 +1.0
comp=Z,11nm,1.2s
KRUC Moravsky 24.72 118 *e*P P 06 45 39.4 +1.1
FUORN Ofenpass-Fuorn 24.80 129 P P 06 45 37.3 -1.9
FUORN IAmb IAmb 06 45 42.0
comp=Z,7.3nm,1.2s
MNK Minsk 24.82 96 *i* P P 06 45 37.7 -1.4
comp=E,5.0nm,0.8s
MNK *i* P P 06 45 37.7 -1.4
comp=N,16nm,0.8s
MNK *i* P P 06 45 37.7 -1.4
comp=Z,7.0nm,0.9s,baz=316
MNK *i* PP **PnPn** 06 46 10.2 -0.8
MNK *i* S S 06 50 01.8 -0.1
MNK *i* SS **SnSn** 06 50 50.5 +2.4
MNK *i* LQ LQ 06 53 25.1
MNK *i* LR LR 06 54 15.9
MNK *i* LRM MLR 06 55 03.8
comp=E,85nm,17.4s
MNK *i* LRM MLR 06 55 26.2
comp=Z,184nm,16.4s
MNK *i* LRM MLR 06 56 03.9
comp=N,142nm,19.4s
MNK Minsk 24.82 96 *i* P P 06 45 37.7 -1.4
MNK *i* 06 46 10.2
MNK *i* S S 06 50 01.7 -0.1
MNK *i* SS **SnSn** 06 50 50.5 +2.4
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=N,16nm,0.8s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=E,85nm,17.0s
MNK MLR MLR
comp=Z,184nm,16.0s
MNK MLR MLR
comp=N,142nm,19.0s
LESA Schwarzleotal 24.86 125 *ep*P pP 06 45 42.2 +1.2
comp=N,13nm,1.3s
RES Resolute Bay 24.95 322 P P 06 45 41.2 +1.1
RES Resolute Bay 24.95 322 P P 06 45 41.2 +1.1
RES pmax pmax
comp=Z,4.0nm,1.1s
OJC Ojcow 25.00 112 P P 06 45 41.4 +0.6
OJC IAmb IAmb 06 45 44.5
comp=Z,10nm,1.2s
OJC Ojcow 25.00 112 P P 06 45 41.4 +0.6
OJC pmax pmax
comp=Z,10.0nm,1.2s
PGAV Gavieira, Arco 25.11 163 *e*P P 06 45 44.0 +2.1
comp=Z,45nn,1.3s
BNI Bardonecchia 25.16 136 P P 06 45 44.1 +1.7
BNI IAmb IAmb 06 45 52.0
comp=Z,10.0nm,1.1s
BNI Bardonecchia 25.16 136 P P 06 45 44.1 +1.7
BNI pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 25.20 75 *e*P P 06 45 42.4 -0.1
KLMR pmax pmax
comp=Z,23nm,1.3s
JAVC Velka Javorina 25.35 117 *e*P P 06 45 47.3 +3.3
KBA Koelnbreinsper 25.38 124 *ep*P P 06 45 44.7 +0.3
comp=Z,6.1nm,1.0s
CONA Conrad Observa 25.50 120 *ep*P pP 06 45 45.9 -1.0
comp=Z,14nm,1.7s
CTI Castel Tesino 25.74 128 P P 06 45 46.0 -1.6
CTI IAmb IAmb 06 45 52.4
comp=Z,12nm,1.2s
CTI Castel Tesino 25.74 128 P P 06 45 46.0 -1.6
CTI pmax pmax
comp=Z,12nm,1.2s
LANS Liptovska Anna 25.76 114 *e*P P 06 45 50.4 +2.7
LANS pmax pmax
comp=Z,4.0nm,1.0s
LANS Liptovska Anna 25.76 114 *e*P P 06 45 50.4 +2.7
SALO Salr 25.77 130 P P 06 45 46.4 -1.4
RONA Rosalia, Austr 25.84 120 *e*P P 06 45 46.3 -2.2
comp=Z,8.1nm,1.5s
MYKA Terra Mystica 25.87 125 *ep*P pP 06 45 51.0 +0.7
comp=Z,36nm,2.2s
STAL STALIGIAL 25.89 126 P P 06 45 47.0 -2.0
SCHQ Schefferville 25.94 267 P P 06 45 49.4 +0.1
SCHQ IAmb IAmb 06 46 12.9
comp=Z,9.2nm,1.4s
SCHQ Schefferville 25.94 267 P P 06 45 48.6 -0.6
comp=Z,2.5nm,0.9s,baz=56,slow=6.5,SNR=5.9
comp=Z,2.5nm,0.9s
MVO Moncorvo 26.05 161 *e*P P 06 45 53.9 +3.4
comp=Z,23nm,1.4s
VYHS Vyhne 26.07 115 *e*P P 06 45 52.4 +1.9
VYHS pmax pmax
comp=Z,8.0nm,1.2s
VYHS Vyhne 26.07 115 *e*P P 06 45 52.4 +1.9
SOKA Soboth 26.29 123 *ep*P P 06 45 52.5 -0.1
comp=Z,8.5nm,1.4s
PVIS Viseu 26.39 163 *e*P P 06 45 56.3 +2.8
CRVS Cervenica-Dubn 26.70 112 *e*P P 06 46 00.9 +4.7
CRVS pmax pmax
comp=Z,17nm,1.4s
CRVS Cervenica-Dubn 26.70 112 *e*P P 06 46 00.9 +4.7
MTE Manteigas 26.74 162 *e*P P 06 45 59.8 +3.1
comp=Z,26nm,1.4s
PSZ Piszkesteto 26.94 115 P P 06 46 00.2 +1.8
PSZ Piszkesteto 26.94 115 P P 06 46 00.3 +1.8
PSZ pmax pmax
comp=Z,12nm,1.0s
OBN Obninsk 27.86 87‖ *e*P P 06 46 06.3 -0.2
OBN *SP **sP** 06 46 12.0 +3.4
OBN 06 46 55.0
OBN pmax pmax
comp=Z,15nm,0.6s
OBN MLR MLR
comp=Z,72nm,13.0s
ESDC Sonseca Array 27.95 157 P P 06 46 06.5 -1.1
ESDC Sonseca Array 27.95 157 P P 06 46 09.3 +1.8
comp=Z,1.0nm,0.9s,baz=349,slow=8.3,SNR=7.3
comp=Z,1.0nm,0.9s
KIEV Kiev 28.24 101 P P 06 46 10.5 +0.6
KIEV IAmb IAmb 06 46 11.4
comp=Z,5.4nm,0.8s
KIEV Kiev 28.24 101 P P 06 46 10.5 +0.6
KIEV pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 28.24 101 P P 06 46 09.6 -0.4
AKASG IAmb IAmb 06 46 15.2
comp=Z,5.6nm,1.2s
AKASG Malin Array Be 28.24 101 *c* *i*P P 06 46 10.6 +0.7
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 28.24 101 P P 06 46 09.8 -0.1
comp=Z,2.3nm,0.6s,baz=324,slow=9.5,SNR=6.8
comp=Z,2.3nm,0.6s
AKBB Malin Array Si 28.24 101 P P 06 46 10.4 +0.4
AKBB IAmb IAmb 06 46 11.4
comp=Z,5.9nm,0.8s
AKBB Malin Array Si 28.24 101 P P 06 46 10.4 +0.4
AKBB pmax pmax
comp=Z,6.0nm,0.9s
PESTR Estremoz 28.25 163 *e*P P 06 46 13.1 +3.0
comp=Z,21nm,2.0s
AK05 Malin Array Si 28.30 101 P P 06 46 08.7 -1.7
AK05 IAmb IAmb 06 46 12.0
comp=Z,7.9nm,0.9s
A36M Sachs Harbour 33.60 328 P P 06 46 58.4 +1.4
A36M IAmb IAmb 06 47 00.6
comp=Z,4.2nm,0.9s
BELG Belogornoye 34.30 81 *i* P P 06 47 03.0 -0.1
BELG pmax pmax
comp=Z,3.0nm,0.9s
KEST Kesra 34.59 139 P P 06 47 07.6 +1.6
comp=Z,6.4nm,0.9s,baz=347,slow=11,SNR=4.5
comp=Z,6.4nm,0.9s
C36M Paulatuk 35.28 324 P P 06 47 12.4 +0.9
C36M IAmb IAmb 06 47 16.1
comp=Z,9.2nm,1.4s
AGG Agios Georgios 35.56 120 P P 06 47 13.7 -0.5
AGG Agios Georgios 35.56 120 P P 06 47 13.7 -0.5
AGG pmax pmax
comp=Z,14nm,1.2s
YKA Yellowknife Ar 37.91 311 P P 06 47 35.0 +1.1
YKA Yellowknife Ar 37.91 311 *ce*P P 06 47 33.5 -0.5
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 37.91 311 P P 06 47 33.2 -0.7
comp=Z,1.3nm,0.8s,baz=42,slow=8.4,SNR=16
YKA PcP **PcP** 06 49 50.1 +0.4
comp=Z,0.4nm,0.8s,baz=37,slow=3.0,SNR=6.4
comp=Z,1.3nm,0.8s
YKAB2 New Yellowknif 37.96 311 P P 06 47 35.0 +0.6
F31M Tsiigehtchic 39.01 327 P P 06 47 44.4 +1.3
BR131 Keskin Array S 39.09 107 P P 06 47 44.1 -0.2
BR131 IAmb IAmb 06 47 47.8
comp=Z,7.6nm,1.0s
BR131 Keskin Array S 39.09 107 *i* P P 06 47 44.1 -0.2
BRTR Keskin Array B 39.09 107 P P 06 47 43.9 -0.5
BRTR Keskin Array B 39.09 107 *ce*P P 06 47 44.0 -0.4
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 39.09 107 P P 06 47 44.2 -0.2
comp=Z,4.1nm,0.8s,baz=322,slow=9.3,SNR=14
comp=Z,4.1nm,0.8s
E29M Blow River 39.10 329 P P 06 47 44.2 +0.3
KBZ Khabaz 39.34 94 *i* P P 06 47 47.8 +1.7
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 39.34 94 P P 06 47 47.6 +1.5
comp=Z,3.9nm,0.9s,baz=317,slow=8.2,SNR=7.7
comp=Z,3.9nm,0.9s
G31M Satah River 39.55 326 P P 06 47 47.8 +0.1
G31M IAmb IAmb 06 47 51.9
comp=Z,6.9nm,1.1s
FFC Flin Flon 39.69 295 P P 06 47 49.3 +0.3
FFC Flin Flon 39.69 295 P P 06 47 49.3 +0.3
FFC pmax pmax
comp=Z,6.0nm,1.1s
D25K Kavik River 39.90 334 P P 06 47 51.7 +1.0
D25K IAmb IAmb 06 47 55.0
comp=Z,17nm,1.5s
G30M tAoh Zraii Nji 39.93 327 P P 06 47 51.4 +0.5
G30M IAmb IAmb 06 47 57.0
comp=Z,9.9nm,1.5s
F28M Old Crow 40.16 330 P P 06 47 53.4 +0.7
TIXI Tiksi 40.32 16 *i* P P 06 47 57.1 +3.1
TIXI pmax pmax
comp=Z,3.0nm,1.5s
D24K Happy Valley 40.47 335 P P 06 47 55.8 +0.5
D24K IAmb IAmb 06 47 58.6
comp=Z,5.8nm,0.8s
E25K Arctic Village 40.81 333 P P 06 47 59.5 +1.3
ULM Lac du Bonnet 40.94 287 P P 06 47 59.2 -0.2
ULM Lac du Bonnet 40.94 287 P P 06 47 59.2 -0.2
ULM pmax pmax
comp=Z,5.0nm,1.1s
ULM Lac du Bonnet 40.94 287 P P 06 47 58.0 -1.4
comp=Z,3.0nm,0.8s,baz=48,slow=8.6,SNR=7.4
comp=Z,3.0nm,0.8s
H29M Whitestone 41.04 328 P P 06 47 59.2 -0.8
TOLK Toolik Lake Re 41.05 335 P P 06 48 01.5 +1.3
BMAR Burnt Mountain 41.24 332 P P 06 48 01.6 -0.1
I30M Mount Dempster 41.45 326 P P 06 48 03.7 +0.1
ABKAR Akbulak array 41.60 75 P P 06 48 05.6 +0.8
ABKAR Akbulak array 41.60 75 P P 06 48 03.7 -1.1
F24K Squaw Lake 41.76 334 P P 06 48 06.1 +0.1
E22K Anaktuvuk Pass 41.88 336 P P 06 48 07.1 +0.2
J30M Hart River 41.99 325 P P 06 48 07.8 -0.2
J30M IAmb IAmb 06 48 17.4
comp=Z,6.8nm,1.2s
I28M Miner Creek 42.03 328 P P 06 48 08.3 0.0
FYU Fort Yukon 42.12 332 P P 06 48 09.7 +0.9
BRVK Borovoye 42.41 63 *i* P P 06 48 13.4 +2.1
BRVK pmax pmax
comp=Z,4.0nm,1.3s
BVAR Borovoye Array 42.47 63 P P 06 48 11.4 -0.5
comp=Z,0.8nm,0.6s,baz=330,slow=8.6,SNR=4.8
comp=Z,0.8nm,0.6s
I26K Coal Creek Min 42.82 330 P P 06 48 16.0 +1.4
I26K IAmb IAmb 06 48 18.4
comp=Z,6.8nm,1.1s
G23K Bananza Creek 42.86 334 P P 06 48 14.2 -0.8
EGAK Eagle 42.88 328 P P 06 48 15.2 +0.2
EGAK IAmb IAmb 06 48 18.5
comp=Z,12nm,1.4s
F21K Alatna River 42.98 336 P P 06 48 15.6 -0.3
F21K IAmb IAmb 06 48 19.6
comp=Z,7.4nm,1.3s
PRP Porcupine Dome 43.11 331 P P 06 48 17.6 +0.5
PRP IAmb IAmb 06 48 21.2
comp=Z,6.2nm,1.1s
DAWY Dawson 43.12 327 P P 06 48 16.8 -0.2
H24K Noodor Dome 43.27 333 P P 06 48 19.7 +1.5
E19K Redstone River 43.33 339 P P 06 48 19.4 +0.7
J26L Joseph Creek 43.62 329 P P 06 48 22.5 +1.4
J26L IAmb IAmb 06 48 26.2
comp=Z,5.0nm,1.1s
K27K Chicken 43.73 328 P P 06 48 21.9 0.0
M30M Minto, Yukon 43.82 324 P P 06 48 23.0 +0.3
M30M IAmb IAmb 06 48 28.4
comp=Z,5.1nm,1.1s
J25K Salcha River, 43.88 330 P P 06 48 24.4 +1.1
J25K IAmb IAmb 06 48 27.1
comp=Z,4.6nm,0.9s
IL03 Eielson Array 44.03 331 P P 06 48 24.1 -0.3
IL31 44.04 331 P P 06 48 25.2 +0.9
IL31 IAmb IAmb 06 48 29.0
comp=Z,4.9nm,1.1s
ILAR Eielson Array 44.04 331 P P 06 48 24.4 0.0
ILAR Eielson Array 44.04 331 P P 06 48 24.7 +0.3
comp=Z,2.4nm,1.0s,baz=23,slow=6.5,SNR=13
ILAR PcP **PcP** 06 50 10.7 +1.1
comp=Z,0.2nm,0.8s,baz=14,slow=2.8,SNR=4.2
comp=Z,2.4nm,1.0s
MDM Murphy Dome 44.12 332 P P 06 48 25.9 +0.8
MDM IAmb IAmb 06 48 29.3
comp=Z,6.4nm,1.1s
IMAR Indian Mountai 44.16 336 P P 06 48 26.0 +0.7
H21K Melozitna Rive 44.30 335 P P 06 48 27.2 +0.7
H21K IAmb IAmb 06 48 30.9
comp=Z,5.1nm,0.8s
M29M Somme Creek 44.32 325 P P 06 48 28.0 +1.2
M29M IAmb IAmb 06 48 31.3
comp=Z,3.8nm,0.8s
CCB Clear Creek Bu 44.32 332 P P 06 48 28.2 +1.5
CCB IAmb IAmb 06 48 30.9
comp=Z,6.3nm,1.3s
HDA Harding Lake 44.37 331 P P 06 48 28.2 +1.1
HDA IAmb IAmb 06 48 30.6
comp=Z,4.0nm,1.0s
BCAR Beaver Creek A 44.51 327 P P 06 48 29.3 +1.0
MLY Manley 44.51 334 P P 06 48 29.3 +1.0
MLY IAmb IAmb 06 48 32.2
comp=Z,4.2nm,1.0s
L27K Beaver Creek, 44.53 327 P P 06 48 30.8 +2.4
WRH Wood River Hil 44.54 332 P P 06 48 29.1 +0.7
I21K Tanana 44.60 334 P P 06 48 30.4 +1.6
I21K IAmb IAmb 06 48 58.7
comp=Z,5.8nm,1.2s
MCK McKinley 45.37 332 P P 06 48 35.5 +0.5
MCK IAmb IAmb 06 48 39.3
comp=Z,8.0nm,1.4s
MCK McKinley 45.37 332 P P 06 48 35.5 +0.5
MCK pmax pmax
comp=Z,8.0nm,1.4s
BPAW Bear Paw Mtn. 45.41 333 P P 06 48 36.2 +0.9
BPAW IAmb IAmb 06 48 39.5
comp=Z,5.9nm,1.1s
P32M Atlin 45.64 320 P P 06 48 38.2 +0.9
P32M IAmb IAmb 06 48 39.8
comp=Z,4.4nm,1.1s
J20K Nowinta River 45.89 335 P P 06 48 41.0 +1.9
KTH Kantishna Hill 45.90 333 P P 06 48 39.0 -0.3
KTH IAmb IAmb 06 48 50.1
comp=Z,8.5nm,1.5s
CAST Castle Rocks 46.23 334 P P 06 48 42.4 +0.5
CAST IAmb IAmb 06 49 05.0
comp=Z,2.9nm,1.1s
ZALV Zalesovo Beam 46.61 53 *i* P P 06 48 45.5 +0.6
ZALV pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 46.61 53 P P 06 48 45.0 +0.1
comp=Z,1.0nm,0.8s,baz=336,slow=10,SNR=5.2
comp=Z,1.0nm,0.8s
K20K Telida 46.64 335 P P 06 48 46.0 +1.0
K20K IAmb IAmb 06 49 00.9
comp=Z,3.1nm,1.1s
ISLE Juniper Island 46.83 326 P P 06 48 48.1 +1.4
KURK Kurchatov 47.27 59 P P 06 48 51.2 +1.0
KURK Kurchatov 47.27 59 *ce*P P 06 48 51.5 +1.4
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra 47.32 59 P P 06 48 49.4 -1.1
comp=Z,2.2nm,0.8s,baz=328,slow=7.4,SNR=20
comp=Z,2.2nm,0.8s
TTA Tatalina 47.36 336 P P 06 48 51.3 +0.5
TTA IAmb IAmb 06 49 04.4
comp=Z,3.3nm,1.4s
TTA Tatalina 47.36 336 P P 06 48 51.3 +0.5
TTA pmax pmax
comp=Z,3.0nm,1.4s
SUA Susitna One 47.79 332 P P 06 48 54.8 +0.6
M20K Styx River 47.84 333 P P 06 48 54.0 -0.5
M20K IAmb IAmb 06 48 58.8
comp=Z,4.9nm,1.1s
EGMT Eagleton 47.97 295 P P 06 48 55.8 0.0
SVW2 Sparrevohn 49.01 334 P P 06 49 03.3 -0.1
M17K Holitna River 49.04 336 P P 06 49 04.0 +0.4
SEY Seymchan 50.70 6 *i* P P 06 49 17.8 +1.6

SEY					pmax	pmax			
	comp=Z,14nm,3.0s								
BOZ	**Bozeman (W)**	**50.71**	**295**		P	**P**	**06 49 16.7**	**-0.1**	
BOZ					lAmb	lAmb	06 49 20.0		
	comp=Z,5.3nm,1.2s								
BOZ	**Bozeman (W)**	**50.71**	**295**		P	**P**	**06 49 16.7**	**-0.1**	
BOZ					pmax	pmax			
	comp=Z,5.0nm,1.2s								
KK31	**Karatay Array**	**50.78**	**71**		P	**P**	**06 49 15.7**	**-1.4**	
KK31					lAmb	lAmb	06 49 37.4		
	comp=Z,4.3nm,1.2s								
KK31	**Karatay Array**	**50.78**	**71**		P	**P**	**06 49 15.7**	**-1.4**	
KK31					pmax	pmax			
	comp=Z,4.0nm,1.3s								
KKAR	**Karatay Array**	**50.78**	**71**		P	**P**	**06 49 15.6**	**-1.5**	
KKAR	**Karatay Array**	**50.78**	**71**		P	**P**	**06 49 15.6**	**-1.5**	
DGZ	**Jazzator, Alta**	**51.09**	**54**	*i*	P	**P**	**06 49 20.1**	**+0.5**	
DGZ					pmax	pmax			
	comp=Z,2.0nm,0.7s								
MK31	**Makanchi Array**	**51.89**	**59**		P	**P**	**06 49 24.7**	**-0.7**	
MK31					lAmb	lAmb	06 49 28.2		
	comp=Z,3.8nm,1.1s								
MK31	**Makanchi Array**	**51.89**	**59**		P	**P**	**06 49 24.7**	**-0.7**	
MK31					pmax	pmax			
	comp=Z,4.0nm,1.2s								
MKAR	**Makanchi Array**	**51.89**	**59**		P	**P**	**06 49 24.9**	**-0.6**	
MKAR	**Makanchi Array**	**51.89**	**59**	*ce*	P	**P**	**06 49 26.3**	**+0.9**	
MKAR					pmax	pmax			
	comp=Z,3.0nm,0.9s								
MKAR	**Makanchi Array**	**51.89**	**59**		P	**P**	**06 49 24.3**	**-1.1**	
	comp=Z,3.0nm,0.9s,baz=320,slow=5.4,SNR=22								
	comp=Z,3.0nm,0.9s								
PD31	**Pinedale Array**	**52.38**	**292**		P	**P**	**06 49 28.8**	**-0.6**	
PDAR	**Pinedale Array**	**52.38**	**292**		P	**P**	**06 49 28.8**	**-0.6**	
PDAR	**Pinedale Array**	**52.38**	**292**		P	**P**	**06 49 28.4**	**-1.0**	
	comp=Z,1.3nm,0.8s,baz=60,slow=8.8,SNR=11								
	comp=Z,1.3nm,0.8s								
AAK	**Ala-Archa**	**52.67**	**68**	*ce*	P	**P**	**06 49 33.5**	**+2.0**	
AAK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
PLID	**Pearl Lake**	**52.72**	**298**		P	**P**	**06 49 31.4**	**-0.4**	
MOY	**Mondy**	**53.41**	**43**	*eP*		**P**	**06 49 36.5**	**-0.2**	
TORD	**Torodi Ar. Bea**	**54.84**	**157**		P	**P**	**06 49 46.7**	**-0.7**	
	comp=Z,4.9nm,0.4s,baz=346,slow=8.8,SNR=15								
	comp=Z,4.9nm,0.4s								
SONM	**Songino Array**	**58.34**	**41**		P	**P**	**06 50 12.5**	**+0.3**	
	comp=Z,1.0nm,0.9s,baz=308,slow=7.3,SNR=6.3								
	comp=Z,1.0nm,0.9s								
R11B	**Troy Canyon, C**	**58.47**	**294**		P	**P**	**06 50 13.6**	**+0.4**	
R11B					lAmb	lAmb	06 50 18.3		
	comp=Z,4.3nm,1.2s								
KVN	**Kaiserville**	**58.76**	**296**		P	**P**	**06 50 15.2**	**0.0**	
KVN					lAmb	lAmb	06 50 33.9		
	comp=Z,4.0nm,1.3s								
KVN	**Kaiserville**	**58.76**	**296**		P	**P**	**06 50 15.2**	**0.0**	
KVN					pmax	pmax			
	comp=Z,4.0nm,1.3s								
TXAR	**Lajitas Array**	**61.87**	**279**		P	**P**	**06 50 36.2**	**-0.3**	
	comp=Z,0.5nm,0.8s,baz=29,slow=3.6,SNR=5.9								
TXAR					PcP	**PcP**	**06 51 18.3**	**+0.9**	
	comp=Z,0.5nm,0.8s,baz=33,slow=3.0,SNR=3.8								
	comp=Z,0.5nm,0.8s								
MJAR	**Matsushiro Arr**	**75.67**	**20**		P	**P**	**06 52 03.7**	**+1.5**	
	comp=Z,0.5nm,0.3s,baz=344,slow=6.7,SNR=2.1								
	comp=Z,0.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**83.29**	**59**		P	**P**	**06 52 45.4**	**+1.4**	
	comp=Z,1.1nm,0.3s,baz=321,slow=7.0,SNR=7.0								
	comp=Z,1.1nm,0.3s								
ASAR	**Alice Springs**	**133.60**	**37**		PKP	**PKPdf**	**06 59 33.7**	**+0.2**	
	comp=Z,0.4nm,0.8s,baz=326,slow=2.7,SNR=3.1								

IDC ***19*** *06:45:48.9±4.3, 35°.83N×140°.19E, h73km±41km, mb3.2/4, mbtmp3.6/4, Error ellipse: s-maj=39.0km s-min=26.7km az=105.0*

JMA ***19*** *06:45:48.8±0.1, 36°.0N±0°.3×140°.1E±0°.5, h59km±1km, MV3.4/39, SOUTHERN IBARAKI PREF*

JMA Felt I J1 at SOUTHERN IBARAKI PREF .

ISC 19 06:45:48.4±0.9, 35°.94N±0°.05×140°.15E±0°.05, h67km±7km, n22, σ0°.88/26, mb3.7/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.29**	**7**	⇓	*i*	P	**Pn**	**06 45 58.5**	**-0.6**
JYT				⇓		S	**Sn**	**06 46 05.8**	**-1.2**
JIHU	**Itakohorinouch**	**0.30**	**85**			P	**Pn**	**06 45 59.3**	**0.0**
JIHU					*eS*		**Sn**	**06 46 07.7**	**+0.5**
JSMT	**Sammumatsuo**	**0.38**	**141**			P	**Pn**	**06 46 00.5**	**+0.7**
JSMT					*eS*		**Sn**	**06 46 10.1**	**+1.9**
JAG	**Ashikaga**	**0.74**	**311**	⇓	*i*	P	**Pn**	**06 46 03.3**	**-0.3**
JAG				⇓		S	**Sn**	**06 46 14.0**	**-0.8**
JRY	**Ryogami san**	**1.02**	**275**	⇓	*i*	P	**Pn**	**06 46 07.2**	**+0.2**
JRY				⇓		S	**Sn**	**06 46 20.9**	**+0.1**
JOD2	**Odawara 2**	**1.10**	**232**	*i*		P	**Pn**	**06 46 08.1**	**+0.1**
JOD2						S	**Sn**	**06 46 21.9**	**-0.8**
JKT	**Katashina**	**1.10**	**319**	*i*		P	**Pn**	**06 46 08.0**	**-0.2**
JKT						S	**Sn**	**06 46 22.7**	**-0.2**
BSO3	**Boso 3**	**1.17**	**165**			P	**Pn**	**06 46 08.7**	**-0.1**
JIM2	**Oshima 3**	**1.35**	**206**			P	**Pn**	**06 46 10.4**	**-0.9**
JIM2						S	**Sn**	**06 46 27.3**	**-1.3**
JYN	**Shimob**	**1.38**	**252**			P	**Pn**	**06 46 12.3**	**+0.5**
JFNN	**Fujinakano**	**1.41**	**239**			P	**Pn**	**06 46 12.6**	**+0.5**
JFNN					*eS*		**Sn**	**06 46 30.3**	**+0.5**
MJAR	**Matsushiro Arr**	**1.68**	**292**			P	**Pn**	**06 46 16.1**	**+0.4**
	24nm,0.3s,baz=90,slow=9.1,SNR=67								
MJAR						S	**Sn**	**06 46 38.6**	**+2.2**
	14nm,0.3s,baz=275,slow=29,SNR=5.0								
H11N2	**WAKE ISLAND Hy**	**28.51**	**117**			T	T	07 21 50.3	
	baz=313								
H11N1	**WAKE ISLAND Hy**	**28.51**	**117**			T	T	07 21 43.4	
	baz=313								
H11N3	**WAKE ISLAND Hy**	**28.52**	**117**			T	T	07 21 49.5	
	baz=319								
H11S3	**WAKE ISLAND Hy**	**29.16**	**120**			T	T	07 22 40.0	
	baz=316								
H11S1	**WAKE ISLAND Hy**	**29.16**	**120**			T	T	07 22 39.8	
	baz=316								
H11S2	**WAKE ISLAND Hy**	**29.18**	**120**			T	T	07 22 42.6	
	baz=316								
KURBB	**Kurchatov Arra**	**45.88**	**309**			P	**P**	**06 54 04.1**	**+0.1**
	0.2nm,0.3s,baz=85,slow=7.8,SNR=1.8								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**50.96**	**32**			P	**P**	**06 54 43.1**	**+0.4**
	0.6nm,0.8s,baz=260,slow=6.1,SNR=7.3								
	0.6nm,0.8s								
INK	**Inuvik**	**55.82**	**27**			P	**P**	**06 55 18.7**	**+0.4**
	0.4nm,0.6s,baz=304,slow=4.9,SNR=3.9								
	0.4nm,0.6s								
WRA	**Warramunga Arr**	**55.85**	**187**			P	**P**	**06 55 18.2**	**-0.9**
	0.5nm,0.6s,baz=1.7,slow=7.5,SNR=5.4								
	0.5nm,0.6s								

IDC ***19*** *06:56:54.1±0.4, 16°.37N×97°.62W, h0km, mb5.3/39, mbtmp5.2/43, ML4.5/3, MS5.6/64, Error ellipse: s-maj=12.3km s-min=8.5km az=40.0*

MOS ***19*** *06:56:56.6±1.0, 16°.40N×97°.58W, h24km, mb5.9/74, MS5.7/54, Error ellipse: s-maj=6.4km s-min=3.9km az=91.2*

BGR ***19*** *06:56:57.0, 16°.32N×98°.30W, h33km, mb5.4, Ms5.8*

MEX ***19*** *06:56:58.2±1.2, 16°.25N×97°.78W, h10km±8km, MD6.0, Mw6.0*

NEIC ***19*** *06:56:58.2±2.9, 16°.29N±0°.04×97°.73W±0°.03, h22km±1km, mb5.8/924, Ms_20 5.7/516, Mwb5.8/100, Mww5.9/46, Md6.0/22(MEX), Error ellipse: s-maj=6.7km s-min=4.6km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.97; Mθθ-1.95; Mϕϕ-1.02; Mrθ4.56; Mθϕ 1.63; Mϕr-1.16; Fault plane solution: M₀5.63000×10¹⁷ NP1:φs108.32000°, δ74.13000°, λ78.95000°. NP2: φs323.85000°, δ19.25000°, λ123.98000°. Principal axes: T 5.6977, Pl59.0000°, Azm3.0000°; N -0.1454, Pl11.0000°, Azm111.0000°; P -5.5523, Pl28.0000°, Azm207.0000°;*

NEIC ***19*** *06:56:59.7, 16°.51N×97°.58W, h36km*

CATAC ***19*** *06:56:59.9±0.3, 16°.59N×97°.59W, h10km, MB6.0, mb5.7, ML6.3*

NEIC ***19*** *06:56:59.7, 16°.31N×97°.58W, h36km, Moment Tensor Solution. Duration: 4s6 Moment tensor: Scale 10¹⁷Nm; Mrr6.19; Mθθ-5.30; Mϕϕ-0.90; Mrθ5.30; Mθϕ 1.60; Mϕr-2.25; Fault plane solution: M₀8.32000×10¹⁷ NP1: φs111.38000°, δ66.93000°, λ92.46000°. NP2: φs285.12000°, δ23.20000°, λ84.24000°. Principal axes: T 8.5200, Pl68.0000°, Azm26.0000°; N -0.3954, Pl2.0000°, Azm290.0000°; P -8.1245, Pl22.0000°, Azm200.0000°;*

NEIC ***19*** *06:57:00.1, 16°.51N×97°.58W, h25km*

BJI ***19*** *06:57:00.0±0.0, 16°.50N×97°.50W, h40km, mB5.9/37, Ms6.1/57, Ms7 5.8/53*

IPGP ***19*** *06:57:01.0, 16°.50N×97°.58W, h29km, Mw5.9, Fault plane solution: NP1:φs110.00000°, δ67.00000°, λ93.00000°. NP2:φs281.00000°, δ23.00000°, λ82.00000°.*

GCMT ***19*** *06:57:02.2±0.1, 16°.59N±0°.01×97°.63W±0°.01, h24km, MW5.9/162, Moment Tensor Solution. s160,c337; s162,c475; Duration: 2s2 Moment tensor: Scale 10¹⁸ Nm; Mrr0.55±.01; Mθθ-0.44±.01; Mϕϕ-0.11±.01; Mrθ0.68±.01; Mθϕ0.17±.00; Mϕr-0.42±.01; Best double couple: M₀0.96200×10¹⁸ NP1:φs120.00000°, δ73.00000°, λ94.00000°. NP2:φs287.00000°, δ17.00000°, λ78.00000°. Principal axes: T 0.9840, Pl62.0000°, Azm35.0000°; N -0.0450, Pl3.0000°, Azm299.0000°; P -0.9390, Pl28.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 06:56:57.5±0.4, 16°.33N±0°.02×97°.72W±0°.02, h23km±2km, h23km:pP-P, n2292, σ1°.63/2072, mb5.7/574, MS5.7/366, 208C-37D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.40**	**279**				**Pb**	**06 57 04.7**	**-1.2**
PNIG							**Sb**	**06 57 10.3**	**-1.4**
PNIG	**Pinotepa**	**0.40**	**279**	⇑	*eP*		**Pb**	**06 57 04.7**	**-1.2**
PNIG					*i* S		**Sb**	**06 57 10.3**	**-1.4**
YOIG	**Yosondua**	**0.55**	**18**				**Pb**	**06 57 08.7**	**0.0**
YOIG							**Sn**	**06 57 18.1**	**-0.7**
YOIG	**Yosondua**	**0.55**	**18**	⇓	*eP*		**Pb**	**06 57 08.7**	**0.0**
YOIG				⇓	*i* S		**Sb**	**06 57 16.9**	**+0.7**
PEIG	**Puerto Escondi**	**0.64**	**121**				**Pb**	**06 57 09.2**	**-0.9**
PEIG							**Sb**	**06 57 18.1**	**-0.6**
PEIG	**Puerto Escondi**	**0.64**	**121**	⇑	*eP*		**Pb**	**06 57 09.2**	**-0.9**
PEIG					*eS*		**Sb**	**06 57 18.1**	**-0.6**
TXIG	**Tlaxiaco**	**0.92**	**357**				**Pb**	**06 57 14.5**	**-0.5**
TXIG	**Tlaxiaco**	**0.92**	**357**	⇓	*eP*		**Pb**	**06 57 14.4**	**-0.5**
VHO	**Vista Hermosa**	**1.20**	**52**	⇓	*eP*		**Pb**	**06 57 19.5**	**-0.2**
VHO					*eS*		**Sn**	**06 57 34.4**	**-0.3**
MGIG	**Malinaltepec**	**1.25**	**316**				**Pn**	**06 57 19.3**	**-0.5**
MGIG							**Sb**	**06 57 37.4**	**+1.1**
MGIG	**Malinaltepec**	**1.25**	**316**		*eP*		**Pn**	**06 57 19.3**	**-0.5**
MGIG					*i* S		**Sb**	**06 57 37.4**	**+1.1**
CRIG	**Cruz Grande**	**1.41**	**287**				**Pn**	**06 57 19.5**	**-2.3**
CRIG	**Cruz Grande**	**1.41**	**287**		*eP*		**Pn**	**06 57 19.5**	**-2.3**
TLIG	**Tlapa**	**1.47**	**327**	Pn			**Pn**	**06 57 22.9**	**+0.2**
TLIG	**Tlapa**	**1.47**	**327**	⇑	P		**Pn**	**06 57 22.6**	**0.0**
TLIG	**Tlapa**	**1.47**	**327**	⇑	*eP*		**Pn**	**06 57 22.7**	**0.0**
TLIG	**Tlapa**	**1.47**	**327**	*i*	P		**Pb**	**06 57 24.2**	**0.0**
TLIG					*i* S		**Sb**	**06 57 42.4**	**-0.1**
TLIG					lAML			06 57 51.5	
	comp=Z,300μm,1.0s								
HLIG	**Huajuapan de L**	**1.49**	**357**				**Pb**	**06 57 24.0**	**-0.7**
HLIG	**Huajuapan de L**	**1.49**	**357**	⇑	*eP*		**Pb**	**06 57 23.9**	**-0.7**
FTIG	**Fresnillo de T**	**1.61**	**346**				**Pn**	**06 57 25.4**	**+0.6**
FTIG	**Fresnillo de T**	**1.61**	**346**	⇑	*eP*		**Pn**	**06 57 25.4**	**+0.6**
FTIG					*eS*		**Sb**	**06 57 46.2**	**-0.5**
HUIG	**Huatulco**	**1.65**	**110**				**Pn**	**06 57 23.9**	**-1.1**
HUIG	**Huatulco**	**1.65**	**110**		*eP*		**Pn**	**06 57 24.0**	**-1.1**
HMTT	**Tlapaneco**	**1.66**	**331**		*eP*		**Pn**	**06 57 25.9**	**+0.5**
HMTT					*eS*		**Sb**	**06 57 47.6**	**-0.5**
TOIG	**Toxpalan**	**1.86**	**20**	⇑	*eP*		**Pn**	**06 57 28.9**	**+0.8**
DAIG	**Los Arroyos**	**1.97**	**291**				**Pn**	**06 57 28.1**	**-1.5**
DAIG	**Los Arroyos**	**1.97**	**291**	⇑	*eP*		**Pn**	**06 57 28.1**	**-1.5**
DAIG					*i* S		**Sn**	**06 57 51.4**	**-2.2**
VNTA	**La Mica**	**2.09**	**286**		*eP*		**Pn**	**06 57 31.7**	**+0.6**
VNTA					*i* S		**Sn**	**06 57 55.0**	**-1.5**
TPIG	**Tehuac#an**	**2.10**	**9**	⇑	*eP*		**Pn**	**06 57 32.6**	**+1.1**
TPIG					*eS*		**Sn**	**06 57 58.0**	**+1.0**
ACP2	**Acapulco**	**2.15**	**285**		*eP*		**Pn**	**06 57 31.9**	**0.0**
ACP2					*eS*		**Sn**	**06 57 56.3**	**-1.5**
NEUV	**Arroyo Zacate**	**2.29**	**53**	⇑	*iP*		**Pn**	**06 57 34.6**	**+0.7**
MEIG	**Mezcala**	**2.41**	**311**				**Pn**	**06 57 35.9**	**+0.3**
MEIG	**Mezcala**	**2.41**	**311**	⇑	*eP*		**Pn**	**06 57 35.9**	**+0.3**
MEIG					*eS*		**Sn**	**06 58 05.5**	**+1.0**
CAIG	**El Cayaco**	**2.54**	**287**				**Pn**	**06 57 35.9**	**-1.5**
CAIG	**El Cayaco**	**2.54**	**287**	⇑	*eP*		**Pn**	**06 57 35.9**	**-1.5**
CAIG					*eS*		**Sn**	**06 58 09.8**	**+2.2**
PLIG	**Platanillo**	**2.66**	**321**	⇑	*eP*		**Pn**	**06 57 40.1**	**+1.0**
PLIG					*eS*		**Sn**	**06 58 10.1**	**-0.7**
ATYC	**Atoyac**	**2.74**	**289**		*eP*		**Pn**	**06 57 41.0**	**+0.9**
ATYC					*eS*		**Sn**	**06 58 14.4**	**+1.9**
CMIG	**Matias Romero**	**2.82**	**74**	Pn			**Pn**	**06 57 40.5**	**-0.6**
	comp=Z,199nm,0.3s,baz=261,slow=11,SNR=1163								
CMIG						Sn	**Sn**	**06 58 13.8**	**-0.7**
	comp=Z,993nm,0.3s,baz=263,slow=11,SNR=7.5								
CMIG						LR	LR	06 58 15.2	
	comp=Z,32μm,19.1s,baz=256,slow=30								
CMIG						Lg	Lg	06 58 23.0	
	comp=Z,4μm,0.3s,baz=0.1,slow=18,SNR=22								
	comp=Z,978nm,0.5s								
CMIG	**Matias Romero**	**2.82**	**74**		*eP*		**Pn**	**06 57 40.6**	**-0.6**
CMIG					*eS*		**Sn**	**06 58 15.2**	**+0.7**
YAIG	**Yautepec**	**2.82**	**333**	⇑	*eP*		**Pn**	**06 57 42.6**	**+1.2**
YAIG					*eS*		**Sn**	**06 58 17.1**	**+2.3**
PPM	**Popocatepetl**	**2.85**	**342**	⇑	*eP*		**Pn**	**06 57 43.9**	**+1.8**
PPM					*eS*		**Sb**	**06 58 19.9**	**-2.8**
AMVM	**AMECAMECA**	**2.96**	**340**		*eP*		**Pn**	**06 57 44.5**	**+1.0**
AMVM					*eS*		**Sn**	**06 58 20.6**	**+2.2**
MPVM	**San Francisco**	**3.11**	**337**		*eP*		**Pn**	**06 57 47.5**	**+2.1**
MPVM					*eS*		**Sn**	**06 58 24.7**	**+2.8**
JAUV	**Jalcomulco**	**3.14**	**16**	*i*	P		**Pn**	**06 57 45.3**	**-0.4**
ARIG	**Puente Sto Nin**	**3.17**	**308**				**Pn**	**06 57 47.0**	**+1.0**
ARIG	**Puente Sto Nin**	**3.17**	**308**	⇑	*eP*		**Pn**	**06 57 46.8**	**+0.8**
ARIG					*eS*		**Sn**	**06 58 23.1**	**-0.1**
TLVM	**San Miguel Top**	**3.17**	**335**		*eP*		**Pn**	**06 57 48.3**	**+2.0**
TLVM					*eS*		**Sn**	**06 58 25.0**	**+1.3**
THVM	**De Xico**	**3.19**	**338**	⇑	*eP*		**Pn**	**06 57 48.6**	**+2.1**
THVM					*eS*		**Sn**	**06 58 23.4**	**-0.6**
XCVM	**Xochimilco**	**3.19**	**336**		*eP*		**Pn**	**06 57 48.6**	**+2.0**
XCVM					*eS*		**Sb**	**06 58 29.2**	**-3.1**
CNCY	**Coyoacan**	**3.27**	**335**		*eS*		**Sn**	**06 58 26.5**	**+0.4**
TXVM	**Universitario**	**3.29**	**340**		*eP*		**Pn**	**06 57 51.1**	**+3.3**
TXVM					*eS*		**Sn**	**06 58 29.0**	**+2.6**
UNM	**Universidad Na**	**3.29**	**335**				**Pn**	**06 57 50.2**	**+2.4**
UNM	**Universidad Na**	**3.29**	**335**	⇑	*eP*		**Pn**	**06 57 49.8**	**+1.9**
UNM	**Universidad Na**	**3.29**	**335**	⇑	*eP*		**Pn**	**06 57 49.8**	**+1.7**
UNM					*eS*		**Sn**	**06 58 30.4**	**+4.0**
AOVM	**Tlapan**	**3.29**	**333**	*i*	P		**Pn**	**06 57 49.3**	**+1.2**
COVM	**Coyoacan**	**3.30**	**336**		*eP*		**Pn**	**06 57 50.3**	**+2.2**
COVM					*eS*		**Sn**	**06 58 28.8**	**+2.1**
PMUV	**Sontecomapan**	**3.31**	**48**	⇑	*eP*		**Pn**	**06 57 47.0**	**-1.1**
BJVM	**Benito Juarez**	**3.33**	**336**		*eP*		**Pn**	**06 57 50.8**	**+2.4**
BJVM					*eS*		**Sn**	**06 58 30.5**	**+3.2**
INVM	**La Marquesa**	**3.34**	**332**	⇑	*eP*		**Pn**	**06 57 50.4**	**+1.7**
INVM					*eS*		**Sn**	**06 58 30.7**	**+2.8**
VRVM	**Mexico City**	**3.34**	**337**		*eP*		**Pn**	**06 57 50.3**	**+1.7**
VRVM					*eS*		**Sn**	**06 58 32.0**	**+4.2**
PBVM	**Pinon**	**3.35**	**337**		*eP*		**Pn**	**06 57 50.1**	**+1.6**
PBVM					*eS*		**Sb**	**06 58 32.9**	**-3.8**
CJVM	**Cuajimalpa**	**3.36**	**334**		*eP*		**Pn**	**06 57 51.2**	**+2.3**
CJVM					*eS*		**Sn**	**06 58 30.5**	**+2.3**
CTVM	**Cuauhtemoc**	**3.38**	**336**		*eP*		**Pn**	**06 57 53.3**	**-3.7**
CTVM					*eS*		**Sn**	**06 58 31.2**	**+2.4**
TEJU	**Tejupilco**	**3.46**	**318**		*eP*		**Pn**	**06 57 52.4**	**+2.3**
TEJU					*i* S		**Sn**	**06 58 32.8**	**+2.4**
TOVM	**TOLUCA**	**3.48**	**328**	⇑	*eP*		**Pn**	**06 57 51.7**	**+1.1**
TOVM					*eS*		**Sn**	**06 58 31.5**	**+0.4**
PTVM	**Pico Tres Padr**	**3.50**	**338**		*eP*		**Pn**	**06 57 52.6**	**+1.7**
PTVM					*eS*		**Sn**	**06 58 28.8**	**-3.0**
AZVM	**Cuida Lopez Ma**	**3.56**	**336**	⇑	*eP*		**Pn**	**06 57 52.9**	**+1.2**
AZVM					*eS*		**Sn**	**06 58 34.5**	**+1.3**
VTVM	**Tizayuca**	**3.56**	**344**		*eP*		**Pn**	**06 57 53.3**	**+1.6**
VTVM					*eS*		**Sn**	**06 58 31.0**	**-2.2**
TUIG	**Tuzandepetl**	**3.58**	**61**	⇑	*eP*		**Pn**	**06 57 51.3**	**-0.3**
TUIG					*eS*		**Sn**	**06 58 35.1**	**+1.9**
LVIG	**Laguna Verde**	**3.59**	**20**	⇑	*eP*		**Pn**	**06 57 50.2**	**-1.6**
PET2	**Petatlan**	**3.60**	**290**		*eP*		**Pn**	**06 57 54.2**	**+2.3**
PET2					*eS*		**Sn**	**06 58 29.2**	**-4.4**
ZUVM	**ZUMPANGO**	**3.71**	**340**		*eP*		**Pn**	**06 57 54.9**	**+1.2**
ZUVM					*eS*		**Sn**	**06 58 36.6**	**-0.1**
ATVM	**ATLACOMULCO**	**3.96**	**330**		*eP*		**Pb**	**06 58 02.2**	**-4.7**
ATVM					*eS*		**Sn**	**06 58 45.1**	**+2.0**
DEIG	**Demacu**	**4.14**	**343**	⇑	*eP*		**Pn**	**06 58 00.3**	**+0.8**
DEIG					*eS*		**Sn**	**06 58 49.8**	**+2.4**
ACIG	**Acambay**	**4.17**	**331**		*eP*		**Pn**	**06 58 01.6**	**+1.7**
ACIG					*eS*		**Sn**	**06 58 46.8**	**-1.3**
UON	**La Union**	**4.24**	**293**		*eP*		**Pn**	**06 57 59.2**	**-1.5**
UON					*eS*		**Sn**	**06 58 50.2**	**+0.7**
PCIG		**4.37**	**98**		*eP*		**Pn**	**06 58 02.0**	**-0.5**
PCIG					*eS*		**Sn**	**06 58 51.5**	**-1.3**
TGIG		**4.43**	**84**	⇑	*eP*		**Pn**	**06 58 02.8**	**-0.6**
TGIG					*eS*		**Sn**	**06 58 55.1**	**+0.7**
ACAM	**Acambaro**	**4.66**	**323**	*i*	P		**Pn**	**06 58 08.0**	**+1.2**
ACAM					*eS*		**Sb**	**06 59 08.0**	**-6.5**
MOIG	**Morelia**	**4.69**	**316**		Pn		**Pn**	**06 58 09.7**	**+2.6**
MOIG	**Morelia**	**4.69**	**316**	⇑	P		**Pn**	**06 58 09.4**	**+2.4**
MOIG	**Morelia**	**4.69**	**316**	⇑	*eP*		**Pn**	**06 58 09.2**	**+2.2**
MOIG					*eS*		**Sn**	**06 58 57.3**	**-3.5**
MOIG	**Morelia**	**4.69**	**316**	*i*	P		**Pn**	**06 58 10.4**	**+3.3**
MOIG					lAML			06 59 44.6	
	comp=Z,55μm,1.0s								
JRQG	**Juriquilla Cam**	**5.06**	**330**		Pn		**Pn**	**06 58 14.5**	**+2.3**
CTUV	**Llano Grande**	**5.15**	**353**		*eP*		**Pn**	**06 58 12.1**	**-1.1**
CCIG	**Comitan**	**5.36**	**90**				**Pn**	**06 58 17.3**	**+1.0**
CCIG	**Comitan**	**5.36**	**90**	⇑	P		**Pn**	**06 58 16.4**	**+0.1**
CCIG	**Comitan**	**5.36**	**90**	⇑	*eP*		**Pn**	**06 58 16.7**	**+0.4**
CCIG					*eS*		**Sn**	**06 59 18.6**	**+1.1**
CCIG	**Comitan**	**5.36**	**90**	*i*	P		**Pn**	**06 58 18.2**	**+1.9**
CCIG					lAmb	lAmb	06 58 45.6		
	comp=Z,960nm,1.0s								
CCIG					lVmB_BB			06 59 15.0	
	comp=Z,26μm,1.0s								
CCIG				*i*	S		**Sn**	**06 59 18.9**	**+1.4**
CCIG					lAML			07 00 11.6	
	comp=Z,30μm,1.0s								
PATR	**El Naranjo**	**5.42**	**102**	⇑	*eP*		**Pn**	**06 58 17.0**	**-0.1**
PATR					*i* S		**Sn**	**06 59 14.5**	**-4.5**
THIG		**5.44**	**104**		*eP*		**Pn**	**06 58 17.9**	**+0.7**
THIG					*eS*		**Sn**	**06 59 16.9**	**-2.3**
PAVE	**Pavencul**	**5.46**	**101**		*eP*		**Pn**	**06 58 18.3**	**+0.6**
PAVE					*i* S		**Sn**	**06 59 21.2**	**+1.3**
CHUJ	**Union Juarez**	**5.54**	**102**		*eP*		**Pn**	**06 58 19.0**	**+0.1**
CHUJ					*i* S		**Sn**	**06 59 19.1**	**-3.0**
IGIG	**Irapuato, Guan**	**5.57**	**323**		*eP*		Pn	06 58 26.5	+7.3
IGIG					*eS*		**Sn**	**06 59 25.8**	**+3.1**
SMCA	**Catarina**	**5.63**	**104**	*i*	P		**Pn**	**06 58 23.2**	**+3.3**
SMCA					lAmb	lAmb	06 58 41.9		
	comp=Z,1μm,0.9s								
SMCA					lVmB_BB			06 59 23.0	
	comp=Z,24μm,1.0s								
SMCA					lAML			07 00 25.3	
	comp=Z,14μm,1.0s								
MMIG	**Aquila**	**5.71**	**291**	⇑	*eP*		**Pn**	**

comp=Z,1µm,1.0s
JAYA Jayaque - finc 8.42 107 *i* P **Pn 06 59 01.2 +2.8**
JAYA IAmb IAmb 06 59 17.8
comp=Z,510nm,0.8s
JAYA IVmB_BB 06 59 19.1
comp=Z,8µm,1.0s
JAYA IAML 07 01 06.2
comp=Z,1µm,1.0s
PMON Piamonte 8.53 107 *i* P **Pn 06 59 04.2 +4.4**
PMON IVmB_BB 06 59 24.4
comp=Z,4µm,1.0s
PMON IAmb IAmb 06 59 24.5
comp=Z,280nm,0.6s
PMON IAML 07 01 33.9
comp=Z,470nm,1.0s
SNET Serv Nac Est T 8.61 107 Pn 06 59 02.9 +2.0
LNIG Linares 8.68 349 *eP* **Pn 06 59 01.7 0.0**
SJTE Alcalda de S 8.84 107 *i* P **Pn 06 59 07.6 +3.5**
SJTE IAmb IAmb 06 59 29.4
comp=Z,150nm,0.7s
SJTE IVmB_BB 06 59 48.1
comp=Z,2µm,1.0s
SJTE IAML 07 01 18.0
comp=Z,410nm,1.0s
MYIG Mrida 8.85 57 *eP* **Pn 06 59 00.5 -3.6**
MYIG *eS* **Sn 07 00 41.6 -1.6**
PAVA Las Pavas 8.88 106 *i* P **Pn 06 59 08.3 +3.7**
PAVA IAmb IAmb 06 59 22.4
comp=Z,440nm,0.9s
PAVA IVmB_BB 07 00 02.7
comp=Z,7µm,1.0s
PAVA IAML 07 01 34.1
comp=Z,1µm,1.0s
SCLA Alcaldia de Sa 9.07 106 *i* P **Pn 06 59 09.7 +2.5**
SCLA IAmb IAmb 06 59 35.2
comp=Z,150nm,1.0s
SCLA IVmB_BB 06 59 47.3
comp=Z,2µm,1.0s
TEIG Tepich 9.77 65 Pn **Pn 06 59 14.2 -2.5**
TEIG Tepich 9.77 65 ⇑P **Pn 06 59 13.2 -3.5**
TEIG Tepich 9.77 65 LR LR 07 03 50.4
comp=Z,493µm,18.9s,baz=26,slow=43
TEIG Tepich 9.77 65 *eP* **Pn 06 59 13.8 -2.9**
LCND La Caada 9.97 106 *i* P Pn 06 59 25.0 +5.6
LCND IAmb IAmb 06 59 53.2
comp=Z,100nm,1.2s
LCND IVmB_BB 07 00 09.6
comp=Z,1µm,1.0s
CNCH Conchagua 10.03 106 *i* P Pn 06 59 27.4 +7.0
CNCH IAmb IAmb 06 59 56.5
comp=Z,410nm,0.9s
CNCH IVmB_BB 07 00 26.7
comp=Z,17µm,1.0s
TGUH Tegucigalpa,Un 10.34 101 Pn **Pn 06 59 26.2 +1.7**
TGUH Tegucigalpa,Un 10.34 101 ⇑P **Pn 06 59 25.7 +1.1**
TGUH Tegucigalpa,Un 10.34 101 *eP* **Pn 06 59 25.5 +0.9**
TGUH Tegucigalpa,Un 10.34 101 *i* P **Pn 06 59 24.1 -0.5**
TGUH IVmB_BB 06 59 43.9
comp=Z,5µm,1.0s
TGUH IAmb IAmb 06 59 45.0
comp=Z,430nm,1.6s
CSGN Cosiguina Volc 10.38 107 *i* P **Pn 06 59 27.4 +2.2**
MAIG Mazatlaan 10.66 311 *eP* **Pn 06 59 32.4 +3.6**
HBVL Hebbronville 10.72 355 Pn **Pn 06 59 32.2 +2.6**
CRIN San Cristobal 10.94 108 Pn 06 59 35.1 +2.2
CRIN San Cristobal 10.94 108 *eP* Pn 06 59 26.1 -6.8
TEL3 Telica 3 11.18 108 *i* P Pn 06 59 43.0 +7.0
PACN Al O del Volca 11.25 108 *i* P **Pn 06 59 39.7 +2.7**
PDIG Papasquiaro 11.25 322 ⇑*eP* **Pn 06 59 40.9 +3.8**
CNGN Cerro Negro 11.34 108 Pn 06 59 41.0 +2.8
MACN El Madrono 11.37 108 *i* P **Pn 06 59 41.4 +2.7**
LIMN Finca el Limon 11.46 105 *i* P **Pn 06 59 44.4 +4.5**
COPN Copaltepe 11.55 110 *i* P **Pn 06 59 42.6 +1.5**
SAPS Ciudad Sandino 11.72 109 *i* P **Pn 06 59 47.1 +3.6**
SAPS IVmB_BB 06 59 54.8
comp=Z,5µm,1.0s
SAPS IAmb IAmb 07 00 03.7
comp=Z,340nm,0.7s
TISN Laguna Tiscapa 11.86 109 *i* P **Pn 06 59 48.5 +3.2**
UNAN Cigeo UNAN 11.87 109 *i* P **Pn 06 59 48.0 +2.6**
UNAN IAmb IAmb 06 59 59.2
comp=Z,2µm,1.2s
UNAN IVmB_BB 07 00 06.2
comp=Z,22µm,1.0s
MATN Matagalpa 11.90 105 Pn 06 59 48.0 +2.0
MCIG Muzquiz 12.00 344 ⇑*eP* **Pn 06 59 49.9 +2.6**
833A Chaparral WMA, 12.03 353 Pn **Pn 06 59 49.6 +1.9**
833A Chaparral WMA, 12.03 353 P **Pn 06 59 49.6 +1.9**
baz=172,SNR=74
SSIG Sanalona 12.21 315 *eP* **Pn 06 59 54.0 +3.9**
BOAB BOACO BROADBAN 12.30 107 Pn 06 59 54.4 +3.1
BOAB BOACO BROADBAN 12.30 107 ⇑P **Pn 06 59 52.2 +0.9**
BOAB BOACO BROADBAN 12.30 107 *i* P **Pn 06 59 54.7 +3.4**
BOAB IVmB_BB 07 00 16.2
comp=Z,2µm,1.0s
BOAB IAmb IAmb 07 00 16.7
comp=Z,140nm,1.2s
735A Kenedy 12.46 360 Pn 06 59 55.0 +1.5
EF01 Eagle Ford 01 12.75 357 Pn 06 59 58.4 +0.9
SIUN Universidad Ur 12.77 100 *i* P **Pn 07 00 01.6 +3.7**
HPIG 12.87 326 Pn **Pn 07 00 02.4 +3.0**
HPIG 12.87 326 ⇑P **Pn 07 00 02.3 +3.0**
HPIG 12.87 326 *eP* **Pn 07 00 02.1 +2.8**
ACON Acoyapa 12.92 108 Pn 07 00 00.4 +0.6
ACON Acoyapa 12.92 108 *eP* **Pn 07 00 00.7 +0.9**
HZTE Horizontes, Gu 13.04 114 *eP* **Pn 07 00 03.8 +2.2**
HZTE Horizontes, Gu 13.04 114 *i* P **Pn 07 00 05.6 +4.1**
HZTE IVmB_BB 07 00 15.0
comp=Z,28µm,1.0s
HZTE IAmb IAmb 07 00 17.0
comp=Z,1µm,1.2s
ALIBA Liberia Airpor 13.14 114 *eP* **Pn 07 00 07.2 +4.4**
DELF Filadelfia 13.20 115 *eP* **Pn 07 00 07.1 +3.4**
HNDO Hondo 13.21 354 Pn 07 00 04.4 +0.6
SACU Santa Cruz 13.26 116 *eP* **Pn 07 00 08.1 +3.6**
DRIO Del Rio 13.30 349 Pn **Pn 07 00 08.8 +0.9**
ORTG Ortega, Santa 13.32 115 Pn **Pn 07 00 08.5 +3.0**
ORTG Ortega, Santa 13.32 115 *eP* **Pn 07 00 08.4 +3.0**
ORTG Ortega, Santa 13.32 115 *i* P **Pn 07 00 09.5 +4.1**
ORTG IVmB_BB 07 00 19.9
comp=Z,10µm,1.0s
ORTG IAmb IAmb 07 00 26.8
comp=Z,460nm,1.0s
MLDN Muldoon 13.40 2 Pn 07 00 08.4 +2.1
COLC Colonia 13.41 113 *eP* **Pn 07 00 10.0 +3.4**
BAGA Bagaces 13.42 114 *eP* **Pn 07 00 10.6 +3.9**
PLVR Palo Verde 13.42 115 *eP* **Pn 07 00 09.7 +2.9**
DUNO Dulce Nombre, 13.43 116 *i* P **P 07 00 11.6 -4.4**
DUNO IAmb IAmb 07 00 31.0
comp=Z,160nm,1.2s
DUNO IVmB_BB 07 01 05.3
comp=Z,5µm,1.0s
VMAR Armenia, Volca 13.43 113 *eP* **Pn 07 00 07.5 +0.7**
VMAR Armenia, Volca 13.43 113 *i* P **Pn 07 00 10.6 +3.8**
VMAR IAmb IAmb 07 00 39.9
comp=Z,990nm,1.1s
VMAR IVmB_BB 07 00 54.2
comp=Z,10µm,1.0s
NICO Nicoya 13.44 116 *eP* **Pn 07 00 09.7 +2.8**
CMARA Lajas Hojancha 13.51 116 *eP* **Pn 07 00 10.3 +2.3**
CNAS Canas 13.61 114 *eP* **Pn 07 00 13.2 +3.9**
SLBS Sierra La Lagu 13.61 304 Pn 07 00 12.0 +2.7
SLBS Sierra La Lagu 13.61 304 ⇑P **Pn 07 00 12.1 +2.7**
VERA Finca Concepci 13.62 112 *eP* **Pn 07 00 11.6 +2.2**
ESPN Las Esperanzas 13.64 106 Pn 07 00 11.2 +1.5
HKT Hockley 13.66 7 Pn **Pn 07 00 09.2 -0.6**
HKT Hockley 13.66 7 ⇑P **Pn 07 00 08.1 -1.8**
HKT Hockley 13.66 7 P **Pn 07 00 09.2 -0.6**
NYURE Nandayure 13.67 116 *eP* **Pn 07 00 12.5 +2.3**
LCHIL Los Chiles 13.69 111 *eP* **Pn 07 00 11.6 +1.3**
JUNT Juntas 13.79 114 *eP* **Pn 07 00 15.1 +3.3**
JTS Las Juntas de 13.80 114 Pn **Pn 07 00 15.4 +3.6**
JTS Las Juntas de 13.80 114 ⇑P **Pn 07 00 14.0 +2.1**
JTS Las Juntas de 13.80 114 Pn **Pn 07 00 11.9 +0.1**
comp=Z,1.1nm,0.3s,baz=322,slow=7.8,SNR=6.4
JTS Sn **Sn 07 02 42.5 -2.0**
comp=Z,0.7nm,0.3s,baz=297,slow=16,SNR=0.7
comp=Z,20nm,0.8s
JTS Las Juntas de 13.80 114 *eP* **Pn 07 00 13.6 +1.8**
JTS Las Juntas de 13.80 114 *eP* **Pn 07 00 12.8 +1.0**
ARE1 Arenal 1 13.93 113 Pn 07 00 16.0 +2.4
ARE1 Arenal 1 13.93 113 *eP* **Pn 07 00 15.6 +2.0**
CEDE Laguna Cedeo 13.93 113 *eP* **Pn 07 00 15.1 +1.4**
VACR Volcan Arenal 13.96 113 *eP* **Pn 07 00 14.5 +0.4**

TUNA La Fortuna 13.99 113 *eP* **Pn 07 00 18.2 +3.7**
TSIG Topolobambo 14.02 313 *eP* **Pn 07 00 17.7 +2.9**
TX31 Lajitas Ar. Si 14.05 338 Pn **Pn 07 00 17.5 +2.2**
TXAR Lajitas Array 14.05 338 Pn **Pn 07 00 17.7 +2.4**
TXAR Lajitas Array 14.05 338 P **Pn 07 00 17.7 +2.4**
TXAR Lajitas Array 14.05 338 Pn **Pn 07 00 17.5 +2.2**
comp=Z,0.4nm,0.3s,baz=155,slow=9.7,SNR=90
TXAR Lg Lg 07 04 24.4
comp=Z,0.2nm,0.3s,baz=172,slow=20,SNR=4.5
TXAR LR LR 07 06 31.9
comp=Z,35µm,18.9s,baz=143,slow=41
comp=Z,30nm,0.8s
COVE Coope Vega, Sa 14.10 112 Pn **Pn 07 00 15.9 0.0**
LPIG La Paz 14.11 305 Pn **Pn 07 00 17.1 +1.1**
comp=Z,18nm,0.9s,baz=295,slow=5.2,SNR=6.7
LPIG LR LR 07 04 42.5
comp=Z,10µm,18.2s,baz=126,slow=33
LPIG La Paz 14.11 305 *eP* **Pn 07 00 18.4 +2.4**
SAND Sanderson 14.15 344 Pn **Pn 07 00 18.9 +2.2**
ARZA Esparza 14.18 115 *eP* **P 07 00 21.3 -3.1**
JCT Junction City 14.21 353 Pn **Pn 07 00 18.8 +1.4**
JCT Junction City 14.21 353 P **Pn 07 00 17.8 +0.3**
baz=171,SNR=66
JCT Junction City 14.21 353 ⇑P **Pn 07 00 17.6 +0.1**
JCT Junction City 14.21 353 P **Pn 07 00 18.8 +1.4**
CPMI Catarata Coope 14.30 113 *eP* **Pn 07 00 20.4 +1.4**
SRA1 San Ramn 14.30 114 *eP* **Pn 07 00 20.5 +1.6**
RAMO San Ramon 14.31 114 *eP* **P 07 00 23.4 -2.6**
ITAL Pital 14.33 112 *eP* **Pn 07 00 20.8 +1.7**
JACO JACO, Garabito 14.35 116 Pn **P 07 00 23.1 -3.1**
JACO JACO, Garabito 14.35 116 *eP* **Pn 07 00 20.7 +1.4**
JACO JACO, Garabito 14.35 116 *i* P **Pn 07 00 22.2 +2.9**
JACO IVmB_BB 07 00 33.4
comp=Z,5µm,1.0s
JACO IAmb IAmb 07 00 42.3
comp=Z,200nm,0.8s
435B Jarrell 14.38 0 Pn **Pn 07 00 19.3 -0.5**
435B Jarrell 14.38 0 P **Pn 07 00 18.8 -1.0**
baz=180
CSIG Choix 14.38 318 *eP* **Pn 07 00 21.8 +1.9**
TRB2 Turrubares 14.41 115 *eP* **Pn 07 00 22.2 +2.0**
SARCI Sarchi 14.42 114 *eP* **Pn 07 00 23.6 +3.1**
VPS6 Volcano Poas 14.47 113 *eP* **Pn 07 00 23.8 +2.4**
HNVL Huntsville, TX 14.50 8 Pn **Pn 07 00 22.1 +0.7**
SARA Sarapiqu 14.55 112 *eP* **Pn 07 00 23.7 +1.6**
BELE Belen 14.61 114 *eP* **P 07 00 26.7 -2.6**
SANTA Santa Ana 14.63 114 *eP* **Pn 07 00 26.1 +2.7**
HDC Heredia 14.66 114 Pn **Pn 07 00 26.7 +2.9**
HDC Heredia 14.66 114 ⇑P **Pn 07 00 25.8 +2.0**
HDC Heredia 14.66 114 *eP* **Pn 07 00 25.1 +1.3**
HDC3 Heredia 3 14.66 114 *eP* **Pn 07 00 24.9 +1.1**
DOMI Santo Domingo 14.69 114 *eP* **P 07 00 27.3 -2.9**
RIFO Rio Frio, Sara 14.69 112 *eP* **Pn 07 00 24.6 +0.6**
RIFO Rio Frio, Sara 14.69 112 *i* P **Pn 07 00 23.1 -1.0**
RIFO IVmB_BB 07 00 42.1
comp=Z,12µm,1.0s
RIFO IAmb IAmb 07 00 42.5
comp=Z,970nm,1.4s
ACOS Acosta 14.71 115 *eP* **Pn 07 00 26.1 +1.6**
LUJA Lujan 14.73 114 *eP* **P 07 00 28.7 -2.0**
LUPE Guadalupe 14.74 114 *eP* **Pn 07 00 27.7 +2.8**
SJS Escuela Geolog 14.74 114 *eP* **Pn 07 00 27.7 +2.8**
SJS3 Mercedes San J 14.75 114 *eP* **P 07 00 28.0 -2.8**
AMPA Desamparados 14.76 114 *eP* **P 07 00 27.9 -3.0**
CORON Coronado 14.77 114 *eP* **P 07 00 29.3 -1.8**
TRT1 Tortuguero 14.78 111 *eP* **Pn 07 00 25.6 +0.4**
CVIMO Finca Echandi 14.80 113 *eP* **Pn 07 00 27.6 +1.8**
TRIO Tres Rios 14.81 114 *eP* **Pn 07 00 28.0 +2.2**
OCM Ochomogo 14.85 114 *eP* **Pn 07 00 27.2 +0.8**
OZNA Ozona 14.85 349 Pn **Pn 07 00 27.3 +1.1**
LCR2 La Lucha 2 14.88 114 Pn **Pn 07 00 28.6 +1.8**
LCR2 La Lucha 2 14.88 114 *eP* **Pn 07 00 26.9 +0.2**
TAGO Cartago 14.89 114 *eP* **Pn 07 00 28.7 +1.8**
RAZU San Marcos de 14.90 115 *eP* **Pn 07 00 28.9 +1.9**
VICA Volcano Irazu 14.91 113 *eP* **Pn 07 00 28.7 +1.4**
HAYA Volcan Irazu 14.91 113 *i* P **P 07 00 31.8 -1.1**
HAYA IAmb IAmb 07 00 40.5
comp=Z,630nm,1.2s
HAYA IVmB_BB 07 00 42.9
comp=Z,7µm,1.0s
LLNJ Naranjito 14.92 116 *eP* **Pn 07 00 28.0 +0.9**
BRDY Brady 14.93 356 Pn **Pn 07 00 26.7 -0.5**
441A DeRidder 14.94 15 Pn 07 00 25.8 -1.4
REPA Paraso 14.96 114 *eP* **P 07 00 31.8 -1.3**
VTLA Turrialba Volc 14.96 113 *eP* **Pn 07 00 28.8 +0.8**
CVTR Volcan Turrial 14.97 113 *eP* **Pn 07 00 28.9 +0.8**
PCAYA Pacayas 14.97 114 *eP* **Pn 07 00 30.4 +2.4**
VTR0 Volcan Turrial 14.97 113 *eP* **Pn 07 00 28.6 +0.4**
CVTV Tajo 14.98 113 *eP* **Pn 07 00 28.7 +0.4**
RIMA Rio Macho 14.99 114 Pn 07 00 30.0 +1.8
RIMA Rio Macho 14.99 114 *eP* **Pn 07 00 29.2 +0.9**
ALPN Alpine 14.99 340 Pn **Pn 07 00 30.3 +2.1**
VTCV VTCV, Calle Va 15.01 113 *eP* **Pn 07 00 29.2 +0.6**
TURIB Turrialba 15.08 113 *eP* **Pn 07 00 31.5 +2.1**
RVSTA Santa Teresita 15.09 113 *eP* **Pn 07 00 31.6 +2.1**
CDM Cerro de Muert 15.17 115 *eP* **Pn 07 00 33.0 +2.1**
SOR Soroa 15.28 63 Pn 07 00 33.0 +1.2
SOR Soroa 15.28 63 P **Pn 07 00 33.0 +1.2**
SOR pmax pmax
comp=Z,61nm,0.9s
ZELE Perez Zeledon 15.31 115 *eP* **P 07 00 34.9 -2.1**
PEZE Perez Zeledon, 15.33 115 Pn 07 00 33.8 +1.1
PEZE Perez Zeledon, 15.33 115 *eP* **Pn 07 00 34.6 +1.9**
WHTX Lake Whitney, 15.59 1 Pn 07 00 35.5 -0.4
WHTX IAmb IAmb 07 00 42.7
comp=Z,882nm,0.9s
WHTX Lake Whitney, 15.59 1 P **Pn 07 00 35.5 -0.4**
baz=180,SNR=61
NATX Nacogdoches 15.61 10 Pn **Pn 07 00 37.0 +0.9**
NATX Nacogdoches 15.61 10 P **Pn 07 00 34.2 -1.9**
baz=190,SNR=19
NATX Nacogdoches 15.61 10 ⇑P **Pn 07 00 32.9 -3.2**
MNHN Monahans 15.63 344 Pn 07 00 37.9 +1.4
237A Washetta, Mont 15.70 6 Pn 07 00 38.3 +1.1
237A IAmb IAmb 07 00 43.3
comp=Z,575nm,1.1s
BURE Buenos Aires 15.72 115 *eP* **P 07 00 40.9 -0.7**
DRK0 Durika 15.76 115 P **P 07 00 40.7 -1.4**
DRK0 Durika 15.76 115 *eP* **P 07 00 40.6 -1.4**
SGCY Sterling City 15.82 349 Pn **Pn 07 00 39.1 +0.2**
VHRN Van Horn 15.85 337 Pn **Pn 07 00 40.9 +1.6**
FW13 Cleburne 15.95 1 Pn 07 00 39.9 -0.6
FW13 IAmb IAmb 07 00 46.0
comp=Z,442nm,0.9s
PECS Pecos 15.98 341 Pn 07 00 42.6 +1.6
PECS IAmb IAmb 07 00 48.9
comp=Z,891nm,0.8s
FW14 Alvarado 16.00 2 Pn 07 00 41.0 -0.2
FW16 Waxahatchie 16.09 3 IAmb IAmb 07 00 47.9
comp=Z,449nm,0.9s
PIRO Carate, Puerto 16.10 118 *eP* **P 07 00 46.4 +0.7**
FW07 Weatherford 16.30 360 IAmb IAmb 07 00 49.6
comp=Z,732nm,1.1s
ABTX Abilene, Hawle 16.31 354 IAmb IAmb 07 00 51.4
comp=Z,1µm,1.0s
ABTX Abilene, Hawle 16.31 354 P **Pn 07 00 45.2 0.0**
baz=173,SNR=264
ODSA Odessa 16.32 345 Pn **Pn 07 00 45.6 +0.3**
TREL Terrell 16.39 5 Pn 07 00 46.7 +0.5
PLPT Palo Pinto 16.42 358 Pn **Pn 07 00 46.0 -0.4**
PLPT IAmb IAmb 07 00 51.8
comp=Z,1µm,1.0s
BRU2 Volcan 16.46 115 *eP* **Pn 07 00 47.5 +0.1**
FW06 Azle 16.57 0 Pn **Pn 07 00 47.8 -0.6**
FW06 IAmb IAmb 07 00 52.5
comp=Z,539nm,1.0s
SN05 Snyder 5 16.72 351 Pn **Pn 07 00 50.5 +0.1**
CAMR Camarioca 16.78 64 Pn 07 00 51.6 +0.5
CAMR IAmb IAmb 07 00 55.3
comp=Z,128nm,0.8s
MNTX Cornudas Mount 16.81 337 P **P 07 00 52.6 -0.9**
baz=153,SNR=204
MNTX Cornudas Mount 16.81 337 ⇑P **Pn 07 00 52.4 +0.9**
CGIG 16.83 328 *eP* **P 07 00 54.0 +0.1**
Z35A Perchaven, San 16.93 1 Pn 07 00 51.9 -1.0
Z35A IAmb IAmb 07 00 56.8
comp=Z,465nm,0.9s
SN07 Snyder 07 16.93 351 Pn **Pn 07 00 52.5 -0.5**
SN07 IAmb IAmb 07 01 02.2
comp=Z,965nm,2.0s
POST Post 17.01 349 Pn 07 00 53.8 -0.2
Z38A Mt. Pleasant 17.03 8 IAmb IAmb 07 01 05.2
comp=Z,964nm,1.1s

VBMS Vicksburg 17.11 21 IAmb IAmb 07 01 05.2
comp=Z,1µm,0.9s
VBMS Vicksburg 17.11 21 P **Pn 07 00 52.9 -2.4**
baz=204,SNR=48
VBMS Vicksburg 17.11 21 ⇑P **Pn 07 00 52.8 -2.5**
143A Socs Landing, 17.27 18 Pn 07 00 55.5 -1.7
143A IAmb IAmb 07 01 06.8
comp=Z,909nm,0.9s
EPT El Paso 17.32 334 P 07 00 59.1 -0.2
SRIG Santa Rosalia 17.34 312 Pn 07 00 57.1 -1.0
SRIG Santa Rosalia 17.34 312 *eP* **P 07 00 59.3 -0.1**
WTFS Witchita Falls 17.37 358 Pn 07 00 58.0 -0.5
Z41A Richland Creek 17.43 14 Pn 07 00 58.6 -0.6
Z41A IAmb IAmb 07 01 08.5
comp=Z,1µm,1.5s
HSIG 17.54 318 P 07 01 03.5 +1.9
HSIG 17.54 318 ⇑P **P 07 01 03.2 +1.6**
HSIG 17.54 318 *eP* **P 07 01 03.0 +1.4**
LOOK Love County 17.59 1 Pn 07 01 00.9 -0.3
BRAL Brewton 17.69 31 P **Pn 07 00 60.0 -2.4**
baz=216
WLAR White Oak Lake 17.77 13 Pn **Pn 07 01 01.8 -1.6**
451A Vernon 17.94 35 Pn 07 01 03.9 -1.6
MSTX Muleshoe 18.14 346 P **Pn 07 01 08.0 -0.1**
baz=164,SNR=162
GMAL Guarumal, Vera 18.22 116 *eP* **P 07 01 11.0 +1.8**
GMAL Guarumal, Vera 18.22 116 *eP* **P 07 01 09.7 +0.4**
X37A Clayton 18.30 6 P **P 07 01 09.4 -0.5**
X37A IAmb IAmb 07 01 20.6
comp=Z,431nm,1.0s
319A Douglas 18.31 327 Pn 07 01 12.4 +2.2
CCAR Cane Creek 18.31 16 IAmb IAmb 07 01 20.6
comp=Z,539nm,0.9s
I20EC Galapagos 18.32 156 I I 08 50 10.0
baz=336,slow=319,SNR=0.3
WMOK Wichita Mounta 18.35 357 P 07 01 09.7 -0.8
WMOK Wichita Mounta 18.35 357 P **P 07 01 09.6 -0.9**
baz=176,SNR=244
WMOK Wichita Mounta 18.35 357 ⇑P **P 07 01 09.6 -0.9**
WMOK Wichita Mounta 18.35 357 P **P 07 01 09.7 -0.9**
WMOK pmax pmax
comp=Z,248nm,1.1s
553A Crawfordville 18.39 39 P **P 07 01 10.8 -0.2**
PAYG Puerto Ayora 18.42 156 P **Pn 07 01 14.0 +2.5**
PAYG Puerto Ayora 18.42 156 ⇑P **Pn 07 01 14.1 +2.5**
MIAR Mount Ida 18.51 11 P **P 07 01 10.9 -1.4**
MIAR IAmb IAmb 07 01 22.7
comp=Z,602nm,1.0s
MIAR Mount Ida 18.51 11 P **P 07 01 11.0 -1.3**
baz=192,SNR=133
MIAR Mount Ida 18.51 11 ⇑P **P 07 01 10.5 -1.8**
MIAR Mount Ida 18.51 11 P **P 07 01 10.9 -1.3**
MIAR pmax pmax
comp=Z,602nm,1.0s
121A Cookes Peak, D 18.53 332 P **Pn 07 01 15.2 +2.3**
baz=148,SNR=48
X40A Basin Creek Fa 18.60 13 P **P 07 01 10.8 -2.5**
X40A IAmb IAmb 07 01 24.4
comp=Z,826nm,1.6s
PNME Penonome 18.68 113 *eP* **Pn 07 01 16.4 +1.7**
250A Grady 18.73 32 P **P 07 01 14.4 -0.2**
CACAO El Cacao, Vera 18.75 116 ⇑*eP* **Pn 07 01 17.6 +2.1**
W35A Tecumseh 18.76 2 P **P 07 01 14.7 -0.3**
W35A IAmb IAmb 07 01 24.8
comp=Z,736nm,1.1s
AMTX Amarillo 18.81 350 P **Pn 07 01 16.0 -0.2**
AMTX IAmb IAmb 07 01 19.8
comp=Z,554nm,1.0s
AMTX Amarillo 18.81 350 P **Pn 07 01 16.1 -0.1**
baz=168
AMTX Amarillo 18.81 350 ⇑P **P 07 01 15.8 +0.2**
SMWD Samnorwood 18.83 354 P **Pn 07 01 16.2 -0.2**
SMWD IAmb IAmb 07 01 18.1
comp=Z,508nm,1.0s
BCIP Isla Barro Col 18.83 110 P **P 07 01 15.7 -0.2**
BCIP Isla Barro Col 18.83 110 P **P 07 01 15.7 -0.2**
BCIP pmax pmax
comp=Z,360nm,1.7s
FNO Franklin 18.85 1 P 07 01 15.7 -0.2
FNO IAmb IAmb 07 01 25.0
comp=Z,521nm,0.9s
Z47A Carrollton 18.92 26 IAmb IAmb 07 01 29.0
comp=Z,690nm,1.4s
UALR University of 18.99 14 P **P 07 01 16.5 -1.0**
UALR IAmb IAmb 07 01 27.1
comp=Z,535nm,1.1s
OKCSW OKLAHOMA CITY 19.00 1 P 07 01 17.6 0.0
352A Blakely 19.05 35 P **P 07 01 17.8 -0.4**
352A IAmb IAmb 07 01 29.6
comp=Z,484nm,1.3s
656A Willston 19.05 44 P 07 01 18.4 +0.1
DWPF Disney Wildern 19.07 49 P **P 07 01 18.0 -0.4**
DWPF Disney Wildern 19.07 49 P **P 07 01 16.2 -2.2**
baz=236
DWPF Disney Wildern 19.07 49 ⇑P **P 07 01 15.5 -2.9**
BAHB Baha de los 19.24 313 *eP* **P 07 01 20.7 +0.4**
LRAL Lakeview Retre 19.25 28 P 07 01 20.3 -0.1
LRAL Lakeview Retre 19.25 28 P **P 07 01 19.9 -0.5**
baz=213,SNR=29
060A Indiantown 19.30 54 IAmb IAmb 07 01 22.4
comp=Z,333nm,0.8s
OK029 Liberty Lake 19.39 1 P 07 01 21.7 -0.1
WHAR Wooly Hollow 19.49 13 IAmb IAmb 07 01 36.2
comp=Z,355nm,1.1s
Y22D IRIS PASSCAL I 19.51 337 IAmb IAmb 07 01 33.7
comp=Z,685nm,1.1s
Y22D IRIS PASSCAL I 19.51 337 P **Pn 07 01 25.4 +0.7**
baz=152,SNR=32
Y22F Passcal Instru 19.51 337 P **Pn 07 01 25.7 +1.0**
baz=152,SNR=28
TUL3 Leonard 19.57 5 P **P 07 01 23.2 -0.6**
baz=185,SNR=124
OXF Oxford 19.58 21 P **P 07 01 23.1 -0.8**
OXF IAmb IAmb 07 01 33.5
comp=Z,637nm,1.0s
OXF Oxford 19.58 21 P **P 07 01 23.1 -0.8**
baz=204,SNR=59
OXF Oxford 19.58 21 ⇑P **P 07 01 22.4 -1.5**
OXF Oxford 19.58 21 P **P 07 01 23.1 -0.8**
OXF pmax pmax
comp=Z,637nm,1.0s
OK052 Battle Ridge R 19.60 2 IAmb IAmb 07 01 37.8
comp=Z,467nm,1.1s
OK033 Mehan 19.64 2 P 07 01 24.2 -0.5
OK033 IAmb IAmb 07 01 31.5
comp=Z,435nm,0.8s
ELIS Ellis County 19.71 356 IAmb IAmb 07 01 40.2
comp=Z,374nm,1.0s
QUOK Quay 19.78 2 P 07 01 25.4 -0.8
QUOK IAmb IAmb 07 01 39.9
comp=Z,428nm,1.0s
TIGA Tifton 19.79 38 IAmb IAmb 07 01 38.0
comp=Z,409nm,0.8s
TIGA Tifton 19.79 38 P **P 07 01 24.9 -1.4**
baz=224,SNR=13
TUC Tucson 19.84 326 P **Pn 07 01 29.5 +0.9**
TUC IAmb IAmb 07 01 39.4
comp=Z,472nm,1.5s
TUC Tucson 19.84 326 P **Pn 07 01 29.5 +0.9**
baz=140
TUC Tucson 19.84 326 ⇑P **Pn 07 01 29.4 +0.9**
TUC Tucson 19.84 326 P **Pn 07 01 29.5 +0.9**
TUC pmax pmax
comp=Z,472nm,1.5s
RLO Rose Lookout 19.90 6 IAmb IAmb 07 01 41.2
comp=Z,389nm,1.2s
U32A Winter Ranch, 20.00 357 IAmb IAmb 07 01 35.6
comp=Z,376nm,0.9s
OK048 Pawnee Station 20.01 2 IAMs_20 IAMs_20 07 10 07.7
comp=Z,26µm,18.0s
OK038 West end E0370 20.09 358 IAmb IAmb 07 01 45.6
comp=Z,342nm,0.8s
CROK Carrier 20.09 359 P 07 01 29.1 -0.5
CROK IAmb IAmb 07 01 42.8
comp=Z,799nm,1.1s
FCAR Ozark Folk Cen 20.11 13 P **P 07 01 29.3 -0.4**
FCAR IAmb IAmb 07 01 37.8
comp=Z,378nm,1.2s
ANMO Albuquerque 20.12 339 P Pn 07 01 32.1 +0.1
ANMO IAmb IAmb 07 01 44.9
comp=Z,664nm,1.4s
ANMO Albuquerque 20.12 339 IAMs_20 IAMs_20 07 09 47.3
comp=Z,49µm,22.0s
ANMO Albuquerque 20.12 339 P Pn 07 01 31.9 0.0
baz=154

ANMO Albuquerque 20.12 339 ⇑P Pn 07 01 31.9 -0.1
ANMO Albuquerque 20.12 339 P Pn 07 01 32.1 +0.1
ANMO pmax pmax
comp=Z,664nm,1.5s
ANMO MLR MLR
comp=Z,49µm,22.0s
ANMO Albuquerque 20.12 339 P Pn 07 01 31.4 -0.6
comp=Z,190nm,1.2s,baz=239,slow=11,SNR=177
ANMO Lg Lg 07 07 45.8
comp=Z,0.1nm,0.3s,baz=131,slow=13,SNR=3.5
ANMO LR LR 07 10 10.7
comp=Z,36µm,19.1s,baz=248,slow=40
comp=Z,190nm,1.2s
HHAR Hobbs 20.15 9 P **P 07 01 29.4 -0.8**
HHAR IAmb IAmb 07 01 45.0
comp=Z,289nm,1.0s
HBAR Harrisburg 20.16 17 P **P 07 01 30.2 0.0**
Y49A Blount Mountai 20.20 28 P **P 07 01 30.3 -0.4**
Y49A IAmb IAmb 07 01 43.0
comp=Z,419nm,1.1s
U38A Gravette 20.24 8 P **P 07 01 31.0 -0.2**
U38A IAmb IAmb 07 01 42.3
comp=Z,602nm,1.4s
456A Hilliard 20.27 42 P **P 07 01 30.4 -1.1**
456A IAmb IAmb 07 01 38.2
comp=Z,236nm,0.8s
OK035 E0210 Rd and N 20.31 358 IAmb IAmb 07 01 38.5
comp=Z,500nm,0.9s
BLOK Blackwell 20.35 1 IAmb IAmb 07 01 44.9
comp=Z,889nm,1.4s
OK032 Salt Plains WL 20.39 359 **P 07 01 33.2 +0.4**
X48A Hartselle 20.43 26 P **P 07 01 32.5 -0.7**
X48A IAmb IAmb 07 01 45.1
comp=Z,262nm,0.8s
PLAL Pickwick Lake 20.48 23 P **P 07 01 33.3 -0.5**
PLAL IAmb IAmb 07 01 48.8
comp=Z,431nm,1.0s
LCAR Lake Charles 20.51 15 P **P 07 01 33.8 -0.3**
LCAR IAmb IAmb 07 01 46.3
comp=Z,930nm,1.6s
RTBA Rita Blanca 20.52 348 P **P 07 01 35.4 +1.1**
RTBA IAmb IAmb 07 01 39.5
comp=Z,554nm,1.0s
T35A Sooner Cattle 20.53 3 P **P 07 01 33.4 -0.9**
KAN13 South Haven SW 20.60 1 P **P 07 01 35.5 +0.4**
KAN13 IAmb IAmb 07 01 47.7
comp=Z,631nm,1.1s
GNAR Gosnell 20.72 18 P **P 07 01 36.5 +0.1**
UPD2 Meteti 20.73 110 *e*P **P 07 01 37.4 +0.8**
214A Organ Pipe Nat 20.73 321 IAmb IAmb 07 01 49.0
comp=Z,401nm,1.6s
214A IAMs_20 IAMs_20 07 10 03.6
comp=Z,23µm,18.0s
214A Organ Pipe Nat 20.73 321 P Pn 07 01 39.5 +0.5
baz=135,SNR=57
255A Hazlehurst 20.80 39 P **P 07 01 35.9 -1.3**
KAN06 Argonia West S 20.83 360 P **P 07 01 38.1 +0.5**
KAN06 IAmb IAmb 07 01 43.0
comp=Z,756nm,1.5s
HALT Halls 20.88 19 P **P 07 01 38.1 +0.1**
154A Montrose 20.93 37 P **P 07 01 37.4 -1.2**
FPAL Fort Paine 21.14 29 P **P 07 01 40.0 -0.9**
FPAL IAmb IAmb 07 01 54.1
comp=Z,250nm,1.0s
X18A Snowflake 21.18 331 P **P 07 01 44.4 +2.8**
X18A IAmb IAmb 07 01 46.5
comp=Z,544nm,1.1s
GLAT Glass 21.23 19 P **P 07 01 42.0 +0.2**
PVMO Portageville 21.23 18 P **P 07 01 41.8 0.0**
MGMO Mountain Grove 21.29 12 P **P 07 01 42.5 -0.1**
GOGA Godfrey 21.32 34 P **P 07 01 41.8 -1.0**
GOGA IAmb IAmb 07 01 53.4
comp=Z,241nm,0.9s
GOGA Godfrey 21.32 34 P **P 07 01 41.2 -1.7**
baz=220,SNR=68
GOGA Godfrey 21.32 34 ⇑P **P 07 01 41.0 -1.8**
GOGA Godfrey 21.32 34 P **P 07 01 41.8 -1.0**
GOGA pmax pmax
comp=Z,241nm,0.9s
Y52A Lilburn 21.35 33 P **P 07 01 42.3 -0.9**
Y52A IAmb IAmb 07 01 54.6
comp=Z,289nm,0.9s
PBMO Poplar Bluff 21.37 16 P **P 07 01 42.4 -0.9**
PBMO IAmb IAmb 07 01 47.5
comp=Z,372nm,0.8s
SFX San Felipe 21.41 316 P **P 07 01 45.6 +1.7**
UTMT University of 21.43 20 P **P 07 01 43.5 -0.5**
PTAC Punta Ardita, 21.51 113 *e*P **P 07 01 45.6 +0.6**
X51A Calhoun 21.51 30 IAmb IAmb 07 01 56.3
comp=Z,594nm,1.5s
T25A Trinidad 21.55 345 P **P 07 01 47.6 +2.0**
baz=162,SNR=309
SWET Sewanee 21.56 27 P **P 07 01 44.3 -1.2**
W18A Petrified Fore 21.58 332 P **P 07 01 48.0 +2.3**
W18A IAmb IAmb 07 01 53.6
comp=Z,273nm,0.9s
W18A Petrified Fore 21.58 332 P **P 07 01 48.1 +2.3**
baz=147,SNR=154
WVT Waverly 21.59 22 P **P 07 01 44.4 -1.3**
WVT Waverly 21.59 22 P **P 07 01 44.7 -1.0**
baz=206
WVT Waverly 21.59 22 ⇑P **P 07 01 44.1 -1.6**
WVT Waverly 21.59 22 P **P 07 01 44.4 -1.3**
WVT pmax pmax
comp=Z,859nm,1.3s
V48A Smith Brothers 21.63 25 P **P 07 01 45.2 -1.0**
V48A IAmb IAmb 07 02 01.7
comp=Z,524nm,0.9s
257A Skidaway Islan 21.73 41 P **P 07 01 46.5 -0.7**
GTBY Guantanamo Bay 21.78 77 P **P 07 01 47.4 -0.5**
GTBY IAmb IAmb 07 01 52.4
comp=Z,565nm,1.1s
GTBY Guantanamo Bay 21.78 77 ⇑P **P 07 01 47.4 -0.5**
GTBY Guantanamo Bay 21.78 77 ⇑*e*P **P 07 01 47.3 -0.6**
X16A Lo Mia Camp, P 21.82 328 IAmb IAmb 07 01 55.3
comp=Z,412nm,1.1s
W50A Signal Mountai 21.82 28 P **P 07 01 46.9 -1.4**
W50A IAmb IAmb 07 01 55.6
comp=Z,442nm,1.0s
SPIG San Pedro Mart 21.83 315 *e* **P 07 01 50.6 +1.9**
113A Mohawk Valley, 21.88 321 P **P 07 01 50.9 +2.1**
113A IAmb IAmb 07 02 03.0
comp=Z,460nm,1.7s
R32A Long Quarter, 22.02 358 P **P 07 01 49.7 -0.7**
R32A IAmb IAmb 07 02 06.1
comp=Z,418nm,0.9s
CGM3 Cape Girardeau 22.07 17 P **P 07 01 49.4 -1.4**
T45A Paducah 22.12 20 P **P 07 01 50.3 -1.0**
CLTN Cedars of Leba 22.14 25 P **P 07 01 50.2 -1.3**
CLTN IAmb IAmb 07 02 02.9
comp=Z,316nm,1.1s
Y14A Wickenburg 22.28 325 IAmb IAmb 07 02 06.2
comp=Z,453nm,1.3s
Y14A IAMs_20 IAMs_20 07 11 37.1
comp=Z,24µm,19.0s
SOLC Bahia Solano 22.28 114 *e*P **P 07 01 54.9 +1.6**
APAC Apartado, Choc 22.29 110 *e*P **P 07 01 55.4 +2.0**
CCM Cathedral Cave 22.38 14 P **P 07 01 52.3 -1.8**
CCM Cathedral Cave 22.38 14 P **P 07 01 52.4 -1.7**
baz=196
CCM Cathedral Cave 22.38 14 ⇑P **P 07 01 52.4 -1.8**
CCM Cathedral Cave 22.38 14 P **P 07 01 52.3 -1.8**
CCM pmax pmax
comp=Z,968nm,1.3s
W52A Murphy 22.39 31 IAmb IAmb 07 02 10.4
comp=Z,429nm,1.1s
CPCT Cooper Cave 22.39 29 P **P 07 01 52.5 -1.9**
CPCT IAmb IAmb 07 02 03.7
comp=Z,333nm,1.1s
R40A Maddies Statio 22.39 11 P **P 07 01 53.2 -1.1**
SDCO Great Sand Dun 22.41 344 P **P 07 01 56.1 +1.3**
SDCO IAmb IAmb 07 01 59.6
comp=Z,374nm,1.1s
SDCO IAMs_20 IAMs_20 07 11 11.7
comp=Z,39µm,18.0s
SDCO Great Sand Dun 22.41 344 P **P 07 01 56.1 +1.3**
baz=160,SNR=198
SDCO Great Sand Dun 22.41 344 ⇑P **P 07 01 56.0 +1.1**
CBKS Cedar Bluff 22.47 356 IAmb IAmb 07 02 05.8
comp=Z,444nm,1.0s
CBKS Cedar Bluff 22.47 356 P **P 07 01 54.9 -0.3**
baz=175,SNR=22
CBKS Cedar Bluff 22.47 356 ⇑P **P 07 01 54.4 -0.7**
S44A Carbondale 22.55 18 P **P 07 01 54.6 -1.4**
CPBX Cerro Prieto 22.59 318 P **P 07 01 58.0 +1.5**

HODGE Hodges 22.60 35 P **P 07 01 54.7 -1.8**
HODGE IAmb IAmb 07 02 09.0
comp=Z,212nm,0.9s
T47A Sharon Grove 22.62 23 P **P 07 01 55.3 -1.4**
WUAZ Wupatki 22.66 330 IAmb IAmb 07 02 02.5
comp=Z,455nm,1.1s
WUAZ IAMs_20 IAMs_20 07 11 58.6
comp=Z,28µm,19.0s
WUAZ Wupatki 22.66 330 P **P 07 02 00.1 +2.6**
baz=144,SNR=40
WUAZ Wupatki 22.66 330 ⇑P **P 07 02 00.0 +2.6**
KSU1 Kansas State U 22.70 2 IAmb IAmb 07 02 08.1
comp=Z,232nm,0.8s
KSU1 Kansas State U 22.70 2 P **P 07 01 56.4 -1.2**
baz=182,SNR=66
KSU1 Kansas State U 22.70 2 ⇑P **P 07 01 55.5 -2.1**
GLA Glamis 22.72 320 P **P 07 01 59.8 +1.9**
GLA IAmb IAmb 07 02 02.8
comp=Z,390nm,1.1s
GLA Glamis 22.72 320 P **P 07 02 00.1 +2.2**
baz=133
GLA Glamis 22.72 320 P **P 07 01 59.8 +1.9**
GLA pmax pmax
comp=Z,391nm,1.1s
U49A Red Boiling Sp 22.73 26 IAmb IAmb 07 02 07.7
comp=Z,391nm,1.0s
ESJX Sierra Juarez 22.75 317 P **P 07 02 00.5 +2.2**
V51A Loudon 22.76 29 IAmb IAmb 07 02 06.7
comp=Z,358nm,1.1s
S22A 4UR Ranch, Cre 22.79 341 P **P 07 02 00.6 +1.6**
S22A IAmb IAmb 07 02 21.7
comp=Z,243nm,1.1s
S22A 4UR Ranch, Cre 22.79 341 P **P 07 02 00.6 +1.6**
baz=156,SNR=200
BG3 Lake Jocassee 22.82 33 P **P 07 01 57.4 -1.4**
BG3 IAmb IAmb 07 02 01.2
comp=Z,208nm,0.8s
UABX UABC, Campus M 22.82 319 IAmb IAmb 07 02 17.6
comp=Z,392nm,0.9s
SJCC San Jacinto, C 22.85 103 *e*P **P 07 01 58.8 -0.6**
MVCO Mesa Verde 22.88 337 P **P 07 02 01.1 +1.3**
MVCO Mesa Verde 22.88 337 P **P 07 02 01.1 +1.3**
baz=152,SNR=212
MVCO Mesa Verde 22.88 337 ⇑P **P 07 02 00.9 +1.2**
TKL Tuckaleechee C 22.92 30 P **P 07 01 58.6 -1.2**
TKL IAmb IAmb 07 02 13.3
comp=Z,437nm,1.2s
TKL Tuckaleechee C 22.92 30 P **P 07 01 58.7 -1.2**
comp=Z,40nm,0.8s,baz=200,slow=12,SNR=39
TKL S **S 07 06 07.7 -0.9**
comp=Z,8.5nm,0.7s,baz=119,slow=9.5,SNR=0.9
TKL LR LR 07 14 17.9
comp=Z,7µm,19.2s,baz=214,slow=46
comp=Z,40nm,0.8s
PIZC Pizarro, Choco 22.95 117 *e*P **P 07 02 02.8 +2.4**
DBBC Dabeiba 22.99 111 ⇑*e*P **P 07 02 02.8 +1.9**
KSCO Kaye Shedlock' 23.00 350 P **P 07 02 01.0 +0.1**
KSCO IAmb IAmb 07 02 25.1
comp=Z,483nm,1.1s
KSCO Kaye Shedlock' 23.00 350 P **P 07 02 01.7 +0.9**
baz=168,SNR=29
BLYC Blythe 23.02 322 P **P 07 02 02.7 +1.8**
BLYC IAmb IAmb 07 02 16.0
comp=Z,229nm,1.2s
NHSC New Hope 23.02 40 P **P 07 01 59.5 -1.5**
NHSC New Hope 23.02 40 P **P 07 01 59.8 -1.2**
baz=228,SNR=16
NHSC New Hope 23.02 40 ⇑P **P 07 01 59.9 -1.1**
YUH Yuha Desert 23.14 318 P **P 07 02 04.2 +2.0**
CCX Cicese 23.14 315 P **P 07 02 04.3 +2.1**
V52A Sevierville 23.15 30 IAmb IAmb 07 02 14.7
comp=Z,401nm,1.1s
SLM Saint Louis 23.17 15 P **P 07 02 02.5 +0.1**
SLM IAmb IAmb 07 02 14.9
comp=Z,323nm,1.2s
SLM Saint Louis 23.17 15 P **P 07 02 02.5 +0.1**
SLM pmax pmax
comp=Z,323nm,1.3s
PDMCI Parker Dam,Lak 23.19 324 P **P 07 02 04.6 +1.9**
baz=136,SNR=68
JSC Jenkinsville 23.20 37 IAmb IAmb 07 02 27.1
comp=Z,160nm,0.8s
SWSC Sam W. Stewart 23.25 319 P **P 07 02 05.5 +2.2**
baz=131,SNR=9.2
IKP In-Ko-Pah, Jac 23.26 318 P **P 07 02 05.3 +1.8**
baz=130,SNR=7.4
PAULI Pauline 23.28 35 P **P 07 02 02.1 -1.5**
PAULI IAmb IAmb 07 02 15.0
comp=Z,748nm,1.7s
UREC San Jos de Ur 23.29 109 ⇑*e*P **P 07 02 04.3 +0.4**
USIN University of 23.30 20 P **P 07 02 03.2 -0.5**
SMRC Santa Marta, M 23.38 100 *e*P **P 07 02 03.8 -1.0**
V53A Saluda 23.40 32 P **P 07 02 04.1 -0.8**
V53A IAmb IAmb 07 02 18.9
comp=Z,438nm,1.4s
Q24A Divide 23.47 345 P **P 07 02 06.5 +0.8**
Q24A IAmb IAmb 07 02 11.3
comp=Z,234nm,1.2s
Q24A Divide 23.47 345 P **P 07 02 06.8 +1.0**
baz=162,SNR=65
P38A Dawn 23.49 8 IAmb IAmb 07 02 15.6
comp=Z,398nm,1.1s
TJIG Tijuana 23.50 316 *e*P **P 07 02 07.5 +1.8**
BC3 Big Chuckawall 23.51 320 P **P 07 02 08.2 +2.2**
baz=132,SNR=53
Y57A Sumter 23.52 38 P **P 07 02 06.2 +0.3**
Y57A IAmb IAmb 07 02 07.3
comp=Z,302nm,1.0s
TKX Tecate 23.54 317 P **P 07 02 08.5 +2.3**
TKX IAMs_20 IAMs_20 07 12 15.2
comp=Z,20µm,18.0s
T50A Nancy 23.55 27 P **P 07 02 06.3 +0.1**
T50A IAmb IAmb 07 02 21.7
comp=Z,402nm,1.3s
MONP2 Monument Peak 23.62 318 P **P 07 02 08.4 +1.2**
baz=129,SNR=7.4
W13A Hualapai Mount 23.63 325 IAmb IAmb 07 02 12.7
comp=Z,188nm,1.0s
W13A IAMs_20 IAMs_20 07 12 08.2
comp=Z,36µm,19.0s
BAR Barrett 23.65 317 P **P 07 02 09.0 +1.7**
IRM Iron Mountain 23.67 322 P **P 07 02 09.4 +1.9**
baz=134,SNR=78
CBOC Ciudad Bolivar 23.68 114 ⇑*e*P **P 07 02 10.2 +2.3**
ARGC Ariguani, Magd 23.74 103 *e*P **P 07 02 08.7 +0.5**
TZTN Tazewell 23.74 29 IAmb IAmb 07 02 21.2
comp=Z,367nm,1.1s
TZTN Tazewell 23.74 29 P **P 07 02 07.1 -1.0**
baz=216,SNR=25
TZTN Tazewell 23.74 29 ⇑P **P 07 02 06.8 -1.3**
KMSC Kings Mountain 23.78 35 P **P 07 02 06.9 -1.6**
KMSC Kings Mountain 23.78 35 P **P 07 02 07.7 -0.8**
baz=222,SNR=59
TJX Tijuana 23.79 316 IAmb IAmb 07 02 14.3
comp=Z,392nm,1.1s
NEE2 Needles Airpor 23.80 324 P **P 07 02 10.5 +1.9**
baz=136,SNR=9.5
U15A North Rim 23.84 330 P **P 07 02 11.6 +2.3**
OLIL Olney 23.86 19 P **P 07 02 08.2 -1.0**
OLIL IAmb IAmb 07 02 21.9
comp=Z,459nm,1.0s
Y58A Scranton 23.88 40 IAmb IAmb 07 02 36.7
comp=Z,392nm,0.8s
PLMC San Jos del P 23.90 116 *e*P **P 07 02 11.0 +1.1**
BIRD Birdtown, Kers 23.92 37 P **P 07 02 09.0 -0.7**
HELC Santa Helena 23.96 112 ⇑*e*P **P 07 02 12.7 +2.0**
WCI Wyandotte Cave 24.02 23 P **P 07 02 09.7 -1.0**
WCI Wyandotte Cave 24.02 23 P **P 07 02 10.1 -0.5**
baz=208
WCI Wyandotte Cave 24.02 23 ⇑P **P 07 02 09.6 -1.0**
WCI Wyandotte Cave 24.02 23 P **P 07 02 09.7 -1.0**
WCI pmax pmax
comp=Z,2µm,1.7s
109C Camp Elliot, M 24.06 317 P **P 07 02 13.1 +1.9**
baz=128,SNR=7.1
BELC Belle Mtn. Jos 24.08 320 P **P 07 02 13.5 +2.0**
baz=132,SNR=5.9
PMD Palm Desert 24.08 319 P **P 07 02 13.2 +1.9**
TPFO Pinon Flats 24.10 319 P **P 07 02 13.6 +2.0**
baz=131,SNR=26
PFO Pinyon Flats O 24.11 319 P **P 07 02 13.7 +2.0**
PFO Pinyon Flats O 24.11 319 P **P 07 02 14.1 +2.4**
baz=131,SNR=7.0
PFO Pinyon Flats O 24.11 319 P **P 07 02 12.5 +0.8**
comp=Z,48nm,1.1s,baz=122,slow=9.5,SNR=30
PFO S **S 07 06 36.0 +7.7**
comp=Z,3.2nm,0.2s,baz=174,slow=11,SNR=4.2
PFO Lg Lg 07 09 51.7
comp=Z,0.3nm,0.3s,baz=203,slow=15,SNR=1.3
PFO LR LR 07 12 58.6
comp=Z,15µm,18.0s,baz=138,slow=40
comp=Z,48nm,1.1s
SMCO Snowmass 24.16 342 P **P 07 02 14.2 +1.7**
SMCO Snowmass 24.16 342 ⇑P **P 07 02 14.1 +1.6**
P43A Skaggs, Pawnee 24.30 16 P **P 07 02 12.6 -0.6**
N33A J Bar K, Exete 24.32 0 P **P 07 02 14.0 +0.5**
YOTC Yotoco, Valle 24.32 118 ⇑*e*P **P 07 02 15.2 +1.4**
PAPH Port-au-Prince 24.35 81 P **P 07 02 14.3 +0.4**
PAPH IAmb IAmb 07 02 16.8
comp=Z,343nm,1.0s
ISCO Idaho Springs 24.37 345 IAMs_20 IAMs_20 07 12 35.8
comp=Z,22µm,18.0s
ISCO Idaho Springs 24.37 345 P **P 07 02 15.9 +1.6**
baz=161,SNR=238
ISCO Idaho Springs 24.37 345 ⇑P **P 07 02 15.5 +1.2**
GMRC Granite Mounta 24.41 322 P **P 07 02 16.5 +2.0**
baz=134,SNR=77
JAMC Jamundi, Valle 24.46 120 ⇑*e*P **P 07 02 16.7 +1.5**
R49A Shelbyville 24.50 24 P **P 07 02 14.0 -1.1**
N35A Tabor 24.51 4 P **P 07 02 15.2 +0.1**
N35A IAmb IAmb 07 02 33.3
comp=Z,299nm,0.8s
X58A Rowland 24.52 39 IAmb IAmb 07 02 17.4
comp=Z,298nm,0.8s
GUY2C Guyana, Caldas 24.55 114 ⇑*e*P **P 07 02 18.9 +2.7**
W57A Gilead 24.55 37 P **P 07 02 14.9 -0.7**
KNB Kanab 24.56 330 IAMs_20 IAMs_20 07 12 47.9
comp=Z,27µm,19.0s
PAC1 Pacto, Paraso 24.56 129 *e*P **P 07 02 17.1 +1.0**
MURC Murrieta 24.57 318 P **P 07 02 17.9 +2.1**
baz=129,SNR=17
S51A Beattyville 24.61 28 IAmb IAmb 07 02 18.2
comp=Z,187nm,0.8s
V12A Nelson 24.62 325 IAmb IAmb 07 02 20.9
comp=Z,199nm,1.0s
V12A IAMs_20 IAMs_20 07 12 39.1
comp=Z,30µm,18.0s
PKCU Pink Cliffs 24.67 331 IAMs_20 IAMs_20 07 13 02.4
comp=Z,33µm,19.0s
BBAC Balboa, Cauca 24.67 123 ⇑*e*P **P 07 02 18.9 +1.8**
LL6C La Loma 6 Bece 24.69 102 ⇑*e*P **P 07 02 17.7 +0.7**
CRJC Cerrejon, Guaj 24.69 99 ⇑*e*P **P 07 02 17.1 -0.1**
LCMT Little Creek M 24.76 329 IAMs_20 IAMs_20 07 12 21.3
comp=Z,21µm,18.0s
PTBC PUERTO BERRIO, 24.76 110 ⇑*e*P **P 07 02 19.3 +1.5**
OGNE Ogallala 24.81 352 P **P 07 02 19.0 +1.0**
baz=170,SNR=37
OGNE Ogallala 24.81 352 ⇑P **P 07 02 18.9 +1.0**
BBRC Big Bear Solar 24.82 320 P **P 07 02 21.0 +2.6**
baz=131
BRIGG Briggsdale 24.83 348 IAMs_20 IAMs_20 07 13 22.9
comp=Z,19µm,18.0s
POPC Popayan, Colom 24.83 121 *e*P **P 07 02 20.1 +1.5**
R50A Paris 24.84 26 P **P 07 02 17.3 -0.8**
R50A IAmb IAmb 07 02 34.9
comp=Z,520nm,1.6s
OTAV Otavalo 24.84 128 P **P 07 02 20.1 +1.2**
OTAV Otavalo 24.84 128 ⇑P **P 07 02 20.6 +1.7**
OTAV Otavalo 24.84 128 P **P 07 02 20.1 +1.2**
OTAV pmax pmax
comp=Z,67nm,1.2s
OTAV Otavalo 24.84 128 *e*P **P 07 02 20.5 +1.7**
HEC Hector,Ludlow 24.84 321 P **P 07 02 20.9 +2.6**
baz=133,SNR=69
P46A Rosedale 24.95 20 P **P 07 02 18.5 -0.6**
BGNE Belgrade 24.99 359 P **P 07 02 20.1 +0.5**
baz=179,SNR=24
TUQ Turquoise Moun 25.02 323 P **P 07 02 22.5 +2.5**
baz=134,SNR=19
TULM Tulcn-Chalpat 25.04 126 *e*P **P 07 02 23.2 +2.5**
WTNK Soarino Height 25.05 325 P **P 07 02 21.1 +0.8**
SCI2 San Clemente I 25.08 315 P **P 07 02 22.4 +2.0**
baz=126
MTPU Mount Pierson 25.10 332 IAmb IAmb 07 02 26.9
comp=Z,300nm,0.9s
OCAC Ocana 25.14 106 *e*P **P 07 02 21.9 +0.6**
U56A King 25.19 34 P **P 07 02 21.1 -0.3**
HDIL Hopedale 25.22 15 P **P 07 02 21.3 -0.3**
baz=199,SNR=32
HDIL Hopedale 25.22 15 ⇑P **P 07 02 21.1 -0.5**
CIS Catalina Islan 25.24 316 P **P 07 02 23.7 +1.8**
baz=127,SNR=7.0
BFSC Mount Baldy Ra 25.27 319 P **P 07 02 24.4 +2.1**
baz=130,SNR=15
RRX Edison Barstow 25.28 321 P **P 07 02 24.7 +2.5**
baz=132
ORTC Ortega, Tolima 25.30 117 *e*P **P 07 02 24.5 +2.0**
SRU San Rafael Swe 25.31 336 P **P 07 02 24.0 +1.3**
SRU IAmb IAmb 07 02 31.9
comp=Z,234nm,1.0s
SRU San Rafael Swe 25.31 336 P **P 07 02 24.0 +1.3**
SRU pmax pmax
comp=Z,234nm,1.0s
SDDR Presa de Saban 25.32 80 P **P 07 02 24.5 +1.7**
SDDR Presa de Saban 25.32 80 ⇑P **P 07 02 23.3 +0.5**
SDDR Presa de Saban 25.32 80 ⇑*e*P **P 07 02 23.5 +0.7**
FMP Fort Macarthur 25.35 317 P **P 07 02 24.8 +2.0**
baz=128
SHPR Sheep Range 25.37 326 IAMs_20 IAMs_20 07 13 12.6
comp=Z,24µm,19.0s
O20A White River Ci 25.42 341 P **P 07 02 25.6 +1.9**
baz=156,SNR=196
SLOR San Lorenzo - 25.44 130 P **P 07 02 27.4 +3.0**
GSC Goldstone, Bar 25.45 322 IAMs_20 IAMs_20 07 12 27.3
comp=Z,17µm,19.0s
GSC Goldstone, Bar 25.45 322 P **P 07 02 25.8 +2.0**
baz=133,SNR=32
W59A Clinton 25.47 39 IAmb IAmb 07 02 58.3
comp=Z,202nm,0.9s
N23A Red Feather La 25.49 345 IAmb IAmb 07 02 28.4
comp=Z,362nm,1.1s
N23A Red Feather La 25.49 345 P **P 07 02 26.1 +1.7**
baz=161,SNR=145
SPBC San Pablo de B 25.49 112 ⇑*e*P **P 07 02 26.2 +1.8**
V58A Windy Hill, Pi 25.51 37 P **P 07 02 24.1 -0.1**
SHOC Shoshone, Teco 25.55 323 P **P 07 02 26.5 +1.8**
baz=134,SNR=11
PASC Pasadena Art C 25.57 318 P **P 07 02 27.1 +2.3**
ROSC El Rosal 25.64 114 IAmb IAmb 07 02 48.0
comp=Z,161nm,1.0s
ROSC El Rosal 25.64 114 P **P 07 02 26.8 +0.7**
comp=Z,70nm,0.9s,baz=326,slow=1.8,SNR=41
ROSC S **S 07 07 00.7 +7.0**
comp=Z,4.1nm,0.6s,baz=296,slow=19,SNR=1.0
comp=Z,70nm,0.9s
ROSC El Rosal 25.64 114 *e*P **P 07 02 30.0 +3.8**
P18A Preston Nutter 25.65 337 P **P 07 02 27.4 +1.4**
SSFO Shawnee State 25.66 27 P **P 07 02 25.1 -0.5**
SFIN Lafayette 25.68 19 P **P 07 02 24.9 -0.8**
SFIN IAmb IAmb 07 02 39.2
comp=Z,198nm,0.9s
SFIN Lafayette 25.68 19 P **P 07 02 25.1 -0.6**
baz=204,SNR=29
PRAC Prado 25.70 117 *e*P **P 07 02 28.2 +1.9**
P17A Butcher Ranch, 25.71 336 IAmb IAmb 07 02 40.2
comp=Z,285nm,1.4s
DECC Green Verdugo 25.71 318 P **P 07 02 28.3 +2.1**
baz=128,SNR=13
P49A Miami Univ. Ec 25.75 24 P **P 07 02 25.4 -1.0**
P49A Miami Univ. Ec 25.75 24 P **P 07 02 25.5 -1.0**
baz=210,SNR=111
PHWY Pilot Hill 25.76 347 IAmb IAmb 07 02 40.3
comp=Z,368nm,1.6s
SCIA State Center 25.78 8 P **P 07 02 26.7 +0.1**
baz=190,SNR=27
SCIA State Center 25.78 8 ⇑P **P 07 02 26.6 -0.1**
S54A Dingess, Beckl 25.82 31 P **P 07 02 26.5 -0.6**
BLA Blacksburg 25.82 33 P **P 07 02 26.9 -0.3**
baz=221,SNR=35
BLA Blacksburg 25.82 33 ⇑P **P 07 02 26.6 -0.6**
CNNC Cliffs of the 25.86 40 IAmb IAmb 07 02 29.3
comp=Z,220nm,0.9s
CNNC Cliffs of the 25.86 40 P **P 07 02 26.9 -0.5**
baz=228,SNR=21
CNNC Cliffs of the 25.86 40 ⇑P **P 07 02 26.9 -0.5**
Q51A Peebles 25.88 26 P **P 07 02 26.9 -0.7**
BARC Barichara 25.89 109 *e*P **P 07 02 29.8 +1.5**
EDW2 Edwards Air Fo 25.90 319 P **P 07 02 29.8 +1.9**
baz=130,SNR=30
SNCC San Nicolas Is 25.90 315 P **P 07 02 28.9 +1.0**
baz=125
QSM Queen of Sheba 25.94 323 IAmb IAmb 07 02 34.8

comp=Z,174nm,1.1s
QSM IAMs_20 IAMs_20 07 13 05.7
comp=Z,16µm,18.0s
GWY Greenwater Val 25.98 323 IAmb IAmb 07 02 42.6
comp=Z,214nm,1.4s
GWY IAMs_20 IAMs_20 07 13 40.7
comp=Z,18µm,20.0s
PRN Pahroc Range 25.98 327 P **P** **07 02 30.6 +1.9**
PRN IAMs_20 IAMs_20 07 13 12.3
comp=Z,18µm,20.0s
PRN Pahroc Range 25.98 327 ⇑P **P** **07 02 31.1 +2.3**
CVER Cruz Verde, Cu 26.01 114 ⇑eP **P** **07 02 32.7 +3.2**
CCAC Calif City Air 26.09 320 IAmb IAmb 07 02 35.5
comp=Z,221nm,1.2s
LRMC Laurel Mtn Rad 26.10 321 P **P** **07 02 31.5 +1.7**
baz=132
OSI Osito Audit: C 26.19 318 P **P** **07 02 30.0 -0.6**
baz=128
FLOC Florencia 26.21 122 eP **P** **07 02 32.6 +1.7**
O48B Farmland 26.22 22 P **P** **07 02 29.6 -1.1**
baz=208,SNR=72
L40A Anamosa 26.24 11 IAmb IAmb 07 02 40.5
comp=Z,354nm,1.0s
RDMU Red Mountain 26.25 339 IAmb IAmb 07 02 44.8
comp=Z,465nm,1.3s
CHIC Chingaza 26.26 114 ⇑eP **P** **07 02 34.1 +2.4**
T57A Hurt 26.29 35 P **P** **07 02 31.0 -0.4**
T57A IAmb IAmb 07 02 47.1
comp=Z,177nm,0.9s
TPNV Topopah Spring 26.29 325 IAmb IAmb 07 02 51.6
comp=Z,404nm,1.5s
TPNV IAMs_20 IAMs_20 07 13 40.4
comp=Z,23µm,19.0s
TPNV Topopah Spring 26.29 325 P **P** **07 02 33.9 +2.4**
baz=136
FURC Furnace Creek, 26.29 323 P **P** **07 02 33.1 +1.8**
baz=134,SNR=12
M44A Midewin, Midew 26.33 17 P **P** **07 02 31.2 -0.4**
ARNL Arenillas 26.36 137 IAmb IAmb 07 02 45.4
comp=Z,222nm,1.4s
MPMC Manual Prospec 26.37 322 P **P** **07 02 34.4 +2.1**
baz=133,SNR=20
WCT Wildcat Mounta 26.38 324 IAMs_20 IAMs_20 07 13 55.3
comp=Z,22µm,18.0s
SCZ2 Santa Cruz Isl 26.41 316 P **P** **07 02 34.0 +1.4**
baz=126
O49A Covington 26.46 23 P **P** **07 02 31.8 -1.1**
L42A Oliver, Polo 26.50 14 P **P** **07 02 32.5 -0.7**
S11A Rachel 26.53 327 IAmb IAmb 07 02 47.7
comp=Z,525nm,1.6s
VILC Villavicencio, 26.54 115 eP **P** **07 02 36.4 +2.4**
RWWY Rawlins 26.56 344 IAMs_20 IAMs_20 07 13 49.6
comp=Z,23µm,19.0s
ARVC Arvin 26.58 319 P **P** **07 02 36.0 +2.0**
baz=129,SNR=18
BSUT Blindstream Ca 26.64 337 P **P** **07 02 36.8 +1.9**
BSUT IAmb IAmb 07 02 53.4
comp=Z,177nm,1.1s
NLU North Lily Min 26.65 335 IAmb IAmb 07 02 51.7
comp=Z,418nm,1.8s
ISA Isabella, Lake 26.70 320 P **P** **07 02 37.1 +1.9**
baz=130,SNR=15
SBC Santa Barbara 26.73 317 P **P** **07 02 36.6 +1.3**
baz=127
HQIL Hanson Quary C 26.76 17 P **P** **07 02 35.4 -0.1**
R55A Marlinton 26.79 32 P **P** **07 02 35.6 -0.3**
R55A IAmb IAmb 07 02 47.2
comp=Z,209nm,0.8s
BCW Bitter Crk WRg 26.84 318 IAmb IAmb 07 03 18.3
comp=Z,192nm,1.4s
SPR3 Spring Creek 3 26.86 330 IAmb IAmb 07 02 40.4
comp=Z,161nm,1.0s
P52A Corning 26.90 27 P **P** **07 02 35.9 -1.0**
baz=215,SNR=21
GRAC Grapevine Rang 26.95 324 IAMs_20 IAMs_20 07 13 40.2
comp=Z,18µm,19.0s
GRAC Grapevine Rang 26.95 324 P **P** **07 02 39.8 +2.5**
baz=134,SNR=12
R11B Troy Canyon, C 26.97 328 IAMs_20 IAMs_20 07 14 51.4
comp=Z,26µm,19.0s
R11B Troy Canyon, C 26.97 328 P **P** **07 02 40.0 +2.3**
baz=139,SNR=81
CWC Cottonwood Cre 26.98 322 P **P** **07 02 39.9 +2.1**
baz=132
V61A Roper 27.03 40 P **P** **07 02 38.7 +0.8**
V61A IAmb IAmb 07 02 51.1
comp=Z,443nm,1.2s
MCRA Macar, Loja 27.05 138 eP **P** **07 02 39.8 +1.3**
PKM Mcpherson Peak 27.07 317 P **P** **07 02 40.2 +1.6**
baz=127,SNR=11
L44A Lake County Fo 27.10 16 P **P** **07 02 38.2 -0.3**
baz=201,SNR=18
P53A Whipple 27.12 29 P **P** **07 02 38.2 -0.5**
Q12A Willow Creek R 27.13 330 P **P** **07 02 41.4 +2.3**
DUG Dugway, Tooele 27.16 334 P **P** **07 02 41.4 +2.1**
baz=146,SNR=89
DUG Dugway, Tooele 27.16 334 ⇑P **P** **07 02 41.4 +2.1**
N49A Columbus Grove 27.16 23 P **P** **07 02 38.4 -0.8**
N49A IAmb IAmb 07 02 53.0
comp=Z,139nm,0.9s
VES Vestal, Richgr 27.20 320 P **P** **07 02 41.8 +2.2**
baz=130,SNR=33
TAMC Tame, Arauca 27.22 108 ⇑eP **P** **07 02 41.7 +1.7**
T59A Double "B" Far 27.23 37 P **P** **07 02 39.6 -0.1**
T59A IAmb IAmb 07 02 50.8
comp=Z,413nm,1.3s
JFWS Jewell Farm 27.25 12 IAmb IAmb 07 02 53.4
comp=Z,328nm,1.1s
JFWS Jewell Farm 27.25 12 IAMs_20 IAMs_20 07 15 11.7
comp=Z,20µm,20.0s
JFWS Jewell Farm 27.25 12 P **P** **07 02 39.6 -0.3**
baz=196,SNR=20
JFWS Jewell Farm 27.25 12 ⇑P **P** **07 02 39.4 -0.6**
LCH Last Change Ra 27.27 324 IAMs_20 IAMs_20 07 14 32.8
comp=Z,26µm,18.0s
K22A Casper 27.29 346 IAmb IAmb 07 02 51.9
comp=Z,320nm,1.1s
K22A Casper 27.29 346 P **P** **07 02 41.6 +1.1**
baz=161,SNR=79
ECSD EROS Data Cent 27.33 2 IAmb IAmb 07 03 19.8
comp=Z,131nm,1.0s
ECSD IAMs_20 IAMs_20 07 14 24.8
comp=Z,16µm,21.0s
L46A Eue Claire 27.41 19 IAmb IAmb 07 03 06.2
comp=Z,170nm,0.9s
SDV Santo Domingo 27.43 102 P **P** **07 02 42.8 +0.8**
SDV IAmb IAmb 07 02 45.4
comp=Z,139nm,0.8s
SDV Santo Domingo 27.43 102 LR LR 07 15 16.4
comp=Z,9µm,19.9s,baz=323,slow=40
SDV Santo Domingo 27.43 102 eP **P** **07 02 42.9 +0.8**
SDV Santo Domingo 27.43 102 eP **P** **07 02 43.0 +0.9**
O52A Adamsville 27.43 27 IAmb IAmb 07 02 54.3
comp=Z,161nm,0.9s
SMMC Simmler 27.44 318 P **P** **07 02 44.1 +2.3**
baz=128,SNR=6.6
K43A Burlington 27.48 15 P **P** **07 02 41.7 -0.4**
TIN Tinemaha, Big 27.49 323 P **P** **07 02 45.1 +2.8**
baz=133,SNR=12
DSP Deep Springs 27.55 323 IAMs_20 IAMs_20 07 14 42.3
comp=Z,21µm,18.0s
TPH Tonopah 27.63 325 IAmb IAmb 07 02 47.0
comp=Z,267nm,1.0s
VOG Valley Oaks Go 27.69 320 P **P** **07 02 45.5 +1.5**
baz=130
PTLC Puerto Leguiza 27.73 123 eP **P** **07 02 47.8 +3.3**
R58B Mineral 27.74 35 IAmb IAmb 07 02 55.3
comp=Z,210nm,1.1s
O53A New Philadelph 27.81 28 IAmb IAmb 07 03 26.2
comp=Z,142nm,1.1s
O53A New Philadelph 27.81 28 P **P** **07 02 44.7 -0.3**
baz=216,SNR=26
T60A Surry 27.82 38 P **P** **07 02 45.2 +0.2**
T60A IAmb IAmb 07 02 56.2
comp=Z,230nm,0.8s
I37A Lemond, Waseca 27.84 7 P **P** **07 02 44.3 -0.9**
I37A IAmb IAmb 07 03 19.1
comp=Z,132nm,0.8s
BGU Big Grassy Mou 27.86 335 IAmb IAmb 07 02 58.8
comp=Z,364nm,2.0s
PTGC Puerto Gaitan, 27.87 113 eP **P** **07 02 46.7 +0.9**
HWUT Hardware Ranch 27.87 337 P **P** **07 02 47.1 +1.4**
HWUT IAmb IAmb 07 03 03.8
comp=Z,200nm,1.4s
HWUT Hardware Ranch 27.87 337 ⇑P **P** **07 02 47.0 +1.2**
SPUT South Promonto 27.95 336 P **P** **07 02 47.2 +0.8**
MCWV Mont Chateau 27.98 30 IAmb IAmb 07 03 16.9
comp=Z,192nm,1.1s
MCWV Mont Chateau 27.98 30 P **P** **07 02 46.3 -0.2**
baz=219,SNR=12
MCWV Mont Chateau 27.98 30 ⇑P **P** **07 02 46.1 -0.4**
M50A Fremont 28.01 24 IAmb IAmb 07 03 43.6
comp=Z,139nm,0.8s
SUSD Miller 28.04 358 IAmb IAmb 07 03 35.2
comp=Z,292nm,1.2s
SUSD Miller 28.04 358 P **P** **07 02 47.2 +0.2**
baz=177
I40A Norwalk 28.12 11 P **P** **07 02 47.3 -0.5**
I40A IAmb IAmb 07 02 58.6
comp=Z,172nm,1.1s
O54A Avella 28.14 29 IAmb IAmb 07 03 04.3
comp=Z,148nm,0.8s
Q09A Carvers 28.16 327 IAmb IAmb 07 03 36.1
comp=Z,184nm,1.2s
CBN Corbin Frederi 28.19 35 IAmb IAmb 07 03 41.7
comp=Z,169nm,0.8s
CBN Corbin Frederi 28.19 35 P **P** **07 02 48.4 0.0**
baz=225,SNR=6.1
RSSD Black Hills 28.21 350 P **P** **07 02 49.7 +0.9**
RSSD Black Hills 28.21 350 P **P** **07 02 49.7 +0.9**
baz=167
RSSD Black Hills 28.21 350 ⇑P **P** **07 02 49.7 +0.9**
RSSD Black Hills 28.21 350 P **P** **07 02 49.7 +0.9**
RSSD pmax pmax
comp=Z,66nm,1.3s
RSSD MLR MLR
comp=Z,10µm,22.0s
PD31 Pinedale Array 28.22 341 IAmb IAmb 07 03 01.4
comp=Z,315nm,1.6s
PDAR Pinedale Array 28.22 341 P **P** **07 02 49.8 +0.9**
comp=Z,33nm,1.0s,baz=139,slow=9.2,SNR=104
PDAR PcP **PcP** **07 06 01.9 -0.3**
comp=Z,6.3nm,1.0s,baz=133,slow=3.8,SNR=2.0
PDAR LR LR 07 15 21.4
comp=Z,29µm,19.7s,baz=169,slow=39
comp=Z,33nm,1.0s
BW06 Boulder Array 28.23 341 P **P** **07 02 50.0 +1.0**
baz=155,SNR=167
BW06 Boulder Array 28.23 341 ⇑P **P** **07 02 49.9 +1.0**
MLAC Mammoth, Mammo 28.23 323 P **P** **07 02 51.2 +2.1**
baz=133
MDPB Devils Postpil 28.37 323 IAMs_20 IAMs_20 07 16 02.1
comp=Z,14µm,18.0s
NV11 Mina Array Sit 28.40 325 IAmb IAmb 07 02 57.9
comp=Z,111nm,0.9s
NV11 IAMs_20 IAMs_20 07 15 13.6
comp=Z,19µm,19.0s
N53A Lisbon 28.43 28 IAmb IAmb 07 03 04.5
comp=Z,194nm,1.0s
I42A Draeger Farm, 28.47 13 P **P** **07 02 50.3 -0.5**
I42A IAmb IAmb 07 03 04.2
comp=Z,114nm,0.9s
LHV Little Huntoon 28.47 324 IAmb IAmb 07 03 05.3
comp=Z,149nm,1.2s
NVAR Mina Array Bea 28.48 325 P **P** **07 02 53.7 +2.4**
NVAR Mina Array Bea 28.48 325 P **P** **07 02 53.4 +2.1**
comp=Z,97nm,0.9s,baz=147,slow=9.0,SNR=262
NVAR PcP **PcP** **07 06 04.0 +1.0**
comp=Z,15nm,1.0s,baz=158,slow=2.6,SNR=4.0
NVAR LR LR 07 15 02.7
comp=Z,15µm,21.0s,baz=132,slow=38
comp=Z,97nm,0.9s
PMPB Monch Peak 28.51 318 IAmb IAmb 07 03 19.1
comp=Z,126nm,1.1s
AAM Ann Arbor 28.55 22 P **P** **07 02 50.5 -1.0**
AAM IAmb IAmb 07 03 34.9
comp=Z,138nm,0.9s
AAM Ann Arbor 28.55 22 P **P** **07 02 50.6 -1.0**
baz=209,SNR=8.7
AAM Ann Arbor 28.55 22 ⇑P **P** **07 02 50.5 -1.0**
AAM Ann Arbor 28.55 22 P **P** **07 02 50.5 -1.0**
AAM pmax pmax
comp=Z,138nm,1.0s
AAM MLR MLR
comp=Z,10µm,22.0s
ELK Elko 28.67 332 ⇑P **P** **07 02 55.0 +2.1**
ELK Elko 28.67 332 P **P** **07 02 54.6 +1.7**
comp=Z,34nm,1.1s,baz=149,slow=6.4,SNR=62
ELK Lg Lg 07 12 12.4
comp=Z,0.1nm,0.3s,baz=130,slow=16,SNR=1.3
ELK LR LR 07 15 01.3
comp=Z,28µm,20.9s,baz=142,slow=38
comp=Z,34nm,1.1s
AHID Auburn Hatcher 28.72 339 IAmb IAmb 07 03 05.9
comp=Z,421nm,1.8s
AHID IAMs_20 IAMs_20 07 15 14.0
comp=Z,17µm,20.0s
AHID Auburn Hatcher 28.72 339 ⇑P **P** **07 02 54.4 +1.1**
RYN Ryan 28.74 325 IAMs_20 IAMs_20 07 15 24.7
comp=Z,17µm,20.0s
P57A Homestead Farm 28.77 33 P **P** **07 02 53.6 0.0**
M52A Chesterland 28.81 26 P **P** **07 02 52.5 -1.4**
M52A IAmb IAmb 07 03 50.4
comp=Z,121nm,0.8s
KVN Kaiserville 28.81 326 IAMs_20 IAMs_20 07 15 14.4
comp=Z,22µm,19.0s
J47A Sunmer 28.98 20 P **P** **07 02 55.0 -0.4**
J47A IAmb IAmb 07 03 51.9
comp=Z,115nm,0.9s
M53A WI Miller and 29.02 27 IAmb IAmb 07 03 57.4
comp=Z,143nm,1.1s
M53A WI Miller and 29.02 27 P **P** **07 02 54.4 -1.3**
baz=215,SNR=11
SPMN Marine on St. 29.10 7 IAmb IAmb 07 03 44.5
comp=Z,311nm,1.2s
SPMN Marine on St. 29.10 7 P **P** **07 02 55.7 -0.7**
baz=190,SNR=32
WAKR Walker 29.17 323 IAMs_20 IAMs_20 07 14 54.2
comp=Z,17µm,20.0s
SNOW Snow King Moun 29.23 340 IAMs_20 IAMs_20 07 16 26.3
comp=Z,21µm,18.0s
LOHW Long Hollow 29.32 341 IAmb IAmb 07 03 10.6
comp=Z,196nm,1.1s
TPAW Teton Pass 29.32 340 P **P** **07 02 59.0 +0.4**
K50A Casco 29.35 23 IAmb IAmb 07 03 12.9
comp=Z,101nm,0.8s
BMN Battle Mountai 29.38 329 IAMs_20 IAMs_20 07 16 29.0
comp=Z,14µm,20.0s
YERR Yerington 29.39 324 P **P** **07 02 59.4 0.0**
YERR IAMs_20 IAMs_20 07 15 22.9
comp=Z,16µm,20.0s
ALLY Alegheny Colle 29.42 27 P **P** **07 02 58.8 -0.5**
ALLY IAmb IAmb 07 03 13.4
comp=Z,121nm,1.1s
F33A 5 Mile Ranch, 29.44 2 P **P** **07 02 59.4 0.0**
MOOW Moose Ponds 29.48 341 P **P** **07 03 01.1 +1.0**
MOOW IAmb IAmb 07 03 12.8
comp=Z,326nm,1.8s
G40A Rib Lake 29.53 11 P **P** **07 02 59.7 -0.5**
G40A IAmb IAmb 07 03 13.1
comp=Z,106nm,0.9s
F36A Milaca 29.65 6 P **P** **07 03 00.5 -0.7**
PNTR Pine Nut 29.67 324 P **P** **07 03 03.5 +1.7**
PNTR IAMs_20 IAMs_20 07 15 31.3
comp=Z,15µm,18.0s
IMW Indian Meadow 29.68 340 IAMs_20 IAMs_20 07 15 58.2
comp=Z,23µm,19.0s
SSPA Standing Stone 29.70 31 P **P** **07 03 01.6 -0.1**
SSPA Standing Stone 29.70 31 P **P** **07 03 01.4 -0.4**
baz=221
SSPA Standing Stone 29.70 31 ⇑P **P** **07 03 01.1 -0.7**
FLWY Flagg Ranch 29.77 341 IAmb IAmb 07 03 15.8
comp=Z,172nm,1.2s
CELP Cerrillos 29.78 82 P **P** **07 03 02.7 -0.1**
BAUV El Baul 29.85 101 P **P** **07 03 03.0 -0.4**
BAUV IAmb IAmb 07 03 03.8
comp=Z,144nm,1.0s
ERPA Erie 29.87 27 IAmb IAmb 07 03 23.4
comp=Z,98nm,1.0s
ERPA Erie 29.87 27 P **P** **07 03 02.1 -1.2**
baz=216,SNR=15
ERPA Erie 29.87 27 ⇓P **P** **07 03 02.5 -0.7**
EMB Emerald Bay 29.88 323 IAmb IAmb 07 03 08.5
comp=Z,214nm,1.1s
M55A Ridgway 29.91 29 P **P** **07 03 03.0 -0.7**
M55A IAmb IAmb 07 03 25.4
comp=Z,132nm,0.9s
PAHR Pah Rah Range 29.98 325 P **P** **07 03 06.6 +2.1**
PAHR IAMs_20 IAMs_20 07 16 13.5
comp=Z,17µm,18.0s
H17A Grant Village 30.01 341 IAmb IAmb 07 03 24.1
comp=Z,248nm,1.8s
H17A Grant Village 30.01 341 P **P** **07 03 06.1 +1.3**
baz=154,SNR=12
MVL Millersville 30.03 34 IAmb IAmb 07 03 20.6
comp=Z,411nm,1.9s
MPK Martis Peak 30.05 324 IAmb IAmb 07 03 10.1
comp=Z,161nm,1.1s
MPK IAMs_20 IAMs_20 07 15 44.5
comp=Z,18µm,20.0s
LKWY Lake 30.11 342 P **P** **07 03 08.0 +2.3**
LKWY IAmb IAmb 07 03 24.9
comp=Z,182nm,1.4s
LKWY Lake 30.11 342 ⇑P **P** **07 03 08.1 +2.4**
LKWY Lake 30.11 342 P **P** **07 03 08.0 +2.3**
LKWY pmax pmax
comp=Z,182nm,1.4s
LKWY MLR MLR
comp=Z,38µm,21.0s
ATAH Atahualpa 30.16 139 LR LR 07 13 15.5
comp=Z,13µm,18.6s,baz=323,slow=33
SJG San Juan 30.19 82 P **P** **07 03 06.2 -0.2**
SJG IAmb IAmb 07 03 07.7
comp=Z,176nm,0.8s
SJG San Juan 30.19 82 ⇑P **P** **07 03 05.5 -0.8**
SJG San Juan 30.19 82 P **P** **07 03 06.2 -0.2**
SJG pmax pmax
comp=Z,176nm,0.8s
SJG MLR MLR
comp=Z,8µm,21.0s
SJG San Juan 30.19 82 LR LR 07 16 43.8
comp=Z,7µm,21.2s,baz=280,slow=40
YMP Mirror Lake Pl 30.20 342 IAmb IAmb 07 03 32.8
comp=Z,163nm,1.3s
GCPR Guaynabo City 30.25 82 P **P** **07 03 06.2 -0.7**
GCPR IAmb IAmb 07 03 08.7
comp=Z,117nm,0.9s
E28A Huff 30.25 356 P **P** **07 03 07.8 +1.1**
RLMT Red Lodge 30.30 344 P **P** **07 03 08.5 +1.2**
RLMT IAmb IAmb 07 03 18.9
comp=Z,322nm,1.4s
RLMT IAMs_20 IAMs_20 07 16 27.6
comp=Z,18µm,18.0s
RLMT Red Lodge 30.30 344 P **P** **07 03 08.6 +1.3**
baz=157,SNR=112
RLMT Red Lodge 30.30 344 ⇑P **P** **07 03 08.4 +1.2**
YNR Norris Junctio 30.33 342 IAmb IAmb 07 03 24.1
comp=Z,302nm,1.8s
AFDM Forest Hills D 30.36 322 P **P** **07 03 09.6 +1.9**
G45A Suttons Bay 30.37 17 P **P** **07 03 07.5 -0.1**
G45A IAmb IAmb 07 04 01.4
comp=Z,214nm,1.1s
WUPA West Chester U 30.38 35 P **P** **07 03 08.1 +0.3**
WUPA IAmb IAmb 07 03 19.1
comp=Z,146nm,1.5s
F42A Maple Grove Fa 30.42 13 IAmb IAmb 07 04 09.7
comp=Z,108nm,1.1s
N58A Sunbury 30.44 32 IAmb IAmb 07 03 20.4
comp=Z,112nm,1.1s
YHH Holmes Hill 30.45 341 P **P** **07 03 10.5 +1.8**
HUMP Col San Antoni 30.47 82 P **P** **07 03 08.6 -0.2**
HUMP IAmb IAmb 07 03 12.0
comp=Z,82nm,0.8s
HUMP PcP **PcP** **07 06 07.9 -0.1**
GLMI Grayling 30.48 19 P **P** **07 03 08.0 -0.7**
GLMI IAmb IAmb 07 04 17.1
comp=Z,193nm,0.8s
GLMI Grayling 30.48 19 P **P** **07 03 07.8 -0.8**
baz=205,SNR=11
GLMI Grayling 30.48 19 ⇑P **P** **07 03 07.8 -0.8**
COWI Conover 30.53 12 IAmb IAmb 07 03 20.3
comp=Z,375nm,1.9s
COWI IAMs_20 IAMs_20 07 16 50.5
comp=Z,16µm,22.0s
COWI Conover 30.53 12 ⇑P **P** **07 03 08.4 -0.7**
M57A Sunshine Farm, 30.60 31 P **P** **07 03 09.3 -0.4**
M57A IAmb IAmb 07 03 22.4
comp=Z,264nm,1.6s
YHL Hebgen Lake 30.61 341 IAmb IAmb 07 03 23.7
comp=Z,296nm,1.5s
E38A The Farm, Brul 30.62 8 IAmb IAmb 07 04 12.3
comp=Z,236nm,1.1s
HLID Hailey 30.63 336 P **P** **07 03 11.9 +1.7**
baz=147,SNR=52
HLID Hailey 30.63 336 ⇑P **P** **07 03 11.7 +1.5**
WVNY West Valley, N 30.72 28 P **P** **07 03 10.2 -0.6**
WVNY IAmb IAmb 07 03 23.6
comp=Z,171nm,0.9s
D32A Dogwood Acres, 30.72 1 P **P** **07 03 10.0 -0.7**
D32A IAmb IAmb 07 03 20.7
comp=Z,91nm,0.9s
L56A Greenwood 31.00 30 P **P** **07 03 12.6 -0.7**
LAO LASA Array 31.08 349 P **P** **07 03 14.3 +0.3**
LAO IAMs_20 IAMs_20 07 17 37.3
comp=Z,13µm,18.0s
LAO LASA Array 31.08 349 P **P** **07 03 14.5 +0.5**
baz=164,SNR=20
LAO LASA Array 31.08 349 ⇑P **P** **07 03 14.4 +0.5**
E43A Lone Tree Farm 31.26 14 P **P** **07 03 15.1 -0.4**
E43A IAmb IAmb 07 03 29.0
comp=Z,92nm,0.8s
GDXM Geysers 31.36 320 IAMs_20 IAMs_20 07 16 01.4
comp=Z,14µm,18.0s
MEDO Medina 31.38 28 IAmb IAmb 07 03 29.6
comp=Z,82nm,1.0s
BOZ Bozeman (W) 31.42 341 P **P** **07 03 18.8 +1.7**
BOZ IAmb IAmb 07 03 30.4
comp=Z,303nm,1.8s
BOZ IAMs_20 IAMs_20 07 17 05.4
comp=Z,25µm,20.0s
BOZ Bozeman (W) 31.42 341 P **P** **07 03 18.8 +1.7**
baz=153,SNR=40
BOZ Bozeman (W) 31.42 341 ⇑P **P** **07 03 18.6 +1.5**
BOZ Bozeman (W) 31.42 341 P **P** **07 03 18.8 +1.7**
BOZ pmax pmax
comp=Z,303nm,1.8s
BOZ MLR MLR
comp=Z,25µm,20.0s
MDND Maddock 31.46 358 P **P** **07 03 17.8 +0.5**
baz=176,SNR=72
D41A Chassel 31.57 12 IAmb IAmb 07 03 31.7
comp=Z,200nm,1.0s
WVOR Wild Horse Val 31.59 330 P **P** **07 03 20.0 +1.4**
WVOR IAmb IAmb 07 03 21.9
comp=Z,219nm,1.1s
WVOR Wild Horse Val 31.59 330 ⇑P **P** **07 03 20.3 +1.8**
WVOR Wild Horse Val 31.59 330 P **P** **07 03 20.0 +1.4**
WVOR pmax pmax
comp=Z,219nm,1.1s
WVOR MLR MLR
comp=Z,7µm,20.0s
HOPS Hopland Field 31.64 321 IAMs_20 IAMs_20 07 16 10.0
comp=Z,13µm,18.0s
ODNJ Ogdensburg 31.73 34 P **P** **07 03 19.2 -0.5**
J55A Hilton 31.75 28 P **P** **07 03 19.0 -0.8**
J55A IAmb IAmb 07 03 32.7
comp=Z,122nm,0.9s
BINY Binghamton 31.81 31 P **P** **07 03 20.4 -0.1**
baz=222,SNR=9.0
BINY Binghamton 31.81 31 ⇑P **P** **07 03 18.8 -1.7**
CPNY Central Park 31.89 35 IAmb IAmb 07 03 32.0
comp=Z,244nm,1.5s
AGMN Agassiz Nation 31.91 2 IAMs_20 IAMs_20 07 17 24.1
comp=Z,14µm,19.0s
EYMN Ely 31.94 8 IAmb IAmb 07 03 31.2
comp=Z,182nm,1.2s
EYMN Ely 31.94 8 IAMs_20 IAMs_20 07 17 44.8
comp=Z,19µm,19.0s
EYMN Ely 31.94 8 P **P** **07 03 20.8 -0.8**
baz=191,SNR=11
EYMN Ely 31.94 8 ⇑P **P** **07 03 20.7 -0.8**
K57A Scipio Center 31.95 30 IAmb IAmb 07 04 33.2
comp=Z,89nm,0.8s
TRNY Table Rock, Ra 31.98 35 P **P** **07 03 21.6 -0.3**
PAL Palisades 32.06 35 P **P** **07 03 22.5 -0.1**
PAL IAmb IAmb 07 03 33.6
comp=Z,200nm,1.1s
PAL Palisades 32.06 35 P **P** **07 03 22.1 -0.5**
baz=227,SNR=20
PAL Palisades 32.06 35 P **P** **07 03 22.5 -0.1**
PAL pmax pmax
comp=Z,200nm,1.2s
B35A Bob, Littlefor 32.11 5 P **P** **07 03 21.9 -1.0**
B35A IAmb IAmb 07 03 35.1
comp=Z,121nm,0.9s
J56A Wolcott 32.20 29 P **P** **07 03 23.5 -0.3**
J56A IAmb IAmb 07 03 36.2
comp=Z,131nm,1.0s
J08A Circle Bar Ran 32.21 331 IAmb IAmb 07 03 27.6
comp=Z,175nm,1.4s

KCPM Cahto Peak 32.38 321 IAMs_20 IAMs_20 07 16 14.5
comp=Z,15µm,19.0s
SADO Sadowa 32.39 25 IAmb IAmb 07 03 39.9
comp=Z,76nm,0.8s
SADO Sadowa 32.39 25 ⇓P **P** **07 03 24.2 -1.2**
SADO Sadowa 32.39 25 P **P** **07 03 23.6 -1.8**
comp=Z,36nm,1.0s,baz=224,slow=9.3,SNR=12
SADO LR LR 07 20 15.9
comp=Z,5µm,18.5s,baz=223,slow=43
comp=Z,36nm,1.0s
DGMT Dagmar 32.49 352 IAmb IAmb 07 03 28.6
comp=Z,142nm,1.1s
DGMT Dagmar 32.49 352 P **P** **07 03 27.2 +0.9**
baz=168,SNR=55
DGMT Dagmar 32.49 352 ⇑P **P** **07 03 26.9 +0.6**
PLID Pearl Lake 32.53 336 P **P** **07 03 28.3 +1.4**
PLID IAmb IAmb 07 03 39.8
comp=Z,173nm,1.2s
J57A Williamstown 32.71 30 P **P** **07 03 27.4 -0.9**
J57A IAmb IAmb 07 03 49.7
comp=Z,112nm,0.9s
PCRV Puerto La Cruz 32.75 97 LR LR 07 17 45.6
comp=Z,5µm,20.4s,slow=38
BPMT Black Pine Rid 32.75 340 P **P** **07 03 29.9 +1.0**
KSCT Kent School, K 32.79 35 P **P** **07 03 28.7 -0.2**
KMRM Mail Ridge 32.80 322 IAmb IAmb 07 03 47.0
comp=Z,133nm,1.1s
KMRM IAMs_20 IAMs_20 07 16 42.0
comp=Z,20µm,19.0s
DELO Deloro Mine 32.83 27 IAmb IAmb 07 03 42.1
comp=Z,128nm,1.0s
LYMT Lyon Mountain 32.85 341 P **P** **07 03 30.7 +1.0**
BMO Blue Mountains 32.87 334 P **P** **07 03 30.5 +0.7**
BMO IAMs_20 IAMs_20 07 18 01.8
comp=Z,13µm,18.0s
BMO Blue Mountains 32.87 334 ⇑P **P** **07 03 30.4 +0.7**
BMO Blue Mountains 32.87 334 P **P** **07 03 30.5 +0.7**
BMO pmax pmax
comp=Z,64nm,1.3s
BMO MLR MLR
comp=Z,13µm,18.0s
K05A Summer Lake 32.93 328 P **P** **07 03 32.3 +1.9**
K05A IAmb IAmb 07 03 45.8
comp=Z,96nm,1.1s
EGMT Eagleton 33.12 345 IAmb IAmb 07 03 45.2
comp=Z,209nm,1.1s
EGMT Eagleton 33.12 345 P **P** **07 03 33.0 +1.1**
baz=158,SNR=54
EGMT Eagleton 33.12 345 ⇑P **P** **07 03 33.0 +1.1**
KMPM Mount Pierce 33.16 322 IAMs_20 IAMs_20 07 16 39.0
comp=Z,16µm,19.0s
YBH Yreka Blue Hor 33.20 325 P **P** **07 03 33.0 +0.3**
YBH IAMs_20 IAMs_20 07 18 10.8
comp=Z,15µm,19.0s
YBH Yreka Blue Hor 33.20 325 P **P** **07 03 33.0 +0.3**
YBH Yreka Blue Hor 33.20 325 P **P** **07 03 33.0 +0.3**
comp=Z,13nm,0.8s,baz=132,slow=4.4,SNR=21
YBH LR LR 07 18 20.3
comp=Z,12µm,21.1s,baz=152,slow=39
comp=Z,13nm,0.8s
KHMM Horse Mountain 33.22 323 IAmb IAmb 07 03 37.6
comp=Z,153nm,1.1s
KHMM IAMs_20 IAMs_20 07 17 10.5
comp=Z,13µm,20.0s
I07A Izee 33.25 331 P **P** **07 03 34.3 +1.2**
K04D Chiloquin, OR 33.30 327 P **P** **07 03 34.7 +1.1**
L04D Klamath Falls 33.31 326 IAmb IAmb 07 03 36.4
comp=Z,145nm,1.2s
JCC Jacoby Creek, 33.36 322 IAMs_20 IAMs_20 07 17 00.2
comp=Z,18µm,19.0s
J59A Piesco 33.48 31 IAmb IAmb 07 03 47.6
comp=Z,212nm,1.4s
J05D Fort Rock, OR 33.50 328 P **P** **07 03 35.6 +0.2**
KRPM Rodgers 33.57 323 IAMs_20 IAMs_20 07 17 28.8
comp=Z,14µm,19.0s
L61B Northampton 33.72 34 P **P** **07 03 37.6 +0.5**
L61B Northampton 33.72 34 P **P** **07 03 36.8 -0.3**
baz=227,SNR=13
PINE Pine Mountain 33.72 329 P **P** **07 03 39.0 +1.7**
F10A Beach Ranch, E 33.75 335 IAmb IAmb 07 03 42.4
comp=Z,168nm,0.9s
F10A Beach Ranch, E 33.75 335 ⇑P **P** **07 03 38.2 +0.8**
QUA2 Belchertown 33.78 35 P **P** **07 03 37.5 -0.1**
ACCN Adirondack Com 33.85 32 IAmb IAmb 07 03 49.7
comp=Z,284nm,1.6s
ULM Lac du Bonnet 33.86 2 P **P** **07 03 37.3 -0.9**
ULM IAmb IAmb 07 03 47.8
comp=Z,129nm,1.2s
ULM Lac du Bonnet 33.86 2 ⇑P **P** **07 03 36.8 -1.5**
ULM Lac du Bonnet 33.86 2 P **P** **07 03 37.3 -0.9**
comp=Z,69nm,1.1s,baz=184,slow=9.0,SNR=49
ULM LR LR 07 18 14.2
comp=Z,7µm,20.6s,baz=185,slow=38
comp=Z,69nm,1.1s
BBSR BB Station 33.88 56 P **P** **07 03 38.7 0.0**
BBSR IAmb IAmb 07 03 41.2
comp=Z,134nm,1.0s
BBSR BB Station 33.88 56 IAMs_20 IAMs_20 07 17 36.9
comp=Z,13µm,19.0s
BBSR BB Station 33.88 56 ⇑P **P** **07 03 38.2 -0.4**
HUMO Hull Mountain 33.93 326 IAMs_20 IAMs_20 07 19 05.9
comp=Z,14µm,21.0s
G08A Pilot Rock 33.93 333 P **P** **07 03 40.0 +0.9**
G08A **PcP** **07 06 18.3 +1.1**
L02F Cave Junction 33.94 324 IAMs_20 IAMs_20 07 18 36.4
comp=Z,13µm,19.0s
NCB Newcomb 33.99 31 P **P** **07 03 38.9 -0.6**
NCB IAmb IAmb 07 03 52.1
comp=Z,176nm,1.5s
K62A Royalston 34.10 34 P **P** **07 03 42.3 +1.8**
TBTG Tabatinga, AM 34.23 124 P **P** **07 03 42.5 +0.6**
TBTG Tabatinga, AM 34.23 124 *eP* **P** **07 03 41.0 -0.8**
WBO Williamsburg 34.25 29 P **P** **07 03 42.6 +1.0**
M65A Busby, Falmout 34.28 37 P **P** **07 03 41.6 -0.3**
M65A IAmb IAmb 07 03 52.9
comp=Z,224nm,1.5s
M65A Busby, Falmout 34.28 37 P **P** **07 03 41.6 -0.3**
baz=231
LONY Lake Ozonia 34.29 30 P **P** **07 03 42.7 +0.6**
LONY IAmb IAmb 07 03 56.0
comp=Z,74nm,0.9s
LONY Lake Ozonia 34.29 30 P **P** **07 03 41.4 -0.7**
baz=222
I05D Terrebonne, OR 34.32 329 P **P** **07 03 43.8 +1.4**
I05D IAmb IAmb 07 03 46.1
comp=Z,121nm,1.1s
HRV Adam Dziewonsk 34.37 35 P **P** **07 03 43.0 +0.2**
HRV Adam Dziewonsk 34.37 35 P **P** **07 03 43.0 +0.2**
baz=228
HRV Adam Dziewonsk 34.37 35 ⇑P **P** **07 03 43.8 +1.0**
HRV Adam Dziewonsk 34.37 35 P **P** **07 03 43.0 +0.2**
HRV pmax pmax
comp=Z,406nm,1.6s
HRV MLR MLR
comp=Z,5µm,21.0s
KBO Bosley Butte 34.37 324 IAMs_20 IAMs_20 07 16 42.7
comp=Z,10µm,19.0s
K02D Willamette Mer 34.38 325 IAMs_20 IAMs_20 07 18 24.8
comp=Z,17µm,20.0s
J61A Chester 34.40 33 P **P** **07 03 43.5 +0.5**
CZSB Cruzeiro do Su 34.42 132 P **P** **07 03 45.1 +1.6**
CZSB IAmb IAmb 07 03 57.0
comp=Z,109nm,1.0s
CZSB Cruzeiro do Su 34.42 132 *eP* **P** **07 03 45.1 +1.6**
I04A Tendick Farm, 34.47 328 P **P** **07 03 44.5 +0.9**
I04A IAmb IAmb 07 03 56.2
comp=Z,126nm,1.3s
GDHS Morne Mazeau, 34.48 85 IAMs_20 IAMs_20 07 19 33.2
comp=Z,12µm,20.0s
CBE Ff, Capester 34.65 85 IAMs_20 IAMs_20 07 19 29.7
comp=Z,14µm,20.0s
GAC Glen Almond 34.70 28 ⇓P **P** **07 03 44.6 -0.9**
F07A Phinny Hill Vi 34.83 332 P **P** **07 03 47.9 +1.3**
J01E Myrtle Point 34.83 326 P **P** **07 03 49.0 +2.3**
J01E IAMs_20 IAMs_20 07 18 28.8
comp=Z,11µm,20.0s
KEBM Edson Butte 34.86 325 IAMs_20 IAMs_20 07 18 51.7
comp=Z,16µm,21.0s
I03D Drain, OR 34.88 327 P **P** **07 03 49.3 +2.2**
I03D IAmb IAmb 07 03 50.0
comp=Z,197nm,1.1s
NNA Nana 34.90 142 P **P** **07 03 49.5 +1.9**
NNA IAmb IAmb 07 03 56.7
comp=Z,232nm,2.0s
NNA Nana 34.90 142 *ceP* **P** **07 03 49.6 +1.9**
NNA pmax pmax
comp=Z,125nm,2.5s
NNA Nana 34.90 142 LR LR 07 15 12.0
comp=Z,9µm,20.5s,baz=330,slow=32
E08A Dider Farm, El 34.92 334 P **P** **07 03 47.7 +0.3**
FRNY Flat Rock 34.93 31 IAmb IAmb 07 04 09.5
comp=Z,299nm,2.0s
MAGL Barre de l'ile 34.97 85 IAMs_20 IAMs_20 07 19 38.3
comp=Z,11µm,20.0s
H04A Detroit Lake 34.99 329 P **P** **07 03 49.9 +1.8**
HAWA Hanford 35.05 333 IAMs_20 IAMs_20 07 19 05.2
comp=Z,17µm,19.0s
H04D Lebanon 35.15 328 IAmb IAmb 07 03 52.1
comp=Z,163nm,1.0s
HOOD Mount Hood Mea 35.19 330 IAmb IAmb 07 03 57.9
comp=Z,177nm,0.9s
E07A Sunnyside 35.31 333 P **P** **07 03 52.3 +1.4**
D08A Wollman Farm, 35.31 335 P **P** **07 03 51.7 +0.9**
LBNH Lisbon 35.35 33 P **P** **07 03 51.7 +0.5**
LBNH Lisbon 35.35 33 P **P** **07 03 52.0 +0.8**
baz=226,SNR=9.0
LBNH Lisbon 35.35 33 ⇑P **P** **07 03 52.0 +0.8**
LBNH Lisbon 35.35 33 P **P** **07 03 51.7 +0.5**
LBNH pmax pmax
comp=Z,602nm,1.6s
LBNH MLR MLR
comp=Z,10µm,20.0s
MNTQ Montreal, Queb 35.40 30 IAmb IAmb 07 04 04.9
comp=Z,185nm,1.3s
COR Corvallis 35.48 328 P **P** **07 03 54.1 +1.9**
COR Corvallis 35.48 328 ⇑P **P** **07 03 54.8 +2.5**
COR Corvallis 35.48 328 P **P** **07 03 54.1 +1.9**
COR pmax pmax
comp=Z,350nm,1.3s
COR MLR MLR
comp=Z,35µm,20.0s
TRQ Mont Tremblant 35.51 28 IAmb IAmb 07 04 06.1
comp=Z,190nm,1.3s
MXC Moxie City 35.52 333 P **P** **07 03 54.1 +1.5**
NEW Newport 35.60 338 P **P** **07 03 54.4 +1.0**
NEW Newport 35.60 338 P **P** **07 03 54.1 +0.7**
baz=146,SNR=22
NEW Newport 35.60 338 ⇑P **P** **07 03 53.9 +0.5**
NEW Newport 35.60 338 P **P** **07 03 54.4 +1.0**
NEW pmax pmax
comp=Z,36nm,1.1s
NEW MLR MLR
comp=Z,34µm,20.0s
NEW Newport 35.60 338 P **P** **07 03 53.0 -0.4**
comp=Z,26nm,0.9s,baz=152,slow=9.5,SNR=30
NEW LR LR 07 20 20.2
comp=Z,33µm,18.6s,baz=154,slow=40
comp=Z,26nm,0.9s
G03D McMinnville, O 35.90 329 P **P** **07 03 57.7 +1.8**
I63A Otisfield 35.93 34 P **P** **07 03 55.3 -0.9**
H62A Milan 35.98 33 P **P** **07 03 57.0 +0.4**
H62A IAmb IAmb 07 04 09.6
comp=Z,85nm,0.9s
F04A Amboy 36.01 330 IAmb IAmb 07 04 10.2
comp=Z,94nm,1.1s
LTY Liberty 36.21 333 IAmb IAmb 07 04 11.7
comp=Z,142nm,1.3s
D05A Enumclaw 36.74 332 P **P** **07 04 04.6 +1.6**
D05A IAmb IAmb 07 04 07.8
comp=Z,134nm,0.9s
WVL Waterville 36.77 34 IAmb IAmb 07 04 15.0
comp=Z,182nm,1.4s
E03A Lebam 37.00 330 P **P** **07 04 06.1 +0.9**
E03A IAmb IAmb 07 04 19.4
comp=Z,202nm,1.2s
BBGH Gun Hill 37.01 90 IAMs_20 IAMs_20 07 20 43.1
comp=Z,12µm,21.0s
PKME Peaks-Kenny Pk 37.42 34 P **P** **07 04 09.4 +0.5**
PKME IAmb IAmb 07 04 19.6
comp=Z,431nm,1.9s
PKME Peaks-Kenny Pk 37.42 34 P **P** **07 04 09.3 +0.5**
baz=229,SNR=5.6
PKME Peaks-Kenny Pk 37.42 34 ⇓P **P** **07 04 08.8 -0.1**
NLWA Neilton Lookou 37.75 331 IAmb IAmb 07 04 35.0
comp=Z,195nm,1.2s
NLWA Neilton Lookou 37.75 331 ⇑P **P** **07 04 13.5 +1.8**
EMMW East Machias 38.07 36 P **P** **07 04 14.9 +0.6**
EMMW IAmb IAmb 07 04 25.7
comp=Z,230nm,1.2s
TEFE Tefe 38.19 118 *eP* **P** **07 04 15.4 -0.3**
E62A Clayton Lake 38.21 32 IAmb IAmb 07 04 28.1
comp=Z,184nm,1.2s
F64A Sherman 38.31 34 P **P** **07 04 16.4 0.0**
F64A IAmb IAmb 07 04 29.4
comp=Z,117nm,0.9s
G65A Princeton 38.31 35 P **P** **07 04 16.5 +0.1**
G65A IAmb IAmb 07 04 27.9
comp=Z,214nm,1.2s
FFC Flin Flon 38.45 356 P **P** **07 04 17.4 0.0**
FFC IAmb IAmb 07 04 19.0
comp=Z,121nm,1.0s
FFC Flin Flon 38.45 356 ⇑P **P** **07 04 17.6 +0.1**
FFC Flin Flon 38.45 356 P **P** **07 04 17.4 0.0**
FFC pmax pmax
comp=Z,121nm,1.0s
LMQ La Malbaie 38.45 30 IAmb IAmb 07 04 28.9
comp=Z,522nm,2.0s
PGC Sidney 38.48 332 P **P** **07 04 19.2 +1.5**
GGN Saint George 38.66 36 IAmb IAmb 07 04 30.6
comp=Z,245nm,1.3s
EDM Edmonton 38.80 345 P **P** **07 04 21.0 +0.5**
EDM IAmb IAmb 07 04 31.3
comp=Z,292nm,1.2s
EDM Edmonton 38.80 345 P **P** **07 04 21.0 +0.5**
EDM pmax pmax
comp=Z,292nm,1.2s
PQI Presque Isle 39.02 33 IAmb IAmb 07 04 34.3
comp=Z,178nm,1.3s
BOAV Boa Vista 39.13 107 P **P** **07 04 23.1 -0.5**
BQAV Boa Vista 39.13 107 *eP* **P** **07 04 23.0 -0.6**
HAL Halifax 40.26 38 P **P** **07 04 31.9 -0.7**
HAL Halifax 40.26 38 P **P** **07 04 31.9 -0.7**
HAL pmax pmax
comp=Z,93nm,1.2s
CBB Campbell River 40.35 332 P **P** **07 04 33.9 +0.6**
BATG Bathurst New B 40.43 33 P **P** **07 04 34.1 0.0**
ETMB Extrema 40.59 128 P **P** **07 04 35.3 -0.4**
ETMB IAmb IAmb 07 04 43.5
comp=Z,438nm,1.9s
ETMB Extrema 40.59 128 *eP* **P** **07 04 35.2 -0.4**
BRLDA Berland Lookou 40.68 342 P **P** **07 04 36.8 +0.6**
BRLDA IAmb IAmb 07 04 52.2
comp=Z,192nm,1.4s
MACA Manacapuru-AM 41.41 115 P **P** **07 04 42.3 -0.2**
MACA Manacapuru-AM 41.41 115 *eP* **P** **07 04 42.6 +0.1**
GBN Guysborough 41.92 39 P **P** **07 04 46.7 +0.4**
SAML Samuel 42.42 124 P **P** **07 04 48.6 -2.1**
SAML Samuel 42.42 124 ⇑P **P** **07 04 49.1 -1.7**
SAML Samuel 42.42 124 P **P** **07 04 48.6 -2.1**
SAML pmax pmax
comp=Z,44nm,1.2s
SAML Samuel 42.42 124 *eP* **P** **07 04 49.2 -1.5**
FCC Fort Churchill 42.45 3 P **P** **07 04 50.7 +0.4**
FCC IAmb IAmb 07 05 02.2
comp=Z,542nm,1.9s
FCC Fort Churchill 42.45 3 P **P** **07 04 50.7 +0.4**
FCC pmax pmax
comp=Z,542nm,1.9s
BBB Bella Bella 43.10 333 P **P** **07 04 54.3 -1.5**
comp=Z,23nm,1.0s,baz=162,slow=3.2,SNR=2.5
BBB LR LR 07 23 24.1
comp=Z,7µm,19.5s,baz=147,slow=37
comp=Z,23nm,1.0s
LPAZ La Paz 43.62 137 P **P** **07 05 01.3 +0.2**
HILA High Level 44.52 346 P **P** **07 05 07.3 +0.2**
RPN Rapa Nui 44.65 195 LR LR 07 19 16.5
comp=Z,5µm,21.6s,baz=62,slow=30
SCHQ Schefferville 45.20 25 P **P** **07 05 11.8 -0.8**
SCHQ IAmb IAmb 07 05 27.8
comp=Z,81nm,1.0s
SCHQ Schefferville 45.20 25 P **P** **07 05 12.2 -0.4**
comp=Z,23nm,0.9s,baz=227,slow=6.2,SNR=26
SCHQ LR LR 07 28 06.7
comp=Z,6µm,19.4s,baz=222,slow=42
comp=Z,23nm,0.9s
PB11 IPOC Station P 45.25 141 P **P** **07 05 14.2 +0.6**
PB11 IAmb IAmb 07 05 26.2
comp=Z,154nm,1.2s
GO01 Chusmiza 45.46 141 IAmb IAmb 07 05 25.1
comp=Z,285nm,1.8s
TA01 Diego Aracena 45.56 143 P **P** **07 05 16.6 +0.8**
MDP Montagnes des 45.57 99 LR LR 07 26 59.0
comp=Z,3µm,19.9s,baz=290,slow=40
DIB Dawson Inlet, 45.75 331 P **P** **07 05 18.7 +1.8**
PB08 IPOC Station P 45.84 141 P **P** **07 05 19.5 +1.0**
PB08 IAmb IAmb 07 05 27.8
comp=Z,82nm,1.1s
DRLN Deer Lake 46.25 36 P **P** **07 05 20.9 -0.1**
DRLN IAmb IAmb 07 05 31.2
comp=Z,76nm,1.0s
DRLN Deer Lake 46.25 36 ⇓P **P** **07 05 20.5 -0.5**
PB02 IPOC Station P 46.31 143 IAmb IAmb 07 05 31.7
comp=Z,120nm,1.1s
ITTB Itaituba 46.33 113 *eP* **P** **07 05 21.2 -0.9**
U35K Hyder 46.54 336 IAMs_20 IAMs_20 07 26 31.2
comp=Z,9µm,19.0s
U35K Hyder 46.54 336 P **P** **07 05 24.9 +1.8**
baz=135
MALB Monte Alegre 46.56 109 *eP* **P** **07 05 23.6 -0.3**
V35K Ketchikan 46.78 334 P **P** **07 05 25.6 +0.6**
V35K Ketchikan 46.78 334 P **P** **07 05 26.9 +1.9**
baz=132
PB09 IPOC Station P 47.06 143 IAmb IAmb 07 05 38.0
comp=Z,74nm,0.9s
VILB Vilhena 47.14 126 IAmb IAmb 07 05 39.9
comp=Z,68nm,0.9s
VILB Vilhena 47.14 126 *eP* **P** **07 05 27.6 -0.8**
T35M Bob Quinn 47.38 336 IAMs_20 IAMs_20 07 27 37.6
comp=Z,8µm,18.0s
T35M Bob Quinn 47.38 336 P **P** **07 05 32.3 +2.5**
baz=135,SNR=15
CRAG Craig 47.51 333 P **P** **07 05 32.5 +1.8**
CRAG IAmb IAmb 07 05 45.4
comp=Z,104nm,1.3s
CRAG Craig 47.51 333 P **P** **07 05 31.7 +1.0**
CRAG Craig 47.51 333 P **P** **07 05 33.1 +2.3**
baz=131,SNR=11
CRAG Craig 47.51 333 ⇑P **P** **07 05 32.9 +2.1**
YKAB2 New Yellowknif 47.55 349 P **P** **07 05 31.5 +0.6**
PB06 IPOC Station P 47.59 144 P **P** **07 05 33.2 +1.3**
YKA Yellowknife Ar 47.61 349 P **P** **07 05 31.5 +0.1**
YKA Yellowknife Ar 47.61 349 P **P** **07 05 31.5 +0.1**
YKA Yellowknife Ar 47.61 349 P **P** **07 05 31.2 -0.2**
comp=Z,49nm,0.9s,baz=155,slow=7.4,SNR=274
YKA LR LR 07 28 05.5
comp=Z,10µm,18.6s,baz=167,slow=39
YKA P4KPbc 07 43 12.1
comp=Z,0.2nm,0.7s,baz=154,slow=4.5,SNR=5.1
comp=Z,49nm,0.9s
FLDN Fort Liard 47.65 343 P **P** **07 05 32.8 +1.1**
FLDN IAmb IAmb 07 05 56.6
comp=Z,77nm,1.0s
FLDN Fort Liard 47.65 343 P **P** **07 05 32.9 +1.2**
baz=145
KOTAN Kotaneelee Air 47.73 343 P **P** **07 05 33.9 +1.5**
baz=145
WRAK Wrangell Islan 47.82 335 IAMs_20 IAMs_20 07 27 01.3
comp=Z,10µm,19.0s
WRAK Wrangell Islan 47.82 335 P **P** **07 05 34.6 +1.5**
baz=132
LVC Limon Verde 47.89 143 P **P** **07 05 34.9 +0.4**
LVC IAmb IAmb 07 05 44.1
comp=Z,92nm,1.2s
LVC Limon Verde 47.89 143 P **P** **07 05 34.9 +0.4**
LVC pmax pmax
comp=Z,92nm,1.3s
LVC Limon Verde 47.89 143 LR LR 07 21 46.0
comp=Z,4µm,21.4s,baz=328,slow=31
LVC Limon Verde 47.89 143 *eP* **P** **07 05 34.8 +0.4**
NPGB Novo Progresso 47.92 116 *eP* **P** **07 05 32.8 -1.7**
U33K Whale Pass 47.94 334 P **P** **07 05 36.0 +2.0**
U33K IAMs_20 IAMs_20 07 27 55.3
comp=Z,8µm,18.0s
U33K Whale Pass 47.94 334 P **P** **07 05 36.0 +2.0**
baz=131
MCPB Macapa, AP 47.99 106 *eP* **P** **07 05 34.8 -0.3**
T33K Petersburg 48.34 335 P **P** **07 05 38.9 +1.9**
baz=132
DLBC Dease Lake 48.35 338 IAmb IAmb 07 05 41.5
comp=Z,125nm,1.1s
DLBC Dease Lake 48.35 338 P **P** **07 05 40.1 +2.8**
baz=136,SNR=89
DLBC Dease Lake 48.35 338 P **P** **07 05 38.6 +1.3**
comp=Z,96nm,1.0s,baz=154,slow=5.0,SNR=104
DLBC LR LR 07 28 00.0
comp=Z,23µm,18.7s,baz=133,slow=39
comp=Z,96nm,1.0s
S34M Telegraph Cree 48.38 337 IAMs_20 IAMs_20 07 27 45.0
comp=Z,10µm,20.0s
S34M Telegraph Cree 48.38 337 P **P** **07 05 40.1 +2.7**
baz=135,SNR=22
PB14 IPOC Station P 48.66 146 P **P** **07 05 41.1 +0.8**
PB14 IAmb IAmb 07 05 49.2
comp=Z,81nm,1.2s
PDRB Porto dos Gac 49.14 122 *eP* **P** **07 05 42.4 -1.5**
WTLY Watson Lake, Y 49.17 340 P **P** **07 05 45.4 +1.9**
WTLY IAmb IAmb 07 05 47.2
comp=Z,141nm,1.0s
WTLY Watson Lake, Y 49.17 340 P **P** **07 05 45.4 +1.9**
baz=139,SNR=140
R33M Jennings River 49.38 338 P **P** **07 05 47.7 +2.4**
R33M IAmb IAmb 07 05 49.2
comp=Z,107nm,1.0s
R33M Jennings River 49.38 338 P **P** **07 05 47.7 +2.4**
baz=136
S32K Killisnoo 49.44 335 IAMs_20 IAMs_20 07 28 41.9
comp=Z,8µm,20.0s
S32K Killisnoo 49.44 335 P **P** **07 05 47.6 +2.1**
baz=130
BBSD Serra de San D 49.47 131 *eP* **P** **07 05 45.2 -1.1**
PTLB Pontes e Lacer 49.47 128 *eP* **P** **07 05 45.4 -1.0**
SIT Sitka 49.48 334 P **P** **07 05 47.5 +1.6**
baz=129
CLDB Colider 49.51 120 *eP* **P** **07 05 45.4 -1.3**
GO02 Mina Guanaco 49.52 146 P **P** **07 05 48.1 +1.2**
Q32M Nakina River 49.55 337 P **P** **07 05 49.0 +2.4**
Q32M IAmb IAmb 07 06 01.1
comp=Z,123nm,1.4s
Q32M Nakina River 49.55 337 P **P** **07 05 49.3 +2.7**
baz=134,SNR=32
JIS Juneau Island 49.89 336 P **P** **07 05 50.9 +2.0**
R32K Eaglecrest 49.94 336 IAMs_20 IAMs_20 07 29 13.3
comp=Z,6µm,22.0s
R32K Eaglecrest 49.94 336 P **P** **07 05 51.5 +2.1**
baz=131
TGTN Hyland Airport 50.09 341 P **P** **07 05 52.4 +1.9**
baz=140,SNR=97
WRGLY Wrigley 50.14 345 IAmb IAmb 07 06 06.8
comp=Z,123nm,1.1s
WRGLY Wrigley 50.14 345 P **P** **07 05 52.0 +1.2**
baz=147,SNR=32
S31K Pelican 50.44 334 IAMs_20 IAMs_20 07 28 59.3
comp=Z,7µm,22.0s
S31K Pelican 50.44 334 P **P** **07 05 55.1 +2.0**
baz=129
P32M Atlin 50.52 337 IAmb IAmb 07 05 57.8
comp=Z,111nm,1.0s
P32M Atlin 50.52 337 P **P** **07 05 56.0 +2.2**
baz=133,SNR=83
R31K City Hall, Gus 50.52 335 P **P** **07 05 55.7 +1.9**
baz=130
P33M Teslin, Yukon 50.62 338 P **P** **07 05 56.6 +2.0**
baz=134,SNR=48
BBRB Robore, Bolivi 50.75 131 *eP* **P** **07 05 54.6 -1.5**
SKAG Skagway 51.04 336 P **P** **07 05 59.7 +2.0**
SKAG Skagway 51.04 336 P **P** **07 05 59.5 +1.8**
SKAG Skagway 51.04 336 P **P** **07 05 59.8 +2.1**
baz=131,SNR=25
SKAG Skagway 51.04 336 ⇑P **P** **07 05 59.0 +1.3**
AC02 Maricunga 51.11 147 P **P** **07 06 00.6 +1.4**
N32M Quiet Lake 51.38 339 P **P** **07 06 02.3 +2.1**
N32M IAmb IAmb 07 06 04.6
comp=Z,166nm,0.9s
N32M Quiet Lake 51.38 339 P **P** **07 06 02.5 +2.2**
baz=134,SNR=111
PLBC Pleasant Camp 51.44 336 P **P** **07 06 02.9 +2.2**
baz=130
FRB Frobisher Bay 51.45 16 ⇑P **P** **07 06 00.4 -0.2**
FRB Frobisher Bay 51.45 16 P **P** **07 06 00.6 -0.1**
comp=Z,38nm,0.9s,baz=221,slow=8.7,SNR=49
FRB LR LR 07 29 41.6
comp=Z,5µm,19.9s,baz=212,slow=38
comp=Z,38nm,0.9s
WHY Whitehorse 51.68 338 P **P** **07 06 04.3 +1.7**
baz=132,SNR=44
PTCN Pitcairn Islan 51.86 218 IAMs_20 IAMs_20 07 22 03.3
comp=Z,6µm,19.0s

LCO	**Las Campanas**	**52.09 150**	P	**P**	**07 06 07.4**	**+1.2**	
LCO	**Las Campanas**	**52.09 150**	P	**P**	**07 06 07.4**	**+1.2**	
LCO			pmax	pmax			
	comp=Z,54nm,1.0s						
P29M	**Windy Craggy**	**52.09 336**	IAmb	IAmb	07 06 20.6		
	comp=Z,116nm,1.2s						
P29M	**Windy Craggy**	**52.09 336**	P	**P**	**07 06 08.0**	**+2.3**	
	baz=128,SNR=34						
P30M	**Million Dollar**	**52.10 336**	P	**P**	**07 06 08.3**	**+2.7**	
	baz=130						
AC05	**El Transito**	**52.16 149**	P	**P**	**07 06 07.3**	**+0.8**	
O30N	**Mendenhall**	**52.20 337**	P	**P**	**07 06 08.5**	**+2.2**	
O30N			IAmb	IAmb	07 06 20.3		
	comp=Z,105nm,1.2s						
O30N	**Mendenhall**	**52.20 337**	P	**P**	**07 06 08.6**	**+2.2**	
	baz=131,SNR=54						
FARO	**Faro, Yukon**	**52.23 340**	P	**P**	**07 06 08.2**	**+1.6**	
FARO	**Faro, Yukon**	**52.23 340**	P	**P**	**07 06 08.4**	**+1.8**	
	baz=135,SNR=88						
SALV	**Santo Antonio**	**52.40 126**	*e*P	**P**	**07 06 07.4**	**-1.0**	
TMAB	**Tom-Au,PA,Br**	**52.41 106**	*e*P	**P**	**07 06 08.8**	**+0.2**	
M31M	**Drury Creek, Y**	**52.56 339**	P	**P**	**07 06 10.9**	**+1.9**	
M31M			IAMs_20	IAMs_20	07 30 17.5		
	comp=Z,10µm,19.0s						
M31M	**Drury Creek, Y**	**52.56 339**	P	**P**	**07 06 11.1**	**+2.0**	
	baz=134,SNR=42						
HYT	**Haines Junctio**	**52.76 337**	IAmb	IAmb	07 06 25.9		
	comp=Z,207nm,1.4s						
HYT	**Haines Junctio**	**52.76 337**	P	**P**	**07 06 13.2**	**+2.6**	
	baz=129,SNR=67						
PNL	**Peninsula**	**52.79 335**	P	**P**	**07 06 13.0**	**+2.3**	
PNL	**Peninsula**	**52.79 335**	P	**P**	**07 06 13.0**	**+2.3**	
	baz=126,SNR=37						
O29M	**Mount Kennedy**	**52.84 336**	IAmb	IAmb	07 06 15.2		
	comp=Z,74nm,1.0s						
O29M	**Mount Kennedy**	**52.84 336**	P	**P**	**07 06 13.4**	**+2.1**	
	baz=128						
N30M	**Aishikik Lake**	**53.01 338**	P	**P**	**07 06 14.6**	**+2.2**	
	baz=130						
BCPM	**Bancas Point**	**53.05 335**	P	**P**	**07 06 14.9**	**+2.2**	
BCPM			IAmb	IAmb	07 06 17.2		
	comp=Z,68nm,0.9s						
BCPM			IAMs_20	IAMs_20	07 30 52.5		
	comp=Z,8µm,18.0s						
YUK6	**Outpost Mounta**	**53.16 337**	P	**P**	**07 06 16.4**	**+2.7**	
	baz=128,SNR=52						
CO01	**Juntas del Tor**	**53.19 150**	P	**P**	**07 06 15.8**	**+1.5**	
PINM	**Pinnacle**	**53.39 335**	P	**P**	**07 06 17.6**	**+2.4**	
	baz=126,SNR=61						
YUK4	**Talbot Arm**	**53.52 337**	P	**P**	**07 06 18.9**	**+2.6**	
	baz=128,SNR=54						
CO03	**El Pedregal**	**53.62 151**	IAmb	IAmb	07 06 28.3		
	comp=Z,93nm,0.9s						
M30M	**Minto, Yukon**	**53.64 339**	P	**P**	**07 06 18.7**	**+1.7**	
	baz=131,SNR=59						
CO02	**Combarbal**	**53.79 151**	IAmb	IAmb	07 06 31.3		
	comp=Z,111nm,1.1s						
CO02	**Combarbal**	**53.79 151**	⇓P	**P**	**07 06 20.1**	**+1.6**	
SNDB	**Serra Nova Dou**	**53.84 119**	*e*P	**P**	**07 06 18.6**	**-0.5**	
YUK8	**Steele Glacier**	**53.91 336**	P	**P**	**07 06 21.5**	**+2.3**	
	baz=127,SNR=58						
TABL	**Table Mountain**	**53.95 335**	P	**P**	**07 06 21.7**	**+2.3**	
TABL			IAmb	IAmb	07 06 23.2		
	comp=Z,88nm,1.1s						
TABL			IAMs_20	IAMs_20	07 30 54.2		
	comp=Z,8µm,19.0s						
MAYO	**Mayo, Yukon**	**54.02 340**	P	**P**	**07 06 21.4**	**+1.7**	
MAYO	**Mayo, Yukon**	**54.02 340**	P	**P**	**07 06 21.9**	**+2.1**	
	baz=133,SNR=59						
LOGN	**Logan Glacier**	**54.12 336**	P	**P**	**07 06 22.8**	**+2.2**	
LOGN			IAmb	IAmb	07 06 30.7		
	comp=Z,57nm,1.0s						
MESA	**MESA**	**54.13 335**	IAmb	IAmb	07 06 24.7		
	comp=Z,87nm,1.1s						
MESA	**MESA**	**54.13 335**	P	**P**	**07 06 23.2**	**+2.4**	
	baz=124,SNR=16						
M29M	**Somme Creek**	**54.14 338**	IAmb	IAmb	07 06 26.0		
	comp=Z,118nm,0.9s						
M29M	**Somme Creek**	**54.14 338**	P	**P**	**07 06 23.0**	**+2.2**	
	baz=129						
CTG	**Chitna Glacier**	**54.33 336**	P	**P**	**07 06 24.6**	**+2.4**	
	baz=125,SNR=32						
BDQN	**Bodoquena, MS**	**54.35 131**	*e*P	**P**	**07 06 21.6**	**-1.1**	
GRNC	**Granite Creek**	**54.37 335**	IAMs_20	IAMs_20	07 31 07.2		
	comp=Z,10µm,19.0s						
L29M	**L29M**	**54.45 339**	IAmb	IAmb	07 06 26.1		
	comp=Z,147nm,1.0s						
L29M	**L29M**	**54.45 339**	P	**P**	**07 06 24.4**	**+1.5**	
	baz=130						
YUK3	**Moose Creek**	**54.47 337**	P	**P**	**07 06 25.2**	**+1.9**	
	baz=127,SNR=49						
MURT	**Porto Murtinho**	**54.51 133**	*e*P	**P**	**07 06 22.6**	**-1.2**	
ISLE	**Juniper Island**	**54.53 335**	IAmb	IAmb	07 06 27.0		
	comp=Z,77nm,1.0s						
BYL	**Byron's Ledge**	**54.64 282**	P	**P**	**07 06 25.8**	**+0.7**	
SBLHI	**Steaming Bluff**	**54.65 282**	P	**P**	**07 06 25.0**	**-0.1**	
KKO	**Keanakako`i**	**54.65 282**	P	**P**	**07 06 24.3**	**-0.8**	
BGLC	**Bering Glacier**	**54.65 334**	P	**P**	**07 06 27.2**	**+2.9**	
	baz=123,SNR=5.1						
RIM	**Rim**	**54.65 282**	P	**P**	**07 06 25.7**	**+0.6**	
UWB	**Uwekahuna B**	**54.66 282**	P	**P**	**07 06 25.2**	**0.0**	
WAX	**Waxell Ridge**	**54.66 334**	P	**P**	**07 06 26.8**	**+2.4**	
WAX			IAmb	IAmb	07 06 28.2		
	comp=Z,105nm,1.1s						
OBL	**Observatory Le**	**54.66 282**	P	**P**	**07 06 26.1**	**+0.8**	
SDHHI	**Sand Hill**	**54.67 282**	P	**P**	**07 06 27.0**	**+1.7**	
WRMHI	**West Rim**	**54.68 282**	P	**P**	**07 06 26.4**	**+1.1**	
K29M	**Barlow Dome**	**54.73 340**	P	**P**	**07 06 26.0**	**+1.0**	
K29M			IAmb	IAmb	07 06 39.6		
	comp=Z,91nm,1.2s						
K29M			IAMs_20	IAMs_20	07 29 04.7		
	comp=Z,6µm,18.0s						
K29M	**Barlow Dome**	**54.73 340**	P	**P**	**07 06 26.2**	**+1.2**	
	baz=131,SNR=52						
TGL	**Tana Glacier**	**54.81 335**	P	**P**	**07 06 27.7**	**+2.0**	
TGL			IAmb	IAmb	07 06 29.1		
	comp=Z,97nm,1.0s						
RVDE	**Rio Verde (Bra**	**54.82 128**	*e*P	**P**	**07 06 24.6**	**-1.6**	
J30M	**Hart River**	**54.83 341**	P	**P**	**07 06 26.6**	**+0.8**	
J30M	**Hart River**	**54.83 341**	P	**P**	**07 06 27.0**	**+1.3**	
	baz=133						
SUCK	**Suckling Hills**	**54.84 334**	IAmb	IAmb	07 06 29.9		
	comp=Z,120nm,1.2s						
SUCK			IAMs_20	IAMs_20	07 29 30.7		
	comp=Z,9µm,19.0s						
CRQE	**Cirque**	**54.92 335**	P	**P**	**07 06 28.5**	**+2.1**	
	baz=123,SNR=27						
CRQM	**Cirque**	**54.94 335**	P	**P**	**07 06 28.1**	**+1.4**	
CRQM			IAmb	IAmb	07 06 29.9		
	comp=Z,100nm,1.0s						
BERG	**Berg Lake**	**54.98 334**	P	**P**	**07 06 29.3**	**+2.6**	
BVCY	**Beaver Creek**	**55.01 337**	P	**P**	**07 06 28.8**	**+1.9**	
	baz=126,SNR=50						
KAIM	**Kayak Island**	**55.03 333**	P	**P**	**07 06 29.4**	**+2.3**	
KAIM			IAmb	IAmb	07 06 31.5		
	comp=Z,67nm,1.0s						
KAIM			IAMs_20	IAMs_20	07 29 21.9		
	comp=Z,5µm,21.0s						
KAIM	**Kayak Island**	**55.03 333**	P	**P**	**07 06 29.5**	**+2.4**	
	baz=121,SNR=6.6						
AQDB	**Aquidauana**	**55.14 130**	P	**P**	**07 06 27.3**	**-1.1**	
AQDB	**Aquidauana**	**55.14 130**	*e*P	**P**	**07 06 27.0**	**-1.4**	
HMT	**Hamilton**	**55.18 334**	P	**P**	**07 06 30.4**	**+2.2**	
HMT			IAmb	IAmb	07 06 31.8		
	comp=Z,127nm,1.0s						
HMT			IAMs_20	IAMs_20	07 29 30.8		
	comp=Z,9µm,21.0s						
MCARA	**McCarthy VSAT**	**55.24 335**	IAMs_20	IAMs_20	07 31 27.4		
	comp=Z,7µm,20.0s						
MCARA	**McCarthy VSAT**	**55.24 335**	P	**P**	**07 06 31.0**	**+2.4**	
	baz=124,SNR=76						
I30M	**Mount Dempster**	**55.29 341**	P	**P**	**07 06 29.9**	**+0.9**	
I30M			IAmb	IAmb	07 06 33.0		
	comp=Z,63nm,1.0s						
I30M			IAMs_20	IAMs_20	07 31 05.6		
	comp=Z,7µm,22.0s						
I30M	**Mount Dempster**	**55.29 341**	P	**P**	**07 06 29.9**	**+0.9**	
	baz=133						
VRDI	**Verde Repeater**	**55.33 335**	P	**P**	**07 06 31.4**	**+1.9**	
M27K	**Edge Creek, AK**	**55.35 337**	P	**P**	**07 06 31.5**	**+1.9**	
	baz=125						
J29N	**Klondike Camp**	**55.36 340**	IAmb	IAmb	07 06 43.2		
	comp=Z,49nm,1.1s						
J29N			IAMs_20	IAMs_20	07 31 55.4		
	comp=Z,9µm,22.0s						
J29N	**Klondike Camp**	**55.36 340**	P	**P**	**07 06 30.6**	**+1.1**	
	baz=130,SNR=21						
RAGM	**Ragged Mountai**	**55.38 334**	P	**P**	**07 06 31.4**	**+1.7**	
RAGM			IAmb	IAmb	07 06 33.8		
	comp=Z,129nm,1.0s						
RAGM			IAMs_20	IAMs_20	07 29 47.2		
	comp=Z,9µm,20.0s						
MT02	**Curacav**	**55.47 153**	IAmb	IAmb	07 06 41.7		
	comp=Z,114nm,1.3s						
C36M	**Paulatuk**	**55.49 349**	IAMs_20	IAMs_20	07 32 58.6		
	comp=Z,6µm,18.0s						
C36M	**Paulatuk**	**55.49 349**	P	**P**	**07 06 30.0**	**-0.2**	
	baz=149,SNR=21						
DAWY	**Dawson**	**55.50 339**	P	**P**	**07 06 30.8**	**+0.3**	
DAWY	**Dawson**	**55.50 339**	P	**P**	**07 06 31.3**	**+0.8**	
	baz=129,SNR=26						
SMTB	**Santa Maria do**	**55.57 113**	*e*P	**P**	**07 06 31.6**	**-0.1**	
PEL	**Peldehue**	**55.57 152**	IAmb	IAmb	07 06 44.1		
	comp=Z,176nm,1.7s						
PEL			IAMs_20	IAMs_20	07 25 04.7		
	comp=Z,8µm,18.0s						
GLB	**Gilahina Butte**	**55.59 335**	IAmb	IAmb	07 06 34.6		
	comp=Z,99nm,1.0s						
Q23K	**Middleton Isla**	**55.63 332**	P	**P**	**07 06 33.4**	**+2.0**	
	baz=119						
BMRM	**Bremner River**	**55.66 334**	P	**P**	**07 06 34.0**	**+2.3**	
	baz=122,SNR=36						
BCAR	**Beaver Creek A**	**55.74 337**	P	**P**	**07 06 34.0**	**+1.8**	
L27K	**Beaver Creek,**	**55.75 337**	P	**P**	**07 06 33.9**	**+1.6**	
L27K			IAmb	IAmb	07 06 35.8		
	comp=Z,85nm,1.0s						
L27K	**Beaver Creek,**	**55.75 337**	P	**P**	**07 06 34.1**	**+1.8**	
	baz=126						
TICA	**Tres Isletas**	**55.86 139**	*e*P	**P**	**07 06 33.0**	**-0.5**	
ANTJ	**Antonio Joao (**	**55.87 132**	*e*P	**P**	**07 06 32.6**	**-1.1**	
MT16	**CCHEN**	**55.88 153**	IAmb	IAmb	07 06 42.5		
	comp=Z,90nm,1.1s						
G31M	**Satah River**	**55.88 344**	P	**P**	**07 06 33.7**	**+0.7**	
G31M			IAmb	IAmb	07 06 35.0		
	comp=Z,109nm,0.9s						
G31M	**Satah River**	**55.88 344**	P	**P**	**07 06 33.9**	**+0.9**	
	baz=136,SNR=95						
EYAK	**Cordova Ski Ar**	**55.92 334**	P	**P**	**07 06 35.7**	**+2.2**	
EYAK	**Cordova Ski Ar**	**55.92 334**	P	**P**	**07 06 36.0**	**+2.5**	
	baz=120,SNR=28						
MT03	**Universidad Ad**	**55.94 153**	IAmb	IAmb	07 06 47.2		
	comp=Z,208nm,1.4s						
MT09	**Talagante**	**55.97 153**	IAmb	IAmb	07 06 46.2		
	comp=Z,162nm,1.4s						
N25K	**Chitina, Valde**	**56.00 335**	P	**P**	**07 06 36.2**	**+2.1**	
N25K			IAmb	IAmb	07 06 37.8		
	comp=Z,83nm,1.0s						
N25K	**Chitina, Valde**	**56.00 335**	P	**P**	**07 06 36.0**	**+1.9**	
	baz=122,SNR=57						
ESFA	**Espinillo Form**	**56.10 136**	*e*P	**P**	**07 06 35.0**	**-0.2**	
F31M	**Tsiigehtchic**	**56.12 344**	P	**P**	**07 06 35.1**	**+0.4**	
F31M			IAmb	IAmb	07 07 05.8		
	comp=Z,100nm,1.2s						
F31M	**Tsiigehtchic**	**56.12 344**	P	**P**	**07 06 35.3**	**+0.5**	
	baz=137,SNR=51						
HIN	**Hinchinbrook I**	**56.17 333**	IAMs_20	IAMs_20	07 29 19.0		
	comp=Z,7µm,21.0s						
EPYK	**Eagle Plains**	**56.18 342**	P	**P**	**07 06 35.8**	**+0.5**	
EPYK	**Eagle Plains**	**56.18 342**	P	**P**	**07 06 36.0**	**+0.7**	
	baz=133,SNR=23						
MT13	**San Alfonso**	**56.25 153**	IAmb	IAmb	07 06 45.8		
	comp=Z,199nm,1.6s						
L26K	**Log Cabin Wild**	**56.29 337**	IAmb	IAmb	07 06 39.2		
	comp=Z,65nm,1.1s						
L26K	**Log Cabin Wild**	**56.29 337**	P	**P**	**07 06 37.9**	**+1.8**	
	baz=124,SNR=29						
BO04	**La Punta**	**56.32 153**	IAmb	IAmb	07 06 45.3		
	comp=Z,111nm,1.5s						
FID	**Port Fidalgo**	**56.34 334**	P	**P**	**07 06 38.7**	**+2.2**	
FID			IAMs_20	IAMs_20	07 30 05.4		
	comp=Z,6µm,20.0s						
P23K	**Montague Islan**	**56.37 333**	P	**P**	**07 06 38.0**	**+1.3**	
	baz=118,SNR=16						
LMEL	**Las Melosas**	**56.38 152**	P	**P**	**07 06 38.5**	**+1.3**	
LMEL			IAmb	IAmb	07 06 46.5		
	comp=Z,88nm,1.2s						
K27K	**Chicken**	**56.41 338**	IAmb	IAmb	07 06 40.9		
	comp=Z,150nm,1.0s						
K27K			IAMs_20	IAMs_20	07 32 40.3		
	comp=Z,8µm,18.0s						
K27K	**Chicken**	**56.41 338**	P	**P**	**07 06 38.8**	**+1.9**	
	baz=126						
BO01	**Tunca**	**56.45 154**	P	**P**	**07 06 38.1**	**+0.5**	
BO01			IAmb	IAmb	07 06 48.5		
	comp=Z,122nm,1.3s						
G30M	**tAoh Zraii Nji**	**56.46 343**	P	**P**	**07 06 37.6**	**+0.3**	
	baz=134						
KLU	**Klutina**	**56.48 335**	IAmb	IAmb	07 06 41.8		
	comp=Z,108nm,0.9s						
KLU			IAMs_20	IAMs_20	07 30 02.1		
	comp=Z,9µm,21.0s						
KLU	**Klutina**	**56.48 335**	P	**P**	**07 06 39.6**	**+2.1**	
	baz=121,SNR=79						
EGAK	**Eagle**	**56.55 339**	P	**P**	**07 06 38.2**	**+0.4**	
EGAK	**Eagle**	**56.55 339**	P	**P**	**07 06 38.1**	**+0.3**	
	baz=128,SNR=42						
EGAK	**Eagle**	**56.55 339**	⇑P	**P**	**07 06 38.5**	**+0.7**	
VACA	**Villa Angela C**	**56.55 140**	*e*P	**P**	**07 06 38.6**	**+0.2**	
I28M	**Miner Creek**	**56.56 340**	P	**P**	**07 06 38.4**	**+0.3**	
I28M	**Miner Creek**	**56.56 340**	P	**P**	**07 06 38.5**	**+0.3**	
	baz=129,SNR=13						
H29M	**Whitestone**	**56.57 342**	IAmb	IAmb	07 07 07.6		
	comp=Z,94nm,1.1s						
H29M	**Whitestone**	**56.57 342**	P	**P**	**07 06 38.9**	**+0.8**	
	baz=131						
RPRD	**Ribas do Rio P**	**56.62 129**	*e*P	**P**	**07 06 38.2**	**-0.9**	
GO05	**Huala**	**56.63 155**	⇓P	**P**	**07 06 40.8**	**+2.0**	
HARP	**HAARP**	**56.65 336**	P	**P**	**07 06 40.6**	**+1.9**	
	baz=122,SNR=47						
GLI	**Glacier Island**	**56.66 334**	IAmb	IAmb	07 06 43.2		
	comp=Z,113nm,1.0s						
GLI	**Glacier Island**	**56.66 334**	P	**P**	**07 06 40.3**	**+1.5**	
	baz=119,SNR=25						
INK	**Inuvik**	**56.70 345**	P	**P**	**07 06 39.4**	**+0.5**	
INK			IAmb	IAmb	07 06 41.2		
	comp=Z,112nm,0.9s						
INK	**Inuvik**	**56.70 345**	P	**P**	**07 06 39.5**	**+0.5**	
	baz=138,SNR=124						
INK	**Inuvik**	**56.70 345**	⇑P	**P**	**07 06 39.4**	**+0.5**	
INK	**Inuvik**	**56.70 345**	P	**P**	**07 06 39.4**	**+0.5**	
INK			pmax	pmax			
	comp=Z,112nm,1.0s						
INK	**Inuvik**	**56.70 345**	P	**P**	**07 06 38.8**	**-0.1**	
	comp=Z,101nm,0.9s,baz=127,slow=8.0,SNR=218						
INK			LR	LR	07 34 03.7		
	comp=Z,16µm,18.2s,baz=158,slow=39						
	comp=Z,101nm,0.9s						
F30M	**Barrier River**	**56.79 344**	P	**P**	**07 06 40.3**	**+0.8**	
	baz=135						
M24K	**Tolsona, Glenn**	**56.90 335**	P	**P**	**07 06 42.8**	**+2.3**	
M24K			IAmb	IAmb	07 06 44.9		
	comp=Z,138nm,0.9s						
M24K			IAMs_20	IAMs_20	07 32 35.2		
	comp=Z,7µm,19.0s						
M24K	**Tolsona, Glenn**	**56.90 335**	P	**P**	**07 06 42.4**	**+1.9**	
	baz=121,SNR=38						
BO02	**Sierra Bellavi**	**56.93 154**	P	**P**	**07 06 41.5**	**+0.4**	
BO02			IAmb	IAmb	07 06 49.8		
	comp=Z,239nm,1.9s						
BO02	**Sierra Bellavi**	**56.93 154**	⇓P	P	07 06 48.1	+7.1	
KIP	**Kipapa**	**56.99 285**	*i* P	**P**	**07 06 44.8**	**+3.1**	
KIP			pmax	pmax			
	comp=Z,404nm,2.6s						
SCRK	**Sand Creek**	**57.07 338**	IAmb	IAmb	07 06 44.8		
	comp=Z,75nm,1.0s						
SCRK	**Sand Creek**	**57.07 338**	P	**P**	**07 06 43.3**	**+1.6**	
	baz=124,SNR=92						
PAX	**Paxson**	**57.07 336**	P	**P**	**07 06 42.8**	**+1.1**	
	baz=122,SNR=74						
NUUK	**Nuuk**	**57.08 22**	*e*P	**P**	**07 06 42.3**	**+0.6**	
NUUK			IAmb	IAmb	07 06 43.5		
	comp=Z,94nm,1.4s						
I27K	**Kandik River**	**57.21 340**	P	**P**	**07 06 43.5**	**+0.9**	
	baz=128						
J26L	**Joseph Creek**	**57.22 338**	IAmb	IAmb	07 06 46.0		
	comp=Z,150nm,1.1s						
J26L			IAMs_20	IAMs_20	07 33 27.6		
	comp=Z,9µm,21.0s						
J26L	**Joseph Creek**	**57.22 338**	P	**P**	**07 06 44.6**	**+1.8**	
	baz=125						
SCM	**Sheep Creek Mo**	**57.23 335**	IAMs_20	IAMs_20	07 30 25.0		
	comp=Z,8µm,21.0s						
SCM	**Sheep Creek Mo**	**57.23 335**	P	**P**	**07 06 44.0**	**+1.1**	
	baz=119,SNR=16						
SEW	**Seward**	**57.33 332**	P	**P**	**07 06 44.4**	**+0.9**	
	baz=116,SNR=28						
M23K	**Glacier View**	**57.38 334**	P	**P**	**07 06 44.9**	**+1.0**	
	baz=119,SNR=18						
KNK	**Knik Glacier**	**57.50 334**	P	**P**	**07 06 46.1**	**+1.4**	
KNK			IAmb	IAmb	07 06 58.6		
	comp=Z,110nm,1.1s						
KNK			IAMs_20	IAMs_20	07 30 14.1		
	comp=Z,9µm,22.0s						
KNK	**Knik Glacier**	**57.50 334**	P	**P**	**07 06 45.9**	**+1.1**	
	baz=118,SNR=28						
I26K	**Coal Creek Min**	**57.54 339**	P	**P**	**07 06 45.7**	**+0.8**	
I26K	**Coal Creek Min**	**57.54 339**	P	**P**	**07 06 45.7**	**+0.8**	
	baz=126,SNR=23						
H27K	**Steamboat Moun**	**57.56 341**	P	**P**	**07 06 46.0**	**+0.9**	
	baz=128						
O22K	**Cooper Landing**	**57.62 332**	IAmb	IAmb	07 07 22.9		
	comp=Z,144nm,1.0s						
O22K			IAMs_20	IAMs_20	07 32 19.3		
	comp=Z,6µm,18.0s						
O22K	**Cooper Landing**	**57.62 332**	P	**P**	**07 06 46.6**	**+1.1**	
	baz=116,SNR=11						
SML	**Sawmill**	**57.63 334**	IAmb	IAmb	07 06 48.8		
	comp=Z,94nm,1.0s						
SML			IAMs_20	IAMs_20	07 33 10.6		
	comp=Z,5µm,20.0s						
SML	**Sawmill**	**57.63 334**	P	**P**	**07 06 47.0**	**+1.3**	
	baz=118,SNR=35						
K24K	**Donnelly Dome**	**57.64 337**	P	**P**	**07 06 47.0**	**+1.3**	
	baz=122,SNR=52						
BRSE	**Bradley Lake S**	**57.76 331**	P	**P**	**07 06 47.8**	**+1.3**	
	baz=115,SNR=25						
WAT6	**Susitna Watana**	**57.77 335**	P	**P**	**07 06 48.1**	**+1.3**	
	baz=119,SNR=68						
CPUP	**Villa Florida**	**57.79 137**	IAmb	IAmb	07 06 54.4		
	comp=Z,146nm,2.0s						
CPUP	**Villa Florida**	**57.79 137**	⇑P	**P**	**07 06 45.9**	**-1.2**	
CPUP	**Villa Florida**	**57.79 137**	P	**P**	**07 06 46.3**	**-0.9**	
	comp=Z,4.2nm,0.7s,baz=330,slow=7.5,SNR=13						
CPUP			LR	LR	07 30 54.8		
	comp=Z,5µm,21.9s,baz=324,slow=35						
	comp=Z,4.2nm,0.7s						
CPUP	**Villa Florida**	**57.79 137**	*e*P	**P**	**07 06 46.0**	**-1.2**	
BRLK	**Bradley Lake**	**57.84 331**	P	**P**	**07 06 48.3**	**+1.2**	
BRLK			IAmb	IAmb	07 06 49.6		
	comp=Z,141nm,1.0s						
BRLK			IAMs_20	IAMs_20	07 31 13.1		
	comp=Z,6µm,20.0s						
KDAK	**Kodiak Island**	**57.86 329**	P	**P**	**07 06 48.4**	**+1.1**	
KDAK	**Kodiak Island**	**57.86 329**	P	**P**	**07 06 48.3**	**+1.1**	
	baz=112						
KDAK	**Kodiak Island**	**57.86 329**	⇑P	**P**	**07 06 48.2**	**+0.9**	
KDAK	**Kodiak Island**	**57.86 329**	*i* P	**P**	**07 06 48.3**	**+1.1**	
KDAK			pmax	pmax			
	comp=Z,84nm,1.1s						
KDAK			MLR	MLR			
	comp=Z,12µm,17.0s						
KDAK	**Kodiak Island**	**57.86 329**	LR	LR	07 32 00.3		
	comp=Z,10µm,18.5s,baz=127,slow=36						
GHO	**Glory Hole Cre**	**57.87 334**	P	**P**	**07 06 48.6**	**+1.3**	
GHO			IAMs_20	IAMs_20	07 30 25.8		
	comp=Z,8µm,21.0s						
PMR	**Palmer**	**57.87 334**	P	**P**	**07 06 48.4**	**+1.1**	
PMR			IAmb	IAmb	07 06 49.7		
	comp=Z,83nm,0.9s						
PMR	**Palmer**	**57.87 334**	P	**P**	**07 06 48.5**	**+1.3**	
PMR	**Palmer**	**57.87 334**	P	**P**	**07 06 48.3**	**+1.1**	
	baz=117,SNR=49						
PMR	**Palmer**	**57.87 334**	P	**P**	**07 06 48.4**	**+1.1**	
PMR			pmax	pmax			
	comp=Z,83nm,0.9s						
DHY	**Denali Highway**	**57.87 336**	IAMs_20	IAMs_20	07 33 12.9		
	comp=Z,8µm,20.0s						
DHY	**Denali Highway**	**57.87 336**	P	**P**	**07 06 48.2**	**+0.7**	
	baz=120,SNR=24						
CNPM	**China Poot**	**57.90 331**	P	**P**	**07 06 48.8**	**+1.3**	
CNPM			IAmb	IAmb	07 06 50.1		
	comp=Z,70nm,1.0s						
CNPM			IAMs_20	IAMs_20	07 32 20.6		
	comp=Z,7µm,18.0s						
RC01	**Rabbit Creek A**	**57.90 333**	IAmb	IAmb	07 06 50.0		
	comp=Z,91nm,0.9s						
RC01			IAMs_20	IAMs_20	07 31 56.7		
	comp=Z,5µm,19.0s						
RC01	**Rabbit Creek A**	**57.90 333**	P	**P**	**07 06 48.8**	**+1.3**	
	baz=116,SNR=46						
E29M	**Blow River**	**57.90 344**	IAmb	IAmb	07 06 49.7		
	comp=Z,82nm,1.1s						
E29M	**Blow River**	**57.90 344**	P	**P**	**07 06 48.4**	**+1.0**	
	baz=133,SNR=106						
J25K	**Salcha River,**	**57.92 338**	P	**P**	**07 06 48.8**	**+1.1**	
J25K	**Salcha River,**	**57.92 338**	P	**P**	**07 06 48.9**	**+1.1**	
	baz=123						
F28M	**Old Crow**	**57.94 342**	IAmb	IAmb	07 06 50.0		
	comp=Z,120nm,0.9s						
F28M	**Old Crow**	**57.94 342**	P	**P**	**07 06 48.7**	**+1.0**	
	baz=130,SNR=174						
A36M	**Sachs Harbour**	**57.96 350**	IAmb	IAmb	07 06 49.4		
	comp=Z,121nm,0.9s						
A36M			IAMs_20	IAMs_20	07 32 31.9		
	comp=Z,7µm,22.0s						
A36M	**Sachs Harbour**	**57.96 350**	P	**P**	**07 06 47.8**	**+0.1**	
	baz=148,SNR=185						
OHAK	**Old Harbor**	**58.01 328**	P	**P**	**07 06 49.7**	**+1.4**	
OHAK			IAmb	IAmb	07 06 51.0		
	comp=Z,97nm,1.0s						
OHAK	**Old Harbor**	**58.01 328**	P	**P**	**07 06 50.0**	**+1.7**	
OHAK	**Old Harbor**	**58.01 328**	P	**P**	**07 06 49.6**	**+1.4**	
	baz=111,SNR=14						
NRS	**Narsarsuaq**	**58.05 27**	*e*P	**P**	**07 06 48.9**	**+0.4**	
NRS			IAmb	IAmb	07 06 55.2		
	comp=Z,116nm,1.1s						
SYI	**Shuyak Island**	**58.08 330**	IAmb	IAmb	07 06 51.8		
	comp=Z,98nm,1.0s						
Q20K	**Shuyak Island**	**58.08 330**	P	**P**	**07 06 50.1**

comp=Z,18µm,18.4s,baz=118,slow=38
comp=Z,57nm,1.0s
G26K Porcupine Rive 58.72 341 P **P** **07 06 53.6 +0.5**
baz=126
CUT Chulitna 58.72 334 P **P** **07 06 54.5 +1.4**
CUT IAMs_20 IAMs_20 07 33 53.3
comp=Z,8µm,19.0s
CUT Chulitna 58.72 334 P **P** **07 06 54.6 +1.4**
baz=117,SNR=76
ITRB Iturama 58.73 126 *eP* **P** **07 06 53.2 -0.7**
O20K Slope Mountain 58.76 331 P **P** **07 06 54.8 +1.2**
baz=113,SNR=7.8
D28M Stokes Point 58.77 344 P **P** **07 06 54.3 +0.9**
baz=132,SNR=55
Q19K Cape Douglas, 58.80 330 IAmb IAmb 07 07 00.1
comp=Z,78nm,0.9s
Q19K IAMs_20 IAMs_20 07 32 32.6
comp=Z,8µm,20.0s
Q19K Cape Douglas, 58.80 330 P **P** **07 06 54.5 +0.6**
baz=111
MCK McKinley 58.81 336 P **P** **07 06 54.6 +0.8**
MCK IAmb IAmb 07 06 56.2
comp=Z,99nm,1.0s
MCK McKinley 58.81 336 P **P** **07 06 54.9 +1.1**
baz=119,SNR=48
MCK McKinley 58.81 336 P **P** **07 06 54.6 +0.8**
MCK pmax pmax
comp=Z,99nm,1.0s
TRCB Terra Rica 58.81 130 IAmb IAmb 07 07 01.4
comp=Z,41nm,0.7s
TRCB Terra Rica 58.81 130 *eP* **P** **07 06 53.4 -1.1**
MCR1 Marechal Candi 58.82 133 *eP* **P** **07 06 53.8 -0.7**
CCB Clear Creek Bu 58.83 337 P **P** **07 06 54.2 +0.2**
WRH Wood River Hil 58.85 337 IAmb IAmb 07 06 58.1
comp=Z,48nm,1.0s
P19K Oil Pt 58.88 331 IAMs_20 IAMs_20 07 32 44.6
comp=Z,6µm,18.0s
P19K Oil Pt 58.88 331 P **P** **07 06 55.8 +1.4**
baz=112
POKR Poker Plat Res 58.94 338 IAmb IAmb 07 06 56.9
comp=Z,77nm,1.0s
POKR Poker Plat Res 58.94 338 P **P** **07 06 55.7 +1.0**
baz=121,SNR=49
ILSW Iliamna Southw 58.97 331 P **P** **07 06 55.9 +0.8**
ILSW IAmb IAmb 07 06 57.1
comp=Z,75nm,1.0s
FYU Fort Yukon 58.97 340 IAmb IAmb 07 07 27.0
comp=Z,121nm,1.4s
COLA College 58.97 338 P **P** **07 06 55.4 +0.6**
COLA IAmb IAmb 07 06 58.6
comp=Z,81nm,1.0s
COLA PcP **PcP** **07 07 45.0 +1.3**
COLA College 58.97 338 P **P** **07 06 55.5 +0.6**
COLA College 58.97 338 P **P** **07 06 55.5 +0.6**
baz=120
COLA College 58.97 338 ⇑P **P** **07 06 55.2 +0.4**
COLA College 58.97 338 P **P** **07 06 55.4 +0.6**
COLA 07 07 45.0
COLA pmax pmax
comp=Z,81nm,1.0s
COLA MLR MLR
comp=Z,16µm,18.0s
RSO Redoubt South 58.97 332 P **P** **07 06 56.2 +0.9**
N20K Mount Spurr 59.03 333 P **P** **07 06 56.3 +0.8**
baz=114,SNR=64
SKT Skwentna 59.06 334 P **P** **07 06 56.8 +1.1**
SKT IAMs_20 IAMs_20 07 31 13.4
comp=Z,7µm,19.0s
SKT Skwentna 59.06 334 P **P** **07 06 56.6 +1.0**
baz=115,SNR=88
SFJD Kangerlussuaq 59.08 20 P **P** **07 06 55.5 -0.1**
SFJD IAmb IAmb 07 06 56.8
comp=Z,68nm,1.0s
SFJD Kangerlussuaq 59.08 20 ⇑P **P** **07 06 55.5 -0.1**
SFJD Kangerlussuaq 59.08 20 P **P** **07 06 55.5 -0.1**
SFJD pmax pmax
comp=Z,68nm,1.0s
SFJD Kangerlussuaq 59.08 20 *eP* **P** **07 06 55.5 -0.1**
SFJD IAmb IAmb 07 06 57.1
comp=Z,127nm,1.3s
SFJD Kangerlussuaq 59.08 20 LR LR 07 34 24.8
comp=Z,8µm,21.2s,baz=232,slow=38
PCMB Pacaembu 59.12 128 *eP* **P** **07 06 56.2 -0.5**
TRF Thorofare Moun 59.21 335 P **P** **07 06 57.8 +1.0**
baz=117,SNR=167
BMAR Burnt Mountain 59.25 341 P **P** **07 06 57.4 +0.5**
F26K Sheenjek River 59.27 341 P **P** **07 06 58.1 +1.1**
baz=126,SNR=50
NEA2 Nenana 59.28 337 P **P** **07 06 57.6 +0.5**
NEA2 IAmb IAmb 07 07 10.4
comp=Z,108nm,1.5s
NEA2 Nenana 59.28 337 P **P** **07 06 57.8 +0.7**
baz=119,SNR=17
H24K Noodor Dome 59.47 338 P **P** **07 06 59.3 +0.9**
H24K IAmb IAmb 07 07 00.8
comp=Z,124nm,1.1s
H24K IAMs_20 IAMs_20 07 34 14.2
comp=Z,7µm,22.0s
H24K Noodor Dome 59.47 338 P **P** **07 06 59.5 +1.1**
baz=121
IPMB Ipameri, GO 59.49 123 *eP* **P** **07 06 58.2 -1.1**
KTH Kantishna Hill 59.51 335 P **P** **07 06 59.2 +0.4**
SDBA SAO DESIDERIO 59.52 115 *eP* **P** **07 06 59.0 -0.6**
O19K Port Alsworth 59.59 331 P **P** **07 06 59.8 +0.5**
O19K IAmb IAmb 07 07 01.0
comp=Z,107nm,1.1s
O19K IAMs_20 IAMs_20 07 33 17.4
comp=Z,5µm,20.0s
O19K Port Alsworth 59.59 331 P **P** **07 06 59.7 +0.5**
baz=112
I23K Minto, Yukon-K 59.66 337 P **P** **07 07 00.6 +1.0**
I23K Minto, Yukon-K 59.66 337 P **P** **07 07 00.8 +1.2**
baz=119,SNR=99
Q17K Contact Creek 59.67 329 P **P** **07 07 00.7 +0.6**
baz=109,SNR=36
F25K Christian Rive 59.68 341 P **P** **07 07 01.2 +1.3**
baz=124,SNR=45
M20K Styx River 59.71 333 P **P** **07 07 01.0 +0.8**
M20K IAMs_20 IAMs_20 07 33 11.6
comp=Z,5µm,18.0s
M20K Styx River 59.71 333 P **P** **07 07 01.2 +1.0**
baz=114
P18K Big Mountain, 59.73 330 P **P** **07 07 00.6 +0.3**
P18K IAmb IAmb 07 07 02.1
comp=Z,114nm,1.1s
P18K IAMs_20 IAMs_20 07 33 11.2
comp=Z,8µm,18.0s
P18K Big Mountain, 59.73 330 P **P** **07 07 00.8 +0.5**
baz=110
PPLA Purkeypile 59.73 334 P **P** **07 07 01.0 +0.6**
PPLA Purkeypile 59.73 334 P **P** **07 07 01.2 +0.8**
baz=115,SNR=32
BPAW Bear Paw Mtn. 59.78 336 IAmb IAmb 07 07 02.5
comp=Z,65nm,1.1s
BPAW IAMs_20 IAMs_20 07 31 39.4
comp=Z,7µm,19.0s
BPAW Bear Paw Mtn. 59.78 336 P **P** **07 07 01.5 +0.9**
baz=117,SNR=38
G24K Hadweenzic Riv 59.79 339 IAmb IAmb 07 07 03.0
comp=Z,79nm,1.1s
G24K Hadweenzic Riv 59.79 339 P **P** **07 07 01.8 +1.3**
baz=122,SNR=20
O18K Koktuh Hills 59.88 331 IAmb IAmb 07 07 03.3
comp=Z,98nm,1.0s
O18K Koktuh Hills 59.88 331 P **P** **07 07 02.1 +0.8**
baz=110,SNR=30
N19K Bonanza Creek 59.90 332 P **P** **07 07 02.2 +0.7**
N19K IAMs_20 IAMs_20 07 32 31.5
comp=Z,5µm,21.0s
N19K Bonanza Creek 59.90 332 P **P** **07 07 02.2 +0.7**
baz=112
CAST Castle Rocks 59.91 335 P **P** **07 07 01.7 +0.2**
CAST IAMs_20 IAMs_20 07 35 03.9
comp=Z,8µm,20.0s
CAST Castle Rocks 59.91 335 P **P** **07 07 01.9 +0.4**
baz=115,SNR=167
E25K Arctic Village 59.96 341 P **P** **07 07 02.8 +1.1**
E25K IAmb IAmb 07 07 03.6
comp=Z,54nm,1.1s
E25K IAMs_20 IAMs_20 07 33 27.0
comp=Z,9µm,22.0s
E25K Arctic Village 59.96 341 P **P** **07 07 02.9 +1.2**
baz=124,SNR=54
MLY Manley 60.12 337 P **P** **07 07 03.7 +0.9**
baz=118,SNR=128
Q16K King Salmon 60.19 329 P **P** **07 07 04.4 +1.1**
baz=108,SNR=31
CHUM Lake Minchumin 60.21 335 P **P** **07 07 03.8 +0.4**
baz=115,SNR=16
ILULI Ilulissat 60.23 17 ⇓P **P** **07 07 03.8 +0.3**
ILULI Ilulissat 60.23 17 *eP* **P** **07 07 03.8 +0.3**
ILULI IAmb IAmb 07 07 04.8
comp=Z,65nm,1.2s
P17K Kvichak River 60.25 330 P **P** **07 07 04.5 +0.8**
baz=109,SNR=30
DY2G Dye2 60.25 21 *eP* **P** **07 07 03.8 -0.3**
DY2G IAmb IAmb 07 07 05.0
comp=Z,111nm,1.0s
M19K Big River Lodg 60.27 333 IAMs_20 IAMs_20 07 33 48.3
comp=Z,6µm,18.0s
M19K Big River Lodg 60.27 333 P **P** **07 07 05.1 +1.1**
baz=112
L20K Farewell, AK 60.27 334 P **P** **07 07 04.6 +0.6**
baz=113,SNR=141
LDASE Londrina, Braz 60.28 130 *eP* **P** **07 07 03.0 -1.6**
R16K Pilot Point 60.31 328 P **P** **07 07 05.3 +1.1**
baz=107
F24K Squaw Lake 60.36 340 P **P** **07 07 05.6 +1.1**
F24K Squaw Lake 60.36 340 P **P** **07 07 05.7 +1.2**
baz=122
PTGB Pitanga 60.39 132 *eP* **P** **07 07 04.2 -1.2**
CHGN Chignik 60.40 326 P **P** **07 07 05.2 +0.4**
CHGN IAmb IAmb 07 07 06.6
comp=Z,112nm,1.0s
CHGN PcP **PcP** **07 07 47.7 -1.9**
CHGN Chignik 60.40 326 P **P** **07 07 05.1 +0.3**
baz=113,SNR=11
XMAS Kiritimati 60.42 263 IAMs_20 IAMs_20 07 25 35.8
comp=Z,5µm,22.0s
FRBT Francisco Belt 60.46 133 *eP* **P** **07 07 04.6 -1.2**
N18K Kilae Creek 60.49 331 IAMs_20 IAMs_20 07 34 05.3
comp=Z,4µm,18.0s
N18K Kilae Creek 60.49 331 P **P** **07 07 06.2 +0.8**
baz=110
SVW2 Sparrevohn 60.50 332 IAmb IAmb 07 07 07.1
comp=Z,97nm,1.0s
SVW2 Sparrevohn 60.50 332 P **P** **07 07 06.0 +0.5**
ITQB Itaqui 60.52 139 P **P** **07 07 05.1 -1.0**
ITQB IAmb IAmb 07 07 17.1
comp=Z,127nm,1.4s
ITQB Itaqui 60.52 139 *eP* **P** **07 07 05.8 -0.3**
L19K White Mountain 60.58 333 P **P** **07 07 06.7 +0.7**
L19K IAmb IAmb 07 07 08.6
comp=Z,85nm,0.9s
L19K IAMs_20 IAMs_20 07 34 07.4
comp=Z,4µm,19.0s
L19K White Mountain 60.58 333 P **P** **07 07 06.8 +0.7**
baz=112,SNR=54
I21K Tanana 60.65 337 IAmb IAmb 07 07 08.6
comp=Z,85nm,1.1s
I21K Tanana 60.65 337 P **P** **07 07 07.3 +0.8**
baz=116,SNR=42
CNBA Chernabura Isl 60.66 324 P **P** **07 07 07.4 +0.7**
CNBA IAmb IAmb 07 07 08.3
comp=Z,95nm,1.1s
CNBA IAMs_20 IAMs_20 07 32 36.2
comp=Z,6µm,21.0s
G23K Bananza Creek 60.67 339 IAmb IAmb 07 07 08.9
comp=Z,65nm,1.1s
G23K Bananza Creek 60.67 339 P **P** **07 07 07.6 +1.0**
baz=119,SNR=59
CHNA Chernabura Isl 60.67 324 P **P** **07 07 07.0 +0.3**
baz=104
K20K Telida 60.70 335 P **P** **07 07 07.3 +0.4**
K20K IAMs_20 IAMs_20 07 35 21.8
comp=Z,7µm,19.0s
K20K Telida 60.70 335 P **P** **07 07 07.5 +0.6**
baz=113,SNR=89
M18K Stony River 60.75 332 P **P** **07 07 07.8 +0.6**
baz=111,SNR=53
O17K Koliganek Dis 60.76 330 P **P** **07 07 08.2 +1.0**
baz=108,SNR=43
CRSM Crissiumal (Br 60.76 135 *eP* **P** **07 07 06.4 -1.4**
H22K Ishtalitna Cre 60.76 338 P **P** **07 07 07.8 +0.6**
baz=117
GO06 Curarrehue 60.78 157 IAmb IAmb 07 07 18.6
comp=Z,76nm,1.2s
GO06 Curarrehue 60.78 157 ⇓P P 07 07 14.7 +6.9
C26K Camden Bay 60.81 343 P **P** **07 07 08.8 +1.3**
baz=126,SNR=35
UMMG Uummannaq 60.84 16 *eP* **P** **07 07 07.8 +0.1**
UMMG IAmb IAmb 07 07 08.4
comp=Z,97nm,1.4s
D25K Kavik River 60.88 342 IAmb IAmb 07 07 10.3
comp=Z,98nm,1.0s
D25K Kavik River 60.88 342 P **P** **07 07 09.1 +1.0**
baz=124
BB19B Bebedouro 60.91 126 *eP* **P** **07 07 08.0 -1.0**
P16K Nushagak River 60.96 329 P **P** **07 07 09.5 +0.9**
baz=107,SNR=13
COLD Coldfoot 60.98 339 P **P** **07 07 09.7 +1.0**
COLD IAmb IAmb 07 07 22.0
comp=Z,80nm,1.2s
COLD Coldfoot 60.98 339 P **P** **07 07 10.1 +1.5**
baz=119,SNR=58
S14K Fog Glacier 61.00 326 P **P** **07 07 09.9 +0.8**
baz=104
N17K Nushagak Hills 61.04 331 IAmb IAmb 07 07 11.5
comp=Z,105nm,1.1s
N17K IAMs_20 IAMs_20 07 34 11.8
comp=Z,7µm,18.0s
N17K Nushagak Hills 61.04 331 P **P** **07 07 10.2 +0.9**
baz=109,SNR=30
J20K Nowinta River 61.06 335 P **P** **07 07 09.7 +0.4**
J20K Nowinta River 61.06 335 P **P** **07 07 09.7 +0.4**
baz=114
UNIS Unisilda (Bra 61.11 137 *eP* **P** **07 07 09.8 -0.3**
NUUG Nuugaatsiaq 61.12 15 *eP* **P** **07 07 10.2 +0.7**
NUUG IAmb IAmb 07 07 22.9
comp=Z,112nm,1.3s
H21K Melozitna Rive 61.17 337 IAmb IAmb 07 07 11.6
comp=Z,58nm,1.0s
H21K Melozitna Rive 61.17 337 P **P** **07 07 10.3 +0.3**
baz=116,SNR=64
O16K Kokwok River B 61.18 330 P **P** **07 07 10.7 +0.6**
O16K IAmb IAmb 07 07 13.4
comp=Z,64nm,0.8s
O16K IAMs_20 IAMs_20 07 34 06.4
comp=Z,7µm,19.0s
O16K Kokwok River B 61.18 330 P **P** **07 07 10.9 +0.8**
baz=108,SNR=25
PPT Papeete 61.19 239 LR LR 07 27 02.6
comp=Z,3µm,18.6s,baz=50,slow=30
E23K Chandalar 61.20 340 P **P** **07 07 12.0 +1.7**
baz=120,SNR=82
PMNB Patos De Minas 61.22 122 *eP* **P** **07 07 10.8 -0.4**
JANB Januaria 61.26 118 *eP* **P** **07 07 11.0 -0.5**
UPNV Upernavik 61.27 13 *eP* **P** **07 07 11.0 +0.5**
UPNV IAmb IAmb 07 07 11.8
comp=Z,54nm,1.0s
G22K Bettles 61.28 339 P **P** **07 07 11.6 +0.9**
baz=118
SDPT Sand Point 61.28 325 IAMs_20 IAMs_20 07 33 16.4
comp=Z,5µm,20.0s
SDPT Sand Point 61.28 325 P **P** **07 07 11.8 +0.9**
SDPT Sand Point 61.28 325 P **P** **07 07 11.4 +0.5**
baz=103,SNR=8.7
TTA Tatalina 61.35 334 IAmb IAmb 07 07 12.8
comp=Z,102nm,1.0s
TTA Tatalina 61.35 334 P **P** **07 07 11.6 +0.2**
TTA Tatalina 61.35 334 P **P** **07 07 11.5 +0.2**
baz=111,SNR=88
TTA Tatalina 61.35 334 ⇑P **P** **07 07 11.4 +0.1**
L18K Granite Mounta 61.39 333 IAmb IAmb 07 07 13.5
comp=Z,118nm,1.1s
L18K IAMs_20 IAMs_20 07 33 06.0
comp=Z,5µm,19.0s
L18K Granite Mounta 61.39 333 P **P** **07 07 12.2 +0.7**
baz=110
FRTB Fartura 61.41 129 *eP* **P** **07 07 11.4 -0.9**
M17K Holitna River 61.45 332 IAMs_20 IAMs_20 07 34 36.5
comp=Z,6µm,18.0s
M17K Holitna River 61.45 332 P **P** **07 07 12.7 +0.8**
baz=109
I20K Naaghedeneel 61.45 336 IAMs_20 IAMs_20 07 32 40.5
comp=Z,6µm,21.0s
I20K Naaghedeneel 61.45 336 P **P** **07 07 12.3 +0.5**
baz=114
TOLK Toolik Lake Re 61.49 341 P **P** **07 07 13.0 +0.9**
TOLK IAmb IAmb 07 07 14.3
comp=Z,74nm,1.0s
TOLK Toolik Lake Re 61.49 341 P **P** **07 07 13.1 +0.9**
baz=121,SNR=68
D24K Happy Valley 61.52 342 IAmb IAmb 07 07 29.2
comp=Z,73nm,1.1s
D24K Happy Valley 61.52 342 P **P** **07 07 13.0 +0.7**
baz=122
J19K Poorman 61.59 335 P **P** **07 07 13.1 +0.3**
baz=112
IMAR Indian Mountai 61.67 337 P **P** **07 07 12.9 -0.4**
IMAR PcP **PcP** **07 07 55.4 +0.8**
N16K Nishlik Lake 61.77 331 P **P** **07 07 15.0 +0.9**
baz=107
C24K Franklin Bluff 61.79 342 P **P** **07 07 15.1 +1.0**
baz=122,SNR=83
J18K Innoko River 61.84 334 IAmb IAmb 07 07 16.2
comp=Z,74nm,1.1s
J18K IAMs_20 IAMs_20 07 36 30.0
comp=Z,6µm,19.0s
J18K Innoko River 61.84 334 P **P** **07 07 14.9 +0.3**
baz=111,SNR=37
RODS Rosario do Sul 61.89 139 *eP* **P** **07 07 15.4 +0.1**
H20K Anotleneega Mo 61.89 337 P **P** **07 07 14.9 0.0**
baz=114
ITAB Concordia 61.90 134 IAmb IAmb 07 07 22.1
comp=Z,66nm,1.1s
ITAB Concordia 61.90 134 *eP* **P** **07 07 14.6 -0.9**
O15K Ungalikthiuk R 61.91 329 P **P** **07 07 14.9 -0.1**
baz=106
E22K Anaktuvuk Pass 61.96 340 IAmb IAmb 07 07 17.5
comp=Z,73nm,1.1s
E22K Anaktuvuk Pass 61.96 340 P **P** **07 07 16.3 +1.0**
baz=118
D23K Nanushuk River 62.00 341 P **P** **07 07 17.0 +1.5**
baz=120
M16K Timber Creek 62.02 331 IAmb IAmb 07 07 18.5
comp=Z,100nm,1.0s
M16K IAMs_20 IAMs_20 07 33 47.8
comp=Z,6µm,20.0s
M16K Timber Creek 62.02 331 P **P** **07 07 16.9 +1.0**
baz=107,SNR=27
TULEG Thule 62.05 7 IAMs_20 IAMs_20 07 35 23.9
comp=Z,5µm,22.0s
L17K Donlin 62.07 332 P **P** **07 07 16.7 +0.5**
baz=109
F21K Alatna River 62.11 339 P **P** **07 07 17.6 +1.3**
baz=116
PLCA Paso Flores 62.13 157 IAmb IAmb 07 07 27.8
comp=Z,82nm,1.0s
PLCA Paso Flores 62.13 157 ⇓P **P** **07 07 17.4 +0.6**
PLCA Paso Flores 62.13 157 P **P** **07 07 17.6 +0.8**
comp=Z,10nm,0.8s,baz=321,slow=8.6,SNR=34
PLCA LR LR 07 29 01.4
comp=Z,6µm,18.1s,baz=334,slow=31
comp=Z,10nm,0.8s
PLCA Paso Flores 62.13 157 *eP* **P** **07 07 17.6 +0.8**
K17K Iditarod 62.27 333 IAmb IAmb 07 07 19.4
comp=Z,100nm,0.9s
K17K IAMs_20 IAMs_20 07 35 59.1
comp=Z,7µm,19.0s
K17K Iditarod 62.27 333 P **P** **07 07 17.6 +0.2**
baz=109
ALGR Alto Alegre (B 62.28 136 *eP* **P** **07 07 17.2 -0.9**
N15K Kwethluk River 62.31 330 P **P** **07 07 18.1 +0.3**
N15K Kwethluk River 62.31 330 P **P** **07 07 18.3 +0.5**
baz=106,SNR=6.0
TBOT Tacuaremb 62.34 140 *eP* **P** **07 07 18.2 -0.1**
GCSA Galena City Sc 62.38 335 P **P** **07 07 18.5 +0.4**
baz=111,SNR=9.5
RCLB Rio Claro- Sao 62.43 127 *eP* **P** **07 07 18.4 -0.8**
L16K Owhat River 62.47 332 P **P** **07 07 19.7 +0.9**
L16K IAmb IAmb 07 07 21.0
comp=Z,75nm,1.1s
L16K IAMs_20 IAMs_20 07 32 50.5
comp=Z,4µm,21.0s
L16K Owhat River 62.47 332 P **P** **07 07 19.7 +0.9**
baz=107,SNR=22
H19K Roundabout Mou 62.50 336 IAmb IAmb 07 07 20.5
comp=Z,88nm,1.0s
H19K Roundabout Mou 62.50 336 P **P** **07 07 19.2 +0.3**
baz=112
ISOG Isortoq, Green 62.52 24 *eP* **P** **07 07 18.8 -0.2**
D22K Ayikyak River 62.59 340 P **P** **07 07 20.6 +1.1**
D22K Ayikyak River 62.59 340 P **P** **07 07 20.5 +1.0**
baz=118
O14K Tigyukauivet M 62.64 329 IAmb IAmb 07 07 21.0
comp=Z,64nm,1.1s
O14K IAMs_20 IAMs_20 07 34 42.1
comp=Z,7µm,20.0s
O14K Tigyukauivet M 62.64 329 P **P** **07 07 19.8 -0.2**
baz=104
M15K Kasigluk River 62.74 330 P **P** **07 07 21.1 +0.5**
baz=106
E21K Killik River 62.82 340 IAmb IAmb 07 07 23.2
comp=Z,63nm,1.1s
E21K Killik River 62.82 340 P **P** **07 07 21.3 +0.3**
baz=116
FALS False Pass 62.84 324 P **P** **07 07 21.1 -0.2**
baz=100,SNR=8.1
G19K Purcell Mounta 62.98 337 P **P** **07 07 22.6 +0.4**
G19K Purcell Mounta 62.98 337 P **P** **07 07 22.7 +0.6**
baz=112,SNR=149
N14K Kuskokwak Cree 63.02 329 P **P** **07 07 22.7 +0.3**
baz=104,SNR=5.5
CPSB Cacapava Do Su 63.06 137 *eP* **P** **07 07 22.8 -0.4**
ANGG Ammassalik, Gr 63.06 24 *eP* **P** **07 07 22.2 -0.4**
ANGG IAmb IAmb 07 07 23.6
comp=Z,100nm,1.1s
H18K Honhosa River 63.12 336 P **P** **07 07 23.6 +0.6**
H18K IAmb IAmb 07 07 25.1
comp=Z,52nm,1.0s
H18K IAMs_20 IAMs_20 07 36 48.5
comp=Z,6µm,19.0s
H18K Honhosa River 63.12 336 P **P** **07 07 23.8 +0.7**
baz=110,SNR=24
SPB Sao Paulo 63.16 128 *eP* **P** **07 07 23.4 -0.5**
M14K Bethel 63.36 330 IAMs_20 IAMs_20 07 35 35.1
comp=Z,5µm,18.0s
M14K Bethel 63.36 330 P **P** **07 07 25.7 +1.0**
baz=104,SNR=29
DIAM Diamantina, MG 63.36 121 *eP* **P** **07 07 25.6 0.0**
L15K Ungalak Mounta 63.38 331 P **P** **07 07 25.9 +1.1**
baz=105
C21K Knifeblade Rid 63.40 340 P **P** **07 07 26.1 +1.2**
baz=116
J16K Anvik River 63.44 333 P **P** **07 07 26.5 +1.3**
baz=107,SNR=47
LPA La Plata 63.44 144 *d* *i* P **P** **07 07 23.8 -1.7**
LPA PP **PP** **07 09 46.5 +1.1**
LPA PKIKP **PKiKP** **07 14 14.8 +2.9**
LPA S **S** **07 15 58.7 +1.4**
LPA SS **SS** **07 19 59.5 -5.3**
E20K Nigu River 63.48 339 P **P** **07 07 26.4 +0.9**
baz=114,SNR=73
G18K Tagagawik 63.49 336 IAmb IAmb 07 07 27.9
comp=Z,53nm,1.0s
G18K Tagagawik 63.49 336 P **P** **07 07 26.4 +0.9**
baz=110
F19K Shaleruckik Mo 63.49 337 IAmb IAmb 07 07 27.7
comp=Z,89nm,1.1s
F19K Shaleruckik Mo 63.49 337 P **P** **07 07 26.4 +0.9**
baz=111
E19K Redstone River 63.53 338 P **P** **07 07 26.3 +0.6**
E19K IAmb IAmb 07 07 27.8
comp=Z,56nm,0.9s
E19K Redstone River 63.53 338 P **P** **07 07 26.5 +0.8**
baz=112
B21K Ikpikpuk River 63.55 341 P **P** **07 07 26.4 +0.6**
B21K IAmb IAmb 07 07 27.7
comp=Z,53nm,1.0s
B21K Ikpikpuk River 63.55 341 P **P** **07 07 26.5 +0.8**
baz=116,SNR=47
K15K Wolf Creek Mou 63.57 332 P **P** **07 07 27.5 +1.4**
K15K IAMs_20 IAMs_20 07 35 09.5
comp=Z,4µm,20.0s
K15K Wolf Creek Mou 63.57 332 P **P** **07 07 27.7 +1.6**
baz=106,SNR=30
I17K Unalakleet 63.66 334 IAmb IAmb 07 07 29.6
comp=Z,93nm,1.1s
I17K Unalakleet 63.66 334 P **P** **07 07 28.4 +1.8**
baz=107,SNR=14
H17K Granite Mounta 63.66 335 IAMs_20 IAMs_20 07 36 44.0
comp=Z,7µm,19.0s
H17K Granite Mounta 63.66 335 P **P** **07 07 27.8 +1.2**
baz=108
TRQA Tornquist 63.66 149 P **P** **07 07 26.7 -0.3**
TRQA IAmb IAmb 07 07 34.5
comp=Z,69nm,1.1s
TRQA IAMs_20 IAMs_20 07 30 11.9
comp=Z,8µm,21.0s
TRQA Tornquist 63.66 149 P **P** **07 07 26.7 -0.3**

TRQA pmax pmax
comp=Z,69nm,1.1s
PET01 Itanhaem-SP 63.66 128 *e*P **P 07 07 27.2 -0.1**
ICESG Greenland Ices 63.69 20 ⇑P **P 07 07 27.1 -0.1**
ICESG Greenland Ices 63.69 20 *e*P **P 07 07 27.1 -0.1**
ICESG IAmb IAmb 07 07 29.1
comp=Z,182nm,0.9s
D20K Etivluk River 63.81 340 P **P 07 07 28.4 +0.8**
baz=114
LL02 Futaleuf 63.82 159 IAmb IAmb 07 07 36.0
comp=Z,58nm,1.1s
BSCB Bom Sucesso 63.83 124 *e*P **P 07 07 28.2 -0.4**
L14K Kuka Creek 63.85 331 P **P 07 07 28.6 +0.7**
L14K IAMs_20 IAMs_20 07 35 43.0
comp=Z,6µm,19.0s
L14K Kuka Creek 63.85 331 P **P 07 07 28.8 +0.9**
baz=104,SNR=33
PLTB Pedras Altas 63.85 139 P **P 07 07 27.9 -0.5**
PLTB IAmb IAmb 07 07 36.3
comp=Z,40nm,0.8s
PLTB Pedras Altas 63.85 139 *e*P **P 07 07 26.0 -2.4**
M13K Dall Lake 63.94 330 P **P 07 07 29.7 +1.1**
baz=103,SNR=18
EUNU Eureka 63.96 2 ⇓P **P 07 07 29.4 +0.9**
CNLB Canela 64.08 135 *e*P **P 07 07 29.8 -0.2**
F18K Selawik 64.11 337 P **P 07 07 30.4 +0.9**
baz=110,SNR=19
G17K Kiwalik Mounta 64.14 336 P **P 07 07 31.2 +1.4**
baz=108
D19K Kuna River 64.23 339 IAmb IAmb 07 07 32.8
comp=Z,86nm,0.9s
D19K Kuna River 64.23 339 P **P 07 07 31.1 +0.7**
baz=112,SNR=66
PARB Paraibuna 64.40 126 *e*P **P 07 07 32.4 +0.1**
UNV Unalaska Valle 64.47 322 P **P 07 07 33.5 +1.4**
baz=97,SNR=6.4
B20K Meade River 64.51 341 P **P 07 07 33.2 +1.1**
baz=114,SNR=97
H16K Elim 64.52 334 P **P 07 07 33.8 +1.5**
baz=106,SNR=54
J14K Nanvaranak Lak 64.59 332 IAMs_20 IAMs_20 07 37 48.6
comp=Z,5µm,18.0s
J14K Nanvaranak Lak 64.59 332 P **P 07 07 34.3 +1.5**
baz=104,SNR=35
AY01 Puyuhuapi 64.64 160 P **P 07 07 33.9 +0.7**
AY01 IAmb IAmb 07 07 44.2
comp=Z,53nm,1.0s
F17K Baldwin Pennin 64.66 337 IAmb IAmb 07 07 51.5
comp=Z,54nm,1.0s
F17K Baldwin Pennin 64.66 337 P **P 07 07 34.1 +0.9**
baz=108
E18K Tukpahlearik C 64.73 338 P **P 07 07 34.2 +0.6**
E18K Tukpahlearik C 64.73 338 P **P 07 07 34.4 +0.8**
baz=109
G16K Koyuk River 64.78 335 IAmb IAmb 07 07 36.6
comp=Z,97nm,1.0s
G16K IAMs_20 IAMs_20 07 37 27.6
comp=Z,6µm,19.0s
G16K Koyuk River 64.78 335 P **P 07 07 35.5 +1.5**
baz=106
PAGU Agualva, Azore 64.89 54 *e*P **P 07 07 35.9 +0.7**
comp=Z,136nm,0.9s
A21K Barrow 64.89 342 P **P 07 07 35.2 +0.6**
baz=115,SNR=33
C19K Lookout Ridge 64.96 340 IAmb IAmb 07 07 37.6
comp=Z,120nm,1.1s
C19K Lookout Ridge 64.96 340 P **P 07 07 36.4 +1.3**
baz=111
RCBR Riachuelo 64.98 105 P **P 07 07 37.0 +0.8**
RCBR IAmb IAmb 07 07 38.4
comp=Z,87nm,1.0s
RCBR Riachuelo 64.98 105 ⇑P **P 07 07 37.0 +0.8**
RCBR Riachuelo 64.98 105 P **P 07 07 37.0 +0.8**
RCBR pmax pmax
comp=Z,87nm,1.0s
RCBR MLR MLR
comp=Z,3µm,20.0s
RCBR Riachuelo 64.98 105 LR LR 07 37 24.4
comp=Z,3µm,20.2s,baz=305,slow=37
RCBR Riachuelo 64.98 105 *e*P **P 07 07 36.0 -0.2**
E17K Hotham Inlet 65.08 337 P **P 07 07 36.7 +0.8**
baz=108,SNR=154
M11K Mekoryuk 65.32 329 P **P 07 07 38.2 +0.7**
baz=100
C18K Utukok River 65.35 339 IAmb IAmb 07 07 39.7
comp=Z,68nm,0.9s
C18K Utukok River 65.35 339 P **P 07 07 38.0 +0.3**
baz=109
NEEM North Greenlan 65.36 10 *i* P **P 07 07 38.5 +0.6**
NEEM IAmb IAmb 07 07 40.1
comp=Z,191nm,0.9s
SUMG Summit 65.52 17 P **P 07 07 39.4 +0.2**
SUMG IAmb IAmb 07 07 40.2
comp=Z,82nm,1.1s
SUMG Summit 65.52 17 ⇑P **P 07 07 39.5 +0.2**
SUMG Summit 65.52 17 P **P 07 07 39.4 +0.2**
SUMG pmax pmax
comp=Z,82nm,1.1s
SUMG Summit 65.52 17 *i* P **P 07 07 39.0 -0.2**
SUMG IAmb IAmb 07 07 40.5
comp=Z,87nm,1.1s
VAS01 Vassouras-RJ 65.55 124 *e*P **P 07 07 39.4 -0.3**
D17K Noatak River 65.73 338 P **P 07 07 40.6 +0.6**
baz=107,SNR=55
NIKH Nikolski High 65.77 321 P **P 07 07 40.4 -0.2**
baz=95
B18K Kokolik River 65.79 340 P **P 07 07 41.6 +1.1**
baz=109
F15K North Star Dit 65.79 335 P **P 07 07 41.9 +1.3**
F15K IAMs_20 IAMs_20 07 38 00.2
comp=Z,6µm,19.0s
F15K North Star Dit 65.79 335 P **P 07 07 41.8 +1.3**
baz=104
GUA01 Guaratinga, BA 65.81 117 *e*P **P 07 07 41.6 +0.2**
ANM Nome 65.81 334 P **P 07 07 41.8 +1.1**
ANM IAmb IAmb 07 07 43.1
comp=Z,80nm,1.0s
ANM IAMs_20 IAMs_20 07 38 15.8
comp=Z,6µm,20.0s
ANM Nome 65.81 334 P **P 07 07 41.7 +1.1**
baz=103,SNR=25
ANM Nome 65.81 334 P **P 07 07 41.8 +1.1**
ANM pmax pmax
comp=Z,80nm,1.0s
ANM MLR MLR
comp=Z,6µm,20.0s
A19K Wainwright 65.83 341 P **P 07 07 41.6 +0.9**
baz=110
COYC Coyhaique 65.85 161 P **P 07 07 42.1 +1.0**
COYC IAmb IAmb 07 07 52.5
comp=Z,83nm,1.0s
COYC Coyhaique 65.85 161 IAMs_20 IAMs_20 07 29 23.8
comp=Z,5µm,21.0s
COYC Coyhaique 65.85 161 ⇑P **P 07 07 42.5 +1.4**
C17K DeLong Mountai 65.99 338 P **P 07 07 42.3 +0.6**
baz=107
PSET Sete Cidades 66.07 55 *e*P **P 07 07 44.5 +1.6**
comp=Z,345nm,1.4s
PDA Ponta Delgada 66.12 56 *e*P **P 07 07 43.0 -0.1**
comp=Z,163nm,0.9s
SOEG Soedalen 66.22 22 *e*P **P 07 07 43.3 +0.1**
SOEG IAmb IAmb 07 07 44.4
comp=Z,110nm,1.1s
CMLA Cha da Macela 66.23 56 P **P 07 07 44.6 +0.7**
CMLA Cha da Macela 66.23 56 *e*P **P 07 07 44.2 +0.3**
comp=Z,95nm,1.4s
CMLA Cha da Macela 66.23 56 ⇓P **P 07 07 45.4 +1.5**
CMLA Cha da Macela 66.23 56 P **P 07 07 44.6 +0.7**
CMLA pmax pmax
comp=Z,153nm,0.9s
DUB01 Friburgo-RJ 66.30 124 *e*P **P 07 07 44.6 0.0**
PGRON Lagoa das Cont 66.34 56 *e*P **P 07 07 46.0 +1.3**
comp=Z,280nm,1.0s
F14K Arctic Creek 66.41 335 P **P 07 07 45.5 +1.0**
baz=102
BART Pico Bartolome 66.51 56 *e*P **P 07 07 47.0 +1.2**
comp=Z,330nm,0.9s
P08K Saint George I 66.52 325 P **P 07 07 45.1 -0.2**
baz=96
RIB01 Linhares ES 66.57 120 *e*P **P 07 07 46.2 -0.1**
PSMA Santa Maria 66.58 56 *e*P **P 07 07 46.7 +0.6**
comp=Z,96nm,1.6s
PSMN Pico do Norte, 66.63 56 *e*P **P 07 07 46.5 0.0**
comp=Z,109nm,1.8s
C16K Lisburne Hills 66.70 338 P **P 07 07 47.0 +0.7**
C16K IAmb IAmb 07 07 48.4
comp=Z,58nm,1.1s
C16K IAMs_20 IAMs_20 07 36 32.3
comp=Z,6µm,19.0s
C16K Lisburne Hills 66.70 338 P **P 07 07 46.8 +0.5**
baz=105
SPIA Saint Paul Isl 66.96 326 P **P 07 07 49.1 +1.0**
baz=95
TNA Tin City 67.08 335 P **P 07 07 50.0 +1.3**
baz=101,SNR=20
GO08 Villa O'Higgin 68.30 162 P **P 07 07 56.4 -0.2**
GO08 IAmb IAmb 07 08 08.7
comp=Z,116nm,1.4s
GAMB Gambell 68.40 333 P **P 07 07 58.4 +1.3**
baz=97
BORG Borgarnes 69.55 26 LR LR 07 41 29.6
comp=Z,2µm,18.5s,baz=274,slow=38
GO09 Cerro Castillo 70.88 163 P **P 07 08 14.6 +2.2**
GO09 IAmb IAmb 07 08 24.7
comp=Z,80nm,1.4s
RAR Rarotonga 71.38 240 LR LR 07 32 10.9
comp=Z,2µm,18.4s,baz=13,slow=30
MG02 Cerro Sombrero 73.11 162 P **P 07 08 27.8 +2.1**
PMOZ Porto Moniz, M 73.51 60 *e*S **SKiKP 07 18 06.4 +8.0**
PMOZ Porto Moniz, M 73.51 60 *e*LR LR 07 31 19.2
comp=Z,4µm,22.0s
PMAR Madeira 73.76 60 *e*P **P 07 08 32.3 +1.8**
comp=Z,132nm,1.5s
JMIC Jan Mayen 74.43 20 LR LR 07 44 54.4
comp=Z,2µm,18.1s,baz=272,slow=39
USHA Ushuaia 75.14 163 LR LR 07 35 31.3
comp=Z,5µm,20.4s,baz=330,slow=31
BILL Bilibino 77.22 337 P **P 07 08 50.0 +0.6**
BILL IAmb IAmb 07 09 06.2
comp=Z,69nm,1.2s
BILL IAMs_20 IAMs_20 07 47 30.4
comp=Z,3µm,20.0s
BILL Bilibino 77.22 337 P **P 07 08 50.0 +0.6**
KPL Plockton 77.52 34 ⇑*e*P **P 07 08 51.1 -0.1**
KPL IAmb IAmb 07 08 52.3
comp=Z,76nm,1.0s
BBTS Babate 77.72 78 LR LR 07 38 20.5
comp=Z,3µm,21.9s,baz=171,slow=32
KBS Kingsbay 77.77 11 P **P 07 08 53.9 +1.6**
KBS Kingsbay 77.77 11 IAMs_20 IAMs_20 07 47 25.3
comp=Z,5µm,19.0s
KBS Kingsbay 77.77 11 P **P 07 08 53.9 +1.6**
KBS pmax pmax
comp=Z,50nm,1.0s
KBS MLR MLR
comp=Z,5µm,19.0s
LAWE Loch Awe, Argy 77.86 35 *e*P **P 07 08 52.8 -0.4**
LAWE IAmb IAmb 07 08 54.6
comp=Z,33nm,0.9s
PGBU Glenifferbraes 78.46 35 *e*P **P 07 08 56.4 -0.1**
PGBU IAmb IAmb 07 08 58.4
comp=Z,79nm,1.0s
GAL1 Galloway 78.53 36 ⇑*e*P **P 07 08 56.3 -0.5**
GAL1 IAmb IAmb 07 08 58.7
comp=Z,47nm,0.9s
INVG Invergeldie, C 78.57 34 *e*P **P 07 08 56.5 -0.6**
INVG IAmb IAmb 07 08 58.1
comp=Z,44nm,1.3s
WIM Isle of Man 78.70 37 *e*P **P 07 08 58.2 +0.3**
PMAFR Mafra 78.73 53 *e*P **P 07 08 58.3 -0.1**
comp=Z,114nm,1.4s
IOMK Kirk Michael 78.73 37 ⇑*e*P **P 07 08 58.1 0.0**
IOMK IAmb IAmb 07 08 58.8
comp=Z,182nm,1.1s
MCD Coleburn Disti 78.74 33 ⇑*e*P **P 07 08 58.2 +0.1**
MCD IAmb IAmb 07 08 59.3
comp=Z,56nm,0.9s
NEWG New Galloway 78.74 36 ⇑*e*P **P 07 08 57.5 -0.6**
NEWG IAmb IAmb 07 08 58.6
comp=Z,47nm,1.2s
PTO Porto 78.79 50 *e*P **P 07 08 59.2 +0.6**
comp=Z,98nm,1.9s
PGAV Gavieira, Arco 78.87 49 *e*P **P 07 08 59.3 +0.1**
comp=Z,122nm,1.6s
PGAV Gavieira, Arco 78.87 49 *e*S **S 07 19 03.2 +6.9**
PGAV Gavieira, Arco 78.87 49 *e*LR LR 07 33 29.9
comp=Z,2µm,20.0s
LIS Lisbon 78.88 53 *e*P **P 07 08 59.1 -0.1**
LIS IAMs_20 IAMs_20 07 36 29.5
comp=N,5µm,28.9s
LIS Lisbon 78.88 53 *e*P **P 07 08 59.1 -0.1**
SPITS Spitsbergen Ar 78.89 11 P **P 07 08 59.2 +0.7**
comp=N,8.1nm,0.9s,baz=172,slow=2.4,SNR=4.2
SPITS LR LR 07 46 21.0
comp=N,7µm,19.3s,baz=272,slow=38
comp=N,8.1nm,0.9s
WPS Cemaes, Angles 78.96 38 *e*P **P 07 08 58.7 -0.6**
WPS IAmb IAmb 07 09 00.5
comp=Z,46nm,0.9s
PSBE So Bento 78.98 52 *e*P **P 07 09 00.1 +0.3**
comp=Z,116nm,1.1s
WLF1 Llynfaes 79.04 38 *e*P **P 07 08 59.6 -0.2**
WLF1 IAmb IAmb 07 09 01.4
comp=Z,96nm,0.9s
PCAS Casmilo, Conde 79.10 51 *e*P **P 07 09 00.8 +0.4**
comp=Z,280nm,1.1s
RSBS Rosebush, Pemb 79.12 39 ⇑*e*P **P 07 08 59.8 -0.4**
RSBS IAmb IAmb 07 09 01.6
comp=Z,58nm,0.9s
COI Coimbra 79.13 51 *e*P **P 07 09 00.9 +0.4**
comp=Z,154nm,1.2s
COI Coimbra 79.13 51 IAmb IAmb 07 09 02.2
comp=Z,92nm,0.9s
COI IAMs_20 IAMs_20 07 42 25.4
comp=Z,4µm,20.0s
EDI Edinburgh 79.15 35 ⇑*e*P **P 07 09 00.0 -0.2**
EDI IAmb IAmb 07 09 01.8
comp=Z,79nm,0.9s
ESK Eskdalemuir 79.27 35 P **P 07 09 00.8 -0.2**
ESK IAmb IAmb 07 09 03.0
comp=Z,83nm,0.9s
ESK Eskdalemuir 79.27 35 P **P 07 09 00.8 -0.2**
ESK pmax pmax
comp=Z,83nm,0.9s
EKB Eskdalemuir 79.28 35 P **P 07 09 00.7 -0.3**
EKB IAmb IAmb 07 09 03.0
comp=Z,76nm,0.9s
EKA Eskdalemuir Ar 79.30 35 P **P 07 09 01.0 -0.1**
EKA Eskdalemuir Ar 79.30 35 P **P 07 09 00.9 -0.1**
comp=Z,57nm,0.9s,baz=285,slow=5.5,SNR=84
comp=Z,57nm,0.9s
DRUM Mains of Drumt 79.30 34 ⇑*e*P **P 07 09 01.2 +0.1**
DRUM IAmb IAmb 07 09 02.6
comp=Z,92nm,0.9s
POLO Lamas de Olo 79.34 50 *e*P **P 07 09 01.9 +0.1**
comp=Z,50nm,1.0s
PVIS Viseu 79.41 51 *e*P **P 07 09 01.7 -0.4**
PVRL Vila Real 79.42 50 *e*P **P 07 09 02.4 +0.2**
comp=Z,88nm,1.9s
PTEO Sao Teotonio 79.46 54 *e*P **P 07 09 02.4 0.0**
comp=Z,130nm,1.3s
PFVI Vila Bisbo 79.47 54 *e*P **P 07 09 02.5 +0.1**
comp=Z,158nm,1.8s
PFVI Vila Bisbo 79.47 54 P **P 07 09 02.6 +0.2**
PFVI IAmb IAmb 07 09 04.3
comp=Z,91nm,0.9s
PNCL Nicolau / Gran 79.49 53 *e*P **P 07 09 02.0 -0.5**
comp=Z,78nm,1.0s
KESW Keswick, Cumbr 79.50 36 ⇑*e*P **P 07 09 02.0 -0.2**
KESW IAmb IAmb 07 09 03.7
comp=Z,45nm,1.0s
PMTG Montargil 79.51 52 *e*P **P 07 09 01.9 -0.7**
comp=Z,161nm,1.0s
MORF Marmelete 79.56 54 *e*P **P 07 09 02.8 -0.2**
comp=Z,69nm,1.0s
MORF Marmelete 79.56 54 P **P 07 09 03.2 +0.2**
MORF Marmelete 79.56 54 *e*P **P 07 09 03.1 +0.1**
MORF IAMs_20 IAMs_20 07 39 59.9
comp=Z,5µm,14.9s
MORF Marmelete 79.56 54 P **P 07 09 03.2 +0.2**
MORF pmax pmax
comp=Z,58nm,1.0s
LLW Llanuwychllyn 79.57 38 *e*P **P 07 09 02.5 -0.1**
MTE Manteigas 79.74 51 *e*P **P 07 09 03.0 -0.9**
comp=Z,170nm,0.9s
MTE Manteigas 79.74 51 *e*S **SKSac 07 19 24.4 +4.6**
MTE Manteigas 79.74 51 *e*LR LR 07 34 27.8
comp=Z,3µm,18.0s
MTE Manteigas 79.74 51 P **P 07 09 03.4 -0.5**
MTE IAmb IAmb 07 09 06.0
comp=Z,119nm,0.8s
MTE IAMs_20 IAMs_20 07 42 56.5
comp=Z,3µm,20.0s
MESJ Messejana 79.78 54 *e*P **P 07 09 04.3 +0.2**
comp=Z,68nm,1.6s
MESJ Messejana 79.78 54 P **P 07 09 03.7 -0.5**
MESJ Messejana 79.78 54 *e*P **P 07 09 04.0 -0.1**
MESJ *e*PP **PP 07 12 04.5 -0.8**
MESJ *e*S **S 07 19 03.6 -2.4**
MESJ IAMs_20 IAMs_20 07 41 50.3
comp=Z,3µm,25.3s
MESJ Messejana 79.78 54 *e*P **P 07 09 04.0 -0.1**
MESJ *e* 07 12 04.5
MESJ *e*S **S 07 19 03.6 -2.4**
EVO Evora 79.79 53 *e*P **P 07 09 04.3 +0.1**
comp=Z,92nm,1.1s
FOEL Foel Wylfa 79.83 38 ⇑*e*P **P 07 09 03.8 -0.3**
FOEL IAmb IAmb 07 09 05.3
comp=Z,55nm,0.9s
PCBR Castelo Branco 79.91 51 *e*P **P 07 09 04.6 -0.2**
comp=Z,140nm,1.0s
MVO Moncorvo 79.95 50 *e*P **P 07 09 04.1 -1.0**
comp=Z,122nm,1.1s
MVO Moncorvo 79.95 50 *e*S **SKSac 07 19 17.3 -3.9**
MVO Moncorvo 79.95 50 *e*LR LR 07 33 56.9
comp=Z,2µm,18.0s
PCVE Castro Verde 79.97 54 *e*P **P 07 09 04.6 -0.6**
comp=Z,76nm,1.1s
PBEJ Beja 80.02 53 *e*P **P 07 09 05.4 0.0**
comp=Z,88nm,1.0s
PBRG Braganca 80.02 49 *e*P **P 07 09 05.4 0.0**
comp=Z,107nm,1.8s
PESTR Estremoz 80.04 52 *e*P **P 07 09 05.6 +0.1**
comp=Z,86nm,1.0s
PESTR Estremoz 80.04 52 P **P 07 09 04.7 -0.9**
PESTR IAmb IAmb 07 09 07.7
comp=Z,64nm,0.9s
PMRV Marv??o 80.06 52 *e*P **P 07 09 05.8 +0.1**
comp=Z,124nm,0.9s
PMRV Marv??o 80.06 52 *e*S **SKSac 07 19 23.1 +1.1**
PMRV Marv??o 80.06 52 *e*LR LR 07 34 31.2
comp=Z,4µm,22.0s
EDMD Edmundbyers 80.08 36 ⇑*e*P **P 07 09 05.7 +0.2**
EDMD IAmb IAmb 07 09 07.6
comp=Z,168nm,0.9s
HLM1 Long Mynd 80.11 38 ⇑*e*P **P 07 09 05.7 0.0**
HLM1 IAmb IAmb 07 09 07.5
comp=Z,86nm,0.9s
PBDV Barranco-do-Ve 80.14 54 *e*P **P 07 09 06.6 +0.5**
comp=Z,113nm,1.3s
MCH1 Michaelchurch 80.17 39 ⇑*e*P **P 07 09 05.5 -0.4**
MCH1 IAmb IAmb 07 09 07.6
comp=Z,39nm,0.8s
PVAQ Vaqueiros 80.27 54 *e*S **S 07 19 17.4 +6.3**
PVAQ Vaqueiros 80.27 54 P **P 07 09 07.0 +0.2**
MONM Monmouth 80.32 39 ⇑*e*P **P 07 09 06.7 0.0**
MONM IAmb IAmb 07 09 08.7
comp=Z,105nm,0.9s
STNC Stoke 80.37 38 *e*P **P 07 09 07.2 +0.3**
STNC IAmb IAmb 07 09 08.5
comp=Z,92nm,1.0s
HPK Haverah Park 80.49 37 ⇑*e*P **P 07 09 07.8 +0.2**
HPK IAmb IAmb 07 09 09.8
comp=Z,48nm,0.8s
LBWR Ladybower, Pea 80.57 37 *e*P **P 07 09 08.3 +0.2**
LBWR IAmb IAmb 07 09 10.5
comp=Z,111nm,0.9s
PBAR Barrancos 80.62 53 *e*P **P 07 09 08.8 +0.2**
comp=Z,101nm,1.0s
STRD Stroud 80.72 39 ⇑*e*P **P 07 09 09.0 +0.1**
STRD IAmb IAmb 07 09 09.5
comp=Z,128nm,1.1s
GDLE Glaisdale, N Y 80.83 36 ⇑*e*P **P 07 09 09.6 +0.2**
GDLE IAmb IAmb 07 09 11.7
comp=Z,87nm,0.8s
JSA Saint Aubin 81.37 41 ⇑*e*P **P 07 09 12.3 0.0**
JSA IAmb IAmb 07 09 13.1
comp=Z,67nm,1.0s
AVE Averroes 81.47 58 IAmb IAmb 07 09 14.8
comp=Z,101nm,1.0s
SFS San Fernando 81.67 55 IAMs_20 IAMs_20 07 43 22.8
comp=Z,5µm,20.0s
WACR West Acre 82.12 37 ⇑*e*P **P 07 09 17.2 +1.0**
WACR IAmb IAmb 07 09 19.2
comp=Z,237nm,1.0s
PAB San Pablo 82.32 51 P **P 07 09 18.2 +0.4**
PAB IAmb IAmb 07 09 19.5
comp=Z,101nm,1.0s
PAB San Pablo 82.32 51 IAMs_20 IAMs_20 07 40 41.0
comp=Z,4µm,22.0s
PAB San Pablo 82.32 51 P **P 07 09 18.2 +0.4**
PAB pmax pmax
comp=Z,101nm,1.0s
ESDC Sonseca Array 82.58 51 P **P 07 09 19.3 +0.2**
comp=Z,43nm,0.9s,baz=296,slow=5.0,SNR=167
ESDC LR LR 07 41 12.9
comp=Z,3µm,21.7s,baz=272,slow=32
comp=Z,43nm,0.9s
MFF Saint Martin d 83.39 43 *e*P **P 07 09 23.4 +0.4**
MFF pmax pmax
comp=Z,30nm,0.9s
SNART Snartemo 83.86 31 *i* P **P 07 09 26.2 +1.0**
MDT Midelt 83.87 58 LR LR 07 42 04.0
comp=Z,5µm,21.0s,baz=312,slow=32
SEY Seymchan 84.32 334 *ce*P **P 07 09 27.5 +0.1**
SEY pmax pmax
comp=Z,28nm,1.0s
SEY MLR MLR
comp=Z,4µm,19.0s
SEY Seymchan 84.32 334 P **P 07 09 28.2 +0.8**
comp=Z,16nm,1.0s,baz=82,slow=5.7,SNR=43
SEY LR LR 07 49 53.9
comp=Z,4µm,19.6s,baz=59,slow=38
comp=Z,16nm,1.0s
NC204 NORSAR Array S 84.39 27 P **P 07 09 28.9 +0.9**
NC204 IAmb IAmb 07 09 29.6
comp=Z,64nm,1.2s
NBO00 NORSAR Array S 84.50 28 IAmb IAmb 07 09 31.0
comp=Z,79nm,1.1s
KONO Kongsberg 84.51 29 P **P 07 09 30.1 +1.7**
KONO Kongsberg 84.51 29 IAMs_20 IAMs_20 07 47 49.8
comp=Z,3µm,20.0s
KONO Kongsberg 84.51 29 P **P 07 09 30.1 +1.7**
KONO pmax pmax
comp=Z,114nm,1.0s
KONO MLR MLR
comp=Z,3µm,20.0s
HOMB Homborsund 84.52 31 *i* P **P 07 09 29.6 +1.1**
CLF Chambon-Foret 84.52 42 IAMs_20 IAMs_20 07 48 59.7
comp=Z,4µm,19.0s
NAO01 NORSAR Array S 84.62 28 P **P 07 09 30.5 +1.4**
NAO01 IAmb IAmb 07 09 31.7
comp=Z,76nm,1.1s
NC303 NORSAR Array S 84.68 27 IAmb IAmb 07 09 31.0
comp=Z,49nm,1.2s
NB2 NORSAR Subarra 84.69 28 P **P 07 09 30.1 +0.7**
comp=Z,91nm,1.1s,baz=299,slow=5.1
NB2 NORSAR Subarra 84.69 28 P **P 07 09 30.1 +0.7**
baz=299,slow=5.1
NOA NORSAR Array B 84.69 28 P **P 07 09 29.6 +0.2**
comp=Z,37nm,0.9s,baz=302,slow=5.0,SNR=70
NOA LR LR 07 48 58.9
comp=Z,2µm,20.1s,baz=295,slow=37
comp=Z,37nm,0.9s
NB201 NORSAR Array S 84.72 28 P **P 07 09 30.2 +0.7**
NB201 IAmb IAmb 07 09 32.8
comp=Z,70nm,0.9s
PMSA Palmer Station 84.84 166 IAMs_20 IAMs_20 07 39 23.9
comp=Z,3µm,18.0s
PMSA Palmer Station 84.84 166 LR LR 07 39 35.7
comp=Z,3µm,18.4s,baz=324,slow=30
NC405 NORSAR Array S 84.88 27 P **P 07 09 31.6 +1.2**
NC405 IAmb IAmb 07 09 33.6
comp=Z,40nm,1.0s
NC602 NORSAR Array S 84.96 28 P **P 07 09 31.5 +0.7**
NC602 IAmb IAmb 07 09 33.3
comp=Z,55nm,1.1s
PET Petropavlovsk 85.06 324 *e*P **P 07 09 28.1 -3.2**
PET *e* 07 12 44.5
PET *e*S **SKSac 07 19 53.6 -1.0**
PET pmax pmax
comp=Z,2µm,5.1s
PET pmax pmax
comp=Z,800nm,6.1s
PET MLR MLR
comp=Z,1µm,15.0s
PET MLR MLR
comp=Z,2µm,18.0s

DOU Dourbes 85.30 39 *b*P P **07 09 33.0 +0.4**
comp=Z,44nm,0.9s
BMRD Maredsous 85.33 39 *b*P P **07 09 33.3 +0.5**
comp=Z,75nm,0.9s
CAF Calviac 85.36 45 *e*P P **07 09 31.7 -1.4**
CAF pmax pmax
comp=Z,40nm,1.0s
CART Cartagena 85.38 52 IAmb IAmb 07 09 34.4
comp=Z,36nm,0.9s
CART IAMs_20 IAMs_20 07 45 49.0
comp=Z,3µm,20.0s
BGES Gesves 85.50 39 *d*P P **07 09 34.1 +0.4**
comp=Z,94nm,0.9s
STRU Stroemstad 85.50 29 *i*P P **07 09 34.9 +1.4**
MUD Monsted U'grnd 85.55 32 *i*P P **07 09 36.3 +2.6**
MUD IAmb IAmb 07 09 37.1
comp=Z,50nm,1.2s
PEA0B Petropavlovsk- 85.57 324 IAmb IAmb 07 09 47.3
comp=Z,82nm,1.1s
PEA0B Petropavlovsk- 85.57 324 *ce*P P **07 09 33.9 0.0**
PETK Petropavlovsk- 85.57 324 P P **07 09 34.5 +0.6**
PETK Petropavlovsk- 85.57 324 P P **07 09 34.5 +0.6**
PETK Petropavlovsk- 85.57 324 P P **07 09 34.1 +0.2**
comp=Z,43nm,1.0s,baz=90,slow=6.0,SNR=22
comp=Z,43nm,1.0s
ARCES ARCESS Array B 85.61 17 P P **07 09 33.6 -0.3**
ARCES ARCESS Array B 85.61 17 P P **07 09 33.6 -0.3**
ARCES pmax pmax
comp=Z,37nm,1.1s
ARCES ARCESS Array B 85.61 17 P P **07 09 33.5 -0.3**
comp=Z,28nm,1.0s,baz=306,slow=2.9,SNR=24
ARCES LR LR 07 49 36.1
comp=Z,3µm,21.7s,baz=302,slow=37
comp=Z,28nm,1.0s
BCLA Clavier 85.62 39 *d*P P **07 09 34.5 +0.3**
comp=Z,49nm,1.0s
RCHB Rochefort 85.66 39 *b*P P **07 09 34.8 +0.4**
comp=Z,63nm,0.9s
BEBN Eben Emael 85.71 38 *b*P P **07 09 34.8 +0.2**
comp=Z,64nm,0.9s
BSTI Sart Tilman 85.72 38 *d*P P **07 09 35.8 +1.1**
KEV Kevo 85.89 17 P P **07 09 35.4 +0.2**
KEV IAmb IAmb 07 10 35.8
comp=Z,75nm,1.2s
KEV IAMs_20 IAMs_20 07 49 09.8
comp=Z,3µm,22.0s
KEV Kevo 85.89 17 P P **07 09 35.4 +0.2**
KEV pmax pmax
comp=Z,75nm,1.2s
KEV MLR MLR
comp=Z,3µm,22.0s
MEM Membach 85.97 38 *d*P P **07 09 36.3 +0.3**
comp=Z,58nm,0.9s
BTNL Ternell 86.05 38 *d*P P **07 09 37.0 +0.6**
comp=Z,26nm,0.9s
BHOU Houvegnez 86.06 39 *d*P P **07 09 37.0 +0.5**
comp=Z,20nm,1.2s
TJOU Tjoern 86.13 30 *i*P P **07 09 36.5 -0.1**
HFS Hagfors 86.19 28 P P **07 09 36.9 0.0**
comp=Z,11nm,0.8s,baz=267,slow=3.0,SNR=17
HFS LR LR 07 49 12.0
comp=Z,2µm,20.2s,baz=283,slow=36
comp=Z,11nm,0.8s
IBBN Ibbenburen 86.37 36 *e*P P **07 09 38.9 +1.1**
comp=Z,52nm,0.8s,baz=295,slow=4.5
WLF Walferdange 86.40 39 P P **07 09 38.7 +0.6**
WLF IAmb IAmb 07 09 41.1
comp=Z,56nm,0.9s
WLF IAMs_20 IAMs_20 07 47 09.1
comp=Z,4µm,21.0s
WLF Walferdange 86.40 39 *d*P P **07 09 38.4 +0.4**
comp=Z,41nm,0.9s
WLF Walferdange 86.40 39 P P **07 09 38.7 +0.6**
WLF pmax pmax
comp=Z,56nm,0.9s
WLF MLR MLR
comp=Z,4µm,21.0s
WLF Walferdange 86.40 39 *e*P P **07 09 38.7 +0.6**
comp=Z,62nm,0.9s,baz=295,slow=4.5
MA2 Magadan 86.48 332 P P **07 09 38.7 +0.4**
MA2 IAmb IAmb 07 09 40.4
comp=Z,35nm,0.9s
MA2 IAMs_20 IAMs_20 07 51 04.2
comp=Z,2µm,21.0s
MA2 Magadan 86.48 332 *ce*P P **07 09 38.9 +0.6**
MA2 pmax pmax
comp=Z,45nm,1.0s
MA2 MLR MLR
comp=Z,2µm,21.0s
MA2 Magadan 86.48 332 P P **07 09 38.5 +0.2**
comp=Z,38nm,1.0s,baz=63,slow=5.1,SNR=26
MA2 LR LR 07 51 34.8
comp=Z,2µm,18.7s,baz=52,slow=38
comp=Z,38nm,1.0s
ONAU Onsala 86.54 31 *i*P P **07 09 39.0 +0.4**
AHRW Bad Neuenahr-A 86.63 38 *e*P P **07 09 40.6 +1.4**
comp=Z,75nm,0.8s,baz=295,slow=4.5
TIXI Tiksi 86.78 347 P P **07 09 39.4 -0.1**
TIXI IAmb IAmb 07 09 40.6
comp=Z,62nm,1.1s
TIXI Tiksi 86.78 347 IAMs_20 IAMs_20 07 55 57.8
comp=Z,4µm,18.0s
TIXI Tiksi 86.78 347 *ce*P P **07 09 39.1 -0.4**
TIXI pmax pmax
comp=Z,66nm,1.0s
TIXI Tiksi 86.78 347 LR LR 07 54 58.8
comp=Z,2µm,18.1s,baz=55,slow=40
BORU Boraas 86.86 30 *i*P P **07 09 40.1 -0.1**
SSB Saint Sauveur 86.91 44 P P **07 09 40.6 -0.1**
SSB IAmb IAmb 07 09 43.1
comp=Z,33nm,0.9s
SSB Saint Sauveur 86.91 44 IAMs_20 IAMs_20 07 45 27.9
comp=Z,3µm,22.0s
SSB Saint Sauveur 86.91 44 P P **07 09 40.6 -0.1**
SSB pmax pmax
comp=Z,33nm,0.9s
FABU Falkenberg 87.11 31 *i*P P **07 09 41.0 -0.4**
RETH Rethem/Aller, 87.11 36 *e*P P **07 09 41.9 +0.5**
comp=Z,27nm,0.9s,baz=295,slow=4.5
BSEG Bad Segeberg 87.16 34 *e*P P **07 09 41.8 +0.2**
comp=Z,47nm,0.8s,baz=295,slow=4.5
KASTN Kahler Asten 87.17 37 *e*P P **07 09 42.0 +0.1**
comp=Z,31nm,0.9s,baz=295,slow=4.5
ECH Echery 87.54 40 P P **07 09 43.6 -0.1**
ECH IAMs_20 IAMs_20 07 53 11.5
comp=Z,3µm,18.0s
ECH Echery 87.54 40 P P **07 09 43.6 -0.1**
ECH pmax pmax
comp=Z,23nm,0.9s
TNS Taunus Mts 87.56 38 *e*P P **07 09 44.0 +0.1**
comp=Z,62nm,0.9s,baz=295,slow=4.5
NRDL Niedersach Rie 87.62 36 *e*P P **07 09 44.5 +0.6**
comp=Z,22nm,0.9s,baz=295,slow=4.5
BJUU Bjuv 87.67 32 *i*P P **07 09 44.2 +0.1**
DEL Delary 87.91 31 *i*P P **07 09 44.6 -0.6**
GTTG Gottingen 87.93 37 *e*P P **07 09 45.8 +0.4**
comp=Z,40nm,0.9s,baz=295,slow=4.5
CLZ Clausthal 88.04 36 *e*P P **07 09 46.4 +0.3**
comp=Z,32nm,0.9s,baz=295,slow=4.5
ASSE Asse, Remlinge 88.09 36 *e*P P **07 09 46.3 +0.1**
comp=Z,22nm,0.9s,baz=295,slow=4.5
BFO Black Forest 88.22 40 P P **07 09 47.0 0.0**
BFO Black Forest 88.22 40 P P **07 09 47.0 0.0**
BFO pmax pmax
comp=Z,22nm,0.9s
BFO Black Forest 88.22 40 *e*P P **07 09 46.1 -0.9**
comp=Z,20nm,0.9s,baz=295,slow=4.5
LPL La Plagne 88.27 43 *e*P P **07 09 48.1 +0.6**
LPL pmax pmax
comp=Z,11nm,1.0s
SENIN Lac Senin/Sane 88.32 42 P P **07 09 48.8 +1.1**
FLTG Flechtingen 88.32 35 *e*P P **07 09 46.6 -0.7**
comp=Z,12nm,0.9s,baz=295,slow=4.5
BNI Bardonecchia 88.40 43 P P **07 09 48.4 +0.4**
BNI IAmb IAmb 07 10 02.3
comp=Z,80nm,1.8s
BNI IAMs_20 IAMs_20 07 49 34.4
comp=Z,4µm,21.0s
BNI Bardonecchia 88.40 43 P P **07 09 48.4 +0.4**
BNI pmax pmax
comp=Z,80nm,1.8s
BNI MLR MLR
comp=Z,4µm,21.0s
RGN Rugen 88.49 33 IAMs_20 IAMs_20 07 50 03.2
comp=Z,3µm,21.0s
RGN Rugen 88.49 33 *e*P P **07 09 52.8 +4.7**
MAHO Mahon 88.56 49 IAMs_20 IAMs_20 07 48 11.9
comp=Z,3µm,19.0s
STU Stuttgart 88.58 39 IAmb IAmb 07 09 51.2
comp=Z,57nm,0.9s
STU IAMs_20 IAMs_20 07 48 59.9
comp=Z,3µm,20.0s
STU Stuttgart 88.58 39 *e*P P **07 09 48.6 0.0**
comp=Z,121nm,0.8s,baz=295,slow=4.5
APA Apatity 89.10 17 ⇓*i*P P **07 09 53.2 +2.5**
APA *i* 07 13 22.0
APA pmax pmax
comp=Z,7.0nm,1.3s
RAF Rauma 89.20 25 *e*P P **07 09 50.3 -0.9**
LVZ Lovozero 89.21 16 *i*P P **07 09 50.0 -1.2**
LVZ pmax pmax
comp=Z,81nm,2.1s
LVZ MLR MLR
comp=Z,3µm,20.0s
MOX Moxa 89.25 37 *e*P P **07 09 51.2 -0.6**
comp=Z,21nm,1.2s,baz=295,slow=4.5
MOX *e*PP PP **07 13 22.2 +0.2**
baz=23,slow=6.7
MOX *e*L L 07 53 36.0
comp=Z,4µm,18.2s
GRA1 Grafenberg Arr 89.42 38 P P **07 09 53.0 +0.5**
GRA1 IAMs_20 IAMs_20 07 49 16.0
comp=Z,4µm,20.0s
GRF Grafenberg Arr 89.42 38 P P **07 09 53.1 +0.5**
GRF pmax pmax
comp=Z,27nm,1.0s
GRF MLR MLR
comp=Z,4µm,20.0s
GRF Grafenberg Arr 89.42 38 *e*P P **07 09 52.9 +0.4**
comp=Z,21nm,1.0s,baz=295,slow=4.5
GRF *e*PP PP 07 13 32.9 +10
baz=23,slow=6.7
GRF *e*L L 07 49 16.4
comp=Z,4µm,21.1s
GRFO Grafenberg 89.42 38 P P **07 09 52.9 +0.4**
GRFO IAMs_20 IAMs_20 07 49 16.0
comp=Z,4µm,21.0s
GRFO Grafenberg 89.42 38 P P **07 09 52.9 +0.4**
GRFO pmax pmax
comp=Z,26nm,1.0s
GRFO MLR MLR
comp=Z,4µm,21.0s
UBR Ueberruh 89.58 40 *e*P P **07 09 53.1 -0.3**
comp=Z,47nm,1.0s,baz=295,slow=4.5
TUE Stuetta 89.58 41 P P **07 09 54.1 +0.4**
TUE IAMs_20 IAMs_20 07 49 43.6
comp=Z,3µm,21.0s
DAVA Damuels 89.59 40 *i*P P **07 09 54.0 +0.4**
comp=Z,62nm,1.0s,SNR=18
RAO Raoul Island 89.60 239 LR LR 07 40 07.8
comp=Z,2µm,20.8s,baz=95,slow=29
PLN Plauen 89.63 37 *e*P P **07 09 53.3 -0.2**
comp=Z,12nm,0.9s,baz=295,slow=4.5
PLN *e*PP PP **07 13 25.4 +0.4**
baz=23,slow=6.7
CLL Collm 89.75 36 P P **07 09 53.7 -0.3**
CLL IAMs_20 IAMs_20 07 55 30.7
comp=Z,2µm,18.0s
CLL Collm 89.75 36 *i*P P **07 09 53.7 -0.3**
CLL *e**PP **sP** **07 10 06.0 +1.3**
CLL *e* 07 13 24.0
CLL *e*S S **07 20 37.0 -7.5**
CLL pmax pmax
comp=Z,21nm,1.4s
CLL MLR MLR
comp=Z,2µm,18.9s
CLL Collm 89.75 36 *e*P P **07 09 53.6 -0.4**
comp=Z,12nm,1.0s,baz=295,slow=4.5
DAVOX Davos/Dischmat 89.80 41 LR LR 07 52 26.9
comp=Z,3µm,18.7s,baz=300,slow=37
MANZ Manzenberg 89.81 37 *e*P P **07 09 54.3 -0.1**
comp=Z,3.2nm,1.0s,baz=295,slow=4.5
MANZ *e*PP PP **07 13 26.9 +0.4**
baz=23,slow=6.7
TANN Tannenbergstha 89.83 37 *e*P P **07 09 54.4 -0.2**
comp=Z,13nm,0.9s,baz=295,slow=4.5
TANN *e*PP PP **07 13 27.1 +0.4**
baz=23,slow=6.7
NKC Novy Kostel 89.91 37 *e*P P **07 09 55.4 +0.5**
NKC AMS AMS 07 53 40.0
comp=Z,3µm,18.9s
NKC Novy Kostel 89.91 37 *e*P P **07 09 55.4 +0.5**
NKC MLR MLR
comp=Z,3µm,18.9s
ROTZ Rotzenmuhle 89.97 38 *e*P P **07 09 54.4 -0.7**
comp=Z,4.9nm,1.2s,baz=295,slow=4.5
ROTZ *e*PP PP **07 13 28.0 +0.3**
baz=23,slow=6.7
RETA Reutte 90.06 40 *i*P P **07 09 56.0 +0.3**
comp=Z,42nm,1.0s,SNR=11
FUORN Ofenpass-Fuorn 90.11 41 P P **07 09 56.6 +0.5**
FUORN IAmb IAmb 07 09 58.7
comp=Z,35nm,0.8s
FUORN IAMs_20 IAMs_20 07 53 01.3
comp=Z,2µm,19.0s
FETA Feichten 90.23 40 *i*PcP PcP **07 09 57.2 -0.6**
comp=Z,24nm,1.1s,SNR=6.2
HSKC Hora Svate Kat 90.31 36 *e*P P **07 09 56.7 0.0**
HSKC AMS AMS 07 54 20.0
comp=Z,4µm,17.5s
MOTA Moosalm 90.33 40 *i*P P **07 09 57.2 +0.1**
comp=Z,37nm,1.1s,SNR=12
SQTA Sankt Quirin 90.45 40 *i*P P **07 09 57.9 +0.3**
comp=Z,24nm,1.3s,SNR=5.8
BRG Berggiesshubel 90.48 36 ⇑*i*P P **07 09 57.5 0.0**
BRG Amp 07 09 58.8
comp=Z,22nm,1.1s
BRG pP **sP** **07 10 10.9 +2.8**
BRG Amp 07 10 11.9
comp=Z,11nm,1.0s
BRG PP PP 07 13 41.2 +10
BRG Amp 07 13 47.3
comp=Z,21nm,1.4s
BRG Berggiesshubel 90.48 36 SS SS 07 26 56.0 +4.8
BRG Amp 07 51 34.0
comp=E,1.4nm,18.5s
BRG Amp 07 51 38.0
comp=Z,3.0nm,20.3s
BRG Amp 07 51 44.0
comp=N,1.4nm,24.1s
BRG Berggiesshubel 90.48 36 ⇑*i*P P **07 09 57.5 0.0**
BRG 07 10 10.9
BRG 07 13 41.2
BRG 07 20 24.0
BRG S **S** **07 20 45.0 -6.3**
BRG SS **SS** **07 26 56.0 +4.8**
BRG pmax pmax
comp=Z,22nm,1.1s
BRG MLR MLR
comp=Z,3µm,20.3s
BRG MLR MLR
comp=N,1µm,24.1s
BRG Berggiesshubel 90.48 36 *e*P P **07 09 57.5 0.0**
comp=N,22nm,1.1s,baz=295,slow=4.5
WATA Walderalm 90.62 40 *i*PcP P **07 09 58.7 +0.3**
comp=N,30nm,1.1s,SNR=5.4
WET Wettzell 90.63 38 *e*P P **07 09 58.3 +0.1**
comp=N,32nm,1.2s,baz=295,slow=4.5
WET *e*PP PP **07 13 31.0 -2.0**
baz=23,slow=6.7
FIA1 FINESS Array S 90.66 24 P P **07 09 57.2 -0.8**
FIA1 IAmb IAmb 07 09 58.5
comp=Z,64nm,1.1s
FINES FINESS Array B 90.66 24 P P **07 09 57.5 -0.5**
FINES FINESS Array B 90.66 24 P P **07 09 57.5 -0.5**
FINES FINESS Array B 90.66 24 P P **07 09 57.0 -1.1**
comp=Z,14nm,0.9s,baz=338,slow=4.5,SNR=30
FINES LR LR 07 52 11.1
comp=Z,4µm,21.2s,baz=304,slow=37
comp=Z,14nm,0.9s
SALO Salr 90.68 42 P P **07 09 58.1 -0.5**
SALO IAmb IAmb 07 10 00.4
comp=Z,50nm,0.9s
WTTA Wattenberg 90.69 40 *i*PcP P **07 09 59.3 +0.5**
comp=Z,14nm,1.1s
RICC Richard 90.71 36 AMS AMS 07 54 40.0
comp=Z,3µm,16.3s
TIC Toumodi 90.73 83 ⇑*i*P P **07 09 58.7 -0.7**
comp=Z,27nm,1.0s
LIC Lamto 90.84 83 ⇑*i*P P **07 09 59.3 -0.6**
comp=Z,68nm,0.9s
DBIC Dimbokro 90.88 83 P P **07 09 59.7 -0.4**
DBIC IAmb IAmb 07 10 00.2
comp=Z,36nm,1.1s
DBIC Dimbokro 90.88 83 P P **07 09 59.1 -0.9**
comp=Z,18nm,0.9s,baz=273,slow=4.5,SNR=18
DBIC LR LR 07 47 19.9
comp=Z,2µm,21.6s,baz=280,slow=33
comp=Z,18nm,0.9s
PVCC Panska Ves 90.99 36 AMS AMS 07 54 50.0
comp=Z,3µm,18.3s
KHC Kasperske Hory 91.05 38 P P **07 10 00.2 0.0**
KHC Kasperske Hory 91.05 38 *e*P P **07 10 00.7 +0.5**
KHC *e*PP PP **07 13 34.5 -1.8**
KHC AMS AMS 07 49 50.0
comp=Z,4µm,22.3s
KHC Kasperske Hory 91.05 38 *ce*P P **07 09 59.3 -0.9**
KHC pmax pmax
comp=Z,38nm,1.2s
KHC MLR MLR
comp=Z,5µm,19.0s
KIC Kosan Boka 91.08 83 ⇑*i*P P **07 10 00.4 -0.6**
comp=Z,63nm,0.9s
PRA Prague 91.12 37 AMS AMS 07 54 30.0
comp=Z,4µm,18.0s
CTI Castel Tesino 91.22 41 P P **07 10 00.6 -0.6**
CTI Castel Tesino 91.22 41 P P **07 10 00.6 -0.6**
CTI pmax pmax
comp=Z,24nm,0.9s
PRU Pruhonice 91.22 37 *e*P P **07 10 01.5 +0.6**
PRU *e*PP **PP** **07 13 33.9 -3.7**
PRU AMS AMS 07 54 40.0
comp=Z,4µm,19.2s
PRU Pruhonice 91.22 37 *e*P P **07 10 01.5 +0.6**
PRU *e* 07 13 33.9
PRU MLR MLR
comp=Z,4µm,19.2s
GEC2 GERESS Array S 91.25 38 P P **07 10 01.0 -0.2**
GEC2 GERESS Array S 91.25 38 *e*P P **07 10 01.1 -0.2**
comp=Z,20nm,1.1s,baz=295,slow=4.5
GERES GERESS Array B 91.25 38 P P **07 10 01.4 +0.2**
GERES GERESS Array B 91.25 38 P P **07 10 01.4 +0.2**
GERES GERESS Array B 91.25 38 P P **07 10 00.5 -0.7**
comp=Z,9.2nm,0.9s,baz=344,slow=4.4,SNR=28
GERES LR LR 07 53 15.8
comp=Z,3µm,18.1s,baz=296,slow=37
comp=Z,9.2nm,0.9s
LESA Schwarzleotal 91.26 40 *i*PcP P **07 10 01.7 +0.4**
comp=Z,23nm,1.0s
ZVC Zvikov 91.27 37 *e*P P **07 10 01.1 -0.1**
ZVC AMS AMS 07 54 30.0
comp=Z,3µm,18.6s
GOPC GO Pecny, Ondr 91.40 37 *e*PP PP **07 13 35.9 -3.1**
GOPC AMS AMS 07 54 50.0
comp=Z,3µm,18.3s
ABTA Abfaltersbach 91.46 40 *i*P P **07 10 02.4 +0.1**
comp=Z,47nm,1.0s,SNR=9.3
ZCCA Zocca 91.50 43 P P **07 10 02.8 +0.4**
ZCCA IAmb IAmb 07 10 05.3
comp=Z,48nm,0.9s
TEOL Teolo 91.52 42 P P **07 10 02.4 0.0**
CIMO Cimolais 91.60 41 P P **07 10 02.5 -0.3**
CIMO IAmb IAmb 07 10 04.2
comp=Z,28nm,0.9s
CKRC Cesky Krumlov 91.62 38 *e*PP PP **07 13 38.0 -2.8**
CKRC *e*SKS **SKSac** **07 20 36.9 +2.6**
CKRC AMS AMS 07 50 00.0
comp=Z,4µm,23.2s
BIOA Bad Ischl, Aus 91.73 39 *i*P P **07 10 03.5 +0.1**
comp=Z,25nm,1.1s,SNR=6.1
STAL STALIGIAL 91.79 41 P P **07 10 03.5 -0.2**
STAL IAmb IAmb 07 10 05.0
comp=Z,30nm,0.9s
CHVC Chvalec 91.80 36 AMS AMS 07 55 50.0
comp=Z,3µm,17.8s
UPC Upice 91.81 36 *e*P P **07 10 04.4 +0.7**
UPC AMS AMS 07 55 30.0
comp=Z,2µm,17.4s
UPC Upice 91.81 36 *e*P P **07 10 04.4 +0.7**
UPC MLR MLR
comp=Z,2µm,17.4s
KBA Koelnbreinsper 91.82 40 *i*PcP PcP **07 10 04.5 -0.4**
comp=Z,36nm,1.0s,SNR=9.5
OSTC Ostas 91.90 36 *e*P P **07 10 04.6 +0.5**
OSTC AMS AMS 07 55 50.0
comp=Z,3µm,17.3s
OSTC Ostas 91.90 36 *e*P P **07 10 04.6 +0.5**
OSTC MLR MLR
comp=Z,3µm,17.3s
OSSC Osservatorio P 92.02 43 P P **07 10 04.3 -0.5**
OSSC IAmb IAmb 07 10 07.3
comp=Z,25nm,1.0s
MOA Molln 92.04 39 *i*P P **07 10 04.9 +0.1**
comp=Z,23nm,1.0s,SNR=7.1
DPC Dobruska-Polom 92.06 36 AMS AMS 07 59 20.0
comp=Z,2µm,17.8s
TREC Trest 92.09 37 AMS AMS 07 55 20.0
comp=Z,4µm,17.1s
MYKA Terra Mystica 92.21 40 *i*P P **07 10 05.7 0.0**
comp=Z,14nm,1.0s
PRED Cave del Predi 92.24 40 P P **07 10 05.3 -0.5**
PRED IAmb IAmb 07 10 07.7
comp=Z,37nm,0.9s
VSL Villasalto 92.37 48 P P **07 10 07.3 +0.8**
VSL IAMs_20 IAMs_20 07 49 25.8
comp=Z,2µm,19.0s
CADS Cadrg 92.44 40 *i*P P **07 10 06.4 -0.4**
CADS *i* 07 10 08.4
comp=Z,32nm,0.8s
KRLC Kraliky 92.45 36 *e*P P **07 10 06.8 +0.1**
KRLC *e*SKS **SKSac** **07 20 39.9 +0.9**
KRLC Kraliky 92.45 36 *e*P P **07 10 06.8 +0.1**
KRLC *e* 07 20 39.9
SABO M.te Sabotino 92.47 41 P P **07 10 06.6 -0.3**
SABO IAmb IAmb 07 10 07.6
comp=Z,217nm,1.7s
VALR Valaam 92.50 22 *i*P P **07 10 05.5 -1.1**
VALR pmax pmax
comp=Z,32nm,1.1s
VALR MLR MLR
comp=Z,1µm,18.0s
VRAC Vranov 92.72 37 *e*P P **07 10 07.1 -0.8**
VRAC *e*PP PP **07 13 46.4 -3.0**
VRAC Vranov 92.72 37 LR LR 07 55 53.0
comp=Z,3µm,18.2s,baz=298,slow=38
KRUC Moravsky 92.72 37 *e*P P **07 10 07.2 -0.7**
KRUC *e*PP PP **07 13 45.7 -3.7**
VSU Vasula 92.74 26 *ce*P P **07 10 05.5 -2.2**
VSU pmax pmax
comp=Z,19nm,1.1s
VSU MLR MLR
comp=Z,3µm,19.0s
OBKA Obir 92.82 40 *i*P P **07 10 08.2 -0.3**
comp=Z,33nm,1.0s
CONA Conrad Observa 92.95 38 *i*PcP P **07 10 09.2 +0.1**
comp=Z,15nm,1.1s
MURB Monte Urbino 92.97 43 P P **07 10 08.3 -1.0**
LJU Ljubljana 93.02 40 *i*P P **07 10 10.4 +1.1**
LJU *i* 07 10 11.1
comp=Z,22nm,0.8s
MORC Moravsky Berou 93.03 36 ⇑P P **07 10 09.7 +0.4**
MORC Moravsky Berou 93.03 36 P P **07 10 09.4 0.0**
MORC Moravsky Berou 93.03 36 *e*P P **07 10 08.9 -0.5**
MORC *e*PP PP **07 13 47.7 -4.2**
MORC Moravsky Berou 93.03 36 P P **07 10 09.4 0.0**
MORC pmax pmax
comp=Z,18nm,1.2s
SOKA Soboth 93.04 39 *i*P P **07 10 09.1 -0.5**
comp=Z,37nm,1.1s,SNR=10
ARSA Arzberg 93.07 39 *i*P P **07 10 09.6 0.0**
comp=Z,14nm,1.1s
PABE Paberze 93.27 29 P P **07 10 10.4 +0.1**
PABE IAmb IAmb 07 10 18.1
comp=Z,40nm,1.3s
PABE IAMs_20 IAMs_20 07 53 16.4
comp=Z,3µm,20.0s
PABE Paberze 93.27 29 *e*P P **07 10 11.3 +1.1**
CESX Cesi 93.29 44 P P **07 10 09.8 -0.9**
CESX IAmb IAmb 07 10 11.5
comp=Z,24nm,0.9s
RONA Rosalia, Austr 93.32 38 *i*PcP PcP **07 10 11.0 -0.3**
comp=Z,22nm,1.0s,SNR=10
OKC Ostrava-Krasne 93.34 36 AMS AMS 07 56 20.0
comp=Z,3µm,18.8s
PUL Pulkovo 93.34 24 *i*P P **07 10 08.9 -1.6**
PUL pmax pmax
comp=Z,34nm,0.6s
PUL MLR MLR
comp=Z,3µm,21.0s

CTZ	Chatham Island	93.36	225	IAMs_20	IAMs_20	07 44 24.1	
	comp=Z,4µm,19.0s						
YAK	Yakutsk	93.43	340	P	P	07 10 11.6	+0.8
YAK	Yakutsk	93.43	340	IAMs_20	IAMs_20	07 55 26.7	
	comp=Z,3µm,19.0s						
YAK	Yakutsk	93.43	340	eP	P	07 10 11.5	+0.6
YAK				e*PP	sP	07 10 22.9	+1.4
YAK				e		07 13 55.3	
YAK				eS	SKSac	07 20 43.2	-0.5
YAK				e*SS	SKKSac	07 21 05.5	+2.4
YAK				eSS	SS	07 27 34.6	+1.7
YAK				pmax	pmax		
	comp=Z,77nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.5s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,395nm,6.5s						
YAK				pmax	pmax		
	comp=N,261nm,4.6s						
YAK				pmax	pmax		
	comp=E,115nm,4.2s						
YAK				smax	smax		
	comp=E,494nm,9.2s						
YAK				smax	smax		
	comp=N,337nm,10.4s						
YAK				MLR	MLR		
	comp=Z,3µm,28.0s						
YAK				MLR	MLR		
	comp=N,2µm,28.0s						
YAK	Yakutsk	93.43	340	P	P	07 10 11.3	+0.4
	comp=N,65nm,0.9s,baz=297,slow=0.8,SNR=13						
YAK				LR	LR	07 55 44.7	
	comp=N,3µm,19.6s,baz=44,slow=38						
	comp=N,65nm,0.9s						
ZST	Bratislava	93.55	37	eP	P	07 10 12.8	+1.1
ZST				e		07 13 56.3	
ZST	Bratislava	93.55	37	eP	P	07 10 12.8	+1.1
ZST				ePP	PP	07 13 56.3	+0.3
JAVC	Velka Javorina	93.56	37	eP	P	07 10 11.9	+0.1
MODS	Modra-Piesok	93.57	37	eP	P	07 10 12.4	+0.5
MODS				pmax	pmax		
	comp=Z,85nm,1.4s						
MODS	Modra-Piesok	93.57	37	eP	P	07 10 12.4	+0.5
MODS				ePP	PP	07 13 55.4	-0.7
SMOL	Smolenice	93.59	37	eP	P	07 10 12.8	+0.9
SMOL				pmax	pmax		
	comp=Z,11nm,0.8s						
SUW	Suwalki	93.75	30	P	P	07 10 12.3	-0.2
SUW				IAMs_20	IAMs_20	07 53 40.1	
	comp=Z,3µm,21.0s						
SUW	Suwalki	93.75	30	P	P	07 10 12.3	-0.2
SUW				pmax	pmax		
	comp=Z,62nm,1.0s						
SUW				MLR	MLR		
	comp=Z,3µm,21.0s						
SUW	Suwalki	93.75	30	eP	P	07 10 12.9	+0.4
GCIS	Gornji Cirnik	93.78	40	i P	P	07 10 13.0	+0.2
GCIS				i		07 10 15.4	
	comp=Z,20nm,0.9s						
KEST	Kesra	93.83	51	P	P	07 10 14.0	+0.6
KEST				IAmb	IAmb	07 10 30.5	
	comp=Z,25nm,1.1s						
KEST	Kesra	93.83	51	P	P	07 10 13.3	-0.1
	comp=Z,16nm,0.9s,baz=265,slow=3.9,SNR=10						
KEST				LR	LR	07 51 16.8	
	comp=Z,2µm,19.0s,baz=254,slow=35						
	comp=Z,16nm,0.9s						
OJC	Ojcow	94.06	35	P	P	07 10 12.8	-1.3
OJC	Ojcow	94.06	35	P	P	07 10 12.8	-1.3
OJC				pmax	pmax		
	comp=Z,14nm,1.1s						
IIGN	Ignalina	94.40	28	eP	P	07 10 13.0	-2.5
VYHS	Vyhne	94.41	37	eP	P	07 10 15.8	+0.1
VYHS				pmax	pmax		
	comp=Z,16nm,1.3s						
VYHS	Vyhne	94.41	37	eP	P	07 10 15.8	+0.1
VYHS				ePP	PP	07 14 01.9	-0.7
LANS	Liptovska Anna	94.43	36	eP	P	07 10 16.8	+1.0
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	94.43	36	eP	P	07 10 16.8	+1.0
LANS				ePP	PP	07 14 02.7	-0.1
NRIK	Noril'sk	94.47	358	P	P	07 10 15.4	-0.1
NRIK	Noril'sk	94.47	358	ceP	P	07 10 15.0	-0.5
NRIK				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK				MLR	MLR		
	comp=Z,2µm,22.0s						
NRIK	Noril'sk	94.47	358	P	P	07 10 15.1	-0.5
	comp=Z,12nm,0.9s,baz=22,slow=4.0,SNR=18						
NRIK				PP	PP	07 14 02.8	+0.3
	comp=Z,7.6nm,0.9s,baz=359,slow=6.6,SNR=6.0						
	comp=Z,12nm,0.9s						
IDID	Didziasalis	94.66	28	⇑eP	P	07 10 10.9	-5.7
TYV	Tymovskoe	94.85	326	eP	P	07 10 17.9	+0.3
TYV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
MXZ	Matakaoa Point	95.14	233	IAMs_20	IAMs_20	07 43 43.8	
	comp=Z,3µm,20.0s						
TOA0	Torodi Ar. Sit	95.15	75	P	P	07 10 18.4	-1.3
TORD	Torodi Ar. Bea	95.15	75	P	P	07 10 18.5	-1.3
	comp=Z,6.3nm,0.3s,baz=299,slow=3.5,SNR=35						
TORD				LR	LR	07 51 05.4	
	comp=Z,3µm,20.1s,baz=296,slow=34						
	comp=Z,6.3nm,0.3s						
PSZ	Piszkesteto	95.31	37	P	P	07 10 20.7	+0.8
PSZ	Piszkesteto	95.31	37	P	P	07 10 20.4	+0.5
PSZ				IAMs_20	IAMs_20	07 57 33.8	
	comp=Z,3µm,19.0s						
PSZ	Piszkesteto	95.31	37	P	P	07 10 20.4	+0.5
PSZ				pmax	pmax		
	comp=Z,26nm,1.4s						
MORH	Mrgy, Hungar	95.45	39	⇑P	P	07 10 20.8	+0.4
TAM	Tamanrasset	95.47	64	IAMs_20	IAMs_20	07 47 42.0	
	comp=Z,3µm,22.0s						
MNK	Minsk	95.68	28	i P	P	07 10 17.8	-3.5
MNK				i		07 14 07.7	
MNK				i S	SKSac	07 20 53.0	-3.2
MNK				i SSS	SSS	07 31 44.5	
MNK				pmax	pmax		
	comp=E,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MNK				pmax	pmax		
	comp=N,25nm,0.8s						
MNK				MLR	MLR		
	comp=E,728nm,19.0s						
MNK				MLR	MLR		
	comp=Z,2µm,18.0s						
MNK				MLR	MLR		
	comp=N,1µm,19.0s						
KLMR	Klimovskoe	95.82	20	eP	P	07 10 19.5	-2.3
KLMR				e		07 14 10.8	
KLMR				S	SKSac	07 20 55.4	-1.2
KLMR				e		07 23 07.7	
KLMR				pmax	pmax		
	comp=Z,25nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,3µm,22.0s						
KWP	Kalwaria Pacla	95.96	34	IAmb	IAmb	07 10 27.5	
	comp=Z,26nm,1.0s						
KWP				IAMs_20	IAMs_20	07 56 39.8	
	comp=Z,2µm,20.0s						
KOLS	Kolonicke sedl	96.11	35	eP	P	07 10 24.7	+1.2
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KOLS	Kolonicke sedl	96.11	35	eP	P	07 10 24.7	+1.2
URZ	Urewera	96.24	232	LR	LR	07 43 49.8	
	comp=Z,2µm,21.6s,baz=148,slow=29						
LVV	L'vov	96.56	34	eP	P	07 10 26.3	+0.8
LVV				e		07 14 19.1	
LVV				e		07 20 56.9	
LVV				eS	S	07 21 42.2	-3.0
LVV				eSS	SS	07 28 30.5	+12
LVV				MLR	MLR		
	comp=Z,1µm,20.0s						
CUC	Castrocucco	96.64	45	IAmb	IAmb	07 10 26.9	
	comp=Z,36nm,1.0s						
CUC				IAMs_20	IAMs_20	07 52 32.5	
	comp=Z,2µm,21.0s						
FRGS	Fruska Gora	96.69	39	⇑P	P	07 10 27.0	+0.8
VAE	Valguarnera	96.80	48	LR	LR	07 54 42.0	
	comp=Z,2µm,18.0s,baz=324,slow=36						
YSS	Yuzh-Sakhalins	96.92	323	IAMs_20	IAMs_20	07 57 55.9	
	comp=Z,2µm,20.0s						
YSS	Yuzh-Sakhalins	96.92	323	eP	P	07 10 28.1	+1.0
YSS				e		07 14 28.1	
YSS				eS	S	07 21 48.3	0.0
YSS				ePS	PS	07 23 14.8	+3.1
YSS				eSS	SS	07 28 28.8	+5.5
YSS				eSSS	SSS	07 32 15.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=Z,200nm,6.1s						
YSS				smax	smax		
	comp=N,400nm,12.1s						
YSS				smax	smax		
	comp=E,300nm,15.4s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS				MLR	MLR		
	comp=N,900nm,18.0s						
MATE	Matera	96.93	44	⇑P	P	07 10 27.9	+0.5
BKZ	Black Stump Fm	96.95	231	IAMs_20	IAMs_20	07 46 52.6	
	comp=Z,2µm,19.0s						
SIRR	Siria	97.21	38	⇑P	Pdif	07 10 29.2	+0.6
TOZ	Tahuroa Road	97.33	233	IAMs_20	IAMs_20	07 44 58.7	
	comp=Z,2µm,20.0s						
BZS	Buzias	97.53	38	⇑P	Pdif	07 10 30.6	+0.5
BZS	Buzias	97.53	38	P	Pdif	07 10 30.5	+0.5
WDD	Wied Dalam	97.61	49	IAMs_20	IAMs_20	07 52 54.5	
	comp=Z,2µm,20.0s						
TIP	Timpagrande	97.66	46	⇑P	P	07 10 30.4	-0.3
TIP	Timpagrande	97.66	46	IAmb	IAmb	07 10 31.0	
	comp=Z,18nm,0.9s						
TIP				IAMs_20	IAMs_20	07 56 42.7	
	comp=Z,3µm,22.0s						
SURR	Surduc	97.76	38	⇑P	Pdif	07 10 31.5	+0.5
MARR	Marisel-Cluj	97.83	37	⇑P	Pdif	07 10 31.6	+0.1
MRZ	Mangatainoka R	98.01	230	IAMs_20	IAMs_20	07 43 28.7	
	comp=Z,3µm,20.0s						
HIZ	Hauiti	98.02	232	IAMs_20	IAMs_20	07 45 36.0	
	comp=Z,3µm,20.0s						
MDVR	Moldovita	98.04	39	⇓P	Pdif	07 10 32.7	+0.4
BURAR	Bucovina Array	98.48	35	⇓P	Pdif	07 10 35.0	+0.6
BURAR	Bucovina Array	98.48	35	P	Pdif	07 10 34.9	+0.6
BOVS	Bovan	98.64	40	⇑P	Pdif	07 10 35.3	+0.3
KIEV	Kiev	98.70	31	⇑P	P	07 10 34.6	-0.4
KIEV	Kiev	98.70	31	P	P	07 10 33.6	-1.4
KIEV	Kiev	98.70	31	IAMs_20	IAMs_20	07 56 34.1	
	comp=Z,3µm,20.0s						
KIEV	Kiev	98.70	31	P	P	07 10 33.6	-1.4
KIEV				pmax	pmax		
	comp=Z,21nm,1.6s						
KIEV				MLR	MLR		
	comp=Z,3µm,20.0s						
AKASG	Malin Array Be	98.70	31	P	P	07 10 34.0	-1.1
AKASG	Malin Array Be	98.70	31	P	P	07 10 34.0	-1.1
	comp=Z,2.4nm,0.7s,baz=290,slow=3.4,SNR=6.3						
AKASG				LR	LR	07 57 14.6	
	comp=Z,3µm,19.5s,baz=306,slow=37						
	comp=Z,2.4nm,0.7s						
AKBB	Malin Array Si	98.70	31	ceP	P	07 10 33.4	-1.7
AKBB				pmax	pmax		
	comp=Z,14nm,1.5s						
BHW	Baring Head	98.72	229	IAMs_20	IAMs_20	07 46 22.2	
	comp=Z,2µm,21.0s						
SNZO	South Karori	98.81	230	IAMs_20	IAMs_20	07 47 13.8	
	comp=Z,3µm,18.0s						
MOS	Moscow	98.96	24	eP	P	07 10 34.0	-2.1
MOS				e		07 10 46.1	
MOS				e		07 14 40.9	
MOS				MLR	MLR		
	comp=Z,2µm,21.0s						
OBN	Obninsk	99.00	25	⇓eP	Pdif	07 10 36.2	-0.1
OBN				*SP	pP	07 10 43.0	-1.1
OBN				i		07 14 40.3	
OBN				PPP	PPP	07 16 56.0	
OBN				S	SKSac	07 21 16.0	+2.9
OBN				ePS	PS	07 23 32.2	-1.6
OBN				SSS	SSS	07 32 39.0	
OBN				pmax	pmax		
	comp=Z,76nm,2.4s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
OBN	Obninsk	99.00	25	P	Pdif	07 10 36.2	-0.1
	comp=Z,19nm,0.4s,baz=170,slow=22,SNR=3.9						
OBN				LR	LR	07 57 23.3	
	comp=Z,4µm,20.2s,baz=326,slow=37						
ARR	Arges	99.44	37	⇑P	Pdif	07 10 39.2	+0.6
VOIR		99.64	37	⇑P	Pdif	07 10 39.8	+0.3
VOIR		99.64	37	P	Pdif	07 10 39.8	+0.3
MLR	Muntele Rosu	100.12	36	⇑P	Pdif	07 10 42.2	+0.4
MLR	Muntele Rosu	100.12	36	Pdif	Pdif	07 10 41.0	-0.7
MLR				IAMs_20	IAMs_20	07 59 10.1	
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	100.12	36	i P	Pdif	07 10 41.0	-0.7
MLR				MLR	MLR		
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	100.12	36	P	Pdif	07 10 40.2	-1.5
	comp=Z,4.5nm,0.8s,baz=299,slow=3.0,SNR=7.8						
VRI	Vrincioaia	100.34	36	⇑P	Pdif	07 10 43.1	+0.5
VRI	Vrincioaia	100.34	36	P	Pdif	07 10 43.0	+0.5
KIRV	Kirov	100.62	17	i P	Pdif	07 10 42.4	-1.0
KIS	Kishinev	100.81	34	eP	Pdif	07 10 46.0	+1.5
KIS	Kishinev	100.81	34	ePP	PP	07 14 51.0	-0.7
KIS				eL	L	07 49 33.0	
	comp=Z,700nm,20.5s						
KIS	Kishinev	100.81	34	eP	Pdif	07 10 46.0	+1.5
KIS				e		07 14 51.0	
MILM	Milestii Mici	100.85	34	eP	Pdif	07 10 43.0	-1.7
MILM	Milestii Mici	100.85	34	ePP	PP	07 14 51.0	-1.0
MILM	Milestii Mici	100.85	34	ePS	PS	07 23 53.0	-1.1
MILM				eL	L	07 49 19.0	
MILM				LRM	MLR	07 59 17.0	
	comp=Z,1µm,18.0s						
MILM	Milestii Mici	100.85	34	eP	Pdif	07 10 43.0	-1.7
MILM				e		07 14 51.0	
MILM				e		07 21 20.0	
MILM				ePS	PS	07 23 53.0	-1.1
MILM				MLR	MLR		
	comp=N,1µm,18.0s						
KLR	Kul'dur	101.42	329	P	Pdif	07 10 47.0	-0.2
KLR	Kul'dur	101.42	329	P	Pdif	07 10 47.0	-0.2
	comp=N,1.0nm,0.7s,baz=63,slow=4.5,SNR=4.2						
AGG	Agios Georgios	101.49	43	Pdif	Pdif	07 10 47.6	-0.2
AGG	Agios Georgios	101.49	43	i P	Pdif	07 10 47.7	-0.2
CFR	Carcaliu	101.55	36	⇑P	Pdif	07 10 48.3	+0.4
CFR	Carcaliu	101.55	36	P	Pdif	07 10 48.2	+0.4
LPSR	Galich'ya Gora	101.79	25	eP	Pdif	07 10 47.4	-1.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2µm,21.0s						
VORR	Voronezh	102.60	26	eP	Pdif	07 10 52.6	+0.2
VORR				pmax	pmax		
	comp=Z,71nm,0.4s						
VSR	Storozhevoye	102.92	26	eP	Pdif	07 10 51.3	-2.5
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,5µm,21.0s						
VORD	Divnogorie	103.16	26	eP	Pdif	07 10 51.5	-3.4
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRH	Novokhopyorsk	103.98	25	eP	Pdif	07 10 55.7	-2.9
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH				MLR	MLR		
	comp=Z,2µm,21.0s						
USRK	Ussuriysk Ar.	104.62	325	Pdiff	Pdif	07 11 03.4	+1.9
	comp=Z,3.4nm,0.9s,baz=50,slow=6.0,SNR=5.0						
JSD	Sado	104.64	317	IAMs_20	IAMs_20	07 54 45.4	
	comp=Z,2µm,19.0s						
ARU	Arti	104.83	13	P	Pdif	07 11 03.7	+1.5
ARU						07 15 18.1	
ARU				S	SKSac	07 21 43.0	+2.1
ARU				SP	SP	07 24 27.8	-4.2
ARU				SS	SS	07 30 05.8	-6.4
BELG	Belogornoye	105.26	21	Pdiff	Pdif	07 11 03.5	-0.6
	comp=Z,8.4nm,0.8s,baz=198,slow=2.6,SNR=7.3						
MJAR	Matsushiro Arr	105.52	316	PP	PP	07 15 24.7	-2.6
	comp=Z,1.5nm,0.7s,baz=46,slow=7.3,SNR=4.4						
MDJ	Mudanjiang	105.62	327	Pdif	Pdif	07 11 04.0	-2.0
MDJ				PP	PP	07 15 27.8	+0.1
MDJ				AMB	AMB		
	comp=Z,360nm,6.4s						
MDJ				LR	LR		
	comp=Z,450nm,21.6s						
MDJ				LR	LR		
	comp=Z,1µm,22.6s						
MDJ				LR	LR		
	comp=Z,2µm,24.2s						
BNX	BinXian	105.96	329	⇓Pdif	Pdif	07 11 07.3	-0.2
BNX				PP	PP	07 15 30.3	+0.2
BNX				SS	SS	07 30 25.4	-3.0
BNX				AMB	AMB		
	comp=Z,520nm,5.7s						
BNX				LR	LR		
	comp=Z,980nm,17.4s						
BNX				LR	LR		
	comp=Z,2µm,17.3s						
BNX				LR	LR		
	comp=Z,1µm,20.6s						
QSPA	South Pole Qui	106.26	180	IAMs_20	IAMs_20	07 51 54.7	
	comp=Z,3µm,20.0s						
HIA	Hailar	106.74	335	IAMs_20	IAMs_20	08 01 06.8	
	comp=Z,4µm,22.0s						
SNAA	Sanae	106.92	161	IAMs_20	IAMs_20	07 51 17.4	
	comp=Z,2µm,21.0s						
ANTO	Ankara	107.55	38	IAMs_20	IAMs_20	08 01 30.9	
	comp=Z,2µm,21.0s						
BRTR	Keskin Array B	108.14	38	PKKPbc	PKKPbc	07 26 40.6	+4.0
	comp=Z,0.6nm,0.7s,baz=114,slow=1.5,SNR=3.6						
KIV	Kislovodsk	109.94	29	i P	Pdif	07 11 21.5	-3.9
KIV				e		07 15 55.4	
KIV				e		07 22 01.3	
KIV				ePS	PS	07 25 23.5	-5.2
KIV				eSS	SS	07 31 19.5	-2.9
ZALV	Zalesovo Beam	109.97	358	PKiKP	PKiKP	07 15 26.2	-0.8
	comp=Z,0.4nm,0.3s,baz=350,slow=4.4,SNR=1.9						
BVAR	Borovoye Array	110.17	8	PKiKP	PKiKP	07 15 23.6	-3.8
	comp=Z,1.6nm,1.0s,baz=5.7,slow=1.5,SNR=3.6						
BVAR				PP	PP	07 15 58.3	-2.0
	comp=Z,5.1nm,1.1s,baz=322,slow=4.4,SNR=2.9						
AKTO	Aktyubinsk	110.17	16	PKiKP	PKiKP	07 15 27.5	0.0
	comp=Z,1.6nm,0.9s,baz=307,slow=5.5,SNR=3.6						
KSRS	Korea Array	111.41	322	PKiKP	PKiKP	07 15 30.4	+0.2
	comp=Z,2.7nm,0.9s,baz=331,slow=0.8,SNR=8.0						
KSRS				PP	PP	07 16 06.4	-3.5
	comp=Z,1.5nm,0.8s,baz=60,slow=5.8,SNR=5.6						
ULN	Ulaanbaatar	112.36	342	IAMs_20	IAMs_20	08 05 12.9	
	comp=Z,3µm,22.0s						
SONM	Songino Array	112.58	343	PKiKP	PKiKP	07 15 30.9	-1.5
	comp=Z,0.2nm,0.6s,baz=27,slow=3.9,SNR=5.1						
SONM				PP	PP	07 16 17.4	-0.6
	comp=Z,2.2nm,1.0s,baz=26,slow=7.2,SNR=5.1						
SONM				PKKPab	PKKPab	07 26 28.5	-3.4
	comp=Z,0.6nm,0.8s,baz=200,slow=2.5,SNR=4.6						
MAK	Makhachkala	112.90	27	i P	Pdif	07 11 32.7	-5.7
MAK				i		07 15 32.4	
MAK				e		07 16 22.5	
MAK				ePPP	PPP	07 18 42.0	
MAK				e		07 22 18.8	
MAK				ePS	PS	07 25 55.4	-0.4
MAK				eSS	SS	07 32 01.7	+0.2
MAK				pmax	pmax		
	comp=Z,148nm,1.1s						
MAK				MLR	MLR		
	comp=Z,2µm,21.0s						
KURK	Kurchatov	113.17	3	i PKIKP	PKiKP	07 15 32.1	-1.0
KURBB	Kurchatov Arra	113.25	3	PKiKP	PKiKP	07 15 32.1	-1.2
	comp=Z,1.0nm,0.6s,baz=353,slow=2.4,SNR=7.6						
KURBB				PP	PP	07 16 14.9	-7.4
	comp=Z,1.9nm,0.7s,baz=358,slow=6.2,SNR=4.8						
KURBB				PKKPab	PKKPab	07 26 25.3	-3.4
	comp=Z,0.9nm,0.7s,baz=188,slow=3.0,SNR=7.0						
BRZS	Berezniki	113.43	7	ePKiKP	PKiKP	07 15 31.8	-2.0
	baz=7.0						
BRZS	Berezniki	113.43	7	i PKIKP	PKiKP	07 15 31.7	-2.0
SEM	Semipalatinsk	113.53	1	ePKiKP	PKiKP	07 15 32.2	-1.9
	baz=1.7						
SEM				LR	LR	08 04 25.4	
	comp=Z,2µm,18.5s,baz=1.7						
SEM	Semipalatinsk	113.53	1	i PKIKP	PKiKP	07 15 32.2	-1.9
GNI	Garni	113.83	31	IAMs_20	IAMs_20	08 08 58.5	
	comp=Z,2µm,20.0s						
ELIB	Princess Elisa	114.84	163	dPKiKP	PKPdf	07 15 42.7	+6.8
BJT	Baijiatuau	115.66	332	IAMs_20	IAMs_20	08 10 43.2	
	comp=Z,2µm,21.0s						
ZSN	Zaisan	116.47	358	ePKP	PKiKP	07 15 37.4	-2.2
	baz=358						
ZSN				ePP	PP	07 16 43.3	-1.8
	baz=358						
ZSN	Zaisan	116.47	358	ePKIKP	PKiKP	07 15 37.4	-2.2
ZSN				e		07 16 43.3	
PMG	Port Moresby	116.59	268	IAMs_20	IAMs_20	07 57 00.5	
	comp=Z,2µm,19.0s						
HHC	Hu-ho-hao-te	116.95	335	ePKP	PKiKP	07 15 40.9	0.0
HHC				PP	PP	07 16 51.4	+2.5
HHC				SS	SS	07 32 52.3	-2.6
HHC				LR	LR		
	comp=Z,2µm,19.1s						
HHC				LR	LR		
	comp=Z,2µm,18.3s						
HHC				LR	LR		
	comp=Z,3µm,19.9s						
MAKZ	Makanchi	117.15	0		PKPdf	07 15 39.8	-1.2
MAKZ	Makanchi	117.15	0	PKIKP	PKPdf	07 15 39.8	-1.2
MK31	Makanchi Array	117.17	360		PKPdf	07 15 39.3	-1.7
MK31	Makanchi Array	117.17	360	PKIKP	PKPdf	07 15 39.3	-1.7
MKAR	Makanchi Array	117.17	360	PKP	PKPdf	07 15 39.6	-1.4
	comp=Z,2.1nm,0.9s,baz=2.9,slow=2.4,SNR=9.9						
MKAR				PP	PP	07 16 44.5	-5.4
	comp=Z,4.3nm,0.9s,baz=3.4,slow=3.5,SNR=6.0						
MKAR				PKKPab	PKKPab	07 26 12.5	+1.1
	comp=Z,0.7nm,0.9s,baz=205,slow=5.4,SNR=4.3						
BTO	Baotou	117.76	336	ePKP	PKiKP	07 15 44.0	+1.5
BTO				sPKP		07 15 58.4	
BTO				PP	PP	07 16 55.9	+1.3
BTO				SS	SS	07 33 05.3	-0.1
BTO				LR	LR		
	comp=Z,3µm,17.2s						
BTO				LR	LR		
	comp=Z,3µm,18.7s						
BTO				LR	LR		
	comp=Z,5µm,21.0s						
HNS	HongShan	118.45	331	⇑PKP	PKPdf	07 15 43.6	-0.1
HNS				PP	PP	07 17 01.9	+2.6
HNS				SS	SS	07 33 17.5	+3.2
HNS				AMB	AMB		
	comp=Z,510nm,7.5s						
HNS				LR	LR		
	comp=Z,1µm,19.9s						
HNS				LR	LR		
	comp=Z,2µm,20.7s						
HNS				LR	LR		
	comp=Z,2µm,23.1s						
BTLS	Baital	118.46	7	ePP	PP	07 16 56.1	-2.9
	baz=6.9						
WIN	Windhoek	118.63	107	IAMs_20	IAMs_20	08 01 24.0	
	comp=Z,2µm,22.0s						
TSUM	Tsumeb	118.63	103	IAMs_20	IAMs_20	08 05 20.8	
	comp=Z,1µm,20.0s						
TDK	Taldyqorghan	118.86	3	ePP	PP	07 16 59.8	-1.9
	baz=3.4						
TDK				LR	LR	08 07 49.0	
	comp=Z,2µm,19.6s,baz=3.4						
CTAO	Charters Tower	119.43	256	IAMs_20	IAMs_20	07 56 23.6	
	comp=Z,2µm,21.0s						
SSE	Sheshan	119.82	322	PKP	PKiKP	07 15 48.3	+1.7
SSE				PP	PP	07 17 15.1	+6.0
SSE				SS	SS	07 33 33.4	+0.7
SSE				AMB	AMB		
	comp=Z,94nm,5.0s						
SSE				LR	LR		
	comp=Z,450nm,23.4s						
SSE				LR	LR		
	comp=Z,620nm,23.1s						
KUU	Kurty	119.82	5	ePKP	PKPdf	07 15 44.5	-1.7
	baz=5.2						
KUU				ePP	PP	07 17 05.3	-3.1
	baz=5.2						
KUU				LR	LR	08 08 26.0	
	baz=5.2						
KUU	Kurty	119.82	5	ePKIKP	PKPdf	07 15 44.5	-1.7
KUU				e		07 17 05.2	
WMQ	Urumqi	119.94	355	PKP	PKPdf	07 15 44.9	-1.6
WMQ				sPKP		07 16 00.8	
WMQ				PP	PP	07 17 19.3	+10

WMQ					AMB	AMB			
	comp=Z,220nm,6.7s								
WMQ					LR	LR			
	comp=Z,3μm,19.7s								
WMQ					LR	LR			
	comp=Z,3μm,21.5s								
WMQ					LR	LR			
	comp=Z,2μm,23.1s								
NJ2	**Nanjing**	**120.48**	**324**	*e*PKP	**PKiKP**	**07 15 47.8**	**0.0**		
NJ2				LR	LR				
	comp=Z,2μm,16.5s								
NJ2				LR	LR				
	comp=Z,1μm,15.1s								
NJ2				LR	LR				
	comp=Z,2μm,16.2s								
IUG	**luzhnay**	**120.72**	**11**	*e*PKP	**PKPdf**	**07 15 45.3**	**-2.9**		
	baz=11								
IUG	**luzhnay**	**120.72**	**11**	*e*PKiKP	**PKPdf**	**07 15 45.2**	**-2.9**		
UZB	**Uzynbulak**	**120.74**	**3**	*e*PKP	**PKPdf**	**07 15 45.9**	**-2.3**		
	baz=3.1								
UZB	**Uzynbulak**	**120.74**	**3**	*e*PKiKP	**PKPdf**	**07 15 45.8**	**-2.3**		
SHLS	**Shalkode**	**120.75**	**2**	*e*PP	**PP**	**07 17 12.7**	**-2.2**		
	baz=2.3								
SATY	**Saty**	**120.80**	**3**	*e*PP	**PP**	**07 17 13.2**	**-2.0**		
	baz=3.6								
AAK	**Ala-Archa**	**120.89**	**7**	PKP	**PKPdf**	**07 15 48.4**	**-0.1**		
	comp=Z,1.8nm,0.8s,baz=320,slow=6.0,SNR=4.8								
COEN	**Coen**	**121.36**	**263**	PKPdf	**PKPdf**	**07 15 49.7**	**-0.1**		
GEYT	**Alibeck**	**121.44**	**22**	PKPdf	**PKiKP**	**07 15 49.7**	**0.0**		
GEYT	**Alibeck**	**121.44**	**22**	PKiKP	**PKiKP**	**07 15 49.7**	**0.0**		
GEYT	**Alibeck**	**121.44**	**22**	PKP	**PKPdf**	**07 15 48.2**	**-1.3**		
	comp=Z,3.9nm,0.4s,baz=267,slow=3.0,SNR=9.5								
GYA0B	**ALIBECK ARRAY**	**121.44**	**22**	PKPdf	**PKPdf**	**07 15 49.4**	**-0.1**		
LYN	**LuoYang**	**121.82**	**331**	*e*PKP	**PKiKP**	**07 15 51.6**	**+1.2**		
LYN				SS	SS	07 34 01.8	+4.1		
LYN				AMB	AMB				
	comp=Z,980nm,6.5s								
LYN				LR	LR				
	comp=Z,3μm,19.2s								
LYN				LR	LR				
	comp=Z,2μm,18.0s								
LYN				LR	LR				
	comp=Z,3μm,22.4s								
ARSB	**Arslanbob**	**121.99**	**8**	PKPdf	**PKiKP**	**07 15 51.5**	**+0.7**		
ARSB	**Arslanbob**	**121.99**	**8**	PKiKP	**PKiKP**	**07 15 51.5**	**+0.7**		
GTA	**Gaotai**	**122.18**	**344**	PKP	**PKPdf**	**07 15 50.8**	**-0.2**		
GTA				PP	**PP**	**07 17 30.0**	**+5.3**		
GTA				SS	SS	07 34 07.1	+5.2		
GTA				LR	LR				
	comp=Z,1μm,24.4s								
GTA				LR	LR				
	comp=Z,1μm,22.5s								
GTA				LR	LR				
	comp=Z,2μm,24.0s								
NRN	**Naryn**	**122.23**	**6**	PKPdf	**PKPdf**	**07 15 51.4**	**+0.1**		
NRN	**Naryn**	**122.23**	**6**	PKiKP	**PKPdf**	**07 15 51.4**	**+0.1**		
XAN	**Xi'an**	**123.84**	**333**	PKP	**PKPdf**	**07 15 53.8**	**-0.5**		
XAN				PP	**PP**	**07 17 37.1**	**+0.9**		
XAN				SS	SS	07 34 26.0	+2.6		
XAN				AMB	AMB				
	comp=Z,620nm,14.2s								
XAN				LR	LR				
	comp=Z,3μm,19.6s								
XAN				LR	LR				
	comp=Z,3μm,19.2s								
XAN				LR	LR				
	comp=Z,2μm,21.0s								
XAN	**Xi'an**	**123.84**	**333**	PKPdf	**PKPdf**	**07 15 53.7**	**-0.5**		
XAN	**Xi'an**	**123.84**	**333**	PKiKP	**PKPdf**	**07 15 53.7**	**-0.5**		
SIMJ	**Simiganj**	**123.90**	**13**		**PKPdf**	**07 15 54.3**	**-0.1**		
LZH	**Lanzhou**	**124.01**	**339**	PKP	**PKPdf**	**07 15 54.8**	**+0.1**		
LZH				sPKP		07 16 08.4			
LZH				PP	**PP**	**07 17 39.4**	**+2.1**		
LZH				AMB	AMB				
	comp=Z,250nm,5.6s								
LZH				LR	LR				
	comp=Z,2μm,17.9s								
LZH				LR	LR				
	comp=Z,1μm,16.8s								
LZH				LR	LR				
	comp=Z,3μm,16.8s								
WHN	**Wuhan**	**124.10**	**326**	PKP	**PKPdf**	**07 15 54.5**	**-0.2**		
KSH	**Kashi**	**124.13**	**6**	PKP	**PKiKP**	**07 15 56.1**	**+1.1**		
KSH				AMB	AMB				
	comp=Z,470nm,13.4s								
KSH				LR	LR				
	comp=Z,2μm,22.7s								
KSH				LR	LR				
	comp=Z,2μm,20.3s								
KSH				LR	LR				
	comp=Z,4μm,23.4s								
YHNB	**Yeheng**	**124.19**	**316**	IAMs_20	IAMs_20	08 18 22.3			
	comp=Z,2μm,20.0s								
STKA	**Stephens Creek**	**124.31**	**242**	PKPdf	**PKPdf**	**07 15 55.1**	**+0.1**		
STKA	**Stephens Creek**	**124.31**	**242**	PKP	**PKiKP**	**07 15 55.3**	**-0.1**		
	comp=Z,13nm,0.8s,baz=54,slow=2.0,SNR=20								
NACB	**Ninganchiao**	**124.38**	**315**	IAMs_20	IAMs_20	08 20 00.4			
	comp=Z,1μm,19.0s								
SSLB	**Suanglung**	**125.07**	**316**	PKPdf	**PKPdf**	**07 15 56.1**	**-0.8**		
SSLB				IAMs_20	IAMs_20	08 14 23.7			
	comp=Z,2μm,20.0s								
YULB	**Yu-li**	**125.10**	**315**	IAMs_20	IAMs_20	08 20 35.8			
	comp=Z,1μm,19.0s								
TPUB	**Ta-pu**	**125.62**	**315**	IAMs_20	IAMs_20	08 20 28.3			
	comp=Z,1μm,20.0s								
BOSA	**Boshof**	**126.34**	**114**	PKPdf	**PKPdf**	**07 15 59.0**	**-0.2**		
BOSA				IAMs_20	IAMs_20	08 07 23.0			
	comp=Z,2μm,20.0s								
BOSA	**Boshof**	**126.34**	**114**	PKiKP	**PKPdf**	**07 15 59.0**	**-0.2**		
BOSA	**Boshof**	**126.34**	**114**	PKP	**PKPdf**	**07 15 59.0**	**-0.2**		
	comp=Z,12nm,0.9s,baz=233,slow=2.3,SNR=14								
GOMU	**GeErMu**	**126.42**	**347**	PKP	**PKPdf**	**07 15 59.6**	**0.0**		
GOMU				SS	SS	07 34 59.4	+3.5		
GOMU				AMB	AMB				
	comp=Z,680nm,6.4s								
GOMU				LR	LR				
	comp=Z,2μm,20.1s								
GOMU				LR	LR				
	comp=Z,1μm,20.2s								
GOMU				LR	LR				
	comp=Z,3μm,20.3s								
SOE	**Somerset East**	**126.48**	**119**	IAMs_20	IAMs_20	08 04 57.6			
	comp=Z,2μm,22.0s								
RAYN	**Ar Rayn**	**126.51**	**43**	PKPdf	**PKPdf**	**07 15 59.7**	**+0.1**		
RAYN	**Ar Rayn**	**126.51**	**43**	PKiKP	**PKPdf**	**07 15 59.7**	**+0.1**		
LBTB	**Lobatse**	**126.58**	**109**	IAMs_20	IAMs_20	08 12 47.3			
	comp=Z,2μm,18.0s								
CASY	**Casey**	**126.71**	**194**	IAMs_20	IAMs_20	08 03 39.8			
	comp=Z,2μm,19.0s								
ENH	**Enshi**	**126.77**	**330**		**PKPdf**	**07 15 59.4**	**-0.5**		
ENH				IAMs_20	IAMs_20	08 19 59.0			
	comp=Z,1μm,21.0s								
LSZ	**Lusaka**	**128.07**	**97**	PKPdf	**PKPdf**	**07 16 02.7**	**-0.1**		
LSZ				IAMs_20	IAMs_20	08 15 31.1			
	comp=Z,1μm,19.0s								
LSZ	**Lusaka**	**128.07**	**97**	PKiKP	**PKPdf**	**07 16 02.7**	**-0.1**		
CD2	**Chengdu**	**128.69**	**336**	PKP	**PKPdf**	**07 16 03.4**	**-0.2**		
CD2				PP	**PP**	**07 18 09.0**	**+0.7**		
CD2				SKS	**SKSac**	**07 23 11.1**	**+0.6**		
CD2				SS	**SS**	**07 35 19.8**	**-4.1**		
CD2				AMB	AMB				
	comp=Z,520nm,8.1s								
CD2				LR	LR				
	comp=Z,2μm,22.9s								
CD2				LR	LR				
	comp=Z,2μm,23.6s								
CD2				LR	LR				
	comp=Z,2μm,21.0s								
FAKI	**Fak Fak**	**129.12**	**280**	IAMs_20	IAMs_20	08 00 49.4			
	comp=Z,2μm,22.0s								
LODK	**Lodwar**	**129.65**	**71**	IAMs_20	IAMs_20	08 09 37.1			
	comp=Z,3μm,22.0s								
FURI	**Furi**	**130.10**	**63**	IAMs_20	IAMs_20	08 12 54.4			
	comp=Z,1μm,20.0s								
GULI	**GuiLin**	**130.40**	**326**	PKP	**PKPdf**	**07 16 05.0**	**-1.9**		
GULI				PP	**PP**	**07 18 20.0**	**+0.3**		
GULI				SS	SS	07 35 42.3	-3.2		
GULI				LR	LR				
	comp=Z,530nm,21.7s								
GULI				LR	LR				
	comp=Z,1μm,19.5s								
GULI				LR	LR				
	comp=Z,1μm,21.1s								
GZH	**Guangzhou**	**130.42**	**321**	⇓PKP	**PKiKP**	**07 16 15.4**	**+7.6**		
GZH				PP	PP	07 18 34.0	+14		
GZH				SKS	**SKSdf**	**07 23 20.4**	**+2.9**		
GZH				LR	LR				
	comp=N,350nm,14.4s								
GZH				LR	LR				
	comp=E,290nm,14.7s								
HKPS	**Hong Kong Po S**	**130.54**	**320**	IAMs_20	IAMs_20	08 22 29.7			
	comp=Z,2μm,19.0s								
WB2	**Warramunga Arr**	**130.54**	**258**	PKPdf	**PKPdf**	**07 16 07.2**	**-0.1**		
WRAB	**Tennant Creek**	**130.54**	**258**	PKPdf	**PKPdf**	**07 16 07.4**	**+0.1**		
WRAB	**Tennant Creek**	**130.54**	**258**	PKiKP	**PKPdf**	**07 16 07.4**	**+0.1**		
WRA	**Warramunga Arr**	**130.55**	**258**	PKP	**PKPdf**	**07 16 07.0**	**-0.3**		
	comp=Z,9.9nm,0.9s,baz=82,slow=1.7,SNR=30								
WRA				SKPbc	**SKPab**	**07 19 30.8**	**+1.2**		
	comp=Z,2.4nm,1.1s,baz=84,slow=3.4,SNR=2.2								
AS31	**Alice Springs**	**131.15**	**253**	PKPdf	**PKPdf**	**07 16 08.3**	**-0.1**		
ASAR	**Alice Springs**	**131.16**	**253**	PKP	**PKPdf**	**07 16 08.6**	**+0.2**		
	comp=Z,7.1nm,0.9s,baz=104,slow=2.2,SNR=31								
ASAR				SKPbc	**SKPab**	**07 19 34.3**	**+2.1**		
	comp=Z,2.5nm,1.0s,baz=90,slow=3.7,SNR=4.2								
GYA	**Guiyang**	**131.31**	**330**	⇓PKP	**PKPdf**	**07 16 08.8**	**0.0**		
GYA				PP	**PP**	**07 18 26.3**	**+0.7**		
GYA				AMB	AMB				
	comp=Z,830nm,8.6s								
GYA				LR	LR				
	comp=Z,740nm,28.0s								
GYA				LR	LR				
	comp=Z,2μm,20.2s								
GYA				LR	LR				
	comp=Z,2μm,24.5s								
UOSS	**Minazif**	**131.73**	**32**	PKPdf	**PKPdf**	**07 16 08.4**	**-1.1**		
ATD	**Arta Tunnel**	**132.17**	**57**	IAMs_20	IAMs_20	08 10 14.6			
	comp=Z,2μm,22.0s								
ATD	**Arta Tunnel**	**132.17**	**57**	*e*P	**PKiKP**	**07 16 12.6**	**+1.0**		
SMLA	**Simla**	**132.56**	**6**	*e*P	**PKPdf**	**07 16 10.8**	**0.0**		
PZH	**PanZhiHua**	**133.41**	**336**	PKP	**PKPdf**	**07 16 11.9**	**-0.9**		
PZH				PP	**PP**	**07 18 40.4**	**+1.5**		
PZH				AMB	AMB				
	comp=Z,520nm,8.6s								
PZH				LR	LR				
	comp=Z,1μm,17.5s								
PZH				LR	LR				
	comp=Z,900nm,18.0s								
PZH				LR	LR				
	comp=Z,1μm,17.6s								
LSA	**Lhasa**	**133.44**	**349**		**PKPdf**	**07 16 13.1**	**-0.1**		
LSA				IAMs_20	IAMs_20	08 20 42.6			
	comp=Z,2μm,21.0s								
LSA	**Lhasa**	**133.44**	**349**	PKIKP	**PKPdf**	**07 16 13.1**	**-0.1**		
KMI	**Kunming**	**134.22**	**334**	⇑PKP	**PKPdf**	**07 16 13.3**	**-1.1**		
KMI				PP	**PP**	**07 18 45.5**	**+1.2**		
KMI				AMB	AMB				
	comp=Z,530nm,7.8s								
KMI				LR	LR				
	comp=Z,1μm,23.7s								
KMI				LR	LR				
	comp=Z,1μm,20.8s								
KMI				LR	LR				
	comp=Z,2μm,22.5s								
KIBK	**Kibwezi**	**134.32**	**77**	PKPdf	**PKPdf**	**07 16 14.1**	**-0.6**		
LGTI	**Lohaghat**	**134.44**	**2**	*e*P	**PKPdf**	**07 16 14.1**	**-0.3**		
LKP	**Lekhapani**	**134.64**	**343**	*e*P	**PKPdf**	**07 16 12.3**	**-2.6**		
DIBR	**DIBRUGARH**	**134.77**	**344**	*e*P	**PKPdf**	**07 16 14.5**	**-0.6**		
ASOR	**Ausora**	**134.96**	**6**	*e*P	**PKPdf**	**07 16 15.6**	**+0.1**		
TAWA	**Tawang**	**135.35**	**348**	*e*P	**PKPdf**	**07 16 15.3**	**-1.4**		
ITAN	**ITANAGAR**	**135.38**	**345**	*e*P	**PKPdf**	**07 16 13.8**	**-2.5**		
QIZ	**Qiongzhong**	**135.61**	**321**	PKP	**PKPdf**	**07 16 15.0**	**-1.9**		
QIZ				PKS	**PKSdf**	**07 19 52.6**	**-0.8**		
QIZ				AMB	AMB				
	comp=Z,260nm,4.5s								
QIZ				LR	LR				
	comp=Z,500nm,16.7s								
QIZ				LR	LR				
	comp=Z,930nm,19.4s								
QIZ				LR	LR				
	comp=Z,1μm,16.8s								
QIZ	**Qiongzhong**	**135.61**	**321**	IAMs_20	IAMs_20	08 23 48.9			
	comp=Z,1μm,19.0s								
TNCH	**TengChong**	**135.94**	**339**	PKP	**PKPdf**	**07 16 17.5**	**-0.1**		
TNCH				PP	**PP**	**07 18 57.4**	**+2.4**		
TNCH				SKS	**SKSdf**	**07 23 18.9**	**-8.9**		
TNCH				SKKS	**SKKSac**	**07 25 46.9**	**-3.7**		
TNCH				SS	**SS**	**07 36 52.0**	**-0.4**		
TNCH				AMB	AMB				
	comp=Z,310nm,6.7s								
TNCH				LR	LR				
	comp=Z,1μm,20.4s								
TNCH				LR	LR				
	comp=Z,1μm,19.6s								
TNCH				LR	LR				
	comp=Z,2μm,30.9s								
GTK	**Tadong**	**136.18**	**352**	*e*P	**PKPdf**	**07 16 16.8**	**-1.2**		
BRCI	**Bahraich**	**136.35**	**1**	*e*P	**PKPdf**	**07 16 13.5**	**-4.6**		
KOHI	**KOHIMA**	**136.64**	**344**	*e*P	**PKPdf**	**07 16 18.3**	**-0.6**		
SLVN	**Son La**	**136.97**	**330**	PKPdf	**PKPdf**	**07 16 16.5**	**-2.9**		
SLVN				IAMs_20	IAMs_20	08 25 51.9			
	comp=Z,2μm,20.0s								
SHL	**Shillong**	**137.31**	**347**	PKPdf	**PKPdf**	**07 16 19.6**	**-0.5**		
SHL	**Shillong**	**137.31**	**347**	PKiKP	**PKPdf**	**07 16 19.6**	**-0.5**		
IMP	**Imphal**	**137.53**	**344**	*e*P	**PKPdf**	**07 16 18.3**	**-2.1**		
JHNI	**Jhiang Mai**	**138.29**	**5**	*e*P	**PKPdf**	**07 16 17.6**	**-4.1**		
ALBI	**Allahabad**	**138.61**	**1**	*e*P	**PKPdf**	**07 16 19.7**	**-2.6**		
SOEI	**Soe**	**138.64**	**274**	IAMs_20	IAMs_20	08 13 07.9			
	comp=Z,1μm,21.0s								
AGT	**Agartala**	**139.08**	**347**	⇑*e*P	**PKPdf**	**07 16 24.2**	**+1.1**		
BOK	**Bokaro**	**139.96**	**355**	*e*P	**PKPdf**	**07 16 24.3**	**-0.5**		
SAIH	**SAIHA**	**140.02**	**344**	*e*P	**PKPdf**	**07 16 24.2**	**-0.9**		
UBPT	**Khong Chiam**	**141.13**	**323**		**PKPdf**	**07 16 27.3**	**+0.2**		
UBPT				IAMs_20	IAMs_20	08 25 46.8			
	comp=Z,1μm,21.0s								
CHTO	**Chiang Mai**	**141.42**	**334**	PKPdf	**PKPdf**	**07 16 27.0**	**-0.6**		
CHTO	**Chiang Mai**	**141.42**	**334**	IAMs_20	IAMs_20	08 30 02.9			
	comp=Z,1μm,21.0s								
CHTO	**Chiang Mai**	**141.42**	**334**	PKIKP	**PKPdf**	**07 16 27.0**	**-0.6**		
CMAR	**Chiang Mai Arr**	**141.73**	**334**	PKhKP	PKPpre	07 16 23.6			
	comp=Z,10nm,0.9s,baz=357,slow=3.7,SNR=18								
CMAR				PP	**PP**	**07 19 31.4**	**+0.6**		
	comp=Z,1.1nm,0.3s,baz=12,slow=5.6,SNR=4.5								
DLV	**T Lat**	**141.77**	**316**	IAMs_20	IAMs_20	08 28 33.2			
	comp=Z,2μm,21.0s								
JHSG	**JHARSUGUGA**	**142.11**	**358**	⇑*e*P	**PKPdf**	**07 16 24.6**	**-4.2**		
POO	**Poona**	**144.38**	**14**	*e*P	PKPbc	07 16 31.1	0.0		
NWAO	**Narrogin (SRO)**	**144.40**	**236**		**PKPab**	**07 16 30.3**	**-0.2**		
NWAO	**Narrogin (SRO)**	**144.40**	**236**	IAMs_20	IAMs_20	08 24 03.9			
	comp=Z,999nm,18.0s								
NWAO	**Narrogin (SRO)**	**144.40**	**236**	PKIKP	**PKPab**	**07 16 30.3**	**-0.2**		
SBUM	**Sibu**	**145.02**	**300**		**PKPbc**	**07 16 31.6**	**-1.7**		
KAD	**Karad**	**145.63**	**14**	*e*P	**PKPdf**	**07 16 34.0**	**-1.0**		
FOMA	**Nahampoana Res**	**145.95**	**111**	PKPbc	**PKPab**	**07 16 36.7**	**+0.2**		
FOMA				IAMs_20	IAMs_20	08 23 32.9			
	comp=Z,1μm,19.0s								
VOI	**Vohitsoka**	**146.07**	**105**	PKPdf	**PKPdf**	**07 16 35.0**	**-0.7**		
VOI				IAMs_20	IAMs_20	08 24 59.5			
	comp=Z,2μm,20.0s								
VIS	**Vishakhapatnam**	**146.14**	**358**	*e*P	**PKPbc**	**07 16 36.3**	**-0.4**		
HYB	**Hyderabad**	**146.26**	**6**	*e*PKPbc	**PKPdf**	**07 16 36.2**	**+0.1**		
HYB				*e*PKiKP	**PKiKP**	**07 16 40.1**	**-0.2**		
HYB				*es*PKiKP	**sPKiKP**	**07 16 50.4**	**-0.8**		
HYB				*e*PP	**PP**	**07 20 00.2**	**+2.6**		
HYB				*e*SKKSac	SKKSdf	07 32 00.5	-48		
HYB	**Hyderabad**	**146.26**	**6**	*e*P	**PKPdf**	**07 16 35.7**	**-0.4**		
MORW	**Morawa**	**146.50**	**242**	PKPdf	**PKPdf**	**07 16 35.4**	**-0.7**		
ABPO	**Ambohimpanom**	**146.53**	**100**	PKPdf	**PKPdf**	**07 16 35.4**	**-1.2**		
ABPO	**Ambohimpanom**	**146.53**	**100**	PKIKP	**PKPdf**	**07 16 35.4**	**-1.2**		
STKI	**Sintang**	**146.91**	**297**	PKP	**PKiKP**	**07 16 46.7**	**+5.0**		
JAGI	**Jajag, Banyuwa**	**147.94**	**280**	PKPdf	**PKPdf**	**07 16 38.6**	**-0.3**		
DGPR	**DIGLIPUR**	**148.84**	**340**	*e*P	**PKPdf**	**07 16 40.9**	**+0.5**		
SRIT	**Nakonsritamara**	**149.88**	**324**	PKPbc	**PKPbc**	**07 16 46.8**	**0.0**		
SMRI	**Semarang**	**150.96**	**285**	PKP	**PKiKP**	**07 16 52.7**	**+2.6**		
MSEY	**Mahe Island**	**151.26**	**69**		**PKPbc**	**07 16 50.0**	**-0.2**		
MSEY	**Mahe Island**	**151.26**	**69**	PKIKP	**PKPbc**	**07 16 50.0**	**-0.2**		
KULM	**Kulim**	**151.86**	**318**	PKPdf	**PKPdf**	**07 16 43.2**	**-2.0**		
KULM				PKPbc	**PKPbc**	**07 16 51.2**	**-0.3**		
KULM				PKPab	**pPKPbc**	**07 16 58.4**	**-1.2**		
KULM				IAMs_20	IAMs_20	08 38 03.1			
	comp=Z,2μm,22.0s								
SALM	**Salem**	**151.90**	**9**	*e*P	**PKPdf**	**07 16 46.0**	**+0.9**		
MYKOM	**Kota Tinggi**	**152.10**	**308**	IAMs_20	IAMs_20	08 39 29.8			
	comp=Z,1μm,20.0s								
IPM	**Ipoh**	**152.23**	**317**		**PKPbc**	**07 16 52.2**	**-0.2**		
IPM				IAMs_20	IAMs_20	08 33 05.2			
	comp=Z,1μm,21.0s								
PPBI	**Pangkal Pinang**	**152.62**	**299**	PKP	**PKiKP**	**07 16 53.9**	**+0.4**		
KOD	**Kodaikanal**	**153.18**	**11**	*e*P	**PKPdf**	**07 16 47.8**	**+0.4**		
PMBI	**Palembang**	**154.18**	**299**	IAMs_20	IAMs_20	08 32 24.1			
	comp=Z,1μm,22.0s								
PSI	**Prapat**	**154.86**	**318**	PKIKP	**PKPdf**	**07 16 48.9**	**-0.7**		
PSI				PKP	**pPKPdf**	**07 16 57.1**	**-0.6**		
PSI				PKP	**PKPab**	**07 17 14.0**	**+0.7**		
RPSI	**Rantau Prapat**	**154.94**	**318**	PKPdf	**PKPdf**	**07 16 48.9**	**-0.7**		
RPSI				PKPbc	**pPKPdf**	**07 16 57.1**	**-0.6**		
RPSI				PKPab	**PKPab**	**07 17 14.0**	**+0.5**		
KCSI	**Kotacane, Aceh**	**155.02**	**321**	PKP	**PKPdf**	**07 16 57.4**	**+7.7**		
BKNI	**Bangkinang**	**155.17**	**310**	IAMs_20	IAMs_20	08 37 10.7			
	comp=Z,1μm,21.0s								
MNAI	**Manna**	**156.47**	**298**	IAMs_20	IAMs_20	08 43 56.7			
	comp=Z,1μm,20.0s								
GSI	**Gunungsitoli**	**156.87**	**318**	PKPdf	**PKPdf**	**07 16 49.5**	**-2.6**		
GSI				PKPab	**PKPab**	**07 17 22.1**	**+0.4**		
GSI				IAMs_20	IAMs_20	08 36 38.9			
	comp=Z,2μm,22.0s								
COCO	**West Island**	**165.31**	**284**	PKPdf	**PKPdf**	**07 16 57.6**	**-3.4**		
COCO				PKPab	**PKPab**	**07 17 58.7**	**0.0**		
COCO	**West Island**	**165.31**	**284**	PKIKP	**PKPdf**	**07 16 57.6**	**-3.4**		
COCO				PKP	**PKPab**	**07 17 58.7**	**0.0**		

IDC 19 06:59:30.5±2.9, 54°.21N×87°.30E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=25.0km s-min=16.5km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**261**	I	I	07 08 30.0	
	0.2nm,0.8s,baz=79,slow=342,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.48**	**261**	Pg	Pn	06 59 56.4	-2.0
	2.3nm,0.3s,baz=77,slow=14,SNR=11						
ZALV				Lg	Lg	07 00 18.7	
	1.8nm,0.3s,baz=80,slow=26,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	Pn	07 01 07.0	+0.3
	0.1nm,0.3s,baz=56,slow=14,SNR=12						
KURBB				Lg	Lg	07 02 56.0	
	baz=49,slow=29,SNR=2.0						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	07 01 30.9	+1.8
	0.2nm,0.3s,baz=26,slow=14,SNR=9.6						
MKAR				Sn	Sn	07 03 00.0	-1.1
	0.1nm,0.3s,baz=22,slow=24,SNR=1.5						
MKAR				Lg	Lg	07 03 45.1	
	baz=21,slow=28,SNR=1.9						
	0.2nm,0.3s						

IDC 19 07:10:11.7±2.5, 53°.71N×86°.74E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=23.3km s-min=13.2km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.16**	**283**	I	I	07 17 50.0	
	0.1nm,0.7s,baz=101,slow=339,SNR=6.1						
ZALV	**Zalesovo Beam**	**1.16**	**283**	Pg	Pg	07 10 32.6	-1.3
	1.1nm,0.3s,baz=99,slow=16,SNR=8.0						
ZALV				Lg	Lg	07 10 49.8	
	1.0nm,0.3s,baz=104,slow=29,SNR=18						
KURBB	**Kurchatov Arra**	**5.92**	**242**	Pn	Pn	07 11 42.1	+1.6
	baz=58,slow=14,SNR=4.7						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.49**	**204**	Pn	Pn	07 12 03.0	+0.9
	0.5nm,0.3s,baz=23,slow=7.8,SNR=11						
	0.4nm,0.4s						

*TEH **19** 07:19:41.9, 34°.48N×45°.25E, h10km±56km, ML2.9*
*ISN **19** 07:19:43.9±1.4, 34°.43N×45°.11E, h30km±36km, ML3.2*
ISC 19 07:19:42.4±1.2, 34°.48N±0°.04×45°.24E±0°.04, h10km±11km, n11, σ0°87/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.29**	**84**	Pg	**Pg**	**07 19 48.3**	**+0.1**
KGS1				Sg	**Sg**	**07 19 52.0**	**0.0**
IDHR	**Dehrash**	**0.97**	**76**	Pg	**Pb**	**07 20 00.3**	**-1.1**
IGHG	**Ghaleghazi**	**1.11**	**97**	Pg	**Pn**	**07 20 03.2**	**-0.9**
ILBA	**Ilam Banvizeh**	**1.17**	**136**	Pg	**Pn**	**07 20 04.2**	**-0.6**
IKRK	**Kirkuk**	**1.18**	**321**	*e*Pg	**Pb**	**07 20 05.0**	**+0.1**

baz=250
H11S1 WAKE ISLAND Hy 40.06 64 T T 08 12 48.7
baz=250
H11N1 WAKE ISLAND Hy 40.63 62 T T 08 13 33.5
baz=250
H11N2 WAKE ISLAND Hy 40.64 62 T T 08 13 39.4
baz=250
H11N3 WAKE ISLAND Hy 40.65 62 T T 08 13 36.0
baz=250
HHC Hu-ho-hao-te 41.34 340 *eP* **P 07 30 30.1 +1.8**
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,150nm,6.5s
USRK Ussuriysk Ar. 41.59 3 P **P 07 30 28.8 -1.4**
USRK Ussuriysk Ar. 41.59 3 P **P 07 30 30.4 +0.3**
comp=Z,5.2nm,0.7s,baz=190,slow=9.6,SNR=9.6
comp=Z,5.2nm,0.7s
BTO Baotou 41.69 338 *eP* **P 07 30 33.3 +2.2**
BTO pP **pwP 07 30 43.6 -1.9**
BTO sP sP 07 30 50.3 +6.4
BTO PP **PnPn 07 32 16.5 +3.5**
BTO S **S 07 36 49.8 +4.1**
BTO SS **SS 07 39 48.3 -3.8**
BTO pmax pmax
comp=Z,14nm,0.5s
BTO pmax pmax
comp=Z,290nm,4.8s
BTO LR LR
comp=N,700nm,11.3s
BTO LR LR
comp=E,600nm,12.0s
BTO LR LR
comp=Z,500nm,14.7s
XLT XiLinHaoTe 42.82 346 *eP* **P 07 30 39.4 -0.9**
XLT pP sP 07 30 52.1 -1.0
XLT sP pwP 07 30 58.0 +3.4
XLT S **S 07 37 08.0 +5.7**
XLT sS sS 07 37 18.8 +1.5
XLT pmax pmax
comp=Z,6.0nm,0.7s
XLT pmax pmax
comp=Z,190nm,4.9s
XLT LR LR
comp=N,25nm,14.8s
XLT LR LR
comp=E,470nm,16.0s
XLT LR LR
comp=Z,150nm,13.4s
DZM Mont Dzumac 43.86 126 LR LR 07 46 37.8
comp=Z,2µm,20.9s,baz=96,slow=33
ULN Ulaanbaatar 49.05 340 P **P 07 31 27.6 -1.9**
ULN IAmb IAmb 07 31 29.7
comp=Z,2.5nm,0.8s
SONM Songino Array 49.24 340 P **P 07 31 29.8 -1.2**
SONM Songino Array 49.24 340 P **P 07 31 30.6 -0.4**
comp=Z,0.9nm,0.6s,baz=152,slow=9.4,SNR=8.5
SONM PcP **PcP 07 32 53.9 +0.3**
comp=Z,0.2nm,0.5s,baz=156,slow=4.3,SNR=1.8
comp=Z,0.9nm,0.6s
WMQ Urumqi 55.11 324 *eP* **P 07 32 12.3 -2.3**
WMQ pP sP 07 32 24.6 -2.9
WMQ sP pwP 07 32 33.1 +4.0
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ LR LR
comp=N,730nm,24.0s
WMQ LR LR
comp=E,670nm,23.8s
WMQ LR LR
comp=Z,2µm,24.1s
PETK Petropavlovsk- 55.68 20 P **P 07 32 17.5 -0.9**
PETK Petropavlovsk- 55.68 20 P **P 07 32 18.9 +0.6**
comp=Z,2.5nm,0.8s,baz=210,slow=3.1,SNR=4.7
comp=Z,2.5nm,0.8s
MK31 Makanchi Array 59.94 325 P **P 07 32 48.2 -0.3**
MK31 IAmb IAmb 07 32 48.9
comp=Z,4.1nm,0.7s
MKAR Makanchi Array 59.94 325 P **P 07 32 48.2 -0.2**
comp=Z,5.6nm,0.5s,baz=118,slow=8.4,SNR=74
MKAR PcP **PcP 07 33 34.0 -0.5**
comp=Z,1.0nm,0.7s,baz=111,slow=3.4,SNR=3.5
comp=Z,5.6nm,0.5s
MAKZ Makanchi 60.13 324 P **P 07 32 49.5 -0.2**
KSH Kashi 60.61 315 P **P 07 32 52.9 -0.4**
ZALV Zalesovo Beam 62.78 332 P **P 07 33 05.8 -1.7**
ZALV Zalesovo Beam 62.78 332 P **P 07 33 06.2 -1.3**
comp=Z,2.8nm,0.9s,baz=111,slow=6.5,SNR=5.5
comp=Z,2.8nm,0.9s
KURK Kurchatov 64.07 327 P **P 07 33 15.5 -0.5**
KURBB Kurchatov Arra 64.07 327 P **P 07 33 15.6 -0.5**
comp=Z,5.9nm,0.6s,baz=126,slow=6.2,SNR=43
comp=Z,5.9nm,0.6s
KK31 Karatay Array 65.77 317 P **P 07 33 27.0 -0.4**
KK31 IAmb IAmb 07 33 27.1
comp=Z,2.3nm,0.8s
KKAR Karatay Array 65.77 317 P **P 07 33 26.7 -0.6**
BVAR Borovoye Array 69.66 327 P **P 07 33 51.1 -0.5**
comp=Z,5.0nm,0.6s,baz=118,slow=7.8,SNR=26
comp=Z,5.0nm,0.6s
BRVK Borovoye 69.73 327 P **P 07 33 51.5 -0.6**
GEYT Alibeck 73.54 309 P **P 07 34 14.7 -0.7**
GEYT IAmb IAmb 07 34 16.4
comp=Z,3.6nm,0.8s
GEYT Alibeck 73.54 309 P **P 07 34 14.8 -0.6**
comp=Z,1.9nm,0.6s,baz=145,slow=5.4,SNR=5.0
comp=Z,1.9nm,0.6s
ABKAR Akbulak array 74.62 321 P **P 07 34 20.3 -1.1**
ABKAR IAmb IAmb 07 34 21.4
comp=Z,3.8nm,1.1s
C18K Utukok River 80.35 20 P **P 07 34 54.1 +1.0**
SVW2 Sparrevohn 80.71 28 P **P 07 34 55.1 0.0**
SVW2 IAmb IAmb 07 35 17.8
comp=Z,9.9nm,1.3s
E19K Redstone River 81.44 22 P **P 07 35 00.1 +1.3**
E19K IAmb IAmb 07 35 11.6
comp=Z,3.0nm,0.9s
KDAK Kodiak Island 81.63 32 P **P 07 34 59.3 -0.7**
B20K Meade River 82.11 19 P **P 07 35 03.7 +1.4**
B20K IAmb IAmb 07 35 15.8
comp=Z,5.4nm,1.2s
IMAR Indian Mountai 82.48 24 P **P 07 35 05.1 +0.8**
CAST Castle Rocks 82.74 26 P **P 07 35 06.7 +0.9**
SKT Skwentna 82.77 28 P **P 07 35 06.5 +0.6**
SKT IAmb IAmb 07 35 31.1
comp=Z,7.6nm,1.4s
H21K Melozitna Rive 82.80 24 P **P 07 35 07.5 +1.5**
I21K Tanana 83.06 25 P **P 07 35 08.6 +1.2**
I21K IAmb IAmb 07 35 28.0
comp=Z,3.3nm,1.2s
E22K Anaktuvuk Pass 83.60 22 P **P 07 35 11.6 +1.4**
E22K IAmb IAmb 07 35 22.9
comp=Z,4.6nm,1.1s
ILAR Eielson Array 85.16 25 P **P 07 35 16.8 -1.3**
comp=Z,0.3nm,0.5s,baz=258,slow=5.6,SNR=5.8
comp=Z,0.3nm,0.5s
N25K Chitina, Valde 86.02 29 P **P 07 35 23.4 +0.9**
N25K IAmb IAmb 07 35 47.4
comp=Z,2.2nm,1.0s
BMAR Burnt Mountain 86.26 23 P **P 07 35 24.5 +0.9**
VRDI Verde Repeater 86.56 29 P **P 07 35 26.0 +0.7**
VRDI IAmb IAmb 07 35 30.5
comp=Z,6.6nm,1.4s
WAX Waxell Ridge 86.84 30 P **P 07 35 26.8 +0.2**
I28M Miner Creek 88.12 25 P **P 07 35 33.3 +0.7**
I28M IAmb IAmb 07 35 43.2
comp=Z,1.5nm,1.1s
ARCES ARCESS Array B 92.42 340 P **P 07 35 50.8 -1.7**
comp=Z,2.3nm,0.8s,baz=69,slow=6.6,SNR=3.8
comp=Z,2.3nm,0.8s
FINES FINESS Array B 94.04 332 P **P 07 35 58.7 -1.4**
comp=Z,1.3nm,0.9s,baz=62,slow=6.5,SNR=1.8
comp=Z,1.3nm,0.9s
HFS Hagfors 100.21 333 P **Pdif 07 36 26.1 -1.9**
comp=Z,0.8nm,0.6s,baz=77,slow=9.7,SNR=1.8

IDC 19 07:25:08.2±3.6, 54.66N×86.47E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=29.9km s-min=17.6km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**234**	I	I			07 32 30.0	
	baz=54,slow=346,SNR=3.3								
ZALV	**Zalesovo Beam**	**1.20**	**234**	Pg	Pg			07 25 29.4	-1.7
	1.3nm,0.3s,baz=51,slow=16,SNR=23								
ZALV				Lg	Lg			07 25 47.8	
	2.4nm,0.3s,baz=54,slow=30,SNR=15								
KURBB	**Kurchatov Arra**	**6.30**	**233**	Pn	Pn			07 26 43.4	+1.2
	baz=54,slow=15,SNR=1.9								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**8.31**	**200**	Pn	Pn			07 27 10.9	+1.1
	0.1nm,0.3s,baz=21,slow=12,SNR=5.3								
	0.1nm,0.3s								

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*SJA **19** 07:32:25.7±0.7, 23.85S×66.67W, h222km±5km, ML4.0, MW3.7*
*GUC **19** 07:32:27.2±0.6, 23.86S×66.97W, h243km±10km, ML4.1*
ISC 19 07:32:24.7±1.9, 23.86S±0.04×66.72W±0.06, h231km±16km, n36, σ1s47/57, 2C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.41**	**128**	*eP*		**Pn**		**07 33 01.0**	**+0.3**
YJA	**Yavi**	**2.01**	**34**	*eP*		**Pn**		**07 33 07.4**	**+1.1**
YJA				*eS*		**S**		**07 33 37.6**	**-1.1**
FSA	**Cafayete**	**2.34**	**163**	*eP*		**Pn**		**07 33 09.4**	**+0.2**
LVC	**Limon Verde**	**2.36**	**301**	*eP*		**Pn**		**07 33 10.7**	**+1.0**
LVC	**Limon Verde**	**2.36**	**301**	*iP*		**Pn**		**07 33 10.9**	**+1.2**
LVC				*i* S		**S**		**07 33 44.0**	**-0.8**
LVC				IAML				07 33 46.8	
	comp=Z,453nm,0.6s								
PB15	**IPOC Station P**	**2.60**	**284**	*eP*		**Pn**		**07 33 13.2**	**+1.2**
PB15				*eS*		**S**		**07 33 48.9**	**-0.1**
PB15				IAML				07 33 52.2	
	comp=Z,993nm,0.1s								
PB15	**IPOC Station P**	**2.60**	**284**	*i* P		**Pn**		**07 33 13.3**	**+1.3**
PB15				*i* S		**S**		**07 33 48.0**	**-0.9**
PB06	**IPOC Station P**	**2.86**	**293**	*eP*		**Pn**		**07 33 16.1**	**+1.3**
PB06				*eS*		**S**		**07 33 52.9**	**-1.0**
PB06				IAML				07 33 56.4	
	comp=Z,244nm,0.1s								
PB06	**IPOC Station P**	**2.86**	**293**	*iP*		**Pn**		**07 33 16.0**	**+1.3**
PB06				*i* S		**S**		**07 33 52.6**	**-1.3**
PB06				IAML				07 33 54.5	
	comp=N,432nm,0.3s								
GO02	**Mina Guanaco**	**2.92**	**243**	*eP*		**Pn**		**07 33 16.6**	**+1.2**
GO02				*eS*		**S**		**07 33 55.2**	**-0.1**
GO02	**Mina Guanaco**	**2.92**	**243**	*iP*		**Pn**		**07 33 16.4**	**+0.9**
GO02				*i* S		**S**		**07 33 54.8**	**-0.5**
PB09	**IPOC Station P**	**3.10**	**311**	*eP*		**Pn**		**07 33 19.1**	**+1.7**
PB09				*eS*		**S**		**07 33 59.3**	**+0.5**
PB09				IAML				07 34 03.5	
	comp=Z,106nm,0.6s								
PB09	**IPOC Station P**	**3.10**	**311**	*i* P		**Pn**		**07 33 19.3**	**+1.9**
PB09				*i* S		**S**		**07 33 58.5**	**-0.2**
PB09				IAML				07 34 01.6	
	comp=N,125nm,0.3s								
AHML	**Horco Molle**	**3.17**	**157**	*eP*		**Pn**		**07 33 18.8**	**+0.7**
PB14	**IPOC Station P**	**3.45**	**256**	*eP*		**Pn**		**07 33 23.1**	**+1.6**
PB14				IAML				07 34 08.8	
	comp=Z,114nm,0.2s								
PB04	**IPOC Station P**	**3.50**	**295**	*eP*		**Pn**		**07 33 23.6**	**+1.6**
PB04				IAML				07 34 14.0	
	comp=Z,226nm,0.2s								
PB04	**IPOC Station P**	**3.50**	**295**	*i* P		**Pn**		**07 33 23.4**	**+1.4**
PB04				*i* S		**S**		**07 34 05.1**	**-1.9**
PB10	**IPOC Station P**	**3.53**	**275**	*eP*		**Pn**		**07 33 23.8**	**+1.7**
PB10				*eS*		**S**		**07 34 06.3**	**-1.0**
PB10				IAML				07 34 09.2	
	comp=Z,109nm,0.2s								
PB10	**IPOC Station P**	**3.53**	**275**	*i* P		**Pn**		**07 33 23.3**	**+1.1**
PB10				*i* S		**S**		**07 34 05.5**	**-1.8**
PB07	**IPOC Station P**	**3.61**	**305**	*eP*		Pn		07 33 17.6	-5.7
PB07				IAML				07 34 09.2	
	comp=Z,198nm,0.2s								
PB07	**IPOC Station P**	**3.61**	**305**	*i* P		**Pn**		**07 33 24.2**	**+0.9**
PB07				*i* S		**S**		**07 34 06.9**	**-2.4**
AC02	**Maricunga**	**3.68**	**216**	*eP*		**Pn**		**07 33 25.9**	**+1.5**
PB01	**IPOC Station P**	**3.79**	**317**	*eP*		**Pn**		**07 33 25.8**	**+0.4**
PB01				IAML				07 34 14.9	
	comp=Z,124nm,0.2s								
PB01	**IPOC Station P**	**3.79**	**317**	*i* P		**Pn**		**07 33 26.5**	**+1.1**
PB01				*i* S		**S**		**07 34 11.5**	**-1.7**
PB02	**IPOC Station P**	**3.87**	**310**	*i* P		**Pn**		**07 33 27.2**	**+0.8**
PB02				*i* S		**S**		**07 34 12.2**	**-2.7**
AC01	**Pan de Azucar**	**4.19**	**236**	*eP*		**Pn**		**07 33 30.2**	**+0.2**
PB08	**IPOC Station P**	**4.33**	**328**	*eP*		**Pn**		**07 33 34.2**	**+2.1**
PB08				*eS*		**S**		**07 34 25.6**	**+0.3**
PB08	**IPOC Station P**	**4.33**	**328**	*i* P		**Pn**		**07 33 34.0**	**+1.8**
PB08				*i* S		**S**		**07 34 24.9**	**-0.4**
PATCX	**Punta Patache**	**4.38**	**313**	*i* P		**Pn**		**07 33 33.7**	**+1.2**
PATCX				*i* S		**S**		**07 34 24.2**	**-1.8**
TA01	**Diego Aracena**	**4.58**	**315**	*eP*		**Pn**		**07 33 36.3**	**+1.5**
TA01	**Diego Aracena**	**4.58**	**315**	*i* S		**S**		**07 34 27.3**	**-3.0**
HMBC	**Humberstone**	**4.62**	**320**	*eP*		**Pn**		**07 33 35.9**	**+0.5**
HMBC				*eS*		**S**		**07 34 28.7**	**-2.6**
HMBC				IAML				07 34 30.2	
	comp=Z,114nm,0.3s								
HMBC	**Humberstone**	**4.62**	**320**	*i* P		**Pn**		**07 33 35.8**	**+0.4**
HMBC				*i* S		**S**		**07 34 28.0**	**-3.2**
GO01	**Chusmiza**	**4.76**	**331**	*eP*		**Pn**		**07 33 39.0**	**+1.4**
GO01				*eS*		**S**		**07 34 35.4**	**+0.3**
GO03	**Copiap**	**4.89**	**220**	*eP*		**Pn**		**07 33 38.5**	**-0.1**
VCA	**Vinchina**	**5.04**	**195**	*eP*		**Pn**		**07 33 42.9**	**+2.4**

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*IDC **19** 07:35:09.2±1.0, 3.85S×103.42W, h0km, mb3.9/11, mbtmp3.9/11, MS4.4/2, Error ellipse: s-maj=82.4km s-min=21.4km az=78.0*
*NEIC **19** 07:35:11.4±2.0, 3.9S±0.1×103.58W±0.09, h10km±2km, mb4.5/94, Error ellipse: s-maj=20.7km s-min=13.3km az=158.0*
ISC 19 07:35:11.0±0.8, 3.9S±0.1×103.5W±0.1, h10km, n123, σ0s92/112, mb4.5/56, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**13.57**	**77**	Pn		Pn	**Pn**	**07 38 24.2**	**+0.4**
BOSC	**San Juan Bosco**	**24.97**	**89**	P		P	**P**	**07 40 35.8**	**+0.6**
SLOR	**San Lorenzo -**	**25.17**	**84**	P		P	**P**	**07 40 39.0**	**+1.6**
ATAH	**Atahualpa**	**25.20**	**99**	LR		LR		07 47 39.4	
	comp=Z,724nm,20.2s,baz=49,slow=30								
OTAV	**Otavalo**	**25.36**	**81**	P			**P**	**07 40 38.7**	**-0.4**
OTAV				IAmb		IAmb	IAmb	07 40 41.6	
	comp=Z,13nm,1.4s								
ZAIG	**Zacatecas**	**26.48**	**2**	P		P	**P**	**07 40 50.5**	**+1.6**
CZSB	**Cruzeiro do Su**	**30.87**	**99**	P		P	**P**	**07 41 27.6**	**-0.3**
CZSB				IAmb		IAmb	IAmb	07 41 28.8	
	comp=Z,11nm,1.3s								
TXAR	**Lajitas Array**	**33.00**	**360**	P		P	**P**	**07 41 48.3**	**+1.8**
TXAR	**Lajitas Array**	**33.00**	**360**	P		P	**P**	**07 41 47.6**	**+1.1**
	comp=Z,1.4nm,1.0s,baz=178,slow=12,SNR=7.4								
	comp=Z,1.4nm,1.0s								
HNDO	**Hondo**	**33.44**	**7**	P		P	**P**	**07 41 50.4**	**+0.1**
HNDO				IAmb		IAmb	IAmb	07 42 04.6	
	comp=Z,10nm,1.4s								
TBTG	**Tabatinga, AM**	**33.51**	**92**	P		P	**P**	**07 41 51.1**	**+0.1**
SAND	**Sanderson**	**33.64**	**2**	P		P	**P**	**07 41 52.7**	**+0.6**
ALPN	**Alpine**	**34.04**	**360**	P		P	**P**	**07 41 56.8**	**+1.2**
ALPN				IAmb		IAmb	IAmb	07 41 57.7	
	comp=Z,7.3nm,1.2s								
PECS	**Pecos**	**35.03**	**359**	P		P	**P**	**07 42 04.5**	**+0.4**
FW16	**Waxahatchie**	**36.68**	**9**	P		P	**P**	**07 42 17.4**	**-0.7**
POST	**Post**	**36.77**	**3**	P		P	**P**	**07 42 18.5**	**-0.5**
H03N2	**Juan Fernandez**	**37.31**	**145**	T		T		08 22 07.8	
	baz=322,slow=78,SNR=6.1								
H03N1	**Juan Fernandez**	**37.32**	**145**	T		T		08 22 00.2	
	baz=322,slow=78,SNR=8.2								
H03N3	**Juan Fernandez**	**37.32**	**145**	T		T		08 22 02.4	
	baz=322,slow=78,SNR=9.6								
MSTX	**Muleshoe**	**37.63**	**1**	P		P	**P**	**07 42 27.7**	**+1.4**
MSTX				IAmb		IAmb	IAmb	07 42 28.3	
	comp=Z,7.6nm,1.0s								
ANMO	**Albuquerque**	**38.70**	**356**	P		P	**P**	**07 42 35.7**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=9.8,slow=6.2,SNR=3.8								
	comp=Z,1.2nm,0.9s								
S22A	**4UR Ranch, Cre**	**41.51**	**356**	P		P	**P**	**07 42 57.8**	**-1.1**
S22A				IAmb		IAmb	IAmb	07 43 01.4	
	comp=Z,11nm,1.3s								
PBMO	**Poplar Bluff**	**42.22**	**16**	P		P	**P**	**07 43 03.7**	**-0.7**
PBMO				IAmb		IAmb	IAmb	07 43 04.7	
	comp=Z,10nm,1.2s								
WCT	**Wildcat Mounta**	**42.25**	**344**	P		P	**P**	**07 43 04.7**	**0.0**
MACA	**Manacapuru-AM**	**42.74**	**90**	P		P	**P**	**07 43 08.6**	**-0.3**
MACA				IAmb		IAmb	IAmb	07 43 26.3	
	comp=Z,12nm,1.0s								
SIV	**San Ignacio**	**43.39**	**109**	LR		LR		07 58 47.7	
	comp=Z,482nm,19.6s,baz=296,slow=33								
R11B	**Troy Canyon, C**	**43.46**	**346**	P		P	**P**	**07 43 16.7**	**+2.1**
ISCO	**Idaho Springs**	**43.48**	**358**	P		P	**P**	**07 43 16.0**	**+1.1**
O20A	**White River Ci**	**43.99**	**355**	P		P	**P**	**07 43 21.4**	**+2.6**
O20A				IAmb		IAmb	IAmb	07 43 21.5	
	comp=Z,8.4nm,0.8s								
NVAR	**Mina Array Bea**	**44.25**	**343**	P		P	**P**	**07 43 22.2**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=184,slow=11,SNR=3.4								
	comp=Z,0.8nm,0.8s								
RDMU	**Red Mountain**	**44.56**	**353**	P		P	**P**	**07 43 25.2**	**+1.7**
RDMU				IAmb		IAmb	IAmb	07 43 34.6	
	comp=Z,9.4nm,1.3s								
N23A	**Red Feather La**	**44.59**	**357**	P		P	**P**	**07 43 24.1**	**+0.3**
N23A				IAmb		IAmb	IAmb	07 43 26.5	
	comp=Z,5.6nm,1.1s								
WAKR	**Walker**	**44.66**	**342**	P		P	**P**	**07 43 27.1**	**+2.9**
WAKR				IAmb		IAmb	IAmb	07 44 05.6	
	comp=Z,11nm,1.3s								
DUG	**Dugway, Tooele**	**44.66**	**350**	P		P	**P**	**07 43 25.7**	**+1.5**
WCI	**Wyandotte Cave**	**44.81**	**19**	P		P	**P**	**07 43 25.2**	**0.0**
WCI				IAmb		IAmb	IAmb	07 43 34.6	
	comp=Z,5.6nm,0.9s								
ELK	**Elko**	**45.67**	**348**	P		P	**P**	**07 43 33.5**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=173,slow=7.6,SNR=3.3								
	comp=Z,0.5nm,0.8s								
HWUT	**Hardware Ranch**	**45.84**	**352**	P		P	**P**	**07 43 34.8**	**+1.2**
PD31	**Pinedale Array**	**46.73**	**354**	P		P	**P**	**07 43 39.4**	**-1.2**
PD31				IAmb		IAmb	IAmb	07 43 41.4	
	comp=Z,8.9nm,1.4s								
PDAR	**Pinedale Array**	**46.73**	**354**	P		P	**P**	**07 43 40.7**	**+0.1**
PDAR	**Pinedale Array**	**46.73**	**354**	P		P	**P**	**07 43 40.5**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=168,slow=7.1,SNR=24								
	comp=Z,2.0nm,0.6s								
PLCA	**Paso Flores**	**47.18**	**146**	P		P	**P**	**07 43 44.5**	**+0.4**
PLCA	**Paso Flores**	**47.18**	**146**	P		P	**P**	**07 43 43.9**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=90,slow=19,SNR=2.3								
	comp=Z,1.3nm,0.9s								
TPAW	**Teton Pass**	**47.61**	**353**	P		P	**P**	**07 43 46.8**	**-0.7**
TPAW				IAmb		IAmb	IAmb	07 43 57.3	
	comp=Z,4.7nm,1.1s								
LOHW	**Long Hollow**	**47.68**	**353**	P		P	**P**	**07 43 48.6**	**+0.6**
LOHW				IAmb		IAmb	IAmb	07 44 01.4	
	comp=Z,5.6nm,1.1s								
MOOW	**Moose Ponds**	**47.83**	**353**	P		P	**P**	**07 43 49.9**	**+0.7**
MOOW				IAmb		IAmb	IAmb	07 43 51.0	
	comp=Z,6.2nm,1.2s								
N49A	**Columbus Grove**	**47.94**	**20**	P		P	**P**	**07 43 50.8**	**+1.1**
IMW	**Indian Meadow**	**48.01**	**353**	P		P	**P**	**07 43 50.8**	**+0.2**
FLWY	**Flagg Ranch**	**48.16**	**353**	P		P	**P**	**07 43 52.4**	**+0.7**
HLID	**Hailey**	**48.22**	**349**	P		P	**P**	**07 43 53.5**	**+1.4**
HLID				IAmb		IAmb	IAmb	07 43 53.9	
	comp=Z,5.6nm,1.2s								
MFID	**Camas Ranch**	**48.35**	**348**	P		P	**P**	**07 43 54.1**	**+1.0**
MFID				IAmb		IAmb	IAmb	07 43 56.3	
	comp=Z,7.5nm,1.4s								
LKWY	**Lake**	**48.60**	**353**	P		P	**P**	**07 43 56.0**	**+0.9**
LKWY				IAmb		IAmb	IAmb	07 43 57.8	
	comp=Z,9.8nm,1.4s								
YBH	**Yreka Blue Hor**	**48.63**	**341**	P		P	**P**	**07 43 56.7**	**+1.5**
YHH	**Holmes Hill**	**48.87**	**353**	P		P	**P**	**07 43 58.8**	**+1.5**
YHL	**Hebgen Lake**	**48.97**	**353**	P		P	**P**	**07 43 59.1**	**+1.1**
RLMT	**Red Lodge**	**49.03**	**355**	P		P	**P**	**07 43 58.3**	**-0.1**
RLMT				IAmb		IAmb	IAmb	07 43 59.7	
	comp=Z,6.8nm,1.3s								
N53A	**Lisbon**	**49.05**	**23**	P		P	**P**	**07 43 57.6**	**-0.7**
I07A	**Izee**	**49.84**	**345**	P		P	**P**	**07 44 06.1**	**+1.6**
PLID	**Pearl Lake**	**49.99**	**348**	P		P	**P**	**07 44 05.9**	**+0.2**
PLID				IAmb		IAmb	IAmb	07 44 07.1	
	comp=Z,4.9nm,1.1s								
NEW	**Newport**	**53.26**	**349**	P		P	**P**	**07 44 30.0**	**+0.1**
NEW				IAmb		IAmb	IAmb	07 44 31.7	
	comp=Z,6.2nm,1.1s								
NEW	**Newport**	**53.26**	**349**	P		P	**P**	**07 44 29.2**	**-0.7**
	comp=Z,5.2nm,1.0s,baz=187,slow=10,SNR=4.6								
	comp=Z,5.2nm,1.0s								
ULM	**Lac du Bonnet**	**54.29**	**6**	P		P	**P**	**07 44 35.0**	**-2.4**
	comp=Z,1.6nm,0.7s,baz=112,slow=7.8,SNR=3.3								
	comp=Z,1.6nm,0.7s								
EDM	**Edmonton**	**57.47**	**353**	P		P	**P**	**07 45 00.4**	**+0.2**
YKA	**Yellowknife Ar**	**66.71**	**354**	P		P	**P**	**07 46 01.6**	**-0.3**
YKA	**Yellowknife Ar**	**66.71**	**354**	P		P	**P**	**07 46 00.7**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=163,slow=6.2,SNR=15								
	comp=Z,1.6nm,0.9s								
M30M	**Minto, Yukon**	**70.92**	**344**	P		P	**P**	**07 46 29.0**	**+0.7**
M30M				IAmb		IAmb	IAmb	07 46 41.1	
	comp=Z,3.5nm,1.2s								
GRNC	**Granite Creek**	**70.92**	**341**	P		P	**P**	**07 46 29.2**	**+0.7**
GRNC				IAmb		IAmb	IAmb	07 46 39.4	
	comp=Z,6.1nm,1.2s								
TGL	**Tana Glacier**	**71.29**	**341**	P		P	**P**	**07 46 31.3**	**+0.7**
BERG	**Berg Lake**	**71.31**	**340**	P		P	**P**	**07 46 31.6**	**+1.0**
L29M	**L29M**	**71.71**	**344**	P		P	**P**	**07 46 34.0**	**+1.0**
L29M				IAmb		IAmb	IAmb	07 46 35.5	
	comp=Z,5.6nm,1.1s								
MCARA	**McCarthy VSAT**	**71.82**	**341**	P		P	**P**	**07 46 32.9**	**-0.8**
MCARA				IAmb		IAmb	IAmb	07 47 01.1	
	comp=Z,6.8nm,1.2s								
VRDI	**Verde Repeater**	**71.84**	**341**	P		P	**P**	**07 46 33.8**	**-0.3**
VRDI				IAmb		IAmb	IAmb	07 46 58.5	
	comp=Z,5.3nm,1.2s								
GLB	**Gilahina Butte**	**72.12**	**341**	P		P	**P**	**07 46 34.9**	**-0.6**
K29M	**Barlow Dome**	**72.14**	**345**	P		P	**P**	**07 46 36.1**	**+0.4**
M27K	**Edge Creek, AK**	**72.20**	**342**	P		P	**P**	**07 46 35.8**	**-0.3**
J30M	**Hart River**	**72.44**	**346**	P		P	**P**	**07 46 37.6**	**0.0**
J30M				IAmb		IAmb	IAmb	07 46 42.3	
	comp=Z,4.8nm,1.5s								
BCAR	**Beaver Creek A**	**72.71**	**343**	P		P	**P**	**07 46 39.0**	**0.0**
L27K	**Beaver Creek,**	**72.72**	**343**	P		P	**P**	**07 46 39.6**	**+0.5**
L27K				IAmb		IAmb	IAmb	07 46 40.6	
	comp=Z,6.2nm,1.4s								
DAWY	**Dawson**	**72.82**	**344**	P		P	**P**	**07 46 39.1**	**-0.6**
KDAK	**Kodiak Island**	**72.92**	**335**	P		P	**P**	**07 46 40.0**	**-0.3**
I30M	**Mount Dempster**	**72.99**	**346**	P		P	**P**	**07 46 41.0**	**+0.3**
K27K	**Chicken**	**73.53**	**343**	P		P	**P**	**07 46 44.8**	**+1.0**
K27K				IAmb		IAmb	IAmb	07 46 59.3	
	comp=Z,7.4nm,1.3s								
EGAK	**Eagle**	**73.85**	**344**	P		P	**P**	**07 46 45.9**	**+0.2**
G31M	**Satah River**	**73.94**	**348**	P		P	**P**	**07 46 45.8**	**-0.3**
I28M	**Miner Creek**	**74.06**	**345**	P		P	**P**	**07 46 46.5**	**-0.5**
H29M	**Whitestone**	**74.28**	**346**	P		P	**P**	**07 46 48.6**	**+0.5**

A36M					IAmb	IAmb	07 47 04.8	
	comp=Z,6.2nm,1.1s							
I21K	**Tanana**	**77.37**	**341**		P	**P**	**07 47 05.2**	**-0.7**
J20K	**Nowinta River**	**77.47**	**340**		P	**P**	**07 47 05.9**	**-0.5**
J20K					IAmb	IAmb	07 47 09.8	
	comp=Z,9.1nm,1.5s							
H21K	**Melozitna River**	**77.94**	**341**		P	**P**	**07 47 09.2**	**+0.2**
H21K					IAmb	IAmb	07 47 34.8	
	comp=Z,6.4nm,1.3s							
IMAR	**Indian Mountai**	**78.45**	**341**		P	**P**	**07 47 11.1**	**-0.7**
F21K	**Alatna River**	**79.15**	**342**		P	**P**	**07 47 17.1**	**+1.4**
F21K					IAmb	IAmb	07 47 31.2	
	comp=Z,6.0nm,1.4s							
J16K	**Anvik River**	**79.32**	**337**		P	**P**	**07 47 18.2**	**+1.6**
H18K	**Honhosa River**	**79.51**	**339**		P	**P**	**07 47 18.8**	**+1.1**
H18K					IAmb	IAmb	07 47 33.4	
	comp=Z,8.0nm,1.2s							
QSPA	**South Pole Qui**	**86.20**	**180**		P	**P**	**07 47 53.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=107,slow=5.7,SNR=2.3							
	comp=Z,0.7nm,0.7s							
H11N3	**WAKE ISLAND Hy**	**90.90**	**290**		T	T	09 29 08.9	
	baz=94,slow=75,SNR=9.6							
H11N2	**WAKE ISLAND Hy**	**90.91**	**290**		T	T	09 29 13.5	
	baz=94,slow=75,SNR=9.2							
H11N1	**WAKE ISLAND Hy**	**90.92**	**290**		T	T	09 29 07.8	
	baz=94,slow=75,SNR=8.1							
H11S2	**WAKE ISLAND Hy**	**91.01**	**288**		T	T	09 29 14.6	
	baz=94,slow=75,SNR=6.8							
H11S1	**WAKE ISLAND Hy**	**91.02**	**288**		T	T	09 29 16.4	
	baz=94,slow=75,SNR=6.2							
H11S3	**WAKE ISLAND Hy**	**91.03**	**288**		T	T	09 29 17.7	
	baz=94,slow=75,SNR=5.2							
BVAR	**Borovoye Array**	**130.73**	**5**		PKP	**PKPdf**	**07 54 22.7**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=49,slow=3.1,SNR=4.5							
MKAR	**Makanchi Array**	**136.93**	**354**		PKP	**PKPdf**	**07 54 34.2**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=42,slow=2.0,SNR=5.2							
CMAR	**Chiang Mai Arr**	**153.69**	**305**		PKPbc	**PKPbc**	**07 55 10.0**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=80,slow=1.0,SNR=4.3							

*IDC **19** 07:43:11.9±1.7,54.°64N×83.°69E, h0km, mbtmp2.9/3, ML2.1/3, Error ellipse: s-maj=15.3km s-min=10.5km az=6.0*

ISC 19 07:43:04.7±4.1,**55.°2N**±0.°3×**84.°5E**±0.°2,**h10km**,**n7**,σ0°**50**/6, **2C-2D**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**170**	I	I	07 48 50.0	
	0.2nm,0.8s,baz=317,slow=342,SNR=14						
ZALV	**Zalesovo Beam**	**1.31**	**170**	Pg	**Pb**	**07 43 29.4**	**+0.1**
	1.4nm,0.3s,baz=315,slow=16,SNR=13						
ZALV				Lg	Lg	07 43 44.0	
	4.1nm,0.3s,baz=313,slow=29,SNR=15						
KURK	**Kurchatov**	**5.73**	**220**	⇓Pg	**Pb**	**07 44 44.9**	**+0.2**
	1.5nm,0.8s						
KURK				⇓Lg	Lg	07 45 52.4	
	4.1nm,1.1s						
KURBB	**Kurchatov Arra**	**5.84**	**220**	⇑Pg	**Pb**	**07 44 47.0**	**+0.4**
	1.7nm,0.9s,baz=38,slow=16						
KURBB				⇑Lg	Lg	07 45 59.3	
	5.1nm,0.6s						
KURBB	**Kurchatov Arra**	**5.84**	**220**	Pn	**Pn**	**07 44 30.6**	**-0.7**
	baz=40,slow=13,SNR=1.8						
	0.6nm,0.2s						
BVAR	**Borovoye Array**	**8.55**	**261**	Pn	**Pn**	**07 45 08.2**	**-0.3**
	baz=70,slow=12,SNR=2.6						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**8.56**	**190**	Pn	**Pn**	**07 45 08.7**	**+0.1**
	baz=11,slow=11,SNR=2.3						
MKAR				Lg	Lg	07 47 25.1	
	0.1nm,0.3s,baz=25,slow=32,SNR=5.1						
	0.2nm,0.4s						

*IDC **19** 07:53:20.5±1.2, 11.°95N×143.°57E, h0km, mb3.8/10, mbtmp3.8/11, ML3.7/1, Error ellipse: s-maj=35.3km s-min=23.2km az=132.0*
*NEIC **19** 07:53:33.0±1.4, 13.°0N±0.°2×143.°3E±0.°1, h49km±9km, mb4.3/34, Error ellipse: s-maj=22.5km s-min=18.5km az=158.0*

ISC 19 07:53:32.2±1.0,**12.°9N**±0.°2×**143.°28E**±0.°10,**h50km**,**n60**, σ1°**15**/54,**mb4.2**/28,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.71**	**65**	Pn	**Pn**	**07 53 58.9**	**-0.6**
GUMO	**Guam**	**1.71**	**65**	Pn	**Pn**	**07 53 57.4**	**-2.1**
	29nm,0.3s,baz=75,slow=4.7,SNR=21						
GUMO				Sn	**Sn**	**07 54 23.2**	**+3.0**
	31nm,0.3s,baz=165,slow=21,SNR=4.4						
	104nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**23.21**	**73**	T	T	08 22 34.1	
	baz=253,slow=74						
H11S1	**WAKE ISLAND Hy**	**23.22**	**73**	T	T	08 22 45.6	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**23.23**	**73**	T	T	08 22 35.8	
	baz=253,slow=74						
JGF	**Kuroka**	**23.26**	**348**	P	**P**	**07 58 34.6**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**23.65**	**70**	T	T	08 23 19.1	
	baz=255,slow=76						
H11N2	**WAKE ISLAND Hy**	**23.66**	**70**	T	T	08 23 21.4	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**23.66**	**70**	T	T	08 23 19.3	
	baz=255,slow=76						
WRA	**Warramunga Arr**	**33.77**	**195**	P	P	07 59 57.1	-12
	0.3nm,0.7s,baz=18,slow=9.8,SNR=1.2						
	0.3nm,0.7s						
SONM	**Songino Array**	**46.45**	**326**	P	**P**	**08 01 57.2**	**+3.0**
	0.2nm,0.4s,baz=134,slow=6.2,SNR=1.9						
	0.2nm,0.4s						
MK31	**Makanchi Array**	**60.95**	**317**	P	**P**	**08 03 40.4**	**+0.2**
MK31				IAmb	IAmb	08 04 03.8	
	comp=Z,3.1nm,1.0s						
MKAR	**Makanchi Array**	**60.95**	**317**	P	**P**	**08 03 38.5**	**-1.7**
BSWZ	**Blackbirch Sta**	**61.19**	**154**	P	**P**	**08 03 42.7**	**+0.9**
ZAA0	**Zalesovo Array**	**61.32**	**325**	P	**P**	**08 03 41.0**	**-1.6**
ZAA0				IAmb	IAmb	08 03 55.7	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**61.32**	**325**	P	**P**	**08 03 40.1**	**-2.4**
KURBB	**Kurchatov Arra**	**64.18**	**320**	P	**P**	**08 04 03.1**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=105,slow=6.9,SNR=5.4						
	comp=Z,1.0nm,0.7s						
F17K	**Baldwin Pennin**	**64.87**	**21**	P	**P**	**08 04 06.8**	**+1.0**
H18K	**Honhosa River**	**65.38**	**23**	P	**P**	**08 04 09.3**	**+0.2**
H18K				IAmb	IAmb	08 04 13.2	
	comp=Z,7.9nm,1.4s						
G19K	**Purcell Mounta**	**66.26**	**23**	P	**P**	**08 04 15.3**	**+0.4**
G19K				IAmb	IAmb	08 04 31.5	
	comp=Z,2.4nm,1.2s						
CNPM	**China Poot**	**66.64**	**30**	P	**P**	**08 04 16.1**	**-1.3**
SPU	**Mount Spurr**	**66.69**	**28**	P	**P**	**08 04 16.6**	**-1.1**
D19K	**Kuna River**	**66.86**	**20**	P	**P**	**08 04 19.9**	**+1.2**
BRLK	**Bradley Lake**	**66.87**	**30**	P	**P**	**08 04 18.1**	**-0.8**
IMAR	**Indian Mountai**	**67.47**	**23**	P	**P**	**08 04 21.5**	**-1.0**
RC01	**Rabbit Creek A**	**67.75**	**29**	P	**P**	**08 04 22.2**	**-2.2**
B20K	**Meade River**	**67.81**	**19**	P	**P**	**08 04 24.3**	**-0.3**
B20K				IAmb	IAmb	08 04 26.4	
	comp=Z,2.2nm,0.8s						
BPAW	**Bear Paw Mtn.**	**67.99**	**26**	P	**P**	**08 04 24.8**	**-1.1**
BPAW				IAmb	IAmb	08 04 29.6	
	comp=Z,5.9nm,1.2s						
F21K	**Alatna River**	**67.99**	**22**	P	**P**	**08 04 25.3**	**-0.6**
KNK	**Knik Glacier**	**68.43**	**29**	P	**P**	**08 04 27.9**	**-0.8**
B21K	**Ikpikpuk River**	**68.47**	**19**	P	**P**	**08 04 30.0**	**+1.2**
SML	**Sawmill**	**68.58**	**28**	P	**P**	**08 04 28.1**	**-1.5**
D22K	**Ayikyak River**	**68.84**	**20**	P	**P**	**08 04 31.0**	**-0.1**
D22K				IAmb	IAmb	08 04 32.9	
	comp=Z,2.0nm,0.8s						
E22K	**Anaktuvuk Pass**	**68.90**	**21**	P	**P**	**08 04 32.1**	**+0.6**
BVAR	**Borovoye Array**	**69.54**	**322**	P	**P**	**08 04 36.7**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=103,slow=8.5,SNR=9.5						
	comp=Z,1.3nm,0.4s						
BRVK	**Borovoye**	**69.61**	**322**	P	**P**	**08 04 37.0**	**+0.9**
BRVK				IAmb	IAmb	08 04 38.3	
	comp=Z,6.4nm,1.2s						
ILAR	**Eielson Array**	**69.88**	**25**	P	**P**	**08 04 36.1**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=248,slow=6.0,SNR=7.3						
	comp=Z,0.3nm,0.5s						
D24K	**Happy Valley**	**70.25**	**21**	P	**P**	**08 04 40.6**	**+0.8**
D24K				IAmb	IAmb	08 04 41.7	
	comp=Z,4.6nm,0.8s						
BMAR	**Burnt Mountain**	**71.37**	**23**	P	**P**	**08 04 47.4**	**+0.8**
LOGN	**Logan Glacier**	**71.90**	**30**	P	**P**	**08 04 50.4**	**+0.3**
I28M	**Miner Creek**	**72.90**	**25**	P	**P**	**08 04 56.1**	**+0.2**
I28M				IAmb	IAmb	08 05 13.1	
	comp=Z,5.1nm,1.4s						
F28M	**Old Crow**	**73.18**	**23**	P	**P**	**08 04 57.4**	**-0.1**
F28M				IAmb	IAmb	08 05 03.9	
	comp=Z,3.5nm,1.2s						
L29M	**L29M**	**73.46**	**28**	P	**P**	**08 04 59.6**	**+0.4**
L29M				IAmb	IAmb	08 05 15.4	
	comp=Z,5.3nm,1.4s						
H29M	**Whitestone**	**73.62**	**24**	P	**P**	**08 04 59.0**	**-1.0**
K29M	**Barlow Dome**	**73.78**	**27**	P	**P**	**08 05 01.3**	**+0.1**
K29M				IAmb	IAmb	08 05 03.8	
	comp=Z,5.7nm,1.5s						
G30M	**tAoh Zraii Nji**	**74.53**	**24**	P	**P**	**08 05 05.8**	**+0.4**
G30M				IAmb	IAmb	08 05 06.2	
	comp=Z,3.9nm,1.1s						
M31M	**Drury Creek, Y**	**75.14**	**29**	P	**P**	**08 05 08.8**	**-0.2**
M31M				IAmb	IAmb	08 05 18.6	
	comp=Z,3.4nm,1.4s						
G31M	**Satah River**	**75.30**	**24**	P	**P**	**08 05 09.9**	**+0.3**
G31M				IAmb	IAmb	08 05 10.8	
	comp=Z,1.7nm,0.6s						
F31M	**Tsiigehtchic**	**75.52**	**23**	P	**P**	**08 05 10.8**	**-0.1**
F31M				IAmb	IAmb	08 05 18.9	
	comp=Z,3.4nm,1.4s						
INK	**Inuvik**	**75.62**	**22**	P	**P**	**08 05 10.6**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=265,slow=6.6,SNR=6.1						
	comp=Z,1.5nm,0.9s						
FARO	**Faro, Yukon**	**75.63**	**29**	P	**P**	**08 05 11.9**	**+0.1**
ABKAR	**Akbulak array**	**76.04**	**318**	P	**P**	**08 05 14.8**	**+0.5**
ABKAR	**Akbulak array**	**76.04**	**318**	P	**P**	**08 05 15.2**	**+0.9**
ABKAR				IAmb	IAmb	08 05 17.8	
	comp=Z,1.1nm,1.0s						
A36M	**Sachs Harbour**	**78.32**	**19**	P	**P**	**08 05 26.8**	**+0.1**
A36M				IAmb	IAmb	08 05 27.7	
	comp=Z,1.5nm,0.8s						
C36M	**Paulatuk**	**79.00**	**21**	P	**P**	**08 05 30.2**	**-0.2**
YKA	**Yellowknife Ar**	**84.21**	**27**	P	**P**	**08 05 57.8**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=285,slow=5.3,SNR=3.1						
	comp=Z,0.1nm,0.5s						
ARCES	**ARCESS Array B**	**87.29**	**342**	P	**P**	**08 06 13.0**	**-0.2**
ARCES	**ARCESS Array B**	**87.29**	**342**	P	**P**	**08 06 13.1**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=69,slow=6.9,SNR=5.9						
	comp=Z,2.9nm,0.9s						
NVAR	**Mina Array Bea**	**88.58**	**51**	P	**P**	**08 06 19.2**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=266,slow=5.9,SNR=3.5						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**91.16**	**335**	P	**P**	**08 06 30.2**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=42,slow=4.3,SNR=4.7						
	comp=Z,0.3nm,0.4s						

*NNC **19** 07:59:49.4±2.0, 53.°59N×87.°91E, h0km, mb2.3, mpv2.0, Error ellipse: s-maj=17.1km s-min=9.0km az=55.0, Suspected Mining explosion.*
*IDC **19** 07:59:52.1±3.1, 53.°51N×87.°93E, h0km, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=33.0km s-min=16.6km az=84.0*

ISC 19 07:59:47.4±4.4,**53.°6N**±0.°1×**88.°3E**±0.°3,**h0km**,**n10**,σ1°**68**/8, **3C-2D**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.07**	**280**	I	I	08 11 30.0	
	0.2nm,0.9s,baz=98,slow=338,SNR=5.1						
ZAA0	**Zalesovo Array**	**2.07**	**280**	Pg	**Pn**	**08 00 23.5**	**+0.2**
	0.5nm,0.4s						
ZAA0				Lg	Lg	08 00 48.8	
	10nm,1.0s						
ZALV	**Zalesovo Beam**	**2.07**	**280**	Pn	**Pb**	**08 00 24.0**	**-1.8**
	0.7nm,0.3s,baz=102,slow=14,SNR=9.0						
ZALV				Sn	**Sn**	**08 00 50.2**	**+0.4**
	4.6nm,0.3s,baz=103,slow=24,SNR=17						
KURK	**Kurchatov**	**6.62**	**248**	⇓Lg	Lg	08 03 10.3	
	14nm,1.2s						
KURBB	**Kurchatov Arra**	**6.71**	**247**	⇓Lg	Lg	08 03 15.1	
	16nm,1.1s						
KURBB	**Kurchatov Arra**	**6.71**	**247**	Pn	**Pn**	**08 01 28.5**	**+1.4**
	0.1nm,0.3s,baz=62,slow=14,SNR=5.7						
KURBB				Lg	Lg	08 03 16.3	
	baz=60,slow=31,SNR=7.1						
	1.1nm,0.4s						
MK31	**Makanchi Array**	**7.85**	**212**	⇑Pn	**Pn**	**08 01 42.2**	**-0.7**
	baz=35,slow=10,SNR=5.3						
MK31				Sn	**Sn**	**08 03 13.3**	**+0.9**
	0.2nm,0.1s,baz=39,slow=55,SNR=4.1						
MK31				⇑Lg	Lg	08 03 56.4	
	7.0nm,1.2s,baz=198,slow=35,SNR=5.1						
MKAR	**Makanchi Array**	**7.85**	**212**	Pn	Pn	08 01 46.0	+3.2
	0.2nm,0.3s,baz=28,slow=13,SNR=6.7						
MKAR				Sn	**Sn**	**08 03 11.3**	**-1.1**
	0.1nm,0.3s,baz=28,slow=20,SNR=3.7						
MKAR				Lg	Lg	08 03 53.4	
	0.1nm,0.3s,baz=34,slow=32,SNR=2.0						
	0.3nm,0.3s						
MAKZ	**Makanchi**	**7.94**	**213**	⇑Lg	Lg	08 03 54.6	
	3.5nm,1.1s						
BVAR	**Borovoye Array**	**10.71**	**274**	Pn	**Pn**	**08 02 24.5**	**+2.5**
	baz=70,slow=17,SNR=2.8						
	1.1nm,0.8s						

IDC 19 07:59:56.0±4.8,**2.°29S×97.°95W**,**h0km**,**mb3.5**/3, **mbtmp3.5**/3,**Error ellipse: s-maj=340.6km s-min=109.9km az=78.0**,**Southwest of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDAR	**Pinedale Array**	**46.06**	**348**	P	P	08 08 21.8	-0.1
	0.3nm,0.5s,baz=164,slow=8.0,SNR=4.2						
	0.3nm,0.5s						
YKA	**Yellowknife Ar**	**65.84**	**352**	P	P	08 10 43.1	+0.1
	0.4nm,0.9s,baz=162,slow=6.2,SNR=5.2						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**75.79**	**341**	P	P	08 11 43.5	-0.1
	0.4nm,0.7s,baz=144,slow=5.2,SNR=6.7						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**135.67**	**360**	PKP	PKPdf	08 19 18.3	-0.5
	0.2nm,0.8s,baz=0.0,slow=2.9,SNR=1.6						

*IDC **19** 08:29:15.7±2.2, 3.°77S×103.°80W, h0km, mb3.8/7, mbtmp3.8/7, MS4.1/5, Error ellipse: s-maj=108.7km s-min=50.8km az=84.0*
*NEIC **19** 08:29:15.1±1.6, 4.°3S±0.°1×103.°7W±0.°1, h10km±2km, mb4.5/51, Error ellipse: s-maj=26.1km s-min=18.3km az=214.0*

ISC 19 08:29:14.5±1.0,**4.°3S**±0.°1×**103.°7W**±0.°1,**h10km**,**n72**, σ0°**99**/63,**mb4.5**/33,**MS3.9**/5,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**13.88**	**75**		**Pn**	**08 32 32.7**	**+1.2**
ARNL	**Arenillas**	**23.59**	**89**	P	**P**	**08 34 25.8**	**0.0**
ARNL				IAmb	IAmb	08 34 36.6	
	comp=Z,14nm,1.2s						
MCRA	**Macar, Loja**	**23.68**	**91**	P	**P**	**08 34 27.3**	**+0.6**
TGUH	**Tegucigalpa,Un**	**24.45**	**42**	P	**P**	**08 34 34.2**	**+0.3**
TGUH				IAmb	IAmb	08 34 40.9	
	comp=Z,22nm,1.1s						
JRQG	**Juriquilla Cam**	**25.04**	**7**	P	**P**	**08 34 40.8**	**+1.5**
JRQG				IAmb	IAmb	08 34 42.0	
	comp=Z,3.9nm,0.4s						
PETF	**Flores**	**25.11**	**33**	P	**P**	**08 34 39.5**	**-0.2**
PETF				IAmb	IAmb	08 34 48.0	
	comp=Z,17nm,1.1s						
BOSC	**San Juan Bosco**	**25.18**	**88**	P	**P**	**08 34 39.6**	**-1.1**
ESPN	**Las Esperanzas**	**25.30**	**49**	P	**P**	**08 34 41.6**	**+0.1**
ATAH	**Atahualpa**	**25.34**	**98**	LR	LR	08 41 58.0	
	comp=Z,476nm,21.9s,baz=272,slow=30						
SLOR	**San Lorenzo -**	**25.43**	**83**	P	**P**	**08 34 43.5**	**+0.2**
OTAV	**Otavalo**	**25.63**	**81**	P	**P**	**08 34 44.5**	**-0.5**
OTAV				IAmb	IAmb	08 34 48.3	
	comp=Z,17nm,1.4s						
TULM	**Tulcn-Chalpat**	**26.37**	**80**	P	**P**	**08 34 49.3**	**-2.5**
TULM				IAmb	IAmb	08 34 59.3	
	comp=Z,9.4nm,1.1s						
ZAIG	**Zacatecas**	**26.91**	**2**	P	**P**	**08 34 54.5**	**-1.8**
NNA	**Nana**	**27.65**	**108**	LR	LR	08 43 08.1	
	comp=Z,326nm,19.3s,baz=308,slow=30						
CZSB	**Cruzeiro do Su**	**31.01**	**98**	P	**P**	**08 35 33.8**	**+1.1**
TX31	**Lajitas Ar. Si**	**33.42**	**0**	P	**P**	**08 35 53.9**	**+0.2**
TXAR	**Lajitas Array**	**33.42**	**0**	P	**P**	**08 35 53.8**	**+0.1**
TXAR	**Lajitas Array**	**33.42**	**0**	P	**P**	**08 35 52.4**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=184,slow=11,SNR=5.2						
TXAR				PcP	**PcP**	**08 38 35.9**	**+0.7**
	comp=Z,0.2nm,0.9s,baz=183,slow=4.5,SNR=2.1						
	comp=Z,0.6nm,0.9s						
TBTG	**Tabatinga, AM**	**33.70**	**91**	P	**P**	**08 35 55.2**	**-1.0**
HNDO	**Hondo**	**33.88**	**7**	P	**P**	**08 35 56.1**	**-1.6**
HNDO				IAmb	IAmb	08 36 06.4	
	comp=Z,8.8nm,1.4s						
SAND	**Sanderson**	**34.08**	**2**	P	**P**	**08 35 59.0**	**-0.4**
ALPN	**Alpine**	**34.46**	**0**	P	**P**	**08 36 02.8**	**0.0**
JCT	**Junction City**	**34.77**	**6**	P	**P**	**08 36 04.2**	**-1.1**
JCT				IAmb	IAmb	08 36 12.2	
	comp=Z,7.8nm,1.2s						
SDV	**Santo Domingo**	**35.47**	**68**	P	**P**	**08 36 11.7**	**-0.1**
SDV				IAmb	IAmb	08 36 19.8	
	comp=Z,9.5nm,1.1s						
319A	**Douglas**	**35.86**	**352**	P	**P**	**08 36 15.6**	**+0.9**
319A				IAmb	IAmb	08 36 25.0	
	comp=Z,6.8nm,1.1s						
ODSA	**Odessa**	**36.22**	**2**	P	**P**	**08 36 17.5**	**-0.3**
ODSA				IAmb	IAmb	08 36 46.0	
	comp=Z,10nm,1.1s						
TAOE	**Nuku Hiva Isla**	**36.47**	**261**	*e*LR	LR	08 46 00.8	
	comp=Z,252nm,24.6s						
ABTX	**Abilene, Hawle**	**36.91**	**6**	P	**P**	**08 36 23.8**	**+0.2**
ABTX				IAmb	IAmb	08 36 36.0	
	comp=Z,16nm,1.4s						
FW13	**Cleburne**	**36.92**	**9**	P	**P**	**08 36 24.3**	**+0.7**
FW13				IAmb	IAmb	08 36 41.2	
	comp=Z,11nm,1.1s						
DUN6	**Lazy B Ranch**	**36.99**	**352**	P	**P**	**08 36 25.6**	**+1.2**
H03N2	**Juan Fernandez**	**37.08**	**144**	T	T	09 16 09.8	
	baz=316						
H03N1	**Juan Fernandez**	**37.09**	**144**	T	T	09 16 09.5	
	baz=316						
H03N3	**Juan Fernandez**	**37.09**	**144**	T	T	09 16 11.7	
	baz=316						
BAUV	**El Baul**	**37.91**	**70**	P	**P**	**08 36 31.9**	**-0.4**
MSTX	**Muleshoe**	**38.06**	**1**	P	**P**	**08 36 33.4**	**-0.1**
MSTX				IAmb	IAmb	08 36 47.2	
	comp=Z,7.2nm,1.0s						
WTFS	**Witchita Falls**	**38.17**	**7**	P	**P**	**08 36 33.9**	**-0.3**
WTFS				IAmb	IAmb	08 36 38.3	
	comp=Z,7.2nm,1.0s						
CO06	**Fray Jorge**	**40.03**	**135**	P	**P**	**08 36 48.7**	**-1.2**
SAML	**Samuel**	**40.50**	**99**	P	**P**	**08 36 54.2**	**+0.1**
SAML				IAmb	IAmb	08 36 55.6	
	comp=Z,11nm,1.4s						
PCRV	**Puerto La Cruz**	**41.48**	**70**	LR	LR	08 54 09.8	
	comp=Z,126nm,18.2s,slow=36						
MT16	**CCHEN**	**42.38**	**137**	P	**P**	**08 37 09.1**	**-0.3**
SIV	**San Ignacio**	**43.45**	**109**	LR	LR	08 53 05.7	
	comp=Z,410nm,19.2s,baz=290,slow=33						
VILB	**Vilhena**	**43.81**	**104**	P	**P**	**08 37 20.7**	**-0.4**
VILB				IAmb	IAmb	08 37 49.3	
	comp=Z,13nm,1.4s						
R11B	**Troy Canyon, C**	**43.82**	**346**	P	**P**	**08 37 21.8**	**+0.7**
ISCO	**Idaho Springs**	**43.90**	**358**	P	**P**	**08 37 20.1**	**-1.6**
P17A	**Butcher Ranch,**	**44.02**	**352**	P	**P**	**08 37 21.5**	**-1.1**
P17A				IAmb	IAmb	08 37 22.7	
	comp=Z,4.1nm,0.7s						
O20A	**White River Ci**	**44.40**	**355**	P	**P**	**08 37 27.2**	**+1.6**
O20A				IAmb	IAmb	08 37 28.1	
	comp=Z,10nm,1.1s						
NVAR	**Mina Array Bea**	**44.60**	**344**	P	**P**	**08 37 26.7**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=164,slow=10,SNR=2.5						
	comp=Z,0.8nm,0.9s						
MPU	**Maple Canyon**	**44.68**	**351**	P	**P**	**08 37 28.7**	**+0.8**
MPU				IAmb	IAmb	08 37 44.2	
	comp=Z,7.6nm,1.3s						
DUG	**Dugway, Tooele**	**45.05**	**350**	P	**P**	**08 37 31.2**	**+0.5**
DUG				IAmb	IAmb	08 37 33.4	
	comp=Z,7.9nm,1.3s						
HWUT	**Hardware Ranch**	**46.23**	**352**		**P**	**08 37 41.4**	**+1.3**
HVU	**Hansel Valley**	**46.58**	**351**	P	**P**	**08 37 43.6**	**+0.8**
HVU				IAmb	IAmb	08 37 57.2	
	comp=Z,5.8nm,1.2s						
ORV	**Oroville**	**46.60**	**341**		**P**	**08 37 43.5**	**+0.6**
ORV				IAmb	IAmb	08 37 46.3	
	comp=Z,6.8nm,1.1s						
PPT	**Papeete**	**46.79**	**250**	LR	LR	08 52 33.6	
	comp=Z,137nm,19.1s,baz=336,slow=30						
PPT2	**Papeete2**	**46.80**	**250**	*e*LR	LR	08 50 52.8	
	comp=Z,256nm,24.5s						
PD31	**Pinedale Array**	**47.13**	**354**	P	**P**	**08 37 47.3**	**+0.1**
PD31				IAmb	IAmb	08 38 05.8	
	comp=Z,8.2nm,1.3s						
PDAR	**Pinedale Array**	**47.13**	**354**	P	**P**	**08 37 47.5**	**+0.2**
PDAR	**Pinedale Array**	**47.13**	**354**	P	**P**	**08 37 46.1**	**-1.2**
	comp=Z,2.0nm,0.9s,baz=170,slow=6.0,SNR=13						
	comp=Z,2.0nm,0.9s						
LOHW	**Long Hollow**	**48.08**	**353**		**P**	**08 37 53.9**	**-0.7**
IMW	**Indian Meadow**	**48.40**	**353**	P	**P**	**08 37 57.7**	**+0.5**
IMW				IAmb	IAmb	08 37 59.0	
	comp=Z,6.9nm,1.1s						
FLWY	**Flagg Ranch**	**48.55**	**353**	P	**P**	**08 37 58.6**	**+0.4**
HLID	**Hailey**	**48.60**	**350**	P	**P**	**08 38 00.2**	**+1.7**
HLID				IAmb	IAmb	08 38 12.8	

comp=Z,5.5nm,0.6s
WB2 Warramunga Arr 15.68 139 Pn 08 34 33.7 +0.1
WB2 IAmb IAmb 08 34 46.5
comp=Z,13nm,1.4s
WR0 Warramunga Arr 15.81 139 Pn 08 34 35.0 -0.2
WR0 IAmb IAmb 08 34 41.4
comp=Z,4.6nm,0.5s
AS31 Alice Springs 18.32 149 P **Pn 08 35 03.6 -1.2**
AS31 IAmb IAmb 08 35 08.0
comp=Z,2.9nm,0.6s
ASAR Alice Springs 18.32 149 Pn 08 35 04.3 -0.8
ASAR Alice Springs 18.32 149 P **Pn 08 35 04.3 -0.6**
comp=Z,6.1nm,0.7s,baz=329,slow=12,SNR=68
ASAR S **S 08 38 23.5 +2.1**
comp=Z,1.8nm,0.6s,baz=329,slow=24,SNR=10
MEEK Meekatharra 18.98 194 P **Pn 08 35 11.5 -1.2**
QIS Mount Isa 19.79 130 P **P 08 35 19.8 +1.5**
COEN Coen 20.05 108 P **P 08 35 21.4 +0.2**
COEN IAmb IAmb 08 35 24.5
comp=Z,3.3nm,0.7s
COEN Coen 20.05 108 P **P 08 35 21.3 +0.2**
OOD Oodnadatta 22.64 151 P **P 08 35 49.0 +1.9**
FORT Forrest 22.89 170 P **P 08 35 50.0 +0.5**
FORT IAmb IAmb 08 36 05.8
comp=Z,28nm,1.2s
FORT Forrest 22.89 170 P **P 08 35 51.1 +1.7**
KMBL Kambalda 23.15 184 P **P 08 35 53.0 +1.2**
BLDU Ballidu 23.26 195 P **P 08 35 54.5 +1.8**
MULG Mulgathing 24.10 157 P **P 08 36 01.8 +1.4**
LCRK Leigh Creek 26.06 150 P **P 08 36 19.4 +1.3**
BBOO Buckleboo 27.12 157 P **P 08 36 29.1 +1.6**
BBOO Buckleboo 27.12 157 P **P 08 36 28.9 +1.4**
HTT Hallett 28.87 153 P **P 08 36 45.3 +2.2**
STKA Stephens Creek 28.94 147 P **P 08 36 43.3 -0.4**
STKA Stephens Creek 28.94 147 P **P 08 36 45.7 +2.0**
STKA Stephens Creek 28.94 147 P **P 08 36 45.6 +2.0**
comp=Z,1.5nm,0.3s,baz=332,slow=12,SNR=18
comp=Z,1.5nm,0.3s
SONM Songino Array 57.79 346 P **P 08 40 34.2 +0.8**
comp=Z,0.3nm,0.5s,baz=163,slow=8.7,SNR=3.7
comp=Z,0.3nm,0.5s
MK31 Makanchi Array 65.88 330 P **P 08 41 25.9 -1.4**
MKAR Makanchi Array 65.88 330 P **P 08 41 28.4 +1.1**
MKAR Makanchi Array 65.88 330 P **P 08 41 28.7 +1.4**
comp=Z,0.6nm,0.5s,baz=130,slow=7.8,SNR=15
comp=Z,0.6nm,0.5s
ZAA0 Zalesovo Array 69.97 337 P **P 08 41 51.4 -1.1**
ZALV Zalesovo Beam 69.97 337 P **P 08 41 51.6 -0.9**
KURK Kurchatov 70.34 331 P **P 08 41 53.5 -1.4**
KURK IAmb IAmb 08 41 57.3
comp=Z,4.9nm,1.4s
VNDA Vanda 72.14 172 P **P 08 42 05.6 +0.3**
UOSS Minazif 73.36 299 P **P 08 42 10.7 -2.7**
UOSS IAmb IAmb 08 42 30.6
comp=Z,6.5nm,1.2s
GSTR Great Sitkin T 78.97 33 P **P 08 42 46.1 +1.6**
QSPA South Pole Qui 81.83 180 P **P 08 43 02.1 +2.4**

*IDC **19** 08:32:06.6±0.8, 66°.36N×17°.67W, h0km, mb3.7/11, mbtmp3.8/17, ML3.2/4, MS3.9/18, Error ellipse: s-maj=22.2km s-min=13.2km az=176.0*
*REY **19** 08:32:06.4, 66°.57N×17°.72W, h13km*
*NEIC **19** 08:32:08.3±1.8, 66°.58N±0°.09×17°.7W±0°.2, h10km±2km, mb4.2/16, Error ellipse: s-maj=15.2km s-min=14.6km az=61.0*

ISC 19 08:32:06.5±1.2, **66°.46N**±0°.03×**17°.71W**±0°.03, **h2**km±8km, **n69**,σ1°**02**/**77**, **mb4.0**/17, **MS3.9**/12, **Iceland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.15**	**305**	P	**Pg**	**08 32 09.5**	**+0.1**
	baz=255						
IGRI				S	**Sg**	**08 32 11.9**	**+0.6**
	baz=255						
IBRE	**Brettingsstaoi**	**0.34**	**194**	P	**Pb**	**08 32 14.9**	**-0.5**
	baz=190						
IBRE				S	**Sb**	**08 32 21.5**	**+0.2**
	baz=190						
IHED	**Heoinshofoi**	**0.41**	**157**	P	**Pg**	**08 32 15.5**	**+1.2**
	baz=161						
IHED				S	**Sb**	**08 32 22.7**	**-0.4**
	baz=161						
ILEI	**Leirhofn**	**0.49**	**95**	P	**Pg**	**08 32 15.8**	**-0.1**
	baz=108						
ILEI				S	**Sg**	**08 32 22.8**	**+0.6**
	baz=108						
IGRA	**Granastaoir**	**0.54**	**175**	P	**Pg**	**08 32 17.9**	**+1.0**
	baz=175						
IGRA				S	**Sb**	**08 32 26.7**	**-0.3**
	baz=175						
IHLA	**Hella**	**0.58**	**209**	P	**Pg**	**08 32 18.4**	**+0.8**
	baz=203						
IHLA				S	**Sb**	**08 32 27.4**	**-0.8**
	baz=203						
IDIM	**Dimmadalss**	**0.59**	**147**	P	**Pg**	**08 32 18.4**	**+0.6**
	baz=152						
IDIM				S	**Sb**	**08 32 27.5**	**-0.8**
	baz=152						
ISIG	**Siglufjorour**	**0.59**	**237**	P	**Pg**	**08 32 17.7**	**-0.1**
	baz=228						
ISIG				S	**Sg**	**08 32 25.9**	**+0.6**
	baz=228						
IGIL	**Gilhagi**	**0.67**	**124**	P	**Pg**	**08 32 19.3**	**0.0**
	baz=131						
IGIL				S	**Sg**	**08 32 29.1**	**+1.2**
	baz=131						
IGHA	**Grjothals**	**0.75**	**145**	P	**Pg**	**08 32 20.9**	**+0.1**
	baz=149						
IGHA				S	**Sb**	**08 32 32.1**	**-0.8**
	baz=149						
IKVO	**Krokottuvotn**	**0.82**	**155**	P	**Pg**	**08 32 22.2**	**0.0**
	baz=158						
IKVO				S	**Sb**	**08 32 34.8**	**-0.2**
	baz=158						
IREN	**Reynihlio**	**0.88**	**158**	P	**Pg**	**08 32 23.2**	**-0.1**
	baz=160						
IREN				S	**Sb**	**08 32 36.0**	**-0.6**
	baz=160						
IMEL	**Melhnausar**	**0.99**	**154**	P	**Pg**	**08 32 25.0**	**-0.5**
	baz=156						
IMEL				S	**Sn**	**08 32 40.1**	**-1.8**
	baz=156						
IHRN	**Hraun**	**1.04**	**252**	S	**Sg**	**08 32 37.4**	**-2.4**
	baz=246						
IGRS	**Grimsstaoir**	**1.04**	**141**	S	**Sb**	**08 32 40.8**	**-0.7**
	baz=144						
IGRS				P	**Pg**	**08 32 25.7**	**-0.8**
	baz=144						
ISVA	**Svartarkot**	**1.14**	**170**	P	**Pb**	**08 32 27.5**	**-1.5**
	baz=171						
ISVA				S	**Sb**	**08 32 43.9**	**-0.3**
	baz=171						
IASK	**Askja**	**1.48**	**162**	S	**Sb**	**08 32 53.8**	**-0.1**
	baz=163						
IASK				P	**Pn**	**08 32 33.0**	**-1.2**
	baz=163						
BORG	**Borgarnes**	**2.28**	**223**		**Pn**	**08 32 44.7**	**-0.5**
BORG	**Borgarnes**	**2.28**	**223**	Pn	**Pn**	**08 32 44.5**	**-0.7**
	34nm,0.3s,baz=42,slow=9.2,SNR=91						
BORG				Sn	**Sn**	**08 33 13.8**	**0.0**
	25nm,0.3s,baz=263,slow=23,SNR=20						
BORG				LR	LR	08 33 41.2	
	comp=Z,2μm,18.4s,baz=23,slow=43						
	319nm,0.6s						
SCO	**Scoresbysund**	**4.34**	**341**	*i* P	**Pn**	**08 33 11.0**	**-2.4**
SOEG	**Soedalen**	**5.57**	**295**	*e*P	**Pn**	**08 33 33.9**	**+3.6**
JMIC	**Jan Mayen**	**5.64**	**32**	LR	LR	08 35 16.6	
	comp=Z,379nm,19.4s,baz=276,slow=33						
SUMG	**Summit**	**9.46**	**320**	Pn	**Pn**	**08 34 20.8**	**-3.3**
ILULI	**Ilulissat**	**12.80**	**297**	Pn	**Pn**	**08 35 07.8**	**-1.4**
EKA	**Eskdalemuir Ar**	**13.16**	**141**	Pn	**Pn**	**08 35 13.6**	**-0.7**
	0.2nm,0.3s,baz=323,slow=13,SNR=1.9						
NOA	**NORSAR Array B**	**13.80**	**99**	LR	LR	08 40 22.3	
	comp=Z,182nm,20.5s,baz=85,slow=36						
SPITS	**Spitsbergen Ar**	**15.27**	**26**	Pn	**Pn**	**08 35 44.7**	**+1.9**
	baz=241,slow=15						
	4.9nm,0.9s						
HFS	**Hagfors**	**15.33**	**99**	Pn	**Pn**	**08 35 43.2**	**-0.4**
	3.0nm,1.1s,baz=340,slow=12,SNR=1.8						
HFS				LR	LR	08 40 45.7	
	comp=Z,310nm,22.0s,baz=330,slow=34						
ARCES	**ARCESS Array B**	**16.21**	**60**	Pn	**Pn**	**08 35 55.9**	**+0.8**
	baz=275,slow=9.6,SNR=4.1						
ARCES				LR	LR	08 41 21.6	
	comp=Z,326nm,18.8s,baz=203,slow=34						
	3.7nm,0.9s						
FINES	**FINESS Array B**	**19.53**	**84**	P	**P**	**08 36 34.8**	**0.0**
FINES	**FINESS Array B**	**19.53**	**84**	P	**Pn**	**08 36 35.3**	**-0.8**
	0.1nm,0.3s,baz=302,slow=8.0,SNR=2.6						
FINES				LR	LR	08 43 26.7	
	comp=Z,310nm,19.0s,baz=342,slow=35						
	1.9nm,0.8s						
FRB	**Frobisher Bay**	**21.09**	**287**	P	**P**	**08 36 52.2**	**+0.5**
	2.9nm,0.8s,baz=57,slow=11,SNR=6.5						
FRB				LR	LR	08 44 14.6	
	comp=Z,291nm,18.7s,baz=20,slow=34						
	2.9nm,0.8s						
CLL	**Collm**	**21.61**	**120**	*e*P	**P**	**08 36 59.0**	**+1.5**
CLL				*i* x	x	08 37 02.6	
	comp=Z,15nm,1.5s						
GERES	**GERESS Array B**	**23.94**	**122**	P	**P**	**08 37 21.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=334,slow=8.7,SNR=1.7						
	comp=Z,0.3nm,0.3s						
DAVOX	**Davos/Dischmat**	**24.50**	**130**	LR	LR	08 47 17.9	
	comp=Z,251nm,20.2s,baz=2.0,slow=37						
VRAC	**Vranov**	**24.55**	**117**	LR	LR	08 48 45.7	
	comp=Z,222nm,19.8s,baz=81,slow=41						
SCHQ	**Schefferville**	**25.97**	**268**	P	**P**	**08 37 40.1**	**0.0**
SCHQ				IAmb	IAmb	08 38 05.3	
	comp=Z,16nm,1.4s						
SCHQ	**Schefferville**	**25.97**	**268**	P	**P**	**08 37 40.5**	**+0.4**
	comp=Z,5.3nm,1.1s,baz=55,slow=11,SNR=2.8						
SCHQ				LR	LR	08 47 03.4	
	comp=Z,279nm,18.9s,baz=33,slow=34						
	comp=Z,5.3nm,1.1s						
AKASG	**Malin Array Be**	**28.21**	**101**	LR	LR	08 49 30.5	
	comp=Z,262nm,18.6s,baz=2.5,slow=37						
KIRV	**Kirov**	**30.47**	**72**	LR	LR	08 50 07.3	
	comp=Z,205nm,18.6s,baz=156,slow=36						
MLR	**Munele Rosu**	**31.20**	**110**	LR	LR	08 52 25.7	
	comp=Z,232nm,18.8s,baz=56,slow=39						
ARU	**Arti**	**35.47**	**68**	LR	LR	08 51 24.1	
	comp=Z,254nm,21.0s,baz=152,slow=33						
YKA	**Yellowknife Ar**	**37.94**	**311**	P	**P**	**08 39 25.3**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=40,slow=8.5,SNR=12						
YKA				PcP	**PcP**	**08 41 40.7**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=39,slow=3.1,SNR=3.4						
	comp=Z,0.7nm,0.7s						
G31M	**Satah River**	**39.58**	**326**	P	**P**	**08 39 37.8**	**-0.7**
G31M				IAmb	IAmb	08 39 42.3	
	comp=Z,4.6nm,0.9s						
G30M	**tAoh Zraii Nji**	**39.95**	**327**	P	**P**	**08 39 41.6**	**-0.1**
D24K	**Happy Valley**	**40.49**	**335**	P	**P**	**08 39 45.9**	**-0.2**
D24K				IAmb	IAmb	08 39 51.1	
	comp=Z,4.2nm,0.8s						
ULM	**Lac du Bonnet**	**40.97**	**287**	P	**P**	**08 39 50.6**	**+0.4**
ULM				IAmb	IAmb	08 39 58.5	
	comp=Z,5.7nm,1.4s						
ULM	**Lac du Bonnet**	**40.97**	**287**	P	**P**	**08 39 51.2**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=39,slow=10,SNR=5.3						
ULM				LR	LR	08 56 19.0	
	comp=Z,388nm,19.3s,baz=28,slow=35						
	comp=Z,2.1nm,0.6s						
TOLK	**Toolik Lake Re**	**41.07**	**335**	P	**P**	**08 39 51.3**	**+0.4**
TOLK				IAmb	IAmb	08 39 55.6	
	comp=Z,2.5nm,0.7s						
FYU	**Fort Yukon**	**42.14**	**332**	P	**P**	**08 39 59.3**	**-0.3**
BVAR	**Borovoye Array**	**42.45**	**63**	P	**P**	**08 40 02.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=348,slow=6.2,SNR=2.0						
	comp=Z,0.5nm,0.5s						
F21K	**Alatna River**	**43.00**	**337**	P	**P**	**08 40 06.2**	**-0.4**
H24K	**Noodor Dome**	**43.29**	**333**	P	**P**	**08 40 10.3**	**+1.3**
H24K				IAmb	IAmb	08 40 18.7	
	comp=Z,4.5nm,1.1s						
K27K	**Chicken**	**43.75**	**328**	P	**P**	**08 40 13.9**	**+1.2**
ILAR	**Eielson Array**	**44.06**	**331**	P	**P**	**08 40 16.4**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=26,slow=8.4,SNR=8.3						
	comp=Z,0.9nm,0.8s						
IMAR	**Indian Mountai**	**44.18**	**336**	P	**P**	**08 40 15.3**	**-0.8**
BCAR	**Beaver Creek A**	**44.54**	**327**	P	**P**	**08 40 19.3**	**+0.2**
WAX	**Waxell Ridge**	**47.10**	**326**	P	**P**	**08 40 37.6**	**-1.7**
KURBB	**Kurchatov Arra**	**47.30**	**59**	P	**P**	**08 40 40.8**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=332,slow=6.8,SNR=7.8						
	comp=Z,0.8nm,0.6s						
TKL	**Tuckaleechee C**	**48.38**	**265**	LR	LR	09 00 02.5	
	comp=Z,153nm,19.8s,baz=12,slow=35						
SVW2	**Sparrevohn**	**49.03**	**334**	P	**P**	**08 40 54.0**	**-0.2**
SVW2				IAmb	IAmb	08 41 19.0	
	comp=Z,5.3nm,1.2s						
N19K	**Bonanza Creek**	**49.10**	**334**	P	**P**	**08 40 54.7**	**-0.2**
N19K				IAmb	IAmb	08 41 02.7	
	comp=Z,4.8nm,1.1s						
O16K	**Kokwok River B**	**50.87**	**335**	P	**P**	**08 41 08.6**	**+0.4**
MKAR	**Makanchi Array**	**51.87**	**59**	P	**P**	**08 41 16.1**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=330,slow=7.0,SNR=6.7						
	comp=Z,0.7nm,0.8s						
PD31	**Pinedale Array**	**52.41**	**292**	P	**P**	**08 41 20.4**	**+0.2**
PDAR	**Pinedale Array**	**52.41**	**292**	P	**P**	**08 41 20.9**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=42,slow=6.2,SNR=8.3						
	comp=Z,0.8nm,0.8s						
WLAR	**White Oak Lake**	**53.84**	**272**	P	**P**	**08 41 29.7**	**-0.9**
ANMO	**Albuquerque**	**58.04**	**285**	LR	LR	09 07 01.9	
	comp=Z,231nm,18.5s,baz=96,slow=36						
TXAR	**Lajitas Array**	**61.90**	**279**	P	**P**	**08 42 27.8**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=51,slow=12,SNR=2.8						
TXAR				LR	LR	09 09 06.7	
	comp=Z,135nm,18.1s,baz=11,slow=36						
	comp=Z,0.3nm,0.8s						

IDC 19 08:41:18.0±2.4, **54°.04N×86°.48E, h0**km, **mbtmp3.1**/2, **ML2.8**/2, **Error ellipse: s-maj=19.9km s-min=11.9km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**266**	I	I	08 47 50.0	
	baz=84,slow=342,SNR=5.9						
ZALV	**Zalesovo Beam**	**0.98**	**265**	Pg	Pg	08 41 35.8	-1.1
	0.9nm,0.3s,baz=84,slow=17,SNR=7.3						
ZALV				Lg	Lg	08 41 50.9	
	2.4nm,0.3s,baz=81,slow=29,SNR=10						
ZALV				Rg	Rg	08 41 57.9	
	1.8nm,0.3s,baz=82,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**5.95**	**238**	Pn	Pn	08 42 48.5	+1.2
	0.1nm,0.3s,baz=56,slow=13,SNR=8.6						
KURBB				Lg	Lg	08 44 27.9	
	baz=53,slow=32,SNR=1.8						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	08 43 13.1	+1.3
	0.3nm,0.3s,baz=23,slow=13,SNR=16						
MKAR				Sn	Sn	08 44 37.5	-2.4
	baz=24,slow=25,SNR=1.7						
MKAR				Lg	Lg	08 45 23.9	
	0.1nm,0.3s,baz=27,slow=31,SNR=6.1						
	0.4nm,0.3s						

*NEIC **19** 08:49:21.2±0.9, 37°.845N±0°.008×122°.00W±0°.01, h10km±2km, Error ellipse: s-maj=1.4km s-min=1.1km az=49.0*

NCEDC 19 08:49:20.5±1.1, **37°.845N**±0°.008×**121°.98W**±0°.01, **h6**km±1km, **Md3.0**/70, **ML2.6**/50(NEIC), **Error ellipse: s-maj=1.3km s-min=1.0km az=216.0, Central California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
C047	**Rutherford Dri**	**0.04**	**244**		Pg	08 49 23.4	+1.7
BGC	**Bolinger Road**	**0.07**	**246**		Pg	08 49 24.6	+2.3
CRPB	**Russellman Par**	**0.09**	**41**		Pg	08 49 22.8	+0.3
C045	**Hawkins Drive**	**0.10**	**171**		Pg	08 49 23.6	+1.0
C045					Sg	08 49 26.5	+2.4
C010	**Sunflower Cour**	**0.10**	**347**		Pg	08 49 23.2	+0.5
SMCB	**Saint Mary's C**	**0.10**	**267**		Pg	08 49 25.8	+3.0
CLCB	**Lake Chabot**	**0.13**	**212**		Pg	08 49 23.9	+0.8
CMOB	**Morgan Territo**	**0.14**	**104**		Pg	08 49 24.4	+0.9
CDOM	**Doolan Road**	**0.16**	**135**		Pg	08 49 25.0	+1.3
CSLM	**San Leandro Hi**	**0.16**	**222**		Pg	08 49 24.6	+0.8
C021	**Meadowview Dri**	**0.16**	**204**		Pg	08 49 24.6	+0.8
C013	**Ascot Lane Oak**	**0.17**	**263**		Pg	08 49 24.8	+0.9
C064	**Brunell Drive**	**0.17**	**256**		Pg	08 49 24.7	+0.8
C064					Sg	08 49 27.9	+1.8
CMCM	**Mills College**	**0.17**	**248**		Pg	08 49 24.6	+0.8
C018	**Christie Drive**	**0.17**	**321**		Pg	08 49 29.3	+5.3
CTAM	**Taylor**	**0.18**	**351**		Pg	08 49 25.5	+1.3
CVPM	**Vollmer Peak**	**0.20**	**282**		Pg	08 49 25.6	+1.2
C071	**Via Corta San**	**0.20**	**217**		Pg	08 49 25.3	+0.8
BKS	**Berkeley--Byer**	**0.20**	**279**		Pg	08 49 25.6	+1.0
C055	**Cottonwood Ave**	**0.21**	**209**		Pg	08 49 25.7	+1.0
VAK	**Adit at Lawren**	**0.21**	**279**		Pg	08 49 25.8	+1.1
CMSB	**University of**	**0.22**	**277**		Pg	08 49 25.8	+1.0
BL67	**Building 67, L**	**0.22**	**278**		Pg	08 49 25.7	+0.9
BL88	**Building 88, L**	**0.22**	**279**		Pg	08 49 25.9	+1.0
BRK	**Berkeley--Havi**	**0.22**	**277**		Pg	08 49 25.9	+1.0
C007	**Forest Lane Be**	**0.23**	**283**		Pg	08 49 26.1	+1.1
CPIM	**Pinole Ridge**	**0.23**	**308**		Pg	08 49 26.6	+1.4
CNIC	**Niles Canyon**	**0.24**	**177**		Pg	08 49 26.3	+1.1
CVLM	**Vallecito**	**0.25**	**152**		Pg	08 49 27.0	+1.7
CBZL	**Buffer Zone**	**0.26**	**126**		Pb	08 49 27.1	-0.4
C006	**Lk Pillsbury D**	**0.26**	**194**		Pb	08 49 26.7	-0.8
C048	**Posada Way Fre**	**0.27**	**182**		Pg	08 49 26.1	+0.4
CBSNC	**Byron Hot Spri**	**0.27**	**96**		Pb	08 49 27.5	-0.2
CSAM	**Sandia**	**0.28**	**128**		Pb	08 49 27.8	-0.1
WENL	**Wente Vineyard**	**0.28**	**141**		Pb	08 49 27.7	-0.3
C002	**Farnham Drive**	**0.29**	**189**		Pb	08 49 27.2	-0.8
RFSB	**Richmond Field**	**0.29**	**284**		Pg	08 49 27.1	+0.9
CYBM	**Yerba Buena Is**	**0.30**	**264**		Pg	08 49 27.2	+0.8
CPMM	**Point Molate**	**0.35**	**287**		Pb	08 49 28.3	-0.8
JPRM	**Presidio of Sa**	**0.39**	**263**		Pb	08 49 29.1	-0.8
CALM	**Calaveras Res.**	**0.42**	**160**		Pb	08 49 29.9	-0.3
CSTL	**Corral Hollow**	**0.43**	**118**		Pb	08 49 30.3	-0.2
CSTL	**Corral Hollow**	**0.43**	**118**		Pg	08 49 29.7	+0.8
SAC	**San Andreas**	**0.43**	**233**		Pb	08 49 29.7	-0.8
JMGM	**Milagra Ridge**	**0.44**	**242**		Pg	08 49 29.8	+0.7
CMLM	**Mount Lewis**	**0.45**	**144**		Pb	08 49 30.8	0.0
JCHM	**Cahill Ridge**	**0.45**	**224**		Pb	08 49 30.1	-0.8
JSFB	**Stanford Teles**	**0.47**	**199**		Pb	08 49 30.7	-0.4
JRSC	**Jasper Ridge**	**0.49**	**205**		Pb	08 49 30.7	-0.7
JFP	**Foothills Park**	**0.51**	**199**		Pb	08 49 31.4	-0.4
JSJM	**St Joseph**	**0.52**	**190**		Pb	08 49 31.8	-0.1
JBMM	**Black Mountain**	**0.54**	**195**		Pb	08 49 32.1	-0.4
CMMM	**Mount Mocho**	**0.55**	**135**		Pb	08 49 32.4	-0.2
MHC	**Mount Hamilton**	**0.57**	**152**		Pb	08 49 32.8	-0.2
BGH	**Bear Gulch**	**0.58**	**210**		Pb	08 49 32.8	-0.1
ARN	**Arnold Ranch**	**0.61**	**144**		Pb	08 49 33.4	-0.1
NBRB	**Beebe Ranch Br**	**0.61**	**313**		Pb	08 49 33.0	-0.6
MTOS	**Mt Oso, Westle**	**0.62**	**123**		Pb	08 49 33.2	-0.5
CVS	**Carmenet Viney**	**0.63**	**323**		Pb	08 49 33.2	-0.6
CCOB	**Coe Ranch Numb**	**0.63**	**157**		Pb	08 49 34.1	+0.2
JJOM	**Saint Joseph's**	**0.64**	**180**		Pb	08 49 33.7	-0.3
NOLM	**Olema**	**0.67**	**287**		Pb	08 49 34.1	-0.5
JPSM		**0.71**	**205**		Pb	08 49 35.1	-0.1
CADM	**Anderson Res.**	**0.74**	**157**		Pb	08 49 35.9	+0.2
NTYM	**Taylor**	**0.77**	**316**		Pg	08 49 35.6	+0.4
MCCM	**Marconi Confer**	**0.77**	**293**	Pg	Pg	08 49 35.5	+0.2
MCCM				IAML		08 49 54.0	
	comp=E,342nm,1.0s						
HLPM	**Lions Peak**	**0.85**	**161**		Pb	08 49 37.9	+0.3
GHS	**Gilroy Hot Spr**	**0.86**	**150**		Pb	08 49 37.4	-0.4
CDC	**Canada Road**	**0.91**	**154**		Pb	08 49 38.8	+0.1
JELB	**Ellicott, Sant**	**0.92**	**172**		Pb	08 49 39.3	+0.4
HCBM	**Chamberlain**	**0.95**	**164**		Pn	08 49 40.0	-0.2
HFEM	**San Felipe**	**0.98**	**152**		Pg	08 49 39.2	0.0
SLD	**San Luis Dam**	**0.98**	**142**		Pb	08 49 39.8	0.0
HCOM	**Corn Cob Canyo**	**0.98**	**167**		Pg	08 49 39.1	-0.2
ANZ	**Anzar Road**	**1.01**	**162**		Pn	08 49 41.1	+0.1
NMTM	**Middletown**	**1.03**	**339**		Pn	08 49 41.5	+0.1
HTUM	**Tustin Road**	**1.05**	**165**		Pb	08 49 41.3	+0.3
GDXM	**Geysers**	**1.16**	**327**	Pg	Pb	08 49 42.9	0.0
SAO	**San Andreas Ge**	**1.16**	**158**	Pg	Pg	08 49 42.6	-0.1
CMB	**Columbia Colle**	**1.27**	**81**		Pn	08 49 43.9	-0.9
BPCNC	**Pine Canyon**	**1.30**	**167**		Pn	08 49 44.3	-0.8
AFDM	**Forest Hills D**	**1.36**	**35**		Pn	08 49 44.2	-1.7
BJCM	**Johnson Can.**	**1.38**	**160**		Pn	08 49 45.5	-0.7
HOPS	**Hopland Field**	**1.43**	**324**		Pn	08 49 46.9	-0.1
HOPS				IAML		08 50 34.2	
	comp=N,82nm,2.4s						
HOPS				IAML		08 50 38.4	
	comp=E,94nm,2.2s						
BBGB	**Big Mountain B**	**1.47**	**149**		Pn	08 49 43.8	-3.8
MBUM	**Mount Bullion**	**1.54**	**100**		Pn	08 49 47.4	-1.2
ORV	**Oroville**	**1.75**	**12**	Pn	Pn	08 49 49.2	-2.1
EMB	**Emerald Bay**	**1.86**	**52**		Pn	08 49 52.2	-0.8
EMB				IAML		08 50 22.9	
	comp=E,66nm,0.8s						
PMPB	**Monarch Peak**	**1.88**	**150**	Pn	Pn	08 49 51.7	-1.5
MPK	**Martis Peak**	**2.11**	**46**	Pn	Pn	08 49 55.3	-1.2
MPK				IAML		08 50 36.4	
	comp=E,61nm,1.0s						
WAKR	**Walker**	**2.11**	**71**		Pb	08 49 58.2	-1.1
WAKR				IAML		08 50 41.4	
	comp=N,32nm,1.1s						
WAKR				IAML		08 50 43.1	
	comp=E,30nm,1.3s						
KCPM	**Cahto Peak**	**2.23**	**326**	Pn	Pn	08 49 57.9	-0.1
PNTR	**Pine Nut**	**2.24**	**56**	Pn	Pn	08 49 58.7	+0.4
PNTR				IAML		08 50 36.6	
	comp=E,45nm,0.8s						
PNTR				IAML		08 50 41.5	
	comp=N,40nm,0.9s						
MDPB	**Devils Postpil**	**2.31**	**94**		Pn	08 49 58.8	-0.5
MDPB				IAML		08 50 13.8	
	comp=E,32nm,3.2s						
MDPB				IAML		08 50 49.1	
	comp=N,36nm,2.6s						
YERR	**Yerington**	**2.43**	**61**	Pn	Pn	08 50 00.2	-0.8
YERR				IAML		08 50 44.8	
	comp=N,42nm,0.6s						
PAHR	**Pah Rah Range**	**2.75**	**47**	Pn	Pn	08 50 04.3	-1.0
LHV	**Little Huntoon**	**2.77**	**81**	Pn	Pn	08 50 03.3	-2.1
LHV				IAML		08 51 14.2	
	comp=E,28nm,0.9s

MKAR Sn Sn 08 58 45.4 +1.0
0.1nm,0.3s,baz=24,slow=26,SNR=3.0
MKAR Lg Lg 08 59 27.8
baz=26,slow=27
0.6nm,0.3s

VAO ***19*** *08:56:20.3±0.4, 15°.90S×73°.93W, h10km, mb4.6*
IDC ***19*** *08:56:23.7±1.9, 15°.77S×74°.01W, h52km±18km, mb4.0/13, mbtmp4.3/17, ML4.2/4, MS3.6/8, Error ellipse: s-maj=22.3km s-min=10.4km az=57.0*
NEIC ***19*** *08:56:23.7±1.7, 15°.88S±0°.07×74°.08W±0°.08, h52km±7km, mb4.7/136, Error ellipse: s-maj=13.0km s-min=7.3km az=55.0*

ISC 19 08:56:23.5±0.4, 15°.87S±0°.05×74°.01W±0°.07, h54km, n291, σ1ᵍ09/277, mb4.7/71, MS3.5/5, 4C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.74**	**324**	Pn	**Pn**	**08 57 32.8**	**+0.2**
NNA				Sn	**Sn**	**08 58 25.2**	**-1.1**
NNA	**Nana**	**4.74**	**324**	P	**Pn**	**08 57 32.0**	**-0.6**
	25nm,0.3s,baz=134,slow=17,SNR=37						
NNA				S	**Sn**	**08 58 24.7**	**-1.7**
	288nm,0.4s,baz=220,slow=19,SNR=7.6						
NNA				LR	LR	08 59 42.9	
	comp=Z,227nm,19.2s,baz=146,slow=43						
	32nm,0.3s						
LPAZ	**La Paz**	**5.67**	**95**	Pn	Pn	08 57 50.7	+4.9
PB11	**IPOC Station P**	**5.67**	**134**	Pn	**Pn**	**08 57 45.9**	**+0.5**
PB11				Sn	**Sn**	**08 58 45.4**	**-3.9**
PB11	**IPOC Station P**	**5.67**	**134**	⇑*i*P	**Pn**	**08 57 46.1**	**+0.6**
PB11				*i* S	**Sn**	**08 58 45.3**	**-3.9**
TA02	**Huaiquique**	**5.72**	**140**		**Pn**	**08 57 46.6**	**+0.6**
TA01	**Diego Aracena**	**5.92**	**143**	Pn	**Pn**	**08 57 48.9**	**+0.3**
GO01	**Chusmiza**	**5.94**	**130**		**Pn**	**08 57 50.9**	**+1.5**
PATCX	**Punta Patache**	**6.13**	**144**		**Pn**	**08 57 52.0**	**+0.3**
PB08	**IPOC Station P**	**6.27**	**133**		**Pn**	**08 57 54.6**	**+0.8**
PB02	**IPOC Station P**	**6.68**	**145**	Pn	**Pn**	**08 57 59.4**	**+0.3**
PB01	**IPOC Station P**	**6.70**	**141**	Pn	**Pn**	**08 57 59.7**	**+0.2**
PB07	**IPOC Station P**	**7.01**	**147**	Pn	**Pn**	**08 58 04.4**	**+0.6**
PB04	**IPOC Station P**	**7.39**	**151**	Pn	**Pn**	**08 58 08.9**	**-0.1**
PB09	**IPOC Station P**	**7.42**	**143**	Pn	**Pn**	**08 58 10.6**	**+1.2**
PB06	**IPOC Station P**	**7.99**	**149**	Pn	**Pn**	**08 58 16.2**	**-1.0**
CZSB	**Cruzeiro do Su**	**8.19**	**9**	Pn	**Pn**	**08 58 20.2**	**+0.3**
CZSB	**Cruzeiro do Su**	**8.19**	**9**	*e*P	**Pn**	**08 58 19.8**	**-0.1**
LVC	**Limon Verde**	**8.25**	**145**	Pn	**Pn**	**08 58 22.4**	**+1.4**
LVC	**Limon Verde**	**8.25**	**145**	P	**Pn**	**08 58 22.6**	**+1.7**
	6.6nm,0.3s,baz=319,slow=12,SNR=34						
LVC				S	**Sn**	**08 59 48.9**	**-4.1**
	165nm,0.5s,baz=96,slow=18,SNR=22						
	17nm,0.3s						
PB10	**IPOC Station P**	**8.27**	**157**		**Pn**	**08 58 19.8**	**-1.1**
PB15	**IPOC Station P**	**8.46**	**150**	Pn	**Pn**	**08 58 24.0**	**+0.3**
AF01	**San Pedro de A**	**8.94**	**143**		**Pn**	**08 58 32.7**	**+2.5**
ATAH	**Atahualpa**	**9.69**	**333**	P	Pn	08 58 46.3	+5.6
	9.4nm,0.3s,baz=147,slow=12,SNR=18						
ATAH				S	**Sn**	**09 00 26.9**	**-1.4**
	15nm,0.8s,baz=113,slow=11,SNR=1.6						
ETMB	**Extrema**	**9.69**	**53**	Pn	**Pn**	**08 58 41.9**	**+1.5**
GO02	**Mina Guanaco**	**10.13**	**157**	Pn	**Pn**	**08 58 46.9**	**+0.3**
AC01	**Pan de Azucar**	**10.71**	**163**	Pn	**Pn**	**08 58 53.0**	**-1.3**
AC02	**Maricunga**	**11.82**	**158**	Pn	**Pn**	**08 59 10.8**	**+1.0**
TBTG	**Tabatinga, AM**	**12.29**	**20**	Pn	**Pn**	**08 59 16.0**	**0.0**
TBTG	**Tabatinga, AM**	**12.29**	**20**	*e*P	**Pn**	**08 59 15.4**	**-0.5**
SIV	**San Ignacio**	**12.44**	**92**	P	**Pn**	**08 59 17.2**	**-0.9**
	0.1nm,0.3s,baz=274,slow=11,SNR=29						
SIV				LR	LR	09 04 45.7	
	comp=Z,202nm,20.7s,baz=290,slow=40						
	6.2nm,0.7s						
SAML	**Samuel**	**12.61**	**58**	Pn	**Pn**	**08 59 20.9**	**+0.7**
SAML	**Samuel**	**12.61**	**58**	*e*P	**Pn**	**08 59 20.7**	**+0.4**
MCRA	**Macar, Loja**	**12.84**	**332**		**Pn**	**08 59 22.8**	**-0.7**
BBSD	**Serra de San D**	**12.91**	**98**	*e*P	**Pn**	**08 59 23.5**	**-1.0**
AC05	**El Transito**	**13.36**	**166**		**Pn**	**08 59 33.1**	**+2.5**
BOSC	**San Juan Bosco**	**13.39**	**340**		**Pn**	**08 59 30.4**	**-0.7**
LCO	**Las Campanas**	**13.43**	**167**		**Pn**	**08 59 30.7**	**-1.0**
ARNL	**Arenillas**	**13.62**	**333**		**Pn**	**08 59 32.9**	**-1.1**
VILB	**Vilhena**	**13.69**	**80**	Pn	**Pn**	**08 59 33.8**	**-1.3**
VILB	**Vilhena**	**13.69**	**80**	*e*P	**Pn**	**08 59 34.2**	**-0.8**
BBRB	**Robore, Bolivi**	**13.79**	**102**	*e*P	**Pn**	**08 59 33.5**	**-2.9**
COHC	**Cochancay**	**14.29**	**338**	Pn	**Pn**	**08 59 41.3**	**-1.8**
PTLB	**Pontes e Lacer**	**14.33**	**90**		**Pn**	**08 59 42.5**	**-1.1**
PTLB	**Pontes e Lacer**	**14.33**	**90**	*e*P	**Pn**	**08 59 40.5**	**-3.0**
CO01	**Juntas del Tor**	**14.49**	**166**	Pn	**Pn**	**08 59 44.9**	**-1.0**
CHSH	**Refugio Sur-Vo**	**15.07**	**341**	Pn	**Pn**	**08 59 52.8**	**-1.0**
CO03	**El Pedregal**	**15.21**	**169**	Pn	**Pn**	**08 59 56.1**	**+1.1**
TEFE	**Tefe**	**15.36**	**38**	*e*P	**Pn**	**08 59 58.0**	**+1.0**
CO02	**Combarbal**	**15.51**	**170**	Pn	**Pn**	**08 59 59.5**	**+0.5**
SLOR	**San Lorenzo -**	**15.68**	**343**	Pn	**Pn**	**09 00 02.1**	**+0.5**
PTLC	**Puerto Leguiza**	**15.96**	**357**	*e*P	Pn	08 59 55.8	-8.9
TICA	**Tres Isletas**	**16.45**	**132**	*e*P	**Pn**	**09 00 10.7**	**-0.1**
MURT	**Porto Murtinho**	**16.56**	**113**	*e*P	**Pn**	**09 00 11.5**	**-0.7**
OTAV	**Otavalo**	**16.60**	**344**	Pn	**Pn**	**09 00 11.2**	**-2.0**
OTAV	**Otavalo**	**16.60**	**344**	*e*P	P	**09 00 14.7**	**-0.2**
OTAV	**Otavalo**	**16.60**	**344**	*e*P	P	**09 00 15.9**	**+1.0**
TULM	**Tulcn-Chalpat**	**16.90**	**347**	Pn	**Pn**	**09 00 14.2**	**-2.7**
VACA	**Villa Angela C**	**17.01**	**136**	*e*P	**P**	**09 00 19.0**	**+0.1**
BDQN	**Bodoquena, MS**	**17.02**	**108**	*e*P	**Pn**	**09 00 17.1**	**-0.9**
VA03	**San Esteban**	**17.11**	**170**	P	**Pn**	**09 00 19.5**	**+0.4**
ESFA	**Espinillo Form**	**17.11**	**124**	*e*P	**Pn**	**09 00 17.7**	**-1.4**
GCUF	**Volcan Galeras**	**17.30**	**349**	*e*P	**P**	**09 00 23.8**	**+1.0**
SALV	**Santo Antonio**	**17.62**	**93**	*e*P	**Pn**	**09 00 24.6**	**-0.8**
MT16	**CCHEN**	**17.76**	**170**		**Pn**	**09 00 26.1**	**-1.0**
VA05	**Santo Domingo**	**17.84**	**173**		**Pn**	**09 00 27.8**	**-0.1**
AQDB	**Aquidauana**	**17.99**	**107**	P	**P**	**09 00 28.8**	**-1.0**
AQDB	**Aquidauana**	**17.99**	**107**	*e*P	**Pn**	**09 00 30.4**	**+0.5**
GARC	**Garzon, Huila**	**18.00**	**355**	*e*P	**Pn**	**09 00 30.7**	**+0.3**
MT09	**Talagante**	**18.04**	**172**	P	**P**	**09 00 30.1**	**-0.2**
H03N1	**Juan Fernandez**	**18.05**	**193**	T	T	09 19 07.0	
	baz=15,slow=74,SNR=934						
H03N2	**Juan Fernandez**	**18.05**	**193**	T	T	09 19 03.1	
	baz=15,slow=74,SNR=911						
BBAC	**Balboa, Cauca**	**18.06**	**350**	*e*P	**Pn**	**09 00 31.7**	**+0.7**
H03N3	**Juan Fernandez**	**18.06**	**193**	T	T	09 19 01.1	
	baz=15,slow=74,SNR=1170						
ANTJ	**Antonio Joao (**	**18.08**	**112**	*e*P	**Pn**	**09 00 31.3**	**+0.2**
MT01	**Popeta**	**18.09**	**173**	P	**P**	**09 00 30.4**	**-0.4**
MT13	**San Alfonso**	**18.11**	**170**	P	**P**	**09 00 29.6**	**-1.6**
MACA	**Manacapuru-AM**	**18.21**	**47**	P	**P**	**09 00 31.7**	**-0.5**
MACA				IAmb	IAmb	09 00 37.4	
	comp=Z,27nm,0.6s						
MACA	**Manacapuru-AM**	**18.21**	**47**	*e*P	**Pn**	**09 00 32.9**	**+0.3**
LMEL	**Las Melosas**	**18.23**	**170**	P	**P**	**09 00 32.6**	**+0.1**
RVDE	**Rio Verde (Bra**	**18.46**	**103**	*e*P	**P**	**09 00 35.0**	**-0.1**
POPC	**Popayan, Colom**	**18.48**	**352**	*e*P	**Pn**	**09 00 36.5**	**+0.3**
BO01	**Tunca**	**18.63**	**172**	P	**Pn**	**09 00 37.7**	**+0.2**
CPUP	**Villa Florida**	**18.70**	**127**	P	**P**	**09 00 37.8**	**+0.2**
CPUP	**Villa Florida**	**18.70**	**127**	P	**Pn**	**09 00 39.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=290,slow=14,SNR=7.3						
CPUP				LR	LR	09 07 41.8	
	comp=Z,118nm,21.6s,baz=22,slow=36						
	comp=Z,5.3nm,0.9s						
CPUP	**Villa Florida**	**18.70**	**127**	*e*P	**Pn**	**09 00 39.5**	**+1.0**
JAMC	**Jamundi, Valle**	**19.15**	**352**	*e*P	**P**	**09 00 43.4**	**+0.7**
GO05	**Huala**	**19.15**	**175**	P	**P**	**09 00 40.8**	**-1.6**
PRAC	**Prado**	**19.48**	**357**	*e*P	**Pn**	**09 00 51.5**	**+3.7**
ORTC	**Ortega, Tolima**	**19.69**	**356**	*e*P	**Pn**	**09 00 51.5**	**+1.2**
RPRD	**Ribas do Rio P**	**19.83**	**106**	*e*P	**Pn**	**09 00 52.3**	**+0.3**
VILC	**Villavicencio,**	**19.86**	**1**	*e*P	**Pn**	**09 00 54.1**	**+1.7**
YOTC	**Yotoco, Valle**	**19.86**	**353**	*e*P	**Pn**	**09 00 52.5**	**0.0**
ML02	**Panimavida**	**19.95**	**174**	P	**P**	**09 00 51.8**	**+0.7**
ML02				IAmb	IAmb	09 00 53.6	
	comp=Z,20nm,0.8s						
PTGC	**Puerto Gaitan,**	**20.03**	**5**	*e*P	**P**	**09 00 52.6**	**+0.5**
NPGB	**Novo Progresso**	**20.26**	**66**	*e*P	**P**	**09 00 55.2**	**+0.6**
CVER	**Cruz Verde, Cu**	**20.26**	**360**	*e*P	Pn	09 00 57.8	+0.2
CHIC	**Chingaza**	**20.37**	**1**	*e*P	Pn	09 00 58.7	-0.1
ROSC	**El Rosal**	**20.58**	**359**	P	**P**	**09 00 58.2**	**-0.4**
ROSC				IAmb	IAmb	09 01 11.5	
	comp=Z,35nm,0.9s						
ROSC	**El Rosal**	**20.58**	**359**	P	**P**	**09 00 59.8**	**+1.2**
	comp=Z,12nm,0.7s,baz=158,slow=16,SNR=7.1						
	comp=Z,12nm,0.7s						
MCR1	**Marechal Candi**	**20.58**	**118**	*e*P	**P**	**09 00 59.8**	**+1.6**
GUY2C	**Guyana, Caldas**	**21.00**	**356**	*e*P	**P**	**09 01 06.2**	**+3.0**
ITQB	**Itaqui**	**21.07**	**134**	P	**P**	**09 01 02.6**	**-0.7**
ITQB				IAmb	IAmb	09 01 05.9	
	comp=Z,40nm,1.2s						
ITQB	**Itaqui**	**21.07**	**134**	*e*P	**P**	**09 01 04.3**	**+1.0**
ITTB	**Itaituba**	**21.29**	**59**	*e*P	**P**	**09 01 08.6**	**+2.8**
TRCB	**Terra Rica**	**21.30**	**112**	P	**P**	**09 01 06.6**	**+0.7**
TRCB				IAmb	IAmb	09 01 08.3	
	comp=Z,22nm,0.6s						
TRCB	**Terra Rica**	**21.30**	**112**	*e*P	**P**	**09 01 07.3**	**+1.4**
SPBC	**San Pablo de B**	**21.39**	**360**	*e*P	**P**	**09 01 08.5**	**+1.6**
CBOC	**Ciudad Bolivar**	**21.69**	**355**	*e*P	**P**	**09 01 10.3**	**+0.1**
CRSM	**Crissiumal (Br**	**21.83**	**125**	*e*P	**P**	**09 01 12.4**	**+0.9**
UNIS	**Unistalda (Bra**	**21.84**	**130**	*e*P	**P**	**09 01 13.6**	**+2.0**
FRBT	**Francisco Belt**	**21.97**	**121**	*e*P	**P**	**09 01 13.8**	**+0.7**
HELC	**Santa Helena**	**21.97**	**356**	*e*P	**P**	**09 01 14.8**	**+1.4**
PTBC	**PUERTO BERRIO,**	**22.27**	**359**	*e*P	**P**	**09 01 16.0**	**-0.3**
PCMB	**Pacaembu**	**22.27**	**108**	*e*P	**P**	**09 01 16.9**	**+0.6**
BARC	**Barichara**	**22.33**	**2**	*e*P	**P**	**09 01 16.6**	**-0.6**
PTGB	**Pitanga**	**22.36**	**117**	*e*P	**P**	**09 01 17.5**	**+0.1**
SNDB	**Serra Nova Dou**	**22.38**	**83**	*e*P	**P**	**09 01 16.9**	**-0.6**
RODS	**Rosario do Sul**	**22.47**	**133**	*e*P	**P**	**09 01 18.9**	**+0.6**
BOAV	**Boa Vista**	**22.52**	**37**	P	**P**	**09 01 19.4**	**+0.4**
BOAV	**Boa Vista**	**22.52**	**37**	*e*P	**P**	**09 01 19.6**	**+0.6**
TBOT	**Tacuaremb**	**22.78**	**137**	*e*P	**P**	**09 01 23.2**	**+1.7**
LDASE	**Londrina, Braz**	**22.80**	**113**	*e*P	**P**	**09 01 21.5**	**-0.5**
ITRB	**Iturama**	**22.83**	**103**	*e*P	**P**	**09 01 22.2**	**-0.1**
DBBC	**Dabeiba**	**22.84**	**354**	*e*P	**P**	**09 01 22.5**	**0.0**
PAMC	**Pamplona, Colo**	**23.10**	**3**	*e*P	**P**	**09 01 24.4**	**-1.0**
ALGR	**Alto Alegre (B**	**23.23**	**127**	*e*P	**P**	**09 01 26.0**	**-0.3**
ITAB	**Concordia**	**23.24**	**123**	P	**P**	**09 01 26.2**	**0.0**
ITAB				IAmb	IAmb	09 01 27.9	
	comp=Z,31nm,0.9s						
ITAB	**Concordia**	**23.24**	**123**	*e*P	**P**	**09 01 27.1**	**+0.8**
UREC	**San Jos de Ur**	**23.52**	**356**	*e*P	**P**	**09 01 30.5**	**+1.5**
GO06	**Curarrehue**	**23.73**	**175**	P	**P**	**09 01 31.9**	**+1.0**
CPSB	**Cacapava Do Su**	**23.75**	**131**	*e*P	**P**	**09 01 31.3**	**+0.2**
APAC	**Apartado, Choc**	**23.75**	**354**	*e*P	**P**	**09 01 33.0**	**+1.9**
MALB	**Monte Alegre**	**23.93**	**56**	*e*P	**P**	**09 01 33.7**	**+1.0**
OCAC	**Ocana**	**23.96**	**2**	*e*P	**P**	**09 01 32.6**	**-0.6**
FRTB	**Fartura**	**24.17**	**112**	*e*P	**P**	**09 01 35.7**	**+0.6**
LR05	**Currie**	**24.33**	**176**	P	**P**	**09 01 36.4**	**+0.2**
LR05				IAmb	IAmb	09 01 39.0	
	comp=Z,48nm,1.4s						
PLTB	**Pedras Altas**	**24.40**	**134**	P	**P**	**09 01 37.5**	**+0.5**
PLTB	**Pedras Altas**	**24.40**	**134**	*e*P	**P**	**09 01 37.8**	**+0.8**
TRQA	**Tornquist**	**24.52**	**157**	P	**P**	**09 01 38.2**	**+0.2**
BB19B	**Bebedouro**	**24.70**	**106**	*e*P	**P**	**09 01 40.9**	**+1.1**
IPMB	**Ipameri, GO**	**24.76**	**99**	*e*P	**P**	**09 01 41.3**	**+0.8**
SDV	**Santo Domingo**	**24.82**	**8**	P	**P**	**09 01 40.6**	**-0.5**
SDV	**Santo Domingo**	**24.82**	**8**	LR	LR	09 12 24.7	
	comp=Z,134nm,19.4s,baz=217,slow=39						
SDV	**Santo Domingo**	**24.82**	**8**	*e*P	**P**	**09 01 41.4**	**+0.3**
SDV	**Santo Domingo**	**24.82**	**8**	*e*P	**P**	**09 01 39.9**	**-1.3**
PLCA	**Paso Flores**	**24.95**	**174**	P	**P**	**09 01 42.8**	**+0.8**
PLCA				IAmb	IAmb	09 02 00.1	
	comp=Z,16nm,1.1s						
PLCA	**Paso Flores**	**24.95**	**174**	P	**P**	**09 01 43.0**	**+1.0**
	comp=Z,3.9nm,0.7s,baz=0.1,slow=15,SNR=18						
	comp=Z,3.9nm,0.7s						
PLCA	**Paso Flores**	**24.95**	**174**	*e*P	**P**	**09 01 43.2**	**+1.2**
BDFB	**Brasilia**	**25.02**	**93**	P	**P**	**09 01 42.2**	**-0.6**
BDFB	**Brasilia**	**25.02**	**93**	P	**P**	**09 01 43.3**	**+0.5**
	comp=Z,6.5nm,0.9s,baz=255,slow=10,SNR=10.0						
	comp=Z,6.5nm,0.9s						
CNLB	**Canela**	**25.16**	**126**	*e*P	**P**	**09 01 44.4**	**+0.5**
BAUV	**El Baul**	**25.35**	**14**	P	**P**	**09 01 45.5**	**-0.2**
ARGC	**Ariguani, Magd**	**25.56**	**359**	*e*P	**P**	**09 01 49.4**	**+1.8**
SJCC	**San Jacinto, C**	**25.63**	**357**	*e*P	**P**	**09 01 50.3**	**+2.0**
SPB	**Sao Paulo**	**26.14**	**111**	P	**P**	**09 01 51.9**	**-0.9**
SPB				IAmb	IAmb	09 01 55.5	
	comp=Z,19nm,1.2s						
PMNB	**Patos De Minas**	**26.46**	**100**	*e*P	**P**	**09 01 56.7**	**+0.8**
PCRV	**Puerto La Cruz**	**27.49**	**20**	LR	LR	09 14 05.8	
	comp=Z,182nm,21.9s,slow=39						
JTS	**Las Juntas de**	**28.16**	**337**	LR	LR	09 13 13.6	
	comp=Z,109nm,20.5s,baz=74,slow=36						
JANB	**Januaria**	**28.62**	**92**	*e*P	**P**	**09 02 15.9**	**+0.7**
DIAM	**Diamantina, MG**	**29.08**	**99**	*e*P	**P**	**09 02 20.1**	**+0.7**
MDP	**Montagnes des**	**29.69**	**47**	LR	LR	09 15 12.4	
	comp=Z,132nm,21.1s,baz=268,slow=38						
RIB01	**Linhares ES**	**32.20**	**101**	*e*P	**P**	**09 02 46.9**	**+0.2**
GUA01	**Guaratinga, BA**	**32.83**	**96**	*e*P	**P**	**09 02 53.2**	**+0.9**
ESQI	**Esquipulas**	**33.82**	**333**	P	**P**	**09 03 01.6**	**+0.7**
TEIG	**Tepich**	**38.51**	**338**	LR	LR	09 21 10.0	
	comp=Z,652nm,18.4s,baz=178,slow=39						
HOPE	**Hope Point**	**48.11**	**151**	P	**P**	**09 04 58.9**	**+1.1**
154A	**Montrose**	**48.99**	**350**	P	**P**	**09 05 03.9**	**-0.9**
152A	**Waverly Hall**	**49.34**	**348**	P	**P**	**09 05 07.0**	**-0.5**
152A				IAmb	IAmb	09 05 30.3	
	comp=Z,5.2nm,0.9s						
GOGA	**Godfrey**	**49.83**	**350**	P	**P**	**09 05 10.8**	**-0.4**
GOGA				IAmb	IAmb	09 05 27.3	
	comp=Z,17nm,1.4s						
735A	**Kenedy**	**50.06**	**333**	P	**P**	**09 05 10.6**	**-2.5**
HODGE	**Hodges**	**50.44**	**351**	P	**P**	**09 05 15.7**	**-0.1**
HODGE				IAmb	IAmb	09 05 25.7	
	comp=Z,8.5nm,1.2s						
BIRD	**Birdtown, Kers**	**50.61**	**353**	P	**P**	**09 05 17.5**	**+0.4**
BIRD				IAmb	IAmb	09 05 17.8	
	comp=Z,10nm,0.9s						
Z47A	**Carrollton**	**50.61**	**345**	P	**P**	**09 05 16.4**	**-0.7**
Z47A				IAmb	IAmb	09 05 32.3	
	comp=Z,11nm,0.9s						
Y49A	**Blount Mountai**	**50.84**	**347**	P	**P**	**09 05 17.9**	**-1.0**
Y49A				IAmb	IAmb	09 05 19.7	
	comp=Z,10nm,1.3s						
PAULI	**Pauline**	**50.95**	**352**	P	**P**	**09 05 18.6**	**-1.1**
PAULI				IAmb	IAmb	09 05 39.3	
	comp=Z,12nm,1.2s						
W57A	**Gilead**	**51.06**	**354**	P	**P**	**09 05 19.9**	**-0.6**
HNDO	**Hondo**	**51.30**	**332**	P	**P**	**09 05 22.9**	**+0.5**
X48A	**Hartselle**	**51.56**	**346**	P	**P**	**09 05 23.1**	**-1.1**
X48A				IAmb	IAmb	09 05 24.2	
	comp=Z,9.0nm,1.1s						
435B	**Jarrell**	**51.63**	**334**	P	**P**	**09 05 25.1**	**+0.3**
V52A	**Sevierville**	**52.23**	**350**	P	**P**	**09 05 28.4**	**-0.8**
WLAR	**White Oak Lake**	**52.54**	**340**	P	**P**	**09 05 29.3**	**-2.2**
WHTX	**Lake Whitney,**	**52.63**	**335**	P	**P**	**09 05 32.6**	**+0.3**
WHTX				IAmb	IAmb	09 05 33.0	
	comp=Z,9.5nm,0.8s						
T59A	**Double "B" Far**	**52.66**	**356**	P	**P**	**09 05 32.9**	**+0.6**
T59A				IAmb	IAmb	09 05 33.4	
	comp=Z,10.0nm,0.8s						
BRDY	**Brady**	**52.68**	**333**	P	**P**	**09 05 32.3**	**-0.3**
BRDY				IAmb	IAmb	09 05 32.8	
	comp=Z,3.7nm,0.8s						
Z38A	**Mt. Pleasant**	**52.80**	**338**	P	**P**	**09 05 34.1**	**+0.6**
T57A	**Hurt**	**52.82**	**355**	P	**P**	**09 05 33.6**	**+0.1**
TX31	**Lajitas Ar. Si**	**53.29**	**327**	P	**P**	**09 05 37.3**	**0.0**
TXAR	**Lajitas Array**	**53.29**	**327**	P	**P**	**09 05 36.8**	**-0.4**
TXAR	**Lajitas Array**	**53.29**	**327**	P	**P**	**09 05 37.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=148,slow=8.9,SNR=29						
	comp=Z,2.3nm,0.7s						
OZNA	**Ozona**	**53.33**	**331**	P	**P**	**09 05 36.7**	**-0.8**
FW07	**Weatherford**	**53.39**	**335**	P	**P**	**09 05 38.0**	**+0.2**
MIAR	**Mount Ida**	**53.48**	**340**	P	**P**	**09 05 38.0**	**-0.4**
S57A	**Dark Hollow, R**	**53.55**	**355**	P	**P**	**09 05 39.1**	**+0.2**
S57A				IAmb	IAmb	09 05 39.7	
	comp=Z,8.4nm,0.8s						
R58B	**Mineral**	**53.67**	**356**	P	**P**	**09 05 39.6**	**-0.1**
R58B				IAmb	IAmb	09 05 41.1	
	comp=Z,10nm,1.0s						
PLPT	**Palo Pinto**	**53.70**	**335**	P	**P**	**09 05 39.5**	**-0.7**
PLPT				IAmb	IAmb	09 05 40.7	
	comp=Z,6.9nm,0.6s						
Z35A	**Perchaven, San**	**53.73**	**336**	P	**P**	**09 05 40.6**	**+0.3**
GNAR	**Gosnell**	**53.73**	**344**	P	**P**	**09 05 39.3**	**-0.9**
ABTX	**Abilene, Hawle**	**54.10**	**333**	P	**P**	**09 05 43.0**	**0.0**
X37A	**Clayton**	**54.14**	**338**	P	**P**	**09 05 42.5**	**-0.7**
X37A				IAmb	IAmb	09 05 45.0	
	comp=Z,11nm,0.9s						
LCAR	**Lake Charles**	**54.15**	**343**	P	**P**	**09 05 41.7**	**-1.6**
LCAR				IAmb	IAmb	09 05 58.3	
	comp=Z,5.1nm,1.0s						
FCAR	**Ozark Folk Cen**	**54.26**	**342**	P	**P**	**09 05 43.6**	**-0.5**
MNHN	**Monahans**	**54.46**	**330**	P	**P**	**09 05 45.9**	**+0.2**
MNHN				IAmb	IAmb	09 05 46.4	
	comp=Z,6.0nm,0.7s						
WTFS	**Witchita Falls**	**54.59**	**335**	P	**P**	**09 05 46.6**	**+0.1**
WTFS				IAmb	IAmb	09 05 47.2	
	comp=Z,8.2nm,0.7s						
PBMO	**Poplar Bluff**	**54.61**	**344**	P	**P**	**09 05 45.9**	**-0.7**
PBMO				IAmb	IAmb	09 06 02.1	
	comp=Z,5.5nm,0.7s						
CGM3	**Cape Girardeau**	**54.90**	**345**	P	**P**	**09 05 48.0**	**-0.8**
CGM3				IAmb	IAmb	09 06 03.8	
	comp=Z,6.4nm,0.9s						
APMT	**Aspermont**	**54.91**	**333**	P	**P**	**09 05 48.5**	**-0.4**
ODSA	**Odessa**	**55.00**	**330**	P	**P**	**09 05 48.6**	**-1.1**
ODSA				IAmb	IAmb	09 05 50.5	
	comp=Z,14nm,1.1s						
PECS	**Pecos**	**55.03**	**329**	P	**P**	**09 05 49.4**	**-0.5**
WCI	**Wyandotte Cave**	**55.03**	**348**	P	**P**	**09 05 47.7**	**-2.0**
SN07	**Snyder 07**	**55.05**	**332**	P	**P**	**09 05 48.4**	**-1.5**
SN07				IAmb	IAmb	09 05 50.2	
	comp=Z,5.8nm,0.7s						
USIN	**University of**	**55.07**	**347**	P	**P**	**09 05 48.9**	**-1.0**
X34A	**Smith Ranch, M**	**55.07**	**336**	P	**P**	**09 05 47.9**	**-2.1**
VHRN	**Van Horn**	**55.13**	**327**	P	**P**	**09 05 50.4**	**-0.3**
VHRN				IAmb	IAmb	09 06 06.7	
	comp=Z,4.2nm,0.9s						
S44A	**Carbondale**	**55.17**	**345**	P	**P**	**09 05 50.2**	**-0.5**
SIUC	**Southern Illin**	**55.19**	**345**	P	**P**	**09 05 50.4**	**-0.3**
HHAR	**Hobbs**	**55.19**	**340**	P	**P**	**09 05 51.0**	**+0.1**
HHAR				IAmb	IAmb	09 06 20.0	
	comp=Z,13nm,1.3s						
W35A	**Tecumseh**	**55.19**	**337**	P	**P**	**09 05 50.1**	**-0.7**
W35A				IAmb	IAmb	09 05 50.2	
	comp=Z,7.7nm,1.0s						
POST	**Post**	**55.30**	**332**	P	**P**	**09 05 50.9**	**-0.9**
POST				IAmb	IAmb	09 06 15.2	
	comp=Z,10nm,1.0s						
TUL3	**Leonard**	**55.48**	**339**	P	**P**	**09 05 52.5**	**-0.4**
TUL3				IAmb	IAmb	09 06 15.7	
	comp=Z,13nm,1.1s						
U38A	**Gravette**	**55.48**	**340**	P	**P**	**09 05 52.0**	**-1.0**
U38A				IAmb	IAmb	09 06 17.1	
	comp=Z,8.2nm,1.4s						
MGMO	**Mountain Grove**	**55.48**	**342**	P	**P**	**09 05 50.7**	**-2.2**
MGMO				IAmb	IAmb	09 06 08.5	
	comp=Z,8.6nm,0.9s						
DKNS	**Dickens**	**55.55**	**333**	P	**P**	**09 05 53.5**	**0.0**
DKNS				IAmb	IAmb	09 05 54.4	
	comp=Z,8.4nm,0.6s						
P48A	**Milroy**	**56.07**	**349**	P	**P**	**09 05 55.5**	**-1.5**
P48A				IAmb	IAmb	09 06 13.1	
	comp=Z,14nm,1.5s						
Q44A	**Meyer Farm, Va**	**56.27**	**346**	P	**P**	**09 05 57.1**	**-1.4**
S39A	**Bolivar**	**56.29**	**342**	P	**P**	**09 05 58.9**	**+0.2**

H11N3	**WAKE ISLAND Hy**	**22.13**	**284**	T	T	11 29 11.0		
	baz=97							
H11N2	**WAKE ISLAND Hy**	**22.14**	**284**	T	T	11 29 09.6		
	baz=97							
H11N1	**WAKE ISLAND Hy**	**22.15**	**284**	T	T	11 29 10.2		
	baz=97							
H11S2	**WAKE ISLAND Hy**	**22.17**	**282**	T	T	11 29 12.4		
	baz=99,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy**	**22.18**	**282**	T	T	11 29 03.2		
	baz=99,slow=75,SNR=6.0							
H11S3	**WAKE ISLAND Hy**	**22.19**	**282**	T	T	11 29 09.5		
	baz=99,slow=75,SNR=9.4							
ASAR	**Alice Springs**	**132.16**	**215**	PKP	**PKPdf**	**09 15 31.9**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=101,slow=1.8,SNR=5.5							
BVAR	**Borovoye Array**	**133.57**	**29**	PKP	**PKiKP**	**09 15 35.1**	**-0.1**	
	comp=Z,0.3nm,0.5s,baz=336,slow=3.2,SNR=1.6							
WRA	**Warramunga Arr**	**134.80**	**219**	PKP	**PKPdf**	**09 15 37.1**	**-0.1**	
	comp=Z,0.9nm,0.9s,baz=138,slow=2.0,SNR=4.6							
ZALV	**Zalesovo Beam**	**138.56**	**19**	PKP	**PKPdf**	**09 15 42.6**	**-0.5**	
	comp=Z,0.3nm,0.3s,baz=349,slow=1.5,SNR=1.6							
MKAR	**Makanchi Array**	**143.41**	**28**	PKP	PKPbc	09 15 50.4	+1.0	
	comp=Z,0.5nm,0.8s,baz=295,slow=2.1,SNR=3.6							
SONM	**Songino Array**	**148.12**	**359**	PKPbc	**PKPbc**	**09 16 03.6**	**+0.1**	
	comp=Z,0.7nm,0.7s,baz=359,slow=3.8,SNR=6.8							

*ISN **19** 09:05:23.6±0.8,33.7°N×45.7°E,h10km±4km, ML2.5*
*TEH **19** 09:05:24.7,33.7°N×45.7°E,h8km±105km, ML2.6*
ISC 19 09:05:24.3±1.3,33.78N±0.04°×45.79E±0.04°,h6km±13km, n11,σ0.58s/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.38**	**113**	Pg	**Pg**	**09 05 31.9**	**+0.2**
ILBA				Sg	**Sb**	**09 05 38.6**	**-1.0**
IBDR	**Badra**	**0.67**	**170**	*e*Pg	**Pg**	**09 05 37.0**	**-0.3**
IBDR				*e*Sg	**Sg**	**09 05 46.0**	**0.0**
IBDR				AML	AML	09 05 58.7	
	comp=E,225nm,0.5s						
IBDR				AML	AML	09 06 00.2	
	comp=N,199nm,0.6s						
KGS1	**Ghasr-e-Shirin**	**0.75**	**347**	Pg	**Pb**	**09 05 39.9**	**+0.1**
IGHG	**Ghaleghazi**	**0.85**	**49**	Pg	**Pb**	**09 05 41.6**	**-0.1**
IDHR	**Dehrash**	**1.04**	**28**	Pg	**Pg**	**09 05 44.3**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.15**	**64**	Pg	**Pn**	**09 05 47.4**	**+0.3**
BHD	**Baghdad**	**1.28**	**247**	*e*Pn	**Pg**	**09 05 49.0**	**0.0**
BHD				*e*Sn	**Sn**	**09 06 07.0**	**+0.7**
BHD				AML	AML	09 06 12.8	
	comp=E,40nm,0.6s						
IKFM	**Kafar-mosalman**	**1.73**	**98**	Pg	**Pb**	**09 05 56.6**	**+0.1**
IBZA	**Bozab**	**1.85**	**67**	Pn	**Pb**	**09 05 59.2**	**+0.5**
IKRK	**Kirkuk**	**2.02**	**324**	*e*Pn	**Pn**	**09 05 59.0**	**+0.1**
IKRK				*e*Sn	**Sb**	**09 06 26.0**	**-0.8**
IKRK				AML	AML	09 06 34.9	
	comp=N,88nm,0.5s						
IKRK				AML	AML	09 06 39.2	
	comp=E,98nm,0.5s						
RAFI	**Al-Rafai**	**2.06**	**172**	*e*Pn	**Pn**	**09 06 00.0**	**+0.5**
RAFI				*e*Sn	**Sb**	**09 06 27.0**	**-1.1**

IDC 19 09:05:54.0±2.2,5.26S×152.27E,h0km,mb3.5/3, mbtmp3.6/3,Error ellipse: s-maj=148.2km s-min=30.2km az=127.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.75**	**229**	P	P	09 10 58.0	0.0
	0.8nm,0.5s,baz=54,slow=10.0,SNR=9.2						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**25.46**	**222**	P	P	09 11 23.8	-0.2
	0.7nm,0.7s,baz=59,slow=9.0,SNR=22						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**82.78**	**22**	P	P	09 18 19.9	+0.2
	0.5nm,0.8s,baz=258,slow=5.2,SNR=3.5						
	0.5nm,0.8s						

IDC 19 09:09:20.0±2.7,53.74N×86.71E,h0km,mbtmp3.0/2, ML2.3/2,Error ellipse: s-maj=23.6km s-min=13.4km az=68.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.14**	**281**	I	I	09 16 50.0	
	0.1nm,0.6s,baz=100,slow=345,SNR=8.8						
ZALV	**Zalesovo Beam**	**1.14**	**281**	Pg	Pg	09 09 41.6	-0.2
	0.4nm,0.3s,baz=98,slow=16,SNR=6.7						
ZALV				Lg	Lg	09 09 57.0	
	1.0nm,0.3s,baz=102,slow=28,SNR=9.5						
KURBB	**Kurchatov Arra**	**5.92**	**241**	Pn	Pn	09 10 50.0	+1.1
	0.1nm,0.3s,baz=57,slow=13,SNR=2.1						
	1.3nm,0.2s						
MKAR	**Makanchi Array**	**7.51**	**204**	Pn	Pn	09 11 11.7	+1.0
	0.1nm,0.3s,baz=24,slow=14,SNR=5.8						
MKAR				Lg	Lg	09 13 19.2	
	0.1nm,0.3s,baz=22,slow=31,SNR=1.8						
	0.1nm,0.3s						

IDC 19 09:12:35.6±8.7,18.24S×176.06W,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=380.4km s-min=42.2km az=142.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.77**	**260**	P	P	09 21 07.3	+0.1
	0.2nm,0.3s,baz=97,slow=7.3,SNR=6.0						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**46.85**	**254**	P	P	09 21 07.5	-0.3
	0.5nm,0.8s,baz=87,slow=7.9,SNR=6.8						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**85.72**	**12**	P	P	09 25 16.1	0.0
	0.4nm,0.9s,baz=219,slow=6.4,SNR=2.7						
	0.4nm,0.9s						

IDC 19 09:14:09.8±2.6,14.93S×174.92W,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=154.2km s-min=27.3km az=144.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.01**	**239**	P	P	09 22 10.9	-0.3
	1.3nm,0.5s,baz=87,slow=9.7,SNR=3.3						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**48.53**	**256**	P	P	09 22 55.1	0.0
	2.7nm,0.7s,baz=91,slow=7.3,SNR=31						
	2.7nm,0.7s						
ASAR	**Alice Springs**	**48.87**	**252**	P	P	09 22 57.7	0.0
	20nm,0.6s,baz=87,slow=8.1,SNR=306						
ILAR	**Eielson Array**	**82.28**	**12**	P	P	09 26 32.6	-0.1
	0.2nm,0.5s,baz=219,slow=4.8,SNR=1.9						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**82.90**	**42**	P	P	09 26 37.4	+0.6
	0.2nm,0.7s,baz=221,slow=3.5,SNR=2.3						
	0.2nm,0.7s						
BRTR	**Keskin Array B**	**144.86**	**320**	PKP	PKPab	09 33 47.6	-0.8
	0.9nm,0.7s,baz=53,slow=3.8,SNR=4.8						

*IDC **19** 09:24:37.6±1.1,41.65N×144.06E,h0km,mb3.9/13, mbtmp3.8/16,ML3.0/3,MS2.8/1,Error ellipse: s-maj=24.4km s-min=22.3km az=78.0*
*NIED **19** 09:24:40.7,41.71N×144.28E,h26km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr=0.10; Mθθ=0.36; Mφφ=0.26; Mrθ=-0.10; Mθφ=-0.89; Mφr=0.36; Fault plane solution: M0=1.01000×10^15 NP1: φs=190.00000°,δ=89.00000°,λ=22.00000°. NP2: φs=100.00000°,δ=68.00000°,λ=179.00000°.*
*JMA **19** 09:24:40.7±0.2,42.2°N×144.3°E±0.7,h26km±2km, MD3.9/35,MV4.0/35,SE OFF TOKACHI*
ISC 19 09:24:38.5±2.0,41.71N±0.07°×144.28E±0.07°,h8km±11km, n37,σ1.9s/34,mb3.9/14,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**0.89**	**290**	*e*P	**Pn**	**09 24 57.7**	**+0.5**
JEM	**Erimo**	**0.89**	**290**	A	A	09 24 57.7	
	comp=E,10.0nm,1.7s,comp=N,6.0nm,2.1s						
JTHR	**Tokachihiroo**	**0.93**	**309**	*e*P	**Pn**	**09 24 57.9**	**+0.1**
JTHR				*e*S	**Sn**	**09 25 11.5**	**+0.2**
JCH	**Churui**	**1.13**	**323**	P	**Pg**	**09 25 00.6**	**+0.5**
JCH				*e*S	**Sn**	**09 25 15.9**	**-0.3**
JCH	**Churui**	**1.13**	**323**	A	A	09 25 00.6	
	comp=E,3.0nm,3.9s,comp=N,4.0nm,1.0s						

JOB	**Onbets**	**1.23**	**345**	*e*P	**Pb**	**09 25 02.5**	**+0.5**	
JOB	**Onbets**	**1.23**	**345**	A	A	09 25 02.5		
	comp=E,5.0nm,1.8s,comp=N,7.0nm,1.4s							
JNBK	**Urakawa-nobuka**	**1.27**	**297**	*e*P	**Pg**	**09 25 03.4**	**+0.6**	
JNBK	**Urakawa-nobuka**	**1.27**	**297**	A	A	09 25 03.4		
	comp=E,4.0nm,0.7s,comp=N,5.0nm,0.6s							
JAK	**Akkeshi**	**1.32**	**14**	*e*P	**Pn**	**09 25 02.8**	**-0.3**	
JAK				*e*S	**Sn**	**09 25 20.0**	**-0.9**	
JSHD	**Hidakashinhida**	**1.52**	**298**	*e*P	**Pg**	**09 25 07.4**	**-0.2**	
JKHN	**Kushirohamanak**	**1.52**	**25**	*e*P	**Pn**	**09 25 05.8**	**-0.1**	
JKHN				*e*S	**Sn**	**09 25 25.2**	**-0.6**	
JAR	**Ashorobuto**	**1.63**	**347**	*e*P	**Pn**	**09 25 07.0**	**-0.4**	
JAR				*e*S	**Sn**	**09 25 28.5**	**0.0**	
ASAJ	**Asahikawa**	**2.70**	**333**	Pn	**Pn**	**09 25 22.3**	**+0.2**	
	comp=N,3.1nm,0.3s,baz=188,slow=8.7,SNR=16							
ASAJ				Sn	**Sn**	**09 25 57.0**	**+2.0**	
	comp=N,11nm,0.3s,baz=198,slow=18,SNR=3.5							
	comp=N,15nm,0.5s							
MJAR	**Matsushiro Arr**	**6.99**	**224**	Pn	**Pn**	**09 26 21.2**	**0.0**	
	comp=N,0.1nm,0.3s,baz=23,slow=13,SNR=6.8							
	comp=N,1.4nm,0.6s							
USRK	**Ussuriysk Ar.**	**9.35**	**290**	Pn	**Pn**	**09 26 51.5**	**-2.0**	
	comp=N,0.1nm,0.3s,baz=97,slow=12,SNR=2.5							
	comp=N,1.7nm,0.8s							
KSRS	**Korea Array**	**13.31**	**257**	LR	LR	09 32 21.4		
	comp=N,39nm,19.9s,baz=75,slow=35							
SEY	**Seymchan**	**21.79**	**10**	P	**P**	**09 29 27.7**	**-2.8**	
	comp=N.2.0nm,0.8s,baz=162,slow=13,SNR=7.2							
SONM	**Songino Array**	**27.38**	**296**	P	**P**	**09 30 23.8**	**-0.4**	
	comp=N,2.2nm,1.0s,baz=86,slow=9.0,SNR=10							
SONM				ScP	**ScP**	**09 37 25.0**	**+1.3**	
	comp=N,0.1nm,0.4s,baz=105,slow=4.9,SNR=1.4							
	comp=N,2.2nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**29.13**	**132**	T	T	10 01 48.4		
	baz=324,slow=75,SNR=58							
H11N1	**WAKE ISLAND Hy**	**29.14**	**132**	T	T	10 01 52.0		
	baz=324,slow=75,SNR=57							
H11N3	**WAKE ISLAND Hy**	**29.15**	**132**	T	T	10 02 08.4		
	baz=324,slow=75,SNR=48							
H11S1	**WAKE ISLAND Hy**	**30.02**	**134**	T	T	10 02 44.6		
	baz=326,slow=74,SNR=75							
H11S3	**WAKE ISLAND Hy**	**30.02**	**134**	T	T	10 02 45.6		
	baz=326,slow=74,SNR=56							
H11S2	**WAKE ISLAND Hy**	**30.03**	**134**	T	T	10 03 18.4		
	baz=326,SNR=44							
ZALV	**Zalesovo Beam**	**40.57**	**308**	P	**P**	**09 32 17.8**	**-0.3**	
	comp=N,2.0nm,0.7s,baz=83,slow=12,SNR=2.5							
	comp=N,2.0nm,0.7s							
MKAR	**Makanchi Array**	**43.67**	**299**	P	**P**	**09 32 43.2**	**-0.4**	
	comp=N,0.8nm,0.6s,baz=80,slow=7.6,SNR=11							
MKAR				PcP	**PcP**	**09 34 29.0**	**-1.7**	
	comp=N,0.6nm,1.0s,baz=68,slow=2.5,SNR=2.1							
	comp=N,0.8nm,0.6s							
ILAR	**Eielson Array**	**44.37**	**35**	P	**P**	**09 32 51.7**	**+2.7**	
	comp=N,0.4nm,0.8s,baz=270,slow=8.0,SNR=4.6							
	comp=N,0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**45.01**	**305**	P	**P**	**09 32 53.5**	**-0.7**	
	comp=N,2.8nm,0.5s,baz=73,slow=8.5,SNR=7.6							
	comp=N,2.8nm,0.5s							
BVAR	**Borovoye Array**	**49.17**	**310**	P	**P**	**09 33 26.1**	**-0.5**	
	comp=N,1.0nm,0.5s,baz=75,slow=9.6,SNR=6.7							
	comp=N,1.0nm,0.5s							
WRA	**Warramunga Arr**	**62.03**	**191**	P	**P**	**09 34 58.8**	**-0.5**	
	comp=N,0.5nm,0.7s,baz=7.6,slow=6.9,SNR=2.5							
	comp=N,0.5nm,0.7s							
FINES	**FINESS Array B**	**65.71**	**332**	P	**P**	**09 35 22.6**	**-0.5**	
	comp=N,2.4nm,0.8s,baz=52,slow=7.6,SNR=7.1							
	comp=N,2.4nm,0.8s							
KBZ	**Khabaz**	**69.54**	**311**	P	**P**	**09 35 48.2**	**+0.6**	
	comp=N,2.1nm,0.7s,baz=74,slow=6.5,SNR=5.1							
	comp=N,2.1nm,0.7s							
NOA	**NORSAR Array B**	**70.71**	**338**	P	**P**	**09 35 55.0**	**+0.5**	
	comp=N,0.5nm,0.6s,baz=36,slow=6.6,SNR=2.6							
	comp=N,0.5nm,0.6s							
HFS	**Hagfors**	**70.72**	**336**	P	**P**	**09 35 55.9**	**+1.4**	
	comp=N,1.4nm,0.6s,baz=23,slow=4.7,SNR=2.0							
	comp=N,1.4nm,0.6s							
AKASG	**Malin Array Be**	**71.94**	**323**	P	**P**	**09 36 01.0**	**-1.1**	
	comp=N,0.8nm,0.6s,baz=55,slow=38,SNR=2.2							
	comp=N,0.8nm,0.6s							
TXAR	**Lajitas Array**	**85.55**	**54**	P	**P**	**09 37 18.3**	**+0.8**	
	comp=N,0.2nm,0.6s,baz=317,slow=3.7,SNR=2.6							
	comp=N,0.2nm,0.6s							

*ISN **19** 09:38:20.5±1.2,34.50N×45.36E,h14km±27km,ML2.6*
*TEH **19** 09:38:20.9,34.49N×45.36E,h17km±49km,ML2.4*
ISC 19 09:38:21.1±1.2,34.51N±0.05°×45.38E±0.04°,h18km±11km, n8,σ0.24s/12,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.18**	**90**	Pg	**Pb**	**09 38 25.9**	**+0.1**
IDHR	**Dehrash**	**0.86**	**77**	Pg	**Pg**	**09 38 37.8**	**-0.1**
IDHR				Sg	**Sn**	**09 38 50.7**	**0.0**
IGHG	**Ghaleghazi**	**1.00**	**100**	Pg	**Pg**	**09 38 40.3**	**-0.3**
ILBA	**Ilam Banvizeh**	**1.12**	**142**	Pg	**Pn**	**09 38 41.9**	**0.0**
IKRK	**Kirkuk**	**1.23**	**317**	*e*Pg	**Pg**	**09 38 45.0**	**+0.1**
IKRK				*e*Sg	**Sg**	**09 39 01.0**	**0.0**
IKRK				AML	AML	09 39 07.6	
	comp=N,133nm,0.3s						
IKRK				AML	AML	09 39 08.1	
	comp=E,116nm,0.3s						
KCHF	**Cheshme Sefid,**	**1.40**	**99**	Pg	**Pg**	**09 38 47.9**	**-0.2**
IBDR	**Badra**	**1.47**	**162**	*e*Pn	**Pb**	**09 38 48.0**	**+0.1**
IBDR				*e*Sn	**Sg**	**09 39 09.0**	**+0.5**
IBDR				AML	AML	09 39 12.1	
	comp=E,151nm,0.4s						
IBDR				AML	AML	09 39 12.4	
	comp=N,73nm,0.5s						
BHD	**Baghdad**	**1.49**	**214**	*e*Pn	**Pb**	**09 38 48.0**	**-0.2**
BHD				*e*Sn	**Sg**	**09 39 09.0**	**-0.1**

IDC 19 09:38:47.9±8.4,21.03N×144.54E,h0km,mb3.4/5, mbtmp3.4/5,Error ellipse: s-maj=332.0km s-min=25.9km az=77.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**40.65**	**320**	P	P	09 46 30.6	+0.6
	0.2nm,0.3s,baz=122,slow=8.8,SNR=1.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**41.93**	**194**	P	P	09 46 40.7	+0.2
	0.2nm,0.3s,baz=15,slow=8.7,SNR=1.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**45.62**	**194**	P	P	09 47 09.7	-0.5
	0.1nm,0.6s,baz=12,slow=6.5,SNR=1.4						
	0.1nm,0.6s						
ZALV	**Zalesovo Beam**	**55.51**	**322**	P	P	09 48 23.9	-0.7
	0.5nm,0.3s,baz=86,slow=6.5,SNR=1.9						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**56.08**	**313**	P	P	09 48 28.8	-0.1
	0.2nm,0.4s,baz=88,slow=8.6,SNR=5.8						
	0.2nm,0.4s						

JMA 19 09:48:50.8±0.2,36.2N±0.3°×14.1E±°,h44km±1km, MV1.7/33,E OFF IBARAKI PREF,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.30**	**301**	P	Pn	09 48 59.4	0.0
JHYU				S	Sn	09 49 05.2	-0.2
JIHU	**Itakohorinouch**	**0.38**	**235**	P	Pn	09 49 00.8	+0.6
JIHU				S	Sn	09 49 07.8	+1.0
JHO	**Hitachi**	**0.50**	**327**	P	Pn	09 49 01.5	-0.3
JYT	**Yasato**	**0.58**	**274**	P	Pn	09 49 02.6	-0.1

*MOS **19** 09:48:51.3±1.4,36.7°N×141.76E,h38km,mb4.3/8,Error ellipse: s-maj=8.9km s-min=5.8km az=100.1*
*NIED **19** 09:48:53.1,36.68N×141.41E,h52km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr=0.12; Mθθ=0.70; Mφφ=-0.58; Mrθ=-0.14; Mθφ=-0.51; Mφr=2.45; Fault plane solution: M0=2.54000×10^15 NP1: φs=352.00000°,δ=89.00000°,λ=75.00000°. NP2: φs=257.00000°,δ=15.00000°,λ=175.00000°.*
*JMA **19** 09:48:53.1±0.2,36.7°N±0.5°×14°1E±°,h52km±2km, MD4.2/40,MV4.3/40,E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .
*IDC **19** 09:48:54.2±2.1,36.67N×141.57E,h41km±18km,mb3.7/19, mbtmp4.0/24,ML3.7/5,MS3.4/11,Error ellipse: s-maj=14.7km s-min=12.3km az=129.0*

*NEIC **19** 09:48:54.7±1.6,36.73N±0.07°×141.52E±0.07°, h41km±11km,mb4.4/13,Error ellipse: s-maj=12.5km s-min=3.5km az=143.0*
ISC 19 09:48:54.3±0.5,36.68N±0.04°×141.63E±0.05°,h50km,n147, σ2.17s/135,mb4.1/36,MS3.5/5,2C-6D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.79**	**303**	⇓P	**Pn**	**09 49 06.1**	**-3.2**
ONAJ				⇓S	**Sn**	**09 49 15.9**	**-4.3**
ONAJ	**Iwakimizuishiy**	**0.79**	**303**	A	A	09 49 06.1	
	comp=E,32nm,0.3s,comp=N,26nm,0.3s						
JHO	**Hitachi**	**0.85**	**266**	P	**Pn**	**09 49 06.4**	**-3.6**
JHO	**Hitachi**	**0.85**	**266**	A	A	09 49 06.4	
	comp=E,8.0nm,1.1s,comp=N,4.0nm,2.7s						
JHYU	**Hitachinakayam**	**0.91**	**248**	⇓P	**Pn**	**09 49 07.6**	**-3.2**
JHYU				⇓*e*S	**Sn**	**09 49 17.8**	**-5.0**
JHYU	**Hitachinakayam**	**0.91**	**248**	A	A	09 49 07.6	
	comp=E,11nm,2.2s,comp=N,10.0nm,0.6s						
JFK	**Kawauchi**	**0.91**	**319**	P	**Pn**	**09 49 08.2**	**-2.7**
JFK				S	**Sn**	**09 49 19.4**	**-3.7**
JFK	**Kawauchi**	**0.91**	**319**	A	A	09 49 08.2	
	comp=E,12nm,0.7s,comp=N,12nm,0.5s						
JFFD	**Fukushimafurud**	**0.95**	**296**	P	**Pn**	**09 49 07.7**	**-3.7**
JFFD	**Fukushimafurud**	**0.95**	**296**	*e*P	**Pn**	**09 49 08.2**	**-3.2**
JFFD				S	**Sn**	**09 49 19.0**	**-4.9**
JIHU	**Itakohorinouch**	**1.14**	**232**	A	A	09 49 11.2	
	comp=E,24nm,2.0s,comp=N,25nm,0.8s						
JMST	**Minamisoumatoc**	**1.20**	**331**	A	A	09 49 12.8	
	comp=E,11nm,0.4s,comp=N,15nm,0.3s						
JYT	**Yasato**	**1.24**	**249**	A	A	09 49 12.2	
	comp=E,13nm,0.4s,comp=N,14nm,0.4s						
JOTO	**OTAMA OYAMA**	**1.36**	**311**	P	**Pn**	**09 49 15.5**	**-1.4**
JOTO	**OTAMA OYAMA**	**1.36**	**311**	A	A	09 49 15.5	
	comp=E,29nm,0.7s,comp=N,60nm,0.4s						
JMM	**Marumori**	**1.36**	**331**		**Pn**	**09 49 15.0**	**-1.9**
JMM	**Marumori**	**1.36**	**331**	P	**Pn**	**09 49 15.2**	**-1.7**
JMM	**Marumori**	**1.36**	**331**	⇓P	**Pn**	**09 49 14.8**	**-2.0**
JMM				⇓S	**Sn**	**09 49 31.2**	**-2.5**
JMM	**Marumori**	**1.36**	**331**	A	A	09 49 14.8	
	comp=E.7.0nm,3.5s,comp=N,8.0nm,0.5s						
JSB	**Shiboa**	**1.40**	**282**	A	A	09 49 14.3	
	comp=E,23nm,1.0s,comp=N,13nm,0.8s						
JFY	**Yanaizu**	**1.70**	**296**	P	**Pn**	**09 49 19.9**	**-1.7**
JFY	**Yanaizu**	**1.70**	**296**	A	A	09 49 19.9	
	comp=E,5.0nm,2.2s,comp=N,4.0nm,1.5s						
JYAR	**Yonezawaarcadi**	**1.71**	**317**	A	A	09 49 19.4	
	comp=E,30nm,1.0s,comp=N,32nm,1.1s						
JAG	**Ashikaga**	**1.77**	**262**	P	**Pn**	**09 49 20.1**	**-2.4**
JAG	**Ashikaga**	**1.77**	**262**	A	A	09 49 20.1	
	comp=E,3.0nm,0.6s,comp=N,4.0nm,1.1s						
JIO	**Ouri**	**1.78**	**353**	P	**Pn**	**09 49 21.0**	**-1.7**
JIO				S	**Sn**	**09 49 41.3**	**-2.8**
JOU	**Okura**	**1.85**	**336**	P	**Pn**	**09 49 22.5**	**-1.1**
JOU				*e*S	**Sn**	**09 49 45.7**	**-0.1**
JOU	**Okura**	**1.85**	**336**	A	A	09 49 22.5	
	comp=E,11nm,3.7s,comp=N,11nm,2.0s						
JKT	**Katashina**	**1.91**	**273**	P	**Pn**	**09 49 22.8**	**-1.8**
JYS	**Shirataka**	**1.98**	**322**	P	**Pn**	**09 49 24.8**	**-0.6**
JYS				*e*S	**Sn**	**09 49 47.9**	**-1.1**
JYS	**Shirataka**	**1.98**	**322**	A	A	09 49 24.8	
	comp=E,9.0nm,0.6s,comp=N,8.0nm,0.7s						
JOFO	**Osakifurukawao**	**2.00**	**344**	A	A	09 49 24.7	
	comp=E,25nm,3.7s,comp=N,25nm,2.1s						
JYA	**Atsumi**	**2.44**	**322**	A	A	09 49 30.1	
	comp=E.5.0nm,0.7s,comp=N,6.0nm,0.9s						
MJA0	**Matsu Arr-Jizo**	**2.72**	**268**	*e*P	**Pn**	**09 49 34.6**	**-1.0**
MJA0				pmax	pmax		
	comp=Z,11nm,0.3s						
MJAR	**Matsushiro Arr**	**2.75**	**268**	P	**Pn**	**09 49 34.7**	**-1.3**
	comp=Z,11nm,0.3s,baz=89,slow=15,SNR=255						
MJAR				S	**Sn**	**09 50 06.5**	**-1.5**
	comp=Z,57nm,0.4s,baz=74,slow=20,SNR=11						
MJAR				LR	LR	09 50 58.2	
	comp=Z,806nm,19.2s,baz=93,slow=46						
	comp=Z,70nm,0.3s						
MAJO	**Matsushiro**	**2.76**	**268**	Pn	**Pn**	**09 49 35.1**	**-0.9**
MAJO	**Matsushiro**	**2.76**	**268**	P	**Pn**	**09 49 35.4**	**-0.6**
MAJO	**Matsushiro**	**2.76**	**268**	P	**Pn**	**09 49 35.1**	**-0.9**
MJB9	**Matsu-Tunnel**	**2.76**	**268**		**Pn**	**09 49 36.0**	**0.0**
JRG	**Rokugo**	**2.82**	**344**	A	A	09 49 36.4	
	comp=E,3.0nm,2.1s,comp=N,3.0nm,1.5s						
JSD	**Sado**	**3.00**	**298**	Pn	**Pn**	**09 49 38.6**	**-0.8**
JSG	**Sagara**	**3.44**	**235**	P	**Pn**	**09 49 47.7**	**+2.3**
JGF	**Kuroka**	**3.62**	**254**		**Pn**	**09 49 48.5**	**+0.6**
JGF	**Kuroka**	**3.62**	**254**	P	**Pn**	**09 49 48.6**	**+0.7**
JHJ2	**Mitsune**	**3.86**	**203**	Pn	**Pn**	**09 49 50.9**	**-0.2**
JHJ2	**Mitsune**	**3.86**	**203**	P	**Pn**	**09 49 51.9**	**+0.7**
JHJ	**Hachijo jima 2**	**3.86**	**204**	P	**Pn**	**09 49 50.3**	**-0.9**
	comp=N,37nm,0.3s,baz=339,slow=23,SNR=7.5						
JHJ				S	**Sn**	**09 50 31.5**	**-3.8**

JOW	**Kunigami**	**15.00**	**233**	LR	LR	09 57 51.6	
	comp=Z,81nm,20.5s,baz=220,slow=36						
ZEA	**Zeya**	**19.77**	**334**	*i* P	**Pn**	**09 53 21.8**	**-0.1**
PETK	**Petropavlovsk-**	**19.91**	**29**	LR	LR	10 00 46.4	
	comp=Z,59nm,20.8s,baz=218,slow=36						
BJT	**Baijiatuau**	**20.22**	**287**	P	**P**	**09 53 24.2**	**-0.9**
BJT	**Baijiatuau**	**20.22**	**287**	P	**P**	**09 53 24.2**	**-0.9**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XLT	**XiLinHaoTe**	**20.73**	**298**	*e*P	**P**	**09 53 28.0**	**-2.6**
XLT				pP	Pn	09 53 35.4	+2.0
XLT				sP	pP	09 53 40.8	-1.3
XLT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XLT				pmax	pmax		
	comp=Z,130nm,4.0s						
TPUB	**Ta-pu**	**22.49**	**239**	P	**P**	**09 53 46.6**	**-3.0**
TPUB				IAmb	IAmb	09 54 03.0	
	comp=Z,17nm,1.1s						
WHN	**Wuhan**	**23.48**	**263**	P	**P**	**09 53 58.8**	**-0.7**
WHN				pmax	pmax		
	comp=Z,22nm,0.7s						
MA2	**Magadan**	**23.66**	**12**	*i* P	**P**	**09 53 58.9**	**-2.0**
BTO	**Baotou**	**24.92**	**289**	*e*P	**P**	**09 54 15.5**	**+2.7**
BTO				pP	**pP**	**09 54 24.1**	**-1.4**
BTO				sP	**sP**	**09 54 29.8**	**-1.6**
BTO				PP	**PnPn**	**09 54 47.8**	**+0.3**
BTO				S	**S**	**09 58 36.0**	**+3.2**
BTO				SS	**SnSn**	**09 59 28.9**	**+4.6**
BTO				pmax	pmax		
	comp=Z,12nm,0.9s						
BTO				pmax	pmax		
	comp=Z,250nm,5.1s						
BTO				LR	LR		
	comp=N,230nm,6.3s						
BTO				LR	LR		
	comp=E,470nm,5.3s						
BTO				LR	LR		
	comp=Z,130nm,6.7s						
YAK	**Yakutsk**	**26.45**	**347**	*i* P	**P**	**09 54 27.6**	**+1.4**
XAN	**Xi'an**	**26.73**	**274**	⇑P	**P**	**09 54 28.9**	**-0.3**
XAN				PcP	**PcP**	**09 57 53.3**	**+1.9**
SEY	**Seymchan**	**27.10**	**11**	*i* P	**P**	**09 54 29.9**	**-2.2**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ENH	**Enshi**	**27.48**	**266**	P	**P**	**09 54 35.1**	**-0.7**
ULN	**Ulaanbaatar**	**27.70**	**305**	*i* P	**P**	**09 54 37.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
H11N2	**WAKE ISLAND Hy**	**27.82**	**121**	T	T	10 24 04.4	
	baz=313,slow=75,SNR=177						
H11N1	**WAKE ISLAND Hy**	**27.83**	**121**	T	T	10 23 59.9	
	baz=313,slow=75,SNR=230						
H11N3	**WAKE ISLAND Hy**	**27.84**	**121**	T	T	10 23 59.8	
	baz=313,slow=75,SNR=174						
SONM	**Songino Array**	**28.12**	**304**	P	**P**	**09 54 42.2**	**+0.6**
SONM	**Songino Array**	**28.12**	**304**	*e*P	**P**	**09 54 44.1**	**+2.5**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**28.12**	**304**	P	**P**	**09 54 42.5**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=105,slow=9.0,SNR=12						
SONM				LR	LR	10 06 34.7	
	comp=Z,59nm,18.6s,baz=346,slow=38						
	comp=Z,3.2nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**28.52**	**123**	T	T	10 24 54.9	
	baz=314,slow=74,SNR=41						
H11S3	**WAKE ISLAND Hy**	**28.52**	**123**	T	T	10 24 53.9	
	baz=314,slow=74,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.54**	**123**	T	T	10 25 26.5	
	baz=314						
DGZ	**Jazzator, Alta**	**40.74**	**306**	*i* P	**P**	**09 56 31.0**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.58**	**256**	LR	LR	10 16 20.5	
	comp=Z,51nm,18.0s,baz=80,slow=40						
ZAA0	**Zalesovo Array**	**42.28**	**313**	P	**P**	**09 56 44.4**	**+1.8**
ZAA0				IAmb	IAmb	09 56 53.5	
	comp=Z,8.2nm,1.1s						
ZALV	**Zalesovo Beam**	**42.28**	**313**	P	**P**	**09 56 42.7**	**0.0**
ZALV	**Zalesovo Beam**	**42.28**	**313**	P	**P**	**09 56 43.0**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=83,slow=6.7,SNR=3.9						
ZALV				PcP	**PcP**	**09 58 35.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=77,slow=1.9,SNR=2.7						
	comp=Z,2.9nm,0.5s						
NRIK	**Noril'sk**	**43.66**	**335**	*i* P	**P**	**09 56 52.5**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MK31	**Makanchi Array**	**44.45**	**302**	*i* P	**P**	**09 57 03.1**	**+2.8**
MKAR	**Makanchi Array**	**44.45**	**302**	*e*P	**P**	**09 57 04.1**	**+3.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**44.45**	**302**	P	**P**	**09 57 00.4**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=86,slow=9.9,SNR=12						
MKAR				LR	LR	10 14 49.6	
	comp=Z,55nm,19.3s,baz=72,slow=35						
	comp=Z,1.4nm,0.6s						
C18K	**Utukok River**	**44.52**	**26**	P	**P**	**09 57 02.8**	**+2.2**
C18K				IAmb	IAmb	09 57 15.3	
	comp=Z,4.7nm,0.8s						
G18K	**Tagagawik**	**44.86**	**30**	P	**P**	**09 57 05.4**	**+2.1**
G18K				IAmb	IAmb	09 57 06.4	
	comp=Z,6.8nm,1.1s						
D19K	**Kuna River**	**45.58**	**27**	P	**P**	**09 57 10.7**	**+1.8**
D19K				IAmb	IAmb	09 57 50.7	
	comp=Z,5.5nm,1.2s						
KURK	**Kurchatov**	**46.28**	**308**	P	**P**	**09 57 14.9**	**+0.2**
KURK	**Kurchatov**	**46.28**	**308**	P	**P**	**09 57 14.9**	**+0.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURBB	**Kurchatov Arra**	**46.35**	**308**	P	**P**	**09 57 15.1**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=88,slow=8.0,SNR=16						
	comp=Z,1.6nm,0.4s						
IMAR	**Indian Mountai**	**46.87**	**30**	P	**P**	**09 57 20.6**	**+1.6**
KDAK	**Kodiak Island**	**47.25**	**42**	P	**P**	**09 57 23.5**	**+1.4**
KDAK	**Kodiak Island**	**47.25**	**42**	P	**P**	**09 57 23.5**	**+1.4**
KDAK				pmax	pmax		
	comp=Z,17nm,1.2s						
CAST	**Castle Rocks**	**47.42**	**34**	P	**P**	**09 57 24.3**	**+0.9**
E22K	**Anaktuvuk Pass**	**47.84**	**28**	P	**P**	**09 57 27.4**	**+0.7**
E22K				IAmb	IAmb	09 57 40.3	
	comp=Z,4.6nm,1.0s						
IL31		**49.70**	**32**	P	**P**	**09 57 42.4**	**+1.5**
IL31				IAmb	IAmb	09 57 43.8	
	comp=Z,9.5nm,1.5s						
ILAR	**Eielson Array**	**49.70**	**32**	P	**P**	**09 57 41.3**	**+0.4**
ILAR	**Eielson Array**	**49.70**	**32**	P	**P**	**09 57 42.5**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=254,slow=5.5,SNR=11						
	comp=Z,0.7nm,0.7s						
AAK	**Ala-Archa**	**50.81**	**299**	*i* P	**P**	**09 57 49.8**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	**Ala-Archa**	**50.81**	**299**	P	**P**	**09 57 50.0**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=101,slow=5.2,SNR=2.1						
AAK				LR	LR	10 20 16.5	
	comp=Z,91nm,19.1s,baz=76,slow=37						
	comp=Z,0.9nm,0.4s						
BVAR	**Borovoye Array**	**50.94**	**313**	P	**P**	**09 57 51.9**	**+1.4**
	comp=Z,1.0nm,0.4s,baz=76,slow=8.9,SNR=4.5						
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**50.99**	**313**	*i* P	**P**	**09 57 50.9**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**56.74**	**188**	P	**P**	**09 58 33.0**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=5.3,slow=7.4,SNR=12						
	comp=Z,1.3nm,0.8s						
ARU	**Arti**	**56.74**	**319**	*i* P	**P**	**09 58 32.1**	**-0.6**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.9s						
ARU	**Arti**	**56.74**	**319**	P	P	09 58 38.2	+5.5
	comp=Z,3.9nm,0.4s,baz=79,slow=16,SNR=1.6						
AKTO	**Aktyubinsk**	**59.04**	**312**	LR	LR	10 23 53.8	
	comp=Z,35nm,18.8s,baz=174,slow=36						
ASAR	**Alice Springs**	**60.46**	**188**	P	**P**	**09 58 59.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=14,slow=6.7,SNR=9.7						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**64.03**	**30**	P	**P**	**09 59 23.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=303,slow=7.1,SNR=12						
	comp=Z,0.5nm,0.7s						
ARCES	**ARCESS Array B**	**64.39**	**340**	P	**P**	**09 59 24.1**	**-0.6**
	comp=Z,4.7nm,1.1s,baz=64,slow=10,SNR=2.2						
	comp=Z,4.7nm,1.1s						
FINES	**FINESS Array B**	**69.20**	**332**	P	**P**	**09 59 54.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=61,slow=9.8,SNR=1.9						
	comp=Z,0.8nm,0.6s						
KBZ	**Khabaz**	**71.26**	**311**	P	**P**	**10 00 10.7**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=0.0,slow=3.0,SNR=1.8						
	comp=Z,0.8nm,0.8s						
HFS	**Hagfors**	**74.48**	**336**	P	**P**	**10 00 27.9**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=46,slow=13,SNR=4.1						
	comp=Z,2.1nm,0.9s						
AKASG	**Malin Array Be**	**74.68**	**322**	P	**P**	**10 00 28.6**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=47,slow=6.3,SNR=4.2						
	comp=Z,0.8nm,0.4s						
NVAR	**Mina Array Bea**	**75.06**	**53**	P	**P**	**10 00 33.0**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=297,slow=5.9,SNR=7.0						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**77.79**	**45**	P	**P**	**10 00 48.3**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=274,slow=1.4,SNR=6.4						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**79.21**	**312**	P	**P**	**10 00 55.4**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=35,slow=5.3,SNR=1.9						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**90.20**	**52**	P	**P**	**10 01 50.8**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=298,slow=1.9,SNR=6.5						
	comp=Z,0.4nm,0.8s						
QSPA	**South Pole Qui**	**126.42**	**180**	PKP	**PKPdf**	**10 07 51.4**	**+0.8**
	comp=Z,1.5nm,1.0s,baz=360,slow=3.0,SNR=2.7						

IDC 19 09:50:21.5±2.8, 53.75N×87.03E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=24.9km s-min=14.2km az=76.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**280**	I	I	09 58 20.0	
	baz=101,slow=346,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.33**	**280**	Pg	Pg	09 50 45.6	-1.3
	0.5nm,0.3s,baz=101,slow=18,SNR=3.6						
ZALV				Lg	Lg	09 51 04.0	
	1.2nm,0.3s,baz=100,slow=31,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.09**	**243**	Pn	Pn	09 51 52.9	+0.2
	0.1nm,0.3s,baz=58,slow=14,SNR=2.5						
KURBB				Lg	Lg	09 53 35.3	
	baz=60,slow=32,SNR=2.2						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.59**	**205**	Pn	Pn	09 52 14.2	+0.9
	baz=16,slow=10,SNR=1.9						
MKAR				Sn	Sn	09 53 42.1	+2.1
	0.1nm,0.3s,baz=20,slow=25,SNR=2.1						
MKAR				Lg	Lg	09 54 23.3	
	baz=28,slow=31,SNR=4.8						
	0.2nm,0.3s						

NNC 19 09:54:28.2±8.8, 54.47N×86.78E, h0km, mb3.8, mpv3.4, 2C-1D, Error ellipse: s-maj=132.2km s-min=65.7km az=167.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.23**	**236**	⇑Pn	Pn	09 56 01.8	+0.4
	1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**6.33**	**236**	⇑Pn	Pn	09 56 02.2	-0.6
	2.0nm,0.2s						
KURBB				⇓Sn	Sn	09 57 16.9	+1.2
	2.4nm,0.5s						
MK31	**Makanchi Array**	**8.19**	**202**	Pn	Pn	09 56 28.5	+0.2
	0.4nm,0.3s,baz=26,slow=13,SNR=93						

IDC 19 09:54:55.0±1.3, 13.19N×144.60E, h0km, mb3.5/4, mbtmp3.5/4, MS3.2/3, Error ellipse: s-maj=62.4km s-min=30.9km az=109.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**19.68**	**254**	LR	LR	10 08 05.1	
	comp=Z,37nm,18.8s,baz=348,slow=40						
H11S3	**WAKE ISLAND Hy**	**21.88**	**73**	T	T	10 22 54.8	
	baz=259,slow=75,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**21.90**	**73**	T	T	10 22 54.8	
	baz=259,slow=75,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**21.90**	**73**	T	T	10 22 54.8	
	baz=259,slow=75,SNR=7.4						
JNU	**Nakatsue**	**23.47**	**330**	LR	LR	10 06 45.4	
	comp=Z,29nm,21.6s,baz=28,slow=30						
WRA	**Warramunga Arr**	**34.44**	**197**	P	P	10 01 44.3	-0.2
	1.0nm,0.9s,baz=17,slow=9.6,SNR=4.0						
	1.0nm,0.9s						
RPZ	**Rata Peaks**	**61.56**	**158**	LR	LR	10 26 43.3	
	comp=Z,102nm,21.4s,baz=142,slow=31						
MKAR	**Makanchi Array**	**61.60**	**316**	P	P	10 05 14.6	+0.1
	0.1nm,0.4s,baz=95,slow=8.7,SNR=1.9						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**69.04**	**25**	P	P	10 06 01.9	-0.4
	0.4nm,0.5s,baz=252,slow=5.8,SNR=13						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**83.33**	**27**	P	P	10 07 24.3	+0.6
	0.2nm,0.7s,baz=290,slow=5.5,SNR=4.5						
	0.2nm,0.7s						

IDC 19 09:59:01.3±3.4, 54.15N×87.25E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=31.7km s-min=19.7km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.45**	**263**	I	I	10 07 50.0	
	0.1nm,0.7s,baz=81,slow=344,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.45**	**263**	Pg	Pn	09 59 26.8	-1.9
	1.8nm,0.3s,baz=83,slow=16,SNR=13						
ZALV				Lg	Lg	09 59 47.2	
	0.6nm,0.3s,baz=81,slow=26,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.40**	**240**	Pn	Pn	10 00 38.2	+1.4
	baz=55,slow=13,SNR=3.8						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**8.02**	**205**	Pn	Pn	10 00 59.9	+0.9
	baz=26,slow=13,SNR=1.7						
	0.1nm,0.3s						

IDC 19 10:11:43.2±3.8, 54.01N×89.95E, h0km, mbtmp2.7/3, ML2.3/3, Error ellipse: s-maj=35.5km s-min=23.9km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.03**	**271**	I	I	10 30 50.0	
	baz=87,slow=342,SNR=3.3						
ZALV	**Zalesovo Beam**	**3.03**	**271**	Pn	Pn	10 12 34.5	+2.2
	0.3nm,0.3s,baz=84,slow=16,SNR=4.8						
ZALV				Lg	Lg	10 13 18.4	
	0.7nm,0.3s,baz=86,slow=27,SNR=7.5						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**7.77**	**249**	Pn	Pn	10 13 37.4	-0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.4						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.72**	**217**	Pn	Pn	10 13 50.8	+0.4
	0.1nm,0.3s,baz=30,slow=12,SNR=11						
MKAR				Sn	Sn	10 15 29.3	-0.1
	0.1nm,0.3s,baz=27,slow=23,SNR=2.6						
	0.2nm,0.3s						

*IDC **19** 10:14:57.8±1.4, 5.00S×140.34E, h0km, mb3.9/3, mbtmp3.9/7, ML4.0/3, MS3.0/1, Error ellipse: s-maj=41.1km s-min=20.3km az=80.0*

ISC 19 10:15:02.8±1.3, 5.45S±0.1×140.4E±0.1, h35km, n7, σ2.975/10, mb3.8/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.83**	**121**	Pn	**Pn**	**10 16 56.0**	**+1.7**
	6.2nm,0.7s,baz=297,slow=6.8,SNR=2.0						
PMG				Sn	**Sn**	**10 18 18.8**	**-3.0**
	0.8nm,0.3s,baz=341,slow=23,SNR=1.5						
WRA	**Warramunga Arr**	**15.60**	**202**	Pn	**P**	**10 18 42.7**	**-1.4**
	0.5nm,0.3s,baz=25,slow=12,SNR=11						
WRA				Sn	**Sn**	**10 21 30.1**	**-2.0**
	0.3nm,0.3s,baz=33,slow=23,SNR=3.4						
WRA				Lg	Lg	10 23 25.0	
	0.4nm,0.3s,baz=26,slow=25,SNR=5.9						
	2.0nm,0.4s						
CTA	**Charters Tower**	**15.69**	**159**	Pn	**P**	**10 18 44.1**	**-1.0**
	0.4nm,0.3s,baz=328,slow=9.6,SNR=5.4						
CTA				Lg	Lg	10 23 26.0	
	baz=47,slow=22						
CTA				LR	LR	10 25 10.5	
	comp=Z,60nm,19.9s,baz=299,slow=38						
	2.5nm,0.6s						
ASAR	**Alice Springs**	**19.20**	**198**	P	**Pn**	**10 19 26.9**	**+2.0**
	0.5nm,0.3s,baz=27,slow=9.8,SNR=57						
ASAR				S	**S**	**10 22 58.4**	**-1.3**
	1.0nm,0.7s,baz=16,slow=29,SNR=4.8						
ASAR				Lg	Lg	10 25 19.7	
	0.1nm,0.3s,baz=14,slow=31,SNR=4.1						
	2.3nm,0.6s						
STKA	**Stephens Creek**	**26.37**	**178**	P	**P**	**10 20 40.8**	**+5.0**
	1.6nm,0.6s,baz=355,slow=12,SNR=2.0						
	1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**76.86**	**325**	P	**P**	**10 26 49.8**	**-1.4**
	0.2nm,0.5s,baz=113,slow=4.4,SNR=2.0						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**82.44**	**325**	P	**P**	**10 27 20.1**	**-1.5**
	0.8nm,0.6s,baz=104,slow=6.3,SNR=3.8						
	0.8nm,0.6s						

*IDC **19** 10:15:38.1±0.9, 51.79N×176.13E, h0km, mb3.6/12, mbtmp3.7/14, ML3.5/2, MS2.8/1, Error ellipse: s-maj=25.7km s-min=14.7km az=1.0*
*NEIC **19** 10:15:44.0±2.0, 52.0N±0.2×176.1E±0.1, h29km±10km, mb4.0/27, Error ellipse: s-maj=26.7km s-min=9.7km az=189.0*

ISC 19 10:15:43.3±0.7, 51.9N±0.1×176.11E±0.05, h33km, n55, σ1.902/49, mb3.9/21, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**1.51**	**306**	Pn	**Pn**	**10 16 07.9**	**-0.2**
	353nm,0.3s,baz=148,slow=3.4,SNR=50						
SHEM				Sn	**Sn**	**10 16 27.4**	**+0.8**
	259nm,0.3s,baz=136,slow=21,SNR=25						
AMKA	**Amchitka**	**2.05**	**102**		**Pn**	**10 16 14.9**	**-0.5**
AMKA				Sn	**Sn**	**10 16 40.9**	**+1.1**
KIWB	**Kanaga Island**	**4.18**	**87**	Pn	**Pn**	**10 16 46.0**	**+1.2**
ADK	**Adak**	**4.47**	**87**	Pn	**Pn**	**10 16 48.5**	**-0.2**
PEA0B	**Petropavlovsk-**	**11.30**	**284**	Pn	**Pn**	**10 18 24.3**	**+2.0**
PETK	**Petropavlovsk-**	**11.30**	**284**	Pn	**Pn**	**10 18 22.2**	**-0.1**
PETK	**Petropavlovsk-**	**11.30**	**284**	Pn	**Pn**	**10 18 21.6**	**-0.7**
	0.4nm,0.3s,baz=101,slow=19,SNR=13						
PETK				Sn	Sn	10 20 16.0	-11
	0.3nm,0.3s,baz=73,slow=26,SNR=1.5						
	2.4nm,0.6s						
K15K	**Wolf Creek Mou**	**15.94**	**40**	Pn	**Pn**	**10 19 24.7**	**-0.2**
P18K	**Big Mountain,**	**17.74**	**54**		**P**	**10 19 48.1**	**-0.1**
P18K				IAmb	IAmb	10 20 17.6	
	comp=Z,15nm,1.4s						
N18K	**Kilae Creek**	**17.76**	**49**		**P**	**10 19 49.8**	**+1.6**
N18K				IAmb	IAmb	10 20 05.8	
	comp=Z,14nm,1.4s						
O18K	**Koktuh Hills**	**17.86**	**52**		**P**	**10 19 50.9**	**+1.5**
O18K				IAmb	IAmb	10 20 12.5	
	comp=Z,18nm,1.4s						
H17K	**Granite Mounta**	**17.99**	**34**	Pn	**Pn**	**10 19 47.9**	**-2.6**
OHAK	**Old Harbor**	**18.45**	**61**	P	**P**	**10 19 54.2**	**-1.7**
OHAK				IAmb	IAmb	10 20 26.1	
	comp=Z,16nm,1.2s						
N19K	**Bonanza Creek**	**18.46**	**49**	P	**Pn**	**10 19 56.2**	**-0.1**
Q19K	**Cape Douglas,**	**18.46**	**56**	P	**Pn**	**10 19 56.7**	**+0.4**
KDAK	**Kodiak Island**	**18.87**	**59**	P	**P**	**10 19 58.9**	**-1.6**
KDAK	**Kodiak Island**	**18.87**	**59**	P	**P**	**10 20 00.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=243,slow=6.1,SNR=6.3						
	comp=Z,12nm,1.1s						
ILSW	**Iliamna Southw**	**18.90**	**53**	P	**P**	**10 19 57.9**	**-3.0**
ILSW				IAmb	IAmb	10 20 41.4	
	comp=Z,24nm,1.4s						
RSO	**Redoubt South**	**19.20**	**51**	P	**Pn**	**10 20 05.3**	**0.0**
J20K	**Nowintz River**	**19.77**	**40**	P	**Pn**	**10 20 11.9**	**-0.1**
CNPM	**China Poot**	**19.77**	**54**	P	**P**	**10 20 10.6**	**+0.2**
C18K	**Utukok River**	**20.04**	**24**	P	Pn	10 20 14.7	-0.4
C18K				IAmb	IAmb	10 20 28.9	
	comp=Z,9.0nm,1.4s						
RC01	**Rabbit Creek A**	**20.77**	**50**	P	**P**	**10 20 21.8**	**+0.6**
F21K	**Alatna River**	**21.44**	**33**	P	**P**	**10 20 28.6**	**+0.3**
SML	**Sawmill**	**21.57**	**49**	P	**P**	**10 20 29.4**	**-0.4**
SML				IAmb	IAmb	10 20 44.6	
	comp=Z,7.9nm,1.0s						
B20K	**Meade River**	**22.01**	**24**	P	**P**	**10 20 34.6**	**+0.2**
B20K				IAmb	IAmb	10 21 08.0	
	comp=Z,7.8nm,1.4s						
E22K	**Anaktuvuk Pass**	**22.46**	**31**	P	**P**	**10 20 40.3**	**+1.1**
E22K				IAmb	IAmb	10 20 56.8	
	comp=Z,5.1nm,1.1s						
H24K	**Noodor Dome**	**22.87**	**39**	P	**P**	**10 20 44.3**	**+0.7**
H24K				IAmb	IAmb	10 21 04.5	
	comp=Z,8.0nm,1.4s						
ILAR	**Eielson Array**	**22.93**	**41**	P	**P**	**10 20 43.2**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=261,slow=6.0,SNR=8.5						
	comp=Z,0.9nm,1.0s						
TOLK	**Toolik Lake Re**	**23.43**	**31**	P	**P**	**10 20 50.3**	**+1.1**
GLB	**Gilahina Butte**	**23.66**	**50**	P	**P**	**10 20 51.9**	**+0.4**
GLB				IAmb	IAmb	10 21 18.8	
	comp=Z,5.9nm,1.3s						
GRNC	**Granite Creek**	**24.61**	**52**	P	**P**	**10 20 59.4**	**-1.1**
GRNC				IAmb	IAmb	10 21 14.2	
	comp=Z,6.5nm,0.9s						
M27K	**Edge Creek, AK**	**24.66**	**48**	P	**P**	**10 21 01.5**	**+0.7**
BARN	**Barnard Glacie**	**24.67**	**52**	P	**P**	**10 21 02.3**	**+1.3**
BARN				IAmb	IAmb	10 21 07.0	
	comp=Z,4.1nm,0.9s						
L27K	**Beaver Creek,**	**24.76**	**47**	P	**P**	**10 21 02.8**	**+1.2**
L27K				IAmb	IAmb	10 21 20.9	
	comp=Z,7.1nm,1.3s						
CTGM	**Chitina Glacie**	**24.82**	**52**	P	**P**	**10 21 02.1**	**-0.2**
DAWY	**Dawson**	**25.97**	**45**	P	**P**	**10 21 13.5**	**+1.0**
DAWY				IAmb	IAmb	10 21 31.2	
	comp=Z,4.0nm,1.1s						
KLR	**Kul'dur**	**27.98**	**282**	P	**P**	**10 21 31.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=79,slow=5.2,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MJAR	**Matsushiro Arr**	**30.78**	**255**	LR	LR	10 35 07.0	

NLC	Nalytchevo	4.48 245	*e*S	Sn	10 24 26.9	+4.5
SMAR	Somma	4.72 248	*e*P	Pn	10 23 39.8	+4.7
UGLR	Uglovaya	4.74 248	*e*P	Pn	10 23 40.2	+5.0
AVH	Avacha	4.76 249	*e*P	Pn	10 23 40.6	+5.1
KRX	Arik	4.76 250	*e*P	Pn	10 23 40.1	+4.6
KOK	Koryaka	4.80 249	*e*P	Pn	10 23 40.8	+4.8
MTVR	Mutnovka	5.45 243	*e*P	Pn	10 23 49.8	+4.9
MTVR			*e*S	Sn	10 24 50.8	+4.4

IDC ***19*** *10:38:30.9±0.6, 4.°90S×131.°99E, h0km, mb4.2/16, mbtmp4.2/17, ML5.4/3, MS3.7/28, Error ellipse: s-maj=33.6km s-min=12.7km az=72.0*

MOS ***19*** *10:38:32.6±1.1, 4.°86S×132.°35E, h24km, mb5.1/18, Error ellipse: s-maj=10.4km s-min=6.0km az=115.1*

NEIC ***19*** *10:38:35.6, 4.°99S×132.°43E, h40km, Moment Tensor Solution. Duration: 1ᵗ±5 Moment tensor: Scale 10¹⁶Nm; Mrr=0.92; Mθθ=0.99; Mφφ=0.07; Mrθ=0.16; Mθφ=3.40; Mφr=0.94; Fault plane solution: M₀3.58000×10¹⁶ NP1: φs=174.35000°, δ=85.03000°, λ=162.66000°. NP2: φs=265.90000°, δ=72.73000°, λ=5.21000°. Principal axes: T 3.1537, Plg16.0000°, Azm129.0000°; N 0.8541, Plg72.0000°, Azm339.0000°; P -4.0078, Plg9.0000°, Azm221.0000°;*

NEIC ***19*** *10:38:35.6, 4.°79S×132.°43E, h40km*

NEIC ***19*** *10:38:36.5±2.1, 4.°77S±0.°05×132.°47E±0.°08, h39km±6km, mb5.3/36, Mww5.0/10, Error ellipse: s-maj=12.2km s-min=6.9km az=81.0*

BJI ***19*** *10:38:37.5±0.0, 4.°71S×132.°13E, h31km, mb4.6/54, mB5.1/27, Ms4.8/8, Ms7 4.4/7*

GCMT ***19*** *10:38:39.5±0.3, 4.°70S±0.°02×132.°52E±0.°02, h79km±4km, MW5.1/69, Moment Tensor Solution. s39,c44; s69,c88; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.34±.21; Mθθ-2.71±.23; Mφφ2.37±.20; Mrθ-0.59±.22; Mθφ3.99±.16; Mφr-1.22±.15; Best double couple: M₀4.92900×10¹⁶ NP1: φs163.00000°, δ79.00000°, λ168.00000°. NP2: φs255.00000°, δ78.00000°, λ11.00000°. Principal axes: T 4.9580, Plg16.0000°, Azm119.0000°; N -0.0560, Plg74.0000°, Azm301.0000°; P -4.9010, Plg1.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 10:38:36.4±0.3, 4.°87S±0.°04×132.°42E±0.°05, h35km, n252, σ1ᵗ88/229, mb4.8/62, MS3.7/28, 3C-2D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.95**	**355**		**Pn**	**10 39 06.4**	**-0.6**
FAKI	**Fak Fak**	**1.95**	**355**	P	**Pn**	**10 39 07.0**	**0.0**
BNDI	**Bandanaira**	**2.53**	**278**	P	**Pn**	**10 39 17.0**	**+2.0**
SAUI	**Saumlaki**	**3.29**	**200**	Pn	**Pn**	**10 39 29.1**	**+3.6**
SAUI	**Saumlaki**	**3.29**	**200**	P	**Pn**	**10 39 29.1**	**+3.6**
SWI	**Sorong**	**4.15**	**344**	P	**Pn**	**10 39 35.5**	**-1.8**
AAI	**Ambon**	**4.37**	**285**	P	**Pn**	**10 39 41.8**	**+1.4**
SANI	**Sanana**	**7.00**	**293**	P	**Pn**	**10 40 15.2**	**-1.4**
TNTI	**Ternate**	**7.54**	**318**	Pn	**Pn**	**10 40 23.0**	**-1.0**
TNTI	**Ternate**	**7.54**	**318**	P	**Pn**	**10 40 24.7**	**+0.7**
DRS	**Darwin Rock St**	**7.66**	**191**	P	**Pn**	**10 40 27.4**	**+1.8**
KDU	**Kakadu**	**7.77**	**180**	P	**Pn**	**10 40 28.5**	**+1.4**
	baz=7.7,SNR=1000						
KDU	**Kakadu**	**7.77**	**180**	P	**Pn**	**10 40 29.1**	**+2.0**
GENI	**Genyem**	**8.06**	**74**	P	**Pn**	**10 40 33.5**	**+2.4**
TABU	**Tabubil**	**8.78**	**93**	P	**Pn**	**10 40 43.6**	**+2.6**
SOEI	**Soe**	**9.43**	**239**	Pn	**Pn**	**10 40 51.2**	**+1.2**
SOEI	**Soe**	**9.43**	**239**	P	**Pn**	**10 40 51.6**	**+1.6**
MMRI	**Maumere**	**10.78**	**249**	Pn	**Pn**	**10 41 12.3**	**+3.9**
MMRI	**Maumere**	**10.78**	**249**	P	**Pn**	**10 41 10.8**	**+2.4**
KNRA	**Kununurra**	**11.32**	**198**	P	**Pn**	**10 41 16.2**	**+0.4**
	baz=11						
KNRA	**Kununurra**	**11.32**	**198**	Pn	**Pn**	**10 41 16.4**	**+0.5**
KNRA	**Kununurra**	**11.32**	**198**	P	**Pn**	**10 41 16.9**	**+1.1**
KAPI	**Kappang**	**12.62**	**269**	Pn	**Pn**	**10 41 34.0**	**+0.4**
KAPI	**Kappang**	**12.62**	**269**	P	**Pn**	**10 41 34.0**	**+0.4**
TOLI2	**Tolitoli**	**13.06**	**297**	Pn	**Pn**	**10 41 37.5**	**-2.0**
TOLI2	**Tolitoli**	**13.06**	**297**	P	**Pn**	**10 41 40.2**	**+0.6**
DAV	**Davao City (W)**	**13.69**	**330**	Pn	**Pn**	**10 41 43.7**	**-4.5**
	26nm,0.3s,baz=247,slow=17,SNR=1.5						
DAV				LR	LR	10 47 04.6	
	comp=Z,178nm,18.9s,baz=136,slow=38						
	88nm,0.4s						
COEN	**Coen**	**13.93**	**131**	P	**Pn**	**10 41 49.6**	**-1.8**
	baz=14,SNR=485						
COEN	**Coen**	**13.93**	**131**	Pn	**Pn**	**10 41 49.7**	**-1.8**
FITZ	**Fitzroy Crossi**	**14.72**	**206**	P	**Pn**	**10 41 59.0**	**-3.3**
	baz=15,SNR=402						
FITZ	**Fitzroy Crossi**	**14.72**	**206**	P	**Pn**	**10 41 59.5**	**-2.7**
WB0	**Warramunga Arr**	**14.93**	**173**	Pn	**Pn**	**10 42 02.5**	**-2.5**
PLAI	**Plampang**	**15.06**	**254**	P	**Pn**	**10 42 06.3**	**-0.5**
WRAB	**Tennant Creek**	**15.09**	**173**	Pn	**Pn**	**10 42 04.4**	**-2.8**
WRAB				IAmb	IAmb	10 42 12.4	
	comp=Z,87nm,0.4s						
WRAB	**Tennant Creek**	**15.09**	**173**	P	**Pn**	**10 42 04.4**	**-2.8**
WRAB				pmax	pmax		
	comp=Z,87nm,0.4s						
WRA	**Warramunga Arr**	**15.10**	**173**	Pn	**Pn**	**10 42 04.0**	**-3.3**
	comp=Z,18nm,0.3s,baz=355,slow=13,SNR=158						
WRA				Sn	Sn	10 44 39.5	-14
	comp=Z,29nm,0.3s,baz=351,slow=21,SNR=13						
WB2	**Warramunga Arr**	**15.10**	**173**	Pn	**Pn**	**10 42 04.7**	**-2.6**
WB2				IAmb	IAmb	10 42 16.2	
	comp=Z,96nm,0.6s						
WC3	**Warramunga Arr**	**15.12**	**173**	P	**Pn**	**10 42 04.1**	**-3.4**
	baz=15						
WR0	**Warramunga Arr**	**15.14**	**172**		**Pn**	**10 42 05.8**	**-2.1**
WR0				IAmb	IAmb	10 42 12.8	
	comp=Z,68nm,0.6s						
PMG	**Port Moresby**	**15.30**	**108**	P	**Pn**	**10 42 10.2**	**+0.2**
PMG				IAmb	IAmb	10 42 14.8	
	comp=Z,151nm,0.8s						
PMG	**Port Moresby**	**15.30**	**108**	P	**Pn**	**10 42 10.6**	**+0.6**
PMG	**Port Moresby**	**15.30**	**108**	P	**Pn**	**10 42 10.5**	**+0.6**
PMG	**Port Moresby**	**15.30**	**108**	P	**Pn**	**10 42 10.2**	**+0.2**
PMG				pmax	pmax		
	comp=Z,151nm,0.9s						
PMG	**Port Moresby**	**15.30**	**108**	Pn	**Pn**	**10 42 10.0**	**0.0**
	comp=Z,18nm,0.3s,baz=299,slow=7.0,SNR=37						
PMG				Sn	**Sn**	**10 44 51.2**	**-7.2**
	comp=Z,6.1nm,0.3s,baz=212,slow=19,SNR=2.2						
PMG				LR	LR	10 48 25.8	
	comp=Z,467nm,21.0s,baz=315,slow=38						
QIS	**Mount Isa**	**17.09**	**156**	P	**Pn**	**10 42 31.7**	**-1.0**
	baz=17,SNR=318						
MTSU	**Mount Surprise**	**17.58**	**140**	P	**Pn**	**10 42 37.7**	**-1.2**
	baz=18,SNR=657						
MTSU	**Mount Surprise**	**17.58**	**140**	P	**P**	**10 42 40.9**	**+1.2**
JAGI	**Jajag, Banyuwa**	**18.49**	**258**	P	**P**	**10 42 46.8**	**-2.9**
JAGI	**Jajag, Banyuwa**	**18.49**	**258**	P	**P**	**10 42 48.4**	**-1.3**
AS31	**Alice Springs**	**18.74**	**176**	P	**P**	**10 42 52.5**	**+0.1**
AS31				IAmb	IAmb	10 43 02.0	
	comp=Z,60nm,0.3s						
ASAR	**Alice Springs**	**18.74**	**176**	P	**P**	**10 42 51.8**	**-0.7**
ASAR	**Alice Springs**	**18.74**	**176**	P	**P**	**10 42 52.1**	**-0.3**
	comp=Z,9.9nm,0.3s,baz=352,slow=14,SNR=221						
ASAR				S	Sn	10 46 11.3	-11
	comp=Z,101nm,0.6s,baz=360,slow=28,SNR=12						
ASAR				LR	LR	10 50 24.1	
	comp=Z,299nm,21.9s,baz=356,slow=38						
AS01	**Alice Springs**	**18.74**	**176**	P	**P**	**10 42 52.9**	**+0.4**
KKM	**Kota Kinabalu**	**19.48**	**304**	P	**P**	**10 42 59.7**	**-1.0**
KKM	**Kota Kinabalu**	**19.48**	**304**	P	**P**	**10 43 01.0**	**+0.4**
RABL	**Rabaul**	**19.70**	**89**	P	**P**	**10 43 03.3**	**+0.3**
RABL				IAmb	IAmb	10 43 09.8	
	comp=Z,163nm,0.8s						
RABL	**Rabaul**	**19.70**	**89**	P	**Pn**	**10 43 05.6**	**+1.0**
TV1H	**Townsville Har**	**20.03**	**137**	P	Pn	10 43 08.6	+0.2
CTA	**Charters Tower**	**20.25**	**140**	P	Pn	10 43 11.3	+0.2
CTA	**Charters Tower**	**20.25**	**140**	P	Pn	10 43 11.3	+0.3
	comp=Z,158nm,0.9s,baz=318,slow=12,SNR=88						
CTA				S	Sn	10 46 57.6	-0.7
	comp=Z,17nm,0.6s,baz=22,slow=22,SNR=1.8						
CTA				LR	LR	10 51 43.0	
	comp=Z,409nm,20.6s,baz=316,slow=39						
CTAO	**Charters Tower**	**20.25**	**140**		Pn	10 43 11.2	+0.2
CTAO				IAmb	IAmb	10 43 16.3	
	comp=Z,152nm,0.8s						
CTAO	**Charters Tower**	**20.25**	**140**	P	Pn	10 43 11.6	+0.5
CTAO	**Charters Tower**	**20.25**	**140**	P	Pn	10 43 11.2	+0.1
CTAO				pmax	pmax		
	comp=Z,152nm,0.8s						
MBWA	**Marble Bar**	**20.34**	**216**	P	**P**	**10 43 10.5**	**+0.5**
MBWA	**Marble Bar**	**20.34**	**216**	P	**P**	**10 43 10.7**	**+0.8**
WRKA	**Warakurna**	**20.44**	**191**	P	**P**	**10 43 12.1**	**+1.1**
	baz=20,SNR=911						
WRKA	**Warakurna**	**20.44**	**191**	P	**P**	**10 43 12.1**	**+1.1**
PSA00	**Pilbara Seismi**	**20.60**	**215**	P	**P**	**10 43 13.6**	**+0.9**
PSA00	**Pilbara Seismi**	**20.60**	**215**	P	**P**	**10 43 13.6**	**+0.9**
AUAYR	**Ayr State High**	**20.67**	**136**	P	**P**	**10 43 14.9**	**+1.5**
SBUM	**Sibu**	**21.45**	**289**	P	**P**	**10 43 21.7**	**-0.2**
TGY	**Tagaytay City**	**22.02**	**329**	LR	LR	10 53 38.7	
	comp=Z,126nm,18.0s,baz=300,slow=42						
GUMO	**Guam**	**22.12**	**34**	LR	LR	10 52 05.0	
	comp=Z,71nm,21.2s,baz=199,slow=36						
KSM	**Kuching**	**22.97**	**285**	P	**P**	**10 43 37.2**	**-0.9**
KSM				IAmb	IAmb	10 43 39.4	
	comp=Z,101nm,1.4s						
KSM	**Kuching**	**22.97**	**285**	P	**P**	**10 43 38.6**	**+0.4**
OOD	**Oodnadatta**	**23.01**	**173**	P	**P**	**10 43 39.5**	**+1.1**
INKA	**Innaminka**	**24.09**	**162**	P	**P**	**10 43 50.6**	**+1.8**
QLP	**Quilpie**	**24.37**	**154**	P	**P**	**10 43 52.1**	**+0.7**
	baz=24,SNR=17						
QLP	**Quilpie**	**24.37**	**154**	P	**P**	**10 43 52.8**	**+1.4**
LEM	**Lembang**	**24.75**	**264**	P	**P**	**10 43 52.6**	**-2.6**
LEM				pmax	pmax		
	comp=Z,41nm,1.0s						
GIRL	**Giralia**	**24.93**	**223**	P	**P**	**10 43 57.1**	**+0.6**
	baz=25,SNR=17						
GIRL	**Giralia**	**24.93**	**223**	P	**P**	**10 43 56.9**	**+0.4**
MULG	**Mulgathing**	**25.32**	**177**	P	**P**	**10 44 00.9**	**+0.9**
MEEK	**Meekatharra**	**25.35**	**210**	P	**P**	**10 43 59.8**	**-0.6**
	baz=25,SNR=106						
MEEK	**Meekatharra**	**25.35**	**210**	P	**P**	**10 44 00.0**	**-0.3**
RK1H	**Rockhampton Ha**	**25.36**	**138**	P	**P**	**10 44 01.5**	**+1.1**
	comp=Z,219nm,0.7s						
LCRK	**Leigh Creek**	**26.02**	**169**	P	**P**	**10 44 07.9**	**+1.5**
FORT	**Forrest**	**26.10**	**189**	P	**P**	**10 44 07.5**	**+0.5**
	baz=26,SNR=46						
FORT	**Forrest**	**26.10**	**189**	P	**P**	**10 44 07.3**	**+0.2**
FORT	**Forrest**	**26.10**	**189**	P	**P**	**10 44 08.3**	**+1.3**
XMIS	**Christmas Isla**	**27.09**	**257**	P	**P**	**10 44 15.1**	**-1.1**
XMIS	**Christmas Isla**	**27.09**	**257**	P	**P**	**10 44 14.8**	**-1.5**
EIDS	**Eidsvold**	**27.13**	**141**	P	**P**	**10 44 16.9**	**+0.5**
	baz=27,SNR=29						
EIDS	**Eidsvold**	**27.13**	**141**	IAmb	IAmb	10 44 18.6	
	comp=Z,76nm,0.9s						
EIDS	**Eidsvold**	**27.13**	**141**	P	**P**	**10 44 17.3**	**+0.9**
HNR	**Honiara**	**27.68**	**101**	LR	LR	10 55 45.4	
	comp=Z,2μm,21.1s,baz=281,slow=37						
BBOO	**Buckleboo**	**28.00**	**173**	P	**P**	**10 44 24.4**	**+0.2**
	baz=28,SNR=9.5						
BBOO	**Buckleboo**	**28.00**	**173**	P	**P**	**10 44 24.5**	**+0.3**
BBOO				IAmb	IAmb	10 45 03.2	
	comp=Z,58nm,0.7s						
KMBL	**Kambalda**	**28.16**	**199**	P	**P**	**10 44 25.7**	**+0.2**
	baz=28,SNR=50						
KMBL	**Kambalda**	**28.16**	**199**	P	**P**	**10 44 26.1**	**+0.5**
STKA	**Stephens Creek**	**28.21**	**163**	P	**P**	**10 44 26.8**	**+0.8**
	baz=28,SNR=20						
STKA	**Stephens Creek**	**28.21**	**163**	P	**P**	**10 44 27.0**	**+0.9**
STKA	**Stephens Creek**	**28.21**	**163**	P	**P**	**10 44 26.9**	**+0.9**
STKA	**Stephens Creek**	**28.21**	**163**	P	**P**	**10 44 27.0**	**+0.9**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
STKA	**Stephens Creek**	**28.21**	**163**	P	**P**	**10 44 26.8**	**+0.8**
	comp=Z,8.7nm,0.5s,baz=341,slow=9.6,SNR=25						
STKA				S	S	10 49 26.6	+17
	comp=Z,6.0nm,0.6s,baz=269,slow=8.6,SNR=1.7						
STKA				LR	LR	10 56 48.9	
	comp=Z,164nm,18.6s,baz=336,slow=39						
	comp=Z,8.7nm,0.5s						
MORW	**Morawa**	**28.64**	**211**	IAmb	IAmb	10 45 07.5	
	comp=Z,94nm,1.1s						
MYKOM	**Kota Tinggi**	**29.30**	**282**	P	**P**	**10 44 34.9**	**-1.1**
CMSA	**Cobar Meteorol**	**29.31**	**156**	P	**P**	**10 44 36.7**	**+0.9**
	baz=29,SNR=8.9						
CMSA	**Cobar Meteorol**	**29.31**	**156**	P	**P**	**10 44 37.0**	**+1.2**
BLDU	**Ballidu**	**29.58**	**208**	P	**P**	**10 44 38.1**	**-0.1**
	baz=30,SNR=85						
BLDU	**Ballidu**	**29.58**	**208**	P	**P**	**10 44 38.4**	**+0.2**
KLBR	**Kellerberrin**	**29.93**	**206**	P	**P**	**10 44 41.3**	**0.0**
	baz=30,SNR=41						
KLBR	**Kellerberrin**	**29.93**	**206**	P	**P**	**10 44 41.5**	**+0.2**
SSLB	**Suanglung**	**30.60**	**339**	P	**P**	**10 44 47.8**	**+0.5**
MUN	**Mundaring**	**30.95**	**207**	P	**P**	**10 44 50.4**	**+0.1**
	baz=31,SNR=17						
ARMA	**Armidale**	**31.21**	**147**	P	**P**	**10 44 53.8**	**+1.1**
	baz=31,SNR=53						
ARMA	**Armidale**	**31.21**	**147**	P	**P**	**10 44 54.2**	**+1.5**
ARMA	**Armidale**	**31.21**	**147**	P	**P**	**10 44 53.8**	**+1.1**
NWAO	**Narrogin (SRO)**	**31.31**	**205**	P	**P**	**10 44 53.5**	**0.0**
	baz=31,SNR=34						
NWAO				P	**P**	**10 44 53.5**	**0.0**
	baz=31,SNR=34						
NWAO	**Narrogin (SRO)**	**31.31**	**205**	P	**P**	**10 44 53.5**	**0.0**
NWAO	**Narrogin (SRO)**	**31.31**	**205**	P	**P**	**10 44 54.2**	**+0.8**
NWAO	**Narrogin (SRO)**	**31.31**	**205**	P	**P**	**10 44 53.5**	**0.0**
NWAO	**Narrogin (SRO)**	**31.31**	**205**	LR	LR	10 59 29.9	
	comp=Z,256nm,18.8s,baz=328,slow=40						
AUPHS	**Peel High Scho**	**31.34**	**149**	P	**P**	**10 44 55.1**	**+1.3**
	comp=Z,37nm,0.8s						
JOW	**Kunigami**	**31.77**	**353**	LR	LR	10 57 37.7	
	comp=Z,102nm,21.0s,baz=30,slow=36						
QIZ	**Qiongzhong**	**32.53**	**318**	P	**P**	**10 45 05.3**	**+0.9**
QIZ				S	**S**	**10 50 21.8**	**+4.3**
QIZ				LR	LR		
	comp=Z,120nm,11.8s						
QIZ				LR	LR		
	comp=Z,110nm,10.9s						
QIZ				LR	LR		
	comp=Z,160nm,21.0s						
QZH	**Quanzhou**	**32.54**	**336**	*e*P	P	10 45 10.8	+6.5
IPM	**Ipoh**	**32.70**	**286**	IAmb	IAmb	10 45 07.7	
	comp=Z,26nm,0.7s						
IPM	**Ipoh**	**32.70**	**286**	P	**P**	**10 45 04.7**	**-1.3**
RKGY	**Rocky Gully**	**32.87**	**204**	P	**P**	**10 45 08.2**	**+1.0**
	baz=33,SNR=14						
RKGY	**Rocky Gully**	**32.87**	**204**	P	**P**	**10 45 08.5**	**+1.4**
ARPS	**Mount Arapiles**	**32.90**	**166**	P	**P**	**10 45 08.7**	**+1.3**
	baz=33,SNR=11						
ARPS	**Mount Arapiles**	**32.90**	**166**	P	**P**	**10 45 09.2**	**+1.8**
MGCD	**Mangrove Creek**	**33.15**	**151**	P	**P**	**10 45 11.2**	**+1.7**
	baz=33,SNR=5.0						
JCJ	**Chichijima**	**33.15**	**16**	LR	LR	10 58 44.0	
	comp=Z,87nm,19.2s,baz=208,slow=36						
KULM	**Kulim**	**33.29**	**287**	IAmb	IAmb	10 45 12.9	
	comp=Z,35nm,1.0s						
CAN	**Canberra**	**33.95**	**155**	P	**P**	**10 45 18.2**	**+1.6**
RPSI	**Rantau Prapat**	**34.30**	**282**	IAmb	IAmb	10 45 20.2	
	comp=Z,34nm,1.0s						
PSI	**Prapat**	**34.32**	**282**	P	**P**	**10 45 18.3**	**-1.9**
TOO	**Toangi**	**34.67**	**162**	P	**P**	**10 45 24.9**	**+2.1**
	baz=35,SNR=7.9						
GSI	**Gunungsitoli**	**35.35**	**279**	P	**P**	**10 45 26.1**	**-2.8**
GSI	**Gunungsitoli**	**35.35**	**279**	P	**P**	**10 45 29.1**	**+0.2**
NAYO	**Nakonayok**	**36.26**	**302**	P	**P**	**10 45 36.3**	**-0.4**
NONG	**Nongkai**	**36.78**	**309**	P	**P**	**10 45 39.9**	**-1.2**
GULI	**GuiLin**	**36.85**	**325**	P	**P**	10 45 48.8	+7.2
NOUC	**Port Laguerre**	**36.99**	**121**	P	**P**	**10 45 42.7**	**-0.2**
DZM	**Mont Dzumac**	**37.10**	**121**	P	**P**	**10 45 44.0**	**+0.1**
DZM				IAmb	IAmb	10 45 45.3	
	comp=Z,44nm,1.2s						
DZM	**Mont Dzumac**	**37.10**	**121**	P	**P**	**10 45 44.3**	**+0.4**
DZM	**Mont Dzumac**	**37.10**	**121**	LR	LR	11 01 08.9	
	comp=Z,303nm,18.0s,baz=277,slow=36						
DZM	**Mont Dzumac**	**37.10**	**121**	P	**P**	**10 45 44.0**	**+0.1**
YATNC	**Mamie plateau,**	**37.48**	**120**	P	**P**	**10 45 48.3**	**+1.2**
JNU	**Nakatsue**	**37.81**	**358**	LR	LR	10 59 43.4	
	comp=Z,97nm,21.1s,baz=166,slow=34						
JHJ	**Hachijo jima 2**	**38.42**	**10**	LR	LR	10 59 09.8	
	comp=Z,158nm,19.8s,baz=96,slow=32						
NJ2	**Nanjing**	**38.92**	**342**	*e*P	**P**	**10 46 01.1**	**+2.1**
NJ2				pP	**pP**	**10 46 07.6**	**-1.2**
NJ2				sP	**sP**	**10 46 10.5**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,92nm,3.9s						
CMAR	**Chiang Mai Arr**	**40.33**	**306**	*i* P	**P**	**10 46 09.8**	**-1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.33**	**306**	P	**P**	**10 46 08.2**	**-2.7**
	comp=Z,1.7nm,0.5s,baz=136,slow=7.3,SNR=14						
	comp=Z,1.7nm,0.5s						
CHTO	**Chiang Mai**	**40.51**	**306**	P	**P**	**10 46 11.8**	**-0.7**
CHTO	**Chiang Mai**	**40.51**	**306**	P	**P**	**10 46 12.1**	**-0.4**
CHTO	**Chiang Mai**	**40.51**	**306**	P	**P**	**10 46 11.8**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**40.51**	**306**	P	**P**	**10 46 11.6**	**-0.9**
KMI	**Kunming**	**41.48**	**317**	⇑P	**P**	**10 46 24.3**	**+3.7**
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
MAJO	**Matsushiro**	**41.55**	**7**	*i* P	**P**	**10 46 19.6**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,31nm,2.5s						
MJAR	**Matsushiro Arr**	**41.55**	**7**	P	**P**	**10 46 21.2**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=187,slow=9.3,SNR=4.1						
MJAR				LR	LR	11 00 55.5	
	comp=Z,104nm,19.1s,baz=184,slow=32						
	comp=Z,1.8nm,0.9s						
KSRS	**Korea Array**	**42.31**	**355**	P	**P**	**10 46 26.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=164,slow=7.9,SNR=1.7						
KSRS				LR	LR	11 02 51.5	
	comp=Z,86nm,21.9s,baz=165,slow=34						
	comp=Z,0.3nm,0.4s						
PZH	**PanZhiHua**	**43.07**	**318**	P	**P**	**10 46 35.8**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
LYN	**LuoYang**	**43.49**	**336**	*e*P	**P**	**10 46 40.4**	**+3.9**
LYN				pP	sP	10 46 51.0	+0.6
LYN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LYN				pmax	pmax		
	comp=Z,240nm,4.7s						
XAN	**Xi'an**	**44.62**	**332**	⇑P	**P**	**10 46 43.1**	**-2.5**
XAN				pP	pP	10 46 55.6	+0.1
XAN				sP	sP	10 47 00.4	+0.9
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XAN	**Xi'an**	**44.62**	**332**	P	**P**	**10 46 43.0**	**-2.5**
DL2	**Dalian**	**44.69**	**348**	*e*P	**P**	**10 46 47.1**	**+1.1**
DL2				pP	**pP**	**10 46 57.0**	**+1.0**
DL2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CD2	**Chengdu**	**44.90**	**324**	P	**P**	**10 46 48.3**	**+0.4**
HNS	**HongShan**	**45.18**	**340**	⇑P	P	10 46 58.8	+8.9
HNS				pmax	pmax		
	comp=Z,18nm,1.1s						
BJT	**Baijiatuau**	**47.11**	**343**	P	**P**	**10 47 03.2**	**-1.9**
BJT				pmax	pmax		
	comp=Z,15nm,0.7s						
BJI	**Beijing**	**47.12**	**343**	P	**P**	**10 47 06.8**	**+1.6**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**48.85**	**360**	*i* P	**P**	**10 47 17.2**	**-1.3**
USRK	**Ussuriysk Ar.**	**48.85**	**360**	P	**P**	**10 47 18.1**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=183,slow=8.0,SNR=2.6						
	comp=Z,2.2nm,0.8s						
CN2	**Changchun**	**48.85**	**353**	*e*P	**P**	**10 47 17.9**	**-0.6**
CN2				*es*P	sP	10 47 35.6	+3.0
CN2				*e*S	**S**	**10 54 17.9**	**-1.8**
MDJ	**Mudanjiang**	**49.33**	**357**	P	P	10 47 27.0	+4.8
MDJ				pP	sP	10 47 35.9	-0.4
MDJ				sP	pP	10 47 42.3	+10
MDJ				PcS	**PcS**	**10 52 44.5**	**+3.6**
MDJ				S	**S**	**10 54 32.8**	**+6.5**
MDJ				ScS	**ScS**	**10 57 16.5**	**+5.1**
MDJ				pmax	pmax		
	comp=Z,12nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.6s						
MDJ				LR	LR		
	comp=Z,150nm,5.4s						
MDJ				LR	LR		
	comp=Z,190nm,4.2s						
MDJ				LR	LR		
	comp=Z,180nm,5.6s						
HHC	**Hu-ho-hao-te**	**49.35**	**339**	*e*P	**P**	**10 47 25.4**	**+2.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.4s						
ASAJ	**Asahikawa**	**49.62**	**10**	LR	LR	11 09 34.7	
	comp=Z,35nm,18.4s,baz=330,slow=38						
SHL	**Shillong**	**49.62**	**310**	P	**P**	**10 47 22.9**	**-2.1**
SHL				IAmb	IAmb	10 47 39.8	
	comp=Z,20nm,0.7s						
SHL	**Shillong**	**49.62**	**310**	P	**P**	**10 47 22.9**	**-2.1**
SHL				pmax	pmax		
	comp=Z,20nm,0.7s						
BTO	**Baotou**	**49.70**	**338**	*e*P	**P**	**10 47 28.8**	**+3.6**
BTO				pP	**sP**	**10 47 41.3**	**+2.0**
BTO				sP	pP	10 47 45.9	+

MA2					pmax	pmax		
	comp=Z,12nm,1.4s							
MA2	**Magadan**	**65.87**	**10**	LR	LR	11 16 16.8		
	comp=Z,45nm,21.6s,baz=162,slow=34							
YAK	**Yakutsk**	**66.74**	**359**	*e*P	**P**	**10 49 27.6**	**+3.8**	
YAK				*e*		10 49 54.9		
YAK				*e*		10 51 58.6		
YAK				*e*PPP	PPP	10 53 30.3		
YAK				*e*S	**S**	**10 58 12.4**	**-0.8**	
YAK				*e**SS	sS	10 58 42.3	+12	
YAK				*e*		10 59 22.5		
YAK				*e*SS	**SS**	**11 02 32.4**	**+0.8**	
YAK				pmax	pmax			
	comp=Z,10.0nm,0.7s							
YAK				pmax	pmax			
	comp=N,1.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,2.0nm,0.8s							
YAK				pmax	pmax			
	comp=Z,177nm,4.4s							
YAK				pmax	pmax			
	comp=N,125nm,4.7s							
YAK				pmax	pmax			
	comp=E,245nm,6.3s							
YAK				smax	smax			
	comp=E,124nm,4.0s							
YAK				smax	smax			
	comp=N,105nm,7.1s							
DGZ	**Jazzator, Alta**	**66.83**	**330**	*i* P	**P**	**10 49 24.2**	**-0.7**	
DGZ				pmax	pmax			
	comp=Z,18nm,1.3s							
SHEM	**Shemya Is, Ala**	**67.32**	**26**	LR	LR	11 15 57.2		
	comp=Z,78nm,19.4s,baz=81,slow=33							
PDGK	**Podgornoye**	**67.63**	**321**	P	P	10 49 35.7	+5.7	
MK31	**Makanchi Array**	**67.81**	**325**	*e*P	**P**	**10 49 30.4**	**-0.6**	
MKAR	**Makanchi Array**	**67.81**	**325**	P	**P**	**10 49 29.7**	**-1.3**	
	comp=Z,1.1nm,0.5s,baz=108,slow=8.6,SNR=10.0							
MKAR				LR	LR	11 20 50.9		
	comp=Z,61nm,19.4s,baz=358,slow=38							
	comp=Z,1.1nm,0.5s							
MAKZ	**Makanchi**	**68.00**	**325**	P	**P**	**10 49 35.6**	**+3.4**	
KSH	**Kashi**	**68.12**	**316**	P	P	10 49 40.8	+7.6	
KSH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
KSH				LR	LR			
	comp=Z,270nm,6.9s							
KSH				LR	LR			
	comp=Z,320nm,13.4s							
KSH				LR	LR			
	comp=Z,350nm,16.5s							
SEY	**Seymchan**	**69.30**	**10**	*i* P	**P**	**10 49 39.8**	**-0.1**	
SEY				pmax	pmax			
	comp=Z,26nm,1.8s							
TKM2	**Tokmak 2**	**69.92**	**319**	P	**P**	**10 49 42.9**	**-1.5**	
CCD	**Concordia, Ant**	**70.37**	**182**	P	**P**	**10 49 50.0**	**+3.2**	
AAK	**Ala-Archa**	**70.52**	**318**	*i* P	**P**	**10 49 47.9**	**-0.1**	
AAK				pmax	pmax			
	comp=Z,13nm,1.3s							
ZALV	**Zalesovo Beam**	**70.78**	**332**	P	**P**	**10 49 47.4**	**-1.7**	
	comp=Z,0.9nm,0.6s,baz=129,slow=6.4,SNR=3.1							
	comp=Z,0.9nm,0.6s							
KURBB	**Kurchatov Arra**	**72.00**	**327**	P	**P**	**10 49 54.7**	**-1.9**	
	comp=Z,1.3nm,0.8s,baz=124,slow=5.2,SNR=7.5							
	comp=Z,1.3nm,0.8s							
KURK	**Kurchatov**	**72.00**	**327**	*i* P	**P**	**10 49 55.7**	**-0.9**	
KURK				pmax	pmax			
	comp=Z,21nm,1.0s							
KK31	**Karatay Array**	**73.37**	**318**	*e*P	**P**	**10 50 09.6**	**+4.7**	
VNDA	**Vanda**	**74.27**	**174**	P	**P**	**10 50 09.0**	**-0.6**	
VNDA	**Vanda**	**74.27**	**174**	P	**P**	**10 50 09.0**	**-0.6**	
	comp=Z,6.1nm,1.1s,baz=314,slow=7.9,SNR=3.3							
VNDA				LR	LR	11 23 39.1		
	comp=Z,86nm,18.0s,baz=312,slow=36							
	comp=Z,6.1nm,1.1s							
TIXI	**Tiksi**	**76.41**	**359**	*i* P	**P**	**10 50 22.0**	**+0.2**	
TIXI				pmax	pmax			
	comp=Z,8.0nm,1.1s							
PPT	**Papeete**	**77.12**	**107**	LR	LR	11 23 01.9		
	comp=Z,18nm,19.0s,baz=196,slow=34							
BVA0	**Borovoye Array**	**77.58**	**327**	P	P	10 50 33.9	+5.0	
BVAR	**Borovoye Array**	**77.58**	**327**	P	**P**	**10 50 26.8**	**-2.0**	
	comp=Z,1.1nm,0.7s,baz=106,slow=7.9,SNR=5.6							
	comp=Z,1.1nm,0.7s							
BRVK	**Borovoye**	**77.65**	**327**	P	**P**	**10 50 28.9**	**-0.3**	
BRVK	**Borovoye**	**77.65**	**327**	P	**P**	**10 50 29.0**	**-0.3**	
BRVK				pmax	pmax			
	comp=Z,8.0nm,0.8s							
NRIK	**Noril'sk**	**80.11**	**345**	P	**P**	**10 50 41.5**	**-0.8**	
	comp=Z,0.8nm,0.3s,baz=112,slow=6.0,SNR=1.6							
	comp=Z,0.8nm,0.3s							
GEYT	**Alibeck**	**80.70**	**310**	P	**P**	**10 50 46.0**	**-0.3**	
	comp=Z,0.6nm,0.3s,baz=50,slow=4.5,SNR=1.5							
	comp=Z,0.6nm,0.3s							
AB31	**Akbulak array**	**82.36**	**321**	P	**P**	**10 50 54.8**	**0.0**	
ABKAR	**Akbulak array**	**82.36**	**321**	P	**P**	**10 50 53.1**	**-1.7**	
AKTO	**Aktyubinsk**	**83.89**	**322**	P	**P**	**10 51 03.1**	**+0.4**	
VOI	**Vohitsoka**	**84.15**	**249**	P	**P**	**10 51 03.2**	**-1.6**	
VOI				IAmb	IAmb	10 51 05.2		
	comp=Z,14nm,0.7s							
VOI	**Vohitsoka**	**84.15**	**249**	P	**P**	**10 51 04.8**	**0.0**	
QSPA	**South Pole Qui**	**85.09**	**180**	P	**P**	**10 51 07.9**	**-0.8**	
QSPA				IAmb	IAmb	10 51 44.0		
	comp=Z,16nm,1.0s							
QSPA	**South Pole Qui**	**85.09**	**180**	P	**P**	**10 51 08.4**	**-0.2**	
	comp=Z,4.4nm,0.8s,baz=308,slow=1.5,SNR=25							
	comp=Z,4.4nm,0.8s							
KDAK	**Kodiak Island**	**86.16**	**31**	LR	LR	11 23 23.5		
	comp=Z,52nm,21.8s,baz=269,slow=31							
ILAR	**Eielson Array**	**90.41**	**25**	P	**P**	**10 51 35.4**	**+1.4**	
	comp=Z,0.3nm,0.6s,baz=273,slow=5.3,SNR=2.3							
	comp=Z,0.3nm,0.6s							
ELIB	**Princess Elisa**	**91.22**	**197**	*d*PcP	**PcP**	**10 51 39.1**	**+0.2**	
SOC	**Sochi**	**95.28**	**313**	*e*P	**P**	**10 51 53.9**	**-3.0**	
SOC				*e*		10 55 41.9		
SOC				*e*PPP	PPP	10 57 45.3		
SOC				*e*S	**SKSac**	**11 02 26.9**	**-3.5**	
EIL	**Elat**	**98.87**	**299**	LR	LR	11 41 40.5		
	comp=Z,20nm,20.5s,baz=67,slow=38							
BBB	**Bella Bella**	**99.64**	**38**	LR	LR	11 38 00.3		
	comp=Z,19nm,19.8s,baz=299,slow=36							
TXAR	**Lajitas Array**	**121.77**	**58**	PKP	**PKPdf**	**10 57 26.5**	**-1.1**	
	comp=Z,0.2nm,0.5s,baz=222,slow=2.2,SNR=2.1							
OK032	**Salt Plains WL**	**123.89**	**48**		**PKPdf**	**10 57 28.6**	**-2.8**	
HHAR	**Hobbs**	**127.25**	**47**		PKPpre	10 57 30.3		
LONY	**Lake Ozonia**	**133.87**	**27**		**PKPdf**	**10 57 47.5**	**-2.6**	
CPUP	**Villa Florida**	**147.58**	**164**	PKPbc	**PKPbc**	**10 58 17.8**	**0.0**	
	comp=Z,4.1nm,0.9s,baz=174,slow=1.4,SNR=6.9							
GO01	**Chusmiza**	**147.65**	**140**		**PKPdf**	**10 58 17.5**	**+1.3**	
BOSC	**San Juan Bosco**	**148.10**	**104**		**PKPbc**	**10 58 20.1**	**+0.2**	
BDFB	**Brasilia**	**159.62**	**179**	PKPab	**PKPab**	**10 59 11.6**	**+0.8**	
	comp=Z,1.5nm,0.4s,baz=144,slow=5.1,SNR=1.5							

RSNC 19 10:44:26.1±0.8, 5°28N×73°76W, h144km±5km, ML2.4, 2C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.48**	**320**	*i*P	Pn	10 44 46.7	-0.1
SPBC				*e*S	Sn	10 45 02.5	0.0
SPBC				*i*		10 45 06.0	
	comp=Z,78nm,0.5s						
CHIC	**Chingaza**	**0.65**	**178**	*i*P	Pn	10 44 47.8	-0.4
CHIC				*e*S	Sn	10 45 04.3	-0.5
CHIC				*i*		10 45 05.7	
	comp=Z,40nm,0.4s						
ROSC	**El Rosal**	**0.71**	**232**	*e*P	Pn	10 44 49.5	+1.0
ROSC				*e*S	Sn	10 45 07.3	+1.8
ROSC				*i*		10 45 11.2	
	comp=Z,51nm,0.6s						
CVER	**Cruz Verde, Cu**	**0.82**	**203**	*e*P	Pn	10 44 49.7	+0.3
CVER				*e*S	Sn	10 45 07.0	0.0
CVER				*i*		10 45 11.1	
	comp=Z,28nm,0.3s						
VILC	**Villavicencio,**	**1.16**	**177**	*e*P	Pn	10 44 52.2	+0.2
VILC				*e*S	Sn	10 45 11.2	-0.5
VILC				*i*		10 45 13.1	
	comp=Z,67nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.43**	**331**	*e*P	Pn	10 44 53.6	-0.9
PTBC				*e*S	Sn	10 45 15.1	-1.2
PTBC				*i*		10 45 20.4	
	comp=Z,16nm,0.1s						
GUY2C	**Guyana, Caldas**	**1.60**	**268**	*e*P	Pn	10 44 56.8	-0.1
GUY2C				*e*S	Sn	10 45 19.6	-0.6
PRAC	**Prado**	**1.92**	**216**	*e*P	Pn	10 44 59.5	-0.5
PRAC				*e*S	Sn	10 45 25.2	-0.9
PRAC				*i*		10 45 26.9	
	comp=Z,37nm,0.3s						
PTGC	**Puerto Gaitan,**	**1.94**	**124**	*e*P	Pn	10 44 59.1	-1.1
PTGC				*e*S	Sn	10 45 23.9	-2.4
HELC	**Santa Helena**	**1.98**	**297**	*e*P	Pn	10 45 01.1	0.0
HELC				*e*S	Sn	10 45 27.6	-0.2
ORTC	**Ortega, Tolima**	**2.02**	**228**	*e*P	Pn	10 45 00.2	-0.9
ORTC				*e*S	Sn	10 45 26.8	-1.2
ORTC				*i*		10 45 29.6	
	comp=Z,14nm,0.2s						
PAMC	**Pamplona, Colo**	**2.30**	**27**	*e*P	Pn	10 45 05.0	0.0
CBOC	**Ciudad Bolivar**	**2.32**	**285**	*e*P	Pn	10 45 05.1	+0.2
CBOC				*e*S	Sn	10 45 34.7	0.0
OCAC	**Ocana**	**2.97**	**8**	*e*P	Pn	10 45 12.5	-0.6

RSNC 19 10:44:53.1±0.7, 6°71N×73°16W, h116km±9km, ML2.3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.12**	**193**	*e*P	Pn	10 45 09.2	-0.2
BARC				*i*		10 45 24.4	
	comp=Z,56nm,0.3s						
PAMC	**Pamplona, Colo**	**0.78**	**36**	*e*P	Pn	10 45 12.6	-0.6
PAMC				*e*S	Sn	10 45 28.4	0.0
PAMC				*i*		10 45 30.8	
	comp=Z,32nm,0.6s						
PAMC	**Pamplona, Colo**	**0.78**	**36**	*e*S	Sn	10 45 28.4	0.0
PTBC	**PUERTO BERRIO,**	**1.30**	**263**	*e*P	Pn	10 45 17.7	-0.3
PTBC				*e*S	Sn	10 45 35.8	-1.1
PTBC				*i*		10 45 38.3	
	comp=Z,29nm,0.4s						
CHIC	**Chingaza**	**2.14**	**196**	*e*P	Pn	10 45 27.9	-0.7
CHIC				*e*S	Sn	10 45 55.5	-0.2
CHIC				*i*		10 46 02.0	
	comp=Z,7.4nm,0.6s						
ROSC	**El Rosal**	**2.19**	**212**	*e*P	Pn	10 45 28.6	-0.5
ROSC				*e*S	Sn	10 45 58.6	+2.0
ROSC				*i*		10 46 06.7	
	comp=Z,21nm,0.3s						
HELC	**Santa Helena**	**2.41**	**258**	*e*P	Pn	10 45 33.9	+1.9
HELC				*e*S	Sn	10 46 01.9	+0.2
HELC				*i*		10 46 07.3	
	comp=Z,23nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**294**	*e*P	Pn	10 45 36.5	+2.7
UREC				*i*		10 46 14.3	
	comp=Z,15nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.64**	**236**	*e*P	Pn	10 45 34.5	-0.5
GUY2C				*e*S	Sn	10 46 10.5	+3.3
GUY2C				*i*		10 46 13.0	
	comp=Z,11nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.96**	**254**	*e*P	Pn	10 45 36.4	-2.5
CBOC				*e*S	Sn	10 46 13.5	-0.7
CBOC				*i*		10 46 24.3	
	comp=Z,7.0nm,0.5s						
DBBC	**Dabeiba**	**3.05**	**276**	*e*P	Pn	10 45 41.8	+1.8
DBBC				*e*S	Sn	10 46 12.4	-3.7
DBBC				*i*		10 46 15.8	
	comp=Z,8.0nm,0.3s						

WEL 19 10:46:03.3±0.6, 34°S±5°×17°9W±1°1, h33km, M4.1/24, mB4.8/15, ML4.6/31, MLv4.4/24, Mw(mB)4.0/15, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.20**	**213**	P	Pn	10 47 05.5	+0.5
MXZ				S	Sn	10 47 49.8	-3.0
WMGZ	**Waiomatatini S**	**4.37**	**210**	P	Pn	10 47 08.7	+1.4
WMGZ				S	Sn	10 47 56.9	-0.1
PKGZ	**Pakihiroa**	**4.57**	**212**	P	Pn	10 47 10.9	+0.8
PKGZ				S	Sn	10 48 00.3	-1.8
HAZ	**Te Kaha**	**4.60**	**216**	P	Pn	10 47 11.6	+1.1
HAZ				S	Sn	10 48 02.7	-0.1
PUZ	**Puketiti**	**4.65**	**210**	P	Pn	10 47 11.6	+0.4
PUZ				S	Sn	10 48 03.9	-0.1
RUGZ	**Raukumara Rang**	**4.82**	**215**	P	Pn	10 47 13.9	+0.3
RUGZ				S	Sn	10 48 09.2	+0.8
GLKZ	**Green Lake**	**4.85**	**9**	P	Pn	10 47 11.7	-2.2
GLKZ				S	Sn	10 48 05.8	-3.1
TWGZ	**Tauwhareparae**	**4.85**	**211**	P	Pn	10 47 15.6	+1.6
TWGZ				S	Sn	10 48 09.7	+0.6
CNGZ	**Carnagh Statio**	**5.02**	**208**	P	Pn	10 47 18.1	+1.8
TKGZ	**Te Karaka**	**5.13**	**211**	P	Pn	10 47 18.5	+0.7
TKGZ				S	Sn	10 48 14.5	-1.3
MWZ	**Matawai**	**5.18**	**214**	P	Pn	10 47 18.0	-0.6
MWZ				S	Sn	10 48 16.7	-0.6
RIGZ	**Rimuhau**	**5.39**	**210**	P	Pn	10 47 22.1	+0.7
RIGZ				S	Sn	10 48 20.6	-1.7
PRGZ	**Paritu Road**	**5.53**	**208**	P	Pn	10 47 24.0	+0.8
KARZ	**Kaharoa**	**5.62**	**224**	P	Pn	10 47 24.1	-0.4
TARZ	**Mount Tarawera**	**5.62**	**221**	P	Pn	10 47 29.4	+4.8
SNGZ	**Shannon Statio**	**5.63**	**212**	P	Pn	10 47 25.7	+1.0
SNGZ				S	Sn	10 48 25.7	-2.6
MUGZ	**Murupara**	**5.66**	**218**	P	Pn	10 47 25.6	+0.5
RTZ	**Ruatahuna**	**5.67**	**215**	P	Pn	10 47 26.2	+0.9
KNZ	**Kokohu**	**5.70**	**209**	P	Pn	10 47 24.9	-0.6
MHGZ	**Mahia Peninsul**	**5.72**	**206**	P	Pn	10 47 25.1	-0.8
MKAZ	**Moumakai**	**5.76**	**237**	P	Pn	10 47 28.8	+2.4
ETAZ	**East Tamaki Re**	**5.86**	**239**	P	Pn	10 47 30.6	+2.9
TOZ	**Tahuroa Road**	**5.88**	**230**	P	Pn	10 47 30.4	+2.3
WCZ	**Waipu Caves**	**5.91**	**250**	P	Pn	10 47 28.8	+0.3
MTHZ	**Maungataniwha**	**5.92**	**215**	P	Pn	10 47 30.6	+1.9
NMHZ	**Naumai**	**6.13**	**214**	P	Pn	10 47 33.0	+1.4
BKZ	**Black Stump Fm**	**6.33**	**215**	P	Pn	10 47 34.7	+0.3
OUZ	**Omahuta**	**6.35**	**257**	P	Pn	10 47 34.2	-0.4
MCHZ	**McNeill Hill**	**6.46**	**212**	P	Pn	10 47 36.5	+0.4
KWHZ	**Kaweka Forest**	**6.57**	**214**	P	Pn	10 47 37.1	-0.5
KAHZ	**Kahuranaki**	**6.68**	**210**	P	Pn	10 47 38.8	-0.3
TMVZ	**Te Maari**	**6.69**	**220**	P	Pn	10 47 39.7	+0.3
OTVZ	**Oturere**	**6.75**	**219**	P	Pn	10 47 41.3	+1.1
HIZ	**Hauiti**	**6.76**	**227**	P	Pn	10 47 41.2	+0.9
KRHZ	**Kereru**	**6.77**	**213**	P	Pn	10 47 39.5	-0.9
SNVZ	**South Ngauruho**	**6.78**	**219**	P	Pn	10 47 42.2	+1.6
BHHZ	**Black Hill Sta**	**6.79**	**216**	P	Pn	10 47 40.4	-0.3
COVZ	**Chateau Observ**	**6.84**	**220**	P	Pn	10 47 45.8	+4.4
PXZ	**Pawanui**	**6.88**	**209**	P	Pn	10 47 43.1	+1.2
WNVZ	**Wahianoa**	**6.91**	**219**	P	Pn	10 47 43.3	+1.0
PNHZ	**Pukenui**	**7.07**	**213**	P	Pn	10 47 43.9	-0.5
WPHZ	**Waipukurau**	**7.09**	**211**	P	Pn	10 47 44.7	+0.1
PRHZ	**Porangahau**	**7.17**	**209**	P	Pn	10 47 44.7	-1.1
BFZ	**Birch Farm**	**7.68**	**209**	P	Pn	10 47 50.2	-2.7
PRWZ	**Pori Road**	**7.69**	**211**	P	Pn	10 47 47.8	-5.1

*IDC **19** 10:59:39.8±2.3, 56°24N×148°55W, h0km, mb3.5/2, mbtmp3.6/7, ML3.4/5, MS3.2/3, Error ellipse: s-maj=37.5km s-min=23.4km az=172.0*

*NEIC **19** 10:59:41.3±1.2, 56°4N±0°1×148°6W±0°1, h20km±9km, ML3.9/72, ML3.5(AEIC), Error ellipse: s-maj=15.7km s-min=7.9km az=165.0*

*AEIC **19** 10:59:46.2±1.1, 56°46N±0°09×148°6W±0°1, h10km±8km, Error ellipse: s-maj=13.5km s-min=8.5km az=162.0*

ISC 19 10:59:41.1±1.1, 56°46N±0°09×148°62W±0°05, h10km, n288, σ1§02/281, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.53**	**303**	Pn	**Pn**	**11 00 22.1**	**-0.1**
KDAK	**Kodiak Island**	**2.53**	**303**		**Sn**	**11 00 50.8**	**-0.3**
KDAK	**Kodiak Island**	**2.53**	**303**	P	**Pn**	**11 00 22.1**	**-0.1**
	baz=121						
KDAK	**Kodiak Island**	**2.53**	**303**	Pn	**Pn**	**11 00 22.1**	**-0.1**
	8.7nm,0.3s,baz=146,slow=4.7,SNR=157						
KDAK				Sn	**Sn**	**11 00 49.2**	**-3.8**
	24nm,0.3s,baz=49,slow=21,SNR=25						
KDAK				LR	LR	11 01 36.7	
	comp=Z,266nm,20.2s,baz=142,slow=43						
	20nm,0.3s						
OHAK	**Old Harbor**	**2.67**	**288**	Pn	**Pn**	**11 00 23.6**	**-0.5**
OHAK	**Old Harbor**	**2.67**	**288**		**Sn**	**11 00 53.0**	**-3.5**
OHAK	**Old Harbor**	**2.67**	**288**	IAML		11 01 00.0	
	comp=N,175nm,0.2s						
OHAK				IAML		11 01 00.3	
	comp=E,304nm,0.4s						
OHAK	**Old Harbor**	**2.67**	**288**	P	**Pn**	**11 00 23.5**	**-0.6**
OHAK	**Old Harbor**	**2.67**	**288**	P	**Pn**	**11 00 23.5**	**-0.6**
	baz=106						
OHAK				S	**Sn**	**11 00 53.3**	**-3.2**
	baz=106						
SYI	**Shuyak Island**	**2.96**	**318**	Pn	**Pn**	**11 00 28.5**	**+0.4**
SYI	**Shuyak Island**	**2.96**	**318**		**Sn**	**11 01 02.9**	**-0.7**
Q20K	**Shuyak Island**	**2.96**	**318**	P	**Pn**	**11 00 28.5**	**+0.4**
	baz=136						
Q20K				S	**Sn**	**11 01 02.9**	**-0.7**
	baz=136						
Q23K	**Middleton Isla**	**3.21**	**21**		**Pn**	**11 00 31.1**	**-0.4**
Q23K					**Sn**	**11 01 07.5**	**-2.3**
Q23K	**Middleton Isla**	**3.21**	**21**	IAML		11 01 10.1	
	comp=E,175nm,1.0s						
Q23K	**Middleton Isla**	**3.21**	**21**	P	**Pn**	**11 00 31.1**	**-0.4**
	baz=202						
Q23K				S	**Sn**	**11 01 08.1**	**-1.7**
	baz=202						
MID	**Middleton Isla**	**3.21**	**21**	Pn	**Pn**	**11 00 31.4**	**-0.1**
MID				IAML		11 01 16.0	
	comp=E,171nm,0.9s						
MID	**Middleton Isla**	**3.21**	**21**		**Sn**	**11 01 05.7**	**-4.1**
MID	**Middleton Isla**	**3.21**	**21**	P	**Pn**	**11 00 31.4**	**-0.1**
CNPM	**China Poot**	**3.37**	**337**		**Pn**	**11 00 33.9**	**+0.1**
BRSE	**Bradley Lake S**	**3.47**	**342**		**Pn**	**11 00 35.2**	**0.0**
BRSE	**Bradley Lake S**	**3.47**	**342**	P	**Pn**	**11 00 35.1**	**-0.1**
	baz=160						
BRSE				S	**Sn**	**11 01 15.2**	**-1.1**
	baz=160						
BRLK	**Bradley Lake**	**3.52**	**341**	Pn	**Pn**	**11 00 35.7**	**-0.2**
BRLK				IAML		11 01 22.2	
	comp=E,118nm,0.4s						
HOM	**Homer**	**3.58**	**335**		**Pn**	**11 00 37.2**	**+0.7**
HOM				IAML		11 01 26.2	
	comp=E,282nm,0.9s						
HOM	**Homer**	**3.58**	**335**	P	**Pn**	**11 00 37.3**	**+0.7**
	baz=152						
P23K	**Montague Islan**	**3.60**	**10**		**Pn**	**11 00 36.5**	**-0.4**
P23K					**Sn**	**11 01 16.8**	**-2.7**
P23K	**Montague Islan**	**3.60**	**10**	P	**Pn**	**11 00 36.5**	**-0.4**
	baz=190						
P23K				S	**Sn**	**11 01 16.8**	**-2.7**
	baz=190						
Q19K	**Cape Douglas,**	**3.66**	**315**		**Pn**	**11 00 38.8**	**+1.1**
Q19K				IAML		11 01 28.6	
	comp=N,252nm,0.7s						
Q19K	**Cape Douglas,**	**3.66**	**315**	P	**Pn**	**11 00 38.6**	**+0.9**
	baz=131						
SEW	**Seward**	**3.68**	**354**		**Pn**	**11 00 37.6**	**-0.3**
SEW	**Seward**	**3.68**	**354**	P	**Pn**	**11 00 37.6**	**-0.3**
	baz=172						
KAPH	**Katmai Pasha**	**3.75**	**307**		**Pn**	**11 00 39.8**	**+0.7**
KAHG	**Katmai Hook Gl**	**3.79**	**305**		**Pn**	**11 00 40.9**	**+1.4**
AU22	**Augustine Moun**	**3.85**	**321**		**Pn**	**11 00 41.8**	**+1.4**
AUJK	**Augustine Jueg**	**3.86**	**321**		**Pn**	**11 00 42.0**	**+1.6**
AUCH	**Augustine Cone**	**3.88**	**321**		**Pn**	**11 00 42.2**	**+1.4**
KCE	**Katmai Mt Cerb**	**3.98**	**299**		**Pn**	**11 00 44.0**	**+1.9**
P19K	**Oil Pt**	**4.03**	**324**		**Pn**	**11 00 43.2**	**+0.4**
P19K	**Oil Pt**	**4.03**	**324**	P	**Pn**	**11 00 43.7**	**+0.9**
	baz=141						
O22K	**Cooper Landing**	**4.07**	**352**		**Pn**	**11 00 43.4**	**+0.1**
O22K	**Cooper Landing**	**4.07**	**352**	P	**Pn**	**11 00 43.1**	**-0.2**
	baz=171						
KAHC	**Katmai Hardscr**	**4.08**	**305**		**Pn**	**11 00 44.3**	**+0.8**
KAHC	**Katmai Hardscr**	**4.08**	**305**	P	**Pn**	**11 00 44.3**	**+0.8**
	baz=120						
HIN	**Hinchinbrook I**	**4.10**	**15**		**Pn**	**11 00 43.9**	**+0.1**
HIN				IAML		11 01 36.9	
	comp=E,199nm,0.9s						
KAIM	**Kayak Island**	**4.12**	**31**	Pn	**Pn**	**11 00 44.2**	**+0.1**
KAIM				IAML		11 01 39.1	
	comp=E,168nm,0.6s						
KAIM				IAML		11 01 39.6	
	comp=N,188nm,0.7s						
KAIM	**Kayak Island**	**4.12**	**31**	P	**Pn**	**11 00 43.8**	**-0.2**
	baz=214						
SLKM	**Skilak Lake**	**4.14**	**349**		**Pn**	**11 00 44.4**	**0.0**
O20K	**Slope Mountain**	**4.20**	**331**		**Pn**	**11 00 45.3**	**+0.1**
O20K	**Slope Mountain**	**4.20**	**331**	P	**Pn**	**11 00 45.3**	**+0.1**
	baz=148						
IVE	**Iliamna Volcan**	**4.25**	**329**		**Pn**	**11 00 45.6**	**-0.3**
ILSW	**Iliamna Southw**	**4.26**	**328**		**Pn**	**11 00 46.1**	**+0.1**
ILSW				IAML		11 01 40.8	
	comp=N,135nm,0.4s						
ILSW				IAML		11 01 42.8	
	comp=E,105nm,0.4s						
KELA	**Mount Kelaz**	**4.33**	**300**		**Pn**	**11 00 47.8**	**+0.9**
CNTC	**Contact Creek**	**4.33**	**298**		**Pn**	**11 00 48.0**	**+1.1**
Q17K	**Contact Creek**	**4.33**	**298**	P	**Pn**	**11 00 48.0**	**+1.1**
	baz=112						
EYAK	**Cordova Ski Ar**	**4.37**	**19**		**Pn**	**11 00 47.5**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.37**	**19**	P	**Pn**	**11 00 47.8**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.37**	**19**	P	**Pn**	**11 00 47.5**	**+0.1**
	baz=201						
SUCK	**Suckling Hills**	**4.43**	**33**		**Pn**	**11 00 48.7**	**+0.4**
SUCK				IAML		11 01 45.2	
	comp=E,66nm,0.6s						
SUCK				IAML		11 01 47.4	
	comp=N,88nm,0.6s						
FID	**Port Fidalgo**	**4.44**	**14**		**Pn**	**11 00 48.1**	**-0.3**
FID				IAML		11 01 38.6	
	comp=E,121nm,0.4s						
FID

WAX	Waxell Ridge	5.01	35			Pn	11 00 56.3	-0.1
WAX	Waxell Ridge comp=E,121nm,0.3s	5.01	35	IAML			11 01 56.0	
WAX	 comp=N,97nm,0.5s			IAML			11 02 01.8	
BARK	Barkley Ridge	5.10	37			Pn	11 00 57.4	-0.1
N20K	Mount Spurr baz=157	5.10	340	P		Pn	11 00 57.5	-0.1
SPCR	Spurr Chakacha	5.10	340			Pn	11 00 57.5	-0.1
SPCN	Chakachatna No	5.12	340			Pn	11 00 58.2	+0.4
MESA	MESA	5.12	41	Pn		Pn	11 00 57.9	0.0
MESA	 comp=N,80nm,0.3s			IAML			11 02 34.6	
MESA	 comp=E,89nm,1.0s			IAML			11 02 42.6	
MESA	MESA baz=226	5.12	41	P		Pn	11 00 57.6	-0.4
SUA	Susitna One	5.13	349	Pn		Pn	11 00 58.0	0.0
SUA	Susitna One baz=167	5.13	349	P		Pn	11 00 58.1	0.0
PMR	Palmer	5.15	357	Pn		Pn	11 00 58.4	+0.3
PMR	 comp=N,52nm,0.4s			IAML			11 01 58.2	
PMR	 comp=E,36nm,0.7s			IAML			11 02 02.9	
PMR	Palmer	5.15	357	P		Pn	11 00 58.5	+0.3
PMR	Palmer baz=177	5.15	357	P		Pn	11 00 58.5	+0.3
SPCP	Crater Peak Br	5.15	341			Pn	11 00 58.8	+0.5
CRQM	Cirque	5.17	31			Pn	11 00 58.6	0.0
CRQM	Cirque comp=N,57nm,0.5s	5.17	31	IAML			11 02 00.2	
CRQM	 comp=E,72nm,0.7s			IAML			11 02 05.3	
CRQE	Cirque baz=216	5.18	32	P		Pn	11 00 58.6	-0.1
KLU	Klutina	5.23	14			Pn	11 00 59.9	+0.5
KLU	Klutina comp=N,72nm,0.3s	5.23	14	IAML			11 01 58.7	
KLU	 comp=E,81nm,0.4s			IAML			11 02 02.0	
KLU	Klutina baz=196	5.23	14	P		Pn	11 00 59.9	+0.5
TGL	Tana Glacier	5.26	33			Pn	11 01 00.0	+0.2
TGL	Tana Glacier comp=N,41nm,0.5s	5.26	33	IAML			11 02 01.5	
TGL	 comp=E,56nm,0.6s			IAML			11 02 05.8	
BAGL	Bagley Icefiel	5.29	38			Pn	11 01 00.3	+0.2
ISLE	Juniper Island	5.30	36	Pn		Pn	11 01 00.5	+0.2
ISLE	 comp=N,34nm,1.1s			IAML			11 02 08.4	
GHO	Glory Hole Cre	5.33	358			Pn	11 01 01.4	+0.8
N19K	Bonanza Creek	5.33	327			Pn	11 01 00.7	0.0
N19K	Bonanza Creek baz=143	5.33	327	P		Pn	11 01 00.5	-0.2
SPNN	North Nagishla	5.35	338			Pn	11 01 01.6	+0.5
SML	Sawmill	5.36	1	Pn		Pn	11 01 01.9	+0.7
SML	Sawmill baz=181	5.36	1	P		Pn	11 01 01.9	+0.7
M23K	Glacier View	5.37	5			Pn	11 01 02.0	+0.9
M23K	Glacier View baz=185	5.37	5	P		Pn	11 01 02.1	+0.9
SCM	Sheep Creek Mo	5.43	7			Pn	11 01 02.8	+0.7
SCM	Sheep Creek Mo baz=187	5.43	7	P		Pn	11 01 02.7	+0.7
CHGN	Chignik	5.44	272	Pn		Pn	11 01 02.5	+0.3
VRDI	Verde Repeater	5.48	27	Pn		Pn	11 01 03.1	+0.3
SAMH	Samovar Hills	5.53	45			Pn	11 01 03.7	+0.2
KIAG	Kiagna River	5.54	34			Pn	11 01 03.7	0.0
N25K	Chitina, Valde	5.56	20			Pn	11 01 04.4	+0.5
N25K	Chitina, Valde baz=203	5.56	20	P		Pn	11 01 04.7	+0.8
GLB	Gilahina Butte	5.58	25			Pn	11 01 04.3	+0.2
O17K	Koliganek Bris	5.58	310			Pn	11 01 04.5	+0.4
O17K	Koliganek Bris baz=123	5.58	310	P		Pn	11 01 04.5	+0.4
GRNC	Granite Creek	5.59	37			Pn	11 01 04.3	0.0
TABL	Table Mountain	5.59	41			Pn	11 01 04.8	+0.3
P16K	Nushagak River	5.64	301			Pn	11 01 05.8	+1.0
P16K	Nushagak River baz=114	5.64	301	P		Pn	11 01 05.8	+1.0
N18K	Kilae Creek	5.68	321			Pn	11 01 05.2	-0.3
N18K	Kilae Creek baz=135	5.68	321	P		Pn	11 01 05.2	-0.3
PTPK	Patty Peak	5.71	31			Pn	11 01 06.3	+0.3
PCA	Pinnacle	5.72	47			Pn	11 01 06.1	0.0
MCARA	McCarthy VSAT	5.72	28			Pn	11 01 06.6	+0.6
MCARA	McCarthy VSAT baz=212	5.72	28	P		Pn	11 01 06.6	+0.6
PINM	Pinnacle baz=233	5.72	47	P		Pn	11 01 06.1	0.0
SKT	Skwentna	5.73	346			Pn	11 01 06.6	+0.4
SKT	Skwentna baz=164	5.73	346	P		Pn	11 01 06.6	+0.4
M24K	Tolsona, Glenn	5.80	11			Pn	11 01 08.1	+1.0
M24K	Tolsona, Glenn baz=193	5.80	11	P		Pn	11 01 08.1	+1.0
PNL	Peninsula	5.86	53			Pn	11 01 07.7	-0.1
PNL	Peninsula	5.86	53	P		Pn	11 01 08.0	+0.1
PNL	Peninsula baz=240	5.86	53	P		Pn	11 01 07.7	-0.1
BARN	Barnard Glacie	5.86	35			Pn	11 01 08.2	+0.1
SVW2	Sparrevohn	5.89	325	Pn		Pn	11 01 07.8	-0.5
SVW2	Sparrevohn	5.89	325	P		Pn	11 01 08.0	-0.3
CTG	Chitna Glacier baz=223	5.89	37	P		Pn	11 01 08.6	+0.1
CTGM	Chitina Glacie	5.90	37			Pn	11 01 08.6	0.0
BCPM	Bancas Point	5.90	50			Pn	11 01 08.8	+0.4
M20K	Styx River	5.91	339			Pn	11 01 08.6	0.0
M20K	Styx River baz=155	5.91	339	P		Pn	11 01 08.6	0.0
LOGN	Logan Glacier	5.91	39			Pn	11 01 08.8	0.0
O16K	Kokwok River B	5.93	306			Pn	11 01 09.3	+0.5
O16K	Kokwok River B baz=118	5.93	306	P		Pn	11 01 09.3	+0.5
WACK	Wrangell Chich	5.96	20			Pn	11 01 10.5	+0.9
CUT	Chulitna	6.02	353	Pn		Pn	11 01 11.3	+1.2
N17K	Nushagak Hills	6.06	316			Pn	11 01 10.8	+0.2
N17K	Nushagak Hills baz=129	6.06	316	P		Pn	11 01 10.8	+0.2
WAT6	Susitna Watana	6.15	4			Pn	11 01 12.7	+0.6
WAT6	Susitna Watana baz=184	6.15	4	P		Pn	11 01 12.7	+0.6
M19K	Big River Lodg	6.21	334			Pn	11 01 12.5	-0.2
M19K	Big River Lodg baz=149	6.21	334	P		Pn	11 01 12.5	-0.2
HARP	HAARP	6.21	15			Pn	11 01 13.9	+1.2
HARP	HAARP baz=198	6.21	15	P		Pn	11 01 13.9	+1.2
M18K	Stony River	6.26	327			Pn	11 01 13.2	-0.2
M18K	Stony River baz=141	6.26	327	P		Pn	11 01 13.2	-0.2
WAT1	Susitna Watana	6.39	0			Pn	11 01 16.0	+0.8
WAT1	Susitna Watana baz=180	6.39	0	P		Pn	11 01 16.0	+0.8
WAT7	Susitna Watana	6.39	359			Pn	11 01 16.0	+0.7
CHNA	Chernabura Isl baz=71	6.42	260	P		Pn	11 01 14.4	-1.2
CNBA	Chernabura Isl	6.42	260			Pn	11 01 14.4	-1.2
O29M	Mount Kennedy	6.53	50			Pn	11 01 18.0	+0.7
O29M	Mount Kennedy baz=238	6.53	50	P		Pn	11 01 18.0	+0.7
L19K	White Mountain	6.56	334			Pn	11 01 17.2	-0.3
L19K	White Mountain baz=148	6.56	334	P		Pn	11 01 17.2	-0.3
O15K	Ungalikthiuk R	6.57	299			Pn	11 01 18.9	+1.2
O15K	Ungalikthiuk R baz=110	6.57	299	P		Pn	11 01 18.9	+1.2
P29M	Windy Craggy	6.59	57			Pn	11 01 16.9	-1.1
P29M	Windy Craggy baz=245	6.59	57	P		Pn	11 01 16.9	-1.1
L20K	Farewell, AK	6.60	338			Pn	11 01 18.4	+0.3
L20K	Farewell, AK baz=154	6.60	338	P		Pn	11 01 18.4	+0.3
DHY	Denali Highway	6.66	5	Pn		Pn	11 01 21.1	+2.1
DHY	Denali Highway baz=186	6.66	5	P		Pn	11 01 20.4	+1.4
YUK8	Steele Glacier	6.66	40			Pn	11 01 20.8	+1.6
YUK8	Steele Glacier baz=227	6.66	40	P		Pn	11 01 20.8	+1.6
N16K	Nishlik Lake	6.67	311			Pn	11 01 19.8	+0.7
N16K	Nishlik Lake baz=123	6.67	311	P		Pn	11 01 19.8	+0.7
YUK2	White River	6.67	34			Pn	11 01 20.4	+1.3
PPLA	Purkeypile	6.70	346			Pn	11 01 21.2	+1.6
PPLA	Purkeypile baz=163	6.70	346	P		Pn	11 01 21.2	+1.6
PAX	Paxson	6.72	12			Pn	11 01 20.8	+1.0
PAX	Paxson baz=195	6.72	12	P		Pn	11 01 20.7	+1.0
M17K	Holitna River	6.73	321			Pn	11 01 20.3	+0.5
M17K	Holitna River baz=134	6.73	321	P		Pn	11 01 20.3	+0.5
SDPT	Sand Point	6.76	265			Pn	11 01 20.2	0.0
SDPT	Sand Point	6.76	265	P		Pn	11 01 20.4	+0.2
SDPT	Sand Point baz=76	6.76	265	P		Pn	11 01 20.2	0.0
M27K	Edge Creek, AK	6.84	27			Pn	11 01 23.2	+1.7
M27K	Edge Creek, AK baz=213	6.84	27	P		Pn	11 01 22.2	+0.7
S31K	Pelican	6.90	72	Pn		Pn	11 01 20.0	-2.1
MENT	Mentasta	6.95	19			Pn	11 01 24.6	+1.7
RND	Reindeer	6.97	359			Pn	11 01 24.3	+1.2
M16K	Timber Creek	7.05	315			Pn	11 01 25.0	+0.7
M16K	Timber Creek baz=126	7.05	315	P		Pn	11 01 25.0	+0.7
N15K	Kwethluk River	7.09	306			Pn	11 01 25.9	+1.2
N15K	Kwethluk River baz=117	7.09	306	P		Pn	11 01 25.9	+1.2
L18K	Granite Mounta	7.09	328			Pn	11 01 23.8	-1.0
P30M	Million Dollar	7.16	54			Pn	11 01 25.9	+0.2
P30M	Million Dollar baz=244	7.16	54	P		Pn	11 01 26.4	+0.7
CAST	Castle Rocks	7.19	347			Pn	11 01 26.8	+0.6
CAST	Castle Rocks baz=164	7.19	347	P		Pn	11 01 26.8	+0.6
KTH	Kantishna Hill	7.21	352			Pn	11 01 28.0	+1.5
R31K	City Hall, Gus	7.22	69			Pn	11 01 25.6	-1.0
HYT	Haines Junctio	7.26	48	Pn		Pn	11 01 27.6	+0.3
MCK	McKinley	7.29	359			Pn	11 01 28.7	+1.1
MCK	McKinley baz=178	7.29	359	P		Pn	11 01 28.7	+1.1
SIT	Sitka	7.34	80			Pn	11 01 24.2	-3.9
SIT	Sitka	7.34	80	P		Pn	11 01 24.1	-4.0
TTA	Tatalina	7.48	333	P		Pn	11 01 30.4	+0.2
L17K	Donlin	7.53	323			Pn	11 01 30.9	0.0
L17K	Donlin baz=135	7.53	323	P		Pn	11 01 31.2	+0.4
M15K	Kasigluk River	7.59	309			Pn	11 01 32.6	+0.9
M15K	Kasigluk River baz=119	7.59	309	P		Pn	11 01 32.6	+0.9
CHUM	Lake Minchumin	7.67	348			Pn	11 01 32.9	+0.3
CHUM	Lake Minchumin baz=164	7.67	348	P		Pn	11 01 32.9	+0.3
L16K	Owhat River	7.67	318			Pn	11 01 33.1	+0.4
L16K	Owhat River baz=129	7.67	318	P		Pn	11 01 33.1	+0.4
SKAG	Skagway	7.68	61	P		Pn	11 01 33.3	+0.5
BESE	Bessie Mountai	7.71	68			Pn	11 01 32.5	-0.9
S32K	Killisnoo	7.75	77			Pn	11 01 30.8	-2.9
BPAW	Bear Paw Mtn.	7.75	352			Pn	11 01 34.0	+0.2
BPAW	Bear Paw Mtn. baz=170	7.75	352	P		Pn	11 01 34.0	+0.2
N30M	Aishikik Lake	7.78	45			Pn	11 01 34.9	+0.5
N30M	Aishikik Lake baz=235	7.78	45	P		Pn	11 01 34.9	+0.5
JIS	Juneau Island	7.91	71			Pn	11 01 34.6	-1.3
JIS	Juneau Island	7.91	71	P		Pn	11 01 35.0	-1.0
M29M	Somme Creek	7.91	37			Pn	11 01 36.8	+0.6
M29M	Somme Creek baz=225	7.91	37	P		Pn	11 01 36.8	+0.6
K17K	Iditarod	7.96	326			Pn	11 01 36.5	-0.2
CCB	Clear Creek Bu	8.22	2			Pn	11 01 41.2	+0.9
WHY	Whitehorse	8.32	54	Pn		Pn	11 01 42.5	+0.8
IL31		8.38	5			Pn	11 01 42.9	+0.5
ILAR	Eielson Array comp=N,0.5nm,0.3s,baz=188,slow=13,SNR=19	8.38	5	Pn		Pn	11 01 43.5	+1.1
ILAR	 comp=N,0.6nm,0.3s,baz=192,slow=21,SNR=8.3 comp=N,0.8nm,0.3s			Sn		Sn	11 03 15.0	-2.0
COLA	College	8.45	2			Pn	11 01 44.9	+1.6
COLA	College	8.45	2	P		Pn	11 01 45.2	+1.9
P32M	Atlin baz=254	8.51	62	P		Pn	11 01 43.9	-0.3
MLY	Manley baz=172	8.66	354	P		Pn	11 01 47.5	+1.2
I23K	Minto, Yukon-K baz=177	8.72	358	P		Pn	11 01 48.9	+1.8
CRAG	Craig	8.75	90	P		Pn	11 01 43.6	-4.0
I21K	Tanana baz=168	8.90	351	P		Pn	11 01 50.9	+1.4
P33M	Teslin, Yukon baz=252	9.12	59	P		Pn	11 01 52.1	-0.6
DLBC	Dease Lake comp=N,1.5nm,0.3s,baz=268,slow=7.1,SNR=23 comp=N,1.3nm,0.3s	10.21	71	Pn		Pn	11 02 07.5	-0.2
G23K	Bananza Creek	10.30	357			Pn	11 02 10.0	+1.2
F20K	Avaraart Lake	11.13	345			Pn	11 02 20.4	+0.4
BMAR	Burnt Mountain	11.16	8	Pn		Pn	11 02 21.7	+1.1
E19K	Redstone River	11.73	344	Pn		Pn	11 02 29.9	+1.6
TOLK	Toolik Lake Re	12.23	358	Pn		Pn	11 02 35.4	+0.2
INK	Inuvik baz=214,slow=6.7,SNR=4.5 comp=N,1.3nm,0.8s	13.73	24	Pn		Pn	11 02 57.0	+1.5
B20K	Meade River	14.10	348	Pn		Pn	11 03 00.5	-0.1
C36M	Paulatuk	16.90	30	Pn		Pn	11 03 37.3	0.0
YKA	Yellowknife Ar comp=N,0.1nm,0.3s,baz=264,slow=11,SNR=9.7 comp=N,1.3nm,1.0s	18.13	57	P		P	11 03 54.7	+1.7
A36M	Sachs Harbour	18.37	23			Pn	11 03 55.6	+0.1
TIXI	Tiksi comp=N,33nm,18.8s,baz=198,slow=36	35.72	327	LR		LR	11 21 11.4	
TKL	Tuckaleechee C comp=N,35nm,18.4s,baz=12,slow=36	47.56	87	LR		LR	11 27 58.6	
H11N2	WAKE ISLAND Hy baz=31,slow=74	49.29	241	T		T	12 01 38.2	
H11N3	WAKE ISLAND Hy baz=31,slow=74	49.30	241	T		T	12 01 40.3	
H11N1	WAKE ISLAND Hy baz=31	49.31	241	T		T	12 01 42.5	
H11S1	WAKE ISLAND Hy baz=29,slow=76,SNR=11	50.43	240	T		T	12 03 04.7	
H11S2	WAKE ISLAND Hy baz=29,slow=76,SNR=9.1	50.45	240	T		T	12 03 04.7	
H11S3	WAKE ISLAND Hy baz=29,slow=76,SNR=8.7	50.45	240	T		T	12 03 04.7	
SONM	Songino Array comp=N,1.0nm,0.9s,baz=36,slow=5.5,SNR=6.4 comp=N,1.0nm,0.9s	58.80	310	P		P	11 09 41.4	+2.1
MKAR	Makanchi Array comp=N,0.2nm,0.7s,baz=45,slow=5.4,SNR=1.0 comp=N,0.2nm,0.7s	68.66	325	P		P	11 10 45.2	+1.1

*NOU **19** 10:59:43.3, 40˚.71S×177˚.52E, h12km, MLv3.9/8, Off E. Coast of N. Island, N.Z.*
*WEL **19** 10:59:50.2±0.5, 40˚.3±3˚×17˚.7E±˚, h16km±3km, M3.6/20, ML4.0/21, MLv3.6/20, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2, confirmed*
ISC 19 10:59:50.0±1.2, **40˚.39S**±0˚.02×**176˚.79E**±0˚.04, **h17**km±8km, **n118**, σ0°**86**/**133**, **North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRHZ	Porangahau	0.17	314	P	Pg	10 59 54.5	+0.1
PRHZ				S	Sb	10 59 57.8	0.0
ANWZ	Angora Road	0.26	253	P	Pb	10 59 56.9	+0.8
PXZ	Pawanui	0.36	8	P	Pb	10 59 58.4	+0.5
PXZ				S	Sb	11 00 04.9	+1.7
WBFS	Weber Fire Sta	0.37	267	P	Pg	10 59 57.4	-0.2
WPHZ	Waipukurau	0.42	320	P	Pb	11 00 06.1	+1.1
WPWS	Waipawa Distri	0.47	340	P	Pb	10 59 59.8	+0.1
WPWS				S	Sb	11 00 07.1	+0.7
DVHZ	Dannevirke	0.49	280	P	Pb	11 00 00.5	+0.4
DVHZ				S	Sb	11 00 08.3	+1.3
BFZ	Birch Farm	0.51	235	P	Pn	11 00 02.1	-0.4
BFZ	Birch Farm	0.51	235	P	Pb	11 00 01.8	+1.3
BFZ				S	Sn	11 00 11.2	+0.3
DVHS	Dannevirke Hig	0.56	289	P	Pg	11 00 00.5	-0.6
DVHS				S	Sb	11 00 09.3	+0.3
KAHZ	Kahuranaki	0.59	6	P	Pn	11 00 02.9	-0.8
KAHZ				S	Sn	11 00 13.0	+0.1
PRWZ	Pori Road	0.65	255	P	Pn	11 00 04.0	-0.4
PRWZ				S	Sn	11 00 14.5	+0.1
PNHZ	Pukenui	0.66	316	P	Pb	11 00 03.2	+0.2
PNHZ				S	Sb	11 00 12.6	+0.8
WDPS	Woodville Poli	0.71	274	P	Pb	11 00 04.6	+0.8
WDPS				S	Sn	11 00 15.4	-0.3
TSZ	Takapari Road	0.72	297	P	Pb	11 00 04.1	+0.1
TSZ				S	Sn	11 00 14.9	-1.1
POWZ	Post Office Ro	0.78	269	P	Pg	11 00 05.8	+0.5
TIWZ	Tintock	0.79	240	P	Pg	11 00 06.1	+0.6
KRHZ	Kereru	0.81	336	P	Pg	11 00 05.6	-0.1
KRHZ				S	Sn	11 00 18.1	-0.2
MCHZ	McNeill Hill	0.94	355	P	Pb	11 00 07.6	-0.3
MRZ	Mangatainoka R	0.97	253	P	Pb	11 00 08.0	-0.3
TMWZ	Te Maipa	0.99	223	P	Pb	11 00 08.4	-0.3
KWHZ	Kaweka Forest	1.00	343	P	Pb	11 00 08.7	-0.2
BHHZ	Black Hill Sta	1.06	328	P	Pb	11 00 09.3	-0.6
BHHZ				S	Sn	11 00 24.1	-0.3
HOWZ	Holdsworth Sta	1.10	242	P	Pb	11 00 09.8	-0.8
HOWZ				S	Sb	11 00 24.7	+0.1
ARHZ	Aropaoanui	1.13	8	P	Pb	11 00 10.4	-0.6
OHWZ	Ohakea	1.15	279	P	Pg	11 00 12.4	+0.3
BKZ	Black Stump Fm	1.24	349	P	Pn	11 00 12.1	-0.5
BKZ	Black Stump Fm	1.24	349	P	Pn	11 00 12.0	-0.5
MTW	Mount Morrison	1.25	231	P	Pn	11 00 11.5	-1.1
MTW				S	Sb	11 00 28.4	-0.5
MOVZ	Moawhango	1.26	320	P	Pb	11 00 13.3	-0.1
NMHZ	Naumai	1.29	0	P	Pn	11 00 13.0	-0.2
OGWZ	Otaki Gorge	1.31	250	P	Pn	11 00 12.7	-0.7
TRWZ	Traveller	1.31	219	P	Pg	11 00 15.8	+0.4
WHHZ	Waihua	1.35	15	P	Pg	11 00 18.9	+2.9
WNVZ	Wahianoa	1.40	319	P	Pb	11 00 15.9	+0.1
TUVZ	Tukino	1.42	321	P	Pb	11 00 16.5	+0.4
MTVZ	Mangateitei	1.43	314	P	Pb	11 00 16.5	+0.3
PAWZ	Paruwai Farm	1.44	226	P	Pn	11 00 15.1	-0.2
WHVZ	Whangaehu Hut	1.44	319	P	Pb	11 00 16.7	+0.3
TRVZ	Turoa	1.45	318	P	Pb	11 00 16.8	+0.2
MAVZ	Matarangi	1.47	319	P	Pb	11 00 17.0	+0.1
FWVZ	Far West T-bar	1.48	319	P	Pb	11 00 17.2	+0.1
RAHZ	Arahi	1.48	9	P	Pn	11 00 15.3	-0.6
SNVZ	South Ngauruho	1.49	323	P	Pb	11 00 17.5	+0.2
CAW	Cannon Point	1.50	241	P	Pn	11 00 15.0	-1.1
OTVZ	Oturere	1.50	324	P	Pb	11 00 17.5	+0.1
ETVZ	East Tongariro	1.50	326	P	Pb	11 00 17.6	+0.1
KIW	Kapiti Island	1.51	251	P	Pn	11 00 15.8	-0.5
NGZ	Ngauruhoe	1.52	322	P	Pb	11 00 17.9	+0.1
KNZ	Kokohu	1.52	27	P	Pn	11 00 15.0	-1.4
TMVZ	Te Maari	1.52	326	P	Pb	11 00 17.8	0.0
WAZ	Wanganui	1.52	294	P	Pb	11 00 17.8	0.0
COVZ	Chateau Observ	1.53	320	P	Pb	11 00 18.0	+0.1
MTHZ	Maungataniwha	1.53	1	P	Pn	11 00 16.0	-0.5
NNVZ	North Ngauruho	1.55	324	P	Pb	11 00 18.4	+0.1
NTVZ	North Tongarir	1.55	326	P	Pb	11 00 18.4	+0.1
PKVZ	Pokaka	1.56	314	P	Pb	11 00 18.7	+0.2
KRVZ	Karewarewa	1.57	325	P	Pb	11 00 18.9	+0.3
WTVZ	West Tongariro	1.57	323	P	Pb	11 00 18.8	+0.1
MRHZ	Matea Rd	1.58	349	P	Pn	11 00 17.3	+0.1
RITZ	Rihia Road	1.58	333	P	Pb	11 00 19.1	+0.3
KATZ	Kakaramea	1.65	329	P	Pb	11 00 20.3	+0.4
SNGZ	Shannon Statio	1.66	15	P	Pn	11 00 17.7	-0.6
PLWZ	Palliser	1.66	224	P	Pn	11 00 17.0	-1.3
TWVZ	Taurewa	1.68	321	P	Pb	11 00 20.2	-0.3
PRGZ	Paritu Road	1.69	30	P	Pn	11 00 17.3	-1.3
RATZ	Rangitukua	1.71	332	P	Pb	11 00 21.4	+0.5
BHW	Baring Head	1.78	234	P	Pn	11 00 18.5	-1.4
SNZO	South Karori	1.83	239	P	Pn	11 00 20.2	-0.5
WHTZ	Whakaora	1.83	339	P	Pg	11 00 25.6	+0.4
POIZ	Poihipi	1.85	341	P	Pg	11 00 25.9	+0.4
ALRZ	Allen Road	1.85	349	P	Pb	11 00 24.1	+0.7
WATZ	Wairara	1.87	334	P	Pg	11 00 25.9	+0.1
MUGZ	Murupara	1.91	359	P	Pn	11 00 21.1	-0.6
PRRZ	Plateau Road	1.91	351	P	Pn	11 00 21.4	-0.3
WPRZ	Whakapapatarin	1.93	345	P	Pg	11 00 26.0	-0.1
VRZ	Vera Road	2.01	308	P	Pn	11 00 25.4	-0.6
HRRZ	Handcock Road	2.03	349	P	Pg	11 00 28.4	-0.5
KUTZ	Kaahu Road	2.04	338	P	Pb	11 00 26.3	-0.2
RRRZ	Republican Roa	2.06	354	P	Pg	11 00 28.8	-0.6
LREZ	Lake Rotokare	2.06	296	P	Pg	11 00 29.1	-0.4
TCW	Tory Channel	2.08	246	P	Pn	11 00 22.9	-1.2
GRRZ	Galatos Road	2.10	345	P	Pg	11 00 29.4	-0.9
HSRZ	Hossack Road	2.12	348	P	Pn	11 00 24.4	-0.2
MWZ	Matawai	2.13	16	P	Pn	11 00 23.5	-1.2
URZ	Urewera	2.14	7	P	Pn	11 00 23.8	-1.1
URZ	Urewera	2.14	7	P	Pn	11 00 23.8	-1.1
TARZ	Mount Tarawera	2.16	354	P	Pn	11 00 25.0	-0.3
DUWZ	D'Urville Isla	2.23	258	P	Pn	11 00 26.3	+0.2
PREZ	Palmer Road	2.28	296	P	Pb	11 00 31.2	+0.5
MHEZ	Mangahewa	2.31	304	P	Pg	11 00 34.7	+0.4
DREZ	Durham Road	2.33	300	P	Pb	11 00 32.6	+1.1
NEZ	North Egmont	2.36	297	P	Pb	11 00 32.3	+0.3
TWGZ	Tauwhareparae	2.39	23	P	Pn	11 00 27.8	-0.3
HIZ	Hauiti	2.40	321	P	Pb	11 00 30.9	+1.8
HIZ	Hauiti	2.40	321	P	Pn	11 00 29.5	+1.1
TUWZ	Tuamarina	2.40	243	P	Pn	11 00 26.7	-1.7
KHEZ	Kahui Hut	2.40	296	P	Pb	11 00 32.1	-0.7
KHEZ	Kahui Hut	2.40	296	P	Pb	11 00 33.3	+0.5
NMEZ	Namu Road	2.44	292	P	Pb	11 00 33.8	+0.4
PKE	Pukeiti	2.47	298	P	Pb	11 00 32.0	-1.9
RUGZ	Raukumara Rang	2.51	16	P	Pn	11 00 28.8	-1.4
NBEZ	Newall Road No	2.52	295	P	Pb	11 00 34.1	-0.6
BSWZ	Blackbirch Sta	2.58	238	P	Pn	11 00 29.0	-1.9
PKGZ	Pakihiroa	2.69	22	P	Pn	11

IRAZ	Razeghan	3.86	73	Pn		Pn		11 03 02.2	+2.3	
ISRB	Sarab	3.92	27	Pn		Pn		11 03 02.6	+1.9	
ITBZ	Tabriz	3.92	9	Pn		Pn		11 03 01.0	+0.4	
ISHB	Shabestar	3.92	2	Pn		Pn		11 03 01.2	+0.4	
JIR1	Jirandeh	4.28	56	Pn		Pn		11 03 07.7	+2.1	
IMRD	Marand	4.36	3	Pn		Pn		11 03 08.1	+1.4	
AKDM	Akdamar-Van	4.42	334	*e*P		Pn		11 03 10.0	+2.4	
VANB	Van	4.53	340	*e*P		Pn		11 03 10.9	+1.9	
IQOM	Qom	4.70	82	Pn		Pn		11 03 13.8	+2.4	
NAX	Nakhchivan	4.81	1	P		Pn		11 03 17.1	+4.3	
GRMI	Germi	4.87	24	Pn		Pn		11 03 15.4	+1.7	
IPIR	Pirpir	4.87	108	Pn		Pn		11 03 15.7	+1.8	
GAS1	Astara - Iran	4.88	34	Pn		Pn		11 03 15.4	+1.7	
JHBN	Jahan bin	4.89	114	Pn		Pn		11 03 15.5	+1.5	
GURO	Guroymak-BITLI	4.99	328	*e*P		Pn		11 03 17.0	+1.6	
GURO	Guroymak-BITLI	4.99	328	Pn		Pn		11 03 16.6	+1.2	
QAMS	Qamsar	5.01	95	Pn		Pn		11 03 18.3	+2.6	
MAKU	Maku	5.02	354	Pn		Pn		11 03 17.6	+1.7	
MAZI	Mazidag	5.08	309	*e*P		Pn		11 03 22.9	+6.4	
ZNGN	Zangian	5.08	115	Pn		Pn		11 03 17.9	+1.2	
SVAN	Silvan-Diyarba	5.09	319	*e*P		Pn		11 03 18.6	+2.0	
KLST	Kelardasht - M	5.09	63	Pn		Pn		11 03 19.5	+2.6	
LKRN	Lenkeran, Azer	5.12	31	P		Pn		11 03 19.8	+2.8	
IKLH	Kolahrood	5.24	100	Pn		Pn		11 03 21.1	+2.3	
IVRN	Varamin	5.25	81	Pn		Pn		11 03 21.5	+2.7	
MLAZ	Malazgirt-MUS	5.30	335	*e*P		Pn		11 03 20.9	+1.3	
MZPU	Pul - Mazandar	5.45	66	Pn		Pn		11 03 23.9	+2.2	
IBRJ	Brojen	5.48	115	Pn		Pn		11 03 23.7	+1.4	
AGRB	Hanur-Agry	5.56	340	*e*P		Pn		11 03 20.9	-2.3	
DYBB	Diyarbakir	5.57	312	*e*P		Pb		11 03 33.6	-4.0	
IDMV	Damavand	5.57	75	Pn		Pn		11 03 25.7	+2.2	
KRSH	Karshahi	5.59	92	Pn		Pn		11 03 25.9	+2.3	
ISFB	Sefidab	5.65	88	Pn		Pn		11 03 26.6	+2.2	
TASB	TASBURUN-IGDIR	5.70	351	*e*P		Pb		11 03 32.7	-7.0	
VRTB	Varto-Mus	5.75	328	*e*P		Pn		11 03 31.5	+5.7	
GNI	Garni	5.81	355	*e*P		Pb		11 03 36.9	-4.8	
GNI	Garni	5.81	355	Pn		Pn		11 03 26.0	-0.6	
GNI	Garni	5.81	355	Pn		Pn		11 03 25.9	-0.7	
	comp=E,0.9nm,0.3s,baz=154,slow=8.0,SNR=1.6									
GNI				Pg		Pb		11 03 40.5	-1.2	
	comp=E,1.7nm,0.3s,baz=12,slow=19,SNR=5.4									
GNI				Lg		Lg		11 04 56.4		
	comp=E,2.2nm,0.3s,baz=242,slow=11,SNR=3.5									
	comp=E,4.3nm,0.3s									
IGAR	Gharneh	5.88	107	Pn		Pn		11 03 29.6	+2.0	
IZEF	Zefreh	5.95	102	Pn		Pn		11 03 31.1	+2.4	
BNGB	Bingl	5.99	322	*e*P		Pn		11 03 30.1	+1.1	
KARO	Karliova-Bingo	6.05	326	*e*P		Pn		11 03 31.7	+1.7	
IFIR	Firoozkooh	6.16	76	Pn		Pn		11 03 33.9	+2.3	
KLNJ	Kolanjah	6.19	121	Pn		Pn		11 03 33.6	+1.6	
KOPR	Koprukoy-ERZUR	6.30	334	*e*P		Pn		11 03 37.7	+4.3	
GANJ	Ganja	6.32	6	P		Pn		11 03 37.0	+3.5	
IRAM	Ramesheh	6.38	112	Pn		Pn		11 03 35.7	+1.2	
PTK	Pertek	6.62	315	*e*P		Pn		11 03 39.5	+1.7	
SENK	Senkaya-Erzuru	6.66	339	*e*P		Pn		11 03 42.9	+4.6	
SEKA	Sheki	6.99	11	P		Pn		11 03 45.8	+3.1	
ANAR	Anarak	7.03	97	Pn		Pn		11 03 45.0	+1.7	
AKH	Akhalkalaki	7.20	348	Pn		Pn		11 03 48.6	+2.9	
AKH	Akhalkalaki	7.20	348	P		Pn		11 03 48.6	+2.9	
GAZ	Gaziantep	7.23	295	*e*P		Pb		11 04 04.7	-1.2	
GAZ	Gaziantep	7.23	295			Pn		11 03 44.2	-1.8	
ZKTA	Zakatala	7.33	7	P		Pn		11 03 52.1	+4.7	
ARPR	Arapgir-MALATY	7.39	312	*e*P		Pn		11 03 54.2	+5.9	
ASF	Jabal al Asfar	7.45	255	Pn		Pn		11 03 49.3	+0.2	
	comp=E,1.7nm,0.3s,baz=152,slow=1.6,SNR=6.0									
ASF				Pg		Pb		11 04 12.1	+2.4	
	comp=E,2.1nm,0.3s,baz=342,slow=0.3,SNR=5.6									
ASF				Lg		Lg		11 05 55.2		
	comp=E,2.3nm,0.3s,baz=153,slow=9.0,SNR=3.6									
	comp=E,3.8nm,0.4s									
KMRS	Kahramanmaras	7.58	297	*e*P		Pb		11 04 05.2	-6.7	
DARE	Darende-Malaty	7.64	306	*e*P		Pb		11 04 07.8	-5.1	
BCA	Borcka	7.68	338	*e*P		Pn		11 03 45.8	-6.4	
DSBU	Dashti - Bushe	7.79	138	Pn		Pn		11 03 55.2	+1.5	
KSHT	Keshet	8.12	263	S		Sn		11 05 32.2	+2.1	
KSHT	Keshet	8.12	263	P		Pn		11 04 00.4	+2.2	
NATI	Neve Ativ	8.12	265	P		Pb		11 04 13.3	-7.7	
SARI	SarD1z-Kayseri	8.30	302	*e*P		Pn		11 04 04.7	+3.9	
ONI	Oni	8.36	350	Pn		Pn		11 04 06.2	+4.6	
ONI	Oni	8.36	350	P		Pn		11 04 06.2	+4.6	
KOZT	Kozan	8.37	295	*e*P		Pn		11 04 07.6	+5.9	
MMAI	Mount Meron Ar	8.45	264	Pn		Pn		11 04 03.9	+1.2	
	comp=E,2.1nm,0.3s,baz=70,slow=13,SNR=1.4									
MMAI				Pg		Pb		11 04 29.8	+3.2	
	comp=E,2.5nm,0.3s,baz=92,slow=15,SNR=5.0									
MMAI				Lg		Lg		11 06 20.2		
	comp=E,3.2nm,0.3s,baz=90,slow=39,SNR=3.4									
MMAI				LR		LR		11 07 57.4		
	comp=E,321nm,20.8s,baz=44,slow=42									
	comp=E,1.2nm,0.3s									
QRNJ	Al-Qirein	8.47	259	P		Pb		11 04 23.9	-3.0	
ZEI	Tsey	8.50	352	*e*P		Pn		11 04 06.2	+2.6	
ZEI				pmax		pmax				
	comp=Z,10.0nm,0.7s									
HMDT	Nahal Hemdat	8.53	259	P		Pn		11 04 15.4	+12	
UJAP	Al Uja	8.67	257	P		Pg		11 04 40.2	-6.1	
MAK	Makhachkala	8.75	10	*e*P		Pn		11 04 01.4	-5.3	
MAK				pmax		pmax				
	comp=Z,31nm,0.4s									
MAK				MLR		MLR				
	comp=Z,230nm,10.0s									
GHAJ	Ghor Haditha	8.82	253	P		Pn		11 04 12.0	+4.2	
GHAJ	Ghor Haditha	8.82	253	P		Pn		11 04 09.4	+1.6	
SLTI	Sal'it	8.93	259	S		Sn		11 05 52.2	+2.2	
SLTI	Sal'it	8.93	259	P		Pn		11 04 11.3	+2.0	
MDBI	Mazsada	8.98	253	P		Pg		11 04 57.9	+5.7	
MSBI	Mazada	8.98	253	P		Pg		11 04 52.4	+0.2	
YTIR	Yattir	9.16	254	S		Sn		11 05 57.7	+2.1	
YTIR	Yattir	9.16	254	P		Pn		11 04 13.7	+1.2	
ZFRI	Zfri	9.44	249	P		Pn		11 04 15.4	-0.8	
KBZ	Khabaz	9.56	349	*i* P		Pn		11 04 19.2	+1.3	
KBZ				pmax		pmax				
	comp=Z,10.0nm,1.0s									
KBZ	Khabaz	9.56	349	Pn		Pn		11 04 19.7	+1.8	
	comp=Z,0.2nm,0.3s,baz=168,slow=9.9,SNR=16									
KBZ				LR		LR		11 07 57.2		
	comp=Z,67nm,21.6s,baz=148,slow=38									
	comp=Z,5.4nm,0.9s									
PRNI	Paran	9.66	248	P		Pn		11 04 21.2	+1.8	
HRFI	Mount Harif	9.78	247	P		Pn		11 04 22.4	+1.4	
KVAR	Kislovodsk Arr	9.81	348	Pn		Pn		11 04 23.6	+2.1	
	baz=191,slow=10									
	comp=Z,2.8nm,0.5s									
KIV	Kislovodsk	9.82	348	Pn		Pn		11 04 26.2	+4.7	
KIV	Kislovodsk	9.82	348	*e*P		Pn		11 04 21.1	-0.4	
KIV				pmax		pmax				
	comp=Z,20nm,1.1s									
KIV				MLR		MLR				
	comp=Z,134nm,12.0s									
KRMI	Paran Flat	9.98	248	P		Pn		11 04 25.1	+1.4	
MBRI	Mt Berech	9.99	246	P		Pn		11 04 25.3	+1.3	
EIL	Elat	10.03	245	Pn		Pn		11 04 25.6	+1.2	
	comp=Z,0.9nm,0.3s,baz=75,slow=12,SNR=2.9									
EIL				Pg				11 04 57.1		
	comp=Z,0.7nm,0.3s,baz=34,slow=13,SNR=4.6									
EIL				Lg		Lg		11 07 15.4		
	comp=Z,1.4nm,0.3s,baz=324,slow=10,SNR=2.4									
EIL				LR		LR		11 09 18.7		
	comp=Z,526nm,18.8s,baz=67,slow=44									
	comp=Z,3.2nm,0.4s									
EIL	Elat	10.03	245	P		Pn		11 04 25.8	+1.5	
SOC	Sochi	10.22	336	*e*P		Pn		11 04 23.9	-3.0	
SOC				*e*SS		Sn		11 06 30.4	+8.8	
SOC				MLR		MLR				
	comp=Z,528nm,14.0s									
RAYN	Ar Rayn	10.79	180	Pn		Pn		11 04 34.8	-0.1	
RAYN	Ar Rayn	10.79	180	P		Pn		11 04 34.8	-0.1	
BRTR	Keskin Array B	10.82	303	Pn		Pn		11 04 32.9	-2.4	
	comp=Z,0.2nm,0.3s,baz=124,slow=15,SNR=4.1									
BRTR				LR		LR		11 09 14.9		
	comp=Z,279nm,19.7s,baz=182,slow=40									
BR131	Keskin Array S	10.82	303	Pn		Pn		11 04 37.6	+2.2	
BR131	Keskin Array S	10.82	303	P		Pn		11 04 37.6	+2.2	
GOF	Gofitskoye	10.84	351	*ce*P		Pn		11 04 40.0	+4.5	
GEYT	Alibeck	10.88	67	Pn		Pn		11 04 39.1	+3.1	
GEYT	Alibeck	10.88	67	P		Pn		11 04 39.1	+3.1	
GEYT	Alibeck	10.88	67	Pn		Pn		11 04 35.5	-0.5	
	comp=Z,0.5nm,0.3s,baz=255,slow=15,SNR=3.6									
	comp=Z,10nm,0.9s									
GYA0	ALIBECK ARRAY	10.88	67	P		Pn		11 04 39.3	+3.3	
GYA0B	ALIBECK ARRAY	10.88	67	Pn		Pn		11 04 39.3	+3.3	
UOSS	Minazif	13.26	132	Pn		Pn		11 05 07.7	-0.9	
KARP	Karpathos	15.01	280			Pn		11 05 34.5	+2.0	

WSAR	Wadi Sarin	16.01	130	Pn		Pn		11 05 44.8	-0.8	
	comp=Z,1.4nm,0.3s,baz=308,slow=13,SNR=17									
	comp=Z,6.8nm,0.5s									
VRH	Novokhopyorsk	17.05	352	*e*P		Pn		11 05 57.0	-1.6	
VRH				pmax		pmax				
	comp=Z,36nm,0.7s									
VORD	Divnogorie	17.19	347	*e*P		Pn		11 05 59.9	-0.4	
VORD				pmax		pmax				
	comp=Z,20nm,0.8s									
VSR	Storozhevoye	17.45	347	*e*P		Pn		11 06 02.6	-1.0	
VSR				pmax		pmax				
	comp=Z,20nm,0.6s									
VORR	Voronezh	17.88	347	*e*P		Pn		11 06 07.9	-1.0	
VORR				pmax		pmax				
	comp=Z,40nm,0.4s									
BELG	Belogornoye	18.10	4	*i* P		Pn		11 06 09.6	-2.0	
BELG				pmax		pmax				
	comp=Z,10.0nm,0.9s									
BELG	Belogornoye	18.10	4	P		Pn		11 06 09.9	-1.7	
	comp=Z,3.0nm,0.3s,baz=348,slow=1.0,SNR=17									
BELG				LR		LR		11 15 20.2		
	comp=Z,204nm,18.2s,baz=267,slow=44									
	comp=Z,50nm,0.8s									
VRI	Vrincioaia	18.29	315	⇓P		P		11 06 15.9	+1.8	
VRI	Vrincioaia	18.29	315	⇓P		P		11 06 15.9	+1.8	
PLOR	Plostina	18.33	314	⇑P		P		11 06 16.0	+1.4	
PLOR	Plostina	18.33	314	⇑P		P		11 06 16.0	+1.4	
ABKAR	Akbulak array	18.36	31	P		P		11 06 15.0	+0.1	
ABKAR	Akbulak array	18.36	31	P		P		11 06 15.4	+0.5	
ABKAR				lAmb		lAmb		11 06 21.1		
	comp=Z,8.5nm,0.8s									
AKTO	Aktyubinsk	18.53	26	P		P		11 06 16.2	-0.5	
	comp=Z,0.6nm,0.3s,baz=217,slow=9.1,SNR=42									
AKTO				LR		LR		11 15 43.6		
	comp=Z,82nm,19.6s,baz=268,slow=45									
	comp=Z,14nm,0.8s									
MLR	Muntele Rosu	18.57	313	⇓P		Pn		11 06 19.4	+1.8	
MLR	Muntele Rosu	18.57	313	⇓P		Pn		11 06 19.2	+1.8	
MLR	Muntele Rosu	18.57	313	P		Pn		11 06 19.3	+1.8	
MLR				pmax		pmax				
	comp=Z,9.0nm,0.8s									
MLR	Muntele Rosu	18.57	313	P		P		11 06 16.6	-0.7	
	comp=Z,0.1nm,0.3s,baz=135,slow=5.7,SNR=2.4									
	comp=Z,2.0nm,0.6s									
TESR	Tescani	18.69	316	⇑P		Pn		11 06 20.4	+1.5	
SORM	Soroca	18.76	322	⇑P		P		11 06 18.6	-0.6	
SORM	Soroca	18.76	322	⇑P		P		11 06 18.6	-0.6	
LPSR	Galich'ya Gora	18.82	348	*e*P		P		11 06 17.5	-2.4	
LPSR				pmax		pmax				
	comp=Z,70nm,0.9s									
AGG	Agios Georgios	19.07	291	P		Pn		11 06 23.8	+0.2	
AGG	Agios Georgios	19.07	291	P		Pn		11 06 23.8	+0.2	
AGG				pmax		pmax				
	comp=Z,18nm,1.4s									
VOIR		19.09	311	⇓P		Pn		11 06 25.1	+1.3	
VOIR		19.09	311	⇓P		Pn		11 06 25.1	+1.3	
DOPR	Dopca	19.14	313	⇑P		P		11 06 23.7	+0.2	
ARR	Arges	19.32	311	⇑P		Pn		11 06 27.4	+0.9	
SIMJ	Simiganj	19.44	70	P		Pn		11 06 27.9	-0.2	
LOT	Lotru	19.89	310	⇑P		Pn		11 06 33.4	-0.1	
BLKB	Belogradchik	19.90	304	⇑P		P		11 06 32.5	+0.7	
BURAR	Bucovina Array	20.12	317	⇑P		P		11 06 35.2	+0.9	
BURAR	Bucovina Array	20.12	317	P		P		11 06 34.9	+0.6	
BURAR	Bucovina Array	20.12	317	P		P		11 06 34.9	+0.6	
BURAR				pmax		pmax				
	comp=Z,8.0nm,0.8s									
BUR08	Bucovina Ar. S	20.14	317	P		P		11 06 35.1	+0.6	
AKASG	Malin Array Be	20.15	329	P		P		11 06 33.9	-0.5	
	comp=Z,1.6nm,0.5s,baz=134,slow=12,SNR=13									
AKASG				LR		LR		11 14 32.1		
	comp=Z,92nm,21.4s,baz=40,slow=38									
	comp=Z,1.6nm,0.5s									
AKBB	Malin Array Si	20.15	329	P		P		11 06 33.6	-0.9	
AKBB	Malin Array Si	20.15	329	*ce*P		P		11 06 34.2	-0.3	
AKBB				pmax		pmax				
	comp=Z,14nm,0.9s									
KIEV	Kiev	20.16	329	⇑P		P		11 06 34.3	-0.2	
KIEV	Kiev	20.16	329	P		P		11 06 33.9	-0.6	
KIEV	Kiev	20.16	329	P		P		11 06 33.9	-0.6	
KIEV				pmax		pmax				
	comp=Z,19nm,1.1s									
DJES	Djerdap	20.38	307	P		P		11 06 38.0	+1.0	
GZR	Gura Zlata	20.50	309	⇑P		P		11 06 39.0	+0.6	
HERR	Herculane	20.53	308	⇑P		P		11 06 39.6	+1.0	
CJR	Cluj-Napoca	20.59	313	⇑P		P		11 06 38.8	-0.5	
CJR	Cluj-Napoca	20.59	313	⇑P		P		11 06 38.8	-0.5	
MARR	Marisel-Cluj	20.86	313	⇑P		P		11 06 43.6	+1.3	
MDVR	Moldovita	20.95	307	⇑P		P		11 06 44.7	+1.4	
BTK	Batken	20.99	67	P		P		11 06 44.4	+0.6	
BTK				lAmb		lAmb		11 06 57.7		
	comp=Z,20nm,0.9s									
BTK	Batken	20.99	67	P		P		11 06 44.4	+0.6	
BTK				pmax		pmax				
	comp=Z,20nm,1.0s									
SURR	Surduc	21.07	310	⇑P		P		11 06 46.2	+1.7	
DRGR		21.16	313	⇑P		P		11 06 46.8	+1.3	
DRGR		21.16	313	⇑P		P		11 06 46.8	+1.3	
BZS	Buzias	21.34	309	⇑P		P		11 06 48.1	+0.7	
BZS	Buzias	21.34	309	⇑P		P		11 06 48.1	+0.7	
KK31	Karatay Array	21.38	58	P		P		11 06 49.1	+1.2	
KK31				lAmb		lAmb		11 06 58.3		
	comp=Z,30nm,1.4s									
KK31	Karatay Array	21.38	58	P		P		11 06 49.1	+1.2	
KK31				pmax		pmax				
	comp=Z,30nm,1.4s									
KKAR	Karatay Array	21.38	58	P		P		11 06 48.7	+0.8	
KKAR				lAmb		lAmb		11 06 58.3		
	comp=Z,30nm,1.4s									
KKAR	Karatay Array	21.38	58	P		P		11 06 48.7	+0.8	
KKAR				pmax		pmax				
	comp=Z,30nm,1.4s									
SIRR	Siria	21.58	311	⇑P		P		11 06 51.1	+1.1	
OBN	Obninsk	21.65	346	P		P		11 06 48.2	-2.3	
OBN	Obninsk	21.65	346	⇓P		P		11 06 49.1	-1.5	
OBN				*e*SP		sP		11 06 54.6	-0.2	
OBN				PPP		PPP		11 07 15.0		
OBN				S		S		11 10 45.0	-5.1	
OBN								11 10 49.0		
OBN				*e*				11 10 53.7		
OBN				SSS		SSS		11 11 31.0		
OBN				pmax		pmax				
	comp=Z,20nm,0.6s									
OBN				MLR		MLR				
	comp=Z,194nm,16.0s									
OBN	Obninsk	21.65	346	P		P		11 06 48.9	-1.7	
	comp=Z,26nm,0.4s,baz=153,slow=23,SNR=5.2									
OBN				S		S		11 10 47.4	-2.7	
	comp=Z,27nm,0.3s,baz=37,slow=20,SNR=2.7									
OBN				LR		LR		11 16 26.2		
	comp=Z,124nm,21.0s,baz=169,slow=40									
	comp=Z,26nm,0.4s									
LVV	L'vov	22.03	321	*e*P		P		11 06 52.9	-1.9	
MOS	Moscow	22.05	348	*e*P		P		11 06 53.0	-1.9	
MOS				*e*S		S		11 10 49.9	-8.0	
MOS				pmax		pmax				
	comp=Z,48nm,0.8s									
KOLS	Kolonicke sedl	22.48	317	*e*P		P		11 07 02.5	+2.8	
KOLS	Kolonicke sedl	22.48	317	*e*P		P		11 07 02.5	+2.8	
KWP	Kalwaria Pacla	22.62	319	*e*P		P		11 07 02.5	+1.4	
KWP	Kalwaria Pacla	22.62	319	P		P		11 07 00.9	-0.2	
KWP				lAmb		lAmb		11 07 36.5		
	comp=Z,24nm,1.0s									
KWP	Kalwaria Pacla	22.62	319	P		P		11 07 00.9	-0.2	
KWP				pmax		pmax				
	comp=Z,24nm,1.0s									
ARSB	Arslanbob	22.80	64	P		P		11 07 03.4	+0.1	
ARSB	Arslanbob	22.80	64	P		P		11 07 03.4	+0.1	
ARSB				pmax		pmax				
	comp=Z,10.0nm,1.2s									
CRVS	Cervenica-Dubn	22.93	317	*e*P		P		11 07 06.0	+1.7	
CRVS	Cervenica-Dubn	22.93	317	*e*P		P		11 07 06.0	+1.7	
STHS	Stebnicka Huta	23.31	318	*e*P		P		11 07 08.4	+0.1	
STHS	Stebnicka Huta	23.31	318	*e*P		P		11 07 08.4	+0.1	
PSZ	Piszkesteto	23.38	313	P		P		11 07 11.3	+2.3	
PSZ				lAmb		lAmb		11 07 16.5		
	comp=Z,17nm,1.2s									
PSZ	Piszkesteto	23.38	313	P		P		11 07 11.3	+2.3	
PSZ				pmax		pmax				
	comp=Z,17nm,1.2s									
MORH	Mrgy, Hungar	23.49	308	⇑P		P		11 07 10.2	+0.2	
MNK	Minsk	23.59	334	*i* P		P		11 07 09.0	-1.9	
MNK				*i* P		P		11 07 09.0	-1.9	
	comp=E,7.0nm,1.1s									
MNK				*i* P		P		11 07 09.0	-1.9	
	comp=N,16nm,0.8s									

MNK				*i* P		P		11 07 09.0	-1.9	
	comp=E,14nm,1.1s,baz=141									
MNK				*i* PP		PnPn		11 07 40.6	+2.8	
MNK				*i* S		S		11 11 21.7	-3.4	
MNK				*i* SS		SnSn		11 11 59.3	-2.4	
MNK				*i* LQ		LQ		11 14 29.0		
MNK				*i* LR		LR		11 16 07.7		
MNK	Minsk	23.59	334	*i* P		P		11 07 09.0	-1.9	
MNK				*i*				11 07 40.6		
MNK				*i* S		S		11 11 21.7	-3.4	
MNK				pmax		pmax				
	comp=N,16nm,0.8s									
MNK				pmax		pmax				
	comp=E,7.0nm,1.0s									
MNK				pmax		pmax				
	comp=Z,14nm,1.0s									
NIE	Niedzica	23.85	317	*e*P		P		11 07 14.2	+0.6	
ARU	Arti	23.85	18	P		P		11 07 13.2	-0.2	
ARU	Arti	23.85	18	*c* *i*P		P		11 07 13.3	-0.2	
ARU				S		S		11 11 31.9	+2.8	
ARU				SS		SnSn		11 12 09.4	+1.5	
ARU				pmax		pmax				
	comp=Z,8.0nm,1.1s									
AAK	Ala-Archa	24.13	61	*i* P		P		11 07 16.3	-0.2	
AAK				pmax		pmax				
	comp=Z,9.0nm,1.2s									
NACGM	Naroch	24.31	333	*e*P		P		11 07 17.2	-0.5	
	comp=N,2μm,1.2s									
KIRV	Kirov	24.39	5	*ce*P		P		11 07 17.6	-0.8	
KIRV	Kirov	24.39	5	P		P		11 07 17.4	-0.9	
	comp=N,26nm,0.6s,baz=90,slow=10,SNR=10									
KIRV				LR		LR		11 19 01.9		
	comp=N,176nm,18.3s,baz=192,slow=42									
	comp=N,26nm,0.6s									
OJC	Ojcow	24.53	318	*e*P		P		11 07 19.7	-0.2	
OJC	Ojcow	24.53	318	P		P		11 07 19.4	-0.4	
OJC				lAmb		lAmb		11 07 26.7		
	comp=Z,12nm,0.9s									
OJC	Ojcow	24.53	318	P		P		11 07 19.4	-0.4	
OJC				pmax		pmax				
	comp=Z,13nm,0.9s									
IIGN	Ignalina	24.86	333	*e*P		P		11 07 20.2	-2.5	
KSH	Kashi	24.90	69	P		P		11 07 22.9	-0.5	
KSH				sP		sP		11 07 28.3	+0.5	
KSH				pmax		pmax				
	comp=Z,24nm,0.9s									
KSH				LR		LR				
	comp=N,270nm,7.9s									
KSH				LR		LR				
	comp=E,320nm,13.7s									
KSH				LR		LR				
	comp=Z,320nm,14.1s									
ISAL	Salakas	25.06	334	*e*P		P		11 07 22.6	-2.0	
NRN	Naryn	25.07	65	P		P		11 07 25.9	+0.8	
NRN				lAmb		lAmb		11 07 33.9		
	comp=Z,17nm,0.9s									
NRN	Naryn	25.07	65	P		P		11 07 25.9	+0.8	
NRN				pmax		pmax				
	comp=Z,17nm,0.9s									
SUW	Suwalki	25.11	328	*e*P		P		11 07 25.1	+0.1

MKAR Makanchi Array 30.37 55 P **P** **11 08 13.0 +0.8**
MKAR Makanchi Array 30.37 55 P **P** **11 08 13.0 +0.8**
MKAR Makanchi Array 30.37 55 P **P** **11 08 12.8 +0.6**
comp=Z,4.0nm,0.9s,baz=254,slow=7.1,SNR=34
comp=Z,4.0nm,0.9s
BNI Bardonecchia 31.38 302 P **P** **11 08 19.9 -1.4**
BNI IAmb IAmb 11 08 28.7
comp=Z,11nm,0.8s
BNI Bardonecchia 31.38 302 P **P** **11 08 19.9 -1.4**
BNI pmax pmax
comp=Z,11nm,0.9s
HFS Hagfors 33.01 331 P **P** **11 08 34.7 -0.5**
comp=Z,9.3nm,0.7s,baz=134,slow=10,SNR=28
HFS LR LR 11 22 48.2
comp=Z,104nm,18.8s,baz=132,slow=38
comp=Z,9.3nm,0.7s
ZAA0 Zalesovo Array 33.81 42 P **P** **11 08 41.4 -0.8**
ZALV Zalesovo Beam 33.81 42 P **P** **11 08 41.4 -0.9**
ZALV Zalesovo Beam 33.81 42 P **P** **11 08 42.1 -0.2**
comp=Z,1.1nm,0.6s,baz=260,slow=8.7,SNR=6.8
ZALV LR LR 11 25 19.5
comp=Z,171nm,18.0s,baz=261,slow=42
comp=Z,1.1nm,0.6s
WMQ Urumqi 33.84 61 *e*P **P** **11 08 45.3 +2.5**
NC602 NORSAR Array S 34.23 331 *e*P **P** **11 08 46.7 +0.8**
DGZ Jazzator, Alta 34.28 51 *i* P **P** **11 08 46.7 0.0**
DGZ pmax pmax
comp=Z,12nm,1.5s
KONO Kongsberg 34.45 328 *e*P **P** **11 08 47.9 +0.1**
NB2 NORSAR Subarra 34.54 331 P **P** **11 08 47.1 -1.4**
comp=Z,5.1nm,0.8s,baz=125,slow=8.6
NB2 NORSAR Subarra 34.54 331 P **P** **11 08 47.1 -1.4**
baz=125,slow=8.6
NOA NORSAR Array B 34.54 331 P **P** **11 08 47.2 -1.4**
comp=Z,1.4nm,0.7s,baz=125,slow=8.6,SNR=6.6
NOA LR LR 11 24 36.0
comp=Z,96nm,19.8s,baz=140,slow=39
comp=Z,1.4nm,0.7s
SNART Snartemo 34.90 325 *e*P **P** **11 08 51.4 -0.3**
SKAR Skarslia 35.54 329 *e*P **P** **11 08 57.4 +0.2**
BLS5 Blasjo 35.74 327 *e*P **P** **11 08 58.9 0.0**
ODD1 Odda 35.89 327 *e*P **P** **11 09 00.5 +0.3**
DOMB Dombas 35.95 332 *e*P **P** **11 09 00.4 -0.3**
DOMB IAmb IAmb 11 09 04.4
comp=Z,48nm,2.1s
NSS Namsos 36.39 336 *e*P **P** **11 09 03.9 -0.5**
HYA Hoyanger 36.68 329 *e*P **P** **11 09 07.1 +0.2**
HYA IAmb IAmb 11 09 08.7
comp=Z,42nm,1.5s
MOR8 Moi Rana 36.73 340 *e*P **P** **11 09 06.0 -1.3**
AKN Aaknes 36.85 331 *e*P **P** **11 09 08.7 +0.3**
KTK1 Kautokeino 36.87 347 *e*P **P** **11 09 09.9 +1.5**
KTK1 IAmb IAmb 11 09 15.2
comp=Z,33nm,1.5s
VADS Vadso 36.89 351 *e*P **P** **11 09 08.7 +0.2**
VADS IAmb IAmb 11 09 13.6
comp=Z,36nm,1.1s
ARA0 ARCESS Array S 36.92 349 *e*P **P** **11 09 09.6 +0.7**
ARCES ARCESS Array B 36.92 349 P **P** **11 09 08.2 -0.7**
comp=Z,4.1nm,0.8s,baz=153,slow=8.2,SNR=9.9
comp=Z,4.1nm,0.8s
STOK Stokkvaagen 37.26 339 *e*P **P** **11 09 11.2 -0.5**
KONS Konsvik 37.34 339 *e*P **P** **11 09 12.7 +0.2**
FAUS Fauske 37.36 341 *e*P **P** **11 09 12.4 -0.2**
FAUS IAmb IAmb 11 09 16.7
comp=Z,18nm,1.2s
STEI Steigen 37.78 342 *e*P **P** **11 09 16.9 +0.8**
JETT Jettan, Norway 37.87 346 *e*P **P** **11 09 16.2 -0.8**
JETT IAmb IAmb 11 09 20.3
comp=Z,18nm,0.9s
HAMF Hammerfest 38.20 348 *e*P **P** **11 09 19.8 +0.2**
LOF Lofoten 38.37 341 *e*P **P** **11 09 21.0 -0.1**
LSA Lhasa 38.81 84 P **P** **11 09 26.3 +0.4**
LSA Lhasa 38.81 84 P **P** **11 09 26.3 +0.4**
LSA pmax pmax
comp=Z,8.0nm,0.9s
EKA Eskdalemuir Ar 39.30 317 P **P** **11 09 28.4 -0.7**
comp=Z,0.4nm,0.4s,baz=104,slow=8.7,SNR=5.3
comp=Z,0.4nm,0.4s
ESDC Sonseca Array 39.38 293 P **P** **11 09 29.7 -0.4**
comp=Z,1.1nm,0.8s,baz=74,slow=9.0,SNR=8.2
ESDC PcP **PcP** **11 11 39.5 +1.3**
comp=Z,0.6nm,0.6s,baz=122,slow=1.5,SNR=4.3
comp=Z,1.1nm,0.8s
GOMU GeErMu 40.03 73 P **P** **11 09 37.3 +1.4**
GOMU pP sP 11 09 40.3 0.0
GOMU sP pP 11 09 44.0 +4.9
GOMU pmax pmax
comp=Z,13nm,0.9s
NRIK Noril'sk 42.02 21 P **P** **11 09 50.9 -0.5**
NRIK IAmb IAmb 11 09 53.0
comp=Z,16nm,1.2s
NRIK Noril'sk 42.02 21*ce*P **P** **11 09 51.4 0.0**
NRIK pmax pmax
comp=Z,12nm,1.2s
NRIK Noril'sk 42.02 21 P **P** **11 09 51.2 -0.2**
comp=Z,7.2nm,0.7s,baz=225,slow=5.0,SNR=9.7
comp=Z,7.2nm,0.7s
GTA Gaotai 43.26 67 *e*P **P** **11 10 03.3 +1.3**
GTA pP sP 11 10 09.1 +2.6
GTA pmax pmax
comp=Z,7.0nm,1.2s
HOPEN Hopen 43.27 353 *e*P **P** **11 10 01.5 +0.1**
TORD Torodi Ar. Bea 44.81 253 P **P** **11 10 14.7 +0.2**
comp=Z,1.5nm,0.5s,baz=45,slow=8.4,SNR=3.1
TORD LR LR 11 31 08.3
comp=Z,48nm,18.7s,baz=328,slow=39
comp=Z,1.5nm,0.5s
SPA0 Spitsbergen Ar 45.67 352 *e*P **P** **11 10 20.8 +0.2**
SPITS Spitsbergen Ar 45.67 352 P **P** **11 10 20.6 0.0**
comp=Z,7.2nm,0.7s,baz=137,slow=12,SNR=21
comp=Z,7.2nm,0.7s
SONM Songino Array 46.73 54 P **P** **11 10 27.6 -1.9**
comp=Z,0.8nm,0.9s,baz=274,slow=6.7,SNR=2.6
SONM PcP **PcP** **11 12 03.0 +0.1**
comp=Z,1.0nm,0.6s,baz=260,slow=3.9,SNR=7.8
comp=Z,0.8nm,0.9s
LZH Lanzhou 47.14 70 *e*P P 11 10 18.3 -15
LZH sP pP 11 10 33.3 -2.9
LZH pmax pmax
comp=Z,18nm,1.4s
ULN Ulaanbaatar 47.17 54 P **P** **11 10 33.5 +0.5**
ULN IAmb IAmb 11 10 36.1
comp=Z,3.9nm,0.8s
ULN Ulaanbaatar 47.17 54*ce*P **P** **11 10 33.5 +0.5**
ULN pmax pmax
comp=Z,4.0nm,0.8s
PZH PanZhiHua 48.68 83 P **P** **11 10 46.1 +1.2**
PZH pmax pmax
comp=Z,9.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.7s
CD2 Chengdu 48.68 77 P **P** **11 10 44.8 0.0**
CD2 pP pP 11 10 47.5 -0.6
CD2 sP sP 11 10 51.3 +2.0
CD2 pmax pmax
comp=Z,300nm,0.8s
CHTO Chiang Mai 49.77 94 P **P** **11 10 52.2 -1.0**
CHTO Chiang Mai 49.77 94 P **P** **11 10 52.2 -1.0**
CHTO pmax pmax
comp=Z,8.0nm,0.7s
CM31 Chiang Mai Arr 49.95 94 P **P** **11 10 53.9 -0.7**
CM31 IAmb IAmb 11 10 55.0
comp=Z,8.0nm,0.7s
CMAR Chiang Mai Arr 49.95 94 P **P** **11 10 54.1 -0.4**
comp=Z,6.7nm,0.7s,baz=295,slow=8.5,SNR=39
CMAR LR LR 11 36 38.5
comp=Z,36nm,19.1s,baz=295,slow=42
comp=Z,6.7nm,0.7s
HHC Hu-ho-hao-te 51.70 62 *e*P **P** **11 11 06.6 -1.1**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,93nm,5.3s
XAN Xi'an 51.73 71 ⇑P **P** **11 11 08.1 +0.2**
XAN pP sP 11 11 12.3 -0.1
XAN pmax pmax
comp=Z,20nm,0.9s
LSZ Lusaka 52.01 201 LR LR 11 35 28.6
comp=Z,101nm,18.1s,baz=119,slow=39
SLVN Son La 52.68 88 P **P** **11 11 14.1 -1.0**
SLVN IAmb IAmb 11 11 16.4
comp=Z,7.3nm,0.9s
ENH Enshi 53.52 75 P **P** **11 11 21.3 +0.1**
DBIC Dimbokro 53.83 251 P **P** **11 11 23.6 +0.1**
comp=Z,2.9nm,0.7s,baz=41,slow=6.9,SNR=4.0
DBIC LR LR 11 36 49.7
comp=Z,60nm,20.0s,baz=65,slow=39
comp=Z,2.9nm,0.7s
XLT XiLinHaoTe 54.12 57 *e*P **P** **11 11 26.4 +1.0**
XLT pP sP 11 11 30.8 +0.8
XLT pmax pmax
comp=Z,4.0nm,1.0s
XLT pmax pmax
comp=Z,180nm,6.4s
LYN LuoYang 54.32 69 *e*P **P** **11 11 28.4 +1.5**
LYN sP sP 11 11 33.3 +1.9
LYN pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 55.76 22 P **P** **11 11 36.2 -0.5**
TIXI IAmb IAmb 11 11 37.3
comp=Z,5.4nm,0.6s
TIXI Tiksi 55.76 22*ce*P **P** **11 11 36.6 -0.1**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
WHN Wuhan 57.28 73 P P 11 11 54.8 +6.6
WHN pmax pmax
comp=Z,50nm,1.1s
YAK Yakutsk 57.70 34 *e*P **P** **11 11 50.1 -0.6**
YAK *e**PP **sP** **11 11 53.6 -1.6**
YAK *e* 11 12 37.6
YAK *e* 11 13 58.0
YAK *e*S **S** **11 19 50.6 +1.6**
YAK *e*SS **SS** **11 23 37.4 -1.3**
YAK pmax pmax
comp=Z,9.0nm,1.1s
YAK pmax pmax
comp=N,1.0nm,0.6s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,289nm,6.7s
YAK pmax pmax
comp=N,194nm,6.8s
YAK pmax pmax
comp=E,86nm,3.7s
YAK smax smax
comp=E,245nm,5.3s
YAK smax smax
comp=N,56nm,3.7s
YAK Yakutsk 57.70 34 LR LR 11 40 26.9
comp=N,114nm,19.0s,baz=277,slow=40
TSUM Tsumeb 59.48 211 LR LR 11 40 21.9
comp=N,89nm,19.0s,baz=162,slow=39
HEH HeiHe 59.70 47 *e*P **P** **11 12 04.6 -0.1**
HEH pmax pmax
comp=Z,11nm,0.9s
HEH pmax pmax
comp=Z,190nm,4.9s
NJ2 Nanjing 60.21 70 *e*P **P** **11 12 07.8 -0.8**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
CN2 Changchun 60.59 55 *e*P **P** **11 12 10.3 -0.7**
BNX BinXian 61.21 52 ⇓P **P** **11 12 14.6 -0.6**
BNX pmax pmax
comp=Z,4.0nm,1.0s
BNX pmax pmax
comp=Z,140nm,5.2s
TULEG Thule 62.19 346 P **P** **11 12 20.6 -0.7**
KLR Kul'dur 62.69 47*ce*P **P** **11 12 24.3 -0.8**
KLR pmax pmax
comp=Z,10.0nm,2.7s
KLR Kul'dur 62.69 47 LR LR 11 43 11.4
comp=Z,50nm,18.2s,baz=251,slow=40
KSAR Wonju Array Be 64.77 61 P **P** **11 12 38.3 -0.6**
KSAR Wonju Array Be 64.77 61 P **P** **11 12 38.3 -0.6**
KSRS Korea Array 64.79 61 P **P** **11 12 38.8 -0.3**
comp=Z,3.9nm,0.8s,baz=283,slow=6.6,SNR=18
KSRS LR LR 11 45 57.9
comp=Z,34nm,18.7s,baz=265,slow=41
comp=Z,3.9nm,0.8s
USRK Ussuriysk Ar. 64.80 53 P **P** **11 12 38.0 -1.1**
USRK Ussuriysk Ar. 64.80 53 P **P** **11 12 38.0 -1.1**
comp=Z,6.0nm,0.8s,baz=293,slow=5.8,SNR=12
comp=Z,6.0nm,0.8s
SEY Seymchan 67.11 28*ce*P **P** **11 12 54.4 +0.8**
SEY pmax pmax
comp=Z,9.0nm,0.9s
MA2 Magadan 68.16 32*ce*P **P** **11 13 01.2 +0.9**
MA2 pmax pmax
comp=Z,14nm,2.5s
MA2 Magadan 68.16 32 LR LR 11 46 53.2
comp=Z,74nm,18.4s,baz=298,slow=40
BILL Bilibino 68.85 20 *e*P **P** **11 13 04.9 +0.4**
BILL pmax pmax
comp=Z,21nm,1.9s
FRB Frobisher Bay 69.28 334 LR LR 11 43 30.3
comp=Z,56nm,20.1s,baz=299,slow=36
ASAJ Asahikawa 71.63 49 LR LR 11 46 04.5
comp=Z,47nm,21.8s,baz=292,slow=37
MJAR Matsushiro Arr 72.52 57 P **P** **11 13 27.2 -0.2**
comp=Z,1.9nm,0.8s,baz=316,slow=3.3,SNR=4.7
comp=Z,1.9nm,0.8s
A36M Sachs Harbour 73.75 357 P **P** **11 13 33.8 -0.2**
A36M Sachs Harbour 73.75 357 P **P** **11 13 33.9 -0.1**
baz=1,SNR=32
SCHQ Schefferville 73.92 326 P **P** **11 13 34.5 -0.9**
comp=Z,2.2nm,0.9s,baz=34,slow=3.6,SNR=2.6
comp=Z,2.2nm,0.9s
A19K Wainwright 73.99 9 P **P** **11 13 35.9 +0.5**
baz=338
B20K Meade River 74.65 8 P **P** **11 13 38.6 -0.6**
B20K IAmb IAmb 11 13 42.0
comp=Z,5.0nm,0.9s
B20K Meade River 74.65 8 P **P** **11 13 39.4 +0.1**
baz=341
B18K Kokolik River 74.67 10 P **P** **11 13 39.5 +0.1**
baz=337
C16K Lisburne Hills 75.13 11 P **P** **11 13 42.1 0.0**
baz=334
C19K Lookout Ridge 75.21 9 P **P** **11 13 42.5 -0.1**
baz=339
C17K DeLong Mountai 75.29 11 P **P** **11 13 42.8 -0.3**
baz=336
B21K Ikpikpuk River 75.29 7 P **P** **11 13 42.9 -0.1**
B21K IAmb IAmb 11 13 44.7
comp=Z,6.9nm,0.9s
B21K Ikpikpuk River 75.29 7 P **P** **11 13 42.7 -0.3**
baz=343
C18K Utukok River 75.42 10 P **P** **11 13 43.5 -0.3**
baz=338
C24K Franklin Bluff 75.72 5 P **P** **11 13 45.1 -0.3**
baz=348
C21K Kniefelbade Rid 75.72 7 P **P** **11 13 45.4 -0.2**
baz=343
C26K Camden Bay 75.76 4 P **P** **11 13 45.6 -0.1**
baz=351
D20K Etivluk River 75.94 8 P **P** **11 13 46.7 -0.1**
baz=341
D19K Kuna River 75.97 9 P **P** **11 13 46.7 -0.3**
baz=340
D17K Noatak River 76.01 11 P **P** **11 13 47.0 -0.1**
baz=336
D22K Ayikyak River 76.20 7 P **P** **11 13 48.4 +0.2**
baz=345
D24K Happy Valley 76.26 5 P **P** **11 13 48.6 0.0**
baz=348
D25K Kavik River 76.27 4 P **P** **11 13 48.8 +0.1**
baz=350
D23K Nanushuk River 76.30 6 P **P** **11 13 48.6 -0.2**
baz=346
C36M Paulatuk 76.31 356 P **P** **11 13 48.0 -0.9**
C36M Paulatuk 76.31 356 P **P** **11 13 48.5 -0.3**
baz=9.0,SNR=8.3
E20K Nigu River 76.43 8 P **P** **11 13 49.6 0.0**
baz=342
D27M Malcolm River 76.60 2 P **P** **11 13 50.4 -0.3**
baz=355
E18K Tukpahlearik C 76.64 10 P **P** **11 13 50.9 +0.1**
E18K IAmb IAmb 11 13 51.8
comp=Z,4.2nm,0.8s
E18K Tukpahlearik C 76.64 10 P **P** **11 13 50.7 0.0**
baz=338
TOLK Toolik Lake Re 76.71 6 P **P** **11 13 51.4 +0.2**
baz=347
E17K Hotham Inlet 76.78 11 P **P** **11 13 51.8 +0.3**
baz=337
E19K Redstone River 77.06 9 P **P** **11 13 53.4 +0.2**
E19K IAmb IAmb 11 13 53.9
comp=Z,5.2nm,0.7s
E19K Redstone River 77.06 9 P **P** **11 13 52.9 -0.3**
baz=341
E23K Chandalar 77.28 6 P **P** **11 13 54.6 +0.2**
baz=347
F17K Baldwin Pennin 77.46 11 P **P** **11 13 55.6 +0.3**
baz=338
E25K Arctic Village 77.50 4 P **P** **11 13 55.3 -0.4**
E25K Arctic Village 77.50 4 P **P** **11 13 55.9 +0.2**
baz=351
E29M Blow River 77.54 1 P **P** **11 13 56.2 +0.4**
baz=357
F15K North Star Dit 77.57 12 P **P** **11 13 56.3 +0.3**
baz=335
F19K Shaleruckik Mo 77.58 9 P **P** **11 13 56.2 +0.2**
baz=341
F20K Avaraart Lake 77.64 8 P **P** **11 13 56.8 +0.4**
baz=342
INK Inuvik 77.65 360 P **P** **11 13 56.0 -0.4**
INK Inuvik 77.65 360 P **P** **11 13 56.0 -0.4**
baz=0.9
INK Inuvik 77.65 360 P **P** **11 13 56.0 -0.4**
INK pmax pmax
comp=Z,4.0nm,1.1s
F21K Alatna River 77.72 7 P **P** **11 13 57.2 +0.3**
F21K IAmb IAmb 11 13 57.9
comp=Z,5.2nm,0.8s
F21K Alatna River 77.72 7 P **P** **11 13 57.2 +0.3**
baz=344
GAMB Gambell 77.87 16 P **P** **11 13 58.1 +0.4**
baz=329
F24K Squaw Lake 77.94 5 P **P** **11 13 58.7 +0.5**
baz=349
F26K Sheenjek River 78.01 4 P **P** **11 13 58.8 +0.3**
baz=352
F25K Christian Rive 78.02 4 P **P** **11 13 59.0 +0.4**
baz=351
COLD Coldfoot 78.04 6 P **P** **11 13 58.3 -0.3**
baz=347
G22K Bettles 78.22 7 P **P** **11 13 59.2 -0.4**
baz=346
G16K Koyuk River 78.25 11 P **P** **11 13 59.4 -0.4**
baz=337
F28M Old Crow 78.27 2 P **P** **11 14 00.0 +0.1**
F28M IAmb IAmb 11 14 01.1
comp=Z,4.6nm,0.9s
F28M Old Crow 78.27 2 P **P** **11 13 59.1 -0.8**
baz=356,SNR=7.8
G19K Purcell Mounta 78.33 9 P **P** **11 13 59.8 -0.4**
baz=341
F30M Barrier River 78.35 0 P **P** **11 13 59.6 -0.7**
baz=359,SNR=8.5
G18K Tagagawik 78.35 10 P **P** **11 14 00.4 0.0**
baz=340
G17K Kiwalik Mounta 78.42 11 P **P** **11 14 00.8 0.0**
baz=338
ANM Nome 78.48 13 P **P** **11 14 01.3 +0.2**
baz=334
F31M Tsiigehtchic 78.52 360 P **P** **11 14 00.8 -0.4**
F31M Tsiigehtchic 78.52 360 P **P** **11 14 01.0 -0.2**
baz=0.8,SNR=10.0
G23K Bananza Creek 78.56 6 P **P** **11 14 01.5 0.0**
baz=347
G26K Porcupine Rive 78.77 4 P **P** **11 14 02.5 -0.1**
baz=352
G24K Hadweenzic Riv 78.78 5 P **P** **11 14 02.6 -0.1**
baz=349
IMAR Indian Mountai 78.89 8 P **P** **11 14 03.2 -0.1**
H16K Elim 78.97 12 P **P** **11 14 03.8 0.0**
baz=337
G30M tAoh Zraii Nji 78.97 1 P **P** **11 14 03.4 -0.4**
G30M tAoh Zraii Nji 78.97 1 P **P** **11 14 03.1 -0.7**
baz=359
H19K Roundabout Mou 79.00 9 P **P** **11 14 03.4 -0.5**
baz=342
G31M Satah River 79.04 360 P **P** **11 14 03.7 -0.4**
baz=0.3,SNR=12
H17K Granite Mounta 79.07 11 P **P** **11 14 04.1 -0.2**
baz=339
H18K Honhosa River 79.09 10 P **P** **11 14 04.7 +0.2**
baz=340
H20K Anotleneega Mo 79.23 8 P **P** **11 14 04.4 -0.8**
baz=343
H22K Ishtalitna Cre 79.23 7 P **P** **11 14 05.2 0.0**
baz=346
H21K Melozitna River 79.31 8 P **P** **11 14 05.6 0.0**
baz=345
EPYK Eagle Plains 79.58 1 P **P** **11 14 06.2 -1.0**
EPYK IAmb IAmb 11 14 07.7
comp=Z,7.9nm,0.8s
EPYK Eagle Plains 79.58 1 P **P** **11 14 07.0 -0.2**
baz=358
H27K Steamboat Moun 79.59 3 P **P** **11 14 06.9 -0.3**
baz=354
H24K Noodor Dome 79.60 6 P **P** **11 14 07.1 -0.2**
baz=349
GCSA Galena City Sc 79.69 10 P **P** **11 14 07.7 0.0**
baz=342
H29M Whitestone 79.70 2 P **P** **11 14 07.9 +0.1**
baz=357,SNR=5.5
I21K Tanana 79.86 7 P **P** **11 14 09.3 +0.7**
I21K IAmb IAmb 11 14 11.2
comp=Z,5.4nm,0.8s
I21K Tanana 79.86 7 P **P** **11 14 08.6 0.0**
baz=346
I17K Unalakleet 79.92 11 P **P** **11 14 08.5 -0.4**
baz=338
I20K Naaghedeneel 79.95 9 P **P** **11 14 08.8 -0.3**
baz=343
PRP Porcupine Dome 80.09 5 P **P** **11 14 08.7 -1.3**
baz=351
MLY Manley 80.14 7 P **P** **11 14 10.1 -0.1**
MLY IAmb IAmb 11 14 11.6
comp=Z,3.7nm,0.8s
MLY Manley 80.14 7 P **P** **11 14 09.3 -0.9**
baz=347,SNR=5.2
I23K Minto, Yukon-K 80.15 6 P **P** **11 14 09.3 -0.9**
baz=348
H31M Peel River 80.16 360 P **P** **11 14 09.9 -0.4**
baz=0.3
I27K Kandik River 80.22 3 P **P** **11 14 09.7 -0.9**
baz=354
POKR Poker Plat Res 80.35 5 P **P** **11 14 10.5 -0.7**
baz=349
I28M Miner Creek 80.44 2 P **P** **11 14 11.1 -0.7**
baz=356
MDM Murphy Dome 80.44 6 P **P** **11 14 11.7 -0.1**
MDM IAmb IAmb 11 14 13.2
comp=Z,7.9nm,1.0s
I26K Coal Creek Min 80.44 4 P **P** **11 14 10.9 -0.8**
baz=353
COLA College 80.55 6 P **P** **11 14 12.4 +0.1**
COLA College 80.55 6 P **P** **11 14 11.5 -0.8**
baz=349
COLA College 80.55 6 P **P** **11 14 12.4 +0.1**
COLA pmax pmax
comp=Z,9.0nm,0.8s
J19K Poorman 80.57 9 P **P** **11 14 12.6 +0.1**
J19K IAmb IAmb 11 14 22.4
comp=Z,7.8nm,1.3s
J19K Poorman 80.57 9 P **P** **11 14 12.2 -0.3**
baz=343
J20K Nowinta River 80.59 9 P **P** **11 14 12.2 -0.4**
baz=344
NEA2 Nenana 80.72 6 P **P** **11 14 13.3 0.0**
baz=348
IL31 80.73 5 P **P** **11 14 12.5 -0.7**
IL31 IAmb IAmb 11 14 14.0
comp=Z,5.2nm,1.1s
ILAR Eielson Array 80.73 5 P **P** **11 14 12.9 -0.4**
ILAR Eielson Array 80.73 5 P **P** **11 14 13.2 -0.1**
comp=Z,1.9nm,0.8s,baz=328,slow=4.3,SNR=22
comp=Z,1.9nm,0.8s
I30M Mount Dempster 80.74 1 P **P** **11 14 13.3 -0.2**
baz=359
J18K Innoko River 80.93 10 P **P** **11 14 14.4 -0.1**
baz=342
J25K Salcha River, 81.00 5 P **P** **11 14 14.6 -0.3**
baz=351
BPAW Bear Paw Mtn. 81.02 7 P **P** **11 14 15.0 +0.1**
BPAW IAmb IAmb 11 14 15.9
comp=Z,7.2nm,1.0s
BPAW Bear Paw Mtn. 81.02 7 P **P** **11 14 14.7 -0.2**
baz=346
EGAK Eagle 81.06 3 P **P** **11 14 14.1 -1.0**
EGAK IAmb IAmb 11 14 16.5
comp=Z,6.1nm,1.0s
EGAK Eagle 81.06 3 P **P** **11 14 14.7 -0.4**
baz=355
HDA Harding Lake 81.08 5 P **P** **11 14 14.8 -0.5**

HDA	Harding Lake	81.08	5	P		P	11 14 14.7	-0.5
	baz=350							
CHUM	Lake Minchumin	81.09	8	P		P	11 14 15.0	-0.2
	baz=345							
PKME	Peaks-Kenny Pk	81.17	320	P		P	11 14 15.3	-0.7
	baz=50							
J26L	Joseph Creek	81.22	4	P		P	11 14 15.4	-0.6
	baz=353							
K15K	Wolf Creek Mou	81.26	12	P		P	11 14 16.4	+0.2
	baz=338							
K20K	Telida	81.39	9	P		P	11 14 16.6	-0.3
	baz=344							
J30M	Hart River	81.39	1	P		P	11 14 17.1	+0.1
J30M				lAmb	lAmb	lAmb	11 14 17.8	
	comp=Z,4.3nm,0.8s							
K17K	Iditarod	81.41	11	P		P	11 14 16.4	-0.5
	baz=340							
J29N	Klondike Camp	81.48	2	P		P	11 14 17.4	0.0
	baz=357							
TTA	Tatalina	81.54	10	P		P	11 14 17.1	-0.6
	baz=342							
CAST	Castle Rocks	81.56	8	P		P	11 14 17.8	0.0
	baz=346,SNR=6.5							
MCK	McKinley	81.58	6	P		P	11 14 17.8	-0.1
	baz=348							
SCRK	Sand Creek	81.72	4	P		P	11 14 18.4	-0.3
	baz=352,SNR=6.3							
K27K	Chicken	81.77	3	P		P	11 14 19.1	+0.3
	baz=354							
K24K	Donnelly Dome	81.77	5	P		P	11 14 18.6	-0.3
	baz=351,SNR=5.7							
DAWY	Dawson	81.84	2	P		P	11 14 18.3	-1.0
DAWY				lAmb	lAmb	lAmb	11 14 26.2	
	comp=Z,5.7nm,1.1s							
DAWY	Dawson	81.84	2	P		P	11 14 19.3	0.0
	baz=356							
L17K	Donlin	81.96	11	P		P	11 14 20.0	+0.2
	baz=340							
PPLA	Purkeypile	82.06	8	P		P	11 14 20.1	-0.5
	baz=345							
K29M	Barlow Dome	82.11	1	P		P	11 14 20.6	-0.2
	baz=358,SNR=5.4							
YKA	Yellowknife Ar	82.15	351	P		P	11 14 20.1	-0.8
	comp=Z,0.5nm,0.6s,baz=15,slow=5.3,SNR=12							
	comp=Z,0.5nm,0.6s							
L20K	Farewell, AK	82.26	9	P		P	11 14 21.6	+0.1
	baz=344							
WRGLY	Wrigley	82.34	355	P		P	11 14 22.0	+0.2
	baz=9.3							
DHY	Denali Highway	82.36	6	P		P	11 14 22.2	-0.1
	baz=349							
MAYO	Mayo, Yukon	82.38	1	P		P	11 14 22.0	-0.1
	baz=359							
L19K	White Mountain	82.42	9	P		P	11 14 21.7	-0.6
	baz=343							
WAT1	Susitna Watana	82.50	6	P		P	11 14 21.5	-1.3
	baz=348							
PAX	Paxson	82.62	5	P		P	11 14 22.9	-0.6
	baz=351							
L26K	Log Cabin Wild	82.70	4	P		P	11 14 23.7	-0.1
	baz=353							
L27K	Beaver Creek,	82.75	3	P		P	11 14 23.7	-0.4
	baz=354							
M19K	Big River Lodg	82.75	9	P		P	11 14 23.8	-0.2
	baz=344							
MENT	Mentasta	82.77	4	P		P	11 14 24.3	+0.1
MENT				lAmb	lAmb	lAmb	11 14 25.5	
	comp=Z,4.0nm,0.8s							
M17K	Holitna River	82.78	11	P		P	11 14 23.7	-0.5
	baz=341							
WAT6	Susitna Watana	82.82	6	P		P	11 14 24.1	-0.5
	baz=349							
L29M	L29M	82.83	2	P		P	11 14 24.7	+0.2
	baz=357							
M16K	Timber Creek	82.90	12	P		P	11 14 24.5	-0.3
	baz=340							
M15K	Kasigluk River	82.90	13	P		P	11 14 24.8	-0.1
	baz=339							
M20K	Styx River	82.93	9	P		P	11 14 25.2	+0.1
	baz=345							
M18K	Stony River	82.94	10	P		P	11 14 24.9	-0.1
	baz=342							
SKT	Skwentna	83.03	8	P		P	11 14 25.8	+0.3
	baz=346							
HARP	HAARP	83.21	5	P		P	11 14 26.5	+0.1
	baz=351							
M24K	Tolsona, Glenn	83.42	5	P		P	11 14 27.0	-0.5
	baz=350							
BVCY	Beaver Creek	83.44	3	P		P	11 14 27.5	-0.2
	baz=355							
M27K	Edge Creek, AK	83.44	3	P		P	11 14 27.9	0.0
	baz=354							
M29M	Somme Creek	83.49	2	P		P	11 14 28.1	+0.1
	baz=357							
SML	Sawmill	83.53	7	P		P	11 14 27.7	-0.4
SML	Sawmill	83.53	7	P		P	11 14 28.3	+0.2
	baz=349							
SML	Sawmill	83.53	7	P		P	11 14 27.7	-0.4
SML				pmax		pmax		
	comp=Z,8.0nm,0.8s							
SCM	Sheep Creek Mo	83.59	6	P		P	11 14 27.7	-0.8
	baz=350							
M23K	Glacier View	83.60	6	P		P	11 14 28.2	-0.3
	baz=349							
SUA	Susitna One	83.62	8	P		P	11 14 28.3	-0.4
	baz=347							
N17K	Nushagak Hills	83.66	11	P		P	11 14 28.3	-0.4
	baz=341							
PMR	Palmer	83.66	7	P		P	11 14 28.8	+0.1
	baz=348							
N20K	Mount Spurr	83.70	8	P		P	11 14 29.1	0.0
	baz=346							
N18K	Kilae Creek	83.71	10	P		P	11 14 29.2	+0.2
	baz=342							
FARO	Faro, Yukon	83.75	359	P		P	11 14 29.6	+0.4
	baz=1.1							
M31M	Drury Creek, Y	83.78	360	P		P	11 14 29.3	0.0
	baz=0.2							
N19K	Bonanza Creek	83.78	10	P		P	11 14 29.4	-0.1
	baz=344							
KNK	Knik Glacier	83.91	7	P		P	11 14 30.1	+0.1
	baz=349							
SPIA	Saint Paul Isl	83.97	19	P		P	11 14 30.5	+0.2
	baz=331							
KLU	Klutina	84.05	5	P		P	11 14 31.6	+0.8
KLU	Klutina	84.05	5	P		P	11 14 30.8	0.0
	baz=351							
YUK3	Moose Creek	84.09	3	P		P	11 14 30.9	-0.3
	baz=355							
RC01	Rabbit Creek A	84.09	7	P		P	11 14 30.8	-0.1
	baz=348							
CAPN	Captain Cook N	84.25	8	P		P	11 14 31.5	-0.2
	baz=346							
TGTN	Hyland Airport	84.32	357	P		P	11 14 31.9	-0.3
	baz=5.3							
O16K	Kokwok River B	84.39	12	P		P	11 14 32.3	-0.2
	baz=341							
N30M	Aishikik Lake	84.50	1	P		P	11 14 32.9	-0.2
	baz=358							
YUK4	Talbot Arm	84.58	2	P		P	11 14 32.4	-1.3
	baz=357							
P18K	Big Mountain,	85.04	10	P		P	11 14 35.0	-0.9
	baz=343							
P17K	Kvichak River	85.04	11	P		P	11 14 35.0	-0.8
	baz=342							
P19K	Oil Pt	85.07	9	P		P	11 14 35.2	-0.7
	baz=345							
SEW	Seward	85.09	7	P		P	11 14 35.1	-0.9
	baz=348							
HYT	Haines Junctio	85.13	1	P		P	11 14 36.7	+0.3
HYT				lAmb	lAmb	lAmb	11 14 42.8	
	comp=Z,5.1nm,0.9s							
HYT	Haines Junctio	85.13	1	P		P	11 14 35.6	-0.8
	baz=358							
O30N	Mendenhall	85.21	1	P		P	11 14 36.1	-0.6
	baz=359							
Q16K	King Salmon	85.50	11	P		P	11 14 36.9	-1.1
	baz=342							
S14K	Fog Glacier	87.25	14	P		P	11 14 46.0	-0.9
	baz=340							
OHAK	Old Harbor	87.42	10	P		P	11 14 46.5	-0.9
	baz=345							
U33K	Whale Pass	89.88	359	P		P	11 14 58.4	-0.8
	baz=1.3							
TZTN	Tazewell	94.93	321	P		P	11 15 22.0	-0.9
	baz=40							
GSC	Goldstone, Bar	108.73	345	P		PKiKP	11 20 28.9	-1.0
	baz=16							
MNTX	Cornudas Mount	108.77	334	P		PKiKP	11 20 29.0	-0.9
	baz=25							
121A	Cookes Peak, D	108.85	336	P		PKiKP	11 20 29.4	-0.9
	baz=23							
SMMC	Simmler	109.36	347	P		PKiKP	11 20 30.2	-0.8
	baz=13							
EDW2	Edwards Air Fo	109.39	346	P		PKiKP	11 20 30.4	-0.7
	baz=16							
BELC	Belle Mtn. Jos	109.80	344	P		PKiKP	11 20 31.4	-0.6
	baz=21							
TUC	Tucson	110.01	339	P		PKiKP	11 20 31.0	-1.3
	baz=13							
SBC	Santa Barbara	110.16	347	P		PKiKP	11 20 31.7	-0.7
	baz=15							
MURC	Murrieta	110.46	345	P		PKiKP	11 20 32.4	-0.7

IDC ***19*** *11:28:20.3±3.1, 12°.25N×143°.95E, h42km±32km, mb3.6/11, mbtmp3.9/11, MS3.3/5, Error ellipse: s-maj=34.8km s-min=13.6km az=101.0*

NEIC ***19*** *11:28:20.6±1.0, 12°.2N±0°.1×143°.9E±0°.2, h39km±10km, mb4.5/7, Error ellipse: s-maj=22.2km s-min=17.5km az=90.0*

ISC 19 11:28:18.1±0.7, 12°.25N±0°.09×143°.9E±0°.1, h26km, n33, σ0s66/23, mb4.3/16, MS3.3/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.66	36		Pn	11 28 45.7	+0.2
GUMO	Guam	1.66	36	P	Pn	11 28 46.0	+0.5
	232nm,0.3s,baz=190,slow=12,SNR=69						
GUMO				S	Sn	11 29 05.8	-0.1
	852nm,0.3s,baz=15,slow=19,SNR=9.2						
GUMO				LR	LR	11 29 38.5	
	comp=Z,338nm,18.1s,baz=196,slow=49						
JHJ	Hachijo jima 2	21.11	350	LR	LR	11 39 38.3	
	comp=Z,73nm,18.4s,baz=12,slow=32						
H11S3	WAKE ISLAND Hy	22.85	71	T	T	11 56 49.0	
	baz=257,slow=75,SNR=9.4						
H11S1	WAKE ISLAND Hy	22.87	71	T	T	11 56 53.2	
	baz=257,slow=75,SNR=8.1						
H11S2	WAKE ISLAND Hy	22.87	71	T	T	11 56 50.4	
	baz=257,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	23.33	69	T	T	11 57 23.5	
	baz=255,slow=75,SNR=31						
H11N2	WAKE ISLAND Hy	23.34	68	T	T	11 57 24.5	
	baz=255,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	23.35	69	T	T	11 57 24.8	
	baz=255,slow=75,SNR=24						
MJAR	Matsushiro Arr	24.72	349	LR	LR	11 42 26.7	
	comp=Z,36nm,19.1s,baz=191,slow=34						
WB0	Warramunga Arr	33.15	196	P	P	11 34 53.0	+0.4
WB0				lAmb	lAmb	11 35 20.4	
	comp=Z,7.2nm,1.4s						
WR0	Warramunga Arr	33.29	196	P	P	11 34 54.0	+0.1
WR0				lAmb	lAmb	11 34 57.8	
	comp=Z,6.6nm,1.4s						
WB2	Warramunga Arr	33.33	196	P	P	11 34 53.9	-0.3
WB2				lAmb	lAmb	11 35 17.3	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	33.33	196	P	P	11 34 53.9	-0.2
	comp=Z,1.5nm,0.7s,baz=20,slow=9.6,SNR=10						
	comp=Z,1.5nm,0.7s						
AS31	Alice Springs	37.00	195	P	P	11 35 25.6	-0.1
ASAR	Alice Springs	37.00	195	P	P	11 35 25.4	-0.3
ASAR	Alice Springs	37.00	195	P	P	11 35 27.1	+1.3
	comp=Z,0.8nm,0.6s,baz=19,slow=10,SNR=18						
	comp=Z,0.8nm,0.6s						
DZM	Mont Dzumac	40.66	147	P	P	11 35 56.9	+0.3
DZM				lAmb	lAmb	11 36 21.5	
	comp=Z,17nm,1.2s						
ARMA	Armidale	43.07	170	P	P	11 36 15.7	-0.4
STKA	Stephens Creek	43.92	183	P	P	11 36 22.4	-0.5
	comp=Z,0.9nm,0.4s,baz=333,slow=9.0,SNR=2.0						
	comp=Z,0.9nm,0.4s						
BBOO	Buckleboo	45.42	189	P	P	11 36 34.9	+0.1
BBOO				lAmb	lAmb	11 36 39.2	
	comp=Z,13nm,1.1s						
SONM	Songino Array	47.28	326	P	P	11 36 48.7	-0.8
	comp=Z,0.3nm,0.7s,baz=155,slow=7.9,SNR=2.3						
	comp=Z,0.3nm,0.7s						
MKAR	Makanchi Array	61.78	317	P	P	11 38 35.4	+0.6
MKAR	Makanchi Array	61.78	317	P	P	11 38 35.5	+0.7
	comp=Z,0.3nm,0.8s,baz=98,slow=8.7,SNR=4.2						
	comp=Z,0.3nm,0.8s						
KURBB	Kurchatov Arra	65.02	320	P	P	11 38 56.7	+0.6
	comp=Z,1.5nm,0.7s,baz=104,slow=6.6,SNR=13						
	comp=Z,1.5nm,0.7s						
NRIK	Noril'sk	67.08	341	LR	LR	12 07 47.0	
	comp=Z,21nm,21.8s,baz=203,slow=35						
ILAR	Eielson Array	70.19	25	P	P	11 39 27.3	-1.1
	comp=Z,0.3nm,0.7s,baz=261,slow=5.2,SNR=1.8						
	comp=Z,0.3nm,0.7s						
BVAR	Borovoye Array	70.38	322	P	P	11 39 30.7	+0.9
	comp=Z,1.6nm,0.5s,baz=110,slow=6.7,SNR=7.1						
	comp=Z,1.6nm,0.5s						
YBH	Yreka Blue Hor	84.49	49	LR	LR	12 17 50.1	
	comp=Z,25nm,18.7s,baz=356,slow=35						
YKA	Yellowknife Ar	84.50	27	P	P	11 40 49.4	+0.9
	comp=Z,0.4nm,0.8s,baz=291,slow=5.6,SNR=6.0						
	comp=Z,0.4nm,0.8s						
NEW	Newport	86.88	41	LR	LR	12 17 34.8	
	comp=Z,27nm,19.6s,baz=304,slow=34						
ARCES	ARCESS Array B	88.06	342	P	P	11 41 05.1	-0.9
	comp=Z,1.5nm,0.8s,baz=71,slow=5.5,SNR=3.7						
	comp=Z,1.5nm,0.8s						
FINES	FINESS Array B	91.96	335	P	P	11 41 24.2	-0.1
	comp=Z,0.7nm,0.4s,baz=62,slow=4.5,SNR=7.1						
	comp=Z,0.7nm,0.4s						

NEIC ***19*** *11:32:12.9±2.0, 18°.65N±0°.08×145°.2E±0°.2, h174km±9km, mb4.2/57, Error ellipse: s-maj=23.2km s-min=12.0km az=93.0*

IDC ***19*** *11:32:13.5±3.9, 18°.69N×145°.66E, h170km±37km, mb3.1/7, mbtmp3.6/8, Error ellipse: s-maj=47.3km s-min=20.8km az=111.0*

ISC 19 11:32:15.1±0.5, 18°.59N±0°.06×145°.2E±0°.1, h200km, n75, σ1s21/76, mb4.0/36, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.98	183	Pn	Pn	11 33 27.8	-1.6
GUMO	Guam	4.98	183	P	Pn	11 33 29.2	-0.1
	36nm,0.6s,baz=349,slow=16,SNR=1.6						
GUMO				S	Sn	11 34 26.9	-0.9
	111nm,1.1s,baz=348,slow=12,SNR=2.0						
JCJ	Chichijima	8.90	343	Pn	Pn	11 34 18.7	-1.4
USA0B	Ussuriysk Arra	27.82	339	P	P	11 37 43.1	-2.6
USA0B				lAmb	lAmb	11 38 22.8	
	comp=Z,10nm,1.4s						
USRK	Ussuriysk Ar.	27.82	339	P	P	11 37 43.7	-2.0
MDJ	Mudanjiang	29.04	337	P	P	11 37 57.6	+1.1
COEN	Coen	32.40	184	P	P	11 38 26.9	+0.6
WB0	Warramunga Arr	39.56	196	P	P	11 39 26.0	-1.0
WB0				lAmb	lAmb	11 39 45.0	
	comp=Z,7.1nm,1.4s						
WR0	Warramunga Arr	39.70	196	P	P	11 39 28.2	+0.1
WR0				lAmb	lAmb	11 39 37.5	
	comp=Z,9.4nm,1.5s						
WB2	Warramunga Arr	39.74	196	P	P	11 39 29.1	+0.7
WB2				lAmb	lAmb	11 39 40.0	
	comp=Z,9.8nm,1.4s						
WRA	Warramunga Arr	39.74	196	P	P	11 39 31.0	+2.5
	comp=Z,0.3nm,0.4s,baz=13,slow=8.2,SNR=6.7						
	comp=Z,0.3nm,0.4s						
FITZ	Fitzroy Crossi	41.20	209	P	P	11 39 41.1	+0.6
AMKA	Amchitka	42.36	31	P	P	11 39 49.4	-0.1
SONM	Songino Array	42.91	322	P	P	11 39 53.9	-0.3
UGM	Wanagama	43.14	235	P	P	11 39 56.3	+0.1
AS31	Alice Springs	43.41	195	P	P	11 39 57.9	-0.3
ASAR	Alice Springs	43.41	195	P	P	11 39 58.4	+0.1
ASAR	Alice Springs	43.41	195	P	P	11 40 01.6	+3.3
	comp=Z,0.3nm,0.7s,baz=8.9,slow=5.7,SNR=4.8						
	comp=Z,0.3nm,0.7s						
NWAO	Narrogin (SRO)	57.77	208	P	P	11 41 45.0	-0.4
J16K	Anvik River	57.78	26	P	P	11 41 45.5	+0.5
MK31	Makanchi Array	58.17	314	P	P	11 41 47.2	-0.9
MKAR	Makanchi Array	58.17	314	P	P	11 41 47.6	-0.6
K17K	Iditarod	58.52	27	P	P	11 41 48.8	-1.4
F17K	Baldwin Pennin	58.91	22	P	P	11 41 52.0	-0.8
F17K				lAmb	lAmb	11 42 19.1	
	comp=Z,7.4nm,1.1s						
O18K	Koktuh Hills	58.96	31	P	P	11 41 51.5	-1.9
H18K	Honhosa River	59.43	24	P	P	11 41 54.0	-2.5
H18K				lAmb	lAmb	11 42 39.1	
	comp=Z,9.3nm,1.4s						
G18K	Tagagawik	59.62	23	P	P	11 41 54.4	-3.4
G18K				lAmb	lAmb	11 42 32.7	
	comp=Z,5.7nm,1.4s						
M19K	Big River Lodg	59.96	28	P	P	11 41 59.2	-0.9
M19K				lAmb	lAmb	11 41 59.2	
	comp=Z,4.9nm,1.2s						
J20K	Nowinta River	60.78	26	P	P	11 42 05.8	+0.2
J20K				lAmb	lAmb	11 42 27.5	
	comp=Z,7.4nm,1.5s						
KURK	Kurchatov	61.01	318	P	P	11 42 07.1	-0.3
KURK				lAmb	lAmb	11 42 09.3	
	comp=Z,5.0nm,1.5s						
BRLK	Bradley Lake	61.05	31	P	P	11 42 06.0	-1.5
F20K	Avaraart Lake	61.16	23	P	P	11 42 07.7	-0.4
F20K				lAmb	lAmb	11 42 14.7	
	comp=Z,3.2nm,1.2s						
SKT	Skwentna	61.28	29	P	P	11 42 08.4	-0.7
CAST	Castle Rocks	61.42	27	P	P	11 42 09.7	-0.3
IMAR	Indian Mountai	61.52	24	P	P	11 42 11.0	+0.4
H21K	Melozitna Rive	61.79	25	P	P	11 42 12.6	+0.2
B20K	Meade River	61.84	19	P	P	11 42 12.5	-0.1
B20K				lAmb	lAmb	11 42 31.7	
	comp=Z,2.9nm,1.2s						
RC01	Rabbit Creek A	61.90	30	P	P	11 42 12.5	-0.7
I21K	Tanana	61.97	25	P	P	11 42 13.6	0.0
I21K				lAmb	lAmb	11 42 32.1	
	comp=Z,2.9nm,1.2s						
B21K	Ikpikpuk River	62.50	20	P	P	11 42 16.9	-0.1
B21K				lAmb	lAmb	11 42 35.4	
	comp=Z,3.9nm,1.4s						
SML	Sawmill	62.71	29	P	P	11 42 18.8	+0.1
D22K	Ayikyak River	62.88	21	P	P	11 42 20.2	+0.7
D22K				lAmb	lAmb	11 42 21.9	
	comp=Z,1.7nm,0.8s						
E22K	Anaktuvuk Pass	62.94	22	P	P	11 42 20.8	+0.8
E22K				lAmb	lAmb	11 43 00.2	
	comp=Z,4.3nm,1.3s						
I23K	Minto, Yukon-K	63.03	26	P	P	11 42 21.2	+0.7
I23K				lAmb	lAmb	11 42 44.1	
	comp=Z,5.9nm,1.4s						
WRH	Wood River Hil	63.40	26	P	P	11 42 22.8	-0.2
WRH				lAmb	lAmb	11 42 26.5	
	comp=Z,4.5nm,1.3s						
H24K	Noodor Dome	63.79	25	P	P	11 42 27.0	+1.3
H24K				lAmb	lAmb	11 42 51.4	
	comp=Z,3.7nm,1.4s						
TOLK	Toolik Lake Re	63.88	22	P	P	11 42 27.3	+1.1
ILAR	Eielson Array	63.97	26	P	P	11 42 25.6	-1.1
	comp=Z,0.4nm,0.8s,baz=251,slow=5.4,SNR=4.6						
	comp=Z,0.4nm,0.8s						
D24K	Happy Valley	64.28	21	P	P	11 42 30.5	+1.8
D24K				lAmb	lAmb	11 42 36.0	
	comp=Z,3.5nm,1.2s						
J25K	Salcha River,	64.58	27	P	P	11 42 29.6	-1.1
J25K				lAmb	lAmb	11 42 50.9	
	comp=Z,3.1nm,1.3s						
SNH	Sunshine Point	65.11	32	P	P	11 42 33.3	-0.9
BMAR	Burnt Mountain	65.42	24	P	P	11 42 37.8	+1.6
GRNC	Granite Creek	65.69	31	P	P	11 42 37.9	-0.3
BCAR	Beaver Creek A	65.92	28	P	P	11 42 38.5	-1.0
BVAR	Borovoye Array	66.23	320	P	P	11 42 44.8	+3.3
	comp=Z,0.6nm,0.5s,baz=89,slow=5.9,SNR=3.0						
	comp=Z,0.6nm,0.5s						
EGAK	Eagle	66.39	27	P	P	11 42 43.7	+1.4
DAWY	Dawson	67.08	28	P	P	11 42 46.5	-0.2
F28M	Old Crow	67.23	24	P	P	11 42 48.6	+1.0
F28M				lAmb	lAmb	11 43 23.9	
	comp=Z,5.1nm,1.5s						
M29M	Somme Creek	67.39	29	P	P	11 42 48.2	-0.6
M29M				lAmb	lAmb	11 43 11.7	
	comp=Z,4.8nm,1.5s						
L29M	L29M	67.58	29	P	P	11 42 51.0	+1.1
L29M				lAmb	lAmb	11 43 34.5	
	comp=Z,4.4nm,1.4s						
H29M	Whitestone	67.69	25	P	P	11 42 51.0	+0.5
H29M				lAmb	lAmb	11 43 22.3	
	comp=Z,5.7nm,1.4s						
N30M	Aishikik Lake	68.00	30	P	P	11 42 52.7	+0.1
N30M				lAmb	lAmb	11 43 31.7	
	comp=Z,5.2nm,1.4s						
SKAG	Skagway	68.86	33	P	P	11 42 57.4	-0.4
SKAG				lAmb	lAmb	11 43 33.8	
	comp=Z,8.8nm,1.2s						
S32K	Killisnoo	69.31	35	P	P	11 43 00.4	-0.2
G31M	Satah River	69.36	25	P	P	11 43 01.3	+0.5
F31M	Tsiigehtchic	69.57	24	P	P	11 43 01.1	-0.9
INK	Inuvik	69.67	23	P	P	11 43 03.8	+1.2
INK				lAmb	lAmb	11 43 03.9	
	comp=Z,3.1nm,0.8s						
DIB	Dawson Inlet,	70.79	39	P	P	11 43 10.5	+0.8
S34M	Telegraph Cree	71.13	34	P	P	11 43 11.7	0.0
S34M				lAmb	lAmb	11 43 31.8	
	comp=Z,4.9nm,1.2s						
DLBC	Dease Lake	71.66	33	P	P	11 43 15.2	+0.3
C36M	Paulatuk	73.04	22	P	P	11 43 23.1	+0.4
ABKAR	Akbulak array	73.07	317	P	P	11 43 25.4	+2.1
YKA	Yellowknife Ar	78.32	28	P	P	11 43 53.2	+0.3
	comp=Z,0.3nm,0.7s,baz=288,slow=5.7,SNR=4.4						
	comp=Z,0.3nm,0.7s						
NVAR	Mina Array Bea	83.60	52	P	P	11 44 21.9	+0.4
	comp=Z,1.0nm,0.7s,baz=271,slow=5.2,SNR=5.3						
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	88.26	45	P	P	11 44 43.5	-0.7
	comp=Z,0.1nm,0.4s,baz=134,slow=0.9,SNR=4.3						
	comp=Z,0.1nm,0.4s						

IDC 19 11:41:51.0±2.5, 7°.07N×124°.57E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=280.4km s-min=22.6km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	28.52	160	P	P	11 47 48.6	+0.2
	0.1nm,0.3s,baz=340,slow=9.6,SNR=1.2						
	0.1nm,0.3s						
ASAR	Alice Springs	31.88	164	P	P	11 48 18.1	-0.1
	0.2nm,0.4s,baz=337,slow=7.4,SNR=11						
	0.2nm,0.4s						
MKAR	Makanchi Array	53.60	325	P	P	11 51 14.8	+0.7
	0.3nm,0.5s,baz=117,slow=7.7,SNR=8.1						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	57.78	327	P	P	11 51 42.9	-1.1
	0.4nm,0.3s,baz=126,slow=5.5,SNR=4.1						
	0.4nm,0.3s						

ISN ***19*** *11:49:27.4±1.2, 34°.48N×45°.27E, h6km±20km, ML2.9*
TEH ***19*** *11:49:28.6, 34°.52N×45°.30E, h17km±40km, ML2.8*

ISC 19 11:49:28.4±1.4, 34°.50N±0°.05×45°.29E±0°.04, h0km±13km, n12, σ0s55/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	Dehrash	0.93	77	Pg	Pg	11

az=62.0
*IDC **19** 12:04:59.6±7.7,3.°11N×128.°49E,h181km±78km,mb3.5/11, mbtmp3.9/11,Error ellipse: s-maj=38.0km s-min=15.2km az=80.0*

ISC 19 12:04:56.7±0.6,**3.°02N**±0.°08×**127.°98E**±0.°09,**h150**km,**n43, σ1s48/45,mb4.0**/20,**1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.31**	**195**		**Pn**	**12 05 33.4**	**-2.2**
TNTI	**Ternate**	**2.31**	**195**	P	**Pn**	**12 05 33.7**	**-1.9**
SGSI	**Sangihe**	**2.53**	**285**	P	**Pn**	**12 05 36.0**	**-2.2**
SGSI				S	**Sn**	**12 06 06.4**	**-3.9**
LBMI	**Labuha**	**3.66**	**187**	P	**Pn**	**12 05 52.9**	**+0.3**
KMSI	**Cibinong**	**4.67**	**239**	P	**Pn**	**12 06 05.1**	**-0.7**
SWI	**Sorong**	**5.06**	**140**	P	**Pn**	**12 06 08.3**	**-2.6**
	33nm,0.5s,978nm0.3nm						
SANI	**Sanana**	**5.41**	**202**	P	**Pn**	**12 06 13.0**	**-2.6**
	12nm,0.5s,930nm0.2nm						
GTOI	**Gorontalo**	**5.50**	**245**	P	**Pn**	**12 06 16.8**	**0.0**
	75nm,0.6s,696nm0.3nm						
MRSI	**Marisa**	**6.54**	**247**	P	**Pn**	**12 06 31.4**	**+0.8**
	184nm,0.5s,2μm0.6nm						
FAKI	**Fak Fak**	**7.28**	**144**	Pn	**Pn**	**12 06 39.3**	**-1.2**
FAKI	**Fak Fak**	**7.28**	**144**	P	**Pn**	**12 06 38.7**	**-1.8**
TOLI2	**Tolitoli**	**7.44**	**255**		**Pn**	**12 06 41.9**	**-0.7**
WB0	**Warramunga Arr**	**23.50**	**165**	P	**P**	**12 09 52.8**	**-0.3**
WB0				IAmb	IAmb	12 10 26.9	
	comp=Z,5.9nm,1.1s						
WRA	**Warramunga Arr**	**23.66**	**165**	P	**P**	**12 09 54.2**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=346,slow=11,SNR=12						
	comp=Z,1.7nm,0.8s						
WB2	**Warramunga Arr**	**23.66**	**165**	P	**P**	**12 09 54.5**	**-0.1**
WB2				IAmb	IAmb	12 10 32.8	
	comp=Z,10nm,1.2s						
WR0	**Warramunga Arr**	**23.73**	**165**	P	**P**	**12 09 55.1**	**-0.1**
WR0				IAmb	IAmb	12 10 23.4	
	comp=Z,4.8nm,1.1s						
AS31	**Alice Springs**	**27.14**	**168**	P	**P**	**12 10 27.8**	**+1.7**
ASAR	**Alice Springs**	**27.14**	**168**	P	**P**	**12 10 26.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=358,slow=7.6,SNR=5.5						
	comp=Z,0.3nm,0.7s						
KSRS	**Korea Array**	**34.27**	**360**	P	**P**	**12 11 27.9**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=178,slow=9.6,SNR=7.3						
	comp=Z,1.6nm,0.8s						
MJAR	**Matsushiro Arr**	**34.67**	**15**	P	**P**	**12 11 29.0**	**-2.9**
	comp=Z,0.8nm,0.5s,baz=188,slow=8.2,SNR=2.3						
	comp=Z,0.8nm,0.5s						
BBOO	**Buckleboo**	**36.45**	**169**	P	**P**	**12 11 48.2**	**+1.0**
STKA	**Stephens Creek**	**37.04**	**161**	P	**P**	**12 11 52.1**	**0.0**
LZH	**Lanzhou**	**39.75**	**329**	*e*P	**P**	**12 12 16.1**	**+1.1**
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
USRK	**Ussuriysk Ar.**	**41.16**	**4**	P	**P**	**12 12 26.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=207,slow=7.9,SNR=3.9						
	comp=Z,1.6nm,0.7s						
GTA	**Gaotai**	**44.35**	**328**	*e*P	**P**	**12 12 54.0**	**+1.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**48.37**	**341**	P	**P**	**12 13 24.0**	**+0.6**
SONM	**Songino Array**	**48.37**	**341**	P	**P**	**12 13 23.9**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=152,slow=8.4,SNR=9.8						
SONM				PcP	**PcP**	**12 14 48.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=181,slow=2.7,SNR=2.7						
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**58.85**	**325**	P	**P**	**12 14 41.0**	**+1.3**
MK31				IAmb	IAmb	12 14 41.4	
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**58.85**	**325**	P	**P**	**12 14 40.9**	**+1.2**
MKAR	**Makanchi Array**	**58.85**	**325**	P	**P**	**12 14 41.0**	**+1.4**
	comp=Z,2.0nm,0.5s,baz=118,slow=8.2,SNR=36						
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	**59.04**	**325**	P	**P**	**12 14 42.3**	**+1.4**
ZALV	**Zalesovo Beam**	**61.79**	**333**	P	**P**	**12 14 58.7**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=131,slow=6.5,SNR=2.3						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**63.01**	**327**	P	**P**	**12 15 08.3**	**+0.7**
	comp=Z,2.1nm,0.2s,baz=127,slow=6.2,SNR=14						
	comp=Z,2.1nm,0.2s						
KURK	**Kurchatov**	**63.01**	**327**	P	**P**	**12 15 08.5**	**+1.0**
KK31	**Karatay Array**	**64.60**	**317**	P	**P**	**12 15 19.0**	**+0.8**
KK31				IAmb	IAmb	12 15 21.2	
	comp=Z,2.7nm,1.3s						
KKAR	**Karatay Array**	**64.60**	**317**	P	**P**	**12 15 19.2**	**+1.0**
BVAR	**Borovoye Array**	**68.59**	**327**	P	**P**	**12 15 44.0**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=134,slow=6.4,SNR=5.6						
	comp=Z,1.5nm,0.6s						
BRVK	**Borovoye**	**68.67**	**327**	P	**P**	**12 15 44.4**	**+0.7**
BRVK				IAmb	IAmb	12 15 45.2	
	comp=Z,2.0nm,0.7s						
ABKAR	**Akbulak array**	**73.49**	**321**	P	**P**	**12 16 13.6**	**+0.8**
E18K	**Tukpahlearik C**	**80.15**	**22**	P	**P**	**12 16 51.4**	**+1.6**
E18K				IAmb	IAmb	12 16 51.8	
	comp=Z,3.6nm,0.8s						
IMAR	**Indian Mountai**	**82.48**	**24**	P	**P**	**12 17 03.5**	**+1.3**
ILAR	**Eielson Array**	**85.21**	**25**	P	**P**	**12 17 13.6**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.8,SNR=7.2						
	comp=Z,0.3nm,0.7s						
SNAA	**Sanae**	**104.84**	**194**	⇓P	**Pdif**	**12 18 47.6**	**+1.7**
	comp=Z,11nm,0.2s						

HEL 19 12:05:35.9±0.1,**67.°65N×33.°74E,h0**km,**ML1.2, Suspected explosion,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.43**	**53**	PG	Pg	12 05 43.3	-0.8
LVZ				SG	Sg	12 05 49.1	-0.5
VRF	**Varrio**	**1.58**	**276**	PG	Pn	12 06 03.8	-1.3
VRF				MSG		12 06 23.3	
	comp=Z,1.9nm,0.2s						
VRF				SG	Sn	12 06 24.6	-1.7
OLKF	**Oulanka, Finla**	**2.17**	**234**	PG	Pn	12 06 14.5	+1.3
OLKF				MSG		12 06 40.2	
	comp=Z,1.1nm,0.2s						
OLKF				SG	Sb	12 06 42.8	-0.5
RAJF	**Raja-Jooseppi**	**2.20**	**295**	PG	Pn	12 06 14.7	+1.0
RAJF				SB	Sn	12 06 42.2	+0.6
KU6	**Riekki**	**2.23**	**225**	PG	Pn	12 06 15.2	+1.2
KU6				MSG		12 06 42.0	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sb	12 06 45.0	-0.1
MSF	**Maaselka**	**2.55**	**229**	PG	Pb	12 06 21.0	-1.5
MSF				SG	Sb	12 06 54.9	+0.5
SGF	**Sodankyl**	**2.78**	**269**	PB	Pb	12 06 24.3	-2.0
SGF				SG	Sb	12 07 02.4	+1.5
KMNF	**Kaamanen**	**2.92**	**304**	SN	Sn	12 06 58.4	-0.7
RNF	**Rovaniemi**	**3.19**	**255**	PN	Pn	12 06 27.2	-0.1
RNF				SB	Sn	12 07 08.3	+2.3
RANF	**Ranua**	**3.20**	**242**	PB	Pb	12 06 31.0	-2.5
	baz=61						
RANF				SG	Sb	12 07 14.2	+1.2
KEV	**Kevo**	**3.24**	**314**	PN	Pn	12 06 28.0	+0.1
KEV				SN	Sn	12 07 06.2	-1.0
HEF	**Hetta**	**3.87**	**286**	PG	Pb	12 06 45.5	+0.6
HEF				SG	Sb	12 07 35.0	+2.9
KTK1	**Kautokeino**	**4.13**	**294**	SG	Sb	12 07 41.7	+2.0
LANU	**Lannavaara**	**4.47**	**281**	SG	Sb	12 07 54.1	+4.7

HEL 19 12:06:58.4±0.2,**63.°87N×20.°37E,h0**km,**ML1.2, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMAU	**Umeaa**	**0.14**	**83**	PG	Pg	12 07 00.2	-0.8
HUSU	**Husum**	**0.74**	**225**	PB	Pg	12 07 12.7	+0.2
	baz=41						
HUSU				SG	Sb	12 07 24.7	+0.1
BURU	**Burvik**	**0.84**	**31**	PB	Pg	12 07 14.4	-0.1
BURU				SB	Sg	12 07 25.1	-0.4
VAF	**Ylistaro**	**1.32**	**128**	PG	Pg	12 07 22.2	-1.6
	baz=312						
VAF				MSG		12 07 38.3	
	comp=Z,1.4nm,0.2s						
VAF				SG	Sg	12 07 39.6	-1.2
OBF8	**Ulkokalla**	**1.43**	**70**	PG	Pn	12 07 24.3	-1.2
OBF8				MSG		12 07 41.4	
	comp=Z,1.0nm,0.2s						
OBF8				SN	Sn	12 07 45.6	+0.6
HEMU	**Hemsoen**	**1.59**	**222**	PG	Pn	12 07 27.1	-0.7
HEMU				SN	Sn	12 07 48.6	-0.5
OBF0	**Syolatti, Pyha**	**1.81**	**68**	PG	Pb	12 07 31.6	-0.7
OBF0				MSG		12 07 52.3	
	comp=Z,1.4nm,0.2s						
OUF	**Merijarvi**	**1.98**	**73**	PG	Pn	12 07 32.7	-0.4
OUF				MSG		12 07 57.2	
	comp=Z,1.2nm,0.2s						
OUF				SG	Sn	12 07 59.0	+0.5
KPF	**Kankaanpaa**	**2.19**	**158**	PG	Pn	12 07 37.3	+1.4
KPF				SG	Sb	12 08 06.2	-0.1
OBF4	**Vikkela, Lumij**	**2.27**	**63**	SN	Pn	12 07 37.0	0.0
OBF4	**Vikkela, Lumij**	**2.27**	**63**	PB	Pn	12 07 37.0	0.0
OBF4				MSG		12 08 05.5	
	comp=Z,1.4nm,0.2s						
OBF4				SG	Sb	12 08 08.0	-0.7
KALU	**Kalix**	**2.37**	**31**	SG	Sb	12 08 12.8	+1.1
KEF	**Keuruu**	**2.67**	**128**	MSG		12 08 16.9	
	comp=Z,1.1nm,0.2s						
KEF				SB	Sb	12 08 18.7	-1.5
OUL	**Oulu**	**2.69**	**60**	SG	Sb	12 08 20.7	-0.1
RNF	**Rovaniemi**	**3.63**	**38**	PN	Pn	12 07 56.7	+0.9

*NEIC **19** 12:12:04.1±1.0,19.°04N±0.°05×155.°43W±0.°05, h30km±11km,Error ellipse: s-maj=8.6km s-min=5.8km az=133.0*

HVO 19 12:12:03.9±1.6,**18.°91N**±0.°03×**155.°36W**±0.°02,**h12**km±6km, **ML2.8**/23,**ML2.9**/52(NEIC),**Error ellipse: s-maj=5.3km s-min=1.8km az=155.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPO	**Honuapo**	**0.26**	**313**		Pg	12 12 09.2	0.0
HPO					Sg	12 12 13.5	+0.6
HTC	**Hot Caves**	**0.33**	**353**		Pg	12 12 10.4	-0.2
HLP	**Hilina Pali**	**0.38**	**7**		Pg	12 12 11.6	-0.1
HLP	**Hilina Pali**	**0.38**	**7**		Sg	12 12 17.6	+0.8
KHU	**Kahuku**	**0.41**	**324**		Pg	12 12 11.7	-0.5
KHU				IAML		12 12 18.3	
	comp=E,1μm,0.8s						
KHU				IAML		12 12 26.4	
	comp=N,1μm,0.9s						
KHU	**Kahuku**	**0.41**	**324**		Sg	12 12 17.8	0.0
PUH	**Pauahi**	**0.48**	**16**		Pg	12 12 12.5	-0.9
PUH				IAML		12 12 29.3	
	comp=E,791nm,0.8s						
PUH				IAML		12 12 31.0	
	comp=N,771nm,0.8s						
SDHHI	**Sand Hill**	**0.48**	**7**		Pg	12 12 12.1	-1.3
SDHHI				IAML		12 12 30.4	
	comp=N,1μm,0.5s						
RIM	**Rim**	**0.49**	**9**		Pg	12 12 11.8	-1.7
RIM				IAML		12 12 25.5	
	comp=E,982nm,0.6s						
RIM				IAML		12 12 27.7	
	comp=N,1μm,0.7s						
KKO	**Keanakako`i**	**0.49**	**10**		Pg	12 12 12.8	-0.9
KKO	**Keanakako`i**	**0.49**	**10**		Sg	12 12 19.8	-0.3
KKO	**Keanakako`i**	**0.49**	**10**	IAML		12 12 26.7	
	comp=E,934nm,0.5s						
WRMHI	**West Rim**	**0.49**	**6**		Pg	12 12 12.4	-1.3
KNHH	**Kane Nui o Ham**	**0.50**	**21**		Pg	12 12 12.9	-0.8
NPH	**North Pit**	**0.50**	**8**		Pg	12 12 12.3	-1.5
NPH				IAML		12 12 29.9	
	comp=N,666nm,0.5s						
BYL	**Byron's Ledge**	**0.51**	**10**		Pg	12 12 13.0	-0.9
BYL	**Byron's Ledge**	**0.51**	**10**	IAML		12 12 27.9	
	comp=E,972nm,0.5s						
BYL				IAML		12 12 28.0	
	comp=N,1μm,0.5s						
OBL	**Observatory Le**	**0.51**	**8**	Pg	Pg	12 12 13.3	-0.6
UWE	**Uwekahuna**	**0.51**	**7**		Pg	12 12 13.2	-0.8
HATHI	**Halema`uma`u T**	**0.52**	**10**		Pg	12 12 13.0	-1.0
HATHI	**Halema`uma`u T**	**0.52**	**10**	IAML		12 12 28.1	
	comp=N,1μm,0.8s						
UWB	**Uwekahuna B**	**0.52**	**8**		Pg	12 12 12.8	-1.3
SBLHI	**Steaming Bluff**	**0.52**	**9**	Pg	Pg	12 12 12.8	-1.3
SBLHI				IAML		12 12 29.9	
	comp=N,945nm,0.7s						
SBLHI				IAML		12 12 30.0	
	comp=E,798nm,0.5s						
STCH	**Steam Cracks**	**0.52**	**25**		Pg	12 12 13.2	-1.0
STCH					Sg	12 12 20.6	-0.5
STCH	**Steam Cracks**	**0.52**	**25**	IAML		12 12 27.5	
	comp=E,587nm,0.7s						
STCH				IAML		12 12 33.7	
	comp=N,693nm,0.8s						
JCUZ	**Jacuzzi**	**0.53**	**27**	Pg	Pg	12 12 12.7	-1.6
NPOC	**North of Pu'u**	**0.53**	**26**	Pg	Pg	12 12 12.8	-1.6
RSD	**Rainshed**	**0.55**	**8**		Pg	12 12 13.4	-1.4
MLH	**Mauna Loa**	**0.58**	**357**		Pg	12 12 14.0	-1.4
MLH				IAML		12 12 28.3	
	comp=E,647nm,0.4s						
MLH				IAML		12 12 31.1	
	comp=N,722nm,0.4s						
MWH	**Moku'aweowe**	**0.61**	**338**		Pg	12 12 14.4	-1.7
MWH	**Moku'aweowe**	**0.61**	**338**		Sg	12 12 22.5	-1.7
MWH	**Moku'aweowe**	**0.61**	**338**	IAML		12 12 36.1	
	comp=N,699nm,1.0s						
MWH				IAML		12 12 36.1	
	comp=E,535nm,0.9s						
JOKA	**Jonika Flow**	**0.61**	**33**		Pg	12 12 14.5	-1.5
MLOA	**Mauna Loa Obse**	**0.65**	**341**		Pg	12 12 14.9	-1.9
MLOA	**Mauna Loa Obse**	**0.65**	**341**		Pn	12 12 23.4	+3.9
ALEP	**Alea Permanent**	**0.68**	**337**		Pg	12 12 15.4	-1.8
ALEP					Sg	12 12 24.2	-2.2
HMH	**Humu'ula Sheep**	**0.70**	**350**		Pg	12 12 16.0	-1.6
KHLU	**Kahalu`u**	**0.84**	**323**		Pg	12 12 18.9	-1.4
KHLU				IAML		12 12 38.9	
	comp=E,389nm,0.5s						
KHLU				IAML		12 12 41.2	
	comp=N,334nm,0.6s						
POHA	**Pohakuloa**	**0.86**	**349**		Pg	12 12 17.9	-2.6
POHA				IAML		12 12 39.4	
	comp=N,336nm,0.7s						
POHA				IAML		12 12 39.6	
	comp=N,399nm,0.6s						
HUH	**Hualalai**	**0.89**	**330**		Pg	12 12 19.8	-1.4
HPAH	**Hawaii Prepara**	**1.16**	**344**		Pb	12 12 22.0	-4.0
HPAH	**Hawaii Prepara**	**1.16**	**344**	IAML		12 12 35.0	
	comp=N,206nm,2.6s						
HPAH				IAML		12 12 54.5	
	comp=E,192nm,2.5s						
MHA	**Mahukona**	**1.37**	**338**	Pn	Pb	12 12 29.4	-0.1

*AZER **19** 12:12:04.3,41.°56N×46.°32E,h10km,ml2.5*
*DRS **19** 12:12:06.5,41.°54N×46.°27E,h15km*
*TIF **19** 12:12:06.5,41.°62N×46.°42E,h23km±1km*

ISC 19 12:12:06.5±1.0,**41.°56N**±0.°02×**46.°32E**±0.°02,**h12**km±8km, **n37,σ1s17/71,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.24**	**72**	P	**Pg**	**12 12 10.6**	**-1.0**
ZKTA				S	**Sg**	**12 12 14.8**	**-0.2**
VSHL	**Vashlovani**	**0.34**	**169**	P	**Pn**	**12 12 15.6**	**-1.6**
SEKA	**Sheki**	**0.75**	**118**	P	**Pg**	**12 12 20.9**	**-0.1**
SEKA				S	**Sb**	**12 12 31.7**	**0.0**
KMKR	**Kumukh**	**0.81**	**46**	*e*Pg	**Pg**	**12 12 21.9**	**-0.3**
	97nm,0.2s						
KMKR				*e*Sg	**Sb**	**12 12 33.4**	**-0.3**
	6.0nm,0.2s						
QZX	**Qazax, Azerbai**	**0.87**	**235**	P	**Pg**	**12 12 23.6**	**+0.3**
QZX				S	**Sn**	**12 12 37.4**	**+0.1**
GANJ	**Ganja**	**0.92**	**180**	P	**Pg**	**12 12 24.2**	**+0.1**
GANJ				S	**Sn**	**12 12 37.1**	**-1.3**
GDB	**GEDABAY**	**0.94**	**207**	P	**Pb**	**12 12 24.1**	**-0.7**
GDB				S	**Sg**	**12 12 37.7**	**+0.7**
GNBR	**Gunib**	**0.95**	**30**	*e*Pg	**Pb**	**12 12 24.6**	**-0.4**
	19nm,0.5s						
GNBR				*e*Sg	**Sg**	**12 12 38.2**	**+0.8**
	56nm,0.4s						
XNZR	**Khunzakh**	**1.02**	**16**	*e*Pg	**Pb**	**12 12 25.8**	**-0.4**
	20nm,0.4s						
XNZR				*e*Sg	**Sn**	**12 12 40.4**	**-0.7**
	74nm,0.5s						
AKT	**Akhty**	**1.06**	**94**	*e*Pg	**Pb**	**12 12 26.1**	**-0.8**
	17nm,0.3s						
AKT				*e*Sg	**Sn**	**12 12 41.4**	**-0.7**
	126nm,0.5s						
URKR	**Urkarakh**	**1.15**	**58**	*e*Pg	**Pb**	**12 12 28.1**	**-0.3**
	21nm,0.3s						
URKR				*e*Sg	**Sg**	**12 12 45.3**	**+1.7**
	45nm,0.5s						
ARKR	**Arakani**	**1.15**	**26**	*e*Pg	**Pn**	**12 12 28.1**	**-0.4**
	10.0nm,0.2s						
ARKR				*e*Sg	**Sg**	**12 12 44.6**	**+0.9**
	86nm,0.6s						
UNCR	**Uncukul**	**1.20**	**17**	*e*Pg	**Pb**	**12 12 29.3**	**+0.1**
	16nm,0.2s						
UNCR				*e*Sg	**Sg**	**12 12 46.7**	**+1.4**
	30nm,0.4s						
QBL	**Gabala**	**1.30**	**118**	P	**Pb**	**12 12 30.6**	**-0.3**
QBL				S	**Sg**	**12 12 49.3**	**+0.9**
KRNR	**Karanay**	**1.34**	**19**	*e*Pg	**Pb**	**12 12 31.2**	**-0.3**
	4.0nm,0.3s						
KRNR				*e*Sg	**Sg**	**12 12 50.5**	**+0.9**
	68nm,0.4s						
SGKR	**Sergokala**	**1.34**	**48**	*e*Pg	**Pb**	**12 12 31.6**	**0.0**
	12nm,0.4s						
SGKR				*e*Sg	**Sg**	**12 12 50.9**	**+1.2**
	83nm,0.4s						
BUJR	**Buynaksk**	**1.39**	**25**	*e*Pg	**Pg**	**12 12 33.0**	**-0.2**
	32nm,0.1s						
BUJR				*e*Sg	**Sg**	**12 12 52.8**	**+1.5**
	25nm,0.3s						
SHTL	**Shatili**	**1.39**	**322**	P	**Pn**	**12 12 32.0**	**+0.1**
SHTL				S	**Sb**	**12 12 50.9**	**+0.5**
XNQ	**Khinaliq**	**1.43**	**105**	Pn	**Pb**	**12 12 32.7**	**-0.4**
XNQ				Sn	**Sg**	**12 12 54.3**	**+1.8**
BRDA	**Brd**	**1.46**	**153**	Pn	**Pg**	**12 12 34.4**	**0.0**
BRDA				Sn	**Sg**	**12 12 56.9**	**+3.6**
QSAR	**Qusar**	**1.46**	**91**	Pn	**Pg**	**12 12 34.5**	**0.0**
QSAR				Sn	**Sg**	**12 12 56.5**	**+3.0**
DBC	**Dubki**	**1.50**	**14**	*e*Pg	**Pb**	**12 12 34.6**	**+0.3**
	6.0nm,0.2s						
DBC				*e*Sg	**Sg**	**12 12 55.9**	**+1.0**
AGDM	**Agdam**	**1.57**	**157**	Pn	**Pb**	**12 12 35.3**	**-0.2**
AGDM				Sn	**Sg**	**12 12 58.3**	**+1.2**
IML	**Ismayilli**	**1.60**	**118**	Sn	**Sg**	**12 12 57.8**	**-0.3**
DMNI	**Dmanisi**	**1.62**	**262**	P	**Pn**	**12 12 35.3**	**+0.4**
DMNI				S	**Sb**	**12 12 57.2**	**+0.5**
QUBA	**Quba, Azerbaij**	**1.65**	**97**	Pn	**Pg**	**12 12 37.8**	**-0.3**
QUBA				Sn	**Sg**	**12 13 00.0**	**+0.5**
ZRD	**Zardab**	**1.65**	**141**	Pn	**Pb**	**12 12 37.1**	**+0.3**
ZRD				Sn	**Sg**	**12 13 02.0**	**+2.5**
TRLG	**Trialeti**	**1.66**	**270**	P	**Pb**	**12 12 36.5**	**-0.6**
TRLG				S	**Sg**	**12 12 59.0**	**-0.9**
MTEO	**Meteo**	**1.73**	**311**	P	**Pb**	**12 12 38.4**	**-0.1**
MTEO				S	**Sg**	**12 13 01.8**	**-0.5**
KDMR	**Kurdemir**	**1.85**	**129**	Sn	**Sg**	**12 13 06.2**	**+0.5**
SIZA	**Siyzn**	**2.00**	**103**	Pn	**Pb**	**12 12 42.0**	**-1.0**
SIZA				Sn	**Sg**	**12 13 11.2**	**+0.3**
ALIG	**Mtskhetisjvari**	**2.06**	**286**	P	**Pb**	**12 12 42.9**	**-1.1**
ALIG				S	**Sb**	**12 13 10.6**	**+1.0**
BLQ	**Beylaqan**	**2.07**	**152**	Pn	**Pb**	**12 12 42.7**	**-1.2**
BLQ				Sn	**Sb**	**12 13 10.9**	**+1.3**
ATGJ	**Altiaghaj**	**2.10**	**109**	Pn	**Pb**	**12 12 44.1**	**-0.4**
ATGJ				Sn	**Sg**	**12 13 12.6**	**-1.3**
QRD	**Qoradiz**	**2.23**	**160**	Pn	**Pn**	**12 12 42.8**	**-0.5**
QRD				Sn	**Sb**	**12 13 16.0**	**+1.6**
YRD	**Yardimli**	**3.03**	**150**	Pn	**Pn**	**12 12 54.7**	**+0.3**
YRD				Sn	**Sn**	**12 13 33.1**	**+2.4**
LRK	**Lerik**	**3.30**	**151**	Pn	**Pn**	**12 12 58.0**	**-0.1**
LRK				Sn	**Sb**	**12 13 41.1**	**-4.2**

*UPA **19** 13:02:14.8±0.7,8.°29N×82.°84W,h29km±4km,MD3.8, ML3.5*
*CATAC **19** 13:02:15.0±0.6,8.°29N×82.°81W,h9km±2km,ML3.3*

ISC 19 13:02:15.8±1.0,**8.°32N**±0.°04×**82.°82W**±0.°03,**h24**km±6km, **n29,σ1s00/54,2C-6D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.13**	**210**	⇑*i*P	**Pb**	**13 02 19.6**	**-1.0**
PTPM				*e*S	**Sb**	**13 02 24.1**	**+0.3**
CCOL	**Caracol de Cor**	**0.18**	**300**	*i*P	**Pb**	**13 02 20.1**	**-1.0**
CCOL				*i*S	**Sb**	**13 02 25.3**	**+0.5**
CCOL				IAML		13 02 30.9	
	comp=Z,16μm,1.0s						
LIMO3	**Limones**	**0.22**	**193**	⇑*i*P	**Pb**	**13 02 20.5**	**-1.0**
LIMO3				AMP		13 02 20.7	
	comp=Z,5μm,0.1s						
LIMO3				*i*S	**Sb**	**13 02 25.9**	**+0.4**
CDITO	**Canoas**	**0.26**	**347**	⇓*i*P	**Pb**	**13 02 21.8**	**-0.4**
CDITO				*i*S	**Sb**	**13 02 26.7**	**+0.1**
CDITO	**Canoas**	**0.26**	**347**	*i*P	**Pb**	**13 02 21.4**	**-0.8**
CDITO				*i*S	**Sb**	**13 02 27.1**	**+0.5**
CDITO				IAML		13 02 30.3	
	comp=Z,3μm,1.0s						
DVD	**David**	**0.38**	**72**	*e*P	**Pb**	**13 02 23.4**	**-0.5**
DVD				*e*S	**Sb**	**13 02 30.0**	**+0.4**
PEDE3	**Pedregal, Chir**	**0.39**	**80**	⇓*i*P	**Pb**	**13 02 23.5**	**-0.7**
PEDE3				*i*S	**Sb**	**13 02 30.3**	**+0.3**
MLIR3	**Monte Lirio, C**	**0.47**	**359**	*e*S	**Pb**	**13 02 25.8**	**+0.2**
BCO2	**Palmira**	**0.49**	**35**	⇓*i*P	**Pb**	**13 02 25.6**	**-0.3**
BCO2				*i*S	**Sb**	**13 02 34.1**	**+1.3**
BRU2	**Volcan**	**0.49**	**14**	⇓*i*P	**Pb**	**13 02 25.7**	**-0.2**
BRU2				AMP		13 02 25.9	
	comp=Z,3μm,0.2s						
BRU2				*e*S	**Sn**	**13 02 34.4**	**-0.9**
BRU2	**Volcan**	**0.49**	**14**	*i*P	**Pb**	**13 02 25.6**	**-0.3**
BRU2				*i*S	**Sn**	**13 02 34.3**	**-0.9**
BRU2				IAML		13 02 35.8	
	comp=Z,1μm,1.0s						
PTAR3	**Potrerillos Ar**	**0.49**	**40**	⇓*i*P	**Pb**	**13 02 25.6**	**-0.3**
PTAR3				AMP		13 02

*IDC **19** 13:05:52.6±1.2,3.°62S×151.°54E,h0km,mb3.8/10, mbtmp3.8/11,ML1.5/1,MS3.1/14,Error ellipse: s-maj=42.6km s-min=20.3km az=105.0*

ISC 19 13:05:58.2±1.3,37.°5S±0.°1×151.°4E±0.3,h35km,n25, σ0°98/11,mb3.7/10,MS3.1/12,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.07**	**217**	Pn	**Pn**	**13 07 37.9**	**-1.3**
	0.4nm,0.3s,baz=33,slow=14,SNR=1.8 4.7nm,0.7s						
HNR	**Honiara**	**10.19**	**124**	LR	LR	13 11 59.1	
	comp=Z,3μm,20.0s,baz=288,slow=36						
CTA	**Charters Tower**	**17.04**	**197**	LR	LR	13 15 52.6	
	comp=Z,54nm,19.4s,baz=24,slow=35						
GUMO	**Guam**	**18.38**	**339**	LR	LR	13 18 01.8	
	comp=Z,35nm,18.2s,baz=153,slow=40						
WRA	**Warramunga Arr**	**23.19**	**225**	P	**P**	**13 11 03.0**	**+1.0**
	1.3nm,0.8s,baz=52,slow=9.7,SNR=6.7 1.3nm,0.8s						
DZM	**Mont Dzumac**	**23.35**	**143**	LR	LR	13 18 49.2	
	comp=Z,176nm,18.1s,baz=352,slow=33						
ASAR	**Alice Springs**	**26.08**	**219**	P	**P**	**13 11 29.4**	**+0.7**
	0.6nm,0.7s,baz=52,slow=9.1,SNR=11 0.6nm,0.7s						
STKA	**Stephens Creek**	**29.50**	**197**	LR	LR	13 23 10.8	
	comp=Z,47nm,18.3s,baz=23,slow=35						
JCJ	**Chichijima**	**31.90**	**344**	LR	LR	13 23 23.6	
	comp=Z,38nm,21.7s,baz=152,slow=33						
JHJ	**Hachijo jima 2**	**38.26**	**344**	LR	LR	13 25 30.9	
	comp=Z,42nm,21.7s,baz=258,slow=31						
MJAR	**Matsushiro Arr**	**41.91**	**344**	LR	LR	13 30 27.9	
	comp=Z,23nm,19.8s,baz=172,slow=35						
RPZ	**Rata Peaks**	**43.46**	**159**	LR	LR	13 32 38.5	
	comp=Z,73nm,18.6s,baz=250,slow=37						
KSRS	**Korea Array**	**46.42**	**334**	LR	LR	13 32 22.4	
	comp=Z,9.5nm,20.4s,baz=150,slow=34						
ASAJ	**Asahikawa**	**48.27**	**351**	LR	LR	13 32 18.2	
	comp=Z,18nm,21.1s,baz=147,slow=33						
KLR	**Kul'dur**	**55.43**	**344**	LR	LR	13 38 43.2	
	comp=Z,15nm,19.6s,baz=158,slow=36						
CMAR	**Chiang Mai Arr**	**56.18**	**295**	P	**P**	**13 15 35.3**	**+0.3**
	0.4nm,0.3s,baz=117,slow=7.4,SNR=5.7 0.4nm,0.3s						
PETK	**Petropavlovsk-**	**56.86**	**5**	LR	LR	13 40 09.9	
	comp=Z,13nm,18.2s,baz=145,slow=36						
MA2	**Magadan**	**63.10**	**360**	LR	LR	13 39 34.9	
	comp=Z,5.5nm,21.3s,baz=164,slow=32						
SONM	**Songino Array**	**64.68**	**328**	P	**P**	**13 16 33.4**	**+0.6**
	0.6nm,0.9s,baz=132,slow=6.0,SNR=3.7						
SONM				LR	LR	13 44 54.0	
	comp=Z,16nm,19.6s,baz=243,slow=36 0.6nm,0.9s						
MKAR	**Makanchi Array**	**78.61**	**319**	P	**P**	**13 17 57.4**	**+0.9**
	0.7nm,0.8s,baz=106,slow=5.6,SNR=7.5 0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**79.50**	**327**	P	**P**	**13 18 00.5**	**-0.6**
	1.2nm,1.0s,baz=106,slow=3.6,SNR=2.4 1.2nm,1.0s						
ILAR	**Eielson Array**	**81.68**	**22**	P	**P**	**13 18 11.7**	**-0.9**
	0.6nm,0.9s,baz=245,slow=5.7,SNR=8.4 0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**82.11**	**322**	P	**P**	**13 18 14.8**	**-0.3**
	0.5nm,0.7s,baz=106,slow=3.7,SNR=6.9 0.5nm,0.7s						
QSPA	**South Pole Qui**	**86.24**	**180**	P	**P**	**13 18 37.1**	**+1.0**
	1.8nm,0.8s,baz=0.0,slow=2.0,SNR=6.1 1.8nm,0.8s						
BVAR	**Borovoye Array**	**87.56**	**323**	P	**P**	**13 18 41.6**	**-1.0**
	2.1nm,0.6s,baz=104,slow=7.0,SNR=13 2.1nm,0.6s						

*SJA **19** 13:12:07.7±0.7,23.°71S×69.°12W,h90km±5km,ML4.0, MW4.0*

*NEIC **19** 13:12:09.8±1.4,23.°74S±0.°05×69.°19W±0.°06,h82km±8km, mb4.2/3,Error ellipse: s-maj=8.1km s-min=6.8km az=118.0*

*GUC **19** 13:12:09.9±0.7,23.°70S×69.°22W,h90km±4km,ML3.9*

*IDC **19** 13:12:11.0±2.2,23.°70S×68.°81W,h86km±21km,mb3.5/3, mbtmp4.1/4,MS3.2/1,Error ellipse: s-maj=38.9km s-min=27.0km az=129.0*

ISC 19 13:12:09.6±0.7,23.72S±0.°03×69.°15W±0.°04,h84km±7km, n69,σ1s62/89,mb3.9/4,4C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**0.59**	**330**		**Pn**	**13 12 24.6**	**-0.1**
PB15				Sn	Sn	13 12 35.4	-0.6
PB15	**IPOC Station P**	**0.59**	**330**	*eP*	**Pn**	**13 12 24.2**	**-0.6**
PB15				*eS*	**Sn**	**13 12 36.1**	**+0.2**
PB15	**IPOC Station P**	**0.59**	**330**	*iP*	**Pn**	**13 12 24.9**	**+0.1**
PB15				*i* S	**Sn**	**13 12 35.8**	**-0.2**
PB06	**IPOC Station P**	**1.08**	**339**		**Pn**	**13 12 30.2**	**+0.1**
PB06				Sn	**Sn**	**13 12 45.4**	**+0.1**
PB06	**IPOC Station P**	**1.08**	**339**	*eP*	**Pn**	**13 12 29.7**	**-0.3**
PB06				*eP*		13 12 30.4	
PB06				*eS*	**Sn**	**13 12 46.3**	**+1.0**
PB06				IAML		13 12 49.3	
	comp=Z,2μm,0.1s						
PB06	**IPOC Station P**	**1.08**	**339**	*iP*	**Pn**	**13 12 30.3**	**+0.2**
PB06				*i* S	**Sn**	**13 12 45.3**	**+0.1**
PB06				IAML		13 12 46.6	
	comp=E,3μm,0.4s						
LVC	**Limon Verde**	**1.13**	**11**	*eP*	Pn	13 12 25.5	-5.3
LVC				*eP*		13 12 30.4	
LVC				IAML		13 12 48.0	
	comp=Z,2μm,0.4s						
LVC	**Limon Verde**	**1.13**	**11**	P	**Pn**	**13 12 31.1**	**+0.3**
	comp=Z,290nm,0.3s,baz=159,slow=7.8,SNR=605						
LVC				S	**Sn**	**13 12 47.4**	**+0.8**
	comp=Z,1μm,0.6s,baz=240,slow=20,SNR=34						
LVC				LR	LR	13 13 03.8	
	comp=Z,141nm,19.4s,baz=215,slow=49						
LVC	**Limon Verde**	**1.13**	**11**	*eP*	**Pn**	**13 12 30.8**	**-0.1**
LVC				*i* S	**Sn**	**13 12 46.4**	**-0.3**
AF01	**San Pedro de A**	**1.18**	**50**		**Pn**	**13 12 32.3**	**+0.9**
AF01	**San Pedro de A**	**1.18**	**50**	*eP*	**Pn**	**13 12 32.4**	**+1.1**
AF01				*i* S	**Sn**	**13 12 49.7**	**+2.1**
AF01				IAML		13 12 50.4	
	comp=E,9μm,0.4s						
PB10	**IPOC Station P**	**1.30**	**279**		**Pn**	**13 12 32.7**	**+0.1**
PB10	**IPOC Station P**	**1.30**	**279**	*eP*	**Pn**	**13 12 32.4**	**-0.2**
PB10				IAML		13 12 55.1	
	comp=Z,2μm,0.5s						
PB10	**IPOC Station P**	**1.30**	**279**	*iP*	**Pn**	**13 12 32.7**	**+0.1**
PB10				*i* S	**Sn**	**13 12 51.0**	**+1.1**
PB10				IAML		13 12 55.4	
	comp=E,3μm,0.5s						
PB14	**IPOC Station P**	**1.46**	**231**		**Pn**	**13 12 35.1**	**+0.3**
PB14	**IPOC Station P**	**1.46**	**231**	*eP*	**Pn**	**13 12 35.3**	**+0.4**
PB14				*i* S	**Sn**	**13 12 54.7**	**+0.8**
PB14				IAML		13 13 01.4	
	comp=N,1μm,0.6s						
GO02	**Mina Guanaco**	**1.49**	**195**	Pn	**Pn**	**13 12 36.1**	**+0.8**
GO02	**Mina Guanaco**	**1.49**	**195**	*eP*	**Pn**	**13 12 35.6**	**+0.3**
GO02				IAML		13 13 00.2	
	comp=Z,2μm,0.6s						
GO02	**Mina Guanaco**	**1.49**	**195**	*iP*	**Pn**	**13 12 36.3**	**+1.0**
GO02				*i* S	**Sn**	**13 12 56.2**	**+1.6**
PB04	**IPOC Station P**	**1.66**	**326**		**Pn**	**13 12 37.3**	**-0.1**
PB04	**IPOC Station P**	**1.66**	**326**	*eP*	**Pn**	**13 12 37.2**	**-0.1**
PB04				IAML		13 13 05.8	
	comp=Z,949nm,0.2s						
PB04	**IPOC Station P**	**1.66**	**326**	*eP*	**Pn**	**13 12 37.3**	**-0.1**
PB09	**IPOC Station P**	**1.92**	**358**		**Pn**	**13 12 41.6**	**+0.9**
PB09	**IPOC Station P**	**1.92**	**358**	*eP*	**Pn**	**13 12 41.6**	**+0.9**
PB09				*eS*	**Sn**	**13 13 01.0**	**-3.3**
PB09				IAML		13 13 10.7	
	comp=Z,916nm,0.6s						
PB09	**IPOC Station P**	**1.92**	**358**	*eP*	**Pn**	**13 12 42.0**	**+1.3**
PB09				*i* S	**Sn**	**13 13 04.6**	**+0.2**
PB09				IAML		13 13 11.0	
	comp=E,953nm,0.7s						
PB07	**IPOC Station P**	**2.10**	**341**		**Pn**	**13 12 43.1**	**+0.1**
PB07	**IPOC Station P**	**2.10**	**341**	*eP*	**Pn**	**13 12 42.7**	**-0.4**
PB07				IAML		13 13 15.2	
	comp=Z,458nm,0.1s						
PB07	**IPOC Station P**	**2.10**	**341**	*iP*	**Pn**	**13 12 43.2**	**+0.1**
PB07				*i* S	**Sn**	**13 13 09.0**	**+0.4**
PB02	**IPOC Station P**	**2.49**	**344**		**Pn**	**13 12 48.3**	**0.0**
PB02	**IPOC Station P**	**2.49**	**344**	*eP*	**Pn**	**13 12 47.9**	**-0.3**
PB02				IAML		13 13 27.1	
	comp=Z,1μm,0.2s						
PB02	**IPOC Station P**	**2.49**	**344**	*eP*	**Pn**	**13 12 48.2**	**0.0**
PB01	**IPOC Station P**	**2.68**	**353**		**Pn**	**13 12 51.0**	**+0.1**
PB01	**IPOC Station P**	**2.68**	**353**	*eP*	**Pn**	**13 12 50.6**	**-0.2**
PB01				IAML		13 13 30.6	
	comp=Z,465nm,0.2s						
PB01	**IPOC Station P**	**2.68**	**353**	*iP*	**Pn**	**13 12 51.1**	**+0.3**
PB01				IAML		13 13 29.4	
	comp=E,775nm,0.1s						
AC01	**Pan de Azucar**	**2.75**	**208**	Pn	**Pn**	**13 12 51.4**	**-0.3**
AC01	**Pan de Azucar**	**2.75**	**208**	*eP*	**Pn**	**13 12 51.5**	**-0.2**
AC01				*eS*	**Sn**	**13 13 25.5**	**+1.5**
AC01				IAML		13 13 35.3	
	comp=Z,640nm,0.2s						
AC01	**Pan de Azucar**	**2.75**	**208**	*eP*	**Pn**	**13 12 51.2**	**-0.5**
PATCX	**Punta Patache**	**3.03**	**342**		**Pn**	**13 12 54.6**	**-0.9**
PATCX	**Punta Patache**	**3.03**	**342**	*eP*	**Pn**	**13 12 54.7**	**-0.8**
AC02	**Maricunga**	**3.10**	**180**	*eP*	**Pn**	**13 12 58.2**	**+1.3**
AC02				*eS*	Sn	13 13 18.5	-15
AC02				IAML		13 13 26.5	
	comp=Z,212nm,0.6s						
TA01	**Diego Aracena**	**3.28**	**343**		**Pn**	**13 12 57.3**	**-1.5**
TA01	**Diego Aracena**	**3.28**	**343**	*eP*	**Pn**	**13 12 57.6**	**-1.2**
TA01				*eS*	**Sn**	**13 13 38.5**	**+1.7**
TA01				IAML		13 13 50.8	
	comp=Z,228nm,0.6s						
HMBC	**Humberstone**	**3.49**	**349**	*eP*	**Pn**	**13 13 01.2**	**-0.7**
HMBC				*eS*	**Sn**	**13 13 45.5**	**+3.3**
HMBC				IAML		13 14 00.8	
	comp=Z,405nm,0.5s						
PB08	**IPOC Station P**	**3.56**	**360**		**Pn**	**13 13 02.6**	**-0.5**
PB08	**IPOC Station P**	**3.56**	**360**	*eP*	**Pn**	**13 13 02.5**	**-0.5**
PB08				*eP*		13 13 03.0	
PB08				*eS*	Sn	13 13 52.5	+8.3
PB08				IAML		13 13 59.8	
	comp=Z,135nm,0.4s						
PB08	**IPOC Station P**	**3.56**	**360**	*eP*	**Pn**	**13 13 02.9**	**-0.2**
YJA	**Yavi**	**3.69**	**66**	*eP*	**Pn**	**13 13 03.0**	**-1.8**
PB11	**IPOC Station P**	**3.97**	**353**	Pn	**Pn**	**13 13 07.3**	**-1.1**
PB11	**IPOC Station P**	**3.97**	**353**	*eP*	**Pn**	**13 13 07.2**	**-1.1**
PB11				*eS*	**Sn**	**13 13 58.0**	**+4.2**
PB11				IAML		13 14 05.8	
	comp=Z,227nm,0.5s						
GO03	**Copiap**	**3.98**	**194**		**Pn**	**13 13 07.5**	**-0.9**
GO03	**Copiap**	**3.98**	**194**	*eP*	**Pn**	**13 13 08.1**	**-0.3**
GO03				*eS*	**Sn**	**13 13 48.0**	**-5.9**
GO03				IAML		13 14 11.7	
	comp=Z,279nm,0.2s						
GO01	**Chusmiza**	**4.03**	**359**		**Pn**	**13 13 08.4**	**-1.1**
GO01	**Chusmiza**	**4.03**	**359**	*eP*	**Pn**	**13 13 08.8**	**-0.7**
GO01				*eS*	Sn	13 14 09.5	+14
GO01				IAML		13 14 17.5	
	comp=Z,159nm,0.9s						
AC04	**Llanos de Chal**	**4.79**	**201**	Pn	**Pn**	**13 13 16.7**	**-2.6**
AC05	**El Transito**	**5.19**	**191**	Pn	**Pn**	**13 13 23.9**	**-1.1**
AC05	**El Transito**	**5.19**	**191**	*eP*	**Pn**	**13 13 24.5**	**-0.5**
AC05				*eS*	**Sn**	**13 14 31.5**	**+7.9**
AC05				IAML		13 14 55.4	
	comp=Z,119nm,0.8s						
LCO	**Las Campanas**	**5.45**	**194**	Pn	**Pn**	**13 13 26.1**	**-2.4**
CO01	**Juntas del Tor**	**6.29**	**187**		**Pn**	**13 13 38.9**	**-1.1**
CO03	**El Pedregal**	**7.22**	**191**		**Pn**	**13 13 50.1**	**-2.5**
SIV	**San Ignacio**	**10.81**	**46**	P	**Pn**	**13 14 39.7**	**-1.9**
	comp=Z,28nm,0.4s,baz=235,slow=9.6,SNR=102						
SIV				S	**Sn**	**13 16 36.9**	**-3.9**
	comp=Z,3.7nm,0.6s,baz=274,slow=21,SNR=4.6						
PTLB	**Pontes e Lacer**	**12.52**	**51**	Pn	**Pn**	**13 15 02.9**	**-1.8**
TRCB	**Terra Rica**	**15.21**	**90**	Pn	**Pn**	**13 15 40.0**	**+0.2**
TRCB				IAmb	IAmb	13 15 54.5	
	comp=Z,32nm,0.6s						
PLCA	**Paso Flores**	**17.00**	**184**		**Pn**	**13 16 03.2**	**+1.0**
PLCA				IAmb	IAmb	13 16 32.0	
	comp=Z,3.2nm,0.8s						
ROSC	**El Rosal**	**28.83**	**349**	LR	LR	13 32 23.3	
	comp=Z,48nm,20.4s,baz=262,slow=42						
QSPA	**South Pole Qui**	**66.48**	**180**	P	**P**	**13 22 51.5**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=141,slow=15,SNR=6.7 comp=Z,0.5nm,0.5s						
TOA0	**Torodi Ar. Sit**	**78.32**	**70**	P	**P**	**13 24 00.9**	**-0.3**
TOA0				IAmb	IAmb	13 24 01.6	
	comp=Z,1.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.32**	**70**	P	**P**	**13 24 01.0**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=260,slow=5.0,SNR=2.5 comp=Z,0.8nm,0.3s						
YKA	**Yellowknife Ar**	**93.20**	**341**	P	**P**	**13 25 14.5**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=134,slow=4.4,SNR=2.0 comp=Z,0.1nm,0.5s						
MKAR	**Makanchi Array**	**147.54**	**38**	PKPbc	**PKPbc**	**13 31 44.4**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=303,slow=2.4,SNR=2.5						

*NEIC **19** 13:12:25.0±1.7,16.°31N±0.°05×98.°00W±0.°04,h14km±5km, mb4.5/36,Md4.4/16(MEX),Error ellipse: s-maj=8.3km s-min=5.7km az=202.0*

*MEX **19** 13:12:25.9±0.9,16.°26N×98.°05W,h9km±3km,MD4.2*

ISC 19 13:12:24.5±0.9,16.°27N±0.°04×98.°05W±0.°03,h17km±5km, n67,σ1s04/90,mb4.5/16,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.14**	**330**		**Pg**	**13 12 28.6**	**+0.1**
PNIG					**Sg**	**13 12 31.4**	**+0.2**
PNIG	**Pinotepa**	**0.14**	**330**	*i* P	**Pg**	**13 12 28.6**	**+0.1**
PNIG				*i* S	**Sg**	**13 12 31.4**	**+0.2**
YOIG	**Yosondua**	**0.76**	**40**		**Pb**	**13 12 38.6**	**-0.8**
YOIG					**Sb**	**13 12 48.4**	**-1.2**
YOIG	**Yosondua**	**0.76**	**40**	*i* P	**Pb**	**13 12 38.6**	**-0.8**
YOIG				*i* S	**Sb**	**13 12 48.4**	**-1.2**
PEIG	**Puerto Escondi**	**0.91**	**107**		**Pb**	**13 12 40.8**	**-1.1**
PEIG					**Sb**	**13 12 52.9**	**-0.9**
PEIG	**Puerto Escondi**	**0.91**	**107**	*eP*	**Pb**	**13 12 40.8**	**-1.1**
PEIG				*eS*	**Sb**	**13 12 52.9**	**-0.9**
TXIG	**Tlaxiaco**	**1.01**	**16**		**Pb**	**13 12 42.7**	**-1.1**
TXIG					**Sb**	**13 12 55.4**	**-1.6**
TXIG	**Tlaxiaco**	**1.01**	**16**	*iP*	**Pb**	**13 12 42.7**	**-1.1**
TXIG				*i* S	**Sb**	**13 12 55.4**	**-1.6**
MGIG	**Malinaltepec**	**1.11**	**330**	*eP*	**Pb**	**13 12 43.7**	**-1.6**
MGIG				*eS*	**Sb**	**13 12 58.1**	**-1.4**
CRIG	**Cruz Grande**	**1.13**	**294**	*eP*	**Pn**	**13 12 43.8**	**-1.7**
CRIG				*i* S	**Sb**	**13 12 58.0**	**-2.1**
TLIG	**Tlapa**	**1.38**	**339**		**Pn**	**13 12 48.5**	**-0.6**
TLIG	**Tlapa**	**1.38**	**339**	*eP*	**Pn**	**13 12 47.9**	**-1.1**
TLIG				*eS*	**Sn**	**13 13 04.4**	**-2.5**
OXIG	**Oaxaca**	**1.50**	**58**		**Pn**	**13 12 49.9**	**-0.9**
OXIG					**Sn**	**13 13 09.4**	**-0.6**
VHO	**Vista Hermosa**	**1.50**	**58**	*eP*	**Pn**	**13 12 49.9**	**-0.9**
VHO				*eS*	**Sn**	**13 13 09.4**	**-0.6**
OXBJ	**Oaxaca**	**1.50**	**58**		**Pn**	**13 12 51.1**	**+0.3**
OXBJ					**Sn**	**13 13 10.2**	**0.0**
OXBJ	**Oaxaca**	**1.50**	**58**	*eP*	**Pn**	**13 12 51.1**	**+0.3**
OXBJ				*eS*	**Sn**	**13 13 10.2**	**0.0**
HLIG	**Huajuapan de L**	**1.57**	**9**	*eP*	**Pn**	**13 12 51.0**	**-0.8**
HLIG				*eS*	**Sn**	**13 13 10.5**	**-1.4**
FTIG	**Fresnillo de T**	**1.63**	**357**	*eP*	**Pn**	**13 12 51.8**	**-0.8**
FTIG				*eS*	**Sn**	**13 13 12.6**	**-0.6**
DAIG	**Los Arroyos**	**1.70**	**296**	*eP*	**Pn**	**13 12 52.8**	**-0.7**
DAIG				*eS*	**Sn**	**13 13 14.6**	**-0.3**
HUIG	**Huatulco**	**1.94**	**105**		**Pn**	**13 12 55.7**	**-0.9**
HUIG	**Huatulco**	**1.94**	**105**	*eP*	**Pn**	**13 12 55.7**	**-0.9**
HUIG				*eS*	**Sn**	**13 13 17.1**	**-3.5**
TOIG	**Toxpalan**	**2.05**	**27**		**Pn**	**13 12 57.3**	**-0.9**
TOIG	**Toxpalan**	**2.05**	**27**	*eP*	**Pn**	**13 12 57.3**	**-0.9**
TOIG				*eS*	**Sn**	**13 13 21.9**	**-1.6**
MEIG	**Mezcala**	**2.23**	**318**	*eP*	**Pn**	**13 13 02.0**	**+1.3**
MEIG				*eS*	**Sb**	**13 13 31.4**	**-0.2**
CAIG	**El Cayaco**	**2.26**	**290**	*eP*	**Pn**	**13 12 60.0**	**-1.1**
CAIG				*eS*	**Sb**	**13 13 31.0**	**-1.5**
CMIG	**Matias Romero**	**3.15**	**75**	*eP*	**Pn**	**13 13 12.1**	**-1.2**
CMIG				*eS*	**Sn**	**13 13 49.1**	**-1.4**
UNM	**Universidad Na**	**3.22**	**341**	Pn	**Pn**	**13 13 15.2**	**+0.5**
ZAIG	**Zacatecas**	**7.74**	**327**	Pn	**Pn**	**13 14 16.9**	**+0.2**
CNGN	**Cerro Negro**	**11.62**	**107**	Pn	**Pn**	**13 15 10.1**	**+0.4**
EF01	**Eagle Ford 01**	**12.80**	**359**	Pn	**Pn**	**13 15 26.5**	**+0.8**
OZNA	**Ozona**	**14.85**	**350**	P	**P**	**13 16 00.8**	**+1.2**
VHRN	**Van Horn**	**15.78**	**338**	P	**P**	**13 16 10.2**	**+0.3**
SGCY	**Sterling City**	**15.82**	**350**	P	**P**	**13 16 10.8**	**+0.4**
SGCY				IAmb	IAmb	13 16 12.2	
	comp=Z,19nm,0.9s						
553A	**Crawfordville**	**18.65**	**40**	P	**Pn**	**13 16 42.9**	**+1.1**
553A				IAmb	IAmb	13 16 50.8	
	comp=Z,61nm,1.4s						
Y22D	**IRIS PASSCAL I**	**19.44**	**337**	P	**P**	**13 16 51.3**	**+0.9**
ANMO	**Albuquerque**	**20.06**	**340**	P	**P**	**13 16 57.5**	**+0.3**
T25A	**Trinidad**	**21.54**	**346**	P	**P**	**13 17 14.0**	**+0.9**
WUAZ	**Wupatki**	**22.56**	**331**	P	**P**	**13 17 25.1**	**+1.0**
N38A	**Joes South For**	**24.79**	**9**	P	**P**	**13 17 44.4**	**-1.1**
N38A				IAmb	IAmb	13 17 46.2	
	comp=Z,12nm,0.9s						
BRIGG	**Briggsdale**	**24.83**	**349**	P	**P**	**13 17 46.3**	**+0.2**
RLMT	**Red Lodge**	**30.27**	**344**	P	**P**	**13 18 36.1**	**+1.2**
J08A	**Circle Bar Ran**	**32.11**	**331**	P	**P**	**13 18 52.6**	**+1.6**
ACCN	**Adirondack Com**	**34.07**	**33**	P	**P**	**13 19 08.7**	**+0.7**
COR	**Corvallis**	**35.36**	**328**	P	**P**	**13 19 19.6**	**+0.6**
SKAG	**Skagway**	**50.97**	**337**	P	**P**	**13 21 26.4**	**+1.4**
SKAG				IAmb	IAmb	13 21 27.3	
	comp=Z,7.3nm,0.7s						
M31M	**Drury Creek, Y**	**52.51**	**340**	P	**P**	**13 21 37.5**	**+1.0**
L29M	**L29M**	**54.40**	**339**	P	**P**	**13 21 51.4**	**+1.0**
GLB	**Gilahina Butte**	**55.51**	**335**	P	**P**	**13 21 59.5**	**+1.0**
GLB				IAmb	IAmb	13 22 26.1	
	comp=Z,7.1nm,1.4s						
BCAR	**Beaver Creek A**	**55.67**	**338**	P	**P**	**13 22 00.3**	**+0.7**
G31M	**Satah River**	**55.85**	**344**	P	**P**	**13 22 01.0**	**+0.3**
G31M				IAmb	IAmb	13 22 01.8	
	comp=Z,3.6nm,1.1s						
H29M	**Whitestone**	**56.53**	**342**	P	**P**	**13 22 06.2**	**+0.5**
H29M				IAmb	IAmb	13 22 23.5	
	comp=Z,4.4nm,1.4s						
INK	**Inuvik**	**56.68**	**345**	P	**P**	**13 22 06.8**	**+0.2**
INK				IAmb	IAmb	13 22 15.7	
	comp=Z,8.0nm,1.4s						
SUA	**Susitna One**	**58.41**	**333**	P	**P**	**13 22 20.4**	**+1.2**
SUA				IAmb	IAmb	13 22 28.6	
	comp=Z,4.5nm,1.1s						
SKT	**Skwentna**	**58.98**	**334**	P	**P**	**13 22 23.5**	**+0.6**
SKT				IAmb	IAmb	13 22 30.6	
	comp=Z,10nm,1.5s						
TRF	**Thorofare Moun**	**59.13**	**336**	P	**P**	**13 22 24.8**	**+0.7**
TRF				IAmb	IAmb	13 22 26.2	
	comp=Z,3.4nm,0.9s						
BMAR	**Burnt Mountain**	**59.21**	**341**	P	**P**	**13 22 25.0**	**+0.5**
M20K	**Styx River**	**59.62**	**333**	P	**P**	**13 22 28.0**	**+0.5**
M20K				IAmb	IAmb	13 22 35.1	
	comp=Z,10nm,1.5s						
N19K	**Bonanza Creek**	**59.80**	**332**	P	**P**	**13 22 28.7**	**0.0**
SVW2	**Sparrevohn**	**60.40**	**332**	P	**P**	**13 22 32.6**	**-0.1**
L18K	**Granite Mounta**	**61.30**	**333**	P	**P**	**13 22 39.3**	**+0.5**
L18K				IAmb	IAmb	13 22 53.9	
	comp=Z,4.7nm,1.2s						
TOLK	**Toolik Lake Re**	**61.44**	**341**	P	**P**	**13 22 40.4**	**+0.6**
TOLK				IAmb	IAmb	13 22 57.0	
	comp=Z,7.4nm,1.5s						
J19K	**Poorman**	**61.51**	**335**	P	**P**	**13 22 40.1**	**-0.1**
J19K				IAmb	IAmb	13 23 23.6	
	comp=Z,8.0nm,1.4s						
D22K	**Ayikyak River**	**62.55**	**341**	P	**P**	**13 22 48.0**	**+0.9**
D22K				IAmb	IAmb	13 23 12.6	
	comp=Z,4.4nm,1.4s						
G19K	**Purcell Mounta**	**62.91**	**337**	P	**P**	**13 22 49.7**	**+0.1**
H17K	**Granite Mounta**	**63.58**	**335**	P	**P**	**13 22 54.0**	**0.0**
D19K	**Kuna River**	**64.18**	**339**	P	**P**	**13 22 58.1**	**+0.1**
D19K				IAmb	IAmb	13 23 31.2	
	comp=Z,7.1nm,1.4s						
B20K	**Meade River**	**64.47**	**341**	P	**P**	**13 23 00.2**	**+0.5**
B20K				IAmb	IAmb	13 23 08.7	
	comp=Z,2.7nm,1.2s						

*NEIC **19** 13:27:35.5±0.8,24.°0S±0.°2×179.°8W±0.°2,h484km±21km, mb4.2/12,Error ellipse: s-maj=23.5km s-min=19.9km az=154.0*

*IDC **19** 13:27:43.7±7.2,24.°31S×179.°99E,h581km±91km,mb3.2/4, mbtmp4.2/5,Error ellipse: s-maj=67.1km s-min=30.8km az=16.0*

ISC 19 13:27:36.4±0.7,24.°09S±0.°10×179.°71W±0.°10,h500km, n24,σ1s36/25,mb4.1/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.38**	**163**	P	**P**	**13 29 05.0**	**-1.8**
NIUE	**Niue**	**10.38**	**63**	P	**P**	**13 29 57.3**	**-0.5**
PINNC	**Pines Island,**	**11.89**	**275**	P	**P**	**13 30 16.1**	**+2.2**
OUENC	**Ouen Island, N**	**12.48**	**275**	P	**P**	**13 30 20.3**	**+0.2**
DZM	**Mont Dzumac**	**12.91**	**276**	P	**P**	**13 30 25.7**	**+1.0**
URZ	**Urewera**	**14.38**	**190**	P	**P**	**13 30 42.1**	**+2.2**
	3.1nm,0.4s,baz=65,slow=18,SNR

0.9nm,0.8s
BVAR Borovoye Array 87.84 323 P P 13 42 26.1 -1.3
0.8nm,0.7s,baz=102,slow=6.1,SNR=3.5
0.8nm,0.7s

*NEIC **19** 13:33:09.8±1.7,51°9N±0°2×173°6W±0°2,h183km±6km, mb3.9/41,ML3.3(AEIC), Error ellipse: s-maj=29.7km s-min=9.6km az=159.0*
*AEIC **19** 13:33:11.7±3.5,51°6N±0°1×173°6W±0°1,h164km±6km, Error ellipse: s-maj=21.2km s-min=9.9km az=158.0*
*IDC **19** 13:33:19.4±14.0,53°26N×173°30W,h200km±100km, mb2.8/4, mbtmp3.5/6, Error ellipse: s-maj=108.7km s-min=60.7km az=64.0*
ISC 19 13:33:10.4±0.8, 52°1N±0°2×173°81W±0°09, h186km±7km, n78, σ1§20/81, mb3.8/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.26**	**318**		**Pn**	**13 33 35.5**	**+0.4**
KOFP					**Sn**	**13 33 54.7**	**+0.4**
ATKA	**Atka Island**	**0.27**	**298**		**Pn**	**13 33 35.1**	**+0.1**
ATKA					**Sn**	**13 33 53.0**	**-1.1**
KOWE	**Korovin West**	**0.40**	**317**		**Pn**	**13 33 35.8**	**+0.3**
GSMY	**Great Sitkin M**	**1.39**	**269**		**Pn**	**13 33 42.1**	**+0.3**
GSMY					**Sn**	**13 34 07.0**	**+0.9**
GSTR	**Great Sitkin T**	**1.39**	**271**	Pn	**Pn**	**13 33 42.6**	**+0.8**
GSCK	**Great Sitkin C**	**1.46**	**268**		**Pn**	**13 33 42.8**	**+0.4**
ADAG	**Mount Adagdak**	**1.73**	**268**		**Pn**	**13 33 46.0**	**+1.0**
ADK	**Adak**	**1.79**	**265**		**Pn**	**13 33 46.4**	**+0.9**
ADK					**Sn**	**13 34 12.5**	**-0.3**
TAFP	**Tanaga Falls P**	**2.59**	**268**		**Pn**	**13 33 55.5**	**+1.2**
TANO	**Tanaga North**	**2.67**	**268**		**Pn**	**13 33 56.5**	**+1.2**
GANE	**Gareloi Northe**	**3.08**	**267**		**Pn**	**13 34 01.6**	**+1.3**
MAPS	**Pakushin South**	**4.50**	**65**		**Pn**	**13 34 18.7**	**+0.8**
MGOD	**Makushin Gods**	**4.53**	**65**		**Pn**	**13 34 19.0**	**+0.6**
SDPT	**Sand Point**	**8.56**	**62**	Pn	**Pn**	**13 35 10.4**	**-0.4**
CNBA	**Chernabura Isl**	**8.92**	**66**	Pn	**Pn**	**13 35 14.4**	**-1.1**
CHGN	**Chignik**	**9.96**	**59**	Pn	**Pn**	**13 35 27.9**	**-1.2**
O16K	**Kokwok River B**	**11.58**	**43**	Pn	**Pn**	**13 35 49.8**	**-0.2**
J14K	**Nanvaranak Lak**	**12.02**	**23**		**P**	**13 36 03.0**	**+2.3**
K15K	**Wolf Creek Mou**	**12.19**	**28**		**P**	**13 36 03.8**	**+1.1**
N17K	**Nushagak Hills**	**12.49**	**41**	Pn	**P**	**13 36 03.7**	**-2.3**
P18K	**Big Mountain,**	**12.74**	**48**	Pn	**Pn**	**13 36 05.2**	**+0.3**
O18K	**Koktuh Hills**	**12.97**	**46**	Pn	**Pn**	**13 36 08.4**	**+0.7**
KDAK	**Kodiak Island**	**13.44**	**57**	P	**Pn**	**13 36 10.8**	**-2.9**
KDAK	2.1nm,0.3s,baz=237,slow=1.6,SNR=54			S	Sn	13 38 30.1	-13
	4.5nm,1.0s,baz=171,slow=20,SNR=1.5						
L19K	**White Mountain**	**14.37**	**38**		**P**	**13 36 28.5**	**+1.6**
M19K	**Big River Lodg**	**14.39**	**39**		**P**	**13 36 28.8**	**+1.7**
J18K	**Innoko River**	**14.54**	**32**		**P**	**13 36 30.6**	**+1.8**
BRLK	**Bradley Lake**	**14.91**	**50**	Pn	**Pn**	**13 36 30.8**	**-1.1**
SKT	**Skwentna**	**15.58**	**42**		**P**	**13 36 41.7**	**+1.5**
SKT				IAmb	IAmb	13 36 43.9	
	comp=Z,5.0nm,1.0s						
SUA	**Susitna One**	**15.66**	**44**		**P**	**13 36 41.3**	**0.0**
RC01	**Rabbit Creek A**	**15.95**	**46**		**P**	**13 36 43.4**	**-0.9**
RC01				IAmb	IAmb	13 37 03.2	
	comp=Z,11nm,1.2s						
CAST	**Castle Rocks**	**16.13**	**37**		**Pn**	**13 36 47.2**	**+0.7**
CAST				IAmb	IAmb	13 36 51.8	
	comp=Z,5.0nm,1.0s						
CUT	**Chulitna**	**16.30**	**42**		**Pn**	**13 36 48.3**	**-0.3**
GHO	**Glory Hole Cre**	**16.58**	**45**		**P**	**13 36 50.5**	**-0.9**
I21K	**Tanana**	**17.23**	**32**	P	**Pn**	**13 36 59.7**	**0.0**
H21K	**Melozitna Rive**	**17.28**	**30**	P	**Pn**	**13 36 59.7**	**-0.6**
FID	**Port Fidalgo**	**17.32**	**49**		**P**	**13 36 58.7**	**-0.7**
E19K	**Redstone River**	**17.43**	**22**	P	**Pn**	**13 37 01.8**	**-0.3**
MLY	**Manley**	**17.55**	**33**	P	**Pn**	**13 37 02.8**	**-0.8**
MLY				IAmb	IAmb	13 37 06.3	
	comp=Z,2.8nm,0.5s						
DHY	**Denali Highway**	**17.79**	**42**	P	**P**	**13 37 04.7**	**0.0**
KLU	**Klutina**	**17.81**	**47**	P	**P**	**13 37 05.0**	**+0.2**
KLU				IAmb	IAmb	13 37 47.0	
	comp=Z,6.9nm,1.3s						
I23K	**Minto, Yukon-K**	**18.09**	**34**	P	**Pn**	**13 37 08.7**	**-1.2**
WRH	**Wood River Hil**	**18.18**	**37**	P	**P**	**13 37 07.7**	**-1.0**
WRH				IAmb	IAmb	13 37 32.1	
	comp=Z,5.9nm,1.4s						
MDM	**Murphy Dome**	**18.39**	**36**	P	**P**	**13 37 10.2**	**-0.8**
MDM				IAmb	IAmb	13 37 15.5	
	comp=Z,6.8nm,1.5s						
HDA	**Harding Lake**	**18.58**	**38**	P	**P**	**13 37 12.2**	**-0.9**
ILAR	**Eielson Array**	**18.78**	**37**	P	**P**	**13 37 12.9**	**-2.3**
	comp=Z,0.9nm,0.4s,baz=239,slow=9.8,SNR=34						
G23K	**Bananza Creek**	**18.82**	**30**	P	**P**	**13 37 15.9**	**+0.2**
G23K				IAmb	IAmb	13 37 18.2	
	comp=Z,4.4nm,1.1s						
H24K	**Noodor Dome**	**18.99**	**34**	P	**P**	**13 37 17.7**	**+0.1**
H24K				IAmb	IAmb	13 37 18.6	
	comp=Z,5.6nm,1.4s						
MENT	**Mentasta**	**19.27**	**44**	P	**P**	**13 37 20.4**	**-0.2**
MENT				IAmb	IAmb	13 37 31.9	
	comp=Z,6.7nm,1.4s						
J25K	**Salcha River,**	**19.28**	**38**	P	**P**	**13 37 19.1**	**-1.6**
SCRK	**Sand Creek**	**19.55**	**41**	P	**P**	**13 37 22.9**	**-0.8**
D22K	**Ayikyak River**	**19.61**	**23**	P	**P**	**13 37 23.8**	**-0.3**
BARN	**Barnard Glacie**	**19.67**	**50**	P	**P**	**13 37 23.4**	**-1.6**
BARN				IAmb	IAmb	13 37 33.6	
	comp=Z,3.3nm,0.7s						
B21K	**Ikpikpuk River**	**19.75**	**20**	P	**P**	**13 37 24.8**	**-0.8**
B21K				IAmb	IAmb	13 37 28.2	
	comp=Z,4.2nm,1.1s						
F24K	**Squaw Lake**	**19.98**	**29**	P	**P**	**13 37 29.0**	**+0.9**
BCAR	**Beaver Creek A**	**20.15**	**45**	P	**P**	**13 37 29.9**	**-0.1**
TOLK	**Toolik Lake Re**	**20.23**	**26**	P	**P**	**13 37 30.6**	**-0.2**
K27K	**Chicken**	**20.35**	**42**	P	**P**	**13 37 31.9**	**-0.2**
K27K				IAmb	IAmb	13 37 35.5	
	comp=Z,3.3nm,0.6s						
BMAR	**Burnt Mountain**	**20.97**	**32**	P	**P**	**13 37 38.9**	**+0.2**
EGAK	**Eagle**	**21.00**	**40**	P	**P**	**13 37 38.4**	**-0.5**
E25K	**Arctic Village**	**21.05**	**30**	P	**P**	**13 37 39.9**	**+0.4**
E25K				IAmb	IAmb	13 37 41.3	
	comp=Z,6.6nm,1.5s						
DAWY	**Dawson**	**21.48**	**43**	P	**P**	**13 37 43.9**	**-0.2**
I28M	**Miner Creek**	**21.73**	**39**	P	**P**	**13 37 46.0**	**-0.7**
K29M	**Barlow Dome**	**22.21**	**44**	P	**P**	**13 37 50.8**	**-0.6**
K29M				IAmb	IAmb	13 37 53.2	
	comp=Z,2.7nm,0.7s						
H29M	**Whitestone**	**22.61**	**38**	P	**P**	**13 37 54.4**	**-0.6**
F28M	**Old Crow**	**22.64**	**34**	P	**P**	**13 37 55.1**	**-0.1**
F28M				IAmb	IAmb	13 38 35.0	
	comp=Z,4.3nm,1.4s						
J30M	**Hart River**	**22.90**	**42**	P	**P**	**13 37 57.9**	**+0.1**
J30M				IAmb	IAmb	13 37 59.3	
	comp=Z,4.6nm,1.3s						
I30M	**Mount Dempster**	**23.06**	**41**	P	**P**	**13 37 59.2**	**0.0**
I30M				IAmb	IAmb	13 38 00.7	
	comp=Z,1.7nm,0.6s						
E29M	**Blow River**	**23.65**	**33**	P	**P**	**13 38 05.7**	**+1.3**
E29M				IAmb	IAmb	13 38 16.3	
	comp=Z,5.7nm,1.4s						
G31M	**Satah River**	**24.39**	**37**	P	**P**	**13 38 11.3**	**+0.2**
INK	**Inuvik**	**25.11**	**35**	P	**P**	**13 38 18.0**	**+0.4**
INK				IAmb	IAmb	13 38 37.7	
	comp=Z,4.4nm,1.4s						
DLBC	**Dease Lake**	**25.37**	**58**	P	**P**	**13 38 20.4**	**+0.2**
DLBC				IAmb	IAmb	13 38 32.2	
	comp=Z,3.2nm,1.3s						
YKA	**Yellowknife Ar**	**32.48**	**48**	P	**P**	**13 39 20.3**	**-2.5**
	baz=280,slow=6.8,SNR=1.6						
NVAR	**Mina Array Bea**	**40.40**	**87**	P	P	13 40 35.8	+5.5
	comp=Z,0.2nm,0.4s,baz=306,slow=7.7,SNR=1.6						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**43.13**	**76**	P	**P**	**13 40 55.8**	**+3.3**
	comp=Z,0.5nm,0.6s,baz=308,slow=4.4,SNR=8.2						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**55.49**	**85**	P	**P**	**13 42 25.3**	**-0.7**
TXAR	**Lajitas Array**	**55.49**	**85**	P	**P**	**13 42 30.0**	**+4.0**
	comp=Z,0.5nm,0.8s,baz=305,slow=6.4,SNR=5.7						
	comp=Z,0.5nm,0.8s						
WRAB	**Tennant Creek**	**84.72**	**228**	P	**P**	**13 45 21.9**	**-1.3**
ESPZ	**Base Esperanza**	**145.89**	**134**	PKPdf	**PKPdf**	**13 52 23.2**	**-2.1**

*UPA **19** 13:53:02.8±1.3,7°29N×78°83W,h24km±25km,MW3.5*
*RSNC **19** 13:53:03.9±0.5,7°31N×78°83W,h32km±9km,ML2.8*
ISC 19 13:53:02.4±2.5, 7°30N±0°07×78°82W±0°04, h27km±26km, n19, σ0§86/36, 1C-1D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**1.02**	**98**	*eP*	**Pn**	**13 53 21.3**	**+0.4**
PTAC				*eS*	**Sb**	**13 53 34.2**	**-0.2**
PTAC				*i*		13 53 37.6	
	comp=Z,116nm,0.3s						
PEDA3	**Pedasi**	**1.21**	**281**	*eP*	**Pn**	**13 53 23.7**	**+0.1**
PEDA3				*eS*	**Sn**	**13 53 39.4**	**+0.2**
UPD2	**Meteti**	**1.48**	**33⇓**	*eP*	**Pn**	**13 53 28.3**	**+1.0**
UPD2				*eS*	**Sn**	**13 53 45.5**	**-0.2**
UPD2	**Meteti**	**1.48**	**33**	*eP*	**Pn**	**13 53 27.3**	**+0.1**
UPD2				*eS*	**Sn**	**13 53 45.3**	**-0.4**
UPD2				*i*		13 53 53.6	
	comp=Z,128nm,0.5s						
AZU	**Azuero**	**1.52**	**289**	*eP*	**Pn**	**13 53 27.7**	**-0.1**
AZU				*eS*	**Sn**	**13 53 47.1**	**+0.4**
AZU	**Azuero**	**1.52**	**289**	*eP*	**Pn**	**13 53 27.6**	**-0.2**
AZU				*eS*	**Sn**	**13 53 46.5**	**-0.2**
TABO3	**Taboga, Panama**	**1.65**	**334**	*eS*	**Sn**	**13 53 48.1**	**-1.9**
TOTI	**Torti**	**1.70**	**17**	*eP*	**Pn**	**13 53 30.5**	**+0.2**
TOTI				*eS*	**Sn**	**13 53 49.7**	**-1.5**
CHIT3	**Chitre**	**1.71**	**293⇓**	*eP*	**Pn**	**13 53 30.8**	**+0.3**
CHIT3				*eS*	**Sn**	**13 53 51.5**	**+0.1**
FLAM	**Flamenco Islan**	**1.75**	**336**	*eP*	**Pn**	**13 53 30.1**	**-0.9**
FLAM				*eS*	**Sn**	**13 53 50.4**	**-2.1**
CHPO	**Chepo, Panama**	**1.88**	**351**	*eP*	**Pn**	**13 53 33.4**	**+0.6**
CHPO				*eS*	**Sn**	**13 53 54.2**	**-1.4**
CNTA3	**Canitas, Panam**	**1.91**	**358**	*eP*	**Pn**	**13 53 34.5**	**+1.3**
CNTA3				*eS*	**Sn**	**13 53 55.8**	**-0.6**
ZANG	**Zanguenga, Cho**	**1.94**	**328**	*eP*	**Pn**	**13 53 34.9**	**+1.2**
ZANG				*eS*	**Sn**	**13 53 57.9**	**+0.7**
CAPC	**Capurgana**	**1.97**	**48**	*eP*	**Pn**	**13 53 34.1**	**0.0**
CAPC				*eS*	**Sn**	**13 53 58.3**	**+0.4**
CAPC				*i*		13 53 59.8	
	comp=Z,42nm,0.2s						
CACAO	**El Cacao, Vera**	**2.02**	**271**	*eP*	**Pn**	**13 53 34.4**	**-0.4**
BCIP	**Isla Barro Col**	**2.11**	**332**	*eP*	**Pn**	**13 53 36.2**	**+0.2**
BCIP				*eS*	**Sn**	**13 54 02.4**	**+1.1**
BCIP	**Isla Barro Col**	**2.11**	**332**	*eP*	**Pn**	**13 53 36.2**	**+0.2**
BCIP				*eS*	**Sn**	**13 54 00.9**	**-0.4**
BCIP				*i*		13 54 06.2	
	comp=Z,226nm,0.3s						
FRIJ	**El Hiral**	**2.11**	**335**	*eP*	**Pn**	**13 53 36.5**	**+0.6**
FRIJ				*eS*	**Sn**	**13 54 01.9**	**+0.6**
MLIR	**Monte Lirio**	**2.18**	**332**	*eP*	**Pn**	**13 53 37.7**	**+0.8**
MLIR				*eS*	**Sn**	**13 54 04.3**	**+1.2**

*OMAN **19** 13:56:30.2±0.3,32°05N×57°39E,h10km,mb4.3/23, ms2.5/7, Error ellipse: s-maj=6.6km s-min=1.4km az=12.0*
*TEH **19** 13:56:42.6,30°83N×57°26E,h6km±173km,ML4.2*
*NEIC **19** 13:56:46.1±1.4,30°77N±0°08×57°28E±0°09,h10km±1km, mb4.4/17, Error ellipse: s-maj=14.9km s-min=12.6km az=140.0*
*IDC **19** 13:56:50.7±2.3,30°74N×57°16E,h53km±24km,mb3.6/15, mbtmp3.8/19,ML3.6/4,MS3.2/7, Error ellipse: s-maj=16.5km s-min=14.2km az=95.0*
ISC 19 13:56:45.9±0.5, 30°77N±0°04×57°20E±0°04, h10km, n115, σ1§42/119, mb4.1/24, MS3.0/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.28**	**168**	Pg	**Pg**	**13 56 50.6**	**-1.0**
ZRDN	**Zarand Kerman**	**0.61**	**289**	Pg	**Pg**	**13 56 56.2**	**-1.6**
KHGB	**Koh Gabri**	**0.74**	**238**	Pg	**Pg**	**13 56 59.1**	**-1.2**
TVBK	**TV Kerman**	**0.87**	**206**	Pg	**Pg**	**13 57 02.4**	**-0.4**
CHMN	**Cheshme madani**	**0.95**	**162**	Pg	**Pg**	**13 57 02.5**	**-1.8**
NGRK	**Negar Kerman**	**1.20**	**200**	Pg	**Pn**	**13 57 08.3**	**-0.8**
IBAF	**Bafgh**	**1.62**	**301**	Pg	**Pn**	**13 57 15.0**	**+0.3**
KBAM	**BAM**	**1.96**	**146**	Pn	**Pn**	**13 57 16.3**	**-1.0**
BSRN	**Basiran**	**2.03**	**54**	Pn	**Pn**	**13 57 19.2**	**-1.1**
IKOO	**Kooshah**	**2.25**	**43**	Pn	**Pn**	**13 57 22.7**	**-0.8**
TPRV	**Parvadeh(Tabas**	**2.29**	**349**	Pn	**Pn**	**13 57 23.3**	**-0.6**
IMEH	**Mehriz**	**2.31**	**286**	Pn	**Pn**	**13 57 24.9**	**+0.7**
ITEG	**Tejag**	**2.49**	**31**	Pn	**Pn**	**13 57 25.7**	**-1.0**
NHDN	**Nehbandan**	**2.52**	**75**	Pn	**Pn**	**13 57 26.5**	**-0.5**
TKDS	**Koohdasht(Taba**	**2.83**	**359**	Pn	**Pn**	**13 57 31.1**	**-0.3**
IDAH	**Dahanechah**	**3.00**	**48**	Pn	**Pn**	**13 57 32.5**	**-1.2**
AFRZ	**Afriz**	**3.06**	**30**	Pn	**Pn**	**13 57 33.3**	**-1.1**
ZHDN	**Zahedan**	**3.41**	**113**	Pn	**Pn**	**13 57 40.0**	**+0.6**
ANAR	**Anarak**	**3.81**	**310**	Pn	**Pn**	**13 57 46.0**	**+1.2**
IRAM	**Ramesheh**	**4.25**	**285**	Pn	**Pn**	**13 57 51.8**	**+0.8**
IZEF	**Zefreh**	**4.66**	**298**	Pn	**Pn**	**13 57 57.6**	**+1.1**
SHME	**Shamm**	**4.80**	**192**	P	**Pn**	**13 58 00.5**	**+2.3**
KLNJ	**Kolanjah**	**4.83**	**274**	Pn	**Pn**	**13 58 00.7**	**+1.7**
BANOM	**Banah**	**4.90**	**190**	P	**Pn**	**13 58 01.1**	**+1.5**
JASK	**Jask - Hormozg**	**4.92**	**173**	Pn	**Pn**	**13 58 01.4**	**+1.4**
JASK	**Jask - Hormozg**	**4.92**	**173**	P	**Pn**	**13 58 02.5**	**+2.6**
	SNR=14						
TBJM	**Torbat-e-JAM**	**5.19**	**30**	Pn	**Pn**	**13 58 04.0**	**+0.1**
KRSH	**Karshahi**	**5.34**	**308**	Pn	**Pn**	**13 58 06.9**	**+1.0**
MASF	**Masafi**	**5.46**	**190**	P	**Pn**	**13 58 10.4**	**+3.0**
ISFB	**Sefidab**	**5.50**	**312**	Pn	**Pn**	**13 58 08.6**	**+0.6**
MDH	**Madha**	**5.51**	**189**	P	**Pn**	**13 58 10.5**	**+2.5**
HRA	**Herat**	**5.57**	**48**	Pn	**Pn**	**13 58 08.4**	**-0.7**
SBZV	**Sabzevar**	**5.61**	**3**	Pn	**Pn**	**13 58 10.2**	**+0.6**
UOSS	**Minazif**	**5.87**	**189**	Pn	**Pn**	**13 58 13.5**	**+0.4**
NAZ	**Nazwa, Dubai**	**5.92**	**194**	P	**Pn**	**13 58 15.7**	**+2.0**
HATD	**Hatta, Dubai**	**6.00**	**189**	P	**Pn**	**13 58 18.6**	**+3.8**
HATD				P	**Pn**	**13 58 18.6**	**+3.8**
IMYA	**Miami**	**6.06**	**23**	Pn	**Pn**	**13 58 15.9**	**+0.2**
ASHO	**Ashiyiah**	**6.15**	**190**	P	**Pn**	**13 58 19.4**	**+2.5**
FAQ	**Al Faqa, Dubai**	**6.17**	**194**	P	**Pn**	**13 58 20.0**	**+2.8**
FAQ				P	**Pn**	**13 58 20.0**	**+2.8**
IKRD	**Kardeh**	**6.29**	**17**	Pn	**Pn**	**13 58 18.3**	**-0.7**
ISFR	**Sfrayin**	**6.30**	**6**	Pn	**Pn**	**13 58 19.6**	**+0.5**
ASUD	**Al Ashush, Dub**	**6.34**	**196**	P	**Pn**	**13 58 21.1**	**+1.6**
IGLO	**Ghaloghah**	**6.37**	**335**	Pn	**Pn**	**13 58 20.9**	**+0.9**
NGCH	**Negor - Chabah**	**6.42**	**146**	P	**Pn**	**13 58 19.3**	**-1.1**
IDMV	**Damavand**	**6.46**	**319**	Pn	**Pn**	**13 58 21.9**	**+0.5**
AJN	**Ajban**	**6.49**	**198**	P	**Pn**	**13 58 22.7**	**+1.2**
SOHO	**SOHO**	**6.64**	**185**	P	**Pn**	**13 58 24.7**	**+1.1**
SOHO				P	**Pn**	**13 58 24.7**	**+1.1**
ALNE	**Al Ain**	**6.81**	**191**	P	**Pn**	**13 58 28.5**	**+2.6**
MRVT	**Maraveh tapeh**	**6.93**	**353**	Pn	**Pn**	**13 58 27.7**	**+0.1**
JRN	**Qarnain Island**	**6.97**	**215**	P	**Pn**	**13 58 28.1**	**0.0**
HOQ	**Hoqain**	**7.16**	**179**	P	**Pn**	**13 58 33.0**	**+2.2**
GEYT	**Alibeck**	**7.18**	**6**	Pn	**Pn**	**13 58 30.8**	**-0.1**
GEYT	**Alibeck**	**7.18**	**6**	P	**Pn**	**13 58 33.5**	**+2.5**
	0.4nm,0.3s,baz=184,slow=15,SNR=2.6						
GEYT				S	**Sn**	**13 59 56.7**	**+4.1**
	8.1nm,0.9s,baz=197,slow=20,SNR=2.3						
	1.0nm,0.3s						
SHMA	**Al-Shehemyia**	**7.36**	**230**	P	**Pn**	**13 58 30.2**	**-3.2**
ARQ	**Araqi**	**7.43**	**185**	P	**Pn**	**13 58 36.7**	**+2.2**
SAKB	**Bahrain**	**7.57**	**233**	P	**Pn**	**13 58 33.9**	**-2.4**
MZWR	**Madinat Zayed**	**7.58**	**204**	P	**Pn**	**13 58 38.2**	**+1.7**
WSAR	**Wadi Sarin**	**7.61**	**170**	P	**Pn**	**13 58 38.0**	**+1.1**
	1.6nm,0.3s,baz=13,slow=9.5,SNR=23						
WSAR				S	**Sn**	**14 00 04.8**	**+1.5**
	3.1nm,0.6s,baz=0.0,slow=18,SNR=1.3						
	8.4nm,0.5s						
WSAR	**Wadi Sarin**	**7.61**	**170**	P	**Pn**	**13 58 38.0**	**+1.1**
	SNR=8.3						
SMDO	**Samad**	**7.72**	**174**	P	**Pn**	**13 58 40.0**	**+1.5**
SMDO				P	**Pn**	**13 58 40.0**	**+1.5**
BSY	**Bisya**	**8.00**	**180**	P	**Pn**	**13 58 44.8**	**+2.6**
BSY				P	**Pn**	**13 58 44.8**	**+2.6**
TRNA	**Turayna**	**8.02**	**223**	P	**Pn**	**13 58 42.1**	**-0.4**
	SNR=18						
SMRA	**Abu-Samra**	**8.24**	**225**	P	**Pn**	**13 58 45.5**	**-0.1**
SLWR	**Sila**	**8.28**	**218**	P	**Pn**	**13 58 46.2**	**+0.2**
WBK	**Wadi Bani Khal**	**8.28**	**169**	P	**Pn**	**13 58 46.9**	**+0.7**
JMDO	**Jabal Madar**	**8.41**	**174**	P	**Pn**	**13 58 50.2**	**+2.3**
JLN	**Jalan Bani Buh**	**8.81**	**167**	P	**Pn**	**13 58 54.3**	**+0.9**
MHTO	**MHTO**	**9.77**	**176**	P	**Pn**	**13 59 08.8**	**+2.3**
DMTO	**DMTO**	**13.16**	**189**	P	**Pn**	**13 59 52.4**	**-0.5**
WHFO	**Wadi Hawf**	**13.17**	**194**	P	**Pn**	**13 59 52.3**	**-0.8**
RBK	**Rabkut**	**13.49**	**192**	P	**Pn**	**13 59 56.9**	**-0.6**
KARS	**Kars**	**15.09**	**314**	Pn	**Pn**	**14 00 20.9**	**+1.6**
ARSB	**Arslanbob**	**16.52**	**46**	P	**P**	**14 00 40.9**	**+0.4**
AAK	**Ala-Archa**	**18.19**	**45**	P	**Pn**	**14 00 58.0**	**-0.7**
	0.1nm,0.3s,baz=205,slow=17,SNR=3.9						
AAK				LR	LR	14 08 36.1	
	comp=Z,28nm,20.3s,baz=196,slow=39						
	1.3nm,0.8s						
ABKAR	**Akbulak array**	**18.58**	**6**	P	**Pn**	**14 01 03.6**	**+0.5**
AKTO	**Aktyubinsk**	**19.65**	**2**	P	**P**	**14 01 14.8**	**+0.1**
	0.5nm,0.3s,baz=185,slow=11,SNR=9.2						
AKTO				LR	LR	14 10 23.1	
	comp=Z,101nm,18.4s,baz=14,slow=41						
	2.7nm,0.6s						
BRTR	**Keskin Array B**	**21.17**	**301**	P	**P**	**14 01 31.4**	**0.0**
BRTR	**Keskin Array B**	**21.17**	**301**	P	**P**	**14 01 31.3**	**-0.2**
	3.1nm,0.9s,baz=118,slow=12,SNR=10						
	3.1nm,0.9s						
BVAR	**Borovoye Array**	**24.23**	**20**	P	**P**	**14 02 02.7**	**-0.1**
	2.0nm,0.5s,baz=201,slow=7.7,SNR=10.0						
BVAR				LR	LR	14 13 03.5	
	comp=Z,37nm,19.4s,baz=203,slow=40						
	2.0nm,0.5s						
MKAR	**Makanchi Array**	**25.11**	**43**	P	**P**	**14 02 10.7**	**-0.2**
MKAR	**Makanchi Array**	**25.11**	**43**	P	**P**	**14 02 10.3**	**-0.5**
	1.9nm,0.8s,baz=230,slow=10.0,SNR=13						
	1.9nm,0.8s						
MK31	**Makanchi Array**	**25.11**	**43**	P	**P**	**14 02 10.4**	**-0.5**
KURBB	**Kurchatov Arra**	**25.42**	**33**	P	**P**	**14 02 13.5**	**-0.1**
	1.5nm,0.8s,baz=233,slow=9.2,SNR=14						
	1.5nm,0.8s						
ARU	**Arti**	**25.66**	**2**	LR	LR	14 13 27.8	
	comp=Z,44nm,20.4s,baz=171,slow=39						
KIRV	**Kirov**	**28.32**	**351**	LR	LR	14 16 05.2	
	comp=Z,36nm,19.8s,baz=184,slow=41						
ZAA0	**Zalesovo Array**	**30.52**	**33**	P	**P**	**14 02 58.6**	**-0.5**
ZALV	**Zalesovo Beam**	**30.52**	**33**	P	**P**	**14 02 58.9**	**-0.2**
	2.0nm,0.6s,baz=239,slow=9.2,SNR=12						
	2.0nm,0.6s						
FIA1	**FINESS Array S**	**36.82**	**336**	P	**P**	**14 03 53.6**	**-0.1**
FINES	**FINESS Array B**	**36.82**	**336**	P	**P**	**14 03 53.4**	**-0.4**
FINES	**FINESS Array B**	**36.82**	**336**	P	**P**	**14 03 53.6**	**-0.2**
	1.2nm,0.6s,baz=130,slow=7.8,SNR=5.4						
	1.2nm,0.6s						
GERES	**GERESS Array B**	**37.38**	**311**	P	**P**	**14 03 58.7**	**-0.2**
	0.7nm,0.6s,baz=96,slow=10.0,SNR=3.4						
	0.7nm,0.6s						
OSSC	**Osservatorio P**	**38.32**	**303**	P	**P**	**14 04 07.4**	**+0.6**
OSSC				IAmb	IAmb	14 04 07.7	
	comp=Z,8.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.66**	**98**	P	**P**	**14 04 18.9**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=309,slow=8.7,SNR=2.0						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	**40.96**	**51**	P	**P**	**14 04 28.7**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=242,slow=8.0,SNR=3.9						
SONM				LR	LR	14 23 23.1	
	comp=Z,37nm,20.2s,baz=250,slow=39						
	comp=Z,0.6nm,1.0s						
NRIK	**Noril'sk**	**42.31**	**15**	P	**P**	**14 04 40.9**	**+1.5**
	comp=Z,2.3nm,0.5s,baz=162,slow=9.6,SNR=4.2						
	comp=Z,2.3nm,0.5s						
ARCES	**ARCESS Array B**	**42.77**	**344**	P	**P**	**14 04 43.1**	**-0.1**
ESDC	**Sonseca Array**	**49.90**	**298**	P	**P**	**14 05 37.7**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=65,slow=7.2,SNR=1.1						
	comp=Z,0.6nm,0.8s						
TOA0	**Torodi Ar. Sit**	**53.85**	**264**	P	**P**	**14 06 08.5**	**-0.9**
TOA0				IAmb	IAmb	14 06 09.6	
	comp=Z,3.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**53.85**	**264**	P	**P**	**14 06 08.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**53.85**	**264**	P	**P**	**14 06 08.5**	**-0.9**
	comp=Z,2.8nm,0.4s,baz=54,slow=7.3,S

LMGC				*e*S	**Sn**	**14 15 44.8**	**-0.1**
DR08	**Loma La Naviza**	**3.46**	**87**	*e*Pg	**Pb**	**14 15 10.8**	**-2.6**
DR08				*e*Sg	**Sb**	**14 15 54.3**	**-1.2**
PILO	**Pilon**	**3.69**	**288**	*e*S	**Pg**	**14 15 23.7**	**+1.0**

IDC ***19*** *14:21:28.7±2.2,2.˝46N×127.˚91E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=146.5km s-min=26.2km az=67.0*

DJA ***19*** *14:21:54.5±0.7,2.˚N±8.˚×12.˚8E±.˚,h228km±8km,M4.0/11, mb4.0/7,mB4.8/1,MLv4.1/11,Mw(mB)4.0/1*

ISC 19 14:21:53.7±1.3,**2.˚3N**±0.˚1×**128.˚42E**±0.˚09,**h250**km,**n12,** σ1ᵽ**53**/16,**mb3.6/3,Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.83**	**215**	P			**Pn**	**14 22 33.5**	**-1.3**
SGSI	**Sangihe**	**3.21**	**296**	P			**Pn**	**14 22 47.2**	**-1.4**
SWI	**Sorong**	**4.22**	**138**	P			**Pn**	**14 22 58.7**	**-1.4**
KMSI	**Cibinong**	**4.75**	**249**	P			**Pn**	**14 23 06.5**	**-0.1**
KMSI				S			**S**	**14 24 05.0**	**+0.4**
SANI	**Sanana**	**4.94**	**210**	P			**Pn**	**14 23 08.1**	**-0.8**
SANI				S			**S**	**14 24 05.4**	**-3.4**
GTOI	**Gorontalo**	**5.65**	**253**	P			**Pn**	**14 23 18.4**	**+0.8**
	14nm,0.6s,0.1nm								
GTOI				S			**S**	**14 24 25.8**	**+1.2**
	14nm,0.6s,0.1nm								
FAKI	**Fak Fak**	**6.42**	**143**	P			**Pn**	**14 23 28.4**	**+1.1**
	14nm,0.9s,0.1nm								
MRSI	**Marisa**	**6.72**	**255**	P			**Pn**	**14 23 30.8**	**-0.2**
	21nm,0.5s,0.1nm								
MRSI				S			**S**	**14 24 46.9**	**-2.1**
	21nm,0.5s,0.1nm								
TTSI	**Tana Toraja**	**10.10**	**238**	P			**Pn**	**14 24 14.1**	**+0.5**
	8.8nm,0.4s,675nm								
WRA	**Warramunga Arr**	**22.83**	**166**	P			**P**	**14 26 36.8**	**+1.3**
	1.4nm,0.5s,baz=344,slow=10,SNR=27 1.4nm,0.5s								
ASAR	**Alice Springs**	**26.34**	**169**	P			**P**	**14 27 08.8**	**+1.8**
	0.9nm,0.6s,baz=354,slow=7.7,SNR=47 0.9nm,0.6s								
MKAR	**Makanchi Array**	**59.70**	**325**	P			**P**	**14 31 32.4**	**+0.2**
	0.1nm,0.4s,baz=121,slow=7.6,SNR=4.2 0.1nm,0.4s								

BER ***19*** *14:42:49.3±2.2,79.˚77N×4.˚54E,h12km±194km,mb(Pn)2.9, Confirmed Earthquake*

ISC 19 14:42:45.4±2.7,**79.˚69N**±0.˚07×**5.˚1E**±0.˚1,**h10**km,**n8,** σ2ᵽ**05**/18,**Svalbard region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.49**	**118**	*e*P			**Pg**	**14 43 14.7**	**+0.7**
KBS				*e*S			**Sg**	**14 43 34.7**	**+1.4**
KBS				IAML				14 43 40.3	
	comp=Z,14nm,0.4s								
BRBB	**Barentsburg B**	**2.38**	**128**	*e*			**Pb**	**14 43 27.8**	**-0.6**
BRBB				*e*P			**Pg**	**14 43 29.3**	**-1.7**
BRBB				*e*S			**Sb**	**14 43 56.9**	**-0.9**
BRBA	**Barentsburg A**	**2.41**	**128**	*e*P			**Pb**	**14 43 29.7**	**+0.9**
BRBA				*e*S			**Sb**	**14 43 58.4**	**-0.1**
BRBA				IAML				14 44 01.8	
	comp=Z,11nm,0.5s								
SPA0	**Spitsbergen Ar**	**2.65**	**119**	*e*P			**Pb**	**14 43 31.3**	**-1.6**
SPA0				*e*S			**Sb**	**14 44 03.4**	**-2.0**
SPA0				IAML				14 44 14.4	
	comp=Z,5.6nm,0.4s								
HSPB	**Hornsund (broa**	**3.43**	**137**	*e*			**Pn**	**14 43 39.9**	**+1.1**
HSPB				*e*P			**Pb**	**14 43 42.4**	**-3.7**
HSPB				*e*S			**Sn**	**14 44 20.8**	**+1.4**
HSPB				IAML				14 44 26.1	
	comp=Z,4.0nm,0.2s								
HOPEN	**Hopen**	**5.18**	**118**	*e*P			**Pn**	**14 44 05.5**	**+2.6**
HOPEN				*e*S			**Sn**	**14 45 03.9**	**+1.3**
HOPEN				IAML				14 45 09.3	
	comp=Z,2.6nm,0.2s								
ZFI2	**Zemlya Franca-**	**7.17**	**61**	*e*P			**Pn**	**14 44 32.7**	**+2.6**
ZFI2				S			**Sn**	**14 45 49.6**	**-1.8**
	comp=Z,9.7nm,2.3s								
OMEGA	**Omega**	**7.19**	**61**	*e*P			**Pn**	**14 44 32.8**	**+2.5**
OMEGA				S			**Sn**	**14 45 49.3**	**-2.6**

TEH ***19*** *14:43:14.8,34.˚48N×45.˚36E,h17km±42km,ML2.5*

ISN ***19*** *14:43:14.1±0.5,34.˚44N×45.˚39E,h7km±10km,ML2.4*

ISC 19 14:43:15.1±1.1,**34.˚46N**±0.˚04×**45.˚37E**±0.˚05,**h16**km±14km, **n8,** σ0ᵽ**86**/13,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.18**	**76**	Pg			**Pb**	**14 43 19.6**	**-0.5**
IDHR	**Dehrash**	**0.87**	**74**	Pg			**Pb**	**14 43 31.4**	**-0.5**
IDHR				Sg			**Sb**	**14 43 44.3**	**+0.8**
IGHG	**Ghaleghazi**	**1.00**	**97**	Pg			**Pn**	**14 43 34.2**	**-0.5**
IGHG				Sg			**Sn**	**14 43 49.0**	**+0.5**
ILBA	**Ilam Banvizeh**	**1.08**	**140**	Pg			**Pn**	**14 43 35.7**	**0.0**
IKRK	**Kirkuk**	**1.26**	**318**	*e*Pg			**Pg**	**14 43 39.0**	**-0.5**
IKRK				*e*Sg			**Sg**	**14 43 57.0**	**+1.0**
IKRK				AML		AML		14 44 01.1	
	comp=E,149nm,0.3s								
IKRK				AML		AML		14 44 01.5	
	comp=N,104nm,0.6s								
ILIN	**Lien**	**1.39**	**70**	Pg			**Pg**	**14 43 41.4**	**-0.4**
IBDR	**Badra**	**1.43**	**161**	*e*Pn			**Pg**	**14 43 42.0**	**-0.5**
IBDR				*e*Sn			**Sg**	**14 44 02.0**	**+1.0**
IBDR				AML		AML		14 44 05.5	
	comp=E,53nm,0.5s								
IBDR				AML		AML		14 44 05.9	
	comp=N,42nm,0.4s								
BHD	**Baghdad**	**1.45**	**215**	*e*Pn			**Pg**	**14 43 42.0**	**-0.9**
BHD				*e*Sn			**Sg**	**14 44 03.0**	**+1.3**
BHD				AML		AML		14 44 06.5	
	comp=E,36nm,0.7s								

IDC ***19*** *14:46:52.6±0.5,24.˚70N×121.˚86E,h0km,mb4.6/31, mbtmp4.6/35,ML3.1/2,MS3.9/69,Error ellipse: s-maj=15.2km s-min=11.7km az=54.0*

MOS ***19*** *14:46:59.6±1.0,24.˚54N×121.˚69E,h62km,mb5.3/72,Error ellipse: s-maj=6.9km s-min=3.9km az=118.3*

BJI ***19*** *14:47:00.0±0.0,24.˚60N×121.˚54E,h55km,mb4.6/83, mB5.1/52,ML5.0/13,Ms4.4/75,Ms7 4.1/76*

ASIES ***19*** *14:47:01.3,24.˚59N×121.˚61E,h53km,ML5.5,Mw4.9, Moment Tensor Solution. Moment tensor: Scale 10²³Nm; Mrr1.50; Mθθ0.38; Mϕϕ-2.13; Mrθ1.35; Mθϕ0.78; Mϕr0.13; Fault plane solution: M₀2.43343×10²³ NP1: ϕs133.41000°,δ58.62000°,λ47.41000°. NP2:ϕs13.88000°, δ51.06000°,λ137.97000°. Principal axes: T Plg54.3560°, Azm348.2100°; N Plg35.2920°, Azm158.9920°; P Plg4.3700°, Azm252.0930°;*

TAP ***19*** *14:47:01.3,24.˚59N×121.˚61E,h53km,ML5.5,B*

NEIC ***19*** *14:47:01.4±2.0,24.˚58N±0.˚05×121.˚63E±0.˚05,h56km±1km, mb5.0/137,Mww5.0/13,Error ellipse: s-maj=7.5km s-min=6.7km az=128.0*

GCMT ***19*** *14:47:01.4±0.2,24.˚62N±0.˚01×121.˚45E±0.˚01,h58km±2km, MW5.0/102,Moment Tensor Solution. s45,c58; s102,c154; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.38±.14; Mθθ1.44±.11; Mϕϕ-2.82±.09; Mrθ2.33±.07; Mθϕ1.08±.09; Mϕr-0.10±.07; Best double couple: M₀3.50400×10¹⁶ NP1:ϕs129.00000°,δ69.00000°, λ41.00000°. NP2:ϕs22.00000°,δ53.00000°,λ153.00000°. Principal axes: T 3.8160, Plg43.0000°, Azm352.0000°; N -0.6240, Plg45.0000°, Azm152.0000°; P -3.1920, Plg10.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *14:47:01.5,24.˚18N×121.˚43E,h50km,Moment Tensor Solution. Duration: 1ᵽ4 Moment tensor: Scale 10¹⁶Nm; Mrr1.91; Mθθ1.07; Mϕϕ-2.98; Mrθ2.44; Mθϕ0.41; Mϕr0.31; Fault plane solution: M₀3.51000×10¹⁶ NP1:ϕs27.48000°, δ58.36000°,λ139.57000°. NP2:ϕs141.56000°,δ56.49000°, λ38.99000°. Principal axes: T 3.9987, Plg50.0000°, Azm354.0000°; N -0.9727, Plg40.0000°, Azm176.0000°; P -3.0259, Plg1.0000°, Azm85.0000°;*

NEIC ***19*** *14:47:01.5,24.˚58N×121.˚65E,h50km*

JMA ***19*** *14:47:01.1±0.4,24.˚6N±0.˚8×12.˚2E±.˚,h55km±4km,*

MD4.7/18,MW4.9/18,TAIWAN REGION

NIED ***19*** *14:47:01.1,24.˚56N×121.˚62E,h55km,MW4.9,Moment Tensor Solution. s3 Moment tensor: Scale 1016Nm; Mrr0.73; Mθθ0.83; Mϕϕ-1.56; Mrθ2.05; Mθϕ0.90; Mϕr-0.41; Fault plane solution: M₀2.61000×10¹⁶ NP1: ϕs119.00000°,δ79.00000°,λ53.00000°. NP2:ϕs16.00000°, δ39.00000°,λ163.00000°.*

ISC 19 14:47:01.4±0.3,**24.˚61N**±0.˚02×**121.˚63E**±0.˚02,**h58**km±2km, **h58**km:**pP-P,n736,**σ1ᵽ**47**/827,**mb4.9**/182,**MS3.9**/76, **104C-101D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ENTT	**Nioudou**	**0.07**	**296**	*i*P			**Pn**	**14 47 09.9**	**-0.2**
	baz=324								
ENTT				*i* S			**Sn**	**14 47 15.8**	**-0.6**
	baz=324								
NDS	**Dongshan**	**0.08**	**72**	P			**Pn**	**14 47 10.0**	**-0.1**
	baz=65								
NDS				*i* S			**Sn**	**14 47 15.9**	**-0.6**
	baz=65								
NDT	**Datong Townshi**	**0.11**	**266**	⇑*i*P			**Pn**	**14 47 10.0**	**-0.3**
	baz=289								
NDT				*e*S			**Sn**	**14 47 15.3**	**-1.3**
	baz=289								
TWE	**Neicheng**	**0.12**	**15**	⇓*i*P			**Pn**	**14 47 10.3**	**0.0**
	baz=27								
TWE				*i* S			**Sn**	**14 47 16.4**	**-0.3**
	baz=27								
LATG	**Datong**	**0.12**	**233**	⇑*i*P			**Pn**	**14 47 10.3**	**-0.2**
	baz=235								
LATG				*i* S			**Sn**	**14 47 16.2**	**-0.8**
	baz=235								
FUSB	**Fushanzhiwuyua**	**0.15**	**344**	⇓*i*P			**Pn**	**14 47 10.3**	**-0.3**
	baz=342								
FUSB				*i* S			**Sn**	**14 47 16.0**	**-1.1**
	baz=342								
ILA	**Ilan**	**0.19**	**34**	⇓*i*P			**Pn**	**14 47 10.8**	**+0.2**
	baz=38								
ILA				S			**Sn**	**14 47 17.4**	**+0.2**
	baz=38								
ESAO	**Su ao**	**0.19**	**100**	⇑*i*P			**Pn**	**14 47 10.2**	**-0.4**
	baz=93								
ESAO				*e*S			**Sn**	**14 47 16.1**	**-1.1**
	baz=93								
TWC	**Suao**	**0.20**	**90**	⇓*i*P			**Pn**	**14 47 10.5**	**-0.1**
	baz=85								
TWC				S			**Sn**	**14 47 16.2**	**-1.0**
	baz=85								
ENA	**Nanau**	**0.20**	**152**	⇑*i*P			**Pn**	**14 47 10.0**	**-0.7**
	baz=148								
ENA				*i* S			**Sn**	**14 47 16.4**	**-1.0**
	baz=148								
NWLT	**Wulai**	**0.20**	**324**	⇓*i*P			**Pn**	**14 47 10.4**	**-0.4**
	baz=342								
NWLT				S			**Sn**	**14 47 16.2**	**-1.3**
	baz=342								
EWUT	**Wuta**	**0.21**	**141**	⇑*i*P			**Pn**	**14 47 10.1**	**-0.6**
	baz=133								
EWUT				*e*S			**Sn**	**14 47 16.0**	**-1.4**
	baz=133								
YHNB	**Yeheng**	**0.24**	**284**				**Pn**	**14 47 10.4**	**-0.6**
YHNB						Sn	**Sn**	**14 47 16.7**	**-1.2**
YHNB	**Yeheng**	**0.24**	**284**			P	**Pn**	**14 47 10.8**	**-0.2**
YHNB	**Yeheng**	**0.24**	**284**	⇑*i*P			**Pn**	**14 47 10.5**	**-0.6**
	baz=300								
YHNB				S			**Sn**	**14 47 16.6**	**-1.4**
	baz=300								
NSK	**Sanguang**	**0.26**	**285**	⇑*i*P			**Pn**	**14 47 10.5**	**-0.6**
	baz=300								
NSK				*i* S			**Sn**	**14 47 16.7**	**-1.4**
	baz=300								
NNS	**Nan Shan**	**0.29**	**235**	⇑*i*P			**Pn**	**14 47 11.2**	**-0.2**
	baz=234								
NNS				S			**Sn**	**14 47 17.6**	**-1.1**
	baz=234								
NNSB	**Datong**	**0.29**	**232**	⇑*i*P			**Pn**	**14 47 11.2**	**-0.2**
	baz=233								
NNSB				*e*S			**Sn**	**14 47 17.5**	**-1.1**
	baz=233								
NNSH	**Datong**	**0.29**	**232**	⇑P			**Pn**	**14 47 11.2**	**-0.2**
	baz=234								
NNSH				*e*S			**Sn**	**14 47 17.6**	**-1.1**
	baz=234								
EAHA	**Aohua**	**0.29**	**161**	⇑*i*P			**Pn**	**14 47 10.4**	**-0.9**
	baz=160								
EAHA				*e*S			**Sn**	**14 47 17.4**	**-1.1**
	baz=160								
NTC	**Toucheng**	**0.30**	**36**	⇓*i*P			**Pn**	**14 47 11.5**	**+0.2**
	baz=37								
NTC				S			**Sn**	**14 47 18.8**	**+0.3**
	baz=37								
EHP	**Heping Village**	**0.31**	**162**	P			**Pn**	**14 47 10.6**	**-0.8**
	baz=159								
EHP				*e*S			**Sn**	**14 47 18.0**	**-0.7**
	baz=159								
EGS		**0.36**	**49**	⇓*i*P			**Pn**	**14 47 12.4**	**+0.6**
	baz=43								
EGS				*e*S			**Sn**	**14 47 20.3**	**+0.9**
	baz=43								
NHDH	**Xindian Distri**	**0.37**	**344**	⇓*i*P			**Pn**	**14 47 11.5**	**-0.4**
	baz=348								
NHDH				*e*S			**Sn**	**14 47 18.6**	**-0.9**
	baz=348								
TWA	**Mucha**	**0.37**	**353**	⇓*i*P			**Pn**	**14 47 11.8**	**-0.2**
	baz=350								
TWA				S			**Sn**	**14 47 18.8**	**-0.8**
	baz=350								
TATO	**Taipei**	**0.39**	**340**				**Pn**	**14 47 11.5**	**-0.6**
TATO						Sn	**Sn**	**14 47 18.7**	**-1.1**
TATO	**Taipei**	**0.39**	**340**			P	**Pn**	**14 47 11.8**	**-0.3**
TATO	**Taipei**	**0.39**	**340**	⇓*i*P			**Pn**	**14 47 11.7**	**-0.3**
	baz=353								
TATO				*i* S			**Sn**	**14 47 18.8**	**-1.1**
	baz=353								
BACT	**New Taipei Cit**	**0.42**	**336**	⇓*e*P			**Pn**	**14 47 12.3**	**-0.2**
	baz=348								
BACT				*e*S			**Sn**	**14 47 20.0**	**-0.4**
	baz=348								
ETLH	**Xiulin Townshi**	**0.42**	**199**	⇑*i*P			**Pn**	**14 47 12.2**	**-0.4**
	baz=191								
ETLH				*i* S			**Sn**	**14 47 20.0**	**-0.6**
	baz=191								
NHY	**Taipei**	**0.43**	**352**	⇓*i*P			**Pn**	**14 47 12.4**	**-0.1**
	baz=356								
NHY				S			**Sn**	**14 47 20.1**	**-0.5**
	baz=356								
NACB	**Ninganchiao**	**0.43**	**185**				**Pn**	**14 47 11.4**	**-1.1**
NACB	**Ninganchiao**	**0.43**	**185**	P			**Pn**	**14 47 10.6**	**-2.0**
NACB	**Ninganchiao**	**0.43**	**185**	⇑*i*P			**Pn**	**14 47 11.5**	**-1.1**
	baz=176								
NACB				*i* S			**Sn**	**14 47 19.2**	**-1.5**
	baz=176								
TAP	**Taipei**	**0.44**	**345**	⇓P			**Pn**	**14 47 12.4**	**-0.2**
	baz=349								
TAP				*i* S			**Sn**	**14 47 20.2**	**-0.5**
	baz=349								
ETL	**Fush Village**	**0.45**	**181**	⇑*i*P			**Pn**	**14 47 11.5**	**-1.2**
	baz=179								
ETL				S			**Sn**	**14 47 20.2**	**-0.8**
	baz=179								
NFF	**Wufeng Townshi**	**0.47**	**273**	⇓*i*P			**Pn**	**14 47 12.8**	**-0.2**
	baz=282								
NFF				S			**Sn**	**14 47 20.6**	**-0.8**
	baz=282								
NWF	**Wu-fen Shan**	**0.48**	**16**	⇓*i*P			**Pn**	**14 47 13.2**	**+0.1**
	baz=8.0								
NWF				S			**Sn**	**14 47 21.1**	**-0.5**
	baz=8.0								
WFSB	**Wu-fen Shan**	**0.48**	**16**	⇓*i*P			**Pn**	**14 47 13.2**	**+0.2**
	baz=8.0								
WFSB				S			**Sn**	**14 47 21.0**	**-0.5**
	baz=8.0								
NTY	**Taoyuan**	**0.49**	**322**	⇓*i*P			**Pn**	**14 47 13.2**	**0.0**
	baz=326								
NTY				*i* S			**Sn**	**14 47 21.7**	**0.0**
	baz=326								
FUSS	**Fushou**	**0.51**	**225**	⇑*i*P			**Pn**	**14 47 13.9**	**+0.3**
	baz=225								
FUSS				S			**Sn**	**14 47 22.1**	**-0.3**
	baz=225								
TWB1	**Santiao Chiao**	**0.51**	**39**	⇓*i*P			**Pn**	**14 47 13.6**	**+0.3**
	baz=31								
TWB1				S			**Sn**	**14 47 21.7**	**-0.3**
	baz=31								
NJD	**Zhudong**	**0.51**	**284**	⇓*i*P			**Pn**	**14 47 13.6**	**+0.3**
	baz=297								
NJD				S			**Sn**	**14 47 22.2**	**+0.1**
	baz=297								
TWS1	**Kuangyinshan**	**0.53**	**338**	⇓*i*P			**Pn**	**14 47 13.5**	**0.0**
	baz=342								
TWS1				S			**Sn**	**14 47 22.3**	**0.0**
	baz=342								
TWD	**Chiawan**	**0.53**	**184**	⇑*i*P			**Pn**	**14 47 12.5**	**-1.1**
	baz=173								
TWD				S			**Sn**	**14 47 20.9**	**-1.4**
	baz=173								
SXI1	**Grass Mountain**	**0.53**	**24**	⇓*i*P			**Pn**	**14 47 13.7**	**0.0**
	baz=17								
SXI1				*i* S			**Sn**	**14 47 22.1**	**-0.5**
	baz=17								
YM01	**YM01**	**0.54**	**354**	⇓*i*P			**Pn**	**14 47 13.4**	**-0.3**
	baz=349								
YM01				*e*S			**Sn**	**14 47 21.8**	**-0.9**
	baz=349								
NCU	**National Centr**	**0.54**	**312**	⇓*i*P			**Pn**	**14 47 13.5**	**-0.2**
	baz=315								
NCU				*i* S			**Sn**	**14 47 22.4**	**-0.2**
	baz=315								
NCUH	**Zhongli**	**0.54**	**311**	⇓*i*P			**Pn**	**14 47 13.7**	**-0.1**
	baz=315								
NCUH				*i* S			**Sn**	**14 47 22.7**	**+0.1**
	baz=315								
TWT	**Tachien**	**0.55**	**230**	⇑*i*P			**Pn**	**14 47 14.5**	**+0.5**
	baz=230								
TWT				*i* S			**Sn**	**14 47 23.6**	**+0.6**
	baz=230								
TNOU	**National Taiwa**	**0.55**	**13**	⇓*i*P			**Pn**	**14 47 13.7**	**-0.1**
	baz=7.0								
TNOU				*i* S			**Sn**	**14 47 22.1**	**-0.8**
	baz=7.0								
TDCB	**Techi**	**0.56**	**231**	⇑*i*P			**Pn**	**14 47 14.5**	**+0.4**
	baz=230								
TDCB				*i* S			**Sn**	**14 47 22.8**	**-0.5**
	baz=230								
LIOB	**Emei**	**0.56**	**274**	⇓*i*P			**Pn**	**14 47 13.9**	**-0.1**
	baz=276								
LIOB				S			**Sn**	**14 47 22.9**	**-0.2**
	baz=276								
WHF	**Hehuan Shan**	**0.57**	**216**	*i* P			**Pn**	**14 47 14.6**	**+0.1**
	baz=207								
WHF				S			**Sn**	**14 47 23.6**	**-0.4**
	baz=207								
NSTT	**Nanjuang**	**0.58**	**272**	⇓*i*P			**Pn**	**14 47 13.9**	**-0.2**
	baz=274								
NSTT				S			**Sn**	**14 47 22.7**	**-0.6**
	baz=274								
EOS2	**EOS2**	**0.58**	**109**	*e*P			**Pn**	**14 47 15.4**	**+1.4**
	baz=110								
NTST	**Danshui**	**0.58**	**343**	⇓*e*P			**Pn**	**14 47 14.1**	**0.0**
	baz=355								
NTST				*e*S			**Sn**	**14 47 23.5**	**+0.2**
	baz=355								
YM08	**YM08**	**0.58**	**356**	⇓*i*P			**Pn**	**14 47 13.6**	**-0.6**
	baz=351								
YM08				*e*S			**Sn**	**14 47 21.9**	**-1.5**
	baz=351								
ANP	**Anpu**	**0.58**	**350**	⇓P			**Pn**	**14 47 13.8**	**-0.5**
	baz=354								
ANP				S			**Sn**	**14 47 22.6**	**-1.0**
	baz=354								
HSN1	**Hsinchu**	**0.58**	**287**	⇓*i*P			**Pn**	**14 47 14.2**	**0.0**
	baz=300								
HSN1				S			**Sn**	**14 47 23.4**	**-0.1**
	baz=300								
NWRT	**Kuosheng**	**0.59**	**2**	⇓P			**Pn**	**14 47 13.9**	**-0.3**
	baz=13								
NWRT				S			**Sn**	**14 47 22.5**	**-1.1**
	baz=13								
SBCB	**Hsinchu**	**0.62**	**287**	⇓*i*P			**Pn**	**14 47 14.5**	**0.0**
	baz=301								
SBCB				S			**Sn**	**14 47 24.0**	**-0.1**
	baz=301								
LXIB	**Xiulin Townshi**	**0.62**	**199**	⇑*i*P			**Pn**	**14 47 14.0**	**-0.7**
	baz=192								
LXIB				S			**Sn**	**14 47 23.7**	**-0.7**
	baz=192								
HWA	**Hwalien**	**0.63**	**182**	⇑*i*P			**Pn**	**14 47 14.0**	**-0.7**
	baz=179								
HWA				*e*S			**Sn**	**14 47 23.9**	**-0.4**
	baz=179								
HSN	**Hsinchu**	**0.63**	**288**	⇓*i*P			**Pn**	**14 47 14.4**	**-0.4**
	baz=294								
HSN				S			**Sn**	**14 47 23.6**	**-0.8**
	baz=294								
ETM	**Tongmen**	**0.65**	**191**	⇑*i*P			**Pn**	**14 47 13.8**	**-1.2**
	baz=178								
ETM				*e*S			**Sn**	**14 47 23.4**	**-1.5**
	baz=178								
NHW	**Xinwu Township**	**0.66**	**307**	⇓*i*P			**Pn**	**14 47 15.0**	**-0.1**
	baz=316								
NHW				*i* S			**Sn**	**14 47 25.2**	**0.0**
	baz=316								
TWY	**Chenhua**	**0.66**	**357**	⇓*i*P			**Pn**	**14 47 15.3**	**+0.2**
	baz=352								
TWY				S			**Sn**	**14 47 25.2**	**+0.1**
	baz=352								
NSM	**Shimen**	**0.68**	**357**	P			**Pn**	**14 47 15.4**	**+0.1**
	baz=359								
NSM				S			**Sn**	**14 47 25.5**	**+0.1**
	baz=359								
CHGB	**Renai**	**0.69**	**218**	⇑*i*P			**Pn**	**14 47 16.1**	**+0.5**
	baz=216								
CHGB				*i* S			**Sn**	**14 47 26.1**	**0.0**
	baz=216								
NJN	**Zhunan**	**0.70**	**276**	⇓*i*P			**Pn**	**14 47 15.6**	**+0.1**
	baz=278								
NJN				S			**Sn**	**14 47 26.0**	**+0.2**
	baz=278								
EOS3	**EOS3**	**0.70**	**117**	*e*P			**Pn**	**14 47 16.8**	**+1.4**
	baz=118								
NMLH	**Miaoli**	**0.77**	**265**	⇓*i*P			**Pn**	**14 47 16.6**	**+0.2**
	baz=266								
NMLH				S			**Sn**	**14 47 27.4**	**-0.1**
	baz=266								
WUSB	**Renai**	**0.78**	**218**	⇑*i*P			**Pn**	**14 47 17.2**	**+0.6**
	baz=211								
WUSB				S			**Sn**	**14 47 27.7**	**0.0**
	baz=211								
EOS4	**EOS4**	**0.79**	**128**	*e*P			**Pn**	**14 47 16.5**	**+0.2**
	baz=126								
ESL	**Shilin**	**0.81**	**193**	⇑*i*P			**Pn**	**14 47 15.5**	**-1.5**
	baz=181								
NSY	**Sanyi**	**0.82**	**257**	⇓*i*P			**Pn**	**14 47 17.4**	**+0.4**
	baz=257								
NSY				*i* S			**Sn**	**14 47 29.1**	**+0.5**
	baz=257								
SHUL	**Shoufeng**	**0.82**	**185**	⇑*i*P			**Pn**	**14 47 16.3**	**-0.8**
	baz=182								
SHUL				*e*S			**Sn**	**14 47 27.7**	**-0.8**
	baz=182								
TWQ1	**Liyutan**	**0.83**	**252**	⇓*i*P			**Pn**	**14 47 17.3**	**+0.2**

TYC	**Yuchr**	**1.00**	**225**	⇓*i*P	**Pn**	**14 47 19.9**	**+0.6**
	baz=232							
TYC				S	**Sn**	**14 47 33.5**	**+0.9**
	baz=232							
WWF	**Wufeng**	**1.02**	**237**	⇓*i*P	**Pn**	**14 47 20.2**	**+0.5**
	baz=235							
SSLB	**Suanglung**	**1.03**	**217**		**Pn**	**14 47 20.1**	**+0.4**
SSLB	**Suanglung**	**1.03**	**217**	P	**Pn**	**14 47 20.5**	**+0.7**
SSLB	**Suanglung**	**1.03**	**217**	⇑*i*P	**Pn**	**14 47 20.2**	**+0.4**
	baz=210							
SSLB				*e*S	**Sn**	**14 47 33.7**	**+0.3**
	baz=210							
PCYT	**Pengchaiyu**	**1.09**	**21**	⇓*i*P	**Pn**	**14 47 20.8**	**+0.2**
	baz=24							
PCYT				S	**Sn**	**14 47 34.8**	**0.0**
	baz=24							
WCHH	**Zhanghua**	**1.11**	**242**	⇓*i*P	**Pn**	**14 47 21.0**	**+0.1**
	baz=241							
WCHH				*e*S	**Sn**	**14 47 34.8**	**-0.6**
	baz=241							
WNT1	**Nantou City**	**1.12**	**231**	*e*P	**Pn**	**14 47 21.3**	**+0.4**
	baz=241							
HGSD	**Ruisui**	**1.13**	**190**	⇑P	**Pn**	**14 47 19.9**	**-1.2**
	baz=187							
HGSD				*e*S	**Sn**	**14 47 35.1**	**-0.6**
	baz=187							
WNT	**Mingjian**	**1.13**	**230**	⇓*i*P	**Pn**	**14 47 21.6**	**+0.5**
	baz=241							
WNT				*e*S	**Sn**	**14 47 36.3**	**+0.5**
	baz=241							
EHY	**Hungye**	**1.14**	**195**	⇑*i*P	**Pn**	**14 47 19.2**	**-2.0**
	baz=181							
WJS	**Zhushan**	**1.14**	**227**	⇓P	**Pn**	**14 47 21.7**	**+0.5**
	baz=238							
WJS				*e*S	**Sn**	**14 47 36.6**	**+0.7**
	baz=238							
WYL	**Yuanlin Townsh**	**1.16**	**236**	*e*P	**Pn**	**14 47 20.1**	**-1.4**
	baz=249							
WYL				*e*S	**Sn**	**14 47 35.4**	**-1.0**
	baz=249							
JYNG	**Yonagunijimaku**	**1.21**	**97**	*i* P	**Pn**	**14 47 22.7**	**+0.6**
JYNG				*e*S	**Sn**	**14 47 38.4**	**+0.9**
JYNG	**Yonagunijimaku**	**1.21**	**97**	A	A	14 47 22.7	
	comp=E,29nm,1.4s,comp=N,34nm,3.2s							
YULB	**Yu-li**	**1.25**	**194**		**Pn**	**14 47 21.9**	**-0.9**
YULB	**Yu-li**	**1.25**	**194**	P	**Pn**	**14 47 21.9**	**-0.9**
YULB	**Yu-li**	**1.25**	**194**	⇑*e*P	**Pn**	**14 47 20.7**	**-2.1**
	baz=183							
YOJ	**Yonaguni jima**	**1.26**	**96**	Pn	**Pn**	**14 47 23.2**	**+0.4**
YOJ	**Yonaguni jima**	**1.26**	**96**	P	**Pn**	**14 47 23.4**	**+0.5**
YOJ	**Yonaguni jima**	**1.26**	**96**	⇓*i*P	**Pn**	**14 47 23.3**	**+0.5**
	baz=85							
YOJ				S	**Sn**	**14 47 39.1**	**+0.2**
	baz=85							
YOJ	**Yonaguni jima**	**1.26**	**96**	P	**Pn**	**14 47 23.2**	**+0.4**
YOJ	**Yonaguni jima**	**1.26**	**96**	P	**Pn**	**14 47 23.4**	**+0.5**
YOJ				S	**Sn**	**14 47 39.4**	**+0.5**
YOJ	**Yonaguni jima**	**1.26**	**96**	A	A	14 47 23.4	
	comp=E,20nm,1.2s,comp=N,22nm,5.5s							
EYUL	**Yuli**	**1.29**	**193**	*e*P	**Pn**	**14 47 21.5**	**-1.8**
	baz=183							
TWF1	**Yuli**	**1.29**	**194**	⇑*e*P	**Pn**	**14 47 21.2**	**-2.0**
	baz=183							
ECBN	**Changbin**	**1.30**	**187**	⇑*e*P	**Pn**	**14 47 22.7**	**-0.7**
	baz=185							
ALS	**Alishan**	**1.33**	**215**	⇓*i*P	**Pn**	**14 47 24.9**	**+0.8**
	baz=222							
ALS				*e*S	**Sn**	**14 47 42.9**	**+2.0**
	baz=222							
CHN5	**Tsauling**	**1.33**	**221**	⇓*i*P	**Pn**	**14 47 24.4**	**+0.5**
	baz=219							
CHN5				*e*S	**Sn**	**14 47 41.9**	**+1.2**
	baz=219							
WGK	**Gukeng**	**1.34**	**227**	⇓*i*P	**Pn**	**14 47 24.6**	**+0.6**
	baz=237							
WGK				*e*S	**Sn**	**14 47 42.4**	**+1.6**
	baz=237							
WRL	**Guolierlin Hig**	**1.35**	**239**	⇓*e*P	**Pn**	**14 47 24.0**	**0.0**
	baz=248							
WRL				S	**Sn**	**14 47 40.8**	**-0.1**
	baz=248							
WDLH	**Douliu**	**1.36**	**228**	⇓P	**Pn**	**14 47 24.7**	**+0.6**
	baz=238							
WDLH				*e*S	**Sn**	**14 47 42.2**	**+1.1**
	baz=238							
RLNB	**Erlin**	**1.37**	**239**	⇓*i*P	**Pn**	**14 47 24.2**	**0.0**
	baz=248							
RLNB				*e*S	**Sn**	**14 47 40.7**	**-0.7**
	baz=248							
CHKH	**Chenggong**	**1.43**	**189**	⇑*e*P	**Pn**	**14 47 24.0**	**-1.1**
	baz=186							
WTCT	**Ta-ch'eng**	**1.44**	**239**	⇓*i*P	**Pn**	**14 47 25.1**	**-0.2**
	baz=247							
WTCT				*i* S	**Sn**	**14 47 42.8**	**-0.3**
	baz=247							
WTK	**Tuku**	**1.46**	**231**	⇓P	**Pn**	**14 47 25.7**	**+0.2**
	baz=230							
WTK				*e*S	**Sn**	**14 47 44.9**	**+1.3**
	baz=230							
WCKO	**Fanlu**	**1.50**	**219**	⇓P	**Pn**	**14 47 26.8**	**+0.7**
	baz=217							
WCKO				*e*S	**Sn**	**14 47 46.3**	**+1.7**
	baz=217							
EHD	**Haiduan**	**1.51**	**195**	*e*P	**Pn**	**14 47 24.1**	**-2.0**
	baz=184							
CHN2	**Minshiung**	**1.51**	**225**	⇓*i*P	**Pn**	**14 47 27.0**	**+0.8**
	baz=235							
CHN2				S	**Sn**	**14 47 46.2**	**+1.5**
	baz=235							
WMLT	**Mailiao**	**1.52**	**238**	*e*P	**Pn**	**14 47 26.2**	**-0.1**
	baz=246							
WMLT				S	**Sn**	**14 47 44.6**	**-0.4**
	baz=246							
CHKT	**Chengkung**	**1.52**	**189**	*e*P	**Pn**	**14 47 25.2**	**-1.2**
	baz=187							
CHKT				S	**Sn**	**14 47 44.2**	**-1.0**
	baz=187							
ELDTW	**Lidau**	**1.52**	**202**	⇑*e*P	**Pn**	**14 47 25.5**	**-1.0**
	baz=189							
ECS	**Chishang**	**1.55**	**194**	*e*P	**Pn**	**14 47 25.5**	**-1.3**
	baz=184							
CHY	**Chiayi**	**1.56**	**225**	*e*P	**Pn**	**14 47 27.6**	**+0.6**
	baz=235							
CHY				S	**Sn**	**14 47 47.1**	**+1.0**
	baz=235							
CHN4	**Tsaushan**	**1.57**	**217**	⇓*i*P	**Pn**	**14 47 27.9**	**+0.8**
	baz=215							
CHN4				*e*S	**Sn**	**14 47 48.8**	**+2.4**
	baz=215							
TPUB	**Ta-pu**	**1.59**	**215**		**Pn**	**14 47 27.7**	**+0.4**
TPUB	**Ta-pu**	**1.59**	**215**	P	**Pn**	**14 47 28.1**	**+0.7**
TPUB	**Ta-pu**	**1.59**	**215**	⇓*i*P	**Pn**	**14 47 28.0**	**+0.6**
	baz=212							
WSF	**Szhu**	**1.61**	**233**	⇓*i*P	**Pn**	**14 47 27.5**	**-0.1**
	baz=242							
WSF				S	**Sn**	**14 47 47.5**	**+0.1**
	baz=242							
STYH	**Taoyuan**	**1.63**	**209**	⇓P	**Pn**	**14 47 28.9**	**+1.1**
	baz=218							
STYH				*e*S	**Sn**	**14 47 49.7**	**+1.9**
	baz=218							
WTP	**Ta-pu**	**1.65**	**215**	⇓*i*P	**Pn**	**14 47 28.7**	**+0.6**
	baz=214							
WTP				*e*S	**Sn**	**14 47 50.0**	**+1.8**
	baz=214							
STYT	**Tauyuan**	**1.65**	**209**	⇓*i*P	**Pn**	**14 47 29.1**	**+1.0**
	baz=194							
WSL	**Shuilin Townsh**	**1.68**	**230**	⇓*i*P	**Pn**	**14 47 28.9**	**+0.4**
	baz=238							
WSL				S	**Sn**	**14 47 49.6**	**+0.6**
	baz=238							
TWK	**Hsinying**	**1.70**	**218**	⇓*i*P	**Pn**	**14 47 29.3**	**+0.5**
	baz=216							
TWK				*e*S	**Sn**	**14 47 52.0**	**+2.5**
	baz=216							
SNST	**Tainan City**	**1.73**	**217**	⇓P	**Pn**	**14 47 29.7**	**+0.5**
	baz=214							
CHN1	**Nanshi**	**1.74**	**216**	⇓*i*P	**Pn**	**14 47 29.8**	**+0.5**
	baz=213							
CHN1				*e*S	**Sn**	**14 47 52.2**	**+1.7**
	baz=213							
ICHU	**Yijhu**	**1.75**	**225**	⇓P	**Pn**	**14 47 30.0**	**+0.5**
	baz=235							
ICHU				*e*S	**Sn**	**14 47 51.7**	**+0.9**
	baz=235							
LONT	**Longtian**	**1.76**	**195**	*e*P	**Pn**	**14 47 27.7**	**-1.8**
	baz=182							
SGST	**Jiashian**	**1.80**	**213**	⇓*e*P	**Pn**	**14 47 29.9**	**-0.2**
	baz=222							
SGST				*e*S	**Sn**	**14 47 54.0**	**+2.1**
	baz=222							
CHN8	**Yiju**	**1.81**	**226**	⇓*i*P	**Pn**	**14 47 30.5**	**+0.3**
	baz=235							
CHN8				S	**Sn**	**14 47 53.1**	**+1.0**
	baz=235							
TWG	**Pinlang**	**1.85**	**196**		**Pn**	**14 47 29.0**	**-1.9**
TWG	**Pinlang**	**1.85**	**196**	⇑*e*P	**Pn**	**14 47 28.8**	**-2.1**
	baz=183							
TWGBT	**Beinan**	**1.85**	**196**	P	**Pn**	**14 47 29.2**	**-1.7**
TWGBT	**Beinan**	**1.85**	**196**	⇑*e*P	**Pn**	**14 47 28.8**	**-2.1**
	baz=183							
TTN	**Taitung**	**1.90**	**194**	*e*P	**Pn**	**14 47 30.5**	**-1.0**
	baz=181							
SSHA	**Shanhua**	**1.92**	**220**	⇓*e*P	**Pn**	**14 47 32.5**	**+0.9**
	baz=218							
SSHA				*e*S	**Sn**	**14 47 56.5**	**+1.9**
	baz=218							
CHN3	**Shinhua**	**1.92**	**218**	⇓*e*P	**Pn**	**14 47 32.8**	**+1.1**
	baz=215							
CHN3				*e*S	**Sn**	**14 47 57.8**	**+3.1**
	baz=215							
LDUT	**Ludao**	**1.93**	**185**	⇑*e*P	**Pn**	**14 47 30.4**	**-1.5**
	baz=182							
LDUT				*e*S	**Sn**	**14 47 53.1**	**-2.0**
	baz=182							
SCLT	**Jiali**	**1.94**	**223**	⇓*i*P	**Pn**	**14 47 32.6**	**+0.5**
	baz=220							
SCLT				*e*S	**Sn**	**14 47 56.5**	**+1.1**
	baz=220							
SHHT	**Tainan City**	**1.97**	**217**	⇓*e*P	**Pn**	**14 47 33.5**	**+1.1**
	baz=213							
SCST	**Cishan**	**2.01**	**212**	⇓*e*P	**Pn**	**14 47 34.1**	**+1.2**
	baz=220							
VWUC	**VWUC**	**2.02**	**281**	⇓*e*P	**Pn**	**14 47 32.4**	**-0.7**
	baz=281							
TAI1	**Yung-k'ang**	**2.02**	**220**	*e*P	**Pn**	**14 47 34.0**	**+0.9**
	baz=217							
TAI1				*e*S	**Sn**	**14 47 58.7**	**+1.4**
	baz=217							
TSCK	**Chigu Township**	**2.03**	**225**	⇓*e*P	**Pn**	**14 47 33.4**	**+0.2**
	baz=221							
HATJ	**Hateruma jima**	**2.06**	**105**	P	**Pn**	**14 47 34.3**	**+0.7**
HATJ	**Hateruma jima**	**2.06**	**105**	A	A	14 47 34.3	
	comp=E,26nm,3.1s,comp=N,23nm,5.4s							
SSD	**Sandimen**	**2.07**	**207**	⇓*e*P	**Pn**	**14 47 33.8**	**0.0**
	baz=216							
SSD				*e*S	**Sn**	**14 47 59.2**	**+0.7**
	baz=216							
TAI	**Tainan**	**2.08**	**220**	*e*P	**Pn**	**14 47 34.9**	**+1.0**
	baz=215							
TWM1	**Shoushan**	**2.10**	**212**	⇓P	**Pn**	**14 47 35.8**	**+1.6**
	baz=208							
ECL	**Taimali**	**2.10**	**197**	*e*P	**Pn**	**14 47 32.4**	**-1.8**
	baz=185							
TSMG	**Majia**	**2.10**	**206**	⇓*e*P	**Pn**	**14 47 35.2**	**+1.0**
	baz=215							
SGLT	**Jiouru**	**2.15**	**209**	*e*P	**Pn**	**14 47 36.6**	**+1.7**
	baz=218							
PNG	**Penghu**	**2.17**	**242**	⇓*e*P	**Pn**	**14 47 34.1**	**-0.9**
	baz=238							
MATB	**Ma-tsu**	**2.17**	**316**	⇑*e*P	**Pn**	**14 47 34.1**	**-1.0**
	baz=316							
PHUB	**P'eng-hu**	**2.18**	**240**	⇓*e*P	**Pn**	**14 47 34.3**	**-1.0**
	baz=237							
TSPT	**Pingtung City**	**2.19**	**209**	*e*P	**Pn**	**14 47 37.1**	**+1.7**
	baz=218							
MASBT	**Mashibuluo**	**2.19**	**205**	*e*P	**Pn**	**14 47 36.0**	**+0.5**
	baz=216							
MASBT				*e*S	**Sn**	**14 48 02.4**	**+1.0**
	baz=216							
MSUT	**Lienchiang**	**2.19**	**315**	*e*P	**Pn**	**14 47 34.4**	**-1.0**
	baz=317							
JKRS	**Kuro-shima**	**2.20**	**99**	P	**Pn**	**14 47 36.2**	**+0.7**
JKRS				S	**Sn**	**14 48 02.8**	**+1.2**
JKRS	**Kuro-shima**	**2.20**	**99**	A	A	14 47 36.2	
	comp=E,36nm,2.9s,comp=N,27nm,1.9s							
SNJT	**Kaohsiung City**	**2.20**	**213**	*e*P	**Pn**	**14 47 36.7**	**+1.1**
	baz=222							
WDGT	**Dungji**	**2.25**	**234**	⇓*e*P	**Pn**	**14 47 35.6**	**-0.7**
	baz=230							
JIJ	**Ishigaki jima**	**2.30**	**96**	P	**Pn**	**14 47 37.0**	**+0.1**
JIJ				S	**Sn**	**14 48 04.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.30**	**96**	A	A	14 47 37.0	
	comp=E,4.0nm,5.5s,comp=N,6.0nm,3.5s							
PTMZ	**Houxiangcun**	**2.32**	**281**	⇓*e*P	**Pn**	**14 47 36.4**	**-0.9**
	baz=281							
EAST	**Anshuo**	**2.33**	**198**	*e*P	**Pn**	**14 47 36.1**	**-1.3**
	baz=185							
TAW	**Tawu**	**2.34**	**197**	*e*P	**Pn**	**14 47 38.3**	**+0.8**
	baz=184							
TAWH	**Dawu Township**	**2.36**	**197**	*e*P	**Pn**	**14 47 36.7**	**-1.0**
	baz=184							
SCZT	**Fangliau**	**2.41**	**203**	*e*P	**Pn**	**14 47 39.5**	**+1.0**
	baz=198							
JISG	**Ishigakijimahi**	**2.44**	**90**	P	**Pn**	**14 47 39.1**	**+0.4**
JISG				S	**Sn**	**14 48 08.2**	**+0.8**
JISG	**Ishigakijimahi**	**2.44**	**90**	A	A	14 47 39.1	
	comp=E,8.0nm,4.9s,comp=N,7.0nm,3.9s							
VCHM	**Qimei**	**2.45**	**236**	⇓*e*P	**Pn**	**14 47 38.2**	**-0.8**
	baz=233							
VCHM				*e*S	**Sn**	**14 48 05.7**	**-2.2**
	baz=233							
SLIU	**Shizi**	**2.50**	**198**	*e*P	**Pn**	**14 47 38.8**	**-0.9**
	baz=193							
TWP	**Hsiaoliuchiu**	**2.54**	**208**	*e*P	**Pn**	**14 47 41.4**	**+1.2**
	baz=215							
LAY	**Lan-yu**	**2.56**	**182**	*e*P	**Pn**	**14 47 39.2**	**-1.3**
	baz=175							
LYJJ	**Jianjiangzhen**	**2.57**	**319**	⇑*e*P	**Pn**	**14 47 39.6**	**-0.9**
	baz=320							
LYUB	**Lan-yu**	**2.60**	**181**	⇑*e*P	**Pn**	**14 47 38.8**	**-2.2**
	baz=175							
XPSS	**Dashiqiu**	**2.65**	**331**	⇑*e*P	**Pn**	**14 47 40.9**	**-0.8**
	baz=333							
SMST	**Manzhou Townsh**	**2.68**	**196**	*e*P	**Pn**	**14 47 42.9**	**+0.8**
	baz=183							
HEN	**Hengchun**	**2.72**	**198**	*e*P	**Pn**	**14 47 43.6**	**+1.0**
	baz=193							
TWK1	**Hengchun**	**2.76**	**196**	*e*P	**Pn**	**14 47 43.3**	**+0.1**
	baz=183							
TWKBT	**Hengchun**	**2.76**	**196**	*e*P	**Pn**	**14 47 43.1**	**-0.1**
	baz=183							
TSEB	**Hengchuen, Pin**	**2.78**	**194**	*e*P	**Pn**	**14 47 43.7**	**+0.2**
	baz=184							
QZH	**Quanzhou**	**2.79**	**277**	⇑*i*P	**Pn**	**14 47 42.3**	**-1.2**
QZH				S	**Sn**	**14 48 12.1**	**-3.9**
QZH				smax	smax		
	comp=N,4μm,0.6s							
QZH				smax	smax		
	comp=N,3μm,0.4s							
JTJ	**Tarama**	**2.79**	**89**	P	**Pn**	**14 47 44.8**	**+1.1**
JTJ				S	**Sn**	**14 48 17.4**	**+1.3**
JTJ	**Tarama**	**2.79**	**89**	A	A	14 47 44.8	
	comp=E,9.0nm,3.5s,comp=N,12nm,2.6s							
KNM	**Kinmen**	**2.92**	**267**	⇓*e*P	**Pn**	**14 47 46.2**	**+0.8**
	baz=265							
KNMB	**Chin-men Tao**	**2.96**	**268**	Pn	**Pn**	**14 47 44.7**	**-1.2**
KNMB	**Chin-men Tao**	**2.96**	**268**	⇓*e*P	**Pn**	**14 47 45.0**	**-1.0**
	baz=266							
JIRB	**Irabujima**	**3.23**	**85**	*e*P	**Pn**	**14 47 50.8**	**+1.2**
JIRB	**Irabujima**	**3.23**	**85**	A	A	14 47 50.8	
	comp=E,7.0nm,3.1s,comp=N,6.0nm,4.6s							
JIKM	**Ikemajima**	**3.30**	**84**	P	**Pn**	**14 47 52.4**	**+1.8**
JIKM	**Ikemajima**	**3.30**	**84**	A	A	14 47 52.4	
	comp=E,5.0nm,5.9s,comp=N,5.0nm,2.8s							
JMJ	**Miyako jima 2**	**3.33**	**86**	P	**Pn**	**14 47 53.7**	**+2.6**
JMJ	**Miyako jima 2**	**3.33**	**86**	*e*P	**Pn**	**14 47 53.2**	**+2.2**
	baz=86							
AXDP	**Jialang**	**3.34**	**276**	⇓*e*P	**Pn**	**14 47 50.7**	**-0.4**
	baz=275							
JMJ2	**Miyako jima3**	**3.36**	**87**	*e*P	**Pn**	**14 47 53.4**	**+1.9**
JMJ2	**Miyako jima3**	**3.36**	**87**	A	A	14 47 53.4	
	comp=E,11nm,6.4s,comp=N,10.0nm,6.2s							
JOGS	**Gusukube**	**3.44**	**87**	P	**Pn**	**14 47 54.5**	**+2.0**
JOGS	**Gusukube**	**3.44**	**87**	A	A	14 47 54.5	
	comp=E,10.0nm,2.8s,comp=N,12nm,4.9s							
ZPLA	**Ao Xicun**	**3.61**	**260**	⇓*e*P	**Pn**	**14 47 54.0**	**-0.8**
	baz=258							
DSXP	**Dongshan**	**3.95**	**258**	⇓*e*P	**Pn**	**14 47 58.7**	**-0.8**
	baz=255							
SXFK	**Yanhouchang**	**4.02**	**297**	⇓*e*P	**Pn**	**14 47 59.3**	**-1.2**
	baz=298							
VDOS	**Pratas Island**	**5.97**	**230**	*e*P	**Pn**	**14 48 27.7**	**+0.5**
	baz=222							
JOW	**Kunigami**	**6.38**	**68**		**Pn**	**14 48 33.4**	**+0.5**
JOW	**Kunigami**	**6.38**	**68**	P	**Pn**	**14 48 33.9**	**+1.0**
JOW	**Kunigami**	**6.38**	**68**	*e*P	**Pn**	**14 48 33.8**	**+0.9**
	baz=68							
JOW	**Kunigami**	**6.38**	**68**	Pn	**Pn**	**14 48 32.6**	**-0.2**
	comp=N,19nm,0.3s,baz=131,slow=16,SNR=74							
JOW				Sn	**Sn**	**14 49 43.3**	**-1.1**
	comp=N,5.5nm,0.3s,baz=101,slow=23,SNR=1.1							
SSE	**Sheshan**	**6.47**	**357**	P	**Pn**	**14 48 32.9**	**-1.2**
SSE				S	**Sn**	**14 49 42.5**	**-4.0**
SSE				smax	smax		
	comp=N,300nm,1.0s							
SSE				smax	smax		
	comp=N,530nm,0.9s							
SSE				LR	LR		
	comp=N,1μm,23.9s							
SSE				LR	LR		
	comp=N,1μm,23.3s							
HKPS	**Hong Kong Po S**	**7.26**	**253**	Pn	**Pn**	**14 48 44.6**	**-0.2**
HKPS	**Hong Kong Po S**	**7.26**	**253**	P	**Pn**	**14 48 44.9**	**0.0**
HKPS	**Hong Kong Po S**	**7.26**	**253**	*e*P	**Pn**	**14 48 44.7**	**-0.2**
	baz=250							
GZH	**Guangzhou**	**7.74**	**260**	P	Pn	14 48 44.9	-6.5
GZH				S	Sn	14 50 06.4	-11
GZH				pmax	pmax		
	comp=N,71nm,0.3s							
GZH				smax	smax		
	comp=N,550nm,1.1s							
NJ2	**Nanjing**	**7.81**	**342**	*e*P	**Pn**	**14 48 51.1**	**-1.2**
NJ2				S	**Sn**	**14 50 14.9**	**-4.4**
NJ2				smax	smax		
	comp=N,1μm,1.0s							
NJ2				smax	smax		
	comp=N,650nm,0.9s							
NJ2				LR	LR		
	comp=N,2μm,3.8s							
NJ2				LR	LR		
	comp=N,3μm,4.3s							
NJ2				LR	LR		
	comp=N,1μm,4.3s							
CNSH	**ChangSha**	**8.57**	**296**	⇑P	**Pn**	**14 49 01.6**	**-1.3**
CNSH				S	**Sn**	**14 50 34.1**	**-4.0**
CNSH				smax	smax		
	comp=N,1μm,1.0s							
CNSH				smax	smax		
	comp=N,1μm,0.9s							
WHN	**Wuhan**	**8.76**	**314**	P	**Pn**	**14 49 04.3**	**-1.0**
WHN				S	**Sn**	**14 50 36.8**	**-5.7**
WHN				LR	LR		
	comp=N,3μm,6.8s							
WHN				LR	LR		
	comp=N,3μm,10.6s							
WHN				LR	LR		
	comp=N,3μm,7.1s							
JMZ	**Minamidaito 2**	**8.77**	**80**	Pn	**Pn**	**14 49 05.3**	**-0.1**
JMZ	**Minamidaito 2**	**8.77**	**80**	P	**Pn**	**14 49 06.1**	**+0.6**
GULI	**GuiLin**	**10.25**	**276**	⇑P	**Pn**	**14 49 23.3**	**-2.5**
GULI				LR	LR		
	comp=N,1μm,5.0s							
GULI				LR	LR		
	comp=N,1μm,7.3s							
GULI				LR	LR		
	comp=N,1μm,6.5s							
JNU	**Nakatsue**	**11.72**	**42**	P	**Pn**	**14 49 49.5**	**+3.6**
JNU	**Nakatsue**	**11.72**	**42**	Pn	Pn	14 49 40.2	-5.7
	comp=N,0.1nm,0.3s,baz=174,slow=4.1,SNR=1.9							
JNU				LR	LR	14 55 11.1	
	comp=N,821nm,19.2s,baz=225,slow=43 comp=N,5.8nm,1.0s							
ENH	**Enshi**	**12.17**	**300**	Pn	**Pn**	**14 49 51.6**	**-0.4**
ENH	**Enshi**	**12.17**	**300**	P	**Pn**	**14 49 54.6**	**+2.6**
TIA	**Tai'an**	**12.20**	**342**	P	**Pn**	**14 49 51.3**	**-1.0**
TIA				S	**Sn**	**14 52 04.5**	**-2.2**
TIA				pmax	pmax		
	comp=N,23nm,0.5s							
TIA				pmax	pmax		
	comp=N,150nm,5.0s							
TIA				LR	LR		
	comp=N,560nm,15.7s							
QIZ	**Qiongzhong**	**12.28**	**245**	P	**Pn**	**14 49 53.6**	**+0.1**
QIZ				S	**Sn**	**14 52 07.0**	**-1.8**
QIZ				pmax	pmax		
	comp=N,26nm,0.9s							
QIZ				pmax	pmax		
	comp=N,280nm,4.2s							
QIZ				LR	LR		
	comp=N,640nm,7.6s							
QIZ				LR	LR		
	comp=N,550nm,10.1s							
QIZ				LR	LR		
	comp=N,620nm,25.2s							
QIZ	**Qiongzhong**	**12.28**	**245**		**Pn**	**14 49 53.5**	**+0.1**
QIZ	**Qiongzhong**	**12.28**	**245**	P	**Pn**	**14 49 53.0**	**-0.5**
LYN	**LuoYang**	**12.71**	**323**	⇑*i*P	**Pn**	**14 49 59.6**	**+0.3**
LYN				PP	**P**	**14 50 11.6**	**+2.9**
LYN				S	**Sn**	**14 52 13.0**	**-6.2**
LYN				pmax	pmax		
	comp=N,27nm,0.6s							
LYN				pmax	pmax		
	comp=N,190nm,4.9s							
LYN				LR	LR		
	comp=N,1μm,7.6s							
LYN				LR	LR		
	comp=N,910nm,8.3s							
LYN				LR	LR		
	comp=N,1μm,10.4s							
TJN	**Taejon**	**12.72**	**21**	Pn	**Pn**	**14 50 01.6**	**+2.1**
TJN	**Taejon**	**12.72**	**21**	P	**Pn**	**14 50 01.8**	**+2.3**
TJN	**Taejon**	**12.72**	**21**	P	**Pn**	**14 50 01.6**	**+2.1**
GYA	**Guiyang**	**13.64**	**281**	⇓P	**Pn**	**14 50 12.3**	**+0.1**
GYA				pP	P	14 50 22.6	+3.4
GYA				S	**Sn**	**14 52 42.9**	**+0.7**
GYA				pmax	pmax		
	comp=N,78nm,0.9s							
GYA				pmax	pmax		
	comp=N,100nm,3.5s							
GYA				LR	LR		
	comp=N,1μm,4.4s							
GYA				LR	LR		
	comp=N,410nm,3.8s							
GYA				LR	LR		
	comp=N,390nm,4.8s							
KSAR	**Wonju Array Be**	**13.86**	**21**	Pn	**Pn**	**14 50 17.3**	**+2.3**
KSAR	**Wonju Array Be**	**13.86**	**21**	P	**Pn**	**14 50 17.3**	**+2.3**
KSRS	**Korea Array**	**13.89**	**21**	P	**Pn**	**14 50 16.0**	**+0.7**
KSRS	**Korea Array**	**13.89**	**21**	Pn	**Pn**	**14 50 16.0**	**+0.7**
	comp=N,2.3nm,0.3s,baz=206,slow=14,SNR=24							
KSRS				Sn	**Sn**	**14 52 42.6**	**-5.2**
	com

XAN LR LR
comp=N,970nm,6.2s
XAN LR LR
comp=N,860nm,5.9s
TIY Taiyuan 15.24 331 *e*P **Pn 14 50 33.8 +0.8**
TIY pP **P 14 50 41.0 +4.2**
TIY sP **pP 14 50 49.9 +0.5**
TIY S **Sn 14 53 27.3 +6.5**
TIY pmax pmax
comp=N,96nm,1.0s
TIY LR LR
comp=N,450nm,6.5s
TIY LR LR
comp=N,200nm,4.1s
TIY LR LR
comp=N,210nm,7.9s
BJT Baijiatuau 16.04 345 P **P 14 50 45.1 -0.5**
BJT Baijiatuau 16.04 345 P **P 14 50 46.3 +0.7**
BJT Baijiatuau 16.04 345 P **P 14 50 45.1 -0.5**
BJT pmax pmax
comp=Z,47nm,1.2s
BJI Beijing 16.06 345 P **P 14 50 45.1 -0.7**
BJI S **Sn 14 53 40.1 -0.3**
BJI pmax pmax
comp=Z,16nm,1.0s
BJI pmax pmax
comp=Z,260nm,9.1s
BJI LR LR
comp=Z,230nm,21.5s
BJI LR LR
comp=Z,230nm,20.6s
BJI LR LR
comp=Z,320nm,26.5s
SLVN Son La 16.65 262 **P 14 50 52.3 -0.3**
CD2 Chengdu 17.01 296 P **Pn 14 50 55.1 -0.4**
CD2 pP pP 14 51 09.1 -0.1
CD2 sP sP 14 51 16.9 +0.3
CD2 S **Sn 14 54 04.1 +0.3**
CD2 pmax pmax
comp=Z,90nm,1.1s
CD2 LR LR
comp=Z,780nm,5.8s
CD2 LR LR
comp=Z,880nm,5.4s
CD2 LR LR
comp=Z,740nm,10.7s
KMI Kunming 17.16 276 ⇑P **P 14 50 59.6 +1.3**
KMI pP pP 14 51 12.1 +1.0
KMI S **Sn 14 54 06.1 -1.5**
KMI pmax pmax
comp=Z,16nm,0.9s
KMI LR LR
comp=Z,670nm,7.2s
KMI LR LR
comp=Z,1μm,8.0s
KMI LR LR
comp=Z,1μm,8.9s
SNY Shenyang 17.25 5 ⇑P **P 14 51 00.0 +1.1**
SNY pmax pmax
comp=Z,34nm,2.0s
SNY pmax pmax
comp=Z,600nm,5.0s
SNY LR LR
comp=Z,400nm,14.7s
SNY LR LR
comp=Z,250nm,10.2s
SNY LR LR
comp=Z,600nm,29.1s
JGF Kuroka 17.44 47 P **P 14 51 04.2 +3.0**
UBPT Khong Chiam 17.79 242 P **P 14 51 05.8 +0.7**
DAV Davao City (W) 17.85 167 LR LR 14 57 23.7
comp=Z,270nm,20.4s,baz=339,slow=35
JHJ Hachijo jima 2 18.00 58 P **P 14 51 01.2 -6.1**
comp=Z,94nm,0.7s,baz=235,slow=22,SNR=1.6
JHJ LR LR 14 57 31.2
comp=Z,390nm,21.7s,baz=266,slow=36
PZH PanZhiHua 18.05 280 P **Pn 14 51 10.5 +2.2**
PZH S **Sn 14 54 18.3 -11**
PZH SS **SnSn 14 54 50.3 +7.0**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,180nm,5.9s
PZH LR LR
comp=Z,820nm,16.2s
PZH LR LR
comp=Z,490nm,15.7s
PZH LR LR
comp=Z,540nm,14.7s
HHC Hu-ho-hao-te 18.25 335 *e*P **Pn 14 51 12.9 +2.3**
HHC S **Sn 14 54 32.0 -1.7**
HHC SS **SnSn 14 54 53.0 +4.6**
HHC pmax pmax
comp=Z,48nm,1.2s
HHC pmax pmax
comp=Z,560nm,6.1s
HHC LR LR
comp=Z,480nm,15.3s
HHC LR LR
comp=Z,270nm,15.3s
HHC LR LR
comp=Z,780nm,16.5s
NONG Nongkai 18.40 253 P **Pn 14 51 14.2 +1.7**
MJAR Matsushiro Arr 18.55 46 P **P 14 51 08.4 -5.0**
comp=Z,0.1nm,0.3s,baz=229,slow=9.5,SNR=3.4
MJAR LR LR 14 59 06.4
comp=Z,407nm,21.1s,baz=226,slow=40
comp=Z,0.8nm,0.6s
JCJ Chichijima 18.66 78 Pn **P 14 51 08.7 -6.0**
comp=Z,20nm,0.4s,baz=312,slow=22,SNR=1.7
BTO Baotou 18.68 331 *e*P **Pn 14 51 18.4 +2.6**
BTO pP **pP 14 51 30.5 +2.9**
BTO sP **sP 14 51 38.8 +3.8**
BTO pmax pmax
comp=Z,40nm,1.3s
BTO pmax pmax
comp=Z,1μm,6.1s
BTO LR LR
comp=Z,960nm,10.6s
BTO LR LR
comp=Z,920nm,9.6s
BTO LR LR
comp=Z,1μm,12.8s
LZH Lanzhou 19.11 311 ⇑P **Pn 14 51 22.3 +1.2**
LZH pP pP 14 51 36.1 +3.7
LZH S **S 14 54 47.1 -6.4**
LZH sS sS 14 55 06.1 -8.2
LZH pmax pmax
comp=Z,54nm,1.6s
LZH pmax pmax
comp=Z,270nm,5.5s
LZH LR LR
comp=Z,750nm,11.3s
LZH LR LR
comp=Z,310nm,11.7s
LZH LR LR
comp=Z,500nm,13.7s
KKM Kota Kinabalu 19.18 197 P **Pn 14 51 21.7 -0.2**
CN2 Changchun 19.40 8 *e*P **P 14 51 22.6 0.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=Z,240nm,11.0s
CN2 LR LR
comp=Z,260nm,11.0s
CN2 LR LR
comp=Z,530nm,11.0s
PSTR Posyet 19.52 21 *i* P **Pn 14 51 25.7 0.0**
MSHR Mys Shultsa 19.58 21 *ce*P **Pn 14 51 25.4 -0.9**
MSHR pmax pmax
comp=Z,54nm,1.3s
XLT XiLinHaoTe 19.77 348 ⇑*i*P **Pn 14 51 28.0 -0.7**
XLT SS **SnSn 14 55 28.4 +2.8**
XLT pmax pmax
comp=Z,43nm,1.4s
XLT pmax pmax
comp=Z,260nm,3.6s
XLT LR LR
comp=Z,35nm,18.8s
XLT LR LR
comp=Z,310nm,9.9s
XLT LR LR
comp=Z,410nm,19.4s
VLA Vladivostok 20.30 22 *i* P Pn 14 51 34.0 -0.8
VLA pmax pmax
comp=Z,60nm,0.8s
TNCH TengChong 20.98 276 P Pn 14 51 42.9 -0.4
TNCH pP pP 14 51 54.6 +1.5
TNCH sP sP 14 52 04.0 +3.1
TNCH S **S 14 55 27.0 -3.9**
TNCH pmax pmax
comp=Z,26nm,1.2s
TNCH pmax pmax
comp=Z,210nm,4.2s
TNCH LR LR
comp=Z,400nm,9.0s
TNCH LR LR
comp=Z,890nm,9.4s
TNCH LR LR
comp=Z,960nm,10.3s
MDJ Mudanjiang 20.98 16 P **P 14 51 40.8 +1.0**
MDJ pP pP 14 51 55.3 +2.7
MDJ sP sP 14 52 01.3 +1.3
MDJ S **S 14 55 33.1 +2.9**
MDJ PcP **PcP 14 55 45.4 +0.3**
MDJ ScP **ScP 14 59 11.5 -5.5**
MDJ pmax pmax
comp=Z,34nm,1.0s
MDJ pmax pmax
comp=Z,350nm,3.5s
MDJ LR LR
comp=Z,500nm,12.8s
MDJ LR LR
comp=Z,570nm,10.2s
MDJ LR LR
comp=Z,750nm,20.2s
MDJ Mudanjiang 20.98 16 P **P 14 51 40.3 +0.5**
MDJ IAmb IAmb 14 51 44.7
comp=Z,68nm,1.3s
MDJ Mudanjiang 20.98 16 P **P 14 51 41.1 +1.3**
SGSI Sangihe 21.14 169 P **P 14 51 41.2 -0.4**
comp=Z,374nm,0.5s,comp=Z,8μm
USA0B Ussuriysk Arra 21.30 21 P **P 14 51 44.0 +0.9**
USA0B Ussuriysk Arra 21.30 21 P **P 14 51 44.0 +0.9**
USA0B pmax pmax
comp=Z,13nm,0.9s
USRK Ussuriysk Ar. 21.30 21 P **P 14 51 38.4 -4.6**
comp=Z,2.1nm,0.7s,baz=193,slow=5.9,SNR=3.6
USRK LR LR 15 01 14.7
comp=Z,251nm,18.5s,baz=196,slow=41
comp=Z,2.1nm,0.7s
BNX BinXian 21.59 11 ⇑P **P 14 51 45.6 -0.6**
BNX pP **pP 14 51 57.0 -2.2**
BNX sP **sP 14 52 04.3 -2.2**
BNX PP **PnPn 14 52 10.3 +1.3**
BNX S **S 14 55 46.9 +4.7**
BNX pmax pmax
comp=Z,18nm,1.3s
BNX pmax pmax
comp=Z,170nm,5.2s
BNX LR LR
comp=Z,160nm,6.0s
BNX LR LR
comp=Z,310nm,5.2s
BNX LR LR
comp=Z,480nm,22.8s
CHTO Chiang Mai 21.84 259 P **P 14 51 49.0 -0.2**
CHTO Chiang Mai 21.84 259 P **P 14 51 49.0 -0.2**
CHTO pmax pmax
comp=Z,17nm,1.0s
CM31 Chiang Mai Arr 21.96 258 P **P 14 51 50.6 +0.2**
CMAR Chiang Mai Arr 21.96 258 P **P 14 51 50.4 -0.1**
CMAR Chiang Mai Arr 21.96 258 *i* P **P 14 51 52.2 +1.7**
CMAR Chiang Mai Arr 21.96 258 P **P 14 51 51.8 +1.3**
comp=Z,2.8nm,0.8s,baz=58,slow=8.5,SNR=21
CMAR LR LR 15 00 17.9
comp=Z,272nm,20.9s,baz=75,slow=36
comp=Z,2.8nm,0.8s
JTM Tenmabayashi 22.89 41 P **P 14 52 01.7 +1.6**
TOLI2 Tolitoli 23.38 182 P **P 14 52 06.2 +1.1**
GTA Gaotai 23.58 314 ⇑P **P 14 52 07.4 +0.4**
GTA pP pP 14 52 21.6 +0.8
GTA sP sP 14 52 30.0 +2.0
GTA S **S 14 56 17.3 +0.2**
GTA pmax pmax
comp=Z,50nm,1.4s
GTA pmax pmax
comp=Z,320nm,5.8s
GTA LR LR
comp=Z,300nm,13.4s
GTA LR LR
comp=Z,240nm,14.2s
GTA LR LR
comp=Z,220nm,16.7s
SBUM Sibu 23.83 204 P **P 14 52 08.7 -0.6**
GTOI Gorontalo 23.87 177 P **P 14 52 07.6 -2.0**
comp=Z,12nm,1.4s
MRSI Marisa 23.99 179 P **P 14 52 12.2 +1.5**
comp=Z,21nm,0.6s
KMSI Cibinong 24.00 174 P **P 14 52 10.8 0.0**
comp=Z,66nm,1.0s
TNTI Ternate 24.34 166 P **P 14 52 15.4 +1.5**
GUMO Guam 24.50 112 LR LR 15 00 06.5
comp=Z,184nm,21.6s,baz=306,slow=33
HIA Hailar 24.66 357 P **P 14 52 16.3 -0.3**
HIA Hailar 24.66 357 P **P 14 52 16.3 -0.3**
HIA pmax pmax
comp=Z,20nm,0.9s
ERM Erimo 24.89 41 P **P 14 52 22.8 +4.2**
comp=Z,91nm,1.1s
JEM Erimo 24.89 41 P **P 14 52 22.5 +3.9**
KSM Kuching 25.47 207 P **P 14 52 24.1 -0.2**
KSM IAmb IAmb 14 52 42.0
comp=Z,55nm,1.1s
GOMU GeErMu 25.77 303 P **P 14 52 28.6 +1.4**
GOMU pmax pmax
comp=Z,14nm,1.2s
GOMU LR LR
comp=Z,590nm,15.4s
GOMU LR LR
comp=Z,280nm,14.5s
GOMU LR LR
comp=Z,510nm,15.1s
KLR Kul'dur 25.82 15 *ce*P **P 14 52 26.8 -0.3**
KLR pmax pmax
comp=Z,66nm,1.4s
KLR Kul'dur 25.82 15 LR LR 15 03 17.5
comp=Z,539nm,20.6s,baz=196,slow=38
ASAJ Asahikawa 25.91 36 LR LR 15 03 01.7
comp=Z,555nm,20.3s,baz=216,slow=38
ULN Ulaanbaatar 25.93 337 P **P 14 52 29.0 +0.7**
ULN IAmb IAmb 14 52 30.0
comp=Z,126nm,1.8s
ULN Ulaanbaatar 25.93 337 P **P 14 52 29.0 +0.7**
ULN pmax pmax
comp=Z,125nm,1.8s
HEH HeiHe 25.99 8 *e*P **P 14 52 28.3 -0.3**
HEH pmax pmax
comp=Z,42nm,1.1s
HEH pmax pmax
comp=Z,150nm,7.0s
HEH LR LR
comp=Z,360nm,16.8s
HEH LR LR
comp=Z,200nm,16.8s
HEH LR LR
comp=Z,410nm,17.1s
SONM Songino Array 26.14 336 P **P 14 52 30.8 +0.6**
SONM IAmb IAmb 14 52 31.9
comp=Z,84nm,1.6s
SONM Songino Array 26.14 336 P **P 14 52 30.8 +0.6**
SONM pmax pmax
comp=Z,83nm,1.6s
SONM Songino Array 26.14 336 P **P 14 52 29.7 -0.5**
comp=Z,13nm,0.9s,baz=156,slow=9.1,SNR=91
SONM LR LR 15 04 05.0
comp=Z,546nm,18.1s,baz=164,slow=40
comp=Z,13nm,0.9s
SHL Shillong 26.94 278 P **P 14 52 37.5 -0.1**
SHL IAmb IAmb 14 52 42.5
comp=Z,50nm,1.1s
SHL Shillong 26.94 278 P **P 14 52 37.5 -0.1**
SHL pmax pmax
comp=Z,50nm,1.1s
YSS Yuzh-Sakhalins 27.95 32 *e*P **P 14 52 48.9 +2.7**
YSS *e*S **S 14 57 29.5 +3.5**
YSS pmax pmax
comp=Z,17nm,1.2s
YSS MLR MLR
comp=Z,500nm,14.0s
ZEA Zeya 29.39 7 *e*P **P 14 52 58.9 -0.1**
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA pmax pmax
comp=Z,200nm,4.4s
ZEA MLR MLR
comp=N,300nm,18.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
ZAK Zakamensk 29.40 336 *e*P **P 14 52 58.0 -1.2**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
IRK Irkutsk 30.60 339 *e*P **P 14 53 08.8 -0.9**
IRK pmax pmax
comp=Z,47nm,1.4s
TYV Tymovskoe 30.82 26 *e*P **P 14 53 13.9 +2.3**
TYV *e*S **S 14 58 17.3 +6.4**
TYV pmax pmax
comp=Z,5.0nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.5s
TYV smax smax
comp=N,100nm,5.0s
TYV smax smax
comp=E,100nm,5.0s
MOY Mondy 31.30 335 *e*P **P 14 53 15.7 -0.2**
MOY pmax pmax
comp=Z,44nm,2.7s
GSI Gunungsitoli 32.83 229 P **P 14 53 29.6 0.0**
WMQ Urumqi 33.66 313 *e*P **P 14 53 37.8 +1.1**
WMQ pmax pmax
comp=Z,38nm,1.5s
WMQ pmax pmax
comp=Z,140nm,4.3s
WMQ LR LR
comp=Z,150nm,24.0s
LEM Lembang 34.10 205 LR LR 15 07 42.3
comp=Z,80nm,18.0s,baz=42,slow=36
DGZ Jazzator, Alta 36.51 322 *i* P **P 14 54 01.3 +0.1**
DGZ pmax pmax
comp=Z,6.0nm,0.7s
ZSN Zaisan 36.96 317 *e*P **P 14 54 05.1 +0.1**
baz=318
ZSN Zaisan 36.96 317 *e*P **P 14 54 05.1 +0.1**
YAK Yakutsk 37.80 6 P **P 14 54 10.2 -1.6**
YAK Yakutsk 37.80 6 *e*P **P 14 54 10.7 -1.1**
YAK *e**PP **pP 14 54 24.9 -1.8**
YAK *e* 14 55 38.2
YAK *e* 14 56 25.7
YAK *e*S **S 14 59 58.4 +0.1**
YAK *e**SS **sS 15 00 22.8 -0.7**
YAK *e*SS **SnSn 15 02 43.5 +0.1**
YAK pmax pmax
comp=Z,67nm,1.3s
YAK pmax pmax
comp=N,24nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,154nm,4.2s
YAK pmax pmax
comp=N,170nm,6.7s
YAK pmax pmax
comp=E,172nm,7.1s
YAK smax smax
comp=E,240nm,6.2s
YAK smax smax
comp=N,149nm,7.1s
YAK Yakutsk 37.80 6 LR LR 15 10 29.1
comp=N,250nm,20.7s,baz=156,slow=38
YAK Yakutsk 37.80 6 P **P 14 54 10.8 -1.1**
MK31 Makanchi Array 38.32 315 P **P 14 54 16.6 +0.1**
MK31 IAmb IAmb 14 54 18.1
comp=Z,26nm,1.2s
MK31 Makanchi Array 38.32 315 P **P 14 54 16.6 +0.1**
MK31 pmax pmax
comp=Z,26nm,1.3s
MKAR Makanchi Array 38.32 315 P **P 14 54 16.9 +0.4**
MKAR Makanchi Array 38.32 315 *i* P **P 14 54 16.8 +0.4**
MKAR pmax pmax
comp=Z,10.0nm,0.6s
MKAR Makanchi Array 38.32 315 P **P 14 54 16.4 -0.1**
comp=Z,15nm,0.8s,baz=102,slow=10,SNR=145
MKAR LR LR 15 11 20.3
comp=Z,216nm,18.8s,baz=108,slow=38
comp=Z,15nm,0.8s
MAKZ Makanchi 38.53 315 P **P 14 54 18.4 +0.2**
MAKZ Makanchi 38.53 315 P **P 14 54 18.4 +0.2**
MAKZ pmax pmax
comp=Z,86nm,1.7s
MAKZ Makanchi 38.53 315 P **P 14 54 18.7 +0.5**
MAKZ pP **pP 14 54 35.2 +2.2**
SHLS Shalkode 39.11 309 ⇑*i*P **P 14 54 21.9 -1.4**
comp=Z,20nm,0.9s,baz=309
SHLS Shalkode 39.11 309 *c i*P **P 14 54 21.8 -1.5**
SHLS pmax pmax
comp=Z,19nm,0.9s
PDGK Podgornoye 39.14 309 P **P 14 54 23.9 +0.4**
PETK Petropavlovsk- 39.29 34 P **P 14 54 22.5 -1.9**
comp=Z,3.1nm,0.8s,baz=328,slow=14,SNR=2.1
PETK LR LR 15 11 30.4
comp=Z,188nm,19.1s,baz=228,slow=38
comp=Z,3.1nm,0.8s
UZB Uzynbulak 39.42 309 ⇑*i*P **P 14 54 27.0 +1.1**
comp=Z,18nm,1.0s,baz=309
UZB Uzynbulak 39.42 309 *c i*P **P 14 54 26.9 +1.1**
UZB pmax pmax
comp=Z,18nm,1.0s
KPKS Kokpek 39.74 309 ⇑*i*P **P 14 54 29.4 +0.9**
comp=Z,13nm,1.0s,baz=309
KPKS Kokpek 39.74 309 *c i*P **P 14 54 29.3 +0.9**
KPKS pmax pmax
comp=Z,13nm,1.0s
SATY Saty 39.84 308 ⇑*i*P **P 14 54 30.2 +0.9**
comp=Z,15nm,1.1s,baz=308
SATY Saty 39.84 308 *c i*P **P 14 54 30.2 +0.9**
SATY pmax pmax
comp=Z,15nm,1.1s
ZHN Zhinishke 39.85 309 *e*P **P 14 54 30.3 +1.0**
baz=309
ZHN Zhinishke 39.85 309 *e*P **P 14 54 30.3 +1.0**
ZAA0 Zalesovo Array 40.11 327 P **P 14 54 30.2 -1.0**
ZAA0 IAmb IAmb 14 54 31.7
comp=Z,31nm,1.2s
ZALV Zalesovo Beam 40.11 327 P **P 14 54 30.1 -1.1**
ZALV Zalesovo Beam 40.11 327 *i* P **P 14 54 30.6 -0.6**
ZALV pmax pmax
comp=Z,10.0nm,0.6s
ZALV Zalesovo Beam 40.11 327 P **P 14 54 30.0 -1.2**
comp=Z,10nm,0.6s,baz=116,slow=8.0,SNR=48
ZALV LR LR 15 12 10.8
comp=Z,238nm,20.0s,baz=127,slow=38
comp=Z,10nm,0.6s
TDK Taldyqorghan 40.33 311 *e*P **P 14 54 34.7 +1.5**
baz=311
TDK Taldyqorghan 40.33 311 *e*P **P 14 54 34.7 +1.5**
MA2 Magadan 40.44 22 P **P 14 54 34.5 +0.7**
MA2 Magadan 40.44 22 *ce*P **P 14 54 34.6 +0.7**
MA2 pmax pmax
comp=Z,15nm,1.0s
MA2 Magadan 40.44 22 LR LR 15 11 44.5
comp=Z,204nm,20.9s,baz=216,slow=37
MA2 Magadan 40.44 22 P **P 14 54 34.8 +1.0**
HYB Hyderabad 40.72 268 *e*P **P 14 54 36.8 0.0**
HYB *e*pP **pP 14 54 50.9 -1.1**
HYB *e*PP **PnPn 14 56 21.3 +5.3**
MDOK Medeo 40.83 308 *e*P **P 14 54 38.7 +1.1**
baz=308
MDOK Medeo 40.83 308 *e*P **P 14 54 38.6 +1.1**
KSH Kashi 41.02 303 P **P 14 54 42.9 +3.8**
KSH pP sP 14 55 00.6 -0.5
KSH PP **PnPn 14 56 24.1 +4.9**
KSH pmax pmax
comp=Z,16nm,1.2s
CHKK Chushkaly 41.03 309 *e*P **P 14 54 39.6 +0.5**
baz=309
CHKK Chushkaly 41.03 309 *e*P **P 14 54 39.5 +0.5**
NRN Naryn 41.27 305 IAmb IAmb 14 54 44.1
comp=Z,28nm,1.2s
KUU Kurty 41.49 309 *e*P **P 14 54 43.8 +0.9**
comp=Z,17nm,0.9s,baz=309
KUU Kurty 41.49 309 *e*P **P 14 54 43.7 +0.9**
KUU pmax pmax
comp=Z,17nm,0.9s

TKM2 Tokmak 2 41.83 308 P **P** **14 54 47.4 +1.6**
SNR=21
TKM2 Tokmak 2 41.83 308 P **P** **14 54 46.8 +1.0**
PMG Port Moresby 41.99 141 LR LR 15 09 05.9
comp=Z,96nm,21.8s,baz=322,slow=32
KURK Kurchatov 42.03 320 P **P** **14 54 46.7 -0.3**
KURK IAmb IAmb 14 54 48.3
comp=Z,41nm,1.5s
KURK Kurchatov 42.03 320 P **P** **14 54 46.7 -0.3**
KURK pmax pmax
comp=Z,41nm,1.5s
KURK Kurchatov 42.03 320 P **P** **14 54 46.9 -0.1**
KURBB Kurchatov Arra 42.05 319 P **P** **14 54 45.9 -1.3**
KURBB Kurchatov Arra 42.05 319 P **P** **14 54 46.5 -0.6**
comp=Z,5.7nm,0.8s,baz=110,slow=9.6,SNR=52
KURBB PP **PP** **14 56 23.7 -1.7**
comp=Z,2.2nm,1.1s,baz=111,slow=10,SNR=5.3
KURBB LR LR 15 14 21.2
comp=Z,90nm,19.9s,baz=151,slow=39
comp=Z,5.7nm,0.8s
H11N1 WAKE ISLAND Hy 42.06 87 T T 15 40 19.1
baz=279
H11N2 WAKE ISLAND Hy 42.06 87 T T 15 40 22.0
baz=279,SNR=16
H11N3 WAKE ISLAND Hy 42.07 87 T T 15 40 19.1
baz=279
H11S3 WAKE ISLAND Hy 42.20 89 T T 15 40 39.0
baz=284,slow=74,SNR=30
H11S1 WAKE ISLAND Hy 42.21 89 T T 15 40 34.1
baz=284,slow=74,SNR=14
H11S2 WAKE ISLAND Hy 42.22 89 T T 15 40 17.3
baz=284,slow=74,SNR=16
KBK Karagaybulak 42.25 307 P **P** **14 54 50.8 +1.6**
SNR=9.8
CHMS Chumysh 42.45 307 P **P** **14 54 51.8 +1.1**
SNR=12
UCH Uchtor 42.50 306 P **P** **14 54 53.6 +2.1**
SNR=22
AAK Ala-Archa 42.58 307 P **P** **14 54 53.2 +1.4**
SNR=7.3
AAK Ala-Archa 42.58 307 P **P** **14 54 52.5 +0.6**
AAK Ala-Archa 42.58 307 *ce*P **P** **14 54 52.7 +0.9**
AAK pmax pmax
comp=Z,10.0nm,1.1s
AAK Ala-Archa 42.58 307 LR LR 15 14 45.4
comp=Z,130nm,19.4s,baz=90,slow=39
AAK Ala-Archa 42.58 307 P **P** **14 54 53.1 +1.2**
PALK Pallekele 42.75 253 LR LR 15 14 33.5
comp=Z,119nm,18.5s,baz=166,slow=39
NIL Nilore 42.89 294 P **P** **14 54 54.5 +0.2**
NIL IAmb IAmb 14 54 56.1
comp=Z,33nm,1.4s
NIL Nilore 42.89 294 P **P** **14 54 54.5 +0.2**
NIL pmax pmax
comp=Z,33nm,1.4s
EKS2 Erkin-Say 43.10 307 P **P** **14 54 57.4 +1.3**
SNR=6.7
BTLS Baital 43.34 310⇑ *i*P **P** **14 54 58.3 +0.6**
baz=310
BTLS Baital 43.34 310 *c i*P **P** **14 54 58.3 +0.6**
SEY Seymchan 43.44 20 *ce*P **P** **14 54 57.9 -0.4**
SEY pmax pmax
comp=Z,5.0nm,0.9s
COEN Coen 43.72 149 P **P** **14 55 01.5 +0.4**
COEN Coen 43.72 149 P **P** **14 55 02.9 +1.8**
DZA Taraz 44.92 307 *e*P **P** **14 55 11.7 +1.2**
baz=307
DZA Taraz 44.92 307 *e*P **P** **14 55 11.7 +1.2**
BTK Batken 45.02 303 IAmb IAmb 14 55 13.7
comp=Z,24nm,1.5s
OTUK Ortayu 45.19 314 P **P** **14 55 12.8 +0.3**
BRZS Berezniki 45.40 317⇑ *i*P **P** **14 55 14.6 +0.4**
baz=317
BRZS Berezniki 45.40 317 *c i*P **P** **14 55 14.5 +0.4**
MBWA Marble Bar 45.53 182 P **P** **14 55 14.8 -0.6**
KK31 Karatay Array 45.54 307 *i*P **P** **14 55 15.8 +0.4**
IUG Iuzhnay 45.79 306⇑ *i*P **P** **14 55 18.7 +1.2**
comp=Z,27nm,1.1s,baz=306
IUG Iuzhnay 45.79 306 *c i*P **P** **14 55 18.7 +1.2**
IUG pmax pmax
comp=Z,27nm,1.1s
WB0 Warramunga Arr 45.83 163 P **P** **14 55 16.6 -1.2**
WB0 IAmb IAmb 14 55 38.4
comp=Z,50nm,1.9s
PSA00 Pilbara Seismi 45.94 182 P **P** **14 55 17.3 -1.3**
WRAB Tennant Creek 45.97 163 P **P** **14 55 17.0 -1.9**
WRAB Tennant Creek 45.97 163 P **P** **14 55 17.0 -1.9**
WRAB pmax pmax
comp=Z,6.0nm,0.9s
WRA Warramunga Arr 45.98 163 P **P** **14 55 17.6 -1.4**
comp=Z,2.8nm,0.5s,baz=346,slow=8.7,SNR=43
comp=Z,2.8nm,0.5s
WB2 Warramunga Arr 45.98 163 P **P** **14 55 17.7 -1.3**
BRLS Borolday 46.02 307 *e*P **P** **14 55 20.4 +1.2**
baz=306
BRLS Borolday 46.02 307 *e*P **P** **14 55 20.4 +1.2**
WR0 Warramunga Arr 46.05 163 IAmb IAmb 14 55 42.6
comp=Z,75nm,2.0s
CHM Chimkent 46.12 306 *e*P **P** **14 55 21.1 +1.1**
baz=306
CHM Chimkent 46.12 306 *e*P **P** **14 55 21.0 +1.1**
SIMJ Simiganj 46.35 301 P **P** **14 55 22.6 +0.6**
SIMJ pP **pP** **14 55 39.1 +1.7**
KBL Kabul 46.35 295 P **P** **14 55 22.8 +0.6**
KBL IAmb IAmb 14 55 24.6
comp=Z,37nm,1.0s
KBL Kabul 46.35 295 P **P** **14 55 22.8 +0.6**
KBL pmax pmax
comp=Z,37nm,1.0s
TIXI Tiksi 47.25 3 P **P** **14 55 26.8 -1.5**
TIXI Tiksi 47.25 3 P **P** **14 55 26.8 -1.5**
TIXI pmax pmax
comp=Z,49nm,1.2s
TIXI Tiksi 47.25 3 P **P** **14 55 27.2 -1.1**
BVA0 Borovoye Array 47.61 320 *i*P **P** **14 55 30.4 -1.0**
BVAR Borovoye Array 47.61 320 P **P** **14 55 30.1 -1.3**
comp=Z,5.5nm,0.6s,baz=109,slow=9.3,SNR=38
BVAR PcP **PcP** **14 56 59.8 -0.5**
comp=Z,1.8nm,0.5s,baz=102,slow=3.6,SNR=5.4
BVAR LR LR 15 18 00.2
comp=Z,60nm,18.2s,baz=101,slow=39
comp=Z,5.5nm,0.6s
BRVK Borovoye 47.68 320 P **P** **14 55 31.9 0.0**
BRVK IAmb IAmb 14 55 33.3
comp=Z,27nm,1.2s
BRVK Borovoye 47.68 320 *ce*P **P** **14 55 32.0 +0.1**
BRVK pmax pmax
comp=Z,26nm,1.2s
BRVK Borovoye 47.68 320 P **P** **14 55 32.2 +0.3**
SHEM Shemya Is, Ala 48.24 40 LR LR 15 15 17.8
comp=Z,94nm,21.9s,baz=294,slow=36
NRIK Noril'sk 49.10 345 *ce*P **P** **14 55 41.3 -1.3**
NRIK pmax pmax
comp=Z,19nm,1.3s
NRIK Noril'sk 49.10 345 P **P** **14 55 41.0 -1.6**
comp=Z,5.6nm,0.8s,baz=126,slow=7.2,SNR=12
NRIK LR LR 15 18 24.8
comp=Z,216nm,20.6s,baz=153,slow=39
comp=Z,5.6nm,0.8s
ASAR Alice Springs 49.44 165 P **P** **14 55 44.7 -1.1**
comp=Z,1.6nm,0.7s,baz=340,slow=6.8,SNR=53
ASAR PcP **PcP** **14 57 06.9 -0.4**
comp=Z,1.5nm,0.8s,baz=343,slow=3.6,SNR=1.8
comp=Z,1.6nm,0.7s
AS01 Alice Springs 49.45 165 P **P** **14 55 46.2 +0.4**
WRKA Warakurna 49.77 172 P **P** **14 55 47.8 -0.5**
HNR Honiara 50.41 127 LR LR 15 17 48.1
comp=Z,618nm,18.3s,baz=261,slow=37
CTA Charters Tower 50.48 149 LR LR 15 15 22.8
comp=Z,103nm,20.9s,baz=324,slow=34
MEEK Meekatharra 51.03 183 P **P** **14 55 57.2 -0.5**
BILL Bilibino 51.15 20 P **P** **14 55 57.2 -0.9**
BILL Bilibino 51.15 20 *e*P **P** **14 55 57.4 -0.7**
BILL pmax pmax
comp=Z,11nm,1.3s
BILL Bilibino 51.15 20 P **P** **14 55 57.6 -0.5**
AB31 Akbulak array 53.44 314 *i*P **P** **14 56 15.4 0.0**
ABKAR Akbulak array 53.44 314 IAmb IAmb 14 56 17.0
comp=Z,40nm,1.5s
OOD Oodnadatta 53.83 165 P **P** **14 56 19.8 +1.4**
SVE Sverdlovsk 53.95 324 *e*P **P** **14 56 18.7 -0.3**
SVE pmax pmax
comp=Z,21nm,1.2s
AKTO Aktyubinsk 54.76 315 P **P** **14 56 23.6 -1.4**
AKTO Aktyubinsk 54.76 315 LR LR 15 21 23.3
comp=Z,147nm,21.2s,baz=290,slow=38

GEYT Alibeck 54.94 300 P **P** **14 56 26.1 -0.4**
comp=Z,17nm,0.8s,baz=84,slow=4.6,SNR=36
GEYT LR LR 15 24 04.7
comp=Z,125nm,20.1s,baz=132,slow=40
comp=Z,17nm,0.8s
GYA0 ALIBECK ARRAY 54.94 300 P **P** **14 56 27.5 +0.9**
ARU Arti 55.02 323 P **P** **14 56 26.0 -0.7**
ARU IAmb IAmb 14 56 27.4
comp=Z,23nm,1.3s
ARU Arti 55.02 323 *c i*P **P** **14 56 25.4 -1.3**
ARU 14 58 26.7
ARU S **S** **15 04 06.9 +2.4**
ARU SS **SS** **15 07 48.3 -0.2**
ARU pmax pmax
comp=Z,12nm,0.8s
ARU Arti 55.02 323 LR LR 15 22 02.9
comp=Z,120nm,19.7s,baz=92,slow=38
ARU Arti 55.02 323 P **P** **14 56 26.2 -0.5**
ARU pP **pP** **14 56 42.3 -0.2**
BLDU Ballidu 55.11 185 P **P** **14 56 28.7 +1.0**
comp=Z,34nm,2.1s
FORT Forrest 55.42 173 P **P** **14 56 31.3 +1.5**
MULG Mulgathing 55.87 167 P **P** **14 56 34.9 +1.8**
LCRK Leigh Creek 57.01 163 P **P** **14 56 43.1 +1.9**
WSAR Wadi Sarin 57.14 283 LR LR 15 23 59.7
comp=Z,75nm,20.6s,baz=83,slow=39
NWAO Narrogin (SRO) 57.37 184 P **P** **14 56 43.6 -0.1**
NWAO Narrogin (SRO) 57.37 184 LR LR 15 22 30.2
comp=Z,46nm,21.4s,baz=302,slow=37
BBOO Buckleboo 58.73 166 P **P** **14 56 55.0 +1.8**
STKA Stephens Creek 59.32 160 P **P** **14 56 56.5 -0.9**
comp=Z,1.7nm,0.5s,baz=351,slow=7.2,SNR=7.3
STKA LR LR 15 24 14.0
comp=Z,36nm,20.9s,baz=23,slow=38
comp=Z,1.7nm,0.5s
KIRV Kirov 60.11 325 *ce*P **P** **14 57 01.9 -0.5**
KIRV Kirov 60.11 325 LR LR 15 26 06.5
comp=Z,104nm,19.6s,baz=95,slow=39
KOUNC Koumac, New Ca 61.13 134 P **P** **14 57 11.3 +1.4**
BELG Belogornoye 61.26 318 *i*P **P** **14 57 09.8 -0.6**
BELG pmax pmax
comp=Z,6.0nm,1.3s
BELG Belogornoye 61.26 318 LR LR 15 26 20.3
comp=Z,72nm,20.1s,baz=172,slow=39
C19K Lookout Ridge 63.25 23 IAmb IAmb 14 57 26.1
comp=Z,7.7nm,0.8s
DZM Mont Dzumac 63.62 133 P **P** **14 57 28.2 +1.5**
DZM Mont Dzumac 63.62 133 P **P** **14 57 25.9 -0.8**
comp=Z,4.2nm,0.6s,baz=247,slow=12,SNR=8.4
DZM LR LR 15 20 41.4
comp=Z,46nm,20.0s,baz=346,slow=32
comp=Z,4.2nm,0.6s
DZM Mont Dzumac 63.62 133 P **P** **14 57 27.7 +1.0**
ARPS Mount Arapiles 63.95 162 P **P** **14 57 28.6 +0.2**
comp=Z,16nm,0.9s
OUENC Ouen Island, N 64.13 133 P **P** **14 57 31.5 +1.6**
GNI Garni 64.90 304 P **P** **14 57 35.5 +0.5**
GNI IAmb IAmb 14 57 37.9
comp=Z,32nm,1.4s
GNI Garni 64.90 304 *ce*P **P** **14 57 37.4 +2.4**
GNI pmax pmax
comp=Z,24nm,1.3s
GNI Garni 64.90 304 LR LR 15 30 37.2
comp=Z,40nm,21.9s,baz=94,slow=40
TTA Tatalina 64.94 30 P **P** **14 57 34.2 -0.5**
TTA IAmb IAmb 14 57 35.5
comp=Z,25nm,1.5s
TTA Tatalina 64.94 30 P **P** **14 57 34.2 -0.5**
TTA pmax pmax
comp=Z,25nm,1.5s
ZEI Tsey 65.00 307 *e*P **P** **14 57 34.8 -0.8**
ZEI pmax pmax
comp=Z,24nm,1.4s
KLMR Klimovskoe 65.02 328 *e*P **P** **14 57 31.2 -4.0**
KLMR pmax pmax
comp=Z,40nm,1.2s
VRH Novokhopyorsk 65.03 317 *e*P **P** **14 57 34.8 -0.6**
VRH pmax pmax
comp=Z,28nm,0.6s
GOF Gofitskoye 65.18 310 *ce*P **P** **14 57 37.6 +1.1**
ONI Oni 65.36 307 IAmb IAmb 14 57 40.7
comp=Z,33nm,1.3s
KBZ Khabaz 65.53 309 *ce*P **P** **14 57 39.2 +0.4**
KBZ pmax pmax
comp=Z,20nm,1.1s
KBZ Khabaz 65.53 309 P **P** **14 57 38.8 0.0**
comp=Z,9.6nm,1.0s,baz=105,slow=4.1,SNR=17
KBZ LR LR 15 30 52.6
comp=Z,62nm,18.4s,baz=74,slow=40
comp=Z,9.6nm,1.0s
KIV Kislovodsk 65.64 309 P **P** **14 57 40.2 +0.5**
KIV Kislovodsk 65.64 309 *e*P **P** **14 57 40.3 +0.7**
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,34nm,17.0s
VORR Voronezh 66.50 318 *e*P **P** **14 57 43.8 -1.1**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 66.50 319 *e*P **P** **14 57 43.2 -1.7**
LPSR pmax pmax
comp=Z,30nm,0.9s
VORD Divnogorie 66.58 317 *e*P **P** **14 57 42.2 -3.1**
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 66.61 317 *e*P **P** **14 57 44.5 -1.1**
VSR pmax pmax
comp=Z,20nm,1.1s
MOS Moscow 66.72 322 *e*P **P** **14 57 43.6 -2.6**
MOS *e* 14 58 09.2
MOS *e*S **S** **15 06 29.3 -4.2**
MOS pmax pmax
comp=Z,30nm,1.2s
ERBR Yeremizino-Bor 66.82 311 *e*P **P** **14 57 47.1 +0.1**
ERBR *e*S **S** **15 06 40.5 +5.3**
ERBR pmax pmax
comp=Z,51nm,1.3s
TOLK Toolik Lake Re 66.90 23 IAmb IAmb 14 57 48.9
comp=Z,9.6nm,0.7s
G23K Bananza Creek 67.02 26 IAmb IAmb 14 57 48.8
comp=Z,6.8nm,0.7s
GURO Guroymak-BITLI 67.30 303 IAmb IAmb 14 57 52.9
comp=Z,38nm,1.7s
KDAK Kodiak Island 67.32 35 LR LR 15 28 40.1
comp=Z,84nm,20.4s,baz=270,slow=37
OBN Obninsk 67.42 322 *c i*P **P** **14 57 49.9 -0.7**
OBN *i* 14 58 18.8
OBN *e*S **S** **15 06 36.1 -5.9**
OBN *SS **sS** **15 07 11.0 +2.1**
OBN SS **SS** **15 11 06.0 +3.6**
OBN SSS SSS 15 14 06.0
OBN pmax pmax
comp=Z,29nm,1.7s
OBN MLR MLR
comp=Z,131nm,24.0s
NEA2 Nenana 67.76 28 IAmb IAmb 14 57 53.1
comp=Z,11nm,0.7s
HOPEN Hopen 67.80 345 *e*P **P** **14 57 53.3 +0.6**
HOPEN IAmb IAmb 14 57 56.1
comp=Z,18nm,1.0s
SOC Sochi 67.82 309 *e*P **P** **14 57 52.1 -1.3**
SOC *e* 15 00 20.7
SOC *e*PPP PPP 15 01 59.1
SOC *e*S **S** **15 06 46.4 -0.8**
VADS Vadso 67.86 338 *e*P **P** **14 57 53.0 -0.2**
VADS IAmb IAmb 14 57 54.2
comp=Z,157nm,1.9s
G24K Hadweenzic Riv 68.02 25 IAmb IAmb 14 57 55.3
comp=Z,7.5nm,0.7s
MDM Murphy Dome 68.05 27 IAmb IAmb 14 57 55.1
comp=Z,12nm,0.8s
POKR Poker Plat Res 68.35 27 IAmb IAmb 14 57 57.5
comp=Z,8.6nm,0.7s
E25K Arctic Village 68.45 24 IAmb IAmb 14 58 05.3
comp=Z,22nm,1.9s
RAYN Ar Rayn 68.62 287 P **P** **14 57 58.9 +0.1**
RAYN IAmb IAmb 14 58 00.4
comp=Z,18nm,1.1s
RAYN Ar Rayn 68.62 287 P **P** **14 57 58.9 +0.1**
RAYN pmax pmax
comp=Z,18nm,1.1s
RAYN Ar Rayn 68.62 287 P **P** **14 57 59.1 +0.3**
RAYN pP **pP** **14 58 16.3 +1.2**
ILAR Eielson Array 68.65 27 P **P** **14 57 56.5 -1.7**
comp=Z,1.9nm,0.6s,baz=266,slow=5.2,SNR=14

ILAR LR LR 15 31 14.3
comp=Z,64nm,18.9s,baz=264,slow=39
comp=Z,1.9nm,0.6s
KEV Kevo 68.74 338 P **P** **14 57 58.2 -0.4**
PRP Porcupine Dome 69.04 26 P **P** **14 58 00.5 -0.4**
VALR Valaam 69.08 329 *i*P **P** **14 58 00.5 -0.4**
VALR pmax pmax
comp=Z,26nm,0.7s
ANN Anapa 69.13 311 *e*P **P** **14 58 00.7 -0.8**
ANN *e**PP **pP** **14 58 17.5 -0.2**
ANN *e*S **S** **15 07 01.7 -1.0**
ANN pmax pmax
comp=Z,31nm,0.8s
SPA0 Spitsbergen Ar 69.16 348 *e*P **P** **14 58 01.0 -0.2**
SPA0 IAmb IAmb 14 58 03.8
comp=Z,13nm,1.0s
SPITS Spitsbergen Ar 69.16 348 P **P** **14 58 00.1 -1.1**
comp=Z,4.9nm,0.4s,baz=85,slow=10,SNR=43
SPITS LR LR 15 32 37.7
comp=Z,198nm,18.4s,baz=22,slow=40
comp=Z,4.9nm,0.4s
ARA0 ARCESS Array S 69.30 338 *e*P **P** **14 58 01.6 -0.6**
ARCES ARCESS Array B 69.30 338 P **P** **14 58 01.5 -0.7**
comp=Z,5.2nm,0.8s,baz=64,slow=8.3,SNR=20
ARCES LR LR 15 32 04.7
comp=Z,58nm,20.1s,baz=108,slow=39
comp=Z,5.2nm,0.8s
ARPR Arapgir-MALATY 69.96 305 IAmb IAmb 14 58 09.3
comp=Z,27nm,1.5s
KTK1 Kautokeino 70.22 338 *e*P **P** **14 58 07.6 -0.3**
KTK1 IAmb IAmb 14 58 12.4
comp=Z,9.5nm,0.9s
JETT Jettan, Norway 71.01 339 *e*P **P** **14 58 12.5 -0.2**
JETT IAmb IAmb 14 58 13.9
comp=Z,20nm,0.4s
FINES FINESS Array B 71.29 330 *i*P **P** **14 58 14.0 -0.4**
FINES pmax pmax
comp=Z,14nm,0.5s
FINES FINESS Array B 71.29 330 P **P** **14 58 13.8 -0.6**
comp=Z,14nm,0.5s,baz=60,slow=5.9,SNR=120
comp=Z,14nm,0.5s
H29M Whitestone 71.67 25 IAmb IAmb 14 58 18.1
comp=Z,36nm,1.9s
VSU Vasula 71.85 327 *ce*P **P** **14 58 18.0 +0.1**
VSU pmax pmax
comp=Z,41nm,0.8s
VSU Vasula 71.85 327 *e*P **P** **14 58 17.9 +0.1**
DAWY Dawson 71.97 27 P **P** **14 58 17.9 -0.7**
J29N Klondike Camp 72.33 27 IAmb IAmb 14 58 21.6
comp=Z,9.6nm,0.7s
MNK Minsk 72.44 322 *i*P **P** **14 58 21.8 +0.3**
MNK *i* *PP **pP** **14 58 38.3 +0.4**
MNK *i* 15 01 10.0
MNK *i*S **S** **15 07 41.6 +0.8**
MNK pmax pmax
comp=E,7.0nm,0.7s
MNK pmax pmax
comp=Z,35nm,0.9s
MNK pmax pmax
comp=N,10.0nm,0.7s
MEF Metsahovi 72.45 329 *e*P **P** **14 58 21.4 +0.1**
INK Inuvik 72.68 22 IAmb IAmb 14 58 23.8
comp=Z,15nm,1.2s
INK Inuvik 72.68 22 P **P** **14 58 20.5 -2.1**
comp=Z,11nm,1.1s,baz=296,slow=5.8,SNR=12
INK LR LR 15 33 18.3
comp=Z,121nm,18.6s,baz=223,slow=38
comp=Z,11nm,1.1s
AKASG Malin Array Be 72.83 318 IAmb IAmb 14 58 24.6
comp=Z,21nm,1.3s
AKASG Malin Array Be 72.83 318 *i*P **P** **14 58 23.1 -0.7**
AKASG pmax pmax
comp=Z,10.0nm,0.9s
AKASG Malin Array Be 72.83 318 P **P** **14 58 22.8 -1.0**
comp=Z,16nm,1.1s,baz=59,slow=5.7,SNR=19
AKASG PP **PP** **15 01 05.5 -0.6**
comp=Z,0.6nm,0.4s,baz=64,slow=2.2,SNR=4.4
AKASG LR LR 15 33 54.0
comp=Z,71nm,21.9s,baz=73,slow=39
comp=Z,16nm,1.1s
AKBB Malin Array Si 72.83 318 IAmb IAmb 14 58 24.2
comp=Z,28nm,1.2s
KIEV Kiev 72.84 318 P **P** **14 58 22.6 -1.3**
KIEV IAmb IAmb 14 58 24.2
comp=Z,26nm,1.2s
KIEV Kiev 72.84 318 P **P** **14 58 22.6 -1.3**
KIEV pmax pmax
comp=Z,26nm,1.3s
ISAL Salakas 73.07 324 *e*P **P** **14 58 25.7 +0.6**
MTSE Matsula 73.22 327 *e*P **P** **14 58 25.7 -0.2**
BR131 Keskin Array S 73.25 306 IAmb IAmb 14 58 28.2
comp=Z,40nm,1.3s
BR131 Keskin Array S 73.25 306 *i*P **P** **14 58 27.3 +0.5**
BRTR Keskin Array B 73.25 306 P **P** **14 58 26.7 -0.1**
comp=Z,10nm,0.8s,baz=102,slow=5.5,SNR=47
BRTR LR LR 15 34 31.0
comp=Z,51nm,21.2s,baz=0.0,slow=39
comp=Z,10nm,0.8s
STEI Steigen 73.36 338 *e*P **P** **14 58 25.8 -0.8**
STEI IAmb IAmb 14 58 26.7
comp=Z,38nm,1.3s
RAF Rauma 73.40 330 *e*P **P** **14 58 27.0 0.0**
FAUS Fauske 73.57 337 *e*P **P** **14 58 27.2 -0.7**
FAUS IAmb IAmb 14 58 27.9
comp=Z,20nm,0.9s
ANTO Ankara 73.82 307 P **P** **14 58 29.9 -0.1**
ANTO Ankara 73.82 307 P **P** **14 58 29.9 -0.1**
ANTO pmax pmax
comp=Z,28nm,0.6s
MMAI Mount Meron Ar 74.05 299 P **P** **14 58 31.7 +0.2**
comp=Z,1.8nm,0.5s,baz=56,slow=9.4,SNR=6.0
MMAI LR LR 15 36 54.3
comp=Z,58nm,19.2s,baz=58,slow=40
comp=Z,1.8nm,0.5s
SORM Soroca 74.18 316 ⇑P **P** **14 58 31.1 -0.8**
SORM Soroca 74.18 316 P **P** **14 58 31.0 -0.8**
PABE Paberze 74.25 324 *e*P **P** **14 58 32.5 +0.4**
MOR8 Moi Rana 74.39 336 *e*P **P** **14 58 31.1 -1.6**
MOR8 IAmb IAmb 14 58 31.7
comp=Z,13nm,0.7s
GHAJ Ghor Haditha 74.48 298 IAmb IAmb 14 58 36.1
comp=Z,31nm,1.2s
KONS Konsvik 74.72 337 *e*P **P** **14 58 34.6 0.0**
STOK Stokkvaagen 74.84 337 *e*P **P** **14 58 34.4 -0.8**
STOK IAmb IAmb 14 58 34.6
comp=Z,142nm,2.0s
SUW Suwalki 75.21 323 *e*P **P** **14 58 37.3 -0.3**
SUW Suwalki 75.21 323 *e*P **P** **14 58 37.4 -0.2**
TPGR Topolog 75.24 313 ⇓P **P** **14 58 38.4 +0.4**
C36M Paulatuk 75.27 20 IAmb IAmb 14 58 37.5
comp=Z,17nm,1.4s
CFR Carcaliu 75.32 313 ⇑P **P** **14 58 38.1 -0.3**
CFR Carcaliu 75.32 313 P **P** **14 58 38.1 -0.3**
VRI Vrincioaia 76.00 314 ⇑P **P** **14 58 42.6 +0.2**
VRI Vrincioaia 76.00 314 P **P** **14 58 42.6 +0.2**
NSS Namsos 76.06 335 *e*P **P** **14 58 40.3 -2.0**
NSS IAmb IAmb 14 58 42.0
comp=Z,8.9nm,0.6s
PLOR Plostina 76.06 314 ⇑P **P** **14 58 42.1 -0.7**
PLOR Plostina 76.06 314 P **P** **14 58 42.0 -0.7**
ISP Isparta 76.18 305 *ce*P **P** **14 58 43.8 +0.1**
ISP pmax pmax
comp=Z,39nm,1.7s
LVV L'vov 76.26 319 *e*P **P** **14 58 43.9 +0.1**
BUR08 Bucovina Ar. S 76.34 316 IAmb IAmb 14 58 45.6
comp=Z,16nm,1.3s
BURAR Bucovina Array 76.34 316 ⇑P **P** **14 58 44.3 -0.2**
BURAR Bucovina Array 76.34 316 P **P** **14 58 44.2 -0.2**
TURR Turia 76.40 315 ⇓P **P** **14 58 45.7 +1.0**
OZUR 76.53 315 ⇑P **P** **14 58 44.6 -0.8**
MLR Muntele Rosu 76.65 314 ⇑P **P** **14 58 45.6 -0.6**
MLR Muntele Rosu 76.65 314 IAmb IAmb 14 58 47.5
comp=Z,13nm,0.8s
MLR Muntele Rosu 76.65 314 P **P** **14 58 45.6 -0.6**
MLR Muntele Rosu 76.65 314 LR LR 15 37 31.7
comp=Z,56nm,20.6s,baz=64,slow=40
DOPR Dopca 76.84 315 ⇑P **P** **14 58 46.8 -0.4**
LOZB Loznitsa 76.99 312 ⇑P **P** **14 58 47.2 -0.8**
KWP Kalwaria Pacla 77.13 319 *e*P **P** **14 58 49.2 +0.5**
BEL Belsk 77.38 321 *e*P **P** **14 58 50.8 +0.8**
HFS Hagfors 77.40 331 P **P** **14 58 49.1 -0.9**
comp=Z,7.4nm,0.8s,baz=114,slow=5.4,SNR=15
HFS LR LR 15 35 07.2
comp=Z,287nm,19.9s,baz=64,slow=37
comp=Z,7.4nm,0.8s
ARR Arges 77.55 314 ⇑P **P** **14 58 51.5 +0.2**

HUMR	**Humele**	**77.64**	**313**	⇑P		**P**		**14 58 51.1**	**-0.5**
KOLS	**Kolonicke sedl**	**77.66**	**318**	*e*P		**P**		**14 58 51.4**	**-0.3**
KOLS					pmax	pmax			
	comp=Z,6.0nm,0.7s								
KOLS	**Kolonicke sedl**	**77.66**	**318**	*e*P		**P**		**14 58 51.3**	**-0.4**
NC405	**NORSAR Array S**	**77.79**	**332**	IAmb		IAmb		14 58 52.6	
	comp=Z,20nm,0.8s								
NC303	**NORSAR Array S**	**77.89**	**332**	IAmb		IAmb		14 59 04.0	
	comp=Z,33nm,1.4s								
NB201	**NORSAR Array S**	**78.00**	**332**	IAmb		IAmb		14 58 53.6	
	comp=Z,25nm,1.0s								
MARR	**Marisel-Cluj**	**78.02**	**316**	⇑P		**P**		**14 58 53.3**	**-0.5**
NB2	**NORSAR Subarra**	**78.04**	**332**	P		**P**		**14 58 53.1**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=59,slow=5.6								
NB2	**NORSAR Subarra**	**78.04**	**332**	P		**P**		**14 58 53.1**	**-0.5**
	baz=59,slow=5.6								
NOA	**NORSAR Array B**	**78.04**	**332**	P		**P**		**14 58 52.8**	**-0.8**
	comp=Z,10nm,0.9s,baz=59,slow=5.6,SNR=23								
NOA					LR	LR		15 36 47.0	
	comp=Z,164nm,18.4s,baz=60,slow=38								
	comp=Z,10nm,0.9s								
NC602	**NORSAR Array S**	**78.05**	**332**	*e*P		**P**		**14 58 52.8**	**-0.8**
NC204	**NORSAR Array S**	**78.11**	**333**	IAmb		IAmb		14 58 53.9	
	comp=Z,50nm,1.6s								
WTLY	**Watson Lake, Y**	**78.13**	**29**	IAmb		IAmb		14 58 55.0	
	comp=Z,40nm,1.9s								
RES	**Resolute Bay**	**78.18**	**9**	LR		LR		15 35 42.6	
	comp=Z,64nm,21.7s,baz=3.0,slow=38								
PLVB	**Pleven**	**78.32**	**312**	⇑P		**P**		**14 58 54.7**	**-0.7**
DLBC	**Dease Lake**	**78.37**	**31**	LR		LR		15 33 53.5	
	comp=Z,64nm,21.6s,baz=294,slow=36								
DOMB	**Dombas**	**78.43**	**334**	IAmb		IAmb		14 58 55.1	
	comp=Z,32nm,1.3s								
DOMB				*e*P		**P**		**14 58 55.4**	**-0.3**
JMIC	**Jan Mayen**	**78.53**	**345**	LR		LR		15 39 18.8	
	comp=Z,92nm,18.6s,baz=54,slow=40								
OJC	**Ojcow**	**78.61**	**320**	*e*P		**P**		**14 58 57.1**	**+0.2**
NIE	**Niedzica**	**78.65**	**319**	*e*P		**P**		**14 58 57.9**	**+0.7**
GKP	**Gorka Klasztor**	**78.75**	**324**	*e*P		**P**		**14 58 57.5**	**-0.1**
GZR	**Gura Zlata**	**78.75**	**315**	⇑P		**P**		**14 58 57.0**	**-0.8**
MOL	**Molde**	**78.75**	**334**	*e*P		**P**		**14 58 57.6**	**+0.3**
KECS	**Kecovo**	**78.93**	**318**	*e*P		**P**		**14 58 59.1**	**+0.4**
KECS					pmax	pmax			
	comp=Z,20nm,1.4s								
KECS	**Kecovo**	**78.93**	**318**	*e*P		**P**		**14 58 59.1**	**+0.4**
AKN	**Aaknes**	**79.18**	**334**	*e*P		**P**		**14 58 59.7**	**-0.1**
HERR	**Herculane**	**79.19**	**314**	⇑P		**P**		**14 59 00.1**	**-0.1**
LANS	**Liptovska Anna**	**79.26**	**319**	*e*P		**P**		**14 59 01.4**	**+0.9**
LANS					pmax	pmax			
	comp=Z,4.0nm,1.0s								
LANS	**Liptovska Anna**	**79.26**	**319**	*e*P		**P**		**14 59 01.4**	**+0.9**
BLKB	**Belogradchik**	**79.53**	**313**	⇓P		**P**		**14 59 01.5**	**-0.6**
VYHS	**Vyhne**	**79.92**	**319**	*e*P		**P**		**14 59 04.7**	**+0.6**
VYHS					pmax	pmax			
	comp=Z,31nm,1.1s								
VYHS	**Vyhne**	**79.92**	**319**	*e*P		**P**		**14 59 04.7**	**+0.6**
MORC	**Moravsky Berou**	**80.12**	**320**	⇑P		**P**		**14 59 04.4**	**-0.8**
MORC	**Moravsky Berou**	**80.12**	**320**	P		**P**		**14 59 04.2**	**-1.0**
MORC					IAmb	IAmb		14 59 06.6	
	comp=Z,17nm,1.3s								
MORC	**Moravsky Berou**	**80.12**	**320**	*e*P		**P**		**14 59 05.2**	**0.0**
MORC	**Moravsky Berou**	**80.12**	**320**	P		**P**		**14 59 04.2**	**-1.0**
MORC					pmax	pmax			
	comp=Z,17nm,1.3s								
KSP	**Ksiaz**	**80.35**	**322**	*e*P		**P**		**14 59 06.8**	**+0.4**
JAVC	**Velka Javorina**	**80.45**	**319**	*e*P		**P**		**14 59 08.4**	**+1.4**
DPC	**Dobruska-Polom**	**80.56**	**321**	*e*P		**P**		**14 59 07.9**	**+0.4**
DPC	**Dobruska-Polom**	**80.56**	**321**	*e*P		**P**		**14 59 07.9**	**+0.4**
CHVC	**Chvalec**	**80.60**	**322**	*e*P		**P**		**14 59 07.8**	**+0.1**
CHVC	**Chvalec**	**80.60**	**322**	*e*P		**P**		**14 59 07.8**	**+0.1**
FRGS	**Fruska Gora**	**80.75**	**315**	⇑P		**P**		**14 59 08.1**	**-0.5**
BER	**Bergen**	**80.84**	**333**	*e*P		**P**		**14 59 08.6**	**-0.1**
VRAC	**Vranov**	**80.88**	**320**	*e*P		**P**		**14 59 09.5**	**+0.3**
VRAC	**Vranov**	**80.88**	**320**	LR		LR		15 37 39.3	
	comp=Z,87nm,18.2s,baz=53,slow=38								
MODS	**Modra-Piesok**	**80.90**	**319**	*e*P		**P**		**14 59 09.9**	**+0.5**
MODS					pmax	pmax			
	comp=Z,24nm,1.2s								
MODS	**Modra-Piesok**	**80.90**	**319**	*e*P		**P**		**14 59 09.9**	**+0.5**
MORH	**Mrgy, Hungar**	**81.03**	**317**	⇑P		**P**		**14 59 09.5**	**-0.5**
KRUC	**Moravsky**	**81.11**	**320**	*e*P		**P**		**14 59 10.6**	**+0.2**
URZ	**Urewera**	**81.33**	**139**	LR		LR		15 32 24.9	
	comp=Z,43nm,20.1s,baz=120,slow=34								
GOPC	**GO Pecny, Ondr**	**81.64**	**321**	*e*P		**P**		**14 59 13.6**	**+0.4**
GOPC	**GO Pecny, Ondr**	**81.64**	**321**	*e*P		**P**		**14 59 13.6**	**+0.4**
BRG	**Berggiesshubel**	**81.65**	**322**	*e*P		**P**		**14 59 13.6**	**+0.3**
BRG					Amp			14 59 14.3	
	comp=Z,7.3nm,1.0s								
BRG	**Berggiesshubel**	**81.65**	**322**	*e*P		**P**		**14 59 13.5**	**+0.3**
BRG					pmax	pmax			
	comp=Z,7.0nm,1.0s								
AGG	**Agios Georgios**	**81.66**	**309**	IAmb		IAmb		14 59 12.3	
	comp=Z,10nm,0.9s								
RPZ	**Rata Peaks**	**81.71**	**146**	LR		LR		15 35 40.5	
	comp=Z,40nm,18.3s,baz=310,slow=36								
RONA	**Rosalia, Austr**	**81.79**	**319**	*e*P		**P**		**14 59 12.6**	**-1.5**
	comp=Z,7.2nm,1.2s								
CONA	**Conrad Observa**	**81.95**	**319**	*i* P		**P**		**14 59 14.3**	**-0.6**
	comp=Z,11nm,1.3s								
CLL	**Collm**	**81.96**	**323**	P		**P**		**14 59 14.2**	**-0.6**
CLL					IAmb	IAmb		14 59 15.5	
	comp=Z,10nm,0.8s								
CLL	**Collm**	**81.96**	**323**	*i* P		**P**		**14 59 14.5**	**-0.4**
CLL					pmax	pmax			
	comp=Z,13nm,1.0s								
CLL	**Collm**	**81.96**	**323**	*i* P		**P**		**14 59 14.5**	**-0.4**
	comp=Z,13nm,1.0s								
CLL				*e*PP		**PP**		**15 02 18.0**	**-4.6**
CLL					AMS	AMS		15 40 00.0	
	comp=Z,200nm,21.1s								
HSKC	**Hora Svate Kat**	**82.07**	**322**	*e*P		**P**		**14 59 15.6**	**+0.1**
BBB	**Bella Bella**	**82.40**	**36**	LR		LR		15 31 33.6	
	comp=Z,23nm,21.6s,baz=307,slow=33								
YKA	**Yellowknife Ar**	**82.42**	**23**	*i* P		**P**		**14 59 15.8**	**-1.2**
YKA					pmax	pmax			
	comp=Z,3.0nm,0.7s								
YKA	**Yellowknife Ar**	**82.42**	**23**	P		**P**		**14 59 15.6**	**-1.5**
	comp=Z,3.4nm,0.7s,baz=312,slow=5.2,SNR=43								
YKA					LR	LR		15 39 29.6	
	comp=Z,61nm,18.6s,baz=304,slow=38								
	comp=Z,3.4nm,0.7s								
CKRC	**Cesky Krumlov**	**82.44**	**320**	*e*P		**P**		**14 59 18.1**	**+0.6**
CKRC	**Cesky Krumlov**	**82.44**	**320**	*e*P		**P**		**14 59 18.1**	**+0.6**
KHC	**Kasperske Hory**	**82.71**	**321**	P		**P**		**14 59 18.2**	**-0.7**
KHC					IAmb	IAmb		14 59 20.1	
	comp=Z,18nm,1.5s								
KHC	**Kasperske Hory**	**82.71**	**321**	*e*P		**P**		**14 59 19.1**	**+0.2**
KHC	**Kasperske Hory**	**82.71**	**321**	*ce*P		**P**		**14 59 19.7**	**+0.8**
KHC					pmax	pmax			
	comp=Z,22nm,1.7s								
GEC2	**GERESS Array S**	**82.78**	**321**	IAmb		IAmb		14 59 20.3	
	comp=Z,13nm,1.1s								
GERES	**GERESS Array B**	**82.78**	**321**	P		**P**		**14 59 18.8**	**-0.5**
	comp=Z,5.9nm,0.9s,baz=38,slow=6.9,SNR=13								
GERES					LR	LR		15 38 31.0	
	comp=Z,110nm,20.6s,baz=66,slow=37								
	comp=Z,5.9nm,0.9s								
MOA	**Molln**	**82.93**	**320**	*i* P		**P**		**14 59 20.5**	**+0.4**
	comp=Z,5.2nm,0.4s								
SOKA	**Soboth**	**83.03**	**318**	*e*P		**P**		**14 59 20.5**	**-0.2**
	comp=Z,5.5nm,0.7s								
MOX	**Moxa**	**83.05**	**323**	*e*L		L		15 40 13.5	
	comp=Z,121nm,18.6s								
BIOA	**Bad Ischl, Aus**	**83.38**	**320**	*i* P		**P**		**14 59 23.4**	**+1.0**
	comp=Z,2.1nm,0.5s								
OBKA	**Obir**	**83.41**	**318**	*i* P		**P**		**14 59 21.8**	**-0.8**
	comp=Z,17nm,1.1s								
GRF	**Grafenberg Arr**	**83.76**	**322**	*e*P		**P**		**14 59 24.6**	**+0.4**
	comp=Z,12nm,1.0s,baz=59,slow=4.8								
GRF				*e*PP		PP		15 03 04.7	+27
GRF				*e*L		L		15 36 39.7	
	comp=Z,126nm,20.9s								
KBA	**Koelnbreinsper**	**83.85**	**319**	*i* P		**P**		**14 59 25.3**	**+0.3**
	comp=Z,14nm,1.1s								
MYKA	**Terra Mystica**	**83.90**	**319**	*e*P		**P**		**14 59 25.1**	**0.0**
	comp=Z,8.3nm,1.1s								
LESA	**Schwarzleotal**	**84.08**	**320**	*i* P		**P**		**14 59 25.4**	**-0.6**
	comp=Z,14nm,0.9s								
ABTA	**Abfaltersbach**	**84.51**	**319**	*e*P		**P**		**14 59 26.9**	**-1.3**
	comp=Z,9.9nm,1.0s								
STAL	**STALIGIAL**	**84.64**	**319**	IAmb		IAmb		14 59 29.3	
	comp=Z,21nm,1.1s								
WATA	**Walderalm**	**84.76**	**320**	*e*P		**P**		**14 59 28.0**	**-1.6**
	comp=Z,8.2nm,0.7s								
WTTA	**Wattenberg**	**84.77**	**320**	*i* P		**P**		**14 59 28.2**	**-1.4**
	comp=Z,18nm,1.2s								
MOTA	**Moosalm**	**85.03**	**320**	*i* P		**P**		**14 59 30.1**	**-0.8**
	comp=Z,8.5nm,1.1s								
SQTA	**Sankt Quirin**	**85.04**	**320**	*e*P		**P**		**14 59 30.0**	**-0.9**
	comp=Z,8.7nm,0.8s								
KIBK	**Kibwezi**	**85.14**	**265**	P		**P**		**14 59 32.0**	**0.0**
KMBO	**Kilima Mbogo**	**85.35**	**267**	P		**P**		**14 59 32.0**	**-1.2**
KMBO	**Kilima Mbogo**	**85.35**	**267**	P		**P**		**14 59 32.0**	**-1.2**
KMBO					pmax	pmax			
	comp=Z,6.0nm,1.3s								
FETA	**Feichten**	**85.42**	**320**	*e*P		**P**		**14 59 32.3**	**-0.6**
	comp=Z,10nm,1.0s								
TIP	**Timpagrande**	**85.47**	**311**	⇑P		**P**		**14 59 33.3**	**+0.1**
DAVOX	**Davos/Dischmat**	**86.04**	**320**	LR		LR		15 40 39.6	
	comp=Z,101nm,20.7s,baz=79,slow=38								
BORG	**Borgarnes**	**86.42**	**345**	LR		LR		15 41 04.0	
	comp=Z,97nm,20.2s,baz=30,slow=38								
BRLDA	**Berland Lookou**	**86.63**	**30**	IAmb		IAmb		15 00 02.0	
	comp=Z,14nm,0.9s								
EKA	**Eskdalemuir Ar**	**87.53**	**332**	P		**P**		**14 59 42.7**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=86,slow=3.4,SNR=4.3								
	comp=Z,1.0nm,0.6s								
VAE	**Valguarnera**	**87.91**	**311**	LR		LR		15 43 43.4	
	comp=Z,42nm,21.0s,baz=146,slow=39								
SFJD	**Kangerlussuaq**	**88.49**	**357**	LR		LR		15 40 37.5	
	comp=Z,46nm,19.6s,baz=348,slow=36								
LPL	**La Plagne**	**88.57**	**320**	*e*P		**P**		**14 59 48.1**	**-0.1**
LPL					pmax	pmax			
	comp=Z,5.0nm,0.6s								
RAR	**Rarotonga**	**88.91**	**114**	LR		LR		15 32 27.6	
	comp=Z,39nm,20.6s,baz=261,slow=31								
LTY	**Liberty**	**89.14**	**37**	IAmb		IAmb		14 59 51.3	
	comp=Z,9.3nm,0.8s								
SMF	**Signal de Mont**	**89.56**	**322**	*e*P		**P**		**14 59 52.1**	**-0.5**
SMF					pmax	pmax			
	comp=Z,21nm,1.2s								
D08A	**Wollman Farm,**	**90.21**	**37**	IAmb		IAmb		14 59 56.6	
	comp=Z,7.0nm,0.8s								
NEW	**Newport**	**90.42**	**35**	P		**P**		**14 59 55.5**	**-1.1**
	comp=Z,4.8nm,0.8s,baz=285,slow=1.9,SNR=5.9								
	comp=Z,4.8nm,0.8s								
YBH	**Yreka Blue Hor**	**91.17**	**42**	LR		LR		15 44 26.7	
	comp=Z,21nm,18.6s,baz=302,slow=38								
CAF	**Calviac**	**91.58**	**322**	*e*P		**P**		**15 00 02.4**	**+0.3**
CAF					pmax	pmax			
	comp=Z,14nm,1.1s								
FCC	**Fort Churchill**	**91.81**	**18**	IAmb		IAmb		15 00 02.4	
	comp=Z,14nm,1.4s								
KEST	**Kesra**	**92.30**	**311**	LR		LR		15 45 56.9	
	comp=Z,26nm,21.3s,baz=195,slow=38								
BMO	**Blue Mountains**	**92.46**	**38**	IAmb		IAmb		15 00 06.8	
	comp=Z,4.2nm,0.7s								
FFC	**Flin Flon**	**92.58**	**24**	P		**P**		**15 00 05.2**	**-1.2**
FFC					IAmb	IAmb		15 00 05.9	
	comp=Z,4.7nm,0.9s								
FFC	**Flin Flon**	**92.58**	**24**	P		**P**		**15 00 05.2**	**-1.2**
FFC					pmax	pmax			
	comp=Z,5.0nm,1.0s								
PLID	**Pearl Lake**	**93.03**	**37**	IAmb		IAmb		15 00 11.4	
	comp=Z,2.6nm,0.6s								
ORV	**Oroville**	**93.17**	**44**	P		**P**		**15 00 08.9**	**-0.5**
ORV					IAmb	IAmb		15 01 09.9	
	comp=Z,22nm,1.9s								
ORV	**Oroville**	**93.17**	**44**	P		**P**		**15 00 09.0**	**-0.5**
ORV					pmax	pmax			
	comp=Z,22nm,1.9s								
EGMT	**Eagleton**	**94.27**	**32**	IAmb		IAmb		15 00 16.1	
	comp=Z,18nm,1.6s								
PAHR	**Pah Rah Range**	**94.40**	**43**	IAmb		IAmb		15 00 16.4	
	comp=Z,7.7nm,0.9s								
CMB	**Columbia Colle**	**94.77**	**44**	P		**P**		**15 00 16.4**	**-0.5**
CMB					IAmb	IAmb		15 00 17.7	
	comp=Z,6.2nm,0.9s								
CMB	**Columbia Colle**	**94.77**	**44**	P		**P**		**15 00 16.4**	**-0.5**
CMB					pmax	pmax			
	comp=Z,6.0nm,1.0s								
HLID	**Hailey**	**94.89**	**37**	IAmb		IAmb		15 00 38.3	
	comp=Z,9.9nm,1.9s								
KVN	**Kaiserville**	**95.59**	**43**	P		**P**		**15 00 20.2**	**-0.6**
KVN					IAmb	IAmb		15 00 22.2	
	comp=Z,7.7nm,1.1s								
KVN	**Kaiserville**	**95.59**	**43**	P		**P**		**15 00 20.2**	**-0.6**
KVN					pmax	pmax			
	comp=Z,8.0nm,1.1s								
NVAR	**Mina Array Bea**	**95.84**	**43**	P		**P**		**15 00 20.8**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=284,slow=4.9,SNR=7.2								
NVAR					LR	LR		15 42 05.2	
	comp=Z,19nm,20.8s,baz=262,slow=35								
	comp=Z,1.1nm,0.7s								
PPT	**Papeete**	**96.08**	**106**	LR		LR		15 33 40.0	
	comp=Z,96nm,20.6s,baz=230,slow=29								
PDAR	**Pinedale Array**	**98.04**	**35**	P		**P**		**15 00 30.2**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=19,slow=8.8,SNR=3.1								
PDAR					LR	LR		15 48 35.4	
	comp=Z,18nm,18.0s,baz=342,slow=38								
	comp=Z,0.4nm,0.7s								
ESDC	**Sonseca Array**	**98.37**	**321**	LR		LR		15 49 17.4	
	comp=Z,72nm,20.1s,baz=38,slow=38								
ULM	**Lac du Bonnet**	**98.40**	**23**	LR		LR		15 53 06.2	
	comp=Z,49nm,19.7s,baz=316,slow=40								
SDV	**Santo Domingo**	**144.62**	**21**			**PKPab**		**15 06 29.9**	**-1.2**
PTBC	**PUERTO BERRIO**	**145.29**	**29**	*e*P		**PKPbc**		**15 06 31.2**	**-2.1**
PAMC	**Pamplona, Colo**	**145.31**	**26**	*e*P		**PKPbc**		**15 06 33.0**	**-0.9**
BAUV	**El Baul**	**145.34**	**17**			**PKPbc**		**15 06 31.6**	**-1.8**
BARC	**Barichara**	**145.79**	**27**	*e*P		**PKPdf**		**15 06 34.1**	**-0.5**
YOTC	**Yotoco, Valle**	**146.63**	**34**	*e*P		**PKPdf**		**15 06 36.2**	**+0.3**
JAMC	**Jamundi, Valle**	**147.11**	**35**	*e*P		**PKPdf**		**15 06 37.9**	**+1.0**
CHIC	**Chingaza**	**147.31**	**29**	*e*P		**PKPbc**		**15 06 40.4**	**+0.6**
BBAC	**Balboa, Cauca**	**147.80**	**37**	*e*P		**PKPdf**		**15 06 38.9**	**+0.9**
OTAV	**Otavalo**	**148.56**	**41**	PKPbc		**PKPdf**		**15 06 41.1**	**+1.6**
OTAV	**Otavalo**	**148.56**	**41**	PKP2		**PKPdf**		**15 06 41.2**	**+1.6**

IDC ***19*** *14:55:09.4±1.1,55.°67N×149.°20W,h0km, mb3.4/7, mbtmp3.5/11,ML3.8/4,MS3.2/1,Error ellipse: s-maj=30.0km s-min=19.0km az=30.0*
NEIC ***19*** *14:55:12.7±1.0,55.°92N±0.°09×149.°4W±0.°1,h15km±7km, ML3.8/52,ML3.7(AEIC),Error ellipse: s-maj=13.2km s-min=9.0km az=171.0*
AEIC ***19*** *14:55:16.8±1.0,55.°98N±0.°09×149.°4W±0.°1,h6km±7km, Error ellipse: s-maj=13.2km s-min=9.2km az=167.0*

ISC 19 14:55:11.2±0.8,55.°96N±0.°08×149.°22W±0.°05,h10km, n291,σ1°64/290,mb3.3/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.58**	**301**				**Pn**	**14 55 52.2**	**-0.7**
OHAK	**Old Harbor**	**2.58**	**301**				**Sn**	**14 56 20.7**	**-3.6**
OHAK	**Old Harbor**	**2.58**	**301**	P		**Pn**	**Pn**	**14 55 52.6**	**-0.4**
OHAK	**Old Harbor**	**2.58**	**301**	P		**Pn**	**Pn**	**14 55 52.3**	**-0.7**
	baz=118								
OHAK						S	**Sn**	**14 56 20.7**	**-3.6**
	baz=118								
KDAK	**Kodiak Island**	**2.60**	**316**				**Pn**	**14 55 53.3**	**0.0**
KDAK	**Kodiak Island**	**2.60**	**316**	Pn			**Pn**	**14 55 53.2**	**0.0**
	12nm,0.3s,baz=168,slow=5.1,SNR=382								
KDAK						Sn	**Sn**	**14 56 22.1**	**-2.7**
	46nm,0.3s,baz=20,slow=20,SNR=19								
KDAK						LR	LR	14 57 04.9	
	comp=Z,92nm,20.2s,baz=92,slow=41								
	28nm,0.3s								
Q20K	**Shuyak Island**	**3.17**	**328**	P			**Pn**	**14 56 01.4**	**+0.4**
	baz=147								
Q20K						S	**Sn**	**14 56 37.1**	**-1.7**
	baz=147								
SYI	**Shuyak Island**	**3.17**	**328**	Pn			**Pn**	**14 56 01.6**	**+0.6**
SYI						IAML		14 56 39.6	
	comp=E,210nm,0.3s								
CNPM	**China Poot**	**3.73**	**344**	Pn			**Pn**	**14 56 09.1**	**+0.2**
CNPM	**China Poot**	**3.73**	**344**				**Sn**	**14 56 51.5**	**-1.4**
Q23K	**Middleton Isla**	**3.80**	**23**	Pn			**Pn**	**14 56 10.8**	**+1.0**
Q23K						IAML		14 56 40.2	
	comp=E,137nm,1.5s								
Q23K						IAML		14 58 23.4	
	comp=N,113nm,1.5s								
Q23K	**Middleton Isla**	**3.80**	**23**	P			**Pn**	**14 56 10.6**	**+0.8**
	baz=206								
MID	**Middleton Isla**	**3.81**	**23**	Pn			**Pn**	**14 56 10.7**	**+0.9**
MID						IAML		14 56 58.0	
	comp=E,126nm,1.3s								
MID						IAML		14 58 23.3	
	comp=N,110nm,1.4s								
MID	**Middleton Isla**	**3.81**	**23**	P			**Pn**	**14 56 11.0**	**+1.2**
Q19K	**Cape Douglas,**	**3.82**	**323**				**Pn**	**14 56 10.8**	**+0.8**
Q19K	**Cape Douglas,**	**3.82**	**323**	P			**Pn**	**14 56 10.9**	**+0.9**
	baz=140								
KAHG	**Katmai Hook Gl**	**3.85**	**313**				**Pn**	**14 56 11.3**	**+0.8**
BRSE	**Bradley Lake S**	**3.88**	**349**				**Pn**	**14 56 10.8**	**0.0**
BRSE							**Sn**	**14 56 54.5**	**-1.9**
BRSE	**Bradley Lake S**	**3.88**	**349**	P			**Pn**	**14 56 10.8**	**0.0**
	baz=168								
BRSE						S	**Sn**	**14 56 54.5**	**-1.9**
	baz=168								
BRLK	**Bradley Lake**	**3.92**	**348**	Pn			**Pn**	**14 56 11.3**	**0.0**
HOM	**Homer**	**3.93**	**342**	Pn			**Pn**	**14 56 12.2**	**+0.8**
HOM						IAML		14 57 00.6	
	comp=E,227nm,0.9s								
HOM						IAML		14 57 01.2	
	comp=N,259nm,0.7s								
KCE	**Katmai Mt Cerb**	**3.98**	**308**				**Pn**	**14 56 13.5**	**+1.3**
ACHA	**Angle Creek He**	**4.02**	**307**				**Pn**	**14 56 13.7**	**+0.8**
AUCH	**Augustine Cone**	**4.10**	**328**				**Pn**	**14 56 14.8**	**+0.9**
KAHC	**Katmai Hardscr**	**4.14**	**313**				**Pn**	**14 56 15.2**	**+0.8**
KAHC	**Katmai Hardscr**	**4.14**	**313**	P			**Pn**	**14 56 15.2**	**+0.8**
	baz=129								
SEW	**Seward**	**4.16**	**358**				**Pn**	**14 56 14.8**	**+0.2**
SEW	**Seward**	**4.16**	**358**	P			**Pn**	**14 56 14.8**	**+0.2**
	baz=179								
P23K	**Montague Islan**	**4.16**	**13**				**Pn**	**14 56 15.6**	**+0.9**
P23K	**Montague Islan**	**4.16**	**13**	P			**Pn**	**14 56 15.6**	**+0.9**
	baz=195								
PLK3	**Peulik 3**	**4.24**	**297**				**Pn**	**14 56 16.1**	**+0.3**
P19K	**Oil Pt**	**4.28**	**332**	Pn			**Pn**	**14 56 17.1**	**+0.8**
P19K	**Oil Pt**	**4.28**	**332**	P			**Pn**	**14 56 17.0**	**+0.6**
	baz=149								
CNTC	**Contact Creek**	**4.30**	**305**				**Pn**	**14 56 17.2**	**+0.5**
Q17K	**Contact Creek**	**4.31**	**305**	P			**Pn**	**14 56 17.2**	**+0.4**
	baz=120								
KELA	**Mount Kelaz**	**4.33**	**308**				**Pn**	**14 56 18.0**	**+0.9**
PLK1	**Peulik 1**	**4.45**	**298**				**Pn**	**14 56 19.3**	**+0.6**
O20K	**Slope Mountain**	**4.51**	**338**				**Pn**	**14 56 20.1**	**+0.5**
O20K	**Slope Mountain**	**4.51**	**338**	P			**Pn**	**14 56 20.1**	**+0.5**
	baz=156								
IVE	**Iliamna Volcan**	**4.54**	**335**				**Pn**	**14 56 19.8**	**-0.2**
ILSW	**Iliamna Southw**	**4.54**	**334**				**Pn**	**14 56 20.2**	**+0.2**
ILSW						IAML		14 57 12.9	
	comp=N,129nm,0.4s								
ILSW						IAML		14 57 15.6	
	comp=E,98nm,0.5s								
O22K	**Cooper Landing**	**4.54**	**357**				**Pn**	**14 56 20.7**	**+0.8**
O22K	**Cooper Landing**	**4.54**	**357**	P			**Pn**	**14 56 20.5**	**+0.7**
	baz=178								
SLKM	**Skilak Lake**	**4.59**	**354**				**Pn**	**14 56 20.8**	**+0.1**
HIN	**Hinchinbrook I**	**4.67**	**17**				**Pn**	**14 56 23.0**	**+1.2**
HIN						IAML		14 57 15.5	
	comp=E,70nm,0.5s								
HIN						IAML		14 57 18.8	
	comp=N,86nm,0.5s								
P18K	**Big Mountain,**	**4.72**	**319**	Pn			**Pn**	**14 56 22.2**	**-0.2**
P18K	**Big Mountain,**	**4.72**	**319**	P			**Pn**	**14 56 22.4**	**0.0**
	baz=135								
KAIM	**Kayak Island**	**4.73**	**31**				**Pn**	**14 56 24.2**	**+1.7**
KAIM						IAML		14 57 21.9	
	comp=N,96nm,1.1s								
KAIM						IAML		14 57

KLU	Klutina	5.81	16			Pn	14 56 39.0	+1.6
KLU	Klutina baz=200	5.81	16	P		Pn	14 56 39.0	+1.6
GHO	Glory Hole Cre	5.83	1			Pn	14 56 39.1	+1.4
TGL	Tana Glacier	5.87	32			Pn	14 56 40.0	+1.8
SML	Sawmill	5.88	4	Pn		Pn	14 56 39.8	+1.5
SML	Sawmill baz=186	5.88	4	P		Pn	14 56 39.7	+1.4
N18K	Kilae Creek	5.89	326			Pn	14 56 38.5	0.0
N18K	Kilae Creek baz=141	5.89	326	P		Pn	14 56 38.5	0.0
BAGL	Bagley Icefiel	5.90	37			Pn	14 56 40.5	+2.0
ISLE	Juniper Island	5.90	35			Pn	14 56 40.6	+1.9
M23K	Glacier View	5.90	7			Pn	14 56 40.4	+1.8
M23K	Glacier View baz=189	5.90	7	P		Pn	14 56 40.4	+1.8
SCM	Sheep Creek Mo	5.97	9			Pn	14 56 41.1	+1.5
SCM	Sheep Creek Mo baz=191	5.97	9	P		Pn	14 56 41.0	+1.5
O16K	Kokwok River B	5.98	311			Pn	14 56 40.2	+0.5
O16K	Kokwok River B baz=124	5.98	311	P		Pn	14 56 40.2	+0.5
CNBA	Chernabura Isl	6.02	263	Pn		Pn	14 56 38.5	-1.7
VRDI	Verde Repeater	6.08	27	Pn		Pn	14 56 43.0	+1.8
SAMH	Samovar Hills	6.12	44			Pn	14 56 44.1	+2.4
SVW2	Sparrevohn	6.13	330	Pn		Pn	14 56 41.6	-0.2
SVW2	Sparrevohn	6.13	330	P		Pn	14 56 41.8	0.0
KIAG	Kiagna River	6.14	33			Pn	14 56 43.8	+1.7
N25K	Chitina, Valde	6.15	21			Pn	14 56 44.0	+1.9
N25K	Chitina, Valde baz=206	6.15	21	P		Pn	14 56 43.5	+1.5
SKT	Skwentna	6.16	350	Pn		Pn	14 56 43.2	+1.2
SKT	Skwentna baz=169	6.16	350	P		Pn	14 56 43.3	+1.2
GLB	Gilahina Butte	6.18	25			Pn	14 56 44.2	+1.8
GRNC	Granite Creek	6.19	36			Pn	14 56 44.6	+1.9
TABL	Table Mountain	6.19	40			Pn	14 56 44.9	+2.1
N17K	Nushagak Hills	6.21	321	Pn		Pn	14 56 42.7	-0.2
N17K	Nushagak Hills baz=134	6.21	321	P		Pn	14 56 43.1	+0.2
YKU2	Yakutat	6.23	51	Pn		Pn	14 56 45.8	+2.8
YKU2	Yakutat	6.23	51	P		Pn	14 56 46.0	+3.0
PCA	Pinnacle	6.31	45			Pn	14 56 46.3	+2.0
PINM	Pinnacle baz=234	6.31	45	P		Pn	14 56 46.3	+2.0
PTPK	Patty Peak	6.32	31			Pn	14 56 46.5	+2.0
MCARA	McCarthy VSAT	6.32	28	Pn		Pn	14 56 46.8	+2.4
MCARA	McCarthy VSAT baz=214	6.32	28	P		Pn	14 56 46.5	+2.1
M24K	Tolsona, Glenn	6.36	13	Pn		Pn	14 56 47.0	+2.1
M24K	Tolsona, Glenn baz=196	6.36	13	P		Pn	14 56 47.3	+2.3
SDPT	Sand Point	6.40	269			Pn	14 56 44.9	-0.5
SDPT	Sand Point	6.40	269	P		Pn	14 56 45.2	-0.2
SDPT	Sand Point baz=80	6.40	269	P		Pn	14 56 44.9	-0.5
PNL	Peninsula	6.43	51			Pn	14 56 47.7	+1.9
PNL	Peninsula	6.43	51	P		Pn	14 56 48.5	+2.7
PNL	Peninsula baz=240	6.43	51	P		Pn	14 56 47.7	+1.9
BARN	Barnard Glacie	6.46	35			Pn	14 56 48.5	+2.0
BCPM	Bancas Point	6.48	48			Pn	14 56 49.1	+2.5
CUT	Chulitna	6.49	356	Pn		Pn	14 56 48.0	+1.5
CTG	Chitna Glacier baz=224	6.50	36	P		Pn	14 56 48.8	+1.9
CTGM	Chitina Glacie	6.50	36	Pn		Pn	14 56 48.9	+2.0
LOGN	Logan Glacier	6.51	38			Pn	14 56 49.0	+1.9
M18K	Stony River	6.52	331			Pn	14 56 46.9	-0.2
M18K	Stony River baz=146	6.52	331	P		Pn	14 56 46.9	-0.2
WACK	Wrangell Chich	6.55	21			Pn	14 56 49.2	+1.5
O15K	Ungalikthiuk R	6.55	304			Pn	14 56 48.1	+0.6
O15K	Ungalikthiuk R baz=115	6.55	304	P		Pn	14 56 48.1	+0.6
WAT6	Susitna Watana	6.68	6			Pn	14 56 50.9	+1.4
WAT6	Susitna Watana baz=188	6.68	6	P		Pn	14 56 50.9	+1.4
N16K	Nishlik Lake	6.77	316			Pn	14 56 51.2	+0.7
N16K	Nishlik Lake baz=128	6.77	316	P		Pn	14 56 51.2	+0.7
WAT7	Susitna Watana	6.90	1			Pn	14 56 53.9	+1.6
WAT1	Susitna Watana	6.90	3			Pn	14 56 53.9	+1.6
WAT1	Susitna Watana baz=184	6.90	3	P		Pn	14 56 53.9	+1.6
M17K	Holitna River	6.93	325			Pn	14 56 53.5	+0.7
M17K	Holitna River baz=139	6.93	325	P		Pn	14 56 53.4	+0.7
O29M	Mount Kennedy	7.12	48			Pn	14 56 58.1	+2.7
O29M	Mount Kennedy baz=238	7.12	48	P		Pn	14 56 58.1	+2.7
N15K	Kwethluk River	7.14	311			Pn	14 56 56.1	+0.5
N15K	Kwethluk River baz=122	7.14	311	P		Pn	14 56 56.1	+0.5
P29M	Windy Craggy	7.15	54			Pn	14 56 57.5	+1.8
P29M	Windy Craggy baz=244	7.15	54	P		Pn	14 56 57.7	+1.9
M16K	Timber Creek	7.19	319			Pn	14 56 57.2	+0.9
M16K	Timber Creek baz=131	7.19	319	P		Pn	14 56 57.2	+0.9
DHY	Denali Highway	7.20	7	Pn		Pn	14 56 58.0	+1.5
DHY	Denali Highway baz=189	7.20	7	P		Pn	14 56 57.7	+1.2
PAX	Paxson	7.29	14			Pn	14 56 59.4	+1.7
PAX	Paxson baz=198	7.29	14	P		Pn	14 56 59.4	+1.7
M27K	Edge Creek, AK	7.44	27	Pn		Pn	14 57 02.3	+2.5
M27K	Edge Creek, AK baz=214	7.44	27	P		Pn	14 57 02.1	+2.3
RND	Reindeer	7.47	1	Pn		Pn	14 57 01.7	+1.5
TRF	Thorofare Moun	7.53	356			Pn	14 57 02.0	+0.9
TRF	Thorofare Moun baz=176	7.53	356	P		Pn	14 57 02.5	+1.4
MENT	Mentasta	7.54	20			Pn	14 57 03.2	+2.2
MENT	Mentasta	7.54	20	P		Pn	14 57 04.0	+3.0
YUK6	Outpost Mounta	7.57	44			Pn	14 57 04.8	+3.2
YUK6	Outpost Mounta baz=234	7.57	44	P		Pn	14 57 04.8	+3.2
CAST	Castle Rocks	7.62	350	Pn		Pn	14 57 03.4	+1.3
CAST	Castle Rocks baz=168	7.62	350	P		Pn	14 57 03.5	+1.3
KTH	Kantishna Hill	7.67	354			Pn	14 57 03.8	+1.0
M15K	Kasigluk River	7.67	313			Pn	14 57 04.5	+1.6
M15K	Kasigluk River baz=124	7.67	313	P		Pn	14 57 04.5	+1.6
YUK4	Talbot Arm baz=231	7.71	41	P		Pn	14 57 08.2	+4.6
P30M	Million Dollar	7.72	52			Pn	14 57 06.4	+2.8
P30M	Million Dollar baz=243	7.72	52	P		Pn	14 57 06.4	+2.8
N14K	Kuskokwak Cree	7.73	306			Pn	14 57 04.3	+0.8
N14K	Kuskokwak Cree baz=116	7.73	306	P		Pn	14 57 04.3	+0.8
BVCY	Beaver Creek	7.76	30			Pn	14 57 06.3	+2.2
BVCY	Beaver Creek baz=218	7.76	30	P		Pn	14 57 06.3	+2.2
SIT	Sitka	7.77	76	P		Pn	14 57 04.1	0.0
TTA	Tatalina	7.80	336	P		Pn	14 57 04.9	+0.3
L16K	Owhat River	7.84	322	Pn		Pn	14 57 05.3	+0.2
HYT	Haines Junctio	7.85	47	Pn		Pn	14 57 07.9	+2.6
HYT	Haines Junctio baz=237	7.85	47	P		Pn	14 57 08.0	+2.7
L27K	Beaver Creek,	8.05	25			Pn	14 57 08.4	+0.3
L27K	Beaver Creek, baz=212	8.05	25	P		Pn	14 57 08.4	+0.3
BCAR	Beaver Creek A	8.06	25	Pn		Pn	14 57 10.2	+2.0
S32K	Killisnoo	8.20	73	Pn		Pn	14 57 10.2	+0.2
K17K	Iditarod	8.21	329	Pn		Pn	14 57 10.8	+0.7
BPAW	Bear Paw Mtn.	8.21	355	Pn		Pn	14 57 10.5	+0.2
BESE	Bessie Mountai	8.21	65			Pn	14 57 11.8	+1.5
SKAG	Skagway	8.22	59	Pn		Pn	14 57 12.5	+2.2
SKAG	Skagway	8.22	59	P		Pn	14 57 12.8	+2.5
SKAG	Skagway baz=251	8.22	59	P		Pn	14 57 12.6	+2.3
BWN	Browne	8.24	359	Pn		Pn	14 57 12.3	+1.7
R32K	Eaglescrest	8.33	68			Pn	14 57 13.6	+1.7
ISLZ	Isanotski Laza	8.36	268			Pn	14 57 11.7	-0.6
N30M	Aishikik Lake	8.37	44			Pn	14 57 15.1	+2.6
N30M	Aishikik Lake baz=235	8.37	44	P		Pn	14 57 15.1	+2.6
JIS	Juneau Island	8.40	68			Pn	14 57 14.4	+1.6
JIS	Juneau Island	8.40	68	P		Pn	14 57 14.4	+1.6
O30N	Mendenhall	8.41	50			Pn	14 57 15.2	+2.1
O30N	Mendenhall baz=241	8.41	50	P		Pn	14 57 15.5	+2.5
SCRK	Sand Creek	8.46	16			Pn	14 57 15.5	+1.8
M29M	Somme Creek	8.52	36			Pn	14 57 17.3	+2.7
M29M	Somme Creek baz=226	8.52	36	P		Pn	14 57 17.3	+2.7
HDA	Harding Lake	8.55	7			Pn	14 57 16.5	+1.6
L15K	Ungalak Mounta	8.56	317			Pn	14 57 15.8	+0.9
L15K	Ungalak Mounta baz=127	8.56	317	P		Pn	14 57 15.8	+0.9
WRH	Wood River Hil	8.56	3			Pn	14 57 16.3	+1.4
NEA2	Nenana	8.66	0	Pn		Pn	14 57 17.5	+1.1
CCB	Clear Creek Bu	8.74	4	Pn		Pn	14 57 18.9	+1.4
WHY	Whitehorse	8.89	52	Pn		Pn	14 57 22.3	+2.7
IL31		8.91	6			Pn	14 57 21.3	+1.5
ILAR	Eielson Array	8.91	6	Pn		Pn	14 57 21.3	+1.4
ILAR	Eielson Array comp=N,0.6nm,0.3s,baz=188,slow=13,SNR=35	8.91	6	Pn		Pn	14 57 20.2	+0.4
ILAR	comp=N,0.6nm,0.3s,baz=190,slow=21,SNR=9.4 comp=N,1.4nm,0.4s				Sn	Sn	14 58 56.4	-3.9
COLA	College	8.97	4			Pn	14 57 22.1	+1.5
U33K	Whale Pass	9.02	82	Pn		Pn	14 57 20.2	-1.0
MDM	Murphy Dome	9.04	3	Pn		Pn	14 57 23.0	+1.3
P32M	Atlin	9.04	60	Pn		Pn	14 57 23.7	+2.0
P32M	Atlin baz=253	9.04	60	P		Pn	14 57 23.9	+2.2
CRAG	Craig	9.10	86	Pn		Pn	14 57 21.3	-1.1
CRAG	Craig	9.10	86	P		Pn	14 57 22.7	+0.3
MLY	Manley	9.13	356			Pn	14 57 23.9	+1.0
M30M	Minto, Yukon	9.18	39	Pn		Pn	14 57 25.6	+2.1
M30M	Minto, Yukon baz=230	9.18	39	P		Pn	14 57 26.4	+2.9
I23K	Minto, Yukon-K	9.22	360			Pn	14 57 25.2	+1.2
I21K	Tanana	9.35	353			Pn	14 57 26.9	+1.1
I21K	Tanana baz=171	9.35	353	P		Pn	14 57 27.5	+1.7
WRAK	Wrangell Islan	9.42	80	Pn		Pn	14 57 27.8	+1.1
DAWY	Dawson	9.49	27	Pn		Pn	14 57 30.1	+2.3
P33M	Teslin, Yukon	9.66	57	Pn		Pn	14 57 32.2	+2.0
P33M	Teslin, Yukon baz=251	9.66	57	P		Pn	14 57 32.9	+2.7
EGAK	Eagle	9.69	21	Pn		Pn	14 57 33.1	+2.6
PRP	Porcupine Dome	9.76	9	Pn		Pn	14 57 33.1	+1.6
M31M	Drury Creek, Y	9.85	45			Pn	14 57 35.8	+3.1
S34M	Telegraph Cree	10.07	71	Pn		Pn	14 57 38.0	+2.2
J29N	Klondike Camp	10.11	28	Pn		Pn	14 57 38.8	+2.5
MAYO	Mayo, Yukon	10.16	36	Pn		Pn	14 57 39.4	+2.4
FARO	Faro, Yukon	10.28	46			Pn	14 57 41.7	+3.1
IMAR	Indian Mountai	10.29	350	Pn		Pn	14 57 38.9	+0.2
DLBC	Dease Lake	10.70	69	Pn		Pn	14 57 46.6	+2.2
DLBC	Dease Lake comp=N,0.7nm,0.3s,baz=275,slow=6.7,SNR=21	10.70	69	Pn		Pn	14 57 46.1	+1.8
DLBC	comp=N,0.1nm,0.3s,baz=209,slow=13,SNR=1.0 comp=N,1.6nm,0.3s				Sn	Sn	14 59 39.5	-4.6
FYU	Fort Yukon	10.81	9	Pn		Pn	14 57 47.2	+1.4
F28M	Old Crow	12.48	17			Pn	14 58 10.4	+1.8
G31M	Satah River	13.06	27			Pn	14 58 18.9	+2.4
YKA	Yellowknife Ar comp=N,0.2nm,0.3s,baz=262,slow=12,SNR=6.7 comp=N,0.5nm,0.6s	18.69	55	P		Pn	14 59 31.3	+1.7
PDAR	Pinedale Array comp=N,0.2nm,0.4s,baz=326,slow=4.4,SNR=2.0 comp=N,0.2nm,0.4s	28.57	101	P		P	15 01 05.0	-2.3
ANMO	Albuquerque comp=N,33nm,18.4s,baz=51,slow=36	35.84	108	LR		LR	15 16 36.8	
TXAR	Lajitas Array comp=N,0.3nm,0.7s,baz=338,slow=6.8,SNR=3.6 comp=N,0.3nm,0.7s	41.68	110	P		P	15 02 58.5	-1.4
H11N2	WAKE ISLAND Hy baz=30	48.75	240	T		T	15 56 03.5	
H11N3	WAKE ISLAND Hy baz=30	48.76	240	T		T	15 56 03.5	
H11N1	WAKE ISLAND Hy baz=30	48.77	240	T		T	15 56 03.5	
H11S1	WAKE ISLAND Hy baz=26,slow=74	49.89	240	T		T	15 58 26.8	
H11S2	WAKE ISLAND Hy baz=26,slow=74	49.90	240	T		T	15 58 17.9	
H11S3	WAKE ISLAND Hy baz=26	49.91	240	T		T	15 58 24.5	
SONM	Songino Array comp=N,0.1nm,0.5s,baz=35,slow=7.0,SNR=2.5 comp=N,0.1nm,0.5s	58.87	310	P		P	15 05 11.2	+1.2
ZALV	Zalesovo Beam comp=N,0.6nm,0.5s,baz=17,slow=7.5,SNR=2.8 comp=N,0.6nm,0.5s	61.85	327	P		P	15 05 33.1	+3.2
FINES	FINESS Array B comp=N,1.3nm,0.9s,baz=350,slow=16,SNR=2.0 comp=N,1.3nm,0.9s	62.88	3	P		P	15 05 39.1	+2.4
KURBB	Kurchatov Arra comp=N,0.2nm,0.6s,baz=31,slow=6.2,SNR=2.5 comp=N,0.2nm,0.6s	66.63	329	P		P	15 06 01.8	+0.4
MKAR	Makanchi Array comp=N,0.1nm,0.4s,baz=29,slow=3.3,SNR=1.9 comp=N,0.1nm,0.4s	68.88	325	P		P	15 06 15.7	+0.1
QSPA	South Pole Qui comp=N,0.9nm,1.0s,baz=346,slow=3.2,SNR=5.9	145.75	180	PKPbc		PKPdf	15 14 48.1	-0.2

*IDC **19** 15:23:06.3±1.7, 1°.77N×123°.30E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=218.0km s-min=24.5km az=62.0*
*DJA **19** 15:23:29.6±0.9, 2°.N±8°×12°.4E±°, h296km±8km, M3.1/6, MLv3.1/6*
ISC 19 15:23:31.7±1.3, 2°.0N±0°.1×124°.34E±0°.09, h250km, n9, σ1s75/11, mb2.9/3, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.48	194	P		Pn		15 24 12.6	+2.7
GTOI	Gorontalo	1.91	224	P		Pn		15 24 15.0	+1.6
MRSI	Marisa	2.85	237	P		Pn		15 24 20.4	-2.2
TNTI	Ternate	3.27	112	P		Pn		15 24 28.2	+1.0
LBMI	Labuha	4.12	130	P		Pn		15 24 35.1	-1.8
LBMI				S		S		15 25 27.7	-1.0
SANI	Sanana	4.37	158	P		Pn		15 24 40.8	+0.9
SANI				S		S		15 25 32.7	-1.4
WRA	Warramunga Arr 0.2nm,0.5s,baz=331,slow=11,SNR=4.9 0.2nm,0.5s	23.93	156	P		P		15 28 24.0	+0.6
ASAR	Alice Springs 0.2nm,0.9s,baz=346,slow=6.4,SNR=4.3 0.2nm,0.9s	27.18	161	P		P		15 28 53.6	+1.1
MKAR	Makanchi Array 1.0nm,0.3s,baz=122,slow=7.5,SNR=41 1.0nm,0.3s	57.63	327	P		P		15 32 55.6	-0.4

*IDC **19** 15:23:57.4±3.4, 36°.29N×70°.43E, h178km±29km, mb3.4/8, mbtmp3.9/14, Error ellipse: s-maj=28.1km s-min=19.0km az=11.0*
*NEIC **19** 15:24:00.9±0.9, 36°.56N±0°.07×70°.4E±0°.1, h188km±6km, mb4.2/17, Error ellipse: s-maj=14.1km s-min=9.9km az=88.0*
*NNC **19** 15:24:05.7±2.3, 36°.99N×70°.46E, h201km±27km, mb2.9, mpv3.8, Error ellipse: s-maj=20.6km s-min=13.0km az=8.0*
ISC 19 15:24:00.0±0.6, 36°.48N±0°.06×70°.40E±0°.06, h204km, n63, σ2s11/70, mb4.0/17, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	Kabul	2.23	210	Pn		Pn		15 24 41.6	+0.1
BTK	Batken	3.59	5	Pn		Pn		15 24 57.4	+0.4
NIL	Nilore	3.67	140	Pn		Pn		15 24 59.2	+1.3
ARSB	Arslanbob	5.24	22	Pn		Pn		15 25 16.7	-1.0
JMU	Jammu	5.28	134	eP		Pn		15 25 19.2	+1.1
JMU				eS		S		15 26 15.3	-4.0
KSH	Kashi	5.34	54	Pn		Pn		15 25 14.3	-4.7
KSH				Sn		S		15 26 08.3	-13
KSH	comp=Z,8.0nm,0.6s			pmax		pmax			
KSH	comp=N,100nm,0.8s			smax		smax			
KSH	comp=E,52nm,0.8s			smax		smax			
THN	Thein Dam	5.96	131	eP		Pn		15 25 27.6	+0.7
THN				eS		S		15 26 34.1	-1.2
THN	comp=E,276nm,0.3s			IAML				15 26 35.1	
THN	comp=N,87nm,0.2s			IAML				15 26 35.7	
DHRM	DHARAMSHALA	6.45	129	eP		Pn		15 25 33.1	-0.3
DHRM				eS		S		15 26 43.6	-3.5
DHRM	comp=E,259nm,0.2s			IAML				15 26 46.1	
DHRM	comp=N,292nm,0.2s			IAML				15 26 46.4	
NRN	Naryn	6.60	40	Pn		Pn		15 25 33.0	-2.2
KK31	Karatay Array comp=N,6.6nm,0.6s,baz=310,slow=14,SNR=75	6.62	1	P		Pn		15 25 35.0	-0.3
KK31				⇑S		S		15 26 45.1	-5.6
KK31	Karatay Array	6.62	1	Pn		Pn		15 25 35.0	-0.3
KKAR	Karatay Array	6.62	1	Pn		Pn		15 25 34.7	-0.5
KKAR	Karatay Array	6.62	1	Pn		Pn		15 25 34.9	-0.4
AAK	Ala-Archa comp=N,4.1nm,0.3s,baz=181,slow=7.0,SNR=30	6.92	26	P		Pn		15 25 39.3	0.0
AAK	comp=N,19nm,0.5s,baz=323,slow=20,SNR=26			S		S		15 26 54.0	-4.0
BHK	Bhakra	7.10	134	eS		S		15 26 58.1	-4.2
BHK	comp=E,81nm,0.2s			IAML				15 27 00.1	
BHK	comp=N,84nm,0.3s			IAML				15 27 01.3	
CHMS	Chumysh comp=N,1.7nm,0.3s	7.32	26	⇓P		Pn		15 25 43.8	-0.6
CHMS	comp=N,25nm,0.8s			⇓S		S		15 27 02.5	-4.8
BOOM	Boomskoye usch	7.37	34	Pn		Pn		15 25 45.4	+0.1
TKM2	Tokmak 2 comp=N,4.0nm,0.5s	7.58	30	⇑P		Pn		15 25 47.5	-0.4
TKM2	comp=N,8.5nm,0.8s			⇑S		S		15 27 08.9	-4.8
SMLA	Simla	7.76	132	eP		Pn		15 25 50.0	-0.2
SMLA				eS		S		15 27 12.4	-5.3
SMLA	comp=E,68nm,0.2s			IAML				15 27 15.8	
SMLA	comp=N,135nm,0.2s			IAML				15 27 15.9	
SMLA	comp=N,135nm,0.3s			IAML				15 27 17.9	
KUDL	Kundal	9.77	147	eS		S		15 27 57.2	-8.7
GEYT	Alibeck comp=N,0.4nm,0.3s,baz=116,slow=10,SNR=2.2	9.91	282	P		Pn		15 26 17.0	-1.0
GEYT				S		S		15 28 03.5	-5.5
LGTI	Lohaghat comp=N,1.1nm,0.5s,baz=80,slow=17,SNR=2.1	10.84	127	eP		Pn		15 26 28.6	-1.4
LGTI				eS		S		15 28 21.0	-10
LGTI	comp=N,20nm,0.3s			IAML				15 28 26.2	
LGTI	comp=E,14nm,0.3s			IAML				15 28 26.8	
MAKZ	Makanchi	13.45	36	Pn		Pn		15 27 02.5	-0.4
MK31	Makanchi Array comp=E,4.4nm,0.7s,baz=222,slow=12,SNR=31	13.60	37	P		Pn		15 27 05.1	+0.4
MK31	Makanchi Array	13.60	37	Pn		Pn		15 27 03.9	-0.8
MKAR	Makanchi Array	13.60	37	Pn		Pn		15 27 04.4	-0.3
MKAR	Makanchi Array comp=E,2.2nm,0.6s,baz=213,slow=8.7,SNR=20	13.60	37	P		Pn		15 27 04.7	0.0
AB31	Akbulak array comp=E,0.2nm,0.2s,baz=149,slow=12,SNR=33	14.87	332	P		Pn		15 27 19.5	-0.8
ABKAR	Akbulak array	14.87	332	Pn		Pn		15 27 19.7	-0.7
WMQ	Urumqi	15.11	56	eP		P		15 27 25.9	+2.1
KURBB	Kurchatov Arra comp=N,0.7nm,0.6s,baz=208,slow=10,SNR=8.5	15.30	20	P		Pn		15 27 24.6	-0.9
KURK	Kurchatov	15.41	20	P		P		15 27 27.9	+0.9
BVA0	Borovoye Array comp=E,0.9nm,0.3s,baz=148,slow=9.4,SNR=18	16.55	360	P		Pn		15 27 41.1	+0.6
BVAR	Borovoye Array comp=E,1.5nm,0.3s,baz=161,slow=8.8,SNR=15	16.55	360	P		P		15 27 40.1	+0.6
AKTO	Aktyubinsk comp=E,3.4nm,0.7s	16.56	331	⇑P		Pn		15 27 40.9	+0.2
AKTO	Aktyubinsk comp=E,5.3nm,0.6s,baz=154,slow=9.8,SNR=16	16.56	331	P		P		15 27 40.4	+0.7
BRVK	Borovoye	16.58	360			Pn		15 27 40.8	0.0
ZAA0	Zalesovo Array	20.14	25	P		P		15 28 19.6	+1.2
ZALV	Zalesovo Beam	20.14	25	P		P		15 28 19.3	+1.0
ZALV	Zalesovo Beam comp=E,3.6nm,0.5s,baz=221,slow=11,SNR=23 comp=E,3.6nm,0.5s	20.14	25	P		P		15 28 19.1	+0.7
ARU	Arti comp=E,2.5nm,0.6s,baz=134,slow=9.2,SNR=5.3 comp=E,2.5nm,0.6s	21.50	342	P		P		15 28 34.4	+1.8
KBZ	Khabaz comp=E,1.4nm,0.9s,baz=164,slow=4.9,SNR=3.5 comp=E,1.4nm,0.9s	22.18	298	P		P		15 28 38.8	-0.7
PZH	PanZhiHua	28.41	102	P		P		15 29 38.6	+2.8
PZH	comp=Z,10.0nm,0.7s			pmax		pmax			
PZH	comp=Z,100nm,4.8s			pmax		pmax			
HHC	Hu-ho-hao-te	32.22	69	eP		P		15 30 10.5	+1.3
HHC	comp=Z,11nm,0.6s			pmax		pmax			
HHC	comp=Z,84nm,5.9s			pmax		pmax			
FIA1	FINESS Array S	37.23	326	P		P		15 30 53.0	+1.4
FINES	FINESS Array B	37.23	326	P		P		15 30 52.9	+1.4
FINES	FINESS Array B comp=Z,0.9nm,0.4s,baz=117,slow=9.2,SNR=9.6 comp=Z,0.9nm,0.4s	37.23	326	P		P		15 30 52.5	+0.9
ARCES	ARCESS Array B	40.98	338	P		P		15 31 24.6	+2.1
ARCES	ARCESS Array B comp=Z,1.5nm,0.7s,baz=94,slow=6.6,SNR=6.3 comp=Z,1.5nm,0.7s	40.98	338	P		P		15 31 23.6	+1.1
HFS	Hagfors comp=Z,1.7nm,0.4s,baz=107,slow=9.9,SNR=14 comp=Z,1.7nm,0.4s	42.78	322	P		P		15 31 38.9	+1.7
NC405	NORSAR Array S	43.87	323	P		P		15 31 47.7	+1.8
NC303	NORSAR Array S	44.05	323	P		P		15 31 49.3	+2.0
NC303	comp=Z,13nm,1.4s			IAmb		IAmb		15 32 00.0	
NB201	NORSAR Array S	44.07	323	P		P		15 31 48.9	+1.4
NB2	NORSAR Subarra comp=Z,0.6nm,0.4s,baz=98,slow=7.9	44.11	323	P		P		15 31 49.2	+1.4
NOA	NORSAR Array B comp=Z,0.6nm,0.4s,baz=106,slow=7.2,SNR=5.0 comp=Z,0.6nm,0.4s	44.11	323	P		P		15 31 49.0	+1.2
NC204	NORSAR Array S	44.35	323	P		P		15 31 51.5	+1.7
NC204	comp=Z,17nm,1.5s			IAmb		IAmb		15 32 06.4	
D19K	Kuna River	69.31	17	P		P		15 34 46.9	+2.1
D19K	comp=Z,6.1nm,1.4s			IAmb		IAmb		15 35 02.8	
E18K	Tukpahlearik C	69.50	19	P		P		15 34 48.0	+2.1
E18K	comp=Z,9.0nm,1.4s			IAmb		IAmb		15 35 19.2	
TOLK	Toolik Lake Re	71.06	14	P		P		15 34 57.7	+2.2
TOLK	comp=Z,5.3nm,1.3s			IAmb		IAmb		15 34 58.6	
A36M	Sachs Harbour	71.27	5	P		P		15 34 59.2	+2.6
A36M	comp=Z,2.9nm,1.1s			IAmb		IAm

0.8nm,0.8s,baz=305,slow=22,SNR=2.8
0.9nm,0.5s
ASAR Alice Springs 21.05 140 P **P** **15 37 07.3 0.0**
1.6nm,0.7s,baz=321,slow=8.5,SNR=42
ASAR S **S** **15 40 57.8 -4.0**
0.3nm,0.9s,baz=317,slow=24,SNR=2.8
1.6nm,0.7s
STKA Stephens Creek 31.65 142 P **P** **15 38 45.4 -1.2**
2.3nm,0.6s,baz=319,slow=9.6,SNR=7.6
2.3nm,0.6s
HNR Honiara 40.19 95 LR LR 16 00 02.8
comp=Z,788nm,18.5s,baz=75,slow=42
MKAR Makanchi Array 63.59 332 P **P** **15 42 57.3 +3.3**
0.7nm,0.6s,baz=147,slow=7.8,SNR=11
0.7nm,0.6s
KURBB Kurchatov Arra 68.09 333 P **P** **15 43 25.1 +2.3**
0.3nm,0.6s,baz=148,slow=5.0,SNR=4.0
0.3nm,0.6s
ZALV Zalesovo Beam 68.09 339 P **P** **15 43 24.0 +1.2**
0.4nm,0.3s,baz=143,slow=5.5,SNR=2.6
0.4nm,0.3s

WEL 19 15:41:26.7±0.9,35°S±6°×17°9E±1°2,h33km,M3.8/19,ML4.0/21,MLv3.8/19,Error ellipse: s-maj=0.0km s-min=0.0km az=101.0,confirmed,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**2.52**	**187**	P	Pn	15 42 05.2	-0.1
WMGZ				S	Sn	15 42 37.9	+3.1
HAZ	**Te Kaha**	**2.58**	**199**	P	Pn	15 42 08.4	+2.4
HAZ				S	Sn	15 42 38.5	+2.3
PKGZ	**Pakihiroa**	**2.63**	**193**	P	Pn	15 42 04.7	-2.3
PKGZ				S	Sn	15 42 38.5	+0.6
PUZ	**Puketiti**	**2.79**	**189**	P	Pn	15 42 08.5	-0.5
PUZ				S	Sn	15 42 42.7	+1.2
RUGZ	**Raukumara Rang**	**2.80**	**199**	P	Pn	15 42 08.0	-1.3
TWGZ	**Tauwhareparae**	**2.93**	**193**	P	Pn	15 42 10.9	-0.1
TWGZ				S	Sn	15 42 47.9	+2.8
MUGZ	**Murupara**	**3.56**	**207**	P	Pn	15 42 20.5	+0.9
SNGZ	**Shannon Statio**	**3.66**	**199**	P	Pn	15 42 20.9	-0.1
SNGZ				S	Sn	15 43 04.6	+1.7
RAHZ	**Arahi**	**3.85**	**201**	P	Pn	15 42 23.7	0.0
RAHZ				S	Sn	15 43 06.1	-1.7
MTHZ	**Maungataniwha**	**3.87**	**204**	P	Pn	15 42 24.6	+0.7
MTHZ				S	Sn	15 43 07.5	-0.7
NMHZ	**Naumai**	**4.10**	**203**	P	Pn	15 42 26.9	-0.3
NMHZ				S	Sn	15 43 15.2	+1.1
ARHZ	**Aropaoanui**	**4.20**	**200**	P	Pn	15 42 27.6	-0.8
ARHZ				S	Sn	15 43 16.4	+0.1
RATZ	**Rangitukua**	**4.30**	**214**	P	Pn	15 42 31.5	+1.6
RITZ	**Rihia Road**	**4.36**	**212**	P	Pn	15 42 31.6	+1.1
KWHZ	**Kaweka Forest**	**4.52**	**204**	P	Pn	15 42 31.8	-1.2
KWHZ				S	Sn	15 43 22.2	-2.3
NTVZ	**North Tongarir**	**4.54**	**213**	P	Pn	15 42 33.9	+0.7
KRVZ	**Karewarewa**	**4.55**	**213**	P	Pn	15 42 34.2	+0.9
ETVZ	**East Tongariro**	**4.55**	**212**	P	Pn	15 42 33.9	+0.5
WTVZ	**West Tongariro**	**4.59**	**213**	P	Pn	15 42 34.8	+0.9
NNVZ	**North Ngauruho**	**4.59**	**213**	P	Pn	15 42 34.9	+0.9
TWVZ	**Taurewa**	**4.62**	**215**	P	Pn	15 42 35.6	+1.2
SNVZ	**South Ngauruho**	**4.62**	**212**	P	Pn	15 42 30.3	-4.1
BHHZ	**Black Hill Sta**	**4.71**	**207**	P	Pn	15 42 33.2	-2.3
BHHZ				S	Sn	15 43 30.0	+1.0
KRHZ	**Kereru**	**4.74**	**204**	P	Pn	15 42 36.6	+0.7
KRHZ				S	Sn	15 43 28.6	-1.0
WNVZ	**Wahianoa**	**4.76**	**212**	P	Pn	15 42 36.0	-0.2
WNVZ				S	Sn	15 43 31.8	+1.4
PXZ	**Pawanui**	**4.96**	**198**	P	Pn	15 42 35.9	-2.9
VRZ	**Vera Road**	**5.00**	**219**	P	Pn	15 42 42.1	+2.7

*MDD **19** 15:42:00.8±0.8,38°.86N×11°.27W,h45km,mb_Lg3.0/12, Error ellipse: s-maj=6.5km s-min=3.9km az=73.0*
*IGIL **19** 15:42:02.1,38°.86N×11°.27W,h31km,ML2.4*
*INMG **19** 15:42:03.5±1.2,38°.87N×11°.33W,h10km,ML2.4, Error ellipse: s-maj=4.7km s-min=2.2km az=81.0*
*CNRM **19** 15:42:09.4,38°.44N×10°.39W,h134km,ML1.9*

ISC 19 15:41:58.7±2.4,38°.84N±0°.04×11°.1W±0°.1,h25km±15km, n69,σ2s27/119,2C-2D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**1.43**	**85**	‖ *eP*	**Pb**	**15 42 26.5**	**+1.8**
PMAFR				*eS*	**Sb**	**15 42 43.4**	**+0.9**
PMAFR				A	A	15 42 46.5	
	67nm,0.2s						
PMAFR	**Mafra**	**1.43**	**85**	Pn	**Pb**	**15 42 26.3**	**+1.6**
PMAFR				Sn	**Sb**	**15 42 43.4**	**+0.9**
PNCL	**Nicolau / Gran**	**2.15**	**109**	↑ *eP*	**Pb**	**15 42 35.6**	**-1.4**
PNCL				*eS*	**Sn**	**15 42 59.6**	**+0.7**
PNCL				A	A	15 43 05.5	
	9.5nm,0.1s						
PNCL	**Nicolau / Gran**	**2.15**	**109**	Pn	**Pb**	**15 42 35.5**	**-1.4**
PNCL				Sn	**Sn**	**15 42 58.7**	**-0.2**
PMTG	**Montargil**	**2.26**	**83**	‖ *eP*	**Pb**	**15 42 37.3**	**-1.5**
PMTG				*eS*	**Sn**	**15 43 02.8**	**+1.2**
PMTG				A	A	15 43 05.7	
	9.6nm,0.1s						
PTEO	**Sao Teotonio**	**2.28**	**124**	*eP*	**Pb**	**15 42 37.4**	**-1.8**
PTEO				*eS*	**Sn**	**15 43 02.4**	**+0.3**
PTEO				A	A	15 43 07.3	
	15nm,0.5s						
PCAS	**Casmilo, Conde**	**2.35**	**58**	*eP*	**Pb**	**15 42 38.2**	**-2.3**
PCAS				*eS*	**Sn**	**15 43 04.8**	**+0.8**
PCAS				A	A	15 43 14.2	
	6.3nm,0.5s						
EVO	**Evora**	**2.44**	**96**	*eS*	**Sn**	**15 43 07.3**	**+1.2**
EVO				A	A	15 43 12.9	
	13nm,0.1s						
EVO	**Evora**	**2.44**	**96**	Pn	**Pb**	**15 42 39.3**	**+2.2**
EVO				Sn	**Sn**	**15 43 07.1**	**+1.0**
MORF	**Marmelete**	**2.47**	**128**	↑ *iP*	**Pn**	**15 42 40.1**	**+2.6**
MORF				*eS*	**Sn**	**15 43 07.4**	**+0.5**
MORF				A	A	15 43 10.4	
	19nm,0.2s						
MORF	**Marmelete**	**2.47**	**128**	*eP*	**Pn**	**15 42 40.0**	**+2.6**
MORF				*eS*	**Sn**	**15 43 06.9**	**0.0**
MORF				IAML		15 43 09.5	
	comp=N,22nm,0.2s						
MESJ	**Messejana**	**2.48**	**113**	*eP*	**Pb**	**15 42 40.3**	**-2.3**
MESJ				*eS*	**Sn**	**15 43 07.3**	**+0.2**
MESJ				A	A	15 43 11.5	
	comp=N,13nm,0.5s						
MESJ	**Messejana**	**2.48**	**113**	*eP*	**Pb**	**15 42 40.3**	**-2.3**
MESJ				*eS*	**Sn**	**15 43 07.5**	**+0.4**
MESJ				IAML		15 43 11.5	
	comp=N,12nm,0.2s						
PFVI	**Vila Bisbo**	**2.48**	**133**	*eP*	**Pn**	**15 42 39.8**	**+2.2**
PFVI				*eS*	**Sn**	**15 43 06.6**	**-0.5**
PFVI				A	A	15 43 09.8	
	comp=N,9.5nm,0.7s						
PFVI	**Vila Bisbo**	**2.48**	**133**	Pn	**Pn**	**15 42 39.8**	**+2.2**
PFVI	**Vila Bisbo**	**2.48**	**133**	P	**Pn**	**15 42 40.2**	**+2.6**
PBEJ	**Beja**	**2.67**	**107**	*eS*	**Sn**	**15 43 12.8**	**+1.0**
PBEJ				A	A	15 43 14.2	
	comp=N,7.6nm,0.2s						
PCVE	**Castro Verde**	**2.70**	**116**	*eP*	**Pn**	**15 42 43.5**	**+2.9**
PCVE				*eS*	**Sn**	**15 43 13.5**	**+1.0**
PCVE				A	A	15 43 22.2	
	comp=N,5.9nm,0.6s						
PCVE	**Castro Verde**	**2.70**	**116**	Pn	**Pn**	**15 42 42.9**	**+2.3**
PCVE				Sn	**Sn**	**15 43 11.7**	**-0.8**
PESTR	**Estremoz**	**2.75**	**88**	*eP*	**Pb**	**15 42 44.2**	**-3.0**
PESTR				*eS*	**Sn**	**15 43 14.8**	**+1.1**
PESTR				A	A	15 43 17.1	
	comp=N,5.1nm,0.2s						
PESTR	**Estremoz**	**2.75**	**88**	Pn	**Pb**	**15 42 44.2**	**-3.0**
PMRV	**Marv??o**	**2.95**	**77**	*eP*	**Pn**	**15 42 46.7**	**+2.7**
PMRV				*eS*	**Sn**	**15 43 19.6**	**+0.9**
PMRV				A	A	15 43 21.7	
	comp=N,11nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.97**	**122**	*eP*	**Pn**	**15 42 47.6**	**+3.2**
PBDV				*eS*	**Sn**	**15 43 19.5**	**+0.2**
PBDV				A	A	15 43 25.7	
	comp=N,7.7nm,1.8s						
PBDV	**Barranco-do-Ve**	**2.97**	**122**	Sn	**Sn**	**15 43 19.4**	**+0.1**
PCBR	**Castelo Branco**	**2.99**	**69**	*eP*	**Pn**	**15 42 47.1**	**+2.6**
PCBR				*eS*	**Sn**	**15 43 19.7**	**+0.2**
PCBR				A	A	15 43 23.9	
	comp=N,4.4nm,0.3s						
PVAQ	**Vaqueiros**	**3.04**	**117**	*eP*	**Pn**	**15 42 48.4**	**+3.2**
PVAQ				*eS*	**Sn**	**15 43 21.5**	**+0.7**
PVAQ	**Vaqueiros**	**3.04**	**117**	Pn	**Pn**	**15 42 48.2**	**+3.0**
PVAQ				Sn	**Sn**	**15 43 20.2**	**-0.6**
PVAQ	**Vaqueiros**	**3.04**	**117**	P	**Pn**	**15 42 47.8**	**+2.6**
PVAQ	**Vaqueiros**	**3.04**	**117**	S	**Sn**	**15 43 17.2**	**-3.5**
PVIS	**Viseu**	**3.10**	**52**	*eS*	**Sn**	**15 43 21.8**	**-0.7**
PVIS				A	A	15 43 24.0	
	comp=N,12nm,0.1s						
EGRO	**El Granado**	**3.14**	**113**	Pn	**Pn**	**15 42 49.2**	**+2.6**
EGRO				Sn	**Sn**	**15 43 21.9**	**-1.5**
EGRO	**El Granado**	**3.14**	**113**	Pn	**Pn**	**15 42 49.3**	**+2.6**
EGRO				Sn	**Sn**	**15 43 24.6**	**+1.3**
EGRO				*i* Vmb_Lg		15 43 27.8	
MTE	**Manteigas**	**3.16**	**59**	*eP*	**Pn**	**15 42 49.1**	**+2.1**
MTE				*eS*	**Sn**	**15 43 23.8**	**-0.2**
MTE				A	A	15 43 26.3	
	comp=N,19nm,0.2s						
EBAD	**Badajoz**	**3.20**	**90**	Pn	**Pn**	**15 42 50.2**	**+2.8**
EBAD				Sn	**Sn**	**15 43 25.2**	**+0.3**
EBAD	**Badajoz**	**3.20**	**90**	Pn	**Pn**	**15 42 48.8**	**+1.3**
EBAD				Sn	**Sn**	**15 43 25.1**	**+0.3**
EBAD				*i* Vmb_Lg		15 43 27.1	
PBAR	**Barrancos**	**3.26**	**101**	*eP*	**Pn**	**15 42 51.8**	**+3.5**
PBAR				*eS*	**Sn**	**15 43 27.0**	**+0.7**
PBAR				A	A	15 43 30.3	
	comp=N,4.7nm,0.4s						
PBAR	**Barrancos**	**3.26**	**101**	Pn	**Pn**	**15 42 51.3**	**+3.0**
PBAR				Sn	**Sn**	**15 43 25.8**	**-0.6**
PVRL	**Vila Real**	**3.56**	**46**	*eP*	**Pn**	**15 42 54.3**	**+1.8**
PVRL				*eS*	**Sn**	**15 43 32.4**	**-1.4**
PVRL				A	A	15 43 34.8	
	comp=N,8.9nm,0.1s						
POLO	**Lamas de Olo**	**3.58**	**44**	*eP*	**Pn**	**15 42 54.5**	**+1.7**
POLO				*eS*	**Sn**	**15 43 33.1**	**-1.3**
POLO				A	A	15 43 34.9	
	comp=N,1.6nm,0.2s						
EMIN	**Mina Concepcio**	**3.65**	**106**	Pn	**Pn**	**15 42 56.7**	**+3.1**
EMIN				Sn	**Sn**	**15 43 35.4**	**-0.6**
EMIN	**Mina Concepcio**	**3.65**	**106**	Pn	**Pn**	**15 42 56.8**	**+3.1**
EMIN				Sn	**Sn**	**15 43 35.9**	**0.0**
EMIN				*i* Vmb_Lg		15 43 40.1	
PCAB	**Cabril**	**3.71**	**38**	*eP*	**Pn**	**15 42 56.7**	**+2.2**
PCAB				*eS*	**Sn**	**15 43 35.8**	**-1.6**
PCAB				A	A	15 43 40.3	
	comp=N,12nm,0.2s						
PGAV	**Gavieira, Arco**	**3.80**	**34**	*eP*	**Pn**	**15 42 57.2**	**+1.4**
PGAV				*eS*	**Sn**	**15 43 37.6**	**-2.1**
PGAV				A	A	15 43 40.6	
	comp=N,5.3nm,0.3s						
ELOB	**Lobios**	**3.81**	**37**	Pn	**Pn**	**15 42 57.6**	**+1.6**
ELOB				Sn	**Sn**	**15 43 36.3**	**-3.8**
ELOB				*i* Vmb_Lg		15 43 41.1	
MVO	**Moncorvo**	**3.90**	**52**	*eP*	**Pn**	**15 42 58.6**	**+1.5**
MVO				*eS*	**Sn**	**15 43 40.6**	**-1.5**
MVO				A	A	15 43 41.4	
	comp=N,6.3nm,0.3s						
EPLA	**Plasencia**	**4.08**	**71**	Pn	**Pn**	**15 43 00.8**	**+1.3**
EPLA				Sn	**Sn**	**15 43 45.5**	**-1.0**
EPLA				*i* Vmb_Lg		15 43 50.1	
EMAZ	**Mazaricos**	**4.41**	**21**	Pn	**Pn**	**15 43 04.4**	**+0.3**
EMAZ				Sn	**Sn**	**15 43 49.5**	**-5.1**
EMAZ				*i* Vmb_Lg		15 43 53.3	
PBRG	**Braganca**	**4.46**	**47**	*eP*	**Pn**	**15 43 06.8**	**+2.0**
PBRG				*eS*	**Sn**	**15 43 54.1**	**-1.8**
PBRG				A	A	15 43 57.9	
	comp=N,2.4nm,0.3s						
ECAB	**El Cabril**	**4.53**	**98**	Pn	**Pn**	**15 43 06.9**	**+1.1**
ECAB				Sn	**Sn**	**15 43 57.0**	**-0.7**
ECAB				*i* Vmb_Lg		15 44 04.2	
ECAL	**Calabor**	**4.55**	**46**	Pn	**Pn**	**15 43 07.8**	**+1.7**
ECAL				Sn	**Sn**	**15 43 56.7**	**-1.6**
ECAL	**Calabor**	**4.55**	**46**	Pn	**Pn**	**15 43 07.6**	**+1.5**
ECAL				Sn	**Sn**	**15 43 56.9**	**-1.3**
ECAL				*i* Vmb_Lg		15 43 59.1	
EAGO	**Agolada(Pontev**	**4.57**	**29**	Pn	**Pn**	**15 43 07.7**	**+1.4**
EAGO				Sn	**Sn**	**15 43 53.1**	**-5.5**
EAGO				*i* Vmb_Lg		15 43 58.5	
EADA	**Adamuz**	**5.17**	**95**	Pn	**Pn**	**15 43 17.0**	**+2.5**
EADA				Sn	**Sn**	**15 44 10.5**	**-2.9**
EADA	**Adamuz**	**5.17**	**95**	Pn	**Pn**	**15 43 16.8**	**+2.3**
EADA				Sn	**Sn**	**15 44 12.7**	**-0.7**
EADA				*i* Vmb_Lg		15 44 18.2	
PAB	**San Pablo**	**5.30**	**80**	Pn	**Pn**	**15 43 18.9**	**+2.5**
PAB				Sn	**Sn**	**15 44 16.7**	**0.0**
PAB				*i* Vmb_Lg		15 44 20.2	
EPON	**Pontenova**	**5.38**	**32**	Pn	**Pn**	**15 43 18.1**	**+0.6**
EPON				Sn	**Sn**	**15 44 15.3**	**-3.4**
GUD	**Guadarrama**	**5.65**	**69**	Pn	**Pn**	**15 43 23.5**	**+2.2**
GUD				Sn	**Sn**	**15 44 24.8**	**-0.7**
GUD				*i* Vmb_Lg		15 44 27.0	
PSIM	**Granatula de C**	**5.74**	**88**	Pn	**Pn**	**15 43 23.7**	**+1.2**
PSIM				Sn	**Sn**	**15 44 25.8**	**-1.7**
ZHG	**ZHG**	**6.49**	**145**	P	**Pn**	**15 43 34.3**	**+1.6**
ZHG	**ZHG**	**6.49**	**145**	S	**Sn**	**15 44 42.0**	**-4.0**
ETOR	**Torete**	**7.24**	**71**	Pn	**Pn**	**15 43 43.9**	**+0.8**
ETOR				Sn	**Sn**	**15 45 02.2**	**-2.4**
MD31	**MD31**	**7.88**	**137**	P	**Pn**	**15 43 53.1**	**+1.2**
MD31	**MD31**	**7.88**	**137**	S	**Sn**	**15 45 12.3**	**-8.0**
MDT	**Midelt**	**8.00**	**137**	P	**Pn**	**15 43 55.1**	**+1.6**
MDT	**Midelt**	**8.00**	**137**	S	**Sn**	**15 45 16.8**	**-6.5**
OUK	**Oukaimeden**	**8.07**	**160**	P	**Pn**	**15 43 56.8**	**+2.2**
OUK	**Oukaimeden**	**8.07**	**160**	S	**Sn**	**15 45 21.6**	**-3.7**
OUZM	**OUZ**	**8.68**	**154**	P	**Pn**	**15 44 04.2**	**+1.3**
OUZM	**OUZ**	**8.68**	**154**	S	**Sn**	**15 45 35.5**	**-4.6**

*IDC **19** 15:42:05.7±3.7,5°.42N×127°.53E,h106km±33km,mb3.2/8, mbtmp3.6/8,MS4.1/1,Error ellipse: s-maj=48.8km s-min=15.3km az=66.0*
*NEIC **19** 15:42:07.1±1.4,5°.47N±0°.07×127°.5E±0°.1,h109km±7km, mb4.3/12,Error ellipse: s-maj=21.2km s-min=10.6km az=87.0*
*DJA **19** 15:42:16.4±1.1,4°N±13°×12°.7E±°,h280km±16km,M4.1/8, mb4.0/6,mB4.6/4,MLv4.2/8,Mw(mB)3.8/4*

ISC 19 15:42:05.7±0.6,5°.44N±0°.07×127°.40E±0°.08,h100km,n34, σ1s49/38,mb4.1/15,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.55**	**227**	P	Pn	15 43 04.1	+19
SGSI				S	**Sn**	**15 43 17.6**	**+1.4**
TNTI	**Ternate**	**4.64**	**180**	Pn	**Pn**	**15 43 14.4**	**+0.8**
TNTI	**Ternate**	**4.64**	**180**	P	**Pn**	**15 43 17.5**	**+3.9**
KMSI	**Cibinong**	**5.92**	**215**	P	**Pn**	**15 43 32.3**	**+1.3**
GTOI	**Gorontalo**	**6.48**	**223**	P	**Pn**	**15 43 40.9**	**+2.3**
	31nm,0.8s,332nm0.1nm						
GTOI				S	**Sn**	**15 44 47.5**	**-3.6**
	31nm,0.8s,332nm0.1nm						
MRSI	**Marisa**	**7.35**	**228**	P	**Pn**	**15 43 51.4**	**+1.0**
	171nm,0.6s,2μm0.5nm						
SWI	**Sorong**	**7.36**	**148**	S	**Sn**	**15 45 14.0**	**+1.5**
SANI	**Sanana**	**7.58**	**191**	P	**Pn**	**15 43 52.2**	**-1.3**
	9.2nm,1.7s,0.1nm						
TOLI2	**Tolitoli**	**7.88**	**237**	Pn	**Pn**	**15 43 58.2**	**+0.6**
KKM	**Kota Kinabalu**	**11.14**	**274**	Pn	**Pn**	**15 44 46.1**	**+3.9**
SBUM	**Sibu**	**15.43**	**259**	P	**P**	**15 45 41.2**	**+0.9**
WRA	**Warramunga Arr**	**26.14**	**165**	P	**P**	**15 47 29.7**	**-1.0**
	0.4nm,0.7s,baz=344,slow=10,SNR=5.8						
WRA				pP	**pP**	**15 47 52.8**	**+1.2**
	1.0nm,0.3s,baz=335,slow=9.8,SNR=6.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**29.62**	**168**	P	**P**	**15 48 00.3**	**-1.5**
	0.2nm,0.5s,baz=340,slow=7.0,SNR=15						
ASAR				pP	**pP**	**15 48 21.4**	**-1.4**
	0.3nm,0.3s,baz=339,slow=7.2,SNR=3.5						
ASAR				PcP	**PcP**	**15 51 03.4**	**-0.9**
	0.2nm,0.3s,baz=351,slow=2.3,SNR=7.2						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.63**	**297**	P	**P**	**15 48 11.3**	**+0.6**
	0.3nm,0.7s,baz=110,slow=7.8,SNR=2.6						
	0.3nm,0.7s						
BRDH	**Bariadhala**	**38.53**	**300**	LR	LR	16 07 09.1	
	comp=Z,304nm,20.5s,baz=190,slow=39						
NWAO	**Narrogin (SRO)**	**39.36**	**194**	P	**P**	**15 49 25.6**	**+0.1**
SONM	**Songino Array**	**45.91**	**340**	P	**P**	**15 50 17.9**	**-0.5**
	0.3nm,0.9s,baz=142,slow=4.9,SNR=1.4						
	0.3nm,0.9s						
MK31	**Makanchi Array**	**56.55**	**324**	P	**P**	**15 51 38.5**	**+0.6**
MKAR	**Makanchi Array**	**56.55**	**324**	P	**P**	**15 51 38.4**	**+0.5**
MKAR	**Makanchi Array**	**56.55**	**324**	P	**P**	**15 51 38.0**	**+0.1**
	1.2nm,0.6s,baz=118,slow=8.4,SNR=21						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**59.38**	**332**	P	**P**	**15 51 57.4**	**0.0**
	0.3nm,0.3s,baz=150,slow=6.0,SNR=2.0						
	0.3nm,0.3s						
KURK	**Kurchatov**	**60.67**	**327**	P	**P**	**15 52 06.7**	**+0.4**
KURK				IAmb	IAmb	15 52 38.5	
	comp=Z,2.8nm,1.2s						
KURBB	**Kurchatov Arra**	**60.67**	**327**	P	**P**	**15 52 06.1**	**-0.2**
	comp=Z,2.2nm,0.2s,baz=127,slow=6.2,SNR=11						
KURBB				ScP	**ScP**	**15 56 40.2**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=142,slow=5.3,SNR=4.0						
BVAR	**Borovoye Array**	**66.26**	**326**	P	**P**	**15 52 42.8**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=128,slow=8.9,SNR=8.0						
	comp=Z,0.9nm,0.5s						
ABKAR	**Akbulak array**	**71.26**	**320**	P	**P**	**15 53 13.9**	**-0.3**
MSEY	**Mahe Island**	**72.52**	**263**	P	**P**	**15 53 21.6**	**-0.9**
B20K	**Meade River**	**79.95**	**20**	P	**P**	**15 54 03.3**	**-0.1**
B20K				IAmb	IAmb	15 54 18.4	
	comp=Z,5.3nm,1.4s						
KDAK	**Kodiak Island**	**80.09**	**32**	P	**P**	**15 54 05.1**	**+0.7**
B21K	**Ikpikpuk River**	**80.74**	**20**	P	**P**	**15 54 08.8**	**+1.2**
H21K	**Melozitna Rive**	**80.86**	**24**	P	**P**	**15 54 08.8**	**+0.4**
H21K				IAmb	IAmb	15 54 10.5	
	comp=Z,6.1nm,1.5s						
H24K	**Noodor Dome**	**82.90**	**24**	P	**P**	**15 54 19.0**	**-0.1**
H24K				IAmb	IAmb	15 54 20.5	
	comp=Z,5.5nm,1.4s						
HDA	**Harding Lake**	**83.24**	**26**	P	**P**	**15 54 20.3**	**-0.5**
HDA				IAmb	IAmb	15 54 53.8	
	comp=Z,6.6nm,1.4s						
ILAR	**Eielson Array**	**83.28**	**25**	P	**P**	**15 54 20.2**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=246,slow=4.9,SNR=5.5						
	comp=Z,0.3nm,0.6s						
TGL	**Tana Glacier**	**85.18**	**30**	P	**P**	**15 54 29.4**	**-1.5**
TGL				IAmb	IAmb	15 54 55.2	
	comp=Z,12nm,1.3s						

*ATH **19** 15:43:46.9,38°.06N×20°.18E,h6km±2km,ML2.8/7,Error ellipse: s-maj=3.0km s-min=1.3km az=64.0*
*THE **19** 15:43:47.3,38°.07N×20°.22E,h5km±1km,ML2.9/13, Error ellipse: s-maj=1.5km s-min=0.5km az=67.0*

ISC 19 15:43:46.7±1.3,38°.07N±0°.03×20°.17E±0°.05,h14km±7km, n46,σ0s81/71,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMLN	**Damoulianata-K**	**0.23**	**43**	P	**Pg**	**15 43 52.1**	**+0.2**
DMLN				S	**Sg**	**15 43 55.2**	**-0.2**
	7μm,0.2s						
DMLN	**Damoulianata-K**	**0.23**	**43**	P	**Pg**	**15 43 52.1**	**+0.2**
DMLN				S	**Sg**	**15 43 55.0**	**-0.4**
LXRA	**Lixouri, Kepha**	**0.25**	**58**	P	**Pg**	**15 43 52.1**	**0.0**
LXRA				S	**Sg**	**15 43 55.4**	**-0.3**
LXR1	**Lixouri, Cepha**	**0.25**	**58**	P	**Pg**	**15 43 52.1**	**0.0**
LXR1				S	**Sg**	**15 43 55.4**	**-0.4**
	20μm,0.3s						
KEF4	**Livadi, Kephal**	**0.28**	**46**	P	**Pg**	**15 43 52.6**	**+0.1**
KEF4				S	**Sg**	**15 43 56.3**	**-0.3**
KEF4	**Livadi, Kephal**	**0.28**	**46**	P	**Pg**	**15 43 52.7**	**+0.1**
KEF4				S	**Sg**	**15 43 56.5**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.33**	**82**	P	**Pg**	**15 43 53.0**	**-0.5**
PSDA				S	**Sg**	**15 43 57.3**	**-0.8**
	3μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.33**	**82**	P	**Pg**	**15 43 53.0**	**-0.5**
VLS	**Valsamata**	**0.35**	**71**	P	**Pg**	**15 43 53.2**	**-0.6**
VLS				S	**Sg**	**15 43 57.4**	**-1.3**
	3μm,0.2s						
VLS	**Valsamata**	**0.35**	**71**	P	**Pg**	**15 43 53.3**	**-0.6**
VLS				S	**Sg**	**15 43 57.6**	**-1.1**
VLS				AML	AML	15 43 57.7	
	comp=N,6984μm,0.2s						
VLS				AML	AML	15 43 58.7	
	comp=E,4723μm,0.1s						
FSK	**Fiskardo**	**0.50**	**38**	P	**Pg**	**15 43 56.3**	**-0.3**
FSK				S	**Sg**	**15 44 02.9**	**-0.4**
	comp=E,2μm,0.5s						
FSK	**Fiskardo**	**0.50**	**38**	P	**Pg**	**15 43 56.3**	**-0.3**
FSK				S	**Sg**	**15 44 02.6**	**-0.6**
FSK				AML	AML	15 44 04.0	
	comp=E,5847μm,0.6s						
FSK				AML	AML	15 44 04.5	
	comp=N,2336μm,0.3s						
LTHK	**Lithakia**	**0.64**	**124**	P	**Pg**	**15 43 58.6**	**-0.6**
LTHK				S	**Sg**	**15 44 07.5**	**-0.1**
	comp=N,2μm,0.6s						
LTHK	**Lithakia**	**0.64**	**124**	P	**Pg**	**15 43 58.8**	**-0.4**
LTHK				S	**Sg**	**15 44 07.6**	**+0.1**
LTHK				AML	AML	15 44 11.5	
	comp=E,2704μm,0.2s						
LTHK				AML	AML	15 44 12.5	
	comp=N,2656μm,0.2s						
KRI1	**kERI**	**0.65**	**128**	P	**Pg**	**15 43 59.3**	**-0.2**
KRI1				S	**Sg**	**15 44 08.2**	**+0.1**
	comp=N,3μm,0.2s						
EVGI	**Lefkada island**	**0.67**	**34**	P	**Pg**	**15 43 59.5**	**-0.3**
EVGI				S	**Sg**	**15 44 08.7**	**-0

n51,σ0ᵏ76/78, 4C-19D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	**San Juanillo,**	**0.09**	**264**	*i* P	**Pg**	**15 53 00.7**	**-0.1**
SAJU				IAML		15 53 00.8	
	comp=Z,42μm,1.0s						
SAJU				*i* S	**Sg**	**15 53 03.9**	**+0.7**
JUD3	**Juan Diaz 3**	**0.12**	**44**⇓	*i* P	**Pg**	**15 53 01.2**	**0.0**
JUD3				*e*S	**Sg**	**15 53 04.8**	**+0.8**
DUNO	**Dulce Nombre,**	**0.13**	**89**	*e* P	**Pg**	**15 53 01.4**	**+0.2**
DUNO				*e*S	**Sg**	**15 53 05.2**	**+1.1**
DUNO	**Dulce Nombre,**	**0.13**	**89**	*i* P	**Pg**	**15 53 01.3**	**+0.1**
DUNO				*i* S	**Sg**	**15 53 05.1**	**+1.1**
DUNO				IAML		15 53 05.7	
	comp=Z,330μm,1.0s						
NICO	**Nicoya**	**0.18**	**72**⇓	*i* P	**Pg**	**15 53 01.9**	**0.0**
NICO				*e*S	**Sg**	**15 53 06.0**	**+0.8**
SACU	**Santa Cruz**	**0.19**	**12**⇓	*i* P	**Pg**	**15 53 02.0**	**0.0**
SACU				*e*S	**Sg**	**15 53 06.2**	**+0.9**
CMARA	**Lajas Hojancha**	**0.21**	**106**⇑	*i* P	**Pg**	**15 53 02.2**	**0.0**
CMARA				*e*S	**Sg**	**15 53 06.6**	**+0.7**
INDI	**Punta indio, G**	**0.24**	**150**⇑	*i* P	**Pb**	**15 53 02.7**	**0.0**
INDI				*e*S	**Sg**	**15 53 07.5**	**+0.8**
INDI	**Punta indio, G**	**0.24**	**150**	*i* P	**Pb**	**15 53 02.6**	**0.0**
INDI				IAML		15 53 02.7	
	comp=Z,4μm,1.0s						
INDI				*i* S	**Sg**	**15 53 07.4**	**+0.8**
ORTG	**Ortega, Santa**	**0.33**	**30**⇓	*i* P	**Pg**	**15 53 04.1**	**-0.1**
ORTG				*e*S	**Sb**	**15 53 09.9**	**+0.5**
ORTG	**Ortega, Santa**	**0.33**	**30**	*i* P	**Pg**	**15 53 04.0**	**-0.3**
ORTG				*i* S	**Sb**	**15 53 09.7**	**+0.4**
ORTG				IAML		15 53 10.0	
	comp=Z,4μm,1.0s						
NYURE	**Nandayure**	**0.38**	**102**⇓	*i* P	**Pg**	**15 53 04.6**	**-0.4**
NYURE				*e*S	**Sb**	**15 53 10.7**	**-0.1**
DELF	**Filadelfia**	**0.38**	**11**⇓	*i* P	**Pg**	**15 53 05.0**	**0.0**
DELF				*e*S	**Sb**	**15 53 11.3**	**+0.5**
ALIBA	**Liberia Airpor**	**0.52**	**9**⇓	*i* P	**Pn**	**15 53 08.8**	**-0.7**
ELI1	**Hacienda Flor**	**0.57**	**7**	*e* P	**Pg**	**15 53 08.8**	**+0.3**
BAGA	**Bagaces**	**0.57**	**39**⇓	*i* P	**Pn**	**15 53 09.4**	**-0.9**
BAGA				*e*S	**Sn**	**15 53 18.8**	**-0.5**
CNAS	**Canas**	**0.63**	**56**	*e* P	**Pb**	**15 53 09.4**	**0.0**
HZTE	**Horizontes, Gu**	**0.63**	**3**⇓	*i* P	**Pg**	**15 53 09.7**	**-0.1**
HZTE				*e*S	**Sn**	**15 53 19.9**	**-0.8**
HZTE	**Horizontes, Gu**	**0.63**	**3**	*i* P	**Pb**	**15 53 09.5**	**0.0**
HZTE				IAML		15 53 09.8	
	comp=Z,2μm,1.0s						
HZTE				*i* S	**Sn**	**15 53 19.6**	**-1.1**
JUNT	**Juntas**	**0.69**	**73**⇓	*i* P	**Pb**	**15 53 09.9**	**-0.6**
JUNT				*e*S	**Sg**	**15 53 20.2**	**+0.3**
JTS	**Las Juntas de**	**0.69**	**72**⇓	*i* P	**Pb**	**15 53 09.9**	**-0.7**
CBL1	**Cabuya**	**0.71**	**133**	*e* P	**Pb**	**15 53 10.9**	**0.0**
GPS3	**Bodega del ICE**	**0.72**	**21**⇑	*i* P	**Pn**	**15 53 12.2**	**-0.1**
GPS3				*e*S	**Sn**	**15 53 23.4**	**+0.4**
CUI	**Cuipilapa**	**0.73**	**38**⇓	*i* P	**Pb**	**15 53 11.0**	**-0.4**
CUI				*e*S	**Sg**	**15 53 21.8**	**+0.4**
VRLE	**La Escondida,**	**0.75**	**20**⇓	*i* P	**Pb**	**15 53 11.1**	**-0.6**
LAFE	**Finca La Fe, P**	**0.75**	**111**	*e* P	**Pb**	**15 53 10.2**	**-1.5**
LAFE				*e*S	**Sb**	**15 53 20.6**	**-0.9**
LAFE	**Finca La Fe, P**	**0.75**	**111**	*i* P	**Pb**	**15 53 10.2**	**-1.5**
LAFE				*i* S	**Sb**	**15 53 20.1**	**-1.4**
LAFE				IAML		15 53 21.8	
	comp=Z,11nm,1.0s						
VMAR	**Armenia, Volca**	**0.89**	**34**⇓	*i* P	**Pb**	**15 53 13.7**	**-0.3**
VMAR	**Armenia, Volca**	**0.89**	**34**	*i* P	**Pb**	**15 53 13.6**	**-0.3**
VMAR				IAML		15 53 15.1	
	comp=Z,1μm,1.0s						
ARE1	**Arenal 1**	**0.97**	**67**⇓	*i* P	**Pb**	**15 53 15.3**	**-0.1**
ARE1				*e*S	**Sn**	**15 53 29.2**	**+0.1**
CEDE	**Laguna Cedeo**	**0.99**	**66**⇓	*e* P	**Pb**	**15 53 15.8**	**0.0**
CEDE				*e*S	**Sn**	**15 53 32.6**	**+2.9**
LCRUZ	**La Cruz**	**1.00**	**360**⇓	*i* P	**Pg**	**15 53 16.5**	**0.0**
LCRUZ				*e*S	**Sn**	**15 53 31.7**	**+2.0**
VACR	**Volcan Arenal**	**1.01**	**67**⇓	*i* P	**Pb**	**15 53 15.9**	**-0.2**
JACO	**JACO, Garabito**	**1.04**	**113**⇑	*e* P	**Pb**	**15 53 15.7**	**-0.8**
JACO	**JACO, Garabito**	**1.04**	**113**	*i* P	**Pb**	**15 53 15.7**	**-0.8**
JACO				IAML		15 53 24.0	
	comp=Z,270nm,1.0s						
SOCE	**Pocosol**	**1.04**	**73**	*e* P	**Pb**	**15 53 15.9**	**-0.6**
SOCE	**Pocosol**	**1.04**	**73**	*i* P	**Pb**	**15 53 16.0**	**-0.5**
SOCE				IAML		15 53 16.4	
	comp=Z,480nm,1.0s						
SOCE				*i* S	**Sn**	**15 53 30.3**	**-0.4**
VERA	**Finca Concepci**	**1.07**	**44**⇓	*i* P	**Pb**	**15 53 16.8**	**-0.3**
CPMI	**Catarata Coope**	**1.24**	**80**	*e* P	**Pn**	**15 53 19.6**	**-0.1**
CPMI	**Catarata Coope**	**1.24**	**80**	*i* P	**Pn**	**15 53 19.4**	**-0.3**
CPMI				*i* S	**Sg**	**15 53 37.4**	**-0.1**
ARIN	**Rivas**	**1.38**	**351**	*i* P	**Pn**	**15 53 19.5**	**-2.0**
ARIN				IAML		15 54 03.8	
	comp=Z,5μm,1.0s						
JAPN	**AI SSO del Vol**	**1.44**	**358**	*i* P	**Pb**	**15 53 22.9**	**-0.5**
JAPN				IAML		15 53 30.8	
	comp=Z,390nm,1.0s						
MORN	**AI Ó del Volca**	**1.46**	**359**	*i* P	**Pn**	**15 53 21.6**	**-0.9**
MORN				IAML		15 53 32.3	
	comp=Z,580nm,1.0s						
CONN	**Concepcion**	**1.48**	**360**	*i* P	**Pn**	**15 53 21.8**	**-1.0**
CONN				IAML		15 53 31.2	
	comp=Z,2μm,1.0s						
LCR2	**La Lucha 2**	**1.63**	**102**	*e* P	**Pn**	**15 53 25.3**	**+0.3**
VICA	**Volcano Irazu**	**1.76**	**93**	*e* P	**Pn**	**15 53 27.3**	**+0.3**
CDM	**Cerro de Muert**	**1.91**	**106**	*e* P	**Pn**	**15 53 29.2**	**+0.2**
ACON	**Acoyapa**	**1.93**	**13**	*i* P	**Pn**	**15 53 28.6**	**-0.4**
ACON	**Acoyapa**	**1.93**	**13**	*i* P	**Pn**	**15 53 29.0**	**0.0**
ACON				*i* S	**Sb**	**15 53 55.0**	**-0.5**
ACON				IAML		15 53 58.0	
	comp=Z,170nm,1.0s						
BOAB	**BOACO BROADBAN**	**2.36**	**359**	*i* P	**Pn**	**15 53 34.6**	**-0.3**
BOAB				IAML		15 54 21.7	
	comp=Z,55nm,1.0s						
RCPN	**Sur Rio San Ju**	**3.46**	**352**	*i* P	**Pn**	**15 53 50.9**	**+0.8**
RCPN				IAML		15 54 07.7	
	comp=Z,0.2nm,1.0s						

IDC 19 16:01:58.6±2.4, 6°21S×129°71E, h0km, mb3.6/1, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=170.1km s-min=32.0km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.37**	**162**	Pn	Pn	16 05 22.6	-0.9
	0.2nm,0.3s,baz=345,slow=13,SNR=4.7						
WRA				Sn	Sn	16 07 50.2	-14
	0.1nm,0.3s,baz=337,slow=22,SNR=1.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.82**	**167**	P	P	16 06 08.8	-0.2
	0.1nm,0.3s,baz=341,slow=9.6,SNR=4.6						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**67.41**	**327**	P	P	16 12 56.0	0.0
	0.2nm,0.4s,baz=116,slow=6.6,SNR=6.2						
	0.2nm,0.4s						

IDC 19 16:02:32.1±1.7, 11°92N×11°62W, h0km, mb3.8/5, mbtmp3.9/7, ML3.7/2, Error ellipse: s-maj=41.8km s-min=23.6km az=51.0
NEIC 19 16:02:33.2±1.7, 11°8N±0°1×11°96W±0°10, h14km±4km, mb4.6/8, Error ellipse: s-maj=18.8km s-min=12.4km az=203.0

ISC 19 16:02:31.2±0.6, 11°7N±0°1×11°91W±0°07, h10km, n27, σ1ᵏ66/28, mb4.2/8, 3C, Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**5.38**	**304**	Pn	**Pn**	**16 03 50.2**	**-1.4**
	2.7nm,0.3s,baz=192,slow=4.4,SNR=1.8						
BBTS				Sn	**Sn**	**16 04 49.6**	**-4.0**
	4.3nm,0.3s,baz=209,slow=17,SNR=1.4						
BBTS				Lg	Lg	16 05 14.9	
	4.6nm,0.3s,baz=77,slow=2.2,SNR=1.7						
MBO	**M'Bour**	**5.60**	**299**	Pn	**Pn**	**16 03 53.2**	**-1.3**
TIC	**Toumodi**	**8.46**	**126**⇑	*e* P	**Pn**	**16 04 34.7**	**+0.8**
	21nm,0.2s						
DBIC	**Dimbokro**	**8.57**	**125**	Pn	**Pn**	**16 04 37.1**	**+1.6**
DBIC	**Dimbokro**	**8.57**	**125**	Pn	**Pn**	**16 04 36.4**	**+1.0**
	0.9nm,0.3s,baz=309,slow=11,SNR=12						
DBIC				Sn	**Sn**	**16 06 08.9**	**-3.3**
	1.7nm,0.3s,baz=214,slow=18,SNR=3.0						
DBIC				Lg	Lg	16 07 00.6	
	4.6nm,0.3s,baz=33,slow=21,SNR=13						
	5.2nm,0.5s						
LIC	**Lamto**	**8.71**	**128**⇑	*i* P	**Pn**	**16 04 37.7**	**+0.4**
	8.4nm,0.3s						
KIC	**Kosan Boka**	**8.85**	**126**⇑	*i* P	**Pn**	**16 04 38.1**	**-1.2**
	4.2nm,0.4s						
TOA0	**Torodi Ar. Sit**	**13.36**	**82**		**Pn**	**16 05 38.0**	**-3.1**
TORD	**Torodi Ar. Bea**	**13.36**	**82**	Pn	Pn	16 05 37.6	-3.5
TORD	**Torodi Ar. Bea**	**13.36**	**82**	Pn	**Pn**	**16 05 37.9**	**-3.2**
	0.3nm,0.3s,baz=269,slow=13,SNR=15						
TORD				Sn	Sn	16 08 01.0	-8.9
	0.3nm,0.3s,baz=272,slow=23,SNR=6.0						
TORD				Lg	Lg	16 09 25.9	
	0.2nm,0.3s,baz=259,slow=24,SNR=3.0						
	1.8nm,0.6s						
TIP	**Timpagrande**	**37.36**	**38**	P	**P**	**16 09 44.1**	**-0.1**
TIP				IAmb	IAmb	16 09 49.9	
	comp=Z,33nm,1.6s						
BRTR	**Keskin Array B**	**48.90**	**47**	P	**P**	**16 11 18.6**	**+0.9**
BRTR	**Keskin Array B**	**48.90**	**47**	P	**P**	**16 11 19.1**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=252,slow=5.4,SNR=3.8						
	comp=Z,0.7nm,0.7s						
BOAV	**Boa Vista**	**49.05**	**263**	P	**P**	**16 11 19.7**	**+0.6**
BOAV				IAmb	IAmb	16 12 27.9	
	comp=Z,9.8nm,1.2s						
AKASG	**Malin Array Be**	**51.34**	**32**	P	**P**	**16 11 36.3**	**+0.5**
AKASG				IAmb	IAmb	16 12 57.8	
	comp=Z,6.1nm,1.4s						
HFS	**Hagfors**	**51.93**	**16**	P	**P**	**16 11 40.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=192,slow=13,SNR=1.5						
	comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**56.79**	**21**	P	**P**	**16 12 15.4**	**0.0**
	comp=Z,1.8nm,1.1s,baz=246,slow=8.1,SNR=4.9						
	comp=Z,1.8nm,1.1s						
ARCES	**ARCESS Array B**	**62.46**	**14**	P	**P**	**16 12 54.5**	**0.0**
ARCES	**ARCESS Array B**	**62.46**	**14**	P	**P**	**16 12 54.4**	**0.0**
	comp=Z,2.1nm,1.0s,baz=199,slow=3.3,SNR=4.9						
	comp=Z,2.1nm,1.0s						
AC02	**Maricunga**	**67.46**	**234**	P	**P**	**16 13 28.8**	**+0.6**
BG3	**Lake Jocassee**	**67.88**	**303**	P	**P**	**16 13 30.2**	**0.0**
ABKAR	**Akbulak array**	**69.38**	**42**	P	**P**	**16 13 40.4**	**+1.1**
MAKZ	**Makanchi**	**84.21**	**44**	P	**P**	**16 15 04.4**	**+1.3**
MKAR	**Makanchi Array**	**84.42**	**44**	P	**P**	**16 15 04.8**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=272,slow=4.8,SNR=3.0						
	comp=Z,0.2nm,0.5s						
TIXI	**Tiksi**	**92.82**	**12**	P	**P**	**16 15 45.7**	**+2.0**
ASAR	**Alice Springs**	**145.42**	**115**	PKPbc	**PKPdf**	**16 22 11.1**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=276,slow=2.8,SNR=17						
WRA	**Warramunga Arr**	**146.56**	**108**	PKPbc	**PKPab**	**16 22 15.8**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=257,slow=3.4,SNR=5.6						

IDC 19 16:04:00.3±1.1, 1°90S×100°37E, h0km, mb4.1/13, mbtmp4.1/13, MS2.9/1, Error ellipse: s-maj=42.0km s-min=15.6km az=56.0
DJA 19 16:04:08.2±1.3, 2°S±3°×10°0E±°, h29km±14km, M4.2/10, MLv4.2/10
NEIC 19 16:04:11.1±1.0, 1°77S±0°08×100°6E±0°1, h76km±8km, mb4.4/25, Error ellipse: s-maj=16.1km s-min=9.5km az=62.0

ISC 19 16:04:08.2±0.5, 1°84S±0°05×100°40E±0°04, h56km, n61, σ1ᵍ17/61, mb4.4/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.99**	**203**	P	**Pn**	**16 04 25.8**	**-0.3**
PPSI				S	**Sn**	**16 04 43.3**	**+4.1**
KRJI	**Kerinci**	**1.09**	**103**	P	**Pn**	**16 04 28.9**	**+1.5**
KRJI				S	**Sn**	**16 04 44.6**	**+3.0**
SISI	**Saibi**	**1.41**	**291**	P	**Pn**	**16 04 32.6**	**+1.0**
SISI				S	**Sn**	**16 04 50.1**	**+1.0**
BKNI	**Bangkinang**	**2.25**	**17**	P	**Pn**	**16 04 44.2**	**+1.2**
BKNI	**Bangkinang**	**2.25**	**17**	P	**Pn**	**16 04 43.3**	**+0.3**
PBSI	**Pulau Batu**	**2.77**	**310**	P	**Pn**	**16 04 49.8**	**-0.3**
MNAI	**Manna**	**3.57**	**135**	Pn	**Pn**	**16 05 03.5**	**+2.3**
MNAI	**Manna**	**3.57**	**135**	P	**Pn**	**16 05 01.7**	**+0.5**
MNAI				S	**Sn**	**16 05 43.8**	**+1.6**
DSRI	**Dabo**	**4.39**	**72**	P	**Pn**	**16 05 12.7**	**+0.3**
RPSI	**Rantau Prapat**	**4.74**	**342**		**Pn**	**16 05 20.5**	**+3.2**
TPRI	**Tanjung Pinang**	**4.95**	**56**	P	**Pn**	**16 05 20.2**	**+0.1**
MYKOM	**Kota Tinggi**	**4.99**	**44**		**Pn**	**16 05 21.4**	**+0.8**
KULM	**Kulim**	**7.09**	**2**	Pn	**Pn**	**16 05 51.5**	**+2.1**
CMAR	**Chiang Mai Arr**	**20.22**	**356**	P	**P**	**16 08 39.1**	**+0.3**
	1.1nm,0.7s,baz=185,slow=9.5,SNR=9.2						
CMAR				LR	LR	16 16 58.2	
	comp=Z,29nm,18.1s,baz=230,slow=38						
	1.1nm,0.7s						
TOLI2	**Tolitoli**	**20.59**	**82**	P	**P**	**16 08 42.8**	**0.0**
TOLI2				IAmb	IAmb	16 08 44.2	
	comp=Z,7.0nm,0.7s						
CRAI	**Chiangrai**	**21.93**	**360**	P	**P**	**16 08 58.3**	**+1.1**
SLVN	**Son La**	**23.29**	**8**	P	**P**	**16 09 10.8**	**-0.5**
WB0	**Warramunga Arr**	**37.70**	**121**	P	**P**	**16 11 17.4**	**-1.3**
WRA	**Warramunga Arr**	**37.73**	**121**	P	**P**	**16 11 17.4**	**-1.5**
WRA	**Warramunga Arr**	**37.73**	**121**	P	**P**	**16 11 17.2**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=301,slow=9.5,SNR=11						
	comp=Z,0.7nm,0.4s						
WRAB	**Tennant Creek**	**37.73**	**121**	P	**P**	**16 11 17.8**	**-1.1**
WRAB				IAmb	IAmb	16 12 01.6	
	comp=Z,6.1nm,0.9s						
WB2	**Warramunga Arr**	**37.74**	**121**	P	**P**	**16 11 17.5**	**-1.4**
WB2				IAmb	IAmb	16 11 27.7	
	comp=Z,9.9nm,1.4s						
WR0	**Warramunga Arr**	**37.91**	**121**	P	**P**	**16 11 19.1**	**-1.4**
WR0				IAmb	IAmb	16 11 19.8	
	comp=Z,3.5nm,0.8s						
AS31	**Alice Springs**	**39.02**	**126**	P	**P**	**16 11 29.4**	**-0.4**
ASAR	**Alice Springs**	**39.02**	**127**	P	**P**	**16 11 29.4**	**-0.4**
	comp=Z,3.3nm,0.6s,baz=304,slow=7.8,SNR=69						
ASAR				PcP	**PcP**	**16 13 39.7**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=314,slow=2.6,SNR=6.8						
	comp=Z,3.3nm,0.6s						
KSRS	**Korea Array**	**46.68**	**30**	P	**P**	**16 12 30.5**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=220,slow=7.5,SNR=4.4						
	comp=Z,0.8nm,0.7s						
CTAO	**Charters Tower**	**48.30**	**115**	P	**P**	**16 12 43.3**	**-1.1**
CTAO				IAmb	IAmb	16 12 54.8	
	comp=Z,8.3nm,1.4s						
STKA	**Stephens Creek**	**48.96**	**132**	P	**P**	**16 12 49.4**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=294,slow=12,SNR=2.9						
	comp=Z,1.4nm,0.6s						
BOOM	**Boomskoye usch**	**49.35**	**336**	P	**P**	**16 12 52.6**	**+0.3**
BOOM				IAmb	IAmb	16 13 09.9	
	comp=Z,6.6nm,1.1s						
ARSB	**Arslanbob**	**49.67**	**333**	P	**P**	**16 12 55.5**	**+0.8**
ARSB				IAmb	IAmb	16 12 57.0	
	comp=Z,2.2nm,1.2s						
SONM	**Songino Array**	**49.75**	**5**	P	**P**	**16 12 55.0**	**-0.2**
SONM	**Songino Array**	**49.75**	**5**	P	**P**	**16 12 54.8**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=187,slow=9.2,SNR=8.7						
SONM				PcP	**PcP**	**16 14 15.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=207,slow=3.5,SNR=4.4						
	comp=Z,1.4nm,0.6s						
AAK	**Ala-Archa**	**50.07**	**335**	P	**P**	**16 12 58.4**	**+0.7**
AAK				IAmb	IAmb	16 13 01.4	
	comp=Z,4.9nm,1.4s						
MK31	**Makanchi Array**	**50.99**	**344**	P	**P**	**16 13 04.2**	**-0.1**
MK31				IAmb	IAmb	16 13 05.3	
	comp=Z,2.6nm,0.6s						
MKAR	**Makanchi Array**	**50.99**	**344**	P	**P**	**16 13 04.3**	**-0.1**
MKAR	**Makanchi Array**	**50.99**	**344**	P	**P**	**16 13 04.6**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=148,slow=8.0,SNR=59						
	comp=Z,3.6nm,0.6s						
MAKZ	**Makanchi**	**51.09**	**344**	P	**P**	**16 13 04.9**	**-0.2**
MAKZ				IAmb	IAmb	16 13 06.5	
	comp=Z,3.6nm,1.2s						
USA0B	**Ussuriysk Arra**	**53.83**	**28**	P	**P**	**16 13 24.4**	**-1.1**
USRK	**Ussuriysk Ar.**	**53.83**	**28**	P	**P**	**16 13 24.4**	**-1.0**
USRK	**Ussuriysk Ar.**	**53.83**	**28**	P	**P**	**16 13 25.5**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=231,slow=5.0,SNR=19						
	comp=Z,3.7nm,0.6s						
EIDS	**Eidsvold**	**54.09**	**120**	P	**P**	**16 13 26.5**	**-1.2**
KURBB	**Kurchatov Arra**	**55.51**	**343**	P	**P**	**16 13 37.3**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=163,slow=7.1,SNR=12						
	comp=Z,2.3nm,0.7s						
KURK	**Kurchatov**	**55.57**	**343**	P	**P**	**16 13 37.9**	**0.0**
KURK				IAmb	IAmb	16 13 38.8	
	comp=Z,4.1nm,0.8s						
ZAA0	**Zalesovo Array**	**57.09**	**349**	P	**P**	**16 13 48.2**	**-0.5**
ZALV	**Zalesovo Beam**	**57.09**	**349**	P	**P**	**16 13 48.0**	**-0.6**
ZALV	**Zalesovo Beam**	**57.09**	**349**	P	**P**	**16 13 48.4**	**-0.3**
	comp=Z,6.1nm,0.8s,baz=174,slow=6.1,SNR=27						
	comp=Z,6.1nm,0.8s						
H04N2	**CROZET ISLANDS**	**61.16**	**217**	T	T	17 19 55.2	
	baz=59,slow=75,SNR=85						
H04N1	**CROZET ISLANDS**	**61.17**	**217**	T	T	17 19 55.7	
	baz=59,slow=75,SNR=92						
H04N3	**CROZET ISLANDS**	**61.18**	**217**	T	T	17 19 54.3	
	baz=59,slow=75,SNR=90						
H04S1	**CROZET ISLANDS**	**61.45**	**216**	T	T	17 20 10.8	
	baz=58						
H04S3	**CROZET ISLANDS**	**61.46**	**216**	T	T	17 20 11.4	
	baz=58,SNR=6.8						
H04S2	**CROZET ISLANDS**	**61.47**	**216**	T	T	17 20 10.8	
	baz=58						
ABKAR	**Akbulak array**	**61.70**	**331**	P	**P**	**16 14 20.1**	**-0.4**
KBZ	**Khabaz**	**68.45**	**319**	P	**P**	**16 15 04.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=132,slow=4.3,SNR=3.8						
	comp=Z,0.9nm,0.7s						
NRIK	**Noril'sk**	**71.58**	**355**	P	**P**	**16 15 22.7**	**-0.4**
NRIK				IAmb	IAmb	16 15 23.4	
	comp=Z,4.5nm,1.3s						
BURAR	**Bucovina Array**	**81.41**	**319**	P	**P**	**16 16 19.9**	**+0.6**
FIA1	**FINESS Array S**	**84.16**	**332**	P	**P**	**16 16 33.1**	**0.0**
FINES	**FINESS Array B**	**84.16**	**332**	P	**P**	**16 16 33.4**	**+0.3**
FINES	**FINESS Array B**	**84.16**	**332**	P	**P**	**16 16 33.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=106,slow=6.2,SNR=5.3						
	comp=Z,0.6nm,0.6s						
ARCES	**ARCESS Array B**	**86.46**	**340**	P	**P**	**16 16 44.3**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=43,slow=5.5,SNR=3.7						
	comp=Z,3.5nm,1.0s						
TXAR	**Lajitas Array**	**144.33**	**38**	PKP	**PKPdf**	**16 23 38.0**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=228,slow=1.1,SNR=18						

SKO 19 16:23:29.5, 41°24N×22°84E, h15km, ML1.1
SOF 19 16:23:29.6, 41°25N±0°01×22°86E±0°01, h13km±1km, MD2.6/5
ATH 19 16:23:30.7, 41°19N×22°83E, h8km±1km, ML1.8/5, Error ellipse: s-maj=1.8km s-min=1.0km az=160.0
BEO 19 16:23:31.9±0.6, 41°29N×22°81E, h23km±4km, ML1.5/6

ISC 19 16:23:30.1±0.8, 41°24N±0°02×22°83E±0°02, h10km±6km, n34, σ0ᵏ57/61, 4C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.09**	**147**⇓	*i* Pg	**Pg**	**16 23 32.6**	**0.0**
KNT				*i* Sg	**Sg**	**16 23 34.3**	**-0.1**
KNT	**Kendrikon**	**0.09**	**147**	P	**Pg**	**16 23 32.6**	**0.0**
KNT				S	**Sg**	**16 23 34.1**	**-0.3**
KNT				AML	AML	16 23 34.4	
	comp=N,6319μm,0.2s						
KNT				AML	AML	16 23 34.7	
	comp=E,2821μm,0.1s						
VAY	**Valandovo**	**0.21**	**293**	*i* Pg	**Pg**	**16 23 34.9**	**+0.3**
VAY				*i* Sg	**Sg**	**16 23 37.9**	**+0.3**
VAY				*i* Lg	Lg	16 23 38.1	
	comp=N,64nm,0.3s						
VAY				*i* Lg	Lg	16 23 38.3	
	comp=E,21nm,0.4s						
GRG	**Griva**	**0.43**	**229**⇑	*i* Pg	**Pg**	**16 23 38.3**	**-0.3**
GRG				*i* Sg	**Sg**	**16 23 44.6**	**+0.4**
GRG	**Griva**	**0.43**	**229**	P	**Pg**	**16 23 38.3**	**-0.3**
GRG				S	**Sg**	**16 23 44.2**	**0.0**
GRG				AML	AML	16 23 45.0	
	comp=N,390μm,0.3s						
GRG				AML	AML	16 23 45.6	
	comp=E,752μm,0.1s						
SOH	**Sokhos**	**0.57**	**136**	*i* Pg	**Pg**	**16 23 41.3**	**+0.1**
SOH				*i* Sg	**Sg**	**16 23 48.5**	**-0.3**
SOH	**Sokhos**	**0.57**	**136**	P	**Pg**	**16 23 41.2**	**-0.1**
SOH				S	**Sg**	**16 23 48.5**	**-0.3**
SOH				AML	AML	16 23 50.0	
	comp=N,202μm,0.3s						
SOH				AML	AML	16 23 52.1	
	comp=E,263μm,0.1s						
SRS	**Serrai**	**0.59**	**102**	*e* Pg	**Pg**	**16 23 41.5**	**0.0**
SRS				*e*Sg	**Sn**	**16 23 55.0**	**+0.9**
SRS	**Serrai**	**0.59**	**102**	*i* Pg	**Pg**	**16 23 41.5**	**0.0**
SRS				*i* Sg	**Sg**	**16 23 49.5**	**+0.2**
SRS	**Serrai**	**0.59**	**102**	P	**Pg**	**16 23 41.2**	**-0.3**
SRS				S	**Sg**	**16 23 49.4**	**+0.2**
SRS				AML	AML	16 23 50.0	
	comp=E,77μm,0.2s						
SRS				AML	AML	16 23 50.2	
	comp=N,72μm,0.1s						
THE	**Thessaloniki

IFIR	**Firoozkooh**	**4.17**	**50**	Pn	**Pn**	**16 28 16.9**	**+1.7**
IPRN	**Peran**	**4.32**	**41**	Pn	**Pn**	**16 28 18.9**	**+1.7**
IHRS	**Heris**	**5.49**	**345**	Pn	**Pn**	**16 28 35.5**	**+2.3**
MKAR	**Makanchi Array**	**28.88**	**52**	P	**P**	**16 33 10.2**	**+0.1**
	0.5nm,0.7s,baz=249,slow=6.0,SNR=7.1 0.5nm,0.7s						
GERES	**GERESS Array B**	**30.57**	**312**	P	**P**	**16 33 25.8**	**+0.7**
	0.2nm,0.3s,baz=152,slow=4.4,SNR=1.8 0.2nm,0.3s						
HFS	**Hagfors**	**35.57**	**330**	P	**P**	**16 34 08.0**	**-0.5**
	0.8nm,0.4s,baz=125,slow=7.8,SNR=2.0 0.8nm,0.4s						
NOA	**NORSAR Array B**	**37.10**	**330**	P	**P**	**16 34 20.8**	**-0.8**
	0.5nm,0.7s,baz=58,slow=13,SNR=2.4 0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P	**P**	**16 35 44.5**	**0.0**
	0.6nm,0.8s,baz=68,slow=6.2,SNR=4.1 0.6nm,0.8s						
SPITS	**Spitsbergen Ar**	**47.40**	**351**	P	**P**	**16 35 45.4**	**+0.1**
	11nm,1.0s,baz=145,slow=9.2,SNR=6.3 11nm,1.0s						
ILAR	**Eielson Array**	**81.76**	**7**	P	**P**	**16 39 28.7**	**-1.1**
	0.3nm,0.8s,baz=302,slow=3.6,SNR=2.9 0.3nm,0.8s						
YKA	**Yellowknife Ar**	**83.89**	**352**	P	**P**	**16 39 40.2**	**-0.8**
	0.2nm,0.7s,baz=13,slow=5.7,SNR=2.7 0.2nm,0.7s						

NEIC ***19*** *16:28:01.7±0.5,36°.85N±0°.02×98°.81W±0°.03,h12km±7km, Error ellipse: s-maj=4.3km s-min=2.1km az=115.0*

TUL 19 16:28:01.6±0.6, 36°.86N±0°.01×98°.82W±0°.02, h5km±6km, ML2.6, mL1.9/10(NEIC), **Error ellipse: s-maj=3.0km s-min=1.8km az=111.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK035	**E0210 Rd and N**	**0.18**	**152**	Pg	Pg	16 28 04.8	-0.3
OK038	**West end E0370**	**0.39**	**171**	Pg	Pg	16 28 09.2	+0.1
OK038	159nm,0.3s			IAML		16 28 20.8	
OK038	146nm,0.3s			IAML		16 28 21.0	
OK032	**Salt Plains WL**	**0.49**	**97**	Pg	Pg	16 28 10.5	-0.5
OK032	52nm,0.2s			IAML		16 28 28.4	
U32A	**Winter Ranch,**	**0.51**	**197**	Pg	Pg	16 28 11.5	+0.2
U32A	comp=N,44nm,0.1s			IAML		16 28 21.5	
KAN14	**Manchester OK**	**0.69**	**82**	Pg	Pg	16 28 14.9	+0.1
CROK	**Carrier**	**0.76**	**118**	Pg	Pg	16 28 16.2	+0.1
CROK	comp=N,55nm,0.3s			IAML		16 28 35.4	
CROK	comp=E,61nm,0.3s			IAML		16 28 37.9	
GC02	**Grant County #**	**0.77**	**91**	Pg	Pg	16 28 16.2	-0.1
KAN08	**Anthony NE Sta**	**0.77**	**62**	Pg	Pg	16 28 16.4	+0.1
R32A	**Long Quarter,**	**1.56**	**3**		Pn	16 28 30.0	-0.1
OK048	**Pawnee Station**	**1.57**	**106**		Pn	16 28 30.4	+0.2
WMOK	**Wichita Mounta**	**2.12**	**179**	Pn	Pn	16 28 38.2	+0.4

IDC ***19*** *16:47:57.8±1.1,3°.34S×130°.22E,h0km,mb3.7/7, mbtmp3.7/8,ML3.6/1,Error ellipse: s-maj=88.2km s-min=19.2km az=75.0*

DJA ***19*** *16:48:00.8±0.3,3°.5±4°×13°.1E±°,h10km,M3.7/10,mb4.0/4, MLv3.5/10*

ISC 19 16:47:59.0±0.7, 3°.31S±0°.06×130°.57E±0°.06, h10km, n16, σ2°.78/19, mb3.8/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.37**	**209**	P	**Pg**	**16 48 28.4**	**+2.9**
FAKI	**Fak Fak**	**1.72**	**77**	P	**Pn**	**16 48 30.5**	**+1.4**
FAKI				S	**Sn**	**16 48 51.2**	**0.0**
SWI	**Sorong**	**2.53**	**16**	P	**Pn**	**16 48 39.1**	**-1.1**
KMPI	**Kaimana, Papua**	**3.15**	**96**	P	**Pn**	**16 48 51.1**	**+2.3**
NLAI	**Namlea**	**3.46**	**271**	P	**Pn**	**16 48 55.1**	**+2.0**
LBMI	**Labuha**	**4.05**	**311**	P	**Pn**	**16 49 01.7**	**+0.5**
SANI	**Sanana**	**4.74**	**285**	P	**Pn**	**16 49 11.6**	**+0.9**
SMPI	**Sarmi**	**8.24**	**81**	P	**Pn**	**16 50 00.2**	**+1.5**
	18nm,1.3s						
WRA	**Warramunga Arr**	**16.94**	**168**	Pn	**Pn**	**16 51 56.2**	**-0.2**
	0.2nm,0.3s,baz=346,slow=11,SNR=7.2						
WRA	0.1nm,0.3s,baz=354,slow=23,SNR=3.2 1.0nm,0.4s			Sn	**Sn**	**16 54 57.4**	**-7.3**
ASAR	**Alice Springs**	**20.49**	**171**	P	**P**	**16 52 37.8**	**+0.5**
	1.9nm,0.4s,baz=352,slow=11,SNR=89						
ASAR	0.2nm,0.7s,baz=2.2,slow=27,SNR=1.3 1.9nm,0.4s			S	**S**	**16 56 20.8**	**-6.1**
STKA	**Stephens Creek**	**30.25**	**161**	P	**P**	**16 54 11.7**	**+1.5**
	0.8nm,0.4s,baz=354,slow=9.2,SNR=1.2 0.8nm,0.4s						
KSRS	**Korea Array**	**40.63**	**357**	P	**P**	**16 55 40.2**	**+1.0**
	0.4nm,0.5s,baz=172,slow=8.6,SNR=2.4 0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**47.31**	**1**	P	**P**	**16 56 32.3**	**-0.5**
	0.5nm,0.5s,baz=153,slow=4.8,SNR=1.9 0.5nm,0.5s						
SONM	**Songino Array**	**55.16**	**340**	P	**P**	**16 57 32.7**	**+0.8**
	0.2nm,0.6s,baz=147,slow=4.8,SNR=2.7 0.2nm,0.6s						
MKAR	**Makanchi Array**	**65.49**	**326**	P	**P**	**16 58 42.3**	**-0.3**
	0.3nm,0.3s,baz=111,slow=8.3,SNR=7.9 0.3nm,0.3s						
BVAR	**Borovoye Array**	**75.28**	**327**	P	**P**	**16 59 40.3**	**-1.9**
	0.5nm,0.7s,baz=160,slow=4.6,SNR=2.5 0.5nm,0.7s						

NNC 19 16:52:05.4±3.2, 37°.25N×78°.72E, h0km, mb3.9, mpv3.6, 2C, Error ellipse: s-maj=25.7km s-min=20.7km az=48.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**5.93**	**347**	Pg	Pg	16 53 54.5	-4.6
TNSS	2.3nm,0.2s 2.1nm,0.5s			Lg	Lg	16 55 15.9	
MDOK	**Medeo**	**6.04**	**348**	Pg	Pg	16 53 56.5	-4.6
MDOK	1.5nm,0.2s 5.6nm,0.3s			Lg	Lg	16 55 19.3	
PDGK	**Podgornoye**	**6.10**	**5**	⇑Pn	Pn	16 53 37.8	+0.9
PDGK	1.4nm,0.5s 3.2nm,0.5s			⇑Sn	Sn	16 54 48.8	+1.5
MTBS	**Maitube**	**6.13**	**344**	Pg	Pb	16 53 55.9	+2.9
MTBS	2.0nm,0.2s 3.3nm,0.2s			Lg	Lg	16 55 18.2	
DGS	**Degeres**	**6.39**	**340**	Pg	Pb	16 54 02.6	+5.1
DGS	1.5nm,0.3s 2.7nm,0.6s			Lg	Lg	16 55 29.7	
KTBS	**Karatobe**	**6.63**	**347**	Pg	Pb	16 54 06.1	+4.5
KTBS	0.6nm,0.1s 2.7nm,0.4s			Lg	Lg	16 55 35.9	
KRBS	**Karabastau**	**6.84**	**341**	Pg	Pb	16 54 09.2	+4.1
KRBS	0.9nm,0.2s 2.5nm,0.4s			Lg	Lg	16 55 41.0	
MRKS	**Merke**	**6.92**	**324**	Pg	Pb	16 54 10.1	+3.6
MRKS	0.4nm,0.1s 2.6nm,0.6s			Lg	Lg	16 55 42.6	
MK31	**Makanchi Array**	**9.89**	**14**	Pn	Pn	16 54 28.3	-0.5
MK31	0.3nm,0.2s,baz=189,slow=14,SNR=16 0.7nm,0.3s,baz=197,slow=24,SNR=6.3			Sn	Sn	16 56 19.5	-1.1

IDC 19 16:56:15.2±3.6, 6°.66S×148°.15E, h0km, mb3.2/2, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=104.1km s-min=26.8km az=100.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.90**	**200**	Pn	Pn	16 57 04.7	+2.1
	16nm,0.3s,baz=13,slow=9.2,SNR=56						
PMG	30nm,0.3s,baz=0.3,slow=18,SNR=14 60nm,0.4s			Sn	Sn	16 57 39.0	+0.8

WRA	**Warramunga Arr**	**18.81**	**224**	P	P	17 00 35.2	-1.3
	0.1nm,0.3s,baz=51,slow=11,SNR=2.1 0.3nm,0.5s						
ASAR	**Alice Springs**	**21.75**	**217**	P	P	17 01 07.4	-1.2
	0.3nm,0.5s,baz=49,slow=9.4,SNR=12 0.3nm,0.5s						
MKAR	**Makanchi Array**	**78.73**	**320**	P	P	17 08 20.1	+0.5
	0.3nm,0.7s,baz=96,slow=7.3,SNR=4.1 0.3nm,0.7s						

IDC ***19*** *16:56:22.4±1.1,23°.93N×121°.70E,h0km,mb3.8/9, mbtmp3.8/10,ML2.5/1,MS3.1/11,Error ellipse: s-maj=64.5km s-min=19.2km az=67.0*

NIED ***19*** *16:56:24.9,23°.96N×122°.30E,h22km,MW3.9,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr1.60; Mθθ-4.61; Mφφ3.01; Mrθ4.96; Mθφ1.07; Mφr2.59; Fault plane solution: M₀6.96000×10¹⁴ NP1:φs62.00000°, δ82.00000°,λ,58.00000°. NP2:φs319.00000°,δ33.00000°, λ,165.00000°.*

JMA ***19*** *16:56:24.9±0.2,24°.0N±0°.8×122°.3E±0°.3,h22km±3km, MD3.8/18,MV3.5/18,TAIWAN REGION*

TAP ***19*** *16:56:25.3,24°.03N×122°.31E,h24km,ML3.9,C*

ASIES ***19*** *16:56:25.3,24°.03N×122°.31E,h24km,ML3.9,Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr0.95; Mθθ-2.00; Mφφ1.04; Mrθ3.65; Mθφ1.24; Mφr2.13; Fault plane solution: M₀4.73408×10²¹ NP1:φs66.33000°, δ84.36000°,λ,64.92000°. NP2:φs324.46000°,δ25.67000°, λ,166.88000°. Principal axes: T Plg44.9790°, Azm311.2500°; N Plg24.9530°, Azm68.9590°; P Plg34.5960°, Azm177.6800°;*

ISC 19 16:56:25.0±0.8, 24°.00N±0°.02×122°.29E±0°.02, h26km±6km, n175, σ1s00/232, mb3.8/9, MS3.1/7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.12**	**10**	*i* P	**Pb**	**16 56 29.4**	**-0.2**
EOS4	baz=6.0			*i* S	**Sb**	**16 56 32.6**	**-0.1**
EOS3	**EOS3**	**0.29**	**4**	*i* P	**Pb**	**16 56 31.9**	**+0.1**
EOS3	baz=345			*e*S	**Sn**	**16 56 37.1**	**-1.6**
EOS2	**EOS2**	**0.42**	**352**	*i* P	**Pb**	**16 56 34.4**	**+0.5**
EAHA	**Aohua**	**0.60**	**303**	*e*P	**Pb**	**16 56 37.0**	**0.0**
HWA	**Hwalien**	**0.63**	**268**	*e*P	**Pb**	**16 56 38.0**	**+0.5**
ETL	**Fush Village**	**0.63**	**285**	*e*P	**Pb**	**16 56 37.8**	**+0.2**
ETL	baz=266			*e*S	**Sn**	**16 56 48.1**	**+0.5**
TWD	**Chiawan**	**0.64**	**277**	*i* P	**Pb**	**16 56 37.6**	**-0.1**
TWD	baz=274			S	**Sb**	**16 56 47.0**	**+0.7**
EWUT	**Wuta**	**0.65**	**313**	P	**Pb**	**16 56 37.3**	**-0.5**
ENA	**Nanau**	**0.66**	**310**	P	**Pb**	**16 56 37.5**	**-0.4**
ENA	baz=317			*e*S	**Sn**	**16 56 48.1**	**-0.1**
NACB	**Ninganchiao**	**0.66**	**285**	P	**Pb**	**16 56 38.0**	**0.0**
NACB	**Ninganchiao**	**0.66**	**285**	P	**Pb**	**16 56 38.0**	**0.0**
NACB	baz=269			*e*S	**Sb**	**16 56 47.3**	**+0.4**
SHUL	**Shoufeng**	**0.70**	**253**	*e*P	**Pb**	**16 56 39.0**	**+0.4**
SHUL	baz=251			*e*S	**Sn**	**16 56 49.5**	**+0.3**
ESAO	**Su ao**	**0.70**	**324**	P	**Pb**	**16 56 38.1**	**-0.6**
ESAO	baz=328			*e*S	**Sb**	**16 56 47.9**	**-0.2**
TWC	**Suao**	**0.73**	**326**	*i* P	**Pb**	**16 56 38.3**	**-0.8**
TWC	baz=324			*e*S	**Sb**	**16 56 47.1**	**-1.6**
ETM	**Tongmen**	**0.73**	**268**	P	**Pb**	**16 56 38.9**	**-0.3**
ETM	baz=256			S	**Sn**	**16 56 50.3**	**+0.3**
JYNG	**Yonagunijimaku**	**0.74**	**53**	P	**Pb**	**16 56 39.4**	**+0.1**
JYNG				*e*S	**Sb**	**16 56 49.0**	**-0.2**
JYNG	**Yonagunijimaku**	**0.74**	**53**	A	A	16 56 39.4	
	comp=E,4.0nm,4.5s,comp=N,8.0nm,1.2s						
TEGC	**Jichi Village**	**0.75**	**247**	P	**Pb**	**16 56 39.5**	**+0.1**
TEGC	baz=245			S	**Sb**	**16 56 50.5**	**+1.2**
ETLH	**Xiulin Townshi**	**0.77**	**286**	P	**Pb**	**16 56 39.8**	**-0.1**
ETLH	baz=271			S	**Sn**	**16 56 51.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.80**	**55**	*i* P	**Pn**	**16 56 40.5**	**-0.1**
YOJ	baz=63			*i* S	**Sb**	**16 56 50.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.80**	**55**	P	**Pn**	**16 56 40.4**	**-0.1**
YOJ				*i* S	**Sb**	**16 56 50.6**	**-0.2**
YOJ	**Yonaguni jima**	**0.80**	**55**	A	A	16 56 40.4	
	comp=E,4.0nm,1.6s,comp=N,6.0nm,1.2s						
LXIB	**Xiulin Townshi**	**0.81**	**272**	*e*P	**Pb**	**16 56 40.2**	**-0.3**
LXIB	baz=259			*e*S	**Sb**	**16 56 51.0**	**-0.1**
ESL	**Shilin**	**0.81**	**257**	P	**Pb**	**16 56 39.7**	**-0.8**
NDS	**Dongshan**	**0.82**	**320**	P	**Pb**	**16 56 40.4**	**-0.3**
WARBT	**Fenglin Townsh**	**0.88**	**252**	P	**Pb**	**16 56 40.8**	**-0.8**
WARBT	baz=240			*e*S	**Sb**	**16 56 52.6**	**-0.4**
LATG	**Datong**	**0.88**	**307**	P	**Pb**	**16 56 41.6**	**-0.1**
LATG	baz=304			*e*S	**Sb**	**16 56 53.5**	**+0.4**
EGS		**0.90**	**339**	P	**Pb**	**16 56 42.0**	**-0.1**
EGS	baz=326			*e*S	**Sn**	**16 56 54.8**	**+0.6**
ILA	**Ilan**	**0.91**	**327**	*e*P	**Pn**	**16 56 42.4**	**+0.2**
TWE	**Neicheng**	**0.92**	**322**	P	**Pb**	**16 56 42.1**	**-0.2**
ENTT	**Nioudou**	**0.92**	**314**	P	**Pn**	**16 56 42.6**	**+0.3**
NDT	**Datong Townshi**	**0.93**	**310**	*e*P	**Pn**	**16 56 42.8**	**+0.4**
NNSB	**Datong**	**0.94**	**297**	P	**Pb**	**16 56 42.5**	**-0.2**
NNSB	baz=281			*e*S	**Sn**	**16 56 55.5**	**+0.4**
HGSD	**Ruisui**	**0.94**	**238**	P	**Pn**	**16 56 42.0**	**-0.6**
HGSD	baz=237			*e*S	**Sb**	**16 56 54.8**	**-0.1**
NNS	**Nan Shan**	**0.95**	**298**	P	**Pb**	**16 56 42.9**	**0.0**
NNS	baz=282			S	**Sn**	**16 56 56.2**	**+0.8**
NTC	**Toucheng**	**0.95**	**334**	*e*P	**Pn**	**16 56 43.1**	**+0.4**
WHF	**Hehuan Shan**	**0.95**	**279**	P	**Pb**	**16 56 42.8**	**-0.3**
WHF	baz=277			*e*S	**Sb**	**16 56 55.8**	**+0.3**
FUSS	**Fushou**	**0.99**	**285**	*e*P	**Pn**	**16 56 43.6**	**+0.2**
FUSS	baz=272			*e*S	**Sn**	**16 56 57.3**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.99**	**320**	P	**Pb**	**16 56 43.7**	**0.0**
FUSB	baz=317			S	**Sn**	**16 56 57.4**	**+0.8**
EHY	**Hungye**	**1.02**	**241**	P	**Pn**	**16 56 43.1**	**-0.4**
EHY	baz=240			*e*S	**Sb**	**16 56 57.4**	**+0.4**
CHGB	**Renai**	**1.03**	**274**	P	**Pn**	**16 56 43.9**	**0.0**
CHGB	baz=260			*e*S	**Sb**	**16 56 57.6**	**+0.2**
ECBN	**Changbin**	**1.03**	**229**	*e*P	**Pn**	**16 56 43.4**	**-0.3**
ECBN	baz=229			*e*S	**Sb**	**16 56 56.8**	**-0.5**
TWB1	**Santiao Chiao**	**1.04**	**345**	P	**Pb**	**16 56 44.2**	**-0.2**
TWT	**Tachien**	**1.05**	**284**	*e*P	**Pb**	**16 56 45.4**	**+0.7**
NWLT	**Wulai**	**1.06**	**317**	P	**Pb**	**16 56 45.0**	**+0.3**
TDCB	**Techi**	**1.07**	**284**	*e*P	**Pn**	**16 56 44.8**	**+0.4**
TDCB	baz=272			*e*S	**Sb**	**16 56 58.8**	**+0.2**
YHNB	**Yeheng**	**1.07**	**309**	P	**Pn**	**16 56 44.8**	**+0.5**
YHNB	**Yeheng**	**1.07**	**309**	P	**Pn**	**16 56 44.9**	**+0.5**
YHNB	baz=306			*e*S	**Sn**	**16 56 59.1**	**+0.7**
WUSB	**Renai**	**1.08**	**270**	P	**Pn**	**16 56 44.6**	**+0.2**
WUSB	baz=268			S	**Sb**	**16 56 59.1**	**+0.4**
VWDT	**VWDT**	**1.08**	**257**	P	**Pn**	**16 56 44.8**	**+0.3**
VWDT	baz=256			S	**Sb**	**16 56 59.0**	**+0.1**
NSK	**Sanguang**	**1.09**	**308**	*e*P	**Pn**	**16 56 44.8**	**+0.2**
NSK	baz=305			*e*S	**Sb**	**16 56 59.0**	**-0.1**
YULB	**Yu-li**	**1.09**	**237**	P	**Pn**	**16 56 44.5**	**-0.2**
YULB	**Yu-li**	**1.09**	**237**	P	**Pn**	**16 56 44.4**	**-0.2**
YULB	baz=253			*e*S	**Sn**	**16 56 58.7**	**-0.2**
EYUL	**Yuli**	**1.10**	**234**	P	**Pn**	**16 56 45.1**	**+0.3**
EYUL	baz=234			*e*S	**Sn**	**16 56 59.9**	**+0.8**
TWF1	**Yuli**	**1.12**	**235**	P	**Pn**	**16 56 44.9**	**-0.1**
TWF1	baz=223			*e*S	**Sn**	**16 56 59.7**	**+0.2**
CHKH	**Chenggong**	**1.15**	**226**	*e*P	**Pn**	**16 56 44.8**	**-0.6**
SXI1	**Grass Mountain**	**1.16**	**341**	P	**Pn**	**16 56 45.7**	**+0.1**
NWF	**Wu-fen Shan**	**1.17**	**336**	*e*P	**Pb**	**16 56 46.2**	**-0.3**
WFSB	**Wu-fen Shan**	**1.17**	**336**	*e*P	**Pb**	**16 56 46.2**	**-0.3**
WFSB	baz=333			*e*S	**Sb**	**16 57 01.2**	**0.0**
TWA	**Mucha**	**1.17**	**327**	*e*P	**Pb**	**16 56 47.1**	**+0.4**
NHDH	**Xindian Distri**	**1.19**	**324**	*e*P	**Pb**	**16 56 47.3**	**+0.4**
TATO	**Taipei**	**1.22**	**323**	P	**Pb**	**16 56 47.9**	**+0.5**
NHY	**Taipei**	**1.23**	**328**	*e*P	**Pb**	**16 56 48.1**	**+0.6**
CHKT	**Chengkung**	**1.24**	**224**	P	**Pn**	**16 56 45.7**	**-0.9**
CHKT	baz=212			*e*S	**Sn**	**16 57 00.6**	**-1.8**
TNOU	**National Taiwa**	**1.24**	**338**	*e*P	**Pn**	**16 56 47.1**	**+0.5**
NFF	**Wufeng Townshi**	**1.24**	**301**	*e*P	**Pb**	**16 56 47.9**	**0.0**
SSLB	**Suanglung**	**1.25**	**261**	P	**Pn**	**16 56 47.5**	**+0.8**
SSLB	**Suanglung**	**1.25**	**261**	P	**Pn**	**16 56 47.3**	**+0.6**
WCS	**Beigang Elemen**	**1.27**	**273**	*e*P	**Pb**	**16 56 48.3**	**+0.1**
SMLT	**Sun Moon Lake**	**1.28**	**265**	P	**Pn**	**16 56 48.0**	**+0.7**
SMLT	baz=253			S	**Sn**	**16 57 04.2**	**+0.5**
EHD	**Haiduan**	**1.31**	**230**	P	**Pn**	**16 56 47.3**	**-0.3**
EHD	baz=219			*e*S	**Sn**	**16 57 03.9**	**-0.3**
TYC	**Yuchr**	**1.32**	**266**	P	**Pn**	**16 56 48.5**	**+0.8**
YM01	**YM01**	**1.32**	**330**	*e*P	**Pb**	**16 56 48.7**	**-0.5**
LIOB	**Emei**	**1.33**	**299**	*i* P	**Pb**	**16 56 49.8**	**+0.5**
ECS	**Chishang**	**1.33**	**228**	P	**Pn**	**16 56 48.4**	**+0.5**
ECS	baz=216			*e*S	**Sn**	**16 57 06.0**	**+1.2**
NSTT	**Nanjuang**	**1.34**	**298**	*i* P	**Pb**	**16 56 49.8**	**+0.4**
NSTT	baz=296			*e*S	**Sb**	**16 57 06.6**	**+0.5**
YM08	**YM08**	**1.35**	**332**	*e*P	**Pb**	**16 56 49.3**	**-0.3**
TWS1	**Kuangyinshan**	**1.36**	**324**	P	**Pb**	**16 56 49.5**	**-0.3**
HATJ	**Hateruma jima**	**1.38**	**87**	P	**Pb**	**16 56 49.6**	**-0.6**
NTST	**Danshui**	**1.39**	**327**	*e*P	**Pb**	**16 56 50.3**	**-0.1**
NCUH	**Zhongli**	**1.40**	**314**	*e*P	**Pb**	**16 56 50.4**	**-0.1**
TWY	**Chenhua**	**1.42**	**334**	P	**Pb**	**16 56 51.1**	**+0.2**
ELDTW	**Lidau**	**1.42**	**236**	P	**Pn**	**16 56 49.0**	**-0.2**
ELDTW	baz=235			*e*S	**Sn**	**16 57 06.6**	**-0.6**
SBCB	**Hsinchu**	**1.43**	**304**	*e*P	**Pb**	**16 56 50.7**	**-0.3**
TWQ1	**Liyutan**	**1.43**	**284**	P	**Pb**	**16 56 51.3**	**+0.3**
WJS	**Zhushan**	**1.44**	**263**	*e*P	**Pb**	**16 56 51.7**	**+0.4**
HSN	**Hsinchu**	**1.45**	**304**	*e*P	**Pb**	**16 56 51.2**	**-0.1**
ALS	**Alishan**	**1.45**	**251**	P	**Pn**	**16 56 50.9**	**+1.1**
ALS	baz=250			*e*S	**Sn**	**16 57 09.1**	**+1.0**
NMLH	**Miaoli**	**1.47**	**292**	*e*P	**Pb**	**16 56 52.1**	**+0.4**
WNT	**Mingjian**	**1.48**	**266**	P	**Pb**	**16 56 52.4**	**+0.6**
WNT	baz=264			*e*S	**Sb**	**16 57 11.6**	**+1.5**
TCU	**Taichung**	**1.49**	**276**	*e*P	**Pb**	**16 56 52.3**	**+0.4**
TCU	baz=274			*e*S	**Sb**	**16 57 12.1**	**+1.6**
LDUT	**Ludao**	**1.52**	**210**	P	**Pn**	**16 56 49.9**	**-0.6**
LDUT	baz=211			*e*S	**Sn**	**16 57 08.1**	**-1.4**
LONT	**Longtian**	**1.52**	**225**	*e*P	**Pn**	**16 56 50.7**	**+0.1**
JKRS	**Kuro-shima**	**1.58**	**81**	P	**Pb**	**16 56 52.8**	**-0.9**
WCHH	**Zhanghua**	**1.59**	**273**	*e*P	**Pb**	**16 56 53.7**	**0.0**
WGK	**Gukeng**	**1.62**	**259**	*e*P	**Pb**	**16 56 54.5**	**+0.4**
STYH	**Taoyuan**	**1.62**	**240**	*e*P	**Pn**	**16 56 53.3**	**+1.5**
TWGBT	**Beinan**	**1.62**	**224**	P	**Pn**	**16 56 51.9**	**0.0**
TWGBT	**Beinan**	**1.62**	**224**	P	**Pn**	**16 56 51.4**	**-0.5**
TWG	**Pinlang**	**1.62**	**224**	*e*P	**Pn**	**16 56 51.7**	**-0.2**
TTN	**Taitung**	**1.63**	**221**	*e*P	**Pn**	**16 56 53.2**	**+1.3**
PCYT	**Pengchaiyu**	**1.64**	**353**	P	**Pn**	**16 56 53.1**	**+1.0**
WDLH	**Douliu**	**1.64**	**259**	*e*P	**Pb**	**16 56 54.3**	**-0.2**
WCKO	**Fanlu**	**1.65**	**251**	*e*P	**Pb**	**16 56 54.9**	**+0.2**
TPUB	**Ta-pu**	**1.68**	**246**	P	**Pn**	**16 56 54.6**	**+1.9**
TPUB	**Ta-pu**	**1.68**	**246**	*e*P	**Pn**	**16 56 54.6**	**+1.9**
CHN4	**Tsaushan**	**1.69**	**248**	P	**Pb**	**16 56 55.5**	**+0.1**
WTP	**Ta-pu**	**1.71**	**244**	P	**Pb**	**16 56 55.4**	**-0.5**

WTP eS Sb 16 57 17.3 +0.3
baz=244

JJJ Ishigaki jima 1.73 78 P Pn 16 56 54.3 +1.0
JJJ eS Sb 16 57 16.3 -1.1
WRL Guolierlin Hig 1.76 267 eP Pb 16 56 56.1 -0.4
baz=266

WTK Tuku 1.77 260 eP Pb 16 56 56.5 -0.3
baz=248

TWK Hsinying 1.81 247 P Pb 16 56 56.8 -0.8
baz=246

TWK eS Sb 16 57 19.7 -0.1
baz=246

CHN1 Nanshi 1.81 244 eP Pb 16 56 57.3 -0.2
baz=243

SGST Jiashian 1.82 240 eP Pn 16 56 55.9 +1.3
baz=230

SGST eS Sn 16 57 19.1 +2.4
baz=230

SNST Tainan City 1.82 245 eP Pb 16 56 57.0 -0.7
baz=244

ECL Taimali 1.86 222 eP Pn 16 56 54.9 -0.3
baz=232

JISG Ishigakijimahi 1.93 72 P Pn 16 56 57.0 +0.9
JISG eS Sb 16 57 21.3 -1.9
WSF Szhu 1.93 260 eS Sb 16 57 23.7 +0.5
baz=258

ICHU Yijhu 1.95 251 eP Pb 16 56 59.0 -0.9
baz=251

SSD Sandimen 1.97 231 eP Pn 16 56 57.9 +1.2
baz=222

TSMG Majia 1.99 230 eP Pn 16 56 58.4 +1.5
baz=221

SCST Cishan 1.99 237 eP Pb 16 57 00.5 -0.1
baz=227

CHN8 Yiju 2.02 252 eP Pn 16 56 59.4 +2.1
baz=251

CHN8 eS Sb 16 57 24.8 -0.9
baz=251

SHHT Tainan City 2.04 242 eP Pb 16 57 01.1 -0.2
baz=241

MASBT Mashibuluo 2.06 228 P Pn 16 56 58.8 +0.8
baz=222

MASBT eS Sn 16 57 25.4 +2.7
baz=222

LAY Lan-yu 2.07 199 eP Pn 16 56 57.0 -1.0
baz=200

TAW Tawu 2.08 218 eP Pn 16 56 58.1 -0.1
baz=219

TWM1 Shoushan 2.08 236 P Pb 16 57 02.2 +0.1
baz=235

EAST Anshuo 2.09 220 eP Pn 16 56 58.2 -0.1
baz=220

LYUB Lan-yu 2.09 198 P Pn 16 56 57.0 -1.4
baz=199

TAWH Dawu Township 2.10 218 eP Pn 16 56 58.4 0.0
baz=220

TAWH eS Sn 16 57 23.1 -0.6
baz=220

TSCK Chigu Township 2.20 248 eP Pn 16 57 01.9 +2.1
baz=247

SCZT Fangliau 2.23 224 eP Pn 16 57 01.7 +1.4
baz=218

SLIU Shizi 2.25 218 P Pn 16 57 00.5 0.0
baz=218

JTJ Tarama 2.29 73 P Pn 16 57 02.9 +1.9
JTJ S Sb 16 57 31.1 -2.3
SMST Manzhou Townsh 2.38 215 eS Sn 16 57 30.0 -0.7
baz=216

TSEB Hengchuen, Pin 2.45 212 eP Pn 16 57 06.3 +3.0
baz=215

TSEB eS Sn 16 57 34.3 +1.8
baz=215

TWKBT Hengchun 2.46 214 P Pn 16 57 04.2 +0.7
baz=216

TWKBT eS Sn 16 57 33.7 +1.0
baz=216

TWK1 Hengchun 2.46 214 P Pn 16 57 04.3 +0.8
baz=216

TWK1 eS Sn 16 57 34.0 +1.3
baz=216

WDGT Dungji 2.52 254 eP Pn 16 57 06.1 +1.8
baz=242

WDGT eS Sn 16 57 35.2 +1.0
baz=242

PHUB P'eng-hu 2.54 260 P Pn 16 57 05.7 +1.2
baz=258

PHUB S Sn 16 57 36.0 +1.4
baz=258

PNG Penghu 2.55 261 P Pn 16 57 05.8 +1.2
baz=259

PNG S Sn 16 57 36.0 +1.3
baz=259

VCHM Qimei 2.74 254 P Pn 16 57 08.5 +1.2
baz=253

VCHM eS Sn 16 57 40.6 +1.0
baz=253

JIRB Irabujima 2.75 72 eP Pn 16 57 09.3 +1.9
JIRB eS Sn 16 57 42.6 +2.9
VWUC VWUC 2.77 291 P Pn 16 57 07.9 +0.2
baz=289

JIKM Ikemajima 2.84 71 eP Pn 16 57 11.0 +2.3
JIKM eS Sn 16 57 44.9 +2.8
JMJ2 Miyako jima3 2.86 74 eP Pn 16 57 11.3 +2.4
JMJ2 eS Sn 16 57 45.5 +2.9
JOGS Gusukube 2.94 74 P Pn 16 57 13.0 +3.0
JOGS S Sn 16 57 47.8 +3.4
MATB Ma-tsu 3.02 316 eP Pn 16 57 11.0 -0.1
baz=313

PTMZ Houxiangcun 3.07 290 eP Pn 16 57 12.1 +0.3
baz=288

LYJJ Jianjiangzhen 3.42 318 eP Pn 16 57 16.7 0.0
baz=316

XPSS Dashiqiu 3.48 327 eP Pn 16 57 17.8 +0.3
baz=335

KNM Kinmen 3.55 278 eP Pn 16 57 20.6 +2.2
baz=275

KNMB Chin-men Tao 3.59 278 P Pn 16 57 19.2 +0.2
baz=276

AXDP Jialang 4.04 284 P Pn 16 57 25.5 +0.4
baz=282

ZPLA Ao Xicun 4.16 270 P Pn 16 57 27.2 +0.4
baz=268

DSXP Dongshan 4.47 267 eP Pn 16 57 31.7 +0.7
baz=266

TGY Tagaytay City 9.93 188 LR LR 17 02 54.7
comp=N,56nm,18.9s,baz=279,slow=40

JNU Nakatsue 11.81 38 LR LR 17 03 44.2
comp=N,53nm,20.7s,baz=202,slow=36

KSRS Korea Array 14.25 18 Pn P 16 59 49.0 -3.1
baz=198,slow=13,SNR=2.4

KSRS LR LR 17 05 46.8
comp=N,35nm,18.2s,baz=190,slow=39
comp=N,0.7nm,0.8s

MJAR Matsushiro Arr 18.55 44 LR LR 17 08 42.1
comp=N,23nm,20.5s,baz=184,slow=39

CMAR Chiang Mai Arr 22.44 260 LR LR 17 11 09.4
comp=N,16nm,19.9s,baz=210,slow=40

KLR Kul'dur 26.26 14 LR LR 17 13 04.4
comp=N,47nm,19.2s,baz=138,slow=38

SONM Songino Array 26.94 336 P P 17 02 04.1 -0.1
comp=N,3.9nm,0.9s,baz=151,slow=9.5,SNR=28

SONM LR LR 17 14 28.5
comp=N,37nm,18.1s,baz=80,slow=40
comp=N,3.9nm,0.9s

YAK Yakutsk 38.35 6 LR LR 17 20 51.0
comp=N,28nm,18.6s,baz=70,slow=38

MKAR Makanchi Array 39.18 316 P P 17 03 50.5 -0.2
comp=N,0.3nm,0.4s,baz=102,slow=8.9,SNR=11
comp=N,0.3nm,0.4s

ZALV Zalesovo Beam 40.95 327 P P 17 04 03.2 -2.0
comp=N,0.8nm,0.4s,baz=112,slow=9.8,SNR=7.9

ZALV LR LR 17 22 22.7
comp=N,44nm,18.4s,baz=108,slow=38
comp=N,0.8nm,0.4s

SEY Seymchan 43.81 19 LR LR 17 25 37.4
comp=N,32nm,19.3s,baz=308,slow=40

WRA Warramunga Arr 45.23 164 P P 17 04 41.0 +0.8
comp=N,0.9nm,0.8s,baz=345,slow=8.5,SNR=4.1
comp=N,0.9nm,0.8s

BVAR Borovoye Array 48.46 321 P P 17 05 04.7 -0.4
comp=N,0.3nm,0.4s,baz=86,slow=4.6,SNR=2.9
comp=N,0.3nm,0.4s

ASAR Alice Springs 48.70 166 P P 17 05 10.4 +3.1
comp=N,0.4nm,0.9s,baz=351,slow=13,SNR=4.8
comp=N,0.4nm,0.9s

ARCES ARCESS Array B 70.09 338 P P 17 07 35.5 +1.0
comp=N,3.0nm,1.0s,baz=49,slow=7.3,SNR=1.7
comp=N,3.0nm,1.0s

FINES FINESS Array B 72.11 330 P P 17 07 47.5 +0.7
comp=N,0.7nm,0.8s,baz=2.9,slow=2.8,SNR=1.6
comp=N,0.7nm,0.8s

BRTR Keskin Array B 74.10 307 P P 17 07 57.7 -1.5
comp=N,1.1nm,1.0s,baz=64,slow=6.6,SNR=4.2
comp=N,1.1nm,1.0s

HFS Hagfors 78.22 331 LR LR 17 46 35.6
comp=N,83nm,18.2s,baz=242,slow=39

*NEIC **19** 17:01:11.0±2.6, 17.78N±0.03°×67.50W±0.02, h10km±2km, ML2.6/22, Md2.4/11(RSPR), Error ellipse: s-maj=5.5km s-min=3.0km az=6.0*
*OSPL **19** 17:01:15.5±0.3, 17.99N×67.38W, h37km±8km, ML2.7*
*SDD **19** 17:01:15.3±0.9, 18.02N×67.48W, h12km±20km, MD3.0, ML2.6, MW2.7*
*RSPR **19** 17:01:16.2, 18.08N×67.45W, h10km±1km, MD2.4/11*
ISC 19 17:01:13.1±1.7, **17.93N**±0.08°×**67.48W**±0.04, **h16**km±10km, **n56**, σ0°**68**/**61**, **11C-8D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.36**	**78**	↑*e*P		**Pn**	**17 01 22.4**	**-1.2**
CRPR	**Cabo Rojo, PR**	**0.36**	**78**			**Pn**	**17 01 22.5**	**-1.2**
CRPR				IAML			17 01 29.1	
	comp=N,639nm,0.3s							
CRPR				IAML			17 01 29.5	
	comp=E,605nm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.36**	**78**	*e*Pg		**Pn**	**17 01 22.3**	**-1.3**
CRPR				⇓*e*Sg		**Sb**	**17 01 27.8**	**+1.3**
CRPR				IAML			17 01 29.0	
	comp=N,885nm,0.1s							
CRPR				IAML			17 01 29.4	
	comp=E,853nm,0.3s							
CRPR	**Cabo Rojo, PR**	**0.36**	**78**	*i* P		**Pn**	**17 01 22.4**	**-1.2**
CRPR				*e*S		**Sb**	**17 01 27.5**	**+1.1**
CRPR				IAML			17 01 29.0	
	comp=Z,891nm,0.2s							
PRSN	**Puerto Rico Se**	**0.42**	**48**	↑*e*P		**Pb**	**17 01 22.7**	**+0.5**
PRSN	**Puerto Rico Se**	**0.42**	**48**	*e*S		**Sg**	**17 01 27.8**	**+0.2**
PRSN	**Puerto Rico Se**	**0.42**	**48**			**Pb**	**17 01 22.3**	**0.0**
PRSN	**Puerto Rico Se**	**0.42**	**48**			**Sg**	**17 01 27.8**	**+0.2**
PRSN	**Puerto Rico Se**	**0.42**	**48**	IAML			17 01 30.2	
	comp=E,583nm,0.2s							
PRSN				IAML			17 01 30.2	
	comp=N,972nm,0.2s							
LSP	**Las Mesas**	**0.44**	**57**	⇓*e*P		**Pb**	**17 01 23.2**	**+0.6**
LSP	**Las Mesas**	**0.44**	**57**	*e*S		**Sg**	**17 01 28.9**	**+0.7**
LSP	**Las Mesas**	**0.44**	**57**			**Pb**	**17 01 23.2**	**+0.6**
LSP						**Sg**	**17 01 28.9**	**+0.7**
IDE	**Isla Desecheo**	**0.45**	**0**	↑*e*P		**Pg**	**17 01 22.7**	**+0.4**
IDE	**Isla Desecheo**	**0.45**	**0**	*e*S		**Sg**	**17 01 26.8**	**-1.6**
IDE	**Isla Desecheo**	**0.45**	**0**			**Pg**	**17 01 22.7**	**+0.4**
IDE						**Sg**	**17 01 26.8**	**-1.6**
GBPR	**Guanica, Bosqu**	**0.57**	**86**	↑*e*P		**Pn**	**17 01 26.6**	**0.0**
GBPR				*e*S		**Sn**	**17 01 34.7**	**-0.9**
GBPR	**Guanica, Bosqu**	**0.57**	**86**			**Pn**	**17 01 26.6**	**0.0**
AGPR	**Aguadilla, PR**	**0.64**	**33**	↑*e*P		**Pg**	**17 01 25.8**	**+0.1**
AGPR	**Aguadilla, PR**	**0.64**	**33**	Pg		**Pg**	**17 01 25.6**	**0.0**
AGPR				IAML			17 01 33.6	
	comp=E,273nm,0.3s							
AGPR				IAML			17 01 38.2	
	comp=N,274nm,0.2s							
AGPR	**Aguadilla, PR**	**0.64**	**33**			**Sg**	**17 01 33.4**	**-0.7**
AGPR	**Aguadilla, PR**	**0.64**	**33**	↑*e*Pg		**Pg**	**17 01 25.8**	**+0.1**
AGPR				IAML			17 01 33.6	
	comp=E,272nm,0.3s							
AGPR				*e*Sg		**Sg**	**17 01 33.9**	**-0.2**
AGPR				IAML			17 01 38.2	
	comp=N,266nm,0.2s							
AGPR	**Aguadilla, PR**	**0.64**	**33**	*i* P		**Pg**	**17 01 25.8**	**+0.1**
AGPR				*e*S		**Sg**	**17 01 33.4**	**-0.7**
AGPR				IAML			17 01 36.9	
	comp=Z,136nm,0.2s							
UUPR	**Utuado, UPR, P**	**0.79**	**66**	↓*e*P		**Pb**	**17 01 28.8**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.79**	**66**	*e*S		**Sg**	**17 01 38.6**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.79**	**66**			**Pb**	**17 01 28.5**	**0.0**
UUPR	**Utuado, UPR, P**	**0.79**	**66**			**Sg**	**17 01 38.6**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.79**	**66**	IAML			17 01 41.0	
	comp=N,1µm,0.3s							
UUPR				IAML			17 01 45.8	
	comp=E,515nm,0.3s							
AOPR	**Arecibo Observ**	**0.80**	**59**	↑*e*P		**Pb**	**17 01 28.8**	**+0.1**
AOPR	**Arecibo Observ**	**0.80**	**59**	*e*S		**Sg**	**17 01 38.6**	**-0.8**
AOPR	**Arecibo Observ**	**0.80**	**59**	Pg		**Pb**	**17 01 28.8**	**+0.1**
AOPR	**Arecibo Observ**	**0.80**	**59**			**Sg**	**17 01 38.6**	**-0.8**
AOPR	**Arecibo Observ**	**0.80**	**59**	↑*e*Pg		**Pb**	**17 01 28.8**	**+0.1**
AOPR				⇓*e*Sg		**Sg**	**17 01 38.8**	**-0.6**
AOPR				IAML			17 01 39.3	
	comp=N,224nm,0.2s							
AOPR				IAML			17 01 41.2	
	comp=E,306nm,0.2s							
OBIP	**Obispado Ponce**	**0.84**	**82**	↓*e*P		**Pn**	**17 01 29.7**	**-0.5**
OBIP				*e*S		**Sb**	**17 01 40.5**	**+0.2**
OBIP	**Obispado Ponce**	**0.84**	**82**			**Pn**	**17 01 29.5**	**-0.7**
CELP	**Cerrillos**	**0.87**	**80**	↓*e*P		**Pn**	**17 01 30.9**	**+0.3**
CELP	**Cerrillos**	**0.87**	**80**	*e*S		**Sb**	**17 01 42.4**	**+1.3**
CELP	**Cerrillos**	**0.87**	**80**			**Pn**	**17 01 30.7**	**+0.1**
CELP	**Cerrillos**	**0.87**	**80**			**Sb**	**17 01 42.4**	**+1.3**
CELP	**Cerrillos**	**0.87**	**80**	IAML			17 01 43.1	
	comp=N,74nm,0.3s							
CELP				IAML			17 01 43.8	
	comp=E,98nm,0.2s							
CELP	**Cerrillos**	**0.87**	**80**	*e*Pg		**Pn**	**17 01 30.9**	**+0.3**
CELP				⇑*e*Sg		**Sn**	**17 01 42.9**	**-0.1**
CELP				IAML			17 01 43.1	
	comp=N,78nm,0.2s							
PCDR	**Punta Cana, DR**	**1.04**	**304**			**Pn**	**17 01 32.8**	**-0.2**
PCDR				IAML			17 01 52.9	
	comp=E,76nm,1.1s							
PCDR	**Punta Cana, DR**	**1.04**	**304**	↑*e*Pg		**Pn**	**17 01 33.2**	**+0.3**
PCDR				IAML			17 02 28.7	
	comp=N,503nm,1.1s							
PCDR	**Punta Cana, DR**	**1.04**	**304**	*i* P		**Pn**	**17 01 33.3**	**+0.3**
PCDR				IAML			17 01 51.8	
	comp=Z,167nm,1.1s							
EMPR	**Esperanza - Ma**	**1.05**	**59**	⇓*e*P		**Pn**	**17 01 33.5**	**+0.3**
EMPR	**Esperanza - Ma**	**1.05**	**59**	*e*S		**Sb**	**17 01 46.9**	**+0.5**
EMPR	**Esperanza - Ma**	**1.05**	**59**	Pn		**Pb**	**17 01 33.1**	**+0.2**
EMPR	**Esperanza - Ma**	**1.05**	**59**			**Sb**	**17 01 46.9**	**+0.5**
EMPR	**Esperanza - Ma**	**1.05**	**59**	IAML			17 01 51.1	
	comp=N,169nm,1.0s							
EMPR				IAML			17 01 51.6	
	comp=E,227nm,1.1s							
GCPR	**Guaynabo City**	**1.38**	**74**	↑*e*P		**Pg**	**17 01 39.4**	**-0.3**
GCPR	**Guaynabo City**	**1.38**	**74**	*e*S		**Sb**	**17 01 56.6**	**+0.7**
GCPR	**Guaynabo City**	**1.38**	**74**	Pn		**Pb**	**17 01 38.3**	**-0.2**
GCPR				IAML			17 02 01.4	
	comp=N,47nm,1.0s							
GCPR	**Guaynabo City**	**1.38**	**74**			**Sb**	**17 01 56.6**	**+0.7**
HUMP	**Col San Antoni**	**1.56**	**82**	⇓*e*P		**Pg**	**17 01 43.1**	**-0.1**
HUMP	**Col San Antoni**	**1.56**	**82**			**Pg**	**17 01 43.1**	**-0.1**
HUMP	**Col San Antoni**	**1.56**	**82**	IAML			17 02 06.8	
	comp=E,40nm,1.1s							
PAPH	**Port-au-Prince**	**4.62**	**278**	Pn		**Pn**	**17 02 21.8**	**-0.5**

IDC 19 17:11:40.9±2.4, **42.36S**×**82.98W**, **h0**km, **mb3.7**/3, **mbtmp3.7**/3, **MS3.9**/24, **Error ellipse: s-maj=69.4km s-min=42.0km az=154.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H03S1	**Juan Fernandez**	**9.08**	**22**	T		T	17 24 07.4	
	baz=196,slow=73,SNR=569							
H03S2	**Juan Fernandez**	**9.08**	**22**	T		T	17 23 55.4	
	baz=196,slow=73,SNR=414							
H03S3	**Juan Fernandez**	**9.10**	**22**	T		T	17 24 07.1	
	baz=196,slow=73,SNR=559							
PLCA	**Paso Flores**	**9.46**	**84**	LR		LR	17 16 59.2	
	comp=Z,307nm,18.7s,baz=252,slow=34							
H03N1	**Juan Fernandez**	**9.46**	**21**	Pn		Pn	17 13 60.0	+1.9
LVC	**Limon Verde**	**22.93**	**35**	LR		LR	17 23 44.9	
	comp=Z,216nm,20.4s,baz=201,slow=32							
RPN	**Rapa Nui**	**26.32**	**297**	LR		LR	17 24 56.6	
	comp=Z,348nm,19.5s,baz=102,slow=30							
CPUP	**Villa Florida**	**26.39**	**61**	P		P	17 17 18.5	-0.5
	1.3nm,0.8s,baz=210,slow=8.3,SNR=2.3							
CPUP				LR		LR	17 27 45.8	
	comp=Z,344nm,19.0s,baz=226,slow=37 1.3nm,0.8s							
NNA	**Nana**	**30.73**	**12**	LR		LR	17 27 44.4	
	comp=Z,139nm,18.4s,baz=192,slow=31							
SIV	**San Ignacio**	**32.31**	**42**	LR		LR	17 30 11.0	
	comp=Z,200nm,21.7s,baz=286,slow=34							
ATAH	**Atahualpa**	**35.31**	**8**	LR		LR	17 30 01.0	
	comp=Z,71nm,19.1s,baz=208,slow=31							
BDFB	**Brasilia**	**40.09**	**59**	LR		LR	17 36 28.8	
	comp=Z,218nm,18.7s,baz=170,slow=37							
ROSC	**El Rosal**	**47.63**	**12**	LR		LR	17 38 56.8	
	comp=Z,195nm,18.2s,baz=240,slow=34							
QSPA	**South Pole Qui**	**47.88**	**180**	LR		LR	17 36 44.8	
	comp=Z,104nm,21.3s,baz=178,slow=31							
SDV	**Santo Domingo**	**52.23**	**16**	LR		LR	17 40 44.4	
	comp=Z,63nm,20.9s,baz=234,slow=33							
JTS	**Las Juntas de**	**52.42**	**358**	LR		LR	17 37 34.1	
	comp=Z,57nm,18.3s,baz=69,slow=30							
VNDA	**Vanda**	**54.08**	**194**	LR		LR	17 39 18.1	
	comp=Z,156nm,20.8s,baz=134,slow=31							
MDP	**Montagnes des**	**54.69**	**38**	LR		LR	17 43 40.0	
	comp=Z,78nm,18.5s,baz=322,slow=35							
RCBR	**Riachuelo**	**55.26**	**62**	LR		LR	17 45 17.1	
	comp=Z,290nm,18.0s,baz=224,slow=36							
RAR	**Rarotonga**	**66.46**	**262**	LR		LR	17 45 03.6	
	comp=Z,42nm,21.5s,baz=234,slow=30							
RPZ	**Rata Peaks**	**71.68**	**227**	LR		LR	17 47 46.9	
	comp=Z,145nm,18.4s,baz=110,slow=30							
URZ	**Urewera**	**71.73**	**235**	LR		LR	17 45 54.9	
	comp=Z,147nm,20.0s,baz=302,slow=29							
TXAR	**Lajitas Array**	**73.84**	**341**	P		P	17 23 16.0	-1.3
	0.5nm,0.8s,baz=157,slow=9.6,SNR=4.6 0.5nm,0.8s							
TKL	**Tuckaleechee C**	**77.64**	**359**	LR		LR	17 52 00.7	
	comp=Z,48nm,20.3s,baz=112,slow=31							
SUR	**Sutherland**	**77.98**	**123**	LR		LR	17 52 56.3	
	comp=Z,53nm,18.8s,baz=180,slow=32							
BOSA	**Boshof**	**83.34**	**123**	LR		LR	17 55 41.6	
	comp=Z,57nm,18.7s,baz=192,slow=32							
TSUM	**Tsumeb**	**84.77**	**111**	LR		LR	18 00 57.6	
	comp=Z,30nm,18.2s,baz=153,slow=35							
LBTB	**Lobatse**	**86.10**	**120**	LR		LR	17 56 55.1	
	comp=Z,38nm,18.1s,baz=173,slow=32							
PDAR	**Pinedale Array**	**88.05**	**341**	P		P	17 24 33.6	+0.7
	0.5nm,0.9s,baz=146,slow=6.6,SNR=2.2 0.5nm,0.9s							
STKA	**Stephens Creek**	**95.53**	**217**	LR		LR	17 58 56.2	
	comp=Z,56nm,19.4s,baz=201,slow=30							
H11S2	**WAKE ISLAND Hyl**	**17.12**	**271**	T		T	19 38 05.3	
	baz=129,slow=76,SNR=24							
H11S1	**WAKE ISLAND Hyl**	**17.14**	**271**	T		T	19 38 07.4	
	baz=129,slow=76,SNR=19							
H11S3	**WAKE ISLAND Hyl**	**17.14**	**271**	T		T	19 38 09.5	
	baz=129,slow=76,SNR=25							
H11N3	**WAKE ISLAND Hyl**	**17.73**	**272**	T		T	19 38 56.7	
	baz=130,slow=74							
H11N1	**WAKE ISLAND Hyl**	**17.74**	**272**	T		T	19 38 59.6	
	baz=130,slow=74							
H11N2	**WAKE ISLAND Hyl**	**17.75**	**272**	T		T	19 38 55.2	
	baz=130							
MJAR	**Matsushiro Arr**	**147.91**	**274**	PKPbc		PKPbc	17 31 27.9	+0.2
	1.6nm,1.1s,baz=103,slow=2.7,SNR=2.3							

IDC 19 17:53:39.6±1.6, **11.39N**×**57.61E**, **h0**km, **mb3.6**/7, **mbtmp3.6**/7, **MS3.6**/3, **Error ellipse: s-maj=40.4km s-min=29.7km az=43.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**35.32**	**327**	LR		LR	18 15 22.6	
	comp=Z,32nm,18.3s,baz=180,slow=37							
CMAR	**Chiang Mai Arr**	**40.48**	**75**	P		P	18 01 21.9	+1.3
	0.5nm,0.7s,baz=277,slow=7.2,SNR=5.0 0.5nm,0.7s							
MKAR	**Makanchi Array**	**41.00**	**26**	P		P	18 01 23.9	-0.6
	0.2nm,0.7s,baz=208,slow=8.8,SNR=4.4 0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**42.72**	**20**	P		P	18 01 38.3	-0.1
	0.4nm,0.6s,baz=214,slow=7.6,SNR=4.9 0.4nm,0.6s							
VAE	**Valguarnera**	**46.56**	**311**	LR		LR	18 21 16.0	
	comp=Z,51nm,20.9s,baz=314,slow=36							
ZALV	**Zalesovo Beam**	**47.65**	**21**	P		P	18 02 16.9	-0.7
	1.1nm,0.5s,baz=218,slow=9.5,SNR=6.7 1.1nm,0.5s							
ESDC	**Sonseca Array**	**60.99**	**309**	P		P	18 03 55.5	+0.5
	0.9nm,0.8s,baz=79,slow=6.7,SNR=5.8 0.9nm,0.8s							
WRA	**Warramunga Arr**	**81.65**	**112**	P		P	18 06 00.2	-0.1
	0.6nm,1.0s,baz=298,slow=4.3,SNR=2.1 0.6nm,1.0s							
ASAR	**Alice Springs**	**82.26**	**116**	P		P	18 06 02.8	-0.7
	0.3nm,0.6s,baz=291,slow=5.3,SNR=4.1							
ASAR				LR		LR	18 38 43.6	
	comp=Z,98nm,20.9s,baz=108,slow=33 0.3nm,0.6s							

*IDC **19** 18:16:00.7±0.7, 19.23N×108.70W, h0km, mb4.3/11, mbtmp4.3/16, ML4.3/5, MS3.8/32, Error ellipse: s-maj=17.6km s-min=15.3km az=86.0*
*MEX **19** 18:16:03.3±0.8, 19.09N×108.53W, h15km±140km, MD4.5*
*NEIC **19** 18:16:03.3±2.9, 19.24N±0.06°×108.76W±0.04, h10km±1km, mb4.6/273, Md4.5/41(MEX), Error ellipse: s-maj=10.8km s-min=5.2km az=208.0*
*GCMT **19** 18:16:03.3±0.4, 19.42N±0.02°×108.60W±0.02, h24km±1km, MW4.9/98, Moment Tensor Solution. s22,c26; s98,c123; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.51±.16; Mθθ=2.16±.11; Mϕϕ=2.67±.13; Mrθ=0.31±.16; Mrϕ=-1.35±.10; Mθϕ=1.05±.17; Best double couple: Mo2.92300×10^16 NP1:ϕ1=299.00000°, δ80.00000°, λ168.00000°. NP2: ϕ2=32.00000°, δ78.00000°, λ11.00000°. Principal axes: T 3.3330, Plg16.0000°, Azm255.0000°; N -0.8230, Plg74.0000°, Azm79.0000°; P -2.5120, Plg1.0000°, Azm346.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 18:16:02.5±0.4, **19.20N**±0.05°×**108.53W**±0.03, **h10**km, **n627**, σ1°**67**/563, **mb4.6**/102, **MS3.7**/27, **Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H06E		**2.30**	**260**			**Pn**	**18 16 37.3**	**-3.2**
H06E						**Sn**	**18 17 04.0**	**-4.9**
H06E		**2.30**	**260**	*e*P		**Pn**	**18 16 37.3**	**-3.2**
H06E				*e*S		**Sn**	**18 17 04.0**	**-4.9**
H06E1	**SOCORRO T-PHAS**	**2.31**	**260**	Pn		**Pn**	**18 16 36.7**	**-3.9**
H06E1				T		T	18 19 18.3	
	SNR=3114							
H06S1	**SOCORRO T**	**2.34**	**259**	Pn		**Pn**	**18 16 37.5**	**-3.6**
H06S1				T		T	18 19 03.4	
	SNR=1665							
H06S		**2.35**	**259**			**Pn**	**18 16 37.8**	**-3.4**
H06S						**Sn**	**18 17 04.7**	**-5.4**
H06S		**2.35**	**259**	*e*P		**Pn**	**18 16 37.8**	**-3.4**
H06S				*e*S		**Sn**	**18 17 04.7**	**-5.4**
H06N1	**SOCORRO T-PHAS**	**2.35**	**262**	Pn		**Pn**	**18 16 37.7**	**-3.5**
H06N1				T		T	18 18 59.1	
	SNR=504							
H06N	**Isla Socorro**	**2.35**	**262**			**Pn**	**18 16 37.9**	**-3.3**
H06N						**Sn**	**18 17 03.6**	**-6.5**
H06N	**Isla Socorro**	**2.35**	**262**	*e*P		**Pn**	**18 16 37.9**	**-3.3**
H06N				*e*S		**Sn**	**18 17 03.6**	**-6.5**
CJM	**Chamela**	**3.30**	**84**	*i* P		**Pn**	**18 16 51.8**	**-2.6**
CJM				*e*S		**Sn**	**18 17 25.5**	**-8.2**
CIHU	**Emiliano Zapat**	**3.58**	**88**	*e*P		**Pn**	**18 16 55.8**	**-2.4**
CIHU				*e*S		**Sn**	**18 17 33.0**	**-7.6**
ESTA	**Talpa de Allen**	**3.66**	**70**	*e*P		**Pn**	**18 16 57.4**	**-2.1**
ESTA				*e*S		**Sn**	**18 17 34.8**	**-8.0**
ANIG	**Ahuacatlan**	**4.19**	**63**			**Pn**	**18 17 04.9**	**-1.8**
ANIG						**Sn**	**18 17 49.3**	**-6.6**
ANIG	**Ahuacatlan**	**4.19**	**63**	*e*P		**Pn**	**18 17 04.9**	**-1.8**
ANIG				*e*S		**Sn**	**18 17 49.3**	**-6.6**
CDAR	**Ciudad de Arme**	**4.28**	**93**	*e*P		**Pn**	**18 17 05.6**	**-2.1**
CDAR				*e*S		**Sn**	**18 17 50.8**	**-7.1**
CEGR	**Campo Tres**	**4.42**	**87**	*e*P		**Pn**	**18 17 08.8**	**-1.0**
CEGR				*e*S		**Sn**	**18 17 52.9**	**-8.5**
MAIG	**Mazatlaan**	**4.43**	**26**			**Pn**	**18 17 07.0**	**-2.8**
MAIG						Sn	18 17 52.3	-9.1
MAIG	**Mazatlaan**	**4.43**	**26**	*e*P		**Pn**	**18 17 05.9**	**-3.

MNGA **Volcan de Coli** 4.64 86 *eP* Pn 18 17 13.0 0.0
MNGA *eS* Sn 18 18 05.5 -1.6
SLBS Sierra La Lagu 4.66 344 Pn 18 17 11.5 -1.5
EZ5V 4.66 86 Pn 18 17 13.3 +0.1
EZ5V Sn 18 18 02.8 -4.7
EZ5V 4.66 86 *eP* Pn 18 17 13.3 +0.1
EZ5V *eS* Sn 18 18 02.8 -4.7
JUBC Volcan de Coli 4.69 85 *eP* Pn 18 17 13.9 +0.2
JUBC *eS* Sn 18 18 04.3 -4.1
MMIG Aquila 5.00 100 Pn 18 17 16.0 -1.6
MMIG Sn 18 18 06.8 -8.6
MMIG Aquila 5.00 100 *eP* Pn 18 17 16.0 -1.6
MMIG *eS* Sn 18 18 06.8 -8.6
LPIG La Paz 5.15 342 Pn Pn 18 17 19.0 -0.7
10nm,0.3s,baz=159,slow=5.5,SNR=11
LPIG LR LR 18 18 43.7
comp=Z,587nm,20.9s,baz=159,slow=32
67nm,0.5s
SSIG Sanalona 5.74 13 Pn 18 17 26.4 -1.5
SSIG Sn 18 18 27.8 -6.0
SSIG Sanalona 5.74 13 *eP* Pn 18 17 26.4 -1.5
SSIG *eS* Sn 18 18 27.8 -6.0
PDIG Papasquiaro 6.50 26 Pn 18 17 39.0 +0.6
PDIG Sn 18 18 50.9 -1.8
PDIG Papasquiaro 6.50 26 *eP* Pn 18 17 39.0 +0.6
PDIG *eS* Sn 18 18 50.9 -1.8
ZAIG Zacatecas 6.61 56 Pn Pn 18 17 39.3 -0.7
MOIG Morelia 6.94 85 Pn Pn 18 17 44.6 0.0
JRQG Juriquilla Cam 7.75 78 Pn 18 17 55.7 0.0
HPIG 8.14 18 Pn Pn 18 18 01.1 +0.1
SRIG Santa Rosalia 8.77 338 Pn Pn 18 18 09.3 -0.2
UNM Universidad Na 8.83 88 Pn Pn 18 18 14.2 +3.6
TLIG Tlapa 9.60 98 Pn Pn 18 18 22.0 +1.0
HSIG 10.02 348 Pn Pn 18 18 26.6 0.0
TX31 Lajitas Ar. Si 11.02 23 Pn Pn 18 18 40.6 +0.3
TXAR Lajitas Array 11.02 23 Pn Pn 18 18 40.4 0.0
TXAR Lajitas Array 11.02 23 Pn Pn 18 18 39.9 -0.4
0.9nm,0.3s,baz=211,slow=13,SNR=52
TXAR LR LR 18 22 26.2
comp=Z,402nm,19.7s,baz=201,slow=35
7.8nm,0.8s
VHRN Van Horn 11.97 15 Pn Pn 18 18 54.8 +1.3
HBVL Hebbronville 11.98 47 Pn 18 18 53.2 -0.2
ALPN Alpine 11.98 21 Pn Pn 18 18 54.3 +0.8
319A Douglas 12.14 357 Pn Pn 18 18 59.0 +3.2
SAND Sanderson 12.19 27 Pn Pn 18 18 57.1 +0.8
833A Chaparral WMA, 12.34 41 Pn Pn 18 18 58.4 0.0
833A Chaparral WMA, 12.34 41 P Pn 18 18 59.0 +0.6
baz=225
DRIO Del Rio 12.47 34 Pn Pn 18 19 01.0 +0.9
EPT El Paso 12.65 8 Pn Pn 18 19 02.5 -0.2
MNTX Cornudas Mount 12.77 12 P Pn 18 19 05.3 +1.1
baz=194
PECS Pecos 12.83 18 Pn 18 19 06.3 +1.2
CMIG Matias Romero 13.14 97 Pn Pn 18 19 10.6 +1.3
2.3nm,0.3s,baz=291,slow=10,SNR=42
CMIG LR LR 18 24 05.2
comp=Z,242nm,18.0s,baz=292,slow=36
46nm,0.8s
MNHN Monahans 13.16 22 Pn 18 19 10.9 +1.3
TUC Tucson 13.21 352 Pn Pn 18 19 11.0 +0.6
TUC Tucson 13.21 352 P Pn 18 19 12.2 +1.8
baz=172
214A Organ Pipe Nat 13.28 344 P Pn 18 19 13.5 +2.4
baz=163
HNDO Hondo 13.29 38 Pn 18 19 10.1 -1.2
121A Cookes Peak, D 13.29 3 Pn Pn 18 19 10.0 -1.6
121A Cookes Peak, D 13.29 3 P Pn 18 19 14.5 +3.0
baz=184
DUN6 Lazy B Ranch 13.31 358 Pn Pn 18 19 09.8 -1.9
OZNA Ozona 13.46 28 Pn Pn 18 19 13.3 -0.3
735A Kenedy 13.71 43 Pn Pn 18 19 16.5 -0.7
JCT Junction City 13.73 33 Pn Pn 18 19 15.7 -1.7
JCT Junction City 13.73 33 P Pn 18 19 19.7 +2.2
baz=218
ODSA Odessa 13.95 22 Pn Pn 18 19 20.9 +0.6
SGCY Sterling City 14.31 26 Pn Pn 18 19 25.0 -0.3
BRDY Brady 14.79 34 Pn Pn 18 19 32.6 +0.7
GLA Glamis 14.90 339 Pn Pn 18 19 35.4 +2.0
GLA Glamis 14.90 339 P Pn 18 19 35.2 +1.8
baz=157
IKP In-Ko-Pah, Jac 15.02 335 P Pn 18 19 35.9 +0.8
baz=152
SWSC Sam W. Stewart 15.16 336 P Pn 18 19 38.3 +1.5
baz=154
POST Post 15.18 23 Pn 18 19 36.3 -0.7
435B Jarrell 15.20 39 Pn Pn 18 19 37.4 +0.1
435B IAmb IAmb 18 19 44.5
comp=Z,26nm,1.0s
435B Jarrell 15.20 39 P Pn 18 19 37.5 +0.1
baz=224
Y14A Wickenburg 15.21 346 Pn 18 19 39.5 +2.0
Y14A IAmb IAmb 18 19 45.2
comp=Z,22nm,1.0s
X18A Snowflake 15.32 356 Pn 18 19 36.2 -2.9
MONP2 Monument Peak 15.36 334 P Pn 18 19 40.6 +1.0
baz=152
X16A Lo Mia Camp, P 15.38 351 Pn Pn 18 19 39.5 -0.3
X16A IAmb IAmb 18 19 43.3
comp=Z,24nm,1.0s
BLYC Blythe 15.45 341 Pn 18 19 40.5 -0.1
ABTX Abilene, Hawle 15.56 29 Pn 18 19 41.5 -0.6
ABTX IAmb IAmb 18 19 55.8
comp=Z,36nm,1.1s
ABTX Abilene, Hawle 15.56 29 P Pn 18 19 43.0 +0.8
baz=214
MSTX Muleshoe 15.58 18 Pn 18 19 40.8 -1.6
MSTX IAmb IAmb 18 20 01.1
comp=Z,64nm,1.3s
MSTX Muleshoe 15.58 18 P Pn 18 19 43.5 +1.1
baz=201
109C Camp Elliot, M 15.65 332 P Pn 18 19 44.2 +1.0
baz=149
BC3 Big Chuckawall 15.67 338 P Pn 18 19 44.9 +1.4
baz=156,SNR=5.8
HKT Hockley 15.73 45 Pn Pn 18 19 43.4 -0.9
ANMO Albuquerque 15.79 6 Pn 18 19 43.7 -1.6
ANMO Albuquerque 15.79 6 P Pn 18 19 46.5 +1.3
baz=188
ANMO Albuquerque 15.79 6 Pn Pn 18 19 45.2 -0.1
comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=6.2
ANMO LR LR 18 24 37.3
comp=Z,387nm,19.1s,baz=280,slow=33
comp=Z,1.6nm,0.7s
PDMCI Parker Dam,Lak 15.85 343 P Pn 18 19 47.3 +1.5
baz=161
CCIG Comitan 15.88 98 Pn Pn 18 19 47.9 +1.4
W18A Petrified Fore 15.89 356 Pn 18 19 46.6 0.0
W18A IAmb IAmb 18 19 53.6
comp=Z,66nm,1.1s
W18A Petrified Fore 15.89 356 P Pn 18 19 48.2 +1.7
baz=177
DKNS Dickens 15.93 24 P Pn 18 19 45.1 -1.8
APMT Aspermont 15.95 26 Pn 18 19 45.0 -2.2
TPFO Pinon Flats 16.00 335 P Pn 18 19 49.4 +1.6
baz=153
PFO Pinyon Flats O 16.00 335 Pn 18 19 48.5 +0.6
PFO Pinyon Flats O 16.00 335 P Pn 18 19 49.2 +1.3
baz=153
PFO Pinyon Flats O 16.00 335 Pn Pn 18 19 46.6 -1.4
comp=Z,0.8nm,0.3s,baz=200,slow=13,SNR=1.9
PFO LR LR 18 25 12.6
comp=Z,664nm,21.2s,baz=164,slow=35
comp=Z,3.3nm,0.4s
PMD Palm Desert 16.00 336 P Pn 18 19 49.7 +1.9
IRM Iron Mountain 16.02 340 P Pn 18 19 49.8 +1.7
baz=158
WHTX Lake Whitney, 16.17 36 Pn Pn 18 19 49.1 -0.8
WHTX IAmb IAmb 18 19 51.2
comp=Z,39nm,1.1s
WHTX Lake Whitney, 16.17 36 P Pn 18 19 50.6 +0.6
baz=221
BELC Belle Mtn. Jos 16.17 337 P Pn 18 19 51.0 +0.9
baz=155
MURC Murrieta 16.30 333 P Pn 18 19 52.1 +0.5
baz=150
PLPT Palo Pinto 16.36 32 Pn Pn 18 19 50.7 -1.6
ELS Elsinore Mount 16.44 333 Pn 18 19 52.4 -1.0
ELS IAmb IAmb 18 19 59.3
comp=Z,49nm,1.2s
WUAZ Wupatki 16.45 352 Pn 18 19 52.8 -0.9
WUAZ IAmb IAmb 18 20 00.1
comp=Z,64nm,1.1s
WUAZ Wupatki 16.45 352 P Pn 18 19 55.0 +1.4
baz=171

W13A Hualapai Mount 16.53 344 P 18 19 57.1 -0.3
FW07 Weatherford 16.54 34 Pn Pn 18 19 53.4 -1.3
GMRC Granite Mounta 16.76 339 P Pn 18 19 59.1 +1.5
baz=157
FMP Fort Macarthur 16.88 331 P Pn 18 19 59.5 +0.6
baz=147
HEC Hector,Ludlow 17.04 338 P P 18 20 02.7 -0.2
baz=155
BFSC Mount Baldy Ra 17.04 333 P Pn 18 20 01.9 +0.8
baz=150
WTFS Witchita Falls 17.06 30 Pn Pn 18 19 59.8 -1.4
WTFS IAmb IAmb 18 20 17.9
comp=Z,44nm,1.2s
SNCC San Nicolas Is 17.10 327 P Pn 18 20 02.9 +1.1
baz=143
RRX Edison Barstow 17.33 336 P P 18 20 06.0 0.0
baz=153
DECC Green Verdugo 17.35 332 P P 18 20 06.3 0.0
baz=148
V12A Nelson 17.39 343 P P 18 20 06.7 0.0
V12A IAmb IAmb 18 20 10.1
comp=Z,47nm,1.2s
TUQ Turquoise Moun 17.45 339 P P 18 20 08.0 +0.6
baz=157
SMWD Samnorwood 17.46 23 P Pn 18 20 06.3 0.0
U15A North Rim 17.48 350 P Pn 18 20 06.5 -0.2
GSC Goldstone, Bar 17.63 337 P Pn 18 20 08.6 +0.2
GSC Goldstone, Bar 17.63 337 P P 18 20 09.7 +0.2
baz=154
NATX Nacogdoches 17.67 42 Pn Pn 18 20 07.8 -1.1
NATX IAmb IAmb 18 20 13.1
comp=Z,72nm,1.1s
NATX Nacogdoches 17.67 42 P P 18 20 09.8 0.0
baz=229
WMOK Wichita Mounta 17.73 27 Pn 18 20 08.9 -0.7
WMOK Wichita Mounta 17.73 27 P Pn 18 20 10.0 +0.4
baz=212
EDW2 Edwards Air Fo 17.73 334 P Pn 18 20 10.0 +0.3
baz=150
SCZ2 Santa Cruz Isl 17.75 328 P P 18 20 11.1 +0.4
baz=144
OSI Osito Audit: C 17.82 332 P P 18 20 12.8 +1.3
baz=148
WTNK Soaring Height 17.86 343 P 18 20 12.4 +0.5
PETF Flores 17.89 94 P P 18 20 14.2 +1.9
PETF IAmb IAmb 18 20 20.4
comp=Z,52nm,0.8s
RTBA Rita Blanca 17.91 15 Pn 18 20 11.8 -0.2
MVCO Mesa Verde 17.95 0 P Pn 18 20 12.8 +0.3
MVCO Mesa Verde 17.95 0 P P 18 20 13.3 +0.3
baz=181
CCAC Calif City Air 17.98 334 Pn 18 20 13.0 +0.4
SHOC Shoshone, Teco 17.98 339 P P 18 20 14.0 +0.8
baz=156
LRMC Laurel Mtn Rad 18.12 335 P P 18 20 15.9 +1.0
baz=152
KNB Kanab 18.15 349 P Pn 18 20 15.4 +0.5
KNB IAmb IAmb 18 20 19.0
comp=Z,42nm,1.1s
SBC Santa Barbara 18.15 329 P P 18 20 15.4 +0.4
baz=145
SHPR Sheep Range 18.20 343 P Pn 18 20 14.7 -0.8
LCMT Little Creek M 18.22 348 P Pn 18 20 15.9 +0.1
T25A Trinidad 18.23 11 P Pn 18 20 15.5 -0.5
T25A Trinidad 18.23 11 P Pn 18 20 16.4 +0.4
baz=193
QSM Queen of Sheba 18.25 338 P Pn 18 20 16.0 0.0
QSM IAmb IAmb 18 20 19.7
comp=Z,47nm,1.1s
ARVC Arvin 18.30 332 P P 18 20 18.0 +1.3
baz=148
GWY Greenwater Val 18.38 339 P P 18 20 19.3 +1.6
BCW Bitter Crk WRg 18.41 331 P Pn 18 20 20.2 +2.2
PKCU Pink Cliffs 18.48 350 Pn 18 20 20.2 +1.1
S22A 4UR Ranch, Cre 18.54 4 P Pn 18 20 21.0 +1.3
baz=186
CSTR Hydro, Custer 18.55 26 P P 18 20 19.4 0.0
PKM Mcpherson Peak 18.56 330 P Pn 18 20 21.2 +1.3
baz=145
MPMC Manual Prospec 18.56 337 P Pn 18 20 21.3 +1.4
baz=153
ISA Isabella, Lake 18.60 334 Pn 18 20 21.3 +1.0
ISA Isabella, Lake 18.60 334 P Pn 18 20 21.4 +1.0
baz=150
SDCO Great Sand Dun 18.67 8 P Pn 18 20 22.2 +0.8
baz=190
FURC Furnace Creek, 18.70 339 P Pn 18 20 22.4 +1.0
baz=155
HMU Henry Mountain 18.77 355 P Pn 18 20 23.6 +1.0
WCT Wildcat Mounta 18.91 340 P Pn 18 20 24.6 +0.4
MTO3 Montecristo 18.96 102 P Pn 18 20 28.5 +3.6
SMMC Simmler 18.99 330 P Pn 18 20 26.5 +1.5
baz=145
VES Vestal, Richgr 19.02 333 P Pn 18 20 26.5 +1.2
baz=149
MTPU Mount Pierson 19.04 351 P 18 20 26.0 +0.8
TEIG Tepich 19.10 84 LR LR 18 28 11.7
comp=Z,2µm,20.3s,baz=38,slow=38
CWC Cottonwood Cre 19.12 336 P P 18 20 26.8 +0.9
baz=152
OK029 Liberty Lake 19.21 28 P Pn 18 20 27.6 +0.1
GRAC Grapevine Rang 19.35 338 P Pn 18 20 30.3 +1.0
GRAC IAmb IAmb 18 20 33.4
comp=Z,60nm,1.4s
GRAC Grapevine Rang 19.35 338 P Pn 18 20 29.9 +0.6
baz=155
S11A Rachel 19.43 343 P Pn 18 20 31.3 +0.9
S11A IAmb IAmb 18 20 37.7
comp=Z,56nm,1.3s
MVU Marysvale 19.50 351 P P 18 20 30.2 +0.1
MSU Marysvale 19.50 351 P P 18 20 30.5 +0.3
TCRU Three Creeks R 19.64 351 P P 18 20 32.1 +0.5
TCRU IAmb IAmb 18 20 46.3
comp=Z,48nm,1.5s
OK033 Mehan 19.64 29 P P 18 20 31.7 +0.2
OK033 IAmb IAmb 18 20 46.9
comp=Z,35nm,1.1s
OK052 Battle Ridge R 19.67 29 P P 18 20 31.7 0.0
OK052 IAmb IAmb 18 20 47.7
comp=Z,40nm,1.3s
TIN Tinemaha, Big 19.72 336 P Pn 18 20 33.9 +0.1
baz=152
Q16A Castle Valley 19.78 354 P P 18 20 34.0 +0.9
Z41A Richland Creek 19.84 42 P Pn 18 20 34.8 -0.3
Z41A IAmb IAmb 18 20 36.5
comp=Z,50nm,1.1s
DSP Deep Springs 19.90 337 P Pn 18 20 36.0 +0.1
Q24A Divide 19.91 8 P Pn 18 20 36.0 -0.4
Q24A Divide 19.91 8 P P 18 20 35.3 +0.6
baz=190
SRU San Rafael Swe 19.92 355 P Pn 18 20 36.3 0.0
WLAR White Oak Lake 19.93 41 P P 18 20 34.5 -0.1
WLAR IAmb IAmb 18 20 39.0
comp=Z,53nm,1.1s
OK048 Pawnee Station 19.95 28 P P 18 20 35.2 +0.4
OK048 IAmb IAmb 18 20 52.0
comp=Z,28nm,1.1s
SMCO Snowmass 19.95 4 P P 18 20 36.2 +1.0
R11B Troy Canyon, C 20.05 344 P P 18 20 37.0 +1.0
R11B IAmb IAmb 18 20 39.2
comp=Z,31nm,1.2s
R11B Troy Canyon, C 20.05 344 P P 18 20 36.1 +0.1
baz=161
OK051 E0350 and S346 20.07 28 P P 18 20 35.9 -0.2
OK051 IAmb IAmb 18 20 46.5
comp=Z,45nm,1.3s
TUL3 Leonard 20.08 31 P P 18 20 35.5 -0.7
TUL3 Leonard 20.08 31 P P 18 20 36.2 0.0
baz=218
BLOK Blackwell 20.12 27 P P 18 20 36.8 +0.2
BLOK IAmb IAmb 18 21 14.6
comp=Z,42nm,1.1s
TMUT Trail Mountain 20.16 354 P P 18 20 37.4 0.0
TMUT IAmb IAmb 18 20 43.1
comp=Z,30nm,1.3s
MIAR Mount Ida 20.25 38 P P 18 20 38.1 +0.1
baz=225
TPH Tonopah 20.28 340 P P 18 20 40.0 +1.5
P17A Butcher Ranch, 20.29 355 P P 18 20 39.2 +0.5
P17A IAmb IAmb 18 20 44.1
comp=Z,28nm,1.0s
SPR3 Spring Creek 3 20.36 347 P P 18 20 39.3 -0.3
SPR3 IAmb IAmb 18 20 41.4
comp=Z,34nm,1.2s
KSCO Kaye Shedlock' 20.39 13 P 18 20 40.1 +0.3

KSCO IAmb IAmb 18 20 44.8
comp=Z,34nm,0.9s
KSCO Kaye Shedlock' 20.39 13 P P 18 20 40.3 +0.6
baz=197
143A Socs Landing, 20.41 45 P P 18 20 39.7 0.0
P18A Preston Nutter 20.41 356 P P 18 20 40.1 0.0
Q12A Willow Creek R 20.51 346 P P 18 20 42.5 +1.4
MDPB Devils Postpil 20.55 336 P P 18 20 42.7 +1.1
MDPB IAmb IAmb 18 20 47.8
comp=Z,24nm,0.9s
T35A Sooner Cattle 20.56 28 P P 18 20 42.0 +0.6
T35A IAmb IAmb 18 20 45.2
comp=Z,18nm,0.9s
X40A Basin Creek Fa 20.64 39 P P 18 20 40.6 -1.7
ISCO Idaho Springs 20.68 6 P P 18 20 43.8 +0.7
ISCO Idaho Springs 20.68 6 P P 18 20 44.2 +1.2
baz=188,SNR=11
VBMS Vicksburg 20.73 48 P P 18 20 44.7 +1.4
VBMS Vicksburg 20.73 48 P P 18 20 43.5 +0.2
baz=236
O20A White River Ci 20.87 1 P P 18 20 45.4 +0.5
O20A IAmb IAmb 18 20 50.5
comp=Z,26nm,0.9s
O20A White River Ci 20.87 1 P P 18 20 44.7 -0.3
baz=181
LHV Little Huntoon 20.88 337 P P 18 20 46.2 +1.4
LHV IAmb IAmb 18 20 48.3
comp=Z,31nm,1.1s
NLU North Lily Min 20.91 352 P P 18 20 46.5 +1.1
NV11 Mina Array Sit 20.91 338 P P 18 20 46.4 +1.0
NV11 IAmb IAmb 18 20 48.5
comp=Z,30nm,1.1s
MPU Maple Canyon 20.92 353 P P 18 20 46.6 +1.1
MPU IAmb IAmb 18 20 48.3
comp=Z,37nm,1.1s
NVAR Mina Array Bea 20.96 338 P P 18 20 47.1 +1.1
NVAR Mina Array Bea 20.96 338 P P 18 20 46.6 +0.6
comp=Z,11nm,1.0s,baz=163,slow=11,SNR=39
NVAR LR LR 18 28 00.6
comp=Z,397nm,22.0s,baz=127,slow=35
comp=Z,11nm,1.0s
R32A Long Quarter, 20.97 22 P P 18 20 45.2 -0.7
R32A IAmb IAmb 18 20 55.7
comp=Z,18nm,0.9s
CBKS Cedar Bluff 20.98 19 P P 18 20 45.3 -0.7
CBKS IAmb IAmb 18 20 55.6
comp=Z,25nm,1.1s
CBKS Cedar Bluff 20.98 19 P P 18 20 44.8 -1.2
baz=204
TGUH Tegucigalpa,Un 20.99 101 P Pn 18 20 48.1 -0.9
UALR University of 21.14 40 P P 18 20 47.3 -0.4
UALR IAmb IAmb 18 20 52.8
comp=Z,18nm,0.8s
U38A Gravette 21.20 33 P P 18 20 47.9 -0.5
RYN Ryan 21.22 338 P P 18 20 49.6 +1.0
DUG Dugway, Tooele 21.25 351 P P 18 20 50.3 +1.4
DUG Dugway, Tooele 21.25 351 P P 18 20 49.4 +0.4
baz=169
RDMU Red Mountain 21.32 358 P P 18 20 50.5 +0.7
RDMU IAmb IAmb 18 20 54.7
comp=Z,26nm,1.0s
BSUT Blindstream Ca 21.35 355 P P 18 20 51.2 +0.9
BSUT IAmb IAmb 18 20 53.0
comp=Z,32nm,1.3s
CMB Columbia Colle 21.42 334 P P 18 20 50.8 0.0
WAKR Walker 21.45 336 P P 18 20 52.7 +1.6
WAKR IAmb IAmb 18 20 56.7
comp=Z,40nm,1.1s
KVN Kaiserville 21.45 339 P P 18 20 51.9 +0.7
KVN IAmb IAmb 18 20 54.2
comp=Z,36nm,1.0s
WHAR Wooly Hollow 21.52 39 P P 18 20 52.0 +0.2
CTU Camp Tracy 21.60 353 P P 18 20 53.3 +0.5
BRIGG Briggsdale 21.61 9 P P 18 20 53.4 +0.5
BRIGG IAmb IAmb 18 20 55.0
comp=Z,22nm,1.0s
N23A Red Feather La 21.74 5 P P 18 20 51.5 -2.9
N23A IAmb IAmb 18 20 57.9
comp=Z,29nm,1.1s
N23A Red Feather La 21.74 5 P P 18 20 54.5 +0.1
baz=187
YERR Yerington 21.79 337 P P 18 20 56.0 +1.1
146A Union 21.99 49 P P 18 20 56.7 -0.2
BGU Big Grassy Mou 22.00 351 P P 18 20 57.5 +0.5
PNTR Pine Nut 22.02 337 P P 18 20 58.8 +1.5
EMB Emerald Bay 22.11 335 P P 18 20 57.6 -0.8
PHWY Pilot Hill 22.19 6 P P 18 20 57.6 -1.6
ELK Elko 22.23 346 P P 18 20 59.4 -0.2
ELK IAmb IAmb 18 21 02.9
comp=Z,37nm,1.4s
ELK Elko 22.23 346 P P 18 20 58.4 -1.3
comp=Z,12nm,1.1s,baz=180,slow=7.7,SNR=19
ELK LR LR 18 28 49.2
comp=Z,104nm,19.8s,baz=156,slow=35
comp=Z,12nm,1.1s
KSU1 Kansas State U 22.36 25 P P 18 21 01.2 +0.5
baz=211
MPK Martis Peak 22.36 336 P P 18 21 01.7 +0.7
OGNE Ogallala 22.38 13 P P 18 20 59.6 -1.4
OGNE IAmb IAmb 18 21 10.5
comp=Z,25nm,0.9s
OGNE Ogallala 22.38 13 P P 18 21 01.5 +0.5
baz=197
AFDM Forest Hills D 22.44 334 P P 18 21 02.6 +0.9
BMN Battle Mountai 22.44 342 P P 18 21 03.0 +1.2
BMN IAmb IAmb 18 21 05.3
comp=Z,19nm,1.1s
RWWY Rawlins 22.45 3 P P 18 21 02.9 +0.9
RWWY IAmb IAmb 18 21 04.8
comp=Z,23nm,1.2s
PAHR Pah Rah Range 22.48 338 P P 18 21 02.8 +0.6
PAHR IAmb IAmb 18 21 06.3
comp=Z,30nm,1.1s
HWUT Hardware Ranch 22.48 354 P P 18 21 00.5 -1.8
S39A Bolivar 22.71 33 P P 18 21 03.2 -1.3
LCAR Lake Charles 22.73 39 P P 18 21 06.2 +1.5
LCAR IAmb IAmb 18 21 18.9
comp=Z,16nm,1.0s
BRAL Brewton 22.75 54 P P 18 21 04.3 -0.7
baz=244
OXF Oxford 22.82 44 P P 18 21 07.1 +1.4
baz=233
BOAB BOACO BROADBAN 22.98 104 P P 18 21 09.6 +2.0
Z47A Carrollton 22.99 49 P P 18 21 07.3 -0.2
Z47A IAmb IAmb 18 21 08.9
comp=Z,27nm,0.9s
ORV Oroville 23.17 334 P P 18 21 09.8 +0.5
ORV IAmb IAmb 18 21 13.3
comp=Z,40nm,1.5s
K22A Casper 23.44 4 P P 18 21 11.7 -0.5
K22A IAmb IAmb 18 21 21.4
comp=Z,27nm,1.2s
K22A Casper 23.44 4 P P 18 21 12.5 +0.4
baz=185
BW06 Boulder Array 23.51 358 P P 18 21 13.4 +0.4
baz=178
PD31 Pinedale Array 23.51 358 P P 18 21 12.6 -0.3
PDAR Pinedale Array 23.51 358 P P 18 21 12.6 -0.3
PDAR Pinedale Array 23.51 358 P P 18 21 12.2 -0.7
comp=Z,5.3nm,0.9s,baz=160,slow=9.4,SNR=30
PDAR LR LR 18 28 58.4
comp=Z,98nm,21.5s,baz=192,slow=33
comp=Z,5.3nm,0.9s
AHID Auburn Hatcher 23.59 355 P P 18 21 13.8 0.0
LRAL Lakeview Retre 23.68 50 P P 18 21 14.1 -0.3
LRAL IAmb IAmb 18 21 16.6
comp=Z,29nm,1.2s
LRAL Lakeview Retre 23.68 50 P P 18 21 14.3 -0.1
baz=240,SNR=7.2
R40A Maddies Statio 23.70 33 P P 18 21 15.1 +0.5
250A Grady 23.71 53 P P 18 21 15.0 +0.3
BGNE Belgrade 23.84 20 P P 18 21 16.6 +0.6
baz=205
PLAL Pickwick Lake 23.98 45 P P 18 21 16.5 -0.8
CCM Cathedral Cave 24.07 35 P P 18 21 17.8 -0.4
CCM IAmb IAmb 18 21 22.2
comp=Z,11nm,0.8s
CCM Cathedral Cave 24.07 35 P P 18 21 17.7 -0.4
baz=224
SOR Soroa 24.08 77 P P 18 21 19.9 +1.5
P38A Dawn 24.12 29 P P 18 21 19.1 +0.5
REDW Red Top Meadow 24.17 356 P P 18 21 19.4 +0.2
SNOW Snow King Moun 24.26 356 P P 18 21 20.2 +0.1
TPAW Teton Pass 24.30 356 P P 18 21 19.3 -1.2
X48A Hartselle 24.39 47 P P 18 21 20.4 -0.6

LOHW **Long Hollow** 24.40 356 P P 18 21 21.1 -0.2
FVM **French Village** 24.47 36 IAmb IAmb 18 21 22.9
comp=Z,14nm,1.0s
Y49A **Blount Mountai** 24.52 49 IAmb IAmb 18 21 23.9
comp=Z,24nm,1.2s
MOOW **Moose Ponds** 24.55 356 IAmb IAmb 18 21 26.9
comp=Z,13nm,0.9s
IMW **Indian Meadow** 24.71 356 IAmb IAmb 18 21 27.1
comp=Z,23nm,1.3s
P40A **Paris** 24.76 32 IAmb IAmb 18 21 39.3
comp=Z,13nm,1.2s
HLID **Hailey** 24.79 350 IAmb IAmb 18 21 27.3
comp=Z,13nm,0.8s
HLID **Hailey** 24.79 350 P P 18 21 25.4 +0.6
baz=167
WVT **Waverly** 24.82 43 P P 18 21 25.1 +0.1
WVT IAmb IAmb 18 21 26.5
comp=Z,9.1nm,0.9s
WVT **Waverly** 24.82 43 P P 18 21 25.4 +0.4
baz=233
FLWY **Flagg Ranch** 24.88 356 IAmb IAmb 18 21 27.4
comp=Z,13nm,1.1s
RSSD **Black Hills** 25.13 8 P P 18 21 27.9 0.0
RSSD IAmb IAmb 18 21 30.4
comp=Z,7.5nm,0.8s
RSSD **Black Hills** 25.13 8 P P 18 21 28.3 +0.3
baz=190
H17A **Grant Village** 25.18 357 IAmb IAmb 18 21 32.5
comp=Z,13nm,1.2s
H17A **Grant Village** 25.18 357 P P 18 21 29.7 +1.2
baz=176
YFT **Old Faithful** 25.25 356 IAmb IAmb 18 21 33.6
comp=Z,7.6nm,0.8s
LKWY **Lake** 25.34 357 IAmb IAmb 18 21 32.6
comp=Z,10.0nm,1.1s
YBH **Yreka Blue Hor** 25.50 335 LR LR 18 31 02.9
comp=Z,207nm,19.1s,baz=158,slow=36
J08A **Circle Bar Ran** 25.50 343 IAmb IAmb 18 21 33.3
comp=Z,22nm,1.2s
TIGA **Tifton** 25.56 57 P P 18 21 32.5 +0.8
baz=248
SWET **Sewanee** 25.57 47 IAmb IAmb 18 21 33.7
comp=Z,11nm,1.0s
RIMA **Rio Macho** 25.62 108 P P 18 21 35.1 +2.5
RIMA IAmb IAmb 18 21 40.7
comp=Z,23nm,1.2s
YHL **Hebgen Lake** 25.67 356 IAmb IAmb 18 21 38.5
comp=Z,16nm,1.3s
T47A **Sharon Grove** 25.81 42 IAmb IAmb 18 21 37.9
comp=Z,10.0nm,0.8s
RLMT **Red Lodge** 25.86 359 IAmb IAmb 18 21 39.8
comp=Z,12nm,1.2s
RLMT **Red Lodge** 25.86 359 P P 18 21 34.6 +0.1
baz=179,SNR=6.8
W50A **Signal Mountai** 25.99 47 IAmb IAmb 18 21 39.4
comp=Z,18nm,1.0s
J05D **Fort Rock, OR** 26.29 339 P P 18 21 39.3 +0.9
J05D IAmb IAmb 18 21 43.2
comp=Z,16nm,1.1s
OLIL **Olney** 26.32 38 IAmb IAmb 18 21 42.3
comp=Z,16nm,0.9s
BOZ **Bozeman (W)** 26.45 355 P P 18 21 40.5 +0.7
baz=174
GOGA **Godfrey** 26.46 53 P P 18 21 39.1 -0.8
baz=244
PINE **Pine Mountain** 26.64 340 IAmb IAmb 18 21 43.8
comp=Z,20nm,1.2s
WCI **Wyandotte Cave** 27.08 41 P P 18 21 45.7 +0.3
baz=232
T50A **Nancy** 27.30 45 IAmb IAmb 18 21 51.7
comp=Z,8.5nm,0.9s
LAO **LASA Array** 27.48 3 P P 18 21 49.3 +0.3
baz=185
TZTN **Tazewell** 27.91 47 P P 18 21 53.9 +1.0
baz=239
SFIN **Lafayette** 28.00 36 P P 18 21 54.0 +0.4
baz=228
JFWS **Jewell Farm** 28.23 29 P P 18 21 56.2 +0.5
baz=219
EGMT **Eagleton** 28.77 358 P P 18 22 01.4 +0.9
baz=178
KMSC **Kings Mountain** 28.81 51 P P 18 22 01.9 +1.0
baz=244
P49A **Miami Univ. Ec** 28.85 40 P P 18 22 00.0 -1.2
baz=233
DGMT **Dagmar** 29.41 6 P P 18 22 06.7 +0.6
baz=189
NEW **Newport** 29.82 348 P P 18 22 10.5 +0.8
baz=164
P51A **Williamsport** 29.85 42 IAmb IAmb 18 22 13.7
comp=Z,9.7nm,0.8s
BLA **Blacksburg** 30.42 48 P P 18 22 15.8 +0.6
baz=242
O53A **New Philadelph** 31.45 42 P P 18 22 24.2 -0.1
baz=236
M53A **WI Miller and** 32.46 41 P P 18 22 32.7 -0.3
baz=236
ULM **Lac du Bonnet** 32.58 15 P P 18 22 32.2 -1.8
comp=Z,4.4nm,1.0s,baz=202,slow=8.1,SNR=6.4
ULM LR LR 18 36 09.7
comp=Z,93nm,20.7s,baz=216,slow=37
comp=Z,4.4nm,1.0s
ERPA **Erie** 33.27 40 P P 18 22 40.2 +0.1
baz=236
SSPA **Standing Stone** 33.81 44 P P 18 22 45.4 +0.5
baz=240
OTAV **Otavalo** 35.00 119 P P 18 22 59.5 +3.5
OTAV IAmb IAmb 18 23 00.7
comp=Z,6.9nm,0.8s
SADO **Sadowa** 35.31 37 LR LR 18 36 54.9
comp=Z,146nm,18.3s,baz=231,slow=35
FFC **Flin Flon** 35.81 6 P P 18 23 01.4 -0.6
FFC IAmb IAmb 18 23 02.6
comp=Z,9.6nm,1.2s
BBB **Bella Bella** 36.31 340 LR LR 18 37 45.1
comp=Z,213nm,19.9s,baz=206,slow=36
SDV **Santo Domingo** 38.08 100 P P 18 23 23.6 +1.6
SDV IAmb IAmb 18 23 34.9
comp=Z,10nm,0.8s
SDV **Santo Domingo** 38.08 100 LR LR 18 39 38.0
comp=Z,107nm,20.3s,baz=220,slow=37
LBNH **Lisbon** 39.41 42 P P 18 23 32.9 +0.2
baz=243
V35K **Ketchikan** 40.09 340 P P 18 23 38.9 +0.9
baz=145
SJG **San Juan** 40.10 84 LR LR 18 39 30.4
comp=Z,77nm,21.3s,baz=212,slow=35
FCC **Fort Churchill** 40.89 11 P P 18 23 43.8 -0.9
T35M **Bob Quinn** 41.04 342 P P 18 23 46.8 +0.8
baz=148
WRAK **Wrangell Islan** 41.22 340 P P 18 23 47.8 +0.5
baz=145
U33K **Whale Pass** 41.23 339 P P 18 23 48.0 +0.6
baz=144
TAOE **Nuku Hiva Isla** 41.81 231 *e*LR LR 18 35 20.2
comp=Z,346nm,26.2s
DLBC **Dease Lake** 42.22 343 P P 18 23 56.4 +0.7
baz=149
DLBC **Dease Lake** 42.22 343 LR LR 18 40 38.5
comp=Z,258nm,18.7s,baz=170,slow=35
KOTAN **Kotaneelee Air** 42.37 349 P P 18 23 57.6 +0.9
baz=158
S32K **Killisnoo** 42.79 340 P P 18 24 00.7 +0.6
baz=143
PCRV **Puerto La Cruz** 43.29 96 LR LR 18 42 40.9
comp=Z,60nm,21.2s,slow=37
Q32M **Nakina River** 43.29 342 P P 18 24 05.1 +0.6
baz=147
R33M **Jennings River** 43.30 343 P P 18 24 05.1 +0.6
baz=149
YKA **Yellowknife Ar** 43.46 356 P P 18 24 04.6 -1.0
comp=Z,2.1nm,0.8s,baz=170,slow=7.8,SNR=34
YKA PcP PcP 18 25 52.8 -0.7
comp=Z,0.5nm,0.9s,baz=165,slow=2.7,SNR=3.6
YKA LR LR 18 42 31.3
comp=Z,273nm,18.8s,baz=181,slow=37
comp=Z,2.1nm,0.8s
NNA **Nana** 43.99 132 LR LR 18 38 45.3
comp=Z,61nm,18.9s,baz=324,slow=31
P32M **Atlin** 44.23 342 P P 18 24 12.4 +0.5
baz=145
CZSB **Cruzeiro do Su** 44.30 124 P P 18 24 15.7 +2.8
P33M **Teslin, Yukon** 44.49 343 P P 18 24 14.6 +0.6
baz=147
TGTN **Hyland Airport** 44.51 347 P P 18 24 14.9 +0.9
baz=153
SKAG **Skagway** 44.62 341 P P 18 24 15.7 +0.9
baz=143

LMN **Caledonia Moun** 44.67 43 P P 18 24 11.4 -4.2
N32M **Quiet Lake** 45.35 344 IAmb IAmb 18 24 22.9
comp=Z,5.4nm,0.9s
N32M **Quiet Lake** 45.35 344 P P 18 24 21.9 +1.1
baz=147
WHY **Whitehorse** 45.45 342 P P 18 24 22.0 +0.3
baz=144
P29M **Windy Craggy** 45.52 340 P P 18 24 22.1 0.0
baz=140
P30M **Million Dollar** 45.65 341 P P 18 24 24.1 +0.9
baz=141
O30N **Mendenhall** 45.89 342 IAmb IAmb 18 24 27.7
comp=Z,9.9nm,1.1s
O30N **Mendenhall** 45.89 342 P P 18 24 25.9 +0.9
baz=143
RPN **Rapa Nui** 46.06 181 LR LR 18 39 12.4
comp=Z,77nm,19.1s,baz=350,slow=30
MMPY **Sheldon Lake,** 46.14 346 P P 18 24 27.1 0.0
baz=150
O29M **Mount Kennedy** 46.30 340 P P 18 24 29.1 +0.7
baz=139
FARO **Faro, Yukon** 46.32 344 P P 18 24 29.7 +1.3
baz=147
HYT **Haines Junctio** 46.37 341 P P 18 24 29.8 +0.9
baz=141
M31M **Drury Creek, Y** 46.57 344 IAmb IAmb 18 24 32.8
comp=Z,11nm,1.4s
M31M **Drury Creek, Y** 46.57 344 P P 18 24 31.3 +1.0
baz=146
PINM **Pinnacle** 46.71 339 P P 18 24 32.8 +1.3
baz=137
YUK6 **Outpost Mounta** 46.73 341 P P 18 24 32.5 +0.6
baz=140
N30M **Aishikik Lake** 46.73 342 IAmb IAmb 18 24 36.6
comp=Z,12nm,1.4s
N30M **Aishikik Lake** 46.73 342 P P 18 24 32.3 +0.6
baz=142
YUK4 **Talbot Arm** 47.12 341 P P 18 24 36.2 +1.3
baz=140
MESA **MESA** 47.36 338 P P 18 24 37.6 +0.8
baz=135
YUK8 **Steele Glacier** 47.43 340 P P 18 24 37.8 +0.4
baz=139
M30M **Minto, Yukon** 47.53 343 P P 18 24 38.7 +0.8
baz=143
SCHQ **Schefferville** 47.55 31 P P 18 24 37.3 -0.8
comp=Z,1.3nm,0.7s,baz=223,slow=10.0,SNR=4.6
comp=Z,1.3nm,0.7s
CTG **Chitna Glacier** 47.71 339 P P 18 24 39.4 0.0
baz=136
M29M **Somme Creek** 47.91 342 IAmb IAmb 18 24 46.2
comp=Z,5.6nm,1.0s
M29M **Somme Creek** 47.91 342 P P 18 24 41.4 +0.5
baz=141
YUK3 **Moose Creek** 48.02 340 P P 18 24 42.4 +0.5
baz=138
KAIM **Kayak Island** 48.09 337 P P 18 24 42.4 +0.3
baz=132
L29M **L29M** 48.33 343 P P 18 24 45.0 +0.9
baz=142
MCARA **McCarthy VSAT** 48.59 339 P P 18 24 47.4 +1.4
baz=135
BVCY **Beaver Creek** 48.62 341 P P 18 24 47.0 +0.7
baz=138
K29M **Barlow Dome** 48.74 343 P P 18 24 48.5 +1.2
baz=143
BMRM **Bremner River** 48.86 338 P P 18 24 48.2 +0.1
baz=133
GLB **Gilahina Butte** 48.90 338 IAmb IAmb 18 24 54.2
comp=Z,9.5nm,1.2s
M27K **Edge Creek, AK** 48.90 340 IAmb IAmb 18 25 00.1
comp=Z,8.2nm,1.1s
M27K **Edge Creek, AK** 48.90 340 P P 18 24 49.2 +0.6
baz=137
EYAK **Cordova Ski Ar** 49.00 337 P P 18 24 49.9 +0.7
baz=131
J30M **Hart River** 49.02 345 IAmb IAmb 18 24 54.8
comp=Z,5.6nm,1.1s
J30M **Hart River** 49.02 345 P P 18 24 50.1 +0.7
baz=145
P23K **Montague Islan** 49.28 335 P P 18 24 52.6 +1.3
baz=129
N25K **Chitina, Valde** 49.29 338 P P 18 24 52.1 +0.6
baz=133
M26K **Nabesna, AK** 49.30 340 P P 18 24 52.4 +0.9
baz=135
L27K **Beaver Creek,** 49.40 341 P P 18 24 52.7 +0.5
baz=137
J29N **Klondike Camp** 49.42 344 P P 18 24 52.8 +0.4
baz=142
DAWY **Dawson** 49.44 343 P P 18 24 52.7 +0.2
DAWY IAmb IAmb 18 24 57.1
comp=Z,7.2nm,1.2s
DAWY **Dawson** 49.44 343 P P 18 24 53.1 +0.6
baz=141
I30M **Mount Dempster** 49.56 345 P P 18 24 54.1 +0.6
baz=145
H31M **Peel River** 49.57 346 IAmb IAmb 18 24 55.4
comp=Z,8.9nm,1.1s
H31M **Peel River** 49.57 346 P P 18 24 54.3 +0.8
baz=148
KLU **Klutina** 49.68 338 P P 18 24 55.2 +0.7
baz=132
L26K **Log Cabin Wild** 49.85 340 P P 18 24 56.6 +0.8
baz=135
MENT **Mentasta** 49.91 340 IAmb IAmb 18 25 07.2
comp=Z,9.0nm,1.3s
SEW **Seward** 50.16 335 P P 18 24 58.7 +0.7
baz=126
M24K **Tok Junction, Glenn** 50.18 338 P P 18 24 58.5 +0.3
baz=132
K27K **Chicken** 50.19 342 IAmb IAmb 18 25 00.9
comp=Z,7.5nm,0.8s
K27K **Chicken** 50.19 342 P P 18 24 58.3 +0.2
baz=138
KDAK **Kodiak Island** 50.22 331 P P 18 24 59.0 +0.5
baz=122
KDAK **Kodiak Island** 50.22 331 LR LR 18 43 34.3
comp=Z,68nm,19.3s,baz=151,slow=33
OHAK **Old Harbor** 50.26 330 P P 18 24 59.1 +0.3
baz=120
EGAK **Eagle** 50.48 343 IAmb IAmb 18 25 02.2
comp=Z,6.1nm,0.8s
EGAK **Eagle** 50.48 343 P P 18 25 00.6 +0.3
baz=139
BRSE **Bradley Lake S** 50.48 334 P P 18 25 00.2 -0.3
baz=125
O22K **Cooper Landing** 50.49 335 P P 18 25 00.4 -0.2
baz=126
G31M **Satah River** 50.51 347 P P 18 25 01.1 +0.6
baz=148,SNR=10
PAX **Paxson** 50.52 339 P P 18 25 00.8 0.0
baz=133
M23K **Glacier View** 50.53 337 P P 18 25 00.9 0.0
baz=130
Q20K **Shuyak Island** 50.57 332 P P 18 25 01.5 +0.4
baz=122
KNK **Knik Glacier** 50.57 336 P P 18 25 01.4 +0.3
baz=128
EPYK **Eagle Plains** 50.59 346 P P 18 25 01.6 +0.4
baz=145
I28M **Miner Creek** 50.65 344 IAmb IAmb 18 25 03.5
comp=Z,5.0nm,0.9s
I28M **Miner Creek** 50.65 344 P P 18 25 02.4 +0.6
baz=141
ETMB **Extrema** 50.70 121 P P 18 25 02.7 0.0
ETMB IAmb IAmb 18 25 04.3
comp=Z,12nm,1.1s
SCRK **Sand Creek** 50.73 341 P P 18 25 02.4 0.0
SCRK IAmb IAmb 18 25 05.3
comp=Z,9.8nm,1.4s
SCRK **Sand Creek** 50.73 341 P P 18 25 03.1 +0.6
baz=135
SML **Sawmill** 50.77 337 P P 18 25 02.9 +0.3
baz=129
HOM **Homer** 50.81 333 P P 18 25 02.9 -0.1
baz=124
F31M **Tsiigehtchic** 50.84 348 IAmb IAmb 18 25 04.7
comp=Z,13nm,1.2s
F31M **Tsiigehtchic** 50.84 348 P P 18 25 03.3 +0.3
baz=149,SNR=6.7
H29M **Whitestone** 50.86 345 IAmb IAmb 18 25 04.7
comp=Z,8.0nm,1.2s
H29M **Whitestone** 50.86 345 P P 18 25 04.3 +1.1
baz=143
RC01 **Rabbit Creek A** 50.86 336 P P 18 25 03.2 -0.1
baz=127
PMR **Palmer** 50.93 336 P P 18 25 04.4 +0.6
baz=128
G30M **tAoh Zraii Nji** 50.98 346 P P 18 25 04.8 +0.7
baz=146
J26L **Joseph Creek** 50.98 341 P P 18 25 04.5 +0.2
baz=136
R18K **Karluk** 50.98 330 P P 18 25 04.5 +0.3
baz=119
WAT6 **Susitna Watana** 51.04 338 P P 18 25 05.0 +0.1
baz=130
C36M **Paulatuk** 51.05 353 P P 18 25 05.6 +1.0
baz=161
K24K **Donnelly Dome** 51.18 340 P P 18 25 06.2 +0.5
baz=133,SNR=6.7
I27K **Kandik River** 51.23 343 P P 18 25 06.3 +0.3
baz=139
CAPN **Captain Cook N** 51.23 335 P P 18 25 06.7 +0.7
baz=125
DHY **Denali Highway** 51.23 339 P P 18 25 06.6 +0.3
baz=131
F30M **Barrier River** 51.41 347 P P 18 25 08.3 +1.0
baz=147
I26K **Coal Creek Min** 51.44 342 IAmb IAmb 18 25 09.5
comp=Z,5.7nm,0.8s
I26K **Coal Creek Min** 51.44 342 P P 18 25 08.0 +0.4
baz=137
O20K **Slope Mountain** 51.46 334 P P 18 25 09.1 +1.2
baz=123
SUA **Susitna One** 51.48 336 IAmb IAmb 18 25 10.0
comp=Z,11nm,1.1s
SUA **Susitna One** 51.48 336 P P 18 25 09.0 +0.9
baz=126
P19K **Oil Pt** 51.49 333 P P 18 25 08.6 +0.6
baz=122
WAT1 **Susitna Watana** 51.49 338 P P 18 25 08.3 +0.2
baz=129
INK **Inuvik** 51.54 348 P P 18 25 08.7 +0.4
baz=150,SNR=11
J25K **Salcha River,** 51.61 341 IAmb IAmb 18 25 10.9
comp=Z,7.3nm,1.1s
J25K **Salcha River,** 51.61 341 P P 18 25 10.1 +1.1
baz=134
H27K **Steamboat Moun** 51.68 344 P P 18 25 09.8 +0.4
baz=139
N20K **Mount Spurr** 51.90 335 P P 18 25 12.1 +0.9
baz=124
Q17K **Contact Creek** 51.98 330 P P 18 25 12.4 +0.5
baz=118
SKT **Skwentna** 52.08 336 P P 18 25 13.0 +0.5
baz=126
MCK **McKinley** 52.20 339 P P 18 25 13.6 +0.3
baz=129
IL31 52.20 340 IAmb IAmb 18 25 14.1
comp=Z,5.4nm,0.7s
ILAR **Eielson Array** 52.20 340 P P 18 25 13.5 +0.2
comp=Z,3.9nm,0.7s,baz=149,slow=6.5,SNR=61
comp=Z,3.9nm,0.7s
P18K **Big Mountain,** 52.23 332 P P 18 25 13.4 -0.3
baz=120
PRP **Porcupine Dome** 52.29 342 P P 18 25 14.5 +0.4
PRP IAmb IAmb 18 25 15.8
comp=Z,5.0nm,0.8s
PRP **Porcupine Dome** 52.29 342 P P 18 25 14.3 +0.3
baz=134
F28M **Old Crow** 52.33 345 P P 18 25 14.4 +0.1
baz=142,SNR=16
CHGN **Chignik** 52.35 327 P P 18 25 15.1 +0.6
baz=114
WRH **Wood River Hil** 52.39 340 IAmb IAmb 18 25 19.6
comp=Z,5.1nm,0.9s
O18K **Koktuh Hills** 52.45 332 P P 18 25 15.7 +0.5
baz=120
R16K **Pilot Point** 52.47 329 P P 18 25 15.5 +0.2
baz=116
TRF **Thorofare Moun** 52.50 338 IAmb IAmb 18 25 19.8
comp=Z,12nm,1.0s
TRF **Thorofare Moun** 52.50 338 P P 18 25 15.4 -0.3
baz=128
E29M **Blow River** 52.50 347 IAmb IAmb 18 25 17.6
comp=Z,14nm,1.1s
E29M **Blow River** 52.50 347 P P 18 25 15.6 +0.2
baz=144
Q16K **King Salmon** 52.53 331 P P 18 25 16.2 +0.4
baz=118
COLA **College** 52.57 340 P P 18 25 17.1 +1.1
baz=131
POKR **Poker Plat Res** 52.60 340 P P 18 25 16.1 -0.1
baz=132
N19K **Bonanza Creek** 52.63 334 P P 18 25 16.6 -0.1
baz=122
M20K **Styx River** 52.65 335 P P 18 25 17.2 +0.4
baz=124
P17K **Kvichak River** 52.68 331 P P 18 25 17.7 +0.8
baz=118
SAML **Samuel** 52.72 118 P P 18 25 17.0 -0.8
SAML IAmb IAmb 18 25 18.8
comp=Z,6.3nm,1.1s
NEA2 **Nenana** 52.79 339 P P 18 25 18.0 +0.3
baz=130
G26K **Porcupine Rive** 52.82 343 P P 18 25 18.3 +0.5
baz=137
PPLA **Purkeypile** 52.86 337 P P 18 25 19.0 +0.6
baz=125
SDPT **Sand Point** 53.06 326 P P 18 25 20.0 +0.2
baz=112
CAST **Castle Rocks** 53.13 337 P P 18 25 20.4 +0.2
baz=126
BPAW **Bear Paw Mtn.** 53.14 338 P P 18 25 20.2 -0.1
baz=127
N18K **Kilae Creek** 53.16 333 P P 18 25 20.3 -0.2
baz=120
M19K **Big River Lodg** 53.17 335 P P 18 25 20.0 -0.5
baz=122
H24K **Noodor Dome** 53.22 341 IAmb IAmb 18 25 22.8
comp=Z,10nm,1.1s
H24K **Noodor Dome** 53.22 341 P P 18 25 20.8 -0.1
baz=132
I23K **Minto, Yukon-K** 53.24 340 IAmb IAmb 18 25 22.8
comp=Z,11nm,1.1s
I23K **Minto, Yukon-K** 53.24 340 P P 18 25 21.1 +0.2
baz=130
O17K **Koliganek Bris** 53.25 332 P P 18 25 21.1 +0.1
baz=118
L20K **Farewell, AK** 53.27 336 P P 18 25 21.4 +0.1
baz=123
P16K **Nushagak River** 53.31 331 P P 18 25 21.9 +0.3
baz=117
F26K **Sheenjek River** 53.46 344 P P 18 25 23.0 +0.4
baz=137
CHUM **Lake Minchumin** 53.48 338 P P 18 25 22.9 +0.2
baz=126
L19K **White Mountain** 53.50 335 P P 18 25 22.8 -0.2
baz=122
MLY **Manley** 53.62 339 IAmb IAmb 18 25 26.0
comp=Z,7.2nm,1.2s
MLY **Manley** 53.62 339 P P 18 25 24.0 +0.2
baz=128
N17K **Nushagak Hills** 53.64 333 P P 18 25 24.5 +0.5
baz=118
G24K **Hadweenzic Riv** 53.68 342 P P 18 25 24.6 +0.4
baz=133
A36M **Sachs Harbour** 53.68 354 P P 18 25 24.2 +0.1
baz=161
F25K **Christian Rive** 53.78 343 P P 18 25 25.3 +0.3
baz=135
K20K **Telida** 53.83 337 IAmb IAmb 18 25 26.5
comp=Z,13nm,1.4s
K20K **Telida** 53.83 337 P P 18 25 25.6 +0.3
baz=124
D27M **Malcolm River** 53.86 346 P P 18 25 26.1 +0.5
baz=141
I21K **Tanana** 54.13 339 IAmb IAmb 18 25 31.4
comp=Z,9.4nm,1.0s
I21K **Tanana** 54.13 339 P P 18 25 28.1 +0.6
baz=127
E25K **Arctic Village** 54.14 344 IAmb IAmb 18 25 29.6
comp=Z,6.6nm,1.1s
E25K **Arctic Village** 54.14 344 P P 18 25 28.1 +0.6
baz=136
M17K **Holitna River** 54.17 333 P P 18 25 28.2 +0.4
baz=119
O15K **Ungalikthiuk R** 54.23 330 P P 18 25 28.6 +0.3
baz=115
L18K **Granite Mounta** 54.26 335 P P 18 25 29.0 +0.6
baz=120
J20K **Nowinta River** 54.31 337 P P 18 25 29.1 +0.2
baz=124
N16K **Nishlik Lake** 54.31 332 P P 18 25 29.6 +0.7
baz=117

PB11	**IPOC Station P**	**54.33**	**133**	P	**P**	**18**	**25**	**31.7 +2.0**
TTA	**Tatalina**	**54.35**	**335**	P	**P**	**18**	**25**	**29.0 -0.2**
	baz=121							
F24K	**Squaw Lake**	**54.35**	**343**	IAmb	IAmb	18	25	31.2
	comp=Z,9.3nm,1.2s							
F24K	**Squaw Lake**	**54.35**	**343**	P	**P**	**18**	**25**	**29.4 +0.3**
	baz=133							
H22K	**Ishtalitna Cre**	**54.37**	**340**	P	**P**	**18**	**25**	**29.4 +0.2**
	baz=128							
PPT	**Papeete**	**54.42**	**230**	LR	LR	18	42	54.9
	comp=Z,115nm,21.6s,baz=268,slow=30							
PPT2	**Papeete2**	**54.43**	**230**	*e*LR	LR	18	41	11.8
PPT2				*e*LR	LR	18	41	13.4
	comp=Z,180nm,31.8s							
G23K	**Bananza Creek**	**54.45**	**341**	P	**P**	**18**	**25**	**30.2 +0.3**
	baz=130							
GO01	**Chusmiza**	**54.59**	**133**	IAmb	IAmb	18	25	35.5
	comp=Z,4.3nm,0.8s							
H21K	**Melozitna Rive**	**54.69**	**339**	P	**P**	**18**	**25**	**32.1 +0.5**
	baz=126							
J19K	**Poorman**	**54.76**	**337**	P	**P**	**18**	**25**	**31.7 -0.3**
	baz=122							
I20K	**Naaghedeneel**	**54.78**	**338**	P	**P**	**18**	**25**	**32.2 +0.1**
	baz=124							
COLD	**Coldfoot**	**54.84**	**342**	P	**P**	**18**	**25**	**33.3 +0.7**
	baz=130							
L17K	**Donlin**	**54.88**	**334**	P	**P**	**18**	**25**	**33.1 +0.1**
	baz=118							
J18K	**Innoko River**	**54.90**	**336**	P	**P**	**18**	**25**	**33.2 +0.1**
	baz=121							
G22K	**Bettles**	**55.04**	**341**	P	**P**	**18**	**25**	**34.8 +0.8**
	baz=128							
K17K	**Iditarod**	**55.15**	**335**	P	**P**	**18**	**25**	**35.0 0.0**
	baz=119							
L16K	**Owhat River**	**55.17**	**333**	P	**P**	**18**	**25**	**35.5 +0.4**
	baz=117							
D25K	**Kavik River**	**55.20**	**345**	IAmb	IAmb	18	25	36.9
	comp=Z,7.9nm,0.9s							
D25K	**Kavik River**	**55.20**	**345**	P	**P**	**18**	**25**	**35.5 +0.3**
	baz=135							
E23K	**Chandalar**	**55.21**	**342**	P	**P**	**18**	**25**	**35.8 +0.5**
	baz=131,SNR=14							
M15K	**Kasigluk River**	**55.26**	**332**	P	**P**	**18**	**25**	**35.3 -0.5**
	baz=115							
C26K	**Camden Bay**	**55.28**	**346**	P	**P**	**18**	**25**	**35.8 +0.1**
	baz=137							
H20K	**Anotleneega Mo**	**55.31**	**338**	P	**P**	**18**	**25**	**35.8 -0.3**
	baz=124							
PB01	**IPOC Station P**	**55.32**	**134**	IAmb	IAmb	18	25	40.6
	comp=Z,8.2nm,0.9s							
TOLK	**Toolik Lake Re**	**55.58**	**343**	IAmb	IAmb	18	25	39.2
	comp=Z,8.3nm,0.9s							
TOLK	**Toolik Lake Re**	**55.58**	**343**	P	**P**	**18**	**25**	**37.9 -0.1**
	baz=132,SNR=8.4							
GCSA	**Galena City Sc**	**55.62**	**337**	P	**P**	**18**	**25**	**38.6 +0.4**
	baz=121							
D24K	**Happy Valley**	**55.72**	**344**	P	**P**	**18**	**25**	**38.9 0.0**
	baz=133							
J17K	**VABM Dome**	**55.79**	**335**	P	**P**	**18**	**25**	**39.3 -0.2**
	baz=118							
F21K	**Alatna River**	**55.84**	**341**	IAmb	IAmb	18	25	41.3
	comp=Z,4.9nm,1.0s							
F21K	**Alatna River**	**55.84**	**341**	P	**P**	**18**	**25**	**39.4 -0.4**
	baz=126							
H19K	**Roundabout Mou**	**55.88**	**338**	P	**P**	**18**	**25**	**39.3 -0.7**
	baz=122							
E22K	**Anaktuvuk Pass**	**55.89**	**342**	IAmb	IAmb	18	25	41.6
	comp=Z,7.0nm,1.1s							
E22K	**Anaktuvuk Pass**	**55.89**	**342**	P	**P**	**18**	**25**	**40.3 +0.1**
	baz=129							
UNV	**Unalaska Valle**	**55.92**	**323**	P	**P**	**18**	**25**	**41.5 +0.9**
	baz=105							
C24K	**Franklin Bluff**	**56.07**	**344**	P	**P**	**18**	**25**	**42.5 +1.1**
	baz=133							
D23K	**Nanushuk River**	**56.10**	**343**	P	**P**	**18**	**25**	**42.3 +0.7**
	baz=130							
MDP	**Montagnes des**	**56.16**	**97**	LR	LR	18	50	42.6
	comp=Z,62nm,20.5s,baz=280,slow=37							
H18K	**Honhosa River**	**56.37**	**337**	P	**P**	**18**	**25**	**43.8 +0.1**
	baz=120							
G19K	**Purcell Mounta**	**56.42**	**339**	P	**P**	**18**	**25**	**44.1 0.0**
	baz=122							
F20K	**Avaraart Lake**	**56.46**	**340**	IAmb	IAmb	18	25	45.6
	comp=Z,6.6nm,1.1s							
F20K	**Avaraart Lake**	**56.46**	**340**	P	**P**	**18**	**25**	**44.1 -0.1**
	baz=124							
D22K	**Ayikyak River**	**56.60**	**342**	IAmb	IAmb	18	25	47.1
	comp=Z,10nm,1.1s							
D22K	**Ayikyak River**	**56.60**	**342**	P	**P**	**18**	**25**	**45.6 +0.3**
	baz=128							
E21K	**Killik River**	**56.72**	**342**	P	**P**	**18**	**25**	**46.4 +0.3**
	baz=127							
LVC	**Limon Verde**	**56.79**	**135**	LR	LR	18	44	27.6
	comp=Z,40nm,20.5s,baz=304,slow=30							
H17K	**Granite Mounta**	**56.84**	**337**	P	**P**	**18**	**25**	**47.6 +0.6**
	baz=118							
E19K	**Redstone River**	**57.17**	**340**	IAmb	IAmb	18	25	51.4
	comp=Z,9.3nm,1.1s							
E19K	**Redstone River**	**57.17**	**340**	P	**P**	**18**	**25**	**50.1 +0.7**
	baz=123							
E20K	**Nigu River**	**57.28**	**341**	P	**P**	**18**	**25**	**50.5 +0.4**
	baz=124							
J14K	**Nanvaranak Lak**	**57.35**	**333**	P	**P**	**18**	**25**	**51.6 +1.0**
	baz=113							
G17K	**Kiwalik Mounta**	**57.38**	**337**	P	**P**	**18**	**25**	**51.5 +0.6**
	baz=118							
F18K	**Selawik**	**57.55**	**338**	P	**P**	**18**	**25**	**53.0 +1.1**
	baz=120							
B21K	**Ikpikpuk River**	**57.60**	**343**	P	**P**	**18**	**25**	**52.7 +0.4**
	baz=126							
D20K	**Etivluk River**	**57.67**	**341**	P	**P**	**18**	**25**	**53.2 +0.3**
	baz=124							
G16K	**Koyuk River**	**57.97**	**337**	P	**P**	**18**	**25**	**55.4 +0.5**
	baz=116							
D19K	**Kuna River**	**58.01**	**341**	P	**P**	**18**	**25**	**55.6 +0.3**
	baz=122							
F17K	**Baldwin Pennin**	**58.03**	**338**	P	**P**	**18**	**25**	**56.0 +0.7**
	baz=118							
TBI	**Tubuai**	**58.17**	**225**	*e*LR	LR	18	42	59.7
	comp=Z,1µm,27.8s							
E18K	**Tukpahlearik C**	**58.27**	**339**	P	**P**	**18**	**25**	**57.5 +0.5**
	baz=119							
P08K	**Saint George I**	**58.29**	**325**	P	**P**	**18**	**25**	**57.9 +0.6**
	baz=104							
E17K	**Hotham Inlet**	**58.53**	**338**	P	**P**	**18**	**25**	**59.4 +0.6**
	baz=118,SNR=6.6							
B20K	**Meade River**	**58.55**	**342**	IAmb	IAmb	18	26	00.7
	comp=Z,8.0nm,1.1s							
B20K	**Meade River**	**58.55**	**342**	P	**P**	**18**	**25**	**59.6 +0.7**
	baz=124							
C19K	**Lookout Ridge**	**58.79**	**341**	IAmb	IAmb	18	26	02.3
	comp=Z,7.1nm,0.9s							
C19K	**Lookout Ridge**	**58.79**	**341**	P	**P**	**18**	**26**	**01.2 +0.5**
	baz=121							
ANM	**Nome**	**58.80**	**335**	P	**P**	**18**	**26**	**01.1 +0.4**
	baz=113							
F15K	**North Star Dit**	**58.97**	**336**	P	**P**	**18**	**26**	**02.0 +0.1**
	baz=114							
C18K	**Utukok River**	**59.06**	**340**	P	**P**	**18**	**26**	**02.7 +0.1**
	baz=119							
D17K	**Noatak River**	**59.25**	**339**	P	**P**	**18**	**26**	**04.0 +0.2**
	baz=117							
H03N2	**Juan Fernandez**	**59.48**	**151**	T	T	19	30	39.3
	baz=329,slow=78,SNR=154							
H03N1	**Juan Fernandez**	**59.49**	**151**	T	T	19	30	43.4
	baz=329,slow=78,SNR=204							
H03N3	**Juan Fernandez**	**59.50**	**151**	T	T	19	30	39.5
	baz=329,slow=78,SNR=210							
F14K	**Arctic Creek**	**59.52**	**336**	P	**P**	**18**	**26**	**05.5 -0.3**
	baz=112							
PTLB	**Pontes e Lacer**	**59.56**	**122**	IAmb	IAmb	18	26	08.4
	comp=Z,3.0nm,0.9s							
C17K	**DeLong Mountai**	**59.63**	**340**	P	**P**	**18**	**26**	**07.1 +0.6**
	baz=117							
A19K	**Wainwright**	**59.79**	**342**	P	**P**	**18**	**26**	**08.4 +0.9**
	baz=120							
C16K	**Lisburne Hills**	**60.27**	**339**	P	**P**	**18**	**26**	**11.8 +1.0**
	baz=115							
GAMB	**Gambell**	**61.16**	**333**	P	**P**	**18**	**26**	**17.3 +0.3**
	baz=106							
RAR	**Rarotonga**	**64.25**	**234**	LR	LR	18	46	54.7
	comp=Z,128nm,21.5s,baz=52,slow=29							
AQDB	**Aquidauana**	**65.06**	**125**	P	**P**	**18**	**26**	**44.5 +1.0**
AQDB				IAmb	IAmb	18	26	54.3
	comp=Z,5.1nm,0.8s							
CPUP	**Villa Florida**	**67.22**	**131**	P	**P**	**18**	**26**	**59.0 +1.7**
CPUP	**Villa Florida**	**67.22**	**131**	P	**P**	**18**	**26**	**58.0 +0.7**
	comp=Z,5.8nm,0.9s,baz=318,slow=8.6,SNR=11							
CPUP				LR	LR	18	54	32.1
	comp=Z,36nm,18.6s,baz=272,slow=34							
	comp=Z,5.8nm,0.9s							
PLCA	**Paso Flores**	**69.29**	**150**	P	**P**	**18**	**27**	**11.7 +1.6**
	comp=Z,2.4nm,0.9s,baz=328,slow=6.0,SNR=4.6							
PLCA				LR	LR	18	50	22.2
	comp=Z,197nm,21.7s,baz=318,slow=30							
	comp=Z,2.4nm,0.9s							
BILL	**Bilibino**	**70.57**	**337**	P	**P**	**18**	**27**	**17.8 +0.3**
SEY	**Seymchan**	**77.15**	**332**	P	**P**	**18**	**27**	**56.5 +0.4**
	comp=Z,4.4nm,0.8s,baz=112,slow=4.3,SNR=15							
	comp=Z,4.4nm,0.8s							
TIXI	**Tiksi**	**81.44**	**344**	P	**P**	**18**	**28**	**19.0 -0.4**
TIXI				IAmb	IAmb	18	28	22.8
	comp=Z,7.2nm,1.2s							
ARCES	**ARCESS Array B**	**85.70**	**15**	P	**P**	**18**	**28**	**40.7 -0.7**
	comp=Z,4.4nm,1.2s,baz=335,slow=4.0,SNR=4.5							
	comp=Z,4.4nm,1.2s							
NOA	**NORSAR Array B**	**86.71**	**25**	LR	LR	19	06	39.4
	comp=Z,56nm,21.1s,baz=305,slow=35							
BBTS	**Babate**	**87.11**	**76**	LR	LR	19	03	10.4
	comp=Z,45nm,21.0s,baz=168,slow=32							
MDT	**Midelt**	**90.87**	**55**	LR	LR	19	05	40.3
	comp=Z,29nm,22.0s,baz=346,slow=33							
DZM	**Mont Dzumac**	**92.64**	**248**	*e*LR	LR	18	58	56.0
	comp=Z,284nm,29.2s							
DZM	**Mont Dzumac**	**92.64**	**248**	LR	LR	19	01	07.5
	comp=Z,82nm,21.2s,baz=94,slow=29							
DAVOX	**Davos/Dischmat**	**94.10**	**37**	LR	LR	19	10	18.0
	comp=Z,78nm,18.4s,baz=274,slow=35							
HNR	**Honiara**	**94.47**	**262**	LR	LR	19	04	59.7
	comp=Z,1µm,18.2s,baz=66,slow=31							
WRA	**Warramunga Arr**	**121.08**	**258**	PKP	**PKPdf**	**18**	**34**	**54.2 -2.2**
	comp=Z,0.3nm,0.9s,baz=69,slow=2.5,SNR=1.5							
ASAR	**Alice Springs**	**122.11**	**254**	PKP	**PKPdf**	**18**	**34**	**58.1 -0.2**
	comp=Z,0.3nm,0.8s,baz=82,slow=3.2,SNR=3.5							
CMAR	**Chiang Mai Arr**	**133.87**	**323**	PKP	**PKPdf**	**18**	**35**	**19.3 -1.5**
	comp=Z,0.7nm,0.9s,baz=349,slow=4.1,SNR=2.3							

BJI ***19*** *18:29:55.0±0.0,56.90N×155.10W,h53km,mb4.8/53, mB5.1/21,Ms5.1/6,Ms7 4.7/5*
MOS ***19*** *18:29:55.4±0.9,56.90N×155.17W,h40km,mb5.1/73, Error ellipse: s-maj=9.6km s-min=4.1km az=94.5*
NEIC ***19*** *18:29:57.7±1.6,56.81N±0.05×155.04W±0.07,h46km±5km, Error ellipse: s-maj=7.4km s-min=5.6km az=177.0*
IDC ***19*** *18:29:57.4±2.1,56.98N×155.36W,h38km±17km,mb4.4/34, mbtmp4.6/36,ML4.0/2,MS3.7/34,Error ellipse: s-maj=17.1km s-min=10.3km az=13.0*
AEIC ***19*** *18:29:58.8±1.4,56.81N±0.05×155.01W±0.07,h47km±5km, ML4.4,mb4.9/160(NEIC),ML4.7/72(NEIC),Error ellipse: s-maj=7.3km s-min=5.6km az=178.0*
BGR ***19*** *18:30:09.9,58.50N×155.50W,h48km±2km, mb4.8*

ISC 19 18:29:57.8±0.4,56.88N±0.05×155.12W±0.04,h48km±2km, h47km:pP-P,n972,σ1$24/985,mb4.8/202,MS3.8/37, 41C-11D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		ISC	h	m	s	ISC
R18K	**Karluk**	**0.77**	**27**			**Pn**	**18**	**30**	**13.1**	**+0.7**
R18K						**Sn**	**18**	**30**	**24.4**	**+1.4**
R18K	**Karluk**	**0.77**	**27**	P		**Pn**	**18**	**30**	**13.1**	**+0.7**
	baz=202									
PLK3	**Peulik 3**	**1.02**	**323**			**Pn**	**18**	**30**	**17.5**	**+1.7**
OHAK	**Old Harbor**	**1.05**	**70**			**Pn**	**18**	**30**	**16.0**	**-0.1**
OHAK	**Old Harbor**	**1.05**	**70**			**Sn**	**18**	**30**	**29.7**	**-0.1**
OHAK	**Old Harbor**	**1.05**	**70**	P		**Pn**	**18**	**30**	**16.6**	**+0.4**
OHAK	**Old Harbor**	**1.05**	**70**	P		**Pn**	**18**	**30**	**16.1**	**-0.1**
	baz=247									
PLK1	**Peulik 1**	**1.23**	**319**			**Pn**	**18**	**30**	**20.3**	**+1.8**
ANCK	**Angle Creek**	**1.33**	**351**			**Pn**	**18**	**30**	**21.4**	**+1.3**
ANCK						**Sn**	**18**	**30**	**39.2**	**+2.5**
ACHA	**Angle Creek He**	**1.34**	**355**			**Pn**	**18**	**30**	**21.2**	**+1.1**
ACHA						**Sn**	**18**	**30**	**38.7**	**+2.0**
KCE	**Katmai Mt Cerb**	**1.36**	**358**			**Pn**	**18**	**30**	**22.0**	**+1.5**
KCG	**Knife Ck. Glac**	**1.43**	**0**			**Pn**	**18**	**30**	**23.2**	**+1.8**
CNTC	**Contact Creek**	**1.45**	**344**			**Pn**	**18**	**30**	**23.2**	**+1.5**
CNTC						**Sn**	**18**	**30**	**41.8**	**+2.3**
Q17K	**Contact Creek**	**1.45**	**344**	P		**Pn**	**18**	**30**	**22.9**	**+1.3**
	baz=162									
PLK5	**Peulik 5**	**1.47**	**320**			**Pn**	**18**	**30**	**23.6**	**+1.8**
R16K	**Pilot Point**	**1.50**	**298**			**Pn**	**18**	**30**	**23.8**	**+1.5**
R16K	**Pilot Point**	**1.50**	**298**	IAML			**18**	**30**	**47.8**	
	comp=N,14µm,0.7s									
R16K	**Pilot Point**	**1.50**	**298**	P		**Pn**	**18**	**30**	**23.8**	**+1.5**
	baz=117									
KVTA	**Katmai Vly 10**	**1.51**	**356**			**Pn**	**18**	**30**	**23.6**	**+1.2**
KELA	**Mount Kelaz**	**1.60**	**348**			**Pn**	**18**	**30**	**24.8**	**+1.2**
ANNE	**Aniakchak Nort**	**1.61**	**272**			**Pn**	**18**	**30**	**25.0**	**+1.1**
KDAK	**Kodiak Island**	**1.64**	**56**			**Pn**	**18**	**30**	**24.2**	**0.0**
KDAK	**Kodiak Island**	**1.64**	**56**	P		**Pn**	**18**	**30**	**24.4**	**+0.3**
	baz=235									
KDAK	**Kodiak Island**	**1.64**	**56**	*i* P		**Pn**	**18**	**30**	**24.5**	**+0.3**
KDAK	**Kodiak Island**	**1.64**	**56**	Pn		**Pn**	**18**	**30**	**23.9**	**-0.3**
	comp=N,74nm,0.3s,baz=248,slow=7.1,SNR=779									
KAHG	**Katmai Hook Gl**	**1.64**	**10**			**Pn**	**18**	**30**	**25.7**	**+1.4**
KAHG						**Sn**	**18**	**30**	**46.8**	**+2.6**
ANNW	**Aniakchak Nort**	**1.70**	**274**			**Pn**	**18**	**30**	**26.6**	**+1.5**
KAHC	**Katmai Hardscr**	**1.77**	**2**			**Pn**	**18**	**30**	**27.2**	**+1.1**
CHGN	**Chignik**	**1.92**	**254**			**Pn**	**18**	**30**	**28.2**	**+0.4**
CHGN				IAML			**18**	**30**	**57.5**	
	comp=N,6µm,0.7s									
CHGN				IAML			**18**	**30**	**57.8**	
	comp=E,4µm,0.5s									
CHGN	**Chignik**	**1.92**	**254**	P		**Pn**	**18**	**30**	**28.3**	**+0.4**
	baz=73,SNR=121									
Q16K	**King Salmon**	**1.98**	**336**	P		**Pn**	**18**	**30**	**29.7**	**+0.9**
	baz=154,SNR=510									
Q19K	**Cape Douglas,**	**2.20**	**20**			**Pn**	**18**	**30**	**33.0**	**+1.1**
Q19K				IAML			**18**	**31**	**19.5**	
	comp=N,7µm,0.8s									
Q19K	**Cape Douglas,**	**2.20**	**20**			**Sn**	**18**	**31**	**00.5**	**+2.8**
Q19K	**Cape Douglas,**	**2.20**	**20**	P		**Pn**	**18**	**30**	**32.9**	**+1.1**
	baz=200									
Q20K	**Shuyak Island**	**2.26**	**39**	P		**Pn**	**18**	**30**	**33.5**	**+0.8**
	baz=219									
SYI	**Shuyak Island**	**2.27**	**39**			**Pn**	**18**	**30**	**33.6**	**+0.9**
SYI				IAML			**18**	**31**	**17.3**	
	comp=N,3µm,1.1s									
VNHG	**Veniaminof 1**	**2.34**	**255**			**Pn**	**18**	**30**	**35.0**	**+1.2**
P17K	**Kvichak River**	**2.42**	**344**	P		**Pn**	**18**	**30**	**35.7**	**+0.9**
	baz=162,SNR=89									
VNSS	**Veniaminof 8**	**2.49**	**256**			**Pn**	**18**	**30**	**37.5**	**+1.5**
P18K	**Big Mountain,**	**2.52**	**359**			**Pn**	**18**	**30**	**37.0**	**+0.8**
P18K	**Big Mountain,**	**2.52**	**359**	P		**Pn**	**18**	**30**	**37.1**	**+0.8**
	baz=177,SNR=79									
S14K	**Fog Glacier**	**2.53**	**258**	P		**Pn**	**18**	**30**	**37.7**	**+1.3**
	baz=76									
VNFG	**Fog Glacier, M**	**2.53**	**258**			**Pn**	**18**	**30**	**37.3**	**+0.9**
P16K	**Nushagak River**	**2.64**	**326**	P		**Pn**	**18**	**30**	**39.2**	**+1.3**
	baz=143									
AUL	**Augustine Lava**	**2.66**	**19**			**Pn**	**18**	**30**	**39.9**	**+1.8**
P19K	**Oil Pt**	**2.95**	**19**			**Pn**	**18**	**30**	**43.7**	**+1.6**
P19K				IAML			**18**	**31**	**43.3**	
	comp=E,3µm,0.8s									
P19K				IAML			**18**	**31**	**43.3**	
	comp=N,2µm,0.7s									
P19K	**Oil Pt**	**2.95**	**19**	P		**Pn**	**18**	**30**	**43.7**	**+1.6**
	baz=199									
O18K	**Koktuh Hills**	**2.98**	**359**			**Pn**	**18**	**30**	**43.6**	**+1.1**
O18K				IAML			**18**	**31**	**45.6**	
	comp=E,2µm,0.7s									
O18K	**Koktuh Hills**	**2.98**	**359**	P		**Pn**	**18**	**30**	**43.7**	**+1.1**
	baz=178									
O17K	**Koliganek Bris**	**3.08**	**341**			**Pn**	**18**	**30**	**44.7**	**+0.8**
O17K	**Koliganek Bris**	**3.08**	**341**	P		**Pn**	**18**	**30**	**44.6**	**+0.8**
	baz=159,SNR=52									
O16K	**Kokwok River B**	**3.14**	**331**	Pn		**Pn**	**18**	**30**	**45.1**	**+0.4**
O16K				IAML			**18**	**31**	**40.7**	
	comp=E,2µm,0.9s									
O16K				IAML			**18**	**31**	**40.7**	
	comp=N,2µm,0.9s									
O16K	**Kokwok River B**	**3.14**	**331**	P		**Pn**	**18**	**30**	**45.5**	**+0.8**
	baz=148									
CHNA	**Chernabura Isl**	**3.25**	**233**	P		**Pn**	**18**	**30**	**45.9**	**-0.4**
	baz=50,SNR=27									
CNBA	**Chernabura Isl**	**3.26**	**233**			**Pn**	**18**	**30**	**46.0**	**-0.4**
CNBA				IAML			**18**	**31**	**56.3**	
	comp=E,1µm,1.2s									
ILSW	**Iliamna Southw**	**3.28**	**18**			**Pn**	**18**	**30**	**47.9**	**+1.2**
IVE	**Iliamna Volcan**	**3.33**	**18**			**Pn**	**18**	**30**	**48.6**	**+1.2**
HOM	**Homer**	**3.33**	**32**	Pn		**Pn**	**18**	**30**	**48.9**	**+1.6**
HOM	**Homer**	**3.33**	**32**	P		**Pn**	**18**	**30**	**48.3**	**+1.0**
	baz=213									
O19K	**Port Alsworth**	**3.35**	**7**	Pn		**Pn**	**18**	**30**	**47.9**	**+0.4**
O19K				IAML			**18**	**31**	**47.0**	
	comp=N,2µm,0.5s									
O19K	**Port Alsworth**	**3.35**	**7**	P		**Pn**	**18**	**30**	**48.5**	**+1.0**
	baz=186									
CNPM	**China Poot**	**3.35**	**36**			**Pn**	**18**	**30**	**48.6**	**+1.0**
CNPM				IAML			**18**	**31**	**54.0**	
	comp=N,1µm,1.3s									
SDPT	**Sand Point**	**3.37**	**245**			**Pn**	**18**	**30**	**48.5**	**+0.6**
SDPT				IAML			**18**	**31**	**48.0**	
	comp=E,3µm,0.9s									
SDPT				IAML			**18**	**31**	**54.1**	
	comp=N,2µm,0.8s									
SDPT	**Sand Point**	**3.37**	**245**	P		**Pn**	**18**	**30**	**48.7**	**+0.8**
SDPT	**Sand Point**	**3.37**	**245**	P		**Pn**	**18**	**30**	**48.2**	**+0.3**
	baz=62									
O15K	**Ungalikthiuk R**	**3.40**	**315**	P		**Pn**	**18**	**30**	**49.6**	**+1.3**
	baz=131,SNR=60									
O20K	**Slope Mountain**	**3.46**	**21**			**Pn**	**18**	**30**	**50.5**	**+1.3**
O20K	**Slope Mountain**	**3.46**	**21**	P		**Pn**	**18**	**30**	**50.4**	**+1.2**
	baz=202									
BRLK	**Bradley Lake**	**3.65**	**36**			**Pn**	**18**	**30**	**51.8**	**+0.1**
BRLK				IAML			**18**	**32**	**07.1**	
	comp=E,1µm,0.9s									
BRSE	**Bradley Lake S**	**3.68**	**37**			**Pn**	**18**	**30**	**52.3**	**+0.2**
BRSE	**Bradley Lake S**	**3.68**	**37**	P		**Pn**	**18**	**30**	**52.3**	**+0.2**
	baz=219									
RED	**Redoubt Volcan**	**3.75**	**18**			**Pn**	**18**	**30**	**54.5**	**+1.4**
RSO	**Redoubt South**	**3.79**	**18**			**Pn**	**18**	**30**	**55.3**	**+1.4**
N17K	**Nushagak Hills**	**3.81**	**344**	Pn		**Pn**	**18**	**30**	**54.7**	**+0.8**
N17K				IAML			**18**	**32**	**04.0**	
	comp=N,924nm,0.8s									
N17K				IAML			**18**	**32**	**05.6**	
	comp=E,1µm,0.9s									
N17K	**Nushagak Hills**	**3.81**	**344**	P		**Pn**	**18**	**30**	**54.8**	**+0.9**
	baz=162									
N18K	**Kilae Creek**	**3.83**	**354**	Pn		**Pn**	**18**	**30**	**54.9**	**+0.7**
N18K				IAML			**18**	**32**	**05.2**	
	comp=E,1µm,1.3s									
N18K				IAML			**18**	**32**	**13.4**	
	comp=N,884nm,0.9s									
N18K	**Kilae Creek**	**3.83**	**354**	P		**Pn**	**18**	**30**	**55.2**	**+1.0**
	baz=173									
NCT	**North Crescent**	**3.86**	**16**			**Pn**	**18**	**30**	**56.2**	**+1.5**
RDJH	**Redoubt Jeurge**	**3.91**	**17**			**Pn**	**18**	**30**	**56.9**	**+1.5**
DFR	**Drift River**	**3.93**	**18**			**Pn**	**18**	**30**	**56.9**	**+1.3**
N19K	**Bonanza Creek**	**3.96**	**4**	Pn		**Pn**	**18**	**30**	**57.0**	**+1.0**
N19K				IAML			**18**	**32**	**06.7**	
	comp=N,696nm,0.8s									
N19K				IAML			**18**	**32**	**14.4**	
	comp=E,780nm,0.9s									
N19K	**Bonanza Creek**	**3.96**	**4**	P		**Pn**	**18**	**30**	**57.3**	**+1.3**
	baz=184									
RDT	**Redoubt**	**3.96**	**20**			**Pn**	**18**	**30**	**57.1**	**+1.0**
PS1A	**Pavlof South-1**	**3.99**	**251**			**Pn**	**18**	**30**	**57.3**	**+1.0**
O14K	**Tigyukauivet M**	**4.04**	**309**			**Pn**	**18**	**30**	**58.4**	**+1.4**
O14K	**Tigyukauivet M**	**4.04**	**309**	IAML			**18**	**32**	**17.7**	
	comp=N,789nm,1.0s									
O14K				IAML			**18**	**32**	**18.7**	
	comp=E,635nm,1.0s									
O14K	**Tigyukauivet M**	**4.04**	**309**	P		**Pn**	**18**	**30**	**58.4**	**+1.4**
	baz=224									
N16K	**Nishlik Lake**	**4.08**	**334**	P		**Pn**	**18**	**30**	**58.8**	**+1.2**
	baz=150									
PN7A	**Pavlof North-7**	**4.11**	**252**			**Pn**	**18**	**30**	**59.4**	**+1.2**
N15K	**Kwethluk River**	**4.20**	**324**	Pn		**Pn**	**18**	**31**	**00.5**	**+1.2**
N15K				IAML			**18**	**32**	**20.5**	
	comp=N,863nm,0.7s									
N15K				IAML			**18**	**32**	**24.5**	
	comp=E,1µm,1.1s									
N15K	**Kwethluk River**	**4.20**	**324**	P		**Pn**	**18**	**31**	**01.0**	**+1.7**
	baz=140									
SVW2	**Sparrevohn**	**4.23**	**357**			**Pn**	**18**	**31**	**00.6**	**+0.8**

L17K **Donlin** 5.51 344 P Pn 18 31 17.9 +0.8
baz=161,SNR=20
M22K **Willow** 5.51 26 Pn 18 31 18.5 +1.4
M22K **Willow** 5.51 26 P Pn 18 31 18.4 +1.2
baz=209
M13K **Dall Lake** 5.57 313 Pn Pn 18 31 20.0 +2.1
M13K **Dall Lake** 5.57 313 P Pn 18 31 20.1 +2.1
baz=126
PMR **Palmer** 5.63 31 Pn Pn 18 31 18.1 -0.7
PMR **Palmer** 5.63 31 P Pn 18 31 20.9 +2.1
PMR **Palmer** 5.63 31 P Pn 18 31 19.0 +0.1
baz=215,SNR=7.3
PMR **Palmer** 5.63 31 P Pn 18 31 18.1 -0.7
L20K **Farewell, AK** 5.65 6 Pn 18 31 20.4 +1.3
L20K **Farewell, AK** 5.65 6 P Pn 18 31 20.7 +1.6
baz=186
KNK **Knik Glacier** 5.69 34 Pn 18 31 19.3 -0.4
KNK **Knik Glacier** 5.69 34 P Pn 18 31 19.2 -0.4
baz=219
HIN **Hinchinbrook I** 5.71 48 Pn 18 31 19.5 -0.5
GLI **Glacier Island** 5.77 43 Pn 18 31 19.1 -1.7
GLI **Glacier Island** 5.77 43 P Pn 18 31 19.9 -0.9
baz=229
L15K **Ungalak Mounta** 5.81 328 Pn 18 31 22.1 +0.9
L15K **Ungalak Mounta** 5.81 328 P Pn 18 31 22.2 +0.9
baz=143
GHO **Glory Hole Cre** 5.84 30 Pn 18 31 21.3 -0.5
FID **Port Fidalgo** 5.93 46 Pn 18 31 21.6 -1.3
L14K **Kuka Creek** 5.93 322 Pn Pn 18 31 24.5 +1.6
L14K **Kuka Creek** 5.93 322 P Pn 18 31 24.4 +1.5
baz=136
SML **Sawmill** 6.03 32 Pn 18 31 24.2 -0.2
SML **Sawmill** 6.03 32 P Pn 18 31 23.9 -0.6
baz=217,SNR=9.5
K17K **Iditarod** 6.07 346 Pn 18 31 26.0 +1.2
K17K **Iditarod** 6.07 346 P Pn 18 31 26.0 +1.2
baz=163
TTA **Tatalina** 6.08 356 Pn Pn 18 31 26.4 +1.3
TTA **Tatalina** 6.08 356 P Pn 18 31 26.6 +1.5
TTA **Tatalina** 6.08 356 P Pn 18 31 26.0 +0.9
baz=175,SNR=19
TTA **Tatalina** 6.08 356 P Pn 18 31 26.4 +1.3
EYAK **Cordova Ski Ar** 6.11 49 Pn 18 31 24.5 -0.8
EYAK **Cordova Ski Ar** 6.11 49 P Pn 18 31 24.9 -0.4
EYAK **Cordova Ski Ar** 6.11 49 P Pn 18 31 24.6 -0.7
baz=236,SNR=6.8
M23K **Glacier View** 6.21 34 P Pn 18 31 27.3 +0.5
baz=220,SNR=18
PPLA **Purkeypile** 6.21 12 Pn 18 31 28.2 +1.3
PPLA **Purkeypile** 6.21 12 P Pn 18 31 28.4 +1.5
baz=194,SNR=11
K15K **Wolf Creek Mou** 6.33 332 Pn 18 31 29.8 +1.5
K15K **Wolf Creek Mou** 6.33 332 P Pn 18 31 30.0 +1.6
baz=146
SCM **Sheep Creek Mo** 6.36 35 Pn 18 31 28.6 -0.3
SCM **Sheep Creek Mo** 6.36 35 P Pn 18 31 28.5 -0.4
baz=221,SNR=15
SCM **Sheep Creek Mo** 6.36 35 P Pn 18 31 28.6 -0.3
KAIM **Kayak Island** 6.39 57 Pn Pn 18 31 28.7 -0.6
KAIM **Kayak Island** 6.39 57 P Pn 18 31 28.8 -0.5
baz=245
DIV **Divide** 6.43 45 Pn 18 31 29.7 -0.2
RAGM **Ragged Mountai** 6.48 53 Pn 18 31 30.5 -0.1
K20K **Telida** 6.52 4 Pn 18 31 31.9 +0.9
K20K **Telida** 6.52 4 P Pn 18 31 32.2 +1.2
baz=185,SNR=32
GOAT **Goat Mountain** 6.55 51 Pn 18 31 31.3 -0.2
KLU **Klutina** 6.60 42 Pn 18 31 32.1 -0.1
KLU **Klutina** 6.60 42 P Pn 18 31 31.9 -0.3
baz=229,SNR=23
HMT **Hamilton** 6.64 54 Pn Pn 18 31 31.9 -0.8
AKUT **Akutan** 6.65 250 Pn Pn 18 31 32.2 -0.6
J18K **Innoko River** 6.65 354 Pn Pn 18 31 34.1 +1.3
J18K **Innoko River** 6.65 354 P Pn 18 31 33.9 +1.1
baz=172
CAST **Castle Rocks** 6.73 12 Pn 18 31 34.4 +0.5
CAST **Castle Rocks** 6.73 12 P Pn 18 31 35.1 +1.2
baz=194,SNR=52
NICHA **Nichawak Mount** 6.73 55 Pn 18 31 33.4 -0.5
WAT7 **Susitna Watana** 6.75 25 Pn 18 31 34.2 0.0
SUCK **Suckling Hills** 6.75 57 Pn Pn 18 31 33.5 -0.6
M11K **Mekoryuk** 6.77 306 Pn 18 31 36.2 +1.8
M11K **Mekoryuk** 6.77 306 P Pn 18 31 35.7 +1.4
baz=117
BMRM **Bremner River** 6.81 49 Pn 18 31 34.2 -0.8
BMRM **Bremner River** 6.81 49 P Pn 18 31 34.4 -0.6
baz=237,SNR=8.6
WAT1 **Susitna Watana** 6.82 26 Pn 18 31 35.0 -0.1
WAT1 **Susitna Watana** 6.82 26 P Pn 18 31 35.2 +0.1
baz=211
WAT6 **Susitna Watana** 6.82 30 Pn 18 31 34.6 -0.6
WAT6 **Susitna Watana** 6.82 30 P Pn 18 31 34.7 -0.6
baz=216,SNR=30
J17K **VABM Dome** 6.83 345 P Pn 18 31 35.9 +0.7
baz=161
BERG **Berg Lake** 6.92 55 Pn Pn 18 31 35.9 -0.6
M24K **Tolsona, Glenn** 6.94 37 Pn 18 31 37.3 +0.5
M24K **Tolsona, Glenn** 6.94 37 P Pn 18 31 37.1 +0.3
baz=224,SNR=12
J16K **Anvik River** 6.98 339 Pn Pn 18 31 38.1 +0.7
J16K **Anvik River** 6.98 339 P Pn 18 31 38.0 +0.7
baz=154
KTH **Kantishna Hill** 7.01 16 Pn 18 31 37.9 +0.1
TRF **Thorofare Moun** 7.01 18 Pn 18 31 38.0 +0.1
TRF **Thorofare Moun** 7.01 18 P Pn 18 31 38.5 +0.6
baz=202
GRIN **Grindle Hills** 7.04 56 Pn 18 31 37.6 -0.6
J19K **Poorman** 7.14 358 Pn 18 31 40.3 +0.8
J19K **Poorman** 7.14 358 P Pn 18 31 41.2 +1.7
baz=177
KHIT **Khitrov Hills** 7.14 55 Pn 18 31 39.0 -0.7
CHUM **Lake Minchumin** 7.16 10 P Pn 18 31 41.1 +1.4
baz=192,SNR=8.0
UNV **Unalaska Valle** 7.17 250 Pn 18 31 39.6 -0.3
UNV **Unalaska Valle** 7.17 250 P Pn 18 31 39.9 0.0
UNV **Unalaska Valle** 7.17 250 P Pn 18 31 40.7 +0.8
baz=61
N25K **Chitina, Valde** 7.17 44 Pn 18 31 39.6 -0.4
N25K **Chitina, Valde** 7.17 44 P Pn 18 31 40.1 0.0
baz=233
SNH **Sunshine Point** 7.22 58 Pn 18 31 40.3 -0.4
MNAT **Makushin Natee** 7.24 250 Pn 18 31 41.3 +0.4
J14K **Nanvaranak Lak** 7.25 328 Pn 18 31 43.0 +1.9
J14K **Nanvaranak Lak** 7.25 328 P Pn 18 31 42.0 +0.9
baz=140
MSW **Makushin Switc** 7.28 251 Pn 18 31 41.7 +0.2
DHY **Denali Highway** 7.32 29 P Pn 18 31 40.6 -1.5
baz=215,SNR=12
CRQM **Cirque** 7.33 53 Pn Pn 18 31 41.9 -0.3
J20K **Nowinta River** 7.33 3 Pn 18 31 42.7 +0.6
J20K **Nowinta River** 7.33 3 P Pn 18 31 42.9 +0.7
baz=184
CRQE **Cirque** 7.34 53 P Pn 18 31 41.7 -0.7
baz=243,SNR=12
GLB **Gilahina Butte** 7.39 47 Pn 18 31 42.5 -0.4
MAPS **Pakushin South** 7.41 250 Pn 18 31 43.4 +0.2
VRDI **Verde Repeater** 7.42 49 Pn 18 31 43.1 -0.4
TGL **Tana Glacier** 7.46 54 Pn 18 31 43.5 -0.5
BARK **Barkley Ridge** 7.47 57 Pn 18 31 43.4 -0.7
WACK **Wrangell Chich** 7.51 43 Pn 18 31 44.7 -0.1
BPAW **Bear Paw Mtn.** 7.52 14 Pn 18 31 44.7 -0.1
BPAW **Bear Paw Mtn.** 7.52 14 P Pn 18 31 44.8 +0.1
baz=197,SNR=13
MCK **McKinley** 7.52 21 Pn 18 31 44.9 +0.1
MCK **McKinley** 7.52 21 P Pn 18 31 44.8 +0.1
baz=206
MCK **McKinley** 7.52 21 P Pn 18 31 44.9 +0.1
I17K **Unalakleet** 7.55 341 Pn Pn 18 31 45.5 +0.4
I17K **Unalakleet** 7.55 341 P Pn 18 31 46.2 +1.1
baz=156
ISLE **Juniper Island** 7.62 55 Pn 18 31 45.6 -0.6
MESA **MESA** 7.64 59 Pn Pn 18 31 46.2 -0.4
MESA **MESA** 7.64 59 P Pn 18 31 46.3 -0.2
baz=250
MCARA **McCarthy VSAT** 7.68 49 P Pn 18 31 46.8 -0.1
baz=239
BAGL **Bagley Icefiel** 7.69 57 Pn 18 31 46.4 -0.6
KIAG **Kiagna River** 7.74 53 Pn 18 31 47.4 -0.5
PAX **Paxson** 7.79 34 Pn 18 31 48.4 0.0
PAX **Paxson** 7.79 34 P Pn 18 31 48.6 +0.1
baz=222,SNR=13
PAX **Paxson** 7.79 34 P Pn 18 31 48.4 0.0
PTPK **Patty Peak** 7.82 51 Pn 18 31 48.6 -0.4
BWN **Browne** 7.82 18 Pn Pn 18 31 48.3 -0.5

GRNC **Granite Creek** 7.93 55 Pn Pn 18 31 50.1 -0.4
GCSA **Galena City Sc** 7.94 355 P Pn 18 31 51.5 +1.1
baz=173,SNR=11
I20K **Naaghedeneel** 7.95 2 P Pn 18 31 51.7 +1.2
baz=182,SNR=6.0
TABL **Table Mountain** 8.11 58 Pn 18 31 52.4 -0.6
BARN **Barnard Glacie** 8.11 53 Pn 18 31 52.1 -0.8
SAMH **Samovar Hills** 8.18 61 Pn 18 31 53.0 -0.8
CTG **Chitna Glacier** 8.21 54 P Pn 18 31 54.1 -0.3
baz=246
CTGM **Chitina Glacie** 8.21 54 Pn 18 31 53.8 -0.6
M26K **Nabesna, AK** 8.26 43 P Pn 18 31 55.4 +0.6
baz=233
SPIA **Saint Paul Isl** 8.26 278 P Pn 18 31 55.2 +0.3
baz=86
NEA2 **Nenana** 8.28 18 P Pn 18 31 53.8 -1.3
baz=203,SNR=11
K24K **Donnelly Dome** 8.34 30 P Pn 18 31 55.2 -0.7
baz=217,SNR=7.9
WRH **Wood River Hil** 8.35 21 Pn 18 31 54.7 -1.3
H17K **Granite Mounta** 8.41 346 P Pn 18 31 58.2 +1.4
baz=162
PCA **Pinnacle** 8.42 61 Pn 18 31 55.9 -1.2
PINM **Pinnacle** 8.42 61 P Pn 18 31 56.4 -0.7
baz=253
H18K **Honhosa River** 8.45 351 P Pn 18 31 58.7 +1.3
baz=168
MLY **Manley** 8.45 13 Pn 18 31 56.3 -1.1
MLY **Manley** 8.45 13 P Pn 18 31 56.7 -0.7
baz=196,SNR=8.8
I21K **Tanana** 8.46 9 P Pn 18 31 57.8 +0.2
baz=191
H16K **Elim** 8.52 339 Pn 18 31 59.1 +0.8
H16K **Elim** 8.52 339 P Pn 18 31 59.4 +1.1
baz=152,SNR=16
L26K **Log Cabin Wild** 8.52 39 P Pn 18 31 59.3 +0.9
baz=228
HDA **Harding Lake** 8.54 25 Pn 18 31 58.1 -0.5
HDA **Harding Lake** 8.54 25 P Pn 18 31 58.3 -0.4
baz=211
H20K **Anotleneega Mo** 8.64 1 Pn 18 32 00.9 +0.8
H20K **Anotleneega Mo** 8.64 1 P Pn 18 32 01.1 +1.0
baz=180,SNR=22
M27K **Edge Creek, AK** 8.66 45 P Pn 18 32 00.6 +0.2
baz=236
BCPM **Bancas Point** 8.68 63 Pn 18 31 59.4 -1.2
H19K **Roundabout Mou** 8.70 356 P Pn 18 32 01.5 +0.7
baz=175
PNL **Peninsula** 8.74 65 Pn 18 31 59.8 -1.6
PNL **Peninsula** 8.74 65 P Pn 18 32 00.8 -0.6
PNL **Peninsula** 8.74 65 P Pn 18 32 00.3 -1.1
baz=258
I23K **Minto, Yukon-K** 8.75 16 Pn Pn 18 32 00.7 -0.8
I23K **Minto, Yukon-K** 8.75 16 P Pn 18 32 00.4 -1.1
baz=201,SNR=14
COLA **College** 8.76 21 Pn 18 32 00.6 -1.0
COLA **College** 8.76 21 P Pn 18 32 01.6 0.0
COLA **College** 8.76 21 P Pn 18 32 01.2 -0.4
baz=207
COLA **College** 8.76 21 P Pn 18 32 00.6 -1.0
MDM **Murphy Dome** 8.76 20 Pn 18 32 00.6 -1.1
NIKH **Nikolski High** 8.83 249 P Pn 18 32 04.3 +1.7
ILAR **Eielson Array** 8.87 23 Pn Pn 18 32 01.1 -2.1
comp=N,1.3nm,0.3s,baz=214,slow=14,SNR=72
ILAR Sn Sn 18 33 34.2 -7.3
comp=N,0.8nm,0.3s,baz=213,slow=8.2,SNR=2.2
ILAR LR LR 18 35 43.7
comp=N,559nm,20.9s,baz=224,slow=39
H21K **Melozitna Rive** 8.87 6 P Pn 18 32 03.9 +0.6
baz=188
YUK3 **Moose Creek** 8.94 51 P Pn 18 32 05.1 +0.7
baz=243,SNR=12
SCRK **Sand Creek** 8.98 33 Pn 18 32 04.4 -0.4
SCRK **Sand Creek** 8.98 33 P Pn 18 32 05.2 +0.3
baz=222
YUK8 **Steele Glacier** 9.04 54 P Pn 18 32 06.9 +1.2
baz=247,SNR=12
G17K **Kiwalik Mounta** 9.05 345 P Pn 18 32 07.3 +1.7
baz=160,SNR=16
POKR **Poker Plat Res** 9.06 21 Pn 18 32 04.9 -0.8
POKR **Poker Plat Res** 9.06 21 P Pn 18 32 05.2 -0.5
baz=207
L27K **Beaver Creek,** 9.08 42 Pn 18 32 06.1 0.0
L27K **Beaver Creek,** 9.08 42 P Pn 18 32 06.7 +0.5
baz=232
BVCY **Beaver Creek** 9.09 47 P Pn 18 32 07.4 +1.2
baz=238
J25K **Salcha River,** 9.09 28 P Pn 18 32 05.5 -0.8
baz=216,SNR=22
BCAR **Beaver Creek A** 9.10 42 Pn Pn 18 32 06.8 +0.4
IMAR **Indian Mountai** 9.16 4 Pn Pn 18 32 07.9 +0.8
ANM **Nome** 9.19 331 Pn Pn 18 32 09.1 +1.6
ANM **Nome** 9.19 331 P Pn 18 32 09.0 +1.6
baz=142,SNR=11
ANM **Nome** 9.19 331 P Pn 18 32 09.1 +1.6
G18K **Tagagawik** 9.20 351 P Pn 18 32 08.6 +0.9
baz=168
H22K **Ishtalitna Cre** 9.22 10 P Pn 18 32 07.6 -0.3
baz=192
G16K **Koyuk River** 9.22 341 P Pn 18 32 09.1 +1.2
baz=154
O29M **Mount Kennedy** 9.28 61 P Pn 18 32 08.7 -0.3
baz=255
G19K **Purcell Mounta** 9.34 355 P Pn 18 32 10.2 +0.6
baz=173
J26L **Joseph Creek** 9.49 32 Pn 18 32 11.2 -0.6
J26L **Joseph Creek** 9.49 32 P Pn 18 32 11.7 -0.1
baz=221
P29M **Windy Craggy** 9.56 66 P Pn 18 32 11.9 -0.8
baz=260
YUK6 **Outpost Mounta** 9.56 58 P Pn 18 32 13.0 +0.1
baz=252
YUK4 **Talbot Arm** 9.57 55 P Pn 18 32 14.2 +1.3
baz=249,SNR=6.7
K27K **Chicken** 9.62 36 P Pn 18 32 13.8 +0.5
baz=227
H24K **Noodor Dome** 9.62 18 P Pn 18 32 12.0 -1.5
baz=204
PRP **Porcupine Dome** 9.81 24 P Pn 18 32 15.2 -1.0
baz=212,SNR=12
HYT **Haines Junctio** 9.93 59 P Pn 18 32 17.7 -0.1
baz=254
F15K **North Star Dit** 9.96 337 Pn Pn 18 32 19.0 +1.0
F15K **North Star Dit** 9.96 337 P Pn 18 32 18.3 +0.3
baz=148,SNR=5.6
F18K **Selawik** 9.98 350 P Pn 18 32 19.7 +1.4
baz=165
F17K **Baldwin Pennin** 10.02 346 P Pn 18 32 19.9 +1.1
baz=160
P30M **Million Dollar** 10.03 64 P Pn 18 32 18.7 -0.4
baz=259
M29M **Somme Creek** 10.08 50 P Pn 18 32 19.8 -0.1
baz=243
G23K **Bananza Creek** 10.15 12 P Pn 18 32 19.7 -1.0
baz=196
F14K **Arctic Creek** 10.16 333 P Pn 18 32 21.2 +0.4
baz=143
F20K **Avaraart Lake** 10.21 359 P Pn 18 32 22.5 +1.1
baz=178
G22K **Bettles** 10.21 8 P Pn 18 32 21.3 -0.2
baz=191
I26K **Coal Creek Min** 10.22 29 P Pn 18 32 21.0 -0.6
baz=219,SNR=5.1
S31K **Pelican** 10.24 76 Pn Pn 18 32 19.6 -2.3
S31K **Pelican** 10.24 76 P Pn 18 32 20.0 -1.9
baz=272
N30M **Aishikik Lake** 10.31 56 P Pn 18 32 22.6 -0.3
baz=251
F21K **Alatna River** 10.40 4 P Pn 18 32 24.8 +0.6
baz=185,SNR=15
EGAK **Eagle** 10.42 35 P Pn 18 32 24.0 -0.4
baz=227
G24K **Hadweenzic Riv** 10.48 17 P Pn 18 32 23.3 -1.9
baz=203
L29M **L29M** 10.53 47 P Pn 18 32 25.9 0.0
baz=241
DAWY **Dawson** 10.56 41 P Pn 18 32 26.1 -0.2
baz=234
O30N **Mendenhall** 10.59 61 P Pn 18 32 25.4 -1.3
baz=256
COLD **Coldfoot** 10.63 10 P Pn 18 32 26.0 -1.3
baz=194
TNA **Tin City** 10.64 330 P Pn 18 32 29.3 +1.9
baz=139
E19K **Redstone River** 10.66 356 P Pn 18 32 29.3 +1.7
baz=174
E17K **Hotham Inlet** 10.70 346 P Pn 18 32 29.8 +1.7
baz=160,SNR=13
GAMB **Gambell** 10.71 317 P Pn 18 32 29.8 +1.5
baz=123
SKAG **Skagway** 10.76 68 P Pn 18 32 29.1 +0.2
SKAG **Skagway** 10.76 68 P Pn 18 32 27.1 -1.8
baz=264
SIT **Sitka** 10.80 81 P Pn 18 32 31.9 +2.3
SIT **Sitka** 10.80 81 P Pn 18 32 27.4 -2.2
baz=277
M30M **Minto, Yukon** 10.84 51 P Pn 18 32 30.1 -0.1
baz=246
I27K **Kandik River** 10.87 31 P Pn 18 32 30.3 -0.3
baz=222
E18K **Tukpahlearik C** 10.88 349 P Pn 18 32 31.8 +1.2
baz=164
K29M **Barlow Dome** 11.13 44 P Pn 18 32 34.3 +0.1
baz=239
R32K **Eaglecrest** 11.14 74 P Pn 18 32 34.6 +0.4
baz=271
WHY **Whitehorse** 11.15 62 P Pn 18 32 33.9 -0.5
baz=259
S32K **Killisnoo** 11.16 78 P Pn 18 32 33.7 -0.8
baz=275
F24K **Squaw Lake** 11.18 14 P Pn 18 32 32.6 -2.2
baz=200
J29N **Klondike Camp** 11.20 40 P Pn 18 32 36.2 +1.1
baz=235
JIS **Juneau Island** 11.21 74 P Pn 18 32 36.4 +1.3
I28M **Miner Creek** 11.26 34 P Pn 18 32 36.1 +0.2
baz=227
H27K **Steamboat Moun** 11.36 29 P Pn 18 32 37.2 -0.1
baz=220
E22K **Anaktuvuk Pass** 11.39 6 P Pn 18 32 37.6 -0.1
baz=189
G26K **Porcupine Rive** 11.40 23 P Pn 18 32 36.2 -1.5
baz=213
E20K **Nigu River** 11.43 358 P Pn 18 32 38.7 +0.5
baz=177,SNR=12
D17K **Noatak River** 11.46 345 P Pn 18 32 38.1 -0.3
baz=157
E23K **Chandalar** 11.49 10 P Pn 18 32 35.7 -3.4
baz=195
P32M **Atlin** 11.59 68 Pn Pn 18 32 39.5 -0.8
P32M **Atlin** 11.59 68 P Pn 18 32 37.2 -3.2
baz=265
F25K **Christian Rive** 11.60 18 P Pn 18 32 38.1 -2.4
baz=206
E21K **Killik River** 11.61 2 P Pn 18 32 38.0 -2.7
baz=183
E24K **Your Creek** 11.63 12 P Pn 18 32 38.8 -2.2
baz=198
BMAR **Burnt Mountain** 11.65 20 Pn Pn 18 32 39.4 -1.8
D19K **Kuna River** 11.73 355 P Pn 18 32 42.8 +0.5
baz=172
M31M **Drury Creek, Y** 11.76 54 P Pn 18 32 42.4 -0.3
baz=252
D20K **Etivluk River** 11.89 357 P Pn 18 32 45.5 +1.1
baz=176
J30M **Hart River** 11.95 42 Pn Pn 18 32 47.5 +2.1
J30M **Hart River** 11.95 42 P Pn 18 32 45.2 -0.2
baz=238
F26K **Sheenjek River** 11.96 21 P Pn 18 32 43.2 -2.2
baz=210
TOLK **Toolik Lake Re** 12.06 10 P Pn 18 32 46.1 -0.7
baz=194
E25K **Arctic Village** 12.09 17 Pn Pn 18 32 44.5 -2.6
E25K **Arctic Village** 12.09 17 P Pn 18 32 44.4 -2.7
baz=205,SNR=5.5
D22K **Ayikyak River** 12.09 4 P Pn 18 32 46.9 -0.2
baz=186
P33M **Teslin, Yukon** 12.09 65 P Pn 18 32 45.4 -1.9
baz=263
N32M **Quiet Lake** 12.10 60 P Pn 18 32 45.3 -2.1
baz=259
C18K **Utukok River** 12.12 349 P Pn 18 32 47.7 0.0
baz=164
C17K **DeLong Mountai** 12.19 346 P Pn 18 32 50.2 +1.7
baz=158
FARO **Faro, Yukon** 12.23 55 P Pn 18 32 47.1 -2.0
baz=253
H29M **Whitestone** 12.25 33 P Pn 18 32 49.1 -0.3
baz=228
I30M **Mount Dempster** 12.29 40 P Pn 18 32 49.6 -0.3
baz=236
D23K **Nanushuk River** 12.29 8 P Pn 18 32 49.9 0.0
baz=191
Q32M **Nakina River** 12.30 71 P Pn 18 32 48.6 -1.7
baz=270
C21K **Knifeblade Rid** 12.32 1 P Pn 18 32 50.6 +0.3
baz=181
CRAG **Craig** 12.33 87 P Pn 18 32 51.6 +1.2
CRAG **Craig** 12.33 87 P Pn 18 32 50.4 0.0
baz=285
C16K **Lisburne Hills** 12.34 342 Pn Pn 18 32 52.3 +1.8
C16K **Lisburne Hills** 12.34 342 P Pn 18 32 50.8 +0.3
baz=153
C19K **Lookout Ridge** 12.43 353 P Pn 18 32 51.6 -0.2
baz=168
WRAK **Wrangell Islan** 12.53 83 P Pn 18 32 51.0 -2.1
baz=281
D24K **Happy Valley** 12.63 10 P Pn 18 32 54.0 -0.5
baz=196
B21K **Ikpikpuk River** 12.79 1 P Pn 18 32 55.6 -1.0
baz=181
F28M **Old Crow** 12.84 27 Pn Pn 18 32 57.2 -0.2
F28M **Old Crow** 12.84 27 P Pn 18 32 56.9 -0.5
baz=220
EPYK **Eagle Plains** 12.86 35 P Pn 18 32 57.8 +0.2
baz=231,SNR=6.8
B18K **Kokolik River** 12.88 349 P Pn 18 32 59.3 +1.5
baz=163
R33M **Jennings River** 12.98 69 P Pn 18 32 58.3 -1.1
baz=269
D25K **Kavik River** 13.07 14 P Pn 18 32 59.1 -1.4
baz=201
C24K **Franklin Bluff** 13.19 10 P Pn 18 32 59.5 -2.6
baz=195
V35K **Ketchikan** 13.19 87 P Pn 18 32 58.7 -3.5
baz=286
B20K **Meade River** 13.21 357 P Pn 18 33 01.7 -0.7
baz=175
MMPY **Sheldon Lake,** 13.27 55 P Pn 18 33 03.2 -0.2
baz=255,SNR=7.7
H31M **Peel River** 13.32 39 P Pn 18 33 03.0 -1.0
baz=237
G30M **tAoh Zraii Nji** 13.40 33 P Pn 18 33 05.4 +0.3
baz=230
DLBC **Dease Lake** 13.49 73 P Pn 18 33 03.0 -3.4
baz=274
DLBC **Dease Lake** 13.49 73 Pn Pn 18 33 07.8 +1.3
comp=N,0.2nm,0.3s,baz=228,slow=19,SNR=2.5
DLBC Sn Sn 18 35 29.9 -4.8
comp=N,0.2nm,0.3s,baz=179,slow=18,SNR=1.6
comp=N,1.4nm,0.6s
T35M **Bob Quinn** 13.56 79 P Pn 18 33 04.4 -2.8
baz=280
A19K **Wainwright** 13.62 351 P Pn 18 33 06.5 -1.5
baz=166
C26K **Camden Bay** 13.82 15 P Pn 18 33 10.1 -0.6
baz=204,SNR=8.5
D27M **Malcolm River** 13.90 21 P Pn 18 33 12.4 +0.5
baz=214
E29M **Blow River** 13.92 27 P Pn 18 33 12.5 +0.5
baz=222
F30M **Barrier River** 13.94 32 P Pn 18 33 12.3 -0.1
baz=229
G31M **Satah River** 13.97 36 Pn Pn 18 33 12.8 +0.1
G31M **Satah River** 13.97 36 P Pn 18 33 12.6 -0.2
baz=234
F31M **Tsiigehtchic** 14.45 34 P Pn 18 33 18.2 -0.9
baz=233,SNR=11
TGTN **Hyland Airport** 14.45 60 P Pn 18 33 18.8 -0.5
baz=263,SNR=9.7
A21K **Barrow** 14.51 358 P Pn 18 33 18.5 -1.4
baz=176
INK **Inuvik** 15.04 32 P Pn 18 33 26.1 -0.9
baz=231,SNR=11
INK **Inuvik** 15.04 32 Pn Pn 18 33 25.8 -1.1
comp=N,1.0nm,0.3s,baz=239,slow=12,SNR=21
INK LR LR 18 39 50.5
comp=N,307nm,21.4s,baz=187,slow=40
comp=N,3.4nm,0.4s
FLDN **Fort Liard** 16.75 65 IAmb IAmb 18 33 50.4
comp=Z,74nm,0.5s
C36M **Paulatuk** 18.50 35 P P 18 34 09.3 -0.2
C36M **Paulatuk** 18.50 35 P P 18 34 09.7 +0.1
baz=243,SNR=14
A36M **Sachs Harbour** 19.53 28 P P 18 34 20.7 0.0

A36M IAmb IAmb 18 34 28.9
comp=Z,43nm,0.8s
A36M Sachs Harbour 19.53 28 P Pn 18 34 22.1 -0.3
baz=235,SNR=49
BILL Bilibino 20.64 318 P P 18 34 32.8 -0.1
BILL Bilibino 20.64 318 *e*P P 18 34 32.6 -0.3
BILL pmax pmax
comp=Z,48nm,1.4s
YKA Yellowknife Ar 20.92 58 P P 18 34 35.1 -0.8
YKA Yellowknife Ar 20.92 58 P P 18 34 36.6 +0.7
comp=Z,1.8nm,0.6s,baz=273,slow=10,SNR=35
YKA ScP **ScP 18 42 14.5 +0.3**
comp=Z,0.5nm,0.8s,baz=275,slow=2.2,SNR=5.1
comp=Z,1.8nm,0.6s
H04D Lebanon 23.69 108 P P 18 35 04.1 -0.8
HOOD Mount Hood Mea 23.73 105 IAmb IAmb 18 35 09.1
comp=Z,50nm,1.1s
EDM Edmonton 23.93 81 P P 18 35 06.5 -0.6
EDM IAmb IAmb 18 35 29.7
comp=Z,119nm,2.0s
EDM Edmonton 23.93 81 P P 18 35 06.5 -0.6
EDM pmax pmax
comp=Z,119nm,2.0s
HAWA Hanford 24.18 100 P P 18 35 07.5 -1.9
NEW Newport 24.36 94 P 18 35 11.6 +0.5
NEW Newport 24.36 94 P P 18 35 12.3 +1.2
baz=305,SNR=6.2
NEW Newport 24.36 94 P P 18 35 11.6 +0.5
NEW pmax pmax
comp=Z,10.0nm,1.1s
NEW Newport 24.36 94 LR LR 18 43 07.6
comp=Z,179nm,21.9s,baz=273,slow=32
E08A Dider Farm, El 24.37 100 P 18 35 11.1 -0.1
E09A Wood Farm, Sta 24.85 99 IAmb IAmb 18 35 18.6
comp=Z,23nm,1.1s
PINE Pine Mountain 25.14 107 IAmb IAmb 18 35 22.3
comp=Z,24nm,1.1s
G08A Pilot Rock 25.19 102 P P 18 35 19.2 +0.5
YBH Yreka Blue Hor 25.68 112 LR LR 18 43 22.5
comp=Z,152nm,19.4s,baz=344,slow=31
K05A Summer Lake 25.90 108 P P 18 35 28.5 +3.2
K05A IAmb IAmb 18 35 47.0
comp=Z,25nm,1.1s
SEY Seymchan 26.34 305 *i* P P **18 35 27.3 -1.6**
SEY pmax pmax
comp=Z,5.0nm,0.8s
PET Petropavlovsk 26.43 281 P P 18 35 31.5 +1.9
PET IAmb IAmb 18 35 45.2
comp=Z,53nm,1.3s
PET Petropavlovsk 26.43 281 *i* P P **18 35 31.6 +1.9**
PET pmax pmax
comp=Z,63nm,1.7s
PEA0B Petropavlovsk- 26.90 282 P P 18 35 35.1 +1.1
PEA0B IAmb IAmb 18 35 36.5
comp=Z,54nm,1.4s
PEA0B Petropavlovsk- 26.90 282 P P 18 35 35.1 +1.1
PEA0B pmax pmax
comp=Z,54nm,1.4s
PETK Petropavlovsk- 26.90 282 P P 18 35 35.0 +1.0
PETK Petropavlovsk- 26.90 282 P P 18 35 35.0 +1.0
PETK Petropavlovsk- 26.90 282 P P 18 35 32.0 -2.0
comp=Z,3.7nm,0.4s,baz=70,slow=12,SNR=15
comp=Z,3.7nm,0.4s
BPMT Black Pine Rid 27.46 94 P P 18 35 41.7 +2.3
LYMT Lyon Mountain 27.77 92 P P 18 35 42.6 +0.5
MA2 Magadan 27.96 298 *i* P P **18 35 43.0 -0.4**
MA2 pmax pmax
comp=Z,5.0nm,1.0s
MA2 Magadan 27.96 298 LR LR 18 48 24.1
comp=Z,126nm,19.0s,baz=84,slow=40
EGMT Eagleton 28.54 88 P P 18 35 48.8 0.0
EGMT Eagleton 28.54 88 P P 18 35 49.6 +0.8
baz=305
RES Resolute Bay 28.56 29 P P 18 35 49.7 +1.1
RES Resolute Bay 28.56 29 P P 18 35 49.7 +1.1
RES pmax pmax
comp=Z,6.0nm,0.8s
HLID Hailey 28.77 100 P P 18 35 52.5 +1.5
baz=312,SNR=6.2
PNTR Pine Nut 29.23 112 P P 18 35 54.2 -1.0
PNTR IAmb IAmb 18 35 58.9
comp=Z,17nm,0.8s
YHH Holmes Hill 29.91 95 P P 18 36 02.3 +1.1
KVN Kaiserville 30.03 111 P P 18 36 03.4 +1.2
KVN Kaiserville 30.03 111 P P 18 36 03.4 +1.2
KVN pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 30.29 105 LR LR 18 46 20.1
comp=Z,122nm,19.0s,baz=276,slow=32
H17A Grant Village 30.32 95 P P 18 36 09.0 +4.3
H17A Grant Village 30.32 95 P P 18 36 07.2 +2.5
baz=310,SNR=10
YMP Mirror Lake Pl 30.32 94 P P 18 36 03.2 -1.7
YMP IAmb IAmb 18 36 33.4
comp=Z,20nm,1.2s
NVAR Mina Array Bea 30.39 112 P P 18 36 07.8 +2.3
comp=Z,5.5nm,0.7s,baz=304,slow=8.9,SNR=32
NVAR PcP **PcP 18 39 05.2 +1.0**
comp=Z,1.1nm,0.9s,baz=337,slow=1.4,SNR=2.5
NVAR LR LR 18 46 28.5
comp=Z,181nm,19.4s,baz=277,slow=32
comp=Z,5.5nm,0.7s
FLWY Flagg Ranch 30.45 96 IAmb IAmb 18 36 09.8
comp=Z,17nm,0.8s
LAO LASA Array 31.27 88 P P 18 36 15.1 +2.2
baz=307
DGMT Dagmar 31.33 83 P P 18 36 14.3 +1.0
baz=305
FCC Fort Churchill 31.57 61 P P 18 36 14.2 -1.1
FCC Fort Churchill 31.57 61 P P 18 36 14.2 -1.1
FCC pmax pmax
comp=Z,10.0nm,1.0s
R11B Troy Canyon, C 31.86 109 P P 18 36 20.6 +2.4
baz=319,SNR=13
BW06 Boulder Array 31.95 96 P P 18 36 21.1 +2.0
baz=312,SNR=10
PDAR Pinedale Array 31.95 96 P P 18 36 20.2 +1.1
PDAR Pinedale Array 31.95 96 P P 18 36 20.9 +1.8
comp=Z,5.8nm,0.6s,baz=314,slow=4.9,SNR=47
PDAR LR LR 18 48 05.8
comp=Z,36nm,18.0s,baz=304,slow=34
comp=Z,5.8nm,0.6s
GRAC Grapevine Rang 31.97 112 P P 18 36 20.7 +1.6
baz=321
DUG Dugway, Tooele 31.97 103 P P 18 36 17.9 -1.3
DUG Dugway, Tooele 31.97 103 P P 18 36 20.7 +1.5
baz=316
DUG Dugway, Tooele 31.97 103 P P 18 36 17.9 -1.3
DUG pmax pmax
comp=Z,11nm,1.6s
SMMC Simmler 31.98 117 P P 18 36 22.0 +2.8
baz=323
VES Vestal, Richgr 32.01 116 P P 18 36 20.4 +1.0
baz=322
CWC Cottonwood Cre 32.04 114 P P 18 36 21.0 +1.1
baz=322
PKM Mcpherson Peak 32.41 118 P P 18 36 25.8 +2.6
baz=324
ISA Isabella, Lake 32.45 115 P P 18 36 25.2 +1.8
baz=322
FURC Furnace Creek, 32.63 112 P P 18 36 26.8 +2.0
baz=321
MPMC Manual Prospec 32.64 113 P P 18 36 27.4 +2.2
baz=322,SNR=6.6
ARVC Arvin 32.70 116 P P 18 36 26.3 +0.8
baz=323
BSUT Blindstream Ca 32.83 101 P P 18 36 24.8 -2.2
BSUT IAmb IAmb 18 36 30.4
comp=Z,11nm,0.9s
LRMC Laurel Mtn Rad 32.99 114 P P 18 36 30.7 +2.5
baz=322
EDW2 Edwards Air Fo 33.31 115 P P 18 36 32.1 +1.2
baz=323
SHOC Shoshone, Teco 33.37 112 P P 18 36 33.6 +2.3
baz=321
TIXI Tiksi 33.40 326 P P 18 36 30.3 -0.8
TIXI IAmb IAmb 18 36 50.1
comp=Z,8.3nm,0.8s
TIXI Tiksi 33.40 326 *ce*P P **18 36 30.4 -0.8**
TIXI pmax pmax
comp=Z,16nm,1.4s
GSC Goldstone, Bar 33.57 114 P P 18 36 35.0 +1.9
baz=322
K22A Casper 33.68 94 P P 18 36 35.6 +1.4
baz=312
TUQ Turquoise Moun 33.91 112 P P 18 36 38.6 +2.4
baz=322
RWWY Rawlins 33.96 96 P P 18 36 35.6 -1.1
SRU San Rafael Swe 33.98 102 P P 18 36 37.0 +0.3
SRU San Rafael Swe 33.98 102 P P 18 36 37.0 +0.3
SRU pmax pmax
comp=Z,33nm,0.9s
BFSC Mount Baldy Ra 33.99 116 P P 18 36 38.5 +1.7
baz=323
RSSD Black Hills 34.08 90 P P 18 36 40.3 +2.7
baz=310
HEC Hector,Ludlow 34.18 113 P P 18 36 40.0 +1.5
baz=322
O20A White River Ci 34.48 99 P P 18 36 41.5 +0.4
O20A White River Ci 34.48 99 P P 18 36 43.2 +2.1
baz=315,SNR=12
GMRC Granite Mounta 34.56 113 P P 18 36 44.1 +2.3
baz=322
SCI2 San Clemente I 34.57 118 P P 18 36 45.1 +3.3
baz=325
ULM Lac du Bonnet 34.80 75 P P 18 36 42.4 -1.2
ULM Lac du Bonnet 34.80 75 P P 18 36 42.4 -1.2
ULM pmax pmax
comp=Z,5.0nm,0.9s
ULM Lac du Bonnet 34.80 75 P P 18 36 44.1 +0.5
comp=Z,2.8nm,0.6s,baz=273,slow=6.0,SNR=6.2
ULM LR LR 18 51 01.2
comp=Z,104nm,18.4s,baz=302,slow=36
comp=Z,2.8nm,0.6s
BELC Belle Mtn. Jos 35.01 114 P P 18 36 47.1 +1.5
baz=323
PFO Pinyon Flats O 35.09 115 LR LR 18 49 12.5
comp=Z,92nm,21.4s,baz=43,slow=33
TPFO Pinon Flats 35.09 115 P P 18 36 48.4 +2.0
baz=323
NEE2 Needles Airpor 35.10 112 P P 18 36 47.7 +1.4
baz=322
N23A Red Feather La 35.20 96 IAmb IAmb 18 37 55.4
comp=Z,19nm,0.8s
N23A Red Feather La 35.20 96 P P 18 36 49.0 +1.6
baz=314
IRM Iron Mountain 35.31 113 P P 18 36 50.4 +2.2
baz=322,SNR=11
BC3 Big Chuckawall 35.56 114 P P 18 36 51.7 +1.3
baz=323
MONP2 Monument Peak 35.68 116 P P 18 36 53.5 +1.9
baz=324
PDMCI Parker Dam,Lak 35.71 112 P P 18 36 53.0 +1.5
baz=322
AGMN Agassiz Nation 35.94 78 IAmb IAmb 18 36 55.2
comp=Z,8.0nm,0.7s
AGMN Agassiz Nation 35.94 78 P P 18 36 54.1 +0.7
baz=306
SWSC Sam W. Stewart 35.95 115 P P 18 36 55.3 +1.7
baz=324
TYV Tymovskoe 36.03 288 *e*P P **18 36 53.6 -0.5**
TYV pmax pmax
comp=Z,9.0nm,0.9s
TYV pmax pmax
comp=Z,200nm,5.1s
IKP In-Ko-Pah, Jac 36.03 115 P P 18 36 56.5 +2.1
baz=324
ISCO Idaho Springs 36.14 97 P P 18 36 57.3 +1.7
baz=315
MVCO Mesa Verde 36.45 102 P P 18 36 59.4 +1.3
baz=318
YAK Yakutsk 36.56 310 P P 18 36 56.5 -1.9
YAK Yakutsk 36.56 310 *e*P P **18 36 57.1 -1.3**
YAK *e**PP **pP 18 37 08.8 -2.1**
YAK *e*S **S 18 42 37.0 -0.2**
YAK *e**SS **sS 18 42 58.1 -0.1**
YAK *e*SS **SnSn 18 44 58.7 -11**
YAK *e* 18 47 08.3
YAK pmax pmax
comp=Z,47nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,11nm,1.4s
YAK smax smax
comp=E,145nm,8.1s
YAK smax smax
comp=N,106nm,6.1s
YAK Yakutsk 36.56 310 P P 18 36 56.2 -2.2
comp=N,37nm,0.8s,baz=69,slow=0.1,SNR=24
YAK LR LR 18 53 17.6
comp=N,198nm,20.3s,baz=102,slow=38
comp=N,37nm,0.8s
S22A 4UR Ranch, Cre 36.96 100 P P 18 37 04.8 +2.3
baz=317
Q24A Divide 36.99 97 P P 18 37 05.0 +2.2
baz=316
OGNE Ogallala 37.30 92 P P 18 37 06.1 +1.0
baz=314
SDCO Great Sand Dun 37.68 99 P P 18 37 08.5 0.0
baz=317
214A Organ Pipe Nat 38.25 112 P P 18 37 13.7 +0.6
baz=323
YSS Yuzh-Sakhalins 38.30 282 *i* P P **18 37 12.2 -1.2**
YSS pmax pmax
comp=Z,18nm,1.4s
KSCO Kaye Shedlock' 38.33 95 P P 18 37 14.5 +0.6
baz=315
ECSD EROS Data Cent 38.40 84 P P 18 37 13.6 -0.7
EYMN Ely 38.49 75 P P 18 37 15.1 +0.2
EYMN IAmb IAmb 18 37 29.2
comp=Z,12nm,0.7s
EYMN Ely 38.49 75 P P 18 37 15.2 +0.2
baz=308
T25A Trinidad 38.71 99 P P 18 37 18.1 +0.9
baz=317
TUC Tucson 39.00 110 P P 18 37 21.0 +1.5
baz=322
BGNE Belgrade 39.12 88 P P 18 37 22.2 +1.9
baz=313
ANMO Albuquerque 39.24 103 P P 18 37 22.6 +1.0
baz=315
ANMO Albuquerque 39.24 103 LR LR 18 53 06.8
comp=Z,52nm,18.3s,baz=52,slow=35
SPMN Marine on St. 39.50 80 IAmb IAmb 18 37 25.2
comp=Z,13nm,0.7s
SPMN Marine on St. 39.50 80 P P 18 37 23.8 +0.4
baz=310
I37A Lemond, Waseca 39.96 82 IAmb IAmb 18 37 29.2
comp=Z,16nm,0.6s
ASAJ Asahikawa 40.21 279 LR LR 18 55 39.4
comp=Z,57nm,19.2s,baz=48,slow=38
121A Cookes Peak, D 40.39 107 P P 18 37 33.4 +2.2
baz=322
N35A Tabor 40.87 87 IAmb IAmb 18 37 37.6
comp=Z,26nm,0.8s
SCIA State Center 41.48 84 P P 18 37 41.5 +1.7
baz=313
ZEA Zeya 42.08 300 *e*P P **18 37 44.5 0.0**
MNTX Cornudas Mount 42.31 105 P P 18 37 48.8 +2.1
baz=322,SNR=9.4
JFWS Jewell Farm 42.41 80 P P 18 37 47.3 -0.1
baz=312
KLR Kul'dur 42.64 292 *i* P P **18 37 48.6 -0.6**
KLR pmax pmax
comp=Z,32nm,1.0s
KLR Kul'dur 42.64 292 LR LR 18 57 42.8
comp=Z,57nm,18.2s,baz=76,slow=39
P38A Dawn 42.89 87 IAmb IAmb 18 37 52.6
comp=Z,22nm,0.8s
VHRN Van Horn 43.24 105 P P 18 37 55.7 +1.3
VHRN IAmb IAmb 18 37 57.9
comp=Z,14nm,1.0s
E46A Sault Ste Mari 43.28 73 P 18 37 54.4 0.0
E46A IAmb IAmb 18 38 14.1
comp=Z,68nm,1.9s
WMOK Wichita Mounta 43.55 96 P P 18 37 57.7 +1.0
baz=318
N41A Harden Midland 43.59 83 IAmb IAmb 18 37 58.0
comp=Z,22nm,0.8s
SUMG Summit 43.71 23 P P 18 37 58.4 +0.4
SUMG IAmb IAmb 18 38 17.5
comp=Z,35nm,1.5s
SUMG Summit 43.71 23 P P 18 37 58.4 +0.4
SUMG pmax pmax
comp=Z,35nm,1.5s
P40A Paris 43.77 85 IAmb IAmb 18 37 59.4
comp=Z,12nm,0.7s
HEH HeiHe 44.16 296 *e*P P **18 37 59.4 -2.0**
HEH pmax pmax
comp=Z,7.0nm,1.4s
HEH pmax pmax
comp=Z,260nm,6.9s
KBS Kingsbay 44.22 4 *e*P P **18 38 03.2 +1.7**
SFJD Kangerlussuaq 44.39 33 P 18 38 02.5 -0.5
SFJD IAmb IAmb 18 38 18.2
comp=Z,13nm,0.8s
SFJD Kangerlussuaq 44.39 33 P P 18 38 02.5 -0.5
SFJD pmax pmax
comp=Z,13nm,0.8s
R40A Maddies Statio 44.53 87 IAmb IAmb 18 38 04.8
comp=Z,15nm,0.8s
HDIL Hopedale 44.55 82 P P 18 38 04.9 +0.3
baz=314,SNR=5.4
ABTX Abilene, Hawle 44.68 99 P P 18 38 06.7 +0.9
baz=320
U38A Gravette 44.70 90 IAmb IAmb 18 38 06.4
comp=Z,10nm,0.4s
TXAR Lajitas Array 45.08 105 P P 18 38 10.0 +0.9
TXAR Lajitas Array 45.08 105 P P 18 38 10.4 +1.3
comp=Z,5.7nm,0.8s,baz=312,slow=6.1,SNR=55
TXAR ScP **ScP 18 43 38.1 +0.8**
comp=Z,0.1nm,0.3s,baz=228,slow=1.1,SNR=3.7
TXAR LR LR 18 55 49.2
comp=Z,43nm,19.9s,baz=314,slow=34
comp=Z,5.7nm,0.8s
SPA0 Spitsbergen Ar 45.09 2 *e*P P **18 38 08.5 0.0**
SPITS Spitsbergen Ar 45.09 2 P P 18 38 07.6 -0.9
comp=Z,1.5nm,0.3s,baz=23,slow=5.4,SNR=29
comp=Z,1.5nm,0.3s
SPB2 Spitsbergen Ar 45.10 2 P P 18 38 08.5 0.0
OZNA Ozona 45.19 102 IAmb IAmb 18 38 11.9
comp=Z,14nm,1.1s
CCM Cathedral Cave 45.26 86 P P 18 38 09.4 -0.8
CCM Cathedral Cave 45.26 86 P P 18 38 10.2 0.0
baz=316
CCM Cathedral Cave 45.26 86 P P 18 38 09.4 -0.8
CCM pmax pmax
comp=Z,7.0nm,0.8s
SAND Sanderson 45.41 103 P P 18 38 12.3 +0.6
BOD Bodaibo 45.45 311 *e*P P **18 38 10.0 -1.5**
BOD pmax pmax
comp=Z,16nm,0.9s
FVM French Village 45.76 86 IAmb IAmb 18 38 15.2
comp=Z,14nm,1.2s
USA0B Ussuriysk Arra 45.83 287 *i* P P **18 38 13.7 -1.0**
USRK Ussuriysk Ar. 45.83 287 P P 18 38 12.6 -2.1
comp=Z,2.4nm,0.7s,baz=67,slow=7.3,SNR=4.7
USRK LR LR 18 57 02.9
comp=Z,60nm,21.5s,baz=44,slow=36
comp=Z,2.4nm,0.7s
SFIN Lafayette 45.86 81 IAmb IAmb 18 38 16.0
comp=Z,13nm,0.6s
SFIN Lafayette 45.86 81 P P 18 38 15.2 +0.1
baz=315
LPIG La Paz 45.95 116 LR LR 18 54 52.9
comp=Z,60nm,20.8s,baz=346,slow=32
BRDY Brady 46.06 99 P P 18 38 17.5 +0.8
BRDY IAmb IAmb 18 38 31.4
comp=Z,6.6nm,0.7s
NRIK Noril'sk 46.21 334 IAmb IAmb 18 38 18.1
comp=Z,27nm,1.1s
NRIK Noril'sk 46.21 334 *ce*P P **18 38 17.1 -0.3**
NRIK pmax pmax
comp=Z,27nm,1.2s
NRIK Noril'sk 46.21 334 P P 18 38 16.7 -0.7
comp=Z,8.2nm,0.4s,baz=49,slow=6.8,SNR=15
comp=Z,8.2nm,0.4s
JCT Junction City 46.25 101 P P 18 38 18.6 +0.4
JCT Junction City 46.25 101 P P 18 38 19.5 +1.3
baz=321,SNR=5.1
JCT Junction City 46.25 101 P P 18 38 18.6 +0.4
JCT pmax pmax
comp=Z,20nm,0.8s
SCHQ Schefferville 46.27 53 P P 18 38 17.8 -0.2
comp=Z,2.3nm,0.5s,baz=247,slow=8.7,SNR=3.5
SCHQ LR LR 18 58 25.7
comp=Z,163nm,18.7s,baz=242,slow=37
comp=Z,2.3nm,0.5s
N47A Urbana 46.27 79 P P 18 38 17.5 -0.7
MIAR Mount Ida 46.55 91 P P 18 38 20.8 +0.3
MIAR IAmb IAmb 18 38 22.0
comp=Z,6.8nm,0.7s
MIAR Mount Ida 46.55 91 P P 18 38 20.9 +0.3
baz=318,SNR=5.7
MIAR Mount Ida 46.55 91 P P 18 38 20.8 +0.3
MIAR pmax pmax
comp=Z,7.0nm,0.7s
DRIO Del Rio 46.63 102 P P 18 38 21.4 +0.2
DRIO IAmb IAmb 18 38 22.7
comp=Z,10nm,0.7s
HOPEN Hopen 46.87 360 *e*P P **18 38 23.0 +0.5**
O48B Farmland 47.00 79 P P 18 38 23.4 -0.6
baz=315
N49A Columbus Grove 47.05 78 P P 18 38 24.3 -0.1
N49A IAmb IAmb 18 38 25.4
comp=Z,14nm,0.8s
BNX BinXian 47.16 291 ⇓P P **18 38 24.9 -0.2**
BNX pmax pmax
comp=Z,15nm,1.2s
BNX pmax pmax
comp=Z,130nm,6.5s
P48A Milroy 47.42 80 P P 18 38 26.4 -0.8
P49A Miami Univ. Ec 47.75 80 P P 18 38 28.8 -1.0
baz=316
WCI Wyandotte Cave 47.83 82 P P 18 38 30.3 -0.2
baz=316
MJAR Matsushiro Arr 47.89 275 P P 18 38 30.5 -0.4
comp=Z,0.9nm,0.7s,baz=34,slow=8.8,SNR=2.1
comp=Z,0.9nm,0.7s
833A Chaparral WMA, 48.16 102 P P 18 38 32.8 -0.2
baz=323
T47A Sharon Grove 48.29 84 IAmb IAmb 18 38 35.2
comp=Z,11nm,0.8s
TRQ Mont Tremblant 48.39 66 P P 18 38 34.9 +0.2
TRQ IAmb IAmb 18 38 56.7
comp=Z,17nm,1.3s
ERPA Erie 48.45 74 P P 18 38 35.2 +0.1
baz=315
WVT Waverly 48.53 85 P P 18 38 35.4 -0.4
WVT IAmb IAmb 18 38 37.2
comp=Z,15nm,0.8s
WVT Waverly 48.53 85 P P 18 38 36.5 +0.7
baz=318
WVT Waverly 48.53 85 P P 18 38 35.4 -0.4
WVT pmax pmax
comp=Z,15nm,0.8s
M53A WI Miller and 48.56 75 P P 18 38 36.1 +0.1
baz=315
OXF Oxford 48.86 88 P P 18 38 38.6 +0.3
baz=318
R50A Paris 48.86 81 P P 18 38 38.0 -0.3
PLAL Pickwick Lake 49.24 87 P P 18 38 41.6 +0.3
CN2 Changchun 49.50 291 *e*P P **18 38 41.8 -1.4**
CN2 *es*P sP 18 38 59.6 -2.0
CN2 *e*S **S 18 45 43.3 -3.8**
CN2 pmax pmax
comp=Z,30nm,0.9s
S51A Beattyville 49.73 81 IAmb IAmb 18 38 46.1
comp=Z,15nm,0.8s
S51A pP 18 38 58.0 0.0
VBMS Vicksburg 49.98 91 P P 18 38 47.7 +0.8
baz=320
X48A Hartselle 50.20 86 P P 18 38 47.7 -0.9
X48A IAmb IAmb 18 39 24.8
comp=Z,9.3nm,0.6s
BINY Binghamton 50.48 71 P P 18 38 50.8 +0.1
baz=316
TZTN Tazewell 50.55 82 P P 18 38 51.6 +0.4
baz=318
Z47A Carrollton 50.58 88 P P 18 38 50.8 -0.6
W50A Signal Mountai 50.59 84 IAmb IAmb 18 40 04.5
comp=Z,13nm,0.9s
SSPA Standing Stone 50.61 74 P P 18 38 51.4 -0.2
baz=316
TKL Tuckaleechee C 51.09 83 LR LR 19 00 53.2
comp=Z,164nm,18.8s,baz=302,slow=36
LRAL Lakeview Retre 51.29 87 P P 18 38 55.9 -0.9
baz=319
V53A Saluda 51.60 82 IAmb IAmb 18 39 00.6
comp=Z,15nm,0.8s
BLA Blacksburg 51.76 79 P P 18 38 59.8 -0.5
baz=318
HAMF Hammerfest 52.77 1 *e*P P **18 39 06.8 -0.5**
KSRS Korea Array 52.79 283 P P 18 39 08.1 +0.2
comp=Z,3.7nm,0.8s,baz=45,slow=7.5,SNR=14
comp=Z,3.7nm,0.8s
KMSC Kings Mountain 52.80 81 IAmb IAmb 18 39 08.9
comp=Z,9.0nm,0.7s
KMSC Kings Mountain 52.80 81 P P 18 39 08.1 +0.1

baz=319
KSAR Wonju Array Be 52.82 283 P **P** **18 39 07.4 -0.7**
KSAR Wonju Array Be 52.82 283 P **P** **18 39 07.4 -0.7**
GOGA Godfrey 52.94 84 P **P** **18 39 09.1 +0.1**
baz=319
HODGE Hodges 52.98 83 pP 18 39 22.1 -0.3
VADS Vadso 53.26 358 *eP* **P** **18 39 10.7 -0.2**
JETT Jettan, Norway 53.82 2 *eP* **P** **18 39 15.3 +0.3**
JETT lAmb lAmb 18 39 15.7
comp=Z,17nm,0.7s
ARA0 ARCESS Array S 53.88 360 *eP* **P** **18 39 15.2 -0.3**
ARCES ARCESS Array B 53.88 360 P **P** **18 39 15.1 -0.4**
ARCES lAmb lAmb 18 39 16.7
comp=Z,12nm,0.8s
ARCES ARCESS Array B 53.88 360 P **P** **18 39 15.1 -0.4**
ARCES pmax pmax
comp=Z,12nm,0.9s
ARCES ARCESS Array B 53.88 360 P **P** **18 39 14.9 -0.6**
comp=Z,7.6nm,0.6s,baz=17,slow=7.4,SNR=73
ARCES PcP **PcP** **18 40 21.1 +0.6**
comp=Z,6.7nm,1.0s,baz=29,slow=2.8,SNR=2.2
comp=Z,7.6nm,0.6s
XLT XiLinHaoTe 54.14 297⇓ *iP* **P** **18 39 18.1 +0.3**
XLT pP pP 18 39 30.6 -0.3
XLT sP sP 18 39 35.9 -0.4
XLT pmax pmax
comp=Z,10.0nm,1.1s
XLT pmax pmax
comp=Z,58nm,4.1s
KTK1 Kautokeino 54.40 1 *eP* **P** **18 39 19.1 -0.2**
KTK1 lAmb lAmb 18 39 20.2
comp=Z,24nm,1.0s
STEI Steigen 55.29 4 *eP* **P** **18 39 25.8 +0.1**
LVZ Lovozero 55.32 356 P **P** **18 39 25.7 -0.3**
LVZ Lovozero 55.32 356*ce*P **P** **18 39 26.1 +0.1**
LVZ pmax pmax
comp=Z,54nm,1.3s
ULN Ulaanbaatar 55.42 306 P **P** **18 39 26.7 -0.4**
ULN lAmb lAmb 18 40 43.2
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 55.42 306*ce*P **P** **18 39 26.8 -0.3**
ULN pmax pmax
comp=Z,5.0nm,1.5s
SONM Songino Array 55.73 306 P **P** **18 39 28.9 -0.4**
SONM lAmb lAmb 18 39 44.4
comp=Z,6.8nm,0.7s
SONM Songino Array 55.73 306 P **P** **18 39 28.9 -0.4**
SONM pmax pmax
comp=Z,7.0nm,0.7s
SONM Songino Array 55.73 306 P **P** **18 39 29.2 -0.1**
comp=Z,4.1nm,0.8s,baz=44,slow=6.5,SNR=26
SONM LR LR 19 05 12.4
comp=Z,170nm,18.9s,baz=3.0,slow=38
comp=Z,4.1nm,0.8s
FAUS Fauske 55.84 4 *eP* **P** **18 39 29.9 +0.2**
FAUS lAmb lAmb 18 39 30.1
comp=Z,21nm,0.9s
KONS Konsvik 56.62 6 *eP* **P** **18 39 36.1 +1.0**
STOK Stokkvaagen 56.78 6 *eP* **P** **18 39 36.6 +0.3**
BJT Baijiatuao 56.99 294 lAmb lAmb 18 39 38.9
comp=Z,7.8nm,0.9s
MOR8 Moi Rana 57.01 5 *eP* **P** **18 39 37.5 -0.5**
MOR8 lAmb lAmb 18 39 38.3
comp=Z,17nm,0.9s
MSF Maaselka 57.48 358 P **P** **18 39 42.0 +0.7**
MSF pmax pmax
comp=Z,55nm,1.0s
OUL Oulu 58.35 359 P **P** **18 39 48.0 +0.6**
OUL pmax pmax
comp=Z,59nm,1.2s
NSS Namsos 58.51 7 *eP* **P** **18 39 48.6 +0.1**
HHC Hu-ho-hao-te 58.63 298 *eP* **P** **18 39 50.1 +0.2**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,74nm,4.9s
ZAA0 Zalesovo Array 59.23 323 P **P** **18 39 53.1 -0.5**
ZAA0 lAmb lAmb 18 39 54.6
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 59.23 323 P **P** **18 39 53.1 -0.5**
ZALV Zalesovo Beam 59.23 323 *i* P **P** **18 39 53.7 +0.1**
ZALV pmax pmax
comp=Z,10.0nm,0.6s
ZALV Zalesovo Beam 59.23 323 P **P** **18 39 53.0 -0.6**
comp=Z,9.4nm,0.6s,baz=38,slow=6.8,SNR=57
ZALV LR LR 19 07 56.1
comp=Z,83nm,20.1s,baz=26,slow=39
comp=Z,9.4nm,0.6s
CMIG Matias Romero 59.68 106 LR LR 19 05 40.3
comp=Z,28nm,18.4s,baz=5.5,slow=36
HNS HongShan 59.72 293⇑↑P **P** **18 39 57.8 +0.5**
HNS pP **pP** **18 40 11.6 +1.1**
HNS sP **sP** **18 40 15.8 -0.1**
HNS pmax pmax
comp=Z,27nm,1.0s
MOL Molde 60.12 9 *eP* **P** **18 39 59.5 -0.1**
AKN Aaknes 60.46 10 *eP* **P** **18 40 02.9 +0.9**
AKN lAmb lAmb 18 40 04.7
comp=Z,13nm,0.8s
TEIG Tepich 60.66 98 LR LR 19 08 19.7
comp=Z,321nm,18.2s,baz=206,slow=38
DOMB Dombas 60.77 8 *eP* **P** **18 40 04.4 +0.2**
DOMB lAmb lAmb 18 40 06.1
comp=Z,8.6nm,1.0s
NC204 NORSAR Array S 61.66 8 lAmb lAmb 18 40 25.2
comp=Z,11nm,0.7s
DGZ Jazzator, Alta 61.88 319⇑ *iP* **P** **18 40 12.5 +0.5**
DGZ pmax pmax
comp=Z,8.0nm,1.5s
NB2 NORSAR Subarra 61.93 7 P **P** **18 40 12.3 +0.3**
comp=Z,9.3nm,0.8s,baz=352,slow=6.9
NB2 NORSAR Subarra 61.93 7 P **P** **18 40 12.3 +0.3**
baz=352,slow=6.9
NOA NORSAR Array B 61.93 7 P **P** **18 40 12.3 +0.3**
comp=Z,3.5nm,0.7s,baz=353,slow=6.8,SNR=28
comp=Z,3.5nm,0.7s
ASK Askoy 61.95 11 *eP* **P** **18 40 15.6 +3.6**
ASK lAmb lAmb 18 40 17.2
comp=Z,9.2nm,0.7s
VALR Valaam 62.00 357 *i* P **P** **18 40 12.7 +0.3**
VALR pmax pmax
comp=Z,26nm,0.9s
FINES FINESS Array B 62.01 359 P **P** **18 40 12.7 +0.2**
comp=Z,7.5nm,0.5s,baz=11,slow=7.8,SNR=59
comp=Z,7.5nm,0.5s
KLMR Klimovskoe 62.04 352 *eP* **P** **18 40 10.9 -1.7**
KLMR *e**PP **pP** **18 40 24.7 -1.3**
KLMR pmax pmax
comp=Z,34nm,1.2s
SKAR Skarslia 62.05 9 *eP* **P** **18 40 13.3 +0.5**
BER Bergen 62.06 11 *eP* **P** **18 40 13.7 +0.9**
BER lAmb lAmb 18 40 14.6
comp=Z,18nm,1.0s
NC602 NORSAR Array S 62.25 7 *eP* **P** **18 40 14.6 +0.5**
RAF Rauma 62.41 2 *eP* **P** **18 40 15.6 +0.5**
ODD1 Odda 62.65 10 *eP* **P** **18 40 18.3 +1.4**
OSL Oslo 62.98 8 *eP* **P** **18 40 20.6 +1.6**
HFS Hagfors 62.99 6 P **P** **18 40 18.5 -0.6**
comp=Z,8.9nm,0.5s,baz=40,slow=5.8,SNR=58
comp=Z,8.9nm,0.5s
SVE Sverdlovsk 63.04 339*de*P **P** **18 40 19.3 -0.1**
SVE pmax pmax
comp=Z,33nm,1.0s
LYN LuoYang 63.08 292⇑↑P **P** **18 40 20.4 +0.4**
LYN pP pP 18 40 34.3 +1.0
LYN sP sP 18 40 38.6 -0.1
LYN pmax pmax
comp=Z,39nm,0.9s
BLS5 Blasjo 63.12 10 *eP* **P** **18 40 21.7 +1.8**
KMY Karmoy 63.20 11 *eP* **P** **18 40 21.1 +0.7**
KIRV Kirov 63.23 346*ce*P **P** **18 40 19.7 -0.8**
MEF Metsahovi 63.24 0 *eP* **P** **18 40 20.9 +0.2**
ARU Arti 63.82 340 P **P** **18 40 23.0 -1.5**
ARU Arti 63.82 340*c iP* **P** **18 40 23.9 -0.6**
ARU *PP **pP** **18 40 37.5 -0.4**
ARU 18 40 56.9
ARU S **S** **18 48 55.8 +0.2**
ARU SS **SS** **18 53 03.0 -0.2**
ARU pmax pmax
comp=Z,24nm,0.7s
KURK Kurchatov 63.97 325 P **P** **18 40 24.9 -0.7**
KURK lAmb lAmb 18 40 26.6
comp=Z,13nm,0.9s
KURK Kurchatov 63.97 325 P **P** **18 40 24.9 -0.7**
KURK pmax pmax
comp=Z,13nm,0.9s
KURBB Kurchatov Arra 64.08 325 P **P** **18 40 25.8 -0.5**
comp=Z,10nm,0.9s,baz=28,slow=6.6,SNR=60
comp=Z,10nm,0.9s
BRVK Borovoye 64.29 332 P **P** **18 40 27.0 -0.7**
BRVK Borovoye 64.29 332 P **P** **18 40 27.0 -0.7**
BRVK pmax pmax
comp=Z,23nm,0.8s
BVA0 Borovoye Array 64.29 331 P **P** **18 40 26.6 -1.1**
BVAR Borovoye Array 64.29 331 P **P** **18 40 27.6 -0.1**
comp=Z,28nm,0.7s,baz=34,slow=6.9,SNR=204
BVAR LR LR 19 12 51.6
comp=Z,108nm,18.5s,baz=359,slow=40
comp=Z,28nm,0.7s
ZSN Zaisan 64.69 319 *eP* **P** **18 40 30.7 +0.2**
comp=Z,15nm,1.1s,baz=319
ZSN Zaisan 64.69 319 *eP* **P** **18 40 30.6 +0.2**
ZSN pmax pmax
comp=Z,15nm,1.1s
MTSE Matsula 64.75 1 *eP* **P** **18 40 30.5 0.0**
VSU Vasula 64.99 359 *i* P **P** **18 40 32.6 +0.4**
VSU Vasula 64.99 359 *eP* **P** **18 40 32.6 +0.4**
XAN Xi'an 65.27 295⇑↑P **P** **18 40 34.3 -0.1**
XAN pP pP 18 40 48.6 +0.8
XAN sP sP 18 40 57.6 +4.4
XAN pmax pmax
comp=Z,20nm,1.1s
WHN Wuhan 65.28 288 P **P** **18 40 34.4 0.0**
WHN pmax pmax
comp=Z,30nm,0.8s
GTA Gaotai 65.29 305 *eP* **P** **18 40 34.3 -0.3**
GTA pP pP 18 40 48.5 +0.5
GTA sP sP 18 40 52.3 -1.1
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA LR LR
comp=Z,540nm,14.9s
GTA LR LR
comp=Z,190nm,15.3s
GTA LR LR
comp=Z,180nm,15.6s
BORU Boraas 65.42 7 *eP* **P** **18 40 35.8 +0.8**
ONAU Onsala 65.59 8 *eP* **P** **18 40 36.8 +0.8**
SLIT Slitere, Latvi 65.82 2 *eP* **P** **18 40 37.8 +0.3**
EKA Eskdalemuir Ar 65.85 17 P **P** **18 40 38.2 +0.5**
comp=Z,3.4nm,0.6s,baz=330,slow=5.1,SNR=25
comp=Z,3.4nm,0.6s
FABU Falkenberg 66.05 7 *eP* **P** **18 40 39.7 +0.8**
LZH Lanzhou 66.11 300⇑↑P **P** **18 40 40.0 +0.1**
LZH pP pP 18 40 51.8 -1.6
LZH pmax pmax
comp=Z,22nm,1.4s
MK31 Makanchi Array 66.16 321 P **P** **18 40 38.9 -1.1**
MKAR Makanchi Array 66.16 321 P **P** **18 40 39.6 -0.4**
comp=Z,6.1nm,0.7s,baz=45,slow=7.0,SNR=75
MKAR LR LR 19 11 50.3
comp=Z,108nm,19.3s,baz=52,slow=38
comp=Z,6.1nm,0.7s
MAKZ Makanchi 66.26 321 P **P** **18 40 39.5 -1.1**
MAKZ lAmb lAmb 18 40 40.8
comp=Z,6.0nm,0.6s
MAKZ Makanchi 66.26 321 P **P** **18 40 39.5 -1.1**
MAKZ pmax pmax
comp=Z,6.0nm,0.6s
BRZS Berezniki 66.40 329 *eP* **P** **18 40 41.1 -0.4**
comp=Z,9.7nm,1.1s,baz=328
BRZS Berezniki 66.40 329 *eP* **P** **18 40 41.0 -0.4**
BRZS pmax pmax
comp=Z,10.0nm,1.1s
DEL Delary 66.65 7 *i* P **P** **18 40 42.0 -0.8**
WMQ Urumqi 66.72 316 *eP* **P** **18 40 43.8 +0.2**
WMQ PcP **PcP** **18 41 14.4 +2.0**
WMQ pmax pmax
comp=Z,16nm,1.5s
BLEU Blekinge 66.93 5 *eP* **P** **18 40 45.0 +0.4**
BJUU Bjuv 66.99 7 *eP* **P** **18 40 45.9 +0.9**
MOS Moscow 67.26 352 *eP* **P** **18 40 46.8 +0.1**
ISAL Salakas 67.90 359 *eP* **P** **18 40 51.1 +0.4**
OBN Obninsk 67.96 353*de*P **P** **18 40 50.5 -0.6**
OBN *e**PP **pP** **18 41 03.2 -1.4**
OBN *e**SP **sP** **18 41 09.3 -0.7**
OBN *e* 18 41 17.7
OBN S **S** **18 49 49.0 +3.0**
OBN *e* 18 50 45.0
OBN pmax pmax
comp=Z,25nm,1.3s
OBN MLR MLR
comp=Z,65nm,16.0s
PABE Paberze 67.97 1 P **P** **18 40 51.0 -0.1**
PABE Paberze 67.97 1 *eP* **P** **18 40 50.8 -0.4**
OTUK Ortayu 68.06 328 P **P** **18 40 51.6 -0.4**
MNK Minsk 68.95 358 *eP* **P** **18 40 57.0 -0.3**
TDK Taldyqorghan 69.05 322 *eP* **P** **18 40 58.8 +0.5**
baz=322
TDK Taldyqorghan 69.05 322 *eP* **P** **18 40 58.7 +0.5**
BELG Belogornoye 69.49 345⇑ *iP* **P** **18 41 00.5 -0.2**
BELG pmax pmax
comp=Z,9.0nm,1.1s
BELG Belogornoye 69.49 345 P **P** **18 41 00.6 -0.2**
comp=Z,16nm,0.5s,baz=330,slow=0.4,SNR=45
comp=Z,16nm,0.5s
AKTO Aktyubinsk 69.59 338 P **P** **18 41 01.3 -0.1**
comp=Z,9.3nm,0.7s,baz=22,slow=4.4,SNR=30
AKTO LR LR 19 13 29.5
comp=Z,74nm,19.1s,baz=280,slow=38
comp=Z,9.3nm,0.7s
RETH Rethem/Aller, 70.00 10 *eP* **P** **18 41 05.1 +1.3**
comp=Z,9.9nm,1.3s,baz=353,slow=6.1
RETH *ep*P **pP** **18 41 18.7 +1.3**
baz=353,slow=5.9
PDGK Podgornoye 70.15 321 P **P** **18 41 05.4 +0.2**
GOMU GeErMu 70.18 306 P **P** **18 41 05.8 +0.1**
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU LR LR
comp=Z,990nm,10.6s
GOMU LR LR
comp=Z,230nm,10.5s
GOMU LR LR
comp=Z,390nm,9.9s
LPSR Galich'ya Gora 70.27 351 *eP* **P** **18 41 03.3 -2.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
AB31 Akbulak array 70.30 336 *i* P **P** **18 41 05.3 -0.5**
ABKAR Akbulak array 70.30 336 lAmb lAmb 18 41 06.2
comp=Z,9.6nm,0.6s
KPKS Kokpek 70.31 321 *eP* **P** **18 41 06.8 +0.7**
comp=Z,7.4nm,0.7s,baz=321
KPKS Kokpek 70.31 321 *eP* **P** **18 41 06.7 +0.7**
KPKS pmax pmax
comp=Z,7.0nm,0.7s
NRDL Niedersach Rie 70.31 10 *eP* **P** **18 41 06.7 +1.1**
comp=Z,9.6nm,1.1s,baz=353,slow=6.1
NRDL *ep*P **pP** **18 41 20.7 +1.5**
baz=353,slow=5.9
SHLS Shalkode 70.31 321⇑ *iP* **P** **18 41 06.2 +0.1**
comp=Z,12nm,0.9s,baz=320
SHLS Shalkode 70.31 321*c iP* **P** **18 41 06.2 +0.1**
SHLS pmax pmax
comp=Z,12nm,0.9s
BTLS Baital 70.43 325⇑ *iP* **P** **18 41 07.0 +0.4**
comp=Z,6.8nm,0.7s,baz=325
BTLS Baital 70.43 325*c iP* **P** **18 41 07.0 +0.4**
BTLS pmax pmax
comp=Z,7.0nm,0.7s
CHKK Chushkaly 70.54 323 *eP* **P** **18 41 07.0 -0.4**
baz=323
CHKK Chushkaly 70.54 323 *eP* **P** **18 41 06.9 -0.4**
FLTG Flechtingen 70.57 9 *eP* **P** **18 41 07.9 +0.6**
comp=Z,5.0nm,0.8s,baz=353,slow=6.1
FLTG *ep*P **pP** **18 41 22.1 +1.2**
baz=353,slow=5.9
ZHN Zhinishke 70.66 321 *eP* **P** **18 41 08.7 +0.4**
baz=321
ZHN Zhinishke 70.66 321 *eP* **P** **18 41 08.6 +0.4**
KUU Kurty 70.72 323 *eP* **P** **18 41 08.1 -0.4**
comp=Z,10nm,0.8s,baz=323
KUU Kurty 70.72 323 *eP* **P** **18 41 08.0 -0.4**
KUU pmax pmax
comp=Z,10.0nm,0.8s
SATY Saty 70.76 321 *eP* **P** **18 41 09.7 +0.8**
baz=321
SATY Saty 70.76 321 *eP* **P** **18 41 09.6 +0.8**
CLZ Clausthal 70.98 9 *eP* **P** **18 41 11.2 +1.3**
comp=Z,7.2nm,0.9s,baz=353,slow=6.1
CLZ *ep*P **pP** **18 41 25.5 +2.0**
baz=353,slow=5.9
MDOK Medeo 71.13 322 *i* P **P** **18 41 11.6 +0.4**
baz=322
MDOK Medeo 71.13 322 *i* P **P** **18 41 11.5 +0.4**
AAA Alma-Ata 71.14 322 *eP* **P** **18 41 11.7 +0.7**
comp=Z,16nm,0.9s,baz=322
AAA Alma-Ata 71.14 322 *eP* **P** **18 41 11.7 +0.7**
AAA pmax pmax
comp=Z,16nm,0.9s
VORR Voronezh 71.17 351 *eP* **P** **18 41 09.6 -1.4**
VORR pmax pmax
comp=Z,30nm,0.4s
TNSS Tian-Shan 71.28 322 *eP* **P** **18 41 12.5 +0.2**
baz=322
TNSS Tian-Shan 71.28 322 *eP* **P** **18 41 12.5 +0.2**
VRH Novokhopyorsk 71.39 349 *eP* **P** **18 41 10.7 -1.6**
VRH pmax pmax
comp=Z,8.0nm,0.7s
KASTN Kahler Asten 71.42 11 *eP* **P** **18 41 13.7 +1.1**
comp=Z,2.9nm,0.7s,baz=353,slow=6.1
KASTN *ep*P **pP** **18 41 27.3 +1.1**
comp=Z,13nm,1.0s,baz=353,slow=5.9
VSR Storozhevoye 71.62 351 *eP* **P** **18 41 11.9 -1.8**
VSR pmax pmax
comp=Z,10.0nm,0.6s
CLL Collm 71.73 8 **P** **18 41 14.8 +0.5**
CLL Collm 71.73 8 *i* P **P** **18 41 14.9 +0.5**
CLL *i* *PP **pP** **18 41 28.7 +0.7**
CLL pmax pmax
comp=Z,7.0nm,1.0s
CLL Collm 71.73 8 *i* P **P** **18 41 14.9 +0.5**
comp=Z,7.0nm,1.0s
CLL *i* x x 18 41 23.9
CLL *i* pP **pP** **18 41 28.7 +0.7**
comp=Z,8.0nm,0.9s
CLL *i* PcP **PcP** **18 41 32.4 -0.8**
CLL *es*P **sP** **18 41 35.0 +1.7**
CLL *e*PP **PP** **18 43 57.0 +3.8**
comp=Z,39nm,2.3s
CLL *i* x x 18 44 20.1
CLL Collm 71.73 8 *eP* **P** **18 41 15.0 +0.6**
baz=353,slow=6.1
CLL *ep*P **pP** **18 41 28.8 +0.9**
baz=353,slow=5.9
NEUB Neuenburg 71.73 9 *eP* **P** **18 41 14.7 +0.3**
comp=Z,13nm,0.8s,baz=353,slow=6.1
NEUB *ep*P **pP** **18 41 28.9 +0.9**
baz=353,slow=5.9
TKM2 Tokmak 2 71.83 323 P **P** **18 41 16.3 +0.8**
SNR=14
TKM2 Tokmak 2 71.83 323 P **P** **18 41 15.8 +0.4**
VORD Divnogorie 71.86 350 *eP* **P** **18 41 12.4 -2.7**
VORD pmax pmax
comp=Z,10.0nm,0.7s
CHMS Chumysh 72.04 324 P **P** **18 41 17.5 +1.1**
SNR=15
TARG Taragay, Kyrgy 72.15 321 lAmb lAmb 18 41 20.1
comp=Z,8.0nm,0.6s
BRG Berggiesshubel 72.23 7 *i* P **P** **18 41 18.5 +1.1**
BRG Amp 18 41 19.4
comp=Z,7.6nm,1.0s
BRG pP **pP** **18 41 32.0 +1.0**
BRG Amp 18 41 33.4
comp=Z,8.9nm,1.0s
BRG Berggiesshubel 72.23 7 *i* P **P** **18 41 18.4 +1.1**
BRG 18 41 32.0
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG Berggiesshubel 72.23 7 *eP* **P** **18 41 18.2 +0.8**
comp=Z,8.8nm,1.0s,baz=353,slow=6.1
BRG *ep*P **pP** **18 41 31.6 +0.6**
baz=353,slow=5.9
FRU1 Bishkek 72.24 324 pP 18 41 32.1 +0.8
MOX Moxa 72.28 9 P **P** **18 41 18.8 +1.1**
MOX pmax pmax
comp=Z,15nm,1.0s
MOX Moxa 72.28 9 *eP* **P** **18 41 18.8 +1.1**
comp=Z,11nm,0.8s,baz=353,slow=6.1
MOX *ep*P **pP** **18 41 32.3 +1.0**
baz=353,slow=5.9
KBK Karagaybulak 72.28 324 P **P** **18 41 18.8 +0.7**
SNR=17
TNS Taunus Mts 72.39 11 *eP* **P** **18 41 19.5 +1.1**
comp=Z,11nm,0.9s,baz=353,slow=6.1
TNS *ep*P **pP** **18 41 33.1 +1.0**
baz=353,slow=5.9
AAK Ala-Archa 72.44 324 P **P** **18 41 20.1 +1.0**
AAK Ala-Archa 72.44 324 P **P** **18 41 19.0 -0.1**
SNR=13
AAK lAmb lAmb 18 41 34.8
comp=Z,13nm,0.7s
AAK Ala-Archa 72.44 324*ce*P **P** **18 41 19.8 +0.8**
AAK pmax pmax
comp=Z,13nm,0.8s
HSKC Hora Svate Kat 72.46 8 *eP* **P** **18 41 19.9 +1.1**
PLN Plauen 72.48 8 *eP* **P** **18 41 19.8 +0.9**
comp=Z,7.3nm,0.8s,baz=353,slow=6.1
PLN *ep*P **pP** **18 41 33.4 +0.8**
baz=353,slow=5.9
TANN Tannenbergstha 72.57 8 *eP* **P** **18 41 20.0 +0.5**
comp=Z,6.2nm,1.1s,baz=353,slow=6.1
TANN *ep*P **pP** **18 41 34.0 +0.9**
baz=353,slow=5.9
PVCC Panska Ves 72.61 7 *eP* **P** **18 41 20.4 +0.7**
PVCC Panska Ves 72.61 7 *eP* **P** **18 41 20.4 +0.7**
CHVC Chvalec 72.64 6 *eP* **P** **18 41 20.7 +0.8**
CHVC Chvalec 72.64 6 *eP* **P** **18 41 20.7 +0.8**
EKS2 Erkin-Say 72.65 324 P **P** **18 41 21.4 +1.2**
SNR=20
AKASG Malin Array Be 72.72 357 P **P** **18 41 20.0 -0.3**
comp=Z,4.3nm,0.5s,baz=5.7,slow=6.0,SNR=13
AKASG LR LR 19 15 07.4
comp=Z,58nm,19.2s,baz=331,slow=37
comp=Z,4.3nm,0.5s
AKBB Malin Array Si 72.72 357 lAmb lAmb 18 41 34.3
comp=Z,10nm,0.7s
KIEV Kiev 72.73 357⇓P **P** **18 41 16.5 -3.8**
KIEV Kiev 72.73 357 P **P** **18 41 19.5 -0.8**
KIEV lAmb lAmb 18 41 34.3
comp=Z,9.5nm,0.7s
KIEV Kiev 72.73 357 P **P** **18 41 19.5 -0.8**
KIEV pmax pmax
comp=Z,9.0nm,0.7s
NKC Novy Kostel 72.75 8 *eP* **P** **18 41 21.5 +0.9**
NKC *ep*P **pP** **18 41 34.1 -0.1**
NKC Novy Kostel 72.75 8 *eP* **P** **18 41 21.5 +0.9**
NKC *e**PP **pP** **18 41 34.1 -0.1**
DPC Dobruska-Polom 72.90 6 *eP* **P** **18 41 22.5 +1.1**
DPC *ep*P **pP** **18 41 34.4 -0.6**
DPC Dobruska-Polom 72.90 6 *eP* **P** **18 41 22.5 +1.1**
DPC *e**PP **pP** **18 41 34.4 -0.6**
NRN Naryn 73.03 322 lAmb lAmb 18 41 25.0
comp=Z,14nm,1.0s
GRA1 Grafenberg Arr 73.19 9 **P** **18 41 23.3 +0.2**
GRA1 lAmb lAmb 18 41 38.9
comp=Z,8.5nm,0.7s
GRF Grafenberg Arr 73.19 9 P **P** **18 41 23.3 +0.2**
GRF pmax pmax
comp=Z,8.0nm,0.7s
GRFO Grafenberg 73.19 9 pP 18 41 37.9 +1.2
KRLC Kraliky 73.20 5 *eP* **P** **18 41 23.9 +0.7**
KRLC *eP* **P** **18 41 24.2 +1.0**
KRLC *ep*P **pP** **18 41 36.2 -0.6**
KRLC Kraliky 73.20 5 *eP* **P** **18 41 23.9 +0.7**
KRLC *e**PP **pP** **18 41 36.2 -0.6**
ROTZ Rotzenmuhle 73.20 9 *eP* **P** **18 41 24.1 +0.9**
comp=Z,1.8nm,0.9s,baz=353,slow=6.1
ROTZ *ep*P **pP** **18 41 37.9 +1.1**
baz=353,slow=5.9
DZA Taraz 73.21 326 *eP* **P** **18 41 23.7 +0.2**
baz=326
DZA Taraz 73.21 326 *eP* **P** **18 41 23.6 +0.2**
KK31 Karatay Array 73.26 327 lAmb lAmb 18 41 25.1
comp=Z,17nm,1.1s
KK31 Karatay Array 73.26 327 *i* P **P** **18 41 23.5 -0.2**
KKAR Karatay Array 73.26 327 lAmb lAmb 18 41 25.1
comp=Z,17nm,1.1s
BRLS Borolday 73.53 327 *eP* **P** **18 41 27.0 +1.6**
baz=327
BRLS Borolday 73.53 327 *eP* **P** **18 41 26.9 +1.6**
MORC Moravsky Berou 73.53 5⇓P P 18 41 19.2 -5.9
MORC Moravsky Berou 73.53 5 *eP* **P** **18 41 25.7 +0.5**
MORC *e* 18 41 39.0
MORC Moravsky Berou 73.53 5⇓P P 18 41 19.2 -6.0
ZVC Zvikov 73.67 7 *eP* **P** **18 41 27.0 +1.0**

ZVC				*e*pP	**pP**	18 41 39.3	-0.3	
CLF	**Chambon-Foret**	**73.77**	**16**	P	**P**	18 41 27.3	+0.8	
KWP	**Kalwaria Pacla**	**73.84**	**1**	IAmb	IAmb	18 41 43.2		
	comp=Z,27nm,1.4s							
WET	**Wettzell**	**73.87**	**8**	*e*P	**P**	18 41 29.2	+2.0	
	comp=Z,7.3nm,1.2s,baz=353,slow=6.1							
WET				*e*pP	**PcP**	18 41 42.2	-0.2	
	baz=353,slow=5.9							
KHC	**Kasperske Hory**	**73.94**	**8**	P	**P**	18 41 27.7	+0.2	
KHC				IAmb	IAmb	18 41 44.0		
	comp=Z,12nm,0.9s							
KHC	**Kasperske Hory**	**73.94**	**8**	*e*P	**P**	18 41 29.1	+1.5	
KHC				*e*pP	**PcP**	18 41 42.7	0.0	
KHC	**Kasperske Hory**	**73.94**	**8**	*ce*P	**P**	18 41 28.9	+1.3	
KHC				pmax	pmax			
	comp=Z,27nm,1.7s							
VRAC	**Vranov**	**73.95**	**6**	*e*P	**P**	18 41 28.1	+0.5	
STHS	**Stebnicka Huta**	**74.02**	**2**	*e*P	**P**	18 41 28.6	+0.6	
STHS				*e*		18 41 41.2		
STHS				pmax	pmax			
	comp=Z,10.0nm,0.7s							
STHS	**Stebnicka Huta**	**74.02**	**2**	*e*P	**P**	18 41 28.6	+0.6	
STHS				*e*		18 41 41.2		
KRUC	**Moravsky**	**74.19**	**6**	*e*P	**P**	18 41 30.3	+1.3	
GEC2	**GERESS Array S**	**74.23**	**8**	*e*P	**P**	18 41 30.5	+1.2	
	comp=Z,6.8nm,0.8s,baz=353,slow=6.1							
GEC2				*e*pP	**PcP**	18 41 43.8	-0.3	
	baz=353,slow=5.9							
GERES	**GERESS Array B**	**74.23**	**8**	P	**P**	18 41 29.6	+0.3	
	comp=Z,2.8nm,0.7s,baz=360,slow=6.2,SNR=12							
	comp=Z,2.8nm,0.7s							
ECH	**Echery**	**74.23**	**12**	pP	**pP**	18 41 43.0	0.0	
ECH				IAmb	IAmb	18 41 45.4		
	comp=Z,11nm,0.9s							
LANS	**Liptovska Anna**	**74.24**	**4**	*e*P	**P**	18 41 31.2	+1.9	
LANS				*e*		18 41 44.3		
LANS				pmax	pmax			
	comp=Z,5.0nm,1.0s							
LANS	**Liptovska Anna**	**74.24**	**4**	*e*P	**P**	18 41 31.2	+1.9	
LANS				*e*		18 41 44.2		
BFO	**Black Forest**	**74.25**	**11**	*e*P	**P**	18 41 30.2	+0.8	
	comp=Z,7.3nm,1.1s,baz=353,slow=6.1							
BFO				*e*pP	**PcP**	18 41 43.9	-0.2	
	baz=353,slow=5.9							
CHM	**Chimkent**	**74.25**	**327**	*e*P	**P**	18 41 29.9	+0.3	
	baz=327							
CHM	**Chimkent**	**74.25**	**327**	*e*P	**P**	18 41 29.8	+0.3	
IUG	**Iuzhnay**	**74.28**	**327**	⇑*i*P	**P**	18 41 30.8	+0.9	
	comp=Z,14nm,0.7s,baz=327							
IUG	**Iuzhnay**	**74.28**	**327**	*c i*P	**P**	18 41 30.7	+0.9	
IUG				pmax	pmax			
	comp=Z,14nm,0.7s							
CKRC	**Cesky Krumlov**	**74.30**	**7**	*e*P	**P**	18 41 30.6	+1.0	
CKRC	**Cesky Krumlov**	**74.30**	**7**	*e*P	**P**	18 41 30.6	+1.0	
PPT	**Papeete**	**74.31**	**175**	LR	LR	19 07 06.2		
	comp=Z,53nm,20.6s,baz=191,slow=30							
JAVC	**Velka Javorina**	**74.45**	**5**	*e*P	**P**	18 41 32.3	+1.7	
KOLS	**Kolonicke sedl**	**74.53**	**2**	*e*P	**P**	18 41 32.2	+1.2	
KOLS				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KOLS	**Kolonicke sedl**	**74.53**	**2**	*e*P	**P**	18 41 32.2	+1.2	
KSH	**Kashi**	**74.75**	**321**	P	**P**	18 41 36.4	+3.8	
KSH				PcP	**sP**	18 41 50.3	-1.2	
KSH				pmax	pmax			
	comp=Z,25nm,0.9s							
KSH				LR	LR			
	comp=Z,350nm,13.1s							
KSH				LR	LR			
	comp=Z,410nm,14.4s							
KSH				LR	LR			
	comp=Z,690nm,15.5s							
MFF	**Saint Martin d**	**74.78**	**18**	*e*P	**P**	18 41 33.4	+0.9	
MFF				pmax	pmax			
	comp=Z,9.0nm,1.0s							
VYHS	**Vyhne**	**74.87**	**4**	*e*P	**P**	18 41 33.9	+0.9	
VYHS				*e*		18 41 46.2		
VYHS				pmax	pmax			
	comp=Z,8.0nm,1.2s							
VYHS	**Vyhne**	**74.87**	**4**	*e*	P	18 41 46.1	+13	
VYHS	**Vyhne**	**74.87**	**4**	*e*P	**P**	18 41 33.9	+0.9	
MODS	**Modra-Piesok**	**74.92**	**5**	*e*P	**P**	18 41 34.5	+1.2	
MODS				*e*		18 41 48.1		
MODS				pmax	pmax			
	comp=Z,15nm,1.0s							
MODS	**Modra-Piesok**	**74.92**	**5**	*e*P	**P**	18 41 34.5	+1.2	
MODS				*e*		18 41 48.1		
PZH	**PanZhiHua**	**74.98**	**295**	P	**P**	18 41 35.8	+1.7	
PZH				pmax	pmax			
	comp=Z,9.0nm,0.7s							
PZH				pmax	pmax			
	comp=Z,110nm,4.7s							
CONA	**Conrad Observa**	**75.29**	**6**	*i* P	**P**	18 41 35.6	+0.2	
	comp=Z,6.7nm,1.3s							
CONA				*i* pP	**pP**	18 41 51.0	+1.8	
	comp=Z,8.0nm,0.9s							
SORM	**Soroca**	**75.31**	**358**	⇓P	**P**	18 41 34.9	-0.5	
SORM	**Soroca**	**75.31**	**358**	⇓P	**P**	18 41 34.9	-0.5	
SMF	**Signal de Mont**	**75.35**	**15**	*e*P	**P**	18 41 36.5	+0.7	
SMF				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BIOA	**Bad Ischl, Aus**	**75.37**	**8**	*e*P	**P**	18 41 36.7	+0.8	
	comp=Z,1.6nm,0.5s							
BIOA				*i* pP	**pP**	18 41 51.1	+1.6	
	comp=Z,7.7nm,1.1s							
MOTA	**Moosalm**	**75.50**	**10**	*i* P	**P**	18 41 37.8	+1.0	
	comp=Z,4.8nm,0.9s							
MOTA				*i* pP	**pP**	18 41 52.2	+1.7	
	comp=Z,11nm,1.0s							
RONA	**Rosalia, Austr**	**75.54**	**6**	*i* P	**P**	18 41 38.1	+1.2	
	comp=Z,2.2nm,0.7s							
RONA				*i* pP	**pP**	18 41 52.5	+2.0	
	comp=Z,5.5nm,1.1s							
WATA	**Walderalm**	**75.56**	**9**	*i* P	**P**	18 41 38.1	+1.0	
	comp=Z,4.6nm,0.7s							
WATA				*e*pP	**pP**	18 41 52.5	+1.7	
	comp=Z,10nm,0.7s							
LESA	**Schwarzleotal**	**75.56**	**9**	*e*P	**P**	18 41 38.2	+1.1	
	comp=Z,7.9nm,1.1s							
LESA				*i* pP	**pP**	18 41 52.4	+1.7	
	comp=Z,9.6nm,0.9s							
KMI	**Kunming**	**75.63**	**294**	⇑P	**P**	18 41 40.3	+2.4	
KMI				PcP	**pP**	18 41 52.9	+1.3	
KMI				pmax	pmax			
	comp=Z,7.0nm,1.1s							
WTTA	**Wattenberg**	**75.63**	**9**	*i* P	**P**	18 41 38.7	+1.1	
	comp=Z,9.4nm,0.8s							
WTTA				*i* pP	**pP**	18 41 52.4	+1.2	
	comp=Z,13nm,0.8s							
SQTA	**Sankt Quirin**	**75.64**	**10**	*i* P	**P**	18 41 38.6	+1.0	
	comp=Z,9.4nm,1.0s							
SQTA				*i* pP	**pP**	18 41 53.2	+2.0	
	comp=Z,15nm,0.8s							
FETA	**Feichten**	**75.79**	**10**	*i* P	**P**	18 41 39.7	+1.2	
	comp=Z,6.2nm,0.9s							
FETA				*i* pP	**pP**	18 41 54.1	+2.0	
	comp=Z,12nm,0.9s							
BURAR	**Bucovina Array**	**75.87**	**360**	⇑P	**P**	18 41 38.4	-0.4	
BURAR	**Bucovina Array**	**75.87**	**360**		**P**	18 41 39.2	+0.4	
BURAR	**Bucovina Array**	**75.87**	**360**	⇑P	**P**	18 41 38.4	-0.4	
ARSA	**Arzberg**	**75.94**	**7**	*e*P	**P**	18 41 40.2	+1.1	
	comp=Z,5.9nm,1.4s							
ARSA				*e*pP	**pP**	18 41 54.8	+1.9	
	comp=Z,4.3nm,0.8s							
KBA	**Koelnbreinsper**	**75.96**	**8**	*e*P	**P**	18 41 40.0	+0.6	
	comp=Z,11nm,1.1s							
KBA				*i* pP	**pP**	18 41 54.5	+1.4	
	comp=Z,21nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**76.14**	**10**	P	**P**	18 41 41.9	+1.3	
FUORN				IAmb	IAmb	18 41 57.2		
	comp=Z,12nm,1.1s							
ABTA	**Abfaltersbach**	**76.22**	**9**	*i* P	**P**	18 41 41.3	+0.5	
	comp=Z,4.6nm,1.1s							
ABTA				*i* pP	**pP**	18 41 56.4	+1.9	
	comp=Z,8.8nm,1.0s							
SOKA	**Soboth**	**76.48**	**7**	*i* P	**P**	18 41 42.8	+0.5	
	comp=Z,3.1nm,1.0s							
SOKA				*i* pP	**pP**	18 41 57.8	+1.8	
	comp=Z,12nm,1.3s							
OBKA	**Obir**	**76.61**	**7**	*i* P	**P**	18 41 43.4	+0.4	
	comp=Z,12nm,0.6s							
OBKA				*i* pP	**pP**	18 41 57.6	+0.8	
	comp=Z,24nm,0.7s							
CAF	**Calviac**	**76.77**	**16**	*e*P	**P**	18 41 44.7	+0.8	
CAF				pmax	pmax			
	comp=Z,12nm,1.3s							
MARR	**Marisel-Cluj**	**76.80**	**1**	⇑P	**P**	18 41 44.6	+0.5	
SIRR	**Siria**	**77.18**	**2**	⇑P	**P**	18 41 46.7	+0.6	
GOF	**Gofitskoye**	**77.29**	**347**	*ce*P	**P**	18 41 47.3	+0.5	
LSA	**Lhasa**	**77.30**	**305**	IAmb	IAmb	18 41 49.8		
	comp=Z,13nm,0.9s							
DOPR	**Dopca**	**77.52**	**360**	⇑P	**P**	18 41 49.0	+1.0	
VRI	**Vrincioaia**	**77.61**	**359**	⇑P	**P**	18 41 47.7	-0.8	
VRI	**Vrincioaia**	**77.61**	**359**	⇑P	**P**	18 41 47.7	-0.8	
PLOR	**Plostina**	**77.62**	**359**	⇓P	**P**	18 41 49.7	+1.0	
PLOR	**Plostina**	**77.62**	**359**	⇓P	**P**	18 41 49.7	+1.0	
COVR	**Voineasa-Covas**	**77.63**	**359**	⇑P	**P**	18 41 49.1	+0.4	
SURR	**Surduc**	**77.70**	**2**	⇑P	**P**	18 41 49.6	+0.6	
BZS	**Buzias**	**77.83**	**2**	⇑P	**P**	18 41 50.2	+0.5	
BZS	**Buzias**	**77.83**	**2**	⇑P	**P**	18 41 50.2	+0.5	
RAR	**Rarotonga**	**77.89**	**184**	LR	LR	19 07 59.6		
	comp=Z,40nm,20.0s,baz=290,slow=29							
MLR	**Muntele Rosu**	**77.99**	**359**	⇑P	**P**	18 41 50.3	-0.5	
MLR	**Muntele Rosu**	**77.99**	**359**	⇑P	**P**	18 41 50.3	-0.5	
GZR	**Gura Zlata**	**78.08**	**2**	⇑P	**P**	18 41 51.8	+0.6	
GZR	**Gura Zlata**	**78.08**	**2**	⇑P	**P**	18 41 51.8	+0.6	
ARR	**Arges**	**78.12**	**0**	⇑P	**P**	18 41 52.1	+0.6	
SLVN	**Son La**	**78.18**	**291**	IAmb	IAmb	18 42 07.7		
	comp=Z,15nm,0.8s							
KVAR	**Kislovodsk Arr**	**78.42**	**347**	P	**P**	18 41 55.1	+1.9	
	comp=Z,2.8nm,0.6s,baz=94,slow=16,SNR=3.1							
	comp=Z,2.8nm,0.6s							
KIV	**Kislovodsk**	**78.42**	**347**	P	**P**	18 41 53.1	-0.1	
KIV	**Kislovodsk**	**78.42**	**347**	*e*P	**P**	18 41 53.9	+0.7	
KIV				pmax	pmax			
	comp=Z,20nm,1.1s							
KIV				MLR	MLR			
	comp=Z,52nm,18.0s							
KBZ	**Khabaz**	**78.62**	**347**	*ce*P	**P**	18 41 54.9	+0.8	
KBZ				pmax	pmax			
	comp=Z,14nm,0.9s							
KBZ	**Khabaz**	**78.62**	**347**	P	**P**	18 41 54.8	+0.7	
	comp=Z,10nm,0.8s,baz=339,slow=4.9,SNR=34							
	comp=Z,10nm,0.8s							
SOC	**Sochi**	**79.13**	**349**	*e*P	**P**	18 41 54.4	-2.5	
SOC				*e*		18 44 55.1		
SOC				*e*S	**S**	18 51 48.4	-4.1	
SOC				*e*SS	**SS**	18 57 02.0	+4.3	
SOC				*e*SSS	SSS	19 00 26.3		
SOC				pmax	pmax			
	comp=Z,12nm,0.8s							
ZEI	**Tsey**	**79.41**	**346**	*e*P	**P**	18 41 57.9	-0.9	
ZEI				pmax	pmax			
	comp=Z,5.0nm,1.1s							
BOVS	**Bovan**	**79.81**	**2**	⇑P	**P**	18 42 01.6	+0.9	
ESDC	**Sonseca Array**	**80.77**	**22**	P	**P**	18 42 06.9	+0.9	
	comp=Z,2.6nm,0.9s,baz=341,slow=4.8,SNR=14							
	comp=Z,2.6nm,0.9s							
CRAI	**Chiangrai**	**80.90**	**293**	IAmb	IAmb	18 42 22.1		
	comp=Z,10.0nm,0.8s							
NIL	**Nilore**	**80.98**	**321**	P	**P**	18 42 07.3	+0.2	
NIL	**Nilore**	**80.98**	**321**	P	**P**	18 42 07.3	+0.2	
NIL				pmax	pmax			
	comp=Z,25nm,0.9s							
GEYT	**Alibeck**	**81.45**	**334**	P	**P**	18 42 10.0	+0.4	
GEYT	**Alibeck**	**81.45**	**334**	P	**P**	18 42 10.2	+0.6	
	comp=Z,6.5nm,0.8s,baz=352,slow=4.5,SNR=16							
GEYT				LR	LR	19 24 00.6		
	comp=Z,74nm,19.8s,baz=7.0,slow=40							
	comp=Z,6.5nm,0.8s							
GYA0B	**ALIBECK ARRAY**	**81.45**	**334**	IAmb	IAmb	18 42 25.7		
	comp=Z,21nm,1.4s							
KBL	**Kabul**	**81.56**	**324**	P	**P**	18 42 09.8	-0.7	
KBL				IAmb	IAmb	18 42 24.7		
	comp=Z,9.0nm,0.7s							
KBL	**Kabul**	**81.56**	**324**	P	**P**	18 42 09.8	-0.7	
KBL				pmax	pmax			
	comp=Z,9.0nm,0.7s							
GNI	**Garni**	**81.89**	**345**	*ce*P	**P**	18 42 12.7	+0.7	
GNI				pmax	pmax			
	comp=Z,9.0nm,1.3s							
UBPT	**Khong Chiam**	**82.40**	**286**	P	**P**	18 42 15.0	+0.2	
CHTO	**Chiang Mai**	**82.81**	**293**		**P**	18 42 16.7	-0.2	
CHTO				IAmb	IAmb	18 42 31.6		
	comp=Z,8.4nm,1.2s							
CHTO	**Chiang Mai**	**82.81**	**293**	P	**P**	18 42 16.7	-0.2	
CHTO				pmax	pmax			
	comp=Z,8.0nm,1.2s							
CMAR	**Chiang Mai Arr**	**83.11**	**293**	P	**P**	18 42 18.5	0.0	
	comp=Z,1.9nm,0.3s,baz=9.2,slow=4.7,SNR=9.4							
CMAR				LR	LR	19 24 28.6		
	comp=Z,16nm,18.5s,baz=315,slow=39							
	comp=Z,1.9nm,0.3s							
BR131	**Keskin Array S**	**83.47**	**353**		**pP**	18 42 34.5	+0.4	
BR131				IAmb	IAmb	18 42 35.6		
	comp=Z,5.0nm,0.8s							
BR131	**Keskin Array S**	**83.47**	**353**	*i* P	**P**	18 42 20.5	+0.3	
BRTR	**Keskin Array B**	**83.47**	**353**	P	**P**	18 42 20.7	+0.5	
	comp=Z,3.7nm,0.9s,baz=36,slow=3.2,SNR=14							
	comp=Z,3.7nm,0.9s							
ARPR	**Arapgir-MALATY**	**83.71**	**350**		**pP**	18 42 36.7	+1.4	
ARPR				IAmb	IAmb	18 42 45.1		
	comp=Z,26nm,1.6s							
RPN	**Rapa Nui**	**92.17**	**140**	LR	LR	19 14 57.8		
	comp=Z,31nm,19.5s,baz=168,slow=29							
MDP	**Montagnes des**	**92.54**	**77**	LR	LR	19 24 04.3		
	comp=Z,38nm,20.9s,baz=116,slow=35							
NNA	**Nana**	**93.63**	**106**	LR	LR	19 22 52.1		
	comp=Z,27nm,18.2s,baz=342,slow=34							
RAYN	**Ar Rayn**	**98.04**	**341**	P	**P**	18 43 29.0	0.0	
RAYN	**Ar Rayn**	**98.04**	**341**	P	**P**	18 43 29.0	0.0	
RAYN				pmax	pmax			
	comp=Z,8.0nm,1.2s							
ASAR	**Alice Springs**	**99.77**	**242**	P	**Pdif**	18 43 36.6	+0.1	
	comp=Z,0.2nm,0.8s,baz=34,slow=5.6,SNR=1.1							
	comp=Z,0.2nm,0.8s							
QSPA	**South Pole Qui**	**146.67**	**180**	PKPbc	**PKPbc**	18 49 32.9	+0.2	
	comp=Z,34nm,1.1s,baz=352,slow=0.4,SNR=76							
BOSA	**Boshof**	**151.74**	**359**	PKIKP	**PKiKP**	18 49 47.0	-0.2	
BOSA	**Boshof**	**151.74**	**359**	PKPbc	**PKiKP**	18 49 47.0	-0.2	
	comp=Z,3.0nm,0.9s,baz=330,slow=3.7,SNR=3.8							

ATH 19 18:39:13.6,38°.55N×20°.10E,h31km±3km,ML1.9/6, Manual Solution by S.Liakopoulos This location: 2020/05/16 17:02:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.37**	**104**	P	Pb	18 39 22.2	0.0
FSK				S	Sb	18 39 28.1	+0.1
DMLN	**Damoulianata-K**	**0.38**	**146**	P	Pb	18 39 22.5	+0.2
DMLN				S	Sb	18 39 28.4	+0.2
KEF4	**Livadi, Kephal**	**0.39**	**139**	P	Pn	18 39 22.7	-0.3
KEF4				S	Sb	18 39 28.5	+0.2
DRAG	**Dragano-Lefkad**	**0.39**	**71**	P	Pb	18 39 22.7	+0.2
DRAG				S	Sb	18 39 28.2	-0.3
VAS2	**Vassiliki, Lef**	**0.41**	**79**	P	Pb	18 39 22.7	+0.1
VAS2				S	Sb	18 39 29.1	+0.4
EVGI	**Lefkada island**	**0.44**	**81**	P	Pb	18 39 23.3	+0.1
EVGI				S	Sb	18 39 30.0	+0.3
LKD2	**Lefkada island**	**0.49**	**62**	P	Pb	18 39 24.2	+0.2
LKD2				S	Sb	18 39 31.1	-0.1
NYDR	**Nydri-Lefkada**	**0.49**	**71**	P	Pb	18 39 23.9	-0.1
NYDR				S	Sb	18 39 31.1	0.0
TSLK	**Tsoukalades, L**	**0.51**	**58**	P	Pn	18 39 24.7	-0.1
TSLK				S	Sn	18 39 32.1	-0.4
SMHA	**Samh**	**0.53**	**125**	P	Pb	18 39 24.5	+0.1
VLS	**Valsamata**	**0.54**	**134**	P	Pb	18 39 24.8	+0.1
VLS				S	Sb	18 39 32.6	+0.3
PSDA	**Pessada-Kefalo**	**0.58**	**139**	P	Pn	18 39 26.4	+0.7
PSDA				S	Sn	18 39 33.8	-0.3

*IDC **19** 18:50:57.9±0.9,34°.82N×86°.68E,h0km,mb3.5/8, mbtmp3.6/14,ML3.3/5,MS3.1/4,Error ellipse: s-maj=33.8km s-min=16.2km az=55.0*

ISC 19 18:50:59.7±0.8,34°.9N±0°.1×87°.0E±0°.1,h10km,n17, σ1s30/15,mb3.6/9,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.36**	**345**	Pn	**Pn**	**18 53 55.9**	**+0.3**
	0.3nm,0.3s,baz=158,slow=10,SNR=49						
	4.5nm,0.9s						
AAK	**Ala-Archa**	**12.38**	**312**	Pn	**Pn**	**18 53 56.8**	**+0.7**
	0.1nm,0.3s,baz=119,slow=19,SNR=1.7						
AAK				LR	LR	18 58 27.0	

	comp=Z,36nm,21.1s,baz=171,slow=36							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**16.83**	**341**	Pn	**Pn**	**18 54 55.4**	**+0.1**	
	0.1nm,0.3s,baz=157,slow=11,SNR=2.9							
	1.9nm,0.2s							
ZALV	**Zalesovo Beam**	**19.07**	**356**	P	**Pn**	**18 55 22.9**	**+0.1**	
	0.1nm,0.3s,baz=179,slow=12,SNR=13							
	3.9nm,1.1s							
SONM	**Songino Array**	**19.40**	**42**	P	**Pn**	**18 55 28.5**	**+1.4**	
	1.1nm,1.0s,baz=231,slow=13,SNR=8.1							
CMAR	**Chiang Mai Arr**	**19.57**	**144**	P	**Pn**	**18 55 29.2**	**0.0**	
	0.2nm,0.3s,baz=327,slow=11,SNR=5.9							
CMAR				LR	LR	19 03 16.2		
	comp=Z,51nm,21.9s,baz=330,slow=38							
	0.2nm,0.3s							
BVAR	**Borovoye Array**	**21.56**	**332**	P	**P**	**18 55 49.2**	**0.0**	
	0.3nm,0.5s,baz=137,slow=9.3,SNR=0.8							
	0.3nm,0.5s							
GEYT	**Alibeck**	**23.35**	**286**	P	**P**	**18 56 11.4**	**+3.2**	
	0.8nm,0.7s,baz=90,slow=8.6,SNR=1.9							
PALK	**Pallekele**	**28.12**	**193**	LR	LR	19 08 10.1		
	comp=Z,49nm,19.3s,baz=142,slow=37							
FINES	**FINESS Array B**	**46.20**	**324**	P	**P**	**18 59 23.8**	**-0.6**	
	0.8nm,0.7s,baz=80,slow=7.6,SNR=2.2							
	0.8nm,0.7s							
NOA	**NORSAR Array B**	**53.38**	**324**	P	**P**	**19 00 17.2**	**-2.0**	
	0.7nm,0.8s,baz=83,slow=7.3,SNR=2.3							
	0.7nm,0.8s							
GERES	**GERESS Array B**	**54.24**	**309**	P	**P**	**19 00 24.3**	**-1.4**	
	0.2nm,0.4s,baz=135,slow=11,SNR=4.6							
	0.2nm,0.4s							
MBAR	**Mbarara**	**63.19**	**249**	LR	LR	19 30 29.4		
	comp=Z,43nm,18.8s,baz=286,slow=38							
WRA	**Warramunga Arr**	**70.73**	**133**	P	**P**	**19 02 16.7**	**+0.5**	
	0.5nm,0.7s,baz=326,slow=6.2,SNR=5.3							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**73.34**	**136**	P	**P**	**19 02 31.9**	**+0.1**	
	0.8nm,0.8s,baz=316,slow=5.3,SNR=7.7							
	0.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.75**	**278**	P	**P**	**19 03 02.1**	**-0.8**	
	0.3nm,0.5s,baz=40,slow=5.4,SNR=2.3							
	0.3nm,0.5s							
YKA	**Yellowknife Ar**	**81.37**	**10**	P	**P**	**19 03 15.7**	**-0.5**	
	0.2nm,0.6s,baz=336,slow=5.3,SNR=3.3							
	0.2nm,0.6s							

*IDC **19** 18:53:46.7±1.3,5°.11N×76°.97W,h0km,mb3.7/2, mbtmp3.7/4,ML2.3/2,Error ellipse: s-maj=33.1km s-min=31.2km az=65.0*

*RSNC **19** 18:53:59.8±1.8,5°.13N×76°.21W,h93km±6km,ML3.4, Mw3.8*

ISC 19 18:53:58.6±0.9,5°.13N±0°.02×76°.22W±0°.03,h97km±6km, n39,σ1s24/73,3D,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLMC	**San Jos del P**	**0.23**	**195**	*e*P	**Pn**	**18 54 12.9**	**+0.2**
PLMC				*e*S	Sn	18 54 24.3	+1.1
CBOC	**Ciudad Bolivar**	**0.76**	**16**	*e*P	**Pn**	**18 54 16.4**	**-0.2**
CBOC				*e*S	Sn	18 54 30.0	+0.1
CBOC				*i*		18 54 38.1	
	comp=Z,626nm,0.5s						
GUY2C	**Guyana, Caldas**	**0.86**	**84**	⇓*i*P	**Pn**	**18 54 18.0**	**+0.2**
GUY2C				*e*S	Sn	18 54 31.2	-1.0
GUY2C				*i*		18 54 34.2	
	comp=Z,776nm,0.6s						
ANIL	**Santa Ana**	**1.03**	**128**	*e*P	**Pn**	**18 54 19.5**	**-0.1**
ANIL				*e*S	Sn	18 54 35.7	+0.4
ANIL				*i*		18 54 40.8	
	comp=Z,2μm,0.4s						
PIZC	**Pizarro, Choco**	**1.15**	**262**	*e*P	**Pn**	**18 54 21.8**	**+1.3**
PIZC				*e*S	Sn	18 54 38.9	+2.0
PIZC				*i*		18 54 55.3	
	comp=Z,540nm,0.5s						
YOTC	**Yotoco, Valle**	**1.15**	**186**	*e*P	**Pn**	**18 54 20.7**	**0.0**
YOTC				*e*S	Sn	18 54 36.4	-0.8
YOTC				*i*		18 54 39.4	
	comp=Z,391nm,0.3s						
HELC	**Santa Helena**	**1.26**	**33**	⇓*i*P	**Pn**	**18 54 21.9**	**-0.2**
HELC				*e*S	Sn	18 54 39.8	-0.1
HELC				*i*		18 54 41.4	
	comp=Z,272nm,0.4s						
NORC	**Norcasia**	**1.41**	**72**	*e*P	**Pn**	**18 54 24.3**	**+0.6**
NORC				*e*S	Sn	18 54 42.4	-0.3
ORTC	**Ortega, Tolima**	**1.56**	**141**	*e*P	**Pn**	**18 54 25.9**	**+0.4**
ORTC				*e*S	Sn	18 54 45.9	0.0
ORTC				*i*		18 54 48.3	
	comp=Z,549nm,0.4s						
MALC	**Bahia Malaga**	**1.57**	**225**	*e*P	**Pn**	**18 54 27.2**	**+1.6**
MALC				*e*S	Sn	18 54 48.5	+2.4
MALC				*i*		18 55 00.9	
	comp=Z,252nm,0.4s						
SOLC	**Bahia Solano**	**1.60**	**313**	*e*P	**Pn**	**18 54 27.1**	**+1.0**
SOLC				*e*S	Sn	18 54 47.2	+0

GCUF				*e*S	**Sn**	18 55 44.0	-1.3	
GCUF				*i*		18 55 54.2		
	comp=Z,19nm,0.4s							
PAMC	**Pamplona, Colo**	**4.13**	**58**	*e*P	**Pn**	18 55 00.9	+1.0	
PAMC				*e*S	**Sn**	18 55 46.6	-0.9	
PAMC				*i*		18 55 52.4		
	comp=Z,20nm,0.5s							
OCAC	**Ocana**	**4.22**	**43**	*e*P	**Pn**	18 55 01.4	+0.5	
OCAC				*e*S	**Sn**	18 55 49.7	+0.4	
OCAC				*i*		18 55 58.2		
	comp=Z,68nm,0.4s							
AZU	**Azuero**	**4.82**	**303**	*e*P	**Pn**	18 55 09.5	+0.7	
AZU				*e*S	**Sn**	18 56 02.9	-0.5	
AZU				*i*		18 56 05.9		
	comp=Z,84nm,0.3s							
PTLC	**Puerto Leguiza**	**5.13**	**164**	*e*P	Pn	18 55 18.3	+5.2	
PTLC				*i*		18 56 48.1		
	comp=Z,24nm,0.4s							
OTAV	**Otavalo**	**5.35**	**205**	*e*P	**Pn**	18 55 17.5	+1.0	
OTAV				*e*S	**Sn**	18 56 17.8	+0.7	
SDV	**Santo Domingo**	**6.68**	**56**	Pn	**Pn**	18 55 34.6	+0.2	
	comp=Z,0.9nm,0.3s,baz=202,slow=19,SNR=2.1							
SDV				Sn	**Sn**	18 56 45.9	-3.3	
	comp=Z,2.1nm,0.3s,baz=34,slow=19,SNR=6.5							
	comp=Z,2.5nm,0.3s							
PLCA	**Paso Flores**	**45.94**	**174**	P	**P**	19 02 11.8	-0.1	
	comp=Z,0.9nm,0.5s,baz=346,slow=9.1,SNR=4.7							
	comp=Z,0.9nm,0.5s							
YKA	**Yellowknife Ar**	**63.82**	**341**	P	**P**	19 04 19.4	-1.0	
	comp=Z,0.3nm,0.7s,baz=137,slow=6.6,SNR=6.5							
	comp=Z,0.3nm,0.7s							
ASAR	**Alice Springs**	**145.63**	**235**	PKPbc	**PKPdf**	19 13 24.9	-1.6	
	comp=Z,0.3nm,0.5s,baz=129,slow=4.2,SNR=5.5							

IDC 19 19:13:33.1±7.7, 18°52S×176°96W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=336.0km s-min=37.7km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.88**	**260**	P	P	19 21 57.4	-0.3
	0.1nm,0.3s,baz=96,slow=7.7,SNR=4.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**45.96**	**255**	P	P	19 21 58.4	0.0
	0.7nm,0.6s,baz=90,slow=8.6,SNR=17						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**86.17**	**12**	P	P	19 26 15.8	0.0
	0.2nm,0.4s,baz=216,slow=5.1,SNR=6.0						
	0.2nm,0.4s						

*ISN **19** 19:20:44.9±0.8, 36°.20N×44°.95E, h8km±8km, ML4.1*
*TEH **19** 19:20:44.3, 36°.20N×44°.97E, h6km±72km, ML4.5*
*MOS **19** 19:20:44.1±1.5, 35°.94N×45°.03E, h14km, mb4.4/22, Error ellipse: s-maj=7.2km s-min=4.1km az=88.4*
*IDC **19** 19:20:44.1±0.6, 36°.07N×45°.00E, h0km, mb3.9/21, mbtmp3.9/32, ML3.5/11, MS3.2/15, Error ellipse: s-maj=13.3km s-min=11.2km az=157.0*
*NEIC **19** 19:20:45.3±1.7, 36°.00N±0°.05×44°.86E±0°.03, h10km±1km, mb4.5/59, Error ellipse: s-maj=8.3km s-min=2.9km az=161.0*
*AFAD **19** 19:20:47.0±0.0, 36°.25N×44°.88E, h23km±24km, MW4.2*

ISC 19 19:20:45.5±1.2, 36°.05N±0°.02×45°.08E±0°.03, h8km±7km, n327, σ2ϑ37/356, mb4.3/70, MS3.2/7, 7C-5D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDS1	**Sardasht. Az.**	**0.35**	**73**	Pg	**Pb**	19 20 53.8	-0.2
MAHB	**Mahabad**	**0.88**	**35**	Pg	**Pg**	19 21 01.0	-1.4
MAHB				Sg	**Sg**	19 21 12.9	-1.0
IKRK	**Kirkuk**	**0.88**	**223**	*e*Pg	**Pb**	19 21 03.0	0.0
IKRK				*e*Sg	**Sb**	19 21 16.0	+1.1
NGD1	**Naghade .Az. G**	**0.94**	**17**	Pg	**Pg**	19 21 01.8	-1.7
KSBB	**Baniby**	**1.13**	**153**	Pg	**Pn**	19 21 08.2	+0.6
KGS1	**Ghasr-e-Shirin**	**1.60**	**165**	Pg	**Pg**	19 21 18.2	+2.1
YOVA	**Hakkari_Yksek**	**1.66**	**338**	P	**Pn**	19 21 14.8	-0.3
YOVA				S	**Sn**	19 21 35.8	-0.9
YOVA				*i* AML	AML	19 21 39.0	
	comp=N,3μm,0.7s						
YOVA				*i* AML	AML	19 21 39.0	
	comp=E,2μm,0.6s						
YOVA	**Hakkari_Yksek**	**1.66**	**338**	Pg	**Pn**	19 21 14.0	-1.1
CUKT	**Cukurca**	**1.68**	**316**	P	**Pn**	19 21 14.5	-0.8
CUKT	**Cukurca**	**1.68**	**316**	P	**Pn**	19 21 14.2	-1.0
CUKT				S	**Sn**	19 21 36.3	-0.7
CUKT				*i* AML	AML	19 21 40.0	
	comp=E,9μm,0.7s						
CUKT				*i* AML	AML	19 21 42.0	
	comp=N,4μm,0.9s						
CUKT	**Cukurca**	**1.68**	**316**	Pg	**Pn**	19 21 14.1	-1.2
IDHR	**Dehrash**	**1.72**	**141**	Pn	**Pg**	19 21 19.7	+1.2
IAZR	**Azarshahr**	**1.78**	**24**	Pg	**Pn**	19 21 17.0	+0.2
HAKT	**HAKKARI**	**1.86**	**324**	P	**Pn**	19 21 18.1	+0.2
HAKT				S	**Sn**	19 21 39.9	-1.8
HAKT				*i* AML	AML	19 21 44.0	
	comp=N,5μm,0.5s						
HAKT				*i* AML	AML	19 21 45.0	
	comp=E,3μm,0.4s						
HAKT	**HAKKARI**	**1.86**	**324**	Pg	**Pn**	19 21 17.0	-0.9
ILIN	**Lien**	**1.91**	**126**	Pn	**Pg**	19 21 23.2	+1.1
IGHG	**Ghaleghazi**	**2.11**	**144**	Pn	**Pg**	19 21 25.9	0.0
IHSH	**Hashtrud**	**2.16**	**54**	Pn	**Pb**	19 21 24.1	-0.9
ISHB	**Shabestar**	**2.27**	**11**	Pn	**Pn**	19 21 23.7	+0.2
ITBZ	**Tabriz**	**2.34**	**21**	Pn	**Pn**	19 21 24.6	+0.2
KCHF	**Cheshme Sefid,**	**2.39**	**137**	Pn	**Pb**	19 21 29.9	+1.0
ILBA	**Ilam Banvizeh**	**2.59**	**159**	Pn	**Pb**	19 21 32.1	-0.1
IMRD	**Marand**	**2.71**	**10**	Pn	**Pn**	19 21 30.3	+0.9
ISRB	**Sarab**	**2.73**	**49**	Pn	**Pb**	19 21 32.2	-2.5
OZAP	**Van, Ozalp-Mer**	**2.75**	**342**	P	**Pb**	19 21 33.3	-1.6
IBZA	**Bozab**	**2.77**	**124**	Pn	**Pb**	19 21 34.7	-0.7
GEVA	**Gevas**	**2.77**	**325**	Pn	**Pn**	19 21 30.6	+0.3
GEVA	**Gevas**	**2.77**	**325**	P	**Pn**	19 21 30.8	+0.5
GEVA	**Gevas**	**2.77**	**325**	Pn	**Pn**	19 21 30.6	+0.3
PERV	**Siirt/Pervari-**	**2.77**	**314**	P	**Pn**	19 21 30.5	+0.2
TVAN	**Van**	**2.81**	**332**	P	**Pn**	19 21 31.9	+1.0
AKDM	**Akdamar-Van**	**2.82**	**324**	P	**Pn**	19 21 32.1	+1.1
BHD	**Baghdad**	**2.83**	**192**	*e*Pn	**Pb**	19 21 34.0	-2.2
BHD				*e*Sn	**Sb**	19 22 10.0	-1.0
BHD				AML	AML	19 22 34.7	
	comp=E,1μm,0.4s						
VANB	**Van**	**2.88**	**333**	P	**Pn**	19 21 31.7	0.0
IBDR	**Badra**	**3.02**	**166**	*e*Pn	**Pb**	19 21 37.0	-2.4
IBDR				*e*Sn	**Sb**	19 22 16.0	-0.4
IBDR				AML	AML	19 22 35.1	
	comp=E,632nm,0.6s						
IBDR				AML	AML	19 22 49.4	
	comp=N,686nm,0.8s						
NAX	**Nakhchivan**	**3.14**	**6**	P	**Pn**	19 21 36.5	+1.2
VMUR	**Van-Muradiye**	**3.17**	**338**	P	**Pb**	19 21 39.1	-3.0
MIDY	**Mardin/Midyat-**	**3.25**	**296**	P	**Pn**	19 21 38.3	+1.5
MAKU	**Maku**	**3.31**	**355**	Pn	**Pn**	19 21 38.1	+0.3
ADCV	**BITLIS_Adilcev**	**3.33**	**326**	P	**Pn**	19 21 38.0	0.0
BLIS	**Bitlis-Merkez**	**3.34**	**316**	P	**Pb**	19 21 43.3	-1.8
IDOB	**Doab**	**3.40**	**131**	Pn	**Pb**	19 21 44.0	-2.2
GURO	**Guroymak-BITLI**	**3.48**	**317**	P	**Pn**	19 21 39.8	-0.3
GURO	**Guroymak-BITLI**	**3.48**	**317**	Pn	**Pn**	19 21 39.7	-0.3
GURO	**Guroymak-BITLI**	**3.48**	**317**	Pn	**Pn**	19 21 39.7	-0.3
GRMI	**Germi**	**3.55**	**38**	Pn	**Pn**	19 21 42.6	+1.6
BTMN	**Batman**	**3.56**	**302**	P	**Pb**	19 21 48.0	-0.8
MARD	**Mardin**	**3.68**	**291**	Pn	**Pn**	19 21 41.0	-1.7
SVAN	**Silvan-Diyarba**	**3.74**	**305**	P	**Pn**	19 21 43.1	-0.4
SVAN	**Silvan-Diyarba**	**3.74**	**305**	P	**Pn**	19 21 43.2	-0.3
DORK	**Agr/Tutak/Do**	**3.80**	**332**	P	**Pn**	19 21 43.3	-1.1
AGRB	**Hanur-Agry**	**3.89**	**336**	P	**Pn**	19 21 47.9	+2.2
MUSM	**Mu-Merkez**	**3.90**	**314**	P	**Pn**	19 21 44.1	-1.6
MAZI	**Mazidag**	**3.98**	**292**	P	**Pn**	19 21 45.3	-1.5
TASB	**TASBURUN-IGDIR**	**3.98**	**351**	P	**Pb**	19 21 52.2	-3.7
IRAZ	**Razeghan**	**4.00**	**98**	Pn	**Pn**	19 21 51.6	+4.4
GNI	**Garni**	**4.10**	**356**	Pn	**Pn**	19 21 50.6	+2.0
GNI	**Garni**	**4.10**	**356**	Pn	**Pn**	19 21 52.3	+3.7
	comp=N,1.7nm,0.3s,baz=168,slow=4.9,SNR=7.7						
GNI				Lg	Lg	19 22 52.2	
	baz=233,slow=20						
GNI				LR	LR	19 23 47.0	
	comp=N,247nm,20.9s,baz=120,slow=45						
	comp=N,11nm,0.6s						
GNI	**Garni**	**4.10**	**356**	P	**Pb**	19 22 00.2	+2.2
VRTB	**Varto-Mus**	**4.23**	**318**	P	**Pb**	19 21 58.9	-1.3
EATA	**Eleskirt**	**4.32**	**333**	P	**Pb**	19 21 58.7	-3.1
DYBB	**Diyarbakir**	**4.38**	**297**	P	**Pn**	19 21 51.3	-1.1
DIYA	**Diyarbakir**	**4.39**	**297**	P	**Pb**	19 22 04.3	+1.5
RAFI	**Al-Rafai**	**4.40**	**168**	*e*Pn	**Pn**	19 21 56.5	+4.0
RAFI				*e*Sn	**Sn**	19 22 48.0	+4.1
HANI	**Diyarbakir_Han**	**4.42**	**304**	P	**Pb**	19 22 03.4	+0.1
KARO	**Karliova-Bingo**	**4.56**	**317**	P	**Pn**	19 21 55.3	+0.4
BNGB	**Bingl**	**4.56**	**311**	P	**Pn**	19 21 55.1	+0.2
KOPR	**Koprukoy-ERZUR**	**4.69**	**328**	P	**Pn**	19 21 58.6	+2.0
GANJ	**Ganja**	**4.69**	**12**	P	**Pn**	19 21 56.6	0.0
HOMI	**Horasan**	**4.71**	**329**	P	**Pb**	19 22 08.1	-0.3
ECAT	**Cat-ERZURUM**	**4.81**	**319**	P	**Pb**	19 22 06.5	-3.7
KARS	**Kars**	**4.83**	**342**	P	**Pn**	19 22 02.7	+4.1
KARS	**Kars**	**4.83**	**342**	Pn	**Pn**	19 22 01.1	+2.5
KARS	**Kars**	**4.83**	**342**	P	**Pn**	19 22 01.1	+2.5
KLST	**Kelardasht - M**	**4.86**	**83**	Pn	**Pn**	19 22 02.8	+3.7
MNGR	**Mingechevir, A**	**4.97**	**18**	P	**Pn**	19 21 59.1	-1.3
SENK	**Senkaya-Erzuru**	**4.99**	**335**	P	**Pn**	19 22 04.1	+3.3
IQOM	**Qom**	**5.04**	**102**	Pn	**Pn**	19 22 05.1	+3.5
MZPU	**Pul - Mazandar**	**5.26**	**84**	Pn	**Pn**	19 22 08.6	+4.0
SURC	**SANLIURFA_SURC**	**5.27**	**281**	P	Pn	19 21 58.9	-5.7
PTK	**Pertek**	**5.34**	**304**	P	**Pn**	19 22 04.3	-1.3
KOPT	**Kop Dagi**	**5.36**	**319**	Pn	**Pn**	19 22 06.6	+0.6
SEKA	**Sheki**	**5.41**	**17**	P	**Pn**	19 22 05.6	-0.9
AKH	**Akhalkalaki**	**5.49**	**347**	Pn	**Pn**	19 22 09.8	+2.0
AKH	**Akhalkalaki**	**5.49**	**347**	P	**Pn**	19 22 09.8	+2.0
IDMV	**Damavand**	**5.67**	**93**	Pn	**Pn**	19 22 13.4	+3.1
QAMS	**Qamsar**	**5.68**	**112**	Pn	**Pn**	19 22 15.0	+4.6
ZKTA	**Zakatala**	**5.71**	**12**	P	**Pn**	19 22 10.4	-0.1
MAYA	**Malatya/Merkez**	**5.78**	**295**	P	**Pn**	19 22 11.2	-0.3
JHBN	**Jahan bin**	**6.00**	**128**	Pn	**Pn**	19 22 19.4	+4.6
ISFB	**Sefidab**	**6.11**	**104**	Pn	**Pn**	19 22 20.1	+4.0
ARPR	**Arapgir-MALATY**	**6.16**	**302**	Pn	**Pn**	19 22 19.0	+2.2
ZNGN	**Zangian**	**6.19**	**128**	Pn	**Pn**	19 22 22.0	+4.5
IFIH	**Ifrane Kouh**	**6.25**	**91**	Pn	**Pn**	19 22 22.6	+4.4
GAZ	**Gaziantep**	**6.42**	**282**	Pn	**Pn**	19 22 19.9	-0.5
ONI	**Oni**	**6.65**	**350**	Pn	**Pn**	19 22 27.9	+4.4
ONI	**Oni**	**6.65**	**350**	P	**Pn**	19 22 27.9	+4.4
IZEF	**Zefreh**	**6.76**	**116**	Pn	**Pn**	19 22 29.8	+4.5
ZEI	**Tsey**	**6.79**	**353**	*e*P	Pn	19 22 31.0	+5.4
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
IGLO	**Ghaloghah**	**7.09**	**84**	Pn	**Pn**	19 22 34.0	+4.4
IRAM	**Ramesheh**	**7.40**	**123**	Pn	Pn	19 22 39.4	+5.5
KLNJ	**Kolanjah**	**7.41**	**131**	Pn	**Pn**	19 22 38.9	+4.7
ANAR	**Anarak**	**7.68**	**109**	Pn	**Pn**	19 22 41.2	+3.5
ASF	**Jabal al Asfar**	**7.81**	**243**	Pn	**Pn**	19 22 38.8	-0.6
	comp=Z,0.8nm,0.3s,baz=334,slow=11,SNR=3.8						
ASF				Pg	Pb	19 23 06.2	+5.1
	comp=Z,0.6nm,0.3s,baz=153,slow=10,SNR=2.4						
ASF				Lg	Lg	19 24 47.4	
	comp=Z,1.1nm,0.3s,baz=333,slow=20,SNR=5.7						
	comp=Z,1.8nm,0.3s						
KBZ	**Khabaz**	**7.85**	**348**	Pn	**Pn**	19 22 43.5	+3.7
	comp=Z,0.1nm,0.3s,baz=162,slow=9.4,SNR=12						
	comp=Z,1.1nm,0.7s						
BNN	**Bunyan**	**7.86**	**294**	Pn	**Pn**	19 22 37.5	-2.7
KIV	**Kislovodsk**	**8.11**	**348**	Pn	**Pn**	19 22 42.6	-0.9
KIV	**Kislovodsk**	**8.11**	**348**	*e*P	**Pn**	19 22 42.4	-1.1
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,50nm,10.0s						
NATI	**Neve Ativ**	**8.18**	**253**	P	**Pn**	19 22 46.0	+1.5
SHMJ	**Saham**	**8.38**	**249**	P	**Pn**	19 22 47.8	+0.6
MMAI	**Mount Meron Ar**	**8.54**	**252**	Pn	**Pn**	19 22 49.9	+0.5
	comp=Z,1.5nm,0.3s,baz=48,slow=12,SNR=6.8						
MMAI				Lg	Lg	19 25 09.3	
	comp=Z,0.7nm,0.3s,baz=70,slow=26,SNR=2.0						
MMAI				LR	LR	19 26 16.8	
	comp=Z,87nm,18.1s,baz=44,slow=39						
	comp=Z,0.8nm,0.3s						
SOC	**Sochi**	**8.58**	**333**	*e*P	**Pn**	19 22 45.3	-4.6
SOC				*e*SS	**Sn**	19 24 33.8	+7.0
SOC				MLR	MLR		
	comp=Z,115nm,14.0s						
QRNJ	**Al-Qirein**	**8.70**	**248**	P	**Pn**	19 22 53.1	+1.6
GHAJ	**Ghor Haditha**	**9.23**	**242**	Pn	**Pn**	19 22 55.6	-3.2
BRTR	**Keskin Array B**	**9.76**	**296**	Pn	**Pn**	19 23 09.3	+3.2
	comp=Z,0.1nm,0.3s,baz=105,slow=11,SNR=2.8						
BRTR				LR	LR	19 27 12.5	
	comp=Z,156nm,19.1s,baz=188,slow=40						
	comp=Z,0.6nm,0.7s						
BR131	**Keskin Array S**	**9.76**	**296**	Pn	**Pn**	19 23 04.2	-2.0
BR131	**Keskin Array S**	**9.76**	**296**	*i* P	**Pn**	19 23 08.3	+2.1
GEYT	**Alibeck**	**10.60**	**76**	Pn	**Pn**	19 23 18.8	+1.2
GEYT	**Alibeck**	**10.60**	**76**	P	**Pn**	19 23 18.8	+1.2
GEYT	**Alibeck**	**10.60**	**76**	Pn	**Pn**	19 23 18.6	+0.9
	comp=Z,0.1nm,0.3s,baz=275,slow=16,SNR=9.1						
	comp=Z,3.9nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**10.60**	**76**	Pn	**Pn**	19 23 18.6	+1.0
EIL	**Elat**	**10.62**	**236**	Pn	**Pn**	19 23 18.0	0.0
	comp=Z,0.2nm,0.3s,baz=359,slow=14,SNR=1.6						
EIL				Lg	Lg	19 26 11.1	
	comp=Z,0.1nm,0.3s,baz=66,slow=22,SNR=1.8						
EIL				LR	LR	19 27 08.2	
	comp=Z,71nm,21.1s,baz=62,slow=36						
	comp=Z,1.5nm,0.7s						
IEMG	**Emamgholi**	**10.98**	**79**	Pn	**Pn**	19 23 27.7	+4.6
SAKB	**Bahrain**	**11.07**	**154**	P	**Pn**	19 23 25.4	+1.3
SAKB				S	**Sn**	19 25 26.7	-1.4
SHMA	**Al-Shehemyia**	**11.34**	**152**	P	**Pn**	19 23 28.5	+0.7
SHMA				S	**Sn**	19 25 30.6	-4.1
SMRA	**Abu-Samra**	**12.31**	**155**	P	**Pn**	19 23 40.4	-0.6
SMRA				S	**Sn**	19 25 54.9	-3.4
TRNA	**Turayna**	**12.45**	**153**	P	**Pn**	19 23 42.5	-0.5
TRNA				S	**Sn**	19 25 58.8	-3.1
RAYN	**Ar Rayn**	**12.49**	**178**	Pn	**Pn**	19 23 41.3	-2.3
RAYN	**Ar Rayn**	**12.49**	**178**	P	**Pn**	19 23 41.3	-2.3
RAYN	**Ar Rayn**	**12.49**	**178**	P	**Pn**	19 23 41.7	-1.9
RAYN				S	**Sn**	19 25 58.1	-4.9
SLWR	**Sila**	**13.24**	**153**	P	**Pn**	19 23 56.2	+2.5
SLWR				S	**Sn**	19 26 16.3	-4.8
SHME	**Shamm**	**13.75**	**133**	Pn	**Pn**	19 24 00.4	-0.2
SHME	**Shamm**	**13.75**	**133**	P	**Pn**	19 24 01.8	+1.2
SHME				S	**Sn**	19 26 32.2	-1.3
GHWR	**Ruwais**	**13.80**	**149**	P	**Pn**	19 24 02.5	+1.1
GHWR				S	**Sn**	19 26 32.2	-2.7
BANOM	**Banah**	**13.94**	**133**	P	**Pn**	19 24 05.8	+2.5
BANOM				P	**Pn**	19 24 05.8	+2.5
MASF	**Masafi**	**14.28**	**135**	P	**Pn**	19 24 08.7	+0.7
MASF				S	**Sn**	19 26 42.6	-4.0
AJN	**Ajban**	**14.28**	**141**	P	**Pn**	19 24 08.5	+0.5
MSFE	**Esma-Masafi**	**14.29**	**135**	Pn	**Pn**	19 24 07.4	-0.7
NAZ	**Nazwa, Dubai**	**14.30**	**138**	P	**Pn**	19 24 09.8	+1.5
ASUD	**Al Ashush, Dub**	**14.41**	**139**	P	**P**	19 24 15.4	-1.3
ASUD	**Al Ashush, Dub**	**14.41**	**139**	P	**Pn**	19 24 11.1	+1.3
	SNR=12						
ASUD				S	**Sn**	19 26 44.5	-5.3
MDH	**Madha**	**14.41**	**135**	Pn	**Pn**	19 24 08.0	-1.8
MDH	**Madha**	**14.41**	**135**	P	**Pn**	19 24 09.4	-0.4
MDH				S	**Sn**	19 26 44.3	-5.5
MZWR	**Madinat Zayed**	**14.42**	**146**	P	**Pn**	19 24 11.1	+1.2
MZWR				S	**Sn**	19 26 45.0	-5.0
FAQ	**Al Faqa, Dubai**	**14.45**	**138**	Pn	**Pn**	19 24 10.6	+0.2
FAQ	**Al Faqa, Dubai**	**14.45**	**138**	P	**Pn**	19 24 11.0	+0.6
FAQ				S	**Sn**	19 26 45.7	-5.1
UOSS	**Minazif**	**14.63**	**136**	Pn	**Pn**	19 24 12.4	-0.4
UOSS	**Minazif**	**14.63**	**136**	Pn	**Pn**	19 24 11.4	-1.4
UOSS	**Minazif**	**14.63**	**136**	P	**Pn**	19 24 12.4	-0.4
HATD	**Hatta, Dubai**	**14.69**	**137**	Pn	**Pn**	19 24 13.2	-0.3
HATD	**Hatta, Dubai**	**14.69**	**137**	P	**Pn**	19 24 14.1	+0.6
	SNR=11						
ASHO	**Ashiyiah**	**14.76**	**137**	Pn	**Pn**	19 24 14.2	-0.3
ASHO				Sn	Sn	19 26 45.6	-13
ASHO	**Ashiyiah**	**14.76**	**137**	P	**Pn**	19 24 14.8	+0.2
MZR	**Muzera**	**14.91**	**148**	P	**Pn**	19 24 16.1	-0.4
MZR				S	**Sn**	19 26 56.8	-5.1
ALNE	**Al Ain**	**15.10**	**139**	Pn	**Pn**	19 24 18.4	-0.6
ALNE	**Al Ain**	**15.10**	**139**	P	**Pn**	19 24 18.8	-0.2
	SNR=9.2						
VRH	**Novokhopyorsk**	**15.34**	**352**	*e*P	**P**	19 24 25.9	-1.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SOHO	**SOHO**	**15.46**	**137**	Pn	**Pn**	19 24 21.2	-2.6
SOHO	**SOHO**	**15.46**	**137**	P	**Pn**	19 24 24.4	+0.6
SOHO				S	**Sn**	19 27 11.6	-3.5
VSR	**Storozhevoye**	**15.74**	**346**	*e*P	**P**	19 24 29.5	-1.9
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
UMZA	**Um Al Zommool**	**15.92**	**144**	P	**Pn**	19 24 28.1	-1.7
ARQ	**Araqi**	**16.09**	**139**	P	**Pn**	19 24 32.1	+0.1
ARQ				S	**Sn**	19 27 25.5	-5.2
VORR	**Voronezh**	**16.17**	**347**	*e*P	**Pn**	19 24 33.0	+0.1
VORR				pmax	pmax		
	comp=Z,30nm,0.3s						
HOQ	**Hoqain**	**16.32**	**136**	P	**P**	19 24 36.8	-1.2
HOQ				P	**P**	19 24 36.8	-1.2
HOQ				S	**Sn**	19 27 32.2	-4.1
HOQ				S	**Sn**	19 27 32.2	-4.1
BELG	**Belogornoye**	**16.44**	**6**	Pn	**Pn**	19 24 36.1	-0.2
	comp=Z,0.3nm,0.3s,baz=180,slow=1.1,SNR=3.7						
BELG				LR	LR	19 32 23.9	
	comp=Z,68nm,20.4s,baz=76,slow=43						
	comp=Z,12nm,0.9s						
BIDO	**Bidbid**	**16.84**	**134**	P	**P**	19 24 43.8	+0.2
BSY	**Bisya**	**16.93**	**138**	P	**Pn**	19 24 41.9	-0.9
	SNR=12						
BSY				S	**Sn**	19 27 50.3	-0.8
ABKAR	**Akbulak array**	**17.10**	**35**	Pn	**Pn**	19 24 45.1	+0.4
ABKAR	**Akbulak array**	**17.10**	**35**	Pn	**Pn**	19 24 44.8	+0.1
LPSR	**Galich'ya Gora**	**17.11**	**347**	*e*P	**Pn**	19 24 43.0	-1.8
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
SMDO	**Samad**	**17.15**	**135**	P	**Pn**	19 24 44.6	-1.1
	SNR=7.7						
SMDO				P	**Pn**	19 24 44.6	-1.1
	SNR=7.7						
SMDO				S	**Sn**	19 27 51.1	-5.5
SMDO				S	**Sn**	19 27 51.1	-5.5
AKTO	**Aktyubinsk**	**17.16**	**29**	P	**Pn**	19 24 45.8	+0.4
	comp=Z,0.5nm,0.3s,baz=225,slow=8.8,SNR=9.0						
	comp=Z,4.5nm,0.8s						
WSAR	**Wadi Sarin**	**17.35**	**134**	P	**Pn**	19 24 46.9	-1.1
	comp=Z,1.3nm,0.3s,baz=297,slow=11,SNR=16						
WSAR				S	Sn	19 27 50.5	-11
	comp=Z,4.8nm,0.8s,baz=339,slow=23,SNR=2.6						
WSAR				LR	LR	19 32 11.5	
	comp=Z,110nm,21.5s,baz=346,slow=40						
	comp=Z,3.9nm,0.5s						
WSAR	**Wadi Sarin**	**17.35**	**134**	P	**Pn**	19 24 48.0	0.0
WSAR				S	**Sn**	19 27 56.8	-4.4
NGCH	**Negor - Chabah**	**17.42**	**123**	P	**P**	19 24 53.6	+3.5
JMDO	**Jabal Madar**	**17.73**	**137**	P	**P**	19 24 54.6	+1.0
	SNR=7.2						
JMDO				P	**P**	19 24 54.6	+1.0
	SNR=7.2						
WBK	**Wadi Bani Khal**	**18.03**	**134**	P	**P**	19 25 01.0	+4.0
	SNR=5.4						
AKASG	**Malin Array Be**	**18.57**	**327**	*i* P	**Pn**	19 25 04.0	+1.1
AKASG	**Malin Array Be**	**18.57**	**327**	P	**P**	19 25 02.0	-0.7
	comp=Z,0.6nm,0.3s,baz=133,slow=12,SNR=5.1						
AKASG				LR	LR	19 33 26.8	
	comp=Z,59nm,20.0s,baz=150,slow=41						
	comp=Z,0.3nm,0.3s						
AKBB	**Malin Array Si**	**18.57**	**327**	P	**P**	19 24 59.1	-3.6
AKBB	**Malin Array Si**	**18.57**	**327**	*ce*P	**Pn**	19 25 05.2	+2.3
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KIEV	**Kiev**	**18.58**	**327**	P	**P**	19

MORC pmax pmax
comp=Z,4.0nm,1.1s
RONA Rosalia, Austr 24.24 308 *e*P **P 19 26 03.6 +0.8**
comp=Z,9.6nm,1.4s
BRVK Borovoye 24.54 38 P **P 19 26 06.4 +1.1**
BRVK IAmb IAmb 19 26 37.5
comp=Z,5.7nm,1.0s
BRVK Borovoye 24.54 38*ce*P **P 19 26 06.8 +1.5**
BRVK pmax pmax
comp=Z,7.0nm,1.3s
BRVK Borovoye 24.54 38 P **P 19 26 06.5 +1.1**
BVAR Borovoye Array 24.57 38 P **P 19 26 05.8 +0.1**
comp=Z,4.6nm,1.0s,baz=244,slow=7.7,SNR=17
comp=Z,4.6nm,1.0s
CONA Conrad Observa 24.59 308 *e*P **P 19 26 06.6 +0.6**
comp=Z,6.5nm,1.4s
KSH Kashi 24.60 73 P **P 19 26 07.8 +1.6**
KSH sP sP 19 26 15.0 +4.7
KSH pmax pmax
comp=Z,3.0nm,1.4s
VRAC Vranov 24.61 311 *e*P **P 19 26 00.3 -5.8**
NRN Naryn 24.64 68 P **P 19 26 08.0 +1.2**
NRN IAmb IAmb 19 26 12.6
comp=Z,4.1nm,0.9s
NRN Naryn 24.64 68 P **P 19 26 08.0 +1.2**
NRN pmax pmax
comp=Z,4.0nm,0.9s
KRUC Moravsky 24.64 311 *e*P **P 19 26 00.8 -5.5**
SOKA Soboth 24.78 305 *e*P **P 19 26 09.3 +1.6**
comp=Z,9.9nm,1.7s
KLMR Klimovskoe 25.08 354 *e*P **P 19 26 07.3 -2.8**
KLMR pmax pmax
comp=Z,14nm,1.4s
VSU Vasula 25.48 337 *i*P **P 19 26 13.9 +0.2**
BIOA Bad Ischl, Aus 25.96 306 *e*P **P 19 26 18.8 +0.5**
comp=Z,11nm,1.2s
KBA Koelnbreinsper 26.00 305 *e*P **P 19 26 19.5 +0.6**
comp=Z,11nm,0.8s
GERES GERESS Array B 26.24 309 P **P 19 26 20.4 -0.6**
comp=Z,0.7nm,0.6s,baz=102,slow=5.9,SNR=4.2
comp=Z,0.7nm,0.6s
MOTA Moosalm 27.55 305 *i*P **P 19 26 31.8 -1.1**
comp=Z,7.3nm,1.2s
FETA Feichten 27.74 304 *e*P **P 19 26 34.4 -0.1**
comp=Z,5.4nm,1.2s
KURBB Kurchatov Arra 28.07 48 P **P 19 26 39.0 +1.7**
comp=Z,1.9nm,0.7s,baz=258,slow=9.2,SNR=18
KURBB PcP **PcP 19 29 51.2 -0.3**
comp=Z,0.7nm,0.8s,baz=250,slow=2.7,SNR=6.6
comp=Z,1.9nm,0.7s
FINES FINESS Array B 28.11 341 *i*P **P 19 26 36.0 -1.5**
FINES pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 28.11 341 P **P 19 26 36.5 -1.0**
comp=Z,0.9nm,0.7s,baz=145,slow=10,SNR=6.4
FINES LR LR 19 37 31.3
comp=Z,57nm,19.4s,baz=102,slow=36
comp=Z,0.9nm,0.7s
KURK Kurchatov 28.16 48 P **P 19 26 39.1 +1.1**
KURK IAmb IAmb 19 26 42.6
comp=Z,4.6nm,1.1s
KURK Kurchatov 28.16 48 P **P 19 26 39.1 +1.1**
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 28.16 48 P **P 19 26 40.3 +2.3**
KEST Kesra 28.85 280 P **P 19 26 45.4 +1.0**
comp=Z,5.7nm,1.0s,baz=51,slow=6.5,SNR=3.0
comp=Z,5.7nm,1.0s
MK31 Makanchi Array 29.64 57 P **P 19 26 52.7 +1.4**
MK31 Makanchi Array 29.64 57*ce*P **P 19 26 52.7 +1.4**
MKAR Makanchi Array 29.64 57 P **P 19 26 52.7 +1.3**
MKAR Makanchi Array 29.64 57 P **P 19 26 52.9 +1.6**
comp=Z,0.5nm,0.6s,baz=253,slow=6.8,SNR=9.8
comp=Z,0.5nm,0.6s
HFS Hagfors 31.41 330 P **P 19 27 06.0 -0.7**
HFS Hagfors 31.41 330 P **P 19 27 06.0 -0.7**
comp=Z,3.0nm,0.7s,baz=121,slow=11,SNR=10
HFS LR LR 19 42 21.7
comp=Z,70nm,18.5s,baz=204,slow=41
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 32.76 44 P **P 19 27 18.6 -0.1**
ZALV Zalesovo Beam 32.76 44 P **P 19 27 18.9 +0.2**
comp=Z,0.8nm,0.7s,baz=234,slow=9.4,SNR=4.8
ZALV PcP **PcP 19 30 02.2 -1.6**
comp=Z,0.2nm,0.3s,baz=219,slow=1.8,SNR=1.8
comp=Z,0.8nm,0.7s
NOA NORSAR Array B 32.93 330 P **P 19 27 19.2 -0.8**
comp=Z,0.3nm,0.6s,baz=138,slow=7.2,SNR=2.2
NOA LR LR 19 43 17.4
comp=Z,17nm,20.7s,baz=250,slow=41
comp=Z,0.3nm,0.6s
DGZ Jazzator, Alta 33.44 53 *i*P **P 19 27 25.8 +0.9**
DGZ pmax pmax
comp=Z,4.0nm,1.3s
ARCES ARCESS Array B 35.21 348 P **P 19 27 38.7 -1.1**
comp=Z,1.2nm,0.7s,baz=140,slow=9.6,SNR=5.7
ARCES LR LR 19 42 29.0
comp=Z,58nm,21.2s,baz=262,slow=37
comp=Z,1.2nm,0.7s
TAM Tamanrasset 36.65 260 P **P 19 27 51.8 -1.0**
TAM IAmb IAmb 19 27 55.7
comp=Z,5.7nm,0.9s
TAM Tamanrasset 36.65 260 P **P 19 27 51.8 -1.0**
TAM pmax pmax
comp=Z,6.0nm,0.9s
EKA Eskdalemuir Ar 37.88 316 P **P 19 28 01.3 -1.3**
comp=Z,0.5nm,0.5s,baz=107,slow=8.9,SNR=6.6
comp=Z,0.5nm,0.5s
ESDC Sonseca Array 38.50 291 P **P 19 28 07.0 -1.2**
comp=Z,0.9nm,0.8s,baz=64,slow=8.8,SNR=3.9
comp=Z,0.9nm,0.8s
NRIK Noril'sk 40.55 22*ce*P **P 19 28 25.7 +0.9**
NRIK pmax pmax
comp=Z,6.0nm,1.4s
SHL Shillong 41.20 91 P **P 19 28 29.7 -1.2**
SHL IAmb IAmb 19 28 34.6
comp=Z,10.0nm,1.1s
SHL Shillong 41.20 91 P **P 19 28 29.7 -1.2**
SHL pmax pmax
comp=Z,10.0nm,1.1s
MSEY Mahe Island 41.67 164 P **P 19 28 32.4 -2.2**
SPITS Spitsbergen Ar 43.96 352 P **P 19 28 50.9 -1.6**
comp=Z,4.4nm,0.7s,baz=193,slow=12,SNR=1.7
comp=Z,4.4nm,0.7s
TOA0 Torodi Ar. Sit 45.08 251 P **P 19 29 01.9 -0.2**
TORD Torodi Ar. Bea 45.08 251 P **P 19 28 59.0 -3.2**
TORD Torodi Ar. Bea 45.08 251 P **P 19 29 01.3 -0.9**
comp=Z,1.5nm,1.0s,baz=46,slow=9.7,SNR=6.6
comp=Z,1.5nm,1.0s
SONM Songino Array 45.97 55 P **P 19 29 08.9 -0.2**
comp=Z,0.3nm,0.8s,baz=269,slow=8.7,SNR=4.0
comp=Z,0.3nm,0.8s
CHTO Chiang Mai 50.17 95 P **P 19 29 41.0 -0.8**
CHTO IAmb IAmb 19 29 45.6
comp=Z,6.2nm,1.1s
CHTO Chiang Mai 50.17 95 P **P 19 29 41.0 -0.8**
CHTO pmax pmax
comp=Z,6.0nm,1.2s
KMI Kunming 50.19 86 ⇑P **P 19 29 45.4 +3.3**
KMI pmax pmax
comp=Z,4.0nm,1.0s
CMAR Chiang Mai Arr 50.36 95 P **P 19 29 43.1 -0.1**
CMAR Chiang Mai Arr 50.36 95 *i*P **P 19 29 43.9 +0.7**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 50.36 95 P **P 19 29 43.6 +0.4**
comp=Z,2.0nm,0.8s,baz=298,slow=8.5,SNR=16
CMAR LR LR 19 55 38.7
comp=Z,18nm,18.0s,baz=0.0,slow=42
comp=Z,2.0nm,0.8s
CRAI Chiangrai 50.61 93 P **P 19 29 45.2 +0.2**
CRAI IAmb IAmb 19 29 48.7
comp=Z,2.5nm,0.8s
XAN Xi'an 51.46 72 ⇓P **P 19 29 52.4 +1.1**
XAN pmax pmax
comp=Z,9.0nm,1.1s
SLVN Son La 52.92 89 P **P 19 30 03.3 +1.0**
SLVN IAmb IAmb 19 30 07.0
comp=Z,10nm,1.3s
DBIC Dimbokro 54.14 250 P **P 19 30 10.0 -1.3**
comp=Z,1.9nm,0.8s,baz=154,slow=6.7,SNR=3.0
comp=Z,1.9nm,0.8s
TIXI Tiksi 54.30 23*ce*P **P 19 30 14.4 +2.7**
TIXI pmax pmax
comp=Z,8.0nm,2.5s
KSRS Korea Array 64.21 61 P **P 19 31 20.5 -0.3**
comp=Z,0.6nm,0.4s,baz=303,slow=6.7,SNR=3.3
comp=Z,0.6nm,0.4s
SEY Seymchan 65.75 29*ce*P **P 19 31 32.7 +2.3**
SEY pmax pmax
comp=Z,14nm,2.5s
BOSA Boshof 66.97 199 P **P 19 31 39.8 +1.0**
comp=Z,1.9nm,0.7s,baz=14,slow=3.8,SNR=2.5
comp=Z,1.9nm,0.7s
BILL Bilibino 67.36 20 P **P 19 31 41.4 +0.8**
BILL Bilibino 67.36 20 *e*P **P 19 31 42.4 +1.8**
BILL pmax pmax
comp=Z,10.0nm,1.7s
A36M Sachs Harbour 72.04 357 P **P 19 32 08.6 -0.8**
B21K Ikpikpuk River 73.65 7 P **P 19 32 20.0 +1.0**
B21K IAmb IAmb 19 32 20.6
comp=Z,5.2nm,1.1s
C18K Utukok River 73.80 10 P **P 19 32 20.9 +0.9**
D19K Kuna River 74.34 9 P **P 19 32 22.7 -0.4**
D25K Kavik River 74.60 4 P **P 19 32 25.3 +0.7**
D25K IAmb IAmb 19 32 25.9
comp=Z,2.5nm,0.8s
C36M Paulatuk 74.61 356 P **P 19 32 23.8 -0.8**
C36M IAmb IAmb 19 32 27.3
comp=Z,5.2nm,0.8s
E18K Tukpahlearik C 75.02 10 P **P 19 32 27.0 0.0**
E19K Redstone River 75.43 9 P **P 19 32 29.2 -0.2**
E25K Arctic Village 75.84 4 P **P 19 32 31.4 -0.3**
E25K IAmb IAmb 19 32 35.5
comp=Z,4.4nm,1.1s
E29M Blow River 75.85 1 P **P 19 32 31.3 -0.5**
E29M IAmb IAmb 19 32 35.5
comp=Z,6.5nm,1.1s
F21K Alatna River 76.08 7 P **P 19 32 33.2 +0.1**
F21K IAmb IAmb 19 32 38.0
comp=Z,4.7nm,1.1s
G19K Purcell Mounta 76.70 9 P **P 19 32 36.6 -0.1**
G19K IAmb IAmb 19 32 41.2
comp=Z,8.2nm,1.2s
IMAR Indian Mountai 77.25 8 P **P 19 32 39.6 -0.1**
G30M tAoh Zraii Nji 77.29 1 P **P 19 32 39.8 -0.2**
G30M IAmb IAmb 19 32 40.5
comp=Z,6.0nm,1.1s
G31M Satah River 77.35 360 P **P 19 32 39.5 -0.7**
G31M IAmb IAmb 19 32 43.4
comp=Z,5.6nm,0.9s
H21K Melozitna Rive 77.67 7 P **P 19 32 42.0 -0.2**
EPYK Eagle Plains 77.90 1 P **P 19 32 42.4 -1.0**
H29M Whitestone 78.02 1 P **P 19 32 43.5 -0.6**
H29M IAmb IAmb 19 32 44.9
comp=Z,4.1nm,0.9s
MLY Manley 78.49 7 P **P 19 32 46.9 +0.1**
MLY IAmb IAmb 19 32 48.0
comp=Z,9.5nm,1.3s
I28M Miner Creek 78.75 2 P **P 19 32 47.9 -0.3**
MDM Murphy Dome 78.78 6 P **P 19 32 47.5 -0.8**
MDM IAmb IAmb 19 32 49.7
comp=Z,11nm,1.3s
COLA College 78.90 6 P **P 19 32 48.5 -0.3**
COLA College 78.90 6 P **P 19 32 48.5 -0.3**
I30M Mount Dempster 79.05 1 P **P 19 32 49.5 -0.4**
I30M IAmb IAmb 19 32 56.2
comp=Z,5.8nm,1.1s
ILAR Eielson Array 79.07 5 P **P 19 32 49.2 -0.6**
comp=Z,1.2nm,0.9s,baz=326,slow=4.9,SNR=9.7
comp=Z,1.2nm,0.9s
J30M Hart River 79.70 1 P **P 19 32 53.2 -0.2**
J30M IAmb IAmb 19 32 54.1
comp=Z,10nm,1.4s
PKME Peaks-Kenny Pk 79.71 319 P **P 19 32 53.2 -0.4**
CAST Castle Rocks 79.93 8 P **P 19 32 54.9 +0.3**
CAST IAmb IAmb 19 32 55.6
comp=Z,12nm,1.3s
SCRK Sand Creek 80.05 4 P **P 19 32 55.7 +0.4**
SCRK IAmb IAmb 19 32 59.2
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 80.44 351 P **P 19 32 56.2 -1.1**
YKA Yellowknife Ar 80.44 351 P **P 19 32 56.7 -0.6**
comp=Z,3.2nm,1.0s,baz=13,slow=5.7,SNR=17
comp=Z,3.2nm,1.0s
WRGLY Wrigley 80.64 355 P **P 19 32 59.2 +0.9**
WRGLY IAmb IAmb 19 33 02.2
comp=Z,6.7nm,0.9s
BCAR Beaver Creek A 81.07 3 P **P 19 33 00.8 0.0**
KLU Klutina 82.39 5 P **P 19 33 08.1 +0.3**
PDAR Pinedale Array 98.21 341 LR LR 20 20 45.5
comp=Z,46nm,19.1s,baz=34,slow=37
ELIB Princess Elisa 108.78 187 *d*PKiKP **PKiKP 19 39 15.1 +0.9**
ELIB *d*PP **PP 19 39 39.9 -1.5**

WEL 19 19:21:00.3±2.0,36°S±16°×17°8E±°, h12km, M3.6/19, **ML3.8**/19, **MLv3.6**/19, **Error ellipse: s-maj=0.0km s-min=0.0km az=23.2, confirmed, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**1.55**	**199**	P	Pn	19 21 25.2	-2.5
MXZ	**Matakaoa Point**	**1.55**	**165**	P	Pn	19 21 24.9	-2.9
HAZ	**Te Kaha**	**1.69**	**181**	P	Pn	19 21 26.7	-3.0
HAZ				S	Sg	19 22 52.4	+58
WMGZ	**Waiomatatini S**	**1.82**	**165**	P	Pb	19 21 32.7	-0.8
PKGZ	**Pakihiroa**	**1.84**	**174**	P	Pn	19 21 30.3	-1.4
PKGZ				T	T	19 22 58.1	
RUGZ	**Raukumara Rang**	**1.91**	**183**	P	Pn	19 21 30.2	-2.5
PUZ	**Puketiti**	**2.04**	**170**	P	Pn	19 21 35.6	+1.1
TWGZ	**Tauwhareparae**	**2.12**	**176**	P	Pn	19 21 36.3	+0.7
TWGZ				S	Sn	19 22 03.0	+1.2
MWZ	**Matawai**	**2.28**	**186**	P	Pn	19 21 36.9	-1.0
KMRZ	**Kaimai**	**2.33**	**220**	P	Pn	19 21 38.2	-0.3
TKGZ	**Te Karaka**	**2.38**	**179**	P	Pn	19 21 40.5	+1.4
CNGZ	**Carnagh Statio**	**2.44**	**173**	P	Pn	19 21 41.1	+1.1
TOZ	**Tahuroa Road**	**2.50**	**227**	P	Pn	19 21 40.6	-0.1
EPAZ	**Eden Park BICE**	**2.61**	**251**	S	Sn	19 22 13.8	0.0
AWAZ	**Awhitu Peninsu**	**2.74**	**248**	P	Pn	19 21 44.0	-0.1
MTHZ	**Maungataniwha**	**2.90**	**195**	P	Pn	19 21 47.2	+0.9
TLZ	**Tolley Road**	**2.91**	**218**	P	Pn	19 21 45.0	-1.4
HIZ	**Hauiti**	**3.40**	**223**	P	Pn	19 21 51.1	-2.0
NTVZ	**North Tongarir**	**3.48**	**209**	P	Pn	19 21 56.2	+1.8
TMVZ	**Te Maari**	**3.48**	**208**	P	Pn	19 21 56.0	+1.6
ETVZ	**East Tongariro**	**3.50**	**208**	P	Pn	19 21 56.0	+1.4
NNVZ	**North Ngauruho**	**3.53**	**209**	P	Pn	19 21 58.2	+3.1
KWHZ	**Kaweka Forest**	**3.54**	**198**	P	Pn	19 21 53.5	-1.6
OTVZ	**Oturere**	**3.54**	**208**	P	Pn	19 21 55.7	+0.5
BHHZ	**Black Hill Sta**	**3.70**	**202**	P	Pn	19 21 57.3	0.0
MHEZ	**Mangahewa**	**4.09**	**222**	P	Pn	19 22 03.6	+0.9

*WEL **19** 19:27:59.8±1.0,36°S±8°×17°7E±°, h12km, M3.9/19, ML4.1/19, MLv3.9/19, Error ellipse: s-maj=0.0km s-min=0.0km az=23.6, confirmed*
*IDC **19** 19:28:01.3±1.3,36°.20S×177°.65E, h0km, mb4.1/5, mbtmp4.0/6, ML3.5/1, MS3.5/5, Error ellipse: s-maj=40.7km s-min=23.6km az=51.0*
ISC 19 19:28:02.0±2.0, 36°30S±0°.06×177°28E±0°.04, h1km±11km, n71, σ1s59/70, mb3.9/5, MS3.4/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**1.22**	**183**	P	**Pb**	**19 28 24.6**	**-1.3**
GRZ	**Great Barrier**	**1.47**	**272**	P	**Pn**	**19 28 28.5**	**-1.2**
GRZ				S	**Sn**	**19 28 47.8**	**-1.9**
MXZ	**Matakaoa Point**	**1.50**	**147**	P	**Pn**	**19 28 27.3**	**-2.9**
MXZ				S	**Sg**	**19 28 52.2**	**+1.9**
HAZ	**Te Kaha**	**1.50**	**165**	P	**Pn**	**19 28 27.5**	**-2.7**
RUGZ	**Raukumara Rang**	**1.69**	**169**	P	**Pn**	**19 28 31.0**	**-1.8**
RUGZ				S	**Sg**	**19 28 58.8**	**+2.5**
PKGZ	**Pakihiroa**	**1.70**	**158**	P	**Pn**	**19 28 31.4**	**-1.6**
WMGZ	**Waiomatatini S**	**1.76**	**149**	P	**Pn**	**19 28 33.5**	**-0.3**
WIAZ	**Waiheke Island**	**1.80**	**254**	P	**Pn**	**19 28 34.7**	**+0.6**
MKAZ	**Moumakai**	**1.88**	**244**	P	**Pn**	**19 28 33.6**	**-1.7**
KARZ	**Kaharoa**	**1.90**	**205**	P	**Pb**	**19 28 37.9**	**+0.3**
KARZ				S	**Sg**	**19 29 04.5**	**+1.4**
PUZ	**Puketiti**	**1.93**	**156**	P	**Pn**	**19 28 36.5**	**+0.5**
TWGZ	**Tauwhareparae**	**1.95**	**164**	P	**Pn**	**19 28 35.5**	**-0.9**
TWGZ				S	**Sb**	**19 29 03.3**	**0.0**
URZ	**Urewera**	**1.96**	**184**	Pn	**Pn**	**19 28 35.7**	**-0.7**
	14nm,0.3s,baz=25,slow=1.9,SNR=38						
URZ				Sn	**Sn**	**19 28 59.4**	**-2.2**
	25nm,0.3s,baz=76,slow=23,SNR=4.7						
	60nm,0.5s						
URZ	**Urewera**	**1.96**	**184**	P	**Pn**	**19 28 35.5**	**-0.9**
MBAZ	**Motutapu North**	**1.97**	**256**	P	**Pn**	**19 28 37.0**	**+0.4**
MBAZ				S	**Sb**	**19 29 03.1**	**-0.8**
ETAZ	**East Tamaki Re**	**2.00**	**250**	P	**Pn**	**19 28 34.6**	**-2.4**
ETAZ				S	**Sn**	**19 29 03.0**	**+0.3**
TOZ	**Tahuroa Road**	**2.01**	**224**	P	**Pn**	**19 28 36.2**	**-1.0**
MWZ	**Matawai**	**2.04**	**175**	P	**Pn**	**19 28 36.7**	**-0.8**
TKGZ	**Te Karaka**	**2.18**	**168**	P	**Pb**	**19 28 40.8**	**-1.5**
RAGZ	**Rawiri**	**2.19**	**177**	P	**Pn**	**19 28 38.9**	**-0.8**
AWAZ	**Awhitu Peninsu**	**2.25**	**250**	P	**Pn**	**19 28 40.4**	**-0.1**
AWAZ				S	**Sb**	**19 29 11.6**	**-0.3**
WTAZ	**Waiatarua**	**2.27**	**253**	P	**Pg**	**19 28 45.8**	**+0.3**
CNGZ	**Carnagh Statio**	**2.30**	**162**	P	**Pn**	**19 28 42.4**	**+1.3**
RIGZ	**Rimuhau**	**2.43**	**171**	P	**Pb**	**19 28 45.3**	**-1.3**
TLZ	**Tolley Road**	**2.45**	**214**	P	**Pn**	**19 28 42.4**	**-0.9**
SNGZ	**Shannon Statio**	**2.47**	**179**	P	**Pn**	**19 28 45.0**	**+1.5**
MTHZ	**Maungataniwha**	**2.57**	**188**	P	**Pb**	**19 28 47.8**	**-1.1**
HIZ	**Hauiti**	**2.93**	**220**	P	**Pb**	**19 28 55.1**	**0.0**
NTVZ	**North Tongarir**	**3.07**	**204**	P	**Pb**	**19 28 56.7**	**-0.7**
TMVZ	**Te Maari**	**3.07**	**204**	P	**Pb**	**19 28 56.6**	**-1.0**
KRVZ	**Karewarewa**	**3.07**	**205**	P	**Pb**	**19 28 57.3**	**-0.3**
ETVZ	**East Tongariro**	**3.09**	**203**	P	**Pb**	**19 28 56.2**	**-1.6**
WTVZ	**West Tongariro**	**3.11**	**205**	P	**Pn**	**19 28 54.4**	**+2.1**
NNVZ	**North Ngauruho**	**3.12**	**205**	P	**Pb**	**19 28 57.9**	**-0.4**
OTVZ	**Oturere**	**3.13**	**204**	P	**Pb**	**19 28 55.5**	**-3.0**
SNVZ	**South Ngauruho**	**3.16**	**204**	P	**Pb**	**19 28 58.0**	**-1.0**
MCHZ	**McNeill Hill**	**3.17**	**188**	P	**Pb**	**19 28 56.7**	**-2.5**
MCHZ				S	**Sg**	**19 29 40.9**	**-2.9**
OUZ	**Omahuta**	**3.19**	**289**	P	**Pn**	**19 28 51.5**	**-1.8**
KWHZ	**Kaweka Forest**	**3.19**	**192**	P	**Pn**	**19 28 55.4**	**+2.0**
WNVZ	**Wahianoa**	**3.30**	**203**	P	**Pb**	**19 28 59.8**	**-1.7**
BHHZ	**Black Hill Sta**	**3.32**	**196**	P	**Pn**	**19 28 57.5**	**+2.3**
BHHZ				S	**Sb**	**19 29 41.2**	**-1.6**
KRHZ	**Kereru**	**3.41**	**192**	P	**Pn**	**19 28 58.1**	**+1.7**
VRZ	**Vera Road**	**3.45**	**215**	P	**Pn**	**19 28 57.4**	**+0.4**
KAHZ	**Kahuranaki**	**3.50**	**185**	P	**Pn**	**19 28 59.5**	**+1.8**
PNHZ	**Pukenui**	**3.70**	**193**	P	**Pn**	**19 29 01.8**	**+1.4**
PNHZ				S	**Sb**	**19 29 51.7**	**-2.0**
NEZ	**North Egmont**	**3.89**	**219**	P	**Pb**	**19 29 08.2**	**-3.2**
PRHZ	**Porangahau**	**3.99**	**187**	P	**Pn**	**19 29 04.7**	**+0.4**
BFZ	**Birch Farm**	**4.45**	**190**	P	**Pn**	**19 29 10.4**	**-0.2**
MRZ	**Mangatainoka R**	**4.55**	**197**	P	**Pn**	**19 29 12.8**	**+0.8**
NNZ	**Nelson**	**5.78**	**211**	P	Pn	19 29 35.3	+6.4
MRNZ	**Matariki Terra**	**6.19**	**213**	P	**Pn**	**19 29 35.7**	**+1.1**
THZ	**Tophouse**	**6.43**	**211**	P	**Pn**	**19 29 40.3**	**+2.4**
RPZ	**Rata Peaks**	**8.81**	**211**	LR	LR	19 33 25.2	
	comp=Z,187nm,21.4s,baz=11,slow=36						
DZM	**Mont Dzumac**	**17.03**	**323**	LR	LR	19 37 06.2	
	comp=Z,215nm,18.4s,baz=92,slow=32						
CTA	**Charters Tower**	**31.58**	**292**	LR	LR	19 45 42.0	
	comp=Z,29nm,19.0s,baz=95,slow=33						
ASAR	**Alice Springs**	**39.32**	**276**	P	**P**	**19 35 33.5**	**+0.6**
	1.2nm,0.8s,baz=118,slow=7.6,SNR=8.0						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**40.87**	**282**	P	**P**	**19 35 49.2**	**+3.4**
	1.6nm,0.6s,baz=121,slow=7.6,SNR=15						
	1.6nm,0.6s						
VNDA	**Vanda**	**41.86**	**185**	LR	LR	19 51 55.4	
	comp=Z,54nm,19.8s,baz=260,slow=34						
QSPA	**South Pole Qui**	**53.82**	**180**	P	**P**	**19 37 27.2**	**+1.0**
	4.5nm,0.8s,baz=9.4,slow=2.9,SNR=12						
	4.5nm,0.8s						
PMSA	**Palmer Station**	**68.50**	**156**	LR	LR	20 02 48.8	
	comp=Z,70nm,19.7s,baz=163,slow=30						
H03S2	**Juan Fernandez**	**80.42**	**125**	T	T	21 08 44.0	
	baz=231,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**80.43**	**125**	T	T	21 08 44.0	
	baz=231,slow=74,SNR=15						
H03S3	**Juan Fernandez**	**80.44**	**125**	T	T	21 08 42.3	
	baz=231,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**80.65**	**125**	T	T	21 08 52.6	
	baz=234,slow=72,SNR=110						
H03N2	**Juan Fernandez**	**80.66**	**125**	T	T	21 08 55.8	
	baz=234,slow=72,SNR=88						
H03N1	**Juan Fernandez**	**80.67**	**125**	T	T	21 08 58.6	
	baz=234,slow=72,SNR=117						
PLCA	**Paso Flores**	**81.28**	**135**	P	**P**	**19 40 20.0**	**-0.2**
	0.7nm,0.6s,baz=292,slow=6.4,SNR=4.5						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**91.75**	**292**	P	**P**	**19 41 11.9**	**+0.2**
	0.4nm,0.4s,baz=147,slow=3.8,SNR=4.1						
	0.4nm,0.4s						
KBZ	**Khabaz**	**144.65**	**296**	PKP	PKPbc	19 47 38.7	-0.3
	1.7nm,1.0s,baz=60,slow=8.1,SNR=3.5						
FINES	**FINESS Array B**	**149.00**	**333**	PKPbc	**PKPdf**	**19 47 48.0**	**+1.1**
	0.6nm,0.5s,baz=81,slow=2.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**156.60**	**191**	PKPab	**PKPab**	**19 48 27.0**	**-1.2**
	0.3nm,0.6s,baz=165,slow=3.0,SNR=2.1						

IDC 19 19:37:58.1±3.3, 1°40S×127°40E, h0km, mb3.2/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=154.7km s-min=35.0km az=86.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.64**	**160**	P	P	19 42 29.2	+0.6
	0.2nm,0.3s,baz=339,slow=11,SNR=11						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**23.02**	**165**	P	P	19 43 04.5	-0.4
	0.4nm,0.8s,baz=346,slow=12,SNR=8.8						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**89.42**	**25**	P	P	19 50 56.6	-0.1
	0.2nm,0.6s,baz=280,slow=5.4,SNR=1.8						
	0.2nm,0.6s						

*IDC **19** 19:40:30.9±1.1,56°.37N×148°.81W, h0km, mb4.0/16, mbtmp4.0/21, ML3.8/5, MS3.1/4, Error ellipse: s-maj=25.9km s-min=16.6km az=9.0*
*NEIC **19** 19:40:33.2±1.1,56°.47N±0°.07×148°.8W±0°.1, h10km±1km, mb4.2/6, ML4.4/82, ML4.1(AEIC), Error ellipse: s-maj=11.9km s-min=10.1km az=189.0*
*AEIC **19** 19:40:37.9±1.1,56°.44N±0°.06×148°.8W±0°.1, h12km±5km, Error ellipse: s-maj=8.9km s-min=8.7km az=72.0*
ISC 19 19:40:33.0±0.6, 56°52N±0°.07×148°73W±0°.04, h10km, n367, σ1s25/358, mb4.1/19, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.45**	**303**		**Pn**	**19 41 13.0**	**0.0**
KDAK	**Kodiak Island**	**2.45**	**303**		**Sn**	**19 41 40.5**	**-2.6**
KDAK	**Kodiak Island**	**2.45**	**303**	Pn	Pn	19 41 13.0	0.0
	16nm,0.3s,baz=113,slow=6.5,SNR=450						
KDAK					Sn	**Sn**	**19 41 40.3**	**-2.7**
	62nm,0.3s,baz=249,slow=23,SNR=83						
KDAK				LR	LR	19 41 41.7	
	comp=Z,100nm,18.5s,baz=131,slow=28						
	34nm,0.3s						
OHAK	**Old Harbor**	**2.60**	**288**	Pn	**Pn**	**19 41 14.5**	**-0.5**
OHAK	**Old Harbor**	**2.60**	**288**		**Sn**	**19 41 42.9**	**-3.8**
OHAK	**Old Harbor**	**2.60**	**288**	P	**Pn**	**19 41 14.5**	**-0.5**
OHAK	**Old Harbor**	**2.60**	**288**	P	**Pn**	**19 41 14.4**	**-0.7**
	baz=106						
OHAK				S	**Sn**	**19 41 42.9**	**-3.8**
	baz=106						
SYI	**Shuyak Island**	**2.88**	**318**		**Sn**	**19 41 52.8**	**-0.7**
SYI	**Shuyak Island**	**2.88**	**318**	Pn	**Pn**	**19 41 19.5**	**+0.6**
SYI	**Shuyak Island**	**2.88**	**318**	IAML		19 41 54.7	
	comp=E,470nm,0.3s						
SYI				IAML		19 41 56.0	
	comp=N,420nm,0.2s						
Q20K	**Shuyak Island**	**2.88**	**318**	P	**Pn**	**19 41 19.5**	**+0.6**
	baz=137						
Q20K				S	**Sn**	**19 41 52.8**	**-0.8**
	baz=137						
MID	**Middleton Isla**	**3.18**	**23**		**Pn**	**19 41 23.5**	**+0.5**
MID					**Sn**	**19 41 59.4**	**-1.6**
MID	**Middleton Isla**	**3.18**	**23**	IAML		19 42 00.2	
	comp=N,469nm,0.8s						
MID				IAML		19 42 01.0	
	comp=E,582nm,0.3s						
MID	**Middleton Isla**	**3.18**	**23**	P	**Pn**	**19 41 23.9**	**+0.9**
Q23K	**Middleton Isla**	**3.18**	**22**		**Pn

R18K IAML 19 42 06.6
comp=E,1µm,0.4s
comp=N,822nm,0.4s
BRSE Bradley Lake S 3.41 343 Pn 19 41 26.4 +0.3
BRSE Sn 19 42 05.6 -0.9
BRSE Bradley Lake S 3.41 343 P Pn 19 41 26.4 +0.3
baz=162
BRSE S Sn 19 42 05.6 -0.9
baz=162
BRLK Bradley Lake 3.45 342 Pn 19 41 27.1 +0.3
BRLK Bradley Lake 3.45 342 IAML 19 42 11.2
comp=E,375nm,0.5s
HOM Homer 3.51 335 Pn 19 41 28.5 +0.9
HOM Homer 3.51 335 IAML 19 42 13.3
comp=N,695nm,0.4s
HOM IAML 19 42 13.7
comp=E,731nm,0.4s
HOM Homer 3.51 335 P Pn 19 41 28.5 +0.9
baz=154
P23K Montague Islan 3.56 11 Pn 19 41 28.9 +0.6
P23K Montague Islan 3.56 11 P Pn 19 41 28.9 +0.6
baz=192
Q19K Cape Douglas, 3.58 315 Pn 19 41 29.2 +0.7
Q19K Cape Douglas, 3.58 315 IAML 19 42 17.8
comp=N,722nm,0.8s
Q19K IAML 19 42 18.2
comp=E,956nm,0.7s
Q19K Cape Douglas, 3.58 315 P Pn 19 41 29.2 +0.7
baz=192
SEW Seward 3.62 354 Pn 19 41 29.5 +0.5
SEW Seward 3.62 354 P Pn 19 41 29.5 +0.5
baz=174
KAHG Katmai Hook Gl 3.71 305 Pn 19 41 31.5 +1.1
AU22 Augustine Moun 3.78 321 Pn 19 41 32.3 +1.1
AUL Augustine Lava 3.81 321 Pn 19 41 33.2 +1.5
P19K Oil Pt 3.95 325 Pn 19 41 34.0 +0.4
P19K IAML 19 42 23.3
comp=E,606nm,0.5s
P19K IAML 19 42 24.2
comp=N,551nm,0.7s
P19K Oil Pt 3.95 325 P Pn 19 41 34.6 +1.0
baz=142
KAHC Katmai Hardscr 4.00 305 Pn 19 41 35.3 +1.0
KAHC Katmai Hardscr 4.00 305 P Pn 19 41 35.3 +1.0
baz=121
O22K Cooper Landing 4.01 353 Pn 19 41 35.1 +0.7
O22K Cooper Landing 4.01 353 P Pn 19 41 35.1 +0.7
baz=173
ANCK Angle Creek 4.03 298 Pn 19 41 35.9 +1.1
HIN Hinchinbrook I 4.06 16 Pn 19 41 36.0 +0.9
HIN IAML 19 42 22.8
comp=N,661nm,0.3s
HIN IAML 19 42 24.3
comp=E,535nm,0.3s
SLKM Skilak Lake 4.08 350 Pn 19 41 35.7 +0.3
KAIM Kayak Island 4.11 32 Pn **Pn 19 41 36.9 +1.1**
KAIM Kayak Island 4.11 32 P Pn 19 41 37.0 +1.3
baz=215
O20K Slope Mountain 4.12 332 Pn 19 41 36.4 +0.4
O20K Slope Mountain 4.12 332 P Pn 19 41 36.4 +0.4
baz=149
IVE Iliamna Volcan 4.18 329 Pn 19 41 36.8 0.0
ILSW Iliamna Southw 4.18 328 Pn 19 41 37.4 +0.4
ILSW IAML 19 42 28.6
comp=E,210nm,0.4s
ILSW IAML 19 42 28.9
comp=N,296nm,0.4s
CNTC Contact Creek 4.25 297 Pn 19 41 38.5 +0.7
Q17K Contact Creek 4.25 297 P Pn 19 41 38.5 +0.7
baz=112
PLK3 Peulik 3 4.28 289 Pn 19 41 38.6 +0.5
EYAK Cordova Ski Ar 4.33 20 Pn 19 41 39.8 +1.0
EYAK Cordova Ski Ar 4.33 20 P **Pn 19 41 40.1 +1.3**
EYAK Cordova Ski Ar 4.33 20 P Pn 19 41 39.8 +1.0
baz=202
FID Port Fidalgo 4.40 15 Pn 19 41 40.2 +0.4
FID IAML 19 42 30.8
comp=N,389nm,0.2s
FID IAML 19 42 31.5
comp=E,391nm,0.3s
SUCK Suckling Hills 4.42 34 Pn 19 41 41.3 +1.3
SUCK Suckling Hills 4.42 34 IAML 19 42 32.8
comp=E,452nm,0.7s
RAGM Ragged Mountai 4.42 27 Pn 19 41 41.0 +0.8
CAPN Captain Cook N 4.45 344 Pn 19 41 41.7 +1.3
RED Redoubt Volcan 4.45 333 Pn 19 41 40.6 0.0
GLI Glacier Island 4.46 10 Pn 19 41 41.2 +0.7
GLI IAML 19 42 32.8
comp=N,241nm,0.4s
GLI IAML 19 42 33.6
comp=E,332nm,0.5s
GLI Glacier Island 4.46 10 P Pn 19 41 41.0 +0.5
baz=192
RDSO Redoubt South 4.47 334 Pn 19 41 40.9 0.0
RSO Redoubt South 4.48 334 Pn 19 41 41.1 0.0
HMT Hamilton 4.49 30 Pn 19 41 42.1 +1.0
NICHA Nichawk Mount 4.49 32 Pn 19 41 42.7 +1.6
P18K Big Mountain, 4.50 312 Pn 19 41 41.3 0.0
P18K Big Mountain, 4.50 312 P Pn 19 41 41.3 0.0
baz=128
RDWB Redoubt West 4.53 333 Pn 19 41 41.5 -0.2
DFR Drift River 4.58 335 Pn 19 41 42.2 -0.2
DFR Drift River 4.58 335 Pn 19 41 42.5 +0.1
GOAT Goat Mountain 4.58 26 Pn 19 41 43.6 +1.3
NCT North Crescent 4.61 333 Pn 19 41 42.9 +0.1
RC01 Rabbit Creek A 4.62 354 Pn 19 41 43.5 +0.8
RC01 Rabbit Creek A 4.62 354 IAML 19 42 36.7
comp=N,353nm,0.3s
RC01 IAML 19 42 37.4
comp=E,403nm,0.3s
RC01 Rabbit Creek A 4.62 354 P Pn 19 41 43.5 +0.8
baz=174
BERG Berg Lake 4.70 32 Pn 19 41 44.9 +1.0
FIS Fire Island 4.71 351 Pn **Pn 19 41 44.9 +1.0**
FIS IAML 19 42 41.7
comp=E,393nm,0.6s
FIS IAML 19 42 42.9
comp=N,436nm,0.5s
O19K Port Alsworth 4.72 324 Pn 19 41 44.3 +0.2
O19K Port Alsworth 4.72 324 P Pn 19 41 44.3 +0.2
baz=140
GRIN Grindle Hills 4.72 35 Pn 19 41 45.7 +1.4
O18K Koktuh Hills 4.79 317 Pn 19 41 45.5 +0.3
O18K Koktuh Hills 4.79 317 P Pn 19 41 45.3 +0.2
baz=132
SNH Sunshine Point 4.81 38 Pn 19 41 46.7 +1.3
SNH IAML 19 42 40.6
comp=N,241nm,0.3s
SNH IAML 19 42 40.9
comp=E,286nm,0.5s
CYK Cape Yakataga 4.86 40 Pn 19 41 47.4 +1.3
DIV Divide 4.87 17 Pn 19 41 47.4 +1.0
KHIT Khitrov Hills 4.87 34 Pn 19 41 47.2 +0.8
KNK Knik Glacier 4.91 2 Pn 19 41 47.7 +0.8
KNK IAML 19 42 51.6
comp=E,202nm,0.6s
KNK Knik Glacier 4.91 2 P Pn 19 41 47.6 +0.8
baz=182
P17K Kvichak River 4.92 306 Pn 19 41 47.5 +0.7
P17K Kvichak River 4.92 306 P Pn 19 41 47.5 +0.7
baz=121
R16K Pilot Point 4.95 286 Pn 19 41 47.5 +0.3
R16K Pilot Point 4.95 286 IAML 19 42 39.6
comp=E,120nm,1.4s
R16K IAML 19 42 45.3
comp=N,129nm,1.5s
R16K Pilot Point 4.95 286 P Pn 19 41 47.5 +0.3
baz=100
BMRM Bremner River 4.95 24 Pn 19 41 48.4 +0.9
BMRM Bremner River 4.95 24 P Pn 19 41 48.4 +0.9
baz=207
WAX Waxell Ridge 5.00 36 Pn 19 41 49.4 +1.2
N20K Mount Spurr 5.03 340 P Pn 19 41 48.7 +0.2
baz=158
SPCR Spurr Chakacha 5.03 340 Pn 19 41 48.7 +0.2
SPCN Chakachatna No 5.05 341 Pn 19 41 49.2 +0.5
SUA Susitna One 5.07 349 Pn 19 41 49.3 +0.2
SUA Susitna One 5.07 349 P Pn 19 41 49.3 +0.2
baz=168
SPCP Crater Peak Br 5.08 341 Pn 19 41 49.7 +0.4
BARK Barkley Ridge 5.09 37 Pn 19 41 50.7 +1.3
PMR Palmer 5.09 358 Pn 19 41 50.3 +1.0
PMR Palmer 5.09 358 IAML 19 42 47.1
comp=N,140nm,0.7s
PMR IAML 19 42 47.1
comp=E,186nm,0.7s
PMR Palmer 5.09 358 P Pn 19 41 50.6 +1.3
PMR Palmer 5.09 358 P Pn 19 41 50.3 +1.0
baz=178
SPBG Spurr Blockage 5.12 340 Pn 19 41 50.2 +0.5
MESA MESA 5.12 41 Pn 19 41 50.9 +1.0
MESA IAML 19 42 53.2
comp=E,209nm,0.4s
MESA MESA 5.12 41 P Pn 19 41 51.1 +1.3
baz=227
CRQM Cirque 5.16 32 Pn 19 41 51.5 +1.1
CRQM Cirque 5.16 32 IAML 19 42 55.2
comp=N,233nm,1.2s
CRQE Cirque 5.17 32 P Pn 19 41 51.5 +1.1
baz=217
KLU Klutina 5.20 15 Pn 19 41 51.9 +1.1
KLU Klutina 5.20 15 IAML 19 42 50.1
comp=E,233nm,0.2s
KLU Klutina 5.20 15 P Pn 19 41 51.9 +1.1
baz=197
STLK Strandline Lak 5.25 343 Pn 19 41 52.3 +0.8
TGL Tana Glacier 5.25 33 Pn 19 41 52.8 +1.3
TGL IAML 19 42 51.9
comp=E,222nm,0.3s
TGL IAML 19 42 52.6
comp=N,145nm,0.6s
N19K Bonanza Creek 5.25 328 Pn 19 41 51.7 +0.2
N19K Bonanza Creek 5.25 328 P Pn 19 41 51.6 +0.1
baz=143
GHO Glory Hole Cre 5.27 359 Pn 19 41 52.8 +0.9
GHO IAML 19 42 52.6
comp=E,259nm,0.6s
GHO IAML 19 42 55.3
comp=N,186nm,0.5s
SPNN North Nagishla 5.28 339 Pn 19 41 52.8 +0.8
ISLE Juniper Island 5.29 37 Pn 19 41 53.1 +1.1
ISLE IAML 19 42 52.2
comp=E,209nm,0.6s
ISLE IAML 19 42 52.6
comp=N,265nm,0.9s
BAGL Bagley Icefiel 5.29 38 Pn 19 41 53.3 +1.4
M23K Glacier View 5.32 5 P Pn 19 41 54.2 +1.9
baz=186
SCM Sheep Creek Mo 5.38 7 Pn 19 41 55.0 +1.7
SCM Sheep Creek Mo 5.38 7 P Pn 19 41 55.0 +1.7
baz=188
CHGN Chignik 5.38 272 Pn 19 41 52.4 -0.8
CHGN IAML 19 42 53.3
comp=E,92nm,0.2s
CHGN Chignik 5.38 272 P Pn 19 41 53.3 +0.1
baz=85
VRDI Verde Repeater 5.46 28 Pn 19 41 55.6 +1.1
O17K Koliganek Bris 5.50 310 Pn 19 41 55.5 +0.6
O17K Koliganek Bris 5.50 310 P Pn 19 41 55.5 +0.6
baz=124
KIAG Kiagna River 5.52 34 Pn 19 41 56.6 +1.2
N25K Chitina, Valde 5.53 21 Pn 19 41 56.9 +1.6
N25K Chitina, Valde 5.53 21 P Pn 19 41 56.9 +1.6
baz=204
SAMH Samovar Hills 5.54 46 Pn 19 41 57.5 +2.0
GLB Gilahina Butte 5.55 25 Pn 19 41 57.1 +1.5
P16K Nushagak River 5.56 301 Pn 19 41 56.8 +1.1
P16K Nushagak River 5.56 301 P Pn 19 41 56.8 +1.1
baz=114
GRNC Granite Creek 5.58 38 Pn 19 41 57.4 +1.3
TABL Table Mountain 5.59 42 Pn 19 41 57.6 +1.2
N18K Kilae Creek 5.61 321 Pn 19 41 56.4 0.0
N18K Kilae Creek 5.61 321 P Pn 19 41 56.4 0.0
baz=136
SKT Skwentna 5.66 346 Pn 19 41 57.4 +0.3
SKT Skwentna 5.66 346 P Pn 19 41 57.4 +0.3
baz=164
PTPK Patty Peak 5.70 32 Pn 19 41 59.2 +1.4
MCARA McCarthy VSAT 5.70 29 P Pn 19 41 59.0 +1.4
baz=214
PCA Pinnacle 5.73 48 Pn 19 41 59.4 +1.4
PINM Pinnacle 5.73 48 P Pn 19 41 59.4 +1.3
baz=234
M24K Tolsona, Glenn 5.76 12 Pn 19 42 00.7 +2.2
M24K Tolsona, Glenn 5.76 12 P Pn 19 42 00.7 +2.2
baz=194
SVW2 Sparrevohn 5.81 325 P Pn 19 41 59.1 0.0
M20K Styx River 5.84 339 Pn 19 42 00.0 +0.5
M20K Styx River 5.84 339 P Pn 19 42 00.0 +0.5
baz=156
BARN Barnard Glacie 5.85 36 Pn 19 42 01.5 +1.6
O16K Kokwok River B 5.85 306 Pn 19 42 00.2 +0.6
O16K Kokwok River B 5.85 306 P Pn 19 42 00.2 +0.6
baz=119
PNL Peninsula 5.87 54 Pn 19 42 01.7 +1.7
PNL Peninsula 5.87 54 P Pn 19 42 01.7 +1.7
PNL Peninsula 5.87 54 P Pn 19 42 01.7 +1.7
baz=241
CTG Chitna Glacier 5.89 38 P Pn 19 42 01.6 +1.3
baz=224
CTGM Chitina Glacie 5.89 38 Pn 19 42 01.6 +1.3
LOGN Logan Glacier 5.91 40 Pn 19 42 01.9 +1.3
BCPN Bancas Point 5.91 51 Pn 19 42 02.2 +1.7
WASW Wrangell South 5.91 21 Pn 19 42 02.0 +1.3
N17K Nushagak Hills 5.98 316 Pn 19 42 01.7 +0.2
N17K Nushagak Hills 5.98 316 P Pn 19 42 01.7 +0.2
baz=129
S14K Fog Glacier 6.02 272 P Pn 19 42 02.5 +0.4
baz=84
VNFG Fog Glacier, M 6.02 272 Pn 19 42 02.5 +0.4
WAT6 Susitna Watana 6.10 4 Pn 19 42 04.6 +1.3
WAT6 Susitna Watana 6.10 4 P Pn 19 42 04.6 +1.3
baz=185
M19K Big River Lodg 6.13 334 Pn 19 42 03.5 -0.1
M19K Big River Lodg 6.13 334 P Pn 19 42 03.5 -0.1
baz=150
HARP HAARP 6.17 16 Pn 19 42 06.7 +2.6
HARP HAARP 6.17 16 P Pn 19 42 06.7 +2.6
baz=199
M18K Stony River 6.19 327 Pn 19 42 04.1 -0.2
M18K Stony River 6.19 327 P Pn 19 42 04.1 -0.2
baz=141
WAT1 Susitna Watana 6.33 1 Pn 19 42 08.0 +1.6
WAT1 Susitna Watana 6.33 1 P Pn 19 42 08.0 +1.6
baz=181
WAT7 Susitna Watana 6.34 360 Pn 19 42 08.0 +1.5
CHNA Chernabura Isl 6.37 259 P Pn 19 42 05.8 -1.0
baz=71
CNBA Chernabura Isl 6.38 259 Pn **Pn 19 42 05.9 -1.0**
L19K White Mountain 6.49 334 Pn 19 42 08.4 0.0
L19K White Mountain 6.49 334 P Pn 19 42 08.4 0.0
baz=149
O15K Ungalikthiuk R 6.50 299 Pn 19 42 09.6 +1.0
O15K Ungalikthiuk R 6.50 299 P Pn 19 42 09.6 +1.0
baz=110
L20K Farewell, AK 6.53 338 Pn 19 42 09.0 0.0
L20K Farewell, AK 6.53 338 P Pn 19 42 09.0 0.0
baz=34
O29M Mount Kennedy 6.54 50 Pn 19 42 10.9 +1.6
O29M Mount Kennedy 6.54 50 P Pn 19 42 10.9 +1.6
baz=239
M26K Nabesna, AK 6.58 24 Pn 19 42 11.6 +1.8
M26K Nabesna, AK 6.58 24 P Pn 19 42 11.6 +1.8
baz=209
N16K Nishlik Lake 6.59 311 Pn 19 42 10.4 +0.6
N16K Nishlik Lake 6.59 311 P Pn 19 42 10.4 +0.6
baz=123
P29M Windy Craggy 6.61 57 Pn 19 42 11.1 +1.0
P29M Windy Craggy 6.61 57 P Pn 19 42 11.1 +1.0
baz=246
DHY Denali Highway 6.61 5 Pn 19 42 12.1 +1.8
DHY Denali Highway 6.61 5 P Pn 19 42 12.1 +1.8
baz=187
PPLA Purkeypile 6.63 346 Pn 19 42 11.6 +1.1
PPLA Purkeypile 6.63 346 P Pn 19 42 11.6 +1.1
baz=164
M17K Holitna River 6.65 321 P Pn 19 42 11.1 +0.5
baz=134
PAX Paxson 6.68 13 Pn 19 42 13.0 +1.9
PAX Paxson 6.68 13 P Pn 19 42 13.0 +1.9
baz=196
SDPT Sand Point 6.71 265 Pn 19 42 11.2 -0.2
SDPT Sand Point 6.71 265 P Pn 19 42 11.2 -0.2
SDPT Sand Point 6.71 265 P Pn 19 42 11.2 -0.2
baz=76
M27K Edge Creek, AK 6.82 28 Pn 19 42 14.7 +1.6
M27K Edge Creek, AK 6.82 28 P Pn 19 42 14.7 +1.6
baz=214
RND Reindeer 6.91 360 Pn 19 42 16.1 +1.8
MENT Mentasta 6.92 19 Pn 19 42 16.8 +2.4
M16K Timber Creek 6.97 315 Pn 19 42 15.8 +0.7
M16K Timber Creek 6.97 315 P Pn 19 42 15.8 +0.7
baz=126
TRF Thorofare Moun 7.00 354 Pn 19 42 17.0 +1.4
TRF Thorofare Moun 7.00 354 P Pn 19 42 17.0 +1.4
baz=173
N15K Kwethluk River 7.01 306 Pn 19 42 16.7 +1.1
N15K Kwethluk River 7.01 306 P Pn 19 42 16.7 +1.1
baz=117
L18K Granite Mounta 7.01 328 Pn 19 42 15.4 -0.3
L18K Granite Mounta 7.01 328 P Pn 19 42 15.4 -0.3
baz=142
CAST Castle Rocks 7.12 348 P Pn 19 42 18.2 +1.0
baz=165
KTH Kantishna Hill 7.14 352 Pn 19 42 18.9 +1.4
P30M Million Dollar 7.17 55 Pn 19 42 19.4 +1.5
P30M Million Dollar 7.17 55 P Pn 19 42 19.4 +1.5
baz=244
O14K Tigyukauivet M 7.22 298 Pn 19 42 19.8 +1.3
O14K Tigyukauivet M 7.22 298 P Pn 19 42 19.8 +1.3
baz=108
MCK McKinley 7.24 359 Pn 19 42 20.7 +2.0
MCK McKinley 7.24 359 P Pn 19 42 20.7 +2.0
baz=179
K20K Telida 7.36 341 Pn 19 42 20.6 +0.1
K20K Telida 7.36 341 P Pn 19 42 20.6 +0.1
baz=157
SIT Sitka 7.38 80 P Pn 19 42 18.1 -2.6
PS1A Pavlof South-1 7.39 267 Pn 19 42 20.4 -0.4
TTA Tatalina 7.41 333 Pn 19 42 20.8 -0.3
TTA Tatalina 7.41 333 P Pn 19 42 21.0 -0.1
TTA Tatalina 7.41 333 P Pn 19 42 20.8 -0.3
baz=148
L27K Beaver Creek, 7.43 25 Pn 19 42 22.7 +1.4
L27K Beaver Creek, 7.43 25 P Pn 19 42 22.7 +1.4
baz=211
PVV Pavlof Volcano 7.43 267 Pn 19 42 20.2 -1.1
K24K Donnelly Dome 7.46 10 Pn 19 42 23.7 +2.0
K24K Donnelly Dome 7.46 10 P Pn 19 42 23.7 +2.0
baz=193
L17K Donlin 7.46 323 Pn 19 42 21.8 +0.1
L17K Donlin 7.46 323 P Pn 19 42 21.8 +0.1
baz=135
M15K Kasigluk River 7.52 309 Pn 19 42 23.5 +1.0
M15K Kasigluk River 7.52 309 P Pn 19 42 23.5 +1.0
baz=119
PN7A Pavlof North-7 7.53 267 Pn 19 42 22.6 -0.1
L16K Owhat River 7.59 318 Pn 19 42 23.8 +0.3
L16K Owhat River 7.59 318 P Pn 19 42 23.8 +0.3
baz=129
CHUM Lake Minchumin 7.60 348 Pn 19 42 24.5 +0.8
CHUM Lake Minchumin 7.60 348 P Pn 19 42 24.5 +0.8
baz=165
N14K Kuskokwak Cree 7.64 302 Pn 19 42 25.4 +1.1
N14K Kuskokwak Cree 7.64 302 P Pn 19 42 25.4 +1.1
baz=112
BPAW Bear Paw Mtn. 7.69 353 Pn 19 42 25.4 +0.5
BPAW Bear Paw Mtn. 7.69 353 P Pn 19 42 25.4 +0.5
baz=171
SKAG Skagway 7.71 62 Pn 19 42 26.1 +1.0
SKAG Skagway 7.71 62 P Pn 19 42 26.5 +1.4
SKAG Skagway 7.71 62 P Pn 19 42 26.1 +1.0
baz=253
BESE Bessie Mountai 7.74 69 Pn 19 42 25.8 +0.1
N30M Aishikik Lake 7.78 46 Pn 19 42 28.0 +1.7
N30M Aishikik Lake 7.78 46 P Pn 19 42 28.0 +1.7
baz=235
S32K Killisnoo 7.79 77 Pn 19 42 24.8 -1.4
SCRK Sand Creek 7.84 15 Pn 19 42 28.9 +1.8
SCRK Sand Creek 7.84 15 P Pn 19 42 28.9 +1.8
baz=200
O30N Mendenhall 7.84 52 Pn 19 42 28.7 +1.6
O30N Mendenhall 7.84 52 P Pn 19 42 28.7 +1.6
baz=242
M29M Somme Creek 7.91 37 Pn 19 42 29.9 +2.0
M29M Somme Creek 7.91 37 P Pn 19 42 29.9 +2.0
baz=226
JIS Juneau Island 7.95 71 Pn 19 42 28.6 +0.2
JIS Juneau Island 7.95 71 P Pn 19 42 29.0 +0.6
WRH Wood River Hil 7.99 2 Pn 19 42 30.5 +1.5
NEA2 Nenana 8.10 359 Pn 19 42 31.3 +0.8
NEA2 Nenana 8.10 359 P Pn 19 42 31.3 +0.8
baz=179
J20K Nowinta River 8.14 343 Pn 19 42 31.8 +0.8
J20K Nowinta River 8.14 343 P Pn 19 42 31.8 +0.8
baz=159
CCB Clear Creek Bu 8.17 3 Pn 19 42 32.5 +1.0
J19K Poorman 8.24 338 P Pn 19 42 32.6 +0.2
baz=153
J25K Salcha River, 8.29 10 Pn 19 42 34.2 +1.0
J25K Salcha River, 8.29 10 P Pn 19 42 34.2 +1.0
baz=193
IL31 8.33 5 Pn 19 42 34.8 +1.2
ILAR Eielson Array 8.33 5 Pn **Pn 19 42 33.1 -0.6**
comp=E,2.2nm,0.3s,baz=192,slow=13,SNR=88
ILAR Sn **Sn 19 44 03.0 -4.7**
comp=E,1.0nm,0.3s,baz=201,slow=17,SNR=5.0
ILAR LR LR 19 45 58.1
comp=E,156nm,21.8s,baz=218,slow=39
comp=E,4.3nm,0.3s
COLA College 8.40 3 Pn 19 42 35.9 +1.3
COLA College 8.40 3 P Pn 19 42 35.9 +1.3
J26L Joseph Creek 8.40 15 Pn 19 42 36.5 +1.7
J26L Joseph Creek 8.40 15 P Pn 19 42 36.4 +1.7
baz=200
FALS False Pass 8.47 265 P Pn 19 42 36.4 +0.9
MDM Murphy Dome 8.47 1 Pn 19 42 36.9 +1.2
L29M L29M 8.49 35 Pn 19 42 37.8 +1.9
L29M L29M 8.49 35 P Pn 19 42 37.8 +1.9
baz=224
P32M Atlin 8.53 63 Pn 19 42 37.4 +0.9
P32M Atlin 8.53 63 P Pn 19 42 37.4 +0.9
baz=255
M30M Minto, Yukon 8.57 40 Pn **Pn 19 42 38.5 +1.5**
M30M Minto, Yukon 8.57 40 P Pn 19 42 38.9 +1.8
baz=230
MLY Manley 8.60 354 Pn 19 42 38.0 +0.6
MLY Manley 8.60 354 P Pn 19 42 38.0 +0.6
baz=173
J17K VABM Dome 8.62 327 Pn 19 42 38.0 +0.4
J17K VABM Dome 8.62 327 P Pn 19 42 38.1 +0.4
baz=139
I23K Minto, Yukon-K 8.67 358 Pn 19 42 39.3 +1.1
I23K Minto, Yukon-K 8.67 358 P Pn 19 42 39.3 +1.1
baz=178
ISNN Isanotski Nort 8.67 265 Pn 19 42 38.2 -0.2
K15K Wolf Creek Mou 8.72 317 Pn 19 42 40.1 +1.1
K15K Wolf Creek Mou 8.72 317 P Pn 19 42 40.1 +1.1
baz=126
CRAG Craig 8.81 90 P Pn 19 42 37.6 -2.7
SSLS Shishaldin Sou 8.83 265 Pn 19 42 40.5 -0.2
I21K Tanana 8.83 351 Pn 19 42 41.6 +1.0
I21K Tanana 8.83 351 P Pn 19 42 41.6 +1.0
baz=168
J16K Anvik River 9.02 324 Pn 19 42 43.3 +0.2
J16K Anvik River 9.02 324 P Pn 19 42 43.3 +0.2
baz=134
Q32M Nakina River 9.13 68 Pn 19 42 46.0 +1.1
Q32M Nakina River 9.13 68 P Pn 19 42 46.0 +1.1
baz=261
P33M Teslin, Yukon 9.14 60 Pn 19 42 45.4 +0.6
P33M Teslin, Yukon 9.14 60 P Pn 19 42 45.4 +0.6
baz=253
PRP Porcupine Dome 9.16 8 Pn 19 42 46.4 +1.2
PRP Porcupine Dome 9.16 8 P Pn 19 42 46.4 +1.2
baz=191
K29M Barlow Dome 9.21 33 Pn 19 42 47.9 +2.0
K29M Barlow Dome 9.21 33 P Pn 19 42 47.9 +2.0
baz=222
M31M Drury Creek, Y 9.26 46 Pn 19 42 48.9 +2.4
M31M Drury Creek, Y 9.26 46 P Pn 19 42 48.9 +2.4
baz=238
N32M Quiet Lake 9.34 54 Pn 19 42 49.1 +1.6
N32M Quiet Lake 9.34 54 P Pn 19 42 49.1 +1.6
baz=247
S34M Telegraph Cree 9.65 74 P Pn 19 42 52.3 +0.6
baz=269
I27K Kandik River 9.74 18 P Pn 19 42 56.7 +3.7
baz=204
R33M Jennings River 9.86 66 P Pn 19 42 56.1 +1.3
baz=260
FYU Fort Yukon 10.22 8 Pn 19 43 00.5 +1.0
G23K Bananza Creek 10.25 357 Pn 19 43 01.0 +1.1
DLBC Dease Lake 10.25 71 Pn **Pn 19 43 01.0 +0.9**
DLBC Dease Lake 10.25 71 Pn **Pn 19 43 01.1 +1.1**

comp=E,1.8nm,0.3s,baz=247,slow=7,3,SNR=24
DLBC Sn **Sn** 19 44 48.4 -6.5
comp=E,0.4nm,0.3s,baz=172,slow=23,SNR=1.2
comp=E,5.0nm,0.4s
MMPY Sheldon Lake, 10.74 48 Pn **Pn** 19 43 09.2 +2.5
F21K Alatna River 10.97 350 **Pn** 19 43 10.9 +1.1
D25K Kavik River 12.90 4 **Pn** 19 43 37.4 +1.3
C23K Itkillik River 13.40 357 **Pn** 19 43 44.8 +1.9
INK Inuvik 13.70 24 Pn **Pn** 19 43 47.8 +0.8
INK Inuvik 13.70 24 Pn **Pn** 19 43 49.5 +2.5
comp=E,0.1nm,0.3s,baz=210,slow=16,SNR=5.9
INK LR LR 19 49 12.9
comp=E,69nm,20.0s,baz=264,slow=38
comp=E,2.5nm,0.9s
YKA Yellowknife Ar 18.15 57 **Pn** 19 44 44.8 0.0
YKA Yellowknife Ar 18.15 57 P **Pn** 19 44 44.6 -0.2
comp=E,0.2nm,0.3s,baz=267,slow=12,SNR=18
comp=E,1.7nm,0.7s
A36M Sachs Harbour 18.34 23 IAmb IAmb 19 45 02.7
comp=Z,11nm,1.1s
LYMT Lyon Mountain 24.23 98 P **P** 19 45 50.3 +0.3
KVN Kaiserville 26.67 118 P **P** 19 46 11.9 -0.2
KVN IAmb IAmb 19 46 16.4
comp=Z,4.6nm,1.1s
PDAR Pinedale Array 28.41 102 P **P** 19 46 28.0 +0.3
PDAR Pinedale Array 28.41 102 P **P** 19 46 27.8 0.0
comp=Z,0.3nm,0.7s,baz=354,slow=1.5,SNR=3.7
comp=Z,0.3nm,0.7s
FRB Frobisher Bay 38.04 45 LR LR 20 03 49.3
comp=Z,82nm,18.0s,baz=286,slow=37
BLOK Blackwell 39.38 98 P **P** 19 48 02.9 +0.4
SCHQ Schefferville 43.60 56 P **P** 19 48 37.2 +0.2
comp=Z,1.8nm,0.7s,baz=291,slow=12,SNR=2.5
comp=Z,1.8nm,0.7s
H11N2 WAKE ISLAND Hy 49.27 240 T T 20 42 31.5
baz=30,slow=76,SNR=7.5
H11N3 WAKE ISLAND Hy 49.27 240 T T 20 42 32.5
baz=30,slow=76,SNR=5.8
H11N1 WAKE ISLAND Hy 49.28 240 T T 20 42 33.5
baz=30,slow=76,SNR=4.5
H11S1 WAKE ISLAND Hy 50.41 240 T T 20 43 59.4
baz=30,slow=76,SNR=8.8
H11S2 WAKE ISLAND Hy 50.42 240 T T 20 43 59.4
baz=30,slow=76,SNR=8.1
H11S3 WAKE ISLAND Hy 50.43 240 T T 20 43 59.9
baz=30,slow=76,SNR=4.9
ARCES ARCESS Array B 54.18 2 P **P** 19 49 57.3 -0.5
comp=Z,0.9nm,0.4s,baz=1.4,slow=7.6,SNR=8.7
comp=Z,0.9nm,0.4s
SONM Songino Array 58.72 310 P **P** 19 50 30.1 -0.6
comp=Z,1.0nm,0.8s,baz=44,slow=7.2,SNR=10
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 61.53 327 P **P** 19 50 49.8 +0.1
comp=Z,1.1nm,0.6s,baz=44,slow=6.6,SNR=6.1
comp=Z,1.1nm,0.6s
FINES FINESS Array B 62.31 3 P **P** 19 50 55.0 +0.3
comp=Z,1.1nm,0.5s,baz=8.0,slow=8.7,SNR=9.8
comp=Z,1.1nm,0.5s
EKA Eskdalemuir Ar 65.05 21 P **P** 19 51 13.0 +0.1
comp=Z,0.3nm,0.4s,baz=310,slow=5.6,SNR=5.1
comp=Z,0.3nm,0.4s
ARU Arti 65.26 344 P **P** 19 51 14.4 +0.1
ARU IAmb IAmb 19 51 27.1
comp=Z,5.9nm,0.7s
BVAR Borovoye Array 66.20 335 P **P** 19 51 20.4 0.0
comp=Z,1.0nm,0.6s,baz=38,slow=7.4,SNR=7.5
comp=Z,1.0nm,0.6s
KURBB Kurchatov Arra 66.29 329 P **P** 19 51 21.3 +0.3
comp=Z,0.5nm,0.6s,baz=29,slow=6.4,SNR=4.0
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 68.58 325 P **P** 19 51 35.6 0.0
comp=Z,0.4nm,0.7s,baz=34,slow=7.1,SNR=5.3
comp=Z,0.4nm,0.7s
AKASG Malin Array Be 73.13 1 P **P** 19 52 02.7 -0.4
comp=Z,6.2nm,0.7s,baz=359,slow=5.8,SNR=6.5
comp=Z,6.2nm,0.7s
GERES GERESS Array B 73.99 12 P **P** 19 52 08.8 +0.5
comp=Z,0.7nm,0.6s,baz=359,slow=8.0,SNR=4.5
comp=Z,0.7nm,0.6s
BURAR Bucovina Array 76.11 4 P **P** 19 52 21.2 +0.5
BURAR IAmb IAmb 19 52 22.5
comp=Z,1.2nm,0.8s
ESDC Sonseca Array 79.64 27 P **P** 19 52 40.6 +0.3
comp=Z,1.5nm,0.8s,baz=341,slow=5.8,SNR=9.6
comp=Z,1.5nm,0.8s
KBZ Khabaz 79.64 351 P **P** 19 52 41.3 +1.1
comp=Z,2.4nm,0.8s,baz=78,slow=1.9,SNR=8.3
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 84.10 358 P **P** 19 53 04.8 +0.9
comp=Z,1.2nm,0.8s,baz=5.1,slow=2.7,SNR=5.5
comp=Z,1.2nm,0.8s
CMAR Chiang Mai Arr 86.44 298 P **P** 19 53 15.8 0.0
comp=Z,0.4nm,0.7s,baz=5.9,slow=4.5,SNR=3.2
comp=Z,0.4nm,0.7s
BOSA Boshof 151.78 11 PKPbc **PKPbc** 20 00 27.2 -0.4
comp=Z,1.5nm,0.6s,baz=320,slow=1.2,SNR=5.6

*NEIC **19** 19:46:52.2±0.8,56.0S±0.1×27.7W±0.3, h90km±8km, mb4.5/7, Error ellipse: s-maj=21.1km s-min=15.6km az=110.0*
*IDC **19** 19:46:56.1±10.0,55.98S×27.76W, h134km±89km, mb4.0/4, mbtmp4.5/5, Error ellipse: s-maj=68.1km s-min=22.6km az=109.0*
ISC 19 19:46:51.8±0.6,**55.90S**±0.10×**27.87W**±0.10,**h100**km,**n83,** σ0**84**/84,**mb4.2/5,3C,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.21**	**285**	Pn	**Pn**	**19 48 09.4**	**+2.2**
HOPE				Sn	**Sn**	**19 49 04.3**	**-1.7**
VNA2	**Neumayer--Watz**	**17.48**	**157**	⇑P	**P**	**19 50 48.7**	**+0.1**
	comp=Z,7.2nm,0.5s,baz=319,slow=13						
SNAA	**Sanae**	**19.04**	**156**	P	**P**	**19 51 05.5**	**-0.2**
SNAA				IAmb	IAmb	19 51 06.6	
	comp=Z,16nm,0.5s						
SNAA	**Sanae**	**19.04**	**156**	⇑P	**P**	**19 51 05.5**	**-0.2**
	comp=Z,395nm,0.4s						
SNAA	**Sanae**	**19.04**	**156**	P	**P**	**19 51 05.5**	**-0.2**
	comp=Z,16nm,0.4s,baz=307,slow=11,SNR=178						
PMSA	**Palmer Station**	**19.71**	**229**	P	**Pn**	**19 51 15.5**	**+0.2**
TROLL	**Troll, Antarti**	**20.55**	**153**	⇑P	**P**	**19 51 21.5**	**-0.6**
	comp=Z,331nm,0.5s						
BELA	**Belgrano 2**	**22.20**	**184**	P	**P**	**19 51 38.5**	**-1.0**
QSPA	**South Pole Qui**	**34.35**	**180**	P	**P**	**19 53 29.1**	**+0.4**
QSPA				IAmb	IAmb	19 53 30.0	
	comp=Z,6.2nm,0.7s						
QSPA	**South Pole Qui**	**34.35**	**180**	P	**P**	**19 53 29.2**	**+0.5**
	comp=Z,5.6nm,0.7s,baz=198,slow=1.8,SNR=23						
	comp=Z,5.6nm,0.7s						
VNDA	**Vanda**	**46.71**	**183**	P	**P**	**19 55 11.4**	**+1.5**
VNDA				IAmb	IAmb	19 55 11.7	
	comp=Z,5.8nm,0.8s						
VNDA	**Vanda**	**46.71**	**183**	P	**P**	**19 55 10.3**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=178,slow=4.4,SNR=10						
	comp=Z,4.1nm,0.7s						
DBIC	**Dimbokro**	**65.19**	**25**	P	**P**	**19 57 22.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=161,slow=18,SNR=2.2						
	comp=Z,2.2nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.11**	**30**	P	**P**	**19 58 12.5**	**+1.4**
TOA0				IAmb	IAmb	19 58 13.7	
	comp=Z,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.11**	**30**	P	**P**	**19 58 12.4**	**+1.3**
TORD	**Torodi Ar. Bea**	**73.11**	**30**	P	**P**	**19 58 12.5**	**+1.4**
	comp=Z,1.6nm,0.4s,baz=200,slow=6.0,SNR=19						
	comp=Z,1.6nm,0.4s						
FINES	**FINESS Array B**	**124.43**	**28**	PKP	**PKPdf**	**20 05 37.1**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=217,slow=2.9,SNR=11						
ARCES	**ARCESS Array B**	**130.94**	**22**	PKP	**PKPdf**	**20 05 49.0**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=211,slow=3.3,SNR=8.1						
YKA	**Yellowknife Ar**	**135.80**	**318**	PKP	**PKPdf**	**20 05 58.7**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=130,slow=2.0,SNR=2.8						
N30M	**Aishikik Lake**	**144.47**	**309**	PKPdf	**PKPdf**	**20 06 14.5**	**-0.5**
F31M	**Tsiigehtchic**	**145.26**	**319**	PKPdf	**PKPbc**	**20 06 15.4**	**-0.6**
G31M	**Satah River**	**145.29**	**318**	PKPdf	**PKPab**	**20 06 16.0**	**-0.4**
M29M	**Somme Creek**	**145.45**	**310**	PKPdf	**PKPab**	**20 06 17.5**	**+0.2**
L29M	**L29M**	**145.55**	**311**	PKPdf	**PKPab**	**20 06 17.8**	**+0.2**
I30M	**Mount Dempster**	**145.56**	**315**	PKPdf	**PKPab**	**20 06 17.1**	**-0.6**
G30M	**tAoh Zrail Nji**	**146.04**	**318**	PKPdf	**PKPab**	**20 06 18.6**	**-0.7**
H29M	**Whitestone**	**146.65**	**316**	PKPdf	**PKPbc**	**20 06 20.0**	**-0.2**
E29M	**Blow River**	**147.03**	**320**	PKPdf	**PKPbc**	**20 06 20.5**	**-0.8**
I28M	**Miner Creek**	**147.05**	**315**	PKPdf	**PKPbc**	**20 06 21.1**	**-0.5**
BCAR	**Beaver Creek A**	**147.10**	**310**	PKPdf	**PKPbc**	**20 06 21.2**	**-0.5**
RAGM	**Ragged Mountai**	**147.50**	**304**		**PKiKP**	**20 06 23.8**	**-1.0**
K27K	**Chicken**	**147.52**	**312**	PKPdf	**PKiKP**	**20 06 23.2**	**-1.5**
F28M	**Old Crow**	**147.58**	**319**	PKPdf	**PKPbc**	**20 06 22.7**	**-0.1**
J26L	**Joseph Creek**	**148.28**	**312**	PKPdf	**PKiKP**	**20 06 25.2**	**-1.3**
D27M	**Malcolm River**	**148.30**	**321**	PKPdf	**PKiKP**	**20 06 25.2**	**-1.1**
SCRK	**Sand Creek**	**148.31**	**311**		**PKPbc**	**20 06 24.7**	**-0.4**
HIN	**Hinchinbrook I**	**148.35**	**304**	PKPdf	**PKPbc**	**20 06 24.4**	**-0.7**
KLU	**Klutina**	**148.44**	**306**	PKPbc	**PKiKP**	**20 06 26.8**	**0.0**
M24K	**Tolsona, Glenn**	**148.74**	**307**	PKPbc	**PKiKP**	**20 06 28.1**	**+0.7**
SCM	**Sheep Creek Mo**	**149.18**	**306**	PKPdf	**PKPbc**	**20 06 26.6**	**-0.6**
BMAR	**Burnt Mountain**	**149.31**	**317**		**PKiKP**	**20 06 27.5**	**-0.9**
PRP	**Porcupine Dome**	**149.33**	**314**	PKPdf	**PKPbc**	**20 06 27.1**	**-0.5**
IL03	**Eielson Array**	**149.72**	**312**	PKPdf	**PKPbc**	**20 06 28.1**	**-0.3**
IL31		**149.73**	**312**	PKPdf	**PKPbc**	**20 06 26.8**	**-1.5**
ILAR	**Eielson Array**	**149.73**	**312**	PKPdf	**PKPbc**	**20 06 27.6**	**-0.8**
ILAR	**Eielson Array**	**149.73**	**312**	PKPbc	**PKPbc**	**20 06 28.1**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=128,slow=1.4,SNR=26						
E25K	**Arctic Village**	**149.79**	**319**		**PKiKP**	**20 06 28.4**	**-1.0**
D25K	**Kavik River**	**150.22**	**321**	PKPdf	**PKPbc**	**20 06 28.7**	**-0.8**
BRLK	**Bradley Lake**	**150.23**	**301**	PKPdf	**PKPbc**	**20 06 28.5**	**-1.2**
RND	**Reindeer**	**150.27**	**309**		**PKiKP**	**20 06 30.0**	**-0.6**
G24K	**Hadweenzic Riv**	**150.32**	**316**		**PKiKP**	**20 06 30.5**	**0.0**
CNPM	**China Poot**	**150.32**	**301**		**PKiKP**	**20 06 30.1**	**-0.6**
H24K	**Noodor Dome**	**150.34**	**314**		**PKPbc**	**20 06 29.6**	**-0.3**
KDAK	**Kodiak Island**	**150.41**	**297**	PKPdf	**PKPbc**	**20 06 29.4**	**-0.7**
F24K	**Squaw Lake**	**150.59**	**317**		**PKiKP**	**20 06 30.9**	**-0.2**
SUA	**Susitna One**	**150.65**	**305**	PKPdf	**PKPbc**	**20 06 28.9**	**-1.9**
I23K	**Minto, Yukon-K**	**150.84**	**312**	PKPdf	**PKPbc**	**20 06 29.7**	**-1.3**
E24K	**Your Creek**	**150.87**	**318**		**PKiKP**	**20 06 31.0**	**-0.7**
TRF	**Thorofare Moun**	**150.91**	**309**		**PKPbc**	**20 06 31.1**	**-0.4**
D24K	**Happy Valley**	**151.07**	**321**	PKPdf	**PKPbc**	**20 06 29.6**	**-1.9**
SONM	**Songino Array**	**151.10**	**87**	PKPbc	**PKPbc**	**20 06 32.0**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=220,slow=3.7,SNR=45						
SKT	**Skwentna**	**151.14**	**305**		**PKiKP**	**20 06 31.9**	**-0.4**
KTH	**Kantishna Hill**	**151.21**	**309**		**PKiKP**	**20 06 31.8**	**-0.7**
TOLK	**Toolik Lake Re**	**151.32**	**320**		**PKiKP**	**20 06 32.5**	**-0.1**
G23K	**Bananza Creek**	**151.33**	**315**		**PKiKP**	**20 06 32.7**	**+0.1**
BPAW	**Bear Paw Mtn.**	**151.34**	**310**		**PKiKP**	**20 06 32.2**	**-0.5**
ILSW	**Iliamna Southw**	**151.38**	**301**		**PKiKP**	**20 06 32.4**	**-0.6**
COLD	**Coldfoot**	**151.45**	**317**	PKPbc	**PKiKP**	**20 06 33.2**	**+0.5**
PPLA	**Purkeypile**	**151.64**	**307**	PKPbc	**PKiKP**	**20 06 32.8**	**-0.7**
CAST	**Castle Rocks**	**151.70**	**308**	PKPdf	**PKPbc**	**20 06 31.3**	**-1.7**
C23K	**Itkillik River**	**151.72**	**322**		**PKiKP**	**20 06 33.1**	**-0.2**
M20K	**Styx River**	**151.85**	**305**		**PKPbc**	**20 06 32.7**	**-0.8**
I21K	**Tanana**	**151.94**	**312**	PKPdf	**PKPbc**	**20 06 32.5**	**-1.0**
E22K	**Anaktuvuk Pass**	**152.12**	**318**		**PKiKP**	**20 06 33.8**	**-0.4**
P18K	**Big Mountain,**	**152.23**	**299**	PKPdf	**PKPbc**	**20 06 33.3**	**-1.1**
N19K	**Bonanza Creek**	**152.24**	**302**		**PKPbc**	**20 06 33.8**	**-0.7**
H21K	**Melozitna Rive**	**152.34**	**313**		**PKiKP**	**20 06 34.6**	**-0.1**
O18K	**Koktuh Hills**	**152.34**	**300**		**PKPbc**	**20 06 33.9**	**-0.7**
D22K	**Ayikyak River**	**152.46**	**320**		**PKiKP**	**20 06 34.7**	**-0.1**
F21K	**Alatna River**	**152.72**	**316**		**PKPbc**	**20 06 34.7**	**-0.6**
IMAR	**Indian Mountai**	**152.75**	**314**		**PKiKP**	**20 06 35.2**	**-0.3**
G19K	**Purcell Mounta**	**154.12**	**314**	PKPbc	**PKiKP**	**20 06 38.5**	**+0.2**
D19K	**Kuna River**	**154.46**	**319**	PKPbc	**PKiKP**	**20 06 39.8**	**+0.8**

*AUST **19** 19:55:21.7±1.6,30.41S×136.82E, h2km±10km, Error ellipse: s-maj=7.1km s-min=5.7km az=38.0, Mining explosion.*
*NOU **19** 19:55:22.0,30.45S×136.86E, h0km, MLv3.1/5, South Australia*
*IDC **19** 19:55:24.5±3.9,29.93S×137.36E, h0km, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=78.1km s-min=17.4km az=44.0*
ISC 19 19:55:20.7±0.9,**30.40S**±0.05×**136.81E**±0.04,**h0km**,**n21,** σ1**66**/31,**South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	**1.21**	**93**	P	**Pg**	**19 55 44.2**	**+0.3**
	baz=1.2,SNR=16						
LCRK				S	**Sb**	**19 56 01.2**	**+0.4**
	baz=1.2						
LCRK	**Leigh Creek**	**1.21**	**93**	P	**Pg**	**19 55 43.7**	**-0.2**
MULG	**Mulgathing**	**2.38**	**272**	P	**Pn**	**19 56 02.2**	**+1.1**
	baz=2.4,SNR=9.8						
MULG				S	**Sn**	**19 56 32.3**	**+1.3**
	baz=2.4,SNR=8.9						
MULG	**Mulgathing**	**2.38**	**272**	P	**Pn**	**19 56 02.9**	**+1.8**
BBOO	**Buckleboo**	**2.49**	**195**	P	**Pn**	**19 56 02.8**	**+0.3**
	baz=2.5,SNR=24						
BBOO				S	**Sn**	**19 56 33.7**	**+0.1**
	baz=2.5,SNR=5.7						
BBOO	**Buckleboo**	**2.49**	**195**	P	**Pn**	**19 56 03.1**	**+0.6**
OOD	**Oodnadatta**	**2.78**	**339**	P	**Pn**	**19 56 08.3**	**+1.9**
	baz=2.8,SNR=10						
OOD				S	**Sn**	**19 56 42.9**	**+2.2**
	baz=2.8,SNR=5.5						
HTT	**Hallett**	**3.51**	**150**	P	**Pn**	**19 56 17.8**	**+1.1**
	baz=3.5						
HTT				S	**Sn**	**19 57 00.9**	**+2.0**
	baz=3.5						
HTT	**Hallett**	**3.51**	**150**	P	**Pn**	**19 56 16.6**	**0.0**
INKA	**Innaminka**	**4.34**	**53**	P	**Pn**	**19 56 28.9**	**+0.9**
	baz=4.3						
INKA				S	**Sn**	**19 57 21.7**	**+2.4**
	baz=4.3						
STKA	**Stephens Creek**	**4.36**	**111**	P	**Pn**	**19 56 29.3**	**+1.2**
	baz=4.3,SNR=11						
STKA				S	**Sn**	**19 57 19.9**	**+0.3**
	baz=4.3						
STKA	**Stephens Creek**	**4.36**	**111**	P	**Pn**	**19 56 29.1**	**+0.9**
STKA	**Stephens Creek**	**4.36**	**111**	Pn	**Pn**	**19 56 29.1**	**+0.9**
	0.7nm,0.3s,baz=304,slow=13,SNR=9.0						
STKA				Sn	**Sn**	**19 57 18.9**	**-0.7**
	2.1nm,0.3s,baz=308,slow=17,SNR=8.0						
STKA				Lg	Lg	19 57 34.7	
	1.4nm,0.3s,baz=313,slow=19,SNR=3.2						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**7.19**	**338**	Pn	**Pn**	**19 57 08.8**	**+1.6**
	0.3nm,0.3s,baz=157,slow=11,SNR=22						
ASAR				Sn	**Sn**	**19 58 26.3**	**-3.4**
	0.4nm,0.3s,baz=157,slow=23,SNR=9.6						
	0.4nm,0.3s						
ASPA	**Alice Springs**	**7.19**	**338**	P	**Pn**	**19 57 09.0**	**+1.8**
	baz=7.2						
FORT	**Forrest**	**7.56**	**265**	P	**Pn**	**19 57 12.8**	**+0.7**
	baz=7.5						
CMSA	**Cobar Meteorol**	**7.71**	**101**	P	**Pn**	**19 57 14.7**	**+0.4**
	baz=7.7						
WRKA	**Warakurna**	**9.25**	**303**	P	**Pn**	**19 57 36.3**	**+0.9**
	baz=9.3						
QIS	**Mount Isa**	**10.12**	**15**	P	**Pn**	**19 57 47.6**	**+0.3**
	baz=10						
WC3	**Warramunga Arr**	**10.63**	**347**	P	**Pn**	**19 57 54.4**	**0.0**
	baz=11						
WRA	**Warramunga Arr**	**10.65**	**347**	Pn	**Pn**	**19 57 54.1**	**-0.6**
	0.4nm,0.3s,baz=164,slow=13,SNR=17						
WRA				Sn	**Sn**	**19 59 49.5**	**-5.2**
	0.2nm,0.3s,baz=166,slow=25,SNR=4.6						
	0.7nm,0.4s						

*MDD **19** 19:58:43.7±0.4, 35.50N×3.77W, h0km, mb_Lg2.8/22, Error ellipse: s-maj=3.8km s-min=2.2km az=6.0*
*CNRM **19** 19:58:44.7, 35.61N×3.69W, h28km, ML2.9*
*INMG **19** 19:58:45.5±1.7, 35.52N×3.84W, h3km, ML2.5, Error ellipse: s-maj=5.8km s-min=4.0km az=140.0*
*IGIL **19** 19:58:45.9, 35.48N×3.81W, h7km*
*SFS **19** 19:58:45.6, 35.46N×3.74W, h27km, ML3.3/25, ML3.3/18, MLv2.9/25*
ISC 19 19:58:45.2±1.0,**35.55N**±0.02×**3.73W**±0.02,**h27km**±10km, **n98**,σ1**56**/154,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.37**	**208**	P	**Pb**	**19 58 52.5**	**-1.0**
PALE	**Palemas**	**0.37**	**208**	S	**Sb**	**19 59 00.5**	**+1.4**
EMEL	**Melilla**	**0.68**	**111**	Pg	**Pb**	**19 58 58.1**	**-0.3**
EMEL				Sg	**Sb**	**19 59 06.3**	**-1.1**
GOG	**Mont Gurugu**	**0.68**	**118**	P	**Pb**	**19 58 58.0**	**-0.6**
GOG				P	**Pn**	**19 58 58.1**	**-1.0**
GOG	**Mont Gurugu**	**0.68**	**118**	S	**Sb**	**19 59 08.3**	**+0.6**
EMLI	**Melilla**	**0.68**	**111**	Pg	**Pb**	**19 58 58.0**	**-0.4**
EMLI				Sg	**Sb**	**19 59 07.1**	**-0.4**
EALB	**Alboran**	**0.69**	**55**	Pg	**Pb**	**19 58 58.3**	**-0.3**
EALB				Sg	**Sn**	**19 59 09.7**	**+0.9**
EALB	**Alboran**	**0.69**	**55**	Pg	**Pb**	**19 58 58.3**	**-0.3**
EALB				Sg	**Sb**	**19 59 08.3**	**+0.6**
EALB				*i* Vmb_Lg		19 59 10.5	
AKLM	**AKL**	**1.04**	**186**	P	**Pn**	**19 59 04.8**	**+0.7**
AKLM	**AKL**	**1.04**	**186**	S	**Sb**	**19 59 18.0**	**+0.1**
CHAS	**Isla Isabel II**	**1.12**	**109**	Pn	**Pn**	**19 59 04.4**	**-0.7**
CHAS				Sn	**Sn**	**19 59 18.8**	**-0.7**
TAF	**Taforalt**	**1.30**	**124**	P	**Pn**	**19 59 07.7**	**0.0**
TAF	**Taforalt**	**1.30**	**124**	S	**Sn**	**19 59 23.5**	**-0.7**
ELGU	**Los Guajares,**	**1.32**	**4**	Pn	**Pn**	**19 59 07.4**	**-0.4**
ELGU				Sn	**Sn**	**19 59 24.6**	**0.0**
ELGU	**Los Guajares,**	**1.32**	**4**	Pg	**Pn**	**19 59 07.4**	**-0.4**
ELGU				Sg	**Sb**	**19 59 25.4**	**-0.4**
ELGU				*i* Vmb_Lg		19 59 29.1	
EMIJ	**Mijas**	**1.32**	**320**	Pn	**Pn**	**19 59 07.0**	**-0.8**
EMIJ				Sn	**Sn**	**19 59 25.1**	**+0.5**
EMIJ	**Mijas**	**1.32**	**320**	Pg	**Pn**	**19 59 07.0**	**-0.8**
EMIJ				Sg	**Sn**	**19 59 24.3**	**-0.2**
EMIJ				*i* Vmb_Lg		19 59 29.6	
EMAL	**Malaga-Limoner**	**1.34**	**335**	Pn	**Pn**	**19 59 07.8**	**-0.2**
EMAL				Sn	**Sn**	**19 59 24.3**	**-0.6**
SMIR	**Smir Dam**	**1.35**	**276**	P	**Pn**	**19 59 06.8**	**-1.4**
SMIR	**Smir Dam**	**1.35**	**276**	S	**Sb**	**19 59 27.1**	**+0.3**
CEU	**Ceuta**	**1.38**	**285**	Pn	**Pn**	**19 59 06.4**	**-2.3**
CEU				Sn	**Sn**	**19 59 23.3**	**-2.7**
ECEU	**Ceuta**	**1.39**	**285**	Pn	**Pn**	**19 59 07.7**	**-1.0**
ECEU	**Ceuta**	**1.39**	**285**	Pn	**Pn**	**19 59 07.7**	**-1.0**
ECEU				Sn	**Sn**	**19 59 26.0**	**-0.2**
ECEU				*i* Vmb_Lg		19 59 28.5	
CHEFC	**Chefchaouen**	**1.39**	**252**	P	**Pn**	**19 59 09.5**	**+0.7**
CHEFC	**Chefchaouen**	**1.39**	**252**	S	**Sn**	**19 59 26.8**	**+0.5**
EBER	**Berja**	**1.51**	**26**	Pn	**Pn**	**19 59 10.2**	**-0.3**
EBER	**Berja**	**1.51**	**26**	Pn	**Pn**	**19 59 10.2**	**-0.3**
EBER				Sg	**Sn**	**19 59 29.8**	**+0.5**
EBER				Sn	**Sb**	**19 59 31.0**	**-0.4**
EBER				*i* Vmb_Lg		19 59 40.8	
JBK	**JBK**	**1.54**	**141**	P	**Pn**	**19 59 11.1**	**+0.1**
JBK	**JBK**	**1.54**	**141**	S	**Sn**	**19 59 30.3**	**0.0**
EGOR	**Sierra Gorda,**	**1.59**	**349**	Pn	**Pn**	**19 59 11.7**	**+0.1**
EGOR				Sn	**Sn**	**19 59 31.6**	**+0.2**
EGOR	**Sierra Gorda,**	**1.59**	**349**	Pn	**Pn**	**19 59 12.0**	**+0.4**
EGOR				Sn	**Sb**	**19 59 33.9**	**+0.2**
EGOR				*i* Vmb_Lg		19 59 38.1	
EQUE	**Quentar**	**1.67**	**8**	Pn	**Pn**	**19 59 13.6**	**+0.9**
EQUE				Sn	**Sb**	**19 59 35.2**	**-0.7**
EQUE				*i* Vmb_Lg		19 59 39.0	
EQTA	**Presa de Quent**	**1.67**	**8**	Pn	**Pn**	**19 59 13.7**	**+1.0**
RSA	**Sarsar**	**1.84**	**249**	P	**Pn**	**19 59 15.1**	**+0.1**
RSA	**Sarsar**	**1.84**	**249**	S	**Sb**	**19 59 40.4**	**-0.3**
ENIJ	**Nijar**	**1.88**	**40**	Pn	**Pn**	**19 59 15.2**	**-0.3**
ENIJ	**Nijar**	**1.88**	**40**	Pn	**Pn**	**19 59 15.6**	**+0.1**
ENIJ				Sn	**Sn**	**19 59 39.9**	**+1.6**
ENIJ				*i* Vmb_Lg		19 59 49.3	
LCRM	**LCR**	**2.08**	**207**	P	**Pb**	**19 59 21.4**	**-0.9**
LCRM	**LCR**	**2.08**	**207**	S	**Sb**	**19 59 48.6**	**+0.8**
ESPR	**Espera**	**2.17**	**308**	Pn	**Pn**	**19 59 21.5**	**+2.0**
EQES	**Quesada**	**2.31**	**13**	Pn	**Pb**	**19 59 24.2**	**-2.0**
EQES				Sn	**Sb**	**19 59 53.5**	**-0.8**
EQES				*i* Vmb_Lg		19 59 58.8	
EADA	**Adamuz**	**2.70**	**346**	Pn	**Pn**	**19 59 28.7**	**+1.9**
EADA	**Adamuz**	**2.70**	**346**	Pn	**Pn**	**19 59 28.7**	**+1.9**
EADA				Sn	**Sn**	**20 00 00.3**	**+1.7**
EADA				*i* Vmb_Lg		20 00 11.6	
MD31	**MD31**	**2.81**	**198**	P	**Pn**	**19 59 30.2**	**+1.9**
MD31	**MD31**	**2.81**	**198**	S	**Sn**	**20 00 03.1**	**+1.7**
MDT	**Midelt**	**2.83**	**195**	P	**Pn**	**19 59 29.8**	**+1.2**
MDT				P	Pb	19 59 29.9	-5.0
MDT	**Midelt**	**2.83**	**195**	S	**Sn**	**20 00 03.1**	**+1.3**
EZAR	**Zarzadilla de**	**2.84**	**35**	Pn	**Pn**	**19 59 29.4**	**+0.6**
EZAR				Sn	**Sn**	**20 00 04.2**	**+2.1**
EZAR				*i* Vmb_Lg		20 00 09.9	
ECAB	**El Cabril**	**2.86**	**332**	Pn	**Pn**	**19 59 30.9**	**+1.8**
ECAB	**El Cabril**	**2.86**	**332**	Pn	**Pn**	**19 59 30.8**	**+1.8**
ECAB				Sn	**Sn**	**20 00 03.9**	**+1.3**
ECAB				*i* Vmb_Lg		20 00 15.6	
CART	**Cartagena**	**2.99**	**46**	Pn	**Pn**	**19 59 32.0**	**+1.3**
CART				Sn	**Sn**	**20 00 03.8**	**-1.9**
CART	**Cartagena**	**2.99**	**46**	P	**Pn**	**19 59 31.7**	**+1.0**
CART	**Cartagena**	**2.99**	**46**	S	**Sn**	**20 00 02.6**	**-3.1**
EMUR	**La Murta**	**3.04**	**40**	Pn	**Pn**	**19 59 31.4**	**0.0**
EMUR				Sn	**Sn**	**20 00 07.8**	**+0.9**
EMUR				*i* Vmb_Lg		20 00 14.2	
**ZHG

EIBI					Sn	Sn	20 01 00.4	-3.0
EIBI	**Ibiza**	**5.33**	**48**		Pn	Pn	**20 00 03.3**	**+0.4**
EIBI					Sn	Sn	**20 01 01.2**	**-2.1**
EIBI				*i*	Vmb_Lg		20 01 14.2	
OUK	**Oukaimeden**	**5.54**	**220**		P	Pn	**20 00 08.0**	**+1.8**
OUK	**Oukaimeden**	**5.54**	**220**		S	Sn	**20 01 09.9**	**+0.7**
PCAS	**Casmilo, Conde**	**5.87**	**321**	*eP*		Pn	**20 00 14.1**	**+3.8**
PVIS	**Viseu**	**6.11**	**329**	*eP*		Pn	**20 00 16.5**	**+2.8**
PVIS				*eS*		Sn	**20 01 22.3**	**-0.5**
PVIS					A	A	20 01 25.5	
	3.0nm,0.3s							
MVO	**Moncorvo**	**6.18**	**336**	*eP*		Pn	**20 00 17.1**	**+2.5**
MVO				*eS*		Sn	**20 01 22.3**	**-2.0**
MVO					A	A	20 01 34.4	
	4.4nm,0.9s							
PVRL	**Vila Real**	**6.52**	**332**	*eP*		Pn	**20 00 21.5**	**+2.2**
PVRL				*eS*		Sn	**20 01 25.7**	**-7.0**
PVRL					A	A	20 01 39.4	
	6.3nm,0.4s							
POLO	**Lamas de Olo**	**6.63**	**332**	*eP*		Pn	**20 00 23.3**	**+2.4**
POLO				*eS*		Sn	**20 01 33.1**	**-2.5**
PBRG	**Braganca**	**6.67**	**340**	*eP*		Pn	**20 00 23.6**	**+2.2**
ETOS	**Mallorca**	**6.68**	**49**	Pn		Pn	**20 00 22.5**	**+1.0**

*CATAC **19** 20:11:01.6±0.5, 12°.25N×89°.68W, h10km, ML3.7*
*SNET **19** 20:11:03.2±0.9, 12°.21N×89°.75W, h35km±999km, ML3.5*
ISC 19 20:11:01.4±3.7, **12°.3N**±0°.1×**89°.67W**±0°.08, **h4**km±27km, **n36, σ0°72/64, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**1.37**	**9**	*eP*	**Pn**	**20 11 27.1**	**-0.3**
JAYA				*eS*	**Sn**	**20 11 45.6**	**-0.5**
JAYA				IAML		20 11 48.0	
	comp=Z,787nm,0.2s						
JAYA	**Jayaque - finc**	**1.37**	**9**	*i* P	**Pn**	**20 11 27.6**	**+0.1**
JAYA				*i* S	**Sn**	**20 11 45.7**	**-0.5**
JAYA				IAML		20 11 48.3	
	comp=Z,2μm,1.0s						
PANCS	**Alcalda de**	**1.39**	**20**	*i* P	**Pn**	**20 11 27.5**	**-0.2**
PANCS				*i* S	**Sn**	**20 11 45.6**	**-1.0**
PANCS				IAML		20 12 04.4	
	comp=Z,2μm,1.0s						
LOMA	**Loma Larga**	**1.43**	**20**	*i* P	**Pn**	**20 11 28.2**	**-0.1**
LOMA				*i* S	**Sn**	**20 11 47.4**	**-0.2**
LOMA				IAML		20 11 50.4	
	comp=Z,480nm,1.0s						
PMON	**Piamonte**	**1.45**	**14**	*i* P	**Pn**	**20 11 29.1**	**+0.5**
PMON				IAML		20 11 58.1	
	comp=Z,610nm,1.0s						
SJTE	**Alcalda de S**	**1.46**	**26**	*i* P	**Pn**	**20 11 27.5**	**-1.2**
SJTE				IAML		20 11 51.9	
	comp=Z,280nm,1.0s						
UDBS	**Universidad Do**	**1.50**	**19**	*i* P	**Pn**	**20 11 27.2**	**-2.0**
UDBS				IAML		20 12 05.6	
	comp=Z,480nm,1.0s						
TECO	**Alcaldia de Te**	**1.51**	**35**	*i* P	**Pn**	**20 11 28.0**	**-1.3**
TECO				*i* S	**Sn**	**20 11 48.7**	**-0.7**
TECO				IAML		20 11 51.5	
	comp=Z,200nm,1.0s						
CEDA	**San Andres**	**1.52**	**10**	*i* P	**Pn**	**20 11 29.9**	**+0.4**
CEDA				*i* S	**Sn**	**20 11 49.6**	**-0.2**
CEDA				IAML		20 12 04.6	
	comp=Z,1μm,1.0s						
CEVE	**Cerro Verde**	**1.52**	**2**	*i* P	**Pn**	**20 11 30.2**	**+0.5**
CEVE				*i* S	**Sn**	**20 11 50.0**	**-0.2**
CEVE				IAML		20 11 51.6	
	comp=Z,3μm,1.0s						
SBLS	**San Blas**	**1.54**	**2**	*eP*		**Pn**	**20 11 30.1**	**+0.2**
SNJE	**San Jose**	**1.56**	**2**	*eP*		**Pn**	**20 11 30.4**	**+0.2**
SNJE				*eS*		**Sn**	**20 11 51.1**	**0.0**
QUEZ	**Alcaldia de Qu**	**1.58**	**14**	*i* P		**Pn**	**20 11 52.2**	**-1.1**
QUEZ				*i* S		**Sn**	**20 11 51.8**	**+0.6**
QUEZ				IAML			20 11 52.9	
	comp=Z,2μm,1.0s							
PAVA	**Las Pavas**	**1.58**	**27**	*i* P		**Pn**	**20 11 30.2**	**-0.1**
PAVA				*i* S		**Sn**	**20 11 50.9**	**-0.4**
PAVA				IAML			20 11 52.7	
	comp=Z,610nm,1.0s							
UESV	**Universidad de**	**1.58**	**33**	*i* P		**Pn**	**20 11 29.0**	**-1.4**
UESV				*i* S		**Sn**	**20 11 51.7**	**+0.3**
UESV				IAML			20 11 58.8	
	comp=Z,310nm,1.0s							
NUBE	**Las Nubes**	**1.60**	**356**	*eP*		**Pn**	**20 11 30.8**	**+0.1**
NUBE				*eS*		**Sn**	**20 11 51.1**	**-0.9**
NUBE				IAML			20 11 53.0	
	comp=Z,496nm,0.4s							
NUBE	**Las Nubes**	**1.60**	**356**	*i* P		**Pn**	**20 11 30.9**	**+0.2**
NUBE				*i* S		**Sn**	**20 11 51.0**	**-0.9**
NUBE				IAML			20 11 52.8	
	comp=Z,1μm,1.0s							
SCLA	**Alcaldia de Sa**	**1.67**	**33**	*i* P		**Pn**	**20 11 31.6**	**0.0**
SCLA				IAML			20 12 00.3	
	comp=Z,91nm,1.0s							
JUCU	**Jucuarįn**	**1.68**	**55**	*i* P		**Pn**	**20 11 31.6**	**-0.1**
JUCU				*i* S		**Sn**	**20 11 54.4**	**+0.7**
JUCU				IAML			20 12 00.5	
	comp=Z,420nm,1.0s							
UNIC	**Universidad Ca**	**1.68**	**4**	*i* P		**Pn**	**20 11 31.1**	**-0.6**
UNIC				*i* S		**Sb**	**20 11 55.1**	**+0.5**
UNIC				IAML			20 12 01.1	
	comp=Z,240nm,1.0s							
LOAL	**Lomas de Alarc**	**1.70**	**356**	*i* P		**Pb**	**20 11 33.3**	**0.0**
LOAL				*i* S		**Sn**	**20 11 54.8**	**+0.6**
LOAL				IAML			20 12 00.1	
	comp=Z,2μm,1.0s							
PQSS	**Presa 15 de Se**	**1.71**	**39**	IAML			20 11 30.2	
	comp=Z,670nm,1.0s							
PQSS				*i* P		**Pn**	**20 11 31.8**	**-0.2**
PQSS				*i* S		**Sb**	**20 11 55.5**	**+0.3**
PACA	**Pacayal**	**1.75**	**48**	*eP*		**Pn**	**20 11 33.2**	**+0.5**
PACA	**Pacayal**	**1.75**	**48**	*i* P		**Pn**	**20 11 33.3**	**+0.5**
PACA				*i* S		**Sb**	**20 11 57.5**	**+0.8**
PACA				IAML			20 11 59.9	
	comp=Z,2μm,1.0s							
LLGN	**La Laguna**	**1.98**	**21**	*i* P		**Pn**	**20 11 36.1**	**+0.2**
LLGN				IAML			20 11 53.8	
	comp=Z,280nm,1.0s							
LLGN				*i* S		**Sb**	**20 12 03.4**	**0.0**
LCND	**La Caada**	**2.00**	**60**	*eP*		**Pn**	**20 11 36.1**	**0.0**
LCND				*eS*		**Sn**	**20 12 02.4**	**+0.7**
LCND	**La Caada**	**2.00**	**60**	*i* P		**Pn**	**20 11 35.8**	**-0.3**
LCND				IAML			20 11 36.3	
	comp=Z,810nm,1.0s							
LCND				*i* S		**Sn**	**20 12 01.0**	**-0.7**
CNCH	**Conchagua**	**2.04**	**61**	*eP*		**Pn**	**20 11 36.7**	**+0.1**
CNCH	**Conchagua**	**2.04**	**61**	*i* P		**Pn**	**20 11 36.3**	**-0.3**
CNCH				*i* S		**Sb**	**20 12 05.3**	**+0.4**
CNCH				IAML			20 12 06.7	
	comp=Z,940nm,1.0s							
MTO3	**Montecristo**	**2.11**	**8**	*eP*		**Pn**	**20 11 38.5**	**+0.7**
MTO3				*eS*		**Sn**	**20 12 05.9**	**+1.2**
MTO3				*eS*		**Sb**	**20 12 06.1**	**-1.1**
MTO3	**Montecristo**	**2.11**	**8**	*i* P		**Pn**	**20 11 38.5**	**+0.7**
MTO3				*i* S		**Sn**	**20 12 04.9**	**+0.2**
MTO3				IAML			20 12 07.9	
	comp=Z,250nm,1.0s							
CSGN	**Cosiguina Volc**	**2.17**	**72**	*i* P		**Pn**	**20 11 36.2**	**-2.2**
CSGN				IAML			20 12 09.0	
	comp=Z,780nm,1.0s							
AMPH	**Amapala**	**2.19**	**63**	*i* P		**Pn**	**20 11 38.4**	**-0.3**
AMPH				*i* S		**Sn**	**20 12 06.9**	**+0.6**
CRIN	**San Cristobal**	**2.59**	**81**	*i* P		**Pn**	**20 11 44.3**	**+0.1**
CRIN				*i* S		**Sn**	**20 12 17.3**	**+1.2**
CRIN				IAML			20 12 29.2	
	comp=Z,490nm,1.0s							
YUSH	**Yuscaran**	**3.21**	**59**	*eP*		**Pn**	**20 11 53.3**	**+0.6**
LIMN	**Finca el Limon**	**3.31**	**76**	*i* P		**Pn**	**20 11 53.6**	**-0.5**
LIMN				IAML			20 11 54.3	
	comp=Z,65nm,1.0s							
LIMN				*i* S		**Sn**	**20 12 33.2**	**-0.8**

IDC 19 20:17:24.6±3.1, **4°.40N**×**126°.36E**, **h0**km, **mb3.4**/3, **mbtmp3.4**/3, **Error ellipse: s-maj=300.1km s-min=26.9km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.43**	**162**	P	P	20 22 54.2	-0.1
	1.3nm,0.7s,baz=341,slow=10,SNR=4.9						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**28.85**	**166**	P	P	20 23 25.1	0.0
	0.1nm,0.7s,baz=351,slow=6.9,SNR=1.4						
	0.1nm,0.7s						
MKAR	**Makanchi Array**	**56.80**	**325**	P	P	20 27 10.7	-0.1
	0.2nm,0.4s,baz=117,slow=7.6,SNR=7.3						
	0.2nm,0.4s						

WEL 19 20:27:09.2±1.0, **34°S**±17°×**17°9E**±2°3, **h279**km±25km, **M4.0**/18, **mB4.5**/7, **ML4.4**/22, **MLv4.2**/18, **Mw(mB)3.7**/7, **Error ellipse: s-maj=0.0km s-min=0.0km az=120.6, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**3.53**	**190**	P	Pn	20 28 08.6	-0.4
HAZ				S	S	20 28 57.2	+0.5
WMGZ	**Waiomatatini S**	**3.54**	**181**	P	Pn	20 28 10.1	+0.9
PKGZ	**Pakihiroa**	**3.63**	**186**	P	Pn	20 28 10.9	+0.7
RUGZ	**Raukumara Rang**	**3.75**	**190**	P	Pn	20 28 10.8	-0.8
RUGZ				S	S	20 29 01.1	-0.3
PUZ	**Puketiti**	**3.80**	**183**	P	Pn	20 28 13.0	+1.0
PUZ				S	S	20 29 01.1	-1.1
TWGZ	**Tauwhareparae**	**3.92**	**186**	P	Pn	20 28 12.7	-0.7
TWGZ				S	S	20 29 05.0	+0.2
MWZ	**Matawai**	**4.13**	**191**	P	Pn	20 28 16.8	+0.9
MWZ				S	S	20 29 09.4	+0.3
URZ	**Urewera**	**4.14**	**196**	P	Pn	20 28 14.7	-1.1
URZ				S	S	20 29 09.7	+0.5
TKGZ	**Te Karaka**	**4.20**	**187**	P	Pn	20 28 16.3	-0.2
TKGZ				S	S	20 29 10.7	+0.4
CNGZ	**Carnagh Statio**	**4.21**	**183**	P	Pn	20 28 15.8	-0.8
CNGZ				S	S	20 29 11.3	+0.7
RAGZ	**Rawiri**	**4.31**	**192**	P	Pn	20 28 18.0	+0.1
RAGZ				S	S	20 29 13.0	+0.1
MUGZ	**Murupara**	**4.43**	**198**	P	Pn	20 28 19.2	0.0
MUGZ				S	S	20 29 14.7	-0.5
RIGZ	**Rimuhau**	**4.47**	**188**	P	Pn	20 28 20.2	+0.6
RIGZ				S	S	20 29 16.3	+0.3
SNGZ	**Shannon Statio**	**4.60**	**192**	P	Pn	20 28 22.0	+0.8
SNGZ				S	S	20 29 20.4	+1.5
PRGZ	**Paritu Road**	**4.67**	**186**	P	Pn	20 28 22.5	+0.5
PRGZ				S	S	20 29 21.5	+1.1
MTHZ	**Maungataniwha**	**4.77**	**196**	P	Pn	20 28 23.8	+0.6
RAHZ	**Arahi**	**4.78**	**194**	P	Pn	20 28 23.3	0.0
RAHZ				S	S	20 29 23.4	+0.8
KNZ	**Kokohu**	**4.79**	**188**	P	Pn	20 28 22.2	-1.1
MHGZ	**Mahia Peninsul**	**4.90**	**186**	P	Pn	20 28 24.7	0.0
NMHZ	**Naumai**	**5.01**	**196**	P	Pn	20 28 27.0	+0.9
ARHZ	**Aropaoanui**	**5.13**	**193**	P	Pn	20 28 27.8	+0.4
MCHZ	**McNeill Hill**	**5.37**	**195**	P	Pn	20 28 30.8	+0.6
KWHZ	**Kaweka Forest**	**5.41**	**198**	P	Pn	20 28 30.5	-0.3
BHHZ	**Black Hill Sta**	**5.57**	**200**	P	Pn	20 28 31.9	-0.8
PKVZ	**Pokaka**	**5.62**	**206**	P	Pn	20 28 34.6	+1.2
KRHZ	**Kereru**	**5.63**	**197**	P	Pn	20 28 32.7	-0.8
KAHZ	**Kahuranaki**	**5.67**	**193**	P	Pn	20 28 33.2	-0.7
PXZ	**Pawanui**	**5.90**	**193**	P	Pn	20 28 35.9	-0.8
PRHZ	**Porangahau**	**6.17**	**194**	P	Pn	20 28 38.8	-1.1
CTZ	**Chatham Island**	**10.18**	**160**	P	P	20 29 42.1	+8.3

DJA 19 20:32:09.0±0.9, **8°S**±11°×**12°8E**±°, **h110**km±59km, **M4.1**/9, **mb3.9**/6, **mB4.6**/2, **MLv4.2**/9, **Mw(mB)3.8**/2, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.49**	**98**	P	Pn	20 33 02.0	+0.5
SOEI	**Soe**	**4.15**	**237**	P	Pn	20 33 09.9	-0.6
MMRI	**Maumere**	**5.63**	**258**	P	Pn	20 33 31.3	+0.9
	41nm,0.6s,0.2nm						
EDFI	**Ende, Flores**	**6.18**	**258**	P	Pn	20 33 37.4	-0.5
	9.9nm,1.6s,0.1nm						
FAKI	**Fak Fak**	**6.36**	**44**	P	Pn	20 33 39.4	-0.9
	11nm,1.3s,0.1nm						
KMPI	**Kaimana, Papua**	**7.01**	**57**	P	Pn	20 33 48.6	-0.5
SWI	**Sorong**	**7.45**	**28**	P	Pn	20 33 55.4	+0.3
	9.8nm,0.5s,0.1nm						

*DJA **19** 20:36:33.5±0.3, 8°S±3°×107°E±°, h10km, M3.8/15, mb3.9/2, MLv3.8/15*
ISC 19 20:36:33.5±1.3, **7°.88S**±0°.06×**106°.50E**±0°.06, **h10**km, **n18, σ0°75/18, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.84**	**48**	P	**Pb**	**20 36 49.9**	**-0.3**
SKJI	**Sukabumi**	**0.87**	**3**	P	**Pb**	**20 36 50.3**	**-0.5**
BBJI	**Bungbulang**	**1.21**	**70**	P	**Pb**	**20 36 55.9**	**-0.7**
DBJI	**Dramaga**	**1.34**	**11**	P	**Pn**	**20 36 57.8**	**-0.5**
LEM	**Lembang**	**1.52**	**47**	P	**Pb**	**20 37 01.3**	**-0.7**
SBJI	**Serang**	**1.79**	**348**	P	**Pn**	**20 37 04.2**	**-0.3**
CMJI	**Cimerak**	**1.93**	**87**	P	**Pn**	**20 37 05.7**	**-0.7**
KPJI	**Karang Pucung**	**2.47**	**77**	P	**Pn**	**20 37 14.0**	**+0.2**
XMI	**Christmas Isla**	**2.68**	**197**	P	**Pn**	**20 37 16.4**	**-0.3**
XMIS	**Christmas Isla**	**2.72**	**198**	P	**Pn**	**20 37 16.7**	**-0.6**
KASI	**Kota Agung**	**3.07**	**319**	P	**Pn**	**20 37 22.5**	**+0.3**
LWLI	**Liwa**	**3.74**	**319**	P	**Pn**	**20 37 32.0**	**+0.5**
UGM	**Wanagama**	**3.98**	**91**	P	**Pn**	**20 37 35.0**	**+0.3**
UGM	**Wanagama**	**3.98**	**91**	P	**Pn**	**20 37 34.8**	**+0.1**
MNAI	**Manna**	**4.97**	**315**	P	**Pn**	**20 37 48.8**	**+0.6**
PWJI	**Pagerwojo**	**5.25**	**92**	P	**Pn**	**20 37 52.7**	**+0.5**
	18nm,2.2s,0.1nm						
JAGI	**Jajag, Banyuwa**	**7.59**	**95**	P	**Pn**	**20 38 26.3**	**+1.9**
PLAI	**Plampang**	**11.20**	**96**	P	**Pn**	**20 39 14.8**	**+1.0**

*AEIC **19** 20:44:13.4±1.0, 56°.5N±0°.1×148°.59W±0°.07, h11km±7km, Error ellipse: s-maj=17.4km s-min=5.2km az=182.0*
NEIC 19 20:44:08.2±0.8, **56°.43N**±0°.07×**148°.62W**±0°.10, **h10**km±2km, **ML3.1**/36, **ML2.9**(AEIC), **Error ellipse: s-maj=14.4km s-min=5.9km az=147.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.55**	**304**		Pn	20 44 49.6	-0.1
KDAK					Sn	20 45 19.3	-1.4
OHAK	**Old Harbor**	**2.69**	**289**		Pn	20 44 51.3	-0.1
OHAK					Sn	20 45 21.6	-2.4
SYI	**Shuyak Island**	**2.99**	**319**		Pn	20 44 56.3	+0.7
SYI					Sn	20 45 29.6	-1.8
CNPM	**China Poot**	**3.40**	**337**		Pn	20 45 01.3	-0.1
CNPM					Sn	20 45 39.4	-2.3
CNPM	**China Poot**	**3.40**	**337**	IAML		20 46 53.2	
	comp=E,13nm,1.5s						
BRSE	**Bradley Lake S**	**3.51**	**342**		Pn	20 45 02.7	-0.1
BRSE					Sn	20 45 41.1	-3.3
BRLK	**Bradley Lake**	**3.56**	**341**		Pn	20 45 02.9	-0.5
BRLK					Sn	20 45 42.2	-3.3
P23K	**Montague Islan**	**3.64**	**10**		Pn	20 45 04.0	-0.5
P23K					Sn	20 45 43.3	-4.2
HIN	**Hinchinbrook I**	**4.13**	**15**		Pn	20 45 11.0	-0.4
HIN	**Hinchinbrook I**	**4.13**	**15**	IAML		20 47 36.1	
	comp=N,22nm,1.4s						
HIN				IAML		20 47 48.4	
	comp=E,22nm,1.5s						
KAIM	**Kayak Island**	**4.15**	**31**		Pn	20 45 11.6	-0.1
KAIM	**Kayak Island**	**4.15**	**31**	IAML		20 47 38.6	
	comp=E,32nm,0.4s						
SLKM	**Skilak Lake**	**4.18**	**349**		Pn	20 45 11.7	-0.3
SUCK	**Suckling Hills**	**4.46**	**33**		Pn	20 45 16.2	+0.4
SUCK	**Suckling Hills**	**4.46**	**33**	IAML		20 47 41.5	
	comp=E,18nm,1.0s						
SUCK				IAML		20 47 44.0	
	comp=N,17nm,1.5s						
FID	**Port Fidalgo**	**4.48**	**14**		Pn	20 45 15.6	-0.5
FID	**Port Fidalgo**	**4.48**	**14**	IAML		20 47 42.6	
	comp=N,11nm,0.6s						
FID				IAML		20 47 44.0	
	comp=E,13nm,1.2s						
RAGM	**Ragged Mountai**	**4.48**	**26**	Pn	Pn	20 45 16.1	-0.1
NICHA	**Nichawak Mount**	**4.54**	**31**		Pn	20 45 17.1	+0.2
HMT	**Hamilton**	**4.54**	**29**		Pn	20 45 17.2	+0.3
BERG	**Berg Lake**	**4.74**	**31**		Pn	20 45 19.6	-0.1
GRIN	**Grindle Hills**	**4.76**	**34**		Pn	20 45 20.3	+0.2
SNH	**Sunshine Point**	**4.84**	**37**		Pn	20 45 21.2	+0.1
SNH	**Sunshine Point**	**4.84**	**37**	IAML		20 47 06.2	
	comp=N,19nm,1.5s						
SNH				IAML		20 47 46.7	
	comp=E,16nm,1.4s						
KHIT	**Khitrov Hills**	**4.92**	**33**		Pn	20 45 21.9	-0.3
BMRM	**Bremner River**	**5.01**	**23**		Pn	20 45 23.2	-0.2
WAX	**Waxell Ridge**	**5.04**	**35**		Pn	20 45 22.0	-1.9
CRQM	**Cirque**	**5.20**	**31**		Pn	20 45 26.1	0.0
KLU	**Klutina**	**5.27**	**14**		Pn	20 45 26.6	-0.4
TGL	**Tana Glacier**	**5.29**	**32**		Pn	20 45 27.3	0.0
TGL	**Tana Glacier**	**5.29**	**32**	IAML		20 47 53.7	
	comp=E,11nm,0.5s						
TGL				IAML		20 47 54.6	
	comp=N,11nm,0.6s						
BAGL	**Bagley Icefiel**	**5.32**	**37**		Pn	20 45 27.7	0.0
ISLE	**Juniper Island**	**5.32**	**36**		Pn	20 45 27.7	-0.1
ISLE	**Juniper Island**	**5.32**	**36**	IAML		20 47 54.3	
	comp=N,12nm,1.2s						
ISLE				IAML		20 48 55.4	
	comp=E,7.9nm,0.9s						
VRDI	**Verde Repeater**	**5.51**	**27**		Pn	20 45 30.2	-0.2
KIAG	**Kiagna River**	**5.56**	**33**		Pn	20 45 31.0	-0.1
N25K	**Chitina, Valde**	**5.59**	**20**	Pn	Pn	20 45 31.9	+0.5
GLB	**Gilahina Butte**	**5.61**	**24**	Pn	Pn	20 45 31.6	-0.1
GRNC	**Granite Creek**	**5.61**	**37**		Pn	20 45 31.9	0.0
TABL	**Table Mountain**	**5.62**	**41**	Pn	Pn	20 45 32.1	+0.1
MCARA	**McCarthy VSAT**	**5.75**	**28**	Pn	Pn	20 45 34.2	+0.6
BARN	**Barnard Glacie**	**5.89**	**35**	Pn	Pn	20 45 35.7	+0.1
BARN					Sn	20 46 38.4	-4.8
CTGM	**Chitina Glacie**	**5.92**	**37**	Pn	Pn	20 45 35.4	-0.7
LOGN	**Logan Glacier**	**5.94**	**39**	Pn	Pn	20 45 35.2	-1.0
O29M	**Mount Kennedy**	**6.55**	**50**	Pn	Pn	20 45 44.8	+0.1
P29M	**Windy Craggy**	**6.61**	**56**	Pn	Pn	20 45 45.7	+0.3
S31K	**Pelican**	**6.91**	**72**	Pn	Pn	20 45 48.4	-1.0
N30M	**Aishikik Lake**	**7.80**	**45**	Pn	Pn	20 46 01.9	+0.1
M29M	**Somme Creek**	**7.94**	**36**	Pn	Pn	20 46 05.1	+1.4

*ISN **19** 20:46:56.0±0.5, 34°.60N×46°.06E, h14km±3km, ML2.7*
*TEH **19** 20:46:56.6, 34°.55N×46°.07E, h10km±34km, ML2.7*
ISC 19 20:46:56.2±1.4, **34°.58N**±0°.04×**46°.06E**±0°.03, **h4**km±13km, **n11, σ0°85/16, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.30**	**65**	Pg	**Pb**	**20 47 03.1**	**-1.2**
KGS1	**Ghasr-e-Shirin**	**0.39**	**260**	Pg	**Pg**	**20 47 04.8**	**+1.0**
IGHG	**Ghaleghazi**	**0.49**	**120**	Pg	**Pg**	**20 47 06.2**	**+0.6**
ILIN	**Lien**	**0.82**	**65**	Pg	**Pb**	**20 47 12.5**	**-0.6**
KCHF	**Cheshme Sefid,**	**0.87**	**110**	Pg	**Pb**	**20 47 13.4**	**-0.5**
KCHF				Sg	**Sb**	**20 47 25.8**	**-0.1**
ILBA	**Ilam Banvizeh**	**0.96**	**173**	Pg	**Pg**	**20 47 14.5**	**0.0**
IBDR	**Badra**	**1.47**	**184**	*e*Pg	**Pb**	**20 47 23.5**	**-0.5**
IBDR				*e*Sg	**Sg**	**20 47 43.0**	**-0.2**
IBDR				AML	AML	20 47 56.7	
	comp=N,78nm,0.6s						
IBDR				AML	AML	20 48 05.5	
	comp=E,73nm,0.5s						
IBZA	**Bozab**	**1.49**	**94**	Pg	**Pg**	**20 47 25.0**	**+0.2**
IKRK	**Kirkuk**	**1.63**	**301**	*e*Pn	**Pb**	**20 47 26.0**	**-0.9**
IKRK				*e*Sn	**Sb**	**20 47 48.0**	**+0.2**
IKRK				AML	AML	20 47 59.8	
	comp=N,188nm,0.3s						
IKRK				AML	AML	20 47 59.8	
	comp=E,211nm,0.4s						
BHD	**Baghdad**	**1.91**	**227**	*e*Pn	**Pb**	**20 47 30.0**	**-1.5**
BHD				*e*Sn	**Sb**	**20 47 55.0**	**-0.7**
RAFI	**Al-Rafai**	**2.84**	**179**	*e*Pn	**Pn**	**20 47 43.0**	**+0.6**
RAFI				*e*Sn	**Sn**	**20 48 18.0**	**+0.9**

*NEIC **19** 20:48:28.8±1.4, 5°.93N±0°.06×126°.8E±0°.1, h142km±7km, mb4.5/42, Error ellipse: s-maj=17.3km s-min=4.3km az=63.0*
*DJA **19** 20:48:28.2±2.5, 6°N±23°×12°7E±°, h146km±8km, M4.7/15, mB5.0/8, mb4.8/15, MLv5.1/10, Mw(mB)4.4/8*
*IDC **19** 20:48:29.1±1.0, 5°.98N×126°.94E, h153km±7km, mb3.9/24, mbtmp4.3/24, Error ellipse: s-maj=18.1km s-min=10.2km az=71.0*
ISC 19 20:48:28.5±0.4, **5°.91N**±0°.05×**126°.85E**±0°.07, **h150**km, **n101, σ1°15/103, mb4.4/47, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.71**	**313**		**Pn**	**20 49 00.3**	**0.0**
DAV	**Davao City (W)**	**1.71**	**313**	P	**Pn**	**20 49 00.5**	**+0.2**
	370nm,0.3s,baz=187,slow=8.1,SNR=7.9						
DAV				S	**Sn**	**20 49 26.3**	**+1.6**
	524nm,0.3s,baz=155,slow=9.8,SNR=19						
DAV				LR	LR	20 49 48.4	
	comp=Z,140nm,18.4s,baz=114,slow=46						
SGSI	**Sangihe**	**2.57**	**211**	P	**Pn**	**20 49 11.5**	**+1.0**
TNTI	**Ternate**	**5.13**	**174**	Pn	**Pn**	**20 49 42.7**	**-1.0**
TNTI				Sn	**Sn**	**20 50 40.0**	**-2.4**
TNTI	**Ternate**	**5.13**	**174**	P	**Pn**	**20 49 44.9**	**+1.2**
TNTI	**Ternate**	**5.13**	**174**	P	**Pn**	**20 49 45.2**	**+1.5**
	69nm,0.6s,2μm0.4nm						
KMSI	**Cibinong**	**6.02**	**208**	P	**Pn**	**20 49 56.9**	**+1.4**
	641nm,0.7s,6μm2.4nm						
KMSI	**Cibinong**	**6.02**	**208**	P	**Pn**	**20 49 57.0**	**+1.4**
	641nm,0

comp=Z,1.7nm,0.4s
TIA Tai'an 31.45 345 P **P** **20 54 36.3 +0.5**
TIA pmax pmax
comp=Z,5.0nm,0.8s
MJAR Matsushiro Arr 32.22 17 P **P** **20 54 41.3 -1.2**
comp=Z,1.5nm,0.6s,baz=198,slow=10,SNR=5.9
comp=Z,1.5nm,0.6s
CD2 Chengdu 32.99 322 P **P** **20 54 49.3 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,1.1s
HNS HongShan 33.24 342 ||P **P** **20 54 52.4 +1.0**
HNS pmax pmax
comp=Z,38nm,0.8s
BJT Baijiatuau 35.29 346 P **P** **20 55 09.3 +0.3**
LZH Lanzhou 36.71 328 *e*P **P** **20 55 22.9 +1.5**
LZH sP pP 20 55 44.6 -9.2
LZH pmax pmax
comp=Z,25nm,1.6s
USRK Ussuriysk Ar. 38.40 6 P **P** **20 55 36.0 +0.8**
comp=Z,4.5nm,0.4s,baz=183,slow=7.9,SNR=29
comp=Z,4.5nm,0.4s
MDJ Mudanjiang 38.63 3 P **P** **20 55 37.9 +0.7**
MDJ IAmb IAmb 20 55 39.0
comp=Z,10.0nm,0.8s
SHL Shillong 38.72 304 P **P** **20 55 38.0 -0.4**
BBOO Buckleboo 39.49 168 P **P** **20 55 46.0 +1.6**
BBOO IAmb IAmb 20 56 16.7
comp=Z,16nm,1.1s
STKA Stephens Creek 40.12 160 P **P** **20 55 51.0 +1.3**
comp=Z,2.4nm,0.7s,baz=324,slow=11,SNR=6.0
comp=Z,2.4nm,0.7s
LSA Lhasa 41.12 309 P **P** **20 55 59.6 +1.0**
GTA Gaotai 41.31 328 *e*P **P** **20 56 00.3 +0.7**
GTA pmax pmax
comp=Z,5.0nm,0.7s
ULN Ulaanbaatar 45.10 341 P **P** **20 56 30.5 +0.6**
ULN IAmb IAmb 20 56 32.1
comp=Z,9.3nm,0.8s
SONM Songino Array 45.29 341 P **P** **20 56 32.1 +0.8**
SONM Songino Array 45.29 341 P **P** **20 56 31.9 +0.6**
comp=Z,3.0nm,0.8s,baz=154,slow=8.3,SNR=28
comp=Z,3.0nm,0.8s
PETK Petropavlovsk- 53.38 23 P **P** **20 57 32.1 -0.4**
comp=Z,5.1nm,0.7s,baz=148,slow=3.0,SNR=6.0
comp=Z,5.1nm,0.7s
MK31 Makanchi Array 55.85 324 P **P** **20 57 50.8 +0.4**
MK31 IAmb IAmb 20 57 51.9
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 55.85 324 P **P** **20 57 50.7 +0.3**
MKAR Makanchi Array 55.85 324 P **P** **20 57 51.1 +0.7**
comp=Z,3.2nm,0.4s,baz=123,slow=8.1,SNR=56
MKAR ScP **ScP** **21 02 32.2 -0.4**
comp=Z,0.4nm,1.0s,baz=134,slow=5.2,SNR=4.0
comp=Z,3.2nm,0.4s
YAK Yakutsk 56.04 2 P **P** **20 57 51.7 +0.3**
MAKZ Makanchi 56.04 324 P **P** **20 57 51.6 -0.2**
MAKZ IAmb IAmb 20 57 53.2
comp=Z,6.0nm,0.9s
NIL Nilore 56.71 307 P **P** **20 57 56.5 -0.3**
ZALV Zalesovo Beam 58.72 332 P **P** **20 58 09.8 -0.5**
comp=Z,0.8nm,0.3s,baz=119,slow=6.4,SNR=8.2
comp=Z,0.8nm,0.3s
AAK Ala-Archa 58.84 317 P **P** **20 58 12.0 +0.3**
KURK Kurchatov 59.99 327 P **P** **20 58 19.3 +0.2**
KURBB Kurchatov Arra 59.99 327 P **P** **20 58 19.4 +0.4**
comp=Z,6.6nm,0.6s,baz=125,slow=6.3,SNR=49
comp=Z,6.6nm,0.6s
KBL Kabul 60.31 306 P **P** **20 58 20.3 -1.6**
BTK Batken 60.52 313 IAmb IAmb 20 58 25.2
comp=Z,6.1nm,0.8s
KK31 Karatay Array 61.74 316 P **P** **20 58 30.8 -0.4**
KK31 IAmb IAmb 20 58 32.3
comp=Z,4.4nm,0.8s
KKAR Karatay Array 61.74 316 P **P** **20 58 31.0 -0.1**
KKAR IAmb IAmb 20 58 32.3
comp=Z,4.4nm,0.8s
BVAR Borovoye Array 65.58 326 P **P** **20 58 56.5 +0.4**
comp=Z,4.9nm,0.7s,baz=129,slow=8.6,SNR=44
comp=Z,4.9nm,0.7s
BRVK Borovoye 65.65 326 P **P** **20 58 56.9 +0.4**
BRVK IAmb IAmb 20 58 57.9
comp=Z,8.3nm,0.8s
TIXI Tiksi 65.68 1 P **P** **20 58 56.2 -0.2**
TIXI IAmb IAmb 20 58 57.1
comp=Z,3.8nm,0.7s
NRIK Noril'sk 68.36 346 P **P** **20 59 12.8 -0.5**
NRIK IAmb IAmb 20 59 14.3
comp=Z,4.0nm,0.8s
NRIK Noril'sk 68.36 346 P **P** **20 59 13.3 0.0**
comp=Z,2.7nm,0.4s,baz=107,slow=3.2,SNR=3.7
comp=Z,2.7nm,0.4s
GEYT Alibeck 69.64 308 P **P** **20 59 21.3 -0.6**
GEYT IAmb IAmb 20 59 24.0
comp=Z,7.6nm,1.2s
GEYT Alibeck 69.64 308 P **P** **20 59 22.8 +0.8**
comp=Z,2.3nm,0.6s,baz=183,slow=2.8,SNR=7.1
comp=Z,2.3nm,0.6s
ABKAR Akbulak array 70.55 320 P **P** **20 59 26.7 -0.5**
ABKAR Akbulak array 70.55 320 IAmb IAmb 20 59 29.4
comp=Z,7.8nm,1.4s
ARU Arti 73.17 327 P **P** **20 59 42.1 -0.6**
ARU IAmb IAmb 20 59 42.9
comp=Z,4.1nm,0.7s
E19K Redstone River 79.18 22 IAmb IAmb 21 00 18.4
comp=Z,8.2nm,1.1s
RAYN Ar Rayn 79.75 293 P **P** **21 00 20.6 +0.1**
RAYN IAmb IAmb 21 00 21.4
comp=Z,6.1nm,0.7s
CAST Castle Rocks 80.75 27 P **P** **21 00 25.6 +0.7**
CAST IAmb IAmb 21 00 27.1
comp=Z,6.7nm,1.0s
E22K Anaktuvuk Pass 81.32 22 IAmb IAmb 21 00 30.9
comp=Z,9.7nm,1.2s
MLY Manley 81.47 25 IAmb IAmb 21 00 30.4
comp=Z,4.4nm,0.7s
KBZ Khabaz 81.58 313 P **P** **21 00 29.7 0.0**
comp=Z,1.3nm,0.8s,baz=113,slow=9.2,SNR=4.9
comp=Z,1.3nm,0.8s
G23K Bananza Creek 81.89 24 P **P** **21 00 32.0 +1.1**
ILAR Eielson Array 83.10 26 P **P** **21 00 36.5 -0.7**
comp=Z,1.2nm,0.5s,baz=250,slow=5.1,SNR=31
comp=Z,1.2nm,0.5s
MMAI Mount Meron Ar 88.03 303 P **P** **21 01 03.1 +0.8**
comp=Z,0.7nm,0.4s,baz=81,slow=7.7,SNR=3.9
comp=Z,0.7nm,0.4s
SPITS Spitsbergen Ar 88.38 349 P **P** **21 01 03.5 +0.6**
comp=Z,4.2nm,0.8s,baz=351,slow=10,SNR=9.4
comp=Z,4.2nm,0.8s
ARCES ARCESS Array B 88.46 340 P **P** **21 01 02.6 -0.9**
comp=Z,1.1nm,0.5s,baz=89,slow=5.7,SNR=9.9
comp=Z,1.1nm,0.5s
BRTR Keskin Array B 88.73 310 P **P** **21 01 04.3 -1.2**
comp=Z,0.6nm,0.6s,baz=101,slow=6.0,SNR=2.8
comp=Z,0.6nm,0.6s
FINES FINESS Array B 89.98 332 P **P** **21 01 09.6 -1.1**
comp=Z,0.6nm,0.5s,baz=68,slow=4.8,SNR=9.4
comp=Z,0.6nm,0.5s
HFS Hagfors 96.16 332 P **P** **21 01 37.7 -1.5**
comp=Z,1.3nm,0.8s,baz=60,slow=10,SNR=1.5
comp=Z,1.3nm,0.8s
TORD Torodi Ar. Bea 122.33 290 PKP **PKPdf** **21 07 05.0 -1.8**
comp=Z,0.3nm,0.4s,baz=65,slow=2.6,SNR=4.3

CATAC ***19*** *20:54:29.2±0.5, 12˚.27N×89˚.63W, h12km±5km, ML4.3*
IDC ***19*** *20:54:29.1±1.9, 13˚.09N×89˚.00W, h0km, mb3.8/6, mbtmp3.9/9, ML3.9/2, MS3.4/26, Error ellipse: s-maj=76.3km s-min=19.5km az=38.0*
NEIC ***19*** *20:54:29.7±2.5, 12˚.36N±0˚.08×89˚.52W±0˚.08, h10km±2km, mb4.5/52, Error ellipse: s-maj=16.2km s-min=9.9km az=227.0*
SNET ***19*** *20:54:30.4±0.8, 12˚.29N×89˚.66W, h52km±999km, ML4.2*
GCG ***19*** *20:54:32.8±0.9, 12˚.59N×89˚.96W, h151km±58km, MD4.1*
ISC 19 20:54:28.6±1.7, 12˚.31N±0˚.05×89˚.64W±0˚.04, h13km±10km, n177, σ1§11/167, mb4.5/30, MS3.5/25, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.21**	**15**	*e*P	**Pg**	**20 54 52.1**	**+0.1**
LALI	**Alcalda de L**	**1.21**	**15**	*i* P	**Pg**	**20 54 51.9**	**-0.1**
LALI				IAML		20 55 11.5	
	comp=Z,610nm,1.0s						
JAYA	**Jayaque - finc**	**1.35**	**8**	*e*P	**Pn**	**20 54 53.8**	**+0.5**
JAYA	**Jayaque - finc**	**1.35**	**8**	*i* P	**Pb**	**20 54 54.1**	**+0.3**
JAYA				IAML		20 55 16.3	
	comp=Z,9μm,1.0s						
PANCS	**Alcalda de**	**1.37**	**19**	*i* P	**Pb**	**20 54 54.3**	**+0.2**
PANCS				IAML		20 55 17.4	
	comp=Z,5μm,1.0s						
LOMA	**Loma Larga**	**1.40**	**19**	*e*P	**Pn**	**20 54 54.8**	**+0.7**
LOMA	**Loma Larga**	**1.40**	**19**	*i* P	**Pn**	**20 54 54.7**	**+0.7**
LOMA				IAML		20 55 17.2	
	comp=Z,2μm,1.0s						
LFRS	**El Faro**	**1.42**	**23**	*e*P	**Pn**	**20 54 54.8**	**+0.6**
SNET	**Serv Nac Est T**	**1.43**	**16**		**Pn**	**20 54 54.4**	**+0.1**
SNET	**Serv Nac Est T**	**1.43**	**16**	*i* P	**Pg**	**20 54 55.9**	**-0.1**
SNET				IAML		20 55 20.8	
	comp=Z,4μm,1.0s						
PMON	**Piamonte**	**1.43**	**13**	*i* P	**Pn**	**20 54 55.1**	**+0.8**
PMON				IAML		20 55 20.7	
	comp=Z,4μm,1.0s						
SJTE	**Alcalda de S**	**1.44**	**25**	*e*P	**Pn**	**20 54 55.0**	**+0.6**
SJTE	**Alcalda de S**	**1.44**	**25**	*i* P	**Pn**	**20 54 54.8**	**+0.4**
SJTE				IAML		20 55 26.4	
	comp=Z,2μm,1.0s						
BOQS	**Boqueron**	**1.46**	**14**	*e*P	**Pb**	**20 54 55.7**	**0.0**
PIC2	**El Picacho**	**1.48**	**15**	*e*P	**Pg**	**20 54 56.8**	**-0.2**
TECO	**Alcaldia de Te**	**1.48**	**34**	*e*P	**Pn**	**20 54 55.3**	**+0.4**
TECO	**Alcaldia de Te**	**1.48**	**34**	*i* P	**Pn**	**20 54 55.3**	**+0.4**
TECO				IAML		20 55 17.6	
	comp=Z,1μm,1.0s						
CEVE	**Cerro Verde**	**1.51**	**1**	*e*P	**Pb**	**20 54 56.6**	**0.0**
CEVE	**Cerro Verde**	**1.51**	**1**	*i* P	**Pn**	**20 54 56.2**	**+0.6**
CEVE				IAML		20 55 18.2	
	comp=Z,15μm,1.0s						
LFU	**La Fuente**	**1.52**	**20**	*e*P	**Pb**	**20 54 56.9**	**+0.2**
SBLS	**San Blas**	**1.52**	**1**	*e*P	**Pb**	**20 54 56.7**	**-0.1**
SNJE	**San Jose**	**1.55**	**1**	*e*P	**Pn**	**20 54 57.0**	**+1.0**
SNJE				*e*P	**Pn**	**20 54 57.1**	**+1.0**
PAVA	**Las Pavas**	**1.56**	**26**	*e*P	**Pn**	**20 54 56.9**	**+0.8**
PAVA	**Las Pavas**	**1.56**	**26**	*i* P	**Pn**	**20 54 56.8**	**+0.8**
PAVA				IAML		20 55 20.1	
	comp=Z,4μm,1.0s						
UESV	**Universidad de**	**1.56**	**32**	*i* P	**Pn**	**20 54 56.5**	**+0.4**
UESV				IAML		20 55 27.4	
	comp=Z,1μm,1.0s						
NUBE	**Las Nubes**	**1.59**	**355**	*e*P	**Pn**	**20 54 57.3**	**+0.7**
NUBE	**Las Nubes**	**1.59**	**355**	*i* P	**Pn**	**20 54 57.4**	**+0.8**
NUBE				IAML		20 55 19.7	
	comp=Z,10μm,1.0s						
TECA	**Tecapa**	**1.62**	**43**	*e*P	**Pn**	**20 54 57.8**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.65**	**33**	*i* P	**Pn**	**20 54 58.2**	**+0.9**
SCLA				*i* S	**Sg**	**20 55 21.1**	**-0.5**
SCLA				IAML		20 55 26.1	
	comp=Z,670nm,1.0s						
JUCU	**Jucuarįn**	**1.65**	**55**	*e*P	**Pn**	**20 54 57.8**	**+0.5**
JUCU	**Jucuarįn**	**1.65**	**55**	*i* P	**Pn**	**20 54 57.6**	**+0.2**
JUCU				IAML		20 55 08.2	
	comp=Z,2μm,1.0s						
UNIC	**Universidad Ca**	**1.67**	**3**	*i* P	**Pb**	**20 54 58.8**	**-0.4**
UNIC				*i* S	**Sb**	**20 55 19.5**	**-0.6**
UNIC				IAML		20 55 26.4	
	comp=Z,1μm,1.0s						
PQSS	**Presa 15 de Se**	**1.68**	**39**	*i* P	**Pn**	**20 54 58.7**	**+1.0**
PQSS				*i* S	**Sb**	**20 55 21.0**	**+0.6**
PQSS				IAML		20 55 24.1	
	comp=Z,3μm,1.0s						
LOAL	**Lomas de Alarc**	**1.68**	**355**	*i* P	**Pb**	**20 54 59.3**	**-0.2**
LOAL				*i* S	**Sb**	**20 55 21.4**	**+0.8**
LOAL				IAML		20 55 24.5	
	comp=Z,8μm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.71**	**355**	*e*P	**Pn**	**20 54 59.5**	**+1.3**
PACA	**Pacayal**	**1.73**	**48**	*e*P	**Pn**	**20 54 59.4**	**+1.0**
PACA	**Pacayal**	**1.73**	**48**	*i* P	**Pn**	**20 54 59.8**	**+1.4**
PACA				IAML		20 55 26.3	
	comp=Z,12μm,1.0s						
LLGN	**La Laguna**	**1.96**	**20**	*i* P	**Pn**	**20 55 02.9**	**+1.2**
LLGN				IAML		20 55 33.2	
	comp=Z,850nm,1.0s						
LCND	**La Caada**	**1.98**	**60**	*e*P	**Pn**	**20 55 02.5**	**+0.8**
LCND	**La Caada**	**1.98**	**60**	*i* P	**Pn**	**20 54 59.0**	**-2.8**
CNCH	**Conchagua**	**2.01**	**61**	*e*P	**Pn**	**20 55 02.7**	**+0.4**
CNCH	**Conchagua**	**2.01**	**61**	*i* P	**Pn**	**20 55 03.1**	**+0.8**
CNCH				IAML		20 55 04.3	
	comp=Z,4μm,1.0s						
MTO3	**Montecristo**	**2.10**	**7**		**Pn**	**20 55 04.9**	**+1.3**
MTO3	**Montecristo**	**2.10**	**7**	*e*P	**Pn**	**20 55 05.2**	**+1.6**
MTO3	**Montecristo**	**2.10**	**7**	*i* P	**Pn**	**20 55 04.9**	**+1.3**
MTO3				*i* S	**Sb**	**20 55 32.3**	**-0.3**
MTO3				IAML		20 55 34.5	
	comp=Z,1μm,1.0s						
CSGN	**Cosiguina Volc**	**2.14**	**72**	*i* P	**Pn**	**20 55 05.0**	**+0.9**
CSGN				IAML		20 55 36.3	
	comp=Z,3μm,1.0s						
POTN	**Potosi Cosigui**	**2.19**	**72**	*i* P	**Pn**	**20 55 05.9**	**+1.2**
POTN				*i* S	**Sn**	**20 55 32.8**	**+1.0**
POTN				IAML		20 55 38.6	
	comp=Z,270nm,1.0s						
ESQI	**Esquipulas**	**2.26**	**7**		**Pn**	**20 55 07.1**	**+1.4**
ESQI	**Esquipulas**	**2.26**	**7**	*i* P	**Pn**	**20 55 07.6**	**+1.9**
ESQI				*i* S	**Sb**	**20 55 36.9**	**-0.3**
ESQI				IAML		20 55 42.4	
	comp=Z,2μm,1.0s						
PCG	**Pacaya**	**2.27**	**336**	*e*P	**Pn**	**20 55 07.8**	**+1.7**
PCG				*e*S	**Sn**	**20 55 34.2**	**+0.1**
NBG	**Las Nubes**	**2.37**	**343**	*e*P	**Pb**	**20 55 10.2**	**-1.0**
NBG				*e*S	**Sn**	**20 55 38.1**	**+1.7**
FUG	**Fuego 3**	**2.42**	**331**	*e*P	**Pn**	**20 55 08.6**	**+0.5**
FUG				*e*S	**Sn**	**20 55 38.1**	**+0.4**
CRIN	**San Cristobal**	**2.56**	**81**		**Pn**	**20 55 09.8**	**0.0**
CRIN	**San Cristobal**	**2.56**	**81**	*i* P	**Pn**	**20 55 10.7**	**+0.8**
CRIN				IAML		20 55 47.4	
	comp=Z,2μm,1.0s						
TEL3	**Telica 3**	**2.75**	**84**	*i* P	**Pn**	**20 55 12.9**	**+0.6**
TEL3				IAML		20 55 56.4	
	comp=Z,2μm,1.0s						
MRL	**Marmol**	**2.76**	**359**	*e*P	**Pn**	**20 55 15.4**	**+2.7**
HERN	**Volcan Telica**	**2.76**	**84**	*i* P	**Pn**	**20 55 12.7**	**+0.1**
HERN				IAML		20 55 53.7	
	comp=Z,840nm,1.0s						
PACN	**Al O del Volca**	**2.79**	**86**	*i* P	**Pn**	**20 55 11.8**	**-1.2**
PACN				IAML		20 55 19.0	
	comp=Z,1μm,1.0s						
PLRN	**Geotermica Pol**	**2.82**	**84**	*i* P	**Pn**	**20 55 13.7**	**+0.3**
PLRN				*i* S	**Sn**	**20 55 48.2**	**+0.9**
PLRN				IAML		20 55 52.2	
	comp=Z,800nm,1.0s						
ROCN	**Rota Cerro Neg**	**2.84**	**85**	*i* P	**Pn**	**20 55 14.2**	**+0.6**
ROCN				IAML		20 56 09.7	
	comp=Z,310nm,1.0s						
CNGA	**Al SSO del Vol**	**2.88**	**86**	*i* P	**Pn**	**20 55 14.5**	**+0.3**
CNGA				IAML		20 55 55.8	
	comp=Z,920nm,1.0s						
CNGN	**Cerro Negro**	**2.88**	**86**		**Pn**	**20 55 14.2**	**0.0**
CNGN	**Cerro Negro**	**2.88**	**86**	*i* P	**Pn**	**20 55 14.8**	**+0.5**
CNGN				IAML		20 56 00.0	
	comp=Z,640nm,1.0s						
ILCN	**San Idelfonso**	**2.89**	**84**	*i* P	**Pn**	**20 55 14.8**	**+0.5**
ILCN				IAML		20 55 55.5	
	comp=Z,210nm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.89**	**53**		**Pn**	**20 55 15.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.89**	**53**	*i* P	**Pn**	**20 55 15.8**	**+1.4**
TGUH				IAML		20 55 28.6	
	comp=Z,720nm,1.0s						
MACN	**El Madrono**	**2.90**	**87**	*i* P	**Pn**	**20 55 15.0**	**+0.5**
MACN				IAML		20 55 55.5	
	comp=Z,480nm,1.0s						
COPN	**Copaltepe**	**2.98**	**92**	*i* P	**Pn**	**20 55 15.7**	**+0.1**
COPN				IAML		20 55 54.0	
	comp=Z,730nm,1.0s						
MOMN	**Momotombo**	**3.03**	**88**	*i* P	**Pn**	**20 55 16.4**	**+0.1**
MOMN				IAML		20 55 55.5	
	comp=Z,32nm,1.0s						
STG3	**Santiaguito 3,**	**3.04**	**322**	*e*P	**Pn**	**20 55 17.3**	**+0.8**
STG3				*e*S	**Sn**	**20 55 50.9**	**-1.9**
MOM2	**El Cardon**	**3.09**	**87**	*i* P	**Pn**	**20 55 17.2**	**+0.2**
MOM2				IAML		20 55 59.1	
	comp=Z,390nm,1.0s						
SAPS	**Ciudad Sandino**	**3.17**	**92**	*i* P	**Pn**	**20 55 19.0**	**+0.8**
SAPS				IAML		20 56 04.5	
	comp=Z,610nm,1.0s						
LIMN	**Finca el Limon**	**3.28**	**76**	*i* P	**Pn**	**20 55 20.0**	**+0.2**
LIMN				IAML		20 55 20.9	
	comp=Z,380nm,1.0s						
TISN	**Laguna Tiscapa**	**3.30**	**93**	*i* P	**Pn**	**20 55 20.5**	**+0.5**
TISN				IAML		20 55 21.2	
	comp=Z,37nm,1.0s						
NANN	**Nandasmo**	**3.46**	**96**	*i* P	**Pn**	**20 55 24.1**	**+1.9**
NANN				IAML		20 56 13.4	
	comp=Z,4μm,1.0s						
SMCA	**Catarina**	**3.46**	**317**	*i* P	**Pn**	**20 55 22.7**	**+0.5**
SMCA				IAML		20 56 05.0	
	comp=Z,430nm,1.0s						
MATN	**Matagalpa**	**3.68**	**80**		**Pn**	**20 55 24.9**	**-0.4**
MATN	**Matagalpa**	**3.68**	**80**	*i* P	**Pn**	**20 55 25.6**	**+0.3**
MATN				IAML		20 55 26.3	
	comp=Z,120nm,1.0s						
BOAB	**BOACO BROADBAN**	**3.89**	**88**		**Pn**	**20 55 28.2**	**+0.2**
BOAB	**BOACO BROADBAN**	**3.89**	**88**	*i* P	**Pn**	**20 55 28.6**	**+0.6**
BOAB				IAML		20 56 29.9	
	comp=Z,110nm,1.0s						
HZTE	**Horizontes, Gu**	**4.27**	**111**	Pn	**Pn**	**20 55 33.4**	**+0.1**
ORTG	**Ortega, Santa**	**4.54**	**115**		**Pn**	**20 55 37.9**	**+0.8**
DUNO	**Dulce Nombre,**	**4.63**	**118**		**Pn**	**20 55 39.1**	**+0.8**
JTS	**Las Juntas de**	**5.02**	**113**	Pn	**Pn**	**20 55 45.3**	**+1.7**
JTS	**Las Juntas de**	**5.02**	**113**	Pn	**Pn**	**20 55 43.4**	**-0.2**
	comp=Z,3.9nm,0.3s,baz=104,slow=22,SNR=9.0						
JTS				Sn	**Sn**	**20 56 41.7**	**+0.1**
	comp=Z,3.2nm,0.3s,baz=285,slow=19,SNR=1.5						
	comp=Z,8.3nm,0.3s						
ARE1	**Arenal 1**	**5.17**	**110**		**Pn**	**20 55 47.0**	**+1.4**
LCR2	**La Lucha 2**	**6.09**	**114**	Pn	**Pn**	**20 55 56.6**	**-2.0**
RIMA	**Rio Macho**	**6.21**	**113**		**Pn**	**20 56 02.9**	**+2.7**
SRBA	**San Rafael, Bu**	**6.89**	**116**		**Pn**	**20 56 11.4**	**+2.0**
CMIG	**Matias Romero**	**6.95**	**314**	Pn	**Pn**	**20 56 12.0**	**+1.8**
	comp=Z,2.2nm,0.3s,baz=157,slow=9.1,SNR=8.4						
CMIG				Sn	**Sn**	**20 57 26.5**	**-2.7**
	baz=114,slow=23						
	comp=Z,4.2nm,0.3s						
DRK0	**Durika**	**6.98**	**115**	Pn	**Pn**	**20 56 12.2**	**+1.5**
CDITO	**Canoas**	**7.62**	**118**		**Pn**	**20 56 19.3**	**-0.1**
TLIG	**Tlapa**	**10.08**	**302**	Pn	**Pn**	**20 56 55.4**	**+2.2**
833A	**Chaparral WMA,**	**18.35**	**332**	P	**Pn**	**20 58 42.3**	**-0.7**
SDV	**Santo Domingo**	**18.99**	**98**	P	**P**	**20 58 48.2**	**-2.1**
	comp=Z,2.5nm,0.6s,baz=345,slow=20,SNR=1.6						
SDV				LR	LR	21 06 28.0	
	comp=Z,59nm,19.4s,baz=260,slow=39						
HNDO	**Hondo**	**19.34**	**334**	P	**P**	**20 58 53.3**	**-0.5**
DRIO	**Del Rio**	**19.86**	**331**	P	**P**	**20 58 58.4**	**-1.0**
JCT	**Junction City**	**20.38**	**334**	P	**P**	**20 59 04.8**	**-0.4**
BRDY	**Brady**	**20.77**	**337**	P	**P**	**20 59 09.7**	**+0.4**
BRDY				IAmb	IAmb	20 59 20.4	
	comp=Z,10nm,0.7s						
LRAL	**Lakeview Retre**	**20.77**	**6**	P	**P**	**20 59 09.8**	**+0.5**
HPIG		**20.93**	**316**		Pn	20 59 13.7	-0.1
HPIG				IAmb	IAmb	20 59 19.4	
	comp=Z,14nm,1.0s						
SAND	**Sanderson**	**21.04**	**328**		**P**	**20 59 12.7**	**+0.4**
TXAR	**Lajitas Array**	**21.38**	**325**	P	**P**	**20 59 17.7**	**+1.7**
TXAR	**Lajitas Array**	**21.38**	**325**	P	**P**	**20 59 17.1**	**+1.0**
	comp=Z,8.2nm,1.1s,baz=143,slow=8.9,SNR=23						
TXAR				LR	LR	21 09 19.8	
	comp=Z,32nm,18.1s,baz=118,slow=42						
	comp=Z,8.2nm,1.1s						
TX31	**Lajitas Ar. Si**	**21.38**	**325**	P	**P**	**20 59 17.8**	**+1.7**
TX31				IAmb	IAmb	20 59 20.7	
	comp=Z,21nm,1.4s						
Y45A	**Yeager Farm, C**	**21.46**	**0**	P	**P**	**20 59 18.2**	**+1.5**
H06E1	**SOCORRO T-PHAS**	**21.48**	**290**	T	T	21 21 32.8	
PLPT	**Palo Pinto**	**21.90**	**340**	P	**P**	**20 59 20.3**	**-1.3**
PLPT				IAmb	IAmb	20 59 33.5	
	comp=Z,19nm,0.9s						
OXF	**Oxford**	**22.10**	**1**	P	**P**	**20 59 22.9**	**-0.8**
ALPN	**Alpine**	**22.16**	**326**	P	**P**	**20 59 25.1**	**+0.6**
X40A	**Basin Creek Fa**	**22.27**	**353**	P	**P**	**20 59 25.2**	**-0.2**
ATAH	**Atahualpa**	**22.32**	**149**	LR	LR	21 06 30.9	
	comp=Z,32nm,19.9s,baz=326,slow=32						
MIAR	**Mount Ida**	**22.42**	**351**	P	**P**	**20 59 27.9**	**+0.8**
MIAR				IAmb	IAmb	20 59 39.6	
	comp=Z,15nm,0.9s						
MNHN	**Monahans**	**22.48**	**329**	P	**P**	**20 59 27.9**	**+0.1**
UALR	**University of**	**22.50**	**354**	P	**P**	**20 59 27.3**	**-0.6**
LOOK	**Love County**	**22.65**	**344**	P	**P**	**20 59 27.0**	**-2.6**
X37A	**Clayton**	**22.78**	**348**	P	**P**	**20 59 30.1**	**-0.8**
X37A				IAmb	IAmb	21 00 03.5	
	comp=Z,31nm,1.5s						
WTFS	**Witchita Falls**	**22.83**	**341**	P	**P**	**20 59 29.9**	**-1.5**
WTFS				IAmb	IAmb	20 59 32.4	
	comp=Z,13nm,0.8s						
WHAR	**Wooly Hollow**	**23.00**	**354**	P	**P**	**20 59 33.6**	**+0.4**
WHAR				IAmb	IAmb	20 59 44.7	
	comp=Z,18nm,1.0s						
APMT	**Aspermont**	**23.01**	**337**	P	**P**	**20 59 32.0**	**-1.3**
APMT				IAmb	IAmb	20 59 50.2	
	comp=Z,7.5nm,0.7s						
SN07	**Snyder 07**	**23.11**	**335**	P	**P**	**20 59 34.0**	**-0.4**
SN07				IAmb	IAmb	20 59 37.0	
	comp=Z,18nm,0.8s						
SJG	**San Juan**	**23.38**	**73**	LR	LR	21 08 21.5	
	comp=Z,63nm,20.7s,baz=192,slow=37						
FCAR	**Ozark Folk Cen**	**23.59**	**355**	P	**P**	**20 59 38.2**	**-0.8**
FCAR				IAmb	IAmb	20 59 50.4	
	comp=Z,8.1nm,0.8s						
LCAR	**Lake Charles**	**23.70**	**357**	P	**P**	**20 59 41.3**	**+1.2**
LCAR				IAmb	IAmb	20 59 43.4	
	comp=Z,23nm,1.3s						
WVT	**Waverly**	**23.77**	**4**	P	**P**	**20 59 41.2**	**+0.3**
WMOK	**Wichita Mounta**	**23.82**	**341**	P	**P**	**20 59 39.6**	**-1.8**
TKL	**Tuckaleechee C**	**23.84**	**12**	LR	LR	21 09 25.7	
	comp=Z,102nm,18.5s,baz=177,slow=39						
V53A	**Saluda**	**24.06**	**14**	P	**P**	**20 59 44.6**	**+0.9**
V53A				IAmb	IAmb	20 59 54.8	
	comp=Z,17nm,1.1s						
U49A	**Red Boiling Sp**	**24.35**	**8**	P	**P**	**20 59 46.4**	**+0.1**
U49A				IAmb	IAmb	20 59 56.3	
	comp=Z,9.7nm,0.8s						
SMWD	**Samnorwood**	**24.65**	**339**	P	**P**	**20 59 48.8**	**-0.3**
SMWD				IAmb	IAmb	21 00 00.2	
	comp=Z,20nm,1.0s						
MSTX	**Muleshoe**	**24.66**	**333**	P	**P**	**20 59 50.4**	**+1.1**
T47A	**Sharon Grove**	**24.68**	**5**	P	**P**	**20 59 48.5**	**-0.8**
MGMO	**Mountain Grove**	**24.85**	**355**	P	**P**	**20 59 51.5**	**+0.6**
MGMO				IAmb	IAmb	20 59 54.7	
	comp=Z,18nm,1.1s						
U54A	**Nelsons Funny**	**25.11**	**15**	P	**P**	**20 59 53.9**	**+0.7**
**

DGMT	**Dagmar**	**38.03 344**	P	**P**	**21 01 46.3**	**-0.3**
DGMT			IAmb	IAmb	21 01 59.5	
	comp=Z,7.4nm,0.8s					
ULM	**Lac du Bonnet**	**38.18 354**	P	**P**	**21 01 47.1**	**-0.6**
ULM	**Lac du Bonnet**	**38.18 354**	P	**P**	**21 01 44.3**	**-3.4**
	comp=Z,0.8nm,0.4s,baz=184,slow=12,SNR=1.7					
ULM			LR	LR	21 18 49.8	
	comp=Z,89nm,19.8s,baz=133,slow=39					
	comp=Z,0.8nm,0.4s					
YBH	**Yreka Blue Hor**	**41.11 322**	LR	LR	21 22 47.4	
	comp=Z,55nm,20.6s,baz=186,slow=42					
NEW	**Newport**	**42.53 333**	LR	LR	21 23 49.6	
	comp=Z,35nm,20.7s,baz=180,slow=42					
RPN	**Rapa Nui**	**43.61 206**	LR	LR	21 17 36.4	
	comp=Z,30nm,19.3s,baz=122,slow=31					
YKA	**Yellowknife Ar**	**53.20 346**	P	**P**	**21 03 44.1**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=142,slow=7.5,SNR=10					
YKA			PcP	**PcP**	**21 04 53.7**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=144,slow=3.8,SNR=4.1					
YKA			LR	LR	21 28 24.1	
	comp=Z,58nm,18.2s,baz=284,slow=39					
	comp=Z,1.1nm,1.0s					
FRB	**Frobisher Bay**	**53.47 11**	LR	LR	21 25 39.6	
	comp=Z,108nm,20.8s,baz=184,slow=36					
SFJD	**Kangerlussuaq**	**60.45 17**	LR	LR	21 29 23.5	
	comp=Z,51nm,18.5s,baz=194,slow=35					
RES	**Resolute Bay**	**62.43 358**	LR	LR	21 32 24.9	
	comp=Z,47nm,18.7s,baz=13,slow=37					
INK	**Inuvik**	**62.71 343**	LR	LR	21 35 12.8	
	comp=Z,36nm,18.4s,baz=188,slow=39					
ILAR	**Eielson Array**	**65.29 337**	P	**P**	**21 05 09.2**	**-0.7**
	comp=Z,0.7nm,1.0s,baz=140,slow=3.0,SNR=5.5					
ILAR			LR	LR	21 36 06.9	
	comp=Z,40nm,18.5s,baz=148,slow=38					
	comp=Z,0.7nm,1.0s					
PPT2	**Papeete2**	**66.21 244**	*e*LR	LR	21 24 53.4	
	comp=Z,176nm,26.0s					
PPT2			*e*LR	LR	21 24 59.3	
	comp=Z,96nm,31.0s					
TBI	**Tubuai**	**68.40 239**	*e*LR	LR	21 26 12.3	
	comp=Z,720nm,35.2s					
F21K	**Alatna River**	**68.72 338**	P	**P**	**21 05 33.3**	**+1.5**
JMIC	**Jan Mayen**	**75.55 20**	LR	LR	21 38 47.5	
	comp=Z,158nm,21.3s,baz=100,slow=36					
MDT	**Midelt**	**79.31 59**	LR	LR	21 36 12.5	
	comp=Z,42nm,19.6s,baz=330,slow=32					
HFS	**Hagfors**	**85.95 29**	LR	LR	21 45 29.1	
	comp=Z,16nm,18.2s,baz=272,slow=36					
DAVOX	**Davos/Dischmat**	**87.55 43**	LR	LR	21 44 41.8	
	comp=Z,33nm,19.3s,baz=291,slow=35					
VRAC	**Vranov**	**91.07 39**	LR	LR	21 46 10.4	
	comp=Z,27nm,21.5s,baz=356,slow=34					
DZM	**Mont Dzumac**	**107.28 251**	*e*LR	LR	21 44 17.7	
	comp=Z,221nm,34.5s					
WRA	**Warramunga Arr**	**137.17 254**	PKhKP	PKPpre	21 13 52.2	
	comp=Z,0.4nm,0.6s,baz=94,slow=3.2,SNR=5.8					
CMAR	**Chiang Mai Arr**	**148.28 344**	PKPbc	**PKPbc**	**21 14 15.9**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=336,slow=3.4,SNR=13					

ISN ***19*** *21:31:36.7±1.1,36.12N×45.04E,h8km±10km, ML4.0*
IDC ***19*** *21:31:37.1±0.6,36.02N×44.92E,h0km,mb4.0/24, mbtmp4.0/33,ML3.6/9,MS2.9/6, Error ellipse: s-maj=13.9km s-min=11.2km az=154.0*
MOS ***19*** *21:31:37.9±1.1,36.10N×44.89E,h15km,mb4.1/21, Error ellipse: s-maj=6.7km s-min=4.1km az=91.1*
TEH ***19*** *21:31:39.1,36.19N×44.98E,h6km±25km,ML4.0*
NEIC ***19*** *21:31:39.3±1.9,36.15N±0.05×44.96E±0.07,h10km±1km, mb4.3/56, Error ellipse: s-maj=11.4km s-min=7.1km az=233.0*
NAO ***19*** *21:31:40.7,36.02N×45.04E,h33km,mb3.7*
ISC 19 21:31:39.5±0.3,36.18N±0.03×44.93E±0.03,h10km,n273,
σ1§48/276,mb4.2/80,7C-3D,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDS1	**Sardasht. Az.**	**0.45**	**94**	Pg	**Pg**	**21 31 47.3**	**-1.1**
MAHB	**Mahabad**	**0.86**	**47**	Pg	**Pg**	**21 31 54.5**	**-1.6**
IKRK	**Kirkuk**	**0.92**	**212**	*e*Pg	**Pg**	**21 31 56.8**	**-0.3**
IKRK				*e*Sg	**Sg**	**21 32 10.4**	**+1.4**
IKRK				AML	AML	21 32 15.1	
	comp=N,4μm,0.0s						
IKRK				AML	AML	21 32 26.4	
	comp=E,3μm,0.3s						
YOVA	**Hakkari_Yksek**	**1.50**	**340**	Pg	**Pb**	**21 32 07.4**	**-0.2**
CUKT	**Cukurca**	**1.50**	**315**	P	**Pb**	**21 32 08.0**	**+0.3**
CUKT	**Cukurca**	**1.50**	**315**	Pg	**Pb**	**21 32 07.4**	**-0.3**
HAKT	**HAKKARI**	**1.69**	**325**	Pg	**Pn**	**21 32 10.1**	**+0.7**
IAZR	**Azarshahr**	**1.72**	**29**	Pg	**Pn**	**21 32 10.5**	**+0.8**
KGS1	**Ghasr-e-Shirin**	**1.75**	**162**	Pg	**Pb**	**21 32 11.9**	**+0.1**
IDHR	**Dehrash**	**1.90**	**141**	Pn	**Pn**	**21 32 13.2**	**+1.0**
ILIN	**Lien**	**2.08**	**127**	Pn	**Pn**	**21 32 16.5**	**+1.8**
ISHB	**Shabestar**	**2.17**	**14**	Pn	**Pn**	**21 32 17.1**	**+1.1**
IHSH	**Hashtrud**	**2.18**	**58**	Pn	**Pn**	**21 32 17.7**	**+1.5**
IGHG	**Ghaleghazi**	**2.28**	**144**	Pn	**Pn**	**21 32 19.3**	**+1.8**
KCHF	**Cheshme Sefid,**	**2.57**	**137**	Pn	**Pn**	**21 32 23.0**	**+1.6**
GEVA	**Gevas**	**2.60**	**325**	Pn	**Pn**	**21 32 21.9**	**+0.1**
IMRD	**Marand**	**2.60**	**13**	Pn	**Pn**	**21 32 24.1**	**+2.2**
AKDM	**Akdamar-Van**	**2.65**	**325**	P	**Pb**	**21 32 24.9**	**-2.3**
VANB	**Van**	**2.71**	**333**	P	**Pn**	**21 32 25.1**	**+1.9**
IHRS	**Heris**	**2.72**	**38**	Pn	**Pn**	**21 32 24.9**	**+1.4**
ISRB	**Sarab**	**2.74**	**52**	Pn	**Pn**	**21 32 26.0**	**+2.2**
ILBA	**Ilam Banvizeh**	**2.76**	**157**	Pn	**Pn**	**21 32 25.4**	**+1.6**
BHD	**Baghdad**	**2.94**	**189**	*e*Pn	**Pn**	**21 32 27.0**	**+0.7**
BHD				*e*Sn	**Sn**	**21 33 04.0**	**+2.4**
BHD				AML	AML	21 33 21.7	
	comp=E,901nm,0.5s						
IBZA	**Bozab**	**2.94**	**125**	Pn	**Pn**	**21 32 28.5**	**+1.9**
NAX	**Nakhchivan**	**3.02**	**8**	P	**Pn**	**21 32 28.3**	**+0.8**
BLIS	**Bitlis-Merkez**	**3.17**	**316**	Pn	**Pn**	**21 32 30.8**	**+1.2**
IBDR	**Badra**	**3.17**	**165**	*e*Pn	**Pn**	**21 32 29.0**	**-0.5**
IBDR				*e*Sn	**Sn**	**21 33 08.0**	**+0.6**
MAKU	**Maku**	**3.18**	**357**	Pn	**Pn**	**21 32 31.8**	**+2.1**
GURO	**Guroymak-BITLI**	**3.31**	**317**	P	**Pn**	**21 32 33.2**	**+1.7**
GURO	**Guroymak-BITLI**	**3.31**	**317**	Pn	**Pn**	**21 32 31.8**	**+0.3**
MLAZ	**Malazgirt-MUS**	**3.51**	**328**	P	**Pn**	**21 32 37.8**	**+3.5**
GRMI	**Germi**	**3.53**	**41**	Pn	**Pn**	**21 32 35.8**	**+1.3**
SVAN	**Silvan-Diyarba**	**3.57**	**305**	P	**Pn**	**21 32 35.2**	**+0.1**
IDOB	**Doab**	**3.58**	**131**	Pn	**Pn**	**21 32 37.3**	**+2.0**
AGRB	**Hanur-Agry**	**3.72**	**336**	P	**Pn**	**21 32 40.2**	**+3.0**
MAZI	**Mazidag**	**3.82**	**291**	P	**Pn**	**21 32 39.2**	**+0.7**
TASB	**TASBURUN-IGDIR**	**3.84**	**352**	P	**Pb**	**21 32 44.1**	**-3.3**
JIR1	**Jirandeh**	**3.96**	**81**	Pn	**Pn**	**21 32 41.7**	**+1.1**
GNI	**Garni**	**3.97**	**358**	Pn	**Pn**	**21 32 40.8**	**+0.2**
GNI	**Garni**	**3.97**	**358**	P	**Pn**	**21 32 40.8**	**+0.2**
GNI	**Garni**	**3.97**	**358**	Pn	**Pn**	**21 32 44.7**	**+4.2**
	comp=E,2.0nm,0.3s,baz=308,slow=0.7,SNR=14						
GNI				Lg	Lg	21 33 51.5	
	baz=218,slow=19						
	comp=E,9.1nm,0.5s						
LKRN	**Lenkeran, Azer**	**3.97**	**49**	P	**Pn**	**21 32 40.6**	**+0.2**
VRTB	**Varto-Mus**	**4.06**	**318**	P	**Pn**	**21 32 40.8**	**-1.0**
DYBB	**Diyarbakir**	**4.22**	**296**	P	**Pn**	**21 32 44.4**	**+0.4**
KARO	**Karliova-Bingo**	**4.38**	**317**	P	**Pg**	**21 33 01.5**	**-2.0**
BNGB	**Bingl**	**4.39**	**311**	P	**Pn**	**21 32 45.2**	**-1.2**
KOPR	**Koprukoy-ERZUR**	**4.51**	**328**	P	**Pb**	**21 32 59.6**	**+0.6**
RAFI	**Al-Rafai**	**4.55**	**167**	*e*Pn	**Pn**	**21 32 49.0**	**+0.5**
RAFI				*e*Sn	**Sn**	**21 33 42.0**	**+0.6**
GANJ	**Ganja**	**4.59**	**13**	P	**Pn**	**21 32 49.9**	**+0.9**
KARS	**Kars**	**4.67**	**342**	P	**Pg**	**21 33 08.6**	**-0.4**
KARS	**Kars**	**4.67**	**342**	Pn	**Pn**	**21 32 49.4**	**-0.9**
KARS	**Kars**	**4.67**	**342**	P	**Pn**	**21 32 49.4**	**-0.9**
SENK	**Senkaya-Erzuru**	**4.82**	**336**	P	**Pb**	**21 33 05.7**	**+1.5**
MNGR	**Mingechevir, A**	**4.89**	**20**	P	**Pn**	**21 32 53.8**	**+0.7**
KLST	**Kelardasht - M**	**4.96**	**84**	Pn	**Pn**	**21 32 56.1**	**+1.8**
PTK	**Pertek**	**5.17**	**303**	P	**Pn**	**21 32 57.6**	**+0.5**
SEKA	**Sheki**	**5.33**	**19**	P	**Pn**	**21 33 00.1**	**+0.9**
AKH	**Akhalkalaki**	**5.34**	**348**	Pn	**Pn**	**21 32 57.3**	**-2.2**
AKH	**Akhalkalaki**	**5.34**	**348**	P	**Pn**	**21 32 57.3**	**-2.2**
MZPU	**Pul - Mazandar**	**5.37**	**85**	Pn	**Pn**	**21 33 02.4**	**+2.5**
ZKTA	**Zakatala**	**5.61**	**13**	P	**Pn**	**21 33 03.9**	**+0.9**
ARPR	**Arapgir-MALATY**	**5.99**	**301**	P	**Pn**	**21 33 09.9**	**+1.6**
ARPR	**Arapgir-MALATY**	**5.99**	**301**		**Pn**	**21 33 06.8**	**-1.6**
IPIR	**Pirpir**	**6.03**	**124**	Pn	**Pn**	**21 33 10.5**	**+1.3**
IKLH	**Kolahrood**	**6.17**	**116**	Pn	**Pn**	**21 33 13.1**	**+2.1**
GAZ	**Gaziantep**	**6.28**	**281**	P	**Pn**	**21 33 10.7**	**-1.6**
GAZ	**Gaziantep**	**6.28**	**281**		**Pn**	**21 33 11.3**	**-1.0**
KRSH	**Karshahi**	**6.30**	**108**	Pn	**Pn**	**21 33 15.1**	**+2.3**
ZNGN	**Zangian**	**6.37**	**128**	Pn	**Pn**	**21 33 15.4**	**+1.7**
ONI	**Oni**	**6.50**	**350**	P	**Pn**	**21 33 12.0**	**-3.3**
ONI	**Oni**	**6.50**	**350**	Pn	**Pn**	**21 33 15.5**	**+0.1**
ONI	**Oni**	**6.50**	**350**	P	**Pn**	**21 33 15.5**	**+0.1**
ZEI	**Tsey**	**6.65**	**353**	*e*P	Pn	21 33 25.0	+7.6
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
IBRJ	**Brojen**	**6.76**	**127**	Pn	**Pn**	**21 33 21.2**	**+2.1**
IZEF	**Zefreh**	**6.93**	**116**	Pn	**Pn**	**21 33 23.5**	**+2.2**
SARI	**SarD1z-Kayseri**	**7.14**	**291**	P	Pn	21 33 14.6	-10
BEIL	**Beino**	**7.33**	**260**	*e*P	**Pn**	**21 33 27.3**	**+0.6**
HWQ	**Hawqa**	**7.59**	**258**	*e*P	**Pn**	**21 33 32.3**	**+2.0**
BNN	**Bunyan**	**7.70**	**293**	Pn	**Pn**	**21 33 31.6**	**-0.2**
KBZ	**Khabaz**	**7.70**	**349**	Pn	Pn	21 33 37.7	+6.0
	comp=Z,0.1nm,0.3s,baz=148,slow=9.6,SNR=11						
KBZ				LR	LR	21 37 17.8	
	comp=Z,78nm,20.2s,baz=150,slow=43						
	comp=Z,2.0nm,0.7s						
ASF	**Jabal al Asfar**	**7.76**	**241**	Pn	**Pn**	**21 33 32.4**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=350,slow=0.9,SNR=11						
ASF				Lg	Lg	21 35 37.8	
	comp=Z,2.4nm,0.3s,baz=333,slow=12,SNR=3.9						
	comp=Z,2.2nm,0.3s						
ASF	**Jabal al Asfar**	**7.76**	**241**	P	**Pn**	**21 33 32.9**	**+0.2**
ZAHL	**Zahle**	**7.77**	**255**	*e*P	**Pn**	**21 33 36.4**	**+3.5**
BHL	**Bhannes**	**7.94**	**256**	*e*P	**Pn**	**21 33 39.0**	**+3.9**
RCY	**Rachaya**	**7.94**	**253**	*e*P	**Pn**	**21 33 37.1**	**+1.9**
KIV	**Kislovodsk**	**7.95**	**348**	Pn	**Pn**	**21 33 34.6**	**-0.6**
KIV	**Kislovodsk**	**7.95**	**348**	*e*P	**Pn**	**21 33 36.5**	**+1.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,39nm,11.0s						
QRWL	**Qaraoun**	**8.04**	**254**	*e*P	**Pn**	**21 33 39.1**	**+2.6**
SHBL	**Chebaa**	**8.07**	**252**	*e*P	**Pn**	**21 33 38.4**	**+1.5**
DQRL	**Deir Qamar**	**8.07**	**255**	*e*P	**Pn**	**21 33 39.0**	**+2.1**
SOC	**Sochi**	**8.41**	**333**	*e*P	**Pn**	**21 33 38.5**	**-2.9**
SOC				*e*		21 35 14.1	
SOC				MLR	MLR		
	comp=Z,87nm,12.0s						
MMAI	**Mount Meron Ar**	**8.46**	**251**	Pn	**Pn**	**21 33 43.6**	**+1.3**
	comp=Z,2.6nm,0.3s,baz=81,slow=18,SNR=20						
MMAI				Sn	**Sn**	**21 35 20.4**	**+2.5**
	comp=Z,1.1nm,0.3s,baz=118,slow=36,SNR=1.9						
MMAI				Lg	Lg	21 36 01.5	
	comp=Z,2.0nm,0.3s,baz=101,slow=30,SNR=1.9						
MMAI				LR	LR	21 37 22.1	
	comp=Z,46nm,19.6s,baz=58,slow=41						
GHAJ	**Ghor Haditha**	**9.19**	**241**	Pn	**Pn**	**21 33 51.3**	**-0.8**
GHAJ	**Ghor Haditha**	**9.19**	**241**	P	**Pn**	**21 33 53.0**	**+0.9**
BR131	**Keskin Array S**	**9.59**	**295**	*i* P	**Pn**	**21 33 56.2**	**-1.6**
BRTR	**Keskin Array B**	**9.59**	**295**	Pn	**Pn**	**21 34 00.7**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=117,slow=13,SNR=3.1						
	comp=Z,0.6nm,0.6s						
EIL	**Elat**	**10.60**	**235**	Pn	**Pn**	**21 34 09.4**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=91,slow=18,SNR=1.7						
EIL				Lg	Lg	21 37 07.7	
	comp=Z,0.3nm,0.3s,baz=60,slow=18,SNR=2.3						
EIL				LR	LR	21 38 17.4	
	comp=Z,32nm,21.5s,baz=55,slow=38						
	comp=Z,1.4nm,0.5s						
EIL	**Elat**	**10.60**	**235**	P	Pn	21 34 20.1	+8.6
GEYT	**Alibeck**	**10.68**	**77**	Pn	**Pn**	**21 34 12.6**	**0.0**
GEYT	**Alibeck**	**10.68**	**77**	P	**Pn**	**21 34 12.6**	**0.0**
GEYT	**Alibeck**	**10.68**	**77**	Pn	**Pn**	**21 34 14.7**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=262,slow=17,SNR=3.6						
GYA0B	**ALIBECK ARRAY**	**10.68**	**77**	Pn	**Pn**	**21 34 12.9**	**+0.2**
RAYN	**Ar Rayn**	**12.62**	**178**	Pn	Pn	21 34 35.2	-4.1
RAYN	**Ar Rayn**	**12.62**	**178**	P	Pn	21 34 35.2	-4.1
UOSS	**Minazif**	**14.81**	**136**	Pn	Pn	21 35 03.5	-5.6
VRH	**Novokhopyorsk**	**15.19**	**352**	*e*P	**P**	**21 35 20.8**	**+1.7**
VRH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VSR	**Storozhevoye**	**15.59**	**346**	*e*P	**P**	**21 35 21.9**	**-1.6**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VORR	**Voronezh**	**16.02**	**347**	*e*P	**Pn**	**21 35 25.8**	**+1.0**
VORR				pmax	pmax		
	comp=Z,20nm,0.4s						
BELG	**Belogornoye**	**16.32**	**6**	*i* P	**Pn**	**21 35 29.5**	**+0.9**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BELG	**Belogornoye**	**16.32**	**6**	Pn	**P**	**21 35 30.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=127,slow=20,SNR=8.5						
	comp=Z,24nm,0.9s						
LPSR	**Galich'ya Gora**	**16.96**	**347**	*e*P	**Pn**	**21 35 36.8**	**+0.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ABKAR	**Akbulak array**	**17.06**	**35**	Pn	**Pn**	**21 35 37.6**	**-0.4**
ABKAR	**Akbulak array**	**17.06**	**35**	Pn	**Pn**	**21 35 36.7**	**-1.3**
ABKAR				IAmb	IAmb	21 35 52.4	
	comp=Z,2.3nm,0.8s						
AKTO	**Aktyubinsk**	**17.10**	**30**	P	**P**	**21 35 41.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=219,slow=8.1,SNR=8.7						
	comp=Z,5.1nm,0.8s						
WSAR	**Wadi Sarin**	**17.52**	**134**	P	**Pn**	**21 35 41.7**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=334,slow=11,SNR=14						
	comp=Z,4.6nm,0.6s						
AKASG	**Malin Array Be**	**18.40**	**327**	P	**Pn**	**21 35 54.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=132,slow=12,SNR=4.2						
AKASG				LR	LR	21 44 53.2	
	comp=Z,30nm,18.1s,baz=2.0,slow=43						
	comp=Z,0.2nm,0.3s						
AKBB	**Malin Array Si**	**18.40**	**327**	*i* P	**P**	**21 35 54.8**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.9s						
BURAR	**Bucovina Array**	**18.54**	**314**	P	**P**	**21 35 54.2**	**-2.1**
BUR08	**Bucovina Ar. S**	**18.57**	**314**	P	**P**	**21 35 54.8**	**-1.8**
KBL	**Kabul**	**19.73**	**88**	P	**P**	**21 36 08.6**	**-0.9**
KBL	**Kabul**	**19.73**	**88**	P	**P**	**21 36 08.6**	**-0.9**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
OBN	**Obninsk**	**19.79**	**346**	P	**P**	**21 36 10.3**	**+0.5**
OBN				IAmb	IAmb	21 36 12.4	
	comp=Z,12nm,0.5s						
OBN	**Obninsk**	**19.79**	**346**	*e*P	**Pn**	**21 36 12.0**	**+0.7**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,88nm,16.0s						
MOS	**Moscow**	**20.19**	**348**	*e*P	**P**	**21 36 13.6**	**-0.5**
BTK	**Batken**	**20.71**	**71**	P	**P**	**21 36 20.6**	**+0.6**
BTK	**Batken**	**20.71**	**71**	P	**P**	**21 36 20.6**	**+0.6**
BTK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KK31	**Karatay Array**	**20.83**	**63**	P	**P**	**21 36 21.6**	**+0.3**
KK31	**Karatay Array**	**20.83**	**63**	P	**P**	**21 36 21.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**20.83**	**63**	P	**P**	**21 36 21.3**	**+0.1**
KKAR	**Karatay Array**	**20.83**	**63**	P	**P**	**21 36 21.3**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KOLS	**Kolonicke sedl**	**20.90**	**315**	*e*P	Pn	21 36 24.4	-0.1
KOLS	**Kolonicke sedl**	**20.90**	**315**	*e*P	Pn	21 36 24.4	-0.1
CRVS	**Cervenica-Dubn**	**21.36**	**314**	*e*P	**P**	**21 36 30.1**	**+3.2**
CRVS	**Cervenica-Dubn**	**21.36**	**314**	*e*P	**P**	**21 36 30.1**	**+3.2**
MNK	**Minsk**	**21.79**	**333**	*i* P	**P**	**21 36 32.5**	**+1.1**
	comp=E,6.0nm,1.2s						
MNK				*i* P	**P**	**21 36 32.5**	**+1.1**
	comp=N,10.0nm,0.9s						
MNK				*i* P	**P**	**21 36 32.5**	**+1.1**
	comp=Z,13nm,0.9s,baz=140						
MNK				*i* PP	**PnPn**	**21 36 54.0**	**+1.6**
MNK				*i* S	**S**	**21 40 34.6**	**+2.5**
MNK				*i* SS	**SnSn**	**21 41 02.5**	**+5.7**
MNK				*i* LQ	LQ	21 43 15.6	
MNK				*i* LR	LR	21 44 55.8	
MNK	**Minsk**	**21.79**	**333**	*e*P	**P**	**21 36 32.4**	**+1.1**
ARU	**Arti**	**22.26**	**20**	P	**P**	**21 36 36.0**	**-0.4**
ARU				IAmb	IAmb	21 36 48.2	
	comp=Z,7.5nm,0.9s						
ARU	**Arti**	**22.26**	**20**	*d* P	**P**	**21 36 36.9**	**+0.5**
ARU						21 36 57.7	
ARU				S	**S**	**21 40 45.8**	**+4.7**
ARU				SS	**SnSn**	**21 41 12.6**	**+4.3**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**22.26**	**20**	P	**P**	**21 36 35.8**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=218,slow=5.0,SNR=13						
	comp=Z,3.9nm,0.6s						
ARSB	**Arslanbob**	**22.42**	**68**	P	**P**	**21 36 38.1**	**-0.3**
ARSB	**Arslanbob**	**22.42**	**68**	P	**P**	**21 36 38.2**	**-0.3**
ARSB				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KIRV	**Kirov**	**22.61**	**6**	LR	LR	21 46 35.1	
	comp=Z,68nm,18.1s,baz=304,slow=39						
VYHS	**Vyhne**	**22.76**	**311**	*e*P	**P**	**21 36 44.4**	**+2.6**
VYHS	**Vyhne**	**22.76**	**311**	*e*P	**P**	**21 36 44.4**	**+2.6**
OJC	**Ojcow**	**22.93**	**316**	P	**P**	**21 36 42.3**	**-1.4**
OJC				IAmb	IAmb	21 36 51.1	
	comp=Z,3.6nm,0.7s						
OJC	**Ojcow**	**22.93**	**316**	P	**P**	**21 36 42.3**	**-1.4**
OJC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SVE	**Sverdlovsk**	**23.20**	**22**	*e*P	P	21 36 57.9	+12
SUW	**Suwalki**	**23.37**	**327**	P	**P**	**21 36 46.9**	**-1.1**
SUW	**Suwalki**	**23.37**	**327**	P	**P**	**21 36 46.9**	**-1.1**
SUW				pmax	pmax		
	comp=Z,20nm,1.0s						
AAK	**Ala-Archa**	**23.66**	**65**	P	**P**	**21 36 52.0**	**+0.7**
AAK	**Ala-Archa**	**23.66**	**65**	*i* P	**P**	**21 36 52.4**	**+1.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MODS	**Modra-Piesok**	**23.67**	**310**	*e*P	**P**	**21 36 52.9**	**+1.7**
MODS	**Modra-Piesok**	**23.67**	**310**	*e*P	**P**	**21 36 52.8**	**+1.6**
MORC	**Moravsky Berou**	**24.05**	**313**	P	**P**	**21 36 53.7**	**-1.1**
MORC	**Moravsky Berou**	**24.05**	**313**	*e*P	**P**	**21 36 55.1**	**+0.3**
MORC	**Moravsky Berou**	**24.05**	**313**	P	**P**	**21 36 53.7**	**-1.1**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RONA	**Rosalia, Austr**	**24.07**	**307**	*e*P	**P**	**21 36 55.4**	**+0.4**
	comp=Z,3.5nm,0.6s						
PAOL	**Paolisi**	**24.15**	**291**	P	**P**	**21 36 53.5**	**-2.3**
PAOL				IAmb	IAmb	21 37 09.7	
	comp=Z,4.9nm,0.8s						
CONA	**Conrad Observa**	**24.42**	**308**	*i* pP	**P**	**21 36 59.1**	**+0.8**
	comp=Z,8.8nm,1.3s						
VRAC	**Vranov**	**24.43**	**311**	*e*P	**P**	**21 36 58.4**	**+0.1**
VRAC	**Vranov**	**24.43**	**311**	P	**P**	**21 36 57.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=106,slow=9.7,SNR=3.5						
	comp=Z,0.6nm,0.3s						
ARSA	**Arzberg**	**24.44**	**306**	*i* P	**P**	**21 36 58.5**	**+0.2**
	comp=Z,3.0nm,0.6s						
KRUC	**Moravsky**	**24.46**	**311**	*e*P	**P**	**21 36 59.0**	**+0.4**
BRVK	**Borovoye**	**24.51**	**39**	P	**P**	**21 36 58.8**	**-0.1**
BRVK				IAmb	IAmb	21 37 10.2	
	comp=Z,3.9nm,1.0s						
BRVK	**Borovoye**	**24.51**	**39**	P	**P**	**21 36 58.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**24.54**	**39**	P	**P**	**21 36 59.5**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=243,slow=7.9,SNR=16						
	comp=Z,2.1nm,0.7s						
KRLC	**Kraliky**	**24.62**	**313**	*e*P	**P**	**21 37 00.3**	**+0.3**
KRLC	**Kraliky**	**24.62**	**313**	*e*P	**P**	**21 37 00.3**	**+0.3**
NRN	**Naryn**	**24.70**	**68**	P	**P**	**21 37 00.8**	**-0.3**
NRN	**Naryn**	**24.70**	**68**	P	**P**	**21 37 00.8**	**-0.3**
NRN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLMR	**Klimovskoe**	**24.93**	**354**	*e*P	**P**	**21 37 00.9**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,13nm,1.5s						
DPC	**Dobruska-Polom**	**25.00**	**313**	*e*P	**P**	**21 37 03.8**	**+0.4**
DPC	**Dobruska-Polom**	**25.00**	**313**	*e*P	**P**	**21 37 03.8**	**+0.4**
CHVC	**Chvalec**	**25.25**	**314**	*e*P	**P**	**21 37 06.7**	**+1.0**
CHVC	**Chvalec**	**25.25**	**314**	*e*

	comp=Z,13nm,2.1s								
SHL	**Shillong**	**41.32**	**91**	P		**P**	**21 39 24.5**	**-1.2**
SHL	**Shillong**	**41.32**	**91**	P		**P**	**21 39 24.5**	**-1.2**
SHL				pmax	pmax			
	comp=Z,7.0nm,0.6s							
SPITS	**Spitsbergen Ar**	**43.81**	**352**	P		**P**	**21 39 46.0**	**+0.9**
	comp=Z,9.3nm,0.8s,baz=146,slow=12,SNR=9.6							
	comp=Z,9.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**45.01**	**251**	P		**P**	**21 39 54.7**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=56,slow=10,SNR=7.8							
	comp=Z,0.8nm,0.5s							
SONM	**Songino Array**	**45.99**	**55**	P		**P**	**21 40 02.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=284,slow=9.2,SNR=4.3							
	comp=Z,0.3nm,0.5s							
ULN	**Ulaanbaatar**	**46.43**	**55**	*ce*P		**P**	**21 40 07.1**	**+0.6**
ULN				pmax	pmax			
	comp=Z,3.0nm,1.3s							
PZH	**PanZhiHua**	**48.87**	**85**	P		**P**	**21 40 27.3**	**+1.6**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.7s							
PZH				pmax	pmax			
	comp=Z,100nm,4.7s							
CMAR	**Chiang Mai Arr**	**50.49**	**95**	*ce*P		**P**	**21 40 37.2**	**-0.8**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**50.49**	**95**	P		**P**	**21 40 36.9**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=297,slow=8.6,SNR=9.4							
	comp=Z,2.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**51.22**	**63**	*e*P		**P**	**21 40 44.0**	**+0.7**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,94nm,5.5s							
XAN	**Xi'an**	**51.53**	**72**	⇓P		**P**	**21 40 43.6**	**-2.1**
XAN				pmax	pmax			
	comp=Z,5.0nm,1.7s							
SLVN	**Son La**	**53.03**	**89**	P		**P**	**21 40 56.2**	**-0.8**
SLVN				IAmb	IAmb		21 41 01.0	
	comp=Z,3.9nm,1.1s							
DBIC	**Dimbokro**	**54.08**	**250**	P		**P**	**21 41 02.5**	**-2.1**
	comp=Z,1.6nm,0.6s,baz=40,slow=6.8,SNR=5.7							
	comp=Z,1.6nm,0.6s							
TIXI	**Tiksi**	**54.23**	**23**	*i* P		**P**	**21 41 05.4**	**+0.5**
TIXI				pmax	pmax			
	comp=Z,3.0nm,1.1s							
KLR	**Kul'dur**	**61.75**	**48**	*ce*P		**P**	**21 42 00.4**	**+2.3**
KLR				pmax	pmax			
	comp=Z,11nm,2.5s							
SEY	**Seymchan**	**65.69**	**29**	*ce*P		**P**	**21 42 25.8**	**+2.0**
SEY				pmax	pmax			
	comp=Z,6.0nm,1.3s							
SEY	**Seymchan**	**65.69**	**29**	P		**P**	**21 42 23.9**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=276,slow=5.2,SNR=5.6							
	comp=Z,2.0nm,0.6s							
BOSA	**Boshof**	**67.06**	**199**	P		**P**	**21 42 32.5**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=344,slow=9.8,SNR=3.0							
	comp=Z,1.5nm,0.7s							
A36M	**Sachs Harbour**	**71.91**	**357**	P		**P**	**21 43 02.3**	**-0.1**
SCHQ	**Schefferville**	**72.19**	**326**	P		**P**	**21 43 03.0**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=10,slow=4.9,SNR=4.6							
	comp=Z,1.8nm,0.7s							
JMM	**Marumori**	**72.91**	**55**	P		**P**	**21 43 08.7**	**-0.3**
C16K	**Lisburne Hills**	**73.42**	**11**	P		**P**	**21 43 12.8**	**+1.4**
C18K	**Utukok River**	**73.69**	**10**	P		**P**	**21 43 12.8**	**-0.3**
C36M	**Paulatuk**	**74.47**	**356**	P		**P**	**21 43 16.9**	**-0.7**
D25K	**Kavik River**	**74.48**	**4**	P		**P**	**21 43 17.8**	**+0.1**
D25K				IAmb	IAmb		21 43 25.2	
	comp=Z,2.4nm,0.8s							
TOLK	**Toolik Lake Re**	**74.93**	**5**	P		**P**	**21 43 21.0**	**+0.6**
TOLK				IAmb	IAmb		21 43 21.4	
	comp=Z,2.6nm,0.8s							
GBN	**Guysborough**	**75.18**	**316**	P		**P**	**21 43 21.6**	**-0.4**
E19K	**Redstone River**	**75.32**	**9**	P		**P**	**21 43 22.7**	**+0.1**
E29M	**Blow River**	**75.72**	**1**	P		**P**	**21 43 24.7**	**-0.1**
E29M				IAmb	IAmb		21 43 26.3	
	comp=Z,3.7nm,0.9s							
F15K	**North Star Dit**	**75.88**	**12**	P		**P**	**21 43 25.6**	**-0.1**
COLD	**Coldfoot**	**76.27**	**6**	P		**P**	**21 43 27.9**	**0.0**
COLD				IAmb	IAmb		21 43 29.8	
	comp=Z,3.3nm,0.8s							
F28M	**Old Crow**	**76.46**	**2**	P		**P**	**21 43 29.1**	**0.0**
F28M				IAmb	IAmb		21 43 30.3	
	comp=Z,1.4nm,0.8s							
IMAR	**Indian Mountai**	**77.14**	**8**	P		**P**	**21 43 32.3**	**-0.6**
G31M	**Satah River**	**77.22**	**360**	P		**P**	**21 43 32.7**	**-0.5**
H21K	**Melozitna Rive**	**77.56**	**7**	P		**P**	**21 43 35.6**	**+0.3**
H21K				IAmb	IAmb		21 43 36.8	
	comp=Z,3.1nm,0.8s							
EPYK	**Eagle Plains**	**77.77**	**1**	P		**P**	**21 43 36.2**	**-0.2**
EPYK				IAmb	IAmb		21 43 40.4	
	comp=Z,2.6nm,0.8s							
H29M	**Whitestone**	**77.89**	**1**	P		**P**	**21 43 36.5**	**-0.6**
H29M				IAmb	IAmb		21 43 41.2	
	comp=Z,5.3nm,1.1s							
I28M	**Miner Creek**	**78.63**	**2**	P		**P**	**21 43 41.1**	**-0.2**
I28M				IAmb	IAmb		21 43 45.3	
	comp=Z,3.0nm,0.9s							
I30M	**Mount Dempster**	**78.92**	**1**	P		**P**	**21 43 43.2**	**+0.2**
I30M				IAmb	IAmb		21 43 43.9	
	comp=Z,3.1nm,0.8s							
ILAR	**Eielson Array**	**78.95**	**5**	P		**P**	**21 43 42.8**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=322,slow=4.2,SNR=7.2							
	comp=Z,0.9nm,1.0s							
J18K	**Innoko River**	**79.20**	**10**	P		**P**	**21 43 45.0**	**+0.6**
J18K				IAmb	IAmb		21 43 56.7	
	comp=Z,3.7nm,1.1s							
BPAW	**Bear Paw Mtn.**	**79.26**	**7**	P		**P**	**21 43 46.0**	**+1.3**
BPAW				IAmb	IAmb		21 43 59.3	
	comp=Z,2.8nm,1.2s							
HDA	**Harding Lake**	**79.31**	**5**	P		**P**	**21 43 44.5**	**-0.4**
HDA				IAmb	IAmb		21 43 55.5	
	comp=Z,2.3nm,0.6s							
CAST	**Castle Rocks**	**79.81**	**8**	P		**P**	**21 43 48.5**	**+0.8**
CAST				IAmb	IAmb		21 43 51.9	
	comp=Z,4.3nm,1.0s							
DAWY	**Dawson**	**80.03**	**2**	P		**P**	**21 43 48.5**	**-0.4**
DAWY				IAmb	IAmb		21 44 06.3	
	comp=Z,3.7nm,1.1s							
G62A	**West of Eustis**	**80.22**	**320**	P		**P**	**21 43 50.8**	**+0.6**
YKA	**Yellowknife Ar**	**80.29**	**351**	P		**P**	**21 43 48.4**	**-1.9**
YKA	**Yellowknife Ar**	**80.29**	**351**	*ce*P		**P**	**21 43 50.7**	**+0.4**
YKA				pmax	pmax			
	comp=Z,2.0nm,1.0s							
YKA	**Yellowknife Ar**	**80.29**	**351**	P		**P**	**21 43 49.5**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=13,slow=5.7,SNR=16							
	comp=Z,1.1nm,0.8s							
L26K	**Log Cabin Wild**	**80.91**	**4**	P		**P**	**21 43 53.6**	**-0.1**
L26K				IAmb	IAmb		21 44 06.4	
	comp=Z,4.9nm,1.1s							
MENT	**Mentasta**	**80.98**	**4**	P		**P**	**21 43 54.2**	**+0.2**
MENT				IAmb	IAmb		21 44 00.6	
	comp=Z,3.8nm,0.9s							
QSPA	**South Pole Qui**	**126.01**	**180**	PKP		**PKPdf**	**21 50 38.6**	**-2.3**
	comp=Z,1.0nm,0.7s,baz=266,slow=9.7,SNR=1.7							

*SKHL **19** 21:32:50.3±0.6, 46°.30N×152°.40E, h94km±5km, mb4.7/3, msha5.5/4*
*MOS **19** 21:32:50.8±1.6, 46°.45N×152°.13E, h116km, mb4.3/1, Error ellipse: s-maj=33.1km s-min=13.3km az=137.4*
*IDC **19** 21:32:56.3±6.3, 46°.95N×151°.78E, h124km±45km, mb3.0/5, mbtmp3.4/7, Error ellipse: s-maj=87.6km s-min=21.6km az=166.0*

ISC 19 21:32:50.9±1.1, 46°.2N±0°.2×152°.3E±0°.1, h100km, n23, σ1s81°/26, mb3.3/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.27**	**254**	*e*PN		**Pn**	**21 33 41.1**	**+0.8**
KUR				*e*S		**Sn**	**21 34 19.3**	**+0.9**
KUR				pmax	pmax			
	comp=Z,51nm,0.6s							
KUR				smax	smax			
	comp=E,155nm,0.5s							
KUR				smax	smax			
	comp=N,120nm,0.3s							
KUR	**Kuril'sk**	**3.27**	**254**	*e*P		**Pn**	**21 33 41.1**	**+0.8**
KUR				AMB	AMB		21 33 43.7	
	comp=N,50nm,0.6s							
KUR				*e*S		**Sn**	**21 34 17.7**	**-0.7**
KUR				A	A		21 34 25.3	
	comp=N,150nm,0.4s							
KUR				A	A		21 34 25.3	
	comp=N,90nm,0.4s							
SHO	**Shikotan**	**4.54**	**241**	PN		**Pn**	**21 33 57.7**	**+0.3**
SHO				*e*S		**Sn**	**21 34 48.4**	**-0.6**
SHO				smax	smax			
	comp=E,107nm,0.2s							
SHO				smax	smax			
	comp=N,114nm,0.3s							
SHO	**Shikotan**	**4.54**	**241**	*e*P		**Pn**	**21 33 57.7**	**+0.3**
SHO				*e*S		**Sn**	**21 34 48.5**	**-0.6**
SHO				A	A		21 35 03.3	
	comp=N,110nm,0.3s							
SHO				A	A		21 35 03.3	
	comp=N,110nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.07**	**247**	*e*PN		**Pn**	**21 34 06.8**	**+2.3**
YUK				*e*S		**Sn**	**21 35 05.0**	**+3.3**
YUK				smax	smax			
	comp=N,111nm,0.5s							
YUK				smax	smax			
	comp=E,172nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.07**	**247**	*e*P		**Pn**	**21 34 06.0**	**+1.5**
YUK				AMB	AMB		21 34 06.3	
	comp=E,30nm,0.4s							
YUK				*e*S		**Sn**	**21 35 02.0**	**+0.3**
YUK				A	A		21 35 13.9	
	comp=E,150nm,0.5s							
YUK				A	A		21 35 13.9	
	comp=E,60nm,0.5s							
RUSJ	**Misakicho**	**5.43**	**250**	*i* PN		**Pn**	**21 34 12.0**	**+2.6**
RUSJ				*e*S		**Sn**	**21 35 13.5**	**+2.9**
NMR	**Nemuro--Hokkai**	**5.49**	**241**	*e*PN		**Pn**	**21 34 09.4**	**-0.8**
NMR				*e*S		**Sn**	**21 35 09.0**	**-2.9**
NMR	**Nemuro--Hokkai**	**5.49**	**241**	*e*P		**Pn**	**21 34 09.6**	**-0.6**
NMR				*e*S		**Sn**	**21 35 09.0**	**-2.9**
AKK	**Akkeshi**	**6.22**	**242**	*e*P		**Pn**	**21 34 20.9**	**+0.7**
PETK	**Petropavlovsk-**	**7.73**	**25**	P		**Pn**	**21 34 39.3**	**-1.3**
	comp=E,2.1nm,0.7s,baz=208,slow=12,SNR=1.6							
USRK	**Ussuriysk Ar.**	**14.48**	**269**	P		**Pn**	**21 36 10.7**	**-0.2**
	comp=E,2.8nm,0.7s,baz=62,slow=10,SNR=7.5							
H11N2	**WAKE ISLAND Hy**	**29.00**	**151**	T		T	22 10 11.7	
	baz=339,slow=76,SNR=155							
H11N1	**WAKE ISLAND Hy**	**29.01**	**151**	T		T	22 10 12.9	
	baz=339,slow=76,SNR=84							
H11N3	**WAKE ISLAND Hy**	**29.02**	**151**	T		T	22 10 09.9	
	baz=339,slow=76,SNR=79							
H11S1	**WAKE ISLAND Hy**	**30.07**	**152**	T		T	22 11 34.1	
	baz=340,slow=76,SNR=133							
H11S3	**WAKE ISLAND Hy**	**30.08**	**152**	T		T	22 11 34.7	
	baz=340,slow=76,SNR=89							
H11S2	**WAKE ISLAND Hy**	**30.09**	**152**	T		T	22 11 35.5	
	baz=340,slow=76,SNR=85							
ILAR	**Eielson Array**	**37.31**	**38**	P		**P**	**21 39 52.8**	**-0.1**
	comp=E,0.3nm,0.7s,baz=264,slow=5.9,SNR=2.4							
	comp=E,0.3nm,0.7s							
MKAR	**Makanchi Array**	**46.71**	**297**	P		**P**	**21 41 07.0**	**-2.5**
	comp=E,0.2nm,0.4s,baz=68,slow=7.6,SNR=9.3							
	comp=E,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**51.68**	**36**	P		**P**	**21 41 47.2**	**+0.1**
	comp=E,0.1nm,0.4s,baz=276,slow=6.6,SNR=2.0							
	comp=E,0.1nm,0.4s							
NVAR	**Mina Array Bea**	**63.17**	**62**	P		**P**	**21 43 11.5**	**+3.1**
	comp=E,0.6nm,0.6s,baz=303,slow=5.0,SNR=2.9							
	comp=E,0.6nm,0.6s							
PDAR	**Pinedale Array**	**65.50**	**53**	P		**P**	**21 43 24.6**	**+0.9**
	comp=E,0.2nm,0.5s,baz=308,slow=4.4,SNR=2.2							
	comp=E,0.2nm,0.5s							

*IDC **19** 21:34:25.0±0.7, 11°.76N×85°.68W, h0km, mb4.0/7, mbtmp4.0/8, ML3.7/1, MS3.2/4, Error ellipse: s-maj=45.4km s-min=10.7km az=64.0*
*CATAC **19** 21:34:26.7±0.2, 10°.87N×86°.47W, h12km±2km, ML4.2*
*UCR **19** 21:34:26.4±1.3, 10°.88N×86°.49W, h15km±8km, MW4.5, MB4.3(NEIC)*
*NEIC **19** 21:34:27.9±1.8, 10°.91N±0°.03×86°.42W±0°.05, h35km±2km, mb4.3/35, Error ellipse: s-maj=7.6km s-min=5.6km az=83.0*

ISC 19 21:34:25.2±1.1, 10°.83N±0°.02×86°.53W±0°.03, h18km±7km, n201, σ1s27°/254, mb4.3/25, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**0.92**	**74**	*e*P		**Pg**	**21 34 43.5**	**+0.3**
LCRUZ				*e*S		**Sn**	**21 34 56.4**	**+0.3**
ARIN	**Rivas**	**0.93**	**48**	*i* P		**Pb**	**21 34 42.6**	**-0.1**
ARIN				IAML			21 34 55.5	
	comp=Z,8μm,1.0s							
HZTE	**Horizontes, Gu**	**0.93**	**97**	Pn		**Pb**	**21 34 43.2**	**+0.4**
HZTE				Sn		**Sb**	**21 34 54.5**	**-0.3**
HZTE	**Horizontes, Gu**	**0.93**	**97**	*e*P		**Pb**	**21 34 43.1**	**+0.4**
HZTE				*e*S		**Sg**	**21 34 56.1**	**+0.5**
HZTE	**Horizontes, Gu**	**0.93**	**97**	*i* P		**Pb**	**21 34 43.2**	**+0.4**
HZTE				*i* S		**Sn**	**21 34 57.0**	**+0.7**
HZTE				IAML			21 35 02.2	
	comp=Z,10μm,1.0s							
ELI1	**Hacienda Flor**	**0.98**	**101**	*e*P		**Pg**	**21 34 44.8**	**+0.5**
MSHP	**Masachapa**	**0.99**	**360**	*i* P		**Pn**	**21 34 45.8**	**+1.5**
MSHP				IAML			21 34 46.5	
	comp=Z,1μm,1.0s							
MSHP				*i* S		**Sn**	**21 35 01.1**	**+3.2**
ALIBA	**Liberia Airpor**	**1.00**	**104**	*e*P		**Pn**	**21 34 46.1**	**+1.7**
ALIBA				*e*S		**Sn**	**21 34 59.6**	**+1.6**
DELF	**Filadelfia**	**1.04**	**111**	*e*P		**Pb**	**21 34 45.7**	**+1.1**
NADN	**Granada**	**1.04**	**28**	*i* P		**Pg**	**21 34 45.2**	**-0.1**
NADN				*i* S		**Sn**	**21 34 59.4**	**+0.4**
NADN				IAML			21 35 01.4	
	comp=Z,11μm,1.0s							
ADRN	**Diriamba**	**1.06**	**16**	*i* P		**Pn**	**21 34 45.9**	**+0.6**
ADRN				*i* S		**Sn**	**21 35 00.3**	**+0.7**
ADRN				IAML			21 35 02.2	
	comp=Z,22μm,1.0s							
JAPN	**AI SSO del Vol**	**1.09**	**50**	*i* P		**Pb**	**21 34 45.9**	**+0.4**
JAPN				IAML			21 34 46.7	
	comp=Z,8μm,1.0s							
SAJU	**San Juanillo,**	**1.11**	**133**	*i* P		**Pb**	**21 34 45.8**	**-0.1**
SAJU				*i* S		**Sb**	**21 34 59.1**	**-0.9**
SAJU				IAML			21 35 09.1	
	comp=Z,2μm,1.0s							
GB1A	**Borinquen Arri**	**1.11**	**90**	*e*P		**Pb**	**21 34 46.1**	**+0.1**
OMEN	**AI SSO del Vol**	**1.12**	**53**	*i* P		**Pb**	**21 34 46.2**	**+0.2**
OMEN				IAML			21 34 47.1	
	comp=Z,8μm,1.0s							
MORN	**AI O del Volca**	**1.12**	**51**	*i* P		**Pb**	**21 34 46.1**	**0.0**
MORN				IAML			21 34 46.8	
	comp=Z,17μm,1.0s							
GPS3	**Bodega del ICE**	**1.15**	**94**	*e*P		**Pg**	**21 34 48.5**	**+1.0**
CONN	**Concepcion**	**1.15**	**51**	*i* P		**Pb**	**21 34 46.4**	**-0.2**
CONN				IAML			21 34 46.9	
	comp=Z,38μm,1.0s							
ORTG	**Ortega, Santa**	**1.15**	**114**			**Pb**	**21 34 46.8**	**+0.1**
ORTG						**Sb**	**21 35 00.9**	**-0.4**
ORTG	**Ortega, Santa**	**1.15**	**114**	*i* P		**Pb**	**21 34 47.0**	**+0.3**
ORTG				*i* S		**Sn**	**21 35 03.4**	**+1.5**
ORTG				IAML			21 35 04.2	
	comp=Z,2μm,1.0s							
CRUN	**El Crucero**	**1.17**	**11**	*i* P		**Pg**	**21 34 48.7**	**+0.8**
CRUN				IAML			21 35 16.5	
	comp=Z,19nm,1.0s							
NANN	**Nandasmo**	**1.17**	**20**	*i* P		**Pg**	**21 34 48.3**	**+0.4**
NANN				IAML			21 35 09.2	
	comp=Z,80nm,1.0s							
JUD3	**Juan Diaz 3**	**1.18**	**124**	*e*P		**Pn**	**21 34 46.7**	**-0.2**
MASN	**Masaya**	**1.21**	**18**	*i* P		**Pb**	**21 34 48.2**	**+0.6**
MASN				IAML			21 35 06.9	
	comp=Z,1μm,1.0s							
AMYN	**Masaya**	**1.22**	**20**	*i* P		**Pn**	**21 34 47.6**	**+0.1**
AMYN				IAML			21 34 48.5	
	comp=Z,7μm,1.0s							
AMYN				*i* S		**Sg**	**21 35 04.0**	**-0.9**
GRNN	**Granada**	**1.23**	**27**	*i* P		**Pn**	**21 34 48.0**	**+0.5**
GRNN				*i* S		**Sg**	**21 35 04.8**	**-0.3**
GRNN				IAML			21 35 16.0	
	comp=Z,8μm,1.0s							
MAS3	**AI N del Volca**	**1.24**	**16**	*i* P		**Pn**	**21 34 48.1**	**+0.4**
MAS3				IAML			21 34 48.7	
	comp=Z,4μm,1.0s							
MAS3				*i* S		**Sg**	**21 35 04.4**	**-1.0**
PLVR	**Palo Verde**	**1.26**	**112**	*e*P		**Pn**	**21 34 48.2**	**+0.2**
DUNO	**Dulce Nombre,**	**1.27**	**126**			**Pn**	**21 34 48.1**	**+0.2**
DUNO	**Dulce Nombre,**	**1.27**	**126**	*e*P		**Pn**	**21 34 48.3**	**+0.3**
DUNO	**Dulce Nombre,**	**1.27**	**126**	*i* P		**Pn**	**21 34 48.2**	**+0.2**
DUNO				IAML			21 35 14.2	
	comp=Z,5μm,1.0s							
BAGA	**Bagaces**	**1.29**	**103**	*e*P		**Pb**	**21 34 49.9**	**+1.1**
MAFN	**Magfor**	**1.29**	**13**	*i* P		**Pb**	**21 34 49.3**	**+0.3**
MAFN				*i* S		**Sg**	**21 35 06.3**	**-0.7**
MAFN				IAML			21 35 18.6	
	comp=Z,8μm,1.0s							
UNAN	**Cigeo UNAN**	**1.30**	**11**	*i* P		**Pb**	**21 34 49.7**	**+0.6**
UNAN				*i* S		**Sg**	**21 35 07.2**	**-0.1**
UNAN				IAML			21 35 13.3	
	comp=Z,28μm,1.0s							
ABCN	**Banco Central**	**1.30**	**10**	*i* P		**Pg**	**21 34 50.1**	**-0.3**
ABCN				*i* S		**Sg**	**21 35 06.6**	**-0.8**
ABCN				IAML			21 35 09.0	
	comp=Z,9μm,1.0s							
ENAN	**Enatrel Managu**	**1.30**	**12**	*i* P		**Pb**	**21 34 49.7**	**+0.5**
ENAN				*i* S		**Sg**	**21 35 06.8**	**-0.7**
ENAN				IAML			21 35 13.7	
	comp=Z,10μm,1.0s							
USIM	**UNAN**	**1.30**	**11**	*i* P		**Pb**	**21 34 49.6**	**+0.4**
USIM				IAML			21 35 00.6	
	comp=Z,8μm,1.0s							
R1F03	**Distro VII**	**1.32**	**14**	*i* P		**Pn**	**21 34 49.6**	**+0.8**
R1F03				IAML			21 35 19.1	
	comp=Z,3μm,1.0s							
TISN	**Laguna Tiscapa**	**1.33**	**11**	*i* P		**Pn**	**21 34 49.8**	**+0.9**
TISN				IAML			21 35 15.3	
	comp=Z,400nm,1.0s							
SAPS	**Ciudad Sandino**	**1.34**	**5**	*i* P		**Pn**	**21 34 50.0**	**+1.0**
SAPS				*i* S		**Sg**	**21 35 07.7**	**-0.8**
SAPS				IAML			21 35 22.8	
	comp=Z,4μm,1.0s							
ALLN	**Telcor Managua**	**1.34**	**11**	*i* P		**Pb**	**21 34 50.2**	**+0.4**
ALLN				*i* S		**Sg**	**21 35 08.1**	**-0.5**
ALLN				IAML			21 35 13.9	
	comp=Z,10μm,1.0s							
MGA1	**Managua**	**1.34**	**12**	*i* P		**Pb**	**21 34 50.1**	**+0.3**
MGA1				*i* S		**Sg**	**21 35 08.7**	**+0.1**
MGA1				IAML			21 35 15.2	
	comp=Z,7μm,1.0s							
R4DEC	**Barrio San Lui**	**1.34**	**12**	*i* P		**Pn**	**21 34 49.7**	**+0.7**
R4DEC				IAML			21 35 15.2	
	comp=Z,4μm,1.0s							
R45A8	**Distro VI**	**1.34**	**13**	*i* P		**Pn**	**21 34 49.3**	**+0.2**
R45A8				IAML			21 35 21.1	
	comp=Z,2μm,1.0s							
COPN	**Copaltepe**	**1.34**	**358**	*i* P		**Pn**	**21 34 50.1**	**+1.0**
COPN				IAML			21 35 09.7	
	comp=Z,9μm,1.0s							
AERN	**Aeropuerto Man**	**1.35**	**15**	*i* P		**Pn**	**21 34 50.2**	**+1.0**
AERN				IAML			21 35 58.8	
	comp=Z,5μm,1.0s							
CUI	**Cuipilapa**	**1.36**	**97**	*e*P		**Pn**	**21 34 49.8**	**+0.5**
CUI				*e*S		**Sb**	**21 35 07.7**	**+0.5**
WILN	**Americas 2**	**1.37**	**14**	*i* P		**Pn**	**21 34 49.9**	**+0.5**
WILN				*i* S		**Sn**	**21 35 07.7**	**+0.6**
WILN				IAML			21 35 17.6	
	comp=Z,2μm,1.0s							
APQ2	**Apoyeque**	**1.38**	**9**	*i* P		**Pn**	**21 34 50.4**	**+0.9**
APQ2				*i* S		**Sg**	**21 35 08.5**	**-1.2**
APQ2				IAML			21 35 09.5	
	comp=Z,5μm,1.0s							
INDI	**Punta indio, G**	**1.40**	**133**	*e*P		**Pn**	**21 34 49.7**	**-0.1**
INDI	**Punta indio, G**	**1.40**	**133**	*i* P		**Pn**	**21 34 49.6**	**-0.1**
INDI				*i* S		**Sn**	**21 35 05.3**	**-2.5**
INDI				IAML			21 35 28.2	
	comp=Z,2μm,1.0s							
VMAR	**Armenia, Volca**	**1.40**	**91**	*i* P		**Pn**	**21 34 50.7**	**+0.9**
VMAR				*i* S		**Sb**	**21 35 08.8**	**+0.5**
VMAR				IAML			21 35 14.6	
	comp=Z,5μm,1.0s							
AMTN	**Mateare**	**1.40**	**4**	*i* P		**Pn**	**21 34 50.6**	**+0.7**
AMTN				*i* S		**Sg**	**21 35 09.6**	**-1.0**
AMTN				IAML			21 35 45.0	
	comp=Z,11μm,1.0s							
APQN	**BB Volcan Apoy**	**1.40**	**9**	*i* P		**Pn**	**21 34 50.6**	**+0.7**
APQN				*i* S		**Sg**	**21 35 09.2**	**-1.4**
APYN	**Apoyeque**	**1.41**	**7**	*i* P		**Pn**	**21 34 50.9**	**+0.9**
APYN				*i* S		**Sb**	**21 35 08.9**	**+0.3**
APYN				IAML			21 35 10.4	
	comp=Z,4μm,1.0s							
TIPN	**Tipitapa**	**1.42**	**18**	*i* P		**Pn**	**21 34 50.4**	**+0.2**
TIPN				*i* S		**Sb**	**21 35 09.3**	**+0.2**
TIPN				IAML			21 35 56.5	
	comp=Z,6μm,1.0s							
BC86	**Nagarote**	**1.43**	**359**	*i* P		**Pn**	**21 34 51.1**	**+0.9**
BC86				*i* S		**Sb**	**21 35 09.4**	**+0.3**
BC86				IAML			21 35 12.2	
	comp=Z,5μm,1.0s							
HUGN	**San Franciso L**	**1.50**	**13**	*i* P		**Pn**	**21 34 52.1**	**+0.9**
HUGN				*i* S		**Sb**	**21 35 11.0**	**-0.1**
HUGN				IAML			21 35 35.8	
	comp=Z,8μm,1.0s							
HUEN		**1.54**	**13**	*i* P		**Pn**	**21 34 52.9**	**+1.1**
MOMN	**Momotombo**	**1.57**	**360**	*i* P		**Pn**	**21 34 52.9**	**+0.7**
MOMN				IAML			21 35 09.2	
	comp=Z,70nm,1.0s							
MOMN				*i* S		**Sn**	**21 35 12.7**	**+0.5**
MOM2	**El Cardon**	**1.60**	**2**	*i* P		**Pn**	**21 34 53.5**	**+0.9**
MOM2				*i* S		**Sb**	**21 35 13.8**	**-0.3**
MOM2				IAML			21 35 15.4	
	comp=Z,2μm,1.0s		

LAFE				*i* S		**Sn**	**21 35 16.9**	**-3.2**
LAFE				IAML			21 35 36.6	
	comp=Z,11nm,1.0s							
CRIN	**San Cristobal**	**1.93**	**345**			**Pn**	**21 34 58.2**	**+1.0**
CRIN	**San Cristobal**	**1.93**	**345**	*eP*		**Pn**	**21 34 58.3**	**+1.1**
CRIN	**San Cristobal**	**1.93**	**345**	*i* P		**Pn**	**21 34 58.5**	**+1.3**
CRIN				*i* S		**Sb**	**21 35 24.6**	**+1.0**
CRIN				IAML			21 35 39.7	
	comp=Z,3µm,1.0s							
SOCE	**Pocosol**	**1.94**	**103**			**Pn**	**21 34 57.0**	**-0.3**
SOCE	**Pocosol**	**1.94**	**103**	*i* P		**Pb**	**21 34 59.7**	**-0.3**
SOCE				IAML			21 35 28.8	
	comp=Z,150nm,1.0s							
MATN	**Matagalpa**	**2.17**	**16**			**Pn**	**21 35 00.6**	**0.0**
MATN	**Matagalpa**	**2.17**	**16**	*i* P		**Pn**	**21 35 01.1**	**+0.5**
MATN				IAML			21 35 16.3	
	comp=Z,410nm,1.0s							
JACO	**JACO, Garabito**	**2.18**	**122**			**Pn**	**21 35 02.8**	**+2.2**
JACO	**JACO, Garabito**	**2.18**	**122**	*i* P		**Pb**	**21 35 04.5**	**+0.4**
JACO				*i* S		**Sn**	**21 35 26.9**	**-0.2**
JACO				IAML			21 35 56.8	
	comp=Z,540nm,1.0s							
CPMI	**Catarata Coope**	**2.19**	**104**	*i* P		**Pb**	**21 35 04.1**	**-0.2**
CPMI				*i* S		**Sn**	**21 35 27.5**	**-0.1**
CPMI				IAML			21 35 49.8	
	comp=Z,1µm,1.0s							
LIMN	**Finca el Limon**	**2.23**	**4**	*i* P		**Pn**	**21 35 01.9**	**+0.6**
LIMN				IAML			21 35 09.3	
	comp=Z,820nm,1.0s							
LIMN				*i* S		**Sn**	**21 35 28.8**	**+0.4**
CSGN	**Cosiguina Volc**	**2.36**	**335**	*i* P		**Pn**	**21 35 04.7**	**+1.6**
CSGN				IAML			21 35 14.0	
	comp=Z,3µm,1.0s							
POTN	**Potosi Cosigui**	**2.36**	**336**	*i* P		**Pn**	**21 35 04.2**	**+1.2**
POTN				IAML			21 35 54.5	
	comp=Z,120nm,1.0s							
HDC	**Heredia**	**2.52**	**109**			**Pn**	**21 35 07.4**	**+2.0**
ACOS	**Acosta**	**2.55**	**114**	*eP*		**Pn**	**21 35 08.8**	**+3.0**
ESPN	**Las Esperanzas**	**2.58**	**58**			**Pn**	**21 35 05.8**	**-0.2**
ESPN	**Las Esperanzas**	**2.58**	**58**	*i* P		**Pn**	**21 35 06.7**	**+0.7**
ESPN				IAML			21 35 53.5	
	comp=Z,420nm,1.0s							
AMPH	**Amapala**	**2.68**	**336**	*i* P		**Pn**	**21 35 08.7**	**+1.3**
OCM	**Ochomogo**	**2.70**	**110**	*i* P		**Pn**	**21 35 11.5**	**+3.6**
OCM				*i* S		**Sn**	**21 35 41.2**	**+1.0**
OCM				IAML			21 35 51.7	
	comp=Z,270nm,1.0s							
LCR2	**La Lucha 2**	**2.71**	**113**	Pn		**Pn**	**21 35 09.6**	**+1.4**
LCR2	**La Lucha 2**	**2.71**	**113**	*i* P		**Pn**	**21 35 11.7**	**+3.6**
LCR2				*i* S		**Sn**	**21 35 42.2**	**+1.6**
LCR2				IAML			21 35 56.2	
	comp=Z,660nm,1.0s							
RCPN	**Sur Rio San Ju**	**2.71**	**9**	*i* P		**Pn**	**21 35 08.9**	**+0.8**
RCPN				IAML			21 35 12.1	
	comp=Z,1.2nm,1.0s							
VIRE	**VIRE**	**2.73**	**108**	*i* P		**Pb**	**21 35 12.5**	**-1.3**
VIRE				IAML			21 36 05.7	
	comp=Z,670nm,1.0s							
CNCH	**Conchagua**	**2.74**	**333**	*i* P		**Pn**	**21 35 09.0**	**+0.5**
CNCH				IAML			21 35 52.4	
	comp=Z,640nm,1.0s							
HAYA	**Volcan Irazu**	**2.78**	**107**	*i* P		**Pn**	**21 35 10.9**	**+1.7**
HAYA				IAML			21 36 08.1	
	comp=Z,580nm,1.0s							
VTRT	**Volcan Turrial**	**2.82**	**107**	*i* P		**Pn**	**21 35 12.3**	**+2.6**
VTRT				IAML			21 35 24.3	
	comp=Z,620nm,1.0s							
RIMA	**Rio Macho**	**2.83**	**112**			**Pn**	**21 35 11.4**	**+1.7**
RIMA	**Rio Macho**	**2.83**	**112**	*i* P		**Pn**	**21 35 13.0**	**+3.2**
RIMA				*i* S		**Sn**	**21 35 46.1**	**+2.5**
RIMA				IAML			21 36 00.3	
	comp=Z,450nm,1.0s							
VTUN	**Crater Central**	**2.84**	**106**	*i* P		**Pb**	**21 35 17.0**	**+1.4**
VTUN				IAML			21 36 17.5	
	comp=Z,360nm,1.0s							
VTUC	**Crater, Volcan**	**2.84**	**106**	*i* P		**Pb**	**21 35 15.3**	**-0.4**
VTUC				IAML			21 35 33.0	
	comp=Z,260nm,1.0s							
VTUC				*i* S		**Sb**	**21 35 51.0**	**+0.7**
VTCV	**VTCV, Calle Va**	**2.89**	**107**	*i* P		**Pb**	**21 35 16.4**	**+0.1**
VTCV				IAML			21 35 37.0	
	comp=Z,490nm,1.0s							
BLUN	**Bluefields**	**2.95**	**66**	*i* P		**Pn**	**21 35 10.7**	**-0.4**
BLUN				IAML			21 35 17.7	
	comp=Z,560nm,1.0s							
BLUN				*i* S		**Sn**	**21 35 49.1**	**+3.0**
CDM	**Cerro de Muert**	**3.01**	**115**	*i* P		**Pn**	**21 35 14.7**	**+2.3**
CDM				*i* S		**Sn**	**21 35 48.5**	**+0.3**
CDM				IAML			21 36 17.2	
	comp=Z,270nm,1.0s							
RANC	**El Ranchito**	**3.11**	**327**	*i* P		**Pn**	**21 35 15.3**	**+1.8**
RANC				IAML			21 36 16.7	
	comp=Z,250nm,1.0s							
YUSH	**Yuscaran**	**3.12**	**354**	*i* P		**Pn**	**21 35 14.7**	**+1.1**
PACA	**Pacayal**	**3.15**	**326**	*i* P		**Pn**	**21 35 17.6**	**+3.5**
PACA				IAML			21 36 18.4	
	comp=Z,2µm,1.0s							
PEZE	**Perez Zeledon,**	**3.16**	**117**	Pn		**Pn**	**21 35 16.2**	**+2.1**
PEZE	**Perez Zeledon,**	**3.16**	**117**	*i* P		**Pb**	**21 35 21.8**	**+0.9**
PEZE				*i* S		**Sn**	**21 35 51.6**	**+0.1**
PEZE				IAML			21 37 47.2	
	comp=Z,500nm,1.0s							
TGUH	**Tegucigalpa,Un**	**3.29**	**347**	Pn		**Pn**	**21 35 16.3**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.29**	**347**	*i* P		**Pn**	**21 35 17.8**	**+1.8**
TGUH				IAML			21 35 48.8	
	comp=Z,290nm,1.0s							
OCHAL	**Ojochal**	**3.33**	**121**	*i* P		**Pb**	**21 35 23.2**	**-0.5**
OCHAL				IAML			21 36 46.0	
	comp=Z,9.5nm,1.0s							
SIUN	**Universidad Ur**	**3.34**	**31**	*i* P		**Pn**	**21 35 15.1**	**-1.5**
SIUN				*i* S		**Sn**	**21 35 58.7**	**+2.7**
SIUN				IAML			21 36 21.6	
	comp=Z,140nm,1.0s							
TECO	**Alcaldia de Te**	**3.47**	**321**	*i* P		**Pn**	**21 35 17.0**	**-1.4**
TECO				*i* S		**Sn**	**21 36 01.4**	**+2.2**
TECO				IAML			21 36 10.8	
	comp=Z,140nm,1.0s							
SRBA	**San Rafael, Bu**	**3.50**	**117**			**Pn**	**21 35 20.8**	**+1.9**
SRBA	**San Rafael, Bu**	**3.50**	**117**	*i* P		**Pn**	**21 35 21.6**	**+2.7**
SRBA				IAML			21 36 02.5	
	comp=Z,330nm,1.0s							
PLAN	**Los Planes de**	**3.54**	**127**	*i* P		**Pn**	**21 35 21.8**	**+2.5**
PLAN				IAML			21 36 04.9	
	comp=Z,690nm,1.0s							
UESV	**Universidad de**	**3.56**	**322**	*i* P		**Pn**	**21 35 23.0**	**+3.4**
UESV				IAML			21 36 26.5	
	comp=Z,270nm,1.0s							
SCLA	**Alcaldia de Sa**	**3.57**	**323**	*i* P		**Pb**	**21 35 26.1**	**-1.8**
SCLA				IAML			21 36 22.5	
	comp=Z,110nm,1.0s							
DRK0	**Durika**	**3.59**	**115**			**Pn**	**21 35 21.0**	**+0.8**
SJTE	**Alcalda de S**	**3.67**	**319**	*i* P		**Pn**	**21 35 25.1**	**+3.8**
SJTE				IAML			21 36 24.2	
	comp=Z,130nm,1.0s							
PAVA	**Las Pavas**	**3.71**	**321**	*i* P		**Pn**	**21 35 23.0**	**+1.3**
PAVA				IAML			21 35 39.1	
	comp=Z,280nm,1.0s							
POTG	**Potrero Grande**	**3.80**	**117**	*i* P		**Pn**	**21 35 24.6**	**+1.6**
POTG				IAML			21 37 41.1	
	comp=Z,730nm,1.0s							
PMON	**Piamonte**	**3.95**	**317**	*i* P		**Pn**	**21 35 26.7**	**+1.6**
PMON				*i* S		**Sb**	**21 36 19.5**	**-2.4**
PMON				IAML			21 36 40.9	
	comp=Z,230nm,1.0s							
RGM0	**Gandoca**	**4.06**	**107**	Pn		**Pn**	**21 35 26.6**	**+0.2**
CDITO	**Canoas**	**4.25**	**122**	Pn		**Pn**	**21 35 29.2**	**+0.2**
CDITO	**Canoas**	**4.25**	**122**	*i* P		**Pn**	**21 35 31.1**	**+2.0**
CDITO				IAML			21 37 26.1	
	comp=Z,280nm,1.0s							
BRU2	**Volcan**	**4.29**	**118**	Pn		**Pn**	**21 35 28.8**	**-1.0**
BRU2	**Volcan**	**4.29**	**118**	*i* P		**Pn**	**21 35 32.3**	**+2.5**
BRU2				*i* S		**Sn**	**21 36 19.3**	**-0.3**
BRU2				IAML			21 36 32.6	
	comp=Z,180nm,1.0s							
NUBE	**Las Nubes**	**4.40**	**314**	*i* P		**Pn**	**21 35 32.2**	**+0.9**
NUBE				IAML			21 35 33.5	
	comp=Z,140nm,1.0s							
MTO3	**Montecristo**	**4.50**	**322**			**Pn**	**21 35 34.1**	**+1.5**
TEIG	**Tepich**	**9.49**	**350**	LR		LR	21 39 20.6	
	comp=Z,282nm,20.9s,baz=5.5,slow=34							
CMIG	**Matias Romero**	**10.22**	**308**	Pn		**Pn**	**21 36 53.7**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=136,slow=12,SNR=4.6							
CMIG				LR		LR	21 41 14.8	
	comp=Z,99nm,20.0s,baz=154,slow=40							
	comp=Z,1.9nm,0.4s							
SDV	**Santo Domingo**	**15.79**	**96**	LR		LR	21 43 44.8	
	comp=Z,42nm,20.8s,baz=68,slow=37							
BAUV	**El Baul**	**18.31**	**94**	P		**Pn**	**21 38 37.9**	**-0.6**
BAUV				IAmb		IAmb	21 39 09.8	
	comp=Z,36nm,1.5s							
ATAH	**Atahualpa**	**19.60**	**155**	LR		LR	21 45 09.0	
	comp=Z,100nm,20.5s,baz=0.1,slow=32							
152A	**Waverly Hall**	**21.80**	**4**	P		**P**	**21 39 16.3**	**0.0**
BRDY	**Brady**	**23.41**	**332**	P		**P**	**21 39 33.4**	**+0.2**
BRDY				IAmb		IAmb	21 39 35.0	
	comp=Z,6.5nm,0.7s							
HODGE	**Hodges**	**23.62**	**9**	P		**P**	**21 39 35.0**	**-0.3**
HODGE				IAmb		IAmb	21 40 00.7	
	comp=Z,10nm,0.6s							
TX31	**Lajitas Ar. Si**	**24.39**	**321**			**P**	**21 39 42.5**	**-0.3**
TXAR	**Lajitas Array**	**24.39**	**321**			**P**	**21 39 43.6**	**+0.9**
TXAR	**Lajitas Array**	**24.39**	**321**	P		**P**	**21 39 44.1**	**+1.4**
	comp=Z,3.4nm,0.7s,baz=138,slow=9.6,SNR=36							
TXAR				PcP		**PcP**	**21 43 23.7**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=134,slow=5.2,SNR=3.6							
	comp=Z,3.4nm,0.7s							
MIAR	**Mount Ida**	**24.47**	**346**	P		**P**	**21 39 41.8**	**-1.5**
MIAR				IAmb		IAmb	21 39 43.5	
	comp=Z,7.0nm,0.8s							
WHAR	**Wooly Hollow**	**24.91**	**349**	P		**P**	**21 39 45.8**	**-1.5**
WHAR				IAmb		IAmb	21 39 46.9	
	comp=Z,8.0nm,0.7s							
X37A	**Clayton**	**24.99**	**343**	P		**P**	**21 39 46.9**	**-1.1**
LOOK	**Love County**	**25.03**	**339**	P		**P**	**21 39 47.0**	**-1.4**
MNHN	**Monahans**	**25.35**	**326**	P		**P**	**21 39 51.4**	**+0.1**
MNHN				IAmb		IAmb	21 39 54.4	
	comp=Z,5.5nm,0.7s							
LCAR	**Lake Charles**	**25.48**	**351**	P		**P**	**21 39 50.2**	**-2.2**
APMT	**Aspermont**	**25.63**	**333**	P		**P**	**21 39 53.9**	**0.0**
APMT				IAmb		IAmb	21 39 56.7	
	comp=Z,7.7nm,0.7s							
W35A	**Tecumseh**	**25.98**	**340**	P		**P**	**21 39 55.9**	**-1.1**
WMOK	**Wichita Mounta**	**26.29**	**337**	P		**P**	**21 39 59.4**	**-0.5**
WMOK				IAmb		IAmb	21 40 03.0	
	comp=Z,9.1nm,0.9s							
PB01	**IPOC Station P**	**35.83**	**152**	P		**P**	**21 41 22.6**	**-1.4**
F33A	**5 Mile Ranch,**	**35.87**	**348**	P		**P**	**21 41 21.5**	**-2.6**
F33A				IAmb		IAmb	21 41 22.2	
	comp=Z,5.7nm,0.8s							
PB02	**IPOC Station P**	**35.89**	**153**	P		**P**	**21 41 23.8**	**-0.8**
PDAR	**Pinedale Array**	**37.62**	**332**	P		**P**	**21 41 39.1**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=127,slow=10,SNR=11							
PDAR				PcP		**PcP**	**21 43 57.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=133,slow=4.0,SNR=2.7							
	comp=Z,0.8nm,0.7s							
NVAR	**Mina Array Bea**	**39.51**	**319**	P		**P**	**21 41 58.2**	**+3.0**
	comp=Z,1.1nm,0.6s,baz=136,slow=7.5,SNR=8.0							
NVAR				PcP		**PcP**	**21 44 04.6**	**+1.8**
	comp=Z,1.1nm,0.7s,baz=131,slow=4.3,SNR=5.2							
	comp=Z,1.1nm,0.6s							
ULM	**Lac du Bonnet**	**40.05**	**351**	P		P	21 41 55.4	-3.9
	comp=Z,2.9nm,0.5s,baz=163,slow=8.3,SNR=8.5							
	comp=Z,2.9nm,0.5s							
DGMT	**Dagmar**	**40.33**	**342**	P		**P**	**21 42 00.7**	**-1.0**
DGMT				IAmb		IAmb	21 42 01.7	
	comp=Z,8.9nm,0.8s							
SCHQ	**Schefferville**	**46.58**	**16**	P		P	21 42 46.8	-5.1
	comp=Z,1.1nm,0.5s,baz=210,slow=6.6,SNR=5.1							
	comp=Z,1.1nm,0.5s							
PLCA	**Paso Flores**	**53.39**	**165**	P		P	21 43 52.1	+8.2
	comp=Z,2.4nm,0.9s,baz=36,slow=5.6,SNR=3.7							
	comp=Z,2.4nm,0.9s							
YKA	**Yellowknife Ar**	**55.40**	**345**	PcP		**PcP**	**21 44 58.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=145,slow=3.8,SNR=1.6							
IL31		**67.86**	**336**	P		**P**	**21 45 21.8**	**-0.4**
IL31				IAmb		IAmb	21 45 36.5	
	comp=Z,3.2nm,1.4s							
ILAR	**Eielson Array**	**67.86**	**336**	P		**P**	**21 45 21.2**	**-1.0**
ILAR	**Eielson Array**	**67.86**	**336**	P		**P**	**21 45 21.0**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=131,slow=4.4,SNR=22							
	comp=Z,0.8nm,0.6s							
RND	**Reindeer**	**68.16**	**335**	P		**P**	**21 45 23.9**	**-0.2**
SUA	**Susitna One**	**68.35**	**332**	P		**P**	**21 45 25.1**	**-0.4**
SUA				IAmb		IAmb	21 45 30.7	
	comp=Z,2.5nm,1.1s							
TRF	**Thorofare Moun**	**68.78**	**334**	P		**P**	**21 45 27.0**	**-1.2**
TRF				IAmb		IAmb	21 45 29.2	
	comp=Z,2.9nm,0.9s							
SKT	**Skwentna**	**68.86**	**333**	P		**P**	**21 45 27.3**	**-1.3**
SKT				IAmb		IAmb	21 45 27.9	
	comp=Z,5.2nm,1.2s							
I23K	**Minto, Yukon-K**	**68.97**	**336**	P		**P**	**21 45 28.3**	**-0.8**
BPAW	**Bear Paw Mtn.**	**69.28**	**335**	P		**P**	**21 45 29.4**	**-1.7**
BPAW				IAmb		IAmb	21 45 30.9	
	comp=Z,3.1nm,0.8s							
MLY	**Manley**	**69.48**	**336**	P		**P**	**21 45 31.2**	**-1.2**
MLY				IAmb		IAmb	21 45 50.2	
	comp=Z,4.3nm,1.5s							
M20K	**Styx River**	**69.56**	**332**	P		**P**	**21 45 31.7**	**-1.2**
K20K	**Telida**	**70.38**	**334**	P		**P**	**21 45 35.8**	**-2.1**
K20K				IAmb		IAmb	21 46 01.3	
	comp=Z,4.2nm,1.4s							
J20K	**Nowinta River**	**70.63**	**335**	P		**P**	**21 45 37.7**	**-1.7**
CHGN	**Chignik**	**71.02**	**326**	P		**P**	**21 45 41.0**	**-0.9**
C23K	**Itkillik River**	**71.09**	**341**	P		**P**	**21 45 41.7**	**-0.4**
F21K	**Alatna River**	**71.23**	**338**	P		**P**	**21 45 42.2**	**-0.8**
H19K	**Roundabout Mou**	**71.93**	**336**	P		**P**	**21 45 46.5**	**-0.7**
H19K				IAmb		IAmb	21 46 29.7	
	comp=Z,3.5nm,1.2s							
E19K	**Redstone River**	**72.70**	**338**	P		**P**	**21 45 50.6**	**-1.2**
E19K				IAmb		IAmb	21 46 29.1	
	comp=Z,5.1nm,1.4s							
B20K	**Meade River**	**73.30**	**340**	P		**P**	**21 45 54.2**	**-1.0**
SONM	**Songino Array**	**120.48**	**350**	PKP		**PKPdf**	**21 53 15.4**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=17,slow=1.5,SNR=1.6							
ASAR	**Alice Springs**	**139.47**	**246**	PKhKP		PKPpre	21 53 53.6	
	comp=Z,0.4nm,0.8s,baz=85,slow=1.8,SNR=2.1							
WRA	**Warramunga Arr**	**139.66**	**252**	PKhKP		PKPpre	21 53 53.4	
	comp=Z,0.6nm,0.8s,baz=95,slow=2.5,SNR=2.5							
CMAR	**Chiang Mai Arr**	**150.40**	**349**	PKPbc		**PKPbc**	**21 54 16.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=342,slow=3.6,SNR=4.7							

*IDC **19** 21:35:27.4±3.9, 24.°93S×178.°65W, h341km±32km, mb4.1/5, mbtmp4.9/6, Error ellipse: s-maj=37.8km s-min=26.4km az=161.0*

*NEIC **19** 21:35:33.5±1.6, 25.°10S±0.°07×178.°74W±0.°2, h408km±12km, mb4.3/18, Error ellipse: s-maj=24.3km s-min=8.8km az=99.0*

ISC 19 21:35:32.1±0.6, 25.°10S±0.°07×178.°74W±0.°10, h400km, n72, σ1°71/70, mb4.3/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
RAO	**Raoul Island**	**4.20**	**170**	Pn	**Pn**	**21 36 47.8**	**+1.8**
NIUE	**Niue**	**10.13**	**55**		**P**	**21 37 49.1**	**-2.1**
PUZ	**Puketiti**	**13.18**	**190**	P	**S**	**21 40 43.4**	**-3.9**
TWGZ	**Tauwhareparae**	**13.33**	**191**	P	**S**	**21 40 49.1**	**-1.3**
OUENC	**Ouen Island, N**	**13.47**	**278**	P	**Pn**	**21 38 29.6**	**-0.7**
TOZ	**Tahuroa Road**	**13.51**	**200**	P	**P**	**21 38 29.3**	**+1.1**
MWZ	**Matawai**	**13.57**	**193**	P	**S**	**21 40 54.0**	**-1.2**
URZ	**Urewera**	**13.58**	**194**	P	**P**	**21 38 28.9**	**-0.1**
	12nm,0.3s,baz=357,slow=1.9,SNR=14						
URZ				S	**S**	**21 40 52.9**	**-2.5**
	20nm,0.4s,baz=135,slow=23,SNR=19						
URZ	**Urewera**	**13.58**	**194**	P	**S**	**21 40 55.0**	**-0.4**
TKGZ	**Te Karaka**	**13.61**	**191**	P	**S**	**21 40 54.3**	**-1.6**
RIGZ	**Rimuhau**	**13.88**	**191**	P	**S**	**21 40 59.0**	**-2.5**
DZM	**Mont Dzumac**	**13.92**	**279**	P	**P**	**21 38 29.6**	**-3.4**
	0.8nm,0.5s,baz=60,slow=20,SNR=1.0						
RTZ	**Ruatahuna**	**13.95**	**194**	P	**P**	**21 38 31.3**	**-1.8**
SNGZ	**Shannon Statio**	**14.04**	**193**	P	**S**	**21 41 03.8**	**-0.7**
KNZ	**Kokohu**	**14.21**	**191**	P	**S**	**21 41 03.1**	**-4.7**
MTHZ	**Maungataniwha**	**14.21**	**194**	P	**S**	**21 41 09.0**	**+0.9**
BKZ	**Black Stump Fm**	**14.59**	**195**	P	**S**	**21 41 14.3**	**-1.3**
TWVZ	**Taurewa**	**14.77**	**198**	P	S	21 41 51.3	+32
KAHZ	**Kahuranaki**	**15.11**	**193**	P	**S**	**21 41 25.0**	**-0.8**
PXZ	**Pawanui**	**15.34**	**193**	P	**S**	**21 41 27.3**	**-3.0**
PNHZ	**Pukenui**	**15.37**	**195**	P	**S**	**21 41 30.3**	**-0.8**
PRHZ	**Porangahau**	**15.61**	**193**	P	**S**	**21 41 33.8**	**-1.9**
DVHZ	**Dannevirke**	**15.75**	**194**	P	**S**	**21 41 38.5**	**+0.1**
POWZ	**Post Office Ro**	**15.93**	**195**	P	**S**	**21 41 44.4**	**+2.5**
PRWZ	**Pori Road**	**16.04**	**195**	P	**S**	**21 41 44.1**	**+0.2**
BFZ	**Birch Farm**	**16.09**	**194**	P	**S**	**21 41 43.1**	**-2.1**
MRZ	**Mangatainoka R**	**16.23**	**196**	P	**S**	**21 41 47.8**	**+0.1**
TIWZ	**Tintock**	**16.27**	**195**	P	**S**	**21 41 49.9**	**+1.4**
HOWZ	**Holdsworth Sta**	**16.47**	**196**	P	**S**	**21 41 49.1**	**-3.3**
LTZ	**Lake Taylor**	**19.13**	**201**	P	**P**	**21 39 30.7**	**+2.5**
LTZ				IAmb	IAmb	21 39 36.9	
	comp=Z,14nm,1.2s						
ARMA	**Armidale**	**26.71**	**252**	P	**P**	**21 40 39.4**	**+2.3**
ARMA				IAmb	IAmb	21 40 40.2	
	comp=Z,13nm,1.1s						
EIDS	**Eidsvold**	**27.28**	**263**	P	**P**	**21 40 42.4**	**+0.3**
EIDS				IAmb	IAmb	21 40 44.7	
	comp=Z,8.9nm,0.9s						
CTA	**Charters Tower**	**32.65**	**272**	P	**P**	**21 41 30.2**	**+1.3**
	comp=Z,9.9nm,0.4s,baz=94,slow=10,SNR=31						
	comp=Z,9.9nm,0.4s						
CTAO	**Charters Tower**	**32.65**	**272**	P	**P**	**21 41 30.1**	**+1.2**
STKA	**Stephens Creek**	**35.37**	**250**	P	**P**	**21 41 52.3**	**+0.4**
STKA	**Stephens Creek**	**35.37**	**250**	P	**P**	**21 41 53.1**	**+1.3**
	comp=Z,6.1nm,0.5s,baz=98,slow=12,SNR=22						
	comp=Z,6.1nm,0.5s						
PMG	**Port Moresby**	**35.98**	**290**	P	**P**	**21 41 56.7**	**-0.5**
	comp=Z,12nm,0.8s,baz=159,slow=5.8,SNR=4.2						
	comp=Z,12nm,0.8s						
COEN	**Coen**	**37.45**	**280**	P	**P**	**21 42 10.1**	**+0.7**
COEN				IAmb	IAmb	21 42 11.4	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**40.05**	**248**	P	**P**	**21 42 31.0**	**+0.4**
BBOO				IAmb	IAmb	21 42 45.7	
	comp=Z,9.9nm,1.1s						
AS31	**Alice Springs**	**42.99**	**262**	P	**P**	**21 42 54.6**	**+0.4**
ASAR	**Alice Springs**	**42.99**	**262**	P	**P**	**21 42 54.2**	**-0.1**
ASAR	**Alice Springs**	**42.99**	**262**	P	**P**	**21 42 54.6**	**+0.4**
	comp=Z,3.4nm,0.3s,baz=88,slow=6.6,SNR=103						
ASAR				PcP	**PcP**	**21 44 37.7**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=101,slow=4.8,SNR=2.1						
	comp=Z,3.4nm,0.3s						
WR0	**Warramunga Arr**	**43.30**	**267**	P	**P**	**21 42 56.4**	**-0.3**
WR0				IAmb	IAmb	21 42 57.2	
	comp=Z,8.3nm,0.7s						
WB2	**Warramunga Arr**	**43.47**	**267**	P	**P**	**21 42 57.8**	**-0.3**
WRAB	**Tennant Creek**	**43.48**	**267**	P	**P**	**21 42 57.6**	**-0.5**
WRAB				IAmb	IAmb	21 42 58.9	
	comp=Z,10nm,0.7s						
WB0	**Warramunga Arr**	**43.48**	**267**	P	**P**	**21 42 57.9**	**-0.3**
WB0				IAmb	IAmb	21 42 59.0	
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**43.48**	**267**	P	**P**	**21 42 57.6**	**-0.6**
WRA	**Warramunga Arr**	**43.48**	**267**	P	**P**	**21 42 58.2**	**0.0**
	comp=Z,11nm,0.5s,baz=99,slow=6.8,SNR=94						
WRA				ScP	**ScP**	**21 47 57.2**	**+6.6**
	comp=Z,0.5nm,0.6s,baz=108,slow=4.0,SNR=2.5						
	comp=Z,11nm,0.5s						
FORT	**Forrest**	**46.98**	**250**	P	**P**	**21 43 24.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**51.89**	**266**	P	**P**	**21 44 02.1**	**+0.3**
MORW	**Morawa**	**57.55**	**250**	P	**P**	**21 44 41.2**	**-0.6**
MORW				IAmb	IAmb	21 44 43.3	
	comp=Z,14nm,1.1s						
TOLI2	**Tolitoli**	**63.99**	**285**		**P**	**21 45 23.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**65.76**	**272**	P	**P**	**21 45 36.4**	**+0.2**
JAGI				IAmb	IAmb	21 46 04.8	
	comp=Z,8.2nm,0.9s						
MKAR	**Makanchi Array**	**113.81**	**312**	PKiKP	**PKiKP**	**21 53 24.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=59,slow=0.8,SNR=2.6						
KURBB	**Kurchatov Arra**	**116.90**	**316**	PKP	**PKiKP**	**21 53 30.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=103,slow=1.9,SNR=4.0						
BVAR	**Borovoye Array**	**122.10**	**318**	PKP	**PKiKP**	**21 53 40.8**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=38,slow=1.7,SNR=4.8						
BVAR				pPKP	pPKPdf	21 55 01.3	-15
	comp=Z,0.5nm,0.7s,baz=108,slow=2.3,SNR=3.6						
ARCES	**ARCESS Array B**

	207nm,0.2s							
BLB	**Baldybastay**	**2.72**	**309**	Pg	**Pb**	**21**	**43**	**20.3 +1.0**
	13nm,0.1s							
BLB				Lg	Lg	21	43	53.0
	82nm,0.3s							
ARXS	**Arharly**	**3.17**	**306**	Pg	**Pb**	**21**	**43**	**28.0 +1.1**
	30nm,0.2s							
ARXS				Lg	Lg	21	44	06.2
	54nm,0.4s							
ARXS	**Arharly**	**3.17**	**306**	*eP*	**Pb**	**21**	**43**	**28.0 +1.1**
	30nm,0.2s							
ARXS				*eS*	**Sb**	**21**	**44**	**06.2 +0.2**
	54nm,0.4s							
KAPS	**Kapalarasan**	**3.23**	**333**	Pg	**Pb**	**21**	**43**	**29.7 +1.9**
	6.3nm,0.2s							
KAPS				Lg	Lg	21	44	09.4
	30nm,0.3s							
KAPS	**Kapalarasan**	**3.23**	**333**	*eP*	**Pb**	**21**	**43**	**29.7 +1.9**
	6.3nm,0.2s							
KAPS				*eS*	**Sb**	**21**	**44**	**09.4 +1.9**
	30nm,0.3s							
KOTS	**Kotyrbulak**	**3.27**	**286**	Pg	**Pb**	**21**	**43**	**30.1 +1.5**
	21nm,0.2s							
KOTS				Lg	Lg	21	44	09.7
	58nm,0.4s							
KOTS	**Kotyrbulak**	**3.27**	**286**	*eP*	**Pb**	**21**	**43**	**30.1 +1.5**
	21nm,0.2s							
KOTS				*eS*	**Sb**	**21**	**44**	**09.7 +0.8**
	58nm,0.4s							
MDOK	**Medeo**	**3.30**	**284**	⇓Pg	**Pb**	**21**	**43**	**31.1 +1.9**
	7.8nm,0.6s							
MDOK				Lg	Lg	21	44	11.6
	38nm,0.6s							
KNDC	**Almaty**	**3.37**	**285**	⇓Pg	**Pb**	**21**	**43**	**31.9 +1.6**
	15nm,0.6s							
KNDC				⇓Lg	Lg	21	44	14.4
	50nm,0.6s							
CHKK	**Chushkaly**	**3.54**	**295**	Pg	**Pb**	**21**	**43**	**34.5 +1.3**
	3.9nm,0.1s							
CHKK				Lg	Lg	21	44	17.3
	30nm,0.3s							
CHKK	**Chushkaly**	**3.54**	**295**	*eP*	**Pb**	**21**	**43**	**34.5 +1.3**
	3.9nm,0.1s							
CHKK				*eS*	**Sb**	**21**	**44**	**17.3 +0.8**
	30nm,0.3s							
KTBS	**Karatobe**	**3.70**	**292**	Pg	**Pb**	**21**	**43**	**37.7 +1.8**
	5.9nm,0.2s							
KTBS				Lg	Lg	21	44	22.8
	30nm,0.2s							
KTBS	**Karatobe**	**3.70**	**292**	*eP*	**Pb**	**21**	**43**	**37.7 +1.8**
	5.9nm,0.2s							
KTBS				*eS*	**Sb**	**21**	**44**	**22.8 +1.6**
	30nm,0.2s							
TKM2	**Tokmak 2**	**4.32**	**279**	⇑Pg	**Pb**	**21**	**43**	**50.3 +3.7**
	4.8nm,0.8s							
TKM2				⇓Lg	Lg	21	44	44.2
	12nm,0.8s							
KRBS	**Karabastau**	**4.39**	**289**	Pg	**Pb**	**21**	**43**	**50.4 +2.6**
	2.2nm,0.3s							
KRBS				Lg	Lg	21	44	44.5
	11nm,0.4s							
KRBS	**Karabastau**	**4.39**	**289**	*eP*	**Pb**	**21**	**43**	**50.4 +2.6**
	2.2nm,0.3s							
KRBS				*eS*	**Sb**	**21**	**44**	**44.5 +3.3**
	11nm,0.4s							
MAKZ	**Makanchi**	**4.40**	**5**	⇓Pg	**Pb**	**21**	**43**	**52.2 +4.4**
	1.0nm,0.5s							
MAKZ				⇓Lg	Lg	21	44	49.4
	8.2nm,0.8s							
MK31	**Makanchi Array**	**4.41**	**8**	Pn	Pn	21	43	42.6 +4.8
	0.2nm,0.3s,baz=184,slow=14,SNR=18							
MK31				⇑Pg	Pg	21	43	53.1 -1.4
	1.8nm,0.6s,baz=192,slow=15,SNR=13							
MK31				Lg	Lg	21	44	50.5
	4.5nm,0.5s,baz=187,slow=28,SNR=6.0							
CHMS	**Chumysh**	**4.95**	**279**	⇓Pn	Pn	21	43	49.4 +4.4
	0.8nm,0.6s							
CHMS				⇑Pg	Pg	21	44	00.9 -3.7
	2.8nm,0.7s							
CHMS				⇓Lg	Lg	21	45	04.0
	5.9nm,0.5s							
ZSN	**Zaisan**	**5.59**	**25**	Pg	**Pg**	**21**	**44**	**15.9 -1.0**
	1.5nm,0.2s							
ZSN				Lg	Lg	21	45	28.4
	5.7nm,0.6s							
ZSN	**Zaisan**	**5.59**	**25**	*eP*	**Pg**	**21**	**44**	**15.9 -1.0**
	1.5nm,0.2s							
ZSN				*eS*	**Sg**	**21**	**45**	**28.4 -1.0**
	5.7nm,0.6s							
KURBB	**Kurchatov Arra**	**8.44**	**347**	⇓Lg	Lg	21	46	57.7
	4.8nm,0.7s							
KURK	**Kurchatov**	**8.51**	**348**	⇓Lg	Lg	21	46	59.2
	1.5nm,0.6s							
OTUK	**Ortayu**	**8.64**	**315**	⇓Lg	Lg	21	46	59.9
	3.2nm,0.8s							

*REN **19** 21:52:26.8±2.3, 40˚.45N±0˚.02×121˚.55W±0˚.01, h11km±4km, Error ellipse: s-maj=2.3km s-min=1.3km az=200.0*
*NEIC **19** 21:52:27.3±2.0, 40˚.46N±0˚.02×121˚.52W±0˚.02, h10km±1km, Error ellipse: s-maj=3.0km s-min=2.8km az=272.0*
NCEDC 19 21:52:27.6±1.8, 40˚.47N±0˚.02×121˚.54W±0˚.02, h5km±5km, Md2.9/64, ML2.9/11(REN), ML2.8/76(NEIC), Error ellipse: s-maj=2.4km s-min=2.0km az=195.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDBM	**Digger Butte**	**0.19**	**259**		Pg	21 52 31.7	+0.2
O03E	**Paynes Creek**	**0.27**	**229**		Pg	21 52 32.9	0.0
O03E					Sg	21 52 36.9	+0.6
HATC	**Hat Creek Radi**	**0.35**	**9**		Pg	21 52 34.9	+0.4
LBCM	**Butte Creek Ri**	**0.39**	**21**		Pg	21 52 35.6	+0.3
LSHM	**Sage Hen Hill**	**0.50**	**310**		Pg	21 52 36.8	-0.5
LTCM	**Tuscan Springs**	**0.52**	**240**		Pg	21 52 37.9	+0.2
LTCM					Sb	21 52 45.9	-1.2
LTIM	**Timbered Crate**	**0.71**	**3**		Pg	21 52 41.2	0.0
OGOM	**Van Goodin Ran**	**0.82**	**184**		Pg	21 52 42.6	-0.7
OBHM	**Bloomer Hill**	**0.82**	**176**		Pg	21 52 43.0	-0.4
KPK	**Kanaka Peak**	**0.90**	**169**		Pg	21 52 43.7	-1.3
KPK					Sg	21 52 56.0	-0.6
ORV	**Oroville**	**0.91**	**178**		Pg	21 52 43.9	-1.2
LBFM	**Black Fox Moun**	**0.92**	**343**		Pg	21 52 44.9	-0.3
M03C	**McCloud**	**0.92**	**331**		Pg	21 52 44.9	-0.4
O02D	**Mt. Diablo Mer**	**1.00**	**253**		Pg	21 52 46.0	-0.8
LGBM	**Gray Butte**	**1.01**	**331**		Pg	21 52 46.5	-0.5
OWYM	**Wyandotte**	**1.01**	**178**		Pg	21 52 45.8	-1.3
BMRR	**Black Mountain**	**1.02**	**110**		Pg	21 52 46.0	-1.2
PAM	**Palermo**	**1.02**	**179**		Pg	21 52 45.6	-1.5
N02D	**Trinity Center**	**1.02**	**300**		Pg	21 52 45.5	-1.8
LBPM	**Beegum Peak**	**1.04**	**262**		Pg	21 52 46.2	-1.4
LGPM	**Granite Peak**	**1.08**	**295**		Pg	21 52 46.3	-2.0
BEKR	**Beckworth**	**1.08**	**123**		Pg	21 52 47.2	-1.3
BEKR					Sg	21 53 02.2	-0.3
OSTM	**Stimpson Lane**	**1.10**	**182**		Pg	21 52 47.8	-0.9
GVV	**Valley View**	**1.11**	**232**		Pg	21 52 48.1	-1.0
LMPM	**Military Pass**	**1.12**	**335**		Pg	21 52 49.1	-0.1
LASM	**Arnica Sink**	**1.13**	**358**		Pg	21 52 48.6	-0.7
OHCM	**Honcut**	**1.13**	**178**		Pg	21 52 48.1	-1.3
LCSM	**College of the**	**1.15**	**326**		Pg	21 52 48.4	-1.3
LGMM	**Garner Mountai**	**1.15**	**349**		Pg	21 52 48.8	-0.9
GCK	**Clark Valley**	**1.15**	**217**		Pg	21 52 49.1	-0.6
OSUM	**Sutter Buttes**	**1.22**	**192**		Pg	21 52 49.4	-1.6
SUTB	**Sutter Butte**	**1.25**	**189**		Pg	21 52 49.9	-1.8
LHEM	**Herd Peak**	**1.27**	**336**		Pg	21 52 51.1	-0.9
GFC	**Funks Creek**	**1.28**	**207**		Pg	21 52 50.8	-1.4
LOY	**Loyalton**	**1.28**	**129**		Pg	21 52 51.1	-1.2
KHBM	**Hayfork Bally**	**1.30**	**279**		Pg	21 52 50.5	-1.9
M04C	**Macdoel**	**1.33**	**350**		Pn	21 52 52.1	-1.0
KBNM	**Bluenose Ridge**	**1.39**	**246**		Pn	21 52 53.5	-0.4
LAMM	**Antelope Mount**	**1.41**	**324**		Pn	21 52 52.1	-2.1
GTSM	**Trough Springs**	**1.42**	**216**		Pn	21 52 52.9	-1.3
GHMM	**Hull Mountain**	**1.45**	**228**		Pn	21 52 53.6	-1.0
DONR	**Donner Summit**	**1.46**	**140**		Pn	21 52 53.7	-1.2
DONR					Sb	21 53 13.0	-1.3
PEAR	**Peavine Mounta**	**1.48**	**125**		Pn	21 52 54.4	-0.9
PEAR					Sb	21 53 14.7	-0.4
B040	**Montague**	**1.52**	**334**		Pn	21 52 53.8	-1.8
YBH	**Yreka Blue Hor**	**1.54**	**325**	Pn	Pn	21 52 54.5	-1.5
AFDM	**Forest Hills D**	**1.58**	**164**	Pn	Pn	21 52 55.0	-1.4
AFDM					Sn	21 53 14.6	-2.6
AFDM				IAML		21 53 18.7	
	comp=E,121nm,0.3s						
AFDM				IAML		21 53 20.7	
	comp=N,108nm,0.6s						

KIPM	**Iron Peak**	**1.63**	**247**		Pn	21	52	57.2 0.0
MPK	**Martis Peak**	**1.65**	**135**		Pn	21	52	57.3 -0.2
MPK				IAML		21	53	26.5
	comp=E,131nm,0.7s							
KMRM	**Mail Ridge**	**1.68**	**262**		Pn	21	52	56.7 -1.1
KMRM				IAML		21	53	27.3
	comp=E,120nm,0.8s							
DCMP	**DeCamp, Califo**	**1.71**	**235**		Pn	21	52	58.6 +0.5
KHMM	**Horse Mountain**	**1.72**	**284**		Pn	21	52	56.8 -1.6
KHMM				IAML		21	53	33.5
	comp=N,72nm,2.3s							
KHMM				IAML		21	53	34.0
	comp=E,82nm,0.9s							
NDHM	**Dunnigan Hills**	**1.73**	**190**		Pb	21	53	00.0 +0.2
MNRC	**McLaughlin Min**	**1.73**	**204**		Pn	21	52	57.7 -0.8
KCRM	**Chalk Rock**	**1.74**	**269**		Pn	21	52	59.0 +0.3
KCPM	**Cahto Peak**	**1.75**	**244**		Pn	21	52	58.1 -0.8
KCPM				IAML		21	53	33.4
	comp=E,101nm,2.4s							
KCPM				IAML		21	53	38.6
	comp=N,89nm,1.1s							
RUBR	**Rubicon Trail**	**1.77**	**143**		Pb	21	53	00.2 -0.6
PAHR	**Pah Rah Range**	**1.82**	**114**	Pn	Pn	21	52	58.7 -1.1
GHLM	**Highland Sprin**	**1.83**	**219**		Pn	21	52	59.8 -0.1
L04D	**Klamath Falls**	**1.84**	**342**	Pn	Pn	21	53	00.3 +0.2
L04D				IAML		21	53	21.7
	comp=N,58nm,3.5s							
L04D				IAML		21	53	35.9
	comp=E,76nm,3.9s							
EMB	**Emerald Bay**	**1.86**	**143**		Pn	21	53	00.5 +0.1
NBPM	**Berryessa Peak**	**1.87**	**196**		Pn	21	53	00.2 -0.1
GTC	**Three Chop Rid**	**1.88**	**236**		Pn	21	53	00.6 +0.1
HOPS	**Hopland Field**	**1.89**	**219**	Pn	Pn	21	53	00.2 -0.5
HOPS				IAML		21	53	23.1
	comp=N,88nm,2.6s							
HOPS				IAML		21	54	04.4
	comp=E,73nm,4.4s							
GDXM	**Geysers**	**1.92**	**211**	Pn	Pn	21	53	01.0 -0.1
JCC	**Jacoby Creek,**	**1.93**	**281**	Pn	Pn	21	53	02.1 +1.0
JCC				IAML		21	53	16.7
	comp=E,81nm,2.9s							
JCC				IAML		21	53	30.9
	comp=N,84nm,1.7s							
KMPM	**Mount Pierce**	**1.97**	**269**	Pn	Pn	21	53	02.2 +0.4
PNTR	**Pine Nut**	**2.03**	**132**	Pn	Pn	21	53	02.7 -0.1
KRMB	**Red Mountain**	**2.08**	**301**		Pn	21	53	02.2 -1.2
KRMB				IAML		21	53	45.8
	comp=E,78nm,4.5s							
KRMB				IAML		21	53	49.5
	comp=N,62nm,2.2s							
K04D	**Chiloquin, OR**	**2.16**	**356**		Pn	21	53	03.6 -0.9
KSXB	**Camp Six Broad**	**2.23**	**308**	Pn	Pn	21	53	04.1 -1.3
KSXB				IAML		21	53	31.9
	comp=E,51nm,5.0s							
KSXB				IAML		21	53	46.6
	comp=N,48nm,1.8s							
L02F	**Cave Junction**	**2.25**	**318**		Pb	21	53	08.8 -0.1
L02F				IAML		21	53	37.0
	comp=E,41nm,3.3s							
L02F				IAML		21	53	39.3
	comp=N,37nm,2.7s							
K05A	**Summer Lake**	**2.31**	**12**		Pb	21	53	09.7 -0.1
K05A				IAML		21	53	48.6
	comp=N,56nm,2.0s							
K05A				IAML		21	53	51.5
	comp=E,43nm,4.7s							
YERR	**Yerington**	**2.31**	**129**	Pn	Pn	21	53	05.4 -1.1
YERR				IAML		21	53	43.1
	comp=N,37nm,0.5s							
WAKR	**Walker**	**2.55**	**140**	Pn	Pn	21	53	08.3 -1.5
WAKR				IAML		21	53	48.2
	comp=E,37nm,1.1s							
CMB	**Columbia Colle**	**2.59**	**159**		Pn	21	53	09.2 -1.1
CMB				IAML		21	53	52.4
	comp=E,40nm,0.8s							
CMB				IAML		21	53	52.4
	comp=N,35nm,0.7s							
K02D	**Willamette Mer**	**2.74**	**325**	Pn	Pn	21	53	12.4 +0.1
K02D				IAML		21	54	13.8
	comp=E,40nm,3.1s							
J05D	**Fort Rock, OR**	**2.82**	**4**		Pn	21	53	13.5 -0.1
J05D				IAML		21	54	27.4
	comp=N,27nm,4.8s							
J05D				IAML		21	54	36.7
	comp=E,30nm,4.5s							
DBO	**Dodson Butte**	**2.94**	**335**	Pn	Pn	21	53	14.9 -0.2
RYN	**Ryan**	**2.97**	**127**	Pn	Pn	21	53	15.5 -0.1
RYN				IAML		21	54	12.0
	comp=E,19nm,1.4s							
KVN	**Kaiserville**	**3.00**	**117**		Pn	21	53	16.0 -0.1
NVAR	**Mina Array Bea**	**3.23**	**128**		Pn	21	53	19.7 +0.5
LHV	**Little Huntoon**	**3.23**	**132**		Pn	21	53	19.5 +0.5
LHV				IAML		21	53	44.9
	comp=E,26nm,2.8s							
LHV				IAML		21	54	17.5
	comp=N,29nm,4.9s							
J01E	**Myrtle Point**	**3.23**	**327**	Pn	Pn	21	53	16.6 -2.4
NV08	**Mina Array Sit**	**3.23**	**129**		Pb	21	53	23.5 -2.2
NV11	**Mina Array Sit**	**3.31**	**127**		Pn	21	53	20.9 +0.5
PINE	**Pine Mountain**	**3.35**	**7**	Pn	Pn	21	53	22.2 -0.7
MDPB	**Devils Postpil**	**3.42**	**145**		Pn	21	53	22.5 +0.6
MDPB				IAML		21	54	22.7
	comp=E,21nm,0.8s							
MDPB				IAML		21	54	28.5
	comp=N,18nm,0.8s							
MLAC	**Mammoth, Mammo**	**3.53**	**143**		Pn	21	53	24.3 +1.0
PDRM	**Domengine Ranc**	**4.23**	**167**		Pn	21	53	36.5 +3.7
H04A	**Detroit Lake**	**4.24**	**354**	Pn	Pn	21	53	31.3 -1.6
R11B	**Troy Canyon, C**	**5.07**	**113**	Pn	Pn	21	53	43.4 -1.2
R11B					Pn	21	53	43.8 -0.7
R11B				IAML		21	54	42.8
	comp=E,3.7nm,4.1s							
R11B				IAML		21	55	35.8
	comp=N,5.5nm,4.5s							
CARC	**Carrizo Plain**	**5.32**	**165**		Pn	21	53	46.7 -1.2

NEIC 19 22:04:32.9±1.5, 28˚.97N±0˚.02×97˚.94W±0˚.06, h5km±2km, mb_Lg3.0/37, ML3.0/6, Error ellipse: s-maj=8.3km s-min=3.5km az=84.0, Near coast of Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
735A	**Kenedy**	**0.16**	**135**	Pg	Pg	22 04 36.2	+0.1
735A				Sg	Sg	22 04 38.7	+0.4
735A				IAML		22 04 40.8	
	comp=N,2µm,0.8s						
EF01	**Eagle Ford 01**	**0.42**	**292**	Pg	Pg	22 04 41.4	+0.5
EF01				IAML		22 04 50.0	
	comp=N,1µm,0.5s						
MLDN	**Muldoon**	**1.11**	**43**		Pg	22 04 52.3	-1.8
MLDN				Sg	Sg	22 05 07.8	-0.8
MLDN				IAmb_Lg		22 05 08.6	
	comp=Z,156nm,0.9s						
MLDN				IAML		22 05 09.7	
	comp=Z,490nm,0.7s						
MLDN				IAML		22 05 22.3	
	comp=Z,399nm,0.7s						
HNDO	**Hondo**	**1.30**	**296**		Pn	22 04 56.3	-1.4
833A	**Chaparral WMA,**	**1.43**	**244**		Pn	22 04 59.2	-0.3
435B	**Jarrell**	**1.83**	**10**	Pn	Pn	22 05 04.2	-0.8
435B				IAmb_Lg		22 05 34.2	
	comp=Z,80nm,0.8s						
JCT	**Junction City**	**2.21**	**313**	Pn	Pn	22 05 10.3	0.0
JCT				IAmb_Lg		22 05 47.2	
	comp=Z,79nm,1.0s						
DRIO	**Del Rio**	**2.38**	**282**	Pn	Pn	22 05 12.0	-0.7
BRDY	**Brady**	**2.48**	**339**	Pn	Pn	22 05 13.3	-0.7
WHTX	**Lake Whitney,**	**3.04**	**8**	Pn	Pn	22 05 21.3	-0.3
WHTX				IAmb_Lg		22 06 16.4	
	comp=Z,38nm,0.8s						
OZNA	**Ozona**	**3.38**	**306**	Pn	Pn	22 05 26.2	-0.2
OZNA				IAmb_Lg		22 06 27.6	
	comp=Z,33nm,0.9s						
FW14	**Alvarado**	**3.48**	**10**	IAmb_Lg		22 06 31.2	
	comp=Z,33nm,0.8s						
FW16	**Waxahatchie**	**3.61**	**14**	Pn	Pn	22 05 28.0	-1.5
FW07	**Weatherford**	**3.72**	**2**	Pn	Pn	22 05 29.7	-1.3
SAND	**Sanderson**	**3.78**	**286**	Pn	Pn	22 05 31.8	0.0
PLPT	**Palo Pinto**	**3.84**	**355**	Pn	Pn	22 05 31.0	-1.7
ABTX	**Abilene, Hawle**	**3.92**	**339**	Pn	Pn	22 05 31.9	-2.0
ABTX				IAmb_Lg		22 06 47.7	
	comp=Z,29nm,1.0s						
FW06	**Azle**	**4.00**	**5**	Pn	Pn	22 05 33.6	-1.3
FW06				IAmb_Lg		22 06 47.4	
	comp=Z,35nm,1.0s						
SGCY	**Sterling City**	**4.02**	**318**	Pn	Pn	22 05 33.4	-1.8
Z35A	**Perchaven, San**	**4.39**	**8**	Pn	Pn	22 05 39.8	-0.4
Z35A				IAmb_Lg		22 06 56.5	
	comp=Z,30nm,1.1s						
SN05	**Snyder 5**	**4.64**	**328**	IAmb_Lg		22 07 09.6	
	comp=Z,30nm,0.7s						
APMT	**Aspermont**	**4.73**	**337**	Pn	Pn	22 05 43.7	-1.2
APMT				IAmb_Lg		22 07 13.5	
	comp=Z,35nm,1.0s						
MNHN	**Monahans**	**4.80**	**301**	Pn	Pn	22 05 44.1	-1.7
MNHN				IAmb_Lg		22 07 06.2	
	comp=Z,27nm,0.7s						
WTFS	**Witchita Falls**	**4.80**	**355**	Pn	Pn	22 05 45.3	-0.5
TX31	**Lajitas Ar. Si**	**5.02**	**276**	Pn	Pn	22 05 47.6	-1.4
LOOK	**Love County**	**5.05**	**7**	Pn	Pn	22 05 47.6	-1.6
POST	**Post**	**5.10**	**324**	Pn	Pn	22 05 49.0	-1.0
POST				IAmb_Lg		22 07 22.6	
	comp=Z,29nm,0.9s						
ALPN	**Alpine**	**5.15**	**287**	Pn	Pn	22 05 48.8	-2.0
ALPN				IAmb_Lg		22 07 29.0	
	comp=Z,26nm,1.2s						
DKNS	**Dickens**	**5.33**	**332**	Pn	Pn	22 05 51.6	-1.6
WMOK	**Wichita Mounta**	**5.79**	**353**	Pn	Pn	22 05 56.8	-2.7
X37A	**Clayton**	**6.01**	**21**	Pn	Pn	22 06 00.6	-1.9
W35A	**Tecumseh**	**6.23**	**8**	Pn	Pn	22 06 04.0	-1.4
VHRN	**Van Horn**	**6.38**	**288**	Pn	Pn	22 06 06.4	-1.3
VHRN				IAmb_Lg		22 08 07.9	
	comp=Z,20nm,1.2s						
SMWD	**Samnorwood**	**6.42**	**343**	Pn	Pn	22 06 06.3	-1.8
MIAR	**Mount Ida**	**6.68**	**33**	Pn	Pn	22 06 09.8	-1.9
ELIS	**Ellis County**	**7.18**	**350**	IAmb_Lg		22 08 36.6	
	comp=Z,15nm,0.9s						
T25A	**Trinidad**	**9.79**	**328**	IAmb_Lg		22 09 55.1	
	comp=Z,14nm,0.9s						

*MOS **19** 22:05:54.4±1.0, 84˚.71N×5˚.20W, h10km, mb4.6/38, Error ellipse: s-maj=60.5km s-min=7.0km az=92.5*
*IDC **19** 22:05:55.2±0.5, 84˚.91N×4˚.41W, h0km, mb4.2/23, mbtmp4.1/26, ML3.8/3, MS3.5/44, Error ellipse: s-maj=16.4km s-min=10.2km az=20.0*
*NEIC **19** 22:05:56.2±1.4, 84˚.75N±0˚.09×4˚.4W±0˚.8, h10km±1km, mb4.5/156, Error ellipse: s-maj=15.5km s-min=11.7km az=33.0*
*BER **19** 22:05:59.5±2.0, 84˚.57N×6˚.19W, h10km, mb(Pn)4.0, ML3.4(NAO), Confirmed Earthquake*
*FCIAR **19** 22:06:01.0, 84˚.75N×0˚.18E, h10km, station ZFI2 has station magnitude of 4.00 station OMEGA has station magnitude of 3.90 station LSH has station magnitude of 4.77 station PRGR has station magnitude of 4.65 station KLMR has station magnitude of 4.74*
ISC 19 22:05:54.9±1.2, 84.78N±0.04×4.64W±0.04, h3km±7km, n522, σ1§44/516, mb4.5/135, MS3.5/44, 15C-3D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**6.29**	**150**	Pn	**Pn**	**22 07 29.0**	**+0.8**
KBS				Sn	**Sn**	**22 08 36.2**	**-4.2**
KBS	**Kingsbay**	**6.29**	**150**	*eP*	**Pn**	**22 07 28.4**	**+0.1**
KBS				*eS*	**Sn**	**22 08 33.4**	**-6.9**
KBS				IAML		22 08 37.6	
	comp=Z,7.9nm,0.5s						
KBS	**Kingsbay**	**6.29**	**150**	P	**Pn**	**22 07 29.0**	**+0.8**
KBS						22 08 36.2	
KBS	**Kingsbay**	**6.29**	**150**	*i* P	**Pn**	**22 07 29.8**	**+1.6**
KBS	**Kingsbay**	**6.29**	**150**	Pn	**Pn**	**22 07 29.3**	**+1.0**
KBS				Sn	**Sn**	**22 08 35.4**	**-4.9**
KBS	**Kingsbay**	**6.29**	**150**	*eP*	**Pn**	**22 07 28.9**	**+0.7**
KBS				*eS*	**Sn**	**22 08 35.0**	**-5.4**
BRBB	**Barentsburg B**	**7.21**	**148**	*eP*	**Pn**	**22 07 41.3**	**+0.4**
BRBB				*eS*	**Sn**	**22 08 56.0**	**-7.0**
BRBB	**Barentsburg B**	**7.21**	**148**	Pn	**Pn**	**22 07 41.8**	**+0.9**
BRBB				Sn	**Sn**	**22 08 58.5**	**-4.5**
SPB5	**Spitsbergen Ar**	**7.23**	**144**	Pn	**Pn**	**22 07 41.6**	**+0.5**
SPB4	**Spitsbergen Ar**	**7.23**	**144**	Pn	**Pn**	**22 07 41.5**	**+0.3**
SPA1	**Spitsbergen Ar**	**7.23**	**144**	Pn	**Pn**	**22 07 40.6**	**-0.7**
SPB1	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 41.1**	**-0.1**
SPA0	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 40.4**	**-0.8**
SPA0	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 41.8**	**+0.5**
	baz=354,slow=8.6						
SPA0				Sn	**Sn**	**22 08 58.4**	**-5.4**
	baz=352,slow=14						
SPA0	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 41.8**	**+0.5**
	baz=354,slow=8.6						
SPA0				Sn	**Sn**	**22 08 58.4**	**-5.4**
	baz=352,slow=14						
SPA0	**Spitsbergen Ar**	**7.24**	**144**	*eP*	**Pn**	**22 07 41.7**	**+0.5**
SPA0				*eS*	**Sn**	**22 08 56.8**	**-7.0**
SPITS	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 41.3**	**+0.1**
	baz=11,slow=10						
	comp=Z,3.2nm,0.8s						
SPA2	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 42.1**	**+0.8**
SPB3	**Spitsbergen Ar**	**7.24**	**144**	Pn	**Pn**	**22 07 41.9**	**+0.6**
SPB2	**Spitsbergen Ar**	**7.24**	**144**	Pn

SFJD Kangerlussuaq 19.83 236 *e*P P **22 10 24.7 -1.5**
SFJD Kangerlussuaq 19.83 236 P P **22 10 26.4 +0.3**
comp=Z,1.2nm,0.3s,baz=18,slow=12,SNR=9.9
comp=Z,3.1nm,0.3s
DY2G Dye2 20.02 231 *e*P Pn 22 10 29.8 -0.5
DY2G Dye2 20.02 231 *e*P Pn 22 10 29.8 -0.5
BORG Borgarnes 20.42 201 LR LR 22 17 50.3
comp=Z,110nm,18.4s,baz=171,slow=35
ISOG Isortoq, Green 20.46 222 *e*P Pn 22 10 35.3 +0.3
ISOG Isortoq, Green 20.46 222 *e*P Pn 22 10 35.3 +0.3
A36M Sachs Harbour 21.27 312 P P **22 10 41.4 -0.3**
A36M IAmb IAmb 22 10 46.6
comp=Z,17nm,0.9s
A36M Sachs Harbour 21.27 312 P P **22 10 42.0 +0.3**
baz=13,SNR=13
NRIK Noril'sk 21.61 74 P P **22 10 42.7 -2.6**
NRIK IAmb IAmb 22 10 49.6
comp=Z,23nm,1.2s
NRIK Noril'sk 21.61 74*ce*P P **22 10 45.0 -0.4**
NRIK pmax pmax
comp=Z,15nm,1.2s
NRIK Noril'sk 21.61 74 P P **22 10 44.1 -1.3**
comp=Z,5.6nm,0.5s,baz=360,slow=7.0,SNR=9.9
NRIK LR LR 22 19 48.0
comp=Z,82nm,21.1s,baz=332,slow=39
comp=Z,5.6nm,0.5s
LSH Leshukonskoye 22.26 120 *e*P P **22 10 51.7 -0.6**
comp=Z,27nm,1.1s
TIXI Tiksi 22.40 37 P P **22 10 54.4 +0.5**
TIXI Tiksi 22.40 37 *i* P P **22 10 54.2 +0.4**
TIXI pmax pmax
comp=Z,8.0nm,1.5s
TIXI Tiksi 22.40 37 LR LR 22 18 06.7
comp=Z,128nm,21.9s,baz=28,slow=33
A21K Barrow 23.56 338 P P **22 11 05.2 -0.6**
baz=6.2
C36M Paulatuk 23.79 310 P P **22 11 07.9 -0.1**
C36M Paulatuk 23.79 310 P P **22 11 08.2 +0.2**
baz=11,SNR=23
A22K Sinclair Lake 23.82 336 P P **22 11 08.9 +0.5**
baz=6.4
NB2 NORSAR Subarra 24.10 161 P P **22 11 13.1 +1.9**
NB2 NORSAR Subarra 24.10 161 P P **22 11 13.1 +1.9**
NOA NORSAR Array B 24.10 161 P P **22 11 11.8 +0.7**
comp=Z,2.4nm,0.9s,baz=355,slow=8.9,SNR=6.3
comp=Z,2.4nm,0.9s
FIA0 FINESS Array S 24.33 143 P P **22 11 15.3 +2.1**
slow=11
FIA0 FINESS Array S 24.33 143 P P **22 11 15.3 +2.1**
slow=11
FINES FINESS Array B 24.33 143 *i* P P 22 11 20.6 +7.4
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 24.33 143 P P **22 11 14.8 +1.6**
comp=Z,3.5nm,0.8s,baz=360,slow=11,SNR=12
FINES PcP **PcP 22 14 52.8 +0.6**
comp=Z,0.9nm,0.7s,baz=4.0,slow=6.0,SNR=1.6
comp=Z,3.5nm,0.8s
C26K Camden Bay 24.48 328 P P **22 11 14.4 0.0**
baz=8.1
FRB Frobisher Bay 24.52 254 LR LR 22 20 57.3
comp=Z,140nm,18.4s,baz=334,slow=37
VALR Valaam 24.70 138 *i* P P **22 11 18.8 +2.3**
VALR pmax pmax
comp=Z,19nm,1.1s
D28M Stokes Point 24.74 322 P P **22 11 17.5 +0.7**
baz=9.1
C23K Itkillik River 24.82 332 P P **22 11 17.8 +0.3**
C23K IAmb IAmb 22 11 20.6
comp=Z,19nm,1.1s
C23K Itkillik River 24.82 332 P P **22 11 18.1 +0.6**
baz=7.0
A19K Wainwright 24.82 341 P P **22 11 18.4 +0.8**
baz=5.0
C24K Franklin Bluff 24.85 331 P P **22 11 18.5 +0.7**
baz=7.3,SNR=7.5
B20K Meade River 24.90 338 P P **22 11 18.9 +0.7**
B20K Meade River 24.90 338 P P **22 11 18.3 0.0**
baz=5.7
D27M Malcolm River 24.94 324 P P **22 11 19.4 +0.7**
D27M Malcolm River 24.94 324 P P **22 11 18.7 -0.1**
baz=8.6
HFS Hagfors 25.09 158 LR LR 22 19 43.3
comp=Z,86nm,18.6s,baz=346,slow=33
D25K Kavik River 25.14 329 P P **22 11 21.3 +0.8**
D25K IAmb IAmb 22 11 23.1
comp=Z,14nm,1.1s
D25K Kavik River 25.14 329 P P **22 11 20.1 -0.4**
baz=7.7
B21K Ikpikpuk River 25.19 336 P P **22 11 21.6 +0.7**
B21K IAmb IAmb 22 11 24.3
comp=Z,16nm,1.3s
B21K Ikpikpuk River 25.19 336 P P **22 11 21.3 +0.4**
baz=6.2
D24K Happy Valley 25.42 331 P P **22 11 23.7 +0.7**
D24K IAmb IAmb 22 11 51.1
comp=Z,10.0nm,1.1s
D24K Happy Valley 25.42 331 P P **22 11 23.7 +0.7**
baz=7.2
INK Inuvik 25.44 318 P P **22 11 23.5 +0.4**
INK IAmb IAmb 22 11 25.6
comp=Z,15nm,1.1s
INK Inuvik 25.44 318 P P **22 11 23.6 +0.4**
baz=9.6,SNR=11
INK Inuvik 25.44 318 P P **22 11 23.5 +0.4**
INK pmax pmax
comp=Z,15nm,1.2s
INK Inuvik 25.44 318 LR LR 22 22 32.9
comp=Z,59nm,20.1s,baz=8.0,slow=39
PRGR Permogore 25.46 121 *e*P P **22 11 20.6 -2.7**
comp=Z,12nm,0.9s
E29M Blow River 25.62 321 P P **22 11 25.9 +1.1**
E29M Blow River 25.62 321 P P **22 11 25.2 +0.3**
baz=8.9
C21K Knifeblade Rid 25.66 336 P P **22 11 25.4 +0.2**
baz=6.0
D23K Nanushuk River 25.69 332 P P **22 11 25.8 +0.3**
baz=6.8
B18K Kokolik River 25.69 341 P P **22 11 25.9 +0.5**
baz=4.7
KLMR Klimovskoe 25.77 128 *e*P P **22 11 26.4 +0.1**
KLMR pmax pmax
comp=Z,18nm,1.2s
KLMR Klimovskoe 25.77 128 *e*P P **22 11 26.3 +0.1**
comp=Z,18nm,1.2s
D22K Ayikyak River 25.86 334 P P **22 11 27.8 +0.8**
D22K IAmb IAmb 22 11 30.3
comp=Z,10nm,1.1s
D22K Ayikyak River 25.86 334 P P **22 11 28.0 +1.0**
baz=6.4
C19K Lookout Ridge 25.88 340 P P **22 11 27.5 +0.2**
C19K IAmb IAmb 22 11 41.5
comp=Z,12nm,1.1s
C19K Lookout Ridge 25.88 340 P P **22 11 28.3 +1.0**
baz=5.1
TOLK Toolik Lake Re 25.96 331 P P **22 11 27.9 -0.1**
baz=6.9
D20K Etivluk River 26.17 337 P P **22 11 29.6 -0.3**
baz=5.6
F30M Barrier River 26.27 319 P P **22 11 30.8 +0.1**
baz=9.0
E25K Arctic Village 26.30 328 P P **22 11 31.3 +0.3**
E25K IAmb IAmb 22 11 34.7
comp=Z,25nm,1.4s
E25K Arctic Village 26.30 328 P P **22 11 30.7 -0.3**
baz=7.5,SNR=11
F31M Tsiigehtchic 26.32 318 P P **22 11 31.0 0.0**
F31M Tsiigehtchic 26.32 318 P P **22 11 31.1 0.0**
baz=9.2,SNR=13
C18K Utukok River 26.39 341 P P **22 11 32.5 +0.7**
C18K IAmb IAmb 22 11 35.5
comp=Z,16nm,1.2s
C18K Utukok River 26.39 341 P P **22 11 32.3 +0.4**
baz=4.7
D19K Kuna River 26.44 338 P P **22 11 32.7 +0.4**
D19K IAmb IAmb 22 11 36.4
comp=Z,9.3nm,1.0s
D19K Kuna River 26.44 338 P P **22 11 33.1 +0.8**
baz=5.2
E24K Your Creek 26.48 330 P P **22 11 33.2 +0.6**
E24K Your Creek 26.48 330 P P **22 11 32.6 -0.1**
baz=7.0
F28M Old Crow 26.50 323 P P **22 11 33.3 +0.5**
F28M IAmb IAmb 22 11 36.7
comp=Z,24nm,1.4s
F28M Old Crow 26.50 323 P P **22 11 32.6 -0.3**
baz=8.3,SNR=15

E23K Chandalar 26.55 331 P P **22 11 33.2 -0.2**
baz=6.7
E22K Anaktuvuk Pass 26.57 333 P P **22 11 33.8 +0.3**
E22K Anaktuvuk Pass 26.57 333 P P **22 11 33.5 +0.1**
baz=6.4
E20K Nigu River 26.61 337 P P **22 11 34.3 +0.4**
baz=5.6
C17K DeLong Mountai 26.62 342 P P **22 11 34.1 +0.3**
baz=4.3
F26K Sheenjek River 26.65 326 P P **22 11 34.8 +0.6**
baz=7.6
F25K Christian Rive 26.82 328 P P **22 11 36.2 +0.4**
baz=7.3
G31M Satah River 26.86 318 P P **22 11 36.2 +0.2**
G31M IAmb IAmb 22 11 37.2
comp=Z,14nm,0.8s
G31M Satah River 26.86 318 P P **22 11 36.6 +0.6**
baz=9.0,SNR=12
C16K Lisburne Hills 26.88 344 P P **22 11 36.8 +0.6**
C16K IAmb IAmb 22 11 41.9
comp=Z,16nm,1.2s
C16K Lisburne Hills 26.88 344 P P **22 11 36.3 +0.2**
baz=3.8
G30M tAoh Zraii Nji 26.92 319 P P **22 11 36.6 0.0**
G30M IAmb IAmb 22 11 41.2
comp=Z,13nm,1.1s
G30M tAoh Zraii Nji 26.92 319 P P **22 11 37.1 +0.5**
baz=8.7
BMAR Burnt Mountain 26.94 327 P P **22 11 37.0 +0.2**
F24K Squaw Lake 27.01 330 P P **22 11 36.9 -0.6**
F24K IAmb IAmb 22 11 38.4
comp=Z,12nm,1.5s
F24K Squaw Lake 27.01 330 P P **22 11 36.8 -0.6**
baz=6.9
BILL Bilibino 27.30 7 P P **22 11 39.2 -0.8**
BILL IAmb IAmb 22 11 41.7
comp=Z,16nm,1.4s
BILL Bilibino 27.30 7 *e*P P **22 11 41.3 +1.3**
BILL pmax pmax
comp=Z,9.0nm,1.3s
G26K Porcupine Rive 27.37 326 P P **22 11 41.6 +1.0**
baz=7.5,SNR=6.4
D17K Noatak River 27.39 342 P P **22 11 40.1 -0.7**
baz=4.2
COLD Coldfoot 27.40 331 P P **22 11 40.6 -0.3**
COLD Coldfoot 27.40 331 P P **22 11 41.1 +0.2**
baz=6.5
E19K Redstone River 27.45 337 P P **22 11 40.9 -0.4**
E19K Redstone River 27.45 337 P P **22 11 40.8 -0.6**
baz=5.2
F21K Alatna River 27.54 334 P P **22 11 42.2 0.0**
F21K Alatna River 27.54 334 P P **22 11 41.5 -0.7**
baz=5.9
EPYK Eagle Plains 27.56 320 P P **22 11 42.0 -0.3**
EPYK Eagle Plains 27.56 320 P P **22 11 43.0 +0.7**
baz=8.4
E18K Tukpahlearik C 27.60 340 P P **22 11 42.8 +0.1**
E18K Tukpahlearik C 27.60 340 P P **22 11 42.3 -0.3**
baz=4.6
G22K Bettles 27.76 332 P P **22 11 43.9 -0.2**
baz=6.2
G24K Hadweenzic Riv 27.80 329 P P **22 11 45.3 +0.8**
G24K IAmb IAmb 22 11 46.8
comp=Z,9.3nm,1.1s
G24K Hadweenzic Riv 27.80 329 P P **22 11 44.8 +0.2**
baz=6.8,SNR=5.5
F20K Avaraart Lake 27.80 336 P P **22 11 43.8 -0.6**
baz=5.4
H29M Whitestone 27.80 321 P P **22 11 45.2 +0.6**
H29M IAmb IAmb 22 11 45.8
comp=Z,6.8nm,0.9s
H29M Whitestone 27.80 321 P P **22 11 43.8 -0.8**
baz=8.2,SNR=5.0
FYU Fort Yukon 27.83 327 P P **22 11 45.0 +0.3**
G23K Bananza Creek 27.91 331 P P **22 11 45.4 -0.1**
baz=6.4
H27K Steamboat Moun 27.97 324 P P **22 11 45.7 -0.4**
baz=7.7
E17K Hotham Inlet 27.98 341 P P **22 11 45.9 -0.1**
baz=4.3
H31M Peel River 27.98 317 P P **22 11 45.6 -0.5**
baz=8.6
F18K Selawik 28.39 339 P P **22 11 49.4 -0.3**
baz=4.7
F17K Baldwin Pennin 28.60 341 P P **22 11 51.5 0.0**
F17K IAmb IAmb 22 12 19.2
comp=Z,14nm,1.2s
F17K Baldwin Pennin 28.60 341 P P **22 11 51.7 +0.2**
baz=4.3
I27K Kandik River 28.60 324 P P **22 11 51.5 -0.2**
baz=7.5
I28M Miner Creek 28.66 322 P P **22 11 52.7 +0.5**
I28M Miner Creek 28.66 322 P P **22 11 51.8 -0.5**
baz=7.7
I30M Mount Dempster 28.68 319 P P **22 11 52.8 +0.3**
I30M Mount Dempster 28.68 319 P P **22 11 51.4 -1.1**
baz=8.2
H24K Noodor Dome 28.68 329 P P **22 11 53.5 +1.1**
H24K Noodor Dome 28.68 329 P P **22 11 51.6 -0.9**
baz=6.5
KIRV Kirov 28.78 118*ce*P P **22 11 53.8 +0.6**
H22K Ishtalitna Cre 28.78 332 P P **22 11 53.5 +0.2**
baz=6.0
PRP Porcupine Dome 28.89 327 P P **22 11 55.8 +1.4**
PRP IAmb IAmb 22 12 15.6
comp=Z,8.0nm,1.3s
PRP PcP **PcP 22 15 04.5 +1.5**
PRP Porcupine Dome 28.89 327 P P **22 11 54.6 +0.3**
baz=6.9
G18K Tagagawik 29.06 338 P P **22 11 56.0 +0.3**
baz=4.7
H21K Melozitna Rive 29.08 333 P P **22 11 56.6 +0.7**
H21K Melozitna Rive 29.08 333 P P **22 11 56.4 +0.5**
baz=5.7
J30M Hart River 29.32 319 P P **22 11 58.9 +0.7**
J30M IAmb IAmb 22 11 59.3
comp=Z,4.4nm,0.7s
J30M Hart River 29.32 319 P P **22 11 57.8 -0.4**
baz=8.0
H20K Anotleneega Mo 29.33 335 P P **22 11 57.0 -1.1**
baz=5.3
H19K Roundabout Mou 29.35 336 P P **22 11 58.7 +0.4**
H19K IAmb IAmb 22 12 14.9
comp=Z,8.6nm,1.4s
H19K Roundabout Mou 29.35 336 P P **22 11 56.3 -1.9**
baz=5.0
POKR Poker Plat Res 29.38 329 P P **22 11 59.4 +0.8**
POKR IAmb IAmb 22 12 01.2
comp=Z,7.8nm,1.0s
POKR Poker Plat Res 29.38 329 P P **22 11 56.9 -1.6**
baz=6.5
EGAK Eagle 29.40 323 P P **22 11 59.6 +1.0**
EGAK PcP **PcP 22 15 05.1 +0.9**
EGAK Eagle 29.40 323 P P **22 11 57.3 -1.4**
baz=7.4
F15K North Star Dit 29.43 343 P P **22 11 58.5 -0.5**
baz=3.6
I23K Minto, Yukon-K 29.44 330 P P **22 12 00.0 +1.0**
I23K IAmb IAmb 22 12 01.4
comp=Z,7.3nm,1.1s
I23K Minto, Yukon-K 29.44 330 P P **22 11 59.4 +0.4**
baz=6.2
G17K Kiwalik Mounta 29.52 340 P P **22 12 00.2 +0.4**
baz=4.3
I21K Tanana 29.52 332 P P **22 12 00.9 +1.1**
I21K Tanana 29.52 332 P P **22 11 59.9 +0.1**
baz=5.7
MDM Murphy Dome 29.58 329 P P **22 12 00.6 +0.3**
MDM IAmb IAmb 22 12 03.7
comp=Z,5.5nm,1.0s
MLY Manley 29.62 331 P P **22 12 01.9 +1.2**
MLY Manley 29.62 331 P P **22 12 00.8 +0.1**
baz=5.9
G16K Koyuk River 29.68 341 P P **22 12 00.9 -0.2**
baz=4.0
IL03 Eielson Array 29.70 328 P P **22 12 01.9 +0.6**
IL31 29.70 328 P P **22 12 01.7 +0.4**
ILAR Eielson Array 29.70 328 P P **22 12 02.5 +1.2**
ILAR Eielson Array 29.70 328 P P **22 12 02.3 +0.9**
comp=Z,3.3nm,0.9s,baz=4.4,slow=7.7,SNR=37
ILAR PcP **PcP 22 15 04.6 -0.4**
comp=Z,1.5nm,0.7s,baz=334,slow=3.7,SNR=17
ILAR LR LR 22 23 21.0
comp=Z,23nm,20.7s,baz=90,slow=35
comp=Z,3.3nm,0.9s
J25K Salcha River, 29.78 327 P P **22 12 02.5 +0.3**

J25K Salcha River, 29.78 327 P P **22 12 01.6 -0.6**
baz=6.7
H18K Honhosa River 29.80 338 P P **22 12 03.0 +0.8**
H18K IAmb IAmb 22 12 03.5
comp=Z,16nm,1.5s
H18K Honhosa River 29.80 338 P P **22 12 01.8 -0.4**
baz=4.7
J26L Joseph Creek 29.80 325 P P **22 12 03.6 +1.2**
J26L Joseph Creek 29.80 325 P P **22 12 02.0 -0.4**
baz=7.0
YKA Yellowknife Ar 29.84 299 P P **22 12 03.1 +0.5**
YKA Yellowknife Ar 29.84 299*ce*P P **22 12 03.5 +0.9**
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 29.84 299 P P **22 12 03.2 +0.7**
comp=Z,1.6nm,0.8s,baz=4.2,slow=8.4,SNR=25
YKA PcP **PcP 22 15 06.1 +0.8**
comp=Z,2.5nm,0.8s,baz=360,slow=2.6,SNR=32
comp=Z,1.6nm,0.8s
CCB Clear Creek Bu 29.87 329 P P **22 12 02.9 +0.1**
CCB IAmb IAmb 22 12 04.5
comp=Z,8.4nm,1.2s
YKAB2 New Yellowknif 29.91 299 P P **22 12 03.6 +0.5**
NEA2 Nenana 29.98 330 P P **22 12 04.3 +0.4**
NEA2 IAmb IAmb 22 12 05.8
comp=Z,12nm,1.2s
NEA2 Nenana 29.98 330 P P **22 12 03.6 -0.3**
baz=6.1
DAWY Dawson 30.01 321 P P **22 12 04.4 +0.3**
DAWY Dawson 30.01 321 P P **22 12 04.3 +0.1**
baz=7.5
I20K Naaghedeneel 30.01 335 P P **22 12 04.1 0.0**
baz=5.3
WRH Wood River Hil 30.06 329 P P **22 12 04.9 +0.4**
WRH IAmb IAmb 22 12 06.6
comp=Z,6.2nm,1.0s
H17K Granite Mounta 30.06 339 P P **22 12 04.4 -0.2**
baz=4.4
HDA Harding Lake 30.06 328 P P **22 12 04.5 0.0**
baz=6.4
K29M Barlow Dome 30.12 320 P P **22 12 06.3 +1.1**
K29M IAmb IAmb 22 12 07.5
comp=Z,6.4nm,1.0s
K29M Barlow Dome 30.12 320 P P **22 12 04.8 -0.4**
baz=7.7
GCSA Galena City Sc 30.15 337 P P **22 12 04.8 -0.5**
baz=4.8
K27K Chicken 30.19 324 P P **22 12 06.7 +1.0**
K27K Chicken 30.19 324 P P **22 12 05.8 +0.1**
baz=7.1
SCRK Sand Creek 30.35 325 P P **22 12 07.4 +0.2**
baz=6.8
BPAW Bear Paw Mtn. 30.56 331 P P **22 12 09.5 +0.5**
baz=5.7
K24K Donnelly Dome 30.61 327 P P **22 12 08.8 -0.7**
baz=6.5
MCK McKinley 30.83 330 P P **22 12 11.1 -0.3**
baz=6.0
J19K Poorman 30.86 335 P P **22 12 11.7 +0.2**
baz=5.0
L29M L29M 30.89 320 P P **22 12 12.6 +0.7**
L29M IAmb IAmb 22 12 14.3
comp=Z,8.4nm,1.1s
L29M L29M 30.89 320 P P **22 12 12.0 +0.1**
baz=7.4
NACGM Naroch 30.89 144 *e*P P **22 12 14.0 +2.0**
comp=Z,12nm,0.8s,baz=355
MMPY Sheldon Lake, 30.94 314 P P **22 12 13.2 +0.8**
MMPY IAmb IAmb 22 12 15.6
comp=Z,6.1nm,1.0s
MMPY Sheldon Lake, 30.94 314 P P **22 12 13.1 +0.7**
baz=8.2,SNR=5.9
KTH Kantishna Hill 31.10 331 P P **22 12 14.1 +0.2**
KTH IAmb IAmb 22 12 15.8
comp=Z,9.7nm,1.1s
BCAR Beaver Creek A 31.14 323 P P **22 12 15.2 +1.1**
L27K Beaver Creek, 31.14 323 P P **22 12 15.2 +1.1**
L27K IAmb IAmb 22 12 17.0
comp=Z,6.4nm,1.1s
L27K Beaver Creek, 31.14 323 P P **22 12 13.7 -0.5**
baz=6.9
L26K Log Cabin Wild 31.26 325 P P **22 12 15.9 +0.7**
baz=6.7
OBN Obninsk 31.28 133 *e*P P **22 12 16.8 +1.5**
OBN *e* 22 12 23.9
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,57nm,15.0s
CAST Castle Rocks 31.29 332 P P **22 12 16.2 +0.8**
CAST Castle Rocks 31.29 332 P P **22 12 15.6 +0.2**
baz=5.4
M30M Minto, Yukon 31.34 319 P P **22 12 16.0 +0.1**
M30M IAmb IAmb 22 12 18.1
comp=Z,5.7nm,1.0s
M30M Minto, Yukon 31.34 319 P P **22 12 16.0 +0.1**
baz=7.5,SNR=6.3
DHY Denali Highway 31.42 328 P P **22 12 16.6 -0.1**
DHY IAmb IAmb 22 12 19.0
comp=Z,8.9nm,1.1s
DHY Denali Highway 31.42 328 P P **22 12 16.5 -0.2**
baz=6.1
PAX Paxson 31.43 326 P P **22 12 17.0 +0.3**
baz=6.4
K20K Telida 31.43 334 P P **22 12 17.6 +0.9**
K20K IAmb IAmb 22 12 24.1
comp=Z,5.8nm,1.1s
FARO Faro, Yukon 31.47 316 P P **22 12 17.5 +0.4**
baz=7.9,SNR=5.9
M31M Drury Creek, Y 31.56 316 P P **22 12 18.0 +0.2**
M31M IAmb IAmb 22 12 21.0
comp=Z,8.9nm,1.1s
M31M Drury Creek, Y 31.56 316 P P **22 12 18.2 +0.3**
baz=7.7,SNR=6.4
M29M Somme Creek 31.57 320 P P **22 12 17.8 -0.2**
M29M IAmb IAmb 22 12 21.1
comp=Z,7.0nm,1.1s
M29M Somme Creek 31.57 320 P P **22 12 18.3 +0.3**
baz=7.2
J17K VABM Dome 31.58 338 P P **22 12 18.6 +0.7**
J17K VABM Dome 31.58 338 P P **22 12 18.1 +0.1**
baz=4.3
ARU Arti 31.68 109 P P **22 12 17.9 -1.0**
ARU Arti 31.68 109*c* *i*P P **22 12 20.3 +1.4**
ARU *c* 22 13 22.4
ARU S S **22 17 32.4 +3.9**
ARU SS **SnSn 22 19 20.2 +6.3**
ARU pmax pmax
comp=Z,15nm,1.5s
ARU Arti 31.68 109 P P **22 12 19.6 +0.7**
comp=Z,4.1nm,0.5s,baz=323,slow=6.6,SNR=12
ARU LR LR 22 27 17.7
comp=Z,68nm,18.6s,baz=326,slow=40
comp=Z,4.1nm,0.5s
WAT1 Susitna Watana 31.72 329 P P **22 12 19.4 +0.2**
baz=5.9
BVCY Beaver Creek 31.73 322 P P **22 12 19.7 +0.3**
baz=6.9
J16K Anvik River 31.74 340 P P **22 12 17.7 -1.7**
baz=4.0
FCC Fort Churchill 31.75 278 P P **22 12 19.1 -0.4**
FCC IAmb IAmb 22 12 22.3
comp=Z,5.7nm,1.3s
FCC Fort Churchill 31.75 278 P P **22 12 19.1 -0.4**
FCC pmax pmax
comp=Z,6.0nm,1.3s
PPLA Purkeypile 31.82 332 P P **22 12 21.4 +1.2**
PPLA Purkeypile 31.82 332 P P **22 12 17.8 -2.4**
baz=5.3
TGTN Hyland Airport 31.82 311 P P **22 12 20.3 +0.1**
baz=8.3
M27K Edge Creek, AK 31.85 323 P P **22 12 21.0 +0.5**
baz=6.8
M26K Nabesna, AK 31.86 324 P P **22 12 20.2 -0.3**
baz=6.6
HARP HAARP 31.98 326 P P **22 12 20.1 -1.4**
baz=6.3
YAK Yakutsk 32.01 40 *e*P P **22 12 20.6 -1.1**
YAK *e**PP **pP 22 12 23.6 +2.2**
YAK *e* 22 13 25.9
YAK *e* 22 15 12.6
YAK *e*S S **22 17 33.3 -0.1**
YAK pmax pmax
comp=Z,34nm,1.5s
YAK pmax pmax
comp=N,7.0nm,1.0s

YAK pmax pmax
comp=E,3.0nm,1.4s
YAK pmax pmax
comp=Z,265nm,5.4s
YAK pmax pmax
comp=N,61nm,4.0s
YAK pmax pmax
comp=E,220nm,9.9s
YAK smax smax
comp=E,187nm,6.8s
YAK smax smax
comp=N,150nm,8.6s
YAK Yakutsk 32.01 40 LR LR 22 24 36.2
comp=N,130nm,21.2s,baz=314,slow=35
SEY Seymchan 32.13 20 LR LR 22 23 57.6
comp=N,66nm,21.3s,baz=10.0,slow=34
K17K Iditarod 32.23 337 P **P** **22 12 23.1 -0.6**
baz=4.3
L20K Farewell, AK 32.30 334 P **P** **22 12 22.5 -1.9**
baz=5.0
M24K Tolsona, Glenn 32.32 327 P **P** **22 12 22.4 -2.1**
baz=6.1
YUK3 Moose Creek 32.35 322 P **P** **22 12 24.8 -0.2**
baz=6.8
N30M Aishikik Lake 32.47 319 P **P** **22 12 26.8 +1.0**
N30M IAmb IAmb 22 12 28.9
comp=Z,9.2nm,1.1s
N30M Aishikik Lake 32.47 319 P **P** **22 12 25.8 0.0**
baz=7.2
N32M Quiet Lake 32.52 315 P **P** **22 12 27.4 +1.1**
N32M IAmb IAmb 22 12 29.1
comp=Z,14nm,1.5s
N32M Quiet Lake 32.52 315 P **P** **22 12 25.7 -0.6**
baz=7.7
L19K White Mountain 32.64 334 P **P** **22 12 28.1 +0.8**
L19K IAmb IAmb 22 12 49.7
comp=Z,6.1nm,1.2s
L19K White Mountain 32.64 334 P **P** **22 12 25.6 -1.7**
baz=4.8
SCM Sheep Creek Mo 32.65 328 P **P** **22 12 28.8 +1.3**
SCM IAmb IAmb 22 13 00.9
comp=Z,11nm,1.1s
SCM Sheep Creek Mo 32.65 328 P **P** **22 12 25.9 -1.6**
baz=5.9
SCM Sheep Creek Mo 32.65 328 P **P** **22 12 28.8 +1.3**
SCM pmax pmax
comp=Z,11nm,1.1s
L18K Granite Mounta 32.67 336 P **P** **22 12 26.2 -1.3**
baz=4.5
YUK4 Talbot Arm 32.67 320 P **P** **22 12 25.6 -2.2**
baz=7.0
SKT Skwentna 32.70 331 P **P** **22 12 27.7 -0.1**
SKT IAmb IAmb 22 12 28.7
comp=Z,12nm,1.2s
SKT Skwentna 32.70 331 P **P** **22 12 26.1 -1.7**
baz=5.3,SNR=5.3
M23K Glacier View 32.71 328 P **P** **22 12 26.6 -1.3**
baz=5.8
SML Sawmill 32.73 329 P **P** **22 12 28.8 +0.7**
SML IAmb IAmb 22 12 30.8
comp=Z,13nm,1.2s
SML Sawmill 32.73 329 P **P** **22 12 28.0 -0.2**
baz=5.8
N25K Chitina, Valde 32.74 325 P **P** **22 12 29.6 +1.3**
N25K IAmb IAmb 22 12 30.4
comp=Z,7.8nm,1.0s
N25K Chitina, Valde 32.74 325 P **P** **22 12 27.3 -1.0**
baz=6.2
K15K Wolf Creek Mou 32.76 340 P **P** **22 12 29.5 +1.2**
K15K Wolf Creek Mou 32.76 340 P **P** **22 12 27.2 -1.1**
baz=3.8
GHO Glory Hole Cre 32.79 329 P **P** **22 12 29.9 +1.2**
GHO IAmb IAmb 22 12 30.8
comp=Z,6.7nm,0.9s
YUK8 Steele Glacier 32.80 321 P **P** **22 12 27.8 -1.2**
baz=6.8
GLB Gilahina Butte 32.87 325 P **P** **22 12 30.4 +1.0**
GLB IAmb IAmb 22 12 32.5
comp=Z,8.4nm,1.0s
M20K Styx River 32.87 333 P **P** **22 12 29.9 +0.6**
M20K IAmb IAmb 22 12 57.1
comp=Z,9.7nm,1.4s
M20K Styx River 32.87 333 P **P** **22 12 28.4 -1.0**
baz=5.0
M19K Big River Lodg 32.90 334 P **P** **22 12 30.4 +0.9**
M19K Big River Lodg 32.90 334 P **P** **22 12 28.6 -0.9**
baz=4.9
KOTAN Kotaneelee Air 32.91 307 P **P** **22 12 28.8 -0.9**
baz=8.5
KLU Klutina 32.92 326 P **P** **22 12 28.9 -1.0**
baz=6.0
YUK6 Outpost Mounta 33.06 320 P **P** **22 12 30.0 -1.2**
baz=7.0
VRDI Verde Repeater 33.06 324 P **P** **22 12 31.2 0.0**
VRDI IAmb IAmb 22 12 33.1
comp=Z,6.4nm,1.1s
O30N Mendenhall 33.09 318 P **P** **22 12 31.6 +0.3**
O30N IAmb IAmb 22 12 33.7
comp=Z,9.6nm,1.0s
O30N Mendenhall 33.09 318 P **P** **22 12 31.5 +0.3**
baz=7.2,SNR=6.2
HYT Haines Junctio 33.12 319 P **P** **22 12 32.1 +0.5**
HYT IAmb IAmb 22 12 34.6
comp=Z,5.9nm,0.9s
HYT Haines Junctio 33.12 319 P **P** **22 12 31.2 -0.4**
baz=7.1
WHY Whitehorse 33.12 317 P **P** **22 12 31.0 -0.6**
baz=7.3
KNK Knik Glacier 33.13 329 P **P** **22 12 30.8 -0.7**
baz=5.7
SCHQ Schefferville 33.18 249 P **P** **22 12 33.3 +1.2**
SCHQ Schefferville 33.18 249 LR LR 22 25 39.0
comp=Z,106nm,18.4s,baz=25,slow=36
SUA Susitna One 33.18 331 P **P** **22 12 32.5 +0.3**
SUA Susitna One 33.18 331 P **P** **22 12 33.0 +0.8**
baz=5.3
CTG Chitna Glacier 33.21 322 P **P** **22 12 32.3 -0.1**
baz=6.6
WTLY Watson Lake, Y 33.27 311 P **P** **22 12 32.1 -0.7**
baz=8.0
L16K Owhat River 33.28 338 P **P** **22 12 31.3 -1.5**
baz=4.0
L15K Ungalak Mounta 33.38 340 P **P** **22 12 32.0 -1.7**
baz=3.7
BMRM Bremner River 33.38 325 P **P** **22 12 32.6 -1.2**
baz=6.1
P33M Teslin, Yukon 33.44 315 P **P** **22 12 35.4 +1.0**
P33M IAmb IAmb 22 12 36.8
comp=Z,7.3nm,0.9s
P33M Teslin, Yukon 33.44 315 P **P** **22 12 33.0 -1.4**
baz=7.5
RC01 Rabbit Creek A 33.51 330 P **P** **22 12 33.4 -1.5**
baz=5.4
CRQE Cirque 33.51 324 P **P** **22 12 34.0 -1.1**
baz=6.3
M17K Holitna River 33.52 337 P **P** **22 12 35.8 +0.9**
M17K Holitna River 33.52 337 P **P** **22 12 33.0 -1.9**
baz=4.3
GLI Glacier Island 33.59 327 P **P** **22 12 36.3 +0.7**
baz=5.8
O29M Mount Kennedy 33.71 320 P **P** **22 12 37.8 +1.0**
baz=6.8
L14K Kuka Creek 33.75 341 P **P** **22 12 37.9 +1.0**
L14K Kuka Creek 33.75 341 P **P** **22 12 37.0 +0.1**
baz=3.5
EYAK Cordova Ski Ar 33.86 326 P **P** **22 12 39.5 +1.7**
baz=5.9
CLL Collm 33.90 160 *e*P **P** **22 12 39.0 +0.7**
CLL *e*PP **PP** **22 13 55.0 +0.3**
CLL *e*PPP PPP 22 14 04.0
LPSR Galich'ya Gora 33.94 131 *e*P **P** **22 12 38.8 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
M16K Timber Creek 33.95 338 P **P** **22 12 38.6 -0.1**
M16K Timber Creek 33.95 338 P **P** **22 12 38.4 -0.3**
baz=4.1
PINM Pinnacle 34.01 321 P **P** **22 12 38.1 -1.2**
baz=6.6
MESA MESA 34.02 323 P **P** **22 12 37.6 -2.0**
baz=6.4
P32M Atlin 34.12 315 P **P** **22 12 41.4 +1.2**
P32M IAmb IAmb 22 12 42.4
comp=Z,5.4nm,0.9s
P32M Atlin 34.12 315 P **P** **22 12 39.2 -1.0**
baz=7.3
R33M Jennings River 34.13 313 P **P** **22 12 40.8 +0.4**
R33M IAmb IAmb 22 13 00.4
comp=Z,7.8nm,1.4s
P29M Windy Craggy 34.33 319 P **P** **22 12 41.6 -0.4**
baz=6.8
N17K Nushagak Hills 34.38 336 P **P** **22 12 42.9 +0.4**
N17K Nushagak Hills 34.38 336 P **P** **22 12 41.9 -0.6**
baz=4.3
O20K Slope Mountain 34.65 332 P **P** **22 12 44.0 -0.8**
baz=4.9
Q32M Nakina River 34.65 314 P **P** **22 12 46.7 +1.7**
Q32M Nakina River 34.65 314 P **P** **22 12 45.4 +0.4**
baz=7.3
BELG Belogornoye 34.79 122 *i*P **P** **22 12 47.6 +1.7**
BELG pmax pmax
comp=Z,4.0nm,1.3s
BELG Belogornoye 34.79 122 P **P** **22 12 46.7 +0.7**
comp=Z,7.6nm,0.6s,baz=155,slow=1.6,SNR=6.6
comp=Z,7.6nm,0.6s
O18K Oktiub Hills 34.98 334 P **P** **22 12 49.4 +1.8**
DLBC Dease Lake 35.02 312 P **P** **22 12 49.9 +1.9**
DLBC IAmb IAmb 22 12 51.6
comp=Z,9.8nm,0.9s
DLBC Dease Lake 35.02 312 P **P** **22 12 47.4 -0.6**
baz=7.5,SNR=6.1
AKASG Malin Array Be 35.22 142 *ce*P **P** **22 12 51.2 +1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 35.22 142 P **P** **22 12 50.9 +1.1**
comp=Z,0.4nm,0.4s,baz=355,slow=9.7,SNR=5.4
comp=Z,0.4nm,0.4s
AKBB Malin Array Si 35.22 142 *ce*P **P** **22 12 51.1 +1.4**
AKBB pmax pmax
comp=Z,8.0nm,1.3s
VSR Storozhevoye 35.33 131 *e*P **P** **22 12 50.9 +0.2**
VSR pmax pmax
comp=Z,7.0nm,0.8s
MA2 Magadan 35.44 21 *ce*P **P** **22 12 51.2 -0.3**
MA2 pmax pmax
comp=Z,14nm,2.5s
MA2 Magadan 35.44 21 LR LR 22 26 45.7
comp=Z,71nm,20.3s,baz=18,slow=35
P18K Big Mountain, 35.44 334 P **P** **22 12 52.5 +0.9**
P18K IAmb IAmb 22 12 53.5
comp=Z,15nm,1.4s
P18K Big Mountain, 35.44 334 P **P** **22 12 52.1 +0.5**
baz=4.4
R32K Eaglecrest 35.48 316 P **P** **22 12 52.9 +1.0**
baz=7.0
VRH Novokhopyorsk 35.53 128 *e*P **P** **22 12 52.6 +0.2**
VRH pmax pmax
comp=Z,10.0nm,0.8s
S34M Telegraph Cree 35.61 313 P **P** **22 12 55.2 +2.1**
S34M IAmb IAmb 22 12 56.6
comp=Z,7.1nm,1.1s
S34M Telegraph Cree 35.61 313 P **P** **22 12 53.1 +0.1**
baz=7.3
P17K Kvichak River 35.69 335 P **P** **22 12 54.9 +1.3**
baz=4.2
VRAC Vranov 36.02 156 LR LR 22 26 22.7
comp=Z,63nm,20.6s,baz=344,slow=34
BRVK Borovoye 36.07 98 P **P** **22 12 57.4 +0.4**
BRVK IAmb IAmb 22 13 00.5
comp=Z,4.5nm,0.7s
BRVK Borovoye 36.07 98 *ce*P **P** **22 12 58.6 +1.6**
BRVK pmax pmax
comp=Z,12nm,1.6s
BVAR Borovoye Array 36.11 98 P **P** **22 12 59.1 +1.7**
comp=Z,3.7nm,0.7s,baz=348,slow=8.5,SNR=29
BVAR PcP **PcP** **22 15 22.6 -0.4**
comp=Z,1.2nm,0.9s,baz=318,slow=3.6,SNR=4.0
BVAR LR LR 22 29 22.2
comp=Z,41nm,20.2s,baz=6.2,slow=39
comp=Z,3.7nm,0.7s
S32K Killisnoo 36.28 316 P **P** **22 13 01.2 +2.4**
S32K IAmb IAmb 22 13 07.1
comp=Z,13nm,1.3s
T35M Bob Quinn 36.48 312 P **P** **22 13 02.1 +1.5**
baz=7.2
ZALV Zalesovo Beam 36.51 83 *i*P **P** **22 13 02.4 +1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 36.51 83 P **P** **22 13 01.4 +0.7**
comp=Z,1.0nm,0.5s,baz=348,slow=6.7,SNR=7.0
ZALV PcP **PcP** **22 15 23.0 -1.1**
comp=Z,1.0nm,0.6s,baz=321,slow=2.0,SNR=5.3
ZALV LR LR 22 30 26.5
comp=Z,72nm,18.5s,baz=346,slow=40
comp=Z,1.0nm,0.5s
CLF Chambon-Foret 36.95 172 P **P** **22 13 05.1 +0.6**
U33K Whale Pass 37.54 314 P **P** **22 13 09.1 -0.4**
baz=6.8
AKTO Aktyubinsk 37.58 111 P **P** **22 13 11.4 +1.5**
comp=Z,3.1nm,0.6s,baz=344,slow=5.1,SNR=7.5
AKTO LR LR 22 30 57.4
comp=Z,103nm,18.4s,baz=280,slow=40
comp=Z,3.1nm,0.6s
BUR08 Bucovina Ar. S 38.06 147 P **P** **22 13 13.5 -0.6**
BURAR Bucovina Array 38.09 147 P **P** **22 13 15.1 +0.8**
SPIA Saint Paul Isl 38.11 347 P **P** **22 13 13.9 -0.4**
baz=2.1
DAVOX Davos/Dischmat 38.34 164 LR LR 22 28 22.3
comp=Z,67nm,18.2s,baz=337,slow=35
PRED Cave del Predi 38.78 160 P **P** **22 13 20.8 +0.6**
ABKAR Akbulak array 38.92 110 P **P** **22 13 21.8 +0.6**
KURK Kurchatov 39.15 90 P **P** **22 13 23.1 +0.1**
KURK Kurchatov 39.15 90 P **P** **22 13 23.1 +0.1**
KURK pmax pmax
comp=Z,9.0nm,1.4s
KURBB Kurchatov Arra 39.23 90 P **P** **22 13 24.5 +0.7**
comp=Z,2.0nm,0.6s,baz=5.0,slow=7.0,SNR=44
KURBB PcP **PcP** **22 15 32.1 -0.4**
comp=Z,1.0nm,0.6s,baz=344,slow=3.5,SNR=9.7
comp=Z,2.0nm,0.6s
ZEA Zeya 40.12 43 *e*P **P** **22 13 31.3 +0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
MLR Muntele Rosu 40.24 146 LR LR 22 30 38.1
comp=Z,63nm,19.3s,baz=334,slow=37
FALS False Pass 40.27 341 P **P** **22 13 32.5 +0.2**
baz=2.9
ULM Lac du Bonnet 40.34 277 P **P** **22 13 33.8 +0.8**
comp=Z,1.9nm,0.5s,baz=3.4,slow=6.6,SNR=5.2
ULM PcP **PcP** **22 15 36.4 +0.3**
comp=Z,4.0nm,0.9s,baz=32,slow=3.9,SNR=5.6
ULM LR LR 22 31 32.4
comp=Z,72nm,19.8s,baz=334,slow=38
comp=Z,1.9nm,0.5s
BATG Bathurst New B 40.61 247 P **P** **22 13 36.8 +1.5**
BATG IAmb IAmb 22 13 53.0
comp=Z,23nm,1.4s
DGZ Jazzator, Alta 40.96 82 *i*P **P** **22 13 39.2 +0.9**
DGZ pmax pmax
comp=Z,5.0nm,1.2s
KIV Kislovodsk 42.81 129 *e*P **P** **22 13 54.1 +0.7**
KIV pmax pmax
comp=Z,6.0nm,1.1s
DGMT Dagmar 42.85 285 P **P** **22 13 53.0 -0.7**
baz=7.7
KBZ Khabaz 43.05 128 *ce*P **P** **22 13 57.8 +2.6**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 43.05 128 P **P** **22 13 57.9 +2.6**
comp=Z,5.5nm,0.9s,baz=335,slow=4.3,SNR=14
comp=Z,5.5nm,0.9s
MAKZ Makanchi 43.33 88 P **P** **22 13 57.0 -0.5**
MAKZ IAmb IAmb 22 13 59.0
comp=Z,8.2nm,0.8s
MAKZ Makanchi 43.33 88 P **P** **22 13 57.0 -0.5**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MK31 Makanchi Array 43.37 88 P **P** **22 13 57.4 -0.5**
MK31 Makanchi Array 43.37 88 P **P** **22 13 57.4 -0.5**
MK31 pmax pmax
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 43.37 88 P **P** **22 13 57.3 -0.6**
MKAR Makanchi Array 43.37 88 *ce*P **P** **22 13 58.4 +0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 43.37 88 P **P** **22 13 58.0 +0.1**
comp=Z,1.2nm,0.8s,baz=346,slow=7.3,SNR=12
MKAR PcP **PcP** **22 15 45.4 -0.8**
comp=Z,0.9nm,0.9s,baz=359,slow=5.1,SNR=4.6
MKAR LR LR 22 34 39.2
comp=Z,72nm,18.7s,baz=318,slow=40
comp=Z,1.2nm,0.8s
EGMT Eagleton 43.78 290 P **P** **22 14 01.1 -0.1**
baz=7.4
ZEI Tsey 44.06 128 *e*P **P** **22 14 05.1 +1.5**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
SADO Sadowa 44.25 260 LR LR 22 32 31.9
comp=Z,56nm,19.3s,baz=12,slow=36
SONM Songino Array 44.46 64 P **P** **22 14 07.2 +0.4**
SONM Songino Array 44.46 64 P **P** **22 14 07.2 +0.4**
SONM pmax pmax
comp=Z,2.0nm,1.3s
SONM Songino Array 44.46 64 P **P** **22 14 07.1 +0.4**
comp=Z,1.4nm,0.8s,baz=342,slow=7.8,SNR=11
SONM PcP **PP** **22 15 50.0 0.0**
comp=Z,0.4nm,0.8s,baz=343,slow=4.5,SNR=2.9
SONM LR LR 22 32 39.9
comp=Z,63nm,21.3s,baz=353,slow=36
comp=Z,1.4nm,0.8s
ULN Ulaanbaatar 44.49 63 P **P** **22 14 06.9 -0.1**
ULN Ulaanbaatar 44.49 63 *ce*P **P** **22 14 07.2 +0.2**
ULN pmax pmax
comp=Z,4.0nm,1.3s
LAO LASA Array 44.80 287 P **P** **22 14 10.9 +1.6**
LAO IAmb IAmb 22 14 12.7
comp=Z,12nm,1.1s
LAO LASA Array 44.80 287 P **P** **22 14 08.8 -0.5**
baz=7.3
KLR Kul'dur 44.89 40 *ce*P **P** **22 14 09.7 -0.2**
KLR pmax pmax
comp=Z,6.0nm,1.3s
KLR Kul'dur 44.89 40 LR LR 22 32 33.4
comp=Z,79nm,19.4s,baz=334,slow=36
OVMT Ovando 45.01 293 P **P** **22 14 11.3 +0.3**
LYMT Lyon Mountain 45.04 293 P **P** **22 14 11.4 -0.1**
ESDC Sonseca Array 45.26 179 P **P** **22 14 15.8 +2.7**
comp=Z,1.3nm,0.8s,baz=2.3,slow=7.5,SNR=8.9
comp=Z,1.3nm,0.8s
AKH Akhalkalaki 45.40 128 P **P** **22 14 15.5 +1.2**
AKH pmax pmax
comp=Z,42nm,1.3s
D08A Wollman Farm, 45.50 299 P **P** **22 14 15.7 +0.9**
BPMT Black Pine Rid 45.67 294 P **P** **22 14 17.1 +0.6**
KK31 Karatay Array 45.96 100 P **P** **22 14 19.5 +1.0**
KK31 IAmb IAmb 22 14 20.9
comp=Z,5.6nm,0.8s
KK31 Karatay Array 45.96 100 P **P** **22 14 19.5 +1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 45.96 100 P **P** **22 14 20.4 +1.9**
KKAR Karatay Array 45.96 100 P **P** **22 14 20.4 +1.9**
BOZ Bozeman (W) 46.35 292 P **P** **22 14 22.1 +0.4**
baz=7.0
BRTR Keskin Array B 46.42 139 *i*P **P** **22 14 20.1 -2.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
AAK Ala-Archa 46.78 96 P **P** **22 14 26.3 +1.2**
AAK Ala-Archa 46.78 96 *ce*P **P** **22 14 27.3 +2.2**
AAK pmax pmax
comp=Z,11nm,1.3s
AAK Ala-Archa 46.78 96 P **P** **22 14 27.4 +2.3**
comp=Z,4.7nm,0.6s,baz=323,slow=1.2,SNR=20
AAK LR LR 22 35 53.3
comp=Z,48nm,18.5s,baz=8.0,slow=38
comp=Z,4.7nm,0.6s
WMQ Urumqi 46.81 83 *e*P **P** **22 14 26.3 +1.0**
WMQ pmax pmax
comp=Z,13nm,0.9s
RSSD Black Hills 47.15 284 P **P** **22 14 28.6 +0.5**
RSSD Black Hills 47.15 284 P **P** **22 14 26.7 -1.5**
baz=7.1
RSSD Black Hills 47.15 284 P **P** **22 14 28.6 +0.5**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
ARPR Arapgir-MALATY 47.34 134 P **P** **22 14 30.0 +0.4**
BMO Blue Mountains 47.56 297 P **P** **22 14 31.8 +0.7**
BMO Blue Mountains 47.56 297 P **P** **22 14 31.8 +0.7**
BMO pmax pmax
comp=Z,4.0nm,1.5s
YSS Yuzh-Sakhalins 47.74 30 *ce*P **P** **22 14 34.0 +1.7**
YSS pmax pmax
comp=Z,31nm,1.4s
ARSB Arslanbob 47.95 98 P **P** **22 14 35.4 +1.2**
ARSB Arslanbob 47.95 98 P **P** **22 14 35.4 +1.2**
ARSB pmax pmax
comp=Z,1.0nm,0.7s
TARG Taragay, Kyrgy 47.98 93 P **P** **22 14 35.6 +0.8**
TARG Taragay, Kyrgy 47.98 93 P **P** **22 14 35.6 +0.8**
TARG pmax pmax
comp=Z,10.0nm,1.1s
BNX BinXian 48.10 44 ‖P **P** **22 14 34.4 -0.8**
BNX pmax pmax
comp=Z,8.0nm,0.9s
BNX pmax pmax
comp=Z,80nm,5.2s
MOOW Moose Ponds 48.11 291 P **P** **22 14 36.5 +0.9**
NRN Naryn 48.11 95 P **P** **22 14 36.3 +0.6**
NRN IAmb IAmb 22 14 50.9
comp=Z,3.3nm,1.1s
NRN Naryn 48.11 95 P **P** **22 14 36.3 +0.6**
NRN pmax pmax
comp=Z,3.0nm,1.1s
SSPA Standing Stone 48.23 258 P **P** **22 14 36.6 +0.3**
baz=6.8
K22A Casper 48.83 286 P **P** **22 14 41.4 +0.3**
baz=6.8
PDAR Pinedale Array 48.98 289 P **P** **22 14 43.4 +1.1**
comp=Z,0.3nm,0.6s,baz=356,slow=5.9,SNR=4.4
PDAR LR LR 22 34 14.6
comp=Z,37nm,20.2s,baz=32,slow=35
comp=Z,0.3nm,0.6s
BTK Batken 49.00 100 P **P** **22 14 43.3 +1.0**
BTK Batken 49.00 100 P **P** **22 14 43.3 +1.0**
BTK pmax pmax
comp=Z,12nm,1.1s
MDJ Mudanjiang 49.36 42 P **P** **22 14 44.4 -0.4**
MDJ sP pwP 22 14 48.3 -1.6
MDJ PP **PP** **22 16 37.0 -1.4**
MDJ PcS **PcS** **22 20 04.6 +1.0**
MDJ S **S** **22 21 53.0 +1.4**
MDJ ScS **ScS** **22 24 33.8 -3.1**
MDJ pmax pmax
comp=Z,14nm,0.9s
MDJ pmax pmax
comp=Z,66nm,4.1s
MDJ LR LR
comp=N,200nm,14.9s
MDJ LR LR
comp=E,110nm,15.4s
MDJ LR LR
comp=Z,210nm,16.5s
MDJ Mudanjiang 49.36 42 P **P** **22 14 43.9 -0.9**
O44A Mansfield 49.67 268 P **P** **22 14 46.5 -0.8**
USRK Ussuriysk Ar. 49.92 40 LR LR 22 36 10.8
comp=Z,56nm,19.7s,baz=15,slow=36
GEYT Alibeck 50.00 113 P **P** **22 14 51.0 +1.1**
GEYT IAmb IAmb 22 14 53.0
comp=Z,9.6nm,1.1s
GEYT Alibeck 50.00 113 P **P** **22 14 51.0 +1.1**
GEYT pmax pmax
comp=Z,10.0nm,1.1s
GEYT Alibeck 50.00 113 P **P** **22 14 52.1 +2.2**
comp=Z,5.5nm,0.7s,baz=310,slow=9.3,SNR=16
comp=Z,5.5nm,0.7s
KSH Kashi 50.01 95 P **P** **22 14 54.5 +4.5**
KSH sP pwP 22 15 02.1 +7.0
KSH pmax pmax
comp=Z,5.0nm,1.3s
SIMJ Simiganj 50.23 102 P **P** **22 14 52.1 +0.4**
SIMJ IAmb IAmb 22 14 54.1
comp=Z,8.5nm,1.3s
ASAJ Asahikawa 50.56 30 LR LR 22 35 33.0
comp=Z,31nm,20.6s,baz=159,slow=35
O20A White River Ci 51.48 288 P **P** **22 15 02.6 +1.5**
baz=6.5
S51A Beattyville 51.72 263 P **P** **22 15 01.0 -1.8**
DUG Dugway, Tooele 51.81 292 P **P** **22 15 03.9 +0.3**
baz=6.4
HHC Hu-ho-hao-te 51.82 60 *e*P **P** **22 15 02.8 -0.8**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.5s
CCM Cathedral Cave 52.01 271 P **P** **22 15 05.9 +1.0**
baz=6.7
MDT Midelt 52.10 180 LR LR 22 35 45.6
comp=Z,47nm,18.1s,baz=342,slow=34
GTA Gaotai 52.27 72 *e*P **P** **22 15 06.9 -0.1**
GTA pmax pmax
comp=Z,3.0nm,1.2s

Q24A	**Divide**	**52.37**	**285**	P		**P**	**22 15 07.7**	**-0.3**
	baz=6.5							
U49A	**Red Boiling Sp**	**53.04**	**265**	P		**P**	**22 15 14.3**	**+1.8**
TKL	**Tuckaleechee C**	**53.70**	**263**	LR		LR	22 37 23.5	
	comp=Z,46nm,18.6s,baz=348,slow=35							
S22A	**4UR Ranch, Cre**	**53.72**	**286**	P		**P**	**22 15 18.1**	**+0.2**
	baz=6.4							
R11B	**Troy Canyon, C**	**53.88**	**295**	P		**P**	**22 15 17.7**	**-1.3**
	baz=6.1							
OK048	**Pawnee Station**	**54.16**	**276**	P		**P**	**22 15 21.3**	**+0.5**
CROK	**Carrier**	**54.16**	**277**	P		**P**	**22 15 20.7**	**-0.1**
LHV	**Little Huntoon**	**54.22**	**297**	P		**P**	**22 15 20.4**	**-0.7**
LHV				IAmb		IAmb	22 15 30.9	
	comp=Z,5.7nm,0.9s							
OK038	**West end E0370**	**54.26**	**278**	P		**P**	**22 15 21.3**	**-0.2**
BG3	**Lake Jocassee**	**54.28**	**262**	P		**P**	**22 15 22.9**	**+1.2**
W50A	**Signal Mountai**	**54.30**	**264**	P		**P**	**22 15 22.6**	**+0.8**
KBL	**Kabul**	**54.32**	**103**	P		**P**	**22 15 22.7**	**+0.5**
KBL				IAmb		IAmb	22 15 24.1	
	comp=Z,8.7nm,1.2s							
KBL	**Kabul**	**54.32**	**103**	P		**P**	**22 15 22.7**	**+0.5**
KBL				pmax		pmax		
	comp=Z,9.0nm,1.3s							
SWET	**Sewanee**	**54.34**	**265**	P		**P**	**22 15 22.8**	**+0.7**
NIL	**Nilore**	**55.58**	**99**	P		**P**	**22 15 31.5**	**+0.4**
NIL				pmax		pmax		
	comp=Z,16nm,1.5s							
KSRS	**Korea Array**	**56.38**	**45**	LR		LR	22 39 39.3	
	comp=Z,20nm,19.0s,baz=15,slow=36							
ANMO	**Albuquerque**	**56.47**	**285**	LR		LR	22 42 27.8	
	comp=Z,48nm,18.7s,baz=102,slow=39							
GMRC	**Granite Mounta**	**57.42**	**294**	P		**P**	**22 15 43.8**	**-0.5**
	baz=5.8							
EDW2	**Edwards Air Fo**	**57.52**	**297**	P		**P**	**22 15 46.5**	**+1.5**
	baz=5.7							
BCW	**Bitter Crk WRg**	**57.58**	**298**	P		**P**	**22 15 47.3**	**+1.9**
MJAR	**Matsushiro Arr**	**57.89**	**35**	LR		LR	22 41 27.9	
	comp=Z,33nm,18.2s,baz=3.5,slow=37							
VHRN	**Van Horn**	**60.46**	**283**	P		**P**	**22 16 06.2**	**+0.7**
JNU	**Nakatsue**	**60.88**	**42**	LR		LR	22 45 04.6	
	comp=Z,19nm,18.0s,baz=33,slow=39							
NJ2	**Nanjing**	**61.12**	**54**	*e*P		**P**	**22 16 09.4**	**-0.4**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.6s							
LSA	**Lhasa**	**61.13**	**81**	P		**P**	**22 16 10.3**	**-0.1**
LSA				IAmb		IAmb	22 16 11.3	
	comp=Z,2.6nm,0.9s							
LSA	**Lhasa**	**61.13**	**81**	P		**P**	**22 16 10.4**	**-0.1**
LSA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
JHJ	**Hachijo jima 2**	**61.38**	**34**	LR		LR	22 42 34.7	
	comp=Z,25nm,20.5s,baz=10.0,slow=36							
TX31	**Lajitas Ar. Si**	**61.78**	**282**	P		**P**	**22 16 14.9**	**+0.4**
TX31				IAmb		IAmb	22 16 16.2	
	comp=Z,2.9nm,1.0s							
TXAR	**Lajitas Array**	**61.78**	**282**	P		**P**	**22 16 14.7**	**+0.3**
TXAR	**Lajitas Array**	**61.78**	**282**	P		**P**	**22 16 15.5**	**+1.0**
	comp=Z,2.7nm,1.0s,baz=358,slow=3.3,SNR=16							
	comp=Z,2.7nm,1.0s							
PZH	**PanZhiHua**	**65.24**	**71**	P		**P**	**22 16 38.8**	**+1.4**
PZH				pmax		pmax		
	comp=Z,7.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,90nm,4.3s							
TEIG	**Tepich**	**69.40**	**266**	LR		LR	22 47 45.8	
	comp=Z,301nm,20.1s,baz=353,slow=36							
SJG	**San Juan**	**69.56**	**243**	LR		LR	22 48 00.2	
	comp=Z,29nm,19.1s,baz=107,slow=36							
SLVN	**Son La**	**70.55**	**70**	P		**P**	**22 17 10.1**	**-0.6**
TOA0	**Torodi Ar. Sit**	**71.71**	**174**	P		**P**	**22 17 17.8**	**0.0**
TOA0				IAmb		IAmb	22 17 28.4	
	comp=Z,7.8nm,1.2s							
TORD	**Torodi Ar. Bea**	**71.71**	**174**	P		**P**	**22 17 17.7**	**0.0**
TORD				IAmb		IAmb	22 17 28.4	
	comp=Z,5.0nm,1.2s							
TORD	**Torodi Ar. Bea**	**71.71**	**174**	P		**P**	**22 17 19.4**	**+1.7**
	comp=Z,1.7nm,0.6s,baz=4.3,slow=7.3,SNR=13							
	comp=Z,1.7nm,0.6s							
SVN	**Savane Anatole**	**72.40**	**238**	P		**P**	**22 17 21.3**	**-0.6**
CM31	**Chiang Mai Arr**	**72.97**	**75**	P		**P**	**22 17 23.8**	**-1.5**
CM31				IAmb		IAmb	22 17 24.6	
	comp=Z,4.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**72.97**	**75**	P		**P**	**22 17 24.2**	**-1.0**
	comp=Z,2.3nm,0.3s,baz=347,slow=6.3,SNR=9.0							
CMAR				LR		LR	22 51 48.0	
	comp=Z,116nm,19.8s,baz=0.0,slow=38							
	comp=Z,2.3nm,0.3s							
CMIG	**Matias Romero**	**73.11**	**272**	LR		LR	22 54 03.3	
	comp=Z,18nm,19.1s,baz=9.0,slow=40							
SDV	**Santo Domingo**	**79.07**	**247**	LR		LR	22 52 02.9	
	comp=Z,35nm,21.8s,baz=35,slow=35							
MDP	**Montagnes des**	**81.43**	**228**	LR		LR	22 49 33.7	
	comp=Z,38nm,21.7s,baz=254,slow=32							
PALK	**Pallekele**	**82.38**	**94**	LR		LR	23 00 31.2	
	comp=Z,35nm,18.0s,baz=345,slow=40							
MBAR	**Mbarara**	**86.31**	**145**	*ce*P		**P**	**22 18 41.1**	**+3.2**
MBAR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
DAV	**Davao City (W)**	**86.39**	**49**	LR		LR	22 59 57.1	
	comp=Z,26nm,18.8s,baz=343,slow=38							

AEIC ***19*** *22:13:45.9±1.2,56.°45N±0.°08×148.°6W±0.°1, h1km±7km, Error ellipse: s-maj=12.5km s-min=8.2km az=154.0*

NEIC 19 22:13:43.8±1.2, 56.°48N±0.°09×148.°7W±0.°1, h21km±10km, ML3.0/62, ML2.8(AEIC)**, Error ellipse: s-maj=14.0km s-min=8.6km az=164.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.50**	**303**		Pn	22 14 23.1	-0.1
KDAK					Sn	22 14 52.1	-1.0
OHAK	**Old Harbor**	**2.65**	**288**	Pn	Pn	22 14 24.1	-1.1
OHAK				Sn	Sn	22 14 54.0	-2.5
SYI	**Shuyak Island**	**2.93**	**318**	Pn	Pn	22 14 29.1	0.0
SYI				Sn	Sn	22 15 03.1	-0.5
Q23K	**Middleton Isla**	**3.20**	**22**	Pn	Pn	22 14 31.4	-1.4
MID	**Middleton Isla**	**3.20**	**22**	Pn	Pn	22 14 32.2	-0.6
CNPM	**China Poot**	**3.35**	**337**	Pn	Pn	22 14 34.3	-0.5
CNPM				Sn	Sn	22 15 12.6	-1.3
CNPM				IAML		22 15 13.6	
	comp=N,19nm,1.5s						
R18K	**Karluk**	**3.35**	**291**	Pn	Pn	22 14 34.5	-0.2
R18K				IAML		22 15 17.5	
	comp=N,36nm,0.4s						
R18K				IAML		22 15 20.8	
	comp=E,53nm,0.4s						
BRSE	**Bradley Lake S**	**3.45**	**342**		Pn	22 14 36.5	+0.3
BRSE					Sn	22 15 15.3	-1.1
BRLK	**Bradley Lake**	**3.50**	**341**	Pn	Pn	22 14 36.8	-0.1
P23K	**Montague Islan**	**3.59**	**10**		Pn	22 14 38.0	-0.1
Q19K	**Cape Douglas,**	**3.63**	**315**	Pn	Pn	22 14 38.6	-0.1
P19K	**Oil Pt**	**4.00**	**325**	Pn	Pn	22 14 43.3	-0.5
P19K				IAML		22 15 36.4	
	comp=E,36nm,0.5s						
HIN	**Hinchinbrook I**	**4.09**	**15**	Pn	Pn	22 14 44.9	-0.1
HIN				IAML		22 15 31.2	
	comp=E,28nm,1.1s						
SLKM	**Skilak Lake**	**4.12**	**349**		Pn	22 14 45.7	+0.3
O20K	**Slope Mountain**	**4.17**	**332**		Pn	22 14 46.4	+0.2
IVE	**Iliamna Volcan**	**4.23**	**329**		Pn	22 14 46.9	0.0
ILSW	**Iliamna Southw**	**4.24**	**328**	Pn	Pn	22 14 46.7	-0.4
EYAK	**Cordova Ski Ar**	**4.36**	**19**	Pn	Pn	22 14 48.2	-0.4
FID	**Port Fidalgo**	**4.43**	**14**	Pn	Pn	22 14 48.4	-1.3
FID				IAML		22 15 37.7	
	comp=E,14nm,0.6s						
FID				IAML		22 15 41.1	
	comp=N,13nm,0.5s						
RAGM	**Ragged Mountai**	**4.44**	**26**	Pn	Pn	22 14 49.3	-0.6
GLI	**Glacier Island**	**4.49**	**10**	Pn	Pn	22 14 50.0	-0.4
GLI				IAML		22 15 42.6	
	comp=E,14nm,1.2s						
GLI				IAML		22 17 39.2	
	comp=N,12nm,1.2s						
RED	**Redoubt Volcan**	**4.50**	**333**		Pn	22 14 50.7	0.0
NICHA	**Nichawak Mount**	**4.50**	**31**		Pn	22 14 50.9	+0.2
HMT	**Hamilton**	**4.51**	**29**	Pn	Pn	22 14 50.9	+0.1
RDT	**Redoubt**	**4.55**	**336**		Pn	22 14 51.5	+0.1
P18K	**Big Mountain,**	**4.56**	**313**	Pn	Pn	22 14 51.0	-0.5
RC01	**Rabbit Creek A**	**4.66**	**354**	Pn	Pn	22 14 53.6	+0.8
RC01				IAML		22 15 48.6	
	comp=E,14nm,0.4s						
RC01				IAML		22 17 44.8	
	comp=N,13nm,1.5s						
BERG	**Berg Lake**	**4.71**	**32**	Pn	Pn	22 14 53.3	-0.2
BERG				IAML		22 18 03.3	
	comp=N,21nm,1.2s						
SNH	**Sunshine Point**	**4.81**	**37**	Pn	Pn	22 14 54.6	-0.3
SNH				IAML		22 17 11.9	
	comp=N,15nm,1.3s						
SNH				IAML		22 18 02.1	
	comp=E,14nm,1.5s						
O18K	**Koktuh Hills**	**4.84**	**317**	Pn	Pn	22 14 55.6	+0.2
O18K				IAML		22 15 54.9	
	comp=N,6.7nm,1.2s						
KHIT	**Khitrov Hills**	**4.88**	**33**		Pn	22 14 55.9	-0.1
KNK	**Knik Glacier**	**4.95**	**1**	Pn	Pn	22 14 55.8	-1.0
KNK				IAML		22 16 06.3	
	comp=E,11nm,1.4s						
KNK				IAML		22 18 16.6	
	comp=N,7.0nm,1.3s						
BMRM	**Bremner River**	**4.97**	**23**	Pn	Pn	22 14 57.3	+0.1
WAX	**Waxell Ridge**	**5.01**	**35**	Pn	Pn	22 14 57.5	-0.2
WAX				IAML		22 15 55.2	
	comp=E,16nm,1.3s						
WAX				IAML		22 18 11.2	
	comp=N,17nm,0.9s						
BARK	**Barkley Ridge**	**5.10**	**37**		Pn	22 14 59.0	+0.1
SUA	**Susitna One**	**5.11**	**349**	Pn	Pn	22 14 59.1	-0.1
SUA				IAML		22 16 18.4	
	comp=N,5.4nm,1.3s						
MESA	**MESA**	**5.12**	**41**	Pn	Pn	22 14 59.3	-0.1
KLU	**Klutina**	**5.22**	**15**	Pn	Pn	22 15 00.4	-0.3
KLU				IAML		22 15 59.6	
	comp=N,8.7nm,0.4s						
KLU				IAML		22 17 59.9	
	comp=E,8.4nm,1.4s						
TGL	**Tana Glacier**	**5.26**	**33**	Pn	Pn	22 15 01.2	0.0
TGL				IAML		22 15 60.0	
	comp=E,7.8nm,1.0s						
TGL				IAML		22 16 11.3	
	comp=N,5.8nm,1.4s						
STLK	**Strandline Lak**	**5.29**	**343**		Pn	22 15 02.6	+1.0
BAGL	**Bagley Icefiel**	**5.29**	**38**		Pn	22 15 01.7	+0.2
ISLE	**Juniper Island**	**5.29**	**36**	Pn	Pn	22 15 01.0	-0.7
N19K	**Bonanza Creek**	**5.30**	**327**	Pn	Pn	22 15 02.0	+0.3
N19K				IAML		22 16 10.8	
	comp=N,5.1nm,1.4s						
GHO	**Glory Hole Cre**	**5.31**	**359**	Pn	Pn	22 15 01.6	-0.2
GHO				IAML		22 16 05.1	
	comp=N,14nm,1.2s						
GHO				IAML		22 16 07.4	
	comp=E,10nm,0.7s						
SML	**Sawmill**	**5.34**	**2**	Pn	Pn	22 15 02.2	0.0
SML				IAML		22 16 06.4	
	comp=N,9.8nm,0.8s						
SML				IAML		22 16 08.3	
	comp=E,9.0nm,1.1s						
SCM	**Sheep Creek Mo**	**5.41**	**7**	Pn	Pn	22 15 03.1	-0.1
CHGN	**Chignik**	**5.42**	**272**	Pn	Pn	22 15 04.0	+0.7
VRDI	**Verde Repeater**	**5.47**	**27**	Pn	Pn	22 15 03.6	-0.6
KIAG	**Kiagna River**	**5.53**	**34**		Pn	22 15 05.0	+0.1
N25K	**Chitina, Valde**	**5.55**	**20**	Pn	Pn	22 15 05.5	+0.4
GLB	**Gilahina Butte**	**5.57**	**25**	Pn	Pn	22 15 04.8	-0.5
GRNC	**Granite Creek**	**5.58**	**37**	Pn	Pn	22 15 05.5	-0.2
TABL	**Table Mountain**	**5.60**	**42**	Pn	Pn	22 15 05.7	-0.2
N18K	**Kilae Creek**	**5.66**	**321**	Pn	Pn	22 15 06.9	+0.4
PTPK	**Patty Peak**	**5.71**	**32**		Pn	22 15 07.8	+0.4
MCARA	**McCarthy VSAT**	**5.72**	**28**	Pn	Pn	22 15 07.7	+0.3
PCA	**Pinnacle**	**5.72**	**47**	Pn	Pn	22 15 07.4	-0.1
M24K	**Tolsona, Glenn**	**5.79**	**12**	Pn	Pn	22 15 09.5	+1.2
BARN	**Barnard Glacie**	**5.86**	**36**	Pn	Pn	22 15 09.3	-0.2
SVW2	**Sparrevohn**	**5.86**	**325**	Pn	Pn	22 15 08.9	-0.4
PNL	**Peninsula**	**5.86**	**53**		Pn	22 15 09.5	+0.2
M20K	**Styx River**	**5.88**	**339**	Pn	Pn	22 15 09.2	-0.5
CTGM	**Chitina Glacie**	**5.90**	**37**	Pn	Pn	22 15 09.5	-0.4
O16K	**Kokwok River B**	**5.90**	**306**	Pn	Pn	22 15 11.2	+1.4
BCPM	**Bancas Point**	**5.90**	**50**	Pn	Pn	22 15 09.9	0.0
LOGN	**Logan Glacier**	**5.91**	**39**	Pn	Pn	22 15 09.6	-0.6
N17K	**Nushagak Hills**	**6.03**	**316**	Pn	Pn	22 15 09.9	-1.8
M19K	**Big River Lodg**	**6.18**	**334**	Pn	Pn	22 15 12.7	-1.0
L19K	**White Mountain**	**6.53**	**334**	Pn	Pn	22 15 18.2	-0.3
P29M	**Windy Craggy**	**6.60**	**57**	Pn	Pn	22 15 19.5	+0.1
DHY	**Denali Highway**	**6.65**	**5**	Pn	Pn	22 15 21.9	+1.7
M17K	**Holitna River**	**6.70**	**321**	Pn	Pn	22 15 21.0	+0.2
M27K	**Edge Creek, AK**	**6.83**	**28**	Pn	Pn	22 15 23.2	+0.5
S31K	**Pelican**	**6.91**	**72**	Pn	Pn	22 15 21.9	-1.8
TRF	**Thorofare Moun**	**7.04**	**354**	Pn	Pn	22 15 26.6	+1.0
N15K	**Kwethluk River**	**7.06**	**306**	Pn	Pn	22 15 27.0	+1.3
HYT	**Haines Junctio**	**7.26**	**49**	Pn	Pn	22 15 27.9	-0.8
BPAW	**Bear Paw Mtn.**	**7.73**	**352**	Pn	Pn	22 15 35.7	+0.8
N30M	**Aishikik Lake**	**7.78**	**45**	Pn	Pn	22 15 36.1	+0.4
O30N	**Mendenhall**	**7.84**	**52**	Pn	Pn	22 15 36.4	-0.1
M29M	**Somme Creek**	**7.91**	**37**	Pn	Pn	22 15 38.2	+0.6
J25K	**Salcha River,**	**8.32**	**10**	Pn	Pn	22 15 41.5	-1.5
WHY	**Whitehorse**	**8.33**	**54**	Pn	Pn	22 15 44.0	+0.8
J26L	**Joseph Creek**	**8.43**	**15**	Pn	Pn	22 15 45.5	+0.9
L29M	**L29M**	**8.50**	**34**	Pn	Pn	22 15 45.9	+0.4
P32M	**Atlin**	**8.52**	**62**	Pn	Pn	22 15 45.3	-0.5
M30M	**Minto, Yukon**	**8.58**	**40**	Pn	Pn	22 15 47.3	+0.7
P33M	**Teslin, Yukon**	**9.12**	**59**	Pn	Pn	22 15 54.2	0.0
K29M	**Barlow Dome**	**9.22**	**32**	Pn	Pn	22 15 55.2	-0.3
M31M	**Drury Creek, Y**	**9.26**	**46**	Pn	Pn	22 15 57.2	+1.2
H21K	**Melozitna Rive**	**9.42**	**349**	Pn	Pn	22 15 58.9	+0.8
R33M	**Jennings River**	**9.85**	**65**	Pn	Pn	22 16 03.5	-0.6
J30M	**Hart River**	**10.12**	**32**	Pn	Pn	22 16 07.3	-0.4
MMPY	**Sheldon Lake,**	**10.74**	**48**	Pn	Pn	22 16 18.8	+0.7

NEIC ***19*** *22:15:41.5±0.7,56.°46N±0.°08×148.°6W±0.°1, h25km±10km, ML3.0/50, ML2.7(AEIC), Error ellipse: s-maj=12.1km s-min=7.9km az=151.0*

AEIC 19 22:15:44±1.2, 56.°4N±0.°1×148.°6W±0.°1, h12km±8km, Error ellipse: s-maj=14.9km s-min=9.2km az=173.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.60**	**304**		Pn	22 16 20.3	-5.6
KDAK					Sn	22 16 48.6	-8.7
OHAK	**Old Harbor**	**2.73**	**289**	Pn	Pn	22 16 21.9	-5.7
OHAK				Sn	Sn	22 16 53.0	-7.6
SYI	**Shuyak Island**	**3.03**	**318**	Pn	Pn	22 16 26.9	-4.9
SYI				Sn	Sn	22 17 01.7	-6.2
R18K	**Karluk**	**3.43**	**292**	Pn	Pn	22 16 32.8	-4.5
R18K				IAML		22 17 14.9	
	comp=N,38nm,0.4s						
R18K				IAML		22 17 16.8	
	comp=E,44nm,0.4s						
CNPM	**China Poot**	**3.44**	**337**	Pn	Pn	22 16 32.5	-4.9
BRSE	**Bradley Lake S**	**3.54**	**342**		Pn	22 16 33.9	-5.0
BRSE					Sn	22 17 13.1	-7.5
P23K	**Montague Islan**	**3.65**	**9**		Pn	22 16 35.2	-5.1
P23K					Sn	22 17 15.2	-8.2
Q19K	**Cape Douglas,**	**3.73**	**315**	Pn	Pn	22 16 36.9	-4.5
P19K	**Oil Pt**	**4.10**	**325**	Pn	Pn	22 16 41.8	-4.7
P19K				IAML		22 17 35.3	
	comp=E,22nm,1.4s						
P19K				IAML		22 17 52.5	
	comp=N,25nm,0.7s						
HIN	**Hinchinbrook I**	**4.14**	**14**	Pn	Pn	22 16 42.5	-4.7
HIN				IAML		22 17 49.5	
	comp=E,28nm,1.3s						
KAIM	**Kayak Island**	**4.15**	**30**	Pn	Pn	22 16 42.8	-4.4
KAIM				IAML		22 18 03.2	
	comp=E,25nm,1.3s						
KAIM				IAML		22 18 31.0	
	comp=N,27nm,1.4s						
SLKM	**Skilak Lake**	**4.21**	**349**		Pn	22 16 43.3	-4.7
O20K	**Slope Mountain**	**4.27**	**331**		Pn	22 16 44.1	-4.7
IVE	**Iliamna Volcan**	**4.32**	**329**		Pn	22 16 44.6	-5.0
ILSW	**Iliamna Southw**	**4.33**	**328**	Pn	Pn	22 16 44.4	-5.3
ILSW				IAML		22 17 38.6	
	comp=N,13nm,1.1s						
ILSW				IAML		22 18 00.7	
	comp=E,12nm,1.3s						
CNTC	**Contact Creek**	**4.39**	**298**		Pn	22 16 46.8	-3.8
SUCK	**Suckling Hills**	**4.46**	**32**	Pn	Pn	22 16 46.9	-4.5
SUCK				IAML		22 17 46.5	
	comp=N,20nm,1.4s						
SUCK				IAML		22 19 22.4	
	comp=E,18nm,1.1s						
RAGM	**Ragged Mountai**	**4.48**	**25**	Pn	Pn	22 16 47.0	-4.7
FID	**Port Fidalgo**	**4.49**	**13**	Pn	Pn	22 16 46.7	-5.2
FID				IAML		22 17 56.4	
	comp=E,13nm,0.8s						
FID				IAML		22 19 43.5	
	comp=N,12nm,1.2s						
HMT	**Hamilton**	**4.54**	**28**	Pn	Pn	22 16 48.5	-4.1
GLI	**Glacier Island**	**4.55**	**9**	Pn	Pn	22 16 47.7	-5.0
GLI				IAML		22 18 07.6	
	comp=E,12nm,1.1s						
GLI				IAML		22 19 34.0	
	comp=N,15nm,1.5s						
RSO	**Redoubt South**	**4.63**	**333**	Pn	Pn	22 16 48.3	-5.6
P18K	**Big Mountain,**	**4.65**	**313**	Pn	Pn	22 16 49.2	-4.9
BERG	**Berg Lake**	**4.74**	**31**	Pn	Pn	22 16 51.0	-4.3
BERG				IAML		22 18 06.2	
	comp=E,18nm,0.9s						
SNH	**Sunshine Point**	**4.84**	**36**	Pn	Pn	22 16 52.3	-4.3
SNH				IAML		22 18 26.6	
	comp=E,15nm,1.4s						
SNH				IAML		22 19 38.0	
	comp=N,18nm,1.4s						
O18K	**Koktuh Hills**	**4.94**	**317**	Pn	Pn	22 16 53.0	-5.0
WAX	**Waxell Ridge**	**5.04**	**34**	Pn	Pn	22 16 55.0	-4.4
CRQM	**Cirque**	**5.20**	**31**	Pn	Pn	22 16 57.2	-4.6
CRQM				IAML		22 17 57.2	
	comp=N,12nm,1.4s						
CRQM				IAML		22 19 36.4	
	comp=E,7.3nm,1.3s						
TGL	**Tana Glacier**	**5.29**	**32**	Pn	Pn	22 16 58.4	-4.5
TGL				IAML		22 19 39.3	
	comp=N,8.1nm,1.5s						
ISLE	**Juniper Island**	**5.32**	**35**	Pn	Pn	22 16 58.2	-5.1
ISLE				IAML		22 18 01.3	
	comp=N,12nm,1.5s						
ISLE				IAML		22 18 20.1	
	comp=E,6.5nm,1.2s						
GHO	**Glory Hole Cre**	**5.39**	**358**	Pn	Pn	22 17 00.5	-3.7
N19K	**Bonanza Creek**	**5.40**	**327**	Pn	Pn	22 16 59.2	-5.2
N19K				IAML		22 19 55.6	
	comp=N,4.6nm,1.5s						
N19K				IAML		22 20 33.5	
	comp=E,4.2nm,0.9s						
VRDI	**Verde Repeater**	**5.51**	**27**	Pn	Pn	22 16 60.0	-6.1
N25K	**Chitina, Valde**	**5.60**	**20**	Pn	Pn	22 17 03.3	-3.9
GRNC	**Granite Creek**	**5.61**	**37**	Pn	Pn	22 17 03.0	-4.4
TABL	**Table Mountain**	**5.61**	**41**	Pn	Pn	22 17 03.9	-3.6
GLB	**Gilahina Butte**	**5.62**	**24**	Pn	Pn	22 17 02.6	-4.8
MCARA	**McCarthy VSAT**	**5.75**	**28**	Pn	Pn	22 17 05.0	-4.2
BARN	**Barnard Glacie**	**5.89**	**35**	Pn	Pn	22 17 06.9	-4.2
BCPM	**Bancas Point**	**5.91**	**49**	Pn	Pn	22 17 07.6	-3.7
CTGM	**Chitina Glacie**	**5.92**	**36**	Pn	Pn	22 17 07.3	-4.3
LOGN	**Logan Glacier**	**5.93**	**39**	Pn	Pn	22 17 07.1	-4.7
P29M	**Windy Craggy**	**6.59**	**56**	Pn	Pn	22 17 16.5	-4.2
S31K	**Pelican**	**6.88**	**72**	Pn	Pn	22 17 18.7	-5.9
N30M	**Aishikik Lake**	**7.79**	**45**	Pn	Pn	22 17 33.6	-3.6
BPAW	**Bear Paw Mtn.**	**7.81**	**352**	Pn	Pn	22 17 32.0	-5.4
M29M	**Somme Creek**	**7.94**	**36**	Pn	Pn	22 17 35.3	-3.9
P32M	**Atlin**	**8.50**	**62**	Pn	Pn	22 17 42.4	-4.5
L29M	**L29M**	**8.53**	**34**	Pn	Pn	22 17 43.6	-3.7
H21K	**Melozitna Rive**	**9.51**	**349**	Pn	Pn	22 17 55.9	-4.7

IDC 19 22:17:44.4±11.0, 24.°90N×142.°30E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=368.3km s-min=116.3km az=12.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**36.39**	**318**	P	P	22 24 50.8	+0.2
	0.1nm,0.5s,baz=100,slow=7.9,SNR=1.8						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**51.97**	**311**	P	P	22 26 55.6	+0.3
	0.1nm,0.6s,baz=87,slow=8.0,SNR=1.9						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**54.66**	**316**	P	P	22 27 14.5	-0.5
	0.8nm,0.4s,baz=91,slow=7.8,SNR=23						
	0.8nm,0.4s						
BVAR	**Borovoye Array**	**59.74**	**318**	P	P	22 27 50.9	-0.1
	1.2nm,0.4s,baz=84,slow=7.3,SNR=20						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**79.96**	**334**	P	P	22 29 55.3	+0.1
	0.6nm,0.4s,baz=67,slow=5.0,SNR=7.4						
	0.6nm,0.4s						

IGIL ***19*** *22:33:23.8, 36.°78N×11.°23W, h30km, ML1.8*
MDD ***19*** *22:33:24.3±0.9, 36.°89N×11.°06W, h14km±24km, mb_Lg2.8/8, Error ellipse: s-maj=28.3km s-min=6.7km az=56.0*
INMG ***19*** *22:33:24.4±1.2, 36.°80N×11.°19W, h23km, ML2.0, Error ellipse: s-maj=5.0km s-min=3.3km az=79.0*
CNRM ***19*** *22:33:29.3, 36.°30N×10.°16W, h0km, ML2.0*

ISC 19 22:33:18.7±2.4, 36.77N±0.07×11.2W±0.1, h10km, n53, s211/87, 2C, Azores-Cape St. Vincent Ridge

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

PBAR	**Barrancos**	**3.58**	**66**	Pn	**Pn**	**22 34 16.8**	**+2.5**
PBAR				Sn	**Sn**	**22 34 55.2**	**-1.5**
EMIN	**Mina Concepcio**	**3.74**	**73**	Pn	**Pn**	**22 34 18.5**	**+2.1**
EMIN				Sn	**Sn**	**22 34 59.1**	**-1.3**
EMIN				*i* Vmb_Lg		22 35 02.1	
EBAD	**Badajoz**	**3.85**	**58**	Pn	**Pn**	**22 34 20.1**	**+2.1**
EBAD				Sn	**Sn**	**22 35 02.0**	**-1.4**
EBAD	**Badajoz**	**3.85**	**58**	Pn	**Pn**	**22 34 20.3**	**+2.2**
EBAD				Sn	**Sn**	**22 35 01.0**	**-2.4**
EBAD				*i* Vmb_Lg		22 35 08.0	
PCAS	**Casmilo, Conde**	**3.90**	**32**	*e*P	**Pn**	**22 34 20.6**	**+1.9**
PCAS				*e*S	**Sn**	**22 35 03.5**	**-1.0**
PCAS				A	A	22 35 06.1	
	comp=N,6.1nm,0.5s						
PMRV	**Marv??o**	**4.00**	**47**	*e*P	**Pn**	**22 34 21.7**	**+1.6**
PMRV				*e*S	**Sn**	**22 35 05.1**	**-1.9**
PMRV				A	A	22 35 08.0	
	comp=N,1.7nm,0.6s						
PCBR	**Castelo Branco**	**4.23**	**42**	*e*P	**Pn**	**22 34 25.6**	**+2.4**
PCBR				*e*S	**Sn**	**22 35 10.9**	**-1.8**
ESPR	**Espera**	**4.28**	**87**	Pn	**Pn**	**22 34 26.4**	**+2.5**
ESPR				Sn	**Sn**	**22 35 13.1**	**-0.7**
ESPR				*i* Vmb_Lg		22 35 14.5	
MTE	**Manteigas**	**4.61**	**37**	*e*P	**Pn**	**22 34 30.6**	**+2.1**
MTE				*e*S	**Sn**	**22 35 21.6**	**-0.6**
PVIS	**Viseu**	**4.71**	**32**	*e*P	**Pn**	**22 34 32.0**	**+2.2**
PVIS				*e*S	**Sn**	**22 35 22.1**	**-2.4**
PVIS				A	A	22 35 24.0	
	comp=N,3.2nm,0.8s						
ECAB	**El Cabril**	**4.77**	**72**	Pn	**Pn**	**22 34 32.8**	**+2.1**
ECAB	**El Cabril**	**4.77**	**72**	Pn	**Pn**	**22 34 32.8**	**+2.1**
ECAB				Sn	**Sn**	**22 35 22.8**	**-3.2**
ECAB				*i* Vmb_Lg		22 35 26.6	
EPLA	**Plasencia**	**5.19**	**49**	Pn	**Pn**	**22 34 38.1**	**+1.7**
POLO	**Lamas de Olo**	**5.30**	**29**	*e*P	**Pn**	**22 34 39.8**	**+1.8**
POLO				*e*S	**Sn**	**22 35 36.2**	**-3.0**
POLO				A	A	22 35 41.3	
	comp=N,1.2nm,0.5s						
EADA	**Adamuz**	**5.44**	**73**	Pn	**Pn**	**22 34 42.2**	**+2.3**
EADA	**Adamuz**	**5.44**	**73**	Pn	**Pn**	**22 34 42.1**	**+2.2**
EADA				Sn	**Sn**	**22 35 40.6**	**-2.0**
EADA				*i* Vmb_Lg		22 35 53.3	
PCAB	**Cabril**	**5.51**	**25**	*e*S	**Sn**	**22 35 42.1**	**-2.1**
ELOB	**Lobios**	**5.64**	**24**	*i* Vmb_Lg		22 35 42.0	
ELOB				Sn	**Sn**	**22 35 43.3**	**-4.2**
PGAV	**Gavieira, Arco**	**5.66**	**23**	*e*P	**Pn**	**22 34 44.4**	**+1.5**
PGAV				*e*S	**Sn**	**22 35 44.4**	**-3.6**
PAB	**San Pablo**	**6.06**	**61**	Pn	**Pn**	**22 34 49.7**	**+1.3**
PAB				Sn	**Sn**	**22 35 53.0**	**-4.9**
OUK	**Oukaimeden**	**6.19**	**153**	P	**Pn**	**22 34 51.9**	**+1.4**
OUK	**Oukaimeden**	**6.19**	**153**	S	**Sn**	**22 35 54.2**	**-7.4**
PSIM	**Granatula de C**	**6.23**	**69**	Pn	**Pn**	**22 34 52.7**	**+2.0**
PSIM				Sn	**Sn**	**22 35 58.6**	**-3.5**
EQES	**Quesada**	**6.55**	**79**	Pn	**Pn**	**22 34 58.1**	**+2.9**
EQES				*i* Vmb_Lg		22 36 16.1	
MD31	**MD31**	**6.56**	**124**	P	**Pn**	**22 34 55.9**	**+0.5**
MD31	**MD31**	**6.56**	**124**	S	Sn	22 36 01.2	-9.1
MDT	**Midelt**	**6.70**	**124**	P	**Pn**	**22 34 57.2**	**0.0**
MDT	**Midelt**	**6.70**	**124**	S	Sn	22 36 03.3	-10
ETOR	**Torete**	**8.20**	**58**	Pn	**Pn**	**22 35 19.5**	**+1.8**

*IDC **19** 22:40:21.8±1.6, 40.°92N×142.°98E, h0km, mb3.4/8, mbtmp3.4/8, Error ellipse: s-maj=38.1km s-min=32.3km az=57.0*
*JMA **19** 22:40:25.6±0.1, 41.°0N±0.°5×143.°2E±0.°8, h36km, MV3.4/36, E OFF AOMORI PREF*
ISC 19 22:40:25.8±2.9, 41.°00N±0.°05×143.°30E±0.°06, h30km±21km, n31, σ1°13/36, mb3.3/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.02**	**354**	P	**Pn**	**22 40 43.9**	**-0.2**
JEM				S	**Sn**	**22 40 57.1**	**-0.3**
JTHR	**Tokachihiroo**	**1.29**	**0**	P	**Pn**	**22 40 47.9**	**+0.1**
JTHR				S	**Sn**	**22 41 04.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.34**	**343**	P	**Pn**	**22 40 48.4**	**-0.2**
JNBK				*e*S	**Sn**	**22 41 05.9**	**+0.5**
JKEN	**Kujiedanarisaw**	**1.44**	**237**	*e*P	**Pn**	**22 40 49.5**	**-0.4**
JARK	**Aomorirokkasho**	**1.46**	**271**	P	**Pn**	**22 40 49.7**	**-0.4**
JARK				*e*S	**Sn**	**22 41 07.2**	**-1.1**
JANG	**Nango**	**1.49**	**246**	P	**Pn**	**22 40 50.0**	**-0.6**
JCH	**Churui**	**1.61**	**2**	P	**Pn**	**22 40 52.2**	**0.0**
JCH				S	**Sn**	**22 41 11.7**	**-0.4**
JTM	**Tenmabayashi**	**1.70**	**264**	P	**Pn**	**22 40 53.1**	**-0.3**
JTM				S	**Sn**	**22 41 13.9**	**-0.3**
JOT	**Ohata**	**1.74**	**283**	*e*P	**Pn**	**22 40 53.5**	**-0.5**
JOT				*e*S	**Sn**	**22 41 14.1**	**-1.0**
JBT2	**Biratori 2**	**1.91**	**339**	*e*P	**Pn**	**22 40 57.1**	**+0.7**
JKB	**Kayabe**	**1.92**	**298**	P	**Pn**	**22 40 56.5**	**0.0**
JKB				S	**Sn**	**22 41 19.7**	**+0.1**
JIAM	**Iburiatsuma**	**1.92**	**328**	*e*P	**Pn**	**22 40 58.9**	**+2.4**
JIAM				*e*S	**Sb**	**22 41 23.5**	**-0.1**
JOM	**Ohasama**	**2.16**	**226**	*e*P	**Pn**	**22 41 01.2**	**+1.4**
JAK	**Akkeshi**	**2.25**	**27**	*e*P	**Pn**	**22 41 00.9**	**-0.1**
JAK				S	**Sn**	**22 41 26.6**	**-1.2**
JEW	**Eniwo**	**2.30**	**324**	*e*S	**Sn**	**22 41 32.0**	**+3.1**
JAR	**Ashorobuto**	**2.32**	**9**	P	**Pn**	**22 41 01.7**	**-0.3**
JAR				S	**Sn**	**22 41 27.8**	**-1.7**
JMK	**Ichinoseki**	**2.59**	**219**	*e*P	**Pn**	**22 41 07.0**	**+1.3**
SONM	**Songino Array**	**27.03**	**297**	P	**P**	**22 46 05.2**	**-0.2**
	0.2nm,0.5s,baz=105,slow=9.1,SNR=2.4						
	0.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.23**	**129**	T	T	23 17 46.6	
	baz=323,slow=75,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**29.24**	**129**	T	T	23 17 46.1	
	baz=323,slow=75,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**29.25**	**129**	T	T	23 17 46.6	
	baz=323,slow=75,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	**30.08**	**131**	T	T	23 18 53.2	
	baz=324,slow=76,SNR=3.1						
H11S3	**WAKE ISLAND Hy**	**30.08**	**131**	T	T	23 18 48.6	
	baz=324,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**30.09**	**131**	T	T	23 18 51.5	
	baz=324,slow=76,SNR=4.0						
ZALV	**Zalesovo Beam**	**40.44**	**309**	P	**P**	**22 47 58.9**	**-2.3**
	0.2nm,0.3s,baz=76,slow=9.8,SNR=2.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**43.37**	**299**	P	**P**	**22 48 23.7**	**-1.6**
	0.2nm,0.6s,baz=75,slow=8.8,SNR=2.2						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**44.82**	**305**	P	**P**	**22 48 36.2**	**-0.6**
	0.3nm,0.6s,baz=77,slow=8.7,SNR=5.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**45.38**	**34**	P	**P**	**22 48 43.0**	**+1.9**
	0.2nm,0.6s,baz=267,slow=6.3,SNR=2.6						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**49.06**	**310**	P	**P**	**22 49 09.8**	**-0.2**
	0.1nm,0.4s,baz=76,slow=7.8,SNR=1.8						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**61.20**	**190**	P	**P**	**22 50 37.5**	**-0.3**
	0.4nm,0.7s,baz=9.6,slow=7.1,SNR=2.3						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**66.00**	**332**	P	**P**	**22 51 09.6**	**+0.6**
	0.7nm,0.8s,baz=67,slow=11,SNR=1.4						
	0.7nm,0.8s						

*SOME **19** 22:48:53.1, 41.°10N×83.°17E, h0km*
*NNC **19** 22:48:56.5±0.6, 41.°16N×83.°11E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=4.6km s-min=3.5km az=167.0*
ISC 19 22:48:52.9±2.2, 41.°08N±0.°10×83.°20E±0.°06, h10km, n54, σ2°74/76, 11C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.17**	**319**	Pg	**Pg**	**22 49 53.1**	**-0.5**
	15nm,0.3s						
KTMS				Lg	Lg	22 50 36.7	
	40nm,0.2s						
KTMS	**Ketmen**	**3.17**	**319**	*e*P	**Pg**	**22 49 53.1**	**-0.5**
	15nm,0.3s						
KTMS				*e*S	**Sg**	**22 50 36.7**	**+2.0**
	40nm,0.2s						
SHLS	**Shalkode**	**3.47**	**308**	Pg	**Pb**	**22 49 53.5**	**-1.0**
	24nm,0.1s						
SHLS				Lg	Lg	22 50 37.2	
	152nm,0.3s						
SHLS	**Shalkode**	**3.47**	**308**	*e*P	**Pb**	**22 49 53.5**	**-1.0**
	24nm,0.1s						
SHLS				*e*S	**Sb**	**22 50 37.2**	**+0.5**
	152nm,0.3s						
PDGK	**Podgornoye**	**3.55**	**310**	Pg	**Pg**	**22 49 58.7**	**-2.3**
	5.2nm,0.2s						
PDGK				Lg	Lg	22 50 46.1	
	30nm,0.7s						
PDGK	**Podgornoye**	**3.55**	**310**	⇑Pn	**Pn**	**22 49 52.1**	**+3.8**
	4.3nm,0.6s						
PDGK				⇑Pg	**Pg**	**22 50 00.7**	**-0.3**
	11nm,0.5s						
PDGK				⇑Lg	Lg	22 50 47.0	
	95nm,0.9s						
UZB	**Uzynbulak**	**3.73**	**305**	Pg	**Pg**	**22 50 02.0**	**-2.3**
	8.5nm,0.3s						
UZB				Lg	Lg	22 50 51.7	
	56nm,0.4s						
UZB	**Uzynbulak**	**3.73**	**305**	*e*P	**Pg**	**22 50 02.0**	**-2.3**
	8.5nm,0.3s						
UZB				*e*S	**Sg**	**22 50 51.7**	**-1.0**
	56nm,0.4s						
SATY	**Saty**	**4.08**	**301**	Pg	**Pg**	**22 50 09.5**	**-1.5**
	8.7nm,0.2s						
SATY				Lg	Lg	22 51 04.4	
	52nm,0.3s						
SATY	**Saty**	**4.08**	**301**	*e*P	**Pg**	**22 50 09.5**	**-1.5**
	8.7nm,0.2s						
SATY				*e*S	**Sg**	**22 51 04.4**	**+0.5**
	52nm,0.3s						
DJR	**Jarkent**	**4.10**	**323**	Pg	**Pg**	**22 50 09.5**	**-2.1**
	25nm,0.2s						
DJR				Lg	Lg	22 51 04.7	
	16nm,0.4s						
DJR	**Jarkent**	**4.10**	**323**	*e*P	**Pg**	**22 50 09.5**	**-2.1**
	25nm,0.2s						
DJR				*e*S	**Sg**	**22 51 04.8**	**0.0**
	16nm,0.4s						
KPKS	**Kokpek**	**4.11**	**307**	Pg	**Pg**	**22 50 08.9**	**-2.7**
	17nm,0.2s						
KPKS				Lg	Lg	22 51 03.8	
	126nm,0.3s						
KPKS	**Kokpek**	**4.11**	**307**	*e*P	**Pg**	**22 50 08.9**	**-2.7**
	17nm,0.2s						
KPKS				*e*S	**Sg**	**22 51 03.8**	**-1.1**
	126nm,0.3s						
ZHN	**Zhinishke**	**4.11**	**302**	Pg	**Pg**	**22 50 09.3**	**-2.3**
	5.6nm,0.3s						
ZHN				Lg	Lg	22 51 04.2	
	77nm,0.3s						
ZHN	**Zhinishke**	**4.11**	**302**	*e*P	**Pg**	**22 50 09.3**	**-2.3**
	5.6nm,0.3s						
ZHN				*e*S	**Sg**	**22 51 04.2**	**-0.7**
	77nm,0.3s						
KNOS	**Konyrlen**	**4.41**	**319**	Pg	**Pg**	**22 50 15.1**	**-2.4**
	29nm,0.5s						
KNOS				Lg	Lg	22 51 14.2	
	18nm,0.3s						
KURS	**Kuram**	**4.44**	**304**	Pg	**Pg**	**22 50 15.4**	**-2.5**
	5.4nm,0.8s						
KURS				Lg	Lg	22 51 15.0	
	18nm,0.4s						
KURS	**Kuram**	**4.44**	**304**	*e*P	**Pg**	**22 50 15.4**	**-2.5**
	5.4nm,0.8s						
KURS				*e*S	**Sg**	**22 51 15.0**	**-0.4**
	18nm,0.4s						
KOTS	**Kotyrbulak**	**5.01**	**297**	Pg	**Pg**	**22 50 25.6**	**-3.2**
	6.7nm,0.4s						
KOTS				Lg	Lg	22 51 32.1	
	84nm,0.5s						
KOTS	**Kotyrbulak**	**5.01**	**297**	*e*P	**Pg**	**22 50 25.6**	**-3.2**
	6.7nm,0.4s						
KOTS				*e*S	**Sg**	**22 51 32.1**	**-1.6**
	84nm,0.5s						
MDOK	**Medeo**	**5.02**	**296**	⇑Pn	Pn	22 50 13.6	+5.1
	1.4nm,0.4s						
MDOK				Pg	**Pg**	**22 50 26.1**	**-3.1**
	3.9nm,0.3s						
MDOK				⇓Pg	Pb	22 50 26.4	+5.3
	4.2nm,0.6s						
MDOK				⇓Lg	Lg	22 51 31.7	
	25nm,0.6s						
MDOK				Lg	Lg	22 51 32.8	
	16nm,0.4s						
MDOK	**Medeo**	**5.02**	**296**	*e*P	**Pg**	**22 50 26.1**	**-3.1**
	3.9nm,0.3s						
MDOK				*e*S	**Sg**	**22 51 32.8**	**-1.4**
	16nm,0.4s						
TNSS	**Tian-Shan**	**5.05**	**295**	Pg	**Pg**	**22 50 26.9**	**-2.7**
	3.5nm,0.2s						
TNSS				Lg	Lg	22 51 34.4	
	16nm,0.5s						
TNSS	**Tian-Shan**	**5.05**	**295**	*e*P	**Pg**	**22 50 26.9**	**-2.7**
	3.5nm,0.2s						
TNSS				*e*S	**Sg**	**22 51 34.4**	**-0.6**
	16nm,0.5s						
KAPS	**Kapalarasan**	**5.05**	**327**	Pg	**Pg**	**22 50 26.2**	**-3.5**
	8.4nm,0.6s						
KAPS				Lg	Lg	22 51 33.4	
	14nm,0.2s						
KAPS	**Kapalarasan**	**5.05**	**327**	*e*P	**Pg**	**22 50 26.2**	**-3.5**
	8.4nm,0.6s						
KAPS				*e*S	**Sg**	**22 51 33.4**	**-1.7**
	14nm,0.2s						
KNDC	**Almaty**	**5.10**	**297**	⇑Lg	Lg	22 51 35.8	
	51nm,0.6s						
TDK	**Taldyqorghan**	**5.26**	**320**	Pg	**Pg**	**22 50 30.6**	**-3.1**
	18nm,0.2s						
TDK				Lg	Lg	22 51 40.7	
	35nm,0.4s						
TDK	**Taldyqorghan**	**5.26**	**320**	*e*P	**Pg**	**22 50 30.6**	**-3.1**
	18nm,0.2s						
TDK				*e*S	**Sg**	**22 51 40.7**	**-1.0**
	35nm,0.4s						
IZV	**Izvestkoviy**	**5.28**	**294**	Pg	**Pg**	**22 50 31.3**	**-2.7**
	1.6nm,0.2s						
IZV				Lg	Lg	22 51 41.0	
	39nm,0.5s						
IZV	**Izvestkoviy**	**5.28**	**294**	*e*P	**Pg**	**22 50 31.3**	**-2.7**
	1.6nm,0.2s						
IZV				*e*S	**Sg**	**22 51 42.0**	**-0.3**
	39nm,0.5s						
CHKK	**Chushkaly**	**5.36**	**303**	Pg	**Pg**	**22 50 31.4**	**-4.2**
	4.3nm,0.1s						
CHKK				Lg	Lg	22 51 42.3	
	22nm,0.3s						
CHKK	**Chushkaly**	**5.36**	**303**	*e*P	**Pg**	**22 50 31.4**	**-4.2**
	4.3nm,0.1s						
CHKK				*e*S	**Sg**	**22 51 42.3**	**-2.7**
	22nm,0.3s						
MTBS	**Maitube**	**5.43**	**294**	Pg	**Pg**	**22 50 33.9**	**-3.1**
	3.5nm,0.1s						
MTBS				Lg	Lg	22 51 46.4	
	16nm,0.3s						
MTBS	**Maitube**	**5.43**	**294**	*e*P	**Pg**	**22 50 33.9**	**-3.1**
	3.5nm,0.1s						
MTBS				*e*S	**Sg**	**22 51 46.4**	**-1.0**
	16nm,0.3s						
KTBS	**Karatobe**	**5.49**	**301**	Pg	**Pg**	**22 50 34.4**	**-3.8**
	2.2nm,0.3s						
KTBS				Lg	Lg	22 51 47.2	
	16nm,0.4s						
KTBS	**Karatobe**	**5.49**	**301**	*e*P	**Pg**	**22 50 34.4**	**-3.8**
	2.2nm,0.3s						
KTBS				*e*S	**Sg**	**22 51 47.2**	**-2.1**
	16nm,0.4s						
KST	**Kastek**	**5.73**	**292**	Pg	**Pg**	**22 50 40.0**	**-2.6**
	2.5nm,0.2s						
KST				Lg	Lg	22 51 57.0	
	21nm,0.7s						
KST	**Kastek**	**5.73**	**292**	*e*P	**Pg**	**22 50 40.0**	**-2.6**
	2.5nm,0.2s						
KST				*e*S	**Sg**	**22 51 57.0**	**+0.2**
	21nm,0.7s						
MK31	**Makanchi Array**	**5.75**	**354**	Pn	**Pn**	**22 50 22.9**	**+4.6**
	0.4nm,0.2s,baz=187,slow=12,SNR=20						
MK31				⇑Pg	**Pg**	**22 50 40.1**	**-2.9**
	2.1nm,0.4s,baz=173,slow=15,SNR=16						
MK31				Sn	**Sn**	**22 51 28.8**	**+4.5**
	6.7nm,0.6s,baz=169,slow=27,SNR=5.1						
MK31				Lg	Lg	22 51 55.3	
	4.5nm,0.4s,baz=174,slow=31,SNR=5.1						
MAKZ	**Makanchi**	**5.79**	**352**	⇓Pn	**Pn**	**22 50 21.3**	**+2.4**
	4.2nm,1.4s						
MAKZ				⇓Pg	**Pg**	**22 50 40.8**	**-3.0**
	1.6nm,0.4s						
MAKZ				⇑Lg	Lg	22 51 56.6	
	6.3nm,0.7s						
KUU	**Kurty**	**5.80**	**301**	Pg	**Pg**	**22 50 40.2**	**-3.7**
	1.8nm,0.4s						
KUU				Lg	Lg	22 51 57.1	
	14nm,1.8s						
KUU	**Kurty**	**5.80**	**301**	*e*P	**Pg**	**22 50 40.2**	**-3.7**
	1.8nm,0.4s						
KUU				*e*S	**Sg**	**22 51 57.1**	**-1.9**
	14nm,1.8s						
DGS	**Degeres**	**5.93**	**294**	Pg	**Pg**	**22 50 42.5**	**-3.9**
	2.6nm,0.6s						
DGS				Lg	Lg	22 52 01.3	
	23nm,0.6s						
DGS	**Degeres**	**5.93**	**294**	*e*P	**Pg**	**22 50 42.5**	**-3.9**
	2.6nm,0.6s						
DGS				*e*S	**Sg**	**22 52 01.3**	**-1.8**
	23nm,0.6s						
TKM2	**Tokmak 2**	**5.95**	**290**	⇑Pn	**Pn**	**22 50 25.2**	**+3.9**
	1.9nm,0.5s						
TKM2				⇑Lg	Lg	22 52 02.5	
	13nm,0.5s						
KRBS	**Karabastau**	**6.15**	**298**	Pg	**Pg**	**22 50 46.6**	**-4.1**
	1.4nm,0.2s						
KRBS				Lg	Lg	22 52 08.3	
	5.9nm,0.3s						
KRBS	**Karabastau**	**6.15**	**298**	*e*P	**Pg**	**22 50 46.6**	**-4.1**
	1.4nm,0.2s						
KRBS				*e*S	**Sg**	**22 52 08.3**	**-2.0**
	5.9nm,0.3s						
ZSN	**Zaisan**	**6.47**	**10**	Pg	**Pg**	**22 50 52.6**	**-4.3**
	3.2nm,0.5s						
ZSN				Lg	Lg	22 52 18.8	
	18nm,1.0s						
ZSN	**Zaisan**	**6.47**	**10**	*e*P	**Pg**	**22 50 52.6**	**-4.3**
	3.2nm,0.5s						
ZSN				*e*S	**Sg**	**22 52 18.8**	**-1.9**
	18nm,1.0s						
CHMS	**Chumysh**	**6.57**	**290**	⇑Lg	Lg	22 52 21.4	
	9.6nm,0.7s						
KURBB	**Kurchatov Arra**	**10.08**	**343**	⇑Lg	Lg	22 54 15.3	
	6.6nm,0.6s						
KURK	**Kurchatov**	**10.14**	**343**	⇓Lg	Lg	22 54 18.1	
	5.2nm,1.0s						

IDC 19 22:52:39.2±2.3, 6.°88S×129.°24E, h0km, mb3.1/1, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=116.9km s-min=33.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.89**	**160**	Pn	Pn	22 55 57.3	-0.3
	0.4nm,0.3s,baz=339,slow=12,SNR=18						
WRA				Sn	Sn	22 58 17.8	-15
	1.1nm,0.3s,baz=339,slow=21,SNR=14						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**17.28**	**165**	P	Pn	22 56 42.4	+0.3
	0.3nm,0.3s,baz=340,slow=10,SNR=10						
ASAR				S	Sn	22 59 39.8	-15
	0.8nm,0.9s,baz=342,slow=24,SNR=5.1						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**67.72**	**327**	P	P	23 03 38.6	0.0
	0.2nm,0.8s,baz=120,slow=5.7,SNR=1.8						
	0.2nm,0.8s						

*IDC **19** 23:12:03.0±8.8, 16.°14S×176.°08W, h287km±79km, mb3.6/6, mbtmp4.2/7, Error ellipse: s-maj=38.0km s-min=25.4km az=65.0*
*NEIC **19** 23:12:10.2±1.2, 16.°3S±0.°2×176.°2W±0.°1, h346km±11km, mb4.2/19, Error ellipse: s-maj=25.0km s-min=20.2km az=174.0*
ISC 19 23:12:10.2±0.7, 16.°2S±0.°1×176.°17W±0.°10, h360km, n30, σ0°79/32, mb4.0/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.82**	**62**		**Pn**	**23 13 28.5**	**-0.1**
NIUE	**Niue**	**6.60**	**117**	Pn	**P**	**23 13 48.6**	**-0.9**
MARNC	**Mare, Loyalty**	**15.84**	**248**	P	**P**	**23 15 33.7**	**+0.1**
PINNC	**Pines Island,**	**16.71**	**245**		**P**	**23 15 42.6**	**-0.3**
DZM	**Mont Dzumac**	**17.42**	**248**	P	**P**	**23 15 47.9**	**-2.8**
	3.1nm,0.8s,baz=80,slow=13,SNR=1.8						
EIDS	**Eidsvold**	**31.87**	**248**	P	**P**	**23 18 02.4**	**-1.0**
EIDS				IAmb	IAmb	23 18 23.7	
	comp=Z,12nm,1.3s						
MLZ	**Mavora Lakes**	**31.93**	**201**	P	**P**	**23 18 03.3**	**-0.3**
DCZ	**Deep Cove**	**32.35**	**202**	P	**P**	**23 18 07.2**	**0.0**
DCZ				IAmb	IAmb	23 18 24.2	
	comp=Z,36nm,1.3s						
WHZ	**Wether Hill Ro**	**32.44**	**201**	P	**P**	**23 18 08.2**	**+0.2**
WHZ				IAmb	IAmb	23 18 08.7	
	comp=Z,31nm,1.3s						
TOO	**Toolangi**	**39.90**	**230**	P	**P**	**23 19 11.6**	**+0.9**
TOO				IAmb	IAmb	23 19 11.9	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**41.32**	**240**	P	**P**	**23 19 23.1**	**+0.8**
STKA	**Stephens Creek**	**41.32**	**240**	P	**P**	**23 19 21.2**	**-1.1**
	comp=Z,1nm,0.5s,baz=86,slow=11,SNR=5.0						
	comp=Z,2.1nm,0.5s						
BBOO	**Buckleboo**	**46.10**	**240**	P	**P**	**23 19 59.7**	**-0.2**
BBOO				IAmb	IAmb	23 20 43.7	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**46.87**	**258**	P	**P**	**23 20 07.2**	**+1.1**
WR0				IAmb	IAmb	23 20 48.9	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	**47.03**	**258**	P	**P**	**23 20 08.1**	**+0.8**
WB0				IAmb	IAmb	23 20 08.4	
	comp=Z,9.2nm,0.8s						
WB2	**Warramunga Arr**	**47.05**	**258**	P	**P**	**23 20 07.8**	**+0.3**
WB2				IAmb	IAmb	23 20 09.0	
	comp=Z,8.7nm,1.2s						
WRAB	**Tennant Creek**	**47.05**	**258**	P	**P**	**23 20 07.5**	**+0.1**
WRAB				IAmb	IAmb	23 20 33.5	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**47.06**	**258**	P	**P**	**23 20 08.0**	**+0.5**
WRA	**Warramunga Arr**	**47.06**	**258**	P	**P**	**23 20 07.6**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=94,slow=6.9,SNR=51						
WRA				PcP	**PcP**	**23 21 33.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=92,slow=3.9,SNR=2.5						
	comp=Z,3.3nm,0.6s						
AS31	**Alice Springs**	**47.32**	**253**		**P**	**23 20 10.1**	**+0.6**
ASAR	**Alice Springs**	**47.33**	**253**	P	**P**	**23 20 09.7**	**+0.2**
ASAR	**Alice Springs**	**47.33**	**253**	P	**P**	**23 20 10.2**	**+0.7**
	comp=Z,13nm,0.5s,baz=87,slow=8.1,SNR=159						
ASAR				PcP	**PcP**	**23 21 34.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=100,slow=4.3,SNR=2.5				

RTAL	**Retalhuleu**	**1.04**	**91**	*i* P		**Pn**	**23 13 28.9**	**0.0**	
RTAL				*i* S		**Sn**	**23 13 42.5**	**-1.0**	
RTAL	**Retalhuleu**	**1.04**	**91**	*i* P		**Pn**	**23 13 28.8**	**0.0**	
RTAL				*i* S		**Sb**	**23 13 42.3**	**+0.3**	
RTAL				IAML			23 13 44.3		
	comp=Z,3μm,1.0s								
SMSP	**San Marcos**	**1.05**	**66**	*i* P		**Pb**	**23 13 29.1**	**+0.6**	
SMSP				*i* S		**Sb**	**23 13 42.3**	**-0.1**	
SMSP				IAML			23 13 44.0		
	comp=Z,18μm,1.0s								
STG3	**Santiaguito 3,**	**1.17**	**82**	*e*P		**Pn**	**23 13 31.1**	**+0.3**	
STG3				*e*S		**Sb**	**23 13 45.1**	**-0.8**	
SULM	**Suchitepequez,**	**1.20**	**102**	*e*P		**Pn**	**23 13 32.2**	**+1.3**	
SULM				*e*S		**Sn**	**23 13 46.4**	**-0.8**	
PCIG		**1.22**	**339**	*e*P		**Pg**	**23 13 31.3**	**-0.3**	
PCIG				*e*S		**Sg**	**23 13 46.0**	**-1.5**	
HUEH	**Huehuetenango**	**1.44**	**58**	*i* P		**Pg**	**23 13 35.7**	**-0.1**	
HUEH				IAML			23 13 37.0		
	comp=Z,5μm,1.0s								
HUEH				*i* S		**Sn**	**23 13 54.6**	**+0.9**	
CCIG	**Comitan**	**1.83**	**20**	*e*P		**Pn**	**23 13 41.6**	**+1.9**	
CCIG				*i* S		**Sn**	**23 13 59.6**	**-3.5**	
CCIG	**Comitan**	**1.83**	**20**	*i* P		**Pb**	**23 13 42.1**	**+0.4**	
CCIG				*i* S		**Sn**	**23 14 04.9**	**+1.8**	
CCIG				IAML			23 14 08.6		
	comp=Z,1μm,1.0s								
FUG	**Fuego 3**	**1.87**	**93**	*e*P		**Pn**	**23 13 41.3**	**+0.9**	
FUG				*e*S		**Sn**	**23 14 02.9**	**-1.4**	
PCG	**Pacaya**	**2.10**	**94**	*e*P		**Pn**	**23 13 44.9**	**+1.3**	
PCG				*e*S		**Sn**	**23 14 10.9**	**+0.9**	
TGIG		**2.24**	**351**	*e*P		**Pn**	**23 13 45.7**	**+0.4**	
TGIG				*e*S		**Sn**	**23 14 12.2**	**-0.9**	
NBG	**Las Nubes**	**2.35**	**89**	*e*P		**Pb**	**23 13 49.8**	**-0.9**	
GUNB	**GUNB**	**2.35**	**89**	*i* P		**Pn**	**23 13 48.5**	**+1.4**	
GUNB				IAML			23 14 22.5		
	comp=Z,460nm,1.0s								
LOAL	**Lomas de Alarc**	**2.95**	**100**	*i* P		**Pb**	**23 13 59.4**	**-1.4**	
LOAL				*i* S		**Sn**	**23 14 28.9**	**-1.8**	
LOAL				IAML			23 16 00.2		
	comp=Z,2μm,1.0s								
NUBE	**Las Nubes**	**2.97**	**102**	*i* P		**Pn**	**23 13 51.7**	**-3.8**	
NUBE				IAML			23 13 58.1		
	comp=Z,550nm,1.0s								
NUBE				*i* S		**Sn**	**23 14 28.7**	**-2.7**	
MRL	**Marmol**	**3.03**	**80**	*e*P		**Pn**	**23 13 57.9**	**+1.5**	
CEVE	**Cerro Verde**	**3.14**	**103**	*i* P		**Pn**	**23 13 59.8**	**+1.9**	
CEVE				*i* S		**Sn**	**23 14 34.4**	**-1.2**	
CEVE				IAML			23 14 49.2		
	comp=Z,810nm,1.0s								
CMIG	**Matias Romero**	**3.24**	**321**	Pn		**Pn**	**23 13 59.8**	**+0.7**	
	comp=Z,14nm,0.3s,baz=150,slow=11,SNR=41								
CMIG				Sn		**Sn**	**23 14 37.1**	**-0.7**	
	comp=Z,16nm,0.3s,baz=36,slow=22,SNR=7.8								
	comp=Z,26nm,0.3s								
MTO3	**Montecristo**	**3.31**	**92**	*i* P		**Pn**	**23 14 00.0**	**-0.2**	
MTO3				IAML			23 14 46.5		
	comp=Z,92nm,1.0s								
ESQI	**Esquipulas**	**3.32**	**89**	*i* P		**Pn**	**23 13 58.8**	**-1.5**	
ESQI				IAML			23 15 07.0		
	comp=Z,250nm,1.0s								
JAYA	**Jayaque - finc**	**3.34**	**105**	*i* P		**Pn**	**23 14 01.9**	**+1.3**	
JAYA				*i* S		**Sn**	**23 14 38.7**	**-1.9**	
JAYA				IAML			23 15 48.4		
	comp=Z,1μm,1.0s								
HUIG	**Huatulco**	**3.44**	**291**	*e*P		**Pn**	**23 14 02.2**	**+0.4**	
HUIG				*e*S		Sn	23 14 36.9	-5.8	
PMON	**Piamonte**	**3.46**	**104**	*i* P		**Pn**	**23 14 03.1**	**+1.0**	
PMON				*i* S		**Sn**	**23 14 42.3**	**-1.0**	
PMON				IAML			23 14 51.1		
	comp=Z,530nm,1.0s								
LALI	**Alcalda de L**	**3.51**	**107**	*i* P		**Pn**	**23 14 02.1**	**-0.7**	
LALI				*i* S		**Sn**	**23 14 43.0**	**-1.5**	
LALI				IAML			23 14 52.3		
	comp=Z,170nm,1.0s								
LOMA	**Loma Larga**	**3.61**	**104**	*i* P		**Pn**	**23 14 04.2**	**0.0**	
LOMA				*i* S		**Sn**	**23 14 45.1**	**-1.9**	
LOMA				IAML			23 14 58.2		
	comp=Z,300nm,1.0s								
PANCS	**Alcalda de**	**3.61**	**105**	*i* P		**Pn**	**23 14 05.9**	**+1.7**	
PANCS				*i* S		**Sn**	**23 14 43.6**	**-3.4**	
PANCS				IAML			23 15 34.8		
	comp=Z,3μm,1.0s								
PETF	**Flores**	**3.65**	**50**	*i* P		**Pn**	**23 14 06.3**	**+1.6**	
PETF				IAML			23 15 34.3		
	comp=Z,270nm,1.0s								
LLGN	**La Laguna**	**3.73**	**95**	*i* P		**Pn**	**23 14 07.8**	**+1.9**	
LLGN				*i* S		**Sn**	**23 14 49.1**	**-0.9**	
LLGN				IAML			23 15 06.4		
	comp=Z,540nm,1.0s								
SJTE	**Alcalda de S**	**3.77**	**104**	*i* P		**Pn**	**23 14 10.1**	**+3.7**	
SJTE				*i* S		**Sn**	**23 14 51.8**	**+0.8**	
SJTE				IAML			23 14 57.2		
	comp=Z,170nm,1.0s								
PAVA	**Las Pavas**	**3.81**	**102**	*i* P		**Pn**	**23 14 06.7**	**-0.3**	
PAVA				*i* S		**Sn**	**23 14 55.5**	**+3.4**	
PAVA				IAML			23 15 19.8		
	comp=Z,260nm,1.0s								
TECO	**Alcaldia de Te**	**4.00**	**104**	*i* P		**Pn**	**23 14 06.7**	**-2.9**	
TECO				IAML			23 14 07.4		
	comp=Z,210nm,1.0s								
TECO				*i* S		**Sn**	**23 14 55.1**	**-1.5**	
SCLA	**Alcaldia de Sa**	**4.01**	**102**	*i* P		**Pn**	**23 14 13.6**	**+3.9**	
SCLA				*i* S		**Sn**	**23 15 00.6**	**+3.7**	
SCLA				IAML			23 15 16.8		
	comp=Z,79nm,1.0s								
PQSS	**Presa 15 de Se**	**4.19**	**102**	*i* P		**Pn**	**23 14 14.5**	**+2.4**	
PQSS				*i* S		**Sn**	**23 15 01.4**	**+0.2**	
PQSS				IAML			23 15 10.6		
	comp=Z,44nm,1.0s								
PACA	**Pacayal**	**4.45**	**103**	*i* P		**Pn**	**23 14 19.7**	**+3.9**	
PACA				*i* S		**Sn**	**23 15 11.9**	**+4.1**	
PACA				IAML			23 15 25.8		
	comp=Z,760nm,1.0s								
RANC	**El Ranchito**	**4.49**	**104**	*i* P		**Pn**	**23 14 18.3**	**+1.9**	
RANC				IAML			23 14 21.1		
	comp=Z,280nm,1.0s								
RANC				*i* S		**Sn**	**23 15 03.1**	**-5.8**	
LCND	**La Caada**	**4.90**	**104**	*i* P		**Pn**	**23 14 23.5**	**+1.6**	
LCND				IAML			23 15 48.1		
	comp=Z,390nm,1.0s								
CNCH	**Conchagua**	**4.96**	**104**	*i* P		**Pn**	**23 14 23.5**	**+0.7**	
CNCH				*i* S		**Sn**	**23 15 21.7**	**+1.3**	
CNCH				IAML			23 15 42.1		
	comp=Z,190nm,1.0s								
CSGN	**Cosiguina Volc**	**5.30**	**107**	*i* P		**Pn**	**23 14 30.4**	**+2.9**	
CSGN				IAmb		IAmb	23 14 36.0		
	comp=Z,110nm,0.5s								
CSGN				IAML			23 15 52.0		
	comp=Z,300nm,1.0s								
YUSH	**Yuscaran**	**5.78**	**95**	*i* P		**Pn**	**23 14 34.4**	**+0.3**	
CRIN	**San Cristobal**	**5.86**	**108**	*i* P		**Pn**	**23 14 39.2**	**+4.1**	
CRIN				IAmb		IAmb	23 14 43.5		
	comp=Z,83nm,0.7s								
CRIN				IAML			23 16 09.4		
	comp=Z,210nm,1.0s								
TLIG	**Tlapa**	**6.32**	**299**	*i* P		**Pn**	**23 14 46.3**	**+4.7**	
TLIG				IAmb		IAmb	23 15 08.4		
	comp=Z,8.6nm,0.6s								
TLIG				IAML			23 16 34.3		
	comp=Z,54nm,1.0s								
MOMN	**Momotombo**	**6.43**	**109**	*i* P		**Pn**	**23 14 47.4**	**+4.5**	
MOMN				IAML			23 14 48.0		
	comp=Z,4.0nm,1.0s								
MOMN				IAmb		IAmb	23 14 48.4		
	comp=Z,3.0nm,0.6s								
TEIG	**Tepich**	**7.09**	**37**	LR		LR	23 16 41.0		
	comp=Z,316nm,21.6s,baz=4.5,slow=35								
JTS	**Las Juntas de**	**8.73**	**118**	Pn		**Pn**	**23 15 17.5**	**+2.9**	
	comp=Z,0.4nm,0.3s,baz=338,slow=18,SNR=1.7								
	comp=Z,2.8nm,0.3s								
TXAR	**Lajitas Array**	**17.83**	**327**	P		**Pn**	**23 17 16.4**	**-0.1**	
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=8.8								
	comp=Z,1.1nm,0.9s								
ELK	**Elko**	**32.62**	**327**	LR		LR	23 32 44.1		
	comp=Z,40nm,19.0s,baz=221,slow=36								
NVAR	**Mina Array Bea**	**32.77**	**321**	P		**P**	**23 19 42.5**	**+0.8**	
	comp=Z,0.6nm,0.5s,baz=133,slow=9.5,SNR=4.8								
	comp=Z,0.6nm,0.5s								
YKA	**Yellowknife Ar**	**50.32**	**347**	P		**P**	**23 22 02.1**	**-2.7**	
	comp=Z,0.5nm,0.6s,baz=150,slow=7.3,SNR=9.5								
	comp=Z,0.5nm,0.6s								

*SJA **19** 23:30:46.9±0.7, 30°25S×71°84W, h10km±4km, ML4.1,*

MW3.7
*GUC **19** 23:30:52.1±0.7, 30°29S×71°51W, h51km±2km, ML4.2*
*IDC **19** 23:30:52.7±1.0, 30°15S×71°33W, h38km±5km, mb3.8/4, mbtmp3.8/6, ML3.8/2, MS3.3/5, Error ellipse: s-maj=39.9km s-min=28.0km az=98.0*
ISC 19 23:30:52.5±0.7, 30°28S±0°02×71°47W±0°04, h32km±4km, n51, σ1s 88/83, mb4.0/5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.41**	**29**	*e*P		**Pn**	**23 31 02.5**	**+0.3**
CO05				*i* S		**Sn**	**23 31 10.2**	**+1.4**
CO05				IAML			23 31 10.9	
	comp=N,14μm,0.3s							
CO06	**Fray Jorge**	**0.42**	**200**	*e*P		**Pb**	**23 31 01.3**	**-0.5**
CO06				*i* S		**Sb**	**23 31 07.8**	**-0.4**
GO04	**Tololo Observa**	**0.59**	**80**	*e*P		**Pb**	**23 31 04.6**	**-0.1**
GO04				IAML			23 31 19.0	
	comp=Z,10μm,0.6s							
GO04	**Tololo Observa**	**0.59**	**80**	*e*P		**Pn**	**23 31 05.3**	**+0.4**
GO04				*i* S		**Sn**	**23 31 14.9**	**+1.4**
CO03	**El Pedregal**	**0.88**	**130**	*e*P		**Pn**	**23 31 07.9**	**-0.8**
CO03				*e*S		**Sn**	**23 31 21.7**	**+1.4**
CO03				IAML			23 31 22.3	
	comp=Z,2μm,0.7s							
CO03	**El Pedregal**	**0.88**	**130**	*e*P		**Pn**	**23 31 08.6**	**0.0**
CO03				*i* S		**Sb**	**23 31 20.9**	**+0.2**
CO03				IAML			23 31 22.6	
	comp=E,5μm,0.4s							
CO02	**Combarbal**	**1.01**	**156**	*e*P		**Pn**	**23 31 09.8**	**-0.7**
CO02				*e*S		**Sb**	**23 31 25.6**	**+1.1**
CO02				IAML			23 31 26.7	
	comp=Z,4μm,0.2s							
CO02	**Combarbal**	**1.01**	**156**	*e*P		**Pn**	**23 31 10.5**	**0.0**
CO02				*i* S		**Sn**	**23 31 24.3**	**+0.7**
CO02				IAML			23 31 25.6	
	comp=N,14μm,0.5s							
CO01	**Juntas del Tor**	**1.23**	**76**	*e*P		**Pb**	**23 31 15.1**	**-0.2**
CO01				*e*S		**Sb**	**23 31 30.7**	**-0.3**
CO01				*e*S			23 31 30.8	
CO01				IAML			23 31 32.5	
	comp=Z,2μm,0.8s							
CO01	**Juntas del Tor**	**1.23**	**76**	*e*P		**Pb**	**23 31 15.0**	**-0.4**
CO01				*i* S		**Sb**	**23 31 30.4**	**-0.6**
LCO	**Las Campanas**	**1.43**	**28**	*e*P		**Pn**	**23 31 16.7**	**+0.2**
LCO				*e*S		**Sb**	**23 31 38.8**	**+2.1**
LCO				IAML			23 31 40.2	
	comp=Z,9μm,0.4s							
LCO	**Las Campanas**	**1.43**	**28**	*e*P		**Pn**	**23 31 16.9**	**+0.4**
LCO				*i* S		**Sb**	**23 31 35.6**	**-1.1**
AROD	**Rodeo**	**1.73**	**87**	*e*P		**Pb**	**23 31 24.1**	**+0.2**
AROD				*e*S		**Sn**	**23 31 41.7**	**-0.1**
ACDV	**Cuesta del Vie**	**2.04**	**88**	*e*P		**Pb**	**23 31 29.8**	**+0.9**
ACDV				*e*P			23 31 29.9	
ACDV				*e*S		**Sn**	**23 31 50.7**	**+1.5**
ACDV				IAML			23 31 56.7	
	comp=Z,942nm,0.6s							
AC04	**Llanos de Chal**	**2.10**	**10**	*e*P		**Pn**	**23 31 25.6**	**+0.1**
AC04				*e*S		**Sb**	**23 31 58.8**	**+3.3**
AC04	**Llanos de Chal**	**2.10**	**10**	*e*P		**Pn**	**23 31 25.5**	**+0.1**
AC04				*i* S		**Sn**	**23 31 51.3**	**+0.9**
ACCO	**Cerro Coronel**	**2.10**	**99**	*e*P		**Pb**	**23 31 30.0**	**-0.1**
ACCO				*e*S		**Sb**	**23 32 01.3**	**+5.4**
DOCA	**Reserva Natura**	**2.17**	**109**	*e*P		**Pb**	**23 31 29.9**	**-1.3**
RTLS	**Leoncito**	**2.40**	**130**	*e*P		**Pb**	**23 31 33.5**	**-1.7**
RTLS				*e*S		**Sb**	**23 32 02.7**	**-1.9**
RTLS				IAML			23 32 11.5	
	comp=Z,1μm,0.8s							
VA03	**San Esteban**	**2.60**	**163**	*e*P		**Pn**	**23 31 33.6**	**+1.3**
VA03				*e*S		**Sb**	**23 32 10.5**	**+0.5**
VA03				IAML			23 32 24.5	
	comp=Z,661nm,0.6s							
VA03	**San Esteban**	**2.60**	**163**	*e*P		**Pn**	**23 31 33.8**	**+1.5**
VA03				*i* S		**Sn**	**23 32 05.9**	**+3.0**
VA03				IAML			23 32 14.4	
	comp=N,1μm,0.3s							
AGUA	**GUANDACOL**	**2.71**	**74**	*e*P		**Pb**	**23 31 38.9**	**-1.5**
AGUA				*e*S		Sb	23 32 23.4	+10
AGUA				IAML			23 32 24.6	
	comp=Z,557nm,0.8s							
ROCH	**El Roble**	**2.71**	**172**	*e*P		**Pn**	**23 31 34.9**	**+0.8**
ROCH				*i* S		**Sn**	**23 32 06.8**	**+1.0**
ROCH				IAML			23 32 19.0	
	comp=E,2μm,0.8s							
GO03	**Copiap**	**2.89**	**22**	*e*P		**Pn**	**23 31 37.4**	**+1.1**
GO03				*e*S		**Sn**	**23 32 12.7**	**+2.7**
GO03				IAML			23 32 35.5	
	comp=Z,387nm,0.7s							
PEL	**Peldehue**	**2.93**	**167**	*e*P		**Pn**	**23 31 37.6**	**+0.7**
PEL				*i* S		**Sn**	**23 32 11.9**	**+0.8**
PEL				IAML			23 32 27.5	
	comp=E,789nm,0.5s							
MT02	**Curacav**	**2.98**	**175**	*e*P		**Pn**	**23 31 37.9**	**+0.4**
MT02				*e*S		**Sn**	**23 32 14.2**	**+2.0**
MT02				*e*S			23 32 21.7	
MT02				IAML			23 32 32.4	
	comp=Z,284nm,0.8s							
MT02	**Curacav**	**2.98**	**175**	*e*P		**Pn**	**23 31 37.7**	**+0.1**
MT02				*i* S		**Sn**	**23 32 12.5**	**+0.3**
MT05	**Renca**	**3.16**	**169**	*e*P		**Pn**	**23 31 41.7**	**+1.6**
MT05				*e*S		**Sn**	**23 32 20.2**	**+3.4**
MT05				IAML			23 32 36.6	
	comp=Z,531nm,1.4s							
MT03	**Universidad Ad**	**3.31**	**166**	*e*P		**Pn**	**23 31 44.2**	**+2.1**
MT03				*e*S		**Sn**	**23 32 25.2**	**+4.9**
MT03				IAML			23 32 38.5	
	comp=Z,476nm,0.7s							
MT04	**Ro Olivares**	**3.32**	**160**	*i* S		**Sn**	**23 32 26.6**	**+5.8**
MT09	**Talagante**	**3.51**	**173**	*e*P		**Pn**	**23 31 45.7**	**+0.7**
MT09				*i* S		**Sn**	**23 32 25.6**	**+0.2**
MT09				IAML			23 32 46.2	
	comp=N,478nm,0.5s							
MT01	**Popeta**	**3.58**	**177**	*e*P		**Pn**	**23 31 46.0**	**+0.3**
MT01				*e*S		**Sn**	**23 32 30.7**	**+3.8**
MT01				IAML			23 32 40.0	
	comp=Z,222nm,0.7s							
AC02	**Maricunga**	**4.00**	**32**	*e*P		**Pn**	**23 31 53.8**	**+1.8**
AC02				*e*S		**Sn**	**23 32 41.7**	**+3.6**
AC02				IAML			23 33 09.4	
	comp=Z,172nm,1.4s							
BO01	**Tunca**	**4.11**	**176**	*e*P		**Pn**	**23 31 53.8**	**+0.7**
BO01				*e*S		**Sn**	**23 32 46.2**	**+6.1**
BO01				IAML			23 33 00.6	
	comp=Z,128nm,0.6s							
AC01	**Pan de Azucar**	**4.19**	**11**	*e*P		**Pn**	**23 31 52.9**	**-1.2**
AC01				IAML			23 33 03.0	
	comp=Z,126nm,0.7s							
BO02	**Sierra Bellavi**	**4.54**	**173**	*e*P		**Pn**	**23 31 59.4**	**+0.4**
BO02				*e*S		**Sn**	**23 32 53.7**	**+3.1**
BO02				IAML			23 33 16.3	
	comp=Z,213nm,0.9s							
RFA	**San Rafael**	**5.15**	**151**	*e*P		Pn	23 31 58.6	-8.8
LVC	**Limon Verde**	**7.98**	**17**	LR		LR	23 35 46.3	
	comp=Z,133nm,21.3s,baz=230,slow=38							
PLCA	**Paso Flores**	**10.46**	**176**	Pn		**Pn**	**23 33 23.5**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=343,slow=9.7,SNR=4.6							
PLCA				LR		LR	23 37 12.2	
	comp=Z,91nm,18.6s,baz=314,slow=36							
	comp=Z,0.5nm,0.4s							
CPUP	**Villa Florida**	**13.07**	**76**	Pn		**Pn**	**23 33 55.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=213,slow=11,SNR=1.9							
CPUP				LR		LR	23 39 30.3	
	comp=Z,98nm,19.0s,baz=220,slow=40							
	comp=Z,0.7nm,0.5s							
BDFB	**Brasilia**	**25.98**	**61**	P		**P**	**23 36 20.1**	**-2.5**
	comp=Z,2.7nm,0.6s,baz=216,slow=5.9,SNR=5.5							
	comp=Z,2.7nm,0.6s							
MDP	**Montagnes des**	**39.54**	**30**	LR		LR	23 55 13.8	
	comp=Z,54nm,19.1s,baz=102,slow=37							
SNAA	**Sanae**	**54.85**	**159**	P		**P**	**23 40 18.6**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=270,slow=20,SNR=1.2							
	comp=Z,1.4nm,0.8s							
TXAR	**Lajitas Array**	**66.75**	**330**	pP		pP	23 41 50.7	0.0
	comp=Z,0.3nm,0.9s,baz=153,slow=8.1,SNR=1.8							
SADO	**Sadowa**	**75.02**	**354**	LR		LR	00 21 21.9	
	comp=Z,28nm,18.0s,baz=290,slow=40							
BOSA	**Boshof**	**81.38**	**118**	P		**P**	**23 43 06.2**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=217,slow=8.1,SNR=1.3							
BOSA				pP		**pP**	**23 43 16.2**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=212,slow=5.4,SNR=3.7							
	comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**82.49**	**70**	P		**P**	**23 43 11.3**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=296,slow=4.0,SNR=5.5							
TORD				pP		**pP**	**23 43 23.0**	**+0.4**
	comp=Z,0.9nm,1.1s,baz=232,slow=4.9,SNR=3.3							
	comp=Z,0.8nm,0.9s							
BVAR	**Borovoye Array**	**144.18**	**40**	PKP		**PKPab**	**23 50 22.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=289,slow=4.5,SNR=5.9							
BVAR				pPKP		**pPKPdf**	**23 50 34.5**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=306,slow=5.1,SNR=4.4							
KURBB	**Kurchatov Arra**	**149.76**	**39**	PKPbc		**PKPbc**	**23 50 37.3**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=301,slow=3.0,SNR=9.7							
KURBB				pPKPbc		**pPKPbc**	**23 50 49.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=300,slow=3.3,SNR=11							
ZALV	**Zalesovo Beam**	**150.79**	**29**	PKPbc		**PKPbc**	**23 50 40.5**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=297,slow=3.0,SNR=20							
ZALV				pPKPbc		**pPKPbc**	**23 50 52.1**	**+0.5**
	comp=Z,7.3nm,0.9s,baz=298,slow=3.2,SNR=14							
MKAR	**Makanchi Array**	**153.85**	**44**	PKPbc		**PKPbc**	**23 50 46.8**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=292,slow=3.9,SNR=2.8							
MKAR				PKPab		**pPKPbc**	**23 50 58.5**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=320,slow=3.6,SNR=4.3							

*NEIC **19** 23:34:23.5±0.9, 53°4N±0°4×169°6W±0°3, h207km±15km, ML3.5/8, ML3.1(AEIC), Error ellipse: s-maj=69.0km s-min=10.2km az=158.0*
*AEIC **19** 23:34:25.1±1.1, 53°7N±0°2×170°0W±0°2, h180km±9km, Error ellipse: s-maj=26.0km s-min=9.5km az=156.0*
ISC 19 23:34:22.4±2.3, 53°2N±0°4×169°5W±0°2, h217km±19km, n34, σ0s 52/41, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.44**	**211**	Pn		**Pn**	**23 34 51.6**	**+0.4**
CLES				IAML			23 35 39.5	
	comp=E,680nm,1.4s							
CLES				IAML			23 35 40.0	
	comp=N,642nm,1.2s							
NIKH	**Nikolski High**	**0.46**	**120**			**Pn**	**23 34 51.6**	**+0.3**
NIKH					Sn	**S**	**23 35 13.2**	**-0.6**
NIKH	**Nikolski High**	**0.46**	**120**	P		**Pn**	**23 34 51.8**	**+0.5**
OKWR	**Okmok West Rim**	**0.82**	**73**			**Pn**	**23 34 53.4**	**+0.5**
OKFG	**Magazine Ridge**	**0.99**	**77**			**Pn**	**23 34 54.2**	**+0.4**
OKFG						**S**	**23 35 18.1**	**-0.1**
MAPS	**Pakushin South**	**1.66**	**67**			**Pn**	**23 34 59.0**	**+0.1**
MAPS						**S**	**23 35 26.7**	**-0.5**
MGOD	**Makushin Gods**	**1.69**	**68**			**Pn**	**23 34 59.8**	**+0.5**
MGOD						**S**	**23 35 27.1**	**-0.7**
MNAT	**Makushin Natee**	**1.83**	**67**			**Pn**	**23 35 00.7**	**+0.3**
MNAT						**S**	**23 35 29.4**	**-0.6**
UNV	**Unalaska Valle**	**1.91**	**69**			**Pn**	**23 35 01.6**	**+0.4**
UNV	**Unalaska Valle**	**1.91**	**69**			**S**	**23 35 30.9**	**-0.4**
UNV	**Unalaska Valle**	**1.91**	**69**	P		**Pn**	**23 35 01.6**	**+0.4**
AKRB	**Akutan Reef Bi**	**2.25**	**64**			**Pn**	**23 35 05.3**	**+0.6**
AKRB						**S**	**23 35 38.1**	**+0.6**
LVA	**Lava Point**	**2.29**	**64**			**Pn**	**23 35 05.7**	**+0.6**
ZRO	**Akutan Zero**	**2.29**	**66**			**Pn**	**23 35 05.7**	**+0.6**
AKBBA	**Akutan Broad B**	**2.32**	**66**			**Pn**	**23 35 06.0**	**+0.6**
AKGG	**Akutan Green G**	**2.32**	**63**			**Pn**	**23 35 05.7**	**+0.3**
AKLV	**Akutan Long Va**	**2.33**	**64**			**Pn**	**23 35 05.9**	**+0.4**
AKUT	**Akutan**	**2.42**	**66**	Pn		**Pn**	**23 35 07.0**	**+0.6**
AKUT				Sn		**S**	**23 35 40.5**	**-0.1**
AKUT	**Akutan**	**2.42**	**66**	P		**Pn**	**23 35 07.3**	**+0.9**
AKSA	**Akutan Strait**	**2.46**	**66**			**Pn**	**23 35 07.7**	**+0.8**
KOFP	**Korovin Flat P**	**2.93**	**253**			**Pn**	**23 35 12.6**	**+0.4**
ATKA	**Atka Island**	**3.02**	**252**			**Pn**	**23 35 12.9**	**-0.1**
ATKA				IAML			23 36 10.5	
	comp=E,63nm,1.1s							
ATKA				IAML			23 37 03.8	
	comp=N,47nm,1.0s							
ATKA	**Atka Island**	**3.02**	**252**	P		**Pn**	**23 35 13.5**	**+0.5**
ISLZ	**Isanotski Laza**	**3.76**	**64**			**Pn**	**23 35 22.4**	**+0.6**
FALS	**False Pass**	**3.96**	**63**	P		**Pn**	**23 35 24.4**	**+0.2**
ADK	**Adak**	**4.57**	**256**			**Pn**	**23 35 32.1**	**+0.4**
ADK	**Adak**	**4.57**	**256**	P		**Pn**	**23 35 32.1**	**+0.4**
KIWB	**Kanaga Island**	**4.85**	**257**			**Pn**	**23 35 35.8**	**+0.5**
PN7A	**Pavlof North-7**	**4.94**	**60**			**Pn**	**23 35 37.1**	**+0.7**
SDPT	**Sand Point**	**5.72**	**64**	Pn		**P

Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.33**	**312**	Pn	Pn	00 13 27.0	-4.9
KDAK					Sn	00 13 53.6	-7.2
OHAK	**Old Harbor**	**2.36**	**296**		Pn	00 13 27.1	-5.2
OHAK					Sn	00 13 53.7	-7.9
SYI	**Shuyak Island**	**2.87**	**327**		Pn	00 13 34.6	-4.7
SYI					Sn	00 14 06.4	-7.7
R18K	**Karluk**	**3.08**	**297**		Pn	00 13 37.5	-4.7
R18K					Sn	00 14 11.8	-7.5
CNPM	**China Poot**	**3.43**	**344**		Pn	00 13 42.0	-5.1
Q19K	**Cape Douglas,**	**3.53**	**321**		Pn	00 13 44.3	-4.2
Q19K	**Cape Douglas,** comp=N,61nm,1.5s	**3.53**	**321**	IAML		00 15 43.7	
BRSE	**Bradley Lake S**	**3.57**	**349**		Pn	00 13 43.4	-5.6
BRLK	**Bradley Lake**	**3.61**	**348**		Pn	00 13 44.1	-5.4
SEW	**Seward**	**3.86**	**359**		Pn	00 13 47.5	-5.5
P23K	**Montague Islan**	**3.90**	**15**		Pn	00 13 48.2	-5.3
P23K					Sn	00 14 30.7	-8.8
SLKM	**Skilak Lake**	**4.29**	**354**		Pn	00 13 53.5	-5.4
HIN	**Hinchinbrook I**	**4.42**	**19**		Pn	00 13 55.5	-5.2
P18K	**Big Mountain,**	**4.43**	**318**	Pn	Pn	00 13 55.7	-5.2
KAIM	**Kayak Island**	**4.53**	**33**		Pn	00 13 57.4	-4.7
KAIM	**Kayak Island** comp=E,25nm,1.3s	**4.53**	**33**	IAML		00 14 35.7	
KAIM	comp=N,25nm,1.2s			IAML		00 16 03.8	
EYAK	**Cordova Ski Ar**	**4.71**	**22**		Pn	00 13 59.8	-4.8
O18K	**Koktuh Hills**	**4.75**	**322**	Pn	Pn	00 14 00.2	-5.0
FID	**Port Fidalgo**	**4.76**	**17**		Pn	00 13 59.5	-5.9
GLI	**Glacier Island**	**4.79**	**13**		Pn	00 14 00.6	-5.2
RAGM	**Ragged Mountai**	**4.83**	**29**	Pn	Pn	00 14 01.7	-4.6
RAGM	comp=E,21nm,1.4s			IAML		00 15 26.1	
SUCK	**Suckling Hills**	**4.84**	**35**		Pn	00 14 01.6	-4.9
SUCK	comp=E,14nm,1.3s			IAML		00 15 44.5	
SUCK	comp=N,18nm,1.4s			IAML		00 15 48.9	
HMT	**Hamilton**	**4.90**	**31**		Pn	00 14 02.9	-4.4
HMT	**Hamilton** comp=N,14nm,0.8s	**4.90**	**31**	IAML		00 15 55.7	
NICHA	**Nichawak Mount**	**4.91**	**33**		Pn	00 14 02.8	-4.6
BERG	**Berg Lake**	**5.12**	**33**		Pn	00 14 05.4	-4.8
BERG	**Berg Lake** comp=N,14nm,0.5s	**5.12**	**33**	IAML		00 16 00.6	
BERG	comp=E,15nm,0.6s			IAML		00 16 02.9	
SNH	**Sunshine Point**	**5.24**	**39**	Pn	Pn	00 14 06.4	-5.6
SNH	comp=N,12nm,1.1s			IAML		00 16 05.0	
SNH	comp=E,9.9nm,1.4s			IAML		00 16 19.7	
BMRM	**Bremner River**	**5.34**	**26**		Pn	00 14 08.5	-4.9
WAX	**Waxell Ridge**	**5.43**	**37**		Pn	00 14 09.9	-4.7
WAX	**Waxell Ridge** comp=E,11nm,1.3s	**5.43**	**37**	IAML		00 16 14.2	
KLU	**Klutina**	**5.55**	**17**		Pn	00 14 11.7	-4.5
CRQM	**Cirque**	**5.57**	**33**		Pn	00 14 11.6	-5.0
TGL	**Tana Glacier**	**5.67**	**35**		Pn	00 14 13.0	-4.9
PNL	**Peninsula**	**6.32**	**53**		Pn	00 14 22.4	-4.3
LOQN	**Logan Glacier**	**6.34**	**40**	Pn	Pn	00 14 22.6	-4.5
P29M	**Windy Craggy**	**7.06**	**57**		Pn	00 14 32.2	-4.7
S31K	**Pelican**	**7.36**	**71**		Pn	00 14 34.1	-6.9

*IDC **20** 00:38:58.8±0.9,53˚.78N×164˚.85W,h0km,mb4.1/27, mbtmp4.2/30,ML4.3/3,MS4.0/38,Error ellipse: s-maj=23.6km s-min=11.6km az=180.0*

*MOS **20** 00:39:01.3±1.1,53˚.65N×164˚.79W,h33km,mb4.8/33, Error ellipse: s-maj=10.7km s-min=6.3km az=88.6*

*AEIC **20** 00:39:02.0±2.5,53˚.60N±0˚.04×164˚.76W±0˚.06,h26km±4km, Error ellipse: s-maj=6.3km s-min=4.3km az=213.0*

*NEIC **20** 00:39:03.3±2.6,53˚.55N±0˚.03×164˚.71W±0˚.04,h34km±3km, mb4.7/242,ML4.5/12,Mwr4.6/22,Mww4.6/12,ML4.3(AEIC), Error ellipse: s-maj=4.7km s-min=3.0km az=195.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.88; Mθθ1.11; Mφφ=-0.22; Mrθ0.17; Mθφ=-0.28; Mφr0.33; Fault plane solution: M₀1.11000×10¹⁶ NP1: φs258.84000°,δ52.67000°,λ-121.65000°. NP2: φs124.31000°,δ47.40000°,λ-55.47000°. Principal axes: T 1.1679, Plg3.0000°, Azm11.0000°; N -0.1150, Plg25.0000°, Azm279.0000°; P -1.0529, Plg65.0000°, Azm107.0000°;*

*NEIC **20** 00:39:03.4,53˚.56N×164˚.75W,h34km*

*NEIC **20** 00:39:03.4,53˚.56N×164˚.75W,h36km*

*NEIC **20** 00:39:03.4,53˚.36N×164˚.58W,h36km,Moment Tensor Solution. Duration: 1§0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.89; Mθθ1.11; Mφφ=-0.22; Mrθ0.28; Mθφ0.09; Mφr-0.07; Fault plane solution: M₀1.05000×10¹⁶ NP1: φs272.77000°,δ53.08000°,λ-81.65000°. NP2:φs79.04000°, δ37.72000°,λ-100.94000°. Principal axes: T 1.1543, Plg8.0000°, Azm357.0000°; N -0.2157, Plg7.0000°, Azm88.0000°; P -0.9387, Plg80.0000°, Azm218.0000°;*

ISC 20 00:39:03.9±0.6,53˚.62N±0˚.06×164˚.77W±0˚.03,h43km±4km, n738,σ1§24/649,mb4.7/156,MS4.0/41,9C-1D,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.75**	**314**		Pn	00 39 16.9	-1.2
AKSA					Sn	00 39 29.0	+0.6
AKUT	**Akutan**	**0.79**	**311**		Sn	00 39 29.4	+0.2
AKUT	**Akutan**	**0.79**	**311**		Pn	00 39 17.2	-1.3
AKUT	**Akutan** comp=E,7μm,0.4s	**0.79**	**311**	IAML		00 39 33.0	
AKUT	comp=N,7μm,0.5s			IAML		00 39 34.4	
AKUT	**Akutan**	**0.79**	**311**	P	Pn	00 39 17.5	-1.0
AHB	**Akutan Harbor**	**0.79**	**309**		Pn	00 39 17.6	-1.1
ZRO	**Akutan Zero**	**0.86**	**304**		Pn	00 39 18.4	-1.1
WESE	**West Dahl East**	**0.86**	**7**		Pn	00 39 18.2	-1.4
HSB	**Akutan Spr's B**	**0.88**	**310**		Pn	00 39 18.8	-1.1
AKRB	**Akutan Reef Bi**	**0.92**	**304**		Pn	00 39 19.4	-1.0
AKRB					Sn	00 39 33.4	+0.9
AKGG	**Akutan Green G**	**0.93**	**309**		Pn	00 39 19.5	-1.0
AKGG					Sn	00 39 33.2	+0.6
AKGG						00 39 35.2	
WEBT	**Westdahl Beart**	**0.97**	**1**		Pn	00 39 20.2	-0.9
WEBT					Sn	00 39 33.9	+0.2
WEBT						00 39 37.0	
UNV	**Unalaska Valle**	**1.05**	**283**		Sn	00 39 34.8	-0.9
UNV	**Unalaska Valle**	**1.05**	**283**		Pn	00 39 20.2	-2.0
UNV	**Unalaska Valle**	**1.05**	**283**	P	Pn	00 39 20.4	-1.8
UNV	**Unalaska Valle** baz=105,SNR=55	**1.05**	**283**	P	Pn	00 39 20.4	-1.8
MNAT	**Makushin Natee**	**1.17**	**284**		Pn	00 39 22.3	-1.4
MREP	**Makushin Rep't**	**1.19**	**280**		Pn	00 39 22.6	-1.5
BRPK	**Brown Peak**	**1.19**	**30**		Pn	00 39 22.3	-1.8
SSLW	**Shishaldin Wes**	**1.21**	**18**		Pn	00 39 23.3	-1.2
MSW	**Makushin Switc**	**1.23**	**285**		Pn	00 39 23.4	-1.2
MSW					Sn	00 39 40.9	+0.8
MGOD	**Makushin Gods**	**1.26**	**279**		Pn	00 39 23.4	-1.7
ISLZ	**Isanotski Laza**	**1.27**	**29**		Pn	00 39 23.6	-1.6
ISLZ					Sn	00 39 40.7	-0.4
MAPS	**Pakushin South**	**1.30**	**279**		Pn	00 39 24.1	-1.6
ISNN	**Isanotski Nort**	**1.34**	**25**		Pn	00 39 25.6	-0.6
FALS	**False Pass**	**1.47**	**32**		Pn	00 39 26.6	-1.3
FALS	**False Pass**	**1.47**	**32**	P	Pn	00 39 26.8	-1.1
FALS	**False Pass** baz=210,SNR=92	**1.47**	**32**	P	Pn	00 39 26.5	-1.3
OKFG	**Magazine Ridge**	**1.89**	**265**		Pn	00 39 33.4	-0.2
OKER	**Okmok East Rim**	**1.97**	**266**		Pn	00 39 34.4	-0.3
OKTU	**Okmok Mt. Tuli**	**1.97**	**264**		Pn	00 39 34.2	-0.6
OKNC	**Okmok New Cone**	**2.01**	**267**		Pn	00 39 34.9	-0.4
DT1	**Dutton Round H**	**2.08**	**43**		Pn	00 39 35.7	-0.6
PN7A	**Pavlof North-7**	**2.43**	**41**		Pn	00 39 41.7	+0.6
PVV	**Pavlof Volcano**	**2.47**	**43**		Pn	00 39 42.0	+0.4
PS1A	**Pavlof South-1**	**2.52**	**43**		Pn	00 39 42.6	+0.3
NIKH	**Nikolski High**	**2.54**	**257**		Pn	00 39 41.8	-0.7
NIKH	**Nikolski High**	**2.54**	**257**	P	Pn	00 39 42.1	-0.4
NIKH	**Nikolski High** baz=75	**2.54**	**257**	P	Pn	00 39 41.3	-1.3
SDPT	**Sand Point**	**3.04**	**54**	Pn	Pn	00 39 49.0	-0.5
SDPT	comp=E,2μm,1.3s			IAML		00 40 45.2	
SDPT	**Sand Point**	**3.04**	**54**	P	Pn	00 39 49.0	-0.5
SDPT	**Sand Point** baz=235,SNR=39	**3.04**	**54**	P	Pn	00 39 49.0	-0.5
CLES	**Cleveland East**	**3.18**	**258**	Pn	Pn	00 39 50.2	-1.2
CLES	comp=E,928nm,1.3s			IAML		00 40 56.5	
CLES	comp=N,1μm,1.1s			IAML		00 41 05.1	
CNBA	**Chernabura Isl**	**3.27**	**66**		Pn	00 39 50.8	-1.8
CNBA					Sn	00 40 27.6	-2.6
CNBA	**Chernabura Isl** comp=N,574nm,1.2s	**3.27**	**66**	IAML		00 40 50.2	
CHNA	**Chernabura Isl** baz=249,SNR=11	**3.27**	**66**	P	Pn	00 39 51.0	-1.6
S14K	**Fog Glacier** baz=229	**4.02**	**46**	P	Pn	00 40 04.3	+1.4
VNFG	**Fog Glacier, M**	**4.02**	**46**		Pn	00 40 03.6	+0.6
VNFG	**Fog Glacier, M**	**4.02**	**46**		Pn	00 40 03.9	+1.0
P08K	**Saint George I**	**4.05**	**319**		Pn	00 40 04.8	+1.5
CHGN	**Chignik**	**4.54**	**51**		Pn	00 40 09.4	-0.5
CHGN	**Chignik** comp=E,739nm,1.2s	**4.54**	**51**	IAML		00 41 32.6	
CHGN	comp=N,516nm,1.1s			IAML		00 41 35.0	
CHGN	**Chignik** baz=235,SNR=24	**4.54**	**51**	P	Pn	00 40 09.5	-0.5
SPIA	**Saint Paul Isl**	**4.74**	**321**	P	Pn	00 40 13.7	+1.0
ANNW	**Aniakchak Nort**	**5.03**	**46**		Pn	00 40 17.6	+0.9
R16K	**Pilot Point** baz=228	**5.68**	**43**	P	Pn	00 40 26.9	+1.4
ATKA	**Atka Island**	**5.88**	**260**		Pn	00 40 28.7	+0.3
ATKA	**Atka Island**	**5.88**	**260**	P	Pn	00 40 29.7	+1.4
O14K	**Tigyukauivet M**	**5.97**	**18**		Pn	00 40 31.0	+1.4
O14K	**Tigyukauivet M** baz=200	**5.97**	**18**	P	Pn	00 40 30.9	+1.4
O15K	**Ungalikthiuk R**	**6.21**	**24**		Pn	00 40 33.2	+0.4
O15K	**Ungalikthiuk R** baz=208	**6.21**	**24**	P	Pn	00 40 34.4	+1.5
N14K	**Kuskokwak Cree**	**6.54**	**14**		Pn	00 40 38.6	+1.2
N14K	**Kuskokwak Cree** baz=196	**6.54**	**14**	P	Pn	00 40 39.3	+1.9
P16K	**Nushagak River**	**6.60**	**32**		Pn	00 40 38.7	+0.5
P16K	**Nushagak River** baz=2	**6.60**	**32**	P	Pn	00 40 40.4	+2.2
Q16K	**King Salmon** baz=224	**6.79**	**39**	P	Pn	00 40 43.8	+3.0
Q17K	**Contact Creek** baz=230,SNR=12	**6.82**	**43**	P	Pn	00 40 42.7	+1.4
M11K	**Mekoryuk**	**6.83**	**354**		Pn	00 40 43.5	+2.2
M11K	**Mekoryuk** baz=172	**6.83**	**354**	P	Pn	00 40 43.2	+1.9
M13K	**Dall Lake**	**6.85**	**6**		Pn	00 40 43.7	+2.0
M13K	**Dall Lake** baz=187	**6.85**	**6**	P	Pn	00 40 44.2	+2.5
ANCK	**Angle Creek**	**6.94**	**45**		Pn	00 40 43.8	+0.8
O16K	**Kokwok River B**	**7.03**	**29**		Pn	00 40 44.8	+0.7
O16K	**Kokwok River B** baz=214	**7.03**	**29**	P	Pn	00 40 45.7	+1.6
N15K	**Kwethluk River**	**7.04**	**19**		Pn	00 40 44.6	+0.3
N15K	**Kwethluk River** baz=203	**7.04**	**19**	P	Pn	00 40 46.2	+1.8
R18K	**Karluk** baz=240	**7.05**	**52**	P	Pn	00 40 46.0	+1.6
GSCK	**Great Sitkin C**	**7.09**	**261**		Pn	00 40 45.1	+0.1
P17K	**Kvichak River**	**7.25**	**36**		Pn	00 40 48.6	+1.6
P17K	**Kvichak River** baz=222,SNR=10	**7.25**	**36**	P	Pn	00 40 49.7	+2.6
M14K	**Bethel**	**7.31**	**11**		Pn	00 40 49.6	+1.7
M14K	**Bethel** baz=193	**7.31**	**11**	P	Pn	00 40 49.0	+1.1
M15K	**Kasigluk River**	**7.43**	**16**		Pn	00 40 50.6	+1.0
M15K	**Kasigluk River** baz=199	**7.43**	**16**	P	Pn	00 40 50.4	+0.8
ADK	**Adak**	**7.44**	**261**		Pn	00 40 49.4	-0.3
ADK	**Adak**	**7.44**	**261**	P	Pn	00 40 51.4	+1.7
ADK	**Adak**	**7.44**	**261**	P	Pn	00 40 49.4	-0.3
OHAK	**Old Harbor**	**7.46**	**56**		Pn	00 40 48.0	-2.0
OHAK	**Old Harbor**	**7.46**	**56**	P	Pn	00 40 48.6	-1.4
OHAK	**Old Harbor** baz=245	**7.46**	**56**	P	Pn	00 40 49.2	-0.8
O17K	**Koliganek Bris**	**7.47**	**31**		Pn	00 40 50.3	+0.1
O17K	**Koliganek Bris** baz=217,SNR=20	**7.47**	**31**	P	Pn	00 40 51.9	+1.7
N16K	**Nishlik Lake**	**7.61**	**23**		Pn	00 40 53.2	+1.1
N16K	**Nishlik Lake** baz=207	**7.61**	**23**	P	Pn	00 40 54.1	+2.0
L14K	**Kuka Creek**	**7.82**	**7**		Pn	00 40 56.4	+1.5
L14K	**Kuka Creek** baz=189	**7.82**	**7**	P	Pn	00 40 57.4	+2.5
P18K	**Big Mountain,**	**7.82**	**39**		Pn	00 40 56.6	+1.6
P18K	**Big Mountain,** baz=226,SNR=14	**7.82**	**39**	P	Pn	00 40 57.2	+2.2
KDAK	**Kodiak Island**	**8.04**	**54**		Pn	00 40 55.5	-2.6
KDAK	**Kodiak Island** baz=243	**8.04**	**54**	P	Pn	00 40 57.3	-0.7
KDAK	**Kodiak Island** comp=N,5.4nm,0.3s,baz=191,slow=5.1,SNR=52	**8.04**	**54**	Pn	Pn	00 40 56.0	-2.0
KDAK	comp=N,1.4nm,0.3s,baz=162,slow=23,SNR=6.0 comp=N,11nm,0.3s			Sn	Sn	00 42 23.9	-3.6
M16K	**Timber Creek**	**8.05**	**21**		Pn	00 40 58.5	+0.4
M16K	**Timber Creek** baz=205	**8.05**	**21**	P	Pn	00 40 59.6	+1.5
N17K	**Nushagak Hills**	**8.06**	**28**		Pn	00 40 59.0	+0.9
N17K	**Nushagak Hills** baz=214	**8.06**	**28**	P	Pn	00 41 00.1	+1.9
Q19K	**Cape Douglas,**	**8.15**	**45**		Pn	00 41 00.1	+0.5
Q19K	**Cape Douglas,** baz=233	**8.15**	**45**	P	Pn	00 40 60.0	+0.4
O18K	**Koktuh Hills**	**8.16**	**36**		Pn	00 41 00.9	+1.3
O18K	**Koktuh Hills** baz=224,SNR=21	**8.16**	**36**	P	Pn	00 41 01.4	+1.8
L15K	**Ungalak Mounta** baz=193	**8.27**	**11**	P	Pn	00 41 03.0	+1.9
Q20K	**Shuyak Island** baz=239	**8.53**	**49**	P	Pn	00 41 05.2	+0.6
SYI	**Shuyak Island**	**8.53**	**49**	Pn	Pn	00 41 07.0	+2.4
N18K	**Kilae Creek**	**8.56**	**31**		Pn	00 41 06.3	+1.2
N18K	**Kilae Creek** baz=218	**8.56**	**31**	P	Pn	00 41 06.6	+1.5
L16K	**Owhat River**	**8.59**	**17**	Pn	Pn	00 41 06.9	+1.5
L16K	**Owhat River** baz=201,SNR=15	**8.59**	**17**	P	Pn	00 41 07.6	+2.2
O19K	**Port Alsworth** baz=225	**8.71**	**37**	P	Pn	00 41 09.0	+1.9
M17K	**Holitna River**	**8.73**	**24**		Pn	00 41 09.4	+1.9
M17K	**Holitna River** baz=210,SNR=12	**8.73**	**24**	P	Pn	00 41 09.4	+1.9
P19K	**Oil Pt** baz=231	**8.76**	**42**	P	Pn	00 41 09.9	+2.0
K15K	**Wolf Creek Mou**	**8.86**	**10**		Pn	00 41 11.1	+2.0
K15K	**Wolf Creek Mou** baz=192	**8.86**	**10**	P	Pn	00 41 11.2	+2.0
SVW2	**Sparrevohn**	**8.98**	**30**		Pn	00 41 12.6	+1.7
ILSW	**Iliamna Southw**	**9.01**	**40**		Pn	00 41 12.5	+1.2
N19K	**Bonanza Creek**	**9.11**	**34**		Pn	00 41 14.5	+1.9
N19K	**Bonanza Creek** baz=222	**9.11**	**34**	P	Pn	00 41 15.3	+2.7
J14K	**Nanvaranak Lak** baz=184	**9.18**	**4**	P	Pn	00 41 14.6	+1.1
M18K	**Stony River**	**9.23**	**28**		Pn	00 41 16.2	+1.9
M18K	**Stony River** baz=215,SNR=9.1	**9.23**	**28**	P	Pn	00 41 15.0	+0.7
O20K	**Slope Mountain** baz=230	**9.27**	**41**	P	Pn	00 41 15.5	+0.6
RDSO	**Redoubt South**	**9.47**	**39**		Pn	00 41 19.1	+1.4
CNPM	**China Poot**	**9.52**	**46**		Pn	00 41 17.4	-0.8
L18K	**Granite Mounta** baz=210	**9.62**	**23**	P	Pn	00 41 20.4	+0.7
RDT	**Redoubt**	**9.67**	**39**		Pn	00 41 22.2	+1.9
K17K	**Iditarod** baz=203	**9.73**	**18**	P	Pn	00 41 22.2	+1.1
BRSE	**Bradley Lake S** baz=237	**9.85**	**46**	P	Pn	00 41 22.0	-0.7
J16K	**Anvik River** baz=194	**9.93**	**11**	P	Pn	00 41 25.2	+1.4
M19K	**Big River Lodg** baz=218	**9.97**	**30**	P	Pn	00 41 26.2	+1.8
L19K	**White Mountain** baz=215	**10.06**	**28**	P	Pn	00 41 27.0	+1.4
N20K	**Mount Spurr** baz=227	**10.16**	**37**	P	Pn	00 41 28.4	+1.4
J17K	**VABM Dome** baz=199	**10.24**	**15**	P	Pn	00 41 28.9	+0.8
CAPN	**Captain Cook N** baz=231	**10.27**	**40**	P	Pn	00 41 28.1	-0.4
M20K	**Styx River**	**10.34**	**32**		Pn	00 41 32.1	+2.6
M20K	**Styx River** baz=222,SNR=16	**10.34**	**32**	P	Pn	00 41 29.7	+0.2
TTA	**Tatalina**	**10.40**	**23**	Pn	Pn	00 41 32.9	+2.6
TTA	**Tatalina** baz=210,SNR=6.4	**10.40**	**23**	P	Pn	00 41 30.5	+0.2
TTA	**Tatalina**	**10.40**	**23**	P	Pn	00 41 32.9	+2.6
I17K	**Unalakleet** baz=193	**10.51**	**10**	P	Pn	00 41 31.9	+0.3
L20K	**Farewell, AK** baz=217	**10.57**	**29**	P	Pn	00 41 33.6	+1.0
SEW	**Seward** baz=238	**10.59**	**46**	P	Pn	00 41 32.0	-0.8
O22K	**Cooper Landing** baz=236,SNR=5.8	**10.68**	**44**	P	Pn	00 41 34.3	+0.3
J18K	**Innoko River** baz=206	**10.72**	**20**	P	Pn	00 41 35.6	+1.0
SUA	**Susitna One** baz=230,SNR=23	**10.87**	**38**	P	Pn	00 41 35.8	-0.9
SKT	**Skwentna**	**10.94**	**35**	Pn	Pn	00 41 38.4	+0.8
SKT	**Skwentna** baz=226,SNR=9.0	**10.94**	**35**	P	Pn	00 41 38.7	+1.2
RC01	**Rabbit Creek A**	**11.02**	**41**		Pn	00 41 37.8	-0.9
RC01	**Rabbit Creek A** baz=233	**11.02**	**41**	P	Pn	00 41 38.3	-0.4
H16K	**Elim** baz=188	**11.12**	**6**	P	Pn	00 41 41.6	+1.4
K20K	**Telida** baz=214	**11.23**	**25**	P	Pn	00 41 42.6	+1.0
M22K	**Willow**	**11.28**	**38**	Pn	Pn	00 41 42.1	-0.1
M22K	**Willow** baz=230	**11.28**	**38**	P	Pn	00 41 43.9	+1.6
PPLA	**Purkeypile** baz=221,SNR=5.9	**11.39**	**30**	P	Pn	00 41 43.4	-0.5
G15K	**Niukluk** baz=182	**11.41**	**2**	P	Pn	00 41 43.1	-1.0
J19K	**Poorman**	**11.41**	**21**		Pn	00 41 45.3	+1.2
J19K	**Poorman** baz=208,SNR=11	**11.41**	**21**	P	Pn	00 41 42.7	-1.4
P23K	**Montague Islan** baz=243	**11.44**	**49**	P	Pn	00 41 43.2	-1.2
PMR	**Palmer**	**11.55**	**40**	Pn	Pn	00 41 45.2	-0.8
PMR	**Palmer** baz=233	**11.55**	**40**	P	Pn	00 41 47.1	+1.2
PMR	**Palmer**	**11.55**	**40**	P	Pn	00 41 45.2	-0.8
H17K	**Granite Mounta** baz=194	**11.61**	**10**	P	Pn	00 41 47.2	+0.4
CUT	**Chulitna**	**11.66**	**35**		Pn	00 41 50.6	+3.2
CUT	**Chulitna** baz=227	**11.66**	**35**	P	Pn	00 41 47.1	-0.3
KNK	**Knik Glacier** baz=235	**11.71**	**42**	P	Pn	00 41 46.8	-1.3
CAST	**Castle Rocks**	**11.82**	**29**	Pn	Pn	00 41 51.0	+1.3
CAST	**Castle Rocks** baz=219,SNR=13	**11.82**	**29**	P	Pn	00 41 48.8	-0.9
GCSA	**Galena City Sc** baz=203	**11.85**	**17**	P	Pn	00 41 50.1	+0.1
G16K	**Koyuk River** baz=187	**11.87**	**5**	P	Pn	00 41 49.6	-0.7
J20K	**Nowinta River** baz=212,SNR=16	**11.90**	**23**	P	Pn	00 41 51.3	+0.5
GLI	**Glacier Island** baz=240	**11.99**	**46**	P	Pn	00 41 49.4	-2.5
SML	**Sawmill** baz=234	**11.99**	**40**	P	Pn	00 41 50.1	-1.9
H18K	**Honhosa River** baz=198	**12.01**	**13**	P	Pn	00 41 51.5	-0.7
HIN	**Hinchinbrook I**	**12.02**	**48**	Pn	Pn	00 41 50.7	-1.7
TNA	**Tin City** baz=171	**12.08**	**354**	P	Pn	00 41 52.3	-0.8
G17K	**Kiwalik Mounta** baz=192	**12.09**	**8**	P	Pn	00 41 53.9	+0.5
CHUM	**Lake Minchumin** baz=217	**12.12**	**27**	P	Pn	00 41 53.1	-0.6
F15K	**North Star Dit** baz=180	**12.12**	**0**	P	Pn	00 41 52.7	-1.1
M23K	**Glacier View** baz=235,SNR=20	**12.21**	**41**	P	Pn	00 41 53.3	-1.8
KTH	**Kantishna Hill**	**12.27**	**30**		Pn	00 41 56.8	+1.0
I20K	**Naaghedeneel**	**12.36**	**21**		Pn	00 41 58.7	+1.7
I20K	**Naaghedeneel** baz=209	**12.36**	**21**	P	Pn	00 41 55.5	-1.5
TRF	**Thorofare Moun**	**12.38**	**32**	Pn	Pn	00 41 58.7	+1.2
TRF	**Thorofare Moun** baz=224	**12.38**	**32**	P	Pn	00 41 57.0	-0.5
SCM	**Sheep Creek Mo**	**12.39**	**42**		Pn	00 41 56.5	-1.0
SCM	**Sheep Creek Mo** baz=236,SNR=7.1	**12.39**	**42**	P	Pn	00 41 55.1	-2.4
SCM	**Sheep Creek Mo**	**12.39**	**42**	P	Pn	00 41 56.5	-1.0
EYAK	**Cordova Ski Ar**	**12.42**	**48**	P	Pn	00 41 57.1	-0.7
EYAK	**Cordova Ski Ar** baz=244	**12.42**	**48**	P	Pn	00 41 55.6	-2.2
WAT1	**Susitna Watana** baz=230	**12.54**	**36**	P	Pn	00 41 57.3	-2.1
H19K	**Roundabout Mou** baz=203	**12.65**	**16**	P	Pn	00 42 00.8	0.0
BPAW	**Bear Paw Mtn.**	**12.66**	**29**	Pn	Pn	00 42 02.0	+0.9
BPAW	**Bear Paw Mtn.** baz=220,SNR=13	**12.66**	**29**	P	Pn	00 41 59.3	-1.8
WAT6	**Susitna Watana** baz=232	**12.67**	**38**	P	Pn	00 41 58.7	-2.7
G18K	**Tagagawik** baz=196	**12.68**	**11**	P	Pn	00 41 59.6	-1.8
SHEM	**Shemya Is, Ala** comp=N,552nm,21.2s,baz=170,slow=37	**12.71**	**274**	LR	LR	00 46 47.8	
KLU	**Klutina** baz=240,SNR=41	**12.79**	**44**	P	Pn	00 42 00.5	-2.4
KAIM	**Kayak Island** baz=249	**12.79**	**52**	P	Pn	00 42 01.3	-1.6
RAGM	**Ragged Mountai**	**12.84**	**50**		Pn	00 42 04.5	+0.9
H20K	**Anofleneega Mo** baz=207,SNR=11	**12.89**	**19**	P	Pn	00 42 03.6	-0.6
M24K	**Tolsona, Glenn**	**13.00**	**42**	Pn	Pn	00 42 03.9	-1.9
M24K	**Tolsona, Glenn** baz=237	**13.00**	**42**	P	Pn	00 42 03.0	-2.8
MCK	**McKinley** baz=226,SNR=12	**13.01**	**33**	P	Pn	00 42 03.7	-2.2
DHY	**Denali Highway** baz=231	**13.11**	**37**	P	Pn	00 42 05.3	-2.0
BMRM	**Bremner River** baz=244	**13.11**	**48**	P	Pn	00 42 05.5	-1.8
G19K	**Purcell Mounta** baz=200	**13.12**	**14**	P	Pn	00 42 05.8	-1.6
BWN	**Browne**	**13.16**	**31**		Pn	00 42 08.9	+1.0
I21K	**Tanana** baz=215	**13.26**	**24**	P	Pn	00 42 08.6	-0.5
N25K	**Chitina, Valde**	**13.40**	**45**		Pn	00 42 09.7	-1.5
N25K	**Chitina, Valde** baz=242,SNR=22	**13.40**	**45**	P	Pn	00 42 09.5	-1.7
MLY	**Manley**	**13.45**	**26**	Pn	Pn	00 42 12.2	+0.3
MLY	**Manley** baz=218,SNR=12	**13.45**	**26**	P	Pn	00 42 10.8	-1.1
H21K	**Melozitna Rive** baz=212,SNR=11	**13.46**	**22**	P

POKR	Poker Plat Res baz=225	14.45	30	P		Pn	00 42 23.5	-1.9
CTG	Chitna Glacier baz=250	14.58	50	P		Pn	00 42 25.5	-1.8
L26K	Log Cabin Wild baz=239	14.60	41	P		Pn	00 42 26.5	-0.9
F21K	Alatna River baz=207	14.70	17	P		Pn	00 42 27.3	-1.3
C16K	Lisburne Hills baz=178	14.71	359	P		Pn	00 42 28.1	-0.7
J25K	Salcha River, baz=230	14.77	34	P		Pn	00 42 28.7	-1.0
G22K	Bettles baz=212	14.82	21	P		Pn	00 42 29.7	-0.5
PINM	Pinnacle baz=254	14.83	54	P		Pn	00 42 29.4	-1.2
H24K	Noodor Dome baz=222	14.84	28	P		Pn	00 42 28.8	-1.9
SCRK	Sand Creek baz=235	14.87	38	P		Pn	00 42 28.9	-2.2
M27K	Edge Creek, AK baz=244	14.88	45	P		Pn	00 42 28.9	-2.4
G23K	Bananza Creek baz=216	14.97	23	P		Pn	00 42 32.5	+0.2
BCPM	Bancas Point comp=Z,31nm,0.9s	15.10	55	IAmb		IAmb	00 42 56.1	
PNL	Peninsula	15.15	56	P		Pn	00 42 33.9	-0.8
PNL	Peninsula baz=257,SNR=9.4	15.15	56	P		Pn	00 42 33.5	-1.2
L27K	Beaver Creek, baz=242	15.22	43	P		Pn	00 42 33.6	-2.0
E20K	Nigu River baz=200	15.24	12	P		Pn	00 42 34.3	-1.6
D19K	Kuna River baz=195	15.25	9	P		Pn	00 42 35.3	-0.6
YUK3	Moose Creek baz=248,SNR=25	15.26	48	P		Pn	00 42 34.8	-1.5
PRP	Porcupine Dome baz=228	15.31	31	P		Pn	00 42 35.4	-1.5
J26L	Joseph Creek baz=234	15.32	36	P		Pn	00 42 35.6	-1.3
BVCY	Beaver Creek baz=246,SNR=9.5	15.34	46	P		Pn	00 42 35.4	-1.7
COLD	Coldfoot baz=214,SNR=13	15.36	22	P		Pn	00 42 35.8	-1.5
YUK8	Steele Glacier baz=251,SNR=14	15.41	50	P		Pn	00 42 36.4	-1.9
G24K	Hadweenzic Riv comp=Z,48nm,1.4s	15.60	26	IAmb		IAmb	00 42 59.8	
G24K	Hadweenzic Riv baz=221	15.60	26	P		Pn	00 42 39.0	-1.4
K27K	Chicken baz=238	15.60	39	P		Pn	00 42 39.4	-1.1
D20K	Etivluk River baz=198	15.62	11	P		Pn	00 42 41.2	+0.5
O29M	Mount Kennedy comp=Z,22nm,0.7s	15.70	54	IAmb		IAmb	00 42 56.9	
O29M	Mount Kennedy baz=256	15.70	54	P		Pn	00 42 41.4	-0.5
C19K	Lookout Ridge comp=Z,40nm,1.4s	15.72	7	IAmb		IAmb	00 43 22.8	
C19K	Lookout Ridge baz=191	15.72	7	P		Pn	00 42 42.8	+0.7
B18K	Kokolik River baz=186	15.86	4	P		Pn	00 42 43.8	+0.1
YUK4	Talbot Arm baz=252,SNR=19	15.94	51	P		Pn	00 42 46.0	+1.0
YUK6	Outpost Mounta baz=254,SNR=10	15.96	52	P		Pn	00 42 45.9	+0.6
P29M	Windy Craggy baz=259	15.97	57	P		Pn	00 42 45.0	-0.2
F24K	Squaw Lake baz=218	16.12	24	P		Pn	00 42 47.2	0.0
E23K	Chandalar baz=214	16.17	21	P		P	00 42 49.3	-1.2
C21K	Knifeblade Rid baz=201	16.26	13	P		Pn	00 42 50.0	+1.1
D22K	Ayikyak River baz=206	16.32	16	P		P	00 42 51.0	-1.0
HYT	Haines Junctio comp=Z,36nm,1.1s	16.33	53	IAmb		IAmb	00 43 00.2	
HYT	Haines Junctio baz=256,SNR=18	16.33	53	P		P	00 42 51.5	-0.8
EGAK	Eagle baz=238,SNR=8.9	16.34	38	P		Pn	00 42 49.8	0.0
M29M	Somme Creek comp=Z,38nm,1.0s	16.38	47	IAmb		IAmb	00 43 15.9	
M29M	Somme Creek baz=249,SNR=33	16.38	47	P		Pn	00 42 50.0	-0.5
E24K	Your Creek baz=216	16.43	22	P		Pn	00 42 51.3	+0.2
P30M	Million Dollar baz=259,SNR=7.1	16.45	56	P		Pn	00 42 50.6	-0.7
S31K	Pelican	16.56	63	P		Pn	00 42 52.3	-0.3
S31K	Pelican baz=267	16.56	63	P		Pn	00 42 52.1	-0.5
I27K	Kandik River baz=235	16.64	35	P		Pn	00 42 53.9	+0.2
DAWY	Dawson baz=243,SNR=18	16.65	41	P		Pn	00 42 53.9	+0.1
TOLK	Toolik Lake Re	16.67	20	P		Pn	00 42 54.3	+0.2
TOLK	Toolik Lake Re baz=213	16.67	20	P		Pn	00 42 54.9	+0.8
N30M	Aishikik Lake comp=Z,25nm,0.8s	16.69	51	IAmb		IAmb	00 43 03.6	
N30M	Aishikik Lake baz=254	16.69	51	P		Pn	00 42 54.8	+0.4
B21K	Ikpikpuk River baz=201	16.72	12	P		Pn	00 42 54.0	-0.6
A19K	Wainwright baz=188	16.73	4	P		Pn	00 42 54.0	-0.6
D23K	Nanushuk River baz=210	16.74	18	P		Pn	00 42 54.0	-0.9
F25K	Christian Rive baz=222	16.74	26	P		Pn	00 42 54.8	-0.2
L29M	L29M baz=248,SNR=12	16.77	45	P		Pn	00 42 55.4	+0.1
G26K	Porcupine Rive baz=227	16.80	29	P		Pn	00 42 55.4	-0.2
B20K	Meade River baz=196	16.81	9	P		Pn	00 42 55.4	-0.3
BMAR	Burnt Mountain	16.91	27	P		P	00 42 58.6	+0.1
O30N	Mendenhall comp=Z,43nm,1.4s	17.00	54	IAmb		IAmb	00 43 08.9	
O30N	Mendenhall baz=258,SNR=12	17.00	54	P		Pn	00 42 57.9	-0.3
H27K	Steamboat Moun baz=233	17.03	33	P		Pn	00 42 58.6	0.0
I28M	Miner Creek baz=238	17.13	37	P		Pn	00 42 59.2	-0.7
E25K	Arctic Village baz=221	17.16	25	P		Pn	00 42 59.6	-0.5
M30M	Minto, Yukon baz=251,SNR=10	17.16	47	P		Pn	00 42 59.8	-0.4
SKAG	Skagway	17.16	58	P		Pn	00 42 59.8	-0.3
SKAG	Skagway baz=263,SNR=11	17.16	58	P		Pn	00 42 59.3	-0.8
F26K	Sheenjek River baz=225	17.21	27	P		Pn	00 43 00.9	+0.1
D24K	Happy Valley baz=213	17.25	19	P		Pn	00 42 59.9	-1.3
J29N	Klondike Camp comp=Z,20nm,0.5s	17.29	41	IAmb		IAmb	00 43 11.1	
J29N	Klondike Camp baz=243,SNR=17	17.29	41	P		Pn	00 43 01.6	-0.2
K29M	Barlow Dome baz=246	17.30	43	P		Pn	00 43 01.5	-0.6
S32K	Killisnoo	17.43	65	Pn		Pn	00 43 02.7	-0.8
S32K	Killisnoo baz=270	17.43	65	P		Pn	00 43 02.8	-0.7
R32K	Eaglecrest	17.48	62	P		P	00 43 04.5	-0.4
R32K	Eaglecrest baz=267	17.48	62	P		Pn	00 43 04.0	-0.2
C23K	Itkillik River baz=209	17.51	16	P		Pn	00 43 04.6	+0.2
JIS	Juneau Island	17.55	62			Pn	00 43 04.7	-0.2
JIS	comp=Z,26nm,0.8s			IAmb		IAmb	00 43 10.6	
WHY	Whitehorse	17.56	54			P	00 43 06.2	+0.4
WHY	Whitehorse baz=259,SNR=11	17.56	54	P		Pn	00 43 04.3	-0.9
C24K	Franklin Bluff baz=212	17.75	18	P		Pn	00 43 07.3	-0.1
MAYO	Mayo, Yukon	17.88	45	P		P	00 43 10.2	+0.9
MAYO	comp=Z,58nm,0.9s			IAmb		IAmb	00 43 39.8	
MAYO	Mayo, Yukon baz=249	17.88	45	P		Pn	00 43 08.3	-0.8

D25K	Kavik River baz=217	17.90	21	P		P	00 43 09.5	+0.1
P32M	Atlin	17.99	58			P	00 43 10.5	0.0
P32M	Atlin baz=264,SNR=9.3	17.99	58	P		Pn	00 43 08.5	-1.9
J30M	Hart River baz=246,SNR=26	18.08	41	P		Pn	00 43 10.7	-0.9
H29M	Whitestone baz=238	18.09	36	P		Pn	00 43 11.0	-0.6
M31M	Drury Creek, Y	18.12	50	P		P	00 43 12.1	+0.2
M31M	comp=Z,45nm,1.2s			IAmb		IAmb	00 43 43.5	
M31M	Drury Creek, Y baz=255,SNR=23	18.12	50	P		Pn	00 43 11.4	-0.7
I30M	Mount Dempster baz=244,SNR=16	18.33	40	P		P	00 43 13.9	-0.5
F28M	Old Crow baz=232	18.39	31	P		P	00 43 14.6	-0.3
P33M	Teslin, Yukon	18.50	56			Pn	00 43 17.2	+0.5
P33M	comp=Z,39nm,0.8s			IAmb		IAmb	00 43 21.0	
P33M	Teslin, Yukon baz=263,SNR=52	18.50	56	P		Pn	00 43 17.2	+0.5
N32M	Quiet Lake comp=Z,36nm,0.8s	18.51	53	IAmb		IAmb	00 43 29.3	
N32M	Quiet Lake baz=260	18.51	53	P		P	00 43 16.4	+0.1
FARO	Faro, Yukon	18.60	50	P		Pn	00 43 18.4	+0.6
FARO	comp=Z,34nm,0.7s			IAmb		IAmb	00 43 21.4	
FARO	Faro, Yukon baz=256,SNR=44	18.60	50	P		Pn	00 43 18.0	+0.1
C26K	Camden Bay baz=219,SNR=24	18.68	21	P		Pn	00 43 19.7	+1.0
Q32M	Nakina River comp=Z,20nm,0.8s	18.68	60	IAmb		IAmb	00 43 22.9	
Q32M	Nakina River baz=267	18.68	60	P		P	00 43 18.2	-0.1
WRAK	Wrangell Islan baz=275	18.70	68	P		Pn	00 43 18.9	-0.1
EPYK	Eagle Plains baz=240,SNR=5.9	18.74	36	P		P	00 43 18.6	-0.2
D27M	Malcolm River baz=227	19.14	26	P		P	00 43 23.2	+0.1
DIB	Dawson Inlet,	19.17	78	P		P	00 43 22.8	-0.7
G30M	tAoh Zraii Nji baz=240,SNR=8.0	19.22	35	P		P	00 43 23.8	-0.2
V35K	Ketchikan	19.24	72			Pn	00 43 25.1	-0.4
V35K	Ketchikan baz=278	19.24	72	P		P	00 43 24.6	+0.4
S34M	Telegraph Cree	19.27	64			Pn	00 43 25.8	-0.1
S34M	comp=Z,46nm,0.9s			IAmb		IAmb	00 43 28.4	
S34M	Telegraph Cree baz=271,SNR=28	19.27	64	P		P	00 43 24.4	-0.2
H31M	Peel River comp=Z,25nm,1.0s	19.35	39	IAmb		IAmb	00 43 48.6	
H31M	Peel River baz=245	19.35	39	P		P	00 43 24.8	-0.5
R33M	Jennings River baz=267,SNR=17	19.37	59	P		P	00 43 26.1	+0.3
E29M	Blow River baz=234	19.45	30	P		P	00 43 26.4	-0.1
MMPY	Sheldon Lake,	19.63	49	P		Pn	00 43 29.6	-0.6
MMPY	comp=Z,27nm,0.8s			IAmb		IAmb	00 43 32.4	
MMPY	Sheldon Lake, baz=258,SNR=64	19.63	49	P		Pn	00 43 29.8	-0.4
F30M	Barrier River baz=239	19.68	33	P		P	00 43 29.3	+0.3
T35M	Bob Quinn	19.80	66			Pn	00 43 31.7	-0.5
T35M	comp=Z,22nm,0.9s			IAmb		IAmb	00 43 34.5	
T35M	Bob Quinn baz=275,SNR=10	19.80	66	P		P	00 43 30.1	-0.3
DLBC	Dease Lake	19.85	62	P		P	00 43 31.2	+0.3
DLBC	comp=Z,19nm,0.8s			IAmb		IAmb	00 43 33.8	
DLBC	Dease Lake baz=271,SNR=15	19.85	62	P		P	00 43 31.1	+0.2
DLBC	Dease Lake comp=Z,0.8nm,0.3s,baz=278,slow=9.9,SNR=39	19.85	62	P		Pn	00 43 32.5	-0.3
DLBC	comp=Z,398nm,20.2s,baz=288,slow=36 comp=Z,15nm,0.8s			LR		LR	00 51 01.9	
G31M	Satah River	19.86	36	P		P	00 43 29.8	-1.1
G31M	Satah River baz=243	19.86	36	P		P	00 43 30.4	-0.5
BILL	Bilibino	19.90	328	P		P	00 43 32.0	+0.7
BILL	Bilibino	19.90	328	*i* P		P	00 43 30.6	-0.7
F31M	Tsiigehtchic	20.29	35	P		P	00 43 35.3	-0.1
F31M	Tsiigehtchic baz=242	20.29	35	P		P	00 43 34.9	-0.6
GRNB	Grenville Isla	20.48	75	Pn		Pn	00 43 40.1	-0.1
GRNB	comp=Z,45nm,1.5s			IAmb		IAmb	00 43 42.3	
WTLY	Watson Lake, Y baz=267	20.50	57	P		P	00 43 38.4	+0.5
INK	Inuvik	20.77	33	P		P	00 43 41.0	+0.3
INK	Inuvik baz=240,SNR=9.4	20.77	33	P		P	00 43 41.2	+0.4
INK	Inuvik	20.77	33	P		P	00 43 41.0	+0.3
INK	comp=Z,12nm,1.0s			pmax		pmax		
INK	Inuvik comp=Z,7.3nm,0.7s,baz=253,slow=13,SNR=8.1 comp=Z,7.3nm,0.7s	20.77	33	P		P	00 43 39.5	-1.3
TGTN	Hyland Airport baz=264,SNR=19	20.86	53	P		P	00 43 42.8	+1.0
PET	Petropavlovsk	21.71	283	*i* P		P	00 43 49.8	-1.1
BBB	Bella Bella comp=Z,134nm,21.2s,baz=292,slow=32	22.00	79	LR		LR	00 50 39.0	
PETK	Petropavlovsk- comp=Z,3.6nm,0.5s,baz=78,slow=14,SNR=2.6	22.24	284	P		P	00 43 55.9	-0.7
PETK	comp=Z,314nm,21.7s,baz=85,slow=35 comp=Z,3.6nm,0.5s			LR		LR	00 51 52.9	
KOTAN	Kotaneelee Air baz=271	22.88	57	P		P	00 44 05.2	+1.9
FLDN	Fort Liard baz=272	23.16	57	P		P	00 44 06.9	+0.7
WRGLY	Wrigley	23.25	49	IAmb		IAmb	00 44 23.4	
WRGLY	comp=Z,28nm,0.7s Wrigley baz=265,SNR=8.8	23.25	49	P		P	00 44 07.8	+0.8
SEY	Seymchan	23.93	310	*i* P		P	00 44 11.3	-2.2
SEY	Seymchan comp=Z,251nm,19.1s,baz=153,slow=38	23.93	310	LR		LR	00 54 08.4	
C36M	Paulatuk	24.33	34	IAmb		IAmb	00 44 19.1	
C36M	comp=Z,21nm,1.3s Paulatuk baz=250,SNR=12	24.33	34	P		P	00 44 17.1	+0.1
MA2	Magadan comp=Z,154nm,18.4s,baz=100,slow=38	24.80	302	LR		LR	00 54 26.6	
A36M	Sachs Harbour	25.00	28	P		P	00 44 23.8	+0.8
A36M	comp=Z,12nm,0.8s			IAmb		IAmb	00 44 59.8	
A36M	Sachs Harbour baz=244,SNR=9.6	25.00	28	P		P	00 44 23.9	+0.8
YKA	Yellowknife Ar	27.31	51	P		P	00 44 45.0	+1.0
YKA	Yellowknife Ar	27.31	51	*e*P		P	00 44 45.1	+1.0
YKA	comp=Z,4.0nm,0.7s			pmax		pmax		
YKA	Yellowknife Ar comp=Z,3.4nm,0.7s,baz=275,slow=9.5,SNR=32	27.31	51	P		P	00 44 44.9	+1.0
YKA	comp=Z,315nm,21.4s,baz=309,slow=38 comp=Z,3.4nm,0.7s			LR		LR	00 56 26.8	
H04A	Detroit Lake comp=Z,14nm,0.9s	28.86	91	IAmb		IAmb	00 45 00.5	
HAWA	Hanford	29.53	86	P		P	00 45 05.9	+1.9
NEW	Newport baz=298	30.03	81	P		P	00 45 08.8	+0.3
NEW	Newport comp=Z,160nm,21.9s,baz=300,slow=32	30.03	81	LR		LR	00 54 52.9	
EDM	Edmonton	30.10	70	P		P	00 45 10.2	+1.2
EDM	comp=Z,11nm,0.8s			IAmb		IAmb	00 45 10.6	
EDM	Edmonton comp=Z,11nm,0.8s	30.10	70	P		P	00 45 10.2	+1.2
EDM				pmax		pmax		
J05D	Fort Rock, OR	30.22	92	P		P	00 45 13.0	+2.7
J05D	comp=Z,32nm,1.4s			IAmb		IAmb	00 45 13.3	
YBH	Yreka Blue Hor comp=Z,246nm,21.5s,baz=312,slow=31	30.27	96	LR		LR	00 54 31.9	
I07A	Izee	30.80	89	IAmb		IAmb	00 45 17.7	

J08A	comp=Z,11nm,1.0s Circle Bar Ran comp=Z,22nm,1.4s	31.82	90	IAmb		IAmb	00 45 26.6	
WVOR	Wild Horse Val comp=Z,13nm,0.9s	32.27	91	IAmb		IAmb	00 45 30.8	
TIXI	Tiksi comp=Z,430nm,18.2s,baz=79,slow=40	33.12	328	LR		LR	01 00 56.6	
LYMT	Lyon Mountain	33.51	80			pP	00 45 49.1	-1.3
PNTR	Pine Nut	33.77	97	P		P	00 45 44.1	+2.5
RES	Resolute Bay comp=Z,399nm,18.3s,baz=210,slow=40	34.02	26	LR		LR	01 01 24.9	
HLID	Hailey baz=305	34.12	86	P		P	00 45 44.5	0.0
WAKR	Walker comp=Z,8.3nm,1.0s	34.25	98	IAmb		IAmb	00 45 49.4	
BMN	Battle Mountai comp=Z,8.2nm,0.9s	34.33	93	IAmb		IAmb	00 45 48.6	
EGMT	Eagleton comp=Z,8.6nm,1.1s	34.45	76	IAmb		IAmb	00 46 17.8	
EGMT	Eagleton baz=300	34.45	76	P		P	00 45 47.3	+0.1
YAK	Yakutsk comp=Z,344nm,19.2s,baz=107,slow=39	34.45	311	LR		LR	01 01 08.7	
KVN	Kaiserville comp=Z,22nm,1.3s	34.69	96	IAmb		IAmb	00 45 52.6	
NVAR	Mina Array Bea comp=Z,3.4nm,0.8s,baz=300,slow=9.1,SNR=19	34.97	97	P		P	00 45 53.5	+1.5
NVAR	comp=Z,141nm,21.0s,baz=274,slow=32 comp=Z,3.4nm,0.8s			LR		LR	00 57 48.9	
MDPB	Devils Postpil comp=Z,12nm,1.0s	35.04	98	IAmb		IAmb	00 45 55.4	
NV11	Mina Array Sit comp=Z,20nm,1.4s	35.06	96	IAmb		IAmb	00 45 55.1	
ASAJ	Asahikawa comp=Z,192nm,21.6s,baz=110,slow=34	35.16	276	LR		LR	00 58 59.7	
ELK	Elko comp=Z,7.2nm,0.8s	35.31	91	IAmb		IAmb	00 45 57.1	
ELK	Elko comp=Z,210nm,19.2s,baz=294,slow=32	35.31	91	LR		LR	00 58 01.9	
YHH	Holmes Hill	35.54	82			pP	00 46 06.9	-1.1
H17A	Grant Village comp=Z,8.9nm,1.4s	35.92	82	IAmb		IAmb	00 46 03.0	
H17A	Grant Village baz=304	35.92	82	P		P	00 46 00.6	+0.6
FLWY	Flagg Ranch comp=Z,11nm,1.4s	36.02	83	IAmb		IAmb	00 46 03.9	
VES	Vestal, Richgr baz=314	36.26	101	P		P	00 46 02.6	-0.1
RLMT	Red Lodge comp=Z,9.2nm,1.3s	36.28	80	IAmb		IAmb	00 46 05.7	
RLMT	Red Lodge baz=304	36.28	80	P		P	00 46 03.8	+0.7
CWC	Cottonwood Cre baz=313	36.44	99	P		P	00 46 05.4	+1.0
GRAC	Grapevine Rang baz=312	36.48	98	P		P	00 46 05.7	+1.1
R11B	Troy Canyon, C comp=Z,14nm,1.0s	36.64	94	IAmb		IAmb	00 46 08.3	
R11B	Troy Canyon, C baz=311,SNR=17	36.64	94	P		P	00 46 06.7	+0.6
ISA	Isabella, Lake	36.74	100	P		P	00 46 07.1	+0.2
ISA	comp=Z,27nm,1.4s			IAmb		IAmb	00 46 08.7	
ISA	Isabella, Lake baz=314	36.74	100	P		P	00 46 07.3	+0.4
ISA	Isabella, Lake comp=Z,27nm,1.4s	36.74	100	P pmax		P pmax	00 46 07.1	+0.2
SPR3	Spring Creek 3	36.96	92	P		P	00 46 09.8	+0.7
SPR3	comp=Z,20nm,1.4s			IAmb		IAmb	00 46 12.8	
HWUT	Hardware Ranch	36.97	87	P		P	00 46 08.8	-0.2
S11A	Rachel	37.00	95	P		P	00 46 09.3	+0.1
S11A	comp=Z,22nm,1.4s			IAmb		IAmb	00 46 13.6	
MPMC	Manual Prospec baz=313,SNR=7.6	37.05	99	P		P	00 46 09.7	0.0
WCT	Wildcat Mounta	37.05	97	P		P	00 46 09.6	0.0
WCT	comp=Z,13nm,1.4s			IAmb		IAmb	00 46 11.9	
DUG	Dugway, Tooele	37.10	90	P		P	00 46 09.7	-0.3
DUG	comp=Z,11nm,1.1s			IAmb		IAmb	00 46 12.1	
DUG	Dugway, Tooele baz=309,SNR=7.4	37.10	90	P		P	00 46 11.4	+1.4
DUG	Dugway, Tooele comp=Z,11nm,1.2s	37.10	90	P pmax		P pmax	00 46 09.7	-0.3
FURC	Furnace Creek, baz=313,SNR=7.8	37.13	98	P		P	00 46 09.2	-1.0
LAO	LASA Array	37.20	76	P		P	00 46 11.2	+0.6
LAO	comp=Z,9.3nm,1.1s			IAmb		IAmb	00 46 12.6	
LAO	LASA Array baz=303	37.20	76	P		P	00 46 09.9	-0.8
LRMC	Laurel Mtn Rad baz=314	37.33	100	P		P	00 46 12.7	+0.6
DGMT	Dagmar	37.41	73	P		P	00 46 12.4	-0.1
DGMT	comp=Z,13nm,1.1s			IAmb		IAmb	00 46 13.8	
DGMT	Dagmar baz=301	37.41	73	P		P	00 46 12.3	-0.1
GWY	Greenwater Val comp=Z,20nm,1.1s	37.44	98	IAmb		IAmb	00 46 15.1	
BW06	Boulder Array baz=306	37.47	84	P		P	00 46 13.0	-0.2
PDAR	Pinedale Array comp=Z,0.8nm,0.8s,baz=329,slow=5.2,SNR=7.7	37.47	84	P		P	00 46 14.2	+0.9
PDAR	comp=Z,74nm,20.6s,baz=312,slow=33 comp=Z,0.8nm,0.8s			LR		LR	00 59 31.5	
QSM	Queen of Sheba comp=Z,18nm,1.1s	37.47	98	IAmb		IAmb	00 46 15.3	
EDW2	Edwards Air Fo baz=315	37.56	101	P		P	00 46 14.4	+0.5
SHOC	Shoshone, Teco baz=313	37.87	98	P		P	00 46 16.3	-0.1
GSC	Goldstone, Bar comp=Z,22nm,1.1s	37.97	99	IAmb		IAmb	00 46 19.6	
GSC	Goldstone, Bar baz=314,SNR=6.2	37.97	99	P		P	00 46 17.4	0.0
FCC	Fort Churchill comp=Z,6.8nm,0.7s	37.98	53	IAmb		IAmb	00 46 28.4	
BSUT	Blindstream Ca comp=Z,8.0nm,1.4s	38.11	88	IAmb		IAmb	00 46 25.5	
BFSC	Mount Baldy Ra baz=315	38.21	101	P		P	00 46 18.9	-0.6
FMP	Fort Macarthur baz=316	38.22	102	P		P	00 46 19.7	+0.4
TUQ	Turquoise Moun baz=314	38.40	98	P		P	00 46 20.6	-0.4
CCUT	Cedar City comp=Z,11nm,1.3s	38.48	93	IAmb		IAmb	00 46 25.0	
HEC	Hector,Ludlow baz=314	38.57	99	P		P	00 46 22.1	-0.3
BBRC	Big Bear Solar baz=315	38.63	100	P		P	00 46 23.7	+0.6
KLR	Kul'dur	38.66	290	*ce*P		P	00 46 22.0	-0.9
KLR	comp=Z,2.0nm,1.1s			pmax		pmax		
KLR	Kul'dur comp=Z,203nm,21.7s,baz=46,slow=35	38.66	290	LR		LR	01 01 37.0	
V12A	Nelson comp=Z,24nm,1.2s	38.83	97	IAmb		IAmb	00 46 27.1	
MTPU	Mount Pierson comp=Z,12nm,1.3s	38.86	92	IAmb		IAmb	00 46 27.6	
Q16A	Castle Valley comp=Z,28nm,1.5s	38.89	90	IAmb		IAmb	00 46 27.6	
LCMT	Little Creek M comp=Z,9.6nm,1.0s	38.91	94	IAmb		IAmb	00 46 27.7	
P18A	Preston Nutter comp=Z,19nm,1.5s	38.99	88	IAmb		IAmb	00 46 28.1	
GMRC	Granite Mounta baz=314,SNR=7.2	39.00	99	P		P	00 46 27.1	+1.0
SRU	San Rafael Swe comp=Z,17nm,1.4s	39.16	89	IAmb		IAmb	00 46 30.4	
K22A	Casper baz=307	39.33	82	P		P	00 46 29.5	+0.7
BELC	Belle Mtn. Jos baz=315	39.35	100	P		P	00 46 28.9	-0.2
PFO	Pinyon Flats O baz=316	39.36	101	P		P	00 46 29.4	+0.3
PFO	Pinyon Flats O comp=Z,315nm,19.1s,baz=272,slow=31	39.36	101	LR		LR	00 59 39.1	
TPFO	Pinon Flats baz=316	39.37	101	P		P	00 46 29.2	+0.1
PMD	Palm Desert	39.38	101	IAmb		IAmb	00 46 30.8	

comp=Z,18nm,1.1s
109C Camp Elliot, M 39.50 102 P P 00 46 31.0 +1.0
baz=316
NEE2 Needles Airpor 39.63 98 P P 00 46 32.4 +1.2
baz=314
IRM Iron Mountain 39.74 99 P P 00 46 33.2 +1.1
baz=315,SNR=5.3
HMU Henry Mountain 39.79 91 IAmb IAmb 00 46 34.8
comp=Z,16nm,0.8s
W13A Hualapai Mount 39.83 97 IAmb IAmb 00 46 35.2
comp=Z,13nm,0.9s
O20A White River Ci 39.86 86 IAmb IAmb 00 46 34.6
comp=Z,11nm,0.9s
O20A White River Ci 39.86 86 P P 00 46 33.9 +0.6
baz=309,SNR=8.0
U15A North Rim 39.87 94 IAmb IAmb 00 46 35.8
comp=Z,23nm,1.3s
MONP2 Monument Peak 39.90 101 P P 00 46 33.7 +0.1
baz=316
RSSD Black Hills 39.92 78 P P 00 46 34.5 +0.8
RSSD Black Hills 39.92 78 P P 00 46 33.9 +0.2
baz=306
RSSD Black Hills 39.92 78 P P 00 46 34.5 +0.8
RSSD pmax pmax
comp=Z,5.0nm,0.9s
BC3 Big Chuckawall 39.92 100 P P 00 46 34.1 +0.4
baz=315
SWSC Sam W. Stewart 40.22 101 P P 00 46 35.4 -0.7
baz=316
H11N2 WAKE ISLAND Hy 40.23 224 T T 01 29 56.1
baz=26,slow=76,SNR=819
PDMCI Parker Dam,Lak 40.23 98 P P 00 46 36.4 +0.2
baz=315
H11N3 WAKE ISLAND Hy 40.23 224 T T 01 29 55.1
baz=26,slow=76,SNR=917
H11N1 WAKE ISLAND Hy 40.25 224 T T 01 30 05.3
baz=26,slow=76,SNR=760
IKP In-Ko-Pah, Jac 40.25 101 P P 00 46 35.7 -0.8
baz=316
MDND Maddock 40.34 71 P P 00 46 38.1 +1.2
MDND Maddock 40.34 71 P P 00 46 36.3 -0.6
baz=303
N23A Red Feather La 40.75 84 IAmb IAmb 00 46 42.1
comp=Z,18nm,1.4s
N23A Red Feather La 40.75 84 P P 00 46 40.2 -0.4
baz=309
WUAZ Wupatki 41.03 94 P P 00 46 43.2 +0.2
baz=313
ULM Lac du Bonnet 41.10 66 eP P 00 46 44.3 +1.2
ULM pmax pmax
comp=Z,1.0nm,0.5s
ULM Lac du Bonnet 41.10 66 P P 00 46 43.3 +0.2
comp=Z,1.4nm,0.6s,baz=307,slow=11,SNR=3.7
ULM LR LR 01 02 48.8
comp=Z,183nm,21.4s,baz=286,slow=35
comp=Z,1.4nm,0.6s
USRK Ussuriysk Ar. 41.33 283 LR LR 01 05 13.8
comp=Z,91nm,19.3s,baz=63,slow=38
H11S1 WAKE ISLAND Hy 41.41 223 T T 01 31 28.2
baz=25,slow=76,SNR=2024
H11S2 WAKE ISLAND Hy 41.42 223 T T 01 31 32.1
baz=25,slow=76,SNR=1712
H11S3 WAKE ISLAND Hy 41.42 223 T T 01 31 31.8
baz=25,slow=76,SNR=448
MVCO Mesa Verde 41.60 90 P P 00 46 47.2 -0.5
baz=312
X16A Lo Mia Camp, P 41.75 95 IAmb IAmb 00 46 51.4
comp=Z,7.8nm,0.9s
AGMN Agassiz Nation 42.18 68 P P 00 46 51.1 -0.8
baz=304
S22A 4UR Ranch, Cre 42.24 88 P P 00 46 52.3 -0.7
baz=311
Q24A Divide 42.45 85 P P 00 46 54.8 +0.2
baz=310
MDJ Mudanjiang 42.46 285 P P 00 46 54.3 0.0
MDJ pP pP 00 47 05.6 -0.6
MDJ sP sP 00 47 10.6 -0.7
MDJ PP PP 00 48 33.6 +0.5
MDJ PcP PcP 00 48 48.0 +1.5
MDJ ScP ScP 00 52 35.0 +1.6
MDJ PcS PcS 00 52 39.6 +1.2
MDJ S S 00 53 11.8 -1.2
MDJ sS sS 00 53 29.3 -3.2
MDJ SS SS 00 56 19.6 -3.4
MDJ ScS ScS 00 56 52.9 +1.2
MDJ pmax pmax
comp=Z,130nm,1.5s
MDJ pmax pmax
comp=Z,190nm,4.5s
MDJ LR LR
comp=N,170nm,13.6s
MDJ LR LR
comp=E,180nm,14.8s
MDJ LR LR
comp=Z,280nm,18.2s
MJAR Matsushiro Arr 42.50 270 LR LR 01 01 47.1
comp=Z,116nm,21.9s,baz=63,slow=32
X18A Snowflake 42.56 94 IAmb IAmb 00 46 57.8
comp=Z,11nm,1.0s
214A Organ Pipe Nat 42.68 99 P P 00 46 56.5 +0.2
baz=316
K30B Basset 43.36 77 P P 00 47 02.7 +1.0
TUC Tucson 43.63 97 P P 00 47 05.6 +1.6
TUC IAmb IAmb 00 47 06.1
comp=Z,11nm,1.0s
TUC Tucson 43.63 97 P P 00 47 03.6 -0.3
baz=316
TUC Tucson 43.63 97 P P 00 47 05.6 +1.6
TUC pmax pmax
comp=Z,11nm,1.0s
KSCO Kaye Shedlock' 43.91 83 P P 00 47 06.1 -0.2
baz=311
JHJ Hachijo jima 2 43.92 265 LR LR 01 02 23.2
comp=Z,118nm,21.9s,baz=110,slow=32
T25A Trinidad 44.09 87 IAmb IAmb 00 47 09.6
comp=Z,17nm,1.1s
T25A Trinidad 44.09 87 P P 00 47 08.2 +0.4
baz=312
ANMO Albuquerque 44.35 91 P P 00 47 11.2 +1.3
ANMO IAmb IAmb 00 47 11.5
comp=Z,9.5nm,1.4s
ANMO Albuquerque 44.35 91 P P 00 47 09.8 -0.1
baz=314
ANMO Albuquerque 44.35 91 P P 00 47 11.2 +1.3
ANMO pmax pmax
comp=Z,10.0nm,1.5s
ANMO Albuquerque 44.35 91 LR LR 01 03 25.0
comp=Z,170nm,18.0s,baz=85,slow=33
ECSD EROS Data Cent 44.44 74 P P 00 47 09.7 -0.6
ECSD IAmb IAmb 00 47 10.3
comp=Z,4.4nm,0.7s
BGNE Belgrade 45.00 78 P P 00 47 14.4 -0.4
baz=309
121A Cookes Peak, D 45.25 94 P P 00 47 16.6 -0.4
baz=315
CN2 Changchun 45.33 287 eP P 00 47 10.8 -6.5
CN2 esP pP 00 47 28.4 -0.9
CN2 eS S 00 53 45.4 -9.3
RTBA Rita Blanca 45.55 86 IAmb IAmb 00 47 20.4
comp=Z,6.8nm,0.9s
CBKS Cedar Bluff 45.75 81 P P 00 47 20.9 +0.1
baz=311
FRB Frobisher Bay 46.31 38 LR LR 01 09 32.0
comp=Z,472nm,18.1s,baz=345,slow=40
NRIK Noril'sk 46.63 332 i P P 00 47 27.6 +0.4
NRIK pmax pmax
comp=Z,4.0nm,1.3s
NRIK Noril'sk 46.63 332 P P 00 47 27.5 +0.4
comp=Z,1.9nm,0.7s,baz=64,slow=7.8,SNR=5.4
NRIK LR LR 01 11 27.8
comp=Z,143nm,18.0s,baz=2.5,slow=42
comp=Z,1.9nm,0.7s
N35A Tabor 46.81 76 pP 00 47 39.0 -2.0
AMTX Amarillo 47.24 87 P P 00 47 32.8 +0.2
baz=314
MNTX Cornudas Mount 47.27 93 P P 00 47 32.0 -0.7
baz=316,SNR=12
KSU1 Kansas State U 47.39 79 P P 00 47 32.7 -0.9
baz=311
SCIA State Center 47.53 74 P P 00 47 33.7 -0.9
baz=310
SMWD Samnorwood 47.94 86 IAmb IAmb 00 47 39.0
comp=Z,13nm,1.1s
KSRS Korea Array 47.99 279 P P 00 47 39.2 +1.0
comp=Z,1.0nm,0.6s,baz=62,slow=8.4,SNR=2.7
KSRS LR LR 01 07 49.9
comp=Z,74nm,20.7s,baz=55,slow=36
comp=Z,1.0nm,0.6s
SPITS Spitsbergen Ar 48.46 360 LR LR 01 07 18.5
comp=Z,157nm,21.7s,baz=321,slow=35
T35A Sooner Cattle 48.91 81 IAmb IAmb 00 47 45.6
comp=Z,9.3nm,0.9s
OK048 Pawnee Station 49.00 82 IAmb IAmb 00 47 46.3
comp=Z,10nm,0.8s
WMOK Wichita Mounta 49.06 85 IAmb IAmb 00 47 47.5
comp=Z,7.5nm,0.8s
WMOK Wichita Mounta 49.06 85 P P 00 47 46.0 -0.5
baz=314,SNR=9.3
MNHN Monahans 49.08 91 IAmb IAmb 00 47 47.8
comp=Z,6.7nm,0.8s
JNU Nakatsue 49.22 272 LR LR 01 08 39.2
comp=Z,76nm,21.5s,baz=29,slow=36
APMT Aspermont 49.25 87 IAmb IAmb 00 47 48.6
comp=Z,13nm,1.1s
ALPN Alpine 49.26 93 IAmb IAmb 00 47 49.4
comp=Z,7.0nm,0.9s
W35A Tecumseh 49.90 83 IAmb IAmb 00 47 53.6
comp=Z,10nm,0.8s
TXAR Lajitas Array 50.00 94 P P 00 47 54.6 +0.8
comp=Z,8.5nm,0.7s,baz=301,slow=5.3,SNR=92
TXAR LR LR 01 07 22.1
comp=Z,75nm,18.9s,baz=325,slow=34
comp=Z,8.5nm,0.7s
TUL3 Leonard 50.02 81 IAmb IAmb 00 47 54.1
comp=Z,9.0nm,0.8s
TUL3 Leonard 50.02 81 P P 00 47 53.4 -0.4
baz=314
ABTX Abilene, Hawle 50.03 87 P P 00 47 54.1 +0.2
ABTX Abilene, Hawle 50.03 87 P P 00 47 53.2 -0.7
baz=315
S39A Bolivar 50.25 78 IAmb IAmb 00 47 54.3
comp=Z,6.1nm,0.8s
RLO Rose Lookout 50.30 81 P P 00 47 55.3 -0.6
RLO IAmb IAmb 00 48 24.0
comp=Z,13nm,0.9s
OZNA Ozona 50.36 90 P P 00 47 56.4 0.0
R40A Maddies Statio 50.46 77 IAmb IAmb 00 47 57.1
comp=Z,11nm,0.8s
SAND Sanderson 50.46 92 P P 00 47 57.5 +0.2
SAND IAmb IAmb 00 47 58.4
comp=Z,7.7nm,1.0s
U38A Gravette 50.48 80 IAmb IAmb 00 47 57.0
comp=Z,12nm,0.8s
LOOK Love County 50.53 84 P P 00 47 57.6 0.0
HDIL Hopedale 50.65 73 P P 00 47 57.9 -0.6
HDIL Hopedale 50.65 73 P P 00 47 56.3 -2.1
baz=312
PLPT Palo Pinto 50.68 86 P P 00 47 58.9 +0.1
HHAR Hobbs 50.85 80 P P 00 47 58.7 -1.4
HHAR IAmb IAmb 00 47 59.5
comp=Z,8.6nm,0.9s
Z35A Perchaven, San 50.95 85 P P 00 48 00.9 +0.1
FW07 Weatherford 51.08 86 P P 00 48 02.0 +0.2
P43A Skaggs, Pawnee 51.13 74 P P 00 48 01.4 -0.8
X37A Clayton 51.18 82 P P 00 48 02.3 -0.3
CCM Cathedral Cave 51.21 76 P P 00 48 01.7 -1.1
CCM IAmb IAmb 00 48 01.9
comp=Z,11nm,1.0s
CCM Cathedral Cave 51.21 76 P P 00 48 00.5 -2.2
baz=313
CCM Cathedral Cave 51.21 76 P P 00 48 01.7 -1.1
CCM pmax pmax
comp=Z,11nm,1.0s
MGMO Mountain Grove 51.23 78 IAmb IAmb 00 48 02.3
comp=Z,8.1nm,0.7s
BRDY Brady 51.36 88 IAmb IAmb 00 48 04.6
comp=Z,9.5nm,0.8s
SLM Saint Louis 51.40 75 P P 00 48 03.4 -0.8
SLM Saint Louis 51.40 75 P P 00 48 03.4 -0.8
SLM pmax pmax
comp=Z,28nm,1.2s
JCT Junction City 51.47 89 P P 00 48 04.6 -0.2
JCT Junction City 51.47 89 P P 00 48 04.3 -0.4
baz=316,SNR=8.0
JCT Junction City 51.47 89 P P 00 48 04.6 -0.2
JCT pmax pmax
comp=Z,21nm,0.8s
FW13 Cleburne 51.54 86 P P 00 48 05.2 -0.1
FVM French Village 51.73 76 P P 00 48 05.3 -1.4
FVM IAmb IAmb 00 48 06.3
comp=Z,11nm,0.8s
FVM French Village 51.73 76 P P 00 48 05.3 -1.4
FVM pmax pmax
comp=Z,11nm,0.9s
DRIO Del Rio 51.74 91 P P 00 48 06.1 -0.7
DRIO IAmb IAmb 00 48 07.0
comp=Z,12nm,0.7s
WHTX Lake Whitney, 51.78 86 P P 00 48 06.3 -0.8
WHTX Lake Whitney, 51.78 86 P P 00 48 06.5 -0.5
baz=316
SFIN Lafayette 52.01 71 P P 00 48 07.7 -1.0
baz=312
FCAR Ozark Folk Cen 52.19 79 P P 00 48 08.2 -1.8
FCAR IAmb IAmb 00 48 09.1
comp=Z,11nm,0.8s
MIAR Mount Ida 52.27 81 IAmb IAmb 00 48 11.1
comp=Z,12nm,0.9s
MIAR Mount Ida 52.27 81 P P 00 48 09.4 -1.3
baz=315,SNR=6.9
PBMO Poplar Bluff 52.56 77 IAmb IAmb 00 48 12.7
comp=Z,8.0nm,0.9s
435B Jarrell 52.57 87 P P 00 48 11.4 -1.5
baz=316
SCHQ Schefferville 52.59 46 P P 00 48 13.2 +0.4
comp=Z,3.8nm,0.9s,baz=331,slow=9.2,SNR=6.4
comp=Z,3.8nm,0.9s
LCAR Lake Charles 52.63 78 IAmb IAmb 00 48 12.0
comp=Z,5.4nm,1.0s
ULN Ulaanbaatar 52.66 302 P P 00 48 13.2 -0.4
ULN IAmb IAmb 00 48 14.8
comp=Z,5.8nm,1.1s
ULN Ulaanbaatar 52.66 302 P P 00 48 13.2 -0.4
ULN pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 53.01 303 eP P 00 48 16.9 +0.8
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 53.01 303 P P 00 48 16.0 -0.1
comp=Z,2.3nm,0.8s,baz=50,slow=7.6,SNR=12
comp=Z,2.3nm,0.8s
O48B Farmland 53.19 70 P P 00 48 15.9 -1.5
baz=313
833A Chaparral WMA, 53.28 91 P P 00 48 17.4 -0.8
baz=318,SNR=6.8
NATX Nacogdoches 53.60 84 P P 00 48 19.2 -1.3
baz=316
P49A Miami Univ. Ec 53.93 70 P P 00 48 21.2 -1.6
baz=314
WCI Wyandotte Cave 53.94 73 P P 00 48 20.2 -2.7
baz=314
HKT Hockley 54.21 87 P P 00 48 26.3 +1.4
HKT Hockley 54.21 87 P P 00 48 26.3 +1.4
HKT pmax pmax
comp=Z,34nm,1.4s
WVT Waverly 54.52 76 P P 00 48 26.1 -1.0
WVT Waverly 54.52 76 P P 00 48 24.8 -2.3
baz=315
WVT Waverly 54.52 76 P P 00 48 26.1 -1.0
WVT pmax pmax
comp=Z,17nm,0.8s
OXF Oxford 54.74 78 P P 00 48 27.1 -1.6
baz=315,SNR=8.2
HHC Hu-ho-hao-te 55.03 293 eP P 00 48 31.3 +0.4
HHC pP pP 00 48 38.5 -4.6
HHC S S 00 56 08.3 -1.6
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,82nm,4.9s
HHC LR LR
comp=N,190nm,14.7s
HHC LR LR
comp=E,190nm,14.5s
HHC LR LR
comp=Z,190nm,16.9s
T50A Nancy 55.60 73 IAmb IAmb 00 48 34.9
comp=Z,7.9nm,0.8s
HNS HongShan 55.68 288 ⇑P P 00 48 36.4 +1.0
HNS pP pP 00 48 46.8 -0.9
HNS eS S 00 56 18.8 +0.4
HNS pmax pmax
comp=Z,6.0nm,1.2s
HNS LR LR
comp=N,210nm,17.5s
HNS LR LR
comp=Z,210nm,21.5s
VBMS Vicksburg 55.72 81 P P 00 48 34.5 -1.3
baz=316
BTO Baotou 56.04 294 eP P 00 48 37.8 -0.4
BTO pP pP 00 48 50.0 -0.4
BTO sP sP 00 48 55.8 +0.4
BTO PP PP 00 50 44.3 +1.3
BTO S S 00 56 23.8 +0.4
BTO Baotou 56.04 294 SS SS 01 00 01.3 -8.1
BTO pmax pmax
comp=Z,9.0nm,0.7s
BTO pmax pmax
comp=Z,280nm,6.9s
BTO LR LR
comp=N,300nm,6.6s
BTO LR LR
comp=E,310nm,5.5s
BTO LR LR
comp=Z,250nm,6.0s
X48A Hartselle 56.15 76 IAmb IAmb 00 48 38.2
comp=Z,7.2nm,0.7s
TZTN Tazewell 56.67 72 P P 00 48 40.1 -2.5
baz=315
BINY Binghamton 56.84 63 P P 00 48 40.7 -3.0
baz=315
ARCES ARCESS Array B 56.92 356 eP P 00 48 46.2 +2.3
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 56.92 356 P P 00 48 43.3 -0.6
comp=Z,2.1nm,0.8s,baz=13,slow=7.2,SNR=7.1
comp=Z,2.1nm,0.8s
Y49A Blount Mountai 56.94 77 IAmb IAmb 00 48 43.8
comp=Z,10nm,0.8s
LRAL Lakeview Retre 57.19 78 IAmb IAmb 00 48 45.4
comp=Z,5.7nm,0.8s
LRAL Lakeview Retre 57.19 78 P P 00 48 44.7 -1.6
baz=316
BLA Blacksburg 57.96 70 P P 00 48 50.3 -1.4
baz=316
ZALV Zalesovo Beam 58.33 319 eP P 00 48 54.6 +0.6
ZALV Zalesovo Beam 58.33 319 P P 00 48 54.3 +0.3
comp=Z,0.4nm,0.3s,baz=36,slow=6.0,SNR=4.9
ZALV LR LR 01 15 34.1
comp=Z,231nm,20.8s,baz=22,slow=38
comp=Z,0.4nm,0.3s
KMSC Kings Mountain 58.93 72 P P 00 48 56.5 -2.0
baz=316
GOGA Godfrey 58.97 75 P P 00 48 56.6 -2.0
baz=317
DGZ Jazzator, Alta 60.49 315 i P P 00 49 09.2 +0.1
DGZ pmax pmax
comp=Z,3.0nm,1.6s
XAN Xi'an 61.35 289 ⇓P P 00 49 15.8 +0.7
XAN pmax pmax
comp=Z,7.0nm,1.2s
GTA Gaotai 62.33 299 eP P 00 49 21.4 -0.3
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA LR LR
comp=N,140nm,16.0s
GTA LR LR
comp=E,140nm,14.5s
GTA LR LR
comp=Z,240nm,16.4s
KURK Kurchatov 63.23 320 i P P 00 49 28.2 +0.9
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 63.34 320 P P 00 49 28.5 +0.5
comp=Z,1.5nm,1.0s,baz=48,slow=6.7,SNR=5.4
KURBB LR LR 01 19 12.7
comp=Z,335nm,19.0s,baz=168,slow=38
comp=Z,1.5nm,1.0s
BVAR Borovoye Array 64.24 327 P P 00 49 33.6 -0.4
comp=Z,0.8nm,0.6s,baz=55,slow=5.6,SNR=8.4
BVAR LR LR 01 19 00.3
comp=Z,231nm,18.7s,baz=7.7,slow=38
comp=Z,0.8nm,0.6s
BRVK Borovoye 64.25 327 ceP P 00 49 35.0 +1.0
BRVK pmax pmax
comp=Z,4.0nm,1.7s
VALR Valaam 64.69 352 i P P 00 49 36.8 +0.1
ARU Arti 64.71 335 c iP P 00 49 35.9 -1.1
ARU 00 50 08.9
ARU 00 51 55.4
ARU S S 00 58 13.7 0.0
ARU SS SS 01 02 20.0 -4.1
ARU pmax pmax
comp=Z,5.0nm,1.1s
KIRV Kirov 64.78 341 ceP P 00 49 36.5 -0.8
WMQ Urumqi 64.89 310 eP P 00 49 44.5 +6.0
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ LR LR
comp=Z,250nm,17.7s
MK31 Makanchi Array 64.91 316 P P 00 49 38.3 -0.2
MK31 Makanchi Array 64.91 316 P P 00 49 38.3 -0.2
MK31 pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 64.91 316 eP P 00 49 38.2 -0.3
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 64.91 316 P P 00 49 38.5 +0.1
comp=Z,0.7nm,0.6s,baz=48,slow=5.6,SNR=11
MKAR LR LR 01 19 22.0
comp=Z,286nm,20.4s,baz=34,slow=37
comp=Z,0.7nm,0.6s
FINES FINESS Array B 64.96 354 P P 00 49 38.4 -0.1
comp=Z,5.1nm,1.0s,baz=6.2,slow=6.1,SNR=12
comp=Z,5.1nm,1.0s
NOA NORSAR Array B 65.64 2 P P 00 49 43.3 +0.3
comp=Z,1.5nm,1.0s,baz=360,slow=6.3,SNR=3.1
comp=Z,1.5nm,1.0s
HFS Hagfors 66.59 1 P P 00 49 49.1 +0.1
comp=Z,1.2nm,0.4s,baz=33,slow=3.5,SNR=14
comp=Z,1.2nm,0.4s
PETF Flores 67.62 92 P P 00 49 59.1 +3.0
VSU Vasula 67.88 354 ceP P 00 49 56.8 -0.4
VSU pmax pmax
comp=Z,35nm,2.5s
VSU Vasula 67.88 354 eP P 00 49 57.5 +0.3
MOS Moscow 69.46 347 eP P 00 50 10.6 +3.6
MOS e 00 50 32.6
OBN Obninsk 70.21 347 eP P 00 50 10.7 -0.9
OBN i 00 50 33.2
OBN pmax pmax
comp=Z,7.0nm,0.5s
EKA Eskdalemuir Ar 70.36 11 P P 00 50 13.0 +0.4
comp=Z,1.4nm,0.6s,baz=352,slow=5.1,SNR=5.4
comp=Z,1.4nm,0.6s
ABKAR Akbulak array 70.77 331 P P 00 50 15.8 +0.6
ABKAR Akbulak array 70.77 331 IAmb IAmb 00 50 17.1
comp=Z,2.8nm,0.8s
PABE Paberze 71.00 355 eP P 00 50 16.8 +0.3
PZH PanZhiHua 71.09 289 P P 00 50 17.6 -0.1
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.4s
AAK Ala-Archa 71.49 318 P P 00 50 21.1 +1.1
AAK IAmb IAmb 00 50 49.9
comp=Z,7.2nm,1.2s
AAK Ala-Archa 71.49 318 P P 00 50 21.1 +1.1
AAK pmax pmax
comp=Z,7.0nm,1.3s
MNK Minsk 71.73 352 i P P 00 50 20.2 -0.7
MNK i 00 52 59.9
MNK i PPP PPP 00 54 43.9
MNK i S S 00 59 37.3 0.0
MNK i SS SS 01 04 15.2 +2.9
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,12nm,0.9s
MNK pmax pmax
comp=N,5.0nm,1.0s
MNK MLR MLR
comp=E,47nm,14.0s
MNK MLR MLR
comp=Z,103nm,18.0s
MNK MLR MLR
comp=N,90nm,13.0s
PPT Papeete 72.10 165 LR LR 01 14 13.1
comp=N,224nm,20.6s,baz=354,slow=29
LPSR Galich'ya Gora 72.31 345 eP P 00 50 23.3 -1.1
LPSR pmax pmax
comp=Z,10.0nm,0.6s

DAV	**Davao City (W)**	**72.31**	**258**	LR	LR	01 17 05.9		
	comp=Z,116nm,21.9s,baz=56,slow=32							
SUW	**Suwalki**	**72.53**	**355**	*e*P	**P**	**00 50 26.2**	**+0.5**	
VSR	**Storozhevoye**	**73.62**	**345**	*e*P	**P**	**00 50 28.6**	**-3.6**	
VSR				pmax	pmax			
	comp=Z,9.0nm,1.1s							
SLVN	**Son La**	**73.88**	**284**	IAmb	IAmb	00 50 36.2		
	comp=Z,4.3nm,1.0s							
PMG	**Port Moresby**	**74.79**	**230**	LR	LR	01 18 33.4		
	comp=Z,95nm,20.4s,baz=356,slow=32							
AKASG	**Malin Array Be**	**75.39**	**351**	*e*P	**P**	**00 50 42.3**	**-0.1**	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**75.39**	**351**	P	**P**	**00 50 42.1**	**-0.3**	
	comp=Z,2.4nm,0.5s,baz=9.8,slow=5.6,SNR=16							
	comp=Z,2.4nm,0.5s							
AKBB	**Malin Array Si**	**75.39**	**351**	IAmb	IAmb	00 50 43.5		
	comp=Z,14nm,1.1s							
AKBB	**Malin Array Si**	**75.39**	**351**	*ce*P	**P**	**00 50 41.8**	**-0.6**	
AKBB				pmax	pmax			
	comp=Z,13nm,0.9s							
KIEV	**Kiev**	**75.39**	**351**	P	**P**	**00 50 42.5**	**0.0**	
KIEV				IAmb	IAmb	00 50 43.5		
	comp=Z,13nm,1.1s							
KIEV	**Kiev**	**75.39**	**351**	P	**P**	**00 50 42.5**	**0.0**	
KIEV				pmax	pmax			
	comp=Z,13nm,1.1s							
JACO	**JACO, Garabito**	**76.42**	**92**	P	**P**	**00 50 49.4**	**+0.6**	
CRAI	**Chiangrai**	**76.78**	**286**	P	**P**	**00 50 50.9**	**0.0**	
CRAI				IAmb	IAmb	00 50 53.9		
	comp=Z,3.9nm,0.8s							
WLF	**Walferdange**	**76.80**	**6**	P	**P**	**00 50 50.6**	**+0.1**	
WLF				IAmb	IAmb	00 50 52.6		
	comp=Z,18nm,1.3s							
WLF	**Walferdange**	**76.80**	**6**	P	**P**	**00 50 50.6**	**+0.1**	
WLF				pmax	pmax			
	comp=Z,18nm,1.3s							
KWP	**Kalwaria Pacla**	**76.93**	**355**	P	**P**	**00 50 51.7**	**+0.4**	
KWP	**Kalwaria Pacla**	**76.93**	**355**	P	**P**	**00 50 51.7**	**+0.4**	
KWP				pmax	pmax			
	comp=Z,20nm,1.2s							
MORC	**Moravsky Berou**	**76.96**	**358**	*e*P	**P**	**00 50 51.7**	**+0.2**	
SIMJ	**Simiganj**	**77.05**	**320**	P	**P**	**00 50 52.9**	**+0.6**	
SIMJ				IAmb	IAmb	00 50 53.4		
	comp=Z,8.4nm,0.9s							
STHS	**Stebnicka Huta**	**77.21**	**356**	*e*P	**P**	**00 50 54.5**	**+1.6**	
STHS	**Stebnicka Huta**	**77.21**	**356**	*e*P	**P**	**00 50 54.5**	**+1.6**	
VRAC	**Vranov**	**77.44**	**359**	*e*P	**P**	**00 50 53.7**	**-0.4**	
LANS	**Liptovska Anna**	**77.54**	**357**	*e*P	**P**	**00 50 56.8**	**+2.1**	
LANS				pmax	pmax			
	comp=Z,2.0nm,0.8s							
LANS	**Liptovska Anna**	**77.54**	**357**	*e*P	**P**	**00 50 56.8**	**+2.1**	
KHC	**Kasperske Hory**	**77.61**	**1**	*ce*P	**P**	**00 50 56.1**	**+0.9**	
KHC				pmax	pmax			
	comp=Z,17nm,1.8s							
KOLS	**Kolonicke sedl**	**77.65**	**355**	*e*P	**P**	**00 50 56.6**	**+1.3**	
KOLS				pmax	pmax			
	comp=Z,4.0nm,0.8s							
KOLS	**Kolonicke sedl**	**77.65**	**355**	*e*P	**P**	**00 50 56.6**	**+1.3**	
CRVS	**Cervenica-Dubn**	**77.71**	**356**	*e*P	**P**	**00 50 57.3**	**+1.6**	
CRVS	**Cervenica-Dubn**	**77.71**	**356**	*e*P	**P**	**00 50 57.2**	**+1.6**	
GERES	**GERESS Array B**	**77.90**	**1**	P	**P**	**00 50 57.4**	**+0.6**	
	comp=Z,0.7nm,0.7s,baz=35,slow=4.9,SNR=4.1							
	comp=Z,0.7nm,0.7s							
VYHS	**Vyhne**	**78.21**	**358**	*e*P	**P**	**00 50 59.7**	**+1.2**	
VYHS				pmax	pmax			
	comp=Z,9.0nm,1.6s							
VYHS	**Vyhne**	**78.21**	**358**	*e*P	**P**	**00 50 59.7**	**+1.2**	
MODS	**Modra-Piesok**	**78.36**	**359**	*e*P	**P**	**00 51 01.2**	**+1.9**	
MODS				pmax	pmax			
	comp=Z,53nm,2.2s							
MODS	**Modra-Piesok**	**78.36**	**359**	*e*P	**P**	**00 51 01.2**	**+1.9**	
BUR08	**Bucovina Ar. S**	**78.75**	**353**	P	**P**	**00 51 01.1**	**-0.4**	
PSZ	**Piszkesteto**	**78.76**	**357**	P	**P**	**00 51 01.9**	**+0.3**	
PSZ				IAmb	IAmb	00 51 04.0		
	comp=Z,4.5nm,0.9s							
PSZ	**Piszkesteto**	**78.76**	**357**	P	**P**	**00 51 01.9**	**+0.3**	
PSZ				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BURAR	**Bucovina Array**	**78.78**	**353**	P	**P**	**00 51 01.4**	**-0.3**	
BURAR	**Bucovina Array**	**78.78**	**353**	P	**P**	**00 51 01.4**	**-0.3**	
BURAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
CONA	**Conrad Observa**	**78.82**	**360**	*i* P	**P**	**00 51 02.0**	**+0.1**	
	comp=Z,0.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**79.00**	**286**	P	**P**	**00 51 03.5**	**+0.3**	
CMAR	**Chiang Mai Arr**	**79.00**	**286**	*e*P	**P**	**00 51 03.9**	**+0.7**	
CMAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**79.00**	**286**	P	**P**	**00 51 04.1**	**+0.8**	
	comp=Z,1.7nm,0.9s,baz=18,slow=5.4,SNR=12							
CMAR				LR	LR	01 28 27.0		
	comp=Z,57nm,19.9s,baz=80,slow=38							
	comp=Z,1.7nm,0.9s							
MOTA	**Moosalm**	**79.35**	**3**	*e*P	**P**	**00 51 05.9**	**+1.0**	
	comp=Z,0.1nm,0.1s							
FETA	**Feichten**	**79.66**	**3**	*e*P	**P**	**00 51 06.3**	**-0.3**	
	comp=Z,0.2nm,0.2s							
KBA	**Koelnbreinsper**	**79.66**	**1**	*i* P	**P**	**00 51 06.3**	**-0.4**	
	comp=Z,1.7nm,0.6s							
BCIP	**Isla Barro Col**	**79.68**	**89**		pP	00 51 17.2	-2.3	
ABTA	**Abfaltersbach**	**79.98**	**2**	*e*P	**P**	**00 51 08.3**	**0.0**	
	comp=Z,1.2nm,0.6s							
KIV	**Kislovodsk**	**79.99**	**340**	P	**P**	**00 51 09.4**	**+1.0**	
KIV				IAmb	IAmb	00 51 11.1		
	comp=Z,7.8nm,1.0s							
KIV	**Kislovodsk**	**79.99**	**340**	*e*P	**P**	**00 51 09.7**	**+1.3**	
KIV				pmax	pmax			
	comp=Z,7.0nm,1.1s							
SOKA	**Soboth**	**80.08**	**0**	*e*P	**P**	**00 51 10.0**	**+1.2**	
	comp=Z,1.2nm,0.6s							
KBZ	**Khabaz**	**80.17**	**340**	*e*P	**P**	**00 51 11.0**	**+1.9**	
KBZ				pmax	pmax			
	comp=Z,4.0nm,0.9s							
KBZ	**Khabaz**	**80.17**	**340**	P	**P**	**00 51 10.4**	**+1.2**	
	comp=Z,3.8nm,0.9s,baz=333,slow=1.1,SNR=12							
	comp=Z,3.8nm,0.9s							
OBKA	**Obir**	**80.24**	**0**	*i* P	**P**	**00 51 10.6**	**+0.9**	
	comp=Z,4.6nm,0.7s							
ZEI	**Tsey**	**80.86**	**339**	*e*P	**P**	**00 51 13.3**	**+0.1**	
ZEI				pmax	pmax			
	comp=Z,8.0nm,1.6s							
GEYT	**Alibeck**	**81.58**	**327**	IAmb	IAmb	00 51 19.2		
	comp=Z,3.5nm,0.8s							
GEYT	**Alibeck**	**81.58**	**327**	P	**P**	**00 51 18.0**	**+1.1**	
GEYT	**Alibeck**	**81.58**	**327**	P	**P**	**00 51 17.9**	**+1.1**	
	comp=Z,3.4nm,0.8s,baz=285,slow=5.7,SNR=7.4							
	comp=Z,3.4nm,0.8s							
ESDC	**Sonseca Array**	**85.61**	**15**	P	**P**	**00 51 38.4**	**+0.8**	
	comp=Z,0.6nm,0.8s,baz=345,slow=5.9,SNR=4.9							
	comp=Z,0.6nm,0.8s							
BRTR	**Keskin Array B**	**85.68**	**346**	*ce*P	**P**	**00 51 39.2**	**+1.2**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BRTR	**Keskin Array B**	**85.68**	**346**	P	**P**	**00 51 38.9**	**+0.9**	
	comp=Z,1.4nm,0.8s,baz=6.1,slow=4.7,SNR=6.2							
	comp=Z,1.4nm,0.8s							
BAUV	**El Baul**	**86.84**	**79**	P	**P**	**00 51 44.0**	**+0.1**	
CLTB	**Caltabellotta**	**89.15**	**2**	P	**P**	**00 51 55.1**	**+0.4**	
COHC	**Cochancay**	**89.30**	**95**	P	**P**	**00 51 55.3**	**-0.2**	
PMOZ	**Porto Moniz, M**	**89.43**	**27**	P	**P**	**00 51 57.1**	**+1.0**	
RAYN	**Ar Rayn**	**98.83**	**332**	P	**P**	**00 52 37.8**	**-1.4**	
RAYN				IAmb	IAmb	00 53 03.0		
	comp=Z,1.7nm,1.0s							
RAYN	**Ar Rayn**	**98.83**	**332**	P	**P**	**00 52 37.8**	**-1.4**	
RAYN				pmax	pmax			
	comp=Z,2.0nm,1.0s							

*MOS **20** 00:53:01.7±1.0, 0.°39S×19.°83W, h12km, mb5.4/97, MS4.6/14, Error ellipse: s-maj=7.8km s-min=3.8km az=56.5*

*IDC **20** 00:53:02.0±0.5, 0.°46S×19.°81W, h0km, mb4.6/27, mbtmp4.6/28, ML5.6/2, MS4.6/59, Error ellipse: s-maj=17.8km s-min=12.0km az=138.0*

*BJI **20** 00:53:03.0±0.0, 0.°40S×19.°80W, h20km, mb5.0/5, mB5.6/3, Ms5.3/13, MS7 5.0/13*

*NEIC **20** 00:53:04.2, 0.°35S×19.°87W, h14km*

*NEIC **20** 00:53:04.2, 0.°25S×19.°77W, h14km, Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.00; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.26; $M_{\theta\phi}$-0.87; $M_{\phi r}$0.22; Fault plane solution: $M_0$1.00000×10^{17} NP1: ϕ_s259.72000°, δ82.16000°, λ-163.34000°. NP2:*

ϕ_s167.38000°, δ73.50000°, λ-8.18000°. Principal axes: T 0.9565, Plg6.0000°, Azm33.0000°; N 0.0889, Plg72.0000°, Azm284.0000°; P -1.0454, Plg17.0000°, Azm125.0000°;

*NEIC **20** 00:53:04.2±1.4, 0.°35S×0.°09×19.°87W×0.°08, h10km±1km, mb5.2/376, Ms_20 4.8/52, Mww5.3/19 Error ellipse: s-maj=14.9km s-min=13.0km az=162.0*

*GCMT **20** 00:53:06.2±0.1, 0.°29S±0.°01×19.°78W±0.°01, h15km, MW5.4/152, Moment Tensor Solution. s119,c203; s152,c289; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.03±.01; $M_{\theta\theta}$0.47±.02; $M_{\phi\phi}$-0.49±.02; $M_{r\theta}$0.31±.04; $M_{\theta\phi}$-1.32±.02; $M_{\phi r}$-0.03±.03; Best double couple: $M_0$1.44100×10^{17} NP1:ϕ_s80.00000°, δ87.00000°, λ168.00000°. NP2:ϕ_s170.00000°, δ78.00000°, λ3.00000°. Principal axes: T 1.4440, Plg11.0000°, Azm34.0000°; N -0.0070, Plg77.0000°, Azm244.0000°; P -1.4370, Plg6.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **20** 00:53:16.2, 0.°79N×18.°16W, h10km, mb5.2*

ISC 20 00:53:04.8±0.2, 0.°39S±0.°05×19.°83W±0.°04, h19km, n911, σ1s25/898, mb5.2/326, MS4.7/94, 35C-37D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.11**	**144**	Pn	**Pn**	**00 55 13.3**	**-1.7**
	baz=323,slow=13						
H10N2				Sn	Sn	00 56 43.4	-14
H10N2				T	T	01 04 38.3	
	baz=323,slow=74,SNR=1218						
H10N3	**ASCENSION HYDR**	**9.11**	**144**	Pn	**Pn**	**00 55 13.3**	**-1.7**
	baz=323,slow=13						
H10N3				Sn	Sn	00 56 41.3	-16
	baz=43,slow=74						
H10N3				T	T	01 04 40.8	
	baz=323,slow=74,SNR=1514						
H10N1	**ASCENSION HYDR**	**9.13**	**144**	Pn	**Pn**	**00 55 13.5**	**-1.8**
	baz=323,slow=13						
H10N1				Sn	Sn	00 56 43.3	-14
	baz=162,slow=74						
H10N1				T	T	01 04 24.1	
	baz=323,SNR=2531						
H10S3	**ASCENSION HYDR**	**9.94**	**149**	Pn	**Pn**	**00 55 25.6**	**-1.0**
	baz=176,slow=74						
H10S3				Sn	Sn	00 57 07.9	-10
H10S3				T	T	01 05 57.8	
	SNR=1219						
H10S2	**ASCENSION HYDR**	**9.96**	**149**	Pn	**Pn**	**00 55 25.7**	**-1.0**
	baz=44,slow=74						
H10S2				Sn	Sn	00 57 08.2	-10
H10S2				T	T	01 05 22.5	
	SNR=212						
MBO	**M'Bour**	**14.96**	**11**	Pn	**Pn**	**00 56 34.3**	**-1.1**
BBTS	**Babate**	**15.31**	**12**	Pn	**Pn**	**00 56 38.2**	**-1.8**
	37nm,0.3s,baz=257,slow=0.9,SNR=27						
BBTS				Sn	Sn	00 59 16.0	-13
	17nm,0.3s,baz=138,slow=3.0,SNR=7.3						
BBTS				LR	LR	01 01 34.4	
	comp=Z,2μm,19.0s,baz=100,slow=33						
SACV	**Santiago Islan**	**15.71**	**346**	Pn	**Pn**	**00 56 42.3**	**-3.0**
LIC	**Lamto**	**16.17**	**66**	*e*P	**Pn**	**00 56 49.7**	**-1.5**
	314nm,0.9s						
TIC	**Tounodi**	**16.35**	**64**	*e*P	**Pn**	**00 56 52.1**	**-1.4**
	62nm,1.0s						
KIC	**Kosan Boka**	**16.49**	**66**	*e*P	**Pn**	**00 56 53.2**	**-2.0**
	262nm,0.9s						
DBIC	**Dimbokro**	**16.51**	**65**	Pn	**Pn**	**00 56 54.0**	**-1.5**
DBIC	**Dimbokro**	**16.51**	**65**	*e*P	**Pn**	**00 56 53.9**	**-1.6**
DBIC	**Dimbokro**	**16.51**	**65**	P	**Pn**	**00 56 54.0**	**-1.5**
DBIC				pmax	pmax		
	comp=Z,559nm,1.6s						
DBIC	**Dimbokro**	**16.51**	**65**	Pn	**Pn**	**00 56 53.6**	**-1.9**
	comp=Z,12nm,0.3s,baz=240,slow=12,SNR=183						
DBIC				Sn	Sn	00 59 44.1	-14
	comp=Z,13nm,0.3s,baz=128,slow=3.0,SNR=11						
DBIC				LR	LR	01 02 04.1	
	comp=Z,2μm,19.4s,baz=228,slow=33						
	comp=Z,40nm,0.3s						
RCBR	**Riachuelo**	**16.92**	**251**		**Pn**	**00 56 58.1**	**-2.6**
RCBR	**Riachuelo**	**16.92**	**251**	P	**Pn**	**00 56 58.2**	**-2.6**
RCBR				pmax	pmax		
	comp=Z,23nm,0.8s						
RCBR	**Riachuelo**	**16.92**	**251**	Pn	**Pn**	**00 56 56.9**	**-3.9**
	comp=Z,2.1nm,0.3s,baz=80,slow=13,SNR=23						
RCBR				Sn	Sn	00 59 48.7	-20
	comp=Z,0.2nm,0.3s,baz=9.4,slow=22,SNR=2.1						
RCBR				LR	LR	01 02 06.7	
	comp=Z,1μm,18.1s,baz=75,slow=32						
SHEL	**Horse Pasture**	**20.80**	**139**	P	**P**	**00 57 45.5**	**+0.4**
SHEL				IAmb	IAmb	00 58 01.5	
	comp=Z,126nm,1.2s						
SHEL	**Horse Pasture**	**20.80**	**139**	P	**P**	**00 57 45.6**	**+0.4**
SHEL				pmax	pmax		
	comp=Z,126nm,1.3s						
TOA0	**Torodi Ar. Sit**	**25.23**	**57**	P	**P**	**00 58 29.3**	**-0.4**
TOA0	**Torodi Ar. Sit**	**25.23**	**57**	P	**P**	**00 58 29.6**	**-0.1**
	SNR=25						
TORD	**Torodi Ar. Bea**	**25.23**	**57**	P	**P**	**00 58 29.1**	**-0.7**
TORD				IAmb	IAmb	00 58 31.8	
	comp=Z,102nm,1.1s						
TORD	**Torodi Ar. Bea**	**25.23**	**57**	P	**P**	**00 58 29.3**	**-0.5**
	comp=Z,65nm,0.9s,baz=242,slow=5.3,SNR=96						
TORD				S	**S**	**01 02 59.8**	**+5.1**
	comp=Z,4.3nm,0.9s,baz=284,slow=12,SNR=1.1						
TORD				LR	LR	01 07 03.9	
	comp=Z,1μm,19.9s,baz=248,slow=33						
	comp=Z,65nm,0.9s						
GUA01	**Guaratinga, BA**	**25.42**	**230**	*e*P	**P**	**00 58 32.2**	**+0.7**
SDBA	**SAO DESIDERIO**	**27.59**	**243**	*e*P	**P**	**00 58 49.9**	**-1.2**
TMAB	**Tom-Au,PA,Br**	**28.32**	**266**	*e*P	**P**	**00 58 58.0**	**+0.3**
BDFB	**Brasilia**	**31.68**	**240**	P	**P**	**00 59 26.7**	**-0.8**
BDFB	**Brasilia**	**31.68**	**240**	P	**P**	**00 59 26.7**	**-0.8**
BDFB				pmax	pmax		
	comp=Z,38nm,1.9s						
BDFB	**Brasilia**	**31.68**	**240**	P	**P**	**00 59 26.8**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=62,slow=9.6,SNR=8.9						
BDFB				LR	LR	01 11 04.6	
	comp=Z,2μm,18.9s,baz=84,slow=34						
	comp=Z,4.1nm,0.8s						
IPMB	**Ipameri, GO**	**32.92**	**236**	*e*P	**P**	**00 59 36.9**	**-1.5**
MDP	**Montagnes des**	**33.22**	**280**	LR	LR	01 10 42.8	
	comp=Z,703nm,21.1s,baz=96,slow=32						
SNDB	**Serra Nova Dou**	**33.27**	**249**	*e*P	**P**	**00 59 41.0**	**-0.4**
TAM	**Tamanrasset**	**33.77**	**45**	P	**P**	**00 59 47.2**	**+1.5**
TAM				IAMs_20	IAMs_20	01 12 28.2	
	comp=Z,2μm,20.0s						
TAM	**Tamanrasset**	**33.77**	**45**	P	**P**	**00 59 47.2**	**+1.5**
TAM				pmax	pmax		
	comp=Z,70nm,1.1s						
TAM				MLR	MLR		
	comp=Z,2μm,20.0s						
SPB	**Sao Paulo**	**35.34**	**227**	IAMs_20	IAMs_20	01 11 41.3	
	comp=Z,2μm,21.0s						
AVE	**Averroes**	**35.49**	**18**	P	**P**	**01 00 01.9**	**+1.5**
AVE				IAMs_20	IAMs_20	01 13 41.6	
	comp=Z,1μm,19.0s						
MDT	**Midelt**	**36.02**	**22**	LR	LR	01 14 05.6	
	comp=Z,1μm,21.4s,baz=229,slow=35						
NPGB	**Novo Progresso**	**36.04**	**259**	*e*P	**P**	**01 00 03.8**	**-1.6**
ITTB	**Itaituba**	**36.08**	**263**	*e*P	**P**	**01 00 04.8**	**-0.9**
PCMB	**Pacaembu**	**37.20**	**233**	*e*P	**P**	**01 00 16.4**	**+1.3**
PDRB	**Porto dos Gac**	**38.29**	**252**	*e*P	**P**	**01 00 23.4**	**-1.1**
SALV	**Santo Antonio**	**38.59**	**245**	*e*P	**P**	**01 00 27.1**	**+0.2**
SFS	**San Fernando**	**38.80**	**18**	IAMs_20	IAMs_20	01 18 30.0	
	comp=Z,2μm,18.0s						
MORF	**Marmelete**	**38.91**	**14**	*e*P	**P**	**01 00 31.0**	**+1.6**
MORF	**Marmelete**	**38.91**	**14**	P	**P**	**01 00 31.2**	**+1.8**
MORF	**Marmelete**	**38.91**	**14**	*e*P	**P**	**01 00 30.9**	**+1.5**
MORF				IAmb	IAmb	01 00 32.1	
	comp=Z,26nm,1.1s						
MORF	**Marmelete**	**38.91**	**14**	P	**P**	**01 00 31.2**	**+1.8**
MORF				pmax	pmax		
	comp=Z,17nm,0.7s						
PBDV	**Barranco-do-Ve**	**39.03**	**15**	*e*P	**P**	**01 00 31.7**	**+1.3**
	comp=Z,82nm,2.0s						
PTEO	**Sao Teotonio**	**39.12**	**14**	*e*P	**P**	**01 00 33.2**	**+2.1**
	comp=Z,119nm,1.6s						
PVAQ	**Vaqueiros**	**39.24**	**15**	*e*P	**P**	**01 00 35.2**	**+3.1**
PCVE	**Castro Verde**	**39.37**	**15**	*e*P	**P**	**01 00 35.2**	**+2.0**
	comp=Z,68nm,2.1s						
PTGB	**Pitanga**	**39.46**	**230**	*e*P	**P**	**01 00 34.6**	**+0.4**
MESJ	**Messejana**	**39.52**	**15**	*e*P	**P**	**01 00 36.5**	**+2.0**
	comp=Z,82nm,1.6s						
MESJ	**Messejana**	**39.52**	**15**	P	**P**	**01 00 36.0**	**+1.6**
MESJ				IAmb	IAmb	01 00 37.7	
	comp=Z,56nm,1.1s						
MESJ	**Messejana**	**39.52**	**15**	*e*P	**P**	**01 00 36.1**	**+1.6**
MESJ				IAmb	IAmb	01 00 38.0	
	comp=Z,82nm,1.3s						
MESJ				*e*S	**S**	**01 06 39.6**	**+3.6**
MESJ	**Messejana**	**39.52**	**15**	*e*P	**P**	**01 00 36.1**	**+1.6**
MESJ				*e*S	**S**	**01 06 39.6**	**+3.6**
PNCL	**Nicolau / Gran**	**39.71**	**14**	*e*P	**P**	**01 00 37.9**	**+1.9**
	comp=Z,40nm,2.0s						
PBEJ	**Beja**	**39.79**	**15**	*e*P	**P**	**01 00 38.6**	**+1.9**
	comp=Z,52nm,1.5s						
PBAR	**Barrancos**	**40.15**	**16**	*e*P	**P**	**01 00 41.5**	**+1.9**
	comp=Z,36nm,1.5s						
EVO	**Evora**	**40.23**	**14**	*e*P	**P**	**01 00 42.3**	**+2.0**
	comp=Z,92nm,1.6s						
PESTR	**Estremoz**	**40.66**	**15**	*e*P	**P**	**01 00 46.5**	**+2.6**
	comp=Z,54nm,1.6s						
PMTG	**Montargil**	**40.69**	**14**	*e*P	**P**	**01 00 46.8**	**+2.7**
	comp=Z,47nm,1.7s						
BOAV	**Boa Vista**	**40.77**	**274**	P	**P**	**01 00 46.0**	**+0.8**
BOAV				IAmb	IAmb	01 00 58.4	
	comp=Z,59nm,1.6s						
BOAV	**Boa Vista**	**40.77**	**274**	*e*P	**P**	**01 00 46.1**	**+0.9**
FRBT	**Francisco Belt**	**40.90**	**229**	*e*P	**P**	**01 00 48.1**	**+1.9**
ITAB	**Concordia**	**40.91**	**227**	P	**P**	**01 00 47.3**	**+1.1**
MACA	**Manacapuru-AM**	**40.92**	**266**	P	**P**	**01 00 47.5**	**+1.1**
MACA	**Manacapuru-AM**	**40.92**	**266**	*e*P	**P**	**01 00 45.9**	**-0.5**
TSUM	**Tsumeb**	**41.17**	**119**	P	**P**	**01 00 49.0**	**+0.5**
TSUM	**Tsumeb**	**41.17**	**119**	IAMs_20	IAMs_20	01 13 48.6	
	comp=Z,1μm,21.0s						
TSUM	**Tsumeb**	**41.17**	**119**	*e*P	**P**	**01 00 47.4**	**-1.1**
TSUM	**Tsumeb**	**41.17**	**119**	LR	LR	01 14 11.2	
	comp=Z,1μm,21.1s,baz=308,slow=31						
PMRV	**Marv??o**	**41.24**	**15**	*e*P	**P**	**01 00 50.5**	**+1.9**
	comp=Z,62nm,1.7s						
PMRV				*e*SS	SS	01 10 04.1	-1.1
PMRV				*e*LR	LR	01 13 02.3	
	comp=Z,821nm,18.0s						
PCAS	**Casmilo, Conde**	**41.56**	**13**	*e*P	**P**	**01 00 54.1**	**+2.8**
	comp=Z,84nm,1.9s						
PTLB	**Pontes e Lacer**	**41.59**	**247**	P	**P**	**01 00 52.1**	**+0.4**
PTLB	**Pontes e Lacer**	**41.59**	**247**	*e*P	**P**	**01 00 52.2**	**+0.4**
CART	**Cartagena**	**41.60**	**23**	P	**P**	**01 00 52.2**	**+0.6**
CART				IAmb	IAmb	01 00 53.9	
	comp=Z,53nm,1.0s						
COI	**Coimbra**	**41.73**	**13**	P	**P**	**01 00 55.8**	**+3.2**
COI	**Coimbra**	**41.73**	**13**		**P**	**01 00 52.4**	**-0.2**
COI				IAmb	IAmb	01 00 55.9	
	comp=Z,64nm,1.2s						
COI	**Coimbra**	**41.73**	**13**	P	**P**	**01 00 52.4**	**-0.2**
COI				pmax	pmax		
	comp=Z,64nm,1.2s						
VILB	**Vilhena**	**41.91**	**251**	P	**P**	**01 00 55.2**	**+0.7**
VILB	**Vilhena**	**41.91**	**251**	*e*P	**P**	**01 00 55.7**	**+1.2**
MTE	**Manteigas**	**42.12**	**14**	*e*P	**P**	**01 00 57.8**	**+1.9**
	comp=Z,68nm,1.7s						
MTE				*e*SS	SS	01 10 24.1	+1.4
MTE				*e*LR	LR	01 13 33.5	
	comp=Z,738nm,20.0s						
MTE	**Manteigas**	**42.12**	**14**	P	**P**	**01 00 57.0**	**+1.1**
MTE				IAmb	IAmb	01 00 59.0	
	comp=Z,30nm,0.9s						
WIN	**Windhoek**	**42.15**	**124**	P	**P**	**01 00 55.9**	**-0.7**
WIN				IAMs_20	IAMs_20	01 14 23.3	
	comp=Z,1μm,20.0s						
WIN	**Windhoek**	**42.15**	**124**	P	**P**	**01 00 55.9**	**-0.7**
WIN				pmax	pmax		
	comp=Z,21nm,1.2s						
PAB	**San Pablo**	**42.20**	**18**	P	**P**	**01 00 57.3**	**+0.7**
PAB				IAmb	IAmb	01 00 59.8	
	comp=Z,86nm,1.6s						
PAB	**San Pablo**	**42.20**	**18**	P	**P**	**01 00 57.3**	**+0.7**
PAB				pmax	pmax		
	comp=Z,86nm,1.6s						
PVIS	**Viseu**	**42.33**	**14**	*e*P	**P**	**01 01 00.0**	**+2.4**
ESDC	**Sonseca Array**	**42.44**	**18**	P	**P**	**01 01 00.2**	**+1.7**
	comp=Z,96nm,1.5s,baz=208,slow=8.0,SNR=59						
ESDC				PP	PP	01 02 29.4	-7.6
	comp=Z,4.0nm,1.1s,baz=200,slow=9.3,SNR=2.8						
ESDC				LR	LR	01 18 58.9	
	comp=Z,707nm,19.6s,baz=206,slow=37						
PVRL	**Vila Real**	**42.91**	**13**	*e*P	**P**	**01 01 04.0**	**+1.7**
	comp=Z,47nm,1.9s						
MVO	**Moncorvo**	**42.97**	**14**	*e*P	**P**	**01 01 04.7**	**+1.9**
	comp=Z,62nm,1.6s						
MVO				*e*SS	SS	01 10 44.2	+4.7
MVO				*e*LR	LR	01 13 39.7	
	comp=Z,612nm,18.0s						
BBRB	**Robore, Bolivi**	**43.09**	**243**	*e*

comp=Z,24nm,1.4s
LSZ Lusaka 49.66 110 LR LR 01 20 39.9
comp=Z,363nm,19.9s,baz=291,slow=33
LSZ Lusaka 49.66 110 P **P** **01 01 56.3 +0.3**
AOPR Arecibo Observ 49.72 295 P **P** **01 01 55.9 -0.3**
SUR Sutherland 49.79 134 *eP* **P** **01 01 58.9 +2.1**
SUR Sutherland 49.79 134 LR LR 01 18 18.2
comp=Z,706nm,20.7s,baz=300,slow=30
SUR Sutherland 49.79 134 P **P** **01 01 56.9 +0.2**
MFF Saint Martin d 49.89 18 *eP* **P** **01 01 57.9 +0.9**
MFF pmax pmax
comp=Z,42nm,1.1s
FRAZ Fraserburg 49.99 133 *eP* **P** **01 01 58.0 -0.2**
FRAZ IAmb IAmb 01 02 21.7
comp=Z,634nm,3.0s
PRSN Puerto Rico Se 50.04 294 P **P** **01 01 58.9 +0.3**
MATJ Matjiesfontein 50.09 135 *eP* **P** **01 01 57.5 -1.4**
MATJ IAmb IAmb 01 02 25.9
comp=Z,94nm,1.5s
LBTB Lobatse 50.24 123 P **P** **01 01 59.6 -0.6**
LBTB IAmb IAmb 01 02 06.6
comp=Z,22nm,0.9s
LBTB Lobatse 50.24 123 *eP* **P** **01 01 59.5 -0.6**
LBTB IAmb IAmb 01 02 10.1
comp=Z,17nm,0.8s
LBTB Lobatse 50.24 123 P **P** **01 01 59.6 -0.6**
LBTB pmax pmax
comp=Z,22nm,1.0s
LBTB Lobatse 50.24 123 LR LR 01 19 29.9
comp=Z,859nm,21.6s,baz=283,slow=32
SSB Saint Sauveur 50.34 22 P **P** **01 02 00.4 -0.1**
SSB Saint Sauveur 50.34 22 P **P** **01 02 00.4 -0.1**
SSB pmax pmax
comp=Z,19nm,1.1s
MERW Merweville 50.45 134 *eP* **P** **01 02 05.9 +4.2**
MBAR Mbarara 50.57 90 P **P** **01 02 04.0 +1.1**
MBAR IAmb IAmb 01 02 15.9
comp=Z,32nm,1.3s
MBAR Mbarara 50.57 90 *i* P **P** **01 02 04.6 +1.7**
MBAR pmax pmax
comp=Z,31nm,1.3s
MBAR Mbarara 50.57 90 LR LR 01 21 27.3
comp=Z,982nm,18.2s,baz=256,slow=34
MBAR Mbarara 50.57 90 P **P** **01 02 05.1 +2.2**
MBAR P **P** **01 02 05.1 +2.2**
CEL Celeste 50.59 37 P **P** **01 02 03.0 +0.5**
CEL IAmb IAmb 01 02 05.2
comp=Z,49nm,1.1s
CEL IAMs_20 IAMs_20 01 24 36.5
comp=Z,1µm,20.0s
GBOS Grotte di Boss 50.82 26 P **P** **01 02 05.6 +1.4**
BNI Bardonecchia 50.99 24 P **P** **01 02 07.2 +1.7**
BNI IAmb IAmb 01 02 09.0
comp=Z,43nm,1.3s
BNI Bardonecchia 50.99 24 P **P** **01 02 07.2 +1.7**
BNI pmax pmax
comp=Z,43nm,1.3s
BRAK Brakfontein 51.01 132 *eP* **P** **01 02 04.4 -1.4**
BRAK IAmb IAmb 01 02 23.1
comp=Z,124nm,1.9s
CASP Castiglione de 51.07 29 P **P** **01 02 05.7 -0.3**
CASP IAmb IAmb 01 02 07.9
comp=Z,32nm,1.1s
SMF Signal de Mont 51.24 21 *eP* **P** **01 02 08.4 +1.2**
SMF pmax pmax
comp=Z,41nm,1.7s
LPL La Plagne 51.39 24 *eP* **P** **01 02 10.1 +1.5**
LPL pmax pmax
comp=Z,20nm,0.9s
BOSA Boshof 51.39 127 P **P** **01 02 08.2 -0.6**
BOSA IAmb IAmb 01 02 18.8
comp=Z,30nm,0.9s
BOSA Boshof 51.39 127 *eP* **P** **01 02 08.3 -0.6**
BOSA IAmb IAmb 01 02 18.6
comp=Z,31nm,0.9s
BOSA Boshof 51.39 127 P **P** **01 02 08.2 -0.6**
BOSA pmax pmax
comp=Z,30nm,1.0s
BOSA Boshof 51.39 127 P **P** **01 02 08.1 -0.8**
comp=Z,8.5nm,0.8s,baz=304,slow=7.5,SNR=32
BOSA LR LR 01 19 51.8
comp=Z,726nm,20.9s,baz=288,slow=31
comp=Z,8.5nm,0.8s
SDV Santo Domingo 51.43 282 P **P** **01 02 09.3 -0.1**
SDV Santo Domingo 51.43 282 LR LR 01 21 29.7
comp=Z,378nm,20.4s,baz=99,slow=33
BFON Badsfontein, M 51.61 132 *eP* **P** **01 02 10.4 -0.1**
BFON IAmb IAmb 01 02 10.7
comp=Z,118nm,2.1s
NHAM Northam, North 51.66 122 *eP* **P** **01 02 11.4 +0.5**
CUC Castrocucco 51.69 35 P **P** **01 02 10.3 -0.4**
CUC IAMs_20 IAMs_20 01 24 53.6
comp=Z,1µm,21.0s
TIP Timpagrande 51.70 36 ⇓P **P** **01 02 12.1 +1.2**
TIP Timpagrande 51.70 36 P **P** **01 02 10.0 -0.9**
PAOL Paolisi 51.70 33 P **P** **01 02 11.2 +0.4**
PAOL IAmb IAmb 01 02 23.9
comp=Z,27nm,1.1s
LEPH Lephalale, Lim 51.70 120 *eP* **P** **01 02 09.1 -2.2**
LEPH IAmb IAmb 01 02 17.2
comp=Z,25nm,1.1s
CESX Cesi 51.78 30 P **P** **01 02 11.6 +0.2**
CESX IAmb IAmb 01 02 13.6
comp=Z,31nm,1.0s
OSSC Osservatorio P 51.81 29 P **P** **01 02 11.3 -0.2**
OSSC IAmb IAmb 01 02 15.3
comp=Z,72nm,1.8s
CLF Chambon-Foret 51.91 19 P **P** **01 02 12.1 -0.1**
INTR Introdacqua 52.03 32 P **P** **01 02 12.9 -0.4**
INTR IAmb IAmb 01 02 15.7
comp=Z,57nm,1.2s
PB08 IPOC Station P 52.07 245 P **P** **01 02 14.3 0.0**
NRCA Norcia 52.22 30 P **P** **01 02 14.4 -0.3**
NRCA IAmb IAmb 01 02 56.0
comp=Z,54nm,1.4s
MURB Monte Urbino 52.23 30 P **P** **01 02 14.4 -0.4**
ZCCA Zocca 52.31 28 P **P** **01 02 15.6 +0.3**
ZCCA IAmb IAmb 01 02 36.3
comp=Z,56nm,1.2s
SENIN Lac Senin/Sane 52.31 24 P **P** **01 02 15.8 +0.3**
HRAO HartRAO 52.32 123 *eP* **P** **01 02 14.3 -1.5**
PRMA PARMA 52.32 27 P **P** **01 02 16.4 +1.2**
PB11 IPOC Station P 52.42 245 P **P** **01 02 15.9 -0.8**
HVD Gariep Dam 52.44 129 *eP* **P** **01 02 17.8 +1.1**
HVD IAmb IAmb 01 02 26.9
comp=Z,34nm,1.1s
LVC Limon Verde 52.56 242 P **P** **01 02 17.5 -0.4**
LVC Limon Verde 52.56 242 P **P** **01 02 17.5 -0.4**
LVC pmax pmax
comp=Z,31nm,1.8s
LVC Limon Verde 52.56 242 LR LR 01 24 46.8
comp=Z,602nm,19.9s,baz=67,slow=36
RUST Rust De Winter 52.80 122 *eP* **P** **01 02 19.0 -0.4**
RUST IAmb IAmb 01 02 31.8
comp=Z,25nm,1.0s
MUSN Musina, Limpop 53.01 118 *eP* **P** **01 02 18.4 -2.5**
PB02 IPOC Station P 53.06 243 P **P** **01 02 21.1 -0.3**
PB02 IAmb IAmb 01 02 25.5
comp=Z,17nm,0.8s
PB07 IPOC Station P 53.17 243 P **P** **01 02 21.3 -0.9**
PB07 IAmb IAmb 01 02 25.8
comp=Z,19nm,0.8s
PB06 IPOC Station P 53.18 242 P **P** **01 02 22.1 -0.2**
PB06 IAmb IAmb 01 03 17.6
comp=Z,32nm,1.3s
CZSB Cruzeiro do Su 53.20 261 P **P** **01 02 22.7 +0.4**
TUE Stuetta 53.24 25 P **P** **01 02 22.4 0.0**
PB15 IPOC Station P 53.24 241 P **P** **01 02 23.4 +0.6**
PB15 IAmb IAmb 01 02 31.5
comp=Z,27nm,1.3s
TEOL Teolo 53.40 27 P **P** **01 02 23.0 -0.2**
BARC Barichara 53.68 278 *eP* **P** **01 02 27.1 +0.9**
FUORN Ofenpass-Fuorn 53.74 25 P **P** **01 02 26.0 -0.1**
ECH Echery 53.78 22 P **P** **01 02 25.8 -0.2**
ECH IAmb IAmb 01 02 28.2
comp=Z,26nm,1.2s
ECH Echery 53.78 22 P **P** **01 02 25.8 -0.2**
ECH pmax pmax
comp=Z,26nm,1.2s
CTI Castel Tesino 53.91 27 P **P** **01 02 27.2 +0.1**
CTI Castel Tesino 53.91 27 P **P** **01 02 27.2 +0.1**
CTI pmax pmax
comp=Z,87nm,1.7s
GO02 Mina Guanaco 53.97 239 P **P** **01 02 27.8 -0.3**
GO02 IAmb IAmb 01 02 29.5
comp=Z,21nm,0.8s
SDDR Presa de Saban 54.02 294 IAMs_20 IAMs_20 01 20 19.5
comp=Z,1µm,22.0s
CHIC Chingaza 54.07 276 *eP* **P** **01 02 24.9 -4.4**
DAVA Damuels 54.11 25 *i* P **P** **01 02 28.9 +0.2**
comp=Z,84nm,1.2s,SNR=19
AC02 Maricunga 54.15 237 P **P** **01 02 30.0 +0.3**
FETA Feichten 54.26 25 *i* P **P** **01 02 29.8 0.0**
comp=Z,33nm,1.1s,SNR=8.3
GRHM Grahamstown, E 54.31 132 P **P** **01 02 28.6 -1.6**
GRHM IAmb IAmb 01 02 53.6
comp=Z,42nm,1.1s
GRHM Grahamstown, E 54.31 132 *eP* **P** **01 02 30.2 -0.1**
GRHM IAmb IAmb 01 02 40.4
comp=Z,32nm,1.0s
BFO Black Forest 54.32 23 P **P** **01 02 29.8 -0.2**
BFO IAmb IAmb 01 02 32.1
comp=Z,37nm,1.2s
BFO Black Forest 54.32 23 P **P** **01 02 29.8 -0.2**
BFO pmax pmax
comp=Z,37nm,1.2s
BFO Black Forest 54.32 23 *eP* **P** **01 02 30.4 +0.4**
comp=Z,36nm,1.2s,baz=216,slow=7.0
NVLJ Novalja 54.34 30 *i* P **P** **01 02 30.2 0.0**
CIMO Cimolais 54.47 27 P **P** **01 02 30.4 -0.7**
CIMO IAmb IAmb 01 04 32.8
comp=Z,40nm,1.5s
DOU Dourbes 54.47 19 *d*P **P** **01 02 31.5 +0.5**
comp=Z,18nm,1.0s
PB14 IPOC Station P 54.49 240 P **P** **01 02 31.9 -0.1**
PB14 IAmb IAmb 01 02 33.9
comp=Z,17nm,0.9s
UBR Ueberruh 54.51 24 *eP* **P** **01 02 31.8 +0.3**
comp=Z,100nm,1.6s,baz=216,slow=7.0
STAL STALIGIAL 54.55 27 P **P** **01 02 31.9 +0.2**
STAL IAmb IAmb 01 02 34.4
comp=Z,31nm,1.1s
PILG Pilgrimsrest, 54.56 121 *eP* **P** **01 02 32.7 +0.3**
PILG IAmb IAmb 01 03 37.5
comp=Z,198nm,2.6s
SQTA Sankt Quirin 54.62 26 *i* P **P** **01 02 32.1 -0.2**
comp=Z,50nm,1.1s,SNR=10
WLF Walferdange 54.63 20 P **P** **01 02 33.1 +1.0**
WLF IAmb IAmb 01 02 34.7
comp=Z,51nm,1.6s
WLF Walferdange 54.63 20 *d*P **P** **01 02 33.9 +1.8**
comp=Z,7.0nm,1.3s
WLF Walferdange 54.63 20 P **P** **01 02 33.1 +1.0**
WLF pmax pmax
comp=Z,51nm,1.6s
WLF Walferdange 54.63 20 *eP* **P** **01 02 33.7 +1.6**
comp=Z,62nm,1.7s,baz=216,slow=7.0
RETA Reutte 54.63 25 *i* P **P** **01 02 32.2 -0.1**
comp=Z,29nm,1.2s,SNR=8.1
STON Ston 54.66 33 *eP* **P** **01 02 35.9 +3.4**
MOTA Moosalm 54.67 25 *i* P **P** **01 02 32.8 +0.1**
comp=Z,28nm,1.1s,SNR=6.4
ROSC El Rosal 54.67 276 P **P** **01 02 32.5 -1.1**
ROSC El Rosal 54.67 276 P **P** **01 02 32.5 -1.1**
ROSC pmax pmax
comp=Z,135nm,2.0s
ROSC El Rosal 54.67 276 P **P** **01 02 35.4 +1.8**
comp=Z,5.3nm,0.4s,baz=120,slow=7.5,SNR=6.7
ROSC LR LR 01 24 17.0
comp=Z,930nm,19.0s,baz=110,slow=34
comp=Z,5.3nm,0.4s
BMRD Maredsous 54.70 19 *d*P **P** **01 02 34.1 +1.4**
RCHB Rochefort 54.73 19 *d*P **P** **01 02 33.0 +0.1**
comp=Z,13nm,0.9s
IDI Anoyia 54.74 45 LR LR 01 27 03.7
comp=Z,288nm,19.3s,baz=248,slow=37
SABO M.te Sabotino 54.76 28 P **P** **01 02 33.1 -0.1**
SABO IAmb IAmb 01 02 47.1
comp=Z,186nm,1.7s
NWCL Newcastle 54.82 124 *eP* **P** **01 02 31.9 -2.2**
NWCL IAmb IAmb 01 02 42.4
comp=Z,204nm,2.2s
HCY Herceg Novi 54.83 34 *eP* **P** **01 02 34.0 +0.2**
ABTA Abfaltersbach 54.83 27 *i* P **P** **01 02 35.1 +1.3**
comp=Z,43nm,1.2s,SNR=8.6
WTTA Wattenberg 54.84 26 *i* P **P** **01 02 34.0 0.0**
comp=Z,31nm,1.2s,SNR=6.6
WATA Walderalm 54.87 26 *i* P **P** **01 02 33.7 -0.4**
comp=Z,28nm,1.3s,SNR=6.5
BGES Gesves 54.88 19 *d*P **P** **01 02 35.1 +1.2**
comp=Z,9.1nm,1.2s
ROBS Robic 54.91 28 *i* P **P** **01 02 35.2 +0.9**
TREB Trebinje 54.92 34 *eP* **P** **01 02 34.7 +0.3**
PTBC PUERTO BERRIO, 54.94 278 *eP* **P** **01 02 34.3 -0.8**
PLIT Plitvice 54.95 30 *i* P **P** **01 02 35.4 +0.7**
CEY Cerknica 54.97 29 *eP* **P** **01 02 32.8 -2.0**
BCLA Clavier 54.98 19 *d*P **P** **01 02 35.1 +0.4**
comp=Z,10nm,1.2s
CADS Cadrg 55.00 28 *i* P **P** **01 02 35.9 +0.8**
STU Stuttgart 55.02 23 P **P** **01 02 35.4 +0.4**
STU IAmb IAmb 01 02 36.7
comp=Z,26nm,0.9s
STU Stuttgart 55.02 23 P **P** **01 02 35.4 +0.4**
STU pmax pmax
comp=Z,26nm,0.9s
KBN Korca 55.02 37 P **P** **01 02 35.4 +0.1**
KBN Korca 55.02 37 P **P** **01 02 35.4 +0.1**
KBN pmax pmax
comp=Z,84nm,1.5s
AGG Agios Georgios 55.03 40 P **P** **01 02 35.4 +0.1**
AGG IAmb IAmb 01 03 14.0
comp=Z,41nm,1.7s
AGG Agios Georgios 55.03 40 P **P** **01 02 35.4 +0.1**
AGG pmax pmax
comp=Z,41nm,1.7s
DRME Dracevica, Mon 55.05 35 *eP* **P** **01 02 33.4 -2.0**
PRED Cave del Predi 55.08 28 P **P** **01 02 35.9 +0.3**
PRED IAmb IAmb 01 02 38.1
comp=Z,43nm,1.3s
A050A Klekovaca 55.13 31 *eP* **P** **01 02 35.9 -0.1**
BRY Bretstogat 55.15 34 *eP* **P** **01 02 34.7 -1.5**
BHOU Houvegnez 55.16 20 *d*P **P** **01 02 37.1 +1.1**
NEVS Nevesinje 55.17 33 *eP* **P** **01 02 33.9 -2.4**
BOJS Bojanci 55.21 29 *eP* **P** **01 02 37.1 +0.7**
BSTI Sart Tilman 55.21 19 *d*P **P** **01 02 38.1 +1.8**
LJU Ljubljana 55.24 29 *i* P **P** **01 02 37.8 +1.1**
MYKA Terra Mystica 55.26 28 *i* P **P** **01 02 38.6 +1.7**
comp=Z,43nm,1.5s,SNR=8.1
NORC Norcasia 55.27 277 *eP* **P** **01 02 35.1 -2.4**
LODK Lodwar 55.29 86 P **P** **01 02 38.1 +0.4**
LODK Lodwar 55.29 86 P **P** **01 02 39.4 +1.7**
SNR=8.9
MEM Membach 55.38 20 *d*P **P** **01 02 38.8 +1.3**
MGRS Mrkonjic Grad 55.38 32 *eP* **P** **01 02 36.3 -1.4**
FUR Furstenfeldbru 55.38 25 *eP* **P** **01 02 38.2 +0.5**
baz=216,slow=7.0
BTNL Ternell 55.40 20 *d*P **P** **01 02 39.4 +1.7**
comp=Z,12nm,1.3s
LESA Schwarzleotal 55.41 26 *i* P **P** **01 02 38.2 +0.2**
comp=Z,39nm,1.1s
KBA Koelnbreinsper 55.45 27 *i* P **P** **01 02 38.8 +0.3**
comp=Z,4.4nm,0.5s
CRES Cresnjev 55.54 29 *eP* **P** **01 02 39.1 +0.3**
UPM Unac-Piva 55.55 34 *eP* **P** **01 02 38.6 -0.6**
OBKA Obir 55.59 28 *eP* **P** **01 02 40.8 +1.5**
comp=Z,12nm,1.2s
OBKA Obir 55.59 28 *eP* **P** **01 02 39.7 +0.4**
BLY Banja Luka 55.66 31 *eP* **P** **01 02 39.1 -0.6**
SANT Santorini 55.68 44 ⇑P **P** **01 02 40.4 +0.3**
SANT Santorini 55.68 44 P **P** **01 02 39.2 -0.8**
AHRW Bad Neuenahr-A 55.69 20 *eP* **P** **01 02 39.0 -0.7**
baz=216,slow=7.0
A051A Mrakovica 55.69 31 *eP* **P** **01 02 40.1 +0.1**
GUY2C Guyana, Caldas 55.74 277 *eP* **P** **01 02 39.6 -1.8**
AC05 El Transito 55.80 235 P **P** **01 02 40.6 -0.6**
AC05 IAmb IAmb 01 03 10.8
comp=Z,16nm,0.9s
TNS Taunus Mts 55.91 22 *eP* **P** **01 02 42.6 +1.1**
baz=216,slow=7.0
SOKA Soboth 55.94 28 *i* P **P** **01 02 42.6 +0.8**
comp=Z,39nm,1.3s,SNR=6.0
MOSL Moslavina 56.03 30 *i* P **P** **01 02 42.8 +0.4**
BIOA Bad Ischl, Aus 56.05 27 *i* P **P** **01 02 42.1 -0.4**
comp=Z,6.5nm,0.5s
RUDO Rudo 56.08 34 *eP* **P** **01 02 42.5 -0.2**
CO01 Juntas del Tor 56.08 234 P **P** **01 02 43.4 +0.1**
CO01 IAmb IAmb 01 02 53.8
comp=Z,23nm,1.3s
UREC San Jos de Ur 56.12 280 *eP* **P** **01 02 42.7 -0.9**
HAPS Han Pijesak,Bl 56.15 33 *eP* **P** **01 02 43.8 +0.4**
SJES Sjenica 56.18 34 *eP* **P** **01 02 44.5 +0.9**
POGA Pongola 56.20 123 P **P** **01 02 43.2 -0.7**
AC04 Llanos de Chal 56.24 236 P **P** **01 02 44.3 +0.1**
AC04 IAmb IAmb 01 02 47.7
comp=Z,27nm,1.1s
BBLS Lazići 56.26 33 *eP* **P** **01 02 44.0 -0.1**
MOA Molln 56.45 27 *i* P **P** **01 02 44.9 -0.4**
comp=Z,16nm,1.4s
KARP Karpathos 56.48 46 P **P** **01 02 46.1 +0.3**
KARP IAMs_20 IAMs_20 01 26 01.5
comp=Z,709nm,21.0s
BUG Bochum--Univer 56.51 20 *eP* **P** **01 02 46.9 +1.3**
baz=216,slow=7.0
GRFO Grafenberg 56.55 24 P **P** **01 02 46.1 +0.1**
GRFO IAmb IAmb 01 02 47.7
comp=Z,22nm,1.1s
GRFO Grafenberg 56.55 24 P **P** **01 02 46.1 +0.1**
GRFO pmax pmax
comp=Z,22nm,1.1s
GRA1 Grafenberg Arr 56.55 24 P **P** **01 02 45.7 -0.3**
GRA1 IAmb IAmb 01 02 47.8
comp=Z,24nm,1.1s
GRF Grafenberg Arr 56.55 24 P **P** **01 02 45.7 -0.3**
GRF pmax pmax
comp=Z,24nm,1.1s
GRF Grafenberg Arr 56.55 24 *eP* **P** **01 02 46.3 +0.3**
baz=216,slow=7.0
GRF *e*PP **PP** **01 04 49.7 -2.3**
baz=215,slow=8.2
ARSA Arzberg 56.59 28 *i* P **P** **01 02 47.3 +0.9**
comp=Z,14nm,1.3s
KASTN Kahler Asten 56.71 21 *eP* **P** **01 02 48.2 +1.1**
baz=216,slow=7.0
WET Wettzell 56.81 25 *eP* **P** **01 02 48.2 +0.3**
baz=216,slow=7.0
GEC2 GERESS Array S 56.94 26 *eP* **P** **01 02 48.6 -0.3**
baz=216,slow=7.0
GEC2 *e*PP **PP** **01 04 53.1 -2.5**
baz=215,slow=8.2
GERES GERESS Array B 56.94 26 P **P** **01 02 49.1 +0.2**
comp=Z,5.2nm,0.8s,baz=224,slow=3.7,SNR=29
GERES LR LR 01 27 51.0
comp=Z,294nm,18.1s,baz=252,slow=37
comp=Z,5.2nm,0.8s
UBBA Unterbreizbach 56.98 22 *eP* **P** **01 02 50.3 +1.4**
baz=216,slow=7.0
ROTZ Rotzenmuhle 57.01 24 *eP* **P** **01 02 49.4 +0.1**
baz=216,slow=7.0
ROTZ *e*PP **PP** **01 04 52.0 -4.1**
baz=215,slow=8.2
KMBO Kilima Mbogo 57.08 91 P **P** **01 02 51.1 +0.4**
KMBO Kilima Mbogo 57.08 91 IAMs_20 IAMs_20 01 24 31.3
comp=Z,927nm,19.0s
KMBO Kilima Mbogo 57.08 91 *eP* **P** **01 02 50.9 +0.2**
KMBO IAmb IAmb 01 02 58.9
comp=Z,180nm,2.5s
KMBO Kilima Mbogo 57.08 91 P **P** **01 02 51.1 +0.4**
KMBO pmax pmax
comp=Z,13nm,1.6s
KHC Kasperske Hory 57.10 26 P **P** **01 02 49.7 -0.2**
KHC IAmb IAmb 01 02 51.8
comp=Z,41nm,1.6s
KHC Kasperske Hory 57.10 26 *eP* **P** **01 02 50.0 +0.1**
KHC *e*PP **PP** **01 04 55.5 -1.5**
KHC Kasperske Hory 57.10 26*ce*P **P** **01 02 50.1 +0.1**
KHC pmax pmax
comp=Z,53nm,1.6s
MANZ Manzenberg 57.14 24 *eP* **P** **01 02 50.4 +0.2**
baz=216,slow=7.0
CKRC Cesky Krumlov 57.19 26 *eP* **P** **01 02 50.6 0.0**
CKRC AMS AMS 01 30 30.0
comp=Z,600nm,16.1s
CKRC Cesky Krumlov 57.19 26 *eP* **P** **01 02 50.6 0.0**
CKRC MLR MLR
comp=Z,600nm,16.1s
EKA Eskdalemuir Ar 57.20 11 P **P** **01 02 50.9 +0.5**
comp=Z,5.9nm,1.0s,baz=190,slow=8.2,SNR=6.4
comp=Z,5.9nm,1.0s
CONA Conrad Observa 57.24 28 *i* P **P** **01 02 51.2 +0.2**
comp=Z,8.9nm,0.8s,SNR=5.1
RONA Rosalia, Austr 57.28 28 *i* P **P** **01 02 52.1 +0.8**
comp=Z,23nm,0.8s,SNR=16
FRGS Fruska Gora 57.31 32 ⇓P **P** **01 02 52.7 +1.2**
FRGS Fruska Gora 57.31 32 *eP* **P** **01 02 51.8 +0.3**
IBBN Ibbenburen 57.40 20 *eP* **P** **01 02 53.6 +1.7**
baz=216,slow=7.0
MORH Mrgy, Hungar 57.41 31 ⇓P **P** **01 02 52.9 +0.8**
MOX Moxa 57.46 23 *eP* **P** **01 02 52.7 +0.3**
baz=216,slow=7.0
NKC Novy Kostel 57.47 24 *eP* **P** **01 02 53.3 +0.8**
NKC Novy Kostel 57.47 24 *eP* **P** **01 02 53.3 +0.8**
ARG Arkhangelos 57.48 45 P **P** **01 02 53.0 +0.1**
ARG Arkhangelos 57.48 45 P **P** **01 02 53.0 +0.1**
ARG pmax pmax
comp=Z,64nm,1.2s
VA03 San Esteban 57.51 231 P **P** **01 02 53.5 +0.2**
VA03 IAmb IAmb 01 03 01.0
comp=Z,19nm,0.9s
PLN Plauen 57.55 24 *eP* **P** **01 02 53.5 +0.4**
baz=216,slow=7.0
CO06 Fray Jorge 57.57 233 P **P** **01 02 53.2 -0.5**
ZVC Zvikov 57.60 26 *eP* **P** **01 02 53.3 -0.1**
TANN Tannenbergstha 57.62 24 *eP* **P** **01 02 53.8 +0.2**
comp=Z,23nm,1.1s,baz=216,slow=7.0
TANN *e*PP **PP** **01 04 59.0 -2.5**
baz=215,slow=8.2
LMEL Las Melosas 57.69 229 P **P** **01 02 54.4 -0.2**
NNA Nana 57.71 256 LR LR 01 27 16.2
comp=Z,947nm,18.3s,baz=72,slow=36
MT16 CCHEN 57.76 230 P **P** **01 02 55.2 +0.2**
MT16 IAmb IAmb 01 03 22.6
comp=Z,33nm,1.1s
MT03 Universidad Ad 57.77 230 P **P** **01 02 56.1 +1.0**
MT03 IAmb IAmb 01 03 03.1
comp=Z,33nm,1.0s
KIBK Kibwezi 57.89 92 P **P** **01 02 56.5 +0.2**
KIBK IAMs_20 IAMs_20 01 24 41.6
comp=Z,915nm,20.0s
BLKB Belogradchik 57.95 35 ⇑P **P** **01 02 56.7 +0.7**
NEUB Neuenburg 57.97 23 *eP* **P** **01 02 57.1 +1.1**
comp=Z,22nm,1.0s,baz=216,slow=7.0
NEUB *e*PP **PP** **01 05 02.7 -1.8**
baz=215,slow=8.2
BO04 La Punta 58.05 229 P **P** **01 02 56.2 -0.8**
BO04 IAmb IAmb 01 03 04.6
comp=Z,26nm,1.4s
PRU Pruhonice 58.16 25 *eP* **P** **01 02 57.3 0.0**
PRU Pruhonice 58.16 25 *eP* **P** **01 02 57.3 0.0**
HSKC Hora Svate Kat 58.16 24 *eP* **P** **01 02 58.1 +0.7**
PRA Prague 58.17 25 *eP* **P** **01 02 57.6 +0.2**
PRA Prague 58.17 25 *eP* **P** **01 02 57.6 +0.2**
MODS Modra-Piesok 58.22 28 *eP* **P** **01 02 58.5 +0.7**
MODS pmax pmax
comp=Z,87nm,1.4s
MODS Modra-Piesok 58.22 28 *eP* **P** **01 02 58.5 +0.7**
MT09 Talagante 58.25 230 P **P** **01 02 57.0 -1.5**
RDO Rodhopi 58.26 39 P **P** **01 02 58.9 +0.7**
RDO IAmb IAmb 01 03 00.8
comp=Z,40nm,1.3s
KRUC Moravsky 58.30 27 *eP* **P** **01 02 57.9 -0.5**
KRUC *e*PP **PP** **01 05 05.0 -2.6**
RETH Rethem/Aller, 58.30 20 *eP* **P** **01 02 59.0 +0.7**
comp=Z,55nm,1.6s,baz=216,slow=7.0
NRDL Niedersach Rie 58.37 21 *eP* **P** **01 03 00.2 +1.6**
comp=Z,30nm,1.3s,baz=216,slow=7.0
RICC Richard 58.39 25 *eP* **P** **01 02 59.2 +0.3**
ALN Alexandroupoli 58.45 40 P **P** **01 02 59.2 -0.3**
ALN IAmb IAmb 01 03 01.5
comp=Z,53nm,1.4s
ALN Alexandroupoli 58.45 40 P **P** **01 02 59.2 -0.3**
ALN pmax pmax
comp=Z,53nm,1.4s
DJES Djerdap 58.49 34 P **P** **01 03 00.4 +0.6**
BO02 Sierra Bellavi 58.51 229 P **P** **01 02 59.7 -0.5**
BO02 IAmb IAmb 01 03 24.1
comp=Z,47nm,1.9s
CLL Collm 58.53 24 P **P** **01 03 00.1 +0.2**
CLL Collm 58.53 24 *i* P **P** **01 03 00.0 +0.2**
CLL *i* 01 03 04.5
CLL *e*S **S** **01 11 08.0 +5.4**
CLL pmax pmax
comp=Z,26nm,1.5s
CLL Collm 58.53 24 *eP* **P** **01 03 00.4 +0.5**
comp=Z,12nm,1.1s,baz=216,slow=7.0
CLL *e*PP **PP** **01 05 06.3 -3.2**

baz=215,slow=8.2
VRAC Vranov 58.57 27 ⇑P **P 01 03 01.1 +0.8**
VRAC Vranov 58.57 27 *e*P **P 01 02 59.7 -0.5**
VRAC *e*PP **PP 01 05 05.5 -4.5**
VRAC Vranov 58.57 27 ⇑P **P 01 03 01.1 +0.8**
VRAC Vranov 58.57 27 LR LR 01 27 44.2
comp=Z,306nm,22.0s,baz=238,slow=36
BO01 Tunca 58.58 229 P **P 01 03 00.1 -0.5**
BRG Berggiesshubel 58.58 24 *e*P **P 01 03 00.5 +0.3**
BRG Amp 01 03 02.8
comp=Z,16nm,1.2s
BRG Berggiesshubel 58.58 24 S S 01 11 13.0 +10
BRG Amp 01 34 02.0
comp=Z,0.9nm,8.5s
BRG Amp 01 34 04.0
comp=E,0.4nm,8.8s
BRG Amp 01 34 06.0
comp=N,0.4nm,8.6s
BRG Berggiesshubel 58.58 24 *e*P **P 01 03 00.5 +0.3**
BRG 01 05 05.6
BRG pmax pmax
comp=Z,16nm,1.2s
BRG pmax pmax
comp=Z,22nm,1.3s
BRG Berggiesshubel 58.58 24 *e*P **P 01 03 00.4 +0.3**
comp=Z,16nm,1.2s,baz=216,slow=7.0
BRG *e*PP **PP 01 05 05.3 -4.6**
baz=215,slow=8.2
PVCC Panska Ves 58.58 25 *e*P **P 01 03 00.7 +0.5**
PVCC Panska Ves 58.58 25 *e*P **P 01 03 00.7 +0.5**
AMBH Ambrzfalva 58.58 32 ⇑P **P 01 03 01.9 +1.6**
BZS Buzias 58.59 33 ⇓P **P 01 03 01.4 +1.0**
BZS Buzias 58.59 33 ⇓P **P 01 03 01.4 +1.0**
OTAV Otavalo 58.62 271 P **P 01 03 02.0 +0.2**
OTAV Otavalo 58.62 271 P **P 01 03 02.0 +0.2**
OTAV pmax pmax
comp=Z,8.0nm,1.1s
OTAV MLR MLR
comp=Z,400nm,18.0s
FLTG Flechtingen 58.65 22 *e*P **P 01 03 00.1 -0.5**
comp=Z,23nm,1.2s,baz=216,slow=7.0
BOSC San Juan Bosco 58.69 267 P **P 01 03 01.2 -0.8**
JAVC Velka Javorina 58.75 28 *e*P **P 01 03 02.2 +0.6**
SURR Surduc 58.95 33 ⇓P **P 01 03 03.8 +0.9**
FURI Furi 59.00 79 P **P 01 03 05.3 +1.0**
ELL Elmali 59.00 46 P **P 01 03 04.5 +0.8**
ELL Elmali 59.00 46 P **P 01 03 04.5 +0.8**
ELL pmax pmax
comp=Z,99nm,0.9s
SIRR Siria 59.02 32 ⇑P **P 01 03 04.4 +0.9**
VYHS Vyhne 59.05 29 *e*P **P 01 03 04.2 +0.6**
VYHS pmax pmax
comp=Z,56nm,1.4s
VYHS Vyhne 59.05 29 *e*P **P 01 03 04.2 +0.6**
GZR Gura Zlata 59.09 34 ⇑P **P 01 03 05.5 +1.5**
GZR Gura Zlata 59.09 34 ⇑P **P 01 03 05.5 +1.5**
MAUC Maruska 59.18 28 *e*P **P 01 03 05.2 +0.7**
UPC Upice 59.18 26 *e*P **P 01 03 04.6 +0.1**
UPC Upice 59.18 26 *e*P **P 01 03 04.6 +0.1**
PSZ Piszkesteto 59.18 30 ⇓P **P 01 03 05.6 +1.0**
PSZ Piszkesteto 59.18 30 P **P 01 03 04.9 +0.3**
PSZ Piszkesteto 59.18 30 P **P 01 03 04.9 +0.3**
PSZ pmax pmax
comp=Z,48nm,1.3s
DPC Dobruska-Polom 59.20 26 *e*P **P 01 03 04.8 +0.1**
DPC Dobruska-Polom 59.20 26 *e*P **P 01 03 04.8 +0.1**
KRLC Kraliky 59.20 27 *e*P **P 01 03 05.4 +0.7**
KRLC Kraliky 59.20 27 *e*P **P 01 03 05.4 +0.7**
CHVC Chvalec 59.26 26 *e*P **P 01 03 05.1 +0.1**
CHVC Chvalec 59.26 26 *e*P **P 01 03 05.1 +0.1**
OSTC Ostas 59.30 26 *e*P **P 01 03 06.0 +0.7**
OSTC Ostas 59.30 26 *e*P **P 01 03 06.0 +0.7**
MORC Moravsky Berou 59.34 27 ⇑P **P 01 03 06.2 +0.6**
MORC Moravsky Berou 59.34 27 P **P 01 03 05.5 -0.1**
MORC IAmb IAmb 01 03 07.6
comp=Z,28nm,1.2s
MORC Moravsky Berou 59.34 27 *e*P **P 01 03 05.8 +0.2**
MORC Moravsky Berou 59.34 27 P **P 01 03 05.5 -0.1**
MORC pmax pmax
comp=Z,28nm,1.2s
ML02 Panimavida 59.38 228 P **P 01 03 06.9 +0.8**
ML02 IAmb IAmb 01 03 26.9
comp=Z,18nm,1.0s
COHC Cochancay 59.44 267 P **P 01 03 06.9 0.0**
ELND Elena 59.45 38 ⇑P **P 01 03 07.3 +0.9**
GO05 Huala 59.46 229 P **P 01 03 07.7 +1.0**
GO05 IAmb IAmb 01 03 23.7
comp=Z,31nm,1.4s
KSP Ksiaz 59.55 26 *e*P **P 01 03 07.4 +0.4**
BSEG Bad Segeberg 59.62 20 *e*P **P 01 03 08.3 +0.9**
comp=Z,26nm,0.8s,baz=216,slow=7.0
OKC Ostrava-Krasne 59.66 27 *e*P **P 01 03 08.4 +0.7**
OKC Ostrava-Krasne 59.66 27 *e*P **P 01 03 08.4 +0.7**
LOT Lotru 59.67 34 ⇑P **P 01 03 09.5 +1.4**
LANS Liptovska Anna 59.80 29 *e*P **P 01 03 10.0 +1.2**
LANS pmax pmax
comp=Z,8.0nm,1.4s
LANS Liptovska Anna 59.80 29 *e*P **P 01 03 10.0 +1.2**
MARR Marisel-Cluj 60.06 33 ⇓P **P 01 03 11.5 +0.8**
EIL Elat 60.10 55 LR LR 01 30 12.9
comp=Z,424nm,19.2s,baz=248,slow=37
LOZB Loznitsa 60.13 38 ⇓P **P 01 03 11.7 +0.6**
MCRA Macar, Loja 60.18 265 P **P 01 03 11.2 -0.9**
CJR Cluj-Napoca 60.35 33 ⇑P **P 01 03 13.9 +1.3**
CJR Cluj-Napoca 60.35 33 ⇑P **P 01 03 13.9 +1.3**
NIE Niedzica 60.39 29 *e*P **P 01 03 13.9 +1.0**
VOIR 60.39 35 ⇑P **P 01 03 13.4 +0.4**
VOIR 60.39 35 ⇑P **P 01 03 13.4 +0.4**
CRVS Cervenica-Dubn 60.62 30 *e*P **P 01 03 15.2 +0.8**
CRVS pmax pmax
comp=Z,73nm,1.7s
CRVS Cervenica-Dubn 60.62 30 *e*P **P 01 03 15.2 +0.8**
OJC Ojcow 60.69 28 *e*P **P 01 03 15.4 +0.6**
OJC Ojcow 60.69 28 P **P 01 03 14.8 0.0**
OJC IAmb IAmb 01 03 16.7
comp=Z,16nm,0.9s
OJC Ojcow 60.69 28 P **P 01 03 14.8 0.0**
OJC pmax pmax
comp=Z,16nm,0.9s
CSS Mathiatis 60.76 49 P **P 01 03 16.2 +0.6**
CSS IAmb IAmb 01 03 30.8
comp=Z,27nm,1.2s
CSS IAMs_20 IAMs_20 01 30 18.9
comp=Z,561nm,20.0s
MLR Muntele Rosu 60.94 35 ⇓P **P 01 03 17.6 +0.8**
MLR Muntele Rosu 60.94 35 P **P 01 03 16.9 +0.1**
MLR IAMs_20 IAMs_20 01 29 05.3
comp=Z,866nm,21.0s
MLR Muntele Rosu 60.94 35 P **P 01 03 16.9 +0.1**
MLR pmax pmax
comp=Z,94nm,1.4s
MLR Muntele Rosu 60.94 35 LR LR 01 31 41.1
comp=Z,661nm,19.6s,baz=239,slow=38
PLCA Paso Flores 60.95 222 LR LR 01 26 01.5
comp=Z,328nm,21.5s,baz=70,slow=32
KOLS Kolonicke sedl 61.05 30 *e*P **P 01 03 18.8 +1.5**
KOLS pmax pmax
comp=Z,17nm,1.6s
KOLS Kolonicke sedl 61.05 30 *e*P **P 01 03 18.8 +1.5**
GO06 Curarrehue 61.06 224 P **P 01 03 18.4 +0.7**
GO06 IAmb IAmb 01 03 39.9
comp=Z,18nm,1.3s
BI05 Punta Hualpn 61.09 227 P **P 01 03 18.5 +0.7**
GHAJ Ghor Haditha 61.15 54 P **P 01 03 18.9 +0.6**
GHAJ IAmb IAmb 01 03 27.6
comp=Z,38nm,1.2s
GHAJ IAMs_20 IAMs_20 01 32 56.5
comp=Z,620nm,20.0s
OZUR 61.20 35 ⇓P **P 01 03 19.7 +1.3**
TURR Turia 61.30 35 ⇑P **P 01 03 19.4 +0.3**
PLOR Plostina 61.55 35 ⇑P **P 01 03 20.0 -0.8**
PLOR Plostina 61.55 35 ⇑P **P 01 03 20.0 -0.8**
VRI Vrincioaia 61.60 35 ⇑P **P 01 03 20.8 -0.3**
VRI Vrincioaia 61.60 35 ⇑P **P 01 03 20.8 -0.3**
MMAI Mount Meron Ar 61.62 52 P **P 01 03 21.8 +0.3**
comp=Z,0.8nm,0.5s,baz=312,slow=10.0,SNR=7.2
MMAI LR LR 01 31 38.2
comp=Z,638nm,19.9s,baz=240,slow=38
comp=Z,0.8nm,0.5s
MDUB Mudurnu 61.62 42 P **P 01 03 21.5 +0.1**
HARR Harsova 61.66 37 ⇑P **P 01 03 22.3 +0.8**
HARR Harsova 61.66 37 ⇑P **P 01 03 22.3 +0.8**
KWP Kalwaria Pacla 61.71 30 *e*P **P 01 03 21.9 +0.1**
KWP Kalwaria Pacla 61.71 30 P **P 01 03 21.9 +0.1**
KWP IAmb IAmb 01 03 24.1
comp=Z,29nm,1.4s
KWP Kalwaria Pacla 61.71 30 P **P 01 03 21.9 +0.1**
KWP pmax pmax
comp=Z,29nm,1.4s
GKP Gorka Klasztor 61.72 24 *e*P **P 01 03 23.7 +2.0**
GKP Gorka Klasztor 61.72 24 *e*P **P 01 03 23.7 +2.0**
BURAR Bucovina Array 61.77 33 ⇓P **P 01 03 23.5 +1.1**
BURAR Bucovina Array 61.77 33 P **P 01 03 23.1 +0.8**
BUR08 Bucovina Ar. S 61.78 33 P **P 01 03 22.6 +0.2**
BUR08 IAmb IAmb 01 03 33.0
comp=Z,30nm,1.4s
TIRR Tirgusor 61.83 37 P **P 01 03 21.5 -1.1**
TIRR Tirgusor 61.83 37 P **P 01 03 21.5 -1.1**
TIRR pmax pmax
comp=Z,165nm,1.4s
PANC Panciu 61.85 35 ⇓P **P 01 03 22.7 -0.1**
TPGR Topolog 62.04 37 ⇓P **P 01 03 25.3 +1.2**
CFR Carcaliu 62.05 36 ⇓P **P 01 03 23.8 -0.3**
CFR Carcaliu 62.05 36 ⇓P **P 01 03 23.8 -0.3**
GHRR 62.10 35 ⇓P **P 01 03 25.4 +0.9**
BATG Bathurst New B 62.22 326 P **P 01 03 24.5 -0.8**
BR231 Keskin MP Arra 62.41 44 P **P 01 03 27.2 +0.5**
BR231 IAmb IAmb 01 03 39.8
comp=Z,34nm,1.2s
ANTO Ankara 62.43 44 P **P 01 03 27.0 +0.1**
ANTO Ankara 62.43 44 IAMs_20 IAMs_20 01 34 20.1
comp=Z,524nm,19.0s
ANTO Ankara 62.43 44 P **P 01 03 27.0 +0.1**
ANTO pmax pmax
comp=Z,34nm,1.2s
ANTO MLR MLR
comp=Z,500nm,19.0s
ANTO Ankara 62.43 44 P **P 01 03 28.2 +1.3**
ANTO P **P 01 03 28.2 +1.3**
TLCR 62.46 37 ⇑P **P 01 03 27.2 +0.4**
TLCR 62.46 37 ⇑P **P 01 03 27.2 +0.4**
LVV L'vov 62.49 30 *e*P **P 01 03 27.4 +0.4**
LVV *e*S **S 01 11 52.2 -1.3**
LVV MLR MLR
comp=Z,300nm,15.0s
LL01 San Ignacio de 62.95 221 P **P 01 03 31.0 +0.8**
LL01 IAmb IAmb 01 03 54.0
comp=Z,51nm,1.8s
BR131 Keskin Array S 62.95 44 P **P 01 03 30.8 +0.3**
BR131 Keskin Array S 62.95 44 P **P 01 03 30.8 +0.3**
BR131 pmax pmax
comp=Z,39nm,1.3s
BR131 Keskin Array S 62.95 44 P **P 01 03 30.9 +0.4**
SNR=9.3
BR131 P **P 01 03 30.9 +0.4**
SNR=9.3
BRTR Keskin Array B 62.95 44 P **P 01 03 30.0 -0.4**
BRTR Keskin Array B 62.95 44 *i* P **P 01 03 30.7 +0.3**
BRTR pmax pmax
comp=Z,8.0nm,1.0s
BRTR Keskin Array B 62.95 44 P **P 01 03 30.8 +0.3**
comp=Z,7.6nm,1.0s,baz=226,slow=6.6,SNR=25
comp=Z,7.6nm,1.0s
HRV Adam Dziewonsk 63.03 319 P **P 01 03 30.9 +0.1**
HRV Adam Dziewonsk 63.03 319 P **P 01 03 30.9 +0.1**
HRV pmax pmax
comp=Z,105nm,1.8s
ATD Arta Tunnel 63.35 77 P **P 01 03 33.1 -0.4**
ATD IAmb IAmb 01 03 44.1
comp=Z,28nm,1.5s
ATD Arta Tunnel 63.35 77 LR LR 01 31 01.6
comp=Z,6.1nm,18.2s,baz=284,slow=36
MILM Milestii Mici 63.39 35 *e*P **P 01 03 32.0 -1.0**
comp=Z,70nm,1.6s
MILM *e*L L 01 25 00.0
MILM LRM MLR 01 32 00.0
comp=Z,600nm,20.0s
MILM Milestii Mici 63.39 35 ⇑P **P 01 03 32.4 -0.6**
MILM Milestii Mici 63.39 35 *e*P **P 01 03 32.0 -1.0**
MILM pmax pmax
comp=Z,70nm,1.6s
KIS Kishinev 63.43 35 *e*P **P 01 03 32.0 -1.3**
comp=Z,50nm,2.5s
KIS *e*L L 01 30 38.0
KIS LRM MLR 01 31 36.0
comp=Z,200nm,21.5s
KIS Kishinev 63.43 35 P **P 01 03 32.0 -1.3**
KIS pmax pmax
comp=Z,50nm,2.5s
I62A Tamworth 63.55 321 P **P 01 03 34.7 +0.6**
LL06 Loncomilla 63.68 222 P **P 01 03 33.7 -1.3**
SORM Soroca 63.80 34 ⇓P **P 01 03 34.3 -1.4**
SORM Soroca 63.80 34 ⇓P **P 01 03 34.3 -1.4**
D62A Allapoint, All 63.81 325 P **P 01 03 35.9 +0.1**
KLNR Kaliningrad 63.90 25 *i* P **P 01 03 36.6 +0.4**
KLNR pmax pmax
comp=Z,35nm,1.3s
HNH Hanover 64.07 320 P **P 01 03 38.3 +0.7**
HNH IAmb IAmb 01 03 53.4
comp=Z,31nm,1.1s
BNN Bunyan 64.15 46 P **P 01 03 38.1 -0.3**
RIMA Rio Macho 64.50 281 P **P 01 03 41.6 +0.4**
RIMA IAmb IAmb 01 03 49.7
comp=Z,53nm,1.9s
GAZ Gaziantep 64.50 48 P **P 01 03 41.4 +0.7**
GAZ IAmb IAmb 01 03 53.5
comp=Z,32nm,1.1s
TRY Troy 64.52 319 P **P 01 03 40.1 -0.4**
WUPA West Chester U 64.65 315 P **P 01 03 41.9 +0.5**
SUW Suwalki 64.78 26 *e*P **P 01 03 42.0 0.0**
SUW Suwalki 64.78 26 P **P 01 03 41.4 -0.6**
SUW Suwalki 64.78 26 P **P 01 03 41.4 -0.6**
SUW pmax pmax
comp=Z,49nm,1.1s
SUW Suwalki 64.78 26 *e*P **P 01 03 42.6 +0.6**
U59A Littleton 64.90 311 P **P 01 03 44.2 +1.1**
U59A IAmb IAmb 01 03 46.4
comp=Z,31nm,1.4s
ESPN Las Esperanzas 65.17 284 P **P 01 03 45.8 +0.5**
ESPN IAmb IAmb 01 04 19.8
comp=Z,20nm,1.2s
MVL Millersville 65.20 315 P **P 01 03 45.8 +0.8**
MVL IAmb IAmb 01 04 25.2
comp=Z,54nm,2.0s
LDAQ Lac Daran 65.53 325 P **P 01 03 47.3 +0.1**
LDAQ IAmb IAmb 01 04 02.2
comp=Z,25nm,1.1s
Y58A Scranton 65.53 308 P **P 01 03 47.9 +0.6**
NBO00 NORSAR Array S 65.60 16 P **P 01 03 46.4 -0.8**
JTS Las Juntas de 65.62 281 LR LR 01 31 50.6
comp=Z,272nm,20.4s,baz=98,slow=36
KIEV Kiev 65.69 32 ⇑P **P 01 03 47.5 -0.5**
KIEV Kiev 65.69 32 P **P 01 03 47.2 -0.8**
KIEV Kiev 65.69 32 P **P 01 03 47.2 -0.8**
KIEV pmax pmax
comp=Z,40nm,1.2s
KIEV MLR MLR
comp=Z,400nm,20.0s
AKASG Malin Array Be 65.70 32 P **P 01 03 47.7 -0.4**
AKASG IAmb IAmb 01 03 48.6
comp=Z,36nm,1.4s
AKASG Malin Array Be 65.70 32 *i* P **P 01 03 47.9 -0.2**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 65.70 32 P **P 01 03 48.0 0.0**
comp=Z,9.7nm,0.8s,baz=235,slow=7.0,SNR=31
AKASG LR LR 01 34 15.7
comp=Z,338nm,19.5s,baz=262,slow=38
comp=Z,9.7nm,0.8s
AKBB Malin Array Si 65.70 32 P **P 01 03 47.2 -0.8**
AKBB Malin Array Si 65.70 32*ce*P **P 01 03 47.8 -0.3**
AKBB pmax pmax
comp=Z,47nm,1.2s
HFS Hagfors 65.71 18 P **P 01 03 48.6 +0.7**
comp=Z,5.1nm,0.6s,baz=191,slow=12,SNR=22
comp=Z,5.1nm,0.6s
NB2 NORSAR Subarra 65.73 16 P **P 01 03 48.6 +0.5**
comp=Z,1.3nm,0.6s,baz=210,slow=6.9
NOA NORSAR Array B 65.73 16 P **P 01 03 48.7 +0.5**
comp=Z,3.4nm,0.9s,baz=210,slow=7.1,SNR=10
comp=Z,3.4nm,0.9s
NC204 NORSAR Array S 65.80 16 P **P 01 03 49.7 +1.1**
NC204 IAmb IAmb 01 03 54.6
comp=Z,39nm,1.4s
BINY Binghamton 65.84 317 P **P 01 03 49.9 +0.7**
J58A Remsen 65.86 319 P **P 01 03 49.2 -0.1**
J58A IAmb IAmb 01 04 03.1
comp=Z,17nm,0.9s
NC303 NORSAR Array S 65.93 16 P **P 01 03 50.2 +0.9**
NC405 NORSAR Array S 65.93 16 P **P 01 03 48.9 -0.4**
ARPR Arapgir-MALATY 66.04 46 P **P 01 03 50.6 -0.1**
PABE Paberze 66.11 26 *e*P **P 01 03 50.7 +0.1**
VSVD Vaisvydziai 66.40 25 *e*P **P 01 03 52.7 +0.3**
TRQ Mont Tremblant 66.67 322 P **P 01 03 54.5 +0.1**
TRQ IAmb IAmb 01 04 07.8
comp=Z,20nm,1.0s
SCHQ Schefferville 67.11 333 P **P 01 03 57.1 +0.1**
SCHQ IAmb IAmb 01 04 21.4
comp=Z,32nm,1.7s
SCHQ Schefferville 67.11 333 P **P 01 03 58.7 +1.7**
comp=Z,3.5nm,0.8s,baz=123,slow=7.2,SNR=5.8
SCHQ LR LR 01 27 39.3
comp=Z,156nm,20.3s,baz=128,slow=31
comp=Z,3.5nm,0.8s
MNK Minsk 67.24 28 *i* P **P 01 03 56.7 -1.1**
MNK *i* 01 06 26.3
MNK *i* PPP PPP 01 08 02.8
MNK *i* S **S 01 12 51.1 -0.6**
MNK *i* SS **SS 01 17 12.4 +1.0**
MNK pmax pmax
comp=Z,15nm,0.9s
MNK pmax pmax
comp=N,7.0nm,1.4s
MNK MLR MLR
comp=E,86nm,13.0s
MNK MLR MLR
comp=Z,229nm,12.0s
MNK MLR MLR
comp=N,198nm,16.0s
V55A Taylorsville 67.35 309 P **P 01 03 59.1 +0.2**
V55A IAmb IAmb 01 04 29.0
comp=Z,17nm,1.2s
M55A Ridgway 67.46 316 P **P 01 03 59.4 -0.1**
M55A IAmb IAmb 01 04 15.3
comp=Z,20nm,1.1s
CNGN Cerro Negro 67.53 284 P **P 01 03 59.1 -1.4**
RAYN Ar Rayn 67.65 64 P **P 01 04 01.3 +0.2**
RAYN IAmb IAmb 01 04 09.0
comp=Z,15nm,1.2s
RAYN Ar Rayn 67.65 64 P **P 01 04 01.3 +0.2**
RAYN pmax pmax
comp=Z,15nm,1.3s
RAYN Ar Rayn 67.65 64 P **P 01 04 02.6 +1.5**
ANN Anapa 67.65 40 *e*P **P 01 03 58.5 -2.1**
ANN *e**PP **pP 01 04 01.1 -4.0**
ANN *e*S **S 01 12 55.1 -1.9**
ANN pmax pmax
comp=Z,30nm,0.7s
WVNY West Valley, N 67.70 317 P **P 01 04 01.8 +0.8**
WVNY IAmb IAmb 01 04 16.8
comp=Z,27nm,1.1s
TIGA Tifton 68.01 304 P **P 01 04 04.0 +0.8**
MTSE Matsula 68.17 23 *e*P **P 01 04 04.7 +1.1**
V53A Saluda 68.53 309 P **P 01 04 07.5 +1.1**
V53A IAmb IAmb 01 04 09.8
comp=Z,54nm,2.0s
GURO Guroymak-BITLI 68.56 48 P **P 01 04 06.7 0.0**
GURO IAmb IAmb 01 04 08.6
comp=Z,22nm,1.0s
SOC Sochi 68.68 42 *e*P **P 01 04 04.6 -2.5**
SOC *e* 01 06 37.7
SOC *e*S **S 01 13 06.3 -3.0**
SOC *e*SS **SS 01 17 33.9 -0.3**
SOC pmax pmax
comp=Z,29nm,1.1s
SOC MLR MLR
comp=Z,203nm,20.0s
R53A Hurricane 68.68 312 P **P 01 04 06.9 -0.3**
R53A IAmb IAmb 01 05 53.1
comp=Z,32nm,1.5s
N53A Lisbon 68.68 315 P **P 01 04 06.4 -0.9**
N53A IAmb IAmb 01 04 36.7
comp=Z,31nm,1.3s
O53A New Philadelph 68.76 314 P **P 01 04 07.7 0.0**
M53A WI Miller and 68.79 315 P **P 01 04 07.7 -0.1**
VSLR Vesyoloye 68.84 42 *i* P **P 01 04 08.5 +0.3**
VSLR pmax pmax
comp=Z,70nm,1.4s
SADO Sadowa 68.97 319 LR LR 01 27 56.6
comp=Z,444nm,19.3s,baz=111,slow=30
VSU Vasula 69.17 24*ce*P **P 01 04 10.1 +0.2**
VSU pmax pmax
comp=Z,24nm,2.5s
VSU Vasula 69.17 24 *e*P **P 01 04 10.0 +0.2**
W52A Murphy 69.25 308 P **P 01 04 10.8 0.0**
152A Waverly Hall 69.25 305 P **P 01 04 09.8 -1.1**
152A IAmb IAmb 01 04 25.3
comp=Z,34nm,1.9s
VLDQ Val d'Or 69.28 323 P **P 01 04 11.7 +1.0**
VLDQ IAmb IAmb 01 04 25.8
comp=Z,17nm,1.3s
TKL Tuckaleechee C 69.28 309 LR LR 01 28 27.7
comp=Z,366nm,21.3s,baz=122,slow=31
BATM Batumi 69.33 45 P **P 01 04 10.7 -0.5**
S51A Beattyville 69.71 311 P **P 01 04 14.1 +0.5**
S51A IAmb IAmb 01 04 35.5
comp=Z,15nm,1.1s
LABN Labinsk 69.75 42 *e*P **P 01 04 10.6 -3.1**
LABN *e**PP **pP 01 04 14.2 -4.1**
LABN *e*S **S 01 13 18.8 -3.2**
LABN pmax pmax
comp=Z,66nm,1.1s
Q51A Peebles 69.93 312 P **P 01 04 14.8 -0.2**
Q51A IAmb IAmb 01 04 21.9
comp=Z,48nm,1.9s
TEIG Tepich 69.96 292 LR LR 01 30 50.8
comp=Z,2μm,22.0s,baz=197,slow=32
KARS Kars 69.99 46 P **P 01 04 15.7 +0.2**
KARS Kars 69.99 46 P **P 01 04 15.7 +0.2**
KARS pmax pmax
comp=Z,71nm,1.3s
ERBR Yeremizino-Bor 69.99 40 *e*P **P 01 04 12.4 -2.8**
ERBR *e**PP **pP 01 04 16.3 -3.5**
ERBR *e*S **S 01 13 23.1 -1.7**
ERBR pmax pmax
comp=Z,75nm,1.3s
250A Grady 70.36 304 P **P 01 04 18.9 +1.2**
250A IAmb IAmb 01 04 23.0
comp=Z,26nm,1.0s
W50A Signal Mountai 70.37 308 P **P 01 04 17.0 -0.8**
W50A IAmb IAmb 01 04 33.6
comp=Z,20nm,1.2s
FPAL Fort Paine 70.44 307 P **P 01 04 18.9 +0.6**
FPAL IAmb IAmb 01 04 21.7
comp=Z,43nm,1.7s
R50A Paris 70.45 311 P **P 01 04 18.7 +0.5**
R50A IAmb IAmb 01 04 48.0
comp=Z,27nm,1.4s
T50A Nancy 70.48 310 P **P 01 04 19.0 +0.6**
AKH Akhalkalaki 70.54 45 P **P 01 04 19.3 +0.4**
AKH Akhalkalaki 70.54 45 P **P 01 04 19.3 +0.4**
AKH pmax pmax
comp=Z,68nm,1.2s
K50A Casco 70.61 316 P **P 01 04 19.5 +0.5**
SFJD Kangerlussuaq 70.65 348 P **P 01 04 19.3 +0.6**
SFJD IAmb IAmb 01 04 35.7
comp=Z,44nm,1.6s
SFJD Kangerlussuaq 70.65 348 P **P 01 04 19.3 +0.6**
SFJD pmax pmax
comp=Z,44nm,1.6s
KIV Kislovodsk 70.82 43 P **P 01 04 20.0 -0.4**
KIV Kislovodsk 70.82 43 *e*P **P 01 04 21.1 +0.7**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 70.82 43 P **P 01 04 21.4 +0.9**
KIV P **P 01 04 21.4 +0.9**
FINES FINESS Array B 70.83 21 P **P 01 04 20.5 +0.5**
FINES FINESS Array B 70.83 21 P **P 01 04 20.7 +0.7**
comp=Z,4.3nm,0.7s,baz=199,slow=4.8,SNR=31
comp=Z,4.3nm,0.7s
FIA1 FINESS Array S 70.83 21 P **P 01 04 19.9 0.0**
SWET Sewanee 70.86 308 P **P 01 04 20.6 -0.2**
SWET IAmb IAmb 01 04 36.2
comp=Z,28nm,1.4s
KBZ Khabaz 70.89 43*ce*P **P 01 04 21.1 +0.5**
KBZ pmax pmax
comp=Z,27nm,1.1s
KBZ Khabaz 70.89 43 P **P 01 04 21.2 +0.5**
comp=Z,26nm,1.0s,baz=217,slow=4.4,SNR=26
KBZ LR LR 01 37 19.0
comp=Z,250nm,22.0s,baz=306,slow=38
comp=Z,26nm,1.0s
VNA2 Neumayer--Watz 70.89 176 ⇓P **P 01 04 20.6 +0.4**

ONI Oni 70.89 44 P **P** 01 04 20.4 -0.4
ONI IAmb IAmb 01 04 26.8
comp=Z,35nm,1.1s
ONI Oni 70.89 44 P **P** 01 04 20.5 -0.4
ONI pmax pmax
comp=Z,35nm,1.1s
O49A Covington 71.01 313 P **P** 01 04 19.1 -2.4
O49A IAmb IAmb 01 04 41.2
comp=Z,53nm,1.9s
TRLG Trialeti 71.01 45 P **P** 01 04 19.8 -2.0
PETF Flores 71.04 288 P **P** 01 04 20.6 -1.5
GNI Garni 71.05 47 P **P** 01 04 21.7 -0.3
GNI Garni 71.05 47 P **P** 01 04 21.7 -0.3
GNI pmax pmax
comp=Z,58nm,1.4s
U49A Red Boiling Sp 71.08 309 P **P** 01 04 21.2 -0.8
U49A IAmb IAmb 01 04 37.7
comp=Z,18nm,1.1s
N49A Columbus Grove 71.12 314 P **P** 01 04 21.8 -0.4
N49A IAmb IAmb 01 05 45.6
comp=Z,36nm,1.7s
ZEI Tsey 71.27 44 *e*P **P** 01 04 21.3 -2.0
ZEI pmax pmax
comp=Z,29nm,1.6s
NAX Nakhchivan 71.33 48 P **P** 01 04 24.3 +0.7
CLTN Cedars of Leba 71.40 308 P **P** 01 04 24.0 0.0
CLTN IAmb IAmb 01 04 31.5
comp=Z,18nm,1.3s
VSR Storozhevoye 71.42 35 *e*P **P** 01 04 21.2 -2.6
VSR pmax pmax
comp=Z,20nm,0.8s
GOF Gofitskoye 71.44 42 *ce*P **P** 01 04 24.1 +0.1
X48A Hartselle 71.57 307 P **P** 01 04 24.4 -0.6
L48A N Adams 71.61 315 P **P** 01 04 24.3 -0.8
L48A IAmb IAmb 01 04 27.4
comp=Z,26nm,1.1s
O48B Farmland 71.63 313 P **P** 01 04 25.1 -0.2
O48B IAmb IAmb 01 04 40.4
comp=Z,34nm,1.4s
VORR Voronezh 71.64 34 *e*P **P** 01 04 25.1 0.0
VORR pmax pmax
comp=Z,27nm,0.4s
V48A Smith Brothers 71.70 308 P **P** 01 04 25.4 -0.4
V48A IAmb IAmb 01 04 41.1
comp=Z,16nm,1.1s
PMSA Palmer Station 71.74 198 LR LR 01 28 35.8
comp=Z,553nm,21.6s,baz=6.0,slow=30
OBN Obninsk 71.80 30 P **P** 01 04 24.7 -1.3
OBN IAmb IAmb 01 04 37.3
comp=Z,31nm,1.3s
OBN Obninsk 71.80 30 *i* P **P** 01 04 25.4 -0.5
OBN *i* 01 04 45.7
OBN pmax pmax
comp=Z,17nm,1.1s
OBN MLR MLR
comp=Z,469nm,17.0s
OBN Obninsk 71.80 30 LR LR 01 37 41.9
comp=Z,420nm,18.8s,baz=284,slow=37
LPSR Galich'ya Gora 71.89 33 *e*P **P** 01 04 24.6 -1.9
LPSR pmax pmax
comp=Z,20nm,0.8s
WCI Wyandotte Cave 71.92 311 P **P** 01 04 26.7 -0.4
WCI Wyandotte Cave 71.92 311 P **P** 01 04 26.7 -0.4
WCI pmax pmax
comp=Z,11nm,1.0s
SNAA Sanae 72.00 174 P **P** 01 04 28.6 +1.6
SNAA Sanae 72.00 174 ⇓P **P** 01 04 25.0 -1.9
comp=Z,96nm,0.7s
SNAA Sanae 72.00 174 P **P** 01 04 28.6 +1.6
SNAA pmax pmax
comp=Z,18nm,1.3s
SNAA Sanae 72.00 174 P **P** 01 04 28.0 +1.0
comp=Z,3.4nm,0.8s,baz=330,slow=9.2,SNR=2.9
SNAA LR LR 01 29 44.4
comp=Z,157nm,18.2s,baz=340,slow=31
comp=Z,3.4nm,0.8s
Z47A Carrollton 72.11 305 P **P** 01 04 29.1 +0.8
Z47A IAmb IAmb 01 04 43.2
comp=Z,24nm,0.9s
N47A Urbana 72.20 313 P **P** 01 04 28.3 -0.4
N47A IAmb IAmb 01 04 34.7
comp=Z,12nm,0.7s
T47A Sharon Grove 72.23 309 P **P** 01 04 29.1 +0.1
GANJ Ganja 72.35 47 P **P** 01 04 30.5 +0.8
WVT Waverly 72.58 308 P **P** 01 04 30.8 -0.3
WVT IAmb IAmb 01 04 37.9
comp=Z,33nm,1.6s
WVT Waverly 72.58 308 P **P** 01 04 30.8 -0.3
WVT pmax pmax
comp=Z,33nm,1.6s
VALR Valaam 72.60 23 *i* P **P** 01 04 31.8 +1.2
VALR pmax pmax
comp=Z,27nm,1.0s
MOS Moscow 72.62 30 *e*P **P** 01 04 29.1 -1.8
MOS *e* 01 04 46.8
MOS *e* 01 07 09.8
MOS pmax pmax
comp=Z,34nm,0.6s
MOS MLR MLR
comp=Z,300nm,17.0s
146A Union 72.81 304 P **P** 01 04 32.5 0.0
146A IAmb IAmb 01 04 38.1
comp=Z,18nm,0.8s
ZKTA Zakatala 72.85 46 P **P** 01 04 33.4 +0.8
VRH Novokhopyorsk 72.88 35 *e*P **P** 01 04 31.8 -0.7
VRH pmax pmax
comp=Z,9.0nm,0.7s
TROLL Troll, Antarti 72.91 173 ⇓P **P** 01 04 33.5 +1.0
comp=Z,402nm,0.8s
MNGR Mingechevir, A 72.94 47 P **P** 01 04 33.9 +0.8
P46A Rosedale 72.97 312 P **P** 01 04 33.4 0.0
P46A IAmb IAmb 01 04 40.4
comp=Z,17nm,0.8s
SEKA Sheki 73.14 47 P **P** 01 04 35.5 +1.1
NVL N'lazarevskaya 73.23 170 *e*P **P** 01 04 38.2 +4.0
NVL pmax pmax
comp=Z,19nm,1.6s
OLIL Olney 73.42 311 P **P** 01 04 35.5 -0.5
OLIL IAmb IAmb 01 04 43.3
comp=Z,28nm,1.0s
MAK Makhachkala 73.84 45 *d* iP **P** 01 04 34.4 -4.0
MAK *e*S **SKiKP** 01 14 04.3 -2.6
MAK *e*SSS SSS 01 22 04.9
MAK pmax pmax
comp=Z,174nm,1.5s
MAK MLR MLR
comp=Z,160nm,18.0s
ABTO Aybut 74.03 72 P **P** 01 04 38.8 -1.2
S44A Carbondale 74.06 309 P **P** 01 04 38.9 -0.8
WHFO Wadi Hawf 74.53 71 P **P** 01 04 43.9 +0.9
143A Socs Landing, 74.76 304 P **P** 01 04 43.8 -0.1
143A IAmb IAmb 01 04 52.1
comp=Z,30nm,1.1s
DOK Doka 74.94 71 P **P** 01 04 45.6 +0.4
FVM French Village 75.03 310 P **P** 01 04 44.7 -0.7
FVM IAmb IAmb 01 04 59.5
comp=Z,37nm,1.6s
FVM French Village 75.03 310 P **P** 01 04 44.7 -0.7
FVM pmax pmax
comp=Z,37nm,1.6s
LCAR Lake Charles 75.20 307 P **P** 01 04 46.4 0.0
CCAR Cane Creek 75.28 305 P **P** 01 04 46.6 -0.4
CCAR IAmb IAmb 01 06 48.3
comp=Z,17nm,0.6s
CCM Cathedral Cave 75.67 309 P **P** 01 04 47.7 -1.4
CCM Cathedral Cave 75.67 309 P **P** 01 04 47.7 -1.4
CCM pmax pmax
comp=Z,14nm,1.0s
CMIG Matias Romero 75.84 288 LR LR 01 35 55.9
comp=Z,169nm,21.9s,baz=99,slow=34
KLMR Klimovskoe 75.90 26 *e*P **P** 01 04 47.7 -2.2
KLMR pmax pmax
comp=Z,49nm,1.4s
KLMR MLR MLR
comp=Z,715nm,19.0s
D41A Chassel 75.94 319 P **P** 01 04 50.2 -0.2
D41A IAmb IAmb 01 05 09.3
comp=Z,38nm,1.2s
N41A Harden Midland 75.95 312 P **P** 01 04 49.3 -1.4
ARCES ARCESS Array B 76.06 15 P **P** 01 04 51.3 +0.6
comp=Z,1.1nm,0.5s,baz=197,slow=3.7,SNR=14
comp=Z,1.1nm,0.5s
X40A Basin Creek Fa 76.25 306 P **P** 01 04 51.0 -1.5
MGMO Mountain Grove 76.29 308 P **P** 01 04 52.3 -0.4
MGMO IAmb IAmb 01 04 55.1
comp=Z,27nm,1.4s
UMZA Um Al Zommool 76.32 67 P **P** 01 04 53.7 +0.6
UMZA P **P** 01 04 53.7 +0.6
ELIB Princess Elisa 76.48 167 *d*P **P** 01 04 51.5 -1.6
comp=Z,8.8nm,1.1s
ELIB *d*PcP **PcP** 01 05 04.7 -0.1
R40A Maddies Statio 76.51 310 P **P** 01 04 52.7 -1.1
I40A Norwalk 76.51 315 P **P** 01 04 54.0 +0.3
BELG Belogornoye 76.73 36 *i* P **P** 01 04 53.9 -0.8
BELG pmax pmax
comp=Z,7.0nm,1.5s
APA Apatity 77.09 18 ⇓*i*P **P** 01 04 57.0 +0.5
APA pmax pmax
comp=Z,9.0nm,1.2s
S39A Bolivar 77.22 309 P **P** 01 04 58.1 +0.2
ASHO Ashiyiah 77.35 65 P **P** 01 04 59.2 +0.2
HATD Hatta, Dubai 77.44 65 P **P** 01 05 00.3 +0.9
HHAR Hobbs 77.45 307 P **P** 01 04 57.9 -1.4
HHAR IAmb IAmb 01 07 36.6
comp=Z,12nm,0.4s
UOSS Minazif 77.51 64 P **P** 01 04 59.6 -0.2
UOSS IAmb IAmb 01 05 13.2
comp=Z,22nm,0.9s
UOSS Minazif 77.51 64 P **P** 01 05 00.0 +0.2
UOSS P **P** 01 05 00.0 +0.2
ARQ Araqi 77.63 66 P **P** 01 05 01.1 +0.6
SNR=7.1
SOHO SOHO 77.73 65 P **P** 01 05 01.6 +0.7
BELA Belgrano 2 77.82 183 P **P** 01 05 02.8 +2.3
U38A Gravette 77.83 307 P **P** 01 05 01.3 -0.1
U38A IAmb IAmb 01 07 28.6
comp=Z,12nm,0.6s
BSY Bisya 78.20 67 P **P** 01 05 04.2 +0.5
SNR=6.5
X37A Clayton 78.34 305 P **P** 01 05 03.9 -0.3
X37A IAmb IAmb 01 07 29.7
comp=Z,19nm,0.7s
SPMN Marine on St. 78.34 316 P **P** 01 05 02.6 -1.4
HOQ Hoqain 78.38 66 P **P** 01 05 05.2 +0.5
SNR=5.9
I37A Lemond, Waseca 78.50 315 P **P** 01 05 05.3 +0.4
I37A IAmb IAmb 01 05 11.4
comp=Z,23nm,1.1s
MHTO MHTO 78.75 69 P **P** 01 05 07.6 +0.9
SNR=5.7
TUL3 Leonard 78.87 307 P **P** 01 05 07.0 -0.2
JMDO Jabal Madar 79.00 67 P **P** 01 05 08.0 0.0
SNR=6.0
SMDO Samad 79.01 67 P **P** 01 05 08.0 -0.2
SNR=14
JASK Jask - Hormozg 79.11 64 P **P** 01 05 07.8 -0.8
N35A Tabor 79.54 312 P **P** 01 05 10.2 -0.5
N35A IAmb IAmb 01 05 28.2
comp=Z,20nm,0.9s
WSAR Wadi Sarin 79.56 66 P **P** 01 05 11.7 +0.5
SNR=5.7
T35A Sooner Cattle 79.60 308 P **P** 01 05 10.4 -0.7
T35A IAmb IAmb 01 05 26.5
comp=Z,23nm,1.2s
B35A Bob, Littlefor 79.63 319 P **P** 01 05 11.0 0.0
W35A Tecumseh 79.64 306 P **P** 01 05 09.7 -1.7
W35A IAmb IAmb 01 06 50.0
comp=Z,15nm,0.5s
KIRV Kirov 79.64 30 *ce*P **P** 01 05 09.8 -1.0
QUOK Quay 79.65 307 P **P** 01 05 10.2 -1.1
735A Kenedy 79.66 299 P **P** 01 05 11.4 -0.1
735A IAmb IAmb 01 06 15.9
comp=Z,30nm,0.7s
435B Jarrell 79.68 301 P **P** 01 05 11.5 -0.1
OK052 Battle Ridge R 79.70 307 P **P** 01 05 10.8 -0.9
OK052 IAMs_20 IAMs_20 01 28 41.1
comp=Z,371nm,19.0s
Z35A Perchaven, San 79.71 304 P **P** 01 05 10.8 -1.0
WHTX Lake Whitney, 79.72 302 P **P** 01 05 11.9 +0.1
LOOK Love County 79.74 305 P **P** 01 05 12.1 +0.2
LOOK IAmb IAmb 01 07 23.7
comp=Z,16nm,0.7s
OK051 E0350 and S346 79.80 307 P **P** 01 05 12.0 -0.1
OK051 IAMs_20 IAMs_20 01 45 25.7
comp=Z,474nm,18.0s
OK033 Mehan 79.81 307 **P** 01 05 12.7 +0.4
WBK Wadi Bani Khal 79.81 67 P **P** 01 05 13.3 +0.7
OK048 Pawnee Station 79.87 307 **P** 01 05 11.7 -0.9
KSU1 Kansas State U 80.00 310 P **P** 01 05 12.0 -1.2
FNO Franklin 80.08 306 **P** 01 05 13.3 -0.5
JLN Jalan Bani Buh 80.18 68 P **P** 01 05 15.0 +0.4
SNR=6.4
OK029 Liberty Lake 80.19 306 IAMs_20 IAMs_20 01 32 52.3
comp=Z,557nm,20.0s
KAN13 South Haven SW 80.38 308 P **P** 01 05 14.4 -0.9
PLPT Palo Pinto 80.53 303 P **P** 01 05 16.8 +0.6
KAN17 Caldwell West 80.61 308 P **P** 01 05 17.1 +0.6
KAN01 Argonia South 80.62 308 P **P** 01 05 17.4 +0.8
KAN01 IAmb IAmb 01 06 29.7
comp=Z,12nm,0.6s
CROK Carrier 80.71 307 **P** 01 05 16.9 -0.2
ECSD EROS Data Cent 80.73 314 P **P** 01 05 16.4 -0.6
GEYT Alibeck 80.74 52 P **P** 01 05 17.6 +0.4
GEYT Alibeck 80.74 52 P **P** 01 05 17.6 +0.4
GEYT pmax pmax
comp=Z,20nm,1.6s
GEYT Alibeck 80.74 52 P **P** 01 05 17.8 +0.5
comp=Z,3.2nm,0.7s,baz=288,slow=16,SNR=6.7
comp=Z,3.2nm,0.7s
WTFS Witchita Falls 80.77 304 **P** 01 05 17.9 +0.5
WTFS IAmb IAmb 01 05 22.6
comp=Z,16nm,0.8s
SPITS Spitsbergen Ar 80.81 7 LR LR 01 37 03.1
comp=Z,165nm,19.3s,baz=174,slow=33
F33A 5 Mile Ranch, 80.86 316 P **P** 01 05 19.2 +1.5
KBS Kingsbay 80.93 6 P **P** 01 05 19.4 +2.0
KBS Kingsbay 80.93 6 P **P** 01 05 19.4 +2.0
KBS pmax pmax
comp=Z,67nm,1.6s
OK032 Salt Plains WL 80.93 307 P **P** 01 05 18.1 -0.2
OK032 IAmb IAmb 01 06 46.4
comp=Z,28nm,1.0s
BRDY Brady 80.94 302 P **P** 01 05 18.5 0.0
833A Chaparral WMA, 81.00 299 P **P** 01 05 19.0 +0.3
833A IAmb IAmb 01 05 34.8
comp=Z,16nm,1.0s
HNDO Hondo 81.01 300 P **P** 01 05 19.1 +0.2
AGMN Agassiz Nation 81.02 319 P **P** 01 05 17.6 -0.9
WMOK Wichita Mounta 81.14 305 P **P** 01 05 18.7 -0.8
WMOK Wichita Mounta 81.14 305 P **P** 01 05 18.7 -0.8
WMOK pmax pmax
comp=Z,39nm,0.4s
CSTR Hydro, Custer 81.17 306 P **P** 01 05 19.8 +0.1
OK038 West end E0370 81.31 307 P **P** 01 05 20.5 +0.2
JRQG Juriquilla Cam 81.36 291 P **P** 01 05 21.4 +0.2
JRQG IAmb IAmb 01 07 05.4
comp=Z,9.8nm,0.4s
ULM Lac du Bonnet 81.39 321 P **P** 01 05 20.1 -0.3
ULM IAmb IAmb 01 05 34.7
comp=Z,26nm,1.6s
ULM Lac du Bonnet 81.39 321 P **P** 01 05 20.1 -0.3
ULM pmax pmax
comp=Z,26nm,1.6s
ULM Lac du Bonnet 81.39 321 P **P** 01 05 20.6 +0.1
comp=Z,3.4nm,0.7s,baz=113,slow=7.9,SNR=7.4
ULM LR LR 01 36 21.7
comp=Z,312nm,19.0s,baz=84,slow=32
comp=Z,3.4nm,0.7s
BGNE Belgrade 81.50 312 P **P** 01 05 20.4 -0.8
BGNE IAmb IAmb 01 05 28.5
comp=Z,18nm,0.8s
U32A Winter Ranch, 81.51 307 P **P** 01 05 21.1 -0.3
U32A IAmb IAmb 01 06 50.7
comp=Z,20nm,0.7s
R32A Long Quarter, 81.53 309 P **P** 01 05 21.7 +0.3
R32A IAmb IAmb 01 07 33.6
comp=Z,12nm,0.5s
JCT Junction City 81.55 301 P **P** 01 05 22.0 +0.3
JCT Junction City 81.55 301 P **P** 01 05 22.0 +0.3
JCT pmax pmax
comp=Z,9.0nm,0.8s
ABTX Abilene, Hawle 81.63 303 P **P** 01 05 22.2 +0.2
ELIS Ellis County 81.81 306 P **P** 01 05 22.5 -0.5
APMT Aspermont 82.10 304 P **P** 01 05 24.0 -0.5
DRIO Del Rio 82.16 300 P **P** 01 05 24.9 0.0
FCC Fort Churchill 82.21 330 P **P** 01 05 24.5 0.0
FCC IAmb IAmb 01 05 39.6
comp=Z,16nm,1.1s
FCC Fort Churchill 82.21 330 P **P** 01 05 24.5 0.0
FCC pmax pmax
comp=Z,16nm,1.1s
CBKS Cedar Bluff 82.38 309 P **P** 01 05 26.3 +0.4
CBKS IAmb IAmb 01 05 45.1
comp=Z,23nm,1.2s
CBKS Cedar Bluff 82.38 309 P **P** 01 05 26.3 +0.4
CBKS pmax pmax
comp=Z,23nm,1.3s
SMWD Samnorwood 82.38 305 P **P** 01 05 26.4 +0.4
SMWD IAmb IAmb 01 07 27.9
comp=Z,10.0nm,0.7s
AKTO Aktyubinsk 82.57 39 LR LR 01 45 27.0
comp=Z,256nm,21.8s,baz=302,slow=38
SN05 Snyder 5 82.69 303 P **P** 01 05 28.0 +0.3
SN05 IAmb IAmb 01 07 36.4
comp=Z,22nm,1.1s
SN07 Snyder 07 82.72 303 P **P** 01 05 28.5 +0.7
SN07 IAmb IAmb 01 08 36.7
comp=Z,6.7nm,0.5s
OZNA Ozona 82.73 301 P **P** 01 05 27.5 -0.5
K30B Basset 82.75 313 P **P** 01 05 27.8 +0.1
K30B IAmb IAmb 01 05 56.7
comp=Z,26nm,1.1s
DKNS Dickens 82.80 304 P **P** 01 05 28.9 +0.7
DKNS IAmb IAmb 01 05 31.2
comp=Z,46nm,2.0s
SGCY Sterling City 82.81 302 P **P** 01 05 28.0 -0.3
SGCY IAmb IAmb 01 05 34.7
comp=Z,10nm,0.8s
POST Post 83.22 303 P **P** 01 05 30.7 +0.2
MDND Maddock 83.42 318 P **P** 01 05 31.9 +0.8
ZAIG Zacatecas 83.45 293 P **P** 01 05 31.9 -0.2
ZAIG IAmb IAmb 01 05 40.6
comp=Z,17nm,1.5s
SAND Sanderson 83.51 300 P **P** 01 05 31.3 -0.7
AMTX Amarillo 83.53 305 P **P** 01 05 32.0 0.0
ABKAR Akbulak array 83.62 40 P **P** 01 05 31.9 -0.1
ABKAR Akbulak array 83.62 40 P **P** 01 05 31.8 -0.2
ABKAR IAmb IAmb 01 05 44.3
comp=Z,14nm,0.9s
HRA Herat 83.67 56 P **P** 01 05 32.8 -0.1
HRA IAmb IAmb 01 05 37.8
comp=Z,27nm,1.6s
ARU Arti 83.91 33 P **P** 01 05 33.0 -0.4
ARU IAmb IAmb 01 05 38.8
comp=Z,27nm,1.3s
ARU Arti 83.91 33 *c* iP **P** 01 05 33.7 +0.4
ARU S **SKSac** 01 15 55.5 +0.1
ARU SS **SS** 01 21 19.3 -4.7
ARU pmax pmax
comp=Z,29nm,1.4s
ARU Arti 83.91 33 LR LR 01 45 36.4
comp=Z,251nm,20.3s,baz=269,slow=38
E28A Huff 83.99 317 P **P** 01 05 34.3 +0.2
ODSA Odessa 84.03 302 P **P** 01 05 33.9 -0.8
ODSA IAmb IAmb 01 05 50.3
comp=Z,11nm,1.0s
MNHN Monahans 84.16 301 P **P** 01 05 34.6 -0.7
MSTX Muleshoe 84.36 304 P **P** 01 05 36.0 -0.3
OGNE Ogallala 84.36 311 P **P** 01 05 36.0 -0.2
RTBA Rita Blanca 84.52 306 P **P** 01 05 36.8 -0.3
RTBA IAmb IAmb 01 06 10.7
comp=Z,41nm,1.8s
KSCO Kaye Shedlock' 84.64 309 P **P** 01 05 38.1 +0.4
TXAR Lajitas Array 84.81 299 P **P** 01 05 38.7 0.0
TXAR Lajitas Array 84.81 299 P **P** 01 05 39.1 +0.4
comp=Z,2.0nm,0.7s,baz=117,slow=6.3,SNR=16
comp=Z,2.0nm,0.7s
TX31 Lajitas Ar. Si 84.81 299 P **P** 01 05 38.1 -0.6
TX31 IAmb IAmb 01 05 46.2
comp=Z,33nm,1.8s
ALPN Alpine 84.85 300 P **P** 01 05 38.7 -0.2
ALPN IAmb IAmb 01 05 42.1
comp=Z,35nm,1.8s
PECS Pecos 85.10 301 P **P** 01 05 39.4 -0.6
SVE Sverdlovsk 85.10 33 *e*P **P** 01 05 40.4 +1.0
SVE pmax pmax
comp=Z,22nm,1.3s
FFC Flin Flon 85.77 325 P **P** 01 05 43.2 +0.5
FFC Flin Flon 85.77 325 P **P** 01 05 43.3 +0.5
FFC pmax pmax
comp=Z,10.0nm,1.2s
T25A Trinidad 85.91 307 P **P** 01 05 43.4 -0.7
VHRN Van Horn 86.03 301 P **P** 01 05 44.8 0.0
VHRN IAmb IAmb 01 05 52.4
comp=Z,44nm,1.8s
RES Resolute Bay 86.45 345 P **P** 01 05 46.3 +0.6
RES Resolute Bay 86.45 345 P **P** 01 05 46.3 +0.6
RES pmax pmax
comp=Z,4.0nm,1.0s
DGMT Dagmar 86.54 318 P **P** 01 05 46.5 -0.3
DGMT IAmb IAmb 01 05 53.7
comp=Z,17nm,1.1s
Q24A Divide 86.59 309 P **P** 01 05 47.6 0.0
Q24A IAmb IAmb 01 06 16.7
comp=Z,16nm,1.4s
PHWY Pilot Hill 86.96 311 P **P** 01 05 49.0 -0.4
ISCO Idaho Springs 87.00 310 P **P** 01 05 50.4 +0.8
ISCO IAmb IAmb 01 06 18.9
comp=Z,18nm,1.6s
ISCO Idaho Springs 87.00 310 P **P** 01 05 50.4 +0.8
ISCO pmax pmax
comp=Z,18nm,1.6s
N23A Red Feather La 87.31 311 P **P** 01 05 50.9 -0.1
N23A IAmb IAmb 01 06 20.6
comp=Z,15nm,1.1s
ANMO Albuquerque 87.45 305 P **P** 01 05 51.2 -0.5
ANMO Albuquerque 87.45 305 P **P** 01 05 51.2 -0.5
ANMO pmax pmax
comp=Z,4.0nm,0.9s
ANMO Albuquerque 87.45 305 LR LR 01 38 29.1
comp=Z,116nm,22.0s,baz=178,slow=31
BNM Barren Site 87.56 304 P **P** 01 05 53.4 +1.1
LAO LASA Array 87.80 317 P **P** 01 05 52.4 -0.5
LAO IAmb IAmb 01 05 59.7
comp=Z,14nm,1.0s
K22A Casper 87.82 313 P **P** 01 05 54.2 +0.9
K22A IAmb IAmb 01 06 16.1
comp=Z,11nm,1.1s
SMCO Snowmass 88.02 309 P **P** 01 05 54.4 -0.3
SMCO IAmb IAmb 01 06 16.8
comp=Z,21nm,1.7s
RWWY Rawlins 88.30 312 P **P** 01 05 55.4 -0.3
RWWY IAmb IAmb 01 06 42.7
comp=Z,21nm,1.5s
121A Cookes Peak, D 88.48 302 P **P** 01 05 56.7 0.0
O20A White River Ci 89.03 310 P **P** 01 05 59.3 +0.1
O20A IAmb IAmb 01 06 13.5
comp=Z,12nm,1.1s
MVCO Mesa Verde 89.17 307 P **P** 01 05 59.6 -0.3
MVCO IAmb IAmb 01 06 48.6
comp=Z,47nm,1.9s
PV01 Paradox Valley 89.25 308 P **P** 01 06 00.7 +0.5
PV01 IAmb IAmb 01 06 08.6
comp=Z,31nm,1.8s
KBL Kabul 89.29 56 P **P** 01 05 58.9 -1.6
KBL IAmb IAmb 01 06 06.7
comp=Z,12nm,1.2s
KBL Kabul 89.29 56 P **P** 01 05 58.9 -1.6
KBL pmax pmax
comp=Z,12nm,1.2s
KBL Kabul 89.29 56 P **P** 01 06 00.9 +0.4
SNR=7.1
KBL P **P** 01 06 00.9 +0.4
SNR=7.1
SIMJ Simiganj 89.33 52 P **P** 01 06 00.4 -0.1
SIMJ IAmb IAmb 01 06 08.8
comp=Z,32nm,1.4s
RPN Rapa Nui 89.38 243 LR LR 01 42 15.1
comp=Z,218nm,20.5s,baz=86,slow=33
PV22 Blue Mesa, Par 89.42 308 P **P** 01 06 00.8 -0.2
PV03 Paradox Valley 89.47 308 P **P** 01 06 01.2 -0.1
PV03 IAmb IAmb 01 06 09.1
comp=Z,32nm,1.7s
PV11 David Mesa, Pa 89.49 308 **P** 01 06 01.0 -0.3
PV11 IAmb IAmb 01 06 16.1
comp=Z,11nm,0.9s
PV04 Paradox Valley 89.51 308 P **P** 01 06 01.4 0.0
PV18 Skein Mesa, Pa 89.51 308 P **P** 01 06 01.5 +0.1
PV18 IAmb IAmb 01 06 31.4
comp=Z,12nm,1.1s
PV19 Morning Glory 89.57 308 P **P** 01 06 01.9 +0.2
PV19 IAmb IAmb 01 07 43.1
comp=Z,13nm,0.5s

DUN6 Lazy B Ranch 89.58 302 P **P** **01 06 00.9 -0.9**
PV23 Carpenter Ridg 89.60 308 P **P** **01 06 02.3 +0.4**
PV23 IAmb IAmb 01 07 44.8
comp=Z,10nm,0.8s
QSPA South Pole Qui 89.68 180 P **P** **01 06 02.4 +0.9**
QSPA IAmb IAmb 01 06 24.7
comp=Z,18nm,0.9s
QSPA South Pole Qui 89.68 180 P **P** **01 06 02.1 +0.6**
comp=Z,4.4nm,0.8s,baz=201,slow=3.0,SNR=13
QSPA LR LR 01 40 23.4
comp=Z,242nm,19.5s,baz=203,slow=32
comp=Z,4.4nm,0.8s
RLMT Red Lodge 89.88 315 **P** **01 06 01.8 -1.2**
PD31 Pinedale Array 90.06 313 P **P** **01 06 03.8 -0.1**
PDAR Pinedale Array 90.06 313 P **P** **01 06 03.8 -0.1**
comp=Z,0.9nm,0.8s,baz=96,slow=4.6,SNR=6.2
PDAR LR LR 01 40 46.4
comp=Z,182nm,21.4s,baz=74,slow=32
comp=Z,0.9nm,0.8s
EGMT Eagleton 90.24 318 P **P** **01 06 05.6 +1.2**
BRVK Borovoye 90.38 37 P **P** **01 06 05.5 +0.7**
BRVK IAmb IAmb 01 06 10.6
comp=Z,14nm,1.4s
BRVK Borovoye 90.38 37 *ce*P **P** **01 06 06.6 +1.8**
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK Borovoye 90.38 37 P **P** **01 06 06.8 +2.0**
BRVK P **P** **01 06 06.8 +2.0**
BVAR Borovoye Array 90.44 37 P **P** **01 06 04.9 -0.3**
comp=Z,1.7nm,0.9s,baz=298,slow=3.2,SNR=10
comp=Z,1.7nm,0.9s
KK31 Karatay Array 90.52 47 P **P** **01 06 05.8 0.0**
KK31 Karatay Array 90.52 47 P **P** **01 06 05.8 0.0**
KK31 pmax pmax
comp=Z,12nm,1.5s
KKAR Karatay Array 90.52 47 P **P** **01 06 05.2 -0.6**
KKAR Karatay Array 90.52 47 P **P** **01 06 05.3 -0.4**
KKAR IAmb IAmb 01 06 11.0
comp=Z,12nm,1.5s
KKAR Karatay Array 90.52 47 P **P** **01 06 05.2 -0.6**
KKAR 01 06 05.3
P18A Preston Nutter 90.57 309 P **P** **01 06 05.5 -1.0**
P18A IAmb IAmb 01 07 26.6
comp=Z,19nm,1.8s
BTK Batken 90.75 50 P **P** **01 06 07.2 +0.3**
BTK IAmb IAmb 01 06 09.1
comp=Z,18nm,1.4s
BTK Batken 90.75 50 P **P** **01 06 07.3 +0.3**
BTK pmax pmax
comp=Z,18nm,1.4s
YHH Holmes Hill 91.00 315 P **P** **01 06 07.7 -0.7**
REDW Red Top Meadow 91.01 313 P **P** **01 06 08.0 -0.3**
IMW Indian Meadow 91.07 314 P **P** **01 06 08.0 -0.7**
TPAW Teton Pass 91.08 313 P **P** **01 06 08.8 +0.1**
TPAW IAmb IAmb 01 07 10.5
comp=Z,20nm,1.9s
FXWY Fox Creek 91.14 313 P **P** **01 06 07.5 -1.5**
AHID Auburn Hatcher 91.20 313 P **P** **01 06 08.4 -0.7**
AHID IAmb IAmb 01 07 35.6
comp=Z,20nm,1.9s
WUAZ Wupatki 91.48 305 IAMs_20 IAMs_20 01 39 38.2
comp=Z,296nm,18.0s
HWUT Hardware Ranch 91.56 311 P **P** **01 06 10.4 -0.5**
HWUT IAmb IAmb 01 06 16.8
comp=Z,20nm,1.9s
MTPU Mount Pierson 92.10 308 P **P** **01 06 12.6 -1.1**
ARSB Arslanbob 92.38 49 P **P** **01 06 14.4 -0.2**
ARSB IAmb IAmb 01 06 20.4
comp=Z,15nm,2.0s
ARSB Arslanbob 92.38 49 P **P** **01 06 14.4 -0.2**
ARSB pmax pmax
comp=Z,15nm,2.0s
EDM Edmonton 92.43 323 P **P** **01 06 14.7 +0.3**
EDM IAmb IAmb 01 06 29.8
comp=Z,15nm,1.1s
EDM Edmonton 92.43 323 P **P** **01 06 14.7 +0.3**
EDM pmax pmax
comp=Z,15nm,1.1s
HVU Hansel Valley 92.46 312 P **P** **01 06 12.6 -2.4**
HVU Hansel Valley 92.46 312 P **P** **01 06 12.6 -2.4**
HVU pmax pmax
comp=Z,3.0nm,0.9s
DUG Dugway, Tooele 92.53 310 P **P** **01 06 14.4 -1.0**
DUG IAmb IAmb 01 07 19.8
comp=Z,16nm,1.9s
DUG Dugway, Tooele 92.53 310 P **P** **01 06 14.4 -1.0**
DUG pmax pmax
comp=Z,16nm,1.9s
YKA Yellowknife Ar 92.56 332 P **P** **01 06 13.2 -1.5**
YKA Yellowknife Ar 92.56 332 *i* P **P** **01 06 15.8 +1.1**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 92.56 332 P **P** **01 06 14.9 +0.1**
comp=Z,0.9nm,0.8s,baz=86,slow=5.0,SNR=14
YKA LR LR 01 45 34.8
comp=Z,301nm,18.2s,baz=92,slow=34
comp=Z,0.9nm,0.8s
YKAB2 New Yellowknif 92.56 332 P **P** **01 06 14.0 -0.8**
AAK Ala-Archa 93.45 47 P **P** **01 06 18.8 -0.8**
AAK Ala-Archa 93.45 47 *ce*P **P** **01 06 21.3 +1.7**
AAK pmax pmax
comp=Z,8.0nm,1.2s
AAK Ala-Archa 93.45 47 P **P** **01 06 20.3 +0.8**
HLID Hailey 93.60 313 **P** **01 06 21.5 +1.3**
SPR3 Spring Creek 3 93.75 309 P **P** **01 06 21.1 -0.1**
ELK Elko 94.36 311 LR LR 01 43 25.2
comp=Z,314nm,19.2s,baz=82,slow=32
NRN Naryn 94.64 49 P **P** **01 06 24.1 -1.2**
NRN Naryn 94.64 49 P **P** **01 06 24.1 -1.2**
NRN pmax pmax
comp=Z,4.0nm,0.8s
KSH Kashi 94.73 51 P **P** **01 06 25.3 -0.2**
KSH sP pwP 01 06 36.3 -0.6
KSH pmax pmax
comp=Z,7.0nm,1.1s
NEW Newport 95.16 318 LR LR 01 43 52.5
comp=Z,356nm,20.9s,baz=72,slow=32
KURBB Kurchatov Arra 95.62 39 P **P** **01 06 29.8 +0.8**
comp=Z,2.2nm,0.2s,baz=282,slow=4.8,SNR=1.1
KURBB PP **PP** **01 10 14.4 -5.8**
comp=Z,0.5nm,0.2s,baz=282,slow=8.4,SNR=5.0
KURBB LR LR 01 56 22.7
comp=Z,346nm,18.2s,baz=259,slow=40
comp=Z,2.2nm,0.2s
KURK Kurchatov 95.66 39 P **P** **01 06 29.8 +0.5**
PFO Pinyon Flats O 95.74 304 LR LR 01 44 14.5
comp=Z,217nm,20.7s,baz=72,slow=32
QSM Queen of Sheba 95.93 306 P **P** **01 06 30.1 -0.8**
QSM IAmb IAmb 01 09 09.5
comp=Z,15nm,1.5s
TARG Taragay, Kyrgy 95.97 48 P **P** **01 06 31.0 -0.4**
TARG IAmb IAmb 01 06 36.0
comp=Z,11nm,1.5s
TARG Taragay, Kyrgy 95.97 48 P **P** **01 06 31.0 -0.4**
TARG pmax pmax
comp=Z,11nm,1.5s
CCX Cicese 96.02 302 P **P** **01 06 28.3 -3.0**
WVOR Wild Horse Val 96.77 313 P **P** **01 06 30.1 -4.6**
WVOR Wild Horse Val 96.77 313 P **P** **01 06 30.1 -4.6**
WVOR pmax pmax
comp=Z,48nm,1.9s
NVAR Mina Array Bea 96.89 309 LR LR 01 47 30.7
comp=Z,126nm,19.5s,baz=86,slow=34
ISA Isabella, Lake 97.26 306 P **P** **01 06 35.8 -1.2**
ISA IAmb IAmb 01 09 56.8
comp=Z,10.0nm,1.4s
ISA Isabella, Lake 97.26 306 P **P** **01 06 35.8 -1.2**
ISA pmax pmax
comp=Z,10.0nm,1.4s
MK31 Makanchi Array 98.58 43 P Pdif 01 06 43.3 +0.7
MK31 Makanchi Array 98.58 43 P Pdif 01 06 43.3 +0.7
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 98.58 43 P **P** **01 06 42.2 -0.4**
MKAR Makanchi Array 98.58 43 *i* P Pdif 01 06 50.0 +7.4
MKAR Makanchi Array 98.58 43 P Pdif 01 06 43.0 +0.3
comp=Z,0.2nm,0.6s,baz=240,slow=1.8,SNR=3.2
MKAR PP **PP** **01 10 36.7 -6.5**
comp=Z,1.3nm,0.9s,baz=286,slow=5.8,SNR=2.3
comp=Z,0.2nm,0.6s
ZALV Zalesovo Beam 98.92 35 PP **PP** **01 10 46.3 +0.8**
comp=Z,0.3nm,0.3s,baz=289,slow=9.0,SNR=1.8
ZALV LR LR 01 55 09.3
comp=Z,281nm,19.6s,baz=300,slow=38
INK Inuvik 98.96 340 LR LR 01 44 28.1
comp=Z,240nm,22.0s,baz=359,slow=31
H04A Detroit Lake 99.06 315 P **Pdif** **01 06 45.0 +0.2**
YBH Yreka Blue Hor 99.86 312 LR LR 01 46 55.9
comp=Z,356nm,22.0s,baz=78,slow=32
I03D Drain, OR 100.03 314 Pdif **Pdif** **01 06 48.5 -0.6**
WMQ Urumqi 102.87 45 *e*P **Pdif** **01 07 02.1 +0.3**
WMQ pmax pmax
comp=Z,5.0nm,0.9s
WMQ LR LR
comp=Z,380nm,16.1s
WMQ LR LR
comp=Z,350nm,14.3s
WMQ LR LR
comp=Z,340nm,17.9s
FID Port Fidalgo 107.40 336 IAMs_20 IAMs_20 01 44 47.7
comp=Z,362nm,19.0s
GOMU GeErMu 109.96 51 Pdif **Pdif** **01 07 33.3 -0.6**
GOMU PP **PP** **01 12 10.8 +2.2**
GOMU SS SS 01 27 27.1 -6.2
GOMU LR LR
comp=Z,150nm,19.8s
GOMU LR LR
comp=Z,120nm,19.2s
GOMU LR LR
comp=Z,210nm,18.8s
BTO Baotou 119.49 42 *e*PKP **PKPdf** **01 11 49.8 -4.0**
BTO sPKP 01 12 02.8
BTO SKS **SKSac** **01 18 55.3 +6.1**
BTO LR LR
comp=Z,390nm,8.4s
BTO LR LR
comp=Z,470nm,9.2s
BTO LR LR
comp=Z,560nm,17.0s
HIA Hailar 120.25 29 IAMs_20 IAMs_20 02 06 17.5
comp=Z,298nm,19.0s
HHC Hu-ho-hao-te 120.40 41 *e*PKP **PKPdf** **01 11 51.3 -4.2**
HHC PP **PP** **01 13 23.4 +1.9**
HHC PKS PKSdf 01 15 23.3 -9.0
HHC SS SS 01 29 51.1 +1.9
HHC AMB AMB
comp=Z,98nm,6.2s
HHC LR LR
comp=Z,160nm,20.1s
HHC LR LR
comp=Z,240nm,20.6s
HHC LR LR
comp=Z,280nm,18.1s
XAN Xi'an 121.57 49 PKP **PKPdf** **01 11 53.6 -4.3**
XAN LR LR
comp=Z,650nm,16.1s
XAN LR LR
comp=Z,570nm,15.8s
HNS HongShan 124.24 43 *e*PKP **PKiKP** **01 12 07.8 +4.7**
HNS *e*PP PP 01 13 57.8 +10
HNS LR LR
comp=N,180nm,16.7s
HNS LR LR
comp=E,360nm,22.3s
HNS LR LR
comp=Z,360nm,24.0s
TBI Tubuai 125.70 241 *e*SS SS 01 31 05.6 +8.1
comp=Z,1μm,30.2s
TBI Tubuai 125.70 241 *e*LR LR 01 51 14.8
comp=Z,1μm,34.0s
PPT2 Papeete2 127.43 247 *e*SS SS 01 31 14.1 -5.7
comp=Z,151nm,34.0s
PPT2 Papeete2 127.43 247 *e*LR LR 01 52 07.5
comp=Z,292nm,24.8s
PPT2 *e*LR LR 01 52 09.2
comp=Z,380nm,24.2s
MDJ Mudanjiang 128.29 28 PKP **PKPdf** **01 12 10.6 +0.2**
MDJ sPKP 01 12 17.5
MDJ PP **PP** **01 14 14.0 +0.3**
MDJ AMB AMB
comp=Z,260nm,4.5s
MDJ Mudanjiang 128.29 28 IAMs_20 IAMs_20 02 16 11.5
comp=Z,239nm,19.0s
NJ2 Nanjing 129.90 47 *e*PKP **PKPdf** **01 12 13.8 0.0**
YSS Yuzh-Sakhalins 131.19 16 *i* PKIKP **PKiKP** **01 12 19.5 +2.8**
YSS *e* 01 14 30.7
YSS *e* 01 19 23.0
YSS *e*PS **PS** **01 24 48.0 +1.5**
YSS pmax pmax
comp=Z,10.0nm,1.0s
STKA Stephens Creek 143.41 153 PKP **PKPdf** **01 12 38.9 +0.2**
comp=Z,3.0nm,0.7s,baz=170,slow=5.6,SNR=3.9
ASAR Alice Springs 145.03 135 **PKPbc** **01 12 41.0 -0.2**
ASAR Alice Springs 145.03 135 PKP **PKPab** **01 12 41.4 +0.2**
comp=Z,18nm,0.8s,baz=222,slow=2.8,SNR=66
AS31 Alice Springs 145.04 135 **PKPab** **01 12 41.3 +0.1**
WRA Warramunga Arr 147.61 130 PKPbc **PKPbc** **01 12 49.0 +0.1**
comp=Z,4.1nm,1.0s,baz=243,slow=2.5,SNR=12
WB0 Warramunga Arr 147.76 130 **PKPbc** **01 12 49.7 +0.4**
WR0 Warramunga Arr 147.76 130 **PKPbc** **01 12 49.0 -0.3**
DZM Mont Dzumac 156.85 195 *e*SS SS 01 37 05.8 +8.2
comp=Z,144nm,30.2s
DZM Mont Dzumac 156.85 195 *e*LR LR 02 05 46.8
comp=Z,442nm,32.5s

*IDC **20** 01:30:05.8±0.4, 75°.85N×7°.35E, h0km, mb4.1/29, mbtmp4.2/34, ML3.4/4, MS4.0/39, Error ellipse: s-maj=11.2km s-min=8.5km az=43.0*
*NAO **20** 01:30:05.3±1.9, 75°.89N×8°.00E, ML4.6*
*GCMT **20** 01:30:06.5±0.2, 75°.90N±0°.04×6°.90E±0°.09, h12km, MW4.8/93, Moment Tensor Solution. s17, c18; s93, c130; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~1.92±.06; Mθθ 0.29±.06; Mφφ 1.63±.06; Mrθ~0.40±.32; Mrφ 0.41±.06; Mθφ~0.74±.27; Best double couple: M◎2.01400×10^16 NP1: ϕs 21.00000°, δ 33.00000°, λ -85.00000°. NP2: ϕs 191.00000°, δ 33.00000°, λ -98.00000°. Principal axes: T 1.9190, Plg12.0000°, Azm107.0000°; N 0.1930, Plg4.0000°, Azm198.0000°; P -2.1100, Plg77.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **20** 01:30:06.5±1.2, 75°.94N×6°.75E, h13km, mb4.7/53 Error ellipse: s-maj=23.7km s-min=4.4km az=94.0*
*NEIC **20** 01:30:07.5±1.6, 75°.99N±0°.07×7°.2E±0°.3, h10km±1km, mb4.7/153, Error ellipse: s-maj=13.4km s-min=12.0km az=274.0*
*BER **20** 01:30:08.8±4.8, 75°.98N×7°.66E, h19km±30km, mb(Pn)4.9, ML4.6(NAO), Confirmed Earthquake*
*KOLA **20** 01:30:09.8, 76°.26N×8°.67E, h0km, ML3.0, Error ellipse: s-maj=23.5km s-min=19.9km az=50.0, Greenland sea, Knipovich ridge, middle*
*FCIAR **20** 01:30:10.1, 75°.92N×8°.27E, h10km, station SPA0 has station magnitude of 4.60*
*DNK **20** 01:30:11.4±3.8, 76°.75N×4°.08E, h0km±309km, ML2.9*

ISC 20 01:30:07.1±0.6, 76°.00N±0°.03×7°.31E±0°.04, h9km±4km, h9km: pP-P, n666, σ≥306/629, mb4.6/170, MS4.0/47, 18C-13D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**2.18**	**58**	*e*P	**Pn**	**01 30 41.6**	**-1.8**
HSPB				*e*S	**Sn**	**01 31 04.8**	**-5.6**
HSPB	**Hornsund (broa**	**2.18**	**58**	Pn	**Pn**	**01 30 41.6**	**-1.8**
HSPB				Sn	**Sn**	**01 31 05.6**	**-4.8**
HSPB	**Hornsund (broa**	**2.18**	**58**	P	**Pn**	**01 30 41.5**	**-1.8**
HSPB				S	**Sn**	**01 31 02.8**	**-7.6**
HSPB	**Hornsund (broa**	**2.18**	**58**	*e*P	**Pn**	**01 30 41.5**	**-1.8**
HSPB				*e*S	**Sn**	**01 31 05.4**	**-5.0**
HSPB				IAML		01 31 10.2	
comp=Z,122nm,0.6s							
BRBA	**Barentsburg A**	**2.59**	**34**	Pn	**Pn**	**01 30 47.7**	**-1.4**
BRBA				Sn	**Sn**	**01 31 15.7**	**-4.9**
BRBA	**Barentsburg A**	**2.59**	**34**	*e*P	**Pn**	**01 30 47.7**	**-1.4**
BRBA				*e*S	**Sn**	**01 31 15.7**	**-4.9**
BRBA				IAML		01 31 16.0	
comp=Z,70nm,0.4s							
BRBB	**Barentsburg B**	**2.62**	**33**	Pn	**Pn**	**01 30 48.4**	**-1.0**
BRBB				Sn	**Sn**	**01 31 16.3**	**-5.0**
BRBB	**Barentsburg B**	**2.62**	**33**	P	**Pn**	**01 30 47.8**	**-1.7**
BRBB				S	**Sn**	**01 31 17.0**	**-4.3**
BRBB	**Barentsburg B**	**2.62**	**33**	*e*P	**Pn**	**01 30 48.2**	**-1.3**
BRBB				*e*S	**Sn**	**01 31 16.1**	**-5.2**
SPA0	**Spitsbergen Ar**	**2.99**	**39**	Pn	**Pn**	**01 30 54.3**	**-0.3**
baz=203,slow=14							
SPA0				Sn	**Sn**	**01 31 27.0**	**-3.4**
baz=217,slow=22							
SPA0	**Spitsbergen Ar**	**2.99**	**39**	⇓*i*P	**Pn**	**01 30 54.3**	**-0.3**
SPA0				*i* S	**Sn**	**01 31 26.8**	**-3.6**
SPB2	**Spitsbergen Ar**	**2.99**	**39**		**Pn**	**01 30 54.2**	**-0.4**
SPITS	**Spitsbergen Ar**	**2.99**	**39**	P	**Pn**	**01 30 54.0**	**-0.5**
SPITS				S	**Sn**	**01 31 28.0**	**-2.4**
SPITS	**Spitsbergen Ar**	**2.99**	**39**	P	**Pn**	**01 30 54.3**	**-0.3**
SPITS	**Spitsbergen Ar**	**2.99**	**39**	Pn	**Pn**	**01 30 54.3**	**-0.3**
comp=Z,105nm,0.4s,baz=208,slow=15,SNR=788							
SPITS				Sn	**Sn**	**01 31 27.5**	**-2.9**
baz=204,slow=30							
KBS	**Kingsbay**	**3.11**	**17**	Pn	**Pn**	**01 30 56.0**	**-0.2**
KBS				Sn	**Sn**	**01 31 29.1**	**-4.3**
KBS	**Kingsbay**	**3.11**	**17**		**Pn**	**01 30 55.1**	**-1.1**
KBS	**Kingsbay**	**3.11**	**17**	P	**Pn**	**01 30 54.6**	**-1.6**
KBS				S	**Sn**	**01 31 28.6**	**-4.9**
KBS	**Kingsbay**	**3.11**	**17**	*e*P	**Pn**	**01 30 55.2**	**-1.1**
KBS				*e*S	**Sn**	**01 31 30.2**	**-3.2**
KBS				IAML		01 31 32.7	
comp=Z,69nm,0.5s							
KBS	**Kingsbay**	**3.11**	**17**	*ce*P	**Pn**	**01 30 55.6**	**-0.6**
KBS				pmax	pmax		
comp=Z,345nm,0.8s							
KBS	**Kingsbay**	**3.11**	**17**	*e*P	**Pn**	**01 30 55.9**	**-0.4**
KBS	**Kingsbay**	**3.11**	**17**	*e*P	**Pn**	**01 30 55.1**	**-1.1**
KBS				*e*S	**Sn**	**01 31 32.2**	**-1.2**
BJO1	**Bjornoya**	**3.34**	**111**	Pn	**Pn**	**01 30 56.2**	**-3.2**
BJO1				Sn	Sn	01 31 30.1	-9.0
BJO1	**Bjornoya**	**3.34**	**111**	*e*P	**Pn**	**01 30 55.7**	**-3.7**
BJO1				*e*S	Sn	01 31 29.5	-10
BJO1				IAML		01 31 32.2	
comp=Z,123nm,0.7s							
HOPEN	**Hopen**	**4.25**	**75**	Pn	**Pn**	**01 31 10.1**	**-1.7**
HOPEN				Sn	**Sn**	**01 31 56.0**	**-5.3**
HOPEN	**Hopen**	**4.25**	**75**	⇑*i*P	**Pn**	**01 31 10.0**	**-1.7**
HOPEN				*e*S	**Sn**	**01 31 54.9**	**-6.4**
HOPEN				IAML		01 31 58.0	
comp=Z,290nm,0.3s							
HOPEN	**Hopen**	**4.25**	**75**	⇑*i*P	**Pn**	**01 31 10.0**	**-1.8**
HOPEN				*i* S	**Sn**	**01 31 55.2**	**-6.2**
JMIC	**Jan Mayen**	**6.73**	**230**	*e*P	**Pn**	**01 31 42.1**	**-3.7**
JMIC	**Jan Mayen**	**6.73**	**230**	LR	LR	01 33 25.9	
comp=Z,354nm,18.7s,baz=76,slow=30							
JMI	**Jan Mayen**	**6.82**	**230**	*e*P	**Pn**	**01 31 43.4**	**-3.6**
HAMF	**Hammerfest**	**7.12**	**131**	Pn	Pn	01 31 46.4	-4.7
HAMF				Sn	Sn	01 32 59.1	-13
HAMF	**Hammerfest**	**7.12**	**131**	*e*P	Pn	01 31 46.0	-5.2
HAMF				*e*S	Sn	01 32 58.4	-14
HAMF				IAML		01 32 59.8	
comp=Z,22nm,0.5s							
JETT	**Jettan, Norway**	**7.52**	**143**	Pn	**Pn**	**01 31 54.2**	**-2.6**
JETT				Sn	Sn	01 33 12.6	-9.5
JETT	**Jettan, Norway**	**7.52**	**143**	Pn	**Pn**	**01 31 54.2**	**-2.6**
JETT				Sn	Sn	01 33 12.6	-9.5
KIF	**Kilpisjarvi**	**8.09**	**143**	Pn	**Pn**	**01 32 02.3**	**-2.2**
KIF				Sn	Sn	01 33 25.4	-10
KIF	**Kilpisjarvi**	**8.09**	**143**	*e*P	**Pn**	**01 32 01.7**	**-2.7**
KIF				*e*S	Sn	01 33 24.4	-11
LOF	**Lofoten**	**8.13**	**163**	Pn	**Pn**	**01 32 03.0**	**-2.0**
LOF	**Lofoten**	**8.13**	**163**	*e*P	**Pn**	**01 32 02.4**	**-2.7**
LOF				IAML		01 33 53.2	
comp=Z,3.7nm,0.6s							
LOF				*e*T	T	01 39 19.9	
ARA0	**ARCESS Array S**	**8.39**	**131**	Pn	**Pn**	**01 32 04.6**	**-4.1**
baz=329,slow=11							
ARA0				Sn	Sn	01 33 29.4	-14
baz=321,slow=18							
ARA0	**ARCESS Array S**	**8.39**	**131**	*e*P	**Pn**	**01 32 04.7**	**-4.0**
ARA0				*e*S	Sn	01 33 30.5	-13
ARA0				IAML		01 33 35.4	
comp=Z,14nm,0.7s							
ARCES	**ARCESS Array B**	**8.39**	**131**	Pn	Pn	01 32 04.0	-4.7
ARCES	**ARCESS Array B**	**8.39**	**131**	P	**Pn**	**01 32 04.2**	**-4.5**
ARCES				S	Sn	01 33 30.7	-13
ARCES	**ARCESS Array B**	**8.39**	**131**	P	**Pn**	**01 32 04.6**	**-4.1**
ARCES	**ARCESS Array B**	**8.39**	**131**	Pn	**Pn**	**01 32 04.5**	**-4.1**
comp=Z,1.0nm,0.3s,baz=329,slow=12,SNR=66							
ARCES				Sn	Sn	01 33 29.8	-14
comp=Z,2.3nm,0.3s,baz=331,slow=22,SNR=9.3							
comp=Z,26nm,0.6s							
KTK1	**Kautokeino**	**8.46**	**138**	*e*P	**Pn**	**01 32 07.5**	**-2.1**
KTK1				*e*S	Sn	01 33 34.4	-11
KTK1				IAML		01 33 41.8	
comp=Z,7.4nm,0.5s							
STEI	**Steigen**	**8.46**	**159**	*e*P	**Pn**	**01 32 08.6**	**-1.0**
STEI				*e*T	T	01 39 30.3	
KEV	**Kevo**	**8.49**	**127**	Pn	**Pn**	**01 32 05.5**	**-4.4**
KEV	**Kevo**	**8.49**	**127**	Pn	**Pn**	**01 32 05.5**	**-4.4**
KEV	**Kevo**	**8.49**	**127**	*e*P	**Pn**	**01 32 06.0**	**-4.0**
KEV				*e*S	Sn	01 33 32.0	-14
KEV	**Kevo**	**8.49**	**127**	P	**Pn**	**01 32 05.5**	**-4.4**
VADS	**Vadso**	**8.66**	**121**	P	**Pn**	**01 32 09.1**	**-3.3**
VADS				S	Sn	01 33 37.8	-12
VADS	**Vadso**	**8.66**	**121**	*e*P	**Pn**	**01 32 08.8**	**-3.5**
VADS				*e*S	Sn	01 33 37.1	-13
VADS				IAML		01 33 41.9	
comp=Z,46nm,0.5s							
FAUS	**Fauske**	**9.00**	**160**	P	**Pn**	**01 32 15.9**	**-1.0**
FAUS	**Fauske**	**9.00**	**160**	*e*P	**Pn**	**01 32 15.8**	**-1.2**
FAUS				*e*T	T	01 40 07.7	
HEF	**Hetta**	**9.07**	**139**	*e*P	**Pn**	**01 32 14.3**	**-3.6**
HEF				*e*S	Sn	01 33 49.2	-11
OMEGA	**Omega**	**9.21**	**41**	*e*P	**Pn**	**01 32 19.1**	**-0.7**
OMEGA				*e*S	**Sn**	**01 33 56.6**	**-6.7**
SALU	**Saltoluokta**	**9.32**	**152**	*e*		01 39 51.7	
SCO	**Scoresbysund**	**9.98**	**251**	*e*P	**Pn**	**01 32 26.1**	**-4.1**
SCO	**Scoresbysund**	**9.98**	**251**	*e*P	**Pn**	**01 32 26.1**	**-4.1**
TERR	**Teriberka**	**10.62**	**115**	P	Pn	01 32 34.4	-4.8
TERR				S	Sn	01 34 23.1	-15
APA0	**Apatity Array**	**11.49**	**124**	Pn	Pn	01 32 46.0	-5.0
baz=324,slow=16							
APA0				Sn	Sn	01 34 43.6	-16
baz=307,slow=22							
APA0	**Apatity Array**	**11.49**	**124**	Pn	Pn	01 32 46.0	-5.0
baz=324,slow=16							
APA0				Sn	Sn	01 34 43.6	-16
baz=307,slow=22							
LVZ	**Lovozero**	**11.59**	**120**		**Pn**	**01 32 48.0**	**-4.4**
LVZ	**Lovozero**	**11.59**	**120**	S	Sn	01 34 46.0	-16
LVZ	**Lovozero**	**11.59**	**120**	P	**Pn**	**01 32 48.0**	**-4.4**
APA	**Apatity**	**11.61**	**123**	⇓*i*P	Pn	01 32 47.7	-4.9
APA				pmax	pmax		
comp=Z,26nm,0.9s							
MSF	**Maaselka**	**12.24**	**134**	P	**Pn**	**01 32 58.5**	**-2.7**
OUL	**Oulu**	**12.49**	**141**	P	**Pn**	**01 33 02.9**	**-1.7**
SUMG	**Summit**	**12.57**	**277**	Pn	**Pn**	**01 33 03.5**	**-2.6**
SUMG	**Summit**	**12.57**	**277**	*e*P	**Pn**	**01 33 03.8**	**-2.3**
SUMG	**Summit**	**12.57**	**277**	P	**Pn**	**01 33 03.5**	**-2.6**
SUMG	**Summit**	**12.57**	**277**	*e*P	**Pn**	**01 33 03.8**	**-2.3**
NEEM	**North Greenlan**	**13.01**	**304**	*e*P	**Pn**	**01 33 08.0**	**-3.9**
NEEM				IAML		01 35 28.6	
comp=Z,18nm,0.8s							
NEEM	**North Greenlan**	**13.01**	**304**	*e*P	**Pn**	**01 33 08.0**	**-3.9**
NEEM				IAML		01 35 28.6	
comp=Z,18nm,0.8s							
BORG	**Borgarnes**	**14.58**	**235**	LR	LR	01 37 39.4	
comp=Z,413nm,19.1s,baz=18,slow=31							
NC303	**NORSAR Array S**	**14.91**	**172**		**Pn**	**01 33 39.3**	**+1.6**
NB2	**NORSAR Subarra**	**15.09**	**173**	P	Pn	**01 33 37.9**	**-2.3**
NB2	**NORSAR Subarra**	**15.09**	**173**	P	Pn	**01 33 37.9**	**-2.3**
NOA	**NORSAR Array B**	**15.09**	**173**	Pn	Pn	**01 33 35.4**	**-4.8**
baz=351,slow=12,SNR=2.0							
FIA1	**FINESS Array S**	**15.97**	**146**	Pn	**Pn**	**01 33 47.8**	**-3.8**
FIA1				IAmb	IAmb	01 34 05.8	
comp=Z,42nm,1.1s							
FIA0	**FINESS Array S**	**15.98**	**146**	P	**Pn**	**01 33 47.7**	**-4.0**
baz=350,slow=16							
FIA0	**FINESS Array S**	**15.98**	**146**	P	**Pn**	**01 33 47.7**	**-4.0**
baz=350,slow=16							
FINES	**FINESS Array B**	**15.98**	**146**	Pn	**Pn**	**01 33 47.6**	**-4.0**
FINES	**FINESS Array B**	**15.98**	**146**	P	**Pn**	**01 33 48.0**	**-3.6**
FINES	**FINESS Array B**	**15.98**	**146**	P	**Pn**	**01 33 48.0**	**-3.6**
comp=Z,0.4nm,0.3s,baz=1.8,slow=12,SNR=22							
FINES				LR	LR	01 39 50.7	
comp=Z,764nm,20.4s,baz=314,slow=37							
comp=Z,4.5nm,0.7s							
HFS	**Hagfors**	**16.10**	**168**	P	**Pn**	**01 33 52.5**	**-0.7**
slow=5.9							
HFS	**Hagfors**	**16.10**	**168**	P	**Pn**	**01 33 52.5**	**-0.7**

slow=5.9
HFS Hagfors 16.10 168 P **Pn** **01 33 51.5 -1.7**
HFS Hagfors 16.10 168 Pn **Pn** **01 33 51.5 -1.7**
comp=Z,0.1nm,0.3s,baz=22,slow=9.3,SNR=3.3
comp=Z,3.6nm,1.0s
KONO Kongsberg 16.45 176 **Pn** **01 33 57.6 -0.1**
KONO IAmb IAmb 01 34 07.1
comp=Z,45nm,0.9s
KONO Kongsberg 16.45 176 *i* P **P** **01 34 00.1 -0.3**
KONO pmax pmax
comp=Z,55nm,1.0s
AMDE Amderma 16.54 84 *e*P **Pn** **01 33 54.5 -4.2**
comp=Z,27nm,0.8s
AMDE *e*S Sn 01 36 44.3 -18
LSH Leshukonskoye 16.56 111 *e*P Pn 01 33 51.3 -7.8
comp=Z,49nm,0.9s
LSH *e*S Sn 01 36 39.4 -23
UPNV Upernavik 16.60 291 *e*P Pn 01 33 51.2 -8.3
UPNV Upernavik 16.60 291 *e*P Pn 01 33 51.2 -8.3
NUUG Nuugaatsiaq 16.75 286 *e*P Pn 01 33 54.2 -7.2
NUUG Nuugaatsiaq 16.75 286 *e*P Pn 01 33 54.2 -7.2
VALR Valaam 16.78 138 *i* P **P** **01 34 03.2 -0.8**
VALR pmax pmax
comp=Z,48nm,1.2s
TULEG Thule 16.95 309 Pn Pn 01 33 56.5 -7.4
TULEG IAmb IAmb 01 33 58.5
comp=Z,43nm,1.0s
TULEG Thule 16.95 309 *e*P **Pn** **01 33 57.6 -6.3**
TULEG Thule 16.95 309 *e*P **Pn** **01 33 57.6 -6.3**
UMMG Uummannaq 17.10 283 *e*P **Pn** **01 34 00.4 -5.4**
UMMG Uummannaq 17.10 283 *e*P **Pn** **01 34 00.4 -5.4**
ILULI Ilulissat 17.91 279 Pn **Pn** **01 34 13.9 -2.1**
ILULI Ilulissat 17.91 279 P **Pn** **01 34 13.9 -2.1**
ILULI pmax pmax
comp=Z,40nm,1.3s
SVZ Severnaya Zeml 18.33 36 *e*P **P** **01 34 22.5 +1.4**
comp=Z,30nm,1.2s
KLMR Klimovskoe 18.81 126 *e*P **P** **01 34 20.9 -5.6**
KLMR pmax pmax
comp=Z,64nm,1.5s
KLMR Klimovskoe 18.81 126 *e*P **P** **01 34 21.2 -5.3**
comp=Z,64nm,1.5s
KLMR S Sn 01 37 32.3 -25
DY2G Dye2 18.85 269 *e*P **Pn** **01 34 27.8 +0.1**
DY2G Dye2 18.85 269 *e*P **Pn** **01 34 27.8 +0.1**
VSU Vasula 18.95 147 *e*P **P** **01 34 25.4 -2.6**
PRGR Permogore 19.37 117 *e*P **P** **01 34 30.7 -1.8**
comp=Z,35nm,0.8s
PRGR *e*S Sn 01 37 49.2 -21
SFJD Kangerlussuaq 19.50 274 P **Pn** **01 34 35.0 -0.1**
SFJD Kangerlussuaq 19.50 274 P **Pn** **01 34 35.0 -0.1**
comp=Z,0.3nm,0.3s,baz=45,slow=10.0,SNR=4.2
SFJD LR LR 01 41 17.0
comp=Z,534nm,18.4s,baz=44,slow=34
comp=Z,7.1nm,0.9s
PBUR Paburge 20.79 156 *e*P **P** **01 34 47.0 -1.0**
VSVD Vaisvydziai 21.04 153 *e*P **P** **01 34 50.3 -0.4**
EKA Eskdalemuir Ar 21.12 197 P **P** **01 34 51.0 -0.7**
EKA Eskdalemuir Ar 21.12 197 P **P** **01 34 51.0 -0.7**
EKA Eskdalemuir Ar 21.12 197 P **P** **01 34 50.3 -1.4**
EKA Eskdalemuir Ar 21.12 197 P **P** **01 34 50.3 -1.4**
comp=Z,2.3nm,0.8s,baz=12,slow=10,SNR=3.4
comp=Z,2.3nm,0.8s
PABE Paberze 21.51 154 P **P** **01 34 55.1 -0.7**
PABE Paberze 21.51 154 *e*P **P** **01 34 55.3 -0.5**
ISAL Salakas 21.69 150 *e*P **P** **01 34 56.7 -1.1**
IGN Ignalina 21.92 150 *e*P **P** **01 34 59.0 -1.2**
IDID Didziasalis 22.02 150 *e*P **P** **01 34 59.8 -1.5**
KLNR Kaliningrad 22.04 160 *i* P **P** **01 35 04.9 +3.5**
KLNR pmax pmax
comp=Z,86nm,0.8s
NACGM Naroch 22.43 150 *e*P **P** **01 35 04.3 -1.3**
comp=E,1μm,0.8s
NRIK Noril'sk 22.87 64 P **P** **01 35 09.6 -0.6**
NRIK IAmb IAmb 01 35 22.8
comp=Z,42nm,1.2s
NRIK Noril'sk 22.87 64*ce*P **P** **01 35 11.4 +1.2**
NRIK pmax pmax
comp=Z,42nm,1.3s
NRIK Noril'sk 22.87 64 P **P** **01 35 10.7 +0.5**
comp=Z,7.8nm,1.1s,baz=327,slow=7.1,SNR=9.0
comp=Z,7.8nm,1.1s
RES Resolute Bay 22.88 318 P **P** **01 35 10.6 +0.4**
RES IAmb IAmb 01 35 19.8
comp=Z,24nm,1.4s
RES Resolute Bay 22.88 318 P **P** **01 35 10.6 +0.4**
RES pmax pmax
comp=Z,24nm,1.4s
RES Resolute Bay 22.88 318 LR LR 01 43 53.1
comp=Z,329nm,20.3s,baz=25,slow=36
SUW Suwalki 22.90 155 *e*P **P** **01 35 11.2 +0.6**
SUW Suwalki 22.90 155 P **P** **01 35 10.2 -0.4**
SUW Suwalki 22.90 155 P **P** **01 35 10.2 -0.4**
SUW pmax pmax
comp=Z,82nm,1.2s
SUW Suwalki 22.90 155 *e*P **P** **01 35 10.6 0.0**
MNK Minsk 22.96 148 *i* P **P** **01 35 11.8 +0.6**
comp=E,9.0nm,1.1s
MNK *i* P **P** **01 35 11.8 +0.6**
comp=N,27nm,1.1s
MNK *i* P **P** **01 35 11.8 +0.6**
comp=Z,28nm,1.0s,baz=347
MNK *i* PP **PnPn** **01 35 35.8 +0.3**
MNK *i* PPP PPP 01 35 44.0
MNK *i* S **S** **01 39 23.6 +2.5**
MNK *i* SS **SnSn** **01 39 54.0 +1.8**
MNK *i* SSS SSS 01 40 09.6
MNK *i* LQ LQ 01 42 16.8
MNK *i* LR LR 01 43 14.4
MNK *i* LRM MLR 01 44 39.4
comp=Z,276nm,15.1s
MNK *i* LRM MLR 01 45 44.3
comp=E,101nm,13.5s
MNK Minsk 22.96 148 *i* P **P** **01 35 11.8 +0.6**
MNK *i* PPP PPP 01 35 43.9
MNK *i* S **S** **01 39 23.6 +2.5**
MNK *i* SSS SSS 01 40 09.6
MNK pmax pmax
comp=E,9.0nm,1.1s
MNK pmax pmax
comp=Z,28nm,1.0s
MNK pmax pmax
comp=N,27nm,1.1s
MNK MLR MLR
comp=Z,276nm,15.0s
MNK MLR MLR
comp=E,101nm,14.0s
GKP Gorka Klasztor 23.14 165 *e*P **P** **01 35 12.9 -0.2**
GKP Gorka Klasztor 23.14 165 *e*P **P** **01 35 13.9 +0.7**
MOS Moscow 23.25 134 *e*P **P** **01 35 14.7 +0.5**
MOS *e* 01 35 42.8
MOS *e*S **S** **01 39 24.3 -1.8**
MOS *e*SS **SnSn** **01 40 02.9 +3.4**
MOS pmax pmax
comp=Z,70nm,1.4s
MOS pmax pmax
comp=N,35nm,0.8s
OBN Obninsk 23.67 136 P **P** **01 35 17.8 -0.5**
OBN Obninsk 23.67 136 *i* P **P** **01 35 17.6 -0.7**
OBN *i* 01 35 49.2
OBN *i* 01 39 02.4
OBN pmax pmax
comp=Z,89nm,1.6s
OBN MLR MLR
comp=Z,402nm,18.0s
CLL Collm 24.89 171 P **P** **01 35 28.6 -1.1**
CLL Collm 24.89 171 P **P** **01 35 28.6 -1.1**
CLL pmax pmax
comp=Z,13nm,1.2s
CLL Collm 24.89 171 *i* P **P** **01 35 29.1 -0.6**
CLL *i* x x 01 35 33.5
CLL *i* x x 01 35 39.1
CLL *e*(PP) 01 36 08.0
CLL AMS AMS 01 44 00.0
comp=Z,400nm,19.5s
BRG Berggiesshubel 25.36 170 *e*P **P** **01 35 33.6 -0.4**
BRG Amp 01 35 37.0
comp=Z,9.0nm,1.2s
BRG Berggiesshubel 25.36 170 P **P** **01 35 39.8 +5.8**
BRG Amp 01 35 40.7
comp=Z,10nm,1.0s
BRG Berggiesshubel 25.36 170 *e*P **P** **01 35 33.5 -0.4**
BRG 01 35 39.7
BRG pmax pmax
comp=Z,9.0nm,1.2s
MEM Membach 25.49 182 *d*P **P** **01 35 34.2 -0.9**
KSP Ksiaz 25.51 167 *e*P **P** **01 35 39.9 +4.6**
MOX Moxa 25.51 174 P **P** **01 35 35.6 +0.3**
MOX pmax pmax
comp=Z,34nm,1.1s
BTNL Ternell 25.51 182 *d*P **P** **01 35 36.7 +1.3**
comp=Z,6.7nm,1.3s
BTNL *d*PP **PnPn** **01 36 09.3 -1.3**
HSKC Hora Svate Kat 25.61 171 *e*P **P** **01 35 35.8 -0.4**
BCLA Clavier 25.69 183 *d*P **P** **01 35 36.6 -0.3**
BGES Gesves 25.73 183 *d*P **P** **01 35 37.9 +0.6**
CHVC Chvalec 25.75 167 *e*P **P** **01 35 38.0 +0.5**
CHVC Chvalec 25.75 167 *e*P **P** **01 35 38.0 +0.5**
BHOU Houvegnez 25.75 182 *d*P **P** **01 35 37.2 -0.3**
NKC Novy Kostel 25.95 172 *e*P **P** **01 35 39.5 +0.2**
NKC *e*pP **pwP** **01 35 45.9 +0.7**
NKC Novy Kostel 25.95 172 *e*P **P** **01 35 39.5 +0.2**
NKC *e* 01 35 45.9
RCHB Rochefort 25.95 183 *d*P **P** **01 35 39.7 +0.4**
DPC Dobruska-Polom 26.00 167 *e*P **P** **01 35 41.2 +1.4**
DPC *e*pP **pwP** **01 35 46.9 +1.5**
DPC Dobruska-Polom 26.00 167 *e*P **P** **01 35 41.2 +1.4**
DPC *e* 01 35 46.9
DOU Dourbes 26.02 184 *d*P **P** **01 35 39.4 -0.6**
PRA Prague 26.18 170 *e*P **P** **01 35 41.7 +0.3**
PRA Prague 26.18 170 *e*P **P** **01 35 41.7 +0.3**
PRU Pruhonice 26.27 169 *e*P **P** **01 35 42.4 +0.2**
PRU *e*pP **pwP** **01 35 48.2 +0.4**
PRU Pruhonice 26.27 169 *e*P **P** **01 35 42.4 +0.2**
PRU *e* 01 35 48.2
KRLC Kraliky 26.30 166 *e*P **P** **01 35 41.7 -0.8**
KRLC *e*pP **pwP** **01 35 49.0 +0.9**
KRLC Kraliky 26.30 166 *e*P **P** **01 35 41.7 -0.8**
KRLC *e* 01 35 49.0
OJC Ojcow 26.36 162 P **P** **01 35 43.6 +0.6**
OJC Ojcow 26.36 162 P **P** **01 35 43.6 +0.6**
OJC pmax pmax
comp=Z,84nm,1.3s
GRA1 Grafenberg Arr 26.45 174 P **P** **01 35 46.5 +2.6**
GRA1 IAmb IAmb 01 35 59.9
comp=Z,16nm,1.0s
GRF Grafenberg Arr 26.45 174 P **P** **01 35 46.5 +2.6**
GRF pmax pmax
comp=Z,17nm,1.0s
GRFO Grafenberg 26.45 174 P **P** **01 35 43.3 -0.6**
GRFO IAmb IAmb 01 35 51.2
comp=Z,18nm,1.1s
GRFO Grafenberg 26.45 174 P **P** **01 35 43.3 -0.6**
GRFO pmax pmax
comp=Z,18nm,1.1s
FRB Frobisher Bay 26.47 285 LR LR 01 45 56.1
comp=Z,502nm,20.5s,baz=24,slow=36
LPSR Galich'ya Gora 26.48 134 *e*P **P** **01 35 46.6 +2.5**
LPSR pmax pmax
comp=Z,30nm,1.1s
MORC Moravsky Berou 26.64 165 P **P** **01 35 45.7 0.0**
MORC IAmb IAmb 01 35 56.1
comp=Z,18nm,1.3s
MORC Moravsky Berou 26.64 165 *e*P **P** **01 35 46.0 +0.4**
MORC Moravsky Berou 26.64 165 P **P** **01 35 45.7 0.0**
MORC pmax pmax
comp=Z,18nm,1.3s
ZVC Zvikov 26.80 170 *e*P **P** **01 35 47.3 +0.2**
AKASG Malin Array Be 26.85 148*ce*P **P** **01 35 51.2 +3.8**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 26.85 148 P **P** **01 35 47.0 -0.4**
comp=Z,1.6nm,0.6s,baz=344,slow=9.7,SNR=2.3
AKASG LR LR 01 46 19.9
comp=Z,327nm,21.0s,baz=338,slow=36
comp=Z,1.6nm,0.6s
AKBB Malin Array Si 26.85 148 *i* P **P** **01 35 50.3 +2.9**
AKBB pmax pmax
comp=Z,17nm,1.3s
KIEV Kiev 26.86 148 P **P** **01 35 48.4 +1.0**
KIEV IAmb IAmb 01 36 23.0
comp=Z,15nm,1.1s
KIEV Kiev 26.86 148 P **P** **01 35 48.4 +1.0**
KIEV pmax pmax
comp=Z,15nm,1.1s
ARU Arti 26.98 107 P **P** **01 35 49.2 +0.6**
ARU Arti 26.98 107*c* *i*P **P** **01 35 50.3 +1.7**
ARU 01 36 30.8
ARU 01 39 08.9
ARU S **S** **01 40 30.9 +5.4**
ARU SS **SnSn** **01 41 37.0 +6.3**
ARU pmax pmax
comp=Z,7.0nm,1.3s
VRAC Vranov 27.05 167 *e*P **P** **01 35 49.0 -0.3**
VRAC Vranov 27.05 167 LR LR 01 45 36.0
comp=Z,217nm,20.1s,baz=346,slow=35
KHC Kasperske Hory 27.09 171 P **P** **01 35 51.8 +2.1**
KHC Kasperske Hory 27.09 171 *e*P **P** **01 35 49.9 +0.3**
KHC Kasperske Hory 27.09 171*ce*P **P** **01 35 50.7 +1.1**
KHC pmax pmax
comp=Z,24nm,1.5s
SVE Sverdlovsk 27.11 105 *e*P **P** **01 35 56.0 +6.3**
LVV L'vov 27.13 156 *e*P **P** **01 35 50.7 +0.7**
LVV *e* 01 36 40.7
LVV *e* 01 40 23.1
KWP Kalwaria Pacla 27.19 158 P **P** **01 35 52.2 +1.7**
KWP Kalwaria Pacla 27.19 158 P **P** **01 35 52.2 +1.7**
KWP pmax pmax
comp=Z,35nm,1.2s
NIE Niedzica 27.19 161 *e*P **P** **01 35 52.8 +2.2**
KRUC Moravsky 27.29 167 *e*P **P** **01 35 51.0 -0.4**
GERES GERESS Array B 27.38 171 P **P** **01 35 51.6 -0.7**
GERES GERESS Array B 27.38 171 P **P** **01 35 51.6 -0.7**
comp=Z,2.5nm,1.0s,baz=1.8,slow=8.5,SNR=8.8
GERES LR LR 01 45 27.0
comp=Z,227nm,18.8s,baz=356,slow=34
comp=Z,2.5nm,1.0s
LANS Liptovska Anna 27.40 163 *e*P **P** **01 35 57.8 +5.4**
LANS Liptovska Anna 27.40 163 *e*P **P** **01 35 57.8 +5.4**
VORR Voronezh 27.42 134 *e*P P 01 36 02.1 +10
VORR pmax pmax
comp=Z,34nm,0.4s
CKRC Cesky Krumlov 27.43 170 *e*P **P** **01 35 52.2 -0.5**
CKRC Cesky Krumlov 27.43 170 *e*P **P** **01 35 52.2 -0.5**
JAVC Velka Javorina 27.57 165 *e*P **P** **01 36 00.6 +6.6**
BFO Black Forest 27.77 179 P **P** **01 35 58.0 +2.2**
BFO IAmb IAmb 01 36 10.2
comp=Z,22nm,1.3s
BFO Black Forest 27.77 179 P **P** **01 35 58.0 +2.2**
BFO pmax pmax
comp=Z,23nm,1.3s
CRVS Cervenica-Dubn 27.80 160 *e*P **P** **01 36 03.1 +7.1**
CRVS Cervenica-Dubn 27.80 160 *e*P **P** **01 36 03.1 +7.1**
KOLS Kolonicke sedl 27.84 159 *e*P P 01 36 03.7 +7.3
KOLS Kolonicke sedl 27.84 159 *e*P P 01 36 03.7 +7.3
VSR Storozhevoye 27.86 135 *e*P **P** **01 35 59.4 +3.0**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VYHS Vyhne 28.00 164 *e*P **P** **01 36 02.1 +4.3**
VYHS Vyhne 28.00 164 *e*P **P** **01 36 02.1 +4.3**
MODS Modra-Piesok 28.02 166 *e*P **P** **01 35 58.7 +0.7**
MODS Modra-Piesok 28.02 166 *e*P **P** **01 35 58.7 +0.7**
VRH Novokhopyorsk 28.32 131 *e*P **P** **01 36 02.7 +2.1**
VRH pmax pmax
comp=Z,8.0nm,0.7s
BELG Belogornoye 28.33 123 *i* P **P** **01 36 03.7 +3.1**
BELG pmax pmax
comp=Z,8.0nm,1.2s
CONA Conrad Observa 28.39 168 *e*P **P** **01 36 01.1 -0.3**
comp=Z,8.4nm,1.6s
MOA Molln 28.39 170 *i* P **P** **01 36 02.1 +0.7**
comp=Z,16nm,1.5s
TIXI Tiksi 28.41 35 P **P** **01 36 01.6 +0.4**
TIXI IAmb IAmb 01 36 11.3
comp=Z,16nm,1.4s
TIXI Tiksi 28.41 35*ce*P **P** **01 36 04.5 +3.3**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
BIOA Bad Ischl, Aus 28.53 171 *e*pP **P** **01 36 04.2 +1.7**
comp=Z,0.6nm,0.5s
RONA Rosalia, Austr 28.64 167 *i* pP **pP** **01 36 05.4 -0.2**
comp=Z,8.3nm,1.3s
RONA *e*PcP **PcP** **01 39 14.2 +0.3**
comp=Z,5.4nm,1.0s
RETA Reutte 28.65 175 *e*P **P** **01 36 04.3 +0.7**
comp=Z,8.4nm,1.3s
PSZ Piszkesteto 28.65 162 P **P** **01 36 04.8 +1.1**
PSZ IAmb IAmb 01 36 39.7
comp=Z,15nm,1.3s
PSZ Piszkesteto 28.65 162 P **P** **01 36 04.8 +1.1**
PSZ pmax pmax
comp=Z,15nm,1.3s
LESA Schwarzleotal 28.76 172 *e*P **P** **01 36 05.8 +1.1**
comp=Z,8.0nm,1.3s
MOTA Moosalm 28.80 175 *i* P **P** **01 36 05.6 +0.5**
comp=Z,6.0nm,1.1s
WATA Walderalm 28.82 174 *i* P **P** **01 36 03.2 -2.0**
comp=Z,9.5nm,1.3s
DAVA Damuels 28.83 176 *i* P **P** **01 36 05.4 0.0**
comp=Z,14nm,2.1s
WTTA Wattenberg 28.89 174 *i* pP **P** **01 36 07.3 +1.3**
comp=Z,8.3nm,1.4s
WTTA *e*PcP **PcP** **01 39 13.8 -0.9**
comp=Z,5.7nm,0.9s
SQTA Sankt Quirin 28.92 174 *e*P **P** **01 36 06.6 +0.4**
comp=Z,8.4nm,1.2s
ARSA Arzberg 29.05 168 *e*P **P** **01 36 08.1 +0.9**
comp=Z,2.7nm,0.8s
FETA Feichten 29.11 175 *i* pP **P** **01 36 09.5 +1.6**
comp=Z,9.4nm,1.9s
FETA *e*PcP **PcP** **01 39 15.8 +0.5**
comp=Z,4.7nm,1.3s
KBA Koelnbreinsper 29.13 172 *e*P **P** **01 36 07.9 -0.1**
comp=Z,8.4nm,1.3s
DAVOX Davos/Dischmat 29.34 176 LR LR 01 49 21.3
comp=Z,154nm,18.3s,baz=353,slow=40
BUR08 Bucovina Ar. S 29.40 155 P **P** **01 36 11.8 +1.5**
BUR08 IAmb IAmb 01 36 21.0
comp=Z,12nm,1.3s
BURAR Bucovina Array 29.43 155 P **P** **01 36 11.0 +0.4**
BURAR Bucovina Array 29.43 155 P **P** **01 36 10.0 -0.6**
BURAR pmax pmax
comp=Z,6.0nm,1.3s
ABTA Abfaltersbach 29.43 173 *e*pP **pP** **01 36 16.8 +4.2**
comp=Z,4.9nm,1.0s
ABTA *e*PcP **PcP** **01 39 13.7 -2.2**
comp=Z,10nm,1.6s
A36M Sachs Harbour 29.48 332 P **P** **01 36 10.8 +0.1**
baz=21
MYKA Terra Mystica 29.59 171 *e*pP pP 01 36 17.8 +3.8
comp=Z,12nm,1.5s
SOKA Soboth 29.60 169 *e*pP **pP** **01 36 18.3 +4.1**
comp=Z,9.8nm,1.5s
SOKA *e*PcP **PcP** **01 39 16.0 -0.4**
comp=Z,6.8nm,1.1s
MFF Saint Martin d 29.66 190 *e*P **P** **01 36 10.9 -1.6**
MFF pmax pmax
comp=Z,33nm,1.7s
OBKA Obir 29.75 170 *i* pP pP 01 36 20.1 +4.7
comp=Z,18nm,1.1s
CTI Castel Tesino 30.11 174 P **P** **01 36 17.3 +0.7**
CTI IAmb IAmb 01 36 18.4
comp=Z,22nm,1.5s
CTI Castel Tesino 30.11 174 P **P** **01 36 17.3 +0.7**
CTI pmax pmax
comp=Z,22nm,1.5s
LPL La Plagne 30.58 181 *e*P **P** **01 36 24.4 +3.4**
LPL pmax pmax
comp=Z,8.0nm,1.2s
MLR Muntele Rosu 31.60 155 LR LR 01 50 24.8
comp=Z,260nm,18.6s,baz=353,slow=39
C36M Paulatuk 31.82 330 P **P** **01 36 32.1 +0.8**
C36M IAmb IAmb 01 36 40.5
comp=Z,10nm,1.5s
C36M Paulatuk 31.82 330 P **P** **01 36 31.1 -0.2**
baz=20
A21K Barrow 32.56 350 P **P** **01 36 38.6 +0.7**
baz=7.2
BRVK Borovoye 32.85 98 P **P** **01 36 41.6 +1.0**
BRVK Borovoye 32.85 98*ce*P **P** **01 36 44.9 +4.4**
BRVK pmax pmax
comp=Z,12nm,1.7s
BVAR Borovoye Array 32.91 98 P **P** **01 36 41.7 +0.6**
BVAR 01 39 25.8
BVAR Borovoye Array 32.91 98 P **P** **01 36 41.7 +0.6**
comp=Z,1.9nm,0.8s,baz=343,slow=9.8,SNR=11
BVAR PP **PP** **01 37 52.9 -2.3**
comp=Z,12nm,0.8s,baz=337,slow=10,SNR=15
BVAR PcP **PcP** **01 39 25.8 +0.8**
comp=Z,2.2nm,0.8s,baz=14,slow=3.0,SNR=4.0
comp=Z,1.9nm,0.8s
C26K Camden Bay 33.30 343 P **P** **01 36 44.7 +0.4**
baz=12
D27M Malcolm River 33.66 340 IAmb IAmb 01 36 50.6
comp=Z,11nm,1.4s
D27M Malcolm River 33.66 340 P **P** **01 36 47.9 +0.4**
baz=13
C23K Itkillik River 33.75 346 P **P** **01 36 48.9 +0.7**
baz=9.5
C24K Franklin Bluff 33.75 345 P **P** **01 36 47.6 -0.6**
baz=10
A19K Wainwright 33.84 353 P **P** **01 36 48.8 -0.1**
baz=5.1
INK Inuvik 33.88 335 P **P** **01 36 49.6 +0.3**
INK Inuvik 33.88 335 P **P** **01 36 48.7 -0.6**
baz=16
INK Inuvik 33.88 335 P **P** **01 36 49.6 +0.3**
INK pmax pmax
comp=Z,4.0nm,1.1s
B20K Meade River 33.90 350 IAmb IAmb 01 36 53.0
comp=Z,7.4nm,0.8s
B20K Meade River 33.90 350 P **P** **01 36 50.3 +0.9**
baz=6.8
SCHQ Schefferville 33.94 275 P **P** **01 36 48.9 -1.2**
comp=Z,3.4nm,0.9s,baz=36,slow=10,SNR=5.2
SCHQ LR LR 01 49 43.2
comp=Z,141nm,18.4s,baz=32,slow=35
comp=Z,3.4nm,0.9s
ABKAR Akbulak array 33.95 111 P **P** **01 36 50.0 -0.1**
ABKAR Akbulak array 33.95 111 IAmb IAmb 01 36 58.4
comp=Z,8.1nm,1.4s
D25K Kavik River 33.99 344 IAmb IAmb 01 36 53.7
comp=Z,6.2nm,0.8s
D25K Kavik River 33.99 344 P **P** **01 36 50.5 +0.1**
baz=11
B21K Ikpikpuk River 34.17 349 IAmb IAmb 01 36 55.6
comp=Z,10nm,0.9s
B21K Ikpikpuk River 34.17 349 P **P** **01 36 50.8 -1.1**
baz=7.8
E29M Blow River 34.23 338 IAmb IAmb 01 37 01.1
comp=Z,8.2nm,1.1s
E29M Blow River 34.23 338 P **P** **01 36 51.8 -0.6**
baz=14
D24K Happy Valley 34.32 345 IAmb IAmb 01 36 56.7
comp=Z,8.4nm,0.8s
D24K Happy Valley 34.32 345 P **P** **01 36 53.6 +0.5**
baz=10
D23K Nanushuk River 34.62 346 P **P** **01 36 55.4 -0.3**
baz=9.3
C21K Knifeblade Rid 34.64 349 P **P** **01 36 56.0 0.0**
baz=7.6
B18K Kokolik River 34.70 353 P **P** **01 36 56.7 +0.3**
baz=4.7
F31M Tsiigehtchic 34.74 335 P **P** **01 36 56.7 -0.1**
F31M IAmb IAmb 01 37 05.2
comp=Z,14nm,1.4s
F31M Tsiigehtchic 34.74 335 P **P** **01 36 57.4 +0.6**
baz=16
F30M Barrier River 34.78 336 P **P** **01 36 56.5 -0.7**
baz=15
D22K Ayikyak River 34.81 347 IAmb IAmb 01 37 06.2
comp=Z,11nm,1.4s
D22K Ayikyak River 34.81 347 P **P** **01 36 56.9 -0.6**
baz=8.4
PBRG Braganca 34.84 199 *e*P **P** **01 36 58.2 +0.2**
comp=Z,30nm,1.7s
TOLK Toolik Lake Re 34.87 345 P **P** **01 36 56.8 -1.2**
baz=9.7
C19K Lookout Ridge 34.89 352 P **P** **01 36 56.3 -1.9**
baz=5.6
E25K Arctic Village 35.12 343 IAmb IAmb 01 37 03.8
comp=Z,9.2nm,0.9s
E25K Arctic Village 35.12 343 P **P** **01 36 58.9 -1.2**
baz=11,SNR=12
F28M Old Crow 35.16 339 IAmb IAmb 01 37 04.3
comp=Z,12nm,1.4s
F28M Old Crow 35.16 339 P **P** **01 36 58.9 -1.6**
baz=13,SNR=7.2
D20K Ettiluk River 35.17 350 P **P** **01 37 00.7 +0.2**
baz=6.8
G31M Satah River 35.30 335 IAmb IAmb 01 37 24.2
comp=Z,10nm,1.4s
G31M Satah River 35.30 335 P **P** **01 37 01.6 0.0**
baz=15
POLO Lamas de Olo 35.35 200 *e*P **P** **01 37 02.7 +0.2**
comp=Z,22nm,2.1s

E24K **Your Creek** **35.36 345** P **P** **01 37 00.1 -2.2**
baz=10.0
C18K **Utukok River** **35.40 353** IAmb IAmb 01 37 06.1
comp=Z,12nm,0.9s
C18K **Utukok River** **35.40 353** P **P** **01 37 02.5 0.0**
baz=4.8
F26K **Sheenjek River** **35.43 342** P **P** **01 37 02.5 -0.3**
baz=12
G30M **tAoh Zraii Nji** **35.44 336** P **P** **01 37 02.6 -0.3**
baz=14
D19K **Kuna River** **35.45 351** IAmb IAmb 01 37 06.3
comp=Z,15nm,1.1s
D19K **Kuna River** **35.45 351** P **P** **01 37 01.7 -1.2**
baz=6.1
PVRL **Vila Real** **35.45 200** *e*P **P** **01 37 03.6 +0.4**
comp=Z,34nm,1.8s
E23K **Chandalar** **35.45 345** P **P** **01 37 01.5 -1.5**
baz=9.5
KIV **Kislovodsk** **35.49 134** *e*P **P** **01 37 04.3 +0.7**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,156nm,16.0s
MVO **Moncorvo** **35.50 199** *e*P **P** **01 37 04.5 +0.8**
ZALV **Zalesovo Beam** **35.57 83** P **P** **01 37 04.8 +0.7**
ZALV **PcP** **01 39 33.2 +0.6**
ZALV **Zalesovo Beam** **35.57 83** *i* P **P** **01 37 06.0 +2.0**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV **Zalesovo Beam** **35.57 83** P **P** **01 37 04.5 +0.5**
comp=Z,1.4nm,0.8s,baz=334,slow=9.9,SNR=6.0
ZALV PcP **PcP** **01 39 32.9 +0.3**
comp=Z,1.3nm,0.6s,baz=325,slow=4.5,SNR=4.8
comp=Z,1.4nm,0.8s
BILL **Bilibino** **35.59 13** P **P** **01 37 05.1 +1.0**
BILL IAmb IAmb 01 37 07.4
comp=Z,12nm,1.1s
BILL **Bilibino** **35.59 13** *e*P **P** **01 37 06.7 +2.6**
BILL pmax pmax
comp=Z,19nm,1.7s
E20K **Nigu River** **35.60 350** P **P** **01 37 01.4 -2.9**
baz=6.9
C17K **DeLong Mountai** **35.63 354** P **P** **01 37 01.9 -2.6**
baz=4.0
F25K **Christian Rive** **35.64 343** P **P** **01 37 03.2 -1.5**
baz=11
PTO **Porto** **35.66 201** *e*P **P** **01 37 05.5 +0.6**
BMAR **Burnt Mountain** **35.73 342** P **P** **01 37 08.0 +2.6**
KBZ **Khabaz** **35.74 134** *ce*P **P** **01 37 07.4 +1.8**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
KBZ **Khabaz** **35.74 134** P **P** **01 37 05.6 -0.1**
comp=Z,2.0nm,0.8s,baz=41,slow=1.3,SNR=6.9
KBZ LR LR 01 52 06.8
comp=Z,276nm,19.8s,baz=342,slow=37
comp=Z,2.0nm,0.8s
F24K **Squaw Lake** **35.88 344** P **P** **01 37 05.8 -0.8**
baz=10
C16K **Lisburne Hills** **35.88 355** P **P** **01 37 03.5 -3.0**
baz=3.1
PVIS **Viseu** **36.02 200** *e*P **P** **01 37 07.9 -0.2**
EPYK **Eagle Plains** **36.08 336** IAmb IAmb 01 37 16.3
comp=Z,8.6nm,1.2s
EPYK **Eagle Plains** **36.08 336** P **P** **01 37 05.2 -3.2**
baz=14
EPYK P **pP** **01 37 08.3 -2.0**
baz=14
G26K **Porcupine Rive** **36.14 341** P **P** **01 37 08.6 -0.2**
baz=12
MTE **Manteigas** **36.30 199** *e*P **P** **01 37 10.8 +0.2**
comp=Z,32nm,1.8s
COLD **Coldfoot** **36.31 345** P **P** **01 37 09.7 -0.6**
baz=9.1,SNR=6.2
H29M **Whitestone** **36.39 337** IAmb IAmb 01 37 19.7
comp=Z,20nm,1.4s
H29M **Whitestone** **36.39 337** P **P** **01 37 10.7 -0.3**
baz=13
H31M **Peel River** **36.39 334** P **P** **01 37 10.0 -1.1**
baz=15
D17K **Noatak River** **36.40 354** P **P** **01 37 10.2 -0.9**
baz=4.0
E19K **Redstone River** **36.45 350** IAmb IAmb 01 37 14.7
comp=Z,11nm,0.9s
E19K **Redstone River** **36.45 350** P **P** **01 37 10.5 -1.0**
baz=6.3
F21K **Alatna River** **36.50 348** P **P** **01 37 10.7 -1.2**
baz=7.8,SNR=6.4
E18K **Tukpahlearik C** **36.61 352** IAmb IAmb 01 37 16.2
comp=Z,11nm,0.9s
E18K **Tukpahlearik C** **36.61 352** P **P** **01 37 10.2 -2.6**
baz=5.0,SNR=5.5
G24K **Hadweenzic Riv** **36.66 344** P **P** **01 37 12.7 -0.5**
baz=10.0
H27K **Steamboat Moun** **36.66 339** P **P** **01 37 12.8 -0.6**
baz=12
G22K **Bettles** **36.69 346** P **P** **01 37 13.1 -0.5**
baz=8.5
ESDC **Sonseca Array** **36.77 195** P **P** **01 37 14.4 -0.2**
comp=Z,2.4nm,0.8s,baz=3.5,slow=8.0,SNR=18
comp=Z,2.4nm,0.8s
F20K **Avaraart Lake** **36.79 349** IAmb IAmb 01 37 19.0
comp=Z,20nm,1.4s
F20K **Avaraart Lake** **36.79 349** P **P** **01 37 12.7 -1.7**
baz=6.8
G23K **Bananza Creek** **36.81 345** P **P** **01 37 12.4 -2.2**
baz=9.0
ZEI **Tsey** **36.83 133** *e*P **P** **01 37 15.4 +0.1**
ZEI pmax pmax
comp=Z,6.0nm,1.2s
PCBR **Castelo Branco** **36.85 199** *e*P **P** **01 37 15.3 +0.1**
YKA **Yellowknife Ar** **36.94 319** P **P** **01 37 15.5 -0.2**
YKA **Yellowknife Ar** **36.94 319** *ce*P **P** **01 37 16.3 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA **Yellowknife Ar** **36.94 319** P **P** **01 37 16.4 +0.6**
comp=Z,1.2nm,0.9s,baz=16,slow=8.9,SNR=15
YKA PcP **PcP** **01 39 36.8 +0.2**
comp=Z,0.9nm,0.8s,baz=15,slow=3.0,SNR=10
comp=Z,1.2nm,0.9s
E17K **Hotham Inlet** **36.99 353** P **P** **01 37 14.9 -1.2**
baz=4.4
KURK **Kurchatov** **37.03 91** P **P** **01 37 17.5 +0.9**
KURK **Kurchatov** **37.03 91** *ce*P **P** **01 37 19.8 +3.2**
KURK pmax pmax
comp=Z,16nm,1.7s
F19K **Shaleruckik Mo** **37.09 350** IAmb IAmb 01 37 19.4
comp=Z,16nm,1.3s
F19K **Shaleruckik Mo** **37.09 350** P **P** **01 37 16.5 -0.5**
baz=6.0
KURBB **Kurchatov Arra** **37.10 91** P **P** **01 37 16.8 -0.4**
comp=Z,2.3nm,0.2s,baz=334,slow=7.4,SNR=6.4
KURBB PP **PP** **01 38 41.2 -0.2**
comp=Z,1.3nm,0.2s,baz=338,slow=9.7,SNR=4.1
comp=Z,2.3nm,0.2s
TIP **Timpagrande** **37.16 168** P **P** **01 37 17.7 -0.2**
TIP IAmb IAmb 01 37 33.0
comp=Z,26nm,1.3s
I30M **Mount Dempster** **37.17 336** P **P** **01 37 16.8 -1.0**
baz=14,SNR=8.2
PMRV **Marv??o** **37.26 199** *e*P **P** **01 37 18.6 0.0**
I27K **Kandik River** **37.28 339** P **P** **01 37 18.3 -0.4**
baz=12
I28M **Miner Creek** **37.29 338** P **P** **01 37 18.5 -0.2**
baz=13
H24K **Noodor Dome** **37.54 344** P **P** **01 37 20.4 -0.4**
baz=9.7
WRGLY **Wrigley** **37.56 326** P **P** **01 37 21.3 +0.4**
baz=18
F17K **Baldwin Pennin** **37.61 352** P **P** **01 37 20.8 -0.5**
baz=4.6
PRP **Porcupine Dome** **37.68 342** P **P** **01 37 23.5 +1.3**
PRP **Porcupine Dome** **37.68 342** P **P** **01 37 19.8 -2.4**
baz=10,SNR=6.5
H22K **Ishtalitna Cre** **37.71 346** P **P** **01 37 20.0 -2.2**
baz=8.3
IMAR **Indian Mountai** **37.75 347** P **P** **01 37 24.4 +1.8**
G19K **Purcell Mounta** **37.75 350** P **P** **01 37 21.3 -1.2**
baz=6.2
J30M **Hart River** **37.79 335** IAmb IAmb 01 37 32.1
comp=Z,21nm,1.5s
J30M **Hart River** **37.79 335** P **P** **01 37 21.6 -1.4**
baz=14,SNR=6.3
PESTR **Estremoz** **37.83 199** *e*P **P** **01 37 23.1 -0.4**
H21K **Melozitna Rive** **38.02 347** P **P** **01 37 22.9 -2.0**
baz=7.8
EGAK **Eagle** **38.05 339** P **P** **01 37 23.6 -1.5**
baz=12
G18K **Tagagawik** **38.06 351** P **P** **01 37 23.7 -1.5**
baz=5.5
J29N **Klondike Camp** **38.10 337** P **P** **01 37 24.9 -0.7**
baz=13
BRTR **Keskin Array B** **38.21 146** P **P** **01 37 26.0 -0.9**
BRTR **Keskin Array B** **38.21 146** P **P** **01 37 26.0 -0.9**
comp=Z,1.1nm,0.8s,baz=330,slow=7.6,SNR=2.7
BRTR PP **PP** **01 38 50.7 -3.3**
comp=Z,1.5nm,1.0s,baz=337,slow=9.4,SNR=2.1
comp=Z,1.1nm,0.8s
POKR **Poker Plat Res** **38.22 343** P **P** **01 37 26.7 +0.1**
baz=9.7
H20K **Anotleneega Mo** **38.30 348** P **P** **01 37 26.1 -1.1**
baz=6.9,SNR=6.8
I23K **Minto, Yukon-K** **38.32 344** P **P** **01 37 27.0 -0.3**
baz=9.0
H19K **Roundabout Mou** **38.34 349** IAmb IAmb 01 37 31.7
comp=Z,17nm,1.2s
H19K **Roundabout Mou** **38.34 349** P **P** **01 37 26.7 -0.7**
baz=6.3
MDM **Murphy Dome** **38.43 344** P **P** **01 37 28.9 +0.5**
F15K **North Star Dit** **38.44 355** P **P** **01 37 27.6 -0.8**
baz=3.2
I21K **Tanana** **38.45 346** P **P** **01 37 25.5 -2.9**
baz=8.0
PBAR **Barrancos** **38.47 198** *e*P **P** **01 37 28.9 0.0**
comp=Z,33nm,1.8s
COLA **College** **38.49 343** P **P** **01 37 25.4 -3.4**
baz=9.5
ILAR **Eielson Array** **38.52 343** P **P** **01 37 31.2 +2.2**
ILAR 01 39 41.7
ILAR **Eielson Array** **38.52 343** P **P** **01 37 31.2 +2.2**
comp=Z,3.8nm,0.9s,baz=1.7,slow=7.1,SNR=47
ILAR PcP **PcP** **01 39 41.7 +0.3**
comp=Z,0.5nm,0.7s,baz=340,slow=3.9,SNR=3.9
comp=Z,3.8nm,0.9s
J26L **Joph Creek** **38.53 340** P **P** **01 37 28.6 -0.7**
baz=11
G17K **Kiwalik Mounta** **38.53 352** P **P** **01 37 28.6 -0.5**
baz=4.7
J25K **Salcha River,** **38.57 341** P **P** **01 37 30.0 +0.5**
baz=10
DAWY **Dawson** **38.59 337** P **P** **01 37 29.5 -0.2**
baz=12
K29M **Barlow Dome** **38.63 336** P **P** **01 37 28.9 -1.2**
baz=13
TNA **Tin City** **38.65 357** P **P** **01 37 29.3 -0.7**
baz=1.9
PBEJ **Beja** **38.69 199** *e*P **P** **01 37 30.8 +0.1**
G16K **Koyuk River** **38.69 353** IAmb IAmb 01 37 34.2
comp=Z,15nm,0.9s
G16K **Koyuk River** **38.69 353** P **P** **01 37 29.9 -0.5**
baz=4.0
F14K **Arctic Creek** **38.71 356** P **P** **01 37 30.8 +0.2**
baz=2.5
VAE **Valguarnera** **38.75 171** LR LR 01 54 53.2
comp=Z,166nm,21.9s,baz=350,slow=38
H18K **Honhosa River** **38.80 350** P **P** **01 37 31.7 +0.4**
baz=5.5
NEA2 **Nenana** **38.85 344** P **P** **01 37 30.3 -1.5**
baz=9.0
K27K **Chicken** **38.87 339** IAmb IAmb 01 37 37.5
comp=Z,19nm,1.5s
K27K **Chicken** **38.87 339** P **P** **01 37 31.4 -0.6**
baz=11
MESJ **Messejana** **38.90 200** *e*P **P** **01 37 32.7 +0.2**
I20K **Naaghedeneel** **38.97 348** P **P** **01 37 32.3 -0.5**
baz=7.0
H17K **Granite Mounta** **39.07 351** P **P** **01 37 32.9 -0.8**
baz=4.9
SCRK **Sand Creek** **39.08 340** P **P** **01 37 32.9 -1.0**
baz=11
GCSA **Galena City Sc** **39.14 349** P **P** **01 37 33.6 -0.5**
baz=5.1
G15K **Niukluk** **39.14 354** P **P** **01 37 33.2 -1.0**
baz=3.4
MMPY **Sheldon Lake,** **39.14 331** P **P** **01 37 34.4 0.0**
baz=15
RIDG **Independent Ri** **39.39 341** P **P** **01 37 35.5 -0.9**
baz=10
K24K **Donnelly Dome** **39.40 342** P **P** **01 37 35.8 -0.7**
baz=10.0
L29M **L29M** **39.41 336** P **P** **01 37 36.8 +0.3**
baz=13
H16K **Elim** **39.45 353** P **P** **01 37 35.8 -1.0**
baz=4.0
BPAW **Bear Paw Mtn.** **39.47 345** P **P** **01 37 36.1 -0.9**
baz=8.2
MORF **Marmelete** **39.47 200** *e*P **P** **01 37 37.1 -0.2**
comp=Z,57nm,2.0s
PBDV **Barranco-do-Ve** **39.47 199** *e*P **P** **01 37 37.6 +0.3**
SEY **Seymchan** **39.54 24** *ce*P **P** **01 37 40.0 +2.4**
SEY pmax pmax
comp=Z,10.0nm,1.3s
GNI **Garni** **39.55 133** LR LR 01 54 47.1
comp=Z,203nm,20.4s,baz=312,slow=38
J20K **Nowinta River** **39.57 347** P **P** **01 37 37.0 -0.8**
baz=7.0
ANM **Nome** **39.60 355** P **P** **01 37 37.5 -0.6**
baz=2.8
MCK **McKinley** **39.70 344** P **P** **01 37 38.8 -0.2**
baz=8.9
FARO **Faro, Yukon** **39.76 332** P **P** **01 37 39.3 -0.2**
baz=14
CHUM **Lake Minchumin** **39.76 346** P **P** **01 37 38.4 -1.0**
baz=7.7
BCAR **Beaver Creek A** **39.79 339** P **P** **01 37 40.8 +1.0**
M30M **Minto, Yukon** **39.79 335** P **P** **01 37 37.2 -2.6**
baz=13
L27K **Beaver Creek,** **39.80 339** P **P** **01 37 37.7 -2.1**
baz=11
J19K **Peorman** **39.83 348** P **P** **01 37 39.4 -0.6**
baz=6.4
TGTN **Hyland Airport** **39.83 328** P **P** **01 37 38.7 -1.4**
baz=15
M31M **Drury Creek, Y** **39.90 333** P **P** **01 37 39.7 -0.9**
baz=14
L26K **Log Cabin Wild** **39.97 340** P **P** **01 37 39.8 -1.4**
baz=11
TRF **Thorofare Moun** **40.07 345** P **P** **01 37 40.6 -1.5**
baz=8.3
M29M **Somme Creek** **40.09 336** P **P** **01 37 41.1 -1.2**
baz=12
DGZ **Jazzator, Alta** **40.12 83** *i* P **P** **01 37 44.7 +2.0**
DGZ pmax pmax
comp=Z,5.0nm,1.1s
PAX **Paxson** **40.20 341** P **P** **01 37 42.9 -0.3**
baz=10.0
CAST **Castle Rocks** **40.21 346** P **P** **01 37 45.1 +2.0**
CAST IAmb IAmb 01 37 46.9
comp=Z,19nm,1.2s
CAST **Castle Rocks** **40.21 346** P **P** **01 37 42.3 -0.9**
baz=7.7,SNR=9.0
DHY **Denali Highway** **40.24 342** P **P** **01 37 44.4 +0.8**
DHY **Denali Highway** **40.24 342** P **P** **01 37 43.5 -0.1**
baz=9.3
BVCY **Beaver Creek** **40.35 338** P **P** **01 37 44.2 -0.2**
baz=12
KEST **Kesra** **40.37 177** P **P** **01 37 44.3 -0.6**
comp=Z,5.7nm,0.9s,baz=349,slow=10,SNR=3.0
KEST LR LR 01 54 15.4
comp=Z,98nm,21.1s,baz=286,slow=36
comp=Z,5.7nm,0.9s
K20K **Telida** **40.38 347** P **P** **01 37 44.2 -0.4**
baz=6.9
J18K **Innoko River** **40.41 349** P **P** **01 37 44.4 -0.4**
baz=6.0
M27K **Edge Creek, AK** **40.50 338** P **P** **01 37 46.1 +0.4**
baz=11
M26K **Nabesna, AK** **40.55 339** P **P** **01 37 46.8 +0.7**
baz=11
WAT1 **Susitna Watana** **40.57 343** P **P** **01 37 47.8 +1.7**
baz=8.8
J17K **VABM Dome** **40.58 351** P **P** **01 37 46.6 +0.4**
baz=5.1
KOTAN **Kotaneelee Air** **40.61 325** P **P** **01 37 46.8 +0.3**
baz=16
PPLA **Purkeypile** **40.74 346** P **P** **01 37 46.9 -0.8**
baz=7.5
HARP **HAARP** **40.74 341** P **P** **01 37 47.1 -0.4**
baz=10.0
J16K **Anvik River** **40.75 352** P **P** **01 37 47.5 -0.1**
baz=4.5
WAT6 **Susitna Watana** **40.76 343** P **P** **01 37 47.3 -0.6**
baz=9.1
N32M **Quiet Lake** **40.78 332** P **P** **01 37 46.8 -1.2**
baz=14
TTA **Tatalina** **40.91 348** P **P** **01 37 49.0 0.0**
baz=6.2
N30M **Aishikik Lake** **40.92 335** P **P** **01 37 47.4 -1.7**
baz=12
YUK3 **Moose Creek** **40.94 337** P **P** **01 37 49.0 -0.4**
baz=11
CUT **Chulitna** **41.10 344** P **P** **01 37 49.4 -1.1**
baz=8.2
M24K **Tolsona, Glenn** **41.11 341** P **P** **01 37 48.5 -2.1**
baz=9.5
YUK4 **Talbot Arm** **41.19 336** P **P** **01 37 48.8 -2.7**
baz=12
K17K **Iditarod** **41.23 350** P **P** **01 37 50.7 -0.8**
baz=5.3
L20K **Farewell, AK** **41.25 347** P **P** **01 37 49.9 -1.9**
baz=6.9
YUK8 **Steele Glacier** **41.36 337** P **P** **01 37 52.0 -1.0**
baz=12
J14K **Nanvaranak Lak** **41.38 354** P **P** **01 37 52.4 -0.3**
baz=3.4
WHY **Whitehorse** **41.46 333** P **P** **01 37 51.9 -1.7**
baz=13
SCM **Sheep Creek Mo** **41.47 342** P **P** **01 37 52.4 -1.2**
baz=9.1
N25K **Chitina, Valde** **41.48 340** P **P** **01 37 52.9 -0.8**
baz=10.0
MOY **Mondy** **41.49 70** *e*P **P** **01 37 56.7 +2.8**
MOY pmax pmax
comp=Z,45nm,1.7s
O30N **Mendenhall** **41.49 334** P **P** **01 37 53.0 -0.7**
baz=13
M23K **Glacier View** **41.53 342** P **P** **01 37 52.7 -1.4**
baz=8.9
YUK6 **Outpost Mounta** **41.55 335** P **P** **01 37 52.2 -2.4**
baz=12
MCARA **McCarthy VSAT** **41.56 339** P **P** **01 37 52.9 -1.4**
baz=10
SML **Sawmill** **41.56 343** P **P** **01 37 53.4 -0.9**
baz=8.7
MK31 **Makanchi Array** **41.58 90** P **P** **01 37 54.8 +0.2**
MK31 **Makanchi Array** **41.58 90** P **P** **01 37 54.8 +0.2**
MK31 pmax pmax
comp=Z,5.0nm,1.0s
MKAR **Makanchi Array** **41.58 90** P **P** **01 37 55.0 +0.4**
MKAR **Makanchi Array** **41.58 90** *ce*P **P** **01 37 56.2 +1.6**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR **Makanchi Array** **41.58 90** P **P** **01 37 55.2 +0.6**
comp=Z,1.6nm,0.8s,baz=350,slow=6.8,SNR=22
MKAR PP **PP** **01 39 25.5 -4.9**
comp=Z,0.7nm,0.7s,baz=324,slow=7.5,SNR=1.6
comp=Z,1.6nm,0.8s
HYT **Haines Junctio** **41.58 335** P **P** **01 37 53.1 -1.5**
baz=12
L19K **White Mountain** **41.60 348** P **P** **01 37 53.3 -1.4**
baz=6.5
SKT **Skwentna** **41.61 345** IAmb IAmb 01 37 57.5
comp=Z,33nm,1.4s
SKT **Skwentna** **41.61 345** P **P** **01 37 53.3 -1.4**
baz=7.6,SNR=6.2
L18K **Granite Mounta** **41.65 349** P **P** **01 37 55.1 +0.1**
baz=5.8
P33M **Teslin, Yukon** **41.67 331** P **P** **01 37 54.3 -1.0**
baz=14
M20K **Styx River** **41.80 346** P **P** **01 37 54.9 -1.5**
baz=7.0
L17K **Donlin** **41.81 350** P **P** **01 37 55.7 -0.6**
baz=5.2
CTG **Chitna Glacier** **41.82 338** P **P** **01 37 54.1 -2.5**
baz=11
M19K **Big River Lodg** **41.85 347** P **P** **01 37 55.8 -0.9**
baz=6.6
KNK **Knik Glacier** **41.97 343** P **P** **01 37 56.3 -1.4**
baz=8.6
FFC **Flin Flon** **41.98 305** P **P** **01 37 58.0 +0.3**
FFC IAmb IAmb 01 38 05.4
comp=Z,18nm,1.2s
FFC **Flin Flon** **41.98 305** P **P** **01 37 58.1 +0.3**
FFC pmax pmax
comp=Z,18nm,1.3s
SUA **Susitna One** **42.07 344** IAmb IAmb 01 38 01.3
comp=Z,14nm,1.0s
SUA **Susitna One** **42.07 344** P **P** **01 37 57.8 -0.8**
baz=7.8,SNR=7.6
BMRM **Bremner River** **42.11 340** P **P** **01 37 57.2 -1.7**
baz=9.9
CRQE **Cirque** **42.19 339** P **P** **01 37 58.1 -1.5**
baz=10
KKAR **Karatay Array** **42.20 103** P **P** **01 38 00.0 +0.2**
KKAR **Karatay Array** **42.20 103** P **P** **01 38 00.7 +0.9**
KKAR **Karatay Array** **42.20 103** P **P** **01 38 00.7 +0.9**
KKAR pmax pmax
comp=Z,7.0nm,1.2s
O29M **Mount Kennedy** **42.21 335** P **P** **01 37 57.3 -2.4**
baz=12
P30M **Million Dollar** **42.22 334** P **P** **01 37 56.5 -3.3**
baz=12
L16K **Owhat River** **42.28 351** P **P** **01 37 59.1 -1.1**
baz=4.8
M18K **Stony River** **42.34 348** P **P** **01 37 58.1 -2.5**
baz=6.0
P32M **Atlin** **42.38 332** P **P** **01 37 59.8 -1.2**
baz=13
GLI **Glacier Island** **42.39 342** P **P** **01 38 00.9 -0.2**
baz=9.0
N20K **Mount Spurr** **42.43 345** P **P** **01 37 59.5 -1.9**
baz=7.3
M17K **Holitna River** **42.51 349** P **P** **01 38 00.6 -1.4**
baz=5.5
MESA **MESA** **42.65 338** P **P** **01 38 01.8 -1.6**
baz=11
MA2 **Magadan** **42.66 27** *ce*P **P** **01 38 05.4 +2.1**
MA2 pmax pmax
comp=Z,7.0nm,1.0s
SVW2 **Sparrevohn** **42.72 348** P **P** **01 38 04.0 +0.3**
SVW2 IAmb IAmb 01 38 07.5
comp=Z,17nm,1.2s
L14K **Kuka Creek** **42.76 353** P **P** **01 38 02.8 -1.3**
baz=3.6
Q32M **Nakina River** **42.82 330** P **P** **01 38 04.1 -0.7**
baz=13
M16K **Timber Creek** **42.95 350** P **P** **01 38 05.7 +0.1**
baz=4.9
DLBC **Dease Lake** **43.05 329** P **P** **01 38 07.8 +1.2**
comp=Z,1.2nm,0.8s,baz=14,slow=12,SNR=2.4
comp=Z,1.2nm,0.8s
M14K **Bethel** **43.33 352** P **P** **01 38 10.1 +1.5**
baz=3.8
AAK **Ala-Archa** **43.59 99** *i* P **P** **01 38 12.4 +1.2**
AAK pmax pmax
comp=Z,3.0nm,1.1s
P19K **Oil Pt** **44.03 346** P **P** **01 38 14.8 +0.5**
baz=6.7
GEYT **Alibeck** **44.33 119** IAmb IAmb 01 38 25.1
comp=Z,14nm,1.1s
GEYT **Alibeck** **44.33 119** P **P** **01 38 16.0 -1.0**
GEYT **Alibeck** **44.33 119** P **P** **01 38 16.0 -1.0**
comp=Z,3.1nm,0.7s,baz=297,slow=9.5,SNR=6.2
comp=Z,3.1nm,0.7s
P18K **Big Mountain,** **44.40 347** P **P** **01 38 17.8 +0.5**
baz=6.0
O15K **Ungalikthiuk R** **44.83 351** P **P** **01 38 22.1 +1.4**
baz=4.4
ZEA **Zeya** **44.93 47** *e*P **P** **01 38 24.0 +2.5**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA MLR MLR
comp=Z,200nm,14.0s
ULM **Lac du Bonnet** **44.93 298** IAmb IAmb 01 38 29.6
comp=Z,11nm,1.4s
ULM **Lac du Bonnet** **44.93 298** P **P** **01 38 22.7 +1.1**
ULM **Lac du Bonnet** **44.93 298** P **P** **01 38 22.6 +1.1**
comp=Z,3.5nm,1.0s,baz=31,slow=16,SNR=4.3
ULM LR LR 01 57 27.5
comp=Z,269nm,19.2s,baz=26,slow=36
comp=Z,3.5nm,1.0s
MMAI **Mount Meron Ar** **45.05 146** LR LR 01 58 46.1
comp=Z,133nm,19.2s,baz=341,slow=38
NRN **Naryn** **45.09 98** P **P** **01 38 24.0 +0.6**
NRN **Naryn** **45.09 98** P **P** **01 38 24.0 +0.6**
NRN pmax pmax
comp=Z,3.0nm,1.0s
WMQ **Urumqi** **45.68 86** *e*P **P** **01 38 31.6 +3.9**
WMQ pP pwP 01 38 35.8 +2.5
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ LR LR
comp=N,360nm,14.5s
WMQ LR LR

comp=E,270nm,17.1s
WMQ LR LR
comp=Z,330nm,17.1s
SADO Sadowa 46.25 280 LR LR 01 55 41.3
comp=Z,149nm,21.1s,baz=44,slow=33
SONM Songino Array 46.31 67 P **P** **01 38 33.6 +0.9**
SONM Songino Array 46.31 67 P **P** **01 38 33.6 +0.9**
SONM pmax pmax
comp=Z,5.0nm,1.2s
SONM Songino Array 46.31 67 P **P** **01 38 32.9 +0.2**
comp=Z,1.9nm,0.9s,baz=333,slow=7.3,SNR=14
SONM PP **PP** **01 40 26.2 +5.2**
comp=Z,0.7nm,1.0s,baz=311,slow=11,SNR=3.5
comp=Z,1.9nm,0.9s
ULN Ulaanbaatar 46.42 66 P **P** **01 38 34.1 +0.5**
ULN IAmb IAmb 01 38 42.7
comp=Z,11nm,1.2s
ULN Ulaanbaatar 46.42 66*ce*P **P** **01 38 35.8 +2.2**
ULN pmax pmax
comp=Z,8.0nm,1.7s
KSH Kashi 46.91 99 P **P** **01 38 41.6 +4.1**
KSH sP pwP 01 38 47.3 +4.3
KSH pmax pmax
comp=Z,2.0nm,1.0s
KSH LR LR
comp=N,210nm,14.1s
KSH LR LR
comp=E,260nm,9.3s
KSH LR LR
comp=Z,240nm,15.1s
EIL Elat 48.29 147 LR LR 01 59 54.5
comp=Z,90nm,19.6s,baz=56,slow=37
HEH HeiHe 48.30 48 *e*P **P** **01 38 49.6 +1.6**
HEH pmax pmax
comp=Z,5.0nm,1.2s
HEH pmax pmax
comp=Z,130nm,3.8s
BBB Bella Bella 48.89 325 LR LR 01 59 40.4
comp=Z,184nm,19.5s,baz=29,slow=36
M53A WI Miller and 49.77 280 P **P** **01 38 59.6 +0.3**
baz=18
SSPA Standing Stone 49.85 277 P **P** **01 38 59.9 -0.1**
baz=18
EGMT Eagleton 49.87 309 IAmb IAmb 01 39 08.2
comp=Z,12nm,1.2s
EGMT Eagleton 49.87 309 P **P** **01 39 00.1 0.0**
baz=16
LAO LASA Array 50.46 305 IAmb IAmb 01 39 16.4
comp=Z,14nm,1.2s
LAO LASA Array 50.46 305 P **P** **01 39 04.7 0.0**
baz=17
JFWS Jewell Farm 50.62 290 P **P** **01 39 06.9 +1.1**
baz=18
NEW Newport 50.98 315 P **P** **01 39 10.0 +1.5**
NEW Newport 50.98 315 P **P** **01 39 10.0 +1.5**
comp=Z,1.6nm,0.7s,baz=262,slow=6.9,SNR=3.9
NEW LR LR 02 00 38.8
comp=Z,208nm,19.2s,baz=38,slow=36
comp=Z,1.6nm,0.7s
ECSD EROS Data Cent 51.27 296 IAmb IAmb 01 39 20.8
comp=Z,5.8nm,0.9s
RSSD Black Hills 52.48 302 P **P** **01 39 21.2 +1.2**
baz=17
P49A Miami Univ. Ec 52.54 283 P **P** **01 39 20.5 +0.3**
baz=18
RLMT Red Lodge 52.56 307 IAmb IAmb 01 39 29.0
comp=Z,17nm,1.2s
RLMT Red Lodge 52.56 307 P **P** **01 39 20.4 -0.2**
baz=16,SNR=8.2
BNX BinXian 52.64 50 ⇓P **P** **01 39 19.6 -1.2**
BNX pmax pmax
comp=Z,5.0nm,1.3s
BNX pmax pmax
comp=Z,180nm,4.9s
GTA Gaotai 52.77 76 *e*P **P** **01 39 23.6 +1.6**
GTA pP pwP 01 39 29.8 +2.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA LR LR
comp=N,170nm,16.7s
GTA LR LR
comp=E,200nm,15.6s
GTA LR LR
comp=Z,230nm,16.4s
TAM Tamanrasset 53.26 182 P **P** **01 39 25.8 -0.1**
TAM IAmb IAmb 01 39 27.8
comp=Z,12nm,1.4s
TAM Tamanrasset 53.26 182 P **P** **01 39 25.8 -0.1**
TAM pmax pmax
comp=Z,12nm,1.4s
H17A Grant Village 53.52 308 P **P** **01 39 28.7 +1.1**
H17A Grant Village 53.52 308 P **P** **01 39 28.8 +1.2**
baz=16
FLWY Flagg Ranch 53.84 308 P **P** **01 39 30.4 +0.4**
HHC Hu-ho-hao-te 54.09 65 *e*P **P** **01 39 29.9 -1.8**
HHC sP pwP 01 39 39.3 +2.3
HHC *es* **S** **01 47 07.3 -0.6**
HHC sS sS 01 47 21.5 +10
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,130nm,6.7s
HHC LR LR
comp=N,160nm,15.7s
HHC LR LR
comp=E,180nm,17.7s
HHC LR LR
comp=Z,280nm,17.5s
MDJ Mudanjiang 54.12 48 P **P** **01 39 31.4 -0.4**
MDJ pmax pmax
comp=Z,4.0nm,0.8s
MDJ pmax pmax
comp=Z,130nm,5.3s
CN2 Changchun 54.14 52 *e*P P 01 39 25.3 -6.6
CN2 *es*P pP 01 39 33.6 -0.5
MOOW Moose Ponds 54.17 308 IAmb IAmb 01 39 40.3
comp=Z,12nm,1.4s
LOHW Long Hollow 54.28 308 IAmb IAmb 01 39 41.8
comp=Z,12nm,1.3s
BMO Blue Mountains 54.31 314 IAmb IAmb 01 39 42.1
comp=Z,10nm,1.3s
FXWY Fox Creek 54.33 308 IAmb IAmb 01 39 42.4
comp=Z,15nm,1.4s
K22A Casper 54.40 304 P **P** **01 39 34.0 0.0**
baz=16
TPAW Teton Pass 54.46 308 IAmb IAmb 01 39 42.4
comp=Z,12nm,1.3s
GOMU GeErMu 54.63 82 P **P** **01 39 37.6 +1.6**
GOMU pP sP 01 39 40.4 +1.3
GOMU S **S** **01 47 17.0 +1.3**
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU LR LR
comp=N,160nm,16.9s
GOMU LR LR
comp=E,200nm,16.7s
GOMU LR LR
comp=Z,290nm,16.5s
PDAR Pinedale Array 54.89 307 P **P** **01 39 37.7 0.0**
PDAR Pinedale Array 54.89 307 P **P** **01 39 38.0 +0.4**
comp=Z,2.8nm,1.0s,baz=27,slow=5.0,SNR=15
PDAR LR LR 02 03 14.7
comp=Z,276nm,20.1s,baz=28,slow=36
comp=Z,2.8nm,1.0s
BW06 Boulder Array 54.89 307 P **P** **01 39 36.5 -1.2**
baz=15,SNR=10
HLID Hailey 55.04 311 IAmb IAmb 01 39 46.7
comp=Z,14nm,1.5s
HLID Hailey 55.04 311 P **P** **01 39 39.0 +0.4**
baz=15
PHWY Pilot Hill 55.48 303 IAmb IAmb 01 39 50.2
comp=Z,6.1nm,1.2s
R40A Maddies Statio 55.48 290 IAmb IAmb 01 39 40.8
comp=Z,7.4nm,0.8s
RAYN Ar Rayn 55.91 137 P **P** **01 39 44.1 -0.8**
RAYN IAmb IAmb 01 39 52.6
comp=Z,13nm,1.3s
RAYN Ar Rayn 55.91 137 P **P** **01 39 44.1 -0.8**
RAYN pmax pmax
comp=Z,13nm,1.3s
KMSC Kings Mountain 55.91 278 P **P** **01 39 46.2 +1.4**
baz=17
N23A Red Feather La 55.97 303 P **P** **01 39 46.3 +0.8**
baz=16
TKL Tuckaleechee C 56.00 281 LR LR 02 02 28.6
comp=Z,189nm,21.0s,baz=22,slow=35
WVT Waverly 56.52 285 P **P** **01 39 50.4 +1.3**
baz=17
CBKS Cedar Bluff 56.66 297 P **P** **01 39 51.3 +1.1**
baz=16
LZH Lanzhou 56.88 74 *e*P **P** **01 39 54.6 +2.7**
LZH sP pwP 01 40 03.4 +6.2
LZH pmax pmax
comp=Z,15nm,1.3s
ISCO Idaho Springs 56.95 302 IAmb IAmb 01 40 00.7
comp=Z,7.7nm,1.2s
ISCO Idaho Springs 56.95 302 P **P** **01 39 52.9 +0.3**
baz=16
O20A White River Ci 57.17 305 P **P** **01 39 53.3 -0.6**
baz=15,SNR=8.8
NHSC New Hope 57.57 277 P **P** **01 39 59.0 +2.4**
baz=17
Q24A Divide 57.66 301 P **P** **01 39 58.4 +0.8**
baz=15
ELK Elko 57.92 311 IAmb IAmb 01 40 11.1
comp=Z,7.3nm,1.3s
ELK Elko 57.92 311 P **P** **01 39 59.6 +0.3**
ELK Elko 57.92 311 P **P** **01 39 59.6 +0.3**
comp=Z,2.4nm,0.9s,baz=17,slow=6.6,SNR=9.5
ELK LR LR 02 06 26.4
comp=Z,215nm,18.1s,baz=41,slow=38
comp=Z,2.4nm,0.9s
DUG Dugway, Tooele 58.00 309 P **P** **01 40 00.7 +0.9**
baz=14
P18A Preston Nutter 58.05 306 IAmb IAmb 01 40 08.3
comp=Z,13nm,1.4s
GOGA Godfrey 58.08 280 P **P** **01 39 59.3 -0.9**
baz=17
HNS HongShan 58.09 64 ⇑P **P** **01 40 02.3 +2.1**
HNS pmax pmax
comp=Z,4.0nm,1.0s
YBH Yreka Blue Hor 58.27 318 LR LR 02 04 54.1
comp=Z,175nm,18.7s,baz=25,slow=36
OK048 Pawnee Station 58.34 293 P **P** **01 40 01.2 -0.7**
MIAR Mount Ida 59.37 290 P **P** **01 40 10.0 +0.9**
baz=16
TIA Tai'an 59.75 62 P **P** **01 40 12.9 +1.1**
TIA pmax pmax
comp=Z,2.0nm,1.0s
XAN Xi'an 60.02 70 ⇓P **P** **01 40 16.3 +2.6**
XAN pP pwP 01 40 20.8 +1.8
XAN pmax pmax
comp=Z,10.0nm,1.2s
XAN LR LR
comp=E,420nm,17.5s
MVCO Mesa Verde 60.04 304 P **P** **01 40 15.5 +1.4**
baz=15
KVN Kaiserville 60.09 313 P **P** **01 40 15.1 +0.9**
KVN IAmb IAmb 01 40 25.2
comp=Z,4.5nm,1.0s
KVN Kaiserville 60.09 313 P **P** **01 40 15.1 +0.9**
KVN pmax pmax
comp=Z,5.0nm,1.0s
R11B Troy Canyon, C 60.31 311 IAmb IAmb 01 40 24.0
comp=Z,9.7nm,1.5s
R11B Troy Canyon, C 60.31 311 P **P** **01 40 17.2 +1.4**
baz=14
WMOK Wichita Mounta 60.36 294 P **P** **01 40 16.0 0.0**
WMOK IAmb IAmb 01 40 17.1
comp=Z,4.6nm,0.9s
WMOK Wichita Mounta 60.36 294 P **P** **01 40 16.0 0.0**
WMOK pmax pmax
comp=Z,5.0nm,0.9s
NVAR Mina Array Bea 60.73 313 P **P** **01 40 19.3 +0.7**
comp=Z,1.4nm,0.9s,baz=20,slow=5.5,SNR=6.5
NVAR LR LR 02 06 19.7
comp=Z,156nm,20.3s,baz=59,slow=36
comp=Z,1.4nm,0.9s
LCMT Little Creek M 61.17 308 IAmb IAmb 01 40 29.9
comp=Z,7.0nm,1.1s
ANMO Albuquerque 61.81 301 P **P** **01 40 25.6 -0.4**
ANMO Albuquerque 61.81 301 P **P** **01 40 26.1 +0.1**
baz=15
ANMO Albuquerque 61.81 301 P **P** **01 40 25.6 -0.4**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 61.81 301 LR LR 02 08 16.8
comp=Z,299nm,18.7s,baz=118,slow=37
CD2 Chengdu 61.82 76 P **P** **01 40 27.0 +1.1**
TOA0 Torodi Ar. Sit 62.92 186 P **P** **01 40 33.0 -0.3**
TORD Torodi Ar. Bea 62.92 186 P **P** **01 40 32.9 -0.4**
TORD IAmb IAmb 01 40 33.8
comp=Z,7.5nm,1.1s
TORD Torodi Ar. Bea 62.92 186 P **P** **01 40 32.2 -1.2**
comp=Z,6.4nm,0.9s,baz=9.0,slow=9.1,SNR=33
TORD PP **PP** **01 42 47.2 -4.4**
comp=Z,0.3nm,0.4s,baz=10,slow=9.1,SNR=2.9
TORD LR LR 02 10 22.6
comp=Z,56nm,19.3s,baz=322,slow=38
comp=Z,6.4nm,0.9s
MJAR Matsushiro Arr 63.48 43 P **P** **01 40 37.6 +0.7**
MJAR Matsushiro Arr 63.48 43 P **P** **01 40 37.6 +0.7**
comp=Z,4.7nm,1.1s,baz=347,slow=7.1,SNR=5.6
comp=Z,4.7nm,1.1s
BRDY Brady 63.73 294 IAmb IAmb 01 40 39.3
comp=Z,3.9nm,0.8s
ENH Enshi 63.77 71 P **P** **01 40 38.9 0.0**
NJ2 Nanjing 64.13 61 *e*P **P** **01 40 41.8 +0.6**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NJ2 pmax pmax
comp=Z,210nm,3.5s
MNHN Monahans 64.50 297 IAmb IAmb 01 40 51.3
comp=Z,8.6nm,1.2s
PFO Pinyon Flats O 65.07 310 LR LR 02 09 22.1
comp=Z,105nm,19.6s,baz=72,slow=36
TUC Tucson 65.24 305 P **P** **01 40 49.5 +0.9**
TUC Tucson 65.24 305 P **P** **01 40 49.5 +0.9**
TUC pmax pmax
comp=Z,15nm,1.4s
PZH PanZhiHua 65.57 79 P **P** **01 40 52.8 +2.0**
PZH pmax pmax
comp=Z,6.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.4s
TX31 Lajitas Ar. Si 66.63 297 IAmb IAmb 01 41 06.3
comp=Z,4.9nm,1.1s
TXAR Lajitas Array 66.63 297 P **P** **01 40 57.4 -0.2**
TXAR Lajitas Array 66.63 297 P **P** **01 40 57.4 -0.2**
comp=Z,2.1nm,0.8s,baz=46,slow=5.2,SNR=18
TXAR LR LR 02 11 12.3
comp=Z,116nm,20.7s,baz=6.5,slow=37
comp=Z,2.1nm,0.8s
DBIC Dimbokro 69.61 193 P **P** **01 41 15.2 -1.1**
DBIC Dimbokro 69.61 193 P **P** **01 41 15.2 -1.1**
comp=Z,2.5nm,0.7s,baz=138,slow=2.7,SNR=3.9
comp=Z,2.5nm,0.7s
SLVN Son La 71.05 78 P **P** **01 41 24.6 -0.5**
JOW Kunigami 71.12 54 LR LR 02 17 50.4
comp=Z,146nm,18.8s,baz=46,slow=40
TEIG Tepich 71.88 280 LR LR 02 13 50.1
comp=Z,1μm,18.4s,baz=200,slow=36
CMAR Chiang Mai Arr 72.62 84 P **P** **01 41 34.3 -0.3**
CMAR Chiang Mai Arr 72.62 84 P **P** **01 41 35.0 +0.4**
CMAR Chiang Mai Arr 72.62 84 P **P** **01 41 35.0 +0.4**
comp=Z,1.9nm,0.3s,baz=335,slow=6.4,SNR=14
comp=Z,1.9nm,0.3s
LPIG La Paz 73.10 302 LR LR 02 15 13.9
comp=Z,177nm,18.2s,baz=16,slow=37
LODK Lodwar 74.22 151 P **P** **01 41 44.3 +0.3**
CMIG Matias Romero 76.46 286 LR LR 02 16 45.0
comp=Z,84nm,21.9s,baz=14,slow=37
MBAR Mbarara 77.69 156 P **P** **01 42 03.5 -0.4**
MBAR IAmb IAmb 01 42 11.8
comp=Z,9.0nm,1.0s
MBAR Mbarara 77.69 156*ce*P **P** **01 42 05.1 +1.2**
MBAR pmax pmax
comp=Z,9.0nm,1.7s
SDV Santo Domingo 78.52 260 LR LR 02 13 12.5
comp=Z,25nm,21.5s,baz=283,slow=33
KMBO Kilima Mbogo 78.93 149 P **P** **01 42 12.4 +1.6**
KMBO Kilima Mbogo 78.93 149 P **P** **01 42 12.5 +1.6**
KMBO pmax pmax
comp=Z,4.0nm,1.2s
PALK Palekele 78.99 104 LR LR 02 21 02.8
comp=Z,105nm,18.3s,baz=78,slow=39
KIBK Kibwezi 80.22 149 P **P** **01 42 18.4 +0.8**
KIBK IAmb IAmb 01 42 26.4
comp=Z,7.2nm,1.2s
JTS Las Juntas de 80.64 275 LR LR 02 18 52.4
comp=Z,58nm,18.3s,baz=324,slow=36
ROSC El Rosal 83.30 263 P **P** **01 42 35.7 +1.4**
ROSC El Rosal 83.30 263 P **P** **01 42 35.7 +1.4**
comp=Z,3.8nm,0.3s,baz=107,slow=19,SNR=1.3
ROSC LR LR 02 17 27.4
comp=Z,38nm,19.2s,baz=257,slow=34
comp=Z,3.8nm,0.3s
DAV Davao City (W) 89.76 61 LR LR 02 29 41.1
comp=Z,86nm,19.3s,baz=336,slow=40
ASAR Alice Springs 121.35 60 PKIKP **PKPdf** **01 48 59.3 -0.6**
ASAR Alice Springs 121.35 60 PKP **PKPdf** **01 48 59.3 -0.6**
comp=Z,2.6nm,0.7s,baz=350,slow=1.7,SNR=19
SNAA Sanae 147.59 186 PKP2 **PKPbc** **01 49 49.4 -0.2**
SNAA Sanae 147.59 186 PKPbc **PKPbc** **01 49 49.4 -0.2**
comp=Z,12nm,1.0s,baz=327,slow=0.7,SNR=9.2
ELIB Princess Elisa 148.06 171 *d*PKP **PKPbc** **01 49 51.5 +0.6**

*IDC **20** 01:47:14.0±35.0, 23˚.66N×122˚.70E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=648.5km s-min=154.1km az=131.0*
*JMA **20** 01:47:17.4±0.1, 23˚.6N±0˚.6×122˚.4E±0˚.4, h37km, MV2.7/14, NEAR ISHIGAKIJIMA ISLAND*
*TAP **20** 01:47:18.5, 23˚.58N×122˚.39E, h38km, ML3.6, D*
ISC 20 01:47:17.0±1.3, 23˚.50N±0˚.02×122˚.46E±0˚.02, h23km±11km, n117, σ1§34/221, mb3.4/4, 6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.63**	**348**	*i* P	**Pb**	**01 47 29.3**	**+0.1**
	baz=355						
EOS4				*i* S	**Sb**	**01 47 37.2**	**-0.3**
	baz=355						
EOS3	**EOS3**	**0.79**	**351**	*i* P	**Pn**	**01 47 32.1**	**-0.5**
	baz=337						
EOS3				*i* S	**Sb**	**01 47 42.2**	**-0.1**
	baz=337						
TEGC	**Jichi Village**	**0.87**	**284**	*i* P	**Pn**	**01 47 33.0**	**-0.8**
	baz=281						
TEGC				S	**Sn**	**01 47 43.9**	**-1.8**
	baz=281						
SHUL	**Shoufeng**	**0.87**	**289**	⇓*i* P	**Pn**	**01 47 32.8**	**-1.0**
	baz=297						
SHUL				*i* S	**Sn**	**01 47 43.8**	**-2.0**
	baz=297						
HWA	**Hwalien**	**0.92**	**301**	*e*P	**Pn**	**01 47 34.0**	**-0.5**
	baz=292						
HWA				S	**Sn**	**01 47 44.8**	**-2.1**
	baz=292						
EOS2	**EOS2**	**0.94**	**347**	*i* P	**Pn**	**01 47 34.5**	**-0.2**
	baz=345						
EOS2				S	**Sn**	**01 47 46.8**	**-0.6**
	baz=345						
ECBN	**Changbin**	**0.94**	**259**	*e*P	**Pn**	**01 47 34.0**	**-0.8**
	baz=255						
ECBN				*i* S	**Sn**	**01 47 45.3**	**-2.3**
	baz=255						
HGSD	**Ruisui**	**0.95**	**270**	⇓*i* P	**Pn**	**01 47 33.8**	**-1.2**
	baz=266						
HGSD				*i* S	**Sn**	**01 47 44.8**	**-2.9**
	baz=266						
TWD	**Chiawan**	**0.98**	**306**	*i* P	**Pn**	**01 47 33.9**	**-1.4**
	baz=307						
TWD				*i* S	**Sn**	**01 47 45.8**	**-2.7**
	baz=307						
ESL	**Shilin**	**0.99**	**289**	*i* P	**Pn**	**01 47 34.0**	**-1.5**
	baz=278						
ESL				S	**Sn**	**01 47 45.7**	**-3.1**
	baz=278						
ETM	**Tongmen**	**1.00**	**298**	*i* P	**Pn**	**01 47 34.2**	**-1.4**
	baz=302						
ETM				S	**Sn**	**01 47 45.7**	**-3.3**
	baz=302						
WARBT	**Fenglin Townsh**	**1.01**	**283**	⇓*i* P	**Pn**	**01 47 34.4**	**-1.4**
	baz=281						
WARBT				*i* S	**Sn**	**01 47 46.3**	**-2.9**
	baz=281						
ETL	**Fush Village**	**1.01**	**311**	*e*P	**Pn**	**01 47 34.4**	**-1.4**
	baz=302						
ETL				*i* S	**Sn**	**01 47 46.2**	**-3.1**
	baz=302						
CHKH	**Chenggong**	**1.02**	**253**	*i* P	**Pn**	**01 47 35.0**	**-0.9**
	baz=249						
CHKH				S	**Sn**	**01 47 47.1**	**-2.4**
	baz=249						
NACB	**Ninganchiao**	**1.04**	**311**	P	**Pn**	**01 47 34.8**	**-1.3**
NACB	**Ninganchiao**	**1.04**	**311**	⇓*i* P	**Pn**	**01 47 34.7**	**-1.5**
	baz=303						
NACB				*i* S	**Sn**	**01 47 46.4**	**-3.6**
	baz=303						
EHY	**Hungye**	**1.04**	**271**	*i* P	**Pn**	**01 47 35.6**	**-0.6**
	baz=268						
EHY				S	**Sn**	**01 47 48.3**	**-1.8**
	baz=268						
JYNG	**Yonagunijimaku**	**1.05**	**25**	P	**Pn**	**01 47 35.7**	**-0.6**
JYNG				*e*S	**Sn**	**01 47 48.7**	**-1.5**
EAHA	**Aohua**	**1.06**	**322**	*e*P	**Pn**	**01 47 37.4**	**+1.0**
	baz=313						
EAHA				S	**Sn**	**01 47 48.2**	**-2.2**
	baz=313						
EYUL	**Yuli**	**1.06**	**262**	*i* P	**Pn**	**01 47 35.8**	**-0.6**
	baz=252						
EYUL				*e*S	**Sn**	**01 47 50.0**	**-0.4**
	baz=252						
YULB	**Yu-li**	**1.07**	**265**	P	**Pn**	**01 47 36.4**	**-0.2**
YULB	**Yu-li**	**1.07**	**265**	*i* P	**Pn**	**01 47 36.1**	**-0.5**
	baz=254						
YULB				S	**Sn**	**01 47 49.0**	**-1.8**
	baz=254						
TWF1	**Yuli**	**1.08**	**262**	*i* P	**Pn**	**01 47 36.0**	**-0.7**
	baz=252						
TWF1				S	**Sn**	**01 47 50.0**	**-0.9**
	baz=252						
CHKT	**Chengkung**	**1.08**	**249**	*i* P	**Pn**	**01 47 36.0**	**-0.8**
	baz=236						
CHKT				*i* S	**Sn**	**01 47 48.5**	**-2.4**
	baz=236						
YOJ	**Yonaguni jima**	**1.08**	**28**	P	**Pn**	**01 47 36.5**	**-0.3**
YOJ	**Yonaguni jima**	**1.08**	**28**	*i* P	**Pn**	**01 47 36.3**	**-0.5**
	baz=31						
YOJ				S	**Sn**	**01 47 50.3**	**-0.8**
	baz=31						
YOJ	**Yonaguni jima**	**1.08**	**28**	P	**Pn**	**01 47 36.3**	**-0.5**
YOJ				S	**Sn**	**01 47 49.6**	**-1.4**
LXIB	**Xiulin Townshi**	**1.09**	**299**	⇓*i* P	**Pn**	**01 47 35.5**	**-1.5**
	baz=298						
LXIB				S	**Sn**	**01 47 48.8**	**-2.6**
	baz=298						
EWUT	**Wuta**	**1.13**	**327**	*i* P	**Pn**	**01 47 36.9**	**-0.5**
	baz=329						
EWUT				S	**Sn**	**01 47 50.0**	**-2.2**
	baz=329						
ENA	**Nanau**	**1.13**	**325**	*e*P	**Pn**	**01 47 37.3**	**-0.2**
	baz=327						
ENA				S	**Sn**	**01 47 50.6**	**-1.7**
	baz=327						
ETLH	**Xiulin Townshi**	**1.14**	**308**	*i* P	**Pn**	**01 47 36.3**	**-1.3**
	baz=309						
ETLH				*i* S	**Sn**	**01 47 50.5**	**-2.0**
	baz=309						
EHD	**Haiduan**	**1.20**	**253**	*i* P	**Pn**	**01 47 37.9**	**-0.6**
	baz=243						
EHD				*i* S	**Sn**	**01 47 52.3**	**-1.8**
	baz=243						
ECS	**Chishang**	**1.21**	**251**	*e*P	**Pn**	**01 47 38.1**	**-0.4**
	baz=239						
ECS				S	**Sn**	**01 47 54.1**	**-0.1**
	baz=239						
ESAO	**Su ao**	**1.21**	**332**	*e*P	**Pn**	**01 47 37.9**	**-0.6**
	baz=345						
ESAO				*e*S	**Sn**	**01 47 51.7**	**-2.4**
	baz=345						
LDUT	**Ludao**	**1.23**	**228**	*i* P	**Pn**	**01 47 38.1**	**-0.6**
	baz=224						
LDUT				*i* S	**Sn**	**01 47 52.3**	**-2.3**
	baz=224						
VWDT	**VWDT**	**1.23**	**282**	⇓*i* P	**Pn**	**01 47 38.5**	**-0.3**
	baz=281						
VWDT				*i* S	**Sn**	**01 47 52.8**	**-2.0**
	baz=281						
TWC	**Suao**	**1.24**	**333**	*i* P	**Pn**	**01 47 38.2**	**-0.7**
	baz=346						
TWC				S	**Sn**	**01 47 54.0**	**-0.9**
	baz=346						
WHF	**Hehuan Shan**	**1.27**	**301**	*i* P	**Pn**	**01 47 38.6**	**-1.1**
	baz=301						
WHF				*i* S	**Sn**	**01 47 53.6**	**-2.6**
	baz=301						
CHGB	**Renai**	**1.30**	**296**	*i* P	**Pn**	**01 47 39.6**	**-0.4**
	baz=303						
CHGB				S	**Sn**	**01 47 55.1**	**-1.7**

	baz=303							
NDS	**Dongshan**	**1.32 329**	*e*P	**Pn**	**01 47 40.2 +0.2**
	baz=341							
NDS			S	**Sn**	**01 47 55.5 -1.3**
	baz=341							
WUSB	**Renai**	**1.32 292**	*i* P	**Pn**	**01 47 39.9 -0.3**
	baz=292							
WUSB			S	**Sn**	**01 47 56.3 -0.9**
	baz=292							
NNSB	**Datong**	**1.35 313**	*i* P	**Pn**	**01 47 40.1 -0.4**
	baz=315							
NNSB			S	**Sn**	**01 47 56.2 -1.7**
	baz=315							
HATJ	**Hateruma jima**	**1.35 66**	P	**Pn**	**01 47 40.7 +0.2**
HATJ			S	**Sn**	**01 47 57.1 -0.6**
LONT	**Longtian**	**1.36 244**	*e*P	**Pn**	**01 47 40.4 -0.2**
	baz=235							
LONT			S	**Sn**	**01 47 56.9 -1.0**
	baz=235							
ELDTW	**Lidau**	**1.36 257**	*i* P	**Pn**	**01 47 40.1 -0.6**
	baz=245							
ELDTW			S	**Sn**	**01 47 56.0 -2.0**
	baz=245							
NNS	**Nan Shan**	**1.36 314**	P	**Pn**	**01 47 40.2 -0.5**
	baz=315							
NNS			S	**Sn**	**01 47 56.4 -1.8**
	baz=315							
NDT	**Datong Townshi**	**1.40 322**	*e*P	**Pn**	**01 47 42.6 +1.5**
	baz=316							
NDT			*e*S	**Sn**	**01 47 57.1 -1.7**
	baz=316							
ENTT	**Nioudou**	**1.40 325**	P	**Pn**	**01 47 41.3 +0.2**
	baz=327							
ENTT			*e*S	**Sn**	**01 47 57.6 -1.3**
	baz=327							
TDCB	**Techi**	**1.41 302**	*i* P	**Pn**	**01 47 41.1 -0.3**
	baz=303							
TDCB			S	**Sn**	**01 47 57.3 -2.0**
	baz=303							
SSLB	**Suanglung**	**1.41 282**	P	**Pn**	**01 47 41.0 -0.3**
SSLB	**Suanglung**	**1.41 282**	*i* P	**Pn**	**01 47 40.9 -0.3**
	baz=282							
SSLB			S	**Sn**	**01 47 57.6 -1.6**
	baz=282							
TWE	**Neicheng**	**1.42 329**	*i* P	**Pn**	**01 47 41.6 +0.3**
	baz=332							
TWE			S	**Sn**	**01 47 58.4 -0.9**
	baz=332							
TTN	**Taitung**	**1.42 239**	*e*S	**Sn**	**01 47 59.0 -0.2**
	baz=236							
ILA	**Ilan**	**1.42 333**	*e*P	**Pn**	**01 47 40.9 -0.5**
	baz=336							
ILA			*e*S	**Sn**	**01 47 59.0 -0.4**
	baz=336							
TWGBT	**Beinan**	**1.44 242**	P	**Pn**	**01 47 42.7 +1.0**
TWGBT	**Beinan**	**1.44 242**	*i* P	**Pn**	**01 47 41.9 +0.2**
	baz=232							
TWGBT			*e*S	**Sn**	**01 47 58.7 -1.2**
	baz=232							
TWG	**Pinlang**	**1.44 242**	P	**Pn**	**01 47 41.9 +0.1**
	baz=232							
TWG			S	**Sn**	**01 47 58.7 -1.3**
	baz=232							
SMLT	**Sun Moon Lake**	**1.48 285**	*i* P	**Pn**	**01 47 42.3 0.0**
	baz=294							
SMLT			*e*S	**Sn**	**01 48 00.7 -0.3**
	baz=294							
ALS	**Alishan**	**1.52 271**	*i* P	**Pn**	**01 47 43.7 +0.7**
	baz=270							
ALS			*e*S	**Sn**	**01 48 02.4 +0.2**
	baz=270							
TYC	**Yuchr**	**1.52 286**	P	**Pn**	**01 47 43.0 +0.2**
	baz=294							
TYC			*e*S	**Sn**	**01 48 01.6 -0.3**
	baz=294							
YHNB	**Yeheng**	**1.53 320**	P	**Pn**	**01 47 43.3 +0.3**
YHNB	**Yeheng**	**1.53 320**	*i* P	**Pn**	**01 47 43.1 +0.1**
	baz=310							
YHNB			*e*S	**Sn**	**01 48 00.6 -1.6**
	baz=310							
NWLT	**Wulai**	**1.54 326**	P	**Pn**	**01 47 44.0 +0.9**
	baz=328							
NWLT			*e*S	**Sn**	**01 48 00.6 -1.8**
	baz=328							
NSK	**Sanguang**	**1.54 320**	P	**Pn**	**01 47 43.4 +0.2**
	baz=310							
NSK			S	**Sn**	**01 48 00.8 -1.8**
	baz=310							
TWB1	**Santiao Chiao**	**1.56 344**	*i* P	**Pn**	**01 47 43.2 -0.2**
	baz=2.0							
TWB1			*e*S	**Sn**	**01 48 00.8 -2.1**
	baz=2.0							
STYH	**Taoyuan**	**1.58 258**	P	**Pn**	**01 47 44.7 +1.1**
	baz=250							
STYH			*e*S	**Sn**	**01 48 02.5 -0.8**
	baz=250							
JKRS	**Kuro-shima**	**1.60 62**	P	**Pn**	**01 47 44.5 +0.6**
JKRS			S	**Sn**	**01 48 03.8 0.0**
WJS	**Zhushan**	**1.62 282**	*i* P	**Pn**	**01 47 45.5 +1.4**
	baz=282							
WJS			S	**Sn**	**01 48 04.9 +0.6**
	baz=282							
ECL	**Taimali**	**1.65 237**	P	**Pn**	**01 47 44.2 -0.3**
	baz=246							
ECL			S	**Sn**	**01 48 02.8 -2.3**
	baz=246							
NFF	**Wufeng Townshi**	**1.67 313**	*i* P	**Pn**	**01 47 46.4 +1.6**
	baz=315							
NFF			*e*S	**Sn**	**01 48 05.9 +0.3**
	baz=315							
WNT	**Mingjian**	**1.67 283**	*i* P	**Pn**	**01 47 46.4 +1.5**
	baz=284							
WNT			*e*S	**Sn**	**01 48 07.0 +1.5**
	baz=284							
SXI1	**Grass Mountain**	**1.67 342**	*i* P	**Pn**	**01 47 44.7 -0.3**
	baz=358							
SXI1			S	**Sn**	**01 48 04.4 -1.4**
	baz=358							
LAY	**Lan-yu**	**1.68 210**	P	**Pn**	**01 47 44.3 -0.6**
	baz=207							
LAY			*e*S	**Sn**	**01 48 02.7 -3.1**
	baz=207							
NWF	**Wu-fen Shan**	**1.68 339**	P	**Pn**	**01 47 45.3 +0.2**
	baz=355							
NWF			*e*S	**Sn**	**01 48 05.0 -1.0**
	baz=355							
WFSB	**Wu-fen Shan**	**1.68 339**	*i* P	**Pn**	**01 47 45.1 +0.1**
	baz=355							
WFSB			S	**Sn**	**01 48 04.8 -1.1**
	baz=355							
NHDH	**Xindian Distri**	**1.69 330**	*e*P	**Pn**	**01 47 46.3 +1.2**
	baz=332							
NHDH			*e*S	**Sn**	**01 48 05.3 -0.7**
	baz=332							
TPUB	**Ta-pu**	**1.69 264**	P	**Pn**	**01 47 46.9 +1.7**
TPUB	**Ta-pu**	**1.69 264**	*i* P	**Pn**	**01 47 46.8 +1.6**
	baz=263							
TPUB			S	**Sn**	**01 48 06.3 +0.2**
	baz=263							
LYUB	**Lan-yu**	**1.69 209**	*i* P	**Pn**	**01 47 44.4 -0.8**
	baz=206							
LYUB			S	**Sn**	**01 48 03.9 -2.3**
	baz=206							
WCKO	**Fanlu**	**1.70 268**	*i* P	**Pn**	**01 47 47.0 +1.7**
	baz=268							
WCKO			S	**Sn**	**01 48 07.3 +1.0**
	baz=268							
WTP	**Ta-pu**	**1.71 262**	P	**Pb**	**01 47 47.6 -0.3**
	baz=261							
WTP			*e*S	**Sn**	**01 48 08.3 +1.6**
	baz=261							
TATO	**Taipei**	**1.72 329**	P	**Pn**	**01 47 45.8 +0.3**
LIOB	**Emei**	**1.74 311**	*i* P	**Pn**	**01 47 47.5 +1.6**
	baz=313							
LIOB			S	**Sn**	**01 48 07.7 +0.3**
	baz=313							
NSTT	**Nanjuang**	**1.74 311**	*i* P	**Pn**	**01 47 47.7 +1.8**
	baz=313							
NSTT			S	**Sn**	**01 48 06.9 -0.5**
	baz=313							
WGK	**Gukeng**	**1.75 276**	*e*P	**Pb**	**01 47 48.5 0.0**
	baz=277							
WGK			*e*S	**Sn**	**01 48 08.2 +0.7**
	baz=277							
TCU	**Taichung**	**1.75 292**	P	**Pn**	**01 47 47.9 +1.9**
	baz=293							
TCU			*e*S	**Sn**	**01 48 08.5 +0.9**
	baz=293							
TWQ1	**Liyutan**	**1.76 299**	*i* P	**Pn**	**01 47 47.6 +1.5**
	baz=301							
TWQ1			S	**Sn**	**01 48 08.8 +1.0**
	baz=301							
JIJ	**Ishigaki jima**	**1.77 61**	P	**Pn**	**01 47 46.6 +0.5**
JIJ			S	**Sn**	**01 48 06.7 -1.3**
WDLH	**Douliu**	**1.77 276**	P	**Pn**	**01 47 47.1 +0.9**
	baz=277							
WDLH			*e*S	**Sn**	**01 48 08.7 +0.6**
	baz=277							
CHN1	**Nanshi**	**1.80 260**	P	**Pn**	**01 47 48.6 +2.0**
	baz=260							
CHN1			*e*S	**Sn**	**01 48 10.6 +1.7**
	baz=260							
NSY	**Sanyi**	**1.80 301**	P	**Pn**	**01 47 47.9 +1.3**
	baz=303							
NSY			*e*S	**Sn**	**01 48 10.2 +1.4**
	baz=303							
CHN2	**Minshiung**	**1.82 271**	*e*P	**Pn**	**01 47 48.3 +1.4**
	baz=272							
CHN2			*e*S	**Sb**	**01 48 12.1 +0.1**
	baz=272							
SNST	**Tainan City**	**1.82 262**	P	**Pn**	**01 47 48.9 +2.0**
	baz=261							
SNST			*e*S	**Sn**	**01 48 10.8 +1.4**
	baz=261							
TWK	**Hsinying**	**1.82 263**	P	**Pb**	**01 47 49.3 -0.4**
	baz=263							
TWK			*e*S	**Sn**	**01 48 11.2 +1.8**
	baz=263							
YM01	**YM01**	**1.83 334**	P	**Pn**	**01 47 48.8 +1.7**
	baz=337							
YM01			*e*S	**Sn**	**01 48 08.2 -1.4**
	baz=337							
WCHH	**Zhanghua**	**1.83 289**	P	**Pn**	**01 47 48.9 +1.8**
	baz=290							
WCHH			*e*S	**Sb**	**01 48 12.5 +0.1**
	baz=290							
NMLH	**Miaoli**	**1.84 304**	P	**Pn**	**01 47 48.0 +0.8**
	baz=294							
NMLH			*e*S	**Sn**	**01 48 10.4 +0.6**
	baz=294							
TSMG	**Majia**	**1.85 245**	P	**Pb**	**01 47 50.3 +0.2**
	baz=239							
TSMG			*e*S	**Sn**	**01 48 10.0 0.0**
	baz=239							
TAWH	**Dawu Township**	**1.85 232**	*i* P	**Pn**	**01 47 47.6 +0.2**
	baz=238							
TAWH			S	**Sn**	**01 48 08.1 -1.9**
	baz=238							
EAST	**Anshuo**	**1.85 233**	P	**Pn**	**01 47 47.5 +0.1**
	baz=240							
EAST			*e*S	**Sn**	**01 48 06.8 -3.3**
	baz=240							
TWS1	**Kuangyinshan**	**1.85 329**	P	**Pn**	**01 47 48.7 +1.3**
	baz=332							
TWS1			*e*S	**Sn**	**01 48 09.8 -0.3**
	baz=332							
YM08	**YM08**	**1.86 335**	*e*P	**Pn**	**01 47 47.0 -0.5**
	baz=338							
YM08			*e*S	**Sn**	**01 48 08.4 -1.9**
	baz=338							
SBCB	**Hsinchu**	**1.86 314**	*e*P	**Pn**	**01 47 47.4 -0.1**
	baz=316							
SBCB			*e*S	**Sn**	**01 48 10.5 +0.2**
	baz=316							
NCUH	**Zhongli**	**1.87 322**	*e*P	**Pn**	**01 47 47.7 +0.2**
	baz=324							
NCUH			*e*S	**Sn**	**01 48 09.8 -0.7**
	baz=324							
NTST	**Danshui**	**1.90 331**	*e*P	**Pn**	**01 47 48.3 +0.4**
	baz=344							
NTST			*e*S	**Sn**	**01 48 10.6 -0.5**
	baz=344							
MASBT	**Mashibuluo**	**1.90 243**	*i* P	**Pn**	**01 47 49.1 +1.1**
	baz=236							
MASBT			*e*S	**Sn**	**01 48 12.3 +1.1**
	baz=236							
SCST	**Cishan**	**1.91 252**	P	**Pb**	**01 47 51.0 -0.1**
	baz=251							
SCST			*e*S	**Sb**	**01 48 14.2 -0.3**
	baz=251							
WTK	**Tuku**	**1.91 276**	P	**Pn**	**01 47 50.0 +1.9**
	baz=277							
WTK			*e*S	**Sn**	**01 48 12.8 +1.4**
	baz=277							
WRL	**Guolierlin Hig**	**1.95 282**	P	**Pn**	**01 47 50.3 +1.6**
	baz=283							
WRL			S	**Sn**	**01 48 14.0 +1.5**
	baz=283							
ICHU	**Yijhu**	**2.01 266**	P	**Pn**	**01 47 51.7 +2.2**
	baz=267							
ICHU			*e*S	**Sn**	**01 48 13.9 0.0**
	baz=267							
JISG	**Ishigakijimahi**	**2.01 57**	*e*P	**Pn**	**01 47 50.2 +0.7**
JISG			*e*S	**Sn**	**01 48 12.2 -1.8**
SCZT	**Fangliau**	**2.03 237**	P	**Pn**	**01 47 52.2 +2.4**
	baz=235							
SCZT			*e*S	**Sn**	**01 48 14.3 -0.2**
	baz=235							
JTJ	**Tarama**	**2.34 61**	P	**Pn**	**01 47 55.1 +1.0**
JTJ			*e*S	**Sn**	**01 48 21.7 -0.5**
SONM	**Songino Array**	**27.46 336**	P	**P**	**01 53 01.3 -0.1**
	0.5nm,0.6s,baz=153,slow=11,SNR=6.5							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**39.64 316**	P	**P**	**01 54 47.8 +0.8**
	0.2nm,0.4s,baz=104,slow=8.9,SNR=8.4							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**41.45 327**	P	**P**	**01 55 02.0 +0.2**
	0.3nm,0.3s,baz=128,slow=9.3,SNR=1.5							
	0.3nm,0.3s							
BVAR	**Borovoye Array**	**48.94 321**	P	**P**	**01 56 01.7 +0.4**
	0.4nm,0.5s,baz=90,slow=5.9,SNR=3.9							
	0.4nm,0.5s							

*RSNC **20** 01:48:01.6±1.2,8.°52N×77.°68W,h4^{km}±6^{km},ML2.8*
*UPA **20** 01:48:04.7±1.6,8.°61N×77.°95W,h12^{km}±4^{km},MW3.5*
ISC 20 01:48:00.6±1.0,**8.°59N**±0.°04×**77.°70W**±0.°02,**h17**^{km}±8^{km},
n36,σ1°**82**/65,**1C-3D**,**Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UPD2	**Meteti**	**0.31**	**263**	⇓*i*P		**Pg**		**01 48 07.9**	**+0.5**
UPD2				*e*S		**Sb**		**01 48 13.4**	**+0.8**
UPD2	**Meteti**	**0.31**	**263**	⇓*i*P		**Pg**		**01 48 07.9**	**+0.5**
UPD2				*e*S		**Sb**		**01 48 13.3**	**+0.7**
UPD2				*i*				01 48 14.0	
	comp=Z,2μm,0.2s								
CAPC	**Capurgana**	**0.35**	**82**	⇑*e*P		**Pg**		**01 48 07.7**	**-0.2**
CAPC				*e*S		**Sg**		**01 48 12.7**	**-0.2**
TOTI	**Torti**	**0.69**	**299**	⇓*i*P		**Pb**		**01 48 13.9**	**-0.3**
TOTI				*e*S		**Sb**		**01 48 23.6**	**+0.1**
APAC	**Apartado, Choc**	**1.30**	**122**	*e*P		**Pb**		**01 48 24.7**	**0.0**
APAC				*e*S		**Sb**		**01 48 40.8**	**-0.4**
APAC				*i*				01 48 54.2	
	comp=Z,178nm,0.4s								
PTAC	**Punta Ardita,**	**1.44**	**184**	*e*P		**Pn**		**01 48 23.9**	**-2.0**
PTAC				*e*S		**Sn**		**01 48 43.2**	**-1.2**
PTAC				*i*				01 48 45.8	
	comp=Z,291nm,0.2s								
CHPO	**Chepo, Panama**	**1.51**	**293**	*e*P		**Pn**		**01 48 26.4**	**-0.5**
CHPO				*e*S		**Sn**		**01 48 44.0**	**-2.3**
FLAM	**Flamenco Islan**	**1.84**	**280**	*e*P		**Pn**		**01 48 31.3**	**-0.2**
FLAM				*e*S		**Sn**		**01 48 52.5**	**-2.0**
UPA	**Univ. de Panam**	**1.85**	**282**	*e*P		**Pn**		**01 48 32.4**	**+0.8**
UPA				*e*S		**Sn**		**01 48 53.1**	**-1.6**
UPA	**Univ. de Panam**	**1.85**	**282**	*e*P		**Pn**		**01 48 31.9**	**+0.2**
UPA				*e*S		**Sn**		**01 48 55.2**	**+0.5**
FRIJ	**El Hiral**	**2.10**	**288**	*e*P		**Pn**		**01 48 36.0**	**+0.9**
DBBC	**Dabeiba**	**2.15**	**136**	*e*P		**Pn**		**01 48 37.1**	**+1.3**
DBBC				*e*S		**Sb**		**01 49 03.9**	**-1.7**
DBBC				*i*				01 49 06.2	
	comp=Z,31nm,0.3s								
ZANG	**Zanguenga, Cho**	**2.17**	**280**	*e*P		**Pn**		**01 48 36.4**	**+0.4**
BCIP	**Isla Barro Col**	**2.19**	**285**	*e*P		**Pn**		**01 48 37.1**	**+0.9**
BCIP				*e*S		**Sn**		**01 49 01.0**	**-2.0**
BCIP	**Isla Barro Col**	**2.19**	**285**	*e*P		**Pn**		**01 48 36.5**	**+0.2**
BCIP				*e*S		**Sb**		**01 49 07.3**	**+0.7**
BCIP				*i*				01 49 17.1	
	comp=Z,59nm,0.3s								
UREC	**San Jos de Ur**	**2.30**	**111**	*e*P		**Pn**		**01 48 38.3**	**+0.4**
UREC				*e*S		**Sn**		**01 49 03.2**	**-2.6**
UREC				*i*				01 49 08.8	
	comp=Z,34nm,0.2s								
AZU	**Azuero**	**2.67**	**253**	*e*P		**Pn**		**01 48 44.8**	**+1.9**
AZU				*e*S		**Sn**		**01 49 13.1**	**-1.7**
AZU	**Azuero**	**2.67**	**253**	*e*P		**Pn**		**01 48 43.6**	**+0.8**
AZU				*e*S		**Sn**		**01 49 13.4**	**-1.4**
AZU				*i*				01 49 23.2	
	comp=Z,106nm,0.4s								
SJCC	**San Jacinto, C**	**2.81**	**62**	*e*P		**Pb**		**01 48 49.5**	**-0.9**
SJCC				*e*S		**Sn**		**01 49 20.6**	**+2.2**
CBOC	**Ciudad Bolivar**	**3.18**	**148**	*e*P		**Pn**		**01 48 50.6**	**+0.5**
CBOC				*e*S		**Sn**		**01 49 26.5**	**-1.3**
CBOC				*i*				01 49 33.4	
	comp=Z,13nm,0.6s								
HELC	**Santa Helena**	**3.21**	**138**	*e*P		**Pn**		**01 48 53.3**	**+2.6**
HELC				*e*S		**Sn**		**01 49 32.1**	**+3.3**
HELC				*i*				01 49 42.3	
	comp=Z,12nm,0.8s								
GMAL	**Guarumal, Vera**	**3.59**	**257**	*e*P		**Pn**		**01 48 57.8**	**+2.2**
GMAL				*e*S		**Sn**		**01 49 42.4**	**+4.7**
ARGC	**Ariguani, Magd**	**3.64**	**69**	*e*P		**Pb**		**01 49 01.5**	**-3.0**
ARGC				*e*S		**Sn**		**01 49 39.7**	**+1.0**
ARGC				*i*				01 49 49.0	
	comp=N,10nm,0.5s								
PTBC	**PUERTO BERRIO,**	**3.81**	**122**	*e*P		**Pn**		**01 48 59.0**	**+0.4**
PTBC				*e*S		**Sn**		**01 49 41.2**	**-1.8**
PTBC				*i*				01 49 45.0	
	comp=Z,8.3nm,0.3s								
PLMC	**San Jos del P**	**3.92**	**159**	*e*P		**Pn**		**01 49 00.0**	**-0.1**
PLMC				*e*S		**Sn**		**01 49 44.6**	**-1.3**
GUY2C	**Guyana, Caldas**	**4.07**	**145**	*e*P		**Pn**		**01 49 05.0**	**+2.4**
GUY2C				*e*S		**Sn**		**01 49 53.5**	**+3.5**
GUY2C				*i*				01 50 03.0	
	comp=Z,8.9nm,0.6s								
OCAC	**Ocana**	**4.35**	**94**	*e*P		**Pn**		**01 49 06.8**	**+0.7**
OCAC				*e*S		**Sn**		**01 49 56.7**	**+0.2**
ANIL	**Santa Ana**	**4.67**	**151**	*e*P		**Pn**		**01 49 15.0**	**+4.4**
YOTC	**Yotoco, Valle**	**4.77**	**164**	*e*P		**Pn**		**01 49 11.4**	**-0.5**
YOTC				*e*S		**Sn**		**01 50 02.2**	**-4.7**
BARC	**Barichara**	**4.90**	**114**	*e*P		**Pn**		**01 49 14.8**	**+1.0**
BARC				*e*S		**Sn**		**01 50 09.3**	**-0.9**
BARC				*i*				01 50 21.9	
	comp=Z,22nm,0.5s								
PAMC	**Pamplona, Colo**	**5.11**	**104**	*e*P		**Pn**		**01 49 19.3**	**+2.5**
PAMC				*e*S		**Sn**		**01 50 15.8**	**+0.1**
PAMC				*i*				01 50 22.8	
	comp=Z,13nm,0.5s								
ORTC	**Ortega, Tolima**	**5.25**	**152**	*e*P		**Pn**		**01 49 19.3**	**+0.9**
CRJC	**Cerrejon, Guaj**	**5.33**	**63**	*e*P		**Pn**		**01 49 19.6**	**+0.1**
CRJC				*i*				01 50 24.8	
	comp=Z,10.0nm,0.3s								
JAMC	**Jamundi, Valle**	**5.43**	**169**	*e*P		**Pn**		**01 49 21.3**	**+0.1**
CHIC	**Chingaza**	**5.57**	**135**	*e*P		**Pn**		**01 49 26.7**	**+3.5**
CHIC				*e*S		**Sn**		**01 50 29.6**	**+2.6**
CHIC				*i*				01 50 33.5	
	comp=Z,1.9nm,0.5s								
POPC	**Popayan, Colom**	**6.09**	**170**	*e*P		**Pn**		**01 49 30.6**	**+0.3**

*NEIC **20** 02:32:02.1±1.1,56.°0S×0.°2×27.°6W×0.°1,h103^{km}±9^{km},*
mb4.6/27,Error ellipse: s-maj=24.0km s-min=4.9km
az=197.0
*IDC **20** 02:32:03.3±4.8,56.°02S×27.°51W,h120^{km}±42^{km},mb3.8/6,*
mbtmp4.2/8,Error ellipse: s-maj=22.8km s-min=17.8km
az=80.0
ISC 20 02:32:02.4±0.5,**55.°92S**±0.°09×**27.°68W**±0.°08,**h112**^{km},**n53**,
σ1°**16**/54,**mb4.5**/19,**4D**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.32**	**284**			**Pn**	**Pn**	**02 33 19.9**	**+0.4**
HOPE							Sn	**02 34 16.5**	**-2.9**
VNA1	**Neumayer--Stat**	**17.02**	**158**	⇓P			**P**	**02 35 56.3**	**+3.1**
	comp=Z,1.2nm,0.2s								
VNA3	**Neumayer Olymp**	**17.21**	**160**	⇓P			**Pn**	**02 35 58.2**	**+2.8**
	comp=Z,0.7nm,0.2s								
VNA2	**Neumayer--Watz**	**17.42**	**158**	⇓P			**Pn**	**02 35 59.5**	**+1.5**
	comp=Z,1.1nm,0.2s,baz=324,slow=13								
SNAA	**Sanae**	**18.97**	**156**	P			**P**	**02 36 13.1**	**-1.6**
SNAA	**Sanae**	**18.97**	**156**	⇓P			**P**	**02 36 13.2**	**-1.5**
	comp=Z,14nm,0.4s								
SNAA	**Sanae**	**18.97**	**156**	P			**P**	**02 36 13.4**	**-1.3**
	comp=Z,5.7nm,0.6s,baz=286,slow=11,SNR=21								
PMSA	**Palmer Station**	**19.78**	**229**	P			**P**	**02 36 23.5**	**+0.2**
	comp=Z,16nm,0.7s,baz=125,slow=12,SNR=2.2								
GO08	**Villa O'Higgin**	**28.07**	**266**	P			**P**	**02 37 42.7**	**-0.4**
PLTB	**Pedras Altas**	**30.21**	**312**	P			**P**	**02 38 03.4**	**+1.2**
PLTB				IAmb			IAmb	02 38 04.1	
	comp=Z,8.2nm,0.6s								
QSPA	**South Pole Qui**	**34.33**	**180**	P			**P**	**02 38 37.7**	**-0.3**
QSPA				IAmb			IAmb	02 38 40.2	
	comp=Z,15nm,1.5s								
QSPA	**South Pole Qui**	**34.33**	**180**	P			**P**	**02 38 37.0**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=189,slow=1.3,SNR=7.7								
QSPA				PcP			**PcP**	**02 41 10.4**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=228,slow=1.8,SNR=3.8								
	comp=Z,2.1nm,0.6s								
CPUP	**Villa Florida**	**36.52**	**312**	P			**P**	**02 38 57.2**	**+0.4**
CPUP	**Villa Florida**	**36.52**	**312**	P			**P**	**02 38 57.7**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=143,slow=9.0,SNR=11								
CPUP				PcP			**PcP**	**02 41 17.9**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=140,slow=1.2,SNR=6.5								
	comp=Z,5.3nm,0.9s								
CO03	**El Pedregal**	**39.14**	**292**	P			**P**	**02 39 19.8**	**+0.8**
CO03				IAmb			IAmb	02 39 27.0	
	comp=Z,13nm,1.4s								
CO01	**Juntas del Tor**	**39.51**	**293**	P			**P**	**02 39 23.3**	**+1.0**
AC05	**El Transito**	**40.52**	**294**	P			**P**	**02 39 31.0**	**+0.5**
AC04	**Llanos de Chal**	**41.45**	**294**	P			**P**	**02 39 38.9**	**+1.0**
AC02	**Maricunga**	**41.57**	**297**	P			**P**	**02 39 40.7**	**+1.2**
AC02				IAmb			IAmb	02 39 42.4	
	comp=Z,10nm,1.2s								
GO02	**Mina Guanaco**	**43.19**	**298**	P			**P**	**02 39 53.1**	**+0.7**
GO02				IAmb			IAmb	02 39 54.6	
	comp=Z,5.4nm,0.7s								
LVC	**Limon Verde**	**45.00**	**301**	P			**P**	**02 40 08.4**	**+1.5**
LVC				IAmb			IAmb	02 40 10.7	
	comp=Z,6.0nm,0.8s								
PB04	**IPOC Station P**	**45.84**	**299**	P			**P**	**02 40 13.3**	**0.0**
PB09	**IPOC Station P**	**45.85**	**301**	P			**P**	**02 40 14.2**	**+0.8**
BOSA	**Boshof**	**46.20**	**76**	P			**P**	**02 40 15.2**	**-0.9**
	comp=Z,1.7nm,1.0s,baz=212,slow=9.5,SNR=1.8								
	comp=Z,1.7nm,1.0s								
PB07	**IPOC Station P**	**46.22**	**300**	P			**P**	**02 40 17.1**	**+0.8**
PB01	**IPOC Station P**	**46.61**	**301**	P			**P**	**02 40 20.2**	**+0.9**
PB01				IAmb			IAmb	02 40 21.1	
	comp=Z,7.7nm,0.8s								
VNDA	**Vanda**	**46.69**	**183**	P			**P**	**02 40 19.0**	**-0.2**
VNDA				IAmb			IAmb	02 40 46.5	
	comp=Z,12nm,1.4s								
VNDA	**Vanda**	**46.69**	**183**	P			**P**	**02 40 18.9**	**-0.2**
	comp=Z,1.7nm,0.8s,baz

NVAR	**Mina Array Bea**	**121.09**	**293**	PKP		**PKiKP**	02 50 42.0	**+0.5**	
	comp=Z,0.3nm,0.5s,baz=116,slow=2.1,SNR=2.7								
FINES	**FINESS Array B**	**124.39**	**28**	PKP		**PKPdf**	02 50 45.9	**-0.8**	
	comp=Z,1.2nm,0.6s,baz=173,slow=3.3,SNR=9.6								
CMAR	**Chiang Mai Arr**	**125.37**	**111**	PKP		**PKPdf**	02 50 49.2	**-0.7**	
	comp=Z,0.7nm,0.3s,baz=242,slow=3.1,SNR=4.6								
ARCES	**ARCESS Array B**	**130.92**	**22**	PKP		**PKPdf**	02 50 58.6	**-0.3**	
	comp=Z,1.3nm,0.7s,baz=132,slow=1.8,SNR=5.9								
BVAR	**Borovoye Array**	**134.94**	**58**	PKP		**PKPdf**	02 51 06.9	**-0.1**	
	comp=Z,0.6nm,0.5s,baz=188,slow=1.0,SNR=3.2								
YKA	**Yellowknife Ar**	**135.89**	**318**	PKP		**PKPdf**	02 51 08.1	**-0.3**	
	comp=Z,0.8nm,0.6s,baz=127,slow=2.3,SNR=12								
MKAR	**Makanchi Array**	**137.10**	**72**	PKP		**PKPdf**	02 51 08.9	**-2.3**	
	comp=Z,0.3nm,0.5s,baz=240,slow=1.0,SNR=5.1								
KURBB	**Kurchatov Arra**	**137.50**	**65**	PKP		**PKPdf**	02 51 09.9	**-1.8**	
	comp=Z,0.3nm,0.6s,baz=248,slow=2.5,SNR=5.3								
ZALV	**Zalesovo Beam**	**142.56**	**64**	PKiKP	PKPpre		02 51 16.8		
	comp=Z,1.1nm,0.4s,baz=270,slow=1.5,SNR=3.9								
ILAR	**Eielson Array**	**149.82**	**312**	PKPbc		**PKPbc**	02 51 37.4	**-0.4**	
	comp=Z,10nm,0.7s,baz=133,slow=2.9,SNR=108								
SONM	**Songino Array**	**150.99**	**87**	PKPbc		**PKPbc**	02 51 40.4	**-0.8**	
	comp=Z,5.7nm,0.5s,baz=220,slow=3.7,SNR=64								

TRN 20 02:37:13.4, 12.00N × 58.90W, h23 km, MD3.9, Far South-east of Barbados., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBGH	**Gun Hill**	**1.30**	**330**	*eP*	Pb	02 37 37.8	+0.4
BBGH				*eS*	Sb	02 37 56.2	+2.6
GCMP	**Grenada, Carri**	**2.52**	**281**	*eP*	Pn	02 37 54.3	+1.3
GCMP				*eS*	Sn	02 38 24.0	+1.1
SVOC	**Richmond Hill,**	**2.54**	**297**	*eP*	Pn	02 37 54.4	+1.1
SVOC				*eS*	Sn	02 38 24.7	+1.2
SVT	**Saint Vincent**	**2.57**	**297**	*eP*	Pn	02 37 54.6	+1.0
SVT				*eS*	Sn	02 38 25.5	+1.4
SVB	**Belmont**	**2.62**	**299**	*eP*	Pn	02 37 56.2	+1.8
SVB				*eS*	Sn	02 38 27.1	+1.6
GRHS	**Sauteurs**	**2.69**	**275**	*eP*	Pn	02 37 56.8	+1.5
GRHS				*eS*	Sn	02 38 28.9	+1.6
GRGR	**Grenville**	**2.70**	**273**	*eP*	Pn	02 37 56.8	+1.3
GRGR				*eS*	Sn	02 38 29.7	+2.2
TRN	**Trinidad (W)**	**2.80**	**242**	*eP*	Pn	02 37 58.9	+2.1
TRN				*eS*	Sn	02 38 30.7	+0.7
SLBI	**Saint Lucia, B**	**2.85**	**315**	*eP*	Pn	02 37 59.4	+1.8
SLBI				*eS*	Sn	02 38 31.9	+0.7
MPOM	**Morne Pois Mar**	**3.09**	**322**	*eP*	Pn	02 38 01.7	+0.9
MPOM				*eS*	Sn	02 38 37.9	+0.9
ANBD	**Bethesda, Anti**	**5.73**	**331**	*eS*	Sn	02 39 41.2	-1.0

*IDC **20** 02:49:07.6±0.8, 31.58S×71.81W, h0 km, mb4.2/8, mbtmp4.1/11, ML4.0/3, MS3.7/13, Error ellipse: s-maj=24.7km s-min=21.0km az=114.0*
*NEIC **20** 02:49:09.3±1.7, 31.577S±0.008×71.96W±0.07, h19 km±4km, mb4.6/15, Mwr4.2/79, Error ellipse: s-maj=8.3km s-min=1.1km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.82; Mθθ=0.25; Mφφ=-1.07; Mrθ=0.51; Mrφ=-0.57; Mθφ=-2.50; Fault plane solution: M=2.78000×10^15 NP1:φs=170.74000°, δ=80.97000°, λ=74.22000°. Principal axes: T 2.7637, Plg52.0000°, Azm63.0000°; N 0.0393, Plg16.0000°, Azm173.0000°; P -2.8030, Plg34.0000°, Azm274.0000°;*
*NEIC **20** 02:49:09.5, 31.58S×71.97W, h20 km*
*GUC **20** 02:49:10.2±0.9, 31.615×71.98W, h39 km±3km, ML4.6*

ISC 20 02:49:08.2±1.4, 31.59S±0.02×72.01W±0.05, h12 km±8km, n99, σ0 87/108, mb4.5/13, MS3.9/9, 4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.94**	**66**		**Pg**	**02 49 26.8**	**+0.4**
CO02				*Sn*	**Sg**	**02 49 39.0**	**+0.3**
CO02	**Combarbal**	**0.94**	**66**	*i P*	**Pg**	**02 49 26.9**	**+0.5**
CO02				*eS*	**Sn**	**02 49 39.5**	**-1.4**
CO02				IAML		02 49 41.4	
	comp=N,28μm,0.1s						
CO06	**Fray Jorge**	**0.97**	**19**		**Pb**	**02 49 27.4**	**+0.5**
CO06				*Sn*	**Sg**	**02 49 40.4**	**+1.0**
CO06	**Fray Jorge**	**0.97**	**19**	*↓iP*	**Pn**	**02 49 27.6**	**0.0**
CO06				*eS*	**Sn**	**02 49 41.4**	**+0.2**
VA06	**Catapilco**	**1.14**	**148**	*Pn*	**Pn**	**02 49 30.1**	**0.0**
VA06				*Sn*	**Sb**	**02 49 44.8**	**0.0**
VA06	**Catapilco**	**1.14**	**148**	*↓iP*	**Pn**	**02 49 30.1**	**0.0**
VA06				*eS*	**Sb**	**02 49 44.7**	**0.0**
VA06				IAML		02 49 51.2	
	comp=E,16μm,0.3s						
CO03	**El Pedregal**	**1.35**	**57**	*Pn*	**Pb**	**02 49 33.6**	**0.0**
CO03	**El Pedregal**	**1.35**	**57**	*i P*	**Pb**	**02 49 33.8**	**+0.2**
CO03				*eS*	**Sb**	**02 49 51.1**	**+0.2**
CO03				IAML		02 49 56.4	
	comp=E,9μm,0.3s						
VA01	**Torpederas**	**1.46**	**168**	*Pn*	**Pn**	**02 49 34.5**	**0.0**
VA01	**Torpederas**	**1.46**	**168**	*eP*	**Pn**	**02 49 34.6**	**+0.2**
ROCH	**El Roble**	**1.62**	**149**	*eP*	**Pn**	**02 49 37.4**	**+0.6**
ROCH				*eP*	**Pb**	**02 49 37.6**	**-0.6**
ROCH				*i S*	**Sb**	**02 49 58.0**	**-0.6**
ROCH				*eS*	**Sg**	**02 49 59.4**	**-0.9**
ROCH				IAML		02 50 05.3	
	comp=N,10μm,0.4s						
VA03	**San Esteban**	**1.70**	**134**		**Pb**	**02 49 39.0**	**-0.5**
VA03	**San Esteban**	**1.70**	**134**	*↓iP*	**Pb**	**02 49 39.0**	**-0.5**
VA03				*eS*	**Sb**	**02 50 01.5**	**+0.5**
VA03				IAML		02 50 05.4	
	comp=N,13μm,0.4s						
GO04	**Tololo Observa**	**1.75**	**37**		**Pn**	**02 49 38.9**	**+0.2**
GO04	**Tololo Observa**	**1.75**	**37**	*eP*	**Pb**	**02 49 39.6**	**-0.8**
GO04				*eS*	**Sb**	**02 50 02.8**	**+0.3**
CO05	**La Serena**	**1.79**	**22**		**Pn**	**02 49 38.8**	**-0.1**
CO05	**La Serena**	**1.79**	**22**	*eP*	**Pb**	**02 49 40.4**	**-0.6**
CO05				*eS*	**Sg**	**02 50 06.6**	**+0.8**
MT02	**Curacav**	**1.82**	**156**		**Pn**	**02 49 39.8**	**+0.4**
MT02	**Curacav**	**1.82**	**156**	*i P*	**Pn**	**02 49 39.9**	**+0.5**
PEL	**Peldehue**	**1.91**	**145**		**Pn**	**02 49 40.8**	**+0.1**
PEL	**Peldehue**	**1.91**	**145**	*eP*	**Pb**	**02 49 42.1**	**-1.0**
PEL				*eS*	**Sn**	**02 50 04.8**	**+0.1**
PEL				IAML		02 50 13.9	
	comp=E,5μm,0.2s						
MT10	**Hacienda Santa**	**2.09**	**144**	*i P*	**Pn**	**02 49 44.5**	**+1.2**
MT10				*i S*	**Sn**	**02 50 09.7**	**+0.4**
VA05	**Santo Domingo**	**2.09**	**171**		**Pn**	**02 49 43.0**	**0.0**
VA05	**Santo Domingo**	**2.09**	**171**	*eP*	**Pn**	**02 49 43.1**	**0.0**
VA05				IAML		02 50 19.9	
	comp=E,7μm,0.4s						
MT05	**Renca**	**2.09**	**150**		**Pn**	**02 49 43.9**	**+0.8**
MT05	**Renca**	**2.09**	**150**	*i P*	**Pn**	**02 49 44.0**	**+0.8**
MT05				*i S*	**Sb**	**02 50 12.4**	**+0.2**
MT05				IAML		02 50 17.1	
	comp=E,7μm,0.3s						
MT14	**Cerro Calן**	**2.19**	**146**	*eP*	**Pn**	**02 49 45.2**	**+0.6**
MT14				*eS*	**Sn**	**02 50 12.7**	**+1.1**
MT14				IAML		02 50 18.8	
	comp=E,9μm,0.5s						
MT16	**CCHEN**	**2.22**	**146**	*Pn*	**Pn**	**02 49 45.6**	**+0.7**
MT16	**CCHEN**	**2.22**	**146**	*↓iP*	**Pn**	**02 49 45.7**	**+0.8**
MT16				*i S*	**Sn**	**02 50 12.9**	**+0.5**
MT16				IAML		02 50 18.8	
	comp=N,3μm,0.5s						
MT03	**Universidad Ad**	**2.28**	**147**		**Pn**	**02 49 45.9**	**+0.1**
CO01	**Juntas del Tor**	**2.30**	**46**	*eP*	**Pn**	**02 49 48.0**	**+1.8**
CO01				*eS*	**Sb**	**02 50 15.9**	**-2.3**
MT09	**Talagante**	**2.34**	**159**		**Pn**	**02 49 47.4**	**+0.7**
MT01	**Popeta**	**2.36**	**165**		**Pn**	**02 49 47.1**	**+0.4**
MT15	**Las Vizcachas**	**2.37**	**148**	*eP*	**Pn**	**02 49 48.2**	**+1.2**
MT15				*eS*	**Sn**	**02 50 17.0**	**+0.9**
MT15				IAML		02 50 27.2	
	comp=N,5μm,0.3s						
MT12	**Pirque**	**2.47**	**150**	*eP*	**Pn**	**02 49 49.1**	**+0.8**
MT12				*eS*	**Sn**	**02 50 17.1**	**-1.4**
MT12				IAML		02 50 31.7	
	comp=E,6μm,0.5s						
MT13	**San Alfonso**	**2.59**	**146**	*Pn*	**Pn**	**02 49 49.8**	**-0.3**
MT13	**San Alfonso**	**2.59**	**146**	*eP*	**Pn**	**02 49 50.7**	**+0.6**
MT13				*eS*	**Sn**	**02 50 22.6**	**+0.9**
MT13				IAML		02 50 34.0	
	comp=N,3μm,0.6s						
BO04	**La Punta**	**2.67**	**154**		**Pn**	**02 49 51.5**	**+0.4**
LMEL	**Las Melosas**	**2.72**	**146**		**Pn**	**02 49 51.8**	**-0.1**
LCO	**Las Campanas**	**2.81**	**24**	*Pn*	**Pn**	**02 49 52.2**	**-0.9**
BO01	**Tunca**	**2.90**	**165**	*Pn*	**Pn**	**02 49 54.9**	**+0.7**
BO02	**Sierra Bellavi**	**3.36**	**162**		**Pn**	**02 50 01.4**	**+0.8**
GO05	**Huala**	**3.41**	**179**	*Pn*	**Pn**	**02 50 00.9**	**-0.4**
ML02	**Panimavida**	**4.19**	**173**		**Pn**	**02 50 10.4**	**-1.6**
BI05	**Punta Hualpn**	**5.24**	**190**	*Pn*	**Pn**	**02 50 24.9**	**-1.4**
H03N1	**Juan Fernandez**	**6.12**	**251**	*Pn*	**Pn**	**02 50 39.1**	**+0.9**
H03N1				*T*	T	02 57 30.7	
	baz=80,slow=72,SNR=1256						
H03N3	**Juan Fernandez**	**6.13**	**250**	*Pn*	**Pn**	**02 50 38.9**	**+0.5**
H03N3				*T*	T	02 57 23.1	
	baz=80,slow=72,SNR=1309						
H03N2	**Juan Fernandez**	**6.13**	**251**	*Pn*	**Pn**	**02 50 39.1**	**+0.8**
H03N2				*T*	T	02 57 25.8	
	baz=80,slow=72,SNR=1466						
GO06	**Curarrehue**	**7.99**	**177**		**Pn**	**02 51 01.6**	**-2.6**
LR03	**Panguipulli**	**8.03**	**182**		**Pn**	**02 51 04.1**	**-0.6**
LR05	**Currie**	**8.62**	**180**	*Pn*	**Pn**	**02 51 11.8**	**-1.0**
PLCA	**Paso Flores**	**9.20**	**173**	*Pn*	**Pn**	**02 51 21.0**	**+0.2**
PLCA	**Paso Flores**	**9.20**	**173**	*Pn*	**Pn**	**02 51 21.7**	**+0.9**
	comp=N,0.5nm,0.3s,baz=336,slow=12,SNR=26						
PLCA				*LR*	LR	02 55 21.8	
	comp=N,204nm,19.1s,baz=344,slow=41						
	comp=N,1.9nm,0.4s						
LVC	**Limon Verde**	**9.36**	**18**	*LR*	LR	02 54 33.5	
	comp=N,120nm,20.2s,baz=196,slow=35						
ITQB	**Itaqui**	**13.39**	**86**		**Pn**	**02 52 18.4**	**+0.3**
CPUP	**Villa Florida**	**13.87**	**72**		**Pn**	**02 52 24.6**	**-0.1**
CPUP	**Villa Florida**	**13.87**	**72**	*Pn*	**Pn**	**02 52 24.4**	**-0.4**
	comp=N,0.2nm,0.3s,baz=233,slow=7.0,SNR=3.0						
CPUP				*Sn*	**Sn**	**02 54 57.5**	**-1.2**
	comp=N,0.4nm,0.3s,baz=249,slow=17,SNR=2.8						
CPUP				*Lg*	Lg	02 56 22.6	
	comp=N,0.1nm,0.3s,baz=149,slow=19,SNR=2.0						
CPUP				*LR*	LR	02 58 12.5	
	comp=N,508nm,18.4s,baz=241,slow=40						
	comp=N,0.4nm,0.3s						
LPAZ	**La Paz**	**15.64**	**14**		**Pn**	**02 52 47.8**	**-1.3**
PLTB	**Pedras Altas**	**15.67**	**95**	*Pn*	**Pn**	**02 52 47.0**	**-2.0**
SIV	**San Ignacio**	**18.45**	**35**	*P*	**P**	**02 53 23.7**	**-0.2**
	baz=218,slow=12,SNR=13						
SIV				*LR*	LR	03 01 35.2	
	comp=N,100nm,18.3s,baz=254,slow=41						
	comp=N,3.9nm,0.9s						
PTLB	**Pontes e Lacer**	**19.90**	**39**	*P*	**P**	**02 53 38.4**	**-1.3**
ETMB	**Extrema**	**22.32**	**15**	*P*	**P**	**02 54 06.5**	**+0.7**
ETMB				*IAmb*	IAmb	02 54 32.6	
	comp=Z,17nm,1.4s						
SPB	**Sao Paulo**	**23.16**	**76**	*P*	**P**	**02 54 13.9**	**-0.7**
SPB				*IAmb*	IAmb	02 54 16.3	
	comp=Z,20nm,0.9s						
SAML	**Samuel**	**23.98**	**22**	*P*	**P**	**02 54 21.6**	**-1.1**
BDFB	**Brasilia**	**27.02**	**60**	*P*	**P**	**02 54 49.1**	**-1.4**
BDFB				*IAmb*	IAmb	02 54 55.7	
	comp=Z,6.8nm,1.0s						
BDFB	**Brasilia**	**27.02**	**60**	*P*	**P**	**02 54 50.0**	**-0.5**
	comp=Z,6.2nm,0.9s,baz=211,slow=7.3,SNR=9.4						
BDFB				*LR*	LR	03 07 10.5	
	comp=Z,266nm,21.8s,baz=197,slow=40						
	comp=Z,6.2nm,0.9s						
IMBA	**Imbabura, San**	**32.23**	**348**	*P*	**P**	**02 55 37.4**	**+0.4**
OTAV	**Otavalo**	**32.24**	**348**	*P*	**P**	**02 55 38.3**	**+1.2**
OTAV				*IAmb*	IAmb	02 56 05.4	
	comp=Z,6.3nm,1.0s						
RPN	**Rapa Nui**	**32.73**	**268**	*LR*	LR	03 05 56.5	
	comp=Z,79nm,18.5s,baz=93,slow=31						
BOAV	**Boa Vista**	**35.52**	**20**	*P*	**P**	**02 56 03.3**	**-1.8**
BOAV				*IAmb*	IAmb	02 56 12.5	
	comp=Z,15nm,1.5s						
PEZE	**Perez Zeledon,**	**42.24**	**343**	*P*	**P**	**02 57 00.4**	**-1.2**
CMIG	**Matias Romero**	**53.15**	**332**	*LR*	LR	03 15 24.7	
	comp=Z,33nm,21.3s,baz=262,slow=30						
SNAA	**Sanae**	**53.81**	**159**	*P*	**P**	**02 58 30.6**	**+0.1**
SNAA				*IAmb*	IAmb	02 58 39.6	
	comp=Z,6.9nm,1.1s						
SNAA	**Sanae**	**53.81**	**159**	*P*	**P**	**02 58 31.2**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=293,slow=7.7,SNR=2.2						
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**58.64**	**180**	*P*	**P**	**02 59 04.9**	**-0.2**
QSPA	**South Pole Qui**	**58.64**	**180**	*P*	**P**	**02 59 06.3**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=108,slow=5.0,SNR=2.2						
	comp=Z,0.5nm,0.3s						
TXAR	**Lajitas Array**	**67.65**	**330**	*P*	**P**	**03 00 06.1**	**+0.9**
TXAR	**Lajitas Array**	**67.65**	**330**	*P*	**P**	**03 00 06.9**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=179,slow=7.5,SNR=3.5						
	comp=Z,0.3nm,0.7s						
DBIC	**Dimbokro**	**74.39**	**72**	*P*	**P**	**03 00 46.1**	**-0.3**
DBIC				*IAmb*	IAmb	03 00 47.9	
	comp=Z,6.5nm,0.8s						
DBIC	**Dimbokro**	**74.39**	**72**	*P*	**P**	**03 00 46.8**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=223,slow=6.3,SNR=7.4						
DBIC				*LR*	LR	03 30 10.7	
	comp=Z,68nm,20.7s,baz=223,slow=33						
	comp=Z,5.3nm,0.8s						
SUR	**Sutherland**	**75.98**	**119**	*LR*	LR	03 33 10.6	
	comp=Z,61nm,18.2s,baz=177,slow=35						
TSUM	**Tsumeb**	**79.85**	**106**	*LR*	LR	03 33 10.3	
	comp=Z,83nm,18.5s,baz=152,slow=33						
BOSA	**Boshof**	**81.17**	**118**	*P*	**P**	**03 01 24.3**	**+0.1**
BOSA				*IAmb*	IAmb	03 01 36.2	
	comp=Z,13nm,1.5s						
BOSA	**Boshof**	**81.17**	**118**	*P*	**P**	**03 01 24.7**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=197,slow=4.5,SNR=5.2						
BOSA				*LR*	LR	03 31 49.3	
	comp=Z,36nm,21.1s,baz=194,slow=32						
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**81.93**	**325**	*P*	**P**	**03 01 29.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=162,slow=7.5,SNR=4.7						
	comp=Z,0.4nm,0.7s						
LBTB	**Lobatse**	**83.30**	**115**	*LR*	LR	03 35 55.1	
	comp=Z,80nm,18.0s,baz=177,slow=34						
TOA0	**Torodi Ar. Sit**	**83.37**	**70**	*P*	**P**	**03 01 35.6**	**0.0**
TOA0				*IAmb*	IAmb	03 01 37.3	
	comp=Z,4.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.37**	**70**	*P*	**P**	**03 01 35.8**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=280,slow=3.0,SNR=30						
	comp=Z,3.5nm,0.7s						
ESDC	**Sonseca Array**	**94.89**	**46**	*LR*	LR	03 44 10.4	
	comp=Z,58nm,19.3s,baz=297,slow=35						
H11S2	**WAKE ISLAND Hyd**	**25.80**	**271**	*T*	T	05 26 58.8	
	baz=116,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hyd**	**25.81**	**271**	*T*	T	05 27 01.1	
	baz=116,slow=75,SNR=42						
H11S3	**WAKE ISLAND Hyd**	**25.81**	**271**	*T*	T	05 26 58.1	
	baz=116,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hyd**	**26.15**	**272**	*T*	T	05 27 21.7	
	baz=117,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hyd**	**26.16**	**272**	*T*	T	05 27 30.9	
	baz=117,slow=76,SNR=6.3						
H11N2	**WAKE ISLAND Hyd**	**26.17**	**272**	*T*	T	05 27 22.8	
	baz=117,slow=76,SNR=28						
BVAR	**Borovoye Array**	**145.47**	**41**	PKPbc		**PKPab**	**03 08 47.1**	**+1.1**
	comp=Z,5.1nm,0.6s,baz=300,slow=3.3,SNR=28						
KURBB	**Kurchatov Arra**	**151.06**	**40**	PKPbc		**PKiKP**	**03 09 01.8**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=300,slow=3.0,SNR=24						
ZALV	**Zalesovo Beam**	**152.15**	**30**	PKPbc		**PKiKP**	**03 09 03.9**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=300,slow=2.9,SNR=30						
MKAR	**Makanchi Array**	**155.10**	**45**	PKPbc	PKPdf		03 09 10.7	+10
	comp=Z,0.4nm,0.7s,baz=341,slow=2.6,SNR=5.3							

*SDD **20** 02:54:49.7±2.3, 19.60N×68.63W, h15 km±172km, MD3.4, ML2.6, MW3.1*
*OSPL **20** 02:54:50.4±0.8, 19.49N×68.91W, h77 km±33km, ML3.0*
*RSPR **20** 02:54:52.5, 19.46N×68.75W, h90 km±13km, MD3.6/6*
*NEIC **20** 02:54:54.4±1.8, 19.35N±0.08×68.64W±0.06, h22 km±15km, ML2.8/18, Md3.6/6(RSPR), Error ellipse: s-maj=13.0km s-min=5.8km az=212.0*

ISC 20 02:54:49.9±1.6, 19.48N±0.08×68.62W±0.04, h5 km±11km, n46, σ0 87/62, 5C-4D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMDR	**Samana, DR**	**0.57**	**250**	*ePg*	**Pg**	**02 55 00.2**	**-0.7**
SMDR				*eSg*	**Sg**	**02 55 10.2**	**+1.8**
SMDR				IAML		02 55 11.8	
	comp=N,166nm,0.8s						
MIDR	**Miches**	**0.65**	**220**	*ePg*	**Pg**	**02 55 01.8**	**-0.5**
MIDR				*eSg*	**Sg**	**02 55 11.3**	**+0.6**
MIDR				IAML		02 55 15.8	
	comp=N,44nm,1.5s						
PCDR	**Punta Cana, DR**	**0.99**	**167**	*↓eP*	**Pn**	**02 55 11.3**	**+0.9**
PCDR	**Punta Cana, DR**	**0.99**	**167**	*eS*	**Sn**	**02 55 23.7**	**-1.1**
PCDR	**Punta Cana, DR**	**0.99**	**167**		**Pn**	**02 55 11.3**	**+0.9**
PCDR					**Sn**	**02 55 23.7**	**-1.1**
PCDR	**Punta Cana, DR**	**0.99**	**167**	IAML		02 55 28.9	
	comp=N,316nm,0.8s						
PCDR	**Punta Cana, DR**	**0.99**	**167**	*ePg*	**Pg**	**02 55 08.6**	**-0.3**
PCDR				*eSg*	**Sn**	**02 55 23.9**	**-1.0**
PCDR				IAML		02 55 53.7	
	comp=N,732nm,2.0s						
PCDR	**Punta Cana, DR**	**0.99**	**167**	*i P*	**Pg**	**02 55 09.0**	**+0.1**
PCDR				*eS*	**Sn**	**02 55 24.0**	**-0.8**
PCDR				IAML		02 55 27.1	
	comp=Z,240nm,2.4s						
HATOM	**Hato Mayor del**	**1.00**	**226**	*ePg*	**Pg**	**02 55 08.0**	**-1.1**
HATOM				*eSg*	**Sg**	**02 55 21.6**	**-0.5**
HATOM				IAML		02 55 22.4	
	comp=N,50nm,0.6s						
SADR	**Isla Saona**	**1.29**	**187**	*ePg*	**Pg**	**02 55 15.1**	**+0.4**
SADR				*eSg*	**Sn**	**02 55 33.5**	**+1.1**
SADR				IAML		02 55 56.5	
	comp=N,159nm,1.1s						
AGPR	**Aguadilla, PR**	**1.75**	**125**	*↑eP*	**Pn**	**02 55 21.7**	**+0.9**
AGPR	**Aguadilla, PR**	**1.75**	**125**	*eS*	**Sg**	**02 55 46.1**	**+0.1**
AGPR	**Aguadilla, PR**	**1.75**	**125**		**Pn**	**02 55 21.7**	**+0.9**
AGPR					**Sg**	**02 55 46.1**	**+0.1**
AGPR	**Aguadilla, PR**	**1.75**	**125**	IAML		02 55 55.6	
	comp=N,138nm,2.1s						
AGPR				IAML		02 56 04.1	
	comp=E,128nm,2.1s						
AGPR	**Aguadilla, PR**	**1.75**	**125**	*ePg*	**Pb**	**02 55 22.4**	**0.0**
AGPR				*eSg*	**Sb**	**02 55 44.8**	**+0.2**
AGPR				IAML		02 55 55.3	
	comp=N,136nm,2.0s						
AGPR	**Aguadilla, PR**	**1.75**	**125**	*i P*	**Pn**	**02 55 21.3**	**+0.4**
AGPR				*eS*	**Sn**	**02 55 43.4**	**-0.1**
AGPR				IAML		02 55 48.8	
	comp=Z,93nm,2.4s						
PRSN	**Puerto Rico Se**	**1.88**	**132**	*Pn*	**Pb**	**02 55 24.7**	**0.0**
PRSN				IAML		02 55 55.2	
	comp=E,121nm,0.3s						
PRSN	**Puerto Rico Se**	**1.88**	**132**	*ePg*	**Pb**	**02 55 25.3**	**+0.6**
PRSN				*eSg*	**Sb**	**02 55 47.8**	**-0.6**
PRSN				IAML		02 56 02.1	
	comp=N,137nm,0.3s						
LSP	**Las Mesas**	**1.95**	**132**	*↑eP*	**Pn**	**02 55 24.9**	**+1.3**
LSP	**Las Mesas**	**1.95**	**132**	*eS*	**Sb**	**02 55 51.2**	**+0.7**
LSP	**Las Mesas**	**1.95**	**132**		**Pn**	**02 55 24.9**	**+1.3**
LSP					**Sb**	**02 55 51.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.05**	**136**	*↓eP*	**Pn**	**02 55 25.6**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.05**	**136**	*eS*	**Sb**	**02 55 52.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.05**	**136**		**Pn**	**02 55 25.6**	**+0.6**
CRPR					**Sb**	**02 55 52.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.05**	**136**	*ePg*	**Pn**	**02 55 26.0**	**+1.0**
CRPR				*eSg*	**Sb**	**02 55 53.4**	**0.0**
CRPR				IAML		02 56 03.9	
	comp=N,68nm,2.5s						
CRPR	**Cabo Rojo, PR**	**2.05**	**136**	*i P*	**Pn**	**02 55 24.8**	**-0.2**
CRPR				*eS*	**Sn**	**02 55 49.7**	**-1.3**
CRPR				IAML		02 56 03.9	
	comp=Z,82nm,1.1s						
AOPR	**Arecibo Observ**	**2.09**	**122**	*↓eP*	**Pb**	**02 55 27.4**	**-1.0**
AOPR	**Arecibo Observ**	**2.09**	**122**	*eS*	**Sn**	**02 55 52.9**	**+0.8**
AOPR	**Arecibo Observ**	**2.09**	**122**		**Pb**	**02 55 27.4**	**-1.0**
AOPR					**Sn**	**02 55 52.9**	**+0.8**
AOPR	**Arecibo Observ**	**2.09**	**122**	IAML		02 56 12.7	
	comp=N,77nm,0.3s						
AOPR	**Arecibo Observ**	**2.09**	**122**	*ePg*	**Pb**	**02 55 27.6**	**-0.8**
AOPR				*eSg*	**Sb**	**02 55 53.8**	**-1.0**
AOPR				IAML		02 55 58.1	
	comp=N,51nm,0.3s						
UUPR	**Utuado, UPR, P**	**2.17**	**124**	*↓eP*	**Pn**	**02 55 28.2**	**+1.4**
UUPR	**Utuado, UPR, P**	**2.17**	**124**	*eS*	**Sn**	**

IPM	**Ipoh**	**3.78**	**17**	Pn	**Pn**	**03 10 19.3**	**+1.2**
IPM	**Ipoh**	**3.78**	**17**	P	**Pn**	**03 10 20.5**	**+2.3**
SNSI	**Sinabang, Aceh**	**3.94**	**293**	P	**Pn**	**03 10 21.5**	**+1.4**
SNSI				S	**Sn**	**03 11 04.6**	**-2.5**
MYKOM	**Kota Tinggi**	**4.02**	**76**	Pn	**Pn**	**03 10 21.8**	**+0.6**
KULM	**Kulim**	**4.48**	**9**	Pn	**Pn**	**03 10 27.6**	**+0.5**
TPRI	**Tanjung Pinang**	**4.59**	**89**	P	**Pn**	**03 10 29.5**	**+1.0**
MLSI	**Meulaboh, Aceh**	**4.91**	**314**	P	**Pn**	**03 10 33.9**	**+1.2**
LHMI	**Lhok Sumawe**	**5.29**	**326**	Pn	**Pn**	**03 10 36.8**	**-0.8**
LHMI	**Lhok Sumawe**	**5.29**	**326**	P	**Pn**	**03 10 36.1**	**-1.6**
	96nm,0.5s,0.6nm						
LHSI	**Lahat**	**5.85**	**142**	P	**Pn**	**03 10 43.6**	**-1.4**
	411nm,1.2s,1.6nm						
MNAI	**Manna**	**5.97**	**150**	Pn	**Pn**	**03 10 45.2**	**-1.5**
MNAI	**Manna**	**5.97**	**150**	P	**Pn**	**03 10 45.9**	**-0.7**
	315nm,1.4s,1.3nm						
SRIT	**Nakonsritamara**	**7.72**	**358**	Pn	**Pn**	**03 11 08.5**	**-1.2**
KASI	**Kota Agung**	**7.78**	**144**	P	**Pn**	**03 11 07.8**	**-2.7**
	44nm,1.0s,0.3nm						
SBUM	**Sibu**	**12.38**	**82**		**Pn**	**03 12 09.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.54**	**357**	P	**P**	**03 13 12.2**	**-0.5**
	1.3nm,0.3s,baz=188,slow=11,SNR=10						
CMAR				S	**S**	**03 16 27.3**	**+1.1**
	1.0nm,0.3s,baz=24,slow=20,SNR=1.5						
SLVN	**Son La**	**20.74**	**10**	P	**P**	**03 13 46.9**	**-0.4**
TOLI2	**Tolitoli**	**20.84**	**89**	P	**P**	**03 13 49.1**	**+0.8**
TOLI2				IAmb	IAmb	03 14 09.9	
	comp=Z,12nm,1.0s						
PZH	**PanZhiHua**	**25.58**	**4**	P	**P**	**03 14 35.8**	**+2.5**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
SHL	**Shillong**	**25.79**	**343**	P	**P**	**03 14 34.8**	**-0.4**
LSA	**Lhasa**	**29.90**	**345**	P	**P**	**03 15 12.0**	**-0.1**
SAUI	**Saumlaki**	**32.47**	**106**	P	**P**	**03 15 34.8**	**+0.5**
XAN	**Xi'an**	**34.09**	**13**	⇑P	**P**	**03 15 46.6**	**-1.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA	**Gaotai**	**38.40**	**360**	*e*P	**P**	**03 16 25.3**	**+0.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WB0	**Warramunga Arr**	**39.50**	**123**	P	**P**	**03 16 33.3**	**-0.7**
WB0				IAmb	IAmb	03 16 35.2	
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**39.53**	**123**	P	**P**	**03 16 33.2**	**-1.0**
	comp=Z,2.2nm,0.4s,baz=308,slow=8.8,SNR=32						
	comp=Z,2.2nm,0.4s						
ASAR	**Alice Springs**	**41.01**	**129**	P	**P**	**03 16 46.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=307,slow=7.9,SNR=9.0						
ASAR				PcP	**PcP**	**03 18 42.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=310,slow=2.9,SNR=7.4						
	comp=Z,0.6nm,0.6s						
AS31	**Alice Springs**	**41.01**	**129**	P	**P**	**03 16 46.4**	**+0.1**
NIL	**Nilore**	**41.13**	**325**	P	**P**	**03 16 47.4**	**+0.2**
NIL				IAmb	IAmb	03 16 48.4	
	comp=Z,19nm,0.7s						
HHC	**Hu-ho-hao-te**	**41.20**	**13**	*e*P	**P**	**03 16 50.6**	**+2.8**
HHC				pP	pP	03 17 21.3	-4.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,90nm,6.0s						
WMQ	**Urumqi**	**44.17**	**347**	*e*P	**P**	**03 17 13.3**	**+1.7**
WMQ				PcP	**PP**	**03 18 56.8**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,58nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.7s						
KSH	**Kashi**	**44.28**	**333**	P	**P**	**03 17 12.1**	**-0.5**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	**44.65**	**32**	P	**P**	**03 17 14.6**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=225,slow=8.4,SNR=8.9						
	comp=Z,2.5nm,0.6s						
COEN	**Coen**	**45.27**	**111**	P	**P**	**03 17 20.4**	**-0.2**
TARG	**Taragay, Kyrgy**	**45.34**	**337**	P	**P**	**03 17 22.0**	**+0.7**
TARG				IAmb	IAmb	03 17 23.4	
	comp=Z,10nm,0.6s						
NRN	**Naryn**	**45.84**	**335**	P	**P**	**03 17 24.2**	**-0.9**
NRN				IAmb	IAmb	03 17 26.7	
	comp=Z,7.3nm,0.6s						
ARSB	**Arslanbob**	**47.10**	**332**	P	**P**	**03 17 34.6**	**0.0**
SIMJ	**Simiganj**	**47.12**	**327**	P	**P**	**03 17 34.3**	**-0.6**
SIMJ				IAmb	IAmb	03 17 35.9	
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**47.15**	**6**	P	**P**	**03 17 34.5**	**-0.4**
SONM	**Songino Array**	**47.15**	**6**	P	**P**	**03 17 35.0**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=189,slow=9.9,SNR=32						
SONM				PcP	**PcP**	**03 19 03.4**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=192,slow=3.7,SNR=11						
SONM				ScP	**ScP**	**03 22 39.7**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=189,slow=4.6,SNR=4.6						
	comp=Z,3.0nm,0.5s						
BTK	**Batken**	**47.18**	**329**	P	**P**	**03 17 35.6**	**+0.4**
BTK				IAmb	IAmb	03 17 37.0	
	comp=Z,6.0nm,0.5s						
ULN	**Ulaanbaatar**	**47.25**	**7**	P	**P**	**03 17 36.4**	**+0.7**
AAK	**Ala-Archa**	**47.47**	**335**	P	**P**	**03 17 37.9**	**+0.4**
AAK	**Ala-Archa**	**47.47**	**335**	P	**P**	**03 17 38.6**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=134,slow=5.6,SNR=13						
	comp=Z,1.5nm,0.3s						
MK31	**Makanchi Array**	**48.31**	**344**	P	**P**	**03 17 43.9**	**+0.2**
MK31				IAmb	IAmb	03 17 44.9	
	comp=Z,14nm,0.7s						
MKAR	**Makanchi Array**	**48.31**	**344**	P	**P**	**03 17 44.2**	**+0.5**
	comp=Z,17nm,0.5s,baz=151,slow=8.3,SNR=314						
MKAR				ScP	**ScP**	**03 22 45.2**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=134,slow=4.2,SNR=2.0						
	comp=Z,17nm,0.5s						
MAKZ	**Makanchi**	**48.41**	**344**	P	**P**	**03 17 44.7**	**+0.2**
MAKZ				IAmb	IAmb	03 17 45.6	
	comp=Z,12nm,0.8s						
KK31	**Karatay Array**	**49.63**	**332**	P	**P**	**03 17 54.2**	**+0.3**
KKAR	**Karatay Array**	**49.63**	**332**	P	**P**	**03 17 54.4**	**+0.5**
KKAR	**Karatay Array**	**49.63**	**332**	P	**P**	**03 17 54.4**	**+0.5**
KKAR				IAmb	IAmb	03 17 55.3	
	comp=Z,3.3nm,0.9s						
BNX	**BinXian**	**50.83**	**25**	⇑P	**P**	**03 18 01.6**	**-1.2**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,210nm,5.7s						
STKA	**Stephens Creek**	**51.10**	**133**	P	**P**	**03 18 04.5**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=311,slow=6.7,SNR=3.0						
	comp=Z,1.3nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.71**	**29**	P	**P**	**03 18 09.0**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=262,slow=5.1,SNR=6.9						
	comp=Z,3.1nm,0.8s						
KURBB	**Kurchatov Arra**	**52.84**	**343**	P	**P**	**03 18 17.8**	**+0.3**
	comp=Z,11nm,0.7s,baz=161,slow=7.1,SNR=111						
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	**52.89**	**343**	P	**P**	**03 18 18.1**	**+0.1**
GEYT	**Alibeck**	**53.27**	**319**	P	**P**	**03 18 20.6**	**-0.4**
GEYT				IAmb	IAmb	03 18 22.2	
	comp=Z,4.5nm,0.8s						
GEYT	**Alibeck**	**53.27**	**319**	P	**P**	**03 18 21.4**	**+0.5**
	comp=Z,4.9nm,0.7s,baz=165,slow=6.2,SNR=7.1						
	comp=Z,4.9nm,0.7s						
ZAA0	**Zalesovo Array**	**54.39**	**349**	P	**P**	**03 18 28.4**	**-0.4**
ZAA0				IAmb	IAmb	03 18 29.5	
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**54.39**	**349**	P	**P**	**03 18 28.7**	**-0.1**
ZALV	**Zalesovo Beam**	**54.39**	**349**	P	**P**	**03 18 28.6**	**-0.2**
	comp=Z,12nm,0.6s,baz=172,slow=6.2,SNR=65						
	comp=Z,12nm,0.6s						
BVAR	**Borovoye Array**	**57.53**	**339**	P	**P**	**03 18 50.8**	**-0.3**
	comp=Z,5.9nm,0.4s,baz=138,slow=9.7,SNR=32						
	comp=Z,5.9nm,0.4s						
BRVK	**Borovoye**	**57.59**	**339**	P	**P**	**03 18 51.3**	**-0.1**
BRVK				IAmb	IAmb	03 18 52.0	
	comp=Z,9.4nm,0.9s						
ABKAR	**Akbulak array**	**59.15**	**331**	P	**P**	**03 19 01.7**	**-0.6**
ABKAR	**Akbulak array**	**59.15**	**331**	P	**P**	**03 19 02.2**	**-0.1**
ABKAR				IAmb	IAmb	03 19 03.0	
	comp=Z,12nm,0.7s						
AKTO	**Aktyubinsk**	**60.87**	**331**	P	**P**	**03 19 13.5**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=130,slow=7.1,SNR=12						
	comp=Z,1.9nm,0.3s						
H04N2	**CROZET ISLANDS**	**63.04**	**216**	T	T	04 25 59.6	
	baz=58,slow=75,SNR=32						
H04N1	**CROZET ISLANDS**	**63.05**	**216**	T	T	04 26 02.8	
	baz=58,slow=75,SNR=36						
H04N3	**CROZET ISLANDS**	**63.06**	**215**	T	T	04 26 16.9	
	baz=58,slow=75,SNR=30						
ARU	**Arti**	**64.61**	**336**	P	**P**	**03 19 38.2**	**-0.4**
	comp=Z,5.8nm,0.2s,baz=169,slow=2.2,SNR=6.1						
	comp=Z,5.8nm,0.2s						
GURO	**Guroymak-BITLI**	**64.82**	**313**	P	**P**	**03 19 40.7**	**+0.1**
GURO				IAmb	IAmb	03 19 42.4	
	comp=Z,4.1nm,0.9s						
ONI	**Oni**	**65.33**	**317**	P	**P**	**03 19 44.4**	**+0.7**
ONI				IAmb	IAmb	03 19 53.8	
	comp=Z,6.7nm,1.4s						
KBZ	**Khabaz**	**66.15**	**318**	P	**P**	**03 19 49.1**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=122,slow=5.8,SNR=17						
	comp=Z,4.5nm,0.8s						
CASY	**Casey**	**67.39**	**175**	P	**P**	**03 19 57.5**	**+1.3**
WAKE	**Wake Island**	**67.78**	**70**	P	**P**	**03 19 58.8**	**-0.8**
GAZ	**Gaziantep**	**68.00**	**310**	P	**P**	**03 20 00.3**	**-0.5**
GAZ				IAmb	IAmb	03 20 02.6	
	comp=Z,7.6nm,0.9s						
MMAI	**Mount Meron Ar**	**68.34**	**305**	P	**P**	**03 20 03.6**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=103,slow=11,SNR=3.6						
	comp=Z,1.1nm,0.6s						
KIRV	**Kirov**	**69.80**	**334**	P	**P**	**03 20 11.5**	**+0.3**
	comp=Z,8.9nm,0.4s,baz=123,slow=4.9,SNR=5.3						
	comp=Z,8.9nm,0.4s						
BR131	**Keskin Array S**	**71.39**	**312**	P	**P**	**03 20 20.9**	**-0.6**
BR131				IAmb	IAmb	03 20 21.9	
	comp=Z,4.4nm,0.8s						
BRTR	**Keskin Array B**	**71.39**	**312**	P	**P**	**03 20 21.4**	**-0.1**
BRTR	**Keskin Array B**	**71.39**	**312**	P	**P**	**03 20 21.2**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=124,slow=7.8,SNR=20						
	comp=Z,3.1nm,0.7s						
OBN	**Obninsk**	**74.38**	**328**	P	**P**	**03 20 37.9**	**-0.6**
	comp=Z,14nm,0.3s,baz=344,slow=17,SNR=3.2						
	comp=Z,14nm,0.3s						
AKASG	**Malin Array Be**	**77.22**	**322**	P	**P**	**03 20 54.2**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=86,slow=4.5,SNR=7.6						
	comp=Z,2.5nm,0.6s						
KIEV	**Kiev**	**77.23**	**322**	P	**P**	**03 20 54.3**	**-0.5**
KIEV				IAmb	IAmb	03 20 54.7	
	comp=Z,3.6nm,0.7s						
VRI	**Vrincioaia**	**77.75**	**317**	⇑P	**P**	**03 20 59.1**	**+1.2**
PLOR	**Plostina**	**77.80**	**317**	⇑P	**P**	**03 20 58.6**	**+0.4**
TESR	**Tescani**	**77.94**	**317**	⇑P	**P**	**03 20 59.8**	**+1.0**
MLR	**Muntele Rosu**	**78.22**	**316**	⇑P	**P**	**03 21 00.2**	**-0.4**
MLR	**Muntele Rosu**	**78.22**	**316**	P	**P**	**03 21 00.8**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=119,slow=10						
	comp=Z,4.6nm,0.9s						
PLVB	**Pleven**	**78.78**	**314**	⇑P	**P**	**03 21 04.4**	**+0.9**
VOIR		**78.83**	**316**	⇑P	**P**	03 20 54.4	-9.4
ARR	**Arges**	**79.10**	**316**	⇑P	**P**	03 20 55.7	-10
BURAR	**Bucovina Array**	**79.11**	**318**	⇑P	**P**	**03 21 06.4**	**+1.0**
ISAL	**Salakas**	**80.20**	**326**	*e*P	**P**	**03 21 10.8**	**-0.1**
BLKB	**Belogradchik**	**80.21**	**314**	⇑P	**P**	**03 21 10.6**	**-0.7**
MARR	**Marisel-Cluj**	**80.36**	**317**	⇑P	**P**	**03 21 13.6**	**+1.5**
DEV	**Deva**	**80.39**	**316**	⇑P	**P**	**03 21 13.2**	**+1.1**
VSU	**Vasula**	**80.55**	**329**	*e*P	**P**	**03 21 12.6**	**-0.1**
SURR	**Surduc**	**80.91**	**316**	⇑P	**P**	**03 21 15.9**	**+1.0**
MDVR	**Moldovita**	**81.06**	**315**	⇑P	P	03 21 22.3	+6.5
BZS	**Buzias**	**81.24**	**316**	⇑P	**P**	**03 21 17.5**	**+0.8**
KOLS	**Kolonicke sedl**	**81.28**	**319**	*e*P	**P**	**03 21 18.1**	**+1.3**
SIRR	**Siria**	**81.30**	**317**	⇑P	**P**	**03 21 18.1**	**+1.1**
PABE	**Paberze**	**81.39**	**326**	*e*P	**P**	**03 21 17.6**	**+0.4**
VSVD	**Vaisvydziai**	**81.50**	**327**	*e*P	**P**	**03 21 18.6**	**+0.9**
SUW	**Suwalki**	**81.56**	**324**	*e*P	**P**	**03 21 19.1**	**+1.0**
FINES	**FINESS Array B**	**81.59**	**332**	P	**P**	**03 21 18.6**	**+0.5**
FINES	**FINESS Array B**	**81.59**	**332**	P	**P**	**03 21 18.5**	**+0.3**
	comp=Z,7.4nm,0.5s,baz=108,slow=5.5,SNR=65						
	comp=Z,7.4nm,0.5s						
MTSE	**Matsula**	**82.10**	**329**	*e*P	**P**	**03 21 20.6**	**-0.2**
MEF	**Metsahovi**	**82.12**	**331**	*e*P	**P**	**03 21 21.4**	**+0.4**
VADS	**Vadso**	**82.69**	**341**	*e*P	**P**	**03 21 24.1**	**+0.4**
MORH	**Mrgy, Hungar**	**83.37**	**316**	⇑P	**P**	**03 21 28.5**	**+0.8**
RAF	**Rauma**	**83.55**	**331**	*e*P	**P**	**03 21 28.0**	**-0.2**
ARA0	**ARCESS Array S**	**83.81**	**340**	*e*P	**P**	**03 21 29.6**	**+0.1**
ARCES	**ARCESS Array B**	**83.81**	**340**	P	**P**	**03 21 29.4**	**-0.1**
	comp=Z,3.4nm,0.4s,baz=109,slow=4.4,SNR=58						
	comp=Z,3.4nm,0.4s						
KTK1	**Kautokeino**	**84.47**	**339**	*e*P	**P**	**03 21 32.7**	**-0.2**
JETT	**Jettan, Norway**	**85.56**	**340**	*e*P	**P**	**03 21 38.4**	**0.0**
ARSA	**Arzberg**	**85.59**	**317**	*e*PcP	**PcP**	**03 21 42.0**	**+0.4**
	comp=Z,4.2nm,0.8s						
SOKA	**Soboth**	**85.89**	**317**	*e*P	**P**	**03 21 41.8**	**+1.3**
GERES	**GERESS Array B**	**86.89**	**319**	P	**P**	**03 21 45.5**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=64,slow=6.1,SNR=5.1						
	comp=Z,1.7nm,0.9s						
RUE	**Ruedersdorf**	**87.00**	**322**	*e*P	**P**	**03 21 47.4**	**+1.8**
FAUS	**Fauske**	**87.17**	**337**	*e*P	**P**	**03 21 46.4**	**+0.3**
STEI	**Steigen**	**87.23**	**338**	*e*P	**P**	**03 21 46.3**	**0.0**
HFS	**Hagfors**	**87.41**	**330**	P	**P**	**03 21 48.4**	**+1.0**
	comp=Z,3.2nm,0.4s,baz=106,slow=4.8,SNR=38						
	comp=Z,3.2nm,0.4s						
MOR8	**Moi Rana**	**87.42**	**336**	*e*P	**P**	**03 21 46.9**	**-0.4**
CLL	**Collm**	**87.43**	**321**	*i* P	**P**	**03 21 48.2**	**+0.5**
	comp=Z,5.0nm,0.9s						
LESA	**Schwarzleotal**	**87.53**	**317**	*i* P	**P**	**03 21 48.3**	**-0.1**
	comp=Z,2.0nm,0.4s						
SPA0	**Spitsbergen Ar**	**87.87**	**348**	*e*P	**P**	**03 21 48.6**	**-0.7**
SPITS	**Spitsbergen Ar**	**87.87**	**348**	P	**P**	**03 21 48.6**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=114,slow=8.3,SNR=17						
	comp=Z,2.3nm,0.5s						
LOF	**Lofoten**	**87.88**	**338**	*e*P	**P**	**03 21 48.6**	**-0.8**
WTTA	**Wattenberg**	**88.24**	**317**	*i* P	**P**	**03 21 51.9**	**+0.1**
	comp=Z,1.6nm,0.4s						
WATA	**Walderalm**	**88.28**	**317**	*i* P	**P**	**03 21 51.9**	**-0.2**
	comp=Z,0.8nm,0.3s						
NC602	**NORSAR Array S**	**88.49**	**331**	*e*P	**P**	**03 21 53.6**	**+1.1**
SQTA	**Sankt Quirin**	**88.53**	**317**	*i* P	**P**	**03 21 53.2**	**0.0**
	comp=Z,2.2nm,0.5s						
MOTA	**Moosalm**	**88.60**	**317**	*e*P	**P**	**03 21 53.8**	**+0.2**
	comp=Z,5.9nm,1.0s						
NOA	**NORSAR Array B**	**88.66**	**331**	P	**P**	**03 21 54.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=100,slow=5.8,SNR=1.4						
	comp=Z,0.3nm,0.5s						
RETA	**Reutte**	**88.83**	**317**	*i* P	**P**	**03 21 55.0**	**+0.4**
	comp=Z,1.8nm,0.5s						
DAVA	**Damuels**	**89.44**	**317**	*i* PcP	**PcP**	**03 21 58.7**	**0.0**
	comp=Z,1.3nm,0.3s						
KEST	**Kesra**	**90.00**	**306**	P	**P**	**03 22 01.7**	**+1.5**
	comp=Z,3.7nm,0.7s,baz=311,slow=3.7,SNR=5.8						
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**90.78**	**180**	P	**P**	**03 22 03.6**	**+0.4**
QSPA				IAmb	IAmb	03 22 12.9	
	comp=Z,2.5nm,1.2s						
QSPA	**South Pole Qui**	**90.78**	**180**	P	**P**	**03 22 04.0**	**+0.8**
	comp=Z,1.0nm,1.0s,baz=90,slow=2.0,SNR=1.7						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**142.47**	**35**	PKhKP	PKPpre	03 28 28.9	
	comp=Z,0.4nm,0.4s,baz=226,slow=0.4,SNR=6.5						
CPUP	**Villa Florida**	**146.51**	**219**	PKPbc	**PKPbc**	**03 28 41.3**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=81,slow=3.3,SNR=4.9						

IDC ***20*** *03:19:07.5±2.2,36.82S×179.75W,h0km,mb4.5/2, mbtmp4.4/3,ML3.4/1,Error ellipse: s-maj=86.9km s-min=36.2km az=156.0*
WEL ***20*** *03:19:10.9±1.5,37.5S±17.0W±.,h33km,M3.9/10, ML4.1/11,MLv3.9/10,Error ellipse: s-maj=0.0km s-min=0.0km az=176.5,confirmed*

ISC 20 03:19:06.2±3.5,37.4S±0.1×179.5W±0.1,h8km±21km,n37, σ1§49/44,East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.74**	**256**	P	**Pb**	**03 19 38.4**	**+0.1**
WMGZ				S	**Sn**	**03 20 00.1**	**+1.1**
MXZ	**Matakaoa Point**	**1.79**	**264**	P	**Pb**	**03 19 38.3**	**-0.9**
MXZ				S	**Sn**	**03 19 59.8**	**-0.3**
PUZ	**Puketiti**	**1.93**	**249**	P	**Pn**	**03 19 40.5**	**+1.1**
PUZ				S	**Sn**	**03 20 02.9**	**-0.9**
PKGZ	**Pakihiroa**	**2.02**	**256**	P	**Pn**	**03 19 41.8**	**+1.2**
CNGZ	**Carnagh Statio**	**2.13**	**239**	P	**Pn**	**03 19 44.1**	**+2.0**
TWGZ	**Tauwhareparae**	**2.17**	**249**	P	**Pn**	**03 19 44.0**	**+1.4**
TWGZ				S	**Sn**	**03 20 10.6**	**+0.9**
HAZ	**Te Kaha**	**2.22**	**260**	P	**Pb**	**03 19 45.0**	**-1.5**
RIGZ	**Rimuhau**	**2.55**	**239**	P	**Pn**	**03 19 49.1**	**+1.3**
MWZ	**Matawai**	**2.56**	**248**	P	**Pn**	**03 19 48.8**	**+0.8**
PRGZ	**Paritu Road**	**2.58**	**233**	P	**Pn**	**03 19 49.7**	**+1.4**
MHGZ	**Mahia Peninsul**	**2.71**	**229**	P	**Pn**	**03 19 51.5**	**+1.5**
KNZ	**Kokohu**	**2.77**	**234**	P	**Pn**	**03 19 52.1**	**+1.2**
URZ	**Urewera**	**2.85**	**252**	Pn	**Pn**	**03 19 53.6**	**+1.7**
	5.9nm,0.3s,baz=336,slow=5.7,SNR=17						
URZ				Sn	**Sn**	**03 20 24.7**	**-1.6**
	15nm,0.3s,baz=222,slow=13,SNR=3.8						
	28nm,0.3s						
URZ	**Urewera**	**2.85**	**252**	P	**Pn**	**03 19 53.8**	**+1.9**
URZ				S	**Sn**	**03 20 26.1**	**-0.2**
RAHZ	**Arahi**	**3.11**	**240**	P	**Pn**	**03 19 59.2**	**+3.6**
MTHZ	**Maungataniwha**	**3.25**	**243**	P	**Pn**	**03 19 58.9**	**+1.3**
MTHZ				S	**Sn**	**03 20 36.0**	**-0.5**
ARHZ	**Aropaoanui**	**3.35**	**235**	P	**Pn**	**03 20 00.7**	**+1.9**
BKZ	**Black Stump Fm**	**3.64**	**240**	P	**Pn**	**03 20 04.2**	**+1.4**
KWHZ	**Kaweka Forest**	**3.81**	**237**	P	**Pn**	**03 20 06.1**	**+0.8**
KWHZ				S	**Sn**	**03 20 49.7**	**-0.6**
KRHZ	**Kereru**	**3.96**	**234**	P	**Pn**	**03 20 06.3**	**-0.9**
BHHZ	**Black Hill Sta**	**4.08**	**238**	P	**Pn**	**03 20 09.9**	**+0.9**
PNHZ	**Pukenui**	**4.22**	**232**	P	**Pn**	**03 20 11.1**	**+0.3**
MKAZ	**Moumakai**	**4.30**	**272**	P	**Pn**	**03 20 13.4**	**+1.5**
TRVZ	**Turoa**	**4.36**	**243**	P	**Pb**	**03 20 22.5**	**-0.6**
TSZ	**Takapari Road**	**4.45**	**232**	P	**Pn**	**03 20 16.6**	**+2.6**
DVHZ	**Dannevirke**	**4.47**	**228**	P	**Pn**	**03 20 17.6**	**+3.4**
PKVZ	**Pokaka**	**4.50**	**244**	P	**Pn**	**03 20 12.4**	**-2.2**
BFZ	**Birch Farm**	**4.67**	**224**	P	**Pn**	**03 20 16.4**	**-0.6**
PRWZ	**Pori Road**	**4.75**	**227**	P	**Pn**	**03 20 19.2**	**+1.2**
TIWZ	**Tintock**	**4.94**	**226**	P	**Pn**	**03 20 21.0**	**+0.3**
MRZ	**Mangatainoka R**	**5.05**	**228**	P	**Pn**	**03 20 21.7**	**-0.4**
ASAR	**Alice Springs**	**42.03**	**275**	P	**P**	**03 26 58.6**	**+0.2**
	14nm,0.5s,baz=121,slow=8.1,SNR=26						
	14nm,0.5s						
WRA	**Warramunga Arr**	**43.65**	**280**	P	**P**	**03 27 11.6**	**+0.1**
	0.7nm,0.3s,baz=120,slow=7.7,SNR=11						
	0.7nm,0.3s						
SAUI	**Saumlaki**	**53.25**	**291**	P	P	03 28 35.7	+10
KURBB	**Kurchatov Arra**	**124.88**	**311**	PKP	**PKiKP**	**03 38 07.2**	**+0.7**
	0.4nm,0.6s,baz=106,slow=1.7,SNR=6.9						
ARCES	**ARCESS Array B**	**145.10**	**345**	PKP	**PKiKP**	**03 38 44.4**	**-2.5**
	3.1nm,0.8s,baz=21,slow=3.0,SNR=19						
FINES	**FINESS Array B**	**151.14**	**335**	PKPbc	**PKiKP**	**03 38 59.9**	**+0.4**
	2.6nm,0.8s,baz=60,slow=3.4,SNR=6.5						

IDC ***20*** *03:27:56.0±2.4,6.58S×131.34E,h0km,mb3.4/3, mbtmp3.5/4,ML4.0/2,Error ellipse: s-maj=189.9km s-min=29.4km az=74.0*

ISC 20 03:27:55.2±0.8,6.73S±0.06×131.5E±0.2,h10km,n15, σ2§61/16,mb3.5/3,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.72**	**324**	P	**Pb**	**03 28 42.2**	**-1.7**
FAKI	**Fak Fak**	**3.85**	**11**	P	**Pn**	**03 28 51.1**	**-3.5**
DRS	**Darwin Rock St**	**5.70**	**186**	P	**Pb**	**03 29 33.0**	**-1.8**
MTN	**Manton Dam**	**6.09**	**184**	P	**Pb**	**03 29 37.3**	**-4.1**
FITZ	**Fitzroy Crossi**	**12.67**	**206**	P	Pn	03 31 03.8	+8.2
WRA	**Warramunga Arr**	**13.42**	**168**	Pn	**Pn**	**03 31 10.2**	**+4.3**
	0.8nm,0.3s,baz=353,slow=14,SNR=24						
WRA				Sn	**Sn**	**03 33 33.9**	**-1.3**
	1.9nm,0.3s,baz=333,slow=24,SNR=13						
	1.2nm,0.4s						
COEN	**Coen**	**13.53**	**123**	P	**Pn**	**03 31 08.5**	**+1.1**
QIS	**Mount Isa**	**15.83**	**151**	P	**P**	**03 31 41.9**	**-0.2**
MTSU	**Mount Surprise**	**16.86**	**133**	P	**Pn**	**03 31 51.1**	**-0.4**
ASAR	**Alice Springs**

OUR	**Ouranopolis**	**1.04**	**3**	P	**Pg**	**03 53 13.4**	**+0.1**	**BOZC**	**Bozcaada**	**1.75**	**71**
OUR				S	**Sg**	**03 53 27.1**	**+0.2**	**KAVA**	**Kavala**	**1.76**	**15**
OUR				AML	AML	03 53 30.6		**KAVA**	**Kavala**	**1.76**	**15**
	comp=E,14629µm,0.3s							**GOAD**	**anakkale-G¶**	**1.77**	**60**
OUR				AML	AML	03 53 30.7		**GADA**	**Gvkgeada**	**1.78**	**59**
	comp=N,16811µm,0.5s							**EFP**	**Efpalio**	**1.79**	**242**
AXAR	**Agios Charalam**	**1.11**	**242**	P	**Pb**	**03 53 14.1**	**-0.6**	**EFP**	**Efpalio**	**1.79**	**242**
AXAR				S	**Sn**	**03 53 30.2**	**-0.4**	**GUR**	**Goura**	**1.83**	**223**
	comp=N,16µm,0.6s							**GUR**	**Goura**	**1.83**	**223**
AXAR	**Agios Charalam**	**1.11**	**242**	P	**Pb**	**03 53 14.2**	**-0.6**	**PRK**	**Paraskevi**	**1.83**	**91**
AXAR				AML	AML	03 53 32.4		PRK			
	comp=E,27444µm,0.7s								comp=N,15921µm,0.8s		
AXAR				AML	AML	03 53 32.8		PRK			
	comp=N,36576µm,0.6s								comp=E,12832µm,0.7s		
LIA	**Limnos Island**	**1.16**	**58**	P	**Pb**	**03 53 14.7**	**-0.8**	**SRS**	**Serrai**	**1.84**	**352**
LIA	**Limnos Island**	**1.16**	**58**	P	**Pb**	**03 53 14.5**	**-1.0**	**SRS**	**Serrai**	**1.84**	**352**
LIA				S	**Sb**	**03 53 29.6**	**-1.0**	**KLV**	**Kalavryta, Ach**	**1.86**	**228**
LIA				AML	AML	03 53 34.1		**EAG2**	**Marmaro, Chios**	**1.87**	**113**
	comp=E,16321µm,0.7s							**ECEA**	**Canakkale, Ece**	**1.90**	**66**
LIA				AML	AML	03 53 36.8		**CHOS**	**Chios island**	**1.90**	**118**
	comp=N,19249µm,0.8s							**EZN**	**Ezine**	**1.94**	**73**
VIL2	**Platees**	**1.19**	**205**	P	**Pn**	**03 53 15.5**	**-0.8**	**EZN**	**Ezine**	**1.94**	**73**
VIL2				S	**Sg**	**03 53 31.6**	**+0.1**	**PVO**	**Paravola**	**1.98**	**251**
VIL2				AML	AML	03 53 36.7		**KRND**	**KRANIDI**	**2.00**	**198**
	comp=E,24892µm,0.5s							**TNSA**	**Tinos**	**2.01**	**150**
VIL2				AML	AML	03 53 37.2		**KNT**	**Kendrikon**	**2.02**	**338**
	comp=N,21086µm,0.5s							**KNT**	**Kendrikon**	**2.02**	**338**
DION	**Dionisos Attik**	**1.21**	**179**	P	**Pg**	**03 53 17.1**	**+0.5**	**GRG**	**Griva**	**2.03**	**326**
DION				S	**Sg**	**03 53 33.0**	**+0.7**	**GRG**	**Griva**	**2.03**	**326**
	comp=N,39µm,0.3s							**KARB**	**zmir-Karabur**	**2.05**	**107**
DION	**Dionisos Attik**	**1.21**	**179**	P	**Pg**	**03 53 16.4**	**-0.1**	**NVR**	**Nevrokopi**	**2.06**	**359**
DION				S	**Sb**	**03 53 31.8**	**-0.5**	NVR			
DION				AML	AML	03 53 35.3			comp=E,2463µm,0.7s		
	comp=E,39844µm,0.3s							NVR			
DION				AML	AML	03 53 35.7			comp=N,1121µm,0.8s		
	comp=N,60755µm,0.3s							**KPRO**	**Kipourio**	**2.08**	**289**
VILL	**Villia**	**1.22**	**203**	P	**Pn**	**03 53 15.7**	**-1.0**	**EAG3**	**Mitilini, Lesv**	**2.08**	**95**
VILL				S	**Sg**	**03 53 33.0**	**+0.5**	**BAYC**	**CANAKKALE_Bayr**	**2.09**	**77**
	comp=N,13µm,0.5s							**COMU**	**Canakkale**	**2.14**	**67**
PTL	**Penteli**	**1.24**	**182**	P	**Pg**	**03 53 17.2**	**+0.1**	**AYVA**	**Ayvalik**	**2.16**	**89**
PTL	**Penteli**	**1.24**	**182**	P	**Pg**	**03 53 17.0**	**-0.1**	**ENZZ**	**Sultanice-Enez**	**2.16**	**52**
PTL				S	**Sb**	**03 53 32.2**	**-1.0**	**DRD**	**Drossia**	**2.18**	**232**
PTL				AML	AML	03 53 35.4		**RDO**	**Rodhopi**	**2.23**	**33**
	comp=N,16612µm,0.4s							**RDO**	**Rodhopi**	**2.23**	**33**
PTL				AML	AML	03 53 36.5		**ENEZ**	**Enez**	**2.25**	**49**
	comp=E,18218µm,0.4s							**MMB**	**Musomishta**	**2.26**	**357**
AGG	**Agios Georgios**	**1.26**	**258**	Pn	**Pn**	**03 53 16.1**	**-1.1**	MMB			
AGG				Sn	**Sn**	**03 53 33.3**	**-1.0**	**GELI**	**Tayfur-Gelibol**	**2.26**	**60**
AGG	**Agios Georgios**	**1.26**	**258**		**Pn**	**03 53 16.2**	**-1.1**	**VAY**	**Valandovo**	**2.27**	**334**
AGG					**Sg**	**03 53 33.8**	**+0.1**	**FOCM**	**Foa**	**2.27**	**104**
AGG	**Agios Georgios**	**1.26**	**258**	P	**Pn**	**03 53 16.5**	**-0.7**	**CAND**	**Candarli**	**2.27**	**98**
AGG	**Agios Georgios**	**1.26**	**258**	P	**Pn**	**03 53 16.0**	**-1.1**	**ZEYE**	**Izmir, Urla-Ze**	**2.28**	**117**
AGG				S	**Sg**	**03 53 34.0**	**+0.2**	**ALN**	**Alexandroupoli**	**2.29**	**45**
AGG				AML	AML	03 53 42.0		**ALN**	**Alexandroupoli**	**2.29**	**45**
	comp=E,2µm,0.6s							**ALN**	**Alexandroupoli**	**2.29**	**45**
AGG	**Agios Georgios**	**1.26**	**258**	P	**Pn**	**03 53 16.2**	**-1.0**	**ALN**	**Alexandroupoli**	**2.29**	**45**
AGG				S	**Sg**	**03 53 33.8**	**+0.1**	**ALN**	**Alexandroupoli**	**2.29**	**45**
AGG	**Agios Georgios**	**1.26**	**258**	P	**Pn**	**03 53 16.3**	**-0.9**	**ALN**	**Alexandroupoli**	**2.29**	**45**
AGG				S	**Sb**	**03 53 31.9**	**-1.7**	**URLA**	**Izmir**	**2.29**	**113**
AGG				AML	AML	03 53 37.1		**URLA**	**Izmir**	**2.29**	**113**
	comp=E,20872µm,0.5s							**PENT**	**Pentalofos**	**2.32**	**294**
AGG				AML	AML	03 53 38.8		**DKL**	**Dikili**	**2.34**	**94**
	comp=N,22287µm,0.6s							**DKL**	**Dikili**	**2.34**	**94**
ATH	**Athens Observa**	**1.33**	**187**	P	**Pn**	**03 53 17.4**	**-0.7**	**ERIK**	**Erikli-Kesan**	**2.43**	**55**
ATH	**Athens Observa**	**1.33**	**187**	P	**Pn**	**03 53 17.4**	**-0.7**	**ERIK**	**Erikli-Kesan**	**2.43**	**55**
ATH	**Athens Observa**	**1.33**	**187**	P	**Pn**	**03 53 17.3**	**-0.7**	ERIK			
ATH				S	**Sb**	**03 53 33.7**	**-1.8**	ERIK			
ATH				AML	AML	03 53 37.7			comp=N,500nm,0.7s		
	comp=E,27265µm,0.4s							**LPK**	**Lapseki**	**2.44**	**63**
ATH				AML	AML	03 53 38.0		**FNA**	**Florina**	**2.45**	**308**
	comp=N,27748µm,0.7s							**BUHA**	**Balikesir, Bur**	**2.46**	**84**
ATHU	**Athens Univers**	**1.33**	**184**	P	**Pn**	**03 53 17.3**	**-0.8**	**RZN**	**Rozhen**	**2.48**	**14**
ATHU	**Athens Univers**	**1.33**	**184**	P	**Pn**	**03 53 16.9**	**-1.2**	RZN			
ATHU				S	**Sb**	**03 53 34.1**	**-1.5**	**ZEDA**	**zmir-Bergama**	**2.48**	**97**
ATHU				AML	AML	03 53 38.9		**CANM**	**Can-anakkale**	**2.53**	**73**
	comp=N,11444µm,0.5s							**APE**	**Apeiranthos**	**2.56**	**150**
ATHU				AML	AML	03 53 39.1		**APE**	**Apeiranthos**	**2.56**	**150**
	comp=E,5152µm,0.4s							**APE**	**Apeiranthos**	**2.56**	**150**
TYRN	**Tyrnavos**	**1.36**	**288**	P	**Pn**	**03 53 17.9**	**-0.7**	**APE**	**Apeiranthos**	**2.56**	**150**
TYRN	**Tyrnavos**	**1.36**	**288**	P	**Pn**	**03 53 17.9**	**-0.7**	APE			
TYRN				S	**Sn**	**03 53 35.4**	**-1.5**		comp=E,916µm,0.3s		
DLFA	**Delphi**	**1.37**	**234**	P	**Pn**	**03 53 17.8**	**-1.0**	APE			
DLFA				AML	AML	03 53 41.8			comp=N,1427µm,0.5s		
	comp=N,6681µm,0.5s							**NYDR**	**Nydri-Lefkada**	**2.57**	**258**
DLFA				AML	AML	03 53 42.2		**KDZ**	**Kurdzhali**	**2.58**	**25**
	comp=E,17245µm,0.6s							**KDZ**	**Kurdzhali**	**2.58**	**25**
MAKR	**Makrakomi, Fth**	**1.41**	**259**	P	**Pb**	**03 53 19.3**	**-0.6**	**LKD2**	**Lefkada island**	**2.58**	**260**
MAKR	**Makrakomi, Fth**	**1.41**	**259**	P	**Pb**	**03 53 19.2**	**-0.6**	**BLCB**	**Balcova**	**2.61**	**109**
MAKR				S	**Sn**	**03 53 36.5**	**-1.6**	**BLCB**	**Balcova**	**2.61**	**109**
MAKR				AML	AML	03 53 43.5		**KKB**	**Krupnik**	**2.62**	**347**
	comp=N,40090µm,0.6s							KKB			
MAKR				AML	AML	03 53 46.5		**MHLO**	**Agia Marina, M**	**2.63**	**171**
	comp=E,26496µm,0.5s							**VLI**	**Veliai**	**2.68**	**197**
VLY	**Voula,Athens**	**1.44**	**184**	P	**Pb**	**03 53 19.6**	**-0.8**	**KBN**	**Korca**	**2.74**	**300**
VLY	**Voula,Athens**	**1.44**	**184**	P	**Pn**	**03 53 19.2**	**-0.5**	**KBN**	**Korca**	**2.74**	**300**
VLY				S	**Sn**	**03 53 36.4**	**-2.4**	**UKOP**	**Uzunkopru-Edir**	**2.78**	**48**
VLY				AML	AML	03 53 42.3		**SMG**	**Samos**	**2.79**	**124**
	comp=N,33071µm,0.6s							**VLS**	**Valsamata**	**2.83**	**248**
VLY				AML	AML	03 53 42.9		**KRBG**	**Karabiga-Canak**	**2.83**	**66**
	comp=E,31461µm,0.6s							**RKY**	**Sarkoy-Tekirda**	**2.87**	**60**
HORT	**Hortiatis**	**1.45**	**335**	Pn	**Pn**	**03 53 19.1**	**-0.7**	**PLD**	**Plovdiv**	**2.92**	**12**
HORT				Sn	**Sb**	**03 53 38.3**	**-0.8**	**PLD**	**Plovdiv**	**2.92**	**12**
HORT	**Hortiatis**	**1.45**	**335**	P	**Pn**	**03 53 19.3**	**-0.5**	**KNL**	**Balıkesir**	**2.95**	**70**
HORT	**Hortiatis**	**1.45**	**335**	P	**Pn**	**03 53 18.9**	**-0.9**	**STEP**	**BALIKESIR_Sava**	**2.95**	**87**
HORT				AML	AML	03 53 42.2		**OHR**	**Ohrid**	**3.00**	**308**
	comp=E,4148µm,0.7s							**GONE**	**Gonen-Balikesi**	**3.01**	**74**
HORT				AML	AML	03 53 43.9		**DIM**	**Dimitrovgrad**	**3.03**	**24**
	comp=N,2670µm,0.8s							**GCAM**	**G?zelcami?**	**3.05**	**120**
THAS	**Thassos island**	**1.45**	**25**	P	**Pn**	**03 53 18.7**	**-1.1**	**THR2**	**Thira island,**	**3.09**	**157**
THAS				S	**Sg**	**03 53 39.6**	**-0.4**	**SNT5**	**Nea Kammeni, S**	**3.11**	**157**
	comp=N,2µm,0.4s							**MRMT**	**Marmara Adasi**	**3.12**	**64**
THAS	**Thassos island**	**1.45**	**25**	P	**Pn**	**03 53 18.7**	**-1.1**	**THR9**	**Santorini-Faro**	**3.15**	**158**
THAS				AML	AML	03 53 46.3		**THR6**	**Thira Island,**	**3.16**	**158**
	comp=N,2206µm,0.3s							**SANT**	**Santorini**	**3.16**	**157**
THAS				AML	AML	03 53 46.3		**SANT**	**Santorini**	**3.16**	**157**
	comp=E,4094µm,0.3s							**SANT**	**Santorini**	**3.16**	**157**
LTK	**Loutraki**	**1.47**	**211**	P	**Pn**	**03 53 19.1**	**-1.0**	**PLNA**	**Plana**	**3.20**	**354**
THL	**Klokotos Trika**	**1.49**	**281**	P	**Pn**	**03 53 19.6**	**-0.8**	PLNA			
THL	**Klokotos Trika**	**1.49**	**281**	P	**Pn**	**03 53 19.4**	**-1.0**	**KEK**	**Kerkira**	**3.21**	**279**
THL				AML	AML	03 53 46.2		**KEK**	**Kerkira**	**3.21**	**279**
	comp=E,5160µm,0.6s							**KEK**	**Kerkira**	**3.21**	**279**
THL				AML	AML	03 53 46.9		**KEK**	**Kerkira**	**3.21**	**279**
	comp=N,4613µm,0.6s							**EDC**	**Edincik**	**3.22**	**70**
LOUT	**Loutraki**	**1.49**	**210**	P	**Pn**	**03 53 19.6**	**-0.8**	**SKO**	**Skopje**	**3.27**	**326**
LOUT	**Loutraki**	**1.49**	**210**	P	**Pn**	**03 53 19.4**	**-1.1**	**EDRB**	**Edirne**	**3.34**	**39**
SIGR	**SIGRI**	**1.51**	**92**	Pn	**Pn**	**03 53 20.0**	**-0.7**	**EDRB**	**Edirne**	**3.34**	**39**
SIGR	**SIGRI**	**1.51**	**92**	P	**Pn**	**03 53 20.2**	**-0.4**	**VTS**	**Vitosha**	**3.36**	**351**
SIGR				S	**Sb**	**03 53 40.6**	**-0.3**	**ANKY**	**Antikythira Is**	**3.45**	**188**
	comp=N,7µm,0.6s							**CRLT**	**Corlu**	**3.46**	**57**
SIGR	**SIGRI**	**1.51**	**92**	P	**Pn**	**03 53 20.2**	**-0.4**	**BODT**	**Bodrum**	**3.48**	**129**
SIGR				AML	AML	03 53 45.6		**DURS**	**Dursunbey**	**3.55**	**84**
	comp=N,22837µm,0.6s							**BDRM**	**Kayabasi**	**3.56**	**128**
SIGR				AML	AML	03 53 46.2		**VLO**	**Vlora**	**3.59**	**290**
	comp=E,7000µm,0.6s							**VLO**	**Vlora**	**3.59**	**290**
THE	**Thessaloniki**	**1.52**	**332**	P	**Pn**	**03 53 20.2**	**-0.6**	**MLSB**	**Milas**	**3.64**	**122**
THE	**Thessaloniki**	**1.52**	**332**	P	**Pn**	**03 53 20.3**	**-0.5**	**KIRA**	**zmir-Kiraz**	**3.68**	**106**
THE				AML	AML	03 53 51.4		**TIR**	**Tirane**	**3.71**	**305**
	comp=E,1250µm,0.6s							**TIR**	**Tirane**	**3.71**	**305**
THE				AML	AML	03 53 52.3		**TIR**	**Tirane**	**3.71**	**305**
	comp=N,1625µm,0.6s							**CHAN**	**Chania**	**3.77**	**178**
KOKK	**Kokkinochori,**	**1.53**	**3**	P	**Pn**	**03 53 20.0**	**-0.9**	**YAZI**	**Mula-Dat§a-**	**3.82**	**132**
KOKK	**Kokkinochori,**	**1.53**	**3**	P	**Pn**	**03 53 19.9**	**-1.0**	**ELND**	**Elena**	**3.92**	**22**
KOKK				S	**Sn**	**03 53 40.1**	**-0.8**	**MPEP**	**Malo Peshtene**	**4.06**	**358**
SOH	**Sokhos**	**1.59**	**345**	P	**Pn**	**03 53 21.4**	**-0.4**	**IDI**	**Anoyia**	**4.07**	**169**
SOH	**Sokhos**	**1.59**	**345**	P	**Pn**	**03 53 21.1**	**-0.6**	**PUK**	**Puka**	**4.11**	**313**
THAL	**Thalero**	**1.59**	**218**	P	**Pn**	**03 53 20.9**	**-0.8**	**PLVB**	**Pleven**	**4.13**	**7**
THAL	**Thalero**	**1.59**	**218**	P	**Pn**	**03 53 21.1**	**-0.6**	**SZH**	**Strazhitsa**	**4.26**	**21**
EVR	**Evrytania**	**1.68**	**258**	P	**Pb**	**03 53 23.5**	**-1.0**	**SCTE**	**Santa Cesarea**	**4.27**	**282**
EVR	**Evrytania**	**1.68**	**258**	P	**Pb**	**03 53 23.6**	**-0.8**	**BLKB**	**Belogradchik**	**4.42**	**348**
EVR				AML	AML	03 53 57.7		**ULC**	**Ulcinj**	**4.44**	**308**
	comp=N,5180µm,0.7s							**PVY**	**Plav**	**4.45**	**319**
EVR				AML	AML	03 53 59.8		PVY			
	comp=E,4977µm,0.8s							**ARG**	**Arkhangelos**	**4.54**	**131**
ANX	**Ano Chora**	**1.70**	**246**	P	**Pn**	**03 53 23.1**	**-0.3**	**ARG**	**Arkhangelos**	**4.54**	**131**
ANX	**Ano Chora**	**1.70**	**246**	P	**Pn**	**03 53 23.0**	**-0.3**	**LOZB**	**Loznitsa**	**4.55**	**26**
TRIZ	**Trizonia**	**1.71**	**238**	P	**Pn**	**03 53 22.7**	**-0.6**	**DRME**	**Dracevica, Mon**	**4.61**	**310**
SMTH	**Samothraki Isl**	**1.71**	**46**	P	**Pn**	**03 53 22.1**	**-1.4**	DRME			
SMTH	**Samothraki Isl**	**1.71**	**46**	P	**Pn**	**03 53 21.9**	**-1.6**	**DRME**	**Dracevica, Mon**	**4.61**	**310**
SMTH				AML	AML	03 53 53.4		**BOVS**	**Bovan**	**4.64**	**340**
	comp=E,1980µm,0.4s							**IVA**	**Berane**	**4.69**	**321**
SMTH				AML	AML	03 53 54.5		IVA			
	comp=N,2266µm,0.6s							**BUM**	**Brajici-Budva**	**4.85**	**310**
GPNR	**Gulpinar-Canak**	**1.73**	**84**	Pn	**Pn**	**03 53 22.9**	**-0.8**				
ALIK	**Aliki, Aigiali**	**1.74**	**234**	P	**Pb**	**03 53 24.5**	**-1.0**				

BUM				*i* Sn	**Sn**	**03 55 05.4**	**+2.4**
KOME	**Kolasin**	**4.87**	**318**	*i*Pn	**Pn**	**03 54 06.5**	**-0.3**
KOME				*i* Sn	**Sn**	**03 55 05.8**	**+2.4**
SJES	**Sjenica**	**4.95**	**324**	*e*Pn	**Pn**	**03 54 08.7**	**+0.6**
CEME	**Cevo**	**4.99**	**312**	*i*Pn	**Pn**	**03 54 08.9**	**+0.4**
CEME				*i* Sn	**Sn**	**03 55 08.8**	**+2.4**
NKME	**Niksic**	**5.11**	**314**	*i*Pn	**Pn**	**03 54 10.0**	**-0.2**
NKME				*i* Sn	**Sn**	**03 55 11.7**	**+2.4**
HCY	**Herceg Novi**	**5.18**	**309**	*i*Pn	**Pn**	**03 54 10.8**	**-0.2**
HCY	**Herceg Novi**	**5.18**	**309**	*e*Pn	**Pn**	**03 54 13.5**	**+2.5**
PLE	**Pljevlja**	**5.28**	**321**	*i*Pn	**Pn**	**03 54 12.4**	**-0.1**
PLE				*i* Sn	**Sn**	**03 55 16.0**	**+2.4**
ELL	**Elmali**	**5.37**	**116**		**Pn**	**03 54 15.7**	**+1.8**
ELL	**Elmali**	**5.37**	**116**	P	**Pn**	**03 54 15.7**	**+1.8**
ISP	**Isparta**	**5.39**	**104**	*i* P	**Pn**	**03 54 15.4**	**+1.4**
TREB	**Trebinje**	**5.42**	**311**	*e*Pn	**Pn**	**03 54 13.6**	**-0.8**
BRY	**Bratogost**	**5.43**	**313**	*i*Pn	**Pn**	**03 54 14.5**	**-0.1**
BRY				*i* Sn	**Sn**	**03 55 19.6**	**+2.3**
BRY	**Bratogost**	**5.43**	**313**	*e*Pn	**Pn**	**03 54 14.6**	**-0.1**
UPM	**Unac-Piva**	**5.43**	**318**	*i*Pn	**Pn**	**03 54 14.5**	**-0.2**
UPM	**Unac-Piva**	**5.43**	**318**	*e*Pn	**Pn**	**03 54 15.9**	**+1.2**
DJES	**Djerdap**	**5.47**	**350**	Pn	**Pn**	**03 54 14.1**	**-1.0**
RUDO	**Rudo**	**5.50**	**323**	*e*Pn	**Pn**	**03 54 14.6**	**-1.0**
DBRK	**Dubrovnik**	**5.51**	**310**	*e*Pn	**Pn**	**03 54 15.7**	**0.0**
TIP	**Timpagrande**	**5.55**	**271**	P	**Pn**	**03 54 15.6**	**-0.7**
TIP	**Timpagrande**	**5.55**	**271**		**Pn**	**03 54 16.2**	**-0.1**
ICOR	**Ion Corvin**	**5.63**	**30**	P	**Pn**	**03 54 16.7**	**-0.5**
BBLS	**Lazići**	**5.68**	**325**	*e*Pn	**Pn**	**03 54 18.3**	**+0.2**
HERR	**Herculane**	**5.69**	**349**	P	**Pn**	**03 54 17.3**	**-0.8**
MATE	**Matera**	**5.70**	**286**	P	**Pn**	**03 54 17.6**	**-0.6**
MDUB	**Mudurnu**	**5.73**	**76**		**Pn**	**03 54 20.2**	**+1.5**
STON	**Ston**	**5.90**	**309**	*e*Pn	**Pn**	**03 54 21.3**	**+0.4**
STON	**Ston**	**5.90**	**309**	*e*Pn	**Pn**	**03 54 21.5**	**+0.6**
NEVS	**Nevesinje**	**5.93**	**314**	*e*Pn	**Pn**	**03 54 22.0**	**+0.6**
MTUR	**Matau**	**5.99**	**8**	P	**Pn**	**03 54 23.1**	**+0.7**
MTUR	**Matau**	**5.99**	**8**	P	**Pn**	**03 54 23.0**	**+0.7**
HAPS	**Han Pijesak,Bl**	**6.06**	**324**	*e*Pn	**Pn**	**03 54 23.7**	**+0.4**
ARR	**Arges**	**6.09**	**5**	P	**Pn**	**03 54 24.2**	**+0.5**
LOT	**Lotru**	**6.15**	**359**	P	**Pn**	**03 54 24.5**	**0.0**
GZR	**Gura Zlata**	**6.16**	**353**	P	**Pn**	**03 54 23.7**	**-0.8**
TIRR	**Tirgusor**	**6.16**	**32**	Pn	**Pn**	**03 54 24.2**	**-0.3**
TIRR	**Tirgusor**	**6.16**	**32**	P	**Pn**	**03 54 24.2**	**-0.3**
HARR	**Harsova**	**6.17**	**28**	P	**Pn**	**03 54 25.3**	**+0.6**
HARR	**Harsova**	**6.17**	**28**	P	**Pn**	**03 54 25.2**	**+0.6**
TEKS	**Tekeris**	**6.19**	**330**	*e*Pn	**Pn**	**03 54 24.8**	**-0.1**
VOIR		**6.20**	**7**	P	**Pn**	**03 54 25.6**	**+0.5**
VOIR		**6.20**	**7**	P	**Pn**	**03 54 25.6**	**+0.5**
CUC	**Castrocucco**	**6.29**	**279**		**Pn**	**03 54 27.3**	**+1.0**
LSTV	**Lastovo**	**6.34**	**305**	*e*Pn	**Pn**	**03 54 26.1**	**-0.9**
LSTV					Sn	**03 55 36.2**	**-3.4**
CEL	**Celeste**	**6.35**	**263**		**Pn**	**03 54 27.3**	**+0.1**
MLR	**Muntele Rosu**	**6.38**	**13**	P	**Pn**	**03 54 28.2**	**+0.6**
MLR	**Muntele Rosu**	**6.38**	**13**	Pn	**Pn**	**03 54 28.5**	**+0.9**
MLR	**Muntele Rosu**	**6.38**	**13**	Pn	**Pn**	**03 54 28.6**	**+1.0**
	comp=N,0.8nm,0.3s,baz=168,slow=14,SNR=11						
MLR				Lg	Lg	03 56 18.6	
	baz=99,slow=19						
	comp=N,6.8nm,0.3s						
TPGR	**Topolog**	**6.49**	**30**	P	**Pn**	**03 54 28.9**	**-0.2**
BZS	**Buzias**	**6.54**	**346**	P	**Pn**	**03 54 28.7**	**-1.2**
BZS	**Buzias**	**6.54**	**346**	P	**Pn**	**03 54 28.6**	**-1.2**
SURR	**Surduc**	**6.59**	**349**	P	**Pn**	**03 54 30.3**	**-0.1**
RICI	**Ricice**	**6.60**	**312**	*e*Pn	**Pn**	**03 54 30.7**	**+0.1**
FRGS	**Fruska Gora**	**6.60**	**334**	P	**Pn**	**03 54 30.4**	**-0.2**
FRGS	**Fruska Gora**	**6.60**	**334**	*e*Pn	**Pn**	**03 54 28.2**	**-2.5**
DEV	**Deva**	**6.63**	**354**	P	**Pn**	**03 54 29.7**	**-1.3**
DEV	**Deva**	**6.63**	**354**	P	**Pn**	**03 54 29.6**	**-1.3**
CFR	**Carcaliu**	**6.66**	**27**	P	**Pn**	**03 54 30.8**	**-0.6**
CFR	**Carcaliu**	**6.66**	**27**	P	**Pn**	**03 54 30.8**	**-0.6**
SGRT	**San Giovanni R**	**6.69**	**294**	Pn	**Pn**	**03 54 31.3**	**-0.6**
DOPR	**Dopca**	**6.76**	**9**	P	**Pn**	**03 54 31.8**	**-1.0**
COVR	**Voineasa-Covas**	**6.76**	**14**	P	**Pn**	**03 54 33.1**	**+0.2**
SPBR	**Spulber**	**6.79**	**17**	P	**Pn**	**03 54 33.1**	**-0.1**
PLOR	**Plostina**	**6.86**	**16**	P	**Pn**	**03 54 33.3**	**-1.0**
PLOR	**Plostina**	**6.86**	**16**	P	**Pn**	**03 54 33.2**	**-1.0**
VRI	**Vrincioaia**	**6.89**	**17**	P	**Pn**	**03 54 34.5**	**-0.1**
VRI	**Vrincioaia**	**6.89**	**17**	P	**Pn**	**03 54 34.5**	**-0.1**
TURR	**Turia**	**6.93**	**12**	P	**Pn**	**03 54 35.1**	**-0.1**
OZUR		**6.94**	**11**	P	**Pn**	**03 54 35.6**	**+0.4**
SIRR	**Siria**	**7.17**	**347**	P	**Pn**	**03 54 36.9**	**-1.5**
VARL	**Varlezi**	**7.21**	**22**	P	**Pn**	**03 54 39.1**	**+0.2**
MGRS	**Mrkonjic Grad**	**7.22**	**317**	*e*Pn	**Pn**	**03 54 39.8**	**+0.6**
KIJV	**Kijevo**	**7.33**	**312**	*e*Pn	**Pn**	**03 54 40.8**	**+0.2**
PAOL	**Paolisi**	**7.36**	**287**		**Pn**	**03 54 40.4**	**-0.7**
BLY	**Banja Luka**	**7.40**	**320**	*e*Pn	**Pn**	**03 54 40.8**	**-0.8**
TESR	**Tescani**	**7.49**	**15**	P	**Pn**	**03 54 42.6**	**-0.2**
BR131	**Keskin Array S**	**7.54**	**84**	Pn	**Pn**	**03 54 44.4**	**+0.9**
BR131	**Keskin Array S**	**7.54**	**84**	*i* P	**Pn**	**03 54 44.7**	**+1.1**
BRTR	**Keskin Array B**	**7.54**	**84**		**Pn**	**03 54 44.5**	**+0.9**
BRTR	**Keskin Array B**	**7.54**	**84**	Pn	**Pn**	**03 54 44.9**	**+1.3**
	comp=N,0.5nm,0.3s,baz=256,slow=10,SNR=26						
BRTR				Sn	**Sn**	**03 56 04.2**	**-5.1**
	baz=265,slow=25						
	comp=N,1.7nm,0.4s						
A050A	**Klekovaca**	**7.56**	**316**	*e*Pn	**Pn**	**03 54 45.2**	**+1.4**
ZIRJ	**Zirje**	**7.58**	**308**	*e*Pn	**Pn**	**03 54 43.4**	**-0.6**
MORI	**Morici**	**7.66**	**309**	*e*Pn	**Pn**	**03 54 45.0**	**-0.1**
VAE	**Valguarnera**	**7.68**	**259**	Pn	**Pn**	**03 54 42.2**	**-3.2**
	comp=N,1.8nm,0.3s,baz=107,slow=14,SNR=2.3						
VAE				Sn	**Sn**	**03 56 12.3**	**-0.3**
	baz=292,slow=22						
	comp=N,4.4nm,0.4s						
A051A	**Mrakovica**	**7.73**	**320**	*e*Pn	**Pn**	**03 54 46.5**	**+0.4**
RAFF	**Raffo Rosso**	**7.79**	**258**		**Pn**	**03 54 46.9**	**-0.1**
MORH	**Mrgy, Hungar**	**7.93**	**332**	P	**Pn**	**03 54 48.7**	**0.0**
INTR	**Introdacqua**	**8.08**	**293**	Pn	**Pn**	**03 54 50.7**	**-0.2**
DUGI	**Dugi Otok**	**8.12**	**308**	*e*Pn	**Pn**	**03 54 50.8**	**-0.7**
WDD	**Wied Dalam**	**8.21**	**248**	Pn	**Pn**	**03 54 51.5**	**-1.2**
VIRC	**Vir**	**8.29**	**310**	*e*Pn	**Pn**	**03 54 53.5**	**-0.2**
BURAR	**Bucovina Array**	**8.37**	**6**	P	**Pn**	**03 54 53.8**	**-1.2**
BURAR	**Bucovina Array**	**8.37**	**6**	Pn	**Pn**	**03 54 55.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**8.40**	**6**	Pn	**Pn**	**03 54 55.3**	**-0.1**
NVLJ	**Novalja**	**8.55**	**311**	*e*Pn	**Pn**	**03 54 56.5**	**-0.8**
CLTB	**Caltabellotta**	**8.57**	**262**		**Pn**	**03 54 57.8**	**+0.2**
CAMP	**Campotosto**	**8.59**	**296**	Pn	**Pn**	**03 54 57.4**	**-0.6**
NRCA	**Norcia**	**8.89**	**297**	Pn	**Pn**	**03 55 00.8**	**-1.2**
BOJS	**Bojanci**	**8.92**	**317**	*e*Pn	**Pn**	**03 55 01.6**	**-0.7**
CRES	**Cresnjev**	**9.03**	**319**	*e*Pn	**Pn**	**03 55 03.5**	**-0.4**
SORM	**Soroca**	**9.40**	**19**	P	**Pn**	**03 55 08.3**	**-0.7**
SORM	**Soroca**	**9.40**	**19**	P	**Pn**	**03 55 08.3**	**-0.7**
MURB	**Monte Urbino**	**9.44**	**298**	Pn	**Pn**	**03 55 09.2**	**-0.4**
CERV	**Cerknica**	**9.51**	**316**	*e*Pn	**Pn**	**03 55 09.6**	**-0.

GERES **GERESS Array B** 12.03 326 Pn **Pn** 03 55 45.0 -0.1
comp=N,0.1nm,0.3s,baz=141,slow=15,SNR=6.7
comp=N,1.8nm,0.8s
WATA **Walderalm** 12.04 316 *i* Pn **Pn** 03 55 47.0 +1.7
comp=N,2.0nm,0.6s
KEST **Kesra** 12.10 257 Pn **Pn** 03 55 47.3 +1.2
KEST **Kesra** 12.10 257 Pn **Pn** 03 55 46.6 +0.6
comp=N,0.3nm,0.3s,baz=34,slow=2.9,SNR=7.2
SQTA **Sankt Quirin** 12.18 315 *e*Pn **Pn** 03 55 47.2 +0.1
comp=N,2.9nm,0.5s
KHC **Kasperske Hory** 12.30 326 Pn **Pn** 03 55 48.4 -0.4
KHC **Kasperske Hory** 12.30 326 *e*P **Pn** 03 55 50.3 +1.6
KHC **Kasperske Hory** 12.30 326 *ce*P **Pn** 03 55 49.1 +0.4
KHC pmax pmax
comp=Z,9.0nm,0.9s
MOTA **Moosalm** 12.31 315 *i* Pn **Pn** 03 55 50.2 +1.3
comp=Z,0.6nm,0.4s
FETA **Feichten** 12.33 313 *e*Pn **Pn** 03 55 50.2 +0.9
comp=Z,3.5nm,1.1s
FUORN **Ofenpass-Fuorn** 12.38 311 Pn **Pn** 03 55 51.1 +1.1
RETA **Reutte** 12.58 315 *e*Pn **Pn** 03 55 54.5 +2.0
comp=Z,0.4nm,0.3s
SOC **Sochi** 12.61 65 *e*P **Pn** 03 55 51.1 -1.8
SOC *e* 03 58 13.1
SOC MLR MLR
comp=Z,27nm,9.0s
TUE **Stuetta** 12.86 309 Pn **Pn** 03 55 56.2 -0.3
SENIN **Lac Senin/Sane** 14.08 306 Pn **Pn** 03 56 13.6 +0.5
CLL **Collm** 14.24 331 *es*PP 03 56 29.0
CLL AMS AMS 07 20 00.0
comp=N,100nm,20.3s
CLL AMS AMS 07 20 00.0
comp=E,200nm,19.4s
CLL AMS AMS 07 20 00.0
comp=Z,200nm,19.2s
KIV **Kislovodsk** 14.79 66 Pn **Pn** 03 56 21.6 -1.2
KIV **Kislovodsk** 14.79 66 *e*P **Pn** 03 56 22.5 -0.3
KIV pmax pmax
comp=Z,5.0nm,1.0s
KBZ **Khabaz** 14.89 67 *i* P **P** 03 56 26.9 -2.9
KBZ **Khabaz** 14.89 67 Pn **P** 03 56 30.7 +0.9
comp=Z,0.1nm,0.3s,baz=274,slow=6.6,SNR=4.8
ONI **Oni** 15.13 71 **Pn** 03 56 28.0 +0.7
ONI IAmb IAmb 03 56 38.9
comp=Z,9.9nm,1.5s
ONI **Oni** 15.13 71 P **Pn** 03 56 28.0 +0.7
ONI pmax pmax
comp=Z,10.0nm,1.5s
ZEI **Tsey** 15.48 71 *e*P **P** 03 56 38.2 +1.6
ZEI pmax pmax
comp=Z,3.0nm,1.1s
NACGM **Naroch** 15.74 6 *e*P **Pn** 03 56 32.2 -2.9
comp=Z,8.0nm,1.1s,baz=189
VSR **Storozhevoye** 16.01 37 *e*P **Pn** 03 56 35.1 -3.5
VSR pmax pmax
comp=Z,2.0nm,0.6s
GNI **Garni** 16.05 80 LR LR 04 02 46.5
comp=Z,85nm,20.3s,baz=274,slow=37
OBN **Obninsk** 17.97 24 *i* P **P** 03 57 03.7 -0.1
OBN pmax pmax
comp=Z,10.0nm,1.3s
MOS **Moscow** 18.82 25 *e*P **Pn** 03 57 18.0 +4.3
VSU **Vasula** 19.27 4 *i* P **Pn** 03 57 18.0 -1.1
PUL **Pulkovo** 20.90 9 *i* P **P** 03 57 35.8 0.0
BELG **Belogornoye** 20.96 44 *i* P Pn 03 57 37.3 -1.8
BELG pmax pmax
comp=Z,2.0nm,0.9s
ESDC **Sonseca Array** 21.49 280 P **P** 03 57 40.2 -2.2
comp=Z,5.1nm,1.1s,baz=76,slow=9.8,SNR=25
comp=Z,5.1nm,1.1s
PAB **San Pablo** 21.80 280 P **P** 03 57 45.3 -0.5
PAB **San Pablo** 21.80 280 P **P** 03 57 45.3 -0.5
PAB pmax pmax
comp=Z,5.0nm,0.9s
HFS **Hagfors** 21.83 346 P **P** 03 57 42.7 -3.1
comp=Z,4.7nm,0.9s,baz=163,slow=12,SNR=5.7
FINES **FINESS Array B** 22.22 3 P **P** 03 57 50.3 +0.3
FINES **FINESS Array B** 22.22 3 P **P** 03 57 50.3 +0.3
FINES **FINESS Array B** 22.22 3 P **P** 03 57 48.6 -1.4
comp=Z,1.7nm,0.9s,baz=169,slow=8.1,SNR=3.0
FINES LR LR 04 07 35.2
comp=Z,66nm,18.1s,baz=194,slow=40
comp=Z,1.7nm,0.9s
TAM **Tamanrasset** 22.70 229 P **P** 03 57 56.0 +0.3
TAM **Tamanrasset** 22.70 229 P **P** 03 57 56.0 +0.3
TAM pmax pmax
comp=Z,4.0nm,1.0s
NC602 **NORSAR Array S** 22.81 344 P **P** 03 57 54.8 -1.5
NB2 **NORSAR Subarra** 23.16 344 P **P** 03 57 59.1 -0.9
comp=Z,5.4nm,1.1s,baz=157,slow=10
NOA **NORSAR Array B** 23.16 344 P **P** 03 57 59.0 -0.9
comp=Z,0.8nm,0.6s,baz=148,slow=8.8,SNR=4.7
comp=Z,0.8nm,0.6s
NC204 **NORSAR Array S** 23.47 344 P **P** 03 58 02.3 -0.8
NC204 IAmb IAmb 03 58 08.3
comp=Z,11nm,0.9s
KLMR **Klimovskoe** 23.67 19 *e*P **P** 03 58 02.3 -2.7
KLMR pmax pmax
comp=Z,18nm,1.8s
RAYN **Ar Rayn** 24.13 124 P **P** 03 58 10.1 +0.3
RAYN IAmb IAmb 03 58 12.5
comp=Z,9.4nm,1.2s
RAYN **Ar Rayn** 24.13 124 P **P** 03 58 10.1 +0.3
RAYN pmax pmax
comp=Z,9.0nm,1.2s
EKA **Eskdalemuir Ar** 24.15 321 P **P** 03 58 08.7 -1.0
comp=Z,10nm,0.9s,baz=122,slow=9.6,SNR=12
comp=Z,10nm,0.9s
EKB **Eskdalemuir** 24.17 321 P **P** 03 58 09.6 -0.2
ARCES **ARCESS Array B** 30.32 1 LR LR 04 11 23.8
comp=Z,62nm,19.6s,baz=282,slow=37
TOA0 **Torodi Ar. Sit** 32.61 223 P **P** 03 59 24.6 -0.9
TOA0 IAmb IAmb 03 59 25.5
comp=Z,3.3nm,0.7s
TORD **Torodi Ar. Bea** 32.61 223 P **P** 03 59 25.0 -0.5
TORD IAmb IAmb 03 59 25.4
comp=Z,4.0nm,1.2s
TORD **Torodi Ar. Bea** 32.61 223 P **P** 03 59 25.0 -0.5
comp=Z,2.9nm,0.6s,baz=35,slow=9.5,SNR=29
comp=Z,2.9nm,0.6s
BRVK **Borovoye** 34.30 51 *ce*P **P** 03 59 40.8 +0.9
BRVK pmax pmax
comp=Z,2.0nm,0.9s
KKAR **Karatay Array** 34.92 68 P **P** 03 59 46.7 +1.3
KKAR **Karatay Array** 34.92 68 P **P** 03 59 46.7 +1.3
AAK **Ala-Archa** 37.88 68 *i* P **P** 04 00 10.8 -0.1
AAK pmax pmax
comp=Z,6.0nm,3.0s
KURBB **Kurchatov Array** 39.43 55 P **P** 04 00 24.1 +0.6
comp=Z,1.4nm,0.2s,baz=278,slow=9.2,SNR=4.6
KURBB LR LR 04 21 45.3
comp=Z,46nm,18.5s,baz=186,slow=44
comp=Z,1.4nm,0.2s
KURK **Kurchatov** 39.48 55 *ce*P **P** 04 00 25.9 +1.9
KURK pmax pmax
comp=Z,5.0nm,1.8s
DBIC **Dimbokro** 41.54 226 P **P** 04 00 40.7 -0.7
DBIC IAmb IAmb 04 00 41.6
comp=Z,15nm,1.1s
DBIC **Dimbokro** 41.54 226 P **P** 04 00 40.7 -0.7
DBIC pmax pmax
comp=Z,15nm,1.2s
DBIC **Dimbokro** 41.54 226 P **P** 04 00 40.9 -0.5
comp=Z,4.7nm,0.5s,baz=27,slow=8.3,SNR=12
DBIC LR LR 04 17 49.8
comp=Z,43nm,20.6s,baz=76,slow=36
comp=Z,4.7nm,0.5s
MK31 **Makanchi Array** 42.45 60 P **P** 04 00 49.1 +0.5
MK31 **Makanchi Array** 42.45 60 P **P** 04 00 49.1 +0.5
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 42.45 60 P **P** 04 00 49.2 +0.6
MKAR **Makanchi Array** 42.45 60 P **P** 04 00 49.4 +0.8
comp=Z,1.4nm,0.6s,baz=279,slow=6.9,SNR=20
comp=Z,1.4nm,0.6s
ZAA0 **Zalesovo Array** 42.97 49 P **P** 04 00 53.0 +0.4
ZAA0 IAmb IAmb 04 00 53.5
comp=Z,2.4nm,0.8s
ZALV **Zalesovo Beam** 42.97 49 P **P** 04 00 52.5 0.0
ZALV **Zalesovo Beam** 42.97 49 P **P** 04 00 53.2 +0.6
comp=Z,1.5nm,0.5s,baz=275,slow=7.3,SNR=9.3
comp=Z,1.5nm,0.5s
NRIK **Noril'sk** 44.61 27 *ce*P **P** 04 01 07.6 +2.0
NRIK pmax pmax
comp=Z,5.0nm,0.9s
NRIK **Noril'sk** 44.61 27 P **P** 04 01 06.5 +0.9
comp=Z,1.5nm,0.4s,baz=257,slow=4.3,SNR=4.6
comp=Z,1.5nm,0.4s
SUMG **Summit** 44.78 338 P **P** 04 01 07.3 -0.1
SUMG **Summit** 44.78 338 P **P** 04 01 07.3 -0.1
DGZ **Jazzator, Alta** 45.22 55 *i* P **P** 04 01 11.8 +0.8
DGZ pmax pmax
comp=Z,1.0nm,0.6s
WMQ **Urumqi** 46.90 63 *e*P **P** 04 01 24.1 0.0
WMQ pP sP 04 01 29.1 +1.6
WMQ pmax pmax
comp=Z,16nm,0.9s
SONM **Songino Array** 57.69 52 P **P** 04 02 44.8 +0.4
comp=Z,1.2nm,1.0s,baz=277,slow=7.5,SNR=8.7
comp=Z,1.2nm,1.0s
ULN **Ulaanbaatar** 58.08 52 *ce*P **P** 04 02 48.5 +1.4
ULN pmax pmax
comp=Z,5.0nm,2.5s
SCHQ **Schefferville** 59.43 318 P **P** 04 02 55.3 -0.9
SCHQ **Schefferville** 59.43 318 P **P** 04 02 55.8 -0.4
comp=Z,1.7nm,0.6s,baz=65,slow=6.2,SNR=5.0
comp=Z,1.7nm,0.6s
PALK **Pallekele** 59.94 106 LR LR 04 33 42.2
comp=Z,36nm,18.2s,baz=266,slow=41
LZH **Lanzhou** 61.33 65 *e*P **P** 04 03 11.0 +1.3
LZH pP sP 04 03 15.9 +2.8
LZH sP pP 04 03 18.8 +6.6
LZH pmax pmax
comp=Z,11nm,1.2s
HHC **Hu-ho-hao-te** 64.21 57 *e*P **P** 04 03 29.8 +1.1
HHC sP sP 04 03 40.4 +8.2
HHC PcP **PcP** **04 04 07.3 +3.7**
HHC pmax pmax
comp=Z,6.0nm,1.1s
HHC pmax pmax
comp=Z,100nm,5.4s
PZH **PanZhiHua** 64.75 76 P **P** 04 03 33.8 +1.3
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
BOSA **Boshof** 67.57 179 P **P** 04 03 50.2 -0.1
comp=Z,3.5nm,0.8s,baz=1.5,slow=9.9,SNR=6.1
comp=Z,3.5nm,0.8s
YKA **Yellowknife Ar** 73.22 341 P **P** 04 04 24.1 -0.3
comp=Z,0.6nm,0.8s,baz=30,slow=5.4,SNR=9.4
comp=Z,0.6nm,0.8s
ULM **Lac du Bonnet** 76.34 325 P **P** 04 04 42.0 -0.7
ULM **Lac du Bonnet** 76.34 325 P **P** 04 04 42.0 -0.7
comp=Z,3.9nm,1.1s,baz=48,slow=7.6,SNR=3.7
comp=Z,3.9nm,1.1s
KSRS **Korea Array** 76.56 53 P **P** 04 04 44.2 +0.1
comp=Z,1.6nm,0.7s,baz=299,slow=5.6,SNR=5.4
KSRS LR LR 04 42 06.9
comp=Z,14nm,18.2s,baz=170,slow=39
comp=Z,1.6nm,0.7s
MJAR **Matsushiro Arr** 83.30 48 P **P** 04 05 20.6 0.0
comp=Z,1.7nm,0.8s,baz=329,slow=5.0,SNR=4.1
comp=Z,1.7nm,0.8s
TXAR **Lajitas Array** 96.07 316 P **P** 04 06 22.0 +0.3
TXAR **Lajitas Array** 96.07 316 P **P** 04 06 22.0 +0.3
comp=Z,0.3nm,0.8s,baz=27,slow=2.2,SNR=2.9
comp=Z,0.3nm,0.8s

SJA ***20*** *03:59:30.2±1.7,29°.20S×72°.66W,h10km,ML3.9,MW3.9*
NEIC ***20*** *03:59:32.4±2.1,29°.22S±0°.04×72°.77W±0°.08,h10km±1km, mb4.6/15, Mwr4.0/50, Error ellipse: s-maj=12.2km s-min=6.8km az=279.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.14; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.95; $M_{r\theta}$0.06; $M_{\theta\phi}$0.24; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.09000×10^{15} NP1:ϕ_s199.70000°,δ44.43000°, λ-85.18000°. NP2:ϕ_s12.97000°,δ45.76000°,λ-94.71000°. Principal axes: T 1.0182, Plg1.0000°, Azm106.0000°; N 0.1259, Plg3.0000°, Azm16.0000°; P -1.1441, Plg87.0000°, Azm207.0000°.*
NEIC ***20*** *03:59:32.6,29°.22S×72°.75W,h10km*
IDC ***20*** *03:59:32.8±0.7,29°.25S×72°.63W,h0km,mb4.2/9, mbtmp4.2/12,ML4.3/3,MS3.2/6, Error ellipse: s-maj=25.7km s-min=20.4km az=90.0*
GUC ***20*** *03:59:36.2±0.6,29°.40S×72°.56W,h31km±3km,ML3.4*
ISC 20 03:59:32.1±0.9,29°.28S±0°.02×72°.67W±0°.03,h10km±5km, n126,σ2$\hat{s}$00/155,mb4.5/13,MS3.6/3,7C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.40**	**118**			**Pb**	**03 59 58.6**	**+0.3**
CO05				Sn		**Sn**	**04 00 15.3**	**-0.8**
CO05	**La Serena**	**1.40**	**118**	⇑*i*	*P*	**Pb**	**03 59 58.6**	**+0.3**
CO05				*e*S		**Sn**	**04 00 15.6**	**-0.5**
CO05				IAML			04 00 23.9	
	comp=N,1μm,0.4s							
CO06	**Fray Jorge**	**1.66**	**148**	Pn		**Pb**	**04 00 01.8**	**-0.9**
CO06				Sn		**Sn**	**04 00 20.9**	**-1.5**
CO06	**Fray Jorge**	**1.66**	**148**	*i* P		**Pb**	**04 00 01.8**	**-0.9**
CO06				*e*S		**Sn**	**04 00 21.0**	**-1.5**
CO06				IAML			04 00 22.4	
	comp=E,958nm,0.5s							
LCO	**Las Campanas**	**1.74**	**82**			**Pb**	**04 00 03.6**	**-0.7**
LCO				Sn		**Sn**	**04 00 24.7**	**-0.2**
LCO	**Las Campanas**	**1.74**	**82**	⇑*i*	*P*	**Pb**	**04 00 03.6**	**-0.7**
LCO				*e*S		**Sn**	**04 00 24.7**	**-0.2**
AC04	**Llanos de Chal**	**1.76**	**53**			**Pn**	**04 00 01.7**	**-0.9**
AC04				Sn		**Sn**	**04 00 22.2**	**-2.8**
AC04	**Llanos de Chal**	**1.76**	**53**	*e*P		**Pn**	**04 00 01.9**	**-0.7**
AC04				*e*S		**Sn**	**04 00 24.0**	**-1.1**
AC04	**Llanos de Chal**	**1.76**	**53**	*e*P		**Pn**	**04 00 01.7**	**-0.9**
GO04	**Tololo Observa**	**1.85**	**119**			**Pb**	**04 00 05.7**	**-0.4**
GO04	**Tololo Observa**	**1.85**	**119**	*e*P		**Pb**	**04 00 06.1**	**-0.1**
GO04				*e*S		**Sn**	**04 00 24.4**	**-3.3**
GO04				*e*S		**Sb**	**04 00 29.9**	**+0.4**
GO04				IAML			04 00 31.1	
	comp=Z,2μm,0.5s							
GO04	**Tololo Observa**	**1.85**	**119**	⇑*i*	*P*	**Pb**	**04 00 05.8**	**-0.4**
GO04				*e*S		**Sn**	**04 00 27.9**	**+0.2**
AC05	**El Transito**	**2.14**	**79**			**Pb**	**04 00 09.3**	**-1.7**
AC05	**El Transito**	**2.14**	**79**	*e*P		**Pb**	**04 00 09.6**	**-1.4**
AC05				*e*S		**Sn**	**04 00 34.9**	**+0.3**
CO03	**El Pedregal**	**2.31**	**133**			**Pb**	**04 00 12.1**	**-1.8**
CO03	**El Pedregal**	**2.31**	**133**	*e*P		**Pb**	**04 00 12.3**	**-1.7**
CO03				*e*S		**Sb**	**04 00 44.0**	**+1.3**
CO03	**El Pedregal**	**2.31**	**133**	⇑*i*	*P*	**Pb**	**04 00 12.2**	**-1.8**
CO03				*e*S		**Sn**	**04 00 39.5**	**+0.6**
CO03				IAML			04 00 41.2	
	comp=E,529nm,0.4s							
CO01	**Juntas del Tor**	**2.35**	**108**			**Pb**	**04 00 13.3**	**-1.2**
CO01	**Juntas del Tor**	**2.35**	**108**	*e*P		**Pb**	**04 00 13.4**	**-1.1**
CO01				*e*S		**Sb**	**04 00 42.7**	**-1.0**
CO01	**Juntas del Tor**	**2.35**	**108**	⇑*i*	*P*	**Pb**	**04 00 13.5**	**-1.1**
CO01				*e*S		**Sn**	**04 00 41.3**	**+1.4**
CO01				IAML			04 00 46.2	
	comp=N,278nm,0.4s							
CO02	**Combarbal**	**2.40**	**144**			**Pn**	**04 00 13.2**	**+1.6**
CO02	**Combarbal**	**2.40**	**144**	*e*P		**Pb**	**04 00 13.5**	**-2.0**
CO02				*e*S		**Sn**	**04 00 42.7**	**+1.6**
CO02				*e*S		**Sn**	**04 00 42.7**	**+1.6**
CO02				IAML			04 00 47.2	
	comp=Z,494nm,0.7s							
CO02	**Combarbal**	**2.40**	**144**	*i* P		**Pb**	**04 00 13.4**	**-2.0**
CO02				*e*S		**Sn**	**04 00 41.4**	**+0.3**
GO03	**Copiap**	**2.72**	**53**			**Pn**	**04 00 16.2**	**+0.4**
GO03	**Copiap**	**2.72**	**53**	*e*P		**Pn**	**04 00 16.1**	**+0.3**
GO03				*e*S		**Sn**	**04 00 49.1**	**+0.2**
GO03				IAML			04 00 49.4	
	comp=Z,428nm,0.6s							
GO03	**Copiap**	**2.72**	**53**	*e*P		**Pn**	**04 00 16.8**	**+0.9**
GO03				*e*S		**Sn**	**04 00 48.0**	**-0.9**
AROD	**Rodeo**	**2.92**	**108**	*e*P		**Pb**	**04 00 22.8**	**-1.5**
AROD				*e*S		**Sb**	**04 00 59.3**	**-0.9**
ACCO	**Cerro Coronel**	**3.39**	**114**	*e*P		**Pb**	**04 00 30.1**	**-2.3**
ACCO				*e*S		**Sn**	**04 01 09.9**	**+4.2**
VA06	**Catapilco**	**3.48**	**161**	Pn		**Pn**	**04 00 27.4**	**+1.2**
VA06	**Catapilco**	**3.48**	**161**	*i* P		**Pn**	**04 00 27.4**	**+1.2**
VA06				*i* S		**Sn**	**04 01 04.8**	**-2.7**
DOCA	**Reserva Natura**	**3.52**	**119**	*e*P		**Pb**	**04 00 31.4**	**-3.3**
DOCA				*e*S		**Sb**	**04 01 18.4**	**+0.6**
DOCA				IAML			04 01 28.7	
	comp=Z,114nm,0.7s							
AC01	**Pan de Azucar**	**3.62**	**31**	Pn		**Pn**	**04 00 26.7**	**-1.4**
AC01	**Pan de Azucar**	**3.62**	**31**	*e*P		**Pn**	**04 00 26.8**	**-1.4**
AC01				*e*S		**Sn**	**04 01 07.3**	**-3.6**
AC01	**Pan de Azucar**	**3.62**	**31**	*e*P		**Pn**	**04 00 26.7**	**-1.4**
AGUA	**GUANDACOL**	**3.65**	**94**	*e*P		**Pb**	**04 00 34.1**	**-2.7**
AGUA				*e*P		Pn	04 00 34.2	+5.5
AGUA				*e*S		**Sb**	**04 01 17.4**	**-3.7**
AGUA				IAML			04 01 37.8	
	comp=Z,226nm,2.8s							
VA01	**Torpederas**	**3.83**	**167**			**Pn**	**04 00 31.1**	**0.0**
RTLS	**Leoncito**	**3.84**	**132**	*e*P		**Pb**	**04 00 36.9**	**-3.2**
RTLS				*e*S		**Sn**	**04 01 18.4**	**+1.5**
RTLS				IAML			04 01 36.6	
	comp=Z,445nm,0.7s							
VA03	**San Esteban**	**3.92**	**153**			**Pn**	**04 00 34.1**	**+1.6**
VA03	**San Esteban**	**3.92**	**153**	*e*P		**Pn**	**04 00 34.2**	**+1.8**
VA03				*e*S		**Sn**	**04 01 21.6**	**+3.0**
VA03				IAML			04 01 32.2	
	comp=Z,198nm,0.6s							
VA03	**San Esteban**	**3.92**	**153**	*e*P		**Pn**	**04 00 34.0**	**+1.6**
VA03				*e*S		**Sn**	**04 01 17.7**	**-0.8**
VCA	**Vinchina**	**3.94**	**83**	*e*P		**Pb**	**04 00 38.2**	**-3.5**
VCA				*e*S		**Sn**	**04 01 24.4**	**+5.2**
VCA				IAML			04 01 42.2	
	comp=Z,212nm,1.1s							
ROCH	**El Roble**	**3.95**	**159**	*e*P		**Pn**	**04 00 34.3**	**+1.4**
ROCH				⇑*i*	*P*	**Pn**	**04 00 34.3**	**+1.4**
ROCH				*e*S		**Sn**	**04 01 17.5**	**-1.8**
ROCH				*i* S		**Sn**	**04 01 17.5**	**-1.8**
AC02	**Maricunga**	**3.96**	**53**	Pn		**Pn**	**04 00 34.6**	**+1.3**
AC02	**Maricunga**	**3.96**	**53**	*e*P		**Pn**	**04 00 34.4**	**+1.1**
AC02				*e*S		**Sn**	**04 01 21.8**	**+1.7**
AC02				IAML			04 01 22.6	
	comp=Z,159nm,0.3s							
AC02	**Maricunga**	**3.96**	**53**	*i* P		**Pn**	**04 00 35.1**	**+1.8**
AC02				*i* S		**Sn**	**04 01 20.2**	**+0.1**
RTLL	**Cerro Villicun**	**4.16**	**120**	*e*P		Pb	04 00 40.8	-4.7
RTLL				*e*S		**Sb**	**04 01 40.4**	**+4.6**
MT02	**Curacav**	**4.18**	**162**			**Pn**	**04 00 36.7**	**+0.8**
MT02	**Curacav**	**4.18**	**162**	*e*P		**Pn**	**04 00 36.8**	**+1.0**
MT02				*e*S		Sn	04 01 16.9	-7.9
MT02				IAML			04 01 29.7	
	comp=Z,71nm,0.5s							
PEL	**Peldehue**	**4.21**	**157**			**Pn**	**04 00 38.1**	**+1.8**
MT10	**Hacienda Santa**	**4.38**	**156**	*i* P		**Pn**	**04 00 40.6**	**+1.9**
MT10				*i* S		**Sn**	**04 01 27.9**	**-2.1**
MT05	**Renca**	**4.42**	**159**			**Pn**	**04 00 40.6**	**+1.4**
MT05	**Renca**	**4.42**	**159**	*e*P		**Pn**	**04 00 41.3**	**+2.0**
MT05				*e*S		**Sn**	**04 01 31.1**	**+0.3**
MT05				IAML			04 01 44.3	
	comp=Z,117nm,0.8s							
MT05	**Renca**	**4.42**	**159**	*e*P		**Pn**	**04 00 40.8**	**+1.6**
MT05				*e*S		**Sn**	**04 01 27.8**	**-3.0**
VA05	**Santo Domingo**	**4.46**	**169**			**Pn**	**04 00 40.2**	**+0.5**
MT14	**Cerro Cal¡n**	**4.49**	**157**	*i* S		**Sn**	**04 01 30.5**	**-2.1**
MT16	**CCHEN**	**4.53**	**157**			**Pn**	**04 00 42.3**	**+1.6**
MT03	**Universidad Ad**	**4.59**	**157**			**Pn**	**04 00 43.3**	**+1.7**
MT15	**Las Vizcachas**	**4.59**	**157**	*e*P		**Pn**	**04 00 45.1**	**+2.2**
MT09	**Talagante**	**4.71**	**163**			**Pn**	**04 00 44.7**	**+1.5**
MT09	**Talagante**	**4.71**	**163**	*i* P		**Pn**	**04 00 44.9**	**+1.6**
MT09				*i* S		**Sn**	**04 01 35.4**	**-2.6**
MT01	**Popeta**	**4.73**	**166**			**Pn**	**04 00 44.2**	**+0.8**
MT12	**Pirque**	**4.80**	**158**	⇑*i*	*P*	**Pn**	**04 00 46.3**	**+1.9**
MT12				*i* S		**Sn**	**04 01 37.4**	**-2.6**
MT13	**San Alfonso**	**4.89**	**156**			**Pn**	**04 00 47.8**	**+2.0**
GO02	**Mina Guanaco**	**4.93**	**34**	Pn		**Pn**	**04 00 46.5**	**+0.1**
BO04	**La Punta**	**5.01**	**160**			**Pn**	**04 00 48.9**	**+1.5**
LMEL	**Las Melosas**	**5.02**	**156**			**Pn**	**04 00 49.9**	**+2.3**
PB14	**IPOC Station P**	**5.05**	**24**	Pn		**Pn**	**04 00 45.7**	**-2.5**
BO01	**Tunca**	**5.27**	**166**			**Pn**	**04 00 52.1**	**+1.2**
BO02	**Sierra Bellavi**	**5.73**	**164**			**Pn**	**04 00 58.3**	**+1.1**
GO05	**Huala**	**5.75**	**174**	Pn		**Pn**	**04 00 57.5**	**0.0**
ML02	**Panimavida**	**6.55**	**171**	Pn		**Pn**	**04 01 09.4**	**+1.0**
PB15	**IPOC Station P**	**6.69**	**26**			**Pn**	**04 01 09.8**	**-0.8**
H03N1	**Juan Fernandez**	**6.76**	**231**	Pn		**Pn**	**04 01 10.2**	**-0.9**
	baz=110,slow=17							
H03N1				Sn		**Sn**	**04 02 20.4**	**-7.7**
	baz=181,slow=19							
H03N1				T		T	04 09 29.3	
	baz=51							
H03N2	**Juan Fernandez**	**6.78**	**231**	Pn		**Pn**	**04 01 10.2**	**-1.0**
	baz=110,slow=17							
H03N2				Sn		**Sn**	**04 02 21.1**	**-7.2**
	baz=181,slow=19							
H03N2				T		T	04 09 53.3	
	baz=51,slow=74							
H03N3	**Juan Fernandez**	**6.78**	**231**	Pn		**Pn**	**04 01 09.8**	**-1.6**
	baz=110,slow=17							
H03N3				Sn		Sn	04 02 19.3	-9.2
	baz=181,slow=19							
H03N3				T		T	04 10 04.6	
	baz=51,slow=74							
H03S3	**Juan Fernandez**	**7.00**	**228**	Pn		**Pn**	**04 01 12.8**	**-1.5**
	baz=146,slow=71							
H03S3				Sn		Sn	04 02 23.4	-10
H03S1	**Juan Fernandez**	**7.00**	**228**	Pn		**Pn**	**04 01 10.6**	**-3.8**
	baz=146,slow=71							
H03S1				Sn		Sn	04 02 22.3	-12
H03S2	**Juan Fernandez**	**7.01**	**228**	Pn		**Pn**	**04 01 13.9**	**-0.6**
	baz=146,slow=71							
H03S2				Sn		Sn	04 02 22.3	-12
PB06	**IPOC Station P**	**7.11**	**24**			**Pn**	**04 01 14.6**	**-1.7**
PB04	**IPOC Station P**	**7.28**	**19**	Pn		**Pn**	**04 01 15.9**	**-2.8**
LVC	**Limon Verde**	**7.45**	**28**	Pn		**Pn**	**04 01 20.9**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=162,slow=9.9,SNR=18							
LVC				Sn		**Sn**	**04 02 41.5**	**-4.4**
	comp=Z,1.4nm,0.3s,baz=351,slow=17,SNR=3.6							
LVC				LR		LR	04 03 59.4	
	comp=Z,64nm,19.6s,baz=200,slow=36							
	comp=Z,2.6nm,0.2s							
BI05	**Punta Hualpn**	**7.46**	**183**	Pn		**Pn**	**04 01 20.8**	**-0.2**
PB07	**IPOC Station P**	**7.93**	**19**			**Pn**	**04 01 25.0**	**-2.6**
PB09	**IPOC Station P**	**8.06**	**23**			**Pn**	**04 01 28.0**	**-1.5**
PB02	**IPOC Station P**	**8.31**	**18**			**Pn**	**04 01 30.8**	**-1.9**
PB01	**IPOC Station P**	**8.69**	**20**			**Pn**	**04 01 35.5**	**-2.5**
GO06	**Curarrehue**	**10.33**	**175**			**Pn**	**04 02 01.3**	**+1.0**
LR03	**Panguipulli**	**10.33**	**179**			**Pn**	**04 02 01.3**	**+1.0**
PLCA	**Paso Flores**	**11.56**	**172**			**Pn**	**04 02 18.1**	**+1.0**
PLCA	**Paso Flores**	**11.56**	**172**	Pn		**Pn**	**04 02 18.9**	**+1.7**
	comp=Z,1.4nm,0.3s,baz=336,slow=10,SNR=60							
	comp=Z,4.4nm,0.5s							
LPAZ	**La Paz**	**13.59**	**19**			**Pn**	**04 02 43.5**	**-2.0**
CPUP	**Villa Florida**	**13.89**	**81**	LR		LR	04 08 36.9	
	comp=Z,211nm,18.0s,baz=253,slow=39							
SIV	**San Ignacio**	**16.99**	**41**	Pn		**P**	**04 03 31.8**	**0.0**
	baz=229,slow=10,SNR=33							
	comp=Z,11nm,0.9s							
NNA	**Nana**	**17.64**	**346**	LR		LR	04 08 04.0	
	comp=Z,49nm,21.5s,baz=142,slow=29							
VILB	**Vilhena**	**19.95**	**38**	P		**Pn**	**04 04 04.4**	**-1.6**
VILB				IAmb		IAmb	04 04 08.4	
	comp=Z,12nm,0.8s							
ETMB	**Extrema**	**20.28**	**19**	P		Pn	04 04 08.2	-1.7
CZSB	**Cruzeiro do Su**	**21.43**	**360**	P		**P**	**04 04 18.9**	**-1.5**
CZSB				IAmb		IAmb	04 04 24.0	
	comp=Z,37nm,0.9s							
SAML	**Samuel**	**22.10**	**26**	P		**P**	**04 04 27.1**	**-0.4**
ATAH	**Atahualpa**	**22.68**	**345**	LR		LR	04 10 30.8	
	comp=Z,18nm,21.9s,

	comp=Z,3.3nm,0.9s								
ECSD	**EROS Data Cent**	**75.90**	**342**	P	P	04 11 20.7	+2.1		
ECSD				IAmb	IAmb	04 11 21.3			
	comp=Z,6.9nm,0.8s								
RWWY	**Rawlins**	**77.49**	**334**	P	**P**	**04 11 29.7**	**+1.8**		
RWWY				IAmb	IAmb	04 11 31.0			
	comp=Z,6.7nm,1.0s								
PDAR	**Pinedale Array**	**79.32**	**333**	P	P	04 11 40.4	+2.4		
	comp=Z,0.6nm,0.6s,baz=135,slow=6.9,SNR=7.2								
	comp=Z,0.6nm,0.6s								
NVAR	**Mina Array Bea**	**79.71**	**325**	P	P	04 11 43.0	+2.8		
	comp=Z,1.1nm,0.8s,baz=162,slow=7.6,SNR=7.2								
	comp=Z,1.1nm,0.8s								
ULM	**Lac du Bonnet**	**81.81**	**345**	P	P	04 11 53.1	+2.3		
	comp=Z,4.4nm,1.0s,baz=185,slow=6.1,SNR=6.7								
	comp=Z,4.4nm,1.0s								
TOA0	**Torodi Ar. Sit**	**83.14**	**71**	P	**P**	**04 11 59.8**	**+1.2**		
TOA0				IAmb	IAmb	04 12 01.8			
	comp=Z,2.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**83.14**	**71**	P	P	04 12 01.1	+2.5		
	comp=Z,2.3nm,0.8s,baz=275,slow=3.5,SNR=13								
	comp=Z,2.3nm,0.8s								
LSZ	**Lusaka**	**91.80**	**109**	LR	LR	04 51 23.1			
	comp=Z,42nm,18.2s,baz=148,slow=34								
YKA	**Yellowknife Ar**	**97.42**	**342**	P	Pdif	04 13 07.0	+1.8		
	comp=Z,0.5nm,0.9s,baz=138,slow=4.4,SNR=3.5								
	comp=Z,0.5nm,0.9s								
WRA	**Warramunga Arr**	**124.56**	**211**	PKP	**PKiKP**	**04 18 33.5**	**+0.8**		
	comp=Z,0.7nm,0.8s,baz=180,slow=1.6,SNR=2.8								
SEY	**Seymchan**	**135.64**	**332**	PKP	**PKiKP**	**04 18 54.6**	**+1.2**		
	comp=Z,0.9nm,0.2s,baz=68,slow=2.2,SNR=4.8								
KURBB	**Kurchatov Arra**	**149.62**	**37**	PKPbc	**PKPab**	**04 19 24.1**	**-2.6**		
	comp=Z,2.0nm,0.6s,baz=303,slow=3.1,SNR=17								
ZALV	**Zalesovo Beam**	**150.40**	**27**	PKP	**PKPbc**	**04 19 19.8**	**-3.5**		
	comp=Z,1.9nm,0.8s,baz=320,slow=3.8,SNR=4.2								
ZALV				PKPbc	sPKPbc	04 19 25.5	-0.1		
	comp=Z,8.8nm,0.7s,baz=270,slow=3.5,SNR=21								
MKAR	**Makanchi Array**	**153.81**	**41**	PKPbc	**PKiKP**	**04 19 33.5**	**+2.1**		
	comp=Z,1.3nm,0.9s,baz=311,slow=1.7,SNR=11								

IDC ***20*** *04:01:55.6±3.5, 36°.21N×70°.12E, h209km±34km, mb3.2/4, mbtmp3.9/10, MS2.9/1, Error ellipse: s-maj=30.4km s-min=22.1km az=174.0*

NNC ***20*** *04:02:01.1±11.0, 37°.21N×69°.91E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=82.7km s-min=74.7km az=8.0*

ISC 20 04:01:57.4±1.1, 36°.6N±0°.1×70°.1E±0°.1, h213km, n15, σ2°29/18, mb3.4/4, 6C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.54**	**2**	⇑Pn	**Pn**	**04 03 32.9**	**+1.2**
	2.0nm,0.3s,baz=191,slow=13,SNR=5.3						
KK31				⇑Pg		04 03 45.3	
	1.1nm,0.3s						
KK31				⇑Sn	**S**	**04 04 42.1**	**-4.4**
	1.4nm,0.4s,baz=193,slow=23,SNR=4.0						
KK31				⇑Lg	Lg	04 05 07.8	
	2.7nm,0.4s						
AAK	**Ala-Archa**	**6.94**	**28**	P	**Pn**	**04 03 39.3**	**+2.4**
	8.8nm,0.4s,baz=196,slow=7.3,SNR=26						
AAK				S	**S**	**04 04 56.2**	**+0.1**
	3.6nm,0.4s,baz=19,slow=20,SNR=9.2						
CHMS	**Chumysh**	**7.34**	**28**	⇑Pn	**Pn**	**04 03 43.4**	**+1.3**
	2.5nm,0.4s						
CHMS				⇓Sn	**S**	**04 05 02.8**	**-2.7**
	4.2nm,0.5s						
TKM2	**Tokmak 2**	**7.61**	**32**	Pn	**Pn**	**04 03 46.4**	**+0.6**
	1.2nm,0.5s						
TKM2				⇑Sn	**S**	**04 05 07.8**	**-4.3**
	2.5nm,0.7s						
GEYT	**Alibeck**	**9.68**	**282**	P	**Pn**	**04 04 11.8**	**-0.5**
	2.9nm,0.6s,baz=92,slow=16,SNR=4.2						
MKAR	**Makanchi Array**	**13.66**	**38**	P	**Pn**	**04 05 04.0**	**+1.5**
	0.6nm,0.6s,baz=221,slow=15,SNR=8.7						
KURBB	**Kurchatov Arra**	**15.30**	**21**	P	**Pn**	**04 05 23.0**	**+0.6**
	0.7nm,0.6s,baz=213,slow=11,SNR=4.1						
AKTO	**Aktyubinsk**	**16.38**	**332**	P	**Pn**	**04 05 36.2**	**+0.7**
	2.1nm,0.4s,baz=136,slow=11,SNR=11						
BVAR	**Borovoye Array**	**16.46**	**1**	P	**Pn**	**04 05 37.6**	**+1.2**
	3.0nm,0.5s,baz=171,slow=12,SNR=16						
WSAR	**Wadi Sarin**	**16.59**	**220**	LR	LR	04 13 51.4	
	comp=Z,46nm,19.7s,baz=255,slow=44						
ZALV	**Zalesovo Beam**	**20.15**	**26**	P	**P**	**04 06 17.3**	**+2.1**
	0.6nm,0.3s,baz=213,slow=12,SNR=2.5						
	0.6nm,0.3s						
SONM	**Songino Array**	**28.87**	**56**	P	**P**	**04 07 37.7**	**+1.5**
	0.3nm,0.5s,baz=260,slow=8.2,SNR=3.5						
	0.3nm,0.5s						
HFS	**Hagfors**	**42.59**	**322**	P	**P**	**04 09 32.8**	**+0.7**
	11nm,1.3s,baz=99,slow=9.3,SNR=1.7						
	11nm,1.3s						
WRA	**Warramunga Arr**	**82.62**	**121**	P	**P**	**04 13 54.5**	**-2.5**
	0.4nm,0.6s,baz=325,slow=4.8,SNR=4.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**84.86**	**124**	P	**P**	**04 14 05.9**	**-2.4**
	0.4nm,0.6s,baz=316,slow=5.2,SNR=3.4						

AEIC ***20*** *04:10:11.7±2.4, 52°.22N±0°.10×170°.5W±0°.1, h50km±6km, Error ellipse: s-maj=15.7km s-min=6.8km az=152.0*

NEIC ***20*** *04:10:13.2±2.0, 52°.19N±0°.09×170°.4W±0°.1, h41km±8km, mb3.7/32, ML3.5/6, ML3.3(AEIC), Error ellipse: s-maj=14.8km s-min=6.3km az=149.0*

IDC ***20*** *04:10:15.5±4.7, 52°.33N×168°.75W, h0km, mb3.4/2, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=87.4km s-min=39.9km az=109.0*

ISC 20 04:10:11.6±0.9, 52°.1N±0°.1×170°.40W±0°.06, h31km, n74, σ1°23/71, mb3.7/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**0.76**	**24**		**Pn**	**04 10 25.9**	**-0.2**
CLES					IAML	04 10 38.2	
	comp=E,7μm,0.2s						
CLES	**Cleveland East**	**0.76**	**24**		**Sn**	**04 10 36.9**	**+0.3**
CLCO	**Concord Point,**	**0.78**	**32**		**Pn**	**04 10 26.0**	**-0.4**
CLCO					**Sn**	**04 10 38.1**	**+1.1**
NIKH	**Nikolski High**	**1.27**	**48**		**Pn**	**04 10 32.5**	**-0.6**
NIKH					**Sn**	**04 10 48.6**	**-0.5**
NIKH	**Nikolski High**	**1.27**	**48**	P	**Pn**	**04 10 32.5**	**-0.6**
OKNC	**Okmok New Cone**	**1.92**	**45**		**Pn**	**04 10 42.4**	**+0.3**
OKER	**Okmok East Rim**	**1.95**	**46**		**Pn**	**04 10 43.2**	**+0.6**
OKFG	**Magazine Ridge**	**1.98**	**49**		**Pn**	**04 10 43.5**	**+0.5**
OKFG					**Sn**	**04 11 08.3**	**+1.5**
KOFP	**Korovin Flat P**	**2.28**	**275**		**Pn**	**04 10 46.6**	**-0.5**
ATKA	**Atka Island**	**2.34**	**273**		**Pn**	**04 10 47.5**	**-0.4**
ATKA	**Atka Island**	**2.34**	**273**	IAML		04 11 16.3	
	comp=N,112nm,1.2s						
ATKA	**Atka Island**	**2.34**	**273**	P	**Pn**	**04 10 46.7**	**-1.2**
MAPS	**Pakushin South**	**2.68**	**50**		**Pn**	**04 10 53.2**	**+0.6**
MSW	**Makushin Switc**	**2.82**	**49**		**Pn**	**04 10 55.3**	**+0.7**
MNAT	**Makushin Natee**	**2.85**	**51**		**Pn**	**04 10 55.5**	**+0.6**
MNAT					**Sn**	**04 11 30.1**	**+2.0**
UNV	**Unalaska Valle**	**2.92**	**52**		**Pn**	**04 10 56.5**	**+0.7**
UNV	**Unalaska Valle**	**2.92**	**52**	P	**Pn**	**04 10 56.4**	**+0.6**
ZRO	**Akutan Zero**	**3.31**	**52**		**Pn**	**04 11 02.6**	**+1.4**
AKBBA	**Akutan Broad B**	**3.34**	**52**		**Pn**	**04 11 02.7**	**+1.1**
AKUT	**Akutan**	**3.44**	**52**	P	**Pn**	**04 11 05.5**	**+2.6**
ADK	**Adak**	**3.89**	**269**	Pn	**Pn**	**04 11 10.6**	**+1.4**
ADK	**Adak**	**3.89**	**269**	IAML		04 11 55.6	
	comp=N,38nm,1.1s						
ADK				IAML		04 12 07.5	
	comp=N,78nm,0.8s						
ADK	**Adak**	**3.89**	**269**	P	**Pn**	**04 11 10.8**	**+1.6**
KIWB	**Kanaga Island**	**4.18**	**269**	Pn	**Pn**	**04 11 14.8**	**+1.6**
SPIA	**Saint Paul Isl**	**5.06**	**1**	P	**Pn**	**04 11 28.0**	**+2.8**
CHGN	**Chignik**	**8.17**	**55**	Pn	**Pn**	**04 12 09.4**	**+1.5**
O16K	**Kokwok River B**	**10.17**	**38**	Pn	**Pn**	**04 12 36.8**	**+1.5**
KDAK	**Kodiak Island**	**11.69**	**54**	Pn	**Pn**	**04 12 56.4**	**+0.4**
KDAK	**Kodiak Island**	**11.69**	**54**	Pn	**Pn**	**04 12 54.4**	**-1.6**
	comp=N,0.4nm,0.3s,baz=234,slow=9.9,SNR=11						
KDAK				Sn	Sn	04 14 53.9	-11
	comp=N,0.1nm,0.3s,baz=136,slow=23,SNR=1.7						
	comp=N,4.3nm,0.9s						
K17K	**Iditarod**	**12.43**	**27**	Pn	**Pn**	**04 13 08.0**	**+1.9**
L18K	**Granite Mounta**	**12.52**	**31**	Pn	**Pn**	**04 13 08.1**	**+0.7**
M19K	**Big River Lodg**	**13.07**	**35**	Pn	**Pn**	**04 13 14.7**	**-0.2**
CAST	**Castle Rocks**	**14.87**	**33**	Pn	**Pn**	**04 13 39.8**	**+0.4**
GHO	**Glory Hole Cre**	**15.11**	**42**	Pn	**Pn**	**04 13 43.7**	**+1.1**
GHO				IAmb	IAmb	04 14 22.3	
	comp=Z,13nm,1.4s						
BPAW	**Bear Paw Mtn.**	**15.69**	**33**	Pn	**Pn**	**04 13 51.3**	**+1.1**
BPAW				IAmb	IAmb	04 14 09.3	
	comp=Z,7.8nm,1.4s						
SCM	**Sheep Creek Mo**	**15.80**	**43**	Pn	**Pn**	**04 13 52.2**	**+0.6**
SCM				IAmb	IAmb	04 14 09.3	
	comp=Z,10nm,1.3s						
BERG	**Berg Lake**	**16.88**	**50**	Pn	**Pn**	**04 14 04.2**	**-1.0**
D19K	**Kuna River**	**17.44**	**15**		**P**	**04 14 13.1**	**-0.2**
D19K				IAmb	IAmb	04 14 25.9	
	comp=Z,9.2nm,1.4s						
ILAR	**Eielson Array**	**17.51**	**35**	Pn	**Pn**	**04 14 10.3**	**-2.7**
	baz=229,slow=10.0,SNR=6.7						
	comp=Z,1.6nm,1.4s						
M26K	**Nabesna, AK**	**17.89**	**44**		**Pn**	**04 14 17.2**	**-0.5**
J25K	**Salcha River,**	**17.96**	**36**	Pn	**Pn**	**04 14 16.8**	**-1.9**
G24K	**Hadweenzic Riv**	**18.51**	**29**	P	**Pn**	**04 14 25.5**	**+0.2**
G24K				IAmb	IAmb	04 14 33.6	
	comp=Z,5.5nm,1.5s						
J26L	**Joseph Creek**	**18.57**	**38**	P	**P**	**04 14 23.5**	**-2.4**
D22K	**Ayikyak River**	**18.79**	**20**	Pn	**Pn**	**04 14 29.6**	**+0.9**
D22K				IAmb	IAmb	04 14 56.5	
	comp=Z,7.2nm,1.4s						
B21K	**Ikpikpuk River**	**19.04**	**17**	P	**Pn**	**04 14 31.3**	**-0.3**
O29M	**Mount Kennedy**	**19.33**	**53**	Pn	**Pn**	**04 14 36.3**	**+0.9**
O29M				IAmb	IAmb	04 14 38.0	
	comp=Z,3.1nm,0.8s						
EGAK	**Eagle**	**19.62**	**39**	P	**P**	**04 14 36.7**	**-0.4**
EGAK				IAmb	IAmb	04 14 47.0	
	comp=Z,5.0nm,1.3s						
P29M	**Windy Craggy**	**19.63**	**55**	Pn	**Pn**	**04 14 39.3**	**+0.5**
P29M				IAmb	IAmb	04 14 41.5	
	comp=Z,7.3nm,1.2s						
BMAR	**Burnt Mountain**	**19.85**	**30**	P	**P**	**04 14 39.5**	**-0.2**
HYT	**Haines Junctio**	**19.95**	**51**	P	**Pn**	**04 14 42.2**	**-0.4**
DAWY	**Dawson**	**20.03**	**41**	P	**P**	**04 14 42.0**	**+0.3**
N30M	**Aishikik Lake**	**20.27**	**50**	P	Pn	04 14 45.7	-0.8
N30M				IAmb	IAmb	04 15 27.2	
	comp=Z,4.2nm,1.2s						
I28M	**Miner Creek**	**20.38**	**37**	P	**P**	**04 14 43.1**	**-2.5**
K29M	**Barlow Dome**	**20.73**	**43**	Pn	Pn	04 14 51.2	-0.5
K29M				IAmb	IAmb	04 15 19.9	
	comp=Z,4.4nm,1.4s						
SKAG	**Skagway**	**20.83**	**56**	P	**P**	**04 14 51.1**	**+0.8**
H29M	**Whitestone**	**21.30**	**36**	P	**P**	**04 14 53.6**	**-1.7**
H29M				IAmb	IAmb	04 15 03.8	
	comp=Z,3.7nm,1.0s						
J30M	**Hart River**	**21.46**	**41**	P	**P**	**04 14 56.5**	**-0.6**
J30M				IAmb	IAmb	04 14 57.0	
	comp=Z,3.4nm,1.4s						
I30M	**Mount Dempster**	**21.66**	**40**	P	**P**	**04 14 56.5**	**-2.8**
P33M	**Teslin, Yukon**	**22.16**	**54**	P	**P**	**04 15 06.2**	**+1.6**
P33M				IAmb	IAmb	04 15 20.8	
	comp=Z,3.6nm,1.2s						
Q32M	**Nakina River**	**22.38**	**57**	P	**P**	**04 15 09.1**	**+1.9**
E29M	**Blow River**	**22.49**	**31**	P	**P**	**04 15 08.2**	**+0.2**
E29M				IAmb	IAmb	04 15 30.1	
	comp=Z,5.3nm,1.4s						
G31M	**Satah River**	**23.09**	**36**	P	**P**	**04 15 12.9**	**-1.4**
G31M				IAmb	IAmb	04 15 32.0	
	comp=Z,5.1nm,1.4s						
LYMT	**Lyon Mountain**	**37.17**	**74**	P	**P**	**04 17 20.2**	**+0.4**
H11S1	**WAKE ISLAND Hy**	**38.07**	**217**	T	T	04 58 17.9	
	baz=22,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**38.08**	**217**	T	T	04 58 22.7	
	baz=22,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**38.08**	**217**	T	T	04 58 23.1	
	baz=22,slow=76,SNR=20						
BOZ	**Bozeman (W)**	**38.27**	**76**	P	**P**	**04 17 29.6**	**+0.7**
PDAR	**Pinedale Array**	**41.07**	**78**	P	**P**	**04 17 53.0**	**+0.6**
PDAR	**Pinedale Array**	**41.07**	**78**	P	**P**	**04 17 52.9**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=306,slow=4.4,SNR=8.1						
	comp=Z,0.7nm,0.6s						
ECSD	**EROS Data Cent**	**48.15**	**69**	P	**P**	**04 18 47.6**	**-1.0**
TXAR	**Lajitas Array**	**53.39**	**88**	P	**P**	**04 19 28.5**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=295,slow=4.9,SNR=2.1						
	comp=Z,0.3nm,0.9s						
P40A	**Paris**	**53.46**	**71**	P	**P**	**04 19 27.2**	**-1.4**
SCHQ	**Schefferville**	**56.04**	**43**	P	**P**	**04 19 46.5**	**-0.5**
KURK	**Kurchatov**	**62.13**	**318**	P	**P**	**04 20 28.6**	**-0.6**

MOS ***20*** *04:24:58.9, 41°.87N×45°.21E, h23km, MPVA3.2*

AZER ***20*** *04:24:58.5, 41°.73N×45°.29E, h32km, ml2.1*

DRS ***20*** *04:25:02.4, 41°.81N×45°.12E, h20km*

ISC 20 04:24:58.5±1.2, 41°.73N±0°.03×45°.15E±0°.03, h16km±11km, n18, σ0°51/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QZX	**Qazax, Azerbai**	**0.69**	**166**	P	**Pn**	**04 25 13.4**	**-0.2**
QZX				S	**Sn**	**04 25 24.5**	**+0.5**
GUDG	**Gudauri**	**0.89**	**326**	*e*Pg	**Pb**	**04 25 15.0**	**-0.7**
GUDG				*e*Sg	**Sb**	**04 25 27.5**	**0.0**
GDB	**GEDABAY**	**1.10**	**155**	P	**Pg**	**04 25 19.9**	**0.0**
GDB				S	**Sg**	**04 25 35.5**	**+1.2**
ZKTA	**Zakatala**	**1.11**	**94**	P	**Pn**	**04 25 18.9**	**-0.4**
ZKTA				S	**Sg**	**04 25 34.4**	**+0.1**
LACR	**Lac**	**1.27**	**330**	*i* Pg	**Pn**	**04 25 21.7**	**0.0**
LACR				*e*Sg	**Sn**	**04 25 38.7**	**+0.1**
GANJ	**Ganja**	**1.40**	**140**	P	**Pb**	**04 25 24.1**	**-0.1**
GANJ				S	**Sg**	**04 25 43.3**	**-0.2**
ZEI	**Tsey**	**1.41**	**319**	*e*Pg	**Pb**	**04 25 24.4**	**-0.1**
ZEI				*e*Sg	**Sb**	**04 25 43.2**	**+0.8**
XNZR	**Khunzakh**	**1.42**	**54**	*e*Pg	**Pb**	**04 25 24.9**	**+0.2**
XNZR				*e*Sg	**Sb**	**04 25 42.7**	**+0.2**
GNBR	**Gunib**	**1.50**	**63**	*e*Pg	**Pb**	**04 25 26.1**	**0.0**
GNBR				*e*Sg	**Sb**	**04 25 45.0**	**0.0**
KMKR	**Kumukh**	**1.51**	**74**	*e*Pg	**Pb**	**04 25 26.6**	**+0.4**
KMKR				*e*Sg	**Sb**	**04 25 45.4**	**+0.1**
UNCR	**Uncukul**	**1.57**	**51**	*e*Pg	**Pb**	**04 25 27.4**	**+0.2**
UNCR				*e*Sg	**Sb**	**04 25 46.1**	**-0.8**
SEKA	**Sheki**	**1.62**	**108**	P	**Pb**	**04 25 27.4**	**-0.7**
SEKA				S	**Sb**	**04 25 49.2**	**+0.8**
ARKR	**Arakani**	**1.63**	**57**	*e*Pg	**Pb**	**04 25 28.4**	**+0.2**
ARKR				*e*Sg	**Sb**	**04 25 48.8**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.65**	**316**	*e*Pg	**Pb**	**04 25 28.7**	**0.0**
DIGR				*e*Sg	**Sg**	**04 25 51.1**	**-0.7**
MNGR	**Mingechevir, A**	**1.74**	**122**	P	**Pn**	**04 25 27.7**	**-0.4**
MNGR				S	**Sb**	**04 25 50.4**	**-1.3**
DBC	**Dubki**	**1.79**	**43**	*e*Pg	**Pb**	**04 25 30.7**	**-0.4**
DBC				*e*Sg	**Sb**	**04 25 53.5**	**+0.1**
LSNR	**Lesken**	**1.83**	**328**	*e*Pg	**Pb**	**04 25 31.7**	**0.0**
LSNR				*e*Sg	**Sb**	**04 25 55.1**	**+0.7**
AKT	**Akhty**	**1.95**	**96**	*e*Pg	**Pb**	**04 25 33.8**	**+0.1**
AKT				*e*Sg	**Sb**	**04 25 58.2**	**+0.4**

IDC ***20*** *04:42:02.5±0.9, 56°.41N×148°.84W, h0km, mb3.9/14, mbtmp4.0/20, ML3.9/6, MS3.6/50, Error ellipse: s-maj=22.8km s-min=12.8km az=31.0*

NEIC ***20*** *04:42:02.5±1.4, 56°.32N±0°.06×148°.78W±0°.09, h19km±5km, mb4.2/14, ML4.3/70, ML4.1(AEIC), Error ellipse: s-maj=9.3km s-min=7.3km az=158.0*

AEIC ***20*** *04:42:06.5±1.4, 56°.36N±0°.07×148°.80W±0°.08, h12km±5km, Error ellipse: s-maj=11.0km s-min=5.8km az=193.0*

ISC 20 04:42:02.6±0.6, 56°.44N±0°.06×148°.75W±0°.04, h10km, n385, σ1°05/325, mb4.2/23, MS3.6/45, 1D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.49**	**304**		**Pn**	**04 42 42.4**	**-0.8**
KDAK				Sn	**Sn**	**04 43 09.7**	**-3.9**
KDAK	**Kodiak Island**	**2.49**	**304**	Pn	**Pn**	**04 42 42.3**	**-0.8**
	21nm,0.3s,baz=132,slow=5.1,SNR=538						
KDAK				Sn	**Sn**	**04 43 10.5**	**-3.0**
	51nm,0.3s,baz=150,slow=23,SNR=7.1						
KDAK				LR	LR	04 43 56.2	
	comp=Z,2μm,19.2s,baz=156,slow=46						
	54nm,0.3s						
OHAK	**Old Harbor**	**2.62**	**289**	Pn	Pn	04 42 43.3	-1.6
OHAK				Sn	**Sn**	**04 43 11.5**	**-5.2**
OHAK	**Old Harbor**	**2.62**	**289**	P	Pn	04 42 43.4	-1.5
OHAK	**Old Harbor**	**2.62**	**289**	P	Pn	04 42 43.3	-1.6
	baz=108						
OHAK				S	**Sn**	**04 43 12.1**	**-4.6**
	baz=108						
SYI	**Shuyak Island**	**2.94**	**319**		**Pn**	**04 42 49.0**	**-0.3**
SYI	**Shuyak Island**	**2.94**	**319**		**Sn**	**04 43 22.8**	**-1.8**
SYI	**Shuyak Island**	**2.94**	**319**	IAML		04 43 24.7	
	comp=N,541nm,0.4s						
SYI				IAML		04 43 25.5	
	comp=E,757nm,0.4s						
Q20K	**Shuyak Island**	**2.94**	**319**	P	**Pn**	**04 42 49.0**	**-0.3**
	baz=138						
Q20K				S	**Sn**	**04 43 22.9**	**-1.7**
	baz=138						
Q23K	**Middleton Isla**	**3.26**	**22**		**Pn**	**04 42 53.4**	**-0.3**
Q23K	**Middleton Isla**	**3.26**	**22**	P	**Pn**	**04 42 53.4**	**-0.3**
	baz=204						
MID	**Middleton Isla**	**3.26**	**22**		**Pn**	**04 42 53.4**	**-0.3**
MID	**Middleton Isla**	**3.26**	**22**		**Sn**	**04 43 29.7**	**-2.9**
MID	**Middleton Isla**	**3.26**	**22**	P	**Pn**	**04 42 53.6**	**-0.2**
CNPM	**China Poot**	**3.37**	**338**	Pn	**Pn**	**04 42 55.1**	**-0.2**
CNPM				IAML		04 43 41.6	
	comp=E,438nm,0.8s						
CNPM	**China Poot**	**3.37**	**338**		**Sn**	**04 43 33.6**	**-1.8**
BRSE	**Bradley Lake S**	**3.48**	**343**		**Pn**	**04 42 56.4**	**-0.4**
BRSE	**Bradley Lake S**	**3.48**	**343**	P	**Pn**	**04 42 56.5**	**-0.4**
	baz=162						
BRLK	**Bradley Lake**	**3.53**	**342**	Pn	**Pn**	**04 42 56.5**	**-1.0**
BRLK				IAML		04 43 42.1	
	comp=E,378nm,0.6s						
BRLK	**Bradley Lake**	**3.53**	**342**		**Sn**	**04 43 37.5**	**-1.7**
HOM	**Homer**	**3.58**	**336**		**Pn**	**04 42 58.4**	**+0.3**
HOM					**Sn**	**04 43 39.1**	**-1.3**
HOM	**Homer**	**3.58**	**336**	IAML		04 43 55.6	
	comp=N,1μm,0.8s						
HOM	**Homer**	**3.58**	**336**	P	**Pn**	**04 42 58.4**	**+0.3**
	baz=154						
HOM				S	**Sn**	**04 43 39.1**	**-1.3**
	baz=154						
Q19K	**Cape Douglas,**	**3.63**	**316**		**Pn**	**04 42 59.2**	**+0.3**
Q19K	**Cape Douglas,**	**3.63**	**316**	IAML		04 43 55.6	
	comp=E,999nm,1.0s						
Q19K				IAML		04 44 03.7	
	comp=N,861nm,0.8s						
Q19K	**Cape Douglas,**	**3.63**	**316**	P	**Pn**	**04 42 59.0**	**+0.2**
	baz=133						
P23K	**Montague Islan**	**3.64**	**11**		**Pn**	**04 42 58.8**	**-0.2**
P23K	**Montague Islan**	**3.64**	**11**	P	**Pn**	**04 42 58.8**	**-0.2**
	baz=192						
SEW	**Seward**	**3.70**	**355**		**Pn**	**04 42 59.3**	**-0.4**
SEW	**Seward**	**3.70**	**355**	P	**Pn**	**04 42 59.5**	**-0.3**
	baz=174						
KAPH	**Katmai Pasha**	**3.72**	**308**		**Pn**	**04 43 00.5**	**+0.4**
KAPH					**Sn**	**04 43 41.8**	**-2.1**
AU22	**Augustine Moun**	**3.84**	**322**		**Pn**	**04 43 02.0**	**+0.4**
AUCH	**Augustine Cone**	**3.86**	**321**		**Pn**	**04 43 02.4**	**+0.3**
AUL	**Augustine Lava**	**3.87**	**322**		**Pn**	**04 43 02.4**	**+0.2**
ACHA	**Angle Creek He**	**3.99**	**299**		**Pn**	**04 43 04.0**	**+0.2**
P19K	**Oil Pt**	**4.01**	**325**		**Pn**	**04 43 04.2**	**+0.2**
P19K	**Oil Pt**	**4.01**	**325**	IAML		04 43 55.7	
	comp=N,714nm,0.6s						
P19K	**Oil Pt**	**4.01**	**325**	P	**Pn**	**04 43 04.5**	**+0.4**
	baz=143						
KAHC	**Katmai Hardscr**	**4.04**	**306**	P	**Pn**	**04 43 04.7**	**+0.2**
	baz=122						
ANCK	**Angle Creek**	**4.06**	**299**		**Pn**	**04 43 05.0**	**+0.2**
O22K	**Cooper Landing**	**4.09**	**353**		**Pn**	**04 43 04.4**	**-0.7**
O22K	**Cooper Landing**	**4.09**	**353**	P	**Pn**	**04 43 05.0**	**-0.2**
	baz=173						
HIN	**Hinchinbrook I**	**4.14**	**16**		**Pn**	**04 43 06.0**	**+0.1**
HIN	**Hinchinbrook I**	**4.14**	**16**	IAML		04 43 54.5	
	comp=N,518nm,0.6s						
HIN				IAML		04 43 54.9	
	comp=E,402nm,0.7s						
KAIM	**Kayak Island**	**4.18**	**31**		**Pn**	**04 43 06.5**	**0.0**
KAIM	**Kayak Island**	**4.18**	**31**	IAML		04 44 02.0	
	comp=N,456nm,0.4s						
KAIM				IAML		04 44 05.5	
	comp=E,412nm,0.8s						
KAIM	**Kayak Island**	**4.18**	**31**	P	**Pn**	**04 43 06.5**	**0.0**
	baz=215						
O20K	**Slope Mountain**	**4.19**	**332**		**Pn**	**04 43 06.2**	**-0.4**
O20K	**Slope Mountain**	**4.19**	**332**	P	**Pn**	**04 43 06.2**	**-0.4**
	baz=150						
IVE	**Iliamna Volcan**	**4.24**	**330**		**Pn**	**04 43 06.7**	**-0.6**
ILSW	**Iliamna Southw**	**4.25**	**329**		**Pn**	**04 43

SUA Susitna One 5.15 349 P Pn 04 43 19.5 -0.3
baz=168
SPCG Spurr Capps Gl 5.16 342 Pn 04 43 20.2 +0.3
BARK Barkley Ridge 5.16 37 Pn 04 43 20.3 +0.3
PMR Palmer 5.18 358 Pn 04 43 19.9 -0.1
PMR IAML 04 44 22.6
comp=E,116nm,0.6s
PMR Palmer 5.18 358 P Pn 04 43 20.9 +0.9
MESA MESA 5.19 41 Pn 04 43 20.3 -0.1
MESA IAML 04 44 23.2
comp=N,167nm,0.6s
MESA IAML 04 44 26.5
comp=E,131nm,0.7s
CRQM Cirque 5.23 32 Pn 04 43 21.3 +0.3
CRQM IAML 04 44 20.8
comp=N,211nm,0.6s
CRQM IAML 04 44 29.4
comp=E,180nm,0.7s
CRQE Cirque 5.24 32 P Pn 04 43 21.4 +0.3
baz=216
KLU Klutina 5.28 15 Pn 04 43 21.7 +0.2
KLU Klutina 5.28 15 P Pn 04 43 21.9 +0.4
baz=197
N19K Bonanza Creek 5.32 328 Pn 04 43 21.4 -0.7
N19K Bonanza Creek 5.32 328 P Pn 04 43 21.4 -0.7
baz=144
TGL Tana Glacier 5.32 33 Pn 04 43 22.4 +0.3
GHO Glory Hole Cre 5.35 359 Pn 04 43 23.1 +0.5
ISLE Juniper Island 5.36 36 Pn 04 43 22.7 0.0
CHGN Chignik 5.38 273 Pn Pn 04 43 21.9 -0.9
CHGN IAML 04 44 23.6
comp=N,162nm,0.4s
CHGN IAML 04 44 27.7
comp=E,146nm,0.7s
M22K Willow 5.38 353 Pn 04 43 22.7 -0.1
SML Sawmill 5.39 2 Pn Pn 04 43 23.3 +0.2
SML Sawmill 5.39 2 P Pn 04 43 23.7 +0.7
baz=183
M23K Glacier View 5.40 5 Pn 04 43 23.8 +0.6
M23K Glacier View 5.40 5 P Pn 04 43 23.8 +0.6
baz=186
SCM Sheep Creek Mo 5.46 7 Pn 04 43 24.6 +0.5
SCM Sheep Creek Mo 5.46 7 P Pn 04 43 24.6 +0.5
baz=188
VRDI Verde Repeater 5.54 28 Pn Pn 04 43 25.2 +0.1
O17K Koliganek Bris 5.55 311 Pn 04 43 24.4 -0.7
O17K Koliganek Bris 5.55 311 P Pn 04 43 24.4 -0.7
baz=124
P16K Nushagak River 5.59 302 P Pn 04 43 26.1 +0.3
baz=115
SAMH Samovar Hills 5.60 45 Pn 04 43 26.7 +0.7
N25K Chitina, Valde 5.61 21 Pn Pn 04 43 26.7 +0.6
N25K Chitina, Valde 5.61 21 P Pn 04 43 26.6 +0.5
baz=204
GLB Gilahina Butte 5.63 25 Pn Pn 04 43 26.6 +0.2
TABL Table Mountain 5.66 42 Pn 04 43 27.4 +0.5
N18K Kilae Creek 5.66 322 Pn 04 43 25.9 -0.8
N18K Kilae Creek 5.66 322 P Pn 04 43 25.9 -0.8
baz=136
SKT Skwentna 5.74 347 Pn 04 43 27.9 0.0
SKT Skwentna 5.74 347 P Pn 04 43 27.9 0.0
baz=165
MCARA McCarthy VSAT 5.78 28 P Pn 04 43 28.8 +0.4
baz=213
PINM Pinnacle 5.79 47 P Pn 04 43 28.9 +0.3
baz=234
M24K Tolsona, Glenn 5.84 12 Pn 04 43 30.0 +0.8
M24K Tolsona, Glenn 5.84 12 P Pn 04 43 30.0 +0.8
baz=194
SVW2 Sparrevohn 5.87 326 Pn 04 43 28.7 -0.9
SVW2 Sparrevohn 5.87 326 P Pn 04 43 28.7 -0.9
O16K Kokwok River B 5.89 306 Pn 04 43 29.6 -0.2
O16K Kokwok River B 5.89 306 P Pn 04 43 29.6 -0.2
baz=119
M20K Styx River 5.91 339 Pn 04 43 29.7 -0.5
M20K Styx River 5.91 339 P Pn 04 43 29.7 -0.5
baz=156
PNL Peninsula 5.93 53 P Pn 04 43 31.3 +0.9
PNL Peninsula 5.93 53 P Pn 04 43 30.6 +0.2
baz=240
CTG Chitna Glacier 5.96 37 P Pn 04 43 31.3 +0.4
baz=223
BCPM Bancas Point 5.97 50 Pn 04 43 31.5 +0.6
LOGN Logan Glacier 5.97 39 Pn 04 43 31.4 +0.2
VNFG Fog Glacier, M 6.01 273 Pn 04 43 31.5 -0.1
WACK Wrangell Chich 6.01 20 Pn 04 43 32.2 +0.4
N17K Nushagak Hills 6.03 316 Pn 04 43 31.1 -0.7
N17K Nushagak Hills 6.03 316 P Pn 04 43 31.1 -0.7
baz=130
WAZA Wrangell Mount 6.13 21 Pn 04 43 34.0 +0.6
WAT6 Susitna Watana 6.19 4 P Pn 04 43 34.6 +0.5
baz=185
M19K Big River Lodg 6.20 334 Pn 04 43 33.4 -0.8
M19K Big River Lodg 6.20 334 P Pn 04 43 33.4 -0.8
baz=150
M18K Stony River 6.25 327 P Pn 04 43 34.0 -0.8
baz=142
HARP HAARP 6.25 16 P Pn 04 43 36.0 +1.1
baz=199
CHNA Chernabura Isl 6.35 260 P Pn 04 43 34.7 -1.4
baz=72
CNBA Chernabura Isl 6.35 260 Pn Pn 04 43 34.4 -1.8
WAT1 Susitna Watana 6.42 1 Pn 04 43 37.8 +0.7
WAT1 Susitna Watana 6.42 1 P Pn 04 43 37.8 +0.7
baz=181
O15K Ungalikthiuk R 6.53 299 Pn 04 43 38.7 +0.1
O15K Ungalikthiuk R 6.53 299 P Pn 04 43 38.7 +0.1
baz=111
L19K White Mountain 6.55 334 Pn 04 43 38.2 -0.8
L19K White Mountain 6.55 334 P Pn 04 43 38.2 -0.8
baz=149
L20K Farewell, AK 6.60 339 Pn 04 43 39.1 -0.5
L20K Farewell, AK 6.60 339 P Pn 04 43 39.1 -0.5
baz=155
O29M Mount Kennedy 6.60 50 Pn 04 43 40.4 +0.7
O29M Mount Kennedy 6.60 50 P Pn 04 43 40.4 +0.7
baz=238
N16K Nishlik Lake 6.63 312 Pn 04 43 39.8 -0.3
M26K Nabesna, AK 6.66 24 Pn 04 43 41.1 +0.6
M26K Nabesna, AK 6.66 24 P Pn 04 43 41.1 +0.6
baz=208
P29M Windy Craggy 6.66 57 Pn 04 43 40.5 0.0
P29M Windy Craggy 6.66 57 P Pn 04 43 40.6 0.0
baz=245
SDPT Sand Point 6.69 266 Pn 04 43 40.2 -0.6
SDPT Sand Point 6.69 266 P Pn 04 43 40.3 -0.5
DHY Denali Highway 6.70 5 Pn 04 43 41.6 +0.6
DHY Denali Highway 6.70 5 P Pn 04 43 41.8 +0.7
baz=187
M17K Holitna River 6.71 322 Pn 04 43 40.7 -0.3
M17K Holitna River 6.71 322 P Pn 04 43 40.8 -0.3
baz=135
PAX Paxson 6.76 13 P Pn 04 43 42.9 +1.1
baz=196
S31K Pelican 6.97 72 Pn 04 43 42.4 -2.2
S31K Pelican 6.97 72 P Pn 04 43 42.9 -1.7
baz=262
RND Reindeer 6.99 360 Pn 04 43 45.6 +0.5
M16K Timber Creek 7.03 315 Pn 04 43 44.9 -0.5
M16K Timber Creek 7.03 315 P Pn 04 43 44.9 -0.5
baz=127
N15K Kwethluk River 7.05 307 Pn 04 43 46.5 +0.7
L18K Granite Mounta 7.08 328 Pn 04 43 45.1 -1.1
L18K Granite Mounta 7.08 328 P Pn 04 43 45.1 -1.1
baz=142
TRF Thorofare Moun 7.08 354 Pn 04 43 46.9 +0.6
TRF Thorofare Moun 7.08 354 P Pn 04 43 46.9 +0.6
baz=173
CAST Castle Rocks 7.20 348 P Pn 04 43 48.4 +0.5
baz=165
BVCY Beaver Creek 7.22 31 Pn 04 43 48.9 +0.9
BVCY Beaver Creek 7.22 31 P Pn 04 43 48.9 +0.9
baz=217
KTH Kantishna Hill 7.22 352 Pn 04 43 48.4 +0.2
P30M Million Dollar 7.23 54 Pn 04 43 49.2 +0.9
O14K Tigyukauivet M 7.25 298 Pn 04 43 48.3 -0.2
O14K Tigyukauivet M 7.25 298 P Pn 04 43 48.3 -0.2
baz=108
MCK McKinley 7.32 359 P Pn 04 43 50.7 +1.2
baz=179
SIT Sitka 7.41 80 Pn Pn 04 43 47.2 -3.4
SIT Sitka 7.41 80 P Pn 04 43 47.8 -2.8
SIT Sitka 7.41 80 P Pn 04 43 48.2 -2.5
baz=270
TTA Tatalina 7.48 334 P Pn 04 43 50.9 -0.7

TTA Tatalina 7.48 334 P Pn 04 43 50.9 -0.7
baz=148
PN7A Pavlof North-7 7.51 268 Pn 04 43 50.8 -1.4
L17K Donlin 7.52 323 Pn 04 43 51.2 -0.9
K24K Donnelly Dome 7.54 10 Pn 04 43 54.0 +1.5
K24K Donnelly Dome 7.54 10 P Pn 04 43 54.0 +1.5
baz=193
M15K Kasigluk River 7.56 309 Pn 04 43 53.0 +0.2
L16K Owhat River 7.64 318 P Pn 04 43 53.9 0.0
baz=130
N14K Kuskokwak Cree 7.68 302 Pn 04 43 54.6 +0.2
CHUM Lake Minchumin 7.68 348 Pn 04 43 54.6 +0.2
CHUM Lake Minchumin 7.68 348 P Pn 04 43 54.6 +0.2
baz=165
SKAG Skagway 7.75 61 Pn 04 43 56.3 +0.9
SKAG Skagway 7.75 61 P Pn 04 43 56.2 +0.9
SKAG Skagway 7.75 61 P Pn 04 43 56.3 +0.9
baz=252
BPAW Bear Paw Mtn. 7.77 353 P Pn 04 43 55.5 -0.2
baz=171
BESE Bessie Mountai 7.78 68 Pn 04 43 55.7 -0.2
S32K Killisnoo 7.82 76 Pn 04 43 55.1 -1.2
S32K Killisnoo 7.82 76 P Pn 04 43 55.3 -1.0
baz=268
N30M Aishikik Lake 7.85 45 P Pn 04 43 57.5 +0.7
baz=235
O30N Mendenhall 7.91 51 P Pn 04 43 58.3 +0.7
baz=242
R32K Eaglecrest 7.91 71 Pn 04 43 57.2 -0.4
SCRK Sand Creek 7.93 15 P Pn 04 43 59.0 +1.1
baz=200
K17K Iditarod 7.94 326 Pn 04 43 57.4 -0.6
K17K Iditarod 7.94 326 P Pn 04 43 57.4 -0.6
baz=139
M29M Somme Creek 7.98 37 Pn 04 43 59.4 +0.8
M29M Somme Creek 7.98 37 P Pn 04 43 59.4 +0.8
baz=225
JIS Juneau Island 7.98 71 Pn 04 43 58.2 -0.4
JIS Juneau Island 7.98 71 P Pn 04 43 58.6 +0.1
WRH Wood River Hil 8.07 2 Pn 04 44 00.5 +0.7
J18K Innoko River 8.10 334 Pn 04 43 60.0 -0.2
J18K Innoko River 8.10 334 P Pn 04 43 60.0 -0.2
baz=147
M14K Bethel 8.14 308 Pn 04 44 00.7 0.0
J20K Nowinta River 8.21 343 Pn 04 44 01.3 -0.4
J20K Nowinta River 8.21 343 P Pn 04 44 01.3 -0.4
baz=159
CCB Clear Creek Bu 8.25 3 Pn 04 44 02.2 0.0
J19K Poorman 8.31 339 P Pn 04 44 02.4 -0.7
baz=153
J25K Salcha River, 8.37 10 Pn 04 44 04.1 +0.2
J25K Salcha River, 8.37 10 P Pn 04 44 04.1 +0.2
baz=193
L15K Ungalak Mounta 8.40 314 P Pn 04 44 04.3 0.0
baz=124
IL31 8.41 5 Pn 04 44 04.5 +0.1
ILAR Eielson Array 8.41 5 Pn Pn 04 44 04.7 +0.3
comp=E,1.2nm,0.3s,baz=191,slow=13,SNR=51
ILAR Sn Sn 04 45 35.1 -4.3
comp=E,1.4nm,0.3s,baz=195,slow=17,SNR=3.9
ILAR LR LR 04 47 42.9
comp=E,251nm,18.6s,baz=228,slow=40
comp=E,3.5nm,0.4s
FALS False Pass 8.45 265 Pn 04 44 03.4 -1.5
FALS False Pass 8.45 265 P Pn 04 44 04.2 -0.7
FALS False Pass 8.45 265 P Pn 04 44 03.4 -1.5
baz=74
COLA College 8.48 3 Pn 04 44 05.2 -0.1
COLA College 8.48 3 P Pn 04 44 03.7 -1.6
J26L Joseph Creek 8.48 15 Pn 04 44 05.8 +0.3
MDM Murphy Dome 8.56 1 Pn 04 44 06.8 +0.4
L29M L29M 8.56 34 P Pn 04 44 07.5 +1.0
baz=223
P32M Atlin 8.58 62 Pn Pn 04 44 06.8 0.0
P32M Atlin 8.58 62 P Pn 04 44 07.1 +0.3
baz=254
M30M Minto, Yukon 8.64 40 Pn 04 44 07.9 +0.3
M30M Minto, Yukon 8.64 40 P Pn 04 44 07.9 +0.3
baz=230
ISNN Isanotski Nort 8.66 266 Pn 04 44 06.8 -1.1
MLY Manley 8.68 354 Pn 04 44 08.1 0.0
MLY Manley 8.68 354 P Pn 04 44 08.1 0.0
baz=173
J17K VABM Dome 8.69 328 Pn 04 44 07.2 -1.0
U33K Whale Pass 8.70 86 Pn Pn 04 44 05.7 -2.7
U33K Whale Pass 8.70 86 P Pn 04 44 05.4 -3.0
baz=278
L14K Kuka Creek 8.72 310 Pn 04 44 08.8 +0.1
I23K Minto, Yukon-K 8.75 358 P Pn 04 44 10.5 +1.5
baz=178
K15K Wolf Creek Mou 8.77 317 Pn 04 44 09.4 +0.1
CRAG Craig 8.82 90 Pn Pn 04 44 06.7 -3.3
CRAG Craig 8.82 90 P Pn 04 44 07.3 -2.7
J16K Anvik River 9.08 324 Pn 04 44 12.5 -1.1
EGAK Eagle 9.15 21 Pn 04 44 15.8 +1.2
EGAK Eagle 9.15 21 P Pn 04 44 15.8 +1.2
baz=207
Q32M Nakina River 9.18 67 Pn 04 44 15.7 +0.6
P33M Teslin, Yukon 9.19 59 Pn 04 44 15.3 +0.2
P33M Teslin, Yukon 9.19 59 P Pn 04 44 15.6 +0.5
baz=252
PRP Porcupine Dome 9.24 8 Pn 04 44 16.7 +0.7
PRP Porcupine Dome 9.24 8 P Pn 04 44 16.7 +0.7
baz=191
K29M Barlow Dome 9.29 32 Pn 04 44 17.5 +0.9
K29M Barlow Dome 9.29 32 P Pn 04 44 17.5 +0.9
baz=222
M31M Drury Creek, Y 9.33 46 P Pn 04 44 18.5 +1.5
baz=238
H21K Melozitna Rive 9.46 350 P Pn 04 44 18.6 -0.2
baz=166
MAYO Mayo, Yukon 9.62 37 Pn 04 44 21.6 +0.5
S34M Telegraph Cree 9.68 74 Pn 04 44 21.5 -0.3
V35K Ketchikan 9.69 89 Pn Pn 04 44 20.6 -1.4
V35K Ketchikan 9.69 89 P Pn 04 44 20.3 -1.6
baz=283
FARO Faro, Yukon 9.76 47 Pn Pn 04 44 23.6 +0.7
I27K Kandik River 9.82 18 Pn 04 44 24.7 +0.9
I27K Kandik River 9.82 18 P Pn 04 44 24.7 +0.9
baz=204
IMAR Indian Mountai 9.88 348 Pn 04 44 24.5 0.0
R33M Jennings River 9.91 65 Pn 04 44 24.9 -0.2
R33M Jennings River 9.91 65 P Pn 04 44 24.9 -0.2
baz=260
H18K Honhosa River 9.91 336 Pn 04 44 24.0 -1.0
DLBC Dease Lake 10.29 71 Pn 04 44 30.3 +0.2
DLBC Dease Lake 10.29 71 Pn Pn 04 44 31.7 +1.5
comp=E,1.7nm,0.3s,baz=252,slow=11,SNR=9.0
DLBC Sn Sn 04 46 21.0 -4.4
comp=E,0.7nm,0.3s,baz=316,slow=20,SNR=2.1
DLBC LR LR 04 47 52.3
comp=E,230nm,18.1s,baz=281,slow=34
comp=E,3.8nm,0.4s
UNV Unalaska Valle 10.49 263 P Pn 04 44 32.7 -0.2
GRNB Grenville Isla 11.06 96 Pn Pn 04 44 39.3 -1.3
F20K Avaraart Lake 11.14 346 Pn Pn 04 44 42.4 +0.6
BMAR Burnt Mountain 11.20 8 Pn Pn 04 44 42.2 -0.4
E25K Arctic Village 11.82 6 Pn 04 44 51.7 +0.7
F28M Old Crow 11.95 17 Pn 04 44 55.2 +2.4
TOLK Toolik Lake Re 12.26 359 Pn 04 44 59.0 +2.0
D22K Ayikyak River 12.62 353 Pn 04 45 01.6 -0.3
BBB Bella Bella 12.76 101 Pn Pn 04 45 04.9 +1.0
comp=E,0.3nm,0.3s,baz=318,slow=15,SNR=1.9
BBB Sn Sn 04 47 20.0 -5.8
comp=E,0.3nm,0.3s,baz=87,slow=6.6,SNR=2.1
BBB LR LR 04 48 51.4
comp=E,345nm,19.8s,baz=294,slow=32
comp=E,2.1nm,0.5s
INK Inuvik 13.78 24 Pn Pn 04 45 18.4 +0.6
INK Inuvik 13.78 24 Pn Pn 04 45 19.5 +1.7
comp=E,0.2nm,0.3s,baz=206,slow=14,SNR=33
INK LR LR 04 50 59.3
comp=E,250nm,18.7s,baz=186,slow=39
comp=E,10nm,0.9s
C36M Paulatuk 16.96 31 IAmb IAmb 04 46 19.9
comp=Z,18nm,1.1s
NLWA Neilton Lookou 17.73 110 Pn 04 46 07.0 -2.4
YKA Yellowknife Ar 18.21 57 Pn 04 46 15.2 0.0
YKA Yellowknife Ar 18.21 57 P Pn 04 46 16.8 +1.6
comp=Z,0.4nm,0.3s,baz=263,slow=10,SNR=40
comp=Z,3.8nm,0.8s
MXC Moxie City 20.13 107 P P 04 46 37.1 +0.6
MXC IAmb IAmb 04 46 49.5
comp=Z,13nm,1.0s
NEW Newport 20.82 100 P P 04 46 47.7 +3.6

comp=Z,1.9nm,0.8s,baz=233,slow=8.2,SNR=3.9
NEW LR LR 04 53 35.3
comp=Z,134nm,21.5s,baz=301,slow=33
comp=Z,1.9nm,0.8s
SHEM Shemya Is, Ala 21.67 276 LR LR 04 55 10.5
comp=Z,71nm,19.3s,baz=236,slow=36
G08A Pilot Rock 21.68 108 P P 04 46 53.4 0.0
PINE Pine Mountain 21.68 114 P P 04 46 53.7 +0.2
PINE IAmb IAmb 04 47 07.8
comp=Z,21nm,1.1s
J05D Fort Rock, OR 21.90 115 P P 04 46 55.0 -0.8
J05D IAmb IAmb 04 47 17.6
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 22.33 120 P P 04 46 59.9 -0.5
YBH IAmb IAmb 04 47 11.8
comp=Z,13nm,1.1s
YBH Yreka Blue Hor 22.33 120 LR LR 04 53 39.8
comp=Z,206nm,18.0s,baz=323,slow=31
BILL Billibino 23.33 318 P P 04 47 09.4 -1.0
WVOR Wild Horse Val 23.83 113 P P 04 47 16.1 +0.3
WVOR IAmb IAmb 04 47 18.8
comp=Z,6.8nm,0.8s
PNTR Pine Nut 25.88 120 P P 04 47 33.7 -0.9
ELK Elko 26.80 112 LR LR 04 56 36.8
comp=Z,102nm,20.0s,baz=315,slow=33
NVAR Mina Array Bea 27.02 119 P P 04 47 46.6 +1.7
comp=Z,1.8nm,0.9s,baz=300,slow=8.8,SNR=8.9
NVAR LR LR 04 56 39.0
comp=Z,161nm,18.7s,baz=279,slow=32
comp=Z,1.8nm,0.9s
RES Resolute Bay 27.29 28 P P 04 47 45.7 -1.0
RES Resolute Bay 27.29 28 LR LR 04 59 20.3
comp=Z,182nm,18.4s,baz=257,slow=38
PDAR Pinedale Array 28.40 102 P P 04 47 58.6 +1.4
comp=Z,0.3nm,0.6s,baz=319,slow=4.3,SNR=3.9
PDAR LR LR 04 59 43.2
comp=Z,59nm,18.4s,baz=324,slow=37
comp=Z,0.3nm,0.6s
SEY Seymchan 29.45 307 LR LR 05 01 06.6
comp=Z,249nm,18.8s,baz=86,slow=39
MSU Marysvale 30.05 111 P P 04 48 11.2 -0.6
PETK Petropavlovsk- 30.42 287 LR LR 05 00 51.2
comp=Z,47nm,20.4s,baz=77,slow=37
MA2 Magadan 31.23 301 LR LR 05 00 46.7
comp=Z,156nm,20.9s,baz=88,slow=36
PFO Pinyon Flats O 31.78 122 LR LR 04 58 48.3
comp=Z,181nm,19.8s,baz=306,slow=32
ANMO Albuquerque 35.74 109 LR LR 05 03 47.2
comp=Z,58nm,18.6s,baz=50,slow=36
FRB Frobisher Bay 38.11 45 LR LR 05 05 06.5
comp=Z,236nm,18.6s,baz=310,slow=36
YAK Yakutsk 39.49 313 LR LR 05 06 03.1
comp=Z,74nm,21.2s,baz=82,slow=36
TXAR Lajitas Array 41.60 111 P P 04 49 52.5 +1.8
comp=Z,0.8nm,0.8s,baz=328,slow=8.8,SNR=6.5
TXAR LR LR 05 05 57.7
comp=Z,66nm,18.8s,baz=328,slow=34
comp=Z,0.8nm,0.8s
LPIG La Paz 42.67 123 LR LR 05 05 25.6
comp=Z,74nm,18.4s,baz=1.0,slow=33
SFJD Kangerlussuaq 42.80 35 LR LR 05 07 46.7
comp=Z,146nm,18.5s,baz=316,slow=36
SCHQ Schefferville 43.66 56 LR LR 05 09 56.1
comp=Z,45nm,18.4s,baz=277,slow=38
ASAJ Asahikawa 43.74 284 LR LR 05 09 57.4
comp=Z,28nm,19.1s,baz=68,slow=38
SADO Sadowa 43.82 75 LR LR 05 08 25.2
comp=Z,58nm,19.4s,baz=300,slow=36
KLR Kul'dur 46.03 296 LR LR 05 11 46.3
comp=Z,44nm,19.1s,baz=14,slow=39
TKL Tuckaleechee C 47.63 87 LR LR 05 10 26.7
comp=Z,85nm,20.2s,baz=305,slow=36
NRIK Noril'sk 48.08 337 LR LR 05 14 49.3
comp=Z,136nm,18.1s,baz=58,slow=41
H11N2 WAKE ISLAND Hy 49.22 240 T T 05 43 48.6
baz=30,slow=76,SNR=15
H11N3 WAKE ISLAND Hy 49.22 240 T T 05 43 50.6
baz=30,slow=76,SNR=12
H11N1 WAKE ISLAND Hy 49.24 240 T T 05 43 51.4
baz=30,slow=76,SNR=10
USRK Ussuriysk Ar. 49.30 291 LR LR 05 13 24.8
comp=Z,42nm,19.1s,baz=89,slow=38
H11S1 WAKE ISLAND Hy 50.36 240 T T 05 45 44.9
baz=29,slow=76,SNR=24
H11S2 WAKE ISLAND Hy 50.37 240 T T 05 45 21.5
baz=29,slow=76,SNR=20
H11S3 WAKE ISLAND Hy 50.38 240 T T 05 45 47.8
baz=29,slow=76,SNR=19
MJAR Matsushiro Arr 51.43 280 LR LR 05 16 52.4
comp=Z,22nm,18.1s,baz=39,slow=41
BORG Borgarnes 52.67 25 LR LR 05 14 41.7
comp=Z,105nm,18.9s,baz=222,slow=37
ARCES ARCESS Array B 54.26 2 P P 04 51 28.7 +0.6
comp=Z,1.2nm,0.8s,baz=8.6,slow=9.0,SNR=6.8
comp=Z,1.2nm,0.8s
CMIG Matias Romero 56.21 112 LR LR 05 14 59.3
comp=Z,63nm,19.5s,baz=330,slow=35
KSRS Korea Array 56.30 288 LR LR 05 15 09.3
comp=Z,10nm,21.2s,baz=30,slow=35
TEIG Tepich 57.12 103 LR LR 05 18 18.8
comp=Z,236nm,18.4s,baz=186,slow=38
SONM Songino Array 58.77 310 P P 04 52 02.3 +1.7
comp=Z,2.9nm,0.8s,baz=39,slow=3.8,SNR=20
SONM LR LR 05 20 49.3
comp=Z,76nm,19.1s,baz=20,slow=40
comp=Z,2.9nm,0.8s
ZALV Zalesovo Beam 61.59 327 P P 04 52 21.2 +1.5
comp=Z,1.3nm,0.7s,baz=24,slow=5.4,SNR=5.5
ZALV LR LR 05 23 25.4
comp=Z,56nm,18.4s,baz=356,slow=40
comp=Z,1.3nm,0.7s
NOA NORSAR Array B 61.81 11 LR LR 05 20 52.9
comp=Z,22nm,18.9s,baz=265,slow=38
HHC Hu-ho-hao-te 61.91 302 eP P 04 52 22.4 +0.2
HHC sP pwP 04 52 32.4 +2.8
HHC PcP PcP 04 53 01.3 -1.6
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,90nm,6.1s
FINES FINESS Array B 62.39 3 P P 04 52 25.1 +0.2
FINES FINESS Array B 62.39 3 P P 04 52 26.1 +1.3
comp=Z,0.8nm,0.5s,baz=350,slow=9.9,SNR=7.8
comp=Z,0.8nm,0.5s
BVAR Borovoye Array 66.27 335 P P 04 52 52.0 +1.5
comp=Z,1.1nm,0.7s,baz=28,slow=6.7,SNR=5.8
BVAR LR LR 05 26 31.4
comp=Z,53nm,19.5s,baz=37,slow=40
comp=Z,1.1nm,0.7s
KURBB Kurchatov Arra 66.36 329 P P 04 52 52.5 +1.4
comp=Z,0.3nm,0.3s,baz=27,slow=6.3,SNR=1.8
KURBB LR LR 05 27 21.5
comp=Z,68nm,18.2s,baz=169,slow=41
comp=Z,0.3nm,0.3s
JTS Las Juntas de 67.11 107 LR LR 05 24 40.8
comp=Z,28nm,21.0s,baz=322,slow=38
XAN Xi'an 68.60 299 ||P P 04 53 06.5 +0.9
XAN pmax pmax
comp=Z,4.0nm,1.3s
MK31 Makanchi Array 68.64 325 P P 04 53 04.5 -1.2
MK31 IAmb IAmb 04 53 27.5
comp=Z,2.2nm,1.4s
MKAR Makanchi Array 68.64 325 P P 04 53 04.9 -0.7
MKAR Makanchi Array 68.64 325 P P 04 53 07.0 +1.4
comp=Z,0.6nm,0.7s,baz=32,slow=2.2,SNR=8.0
MKAR LR LR 05 27 59.2
comp=Z,57nm,18.6s,baz=58,slow=40
comp=Z,0.6nm,0.7s
WMQ Urumqi 69.42 320 eP P 04 53 08.3 -2.3
WMQ pP sP 04 53 18.9 +5.8
WMQ pmax pmax
comp=Z,10.0nm,0.9s
ABKAR Akbulak array 72.00 341 P P 04 53 26.5 +0.4
ABKAR IAmb IAmb 04 53 48.8
comp=Z,1.9nm,0.9s
AKASG Malin Array Be 73.22 1 P P 04 53 34.6 +1.4
comp=Z,0.8nm,0.4s,baz=355,slow=5.7,SNR=3.6
AKASG LR LR 05 25 57.3
comp=Z,36nm,20.1s,baz=324,slow=36
comp=Z,0.8nm,0.4s
VRAC Vranov 73.92 10 LR LR 05 26 30.5
comp=Z,48nm,20.2s,baz=329,slow=36
AAK Ala-Archa 74.78 328 LR LR 05 30 08.7
comp=Z,90nm,19.6s,baz=26,slow=39
DAVOX Davos/Dischmat 75.61 15 LR LR 05 31 54.6
comp=Z,34nm,18.2s,baz=301,slow=40
HNR Honiara 78.04 232 LR LR 05 24 31.3
comp=Z,371nm,19.4s,baz=336,slow=33

PZH	**PanZhiHua**	**78.30**	**300**	P	**P**	**04 54 01.6**	**-1.3**
PZH	comp=Z,6.0nm,0.7s			pmax	pmax		
PZH	comp=Z,100nm,4.6s			pmax	pmax		
ESDC	**Sonseca Array**	**79.72**	**27**	P	**P**	**04 54 12.4**	**+2.0**
	comp=Z,1.5nm,1.0s,baz=326,slow=5.7,SNR=5.7						
	comp=Z,1.5nm,1.0s						
KBZ	**Khabaz**	**79.72**	**351**	LR	LR	05 33 58.7	
	comp=Z,56nm,18.3s,baz=350,slow=39						
GNI	**Garni**	**83.11**	**350**	LR	LR	05 37 25.3	
	comp=Z,26nm,18.4s,baz=346,slow=40						
CMAR	**Chiang Mai Arr**	**86.47**	**298**	P	**P**	**04 54 47.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=6.1,slow=5.3,SNR=5.7						
CMAR				LR	LR	05 37 57.4	
	comp=Z,26nm,18.9s,baz=35,slow=39						
	comp=Z,1.0nm,0.3s						
RPN	**Rapa Nui**	**89.69**	**146**	LR	LR	05 26 18.2	
	comp=Z,24nm,18.2s,baz=290,slow=30						

JMA ***20*** *05:09:13.8±0.1,22.9°N±0.2×121.2°E±0.4,h4km±1km, MV3.5/12,TAIWAN REGION*
ASIES ***20*** *05:09:13.3,22.98°N×121.00E,h7km,ML3.6,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}=0.85; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$1.01; $M_{r\theta}$0.15; $M_{r\phi}$0.05; $M_{\theta\phi}$-0.21; Fault plane solution: $M_0$0.97210×10^{21} NP1: ϕ_s351.84000°,δ52.13000°,λ-103.82000°. NP2: ϕ_s193.68000°,δ39.96000°,λ-72.92000°. Principal axes: T Plg6.1930°, Azm91.6220°; N Plg10.8730°, Azm0.4280°; P Plg77.4490°, Azm210.7940°;*
TAP ***20*** *05:09:13.3,22.98°N×121.00E,h7km,ML3.6,C*
ISC 20 05:09:13.7±0.8,22.97N±0.01×121.02E±0.01,h14km±5km, n130,σ0.76/201,28C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LONT	**Longtian**	**0.12**	**122**	⇑*i*	*i*	P	**Pg**	**05 09 17.1**	**-0.1**
LONT	baz=122			*i*	*i*	S	**Sg**	**05 09 19.3**	**-0.2**
TWG	**Pinlang**	**0.16**	**161**	⇑*i*	*i*	P	**Pg**	**05 09 17.6**	**0.0**
TWG	baz=156			*i*	*i*	S	**Sg**	**05 09 20.0**	**-0.2**
TWGBT	**Beinan**	**0.17**	**159**			P	**Pg**	**05 09 17.6**	**-0.1**
TWGBT	**Beinan**	**0.17**	**159**	⇑*i*	*i*	P	**Pg**	**05 09 17.6**	**-0.1**
TWGBT	baz=156			*i*	*i*	S	**Sg**	**05 09 20.0**	**-0.4**
ELDTW	**Lidau**	**0.21**	**0**	⇑*i*	*i*	P	**Pg**	**05 09 17.9**	**-0.6**
ELDTW	baz=13					S	**Sg**	**05 09 20.6**	**-1.3**
ECS	**Chishang**	**0.22**	**57**		P	P	**Pg**	**05 09 18.9**	**+0.2**
ECS	baz=61				*e*	S	**Sg**	**05 09 22.7**	**+0.7**
EHD	**Haiduan**	**0.25**	**45**	⇑*i*	*i*	P	**Pg**	**05 09 18.8**	**-0.3**
EHD	baz=49					S	**Sg**	**05 09 22.1**	**-0.6**
TTN	**Taitung**	**0.25**	**151**	⇑*i*	*i*	P	**Pb**	**05 09 20.1**	**+0.1**
TTN	baz=147					S	**Sb**	**05 09 25.1**	**+1.0**
STYH	**Taoyuan**	**0.30**	**312**	⇑*i*	*i*	P	**Pg**	**05 09 19.5**	**-0.3**
STYH	baz=313					S	**Sg**	**05 09 23.4**	**-0.6**
CHKT	**Chengkung**	**0.34**	**69**	⇑*i*	*i*	P	**Pb**	**05 09 21.9**	**+0.3**
CHKT	baz=71				*e*	S	**Sb**	**05 09 27.5**	**+0.5**
ECL	**Taimali**	**0.38**	**189**	⇑*i*	*i*	P	**Pg**	**05 09 20.9**	**-0.4**
ECL	baz=185				*e*	S	**Sg**	**05 09 25.8**	**-0.7**
CHKH	**Chenggong**	**0.41**	**58**	⇑*e*	*e*	P	**Pb**	**05 09 22.5**	**-0.3**
CHKH	baz=78				*e*	S	**Sb**	**05 09 29.4**	**+0.5**
SGST	**Jiashian**	**0.41**	**285**	⇑*i*	*i*	P	**Pg**	**05 09 21.2**	**-0.8**
SGST	baz=289				*i*	S	**Sg**	**05 09 27.7**	**+0.1**
TSMG	**Majia**	**0.43**	**232**	*e*	*e*	P	**Pg**	**05 09 21.5**	**-0.9**
TSMG	baz=223				*e*	S	**Sg**	**05 09 27.1**	**-1.1**
TWF1	**Yuli**	**0.46**	**34**	⇑*i*	*i*	P	**Pg**	**05 09 22.6**	**-0.2**
TWF1	baz=37				*e*	S	**Sg**	**05 09 28.2**	**-0.8**
WTP	**Ta-pu**	**0.46**	**306**	⇑*i*	*i*	P	**Pb**	**05 09 23.1**	**-0.5**
WTP	baz=307				*i*	S	**Sb**	**05 09 29.9**	**-0.4**
EYUL	**Yuli**	**0.47**	**37**	⇑	P	P	**Pg**	**05 09 22.9**	**-0.1**
EYUL	baz=30				*e*	S	**Sg**	**05 09 28.4**	**-0.8**
TPUB	**Ta-pu**	**0.48**	**313**			P	**Pb**	**05 09 23.6**	**-0.4**
TPUB	**Ta-pu**	**0.48**	**313**	⇑*i*	*i*	P	**Pb**	**05 09 23.5**	**-0.4**
TPUB	baz=313					S	**Sb**	**05 09 30.4**	**-0.5**
SCST	**Cishan**	**0.49**	**260**	*e*	*e*	P	**Pb**	**05 09 23.7**	**-0.4**
SCST	baz=253				*e*	S	**Sb**	**05 09 30.3**	**-0.8**
YULB	**Yu-li**	**0.49**	**32**			P	**Pg**	**05 09 23.1**	**-0.3**
YULB	**Yu-li**	**0.49**	**32**	⇑*i*	*i*	P	**Pg**	**05 09 22.9**	**-0.5**
YULB	baz=34				*e*	S	**Sg**	**05 09 29.3**	**-0.7**
CHN1	**Nanshi**	**0.50**	**295**	⇑*i*	*i*	P	**Pb**	**05 09 24.2**	**-0.1**
CHN1	baz=301				*e*	S	**Sb**	**05 09 31.3**	**-0.1**
MASBT	**Mashibuluo**	**0.50**	**225**	⇑*i*	*i*	P	**Pg**	**05 09 22.9**	**-0.7**
MASBT	baz=217					S	**Sg**	**05 09 29.4**	**-1.0**
LDUT	**Ludao**	**0.51**	**125**	⇑	P	P	**Pb**	**05 09 24.4**	**-0.1**
LDUT	baz=125				*e*	S	**Sb**	**05 09 32.0**	**+0.2**
ECBN	**Changbin**	**0.53**	**49**	*e*	P	P	**Pb**	**05 09 24.9**	**+0.1**
SNST	**Tainan City**	**0.54**	**297**	⇑	P	P	**Pb**	**05 09 25.1**	**+0.2**
SNST	baz=300				*e*	S	**Sb**	**05 09 32.8**	**+0.3**
CHN4	**Tsaushan**	**0.54**	**314**	⇑*i*	*i*	P	**Pb**	**05 09 24.8**	**-0.2**
CHN4	baz=315				*e*	S	**Sb**	**05 09 32.4**	**-0.2**
SGLT	**Jiouru**	**0.54**	**243**	*e*	P	P	**Pb**	**05 09 24.6**	**-0.4**
SGLT	baz=236				*e*	S	**Sb**	**05 09 32.6**	**0.0**
TWM1	**Shoushan**	**0.57**	**255**	⇑*i*	*i*	P	**Pb**	**05 09 25.7**	**+0.3**
TWM1	baz=248				*e*	S	**Sb**	**05 09 34.5**	**+1.1**
TWK	**Hsinying**	**0.57**	**301**	⇑*i*	*i*	P	**Pb**	**05 09 25.4**	**-0.1**
TWK	baz=307				*e*	S	**Sb**	**05 09 33.7**	**+0.3**
ALS	**Alishan**	**0.57**	**340**	⇑	P	P	**Pg**	**05 09 24.7**	**-0.3**
ALS	baz=343				*e*	S	**Sg**	**05 09 32.4**	**-0.2**
WCKO	**Fanlu**	**0.60**	**321**	*e*	P	P	**Pb**	**05 09 25.9**	**0.0**
WCKO	baz=332				*e*	S	**Sb**	**05 09 34.8**	**+0.5**
EHY	**Hungye**	**0.60**	**28**	⇑	P	P	**Pg**	**05 09 24.9**	**-0.6**
EHY	baz=30				*i*	S	**Sg**	**05 09 32.8**	**-0.7**
EAST	**Anshuo**	**0.61**	**195**	⇑	P	P	**Pg**	**05 09 25.4**	**-0.2**
EAST	baz=192				*e*	S	**Sg**	**05 09 32.4**	**-1.3**
CHN3	**Shinhua**	**0.61**	**280**	*e*	P	P	**Pn**	**05 09 28.1**	**+0.1**
SHHT	**Tainan City**	**0.62**	**275**	⇑*e*	*e*	P	**Pn**	**05 09 28.1**	**0.0**
SHHT	baz=274				*e*	S	**Sn**	**05 09 38.5**	**+0.8**
TAW	**Tawu**	**0.62**	**190**	*e*	P	P	**Pg**	**05 09 25.7**	**-0.2**
TAW	baz=195				*e*	S	**Sg**	**05 09 33.5**	**-0.6**
HGSD	**Ruisui**	**0.64**	**36**	⇑*i*	*i*	P	**Pb**	**05 09 26.4**	**-0.2**
HGSD	baz=30				*e*	S	**Sg**	**05 09 35.0**	**+0.4**
TAWH	**Dawu Township**	**0.64**	**191**	*e*	P	P	**Pg**	**05 09 26.1**	**-0.1**
TAWH	baz=189				*e*	S	**Sg**	**05 09 34.2**	**-0.5**
SNJT	**Kaohsiung City**	**0.67**	**251**	*e*	P	P	**Pn**	**05 09 29.1**	**+0.4**
SSHA	**Shanhua**	**0.69**	**284**	*e*	P	P	**Pn**	**05 09 29.9**	**+0.8**
SCZT	**Fangliau**	**0.70**	**212**	*i*	P	P	**Pg**	**05 09 26.8**	**-0.5**
SCZT	baz=209				*e*	S	**Sg**	**05 09 36.2**	**-0.4**
TAI1	**Yung-k'ang**	**0.73**	**275**	*e*	P	P	**Pn**	**05 09 30.8**	**+1.3**
TAI1	baz=274				*e*	S	**Sn**	**05 09 41.5**	**+1.0**
CHY	**Chiayi**	**0.76**	**314**	*e*	P	P	**Pb**	**05 09 28.1**	**-0.5**
SLIU	**Shizi**	**0.78**	**195**	*e*	P	P	**Pg**	**05 09 28.8**	**-0.1**
SLIU	baz=187				*e*	S	**Sb**	**05 09 39.7**	**+0.2**
ICHU	**Yijhu**	**0.78**	**300**	*e*	P	P	**Pn**	**05 09 29.8**	**-0.4**
ICHU	baz=300				*e*	S	**Sn**	**05 09 42.4**	**+0.6**
VWDT	**VWDT**	**0.79**	**8**	P		P	**Pg**	**05 09 27.9**	**-1.0**
VWDT	baz=18					S	**Sg**	**05 09 38.4**	**-1.0**
SSLB	**Suanglung**	**0.81**	**356**	P		P	**Pg**	**05 09 29.1**	**-0.4**
SSLB	**Suanglung**	**0.81**	**356**	*e*	P	P	**Pg**	**05 09 28.8**	**-0.7**
WARBT	**Fenglin Townsh**	**0.82**	**25**	*e*	P	P	**Pg**	**05 09 28.5**	**-1.0**
WARBT	baz=26				*e*	S	**Sg**	**05 09 39.0**	**-1.3**
WGK	**Gukeng**	**0.82**	**330**	*e*	P	P	**Pn**	**05 09 30.7**	**-0.1**
WGK	baz=332				*e*	S	**Sn**	**05 09 43.0**	**+0.1**
CHN8	**Yiju**	**0.83**	**297**	*e*	P	P	**Pn**	**05 09 30.7**	**-0.3**
CHN8	baz=297				*e*	S	**Sn**	**05 09 44.6**	**+1.6**
WDLH	**Douliu**	**0.84**	**328**	P		P	**Pn**	**05 09 31.1**	**0.0**
WDLH	baz=330				*i*	S	**Sn**	**05 09 43.7**	**+0.5**
TSCK	**Chigu Township**	**0.87**	**282**	*e*	P	P	**Pn**	**05 09 31.7**	**+0.2**
TEGC	**Jichi Village**	**0.88**	**33**	*e*	P	P	**Pg**	**05 09 30.5**	**-0.2**
WJS	**Zhushan**	**0.89**	**343**	P		P	**Pb**	**05 09 31.4**	**+0.5**
WJS	baz=345					S	**Sn**	**05 09 45.6**	**+1.2**
WSL	**Shuilin Townsh**	**0.91**	**307**	*e*	P	P	**Pn**	**05 09 32.1**	**0.0**
WSL	baz=308				*e*	S	**Sn**	**05 09 46.5**	**+1.6**
SMLT	**Sun Moon Lake**	**0.91**	**353**	*e*	P	P	**Pb**	**05 09 31.2**	**-0.2**
SMLT	baz=4.0				*e*	S	**Sn**	**05 09 44.9**	**-0.3**
WTK	**Tuku**	**0.92**	**321**	*e*	P	P	**Pn**	**05 09 32.3**	**+0.1**
WTK	baz=322				*e*	S	**Sn**	**05 09 46.5**	**+1.3**
ESL	**Shilin**	**0.92**	**24**	*e*	P	P	**Pg**	**05 09 30.7**	**-0.8**
TYC	**Yuchr**	**0.94**	**351**	*e*	P	P	**Pb**	**05 09 31.6**	**-0.1**
TYC	baz=2.0				*e*	S	**Sn**	**05 09 45.8**	**+0.1**
WNT	**Mingjian**	**0.95**	**341**	*e*	P	P	**Pn**	**05 09 32.9**	**+0.3**
WNT	baz=344				*i*	S	**Sn**	**05 09 47.0**	**+1.0**
SHUL	**Shoufeng**	**0.95**	**32**	*e*	P	P	**Pb**	**05 09 32.3**	**+0.3**
SMST	**Manzhou Townsh**	**0.96**	**190**	*e*	P	P	**Pn**	**05 09 35.3**	**+2.6**
WSF	**Szhu**	**0.99**	**312**	*e*	P	P	**Pn**	**05 09 33.1**	**0.0**
WSF	baz=313				*i*	S	**Sn**	**05 09 48.1**	**+1.2**
HEN	**Hengchun**	**1.00**	**195**	*e*	P	P	**Pn**	**05 09 33.9**	**+0.6**
HEN	baz=193				*e*	S	**Sn**	**05 09 47.7**	**+0.6**
WUSB	**Renai**	**1.02**	**5**	*e*	P	P	**Pg**	**05 09 32.3**	**-1.1**
TWK1	**Hengchun**	**1.04**	**191**	*e*	P	P	**Pn**	**05 09 36.0**	**+2.1**
TWKBT	**Hengchun**	**1.04**	**190**	*e*	P	P	**Pn**	**05 09 34.3**	**+0.4**
LAY	**Lan-yu**	**1.05**	**152**	*e*	P	P	**Pg**	**05 09 32.4**	**-1.6**
TSEB	**Hengchuen, Pin**	**1.07**	**186**	*e*	P	P	**Pn**	**05 09 35.3**	**+1.0**
ETM	**Tongmen**	**1.08**	**24**	*e*	P	P	**Pg**	**05 09 33.3**	**-1.3**
WCS	**Beigang Elemen**	**1.08**	**355**	*e*	P	P	**Pn**	**05 09 34.9**	**+0.4**
WCS	baz=5.0				*e*	S	**Sn**	**05 09 50.1**	**+0.8**
CHGB	**Renai**	**1.09**	**8**	*e*	P	P	**Pg**	**05 09 33.8**	**-1.0**
WRL	**Guolierlin Hig**	**1.09**	**328**	*e*	P	P	**Pn**	**05 09 35.1**	**+0.4**
WRL	baz=329				*e*	S	**Sn**	**05 09 50.3**	**+0.7**
LYUB	**Lan-yu**	**1.10**	**151**			P	**Pg**	**05 09 31.4**	**-3.5**
LXIB	**Xiulin Townshi**	**1.10**	**19**	*e*	P	P	**Pg**	**05 09 33.3**	**-1.7**
LXIB	baz=21				*e*	S	**Sb**	**05 09 49.5**	**+0.4**
HWA	**Hwalien**	**1.14**	**28**	*e*	P	P	**Pg**	**05 09 35.2**	**-0.5**
WCHH	**Zhanghua**	**1.18**	**339**	*e*	P	P	**Pn**	**05 09 37.4**	**+1.6**
WCHH	baz=341				*e*	S	**Sn**	**05 09 53.9**	**+2.3**
WHF	**Hehuan Shan**	**1.19**	**11**	*e*	P	P	**Pg**	**05 09 35.6**	**-1.1**
TCU	**Taichung**	**1.21**	**345**	*e*	P	P	**Pn**	**05 09 38.0**	**+1.7**
TCU	baz=348				*e*	S	**Sn**	**05 09 54.4**	**+1.9**
TDCB	**Techi**	**1.28**	**6**	*e*	P	P	**Pg**	**05 09 38.3**	**-0.1**
WDGT	**Dungji**	**1.28**	**283**	*e*	P	P	**Pn**	**05 09 37.4**	**+0.2**
WDGT	baz=282				*i*	S	**Sn**	**05 09 55.1**	**+1.0**
TWT	**Tachien**	**1.28**	**7**	*e*	P	P	**Pn**	**05 09 38.0**	**-0.4**
ETLH	**Xiulin Townshi**	**1.30**	**19**	*i*	P	P	**Pn**	**05 09 37.9**	**+0.3**
ETLH	baz=21				*e*	S	**Sg**	**05 09 55.3**	**-0.4**
ETL	**Fush Village**	**1.30**	**25**	*e*	P	P	**Pn**	**05 09 37.9**	**+0.4**
NACB	**Ninganchiao**	**1.31**	**24**			P	**Pn**	**05 09 37.9**	**+0.3**
NACB	**Ninganchiao**	**1.31**	**24**	*e*	P	P	**Pn**	**05 09 37.1**	**-0.5**
TWQ1	**Liyutan**	**1.39**	**351**	*e*	P	P	**Pg**	**05 09 40.7**	**+0.3**
TWQ1	baz=353				*e*	S	**Sg**	**05 10 00.0**	**+1.5**
PHUB	**P'eng-hu**	**1.43**	**292**	*e*	P	P	**Pn**	**05 09 39.2**	**-0.1**
PHUB	baz=291				*e*	S	**Sb**	**05 09 57.9**	**-0.5**
NSY	**Sanyi**	**1.46**	**351**	*e*	P	P	**Pg**	**05 09 42.1**	**+0.4**
PNG	**Penghu**	**1.47**	**294**	*e*	P	P	**Pn**	**05 09 39.7**	**0.0**
PNG	baz=293				*e*	S	**Sn**	**05 09 58.6**	**-0.2**
VCHM	**Qimei**	**1.48**	**279**	*e*	P	P	**Pn**	**05 09 39.9**	**-0.1**
VCHM	baz=292					S	**Sn**	**05 09 59.6**	**+0.5**
NNSB	**Datong**	**1.49**	**13**	*e*	P	P	**Pb**	**05 09 41.3**	**+0.1**
NNS	**Nan Shan**	**1.50**	**13**	*e*	P	P	**Pg**	**05 09 41.8**	**-0.7**
NNS	baz=24				*e*	S	**Sb**	**05 10 00.7**	**+0.5**
EAHA	**Aohua**	**1.50**	**26**	*e*	P	P	**Pn**	**05 09 40.6**	**+0.4**
NMLH	**Miaoli**	**1.57**	**352**	*e*	P	P	**Pg**	**05 09 44.6**	**+0.7**
ENA	**Nanau**	**1.59**	**24**	*e*	P	P	**Pn**	**05 09 42.1**	**+0.6**
EWUT	**Wuta**	**1.62**	**25**	*e*	P	P	**Pb**	**05 09 43.4**	**-0.1**
LATG	**Datong**	**1.62**	**17**	*e*	P	P	**Pb**	**05 09 43.9**	**+0.3**
NSTT	**Nanjuang**	**1.65**	**360**	*e*	P	P	**Pg**	**05 09 45.2**	**-0.2**
NSTT	baz=339					S	**Sg**	**05 10 05.8**	**-1.1**
EOS4	**EOS4**	**1.65**	**46**	*e*	P	P	**Pn**	**05 09 42.4**	**+0.4**
NFF	**Wufeng Townshi**	**1.65**	**3**	*e*	P	P	**Pg**	**05 09 45.0**	**-0.5**
NFF	baz=20					S	**Sg**	**05 10 07.2**	**+0.2**
LIOB	**Emei**	**1.67**	**360**	*e*	P	P	**Pb**	**05 09 44.4**	**+0.2**
NDT	**Datong Townshi**	**1.69**	**16**	*e*	P	P	**Pg**	**05 09 45.2**	**-0.9**
YHNB	**Yeheng**	**1.72**	**11**		P	P	**Pb**	**05 09 45.6**	**+0.4**
YHNB	**Yeheng**	**1.72**	**11**	*e*	P	P	**Pb**	**05 09 45.2**	**0.0**
NSK	**Sanguang**	**1.72**	**10**	*e*	P	P	**Pb**	**05 09 45.4**	**+0.2**
ENTT	**Nioudou**	**1.73**	**17**	*e*	P	P	**Pb**	**05 09 44.9**	**-0.4**
NDS	**Dongshan**	**1.77**	**21**	*e*	P	P	**Pb**	**05 09 46.2**	**+0.2**
TWC	**Suao**	**1.80**	**25**	*e*	P	P	**Pb**	**05 09 45.9**	**-0.5**
TWE	**Neicheng**	**1.84**	**19**	*e*	P	P	**Pb**	**05 09 47.9**	**+0.8**
NWLT	**Wulai**	**1.85**	**14**	*e*	P	P	**Pg**	**05 09 48.2**	**-1.0**
FUSB	**Fushanzhiwuyua**	**1.85**	**16**	*e*	P	P	**Pb**	**05 09 46.9**	**-0.5**
TWA	**Mucha**	**2.06**	**14**	*e*	P	P	**Pb**	**05 09 51.4**	**+0.4**
TWB1	**Santiao Chiao**	**2.21**	**23**	*e*	P	P	**Pb**	**05 09 52.2**	**-1.3**
SXI1	**Grass Mountain**	**2.25**	**20**	*e*	P	P	**Pb**	**05 09 53.4**	**-0.8**
JYNG	**Yonagunijimaku**	**2.30**	**50**			P	**Pn**	**05 09 51.6**	**+0.4**
JYNG						S	**Sn**	**05 10 20.0**	**+0.7**
YOJ	**Yonaguni jima**	**2.35**	**51**			P	**Pn**	**05 09 52.4**	**+0.5**
YOJ	**Yonaguni jima**	**2.35**	**51**	*e*	P	P	**Pn**	**05 09 51.6**	**-0.3**
YOJ	**Yonaguni jima**	**2.35**	**51**			P	**Pn**	**05 09 52.4**	**+0.5**
YOJ						S	**Sn**	**05 10 21.2**	**+0.6**
VWUC	**VWUC**	**2.47**	**325**	*e*	P	P	**Pn**	**05 09 53.4**	**-0.1**
PTMZ	**Houxiangcun**	**2.69**	**320**	*e*	P	P	**Pn**	**05 09 57.1**	**+0.5**
HATJ	**Hateruma jima**	**2.78**	**67**			P	**Pn**	**05 09 57.9**	**+0.1**
HATJ					*e*	S	**Sn**	**05 10 30.6**	**-0.5**
JKRS	**Kuro-shima**	**3.02**	**65**			P	**Pn**	**05 10 01.9**	**+0.8**
JKRS					*e*	S	**Sn**	**05 10 36.7**	**-0.4**
ZPLA	**Ao Xicun**	**3.15**	**288**	*e*	P	P	**Pn**	**05 10 03.4**	**+0.5**
JIJ	**Ishigaki jima**	**3.18**	**64**	*e*	P	P	**Pn**	**05 10 03.3**	**-0.1**
JIJ					*e*	S	**Sn**	**05 10 40.7**	**-0.5**
MATB	**Ma-tsu**	**3.31**	**343**	*e*	P	P	**Pn**	**05 10 04.9**	**-0.2**
AXDP	**Jialang**	**3.38**	**305**	*e*	P	P	**Pn**	**05 10 06.4**	**+0.3**

SOME ***20*** *05:31:35.3,41.43N×78.37E,h0km*
KRNET ***20*** *05:31:35.8±0.1,41.67N×78.63E,h13km,mb1.9*
NNC ***20*** *05:31:36.6±1.4,41.41N×78.44E,h0km,mb3.3,mpv2.8, Error ellipse: s-maj=9.7km s-min=5.9km az=175.0*
ISC 20 05:31:35.9±2.0,41.43N±0.08×78.51E±0.05,h13km±10km, n21,σ1.940/36,12C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.60**	**300**	⇑*i*	*i*	P	**Pg**	**05 31 47.5**	**-0.3**
TARG	baz=76			⇑*i*	*i*	S	**Sg**	**05 31 56.3**	**+0.4**
KDJ	**Kajisay**	**1.21**	**306**	⇑*i*	*i*	P	**Pn**	**05 31 58.0**	**-0.7**
KDJ	baz=94			⇑*i*	*i*	S	**Sb**	**05 32 14.3**	**-0.2**
ANVS	**Anan'yevo**	**1.49**	**336**	⇑*e*	*e*	P	**Pn**	**05 32 00.6**	**-1.9**
ANVS	baz=28			⇑*e*	*e*	S	**Sn**	**05 32 18.6**	**-3.3**
SATY	**Saty** 1.4nm,0.2s	**1.63**	**357**	P		P	**Pg**	**05 32 06.9**	**-0.3**
SATY	4.1nm,0.1s			S		S	**Sg**	**05 32 29.6**	**+1.2**
SATY	**Saty** 1.4nm,0.2s	**1.63**	**357**	*e*	P	P	**Pb**	**05 32 06.4**	**+0.6**
SATY	4.1nm,0.1s			*e*	*e*	S	**Sb**	**05 32 29.0**	**+2.6**
ULHL	**Ulahol**	**1.88**	**296**	⇑*i*	*i*	P	**Pg**	**05 32 10.6**	**-1.3**
ULHL	baz=89			⇑*i*	*i*	S	**Sg**	**05 32 35.6**	**-0.7**
NRN	**Naryn**	**1.88**	**271**	⇓*e*	*e*	P	**Pg**	**05 32 12.6**	**+0.5**
NRN	baz=64			⇓*e*	*e*	S	**Sg**	**05 32 38.9**	**+2.4**
TNSS	**Tian-Shan** 2.5nm,0.3s	**1.98**	**325**	Pg		P	**Pg**	**05 32 12.9**	**-1.0**
TNSS	1.6nm,0.5s			Lg		Lg	Lg	05 32 40.1	
TNSS	**Tian-Shan** 2.5nm,0.1s	**1.98**	**325**	*e*	P	P	**Pb**	**05 32 12.7**	**+0.7**
TNSS	1.5nm,0.3s			*e*	*e*	S	**Sg**	**05 32 39.8**	**+0.2**
PDGK	**Podgornoye** 1.3nm,0.4s	**2.03**	**21**	Pg		P	**Pg**	**05 32 14.1**	**-0.8**
PDGK	3.9nm,0.5s			Lg		Lg	Lg	05 32 41.9	
PDGK	**Podgornoye** 1.2nm,0.5s	**2.03**	**21**	⇑Pn		P	**Pb**	**05 32 12.8**	**0.0**
PDGK				⇑Sn		S	**Sb**	**05 32 39.6**	**+1.6**
KPKS	**Kokpek** 1.4nm,0.2s	**2.04**	**4**	Pg		P	**Pg**	**05 32 14.3**	**-0.8**
KPKS	6.6nm,0.3s			Lg		Lg	Lg	05 32 42.2	
KPKS	**Kokpek** 1.5nm,0.1s	**2.04**	**4**	*e*	P	P	**Pg**	**05 32 14.2**	**-0.8**
KPKS	6.6nm,0.3s			*e*	*e*	S	**Sg**	**05 32 42.2**	**+0.8**
MDOK	**Medeo** 3.9nm,0.2s	**2.04**	**329**	Pg		P	**Pg**	**05 32 14.1**	**-1.0**
MDOK	4.9nm,0.6s			Lg		Lg	Lg	05 32 42.1	
MDOK	**Medeo** 3.9nm,0.1s	**2.04**	**329**	*e*	P	P	**Pg**	**05 32 14.1**	**-1.0**
MDOK	4.9nm,0.6s			*e*	*e*	S	**Sg**	**05 32 42.1**	**+0.5**
KOTS	**Kotyrbulak** 5.6nm,0.2s	**2.08**	**331**	Pg		P	**Pg**	**05 32 14.8**	**-0.9**
KOTS	6.7nm,0.3s			Lg		Lg	Lg	05 32 43.7	
KOTS	**Kotyrbulak** 5.6nm,0.1s	**2.08**	**331**	*e*	P	P	**Pg**	**05 32 14.8**	**-0.9**
KOTS	6.7nm,0.3s			*e*	*e*	S	**Sg**	**05 32 43.7**	**+1.0**
KNDC	**Almaty**	**2.12**	**328**	⇑Pn		P	**Pb**	**05 32 13.6**	**-0.6**

	11nm,0.3s						
KNDC				⇑Sn	**Sn**	**05 32 40.5**	**+3.2**
	18nm,0.5s						
BOOM	**Boomskoye usch**	**2.19**	**300**	⇓*e*P	**Pb**	**05 32 14.5**	**-0.9**
	baz=93						
BOOM				⇓*i*S	**Sb**	**05 32 42.8**	**+0.3**
	baz=93						
DGS	**Degeres**	**2.72**	**313**	Pg	**Pb**	**05 32 24.7**	**+0.3**
	1.2nm,0.5s						
DGS				Lg	Lg	05 33 00.4	
	4.0nm,0.4s						
DGS	**Degeres**	**2.72**	**313**	*e*P	**Pb**	**05 32 24.7**	**+0.3**
	1.2nm,0.4s						
DGS				*e*S	**Sb**	**05 33 00.4**	**+2.7**
	4.0nm,0.4s						

NEIC ***20*** *05:34:21.2±1.0,56°.3N±0°.1×148°.8W±0°.1,h20km±11km, ML3.1/26,ML2.9(AEIC),Error ellipse: s-maj=16.8km s-min=8.9km az=172.0*

AEIC 20 05:34:24.4±1.0,56°.3N±0°.1×148°.7W±0°.1,h10km±8km, Error ellipse: s-maj=18.2km s-min=9.7km az=177.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.57**	**306**		Pn	05 35 01.4	-4.7
KDAK	**Kodiak Island**	**2.57**	**306**		Sn	05 35 29.3	-8.1
OHAK	**Old Harbor**	**2.67**	**292**		Pn	05 35 02.4	-5.0
OHAK					Sn	05 35 32.1	-7.7
SYI	**Shuyak Island**	**3.04**	**321**		Pn	05 35 08.0	-4.5
SYI					Sn	05 35 42.5	-6.3
CNPM	**China Poot**	**3.49**	**338**		Pn	05 35 14.0	-4.7
CNPM					Sn	05 35 52.5	-7.5
CNPM	**China Poot**	**3.49**	**338**	IAML		05 37 32.2	
	comp=E,17nm,0.7s						
CNPM				IAML		05 37 33.1	
	comp=N,16nm,0.3s						
BRSE	**Bradley Lake S**	**3.60**	**343**		Pn	05 35 15.2	-5.0
BRLK	**Bradley Lake**	**3.65**	**343**		Pn	05 35 15.6	-5.2
BRLK	**Bradley Lake**	**3.65**	**343**	IAML		05 37 38.8	
	comp=E,29nm,0.6s						
BRLK				IAML		05 37 39.7	
	comp=N,25nm,0.9s						
P23K	**Montague Islan**	**3.76**	**10**		Pn	05 35 17.1	-5.3
P23K					Sn	05 35 58.4	-8.2
HIN	**Hinchinbrook I**	**4.26**	**15**		Pn	05 35 24.1	-5.2
SLKM	**Skilak Lake**	**4.28**	**350**		Pn	05 35 24.9	-4.6
KAIM	**Kayak Island**	**4.28**	**30**		Pn	05 35 24.8	-4.7
ILSW	**Iliamna Southw**	**4.36**	**329**	Pn	Pn	05 35 26.3	-4.4
FID	**Port Fidalgo**	**4.60**	**14**		Pn	05 35 29.0	-5.0
RAGM	**Ragged Mountai**	**4.61**	**26**	Pn	Pn	05 35 30.3	-3.7
P18K	**Big Mountain,**	**4.65**	**314**		Pn	05 35 29.9	-4.8
NICHA	**Nichawak Mount**	**4.67**	**31**		Pn	05 35 30.4	-4.5
GOAT	**Goat Mountain**	**4.76**	**24**		Pn	05 35 31.8	-4.5
WAX	**Waxell Ridge**	**5.17**	**34**		Pn	05 35 37.6	-4.2
SUA	**Susitna One**	**5.27**	**349**	Pn	Pn	05 35 38.2	-5.0
SUA				IAML		05 38 18.6	
	comp=E,8.2nm,1.1s						
SUA				IAML		05 38 29.5	
	comp=N,8.7nm,1.4s						
TGL	**Tana Glacier**	**5.42**	**32**		Pn	05 35 41.1	-4.2
ISLE	**Juniper Island**	**5.45**	**35**	Pn	Pn	05 35 42.4	-3.4
GHO	**Glory Hole Cre**	**5.47**	**359**	Pn	Pn	05 35 42.4	-3.6
KIAG	**Kiagna River**	**5.69**	**33**		Pn	05 35 44.6	-4.4
PNL	**Peninsula**	**5.99**	**52**		Pn	05 35 48.6	-4.4
P29M	**Windy Craggy**	**6.72**	**56**		Pn	05 35 58.5	-4.5
S31K	**Pelican**	**7.00**	**71**		Pn	05 36 00.6	-6.1

IDC ***20*** *05:56:58.4±0.8,2°.71N×133°.14E,h0km,mb4.3/12, mbtmp4.3/13,ML2.9/1,MS3.6/10,Error ellipse: s-maj=38.9km s-min=14.2km az=68.0*

NEIC ***20*** *05:57:00.9±2.1,2°.74N±0°.10×133°.1E±0°.1,h10km±1km, mb4.7/51,Error ellipse: s-maj=19.4km s-min=15.0km az=52.0*

DJA ***20*** *05:57:02.5±1.2,3°.1N±3°×13°.3E±°,h18km±9km,M4.9/32, mB5.5/18,mb4.7/32,MLv4.8/8,Mw(mB)4.9/18*

GCMT ***20*** *05:57:04.9±0.3,2°.94N±0°.03×133°.05E±0°.02,h22km, MW5.0/116,Moment Tensor Solution. s20,c21; s116,c159; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.27±.22; Mθθ 1.06±.12; Mφφ 3.21±.14; Mrθ 1.22±.25; Mθφ 0.41±.07; Mφr 0.66±.20; Best double couple: M○3.98200×10^16 NP1○φ203.00000°,δ53.00000°, λ-77.00000°. NP2○φ2.00000°,δ39.00000°,λ-107.00000°. Principal axes: T 3.3880, Plg7.0000°, Azm283.0000°; N 1.1880, Plg11.0000°, Azm15.0000°; P -4.5760, Plg77.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 05:57:04.1±0.4,2°.67N±0°.05×133°.11E±0°.07,h35km,n130, σ1§91/119,mb4.6/51,MS3.6/11,1C-2D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**3.97**	**208**	P	**Pn**	**05 57 59.6**	**-2.9**
FAKI	**Fak Fak**	**5.62**	**189**	Pn	**Pn**	**05 58 24.5**	**-0.8**
FAKI	**Fak Fak**	**5.62**	**189**	P	**Pn**	**05 58 25.3**	**0.0**
	34nm,0.7s,749nm0.2nm						
TNTI	**Ternate**	**6.04**	**252**	Pn	**Pn**	**05 58 29.6**	**-1.4**
TNTI	**Ternate**	**6.04**	**252**	P	**Pn**	**05 58 30.8**	**-0.2**
LBMI	**Labuha**	**6.50**	**240**	P	**Pn**	**05 58 36.7**	**-0.6**
	94nm,0.8s,2μm0.4nm						
SMPI	**Sarmi**	**7.27**	**130**	P	**Pn**	**05 58 44.6**	**-3.3**
	256nm,0.9s,3μm0.9nm						
SGSI	**Sangihe**	**7.63**	**278**	P	**Pn**	**05 58 49.3**	**-3.6**
	279nm,0.5s,1.8nm						
NLAI	**Namlea**	**8.40**	**226**	P	**Pn**	**05 59 01.7**	**-1.7**
	14nm,0.6s,4μm						
SANI	**Sanana**	**8.52**	**237**	P	**Pn**	**05 59 04.5**	**-0.6**
	16nm,0.8s,577nm						
GENI	**Genyem**	**8.78**	**126**	P	**Pn**	**05 59 08.2**	**-0.5**
	48nm,0.9s						
KMSI	**Cibinong**	**9.36**	**257**	P	**Pn**	**05 59 16.8**	**+0.2**
	102nm,0.5s						
GTOI	**Gorontalo**	**10.29**	**259**	P	**Pn**	**05 59 28.9**	**-0.5**
	5.0nm,1.9s						
TABU	**Tabubil**	**11.31**	**134**	P	**Pn**	**05 59 46.2**	**+2.8**
TOLI2	**Tolitoli**	**12.42**	**263**	Pn	**Pn**	**05 59 57.8**	**-0.7**
BBSI	**Bau Bau**	**13.29**	**232**	P	**Pn**	**06 00 10.9**	**+0.5**
	72nm,1.2s,1μm						
MPSI	**Mapaga**	**13.41**	**260**	P	**Pn**	**06 00 11.0**	**-1.0**
TTSI	**Tana Toraja**	**14.45**	**247**	P	**Pn**	**06 00 23.0**	**-3.2**
	39nm,1.2s						
SOEI	**Soe**	**15.16**	**215**	P	**Pn**	**06 00 33.5**	**-2.5**
	35nm,1.3s						
KDU	**Kakadu**	**15.27**	**182**	P	**P**	**06 00 45.1**	**+3.4**
KAPI	**Kappang**	**15.37**	**240**	Pn	**Pn**	**06 00 36.8**	**-1.8**
MMRI	**Maumere**	**15.61**	**224**		**Pn**	**06 00 43.9**	**+2.3**
MMRI				IAmb	IAmb	06 01 11.2	
	comp=Z,37nm,1.0s						
GUMO	**Guam**	**15.90**	**46**	LR	LR	06 04 55.4	
	comp=Z,197nm,21.3s,baz=173,slow=30						
EDFI	**Ende, Flores**	**16.07**	**225**	P	**Pn**	**06 00 47.2**	**-0.5**
	comp=Z,20nm,1.4s						
TGY	**Tagaytay City**	**16.54**	**314**	LR	LR	06 07 50.9	
	comp=Z,374nm,21.1s,baz=54,slow=40						
PMG	**Port Moresby**	**18.44**	**131**	P	**P**	**06 01 17.3**	**+0.5**
PMG				IAmb	IAmb	06 01 18.7	
	comp=Z,63nm,1.1s						
PMG	**Port Moresby**	**18.44**	**131**	P	**Pn**	**06 01 19.0**	**+1.9**
PMG	**Port Moresby**	**18.44**	**131**	P	**P**	**06 01 15.9**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=335,slow=12,SNR=9.6 comp=Z,29nm,0.9s						
MTKI	**Muara Teweh, K**	**18.56**	**259**	P	**P**	**06 01 15.2**	**-2.9**
PLAI	**Plampang**	**19.08**	**233**	P	**P**	**06 01 24.4**	**+0.5**
	comp=Z,21nm,1.1s						
BBKI	**Banjar Baru**	**19.25**	**252**	P	**P**	**06 01 25.2**	**-0.5**
	comp=Z,112nm,1.7s,comp=Z,5μm						
COEN	**Coen**	**19.30**	**149**	P	**P**	**06 01 26.1**	**-0.2**
COEN				IAmb	IAmb	06 01 30.1	
	comp=Z,59nm,1.1s						
COEN	**Coen**	**19.30**	**149**	P	**P**	**06 01 27.4**	**+1.1**
TWSI	**Taliwang, Sumb**	**19.75**	**235**	P	**P**	**06 01 32.2**	**+1.0**
	comp=Z,32nm,1.7s,comp=Z,1μm						
SRBI	**Singaraja**	**20.80**	**239**	P	**P**	**06 01 42.7**	**+0.1**
	comp=Z,19nm,1.2s						
SBUM	**Sibu**	**20.87**	**270**	P	**P**	**06 01 44.4**	**+1.1**
SBUM				IAmb	IAmb	06 01 51.3	
	comp=Z,79nm,1.5s						
ABJI	**Asem Bagus**	**21.51**	**241**	P	**P**	**06 01 51.0**	**+0.8**
	comp=Z,27nm,0.8s						
STKI	**Sintang**	**21.78**	**264**	P	**P**	**06 01 54.0**	**+0.9**
	comp=Z,31nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.91**	**199**	P	**P**	**06 01 54.7**	**+0.2**
WB0	**Warramunga Arr**	**22.34**	**177**	P	**P**	**06 01 59.0**	**0.0**
WB0				IAmb	IAmb	06 02 02.8	
	comp=Z,20nm,1.0s						
WRA	**Warramunga Arr**	**22.51**	**177**	P	**P**	**06 02 01.1**	**+0.2**
WRA	**Warramunga Arr**	**22.51**	**177**	P	**P**	**06 02 00.1**	**-0.8**
	comp=Z,10nm,1.0s,baz=357,slow=11,SNR=20 comp=Z,10nm,1.0s						
WR0	**Warramunga Arr**	**22.54**	**176**	P	**P**	**06 02 01.2**	**+0.1**
WR0				IAmb	IAmb	06 02 16.9	
	comp=Z,22nm,1.2s						
KSM	**Kuching**	**22.82**	**267**	P	**P**	**06 02 04.8**	**+0.6**
MTSU	**Mount Surprise**	**23.44**	**152**	P	**P**	**06 02 13.0**	**+2.5**
PWJI	**Pagerwojo**	**23.76**	**243**	P	**P**	**06 02 10.5**	**-3.0**
	comp=Z,22nm,1.1s						
NACB	**Ninganchiao**	**24.10**	**333**	P	**P**	**06 02 14.3**	**-2.3**
JCJ	**Chichijima**	**25.80**	**19**	LR	LR	06 11 20.2	
	comp=Z,105nm,19.6s,baz=132,slow=34						
CTAO	**Charters Tower**	**26.04**	**151**	P	**P**	**06 02 34.8**	**+0.5**
CTAO				IAmb	IAmb	06 03 03.5	
	comp=Z,15nm,1.4s						
DLV	**T Lat**	**26.07**	**292**	P	**P**	**06 02 35.3**	**+0.4**
AS31	**Alice Springs**	**26.19**	**178**	P	**P**	**06 02 36.4**	**+0.7**
ASAR	**Alice Springs**	**26.19**	**178**	P	**P**	**06 02 35.4**	**-0.3**
	comp=Z,14nm,0.4s,baz=8.8,slow=11,SNR=12						
ASAR				LR	LR	06 13 38.5	
	comp=Z,230nm,20.5s,baz=10.0,slow=38 comp=Z,14nm,0.4s						
LEM	**Lembang**	**27.14**	**250**	P	**P**	**06 02 47.3**	**+2.8**
	comp=Z,14nm,1.1s						
PPBI	**Pangkal Pinang**	**27.39**	**260**	P	**P**	**06 02 48.0**	**+1.4**
QIZ	**Qiongzhong**	**27.97**	**307**	P	**P**	**06 02 53.0**	**+1.3**
QIZ				S	**S**	**06 07 38.3**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.6s						
JHJ	**Hachijo jima 2**	**30.93**	**11**	LR	LR	06 13 29.9	
	comp=Z,96nm,18.5s,baz=333,slow=32						
BKNI	**Bangkinang**	**32.14**	**266**	P	**P**	**06 03 30.1**	**+1.4**
BKNI	**Bangkinang**	**32.14**	**266**	P	**P**	**06 03 27.9**	**-0.8**
NJ2	**Nanjing**	**32.16**	**337**	*e*P	**P**	**06 03 29.3**	**+0.8**
NJ2				sP	**sP**	**06 03 40.1**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SLVN	**Son La**	**33.93**	**305**	P	**P**	**06 03 44.1**	**-0.2**
SLVN				IAmb	IAmb	06 03 48.3	
	comp=Z,6.8nm,1.0s						
RPSI	**Rantau Prapat**	**34.15**	**271**	P	**P**	**06 03 45.0**	**-1.3**
KSRS	**Korea Array**	**34.94**	**353**	LR	LR	06 20 56.3	
	comp=Z,56nm,18.4s,baz=180,slow=41						
KCSI	**Kotacane, Aceh**	**35.29**	**272**	P	**P**	**06 03 55.3**	**-0.9**
STKA	**Stephens Creek**	**35.29**	**167**	P	**P**	**06 03 54.8**	**-1.1**
STKA	**Stephens Creek**	**35.29**	**167**	P	**P**	**06 03 55.3**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=341,slow=10.0,SNR=7.4 comp=Z,5.7nm,0.9s						
CRAI	**Chiangrai**	**36.39**	**301**	P	**P**	**06 04 05.9**	**+0.4**
CRAI				IAmb	IAmb	06 04 08.4	
	comp=Z,13nm,1.6s						
H11S3	**WAKE ISLAND Hy**	**36.45**	**62**	T	T	06 42 46.5	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**36.46**	**62**	T	T	06 42 50.4	
	baz=252,slow=74						
H11S1	**WAKE ISLAND Hy**	**36.47**	**62**	T	T	06 42 48.8	
	baz=252,slow=74						
KMI	**Kunming**	**36.79**	**310**	⇓P	**P**	**06 04 12.8**	**+3.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CMAR	**Chiang Mai Arr**	**36.95**	**298**	P	**P**	**06 04 10.3**	**0.0**
CMAR	**Chiang Mai Arr**	**36.95**	**298**	P	**P**	**06 04 10.0**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=117,slow=6.3,SNR=9.0						
CMAR				LR	LR	06 20 19.4	
	comp=Z,91nm,20.4s,baz=110,slow=38 comp=Z,1.5nm,0.3s						
LYN	**LuoYang**	**37.09**	**331**	*e*P	**P**	**06 04 13.4**	**+2.2**
LYN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**37.09**	**60**	T	T	06 43 33.4	
	baz=247,slow=75,SNR=128						
H11N2	**WAKE ISLAND Hy**	**37.10**	**60**	T	T	06 43 34.4	
	baz=247,slow=75,SNR=187						
H11N3	**WAKE ISLAND Hy**	**37.10**	**60**	T	T	06 43 34.9	
	baz=247,slow=75,SNR=174						
PZH	**PanZhiHua**	**38.29**	**311**	P	**P**	**06 04 23.8**	**+2.2**
PZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,4.7s						
HNS	**HongShan**	**38.48**	**336**	⇑P	**P**	**06 04 22.9**	**+0.1**
HNS				*e*S	**S**	**06 10 14.6**	**-1.4**
HNS				pmax	pmax		
	comp=Z,13nm,1.0s						
HNS				LR	LR		
	comp=N,200nm,19.9s						
HNS				LR	LR		
	comp=E,280nm,15.9s						
HNS				LR	LR		
	comp=Z,270nm,22.1s						
XAN	**Xi'an**	**38.51**	**327**	⇓P	**P**	**06 04 25.9**	**+2.6**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CD2	**Chengdu**	**39.46**	**318**	P	**P**	**06 04 33.9**	**+2.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	**Baijiatuau**	**40.23**	**340**	P	**P**	**06 04 37.1**	**-0.3**
BJI	**Beijing**	**40.24**	**340**	P	**P**	**06 04 37.3**	**-0.2**
BJI				S	**S**	**06 10 48.6**	**+6.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CN2	**Changchun**	**41.52**	**352**	*e*P	P	06 04 42.8	-5.2
CN2				*es*P	pP	06 04 51.8	-5.1
CN2				*es*S	S	06 11 07.5	+6.2
CN2				LR	LR		
	comp=N,170nm,15.0s						
CN2				LR	LR		
	comp=E,180nm,15.0s						
MDJ	**Mudanjiang**	**41.88**	**356**	P	**P**	**06 04 53.1**	**+2.1**
MDJ				pP	pP	06 04 55.9	-4.1
MDJ				sP	sP	06 04 57.8	-5.8
MDJ				PP	**PnPn**	**06 06 32.8**	**-0.8**
MDJ				PcP	**PcP**	**06 06 45.3**	**-1.0**
MDJ				ScP	**ScP**	**06 10 36.3**	**+2.1**
MDJ				PcS	**PcS**	**06 10 37.0**	**-0.8**
MDJ				S	S	06 11 16.1	+9.3
MDJ				sS	sS	06 11 23.8	+2.1
MDJ				SS	**SnSn**	**06 14 29.4**	**+3.0**
MDJ	**Mudanjiang**	**41.88**	**356**	ScS	ScS	06 14 55.1	+3.9
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,180nm,5.5s						
HHC	**Hu-ho-hao-te**	**42.69**	**336**	*e*P	**P**	**06 05 00.1**	**+2.3**
HHC				sP	sP	06 05 09.5	-1.2
HHC				*e*S	**S**	**06 11 25.5**	**+6.5**
HHC				sS	sS	06 11 35.9	+1.9
HHC				SS	**SS**	**06 14 22.8**	**-7.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.0s						
HHC				LR	LR		
	comp=N,150nm,16.5s						
HHC				LR	LR		
	comp=E,190nm,14.9s						
HHC				LR	LR		
	comp=Z,170nm,14.3s						
LZH	**Lanzhou**	**42.86**	**324**	*e*P	**P**	**06 05 00.8**	**+1.5**
LZH				pP	sP	06 05 10.0	-2.1
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BTO	**Baotou**	**43.14**	**334**	*e*P	**P**	**06 05 04.3**	**+2.9**
BTO				pP	**pP**	**06 05 09.0**	**-1.6**
BTO				sP	**sP**	**06 05 11.5**	**-2.9**
BTO				PP	**PcP**	**06 06 48.6**	**-2.2**
BTO				S	S	06 11 34.1	+8.5
BTO				SS	**SS**	**06 14 40.9**	**+1.7**
BTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BTO				pmax	pmax		
	comp=Z,260nm,7.5s						
BTO				LR	LR		
	comp=N,330nm,5.9s						
BTO				LR	LR		
	comp=E,240nm,6.6s						
BTO				LR	LR		
	comp=Z,250nm,6.2s						
XLT	**XiLinHaoTe**	**43.74**	**342**	*e*P	P	06 04 58.8	-7.4
XLT				sP	pP	06 05 05.8	-10
XLT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,140nm,6.0s						
SHL	**Shillong**	**45.69**	**304**	P	**P**	**06 05 21.1**	**-1.1**
SHL				IAmb	IAmb	06 05 25.3	
	comp=Z,15nm,1.0s						
GTA	**Gaotai**	**47.46**	**325**	P	**P**	**06 05 35.6**	**-0.1**
ULN	**Ulaanbaatar**	**50.32**	**337**	P	**P**	**06 05 56.9**	**-0.7**
ULN				IAmb	IAmb	06 06 10.1	
	comp=Z,15nm,1.6s						
SONM	**Songino Array**	**50.55**	**337**	P	**P**	**06 05 58.0**	**-1.3**
SONM	**Songino Array**	**50.55**	**337**	P	**P**	**06 05 58.7**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=152,slow=8.0,SNR=8.0 comp=Z,1.6nm,1.0s						
WMQ	**Urumqi**	**57.35**	**322**	*e*P	**P**	**06 06 47.3**	**-1.7**
WMQ				pP	pP	06 06 56.3	-2.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
MK31	**Makanchi Array**	**62.14**	**323**	IAmb	IAmb	06 07 29.8	
	comp=Z,6.4nm,1.4s						
MKAR	**Makanchi Array**	**62.14**	**323**	P	**P**	**06 07 21.1**	**-0.8**
MKAR	**Makanchi Array**	**62.14**	**323**	P	**P**	**06 07 21.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=119,slow=7.6,SNR=8.2 comp=Z,0.8nm,0.6s						
MAKZ	**Makanchi**	**62.34**	**323**	P	**P**	**06 07 23.1**	**-0.1**
MAKZ				IAmb	IAmb	06 07 31.1	
	comp=Z,10.0nm,1.4s						
KSH	**Kashi**	**63.34**	**313**	P	P	06 07 35.1	+5.0
ZALV	**Zalesovo Beam**	**64.52**	**331**	P	**P**	**06 07 35.8**	**-1.5**
ZALV	**Zalesovo Beam**	**64.52**	**331**	P	**P**	**06 07 36.6**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=93,slow=6.5,SNR=5.0 comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**66.13**	**326**	P	**P**	**06 07 46.9**	**-1.0**
KURBB	**Kurchatov Arra**	**66.14**	**325**	P	**P**	**06 07 47.5**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=118,slow=5.9,SNR=22						
KURBB				LR	LR	06 37 01.4	
	comp=Z,38nm,21.6s,baz=168,slow=36 comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	**68.39**	**316**	P	**P**	**06 08 01.3**	**-1.1**
KKAR	**Karatay Array**	**68.39**	**316**	P	**P**	**06 08 00.7**	**-1.7**
BVAR	**Borovoye Array**	**71.73**	**326**	P	**P**	**06 08 22.4**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=116,slow=7.9,SNR=17 comp=Z,4.7nm,0.8s						
BRVK	**Borovoye**	**71.80**	**326**	P	**P**	**06 08 22.2**	**-0.8**
BRVK				IAmb	IAmb	06 08 31.0	
	comp=Z,5.4nm,0.8s						
GEYT	**Alibeck**	**76.53**	**308**	IAmb	IAmb	06 08 59.7	
	comp=Z,7.1nm,1.0s						
GEYT	**Alibeck**	**76.53**	**308**	P	**P**	**06 08 50.6**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=81,slow=8.9,SNR=6.8 comp=Z,2.4nm,0.7s						
ABKAR	**Akbulak array**	**77.02**	**320**	P	**P**	**06 08 52.2**	**-1.3**
ABKAR	**Akbulak array**	**77.02**	**320**	P	**P**	**06 08 52.3**	**-1.3**
ABKAR				IAmb	IAmb	06 08 56.5	
	comp=Z,2.6nm,0.8s						
N19K	**Bonanza Creek**	**79.14**	**28**	IAmb	IAmb	06 09 09.2	
	comp=Z,14nm,1.1s						
E22K	**Anaktuvuk Pass**	**81.99**	**21**	IAmb	IAmb	06 09 24.1	
	comp=Z,4.2nm,0.9s						
KNK	**Knik Glacier**	**82.13**	**28**	P	**P**	**06 09 20.4**	**-0.6**
KNK				IAmb	IAmb	06 09 26.2	
	comp=Z,14nm,1.1s						
SML	**Sawmill**	**82.25**	**28**	IAmb	IAmb	06 09 27.2	
	comp=Z,12nm,1.1s						
RND	**Reindeer**	**82.27**	**26**	P	**P**	**06 09 21.8**	**-0.1**
RND				IAmb	IAmb	06 09 34.1	
	comp=Z,13nm,1.4s						
G23K	**Bananza Creek**	**82.37**	**23**	IAmb	IAmb	06 09 25.0	
	comp=Z,19nm,1.6s						
SCM	**Sheep Creek Mo**	**82.72**	**28**	P	**P**	**06 09 24.5**	**+0.3**
ILAR	**Eielson Array**	**83.33**	**25**	P	**P**	**06 09 28.0**	**+0.7**
ILAR	**Eielson Array**	**83.33**	**25**	P	**P**	**06 09 26.8**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=270,slow=5.3,SNR=8.5 comp=Z,1.0nm,0.9s						
F24K	**Squaw Lake**	**83.34**	**22**	IAmb	IAmb	06 09 30.8	
	comp=Z,12nm,1.6s						
KIRV	**Kirov**	**84.44**	**328**	LR	LR	06 48 04.0	
	comp=Z,26nm,21.2s,baz=86,slow=36						
BMAR	**Burnt Mountain**	**84.59**	**23**	P	**P**	**06 09 34.0**	**+0.4**
L27K	**Beaver Creek,**	**85.39**	**27**	IAmb	IAmb	06 09 51.1	
	comp=Z,5.5nm,1.1s						
BCAR	**Beaver Creek A**	**85.41**	**27**	P	**P**	**06 09 38.0**	**+0.1**
CTGM	**Chitina Glacie**	**85.52**	**29**	IAmb	IAmb	06 09 43.2	
	comp=Z,9.5nm,1.0s						
RAYN	**Ar Rayn**	**86.75**	**293**	P	**P**	**06 09 44.4**	**-0.9**
RAYN				IAmb	IAmb	06 09 48.0	
	comp=Z,5.5nm,0.8s						
GNI	**Garni**	**87.04**	**310**	LR	LR	06 54 02.3	
	comp=Z,50nm,18.0s,baz=52,slow=39						
QSPA	**South Pole Qui**	**92.58**	**180**	P	**P**	**06 10 11.9**	**0.0**
	comp=Z,3.1nm,1.0s,baz=326,slow=4.4,SNR=5.3 comp=Z,3.1nm,1.0s						

IDC ***20*** *05:58:18.0±0.7,2°.70N×133°.23E,h0km,mb4.4/14, mbtmp4.4/15,ML2.9/1,MS3.7/6,Error ellipse: s-maj=42.0km s-min=14.3km az=68.0*

BJI ***20*** *05:58:19.0±0.0,2°.80N×133°.20E,h10km,mb4.4/48, mB5.0/19,Ms4.4/8,Ms7 4.0/9*

NEIC ***20*** *05:58:20.6±1.6,2°.82N±0°.09×133°.2E±0°.1,h10km±1km, mb4.8/37,Error ellipse: s-maj=22.5km s-min=14.9km az=77.0*

DJA ***20*** *05:58:23.2±0.8,3°.1N±5°×13°.3E±°,h41km±8km,M5.0/26, mB5.6/6,mb4.8/26,MLv5.1/2,Mw(mB)5.1/6*

ISC 20 05:58:21.1±0.8,2°.72N±0°.05×133°.15E±0°.08,h15km±4km, n103,σ1§70/108,mb4.6/52,MS3.7/8,2D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**5.67**	**189**	Pn	**Pn**	**05 59 46.7**	**+1.8**
SMPI	**Sarmi**	**7.26**	**130**	P	**Pn**	**06 00 04.6**	**-2.1**
	281nm,0.8s,7μm1.2nm						
NLAI	**Namlea**	**8.46**	**226**	P	**Pn**	**06 00 20.4**	**-2.8**
	21nm,0.8s						
SAUI	**Saumlaki**	**10

NGJI	**Ngawi**	**23.85**	**245**	P	**P**	**06 03 33.9**	**-0.2**
	comp=Z,48nm,1.4s						
NACB	**Ninganchiao**	**24.08**	**333**	P	**P**	**06 03 35.7**	**-0.4**
SMRI	**Semarang**	**24.66**	**247**	P	**P**	**06 03 41.3**	**-0.3**
	comp=Z,83nm,1.3s						
UGM	**Wanagama**	**24.92**	**245**	P	**P**	**06 03 44.6**	**+0.7**
UGM	**Wanagama**	**24.92**	**245**	P	**P**	**06 03 44.7**	**+0.7**
	comp=Z,147nm,1.4s						
DLV	**T Lat**	**26.10**	**292**	P	**P**	**06 03 54.9**	**0.0**
ASAR	**Alice Springs**	**26.23**	**178**	P	**P**	**06 03 54.9**	**-0.8**
	comp=Z,11nm,0.3s,baz=2.7,slow=10,SNR=2.6						
	comp=Z,11nm,0.3s						
PPBI	**Pangkal Pinang**	**27.44**	**260**	P	P	06 03 58.8	-7.9
QIZ	**Qiongzhong**	**27.98**	**307**	P	**P**	**06 04 11.3**	**-0.2**
QIZ				S	**S**	**06 08 57.0**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,190nm,4.6s						
QIZ				LR	LR		
	comp=Z,86nm,13.2s						
QIZ				LR	LR		
	comp=Z,220nm,10.1s						
QIZ				LR	LR		
	comp=Z,270nm,20.8s						
NJ2	**Nanjing**	**32.13**	**337**	*e*P	**P**	**06 04 49.1**	**+1.0**
NJ2				sP	**pwP**	**06 04 56.1**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,240nm,3.7s						
SLVN	**Son La**	**33.95**	**305**	P	**P**	**06 05 03.7**	**-0.5**
RPSI	**Rantau Prapat**	**34.19**	**271**	P	**P**	**06 05 05.0**	**-1.4**
STKA	**Stephens Creek**	**35.33**	**168**	P	**P**	**06 05 14.6**	**-1.3**
STKA	**Stephens Creek**	**35.33**	**168**	P	**P**	**06 05 15.2**	**-0.6**
	comp=Z,6.4nm,1.0s,baz=344,slow=6.9,SNR=5.6						
	comp=Z,6.4nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**36.39**	**62**	T	T	06 44 09.2	
	baz=248,slow=75,SNR=45						
H11S2	**WAKE ISLAND Hy**	**36.40**	**62**	T	T	06 44 07.1	
	baz=248,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**36.41**	**62**	T	T	06 44 05.6	
	baz=248,slow=75,SNR=15						
CMAR	**Chiang Mai Arr**	**36.98**	**297**	P	**P**	**06 05 29.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**36.98**	**297**	P	**P**	**06 05 29.9**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=114,slow=5.7,SNR=4.6						
CMAR				PcP	**PcP**	**06 07 51.5**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=144,slow=1.3,SNR=6.5						
	comp=Z,1.1nm,0.3s						
H11N1	**WAKE ISLAND Hy**	**37.03**	**60**	T	T	06 44 55.4	
	baz=246,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**37.04**	**60**	T	T	06 44 54.3	
	baz=246,slow=75,SNR=55						
H11N3	**WAKE ISLAND Hy**	**37.04**	**60**	T	T	06 44 54.7	
	baz=246,slow=75,SNR=38						
LYN	**LuoYang**	**37.07**	**331**	*e*P	**P**	**06 05 31.8**	**+1.0**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	**Chiang Mai**	**37.10**	**298**	P	**P**	**06 05 30.2**	**-1.1**
CHTO				IAmb	IAmb	06 05 34.9	
	comp=Z,22nm,2.0s						
PZH	**PanZhiHua**	**38.30**	**311**	P	**P**	**06 05 42.6**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,4.6s						
HNS	**HongShan**	**38.46**	**336**	⇓P	**P**	**06 05 42.6**	**+0.2**
HNS				pmax	pmax		
	comp=Z,22nm,1.1s						
XAN	**Xi'an**	**38.50**	**327**	⇓P	**P**	**06 05 43.8**	**+0.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
CD2	**Chengdu**	**39.46**	**318**	P	**P**	**06 05 50.8**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJT	**Baijiatuau**	**40.20**	**340**	P	**P**	**06 05 55.4**	**-1.6**
BJI	**Beijing**	**40.22**	**340**	P	**P**	**06 05 57.9**	**+0.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DZM	**Mont Dzumac**	**40.80**	**129**	LR	LR	06 21 39.4	
	comp=Z,165nm,20.4s,baz=300,slow=34						
USA0B	**Ussuriysk Arra**	**41.32**	**359**	P	**P**	**06 06 03.8**	**-2.4**
USRK	**Ussuriysk Ar.**	**41.32**	**359**	P	**P**	**06 06 03.7**	**-2.5**
USRK	**Ussuriysk Ar.**	**41.32**	**359**	LR	LR	06 23 24.7	
	comp=Z,74nm,19.1s,baz=177,slow=36						
MDJ	**Mudanjiang**	**41.84**	**356**	P	**P**	**06 06 12.3**	**+1.8**
MDJ				pP	sP	06 06 15.0	-0.2
MDJ				sP	pwP	06 06 16.5	-2.9
MDJ				PP	**PP**	**06 07 48.4**	**+1.0**
MDJ				PcP	**PcP**	**06 08 08.8**	**+2.5**
MDJ				ScP	**ScP**	**06 11 59.1**	**+2.8**
MDJ				PcS	**PcS**	**06 12 00.6**	**+2.9**
MDJ				S	**S**	**06 12 29.8**	**+2.0**
MDJ				sS	sS	06 12 35.8	+2.5
MDJ				ScS	**ScS**	**06 16 15.8**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.8s						
ASAJ	**Asahikawa**	**42.07**	**10**	LR	LR	06 23 58.6	
	comp=Z,70nm,18.7s,baz=261,slow=37						
HHC	**Hu-ho-hao-te**	**42.67**	**336**	*e*P	**P**	**06 06 19.4**	**+2.0**
HHC				sP	pwP	06 06 29.0	+2.6
HHC				*e*S	**S**	**06 12 41.5**	**+1.1**
HHC				SS	**SS**	**06 15 44.8**	**-6.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.8s						
HHC				LR	LR		
	comp=Z,120nm,13.3s						
HHC				LR	LR		
	comp=Z,150nm,14.1s						
HHC				LR	LR		
	comp=Z,180nm,16.3s						
LZH	**Lanzhou**	**42.85**	**324**	*e*P	**P**	**06 06 23.3**	**+4.3**
LZH				pP	pwP	06 06 28.8	+0.8
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
BTO	**Baotou**	**43.12**	**334**	*e*P	**P**	**06 06 22.5**	**+1.4**
BTO				pP	**pwP**	**06 06 26.9**	**-3.1**
BTO				sP	**sP**	**06 06 29.6**	**+3.8**
BTO				PP	**PP**	**06 08 02.5**	**+1.1**
BTO				S	**S**	**06 12 50.1**	**+3.1**
BTO				SS	**SS**	**06 15 55.8**	**-4.1**
BTO				pmax	pmax		
	comp=Z,16nm,0.8s						
BTO				pmax	pmax		
	comp=Z,310nm,4.9s						
BTO				LR	LR		
	comp=Z,360nm,5.0s						
BTO				LR	LR		
	comp=Z,370nm,6.7s						
BTO				LR	LR		
	comp=Z,190nm,6.5s						
XLT	**XiLinHaoTe**	**43.72**	**342**	*e*P	**P**	**06 06 26.5**	**+0.7**
XLT				sP	pwP	06 06 33.6	-1.1
XLT				S	**S**	**06 12 58.6**	**+3.0**
XLT				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,93nm,3.9s						
SHL	**Shillong**	**45.71**	**304**	P	**P**	**06 06 40.5**	**-1.6**
SHL				IAmb	IAmb	06 06 41.9	
	comp=Z,14nm,0.9s						
KLR	**Kul'dur**	**46.36**	**359**	LR	LR	06 26 42.2	
	comp=Z,58nm,18.2s,baz=220,slow=37						
GTA	**Gaotai**	**47.45**	**325**	P	**P**	**06 06 54.8**	**-0.7**
GTA				PcP	**PcP**	**06 08 26.9**	**+1.0**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LSA	**Lhasa**	**48.01**	**308**	P	**P**	**06 06 59.2**	**-1.2**
LSA				IAmb	IAmb	06 07 04.5	
	comp=Z,8.8nm,1.0s						
ULN	**Ulaanbaatar**	**50.30**	**337**	P	**P**	**06 07 17.2**	**0.0**
ULN				IAmb	IAmb	06 07 25.5	
	comp=Z,6.6nm,0.9s						
SONM	**Songino Array**	**50.53**	**337**	P	**P**	**06 07 18.4**	**-0.6**
SONM	**Songino Array**	**50.53**	**337**	P	**P**	**06 07 17.1**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=150,slow=9.3,SNR=5.5						
SONM				PcP	**PcP**	**06 08 36.0**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=154,slow=4.4,SNR=3.5						
	comp=Z,1.2nm,0.7s						
WMQ	**Urumqi**	**57.34**	**322**	*e*P	**P**	**06 08 08.3**	**-0.5**
WMQ				pP	pwP	06 08 16.0	-1.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**62.14**	**323**	P	**P**	**06 08 40.6**	**-1.1**
MK31				IAmb	IAmb	06 08 49.8	
	comp=Z,5.4nm,1.1s						
MKAR	**Makanchi Array**	**62.14**	**323**	P	**P**	**06 08 41.1**	**-0.6**
MKAR	**Makanchi Array**	**62.14**	**323**	P	**P**	**06 08 41.3**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=116,slow=8.2,SNR=7.4						
	comp=Z,3.4nm,0.8s						
MAKZ	**Makanchi**	**62.33**	**323**		**P**	**06 08 42.2**	**-0.8**
MAKZ				IAmb	IAmb	06 08 44.0	
	comp=Z,6.9nm,1.1s						
KSH	**Kashi**	**63.35**	**313**	P	**P**	**06 08 49.8**	**-0.3**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZAA0	**Zalesovo Array**	**64.50**	**331**	P	**P**	**06 08 55.9**	**-1.3**
ZAA0				IAmb	IAmb	06 08 57.4	
	comp=Z,4.8nm,1.1s						
ZALV	**Zalesovo Beam**	**64.50**	**331**	P	**P**	**06 08 55.8**	**-1.4**
ZALV	**Zalesovo Beam**	**64.50**	**331**	P	**P**	**06 08 56.6**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=111,slow=6.5,SNR=6.2						
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**66.12**	**326**	P	**P**	**06 09 07.5**	**-0.3**
KURBB	**Kurchatov Arra**	**66.13**	**325**	P	**P**	**06 09 07.5**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=119,slow=5.7,SNR=10						
	comp=Z,5.0nm,0.8s						
SIMJ	**Simiganj**	**68.27**	**311**	P	**P**	**06 09 20.5**	**-1.4**
SIMJ				IAmb	IAmb	06 09 22.2	
	comp=Z,4.4nm,0.9s						
KK31	**Karatay Array**	**68.39**	**316**	P	**P**	**06 09 21.8**	**-0.6**
KK31				IAmb	IAmb	06 09 23.0	
	comp=Z,7.1nm,1.1s						
KKAR	**Karatay Array**	**68.39**	**316**	P	**P**	**06 09 21.6**	**-0.8**
KKAR	**Karatay Array**	**68.39**	**316**		**P**	**06 09 21.6**	**-0.8**
KKAR				IAmb	IAmb	06 09 23.1	
	comp=Z,7.1nm,1.1s						
BVAR	**Borovoye Array**	**71.72**	**326**	P	**P**	**06 09 42.5**	**-0.1**
	comp=Z,8.6nm,0.8s,baz=113,slow=8.2,SNR=12						
	comp=Z,8.6nm,0.8s						
BRVK	**Borovoye**	**71.79**	**326**	P	**P**	**06 09 42.6**	**-0.4**
BRVK				IAmb	IAmb	06 09 43.9	
	comp=Z,11nm,0.9s						
NRIK	**Noril'sk**	**73.02**	**345**	P	**P**	**06 09 50.7**	**+0.7**
	comp=Z,2.5nm,0.4s,baz=120,slow=6.2,SNR=2.1						
	comp=Z,2.5nm,0.4s						
GEYT	**Alibeck**	**76.54**	**308**	P	**P**	**06 10 11.4**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=128,slow=4.1,SNR=8.0						
	comp=Z,1.8nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**76.54**	**308**	P	**P**	**06 10 10.9**	**-0.2**
ABKAR	**Akbulak array**	**77.02**	**320**	P	**P**	**06 10 12.6**	**-1.0**
ABKAR	**Akbulak array**	**77.02**	**320**	IAmb	IAmb	06 10 14.0	
	comp=Z,6.9nm,0.9s						
AKTO	**Aktyubinsk**	**78.46**	**321**	LR	LR	06 45 21.2	
	comp=Z,30nm,20.9s,baz=26,slow=36						
VNDA	**Vanda**	**81.68**	**174**	P	**P**	**06 10 37.2**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=346,slow=4.7,SNR=5.6						
	comp=Z,4.2nm,0.8s						
CCB	**Clear Creek Bu**	**82.86**	**25**	P	**P**	**06 10 44.6**	**-0.2**
CCB				IAmb	IAmb	06 10 47.3	
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	**83.27**	**25**	P	**P**	**06 10 46.0**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=240,slow=7.2,SNR=3.2						
	comp=Z,0.8nm,1.0s						
RAYN	**Ar Rayn**	**86.78**	**293**	P	**P**	**06 11 05.0**	**-0.5**
KBZ	**Khabaz**	**88.33**	**314**	LR	LR	06 56 44.3	
	comp=Z,58nm,18.3s,baz=30,slow=40						
QSPA	**South Pole Qui**	**92.63**	**180**	P	**P**	**06 11 30.7**	**-1.4**
	comp=Z,2.6nm,0.9s,baz=296,slow=4.0,SNR=5.7						
	comp=Z,2.6nm,0.9s						

IDC 20 06:00:16.3±3.6, 55.56N×85.97E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=27.4km s-min=23.6km az=9.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**203**	I	I	06 11 10.0	
	0.1nm,0.9s,baz=21,slow=336,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.75**	**203**	Pg	Pn	06 00 46.8	-1.1
	2.7nm,0.3s,baz=23,slow=16,SNR=27						
ZALV				Lg	Lg	06 01 12.5	
	1.7nm,0.3s,baz=24,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**6.67**	**225**	Pn	Pn	06 01 55.1	-0.4
	baz=42,slow=14,SNR=3.1						
KURBB				Sn	Sn	06 03 11.1	-1.1
	baz=43,slow=27,SNR=1.7						
KURBB				Lg	Lg	06 03 47.6	
	baz=31,slow=45,SNR=1.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**9.08**	**196**	Pn	Pn	06 02 29.2	+0.7
	0.1nm,0.3s,baz=27,slow=16,SNR=2.5						
	0.1nm,0.5s						

IDC 20 06:04:55.1±2.7, 54.12N×86.40E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=22.0km s-min=12.4km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**260**	I	I	06 11 20.0	
	baz=81,slow=338,SNR=4.5						
ZALV	**Zalesovo Beam**	**0.95**	**260**	Pg	Pg	06 05 11.8	-1.4
	0.8nm,0.3s,baz=78,slow=17,SNR=13						
ZALV				Lg	Lg	06 05 26.9	
	1.7nm,0.3s,baz=77,slow=29,SNR=5.4						
KURBB	**Kurchatov Arra**	**5.96**	**237**	Pn	Pn	06 06 25.7	+1.2
	0.1nm,0.3s,baz=54,slow=13,SNR=6.9						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.79**	**201**	Pn	Pn	06 06 50.5	+0.8
	0.1nm,0.3s,baz=24,slow=14,SNR=5.2						
	0.2nm,0.4s						

*NEIC **20** 06:18:56.5±2.2, 55.88N×0.09×150.1W×0.1, h4km±6km, mb3.9/2, ML4.0/54, ML3.8(AEIC), Error ellipse: s-maj=12.6km s-min=9.4km az=173.0*

*IDC **20** 06:18:58.1±1.3, 56.01N×150.15W, h0km, mb3.6/6, mbtmp3.6/11, ML3.3/5, MS3.4/9, Error ellipse: s-maj=30.6km s-min=17.6km az=32.0*

*AEIC **20** 06:19:02.5±1.9, 55.96N×0.08×150.1W×0.1, h12km±6km, Error ellipse: s-maj=11.8km s-min=10.1km az=153.0*

ISC 20 06:18:59.7±0.9, 56.12N×0.08×150.08W×0.05, h10km, n265, σ0 78/238, mb3.6/6, MS3.4/6, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.09**	**303**	Pn	Pn	06 19 33.3	-1.5
OHAK	**Old Harbor**	**2.09**	**303**		**Sn**	**06 19 58.3**	**-2.5**
OHAK	**Old Harbor**	**2.09**	**303**	P	**Pn**	**06 19 33.7**	**-1.1**
OHAK	**Old Harbor**	**2.09**	**303**	P	**Pn**	**06 19 33.5**	**-1.3**
	baz=125						
OHAK				S	**Sn**	**06 19 58.3**	**-2.5**
	baz=125						
KDAK	**Kodiak Island**	**2.16**	**322**	Pn	**Pn**	**06 19 35.4**	**-0.4**
KDAK	**Kodiak Island**	**2.16**	**322**		**Sn**	**06 20 01.4**	**-1.2**
KDAK	**Kodiak Island**	**2.16**	**322**	Pn	**Pn**	**06 19 35.3**	**-0.4**
	16nm,0.3s,baz=158,slow=4.8,SNR=487						
KDAK				Sn	**Sn**	**06 20 00.4**	**-2.2**
	16nm,0.3s,baz=50,slow=23,SNR=23						
	56nm,0.4s						
SYI	**Shuyak Island**	**2.80**	**334**	Pn	**Pn**	**06 19 44.5**	**0.0**
SYI	**Shuyak Island**	**2.80**	**334**		**Sn**	**06 20 17.7**	**-0.5**
Q20K	**Shuyak Island**	**2.80**	**334**	P	**Pn**	**06 19 44.4**	**0.0**
	baz=154						
Q20K				S	**Sn**	**06 20 18.1**	**-0.1**
	baz=154						
KAHG	**Katmai Hook Gl**	**3.40**	**316**		**Pn**	**06 19 53.8**	**+1.0**
Q19K	**Cape Douglas,**	**3.41**	**327**		**Pn**	**06 19 53.8**	**+0.8**
Q19K	**Cape Douglas,**	**3.41**	**327**	P	**Pn**	**06 19 53.9**	**+0.9**
	baz=146						
CNPM	**China Poot**	**3.47**	**350**		**Pn**	**06 19 53.6**	**-0.2**
CNPM				IAML		06 20 36.4	
	comp=E,185nm,0.6s						
CNPM	**China Poot**	**3.47**	**350**		**Sn**	**06 20 34.2**	**-0.7**
ANCK	**Angle Creek**	**3.61**	**308**		**Pn**	**06 19 55.7**	**0.0**
HOM	**Homer**	**3.65**	**347**	Pn	**Pn**	**06 19 56.9**	**+0.7**
HOM				IAML		06 20 42.0	
	comp=N,364nm,0.6s						
HOM				IAML		06 20 44.3	
	comp=E,405nm,0.8s						
BRSE	**Bradley Lake S**	**3.65**	**355**		**Pn**	**06 19 55.6**	**-0.7**
BRSE					**Sn**	**06 20 38.8**	**-0.6**
BRSE	**Bradley Lake S**	**3.65**	**355**	P	**Pn**	**06 19 55.6**	**-0.7**
	baz=174						
BRSE				S	**Sn**	**06 20 38.8**	**-0.6**
	baz=174						
BRLK	**Bradley Lake**	**3.68**	**354**		**Pn**	**06 19 56.2**	**-0.5**
BRLK				IAML		06 20 43.0	
	comp=E,128nm,0.8s						
BRLK	**Bradley Lake**	**3.68**	**354**		**Sn**	**06 20 39.4**	**-0.8**
Q17K	**Contact Creek**	**3.82**	**307**	P	**Pn**	**06 19 58.8**	**+0.1**
	baz=124						
Q23K	**Middleton Isla**	**3.87**	**29**		**Pn**	**06 19 58.5**	**-0.8**
Q23K	**Middleton Isla**	**3.87**	**29**	IAML		06 20 44.2	
	comp=E,102nm,1.2s						
Q23K	**Middleton Isla**	**3.87**	**29**	P	**Pn**	**06 19 58.5**	**-0.8**
	baz=211						
MID	**Middleton Isla**	**3.88**	**30**		**Pn**	**06 19 58.5**	**-0.8**
MID	**Middleton Isla**	**3.88**	**30**	IAML		06 21 08.0	
	comp=E,99nm,1.6s						
MID	**Middleton Isla**	**3.88**	**30**	P	**Pn**	**06 19 58.9**	**-0.4**
P19K	**Oil Pt**	**3.92**	**336**		**Pn**	**06 20 00.2**	**+0.2**
P19K				IAML		06 20 49.8	
	comp=E,333nm,0.5s						
P19K	**Oil Pt**	**3.92**	**336**	P	**Pn**	**06 20 00.9**	**+0.9**
	baz=154						
PLK1	**Peulik 1**	**3.95**	**298**		**Pn**	**06 19 60.0**	**-0.4**
SEW	**Seward**	**4.01**	**4**		**Pn**	**06 20 00.1**	**-1.0**
SEW					**Sn**	**06 20 45.8**	**-2.4**
SEW	**Seward**	**4.01**	**4**	P	**Pn**	**06 20 00.5**	**-0.7**
	baz=185						
SEW				S	**Sn**	**06 20 45.8**	**-2.4**
	baz=185						
P23K	**Montague Islan**	**4.14**	**19**		**Sn**	**06 20 48.9**	**-2.5**
P23K	**Montague Islan**	**4.14**	**19**	P	**Pn**	**06 20 02.5**	**-0.5**
	baz=200						
P23K				S	**Sn**	**06 20 48.9**	**-2.5**
	baz=200						
O20K	**Slope Mountain**	**4.20**	**342**		**Pn**	**06 20 03.7**	**-0.1**
O20K	**Slope Mountain**	**4.20**	**342**	P	**Pn**	**06 20 03.7**	**-0.1**
	baz=161						
ILSW	**Iliamna Southw**	**4.21**	**338**		**Pn**	**06 20 03.8**	**-0.1**
ILSW	**Iliamna Southw**	**4.21**	**338**	IAML		06 20 55.9	
	comp=E,93nm,0.7s						
ILSW				IAML		06 20 58.8	
	comp=N,114nm,0.8s						
IVE	**Iliamna Volcan**	**4.21**	**339**		**Pn**	**06 20 03.7**	**-0.3**
P18K	**Big Mountain,**	**4.29**	**322**	Pn	**Pn**	**06 20 04.9**	**-0.1**
P18K	**Big Mountain,**	**4.29**	**322**	P	**Pn**	**06 20 04.8**	**-0.1**
	baz=139						
R16K	**Pilot Point**	**4.37**	**293**		**Pn**	**06 20 04.8**	**-1.2**
R16K	**Pilot Point**	**4.37**	**293**	IAML		06 21 05.1	
	comp=E,164nm,4.6s						
R16K				IAML		06 22 09.1	
	comp=N,167nm,3.3s						
R16K	**Pilot Point**	**4.37**	**293**	P	**Pn**	**06 20 04.8**	**-1.2**
	baz=108						
O22K	**Cooper Landing**	**4.38**	**2**		**Pn**	**06 20 06.4**	**+0.2**
O22K	**Cooper Landing**	**4.38**	**2**	IAML		06 21 12.0	
	comp=N,248nm,0.7s						
O22K	**Cooper Landing**	**4.38**	**2**	P	**Pn**	**06 20 06.7**	**+0.5**
	baz=182						
Q16K	**King Salmon**	**4.39**	**309**		**Pn**	**06 20 05.8**	**-0.5**
Q16K	**King Salmon**	**4.39**	**309**	P	**Pn**	**06 20 05.8**	**-0.5**
	baz=125						
SLKM	**Skilak Lake**	**4.40**	**359**		**Pn**	**06 20 05.6**	**-1.0**
RSO	**Redoubt South**	**4.58**	**343**		**Pn**	**06 20 11.1**	**+2.0**
P17K	**Kvichak River**	**4.60**	**315**		**Pn**	**06 20 09.5**	**+0.2**
P17K	**Kvichak River**	**4.60**	**315**	P	**Pn**	**06 20 09.5**	**+0.2**
	baz=131						
RDWB	**Redoubt West**	**4.62**	**343**		**Pn**	**06 20 08.2**	**-1.5**
RDT	**Redoubt**	**4.63**	**346**		**Pn**	**06 20 09.0**	**-0.8**
O18K	**Koktuh Hills**	**4.64**	**326**		**Pn**	**06 20 09.3**	**-0.5**
O18K	**Koktuh Hills**	**4.64**	**326**	IAML		06 21 19.5	
	comp=E,111nm,0.8s						
O18K				IAML		06 21 20.7	
	comp=N,81nm,0.9s						
O18K	**Koktuh Hills**	**4.64**	**326**	P	**Pn**	**06 20 09.3**	**-0.5**
	baz=143						
CHGN	**Chignik**	**4.66**	**276**		Pn	06 20 08.2	-1.8
CHGN	**Chignik**	**4.66**	**276**	IAML		06 21 08.8	
	comp=E,60nm,0.9s						
O19K	**Port Alsworth**	**4.67**	**333**		**Pn**	**06 20 09.9**	**-0.2**
O19K	**Port Alsworth**	**4.67**	**333**	P	**Pn**	**06 20 09.9**	**-0.2**
	baz=150						
HIN	**Hinchinbrook I**	**4.69**	**22**		**Pn**	**06 20 10.2**	**-0.3**
HIN	**Hinchinbrook I**	**4.69**	**22**	IAML		06 21 11.1	
	comp=E,94nm,1.0s						
HIN				IAML		06 21 12.7	
	comp=N,88nm,0.8s						
CAPN	**Captain Cook N**	**4.70**	**354**	Pn	**Pn**	**06 20 11.9**	**+1.3**
CAPN					**Sn**	**06 21 05.5**	**+0.5**
CAPN				IAML		06 21 34.4	
	comp=E,197nm,0.9s						
NCT	**North Crescent**	**4.70**	**343**		**Pn**	**06 20 10.0**	**-0.7**
KAIM	**Kayak Island**	**4.86**	**36**		**Pn**	**06 20 12.4**	**-0.4**
KAIM	**Kayak Island**	**4.86**	**36**	IAML		06 21 15.1	
	comp=N,123nm,0.6s						
KAIM				IAML		06 21 21.6	
	comp=E,106nm,0.6s						
KAIM	**Kayak Island**	**4.86**	**36**	P	**Pn**	**06 20 12.5**	**-0.4**
	baz=219						
RC01	**Rabbit Creek A**	**4.99**	**2**		**Pn**	**06 20 14.2**	**-0.5**
RC01	**Rabbit Creek A**	**4.99**	**2**	P	**Pn**	**06 20 14.1**	**-0.5**
	baz=182						
EYAK	**Cordova Ski Ar**	**4.99**	**25**		**Pn**	**06 20 14.4**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.99**	**25**	P	**Pn**	**06 20 14.8**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.99**	**25**	P	**Pn**	**06 20 14.4**	**-0.2**
	baz=208						
FID	**Port Fidalgo**	**5.01**	**21**		**Pn**	**06 20 14.4**	**-0.5**
GLI	**Glacier Island**	**5.03**	**17**		**Pn**	**06 20 14.7**	**-0.4**
GLI	**Glacier Island**	**5.03**	**17**	P	**Pn**	**06 20 15.0**	**-0.1**
	baz=199						
FIS	**Fire Island**	**5.04**	**359**	IAML		06 21 23.4	
	comp=E,116nm,1.3s						
FIS				IAML		06 21 48.9	
	comp=N,148nm,3.7s						
RAGM	**Ragged Mountai**	**5.14**	**31**		**Pn**	**06 20 16.6**	**-0.1**
RAGM	**Ragged Mountai**	**5.14**	**31**	IAML		06 21 30.4	
	comp=E,120nm,1.2s						
**P16

M23K **Glacier View** 5.82 11 P Pn 06 20 26.0 0.0
baz=193
CRQM **Cirque** 5.91 35 Pn 06 20 27.2 -0.1
SCM **Sheep Creek Mo** 5.91 13 Pn 06 20 27.6 +0.4
SCM **Sheep Creek Mo** 5.91 13 P Pn 06 20 27.6 +0.4
baz=195
CRQE **Cirque** 5.92 35 P Pn 06 20 27.5 0.0
baz=220
MESA **MESA** 5.92 43 Pn 06 20 27.2 -0.3
MESA **MESA** 5.92 43 P Pn 06 20 27.3 -0.3
baz=229
SDPT **Sand Point** 5.93 267 Pn 06 20 24.7 -2.8
SDPT **Sand Point** 5.93 267 P Pn 06 20 25.6 -1.8
SDPT **Sand Point** 5.93 267 P Pn 06 20 24.7 -2.8
baz=80
SKT **Skwentna** 5.93 353 Pn 06 20 27.4 -0.1
M20K **Styx River** 5.99 346 Pn 06 20 28.0 -0.5
O15K **Ungalikthiuk R** 6.07 304 Pn 06 20 29.0 -0.4
BAGL **Bagley Icefiel** 6.08 41 Pn 06 20 29.3 -0.2
M18K **Stony River** 6.16 333 Pn 06 20 30.1 -0.6
M18K **Stony River** 6.16 333 P Pn 06 20 30.1 -0.6
baz=149
VRDI **Verde Repeater** 6.18 31 Pn 06 20 30.8 -0.3
N25K **Chitina, Valde** 6.19 25 Pn Pn 06 20 31.6 +0.4
N25K **Chitina, Valde** 6.19 25 P Pn 06 20 31.7 +0.5
baz=209
M19K **Big River Lodg** 6.22 341 Pn 06 20 31.0 -0.4
GLB **Gilahina Butte** 6.25 29 Pn 06 20 32.1 +0.1
N16K **Nishlik Lake** 6.33 317 P Pn 06 20 33.5 +0.5
baz=131
M24K **Tolsona, Glenn** 6.33 17 Pn 06 20 33.7 +0.6
M24K **Tolsona, Glenn** 6.33 17 P Pn 06 20 33.7 +0.6
baz=200
SAMH **Samovar Hills** 6.36 47 Pn 06 20 33.3 -0.1
TABL **Table Mountain** 6.40 44 Pn 06 20 33.9 -0.3
MCARA **McCarthy VSAT** 6.43 32 P Pn 06 20 34.3 0.0
baz=217
M17K **Holitna River** 6.54 327 Pn 06 20 35.8 0.0
M17K **Holitna River** 6.54 327 P Pn 06 20 36.2 +0.4
baz=142
PCA **Pinnacle** 6.55 48 Pn 06 20 36.2 +0.1
PINM **Pinnacle** 6.56 48 P Pn 06 20 36.2 0.0
baz=236
L19K **White Mountain** 6.56 340 Pn 06 20 35.4 -0.8
WASW **Wrangell South** 6.57 25 Pn 06 20 36.9 +0.4
WACK **Wrangell Chich** 6.59 24 Pn 06 20 37.2 +0.5
WAT6 **Susitna Watana** 6.59 9 Pn 06 20 36.9 +0.2
WAT6 **Susitna Watana** 6.59 9 P Pn 06 20 36.9 +0.2
baz=191
BARN **Barnard Glacie** 6.62 38 Pn 06 20 37.3 +0.1
CTG **Chitna Glacier** 6.67 40 P Pn 06 20 37.8 0.0
baz=226
L20K **Farewell, AK** 6.67 345 Pn 06 20 38.5 +0.8
L20K **Farewell, AK** 6.67 345 P Pn 06 20 38.5 +0.8
baz=162
CTGM **Chitina Glacie** 6.67 40 Pn 06 20 37.7 -0.1
N15K **Kwethluk River** 6.68 312 P Pn 06 20 38.6 +0.9
baz=124
LOGN **Logan Glacier** 6.70 41 Pn 06 20 37.7 -0.5
WAZA **Wrangell Mount** 6.71 25 Pn 06 20 38.9 +0.5
PNL **Peninsula** 6.71 54 P Pn 06 20 38.3 0.0
PNL **Peninsula** 6.71 54 P Pn 06 20 38.2 -0.1
baz=241
BCPM **Bancas Point** 6.75 51 Pn 06 20 38.6 0.0
M16K **Timber Creek** 6.76 320 Pn 06 20 38.9 0.0
M16K **Timber Creek** 6.76 320 P Pn 06 20 38.9 0.0
baz=134
WAT7 **Susitna Watana** 6.77 5 Pn 06 20 39.8 +0.8
O14K **Tigyukauivet M** 6.77 302 Pn 06 20 39.4 +0.4
HARP **HAARP** 6.79 20 Pn 06 20 39.8 +0.6
HARP **HAARP** 6.79 20 P Pn 06 20 39.8 +0.6
baz=203
L18K **Granite Mounta** 7.00 334 Pn 06 20 41.8 -0.3
DHY **Denali Highway** 7.11 10 Pn 06 20 44.5 +0.6
DHY **Denali Highway** 7.11 10 P Pn 06 20 44.5 +0.6
baz=192
M15K **Kasigluk River** 7.22 314 Pn 06 20 45.1 0.0
N14K **Kuskokwak Cree** 7.25 307 Pn 06 20 45.6 +0.1
PAX **Paxson** 7.26 17 Pn 06 20 46.3 +0.5
PAX **Paxson** 7.26 17 P Pn 06 20 46.3 +0.5
baz=200
RND **Reindeer** 7.34 4 Pn 06 20 47.4 +0.5
L17K **Donlin** 7.36 328 Pn 06 20 47.0 -0.2
O29M **Mount Kennedy** 7.38 51 Pn 06 20 47.6 +0.1
CAST **Castle Rocks** 7.39 353 Pn 06 20 48.4 +0.8
CAST **Castle Rocks** 7.39 353 P Pn 06 20 48.4 +0.8
baz=171
L16K **Owhat River** 7.42 323 Pn 06 20 48.0 +0.1
L16K **Owhat River** 7.42 323 P Pn 06 20 48.0 +0.1
baz=136
P29M **Windy Craggy** 7.46 57 Pn 06 20 47.4 -1.2
P29M **Windy Craggy** 7.46 57 P Pn 06 20 47.3 -1.2
baz=246
TTA **Tatalina** 7.47 339 P Pn 06 20 49.6 +1.0
M27K **Edge Creek, AK** 7.53 30 Pn 06 20 50.1 +0.4
K20K **Telida** 7.54 346 Pn 06 20 49.0 -0.5
K20K **Telida** 7.54 346 P Pn 06 20 50.3 +0.7
baz=163
M14K **Bethel** 7.77 312 Pn 06 20 53.2 +0.5
S31K **Pelican** 7.78 71 Pn 06 20 49.7 -3.1
S31K **Pelican** 7.78 71 P Pn 06 20 50.3 -2.5
baz=261
K17K **Iditarod** 7.83 331 Pn 06 20 53.8 +0.3
BVCY **Beaver Creek** 7.88 33 Pn 06 20 55.0 +0.7
BVCY **Beaver Creek** 7.88 33 P Pn 06 20 55.0 +0.7
baz=220
ISNN **Isanotski Nort** 7.89 266 Pn 06 20 52.6 -1.8
P30M **Million Dollar** 8.02 55 Pn 06 20 56.4 +0.3
BPAW **Bear Paw Mtn.** 8.02 357 Pn 06 20 55.4 -0.8
BPAW **Bear Paw Mtn.** 8.02 357 P Pn 06 20 57.2 +1.0
baz=176
RIDG **Independent Ri** 8.08 17 Pn 06 20 58.9 +1.8
HYT **Haines Junctio** 8.10 49 Pn Pn 06 20 58.0 +0.6
L15K **Ungalak Mounta** 8.12 318 Pn 06 20 57.4 0.0
L27K **Beaver Creek,** 8.12 28 Pn 06 20 57.8 +0.2
L27K **Beaver Creek,** 8.12 28 P Pn 06 20 57.8 +0.2
baz=214
BCAR **Beaver Creek A** 8.13 28 Pn Pn 06 20 58.8 +1.0
SIT **Sitka** 8.20 77 P Pn 06 20 55.8 -2.8
M13K **Dall Lake** 8.21 307 Pn 06 20 59.3 +0.6
J19K **Poorman** 8.37 343 Pn 06 21 01.4 +0.5
J19K **Poorman** 8.37 343 P Pn 06 21 01.7 +0.7
baz=158
L14K **Kuka Creek** 8.38 314 Pn 06 21 01.0 -0.1
L14K **Kuka Creek** 8.38 314 P Pn 06 21 00.8 -0.3
baz=124
SKAG **Skagway** 8.56 61 Pn Pn 06 21 03.6 +0.1
SKAG **Skagway** 8.56 61 P Pn 06 21 03.2 -0.3
N30M **Aishikik Lake** 8.60 46 Pn 06 21 03.9 -0.3
N30M **Aishikik Lake** 8.60 46 P Pn 06 21 03.6 -0.6
baz=236
JIS **Juneau Island** 8.79 69 P Pn 06 21 05.7 -1.0
IL31 8.82 9 Pn 06 21 07.4 +0.3
ILAR **Eielson Array** 8.82 9 Pn Pn 06 21 06.6 -0.6
comp=E,0.3nm,0.3s,baz=187,slow=13,SNR=22
ILAR LR LR 06 24 43.8
comp=E,91nm,19.9s,baz=230,slow=39
comp=E,0.8nm,0.4s
COLA **College** 8.85 6 P Pn 06 21 09.9 +2.4
J26L **Joseph Creek** 9.00 18 Pn 06 21 09.6 -0.1
J26L **Joseph Creek** 9.00 18 P Pn 06 21 10.2 +0.5
baz=204
L29M **L29M** 9.25 36 Pn 06 21 13.4 +0.4
L29M **L29M** 9.25 36 P Pn 06 21 13.4 +0.4
baz=225
M30M **Minto, Yukon** 9.36 41 Pn 06 21 14.8 +0.2
M30M **Minto, Yukon** 9.36 41 P Pn 06 21 14.8 +0.2
baz=232
P32M **Atlin** 9.38 61 Pn 06 21 14.2 -0.7
P32M **Atlin** 9.38 61 P Pn 06 21 13.6 -1.3
baz=254
U33K **Whale Pass** 9.47 83 Pn 06 21 12.7 -3.3
U33K **Whale Pass** 9.47 83 P Pn 06 21 12.7 -3.3
baz=276
DAWY **Dawson** 9.58 29 Pn 06 21 17.9 +0.3
H21K **Melozitna Rive** 9.66 353 Pn 06 21 18.4 -0.3
EGAK **Eagle** 9.73 23 Pn Pn 06 21 21.0 +1.5
P33M **Teslin, Yukon** 9.99 59 Pn Pn 06 21 22.9 -0.3
IMAR **Indian Mountai** 10.06 351 Pn Pn 06 21 24.5 +0.5
M31M **Drury Creek, Y** 10.08 46 Pn 06 21 25.5 +1.1
FARO **Faro, Yukon** 10.52 48 Pn Pn 06 21 31.6 +1.1
DLBC **Dease Lake** 11.09 70 Pn Pn 06 21 37.6 -0.7
comp=E,0.2nm,0.3s,baz=287,slow=12,SNR=1.7
DLBC Sn Sn 06 23 33.8 -8.5

comp=E,0.1nm,0.3s,baz=237,slow=6.2,SNR=1.3
comp=E,0.7nm,0.4s
G31M **Satah River** 13.15 28 Pn Pn 06 22 07.5 +1.3
BBB **Bella Bella** 13.44 98 LR LR 06 25 42.8
comp=E,100nm,21.2s,baz=318,slow=30
F31M **Tsiigehtchic** 13.67 27 Pn 06 22 14.0 +0.6
INK **Inuvik** 14.38 25 Pn Pn 06 22 24.4 +1.4
INK **Inuvik** 14.38 25 Pn Pn 06 22 24.2 +1.2
baz=324,slow=32,SNR=7.2
INK LR LR 06 28 16.9
comp=E,109nm,18.7s,baz=178,slow=38
comp=E,2.3nm,0.8s
C36M **Paulatuk** 17.61 31 Pn 06 23 04.7 -0.1
C36M IAmb IAmb 06 23 08.8
comp=Z,4.6nm,0.8s
YKA **Yellowknife Ar** 19.00 56 P P 06 23 22.0 +0.8
comp=Z,0.1nm,0.3s,baz=265,slow=9.8,SNR=16
comp=Z,0.5nm,0.7s
A36M **Sachs Harbour** 19.01 24 P 06 23 21.8 +0.7
A36M IAmb IAmb 06 23 31.6
comp=Z,11nm,0.9s
NEW **Newport** 21.50 97 LR LR 06 30 11.8
comp=Z,98nm,21.2s,baz=294,slow=31
YBH **Yreka Blue Hor** 22.83 118 LR LR 06 30 25.3
comp=Z,92nm,19.9s,baz=327,slow=30
NVAR **Mina Array Bea** 27.53 117 P P 06 24 47.1 +0.5
comp=Z,0.9nm,0.9s,baz=296,slow=11,SNR=3.6
comp=Z,0.9nm,0.9s
RES **Resolute Bay** 27.91 28 LR LR 06 36 09.0
comp=Z,86nm,18.0s,baz=352,slow=37
MA2 **Magadan** 30.77 301 LR LR 06 39 10.3
comp=Z,85nm,18.1s,baz=151,slow=39
TXAR **Lajitas Array** 42.19 110 P P 06 26 52.8 +0.2
comp=Z,0.6nm,1.0s,baz=300,slow=5.7,SNR=3.9
comp=Z,0.6nm,1.0s
KLR **Kul'dur** 45.51 296 LR LR 06 47 22.6
comp=Z,45nm,18.2s,baz=6.5,slow=37
H11N2 **WAKE ISLAND Hy** 48.42 239 T T 07 19 44.4
baz=31,slow=76,SNR=6.9
H11N3 **WAKE ISLAND Hy** 48.42 239 T T 07 19 45.7
baz=31,slow=76,SNR=5.3
H11N1 **WAKE ISLAND Hy** 48.43 239 T T 07 19 45.5
baz=31,slow=76,SNR=7.0
H11S1 **WAKE ISLAND Hy** 49.56 239 T T 07 21 55.5
baz=32
H11S2 **WAKE ISLAND Hy** 49.57 239 T T 07 22 11.1
baz=32,slow=74
H11S3 **WAKE ISLAND Hy** 49.58 239 T T 07 21 52.5
baz=32,slow=74
SONM **Songino Array** 58.41 310 P P 06 28 55.7 +0.6
comp=Z,0.5nm,0.8s,baz=49,slow=6.1,SNR=4.4
comp=Z,0.5nm,0.8s
ZALV **Zalesovo Beam** 61.46 327 P P 06 29 15.3 -0.5
comp=Z,0.8nm,0.3s,baz=34,slow=10,SNR=2.5
comp=Z,0.8nm,0.3s
KURBB **Kurchatov Arra** 66.25 329 P P 06 29 47.3 -0.1
comp=Z,0.3nm,0.7s,baz=25,slow=6.9,SNR=1.5
comp=Z,0.3nm,0.7s
MKAR **Makanchi Array** 68.47 324 P P 06 30 01.9 +0.3
comp=Z,0.3nm,0.7s,baz=44,slow=6.4,SNR=3.3
comp=Z,0.3nm,0.7s
ABKAR **Akbulak array** 72.06 340 P P 06 30 24.1 +0.7
NNA **Nana** 90.74 110 LR LR 07 12 58.7
comp=Z,104nm,18.5s,baz=283,slow=36

NEIC **20** *06:22:19.6±1.2,63°.07N±0°.03×148°.30W±0°.08,h59km±4km, Error ellipse: s-maj=5.5km s-min=4.0km az=71.0*
AEIC 20 06:22:18.9±1.1,63°.07N±0°.03×148°.30W±0°.09,h66km±5km, ML2.5,ML2.7/170(NEIC),**Error ellipse: s-maj=5.9km s-min=3.6km az=65.0,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT1	**Susitna Watana**	**0.27**	**205**		Pn	06 22 29.5	0.0
WAT1					Sn	06 22 37.6	+0.4
WAT7	**Susitna Watana**	**0.34**	**226**		Pn	06 22 29.9	-0.2
WAT7					Sn	06 22 38.6	+0.3
RND	**Reindeer**	**0.42**	**324**		Pn	06 22 31.1	+0.4
RND					Sn	06 22 40.0	+0.7
RND	**Reindeer**	**0.42**	**324**	IAML		06 22 40.5	
	comp=E,351nm,0.4s						
RND				IAML		06 22 40.8	
	comp=N,325nm,0.4s						
DHY	**Denali Highway**	**0.42**	**89**		Pn	06 22 30.7	-0.1
DHY					Sn	06 22 39.7	+0.2
DHY	**Denali Highway**	**0.42**	**89**	IAML		06 22 40.6	
	comp=E,334nm,0.4s						
DHY				IAML		06 22 41.9	
	comp=N,249nm,0.5s						
WAT6	**Susitna Watana**	**0.56**	**152**		Pn	06 22 31.7	-0.4
WAT6					Sn	06 22 41.3	-0.5
MCK	**McKinley**	**0.72**	**337**		Pn	06 22 34.4	+0.6
MCK					Sn	06 22 45.7	+1.0
TRF	**Thorofare Moun**	**0.97**	**294**		Pn	06 22 37.6	+0.6
TRF	**Thorofare Moun**	**0.97**	**294**	IAML		06 22 52.4	
	comp=N,293nm,0.4s						
TRF				IAML		06 22 52.5	
	comp=E,295nm,0.5s						
CUT	**Chulitna**	**1.13**	**234**		Pn	06 22 38.8	0.0
CUT	**Chulitna**	**1.13**	**234**	IAML		06 23 00.4	
	comp=N,233nm,0.6s						
BWN	**Browne**	**1.22**	**335**		Sn	06 22 55.6	-0.2
BWN	**Browne**	**1.22**	**335**	Pn	Pn	06 22 40.1	+0.1
BWN				IAML		06 22 56.3	
	comp=E,164nm,0.4s						
BWN				IAML		06 22 56.6	
	comp=N,123nm,0.3s						
SML	**Sawmill**	**1.27**	**181**		Pn	06 22 40.6	-0.1
SML	**Sawmill**	**1.27**	**181**	IAML		06 23 02.7	
	comp=E,129nm,0.4s						
SML				IAML		06 23 04.7	
	comp=N,150nm,0.6s						
KTH	**Kantishna Hill**	**1.28**	**293**		Pn	06 22 41.5	+0.7
KTH					Sn	06 22 59.0	+1.7
KTH	**Kantishna Hill**	**1.28**	**293**	IAML		06 22 59.5	
	comp=E,88nm,0.5s						
KTH				IAML		06 22 59.8	
	comp=N,99nm,1.0s						
PAX	**Paxson**	**1.30**	**93**		Pn	06 22 41.3	+0.2
SCM	**Sheep Creek Mo**	**1.32**	**160**		Pn	06 22 42.0	+0.5
GHO	**Glory Hole Cre**	**1.34**	**193**		Pn	06 22 41.6	0.0
GHO	**Glory Hole Cre**	**1.34**	**193**	IAML		06 23 03.2	
	comp=N,117nm,0.4s						
GHO				IAML		06 23 03.9	
	comp=E,117nm,0.5s						
K24K	**Donnelly Dome**	**1.35**	**56**		Pn	06 22 43.2	+1.4
M24K	**Tolsona, Glenn**	**1.38**	**134**		Pn	06 22 43.1	+0.9
M24K	**Tolsona, Glenn**	**1.38**	**134**	IAML		06 23 03.8	
	comp=E,185nm,0.8s						
M24K				IAML		06 23 04.3	
	comp=N,93nm,0.5s						
WRH	**Wood River Hil**	**1.41**	**4**		Pn	06 22 42.4	-0.1
WRH				IAML		06 23 00.2	
	comp=E,62nm,0.4s						
WRH				IAML		06 23 00.5	
	comp=N,98nm,0.4s						
HDA	**Harding Lake**	**1.47**	**24**		Pn	06 22 43.4	+0.1
HDA	**Harding Lake**	**1.47**	**24**	IAML		06 23 02.0	
	comp=E,56nm,0.7s						
HDA				IAML		06 23 02.4	
	comp=N,58nm,0.5s						
PMR	**Palmer**	**1.54**	**195**		Pn	06 22 45.0	+0.8
NEA2	**Nenana**	**1.56**	**348**	Pn	Pn	06 22 44.4	-0.2
NEA2				IAML		06 23 03.2	
	comp=N,120nm,0.5s						
CCB	**Clear Creek Bu**	**1.60**	**8**	IAML		06 23 04.7	
	comp=E,85nm,0.1s						
HARP	**HAARP**	**1.60**	**114**		Pn	06 22 46.1	+1.1
RIDG	**Independent Ri**	**1.69**	**65**		Pn	06 22 47.5	+1.1
CAST	**Castle Rocks**	**1.75**	**283**		Pn	06 22 47.7	+0.7
CAST	**Castle Rocks**	**1.75**	**283**	IAML		06 23 11.2	
	comp=E,66nm,0.5s						
PPLA	**Purkeypile**	**1.78**	**266**		Pn	06 22 48.5	+0.8
IL31		**1.82**	**20**		Pn	06 22 47.8	-0.1
ILAR	**Eielson Array**	**1.82**	**20**	Pn	Pn	06 22 47.6	-0.4
COLA	**College**	**1.82**	**6**		Pn	06 22 48.0	0.0
SKT	**Skwentna**	**1.85**	**235**		Pn	06 22 48.8	+0.3
MDM	**Murphy Dome**	**1.90**	**1**		Pn	06 22 49.1	+0.1
MDM	**Murphy Dome**	**1.90**	**1**	IAML		06 23 11.4	
	comp=E,60nm,0.7s						
MDM				IAML		06 23 12.2	
	comp=N,79nm,0.5s						
KLU	**Klutina**	**1.94**	**144**		Pn	06 22 50.5	+0.8
KLU	**Klutina**	**1.94**	**144**	IAML		06 23 16.2	
	comp=E,84nm,0.3s						

KLU IAML 06 23 17.3
comp=N,68nm,0.5s
CHUM **Lake Minchumin** 1.98 296 Pn 06 22 50.2 +0.2
SUA **Susitna One** 1.98 216 Pn 06 22 51.5 +1.2
SUA **Susitna One** 1.98 216 IAML 06 23 19.9
comp=E,68nm,0.9s
J25K **Salcha River,** 2.02 39 Pn Pn 06 22 50.7 0.0
POKR **Poker Plat Res** 2.09 10 Pn 06 22 51.8 +0.2
POKR IAML 06 23 16.3
comp=E,58nm,0.6s
POKR IAML 06 23 16.9
comp=N,66nm,0.6s
MENT **Mentasta** 2.10 92 Pn 06 22 52.4 +0.7
MENT **Mentasta** 2.10 92 IAML 06 23 23.5
comp=N,59nm,0.4s
MENT IAML 06 23 27.6
comp=E,84nm,0.5s
RC01 **Rabbit Creek A** 2.10 199 Pn 06 22 53.7 +1.9
RC01 **Rabbit Creek A** 2.10 199 IAML 06 23 23.9
comp=N,95nm,0.2s
RC01 IAML 06 23 24.4
comp=E,95nm,0.5s
FIS **Fire Island** 2.13 206 Pn 06 22 54.7 +2.5
I23K **Minto, Yukon-K** 2.14 348 Pn 06 22 52.5 +0.2
I23K **Minto, Yukon-K** 2.14 348 IAML 06 23 17.7
comp=E,29nm,0.4s
SCRK **Sand Creek** 2.14 63 Pn 06 22 52.6 +0.3
SCRK **Sand Creek** 2.14 63 IAML 06 23 19.0
comp=E,59nm,0.6s
WAZA **Wrangell Mount** 2.17 116 Pn 06 22 53.2 +0.3
WASW **Wrangell South** 2.23 119 Pn 06 22 54.2 +0.4
MLY **Manley** 2.24 333 IAML 06 23 20.5
comp=E,35nm,0.5s
MLY IAML 06 23 20.8
comp=N,56nm,0.4s
L26K **Log Cabin Wild** 2.26 89 Pn 06 22 54.9 +0.9
L26K IAML 06 23 37.1
comp=N,82nm,0.4s
L26K IAML 06 23 39.9
comp=E,57nm,0.3s
GLI **Glacier Island** 2.27 165 Pn 06 22 54.4 +0.3
GLI **Glacier Island** 2.27 165 IAML 06 23 27.6
comp=N,197nm,0.4s
GLI IAML 06 23 27.8
comp=E,187nm,0.4s
STLK **Strandline Lak** 2.28 228 Pn 06 22 55.5 +1.1
DIV **Divide** 2.28 147 Pn 06 22 54.0 -0.4
FID **Port Fidalgo** 2.48 159 IAML 06 23 33.8
comp=E,191nm,0.4s
FID IAML 06 23 35.3
comp=N,136nm,0.4s
SPCG **Spurr Capps Gl** 2.50 226 Pn 06 22 58.6 +1.4
M26K **Nabesna, AK** 2.53 103 Pn 06 22 58.0 +0.3
M26K **Nabesna, AK** 2.53 103 IAML 06 23 43.7
comp=N,22nm,0.5s
M20K **Styx River** 2.54 244 Pn 06 22 58.2 +0.4
M20K **Styx River** 2.54 244 IAML 06 23 31.4
comp=E,58nm,0.3s
M20K IAML 06 23 31.4
comp=N,65nm,1.1s
J26L **Joseph Creek** 2.55 54 Pn 06 22 58.5 +0.6
J26L **Joseph Creek** 2.55 54 IAML 06 23 28.9
comp=E,44nm,0.3s
J26L IAML 06 23 28.9
comp=N,52nm,0.3s
SPCN **Chakachatna No** 2.60 226 Pn 06 23 00.8 +2.2
SPCR **Spurr Chakacha** 2.62 226 Pn 06 23 01.0 +2.1
K20K **Telida** 2.63 279 Pn 06 22 59.0 0.0
L20K **Farewell, AK** 2.63 259 Pn 06 22 59.3 +0.3
I21K **Tanana** 2.66 324 Pn 06 22 59.7 +0.3
GLB **Gilahina Butte** 2.66 126 Pn 06 23 00.0 +0.5
CAPN **Captain Cook N** 2.68 212 Pn Pn 06 23 03.2 +3.7
O22K **Cooper Landing** 2.69 195 Pn Pn 06 23 01.9 +2.1
SLKM **Skilak Lake** 2.73 200 Pn 06 23 01.4 +1.0
BMRM **Bremner River** 2.74 139 Pn 06 23 00.2 -0.3
PRP **Porcupine Dome** 2.74 25 Pn 06 23 00.8 +0.3
H24K **Noodor Dome** 2.78 4 Pn 06 23 01.3 +0.2
H24K **Noodor Dome** 2.78 4 IAML 06 23 32.6
comp=N,17nm,0.6s
EYAK **Cordova Ski Ar** 2.81 153 Pn 06 23 01.7 +0.3
HIN **Hinchinbrook I** 2.82 161 Pn 06 23 01.9 +0.4
J20K **Nowinta River** 2.83 296 Pn 06 23 01.9 +0.1
VRDI **Verde Repeater** 2.93 127 Pn 06 23 03.7 +0.4
K27K **Chicken** 2.95 68 Pn 06 23 03.6 +0.3
K27K **Chicken** 2.95 68 IAML 06 23 38.4
comp=E,25nm,0.4s
K27K IAML 06 23 38.6
comp=N,25nm,0.6s
L27K **Beaver Creek,** 2.95 87 Pn 06 23 03.2 -0.1
BCAR **Beaver Creek A** 2.97 87 Pn Pn 06 23 03.3 -0.7
MCARA **McCarthy VSAT** 3.00 122 Pn Pn 06 23 05.1 +1.2
MCARA IAML 06 23 56.5
comp=N,15nm,1.3s
MCARA IAML 06 24 01.8
comp=E,17nm,0.9s
SEW **Seward** 3.03 191 Pn 06 23 05.9 +1.5
M19K **Big River Lodg** 3.06 250 Pn Pn 06 23 05.8 +1.0
M19K IAML 06 23 45.2
comp=N,22nm,0.3s
M19K IAML 06 23 47.9
comp=E,25nm,0.5s
H22K **Ishtalitna Cre** 3.13 336 Pn 06 23 06.5 +0.7
L19K **White Mountain** 3.16 256 Pn 06 23 06.2 +0.1
L19K **White Mountain** 3.16 256 IAML 06 23 46.0
comp=N,21nm,1.2s
L19K IAML 06 23 46.6
comp=E,26nm,0.7s
RDT **Redoubt** 3.17 220 Pn 06 23 07.5 +1.1
I20K **Naaghedeneel** 3.23 305 Pn 06 23 07.7 +0.7
I20K **Naaghedeneel** 3.23 305 IAML 06 24 12.6
comp=E,30nm,1.4s
DFR **Drift River** 3.24 222 Pn 06 23 08.3 +0.9
H21K **Melozitna Rive** 3.25 325 Pn 06 23 07.7 +0.3
PTPK **Patty Peak** 3.33 122 Pn 06 23 09.3 +0.6
HMT **Hamilton** 3.35 143 Pn Pn 06 23 08.6 -0.3
CRQM **Cirque** 3.37 131 Pn 06 23 09.2 -0.1
CRQM **Cirque** 3.37 131 IAML 06 24 01.1
comp=E,17nm,1.4s
CRQM IAML 06 24 12.0
comp=N,19nm,0.8s
J19K **Poorman** 3.41 289 Pn 06 23 09.8 +0.3
BERG **Berg Lake** 3.47 139 Pn Pn 06 23 10.9 +0.5
BERG IAML 06 24 11.4
comp=N,29nm,0.6s
TGL **Tana Glacier** 3.48 129 Pn 06 23 10.1 -0.6
TGL **Tana Glacier** 3.48 129 IAML 06 24 09.0
comp=E,14nm,1.3s
TGL IAML 06 24 13.4
comp=N,12nm,0.7s
TTA **Tatalina** 3.52 271 Pn 06 23 11.1 0.0
TTA **Tatalina** 3.52 271 IAML 06 23 55.1
comp=N,9.8nm,0.8s
TTA IAML 06 23 55.6
comp=E,9.2nm,1.4s
KIAG **Kiagna River** 3.54 125 Pn 06 23 11.1 -0.4
BRLK **Bradley Lake** 3.54 202 Pn 06 23 12.5 +1.1
BRLK **Bradley Lake** 3.54 202 IAML 06 24 06.5
comp=N,15nm,1.0s
BRLK IAML 06 24 07.2
comp=E,16nm,1.5s
EGAK **Eagle** 3.59 58 IAML 06 24 13.3
comp=E,22nm,0.8s
EGAK IAML 06 24 14.2
comp=E,19nm,1.1s
G24K **Hadweenzic Riv** 3.66 5 Pn 06 23 13.2 +0.2
KAIM **Kayak Island** 3.66 148 Pn 06 23 12.4 -0.7
WAX **Waxell Ridge** 3.69 133 Pn Pn 06 23 13.4 -0.1
WAX IAML 06 24 16.7
comp=E,16nm,0.7s
BARN **Barnard Glacie** 3.72 120 Pn 06 23 14.5 +0.5
FYU **Fort Yukon** 3.75 19 Pn 06 23 14.6 +0.5
FYU **Fort Yukon** 3.75 19 IAML 06 24 09.3
comp=E,7.7nm,1.4s
IMAR **Indian Mountai** 3.75 324 Pn Pn 06 23 15.0 +0.8
H20K **Anotleneega Mo** 3.76 313 Pn 06 23 14.9 +0.5
ISLE **Juniper Island** 3.76 129 Pn 06 23 13.7 -0.8
ISLE **Juniper Island** 3.76 129 IAML 06 24 13.6
comp=N,9.5nm,1.3s
ISLE IAML 06 24 25.6
comp=E,8.7nm,0.8s
J18K **Innoko River** 3.82 280 Pn 06 23 15.4 +0.2
CNPM **China Poot** 3.83 203 Pn 06 23 16.1 +0.8
CNPM **China Poot** 3.83 203 IAML 06 24 17.0
comp=N,14nm,1.2s
CNPM IAML 06 24 18.7

comp=E,18nm,0.4s
BARK Barkley Ridge 3.85 131 Pn 06 23 15.3 -0.4
M18K Stony River 3.85 249 Pn 06 23 16.2 +0.6
SNH Sunshine Point 3.90 136 Pn 06 23 16.1 -0.2
SNH Sunshine Point 3.90 136 IAML 06 24 01.8
comp=N,13nm,1.3s
SNH IAML 06 24 17.6
comp=E,12nm,1.3s
BAGL Bagley Icefiel 3.93 128 Pn 06 23 16.0 -0.6
L18K Granite Mounta 3.96 261 Pn 06 23 16.9 -0.2
L18K Granite Mounta 3.96 261 IAML 06 24 00.2
comp=N,12nm,1.4s
L18K IAML 06 24 25.7
comp=E,7.3nm,1.3s
DAWY Dawson 4.11 72 Pn 06 23 19.5 +0.3
P19K Oil Pt 4.17 217 Pn 06 23 21.4 +1.3
H19K Roundabout Mou 4.32 308 Pn 06 23 22.4 +0.4
G26K Porcupine Rive 4.34 24 Pn 06 23 22.1 -0.1
I28M Miner Creek 4.36 53 IAML 06 24 29.7
comp=N,6.9nm,0.8s
I28M IAML 06 24 44.3
comp=E,7.8nm,1.5s
F24K Squaw Lake 4.47 2 Pn Pn 06 23 24.8 +0.8
F24K IAML 06 24 15.8
comp=E,5.2nm,0.6s
F24K IAML 06 24 36.8
comp=N,4.5nm,1.5s
BMAR Burnt Mountain 4.65 18 Pn Pn 06 23 26.9 +0.4
F25K Christian Rive 4.67 13 Pn 06 23 27.2 +0.3
L17K Donlin 4.71 263 Pn 06 23 27.5 +0.1
H18K Honhosa River 4.88 300 Pn 06 23 30.3 +0.7
H18K Honhosa River 4.88 300 IAML 06 24 25.9
comp=N,3.7nm,1.5s
H18K IAML 06 25 06.8
comp=E,5.5nm,1.5s
Q19K Cape Douglas, 4.90 214 Pn 06 23 30.9 +0.8
SYI Shuyak Island 4.90 206 Pn 06 23 31.0 +1.0
F26K Sheenjek River 4.96 19 Pn 06 23 31.0 +0.3
E25K Arctic Village 5.20 11 Pn 06 23 34.1 +0.1
E25K Arctic Village 5.20 11 IAML 06 24 33.7
comp=E,3.3nm,0.5s
G18K Tagagawik 5.29 307 Pn 06 23 36.1 +0.8
G18K Tagagawik 5.29 307 IAML 06 25 07.2
comp=N,3.6nm,1.4s
H29M Whitestone 5.31 49 Pn Pn 06 23 35.8 +0.3
H29M IAML 06 24 59.7
comp=E,2.6nm,1.1s
J30M Hart River 5.51 69 Pn Pn 06 23 39.4 +1.0
TOLK Toolik Lake Re 5.62 355 Pn Pn 06 23 40.8 +1.1
I30M Mount Dempster 5.65 62 Pn Pn 06 23 41.2 +1.0

*MEX **20** 06:28:43.3±1.0, 15°.48N×94°.84W, h16km±10km, MD5.1*
*NEIC **20** 06:28:44.5±2.7, 15°.50N±0°.06×94°.85W±0°.04, h35km±7km, mb4.9/328, Md5.1/179(MEX), Error ellipse: s-maj=8.1km s-min=5.1km az=179.0*
*GCG **20** 06:28:44.3±7.9, 15°.51N×94°.83W, h10km, MD5.6*
*IDC **20** 06:28:44.5±2.1, 15°.58N×94°.64W, h42km±16km, mb4.2/20, mbtmp4.4/23, ML4.5/3, MS4.3/58, Error ellipse: s-maj=22.4km s-min=10.2km az=61.0*
*GCMT **20** 06:28:45.5±0.2, 15°.62N±0°.01×94°.73W±0°.02, h31km±1km, MW5.0/102, Moment Tensor Solution. s57,c78; s102,c154; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.21±.15; Mθθ-3.34±.10; Mϕϕ1.13±.10; Mrθ2.83±.15; Mθϕ0.54±.07; Mϕr-1.68±.14; Best double couple: Mo4.40500×10^16 NP1:ϕs118.00000°, δ72.00000°, λ110.00000°. NP2:ϕs248.00000°, δ27.00000°, λ43.00000°. Principal axes: T 4.0470, Plg58.0000°, Azm56.0000°; N 0.7140, Plg19.0000°, Azm292.0000°; P -4.7620, Plg24.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*CATAC **20** 06:28:45.1±0.5, 15°.59N×94°.85W, h30km±5km, MB5.5, mb5.4, ML5.7*
*SNET **20** 06:28:47.8±2.1, 15°.65N×94°.20W, h0km±999km*
ISC 20 06:28:42.3±0.5,**15°.48N**±0°.03×**94°.89W**±0°.03, **h27**km±3km, **n911**,σ2**s21**/849,**mb4.9**/142,**MS4.3**/57,**6C-14D,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NILT	**Santiago Nilte**	**1.11**	**14**	*i* P		**Pn**	**06 29 00.4**	**-1.6**
NILT				*e*S		**Sn**	**06 29 14.2**	**-2.2**
CARR	**Arriaga**	**1.21**	**51**	*e*P		**Pn**	**06 29 01.2**	**-2.2**
CARR				*e*S		**Sn**	**06 29 14.7**	**-4.2**
HUIG	**Huatulco**	**1.21**	**284**			**Pn**	**06 29 02.6**	**-0.9**
HUIG						**Sn**	**06 29 16.7**	**-2.3**
HUIG	**Huatulco**	**1.21**	**284**	⇓*e*P		**Pn**	**06 29 02.6**	**-0.9**
HUIG				*e*S		**Sn**	**06 29 16.7**	**-2.3**
PANG	**Puerto Angel**	**1.54**	**277**			**Pn**	**06 29 07.0**	**-1.0**
PANG	**Puerto Angel**	**1.54**	**277**	*e*P		**Pn**	**06 29 07.0**	**-1.0**
PANG				*e*S		**Sn**	**06 29 23.6**	**-3.5**
CMIG	**Matias Romero**	**1.60**	**0**			**Pn**	**06 29 08.3**	**-0.5**
CMIG						**Sn**	**06 29 27.4**	**-1.2**
CMIG	**Matias Romero**	**1.60**	**0**	P		**Pn**	**06 29 08.3**	**-0.5**
	4μm,0.6s,baz=169,slow=12,SNR=6601							
CMIG				S		**Sn**	**06 29 27.8**	**-0.9**
	7μm,0.4s,baz=80,slow=16,SNR=31							
CMIG				LR		LR	06 29 59.9	
	comp=Z,11μm,19.4s,baz=178,slow=50							
CMIG	**Matias Romero**	**1.60**	**0**	⇓*i* P		**Pn**	**06 29 08.3**	**-0.5**
CMIG				*e*S		**Sn**	**06 29 27.4**	**-1.2**
PCIG		**1.62**	**82**	*i* P		**Pn**	**06 29 07.4**	**-1.7**
PCIG				*e*S		**Sn**	**06 29 24.7**	**-4.4**
TGIG		**2.13**	**53**			**Pn**	**06 29 16.2**	**0.0**
TGIG						**Sn**	**06 29 40.7**	**-1.1**
TGIG		**2.13**	**53**	*e*P		**Pn**	**06 29 16.2**	**0.0**
TGIG				*e*S		**Sn**	**06 29 40.7**	**-1.1**
TGBT	**Tuxtla Gutierr**	**2.15**	**53**			**Pn**	**06 29 16.5**	**+0.1**
TGBT						**Sn**	**06 29 41.2**	**-1.0**
TGBT	**Tuxtla Gutierr**	**2.15**	**53**	*e*P		**Pn**	**06 29 16.5**	**+0.1**
TGBT				*e*S		**Sn**	**06 29 41.2**	**-1.0**
PEIG	**Puerto Escondi**	**2.24**	**284**			**Pn**	**06 29 17.0**	**-0.6**
PEIG	**Puerto Escondi**	**2.24**	**284**	⇓*i* P		**Pn**	**06 29 17.0**	**-0.6**
PEIG				*e*S		**Sn**	**06 29 41.1**	**-3.2**
OXBJ	**Oaxaca**	**2.37**	**312**			**Pn**	**06 29 22.0**	**+2.4**
OXBJ						**Sn**	**06 29 47.1**	**-0.7**
OXBJ	**Oaxaca**	**2.37**	**312**	*e*P		**Pn**	**06 29 22.0**	**+2.4**
OXBJ				*e*S		**Sn**	**06 29 47.1**	**-0.7**
OXIG	**Oaxaca**	**2.38**	**312**			**Pn**	**06 29 21.5**	**+1.8**
OXIG						**Sn**	**06 29 49.6**	**+1.5**
VHO	**Vista Hermosa**	**2.38**	**312**	*e*P		**Pn**	**06 29 21.5**	**+1.8**
VHO				*e*S		**Sn**	**06 29 49.6**	**+1.5**
NEUV	**Arroyo Zacate**	**2.39**	**339**	⇓*e*P		**Pn**	**06 29 19.7**	**+0.1**
NEUV				*i* S		**Sn**	**06 29 47.0**	**-1.0**
MIHL	**Minatitlan**	**2.52**	**7**	*e*P		**Pn**	**06 29 22.6**	**+1.2**
MIHL				*e*S		**Sb**	**06 29 54.4**	**-2.9**
TUIG	**Tuzandepetl**	**2.58**	**10**	*e*P		**Pn**	**06 29 22.7**	**+0.4**
TUIG				*e*S		**Sn**	**06 29 54.7**	**+2.0**
PATR	**El Naranjo**	**2.58**	**98**	*e*P		**Pn**	**06 29 21.0**	**-1.6**
PATR				*e*S		**Sn**	**06 29 49.2**	**-4.0**
THIG		**2.59**	**102**			**Pn**	**06 29 21.2**	**-1.3**
THIG		**2.59**	**102**	*e*P		**Pn**	**06 29 21.2**	**-1.3**
THIG				*e*S		**Sn**	**06 29 49.5**	**-3.7**
PAVE	**Pavencul**	**2.63**	**96**	*e*P		**Pn**	**06 29 22.2**	**-1.0**
PAVE				*e*S		**Sn**	**06 29 51.9**	**-2.5**
CHUJ	**Union Juarez**	**2.71**	**98**	*e*P		**Pn**	**06 29 23.3**	**-1.0**
CHUJ				*e*S		**Sn**	**06 29 54.0**	**-2.3**
CCIG	**Comitan**	**2.76**	**73**			**Pn**	**06 29 26.0**	**+1.0**
CCIG	**Comitan**	**2.76**	**73**	*e*P		**Pn**	**06 29 25.5**	**+0.5**
CCIG				*e*S		**Sn**	**06 29 59.7**	**+2.2**
CCIG	**Comitan**	**2.76**	**73**	*i* P		**Pn**	**06 29 25.5**	**+0.6**
CCIG				*i* S		**Sn**	**06 30 00.0**	**+2.4**
CCIG				IAML			06 30 13.8	
	comp=Z,14μm,1.0s							
SMCA	**Catarina**	**2.79**	**103**	*i* P		**Pn**	**06 29 23.5**	**-1.6**
SMCA				*i* S		**Sn**	**06 29 54.4**	**-3.5**
SMCA				IAML			06 30 05.9	
	comp=Z,14μm,1.0s							
YOIG	**Yosondua**	**2.90**	**299**			**Pn**	**06 29 28.7**	**+1.7**
YOIG						**Sn**	**06 30 00.4**	**-0.7**
YOIG	**Yosondua**	**2.90**	**299**	⇑*e*P		**Pn**	**06 29 28.7**	**+1.7**
YOIG				*e*S		**Sn**	**06 30 00.4**	**-0.7**
PMUV	**Sontecomapan**	**3.06**	**356**	*e*P		**Pn**	**06 29 27.8**	**-1.2**
PMUV				*e*S		**Sn**	**06 30 04.5**	**-0.2**
VHSA	**Villahermosa**	**3.11**	**37**	*e*P		**Pn**	**06 29 30.8**	**+1.2**
VHSA				*e*S		**Sn**	**06 30 08.0**	**+2.1**
RTAL	**Retalhuleu**	**3.23**	**107**	Pn		**Pn**	**06 29 31.4**	**+0.1**
RTAL	**Retalhuleu**	**3.23**	**107**	*e*P		**Pn**	**06 29 31.0**	**-0.2**
RTAL				*e*S		**Sn**	**06 30 07.4**	**-1.4**
PNIG	**Pinotepa**	**3.25**	**287**			**Pn**	**06 29 31.8**	**+0.3**
PNIG	**Pinotepa**	**3.25**	**287**	⇓*i* P		**Pn**	**06 29 31.8**	**+0.3**
PNIG				*e*S		**Sn**	**06 30 04.6**	**-4.6**
HUEH	**Huehuetenango**	**3.27**	**92**	Pn		**Pn**	**06 29 33.0**	**+1.1**
HUEH	**Huehuetenango**	**3.27**	**92**	*e*P		**Pn**	**06 29 33.1**	**+1.1**
HUEH				*e*S		**Sn**	**06 30 11.3**	**+1.2**
TXIG	**Tlaxiaco**	**3.28**	**303**			**Pn**	**06 29 34.6**	**+2.4**
TXIG						**Sn**	**06 30 09.4**	**-1.0**
TXIG	**Tlaxiaco**	**3.28**	**303**	⇑*e*P		**Pn**	**06 29 34.6**	**+2.4**
TXIG				*e*S		**Sn**	**06 30 09.4**	**-1.0**
STG3	**Santiaguito 3,**	**3.29**	**103**	*e*P		**Pn**	**06 29 31.7**	**-0.6**
STG3				*e*S		**Sb**	**06 30 25.7**	**+5.8**
TOIG	**Toxpalan**	**3.33**	**322**			**Pn**	**06 29 36.4**	**+3.6**
TOIG	**Toxpalan**	**3.33**	**322**	*e*P		**Pn**	**06 29 36.4**	**+3.6**
TOIG				*e*S		**Sn**	**06 30 15.3**	**+3.7**
SULM	**Suchitepequez,**	**3.42**	**110**	*e*P		**Pn**	**06 29 33.9**	**0.0**
SULM				*e*S		**Sb**	**06 30 21.1**	**-2.2**
HLIG	**Huajuapan de L**	**3.64**	**310**			**Pn**	**06 29 40.0**	**+2.8**
HLIG						**Sn**	**06 30 19.3**	**0.0**
HLIG	**Huajuapan de L**	**3.64**	**310**	⇑*i* P		**Pn**	**06 29 40.0**	**+2.8**
HLIG				*e*S		**Sn**	**06 30 19.3**	**0.0**
TPIG	**Tehuac#an**	**3.76**	**321**			**Pn**	**06 29 42.4**	**+3.7**
TPIG	**Tehuac#an**	**3.76**	**321**	*e*P		**Pn**	**06 29 42.4**	**+3.7**
TPIG				*e*S		**Sn**	**06 30 26.1**	**+3.9**
FTIG	**Fresnillo de T**	**3.94**	**308**			**Pn**	**06 29 44.1**	**+3.0**
FTIG						**Sn**	**06 30 27.0**	**+0.5**
FTIG	**Fresnillo de T**	**3.94**	**308**	*e*P		**Pn**	**06 29 44.1**	**+3.0**
FTIG				*e*S		**Sn**	**06 30 27.0**	**+0.5**
OZST	**Orizaba**	**3.97**	**328**	*e*P		**Pn**	**06 29 43.5**	**+1.9**
OZST				*e*S		**Sn**	**06 30 27.3**	**+0.1**
FUG	**Fuego 3**	**4.04**	**104**	*e*P		**Pn**	**06 29 43.1**	**+0.5**
FUG				*e*S		**Sb**	**06 30 37.9**	**-3.6**
TLIG	**Tlapa**	**4.09**	**301**			**Pn**	**06 29 45.6**	**+2.4**
TLIG	**Tlapa**	**4.09**	**301**	⇓*i* P		**Pn**	**06 29 45.6**	**+2.4**
TLIG				*e*S		**Sn**	**06 30 28.6**	**-1.7**
TLIG	**Tlapa**	**4.09**	**301**	*i* P		**Pn**	**06 29 46.2**	**+3.0**
TLIG				*i* S		**Sn**	**06 30 29.7**	**-0.6**
TLIG				IAML			06 30 58.3	
	comp=Z,2μm,1.0s							
HMTT	**Tlapaneco**	**4.21**	**304**			**Pn**	**06 29 47.6**	**+2.9**
HMTT						**Sn**	**06 30 33.6**	**+0.5**
HMTT	**Tlapaneco**	**4.21**	**304**	*e*P		**Pn**	**06 29 47.6**	**+2.9**
HMTT				*e*S		**Sn**	**06 30 33.6**	**+0.5**
GUMI	**Mixco**	**4.21**	**101**	*i* P		**Pn**	**06 29 47.6**	**+2.6**
GUMI				IAML			06 31 03.5	
	comp=Z,6μm,1.0s							
CRIG	**Cruz Grande**	**4.27**	**288**			**Pn**	**06 29 46.1**	**+0.6**
CRIG	**Cruz Grande**	**4.27**	**288**	*e*P		**Pn**	**06 29 46.1**	**+0.6**
CRIG				*e*S		**Sn**	**06 30 29.5**	**-4.9**
JAUV	**Jalcomulco**	**4.28**	**335**	*e*P		**Pn**	**06 29 45.3**	**-0.4**
JAUV				*e*S		**Sn**	**06 30 33.6**	**-1.1**
PCG	**Pacaya**	**4.28**	**104**	*e*P		**Pn**	**06 29 48.5**	**+2.7**
PCG				*e*S		**Sb**	**06 30 45.0**	**-3.2**
GCG4	**OSOP**	**4.30**	**101**	*i* P		**Pn**	**06 29 48.0**	**+1.9**
GCG4				*i* S		**Sn**	**06 30 39.0**	**+3.5**
GCG4				IAML			06 31 08.0	
	comp=Z,6μm,1.0s							
AVCB	**Coban**	**4.32**	**90**	*i* P		**Pn**	**06 29 48.7**	**+2.3**
AVCB				*i* S		**Sn**	**06 30 37.5**	**+1.5**
AVCB				IAML			06 31 06.5	
	comp=Z,13μm,1.0s							
LVIG	**Laguna Verde**	**4.46**	**341**	*e*P		**Pn**	**06 29 47.9**	**-0.3**
LVIG				*e*S		**Sn**	**06 30 36.3**	**-3.0**
NBG	**Las Nubes**	**4.48**	**101**	*e*P		**Pn**	**06 29 51.9**	**+3.3**
NBG				*e*S		**Sb**	**06 30 49.1**	**-4.9**
DAIG	**Los Arroyos**	**4.83**	**289**			**Pn**	**06 29 54.1**	**+0.9**
DAIG	**Los Arroyos**	**4.83**	**289**	*e*P		**Pn**	**06 29 54.1**	**+0.9**
DAIG				*e*S		**Sn**	**06 30 42.8**	**-5.5**
SCIG	**Sabancuy**	**4.95**	**45**	⇓*i* P		**Pn**	**06 29 54.7**	**-0.2**
SCIG				*i* S		**Sn**	**06 30 44.9**	**-6.4**
ACP2	**Acapulco**	**5.00**	**287**			**Pn**	**06 29 55.6**	**0.0**
ACP2	**Acapulco**	**5.00**	**287**	*e*P		**Pn**	**06 29 55.6**	**0.0**
ACP2				*e*S		**Sn**	**06 30 46.8**	**-5.8**
PETF	**Flores**	**5.03**	**73**	Pn		**Pn**	**06 29 56.8**	**+0.8**
PETF	**Flores**	**5.03**	**73**	*e*P		**Pn**	**06 29 56.2**	**+0.2**
PETF				*e*S		**Sn**	**06 30 47.8**	**-5.5**
MRL	**Marmol**	**5.04**	**94**	*e*P		**Pn**	**06 29 57.3**	**+1.0**
MRL				*e*S		**Sn**	**06 30 47.6**	**-6.2**
PPM	**Popocatepetl**	**5.05**	**315**	*e*P		**Pn**	**06 30 01.4**	**+4.7**
PPM				*e*S		**Sn**	**06 30 51.1**	**-3.3**
JUAM	**Asuncion Mita**	**5.14**	**102**	*i* P		**Pn**	**06 30 00.3**	**+2.8**
JUAM				IAmb	IAmb		06 30 25.4	
	comp=Z,600nm,0.8s							
JUAM				IVmB_BB			06 30 30.1	
	comp=Z,6μm,1.0s							
JUAM				*i* S		**Sn**	**06 31 00.5**	**+4.5**
JUAM				IAML			06 31 17.9	
	comp=Z,2μm,1.0s							
SLOZ	**Alcaldia de Sa**	**5.14**	**106**	*e*P		**Pn**	**06 29 57.6**	**0.0**
MEIG	**Mezcala**	**5.15**	**299**			**Pn**	**06 30 00.6**	**+2.9**
MEIG						**Sn**	**06 30 54.1**	**-2.1**
MEIG	**Mezcala**	**5.15**	**299**	*e*P		**Pn**	**06 30 00.6**	**+2.9**
MEIG				*e*S		**Sn**	**06 30 54.1**	**-2.1**
LOAL	**Lomas de Alarc**	**5.16**	**106**	*i* P		**Pn**	**06 30 00.4**	**+2.6**
LOAL				*i* S		**Sn**	**06 31 00.2**	**+3.8**
LOAL				IAML			06 31 28.7	
	comp=Z,5μm,1.0s							
NUBE	**Las Nubes**	**5.18**	**107**	*e*P		**Pn**	**06 29 58.7**	**+0.4**
NUBE	**Las Nubes**	**5.18**	**107**	*i* P		**Pn**	**06 29 58.8**	**+0.5**
NUBE				IVmB_BB			06 30 10.2	
	comp=Z,8μm,1.0s							
NUBE				IAmb	IAmb		06 30 10.3	
	comp=Z,650nm,0.7s							
NUBE				*i* S		**Sn**	**06 30 57.7**	**+0.4**
NUBE				IAML			06 31 11.3	
	comp=Z,2μm,1.0s							
AMVM	**AMECAMECA**	**5.20**	**315**	*e*P		Pn	06 30 03.5	+4.8
AMVM				*e*S		**Sn**	**06 30 55.4**	**-2.5**
YAIG	**Yautepec**	**5.22**	**311**			**Pn**	**06 30 02.5**	**+3.7**
YAIG						**Sn**	**06 30 56.0**	**-2.2**
YAIG	**Yautepec**	**5.22**	**311**	*e*P		**Pn**	**06 30 02.5**	**+3.7**
YAIG				*e*S		**Sn**	**06 30 56.0**	**-2.2**
PLIG	**Platanillo**	**5.28**	**304**			**Pn**	**06 30 03.2**	**+3.6**
PLIG						**Sn**	**06 30 58.5**	**-1.0**
PLIG	**Platanillo**	**5.28**	**304**	*e*P		**Pn**	**06 30 03.2**	**+3.6**
PLIG				*e*S		**Sn**	**06 30 58.5**	**-1.0**
CEVE	**Cerro Verde**	**5.35**	**107**	*e*P		**Pn**	**06 30 01.2**	**+0.6**
CEVE				*e*S		**Sn**	**06 31 00.5**	**-1.1**
CEVE	**Cerro Verde**	**5.35**	**107**	*i* P		**Pn**	**06 30 03.5**	**+2.8**
CEVE				IVmB_BB			06 30 14.8	
	comp=Z,9μm,1.0s							
CEVE				IAmb	IAmb		06 30 19.4	
	comp=Z,710nm,0.5s							
CEVE				*i* S		**Sn**	**06 31 05.3**	**+3.7**
CEVE				IAML			06 31 25.9	
	comp=Z,3μm,1.0s							
SNJE	**San Jose**	**5.36**	**107**	*e*P		**Pn**	**06 30 00.9**	**+0.2**
UNIC	**Universidad Ca**	**5.38**	**105**	*i* P		**Pn**	**06 30 03.7**	**+2.9**
UNIC				IVmB_BB			06 30 52.3	
	comp=Z,17μm,1.0s							
UNIC				*i* S		**Sn**	**06 31 05.8**	**+3.9**
UNIC				IAML			06 31 27.0	
	comp=Z,550nm,1.0s							
CAIG	**El Cayaco**	**5.40**	**288**			**Pn**	**06 30 02.2**	**+1.1**
CAIG	**El Cayaco**	**5.40**	**288**	⇓*i* P		**Pn**	**06 30 02.2**	**+1.1**
CAIG				*e*S		**Sn**	**06 30 55.8**	**-6.5**
MPVM	**San Francisco**	**5.40**	**314**	*e*P		**Pn**	**06 30 05.9**	**+4.6**
MPVM				*e*S		**Sn**	**06 31 05.6**	**+2.8**
ESQI	**Esquipulas**	**5.44**	**99**	Pn		**Pn**	**06 30 03.4**	**+1.8**
MTO3	**Montecristo**	**5.45**	**101**			**Pn**	**06 30 02.7**	**+0.7**
MTO3	**Montecristo**	**5.45**	**101**	*i* P		**Pn**	**06 30 03.5**	**+1.5**
MTO3				IAmb	IAmb		06 30 31.0	
	comp=Z,300nm,1.5s							
MTO3				IVmB_BB			06 30 39.6	
	comp=Z,4μm,1.0s							
MTO3				*i* S		**Sn**	**06 31 07.0**	**+3.1**
MTO3				IAML			06 31 41.1	
	comp=Z,880nm,1.0s							
THVM	**De Xico**	**5.45**	**315**	*e*P		Pn	06 30 07.6	+5.5
THVM				*e*S		**Sn**	**06 31 05.9**	**+1.8**
TLVM	**San Miguel Top**	**5.51**	**313**	*e*P		**Pn**	**06 30 07.3**	**+4.4**
TLVM				*e*S		**Sn**	**06 31 06.8**	**+1.2**
XCVM	**Xochimilco**	**5.51**	**313**	*e*P		Pn	06 30 08.3	+5.4
XCVM				*e*S		**Sn**	**06 31 05.9**	**+0.3**
JAYA	**Jayaque - finc**	**5.57**	**108**	*e*P		**Pn**	**06 30 04.5**	**+0.9**
JAYA	**Jayaque - finc**	**5.57**	**108**	*i* P		**Pn**	**06 30 04.1**	**+0.5**
JAYA				IVmB_BB			06 30 22.7	
	comp=Z,11μm,1.0s							
JAYA				IAmb	IAmb		06 30 23.2	
	comp=Z,660nm,0.9s							
JAYA				*i* S		**Sn**	**06 31 04.8**	**-2.0**
JAYA				IAML			06 31 15.1	
	comp=Z,2μm,1.0s							
CEDA	**San Andres**	**5.57**	**107**	*i* P		**Pn**	**06 30 04.6**	**+1.1**
CEDA				IAmb	IAmb		06 30 27.7	
	comp=Z,800nm,0.6s							
CEDA				IVmB_BB			06 30 29.9	
	comp=Z,40μm,1.0s							
CEDA				IAML			06 31 46.3	
	comp=Z,5μm,1.0s							
COVM	**Coyoacan**	**5.61**	**314**	*e*			06 31 27.2	
UNM	**Universidad Na**	**5.61**	**314**	Pn		**Pn**	**06 30 04.4**	**+0.2**
UNM	**Universidad Na**	**5.61**	**314**	*e*P		Pn	06 30 09.1	+5.0
UNM				*e*S		**Sn**	**06 31 12.2**	**+4.3**
PBVM	**Pinon**	**5.62**	**315**	*e*P		Pn	06 30 09.0	+5.0
PBVM				*e*S		**Sn**	**06 31 06.0**	**-1.7**
BJVM	**Benito Juarez**	**5.63**	**314**	*e*		Pb	06 30 25.2	+5.1
BJVM				*e*			06 31 11.8	
VTVM	**Tizayuca**	**5.65**	**320**	*e*P		**Pn**	**06 30 04.7**	**-0.1**
VTVM				*e*S		**Sn**	**06 31 04.0**	**-5.0**
AOVM	**Tlapan**	**5.67**	**312**	*e*P		**Pn**	**06 30 09.7**	**+4.5**
AOVM				*e*S		**Sn**	**06 31 06.8**	**-2.8**
PMON	**Piamonte**	**5.67**	**107**	*i* P		**Pn**	**06 30 07.0**	**+2.0**
PMON				IVmB_BB			06 30 24.5	
	comp=Z,8μm,1.0s							
PMON				IAmb	IAmb		06 30 33.8	
	comp=Z,620nm,0.5s							
PMON				*i* S		**Sn**	**06 31 12.8**	**+3.5**
PMON				IAML			06 31 27.1	
	comp=Z,2μm,1.0s							
QUEZ	**Alcaldia de Qu**	**5.67**	**106**	*i* P		**Pn**	**06 30 07.7**	**+2.8**
QUEZ				*i* S		**Sn**	**06 31 12.9**	**+3.7**
QUEZ				IAML			06 31 51.5	
	comp=Z,5μm,1.0s							
MHVM	**Bosque de Chap**	**5.68**	**314**	*e*		Pb	06 30 13.6	-7.3
MHVM				*e*			06 31 19.6	
CJVM	**Cuajimalpa**	**5.70**	**313**	*e*P		**Pn**	**06 30 05.2**	**-0.3**
CJVM				*e*S		**Sn**	**06 31 14.6**	**+4.4**
PIC2	**El Picacho**	**5.72**	**107**	*e*P		**Pn**	**06 30 06.9**	**+1.2**
ITCA	**Escuela Especi**	**5.72**	**108**	*i* P		**Pn**	**06 30 08.5**	**+2.9**
ITCA				*i* S		**Sn**	**06 31 13.6**	**+3.2**
ITCA				IAML			06 31 40.6	
	comp=Z,7μm,1.0s							
INVM	**La Marquesa**	**5.72**	**312**	*e*P		**Pn**	**06 30 09.9**	**+4.0**
INVM				*e*S		**Sn**	**06 31 10.3**	**-0.6**
PTVM	**Pico Tres Padr**	**5.74**	**316**			**Sn**	**06 31 14.6**	**+3.4**
PTVM	**Pico Tres Padr**	**5.74**	**316**	*e*P		Pn	06 30 11.6	+5.6
PTVM				*e*S		**Sn**	**06 31 14.6**	**+3.4**
UEES	**Universidad Ev**	**5.74**	**107**	*i* P		Pn	06 30 11.2	+5.3
UEES				IVmB_BB			06 30 31.2	
	comp=Z,4μm,1.0s							
UEES				*i* S		**Sn**	**06 31 14.9**	**+3.9**
UEES				IAML			06 31 38.3	
	comp=Z,740nm,1.0s							
LALI	**Alcalda de L**	**5.74**	**109**	*e*P		**Pn**	**06 30 08.5**	**+2.7**
LALI	**Alcalda de L**	**5.74**	**109**	*i* P		**Pn**	**06 30 08.4**	**+2.6**
LALI				IAmb	IAmb		06 30 18.8	
	comp=Z,240nm,0.8s							
LALI				IVmB_BB			06 30 47.5	
	comp=Z,2μm,1.0s							
LALI				*i* S		**Sn**	**06 31 15.3**	**+4.5**
LALI				IAML			06 31 36.6	
	comp=Z,680nm,1.0s							
SNET	**Serv Nac Est T**	**5.76**	**107**			**Pn**	**06 30 08.0**	**+1.9**
SNET	**Serv Nac Est T**	**5.76**	**107**	*i* P		**Pn**	**06 30 08.5**	**+2.4**
SNET				IAmb	IAmb		06 30 31.1	
	comp=Z,900nm,0.9s							
SNET				*i* S		**Sn**	**06 31 15.4**	**+4.0**
SNET				IAML			06 31 35.4	
	comp=Z,2μm,1.0s							
SEMO	**Seminario San**	**5.76**	**107**	*i* P		**Pn**	**06 30 09.0**	**+2.9**
SEMO				*i* S		**Sn**	**06 31 14.4**	**+3.0**
SEMO				IAML			06 31 44.6	
	comp=Z,4μm,1.0s							
UTEC	**Universidad Te**	**5.78**	**107**	*i* P		**Pn**	**06 30 08.7**	**+2.3**
UTEC				*i* S		**Sn**	**06 31 15.4**	**+3.5**
UTEC				IAML			06 31 44.2	
	comp=Z,1μm,1.0s							
IGN	**Direccin Gen**	**5.81**	**107**	*i* P		**Pn**	**06 30 09.8**	**+3.1**
IGN				*i* S		**Sn**	**06 31 17.1**	**+4.6**
IGN				IAML			06 31 40.8	
	comp=Z,4μm,1.0s							
UDBS	**Universidad Do**	**5.82**	**107**	*i* P		**Pn**	**06 30 08.1**	**+1.2**
UDBS		

PQSS *i* S **Sn** **06 31 30.9 +3.9**
PQSS IAML 06 31 47.3
comp=Z,250nm,1.0s
ALJI **Alcalda de J** **6.48 108** *e*P Pn 06 30 08.9 -7.1
ALJI **Alcalda de J** **6.48 108** *i* P **Pn** **06 30 19.1 +3.1**
ALJI IVmB_BB 06 30 27.4
comp=Z,3μm,1.0s
ALJI IAmb IAmb 06 30 27.7
comp=Z,310nm,0.8s
ALJI IAML 06 31 45.4
comp=Z,610nm,1.0s
ACIG **Acambay** **6.53 314** **Pn** **06 30 19.2 +2.4**
ACIG **Sn** **06 31 28.8 -1.7**
ACIG **Acambay** **6.53 314** *e*P **Pn** **06 30 19.2 +2.4**
ACIG *e*S **Sn** **06 31 28.8 -1.7**
PACA **Pacayal** **6.66 107** *i* P **Pn** **06 30 21.8 +3.2**
PACA IAmb IAmb 06 30 47.5
comp=Z,1μm,0.7s
PACA IVmB_BB 06 30 54.8
comp=Z,14μm,1.0s
PACA IAML 06 32 11.7
comp=Z,4μm,1.0s
RANC **El Ranchito** **6.71 107** *i* P **Pn** **06 30 22.0 +2.8**
RANC IAmb IAmb 06 30 34.1
comp=Z,230nm,0.7s
RANC IAML 06 32 12.6
comp=Z,540nm,1.0s
JUCU **Jucuarɲn** **6.80 108** *i* P **Pn** **06 30 23.3 +2.9**
JUCU IVmB_BB 06 30 33.2
comp=Z,1μm,1.0s
JUCU IAmb IAmb 06 30 39.7
comp=Z,100nm,0.6s
JUCU IAML 06 32 13.7
comp=Z,390nm,1.0s
CNRM **Centro Naciona** **6.80 106** *i* P **Pn** **06 30 23.4 +3.0**
CNRM IVmB_BB 06 31 07.9
comp=Z,310μm,1.0s
CNRM IAML 06 32 26.7
comp=Z,5μm,1.0s
LCND **La Caada** **7.11 107** *e*P **Pn** **06 30 26.1 +1.4**
LCND **La Caada** **7.11 107** *i* P **Pn** **06 30 27.3 +2.6**
LCND IVmB_BB 06 30 37.1
comp=Z,2μm,1.0s
LCND IAmb IAmb 06 30 37.3
comp=Z,130nm,0.5s
LCND IAML 06 32 17.9
comp=Z,370nm,1.0s
CNCH **Conchagua** **7.18 107** *i* P **Pn** **06 30 29.5 +3.9**
CNCH IVmB_BB 06 30 39.3
comp=Z,7μm,1.0s
CNCH IAmb IAmb 06 30 39.7
comp=Z,550nm,0.6s
CNCH IAML 06 32 11.7
comp=Z,1μm,1.0s
MOIG **Morelia** **7.32 306** Pn **Pn** **06 30 29.0 +1.3**
MOIG **Morelia** **7.32 306** *e*P **Pn** **06 30 31.9 +4.3**
MOIG *e*S **Sn** **06 31 54.3 +4.4**
MOIG **Morelia** **7.32 306** *i* P Pn 06 30 32.8 +5.1
MOIG IVmB_BB 06 30 54.0
comp=Z,2μm,1.0s
MOIG IAmb IAmb 06 30 57.2
comp=Z,200nm,0.6s
MOIG IAML 06 33 00.6
comp=Z,790nm,1.0s
MYIG **Mrida** **7.32 41** *e*P **Pn** **06 30 27.5 +0.1**
MYIG *e*S **Sn** **06 31 45.8 -3.9**
TGUH **Tegucigalpa,Un** **7.50 100** Pn **Pn** **06 30 30.8 +0.7**
TGUH **Tegucigalpa,Un** **7.50 100** *i* P **Pn** **06 30 31.7 +1.6**
TGUH IVmB_BB 06 30 40.1
comp=Z,3μm,1.0s
TGUH IAmb IAmb 06 30 48.7
comp=Z,330nm,0.9s
TGUH IAML 06 32 39.5
comp=Z,580nm,1.0s
CSGN **Cosiguina Volc** **7.53 108** *i* P **Pn** **06 30 33.2 +2.8**
CSGN IVmB_BB 06 30 53.4
comp=Z,6μm,1.0s
CSGN IAmb IAmb 06 30 54.2
comp=Z,630nm,0.7s
CSGN IAML 06 32 10.7
comp=Z,1μm,1.0s
TEIG **Tepich** **7.87 52** Pn **Pn** **06 30 33.8 -1.2**
TEIG **Tepich** **7.87 52** LR LR 06 34 09.9
comp=Z,36μm,18.4s,baz=14,slow=43
YUSH **Yuscaran** **7.93 100** *e*P **Pn** **06 30 37.2 +1.2**
RPIG **Rio Verde** **7.99 324** *i* P **Pn** **06 30 41.4 +4.6**
RPIG *e*S **Sn** **06 32 04.0 -2.4**
CRIN **San Cristobal** **8.09 109** **Pn** **06 30 39.9 +1.8**
CRIN **San Cristobal** **8.09 109** *i* P **Pn** **06 30 41.1 +3.0**
CRIN IAmb IAmb 06 31 02.9
comp=Z,810nm,0.7s
CRIN IVmB_BB 06 31 10.9
comp=Z,6μm,1.0s
CRIN *i* S **Sn** **06 32 13.2 +4.4**
HERN **Volcan Telica** **8.32 109** *i* P **Pn** **06 30 43.1 +1.8**
HERN IVmB_BB 06 30 51.2
comp=Z,7μm,1.0s
HERN IAmb IAmb 06 30 54.5
comp=Z,280nm,0.6s
TEL3 **Telica 3** **8.32 109** *i* P **Pn** **06 30 44.1 +2.8**
TEL3 IAmb IAmb 06 31 11.0
comp=Z,540nm,0.9s
TEL3 IVmB_BB 06 31 15.9
comp=Z,6μm,1.0s
PLRN **Geotermica Pol** **8.39 109** *i* P **Pn** **06 30 44.7 +2.5**
PLRN IAmb IAmb 06 30 56.8
comp=Z,46nm,0.6s
PACN **Al O del Volca** **8.40 110** *i* P **Pn** **06 30 41.9 -0.4**
PACN IAmb IAmb 06 30 56.5
comp=Z,99nm,0.4s
ROCN **Rota Cerro Neg** **8.43 109** *i* P **Pn** **06 30 46.2 +3.4**
ROCN IAmb IAmb 06 30 56.0
comp=Z,110nm,0.6s
ILCN **San Idelfonso** **8.45 109** *i* P **Pn** **06 30 45.3 +2.3**
ILCN IAmb IAmb 06 30 51.8
comp=Z,59nm,0.7s
ILCN IVmB_BB 06 31 03.6
comp=Z,660nm,1.0s
CNGA **Al SSO del Vol** **8.48 109** *i* P **Pn** **06 30 46.9 +3.4**
CNGA IAmb IAmb 06 30 51.8
comp=Z,140nm,0.4s
CNGA IVmB_BB 06 30 53.5
comp=Z,10μm,1.0s
CNGN **Cerro Negro** **8.48 109** **Pn** **06 30 46.0 +2.5**
CNGN **Cerro Negro** **8.48 109** *i* P **Pn** **06 30 43.9 +0.4**
CNGN IVmB_BB 06 31 02.9
comp=Z,6μm,1.0s
CNGN IAmb IAmb 06 31 04.0
comp=Z,320nm,1.2s
MACN **El Madrono** **8.52 110** *i* P **Pn** **06 30 47.2 +3.3**
MACN IAmb IAmb 06 31 02.7
comp=Z,36nm,0.5s
MACN IVmB_BB 06 31 25.4
comp=Z,2μm,1.0s
GTIG **Gomez Farias** **8.56 332** *e*P **Pn** **06 30 48.6 +4.1**
GTIG *e*S **Sn** **06 32 24.1 +3.9**
MMIG **Aquila** **8.56 290** **Pn** **06 30 47.1 +2.5**
MMIG **Sn** **06 32 18.4 -1.9**
MMIG **Aquila** **8.56 290** *i*P **Pn** **06 30 47.1 +2.5**
MMIG *e*S **Sn** **06 32 18.4 -1.9**
LIMN **Finca el Limon** **8.60 105** *i* P **Pn** **06 30 47.4 +2.2**
LIMN IVmB_BB 06 30 52.5
comp=Z,3μm,1.0s
LIMN IAmb IAmb 06 31 02.6
comp=Z,260nm,0.8s
MOMN **Momotombo** **8.66 110** *i* P **Pn** **06 30 47.9 +2.0**
MOMN IVmB_BB 06 31 03.1
comp=Z,140nm,1.0s
MOMN IAmb IAmb 06 31 10.0
comp=Z,9.0nm,0.6s
COPN **Copaltepe** **8.70 111** *i* P **Pn** **06 30 47.5 +1.1**
COPN IVmB_BB 06 31 08.2
comp=Z,4μm,1.0s
COPN IAmb IAmb 06 31 08.6
comp=Z,500nm,0.8s
SAPS **Ciudad Sandino** **8.87 111** *i* P **Pn** **06 30 52.4 +3.6**
APQ2 **Apoyeque** **8.93 110** *i* P **Pn** **06 30 52.4 +2.8**
APQ2 IAmb IAmb 06 30 58.1
comp=Z,230nm,0.6s
APQ2 IVmB_BB 06 31 03.2
comp=Z,2μm,1.0s
TISN **Laguna Tiscapa** **9.00 111** *i* P **Pn** **06 30 52.6 +2.0**
TISN IVmB_BB 06 30 59.7
comp=Z,290nm,1.0s
TISN IAmb IAmb 06 30 59.9
comp=Z,20nm,0.6s
UNAN **Cigeo UNAN** **9.01 111** *i* P **Pn** **06 30 52.9 +2.1**
UNAN IVmB_BB 06 31 15.3
comp=Z,14μm,1.0s
R4DEC **Barrio San Lui** **9.02 110** *i* P **Pn** **06 30 53.9 +3.1**
R4DEC IVmB_BB 06 31 06.5
comp=Z,14μm,1.0s
R4DEC IAmb IAmb 06 31 16.1
comp=Z,240nm,0.9s
MATN **Matagalpa** **9.05 105** **Pn** **06 30 52.6 +1.3**
MATN **Matagalpa** **9.05 105** *i* P **Pn** **06 30 52.8 +1.4**
MATN IAmb IAmb 06 31 08.7
comp=Z,87nm,0.9s
MATN IVmB_BB 06 31 49.1
comp=Z,1μm,1.0s
WILN **Americas 2** **9.07 110** *i* P **Pn** **06 30 55.1 +3.6**
WILN IAmb IAmb 06 31 23.9
comp=Z,170nm,1.3s
MAS3 **Al N del Volca** **9.13 111** *i* P **Pn** **06 30 55.3 +2.9**
MAS3 IVmB_BB 06 31 01.6
comp=Z,3μm,1.0s
MAS3 IAmb IAmb 06 31 02.0
comp=Z,230nm,0.6s
COIG **Colima** **9.18 295** *e*P **Pn** **06 30 57.3 +4.3**
COIG *e*S **Sn** **06 32 35.1 -0.4**
JUBC **Volcan de Coli** **9.20 297** *e*P Pn 06 30 59.1 +5.5
JUBC *e*S **Sn** **06 32 41.5 +5.1**
EZ5V **9.22 297** *e*P Pn 06 30 59.1 +5.3
EZ5V *e*S **Sn** **06 32 40.1 +3.3**
MNGA **Volcan de Coli** **9.23 297** *e*P Pn 06 30 59.0 +5.1
MNGA *e*S **Sn** **06 32 38.1 +1.2**
INCO **Volcan de Coli** **9.24 297** *e*P Pn 06 30 59.0 +4.8
INCO *e*S **Sn** **06 32 44.0 +6.6**
SOMAC **Volcano de Col** **9.26 297** *e*P Pn 06 30 59.8 +5.4
SOMAC *e*S **Sn** **06 32 43.0 +5.1**
CDAR **Ciudad de Arme** **9.37 293** *e*P **Pn** **06 30 58.8 +3.1**
CDAR *e*S **Sn** **06 32 40.0 -0.2**
CEGR **Campo Tres** **9.40 296** *e*P **Pn** **06 31 00.9 +4.7**
CEGR *e*S **Sn** **06 32 40.0 -1.2**
BOAB **BOACO BROADBAN** **9.44 107** **Pn** **06 30 56.7 +0.1**
BOAB **BOACO BROADBAN** **9.44 107** *i* P **Pn** **06 30 59.5 +2.9**
BOAB IVmB_BB 06 31 14.9
comp=Z,1μm,1.0s
BOAB IAmb IAmb 06 31 15.4
comp=Z,99nm,1.2s
AAIG **Aguscalientes** **9.59 313** **Pn** **06 31 02.5 +3.7**
AAIG **Aguscalientes** **9.59 313** *e*P **Pn** **06 31 02.5 +3.7**
AAIG *e*S **Sn** **06 32 50.5 +4.6**
SIUN **Universidad Ur** **9.95 99** *i* P **Pn** **06 31 05.4 +1.9**
SIUN IVmB_BB 06 31 10.4
comp=Z,390nm,1.0s
SIUN IAmb IAmb 06 31 11.5
comp=Z,32nm,1.4s
ACON **Acoyapa** **10.06 109** *i* P **Pn** **06 31 06.9 +1.8**
ACON IAmb IAmb 06 31 16.7
comp=Z,58nm,0.6s
CIHU **Emiliano Zapat** **10.13 293** *e*P **Pn** **06 31 09.6 +3.6**
CIHU *e* 06 33 38.6
HZTE **Horizontes, Gu** **10.21 117** **Pn** **06 31 09.7 +2.4**
ZAIG **Zacatecas** **10.26 316** Pn **Pn** **06 31 09.3 +1.2**
ZAIG **Zacatecas** **10.26 316** *e*P **Pn** **06 31 12.7 +4.7**
ZAIG *e*S **Sn** **06 33 03.1 +0.8**
ZAIG **Zacatecas** **10.26 316** *i* P **Pn** **06 31 10.7 +2.7**
ZAIG IAmb IAmb 06 31 22.2
comp=Z,32nm,0.8s
LNIG **Linares** **10.31 336** *i* P **Pn** **06 31 11.6 +3.2**
LNIG *e*S **Sn** **06 32 59.2 -3.9**
SAJU **San Juanillo,** **10.44 120** *i* P **Pn** **06 31 13.2 +2.9**
SAJU IAmb IAmb 06 31 20.7
comp=Z,170nm,0.8s
SAJU IVmB_BB 06 31 24.0
comp=Z,2μm,1.0s
CJM **Chamela** **10.48 294** *e*P **Pn** **06 31 14.7 +3.8**
CJM *e*S **Sn** **06 33 09.5 +2.1**
ORTG **Ortega, Santa** **10.50 118** **Pn** **06 31 13.9 +2.6**
ORTG **Ortega, Santa** **10.50 118** *e*P **Pn** **06 31 14.5 +3.2**
ORTG **Ortega, Santa** **10.50 118** *i* P **Pn** **06 31 14.9 +3.7**
ORTG IAmb IAmb 06 31 25.6
comp=Z,210nm,0.9s
ORTG IVmB_BB 06 33 33.2
comp=Z,2μm,1.0s
JUD3 **Juan Diaz 3** **10.53 119** *e*P **Pn** **06 31 14.8 +3.2**
COLC **Colonia** **10.58 116** *e*P **Pn** **06 31 15.1 +2.8**
VMAR **Armenia, Volca** **10.59 115** *e*P Pn 06 31 17.4 +5.0
VMAR **Armenia, Volca** **10.59 115** *i* P **Pn** **06 31 16.1 +3.7**
VMAR IAmb IAmb 06 31 38.2
comp=Z,130nm,1.2s
VMAR IVmB_BB 06 31 53.7
comp=Z,2μm,1.0s
PLVR **Palo Verde** **10.60 118** *e*P **Pn** **06 31 15.4 +2.7**
DUNO **Dulce Nombre,** **10.62 119** *e*P **Pn** **06 31 15.6 +2.9**
NICO **Nicoya** **10.63 119** *e*P **Pn** **06 31 16.1 +3.2**
ESTA **Talpa de Allen** **10.66 299** *e*P **Pn** **06 31 18.2 +4.7**
ESTA *e* 06 33 41.4
CMARA **Lajas Hojancha** **10.71 119** *e*P **Pn** **06 31 16.3 +2.3**
INDI **Punta indio, G** **10.72 120** *e*P **Pn** **06 31 16.7 +2.5**
INDI **Punta indio, G** **10.72 120** *i* P **Pn** **06 31 17.3 +3.1**
INDI IVmB_BB 06 31 23.9
comp=Z,2μm,1.0s
INDI IAmb IAmb 06 31 24.8
comp=Z,240nm,0.9s
NYURE **Nandayure** **10.86 119** *e*P **Pn** **06 31 19.8 +3.7**
JUNT **Juntas** **10.97 117** *e*P **Pn** **06 31 20.6 +3.0**
JTS **Las Juntas de** **10.97 117** **Pn** **06 31 20.2 +2.6**
JTS **Las Juntas de** **10.97 117** P **Pn** **06 31 17.7 +0.1**
comp=Z,3.0nm,0.3s,baz=306,slow=15,SNR=10
JTS S **Sn** **06 33 17.8 -1.7**
comp=Z,13nm,0.9s,baz=308,slow=20,SNR=1.1
comp=Z,5.8nm,0.3s
JTS **Las Juntas de** **10.97 117** *e*P **Pn** **06 31 18.7 +1.1**
ARE1 **Arenal 1** **11.09 116** **Pn** **06 31 21.1 +1.8**
ARE1 **Arenal 1** **11.09 116** *e*P **Pn** **06 31 22.8 +3.5**
LAFE **Finca La Fe, P** **11.25 119** *e*P **Pn** **06 31 21.7 +0.4**
LAFE **Finca La Fe, P** **11.25 119** *i* P **Pn** **06 31 24.4 +3.0**
LAFE IVmB_BB 06 31 30.2
comp=Z,19nm,1.0s
LAFE IAmb IAmb 06 31 37.5
comp=Z,1.7nm,0.8s
SRA1 **San Ramn** **11.48 117** *e*P Pn 06 31 30.6 +5.9
JACO **JACO, Garabito** **11.53 119** *e*P **Pn** **06 31 25.4 +0.6**
JACO **JACO, Garabito** **11.53 119** *i* P **Pn** **06 31 28.4 +3.1**
JACO IVmB_BB 06 31 34.1
comp=Z,2μm,1.0s
JACO IAmb IAmb 06 31 39.3
comp=Z,160nm,0.8s
TRB2 **Turrubares** **11.59 117** *e*P **Pn** **06 31 29.4 +3.3**
HDC **Heredia** **11.83 116** *e*P Pn 06 31 35.4 +5.9
CVIMO **Finca Echandi** **11.97 116** *e*P **Pn** **06 31 32.3 +0.8**
OCM **Ochomogo** **12.02 116** *e*P **Pn** **06 31 31.7 -0.4**
LCR2 **La Lucha 2** **12.05 117** Pn **Pn** **06 31 35.2 +2.7**
LCR2 **La Lucha 2** **12.05 117** *e*P **Pn** **06 31 33.0 +0.4**
LCR2 **La Lucha 2** **12.05 117** *i* P **Pn** **06 31 35.5 +2.9**
LCR2 IVmB_BB 06 31 42.1
comp=Z,1μm,1.0s
LCR2 IAmb IAmb 06 31 42.9
comp=Z,160nm,0.7s
VICA **Volcano Irazu** **12.07 116** *e*P **Pn** **06 31 35.2 +2.2**
RAZU **San Marcos de** **12.08 117** *e*P **Pn** **06 31 35.2 +2.4**
ICR3 **Volcano Irazu** **12.09 116** *e*P **Pn** **06 31 35.0 +1.7**
LLNJ **Naranjito** **12.10 118** *e*P **Pn** **06 31 35.4 +2.3**
REPA **Paraso** **12.13 116** *e*P **Pn** **06 31 38.0 +4.4**
PCAYA **Pacayas** **12.14 116** *e*P **Pn** **06 31 37.9 +4.2**
CVTV **Tajo** **12.15 115** *e*P **Pn** **06 31 36.4 +2.4**
RIMA **Rio Macho** **12.16 117** *e*P **Pn** **06 31 36.5 +2.5**
RIMA **Rio Macho** **12.16 117** *i* P **Pn** **06 31 36.3 +2.2**
RIMA IVmB_BB 06 31 44.5
comp=Z,1μm,1.0s
RIMA IAmb IAmb 06 31 45.0
comp=Z,100nm,0.6s
VTCV **VTCV, Calle Va** **12.18 115** *i* P **Pn** **06 31 37.6 +3.3**
VTCV IVmB_BB 06 31 47.4
comp=Z,2μm,1.0s
VTCV IAmb IAmb 06 31 47.5
comp=Z,180nm,0.8s
CDM **Cerro de Muert** **12.35 117** *e*P **Pn** **06 31 38.1 +1.2**
CDM **Cerro de Muert** **12.35 117** *i* P **Pn** **06 31 39.4 +2.5**
CDM IVmB_BB 06 31 45.6
comp=Z,2μm,1.0s
CDM IAmb IAmb 06 31 47.0
comp=Z,130nm,0.8s
PEZE **Perez Zeledon,** **12.51 118** **Pn** **06 31 40.5 +1.7**
PEZE **Perez Zeledon,** **12.51 118** *e*P **Pn** **06 31 39.9 +1.2**
PEZE **Perez Zeledon,** **12.51 118** *i* P **Pn** **06 31 41.1 +2.4**
PEZE IVmB_BB 06 31 47.8
comp=Z,2μm,1.0s
PEZE IAmb IAmb 06 31 55.3
comp=Z,150nm,1.3s
PLAN **Los Planes de** **12.88 120** *i* P **Pn** **06 31 47.8 +4.1**
PLAN IAmb IAmb 06 31 58.7
comp=Z,88nm,0.8s
PLAN IVmB_BB 06 32 32.2
comp=Z,4μm,1.0s
BURE **Buenos Aires** **12.90 118** *e*P **Pn** **06 31 46.7 +2.7**
DRK0 **Durika** **12.94 117** *e*P **Pn** **06 31 46.6 +2.0**
POTG **Potrero Grande** **13.15 118** *e*P **Pn** **06 31 48.4 +0.9**
POTG **Potrero Grande** **13.15 118** *i* P **Pn** **06 31 50.2 +2.7**
POTG IAmb IAmb 06 31 55.6
comp=Z,260nm,0.9s
POTG IVmB_BB 06 32 04.8
comp=Z,4μm,1.0s
PIRO **Carate, Puerto** **13.31 121** *e*P **Pn** **06 31 53.1 +3.6**
833A **Chaparral WMA,** **13.45 343** Pn **Pn** **06 31 53.8 +2.4**
833A **Chaparral WMA,** **13.45 343** P **Pn** **06 31 53.6 +2.3**
baz=160,SNR=48
CDITO **Canoas** **13.60 119** **Pn** **06 31 55.2 +1.6**
BRU2 **Volcan** **13.65 118** Pn **Pn** **06 31 57.8 +3.5**
MCIG **Muzquiz** **13.77 335** *e*P **Pn** **06 31 59.8 +4.0**
DRIO **Del Rio** **14.85 340** Pn **Pn** **06 32 12.7 +2.2**
HPIG **15.18 320** Pn **P** **06 32 18.4 -1.5**
435B **Jarrell** **15.43 351** P **Pn** **06 32 19.8 +1.6**
baz=170
BCIG **La Boquilla** **15.48 323** *e* **P** **06 32 22.3 -0.9**
JCT **Junction City** **15.60 344** IAmb IAmb 06 32 30.1
comp=Z,53nm,0.7s
JCT **Junction City** **15.60 344** P **Pn** **06 32 21.3 +1.0**
baz=162,SNR=12
JCT **Junction City** **15.60 344** *e* **Pn** **06 32 21.8 +1.4**
SAND **Sanderson** **15.87 336** Pn **Pn** **06 32 25.7 +1.8**
TXAR **Lajitas Array** **15.99 331** P **P** **06 32 28.1 -0.7**
comp=Z,0.6nm,0.3s,baz=151,slow=15,SNR=81
TXAR LR LR 06 38 57.7
comp=Z,297nm,21.7s,baz=148,slow=38
comp=Z,14nm,0.7s
NATX **Nacogdoches** **16.21 1** Pn **Pn** **06 32 28.6 +0.4**
NATX **Nacogdoches** **16.21 1** P **Pn** **06 32 27.6 -0.5**
baz=180
OZNA **Ozona** **16.40 341** IAmb IAmb 06 32 40.4
comp=Z,98nm,0.8s
346A **Big Creek Wild** **16.59 16** IAmb IAmb 06 32 40.6
comp=Z,60nm,0.7s
WHTX **Lake Whitney,** **16.60 352** IAmb IAmb 06 32 39.9
comp=Z,74nm,0.7s
WHTX **Lake Whitney,** **16.60 352** P **Pn** **06 32 33.9 +0.7**
baz=171,SNR=13
LPIG **La Paz** **16.84 303** P **P** **06 32 40.1 +2.0**
comp=Z,1.3nm,0.3s,baz=266,slow=3.1,SNR=2.1
LPIG LR LR 06 38 35.6
comp=Z,1μm,18.9s,baz=128,slow=35
comp=Z,6.5nm,0.3s
ALPN **Alpine** **16.86 333** IAmb IAmb 06 32 41.0
comp=Z,68nm,0.7s
CSIG **Choix** **16.88 314** *e* **P** **06 32 38.7 0.0**
FW13 **Cleburne** **16.95 353** IAmb IAmb 06 32 43.5
comp=Z,71nm,0.6s
FW14 **Alvarado** **16.97 353** P **Pn** **06 32 37.3 -0.5**
FW14 IAmb IAmb 06 32 43.1
comp=Z,70nm,0.6s
FW16 **Waxahatchie** **17.02 354** P **Pn** **06 32 38.3 -0.2**
FW16 IAmb IAmb 06 32 42.9
comp=Z,77nm,0.8s
VBMS **Vicksburg** **17.13 13** P **Pn** **06 32 40.0 +0.1**
VBMS **Vicksburg** **17.13 13** P **Pn** **06 32 40.3 +0.5**
baz=194
BRAL **Brewton** **17.18 23** P **Pn** **06 32 40.2 -0.3**
baz=206
TREL **Terrell** **17.21 357** P **Pn** **06 32 41.4 +0.6**
TREL IAmb IAmb 06 32 47.3
comp=Z,68nm,0.5s
MNHN **Monahans** **17.35 337** IAmb IAmb 06 32 53.1
comp=Z,40nm,0.7s
553A **Crawfordville** **17.51 31** IAmb IAmb 06 32 48.1
comp=Z,72nm,0.9s
PLPT **Palo Pinto** **17.53 350** P **P** **06 32 47.7 +1.9**
PLPT IAmb IAmb 06 32 52.5
comp=Z,52nm,0.7s
FW06 **Azle** **17.58 353** IAmb IAmb 06 32 51.8
comp=Z,78nm,0.6s
ABTX **Abilene, Hawle** **17.61 347** IAmb IAmb 06 32 50.9
comp=Z,81nm,0.7s
ABTX **Abilene, Hawle** **17.61 347** P **P** **06 32 46.6 0.0**
baz=164,SNR=28
DWPF **Disney Wildern** **17.70 43** P **Pn** **06 32 46.2 -0.7**
DWPF **Disney Wildern** **17.70 43** P **Pn** **06 32 46.0 -0.9**
baz=227
Z38A **Mt. Pleasant** **17.70 360** IAmb IAmb 06 32 50.5
comp=Z,69nm,0.8s
Z41A **Richland Creek** **17.80 6** P **Pn** **06 32 47.9 -0.2**
Z41A IAmb IAmb 06 32 59.2
comp=Z,200nm,1.7s
146A **Union** **17.88 16** IAmb IAmb 06 32 53.4
comp=Z,60nm,1.1s
Z35A **Perchaven, San** **17.90 354** IAmb IAmb 06 32 54.9
comp=Z,40nm,0.7s
ODSA **Odessa** **17.98 338** **P** **06 32 51.4 +0.6**
ODSA IAmb IAmb 06 32 55.9
comp=Z,50nm,0.8s
SN05 **Snyder 5** **18.16 344** IAmb IAmb 06 32 57.3
comp=Z,87nm,0.6s
WLAR **White Oak Lake** **18.20 5** P **Pn** **06 32 52.6 -0.4**
WLAR IAmb IAmb 06 33 04.2
comp=Z,40nm,0.7s
352A **Blakely** **18.34 28** IAmb IAmb 06 32 58.0
comp=Z,78nm,0.9s
APMT **Aspermont** **18.39 346** IAmb IAmb 06 32 59.4
comp=Z,60nm,0.7s
POST **Post** **18.51 342** IAmb IAmb 06 33 01.7
comp=Z,36nm,0.7s
LOOK **Love County** **18.55 354** IAmb IAmb 06 33 05.7
comp=Z,61nm,0.6s
MNTX **Cornudas Mount** **18.77 331** P **Pn** **06 33 00.3 +0.3**
baz=146,SNR=13
LRAL **Lakeview Retre** **18.88 21** P **P** **06 33 00.5 -0.1**
baz=204
DKNS **Dickens** **18.91 344** IAmb IAmb 06 33 05.2
comp=Z,46nm,0.8s
Y45A **Yeager Farm, C** **18.93 14** **Pn** **06 33 02.4 +0.5**
Y45A IAmb IAmb 06 33 11.5
comp=Z,61nm,0.9s
X40A **Basin Creek Fa** **19.02 5** P **P** **06 33 01.3 -0.7**
MIAR **Mount Ida** **19.02 3** P **P** **06 33 01.5 -0.6**
baz=183,SNR=8.8
X37A **Clayton** **19.03 359** IAmb IAmb 06 33 13.0
comp=Z,70nm,0.6s
UALR **University of** **19.35 6** P **P** **06 33 04.6 -1.1**
EPT **El Paso** **19.37 329** **Pn** **06 33 09.3 +1.9**
APAC **Apartado, Choc** **19.43 111** *e*P **P** **06 33 07.2 +0.4**
WMOK **Wichita Mounta** **19.49 350** P **P** **06 33 07.5 +0.1**
baz=168,SNR=28
OXF **Oxford** **19.58 14** P **P** **06 33 07.4 -0.8**
OXF IAmb IAmb 06 33 18.9
comp=Z,57nm,0.9s
OXF **Oxford** **19.58 14** P **P** **06 33 08.3 0.0**
baz=196
W35A **Tecumseh** **19.67 355** IAmb IAmb 06 33 11.8
comp=Z,70nm,0.7s
MSTX **Muleshoe** **19.74 340** IAmb IAmb 06 33 14.6
comp=Z,37nm,0.7s
MSTX **Muleshoe** **19.74 340** P **P** **06 33 10.8 +0.7**
baz=156,SNR=23
WHAR **Wooly Hollow** **19.86 6** **Pn** **06 33 12.7 -0.3**
WHAR IAmb IAmb 06 33 21.7
comp=Z,42nm,1.0s
SJCC **San Jacinto, C** **20.00 104** *e*P **P** **06 33 10.6 -2.5**
154A **Montrose** **20.14 30** P **P** **06 33 14.3 0.0**
154A IAmb IAmb 06 33 23.3
comp=Z,58nm,0.8s
DBBC **Dabeiba** **20.14 113** *e*P **P** **06 33 14.9 +0.3**
X48A **Hartselle** **20.17 19** P **P** **06 33 14.3 -0.3**
AMTX **Amarillo** **20.26 344** P Pn 06 33 17.1 -0.7
baz=160
DEOK **Depew** **20.33 356** P **P** **06 33 16.6 +0.3**
TUL3 **Leonard** **20.36 358** IAmb IAmb 06 33 30.3
comp=Z,49nm,0.8s
TUL3 **Leonard** **20.36 358** P **P** **06 33 17.1 +0.3**
baz=177,SNR=22
UREC **San Jos de Ur** **20.44 110** *e*P **P** **06 33 15.2 -2.6**
FCAR **Ozark Folk Cen** **20.47 6** IAmb IAmb 06 33 27.6
comp=Z,38nm,1.1s

GOGA **Godfrey** 20.63 28 P 06 33 20.2 +0.6
GOGA **Godfrey** 20.63 28 P P 06 33 19.8 +0.2
baz=212,SNR=9.0
121A **Cookes Peak, D** 20.63 328 IAmb IAmb 06 33 26.1
comp=Z,59nm,1.1s
121A **Cookes Peak, D** 20.63 328 P P 06 33 21.2 +1.3
baz=142,SNR=22
121A **Cookes Peak, D** 20.63 328 *e* Pn 06 33 23.5 +1.2
HHAR **Hobbs** 20.73 2 P P 06 33 20.7 -0.1
Y52A **Lilburn** 20.75 26 IAmb IAmb 06 33 36.1
comp=Z,39nm,0.7s
CBOC **Ciudad Bolivar** 20.85 115 *eP* P 06 33 23.6 +1.3
U38A **Gravette** 20.88 1 P P 06 33 22.4 +0.1
OK051 **E0350 and S346** 21.01 356 IAmb IAmb 06 33 28.3
comp=Z,55nm,0.7s
X51A **Calhoun** 21.04 24 IAmb IAmb 06 33 43.3
comp=Z,32nm,0.9s
HELC **Santa Helena** 21.12 114 *eP* P 06 33 25.7 +0.2
V48A **Smith Brothers** 21.43 18 P P 06 33 28.8 +0.6
OK032 **Salt Plains WL** 21.44 353 IAmb IAmb 06 33 38.2
comp=Z,46nm,0.7s
WVT **Waverly** 21.51 16 P P 06 33 29.4 +0.3
WVT **Waverly** 21.51 16 P P 06 33 29.9 +0.8
baz=198
YOTC **Yotoco, Valle** 21.52 120 *eP* P 06 33 30.0 +0.4
KAN14 **Manchester OK** 21.56 353 IAmb IAmb 06 33 46.1
comp=Z,26nm,0.8s
KAN17 **Caldwell West** 21.63 354 IAmb IAmb 06 33 35.2
comp=Z,59nm,0.8s
JAMC **Jamundi, Valle** 21.69 122 *eP* P 06 33 32.0 +0.5
KAN09 **Caldwell North** 21.70 354 IAmb IAmb 06 33 35.9
comp=Z,59nm,0.8s
MGMO **Mountain Grove** 21.71 6 IAmb IAmb 06 33 52.1
comp=Z,65nm,1.5s
GUY2C **Guyana, Caldas** 21.72 116 *eP* P 06 33 33.1 +1.0
KAN08 **Anthony NE Sta** 21.83 353 IAmb IAmb 06 33 37.2
comp=Z,63nm,0.8s
HODGE **Hodges** 21.87 29 P P 06 33 32.6 -0.3
PTBC **PUERTO BERRIO,** 21.91 112 *eP* P 06 33 31.7 -2.0
BBAC **Balboa, Cauca** 21.94 126 *eP* P 06 33 35.9 +1.7
ANMO **Albuquerque** 21.99 334 P P 06 33 37.0 +2.4
ANMO **Albuquerque** 21.99 334 P P 06 33 36.6 +2.0
baz=148
ANMO **Albuquerque** 21.99 334 P P 06 33 35.7 +1.1
comp=Z,10nm,0.8s,baz=239,slow=12,SNR=44
ANMO LR LR 06 43 37.6
comp=Z,317nm,18.2s,baz=244,slow=41
comp=Z,10nm,0.8s
NHSC **New Hope** 22.04 35 P P 06 33 35.3 +0.5
baz=220
ANIL **Santa Ana** 22.05 118 *eP* P 06 33 38.5 +3.0
POPC **Popayan, Colom** 22.08 124 *eP* P 06 33 37.2 +1.6
TUC **Tucson** 22.13 322 P P 06 33 39.0 +3.0
TUC **Tucson** 22.13 322 P P 06 33 37.7 +1.8
baz=135
TUC **Tucson** 22.13 322 *e* P 06 33 38.8 +2.9
S39A **Bolivar** 22.17 3 IAmb IAmb 06 33 48.2
comp=Z,28nm,1.0s
BG3 **Lake Jocassee** 22.20 27 IAmb IAmb 06 33 53.9
comp=Z,33nm,0.6s
OTAV **Otavalo** 22.20 132 P P 06 33 39.2 +2.0
OTAV **Otavalo** 22.20 132 *eP* P 06 33 40.0 +2.8
OTAV **Otavalo** 22.20 132 *eP* P 06 33 40.4 +3.2
OCAC **Ocana** 22.29 106 *eP* P 06 33 35.9 -2.0
TULM **Tulcn-Chalpat** 22.36 129 *eP* P 06 33 44.8 +5.8
GCUF **Volcan Galeras** 22.37 128 *eP* P 06 33 41.2 +2.1
TKL **Tuckaleechee C** 22.42 24 IAmb IAmb 06 33 56.0
comp=Z,83nm,1.6s
TKL **Tuckaleechee C** 22.42 24 LR LR 06 45 13.0
comp=Z,884nm,18.2s,baz=200,slow=44
U49A **Red Boiling Sp** 22.46 19 IAmb IAmb 06 33 47.0
comp=Z,29nm,0.8s
ORTC **Ortega, Tolima** 22.49 119 *eP* P 06 33 40.9 +1.0
T47A **Sharon Grove** 22.51 16 IAmb IAmb 06 34 03.0
comp=Z,28nm,0.9s
PAULI **Pauline** 22.56 29 P P 06 33 40.0 -0.4
PAULI IAmb IAmb 06 33 53.5
comp=Z,57nm,1.4s
SPBC **San Pablo de B** 22.65 113 *eP* P 06 33 40.4 -1.3
S44A **Carbondale** 22.68 12 IAmb IAmb 06 33 57.7
comp=Z,75nm,1.2s
CCM **Cathedral Cave** 22.72 7 P P 06 33 41.9 -0.2
CCM IAmb IAmb 06 33 58.3
comp=Z,28nm,1.1s
CCM **Cathedral Cave** 22.72 7 P P 06 33 42.3 +0.2
baz=189
ROSC **El Rosal** 22.81 115 P P 06 33 46.2 +2.5
ROSC IAmb IAmb 06 33 51.5
comp=Z,64nm,0.9s
ROSC **El Rosal** 22.81 115 P P 06 33 46.0 +2.4
comp=Z,54nm,0.8s,baz=320,slow=3.8,SNR=26
ROSC LR LR 06 43 16.8
comp=Z,159nm,20.4s,baz=336,slow=38
ROSC **El Rosal** 22.81 115 *eP* P 06 33 46.6 +2.9
V53A **Saluda** 22.82 26 IAmb IAmb 06 33 57.5
comp=Z,113nm,1.8s
R40A **Maddies Statio** 22.84 5 IAmb IAmb 06 33 54.4
comp=Z,42nm,1.3s
PRAC **Prado** 22.89 119 *eP* P 06 33 45.8 +1.6
BARC **Barichara** 23.04 110 *eP* P 06 33 45.2 -0.7
KMSC **Kings Mountain** 23.05 29 IAmb IAmb 06 33 59.6
comp=Z,28nm,1.1s
KMSC **Kings Mountain** 23.05 29 P P 06 33 45.2 -0.3
baz=215
R32A **Long Quarter,** 23.10 352 IAmb IAmb 06 33 54.7
comp=Z,49nm,0.9s
214A **Organ Pipe Nat** 23.14 318 P P 06 33 48.1 +1.6
baz=131
214A **Organ Pipe Nat** 23.14 318 *e* P 06 33 48.1 +1.6
T25A **Trinidad** 23.17 340 P P 06 33 48.0 +1.0
baz=156,SNR=34
CVER **Cruz Verde, Cu** 23.18 116 *eP* P 06 33 50.1 +2.5
PAMC **Pamplona, Colo** 23.19 108 *eP* P 06 33 48.1 +0.5
TZTN **Tazewell** 23.28 24 P P 06 33 47.1 -0.7
baz=208
CHIC **Chingaza** 23.43 115 *eP* P 06 33 50.0 +0.1
FLOC **Florencia** 23.47 124 *eP* P 06 33 51.2 +1.3
KSU1 **Kansas State U** 23.58 357 IAmb IAmb 06 34 02.0
comp=Z,30nm,0.8s
KSU1 **Kansas State U** 23.58 357 P P 06 33 50.6 -0.1
baz=176,SNR=12
CBKS **Cedar Bluff** 23.63 351 P P 06 33 51.3 0.0
baz=168,SNR=10.0
VILC **Villavicencio,** 23.71 116 *eP* P 06 33 55.5 +3.1
WCI **Wyandotte Cave** 23.89 17 P P 06 33 52.3 -1.5
WCI IAmb IAmb 06 34 10.1
comp=Z,35nm,0.9s
WCI **Wyandotte Cave** 23.89 17 P P 06 33 53.2 -0.6
baz=200
Q44A **Meyer Farm, Va** 23.90 11 IAmb IAmb 06 34 22.7
comp=Z,45nm,0.9s
OLIL **Olney** 23.92 13 IAmb IAmb 06 34 12.0
comp=Z,41nm,1.1s
P38A **Dawn** 24.08 3 IAmb IAmb 06 34 21.2
comp=Z,18nm,0.7s
SDCO **Great Sand Dun** 24.09 339 IAmb IAmb 06 34 01.1
comp=Z,20nm,0.8s
SDCO **Great Sand Dun** 24.09 339 P P 06 33 56.2 +0.3
baz=154,SNR=33
P40A **Paris** 24.09 5 IAmb IAmb 06 33 57.9
comp=Z,29nm,0.8s
TAMC **Tame, Arauca** 24.37 109 *eP* P 06 33 57.4 -1.0
KSCO **Kaye Shedlock'** 24.41 345 IAmb IAmb 06 34 12.9
comp=Z,27nm,0.8s
KSCO **Kaye Shedlock'** 24.41 345 P P 06 33 59.3 +0.6
baz=161
U56A **King** 24.48 29 IAmb IAmb 06 34 26.0
comp=Z,15nm,0.6s
P43A **Skaggs, Pawnee** 24.52 10 IAmb IAmb 06 34 30.1
comp=Z,24nm,1.0s
S22A **4UR Ranch, Cre** 24.57 337 P P 06 34 01.3 +0.9
baz=151
SDV **Santo Domingo** 24.58 103 P P 06 34 00.5 -0.1
SDV IAmb IAmb 06 34 02.4
comp=Z,23nm,0.8s
SDV **Santo Domingo** 24.58 103 LR LR 06 46 09.0
comp=Z,570nm,18.0s,baz=281,slow=43
SDV **Santo Domingo** 24.58 103 *eP* P 06 33 57.1 -3.5
SDV **Santo Domingo** 24.58 103 *eP* P 06 33 58.9 -1.6
MCRA **Macar, Loja** 24.65 142 *eP* P 06 34 01.2 +0.2
BLO **Bloomington** 24.72 16 IAmb IAmb 06 34 17.7
comp=Z,20nm,0.8s
MVCO **Mesa Verde** 24.79 333 P P 06 34 03.4 +1.2
baz=147,SNR=14
WUAZ **Wupatki** 24.82 327 IAmb IAmb 06 34 08.7
comp=Z,58nm,1.2s
WUAZ **Wupatki** 24.82 327 P P 06 34 03.8 +1.4
baz=139,SNR=18
CNNC **Cliffs of the** 24.89 35 P P 06 34 01.5 -1.3
baz=222
P46A **Rosedale** 24.97 14 IAmb IAmb 06 34 36.5
comp=Z,29nm,1.0s
PTLC **Puerto Leguiza** 25.00 126 *eP* P 06 34 08.2 +4.1
PTGC **Puerto Gaitan,** 25.03 114 *eP* P 06 34 05.1 +0.7
Q24A **Divide** 25.07 341 P P 06 34 05.4 +0.5
baz=156
BLA **Blacksburg** 25.16 28 IAmb IAmb 06 34 39.0
comp=Z,78nm,1.5s
BLA **Blacksburg** 25.16 28 P P 06 34 04.5 -0.9
baz=214
P48A **Milroy** 25.29 17 IAmb IAmb 06 34 37.2
comp=Z,56nm,1.6s
N41A **Harden Midland** 25.38 7 IAmb IAmb 06 34 08.2
comp=Z,26nm,0.8s
HDIL **Hopedale** 25.45 10 P P 06 34 07.9 0.0
baz=192
PDMCI **Parker Dam,Lak** 25.53 321 P P 06 34 09.8 +1.1
baz=132
P49A **Miami Univ. Ec** 25.57 18 P P 06 34 08.6 -0.4
baz=203
SFIN **Lafayette** 25.72 14 P P 06 34 10.0 -0.4
baz=197
Q52A **Bidwell** 25.89 23 IAmb IAmb 06 34 40.4
comp=Z,34nm,1.1s
BC3 **Big Chuckawall** 25.94 318 P P 06 34 14.3 +1.8
baz=129
ISCO **Idaho Springs** 25.98 341 P P 06 34 14.4 +1.2
baz=156,SNR=9.7
BGNE **Belgrade** 25.99 354 P P 06 34 14.0 +1.2
baz=172
U15A **North Rim** 25.99 327 IAmb IAmb 06 34 21.4
comp=Z,50nm,1.9s
IRM **Iron Mountain** 26.06 319 P P 06 34 15.2 +1.6
baz=130
O48B **Farmland** 26.10 17 P P 06 34 14.3 +0.4
baz=201
OGNE **Ogallala** 26.12 348 P P 06 34 15.5 +1.4
baz=164,SNR=16
O49A **Covington** 26.28 18 IAmb IAmb 06 34 52.8
comp=Z,26nm,0.8s
SCIA **State Center** 26.37 3 P P 06 34 15.5 -0.8
baz=183,SNR=19
L34A **Svendsen Farm,** 26.42 358 IAmb IAmb 06 34 27.2
comp=Z,36nm,0.9s
P52A **Corning** 26.53 22 P P 06 34 16.6 -1.1
baz=208
PFO **Pinyon Flats O** 26.57 317 LR LR 06 45 39.3
comp=Z,935nm,18.4s,baz=133,slow=38
L40A **Anamosa** 26.68 6 IAmb IAmb 06 34 28.5
comp=Z,25nm,1.1s
GMRC **Granite Mounta** 26.79 320 P P 06 34 21.8 +1.5
baz=130
O52A **Adamsville** 27.06 22 IAmb IAmb 06 34 54.9
comp=Z,20nm,1.0s
N23A **Red Feather La** 27.08 341 P P 06 34 23.9 +0.9
baz=156
K38A **Parkersburg** 27.13 3 IAmb IAmb 06 34 56.1
comp=Z,25nm,0.8s
O20A **White River Ci** 27.19 337 P P 06 34 24.9 +1.1
baz=151
O53A **New Philadelph** 27.41 23 P P 06 34 24.5 -1.1
baz=209
MCWV **Mont Chateau** 27.45 26 P P 06 34 25.5 -0.5
baz=213
JFWS **Jewell Farm** 27.63 7 IAmb IAmb 06 34 40.6
comp=Z,23nm,0.7s
JFWS **Jewell Farm** 27.63 7 P P 06 34 20.6 -6.9
baz=189
ATAH **Atahualpa** 27.78 143 LR LR 06 44 00.8
comp=Z,387nm,18.5s,baz=312,slow=33
ECSD **EROS Data Cent** 28.20 357 IAmb IAmb 06 35 18.0
comp=Z,63nm,1.6s
RWWY **Rawlins** 28.20 340 IAmb IAmb 06 34 36.4
comp=Z,31nm,1.3s
I37A **Lemond, Waseca** 28.47 2 IAmb IAmb 06 35 19.1
comp=Z,19nm,0.8s
FURC **Furnace Creek,** 28.63 321 P P 06 34 36.3 -0.2
baz=131
M53A **WI Miller and** 28.64 23 P P 06 34 32.8 -3.8
baz=209
MPMC **Manual Prospec** 28.75 320 P P 06 34 36.6 -1.3
baz=129
K22A **Casper** 28.86 342 IAmb IAmb 06 34 43.3
comp=Z,44nm,1.8s
K22A **Casper** 28.86 342 P P 06 34 37.5 -1.2
baz=156
SSPA **Standing Stone** 29.10 27 P P 06 34 37.0 -3.7
baz=215
ISA **Isabella, Lake** 29.13 318 P P 06 34 39.8 -1.4
baz=127
DUG **Dugway, Tooele** 29.17 331 P P 06 34 40.4 -1.1
baz=142
R11B **Troy Canyon, C** 29.18 325 P P 06 34 41.7 0.0
baz=135
CWC **Cottonwood Cre** 29.36 320 P P 06 34 43.6 +0.3
baz=129
ERPA **Erie** 29.48 23 P P 06 34 42.0 -2.1
baz=210
SPMN **Marine on St.** 29.70 3 IAmb IAmb 06 35 00.0
comp=Z,16nm,0.6s
SPMN **Marine on St.** 29.70 3 P P 06 34 44.3 -1.7
baz=184
PCRV **Puerto La Cruz** 29.94 96 LR LR 06 48 11.0
comp=Z,498nm,20.6s,slow=39
PDAR **Pinedale Array** 29.96 338 P P 06 34 49.1 +0.5
comp=Z,0.5nm,0.6s,baz=144,slow=9.6,SNR=6.4
PDAR PcP PcP 06 37 49.8 -0.9
comp=Z,0.4nm,0.6s,baz=131,slow=6.6,SNR=2.3
PDAR LR LR 06 49 39.7
comp=Z,258nm,18.9s,baz=163,slow=42
comp=Z,0.5nm,0.6s
BW06 **Boulder Array** 29.97 338 P P 06 34 45.8 -2.8
baz=150
VOG **Valley Oaks Go** 30.11 318 P P 06 34 47.5 -2.3
baz=127
F33A **5 Mile Ranch,** 30.29 358 IAmb IAmb 06 35 42.1
comp=Z,10nm,0.8s
F36A **Milaca** 30.31 2 IAmb IAmb 06 34 53.6
comp=Z,27nm,1.6s
GLMI **Grayling** 30.51 14 P P 06 34 50.6 -2.5
baz=200
ELK **Elko** 30.76 329 P P 06 34 58.2 +2.5
ELK **Elko** 30.76 329 LR LR 06 49 11.1
comp=Z,914nm,19.4s,baz=152,slow=40
NVAR **Mina Array Bea** 30.79 322 P P 06 34 58.4 +2.5
comp=Z,2.3nm,0.6s,baz=139,slow=8.4,SNR=21
NVAR PcP PcP 06 37 54.1 +1.1
comp=Z,0.8nm,0.6s,baz=156,slow=2.5,SNR=3.4
NVAR LR LR 06 47 46.7
comp=Z,677nm,21.9s,baz=136,slow=37
comp=Z,2.3nm,0.6s
SNOW **Snow King Moun** 31.01 337 IAmb IAmb 06 35 15.3
comp=Z,15nm,0.8s
LOHW **Long Hollow** 31.08 338 IAmb IAmb 06 35 02.4
comp=Z,29nm,1.5s
TPAW **Teton Pass** 31.10 337 P P 06 34 59.3 +0.6
E38A **The Farm, Brul** 31.16 4 IAmb IAmb 06 35 06.5
comp=Z,23nm,0.9s
BINY **Binghamton** 31.20 28 P P 06 34 55.1 -4.2
baz=217
PAL **Palisades** 31.27 31 P P 06 34 56.6 -3.3
baz=222
H17A **Grant Village** 31.75 338 P P 06 35 04.0 -0.3
baz=150
CZSB **Cruzeiro do Su** 31.86 135 *eP* P 06 35 07.5 +2.2
RLMT **Red Lodge** 31.94 341 IAmb IAmb 06 35 09.7
comp=Z,32nm,1.4s
RLMT **Red Lodge** 31.94 341 P P 06 35 04.0 -2.1
baz=153,SNR=14
SADO **Sadowa** 32.09 21 LR LR 06 50 28.6
comp=Z,441nm,19.7s,baz=213,slow=41
YHL **Hebgen Lake** 32.36 338 IAmb IAmb 06 35 14.5
comp=Z,17nm,1.4s
EYMN **Ely** 32.49 4 P P 06 35 08.8 -1.8
baz=186
MDND **Maddock** 32.51 354 P P 06 35 08.6 -2.1
baz=171
LAO **LASA Array** 32.52 345 IAmb IAmb 06 35 14.0
comp=Z,36nm,1.6s
LAO **LASA Array** 32.52 345 P P 06 35 10.2 -0.7
baz=159
HLID **Hailey** 32.57 333 P P 06 35 10.6 -0.9
baz=143,SNR=12
NNA **Nana** 32.62 146 LR LR 06 46 01.6
comp=Z,430nm,21.6s,baz=338,slow=32
B35A **Bob, Littlefor** 32.80 1 IAmb IAmb 06 35 15.6
comp=Z,15nm,0.7s
MFID **Camas Ranch** 33.09 332 IAmb IAmb 06 35 33.7
comp=Z,22nm,1.8s
BOZ **Bozeman (W)** 33.16 338 IAmb IAmb 06 35 55.7
comp=Z,25nm,1.9s
BOZ **Bozeman (W)** 33.16 338 P P 06 35 15.9 -0.7
baz=149
HRV **Adam Dziewonsk** 33.56 32 P P 06 35 17.1 -2.8
baz=224
DGMT **Dagmar** 33.78 349 P P 06 35 21.3 -0.5
baz=163
J08A **Circle Bar Ran** 34.31 329 IAmb IAmb 06 35 44.3
comp=Z,13nm,0.9s
ULM **Lac du Bonnet** 34.69 359 IAmb IAmb 06 35 31.0
comp=Z,11nm,0.8s
ULM **Lac du Bonnet** 34.69 359 P P 06 35 27.6 -1.9
comp=Z,7.4nm,0.7s,baz=178,slow=9.6,SNR=19
ULM PcP PcP 06 38 02.6 -0.6
comp=Z,3.3nm,0.7s,baz=87,slow=2.9,SNR=2.7
ULM LR LR 06 51 32.7
comp=Z,269nm,19.9s,baz=170,slow=40
comp=Z,7.4nm,0.7s
EGMT **Eagleton** 34.70 342 P P 06 35 31.3 +1.5
EGMT **Eagleton** 34.70 342 P P 06 35 29.6 -0.2
baz=154,SNR=14
BMO **Blue Mountains** 34.87 332 IAmb IAmb 06 35 34.8
comp=Z,15nm,1.5s
TEFE **Tefe** 35.39 120 *eP* P 06 35 34.4 -1.7
YBH **Yreka Blue Hor** 35.50 323 LR LR 06 50 56.4
comp=Z,648nm,19.9s,baz=148,slow=38
F10A **Beach Ranch, E** 35.70 333 IAmb IAmb 06 35 57.8
comp=Z,17nm,0.8s
BOAV **Boa Vista** 36.27 108 P P 06 35 42.8 -0.9
BOAV IAmb IAmb 06 35 42.9
comp=Z,17nm,1.3s
BOAV **Boa Vista** 36.27 108 *eP* P 06 35 41.8 -1.9
NEW **Newport** 37.47 335 P P 06 35 53.6 +0.1
baz=143,SNR=5.7
NEW **Newport** 37.47 335 P P 06 35 54.2 +0.7
comp=Z,4.5nm,0.6s,baz=138,slow=9.2,SNR=14
NEW LR LR 06 54 06.7
comp=Z,410nm,18.0s,baz=155,slow=41
comp=Z,4.5nm,0.6s
C09A **Chrisman Ranch** 37.58 334 IAmb IAmb 06 35 57.2
comp=Z,9.0nm,0.8s
ETMB **Extrema** 37.93 130 P P 06 35 57.5 -0.2
ETMB IAmb IAmb 06 36 09.0
comp=Z,22nm,1.2s
ETMB **Extrema** 37.93 130 *eP* P 06 35 57.2 -0.4
MACA **Manacapuru-AM** 38.58 116 IAmb IAmb 06 36 03.8
comp=Z,38nm,1.3s
MACA **Manacapuru-AM** 38.58 116 *eP* P 06 36 02.1 -1.2
FFC **Flin Flon** 39.55 354 P P 06 36 11.0 +0.2
FFC IAmb IAmb 06 36 12.2
comp=Z,36nm,1.6s
FFC **Flin Flon** 39.55 354 P P 06 36 10.8 0.0
FFC pP sP 06 36 20.6 -1.6
SAML **Samuel** 39.70 126 P P 06 36 11.3 -1.2
SAML **Samuel** 39.70 126 *eP* P 06 36 12.1 -0.5
SAML **Samuel** 39.70 126 P P 06 36 10.5 -2.0
SAML sP sP 06 36 24.6 +0.6
EDM **Edmonton** 40.37 343 IAmb IAmb 06 36 20.6
comp=Z,48nm,1.4s
MDP **Montagnes des** 42.74 99 LR LR 06 56 39.7
comp=Z,298nm,19.4s,baz=280,slow=39
FCC **Fort Churchill** 43.21 1 P P 06 36 40.5 -0.3
ITTB **Itaituba** 43.49 114 *eP* P 06 36 41.8 -1.9
VILB **Vilhena** 44.45 128 *eP* P 06 36 53.4 +2.0
RPN **Rapa Nui** 44.62 198 LR LR 06 50 47.5
comp=Z,316nm,20.6s,baz=1.5,slow=30
SCHQ **Schefferville** 44.87 23 P P 06 36 51.8 -2.4
comp=Z,2.3nm,0.8s,baz=188,slow=12,SNR=3.5
SCHQ PcP PcP 06 38 33.9 -1.7
comp=Z,2.4nm,0.6s,baz=238,slow=4.4,SNR=2.7
SCHQ LR LR 06 58 16.8
comp=Z,831nm,19.3s,baz=217,slow=40
comp=Z,2.3nm,0.8s
NPGB **Novo Progresso** 45.10 117 *eP* P 06 36 54.5 -2.1
BBB **Bella Bella** 45.12 332 LR LR 06 58 35.4
comp=Z,282nm,18.1s,baz=162,slow=40
MCPB **Macapa, AP** 45.14 106 *eP* P 06 36 55.7 -1.2
LVC **Limon Verde** 45.61 146 LR LR 06 55 14.2
comp=Z,223nm,20.8s,baz=333,slow=35
SIV **San Ignacio** 45.74 132 LR LR 06 55 44.9
comp=Z,342nm,18.9s,baz=298,slow=36
PDRB **Porto dos Gac** 46.39 123 *eP* P 06 37 05.8 -0.9
PTLB **Pontes e Lacer** 46.81 129 P P 06 37 09.8 -0.2
PTLB **Pontes e Lacer** 46.81 129 *eP* P 06 37 09.4 -0.6
U35K **Hyder** 48.46 334 P P 06 37 21.7 -0.5
baz=132
TOAD **Toad River Com** 48.77 340 P P 06 37 24.5 -0.2
baz=139
AC02 **Maricunga** 48.94 149 IAmb IAmb 06 37 29.5
comp=Z,8.6nm,0.9s
YKA **Yellowknife Ar** 48.98 348 P P 06 37 26.2 +0.1
comp=Z,4.0nm,0.6s,baz=153,slow=7.1,SNR=87
comp=Z,4.0nm,0.6s
KOTAN **Kotaneelee Air** 49.38 341 P P 06 37 30.4 +1.2
baz=142,SNR=6.0
CRAG **Craig** 49.51 332 P P 06 37 30.2 -0.1
baz=128
TMAB **Tom-Au,PA,Br** 49.56 107 *eP* P 06 37 30.1 -1.2
SALV **Santo Antonio** 49.70 127 *eP* P 06 37 31.9 -0.4
DLBC **Dease Lake** 50.19 337 P P 06 37 34.3 -1.3
baz=134,SNR=7.0
DLBC **Dease Lake** 50.19 337 LR LR 06 59 52.5
comp=Z,340nm,19.2s,baz=164,slow=37
S34M **Telegraph Cree** 50.26 336 P P 06 37 35.6 -0.4
baz=132
WTLY **Watson Lake, Y** 50.92 339 IAmb IAmb 06 37 44.9
comp=Z,27nm,1.4s
WTLY **Watson Lake, Y** 50.92 339 P P 06 37 42.6 +1.6
baz=136,SNR=6.4
SNDB **Serra Nova Dou** 51.05 120 *eP* P 06 37 41.9 -0.7
R33M **Jennings River** 51.20 337 IAmb IAmb 06 37 48.0
comp=Z,15nm,1.4s
R33M **Jennings River** 51.20 337 P P 06 37 42.6 -0.6
baz=133
S32K **Killisnoo** 51.38 334 P P 06 37 43.6 -0.9
baz=128
Q32M **Nakina River** 51.40 336 P P 06 37 43.7 -1.2
baz=131
FRB **Frobisher Bay** 51.55 15 LR LR 07 03 17.9
comp=Z,242nm,18.5s,baz=237,slow=40
BDQN **Bodoquena, MS** 51.76 132 *eP* P 06 37 46.3 -1.4
TGTN **Hyland Airport** 51.78 340 P P 06 37 49.8 +2.3
baz=137,SNR=7.8
MURT **Porto Murtinho** 51.95 134 *eP* P 06 37 48.5 -0.7
RVDE **Rio Verde (Bra** 52.17 130 *eP* P 06 37 50.9 0.0
P32M **Atlin** 52.38 336 P P 06 37 53.2 +1.3
baz=130
P33M **Teslin, Yukon** 52.44 337 IAmb IAmb 06 37 56.6
comp=Z,18nm,1.5s
P33M **Teslin, Yukon** 52.44 337 P P 06 37 52.1 -0.4
baz=131,SNR=5.1
ARAG **Araguaiana, MT** 52.63 124 *eP* P 06 37 53.6 -0.7
SMTB **Santa Maria do** 52.73 114 *eP* P 06 37 54.8 -0.4
SKAG **Skagway** 52.93 335 IAmb IAmb 06 38 00.3
comp=Z,41nm,1.9s
SKAG **Skagway** 52.93 335 P P 06 37 54.8 -1.1
baz=128
N32M **Quiet Lake** 53.17 338 IAmb IAmb 06 38 19.6
comp=Z,9.2nm,0.8s
N32M **Quiet Lake** 53.17 338 P P 06 37 57.8 +0.1
baz=132
PLBC **Pleasant Camp** 53.35 335 P P 06 37 58.3 -0.7
baz=127
WHY **Whitehorse** 53.51 337 P P 06 37 59.1 -1.3
baz=129
FARO **Faro, Yukon** 53.99 339 P P 06 38 03.8 +0.1
baz=132
P30M **Million Dollar** 53.99 335 P P 06 38 01.7 -2.1
baz=127
P29M **Windy Craggy** 54.01 335 P P 06 38 01.9 -2.0
baz=126
O30N **Mendenhall** 54.05 336 IAmb IAmb 06 38 07.8
comp=Z,21nm,1.6s
O30N **Mendenhall** 54.05 336 P P 06 38 03.8 -0.4
baz=128
M31M **Drury Creek, Y** 54.33 338 IAmb IAmb 06 38 47.8
comp=Z,28nm,1.9s
M31M **Drury Creek, Y** 54.33 338 P P 06 38 05.9 -0.4
baz=131
LMEL **Las Melosas** 54.41 155 IAmb IAmb 06 38 09.4
comp=Z,10nm,0.9s

BO01 **Tunca** 54.52 156 IAmb IAmb 06 38 09.4
comp=Z,11nm,1.1s
HYT **Haines Junctio** 54.63 336 P P 06 38 08.0 -0.5
baz=127,SNR=5.7
PNL **Peninsula** 54.72 334 P P 06 38 07.9 -1.2
baz=124
O29M **Mount Kennedy** 54.75 335 P P 06 38 08.1 -1.3
baz=125
N30M **Aishikik Lake** 54.85 337 IAmb IAmb 06 38 33.8
comp=Z,17nm,1.6s
N30M **Aishikik Lake** 54.85 337 P P 06 38 07.9 -2.1
baz=127
YUK6 **Outpost Mounta** 55.04 336 P P 06 38 10.6 -1.0
baz=126
PINM **Pinnacle** 55.32 334 P P 06 38 11.8 -1.7
baz=123
CPUP **Villa Florida** 55.33 138 P P 06 38 13.2 -0.6
CPUP IAmb IAmb 06 38 21.9
comp=Z,29nm,1.9s
CPUP **Villa Florida** 55.33 138 P P 06 38 12.6 -1.3
comp=Z,2.8nm,0.9s,baz=319,slow=5.1,SNR=6.6
CPUP LR LR 07 01 59.4
comp=Z,204nm,20.8s,baz=324,slow=36
comp=Z,2.8nm,0.9s
CPUP **Villa Florida** 55.33 138 P P 06 38 13.0 -0.8
CPUP pP pP 06 38 23.5 +1.4
YUK4 **Talbot Arm** 55.38 336 P P 06 38 14.0 -0.1
baz=126
M30M **Minto, Yukon** 55.43 338 IAmb IAmb 06 38 31.6
comp=Z,13nm,1.4s
M30M **Minto, Yukon** 55.43 338 P P 06 38 16.0 +1.8
baz=128,SNR=6.5
BDFB **Brasilia** 55.67 122 P P 06 38 16.6 0.0
BDFB IAmb IAmb 06 38 20.4
comp=Z,9.3nm,0.7s
BDFB **Brasilia** 55.67 122 P P 06 38 16.3 -0.3
comp=Z,11nm,0.6s,baz=288,slow=4.4,SNR=11
comp=Z,11nm,0.6s
MAYO **Mayo, Yukon** 55.77 339 IAmb IAmb 06 38 42.4
comp=Z,12nm,0.7s
YUK8 **Steele Glacier** 55.79 336 P P 06 38 17.2 +0.2
baz=124,SNR=6.0
M29M **Somme Creek** 55.97 337 IAmb IAmb 06 38 22.4
comp=Z,17nm,1.2s
M29M **Somme Creek** 55.97 337 P P 06 38 17.2 -0.9
baz=126
ITRB **Iturama** 56.03 127 eP P 06 38 19.1 0.0
TRCB **Terra Rica** 56.19 132 IAmb IAmb 06 38 28.1
comp=Z,11nm,0.7s
L29M **L29M** 56.25 338 IAmb IAmb 06 38 43.0
comp=Z,11nm,1.1s
L29M **L29M** 56.25 338 P P 06 38 21.6 +1.5
baz=127,SNR=6.4
CTG **Chitna Glacier** 56.25 335 P P 06 38 19.7 -0.5
baz=123
GRNC **Granite Creek** 56.29 334 IAmb IAmb 06 38 34.0
comp=Z,16nm,1.3s
YUK3 **Moose Creek** 56.34 336 P P 06 38 20.9 0.0
baz=124
BARN **Barnard Glacie** 56.43 335 IAmb IAmb 06 38 26.1
comp=Z,25nm,1.8s
PCMB **Pacaembu** 56.47 130 eP P 06 38 23.4 +1.2
K29M **Barlow Dome** 56.48 339 IAmb IAmb 06 38 38.9
comp=Z,12nm,1.4s
K29M **Barlow Dome** 56.48 339 P P 06 38 21.3 -0.5
baz=128
J30M **Hart River** 56.55 340 IAmb IAmb 06 38 30.0
comp=Z,18nm,1.9s
J30M **Hart River** 56.55 340 P P 06 38 22.5 +0.3
baz=130
SDBA **SAO DESIDERIO** 56.70 116 eP P 06 38 23.1 -0.8
H31M **Peel River** 56.74 342 P P 06 38 24.6 +1.2
baz=133
IPMB **Ipameri, GO** 56.75 124 eP P 06 38 24.7 +0.4
BVCY **Beaver Creek** 56.86 336 P P 06 38 24.8 +0.4
baz=124
C36M **Paulatuk** 56.86 348 P P 06 38 23.8 -0.3
baz=146
CRQE **Cirque** 56.86 334 P P 06 38 25.7 +1.1
baz=121
I30M **Mount Dempster** 56.98 341 IAmb IAmb 06 38 28.6
comp=Z,12nm,1.4s
I30M **Mount Dempster** 56.98 341 P P 06 38 25.9 +0.5
baz=130
KAIM **Kayak Island** 57.02 333 P P 06 38 26.8 +1.3
baz=119
J29N **Klondike Camp** 57.10 339 P P 06 38 27.4 +1.2
baz=128
MCARA **McCarthy VSAT** 57.16 335 P P 06 38 27.8 +1.3
MCARA IAmb IAmb 06 38 59.0
comp=Z,8.8nm,0.8s
MCARA **McCarthy VSAT** 57.16 335 P P 06 38 26.1 -0.4
baz=121
M27K **Edge Creek, AK** 57.22 336 P P 06 38 25.3 -1.8
baz=123
VRDI **Verde Repeater** 57.26 334 P P 06 38 28.8 +1.4
VRDI IAmb IAmb 06 38 30.9
comp=Z,15nm,1.4s
DAWY **Dawson** 57.27 339 P P 06 38 27.2 -0.1
baz=126
G31M **Satah River** 57.48 343 IAmb IAmb 06 38 31.4
comp=Z,21nm,1.4s
G31M **Satah River** 57.48 343 P P 06 38 27.4 -1.2
baz=133,SNR=6.4
GLB **Gilahina Butte** 57.52 335 IAmb IAmb 06 38 50.2
comp=Z,7.6nm,1.0s
BCAR **Beaver Creek A** 57.58 337 P P 06 38 30.1 +0.6
L27K **Beaver Creek,** 57.59 337 IAmb IAmb 06 38 32.6
comp=Z,18nm,1.7s
L27K **Beaver Creek,** 57.59 337 P P 06 38 27.0 -2.6
baz=123
BMRM **Bremner River** 57.61 334 P P 06 38 28.0 -1.7
baz=119
LDASE **Londrina, Braz** 57.66 131 eP P 06 38 31.9 +1.3
M26K **Nabesna, AK** 57.69 336 IAmb IAmb 06 38 34.2
comp=Z,9.9nm,1.4s
M26K **Nabesna, AK** 57.69 336 P P 06 38 28.5 -1.7
baz=122
F31M **Tsiigehtchic** 57.70 343 P P 06 38 30.6 +0.5
baz=134
PTGB **Pitanga** 57.80 133 eP P 06 38 32.5 +0.9
EPYK **Eagle Plains** 57.84 341 P P 06 38 29.0 -2.2
baz=130
EYAK **Cordova Ski Ar** 57.90 333 P P 06 38 30.5 -1.2
baz=118
FRBT **Francisco Belt** 57.91 135 eP P 06 38 35.6 +3.3
N25K **Chitina, Valde** 57.93 335 IAmb IAmb 06 38 35.7
comp=Z,17nm,1.4s
N25K **Chitina, Valde** 57.93 335 P P 06 38 29.8 -2.2
baz=120
G30M **tAoh Zraii Nji** 58.09 342 P P 06 38 31.2 -1.8
baz=131
ITQB **Itaqui** 58.12 141 eP P 06 38 34.0 +0.4
L26K **Log Cabin Wild** 58.15 336 P P 06 38 31.8 -1.7
baz=122
BB19B **Bebedouro** 58.22 127 eP P 06 38 34.0 -0.6
K27K **Chicken** 58.22 338 IAmb IAmb 06 38 37.1
comp=Z,12nm,1.4s
K27K **Chicken** 58.22 338 P P 06 38 31.8 -2.1
baz=124
INK **Inuvik** 58.25 344 IAmb IAmb 06 38 54.9
comp=Z,11nm,1.1s
INK **Inuvik** 58.25 344 P P 06 38 31.0 -3.0
baz=135,SNR=8.9
INK **Inuvik** 58.25 344 LR LR 07 08 07.0
comp=Z,426nm,18.2s,baz=186,slow=41
H29M **Whitestone** 58.25 341 IAmb IAmb 06 38 45.5
comp=Z,7.8nm,1.1s
H29M **Whitestone** 58.25 341 P P 06 38 31.5 -2.6
baz=128
CRSM **Crissiumal (Br** 58.26 137 eP P 06 38 35.4 +0.7
I28M **Miner Creek** 58.29 340 P P 06 38 32.2 -2.3
baz=126
EGAK **Eagle** 58.31 339 P P 06 38 32.0 -2.5
baz=125
F30M **Barrier River** 58.38 343 P P 06 38 32.4 -2.6
baz=132
P23K **Montague Islan** 58.39 332 P P 06 38 33.5 -1.6
baz=116
KLU **Klutina** 58.42 334 P P 06 38 34.6 -0.9
baz=118
JANB **Januaria** 58.46 119 eP P 06 38 36.0 -0.4
PMNB **Patos De Minas** 58.47 124 eP P 06 38 35.9 -0.5
HARP **HAARP** 58.55 335 P P 06 38 35.8 -0.4
baz=119
GLI **Glacier Island** 58.64 333 P P 06 38 35.2 -1.7
baz=117

M24K **Tolsona, Glenn** 58.82 335 P P 06 38 37.3 -0.9
baz=118
SCRK **Sand Creek** 58.90 337 P P 06 38 39.2 +0.4
SCRK **Sand Creek** 58.90 337 P P 06 38 37.4 -1.4
baz=122
I27K **Kandik River** 58.95 339 P P 06 38 37.2 -1.8
baz=125
PAX **Paxson** 58.96 336 P P 06 38 38.2 -1.0
baz=119
SFJD **Kangerlussuaq** 58.98 19 LR LR 07 06 56.8
comp=Z,218nm,18.4s,baz=204,slow=39
J26L **Joseph Creek** 59.02 338 IAmb IAmb 06 38 43.4
comp=Z,12nm,1.3s
J26L **Joseph Creek** 59.02 338 P P 06 38 38.6 -1.0
baz=122
RIDG **Independent Ri** 59.10 337 P P 06 38 38.3 -1.8
baz=120
SCM **Sheep Creek Mo** 59.18 334 P P 06 38 35.9 -4.8
baz=117
RES **Resolute Bay** 59.21 360 LR LR 07 06 13.1
comp=Z,210nm,19.8s,baz=202,slow=38
A36M **Sachs Harbour** 59.27 349 IAmb IAmb 06 38 43.2
comp=Z,7.9nm,0.8s
A36M **Sachs Harbour** 59.27 349 P P 06 38 38.9 -2.2
baz=145,SNR=10
H27K **Steamboat Moun** 59.28 340 P P 06 38 38.2 -3.1
baz=125
KNK **Knik Glacier** 59.47 333 P P 06 38 35.5 -7.2
baz=116,SNR=6.1
K24K **Donnelly Dome** 59.49 336 P P 06 38 40.6 -2.2
baz=120
E29M **Blow River** 59.50 343 IAmb IAmb 06 39 04.4
comp=Z,13nm,1.4s
E29M **Blow River** 59.50 343 P P 06 38 38.4 -4.3
baz=130
F28M **Old Crow** 59.59 342 P P 06 38 40.7 -2.6
baz=128,SNR=12
WAT6 **Susitna Watana** 59.69 335 P P 06 38 41.6 -2.8
baz=117,SNR=8.7
J25K **Salcha River,** 59.75 337 P P 06 38 42.8 -1.8
baz=120
DHY **Denali Highway** 59.77 335 P P 06 38 42.5 -2.3
baz=118
RC01 **Rabbit Creek A** 59.90 333 IAmb IAmb 06 38 59.0
comp=Z,20nm,1.4s
RC01 **Rabbit Creek A** 59.90 333 P P 06 38 43.9 -1.7
baz=114
KDAK **Kodiak Island** 60.00 328 P P 06 38 44.4 -1.9
baz=110
KDAK **Kodiak Island** 60.00 328 LR LR 07 03 12.7
comp=Z,223nm,21.5s,baz=142,slow=34
HDA **Harding Lake** 60.24 337 P P 06 38 48.2 +0.4
baz=119
PRP **Porcupine Dome** 60.27 338 P P 06 38 49.1 +0.9
PRP **Porcupine Dome** 60.27 338 P P 06 38 47.6 -0.6
baz=121,SNR=6.2
PLCA **Paso Flores** 60.32 159 P P 06 38 49.3 +0.6
PLCA IAmb IAmb 06 38 50.7
comp=Z,14nm,1.1s
PLCA **Paso Flores** 60.32 159 P P 06 38 49.1 +0.3
comp=Z,6.5nm,0.9s,baz=328,slow=8.1,SNR=13
PLCA LR LR 06 59 53.5
comp=Z,241nm,18.4s,baz=339,slow=31
comp=Z,6.5nm,0.9s
PLCA **Paso Flores** 60.32 159 P P 06 38 49.3 +0.6
PLCA pP sP 06 38 59.5 -0.8
IL31 60.39 337 P P 06 38 49.7 +0.9
ILAR **Eielson Array** 60.39 337 P P 06 38 49.4 +0.5
comp=Z,2.3nm,0.9s,baz=122,slow=5.2,SNR=22
ILAR LR LR 07 08 26.0
comp=Z,201nm,18.2s,baz=98,slow=39
comp=Z,2.3nm,0.9s
G26K **Porcupine Rive** 60.43 340 P P 06 38 50.3 +1.2
baz=123
SUA **Susitna One** 60.49 333 P P 06 38 48.8 -1.0
baz=113,SNR=6.4
DIAM **Diamantina, MG** 60.59 122 eP P 06 38 51.1 0.0
CUT **Chulitna** 60.67 334 P P 06 38 49.5 -1.3
baz=114
MCK **McKinley** 60.70 336 P P 06 38 48.8 -2.2
baz=116
POKR **Poker Plat Res** 60.76 337 P P 06 38 51.0 -0.5
baz=118
COLA **College** 60.80 337 P P 06 38 51.8 +0.2
baz=118
COLA **College** 60.80 337 P P 06 38 52.1 +0.5
O20K **Slope Mountain** 60.82 331 P P 06 38 50.0 -2.0
baz=111
Q19K **Cape Douglas,** 60.91 330 P P 06 38 50.8 -1.7
baz=109
BMAR **Burnt Mountain** 60.96 340 P P 06 38 53.9 +1.1
F26K **Sheenjek River** 60.96 341 P P 06 38 53.1 +0.3
baz=123
PET01 **Itanhaem-SP** 61.01 130 eP P 06 38 54.1 +0.4
N20K **Mont Spurr** 61.04 332 P P 06 38 52.1 -1.4
baz=112
SKT **Skwentna** 61.04 333 P P 06 38 54.0 +0.6
baz=113
BSCB **Bom Sucesso** 61.10 125 eP P 06 38 54.4 -0.1
TRF **Thorofare Moun** 61.12 335 P P 06 38 55.3 +1.2
TRF **Thorofare Moun** 61.12 335 P P 06 38 53.0 -1.1
baz=115,SNR=6.8
NEA2 **Nenana** 61.14 336 P P 06 38 52.2 -1.7
baz=117
H24K **Noodor Dome** 61.27 338 P P 06 38 52.7 -2.2
baz=118
F25K **Christian Rive** 61.39 340 P P 06 38 53.0 -2.7
baz=122
I23K **Minto, Yukon-K** 61.50 337 IAmb IAmb 06 38 58.9
comp=Z,12nm,0.9s
I23K **Minto, Yukon-K** 61.50 337 P P 06 38 53.4 -3.0
baz=117,SNR=7.9
G24K **Hadweenzic Riv** 61.55 339 IAmb IAmb 06 39 13.2
comp=Z,12nm,1.1s
G24K **Hweenzic Riv** 61.55 339 P P 06 38 54.1 -2.6
baz=119
E25K **Arctic Village** 61.65 341 IAmb IAmb 06 39 09.9
comp=Z,25nm,1.8s
E25K **Arctic Village** 61.65 341 P P 06 38 53.9 -3.5
baz=122
O19K **Port Alsworth** 61.66 331 P P 06 38 52.4 -5.1
baz=109
BPAW **Bear Paw Mtn.** 61.67 336 IAmb IAmb 06 38 59.7
comp=Z,12nm,1.4s
BPAW **Bear Paw Mtn.** 61.67 336 P P 06 38 52.9 -4.8
baz=114
PPLA **Purkeypile** 61.68 334 P P 06 38 53.8 -4.1
baz=113
M20K **Styx River** 61.71 333 P P 06 38 55.3 -2.7
baz=111
Q17K **Contact Creek** 61.82 328 P P 06 38 54.8 -4.0
baz=107
P18K **Big Mountain,** 61.83 330 P P 06 38 54.9 -3.9
baz=108
CAST **Castle Rocks** 61.84 335 IAmb IAmb 06 39 13.0
comp=Z,12nm,1.3s
CAST **Castle Rocks** 61.84 335 P P 06 38 54.9 -3.9
baz=113
N19K **Bonanza Creek** 61.94 331 P P 06 38 54.7 -4.9
baz=109
O18K **Koktuh Hills** 61.97 330 P P 06 38 55.8 -3.9
baz=108
MLY **Manley** 61.97 337 P P 06 38 56.6 -3.1
baz=115,SNR=7.4
F24K **Squaw Lake** 62.09 340 P P 06 38 57.8 -2.7
baz=119
CHUM **Lake Minchumin** 62.12 335 P P 06 38 56.7 -3.9
baz=113
RCBR **Riachuelo** 62.13 105 LR LR 07 07 06.9
comp=Z,242nm,21.1s,baz=290,slow=37
RCBR **Rielo** 62.13 105 eP P 06 39 01.7 +0.2
L20K **Farewell, AK** 62.25 333 P P 06 38 58.0 -3.5
baz=111
M19K **Big River Lodg** 62.27 333 P P 06 38 59.5 -2.2
baz=110
P17K **Kvichak River** 62.37 329 P P 06 38 59.8 -2.5
baz=107
C26K **Camden Bay** 62.43 343 P P 06 38 59.9 -2.6
baz=123
G23K **Bananza Creek** 62.45 338 P P 06 38 59.7 -3.1
baz=117
I21K **Tanana** 62.51 336 P P 06 39 01.0 -2.2
baz=114
D25K **Kavik River** 62.53 342 P P 06 39 01.1 -2.3
baz=122
N18K **Kilae Creek** 62.55 331 P P 06 39 01.0 -2.6
baz=108
E24K **Your Creek** 62.57 340 IAmb IAmb 06 39 06.5
comp=Z,16nm,1.6s
E24K **Your Creek** 62.57 340 P P 06 39 01.3 -2.3
baz=119
L19K **White Mountain** 62.57 333 P P 06 39 04.6 +0.9
baz=110
H22K **Ishtalitna Cre** 62.58 337 P P 06 39 01.5 -2.2
baz=115
CHGN **Chignik** 62.63 326 P P 06 39 04.3 +0.2
baz=103
K20K **Telida** 62.65 334 P P 06 39 04.2 +0.1
baz=111
COLD **Coldfoot** 62.75 339 P P 06 39 05.1 +0.3
baz=117
M18K **Stony River** 62.78 332 P P 06 39 04.9 -0.1
baz=108
O17K **Koliganek Bris** 62.85 330 P P 06 39 05.2 -0.4
baz=106
E23K **Chandalar** 62.93 340 P P 06 39 06.3 +0.2
baz=118
CHNA **Chernabura Isl** 62.95 324 P P 06 39 05.4 -0.9
baz=102
J20K **Nowinta River** 62.98 335 P P 06 39 06.4 +0.1
baz=111
GUA01 **Guaratinga, BA** 63.00 118 eP P 06 39 07.4 +0.2
H21K **Melozitna Rive** 63.02 337 P P 06 39 05.1 -1.5
baz=113
G22K **Bettles** 63.07 338 P P 06 39 07.0 +0.1
baz=115
N17K **Nushagak Hills** 63.12 331 P P 06 39 06.0 -1.3
baz=107
PPT **Papeete** 63.12 241 LR LR 06 58 52.9
comp=Z,175nm,20.4s,baz=34,slow=28
TOLK **Toolik Lake Re** 63.19 340 P P 06 39 04.6 -3.1
baz=118
D24K **Happy Valley** 63.20 341 IAmb IAmb 06 39 26.6
comp=Z,18nm,1.4s
D24K **Happy Valley** 63.20 341 P P 06 39 05.9 -1.8
baz=119
S14K **Fog Glacier** 63.24 326 P P 06 39 06.9 -1.4
baz=102
O16K **Kokwok River B** 63.29 329 P P 06 39 07.6 -0.9
baz=105
TTA **Tatalina** 63.33 333 P P 06 39 07.3 -1.4
baz=109
I20K **Naaghedeneel** 63.34 336 P P 06 39 07.0 -1.7
baz=111
C24K **Franklin Bluff** 63.44 342 P P 06 39 08.4 -0.9
baz=119
J19K **Poorman** 63.52 335 IAmb IAmb 06 39 16.4
comp=Z,11nm,1.0s
J19K **Poorman** 63.52 335 P P 06 39 08.2 -1.8
baz=110,SNR=5.7
D23K **Nanushuk River** 63.70 341 P P 06 39 07.9 -3.1
baz=117
E22K **Anaktuvuk Pass** 63.70 340 IAmb IAmb 06 39 16.2
comp=Z,10nm,1.2s
E22K **Anaktuvuk Pass** 63.70 340 P P 06 39 08.8 -2.3
baz=116
H20K **Anotleneega Mo** 63.76 336 P P 06 39 07.5 -4.0
baz=111
RIB01 **Linhares ES** 63.79 121 eP P 06 39 12.6 +0.2
J18K **Innoko River** 63.80 334 P P 06 39 09.2 -2.7
baz=108
N16K **Nishlik Lake** 63.85 330 P P 06 39 10.8 -1.4
baz=105
F21K **Alatna River** 63.90 338 P P 06 39 11.4 -1.0
baz=113,SNR=11
D22K **Ayikyak River** 64.31 340 IAmb IAmb 06 39 32.3
comp=Z,9.9nm,0.9s
D22K **Ayikyak River** 64.31 340 P P 06 39 13.7 -1.4
baz=115,SNR=7.8
H19K **Roundabout Mou** 64.38 336 P P 06 39 12.5 -3.0
baz=110
N15K **Kwethluk River** 64.41 330 P P 06 39 14.1 -1.8
baz=104
E21K **Killik River** 64.56 339 P P 06 39 10.6 -6.2
baz=114
ABR01 **Abrolhos, BA** 64.57 119 eP P 06 39 18.0 +0.5
M15K **Kasigluk River** 64.83 330 P P 06 39 14.2 -4.3
baz=103
G19K **Purcell Mounta** 64.83 337 P P 06 39 16.3 -2.2
baz=109
H18K **Honhosa River** 65.02 335 P P 06 39 15.8 -4.0
baz=108
C21K **Knifeblade Rid** 65.12 340 P P 06 39 18.0 -2.3
baz=113
FALS **False Pass** 65.14 324 P P 06 39 15.0 -5.6
baz=98
B21K **Ikpikpuk River** 65.25 341 IAmb IAmb 06 39 23.4
comp=Z,8.3nm,1.0s
B21K **Ikpikpuk River** 65.25 341 P P 06 39 18.0 -3.1
baz=113
E20K **Nigu River** 65.25 339 P P 06 39 18.9 -2.3
baz=111
F19K **Shaleruckik Mo** 65.33 337 P P 06 39 18.6 -3.1
baz=109
E19K **Redstone River** 65.34 338 P P 06 39 20.8 -1.0
baz=110
D20K **Etivluk River** 65.56 339 P P 06 39 20.1 -3.2
baz=111
L14K **Kuka Creek** 65.92 331 P P 06 39 25.1 -0.5
baz=102
F18K **Selawik** 65.96 337 P P 06 39 26.9 +1.1
baz=107
D19K **Kuna River** 66.00 339 P P 06 39 27.1 +1.0
baz=109
G17K **Kiwalik Mounta** 66.04 335 P P 06 39 25.8 -0.5
baz=106
B20K **Meade River** 66.21 341 P P 06 39 24.2 -3.1
baz=111
H16K **Elim** 66.47 334 P P 06 39 26.4 -2.7
baz=104
A21K **Barrow** 66.53 342 P P 06 39 27.9 -1.4
baz=112
E18K **Tukpahlearik C** 66.56 337 P P 06 39 28.2 -1.4
baz=106
E17K **Hotham Inlet** 66.92 337 P P 06 39 29.2 -2.7
baz=105
A19K **Wainwright** 67.54 340 P P 06 39 34.8 -1.0
baz=107
F15K **North Star Dit** 67.70 335 P P 06 39 37.9 +1.0
baz=102
C17K **DeLong Mountai** 67.78 338 P P 06 39 38.4 +1.0
baz=104
BORG **Borgarnes** 69.10 26 LR LR 07 10 19.3
comp=Z,299nm,18.5s,baz=262,slow=36
GAMB **Gambell** 70.41 333 P P 06 39 53.5 -0.2
baz=95
RAR **Rarotonga** 73.36 242 LR LR 07 04 04.1
comp=Z,133nm,18.4s,baz=104,slow=29
BBTS **Babate** 75.22 79 LR LR 07 09 30.2
comp=Z,195nm,20.2s,baz=146,slow=33
PVIS **Viseu** 77.83 51 eP P 06 40 37.6 0.0
MVO **Moncorvo** 78.40 50 eP P 06 40 40.3 -0.5
EKA **Eskdalemuir Ar** 78.40 36 P P 06 40 39.6 -0.7
comp=Z,2.7nm,0.5s,baz=284,slow=5.4,SNR=21
comp=Z,2.7nm,0.5s
SPITS **Spitsbergen Ar** 79.19 11 P P 06 40 44.7 +0.4
comp=Z,2.5nm,0.6s,baz=298,slow=1.8,SNR=6.1
SPITS LR LR 07 20 36.4
comp=Z,279nm,18.4s,baz=248,slow=39
comp=Z,2.5nm,0.6s
PAB **San Pablo** 80.72 52 P P 06 40 53.3 -0.1
ESDC **Sonseca Array** 80.99 51 P P 06 40 54.1 -0.8
comp=Z,4.5nm,0.8s,baz=289,slow=5.3,SNR=22
ESDC LR LR 07 12 43.6
comp=Z,244nm,19.1s,baz=274,slow=33
comp=Z,4.5nm,0.8s
MDT **Midelt** 82.00 58 LR LR 07 13 08.5
comp=Z,129nm,20.1s,baz=321,slow=33
PMSA **Palmer Station** 83.39 167 LR LR 07 13 07.4
comp=Z,131nm,18.1s,baz=316,slow=32
NB2 **NORSAR Subarra** 84.17 28 P P 06 41 11.4 +0.5
comp=Z,8.4nm,0.9s,baz=294,slow=5.1
NOA **NORSAR Array B** 84.17 28 P P 06 41 11.4 +0.5
comp=Z,1.4nm,0.6s,baz=292,slow=5.0,SNR=10.0
NOA LR LR 07 17 23.8
comp=Z,209nm,21.9s,baz=280,slow=35
comp=Z,1.4nm,0.6s
DOU **Dourbes** 84.22 40 dP P 06 41 11.4 0.0
BMRD **Maredsous** 84.27 39 dP P 06 41 13.0 +1.4
BGES **Gesves** 84.44 39 dP P 06 41 12.3 -0.2
comp=Z,7.3nm,0.7s
BCLA **Clavier** 84.56 39 dP P 06 41 12.8 -0.3
MEM **Membach** 84.93 39 dP P 06 41 14.8 -0.1
ARCES **ARCESS Array B** 85.60 18 P P 06 41 17.0 -1.0
comp=Z,2.6nm,0.7s,baz=267,slow=4.9,SNR=11
ARCES LR LR 07 21 16.3

comp=Z,200nm,18.2s,baz=294,slow=37
comp=Z,2.6nm,0.7s
HFS Hagfors 85.65 28 LR LR 07 18 06.1
comp=Z,220nm,21.9s,baz=276,slow=35
SENIN Lac Senin/Sane 87.11 43 P P 06 41 27.6 +1.5
TIC Toumodi 88.12 84⇑*i*PKP2 P 06 41 32.2 +0.9
comp=Z,3.0nm,0.3s
TIXI Tiksi 88.22 347 LR LR 07 24 41.1
comp=Z,106nm,21.5s,baz=32,slow=38
LIC Lamto 88.23 84⇑*i*PKP2 P 06 41 31.0 -0.8
comp=Z,14nm,0.7s
DBIC Dimbokro 88.28 84 P P 06 41 31.6 -0.4
comp=Z,2.7nm,0.5s,baz=272,slow=6.2,SNR=8.0
DBIC LR LR 07 15 32.9
comp=Z,85nm,20.0s,baz=282,slow=32
comp=Z,2.7nm,0.5s
KIC Kosan Boka 88.47 84⇑*i*PKP2 P 06 41 32.2 -0.7
comp=Z,4.9nm,0.5s
DAVOX Davos/Dischmat 88.64 42 LR LR 07 16 10.6
comp=Z,177nm,21.4s,baz=266,slow=32
FUORN Ofenpass-Fuorn 88.94 42 P P 06 41 35.6 +0.7
FUORN IAmb IAmb 06 41 45.2
comp=Z,10nm,1.4s
GERES GERESS Array B 90.22 39 P P 06 41 40.6 -0.1
comp=Z,1.0nm,0.7s,baz=347,slow=5.5,SNR=3.7
GERES LR LR 07 24 55.6
comp=Z,140nm,18.3s,baz=298,slow=38
comp=Z,1.0nm,0.7s
FINES FINESS Array B 90.33 24 P P 06 41 39.5 -1.2
comp=Z,0.7nm,0.6s,baz=338,slow=4.5,SNR=3.8
FINES LR LR 07 24 12.7
comp=Z,107nm,19.1s,baz=302,slow=37
comp=Z,0.7nm,0.6s
VRAC Vranov 91.75 38 LR LR 07 21 04.9
comp=Z,118nm,21.1s,baz=306,slow=34
KEST Kesra 92.22 52 P P 06 41 51.0 +0.9
comp=Z,2.1nm,0.7s,baz=237,slow=22,SNR=1.7
KEST LR LR 07 17 35.7
comp=Z,166nm,22.0s,baz=212,slow=32
comp=Z,2.1nm,0.7s
TORD Torodi Ar. Bea 92.73 76 LR LR 07 21 24.5
comp=Z,182nm,18.9s,baz=319,slow=34
YAK Yakutsk 95.16 341 LR LR 07 30 06.8
comp=Z,100nm,18.6s,baz=80,slow=39
VAE Valguarnera 95.32 49 LR LR 07 21 08.4
comp=Z,368nm,20.3s,baz=340,slow=33
NRIK Noril'sk 95.39 359 LR LR 07 31 54.6
comp=Z,121nm,18.4s,baz=323,slow=40
URZ Urewera 97.88 233 LR LR 07 16 51.7
comp=Z,147nm,20.6s,baz=121,slow=29
AKASG Malin Array Be 98.00 32 LR LR 07 26 30.2
comp=Z,114nm,20.2s,baz=304,slow=33
OBN Obninsk 98.61 26 LR LR 07 26 28.3
comp=Z,179nm,21.9s,baz=356,slow=35
MDJ Mudanjiang 107.80 328 Pdif Pdif 06 42 59.6 -0.3
MDJ PP PP 06 47 31.3 +3.5
MDJ Mudanjiang 107.80 328 SS SS 07 02 35.6 -1.7
MDJ AMB AMB
comp=Z,150nm,10.3s
KURBB Kurchatov Arra 113.93 5 PKiKP PKiKP 06 47 16.6 -2.2
comp=Z,0.6nm,0.8s,baz=355,slow=2.1,SNR=5.9
HHC Hu-ho-hao-te 118.82 337 *e*P PKiKP 06 47 30.3 +1.6
WMQ Urumqi 120.94 358 *e*P PKiKP 06 47 33.6 +0.9
WMQ LR LR
comp=Z,120nm,17.1s
NJ2 Nanjing 122.73 326 *e*P PKPdf 06 47 36.0 -0.2
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
BOSA Boshof 123.51 114 PKP PKPdf 06 47 37.2 -0.7
comp=Z,1.0nm,0.5s,baz=326,slow=0.7,SNR=4.5
STKA Stephens Creek 126.33 242 PKP PKPdf 06 47 43.1 +0.1
comp=Z,1.0nm,0.6s,baz=64,slow=2.4,SNR=5.1
WRA Warramunga Arr 133.03 257 PKP PKPdf 06 47 55.9 -0.3
comp=Z,1.0nm,0.6s,baz=85,slow=2.1,SNR=11
ASAR Alice Springs 133.50 252 PKP PKPdf 06 47 56.8 -0.2
comp=Z,0.6nm,0.6s,baz=93,slow=2.0,SNR=5.4
PZH PanZhiHua 135.25 339 PKP PKPdf 06 47 59.3 -1.0
CMAR Chiang Mai Arr 143.63 338 PKhKP PKPpre 06 48 12.0
comp=Z,1.3nm,0.4s,baz=350,slow=4.2,SNR=7.0

IDC 20 06:30:29.0±2.9, 54°.35N×86°.75E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=23.0km s-min=14.7km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.20	251	I	I	06 38 10.0	
	baz=71,slow=342,SNR=4.5						
ZALV	Zalesovo Beam	1.20	251	Pg	Pg	06 30 50.5	-1.5
	0.9nm,0.3s,baz=72,slow=16,SNR=12						
ZALV				Lg	Lg	06 31 08.9	
	1.3nm,0.3s,baz=68,slow=29,SNR=12						
KURBB	Kurchatov Arra	6.25	237	Pn	Pn	06 32 03.4	+1.0
	0.1nm,0.3s,baz=52,slow=14,SNR=7.4						
KURBB				Sn	Sn	06 33 13.3	-1.2
	baz=52,slow=18,SNR=1.0						
KURBB				Lg	Lg	06 33 45.5	
	baz=53,slow=35,SNR=2.3						
	0.4nm,0.4s						
MKAR	Makanchi Array	8.07	202	Pn	Pn	06 32 28.7	+1.2
	0.1nm,0.3s,baz=26,slow=14,SNR=5.7						
MKAR				Sn	Sn	06 33 59.1	-0.4
	0.1nm,0.3s,baz=25,slow=28,SNR=2.9						
MKAR				Lg	Lg	06 34 47.6	
	baz=26,slow=32,SNR=6.1						
	0.1nm,0.3s						

*IDC **20** 06:34:21.2±1.7, 6°.39S×154°.32E, h0km, mb4.1/5, mbtmp4.1/5, MS3.9/5, Error ellipse: s-maj=63.4km s-min=29.1km az=124.0*

ISC 20 06:34:28.1±1.5, 6°.5S±0°.3×154°.3E±0°.3, h48km, n11, σ0§31/6, mb3.8/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.35	118	LR	LR	06 38 41.3	
	comp=Z,2μm,18.3s,baz=251,slow=41						
PMG	Port Moresby	7.63	247	LR	LR	06 39 31.2	
	comp=Z,141nm,19.2s,baz=35,slow=40						
CTA	Charters Tower	15.63	209	LR	LR	06 44 10.9	
	comp=Z,81nm,18.7s,baz=85,slow=38						
WRA	Warramunga Arr	23.55	233	P	P	06 39 34.3	-0.1
	1.5nm,0.7s,baz=58,slow=9.6,SNR=5.4						
	1.5nm,0.7s						
ASAR	Alice Springs	26.01	227	P	P	06 39 57.1	+0.3
	14nm,0.4s,baz=58,slow=9.2,SNR=5.1						
	14nm,0.4s						
SONM	Songino Array	68.50	328	P	P	06 45 25.8	+0.2
	0.4nm,0.6s,baz=145,slow=5.3,SNR=3.6						
	0.4nm,0.6s						
MKAR	Makanchi Array	82.53	319	P	P	06 46 45.7	-0.1
	0.7nm,0.7s,baz=104,slow=5.1,SNR=8.3						
	0.7nm,0.7s						
NVAR	Mina Array Bea	91.95	52	P	P	06 47 32.2	+0.1
	1.1nm,0.9s,baz=267,slow=10,SNR=4.3						
	1.1nm,0.9s						
ARU	Arti	98.50	326	LR	LR	07 32 00.3	
	comp=Z,231nm,21.3s,baz=334,slow=35						
AKTO	Aktyubinsk	98.92	320	LR	LR	07 35 35.1	
	comp=Z,121nm,19.6s,baz=264,slow=37						
TORD	Torodi Ar. Bea	152.19	286	PKPbc	PKPbc	06 54 19.2	-0.4
	1.6nm,0.4s,baz=53,slow=4.6,SNR=3.6						

*IDC **20** 06:44:46.9±5.8, 13°.76S×166°.82E, h129km±52km, mb3.8/5, mbtmp4.1/7, Error ellipse: s-maj=42.1km s-min=36.7km az=149.0*

ISC 20 06:44:49.0±1.6, 14°.0S±0°.1×166°.8E±0°.2, h150km, n8, σ1§41/9, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.09	182	P	Pn	06 46 44.4	+0.7
	3.1nm,0.8s,baz=241,slow=18,SNR=1.6						
DZM				S	Sn	06 48 12.3	-1.5
	3.3nm,0.8s,baz=309,slow=21,SNR=1.5						
PMG	Port Moresby	19.76	281	P	P	06 49 05.7	-1.9
	7.3nm,0.5s,baz=100,slow=6.1,SNR=3.0						
STKA	Stephens Creek	29.17	228	P	P	06 50 37.5	+1.2
	4.7nm,0.4s,baz=55,slow=9.0,SNR=18						
	4.7nm,0.4s						
WRA	Warramunga Arr	31.59	255	P	P	06 50 57.9	+0.2
	1.5nm,0.6s,baz=85,slow=9.2,SNR=12						
	1.5nm,0.6s						
ASAR	Alice Springs	32.54	248	P	P	06 51 06.7	+0.6
	1.6nm,0.5s,baz=77,slow=9.3,SNR=43						
	1.6nm,0.5s						
SONM	Songino Array	81.60	324	P	P	06 56 51.0	+0.6
	0.2nm,0.5s,baz=118,slow=5.5,SNR=2.1						
	0.2nm,0.5s						
MKAR	Makanchi Array	96.33	317	P	P	06 58 00.9	+0.2
	0.4nm,0.6s,baz=93,slow=6.6,SNR=5.4						
	0.4nm,0.6s						
ARCES	ARCESS Array B	119.39	345	PKP	PKiKP	07 03 18.3	-1.8
	2.3nm,1.1s,baz=29,slow=2.8,SNR=5.7						

IDC 20 06:45:26.7±3.4, 53°.74N×88°.04E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=29.1km s-min=18.5km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.92	278	I	I	06 58 00.0	
	0.2nm,0.8s,baz=93,slow=338,SNR=12						
ZALV	Zalesovo Beam	1.92	278	Pg	Pn	06 46 00.6	0.0
	0.8nm,0.3s,baz=91,slow=14,SNR=23						
ZALV				Lg	Lg	06 46 28.0	
	2.5nm,0.3s,baz=99,slow=22,SNR=18						
KURBB	Kurchatov Arra	6.63	246	Pn	Pn	06 47 06.2	+0.9
	0.1nm,0.3s,baz=65,slow=15,SNR=4.3						
KURBB				Lg	Lg	06 48 56.3	
	baz=59,slow=31,SNR=5.8						
	0.4nm,0.4s						
MKAR	Makanchi Array	7.87	210	Pn	Pn	06 47 23.6	+1.2
	0.1nm,0.3s,baz=29,slow=14,SNR=2.7						
MKAR				Lg	Lg	06 49 35.1	
	0.1nm,0.3s,baz=29,slow=30,SNR=1.9						
	0.2nm,0.5s						

IDC 20 06:46:21.6±1.9, 2°.49S×143°.54E, h0km, mb3.3/2, mbtmp3.4/3, ML3.8/1, MS3.3/3, Error ellipse: s-maj=256.9km s-min=31.5km az=114.0, Ninigo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.54	207	P	Pn	06 50 51.7	-0.5
	0.3nm,0.3s,baz=40,slow=12,SNR=10						
	1.0nm,0.5s						
DAV	Davao City (W)	20.28	298	LR	LR	06 59 15.0	
	comp=Z,25nm,18.5s,baz=318,slow=38						
ASAR	Alice Springs	23.03	203	P	P	06 51 28.4	-0.1
	0.4nm,0.5s,baz=29,slow=12,SNR=8.0						
	0.4nm,0.5s						
DZM	Mont Dzumac	29.57	133	LR	LR	07 02 13.4	
	comp=Z,61nm,19.3s,baz=266,slow=32						
PETK	Petropavlovsk-	56.66	10	LR	LR	07 15 42.1	
	comp=Z,61nm,22.0s,baz=63,slow=31						
ILAR	Eielson Array	83.66	24	P	P	06 58 51.6	-0.3
	0.4nm,0.9s,baz=238,slow=5.2,SNR=2.9						
	0.4nm,0.9s						

DJA 20 06:59:39.0±0.4, 9°.5±6°×11°.6E±°, h82km±6km, M3.7/11, mb4.0/3, MLv3.6/11, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.55	290	P	Pn	06 59 53.9	+0.5
DNP	Denpasar	0.56	306	P	Pn	06 59 54.6	+1.1
DNP				S	Sn	07 00 07.8	+3.6
SRBI	Singaraja	1.02	334	P	Pn	06 59 58.6	+0.1
SRBI				S	Sn	07 00 13.4	+0.4
TWSI	Taliwang, Sumb	1.23	77	P	Pn	07 00 00.6	-0.3
TWSI				S	Sn	07 00 18.0	+0.6
JAGI	Jajag, Banyuwa	1.59	290	P	Pn	07 00 05.7	+0.1
JAGI				S	Sn	07 00 25.8	0.0
ABJI	Asem Bagus	1.86	310	P	Pn	07 00 09.4	+0.2
ABJI				S	Sn	07 00 32.5	+0.4
PLAI	Plampang	2.09	85	P	Pn	07 00 12.5	+0.3
GMJI	Gumukmas	2.32	288	P	Pn	07 00 15.4	+0.2
BLJI	Banyuglugur	2.41	301	P	Pn	07 00 16.1	-0.3
BLJI				S	Sn	07 00 45.5	+0.4
PWJI	Pagerwojo	3.95	284	P	Pn	07 00 38.1	+0.8
UGM	Wanagama	5.21	282	P	Pn	07 00 55.0	+0.5
	65nm,1.3s,0.4nm						
EDFI	Ende, Flores	5.96	88	P	Pn	07 01 04.8	+0.1
	4.5nm,0.9s,0.1nm						

*IDC **20** 07:00:11.4±0.7, 45°.68N×38°.41E, h0km, mb3.3/5, mbtmp3.4/11, ML3.2/6, Error ellipse: s-maj=12.8km s-min=7.4km az=35.0*
*MOS **20** 07:00:18.6, 45°.40N×38°.67E, h10km, MPVA4.0, FELT I=III-IV MSK at Primorsko-Akhtarsk*
*CFUSG **20** 07:00:18.6, 46°.05N×38°.43E, h7km, Krasnodar region Magtype MSH 2.6 from 1 stations*

ISC 20 07:00:14.5±1.2, 45°.80N±0°.04×38°.52E±0°.02, h26km±11km, n72, σ2§29/118, mb3.2/4, 3C-1D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGUR	Krasnodar	0.86	155	P	Pn	07 00 33.2	+2.4
KGUR				SG	Sn	07 00 48.7	+6.2
SPGR	Shapsug	1.10	197	*e*Pg	Pb	07 00 34.4	-0.5
SPGR				*e*Sg	Sb	07 00 43.9	-4.9
SPGR	Shapsug	1.10	197	P	Pb	07 00 34.8	-0.1
SPGR				SG	Sn	07 00 52.9	+4.4
ANN	Anapa	1.26	218	*i* Pg	Pb	07 00 36.9	-0.7
ANN				*e*Sg	Sb	07 00 55.2	+1.9
ANN	Anapa	1.26	218	*e*P	Pb	07 00 36.8	-0.7
ANN				*e*		07 00 57.0	
ANN				pmax	pmax		
	comp=Z,124nm,0.2s						
ANN				smax	smax		
	comp=E,1μm,0.6s						
GELR	Gelenjik	1.27	197	*i* Pg	Pb	07 00 38.2	+0.4
GELR				*e*Sg	Sn	07 00 52.5	-0.3
GELR	Gelenjik	1.27	197	*d* iP	Pb	07 00 38.2	+0.4
GELR				*i* S	Sb	07 00 57.9	+4.2
GELR				pmax	pmax		
	comp=Z,130nm,0.6s						
GELR				smax	smax		
	comp=Z,2.0nm,0.6s						
ERBR	Yeremizino-Bor	1.38	93	*e*Pg	Pb	07 00 40.5	+1.0
ERBR				*e*Sg	Sb	07 01 01.9	+5.2
ERBR	Yeremizino-Bor	1.38	93	*e*P	Pb	07 00 39.7	+0.1
ERBR				*e*		07 01 01.9	
ERBR				pmax	pmax		
	comp=Z,65nm,0.3s						
ERBR				smax	smax		
	comp=E,1μm,0.3s						
GOYR	Goytkh	1.67	158	*i* Pg	Pb	07 00 44.0	-0.5
GOYR				*e*Sg	Sn	07 01 01.8	-0.7
GOYR	Goytkh	1.67	158	*i* P	Pb	07 00 44.0	-0.5
GOYR				*e*S	Sn	07 01 01.8	-0.7
LABN	Labinsk	1.94	126	*e*Pg	Pb	07 00 49.2	0.0
LABN				*e*Sg	Sn	07 01 11.2	+2.0
LABN	Labinsk	1.94	126	*e*P	Pb	07 00 49.2	0.0
LABN				*e*S	Sn	07 01 11.2	+2.0
MRNR	Maryino	1.98	160	*i* Pg	Pb	07 00 48.2	-1.7
MRNR				*e*Sg	Sn	07 01 09.3	-1.0
MRNR	Maryino	1.98	160	*i* P	Pb	07 00 48.2	-1.7
MRNR				*e*S	Sn	07 01 09.3	-1.0
GUZR	Guzeripl'	2.13	147	*e*Pg	Pn	07 00 50.1	+1.7
GUZR				*e*Sg	Sn	07 01 13.1	-0.9
GUZR	Guzeripl'	2.13	147	*e*P	Pn	07 00 50.1	+1.7
GUZR				*e*S	Sn	07 01 13.1	-0.9
FEO	Feodosiya	2.34	252	*e*Pn	Pb	07 01 00.3	+4.4
FEO				*e*Sn	Sb	07 01 29.3	+5.0
FEO	Feodosiya	2.34	252	Snm		07 01 37.6	
	comp=N,128nm,0.3s						
FEO				Snm		07 01 39.3	
	comp=E,77nm,0.3s						
FEO	Feodosiya	2.34	252	*e*P	Pb	07 01 00.3	+4.4
FEO				*e*S	Sb	07 01 29.3	+5.0
SOC	Sochi	2.37	158	*e*Pg	Pn	07 00 53.8	+2.1
SOC				*e*Sg	Sn	07 01 18.8	-1.1
SOC	Sochi	2.37	158	*e*P	Pn	07 00 53.8	+2.1
SOC				*e*S	Sn	07 01 18.8	-1.1
RPOR	Krasnaya Polya	2.44	149	*i* Pg	Pn	07 00 54.8	+2.1
RPOR				*e*Sg	Sn	07 01 20.4	-1.2
RPOR	Krasnaya Polya	2.44	149	*i* P	Pn	07 00 54.8	+2.1
RPOR				*e*S	Sn	07 01 20.4	-1.2
VSLR	Vesyoloye	2.58	155	*e*Pg	Pn	07 00 56.0	+1.5
VSLR				*e*Sg	Sn	07 01 23.1	-1.8
VSLR	Vesyoloye	2.58	155	*ce*P	Pn	07 00 56.3	+1.8
VSLR				*e*S	Sb	07 01 30.6	-0.5
VSLR				pmax	pmax		
	comp=Z,20nm,0.5s						
VSLR				smax	smax		
	comp=Z,76nm,0.5s						
SUDU	Sudak	2.64	251	*e*Pn	Pb	07 01 02.6	+1.5
SUDU				*e*Sn	Sb	07 01 34.7	+1.6
SUDU	Sudak	2.64	251	*e*Pn	Pb	07 01 02.6	+1.5
SUDU				Pnm		07 01 04.2	
	comp=Z,26nm,0.2s						
SUDU				*e*Sn	Sb	07 01 34.7	+1.6
SUDU				Snm		07 01 37.8	
	comp=N,93nm,0.3s						
SUDU				Snm		07 01 38.5	
	comp=E,55nm,0.4s						
SUDU	Sudak	2.64	251	*e*P	Pb	07 01 02.6	+1.5
SUDU				*e*S	Sb	07 01 34.7	+1.6
ARXR	Arkhyz	2.98	138	*e*Pn	Pn	07 01 02.9	+2.8
ARXR				*e*Sn	Sn	07 01 33.7	-1.4
ARXR	Arkhyz	2.98	138	*e*P	Pn	07 01 02.9	+2.8
ARXR				*e*S	Sn	07 01 33.7	-1.4
ALU	Alushta	3.11	250	*e*Pn	Pb	07 01 12.0	+2.9
ALU				*e*Sn	Sb	07 01 46.7	+0.1
ALU	Alushta	3.11	250	*e*Sn	Sb	07 01 46.7	+0.1
ALU				Snm		07 01 51.4	
	comp=N,36nm,0.3s						
ALU				Snm		07 01 51.7	
	comp=E,19nm,0.5s						
ALU	Alushta	3.11	250	*e*P	Pb	07 01 12.0	+2.9
ALU				*e*S	Sb	07 01 46.7	+0.1
SIM	Simferopol'	3.22	256	*e*Pn	Pb	07 01 11.0	+0.1
SIM				*e*Sn	Sb	07 01 51.9	+2.3
SIM	Simferopol'	3.22	256	*e*Sn	Sb	07 01 51.9	+2.3
SIM				Snm		07 01 59.7	
	comp=N,57nm,0.2s						
SIM				Snm		07 02 00.4	
	comp=E,69nm,0.3s						
SIM	Simferopol'	3.22	256	*e*P	Pb	07 01 11.0	+0.1
SIM				*e*S	Sb	07 01 51.9	+2.3
GOF	Gofitskoye	3.27	101	*e*Pn	Pb	07 01 08.1	-3.7
GOF				*i* Sn	Sn	07 01 45.7	+3.6
GOF	Gofitskoye	3.27	101	*e*P	Pb	07 01 08.1	-3.7
GOF				*i* S	Sn	07 01 45.7	+3.6
YAL	Yalta	3.35	249	*e*Pn	Pb	07 01 12.2	-1.0
YAL				Pnm		07 01 13.9	
	comp=Z,7.0nm,0.2s						
YAL	Yalta	3.35	249	*e*P	Pb	07 01 12.2	-1.0
KIV	Kislovodsk	3.49	120	*i* Pn	Pn	07 01 08.6	+1.5
KIV				*e*Sn	Sn	07 01 50.3	+2.7
KIV	Kislovodsk	3.49	120	*i* P	Pn	07 01 08.6	+1.5
KIV				*e*S	Sn	07 01 50.3	+2.7
KVAR	Kislovodsk Arr	3.49	120	Pn	Pn	07 01 08.4	+1.1
	baz=58,slow=24						
KVAR				Sn	Sn	07 01 50.2	+2.4
	baz=359,slow=15						
KVAR				Lg	Lg	07 02 04.9	
	baz=313,slow=20						
	comp=Z,4.6nm,0.3s						
BEYR	Belyy Ugol+	3.54	119	*i* Pn	Pn	07 01 08.1	+0.4
BEYR				*e*Sn	Sn	07 01 50.6	+1.9
BEYR	Belyy Ugol+	3.54	119	*i* P	Pn	07 01 08.1	+0.4
BEYR				*e*S	Sn	07 01 50.6	+1.9
SHA1	Shidzhatmaz	3.60	123	*i* Pn	Pn	07 01 10.1	+1.4
SHA1				*e*Sn	Sn	07 01 51.3	+0.9
SHA1	Shidzhatmaz	3.60	123	*i* P	Pn	07 01 10.1	+1.4
SHA1				*e*S	Sn	07 01 51.3	+0.9
SEV	Sevastopol'	3.65	252	*e*Pn	Pb	07 01 16.0	-2.3
SEV				Pnm		07 01 19.3	
	comp=Z,8.0nm,0.2s						
SEV	Sevastopol'	3.65	252	*e*P	Pb	07 01 16.0	-2.3
KBZ	Khabaz	3.74	122	*i* P	Pn	07 01 11.9	+1.4
KBZ				*e*S	Sn	07 01 57.2	+3.5
KBZ	Khabaz	3.74	122	Pn	Pn	07 01 11.2	+0.7
	comp=Z,1.9nm,0.3s,baz=271,slow=6.4,SNR=70						
KBZ				Pg	Pb	07 01 19.2	-0.6
	comp=Z,3.4nm,0.3s,baz=290,slow=5.3,SNR=13						
KBZ				Sn	Sn	07 01 54.7	+1.1
	comp=Z,4.9nm,0.3s,baz=318,slow=16,SNR=3.9						
KBZ				Lg	Lg	07 02 10.5	
	comp=Z,4.9nm,0.3s,baz=60,slow=12,SNR=3.6						
	comp=Z,5.8nm,0.2s						
KBTC	Kuba-Taba	4.00	118	*e*Pn	Pn	07 01 15.9	+1.7
KBTC				*e*Sn	Sn	07 02 03.6	+3.4
KBTC	Kuba-Taba	4.00	118	*e*P	Pn	07 01 15.9	+1.7
KBTC				*e*S	Sn	07 02 03.6	+3.4
ZEI	Tsey	4.90	126	*e*P	Pb	07 01 37.4	-2.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VORD	Divnogorie	5.20	5	*e*P	Pn	07 01 28.7	-1.7
VORD				pmax	pmax		
	comp=Z,2.0nm,0.3s						
VSR	Storozhevoye	5.44	4	*e*P	Pn	07 01 31.6	-2.2
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BR131	Keskin Array S	7.05	212	*ce*P	Pn	07 01 58.4	+2.3
BRTR	Keskin Array B	7.05	212	Pn	Pn	07 01 55.2	-0.8
	comp=Z,0.1nm,0.3s,baz=43,slow=15,SNR=1.8						
BRTR				Sn	Sn	07 03 14.3	-1.1
	comp=Z,0.2nm,0.3s,baz=40,slow=23,SNR=1.9						
	comp=Z,0.4nm,0.4s						
AKASG	Malin Array Be	7.91	312	Pn	Pn	07 02 07.2	-0.4
	comp=Z,1.6nm,0.3s,baz=121,slow=13,SNR=5.7						
AKASG				Sn	Sn	07 03 36.1	0.0
	comp=Z,3.2nm,0.3s,baz=126,slow=24,SNR=4.4						
AKASG				Lg	Lg	07 04 09.6	
	comp=Z,5.2nm,0.3s,baz=117,slow=30,SNR=4.8						
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	7.91	312⇑	*e*P	Pn	07 02 07.3	-0.3
MLR	Muntele Rosu	8.82	272	Pn	Pn	07 02 17.3	-3.0
	comp=Z,0.1nm,0.3s,baz=245,slow=22,SNR=1.3						
MLR				Sn	Sn	07 03 47.5	-11
	comp=Z,0.3nm,0.3s,baz=68,slow=16,SNR=1.1						
MLR				Lg	Lg	07 04 43.3	
	comp=Z,0.3nm,0.3s,baz=251,slow=13,SNR=1.4						
BELG	Belogornoye	8.90	39	Pn	Pn	07 02 19.1	-2.0
	comp=Z,0.6nm,0.3s,baz=48,slow=16,SNR=1.9						
BELG				Sn	Sn	07 03 53.7	-6.8
	comp=Z,0.4nm,0.3s,baz=311,slow=18,SNR=1.9						
BELG				Lg	Lg	07 04 52.9	
	comp=Z,0.8nm,0.3s,baz=46,slow=21,SNR=1.5						
AKTO	Aktyubinsk	13.82	63	Pn	Pn	07 03 25.6	-2.9
	comp=Z,0.4nm,0.3s,baz=262,slow=6.9,SNR=5.2						
AKTO				Sn	Sn	07 05 50.3	-11
	comp=Z,0.4nm,0.3s,baz=73,slow=16,SNR=2.4						
	comp=Z,0.6nm,0.3s						
FINES	FINESS Array B	17.27	340	Pn	Pn	07 04 07.5	-6.0
	comp=Z,0.2nm,0.3s,baz=149,slow=14,SNR=5.2						
	comp=Z,0.8nm,0.6s						
HFS	Hagfors	20.55	323	P	P	07 04 51.0	+0.3
HFS	Hagfors	20.55	323	P	P	07 04 51.0	+0.3
	comp=Z,1.5nm,0.6s,baz=123,slow=13,SNR=2.7						
	comp=Z,1.5nm,0.6s						
BVAR	Borovoye Array	21.82	59	P	P	07 05 06.8	+2.3
	comp=Z,0.4nm,0.4s,baz=262,slow=12,SNR=3.0						
	comp=Z,0.4nm,0.4s						
NOA	NORSAR Array B	22.07	324	P	P	07 05 07.4	+0.3
	comp=Z,0.5nm,0.7s,baz=128,slow=10,SNR=1.8						
	comp=Z,0.5nm,0.7s						
ARCES	ARCESS Array B	24.68	349	P	P	07 05 34.6	+1.8
	comp=Z,1.2nm,

GVZ	**Greta Valley S**	0.21	131	P	Pg	07 02 48.2	+1.3	
GVZ				S	Sg	07 02 52.5	+2.6	
HSES	**Hanmer Springs**	0.30	1	P	Pg	07 02 48.8	+0.1	
AMBC	**Amberley HDC**	0.33	191	P	Pg	07 02 49.7	+0.6	
AMBC				S	Sb	07 02 55.8	-0.1	
CECS	**Cheviot Emerge**	0.34	88	P	Pg	07 02 50.2	+1.0	
AMCZ	**Amberley**	0.37	199	P	Pb	07 02 51.6	+0.4	
AMCZ				S	Sb	07 02 57.8	+0.8	
LTZ	**Lake Taylor**	0.41	276	P	Pg	07 02 51.1	+0.6	
LTZ				S	Sg	07 02 57.4	+1.5	
ASHY	**Ashley**	0.47	200	P	Pg	07 02 51.9	+0.1	
ASHY				S	Sb	07 03 00.1	+0.1	
KHZ	**Kahutara**	0.67	52	P	Pg	07 02 55.8	+0.3	
KHZ	**Kahutara**	0.67	52	P	Pg	07 02 55.9	+0.4	
KHZ				S	Sb	07 03 05.7	+0.1	
OXZ	**Oxford**	0.76	229	P	Pg	07 02 58.1	+0.9	
OXZ				S	Sb	07 03 09.2	+1.0	
MQZ	**McQueen's Vall**	0.89	188	P	Pg	07 02 59.0	-0.5	
MQZ				S	Sb	07 03 12.0	+0.1	
INZ	**Inchbonnie**	1.02	275	P	Pg	07 03 02.4	+0.3	
INZ				S	Sb	07 03 17.5	+1.9	
RACZ	**Rakaia**	1.03	209	P	Pg	07 03 01.6	-0.6	
RACZ				S	Sb	07 03 16.4	+0.5	
AKCZ	**Akaroa Harbour**	1.05	176	P	Pg	07 03 01.6	-1.0	
AKCZ				S	Sb	07 03 16.3	-0.2	
THZ	**Tophouse**	1.07	3	P	Pg	07 03 02.1	-0.9	
THZ				S	Sg	07 03 18.0	+1.2	
MHCZ	**Mount Hutt**	1.16	232	P	Pb	07 03 03.5	-1.1	
MHCZ				S	Sg	07 03 20.4	+0.7	
DSZ	**Denniston Nort**	1.32	325	P	Pn	07 03 06.9	-0.1	
WACZ	**Wakanui South**	1.32	212	P	Pn	07 03 05.7	-1.3	
WACZ				S	Sg	07 03 26.4	+1.3	
BSWZ	**Blackbirch Sta**	1.36	36	P	Pn	07 03 07.2	-0.3	
BSWZ				S	Sg	07 03 27.2	+0.9	
MRNZ	**Matariki Terra**	1.43	358	P	Pn	07 03 08.3	-0.2	
CMWZ	**Cape Campbell**	1.49	44	P	Pg	07 03 13.3	+2.1	
WVZ	**Waitaha Valley**	1.55	260	P	Pn	07 03 10.1	-0.1	
WVZ				S	Sn	07 03 30.1	-0.2	
RPZ	**Rata Peaks**	1.56	235	P	Pn	07 03 09.4	-1.0	
RPZ	**Rata Peaks**	1.56	235	P	Pn	07 03 09.4	-1.0	
TUWZ	**Tuamarina**	1.63	31	P	Pn	07 03 10.5	-0.7	
ARCZ	**Arundel**	1.64	226	P	Pn	07 03 10.2	-1.2	
NNZ	**Nelson**	1.66	15	P	Pn	07 03 12.0	+0.3	
TKNZ	**Takaka Hill**	1.80	3	P	Pn	07 03 14.2	+0.7	
GCSZ	**Gaunt Creek Bo**	1.89	254	P	Pn	07 03 15.2	+0.4	
TCW	**Tory Channel**	1.95	34	P	Pn	07 03 14.6	-1.0	
QRZ	**Quartz Range**	2.01	354	P	Pn	07 03 17.2	+0.7	
QRZ	**Quartz Range**	2.01	354	P	Pn	07 03 16.5	0.0	
TMZ	**Timaru**	2.04	220	P	Pn	07 03 15.5	-1.4	
SNZO	**South Karori**	2.07	43	P	Pn	07 03 16.1	-1.1	
DUWZ	**D'Urville Isla**	2.19	23	P	Pn	07 03 19.2	+0.3	
FOZ	**Fox Glacier**	2.31	251	P	Pn	07 03 20.7	+0.2	
CAW	**Cannon Point**	2.40	45	P	Pn	07 03 20.3	-1.5	
PAWZ	**Paruwai Farm**	2.42	54	P	Pn	07 03 19.9	-2.3	
LBZ	**Lake Benmore**	2.47	230	P	Pn	07 03 21.8	-1.0	
OGWZ	**Otaki Gorge**	2.67	42	P	Pn	07 03 24.0	-1.5	
ODZ	**Otahua Downs**	2.72	215	P	Pn	07 03 24.8	-1.4	
ODZ	**Otahua Downs**	2.72	215	P	Pn	07 03 24.7	-1.4	
MRZ	**Mangatainoka R**	2.99	45	P	Pn	07 03 27.9	-2.1	
BFZ	**Birch Farm**	3.34	51	P	Pn	07 03 33.6	-1.2	
BFZ	**Birch Farm**	3.34	51	P	Pn	07 03 33.0	-1.8	
WKZ	**Wanaka**	3.40	233	P	Pn	07 03 34.1	-1.5	
HHSZ	**Highcliff Hill**	3.45	207	P	Pn	07 03 34.6	-1.6	
EAZ	**Earnscleugh**	3.49	225	P	Pn	07 03 35.1	-1.7	
TUZ	**Tuapeka**	3.87	215	P	Pn	07 03 40.6	-1.4	
MLZ	**Mavora Lakes**	4.23	232	P	Pn	07 03 45.3	-1.8	
SYZ	**Scrubby Hill**	4.54	214	P	Pn	07 03 50.0	-1.3	
SYZ	**Scrubby Hill**	4.54	214	P	Pn	07 03 49.9	-1.3	
HIZ	**Hauiti**	4.58	20	P	Pn	07 03 51.9	+0.1	
HIZ	**Hauiti**	4.58	20	P	Pn	07 03 52.0	+0.2	

IDC 20 07:07:05.1±3.4, **54°12N×87°48E, h0**km, **mbtmp2.8**/2, **ML2.5**/2, **Error ellipse: s-maj=27.1km s-min=17.2km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.58**	**265**	I		I	07 16 00.0	
	0.2nm,0.7s,baz=83,slow=342,SNR=5.5							
ZALV	**Zalesovo Beam**	**1.58**	**265**	Pg		Pn	07 07 31.8	-2.5
	2.3nm,0.3s,baz=80,slow=16,SNR=12							
ZALV				Lg		Lg	07 07 56.3	
	1.4nm,0.3s,baz=85,slow=16,SNR=4.7							
KURBB	**Kurchatov Arra**	**6.50**	**241**	Pn		Pn	07 08 42.7	+0.7
	0.1nm,0.3s,baz=55,slow=14,SNR=4.1							
KURBB				Lg		Lg	07 10 32.3	
	0.1nm,0.3s,baz=60,slow=33,SNR=5.5							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**8.05**	**206**	Pn		Pn	07 09 05.0	+1.8
	0.1nm,0.3s,baz=26,slow=14,SNR=2.4							
MKAR				Sn		Sn	07 10 34.2	-0.6
	baz=30,slow=22,SNR=1.4							
MKAR				Lg		Lg	07 11 18.7	
	baz=21,slow=37,SNR=3.1							
	0.1nm,0.4s							

*IDC **20** 07:08:00.5±1.0, 16°47S×69°61W, h167km±7km, mb3.9/14, mbtmp4.5/19, Error ellipse: s-maj=14.5km s-min=10.6km az=55.0*

*VAO **20** 07:08:00.8±0.3, 16°59S×69°68W, h147km, mb5.0*

*GUC **20** 07:08:01.8±0.5, 16°97S×70°18W, h202km±3km, ML4.8*

*NEIC **20** 07:08:01.1±2.3, 16°58S±0°06×69°75W±0°03, h175km±6km, mb4.7/38, Error ellipse: s-maj=8.6km s-min=2.3km az=199.0*

ISC 20 07:08:02.1±0.3, **16°61S**±0°05×**69°71W**±0°06, **h189**km, **n183**, σ1§**46**/185, **mb4.6**/24, **7C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB18	**Visviri**	**1.00**	**167**	*i* P		**Pn**	**07 08 31.5**	**+0.1**
I08BO	**LAS PENAS INFR**	**1.27**	**72**	P		**Pn**	**07 08 33.6**	**+0.2**
	baz=261,slow=14,SNR=7.9							
LPAZ	**La Paz**	**1.55**	**78**			**Pn**	**07 08 35.6**	**-0.5**
PB16	**IPOC Station P**	**1.73**	**174**			**Pn**	**07 08 37.7**	**0.0**
PB12	**IPOC Station P**	**2.08**	**196**			**Pn**	**07 08 38.7**	**-2.2**
PX02	**IPOC Station P**	**2.39**	**191**	*eP*		**Pn**	**07 08 41.4**	**-2.8**
GO01	**Chusmiza**	**3.09**	**171**	Pn		**Pn**	**07 08 52.6**	**-0.2**
GO01	**Chusmiza**	**3.09**	**171**	⇑*iP*		**Pn**	**07 08 52.5**	**-0.2**
GO01				*i* S		**Sn**	**07 09 30.7**	**-1.6**
PB11	**IPOC Station P**	**3.14**	**179**	Pn		**Pn**	**07 08 51.9**	**-1.2**
PB11	**IPOC Station P**	**3.14**	**179**	⇑*iP*		**Pn**	**07 08 51.6**	**-1.4**
PB11				*i* S		**Sn**	**07 09 29.1**	**-3.8**
PB11				IAML			07 09 31.2	
	comp=N,2μm,0.7s							
PB08	**IPOC Station P**	**3.56**	**172**			**Pn**	**07 08 58.0**	**-0.4**
TA02	**Huaiquique**	**3.67**	**186**			**Pn**	**07 08 57.9**	**-1.5**
TA01	**Diego Aracena**	**3.96**	**186**	Pn		**Pn**	**07 09 01.6**	**-1.5**
PATCX	**Punta Patache**	**4.21**	**186**			**Pn**	**07 09 04.4**	**-1.9**
PB01	**IPOC Station P**	**4.42**	**177**			**Pn**	**07 09 07.4**	**-1.6**
PB02	**IPOC Station P**	**4.69**	**182**			**Pn**	**07 09 10.6**	**-2.0**
PB07	**IPOC Station P**	**5.10**	**182**			**Pn**	**07 09 16.5**	**-1.2**
PB09	**IPOC Station P**	**5.18**	**175**			**Pn**	**07 09 18.1**	**-0.7**
PB04	**IPOC Station P**	**5.71**	**184**	Pn		**Pn**	**07 09 23.7**	**-2.0**
LVC	**Limon Verde**	**6.02**	**173**	Pn		**Pn**	**07 09 29.0**	**-0.8**
LVC	**Limon Verde**	**6.02**	**173**	P		**Pn**	**07 09 28.9**	**-1.0**
	comp=N,87nm,0.4s,baz=13,slow=9.0,SNR=247							
LVC				S		**Sn**	**07 10 32.9**	**-6.2**
	comp=N,178nm,0.3s,baz=144,slow=20,SNR=30							
LVC	**Limon Verde**	**6.02**	**173**	*eP*		**Pn**	**07 09 28.9**	**-1.0**
PB06	**IPOC Station P**	**6.07**	**179**			**Pn**	**07 09 28.4**	**-1.9**
AF01	**San Pedro de A**	**6.48**	**167**			**Pn**	**07 09 35.3**	**-0.5**
PB15	**IPOC Station P**	**6.57**	**178**			**Pn**	**07 09 35.3**	**-1.6**
ETMB	**Extrema**	**7.56**	**27**	Pn		**Pn**	**07 09 48.3**	**-1.4**
ETMB	**Extrema**	**7.56**	**27**	*eP*		**Pn**	**07 09 47.9**	**-1.8**
NNA	**Nana**	**8.39**	**303**	P		**Pn**	**07 09 57.1**	**-2.4**
	comp=N,211nm,0.5s,baz=137,slow=10,SNR=91							
NNA				S		Sn	07 11 23.9	-8.7
	comp=N,65nm,0.5s,baz=42,slow=21,SNR=5.4							
SIV	**San Ignacio**	**8.32**	**87**	P		**Pn**	**07 09 57.3**	**-2.4**
	comp=N,26nm,0.6s,baz=272,slow=9.9,SNR=136							
SIV				S		Sn	07 11 16.4	-17
	comp=N,15nm,0.6s,baz=284,slow=19,SNR=1.4							
BBSD	**Serra de San D**	**8.73**	**95**	*eP*		**Pn**	**07 10 03.0**	**-2.1**
CZSB	**Cruzeiro do Su**	**9.29**	**341**			**Pn**	**07 10 09.5**	**-2.9**
CZSB	**Cruzeiro do Su**	**9.29**	**341**	*eP*		**Pn**	**07 10 09.8**	**-2.6**
AC01	**Pan de Azucar**	**9.53**	**185**			**Pn**	**07 10 12.6**	**-2.9**
BBRB	**Robore, Bolivi**	**9.60**	**101**	*eP*		**Pn**	**07 10 12.8**	**-3.5**
VILB	**Vilhena**	**9.89**	**70**			**Pn**	**07 10 18.6**	**-1.6**
VILB	**Vilhena**	**9.89**	**70**	*eP*		**Pn**	**07 10 17.9**	**-2.2**
SAML	**Samuel**	**9.92**	**41**			**Pn**	**07 10 17.9**	**-2.7**
SAML	**Samuel**	**9.92**	**41**	*eP*		**Pn**	**07 10 17.9**	**-2.7**
AC02	**Maricunga**	**10.20**	**177**			**Pn**	**07 10 22.5**	**-2.0**
PTLB	**Pontes e Lacer**	**10.23**	**85**			**Pn**	**07 10 22.2**	**-2.4**
PTLB	**Pontes e Lacer**	**10.23**	**85**	*eP*		**Pn**	**07 10 22.0**	**-2.6**
GO03	**Copiap**	**10.95**	**182**	Pn		**Pn**	**07 10 31.3**	**-2.6**
AC05	**El Transito**	**12.19**	**182**	Pn		**Pn**	**07 10 47.8**	**-2.0**
TBTG	**Tabatinga, AM**	**12.34**	**359**	*eP*		**Pn**	**07 10 50.9**	**-0.9**
LCO	**Las Campanas**	**12.38**	**184**	Pn		**Pn**	**07 10 49.9**	**-2.5**
MURT	**Porto Murtinho**	**12.49**	**116**	*eP*		**Pn**	**07 10 52.1**	**-1.5**
ATAH	**Atahualpa**	**12.68**	**317**	P		**Pn**	**07 10 54.6**	**-1.8**
	comp=N,22nm,1.0s,baz=145,slow=11,SNR=15							
BDQN	**Bodoquena, MS**	**12.87**	**109**	*eP*		**Pn**	**07 10 56.6**	**-1.9**
TICA	**Tres Isletas**	**13.04**	**140**	*eP*		**Pn**	**07 10 59.9**	**-0.6**
CO05	**La Serena**	**13.33**	**186**	Pn		**Pn**	**07 11 02.2**	**-1.9**
ESFA	**Espinillo Form**	**13.38**	**130**	*eP*		**Pn**	**07 11 04.5**	**-0.2**
SALV	**Santo Antonio**	**13.48**	**89**	*eP*		**Pn**	**07 11 04.5**	**-1.5**
PDRB	**Porto dos Gac**	**13.53**	**70**	*eP*		**Pn**	**07 11 04.5**	**-2.2**
VACA	**Villa Angela C**	**13.78**	**144**	*eP*		**Pn**	**07 11 09.5**	**-0.3**
AQDB	**Aquidauana**	**13.83**	**108**	Pn		**Pn**	**07 11 10.0**	**-0.4**
AQDB	**Aquidauana**	**13.83**	**108**	*eP*		**Pn**	**07 11 11.1**	**+0.6**
TEFE	**Tefe**	**13.94**	**22**	*eP*		**Pn**	**07 11 13.3**	**-0.5**
ANTJ	**Antonio Joao (**	**14.00**	**115**	*eP*		**Pn**	**07 11 13.1**	**+0.5**
CLDB	**Colider**	**14.66**	**69**	*eP*		**P**	**07 11 21.5**	**-0.6**
CPUP	**Villa Florida**	**15.04**	**132**	P		**Pn**	**07 11 23.0**	**-2.3**
CPUP				IAmb		IAmb	07 11 28.7	
	comp=N,24nm,0.9s							
CPUP	**Villa Florida**	**15.04**	**132**	P		**Pn**	**07 11 23.6**	**-1.7**
	comp=N,16nm,0.8s,baz=305,slow=13,SNR=18							
CPUP	**Villa Florida**	**15.04**	**132**	*eP*		**Pn**	**07 11 23.6**	**-1.7**
RPRD	**Ribas do Rio P**	**15.66**	**107**	*eP*		**P**	**07 11 33.4**	**+0.2**
MCRA	**Macar, Loja**	**15.78**	**319**			**Pn**	**07 11 33.2**	**-1.3**
BOSC	**San Juan Bosco**	**15.92**	**326**	P		**P**	**07 11 33.8**	**-2.3**
BOSC				IAmb		IAmb	07 11 40.1	
	comp=Z,12nm,0.6s							
MACA	**Manacapuru-AM**	**16.04**	**35**	P		**P**	**07 11 36.8**	**-0.5**
MACA				IAmb		IAmb	07 12 06.2	
	comp=Z,30nm,0.6s							
MACA	**Manacapuru-AM**	**16.04**	**35**	*eP*		**P**	**07 11 36.8**	**-0.5**
VA03	**San Esteban**	**16.11**	**183**	P		**Pn**	**07 11 39.0**	**+0.7**
VA03				IAmb		IAmb	07 11 42.6	
	comp=Z,25nm,0.8s							
ARNL	**Arenillas**	**16.49**	**321**	P		**P**	**07 11 41.1**	**-1.2**
MCR1	**Marechal Candi**	**16.62**	**121**	*eP*		**Pn**	**07 11 45.0**	**+0.5**
MT02	**Curacav**	**16.63**	**184**	P		**Pn**	**07 11 45.2**	**+0.6**
MT02				IAmb		IAmb	07 11 46.7	
	comp=Z,25nm,0.8s							
COHC	**Cochancay**	**16.90**	**325**			**Pn**	**07 11 48.9**	**+1.0**
NPGB	**Novo Progresso**	**16.95**	**58**	*eP*		**P**	**07 11 46.2**	**-1.1**
MT13	**San Alfonso**	**17.07**	**182**			**Pn**	**07 11 51.1**	**+1.1**
MT13				IAmb		IAmb	07 11 59.0	
	comp=Z,22nm,0.9s							
MT09	**Talagante**	**17.14**	**184**	P		**Pn**	**07 11 51.6**	**+0.9**
MT09				IAmb		IAmb	07 11 59.5	
	comp=Z,24nm,0.8s							
TRCB	**Terra Rica**	**17.21**	**114**	P		**P**	**07 11 50.5**	**+0.3**
TRCB	**Terra Rica**	**17.21**	**114**	*eP*		**Pn**	**07 11 51.1**	**-0.4**
ITQB	**Itaqui**	**17.70**	**140**	Pn		**P**	**07 11 56.6**	**+1.2**
ITQB	**Itaqui**	**17.70**	**140**	*eP*		**Pn**	**07 11 56.9**	**-0.3**
BO01	**Tunca**	**17.76**	**184**	Pn		**P**	**07 11 57.4**	**+1.4**
BO01				IAmb		IAmb	07 12 04.1	
	comp=Z,17nm,0.7s							
SLOR	**San Lorenzo -**	**18.00**	**330**	Pn		**Pn**	**07 12 01.6**	**+0.3**
SLOR				IAmb		IAmb	07 12 10.9	
	comp=Z,25nm,0.7s							
FRBT	**Francisco Belt**	**18.08**	**124**	*eP*		**P**	**07 12 00.1**	**+0.4**
CRSM	**Crissiumal (Br**	**18.10**	**129**	*eP*		**P**	**07 12 00.3**	**+0.5**
PCMB	**Pacaembu**	**18.12**	**109**	*eP*		**P**	**07 12 00.6**	**+0.4**
UNIS	**Unistalda (Bra**	**18.30**	**135**	*eP*		**Pn**	**07 12 03.8**	**-0.5**
ITTB	**Itaituba**	**18.33**	**50**	*eP*		**P**	**07 12 02.5**	**0.0**
PTGB	**Pitanga**	**18.36**	**119**	*eP*		**P**	**07 12 03.4**	**+0.6**
SNDB	**Serra Nova Dou**	**18.43**	**78**	*eP*		**P**	**07 12 04.0**	**+0.5**
ITRB	**Iturama**	**18.64**	**102**	*eP*		**P**	**07 12 06.7**	**+0.8**
H03N1	**Juan Fernandez**	**18.71**	**205**	T		T	07 31 08.8	
	baz=25,slow=73,SNR=8.7							
H03N2	**Juan Fernandez**	**18.71**	**205**	T		T	07 31 17.7	
	baz=25,slow=73,SNR=9.9							
LDASE	**Londrina, Braz**	**18.72**	**114**	*eP*		**P**	**07 12 07.1**	**+0.4**
H03N3	**Juan Fernandez**	**18.72**	**205**	T		T	07 31 01.3	
	baz=25,slow=73,SNR=5.3							
OTAV	**Otavalo**	**18.83**	**332**	P		**P**	**07 12 09.2**	**+0.9**
OTAV	**Otavalo**	**18.83**	**332**	*eP*		**Pn**	**07 12 10.6**	**-0.5**
RODS	**Rosario do Sul**	**19.06**	**138**	*eP*		**P**	**07 12 11.0**	**+0.8**
ML02	**Panimavida**	**19.14**	**184**	P		**P**	**07 12 12.3**	**+1.3**
ITAB	**Concordia**	**19.41**	**126**	P		**P**	**07 12 13.9**	**-0.2**
ITAB	**Concordia**	**19.41**	**126**	*eP*		**P**	**07 12 14.7**	**+0.6**
TBOT	**Tacuaremb**	**19.55**	**143**	*eP*		**P**	**07 12 16.3**	**+0.9**
ALGR	**Alto Alegre (B**	**19.57**	**131**	*eP*		**P**	**07 12 15.7**	**-0.1**
FRTB	**Fartura**	**20.07**	**113**	*eP*		**P**	**07 12 21.4**	**+0.2**
CPSB	**Cacapava Do Su**	**20.25**	**136**	*eP*		**P**	**07 12 22.7**	**-0.2**
BI05	**Punta Hualpn**	**20.30**	**188**	P		**P**	**07 12 22.6**	**-0.8**
BB19B	**Bebedouro**	**20.53**	**106**	*eP*		**P**	**07 12 26.7**	**+0.6**
BDFB	**Brasilia**	**20.86**	**90**	P		**P**	**07 12 29.1**	**-0.7**
BDFB				IAmb		IAmb	07 12 32.1	
	comp=Z,28nm,0.7s							
BDFB	**Brasilia**	**20.86**	**90**	P		**P**	**07 12 29.2**	**-0.6**
	comp=Z,22nm,0.5s,baz=264,slow=12,SNR=69							
	comp=Z,22nm,0.5s							
PLTB	**Pedras Altas**	**21.02**	**139**	P		**P**	**07 12 30.6**	**-0.6**
PLTB				IAmb		IAmb	07 12 33.4	
	comp=Z,44nm,1.0s							
PLTB	**Pedras Altas**	**21.02**	**139**	*eP*		**P**	**07 12 30.8**	**-0.4**
MALB	**Monte Alegre**	**21.12**	**48**	*eP*		**P**	**07 12 33.5**	**+1.1**
CNLB	**Canela**	**21.44**	**129**	*eP*		**P**	**07 12 33.7**	**-2.1**
RCLB	**Rio Claro- Sao**	**21.68**	**109**	*eP*		**P**	**07 12 38.4**	**+0.1**
SPB	**Sao Paulo**	**22.03**	**112**	P		**P**	**07 12 41.3**	**-0.3**
SPB				IAmb		IAmb	07 12 43.0	
	comp=Z,44nm,1.0s							
SPB	**Sao Paulo**	**22.03**	**112**	*eP*		**P**	**07 12 42.0**	**+0.4**
PMNB	**Patos De Minas**	**22.27**	**98**	*eP*		**P**	**07 12 43.5**	**-0.6**
PET01	**Itanhaem-SP**	**22.35**	**114**	*eP*		**P**	**07 12 44.7**	**+0.1**
SMTB	**Santa Maria do**	**22.89**	**73**	*eP*		**P**	**07 12 49.8**	**+0.1**
GO06	**Curarrehue**	**22.95**	**183**	P		**P**	**07 12 50.8**	**+0.8**
GO06				IAmb		IAmb	07 12 53.2	
	comp=Z,17nm,0.7s							
PARB	**Paraibuna**	**23.59**	**110**	*eP*		**P**	**07 12 57.0**	**+1.0**
MCPB	**Macapa, AP**	**23.73**	**49**	*eP*		**P**	**07 12 57.8**	**+0.5**
BSCB	**Bom Sucesso**	**24.00**	**104**	*eP*		**P**	**07 13 02.1**	**+2.3**
PLCA	**Paso Flores**	**24.05**	**182**	P		**P**	**07 13 01.9**	**+1.8**
PLCA				IAmb		IAmb	07 13 04.3	
	comp=Z,30nm,0.9s							
PLCA	**Paso Flores**	**24.05**	**182**	P		**P**	**07 13 01.7**	**+1.7**
	comp=Z,18nm,0.8s,baz=360,slow=11,SNR=48							
	comp=Z,18nm,0.8s							
PLCA	**Paso Flores**	**24.05**	**182**	*eP*		**P**	**07 13 01.9**	**+1.8**
DIAM	**Diamantina, MG**	**24.89**	**98**	*eP*		**P**	**07 13 09.0**	**+1.1**
VAS01	**Vassouras-RJ**	**25.39**	**107**	*eP*		**P**	**07 13 14.9**	**+2.7**
BAUV	**El Baul**	**25.44**	**4**	P		**P**	**07 13 11.2**	**-1.5**
TMAB	**Tom-Au,PA,Br**	**25.54**	**59**	*eP*		**P**	**07 13 14.7**	**+1.1**
LL01	**San Ignacio de**	**25.79**	**185**	P		**P**	**07 13 16.3**	**+0.7**
LL01				IAmb		IAmb	07 13 21.8	
	comp=Z,21nm,1.4s							
DUB01	**Friburgo-RJ**	**26.34**	**106**	*eP*		**P**	**07 13 23.8**	**+2.9**
AY01	**Puyuhuapi**	**27.84**	**185**	P		**P**	**07 13 34.5**	**+0.7**
AY01				IAmb		IAmb	07 13 36.0	
	comp=Z,15nm,0.8s							
RIB01	**Linhares ES**	**28.00**	**100**	*eP*		**P**	**07 13 37.6**	**+2.0**
GUA01	**Guaratinga, BA**	**28.65**	**94**	*eP*		**P**	**07 13 42.7**	**+1.4**
RCBR	**Riachuelo**	**34.79**	**76**	P		**P**	**07 14 33.2**	**-1.9**
RCBR				IAmb		IAmb	07 14 35.8	
	comp=Z,27nm,1.0s							
RCBR	**Riachuelo**	**34.79**	**76**	*eP*		**P**	**07 14 35.5**	**+0.4**
TXAR	**Lajitas Array**	**56.22**	**324**	P		**P**	**07 17 23.3**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=149,slow=8.6,SNR=9.7							
TXAR				PcP		**PcP**	**07 18 19.4**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=149,slow=6.9,SNR=4.4							
	comp=Z,0.8nm,0.7s							
VHRN	**Van Horn**	**58.06**	**324**	P		**P**	**07 17 36.1**	**+0.2**
S39A	**Bolivar**	**58.40**	**338**	P		**P**	**07 17 37.8**	**-0.1**
S39A				IAmb		IAmb	07 17 41.7	
	comp=Z,8.6nm,1.4s							
SNAA	**Sanae**	**67.13**	**162**	P		**P**	**07 18 37.0**	**+1.8**
SNAA	**Sanae**	**67.13**	**162**	P		**P**	**07 18 36.2**	**+1.0**
	comp=Z,4.5nm,0.8s,baz=295,slow=6.5,SNR=5.9							
	comp=Z,4.5nm,0.8s							
LIC	**Lamto**	**67.85**	**76**	⇑*iP*		**P**	**07 18 40.1**	**-0.4**
	comp=Z,7.3nm,0.3s							
TIC	**Toumodi**	**68.00**	**76**	⇑*iP*		**P**	**07 18 38.5**	**-3.0**
	comp=Z,3.8nm,0.2s							
KIC	**Kosan Boka**	**68.16**	**76**	⇑*iP*		**P**	**07 18 42.3**	**-0.2**
	comp=Z,23nm,0.5s							
DBIC	**Dimbokro**	**68.16**	**76**	P		**P**	**07 18 42.0**	**-0.5**
DBIC	**Dimbokro**	**68.16**	**76**	P		**P**	**07 18 42.3**	**-0.2**
	comp=Z,11nm,0.7s,baz=242,slow=6.8,SNR=21							
	comp=Z,11nm,0.7s							
TROLL	**Troll, Antarti**	**68.85**	**161**	⇑P		**P**	**07 18 48.5**	**+2.6**
	comp=Z,78nm,0.5s							
PDAR	**Pinedale Array**	**69.52**	**330**	P		**P**	**07 18 51.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=127,slow=9.6,SNR=8.0							
	comp=Z,0.4nm,0.5s							
ULM	**Lac du Bonnet**	**70.44**	**343**	P		**P**	**07 18 54.7**	**-1.1**
ULM	**Lac du Bonnet**	**70.44**	**343**	P		**P**	**07 18 54.6**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=143,slow=5.8,SNR=8.9							
	comp=Z,2.9nm,0.6s							
NVAR	**Mina Array Bea**	**71.20**	**322**	P		**P**	**07 19 01.4**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=169,slow=7.6,SNR=6.6							
	comp=Z,1.2nm,0.9s							
QSPA	**South Pole Qui**	**73.56**	**180**	P		**P**	**07 19 16.1**	**+1.8**
QSPA	**South Pole Qui**	**73.56**	**180**	P		**P**	**07 19 16.3**	**+2.1**
	comp=Z,6.5nm,0.9s,baz=181,slow=1.3,SNR=22							
	comp=Z,6.5nm,0.9s							
ORV	**Oroville**	**73.84**	**321**	P		**P**	**07 19 15.2**	**-0.9**
PLID	**Pearl Lake**	**74.40**	**328**	P		**P**	**07 19 19.8**	**+0.3**
PINE	**Pine Mountain**	**76.18**	**324**	P		**P**	**07 19 31.6**	**+1.9**
TOA0	**Torodi Ar. Sit**	**76.49**	**72**	P		**P**	**07 19 31.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.49**	**72**	P		**P**	**07 19 31.9**	**+0.2**
TORD				IAmb		IAmb	07 19 32.8	
	comp=Z,13nm,0.7s							
TORD	**Torodi Ar. Bea**	**76.49**	**72**	P		**P**	**07 19 31.0**	**-0.8**
	comp=Z,14nm,0.7s,baz=265,slow=5.0,SNR=15							
	comp=Z,14nm,0.7s							
EDM	**Edmonton**	**79.03**	**335**	P		**P**	**07 19 45.3**	**+0.3**
EDM			

EIDS	**Eidsvold**	**28.15**	**264**	P	**P**	**07 18 57.4**	**+0.5**
EIDS				IAmb	IAmb	07 19 38.4	
	comp=Z,19nm,1.5s						
CTA	**Charters Tower**	**33.66**	**273**	LR	LR	07 31 59.6	
	comp=Z,221nm,18.5s,baz=88,slow=33						
CTAO	**Charters Tower**	**33.66**	**273**	P	**P**	**07 19 46.1**	**+0.8**
CTAO				IAmb	IAmb	07 19 47.6	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**38.58**	**280**	P	**P**	**07 20 27.6**	**+0.4**
COEN				IAmb	IAmb	07 20 30.1	
	comp=Z,8.9nm,1.4s						
ASAR	**Alice Springs**	**43.82**	**262**	P	**P**	**07 21 08.4**	**-1.6**
ASAR	**Alice Springs**	**43.82**	**262**	P	**P**	**07 21 08.6**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=97,slow=7.7,SNR=19						
	comp=Z,1.2nm,0.5s						
WR0	**Warramunga Arr**	**44.23**	**268**	P	**P**	**07 21 12.6**	**-0.6**
WB2	**Warramunga Arr**	**44.41**	**268**	P	**P**	**07 21 14.9**	**+0.3**
WB2				IAmb	IAmb	07 21 16.8	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.42**	**268**	P	**P**	**07 21 14.8**	**0.0**
WRA	**Warramunga Arr**	**44.42**	**268**	P	**P**	**07 21 12.6**	**-2.2**
	comp=Z,1.1nm,0.5s,baz=104,slow=7.9,SNR=8.8						
WRA				PcP	**PcP**	**07 22 55.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=111,slow=4.6,SNR=4.8						
	comp=Z,1.1nm,0.5s						
WB0	**Warramunga Arr**	**44.42**	**268**	P	**P**	**07 21 14.2**	**-0.6**
FORT	**Forrest**	**47.60**	**251**	P	**P**	**07 21 36.1**	**-3.4**
FORT				IAmb	IAmb	07 22 19.3	
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**52.43**	**186**	P	**P**	**07 22 15.3**	**+0.1**
VNDA				IAmb	IAmb	07 22 27.7	
	comp=Z,18nm,1.5s						
GUMO	**Guam**	**53.69**	**313**	LR	LR	07 43 08.8	
	comp=Z,36nm,20.4s,baz=74,slow=33						
RPN	**Rapa Nui**	**60.38**	**108**	LR	LR	07 43 35.1	
	comp=Z,26nm,22.0s,baz=234,slow=30						
QSPA	**South Pole Qui**	**64.04**	**180**	P	**P**	**07 23 35.6**	**-0.4**
QSPA				IAmb	IAmb	07 23 37.4	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**64.04**	**180**	P	**P**	**07 23 35.2**	**-0.8**
	comp=Z,4.9nm,0.8s,baz=48,slow=1.0,SNR=13						
	comp=Z,4.9nm,0.8s						
JOW	**Kunigami**	**74.01**	**311**	P	**P**	**07 24 38.5**	**+0.7**
	comp=Z,17nm,0.8s,baz=260,slow=3.0,SNR=1.8						
	comp=Z,17nm,0.8s						
BELA	**Belgrano 2**	**74.03**	**172**	P	**P**	**07 24 35.7**	**-1.6**
MJAR	**Matsushiro Arr**	**74.88**	**324**	P	**P**	**07 24 41.5**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=155,slow=6.3,SNR=2.2						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**81.26**	**319**	P	**P**	**07 25 17.0**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=130,slow=5.3,SNR=5.3						
	comp=Z,1.3nm,0.5s						
PEA0B	**Petropavlovsk-**	**81.70**	**345**	P	**P**	**07 25 21.7**	**+2.0**
PETK	**Petropavlovsk-**	**81.70**	**345**	P	**P**	**07 25 21.3**	**+1.6**
PETK	**Petropavlovsk-**	**81.70**	**345**	P	**P**	**07 25 20.4**	**+0.7**
	comp=Z,4.0nm,0.6s,baz=128,slow=5.2,SNR=9.4						
	comp=Z,4.0nm,0.6s						
TROLL	**Troll, Antarti**	**82.20**	**180**	⇑P	**P**	**07 25 21.7**	**-0.8**
	comp=Z,300nm,0.4s						
SNAA	**Sanae**	**82.47**	**178**	P	**P**	**07 25 22.4**	**-1.5**
SNAA				IAmb	IAmb	07 25 24.4	
	comp=Z,9.5nm,1.0s						
SNAA	**Sanae**	**82.47**	**178**	⇑P	**P**	**07 25 22.5**	**-1.3**
	comp=Z,99nm,0.7s						
SNAA	**Sanae**	**82.47**	**178**	P	**P**	**07 25 22.3**	**-1.5**
	comp=Z,5.2nm,0.9s,baz=200,slow=9.8,SNR=14						
	comp=Z,5.2nm,0.9s						
VNA3	**Neumayer Olymp**	**82.60**	**176**	⇑P	**P**	**07 25 22.5**	**-1.9**
	comp=Z,20nm,0.8s						
H03S2	**Juan Fernandez**	**82.61**	**124**	T	T	08 56 23.6	
	baz=240						
H03S1	**Juan Fernandez**	**82.63**	**124**	T	T	08 56 26.0	
	baz=240						
H03S3	**Juan Fernandez**	**82.63**	**124**	T	T	08 56 21.6	
	baz=240						
H03N2	**Juan Fernandez**	**82.78**	**124**	T	T	08 56 46.3	
	baz=240						
H03N3	**Juan Fernandez**	**82.78**	**124**	T	T	08 56 34.9	
	baz=240						
H03N1	**Juan Fernandez**	**82.80**	**124**	T	T	08 56 27.1	
	baz=240						
VNA2	**Neumayer--Watz**	**83.05**	**177**	⇑P	**P**	**07 25 25.8**	**-0.9**
	comp=Z,17nm,0.7s,baz=196,slow=5.2						
USRK	**Ussuriysk Ar.**	**83.73**	**326**	P	**P**	**07 25 31.3**	**+0.9**
	comp=Z,2.9nm,0.4s,baz=154,slow=4.4,SNR=17						
	comp=Z,2.9nm,0.4s						
NVAR	**Mina Array Bea**	**84.85**	**43**	P	**P**	**07 25 38.1**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=222,slow=7.3,SNR=8.4						
	comp=Z,1.1nm,0.6s						
PLCA	**Paso Flores**	**85.24**	**133**	P	**P**	**07 25 39.0**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=239,slow=7.4,SNR=5.5						
	comp=Z,2.1nm,0.8s						
BNX	**BinXian**	**87.13**	**325**	⇓P	**P**	**07 25 48.1**	**+0.9**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,130nm,5.7s						
KLR	**Kul'dur**	**87.45**	**330**	P	**P**	**07 25 48.5**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=138,slow=1.6,SNR=12						
	comp=Z,2.7nm,0.7s						
TXAR	**Lajitas Array**	**89.78**	**57**	P	**P**	**07 26 01.9**	**+1.7**
	comp=Z,0.9nm,1.0s,baz=214,slow=6.0,SNR=6.2						
	comp=Z,0.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**92.26**	**289**	P	**P**	**07 26 11.4**	**-0.4**
	comp=Z,2.4nm,0.3s,baz=139,slow=3.7,SNR=6.4						
	comp=Z,2.4nm,0.3s						
PDAR	**Pinedale Array**	**92.78**	**43**	P	**P**	**07 26 14.5**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=207,slow=2.8,SNR=6.1						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**93.64**	**13**	P	**P**	**07 26 18.0**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=228,slow=5.2,SNR=2.1						
	comp=Z,0.2nm,0.8s						
MKAR	**Makanchi Array**	**115.17**	**312**	PKP	**PKPdf**	**07 31 40.9**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=169,slow=0.9,SNR=7.2						
KURBB	**Kurchatov Arra**	**118.27**	**315**	PKP	**PKPdf**	**07 31 46.7**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=105,slow=2.2,SNR=1.9						
BVAR	**Borovoye Array**	**123.46**	**318**	PKP	**PKPdf**	**07 31 57.1**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=146,slow=0.9,SNR=7.7						
AKTO	**Aktyubinsk**	**131.32**	**315**	PKP	**PKiKP**	**07 32 13.5**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=109,slow=1.3,SNR=2.4						
ARCES	**ARCESS Array B**	**134.41**	**349**	PKP	**PKPdf**	**07 32 17.7**	**0.0**
	comp=Z,1.9nm,0.7s,baz=46,slow=3.5,SNR=4.8						
FINES	**FINESS Array B**	**141.15**	**342**	PKhKP	PKPpre	07 32 22.9	
	comp=Z,0.7nm,0.5s,baz=72,slow=4.5,SNR=2.4						
FINES				PKP	**PKPdf**	**07 32 28.3**	**-2.0**
	comp=Z,0.6nm,0.4s,baz=47,slow=4.0,SNR=6.5						
NB2	**NORSAR Subarra**	**144.51**	**353**	PKP	PKPbc	07 32 35.7	+0.3
	comp=Z,0.2nm,0.3s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**144.51**	**353**	PKP	**PKPab**	**07 32 35.2**	**0.0**
	comp=Z,5.2nm,1.0s,baz=15,slow=5.0,SNR=9.2						
HFS	**Hagfors**	**145.05**	**350**	PKPbc	**PKPbc**	**07 32 36.4**	**-0.6**
	comp=Z,2.6nm,0.3s,baz=60,slow=3.9,SNR=30						
AKASG	**Malin Array Be**	**147.93**	**327**	PKPbc	**PKPbc**	**07 32 44.6**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=45,slow=4.4,SNR=23						
EKA	**Eskdalemuir Ar**	**150.47**	**6**	PKPbc	**PKPbc**	**07 32 51.1**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=7.0,slow=7.6,SNR=3.4						
MMAI	**Mount Meron Ar**	**150.50**	**291**	PKPbc	**PKPbc**	**07 32 52.3**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=71,slow=5.4,SNR=6.1						
BRTR	**Keskin Array B**	**150.57**	**305**	PKPbc	**PKPbc**	**07 32 52.6**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=128,slow=3.5,SNR=6.1						
BRTR				PKPab	**PKPab**	**07 33 00.5**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=90,slow=3.7,SNR=9.1						
EIL	**Elat**	**151.00**	**285**	PKPbc	**PKPbc**	**07 32 53.1**	**-0.7**
	comp=Z,4.9nm,0.7s,baz=350,slow=6.6,SNR=3.7						
MLR	**Muntele Rosu**	**152.92**	**322**	PKPbc	**PKiKP**	**07 32 58.5**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=101,slow=23,SNR=1.8						
MLR				PKPab	**PKPab**	**07 33 09.8**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=293,slow=5.6,SNR=4.8						

*NNC **20** 07:16:06.3±0.5,50.02N×78.81E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=6.7km s-min=2.2km az=80.0, Suspected Mining explosion.*
*IDC **20** 07:16:07.5±0.8,50.03N×78.72E,h0km,mbtmp3.0/3, ML2.4/3,Error ellipse: s-maj=8.8km s-min=5.7km az=53.0*
ISC 20 07:16:04.5±0.8,49.88N±0.03×78.77E±0.04,h0km,n30, σ1§34/45,11C-20D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR07	**Kurchatov Arra**	**0.72**	**347**	⇑P		**Pg**	**07 16 18.0**	**-0.2**
KUR07				⇑S		**Sg**	**07 16 27.4**	**-0.2**
KUR06	**Kurchatov Arra**	**0.74**	**348**	⇓P		**Pg**	**07 16 18.3**	**-0.3**
KUR06				⇓S		**Sg**	**07 16 28.2**	**0.0**
KUR14	**Kurchatov Arra**	**0.74**	**351**	⇑P		**Pg**	**07 16 18.3**	**-0.3**
KUR14				⇓S		**Sg**	**07 16 27.8**	**-0.5**
KUR15	**Kurchatov Arra**	**0.75**	**350**	⇓P		**Pg**	**07 16 18.6**	**-0.3**
KUR15				⇓S		**Sg**	**07 16 28.2**	**-0.4**
KURBB	**Kurchatov Arra**	**0.76**	**348**	⇑P		**Pg**	**07 16 18.6**	**-0.3**
	42nm,0.4s							
KURBB				⇓S		**Sg**	**07 16 27.7**	**-1.1**
	75nm,0.6s							
KURBB	**Kurchatov Arra**	**0.76**	**348**	Pg		**Pg**	**07 16 19.0**	**0.0**
	4.8nm,0.3s,baz=166,slow=18,SNR=63							
KURBB				Lg		Lg	07 16 27.9	
	4.8nm,0.3s,baz=170,slow=32,SNR=11							
KUR16	**Kurchatov Arra**	**0.77**	**347**	⇓P		**Pg**	**07 16 19.0**	**-0.1**
KUR16				⇓S		**Sg**	**07 16 28.8**	**-0.2**
KUR17	**Kurchatov Arra**	**0.77**	**346**	⇓P		**Pg**	**07 16 19.1**	**-0.2**
KUR17				⇓S		**Sg**	**07 16 29.0**	**-0.4**
KUR05	**Kurchatov Arra**	**0.78**	**349**	⇓P		**Pg**	**07 16 19.0**	**-0.3**
KUR05				⇑S		**Sg**	**07 16 28.9**	**-0.5**
KUR04	**Kurchatov Arra**	**0.79**	**350**	⇓P		**Pg**	**07 16 19.4**	**-0.3**
KUR04				⇓S		**Sg**	**07 16 29.4**	**-0.6**
KURK	**Kurchatov**	**0.84**	**354**	⇑P		**Pg**	**07 16 19.9**	**-0.6**
	11nm,0.3s							
KURK				⇑S		**Sg**	**07 16 29.8**	**-1.6**
	18nm,0.6s							
MAKZ	**Makanchi**	**3.75**	**144**	⇓Pg		**Pg**	**07 17 16.1**	**-0.2**
	1.5nm,0.5s							
MAKZ				⇓Lg		Lg	07 18 07.2	
	7.1nm,0.5s							
MK31	**Makanchi Array**	**3.88**	**141**	Pn		**Pb**	**07 17 10.8**	**-3.0**
	0.2nm,0.2s,baz=90,slow=8.0,SNR=33							
MK31				⇓Pg		**Pg**	**07 17 18.2**	**-0.6**
	1.4nm,0.3s,baz=334,slow=16,SNR=39							
MK31				⇑Lg		Lg	07 18 13.5	
	6.8nm,0.4s,baz=334,slow=26,SNR=23							
MKAR	**Makanchi Array**	**3.88**	**141**	Pn		**Pb**	**07 17 11.0**	**-2.8**
	0.6nm,0.3s,baz=321,slow=10,SNR=41							
MKAR				Pg		**Pg**	**07 17 17.7**	**-1.2**
	1.1nm,0.3s,baz=321,slow=15,SNR=16							
MKAR				Sn		**Sb**	**07 17 58.0**	**-3.3**
	1.1nm,0.3s,baz=330,slow=19,SNR=2.4							
MKAR				Lg		Lg	07 18 11.5	
	3.5nm,0.3s,baz=325,slow=32,SNR=12							
	0.5nm,0.3s							
BRZS	**Berezniki**	**3.94**	**274**	Pg		**Pg**	**07 17 18.7**	**-1.2**
	3.6nm,0.3s							
BRZS				Lg		Lg	07 18 07.6	
	8.0nm,0.4s							
OTUK	**Ortayu**	**4.53**	**251**	Pg		**Pg**	**07 17 30.5**	**-0.8**
	0.6nm,0.3s							
OTUK				Lg		Lg	07 18 29.8	
	3.8nm,0.4s							
OTUK	**Ortayu**	**4.53**	**251**	⇑Pn		**Pn**	**07 17 17.7**	**+3.3**
	3.7nm,1.3s							
OTUK				⇓Pg		**Pg**	**07 17 30.1**	**-1.2**
	0.6nm,0.3s							
OTUK				⇓Lg		Lg	07 18 30.9	
	6.4nm,0.7s							
KAPS	**Kapalarasan**	**4.62**	**175**	Pg		**Pg**	**07 17 34.6**	**+1.7**
	1.6nm,0.3s							
KAPS				Lg		Lg	07 18 34.5	
	9.9nm,0.4s							
ZALV	**Zalesovo Beam**	**5.53**	**40**	Pn		**Pn**	**07 17 31.3**	**+3.3**
	1.1nm,0.3s,baz=232,slow=13,SNR=16							
ZALV				Sn		**Sn**	**07 18 33.5**	**+1.3**
	0.4nm,0.3s,baz=230,slow=24,SNR=2.8							
ZALV				Lg		Lg	07 18 59.2	
	0.5nm,0.3s,baz=228,slow=25,SNR=2.4							
	1.9nm,0.3s							
I46RU	**ZALESOVO INFRA**	**5.53**	**40**	I		I	07 51 10.0	
	baz=225,slow=337,SNR=4.2							
KNOS	**Konyrlen**	**5.53**	**177**	Pg		**Pg**	**07 17 50.3**	**-0.1**
	3.2nm,0.5s							
KNOS				Lg		Lg	07 19 01.4	
	3.4nm,0.4s							
ARXS	**Arharly**	**5.71**	**187**	Pg		**Pg**	**07 17 53.9**	**+0.1**
	22nm,0.4s							
ARXS				Lg		Lg	07 19 08.4	
	7.2nm,0.5s							
BTLS	**Baital**	**5.80**	**215**	Pg		**Pg**	**07 17 54.8**	**-0.8**
	0.9nm,0.3s							
BTLS				Lg		Lg	07 19 10.1	
	1.7nm,0.5s							
BVA0	**Borovoye Array**	**6.11**	**304**	⇓Sn		**Sn**	**07 18 47.3**	**+0.8**
	1.6nm,0.6s,baz=107,slow=25,SNR=3.2							
BVA0				⇓Lg		Lg	07 19 18.6	
	2.0nm,0.6s,baz=114,slow=25,SNR=5.0							
BVAR	**Borovoye Array**	**6.11**	**304**	Pn		**Pn**	**07 17 36.3**	**+0.3**
	baz=114,slow=16,SNR=1.7							
BVAR				Sn		**Sn**	**07 18 45.2**	**-1.3**
	0.1nm,0.3s,baz=119,slow=20,SNR=7.6							
BVAR				Lg		Lg	07 19 18.7	
	0.1nm,0.3s,baz=119,slow=28,SNR=3.0							
	0.5nm,0.4s							
CHKK	**Chushkaly**	**6.15**	**192**	Pg		**Pg**	**07 18 03.3**	**+1.0**
	1.8nm,0.1s							
CHKK				Lg		Lg	07 19 23.1	
	5.7nm,0.3s							
BRVK	**Borovoye**	**6.18**	**304**	⇑Sn		**Sn**	**07 18 48.9**	**+0.7**
	1.7nm,0.7s							
BRVK				⇑Lg		Lg	07 19 18.7	
	2.5nm,0.7s							
KPKS	**Kokpek**	**6.42**	**181**	Pg		**Pg**	**07 18 09.6**	**+2.2**
	2.0nm,0.2s							
KPKS				Lg		Lg	07 19 34.4	
	5.2nm,0.4s							
KTMS	**Ketmen**	**6.53**	**170**	Pg		**Pg**	**07 18 10.0**	**+0.4**
	0.6nm,0.3s							
KTMS				Lg		Lg	07 19 34.8	
	1.1nm,0.2s							
KST	**Kastek**	**7.11**	**197**	Pg		**Pg**	**07 18 20.7**	**+0.1**
	1.2nm,0.3s							
KST				Lg		Lg	07 19 53.5	
	3.9nm,0.8s							

*IDC **20** 07:19:28.0±3.3,36.31N×71.11E,h98km±27km,mb3.6/12, mbtmp4.0/18,Error ellipse: s-maj=24.1km s-min=16.8km az=23.0*
*NNC **20** 07:19:34.5±5.1,37.12N×70.70E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=40.6km s-min=29.1km az=170.0*
ISC 20 07:19:31.4±0.6,36.42N±0.06×70.98E±0.06,h150km,n32, σ3§18/42,mb3.8/12,9C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JMU	**Jammu**	**4.91**	**138**	*e*P		**Pn**	**07 20 42.2**	**-1.4**
JMU				*e*S		**Sn**	**07 21 35.9**	**-4.0**
THN	**Thein Dam**	**5.58**	**134**	*e*P		**Pn**	**07 20 52.5**	**0.0**
THN				*e*S		**Sn**	**07 21 54.3**	**-1.5**
THN				IAML			07 21 57.1	
	comp=E,248nm,0.6s							
THN				IAML			07 22 01.3	
	comp=E,188nm,0.4s							
THN				IAML			07 22 01.3	
	comp=E,191nm,0.3s							
DHRM	**DHARAMSHALA**	**6.05**	**132**	*e*P		**Pn**	**07 20 58.8**	**-0.3**
DHRM				*e*S		**Sn**	**07 22 03.9**	**-3.6**
DHRM				IAML			07 22 07.5	
	comp=E,498nm,0.2s							
DHRM				IAML			07 22 09.1	
	comp=E,568nm,0.3s							
KK31	**Karatay Array**	**6.68**	**357**	⇑P		**Pn**	**07 21 06.1**	**-1.1**
	comp=E,5.0nm,0.4s,baz=175,slow=12,SNR=65							
KK31				S		**Sn**	**07 22 16.4**	**-5.8**
	comp=E,3.9nm,0.3s,baz=178,slow=16,SNR=7.7							
BHK	**Bhakra**	**6.73**	**136**	*e*S		**Sn**	**07 22 18.5**	**-4.9**
BHK				IAML			07 22 25.0	
	comp=E,127nm,0.3s							
BHK				IAML			07 22 32.0	
	comp=E,100nm,0.1s							
AAK	**Ala-Archa**	**6.78**	**23**	P		**Pn**	**07 21 07.4**	**-1.2**
	comp=E,5.2nm,0.3s,baz=196,slow=4.5,SNR=16							
AAK				S		**Sn**	**07 22 19.9**	**-4.7**
	comp=E,9.8nm,0.4s,baz=335,slow=23,SNR=19							
CHMS	**Chumysh**	**7.18**	**23**	⇑P		**Pn**	**07 21 14.1**	**+0.2**
	comp=E,5.3nm,0.4s							
CHMS				⇑S		**Sn**	**07 22 29.8**	**-4.4**
	comp=E,13nm,0.6s							
SMLA	**Simla**	**7.37**	**134**	*e*P		**Pn**	**07 21 16.0**	**-0.4**
SMLA				*e*S		**Sn**	**07 22 33.7**	**-5.1**
SMLA				IAML			07 22 39.3	
	comp=E,100nm,0.3s							
SMLA				IAML			07 22 39.4	
	comp=E,107nm,0.2s							
TKM2	**Tokmak 2**	**7.40**	**27**	⇑P		**Pn**	**07 21 18.1**	**+1.2**
	comp=E,7.9nm,0.6s							
TKM2				⇑S		**Sn**	**07 22 36.1**	**-3.6**
	comp=E,6.5nm,0.4s							
KHET	**Khetri**	**9.27**	**153**	*e*S		**Sn**	**07 23 18.2**	**-6.4**
KUDL	**Kundal**	**9.47**	**149**	*e*S		Sn	07 23 19.9	-10
GEYT	**Alibeck**	**10.38**	**282**	P		**Pn**	**07 21 54.9**	**-1.5**
	comp=E,2.3nm,0.3s,baz=89,slow=12,SNR=3.8							
GEYT				S		**Sn**	**07 23 45.2**	**-6.0**
	comp=E,1.5nm,0.2s,baz=81,slow=19,SNR=1.6							
MKAR	**Makanchi Array**	**13.36**	**36**	P		**Pn**	**07 22 35.6**	**+0.5**
	comp=E,0.9nm,0.6s,baz=222,slow=15,SNR=7.8							
AB31	**Akbulak array**	**15.15**	**331**	⇑P		**Pn**	**07 22 57.3**	**-0.2**
	comp=E,1.3nm,0.4s,baz=144,slow=12,SNR=44							
AB31				⇑S		**Sn**	**07 25 40.6**	**-5.1**
	comp=E,3.1nm,0.8s,baz=158,slow=24,SNR=5.5							
KURBB	**Kurchatov Arra**	**15.20**	**19**	P		**Pn**	**07 22 58.6**	**+0.5**
	comp=E,1.2nm,0.3s,baz=207,slow=10,SNR=9.8							
BVAR	**Borovoye Array**	**16.61**	**359**	P		**Pn**	**07 23 15.5**	**+0.1**
	comp=E,1.2nm,0.6s,baz=181,slow=10,SNR=7.6							
AKTO	**Aktyubinsk**	**16.84**	**330**	⇑P		**Pn**	**07 23 18.5**	**+0.3**
	comp=E,3.2nm,0.9s							
AKTO				⇑S		**S**	**07 26 19.9**	**-5.4**
	comp=E,3.2nm,0.9s							
AKTO	**Aktyubinsk**	**16.84**	**330**	P		**Pn**	**07 23 19.2**	**+1.0**
	comp=E,1.7nm,0.3s,baz=129,slow=9.9,SNR=11							
ZALV	**Zalesovo Beam**	**19.99**	**24**	P		**Pn**	**07 23 54.4**	**-0.9**
	comp=E,11nm,0.6s,baz=224,slow=11,SNR=38							
	comp=E,11nm,0.6s							
ARU	**Arti**	**21.70**	**341**	P		**P**	**07 24 12.3**	**+2.1**
	comp=E,2.4nm,0.3s,baz=194,slow=6.8,SNR=5.7							
	comp=E,2.4nm,0.3s							
AKASG	**Malin Array Be**	**32.98**	**309**	P		**P**	**07 25 54.5**	**+2.7**
	comp=E,0.6nm,0.5s,baz=106,slow=7.7,SNR=4.3							
	comp=E,0.6nm,0.5s							
NRIK	**Noril'sk**	**34.21**	**10**	P		**P**	**07 26 04.8**	**+2.6**
	comp=E,1.4nm,0.5s,baz=175,slow=7.9,SNR=3.6							
	comp=E,1.4nm,0.5s							
FINES	**FINESS Array B**	**37.54**	**326**	P		**P**	**07 26 33.8**	**+3.1**
	comp=E,0.7nm,0.3s,baz=115,slow=8.3,SNR=8.5							
	comp=E,0.7nm,0.3s							
ARCES	**ARCESS Array B**	**41.21**	**338**	P		**P**	**07 27 04.1**	**+3.1**
	comp=E,1.9nm,0.7s,baz=113,slow=8.6,SNR=9.9							
	comp=E,1.9nm,0.7s							
HFS	**Hagfors**	**43.12**	**322**	P		**P**	**07 27 19.7**	**+3.2**
	comp=E,1.6nm,0.4s,baz=104,slow=11,SNR=13							
	comp=E,1.6nm,0.4s							
NB2	**NORSAR Subarra**	**44.44**	**323**	P		**P**	**07 27 29.9**	**+2.9**
	comp=Z,0.7nm,0.4s,baz=122,slow=6.2							
NOA	**NORSAR Array B**	**44.44**	**323**	P		**P**	**07 27 29.4**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=107,slow=7.1,SNR=4.5							
	comp=Z,0.4nm,0.4s							
SPITS	**Spitsbergen Ar**	**47.57**	**347**	P		**P**	**07 27 54.2**	**+2.9**
	comp=Z,4.7nm,0.8s,baz=117,slow=8.4,SNR=2.1							
	comp=Z,4.7nm,0.8s							
TGY	**Tagaytay City**	**49.71**	**103**	P		**P**	**07 28 09.7**	**+1.2**
	comp=Z,100nm,0.3s,baz=7.4,slow=20,SNR=1.2							
YKA	**Yellowknife Ar**	**81.33**	**3**	P		**P**	**07 31 33.2**	**+2.6**
	comp=Z,0.2nm,0.6s,baz=348,slow=5.7,SNR=5.1							
	comp=Z,0.2nm,0.6s							
WRA	**Warramunga Arr**	**81.96**	**122**	P		**P**	**07 31 36.2**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=302,slow=8.5,SNR=1.5							
	comp=Z,0.6nm,0.9s							
ASAR	**Alice Springs**	**84.22**	**125**	P		**P**	**07 31 47.4**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=298,slow=4.5,SNR=4.3							
	comp=Z,0.4nm,0.7s							

*NEIC **20** 07:21:32.0±1.1,18.06N±0.04×67.45W±0.05,h29km±9km, ML2.2/22,Md3.1/10(RSPR),Error ellipse: s-maj=7.6km s-min=6.2km az=72.0*
*OSPL **20** 07:21:33.5±0.4,18.09N×67.46W,h11km±176km,ML2.0*
*RSPR **20** 07:21:33.3,18.07N×67.46W,h8km±1km,MD2.6/11*
ISC 20 07:21:32.0±1.1,18.09N±0.05×67.46W±0.03,h32km,n46, σ0§47/51,8C-5D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IDE	**Isla Desecheo**	**0.30**	**357**	⇑*e*P		**Pb**	**07 21 39.3**	**-0.4**
IDE	**Isla Desecheo**	**0.30**	**357**	*e*S		**Sb**	**07 21 44.3**	**-0.5**
IDE	**Isla Desecheo**	**

	39nm,0.2s							
SHLS				S		Sn	07 22 21.1	-4.9
	79nm,0.2s							
SHLS	**Shalkode**	**1.44**	**313**	*e*P		**Pn**	**07 22 05.7**	**-1.3**
	39nm,0.2s							
SHLS				*e*S		**Sn**	**07 22 21.1**	**-4.9**
	79nm,0.2s							
PDGK	**Podgornoye**	**1.54**	**318**	P		**Pg**	**07 22 10.8**	**+0.4**
PDGK	7.8nm,0.3s			S		**Sg**	**07 22 30.6**	**+0.1**
	6.4nm,0.3s							
PDGK	**Podgornoye**	**1.54**	**318**	⇓P		**Pg**	**07 22 10.6**	**+0.3**
PDGK	7.0nm,0.4s			⇓S		**Sn**	**07 22 28.8**	**+0.1**
	15nm,0.5s							
UZB	**Uzynbulak**	**1.69**	**305**	P		**Pb**	**07 22 12.5**	**+0.5**
UZB	11nm,0.2s			S		**Sb**	**07 22 33.7**	**+0.4**
	16nm,0.2s							
UZB	**Uzynbulak**	**1.69**	**305**	*e*P		**Pb**	**07 22 12.5**	**+0.5**
UZB	11nm,0.2s			*e*S		**Sb**	**07 22 33.7**	**+0.4**
	16nm,0.2s							
PRZ	**Przheval'sk**	**1.88**	**280**	⇑*i*P		**Pb**	**07 22 16.1**	**+0.8**
PRZ	baz=80			⇑*i*S		**Sn**	**07 22 38.1**	**+1.1**
	baz=80							
SATY	**Saty**	**2.04**	**296**	*e*P		**Pg**	**07 22 19.7**	**-0.1**
SATY	21nm,0.1s			*e*S		**Sg**	**07 22 46.0**	**-0.3**
	54nm,0.2s							
ZHN	**Zhinishke**	**2.07**	**299**	Pg		**Pb**	**07 22 19.7**	**+1.3**
ZHN	24nm,0.2s			Lg		Lg	07 22 46.2	
	78nm,0.2s							
ZHN	**Zhinishke**	**2.07**	**299**	*e*P		**Pb**	**07 22 19.7**	**+1.3**
ZHN	24nm,0.2s			*e*S		**Sg**	**07 22 46.2**	**-1.0**
	78nm,0.2s							
KPKS	**Kokpek**	**2.07**	**309**	Pg		**Pb**	**07 22 19.9**	**+1.4**
KPKS	43nm,0.2s			Lg		Lg	07 22 46.5	
	115nm,0.3s							
KPKS	**Kokpek**	**2.07**	**309**	*e*P		**Pg**	**07 22 20.1**	**-0.4**
KPKS	43nm,0.2s			*e*S		**Sg**	**07 22 46.5**	**-0.9**
	115nm,0.3s							
DJR	**Jarkent**	**2.29**	**340**	Pg		**Pg**	**07 22 24.8**	**+0.1**
DJR	2.7nm,0.1s			Lg		Lg	07 22 54.5	
	31nm,0.2s							
DJR	**Jarkent**	**2.29**	**340**	*e*P		**Pg**	**07 22 24.8**	**+0.1**
DJR	2.7nm,0.1s			*e*S		**Sg**	**07 22 54.5**	**+0.1**
	31nm,0.2s							
TARG	**Taragay, Kyrgy**	**2.36**	**260**	⇓*i*P		**Pb**	**07 22 24.9**	**+1.3**
TARG	baz=57			⇓*i*S		**Sb**	**07 22 52.8**	**-0.1**
	baz=57							
KURS	**Kuram**	**2.40**	**304**	Pg		**Pb**	**07 22 25.3**	**+1.3**
KURS	25nm,0.4s			Lg		Lg	07 22 55.2	
	12nm,0.5s							
KURS	**Kuram**	**2.40**	**304**	*e*P		**Pb**	**07 22 25.3**	**+1.3**
KURS	25nm,0.4s			*e*S		**Sb**	**07 22 55.2**	**+1.6**
	12nm,0.5s							
ANVS	**Anan'yevo**	**2.47**	**285**	⇑*i*P		**Pb**	**07 22 26.0**	**+0.7**
ANVS	baz=85			⇑*i*S		**Sb**	**07 22 54.9**	**-0.9**
	baz=85							
KNOS	**Konyrlen**	**2.51**	**330**	Pg		**Pb**	**07 22 28.0**	**+2.0**
KNOS	18nm,0.2s			Lg		Lg	07 22 60.0	
	27nm,0.3s							
KDJ	**Kajisay**	**2.77**	**270**	⇑*i*P		**Pb**	**07 22 30.2**	**-0.3**
KDJ	baz=68			⇑*i*S		**Sn**	**07 23 01.9**	**+2.9**
	baz=68							
KOTS	**Kotyrbulak**	**2.98**	**292**	Pg		**Pb**	**07 22 35.3**	**+1.3**
KOTS	11nm,0.2s			Lg		Lg	07 23 12.6	
	41nm,0.3s							
KOTS	**Kotyrbulak**	**2.98**	**292**	*e*P		**Pb**	**07 22 35.3**	**+1.3**
KOTS	11nm,0.2s			*e*S		**Sb**	**07 23 12.6**	**+1.9**
	41nm,0.3s							
MDOK	**Medeo**	**3.01**	**290**	Pg		**Pb**	**07 22 34.6**	**+0.1**
MDOK	17nm,0.4s			⇓Pg		**Pb**	**07 22 35.3**	**+0.9**
	9.3nm,0.4s							
MDOK				Lg		Lg	07 23 11.2	
	23nm,0.4s							
MDOK				⇓Lg		Lg	07 23 12.2	
	14nm,0.4s							
MDOK	**Medeo**	**3.01**	**290**	*e*P		**Pb**	**07 22 35.4**	**+0.9**
MDOK	17nm,0.2s			*e*S		**Sb**	**07 23 12.4**	**+1.1**
	23nm,0.4s							
TNSS	**Tian-Shan**	**3.04**	**287**	Pg		**Pb**	**07 22 35.5**	**+0.3**
TNSS	11nm,0.2s			Lg		Lg	07 23 12.6	
	14nm,0.2s							
TNSS	**Tian-Shan**	**3.04**	**287**	*e*P		**Pb**	**07 22 35.5**	**+0.3**
TNSS	11nm,0.2s			*e*S		**Sb**	**07 23 12.6**	**0.0**
	14nm,0.2s							
KAPS	**Kapalarasan**	**3.29**	**341**	Pg		**Pb**	**07 22 42.0**	**+2.7**
KAPS	1.3nm,0.2s			Lg		Lg	07 23 23.9	
	28nm,0.2s							
KAPS	**Kapalarasan**	**3.29**	**341**	*e*P		**Pb**	**07 22 42.3**	**+3.0**
KAPS	0.8nm,0.1s			*e*S		**Sg**	**07 23 24.4**	**-2.0**
	27nm,0.1s							
CHKK	**Chushkaly**	**3.32**	**301**	Pg		**Pb**	**07 22 40.7**	**+1.0**
CHKK	2.7nm,0.1s			Lg		Lg	07 23 21.8	
	19nm,0.4s							
CHKK	**Chushkaly**	**3.32**	**301**	*e*P		**Pb**	**07 22 40.8**	**+1.1**
CHKK	2.7nm,0.1s			*e*S		**Sb**	**07 23 22.2**	**+2.0**
	19nm,0.3s							
MTBS	**Maitube**	**3.43**	**287**	*e*P		**Pb**	**07 22 43.0**	**+1.3**
MTBS	5.8nm,0.3s			*e*S		**Sb**	**07 23 25.4**	**+1.9**
	13nm,0.3s							
KTBS	**Karatobe**	**3.46**	**298**	*e*P		**Pb**	**07 22 43.8**	**+1.7**
KTBS	3.1nm,0.2s			*e*S		**Sb**	**07 23 26.9**	**+2.8**
	33nm,0.2s							
MAKZ	**Makanchi**	**4.68**	**9**	⇑Pg		**Pb**	**07 23 03.6**	**+0.7**
MAKZ	2.1nm,0.8s			⇑Lg		Lg	07 24 16.6	
	1.5nm,0.5s							
MK31	**Makanchi Array**	**4.71**	**12**	⇑Pg		**Pb**	**07 23 03.8**	**+0.5**
MK31	0.2nm,0.3s,baz=200,slow=15,SNR=5.0			⇑Lg		Lg	07 24 12.5	
	3.7nm,0.6s,baz=191,slow=26,SNR=8.7							

*IDC **20** 07:23:08.1±0.8,6.°10N×125.°08E,h0km,mb3.9/7, mbtmp3.9/7,Error ellipse: s-maj=24.2km s-min=10.6km az=103.0*

ISC 20 07:23:12.9±0.8,6°2.N±0.°1×125°3.E±0.°3,h35km,n15, σ0°79/11,mb3.9/8,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.92**	**20**	Pg	**Pn**	**07 23 29.8**	**+0.3**
	272nm,0.3s,baz=68,slow=1.2,SNR=21						
DAV				Lg	Lg	07 23 43.1	
	178nm,0.3s,baz=271,slow=22,SNR=14						
WRA	**Warramunga Arr**	**27.47**	**161**	P	**P**	**07 28 55.7**	**-0.3**
	0.5nm,0.5s,baz=339,slow=10,SNR=7.7						
WRA				PcP	**PcP**	**07 32 13.7**	**-0.4**
	0.5nm,0.7s,baz=343,slow=2.6,SNR=1.9						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**30.86**	**164**	P	**P**	**07 29 26.6**	**+0.6**
	1.0nm,0.6s,baz=346,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**07 32 22.4**	**-0.3**
	0.5nm,0.6s,baz=343,slow=2.3,SNR=5.7						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**40.94**	**159**	P	**P**	**07 30 52.4**	**+0.1**
	2.3nm,0.7s,baz=343,slow=11,SNR=4.7						
	2.3nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**42.16**	**69**	T	T	08 14 49.7	
	baz=257,slow=75,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**42.18**	**69**	T	T	08 14 52.0	
	baz=257,slow=75,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**42.18**	**69**	T	T	08 14 54.1	
	baz=257,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**42.60**	**68**	T	T	08 15 29.9	
	baz=260,slow=75						
H11N2	**WAKE ISLAND Hy**	**42.61**	**68**	T	T	08 15 32.2	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**42.62**	**68**	T	T	08 15 41.5	
	baz=260,slow=75						
SONM	**Songino Array**	**44.51**	**342**	P	**P**	**07 31 22.1**	**+0.9**
	0.9nm,1.1s,baz=156,slow=7.4,SNR=4.9						
	0.9nm,1.1s						
MKAR	**Makanchi Array**	**54.71**	**325**	P	**P**	**07 32 39.6**	**+0.8**
	0.5nm,0.4s,baz=120,slow=7.6,SNR=12						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**57.74**	**333**	P	**P**	**07 33 00.0**	**-0.2**
	0.4nm,0.4s,baz=119,slow=9.0,SNR=2.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**58.88**	**327**	P	**P**	**07 33 08.5**	**+0.2**
	0.7nm,0.3s,baz=130,slow=6.3,SNR=2.5						
	0.7nm,0.3s						
NRIK	**Noril'sk**	**67.70**	**346**	P	**P**	**07 34 04.7**	**-1.7**
	2.1nm,0.5s,baz=116,slow=5.6,SNR=4.2						

*NEIC **20** 07:28:13.2±1.0,26.°5S±0.°1×177.°6W±0.°2,h166km±10km, mb4.4/12,Error ellipse: s-maj=25.4km s-min=16.9km az=105.0*
*IDC **20** 07:28:15.1±2.1,26.°54S×177.°67W,h184km±16km,mb3.7/8, mbtmp4.3/11,Error ellipse: s-maj=24.3km s-min=16.2km az=38.0*

ISC 20 07:28:15.8±0.6,26°58S±0.°08×177°6W±0.°1,h200km,n39, σ1°52/33,mb4.2/13,4C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.69**	**187**	Pn	**Pn**	**07 28 57.3**	**-4.4**
RAO	**Raoul Island**	**2.69**	**187**	P	**Pn**	**07 29 00.3**	**-1.4**
	518nm,0.3s,baz=40,slow=21,SNR=8.6						
RAO				S	**Sn**	**07 29 36.1**	**-1.7**
	595nm,0.3s,baz=301,slow=23,SNR=3.7						
NIUE	**Niue**	**10.26**	**45**	Pn	**Pn**	**07 30 36.6**	**-1.8**
URZ	**Urewera**	**12.48**	**200**	P	**Pn**	**07 31 07.4**	**+0.7**
	17nm,0.3s,baz=30,slow=3.0,SNR=19						
URZ				S	Sn	07 33 10.2	-16
	38nm,0.5s,baz=248,slow=15,SNR=24						
DZM	**Mont Dzumac**	**15.25**	**284**	P	**P**	**07 31 41.2**	**-0.4**
	3.6nm,0.9s,baz=117,slow=16,SNR=2.4						
EIDS	**Eidsvold**	**28.18**	**265**	P	**P**	**07 33 51.1**	**+1.3**
EIDS				IAmb	IAmb	07 33 51.8	
	comp=Z,9.1nm,1.1s						
CTA	**Charters Tower**	**33.77**	**273**	P	**P**	**07 34 39.1**	**+0.3**
	comp=Z,2.3nm,0.4s,baz=95,slow=9.8,SNR=9.0						
	comp=Z,2.3nm,0.4s						
CTAO	**Charters Tower**	**33.77**	**273**	P	**P**	**07 34 38.6**	**-0.2**
CTAO				IAmb	IAmb	07 35 01.1	
	comp=Z,14nm,1.5s						
ASAR	**Alice Springs**	**43.84**	**263**	P	**P**	**07 36 01.7**	**-0.7**
ASAR	**Alice Springs**	**43.84**	**263**	P	**P**	**07 36 02.1**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=93,slow=7.1,SNR=78						
	comp=Z,3.6nm,0.6s						
WR0	**Warramunga Arr**	**44.29**	**268**	P	**P**	**07 36 05.4**	**-0.6**
WB2	**Warramunga Arr**	**44.47**	**268**	P	**P**	**07 36 06.8**	**-0.6**
WB2				IAmb	IAmb	07 36 07.7	
	comp=Z,8.1nm,0.9s						
WRA	**Warramunga Arr**	**44.48**	**268**	P	**P**	**07 36 07.2**	**-0.3**
WRA	**Warramunga Arr**	**44.48**	**268**	P	**P**	**07 36 07.1**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=105,slow=6.1,SNR=20						
	comp=Z,5.1nm,0.8s						
WB0	**Warramunga Arr**	**44.48**	**268**	P	**P**	**07 36 06.7**	**-0.8**
FORT	**Forrest**	**47.51**	**252**	P	**P**	**07 36 29.8**	**-1.2**
SBA	**Scott Base**	**51.87**	**184**	P	P	07 37 06.8	+3.7
VNDA	**Vanda**	**51.92**	**186**	P	**P**	**07 37 06.4**	**+2.8**
VNDA				IAmb	IAmb	07 37 14.4	
	comp=Z,11nm,1.4s						
VNDA	**Vanda**	**51.92**	**186**	P	**P**	**07 37 05.2**	**+1.7**
	comp=Z,1.9nm,0.6s,baz=14,slow=8.4,SNR=7.5						
	comp=Z,1.9nm,0.6s						
QSPA	**South Pole Qui**	**63.52**	**180**	P	**P**	**07 38 26.0**	**+1.4**
QSPA	**South Pole Qui**	**63.52**	**180**	P	**P**	**07 38 25.8**	**+1.3**
	comp=Z,3.6nm,0.6s,baz=359,slow=2.3,SNR=25						
	comp=Z,3.6nm,0.6s						
BELA	**Belgrano 2**	**73.51**	**172**	P	**P**	**07 39 26.9**	**+0.9**
BELA				IAmb	IAmb	07 39 27.1	
	comp=Z,5.2nm,0.9s						
TROLL	**Troll, Antarti**	**81.68**	**180**	⇑P	**P**	**07 40 12.7**	**+1.2**
	comp=Z,280nm,0.6s						
SNAA	**Sanae**	**81.95**	**178**	P	**P**	**07 40 13.2**	**+0.4**
SNAA				IAmb	IAmb	07 40 54.5	
	comp=Z,9.7nm,1.3s						
SNAA	**Sanae**	**81.95**	**178**	⇑P	**P**	**07 40 12.4**	**-0.4**
	comp=Z,54nm,0.6s						
SNAA	**Sanae**	**81.95**	**178**	P	**P**	**07 40 13.7**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=180,slow=17,SNR=7.2						
	comp=Z,3.5nm,0.9s						
VNA3	**Neumayer Olymp**	**82.08**	**176**	⇑P	**P**	**07 40 12.1**	**-1.3**
	comp=Z,14nm,0.9s						
H03S2	**Juan Fernandez**	**82.26**	**124**	T	T	09 10 44.2	
	baz=242						
H03S1	**Juan Fernandez**	**82.27**	**124**	T	T	09 10 45.8	
	baz=242						
H03S3	**Juan Fernandez**	**82.28**	**124**	T	T	09 10 42.3	
	baz=242						
H03N2	**Juan Fernandez**	**82.43**	**123**	T	T	09 10 50.5	
	baz=242						
H03N3	**Juan Fernandez**	**82.43**	**124**	T	T	09 10 55.6	
	baz=242						
H03N1	**Juan Fernandez**	**82.45**	**124**	T	T	09 10 48.2	
	baz=242						
VNA2	**Neumayer--Watz**	**82.52**	**177**	⇑P	**P**	**07 40 15.6**	**-0.1**
	comp=Z,14nm,1.0s,baz=196,slow=3.9						
NVAR	**Mina Array Bea**	**85.18**	**43**	P	**P**	**07 40 31.7**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=216,slow=8.6,SNR=2.9						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**90.00**	**57**	P	**P**	**07 40 53.7**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=213,slow=9.7,SNR=3.5						
	comp=Z,0.4nm,0.9s						
HFS	**Hagfors**	**145.57**	**350**	PKPbc	**PKiKP**	**07 47 30.4**	**-3.2**
	comp=Z,0.8nm,0.4s,baz=75,slow=6.1,SNR=1.9						
MMAI	**Mount Meron Ar**	**150.76**	**291**	PKPbc	**PKiKP**	**07 47 46.2**	**+0.9**
	comp=Z,1.1nm,0.2s,baz=48,slow=2.1,SNR=1.3						
BRTR	**Keskin Array B**	**150.93**	**305**	PKPbc	**PKiKP**	**07 47 44.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=43,slow=3.2,SNR=2.2						

IDC 20 07:31:51.2±4.5,13°31N×122°05E,h0km,mb3.6/3, mbtmp3.6/3,MS2.9/2,Error ellipse: s-maj=168.6km s-min=14.9km az=45.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.34**	**306**	Pg	Pg	07 32 16.9	0.0
	280nm,0.3s,baz=194,slow=4.9,SNR=14						
TGY				Lg	Lg	07 32 33.6	
	142nm,0.3s,baz=11,slow=18,SNR=4.2						
DAV	**Davao City (W)**	**7.11**	**150**	LR	LR	07 36 55.1	
	comp=Z,107nm,21.6s,baz=198,slow=43						
CMAR	**Chiang Mai Arr**	**22.80**	**286**	P	P	07 36 56.2	+0.4
	1.7nm,0.3s,baz=96,slow=8.3,SNR=4.2						
	1.7nm,0.3s						
JHJ	**Hachijo jima 2**	**25.51**	**36**	LR	LR	07 45 49.0	
	comp=Z,24nm,20.0s,baz=52,slow=33						
WRA	**Warramunga Arr**	**35.19**	**160**	P	P	07 38 47.4	+0.1
	0.6nm,0.9s,baz=340,slow=9.1,SNR=1.9						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**38.53**	**162**	P	P	07 39 15.1	-0.6
	0.3nm,0.5s,baz=339,slow=7.4,SNR=2.1						
	0.3nm,0.5s						

IDC 20 07:42:41.4±3.9,53°52N×90°58E,h0km,mbtmp3.1/3, ML2.2/3,Error ellipse: s-maj=36.8km s-min=25.9km az=50.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.45**	**279**	I	I	08 04 40.0	
	0.2nm,0.8s,baz=92,slow=338,SNR=5.8						
ZALV	**Zalesovo Beam**	**3.45**	**279**	Pn	Pn	07 43 38.4	+2.1
	0.4nm,0.3s,baz=95,slow=16,SNR=7.3						
ZALV				Lg	Lg	07 44 29.9	
	0.8nm,0.3s,baz=93,slow=25,SNR=6.8						
	1.3nm,0.3s						
KURBB	**Kurchatov Arra**	**7.97**	**253**	Pn	Pn	07 44 37.8	-0.5
	0.1nm,0.3s,baz=58,slow=15,SNR=1.5						
KURBB				Lg	Lg	07 46 56.9	
	baz=72,slow=32						
	1.1nm,0.3s						
MKAR	**Makanchi Array**	**8.58**	**222**	Pn	Pn	07 44 47.4	+0.7
	baz=42,slow=14,SNR=6.0						
MKAR				Lg	Lg	07 47 11.9	
	baz=33,slow=24,SNR=3.1						
	0.3nm,0.5s						
SONM	**Songino Array**	**11.53**	**113**	Lg	Lg	07 48 35.6	
	baz=302,slow=30,SNR=5.1						
I34MN	**SONGINO INFRAS**	**11.55**	**113**	I	I	08 53 50.0	
	baz=305,slow=334,SNR=1.3						

*NEIC **20** 07:51:04.3±1.6,56.°11N±0.°05×149.°71W±0.°10,h23km±7km, ML3.6/58,ML3.3(AEIC),Error ellipse: s-maj=9.6km s-min=5.9km az=133.0*
*AEIC **20** 07:51:06.9±1.6,56.°08N±0.°08×149.°7W±0.°1,h12km±7km, Error ellipse: s-maj=12.4km s-min=9.0km az=178.0*

ISC 20 07:51:02.5±1.2,56°16N±0.°08×149°72W±0.°06,h10km, n255,σ1°13/248,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.24**	**300**		**Pn**	**07 51 39.4**	**-0.1**
OHAK				IAML		07 52 06.2	
	comp=N,217nm,0.5s						
OHAK	**Old Harbor**	**2.24**	**300**		**Sn**	**07 52 05.1**	**-2.1**
OHAK	**Old Harbor**	**2.24**	**300**	P	**Pn**	**07 51 39.8**	**+0.3**
OHAK	**Old Harbor**	**2.24**	**300**	P	**Pn**	**07 51 39.6**	**+0.1**
	baz=118						
OHAK				S	**Sn**	**07 52 05.1**	**-2.1**
	baz=118						
KDAK	**Kodiak Island**	**2.26**	**317**		**Pn**	**07 51 40.1**	**+0.3**
KDAK	**Kodiak Island**	**2.26**	**317**		**Sn**	**07 52 06.1**	**-1.6**
KDAK	**Kodiak Island**	**2.26**	**317**	S	**Sn**	**07 52 06.1**	**-1.6**
	baz=136						
SYI	**Shuyak Island**	**2.85**	**331**		**Pn**	**07 51 48.8**	**+0.9**
SYI					**Sn**	**07 52 22.1**	**-0.1**
Q20K	**Shuyak Island**	**2.85**	**331**	P	**Pn**	**07 51 48.8**	**+0.9**
	baz=149						
Q20K				S	**Sn**	**07 52 22.1**	**-0.1**
	baz=149						
CNPM	**China Poot**	**3.47**	**347**	Pn	**Pn**	**07 51 56.5**	**+0.1**
CNPM				IAML		07 52 39.1	
	comp=E,76nm,0.7s						
CNPM	**China Poot**	**3.47**	**347**		**Sn**	**07 52 37.2**	**-0.4**
Q19K	**Cape Douglas,**	**3.49**	**324**		**Pn**	**07 51 58.0**	**+1.3**
Q19K	**Cape Douglas,**	**3.49**	**324**	P	**Pn**	**07 51 58.0**	**+1.3**
	baz=142						
KAHG	**Katmai Hook Gl**	**3.51**	**314**		**Pn**	**07 51 58.9**	**+1.8**
BRSE	**Bradley Lake S**	**3.63**	**352**		**Pn**	**07 51 58.9**	**+0.1**
BRSE					**Sn**	**07 52 40.4**	**-1.2**
BRSE	**Bradley Lake S**	**3.63**	**352**	P	**Pn**	**07 51 58.8**	**+0.1**
	baz=171						
BRSE				S	**Sn**	**07 52 40.4**	**-1.2**
	baz=171						
HOM	**Homer**	**3.65**	**344**	Pn	**Pn**	**07 51 58.2**	**-0.8**
HOM				IAML		07 53 15.6	
	comp=E,168nm,1.0s						
HOM				IAML		07 54 15.1	
	comp=N,171nm,1.1s						
BRLK	**Bradley Lake**	**3.67**	**351**		**Pn**	**07 51 59.2**	**0.0**
BRLK	**Bradley Lake**	**3.67**	**351**	IAML		07 52 45.2	
	comp=E,64nm,0.5s						
Q23K	**Middleton Isla**	**3.74**	**27**		**Pn**	**07 52 00.3**	**+0.2**
Q23K	**Middleton Isla**	**3.74**	**27**	IAML		07 52 33.0	
	comp=N,80nm,1.9s						
Q23K				IAML		07 52 44.7	
	comp=E,94nm,2.4s						
Q23K	**Middleton Isla**	**3.74**	**27**	P	**Pn**	**07 52 00.3**	**+0.2**
	baz=209						
MID	**Middleton Isla**	**3.74**	**28**		**Pn**	**07 52 00.4**	**+0.2**
MID	**Middleton Isla**	**3.74**	**28**	IAML		07 53 51.8	
	comp=E,87nm,2.4s						
MID				IAML		07 54 00.9	
	comp=N,70nm,1.6s						
MID	**Middleton Isla**	**3.74**	**28**	P	**Pn**	**07 52 00.6**	**+0.4**
CNTC	**Contact Creek**	**3.96**	**305**		**Pn**	**07 52 04.5**	**+1.2**
Q17K	**Contact Creek**	**3.96**	**305**	P	**Pn**	**07 52 04.5**	**+1.2**
	baz=120						
P19K	**Oil Pt**	**3.97**	**333**		**Pn**	**07 52 04.1**	**+0.7**
P19K	**Oil Pt**	**3.97**	**333**	IAML		07 52 54.5	
	comp=E,125nm,0.4s						
P19K				IAML		07 52 56.1	
	comp=N,125nm,0.5s						
P19K	**Oil Pt**	**3.97**	**333**	P	**Pn**	**07 52 04.1**	**+0.7**
	baz=151						
P23K	**Montague Islan**	**4.04**	**17**		**Pn**	**07 52 04.7**	**+0.4**
P23K					**Sn**	**07 52 49.2**	**-2.4**
P23K	**Montague Islan**	**4.04**	**17**	P	**Pn**	**07 52 04.7**	**+0.4**
	baz=198						
P23K				S	**Sn**	**07 52 49.2**	**-2.4**
	baz=198						
O20K	**Slope Mountain**	**4.22**	**340**		**Pn**	**07 52 07.4**	**+0.6**
O20K	**Slope Mountain**	**4.22**	**340**	P	**Pn**	**07 52 07.4**	**+0.6**
	baz=157						
ILSW	**Iliamna Southw**	**4.24**	**336**		**Pn**	**07 52 07.5**	**+0.4**
ILSW	**Iliamna Southw**	**4.24**	**336**	IAML		07 53 02.3	
	comp=N,41nm,0.4s						
IVE	**Iliamna Volcan**	**4.24**	**337**		**Pn**	**07 52 07.6**	**+0.4**
O22K	**Cooper Landing**	**4.33**	**360**		**Pn**	**07 52 08.6**	**+0.3**
O22K	**Cooper Landing**	**4.33**	**360**	IAML		07 53 05.7	
	comp=N,98nm,0.7s						
O22K				IAML		07 53 05.7	
	comp=E,66nm,0.6s						
O22K	**Cooper Landing**	**4.33**	**360**	P	**Pn**	**07 52 08.6**	**+0.3**
	baz=180						
SLKM	**Skilak Lake**	**4.37**	**357**		**Pn**	**07 52 08.8**	**0.0**
P18K	**Big Mountain,**	**4.38**	**320**		**Pn**	**07 52 09.5**	**+0.5**
P18K	**Big Mountain,**	**4.38**	**320**	P	**Pn**	**07 52 09.5**	**+0.5**
	baz=136						
Q16K	**King Salmon**	**4.52**	**307**		**Pn**	**07 52 11.8**	**+1.0**
Q16K	**King Salmon**	**4.52**	**307**	P	**Pn**	**07 52 11.8**	**+1.0**
	baz=122						
HIN	**Hinchinbrook I**	**4.57**	**20**		**Pn**	**07 52 12.3**	**+0.7**
HIN	**Hinchinbrook I**	**4.57**	**20**	IAML		07 53 03.7	
	comp=N,48nm,0.6s						
HIN				IAML		07 53 07.4	
	comp=E,50nm,1.2s						
RSO	**Redoubt South**	**4.60**	**341**		**Pn**	**07 52 13.2**	**+1.0**
RDT	**Redoubt**	**4.65**	**343**		**Pn**	**07 52 12.6**	**-0.1**
CAPN	**Captain Cook N**	**4.68**	**351**	Pn	Pn	07 52 11.3	-1.8
KAIM	**Kayak Island**	**4.71**	**35**		**Pn**	**07 52 14.0**	**+0.5**
KAIM	**Kayak Island**	**4.71**	**35**	IAML		07 53 09.1	
	comp=N,72nm,0.7s						
KAIM				IAML		07 53 11.2	
	comp=E,71nm,0.5s						
KAIM	**Kayak Island**	**4.71**	**35**	P	**Pn**	**07 52 14.0**	**+0.5**
	baz=218						
O18K	**Koktuh Hills**	**4.71**	**324**		**Pn**	**07 52 13.9**	**+0.4**
O18K

SUCK	Suckling Hills	5.03	36			Pn	07 52 18.8 +0.9
SUCK	Suckling Hills	5.03	36	IAML			07 53 15.0
	comp=E,36nm,1.4s						
SUCK				IAML			07 53 16.6
	comp=N,45nm,0.5s						
HMT	Hamilton	5.08	32			Pn	07 52 19.9 +1.2
NICHA	Nichawak Mount	5.09	34			Pn	07 52 19.6 +0.8
GOAT	Goat Mountain	5.15	29			Pn	07 52 20.6 +1.0
N20K	Mount Spurr	5.22	347	P		Pn	07 52 20.4 -0.2
	baz=164						
SPCR	Spurr Chakacha	5.22	347			Pn	07 52 20.4 -0.2
N19K	Bonanza Creek	5.29	334	Pn		Pn	07 52 21.3 -0.2
N19K				IAML			07 53 51.1
	comp=N,20nm,4.2s						
N19K				IAML			07 54 53.7
	comp=E,18nm,4.0s						
P16K	Nushagak River	5.30	306			Pn	07 52 23.1 +1.6
P16K	Nushagak River	5.30	306	P		Pn	07 52 23.1 +1.6
	baz=120						
BERG	Berg Lake	5.30	34			Pn	07 52 22.3 +0.7
KNK	Knik Glacier	5.31	7			Pn	07 52 22.7 +1.0
KNK	Knik Glacier	5.31	7	IAML			07 53 24.2
	comp=E,20nm,0.9s						
KNK	Knik Glacier	5.31	7	P		Pn	07 52 22.7 +1.0
	baz=187						
GRIN	Grindle Hills	5.34	37			Pn	07 52 23.0 +0.8
SUA	Susitna One	5.34	355			Pn	07 52 22.2 -0.1
SUA	Susitna One	5.34	355	P		Pn	07 52 22.2 -0.1
	baz=174						
DIV	Divide	5.39	21			Pn	07 52 23.5 +0.6
SNH	Sunshine Point	5.43	39	Pn		Pn	07 52 24.5 +1.1
PMR	Palmer	5.46	3			Pn	07 52 24.3 +0.6
PMR	Palmer	5.46	3	P		Pn	07 52 24.5 +0.8
PMR	Palmer	5.46	3	P		Pn	07 52 24.3 +0.6
	baz=183						
STLK	Strandline Lak	5.46	349			Pn	07 52 24.3 +0.4
KHIT	Khitrov Hills	5.48	36			Pn	07 52 25.0 +0.8
BMRM	Bremner River	5.51	27			Pn	07 52 25.6 +1.0
BMRM	Bremner River	5.51	27	P		Pn	07 52 25.5 +1.0
	baz=211						
N18K	Kilae Creek	5.57	327	Pn		Pn	07 52 26.2 +0.9
WAX	Waxell Ridge	5.62	37			Pn	07 52 27.1 +1.1
O16K	Kokwok River B	5.64	311	Pn		Pn	07 52 27.8 +1.6
GHO	Glory Hole Cre	5.64	4			Pn	07 52 27.6 +1.3
KLU	Klutina	5.70	19			Pn	07 52 28.2 +1.1
KLU	Klutina	5.70	19	P		Pn	07 52 28.5 +1.4
	baz=201						
SML	Sawmill	5.71	7	Pn		Pn	07 52 28.6 +1.4
SML	Sawmill	5.71	7	P		Pn	07 52 28.5 +1.4
	baz=188						
BARK	Barkley Ridge	5.71	39			Pn	07 52 28.2 +0.9
MESA	MESA	5.75	42	Pn		Pn	07 52 29.4 +1.4
CRQM	Cirque	5.76	34			Pn	07 52 28.2 +0.2
CHNA	Chernabura Isl	5.77	261	P		Pn	07 52 27.2 -0.8
	baz=73						
CRQE	Cirque	5.77	34	P		Pn	07 52 29.0 +0.9
	baz=219						
CNBA	Chernabura Isl	5.77	261			Pn	07 52 27.2 -0.8
SVW2	Sparrevohn	5.82	331	Pn		Pn	07 52 29.3 +0.5
SVW2	Sparrevohn	5.82	331	P		Pn	07 52 29.2 +0.5
SCM	Sheep Creek Mo	5.82	11			Pn	07 52 30.9 +2.1
TGL	Tana Glacier	5.86	35			Pn	07 52 29.3 0.0
N17K	Nushagak Hills	5.88	321	Pn		Pn	07 52 30.9 +1.3
ISLE	Juniper Island	5.91	38	Pn		Pn	07 52 30.2 +0.2
SKT	Skwentna	5.91	352	Pn		Pn	07 52 29.8 -0.1
M20K	Styx River	6.00	344	Pn		Pn	07 52 30.7 -0.6
VRDI	Verde Repeater	6.04	30	Pn		Pn	07 52 32.9 +1.0
N25K	Chitina, Valde	6.07	24	Pn		Pn	07 52 33.9 +1.7
N25K	Chitina, Valde	6.07	24	P		Pn	07 52 33.6 +1.4
	baz=208						
GLB	Gilahina Butte	6.12	28	Pn		Pn	07 52 33.9 +1.0
SDPT	Sand Point	6.13	267			Pn	07 52 33.4 +0.4
SDPT	Sand Point	6.13	267	P		Pn	07 52 33.3 +0.4
SDPT	Sand Point	6.13	267	P		Pn	07 52 33.4 +0.4
	baz=79						
GRNC	Granite Creek	6.20	39			Pn	07 52 35.2 +1.0
M18K	Stony River	6.21	332			Pn	07 52 34.3 +0.2
M18K	Stony River	6.21	332	P		Pn	07 52 34.3 +0.2
	baz=147						
TABL	Table Mountain	6.23	43			Pn	07 52 35.7 +1.1
M24K	Tolsona, Glenn	6.24	16			Pn	07 52 37.0 +2.5
M24K	Tolsona, Glenn	6.24	16	P		Pn	07 52 36.0 +1.5
	baz=198						
M19K	Big River Lodg	6.24	339	Pn		Pn	07 52 35.5 +1.0
MCARA	McCarthy VSAT	6.29	31			Pn	07 52 35.7 +0.6
MCARA	McCarthy VSAT	6.29	31	P		Pn	07 52 35.7 +0.6
	baz=216						
PTPK	Patty Peak	6.30	34			Pn	07 52 36.5 +1.0
PCA	Pinnacle	6.38	48			Pn	07 52 37.3 +0.8
PINM	Pinnacle	6.38	48	P		Pn	07 52 37.3 +0.8
	baz=235						
BARN	Barnard Glacie	6.47	37			Pn	07 52 39.3 +1.5
CTGM	Chitina Glacie	6.51	39			Pn	07 52 38.7 +0.4
WAT6	Susitna Watana	6.52	8			Pn	07 52 39.5 +1.1
WAT6	Susitna Watana	6.52	8	P		Pn	07 52 39.5 +1.1
	baz=190						
PNL	Peninsula	6.53	53			Pn	07 52 39.6 +1.1
PNL	Peninsula	6.53	53	P		Pn	07 52 39.8 +1.4
PNL	Peninsula	6.53	53	P		Pn	07 52 39.6 +1.1
	baz=241						
LOGN	Logan Glacier	6.54	41			Pn	07 52 39.2 +0.5
BCPM	Bancas Point	6.56	50	Pn		Pn	07 52 40.3 +1.4
L19K	White Mountain	6.59	339	Pn		Pn	07 52 39.8 +0.5
M17K	Holitna River	6.61	326	Pn		Pn	07 52 40.2 +0.7
WAT7	Susitna Watana	6.71	3			Pn	07 52 42.0 +1.0
WAT1	Susitna Watana	6.72	5			Pn	07 52 42.1 +1.1
WAT1	Susitna Watana	6.72	5	P		Pn	07 52 42.1 +1.1
	baz=185						
N15K	Kwethluk River	6.80	310	Pn		Pn	07 52 44.4 +2.2
M16K	Timber Creek	6.86	319	Pn		Pn	07 52 45.1 +2.1
O14K	Tigyukauivet M	6.92	301	Pn		Pn	07 52 44.6 +0.9
PN7A	Pavlof North-7	6.96	269			Pn	07 52 45.1 +0.6
DHY	Denali Highway	7.04	9			Pn	07 52 47.1 +1.5
DHY	Denali Highway	7.04	9	P		Pn	07 52 47.1 +1.5
	baz=190						
L18K	Granite Mounta	7.05	332	Pn		Pn	07 52 44.6 -1.0
O29M	Mount Kennedy	7.20	50			Pn	07 52 49.2 +1.5
O29M	Mount Kennedy	7.20	50	P		Pn	07 52 49.2 +1.5
	baz=239						
P29M	Windy Craggy	7.27	56			Pn	07 52 49.3 +0.7
P29M	Windy Craggy	7.27	56	P		Pn	07 52 49.3 +0.7
	baz=246						
RND	Reindeer	7.28	3			Pn	07 52 50.5 +1.7
TRF	Thorofare Moun	7.32	358			Pn	07 52 50.7 +1.3
TRF	Thorofare Moun	7.32	358	P		Pn	07 52 50.7 +1.3
	baz=177						
CAST	Castle Rocks	7.38	352	Pn		Pn	07 52 50.7 +0.6
M27K	Edge Creek, AK	7.40	30	Pn		Pn	07 52 51.4 +1.0
KTH	Kantishna Hill	7.44	356			Pn	07 52 51.8 +0.8
MENT	Mentasta	7.45	22	Pn		Pn	07 52 53.1 +2.1
TTA	Tatalina	7.50	337	Pn		Pn	07 52 51.5 -0.4
L16K	Owhat River	7.51	322	Pn		Pn	07 52 52.1 +0.3
K20K	Telida	7.54	345	Pn		Pn	07 52 52.3 -0.1
S31K	Pelican	7.57	71			Pn	07 52 51.4 -1.3
S31K	Pelican	7.57	71	P		Pn	07 52 51.7 -1.0
	baz=261						
BVCY	Beaver Creek	7.73	32			Pn	07 52 56.6 +1.7
BVCY	Beaver Creek	7.73	32	P		Pn	07 52 56.6 +1.7
	baz=219						
P30M	Million Dollar	7.83	54			Pn	07 52 57.7 +1.4
P30M	Million Dollar	7.83	54	P		Pn	07 52 57.7 +1.4
	baz=244						
CHUM	Lake Minchumin	7.85	352			Pn	07 52 57.5 +1.0
CHUM	Lake Minchumin	7.85	352	P		Pn	07 52 57.5 +1.0
	baz=169						
FALS	False Pass	7.89	266			Pn	07 52 57.5 +0.4
FALS	False Pass	7.89	266	P		Pn	07 52 57.5 +0.4
FALS	False Pass	7.89	266	P		Pn	07 52 57.5 +0.4
	baz=75						
K17K	Iditarod	7.89	330	Pn		Pn	07 52 57.0 -0.1
HYT	Haines Junctio	7.92	49	Pn		Pn	07 52 57.9 +0.3
RIDG	Independent Ri	7.98	16			Pn	07 52 59.7 +1.3
L27K	Beaver Creek,	7.99	27	Pn		Pn	07 52 59.0 +0.5
BPAW	Bear Paw Mtn.	7.99	356	Pn		Pn	07 52 57.8 -0.7
SIT	Sitka	8.00	78			Pn	07 52 56.7 -1.8
SIT	Sitka	8.00	78	P		Pn	07 52 56.8 -1.8
SIT	Sitka	8.00	78	P		Pn	07 52 56.7 -1.8
	baz=269						
BCAR	Beaver Creek A	8.00	27	Pn		Pn	07 53 00.2 +1.6
ISLZ	Isanotski Laza	8.09	266			Pn	07 53 00.0 +0.2
J20K	Nowinta River	8.34	347	Pn		Pn	07 53 03.6 +0.4
SCRK	Sand Creek	8.34	18	Pn		Pn	07 53 03.7 +0.3
M13K	Dall Lake	8.35	306	Pn		Pn	07 53 04.7 +1.4
SKAG	Skagway	8.36	61	Pn		Pn	07 53 04.2 +0.6
SKAG	Skagway	8.36	61	P		Pn	07 53 04.7 +1.2
WRH	Wood River Hil	8.38	5	Pn		Pn	07 53 05.0 +1.2
J19K	Poorman	8.39	342	Pn		Pn	07 53 03.9 0.0
S32K	Killisnoo	8.41	75			Pn	07 53 03.0 -1.2
S32K	Killisnoo	8.41	75	P		Pn	07 53 03.0 -1.2
	baz=267						
N30M	Aishikik Lake	8.43	46	Pn		Pn	07 53 05.1 +0.6
NEA2	Nenana	8.47	2	Pn		Pn	07 53 05.8 +0.8
L14K	Kuka Creek	8.50	313	Pn		Pn	07 53 07.3 +1.9
O30N	Mendenhall	8.50	51	Pn		Pn	07 53 06.0 +0.5
M29M	Somme Creek	8.53	38			Pn	07 53 08.1 +2.2
CCB	Clear Creek Bu	8.57	6			Pn	07 53 08.4 +2.1
JIS	Juneau Island	8.59	69			Pn	07 53 06.7 0.0
JIS	Juneau Island	8.59	69	P		Pn	07 53 06.9 +0.3
K15K	Wolf Creek Mou	8.62	320	Pn		Pn	07 53 09.1 +2.0
WECS	Westdahl Cape	8.74	265			Pn	07 53 08.7 -0.1
J25K	Salcha River,	8.75	12	Pn		Pn	07 53 10.4 +1.5
IL31		8.75	8			Pn	07 53 10.1 +1.2
ILAR	Eielson Array	8.75	8	Pn		Pn	07 53 10.7 +1.8
K27K	Chicken	8.76	23	Pn		Pn	07 53 09.4 +0.4
COLA	College	8.79	5	P		Pn	07 53 11.4 +2.0
MDM	Murphy Dome	8.86	4			Pn	07 53 10.9 +0.6
J26L	Joseph Creek	8.90	17	Pn		Pn	07 53 12.5 +1.4
MLY	Manley	8.91	357	Pn		Pn	07 53 12.8 +1.6
WHY	Whitehorse	8.99	54	Pn		Pn	07 53 13.8 +1.5
I23K	Minto, Yukon-K	9.02	1	Pn		Pn	07 53 13.6 +1.0
L29M	L29M	9.10	35	Pn		Pn	07 53 15.6 +1.9
I21K	Tanana	9.12	354	Pn		Pn	07 53 14.5 +0.6
P32M	Atlin	9.19	61	Pn		Pn	07 53 15.2 +0.3
P32M	Atlin	9.19	61	P		Pn	07 53 15.4 +0.4
	baz=254						
M30M	Minto, Yukon	9.20	40	Pn		Pn	07 53 16.0 +0.9
U33K	Whale Pass	9.27	83			Pn	07 53 13.8 -2.2
U33K	Whale Pass	9.27	83	P		Pn	07 53 13.8 -2.2
	baz=277						
CRAG	Craig	9.37	87			Pn	07 53 15.6 -1.8
CRAG	Craig	9.37	87	P		Pn	07 53 16.5 -0.9
CRAG	Craig	9.37	87	P		Pn	07 53 15.6 -1.8
	baz=281						
DAWY	Dawson	9.44	29	Pn		Pn	07 53 19.9 +1.5
EGAK	Eagle	9.61	22	Pn		Pn	07 53 22.1 +1.5
H21K	Melozitna Rive	9.64	352	Pn		Pn	07 53 21.9 +0.8
H24K	Noodor Dome	9.75	4	Pn		Pn	07 53 24.0 +1.4
Q32M	Nakina River	9.78	66	Pn		Pn	07 53 23.3 +0.1
P33M	Teslin, Yukon	9.80	59	Pn		Pn	07 53 23.4 +0.1
P33M	Teslin, Yukon	9.80	59	P		Pn	07 53 23.2 -0.1
	baz=252						
K29M	Barlow Dome	9.81	33	Pn		Pn	07 53 25.4 +1.8
M31M	Drury Creek, Y	9.91	46	Pn		Pn	07 53 26.9 +2.1
UNV	Unalaska Valle	9.92	263	P		Pn	07 53 24.0 -0.9
N32M	Quiet Lake	9.99	53	Pn		Pn	07 53 27.3 +1.3
IMAR	Indian Mountai	10.04	351	Pn		Pn	07 53 27.9 +1.3
FARO	Faro, Yukon	10.35	47	Pn		Pn	07 53 32.9 +2.1
I28M	Miner Creek	10.45	23	Pn		Pn	07 53 33.9 +1.6
R33M	Jennings River	10.52	64	Pn		Pn	07 53 33.6 +0.4
G23K	Bananza Creek	10.59	359	Pn		Pn	07 53 35.5 +1.4
G24K	Hadweenzic Riv	10.63	5	Pn		Pn	07 53 36.7 +2.1
FYU	Fort Yukon	10.66	10	Pn		Pn	07 53 36.8 +1.9
BMAR	Burnt Mountain	11.56	10	Pn		Pn	07 53 48.9 +1.6
G31M	Satah River	13.01	28	Pn		Pn	07 54 09.5 +2.4

BJI **20** *07:59:40.6±0.0,5˚.13S×152˚.29E, h98km, mb4.7/63, mB5.1/26*

DJA **20** *07:59:44.8±0.3,5˚S±2˚×15˚2E±˚, h103km±3km, M5.2/42, mb5.2/42, mB5.6/17, MLv5.4/3, Mw(mB)5.2/17, MwMwp4.9/3, Mwp5.2/3*

IDC **20** *07:59:44.4±0.3,4˚.92S×151˚.74E, h93km±2km, mb4.4/24, mbtmp4.9/28, MS3.7/41, Error ellipse: s-maj=11.9km s-min=7.1km az=107.0*

NEIC **20** *07:59:45.1±2.4,5˚.01S±0˚.06×151˚.89E±0˚.08, h94km±6km, mb5.0/84, Error ellipse: s-maj=12.0km s-min=9.2km az=107.0*

MOS **20** *07:59:45.4±0.9,4˚.95S×151˚.73E, h114km, mb4.8/37, Error ellipse: s-maj=9.8km s-min=6.3km az=106.3*

GCMT **20** *07:59:47.1±0.2,5˚.15S±0˚.01×151˚.83E±0˚.01, h88km±1km, MW5.1/123, Moment Tensor Solution. s78,c98; s123,c197; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.22±.12; Mθθ-2.92±.13; Mϕϕ-0.30±.13; Mrθ-2.78±.09; Mϕr4.24±.12; Mϕr-0.60±.09; Best double couple: M=5.88700×10^16 NP1:ϕ±274.00000°, δ67.00000°, λ47.00000°. NP2:ϕ±161.00000°, δ47.00000°, λ148.00000°. Principal axes: T 5.3390, Plg49.0000°, Azm137.0000°; N 1.0930, Plg38.0000°, Azm294.0000°; P -6.4350, Plg12.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 07:59:44.6±0.2, 5.01S±0.03×151.83E±0.04, h95km±2km, h96km:pP-P, n439, σ1§26/484, mb4.9/107, 9C-15D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.73	16	P	Pn	08 00 02.3	+0.4
	2µm,0.3s,baz=277,slow=0.7,SNR=2.1						
KRVT				S	Sn	08 00 14.4	-0.4
	7µm,0.3s,baz=282,slow=22,SNR=3.8						
RABL	Rabaul	0.88	22	Pn	Pn	08 00 03.9	+0.4
RABL				Sn	Sn	08 00 17.4	-0.1
BULU	Kimbe	1.59	251	P	Pn	08 00 13.1	+1.3
KAVG	Kavieng	2.62	337	P	Pn	08 00 27.4	+2.2
MANU	Manus Island	5.34	303		Pn	08 01 04.5	+2.6
PMG	Port Moresby	6.36	226	P	Pn	08 01 17.2	+1.3
PMG	Port Moresby	6.36	226	P	Pn	08 01 17.0	+1.1
PMG	Port Moresby	6.36	226	P	Pn	08 01 16.8	+1.0
	770nm,0.6s,baz=48,slow=5.6,SNR=92						
PMG				S	Sn	08 02 23.8	-3.4
	299nm,0.6s,baz=135,slow=6.7,SNR=1.7						
HNR	Honiara	9.17	119	P	Pn	08 01 54.6	+0.4
	536nm,0.4s,baz=146,slow=7.8,SNR=1.4						
HNR				S	Sn	08 03 33.1	-2.6
	1µm,0.7s,baz=108,slow=5.0,SNR=1.3						
HNR				LR	LR	08 05 55.5	
	comp=Z,3µm,20.5s,baz=286,slow=40						
GENI	Genyem	11.88	281	P	Pn	08 02 32.0	+1.1
	133nm,1.2s,3µm						
COEN	Coen	12.32	223	P	Pn	08 02 37.2	+0.5
	baz=12,SNR=53						
COEN	Coen	12.32	223	Pn	Pn	08 02 37.4	+0.7
COEN	Coen	12.32	223	P	Pn	08 02 37.4	+0.7
SMPI	Sarmi	13.43	282	P	Pn	08 02 53.6	+2.2
	100nm,1.2s,3µm						
PATS	Pohnpei	13.43	29	P	Pn	08 02 52.9	+1.4
	baz=14						
PATS	Pohnpei	13.43	29	Pn	Pn	08 02 51.9	+0.4
MTSU	Mount Surprise	14.97	209	P	P	08 03 13.5	-0.9
	baz=15,SNR=74						
MTSU	Mount Surprise	14.97	209	P	P	08 03 13.6	-0.9
TV1H	Townsville Har	14.99	199	P	P	08 03 13.6	-1.1
CTA	Charters Tower	15.94	199	P	P	08 03 25.5	+0.4
	15nm,0.4s,baz=20,slow=14,SNR=50						
CTA				S	Sn	08 06 18.9	-1.0
	4.2nm,0.8s,baz=35,slow=15,SNR=1.3						
CTA				LR	LR	08 09 02.8	
	comp=Z,502nm,19.6s,baz=14,slow=35						
CTAO	Charters Tower	15.94	199		P	08 03 25.6	+0.4
CTAO	Charters Tower	15.94	199	P	P	08 03 25.3	+0.1
CTAO	Charters Tower	15.94	199	P	P	08 03 25.6	+0.4
RK1H	Rockhampton Ha	18.32	184	P	Pn	08 03 53.5	+1.0
QIS	Mount Isa	19.49	216	P	Pn	08 04 06.0	-0.5
	baz=20,SNR=117						
QIS	Mount Isa	19.49	216	P	Pn	08 04 06.0	-0.5
KOUNC	Koumac, New Ca	19.63	143	P	Pn	08 04 07.8	-0.3
FAKI	Fak Fak	19.64	275	P	Pn	08 04 08.2	-0.1
FAKI	Fak Fak	19.64	275	P	P	08 04 06.9	+0.9
	59nm,1.8s						
GUMO	Guam	19.73	340	P	Pn	08 04 08.1	-1.1
GUMO	Guam	19.73	340	P	Pn	08 04 08.1	-1.1
GUMO	Guam	19.73	340	P	P	08 04 06.4	-0.5
	334nm,1.0s,baz=168,slow=7.8,SNR=7.5						
GUMO				LR	LR	08 11 20.4	
	comp=Z,114nm,20.3s,baz=134,slow=36						
EIDS	Eidsvold	20.25	182	P	Pn	08 04 14.3	-1.0
	baz=20,SNR=54						
EIDS	Eidsvold	20.25	182	P	Pn	08 04 14.7	-0.6
EIDS	Eidsvold	20.25	182	P	Pn	08 04 14.4	-0.9
KDU	Kakadu	20.57	247	P	P	08 04 16.0	0.0
	baz=21,SNR=63						
SWI	Sorong	20.94	281	P	P	08 04 21.6	+1.6

	81nm,1.0s						
RMQ	Roma	21.55	188	P	P	08 04 28.4	+2.0
	baz=22						
MTN	Manton Dam	21.86	248	P	P	08 04 29.8	0.0
	baz=22,SNR=21						
MTN	Manton Dam	21.86	248	P	P	08 04 29.9	+0.2
MTN	Manton Dam	21.86	248	P	P	08 04 29.7	-0.1
DRS	Darwin Rock St	21.95	249	P	P	08 04 30.8	+0.1
DZM	Mont Dzumac	22.09	141	P	P	08 04 34.1	+1.8
DZM	Mont Dzumac	22.09	141	P	P	08 04 33.9	+1.6
DZM	Mont Dzumac	22.09	141	eP	P	08 04 31.9	-0.4
	336nm,0.8s						
DZM				eS	S	08 08 30.8	+0.7
	149nm,28.1s						
DZM				eLR	LR	08 09 54.1	
	898nm,29.4s						
DZM	Mont Dzumac	22.09	141	LR	LR	08 12 08.6	
	comp=Z,194nm,19.5s,baz=274,slow=34						
ONTNC	Ouen Toro	22.27	142	P	P	08 04 34.9	+0.8
YATNC	Mamie plateau,	22.36	141	P	P	08 04 36.8	+1.8
WB0	Warramunga Arr	22.43	228	P	P	08 04 36.2	+0.4
WR0	Warramunga Arr	22.45	227	P	P	08 04 36.3	+0.4
WRAB	Tennant Creek	22.57	227	P	P	08 04 37.3	0.0
WRAB	Tennant Creek	22.57	227	P	P	08 04 37.3	0.0
WB2	Warramunga Arr	22.57	227	P	P	08 04 37.1	-0.2
	baz=23						
WB2	Warramunga Arr	22.57	227	P	P	08 04 37.4	+0.1
WRA	Warramunga Arr	22.58	227	P	P	08 04 36.2	-1.2
WRA	Warramunga Arr	22.58	227	*i* P	P	08 04 37.2	-0.2
WRA				pmax	pmax		
	comp=Z,48nm,0.5s						
WRA	Warramunga Arr	22.58	227	P	P	08 04 37.2	-0.2
	comp=Z,144nm,0.5s,baz=53,slow=9.7,SNR=128						
WRA				pP	pP	08 04 55.9	-0.6
	comp=Z,110nm,0.7s,baz=52,slow=10.0,SNR=13						
WRA				sP	sP	08 05 07.3	-1.3
	comp=Z,64nm,0.6s,baz=49,slow=12,SNR=6.3						
WRA				PcP	PcP	08 08 28.2	+0.6
	comp=Z,22nm,0.8s,baz=50,slow=2.1,SNR=9.6						
WRA				S	S	08 08 36.3	-1.9
	comp=Z,33nm,1.0s,baz=53,slow=20,SNR=8.3						
WRA				ScP	ScP	08 11 56.7	-0.1
	comp=Z,6.1nm,0.9s,baz=42,slow=2.4,SNR=7.2						
	comp=Z,44nm,0.5s						
OUENC	Ouen Island, N	22.59	141	P	P	08 04 38.1	+0.7
OUENC	Ouen Island, N	22.59	141	P	P	08 04 41.1	+3.7
QLP	Quilpie	22.64	198	P	P	08 04 39.5	+1.6
	baz=23,SNR=15						
QLP	Quilpie	22.64	198	P	P	08 04 40.2	+2.3
MARNC	Mare, Loyalty	22.69	138	P	P	08 04 39.4	+1.0
PINNC	Pines Island,	23.11	141	P	P	08 04 44.0	+1.4
INKA	Innaminka	24.94	204	P	P	08 05 01.5	+2.3
ARMA	Armidale	25.27	180	P	P	08 05 04.0	+1.7
	baz=25,SNR=19						
ARMA	Armidale	25.27	180	P	P	08 05 04.0	+1.7
ARMA	Armidale	25.27	180	P	P	08 05 04.1	+1.8
AS01	Alice Springs	25.31	221	P	P	08 05 03.2	+0.6
ASAR	Alice Springs	25.35	221	P	P	08 05 02.5	-0.4
ASAR	Alice Springs	25.35	221	P	P	08 05 02.5	-0.4
ASAR	Alice Springs	25.35	221	P	P	08 05 03.6	+0.7
	comp=Z,14nm,0.3s,baz=53,slow=9.2,SNR=476						
ASAR				pP	pP	08 05 24.5	+0.1
	comp=Z,68nm,0.7s,baz=53,slow=9.5,SNR=13						
ASAR				sP	sP	08 05 35.3	-0.3
	comp=Z,90nm,0.8s,baz=53,slow=9.5,SNR=8.1						
ASAR				PcP	PcP	08 08 34.2	+0.7
	comp=Z,11nm,0.7s,baz=47,slow=3.1,SNR=7.2						
ASAR				S	S	08 09 23.4	+0.9
	comp=Z,4.2nm,1.0s,baz=37,slow=21,SNR=3.4						
ASAR				ScP	ScP	08 12 04.5	+0.2
	comp=Z,4.7nm,0.9s,baz=51,slow=3.1,SNR=6.7						
ASAR				pScP		08 12 47.4	
	comp=Z,1.8nm,0.7s,baz=57,slow=3.3,SNR=4.7						
	comp=Z,14nm,0.3s						
SANI	Sanana	25.95	276	P	P	08 05 09.6	+1.1
SANI	Sanana	25.95	276	P	P	08 05 09.0	+0.5
	comp=Z,21nm,0.5s,comp=Z,2µm						
CMSA	Cobar Meteorol	27.01	192	P	P	08 05 18.3	+0.5
	baz=27,SNR=48						
CMSA	Cobar Meteorol	27.01	192	P	P	08 05 18.6	+0.8
OOD	Oodnadatta	27.37	212	P	P	08 05 21.6	+0.5
MGCD	Mangrove Creek	28.06	181	P	P	08 05 28.9	+1.8
	baz=28,SNR=4.9						
MGCD	Mangrove Creek	28.06	181	P	P	08 05 28.8	+1.6
LCRK	Leigh Creek	28.37	205	P	P	08 05 30.6	+0.7
STKA	Stephens Creek	28.39	199	P	P	08 05 30.3	+0.2
	baz=28,SNR=33						
STKA	Stephens Creek

GLAD	**Gladstone**	**35.98**	**185**	P		**P**	**08**	**06**	**38.2 +1.9**
OUZ	**Omahuta**	**36.16**	**149**	P		**P**	**08**	**06**	**39.7 +1.8**
MOO	**Moorlands**	**37.50**	**186**	P		**P**	**08**	**06**	**51.1 +1.9**
	baz=38,SNR=12								
MOO	**Moorlands**	**37.50**	**186**	P		**P**	**08**	**06**	**51.6 +2.4**
TAU	**Tasmania Unive**	**37.95**	**185**	P		**P**	**08**	**06**	**54.9 +2.0**
TAU	**Tasmania Unive**	**37.95**	**185**	P		**P**	**08**	**06**	**55.4 +2.5**
TAU	**Tasmania Unive**	**37.95**	**185**	P		**P**	**08**	**06**	**54.9 +2.0**
MEEK	**Meekatharra**	**38.30**	**232**	P		**P**	**08**	**06**	**56.0 -0.2**
	baz=38,SNR=86								
MEEK	**Meekatharra**	**38.30**	**232**	P		**P**	**08**	**06**	**56.3 0.0**
KMBL	**Kambalda**	**38.43**	**223**	P		**P**	**08**	**06**	**56.8 -0.4**
	baz=38,SNR=30								
KMBL	**Kambalda**	**38.43**	**223**	P		**P**	**08**	**06**	**57.1 -0.1**
JOW	**Kunigami**	**39.01**	**325**	P		**P**	**08**	**07**	**02.7 +0.7**
JOW	**Kunigami**	**39.01**	**325**	LR		LR	08	21	44.7
	comp=Z,125nm,19.3s,baz=234,slow=34								
HIZ	**Hauiti**	**39.37**	**151**	P		**P**	**08**	**07**	**07.0 +2.1**
QRZ	**Quartz Range**	**40.21**	**155**	P		**P**	**08**	**07**	**14.3 +2.5**
URZ	**Urewera**	**40.30**	**149**	P		**P**	**08**	**07**	**13.4 +0.8**
URZ	**Urewera**	**40.30**	**149**	LR		LR	08	21	01.3
	comp=Z,142nm,19.6s,baz=301,slow=32								
GIRL	**Giralia**	**40.32**	**241**	P		**P**	**08**	**07**	**13.0 0.0**
RTZ	**Ruatahuna**	**40.50**	**149**	P		**P**	**08**	**07**	**16.2 +1.8**
BKZ	**Black Stump Fm**	**40.68**	**150**	P		**P**	**08**	**07**	**17.3 +1.5**
BKZ				IAmb		IAmb	08	07	18.5
	comp=Z,40nm,1.0s								
THZ	**Tophouse**	**41.15**	**156**	P		**P**	**08**	**07**	**20.6 +1.0**
INZ	**Inchbonnie**	**41.40**	**158**	P		**P**	**08**	**07**	**22.6 +1.1**
MRZ	**Mangatainoka R**	**41.41**	**152**	P		**P**	**08**	**07**	**22.6 +0.9**
KLBR	**Kellerberrin**	**41.46**	**226**	P		**P**	**08**	**07**	**21.3 -0.9**
	baz=42,SNR=20								
KLBR	**Kellerberrin**	**41.46**	**226**	P		**P**	**08**	**07**	**21.4 -0.9**
MORW	**Morawa**	**41.46**	**231**	P		**P**	**08**	**07**	**21.8 -0.5**
	baz=42,SNR=15								
MORW	**Morawa**	**41.46**	**231**	P		**P**	**08**	**07**	**22.2 -0.1**
MORW				IAmb		IAmb	08	07	22.8
	comp=Z,44nm,0.8s								
MORW	**Morawa**	**41.46**	**231**	P		**P**	**08**	**07**	**22.0 -0.3**
BSWZ	**Blackbirch Sta**	**41.51**	**155**	P		**P**	**08**	**07**	**24.1 +1.6**
SNZO	**South Karori**	**41.54**	**154**	P		**P**	**08**	**07**	**24.3 +1.6**
BLDU	**Ballidu**	**41.71**	**228**	P		**P**	**08**	**07**	**23.7 -0.7**
	baz=42,SNR=22								
BLDU	**Ballidu**	**41.71**	**228**	P		**P**	**08**	**07**	**24.1 -0.3**
BFZ	**Birch Farm**	**41.74**	**152**	P		**P**	**08**	**07**	**25.7 +1.3**
BFZ	**Birch Farm**	**41.74**	**152**	P		**P**	**08**	**07**	**25.7 +1.3**
LTZ	**Lake Taylor**	**41.76**	**157**	P		**P**	**08**	**07**	**27.2 +2.6**
KHZ	**Kahutara**	**41.95**	**156**	P		**P**	**08**	**07**	**27.4 +1.3**
JMW	**Monobe**	**42.11**	**337**	P		**P**	**08**	**07**	**27.5 0.0**
RPZ	**Rata Peaks**	**42.11**	**159**	P		**P**	**08**	**07**	**28.1 +0.7**
RPZ	**Rata Peaks**	**42.11**	**159**	P		**P**	**08**	**07**	**29.9 +2.5**
RPZ	**Rata Peaks**	**42.11**	**159**	LR		LR	08	24	51.0
	comp=Z,199nm,18.2s,baz=328,slow=36								
OXZ	**Oxford**	**42.13**	**158**	P		**P**	**08**	**07**	**28.3 +0.7**
NWAO	**Narrogin (SRO)**	**42.55**	**225**	P		**P**	**08**	**07**	**30.4 -0.7**
MLZ	**Mavora Lakes**	**42.64**	**163**	P		**P**	**08**	**07**	**32.7 +1.1**
KPJI	**Karang Pucung**	**42.70**	**265**	P		**P**	**08**	**07**	**30.6 -2.0**
	comp=Z,22nm,0.7s								
MUN	**Mundaring**	**42.78**	**227**	P		**P**	**08**	**07**	**32.8 -0.2**
	baz=43,SNR=8.9								
MUN	**Mundaring**	**42.78**	**227**	P		**P**	**08**	**07**	**33.0 0.0**
JNU	**Nakatsue**	**42.81**	**334**	P		**P**	**08**	**07**	**33.8 +0.6**
ODZ	**Otahua Downs**	**43.14**	**160**	P		**P**	**08**	**07**	**37.7 +2.0**
MJAR	**Matsushiro Arr**	**43.26**	**344**	P		**P**	**08**	**07**	**34.6 -2.2**
	comp=Z,5.6nm,0.8s,baz=162,slow=7.0,SNR=11								
MJAR				pP		**pP**	**08**	**07**	**57.8 -1.7**
	comp=Z,13nm,1.0s,baz=161,slow=8.5,SNR=8.1								
MJAR				LR		LR	08	25	37.9
	comp=Z,66nm,18.7s,baz=164,slow=36								
	comp=Z,5.6nm,0.8s								
MAJO	**Matsushiro**	**43.26**	**344**	P		**P**	**08**	**07**	**36.0 -0.7**
MAJO				IAmb		IAmb	08	07	37.0
	comp=Z,19nm,0.9s								
MAJO	**Matsushiro**	**43.26**	**344**	P		**P**	**08**	**07**	**36.0 -0.7**
MAJO				pmax		pmax			
	comp=Z,19nm,1.0s								
RKGY	**Rocky Gully**	**43.66**	**223**	P		**P**	**08**	**07**	**40.2 +0.2**
	baz=44,SNR=11								
RKGY	**Rocky Gully**	**43.66**	**223**	P		**P**	**08**	**07**	**41.1 +1.0**
BBJI	**Bungbulang**	**43.97**	**264**	P		**P**	**08**	**07**	**42.2 -0.7**
SYZ	**Scrubby Hill**	**44.00**	**163**	P		**P**	**08**	**07**	**44.5 +2.0**
XMI	**Christmas Isla**	**46.00**	**260**	P		**P**	**08**	**07**	**58.3 -0.6**
DLV	**T Lat**	**46.27**	**292**	P		**P**	**08**	**08**	**01.3 0.0**
DLV				IAmb		IAmb	08	08	04.3
	comp=Z,18nm,0.7s								
JTM	**Tenmabayashi**	**46.63**	**349**	P		**P**	**08**	**08**	**02.5 -0.8**
QIZ	**Qiongzhong**	**47.74**	**301**	P		**P**	**08**	**08**	**13.6 +1.2**
QIZ				S		**S**	**08**	**15**	**00.6 -1.4**
QIZ				sS		**sS**	**08**	**15**	**44.5 +3.1**
QIZ				pmax		pmax			
	comp=Z,16nm,1.1s								
QIZ				LR		LR			
	comp=Z,100nm,18.5s								
QIZ				LR		LR			
	comp=Z,150nm,15.1s								
QIZ				LR		LR			
	comp=Z,130nm,16.8s								
QIZ	**Qiongzhong**	**47.74**	**301**	P		**P**	**08**	**08**	**14.2 +1.8**
QIZ				IAmb		IAmb	08	08	15.1
	comp=Z,13nm,0.7s								
QIZ	**Qiongzhong**	**47.74**	**301**	P		**P**	**08**	**08**	**14.2 +1.8**
KSRS	**Korea Array**	**47.76**	**334**	P		**P**	**08**	**08**	**11.8 -0.4**
	comp=Z,1.6nm,0.6s,baz=147,slow=9.4,SNR=9.6								
KSRS				pP		**pP**	**08**	**08**	**34.4 -0.7**
	comp=Z,6.6nm,0.9s,baz=151,slow=8.6,SNR=8.5								
KSRS				LR		LR	08	28	09.7
	comp=Z,58nm,18.2s,baz=145,slow=36								
	comp=Z,1.6nm,0.6s								
KSAR	**Wonju Array Be**	**47.77**	**334**	P		**P**	**08**	**08**	**11.8 -0.4**
KSAR	**Wonju Array Be**	**47.77**	**334**	P		**P**	**08**	**08**	**11.8 -0.4**
INCN	**Inchon**	**48.35**	**333**	P		**P**	**08**	**08**	**17.5 +0.7**
INCN						**pP**	**08**	**08**	**41.0 +1.2**
NJ2	**Nanjing**	**48.40**	**322**	*eP*		**P**	**08**	**08**	**19.9 +2.6**
NJ2				pP		**pP**	**08**	**08**	**42.3 +2.3**
NJ2				pmax		pmax			
	comp=Z,3.0nm,0.5s								
NJ2				pmax		pmax			
	comp=Z,340nm,3.8s								
RAR	**Rarotonga**	**49.58**	**114**	P		**P**	**08**	**08**	**27.9 +1.4**
RAR	**Rarotonga**	**49.58**	**114**	P		**P**	**08**	**08**	**27.9 +1.4**
RAR				pmax		pmax			
	comp=Z,81nm,1.0s								
RAR	**Rarotonga**	**49.58**	**114**	LR		LR	08	26	03.0
	comp=Z,28nm,18.4s,baz=302,slow=32								
ASAJ	**Asahikawa**	**49.60**	**351**	LR		LR	08	27	44.6
	comp=Z,38nm,21.8s,baz=278,slow=34								
IPM	**Ipoh**	**51.61**	**280**	P		**P**	**08**	**08**	**40.9 -1.0**
IPM				IAmb		IAmb	08	08	42.6
	comp=Z,21nm,0.8s								
KULM	**Kulim**	**52.12**	**281**	P		**P**	**08**	**08**	**44.2 -1.4**
KULM				IAmb		IAmb	08	08	45.8
	comp=Z,18nm,0.7s								
USRK	**Ussuriysk Ar.**	**52.14**	**342**	P		**P**	**08**	**08**	**45.4 +0.2**
USRK	**Ussuriysk Ar.**	**52.14**	**342**	P		**P**	**08**	**08**	**45.4 +0.2**
USRK	**Ussuriysk Ar.**	**52.14**	**342**	P		**P**	**08**	**08**	**44.9 -0.4**
	comp=Z,5.4nm,0.7s,baz=161,slow=9.1,SNR=7.3								
USRK				pP		**pP**	**08**	**09**	**08.1 -0.5**
	comp=Z,19nm,1.1s,baz=157,slow=10,SNR=5.7								
	comp=Z,5.4nm,0.7s								
USA0B	**Ussuriysk Arra**	**52.14**	**342**	P		**P**	**08**	**08**	**44.4 -0.8**
USA0B						**pP**	**08**	**09**	**08.2 -0.4**
USA0B	**Ussuriysk Arra**	**52.14**	**342**	P		**P**	**08**	**08**	**44.4 -0.8**
USA0B				*PP		**pP**	**08**	**09**	**08.2 -0.4**
MDJ	**Mudanjiang**	**53.28**	**340**	P		**P**	**08**	**08**	**49.0 -4.7**
MDJ				pmax		pmax			
	comp=Z,10.0nm,1.3s								
MDJ				pmax		pmax			
	comp=Z,200nm,4.3s								
RPSI	**Rantau Prapat**	**53.40**	**277**	P		**P**	**08**	**08**	**53.6 -1.5**
RPSI				IAmb		IAmb	08	08	56.2
	comp=Z,11nm,1.0s								
PSI	**Prapat**	**53.42**	**277**	P		**P**	**08**	**08**	**53.6 -1.8**
PSI				pmax		pmax			
	comp=Z,11nm,1.0s								
ENH	**Enshi**	**53.59**	**314**	P		**P**	**08**	**08**	**56.6 +0.4**
ENH				IAmb		IAmb	08	08	57.6
	comp=Z,21nm,1.0s								
ENH	**Enshi**	**53.59**	**314**	P		**P**	**08**	**08**	**57.1 +0.8**
ENH				pP		**pP**	**08**	**09**	**20.5 +1.1**
ENH				PcP		**PcP**	**08**	**10**	**01.7 0.0**
GYA	**Guiyang**	**53.76**	**308**	⇓P		**P**	**08**	**08**	**58.9 +1.3**
GYA				pmax		pmax			
	comp=Z,11nm,1.1s								
SLVN	**Son La**	**53.77**	**301**	P		**P**	**08**	**08**	**59.2 +1.4**
SLVN				IAmb		IAmb	08	08	60.0
	comp=Z,8.2nm,0.8s								
LYN	**LuoYang**	**54.07**	**320**	*eP*		**P**	**08**	**08**	**59.3 -0.3**
LYN				pmax		pmax			
	comp=Z,13nm,0.9s								
HNS	**HongShan**	**54.54**	**324**	⇓P		**P**	**08**	**09**	**03.5 +0.6**
HNS				pP		**pP**	**08**	**09**	**26.8 +0.7**
HNS				sP		**sP**	**08**	**09**	**39.8 +3.2**
HNS				pmax		pmax			
	comp=Z,12nm,1.3s								
GSI	**Gunungsitoli**	**54.55**	**275**	P		**P**	**08**	**09**	**01.3 -2.2**
	comp=Z,62nm,0.8s,comp=Z,3μm								
KCSI	**Kotacane, Aceh**	**54.66**	**278**	P		**P**	**08**	**09**	**02.1 -2.2**
	comp=Z,40nm,0.7s,comp=Z,7μm								
BNX	**BinXian**	**55.02**	**339**	⇑P		**P**	**08**	**09**	**06.8 +0.6**
BNX				pmax		pmax			
	comp=Z,14nm,1.0s								
BNX				pmax		pmax			
	comp=Z,110nm,4.6s								
KIP	**Kipapa**	**55.73**	**60**	*i* P		**P**	**08**	**09**	**13.1 +1.3**
XAN	**Xi'an**	**56.11**	**317**	⇓P		**P**	**08**	**09**	**14.6 +0.2**
XAN				pP		pP	08	09	38.6 +0.9
XAN				sP		sP	08	09	47.8 -0.5
XAN				pmax		pmax			
	comp=Z,20nm,1.2s								
XAN	**Xi'an**	**56.11**	**317**	P		**P**	**08**	**09**	**14.5 +0.2**
XAN				pP		**pP**	**08**	**09**	**38.6 +0.9**
XAN				sP		**sP**	**08**	**09**	**48.0 -0.3**
MLSI	**Meulaboh, Aceh**	**56.12**	**279**	P		**P**	**08**	**09**	**12.4 -2.4**
	comp=Z,95nm,0.7s								
KMI	**Kunming**	**56.30**	**305**	⇑P		**P**	**08**	**09**	**17.3 +1.2**
KMI				pP		pP	08	09	43.1 +3.7
KMI				sP		sP	08	09	54.4 +4.5
KMI				pmax		pmax			
	comp=Z,21nm,1.0s								
CRAI	**Chiangrai**	**56.42**	**298**	P		**P**	**08**	**09**	**18.1 +1.4**
CRAI				IAmb		IAmb	08	09	18.8
	comp=Z,18nm,0.7s								
KLR	**Kul'dur**	**56.78**	**344**	*d* *i* P		**P**	**08**	**09**	**18.4 -0.4**
KLR				pmax		pmax			
	comp=Z,13nm,1.2s								
KLR	**Kul'dur**	**56.78**	**344**	P		**P**	**08**	**09**	**18.3 -0.4**
	comp=Z,4.6nm,0.8s,baz=165,slow=3.4,SNR=13								
KLR				pP		**pP**	**08**	**09**	**41.2 -1.2**
	comp=Z,19nm,1.0s,baz=155,slow=6.7,SNR=15								
KLR				LR		LR	08	30	45.8
	comp=Z,62nm,20.8s,baz=174,slow=33								
	comp=Z,4.6nm,0.8s								
CMAR	**Chiang Mai Arr**	**57.09**	**296**	P		**P**	**08**	**09**	**22.3 +0.7**
CMAR	**Chiang Mai Arr**	**57.09**	**296**	*i* P		**P**	**08**	**09**	**22.8 +1.3**
CMAR				pmax		pmax			
	comp=Z,7.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**57.09**	**296**	P		**P**	**08**	**09**	**21.2 -0.4**
	comp=Z,6.2nm,0.8s,baz=109,slow=5.1,SNR=34								
CMAR				pP		**pP**	**08**	**09**	**44.0 -0.9**
	comp=Z,1.7nm,0.3s,baz=116,slow=5.3,SNR=1.7								
CMAR				LR		LR	08	33	15.3
	comp=Z,25nm,20.1s,baz=115,slow=35								
	comp=Z,6.2nm,0.8s								
CHTO	**Chiang Mai**	**57.20**	**296**	P		**P**	**08**	**09**	**22.4 0.0**
CHTO				IAmb		IAmb	08	09	24.0
	comp=Z,11nm,0.9s								
CHTO	**Chiang Mai**	**57.20**	**296**	P		**P**	**08**	**09**	**22.4 0.0**
CHTO				pmax		pmax			
	comp=Z,11nm,1.0s								
PZH	**PanZhiHua**	**57.70**	**306**	P		**P**	**08**	**09**	**28.8 +2.9**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,4.7s								
PETK	**Petropavlovsk-**	**58.11**	**4**	P		**P**	**08**	**09**	**27.6 -0.4**
	comp=Z,4.3nm,0.7s,baz=151,slow=6.4,SNR=6.5								
PETK				pP		**pP**	**08**	**09**	**49.8 -2.0**
	comp=Z,6.3nm,0.8s,baz=179,slow=8.9,SNR=5.0								
PETK				LR		LR	08	30	52.8
	comp=Z,49nm,20.6s,baz=166,slow=32								
	comp=Z,4.3nm,0.7s								
CD2	**Chengdu**	**58.14**	**311**	P		**P**	**08**	**09**	**29.0 +0.2**
CD2				pP		pP	08	09	53.8 +1.7
CD2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
XLT	**XiLinHaoTe**	**58.36**	**330**	*eP*		**P**	**08**	**09**	**30.5 +0.4**
XLT				pP		pP	08	09	54.3 +0.6
XLT				sP		sP	08	10	06.0 +1.8
XLT				pmax		pmax			
	comp=Z,13nm,1.6s								
XLT				pmax		pmax			
	comp=Z,91nm,5.5s								
PPT	**Papeete**	**58.59**	**107**	P		**P**	**08**	**09**	**32.0 -0.1**
	comp=Z,36nm,0.7s,baz=34,slow=17,SNR=2.8								
	comp=Z,36nm,0.7s								
PPT2	**Papeete2**	**58.59**	**107**	*e* LR		LR	08	26	42.7
	comp=Z,101nm,31.5s								
PPT2				*e* LR		LR	08	26	48.3
	comp=Z,112nm,33.2s								
HHC	**Hu-ho-hao-te**	**58.66**	**325**	⇓*i*P		**P**	**08**	**09**	**33.3 +1.1**
HHC				pP		pP	08	09	54.8 -0.8
HHC				*e*S		**S**	**08**	**17**	**31.0 +1.4**
HHC				pmax		pmax			
	comp=Z,9.0nm,0.8s								
HHC				pmax		pmax			
	comp=Z,100nm,5.6s								
HHC				LR		LR			
	comp=Z,150nm,16.3s								
HHC				LR		LR			
	comp=Z,100nm,19.8s								
HHC				LR		LR			
	comp=Z,150nm,16.3s								
HEH	**HeiHe**	**58.95**	**342**	*eP*		**P**	**08**	**09**	**34.4 +0.5**
HEH				pmax		pmax			
	comp=Z,9.0nm,0.9s								
HEH				pmax		pmax			
	comp=Z,140nm,5.6s								
TBI	**Tubuai**	**59.36**	**114**	*e* LR		LR	08	27	18.8
	comp=Z,1μm,33.0s								
BTO	**Baotou**	**59.39**	**324**	*eP*		**P**	**08**	**09**	**41.0 +3.7**
BTO				pP		**pP**	**08**	**10**	**04.8 +4.0**
BTO				sP		**sP**	**08**	**10**	**16.6 +5.4**
BTO				S		**S**	**08**	**17**	**44.8 +5.7**
BTO				SS		**SS**	**08**	**21**	**40.5 +4.8**
BTO				pmax		pmax			
	comp=Z,26nm,0.5s								
BTO				pmax		pmax			
	comp=Z,240nm,4.4s								
BTO				LR		LR			
	comp=Z,270nm,7.9s								
BTO				LR		LR			
	comp=Z,330nm,5.4s								
BTO				LR		LR			
	comp=Z,240nm,6.1s								
SHEM	**Shemya Is, Ala**	**60.54**	**15**	LR		LR	08	30	48.3
	comp=Z,78nm,21.1s,baz=223,slow=31								
LZH	**Lanzhou**	**60.71**	**316**	*eP*		**P**	**08**	**09**	**44.8 -1.7**
LZH				pP		pP	08	10	10.0 -0.1
LZH				pmax		pmax			
	comp=Z,11nm,1.2s								
HIA	**Hailar**	**60.83**	**337**	P		**P**	**08**	**09**	**47.2 +0.4**
HIA				IAmb		IAmb	08	10	13.3
	comp=Z,9.9nm,0.9s								
HIA	**Hailar**	**60.83**	**337**	*de*P		**P**	**08**	**09**	**46.9 0.0**
HIA				pmax		pmax			
	comp=Z,12nm,1.2s								
ZEA	**Zeya**	**62.07**	**344**	*i* P		**P**	**08**	**09**	**56.5 +1.4**
DRV	**Dumont d'Urvil**	**62.09**	**185**	P		**P**	**08**	**09**	**56.2 +1.2**
DRV				pP		**pP**	**08**	**10**	**19.1 +0.2**
DRV				sP		**sP**	**08**	**10**	**29.2 -0.3**
MA2	**Magadan**	**64.39**	**359**	P		**P**	**08**	**10**	**08.8 -1.5**
MA2				IAmb		IAmb	08	10	36.2
	comp=Z,74nm,2.0s								
MA2	**Magadan**	**64.39**	**359**	⇓*i*P		**P**	**08**	**10**	**10.8 +0.5**
MA2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
MA2	**Magadan**	**64.39**	**359**	LR		LR	08	34	04.3
	comp=Z,64nm,21.6s,baz=186,slow=32								
GTA	**Gaotai**	**65.16**	**318**	*eP*		**P**	**08**	**10**	**16.5 +0.6**
GTA				pP		pP	08	10	41.0 +1.2
GTA				sP		sP	08	10	50.4 +0.2
GTA				pmax		pmax			
	comp=Z,6.0nm,1.2s								
SHL	**Shillong**	**65.58**	**301**	P		**P**	**08**	**10**	**18.7 -0.2**
SHL				IAmb		IAmb	08	10	19.5
	comp=Z,23nm,0.7s								
SHL	**Shillong**	**65.58**	**301**	P		**P**	**08**	**10**	**18.7 -0.2**
SHL				pmax		pmax			
	comp=Z,23nm,0.7s								
ULN	**Ulaanbaatar**	**65.67**	**329**	P		**P**	**08**	**10**	**18.5 -0.6**
ULN	**Ulaanbaatar**	**65.67**	**329**	⇑*i*P		**P**	**08**	**10**	**19.2 +0.2**
ULN				pmax		pmax			
	comp=Z,13nm,1.7s								
ULN	**Ulaanbaatar**	**65.67**	**329**	P		**P**	**08**	**10**	**19.7 +0.7**
ULN				pP		**pP**	**08**	**10**	**43.8 +0.8**
SONM	**Songino Array**	**65.99**	**328**	P		**P**	**08**	**10**	**20.4 -0.6**
SONM				IAmb		IAmb	08	10	49.0
	comp=Z,14nm,1.2s								
SONM	**Songino Array**	**65.99**	**328**	P		**P**	**08**	**10**	**20.4 -0.6**
SONM				pmax		pmax			
	comp=Z,14nm,1.2s								
SONM	**Songino Array**	**65.99**	**328**	P		**P**	**08**	**10**	**21.0 0.0**
	comp=Z,3.2nm,0.4s,baz=146,slow=4.9,SNR=23								
SONM				pP		**pP**	**08**	**10**	**43.9 -1.2**
	comp=Z,11nm,1.1s,baz=148,slow=8.7,SNR=4.4								
	comp=Z,3.2nm,0.4s								
LSA	**Lhasa**	**67.56**	**305**	P		**P**	**08**	**10**	**32.3 +0.5**
LSA				IAmb		IAmb	08	10	33.3
	comp=Z,11nm,0.8s								
LSA	**Lhasa**	**67.56**	**305**	P		**P**	**08**	**10**	**32.3 +0.5**
LSA				pmax		pmax			
	comp=Z,11nm,0.8s								
SEY	**Seymchan**	**67.76**	**0**	⇑*eP*		**P**	**08**	**10**	**33.2 +1.4**
SEY				pmax		pmax			
	comp=Z,17nm,2.2s								
SEY	**Seymchan**	**67.76**	**0**	LR		LR	08	39	32.8
	comp=Z,36nm,19.3s,baz=323,slow=35								
YAK	**Yakutsk**	**68.99**	**349**	*eP*		**P**	**08**	**10**	**37.3 -2.2**
YAK				*e**PP		**pP**	**08**	**11**	**05.0 +1.2**
YAK				*e*			08	13	10.2
YAK				*e*PPP		PPP	08	14	52.4
YAK				*e*S		**S**	**08**	**19**	**34.6 -1.9**
YAK				*e**SS		**sS**	**08**	**20**	**16.8 0.0**
YAK				*e*SS		**SS**	**08**	**24**	**03.6 -0.6**
YAK				pmax		pmax			
	comp=Z,9.0nm,0.8s								
YAK				pmax		pmax			
	comp=N,5.0nm,1.1s								
YAK				pmax		pmax			
	comp=E,4.0nm,1.1s								
YAK				pmax		pmax			
	comp=Z,209nm,5.5s								
YAK				pmax		pmax			
	comp=N,152nm,4.8s								
YAK				pmax		pmax			
	comp=E,67nm,3.6s								
YAK				smax		smax			
	comp=E,234nm,7.6s								
YAK				smax		smax			
	comp=N,118nm,5.8s								
YAK	**Yakutsk**	**68.99**	**349**	LR		LR	08	43	45.2
	comp=N,24nm,18.0s,baz=112,slow=38								
ZAK	**Zakamensk**	**69.17**	**329**	*eP*		**P**	**08**	**10**	**40.9 -0.1**
ZAK				pmax		pmax			
	comp=Z,12nm,1.0s								
BOD	**Bodaibo**	**69.64**	**340**	*eP*		**P**	**08**	**10**	**42.4 -1.2**
BOD				pmax		pmax			
	comp=Z,11nm,1.6s								
MOY	**Mondy**	**71.10**	**329**	*eP*		**P**	**08**	**10**	**52.7 0.0**
MOY				pmax		pmax			
	comp=Z,20nm,1.5s								
CCD	**Concordia, Ant**	**71.93**	**187**	P		**P**	**08**	**10**	**58.7 +1.0**
CCD				sP		**sP**	**08**	**11**	**33.0 +0.3**
VNDA	**Vanda**	**72.66**	**178**	P		**P**	**08**	**11**	**02.5 +1.0**
VNDA				IAmb		IAmb	08	11	03.6
	comp=Z,40nm,1.4s								
VNDA	**Vanda**	**72.66**	**178**	P		**P**	**08**	**11**	**02.5 +1.0**
VNDA				pmax		pmax			
	comp=Z,40nm,1.4s								
VNDA	**Vanda**	**72.66**	**178**	P		**P**	**08**	**11**	**02.4 +0.8**
	comp=Z,7.9nm,0.7s,baz=334,slow=7.2,SNR=17								
VNDA				pP		**pP**	**08**	**11**	**26.3 +0.1**
	comp=Z,6.1nm,0.9s,baz=300,slow=8.8,SNR=3.5								
VNDA				sP		**sP**	**08**	**11**	**36.6 -0.1**
	comp=Z,8.5nm,1.0s,baz=340,slow=12,SNR=3.3								
	comp=Z,7.9nm,0.7s								
BILL	**Bilibino**	**73.59**	**6**	*i* P		**P**	**08**	**11**	**08.9 +1.8**
BILL				pmax		pmax			
	comp=Z,16nm,3.3s								
WMQ	**Urumqi**	**75.24**	**318**	*eP*		**P**	**08**	**11**	**17.5 +0.2**
WMQ				pP		pP	08	11	41.8 +0.1
WMQ				sP		sP	08	11	58.3 +6.4
WMQ				pmax		pmax			
	comp=Z,8.0nm,1.3s								
HYB	**Hyderabad**	**75.64**	**289**	*eP*		**P**	**08**	**11**	**20.9 +0.9**
K15K	**Wolf Creek Mou**	**75.94**	**21**	P		**P**	**08**	**11**	**22.5 +1.7**
KDAK	**K

baz=317
TDK Taldyqorghan 81.92 317 *e*P P **08 11 53.2 -0.6**
B20K Meade River 82.30 16 P P **08 11 55.4 +0.2**
KSH Kashi 82.34 311 P P **08 11 58.4 +2.1**
KSH pmax pmax
comp=Z,5.0nm,0.5s
MDOK Medeo 82.40 315 *e*P P **08 11 56.7 +0.1**
baz=315
MDOK Medeo 82.40 315 *e*P P **08 11 56.6 0.0**
COLA College 82.41 22 P P **08 11 54.9 -1.0**
COLA IAmb IAmb 08 11 56.4
comp=Z,9.2nm,0.7s
COLA College 82.41 22 P P **08 11 54.9 -1.0**
COLA pmax pmax
comp=Z,9.0nm,0.7s
TNSS Tian-Shan 82.44 314 *e*P P **08 11 56.8 -0.3**
baz=314
TNSS Tian-Shan 82.44 314 *e*P P **08 11 56.8 -0.3**
VRDI Verde Repeater 82.54 26 P P **08 11 55.7 -1.2**
CHKK Chushkaly 82.61 315 *e*P P **08 11 56.1 -1.4**
baz=315
CHKK Chushkaly 82.61 315 *e*P P **08 11 56.1 -1.4**
IL31 82.72 22 P P **08 11 56.4 -1.1**
ILAR Eielson Array 82.72 22 P P **08 11 55.1 -2.5**
ILAR Eielson Array 82.72 22 P P **08 11 55.1 -2.5**
ILAR Eielson Array 82.72 22 P P **08 11 55.8 -1.8**
comp=Z,3.6nm,0.6s,baz=250,slow=4.7,SNR=64
ILAR PKKP **PKKPbc 08 30 20.8 -4.0**
comp=Z,0.6nm,0.5s,baz=351,slow=1.7,SNR=13
ILAR LR LR 08 42 15.4
comp=Z,47nm,20.7s,baz=230,slow=31
comp=Z,3.6nm,0.6s
ULHL Ulahol 82.76 314 P P **08 11 59.1 +0.5**
SNR=5.1
D22K Ayikyak River 82.90 18 P P **08 11 59.0 +0.5**
D22K IAmb IAmb 08 12 40.7
comp=Z,14nm,1.1s
BOOM Boomskoye usch 83.03 314 P P **08 12 00.0 +0.1**
BOOM Boomskoye usch 83.03 314 P P **08 12 00.0 +0.1**
BOOM pmax pmax
comp=Z,6.0nm,0.6s
KUU Kurty 83.08 315 *e*P P **08 11 59.4 -0.5**
comp=Z,21nm,1.7s,baz=315
KUU Kurty 83.08 315 *e*P P **08 11 59.4 -0.5**
KUU pmax pmax
comp=Z,21nm,1.7s
BARN Barnard Glacie 83.26 27 P P **08 12 01.1 +0.4**
NIL Nilore 83.30 305 P P **08 12 00.1 -1.2**
NIL IAmb IAmb 08 12 01.6
comp=Z,14nm,0.7s
NIL Nilore 83.30 305 P P **08 12 00.1 -1.2**
NIL pmax pmax
comp=Z,14nm,0.7s
KURK Kurchatov 83.34 322 P P **08 11 59.8 -1.3**
KURK *p*P **08 12 24.3 -1.6**
KURK Kurchatov 83.34 322 P P **08 11 59.8 -1.3**
KURK pmax pmax
comp=Z,8.0nm,1.1s
KURBB Kurchatov Arra 83.37 322 P P **08 12 00.0 -1.2**
comp=Z,2.5nm,0.8s,baz=114,slow=3.8,SNR=23
KURBB pP **pP 08 12 24.4 -1.7**
comp=Z,3.6nm,0.9s,baz=106,slow=4.4,SNR=7.2
comp=Z,2.5nm,0.8s
TKM2 Tokmak 2 83.38 314 P P **08 12 01.7 0.0**
SNR=6.4
BCAR Beaver Creek A 84.00 25 P P **08 12 03.5 -0.7**
UCH Uchtor 84.01 313 P P **08 12 05.6 +0.4**
SNR=9.2
AAK Ala-Archa 84.11 314 P P **08 12 05.9 +0.5**
SNR=6.6
AAK Ala-Archa 84.11 314 P P **08 12 04.5 -0.9**
AAK Ala-Archa 84.11 314 *c iP* P **08 12 05.4 0.0**
AAK pmax pmax
comp=Z,15nm,1.7s
AAK Ala-Archa 84.11 314 P P **08 12 04.8 -0.6**
comp=Z,4.8nm,0.8s,baz=126,slow=5.4,SNR=18
AAK pP **pP 08 12 29.9 -0.4**
comp=Z,2.4nm,0.8s,baz=128,slow=6.4,SNR=2.4
comp=Z,4.8nm,0.8s
EKS2 Erkin-Say 84.63 314 P P **08 12 08.8 +0.8**
SNR=9.7
BTLS Baital 84.93 316 *e*P P **08 12 09.0 -0.4**
comp=Z,12nm,1.6s,baz=316
BTLS Baital 84.93 316 *e*P P **08 12 08.9 -0.4**
BTLS pmax pmax
comp=Z,12nm,1.6s
EGAK Eagle 84.94 23 P P **08 12 09.2 +0.3**
QSPA South Pole Qui 84.95 180 P P **08 12 08.6 -0.6**
QSPA South Pole Qui 84.95 180 P P **08 12 09.6 +0.5**
comp=Z,33nm,0.7s,baz=332,slow=0.9,SNR=241
comp=Z,33nm,0.7s
HYT Haines Junctio 85.07 28 P P **08 12 10.1 +0.3**
HYT IAmb IAmb 08 12 12.4
comp=Z,14nm,1.0s
DAWY Dawson 85.38 24 P P **08 12 11.0 -0.2**
DAWY IAmb IAmb 08 12 13.5
comp=Z,37nm,1.9s
NRIK Noril'sk 85.85 341 *d iP* P **08 12 12.7 -0.6**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
NRIK Noril'sk 85.85 341 P P **08 12 12.5 -0.8**
comp=Z,2.9nm,0.5s,baz=56,slow=5.4,SNR=5.3
NRIK pP **pP 08 12 37.8 -0.6**
comp=Z,2.5nm,0.4s,baz=108,slow=3.2,SNR=2.4
comp=Z,2.9nm,0.5s
K29M Barlow Dome 86.07 25 P P **08 12 14.6 -0.1**
K29M IAmb IAmb 08 12 17.2
comp=Z,11nm,0.8s
BTK Batken 86.34 311 P P **08 12 15.7 -0.8**
BTK IAmb IAmb 08 12 17.3
comp=Z,27nm,1.7s
BTK Batken 86.34 311 P P **08 12 15.7 -0.8**
BTK pmax pmax
comp=Z,27nm,1.7s
DZA Taraz 86.44 313 *e*P P **08 12 16.4 -0.5**
baz=313
DZA Taraz 86.44 313 *e*P P **08 12 16.4 -0.5**
KK31 Karatay Array 87.07 314 P P **08 12 19.1 -0.7**
KK31 IAmb IAmb 08 12 21.4
comp=Z,24nm,1.8s
KK31 Karatay Array 87.07 314 P P **08 12 19.2 -0.7**
KK31 pmax pmax
comp=Z,24nm,1.8s
KKAR Karatay Array 87.07 314 P P **08 12 19.1 -0.9**
KKAR IAmb IAmb 08 12 21.4
comp=Z,24nm,1.8s
KKAR Karatay Array 87.07 314 P P **08 12 19.0 -0.9**
KKAR Karatay Array 87.07 314 P P **08 12 19.0 -0.9**
KKAR pmax pmax
comp=Z,24nm,1.8s
BRLS Borolday 87.55 313 *e*P P **08 12 21.5 -0.8**
baz=313
BRLS Borolday 87.55 313 *e*P P **08 12 21.4 -0.8**
BBB Bella Bella 87.85 37 LR LR 08 44 08.3
comp=Z,30nm,19.8s,baz=272,slow=30
G31M Satah River 88.33 22 P P **08 12 24.8 -0.5**
G31M IAmb IAmb 08 13 06.6
comp=Z,7.9nm,0.8s
BVAR Borovoye Array 88.83 323 P P **08 12 26.4 -1.6**
comp=Z,2.8nm,0.7s,baz=107,slow=5.8,SNR=13
BVAR pP **pP 08 12 51.2 -1.9**
comp=Z,5.1nm,0.8s,baz=102,slow=5.5,SNR=6.3
BVAR LR LR 08 54 00.9
comp=Z,39nm,19.0s,baz=86,slow=37
comp=Z,2.8nm,0.7s
BRVK Borovoye 88.90 323 P P **08 12 26.7 -1.6**
BRVK Borovoye 88.90 323 ⇑ *iP* P **08 12 26.0 -2.3**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
INK Inuvik 89.00 21 P P **08 12 28.5 +0.1**
INK IAmb IAmb 08 13 09.4
comp=Z,10nm,1.1s
INK Inuvik 89.00 21 P P **08 12 28.5 +0.1**
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 89.00 21 LR LR 08 48 30.1
comp=Z,33nm,20.2s,baz=1.0,slow=33
YBH Yreka Blue Hor 89.92 48 LR LR 08 50 01.6
comp=Z,79nm,18.2s,baz=276,slow=34
J05D Fort Rock, OR 91.17 47 P P **08 12 38.4 -0.9**
J05D IAmb IAmb 08 12 41.2
comp=Z,14nm,0.9s
K05A Summer Lake 91.37 47 P P **08 12 40.3 0.0**
K05A IAmb IAmb 08 12 42.1
comp=Z,15nm,1.0s
PINE Pine Mountain 91.43 46 P P **08 12 40.8 +0.2**
PINE IAmb IAmb 08 12 42.4
comp=Z,11nm,0.9s
PINE **pP 08 13 04.8 -1.5**
NVAR Mina Array Bea 92.98 52 P P **08 12 48.3 +0.4**
NVAR Mina Array Bea 92.98 52 P P **08 12 48.9 +1.0**
comp=Z,5.2nm,0.8s,baz=253,slow=6.7,SNR=28
NVAR pP **pP 08 13 12.5 -0.8**
comp=Z,1.8nm,0.6s,baz=258,slow=6.3,SNR=5.8
NVAR LR LR 08 50 38.8
comp=Z,85nm,18.2s,baz=290,slow=33
comp=Z,5.2nm,0.8s
NV11 Mina Array Sit 93.09 52 P P **08 12 47.5 -0.9**
NV11 IAmb IAmb 08 12 50.1
comp=Z,9.7nm,1.1s
KVN Kaiserville 93.18 51 P P **08 12 48.2 -0.6**
KVN IAmb IAmb 08 12 50.4
comp=Z,6.6nm,1.1s
KVN **pP 08 13 12.9 -1.3**
PFO Pinyon Flats O 94.17 57 LR LR 08 46 15.3
comp=Z,51nm,21.0s,baz=258,slow=30
NEW Newport 94.40 42 LR LR 08 52 35.5
comp=Z,44nm,18.2s,baz=296,slow=34
ELK Elko 95.46 50 LR LR 08 54 32.5
comp=Z,21nm,18.2s,baz=255,slow=34
RPN Rapa Nui 95.57 118 LR LR 08 49 25.8
comp=Z,15nm,21.3s,baz=248,slow=31
ARU Arti 95.95 326 LR LR 08 58 38.5
comp=Z,58nm,18.7s,baz=97,slow=37
GEYT Alibeck 95.97 307 LR LR 09 00 42.7
comp=Z,32nm,18.0s,baz=141,slow=38
YKA Yellowknife Ar 96.06 28 *i* P P **08 13 02.2 +1.0**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 96.06 28 P P **08 13 00.8 -0.4**
comp=Z,0.7nm,0.8s,baz=270,slow=4.8,SNR=12
YKA pP **pP 08 13 25.4 -1.3**
comp=Z,0.4nm,0.6s,baz=271,slow=4.8,SNR=3.9
YKA PKiKP **PKiKP 08 17 41.9 +2.6**
comp=Z,0.2nm,0.5s,baz=276,slow=1.2,SNR=4.1
YKA PKKP **PKKPbc 08 29 47.8 -3.4**
comp=Z,1.0nm,0.7s,baz=90,slow=3.0,SNR=20
YKA LR LR 08 58 21.0
comp=Z,61nm,18.9s,baz=283,slow=37
comp=Z,0.7nm,0.8s
AKTO Aktyubinsk 96.26 320 LR LR 08 56 08.9
comp=Z,68nm,20.2s,baz=46,slow=35
ELIB Princess Elisa 96.36 194 *dP* P **08 13 02.5 0.0**
comp=Z,6.3nm,0.9s
ELIB *dp*P **pP 08 13 27.1 -1.1**
LPIG La Paz 99.20 66 LR LR 08 53 47.7
comp=Z,64nm,18.2s,baz=246,slow=33
PDAR Pinedale Array 99.71 48 P Pdif **08 13 17.9 -0.4**
comp=Z,1.5nm,0.8s,baz=231,slow=2.0,SNR=12
PDAR pP **pP 08 13 42.0 -2.2**
comp=Z,1.2nm,0.6s,baz=236,slow=1.8,SNR=6.6
PDAR LR LR 08 50 04.4
comp=Z,41nm,21.6s,baz=291,slow=30
comp=Z,1.5nm,0.8s
TROLL Troll, Antarti 100.59 189 ⇑PKiKP **PKiKP 08 17 42.2 -5.2**
comp=Z,181nm,0.5s
TROLL ⇑Pdiff **Pdif 08 13 21.4 -0.1**
comp=Z,217nm,0.7s
SNAA Sanae 101.69 188 P **Pdif 08 13 26.2 -0.1**
comp=Z,1.0nm,0.6s,baz=294,slow=22,SNR=1.1
NOA NORSAR Array B 116.78 340 PKP **PKPdf 08 18 16.8 -0.9**
comp=Z,0.5nm,0.7s,baz=53,slow=2.1,SNR=1.8
BOSA Boshof 118.72 234 PKP **PKPdf 08 18 22.2 -0.4**
comp=Z,5.0nm,0.7s,baz=150,slow=1.1,SNR=7.9
PLCA Paso Flores 120.19 144 PKP **PKiKP 08 18 25.4 +0.3**
comp=Z,1.2nm,0.7s,baz=332,slow=1.2,SNR=8.8
SCHQ Schefferville 121.39 25 PKP **PKPdf 08 18 26.1 -0.7**
comp=Z,2.6nm,1.0s,baz=260,slow=13,SNR=2.2
CLL Collm 122.56 331 *e*PKiKP **PKPdf 08 18 28.0 -1.1**
CLL Collm 122.56 331 *e*PKPdf **PKPdf 08 18 28.0 -1.1**
CONA Conrad Observa 123.08 326 *e*PKP **PKPdf 08 18 29.7 -0.7**
comp=Z,3.5nm,1.1s
CKRC Cesky Krumlov 123.42 328 *e*PKPDF **PKiKP 08 18 31.1 0.0**
CKRC Cesky Krumlov 123.42 328 *e*PKiKP **PKiKP 08 18 31.1 0.0**
KHC Kasperske Hory 123.61 328 *e*PKPDF **PKPdf 08 18 31.2 -0.1**
KHC Kasperske Hory 123.61 328 *e*PKiKP **PKPdf 08 18 31.2 -0.1**
GERES GERESS Array B 123.72 328 PKP **PKPdf 08 18 31.1 -0.4**
comp=Z,1.7nm,0.5s,baz=93,slow=2.8,SNR=7.2
WTTA Wattenberg 125.78 327 *i* PKP **PKPdf 08 18 35.2 -0.5**
comp=Z,8.7nm,1.0s
EKA Eskdalemuir Ar 125.95 343 PKP **PKPdf 08 18 34.9 -0.6**
comp=Z,0.9nm,0.4s,baz=21,slow=3.0,SNR=5.6
MOTA Moosalm 126.02 328 *e*PKP **PKPdf 08 18 35.7 -0.4**
comp=Z,4.5nm,0.9s
SQTA Sankt Quirin 126.04 328 *e*PKP **PKPdf 08 18 35.6 -0.5**
comp=Z,6.7nm,0.9s
BTNL Ternell 126.26 334 *d*PKiKP **PKPdf 08 18 35.8 -0.5**
FETA Feichten 126.42 328 *i* PKiKP **PKPdf 08 18 36.9 0.0**
comp=Z,3.5nm,0.8s
DAVA Damuels 126.70 328 *e*PKiKP **PKiKP 08 18 37.8 0.0**
comp=Z,12nm,1.2s
WLF Walferdange 126.91 333 *d*PKiKP **PKPdf 08 18 37.5 0.0**
RCHB Rochefort 126.97 334 *d*PKiKP **PKiKP 08 18 38.2 +0.1**
BMRD Maredsous 127.07 334 *d*PKiKP **PKiKP 08 18 38.1 -0.2**
MCRA Macar, Loja 127.44 99 *e*P **PKPdf 08 18 38.7 -0.9**
GCUF Volcan Galeras 130.77 93 *e*P **PKiKP 08 18 47.9 +0.4**
BBAC Balboa, Cauca 130.94 92 *e*P **PKPdf 08 18 46.2 -0.3**
POPC Popayan, Colom 131.55 91 *e*P **PKPdf 08 18 47.6 -0.1**
JAMC Jamundi, Valle 131.60 90 *e*P **PKPdf 08 18 46.8 -1.0**
YOTC Yotoco, Valle 131.97 89 *e*P **PKiKP 08 18 49.0 -0.3**
CBOC Ciudad Bolivar 132.38 87 *e*P **PKiKP 08 18 49.8 -0.4**
FLOC Florencia 132.49 92 *e*P **PKPdf 08 18 49.7 +0.5**
UREC San Jos de Ur 132.87 84 *e*P **PKPdf 08 18 49.4 -0.4**
GUY2C Guyana, Caldas 133.00 88 *e*P **PKiKP 08 18 51.3 -0.6**
ORTC Ortega, Tolima 133.06 89 *e*P **PKPdf 08 18 50.6 +0.3**
PRAC Prado 133.41 90 *e*P **PKPdf 08 18 51.3 +0.4**
CZSB Cruzeiro do Su 133.81 106 *e*P **PKPdf 08 18 52.0 +0.3**
ROSC El Rosal 134.03 88 PKP **PKiKP 08 18 53.4 -0.4**
comp=Z,20nm,0.5s,baz=170,slow=4.7,SNR=13
ROSC El Rosal 134.03 88 *e*P **PKiKP 08 18 53.3 -0.6**
CHIC Chingaza 134.61 88 *e*P **PKPdf 08 18 53.7 0.0**
VILC Villavicencio, 134.62 89 *e*P **PKPdf 08 18 50.9 -2.5**
BARC Barichara 135.21 86 *e*P **PKPdf 08 18 53.0 -1.6**
PAMC Pamplona, Colo 135.69 85 *e*P **PKPdf 08 18 56.3 +0.6**
CPUP Villa Florida 137.94 139 PKhKP PKPpre 08 18 49.2
comp=Z,2.0nm,0.8s,baz=56,slow=0.5,SNR=4.2
TORD Torodi Ar. Bea 149.45 287 PKP **PKPdf 08 19 18.8 -0.5**
comp=Z,15nm,0.9s,baz=29,slow=3.1,SNR=5.0
TORD PKPbc **PKPbc 08 19 23.4 -0.4**
comp=Z,27nm,0.8s,baz=50,slow=4.8,SNR=16
TORD pPKPbc **pPKPbc 08 19 48.4 -1.7**
comp=Z,8.0nm,0.7s,baz=46,slow=4.2,SNR=3.0
BDFB Brasilia 151.59 137 PKP **PKPdf 08 19 23.5 +0.8**
comp=Z,3.6nm,0.7s,baz=206,slow=7.4,SNR=3.7
BDFB PKPbc **PKPbc 08 19 29.1 +0.1**
comp=Z,7.4nm,0.5s,baz=220,slow=1.8,SNR=15
BDFB PKPab **PKPab 08 19 38.7 +0.9**
comp=Z,17nm,0.6s,baz=199,slow=1.9,SNR=21

NDI ***20*** *08:12:13.5±2.6, 22.°65N×93.°42E, h20km, ML4.1, MW3.9, mb4.3(NEIC)*
NEIC ***20*** *08:12:13.3±1.7, 22.°58N±0.°05×93.°34E±0.°05, h38km±7km, mb4.3/17, Error ellipse: s-maj=8.7km s-min=5.5km az=140.0*
IDC ***20*** *08:12:15.1±1.5, 22.°65N×93.°49E, h63km±16km, mb3.8/18, mbtmp4.1/19, MS3.0/3, Error ellipse: s-maj=17.9km s-min=9.4km az=30.0*
ISC 20 08:12:13.4±0.9, 22.°62N±0.°05×93.°40E±0.°04, h47km±8km, n70, σ1$54/80, mb4.2/26, 1C-1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**0.40**	**252**	*e*P	**Pn**	**08 12 22.5**	**-0.9**
SAIH				*e*S	**Sn**	**08 12 29.2**	**-1.3**
SAIH				IAML		08 12 31.9	
	4μm,0.4s						
SAIH				IAML		08 12 34.5	
	comp=E,8μm,0.6s						
AZL	**Aizawl**	**1.29**	**330**	*e*P	**Pn**	**08 12 36.3**	**+1.2**
AZL				*e*S	**Sn**	**08 12 56.4**	**+5.0**
AZL				IAML		08 12 58.9	
	comp=E,4μm,0.3s						
AZL				IAML		08 13 01.5	
	comp=E,3μm,0.3s						
BRDH	**Bariadhala**	**1.62**	**272**	P	**Pn**	**08 12 40.9**	**+1.4**
	comp=E,309nm,0.4s,baz=90,slow=4.1,SNR=21						
BRDH				S	**Sn**	**08 13 03.9**	**+4.6**
	comp=E,3μm,0.3s,baz=270,slow=20,SNR=57						
BELO	**BELONIA**	**1.90**	**290**	*e*P	**Pn**	**08 12 44.1**	**+0.7**
BELO				*e*S	**Sn**	**08 13 09.3**	**+3.1**
IMP	**Imphal**	**2.26**	**13**	*e*P	**Pn**	**08 12 50.7**	**+2.3**
IMP				*e*S	**Sn**	**08 13 14.8**	**-0.4**
AGT	**Agartala**	**2.34**	**303**	*e*S	**Sn**	**08 13 18.6**	**+1.6**
AGT				IAML		08 13 28.5	
	comp=N,1μm,1.1s						
AGT				IAML		08 13 29.4	
	comp=E,2μm,0.6s						
MND	**Mandalay**	**2.59**	**103**	Pn	**Pn**	**08 12 53.8**	**+1.0**
KOHI	**KOHIMA**	**3.16**	**12**	*e*P	**Pn**	**08 13 02.4**	**+1.6**
KOHI				*e*S	**Sn**	**08 13 37.2**	**-0.1**
KOHI				IAML		08 13 40.9	
	comp=E,582nm,0.4s						
KOHI				IAML		08 13 43.5	
	comp=E,705nm,0.4s						
SHL	**Shillong**	**3.25**	**335**	Pn	**Pn**	**08 13 02.6**	**+0.6**
SHL	**Shillong**	**3.25**	**335**	*e*P	**Pn**	**08 13 02.3**	**+0.2**
SHL				*e*S	**Sn**	**08 13 38.3**	**-1.3**
MOKO	**MOKOCHONG**	**3.83**	**15**	*e*P	**Pn**	**08 13 11.8**	**+1.8**
MOKO				*e*S	**Sn**	**08 13 53.9**	**+0.1**
GUWA	**GUWAHATI**	**3.89**	**337**	*e*P	**Pn**	**08 13 10.8**	**+0.2**
GUWA				*e*S	**Sn**	**08 13 52.3**	**-2.7**
TEZP	**TEZPUR**	**4.02**	**352**	*e*P	**Pn**	**08 13 13.8**	**+1.3**
TEZP				*e*S	**Sn**	**08 13 56.5**	**-1.8**
ITAN	**ITANAGAR**	**4.52**	**4**	*e*S	**Sn**	**08 14 08.9**	**-1.7**
ITAN				IAML		08 14 11.9	
	comp=E,506nm,0.2s						
ITAN				IAML		08 14 12.1	
	comp=N,662nm,0.2s						
ZIRO	**ZIRO**	**4.91**	**5**	*e*P	**Pn**	**08 13 26.2**	**+1.4**
ZIRO				*e*S	**Sn**	**08 14 18.0**	**-2.4**
ZIRO				IAML		08 14 25.5	
	comp=E,1μm,0.6s						
ZIRO				IAML		08 14 30.2	
	comp=E,1μm,0.3s						
GTK	**Tadong**	**6.39**	**318**	*e*P	**Pn**	**08 13 45.0**	**-0.1**
GTK				*e*S	**Sn**	**08 14 55.5**	**-1.4**
GTK				IAML		08 14 58.8	
	comp=E,217nm,0.2s						
GTK				IAML		08 15 05.2	
	comp=E,144nm,0.5s						
CHTO	**Chiang Mai**	**6.42**	**125**	Pn	**Pn**	**08 13 47.2**	**+1.7**
CM31	**Chiang Mai Arr**	**6.64**	**128**	Pn	**Pn**	**08 13 49.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**6.64**	**128**	Pn	**Pn**	**08 13 50.4**	**+1.9**
CMAR	**Chiang Mai Arr**	**6.64**	**128**	P	**Pn**	**08 13 49.7**	**+1.2**
	comp=E,3.7nm,0.4s,baz=307,slow=13,SNR=26						
CMAR				S	**Sn**	**08 15 03.9**	**+1.0**
	comp=E,1.5nm,0.3s,baz=220,slow=18,SNR=1.4						
CMAR				LR	LR	08 17 03.3	
	comp=E,120nm,18.9s,baz=300,slow=44						
LSA	**Lhasa**	**7.34**	**345**	Pn	**Pn**	**08 14 00.7**	**+2.3**
KMI	**Kunming**	**8.91**	**72**	⇓Pn	Pn	08 14 28.6	+8.8
KMI				Sn	Sn	08 16 11.8	+13
SLVN	**Son La**	**9.84**	**95**		**Pn**	**08 14 34.6**	**+2.3**
GOMU	**GeErMu**	**13.59**	**5**	P	**Pn**	**08 15 22.8**	**-1.1**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
XAN	**Xi'an**	**17.76**	**47**	⇑P	**Pn**	**08 16 16.3**	**-1.0**
PALK	**Pallekele**	**19.55**	**221**	LR	LR	08 25 45.9	
	comp=Z,34nm,19.1s,baz=174,slow=41						
NIL	**Nilore**	**20.85**	**306**	P	**P**	**08 16 50.7**	**-0.7**
NIL				IAmb	IAmb	08 16 52.8	
	comp=Z,14nm,0.7s						
KSH	**Kashi**	**22.44**	**323**	P	**P**	**08 17 14.1**	**+5.6**
KSH	**Kashi**	**22.44**	**323**	pmax	pmax		
	comp=Z,6.0nm,0.5s						
KBL	**Kabul**	**24.40**	**305**	P	**P**	**08 17 27.0**	**-0.6**
KBL				IAmb	IAmb	08 17 29.8	
	comp=Z,6.6nm,0.9s						
BOOM	**Boomskoye usch**	**24.59**	**328**	P	**P**	**08 17 31.5**	**+2.2**
AAK	**Ala-Archa**	**25.43**	**326**	P	**P**	**08 17 37.6**	**+0.7**
AAK				IAmb	IAmb	08 17 54.4	
	comp=Z,13nm,1.4s						
AAK	**Ala-Archa**	**25.43**	**326**	LR	LR	08 28 17.8	
	comp=Z,56nm,20.1s,baz=180,slow=38						
MK31	**Makanchi Array**	**25.74**	**342**	P	**P**	**08 17 39.9**	**+0.4**
MK31				IAmb	IAmb	08 17 42.1	
	comp=Z,3.6nm,0.8s						
MKAR	**Makanchi Array**	**25.74**	**342**	P	**P**	**08 17 39.4**	**-0.1**
MKAR	**Makanchi Array**	**25.74**	**342**	P	**P**	**08 17 40.1**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=154,slow=10.0,SNR=35						
	comp=Z,4.7nm,0.8s						
MAKZ	**Makanchi**	**25.84**	**342**	P	**P**	**08 17 40.6**	**+0.2**
BTK	**Batken**	**25.85**	**317**	P	**P**	**08 17 40.7**	**+0.1**
BTK				IAmb	IAmb	08 17 56.9	
	comp=Z,12nm,1.1s						
SIMJ	**Simiganj**	**26.27**	**313**	P	**P**	**08 17 43.8**	**-0.7**
SIMJ				IAmb	IAmb	08 17 48.2	
	comp=Z,6.4nm,1.1s						
SONM	**Songino Array**	**27.23**	**19**	P	**P**	**08 17 53.2**	**+0.1**
SONM	**Songino Array**	**27.23**	**19**	P	**P**	**08 17 53.7**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=198,slow=10.0,SNR=8.1						
	comp=Z,1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**30.27**	**341**	P	**P**	**08 18 20.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=158,slow=8.3,SNR=6.8						
KURBB				PcP	**PcP**	**08 21 19.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=178,slow=3.0,SNR=1.7						
	comp=Z,1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**31.95**	**350**	P	**P**	**08 18 34.7**	**0.0**
ZALV	**Zalesovo Beam**	**31.95**	**350**	P	**P**	**08 18 35.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=170,slow=9.9,SNR=4.8						
	comp=Z,1.0nm,0.6s						
GEYT	**Alibeck**	**33.85**	**305**	P	**P**	**08 18 51.5**	**0.0**
	comp=Z,1.1nm,0.2s,baz=91,slow=16,SNR=1.6						
	comp=Z,1.1nm,0.2s						
BVAR	**Borovoye Array**	**35.07**	**336**	P	**P**	**08 19 02.2**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=149,slow=9.0,SNR=4.9						
BVAR				PcP	**PcP**	**08 21 31.6**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=147,slow=3.4,SNR=1.4						
	comp=Z,0.8nm,0.5s						
ABKAR	**Akbulak array**	**37.44**	**324**	P	**P**	**08 19 22.1**	**0.0**
ABKAR				IAmb	IAmb	08 19 23.8	
	comp=Z,2.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**38.27**	**46**	P	**P**	**08 19 27.7**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=245,slow=7.4,SNR=1.9						
	comp=Z,1.0nm,0.6s						
KLR	**Kul'dur**	**40.20**	**39**	P	**P**	**08 19 43.5**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=262,slow=9.8,SNR=7.8						
	comp=Z,1.4nm,0.5s						
WB0	**Warramunga Arr**	**58.11**	**133**	P	**P**	**08 22 02.3**	**-0.1**
WRA	**Warramunga Arr**	**58.20**	**133**	P	**P**	**08 22 02.1**	**-1.0**
WRA	**Warramunga Arr**	**58.20**	**133**	P	**P**	**08 22 02.5**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=320,slow=7.5,SNR=35						
	comp=Z,1.8nm,0.4s						
WB2	**Warramunga Arr**	**58.21**	**133**	P	**P**	**08 22 02.8**	**-0.3**
WR0	**Warramunga Arr**	**58.34**	**133**	P	**P**	**08 22 03.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**59.09**	**313**	P	**P**	**08 22 08.8**	**-0.3**
FINES	**FINESS Array B**	**59.57**	**329**	P	**P**	**08 22 12.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=93,slow=7.6,SNR=6.3						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**60.56**	**137**	P	**P**	**08 22 19.0**	**-0.4**
ASAR	**Alice Springs**	**60.56**	**137**	P	**P**	**08 22 19.6**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=321,slow=6.8,SNR=49						
	comp=Z,2.7nm,0.6s						
ARCES	**ARCESS Array B**	**61.30**	**338**	P	**P**	**08 22 23.6**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=110,slow=7.9,SNR=5.9						
	comp=Z,2.4nm,0.9s						
SPITS	**Spitsbergen Ar**	**65.36**	**347**	P	**P**	**08 22 50.2**	**-0.2**
	comp=Z,9.2nm,1.1s,baz=51,slow=11,SNR=1.3						
	comp=Z,9.2nm,1.1s						
HFS	**Hagfors**	**65.56**	**327**	P	**P**	**08 22 51.8**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=101,slow=7.7,SNR=9.8						
	comp=Z,2.7nm,0.6s						
GERES	**GERESS Array B**	**66.66**	**315**	P	**P**	**08 22 58.9**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=77,slow=7.0,SNR=5.2						
	comp=Z,1.6nm,0.6s						
NB2	**NORSAR Subarra**	**66.72**	**328**	P	**P**	**08 22 58.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**66.72**	**328**	P	**P**	**08 22 58.7**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=86,slow=6.1,SNR=4.1						
	comp=Z,0.9nm,0.7s						
CLL	**Collm**	**66.77**	**318**	*e*Px	Px	08 23 04.0	
BMAR	**Burnt Mountain**	**80.59**	**19**	P	**P**	**08 24 22.2**	**+1.5**
ILAR	**Eielson Array**	**81.42**	**22**	P	**P**	**08 24 25.5**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=5.0,SNR=5.1						
	comp=Z,0.2nm,0.6s						
C36M	**Paulatuk**	**84.42**	**13**	P	**P**	**08 24 39.7**	**-0.8**
C36M				IAmb	IAmb	08 25 01.7	
	comp=Z,2.5nm,1.1s						
YKA	**Yellowknife

IDC 20 08:20:01.9±3.2, 55.07N×84.00E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=27.3km s-min=15.7km az=179.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.22**	**157**	I	I	08 27 20.0	
	0.1nm,0.9s,baz=334,slow=339,SNR=20						
ZALV	**Zalesovo Beam**	**1.22**	**157**	Pg	Pg	08 20 23.4	-1.8
	0.6nm,0.3s,baz=340,slow=20,SNR=9.1						
ZALV				Lg	Lg	08 20 42.4	
	1.1nm,0.3s,baz=338,slow=27,SNR=15						
KURBB	**Kurchatov Arra**	**5.55**	**219**	Pn	Pn	08 21 25.7	0.0
	baz=38,slow=13,SNR=2.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.35**	**188**	Pn	Pn	08 22 04.8	+0.6
	0.1nm,0.3s,baz=9.8,slow=9.4,SNR=1.8						
	0.2nm,0.7s						

*IDC **20** 08:20:49.5±0.7, 28.85N×142.68E, h0km, mb4.0/21, mbtmp3.9/24, ML3.5/3, MS3.1/1, Error ellipse: s-maj=18.5km s-min=15.4km az=89.0*
*MOS **20** 08:20:50.7±1.2, 28.88N×142.61E, h13km, mb4.5/19, Error ellipse: s-maj=14.5km s-min=5.8km az=113.1*
*JMA **20** 08:20:53.5±0.1, 29.0N±0.4×14.2E±, h46km, MV4.1/18, NEAR CHICHIJIMA ISLAND*
*NEIC **20** 08:20:53.7±1.6, 28.87N±0.06×142.7E±0.2, h21km±6km, mb4.5/18, Error ellipse: s-maj=20.9km s-min=9.1km az=93.0*

ISC 20 08:20:54.6±0.5, 28.92N±0.05×142.61E±0.10, h27km, n100, σ2.507/108, mb4.2/43, 7C-9D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.85**	**192**	*e*P	**Pn**	**08 21 23.8**	**-0.8**
CBIJ				S	**Sn**	**08 21 46.2**	**-0.9**
JCJ	**Chichijima**	**1.85**	**192**		**Pn**	**08 21 23.1**	**-1.5**
JCJ	**Chichijima**	**1.85**	**192**	Pn	**Pn**	**08 21 20.0**	**-4.6**
	7.2nm,0.3s,baz=293,slow=16,SNR=1.6						
JCJ				Sn	**Sn**	**08 21 40.6**	**-6.5**
	38nm,0.3s,baz=108,slow=24,SNR=9.1						
JHH2	**Haha-jima-NKT2**	**2.31**	**190**	*e*S	**Sn**	**08 21 57.8**	**-0.6**
BSO3	**Boso 3**	**6.13**	**344**	*e*P	**Pn**	**08 22 21.9**	**-1.3**
BSO3				S	**Sn**	**08 23 28.1**	**-4.2**
BSO4	**Boso 4**	**6.35**	**343**	P	**Pn**	**08 22 25.2**	**-1.1**
BSO4				S	**Sn**	**08 23 35.2**	**-2.7**
JOD2	**Odawara 2**	**7.00**	**336**	*e*S	**Sn**	**08 23 48.8**	**-5.2**
JHU	**Hanno**	**7.46**	**339**	P	**Pn**	**08 22 40.0**	**-1.6**
JHU				S	**Sn**	**08 24 00.1**	**-5.3**
JYT	**Yasato**	**7.57**	**345**	S	**Sn**	**08 24 05.0**	**-3.0**
JRY	**Ryogami san**	**7.74**	**337**	P	**Pn**	**08 22 44.4**	**-1.1**
JRY				S	**Sn**	**08 24 09.3**	**-3.0**
JAG	**Ashikaga**	**7.94**	**341**	P	**Pn**	**08 22 45.3**	**-3.0**
JAG				*e*S	**Sn**	**08 24 10.3**	**-7.0**
MJA0	**Matsu Arr-Jizo**	**8.44**	**335**	*e*P	**Pn**	**08 22 54.3**	**-0.9**
MJAR	**Matsushiro Arr**	**8.46**	**335**	Pn	**Pn**	**08 22 53.5**	**-1.8**
	0.3nm,0.3s,baz=160,slow=10,SNR=23						
MJAR				Sn	**Sn**	**08 24 23.5**	**-6.4**
	0.1nm,0.3s,baz=277,slow=40,SNR=1.5						
	2.7nm,0.5s						
MAJO	**Matsushiro**	**8.46**	**335**	Pn	**Pn**	**08 22 55.1**	**-0.3**
MAJO	**Matsushiro**	**8.46**	**335**	*d* P	**Pn**	**08 22 55.4**	**0.0**
MJB9	**Matsu-Tunnel**	**8.46**	**335**	Pn	**Pn**	**08 22 55.9**	**+0.5**
JMM	**Marumori**	**9.05**	**351**		**Pn**	**08 23 01.7**	**-1.7**
KSRS	**Korea Array**	**14.94**	**309**	Pn	**Pn**	**08 24 24.5**	**+0.5**
	0.3nm,0.3s,baz=115,slow=12,SNR=8.8						
	2.3nm,0.7s						
USA0B	**Ussuriysk Arra**	**17.45**	**334**	*c* P	**P**	**08 24 56.8**	**-0.2**
USRK	**Ussuriysk Ar.**	**17.45**	**334**	P	**Pn**	**08 24 54.7**	**-1.3**
	0.2nm,0.3s,baz=143,slow=9.4,SNR=3.0						
	2.3nm,0.6s						
YSS	**Yuzh-Sakhalins**	**18.01**	**0**	*e*P	**Pn**	**08 25 01.9**	**-0.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BNX	**BinXian**	**20.63**	**329**	⇓P	**P**	**08 25 31.3**	**-0.6**
BNX				pmax	pmax		
	comp=Z,13nm,0.7s						
BNX				pmax	pmax		
	comp=Z,91nm,4.3s						
TYV	**Tymovskoe**	**21.92**	**0**	*e*P	**P**	**08 25 47.1**	**+1.5**
TYV				*e*S	Sn	08 29 52.7	-4.2
TYV				pmax	pmax		
	comp=Z,5.0nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,4.9s						
TYV				smax	smax		
	comp=N,500nm,8.6s						
TYV				smax	smax		
	comp=E,600nm,8.6s						
KLR	**Kul'dur**	**21.92**	**341**	⇑*e*P	**P**	**08 25 46.6**	**+0.9**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KLR	**Kul'dur**	**21.92**	**341**	P	**P**	**08 25 44.6**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=146,slow=9.6,SNR=6.4						
	comp=Z,1.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**23.91**	**107**	T	T	08 51 01.3	
	baz=298						
H11N1	**WAKE ISLAND Hy**	**23.91**	**107**	T	T	08 51 17.5	
	baz=298						
H11N3	**WAKE ISLAND Hy**	**23.92**	**107**	T	T	08 51 13.1	
	baz=298						
HEH	**HeiHe**	**24.22**	**336**	*e*P	**P**	**08 26 11.1**	**+2.1**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,190nm,5.0s						
PETK	**Petropavlovsk-**	**26.60**	**21**	P	**P**	**08 26 29.8**	**-0.7**
	comp=Z,2.4nm,1.1s,baz=247,slow=17,SNR=0.9						
	comp=Z,2.4nm,1.1s						
HIA	**Hailar**	**26.80**	**326**	⇑*i*P	**P**	**08 26 34.6**	**+2.3**
HIA				pmax	pmax		
	comp=Z,12nm,1.6s						
ZEA	**Zeya**	**27.23**	**340**	*e*P	**P**	**08 26 38.1**	**+2.0**
MA2	**Magadan**	**31.16**	**8**	⇓*e*P	**P**	**08 27 14.0**	**+3.1**
ULN	**Ulaanbaatar**	**33.29**	**314**	⇓*e*P	**P**	**08 27 30.0**	**0.0**
SONM	**Songino Array**	**33.69**	**314**	P	**P**	**08 27 34.6**	**+1.1**
SONM	**Songino Array**	**33.69**	**314**	P	**P**	**08 27 34.6**	**+1.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**33.69**	**314**	P	**P**	**08 27 33.1**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=122,slow=9.0,SNR=8.9						
	comp=Z,1.0nm,0.7s						
SEY	**Seymchan**	**34.61**	**8**	*c*eP	**P**	**08 27 41.1**	**0.0**
SEY				pmax	pmax		
	comp=Z,5.0nm,1.8s						
MOY	**Mondy**	**38.32**	**318**	*e*P	**P**	**08 28 15.2**	**+2.2**
MOY				*i*		08 28 16.5	
MOY				*e*		08 30 25.0	
CRAI	**Chiangrai**	**39.21**	**267**	P	**P**	**08 28 20.5**	**-0.2**
CRAI				IAmb	IAmb	08 28 22.8	
	comp=Z,4.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.12**	**265**	*e*P	**P**	**08 28 37.0**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.12**	**265**	P	**P**	**08 28 35.8**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=46,slow=6.6,SNR=5.1						
CMAR				LR	LR	08 45 30.9	
	comp=Z,24nm,20.5s,baz=205,slow=36						
	comp=Z,1.2nm,0.3s						
MTN	**Manton Dam**	**42.97**	**197**	P	**P**	**08 28 51.1**	**-0.5**
MTN				IAmb	IAmb	08 29 16.4	
	comp=Z,14nm,1.1s						
TIXI	**Tiksi**	**43.45**	**354**	⇓*e*P	**P**	**08 28 56.4**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.0s						
DGZ	**Jazzator, Alta**	**46.30**	**312**	*de*P	**P**	**08 29 18.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZALV	**Zalesovo Beam**	**48.38**	**318**	*e*P	**P**	**08 29 34.9**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**48.38**	**318**	P	**P**	**08 29 33.9**	**0.0**
	comp=Z,0.6nm,0.4s,baz=107,slow=8.3,SNR=3.9						
	comp=Z,0.6nm,0.4s						
WB0	**Warramunga Arr**	**49.05**	**190**	P	**P**	**08 29 39.2**	**-0.2**
WB0				IAmb	IAmb	08 29 51.5	
	comp=Z,5.8nm,0.9s						
WR0	**Warramunga Arr**	**49.21**	**190**	P	**P**	**08 29 39.9**	**-0.8**
WR0				IAmb	IAmb	08 30 17.9	
	comp=Z,5.1nm,1.1s						
WB2	**Warramunga Arr**	**49.23**	**190**	P	**P**	**08 29 40.6**	**-0.2**
WRA	**Warramunga Arr**	**49.23**	**190**	P	**P**	**08 29 40.6**	**-0.2**
WRA	**Warramunga Arr**	**49.23**	**190**	*i* P	**P**	**08 29 40.4**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**49.23**	**190**	P	**P**	**08 29 40.0**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=11,slow=8.2,SNR=20						
	comp=Z,4.3nm,0.8s						
MK31	**Makanchi Array**	**49.62**	**308**	P	**P**	**08 29 43.5**	**-0.2**
MK31	**Makanchi Array**	**49.62**	**308**	P	**P**	**08 29 43.5**	**-0.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**49.62**	**308**	P	**P**	**08 29 43.2**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=76,slow=10,SNR=16						
MKAR				PcP	**PcP**	**08 31 04.5**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=88,slow=4.6,SNR=1.9						
	comp=Z,1.2nm,0.7s						
NRIK	**Noril'sk**	**51.10**	**338**	⇓*e*P	**P**	**08 29 55.1**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NRIK	**Noril'sk**	**51.10**	**338**	P	**P**	**08 29 54.6**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=123,slow=9.1,SNR=1.6						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**51.99**	**314**	P	**P**	**08 30 01.3**	**-0.1**
KURK				IAmb	IAmb	08 30 04.6	
	comp=Z,12nm,1.2s						
KURK	**Kurchatov**	**51.99**	**314**	P	**P**	**08 30 01.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,12nm,1.2s						
KURBB	**Kurchatov Arra**	**52.05**	**313**	P	**P**	**08 30 01.6**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=90,slow=7.7,SNR=23						
	comp=Z,2.8nm,0.7s						
ASAR	**Alice Springs**	**52.95**	**190**	P	**P**	**08 30 07.7**	**-1.0**
ASAR	**Alice Springs**	**52.95**	**190**	P	**P**	**08 30 07.7**	**-1.0**
ASAR	**Alice Springs**	**52.95**	**190**	P	**P**	**08 30 07.1**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=11,slow=6.3,SNR=2.4						
	comp=Z,0.1nm,0.3s						
IMAR	**Indian Mountai**	**53.26**	**27**	P	**P**	**08 30 10.3**	**-0.2**
BOOM	**Boomskoye usch**	**54.51**	**303**	P	**P**	**08 30 19.5**	**-0.8**
BOOM	**Boomskoye usch**	**54.51**	**303**	P	**P**	**08 30 19.5**	**-0.8**
BOOM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**55.54**	**304**	⇓*e*P	**P**	**08 30 28.2**	**+0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**55.54**	**304**	P	**P**	**08 30 27.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=60,slow=20,SNR=2.1						
	comp=Z,0.7nm,0.5s						
D24K	**Happy Valley**	**55.68**	**24**	P	**P**	**08 30 28.9**	**+0.9**
ILAR	**Eielson Array**	**55.94**	**29**	P	**P**	**08 30 29.1**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=258,slow=6.2,SNR=7.8						
	comp=Z,0.7nm,0.8s						
E25K	**Arctic Village**	**56.73**	**25**	P	**P**	**08 30 36.5**	**+0.8**
E25K				IAmb	IAmb	08 30 46.0	
	comp=Z,7.3nm,1.4s						
BVAR	**Borovoye Array**	**56.97**	**317**	P	**P**	**08 30 37.2**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=90,slow=8.1,SNR=10						
	comp=Z,1.3nm,0.5s						
BRVK	**Borovoye**	**57.03**	**317**	*d* P	**P**	**08 30 37.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.0s						
KK31	**Karatay Array**	**58.34**	**305**	P	**P**	**08 30 46.5**	**-0.8**
KK31				IAmb	IAmb	08 30 51.0	
	comp=Z,4.1nm,1.0s						
KK31	**Karatay Array**	**58.34**	**305**	P	**P**	**08 30 46.5**	**-0.8**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**58.34**	**305**	P	**P**	**08 30 46.7**	**-0.7**
KKAR	**Karatay Array**	**58.34**	**305**	P	**P**	**08 30 46.7**	**-0.7**
G30M	**tAoh Zraii Nji**	**60.31**	**27**	P	**P**	**08 31 01.1**	**+0.5**
F31M	**Tsiigehtchic**	**61.23**	**26**	P	**P**	**08 31 06.8**	**0.0**
F31M				IAmb	IAmb	08 31 20.4	
	comp=Z,3.9nm,1.0s						
ARU	**Arti**	**63.22**	**322**	*c* P	**P**	**08 31 22.5**	**+2.2**
ARU						08 33 37.0	
ARU				S	**S**	**08 39 58.5**	**+8.4**
ARU				SS	**SS**	**08 44 00.0**	**+4.0**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ABKAR	**Akbulak array**	**64.10**	**314**	P	**P**	**08 31 26.1**	**-0.1**
ABKAR	**Akbulak array**	**64.10**	**314**	P	**P**	**08 31 26.2**	**-0.1**
ABKAR				IAmb	IAmb	08 31 27.6	
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**70.37**	**29**	*e*P	**P**	**08 32 05.4**	**-0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**70.37**	**29**	P	**P**	**08 32 05.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=294,slow=6.0,SNR=15						
	comp=Z,1.3nm,0.8s						
BELG	**Belogornoye**	**70.52**	**320**	*c* P	**P**	**08 32 07.7**	**+0.9**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**76.48**	**334**	P	**P**	**08 32 41.1**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=46,slow=10,SNR=2.7						
	comp=Z,1.6nm,0.9s						
BMO	**Blue Mountains**	**76.76**	**46**	P	**P**	**08 32 43.3**	**-0.5**
BMO				IAmb	IAmb	08 32 44.6	
	comp=Z,4.3nm,1.3s						
BMO	**Blue Mountains**	**76.76**	**46**	P	**P**	**08 32 43.3**	**-0.5**
BMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KBZ	**Khabaz**	**77.05**	**313**	⇑*e*P	**P**	**08 32 46.2**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KBZ	**Khabaz**	**77.05**	**313**	P	**P**	**08 32 45.1**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=41,slow=2.9,SNR=4.0						
	comp=Z,1.7nm,0.8s						
KIV	**Kislovodsk**	**77.08**	**313**	*e*P	**P**	**08 32 49.1**	**+3.5**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NVAR	**Mina Array Bea**	**79.10**	**52**	P	**P**	**08 32 57.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=284,slow=4.6,SNR=5.7						
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**82.06**	**338**	*e*P	**P**	**08 33 13.6**	**+1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**82.06**	**338**	P	**P**	**08 33 11.0**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=45,slow=4.9,SNR=3.5						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**82.66**	**45**	P	**P**	**08 33 14.3**	**-1.8**
	comp=Z,0.7nm,0.9s,baz=284,slow=6.0,SNR=5.0						
	comp=Z,0.7nm,0.9s						
RAYN	**Ar Rayn**	**84.76**	**294**	P	**P**	**08 33 27.3**	**+0.5**
RAYN	**Ar Rayn**	**84.76**	**294**	P	**P**	**08 33 27.3**	**+0.5**
RAYN				pmax	pmax		
	comp=Z,20nm,1.4s						
BRTR	**Keskin Array B**	**85.04**	**313**	P	**P**	**08 33 28.8**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=45,slow=4.3,SNR=3.3						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**94.21**	**53**	P	**P**	**08 34 11.6**	**0.0**
	comp=Z,0.8nm,1.0s,baz=298,slow=3.9,SNR=4.1						
	comp=Z,0.8nm,1.0s						

DJA 20 08:23:08.3±0.8, 9.3S±4.3×111.3E±, h30km±8km, M3.7/13, mb4.2/1, MLv3.5/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.96**	**46**	P	Pn	08 23 24.9	-0.9
GMJI				S	Sn	08 23 37.7	-0.7
PWJI	**Pagerwojo**	**1.31**	**315**	P	Pn	08 23 30.6	0.0
PWJI				S	Sn	08 23 46.7	-0.4
BLJI	**Banyuglugur**	**1.46**	**35**	P	Pn	08 23 33.4	+0.8
BLJI				S	Sn	08 23 51.6	+0.8
JAGI	**Jajag, Banyuwa**	**1.47**	**71**	P	Pn	08 23 31.7	-1.0
JAGI				S	Sn	08 23 48.7	-2.2
ABJI	**Asem Bagus**	**1.86**	**52**	P	Pn	08 23 38.7	+0.5
NGJI	**Ngawi**	**2.02**	**321**	P	Pn	08 23 41.1	+0.7
GRJI	**Gresik**	**2.04**	**352**	S	Sn	08 24 06.9	+1.8
IGBI	**Denpasar**	**2.37**	**87**	P	Pn	08 23 46.5	+1.3
IGBI				S	Sn	08 24 10.2	-3.1
UGM	**Wanagama**	**2.43**	**295**	P	Pn	08 23 46.2	+0.1
UGM				S	Sn	08 24 14.5	-0.3
SRBI	**Singaraja**	**2.58**	**71**	P	Pn	08 23 47.1	-1.0
SRBI				S	Sn	08 24 16.8	-1.7
TWSI	**Taliwang, Sumb**	**4.09**	**87**	P	Pn	08 24 06.4	-2.4
TWSI				S	Sn	08 24 52.1	-3.6
KPJI	**Karang Pucung**	**4.11**	**293**	P	Pn	08 24 09.0	-0.1
PLAI	**Plampang**	**4.97**	**89**	P	Pn	08 24 21.4	+0.5

*SNET **20** 08:40:05.9±4.0, 12.71N×87.96W, h118km±77km, ML2.8*
CATAC 20 08:40:03.6±0.8, 11.78N×89.17W, h0km, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**1.64**	**21**	*e*P	Pn	08 40 23.5	-10
ALJI				*e*S	Sn	08 40 44.0	-12
JUCU	**Jucuarɲn**	**1.72**	**31**	*i* P	Pn	08 40 35.2	+0.3
JUCU				IAML		08 40 57.9	
	comp=Z,70nm,1.0s						
TECO	**Alcaldia de Te**	**1.79**	**12**	*i* P	Pn	08 40 35.1	-0.7
TECO				IAML		08 40 37.7	
	comp=Z,89nm,1.0s						
SJTE	**Alcalda de S**	**1.83**	**5**	*i* P	Pn	08 40 36.0	-0.4
SJTE				*i* S	Sn	08 41 00.8	+0.4
SJTE				IAML		08 41 37.5	
	comp=Z,92nm,1.0s						
RANC	**El Ranchito**	**1.85**	**27**	*i* P	Pn	08 40 37.0	+0.2
RANC				IAML		08 41 01.5	
	comp=Z,420nm,1.0s						
PACA	**Pacayal**	**1.87**	**26**	*i* P	Pn	08 40 37.6	+0.6
PACA				IAML		08 41 01.4	
	comp=Z,750nm,1.0s						
PACA				*i* S	Sn	08 41 01.8	+0.4
JAYA	**Jayaque - finc**	**1.88**	**352**	*e*P	Pn	08 40 37.2	-0.1
JAYA				*e*S	Sn	08 41 00.1	-1.7
JAYA				IAML		08 41 02.0	
	comp=N,323nm,0.2s						
JAYA	**Jayaque - finc**	**1.88**	**352**	*i* P	Pn	08 40 37.5	+0.3
JAYA				*i* S	Sn	08 40 59.8	-2.0
JAYA				IAML		08 41 01.4	
	comp=Z,630nm,1.0s						
PQSS	**Presa 15 de Se**	**1.93**	**18**	*i* P	Pn	08 40 37.7	0.0
PQSS				IAML		08 41 02.7	
	comp=Z,130nm,1.0s						
SCLA	**Alcaldia de Sa**	**1.96**	**13**	*i* P	Pn	08 40 38.4	+0.2
SCLA				IAML		08 41 02.5	
	comp=Z,110nm,1.0s						
LCND	**La Caada**	**1.96**	**39**	*i* P	Pn	08 40 37.2	-1.0
LCND				IAML		08 41 07.3	
	comp=Z,55nm,1.0s						
NUBE	**Las Nubes**	**2.19**	**344**	*e*P	Pn	08 40 41.7	+0.2
NUBE				*e*S	Sn	08 41 06.7	-2.8
NUBE				IAML		08 41 08.9	
	comp=Z,41nm,0.2s						
NUBE	**Las Nubes**	**2.19**	**344**	*i* P	Pn	08 40 41.6	+0.1
NUBE				*i* S	Sn	08 41 07.1	-2.4
NUBE				IAML		08 41 08.7	
	comp=Z,140nm,1.0s						
SLOZ	**Alcaldia de Sa**	**2.31**	**345**	*e*P	Pn	08 40 44.0	+0.9
SLOZ				*e*S	Sn	08 41 10.9	-1.3
SLOZ				IAML		08 41 18.3	
	comp=Z,17nm,0.4s						
COPN	**Copaltepe**	**2.55**	**81**	*i* P	Pn	08 40 44.2	-2.0
COPN				IAML		08 41 18.9	
	comp=Z,82nm,1.0s						

IDC 20 08:40:30.0±3.0, 53.76N×87.04E, h0km, mbtmp2.4/2, ML2.3/2, Error ellipse: s-maj=28.1km s-min=16.6km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**279**	I	I	08 48 51.9	
	baz=101,slow=337,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.33**	**279**	Pg	Pg	08 40 53.3	-2.1
	0.7nm,0.3s,baz=98,slow=16,SNR=7.0						
ZALV				Lg	Lg	08 41 13.1	
	0.6nm,0.3s,baz=96,slow=28,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.10**	**242**	Pn	Pn	08 42 02.4	+1.1
	0.1nm,0.3s,baz=47,slow=4.1,SNR=1.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**7.60**	**205**	Pn	Pn	08 42 23.4	+1.4
	0.1nm,0.3s,baz=18,slow=13,SNR=2.5						
MKAR				Lg	Lg	08 44 32.9	
	baz=20,slow=34,SNR=2.3						
	0.1nm,0.3s						

*NEIC **20** 08:45:29.7±0.4, 35.670N±0.007×97.40W±0.01, h7km±2km, Error ellipse: s-maj=1.5km s-min=0.8km az=61.0*
TUL 20 08:45:29.8±0.6, 35.669N±0.008×97.39W±0.01, h6km±2km, ML2.6, mb_Lg2.5/35(NEIC), ML2.6/39(NEIC), Error ellipse: s-maj=1.4km s-min=0.9km az=47.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.02**	**133**	Pg	Pg	08 45 31.4	+0.4
ADOK				Sg	Sg	08 45 32.5	+0.8
OK029	**Liberty Lake**	**0.14**	**338**	Pg	Pg	08 45 33.1	+0.5
OK029				Sg	Sg	08 45 35.4	+0.8
OK029				IAML		08 45 35.7	
	3µm,0.4s						
OKCSW	**OKLAHOMA CITY**	**0.27**	**188**	Pg	Pg	08 45 35.3	+0.3
OKCSW				Sg	Sg	08 45 39.4	+0.9
FNO	**Franklin**	**0.41**	**181**	Pg	Pg	08 45 38.0	+0.3
FNO				Sg	Sg	08 45 44.0	+0.9
FNO				IAML		08 45 44.3	
	comp=E,796nm,0.5s						
FNO				IAML		08 45 44.3	
	comp=N,344nm,0.4s						
OK033	**Mehan**	**0.53**	**44**	Pg	Pg	08 45 40.1	+0.2
OK033				IAML		08 45 48.0	
	comp=N,478nm,0.3s						
OK033				IAML		08 45 48.4	
	comp=N,282nm,0.2s						
OK052	**Battle Ridge R**	**0.58**	**56**	Pg	Pg	08 45 41.0	+0.1
OK052				Sg	Sg	08 45 49.2	+0.7
W35A	**Tecumseh**	**0.67**	**140**	Pg	Pg	08 45 42.5	-0.2
W35A				Sg	Sg	08 45 51.4	+0.2
W35A				IAML		08 45 52.1	
	comp=E,198nm,0.5s						
DEOK	**Depew**	**0.75**	**76**	Pg	Pg	08 45 43.7	-0.4
DEOK				IAML		08 45 57.6	
	comp=N,139nm,0.5s						
QUOK	**Quay**	**0.75**	**48**	Pg	Pg	08 45 44.0	-0.2
QUOK				IAML		08 46 11.2	
	comp=E,278nm,0.2s						
OK048	**Pawnee Station**	**0.83**	**26**	Pg	Pg	08 45 45.5	-0.2
OK048				IAML		08 45 57.1	

SN05	**Snyder 5**	**4.01**	**227**	IAmb_Lg	08 47 48.1
	comp=Z,12nm,0.8s				
WHAR	**Wooly Hollow**	**4.18**	**94**	IAmb_Lg	08 47 42.9
	comp=Z,9.6nm,0.8s				
UALR	**University of**	**4.23**	**101**	IAmb_Lg	08 47 53.5
	comp=Z,9.8nm,0.8s				
RTBA	**Rita Blanca**	**4.40**	**282**	IAmb_Lg	08 47 55.8
	comp=Z,11nm,0.9s				
R40A	**Maddies Statio**	**4.87**	**56**	IAmb_Lg	08 48 15.5
	comp=Z,9.2nm,1.0s				
435B	**Jarrell**	**4.88**	**182**	IAmb_Lg	08 48 13.4
	comp=Z,12nm,0.7s				
P38A	**Dawn**	**5.00**	**37**	IAmb_Lg	08 48 19.7
	comp=Z,11nm,1.0s				
KSCO	**Kaye Shedlock'**	**5.34**	**310**	IAmb_Lg	08 48 31.0
	comp=Z,10nm,0.7s				
JCT	**Junction City**	**5.56**	**202**	IAmb_Lg	08 48 40.4
	comp=Z,15nm,0.7s				
FVM	**French Village**	**6.05**	**65**	IAmb_Lg	08 48 43.5
	comp=Z,4.7nm,0.7s				
MNHN	**Monahans**	**6.22**	**228**	IAmb_Lg	08 49 01.7
	comp=Z,5.8nm,1.1s				

*IDC **20** 08:46:50.1±1.8, 37°.20N×135°.13E, h374km±18km, mb2.7/2, mbtmp3.4/6, Error ellipse: s-maj=42.4km s-min=25.9km az=180.0*

ISC 20 08:46:50.5±1.5, 37°.4N±0°.2×135°.2E±0°.1, h350km, n6, σ2s23/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**2.56**	**109**	P	**Pn**	**08 47 48.1**	**+2.0**
	3.8nm,0.6s,baz=282,slow=8.8,SNR=8.8						
KSRS	**Korea Array**	**5.79**	**273**	P	**Pn**	**08 48 19.6**	**+0.6**
	1.6nm,0.6s,baz=94,slow=12,SNR=5.6						
USRK	**Ussuriysk Ar.**	**7.21**	**341**	P	**Pn**	**08 48 38.0**	**+2.8**
	3.3nm,0.7s,baz=157,slow=11,SNR=5.0						
ASAJ	**Asahikawa**	**8.74**	**38**	P	**Pn**	**08 48 54.3**	**+1.0**
	5.2nm,0.5s,baz=233,slow=15,SNR=7.1						
ASAJ				S	**S**	**08 50 33.1**	**-0.6**
	7.8nm,1.0s,baz=184,slow=19,SNR=1.7						
ILAR	**Eielson Array**	**51.84**	**32**	P	**P**	**08 55 23.0**	**-0.5**
	0.2nm,0.7s,baz=264,slow=7.2,SNR=1.8						
	0.2nm,0.7s						
FINES	**FINES Array B**	**66.11**	**330**	P	**P**	**08 56 58.1**	**-2.5**
	0.7nm,0.8s,baz=64,slow=14,SNR=1.3						
	0.7nm,0.8s						

IDC 20 08:50:22.0±3.4, 54°.20N×87°.19E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=31.2km s-min=20.0km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**261**	I	I	08 59 31.9	
	0.1nm,0.7s,baz=81,slow=335,SNR=0.8						
ZALV	**Zalesovo Beam**	**1.42**	**261**	Pg	Pn	08 50 46.4	-2.6
	2.6nm,0.3s,baz=78,slow=15,SNR=20						
ZALV				Lg	Lg	08 51 07.6	
	1.7nm,0.3s,baz=80,slow=23,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.39**	**239**	Pn	Pn	08 51 58.3	+0.9
	0.1nm,0.3s,baz=55,slow=14,SNR=2.0						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.05**	**205**	Pn	Pn	08 52 21.9	+1.8
	0.1nm,0.3s,baz=22,slow=11,SNR=1.8						
	0.1nm,0.3s						

*NEIC **20** 08:53:34.7±0.5, 35°.663N±0°.008×97°.40W±0°.02, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.5km az=346.0*

TUL 20 08:53:34.9±0.4, 35°.67N±0°.01×97°.39W±0°.02, h6km±4km, ML2.5, mb_Lg2.3/12(NEIC), ML2.5/38(NEIC), Error ellipse: s-maj=2.2km s-min=1.5km az=97.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.03**	**131**		Pg	08 53 36.5	+0.4
ADOK					Sg	08 53 37.6	+0.6
OK029	**Liberty Lake**	**0.14**	**339**	Pg	Pg	08 53 38.2	+0.5
OK029					Sg	08 53 40.5	+0.8
OK029				IAML		08 53 40.7	
	2µm,0.3s						
OKCSW	**OKLAHOMA CITY**	**0.27**	**188**	Pg	Pg	08 53 40.4	+0.3
OKCSW					Sg	08 53 44.5	+0.9
FNO	**Franklin**	**0.41**	**181**	Pg	Pg	08 53 43.1	+0.2
FNO				IAML		08 53 49.4	
	comp=E,526nm,0.7s						
OK033	**Mehan**	**0.53**	**44**		Pg	08 53 45.2	+0.1
OK033				IAML		08 53 53.1	
	comp=E,285nm,0.3s						
OK033				IAML		08 53 53.3	
	comp=E,240nm,0.2s						
OK052	**Battle Ridge R**	**0.58**	**56**		Pg	08 53 46.3	+0.2
OK052				IAML		08 53 55.7	
	comp=E,209nm,0.2s						
W35A	**Tecumseh**	**0.67**	**140**		Pg	08 53 47.7	0.0
W35A				IAML		08 53 57.3	
	comp=E,134nm,0.6s						
DEOK	**Depew**	**0.75**	**76**		Pg	08 53 48.9	-0.4
DEOK				IAML		08 53 59.9	
	comp=N,162nm,0.2s						
QUOK	**Quay**	**0.75**	**48**		Pg	08 53 49.2	-0.1
QUOK				IAML		08 54 00.8	
	comp=E,159nm,0.2s						
OK048	**Pawnee Station**	**0.83**	**26**	Pg	Pg	08 53 50.6	-0.2
OK048				IAML		08 54 02.2	
	comp=E,190nm,0.2s						
OK051	**E0350 and S346**	**0.95**	**28**		Pg	08 53 52.8	-0.3
CROK	**Carrier**	**0.96**	**330**		Pg	08 53 53.0	-0.4
CROK				IAML		08 54 16.9	
	comp=N,158nm,0.3s						
CROK				IAML		08 54 17.6	
	comp=E,124nm,0.3s						
CSTR	**Hydro, Custer**	**1.05**	**269**		Pg	08 53 55.2	+0.1
BLOK	**Blackwell**	**1.10**	**8**		Pg	08 53 56.1	+0.1
X34A	**Smith Ranch, M**	**1.12**	**199**	Pg	Pg	08 53 56.4	-0.1
X34A				IAML		08 54 15.5	
	comp=E,104nm,0.5s						
X34A				IAML		08 54 15.5	
	comp=N,118nm,0.5s						
GC02	**Grant County #**	**1.24**	**342**	Pg	Pg	08 53 57.9	-0.8
OK032	**Salt Plains WL**	**1.31**	**330**		Pn	08 53 58.9	-0.9
TUL3	**Leonard**	**1.32**	**79**		Pn	08 53 58.9	-1.1
TUL3				IAML		08 54 18.3	
	comp=E,76nm,0.3s						
TUL3				IAML		08 54 20.3	
	comp=N,57nm,0.6s						
KAN13	**South Haven SW**	**1.34**	**357**		Pn	08 53 59.4	-0.8
KAN14	**Manchester OK**	**1.36**	**341**		Pn	08 53 60.0	-0.6
KAN17	**Caldwell West**	**1.41**	**348**		Pn	08 54 00.7	-0.3
T35A	**Sooner Cattle**	**1.44**	**30**		Pn	08 54 01.0	-0.5
WMOK	**Wichita Mounta**	**1.47**	**231**	Pg	Pn	08 54 01.3	-0.6
U32A	**Winter Ranch,**	**1.48**	**299**		Pn	08 54 01.9	-0.3
KS21	**Milan North St**	**1.63**	**352**		Pn	08 54 03.8	-0.3
LOOK	**Love County**	**1.68**	**174**		Pn	08 54 05.2	+0.3
X37A	**Clayton**	**1.98**	**122**	Pn	Pn	08 54 10.0	+1.2
WTFS	**Witchita Falls**	**2.09**	**205**	Pn	Pn	08 54 11.2	+0.8
SMWD	**Samnorwood**	**2.39**	**257**		Pn	08 54 15.9	+1.2
SMWD				IAmb_Lg		08 54 51.9	
	comp=Z,12nm,0.8s						
U38A	**Gravette**	**2.56**	**72**		Pn	08 54 17.9	+1.0
FW06	**Azle**	**2.69**	**183**	IAmb_Lg		08 54 58.7	
	comp=Z,6.8nm,0.8s						
KSU1	**Kansas State U**	**3.48**	**10**	IAmb_Lg		08 55 31.7	
	comp=Z,8.1nm,0.8s						
X40A	**Basin Creek Fa**	**3.92**	**106**	IAmb_Lg		08 55 39.3	
	comp=Z,9.3nm,0.8s						
BRDY	**Brady**	**4.57**	**198**	IAmb_Lg		08 56 03.2	
	comp=Z,8.1nm,0.9s						
JCT	**Junction City**	**5.55**	**202**	IAmb_Lg		08 56 46.2	
	comp=Z,6.0nm,0.7s						

IDC 20 09:00:14.1±3.1, 53°.58N×87°.87E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=25.5km s-min=15.9km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.85**	**283**	Pg	Pn	09 00 47.7	+0.7
	1.4nm,0.3s,baz=99,slow=17,SNR=8.5						
ZALV				Lg	Lg	09 01 12.8	
	2.2nm,0.3s,baz=86,slow=30,SNR=3.8						
I46RU	**ZALESOVO INFRA**	**1.85**	**283**	I	I	09 12 00.0	
	0.2nm,0.7s,baz=100,slow=341,SNR=16						
KURBB	**Kurchatov Arra**	**6.47**	**247**	Pn	Pn	09 01 51.0	+0.6
	0.2nm,0.3s,baz=61,slow=14,SNR=4.5						
KURBB				Pg	Pb	09 02 05.5	-2.0
	0.1nm,0.3s,baz=53,slow=14,SNR=5.3						
KURBB				Sn	Sn	09 03 04.2	-0.7
	baz=33,slow=16,SNR=1.7						
KURBB				Lg	Lg	09 03 38.6	
	0.1nm,0.3s,baz=59,slow=32,SNR=2.2						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn	09 02 08.2	+1.1
	0.1nm,0.3s,baz=28,slow=14,SNR=7.1						
MKAR				Pg	Pb	09 02 28.9	+0.9
	0.1nm,0.3s,baz=18,slow=13,SNR=2.0						
MKAR				Sn	Sn	09 03 34.6	-0.1
	baz=29,slow=28,SNR=5.8						
MKAR				Lg	Lg	09 04 08.7	
	0.1nm,0.3s,baz=33,slow=24,SNR=2.0						
	0.2nm,0.3s						

*IDC **20** 09:00:25.6±4.1, 4°.12S×104°.16E, h0km, mb3.4/4, mbtmp3.4/4, MS3.7/1, Error ellipse: s-maj=175.6km s-min=26.6km az=55.0*

*DJA **20** 09:00:40.8±0.4, 5°.5S×10°.4E±°, h166km±5km, M4.0/11, mb4.2/3, MLv3.9/11*

ISC 20 09:00:41.6±0.9, 4°.3S±0°.1×103°.9E±0°.1, h150km, n13, σ1s31/14, mb3.3/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.73**	**170**	P	**Pn**	**09 01 05.8**	**+1.3**
MNAI	**Manna**	**0.97**	**266**	P	**Pn**	**09 01 07.5**	**+1.3**
MNAI				S	**Sn**	**09 01 25.4**	**+0.5**
KASI	**Kota Agung**	**1.34**	**155**	P	**Pn**	**09 01 10.9**	**+1.3**
KASI				S	**Sn**	**09 01 31.1**	**+0.1**
PPSI	**Pulau Pagai**	**4.20**	**291**	P	**Pn**	**09 01 44.2**	**-0.3**
CNJI	**Cibinong**	**4.37**	**133**	P	**Pn**	**09 01 46.1**	**-0.6**
SISI	**Saibi**	**5.66**	**301**	P	**Pn**	**09 02 02.3**	**-1.6**
	30nm,1.0s,0.2nm						
CMJI	**Cimerak**	**5.67**	**128**	P	**Pn**	**09 02 03.2**	**-0.8**
	31nm,1.6s,0.2nm						
PBSI	**Pulau Batu**	**7.04**	**307**	P	**Pn**	**09 02 20.7**	**-1.6**
NWAO	**Narrogin (SRO)**	**31.08**	**158**	LR	LR	09 19 11.1	
	comp=Z,152nm,21.9s,baz=100,slow=36						
WRA	**Warramunga Arr**	**33.45**	**120**	P	**P**	**09 07 04.4**	**-2.2**
	0.2nm,0.4s,baz=306,slow=8.7,SNR=2.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**34.74**	**126**	P	**P**	**09 07 18.1**	**+0.4**
	0.3nm,0.3s,baz=301,slow=7.6,SNR=2.4						
	0.3nm,0.3s						
SONM	**Songino Array**	**51.95**	**2**	P	**P**	**09 09 36.7**	**+1.4**
	0.3nm,0.5s,baz=182,slow=9.2,SNR=4.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.35**	**342**	P	**P**	**09 09 52.1**	**-0.6**
	0.2nm,0.5s,baz=152,slow=8.0,SNR=5.0						
	0.2nm,0.5s						

IDC 20 09:04:14.0±3.5, 54°.20N×86°.56E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=28.4km s-min=17.6km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**257**	I	I	09 08 38.5	
	0.3nm,0.8s,baz=75,slow=334,SNR=3.0						
ZALV	**Zalesovo Beam**	**1.06**	**257**	Pg	Pg	09 04 33.4	-0.8
	0.5nm,0.3s,baz=76,slow=18,SNR=5.5						
ZALV				Lg	Lg	09 04 49.2	
	1.0nm,0.3s,baz=84,slow=28,SNR=6.8						
KURBB	**Kurchatov Arra**	**6.08**	**237**	Pn	Pn	09 05 46.5	+1.5
	baz=55,slow=13,SNR=2.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.90**	**202**	Pn	Pn	09 06 10.4	+0.4
	0.1nm,0.3s,baz=25,slow=13,SNR=1.6						
	0.1nm,0.2s						

*TEH **20** 09:11:13.4, 33°.69N×45°.67E, h12km±24km, ML3.0*

*ISN **20** 09:11:13.3±0.9, 33°.71N×45°.71E, h8km±5km, ML3.0*

ISC 20 09:11:13.7±1.4, 33.74N±0°.03×45.72E±0°.04, h1km±13km, n14, σ0s90/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.43**	**106**	Pg	**Pg**	**09 11 22.3**	**+0.4**
IBDR	**Badra**	**0.66**	**164**	*e*Pg	**Pg**	**09 11 26.0**	**-0.2**
IBDR				*e*Sg	**Sg**	**09 11 34.0**	**-0.7**
KGS1	**Ghasr-e-Shirin**	**0.77**	**352**	Pg	**Pg**	**09 11 29.2**	**+0.8**
IGHG	**Ghaleghazi**	**0.92**	**50**	Pg	**Pn**	**09 11 32.8**	**-1.2**
IGHG				Sg	**Sn**	**09 11 47.0**	**-0.9**
IDHR	**Dehrash**	**1.10**	**30**	Pg	**Pn**	**09 11 36.1**	**-0.4**
BHD	**Baghdad**	**1.21**	**247**	*e*Pn	**Pn**	**09 11 38.0**	**+0.3**
BHD				*e*Sn	**Sn**	**09 11 56.0**	**+1.3**
BHD				AML	AML	09 11 58.3	
	comp=E,761nm,0.4s						
KCHF	**Cheshme Sefid,**	**1.22**	**64**	Pg	**Pg**	**09 11 38.4**	**+1.3**
ILIN	**Lien**	**1.56**	**41**	Pg	**Pg**	**09 11 44.5**	**+0.9**
IKFM	**Kafar-mosalman**	**1.79**	**96**	Pn	**Pb**	**09 11 47.2**	**0.0**
IBZA	**Bozab**	**1.92**	**67**	Pn	**Pb**	**09 11 48.7**	**-1.0**
IKRK	**Kirkuk**	**2.00**	**326**	*e*Pn	**Pb**	**09 11 50.0**	**-0.9**
IKRK				*e*Sn	**Sb**	**09 12 16.0**	**-0.4**
RAFI	**Al-Rafai**	**2.04**	**170**	*e*Pn	**Pn**	**09 11 49.0**	**-0.1**
RAFI				*e*Sn	**Sn**	**09 12 16.0**	**+0.7**
IDOB	**Doab**	**2.05**	**88**	Pn	**Pn**	**09 11 50.3**	**+0.8**
HAGD	**Aghdareh**	**3.03**	**68**	Pn	**Pn**	**09 12 04.1**	**+1.1**

*IDC **20** 09:11:13.9±2.2, 55°.76N×150°.18W, h0km, mb3.5/2, mbtmp3.7/4, ML3.4/2, MS3.3/11, Error ellipse: s-maj=46.9km s-min=31.1km az=51.0*

*NEIC **20** 09:11:14.1±1.8, 55°.94N±0°.08×149°.9W±0°.1, h9km±6km, mb4.1/3, ML3.8/54, ML3.7(AEIC), Error ellipse: s-maj=12.1km s-min=8.4km az=167.0*

*AEIC **20** 09:11:18.5±1.8, 55°.92N±0°.09×149°.9W±0°.1, h10km±6km, Error ellipse: s-maj=13.0km s-min=7.9km az=162.0*

ISC 20 09:11:15.3±0.9, 56°.07N±0°.08×149°.94W±0°.06, h10km, n266, σ0s99/254, mb3.6/3, MS3.2/7, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.18**	**304**	Pn	**Pn**	**09 11 50.8**	**-0.8**
OHAK					**Sn**	**09 12 16.6**	**-2.0**
OHAK	**Old Harbor**	**2.18**	**304**	P	**Pn**	**09 11 50.8**	**-0.8**
OHAK	**Old Harbor**	**2.18**	**304**	P	**Pn**	**09 11 50.7**	**-0.8**
	baz=124						
OHAK				S	**Sn**	**09 12 16.4**	**-2.2**
	baz=124						
KDAK	**Kodiak Island**	**2.25**	**321**	Pn	**Pn**	**09 11 52.7**	**+0.1**
KDAK					**Sn**	**09 12 19.9**	**-0.4**
KDAK	**Kodiak Island**	**2.25**	**321**	S	**Sn**	**09 12 19.5**	**-0.9**
	baz=141						
KDAK	**Kodiak Island**	**2.25**	**321**	LR	LR	09 13 04.3	
	comp=Z,579nm,19.2s,baz=193,slow=46						
Q20K	**Shuyak Island**	**2.88**	**333**	P	**Pn**	**09 12 00.8**	**-0.3**
	baz=153						
Q20K				S	**Sn**	**09 12 35.8**	**0.0**
	baz=153						
SYI	**Shuyak Island**	**2.88**	**334**		**Pn**	**09 12 01.6**	**+0.4**
SYI					**Sn**	**09 12 36.1**	**+0.3**
KAHG	**Katmai Hook Gl**	**3.49**	**316**		**Pn**	**09 12 10.7**	**+1.0**
Q19K	**Cape Douglas,**	**3.50**	**327**		**Pn**	**09 12 10.9**	**+1.1**
Q19K	**Cape Douglas,**	**3.50**	**327**	P	**Pn**	**09 12 10.8**	**+1.1**
	baz=145						
CNPM	**China Poot**	**3.54**	**349**	Pn	**Pn**	**09 12 10.2**	**-0.2**
CNPM					**Sn**	**09 12 52.4**	**+0.2**
CNPM				IAML		09 13 04.2	
	comp=E,102nm,0.6s						
ACHA	**Angle Creek He**	**3.64**	**308**		**Pn**	**09 12 12.3**	**+0.6**
ANCK	**Angle Creek**	**3.71**	**308**		**Pn**	**09 12 13.2**	**+0.6**
BRSE	**Bradley Lake S**	**3.71**	**354**		**Pn**	**09 12 12.1**	**-0.6**
BRSE					**Sn**	**09 12 55.3**	**-1.1**
BRSE	**Bradley Lake S**	**3.71**	**354**	P	**Pn**	**09 12 12.5**	**-0.2**
	baz=173						
BRSE				S	**Sn**	**09 12 55.3**	**-1.1**
	baz=173						
HOM	**Homer**	**3.72**	**347**	Pn	**Pn**	**09 12 12.4**	**-0.3**
HOM				IAML		09 12 59.8	
	comp=N,310nm,0.7s						
HOM				IAML		09 13 07.4	
	comp=E,226nm,0.6s						
BRLK	**Bradley Lake**	**3.74**	**353**	Pn	**Pn**	**09 12 12.3**	**-0.8**
PLK3	**Peulik 3**	**3.83**	**298**		**Pn**	**09 12 14.6**	**+0.2**

Q23K	**Middleton Isla**	**3.88**	**28**		**Pn**	**09 12 14.3**	**-0.7**
Q23K				IAML		09 13 08.7	
	comp=E,89nm,1.4s						
Q23K	**Middleton Isla**	**3.88**	**28**	P	**Pn**	**09 12 14.4**	**-0.7**
	baz=210						
MID	**Middleton Isla**	**3.88**	**28**		**Pn**	**09 12 14.5**	**-0.5**
MID				IAML		09 14 11.0	
	comp=E,95nm,4.0s						
MID	**Middleton Isla**	**3.88**	**28**	P	**Pn**	**09 12 14.6**	**-0.4**
MID	**Middleton Isla**	**3.88**	**28**	P	**Pn**	**09 12 14.5**	**-0.5**
CNTC	**Contact Creek**	**3.91**	**307**		**Pn**	**09 12 16.0**	**+0.5**
Q17K	**Contact Creek**	**3.92**	**307**	P	**Pn**	**09 12 16.0**	**+0.5**
	baz=123						
P19K	**Oil Pt**	**4.00**	**335**		**Pn**	**09 12 17.5**	**+0.8**
P19K				IAML		09 13 08.4	
	comp=N,223nm,0.6s						
P19K	**Oil Pt**	**4.00**	**335**	P	**Pn**	**09 12 17.3**	**+0.6**
	baz=153						
PLK1	**Peulik 1**	**4.04**	**298**		**Pn**	**09 12 17.5**	**+0.3**
SEW	**Seward**	**4.06**	**3**		**Pn**	**09 12 16.6**	**-0.8**
SEW	**Seward**	**4.06**	**3**	P	**Pn**	**09 12 16.8**	**-0.7**
	baz=184						
P23K	**Montague Islan**	**4.17**	**18**		**Pn**	**09 12 18.5**	**-0.4**
P23K					**Sn**	**09 13 05.2**	**-2.4**
P23K	**Montague Islan**	**4.17**	**18**	P	**Pn**	**09 12 18.5**	**-0.4**
	baz=199						
P23K				S	**Sn**	**09 13 05.2**	**-2.4**
	baz=199						
O20K	**Slope Mountain**	**4.27**	**342**		**Pn**	**09 12 20.1**	**-0.3**
O20K	**Slope Mountain**	**4.27**	**342**	P	**Pn**	**09 12 20.1**	**-0.3**
	baz=160						
ILSW	**Iliamna Southw**	**4.28**	**338**		**Pn**	**09 12 20.7**	**+0.1**
ILSW				IAML		09 13 13.5	
	comp=N,83nm,0.4s						
ILSW				IAML		09 13 14.6	
	comp=E,74nm,0.7s						
IVE	**Iliamna Volcan**	**4.29**	**339**		**Pn**	**09 12 20.4**	**-0.3**
P18K	**Big Mountain,**	**4.38**	**322**		**Pn**	**09 12 21.9**	**0.0**
P18K	**Big Mountain,**	**4.38**	**322**	P	**Pn**	**09 12 21.8**	**0.0**
	baz=139						
O22K	**Cooper Landing**	**4.43**	**1**		**Pn**	**09 12 22.5**	**0.0**
O22K	**Cooper Landing**	**4.43**	**1**	P	**Pn**	**09 12 22.1**	**-0.4**
	baz=182						
R16K	**Pilot Point**	**4.46**	**293**		**Pn**	**09 12 23.6**	**+0.8**
R16K				IAML		09 13 16.2	
	comp=N,152nm,4.9s						
R16K				IAML		09 13 24.6	
	comp=E,123nm,3.5s						
R16K	**Pilot Point**	**4.46**	**293**	P	**Pn**	**09 12 21.8**	**-1.0**
	baz=108						
SLKM	**Skilak Lake**	**4.46**	**358**		**Pn**	**09 12 22.8**	**-0.1**
Q16K	**King Salmon**	**4.48**	**309**		**Pn**	**09 12 23.7**	**+0.5**
Q16K	**King Salmon**	**4.48**	**309**	P	**Pn**	**09 12 23.7**	**+0.5**
	baz=124						
RSO	**Redoubt South**	**4.65**	**343**	Pn	**Pn**	**09 12 25.7**	**0.0**
P17K	**Kvichak River**	**4.69**	**315**		**Pn**	**09 12 26.9**	**+0.8**
P17K	**Kvichak River**	**4.69**	**315**	P	**Pn**	**09 12 26.9**	**+0.8**
	baz=130						
RDT	**Redoubt**	**4.70**	**345**		**Pn**	09 12 24.5	-1.8
HIN	**Hinchinbrook I**	**4.71**	**21**		**Pn**	**09 12 26.3**	**-0.1**
HIN				IAML		09 13 27.5	
	comp=N,79nm,0.6s						
HIN				IAML		09 13 27.6	
	comp=E,110nm,0.5s						
O18K	**Koktuh Hills**	**4.72**	**326**		**Pn**	**09 12 26.5**	**0.0**
O18K				IAML		09 13 23.4	
	comp=N,76nm,0.7s						
O18K				IAML		09 13 36.4	
	comp=E,55nm,0.7s						
O18K	**Koktuh Hills**	**4.72**	**326**	P	**Pn**	**09 12 26.9**	**+0.4**
	baz=142						
CHGN	**Chignik**	**4.74**	**276**		**Pn**	**09 12 25.4**	**-1.4**
CHGN				IAML		09 13 21.5	
	comp=E,64nm,0.2s						
CHGN				IAML		09 13 23.5	
	comp=N,61nm,0.6s						
CHGN	**Chignik**	**4.74**	**276**	P	**Pn**	**09 12 25.4**	**-1.4**
	baz=91						
O19K	**Port Alsworth**	**4.75**	**333**		**Pn**	**09 12 26.5**	**-0.4**
O19K	**Port Alsworth**	**4.75**	**333**	P	**Pn**	**09 12 26.8**	**-0.1**
	baz=150						
CAPN	**Captain Cook N**	**4.76**	**353**	Pn	**Pn**	**09 12 28.2**	**+1.2**
KAIM	**Kayak Island**	**4.86**	**35**		**Pn**	**09 12 28.4**	**0.0**
KAIM				IAML		09 13 34.3	
	comp=N,84nm,0.7s						
KAIM				IAML		09 13 38.3	
	comp=E,80nm,0.6s						
EYAK	**Cordova Ski Ar**	**5.01**	**24**		**Pn**	**09 12 30.7**	**+0.2**
EYAK	**Cordova Ski Ar**	**5.01**	**24**	P	**Pn**	**09 12 30.9**	**+0.4**
EYAK	**Cordova Ski Ar**	**5.01**	**24**	P	**Pn**	**09 12 30.6**	**+0.1**
	baz=207						
FID	**Port Fidalgo**	**5.04**	**20**		**Pn**	**09 12 30.6**	**-0.2**
FID				IAML		09 13 28.5	
	comp=E,47nm,0.6s						
FID				IAML		09 13 35.9	
	comp=N,50nm,0.5s						
RC01	**Rabbit Creek A**	**5.04**	**1**		**Pn**	**09 12 30.9**	**0.0**
RC01				IAML		09 13 31.5	
	comp=E,60nm,0.5s						
RC01				IAML		09 13 32.0	
	comp=N,57nm,0.5s						
RC01	**Rabbit Creek A**	**5.04**	**1**	P	**Pn**	**09 12 30.9**	**0.0**
	baz=181						
GLI	**Glacier Island**	**5.05**	**16**		**Pn**	**09 12 31.1**	**0.0**
GLI				IAML		09 13 29.1	
	comp=N,54nm,0.6s						
GLI				IAML		09 13 35.9	
	comp=E,95nm,0.5s						
GLI	**Glacier Island**	**5.05**	**16**	P	**Pn**	**09 12 30.1**	**-1.0**
	baz=198						
FIS	**Fire Island**	**5.10**	**358**	Pn	**Pn**	**09 12 32.9**	**+1.2**
FIS				IAML		09 13 38.7	
	comp=N,111nm,0.6s						
RAGM	**Ragged Mountai**	**5.15**	**31**		**Pn**	**09 12 32.4**	**-0.1**
RAGM				IAML		09 13 43.5	
	comp=E,93nm,0.5s						
SUCK	**Suckling Hills**	**5.18**	**37**		**Pn**	**09 12 33.1**	**+0.2**
SUCK				IAML		09 13 32.0	
	comp=N,57nm,0.5s						
SUCK				IAML		09 13 32.9	
	comp=E,44nm,1.0s						
HMT	**Hamilton**	**5.23**	**33**		**Pn**	**09 12 33.9**	**+0.4**
NICHA	**Nichawak Mount**	**5.24

baz=194
SKT Skwentna 5.99 353 Pn 09 12 43.0 -0.9
SDPT Sand Point 6.00 267 Pn 09 12 41.2 -2.9
SDPT Sand Point 6.00 267 P Pn 09 12 43.5 -0.6
SDPT Sand Point 6.00 267 P Pn 09 12 42.5 -1.6
baz=80
TGL Tana Glacier 6.00 36 Pn 09 12 44.2 0.0
ISLE Juniper Island 6.06 38 Pn Pn 09 12 41.9 -3.1
M20K Styx River 6.06 346 Pn 09 12 46.5 +1.5
BAGL Bagley Icefiel 6.07 40 Pn 09 12 44.9 -0.1
O15K Unggalikthiuk R 6.16 305 Pn 09 12 46.4 +0.2
VRDI Verde Repeater 6.18 31 Pn 09 12 45.0 -1.8
N25K Chitina, Valde 6.21 24 Pn 09 12 47.1 +0.1
N25K Chitina, Valde 6.21 24 P Pn 09 12 47.6 +0.5
baz=208
M18K Stony River 6.24 333 Pn 09 12 47.0 -0.4
M18K Stony River 6.24 333 P Pn 09 12 47.0 -0.4
baz=149
GLB Gilahina Butte 6.26 28 Pn 09 12 47.3 -0.5
KIAG Kiagna River 6.29 36 Pn 09 12 47.6 -0.6
M19K Big River Lodg 6.29 340 Pn Pn 09 12 47.4 -0.7
SAMH Samovar Hills 6.34 46 Pn 09 12 49.0 +0.2
GRNC Granite Creek 6.36 39 Pn 09 12 48.7 -0.5
M24K Tolsona, Glenn 6.36 16 Pn 09 12 48.2 -0.9
M24K Tolsona, Glenn 6.36 16 P Pn 09 12 49.8 +0.7
baz=199
TABL Table Mountain 6.39 43 Pn 09 12 49.5 -0.1
N16K Nishlik Lake 6.42 317 Pn 09 12 50.6 +0.8
MCARA McCarthy VSAT 6.43 31 Pn 09 12 50.1 +0.1
MCARA McCarthy VSAT 6.43 31 P Pn 09 12 50.7 +0.6
baz=216
PTPK Patty Peak 6.45 34 Pn 09 12 50.7 +0.2
PCA Pinnacle 6.53 48 Pn 09 12 51.3 -0.1
PINM Pinnacle 6.53 48 P Pn 09 12 51.7 +0.2
baz=235
BARN Barnard Glacie 6.62 37 Pn 09 12 52.6 -0.1
M17K Holitna River 6.62 327 Pn 09 12 53.2 +0.6
WAT6 Susitna Watana 6.63 9 Pn 09 12 53.2 +0.3
WAT6 Susitna Watana 6.63 9 P Pn 09 12 53.5 +0.6
baz=191
L19K White Mountain 6.63 340 Pn 09 12 52.6 -0.1
CTG Chitna Glacier 6.66 39 P Pn 09 12 53.5 +0.2
baz=226
CTGM Chitina Glacie 6.67 39 Pn 09 12 53.2 -0.1
PNL Peninsula 6.68 53 Pn 09 12 53.5 0.0
PNL Peninsula 6.68 53 P Pn 09 12 53.5 0.0
baz=241
LOGN Logan Glacier 6.69 41 Pn 09 12 53.6 -0.1
BCPM Bancas Point 6.72 50 Pn 09 12 54.1 +0.1
L20K Farewell, AK 6.74 344 Pn 09 12 54.8 +0.5
L20K Farewell, AK 6.74 344 P Pn 09 12 55.0 +0.7
baz=161
N15K Kwethluk River 6.77 312 Pn 09 12 56.0 +1.4
HARP HAARP 6.81 19 Pn 09 12 56.2 +1.0
HARP HAARP 6.81 19 P Pn 09 12 56.3 +1.1
baz=203
WAT1 Susitna Watana 6.82 5 Pn 09 12 56.2 +0.8
WAT1 Susitna Watana 6.82 5 P Pn 09 12 56.2 +0.8
baz=186
PN7A Pavlof North-7 6.84 270 Pn 09 12 54.3 -1.3
M16K Timber Creek 6.85 320 Pn 09 12 56.2 +0.5
M16K Timber Creek 6.85 320 P Pn 09 12 56.3 +0.5
baz=133
O14K Tigyukauivet M 6.86 302 Pn 09 12 57.1 +1.2
L18K Granite Mounta 7.08 333 Pn 09 12 58.8 0.0
DHY Denali Highway 7.15 9 Pn 09 13 00.8 +0.8
DHY Denali Highway 7.15 9 P Pn 09 13 00.7 +0.7
baz=191
PAX Paxson 7.29 16 Pn 09 13 03.2 +1.4
PAX Paxson 7.29 16 P Pn 09 13 02.7 +0.9
baz=200
M15K Kasigluk River 7.31 314 Pn 09 13 02.1 +0.1
N14K Kuskokwak Cree 7.34 307 Pn 09 13 03.0 +0.7
O29M Mount Kennedy 7.35 50 Pn 09 13 03.3 +0.5
O29M Mount Kennedy 7.35 50 P Pn 09 13 02.8 0.0
baz=239
RND Reindeer 7.38 4 Pn 09 13 04.3 +1.1
TRF Thorofare Moun 7.41 359 Pn 09 13 02.1 -1.5
P29M Windy Craggy 7.42 56 Pn 09 13 03.3 -0.4
P29M Windy Craggy 7.42 56 P Pn 09 13 03.3 -0.4
baz=246
L17K Donlin 7.45 328 Pn 09 13 04.0 +0.1
CAST Castle Rocks 7.46 353 Pn 09 13 08.5 +4.4
L16K Owhat River 7.51 323 Pn 09 13 04.4 -0.3
KTH Kantishna Hill 7.53 357 Pn 09 13 04.5 -0.6
M27K Edge Creek, AK 7.54 30 Pn 09 13 06.5 +1.1
TTA Tatalina 7.54 338 Pn Pn 09 13 04.5 -0.8
MENT Mentasta 7.58 22 Pn 09 13 07.3 +1.5
K20K Telida 7.61 346 Pn Pn 09 13 05.4 -0.7
S31K Pelican 7.72 70 Pn 09 13 04.8 -2.9
S31K Pelican 7.72 70 P Pn 09 13 05.9 -1.8
baz=261
FALS False Pass 7.76 267 Pn 09 13 05.4 -2.8
FALS False Pass 7.76 267 P Pn 09 13 07.6 -0.6
FALS False Pass 7.76 267 P Pn 09 13 07.0 -1.2
baz=77
M14K Bethel 7.86 312 Pn 09 13 10.2 +0.7
K17K Iditarod 7.91 331 Pn 09 13 10.3 +0.1
ISLZ Isanotski Laza 7.96 266 Pn 09 13 08.9 -2.0
BPAW Bear Paw Mtn. 8.08 357 Pn Pn 09 13 11.9 -0.7
RIDG Independent Ri 8.11 19 Pn 09 13 12.7 -0.4
L27K Beaver Creek, 8.13 27 Pn 09 13 13.1 -0.3
BCAR Beaver Creek A 8.14 27 Pn Pn 09 13 11.5 -2.1
J18K Innoko River 8.17 338 Pn Pn 09 13 12.1 -1.7
L15K Ungalak Mounta 8.20 318 Pn 09 13 14.7 +0.4
M13K Dall Lake 8.30 307 Pn 09 13 14.6 -1.0
SCRK Sand Creek 8.47 18 Pn 09 13 17.1 -1.0
L14K Kuka Creek 8.47 314 Pn 09 13 19.6 +1.6
HDA Harding Lake 8.50 9 Pn 09 13 20.3 +1.9
NEA2 Nenana 8.57 3 Pn Pn 09 13 19.6 +0.4
CCB Clear Creek Bu 8.67 6 Pn 09 13 22.1 +1.4
JIS Juneau Island 8.74 69 Pn Pn 09 13 19.0 -2.6
IL31 8.86 9 Pn 09 13 23.1 -0.2
ILAR Eielson Array 8.86 9 Pn Pn 09 13 25.0 +1.7
comp=E,0.5nm,0.3s,baz=190,slow=13,SNR=12
ILAR Sn Sn 09 14 58.6 -4.5
comp=E,0.4nm,0.3s,baz=96,slow=26,SNR=1.8
comp=E,9.6nm,0.3s
J25K Salcha River, 8.87 13 Pn 09 13 25.5 +2.0
K27K Chicken 8.90 23 Pn Pn 09 13 22.8 -1.0
COLA College 8.90 6 Pn Pn 09 13 24.7 +1.0
MDM Murphy Dome 8.96 5 Pn 09 13 25.1 +0.4
MLY Manley 9.00 358 Pn Pn 09 13 27.1 +1.8
J26L Joseph Creek 9.03 18 Pn 09 13 26.2 +0.5
I23K Minto, Yukon-K 9.12 2 Pn Pn 09 13 29.0 +2.2
I21K Tanana 9.20 355 Pn 09 13 29.5 +1.6
P32M Atlin 9.34 61 Pn Pn 09 13 28.7 -1.2
DAWY Dawson 9.59 29 Pn Pn 09 13 30.9 -2.4
J14K Nanvaranak Lak 9.63 320 Pn Pn 09 13 35.8 +2.0
PRP Porcupine Dome 9.72 11 Pn Pn 09 13 34.8 -0.5
H21K Melozitna Rive 9.72 353 Pn 09 13 35.7 +0.6
EGAK Eagle 9.75 23 Pn 09 13 34.8 -0.6
UNV Unalaska Valle 9.78 264 Pn Pn 09 13 34.9 -1.0
H24K Noodor Dome 9.86 5 Pn Pn 09 13 39.6 +2.7
M31M Drury Creek, Y 10.07 46 Pn Pn 09 13 41.2 +1.4
IMAR Indian Mountai 10.12 351 Pn Pn 09 13 41.3 +0.8
H17K Granite Mounta 10.15 335 Pn Pn 09 13 41.2 +0.2
I28M Miner Creek 10.59 23 Pn Pn 09 13 48.5 +1.5
G23K Bananza Creek 10.68 360 Pn 09 13 49.4 +1.1
G24K Hadweenzic Riv 10.74 5 Pn Pn 09 13 50.2 +1.3
FYU Fort Yukon 10.77 10 Pn Pn 09 13 50.9 +1.5
I30M Mount Dempster 11.31 30 Pn Pn 09 13 57.3 +0.3
F21K Alatna River 11.32 353 Pn Pn 09 13 58.0 +1.1
ANM Nome 11.42 325 Pn Pn 09 14 00.3 +2.1
F24K Squaw Lake 11.54 4 Pn Pn 09 14 00.5 +0.6
H29M Whitestone 11.59 24 Pn Pn 09 14 02.6 +2.0
BMAR Burnt Mountain 11.68 10 Pn Pn 09 14 03.4 +1.5
E19K Redstone River 11.93 346 Pn Pn 09 14 05.1 -0.1
F15K North Star Dit 11.99 330 Pn Pn 09 14 05.7 -0.5
CLES Cleveland East 12.05 263 Pn Pn 09 14 03.3 -3.6
EPYK Eagle Plains 12.11 26 Pn Pn 09 14 09.5 +1.8
E22K Anaktuvuk Pass 12.14 357 Pn Pn 09 14 07.6 -0.7
E25K Arctic Village 12.27 8 Pn Pn 09 14 12.2 +2.4
H31M Peel River 12.32 31 Pn Pn 09 14 10.0 -0.6
TOLK Toolik Lake Re 12.62 1 Pn Pn 09 14 14.8 0.0
G31M Satah River 13.16 28 Pn Pn 09 14 22.2 +0.3
BBB Bella Bella 13.36 98 LR LR 09 18 06.3
comp=E,119nm,18.6s,baz=301,slow=31
E29M Blow River 13.54 19 Pn Pn 09 14 27.0 -0.2
F31M Tsiigehtchic 13.68 27 Pn Pn 09 14 30.0 +0.9
B20K Meade River 14.35 350 Pn Pn 09 14 39.1 +0.8
INK Inuvik 14.40 25 Pn Pn 09 14 40.9 +2.1
INK Inuvik 14.40 25 LR LR 09 20 30.2
comp=E,100nm,19.3s,baz=180,slow=38
C36M Paulatuk 17.62 31 Pn 09 15 22.5 +2.0
C36M IAmb IAmb 09 15 32.7
comp=E,4.1nm,0.7s
YKAB2 New Yellowknif 18.96 56 P P 09 15 37.3 +0.9
YKA Yellowknife Ar 18.97 56 P P 09 15 35.3 -1.2
YKA Yellowknife Ar 18.97 56 P P 09 15 37.8 +1.4
comp=Z,0.1nm,0.3s,baz=265,slow=9.8,SNR=19
YKA LR LR 09 22 47.0
comp=Z,129nm,18.1s,baz=286,slow=36
comp=Z,0.6nm,0.6s
A36M Sachs Harbour 19.03 23 P P 09 15 38.9 +1.9
A36M IAmb IAmb 09 15 50.3
comp=Z,8.0nm,0.7s
YBH Yreka Blue Hor 22.74 118 LR LR 09 22 52.2
comp=Z,104nm,18.7s,baz=332,slow=31
NVAR Mina Array Bea 27.44 117 P P 09 17 02.1 +0.7
comp=Z,0.5nm,0.8s,baz=282,slow=12,SNR=3.6
NVAR LR LR 09 25 26.8
comp=Z,72nm,20.3s,baz=330,slow=31
comp=Z,0.5nm,0.8s
MA2 Magadan 30.86 301 LR LR 09 31 29.9
comp=Z,61nm,19.7s,baz=86,slow=39
PFO Pinyon Flats O 32.16 120 LR LR 09 27 32.6
comp=Z,74nm,19.0s,baz=322,slow=30
YAK Yakutsk 39.25 313 LR LR 09 35 22.7
comp=Z,40nm,20.3s,baz=247,slow=37
SCHQ Schefferville 44.42 55 LR LR 09 37 25.4
comp=Z,28nm,20.1s,baz=61,slow=35
H11N2 WAKE ISLAND Hy 48.45 239 T T 10 12 06.8
baz=31,slow=76,SNR=4.9
H11N3 WAKE ISLAND Hy 48.46 239 T T 10 12 04.0
baz=31,slow=76,SNR=5.6
H11N1 WAKE ISLAND Hy 48.47 239 T T 10 12 04.6
baz=31,slow=76,SNR=4.5
USRK Ussuriysk Ar. 48.81 291 LR LR 09 41 36.8
comp=Z,21nm,20.4s,baz=356,slow=37
MKAR Makanchi Array 68.56 324 P P 09 22 17.4 -0.5
MKAR Makanchi Array 68.56 324 P P 09 22 18.6 +0.8
comp=Z,0.3nm,0.6s,baz=41,slow=6.2,SNR=3.6
comp=Z,0.3nm,0.6s
ABKAR Akbulak array 72.13 340 P P 09 22 41.0 +1.4
KK31 Karatay Array 75.45 331 P P 09 22 58.1 -1.1
KK31 IAmb IAmb 09 22 58.6
comp=Z,4.0nm,0.7s
KKAR Karatay Array 75.45 331 P P 09 22 57.4 -1.8

BER 20 09:17:49.6±2.8, 72°.28N×1°.79E, h12km±30km, mb(Pn)3.9, Confirmed Earthquake, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
BJO1	**Bjornoya**	**5.41**	**58**	*eP*	Pn	09 19 06.7	-3.1
BJO1				*eS*	Sn	09 20 07.3	-4.5
BJO1				IAML		09 20 25.0	
	comp=Z,3.3nm,0.8s						
LOF	**Lofoten**	**5.76**	**131**	*eP*	Pn	09 19 13.2	-1.5
LOF				*eS*	Sn	09 20 12.0	-8.5
LOF				IAML		09 20 42.0	
	comp=Z,3.0nm,0.8s						
HSPB	**Hornsund (broa**	**5.97**	**31**	*eP*	Pn	09 19 15.1	-2.4
HSPB				*eS*	Sn	09 20 19.4	-6.3
HSPB				IAML		09 20 31.2	
	comp=Z,2.0nm,0.6s						
STEI	**Steigen**	**6.32**	**127**	*eP*	Pn	09 19 20.4	-2.0
STEI				*eS*	Sn	09 20 26.7	-7.7
STEI				IAML		09 20 34.4	
	comp=Z,1.8nm,0.9s						
BRBB	**Barentsburg B**	**6.63**	**23**	*eP*	Pn	09 19 25.0	-1.7
JETT	**Jettan, Norway**	**6.67**	**105**	*eP*	Pn	09 19 24.0	-3.2
FAUS	**Fauske**	**6.76**	**130**	*eP*	Pn	09 19 26.1	-2.3
FAUS				*eS*	Sn	09 20 35.6	-10
FAUS				IAML		09 20 42.9	
	comp=Z,1.9nm,0.4s						
SPA0	**Spitsbergen Ar**	**6.97**	**25**	*eP*	Pn	09 19 28.8	-2.5
KONS	**Konsvik**	**7.03**	**140**	*eP*	Pn	09 19 29.3	-2.8
KONS				*eS*	Sn	09 20 43.8	-8.1
KONS				IAML		09 21 11.0	
	comp=Z,2.5nm,1.0s						
KIF	**Kilpisjarvi**	**7.10**	**108**	*eP*	Pn	09 19 29.1	-4.0
KIF				*eS*	Sn	09 20 43.0	-11
KBS	**Kingsbay**	**7.13**	**16**	*eP*	Pn	09 19 29.0	-4.4
HAMF	**Hammerfest**	**7.15**	**93**	*eP*	Pn	09 19 29.5	-4.3
HAMF				*eS*	Sn	09 20 45.8	-8.9
HAMF				IAML		09 20 51.0	
	comp=Z,2.7nm,0.6s						
STOK	**Stokkvaagen**	**7.16**	**141**	*eP*	Pn	09 19 30.2	-3.6
STOK				*eS*	Sn	09 20 44.6	-10
STOK				IAML		09 20 50.2	
	comp=Z,3.7nm,0.7s						
SALU	**Saltoluokta**	**7.56**	**122**	*eP*	Pn	09 19 37.5	-2.0
SALU				*eS*	Sn	09 20 57.2	-7.7
MOR8	**Moi Rana**	**7.58**	**138**	*eP*	Pn	09 19 38.6	-1.1
MOR8				IAML		09 21 03.8	
	comp=Z,1.9nm,0.3s						
ARA0	**ARCESS Array S**	**8.21**	**98**	*eP*	Pn	09 19 44.6	-3.8
HEF	**Hetta**	**8.29**	**107**	*eP*	Pn	09 19 45.5	-3.9

IDC 20 09:26:48.6±2.8, 53°.85N×86°.70E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=22.3km s-min=13.5km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.12**	**276**	I	I	09 34 12.5	
	baz=95,slow=335,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.12**	**276**	Pg	Pg	09 27 09.1	-0.8
	0.7nm,0.3s,baz=91,slow=17,SNR=8.1						
ZALV				Lg	Lg	09 27 25.5	
	1.8nm,0.3s,baz=95,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**5.97**	**241**	Pn	Pn	09 28 19.2	+1.1
	0.1nm,0.3s,baz=57,slow=14,SNR=3.5						
KURBB				Lg	Lg	09 29 59.1	
	baz=65,slow=36,SNR=2.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**7.60**	**204**	Pn	Pn	09 28 41.6	+1.0
	0.1nm,0.3s,baz=25,slow=16,SNR=3.4						
MKAR				Lg	Lg	09 30 49.0	
	baz=16,slow=41,SNR=3.3						
	0.1nm,0.2s						

*BJI **20** 09:29:22.6±0.0, 1°.08N×124°.58E, h222km, mb4.8/75, mB4.8/34*
*MOS **20** 09:29:27.8±0.9, 1°.48N×124°.30E, h247km, mb4.8/53, Error ellipse: s-maj=9.2km s-min=4.4km az=119.5*
*DJA **20** 09:29:27.2±0.2, 1°.N±2°×12°.4E±°, h222km±2km, M4.9/82, mb5.1/82, mB5.4/36, MLv5.5/15, Mw(mB)4.8/36, MwMwp5.2/4, Mwp5.4/4*
*GCMT **20** 09:29:27.6±0.4, 1°.50N±0°.03×124°.48E±0°.03, h218km±3km, MW5.0/72, Moment Tensor Solution. s20,c22; s72,c85; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.47±.19; Mθθ3.65±.26; Mϕϕ-3.18±.27; Mrθ-0.76±.16; Mrϕ0.85±.17; Mθϕ-3.32±.16; Best double couple: M=4.79400×10^16^ NP1:ϕs302.00000°, δ51.00000°, λ-12.00000°. Principal axes: T 4.1670, Plg19.0000°, Azm164.0000°; N 1.2490, Plg50.0000°, Azm50.0000°; P -5.4210, Plg34.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **20** 09:29:27.3±0.7, 1°.46N×124°.25E, h227km±6km, mb4.4/37, mbtmp5.0/39 Error ellipse: s-maj=13.5km s-min=7.1km az=63.0*
*NEIC **20** 09:29:27.6±2.0, 1°.49N±0°.08×124°.37E±0°.07, h220km±6km, mb4.8/146, Error ellipse: s-maj=11.6km s-min=9.4km az=203.0*

ISC 20 09:29:27.6±0.3, 1°.42N±0°.03×124°.32E±0°.04, h229km±2km, h230km:pP-P, n537, σ1°.35/631, mb4.8/178, 9C-19D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
KMSI	**Cibinong**	**0.91**	**202**	P	Pn	**09 29 59.0**	**-0.9**
KMSI				S	S	**09 30 24.0**	**-1.2**
GTOI	**Gorontalo**	**1.52**	**239**	P	Pn	**09 30 03.8**	**-0.3**
SGSI	**Sangihe**	**2.55**	**28**	P	Pn	**09 30 12.9**	**-1.0**
TNTI	**Ternate**	**3.12**	**102**	Pn	Pn	**09 30 17.6**	**-2.5**
TNTI	**Ternate**	**3.12**	**102**	P	Pn	**09 30 17.9**	**-2.2**
TNTI	**Ternate**	**3.12**	**102**	P	Pn	**09 30 17.9**	**-2.2**
TOLI2	**Tolitoli**	**3.55**	**265**	Pn	Pn	**09 30 25.0**	**-0.2**
TOLI2	**Tolitoli**	**3.55**	**265**	P	Pn	**09 30 25.0**	**-0.2**
LBMI	**Labuha**	**3.78**	**123**	P	Pn	**09 30 25.5**	**-2.4**
SANI	**Sanana**	**3.83**	**154**	P	Pn	**09 30 24.9**	**-3.6**
SANI	**Sanana**	**3.83**	**154**	P	Pn	**09 30 25.1**	**-3.4**
SANI				S	S	09 31 04.3	-12
MPSI	**Mapaga**	**4.55**	**256**	P	Pn	**09 30 38.5**	**+1.3**
MPSI				S	S	**09 31 33.5**	**+1.3**
NLAI	**Namlea**	**5.40**	**149**	P	Pn	**09 30 46.1**	**-1.7**
	134nm,0.6s,15μm13nm						
DAV	**Davao (WV)**	**5.75**	**13**	S	S	**09 31 58.2**	**-1.3**
	123nm,0.3s,baz=96,slow=11,SNR=1.3						
TTSI	**Tana Toraja**	**6.32**	**225**	P	Pn	**09 31 00.2**	**+0.8**
	159nm,0.7s,2μm1.0nm						
SWI	**Sorong**	**7.30**	**108**	P	Pn	**09 31 11.8**	**-0.2**
	155nm,0.8s,4μm0.7nm						
KAPI	**Kappang**	**7.86**	**215**	Pn	Pn	**09 31 19.9**	**+0.8**
KAPI	**Kappang**	**7.86**	**215**	P	Pn	**09 31 20.5**	**+1.4**
KAPI	**Kappang**	**7.86**	**215**	P	Pn	**09 31 19.9**	**+0.8**
BKB	**Balikpapan**	**7.89**	**250**	Pn	Pn	**09 31 19.5**	**+0.1**
BKB	**Balikpapan**	**7.89**	**250**	P	Pn	**09 31 20.8**	**+1.4**
BKB	**Balikpapan**	**7.89**	**250**	P	Pn	**09 31 20.0**	**+0.6**
	117nm,0.8s,2μm0.8nm						
BNDI	**Bandanaira**	**8.13**	**137**	P	Pn	**09 31 22.2**	**-0.3**
BNDI	**Bandanaira**	**8.13**	**137**	P	Pn	**09 31 21.7**	**-0.8**
	400nm,1.0s						
FAKI	**Fak Fak**	**9.03**	**119**	Pn	Pn	**09 31 31.0**	**-3.0**
FAKI	**Fak Fak**	**9.03**	**119**	P	Pn	**09 31 32.1**	**-2.0**
FAKI	**Fak Fak**	**9.03**	**119**	P	Pn	**09 31 32.1**	**-2.0**
	74nm,0.8s,2μm						
KKM	**Kota Kinabalu**	**9.30**	**300**	Pn	Pn	**09 31 37.2**	**-0.4**
KKM	**Kota Kinabalu**	**9.30**	**300**	P	Pn	**09 31 40.2**	**+2.6**
MTKI	**Muara Teweh, K**	**9.71**	**256**	P	Pn	**09 31 45.3**	**+2.5**
	108nm,0.4s,38μm						
MMRI	**Maumere**	**10.21**	**192**	P	Pn	**09 31 49.8**	**+0.7**
MMRI	**Maumere**	**10.21**	**192**	P	Pn	**09 31 52.0**	**+2.9**
	171nm,0.7s						
EDFI	**Ende, Flores**	**10.44**	**194**	P	Pn	**09 31 53.4**	**+1.2**
	95nm,0.8s,773nm						
SOEI	**Soe**	**11.11**	**180**		Pn	**09 32 00.9**	**+0.3**
SOEI	**Soe**	**11.11**	**180**	P	Pn	**09 32 02.8**	**+2.2**
SOEI	**Soe**	**11.11**	**180**	P	Pn	**09 32 02.3**	**+1.7**
	147nm,0.9s,1μm						
SAUI	**Saumlaki**	**11.65**	**143**	Pn	Pn	**09 32 06.4**	**-1.1**
SAUI	**Saumlaki**	**11.65**	**143**	P	Pn	**09 32 07.1**	**-0.3**
SAUI	**Saumlaki**	**11.65**	**143**	P	Pn	**09 32 06.6**	**-0.8**
	1μm,0.9s,15μm						
PLAI	**Plampang**	**12.09**	**213**	P	P	**09 32 14.8**	**-1.7**
PLAI	**Plampang**	**12.09**	**213**	P	P	**09 32 14.8**	**-1.7**
	455nm,0.8s,3μm						
SBUM	**Sibu**	**12.13**	**275**	Pn	Pn	**09 32 14.0**	**+0.5**
BASI	**Baing, Sumba**	**12.15**	**198**	P	Pn	**09 32 13.7**	**0.0**
	243nm,0.7s						
TWSI	**Taliwang, Sumb**	**12.52**	**216**	P	P	**09 32 20.5**	**-0.8**
	248nm,0.8s,2μm						
STKI	**Sintang**	**12.91**	**264**	P	P	**09 32 25.7**	**+0.1**
	159nm,1.0s,16μm						
TGY	**Tagaytay City**	**13.03**	**345**	P	Pn	**09 32 25.2**	**+0.5**
	117nm,0.3s,baz=337,slow=13,SNR=1.4						
SRBI	**Singaraja**	**13.10**	**224**	P	P	**09 32 27.2**	**-0.5**
	308nm,1.2s,3μm						
DNP	**Denpasar**	**13.53**	**222**	P	Pn	**09 32 30.6**	**-0.2**
	429nm,1.1s						
ABJI	**Asem Bagus**	**13.60**	**228**	P	Pn	**09 32 32.0**	**+0.3**
	74nm,0.9s						
IGBI	**Denpasar**	**13.68**	**222**	P	P	**09 32 34.8**	**+0.7**
	223nm,0.7s,2μm						
KSM	**Kuching**	**14.01**	**270**	P	P	**09 32 38.3**	**+0.5**
BLJI	**Banyuglugur**	**14.05**	**229**	P	P	**09 32 39.8**	**+1.6**
	116nm,0.9s,3μm						
JAGI	**Jajag, Banyuwa**	**14.12**	**226**	Pn	P	**09 32 38.6**	**-0.4**
JAGI					Pn	**09 32 39.4**	**+1.3**
JAGI	**Jajag, Banyuwa**	**14.12**	**226**	P	P	**09 32 40.8**	**+1.8**
JAGI	**Jajag, Banyuwa**	**14.12**	**226**	P	P	**09 32 39.6**	**+0.6**
	126nm,1.2s,2μm						
GRJI	**Gresik**	**14.43**	**235**	P	P	**09 32 42.5**	**0.0**
	258nm,1.0s,3μm						
GMJI	**Gumukmas**	**14.50**	**228**	P	Pn	**09 32 42.5**	**-0.2**
DRS	**Darwin Rock St**	**15.24**	**155**	P	Pn	**09 32 51.2**	**-0.4**
UWJI	**Ujung Watu**	**15.46**	**240**	P	P	**09 32 53.7**	**-0.1**
	204nm,0.9s,3μm						
NGJI	**Ngawi**	**15.52**	**236**	P	Pn	**09 32 57.3**	**+2.3**
	146nm,0.8s						
PWJI	**Pagerwojo**	**15.62**	**233**	P	Pn	**09 32 57.2**	**+1.1**
	112nm,0.9s						
MTN	**Manton Dam**	**15.71**	**155**	P	P	**09 32 56.0**	**-0.6**
	baz=16,SNR=66						
MTN	**Manton Dam**	**15.71**	**155**	P	P	**09 32 56.4**	**-0.1**
MTN	**Manton Dam**	**15.71**	**155**	P	P	**09 32 56.5**	**0.0**
KDU	**Kakadu**	**16.19**	**150**	P	P	**09 33 01.2**	**-0.6**
	baz=16,SNR=129						
KDU	**Kakadu**	**16.19**	**150**	P	P	**09 33 02.0**	**+0.2**
SMRI	**Semarang**	**16.21**	**239**	P	Pn	**09 33 04.5**	**+1.3**
SMRI	**Semarang**	**16.21**	**239**	P	Pn	**09 33 04.9**	**+1.7**
SMRI	**Semarang**	**16.21**	**239**	P	Pn	**09 33 04.9**	**+1.7**
	186nm,0.9s						
GENI	**Genyem**	**16.34**	**104**	P	Pn	**09 33 05.3**	**+0.5**
GENI	**Genyem**	**16.34**	**104**	P	Pn	**09 33 04.8**	**0.0**
	521nm,0.8s,5μm						
UGM	**Wanagama**	**16.59**	**236**	P	Pn	**09 33 07.6**	**-0.2**
	128nm,1.3s						
KNRA	**Kununurra**	**17.55**	**166**	P	P	**09 33 17.5**	**+0.8**
KNRA	**Kununurra**	**17.55**	**166**	P	Pn	**09 33 18.5**	**-0.5**
KPJI	**Karang Pucung**	**17.65**	**240**	P	P	**09 33 18.1**	**+0.3**
	80nm,0.8s						
TABU	**Tabubil**	**18.15**	**112**	P	Pn	**09 33 24.9**	**-1.2**
PPBI	**Pangkal Pinang**	**18.52**	**259**	P	Pn	**09 33 29.1**	**-1.4**
	153nm,0.9s,68μm						
LEM	**Lembang**	**18.57**	**244**	P	P	**09 33 27.4**	**-0.6**
	47nm,0.8s,baz=64,slow=10,SNR=5.8						
LEM	**Lembang**	**18.57**	**244**	P	P	**09 33 27.6**	**-0.5**
	69nm,0.8s						
MMPI	**Merauke**	**18.79**	**122**	P	P	**09 33 31.4**	**+1.2**
	1μm,0.6s,19μm						
BBJI	**Bungbulang**	**18.83**	**242**	P	P	**09 33 30.0**	**-0.7**
DLV	**T Lat**	**18.86**	**304**	P	Pn	**09 33 33.0**	**-1.6**
DLV	**T Lat**	**18.86**	**304**	P	Pn	**09 33 34.0**	**-0.6**
CNJI	**Cibinong**	**19.22**	**243**	P	P	**09 33 35.5**	**+0.7**
	30nm,1.0s						
DBJI	**Dramaga**	**19.25**	**245**	P	P	**09 33 34.4**	**-0.7**
	73nm,0.8s,8μm						
FITZ	**Fitzroy Crossi**	**19.44**	**176**	P	P	**09 33 36.9**	**-0.2**
	baz=20,SNR=24						
FITZ	**Fitzroy Crossi**	**19.44**	**176**	P	P	**09 33 36.5**	**-0.6**
DSRI	**Dabo**	**19.83**	**265**	P	Pn	**09 33 44.2**	**-1.8**
	77nm,1.5s						
MYKOM	**Kota Tinggi**	**20.46**	**271**	P	P	**09 33 48.8**	**+0.6**
JMBI	**JAMBI**	**20.90**	**262**	P	P	**09 33 55.4**	**+2.7**
	244nm,0.8s						
KASI	**Kota Agung**	**20.97**	**251**	P	P	**09 33 53.8**	**+0.4**
	258nm,0.8s,2μm						
LWLI	**Liwa**	**21.23**	**252**	P	P	**09 33 58.3**	**+2.1**
	502nm,0.6s						
TWG	**Pinlang**	**21.50**	**352**	P	P	**09 33 57.6**	**-1.0**
TWG				IAmb	IAmb	09 34 07.6	
	comp=Z,16nm,0.6s						
XMI	**Christmas Isla**	**21.97**	**237**	P	P	**09 34 03.1**	**-0.2**
XMIS	**Christmas Isla**	**22.02**	**237**	P	P	**09 34 01.3**	**-2.4**
XMIS				IAmb	IAmb	09 34 04.9	
	comp=Z,76nm,1.4s						
YULB	**Yu-li**	**22.03**	**353**	P	P	**09 34 02.2**	**-1.6**
TPUB	**Ta-pu**	**22.04**	**351**	P	P	**09 34 02.9**	**-0.9**
TPUB				IAmb	IAmb	09 34 05.1	
	comp=Z,62nm,0.9s						
TPUB	**Ta-

WB0 Warramunga Arr 23.26 155 P **P** 09 34 14.7 -0.3
MANU Manus Island 23.30 98 P **P** 09 34 17.1 +1.7
BKNI Bangkinang 23.30 268 P **P** 09 34 17.1 +1.7
WRAB Tennant Creek 23.39 156 P **P** 09 34 15.9 -0.3
WRAB Tennant Creek 23.39 156 P **P** 09 34 15.9 -0.3
WRAB pmax pmax
comp=Z,186nm,0.7s
WRA Warramunga Arr 23.40 156 P **P** 09 34 16.3 +0.1
WRA IAmb IAmb 09 34 18.1
comp=Z,28nm,0.6s
WRA Warramunga Arr 23.40 156 P **P** 09 34 16.3 +0.1
WRA pmax pmax
comp=Z,28nm,0.6s
WRA Warramunga Arr 23.40 156 P **P** 09 34 16.6 +0.4
comp=Z,178nm,0.5s,baz=335,slow=10,SNR=367
WRA S **S** 09 38 07.8 -4.4
comp=Z,22nm,1.0s,baz=327,slow=16,SNR=12
WRA ScP **ScP** 09 41 12.6 +0.2
comp=Z,1.5nm,0.5s,baz=323,slow=2.6,SNR=4.7
WRA ScS **ScS** 09 44 57.2 -1.9
comp=Z,0.5nm,0.7s,baz=173,slow=9.3,SNR=2.1
WB2 Warramunga Arr 23.40 156 P **P** 09 34 16.0 -0.2
baz=23
WB2 Warramunga Arr 23.40 156 P **P** 09 34 16.1 -0.2
IPM Ipoh 23.46 278 P **P** 09 34 18.3 +1.4
IPM IAmb IAmb 09 34 20.1
comp=Z,49nm,0.9s
IPM Ipoh 23.46 278 P **P** 09 34 19.0 +2.2
WR0 Warramunga Arr 23.50 155 P **P** 09 34 16.9 -0.2
KULM Kulim 23.93 280 P **P** 09 34 21.4 +0.3
KULM IAmb IAmb 09 34 23.6
comp=Z,33nm,1.0s
COEN Coen 24.14 130 P **P** 09 34 22.3 -0.7
baz=24,SNR=53
COEN Coen 24.14 130 P **P** 09 34 22.3 -0.7
COEN Coen 24.14 130 P **P** 09 34 22.8 -0.2
PMG Port Moresby 25.17 116 P **P** 09 34 32.2 -0.1
PMG Port Moresby 25.17 116 P **P** 09 34 32.9 +0.6
PMG Port Moresby 25.17 116 P **P** 09 34 32.6 +0.3
PMG Port Moresby 25.17 116 P **P** 09 34 32.2 -0.1
PMG pmax pmax
comp=Z,99nm,0.8s
PMG Port Moresby 25.17 116 P **P** 09 34 32.3 +0.1
comp=Z,102nm,0.8s,baz=307,slow=6.6,SNR=32
comp=Z,102nm,0.8s
SISI Saibi 25.38 264 P **P** 09 34 34.4 +0.2
comp=Z,156nm,0.8s,comp=Z,1μm
RPSI Rantau Prapat 25.41 273 P **P** 09 34 35.4 +0.9
PSI Prapat 25.41 274 P **P** 09 34 36.6 +1.9
PSI Prapat 25.41 274 P **P** 09 34 35.4 +0.7
PSI pmax pmax
comp=Z,71nm,0.9s
NAYO Nakonayok 26.09 301 P **P** 09 34 43.1 +2.5
QIS Mount Isa 26.49 146 P **P** 09 34 44.3 +0.2
baz=26,SNR=100
QIS Mount Isa 26.49 146 P **P** 09 34 44.5 +0.4
NONG Nongkai 26.56 310 P **P** 09 34 45.7 +0.9
WRKA Warakurna 26.59 172 P **P** 09 34 46.0 +1.1
baz=27,SNR=50
WRKA Warakurna 26.59 172 P **P** 09 34 46.1 +1.1
KCSI Kotacane, Aceh 26.60 275 P **P** 09 34 45.7 +0.5
comp=Z,60nm,0.9s
AS31 Alice Springs 26.62 160 P **P** 09 34 45.7 +0.4
AS31 IAmb IAmb 09 34 46.7
comp=Z,14nm,0.6s
ASPA Alice Springs 26.62 160 P **P** 09 34 45.4 +0.1
baz=27
ASAR Alice Springs 26.63 160 P **P** 09 34 45.7 +0.4
comp=Z,28nm,0.6s,baz=341,slow=7.4,SNR=651
ASAR PcP **PcP** 09 38 03.3 +0.1
comp=Z,3.5nm,0.7s,baz=336,slow=2.0,SNR=3.2
ASAR S **S** 09 39 01.3 -1.8
comp=Z,13nm,0.8s,baz=348,slow=22,SNR=12
ASAR ScP **ScP** 09 41 21.4 0.0
comp=Z,4.4nm,0.7s,baz=350,slow=3.2,SNR=7.9
ASAR ScS **ScS** 09 45 10.6 -2.0
comp=Z,0.5nm,0.7s,baz=308,slow=9.3,SNR=4.5
comp=Z,28nm,0.6s
AS01 Alice Springs 26.64 160 P **P** 09 34 45.8 +0.4
GSI Gunungsitoli 26.74 270 P **P** 09 34 46.6 +0.2
GSI Gunungsitoli 26.74 270 P **P** 09 34 47.6 +1.2
GSI Gunungsitoli 26.74 270 P **P** 09 34 46.6 +0.2
comp=Z,81nm,1.0s,comp=Z,6μm
KAVG Kavieng 26.78 99 P **P** 09 34 48.6 +1.9
MTSU Mount Surprise 27.66 136 P **P** 09 34 54.8 +0.2
baz=28,SNR=14
MTSU Mount Surprise 27.66 136 P **P** 09 34 55.1 +0.5
SLVN Son La 28.07 316 P **P** 09 34 59.9 +1.7
SLVN IAmb IAmb 09 35 01.5
comp=Z,26nm,1.3s
RABL Rabaul 28.38 101 P **P** 09 35 02.2 +1.2
RABL Rabaul 28.38 101 P **P** 09 35 01.9 +0.9
MEEK Meekatharra 28.44 191 P **P** 09 35 01.0 -0.4
baz=28,SNR=22
MEEK Meekatharra 28.44 191 P **P** 09 35 01.7 +0.4
CM31 Chiang Mai Arr 30.10 306 P **P** 09 35 17.0 +0.9
CM31 IAmb IAmb 09 35 19.4
comp=Z,57nm,1.4s
CMAR Chiang Mai Arr 30.10 306 *i* P **P** 09 35 17.6 +1.5
CMAR pmax pmax
comp=Z,8.0nm,0.7s
CMAR Chiang Mai Arr 30.10 306 P **P** 09 35 16.6 +0.4
comp=Z,12nm,1.0s,baz=129,slow=7.1,SNR=37
CMAR PcP **PcP** 09 38 13.3 +1.4
comp=Z,5.9nm,0.8s,baz=172,slow=1.6,SNR=15
CMAR ScP **ScP** 09 41 33.6 +1.2
comp=Z,1.3nm,0.3s,baz=154,slow=2.5,SNR=12
comp=Z,12nm,1.0s
GYA Guiyang 30.13 327 ⇓P **P** 09 35 19.1 +2.7
GYA pmax pmax
comp=Z,34nm,0.6s
TV1H Townsville Har 30.16 134 P **P** 09 35 17.8 +1.2
CHTO Chiang Mai 30.29 306 P **P** 09 35 18.5 +0.8
CHTO IAmb IAmb 09 35 20.7
comp=Z,47nm,1.2s
CHTO **PcP** 09 38 13.7 +1.2
CHTO Chiang Mai 30.29 306 P **P** 09 35 19.3 +1.5
CHTO Chiang Mai 30.29 306 P **P** 09 35 19.2 +1.5
CHTO PcP **PcP** 09 38 13.5 +1.1
CHTO ScP **ScP** 09 41 33.3 +0.3
CTAO Charters Tower 30.33 136 P **P** 09 35 18.0 -0.1
CTAO IAmb IAmb 09 35 20.1
comp=Z,53nm,1.5s
CTAO Charters Tower 30.33 136 P **P** 09 35 19.3 +1.2
CTAO Charters Tower 30.33 136 P **P** 09 35 18.0 -0.1
CTAO pmax pmax
comp=Z,53nm,1.5s
CTAO Charters Tower 30.33 136 P **P** 09 35 18.7 +0.6
CTAO pP **pwP** 09 36 03.8 -2.6
CTAO sP **sP** 09 36 29.4 -0.2
CTAO ScP **ScP** 09 41 35.5 +2.4
COCO West Island 30.46 243 P **P** 09 35 20.3 +1.0
COCO West Island 30.46 243 P **P** 09 35 20.3 +1.0
COCO pmax pmax
comp=Z,78nm,0.8s
WHN Wuhan 30.47 343 P **P** 09 35 21.5 +2.4
WHN pmax pmax
comp=Z,36nm,0.7s
NJ2 Nanjing 30.90 351 *e*P **P** 09 35 24.0 +1.1
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
OOD Oodnadatta 31.04 160 P **P** 09 35 24.7 +0.5
MORW Morawa 31.34 194 P **P** 09 35 27.0 +0.1
baz=31,SNR=3.0
KMI Kunming 31.45 320 ⇑P **P** 09 35 30.9 +2.8
KMI pmax pmax
comp=Z,19nm,1.0s
ENH Enshi 31.96 335 P **P** 09 35 32.8 +0.5
ENH IAmb IAmb 09 35 34.8
comp=Z,38nm,0.8s
ENH Enshi 31.96 335 P **P** 09 35 34.2 +1.9
ENH Enshi 31.96 335 P **P** 09 35 32.9 +0.7
ENH PcP **PcP** 09 38 17.1 +0.4
ENH ScP **ScP** 09 41 37.9 -0.5
JNU Nakatsue 32.13 10 P **P** 09 35 33.6 -0.1
JNU IAmb IAmb 09 35 34.6
comp=Z,19nm,1.0s
FORT Forrest 32.22 174 P **P** 09 35 35.3 +0.8
baz=32,SNR=9.0
FORT Forrest 32.22 174 P **P** 09 35 35.1 +0.7
FORT IAmb IAmb 09 35 35.8
comp=Z,25nm,0.7s
BLDU Ballidu 32.68 192 P **P** 09 35 38.6 +0.2
baz=33,SNR=17
KMBL Kambalda 32.69 184 P **P** 09 35 39.3 +0.7
baz=33,SNR=23
KMBL Kambalda 32.69 184 P **P** 09 35 39.5 +0.9
MULG Mulgathing 32.87 164 P **P** 09 35 41.0 +0.9
INKA Innaminka 33.02 153 P **P** 09 35 42.9 +1.5
PZH PanZhiHua 33.06 321 P **P** 09 35 42.4 +0.4
PZH pmax pmax
comp=Z,40nm,1.1s
PZH pmax pmax
comp=Z,120nm,5.3s
JMN Monobe 33.36 15 P **P** 09 35 45.3 +0.9
JMN IAmb IAmb 09 35 48.7
comp=Z,36nm,1.2s
KLBR Kellerberrin 33.42 190 P **P** 09 35 45.5 +0.6
baz=34,SNR=17
KLBR Kellerberrin 33.42 190 P **P** 09 35 45.4 +0.5
QLP Quilpie 33.83 147 P **P** 09 35 49.0 +0.6
baz=34,SNR=6.4
QLP Quilpie 33.83 147 P **P** 09 35 49.5 +1.0
MUN Mundaring 34.10 192 P **P** 09 35 51.3 +0.6
baz=34,SNR=6.5
MND Mandalay 34.24 309 P **P** 09 35 53.6 +1.6
LCRK Leigh Creek 34.35 158 P **P** 09 35 53.7 +0.8
LYN LuoYang 34.77 343 ⇑P **P** 09 35 56.8 +0.4
LYN pmax pmax
comp=Z,52nm,0.9s
LYN pmax pmax
comp=Z,150nm,4.6s
NWAO Narrogin (SRO) 34.82 190 P **P** 09 35 57.6 +0.8
NWAO Narrogin (SRO) 34.82 190 P **P** 09 35 57.6 +0.8
NWAO pmax pmax
comp=Z,98nm,1.4s
CD2 Chengdu 35.20 328 P **P** 09 36 01.0 +0.8
CD2 pmax pmax
comp=Z,20nm,0.7s
TIA Tai'an 35.25 350 ⇑P **P** 09 36 01.1 +0.6
TIA pmax pmax
comp=Z,11nm,0.8s
RK1H Rockhampton Ha 35.45 136 P **P** 09 36 03.0 +0.6
XAN Xi'an 35.50 338 ⇓P **P** 09 36 02.3 -0.4
XAN PcP **PcP** 09 38 27.5 +0.7
XAN ScP **ScP** 09 41 51.0 +0.1
XAN pmax pmax
comp=Z,18nm,0.8s
XAN Xi'an 35.50 338 P **P** 09 36 02.5 -0.3
XAN PcP **PcP** 09 38 27.0 +0.2
XAN ScP **ScP** 09 41 50.9 0.0
BBOO Buckleboo 35.81 163 P **P** 09 36 05.7 +0.4
baz=36,SNR=35
BBOO Buckleboo 35.81 163 P **P** 09 36 05.5 +0.2
BBOO IAmb IAmb 09 36 07.1
comp=Z,32nm,0.7s
BBOO Buckleboo 35.81 163 P **P** 09 36 05.8 +0.4
KSRS Korea Array 36.01 5 P **P** 09 36 07.7 +0.8
comp=Z,3.2nm,0.8s,baz=181,slow=9.3,SNR=12
KSRS PcP **PcP** 09 38 29.1 +0.9
comp=Z,3.2nm,0.9s,baz=182,slow=2.9,SNR=7.1
KSRS ScP **ScP** 09 41 54.0 +1.5
comp=Z,3.8nm,0.8s,baz=188,slow=3.6,SNR=13
comp=Z,3.2nm,0.8s
KS19 Wonju Array Si 36.05 5 P **P** 09 36 08.1 +0.9
JGF Kuroka 36.10 18 P **P** 09 36 09.0 +1.2
GD1S Gladstone Soft 36.22 136 P **P** 09 36 10.1 +1.2
WHYH Whyalla 36.49 161 P **P** 09 36 11.7 +0.7
RKGY Rocky Gully 36.50 190 P **P** 09 36 13.0 +1.9
baz=37,SNR=8.8
HNS HongShan 36.88 347 ⇑P **P** 09 36 15.3 +1.1
HNS ScP **ScP** 09 41 56.8 +1.0
HNS pmax pmax
comp=Z,25nm,1.0s
STKA Stephens Creek 36.95 155 P **P** 09 36 15.8 +0.9
baz=37,SNR=62
STKA Stephens Creek 36.95 155 P **P** 09 36 15.8 +0.9
STKA Stephens Creek 36.95 155 P **P** 09 36 15.9 +0.9
STKA Stephens Creek 36.95 155 P **P** 09 36 15.8 +0.9
STKA pmax pmax
comp=Z,9.0nm,0.9s
STKA Stephens Creek 36.95 155 P **P** 09 36 15.6 +0.7
comp=Z,30nm,0.5s,baz=330,slow=8.9,SNR=78
STKA pP **pwP** 09 37 01.9 -2.9
comp=Z,7.4nm,0.7s,baz=328,slow=9.0,SNR=2.2
STKA PP **PP** 09 37 42.6 -1.9
comp=Z,14nm,0.7s,baz=314,slow=11,SNR=4.8
STKA S **S** 09 41 41.8 -1.1
comp=Z,2.8nm,0.7s,baz=42,slow=24,SNR=2.4
comp=Z,30nm,0.5s
EIDS Eidsvold 37.16 138 P **P** 09 36 16.0 -0.7
baz=37,SNR=6.7
EIDS Eidsvold 37.16 138 P **P** 09 36 16.7 0.0
EIDS IAmb IAmb 09 36 17.5
comp=Z,32nm,1.1s
EIDS Eidsvold 37.16 138 P **P** 09 36 16.8 0.0
MJAR Matsushiro Arr 37.23 19 P **P** 09 36 16.7 -0.6
comp=Z,2.2nm,0.5s,baz=196,slow=9.0,SNR=4.9
MJAR pP **pP** 09 37 03.2 0.0
comp=Z,3.8nm,0.8s,baz=191,slow=8.3,SNR=2.8
MJAR ScP **ScP** 09 41 57.8 +0.6
comp=Z,5.1nm,0.9s,baz=190,slow=3.0,SNR=7.4
comp=Z,2.2nm,0.5s
HTT Hallett 37.30 160 P **P** 09 36 18.9 +0.9
baz=37,SNR=23
HTT Hallett 37.30 160 P **P** 09 36 19.1 +1.1
TIY Taiyuan 37.73 345 *e*P **P** 09 36 22.6 +1.1
TIY pmax pmax
comp=Z,33nm,0.6s
AULRC Lightning Ridg 38.12 145 P **P** 09 36 25.5 +0.7
CMSA Cobar Meteorol 38.55 150 P **P** 09 36 29.5 +1.2
baz=39,SNR=5.4
CMSA Cobar Meteorol 38.55 150 P **P** 09 36 29.8 +1.5
BJT Baijiatuan 39.12 350 P **P** 09 36 32.5 -0.5
BJT Baijiatuan 39.12 350 P **P** 09 36 34.0 +1.0
BJT Baijiatuan 39.12 350 P **P** 09 36 32.5 -0.5
BJT pmax pmax
comp=Z,14nm,0.9s
BJT Baijiatuan 39.12 350 P **P** 09 36 34.0 +1.0
BJT sP **sP** 09 37 44.9 +0.2
BJI Beijing 39.14 350 P **P** 09 36 33.8 +0.7
BJI pmax pmax
comp=Z,9.0nm,0.8s
LZH Lanzhou 39.37 333 *e*P **P** 09 36 36.6 +1.3
LZH PcP **PcP** 09 38 39.9 +1.1
LZH ScP **ScP** 09 42 07.3 +1.7
LZH pmax pmax
comp=Z,44nm,1.2s
SHL Shillong 39.41 310 P **P** 09 36 36.3 +0.6
SHL Shillong 39.41 310 P **P** 09 36 36.3 +0.6
SHL pmax pmax
comp=Z,69nm,0.8s
AUDCS Dubbo College 40.62 148 P **P** 09 36 47.1 +1.7
HHC Hu-ho-hao-te 40.91 345 ⇑*i*P **P** 09 36 48.8 +1.1
HHC *e*S **S** 09 42 49.9 +8.0
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,160nm,4.9s
ARMA Armidale 40.99 143 P **P** 09 36 50.3 +1.8
baz=41,SNR=37
ARMA Armidale 40.99 143 P **P** 09 36 50.3 +1.8
ARMA IAmb IAmb 09 36 51.1
comp=Z,58nm,1.0s
ARMA Armidale 40.99 143 P **P** 09 36 50.1 +1.6
BTO Baotou 41.10 343 *e*P **P** 09 36 52.3 +3.0
BTO pP **pwP** 09 37 39.5 -2.6
BTO sP **sP** 09 38 04.9 +3.6
BTO PP **PnPn** 09 38 34.3 -1.9
BTO S **S** 09 42 50.4 +5.7
BTO pmax pmax
comp=Z,16nm,0.6s
BTO pmax pmax
comp=Z,320nm,4.8s
BTO LR LR
comp=Z,370nm,5.9s
BTO LR LR
comp=Z,180nm,6.4s
BTO LR LR
comp=Z,310nm,6.7s
ARPS Mount Arapiles 41.34 159 P **P** 09 36 52.4 +1.2
baz=41,SNR=6.9
ARPS Mount Arapiles 41.34 159 P **P** 09 36 51.8 +0.6
YNG Young 42.12 150 P **P** 09 36 59.4 +1.8
baz=42,SNR=6.9
YNG Young 42.12 150 P **P** 09 36 59.8 +2.3
LSA Lhasa 42.25 315 P **P** 09 37 00.8 +1.6
LSA IAmb IAmb 09 37 02.0
comp=Z,22nm,0.9s
LSA Lhasa 42.25 315 P **P** 09 37 00.8 +1.6
LSA pmax pmax
comp=Z,22nm,0.9s
LSA Lhasa 42.25 315 P **P** 09 37 00.9 +1.7
LSA PcP **PcP** 09 38 50.0 +1.2
MGCD Mangrove Creek 42.72 146 P **P** 09 37 04.9 +2.5
baz=43,SNR=23
BRAT Ballarat 42.82 157 P **P** 09 37 04.7 +1.6
XLT XiLinHaoTe 42.92 351 *e*P **P** 09 37 03.1 -0.8
XLT pmax pmax
comp=Z,6.0nm,1.0s
XLT pmax pmax
comp=Z,90nm,4.6s
USA0B Ussuriysk Arra 43.13 8 P **P** 09 37 06.1 +0.6
USA0B Ussuriysk Arra 43.13 8 P **P** 09 37 06.1 +0.6
USA0B pmax pmax
comp=Z,26nm,1.2s
USRK Ussuriysk Ar. 43.13 8 P **P** 09 37 06.2 +0.8
USRK Ussuriysk Ar. 43.13 8 P **P** 09 37 06.1 +0.7
comp=Z,7.4nm,0.4s,baz=195,slow=7.6,SNR=24
comp=Z,7.4nm,0.4s
CAN Canberra 43.23 150 P **P** 09 37 08.5 +2.0
CAN Canberra 43.23 150 P **P** 09 37 08.9 +2.4
CAN Canberra 43.23 150 P **P** 09 37 08.5 +2.0
CAN pmax pmax
comp=Z,79nm,0.8s
CAN Canberra 43.23 150 P **P** 09 37 08.6 +2.1
CAN pP **pwP** 09 37 57.2 -0.1
MDJ Mudanjiang 43.26 5 P **P** 09 37 07.4 +0.9
MDJ pP pP 09 37 52.0 -1.6
MDJ sP sP 09 38 15.8 -3.1
MDJ PP **PcP** 09 38 51.1 -0.1
MDJ PcP **PP** 09 38 52.9 +0.7
MDJ ScP **ScP** 09 42 24.3 +3.7
MDJ PcS **PcS** 09 42 45.3 +1.3
MDJ S **S** 09 43 18.6 +2.6
MDJ sS sS 09 44 38.3 -2.2
MDJ ScS **ScS** 09 46 44.4 +3.0
MDJ pmax pmax
comp=Z,24nm,0.6s
MDJ pmax pmax
comp=Z,75nm,4.2s
MDJ Mudanjiang 43.26 5 P **P** 09 37 07.3 +0.9
MDJ IAmb IAmb 09 37 07.9
comp=Z,16nm,0.6s
MDJ Mudanjiang 43.26 5 P **P** 09 37 07.5 +0.9
MDJ Mudanjiang 43.26 5 P **P** 09 37 07.1 +0.6
CNB Canberra Magne 43.41 150 P **P** 09 37 09.5 +1.6
baz=43,SNR=28
CNB Canberra Magne 43.41 150 P **P** 09 37 09.9 +2.0
TOO Toolangi 43.47 155 P **P** 09 37 10.5 +2.2
baz=44,SNR=21
TOO Toolangi 43.47 155 P **P** 09 37 10.4 +2.1
TOO IAmb IAmb 09 37 11.5
comp=Z,48nm,0.9s
TOO Toolangi 43.47 155 P **P** 09 37 10.5 +2.2
TOO Toolangi 43.47 155 P **P** 09 37 10.4 +2.1
TOO pmax pmax
comp=Z,48nm,0.9s
PALK Pallekele 43.85 279 P **P** 09 37 11.6 -0.2
PALK Pallekele 43.85 279 P **P** 09 37 11.6 -0.2
PALK pmax pmax
comp=Z,18nm,0.9s
GTA Gaotai 43.92 332 *e*P **P** 09 37 12.3 +0.3
GTA pP pP 09 37 58.8 -0.3
GTA PcP **PcP** 09 38 55.1 +1.3
GTA ScP **ScP** 09 42 23.8 +0.2
GTA S **S** 09 43 26.1 +0.1
GTA ScS **ScS** 09 46 44.1 -2.0
GTA pmax pmax
comp=Z,34nm,0.9s
GOMU GeErMu 44.09 325 P **P** 09 37 15.1 +1.4
GOMU pP pP 09 37 59.9 -0.9
GOMU PcP **PcP** 09 38 55.8 +1.1
GOMU pmax pmax
comp=Z,21nm,1.0s
BNX BinXian 44.22 3 ⇑P **P** 09 37 16.8 +2.7
BNX pmax pmax
comp=Z,10.0nm,0.7s
BNX pmax pmax
comp=Z,130nm,5.2s
MILA Mila 44.69 151 P **P** 09 37 19.5 +1.5
baz=45,SNR=5.8
KOUNC Koumac, New Ca 44.81 121 P **P** 09 37 20.3 +1.1
KOUNC IAmb IAmb 09 37 21.0
comp=Z,18nm,0.7s
DZM Mont Dzumac 47.27 122 P **P** 09 37 39.1 +0.7
DZM Mont Dzumac 47.27 122 P **P** 09 37 39.1 +0.7
YATNC Mamie plateau, 47.64 122 P **P** 09 37 42.6 +1.4
HIA Hailar 47.82 356 P **P** 09 37 43.7 +1.6
HIA Hailar 47.82 356 P **P** 09 37 44.0 +1.9
HIA Hailar 47.82 356 P **P** 09 37 43.7 +1.6
HIA pmax pmax
comp=Z,13nm,0.7s
KLR Kul'dur 48.05 7 *d i*P **P** 09 37 43.5 -0.3
KLR pmax pmax
comp=Z,15nm,0.8s
ULN Ulaanbaatar 48.62 345 P **P** 09 37 48.0 -0.4
ULN Ulaanbaatar 48.62 345 P **P** 09 37 48.0 -0.4
ULN pmax pmax
comp=Z,18nm,1.3s
ULN Ulaanbaatar 48.62 345 P **P** 09 37 48.1 -0.4
ULN PcP **PcP** 09 39 08.3 -1.9
ULN ScP **ScP** 09 42 43.0 -0.2
HEH HeiHe 48.72 3 *e*P **P** 09 37 48.8 -0.1
HEH pmax pmax
comp=Z,37nm,1.0s
HEH pmax pmax
comp=Z,70nm,6.6s
SONM Songino Array 48.77 344 P **P** 09 37 48.9 -0.6
SONM PcP **PcP** 09 39 10.8 +0.1
SONM Songino Array 48.77 344 P **P** 09 37 49.1 -0.4
comp=Z,6.0nm,0.5s,baz=156,slow=8.0,SNR=21
SONM ScP **ScP** 09 42 42.1 -1.7
comp=Z,1.1nm,0.7s,baz=163,slow=4.3,SNR=4.6
SONM S **S** 09 44 31.2 -3.4
comp=Z,0.1nm,0.4s,baz=182,slow=40,SNR=1.2
comp=Z,6.0nm,0.5s
ZAK Zakamensk 51.95 343 *e*P **P** 09 38 12.4 -0.8
ZAK pmax pmax
comp=Z,6.0nm,1.3s
ZEA Zeya 52.20 2 *e*P **P** 09 38 14.9 +0.1
ZEA *e* 09 39 09.3
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,0.9s
WMQ Urumqi 53.29 327 *e*P **P** 09 38 23.5 +0.4
WMQ PcP **PcP** 09 39 27.5 -0.1
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,190nm,3.7s
MOY Mondy 53.77 342 *e*P **P** 09 38 26.8 +0.3
MOY pmax pmax
comp=Z,16nm,1.3s
BOD Bodaibo 56.82 353 *e*P **P** 09 38 47.9 -0.1
BOD pmax pmax
comp=Z,17nm,1.8s
ZSN Zaisan 57.18 329 *e*P **P** 09 38 50.8 0.0
baz=329
ZSN Zaisan 57.18 329 *e*P **P** 09 38 50.7 0.0
DGTI Dogotuki 57.45 110 P **P** 09 38 54.3 +1.2
DGZ Jazzator, Alta 57.46 332 *d i*P **P** 09 38 52.7 -0.1
DGZ pmax pmax
comp=Z,18nm,1.0s
NIL Nilore 57.48 310 P **P** 09 38 52.7 -0.4
NIL Nilore 57.48 310 P **P** 09 38 52.7 -0.4
NIL pmax pmax
comp=Z,30nm,0.6s
SHLS Shalkode 57.63 322 *e*P **P** 09 38 51.9 -2.2
baz=322
SHLS Shalkode 57.63 322 *e*P **P** 09 38 51.8 -2.2
PDGK Podgornoye 57.71 323 P **P** 09 38 54.1 -0.5
UZB Uzynbulak 57.89 322 *e*P **P** 09 38 55.7 -0.3
baz=322
UZB Uzynbulak 57.89 322 *e*P **P** 09 38 55.6 -0.3
TARG Taragay, Kyrgy 57.91 320 P **P** 09 38 57.5 +1.1
TARG Taragay, Kyrgy 57.91 320 P **P** 09 38 57.5 +1.1
TARG pmax pmax
comp=Z,6.0nm,0.6s
PRZ Przheval'sk 57.92 321 P **P** 09 38 56.9 +0.7
PRZ IAmb IAmb 09 38 59.9
comp=Z,20nm,0.6s
PRZ **pP** 09 39 44.9 -1.0

KSH Kashi 58.02 317 P **P** 09 38 59.6 +2.7
KSH pmax pmax
comp=Z,21nm,1.0s
MK31 Makanchi Array 58.12 327 P **P** 09 38 57.0 -0.3
MK31 IAmb IAmb 09 38 58.9
comp=Z,18nm,0.7s
MK31 PcP **pP** 09 39 45.7 -1.4
MK31 Makanchi Array 58.12 327*d* *i*P **P** 09 38 56.9 -0.4
MKAR Makanchi Array 58.12 327 P **P** 09 38 56.9 -0.3
MKAR PcP **PcP** 09 39 46.1 -0.2
MKAR Makanchi Array 58.12 327 P **P** 09 38 57.0 -0.3
comp=Z,18nm,0.4s,baz=121,slow=7.4,SNR=170
MKAR PcP **pP** 09 39 46.0 -1.1
comp=Z,13nm,0.7s,baz=130,slow=4.3,SNR=12
MKAR ScP **ScP** 09 43 23.7 -0.7
comp=Z,0.7nm,0.6s,baz=125,slow=4.6,SNR=3.7
MKAR S **S** 09 46 37.2 -2.9
comp=Z,0.1nm,0.4s,baz=185,slow=13,SNR=1.6
MKAR ScS **ScS** 09 48 19.8 -3.9
baz=285,slow=42,SNR=1.2
comp=Z,18nm,0.4s
SATY Saty 58.23 322⇓ *i*P **P** 09 38 58.4 +0.2
comp=Z,7.6nm,0.6s,baz=322
SATY Saty 58.23 322*d* *i*P **P** 09 38 58.4 +0.2
SATY pmax pmax
comp=Z,8.0nm,0.6s
ZHN Zhinishke 58.27 322 *e*P **P** 09 38 58.5 -0.1
baz=322
ZHN Zhinishke 58.27 322 *e*P **P** 09 38 58.4 -0.1
KPKS Kokpek 58.27 322 *e*P **P** 09 38 58.5 -0.1
baz=322
KPKS Kokpek 58.27 322 *e*P **P** 09 38 58.4 -0.1
MAKZ Makanchi 58.30 327 P **P** 09 38 58.1 -0.4
MAKZ IAmb IAmb 09 39 00.0
comp=Z,20nm,0.7s
MAKZ PcP **PcP** 09 39 46.5 -0.4
MAKZ Makanchi 58.30 327 P **P** 09 38 58.1 -0.4
MAKZ 09 39 46.5
MAKZ pmax pmax
comp=Z,20nm,0.7s
MAKZ Makanchi 58.30 327 P **P** 09 38 58.0 -0.4
MAKZ PcP **PcP** 09 39 46.6 -0.4
PETK Petropavlovsk- 58.47 23 P **P** 09 38 59.3 -0.2
comp=Z,2.7nm,0.7s,baz=157,slow=8.0,SNR=4.1
PETK PcP **PcP** 09 39 47.3 -0.2
comp=Z,5.9nm,1.0s,baz=214,slow=5.7,SNR=4.6
comp=Z,2.7nm,0.7s
NRN Naryn 58.93 319 P **P** 09 39 02.7 -0.6
NRN PcP **PcP** 09 39 49.9 -0.1
TNSS Tian-Shan 59.12 321 *e*P **P** 09 39 04.6 -0.2
baz=321
TNSS Tian-Shan 59.12 321 *e*P **P** 09 39 04.5 -0.2
MDOK Medeo 59.13 321 *e*P **P** 09 39 04.6 +0.2
baz=321
MDOK Medeo 59.13 321 *e*P **P** 09 39 04.6 +0.2
TDK Taldyqorghan 59.28 324 *e*P **P** 09 39 05.1 -0.3
comp=Z,14nm,0.6s,baz=324
TDK Taldyqorghan 59.28 324 *e*P **P** 09 39 05.0 -0.3
TDK pmax pmax
comp=Z,14nm,0.6s
BOOM Boomskoye usch 59.49 320 P **P** 09 39 07.0 +0.1
BOOM Boomskoye usch 59.49 320 P **P** 09 39 07.0 +0.1
BOOM pmax pmax
comp=Z,3.0nm,0.6s
CHKK Chushkaly 59.52 322 *e*P **P** 09 39 06.1 -0.9
baz=322
CHKK Chushkaly 59.52 322 *e*P **P** 09 39 06.1 -0.9
TKM2 Tokmak 2 59.92 320 *i* P **P** 09 39 09.7 -0.2
TKM2 pmax pmax
comp=Z,8.0nm,0.5s
KUU Kurty 59.94 322⇓ *i*P **P** 09 39 09.8 -0.1
baz=322
KUU Kurty 59.94 322*d* *i*P **P** 09 39 09.7 -0.1
AAK Ala-Archa 60.49 320 P **P** 09 39 13.5 -0.2
AAK Ala-Archa 60.49 320*d* *i*P **P** 09 39 13.8 0.0
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 60.49 320 P **P** 09 39 14.0 +0.3
comp=Z,3.8nm,0.4s,baz=135,slow=4.3,SNR=13
AAK PcP **PcP** 09 39 56.4 +0.4
comp=Z,4.6nm,0.5s,baz=107,slow=3.8,SNR=4.3
comp=Z,3.8nm,0.4s
AAK Ala-Archa 60.49 320 P **P** 09 39 14.7 +1.0
AAK PcP **PcP** 09 39 56.4 +0.4
AAK pP **pP** 09 40 04.5 +0.6
YAK Yakutsk 60.59 3 P **P** 09 39 14.0 +0.3
YAK Yakutsk 60.59 3*d* *i*P **P** 09 39 13.7 -0.1
YAK *e* 09 39 53.8
YAK *e* 09 41 30.6
YAK *e*PPP PPP 09 42 56.9
YAK *e*S **S** 09 47 12.1 +0.9
YAK *e**SS SKKSac 09 48 39.6 -1.6
YAK *e*SS **SS** 09 51 10.5 -3.3
YAK pmax pmax
comp=Z,157nm,1.0s
YAK pmax pmax
comp=N,23nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,139nm,4.9s
YAK pmax pmax
comp=N,200nm,5.3s
YAK pmax pmax
comp=E,162nm,5.1s
YAK smax smax
comp=N,140nm,4.4s
YAK smax smax
comp=E,110nm,5.1s
YAK Yakutsk 60.59 3 P **P** 09 39 14.1 +0.3
KBL Kabul 61.05 309 P **P** 09 39 17.6 -0.2
KBL IAmb IAmb 09 39 20.0
comp=Z,33nm,0.8s
KBL Kabul 61.05 309 P **P** 09 39 17.6 -0.2
KBL pmax pmax
comp=Z,33nm,0.8s
LBZ Lake Benmore 61.19 144 P **P** 09 39 19.6 +1.4
RPZ Rata Peaks 61.33 143 P **P** 09 39 20.1 +1.0
RPZ Rata Peaks 61.33 143 P **P** 09 39 19.3 +0.2
comp=Z,17nm,0.4s,baz=317,slow=7.6,SNR=4.7
comp=Z,17nm,0.4s
SEM Semipalatinsk 61.41 330 *e*P **P** 09 39 19.9 0.0
baz=330
SEM Semipalatinsk 61.41 330 *e*P **P** 09 39 19.8 0.0
MA2 Magadan 61.52 15 P **P** 09 39 20.2 +0.1
MA2 Magadan 61.52 15*de*P **P** 09 39 21.1 +1.0
MA2 pmax pmax
comp=Z,8.0nm,1.0s
ZAA0 Zalesovo Array 61.58 335 P **P** 09 39 19.3 -1.3
ZAA0 IAmb IAmb 09 39 21.8
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 61.58 335 P **P** 09 39 19.1 -1.6
ZALV Zalesovo Beam 61.58 335 P **P** 09 39 19.2 -1.4
comp=Z,7.9nm,0.5s,baz=116,slow=6.7,SNR=30
ZALV PcP **PcP** 09 39 58.2 -1.7
comp=Z,2.6nm,0.6s,baz=163,slow=5.0,SNR=1.8
ZALV S **S** 09 47 19.4 -4.6
comp=Z,1.4nm,0.7s,baz=120,slow=17,SNR=5.3
comp=Z,7.9nm,0.5s
BTK Batken 61.82 316 P **P** 09 39 23.0 +0.3
BTK IAmb IAmb 09 39 25.3
comp=Z,12nm,0.8s
BTK Batken 61.82 316 P **P** 09 39 23.0 +0.3
BTK pmax pmax
comp=Z,12nm,0.9s
BTLS Baital 61.94 322 *e*P **P** 09 39 22.7 -0.6
baz=322
BTLS Baital 61.94 322 *e*P **P** 09 39 22.6 -0.6
KURBB Kurchatov Arra 62.41 329 P **P** 09 39 25.5 -0.7
comp=Z,21nm,0.7s,baz=126,slow=6.4,SNR=89
KURBB PcP **PcP** 09 40 02.7 -0.7
comp=Z,3.1nm,0.7s,baz=126,slow=3.7,SNR=5.1
KURBB pP **pP** 09 40 18.3 +1.5
comp=Z,6.0nm,0.9s,baz=130,slow=5.6,SNR=3.0
KURBB S **S** 09 47 33.1 -1.4
comp=Z,0.3nm,0.4s,baz=210,slow=5.5,SNR=2.7
comp=Z,21nm,0.7s
KURK Kurchatov 62.42 329 P **P** 09 39 25.8 -0.5
KURK Kurchatov 62.42 329 P **P** 09 39 25.8 -0.5
KURK pmax pmax
comp=Z,43nm,0.7s
KURK Kurchatov 62.42 329 P **P** 09 39 25.6 -0.7
KURK ScP **ScP** 09 43 44.9 +1.6
SIMJ Simiganj 62.56 314 P **P** 09 39 27.1 -0.5
SIMJ IAmb IAmb 09 39 28.5
comp=Z,9.7nm,0.8s
SIMJ Simiganj 62.56 314 P **P** 09 39 27.3 -0.4
SIMJ pwP **pwP** 09 40 23.1 -2.1
RTZ Ruatahuna 62.63 135 P **P** 09 39 28.6 +0.5
PLWZ Palliser 62.84 139 P **P** 09 39 29.2 -0.1
KK31 Karatay Array 63.31 319 P **P** 09 39 32.5 +0.2
KK31 Karatay Array 63.31 319 P **P** 09 39 32.5 +0.2
KK31 pmax pmax
comp=Z,7.0nm,0.7s
KKAR Karatay Array 63.31 319 P **P** 09 39 31.9 -0.4
KKAR Karatay Array 63.31 319 P **P** 09 39 31.9 -0.4
OTUK Ortayu 64.54 324 P **P** 09 39 39.5 -0.7
SEY Seymchan 64.82 14⇓ *e*P **P** 09 39 42.5 +0.9
SEY pmax pmax
comp=Z,6.0nm,1.0s
BRZS Berezniki 65.21 326 *e*P **P** 09 39 43.8 -0.7
baz=326
BRZS Berezniki 65.21 326 *e*P **P** 09 39 43.8 -0.7
WSAR Wadi Sarin 67.15 295 P **P** 09 39 55.4 -2.0
comp=Z,9.5nm,0.8s,baz=116,slow=5.9,SNR=7.3
comp=Z,9.5nm,0.8s
BVAR Borovoye Array 67.96 328 P **P** 09 40 01.0 -0.8
comp=Z,8.0nm,0.7s,baz=133,slow=8.3,SNR=35
comp=Z,8.0nm,0.7s
BRVK Borovoye 68.03 328 P **P** 09 40 01.8 -0.4
BRVK IAmb IAmb 09 40 03.6
comp=Z,16nm,0.9s
BRVK Borovoye 68.03 328 P **P** 09 40 01.8 -0.4
BRVK pmax pmax
comp=Z,16nm,1.0s
BRVK Borovoye 68.03 328 P **P** 09 40 01.5 -0.7
DRV Dumont d'Urvil 68.85 173 P **P** 09 40 07.7 +0.8
UOSS Minazif 69.60 296 P **P** 09 40 11.5 -1.0
UOSS IAmb IAmb 09 40 13.1
comp=Z,17nm,1.2s
TIXI Tiksi 70.18 2 P **P** 09 40 14.6 -0.4
TIXI IAmb IAmb 09 40 15.9
comp=Z,35nm,0.9s
TIXI Tiksi 70.18 2 P **P** 09 40 14.6 -0.4
TIXI pmax pmax
comp=Z,35nm,1.0s
TIXI Tiksi 70.18 2 P **P** 09 40 14.8 -0.2
TIXI pP **pP** 09 41 08.0 +1.1
GEYT Alibeck 70.48 310 P **P** 09 40 17.8 +0.2
GEYT IAmb IAmb 09 40 19.5
comp=Z,13nm,0.8s
GEYT Alibeck 70.48 310 P **P** 09 40 17.8 +0.2
GEYT pmax pmax
comp=Z,13nm,0.9s
GEYT Alibeck 70.48 310 P **P** 09 40 17.3 -0.3
comp=Z,10nm,0.8s,baz=111,slow=8.1,SNR=13
comp=Z,10nm,0.8s
GYA0B ALIBECK ARRAY 70.48 310 P **P** 09 40 16.7 -0.9
GYA0B IAmb IAmb 09 40 19.5
comp=Z,11nm,0.8s
RER Riviere de l'E 70.61 247 P **P** 09 40 18.9 +0.1
NRIK Noril'sk 72.10 347 P **P** 09 40 26.5 -0.1
NRIK IAmb IAmb 09 40 27.3
comp=Z,20nm,0.8s
NRIK Noril'sk 72.10 347*d* *i*P **P** 09 40 26.2 -0.4
NRIK pmax pmax
comp=Z,17nm,0.6s
NRIK Noril'sk 72.10 347 P **P** 09 40 26.4 -0.1
comp=Z,19nm,0.5s,baz=131,slow=5.7,SNR=34
NRIK pP **pP** 09 41 19.9 +1.2
comp=Z,6.8nm,0.6s,baz=163,slow=5.7,SNR=1.9
comp=Z,19nm,0.5s
AB31 Akbulak array 72.43 322 *i* P **P** 09 40 27.5 -1.4
ABKAR Akbulak array 72.43 322 P **P** 09 40 28.2 -0.7
AKTO Aktyubinsk 73.98 322 P **P** 09 40 37.4 -0.6
comp=Z,14nm,0.7s,baz=112,slow=6.2,SNR=46
comp=Z,14nm,0.7s
SVE Sverdlovsk 74.68 329 *e*P **P** 09 40 41.0 -0.8
SVE pmax pmax
comp=Z,18nm,0.8s
ARU Arti 75.61 328 P **P** 09 40 45.8 -1.4
ARU IAmb IAmb 09 40 46.8
comp=Z,17nm,1.0s
ARU Arti 75.61 328*d* *i*P **P** 09 40 46.0 -1.1
ARU S **S** 09 50 10.1 +1.3
ARU SS **SS** 09 54 59.6 -5.6
ARU pmax pmax
comp=Z,18nm,1.0s
ARU Arti 75.61 328 P **P** 09 40 46.1 -1.0
comp=Z,12nm,0.2s,baz=142,slow=1.3,SNR=13
comp=Z,12nm,0.2s
ABPO Ambohimpanom 78.27 250 P **P** 09 41 03.4 +0.4
ABPO IAmb IAmb 09 41 04.4
comp=Z,34nm,0.9s
ABPO Ambohimpanom 78.27 250 P **P** 09 41 03.4 +0.4
ABPO pmax pmax
comp=Z,34nm,0.9s
VOI Vohitsoka 78.97 247 P **P** 09 41 06.9 +0.2
VOI Vohitsoka 78.97 247 P **P** 09 41 07.0 +0.4
RAYN Ar Rayn 79.18 294 P **P** 09 41 07.0 -0.6
RAYN IAmb IAmb 09 41 08.9
comp=Z,14nm,0.8s
RAYN Ar Rayn 79.18 294 P **P** 09 41 07.1 -0.6
RAYN pmax pmax
comp=Z,14nm,0.8s
SEKA Sheki 79.38 312 P **P** 09 41 07.7 -0.7
ZKTA Zakatala 79.86 312 P **P** 09 41 10.9 -0.1
GANJ Ganja 79.97 311 P **P** 09 41 11.2 -0.4
BELG Belogornoye 80.76 323 *i* P **P** 09 41 14.5 -1.0
BELG pmax pmax
comp=Z,9.0nm,1.0s
BELG Belogornoye 80.76 323 P **P** 09 41 14.4 -1.0
comp=Z,44nm,0.9s,baz=144,slow=4.5,SNR=18
comp=Z,44nm,0.9s
KIRV Kirov 80.94 329*c* *i*P **P** 09 41 15.5 -0.8
KIRV Kirov 80.94 329 P **P** 09 41 15.4 -0.9
comp=Z,8.9nm,0.4s,baz=272,slow=22,SNR=4.5
comp=Z,8.9nm,0.4s
GNI Garni 81.11 310*d* *i*P **P** 09 41 17.9 +0.1
GNI pmax pmax
comp=Z,18nm,1.3s
GNI Garni 81.11 310 P **P** 09 41 18.1 +0.3
comp=Z,3.6nm,0.4s,baz=138,slow=11,SNR=3.3
comp=Z,3.6nm,0.4s
ATD Arta Tunnel 81.36 281 P **P** 09 41 18.7 -0.8
ATD IAmb IAmb 09 41 21.4
comp=Z,16nm,0.8s
VNDA Vanda 81.47 172 P **P** 09 41 19.2 +0.6
comp=Z,2.6nm,0.8s,baz=311,slow=9.7,SNR=5.8
comp=Z,2.6nm,0.8s
ZEI Tsey 82.00 313 *e*P **P** 09 41 21.3 -1.2
ZEI pmax pmax
comp=Z,14nm,1.0s
AKH Akhalkalaki 82.17 311 P **P** 09 41 24.5 +1.1
AKH Akhalkalaki 82.17 311 P **P** 09 41 24.5 +1.1
AKH pmax pmax
comp=Z,82nm,1.1s
L16K Owhat River 82.23 28 P **P** 09 41 24.5 +1.6
ONI Oni 82.31 313 P **P** 09 41 24.4 +0.5
ONI Oni 82.31 313 P **P** 09 41 24.4 +0.5
ONI pmax pmax
comp=Z,8.0nm,1.1s
KARS Kars 82.42 311 P **P** 09 41 25.4 +0.8
KARS Kars 82.42 311 P **P** 09 41 25.5 +0.8
KARS pmax pmax
comp=Z,56nm,0.8s
H17K Granite Mounta 82.70 25 P **P** 09 41 26.6 +1.2
H17K IAmb IAmb 09 41 27.8
comp=Z,12nm,0.8s
KBZ Khabaz 82.81 314⇓ *i*P **P** 09 41 25.7 -0.6
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 82.81 314 P **P** 09 41 25.9 -0.4
comp=Z,8.6nm,1.0s,baz=180,slow=9.2,SNR=16
comp=Z,8.6nm,1.0s
K17K Iditarod 82.96 27 P **P** 09 41 29.0 +2.3
K17K IAmb IAmb 09 41 47.2
comp=Z,15nm,1.1s
E18K Tukpahlearik C 82.98 22 P **P** 09 41 28.1 +1.4
E18K IAmb IAmb 09 41 29.5
comp=Z,14nm,0.8s
KIV Kislovodsk 82.98 314 *e*P **P** 09 41 27.2 -0.2
KIV pmax pmax
comp=Z,6.0nm,1.0s
GURO Guroymak-BITLI 83.08 308 P **P** 09 41 28.7 +0.7
GURO IAmb IAmb 09 41 29.6
comp=Z,22nm,0.9s
C19K Lookout Ridge 83.73 21 P **P** 09 41 32.6 +2.1
C19K IAmb IAmb 09 41 33.6
comp=Z,15nm,0.8s
G19K Purcell Mounta 84.09 24 P **P** 09 41 33.6 +1.3
G19K IAmb IAmb 09 41 34.8
comp=Z,9.6nm,0.8s
D19K Kuna River 84.13 21 P **P** 09 41 34.0 +1.4
D19K IAmb IAmb 09 41 34.9
comp=Z,13nm,0.8s
H19K Roundabout Mou 84.25 24 P **P** 09 41 35.2 +2.1
H19K IAmb IAmb 09 41 35.8
comp=Z,19nm,1.4s
VRH Novokhopyorsk 84.25 321 *e*P **P** 09 41 32.4 -1.1
VRH pmax pmax
comp=Z,34nm,1.1s
E19K Redstone River 84.26 22 P **P** 09 41 35.1 +1.9
E19K IAmb IAmb 09 41 35.7
comp=Z,17nm,1.4s
B20K Meade River 84.74 20 P **P** 09 41 36.8 +1.3
B20K IAmb IAmb 09 41 38.2
comp=Z,10nm,0.8s
SOC Sochi 85.11 313 *e*P **P** 09 41 36.0 -1.9
SOC *e* 09 44 54.2
SOC *e*PPP PPP 09 46 51.5
SOC *e*S **SKSac** 09 51 38.5 -2.2
SOC *e*SS **SS** 09 57 22.8 -4.4
SOC *e*SSS SSS 10 00 57.6
SOC pmax pmax
comp=Z,16nm,0.6s
B21K Ikpikpuk River 85.56 20 P **P** 09 41 40.8 +1.2
B21K IAmb IAmb 09 41 42.8
comp=Z,13nm,0.8s
VORD Divnogorie 85.76 321 *e*P **P** 09 41 39.2 -1.8
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORR Voronezh 85.85 322 *e*P **P** 09 41 39.2 -2.2
VORR pmax pmax
comp=Z,81nm,0.7s
VSR Storozhevoye 85.85 321 *e*P **P** 09 41 39.3 -2.1
VSR pmax pmax
comp=Z,20nm,0.8s
ARPR Arapgir-MALATY 85.99 309 P **P** 09 41 43.3 +0.7
ARPR IAmb IAmb 09 41 44.4
comp=Z,34nm,1.2s
LPSR Galich'ya Gora 86.07 322 *e*P **P** 09 41 40.8 -1.6
LPSR pmax pmax
comp=Z,50nm,0.9s
KLMR Klimovskoe 86.22 331 *e*P **P** 09 41 41.9 -1.1
KLMR *e* 09 45 06.7
KLMR pmax pmax
comp=Z,19nm,0.8s
KIBK Kibwezi 86.33 268 P **P** 09 41 45.4 +0.7
KIBK IAmb IAmb 09 41 46.7
comp=Z,22nm,1.2s
E22K Anaktuvuk Pass 86.39 22 P **P** 09 41 45.1 +1.3
ANN Anapa 86.79 315 *e*P **P** 09 41 43.4 -2.7
ANN *e*S **SKSac** 09 51 48.0 -3.1
ANN pmax pmax
comp=Z,77nm,1.3s
GAZ Gaziantep 86.84 307 P **P** 09 41 46.7 0.0
GAZ IAmb IAmb 09 41 47.8
comp=Z,20nm,0.9s
MOS Moscow 86.96 326 *e*P **P** 09 41 44.8 -1.9
G23K Bananza Creek 86.98 23 P **P** 09 41 48.1 +1.5
ASF Jabal al Asfar 87.06 302 P **P** 09 41 47.7 -0.2
comp=Z,16nm,0.8s,baz=154,slow=2.6,SNR=9.4
comp=Z,16nm,0.8s
KMBO Kilima Mbogo 87.10 269 P **P** 09 41 49.3 +0.7
KMBO IAmb IAmb 09 41 50.8
comp=Z,26nm,1.1s
KMBO Kilima Mbogo 87.10 269 P **P** 09 41 49.3 +0.7
KMBO pmax pmax
comp=Z,26nm,1.1s
I23K Minto, Yukon-K 87.16 25 P **P** 09 41 48.5 +1.0
TOLK Toolik Lake Re 87.26 21 P **P** 09 41 49.1 +1.2
OBN Obninsk 87.55 325 *i* P **P** 09 41 48.0 -1.5
OBN pmax pmax
comp=Z,12nm,0.8s
OBN Obninsk 87.55 325 P **P** 09 41 47.7 -1.7
comp=Z,20nm,0.4s,baz=138,slow=22,SNR=4.9
comp=Z,20nm,0.4s
D24K Happy Valley 87.55 21 P **P** 09 41 50.1 +0.8
CCB Clear Creek Bu 87.81 26 P **P** 09 41 50.4 -0.2
F24K Squaw Lake 87.85 23 P **P** 09 41 52.0 +1.3
GHAJ Ghor Haditha 88.20 301 P **P** 09 41 53.6 +0.5
GHAJ IAmb IAmb 09 41 56.5
comp=Z,23nm,0.8s
ILAR Eielson Array 88.20 25 P **P** 09 41 51.2 -1.2
comp=Z,0.5nm,0.5s,baz=245,slow=4.9,SNR=15
MMAI Mount Meron Ar 88.32 303 P **P** 09 41 53.8 0.0
comp=Z,5.4nm,0.6s,baz=340,slow=20,SNR=4.4
comp=Z,5.4nm,0.6s
LVZ Lovozero 88.56 338⇓ *e*P **P** 09 41 55.1 +1.0
LVZ pmax pmax
comp=Z,55nm,1.6s
E25K Arctic Village 88.73 22 P **P** 09 41 55.8 +0.9
EIL Elat 88.75 299 P **P** 09 41 55.7 -0.1
comp=Z,6.0nm,0.7s,baz=105,slow=3.4,SNR=4.4
comp=Z,6.0nm,0.7s
LODK Lodwar 88.88 273 P **P** 09 41 57.7 +0.9
BMAR Burnt Mountain 89.12 23 P **P** 09 41 57.9 +1.2
BR131 Keskin Array S 89.62 310⇓ *e*P **P** 09 42 00.2 +0.4
BRTR Keskin Array B 89.62 310 P **P** 09 41 59.8 0.0
comp=Z,2.2nm,0.9s,baz=152,slow=6.7,SNR=7.9
BRTR PP **PP** 09 45 34.9 -0.1
comp=Z,1.3nm,0.8s,baz=101,slow=6.7,SNR=5.0
comp=Z,2.2nm,0.9s
CSS Mathiatis 90.00 305 P **P** 09 42 01.3 -0.2
CSS IAmb IAmb 09 42 01.9
comp=Z,14nm,0.8s
VALR Valaam 90.41 331*c* *i*P **P** 09 42 01.5 -1.3
VALR pmax pmax
comp=Z,12nm,0.8s
BCAR Beaver Creek A 90.51 27 P **P** 09 42 04.6 +1.3
HOPEN Hopen 90.80 347 *e*P **P** 09 42 03.9 -0.4
HOPEN IAmb IAmb 09 42 04.3
comp=Z,41nm,1.2s
CTGM Chitina Glacie 90.88 29 P **P** 09 42 06.5 +1.2
F28M Old Crow 90.91 22 P **P** 09 42 06.0 +0.9
QSPA South Pole Qui 91.35 180 P **P** 09 42 08.2 +1.0
QSPA South Pole Qui 91.35 180 P **P** 09 42 08.0 +0.8
comp=Z,2.8nm,0.7s,baz=319,slow=1.6,SNR=25
comp=Z,2.8nm,0.7s
ARA0 ARCESS Array S 91.76 340 *e*P **P** 09 42 07.8 -1.2
ARA0 IAmb IAmb 09 42 09.0
comp=Z,46nm,1.6s
ARCES ARCESS Array B 91.76 340 P **P** 09 42 07.9 -1.0
ARCES IAmb IAmb 09 42 08.6
comp=Z,14nm,1.0s
ARCES ARCESS Array B 91.76 340 P **P** 09 42 07.9 -1.0
ARCES pmax pmax
comp=Z,14nm,1.0s
ARCES ARCESS Array B 91.76 340 P **P** 09 42 07.8 -1.1
comp=Z,10nm,0.8s,baz=85,slow=6.6,SNR=30
comp=Z,10nm,0.8s
AKASG Malin Array Be 92.14 321 P **P** 09 42 09.5 -1.6
comp=Z,1.4nm,0.6s,baz=67,slow=4.4,SNR=5.6
comp=Z,1.4nm,0.6s
AKBB Malin Array Si 92.14 321⇑ *e*P **P** 09 42 09.6 -1.4
AKBB pmax pmax
comp=Z,13nm,2.1s
L29M L29M 92.16 27 P **P** 09 42 11.4 +0.5
L29M IAmb IAmb 09 42 13.4
comp=Z,11nm,1.5s
HAMF Hammerfest 92.19 341 *e*P **P** 09 42 09.1 -1.7
HAMF IAmb IAmb 09 42 10.5
comp=Z,13nm,0.9s
SPB2 Spitsbergen Ar 92.25 349 P **P** 09 42 10.8 -0.3
SPA0 Spitsbergen Ar 92.26 349 IAmb IAmb 09 42 11.0
comp=Z,48nm,1.2s
SPA0 *e*P **P** 09 42 11.2 +0.2
SPITS Spitsbergen Ar 92.26 349 P **P** 09 42 10.8 -0.3
SPITS Spitsbergen Ar 92.26 349 P **P** 09 42 09.1 -2.0
comp=Z,7.0nm,0.6s,baz=91,slow=7.5,SNR=25
comp=Z,7.0nm,0.6s
EPYK Eagle Plains 92.30 23 P **P** 09 42 11.8 +0.3
EPYK IAmb IAmb 09 42 13.2
comp=Z,7.9nm,1.1s
G30M tAoh Zraii Nji 92.40 23 P **P** 09 42 11.9 -0.1
MNK Minsk 92.60 325 *i* P **P** 09 42 09.7 -3.3
MNK *i* 09 45 53.4
MNK *i* S **SKSac** 09 52 21.2 -3.2
MNK *i* SS **SS** 09 59 13.2 -1.6
MNK *i* SSS SSS 10 02 53.7
KTK1 Kautokeino 92.65 339 *e*P **P** 09 42 11.4 -1.6
FIA1 FINESS Array S 92.70 332 P **P** 09 42 12.2 -1.2
FIA1 IAmb IAmb 09 42 12.8
comp=Z,16nm,0.9s
FINES FINESS Array B 92.71 332 P **P** 09 42 11.9 -1.5

FINES	**FINES Array B**	**92.71**	**332**	*i* P		**P**	**09 42 11.6**	**-1.8**
FINES				pmax		pmax			
	comp=Z,3.0nm,0.7s								
FINES	**FINES Array B**	**92.71**	**332**	P		**P**	**09 42 11.7**	**-1.7**
	comp=Z,3.4nm,0.7s,baz=91,slow=7.6,SNR=15								
	comp=Z,3.4nm,0.7s								
KBS	**Kingsbay**	**92.83**	**350**	*eP*		**P**	**09 42 13.0**	**-0.7**
KBS				IAmb		IAmb	09 42 13.3		
	comp=Z,24nm,1.2s								
F31M	**Tsiigehtchic**	**93.27**	**22**	P		**P**	**09 42 15.9**	**0.0**
JETT	**Jettan, Norway**	**93.52**	**340**	*eP*		**P**	**09 42 15.5**	**-1.6**
JETT				IAmb		IAmb	09 42 16.2		
	comp=Z,23nm,0.8s								
WHY	**Whitehorse**	**94.06**	**29**	P		**P**	**09 42 20.1**	**+0.3**
WHY				IAmb		IAmb	09 42 22.0		
	comp=Z,5.1nm,1.0s								
FARO	**Faro, Yukon**	**94.48**	**27**	P		**P**	**09 42 22.9**	**+1.3**
FARO				IAmb		IAmb	09 42 23.5		
	comp=Z,6.1nm,0.8s								
PABE	**Paberze**	**94.70**	**326**	P		**P**	**09 42 22.1**	**-0.6**
N32M	**Quiet Lake**	**94.83**	**28**	P		**P**	**09 42 24.4**	**+1.1**
N32M				IAmb		IAmb	09 42 42.6		
	comp=Z,11nm,1.1s								
A36M	**Sachs Harbour**	**94.88**	**17**	P		**P**	**09 42 23.0**	**-0.1**
A36M				IAmb		IAmb	09 42 24.4		
	comp=Z,3.1nm,0.7s								
BURAR	**Bucovina Array**	**95.10**	**318**	P		**P**	**09 42 24.5**	**-0.3**
BURAR				IAmb		IAmb	09 42 25.7		
	comp=Z,5.3nm,0.8s								
BUR08	**Bucovina Ar. S**	**95.10**	**318**	P		**P**	**09 42 24.5**	**-0.3**
BUR08				IAmb		IAmb	09 42 25.4		
	comp=Z,7.3nm,0.9s								
SUW	**Suwalki**	**95.40**	**324**	P		**P**	**09 42 25.7**	**-0.2**
SUW	**Suwalki**	**95.40**	**324**	P		**P**	**09 42 25.7**	**-0.2**
STEI	**Steigen**	**95.78**	**339**	*eP*		**P**	**09 42 25.4**	**-1.9**
FAUS	**Fauske**	**95.93**	**338**	*eP*		**P**	**09 42 26.4**	**-1.6**
FAUS				IAmb		IAmb	09 42 27.5		
	comp=Z,57nm,1.8s								
C36M	**Paulatuk**	**96.17**	**19**	P		**P**	**09 42 29.0**	**-0.1**
C36M				IAmb		IAmb	09 42 29.8		
	comp=Z,5.5nm,0.8s								
LSZ	**Lusaka**	**96.29**	**255**	P		**P**	**09 42 30.7**	**-0.2**
LSZ	**Lusaka**	**96.29**	**255**	P		**P**	**09 42 30.7**	**-0.2**
LSZ				pmax		pmax			
	comp=Z,16nm,0.8s								
MOR8	**Moi Rana**	**96.64**	**337**	*eP*		**P**	**09 42 28.5**	**-2.8**
CRVS	**Cervenica-Dubn**	**97.37**	**320**	*eP*		Pdif	09 42 35.2	+0.2
CRVS	**Cervenica-Dubn**	**97.37**	**320**	*e*PDIFF		Pdif	09 42 35.1	+0.1
OJC	**Ojcow**	**98.17**	**321**	P		Pdif	09 42 38.8	+0.2
OJC				IAmb		IAmb	09 42 39.0		
	comp=Z,6.0nm,1.0s								
OJC	**Ojcow**	**98.17**	**321**	P		Pdif	09 42 38.8	+0.3
OJC				pmax		pmax			
	comp=Z,6.0nm,1.0s								
HFS	**Hagfors**	**98.91**	**332**	P		Pdif	09 42 39.4	-2.2
	comp=Z,1.2nm,0.4s,baz=117,slow=5.3,SNR=7.1								
	comp=Z,1.2nm,0.4s								
NB2	**NORSAR Subarra**	**99.75**	**333**	P		**Pdif**	**09 42 43.2**	**-2.2**
	comp=Z,2.0nm,0.8s,baz=66,slow=4.6								
NB2	**NORSAR Subarra**	**99.75**	**333**	P		**Pdif**	**09 42 43.2**	**-2.2**
	baz=66,slow=4.6								
NOA	**NORSAR Array B**	**99.75**	**333**	P		**Pdif**	**09 42 43.6**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=69,slow=4.5,SNR=4.4								
	comp=Z,1.2nm,0.7s								
CLL	**Collm**	**102.06**	**323**	*eP*		**Pdif**	**09 42 54.0**	**-1.8**
YKA	**Yellowknife Ar**	**102.58**	**24**	PKiKP		**PKiKP**	**09 47 17.0**	**-0.7**
	comp=Z,0.1nm,0.6s,baz=308,slow=1.4,SNR=4.1								
YKA				PKKPbc		**PKKPbc**	**09 58 55.3**	**-4.6**
	comp=Z,0.6nm,0.8s,baz=115,slow=2.3,SNR=7.2								
NVAR	**Mina Array Bea**	**110.23**	**48**	PKiKP		**PKiKP**	**09 47 33.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=282,slow=4.5,SNR=2.5								
NVAR				PP		**PP**	**09 48 10.8**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=280,slow=8.9,SNR=4.1								
NVAR				PKKPab		**PKKPab**	**09 58 46.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=113,slow=4.9,SNR=7.2								
PDAR	**Pinedale Array**	**114.66**	**41**	PKP		**PKiKP**	**09 47 41.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=132,slow=2.2,SNR=2.2								
PDAR				PKKPbc		**PKKPbc**	**09 58 19.2**	**-2.1**
	comp=Z,0.4nm,0.8s,baz=125,slow=7.4,SNR=4.1								
PDAR				PKKPab		**PKKPab**	**09 58 26.4**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=121,slow=6.3,SNR=10.0								
TORD	**Toradi Ar. Bea**	**121.30**	**286**	PKP		**PKPdf**	**09 47 53.4**	**-1.0**
	comp=Z,4.8nm,0.6s,baz=58,slow=1.4,SNR=3.2								
SCHQ	**Schefferville**	**123.18**	**8**	PKP		**PKPdf**	**09 47 56.6**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=334,slow=4.9,SNR=4.5								
TXAR	**Lajitas Array**	**124.91**	**52**	PKP		**PKiKP**	**09 48 01.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=103,slow=2.8,SNR=3.4								
TXAR				PKKPbc		**PKKPab**	**09 57 42.6**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=154,slow=6.9,SNR=3.5								
DBIC	**Dimbokro**	**128.64**	**280**	PKP		**PKPdf**	**09 48 08.8**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=83,slow=0.9,SNR=5.9								
PLCA	**Paso Flores**	**138.62**	**163**	SKPbc		**SKPbc**	**09 51 39.7**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=214,slow=1.5,SNR=6.9								

VAO ***20*** *09:38:55.5±0.4,25.2°15S×70.2°59W,h10km,mb5.0*
MOS ***20*** *09:38:57.8±1.3,25.3°37S×70.4°45W,h43km,mb5.3/28,Error ellipse: s-maj=12.9km s-min=6.2km az=96.1*
SJA ***20*** *09:38:57.5±0.7,25.3°31S×70.5°55W,h42km±12km,ML5.3, MW4.9*
IDC ***20*** *09:38:59.4±2.6,25.3°37S×70.4°41W,h42km±22km,mb4.4/15, mbtmp4.6/20,ML4.1/4,MS3.8/33,Error ellipse: s-maj=20.1km s-min=13.5km az=62.0*
NEIC ***20*** *09:38:59.3,25.5°52S×70.3°70W,h50km,Moment Tensor Solution. Duration: 1ŝ2 Moment tensor: Scale 10^16Nm; Mrr1.91; Mθθ0.85; Mϕϕ-2.77; Mrθ0.40; Mθϕ0.05; Mϕr-0.03; Fault plane solution: M0 2.41000×10^16 NP1: ϕs161.52000°,δ48.39000°,λ64.67000°. NP2:ϕs17.00000°, δ47.49000°,λ115.72000°. Principal axes: T 2.0512, Plg71.0000°, Azm1.0000°; N 0.7171, Plg19.0000°, Azm179.0000°; P -2.7683, Plg0.0000°, Azm269.0000°;*
NEIC ***20*** *09:38:59.3,25.3°32S×70.5°59W,h50km*
GUC ***20*** *09:38:59.4±0.6,25.3°33S×70.5°50W,h37km±2km,ML5.3*
NEIC ***20*** *09:38:59.6±2.6,25.3°31S±0.1°03×70.6°60W±0.1°06,h42km±4km, mb5.2/386,Mwr4.7/40,Mww4.9/19,Error ellipse: s-maj=7.3km s-min=4.1km az=94.0,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr0.86; Mθθ0.25; Mϕϕ-1.11; Mrθ0.60; Mθϕ0.66; Mϕr0.78; Fault plane solution: M0 1.56000×10^16 NP1:ϕs10.69000°, δ67.44000°,λ128.55000°. NP2:ϕs126.40000°,δ43.76000°, λ33.69000°. Principal axes: T 1.6055, Plg51.0000°, Azm326.0000°; N -0.1020, Plg35.0000°, Azm174.0000°; P -1.5036, Plg14.0000°, Azm74.0000°;*
NEIC ***20*** *09:38:59.3,25.3°32S×70.5°59W,h39km*
BJI ***20*** *09:39:01.0±0.0,25.3°30S×70.5°50W,h40km,mB5.4/2, Ms5.1/1,Ms7 4.8/2*

ISC 20 09:38:59.0±0.3,25.5°35S±0.1°02×70.5°56W±0.1°04,h41km±3km, h41km:pP-P,n762,σ1ŝ33/698,mb5.2/205,MS3.8/30, 17C-10D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**0.73**	**11**		**Pn**	**09 39 12.2**	**-1.0**
PB14				Sn	**Sn**	**09 39 22.5**	**-0.9**
PB14	**IPOC Station P**	**0.73**	**11**	*eP*	**Pn**	**09 39 12.6**	**-0.6**
PB14				*e*S	**Sn**	**09 39 22.9**	**-0.5**
PB14	**IPOC Station P**	**0.73**	**11**	*i* P	**Pn**	**09 39 12.7**	**-0.5**
PB14				*e*S	**Sn**	**09 39 22.7**	**-0.7**
AC01	**Pan de Azucar**	**0.80**	**183**		**Pn**	**09 39 14.2**	**+0.5**
AC01				Sn	**Sn**	**09 39 25.4**	**+0.9**
AC01	**Pan de Azucar**	**0.80**	**183**	*e*P	**Pn**	**09 39 14.2**	**+0.5**
AC01				*e*S	**Sn**	**09 39 25.9**	**+1.4**
AC01				IAML		09 39 27.2	
	comp=Z,151μm,0.8s						
AC01	**Pan de Azucar**	**0.80**	**183**	⇓*i*P	**Pn**	**09 39 14.4**	**+0.6**
AC01				*e*S	**Sn**	**09 39 25.4**	**+0.9**
AC01				IAML		09 39 27.0	
	comp=N,355μm,0.8s						
GO02	**Mina Guanaco**	**0.90**	**78**	Pn	**Pn**	**09 39 15.2**	**-0.2**
GO02				Sn	**Sn**	**09 39 27.4**	**0.0**
GO02	**Mina Guanaco**	**0.90**	**78**	*e*P	**Pn**	**09 39 15.2**	**-0.2**
GO02				*e*S	**Sn**	**09 39 27.8**	**+0.5**
GO02	**Mina Guanaco**	**0.90**	**78**	*i* P	**Pn**	**09 39 15.2**	**-0.2**
GO02				*i* S	**Sn**	**09 39 27.1**	**-0.3**
GO02				IAML		09 39 28.2	
	comp=E,159μm,0.4s						
PB10	**IPOC Station P**	**1.83**	**0**		**Pn**	**09 39 27.0**	**-0.9**
PB10	**IPOC Station P**	**1.83**	**0**	*e*P	**Pn**	**09 39 27.4**	**-0.5**
PB10	**IPOC Station P**	**1.83**	**0**	⇑*i*P	**Pn**	**09 39 27.2**	**-0.8**
PB10				*e*S	**Sn**	**09 39 52.0**	**+2.2**
AC02	**Maricunga**	**1.96**	**139**		**Pn**	**09 39 32.4**	**+2.3**
AC02	**Maricunga**	**1.96**	**139**	*e*P	**Pn**	**09 39 32.6**	**+2.4**
AC02				*e*S	**Sn**	**09 39 56.8**	**+3.0**
AC02				IAML		09 40 01.0	
	comp=Z,21μm,0.3s						
AC02	**Maricunga**	**1.96**	**139**	⇑*i*P	**Pn**	**09 39 32.6**	**+2.4**
AC02				*i* S	**Sn**	**09 39 56.6**	**+2.9**
AC02				IAML		09 39 57.7	
	comp=N,38μm,0.4s						
GO03	**Copiap**	**2.25**	**173**		**Pn**	**09 39 35.0**	**+1.1**
GO03	**Copiap**	**2.25**	**173**	*e*P	**Pn**	**09 39 34.9**	**+1.1**
GO03	**Copiap**	**2.25**	**173**	⇓*i*P	**Pn**	**09 39 34.9**	**+1.1**
GO03				*i* S	**Sn**	**09 40 04.8**	**+4.3**
GO03				IAML		09 40 14.3	
	comp=N,17μm,0.4s						
PB15	**IPOC Station P**	**2.35**	**25**		**Pn**	**09 39 36.3**	**+1.0**
PB15	**IPOC Station P**	**2.35**	**25**	*e*P	**Pn**	**09 39 36.1**	**+0.8**
PB15				IAML		09 40 14.9	
	comp=Z,33μm,0.4s						
PB15	**IPOC Station P**	**2.35**	**25**	⇑*i*P	**Pn**	**09 39 36.1**	**+0.8**
PB15				*i* S	**Sn**	**09 40 07.5**	**+4.4**
PB06	**IPOC Station P**	**2.78**	**19**		**Pn**	**09 39 41.1**	**-0.1**
PB06	**IPOC Station P**	**2.78**	**19**	*e*P	**Pn**	**09 39 41.2**	**0.0**
PB06				IAML		09 40 29.0	
	comp=Z,7μm,0.7s						
PB06	**IPOC Station P**	**2.78**	**19**	⇑*i*P	**Pn**	**09 39 41.2**	**0.0**
PB06				*e*S	**Sn**	**09 40 16.6**	**+2.9**
PB06				IAML		09 40 32.8	
	comp=E,9μm,0.4s						
AC04	**Llanos de Chal**	**2.88**	**189**	Pn	**Pn**	**09 39 41.3**	**-1.1**
AC04	**Llanos de Chal**	**2.88**	**189**	*e*P	**Pn**	**09 39 41.3**	**-1.1**
AC04				IAML		09 40 37.0	
	comp=Z,6μm,0.5s						
AC04	**Llanos de Chal**	**2.88**	**189**	⇓*i*P	**Pn**	**09 39 41.2**	**-1.1**
AC04				IAML		09 40 35.1	
	comp=N,7μm,0.3s						
PB04	**IPOC Station P**	**3.03**	**7**	Pn	**Pn**	**09 39 43.6**	**-1.0**
PB04	**IPOC Station P**	**3.03**	**7**	*e*P	**Pn**	**09 39 43.4**	**-1.1**
PB04				IAML		09 40 34.6	
	comp=Z,8μm,0.5s						
PB04	**IPOC Station P**	**3.03**	**7**	⇑*i*P	**Pn**	**09 39 43.4**	**-1.1**
PB04				*i* S	**Sn**	**09 40 28.4**	**+8.8**
PB04				IAML		09 40 31.9	
	comp=N,10μm,0.7s						
LVC	**Limon Verde**	**3.12**	**29**	*e*P	**Pn**	**09 39 46.9**	**+0.9**
LVC				IAML		09 40 40.7	
	comp=Z,5μm,0.9s						
LVC	**Limon Verde**	**3.12**	**29**	P	**Pn**	**09 39 46.8**	**+0.9**
	comp=Z,61nm,0.3s,baz=213,slow=8.8,SNR=312						
LVC				S	**Sn**	**09 40 28.3**	**+6.1**
	comp=Z,6μm,0.4s,baz=333,slow=22,SNR=24						
LVC				LR	LR	09 41 10.5	
	comp=Z,2μm,18.9s,baz=226,slow=43						
	comp=Z,308nm,0.3s						
LVC	**Limon Verde**	**3.12**	**29**	⇑*i*P	**Pn**	**09 39 46.7**	**+0.7**
AF01	**San Pedro de A**	**3.23**	**43**		**Pn**	**09 39 49.5**	**+2.0**
AF01	**San Pedro de A**	**3.23**	**43**	*e*P	**Pn**	**09 39 49.4**	**+2.0**
AC05	**El Transito**	**3.48**	**176**	Pn	**Pn**	**09 39 52.0**	**+1.3**
AC05	**El Transito**	**3.48**	**176**	*e*P	**Pn**	**09 39 52.3**	**+1.5**
AC05				IAML		09 40 51.8	
	comp=Z,5μm,0.9s						
LCO	**Las Campanas**	**3.65**	**182**	Pn	**Pn**	**09 39 53.0**	**-0.2**
LCO	**Las Campanas**	**3.65**	**182**	P	**Pn**	**09 39 53.0**	**-0.2**
LCO	**Las Campanas**	**3.65**	**182**	*e*P	**Pn**	**09 39 53.6**	**+0.4**
LCO				IAML		09 40 57.3	
	comp=Z,7μm,0.4s						
LCO	**Las Campanas**	**3.65**	**182**	*i* P	**Pn**	**09 39 52.8**	**-0.4**
PB07	**IPOC Station P**	**3.66**	**10**		**Pn**	**09 39 52.2**	**-1.0**
PB07	**IPOC Station P**	**3.66**	**10**	*e*P	**Pn**	**09 39 52.3**	**-1.0**
PB07				IAML		09 40 57.9	
	comp=Z,7μm,0.8s						
PB07	**IPOC Station P**	**3.66**	**10**	⇑*i*P	**Pn**	**09 39 52.0**	**-1.2**
PB09	**IPOC Station P**	**3.74**	**19**		**Pn**	**09 39 54.8**	**+0.4**
PB09	**IPOC Station P**	**3.74**	**19**	*e*P	**Pn**	**09 39 54.7**	**+0.3**
PB09				IAML		09 41 01.8	
	comp=Z,8μm,0.8s						
PB09	**IPOC Station P**	**3.74**	**19**	⇑*i*P	**Pn**	**09 39 54.6**	**+0.3**
VCA	**Vinchina**	**3.97**	**149**	*e*P	**Pn**	**09 40 01.9**	**+4.4**
VCA				*e*S	**Sn**	**09 40 38.9**	**-4.1**
VCA				IAML		09 41 02.6	
	comp=Z,3μm,0.5s						
PB02	**IPOC Station P**	**4.06**	**9**		**Pn**	**09 39 57.3**	**-1.4**
PB02	**IPOC Station P**	**4.06**	**9**	*e*P	**Pn**	**09 39 57.4**	**-1.4**
PB02				IAML		09 41 25.9	
	comp=Z,5μm,0.3s						
PB02	**IPOC Station P**	**4.06**	**9**	⇑*i*P	**Pn**	**09 39 57.1**	**-1.6**
PB01	**IPOC Station P**	**4.40**	**13**		**Pn**	**09 40 02.4**	**-1.0**
PB01	**IPOC Station P**	**4.40**	**13**	*e*P	**Pn**	**09 40 02.4**	**-1.0**
PB01				IAML		09 41 23.7	
	comp=Z,2μm,0.8s						
PB01	**IPOC Station P**	**4.40**	**13**	⇑*i*P	**Pn**	**09 40 02.4**	**-1.0**
PATCX	**Punta Patache**	**4.52**	**5**		**Pn**	**09 40 02.9**	**-2.2**
PATCX	**Punta Patache**	**4.52**	**5**	⇑*i*P	**Pn**	**09 40 02.6**	**-2.4**
CO05	**La Serena**	**4.59**	**187**		**Pn**	**09 40 04.8**	**-1.1**
CO01	**Juntas del Tor**	**4.63**	**175**		**Pn**	**09 40 07.7**	**+1.1**
CO01	**Juntas del Tor**	**4.63**	**175**	*e*P	**Pn**	**09 40 08.8**	**+2.2**
CO01				IAML		09 41 29.4	
	comp=Z,2μm,0.5s						
TA01	**Diego Aracena**	**4.78**	**4**	Pn	**Pn**	**09 40 05.8**	**-2.6**
TA01	**Diego Aracena**	**4.78**	**4**	*e*P	**Pn**	**09 40 06.5**	**-2.0**
TA01				IAML		09 41 30.2	
	comp=Z,2μm,1.0s						
GO04	**Tololo Observa**	**4.81**	**183**		**Pn**	**09 40 09.3**	**+0.3**
GO04	**Tololo Observa**	**4.81**	**183**	*e*P	**Pn**	**09 40 10.0**	**+0.9**
GO04				*e*S	**Sn**	**09 41 05.2**	**+1.5**
GO04	**Tololo Observa**	**4.81**	**183**	*i* P	**Pn**	**09 40 08.8**	**-0.3**
AROD	**Rodeo**	**4.89**	**169**	*e*P	**Pn**	**09 40 13.4**	**+3.0**
AHML	**Horco Molle**	**4.91**	**108**	*e*P	**Pn**	**09 40 14.8**	**+4.5**
ACDV	**Cuesta del Vie**	**4.97**	**165**	*e*P	**Pn**	**09 40 14.8**	**+3.6**
ACDV				IAML		09 41 38.5	
	comp=Z,1μm,0.7s						
TA02	**Huaiquique**	**5.07**	**5**		**Pn**	**09 40 10.0**	**-2.5**
TA02	**Huaiquique**	**5.07**	**5**	*e*P	**Pn**	**09 40 11.0**	**-1.5**
TA02				IAML		09 41 44.8	
	comp=Z,1μm,0.8s						
PB08	**IPOC Station P**	**5.34**	**14**	Pn	**Pn**	**09 40 15.4**	**-1.2**
CO06	**Fray Jorge**	**5.39**	**190**		**Pn**	**09 40 14.8**	**-2.0**
CO03	**El Pedregal**	**5.47**	**181**	Pn	**Pn**	**09 40 17.7**	**-0.3**
PB11	**IPOC Station P**	**5.62**	**9**	Pn	**Pn**	**09 40 17.8**	**-2.5**
GO01	**Chusmiza**	**5.79**	**13**	Pn	**Pn**	**09 40 21.3**	**-1.6**
CO02	**Combarbal**	**5.84**	**184**		**Pn**	**09 40 22.6**	**-0.6**
PB12	**IPOC Station P**	**6.71**	**2**		**Pn**	**09 40 32.8**	**-2.2**
PB16	**IPOC Station P**	**7.05**	**8**		**Pn**	**09 40 38.3**	**-1.9**
VA06	**Catapilco**	**7.21**	**185**		**Pn**	**09 40 42.0**	**+0.2**
VA03	**San Esteban**	**7.39**	**180**		**Pn**	**09 40 43.5**	**-0.9**
VA01	**Torpederas**	**7.70**	**187**	Pn	**Pn**	**09 40 49.5**	**+0.9**
PEL	**Peldehue**	**7.77**	**181**	Pn	**Pn**	**09 40 48.6**	**-0.9**
PEL	**Peldehue**	**7.77**	**181**	P	**Pn**	**09 40 48.6**	**-0.9**
MT02	**Curacav**	**7.90**	**184**		**Pn**	**09 40 50.5**	**-0.8**
MT16	**CCHEN**	**8.05**	**180**	Pn	**Pn**	**09 40 51.3**	**-2.1**
MT03	**Universidad Ad**	**8.12**	**180**	Pn	**Pn**	**09 40 52.6**	**-1.7**
VA05	**Santo Domingo**	**8.33**	**186**		**Pn**	**09 40 54.7**	**-2.4**
MT13	**San Alfonso**	**8.37**	**178**	Pn	**Pn**	**09 40 58.0**	**+0.1**
MT09	**Talagante**	**8.40**	**182**		**Pn**	**09 40 56.5**	**-1.9**
LMEL	**Las Melosas**	**8.47**	**178**		**Pn**	**09 40 58.8**	**-0.5**
MT01	**Popeta**	**8.51**	**184**		**Pn**	**09 40 57.3**	**-2.3**
BO04	**La Punta**	**8.61**	**180**		**Pn**	**09 40 59.3**	**-1.8**
BO01	**Tunca**	**9.02**	**183**	Pn	**Pn**	**09 41 04.9**	**-1.8**
VACA	**Villa Angela C**	**9.12**	**107**	*e*P	**Pn**	**09 41 09.2**	**+1.2**
TICA	**Tres Isletas**	**9.22**	**99**	*e*P	**Pn**	**09 41 10.9**	**+1.4**
LPAZ	**La Paz**	**9.30**	**15**	Pn	**Pn**	**09 41 10.2**	**-0.9**
LPAZ	**La Paz**	**9.30**	**15**	P	**Pn**	**09 41 10.2**	**-0.9**
BO02	**Sierra Bellavi**	**9.41**	**181**		**Pn**	**09 41 10.5**	**-1.6**
GO05	**Huala**	**9.70**	**187**	Pn	Pn	09 41 11.8	-4.2
H03N1	**Juan Fernandez**	**10.86**	**220**	P	**Pn**	**09 41 29.0**	**-2.5**
	baz=108,slow=15,SNR=102						
H03N1				T	T	09 52 23.2	
	baz=46,slow=72,SNR=2604						
H03N2	**Juan Fernandez**	**10.87**	**220**	P	**Pn**	**09 41 29.0**	**-2.7**
	baz=108,slow=15,SNR=64						
H03N2				T	T	09 52 23.6	
	baz=46,slow=72,SNR=2538						
H03N3	**Juan Fernandez**	**10.88**	**220**	P	**Pn**	**09 41 28.8**	**-3.1**
	baz=108,slow=15,SNR=73						
H03N3				T	T	09 52 22.1	
	baz=46,slow=72,SNR=3537						
ESFA	**Espinillo Form**	**10.94**	**91**	*e*P	**Pn**	**09 41 32.3**	**-0.7**
VA04	**Juan Fernndez**	**10.96**	**219**	Pn	**Pn**	**09 41 30.1**	**-3.1**
H03S3	**Juan Fernandez**	**11.14**	**219**	P	**Pn**	**09 41 32.4**	**-3.0**
	baz=31,slow=20,SNR=71						
H03S1	**Juan Fernandez**	**11.15**	**219**	P	**Pn**	**09 41 32.2**	**-3.3**
	baz=31,slow=20,SNR=38						
H03S2	**Juan Fernandez**	**11.15**	**219**	P	**Pn**	**09 41 32.4**	**-3.2**
	baz=31,slow=20,SNR=51						
CPUP	**Villa Florida**	**11.96**	**98**		**Pn**	**09 41 46.3**	**-0.5**
CPUP	**Villa Florida**	**11.96**	**98**	P	**Pn**	**09 41 46.3**	**-0.5**
CPUP	**Villa Florida**	**11.96**	**98**	P	**Pn**	**09 41 46.0**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=281,slow=14,SNR=20						
	comp=Z,14nm,0.7s						
CPUP	**Villa Florida**	**11.96**	**98**	*e*P	**Pn**	**09 41 46.2**	**-0.7**
BBRB	**Robore, Bolivi**	**12.21**	**57**	*e*P	**Pn**	**09 41 48.6**	**-1.8**
BBSD	**Serra de San D**	**12.32**	**51**	*e*P	**Pn**	**09 41 48.9**	**-3.0**
MURT	**Porto Murtinho**	**12.43**	**75**	*e*P	**Pn**	**09 41 53.2**	**-0.2**
SIV	**San Ignacio**	**12.86**	**45**	P	Pn	09 41 54.7	-4.6
	comp=Z,7.7nm,0.5s,baz=232,slow=9.4,SNR=58						
SIV				S	**Sn**	**09 44 14.4**	**-6.7**
	comp=Z,23nm,0.7s,baz=226,slow=12,SNR=3.6						
ITQB	**Itaqui**	**13.09**	**112**		**Pn**	**09 42 02.6**	**+0.3**
ITQB	**Itaqui**	**13.09**	**112**	*e*P	**Pn**	**09 42 03.2**	**+0.9**
BDQN	**Bodoquena, MS**	**13.62**	**72**	*e*P	**Pn**	**09 42 08.0**	**-1.7**
ANTJ	**Antonio Joao (**	**13.74**	**79**	*e*P	**Pn**	**09 42 09.8**	**-1.6**
GO06	**Curarrehue**	**14.21**	**183**		**Pn**	**09 42 15.2**	**-2.5**
UNIS	**Unistalda (Bra**	**14.27**	**108**	*e*P	**Pn**	**09 42 18.7**	**+0.3**
TBOT	**Tacuaremb**	**14.31**	**119**	*e*P	**Pn**	**09 42 19.7**	**+0.8**
RODS	**Rosario do Sul**	**14.47**	**114**	*e*P	**Pn**	**09 42 21.7**	**+0.6**
AQDB	**Aquidauana**	**14.52**	**73**		**Pn**	**09 42 21.3**	**-0.5**
AQDB	**Aquidauana**	**14.52**	**73**	*e*P	**Pn**	**09 42 21.8**	**0.0**
PTLB	**Pontes e Lacer**	**14.54**	**50**		**Pn**	**09 42 18.5**	**-3.6**
PTLB	**Pontes e Lacer**	**14.54**	**50**	*e*P	**Pn**	**09 42 19.9**	**-2.1**
NNA	**Nana**	**14.56**	**335**	Pn	**Pn**	**09 42 17.8**	**-4.6**
NNA	**Nana**	**14.56**	**335**	P	**Pn**	**09 42 24.1**	**+1.7**
	comp=Z,4.7nm,0.5s,baz=253,slow=16,SNR=1.7						
NNA				LR	LR	09 47 11.4	
	comp=Z,214nm,20.9s,baz=167,slow=34						
LR05	**Currie**	**14.89**	**184**	Pn	**Pn**	**09 42 24.0**	**-2.6**
CRSM	**Crissiumal (Br**	**14.95**	**102**	*e*P	**Pn**	**09 42 27.8**	**+0.3**
MCR1	**Marechal Candi**	**15.02**	**90**	*e*P	**Pn**	**09 42 29.2**	**+0.7**
PLCA	**Paso Flores**	**15.34**	**180**	Pn	**Pn**	**09 42 30.9**	**-1.8**
PLCA	**Paso Flores**	**15.34**	**180**	P	**Pn**	**09 42 31.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=353,slow=11,SNR=1.9						
PLCA				LR	LR	09 48 33.8	
	comp=Z,603nm,21.5s,baz=358,slow=38						
	comp=Z,1.3nm,0.8s						
PLCA	**Paso Flores**	**15.34**	**180**	*e*P	**Pn**	**09 42 35.4**	**+2.8**
VILB	**Vilhena**	**15.73**	**40**		**Pn**	**09 42 33.8**	**-3.9**
VILB				IAmb	IAmb	09 42 44.9	
	comp=Z,85nm,0.6s						
VILB	**Vilhena**	**15.73**	**40**	*e*P	**Pn**	**09 42 35.4**	**-2.4**
FRBT	**Francisco Belt**	**15.79**	**96**	*e*P	**Pn**	**09 42 38.7**	**+0.2**
CPSB	**Cacapava Do Su**	**15.95**	**112**	*e*P	**Pn**	**09 42 41.6**	**+1.1**
ALGR	**Alto Alegre (B**	**15.99**	**106**	*e*P	**Pn**	**09 42 41.0**	**-0.1**
ETMB	**Extrema**

VILC Villavicencio, 29.45 354 eP P 09 44 59.8 +0.7
YOTC Yotoco, Valle 29.70 348 eP P 09 45 01.8 +0.4
GUA01 Guaratinga, BA 29.95 79 eP P 09 45 04.6 +1.1
CHIC Chingaza 29.96 354 eP P 09 45 03.8 -0.2
ROSC El Rosal 30.23 353 P P 09 45 07.0 +0.7
comp=Z,14nm,0.6s,baz=161,slow=18,SNR=2.3
ROSC LR LR 09 58 35.2
comp=Z,100nm,21.7s,baz=254,slow=39
comp=Z,14nm,0.6s
PLMC San Jos del P 30.59 349 eP P 09 45 09.9 +0.8
MCPB Macapa, AP 30.61 39 eP P 09 45 08.7 -0.5
GUY2C Guyana, Caldas 30.75 351 eP P 09 45 12.0 +1.0
PAYG Puerto Ayora 31.06 319 P P 09 45 12.0 -1.3
PAYG IAmb IAmb 09 45 16.6
comp=Z,36nm,1.1s
CBOC Ciudad Bolivar 31.48 350 eP P 09 45 17.5 +0.4
TAMC Tame, Arauca 31.62 358 eP P 09 45 17.6 -0.6
HELC Santa Helena 31.72 351 eP P 09 45 19.8 +0.3
BARC Barichara 31.85 355 eP P 09 45 17.5 -3.0
PTBC PUERTO BERRIO, 31.92 353 eP P 09 45 19.2 -1.6
PAMC Pamplona, Colo 32.56 356 eP P 09 45 26.4 -0.5
DBBC Dabeiba 32.64 350 eP P 09 45 28.6 +1.4
UREC San Jos de Ur 33.26 351 eP P 09 45 31.9 -0.6
SDV Santo Domingo 34.03 360 P P 09 45 37.7 -1.8
SDV Santo Domingo 34.03 360 LR LR 10 01 03.2
comp=Z,116nm,19.8s,baz=196,slow=39
SDV Santo Domingo 34.03 360 eP P 09 45 36.8 -2.7
BAUV El Baul 34.17 4 P P 09 45 39.4 -1.1
RPN Rapa Nui 34.74 258 LR LR 09 56 29.2
comp=Z,130nm,19.1s,baz=86,slow=30
MDP Montagnes des 34.92 32 LR LR 10 01 50.2
comp=Z,153nm,18.2s,baz=200,slow=39
SJCC San Jacinto, C 35.32 352 eP P 09 45 50.0 -0.5
PCRV Puerto La Cruz 35.78 10 LR LR 10 01 07.4
comp=Z,236nm,21.4s,slow=37
DRK0 Durika 36.56 339 P P 09 46 03.1 +1.9
PEZE Perez Zeledon, 36.81 338 P P 09 46 05.3 +2.0
PEZE IAmb IAmb 09 46 06.3
comp=Z,24nm,0.6s
RIMA Rio Macho 37.23 338 P P 09 46 08.9 +1.9
RIMA IAmb IAmb 09 46 09.6
comp=Z,15nm,0.7s
LCR2 La Lucha 2 37.26 338 P P 09 46 08.9 +1.8
LCR2 IAmb IAmb 09 46 10.2
comp=Z,22nm,0.7s
JTS Las Juntas de 38.10 337 P P 09 46 16.5 +2.4
JTS IAmb IAmb 09 46 17.5
comp=Z,83nm,1.9s
JTS Las Juntas de 38.10 337 P P 09 46 16.5 +2.4
JTS pmax pmax
comp=Z,83nm,1.9s
DUNO Dulce Nombre, 38.10 336 P P 09 46 16.1 +2.0
COVE Coope Vega, Sa 38.31 338 P P 09 46 18.1 +2.3
ORTG Ortega, Santa 38.35 336 P P 09 46 18.6 +2.3
ORTG IAmb IAmb 09 46 19.5
comp=Z,34nm,1.1s
RCBR Riachuelo 38.42 66 P P 09 46 17.9 +1.0
RCBR IAmb IAmb 09 46 34.5
comp=Z,70nm,1.4s
RCBR Riachuelo 38.42 66 P P 09 46 17.9 +1.0
RCBR pmax pmax
comp=Z,70nm,1.4s
RCBR Riachuelo 38.42 66 LR LR 10 03 19.4
comp=Z,80nm,20.1s,baz=258,slow=38
RCBR Riachuelo 38.42 66 P P 09 46 17.7 +0.8
RCBR pP pP 09 46 29.9 +1.3
RCBR sP sP 09 46 34.5 +1.0
HZTE Horizontes, Gu 38.73 336 P P 09 46 21.6 +2.3
PMSA Palmer Station 39.65 176 LR LR 10 02 09.3
comp=Z,224nm,19.6s,baz=309,slow=35
ESPN Las Esperanzas 39.65 339 P P 09 46 26.1 -0.9
ACON Acoyapa 39.73 337 P P 09 46 28.8 +1.1
ACON IAmb IAmb 09 46 29.6
comp=Z,22nm,0.9s
MATN Matagalpa 40.89 337 P P 09 46 37.0 -0.4
TGUH Tegucigalpa,Un 42.42 336 P P 09 46 51.1 +1.2
TGUH IAmb IAmb 09 46 51.8
comp=Z,34nm,0.8s
SNET Serv Nac Est T 42.86 333 P P 09 46 52.3 -1.2
CRPR Cabo Rojo, PR 43.23 5 P P 09 46 54.4 -1.8
SABA Saba 43.30 10 P P 09 46 55.7 -1.2
OBIP Obispado Ponce 43.30 5 P P 09 46 55.3 -1.6
CELP Cerrillos 43.34 6 P P 09 46 56.0 -1.2
CELP IAmb IAmb 09 48 07.4
comp=Z,79nm,1.4s
SJG San Juan 43.41 6 LR LR 10 07 39.3
comp=Z,48nm,20.2s,baz=128,slow=40
MTO3 Montecristo 43.55 333 P P 09 46 59.1 -0.1
AOPR Arecibo Observ 43.59 5 P P 09 46 58.0 -1.2
AOPR IAmb IAmb 09 47 32.8
comp=Z,62nm,1.1s
ESQI Esquipulas 43.69 333 P P 09 47 01.8 +1.6
ESQI IAmb IAmb 09 47 02.8
comp=Z,32nm,0.8s
GTBY Guantanamo Bay 45.22 354 P P 09 47 13.0 +0.8
PETF Flores 46.03 334 P P 09 47 19.7 +1.0
PETF IAmb IAmb 09 47 20.5
comp=Z,35nm,0.8s
TEIG Tepich 48.47 338 P P 09 47 38.2 +0.6
TEIG Tepich 48.47 338 P P 09 47 37.8 +0.2
CAMR Camarioca 49.25 347 P P 09 47 44.8 +1.2
CAMR IAmb IAmb 09 47 45.2
comp=Z,466nm,1.8s
SOR Soroa 49.36 345 P P 09 47 44.8 +0.4
SOR Soroa 49.36 345 P P 09 47 44.8 +0.4
SOR pmax pmax
comp=Z,33nm,0.9s
DWPF Disney Wildern 54.17 348 P P 09 48 19.8 -0.4
baz=168
JRQG Juriquilla Cam 54.21 325 P P 09 48 19.1 -1.9
BELA Belgrano 2 55.17 171 P P 09 48 26.5 -0.5
656A Willston 55.61 347 P P 09 48 30.2 -0.3
553A Crawfordville 56.80 346 P P 09 48 38.4 -0.7
ZAIG Zacatecas 57.02 324 IAmb IAmb 09 48 44.4
comp=Z,11nm,0.7s
TIGA Tifton 57.83 347 P P 09 48 46.3 0.0
baz=166
352A Blakely 58.16 346 P P 09 48 48.2 -0.5
BRAL Brewton 58.37 343 P P 09 48 49.8 -0.3
baz=162
HBVL Hebbronville 58.74 331 P P 09 48 53.6 +0.8
HBVL IAmb IAmb 09 48 54.5
comp=Z,16nm,0.8s
NHSC New Hope 58.85 351 P P 09 48 54.0 +0.5
NHSC New Hope 58.85 351 P P 09 48 53.7 +0.3
baz=170
154A Montrose 58.87 348 P P 09 48 53.1 -0.4
H06E1 SOCORRO T-PHAS 58.88 314 T T 10 52 55.3
SNR=44
250A Grady 58.95 344 P P 09 48 53.8 -0.3
SNAA Sanae 59.17 160 P P 09 48 55.7 +0.4
SNAA IAmb IAmb 09 49 12.5
comp=Z,9.9nm,0.8s
SNAA Sanae 59.17 160 ⇑P P 09 48 55.0 -0.3
comp=Z,191nm,0.7s
SNAA Sanae 59.17 160 P P 09 48 55.7 +0.4
SNAA pmax pmax
comp=Z,10.0nm,0.8s
SNAA Sanae 59.17 160 P P 09 48 55.2 -0.2
comp=Z,3.9nm,0.7s,baz=296,slow=9.6,SNR=10
comp=Z,3.9nm,0.7s
152A Waverly Hall 59.26 346 IAmb IAmb 09 48 56.4
comp=Z,27nm,0.9s
Y60A Bolivia 59.48 353 P P 09 48 57.7 0.0
GOGA Godfrey 59.71 348 P P 09 48 58.9 -0.5
GOGA IAmb IAmb 09 48 59.0
comp=Z,11nm,0.8s
GOGA Godfrey 59.71 348 P P 09 48 57.8 -1.6
baz=166
GOGA Godfrey 59.71 348 P P 09 48 58.9 -0.5
GOGA pmax pmax
comp=Z,11nm,0.8s
Y57A Sumter 59.78 351 P P 09 48 59.5 -0.3
Y57A IAmb IAmb 09 49 00.2
comp=Z,24nm,0.9s
Z51A Franklin 59.98 346 P P 09 49 00.7 -0.6
Z51A IAmb IAmb 09 49 01.6
comp=Z,23nm,1.1s
LRAL Lakeview Retre 60.14 344 P P 09 49 01.5 -0.7
LRAL IAmb IAmb 09 49 01.9
comp=Z,11nm,0.7s
LRAL Lakeview Retre 60.14 344 P P 09 49 01.6 -0.7
baz=163,SNR=6.6
833A Chaparral WMA, 60.15 331 P P 09 49 03.3 +0.8
baz=150,SNR=7.7
X58A Rowland 60.16 352 P P 09 49 02.6 +0.2
JSC Jenkinsville 60.17 350 P P 09 49 02.2 -0.3
JSC IAmb IAmb 09 49 02.7
comp=Z,15nm,0.7s
JSC Jenkinsville 60.17 350 P P 09 49 02.2 -0.3
JSC pmax pmax
comp=Z,15nm,0.7s
Y52A Lilburn 60.27 347 P P 09 49 02.9 -0.3
Y52A IAmb IAmb 09 49 03.0
comp=Z,14nm,0.7s
HODGE Hodges 60.29 349 P P 09 49 02.5 -0.8
HODGE IAmb IAmb 09 49 03.9
comp=Z,25nm,1.5s
146A Union 60.30 342 P P 09 49 03.7 +0.2
VBMS Vicksburg 60.33 341 P P 09 49 03.2 -0.4
baz=159
BIRD Birdtown, Kers 60.40 351 P P 09 49 03.8 -0.3
BIRD IAmb IAmb 09 49 04.9
comp=Z,18nm,0.8s
Z47A Carrollton 60.57 343 P P 09 49 04.6 -0.6
CNNC Cliffs of the 60.66 353 P P 09 49 06.3 +0.5
CNNC Cliffs of the 60.66 353 P P 09 49 05.4 -0.4
baz=172
Y49A Blount Mountai 60.78 345 P P 09 49 05.6 -1.1
Y49A IAmb IAmb 09 49 07.3
comp=Z,20nm,1.0s
PAULI Pauline 60.79 349 P P 09 49 06.3 -0.4
PAULI IAmb IAmb 09 49 07.0
comp=Z,12nm,0.9s
W57A Gilead 60.83 351 P P 09 49 06.6 -0.4
W57A IAmb IAmb 09 49 07.4
comp=Z,16nm,0.8s
TROLL Troll, Antarti 60.89 160 ⇑P P 09 49 06.9 -0.3
comp=Z,349nm,0.8s
KMSC Kings Mountain 61.02 350 P P 09 49 08.1 -0.3
KMSC IAmb IAmb 09 49 09.1
comp=Z,16nm,1.1s
KMSC Kings Mountain 61.02 350 P P 09 49 08.2 -0.1
baz=169
143A Scs Landing, 61.05 340 P P 09 49 08.7 +0.1
X51A Calhoun 61.11 347 P P 09 49 08.4 -0.6
HNDO Hondo 61.14 331 P P 09 49 09.9 +0.7
FPAL Fort Paine 61.25 346 IAmb IAmb 09 49 10.1
comp=Z,34nm,1.3s
NATX Nacogdoches 61.28 337 P P 09 49 09.8 -0.3
baz=155
W52A Murphy 61.44 348 IAmb IAmb 09 49 11.8
comp=Z,30nm,1.2s
435B Jarrell 61.52 334 P P 09 49 11.1 -0.7
baz=152
DRIO Del Rio 61.64 330 P P 09 49 12.9 +0.3
DRIO IAmb IAmb 09 49 14.8
comp=Z,14nm,0.9s
V55A Taylorsville 61.70 350 IAmb IAmb 09 49 13.7
comp=Z,37nm,1.4s
U59A Littleton 61.75 353 IAmb IAmb 09 49 14.4
comp=Z,19nm,0.8s
V53A Saluda 61.79 349 P P 09 49 13.1 -0.5
CPCT Cooper Cave 61.90 347 IAmb IAmb 09 49 14.7
comp=Z,19nm,0.9s
TKL Tuckaleechee C 61.95 348 IAmb IAmb 09 49 14.3
comp=Z,12nm,0.7s
Z41A Richland Creek 62.01 339 P P 09 49 14.8 -0.2
Z41A IAmb IAmb 09 49 15.7
comp=Z,30nm,1.1s
HPIG 62.03 324 P P 09 49 15.2 -0.4
HPIG IAmb IAmb 09 49 18.0
comp=Z,11nm,0.9s
U56A King 62.06 351 P P 09 49 15.2 -0.1
U56A IAmb IAmb 09 49 16.0
comp=Z,11nm,0.7s
V52A Sevierville 62.10 348 IAmb IAmb 09 49 15.3
comp=Z,14nm,0.7s
OXF Oxford 62.16 342 P P 09 49 15.2 -0.8
baz=161,SNR=6.3
JCT Junction City 62.18 332 P P 09 49 16.5 +0.2
baz=150,SNR=14
PLAL Pickwick Lake 62.26 344 P P 09 49 15.5 -1.2
PLAL IAmb IAmb 09 49 16.5
comp=Z,22nm,1.1s
T59A Double "B" Far 62.34 354 P P 09 49 17.2 +0.1
T59A IAmb IAmb 09 49 18.4
comp=Z,17nm,0.9s
LPIG La Paz 62.43 319 LR LR 10 09 49.3
comp=Z,41nm,21.3s,baz=198,slow=30
U54A Nelsons Funny 62.45 350 P P 09 49 17.6 -0.4
U54A IAmb IAmb 09 49 18.4
comp=Z,18nm,0.8s
WHTX Lake Whitney, 62.54 334 P P 09 49 18.2 -0.4
baz=153
BRDY Brady 62.54 333 IAmb IAmb 09 49 19.9
comp=Z,14nm,0.8s
V48A Smith Brothers 62.68 345 IAmb IAmb 09 49 19.3
comp=Z,19nm,0.7s
TZTN Tazewell 62.77 348 P P 09 49 19.2 -0.8
baz=167
SAND Sanderson 62.77 329 P P 09 49 21.5 +1.2
SAND IAmb IAmb 09 49 22.4
comp=Z,20nm,0.8s
CLTN Cedars of Leba 62.90 346 IAmb IAmb 09 51 24.6
comp=Z,18nm,1.0s
BLA Blacksburg 62.92 351 P P 09 49 20.6 -0.5
baz=170
TXAR Lajitas Array 62.98 328 P P 09 49 22.6 +0.9
comp=Z,3.2nm,0.7s,baz=152,slow=7.7,SNR=30
TXAR LR LR 10 12 43.0
comp=Z,34nm,20.6s,baz=91,slow=32
comp=Z,3.2nm,0.7s
TX31 Lajitas Ar. Si 62.98 328 P P 09 49 22.6 +0.8
OZNA Ozona 63.14 331 P P 09 49 23.2 +0.5
OZNA IAmb IAmb 09 49 24.4
comp=Z,22nm,1.2s
U49A Red Boiling Sp 63.19 346 IAmb IAmb 09 51 24.5
comp=Z,18nm,0.9s
UALR University of 63.27 340 IAmb IAmb 09 49 24.1
comp=Z,18nm,1.1s
S57A Dark Hollow, R 63.27 353 P P 09 49 23.3 0.0
S57A IAmb IAmb 09 49 24.0
comp=Z,15nm,0.7s
WVT Waverly 63.29 344 P P 09 49 22.6 -0.9
WVT Waverly 63.29 344 P P 09 49 22.9 -0.5
baz=163
WVT Waverly 63.29 344 P P 09 49 22.6 -0.9
WVT pmax pmax
comp=Z,25nm,0.8s
WVT Waverly 63.29 344 P P 09 49 22.2 -1.3
WVT pP pP 09 49 34.3 -1.0
R58B Mineral 63.35 354 IAmb IAmb 09 49 25.4
comp=Z,26nm,0.9s
MIAR Mount Ida 63.45 339 P P 09 49 24.3 -0.3
MIAR IAmb IAmb 09 49 25.6
comp=Z,15nm,0.8s
MIAR Mount Ida 63.45 339 P P 09 49 24.2 -0.3
baz=157,SNR=7.4
MIAR Mount Ida 63.45 339 P P 09 49 24.3 -0.3
MIAR pmax pmax
comp=Z,15nm,0.8s
T50A Nancy 63.48 347 IAmb IAmb 09 51 24.8
comp=Z,14nm,0.8s
CBN Corbin Frederi 63.54 354 P P 09 49 26.0 +0.9
baz=173
S54A Dingess, Beckl 63.62 351 IAmb IAmb 09 51 28.9
comp=Z,16nm,0.8s
WHAR Wooly Hollow 63.73 340 P P 09 49 26.3 -0.1
WHAR IAmb IAmb 09 49 27.1
comp=Z,22nm,0.8s
NVL N'lazarevskaya 63.80 159 eP P 09 49 25.1 -1.4
NVL pmax pmax
comp=Z,20nm,1.6s
ALPN Alpine 63.84 328 IAmb IAmb 09 49 29.6
comp=Z,29nm,1.6s
T47A Sharon Grove 63.94 345 IAmb IAmb 09 49 28.0
comp=Z,32nm,0.9s
ABTX Abilene, Hawle 63.97 333 P P 09 49 28.6 +0.4
ABTX IAmb IAmb 09 49 29.7
comp=Z,31nm,1.1s
ABTX Abilene, Hawle 63.97 333 P P 09 49 27.4 -0.7
baz=151,SNR=7.3
SGCY Sterling City 63.99 331 P P 09 49 29.1 +0.8
SGCY IAmb IAmb 09 49 29.8
comp=Z,18nm,1.1s
X37A Clayton 64.09 337 IAmb IAmb 09 49 30.2
comp=Z,20nm,0.8s
LCAR Lake Charles 64.11 342 P P 09 49 28.3 -0.6
LCAR IAmb IAmb 09 49 29.3
comp=Z,22nm,0.7s
FCAR Ozark Folk Cen 64.23 341 P P 09 49 29.0 -0.7
FCAR IAmb IAmb 09 49 30.3
comp=Z,36nm,1.4s
PECS Pecos 64.77 329 P P 09 49 34.6 +1.1
PECS IAmb IAmb 09 49 35.2
comp=Z,9.4nm,0.7s
APMT Aspermont 64.78 333 IAmb IAmb 09 49 35.0
comp=Z,25nm,0.8s
ODSA Odessa 64.80 330 P P 09 49 34.2 +0.6
VHRN Van Horn 64.82 327 IAmb IAmb 09 49 35.9
comp=Z,41nm,1.4s
QSPA South Pole Qui 64.86 180 P P 09 49 34.6 +0.9
QSPA IAmb IAmb 09 49 47.2
comp=Z,12nm,0.8s
QSPA South Pole Qui 64.86 180 P P 09 49 34.5 +0.8
comp=Z,6.2nm,0.5s,baz=322,slow=1.4,SNR=90
comp=Z,6.2nm,0.5s
QSPA South Pole Qui 64.86 180 P P 09 49 34.6 +0.9
QSPA pP pP 09 49 45.9 0.0
QSPA sP sP 09 49 51.3 +0.6
SN07 Snyder 07 64.90 332 IAmb IAmb 09 49 35.4
comp=Z,17nm,0.8s
WCI Wyandotte Cave 64.94 346 P P 09 49 33.1 -1.2
WCI Wyandotte Cave 64.94 346 P P 09 49 33.0 -1.3
baz=164
WCI Wyandotte Cave 64.94 346 P P 09 49 33.1 -1.3
WCI pmax pmax
comp=Z,24nm,0.7s
WCI Wyandotte Cave 64.94 346 P P 09 49 33.0 -1.3
WCI pP pP 09 49 46.4 +0.2
X34A Smith Ranch, M 65.00 335 P P 09 49 35.0 +0.2
S44A Carbondale 65.13 344 P P 09 49 35.0 -0.5
Q51A Peebles 65.15 349 P P 09 49 34.8 -0.9
Q51A IAmb IAmb 09 51 22.4
comp=Z,14nm,0.9s
HHAR Hobbs 65.15 339 P P 09 49 35.6 -0.1
MCWV Mont Chateau 65.25 352 P P 09 49 36.1 -0.2
baz=171
DKNS Dickens 65.41 332 IAmb IAmb 09 49 38.2
comp=Z,8.8nm,0.7s
TUL3 Leonard 65.43 338 IAmb IAmb 09 49 38.4
comp=Z,21nm,0.7s
TUL3 Leonard 65.43 338 P P 09 49 37.2 -0.4
baz=155,SNR=9.1
U38A Gravette 65.44 339 IAmb IAmb 09 49 37.8
comp=Z,12nm,0.7s
MGMO Mountain Grove 65.45 341 P P 09 49 37.4 -0.2
MGMO IAmb IAmb 09 49 37.9
comp=Z,15nm,0.7s
WMOK Wichita Mounta 65.48 335 IAmb IAmb 09 49 38.7
comp=Z,20nm,1.6s
WMOK Wichita Mounta 65.48 335 P P 09 49 37.4 -0.5
baz=152
P51A Williamsport 65.55 349 P P 09 49 36.8 -1.4
P51A IAmb IAmb 09 49 37.6
comp=Z,16nm,0.6s
P52A Corning 65.55 350 IAmb IAmb 09 49 37.7
comp=Z,16nm,0.7s
P52A Corning 65.55 350 P P 09 49 37.0 -1.2
baz=169
MNTX Cornudas Mount 65.77 328 P P 09 49 39.3 -0.5
baz=146,SNR=16
OLIL Olney 65.83 345 IAmb IAmb 09 51 13.4
comp=Z,24nm,0.9s
P49A Miami Univ. Ec 65.89 348 P P 09 49 39.3 -1.1
baz=166
OK029 Liberty Lake 65.92 336 P 09 49 40.3 -0.4
OK029 IAmb IAmb 09 49 40.9
comp=Z,17nm,0.6s
O52A Adamsville 65.97 351 P P 09 49 40.2 -0.7
O52A IAmb IAmb 09 49 40.6
comp=Z,18nm,0.6s
CCM Cathedral Cave 65.99 342 P P 09 49 40.7 -0.4
CCM IAmb IAmb 09 49 41.7
comp=Z,22nm,0.8s
CCM Cathedral Cave 65.99 342 P P 09 49 40.3 -0.8
baz=160
CCM Cathedral Cave 65.99 342 P P 09 49 40.7 -0.4
CCM pmax pmax
comp=Z,22nm,0.8s
CCM Cathedral Cave 65.99 342 P P 09 49 40.7 -0.4
CCM pP pP 09 49 53.8 +0.8
N62A Caumsett State 66.00 358 P P 09 49 41.2 +0.2
SSPA Standing Stone 66.00 354 P P 09 49 40.7 -0.4
baz=173
SSPA Standing Stone 66.00 354 P P 09 49 41.3 +0.2
SSPA sP sP 09 49 58.9 +1.0
O53A New Philadelph 66.01 351 P P 09 49 40.6 -0.6
O53A IAmb IAmb 09 51 23.2
comp=Z,21nm,0.9s
O53A New Philadelph 66.01 351 P P 09 49 40.4 -0.7
baz=170
S39A Bolivar 66.26 340 P P 09 49 42.4 -0.4
ACSO Alum Creek Sta 66.26 350 P P 09 49 42.1 -0.7
OK048 Pawnee Station 66.29 337 P 09 49 42.9 -0.1
SMWD Samnorwood 66.38 334 P P 09 49 44.0 +0.3
SMWD IAmb IAmb 09 49 45.0
comp=Z,34nm,1.0s
O49A Covington 66.45 349 P P 09 49 43.0 -1.0
O49A IAmb IAmb 09 51 16.4
comp=Z,15nm,1.0s
MSTX Muleshoe 66.46 331 P P 09 49 44.9 +0.5
MSTX IAmb IAmb 09 49 45.9
comp=Z,33nm,1.0s
MSTX Muleshoe 66.46 331 P P 09 49 44.2 -0.1
baz=148,SNR=13
T35A Sooner Cattle 66.59 338 IAmb IAmb 09 49 46.1
comp=Z,29nm,1.3s
BLOK Blackwell 66.69 337 IAmb IAmb 09 49 46.8
comp=Z,37nm,1.2s
CROK Carrier 66.74 336 P 09 49 45.6 -0.3
CROK IAmb IAmb 09 49 46.4
comp=Z,21nm,0.8s
KSPA Keystone Colle 66.74 356 P P 09 49 46.1 +0.3
KSPA IAmb IAmb 09 49 48.0
comp=Z,61nm,1.9s
P43A Skaggs, Pawnee 67.03 344 IAmb IAmb 09 51 01.2
comp=Z,34nm,1.1s
M53A WI Miller and 67.11 352 P P 09 49 47.8 -0.4
baz=170
N49A Columbus Grove 67.14 349 IAmb IAmb 09 49 48.4
comp=Z,29nm,0.9s
SFIN Lafayette 67.18 346 P P 09 49 48.0 -0.6
baz=164
L59A Walton 67.33 356 P P 09 49 50.5 +0.9
ELIB Princess Elisa 67.33 160 dP P 09 49 49.4 0.0
ELIB dpP pP 09 50 01.1 -0.5
ELIB dsP sP 09 50 06.2 0.0
ELIB dPcP PcP 09 50 17.0 0.0
N47A Urbana 67.38 348 P P 09 49 48.8 -1.1
N47A IAmb IAmb 09 49 49.7
comp=Z,52nm,1.5s
BINY Binghamton 67.40 356 IAmb IAmb 09 49 51.4
comp=Z,38nm,1.3s
BINY Binghamton 67.40 356 P P 09 49 49.8 -0.1
baz=175
L56A Greenwood 67.46 354 IAmb IAmb 09 51 22.4
comp=Z,45nm,1.3s
319A Douglas 67.47 325 IAmb IAmb 09 49 53.6
comp=Z,16nm,0.9s
L61B Northampton 67.49 358 P P 09 49 51.3 +0.8
L61B IAmb IAmb 09 49 52.1
comp=Z,35nm,1.1s
L61B Northampton 67.49 358 P P 09 49 50.6 0.0
baz=178,SNR=5.3
HRV Adam Dziewonsk 67.52 359 P P 09 49 51.3 +0.6
HRV Adam Dziewonsk 67.52 359 P P 09 49 51.0 +0.3
baz=179
HRV Adam Dziewonsk 67.52 359 P P 09 49 51.3 +0.6
HRV pmax pmax
comp=Z,27nm,0.8s
HRV Adam Dziewonsk 67.52 359 P P 09 49 51.5 +0.8
HRV pP pP 09 50 04.9 +2.1
P40A Paris 67.59 342 P P 09 49 51.1 -0.1
121A Cookes Peak, D 67.62 326 P P 09 49 52.4 +0.5
baz=144,SNR=5.7
ERPA Erie 67.69 352 IAmb IAmb 09 51 18.1
comp=Z,21nm,0.9s
ERPA Erie 67.69 352 P P 09 49 51.3 -0.5
baz=171
HDIL Hopedale 67.85 345 P P 09 49 52.2 -0.6
baz=162
P38A Dawn 68.11 341 P P 09 49 54.3 -0.2
P38A IAmb IAmb 09 49 55.9

comp=Z,16nm,0.8s
L48A N Adams 68.18 349 IAmb IAmb 09 49 54.3
comp=Z,20nm,0.7s
DUN6 Lazy B Ranch 68.30 326 IAmb IAmb 09 49 59.1
comp=Z,35nm,1.1s
N41A Harden Midland 68.38 344 P **P** **09 49 55.3 -0.8**
J61A Chester 68.38 358 IAmb IAmb 09 49 58.1
comp=Z,20nm,0.8s
J56A Wolcott 68.53 355 IAmb IAmb 09 49 57.7
comp=Z,25nm,0.8s
J59A Piesco 68.57 357 P **P** **09 49 57.4 +0.1**
J59A IAmb IAmb 09 49 58.8
comp=Z,19nm,1.1s
L46A Eue Claire 68.59 347 P **P** **09 49 56.1 -1.3**
KSU1 Kansas State U 68.59 338 P **P** **09 49 57.6 0.0**
baz=155
J57A Williamstown 68.60 356 P **P** **09 49 57.3 -0.2**
K50A Casco 68.69 350 P **P** **09 49 56.6 -1.4**
HNH Hanover 68.73 359 P **P** **09 49 58.9 +0.6**
HNH IAmb IAmb 09 50 00.6
comp=Z,38nm,1.1s
ANMO Albuquerque 68.94 329 P **P** **09 50 01.8 +1.7**
ANMO Albuquerque 68.94 329 P **P** **09 50 00.8 +0.7**
baz=146
ANMO Albuquerque 68.94 329 P **P** **09 50 01.8 +1.7**
ANMO pmax pmax
comp=Z,7.0nm,0.8s
ANMO Albuquerque 68.94 329 LR LR 10 16 47.5
comp=Z,49nm,19.3s,baz=202,slow=33
ANMO Albuquerque 68.94 329 P **P** **09 50 01.4 +1.3**
ANMO sP **sP** **09 50 18.1 +1.4**
TUC Tucson 68.99 324 P **P** **09 50 01.1 +0.8**
baz=141
I63A Otisfield 69.06 360 P **P** **09 50 00.7 +0.4**
I63A IAmb IAmb 09 50 16.3
comp=Z,51nm,1.4s
NCB Newcomb 69.06 357 IAmb IAmb 09 51 19.5
comp=Z,17nm,1.1s
N38A Joes South For 69.10 342 P **P** **09 50 00.7 0.0**
N38A IAmb IAmb 09 50 02.2
comp=Z,23nm,0.7s
LBNH Lisbon 69.26 359 P **P** **09 50 02.0 +0.5**
LBNH Lisbon 69.26 359 P **P** **09 50 02.4 +0.8**
baz=179
LBNH Lisbon 69.26 359 P **P** **09 50 02.1 +0.5**
LBNH pmax pmax
comp=Z,78nm,1.8s
CBKS Cedar Bluff 69.43 336 P **P** **09 50 02.8 0.0**
CBKS Cedar Bluff 69.43 336 P **P** **09 50 03.3 +0.5**
baz=152
CBKS Cedar Bluff 69.43 336 P **P** **09 50 02.8 0.0**
CBKS pmax pmax
comp=Z,77nm,1.5s
J47A Sunmer 69.50 349 P **P** **09 50 02.6 -0.5**
J47A IAmb IAmb 09 50 02.6
comp=Z,20nm,0.8s
LONY Lake Ozonia 69.73 357 IAmb IAmb 09 50 06.5
comp=Z,62nm,1.8s
LONY Lake Ozonia 69.73 357 P **P** **09 50 04.6 +0.1**
baz=176,SNR=5.0
L40A Anamosa 69.75 344 P **P** **09 50 04.0 -0.6**
L40A IAmb IAmb 09 50 05.1
comp=Z,28nm,0.8s
EMMW East Machias 69.78 2 P **P** **09 50 05.0 +0.3**
214A Organ Pipe Nat 69.82 322 P **P** **09 50 05.6 +0.2**
baz=140
T25A Trinidad 69.85 332 IAmb IAmb 09 50 08.2
comp=Z,37nm,1.6s
T25A Trinidad 69.85 332 P **P** **09 50 06.0 +0.3**
baz=148,SNR=7.2
N35A Tabor 69.88 340 IAmb IAmb 09 50 06.0
comp=Z,38nm,0.9s
SCIA State Center 70.13 342 P **P** **09 50 07.1 +0.1**
baz=158
WBO Williamsburg 70.14 356 P **P** **09 50 07.0 +0.1**
WBO IAmb IAmb 09 50 08.2
comp=Z,25nm,0.8s
SADO Sadowa 70.22 354 P **P** **09 50 07.1 -0.3**
SADO IAmb IAmb 09 50 07.6
comp=Z,21nm,0.6s
SADO Sadowa 70.22 354 LR LR 10 24 10.6
comp=Z,73nm,18.1s,baz=286,slow=39
G62A West of Eustis 70.23 0 IAmb IAmb 09 50 09.5
comp=Z,23nm,0.8s
PKME Peaks-Kenny Pk 70.28 1 P **P** **09 50 08.1 +0.3**
baz=181
JFWS Jewell Farm 70.31 345 IAmb IAmb 09 50 08.2
comp=Z,20nm,0.9s
JFWS Jewell Farm 70.31 345 P **P** **09 50 08.2 +0.2**
baz=161
MNTQ Montreal, Queb 70.56 358 P **P** **09 50 10.3 +0.8**
MNTQ IAmb IAmb 09 50 11.0
comp=Z,22nm,0.8s
W18A Petrified Fore 70.66 327 P **P** **09 50 10.9 +0.3**
baz=143
KSCO Kaye Shedlock' 70.71 334 P **P** **09 50 11.8 +1.0**
KSCO Kaye Shedlock' 70.71 334 P **P** **09 50 11.3 +0.5**
baz=150
SDCO Great Sand Dun 70.83 331 P **P** **09 50 12.4 +0.7**
baz=147
F64A Sherman 70.90 2 P **P** **09 50 12.4 +0.8**
F64A IAmb IAmb 09 50 13.2
comp=Z,25nm,0.7s
113A Mohawk Valley, 70.96 322 P **P** **09 50 13.2 +0.9**
L34A Svendsen Farm, 71.11 340 P **P** **09 50 12.6 -0.4**
BGNE Belgrade 71.18 338 P **P** **09 50 13.4 0.0**
baz=154,SNR=6.0
H43A Windswept, Lux 71.25 347 P **P** **09 50 13.0 -0.7**
DBIC Dimbokro 71.29 73 P **P** **09 50 14.4 -0.3**
DBIC IAmb IAmb 09 50 27.8
comp=Z,10nm,0.7s
DBIC Dimbokro 71.29 73 P **P** **09 50 14.4 -0.3**
comp=Z,6.5nm,0.5s,baz=226,slow=5.4,SNR=13
DBIC LR LR 10 19 59.7
comp=Z,64nm,19.1s,baz=229,slow=35
comp=Z,6.5nm,0.5s
DBIC Dimbokro 71.29 73 P **P** **09 50 14.4 -0.3**
DBIC pP **pP** **09 50 27.4 +0.1**
TRQ Mont Tremblant 71.33 357 P **P** **09 50 14.1 -0.1**
TRQ IAmb IAmb 09 50 15.1
comp=Z,20nm,0.9s
S22A 4UR Ranch, Cre 71.42 330 P **P** **09 50 16.2 +0.9**
baz=146
E62A Clayton Lake 71.64 1 IAmb IAmb 09 50 17.8
comp=Z,20nm,0.8s
Q24A Divide 71.70 332 P **P** **09 50 18.3 +1.3**
Q24A IAmb IAmb 09 50 19.4
comp=Z,17nm,0.9s
Q24A Divide 71.70 332 P **P** **09 50 17.9 +0.9**
baz=147,SNR=15
MVCO Mesa Verde 71.74 329 IAmb IAmb 09 50 19.8
comp=Z,20nm,1.1s
MVCO Mesa Verde 71.74 329 P **P** **09 50 18.1 +0.9**
baz=144,SNR=13
WUAZ Wupatki 71.80 326 P **P** **09 50 18.8 +1.3**
baz=142,SNR=9.2
D62A Allapoint, All 72.11 1 P **P** **09 50 19.3 +0.5**
D62A IAmb IAmb 09 50 20.3
comp=Z,20nm,0.8s
BLYC Blythe 72.11 323 IAmb IAmb 09 50 22.1
comp=Z,19nm,1.1s
I37A Lemond, Waseca 72.14 343 P **P** **09 50 19.0 -0.1**
SWSC Sam W. Stewart 72.23 321 P **P** **09 50 21.0 +1.2**
baz=136
PDMCI Parker Dam,Lak 72.32 323 P **P** **09 50 21.4 +1.0**
baz=139
MONP2 Monument Peak 72.55 321 P **P** **09 50 23.4 +1.3**
baz=137
BC3 Big Chuckawall 72.56 322 P **P** **09 50 23.4 +1.4**
baz=138
LMQ La Malbaie 72.56 0 P **P** **09 50 21.5 -0.1**
ISCO Idaho Springs 72.59 332 P **P** **09 50 23.2 +1.0**
ISCO Idaho Springs 72.59 332 P **P** **09 50 23.0 +0.7**
baz=147
ISCO Idaho Springs 72.59 332 P **P** **09 50 23.3 +1.0**
ISCO pmax pmax
comp=Z,5.0nm,0.9s
SMCO Snowmass 72.66 331 IAmb IAmb 09 50 25.7
comp=Z,26nm,1.2s
ECSD EROS Data Cent 72.79 341 IAmb IAmb 09 50 24.0
comp=Z,22nm,1.1s
K30B Basset 72.80 338 P **P** **09 50 23.7 +0.6**
E43A Lone Tree Farm 72.93 348 P **P** **09 50 22.9 -0.8**
E43A IAmb IAmb 09 50 24.1
comp=Z,17nm,0.8s
109C Camp Elliot, M 72.94 320 P **P** **09 50 24.4 +0.3**
baz=137
LDAQ Lac Daran 72.98 360 P **P** **09 50 24.6 +0.5**
LDAQ IAmb IAmb 09 50 24.8
comp=Z,15nm,0.9s
TPFO Pinon Flats 73.08 321 P **P** **09 50 25.7 +0.5**
baz=137
PFO Pinyon Flats O 73.09 321 LR LR 10 17 27.9
comp=Z,48nm,18.3s,baz=138,slow=32
SPMN Marine on St. 73.11 344 IAmb IAmb 09 50 24.8
comp=Z,17nm,0.6s
SPMN Marine on St. 73.11 344 P **P** **09 50 25.2 +0.4**
baz=159,SNR=9.1
BELC Belle Mtn. Jos 73.12 322 P **P** **09 50 25.9 +0.5**
baz=138
MURC Murrieta 73.50 321 P **P** **09 50 27.8 +0.3**
baz=137
GMRC Granite Mounta 73.51 323 P **P** **09 50 29.0 +1.4**
baz=138
N23A Red Feather La 73.65 333 P **P** **09 50 29.2 +0.7**
N23A Red Feather La 73.65 333 P **P** **09 50 29.4 +0.9**
baz=147,SNR=7.1
KNB Kanab 73.70 326 IAmb IAmb 09 50 32.2
comp=Z,35nm,1.2s
V12A Nelson 73.77 324 P **P** **09 50 30.6 +1.5**
PHWY Pilot Hill 73.79 333 P **P** **09 50 29.6 +0.3**
PHWY IAmb IAmb 09 50 31.5
comp=Z,37nm,1.9s
F36A Milaca 73.89 344 P **P** **09 50 28.4 -1.0**
F36A IAmb IAmb 09 50 29.8
comp=Z,16nm,1.0s
D41A Chassel 73.89 347 P **P** **09 50 29.5 +0.1**
HEC Hector,Ludlow 73.92 322 P **P** **09 50 31.0 +1.1**
baz=138,SNR=6.2
O20A White River Ci 74.00 331 IAmb IAmb 09 50 33.0
comp=Z,22nm,0.9s
O20A White River Ci 74.00 331 P **P** **09 50 32.0 +1.5**
baz=145,SNR=14
E38A The Farm, Brul 74.10 345 P **P** **09 50 29.4 -1.2**
SUSD Miller 74.16 339 P **P** **09 50 31.3 +0.2**
SRU San Rafael Swe 74.22 329 IAmb IAmb 09 50 34.0
comp=Z,11nm,0.8s
BFSC Mount Baldy Ra 74.23 321 P **P** **09 50 33.2 +1.3**
baz=137
CCUT Cedar City 74.38 326 P **P** **09 50 33.8 +1.0**
CCUT IAmb IAmb 09 50 36.3
comp=Z,21nm,0.9s
P18A Preston Nutter 74.50 329 P **P** **09 50 34.9 +1.3**
P18A IAmb IAmb 09 50 36.2
comp=Z,14nm,0.9s
GSC Goldstone, Bar 74.53 322 P **P** **09 50 35.0 +1.5**
baz=137
F33A 5 Mile Ranch, 74.61 342 P **P** **09 50 33.6 -0.1**
RWWY Rawlins 74.84 332 P **P** **09 50 35.8 +0.4**
RWWY IAmb IAmb 09 50 36.7
comp=Z,13nm,0.8s
EDW2 Edwards Air Fo 74.89 321 P **P** **09 50 37.1 +1.5**
baz=136
RDMU Red Mountain 74.95 330 IAmb IAmb 09 50 38.2
comp=Z,33nm,1.6s
GWY Greenwater Val 75.10 323 P **P** **09 50 37.9 +1.1**
K22A Casper 75.36 333 P **P** **09 50 39.2 +1.0**
baz=147,SNR=5.9
FURC Furnace Creek, 75.41 323 P **P** **09 50 40.1 +1.7**
baz=138,SNR=5.2
MPMC Manual Prospec 75.46 322 P **P** **09 50 40.3 +1.3**
baz=137
BSUT Blindstream Ca 75.46 329 IAmb IAmb 09 50 41.9
comp=Z,53nm,1.9s
NLU North Lily Min 75.62 328 P **P** **09 50 41.5 +1.6**
NLU IAmb IAmb 09 50 42.6
comp=Z,28nm,1.8s
RSSD Black Hills 75.63 336 P **P** **09 50 40.4 +0.6**
RSSD Black Hills 75.63 336 P **P** **09 50 41.3 +1.5**
baz=149
RSSD Black Hills 75.63 336 P **P** **09 50 40.4 +0.6**
RSSD pmax pmax
comp=Z,13nm,1.2s
ISA Isabella, Lake 75.72 321 P **P** **09 50 42.1 +1.7**
baz=136,SNR=5.0
PKM Mcpherson Peak 75.94 320 P **P** **09 50 42.6 +0.9**
baz=135
SPR3 Spring Creek 3 75.98 326 P **P** **09 50 42.9 +0.8**
D32A Dogwood Acres, 76.00 342 P **P** **09 50 41.6 +0.1**
D32A IAmb IAmb 09 50 42.5
comp=Z,41nm,1.2s
CWC Cottonwood Cre 76.06 322 P **P** **09 50 43.7 +1.3**
baz=137
GRAC Grapevine Rang 76.07 323 P **P** **09 50 43.3 +1.0**
baz=137
R11B Troy Canyon, C 76.13 325 P **P** **09 50 43.6 +0.8**
R11B IAmb IAmb 09 50 46.0
comp=Z,24nm,1.6s
R11B Troy Canyon, C 76.13 325 P **P** **09 50 43.9 +1.2**
baz=139,SNR=14
DUG Dugway, Tooele 76.16 328 P **P** **09 50 43.7 +0.9**
DUG Dugway, Tooele 76.16 328 P **P** **09 50 43.9 +1.1**
baz=141,SNR=7.9
DUG Dugway, Tooele 76.16 328 P **P** **09 50 43.7 +0.9**
DUG pmax pmax
comp=Z,14nm,1.1s
VES Vestal, Richgr 76.19 321 P **P** **09 50 43.9 +0.9**
baz=136
B35A Bob, Littlefor 76.26 344 P **P** **09 50 42.5 -0.5**
B35A IAmb IAmb 09 50 43.6
comp=Z,49nm,1.8s
SMMC Simmler 76.34 320 P **P** **09 50 44.7 +0.8**
baz=135
LCH Last Change Ra 76.40 323 P **P** **09 50 46.2 +1.9**
HWUT Hardware Ranch 76.68 330 P **P** **09 50 47.0 +1.1**
HWUT IAmb IAmb 09 50 47.9
comp=Z,16nm,0.9s
BW06 Boulder Array 76.72 332 P **P** **09 50 47.0 +0.9**
baz=144
PDAR Pinedale Array 76.72 332 P **P** **09 50 46.3 +0.3**
PDAR Pinedale Array 76.72 332 P **P** **09 50 46.5 +0.5**
comp=Z,1.8nm,0.6s,baz=134,slow=7.5,SNR=17
comp=Z,1.8nm,0.6s
AGMN Agassiz Nation 76.75 343 P **P** **09 50 44.9 -0.9**
AGMN IAmb IAmb 09 50 46.2
comp=Z,12nm,0.6s
AGMN Agassiz Nation 76.75 343 P **P** **09 50 46.8 +1.1**
baz=157
TPH Tonopah 76.79 324 P **P** **09 50 48.2 +1.7**
TPH Tonopah 76.79 324 P **P** **09 50 48.3 +1.7**
TPH pmax pmax
comp=Z,64nm,1.2s
MLAC Mammoth, Mammo 77.34 323 P **P** **09 50 50.5 +0.8**
baz=136
MDND Maddock 77.40 340 P **P** **09 50 49.8 +0.3**
baz=153,SNR=8.1
NVAR Mina Array Bea 77.63 323 P **P** **09 50 52.8 +1.5**
comp=Z,3.8nm,0.8s,baz=157,slow=6.5,SNR=23
comp=Z,3.8nm,0.8s
REDW Red Top Meadow 77.76 331 P **P** **09 50 50.8 -1.1**
ELK Elko 77.76 327 P **P** **09 50 52.9 +0.9**
ELK Elko 77.76 327 P **P** **09 50 52.9 +0.9**
ELK pmax pmax
comp=Z,8.0nm,1.0s
LOHW Long Hollow 77.85 331 P **P** **09 50 53.7 +1.3**
LOHW IAmb IAmb 09 50 54.6
comp=Z,18nm,1.4s
TPAW Teton Pass 77.91 331 P **P** **09 50 52.8 +0.1**
SUR Sutherland 77.96 120 LR LR 10 22 27.4
comp=Z,72nm,18.4s,baz=246,slow=34
KVN Kaiserville 77.97 324 P **P** **09 50 54.2 +1.1**
KVN Kaiserville 77.97 324 P **P** **09 50 54.2 +1.1**
KVN pmax pmax
comp=Z,10.0nm,1.1s
IMW Indian Meadow 78.23 331 IAmb IAmb 09 50 57.0
comp=Z,26nm,1.5s
FLWY Flagg Ranch 78.27 332 P **P** **09 50 56.2 +1.5**
FLWY IAmb IAmb 09 50 57.4
comp=Z,18nm,0.8s
WAKR Walker 78.30 323 IAmb IAmb 09 50 58.0
comp=Z,24nm,1.5s
H17A Grant Village 78.47 332 P **P** **09 50 57.4 +1.5**
H17A Grant Village 78.47 332 P **P** **09 50 58.5 +2.7**
baz=144,SNR=5.5
RLMT Red Lodge 78.51 333 P **P** **09 50 57.3 +1.3**
RLMT IAmb IAmb 09 50 57.8
comp=Z,10.0nm,0.6s
RLMT Red Lodge 78.51 333 P **P** **09 50 56.6 +0.6**
baz=145,SNR=15
ULM Lac du Bonnet 78.55 344 IAmb IAmb 09 50 56.7
comp=Z,37nm,1.6s
ULM Lac du Bonnet 78.55 344 P **P** **09 50 55.4 -0.3**
comp=Z,4.9nm,0.4s,baz=162,slow=6.0,SNR=14
ULM LR LR 10 30 30.0
comp=Z,34nm,18.6s,baz=91,slow=39
comp=Z,4.9nm,0.4s
LAO LASA Array 78.63 336 P **P** **09 50 57.2 +0.9**
LAO IAmb IAmb 09 50 57.8
comp=Z,11nm,0.7s
LAO LASA Array 78.63 336 P **P** **09 50 56.7 +0.3**
baz=148,SNR=9.7
PNTR Pine Nut 78.80 323 IAmb IAmb 09 51 00.6
comp=Z,19nm,0.8s
YHL Hebgen Lake 79.09 332 IAmb IAmb 09 51 02.4
comp=Z,41nm,1.6s
PAHR Pah Rah Range 79.13 324 P **P** **09 51 01.3 +1.8**
PAHR IAmb IAmb 09 51 02.3
comp=Z,22nm,0.9s
DGMT Dagmar 79.43 338 P **P** **09 51 01.5 +0.8**
DGMT IAmb IAmb 09 51 02.3
comp=Z,22nm,0.6s
DGMT Dagmar 79.43 338 P **P** **09 51 01.4 +0.8**
baz=149,SNR=9.2
AFDM Forest Hills D 79.45 322 P **P** **09 51 01.6 +0.6**
HLID Hailey 79.52 329 IAmb IAmb 09 51 04.3
comp=Z,17nm,1.0s
HLID Hailey 79.52 329 P **P** **09 51 02.7 +1.2**
baz=140,SNR=22
BOZ Bozeman (W) 79.88 332 P **P** **09 51 04.4 +1.0**
BOZ Bozeman (W) 79.88 332 P **P** **09 51 04.5 +1.1**
baz=143,SNR=7.7
BOZ Bozeman (W) 79.88 332 P **P** **09 51 04.4 +1.0**
BOZ pmax pmax
comp=Z,9.0nm,1.4s
SCHQ Schefferville 79.92 2 P **P** **09 51 03.0 -0.2**
comp=Z,3.6nm,0.7s,baz=199,slow=4.8,SNR=8.7
SCHQ LR LR 10 26 16.4
comp=Z,33nm,20.4s,baz=186,slow=36
comp=Z,3.6nm,0.7s
TOA0 Torodi Ar. Sit 80.07 70 P **P** **09 51 04.6 -0.3**
TOA0 IAmb IAmb 09 51 05.3
comp=Z,18nm,0.6s
TORD Torodi Ar. Bea 80.07 70 P **P** **09 51 04.4 -0.5**
TORD IAmb IAmb 09 51 18.5
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 80.07 70 P **P** **09 51 04.5 -0.5**
comp=Z,14nm,0.6s,baz=270,slow=3.9,SNR=6.6
TORD LR LR 10 26 39.0
comp=Z,83nm,19.5s,baz=139,slow=36
comp=Z,14nm,0.6s
ORV Oroville 80.17 322 P **P** **09 51 06.3 +1.4**
ORV IAmb IAmb 09 51 07.6
comp=Z,22nm,1.1s
ORV Oroville 80.17 322 P **P** **09 51 06.3 +1.4**
ORV pmax pmax
comp=Z,22nm,1.2s
TSUM Tsumeb 80.39 107 P **P** **09 51 06.3 -0.5**
TSUM IAmb IAmb 09 51 20.9
comp=Z,17nm,0.9s
TSUM Tsumeb 80.39 107 LR LR 10 23 28.9
comp=Z,59nm,18.7s,baz=156,slow=33
LRM Limekiln Ridge 80.41 332 P **P** **09 51 07.5 +1.2**
EGMT Eagleton 81.08 335 IAmb IAmb 09 51 11.1
comp=Z,18nm,1.2s
EGMT Eagleton 81.08 335 P **P** **09 51 10.0 +0.3**
baz=145,SNR=6.3
LYMT Lyon Mountain 81.25 333 P **P** **09 51 11.3 +0.5**
J08A Circle Bar Ran 81.31 327 IAmb IAmb 09 51 13.6
comp=Z,37nm,1.5s
BPMT Black Pine Rid 81.32 332 P **P** **09 51 12.6 +1.4**
PLID Pearl Lake 81.42 329 P **P** **09 51 12.8 +1.1**
PLID IAmb IAmb 09 51 13.8
comp=Z,20nm,0.8s
K05A Summer Lake 82.08 325 IAmb IAmb 09 51 17.9
comp=Z,21nm,1.0s
YBH Yreka Blue Hor 82.35 323 LR LR 10 23 22.4
comp=Z,33nm,21.1s,baz=150,slow=32
I07A Izee 82.35 327 P **P** **09 51 17.9 +1.4**
F10A Beach Ranch, E 82.66 329 P **P** **09 51 18.1 +0.1**
J05D Fort Rock, OR 82.66 325 IAmb IAmb 09 51 21.2
comp=Z,24nm,1.4s
PINE Pine Mountain 82.87 326 P **P** **09 51 20.4 +1.0**
PINE IAmb IAmb 09 51 21.9
comp=Z,19nm,1.0s
BOSA Boshof 82.98 118 P **P** **09 51 19.6 -0.7**
BOSA IAmb IAmb 09 51 33.7
comp=Z,11nm,0.9s
BOSA Boshof 82.98 118 P **P** **09 51 19.6 -0.7**
BOSA pmax pmax
comp=Z,11nm,1.0s
BOSA Boshof 82.98 118 P **P** **09 51 18.7 -1.6**
comp=Z,4.4nm,0.7s,baz=264,slow=3.5,SNR=5.5
BOSA LR LR 10 25 17.6
comp=Z,93nm,18.3s,baz=202,slow=34
comp=Z,4.4nm,0.7s
I05D Terrebonne, OR 83.46 326 IAmb IAmb 09 51 24.1
comp=Z,11nm,0.7s
FFC Flin Flon 84.20 342 P **P** **09 51 25.5 -0.1**
FFC Flin Flon 84.20 342 P **P** **09 51 25.5 -0.1**
FFC pmax pmax
comp=Z,7.0nm,1.1s
NEW Newport 84.33 331 P **P** **09 51 26.2 -0.3**
NEW IAmb IAmb 09 51 43.6
comp=Z,21nm,1.9s
NEW Newport 84.33 331 P **P** **09 51 26.6 +0.1**
baz=139
NEW Newport 84.33 331 P **P** **09 51 26.2 -0.3**
NEW pmax pmax
comp=Z,21nm,1.9s
C09A Chrisman Ranch 84.50 330 P **P** **09 51 27.5 +0.2**
C09A IAmb IAmb 09 51 29.1
comp=Z,15nm,1.1s
LBTB Lobatse 84.78 115 P **P** **09 51 29.1 -0.4**
LBTB IAmb IAmb 09 51 32.9
comp=Z,48nm,1.8s
LBTB Lobatse 84.78 115 P **P** **09 51 29.1 -0.4**
LBTB pmax pmax
comp=Z,48nm,1.8s
LBTB Lobatse 84.78 115 LR LR 10 26 41.4
comp=Z,37nm,19.7s,baz=198,slow=34
MDT Midelt 85.36 50 P **P** **09 51 32.5 +0.3**
comp=Z,6.6nm,1.1s,baz=272,slow=4.3,SNR=6.1
MDT LR LR 10 28 30.0
comp=Z,43nm,20.3s,baz=246,slow=35
comp=Z,6.6nm,1.1s
FCC Fort Churchill 86.05 348 P **P** **09 51 34.8 +0.1**
FCC IAmb IAmb 09 51 36.1
comp=Z,30nm,1.9s
FCC Fort Churchill 86.05 348 P **P** **09 51 34.8 +0.1**
FCC pmax pmax
comp=Z,30nm,1.9s
EDM Edmonton 86.62 336 P **P** **09 51 37.0 -0.7**
EDM Edmonton 86.62 336 P **P** **09 51 37.0 -0.7**
EDM pmax pmax
comp=Z,29nm,0.9s
FRB Frobisher Bay 88.81 1 LR LR 10 31 49.4
comp=Z,48nm,19.5s,baz=241,slow=36
ESDC Sonseca Array 89.62 45 P **P** **09 51 52.3 -0.1**
comp=Z,0.6nm,0.7s,baz=252,slow=5.9,SNR=4.1
comp=Z,0.6nm,0.7s
URZ Urewera 90.46 227 LR LR 10 24 54.8
comp=Z,55nm,19.4s,baz=299,slow=30
RPZ Rata Peaks 91.07 220 LR LR 10 25 06.6
comp=Z,68nm,19.3s,baz=50,slow=30
LSZ Lusaka 91.22 107 LR LR 10 28 44.3
comp=Z,81nm,21.3s,baz=248,slow=33
SFJD Kangerlussuaq 93.28 8 LR LR 10 33 52.8
comp=Z,55nm,20.4s,baz=154,slow=35
YKA Yellowknife Ar 94.31 341 P **P** **09 52 13.2 -0.2**
comp=Z,2.4nm,0.7s,baz=136,slow=4.6,SNR=48
YKA LR LR 10 38 36.8
comp=Z,70nm,18.7s,baz=312,slow=38
comp=Z,2.4nm,0.7s
FLDN Fort Liard 95.56 336 P **P** **09 52 20.2 +1.0**
baz=134
KOTAN Kotaneelee Air 95.69 336 P **P** **09 52 21.2 +1.3**
baz=133
U33K Whale Pass 96.85 330 P **P** **09 52 25.8 +0.7**
baz=126
DLBC Dease Lake 96.91 333 P **P** **09 52 26.4 +0.8**
baz=128
WTLY Watson Lake, Y 97.47 335 P Pdif 09 52 28.5 +0.5
baz=129
R33M Jennings River 97.89 333 P Pdif 09 52 30.7 +0.6
baz=128
TGTN Hyland Airport 98.17 336 P Pdif 09 52 32.3 +1.1
baz=129
P33M Teslin, Yukon 99.13 333 P **Pdif** **09 52 35.9 +0.3**
baz=126

SKAG	**Skagway** baz=124	**99.74**	**332**	P		**Pdif**	**09 52 39.3**	**+1.2**
WHY	**Whitehorse** baz=124	**100.22**	**333**	P		**Pdif**	**09 52 41.3**	**+0.9**
FARO	**Faro, Yukon** baz=125	**100.51**	**335**	P		**Pdif**	**09 52 42.3**	**+0.8**
O30N	**Mendenhall** baz=123	**100.78**	**333**	P		**Pdif**	**09 52 44.3**	**+1.5**
N30M	**Aishikik Lake** baz=122	**101.56**	**333**	P		**Pdif**	**09 52 47.7**	**+1.5**
YUK4	**Talbot Arm** baz=121	**102.14**	**333**	P		**Pdif**	**09 52 49.0**	**-0.1**
PINM	**Pinnacle** baz=120	**102.19**	**331**	P		**Pdif**	**09 52 50.1**	**+0.9**
YUK8	**Steele Glacier** baz=120	**102.58**	**332**	P		**Pdif**	**09 52 51.3**	**+0.2**
M29M	**Somme Creek** baz=121	**102.63**	**334**	P		**Pdif**	**09 52 51.2**	**+0.1**
L29M	**L29M** baz=121	**102.84**	**334**	P		**Pdif**	**09 52 52.4**	**+0.5**
K29M	**Barlow Dome** baz=121	**102.99**	**335**	P		**Pdif**	**09 52 53.3**	**+0.6**
I30M	**Mount Dempster** baz=122	**103.30**	**337**	P		**Pdif**	**09 52 54.5**	**+0.5**
G31M	**Satah River** baz=124	**103.50**	**339**	P		**Pdif**	**09 52 56.0**	**+1.3**
ILAR	**Eielson Array** comp=Z,0.3nm,0.8s,baz=106,slow=5.3,SNR=4.0	**107.04**	**334**	PP		**PP**	**09 57 36.8**	**-0.8**
O18K	**Koktuh Hills** baz=108	**108.97**	**328**	P		**PKiKP**	**09 57 23.9**	**+0.5**
K20K	**Telida** baz=108	**109.51**	**332**	P		**PKiKP**	**09 57 24.9**	**+0.5**
C24K	**Franklin Bluff** baz=110	**109.53**	**339**	P		**PKiKP**	**09 57 24.7**	**+0.5**
B21K	**Ikpikpuk River** baz=105	**111.47**	**338**	P		**PKiKP**	**09 57 28.5**	**+0.7**
L16K	**Owhat River** baz=104	**111.48**	**329**	P		**PKiKP**	**09 57 28.6**	**+0.4**
G19K	**Purcell Mounta** baz=104	**111.51**	**334**	P		**PKiKP**	**09 57 28.2**	**+0.1**
E20K	**Nigu River** baz=104	**111.68**	**336**	P		**PKiKP**	**09 57 28.7**	**+0.3**
J17K	**VABM Dome** baz=103	**111.70**	**331**	P		**PKiKP**	**09 57 28.9**	**+0.4**
M15K	**Kasigluk River** baz=103	**111.82**	**328**	P		**PKiKP**	**09 57 29.4**	**+0.6**
D19K	**Kuna River** baz=102	**112.43**	**337**	P		**PKiKP**	**09 57 31.4**	**+1.6**
M14K	**Bethel** baz=102	**112.44**	**328**	P		**PKiKP**	**09 57 30.7**	**+0.8**
F18K	**Selawik** baz=102	**112.62**	**334**	P		**PKiKP**	**09 57 31.5**	**+1.4**
G17K	**Kiwalik Mounta** baz=101	**112.81**	**333**	P		**PKiKP**	**09 57 31.4**	**+0.9**
C18K	**Utukok River** baz=99	**113.57**	**336**	P		**PKiKP**	**09 57 32.6**	**+0.6**
G15K	**Niukluk** baz=98	**114.13**	**332**	P		**PKiKP**	**09 57 33.7**	**+0.6**
KBZ	**Khabaz**	**123.67**	**53**	⇑*i*PKIKP		**PKiKP**	**09 57 52.9**	**+0.6**
KBZ	**Khabaz** comp=Z,2.0nm,1.1s,baz=220,slow=7.7,SNR=3.8	**123.67**	**53**	PKP		**PKiKP**	**09 57 52.8**	**+0.5**
ASAR	**Alice Springs** comp=Z,1.4nm,0.6s,baz=127,slow=1.7,SNR=34	**125.82**	**208**	PKP		**PKPdf**	**09 57 56.6**	**-0.4**
BELG	**Belogornoye**	**126.75**	**42**	*e*PKIKP		**PKPdf**	**09 57 57.5**	**-0.2**
H11S2	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=399	**126.77**	**275**	T		T	12 17 40.7	
H11S1	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=483	**126.78**	**275**	T		T	12 17 36.9	
H11S3	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=367	**126.79**	**275**	T		T	12 17 40.4	
H11N3	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=17	**126.96**	**276**	T		T	12 17 56.7	
H11N1	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=19	**126.97**	**276**	T		T	12 17 57.7	
H11N2	**WAKE ISLAND Hyl** baz=108,slow=75,SNR=23	**126.97**	**276**	T		T	12 17 53.8	
WRA	**Warramunga Arr** comp=Z,1.3nm,0.6s,baz=160,slow=1.8,SNR=14	**128.88**	**211**	PKP		**PKPdf**	**09 58 02.8**	**-0.1**
SEY	**Seymchan**	**132.97**	**335**	⇑*i*PKIKP		**PKPdf**	**09 58 09.9**	**+0.7**
BRVK	**Borovoye**	**139.73**	**36**	⇑*e*PKIKP		**PKPdf**	**09 58 23.1**	**+1.1**
BVAR	**Borovoye Array** comp=Z,1.2nm,0.7s,baz=29,slow=3.4,SNR=5.0	**139.80**	**36**	PKhKP		PKPpre	09 58 18.6	
YAK	**Yakutsk**	**140.87**	**345**	*e*PKIKP		**PKPdf**	**09 58 21.6**	**-2.2**
KURK	**Kurchatov**	**145.35**	**35**	*e*PKIKP		**PKPbc**	**09 58 32.4**	**+0.4**
KURBB	**Kurchatov Arra** comp=Z,5.7nm,0.6s,baz=301,slow=3.7,SNR=60	**145.36**	**35**	PKPbc		**PKPdf**	**09 58 32.5**	**+0.4**
YSS	**Yuzh-Sakhalins**	**145.91**	**318**	*e*PKP2		**PKPab**	**09 58 34.7**	**+0.3**
YSS	comp=Z,10.0nm,0.8s			pmax		pmax		
ZALV	**Zalesovo Beam** comp=Z,24nm,0.6s,baz=311,slow=3.9,SNR=127	**146.06**	**26**	PKPbc		**PKPdf**	**09 58 33.8**	**+0.6**
EKS2	**Erkin-Say** SNR=9.2	**146.07**	**50**	P		**PKPab**	**09 58 35.6**	**+0.3**
AAK	**Ala-Archa** SNR=14	**146.58**	**50**	P		**PKPab**	**09 58 37.7**	**+0.4**
AAK	**Ala-Archa** comp=Z,11nm,0.8s,baz=252,slow=6.0,SNR=30	**146.58**	**50**	PKPbc		**PKPdf**	**09 58 35.4**	**+0.7**
CHMS	**Chumysh** SNR=6.0	**146.63**	**49**	P		**PKPbc**	**09 58 37.3**	**+1.1**
UCH	**Uchtor** SNR=23	**146.73**	**51**	P		**PKPbc**	**09 58 37.3**	**+0.2**
KBK	**Karagaybulak** SNR=7.4	**146.89**	**50**	P		**PKPbc**	**09 58 37.3**	**+0.1**
TKM2	**Tokmak 2** SNR=7.4	**147.24**	**49**	P		**PKPbc**	**09 58 39.0**	**+0.8**
BOD	**Bodaibo**	**147.39**	**355**	*e*PKP2		**PKPbc**	**09 58 37.4**	**-0.4**
BOD	comp=Z,22nm,1.2s			pmax		pmax		
ULHL	**Ulahol** SNR=10	**147.93**	**50**	P		**PKPdf**	**09 58 38.5**	**+1.4**
KSH	**Kashi**	**148.62**	**55**	PKPbc		**PKPbc**	**09 58 42.3**	**+0.4**
ZEA	**Zeya**	**148.68**	**340**	*e*PKP2		**PKPbc**	**09 58 41.6**	**+0.2**
ZEA	comp=Z,10.0nm,1.6s			pmax		pmax		
MKAR	**Makanchi Array** comp=Z,12nm,0.7s,baz=316,slow=2.7,SNR=130	**149.60**	**38**	PKPbc		**PKPbc**	**09 58 44.1**	**+0.2**
HEH	**HeiHe**	**151.52**	**335**	*e*PKPbc		**PKPbc**	**09 58 47.8**	**-0.5**
MOY	**Mondy**	**152.94**	**12**	*e*PKIKP		**PKiKP**	**09 58 52.5**	**+0.7**
MOY	comp=Z,15nm,1.3s			pmax		pmax		
MJAR	**Matsushiro Arr** comp=Z,2.5nm,0.8s,baz=231,slow=0.9,SNR=6.5	**153.02**	**301**	PKPbc		**PKPbc**	**09 58 52.1**	**-0.1**
USRK	**Ussuriysk Ar.** comp=Z,3.9nm,0.7s,baz=149,slow=2.1,SNR=6.2	**153.75**	**321**	PKPbc		**PKPbc**	**09 58 53.2**	**-0.3**
WMQ	**Urumqi**	**154.44**	**38**	*e*PKPbc		**PKPdf**	**09 58 48.6**	**+1.9**
WMQ				PKPab		**PKPab**	**09 59 10.1**	**+0.6**
ZAK	**Zakamensk**	**154.56**	**9**	*e*PKP2		**PKPab**	**09 59 09.4**	**-0.4**
ZAK	comp=Z,6.0nm,1.4s			pmax		pmax		
MDJ	**Mudanjiang**	**154.78**	**325**	PKPbc		**PKPdf**	**09 58 46.8**	**-0.3**
MDJ				SS		SS	10 22 25.8	+0.6
MDJ	comp=Z,240nm,5.3s			AMB		AMB		
BNX	**BinXian**	**155.06**	**329**	⇓P		**PKPab**	**09 59 12.3**	**+0.4**
BNX	comp=Z,14nm,0.8s			pmax		pmax		
BNX	comp=Z,61nm,3.8s			pmax		pmax		
SONM	**Songino Array** comp=Z,1.4nm,0.9s,baz=278,slow=0.5,SNR=10	**157.43**	**5**	PKP		**PKPdf**	**09 58 51.1**	**+0.5**
SONM				PKPab		**PKPab**	**09 59 22.5**	**+0.3**
CN2	**Changchun**	**157.43**	**329**	*e*PKP		**PKPdf**	**09 58 50.8**	**+0.2**
CN2				*ep*PKP		pPKPdf	09 59 01.8	-1.7
KSRS	**Korea Array** comp=Z,1.5nm,0.6s,baz=53,slow=3.9,SNR=6.1	**160.18**	**312**	PKPbc		**PKPab**	**09 59 35.5**	**+1.2**
GTA	**Gaotai**	**163.81**	**28**	PKP		**PKPdf**	**09 58 58.4**	**+0.5**
GTA				PKPab		**PKPab**	**09 59 50.5**	**+0.2**
HHC	**Hu-ho-hao-te**	**164.44**	**354**	*e*PKP		**PKPdf**	**09 59 00.5**	**+2.1**
NJ2	**Nanjing**	**169.38**	**311**	*e*PKP		**PKPdf**	**09 59 01.3**	**-0.9**
PZH	**PanZhiHua**	**172.97**	**79**	PKP		**PKPdf**	**09 59 03.6**	**-0.7**

IDC 20 09:48:21.9±3.0,**53.48N**×**87.54E**,**h0**km,**mbtmp2.7**/2,
ML2.3/2,**Error ellipse: s-maj=26.3km s-min=15.6km az=62.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.5nm,0.9s,baz=104,slow=338,SNR=5.5	**1.69**	**287**	I	I	09 59 20.0	
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=104,slow=17,SNR=6.6	**1.69**	**287**	Pg	Pn	09 48 52.0	-0.6
ZALV	1.0nm,0.3s,baz=108,slow=25,SNR=8.8			Lg	Lg	09 49 15.4	
KURBB	**Kurchatov Arra** baz=59,slow=13,SNR=2.9	**6.25**	**246**	Pn	Pn	09 49 56.5	+1.2
KURBB	baz=64,slow=32,SNR=3.8 0.3nm,0.4s			Lg	Lg	09 51 38.9	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=14,SNR=5.3	**7.49**	**209**	Pn	Pn	09 50 13.4	+1.0
MKAR	baz=10,slow=34,SNR=7.5 0.2nm,0.4s			Lg	Lg	09 52 20.4	

*NEIC **20** 09:53:38.8±0.5, 19.4ºN±0.0º×155.83ºW±0.0º,07, h20km±6km, Error ellipse: s-maj=10.2km s-min=5.4km az=66.0*
HVO 20 09:53:39.7±1.6, **19.449N**±0.010º×**155.83W**±0.02, **h11**km±2km, **ML2.4**/10, **ML2.5**/42(NEIC), **Error ellipse: s-maj=2.8km s-min=1.4km az=78.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPH	**Captain Cook**	**0.09**	**296**		Pg	09 53 42.5	+0.2
KHLU	**Kahalu`u**	**0.15**	**338**		Pg	09 53 43.3	0.0
KHLU					Sg	09 53 46.2	+0.4
ALEP	**Alea Permanent**	**0.20**	**63**		Pg	09 53 44.5	+0.3
ALEP					Sg	09 53 48.1	+0.8
MWH	**Moku'aweowe**	**0.23**	**81**		Pg	09 53 44.3	-0.4
HUH	**Hualalai**	**0.23**	**359**	Pg	Pg	09 53 45.1	+0.4
HUH	comp=N,713nm,0.2s			IAML		09 53 53.6	
MLOA	**Mauna Loa Obse**	**0.26**	**70**		Pg	09 53 45.1	-0.1
MLOA					Sg	09 53 49.2	+0.3
MLOA	comp=N,823nm,0.2s			IAML		09 53 49.8	
MLOA	comp=E,784nm,0.4s			IAML		09 53 49.8	
KHU	**Kahuku**	**0.29**	**134**		Pg	09 53 45.7	+0.1
KHU					Sg	09 53 50.7	+1.0
HMH	**Humu'ula Sheep**	**0.36**	**65**		Pg	09 53 47.0	-0.1
HMH					Sg	09 53 52.6	+0.6
HMH	comp=N,321nm,0.3s			IAML		09 53 55.1	
HMH	comp=E,301nm,0.5s			IAML		09 53 55.4	
POHA	**Pohakuloa**	**0.42**	**43**		Pg	09 53 47.9	-0.1
POHA	comp=E,256nm,0.3s			IAML		09 53 56.7	
POHA	comp=E,251nm,1.1s			IAML		09 54 02.1	
MLH	**Mauna Loa**	**0.42**	**84**		Pg	09 53 47.6	-0.6
MLH	comp=N,506nm,4.0s			IAML		09 53 53.4	
MLH					Sg	09 53 54.2	+0.4
HTC	**Hot Caves**	**0.46**	**117**		Pg	09 53 48.2	-0.5
WRMHI	**West Rim**	**0.51**	**95**		Pg	09 53 48.9	-0.7
UWE	**Uwekahuna**	**0.51**	**93**		Pg	09 53 49.0	-0.7
SDHHI	**Sand Hill**	**0.51**	**96**		Pg	09 53 48.9	-0.9
HLP	**Hilina Pali**	**0.52**	**107**		Pg	09 53 49.3	-0.6
HLP	comp=N,402nm,3.8s			IAML		09 53 51.7	
HLP	comp=E,548nm,3.6s			IAML		09 53 52.0	
OBL	**Observatory Le**	**0.52**	**93**		Pg	09 53 49.2	-0.6
RSD	**Rainshed**	**0.52**	**88**		Pg	09 53 49.2	-0.8
RSD	**Rainshed** comp=N,284nm,2.6s	**0.52**	**88**	IAML		09 54 02.9	
RSD	comp=E,258nm,2.8s			IAML		09 54 03.0	
UWB	**Uwekahuna B**	**0.52**	**92**		Pg	09 53 49.2	-0.8
UWB	comp=E,183nm,2.6s			IAML		09 54 02.1	
UWB	comp=N,246nm,1.6s			IAML		09 54 07.9	
SBLHI	**Steaming Bluff**	**0.53**	**92**		Pg	09 53 49.4	-0.8
SBLHI	comp=N,462nm,0.8s			IAML		09 53 52.5	
SBLHI	comp=E,375nm,1.0s			IAML		09 54 07.2	
KKO	**Keanakako`i**	**0.54**	**95**		Pg	09 53 49.7	-0.5
KKO	comp=E,435nm,2.1s			IAML		09 54 06.8	
HATHI	**Halema'uma'u T**	**0.54**	**93**		Pg	09 53 49.5	-0.8
HATHI	comp=N,512nm,1.3s			IAML		09 53 58.8	
BYL	**Byron's Ledge**	**0.54**	**94**		Pg	09 53 49.5	-0.8
BYL	**Byron's Ledge** comp=N,482nm,1.2s	**0.54**	**94**	IAML		09 53 57.0	
BYL	comp=E,410nm,1.3s			IAML		09 54 04.2	
PUH	**Pauahi**	**0.59**	**97**		Pg	09 53 49.7	-1.5
PUH	comp=N,178nm,1.7s			IAML		09 53 54.7	
PUH	comp=E,172nm,3.6s			IAML		09 54 09.8	
HPAH	**Hawaii Prepara**	**0.59**	**12**	Pg	Pg	09 53 50.3	-1.0
KNHH	**Kane Nui o Ham**	**0.63**	**96**		Pg	09 53 50.5	-1.5
JOKA	**Jonika Flow**	**0.78**	**91**		Pg	09 53 52.1	-2.8

*HEL **20** 10:00:09.2±0.2, 64.77Nx30.72E, h0km, ML2.0, Suspected explosion*
*UPP **20** 10:00:09.0±2.5, 64.65Nx30.75E, h0km, ML1.8*
*IDC **20** 10:00:10.1±2.7, 64.69Nx31.10E, h0km, mbtmp3.1/4, ML2.2/4, Error ellipse: s-maj=43.7km s-min=9.7km az=105.0*
ISC 20 10:00:09.0±1.0, **64.80N**±0.02×**30.72E**±0.05, **h0**km, **n47**, σ1**39**/72, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara** baz=28	**0.68**	**211**	PB	**Pg**	**10 00 21.8**	**-0.1**
RMF	comp=Z,28nm,0.2s			MSG		10 00 30.0	
KU6	**Riekki** baz=167	**1.28**	**345**	PB	**Pg**	**10 00 32.8**	**-0.6**
KU6	comp=Z,16nm,0.2s			MSG		10 00 48.6	
KU6				SB	**Sg**	**10 00 49.9**	**0.0**
MSF	**Maaselka** baz=146	**1.32**	**328**	PG	**Pg**	**10 00 33.4**	**-0.8**
MSF				SB	**Sg**	**10 00 51.6**	**+0.4**
OLKF	**Oulanka, Finla**	**1.62**	**341**	PG	**Pn**	**10 00 38.9**	**+0.1**
OLKF	comp=Z,21nm,0.2s			MSG		10 00 58.5	
OLKF				SN	**Sn**	**10 01 00.8**	**+0.4**
NIF	**Nilsia**	**1.91**	**223**	PG	**Pn**	**10 00 43.4**	**+0.7**
NIF				SG	**Sb**	**10 01 08.6**	**-0.3**
JOF	**Joensuu** baz=350	**1.91**	**172**	PG	**Pn**	**10 00 42.5**	**-0.2**
RANF	**Ranua** baz=123	**2.05**	**308**	PG	**Pn**	**10 00 46.0**	**+1.4**
RANF				SG	**Sn**	**10 01 12.0**	**+1.2**
OUL	**Oulu** baz=98	**2.07**	**280**	PG	**Pn**	**10 00 46.4**	**+1.5**
OUL				SG	**Sn**	**10 01 12.4**	**+1.0**
OBF4	**Vikkela, Lumij** baz=90	**2.40**	**273**	PB	**Pn**	**10 00 50.7**	**+1.2**
OBF4	comp=Z,12nm,0.2s			MSG		10 01 20.2	
OBF4				SG	**Sb**	**10 01 23.5**	**+0.4**
OUF	**Merijarvi**	**2.62**	**263**	PB	**Pn**	**10 00 53.7**	**+1.2**
OUF				MSG		10 01 26.4	
OUF	comp=Z,8.8nm,0.2s			SG	**Sb**	**10 01 28.9**	**-0.5**
RNF	**Rovaniemi** baz=131	**2.66**	**315**	PN	**Pn**	**10 00 53.7**	**+0.7**
RNF				SG	**Sb**	**10 01 30.8**	**+0.2**
OBF0	**Syolatti, Pyha**	**2.81**	**267**	PB	**Pn**	**10 00 56.0**	**+1.0**
OBF0				MSG		10 01 31.9	
OBF0	comp=Z,7.4nm,0.2s			SG	**Sb**	**10 01 36.2**	**+1.4**
SUF	**Sumiainen**	**2.91**	**226**	PB	**Pn**	**10 00 58.6**	**+2.1**
SUF				MSG		10 01 34.5	
SUF	comp=Z,4.5nm,0.2s						
TOF	**Tornio**	**2.96**	**299**	PG	**Pb**	**10 01 02.1**	**-0.5**
TOF				MSG		10 01 36.8	
TOF	comp=Z,3.1nm,0.2s			SB	**Sb**	**10 01 38.2**	**-1.1**
VRF	**Varrio**	**2.99**	**352**	PB	**Pn**	**10 00 58.9**	**+1.3**
VRF				MSG		10 01 38.1	
VRF	comp=Z,4.6nm,0.2s			SG	**Sb**	**10 01 41.8**	**+1.6**
SGF	**Sodankyl**	**3.15**	**329**	PN	**Pn**	**10 01 00.4**	**+0.6**
SGF				SG	**Sb**	**10 01 44.6**	**-0.1**
OBF8	**Ulkokalla** baz=76	**3.17**	**265**	PN	**Pn**	**10 01 00.9**	**+0.8**
KALU	**Kalix**	**3.27**	**292**	P	**Pn**	**10 01 02.5**	**+1.2**
KALU				S	**Sn**	**10 01 42.0**	**+1.2**
KALU	**Kalix**	**3.27**	**292**	PN	**Pn**	**10 01 02.5**	**+1.2**
KALU				SB	**Sn**	**10 01 43.9**	**+3.1**
KAF	**Kangasniemi** baz=34	**3.35**	**218**	PB	**Pn**	**10 01 04.6**	**+2.2**
KAF				SB	**Sb**	**10 01 49.2**	**-1.2**
RUF	**Ruokolahti**	**3.48**	**194**	PN	**Pn**	**10 01 05.2**	**+0.9**
LVZ	**Lovozero**	**3.49**	**25**	PN	**Pn**	**10 01 06.0**	**+1.5**
LVZ				SN	**Sn**	**10 01 42.6**	**-3.8**
KLF	**Kolari**	**3.68**	**315**	PN	**Pn**	**10 01 07.5**	**+0.4**
KEF	**Keuruu**	**3.72**	**227**	PB	**Pb**	**10 01 12.4**	**-3.1**
RAJF	**Raja-Jooseppi**	**3.81**	**347**	PN	**Pn**	**10 01 09.9**	**+1.1**
RAJF				SG	**Sb**	**10 02 05.4**	**+1.7**
PAJU	**Pajala**	**3.83**	**309**	P	**Pn**	**10 01 09.7**	**+0.5**
PAJU				S	**Sn**	**10 01 55.1**	**+0.2**
PAJU	**Pajala**	**3.83**	**309**	PN	**Pn**	**10 01 09.6**	**+0.5**
PAJU				SG	**Sb**	**10 02 06.9**	**+2.6**
SJUU	**Sjulsmark**	**3.91**	**285**	P	**Pn**	**10 01 10.6**	**+0.4**
SJUU				S	**Sn**	**10 01 58.4**	**+1.7**
VAF	**Ylistaro**	**3.97**	**247**	PB	**Pb**	**10 01 16.0**	**-3.6**
FIA0	**FINESS Array S** baz=35	**3.98**	**214**	PN	**Pn**	**10 01 11.8**	**+0.7**
FIA0				SG	**Sb**	**10 02 08.9**	**+0.6**
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=37,slow=13,SNR=13	**3.98**	**214**	Pn	**Pn**	**10 01 11.9**	**+0.9**
FINES				Pg	**Pb**	**10 01 20.0**	**+0.2**
FINES	comp=Z,0.3nm,0.3s,baz=34,slow=15,SNR=12			Sn	**Sn**	**10 01 58.4**	**+0.1**
FINES	comp=Z,0.4nm,0.3s,baz=39,slow=24,SNR=7.1			Lg	Lg	10 02 12.3	
BURU	**Burvik**	**4.02**	**271**	P	**Pn**	**10 01 11.5**	**-0.1**
BURU	**Burvik**	**4.02**	**271**	PN	**Pn**	**10 01 11.7**	**+0.1**
BURU				SN	**Sn**	**10 02 00.1**	**+0.8**
ODEU	**Stanfors**	**4.33**	**269**	P	**Pn**	**10 01 15.3**	**-0.6**
MASU	**Masugnsbyn**	**4.43**	**311**	P	**Pn**	**10 01 18.9**	**+1.5**
UMAU	**Umeaa**	**4.46**	**263**	P	**Pn**	**10 01 17.0**	**-0.8**
UMAU	**Umeaa**	**4.46**	**263**	PN	**Pn**	**10 01 17.1**	**-0.7**
UMAU				SN	**Sn**	**10 02 09.1**	**-1.2**
VJF	**Virojoki**	**4.52**	**200**	SG	**Sb**	**10 02 28.8**	**+4.8**
HEF	**Hetta**	**4.58**	**325**	PN	**Pn**	**10 01 19.9**	**+0.4**
KMNF	**Kaamanen**	**4.61**	**343**	PN	**Pn**	**10 01 20.4**	**+0.7**
LILU	**Lilltraesk**	**4.63**	**281**	P	**Pn**	**10 01 20.4**	**+0.3**
DUNU	**Dundret**	**4.76**	**304**	P	**Pn**	**10 01 22.6**	**+0.7**
SVAU	**Svanoeiden**	**4.80**	**271**	P	**Pn**	**10 01 22.3**	**-0.1**
ARCES	**ARCESS Array B** comp=Z,0.5nm,0.3s,baz=154,slow=14,SNR=83	**5.17**	**339**	Pn	**Pn**	**10 01 27.8**	**+0.4**
ARCES				Lg	Lg	10 02 46.0	
	comp=Z,0.4nm,0.3s,baz=153,slow=28,SNR=7.3 comp=Z,1.1nm,0.2s						
I37NO	**I37NO** baz=126,slow=333,SNR=4.9	**6.40**	**317**	I	I	10 40 10.0	
HFS	**Hagfors** comp=Z,0.2nm,0.3s,baz=50,slow=16,SNR=1.7	**9.15**	**247**	Pn	**Pn**	**10 02 21.2**	**-0.9**
HFS				Lg	Lg	10 04 51.4	
	comp=Z,0.3nm,0.3s,baz=59,slow=26,SNR=2.2 comp=Z,2.6nm,1.1s						
NOA	**NORSAR Array B** baz=55,slow=14,SNR=2.0	**9.64**	**256**	Pn	**Pn**	**10 02 28.3**	**-0.5**
NOA				Lg	Lg	10 05 12.7	
	baz=15,slow=4.2,SNR=4.3 comp=Z,0.5nm,0.8s						

*ISN **20** 10:01:23.1±0.8, 36.25Nx45.01E, h6km±9km, ML3.0*
*ISK **20** 10:01:23.4, 35.83Nx44.88E, h80km, ML2.8/8*
*AFAD **20** 10:01:23.4±0.0, 36.06Nx44.84E, h7km±5km, ML2.8*
*TEH **20** 10:01:24.5, 36.21Nx45.01E, h7km±44km, ML3.0*
ISC 20 10:01:24.6±1.2, **36.21N**±0.02×**45.00E**±0.03, **h4**km±11km, **n29**, σ1**33**/39, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDS1	**Sardasht. Az.**	**0.40**	**98**	Pg	**Pg**	**10 01 32.3**	**-0.1**
SDS1				Sg	**Sg**	**10 01 38.3**	**+0.6**
MAHB	**Mahabad**	**0.80**	**45**	Pg	**Pg**	**10 01 39.4**	**-0.6**
MAHB				Sg	**Sb**	**10 01 51.1**	**-1.3**
IKRK	**Kirkuk**	**0.96**	**214**	*e*Pg	**Pg**	**10 01 43.0**	**-0.1**
IKRK				*e*Sg	**Sg**	**10 01 56.0**	**+0.4**
IKRK	comp=N,135nm,0.5s			AML	AML	10 01 59.9	
IKRK	comp=E,115nm,0.3s			AML	AML	10 02 09.1	
YOVA	**Hakkari_Yksek**	**1.49**	**338**	P	**Pg**	**10 01 53.3**	**+0.1**
YOVA				S	**Sg**	**10 02 16.0**	**+3.4**
YOVA	comp=E,87nm,0.6s			*i* AML	AML	10 02 17.0	
YOVA	comp=E,114nm,0.8s			*i* AML	AML	10 02 18.0	
CUKT	**Cukurca**	**1.53**	**313**	Pn	**Pb**	**10 01 52.9**	**-0.6**
CUKT				Sn	**Sg**	**10 02 14.7**	**+1.0**
CUKT	**Cukurca**	**1.53**	**313**	P	**Pb**	**10 01 53.1**	**-0.5**
CUKT				S	**Sg**	**10 02 14.8**	**+1.2**
CUKT	comp=E,244nm,0.8s			*i* AML	AML	10 02 17.0	
CUKT	comp=E,141nm,0.8s			*i* AML	AML	10 02 19.0	
IAZR	**Azarshahr**	**1.67**	**28**	Pg	**Pb**	**10 01 55.4**	**-0.7**
HAKT	**HAKKARI**	**1.70**	**323**	P	**Pb**	**10 01 55.6**	**-1.0**
HAKT				S	**Sg**	**10 02 19.9**	**+0.6**
HAKT	comp=E,99nm,0.4s			*i* AML	AML	10 02 21.0	
HAKT	comp=E,181nm,0.6s			*i* AML	AML	10 02 22.0	
KGS1	**Ghasr-e-Shirin**	**1.76**	**164**	Sg	**Sg**	**10 02 22.0**	**+0.7**
IDHR	**Dehrash**	**1.88**	**143**	Pn	**Pb**	**10 01 58.2**	**-1.4**
ILIN	**Lien**	**2.05**	**128**	Pn	**Pb**	**10 02 01.2**	**-1.3**
IHSH	**Hashtrud**	**2.13**	**58**	Pn	**Pb**	**10 02 02.6**	**-1.3**
ISHB	**Shabestar**	**2.13**	**13**	Pn	**Pn**	**10 02 01.8**	**+0.6**
ITBZ	**Tabriz**	**2.22**	**24**	Pn	**Pb**	**10 02 03.3**	**-2.2**
IGHG	**Ghaleghazi**	**2.27**	**145**	Pn	**Pb**	**10 02 04.9**	**-1.4**
IMRD	**Marand**	**2.57**	**12**	Pn	**Pb**	**10 02 08.9**	**-2.4**
AKDM	**Akdamar-Van**	**2.66**	**323**	Pn	**Pn**	**10 02 09.4**	**+1.0**
VANB	**Van**	**2.71**	**332**	Pn	**Pn**	**10 02 09.4**	**+0.4**
ILBA	**Ilam Banvizeh**	**2.76**	**159**	Pn	**Pn**	**10 02 11.0**	**+1.3**
BHD	**Baghdad**	**2.97**	**190**	*e*Pn	**Pn**	**10 02 13.0**	**+0.5**
BHD				*e*Sn	**Sn**	**10 02 50.0**	**+1.5**
BHD	comp=E,307nm,0.4s			AML	AML	10 03 04.3	
MAKU	**Maku**	**3.15**	**356**	Pn	**Pn**	**10 02 17.0**	**+1.8**
IBDR	**Badra**	**3.18**	**166**	*e*Pn	**Pn**	**10 02 15.0**	**+0.6**
IBDR				*e*Sn	**Sn**	**10 02 55.0**	**+1.3**
IKFM	**Kafar-mosalman**	**3.56**	**138**	Pn	**Pn**	**10 02 22.1**	**+1.6**
SVAN	**Silvan-Diyarba**	**3.60**	**304**	Pn	**Pn**	**10 02 20.7**	**-0.5**
AGRB	**Hanur-Agry**	**3.72**	**335**	Pn	**Pn**	**10 02 24.5**	**+1.5**
MAZI	**Mazidag**	**3.86**	**290**	Pn	**Pn**	**10 02 23.0**	**-1.8**
DYBB	**Diyarbakir**	**

PCIG		**1.56**	**87**			**Pn**	**10 04 31.6**	**+0.3**
PCIG						**Sn**	**10 04 49.3**	**-1.5**
PCIG		**1.56**	**87**	*i*	P	**Pn**	**10 04 31.6**	**+0.3**
PCIG					eS	**Sn**	**10 04 49.3**	**-1.5**
PANG	**Puerto Angel**	**1.57**	**272**			**Pn**	**10 04 31.8**	**+0.3**
PANG						**Sn**	**10 04 49.8**	**-1.2**
PANG	**Puerto Angel**	**1.57**	**272**	*i*	P	**Pn**	**10 04 31.8**	**+0.3**
PANG					eS	**Sn**	**10 04 49.8**	**-1.2**
TGIG		**2.01**	**55**	*e*	P	**Pn**	**10 04 38.3**	**+0.8**
TGIG					eS	**Sn**	**10 05 02.7**	**+0.7**
TGBT	**Tuxtla Gutierr**	**2.04**	**55**	*e*	P	**Pn**	**10 04 38.6**	**+0.8**
TGBT					eS	**Sn**	**10 05 03.6**	**+1.1**
PEIG	**Puerto Escondi**	**2.25**	**280**	*i*	P	**Pn**	**10 04 41.4**	**+0.6**
PEIG					eS	**Sn**	**10 05 05.1**	**-2.8**
NEUV	**Arroyo Zacate**	**2.27**	**336**	*e*	P	**Pn**	**10 04 41.9**	**+0.8**
NEUV					eS	**Sn**	**10 05 08.1**	**-0.3**
OXBJ	**Oaxaca**	**2.31**	**309**	*e*	P	**Pn**	**10 04 44.4**	**+2.6**
OXBJ					eS	**Sn**	**10 05 10.1**	**+0.6**
VHO	**Vista Hermosa**	**2.32**	**309**	*e*	P	**Pn**	**10 04 44.6**	**+2.6**
VHO					eS	**Sn**	**10 05 10.5**	**+0.7**
TUIG	**Tuzandepetl**	**2.43**	**9**	*e*	P	**Pn**	**10 04 43.8**	**+0.5**
TUIG				*e*			10 05 12.0	
PATR	**El Naranjo**	**2.56**	**101**	*e*	P	**Pn**	**10 04 46.0**	**+0.7**
PATR					eS	**Sn**	**10 05 14.4**	**-1.5**
THIG		**2.58**	**106**	*e*	P	**Pn**	**10 04 46.6**	**+1.2**
THIG					eS	**Sn**	**10 05 14.8**	**-1.2**
PAVE	**Pavencul**	**2.60**	**99**	*e*	P	**Pn**	**10 04 46.9**	**+1.1**
PAVE					eS	**Sn**	**10 05 16.2**	**-0.6**
CCIG	**Comitan**	**2.68**	**75**			**Pn**	**10 04 48.5**	**+1.6**
CCIG	**Comitan**	**2.68**	**75**	*e*	P	**Pn**	**10 04 48.3**	**+1.5**
CCIG					eS	**Sn**	**10 05 21.1**	**+2.5**
CHUJ	**Union Juarez**	**2.69**	**101**	*e*	P	**Pn**	**10 04 47.9**	**+0.9**
CHUJ					eS	**Sn**	**10 05 17.3**	**-1.6**
YOIG	**Yosondua**	**2.88**	**296**	*e*	P	**Pn**	**10 04 52.4**	**+2.7**
YOIG					eS	**Sn**	**10 05 21.5**	**-2.1**
PMUV	**Sontecomapan**	**2.92**	**355**	*e*	P	**Pn**	**10 04 49.1**	**-1.0**
PMUV					eS	**Sn**	**10 05 21.4**	**-3.1**
VHSA	**Villahermosa**	**2.97**	**38**	*e*	P	**Pn**	**10 04 49.8**	**-0.9**
VHSA					eS	**Sn**	**10 05 25.7**	**+0.1**
HUEH	**Huehuetenango**	**3.23**	**95**	Pn		**Pn**	**10 04 56.2**	**+1.8**
HUEH	**Huehuetenango**	**3.23**	**95**	*e*	P	**Pn**	**10 04 58.2**	**+3.7**
HUEH					eS	**Sn**	**10 05 31.9**	**-0.4**
TXIG	**Tlaxiaco**	**3.24**	**300**	*e*	P	**Pn**	**10 04 57.6**	**+2.9**
TXIG					eS	**Sn**	**10 05 31.6**	**-1.1**
PNIG	**Pinotepa**	**3.25**	**284**	*e*	P	**Pn**	**10 04 55.8**	**+1.2**
PNIG					eS	**Sn**	**10 05 28.5**	**-4.1**
TOIG	**Toxpalan**	**3.25**	**319**	*e*	P	**Pn**	**10 04 58.4**	**+3.7**
TOIG					eS	**Sn**	**10 05 33.6**	**+0.8**
HLIG	**Huajuapan de L**	**3.59**	**308**	*e*	P	**Pn**	**10 05 02.9**	**+3.5**
HLIG					eS	**Sn**	**10 05 40.4**	**-0.8**
TPIG	**Tehuac#an**	**3.68**	**319**	*e*	P	**Pn**	**10 05 04.8**	**+4.2**
TPIG					eS	**Sn**	**10 05 44.3**	**+0.9**
OZST	**Orizaba**	**3.88**	**327**	*e*	P	**Pn**	**10 05 05.7**	**+2.5**
OZST					eS	**Sn**	**10 05 47.9**	**-0.2**
FTIG	**Fresnillo de T**	**3.89**	**306**	*e*	P	**Pn**	**10 05 07.0**	**+3.6**
FTIG					eS	**Sn**	**10 05 47.6**	**-0.8**
MGIG	**Malinaltepec**	**3.98**	**294**	*e*	P	**Pn**	**10 05 07.6**	**+2.9**
MGIG					eS	**Sn**	**10 05 49.1**	**-1.6**
TLIG	**Tlapa**	**4.06**	**299**	Pn		**Pn**	**10 05 09.1**	**+3.3**
TLIG	**Tlapa**	**4.06**	**299**	*e*	P	**Pn**	**10 05 09.2**	**+3.3**
TLIG					eS	**Sn**	**10 05 49.8**	**-2.9**
JAUV	**Jalcomulco**	**4.17**	**334**	*e*	P	**Pn**	**10 05 07.1**	**-0.1**
JAUV					eS	**Sn**	**10 05 50.7**	**-4.5**
CRIG	**Cruz Grande**	**4.27**	**286**	*e*	P	**Pn**	**10 05 10.0**	**+1.5**
CRIG					eS	**Sn**	**10 05 52.7**	**-5.0**
LVIG	**Laguna Verde**	**4.35**	**340**	*e*	P	**Pn**	**10 05 09.3**	**-0.3**
LVIG					eS	**Sn**	**10 05 54.2**	**-5.3**
SCIG	**Sabancuy**	**4.82**	**46**	*e*	P	**Pn**	**10 05 16.1**	**-0.1**
SCIG					eS	**Sn**	**10 06 06.9**	**-4.3**
DAIG	**Los Arroyos**	**4.83**	**287**	*e*	P	**Pn**	**10 05 15.5**	**-0.7**
DAIG					eS	**Sn**	**10 06 05.9**	**-5.5**
PETF	**Flores**	**4.95**	**74**	Pn		**Pn**	**10 05 19.7**	**+1.8**
PETF	**Flores**	**4.95**	**74**	*e*	P	**Pn**	**10 05 18.9**	**+1.1**
PETF					eS	**Sn**	**10 06 12.8**	**-1.5**
PPM	**Popocatepetl**	**4.98**	**314**	*e*	P	Pn	10 05 23.8	+5.0
PPM					eS	**Sn**	**10 06 16.1**	**+0.2**
MEIG	**Mezcala**	**5.12**	**297**	*e*	P	**Pn**	**10 05 23.8**	**+3.5**
MEIG					eS	**Sn**	**10 06 15.7**	**-3.1**
AMVM	**AMECAMECA**	**5.14**	**313**	*e*	S	**Sn**	**10 06 15.0**	**-4.4**
YAIG	**Yautepec**	**5.17**	**309**	*e*	P	**Pn**	**10 05 25.3**	**+4.2**
YAIG					eS	**Sn**	**10 06 17.3**	**-2.7**
PLIG	**Platanillo**	**5.24**	**302**	*e*	P	**Pn**	**10 05 26.6**	**+4.5**
PLIG					eS	**Sn**	**10 06 19.2**	**-2.6**
MPVM	**San Francisco**	**5.34**	**312**	*e*	P	**Pn**	**10 05 27.0**	**+3.5**
MPVM					eS	**Sn**	**10 06 24.9**	**-0.2**
CAIG	**El Cayaco**	**5.40**	**286**	*i*	P	**Pn**	**10 06 26.2**	**+2.1**
CAIG					eS	Sn	10 06 18.4	-7.2
ESQI	**Esquipulas**	**5.42**	**101**	Pn		**Pn**	**10 05 24.9**	**+0.5**
MTO3	**Montecristo**	**5.43**	**102**			**Pn**	**10 05 25.9**	**+1.1**
TLVM	**San Miguel Top**	**5.45**	**312**	*e*	P	Pn	10 05 21.7	-3.4
TLVM					eS	**Sn**	**10 06 23.4**	**-3.8**
XCVM	**Xochimilco**	**5.45**	**312**	*e*	S	**Sn**	**10 06 24.6**	**-2.5**
AOVM	**Tlapan**	**5.61**	**311**	*e*	P	**Pn**	**10 05 27.3**	**-0.1**
AOVM					eS	**Sn**	**10 06 29.9**	**-1.4**
TOVM	**TOLUCA**	**5.88**	**309**	*e*	P	**Pn**	**10 05 32.6**	**+1.6**
TOVM					eS	**Sn**	**10 06 35.4**	**-2.4**
ARIG	**Puente Sto Nin**	**5.90**	**297**	*e*	P	**Pn**	**10 05 35.0**	**+4.0**
ARIG					eS	**Sn**	**10 06 33.6**	**-4.2**
TEIG	**Tepich**	**7.75**	**53**	Pn		**Pn**	**10 05 56.0**	**-0.3**
ORTG	**Ortega, Santa**	**10.53**	**119**	Pn		**Pn**	**10 06 34.6**	**0.0**
RIMA	**Rio Macho**	**12.19**	**117**	Pn		Pn	10 06 55.5	-1.8
SOR	**Soroa**	**13.25**	**56**	Pn		**Pn**	**10 07 10.9**	**-0.9**
833A	**Chaparral WMA,**	**13.32**	**342**			**Pn**	**10 07 14.0**	**+1.3**
HNDO	**Hondo**	**14.43**	**344**			**Pn**	**10 07 28.1**	**+0.2**
435B	**Jarrell**	**15.30**	**351**			**Pn**	**10 07 42.4**	**+2.9**
435B					IAmb	IAmb	10 07 43.6	
	comp=Z,23nm,1.3s							
JCT	**Junction City**	**15.47**	**344**	Pn		**Pn**	**10 07 42.6**	**+0.8**
SAND	**Sanderson**	**15.76**	**336**	Pn		**Pn**	**10 07 46.5**	**+0.9**
TX31	**Lajitas Ar. Si**	**15.89**	**331**	Pn		**Pn**	**10 07 46.5**	**-0.7**
TXAR	**Lajitas Array**	**15.89**	**331**	Pn		**Pn**	**10 07 46.6**	**-0.6**
TXAR	**Lajitas Array**	**15.89**	**331**	P		**Pn**	**10 07 49.7**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=152,slow=14,SNR=13							
	comp=Z,1.4nm,0.8s							
BRDY	**Brady**	**16.05**	**347**	Pn		**Pn**	**10 07 50.5**	**+1.3**
OZNA	**Ozona**	**16.28**	**340**			**Pn**	**10 07 54.0**	**+1.8**
SGCY	**Sterling City**	**17.20**	**342**			**Pn**	**10 08 04.8**	**+0.9**
SGCY					IAmb	IAmb	10 08 08.7	
	comp=Z,12nm,0.7s							
PLPT	**Palo Pinto**	**17.40**	**350**	Pn		**Pn**	**10 08 05.0**	**-1.3**
PLPT					IAmb	IAmb	10 08 23.4	
	comp=Z,9.8nm,0.8s							
FW06	**Azle**	**17.45**	**352**	Pn		**Pn**	**10 08 04.5**	**-2.4**
FW06					IAmb	IAmb	10 08 21.9	
	comp=Z,22nm,0.9s							
ABTX	**Abilene, Hawle**	**17.48**	**346**	Pn		**Pn**	**10 08 06.2**	**-1.0**
VHRN	**Van Horn**	**17.73**	**330**	P		**Pn**	**10 08 13.1**	**+2.7**
APMT	**Aspermont**	**18.26**	**346**	P		**Pn**	**10 08 17.3**	**+0.4**
DKNS	**Dickens**	**18.79**	**344**	P		**P**	**10 08 22.6**	**-0.2**
DKNS					IAmb	IAmb	10 08 24.2	
	comp=Z,9.7nm,0.9s							
MIAR	**Mount Ida**	**18.88**	**3**	P		**P**	**10 08 22.7**	**-0.9**
OXF	**Oxford**	**19.43**	**14**	P		**P**	**10 08 28.6**	**-1.2**
W35A	**Tecumseh**	**19.54**	**355**	P		**P**	**10 08 30.7**	**-0.1**
W35A					IAmb	IAmb	10 08 35.8	
	comp=Z,6.6nm,0.6s							
MSTX	**Muleshoe**	**19.62**	**340**	P		**P**	**10 08 31.0**	**-1.0**
SMWD	**Samnorwood**	**20.00**	**347**	P		**P**	**10 08 35.6**	**-0.3**
SMWD					IAmb	IAmb	10 08 41.4	
	comp=Z,10nm,0.8s							
AMTX	**Amarillo**	**20.14**	**343**	P		**P**	**10 08 38.4**	**+0.8**
AMTX					IAmb	IAmb	10 08 41.5	
	comp=Z,15nm,0.9s							
OK052	**Battle Ridge R**	**20.36**	**355**	P		**P**	**10 08 39.7**	**-0.2**
OK052					IAmb	IAmb	10 08 43.2	
	comp=Z,24nm,1.4s							
QUOK	**Quay**	**20.53**	**356**	P		**P**	**10 08 41.0**	**-0.7**
QUOK					IAmb	IAmb	10 08 45.4	
	comp=Z,11nm,0.9s							
OK048	**Pawnee Station**	**20.80**	**355**	P		**P**	**10 08 44.1**	**-0.4**
OK048					IAmb	IAmb	10 09 03.4	
	comp=Z,8.0nm,1.0s							
OK051	**E0350 and S346**	**20.88**	**355**	P		**P**	**10 08 45.2**	**-0.1**
T35A	**Sooner Cattle**	**21.26**	**356**	P		**P**	**10 08 48.4**	**-1.2**
T35A					IAmb	IAmb	10 08 52.3	
	comp=Z,10nm,1.1s							
ANMO	**Albuquerque**	**21.89**	**334**	P		**P**	**10 08 56.5**	**0.0**
RTBA	**Rita Blanca**	**21.89**	**343**	P		**P**	**10 08 57.1**	**+0.7**
RTBA					IAmb	IAmb	10 08 58.7	
	comp=Z,7.5nm,0.8s							
T25A	**Trinidad**	**23.05**	**340**	P		**P**	**10 09 10.7**	**+1.7**
T25A					IAmb	IAmb	10 09 12.3	
	comp=Z,8.2nm,1.0s							
X18A	**Snowflake**	**23.22**	**327**	P		**P**	**10 09 11.7**	**+1.1**
X16A	**Lo Mia Camp, P**	**23.95**	**324**	P		**P**	**10 09 18.9**	**+1.3**
WUAZ	**Wupatki**	**24.73**	**326**	P		**P**	**10 09 25.9**	**+1.2**
WUAZ					IAmb	IAmb	10 09 29.0	
	comp=Z,5.7nm,0.8s							
N38A	**Joes South For**	**25.12**	**3**	P		**P**	**10 09 26.7**	**-1.4**
SCIA	**State Center**	**26.23**	**3**	P		**P**	**10 09 36.1**	**-2.0**
ECSD	**EROS Data Cent**	**28.06**	**357**	P		**P**	**10 09 53.9**	**-0.7**
ECSD					IAmb	IAmb	10 10 22.8	
	comp=Z,7.1nm,1.5s							
PDAR	**Pinedale Array**	**29.85**	**338**	P		**P**	**10 10 11.7**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=155,slow=6.9,SNR=2.6							
	comp=Z,0.5nm,0.9s							
ELK	**Elko**	**30.67**	**329**	P		**P**	**10 10 18.1**	**+0.1**
NVAR	**Mina Array Bea**	**30.70**	**322**	P		**P**	**10 10 20.8**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=142,slow=10,SNR=5.1							
	comp=Z,0.8nm,0.8s							
RLMT	**Red Lodge**	**31.83**	**340**	P		**P**	**10 10 28.9**	**+0.8**
RLMT					IAmb	IAmb	10 10 47.9	
	comp=Z,3.7nm,1.4s							
AGMN	**Agassiz Nation**	**32.59**	**359**	P		P	10 10 32.4	-2.2
AGMN					IAmb	IAmb	10 10 33.6	
	comp=Z,5.9nm,1.1s							
B35A	**Bob, Littlefor**	**32.66**	**1**	P		P	10 10 32.9	-2.2
PLID	**Pearl Lake**	**34.37**	**333**	P		**P**	**10 10 51.5**	**+1.1**
PLID					IAmb	IAmb	10 10 52.0	
	comp=Z,3.2nm,0.8s							
BPMT	**Black Pine Rid**	**34.43**	**337**	P		**P**	**10 10 52.7**	**+1.8**
LYMT	**Lyon Mountain**	**34.46**	**339**	P		**P**	**10 10 51.6**	**+0.5**
F10A	**Beach Ranch, E**	**35.60**	**333**	P		**P**	**10 11 00.9**	**+0.1**
F10A					IAmb	IAmb	10 11 02.5	
	comp=Z,3.6nm,0.8s							
FFC	**Flin Flon**	**39.41**	**353**	P		**P**	**10 11 32.2**	**-0.6**
FFC					IAmb	IAmb	10 11 32.4	
	comp=Z,3.2nm,1.1s							
YKAB2	**New Yellowknif**	**48.79**	**348**	P		**P**	**10 12 47.2**	**-0.7**
YKA	**Yellowknife Ar**	**48.85**	**348**	P		**P**	**10 12 47.1**	**-1.2**
YKA	**Yellowknife Ar**	**48.85**	**348**	P		**P**	**10 12 47.5**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=152,slow=7.2,SNR=12							
	comp=Z,0.8nm,0.7s							
DLBC	**Dease Lake**	**50.07**	**337**	P		**P**	**10 13 00.3**	**+2.4**
FARO	**Faro, Yukon**	**53.87**	**339**	P		**P**	**10 13 26.6**	**+0.6**
FARO					IAmb	IAmb	10 13 27.8	
	comp=Z,2.3nm,1.1s							
M31M	**Drury Creek, Y**	**54.22**	**338**	P		**P**	**10 13 29.6**	**+1.1**
M31M					IAmb	IAmb	10 13 32.6	
	comp=Z,2.1nm,1.2s							
M29M	**Somme Creek**	**55.85**	**337**	P		**P**	**10 13 41.8**	**+1.4**
M29M					IAmb	IAmb	10 13 42.3	
	comp=Z,3.7nm,1.1s							
G31M	**Satah River**	**57.36**	**343**	P		**P**	**10 13 50.7**	**-0.2**
G31M					IAmb	IAmb	10 14 08.9	
	comp=Z,1.8nm,1.1s							
GLB	**Gilahina Butte**	**57.41**	**335**	P		**P**	**10 13 52.8**	**+1.4**
F31M	**Tsiigehtchic**	**57.57**	**343**	P		**P**	**10 13 51.9**	**-0.6**
F31M					IAmb	IAmb	10 13 59.3	
	comp=Z,2.6nm,1.4s							
INK	**Inuvik**	**58.13**	**344**	P		**P**	**10 13 55.9**	**-0.4**
INK					IAmb	IAmb	10 14 00.8	
	comp=Z,3.1nm,1.3s							
ITQB	**Itaqui**	**58.19**	**141**	P		**P**	**10 13 56.9**	**-0.5**
RES	**Resolute Bay**	**59.07**	**360**	P		**P**	**10 14 01.8**	**-1.0**
RES					IAmb	IAmb	10 14 02.1	
	comp=Z,1.2nm,0.7s							
A36M	**Sachs Harbour**	**59.15**	**349**	P		**P**	**10 14 04.0**	**+0.6**
F28M	**Old Crow**	**59.47**	**342**	P		**P**	**10 14 06.5**	**+0.8**
F28M					IAmb	IAmb	10 14 12.2	
	comp=Z,3.4nm,1.4s							
ILAR	**Eielson Array**	**60.28**	**337**	P		**P**	**10 14 10.9**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=161,slow=4.1,SNR=7.6							
	comp=Z,0.7nm,0.9s							
SUA	**Susitna One**	**60.39**	**333**	P		**P**	**10 14 11.6**	**-0.7**
SUA					IAmb	IAmb	10 14 37.1	
	comp=Z,2.2nm,1.0s							
D27M	**Malcolm River**	**60.78**	**343**	P		**P**	**10 14 14.7**	**0.0**
D27M					IAmb	IAmb	10 14 18.1	
	comp=Z,3.3nm,1.4s							
BMAR	**Burnt Mountain**	**60.84**	**340**	P		**P**	**10 14 15.4**	**+0.3**
SKT	**Skwentna**	**60.94**	**333**	P		**P**	**10 14 16.2**	**+0.3**
TRF	**Thorofare Moun**	**61.01**	**335**	P		**P**	**10 14 17.1**	**+0.6**
H24K	**Noodor Dome**	**61.16**	**338**	P		**P**	**10 14 17.3**	**0.0**
I23K	**Minto, Yukon-K**	**61.39**	**337**	P		**P**	**10 14 19.2**	**+0.4**
I23K					IAmb	IAmb	10 14 26.6	
	comp=Z,4.0nm,1.4s							
N19K	**Bonanza Creek**	**61.84**	**331**	P		**P**	**10 14 22.7**	**+0.6**
MLY	**Manley**	**61.86**	**337**	P		**P**	**10 14 22.1**	**0.0**
TOLK	**Toolik Lake Re**	**63.08**	**340**	P		**P**	**10 14 30.6**	**+0.5**
F21K	**Alatna River**	**63.79**	**338**	P		**P**	**10 14 36.0**	**+1.2**
F21K					IAmb	IAmb	10 14 36.2	
	comp=Z,2.2nm,0.8s							
B21K	**Ikpikpuk River**	**65.13**	**341**	P		**P**	**10 14 43.3**	**-0.2**
E19K	**Redstone River**	**65.22**	**338**	P		**P**	**10 14 43.7**	**-0.5**
B20K	**Meade River**	**66.09**	**341**	P		**P**	**10 14 49.7**	**0.0**
ESDC	**Sonseca Array**	**80.86**	**51**	P		P	10 16 15.4	-1.9
	comp=Z,0.9nm,0.8s,baz=285,slow=5.1,SNR=4.4							
	comp=Z,0.9nm,0.8s							
ARCES	**ARCESS Array B**	**85.45**	**18**	P		**P**	**10 16 41.2**	**+0.8**
	comp=Z,5.7nm,1.1s,baz=311,slow=5.6,SNR=2.1							
	comp=Z,5.7nm,1.1s							

*IDC **20** 10:11:21.3±3.2, 53°.79N×90°.76E, h0km, mbtmp2.9/3, ML2.8/2, Error ellipse: s-maj=27.1km s-min=22.2km az=60.0.*
*NNC **20** 10:11:24.3±5.8, 53°.78N×90°.48E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=44.2km s-min=34.1km az=48.0, Suspected Mining explosion.*

ISC 20 10:11:24.7±4.0, 53°.8N±0°.1×90°.4E±0°.2, h0km, n10, σ1§52/13, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.32**	**275**			I	I	10 33 15.2	
	0.1nm,0.9s,baz=92,slow=338,SNR=4.1								
ZAA0	**Zalesovo Array**	**3.32**	**275**	⇑Pg		**Pb**		**10 12 23.4**	**-1.0**
	1.1nm,0.8s								
ZAA0				⇓Lg		Lg		10 13 13.5	
	9.6nm,1.2s								
ZALV	**Zalesovo Beam**	**3.32**	**275**	Pn		**Pn**		**10 12 18.4**	**+0.6**
	0.7nm,0.4s,baz=96,slow=10,SNR=1.8								
ZALV				Pg		**Pb**		**10 12 23.9**	**-0.4**
	0.7nm,0.3s,baz=93,slow=16,SNR=12								
ZALV				Lg		Lg		10 13 14.3	
	3.1nm,0.3s,baz=94,slow=25,SNR=12								
KURK	**Kurchatov**	**7.87**	**252**	⇑Pn		**Pn**		**10 13 21.0**	**+0.7**
	3.9nm,1.3s								
KURK				⇓Sn		**Sn**		**10 14 53.2**	**+3.2**
	11nm,1.1s								
KURK				⇑Lg		Lg		10 15 38.2	
	38nm,1.1s								
KURBB	**Kurchatov Arra**	**7.97**	**251**	⇑Pn		**Pn**		**10 13 22.9**	**+1.3**
	2.3nm,0.6s								
KURBB				⇓Sn		**Sn**		**10 14 51.6**	**-0.7**
	12nm,0.8s								
KURBB				⇑Lg		Lg		10 15 36.9	
	40nm,0.9s								
KURBB	**Kurchatov Arra**	**7.97**	**251**	Pn		**Pn**		**10 13 20.3**	**-1.3**
	0.1nm,0.3s,baz=65,slow=15,SNR=9.5								
KURBB				Sn		**Sn**		**10 14 51.0**	**-1.3**
	baz=68,slow=15,SNR=1.5								
KURBB				Lg		Lg		10 15 42.0	
	0.1nm,0.3s,baz=64,slow=31,SNR=4.6								
	0.9nm,0.5s								
MK31	**Makanchi Array**	**8.73**	**220**	⇑Pn		**Pn**		**10 13 34.1**	**+2.0**
	0.7nm,0.7s,baz=41,slow=15,SNR=7.0								
MK31				⇑Sn		**Sn**		**10 15 10.7**	**-0.5**
	3.8nm,1.1s,baz=49,slow=23,SNR=4.8								
MK31				⇓Lg		Lg		10 16 03.3	
	15nm,1.0s,baz=54,slow=32,SNR=6.4								
MKAR	**Makanchi Array**	**8.73**	**220**	Pn		**Pn**		**10 13 31.1**	**-1.0**
	0.1nm,0.3s,baz=41,slow=14,SNR=7.5								
MKAR				Sn		**Sn**		**10 15 11.1**	**-0.1**
	0.2nm,0.3s,baz=31,slow=24,SNR=4.6								
MKAR				Lg		Lg		10 15 59.8	
	0.1nm,0.3s,baz=31,slow=21,SNR=6.4								
	0.4nm,0.5s								
SONM	**Songino Array**	**11.72**	**114**	Lg		Lg		10 17 12.8	
	0.1nm,0.3s,baz=27,slow=30,SNR=2.5								
I34MN	**SONGINO INFRAS**	**11.75**	**114**	I		I		11 18 50.0	
	baz=306,slow=330,SNR=3.9								

*NSSP **20** 10:11:52.5, 38°.80N×43°.20E, h7km, Ms3.4*
*ISK **20** 10:11:54.7, 38°.77N×43°.41E, h5km, ML3.0/15*
*AFAD **20** 10:11:55.8±0.0, 38°.78N×43°.41E, h7km±6km, ML2.6*

ISC 20 10:11:55.8±0.9, 38°.77N±0°.02×43°.43E±0°.02, h14km±7km, n34, σ0§95/59, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**190**	Pg		**Pb**		**10 12 00.8**	**-0.2**
VANB				Sg		**Sb**		**10 12 05.9**	**+1.5**
TVAN	**Van**	**0.24**	**184**	P		**Pg**		**10 12 00.8**	**-0.3**
TVAN				*i* AML		AML		10 12 06.0	
	comp=E,7μm,0.3s								
TVAN				*i* AML		AML		10 12 06.0	
	comp=N,5μm,0.3s								
TVAN				S		**Sb**		**10 12 06.1**	**-0.2**
VMUR	**Van-Muradiye**	**0.25**	**27**	P		**Pg**		**10 12 00.2**	**-1.0**
VMUR				S		**Sg**		**10 12 05.5**	**+0.5**
VMUR				*i* AML		AML		10 12 07.0	
	comp=E,4μm,0.3s								
VMUR				*i* AML		AML		10 12 07.0	
	comp=N,3μm,0.4s								
ERCV	**ERCIS-VAN**	**0.26**	**344**	Pg		**Pg**		**10 12 01.2**	**-0.3**
ERCV				Sg		**Sg**		**10 12 05.5**	**+0.1**
OZAP	**Van, Ozalp-Mer**	**0.45**	**103**	P		**Pg**		**10 12 03.8**	**-1.1**
OZAP				S		**Sb**		**10 12 12.7**	**+0.2**
OZAP				*i* AML		AML		10 12 19.0	
	comp=E,985nm,0.8s								
OZAP				*i* AML		AML		10 12 20.0	
	comp=N,1μm,0.8s								
GEVA	**Gevas**	**0.54**	**213**	P		**Pg**		**10 12 06.1**	**-0.5**
GEVA				S		**Sb**		**10 12 15.7**	**+0.8**
GEVA				*i* AML		AML		10 12 22.0	
	comp=E,236nm,0.4s								
GEVA				*i* AML		AML		10 12 23.0	
	comp=N,323nm,0.4s								
ADCV	**BITLIS_Adilcev**	**0.55**	**274**	P		**Pb**		**10 12 07.6**	**+0.1**
ADCV				S		**Sn**		**10 12 17.7**	**-0.9**
ADCV				*i* AML		AML		10 12 18.0	
	comp=N,496nm,0.3s								
ADCV				*i* AML		AML		10 12 19.0	
	comp=E,485nm,0.2s								
AKDM	**Akdamar-Van**	**0.56**	**219**	Pg		**Pg**		**10 12 06.7**	**-0.2**
MLAZ	**Malazgirt-MUS**	**0.78**	**299**	Pg		**Pg**		**10 12 10.8**	**-0.2**
MLAZ				Sg		**Sn**		**10 12 22.6**	**-1.6**
DORK	**Agr/Tutak/Do**	**0.80**	**321**	P		**Pg**		**10 12 10.8**	**-0.6**
DORK				S		**Sb**		**10 12 22.9**	**+0.5**
DORK				*i* AML		AML		10 12 26.0	
	comp=N,153nm,0.5s								
DORK				*i* AML		AML		10 12 27.0	
	comp=E,201nm,0.5s								
DYDN	**Diyadin**	**0.80**	**15**	P		**Pg**		**10 12 10.1**	**-1.3**
DYDN				S		**Sb**		**10 12 23.4**	**+0.9**
DYDN				*i* AML		AML		10 12 25.0	
	comp=N,126nm,0.2s								
DYDN				*i* AML		AML		10 12 29.0	
	comp=E,232nm,0.8s								
AGRB	**Hanur-Agry**	**0.88**	**337**	Pg		**Pb**		**10 12 12.4**	**-0.6**
AGRB				Sg		**Sn**		**10 12 25.7**	**-0.9**
KOTA	**Agri, Merkez-K**	**1.05**	**351**	P		**Pb**		**10 12 15.0**	**-0.9**
KOTA				S		**Sg**		**10 12 29.8**	**0.0**
KOTA				*i* AML		AML	

SV2X eS Sg 10 22 45.5 -0.1
SV2X IAML 10 22 45.8
comp=N,5µm,0.0s
SV2X e 10 22 45.8
SV2X IAML 10 22 46.0
comp=E,7µm,0.1s
SV2X e 10 22 46.0
CCX Cicese 0.47 278 Pg 10 22 39.4 +0.2
CCX Sg Sg 10 22 46.0 +0.4
CCX IAML 10 22 46.6
comp=N,4µm,0.4s
CCX Cicese 0.47 278⇑ *i*P Pg 10 22 39.4 +0.2
CCX *i* S Sg 10 22 46.1 +0.4
CCX IAML 10 22 46.4
comp=N,4µm,0.2s
CCX ⇑*e* 10 22 46.4
CCX ⇓*e* 10 22 47.0
CCX IAML 10 22 47.0
comp=E,7µm,0.3s
VTX Valle De La Tr 0.49 146 Pg 10 22 39.4 -0.3
VTX IAML 10 22 46.4
comp=N,3µm,0.1s
VTX IAML 10 22 46.5
comp=E,2µm,0.3s
VTX Valle De La Tr 0.49 146 Sg 10 22 46.0 -0.3
VTX Valle De La Tr 0.49 146⇑ *e*P Pg 10 22 39.3 -0.3
VTX eS Sg 10 22 45.9 -0.3
VTX IAML 10 22 46.4
comp=N,5µm,0.1s
VTX ⇓*e* 10 22 46.4
VTX *e* 10 22 46.5
VTX IAML 10 22 46.5
comp=E,3µm,0.1s
PBX Punta Banda 0.53 264⇑ *i*P Pg 10 22 40.4 +0.2
PBX eS Sg 10 22 47.9 +0.6
PBX IAML 10 22 48.5
comp=N,3µm,0.2s
PBX ⇓*e* 10 22 48.5
CBX Cerro Bola 0.69 318 Pg 10 22 42.8 -0.6
CBX Cerro Bola 0.69 318 Sg 10 22 52.1 -0.5
CBX Cerro Bola 0.69 318 *e*P Pg 10 22 42.7 -0.6
CBX eS Sg 10 22 51.9 -0.7
CBX Cerro Bola 0.69 318⇑ *e*P Pg 10 22 42.8 -0.6
CBX eS Sg 10 22 52.1 -0.5
RHX Rio Hardy 0.78 64 *i* P Pg 10 22 44.4 -0.5
TJIG Tijuana 0.79 323 *e*P Pg 10 22 44.3 -0.9
TJIG eS Sg 10 22 54.5 -1.1
TJIG Tijuana 0.79 323⇑ *e*P Pg 10 22 44.3 -0.9
TJIG eS Sg 10 22 54.5 -1.1
RMX La Rumorosa 0.80 2 Pg 10 22 43.9 -1.5
RMX Sg Sg 10 22 53.5 -2.4
RMX IAML 10 22 54.2
comp=N,1µm,0.3s
RMX IAML 10 22 54.6
comp=E,1µm,0.2s
RMX La Rumorosa 0.80 2 *e*P Pg 10 22 43.9 -1.5
RMX eS Sg 10 22 53.7 -2.2
RMX IAML 10 22 54.2
comp=N,1µm,0.1s
RMX ⇑*e* 10 22 54.2
IKP In-Ko-Pah, Jac 0.85 0 Pg 10 22 45.6 -0.7
IKP In-Ko-Pah, Jac 0.85 0 P Pg 10 22 45.7 -0.7
baz=180,SNR=100
IKP S Sg 10 22 56.1 -1.3
baz=180
IKP In-Ko-Pah, Jac 0.85 0 *e*P Pg 10 22 45.7 -0.6
YUH Yuha Desert 0.86 11 Pg Pg 10 22 45.7 -0.8
YUH IAML 10 22 57.8
comp=N,868nm,0.6s
YUH IAML 10 23 00.2
comp=E,987nm,0.4s
YUH Yuha Desert 0.86 11 Sg 10 22 56.4 -1.3
YUH2 Yuha Desert 0.86 11⇑ *e*P Pg 10 22 45.6 -0.9
YUH2 eS Sg 10 22 56.5 -1.3
JARAX Ej. Heriberto 0.86 31⇑ *i*P Pg 10 22 46.0 -0.6
JARAX eS Sg 10 22 57.4 -0.4
JARAX ⇓*e* 10 23 00.9
JARAX IAML 10 23 00.9
comp=E,4µm,0.4s
TKX Tecate 0.87 331 Pg 10 22 45.7 -1.1
TKX Tecate 0.87 331 *e*P Pg 10 22 45.6 -1.1
TKX eS Sg 10 22 56.9 -1.3
TKX ⇓*e* 10 22 57.1
TKX IAML 10 22 57.1
comp=E,3µm,0.1s
SGL Mount Signal 0.91 21 Pg 10 22 46.6 -0.8
SGL Sg 10 22 58.5 -0.8
CPBX Cerro Prieto 0.92 48 Pb 10 22 47.6 -0.1
CPBX Sg Sb 10 22 60.0 +0.1
SPIG San Pedro Mart 0.93 144 *e*P Pg 10 22 47.0 -1.0
SPIG eS Sg 10 22 58.9 -1.4
SPIG San Pedro Mart 0.93 144 *e*P Pg 10 22 47.0 -1.0
SPIG eS Sg 10 22 59.2 -1.0
ECBX El Chinero 0.96 110⇑ *i*P Pb 10 22 47.5 -0.8
ECBX eS Sb 10 23 00.3 -0.6
DUZA Dulzura 0.98 325 Pb 10 22 47.4 -1.3
DUZA Sb 10 23 00.0 -1.5
MBIG Mexicali 0.98 52 *e*P Pb 10 22 47.5 -1.2
MBIG *e*P Pg 10 22 48.3 -0.6
MBIG eS Sb 10 23 00.1 -1.5
MBIG eS Sn 10 23 03.1 +0.1
BAR Barrett 1.00 332 Sb 10 23 00.3 -1.7
BAR Barrett 1.00 332 Pg Pb 10 22 47.7 -1.4
BAR Barrett 1.00 332 IAML 10 23 00.9
comp=N,779nm,0.2s
BAR IAML 10 23 00.9
comp=E,755nm,0.4s
BAR Barrett 1.00 332 *e*P Pb 10 22 47.6 -1.4
UABX UABC, Campus M 1.00 34 Pb 10 22 48.8 -0.3
UABX UABC, Campus M 1.00 34 Sn 10 23 03.4 -0.2
WESC Westside Schoo 1.01 19 Pb 10 22 48.8 -0.4
WESC Sg 10 23 02.7 +0.2
GUVIX Guadalupe Vict 1.01 60 Pb 10 22 48.7 -0.5
GUVIX Guadalupe Vict 1.01 60 Pn 10 22 49.7 0.0
GUVIX Sn 10 23 04.0 +0.2
GUVIX IAML 10 23 04.4
comp=N,6µm,0.6s
GUVIX IAML 10 23 04.6
comp=E,7µm,0.6s
5053 Calexico 1.01 31 Pb 10 22 48.6 -0.6
5053 Sn 10 23 03.4 -0.4
OLP Otay Lakes Par 1.06 319 Pb 10 22 49.0 -1.1
OLP Sb 10 23 02.9 -1.0
TJX Tijuana 1.07 312 Pn Pn 10 22 50.7 +0.2
TJX Tijuana 1.07 312 *e*P Pb 10 22 49.6 -0.6
TJX eS Sb 10 23 03.3 -0.8
CRR Carrizo Plain 1.09 6 Pb 10 22 50.0 -0.5
CRR Sb 10 23 04.8 +0.2
COK2 Cook Ranch 2 1.09 17 Pb 10 22 50.4 -0.2
COK2 Sn 10 23 06.5 +0.6
5054 Holtville Bond 1.10 36 Pn 10 22 51.0 +0.1
5054 Sn 10 23 06.8 +0.7
MONP2 Monument Peak 1.12 346 Pb 10 22 50.2 -1.0
MONP2 Monument Peak 1.12 346 P Pb 10 22 50.2 -1.0
baz=166,SNR=39
MONP2 S Sb 10 23 04.9 -0.9
baz=166
DREC Desert Rsrch C 1.15 29 Pg 10 22 52.0 0.0
SDRC San Diego Road 1.17 323 Pn 10 22 50.8 -1.1
SDRC Sb 10 23 05.3 -1.6
SWSC Sam W. Stewart 1.17 13 Pn 10 22 51.2 -0.8
SWSC Sb 10 23 06.8 -0.2
SWSC Sam W. Stewart 1.17 13 P Pn 10 22 51.1 -0.8
baz=193,SNR=114
SWSC S Sb 10 23 06.8 -0.2
baz=193
IMPE Imperial 1.19 23 Pn 10 22 51.9 -0.3
IMPE Sg 10 23 09.2 +0.8
SQX San Quintin 1.24 171⇑ *e*P Pn 10 22 51.7 -1.2
SQX eS Sb 10 23 07.7 -1.2
SQX *e* 10 23 09.8
SQX IAML 10 23 09.8
comp=E,1µm,0.2s
SQX *e* 10 23 10.2
SQX IAML 10 23 10.2
comp=N,813nm,0.2s
EML El Monte Cty P 1.25 330 Pn 10 22 51.9 -1.2
EML Sb 10 23 08.0 -1.4
EML El Monte Cty P 1.25 330⇓ *e*P Pn 10 22 51.8 -1.2
SFX San Felipe 1.32 125 Pn Pn 10 22 53.7 -0.3
SFX Sb 10 23 11.0 -0.3
SFX IAML 10 23 12.5
comp=N,1µm,0.4s
SFX IAML 10 23 13.1
comp=E,739nm,0.5s
SFX San Felipe 1.32 125 *e*P Pn 10 22 52.6 -1.4
SFX *e*S Sb 10 23 11.0 -0.3
SFX San Felipe 1.32 125 *e*P Pn 10 22 52.5 -1.4
ERRC Elmore Ranch 1.33 10 Pb 10 22 55.1 +0.4
EMSC East Mesa 1.34 45 Pn 10 22 53.2 -1.0
EMSC Sg 10 23 13.3 +0.4
JUEM Julian Eagle M 1.34 342 Pn 10 22 53.8 -0.6
JUEM Sb 10 23 11.2 -0.9
COA Coachella 1.35 38 Pn 10 22 53.4 -1.0
109C Camp Elliot, M 1.37 322 Pn Pn 10 22 54.1 -0.6
109C IAML 10 23 12.7
comp=N,789nm,0.3s
109C IAML 10 23 13.4
comp=E,762nm,0.4s
109C Camp Elliot, M 1.37 322 P Pn 10 22 54.0 -0.7
baz=142,SNR=40
109C S Sn 10 23 11.2 -1.5
baz=142
CPE Camp Elliot 1.37 322 Pn 10 22 54.2 -0.5
CPE Sn 10 23 11.5 -1.2
DPP Dos Picos Cty 1.39 330 Pn 10 22 54.3 -0.6
DPP Sn 10 23 12.1 -1.0
SLH Sleepy Hollow 1.39 355 Pn 10 22 55.1 +0.1
SLH Sg 10 23 14.3 -0.5
MATG Mataguay Scout 1.47 342 Pn 10 22 56.0 -0.1
MATG Sn 10 23 15.4 +0.2
BORC Borrego Spring 1.48 350 Pn 10 22 56.6 +0.4
RUN Ruthven 1.51 39 Pn 10 22 55.4 -1.3
RUN Sn 10 23 14.0 -2.2
GORC Green Oak Ranc 1.65 325 Pn 10 22 58.9 +0.4
GORC Sn 10 23 19.2 -0.3
GLA Glamis 1.65 41 Pn Pn 10 22 58.6 0.0
GLA Glamis 1.65 41 P Pn 10 22 57.4 -1.2
baz=221
GLA S Sn 10 23 18.1 -1.6
baz=221
PLM Palomar 1.67 338 Pn 10 22 59.1 +0.1
PLM Sn 10 23 20.6 +0.2
FRD Ford Ranch, An 1.74 346 Pb 10 23 01.5 -0.2
FRD Ford Ranch, An 1.74 346 Pn 10 23 00.3 +0.5
BZNA Buzz No.'s Pla 1.75 345 Pb 10 23 01.4 -0.5
BZNA Sb 10 23 23.7 -0.1
SNDA J Saunders Pla 1.80 347 Pn 10 23 01.2 +0.5
DNR Dunn Ranch,Anz 1.81 346 Pn 10 23 01.8 +0.9
TPFO Pinon Flats 1.82 351 P Pn 10 23 01.0 -0.1
baz=171,SNR=11
TPFO Sb Sb 10 23 26.1 +0.2
baz=171
XPFO Pion Flat 1.83 351 Pn 10 23 01.1 0.0
PFO Pinyon Flats O 1.83 351 Pn 10 23 00.6 -0.5
PFO IAML 10 23 29.8
comp=E,187nm,0.4s
PFO Pinyon Flats O 1.83 351 Pb 10 23 03.4 +0.2
PFO Pinyon Flats O 1.83 351 P Pn 10 23 00.9 -0.2
baz=171,SNR=12
PFO Sb Sb 10 23 26.4 +0.3
baz=171
PFO Pinyon Flats O 1.83 351 Pg Pn 10 23 01.0 -0.1
comp=E,12nm,0.3s,baz=159,slow=13,SNR=70
PFO Lg Lg 10 23 26.1
comp=E,41nm,0.3s,baz=282,slow=16,SNR=19
CRY Cary Ranch 1.84 343 Pb 10 23 03.0 -0.4
PMD Palm Desert 1.85 353 Pn 10 23 01.2 -0.1
PMD Palm Desert 1.85 353 Pn Pn 10 23 00.8 -0.5
PMD Palm Desert 1.85 353 IAML 10 23 28.2
comp=E,320nm,0.4s
PMD IAML 10 23 29.5
comp=N,164nm,0.5s
BC3 Big Chuckawall 1.93 17 P Pn 10 23 02.2 -0.3
baz=197,SNR=27
BC3 S Sn 10 23 25.6 -1.1
baz=197
POB Polly Butte 2.00 340 Pb 10 23 05.1 -1.1
MURC Murrieta 2.01 333 P Pn 10 23 04.1 +0.6
baz=153
MURC S Sn 10 23 30.0 +1.4
baz=153
HMTC Hemet 2.04 339 Pn 10 23 05.4 +1.4
EW2 E Wide Canyon 2.15 353 Pb 10 23 09.3 +0.7
ELS Elsinore Mount 2.15 329 Pn 10 23 06.1 +0.6
ELS IAML 10 23 38.3
comp=N,185nm,0.8s
ELS IAML 10 23 38.6
comp=E,284nm,0.8s
BELC Belle Mtn. Jos 2.19 2 P Pn 10 23 06.1 -0.1
baz=182
BELC Sb Sg 10 23 38.7 -1.8
baz=182
113A Mohawk Valley, 2.21 63 Pn 10 23 05.4 -0.8
113A IAML 10 23 49.3
comp=N,102nm,0.9s
PIX Pinacate 2.27 95 Pn 10 23 05.0 -2.0
TPC Twentynine Pal 2.30 1 Pn 10 23 07.8 +0.3
BLYC Blythe 2.36 34 Pn 10 23 07.9 -0.4
BLYC IAML 10 23 53.8
comp=E,124nm,0.7s
BLYC IAML 10 23 54.5
comp=N,103nm,0.6s
SCI2 San Clemente I 2.37 300 P Pn 10 23 08.1 -0.3
baz=119
SCI2 S Sn 10 23 37.5 +0.1
baz=119
IRM Iron Mountain 2.49 19 P Pn 10 23 10.0 0.0
baz=199
CIS Catalina Islan 2.52 310 P Pn 10 23 09.5 -0.9
baz=129
CIS S Sn 10 23 39.8 -1.2
baz=129
BBRC Big Bear Solar 2.55 345 Pb Pb 10 23 15.0 -0.5
baz=164
BBRC Sb Sb 10 23 48.1 +1.2
baz=164
SSK Sunset Peak 2.75 331 Pb 10 23 17.2 -1.7
BFSC Mount Baldy Ra 2.76 332 P Pn 10 23 14.3 +0.5
baz=152
BFSC Sb Sb 10 23 52.9 +0.1
baz=152
214A Organ Pipe Nat 2.81 86 Pn Pn 10 23 13.1 -1.4
214A IAML 10 23 53.8
comp=N,57nm,0.4s
214A Organ Pipe Nat 2.81 86 P Pn 10 23 13.2 -1.4
baz=268,SNR=14
214A S Sn 10 23 46.5 -1.8
baz=268
214A Organ Pipe Nat 2.81 86 *e*P Pn 10 23 13.0 -1.5
214A *e*S Sn 10 23 45.8 -2.6
PASC Pasadena Art C 2.94 324 Pn Pn 10 23 16.9 +0.6
PASC Pasadena Art C 2.94 324 IAML 10 24 00.4
comp=N,85nm,0.8s
PASC IAML 10 24 03.2
comp=E,66nm,0.6s
SBI Santa Barbara 2.98 305 Pn 10 23 13.6 -3.1
GMRC Granite Mounta 3.00 7 P Pn 10 23 17.4 +0.2
baz=187
HEC Hector,Ludlow 3.02 357 S Sn 10 23 55.1 +1.5
baz=176
DECC Green Verdugo 3.08 323 P Pn 10 23 18.3 +0.1
baz=142
RRX Edison Barstow 3.15 347 P Pn 10 23 19.4 +0.2
baz=166
RRX Sb Sb 10 24 06.2 +2.1
baz=166
NEE2 Needles Airpor 3.21 23 P Pn 10 23 20.6 +0.6
baz=203,SNR=6.3
SNCC San Nicolas Is 3.22 297 S Sn 10 23 58.9 +0.4
baz=116
Y14A Wickenburg 3.37 50 Pn 10 23 22.5 +0.2
Y14A IAML 10 24 31.1
comp=N,55nm,0.6s
Y14A IAML 10 24 32.9
comp=E,49nm,0.6s
EDW2 Edwards Air Fo 3.45 333 Sb Sb 10 24 13.6 +0.8
baz=152
GSC Goldstone, Bar 3.54 351 Pn Pn 10 23 25.8 +1.2
GSC IAML 10 24 22.9
comp=N,40nm,0.9s
GSC IAML 10 24 32.6
comp=E,53nm,1.2s
OSI Osito Audit: C 3.56 323 S Sn 10 24 06.0 -0.7
baz=141
CCAC Calif City Air 3.70 335 Pn 10 23 28.2 +1.4
W13A Hualapai Mount 3.78 29 Pn 10 23 28.9 +0.8
V12A Nelson 4.05 15 Pn 10 23 32.7 +1.0
BCW Bitter Crk WRg 4.17 319 Pn Pn 10 23 35.4 +2.0
BCW IAML 10 24 46.4
comp=N,61nm,1.2s
QSM Queen of Sheba 4.20 352 Pn Pn 10 23 33.8 +0.2
QSM IAML 10 24 43.3
comp=N,20nm,0.9s
QSM IAML 10 24 46.1
comp=E,26nm,0.6s
ISA Isabella, Lake 4.33 334 Pn Pn 10 23 36.8 +1.4
ISA IAML 10 24 44.3
comp=E,22nm,1.3s
GWY Greenwater Val 4.40 354 Pn Pn 10 23 37.6 +1.1
GWY IAML 10 24 58.1
comp=E,30nm,2.9s
GWY IAML 10 24 59.9
comp=N,20nm,0.5s
WTNK Soaring Height 4.47 11 Pn 10 23 39.3 +1.9
TUC Tucson 4.55 82 Pn Pn 10 23 37.1 -1.3
TUC Tucson 4.55 82 P Pn 10 23 37.6 -0.9
baz=265
TUC Tucson 4.55 82 *e*P Pn 10 23 36.6 -1.9
TUC *e*S Sn 10 24 27.9 -3.4
X16A Lo Mia Camp, P 4.71 55 Pn 10 23 41.6 +0.9
SHPR Sheep Range 4.76 9 Pn 10 23 43.0 +1.6
WCT Wildcat Mounta 5.00 355 Pn Pn 10 23 45.8 +1.2
GRAC Grapevine Rang 5.28 349 Pn Pn 10 23 50.0 +1.5
GRAC IAML 10 25 21.8
comp=N,24nm,1.8s
GRAC IAML 10 25 32.5
comp=E,19nm,2.0s
WUAZ Wupatki 5.42 46 Pn 10 23 52.6 +2.2
WUAZ Wupatki 5.42 46 P Pn 10 23 52.1 +1.7
baz=228
LCH Last Change Ra 5.56 347 Pn Pn 10 23 54.9 +2.4
U15A North Rim 5.60 33 Pn 10 23 55.1 +2.1
DSP Deep Springs 5.76 345 Pn Pn 10 23 57.0 +2.0
S11A Rachel 5.84 3 Pn Pn 10 23 59.1 +2.9
X18A Snowflake 5.84 61 Pn 10 23 57.6 +1.3
319A Douglas 5.84 92 Pn 10 23 56.4 +0.1
KNB Kanab 5.87 27 Pn Pn 10 23 59.0 +2.3
DUN6 Lazy B Ranch 6.00 81 Pn Pn 10 23 58.2 -0.3
CCUT Cedar City 6.17 21 Pn Pn 10 24 03.3 +2.5
W18A Petrified Fore 6.27 56 Pn Pn 10 24 04.3 +2.0
W18A Petrified Fore 6.27 56 P Pn 10 24 03.8 +1.6
baz=240
MDPB Devils Postpil 6.31 338 Pn 10 24 05.0 +2.2
PKCU Pink Cliffs 6.44 28 Pn 10 24 07.9 +3.2
R11B Troy Canyon, C 6.55 4 Pn 10 24 05.9 -0.1
LHV Little Huntoon 6.73 344 Pn 10 24 08.5 +0.3
NVAR Mina Array Bea 6.85 345 Pn 10 24 13.2 +2.9
baz=167,slow=15,SNR=1.6
comp=E,0.1nm,0.4s
MTPU Mount Pierson 7.01 26 Pn 10 24 13.4 +0.9
121A Cookes Peak, D 7.10 82 Pn 10 24 13.6 +0.1
121A Cookes Peak, D 7.10 82 P Pn 10 24 13.1 -0.5
baz=266
CMB Columbia Colle 7.14 332 Pn 10 24 14.9 +0.8
SPR3 Spring Creek 3 7.33 11 Pn 10 24 18.2 +1.4
HMU Henry Mountain 7.54 34 Pn 10 24 20.8 +1.0
MVCO Mesa Verde 8.28 47 P Pn 10 24 32.5 +2.6
baz=232
ELK Elko 8.95 4 Pn Pn 10 24 42.5 +3.4
comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=2.7
comp=E,0.5nm,0.4s
MNTX Cornudas Mount 9.14 88 P Pn 10 24 41.9 +0.5
baz=274,SNR=5.2
VHRN Van Horn 9.57 93 Pn 10 24 47.7 +0.2
S22A 4UR Ranch, Cre 9.66 50 Pn 10 24 49.1 +0.2
TX31 Lajitas Ar Si 11.00 100 Pn 10 25 08.2 +1.1
TXAR Lajitas Array 11.01 100 Pn 10 25 08.7 +1.6
TXAR Lajitas Array 11.01 100 Pn Pn 10 25 08.9 +1.8
comp=E,0.2nm,0.3s,baz=280,slow=13,SNR=17
comp=E,0.9nm,0.6s
ILAR Eielson Array 38.06 339 P P 10 29 50.5 +2.8
comp=E,0.2nm,0.7s,baz=153,slow=7.8,SNR=5.1
comp=E,0.2nm,0.7s

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*NNC **20** 10:26:21.4±2.7, 51.°93N×75.°60E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=162.9km s-min=9.0km az=27.0, Suspected Mining explosion.*

*IDC **20** 10:26:25.1±1.3, 51.°59N×75.°43E, h0km, mbtmp2.2/4, ML1.6/3, Error ellipse: s-maj=28.4km s-min=12.2km az=28.0*

ISC 20 10:26:21.1±1.1, 52.°30N±0.°10×76.°07E±0.°06, h0km, n9, σ1§56/8, 4C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KURK	**Kurchatov**	**2.25**	**134**	⇑Pg	**Pb**		**10 27 01.2**	**-1.3**
KURK	2.6nm,0.9s			⇓Lg	Lg		10 27 30.8	
KURBB	**Kurchatov Arra**	**2.28**	**137**	⇑Pg	**Pg**		**10 27 04.4**	**-0.3**
KURBB	3.8nm,0.9s			⇓Lg	Lg		10 27 33.8	
KURBB	**Kurchatov Arra**	**2.28**	**137**	Pn	**Pb**		**10 27 02.4**	**-0.6**
KURBB	9.6nm,0.6s			Lg	Lg		10 27 33.0	
BVA0	**Borovoye Array**	**3.53**	**284**	⇑Pg	**Pb**		**10 27 23.4**	**-1.0**
BVA0	0.2nm,0.3s,baz=298,slow=18,SNR=16 1.5nm,0.9s,baz=114,slow=16,SNR=4.6 0.4nm,0.4s			⇓Lg	Lg		10 28 08.8	
BVAR	**Borovoye Array**	**3.53**	**284**	Pn	**Pb**		**10 27 19.1**	**+1.9**
BVAR	2.2nm,0.6s,baz=115,slow=26,SNR=5.5 baz=124,slow=40,SNR=3.8 0.1nm,0.3s,baz=105,slow=28,SNR=8.3 0.3nm,0.3s			Lg	Lg		10 28 08.7	
BRVK	**Borovoye**	**3.60**	**284**	⇓Pg	**Pb**		**10 27 23.5**	**-2.1**
BRVK	2.8nm,1.3s 2.1nm,0.6s			⇑Lg	Lg		10 28 10.0	
I46RU	**ZALESOVO INFRA**	**5.52**	**69**	I	I		11 00 42.2	
ZALV	baz=254,slow=336,SNR=26 **Zalesovo Beam** 0.1nm,0.3s,baz=257,slow=12,SNR=2.4 0.4nm,0.4s	**5.52**	**69**	Pn	**Pb**		**10 27 57.4**	**-0.9**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=313,slow=16,SNR=2.3	**6.84**	**141**	Pn	**Pn**		**10 28 02.9**	**+0.3**
MKAR	baz=325,slow=27,SNR=2.9			Lg	Lg		10 29 49.3	

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*SJA **20** 10:51:01.8±0.7, 19.°99S×70.°54W, h32km±1km, ML4.4, MW4.4*

*VAO **20** 10:51:02.8±0.5, 19.°89S×70.°64W, h10km, mb4.5*

*NEIC **20** 10:51:02.8, 20.°07S×70.°61W, h18km*

*NEIC **20** 10:51:03.5±1.8, 20.°09S±0.°03×70.°58W±0.°05, h27km±5km, mb4.8/70, Mwr4.3/44, Error ellipse: s-maj=6.9km s-min=4.5km az=97.0, Moment Tensor Solution. Moment tensor: Scale 10[15]Nm; Mrr=1.47; Mθθ=0.43; Mφφ=1.04; Mrθ=0.41; Mθφ=0.48; Mφr=2.63; Fault plane solution: M=3.01000×10[15] NP1:φs=217.78000°, δ16.46000°, λ=-50.11000°. NP2:φs=356.71000°, δ77.44000°, λ=-100.73000°. Principal axes: T 2.7171, Plg32.0000°, Azm96.0000°; N 0.5148, Plg10.0000°, Azm359.0000°; P -3.2319, Plg56.0000°, Azm253.0000°;*

*GUC **20** 10:51:04.6±0.8, 20.°02S×70.°51W, h33km±5km, ML4.1*

*IDC **20** 10:51:05.0±3.4, 19.°89S×70.°45W, h36km±28km, mb3.8/10, mbtmp4.1/14, ML4.0/4, MS3.7/18, Error ellipse: s-maj=25.5km s-min=16.9km az=70.0*

ISC 20 10:51:02.1±1.2, 20.°01S±0.°02×70.°62W±0.°04, h18km±7km, n227, σ1§28/230, mb4.8/40, MS3.7/14, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TA02	**Huaiquique**	**0.53**	**119**			**Pb**	**10 51 13.0**	**+0.1**
TA02				Sg		**Sg**	**10 51 19.9**	**0.0**
TA02	**Huaiquique**	**0.53**	**119**	*e*P		**Pg**	**10 51 12.3**	**-0.4**
TA02				*e*S		**Sg**	**10 51 20.1**	**+0.2**
TA02	comp=Z,24µm,0.8s			IAML			10 51 20.6	
TA02	**Huaiquique**	**0.53**	**119**	*i* P		**Pb**	**10 51 13.0**	**+0.1**
TA02				*e*S		**Sg**	**10 51 19.9**	**0.0**
TA02	comp=N,27µm,0.1s			IAML			10 51 21.3	
TA01	**Diego Aracena**	**0.69**	**143**			**Pb**	**10 51 15.6**	**-0.1**

TA01 Sg **Sg** **10 51 24.0 -1.0**
TA01 Diego Aracena 0.69 143 *eP* **Pg** **10 51 15.4 -0.4**
TA01 Diego Aracena 0.69 143 *iP* **Pb** **10 51 15.6 -0.1**
TA01 *eS* **Sg** **10 51 24.1 -0.9**
HMBC Humberstone 0.74 111 ⇓*iP* **Pb** **10 51 16.3 -0.3**
HMBC *eS* **Sb** **10 51 25.4 -1.1**
HMBC IAML 10 51 26.7
comp=N,36μm,0.3s
PATCX Punta Patache 0.92 151 **Pb** **10 51 19.2 -0.4**
PATCX **Sb** **10 51 30.6 -1.0**
PATCX Punta Patache 0.92 151 *iP* **Pb** **10 51 19.3 -0.4**
PATCX *eS* **Sb** **10 51 30.9 -0.8**
PB11 IPOC Station P 0.94 75 **Pb** **10 51 19.3 -0.8**
PB11 Sg **Sb** **10 51 31.1 -1.2**
PB11 IPOC Station P 0.94 75 *eP* **Pb** **10 51 19.1 -0.9**
PB11 IAML 10 51 34.9
comp=Z,10μm,0.7s
PB11 IPOC Station P 0.94 75⇑*iP* **Pb** **10 51 19.4 -0.7**
PB11 *eS* **Sb** **10 51 29.5 -2.8**
GO01 Chusmiza 1.39 76 Pn **Pn** **10 51 26.8 -0.3**
GO01 Chusmiza 1.39 76 *eP* **Pn** **10 51 26.6 -0.5**
GO01 *eS* **Sn** **10 51 44.5 -0.7**
GO01 IAML 10 51 44.7
comp=Z,7μm,0.2s
GO01 Chusmiza 1.39 76 *iP* **Pn** **10 51 26.8 -0.3**
GO01 *eS* **Sn** **10 51 44.3 -1.0**
PB08 IPOC Station P 1.39 96 **Pn** **10 51 26.5 -0.5**
PB08 Sn **Sn** **10 51 43.7 -1.4**
PB08 IPOC Station P 1.39 96 *eP* **Pn** **10 51 26.5 -0.5**
PB08 *eS* **Sn** **10 51 43.9 -1.2**
PB08 IAML 10 51 46.1
comp=Z,4μm,0.6s
PB08 IPOC Station P 1.39 96⇑*iP* **Pn** **10 51 26.5 -0.5**
PB08 *eS* **Sn** **10 51 43.3 -1.8**
PB08 IAML 10 51 44.4
comp=N,5μm,0.3s
PB12 IPOC Station P 1.42 11 **Pn** **10 51 27.6 +0.4**
PB12 IPOC Station P 1.42 11 *eP* **Pn** **10 51 26.9 -0.2**
PB12 *eS* **Sn** **10 51 45.4 0.0**
PB12 IAML 10 51 51.2
comp=Z,7μm,0.6s
PB02 IPOC Station P 1.47 153 **Pn** **10 51 27.9 0.0**
PB02 IPOC Station P 1.47 153 *eP* **Pn** **10 51 27.6 -0.3**
PB02 *eS* **Sg** **10 51 48.2 -1.5**
PB02 IAML 10 51 51.7
comp=Z,5μm,0.3s
PB02 IPOC Station P 1.47 153 ⇓*iP* **Pn** **10 51 27.9 0.0**
PB02 *eS* **Sb** **10 51 48.0 +0.5**
PB01 IPOC Station P 1.48 134 Pn **Pn** **10 51 27.6 -0.3**
PB01 IPOC Station P 1.48 134 *eP* **Pn** **10 51 27.8 -0.3**
PB01 *eS* **Sn** **10 51 46.9 -0.1**
PB01 IAML 10 51 48.2
comp=Z,4μm,1.0s
PB01 IPOC Station P 1.48 134⇑*iP* **Pn** **10 51 27.7 -0.3**
PB01 *eS* **Sn** **10 51 46.9 -0.1**
PB01 IAML 10 51 49.4
comp=N,3μm,0.6s
AP01 Chacalluta 1.65 9 **Pn** **10 51 31.5 +1.2**
AP01 Chacalluta 1.65 9 *eP* **Pn** **10 51 31.0 +0.7**
AP01 *eS* Sn 10 51 31.7 -19
AP01 IAML 10 51 44.9
comp=Z,4μm,0.4s
PB07 IPOC Station P 1.84 158 **Pn** **10 51 33.3 +0.2**
PB07 IPOC Station P 1.84 158 *eP* Pn 10 51 27.6 -5.4
PB07 *eP* **Pn** **10 51 33.2 +0.2**
PB07 *eS* **Sb** **10 51 57.9 -0.4**
PB07 IAML 10 52 16.0
comp=Z,2μm,0.5s
PB07 IPOC Station P 1.84 158 ⇓*iP* **Pn** **10 51 33.3 +0.2**
PB16 IPOC Station P 1.97 33 **Pn** **10 51 36.4 +1.2**
PB09 IPOC Station P 2.20 144 **Pn** **10 51 39.3 +1.3**
PB09 IPOC Station P 2.20 144 *eP* **Pn** **10 51 38.9 +0.9**
PB09 *eS* **Sn** **10 52 03.6 -1.2**
PB09 IAML 10 52 13.7
comp=Z,3μm,0.9s
PB09 IPOC Station P 2.20 144 *iP* **Pn** **10 51 39.4 +1.4**
PB09 *eS* **Sb** **10 52 07.2 -1.3**
PB09 IAML 10 52 12.2
comp=E,2μm,0.7s
PB04 IPOC Station P 2.35 169 Pn **Pn** **10 51 39.6 -0.5**
PB04 IPOC Station P 2.35 169 *eP* **Pn** **10 51 39.9 -0.2**
PB04 *eS* **Sb** **10 52 11.7 -1.4**
PB04 IAML 10 52 25.4
comp=Z,1μm,0.8s
PB18 Visviri 2.64 24 *eP* **Pb** **10 51 49.0 -0.2**
PB18 *eS* **Sb** **10 52 24.4 +2.8**
PB06 IPOC Station P 2.86 160 **Pn** **10 51 46.7 -0.3**
PB06 IPOC Station P 2.86 160 *eP* **Pn** **10 51 46.8 -0.3**
PB06 *eS* **Sb** **10 52 26.6 -0.8**
PB06 IAML 10 52 32.5
comp=Z,1μm,1.5s
PB06 IPOC Station P 2.86 160 ⇓*iP* **Pn** **10 51 46.7 -0.3**
LVC Limon Verde 3.04 149 Pn **Pn** **10 51 51.2 +1.4**
LVC Limon Verde 3.04 149 *eP* **Pn** **10 51 50.6 +0.8**
LVC *eS* **Sn** **10 52 23.1 -2.8**
LVC Limon Verde 3.04 149 Pn **Pn** **10 51 51.3 +1.5**
comp=Z,23nm,0.3s,baz=329,slow=9.4,SNR=142
LVC Sn **Sn** **10 52 26.9 +1.0**
comp=Z,41nm,0.3s,baz=310,slow=11,SNR=4.5
LVC LR LR 10 53 17.6
comp=Z,937nm,20.3s,baz=324,slow=43
comp=Z,66nm,0.3s
PB15 IPOC Station P 3.36 162 **Pn** **10 51 53.5 -0.5**
PB15 IPOC Station P 3.36 162 *eP* **Pn** **10 51 53.6 -0.3**
PB15 *eS* **Sb** **10 52 42.1 +0.2**
PB15 IAML 10 52 58.3
comp=Z,941nm,0.3s
PB10 IPOC Station P 3.49 179 Pn **Pn** **10 51 54.4 -1.2**
PB10 IPOC Station P 3.49 179 *eP* **Pn** **10 51 54.7 -0.9**
PB10 *eS* **Sn** **10 52 38.1 +1.7**
LPAZ La Paz 4.39 33 Pn **Pn** **10 52 12.7 +4.1**
PB14 IPOC Station P 4.60 178 **Pn** **10 52 09.7 -1.5**
GO02 Mina Guanaco 5.22 170 Pn **Pn** **10 52 18.8 -0.8**
GO02 Mina Guanaco 5.22 170 *eP* **Pn** **10 52 19.1 -0.5**
GO02 *eS* **Sn** **10 53 21.9 +2.3**
GO02 IAML 10 53 45.5
comp=Z,258nm,1.4s
AC01 Pan de Azucar 6.11 180 Pn **Pn** **10 52 29.4 -2.2**
AC02 Maricunga 6.93 169 Pn **Pn** **10 52 42.9 -0.4**
GO03 Copiap 7.56 177 Pn **Pn** **10 52 49.5 -2.1**
AC04 Llanos de Chal 8.17 183 Pn **Pn** **10 52 56.1 -3.7**
AC05 El Transito 8.79 178 Pn **Pn** **10 53 06.3 -2.3**
LCO Las Campanas 8.96 180 Pn **Pn** **10 53 09.2 -1.8**
BBSD Serra de San D 9.90 75 *eP* **Pn** **10 53 24.8 +1.1**
SIV San Ignacio 9.93 68 Pn **Pn** **10 53 23.7 -0.3**
comp=Z,0.6nm,0.3s,baz=257,slow=9.7,SNR=102
SIV LR LR 10 58 02.6
comp=Z,449nm,20.5s,baz=288,slow=43
comp=Z,31nm,0.6s
NNA Nana 9.97 322 Pn **Pn** **10 53 27.2 +2.5**
comp=Z,0.6nm,0.3s,baz=191,slow=12,SNR=1.8
NNA Sn **Sn** **10 55 10.6 -5.5**
comp=Z,1.1nm,0.3s,baz=217,slow=14,SNR=1.2
NNA LR LR 10 56 55.2
comp=Z,160nm,21.1s,baz=164,slow=35
comp=Z,4.1nm,0.4s
CO06 Fray Jorge 10.66 185 Pn **Pn** **10 53 31.7 -2.3**
ETMB Extrema 10.99 23 **Pn** **10 53 40.0 +1.4**
ETMB Extrema 10.99 23 *eP* **Pn** **10 53 40.0 +1.4**
CO02 Combarbal 11.15 182 Pn **Pn** **10 53 40.8 -0.1**
TICA Tres Isletas 11.35 126 *eP* Pn 10 53 47.0 +3.4
PTLB Pontes e Lacer 11.85 69 **Pn** **10 53 49.7 -0.6**
PTLB Pontes e Lacer 11.85 69 *eP* **Pn** **10 53 50.5 +0.1**
VILB Vilhena 12.21 57 **Pn** **10 53 56.0 +0.7**
VILB Vilhena 12.21 57 *eP* **Pn** **10 53 56.0 +0.7**
ESFA Espinillo Form 12.25 116 *eP* **Pn** **10 53 58.5 +2.7**
CZSB Cruzeiro do Su 12.37 350 **Pn** **10 53 56.5 -1.1**
CZSB Cruzeiro do Su 12.37 350 *eP* **Pn** **10 53 57.1 -0.5**
SAML Samuel 13.14 34 **Pn** **10 54 08.8 +0.7**
SAML Samuel 13.14 34 *eP* **Pn** **10 54 09.4 +1.4**
MT02 Curacav 13.21 182 Pn **Pn** **10 54 07.5 -1.4**
CPUP Villa Florida 13.74 120 **Pn** **10 54 15.3 -0.9**
CPUP Villa Florida 13.74 120 Pn **Pn** **10 54 17.2 +1.0**
comp=Z,0.1nm,0.3s,baz=311,slow=12,SNR=6.6
CPUP LR LR 11 00 28.8
comp=Z,230nm,18.1s,baz=298,slow=41
comp=Z,4.5nm,1.0s
CPUP Villa Florida 13.74 120 *eP* **Pn** **10 54 18.5 +2.3**
ANTJ Antonio Joao (13.80 101 *eP* **Pn** **10 54 18.9 +1.9**
SALV Santo Antonio 14.78 76 *eP* **Pn** **10 54 30.7 +0.3**
ATAH Atahualpa 14.85 328 LR LR 10 59 45.6
comp=Z,53nm,21.7s,baz=178,slow=35
H03N1 Juan Fernandez 15.28 207 T T 11 10 44.6
baz=33,slow=72,SNR=629
H03N2 Juan Fernandez 15.29 207 T T 11 10 46.6
baz=33,slow=72,SNR=526
H03N3 Juan Fernandez 15.30 207 T T 11 10 42.0
baz=33,slow=72,SNR=596
RPRD Ribas do Rio P 15.89 95 *eP* **Pn** **10 54 46.8 +1.8**
TRCB Terra Rica 16.98 103 **Pn** **10 54 56.8 -2.1**
TRCB Terra Rica 16.98 103 *eP* **P** **10 55 00.6 -0.2**
FRBT Francisco Belt 17.22 113 *eP* **P** **10 55 04.7 +1.3**
TEFE Tefe 17.41 20 *eP* **Pn** **10 55 05.0 +0.7**
PTGB Pitanga 17.79 109 *eP* **P** **10 55 11.8 +2.1**
MCRA Macar, Loja 18.01 328 P **P** **10 55 12.7 +0.5**
PCMB Pacaembu 18.17 98 *eP* **P** **10 55 15.2 +1.2**
ALGR Alto Alegre (B 18.24 122 *eP* **P** **10 55 17.0 +2.3**
ARAG Araguaiana, MT 18.41 80 *eP* **P** **10 55 16.6 0.0**
BOSC San Juan Bosco 18.43 334 P **P** **10 55 16.6 -0.4**
LDASE Londrina, Braz 18.43 104 *eP* **Pn** **10 55 18.8 +1.8**
CPSB Cacapava Do Su 18.66 127 *eP* **Pn** **10 55 23.5 +4.0**
ITRB Iturama 19.07 93 *eP* **Pn** **10 55 25.9 +1.3**
MACA Manacapuru-AM 19.35 31 P **P** **10 55 26.4 -0.5**
MACA IAmb IAmb 10 55 39.2
comp=Z,34nm,0.9s
MACA Manacapuru-AM 19.35 31 *eP* **P** **10 55 27.8 +0.9**
COHC Cochancay 19.37 333 P **P** **10 55 27.7 +0.6**
NPGB Novo Progresso 19.63 51 *eP* **P** **10 55 31.1 +1.1**
FRTB Fartura 19.85 103 *eP* **Pn** **10 55 35.7 +1.7**
LR05 Currie 20.19 183 P **P** **10 55 35.9 +0.1**
SALI Salinas 20.41 329 P Pn 10 55 41.3 +0.8
SALI IAmb IAmb 10 55 42.3
comp=Z,32nm,0.9s
SLOR San Lorenzo - 20.65 337 P Pn 10 55 44.7 +0.8
SLOR IAmb IAmb 10 56 00.6
comp=Z,19nm,0.8s
PLCA Paso Flores 20.66 180 P Pn 10 55 42.0 -1.4
PLCA Paso Flores 20.66 180 P Pn 10 55 42.0 -1.4
comp=Z,4.8nm,0.6s,baz=358,slow=14,SNR=7.3
comp=Z,4.8nm,0.6s
PLCA Paso Flores 20.66 180 *eP* Pn 10 55 42.3 -1.0
BB19B Bebedouro 20.72 97 *eP* Pn 10 55 43.9 -0.3
IPMB Ipameri, GO 21.29 88 *eP* **P** **10 55 49.6 +1.6**
IMBA Imbabura, San 21.48 339 P **P** **10 55 51.0 +0.5**
IMBA IAmb IAmb 10 56 11.9
comp=Z,54nm,0.9s
OTAV Otavalo 21.53 338 P **P** **10 55 49.8 -1.3**
OTAV Otavalo 21.53 338 *eP* **P** **10 55 51.5 +0.4**
RCLB Rio Claro- Sao 21.66 100 *eP* **P** **10 55 53.7 +1.8**
BDFB Brasilia 21.95 82 P **P** **10 55 53.5 -1.7**
BDFB Brasilia 21.95 82 P **P** **10 55 53.9 -1.3**
comp=Z,4.3nm,0.7s,baz=249,slow=9.5,SNR=6.8
BDFB LR LR 11 05 36.7
comp=Z,249nm,20.5s,baz=287,slow=40
comp=Z,4.3nm,0.7s
FLOC Florencia 22.02 346 *eP* **P** **10 55 57.6 +1.8**
GCUF Volcan Galeras 22.11 342 *eP* **P** **10 56 02.5 +5.3**
LL01 San Ignacio de 22.35 183 P **P** **10 55 59.4 +0.3**
BBAC Balboa, Cauca 22.84 343 *eP* **P** **10 56 06.5 +1.8**
PMNB Patos De Minas 22.87 90 *eP* **P** **10 56 06.5 +1.5**
ORTC Ortega, Tolima 24.20 349 *eP* **P** **10 56 18.1 +0.2**
BSCB Bom Sucesso 24.23 97 *eP* **P** **10 56 20.6 +2.4**
BOAV Boa Vista 24.37 25 P **P** **10 56 19.3 -0.2**
BOAV Boa Vista 24.37 25 *eP* **P** **10 56 19.5 0.0**
YOTC Yotoco, Valle 24.50 346 *eP* **P** **10 56 19.9 -0.8**
SMTB Santa Maria do 24.87 67 *eP* **P** **10 56 24.8 +0.7**
GUY2C Guyana, Caldas 25.50 349 *eP* **P** **10 56 31.2 +1.0**
SDBA SAO DESIDERIO 25.80 77 *eP* **P** **10 56 34.4 +1.8**
CBOC Ciudad Bolivar 26.25 348 *eP* **P** **10 56 38.1 +1.4**
BARC Barichara 26.55 354 *eP* **P** **10 56 37.0 -2.5**
MCPB Macapa, AP 26.68 45 *eP* **P** **10 56 42.3 +1.9**
BAUV El Baul 28.88 5 P **P** **10 57 00.2 +0.1**
BAUV IAmb IAmb 10 57 16.7
comp=Z,25nm,1.0s
PCRV Puerto La Cruz 30.57 12 LR LR 11 11 07.6
comp=Z,138nm,18.9s,slow=40
MDP Montagnes des 30.58 37 LR LR 11 09 58.4
comp=Z,179nm,20.1s,baz=196,slow=37
JTS Las Juntas de 33.25 334 LR LR 11 11 32.4
comp=Z,82nm,19.6s,baz=137,slow=37
RPN Rapa Nui 36.08 251 LR LR 11 08 54.4
comp=Z,210nm,18.2s,baz=84,slow=30
SJG San Juan 38.14 7 LR LR 11 16 01.0
comp=Z,39nm,18.1s,baz=235,slow=39
APG El Apazote 39.89 329 LR LR 11 12 34.4
comp=Z,5.5nm,20.9s,baz=76,slow=32
TEIG Tepich 43.56 336 LR LR 11 18 00.3
comp=Z,478nm,19.3s,baz=360,slow=37
CMIG Matias Romero 43.90 325 LR LR 11 14 46.3
comp=Z,102nm,21.8s,baz=139,slow=32
JSC Jenkinsville 54.93 349 P **P** **11 00 32.3 +0.3**
JSC IAmb IAmb 11 00 32.4
comp=Z,8.3nm,0.9s
BIRD Birdtown, Kers 55.15 350 P **P** **11 00 33.9 +0.3**
BIRD IAmb IAmb 11 00 51.7
comp=Z,20nm,1.2s
X48A Hartselle 56.37 344 P **P** **11 00 41.8 -0.5**
X48A IAmb IAmb 11 00 59.3
comp=Z,14nm,1.2s
TKL Tuckaleechee C 56.75 347 LR LR 11 26 20.8
comp=Z,63nm,19.1s,baz=116,slow=37
SWET Sewanee 56.81 345 P **P** **11 00 44.8 -0.7**
SWET IAmb IAmb 11 00 55.6
comp=Z,13nm,1.1s
V52A Sevierville 56.89 347 P **P** **11 00 45.6 -0.4**
V52A IAmb IAmb 11 00 56.8
comp=Z,9.1nm,0.8s
T59A Double "B" Far 57.05 353 P **P** **11 00 47.2 +0.1**
T59A IAmb IAmb 11 00 48.2
comp=Z,11nm,0.9s
U54A Nelsons Funny 57.21 349 P **P** **11 00 48.2 -0.2**
U54A IAmb IAmb 11 00 49.0
comp=Z,9.6nm,0.9s
V48A Smith Brothers 57.53 344 P **P** **11 00 49.9 -0.6**
V48A IAmb IAmb 11 01 08.2
comp=Z,13nm,1.1s
WLAR White Oak Lake 57.54 338 P **P** **11 00 51.8 +1.1**
CLTN Cedars of Leba 57.74 345 P **P** **11 00 51.4 -0.6**
CLTN IAmb IAmb 11 01 02.6
comp=Z,8.0nm,0.9s
FW16 Waxahatchie 57.94 334 P **P** **11 00 53.2 -0.3**
S57A Dark Hollow, R 57.99 352 P **P** **11 00 54.1 +0.3**
U49A Red Boiling Sp 58.01 346 P **P** **11 00 52.3 -1.6**
U49A IAmb IAmb 11 01 10.7
comp=Z,15nm,1.4s
WVT Waverly 58.16 344 P **P** **11 00 54.0 -1.0**
WVT IAmb IAmb 11 01 04.9
comp=Z,10nm,0.7s
T50A Nancy 58.29 347 P **P** **11 00 54.9 -0.9**
T50A IAmb IAmb 11 01 05.9
comp=Z,7.0nm,0.8s
MIAR Mount Ida 58.48 338 P **P** **11 00 57.6 +0.4**
MIAR IAmb IAmb 11 01 15.8
comp=Z,7.7nm,0.8s
TXAR Lajitas Array 58.50 326 P **P** **11 00 56.1 -1.5**
TXAR Lajitas Array 58.50 326 P **P** **11 00 56.8 -0.8**
comp=Z,0.7nm,1.0s,baz=139,slow=8.3,SNR=4.4
comp=Z,0.7nm,1.0s
T47A Sharon Grove 58.79 345 P **P** **11 00 58.8 -0.5**
PLPT Palo Pinto 58.82 333 P **P** **11 00 59.8 +0.1**
PLPT IAmb IAmb 11 01 00.8
comp=Z,12nm,1.4s
X37A Clayton 59.18 336 P **P** **11 01 02.8 +0.7**
ABTX Abilene, Hawle 59.24 332 P **P** **11 01 02.7 0.0**
ABTX IAmb IAmb 11 01 14.4
comp=Z,8.2nm,0.8s
MNHN Monahans 59.65 328 P **P** **11 01 06.0 +0.5**
MNHN IAmb IAmb 11 01 17.6
comp=Z,6.0nm,0.9s
S44A Carbondale 60.02 343 P **P** **11 01 07.6 -0.2**
SN05 Snyder 5 60.02 331 P **P** **11 01 08.3 +0.3**
APMT Aspermont 60.05 332 P **P** **11 01 08.8 +0.6**
APMT IAmb IAmb 11 01 19.9
comp=Z,9.5nm,0.7s
TUL3 Leonard 60.51 337 P **P** **11 01 11.0 -0.3**
TUL3 IAmb IAmb 11 01 22.7
comp=Z,11nm,0.8s
FVM French Village 60.62 342 P **P** **11 01 11.5 -0.4**
OK052 Battle Ridge R 60.97 336 P **P** **11 01 14.5 +0.1**
OK033 Mehan 61.06 336 P **P** **11 01 14.7 -0.3**
QUOK Quay 61.09 336 P **P** **11 01 15.3 +0.1**
S39A Bolivar 61.24 340 P **P** **11 01 15.9 -0.3**
S39A IAmb IAmb 11 01 26.7
comp=Z,7.5nm,0.7s
OK048 Pawnee Station 61.39 336 P **P** **11 01 17.1 -0.1**
SMWD Samnorwood 61.60 333 P **P** **11 01 18.5 -0.2**
T35A Sooner Cattle 61.67 337 P **P** **11 01 18.7 -0.4**
BLOK Blackwell 61.80 336 P **P** **11 01 19.6 -0.4**
MSTX Muleshoe 61.80 330 P **P** **11 01 20.3 +0.1**
MSTX IAmb IAmb 11 01 38.8
comp=Z,9.7nm,1.1s
P17A Butcher Ranch, 70.05 328 P **P** **11 02 14.8 +1.5**
P17A IAmb IAmb 11 02 25.7
comp=Z,7.8nm,0.8s
MSU Marysvale 70.05 326 P **P** **11 02 14.8 +1.4**
MVU Marysvale 70.07 326 P **P** **11 02 15.3 +1.8**
QSPA South Pole Qui 70.17 180 P **P** **11 02 14.0 +0.3**
QSPA IAmb IAmb 11 02 15.8
comp=Z,10nm,1.3s
QSPA South Pole Qui 70.17 180 P **P** **11 02 14.7 +1.0**
comp=Z,2.9nm,0.9s,baz=203,slow=0.7,SNR=9.7
comp=Z,2.9nm,0.9s
BSUT Blindstream Ca 70.87 329 P **P** **11 02 19.5 +1.0**
BSUT IAmb IAmb 11 02 31.5
comp=Z,7.6nm,0.8s
PDAR Pinedale Array 72.03 331 P **P** **11 02 25.7 +0.4**
comp=Z,0.3nm,0.6s,baz=132,slow=6.6,SNR=4.3
comp=Z,0.3nm,0.6s
HWUT Hardware Ranch 72.08 329 P **P** **11 02 26.3 +0.7**
HWUT IAmb IAmb 11 02 39.5
comp=Z,5.2nm,0.8s
HVU Hansel Valley 72.80 328 P **P** **11 02 30.7 +0.9**
HVU IAmb IAmb 11 02 54.8
comp=Z,4.8nm,0.7s
REDW Red Top Meadow 73.09 331 P **P** **11 02 31.3 -0.3**
LOHW Long Hollow 73.17 331 P **P** **11 02 31.2 -0.8**
NVAR Mina Array Bea 73.34 323 P **P** **11 02 33.8 +0.6**
comp=Z,0.5nm,0.7s,baz=132,slow=4.4,SNR=4.2
comp=Z,0.5nm,0.7s
ULM Lac du Bonnet 73.43 343 P **P** **11 02 32.0 -1.1**
comp=Z,1.3nm,0.7s,baz=135,slow=4.3,SNR=2.2
comp=Z,1.3nm,0.7s
RLMT Red Lodge 73.75 333 P **P** **11 02 36.6 +1.1**
RLMT IAmb IAmb 11 02 47.7
comp=Z,5.6nm,0.8s
LKWY Lake 73.82 332 P **P** **11 02 35.4 -0.4**
LKWY IAmb IAmb 11 02 49.3
comp=Z,7.4nm,0.9s
YHL Hebgen Lake 74.39 331 P **P** **11 02 40.8 +1.6**
SCHQ Schefferville 74.61 2 P **P** **11 02 37.6 -2.4**
comp=Z,1.5nm,0.8s,baz=186,slow=12,SNR=1.8
comp=Z,1.5nm,0.8s
PAHR Pah Rah Range 74.83 323 P **P** **11 02 42.6 +0.8**
HLID Hailey 74.94 329 P **P** **11 02 43.0 +0.7**
HLID IAmb IAmb 11 02 55.9
comp=Z,6.4nm,0.8s
BOZ Bozeman (W) 75.17 332 P **P** **11 02 44.4 +0.8**
MFID Camas Ranch 75.53 328 P **P** **11 02 45.6 0.0**
TOA0 Torodi Ar. Sit 78.38 71 P **P** **11 03 00.1 -2.2**
TORD Torodi Ar. Bea 78.38 71 P **P** **11 03 00.0 -2.2**
comp=Z,1.5nm,0.3s,baz=246,slow=6.0,SNR=2.7
TORD LR LR 11 36 48.3
comp=Z,60nm,18.6s,baz=257,slow=35
comp=Z,1.5nm,0.3s
FCC Fort Churchill 80.84 348 P **P** **11 03 14.4 -0.1**
EDM Edmonton 81.75 336 P **P** **11 03 19.1 -0.4**
EDM IAmb IAmb 11 03 30.4
comp=Z,12nm,0.8s
CLRS Cowichan Lake 83.43 328 P **P** **11 03 28.1 -0.3**
CLRS IAmb IAmb 11 03 49.1
comp=Z,15nm,1.3s
BOSA Boshof 85.56 119 LR LR 11 38 20.3
comp=Z,43nm,18.4s,baz=186,slow=33
LBTB Lobatse 87.10 115 LR LR 11 38 57.2
comp=Z,62nm,20.4s,baz=182,slow=33
YKAB2 New Yellowknif 89.21 341 P **P** **11 03 56.4 0.0**
YKA Yellowknife Ar 89.26 341 P **P** **11 03 56.5 -0.2**
YKA Yellowknife Ar 89.26 341 P **P** **11 03 56.8 +0.1**
comp=Z,1.8nm,0.8s,baz=134,slow=4.8,SNR=29
comp=Z,1.8nm,0.8s
RES Resolute Bay 95.75 354 LR LR 11 50 18.8
comp=Z,38nm,20.1s,baz=30,slow=37
H11S2 WAKE ISLAND Hyl 26.08 279 T T 13 29 26.1
baz=102,slow=74,SNR=404
H11S1 WAKE ISLAND Hyl 26.09 279 T T 13 29 27.1
baz=102,slow=74,SNR=323
H11S3 WAKE ISLAND Hyl 26.10 279 T T 13 29 27.2
baz=102,slow=74,SNR=300
H11N3 WAKE ISLAND Hyl 26.13 280 T T 13 29 27.0
baz=101,slow=74,SNR=145
H11N2 WAKE ISLAND Hyl 26.15 280 T T 13 29 29.7
baz=101,slow=74,SNR=130
H11N1 WAKE ISLAND Hyl 26.15 280 T T 13 29 30.7
baz=101,slow=74,SNR=93
ASAR Alice Springs 130.44 210 PKP **PKPdf** **11 10 12.6 0.0**
comp=Z,0.6nm,0.9s,baz=182,slow=2.8,SNR=4.3
BVAR Borovoye Array 135.45 33 PKP **PKPdf** **11 10 20.3 -0.6**
comp=Z,0.6nm,0.7s,baz=346,slow=3.0,SNR=2.7
KURBB Kurchatov Arra 140.94 31 PKP **PKPdf** **11 10 30.6 -0.5**
comp=Z,0.2nm,0.4s,baz=304,slow=3.3,SNR=2.2
ZALV Zalesovo Beam 141.25 23 PKP **PKPdf** **11 10 31.7 +0.2**
comp=Z,1.7nm,0.7s,baz=311,slow=4.3,SNR=5.0
MKAR Makanchi Array 145.32 33 PKPbc **PKPbc** **11 10 38.7 -0.1**
comp=Z,3.4nm,0.7s,baz=322,slow=4.1,SNR=42
USRK Ussuriysk Ar. 149.39 327 PKPbc **PKPbc** **11 10 50.7 +0.5**
comp=Z,4.6nm,0.8s,baz=21,slow=2.2,SNR=5.3
MJAR Matsushiro Arr 149.89 309 PKPbc **PKPbc** **11 10 51.7 0.0**
comp=Z,2.2nm,0.7s,baz=72,slow=1.6,SNR=5.7
SONM Songino Array 152.14 4 PKPbc **PKiKP** **11 10 57.1 +0.1**
comp=Z,2.0nm,0.8s,baz=318,slow=1.7,SNR=13

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*NNC **20** 10:53:30.2± 1.4, 51°.84N × 75°.20E, h0km, mb 3.1, mpv 2.8, Error ellipse: s-maj=26.1km s-min=9.1km az=25.0, Suspected Mining explosion.*
*IDC **20** 10:53:35.8± 1.3, 51°.81N × 75°.64E, h0km, mbtmp2.6/4, ML2.0/4, Error ellipse: s-maj=33.9km s-min=11.3km az=33.0*
ISC 20 10:53:32.9± 1.1, **51°.83N**±0°.09 × **75°.37E**±0°.06, **h0km, n11, σ1s15/12, 7C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.33**	**120**	⇓Pg	**Pb**		**10 54 14.9**	**-0.8**
	2.7nm,0.3s							
KURBB				⇑Lg	Lg		10 54 45.1	
	21nm,0.5s							
KURBB	**Kurchatov Arra**	**2.33**	**120**	Pn	**Pn**		**10 54 13.3**	**+0.9**
	0.5nm,0.3s,baz=304,slow=18,SNR=23							
KURBB				Lg	Lg		10 54 44.4	
	0.6nm,0.3s,baz=308,slow=29,SNR=4.4							
	1.0nm,0.3s							
KURK	**Kurchatov**	**2.33**	**117**	⇑Pg	**Pb**		**10 54 14.9**	**-0.8**
	3.0nm,0.7s							
KURK				⇑Lg	Lg		10 54 44.9	
	5.6nm,0.5s							
BVA0	**Borovoye Array**	**3.28**	**293**	⇑Pg	**Pn**		**10 54 26.8**	**+1.4**
	1.0nm,0.5s,baz=120,slow=17,SNR=3.6							
BVA0				⇑Lg	Lg		10 55 13.9	
	10nm,1.1s,baz=118,slow=29,SNR=4.7							
BVAR	**Borovoye Array**	**3.28**	**293**	Pn	**Pb**		**10 54 30.4**	**-1.4**
	baz=101,slow=16,SNR=4.4							
BVAR				Lg	Lg		10 55 18.5	
	0.2nm,0.3s,baz=118,slow=30,SNR=2.6							
	1.2nm,0.5s							
BRVK	**Borovoye**	**3.35**	**294**	⇑Pg	**Pn**		**10 54 27.8**	**+1.3**
	1.7nm,0.8s							
BRVK				⇓Lg	Lg		10 55 14.3	
	9.4nm,0.9s							
OTUK	**Ortayu**	**4.09**	**210**	⇓Pg	**Pb**		**10 54 45.2**	**-0.5**
	2.2nm,0.5s							
OTUK				⇑Lg	Lg		10 55 40.6	
	8.1nm,1.1s							
I46RU	**ZALESOVO INFRA**	**6.10**	**66**	I	I		11 28 00.4	
	baz=254,slow=334,SNR=6.3							
ZALV	**Zalesovo Beam**	**6.10**	**66**	Pn	**Pn**		**10 55 05.2**	**+0.9**
	0.2nm,0.3s,baz=246,slow=11,SNR=3.2							
	0.7nm,0.3s							
MK31	**Makanchi Array**	**6.77**	**135**	Pn	**Pn**		**10 55 14.7**	**+1.2**
	0.5nm,0.7s,baz=316,slow=10,SNR=4.8							
MK31				⇓Sn	**Sn**		**10 56 31.6**	**+0.3**
	0.3nm,0.3s							
MK31				⇓Lg	Lg		10 57 11.1	
	3.6nm,0.8s,baz=314,slow=24,SNR=6.6							
MKAR	**Makanchi Array**	**6.77**	**135**	Pn	**Pn**		**10 55 12.8**	**-0.6**
	0.1nm,0.3s,baz=325,slow=10,SNR=4.3							
MKAR				Sn	**Sn**		**10 56 30.2**	**-1.1**
	0.1nm,0.3s,baz=4.1,slow=15,SNR=1.5							
MKAR				Lg	Lg		10 57 02.1	
	0.3nm,0.3s,baz=319,slow=24,SNR=8.8							
	0.4nm,0.8s							

IDC 20 10:54:17.9±433.0, **48°90N×48°59E**, **h0km**, **Error ellipse: s-maj=145.8km s-min=118.2km az=46.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**6.31**	**73**	I	I	11 29 30.0	
	baz=260,slow=323,SNR=2.0						
I43RU	**DUBNA INFRASON**	**10.41**	**323**	I	I	11 57 20.0	
	baz=134,slow=334,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**22.97**	**64**	I	I	13 16 00.0	
	baz=275,slow=326,SNR=2.6						

AFAD 20 11:01:49.9±0.0, **36°76N×36°31E**, **h6km±5km**, **ML1.4, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.51**	**34**	P	Pg	11 01 51.4	-8.4
KAMA				S	Sg	11 02 06.9	+0.5
AKO	**Adana**	**0.98**	**315**	P	Pn	11 02 15.9	+5.7
AKO				S	Sg	11 02 19.2	-2.3
SAIM	**ADANA**	**1.22**	**351**	P	Pn	11 02 22.5	+8.8
SAIM				S	Sn	11 02 31.5	+0.9
GULE	**Gulek**	**1.33**	**293**	P	Pg	11 02 23.3	+7.8
GULE				S	Sn	11 02 33.9	+0.6
YAHY	**KAYSERI_Yahyal**	**1.53**	**331**	P	Pb	11 02 18.4	-0.3
YAHY				S	Sn	11 02 26.6	-12
YAHY				*i* AML	AML	11 02 39.0	
	comp=E,1.7nm,0.1s						
YAHY				*i* AML	AML	11 02 43.0	
	comp=N,6.8nm,0.4s						
NIDE	**Nigde/Merkez-G**	**1.74**	**316**	P	Pg	11 02 23.3	+0.1
NIDE				S	Sn	11 02 35.6	-7.7
NIDE				*i* AML	AML	11 02 50.0	
	comp=N,8.8nm,0.2s						
NIDE				*i* AML	AML	11 02 56.0	
	comp=E,15nm,0.2s						

ISK 20 11:02:10.4, **37°67N×35°44E**, **h20km**, **ML1.5/6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.36**	**122**	Pg	Pb	11 02 18.4	+0.4
KOZT				S	Sb	11 02 24.6	+1.4
CMRD	**Camardi-Nigde**	**0.36**	**268**	Pg	Pb	11 02 18.2	+0.1
CMRD				S	Sb	11 02 24.7	+1.3
KARA	**Karaisali**	**0.52**	**217**	Pg	Pb	11 02 21.2	+0.4
KARA				S	Sb	11 02 28.9	+1.1
SARI	**SarD1z-Kayseri**	**1.06**	**46**	Pg	Pn	11 02 30.9	+0.6
GULA	**Gulagac**	**1.17**	**305**	Pn	Pb	11 02 32.3	+0.4
KMRS	**Kahramanmaras**	**1.17**	**98**	Pn	Pn	11 02 31.4	-0.2

*IDC **20** 11:04:09.5±5.7, 36°77N×70°80E, h140km±46km, mbtmp3.6/7, Error ellipse: s-maj=68.5km s-min=19.7km az=155.0*
*NNC **20** 11:04:12.0±5.1, 37°.14N×70°.96E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=40.2km s-min=31.4km az=179.0*
ISC 20 11:04:08.3±2.2, **36°6N±0°2×70°89E±0°10**, **h150km**, **n10**, **σ1s63/15**, **4C**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.48**	**358**	P	**Pn**	**11 05 42.7**	**+1.3**
	3.9nm,0.4s,baz=182,slow=12,SNR=63						
KK31				⇑S	**Sn**	**11 06 52.5**	**-1.8**
	3.0nm,0.3s,baz=28,slow=48,SNR=4.7						
AAK	**Ala-Archa**	**6.62**	**24**	P	**Pn**	**11 05 43.7**	**+0.4**
	3.6nm,0.3s,baz=227,slow=3.7,SNR=14						
AAK				S	**Sn**	**11 06 57.1**	**-0.8**
	4.6nm,0.6s,baz=122,slow=20,SNR=8.5						
TKM2	**Tokmak 2**	**7.26**	**28**	⇑P	**Pn**	**11 05 53.3**	**+1.4**
	5.7nm,0.6s						
TKM2				⇑S	**Sn**	**11 07 11.0**	**-2.2**
	2.5nm,0.7s						
GEYT	**Alibeck**	**10.27**	**281**	P	**Pn**	**11 06 30.7**	**-1.1**
	1.1nm,0.3s,baz=85,slow=16,SNR=2.1						
GEYT				S	**Sn**	**11 08 24.2**	**-1.2**
	1.1nm,0.3s,baz=285,slow=39,SNR=2.8						
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**11 07 10.6**	**+0.2**
	0.2nm,0.6s,baz=215,slow=12,SNR=7.3						
AB31	**Akbulak array**	**14.94**	**331**	P	**P**	**11 07 35.9**	**+2.3**
	0.3nm,0.3s,baz=149,slow=12,SNR=17						
AB31				⇑S	**Sn**	**11 10 18.8**	**+1.3**
	0.7nm,0.5s,baz=149,slow=21,SNR=5.2						
KURBB	**Kurchatov Arra**	**15.04**	**19**	P	**Pn**	**11 07 31.9**	**-1.0**
	0.3nm,0.6s,baz=207,slow=10,SNR=3.0						
BVAR	**Borovoye Array**	**16.41**	**359**	P	**Pn**	**11 07 50.3**	**+0.5**
	0.6nm,0.3s,baz=161,slow=12,SNR=6.7						
AKTO	**Aktyubinsk**	**16.64**	**330**	P	**Pn**	**11 07 54.0**	**+1.4**
	2.0nm,0.7s,baz=138,slow=9.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.84**	**25**	P	**Pn**	**11 08 27.8**	**-2.6**
	1.0nm,0.5s,baz=220,slow=10,SNR=5.7						

IDC 20 11:09:52.1±314.0, **57°20N×30°36E**, **h0km**, **Error ellipse: s-maj=124.6km s-min=77.1km az=93.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**3.78**	**94**	I	I	11 32 30.0	
	0.4nm,0.7s,baz=276,slow=328,SNR=4.4						
I37NO	**I37NO**	**13.01**	**341**	I	I	12 21 40.0	
	baz=145,slow=332,SNR=2.2						
I26DE	**FREYUNG INFRAS**	**13.02**	**237**	I	I	12 31 20.0	
	baz=38,slow=337,SNR=1.8						
I31KZ	**AKTYUBINSK INF**	**17.61**	**101**	I	I	13 01 23.2	
	baz=304,slow=334,SNR=3.3						

*IDC **20** 11:12:00.2±4.0, 14°.93N×91°.36W, h0km, mb3.6/4, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=111.2km s-min=50.7km az=26.0*
*MEX **20** 11:12:10.7±0.8, 14°.59N×92°.39W, h67km±22km, MD4.4*
*GCG **20** 11:12:12.7±0.5, 14°.80N×92°.22W, h46km±18km, MD4.0*
ISC 20 11:12:10.4±1.0, **14°67N±0°06×92°38W±0°04**, **h65km±8km**, **n35**, **σ1s96/57**, **mb3.7/4**, **1D**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**0.47**	**18**	*eP*	**Pn**	**11 12 22.1**	**-0.7**
PATR				*i* S	**Sn**	**11 12 31.9**	**+0.1**
CHUJ	**Union Juarez**	**0.50**	**32**	*i* P	**Pn**	**11 12 22.4**	**-0.7**
CHUJ				*eS*	**Sn**	**11 12 32.2**	**-0.2**
PAVE	**Pavencul**	**0.56**	**21**	*i* P	**Pn**	**11 12 23.5**	**-0.3**
PAVE				*i* S	**Sn**	**11 12 33.8**	**+0.4**
STG3	**Santiaguito 3,**	**0.79**	**87⇓**	*eP*	**Pn**	**11 12 26.1**	**-0.2**
SULM	**Suchitepequez,**	**0.87**	**115**	*eP*	**Pn**	**11 12 27.6**	**+0.5**
PCIG		**1.31**	**322**	*eP*	**Pn**	**11 12 32.8**	**+0.1**
PCIG				*eS*	**Sn**	**11 12 49.3**	**-0.2**
FUG	**Fuego 3**	**1.51**	**98**	*eP*	**Pn**	**11 12 35.9**	**+0.4**
FUG				*eS*	**Sn**	**11 12 55.9**	**+1.5**
CCIG	**Comitan**	**1.62**	**8**	*i* P	**Pn**	**11 12 38.9**	**+1.8**
CCIG				*eS*	**Sn**	**11 13 00.2**	**+3.1**
PCG	**Pacaya**	**1.74**	**99**	*eP*	**Pn**	**11 12 39.9**	**+1.1**
PCG				*eS*	**Sn**	**11 13 00.7**	**+0.6**
CARR	**Arriaga**	**2.15**	**317**	*eP*	**Pn**	**11 12 45.2**	**+1.1**
CARR				*eS*	**Sn**	**11 13 11.1**	**+1.3**
TGIG		**2.21**	**341**	*eP*	**Pn**	**11 12 44.8**	**-0.2**
TGIG				*eS*	**Sn**	**11 13 12.6**	**+1.2**
MRL	**Marmol**	**2.64**	**81**	*eP*	**Pn**	**11 12 50.2**	**-0.7**
NILT	**Santiago Nilte**	**2.86**	**311**	*eP*	**Pn**	**11 12 55.0**	**+1.3**
NILT				*eS*	**Sn**	**11 13 26.6**	**-0.5**
CMIG	**Matias Romero**	**3.41**	**315**	Pn	**Pn**	**11 13 01.7**	**+0.6**
	3.9nm,0.3s,baz=149,slow=9.5,SNR=32						
CMIG				Sn	**Sn**	**11 13 43.4**	**+3.1**
	25nm,0.3s,baz=63,slow=19,SNR=11						
	8.8nm,0.3s						
CMIG	**Matias Romero**	**3.41**	**315**	*eP*	**Pn**	**11 13 01.8**	**+0.6**
CMIG				*eS*	**Sn**	**11 13 40.7**	**+0.3**
SCIG	**Sabancuy**	**4.42**	**15**	*eP*	**Pn**	**11 13 15.4**	**+0.3**
SCIG				*eS*	**Sn**	**11 14 04.1**	**-1.2**
NEUV	**Arroyo Zacate**	**4.47**	**313**	*eP*	**Pn**	**11 13 18.7**	**+3.0**
NEUV				*eS*	**Sn**	**11 14 08.4**	**+2.0**
PMUV	**Sontecomapan**	**4.66**	**326**	*e*	Pn	11 13 25.8	+7.4
PMUV				*eS*	**Sn**	**11 14 06.0**	**-5.3**
PEIG	**Puerto Escondi**	**4.78**	**287**	*eP*	**Pn**	**11 13 19.8**	**-0.3**
PEIG				*eS*	Sn	11 14 07.1	-7.2
YOIG	**Yosondua**	**5.43**	**294**	*eP*	**Pn**	**11 13 26.1**	**-3.0**
YOIG				*eS*	**Sn**	**11 14 35.6**	**+5.3**
TOIG	**Toxpalan**	**5.64**	**308**	*eP*	**Pn**	**11 13 34.7**	**+2.8**
TOIG				*eS*	**Sn**	**11 14 35.3**	**-0.1**
TXIG	**Tlaxiaco**	**5.78**	**297**	*eP*	**Pn**	**11 13 36.0**	**+2.0**
TXIG				*eS*	**Sn**	**11 14 43.2**	**+4.1**
TPIG	**Tehuac#an**	**6.06**	**309**	*eP*	**Pn**	**11 13 38.6**	**+1.0**
TPIG				*eS*	**Sn**	**11 14 47.3**	**+1.6**
HLIG	**Huajuapan de L**	**6.08**	**302**	*eP*	**Pn**	**11 13 39.4**	**+1.4**
HLIG				*eS*	**Sn**	**11 14 44.2**	**-2.2**
JAUV	**Jalcomulco**	**6.30**	**318**	*eP*	**Pn**	**11 13 40.0**	**-0.8**
JAUV				*eS*	**Sn**	**11 14 49.0**	**-2.5**
FTIG	**Fresnillo de T**	**6.39**	**301**	*eP*	Pn	11 13 48.6	+6.4
FTIG				*eS*	**Sn**	**11 14 51.8**	**-2.1**
TLIG	**Tlapa**	**6.60**	**297**	*eP*	**Pn**	**11 13 42.0**	**-3.0**
TLIG				*eS*	**Sn**	**11 14 57.0**	**-2.1**
CRIG	**Cruz Grande**	**6.82**	**288**	*eP*	Pn	11 13 43.9	-3.9
CRIG				*eS*	**Sn**	**11 15 01.7**	**-2.4**
PPM	**Popocatepetl**	**7.41**	**307**	*eP*	**Pn**	**11 13 57.5**	**+1.1**
PPM				*eS*	**Sn**	**11 15 21.2**	**+2.0**
TXAR	**Lajitas Array**	**17.94**	**326**	P	**Pn**	**11 16 16.5**	**+0.9**
	baz=153,slow=10,SNR=3.8						
	0.3nm,0.7s						
ANMO	**Albuquerque**	**23.84**	**330**	P	**P**	**11 17 18.6**	**+0.7**
	0.7nm,0.6s,baz=105,slow=10,SNR=3.8						
	0.7nm,0.6s						
NVAR	**Mina Array Bea**	**32.92**	**321**	P	**P**	**11 18 41.0**	**+2.1**
	1.1nm,0.7s,baz=132,slow=8.7,SNR=9.2						
	1.1nm,0.7s						
YKA	**Yellowknife Ar**	**50.29**	**347**	P	**P**	**11 20 57.9**	**-2.2**
	0.4nm,0.7s,baz=133,slow=8.7,SNR=7.5						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**62.08**	**337**	P	**P**	**11 22 22.9**	**-1.2**
	0.6nm,0.6s,baz=111,slow=5.6,SNR=12						
	0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**145.24**	**341**	PKPbc	**PKPab**	**11 31 40.2**	**-1.3**
	1.3nm,0.7s,baz=344,slow=3.4,SNR=7.7						

FUNV 20 11:13:53.8, **10°70N×65°70W**, **h7km**, **MW4.0, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**1.11**	**258**	*eP*	Pg	11 14 13.5	-1.7
FUNV				*eS*	Sg	11 14 27.4	-2.3
PCRV	**Puerto La Cruz**	**1.17**	**116**	*eP*	Pg	11 14 16.1	-0.2
PCRV				*eS*	Sb	11 14 32.4	+0.5
TACV	**Tcata**	**1.42**	**247**	*eP*	Pn	11 14 19.7	-0.4
TACV				*eS*	Sb	11 14 38.7	-0.2
CUMV	**Cumana_UDO**	**1.51**	**100**	*eP*	Pn	11 14 20.4	-0.8
CUMV				*eS*	Sn	11 14 40.9	-0.3
BENV	**Beln**	**2.00**	**249**	*eP*	Pn	11 14 28.6	+0.5
BENV				*eS*	Sn	11 14 52.7	-0.8
TURV	**Turiamo**	**2.12**	**263**	*eP*	Pn	11 14 28.9	-0.8
TURV				*eS*	Sn	11 14 54.9	-1.3
CRUV	**Carupano**	**2.42**	**90**	*eP*	Pn	11 14 33.8	-0.1
BAUV	**El Baul**	**2.89**	**233**	*eP*	Pn	11 14 40.1	-0.2
BAUV				*eS*	Sn	11 15 13.5	-1.9
CACV	**CAICARA DEL OR**	**3.22**	**195**	*eP*	Pn	11 14 44.2	-0.6
CACV				*eS*	Sn	11 15 19.9	-3.6
TEPV	**Terepaima**	**3.51**	**258**	*eP*	Pn	11 14 47.9	-1.0
TEPV				*eS*	Sn	11 15 27.8	-2.9
SANV	**Sanarito**	**3.96**	**253**	*eP*	Pn	11 14 54.2	-0.9
SANV				*eS*	Sn	11 15 38.2	-3.7
SIQV	**Siquisique**	**4.04**	**270**	*eP*	Pn	11 14 54.1	-2.0
SIQV				*eS*	Sn	11 15 39.4	-4.2
SOCV	**Socops**	**5.62**	**245**	*eP*	Pn	11 15 17.0	-0.9
SOCV				*eS*	Sn	11 16 16.6	-6.2
LUEV	**Luepa**	**6.40**	**139**	*eP*	Pn	11 15 26.6	-2.0
LUEV				*eS*	Sn	11 16 34.0	-8.1
CAPV	**Capacho**	**7.11**	**247**	*eP*	Pn	11 15 36.2	-2.2
CAPV				*eS*	Sn	11 16 52.1	-7.6

WEL 20 11:31:00.3±0.8, **34°S±7°×18°0E±1°4**, **h150km±22km**, **M4.1/9, ML4.3/11, MLv4.1/9, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6, confirmed, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.72**	**198**	S	Sn	11 32 40.3	-0.5
WMGZ	**Waiomatatini S**	**3.94**	**195**	P	Pn	11 32 01.7	+2.0
WMGZ				S	Sn	11 32 46.4	+0.5
HAZ	**Te Kaha**	**4.05**	**202**	P	Pn	11 32 03.3	+2.2
HAZ				S	Sn	11 32 51.0	+2.5
PKGZ	**Pakihiroa**	**4.09**	**199**	P	Pn	11 32 02.8	+1.2
PKGZ				S	Sn	11 32 50.2	+0.7
PUZ	**Puketiti**	**4.22**	**196**	P	Pn	11 32 04.1	+0.7
PUZ				S	Sn	11 32 52.6	+0.1
RUGZ	**Raukumara Rang**	**4.28**	**202**	P	Pn	11 32 06.3	+2.1
RUGZ				S	Sn	11 32 54.8	+0.8
TWGZ	**Tauwhareparae**	**4.38**	**198**	P	Pn	11 32 06.3	+0.8
TWGZ				S	Sn	11 32 57.9	+1.5
CNGZ	**Carnagh Statio**	**4.62**	**195**	P	Pn	11 32 09.7	+1.0
MWZ	**Matawai**	**4.66**	**202**	P	Pn	11 32 09.4	+0.2
MWZ				S	Sn	11 33 02.6	-0.3
TKGZ	**Te Karaka**	**4.67**	**198**	P	Pn	11 32 09.0	-0.2
TKGZ				S	Sn	11 33 03.4	+0.5
URZ	**Urewera**	**4.73**	**206**	P	Pn	11 32 09.5	-0.5
URZ				S	Sn	11 33 04.5	-0.1
RIGZ	**Rimuhau**	**4.94**	**198**	P	Pn	11 32 12.1	-0.8
RIGZ				S	Sn	11 33 08.9	-0.7
SNGZ	**Shannon Statio**	**5.13**	**201**	P	Pn	11 32 14.6	-0.8
SNGZ				S	Sn	11 33 13.1	-0.9
GLKZ	**Green Lake**	**5.15**	**24**	S	Sn	11 33 13.6	-0.9
OUZ	**Omahuta**	**5.19**	**255**	P	Pn	11 32 16.4	+0.3
KNZ	**Kokohu**	**5.26**	**198**	P	Pn	11 32 15.5	-1.5
ALRZ	**Allen Road**	**5.29**	**210**	P	Pn	11 32 18.1	+0.5
RAHZ	**Arahi**	**5.33**	**203**	P	Pn	11 32 17.6	-0.4
RAHZ				S	Sn	11 33 15.1	-3.7
NMHZ	**Naumai**	**5.59**	**204**	P	Pn	11 32 21.9	+0.4
NMHZ				S	Sn	11 33 24.5	-0.5
ARHZ	**Aropaoanui**	**5.68**	**202**	P	Pn	11 32 21.8	-0.8

*CATAC **20** 11:32:32.3±1.0, 7°.97N×83°.25W, h1km±6km, ML3.8*
*UCR **20** 11:32:32.6±0.6, 8°.16N×82°.94W, h11km±5km, MW4.0*
*UPA **20** 11:32:33.1±1.6, 8°.22N×82°.93W, h8km±2km, MW4.2*
ISC 20 11:32:30.5±1.2, **8°05N±0°04×82°95W±0°03**, **h14km±7km**, **n65**, **σ1s06/93**, **3C-4D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.17**	**25⇓**	*iP*	**Pg**	**11 32 35.3**	**+0.8**
PTPM				*eS*	**Sg**	**11 32 37.3**	**0.0**
PIRO	**Carate, Puerto**	**0.52**	**313⇓**	*iP*	**Pb**	**11 32 41.4**	**0.0**
CDITO	**Canoas**	**0.52**	**8**	*eP*	**Pg**	**11 32 40.9**	**0.0**
CDITO				*eS*	**Sg**	**11 32 46.7**	**-1.1**
CDITO	**Canoas**	**0.52**	**8⇓**	*iP*	**Pg**	**11 32 40.8**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.59**	**324**	*eP*	**Pb**	**11 32 42.8**	**+0.1**
FITO	**Golfito**	**0.60**	**341**	*eP*	**Pg**	**11 32 41.8**	**-0.6**
JIME	**Puerto Jimenez**	**0.61**	**323⇓**	*eP*	**Pb**	**11 32 43.1**	**+0.1**
PEDE3	**Pedregal, Chir**	**0.62**	**58**	*eP*	**Pb**	**11 32 43.0**	**-0.2**
DVD	**David**	**0.62**	**52**	*eP*	**Pb**	**11 32 43.1**	**-0.1**
DVD				*eS*	**Sb**	**11 32 51.7**	**-0.2**
EDAD	**Golfito**	**0.63**	**340⇑**	*eP*	**Pg**	**11 32 43.3**	**-0.6**
LOCO3	**Loma Colorada,**	**0.64**	**56**	*eP*	**Pb**	**11 32 43.5**	**+0.1**
VITO	**San Vito**	**0.76**	**359**	*eP*	**Pb**	**11 32 45.4**	**-0.3**
PTAR3	**Potrerillos Ar**	**0.78**	**35**	*eP*	**Pb**	**11 32 45.8**	**-0.2**
BRU2	**Volcan**	**0.78**	**19**	*eP*	**Pg**	**11 32 45.6**	**-0.1**
BRU2				*eS*	**Sb**	**11 32 56.6**	**+0.1**
BRU2	**Volcan**	**0.78**	**19⇓**	*iP*	**Pg**	**11 32 45.6**	**-0.1**
BCO2	**Palmira**	**0.78**	**32**	*eP*	**Pg**	**11 32 45.7**	**-0.1**
BCO2				*eS*	**Sg**	**11 32 55.7**	**-0.4**
BC3P	**Paso Ancho**	**0.83**	**24**	*eP*	**Pg**	**11 32 46.5**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.89**	**34**	*eP*	**Pg**	**11 32 47.0**	**-0.8**
POTG	**Potrero Grande**	**1.01**	**351**	*eP*	**Pg**	**11 32 49.1**	**-0.9**
EDPN	**Palmar Norte**	**1.03**	**331**	*eP*	**Pg**	**11 32 49.7**	**-0.8**
BURE	**Buenos Aires**	**1.18**	**341**	*eP*	**Pb**	**11 32 52.5**	**-0.2**
CHGR2	**Aguacate**	**1.19**	**42**	*eP*	**Pb**	**11 32 51.9**	**-1.0**
CHGR2				*eS*	**Sb**	**11 33 07.9**	**-0.2**
NANC3	**Nancito, Chiri**	**1.22**	**81**	*eP*	**Pg**	**11 32 54.1**	**+0.1**
OCHAL	**Ojochal**	**1.25**	**327**	*iP*	**Pn**	**11 32 53.2**	**-0.3**
OCHAL				*i* S	**Sn**	**11 33 10.9**	**+0.7**
OCHAL				IAML		11 33 14.4	
	comp=Z,30nm,1.0s						
CNI2	**El Empalme, Bo**	**1.44**	**19**	*eP*	**Pn**	**11 32 56.2**	**0.0**
CNI2				*eS*	**Sn**	**11 33 13.1**	**-1.9**
PEZE	**Perez Zeledon,**	**1.50**	**332**	*i* P	**Pb**	**11 32 58.0**	**-0.3**
PEZE				*i* S	**Sg**	**11 33 19.5**	**+0.4**
PEZE				IAML		11 33 23.0	
	comp=Z,850nm,1.0s						
CDM	**Cerro de Muert**	**1.69**	**332**	*eP*	**Pn**	**11 33 00.5**	**+0.4**
CDM	**Cerro de Muert**	**1.69**	**332**	*i* P	**Pb**	**11 33 01.3**	**-0.5**
CDM				*i* S	**Sg**	**11 33 24.5**	**-0.7**
CDM				IAML		11 33 28.3	
	comp=Z,840nm,1.0s						
GMAL	**Guarumal, Vera**	**1.73**	**99**	*eP*	**Pn**	**11 33 00.1**	**0.0**
GMAL				*eS*	**Sb**	**11 33 24.2**	**+0.6**
GMAL	**Guarumal, Vera**	**1.73**	**99**	*eP*	**Pg**	**11 33 03.1**	**-0.5**
RSUS3	**Rio de Jesus,**	**1.77**	**92**	*eP*	**Pb**	**11 33 02.5**	**-0.4**
SAFE3	**Santa Fe, Vera**	**1.91**	**76**	*eP*	**Pb**	**11 33 05.4**	**+0.2**
RIMA	**Rio Macho**	**1.93**	**332**	*eP*	**Pn**	**11 33 04.1**	**+1.0**
RIMA	**Rio Macho**	**1.93**	**332**	*i* P	**Pn**	**11 33 04.1**	**+1.0**
RIMA				*i* S	**Sb**	**11 33 29.8**	**+0.2**
RIMA				IAML		11 33 40.6	
	comp=Z,310nm,1.0s						
STIA3	**Santiago, Vera**	**1.96**	**88**	*eP*	**Pb**	**11 33 05.4**	**-0.6**
LCR2	**La Lucha 2**	**1.98**	**328**	*eP*	**Pb**	**11 33 05.2**	**-1.2**
LCR2	**La Lucha 2**	**1.98**	**328**	*i* P	**Pb**	**11 33 05.6**	**-0.8**
LCR2				*i* S	**Sb**	**11 33 31.2**	**+0.2**
LCR2				IAML		11 33 32.6	
	comp=Z,690nm,1.0s						
RVSTA	**Santa Teresita**	**2.03**	**340**	*eP*	**Pb**	**11 33 06.1**	**-1.2**
PCAYA	**Pacayas**	**2.04**	**335**	*eP*	**Pb**	**11 33 07.9**	**+0.4**
VTCV	**VTCV, Calle Va**	**2.07**	**338**	*i* P	**Pb**	**11 33 07.7**	**-0.3**
VTCV				*i* S	**Sb**	**11 33 34.3**	**+0.7**
VTCV				IAML		11 33 38.4	
	comp=Z,1μm,1.0s						
OCM	**Ochomogo**	**2.08**	**331**	*eP*	**Pn**	**11 33 06.7**	**+1.4**
OCM	**Ochomogo**	**2.08**	**331**	*i* P	**Pb**	**11 33 07.8**	**-0.5**
OCM				*i* S	**Sb**	**11 33 33.6**	**-0.6**
OCM				IAML		11 33 35.7	
	comp=Z,510nm,1.0s						
CVTV	**Tajo**	**2.09**	**338**	*eP*	**Pb**	**11 33 07.3**	**-1.2**
VTLA	**Turrialba Volc**	**2.10**	**337**	*eP*	**Pb**	**11 33 07.8**	**-0.9**
ICR3	**Volcano Irazu**	**2.10**	**336**	*eP*	**Pg**	**11 33 09.9**	**-1.0**
IRES	**Siquirres**	**2.10**	**345**	*eP*	**Pb**	**11 33 07.5**	**-1.0**
CALO3	**Calobre, Verag**	**2.11**	**83**	*eP*	**Pb**	**11 33 07.2**	**-1.3**
VTRT	**Volcan Turrial**	**2.11**	**337**	*i* P	**Pb**	**11 33 08.7**	**-0.1**
VTRT				IAML		11 33 46.1	
	comp=Z,1μm,1.0s						
VTUN	**Crater Central**	**2.12**	**338**	*i* P	**Pb**	**11 33 08.3**	**-0.6**
VTUN				IAML		11 33 41.6	
	comp=Z,510nm,1.0s						
VTUC	**Crater, Volcan**	**2.12**	**338**	*i* P	**Pb**	**11 33 08.4**	**-0.5**
VTUC				IAML		11 33 45.4	
	comp=Z,470nm,1.0s						
VIRE	**VIRE**	**2.12**	**334**	*i* P	**Pb**	**11 33 08.2**	**-0.8**
VIRE				*i* S	**Sb**	**11 33 35.4**	**+0.1**
VIRE				IAML		11 33 46.4	
	comp=Z,1μm,1.0s						
CACAO	**El Cacao, Vera**	**2.19**	**109**	*eP*	**Pb**	**11 33 09.2**	**-0.7**
CACAO				*eS*	**Sb**	**11 33 37.9**	**+1.0**
JACO	**JACO, Garabito**	**2.33**	**314**	*i* P	**Pn**	**11 33 08.5**	**+0.1**
JACO				IAML		11 33 49.4	
	comp=Z,330nm,1.0s						
RIFO	**Rio Frio, Sara**	**2.45**	**337**	*i* P	**Pb**	**11 33 13.3**	**-1.0**
RIFO				*i* S	**Sb**	**11 33 44.4**	**0.0**
RIFO				IAML		11 34 00.1	
	comp=Z,420nm,1.0s						
CHIT3	**Chitre**	**2.51**	**92**	*eP*	**Pb**	**11 33 14.3**	**-1.1**
CHIT3				*eS*	**Sb**	**11 33 44.5**	**-1.7**
AZU	**Azuero**	**2.66**	**95**	*eP*	**Pb**	**11 33 16.4**	**-1.7**
AZU				*eS*	**Sb**	**11 33 48.4**	**-2.3**
SOCE	**Pocosol**	**2.84**	**325**	*i* P	**Pb**	**11 33 19.7**	**-1.4**
SOCE				IAML		11 33 25.1	
	comp=Z,120nm,1.0s						
SOCE				*i* S	**Sb**	**11 33 53.2**	**-2.6**
JTS	**Las Juntas de**	**2.98**	**319⇑**	*iP*	**Pn**	**11 33 20.1**	**+2.7**
JTS				*eS*	**Sn**	**11 33 53.3**	**+0.4**
INDI	**Punta indio, G**	**3.10**	**306**	*i* P	**Pn**	**11 33 19.8**	**+0.8**
INDI				*i* S	**Sn**	**11 33 55.6**	**-0.3**
INDI				IAML		11 34 29.4	
	comp=Z,120nm,1.0s						
DUNO	**Dulce Nombre,**	**3.22**	**309**	*i* P	**Pn**	**11 33 22.1**	**+1.4**
DUNO				*i* S	**Sn**	**11 33 58.9**	**0.0**
DUNO				IAML		11 34 01.4	
	comp=Z,290nm,1.0s						
BCIP	**Isla Barro Col**	**3.27**	**70**	*eP*	**Pn**	**11 33 24.4**	**+3.0**
BCIP				*eS*

THL				S	Sg	12 21 54.0	0.0	
TYRN	**Tyrnavos**	**0.74**	**3**	P	Pg	12 21 48.3	-0.2	
TYRN				S	Sg	12 21 58.6	+0.4	
TYRN				AML	AML	12 22 01.4		
	comp=E,80μm,0.6s							
TYRN				AML	AML	12 22 02.0		
	comp=N,70μm,0.3s							
NEO	**Neokhori**	**0.88**	**67**	P	Pg	12 21 50.9	-0.3	
NEO				S	Sg	12 22 02.7	+0.1	
XOR	**Xorichti**	**0.88**	**63**	P	Pg	12 21 51.1	-0.2	
KLV	**Kalavryta, Ach**	**0.93**	**181**	P	Pg	12 21 51.8	-0.3	
KLV				S	Sg	12 22 04.4	+0.2	
GUR	**Goura**	**1.04**	**173**	P	Pg	12 21 54.0	-0.4	
GUR				AML	AML	12 22 10.0		
	comp=E,65μm,0.4s							
GUR				AML	AML	12 22 11.7		
	comp=N,92μm,0.3s							

ATH 20 12:21:36.5, 38.10N×23.54E, h10km±2km, ML1.0/2, Manual Solution by A.Andreou This location: 2020/05/21 07:32:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATH	**Athens Observa**	**0.19**	**131**	P	Pg	12 21 40.7	+0.2
ATH				S	Sg	12 21 43.5	+0.3
ATHU	**Athens Univers**	**0.23**	**123**	P	Pg	12 21 41.4	+0.1
ATHU				S	Sg	12 21 44.7	+0.1
VIL2	**Platees**	**0.24**	**299**	P	Pg	12 21 40.8	-0.7
VIL2				S	Sg	12 21 43.5	-1.3
PTL	**Penteli**	**0.26**	**100**	P	Pg	12 21 42.1	+0.2
PTL				S	Sg	12 21 45.9	+0.4
DION	**Dionisos Attik**	**0.31**	**93**	P	Pg	12 21 42.8	0.0
DION				S	Sg	12 21 47.4	+0.4
VLY	**Voula,Athens**	**0.32**	**140**	P	Pg	12 21 43.0	+0.2
VLY				S	Sg	12 21 47.2	+0.1
LTK	**Loutraki**	**0.46**	**261**	P	Pg	12 21 45.6	+0.2
LTK				S	Sg	12 21 51.9	+0.5
LOUT	**Loutraki**	**0.46**	**256**	P	Pg	12 21 45.5	+0.1
LOUT				S	Sg	12 21 51.6	+0.1

*IDC **20** 12:32:14.2±4.5, 15.49S×167.63E, h117km±39km, mb3.9/9, mbtmp4.3/10, MS4.0/2, Error ellipse: s-maj=28.2km s-min=25.1km az=172.0*
*NEIC **20** 12:32:14.3±2.7, 15.75S±0.1×167.8E±0.2, h115km±12km, mb4.6/20, Error ellipse: s-maj=23.4km s-min=16.1km az=76.0*
*NOU **20** 12:32:15.5, 15.59S×167.72E, h120km, MLv5.0/13, Vanuatu Islands*
ISC 20 12:32:12.0±0.8, 15.52S±0.08×167.8E±0.1, h100km, n47, σ1§84/48, mb4.4/17, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.93**	**178**		**Pn**	**12 33 38.5**	**+1.1**
MARNC				Sn	**Sn**	**12 34 40.4**	**-3.5**
MARNC	**Mare, Loyalty**	**5.93**	**178**	P	**Pn**	**12 33 39.0**	**+1.7**
KOUNC	**Koumac, New Ca**	**6.03**	**213**		**Pn**	**12 33 41.3**	**+2.6**
KOUNC	**Koumac, New Ca**	**6.03**	**213**	P	**Pn**	**12 33 41.1**	**+2.4**
YAYM	**Mamie plateau,**	**6.56**	**188**	P	**Pn**	**12 33 47.9**	**+1.9**
DZM	**Mont Dzumac**	**6.64**	**191**		**Pn**	**12 33 49.8**	**+2.7**
DZM	**Mont Dzumac**	**6.64**	**191**	P	**Pn**	**12 33 50.0**	**+2.8**
DZM	**Mont Dzumac**	**6.64**	**191**	P	**Pn**	**12 33 49.9**	**+2.8**
	77nm,0.3s,baz=18,slow=11,SNR=148						
DZM				S	**Sn**	**12 34 59.4**	**-2.1**
	40nm,0.4s,baz=326,slow=23,SNR=1.5						
ONTNC	**Ouen Toro**	**6.87**	**191**		**Pn**	**12 33 53.5**	**+3.3**
ONTNC	**Ouen Toro**	**6.87**	**191**	P	**Pn**	**12 33 53.5**	**+3.3**
OUENC	**Ouen Island, N**	**6.92**	**188**		**Pn**	**12 33 54.2**	**+3.3**
OUENC	**Ouen Island, N**	**6.92**	**188**	P	**Pn**	**12 33 54.0**	**+3.2**
PINNC	**Pines Island,**	**7.06**	**183**		**Pn**	**12 33 55.6**	**+2.9**
PINNC	**Pines Island,**	**7.06**	**183**	P	**Pn**	**12 33 55.4**	**+2.7**
HNR	**Honiara**	**9.79**	**307**	LR	LR	12 37 38.9	
	comp=Z,1μm,18.6s,baz=143,slow=34						
EIDS	**Eidsvold**	**18.48**	**235**	P	**P**	**12 36 22.2**	**+1.9**
EIDS				IAmb	IAmb	12 36 22.9	
	comp=Z,23nm,0.7s						
ARMA	**Armidale**	**20.99**	**222**	P	**P**	**12 36 48.8**	**+1.3**
ARMA				IAmb	IAmb	12 36 51.1	
	comp=Z,20nm,1.0s						
CTA	**Charters Tower**	**21.04**	**254**	P	**P**	**12 36 47.3**	**-0.7**
	comp=Z,10nm,0.8s,baz=90,slow=10,SNR=13						
	comp=Z,10nm,0.8s						
CTAO	**Charters Tower**	**21.04**	**254**	P	**P**	**12 36 48.7**	**+0.7**
COEN	**Coen**	**23.89**	**271**	P	**P**	**12 37 16.5**	**-0.2**
COEN				IAmb	IAmb	12 37 18.3	
	comp=Z,12nm,0.8s						
INZ	**Inchbonnie**	**27.29**	**174**	P	**P**	**12 37 46.2**	**-0.8**
STKA	**Stephens Creek**	**28.91**	**231**	P	**P**	**12 38 01.9**	**+0.3**
STKA	**Stephens Creek**	**28.91**	**231**	P	**P**	**12 38 01.8**	**+0.1**
	comp=Z,6.6nm,0.6s,baz=41,slow=8.1,SNR=17						
	comp=Z,6.6nm,0.6s						
WR0	**Warramunga Arr**	**31.98**	**257**	P	**P**	**12 38 27.3**	**-1.6**
WB0	**Warramunga Arr**	**32.11**	**258**	P	**P**	**12 38 28.5**	**-1.5**
WB0				IAmb	IAmb	12 38 29.0	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**32.16**	**257**	P	**P**	**12 38 28.9**	**-1.6**
WB2				IAmb	IAmb	12 38 29.5	
	comp=Z,6.6nm,0.8s						
WRAB	**Tennant Creek**	**32.16**	**257**	P	**P**	**12 38 28.8**	**-1.6**
WRAB				IAmb	IAmb	12 38 29.4	
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**32.17**	**257**	P	**P**	**12 38 28.5**	**-2.1**
WRA	**Warramunga Arr**	**32.17**	**257**	P	**P**	**12 38 28.6**	**-1.9**
	comp=Z,5.3nm,0.6s,baz=85,slow=8.9,SNR=34						
	comp=Z,5.3nm,0.6s						
AS31	**Alice Springs**	**32.91**	**250**	P	**P**	**12 38 35.8**	**-1.2**
AS31				IAmb	IAmb	12 38 36.9	
	comp=Z,7.3nm,0.9s						
ASAR	**Alice Springs**	**32.91**	**250**	P	**P**	**12 38 35.7**	**-1.4**
ASAR	**Alice Springs**	**32.91**	**250**	P	**P**	**12 38 35.5**	**-1.5**
	comp=Z,12nm,0.5s,baz=79,slow=8.9,SNR=219						
ASAR				PcP	**PcP**	**12 41 19.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=78,slow=2.2,SNR=1.7						
	comp=Z,12nm,0.5s						
BBOO	**Buckleboo**	**33.53**	**233**	P	**P**	**12 38 42.0**	**-0.3**
BBOO				IAmb	IAmb	12 38 42.9	
	comp=Z,12nm,0.7s						
FAKI	**Fak Fak**	**37.21**	**286**	P	**P**	**12 39 14.0**	**0.0**
FORT	**Forrest**	**39.37**	**240**	P	**P**	**12 39 31.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**40.41**	**260**	P	**P**	**12 39 39.9**	**-0.8**
FITZ				IAmb	IAmb	12 39 40.7	
	comp=Z,8.3nm,0.6s						
PSA00	**Pilbara Seismi**	**45.75**	**255**	P	**P**	**12 40 23.1**	**-0.6**
PSA00				IAmb	IAmb	12 40 41.7	
	comp=Z,17nm,1.1s						
MORW	**Morawa**	**49.42**	**245**	P	**P**	**12 40 51.5**	**-0.5**
UGM	**Wanagama**	**56.49**	**271**	P	**P**	**12 41 43.8**	**-0.4**
QSPA	**South Pole Qui**	**74.51**	**180**	P	**P**	**12 43 40.1**	**+0.6**
QSPA	**South Pole Qui**	**74.51**	**180**	P	**P**	**12 43 39.9**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=346,slow=0.7,SNR=11						
	comp=Z,2.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.77**	**294**	P	**P**	**12 43 47.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=132,slow=5.0,SNR=1.5						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**83.45**	**323**	P	**P**	**12 44 29.0**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=139,slow=8.2,SNR=5.8						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**87.11**	**18**	P	**P**	**12 44 45.4**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=232,slow=4.7,SNR=5.7						
	comp=Z,0.2nm,0.6s						
SNAA	**Sanae**	**92.79**	**183**	LR	LR	13 25 07.8	
	comp=Z,43nm,18.2s,baz=357,slow=34						
YKA	**Yellowknife Ar**	**98.00**	**27**	P	**P**	**12 45 37.3**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=249,slow=5.2,SNR=4.2						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**121.15**	**345**	PKP	**PKPdf**	**12 50 52.6**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=89,slow=2.2,SNR=7.9						

*IDC **20** 12:33:49.6±3.0, 36.25N×67.99E, h0km, mb3.6/6, mbtmp3.6/10, ML3.1/4, Error ellipse: s-maj=53.2km s-min=18.0km az=162.0*
ISC 20 12:33:55.9±1.9, 36.6N±0.2×67.8E±0.1, h30km, n12, σ1§37/15, mb3.8/4, 1C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.84**	**17**	⇓Pn	**Pn**	**12 35 35.2**	**+1.1**
	0.4nm,0.2s,baz=198,slow=16,SNR=3.7						
KK31				⇓Sn	**Sn**	**12 36 50.2**	**-0.8**
	5.4nm,0.7s						
KK31				⇑Lg	Lg	12 37 23.0	
	9.0nm,0.7s,baz=196,slow=26,SNR=5.8						
GEYT	**Alibeck**	**7.86**	**283**	Pn	**Pn**	**12 35 47.3**	**-0.9**
	0.4nm,0.3s,baz=108,slow=14,SNR=1.8						
GEYT				Sn	**Sn**	**12 37 15.4**	**-0.8**
	1.0nm,0.3s,baz=100,slow=24,SNR=2.4						
GEYT				Lg	Lg	12 38 05.8	
	baz=126,slow=31						
	0.8nm,0.3s						
AAK	**Ala-Archa**	**7.95**	**38**	Pn	**Pn**	**12 35 51.0**	**+1.5**
	0.4nm,0.3s,baz=217,slow=5.1,SNR=1.4						
AAK				Sn	**Sn**	**12 37 19.5**	**+1.1**
	0.2nm,0.3s,baz=118,slow=20,SNR=2.0						
	1.9nm,0.5s						
MKAR	**Makanchi Array**	**14.84**	**42**	Pn	**Pn**	**12 37 21.2**	**-2.4**
	baz=228,slow=13,SNR=5.5						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**16.02**	**25**	Pn	**Pn**	**12 37 39.0**	**+0.2**
	0.1nm,0.3s,baz=213,slow=10,SNR=8.8						
BVAR	**Borovoye Array**	**16.55**	**5**	Pn	**Pn**	**12 37 43.1**	**-2.5**
	0.1nm,0.3s,baz=178,slow=8.7,SNR=6.1						
	0.7nm,0.4s						
KBZ	**Khabaz**	**20.31**	**298**	P	**P**	**12 38 30.4**	**+1.2**
	0.4nm,0.4s,baz=108,slow=10,SNR=1.8						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**21.00**	**29**	P	**P**	**12 38 36.4**	**-0.2**
	0.5nm,0.4s,baz=223,slow=10,SNR=4.4						
	0.5nm,0.4s						
BELG	**Belogornoye**	**21.29**	**324**	P	**P**	**12 38 40.6**	**+0.9**
	3.9nm,0.7s,baz=127,slow=5.1,SNR=3.8						
	3.9nm,0.7s						
FINES	**FINESS Array B**	**36.02**	**327**	P	**P**	**12 40 55.2**	**+1.2**
	0.7nm,0.8s,baz=152,slow=9.5,SNR=1.4						
	0.7nm,0.8s						
SCHQ	**Schefferville**	**81.00**	**335**	P	**P**	**12 46 07.4**	**0.0**
	0.6nm,0.3s,baz=90,slow=4.0,SNR=1.8						
	0.6nm,0.3s						
YKA	**Yellowknife Ar**	**81.26**	**1**	P	**P**	**12 46 08.9**	**+0.2**
	0.2nm,0.6s,baz=351,slow=5.6,SNR=5.8						
	0.2nm,0.6s						

*JMA **20** 12:48:14.7±0.2, 28.2N×142.2E, h472km, MV3.7/23, W OFF OGASAWARA*
*IDC **20** 12:48:34.8±8.7, 27.99N×138.94E, h634km±97km, mb2.7/5, mbtmp3.7/6, Error ellipse: s-maj=131.7km s-min=17.7km az=72.0*
ISC 20 12:48:16.3±1.1, 28.57N±0.10×141.7E±0.3, h500km, n16, σ2§69/19, mb3.3/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.54**	**163**	P	**P**	**12 49 17.6**	**-1.8**
CBIJ				*eS*	**S**	**12 50 07.9**	**-2.6**
JHH2	**Haha-jima-NKT2**	**1.98**	**167**	*eP*	**P**	**12 49 19.4**	**-2.0**
JHH2				*eS*	**S**	**12 50 09.8**	**-4.3**
JHJ2	**Mitsune**	**4.80**	**341**	*eP*	**P**	**12 49 39.2**	**-2.1**
BSO1	**Boso 1**	**6.09**	**355**	*eP*	**P**	**12 49 55.0**	**+2.3**
BSO3	**Boso 3**	**6.29**	**351**	*eS*	**S**	**12 51 13.6**	**-2.2**
JOD2	**Odawara 2**	**7.02**	**342**	*eP*	**P**	**12 50 01.6**	**-0.9**
JYT	**Yasato**	**7.74**	**351**	*eP*	**P**	**12 50 10.7**	**+0.9**
JRY	**Ryogami san**	**7.79**	**343**	*eP*	**P**	**12 50 10.1**	**-0.3**
JAG	**Ashikaga**	**8.05**	**347**	P	**P**	**12 50 11.9**	**-1.2**
JAG				*eS*	**S**	**12 51 44.1**	**-4.8**
JHO	**Hitachi**	**8.07**	**354**	P	**P**	**12 50 15.1**	**+1.9**
KSRS	**Korea Array**	**14.53**	**311**	P	**P**	**12 51 24.8**	**+3.4**
	0.5nm,0.5s,baz=142,slow=8.2,SNR=5.4						
MKAR	**Makanchi Array**	**49.20**	**309**	P	**P**	**12 56 16.1**	**-1.9**
	0.4nm,0.5s,baz=91,slow=8.8,SNR=7.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**51.69**	**314**	P	**P**	**12 56 35.3**	**-0.8**
	0.6nm,0.4s,baz=93,slow=7.2,SNR=10						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**52.47**	**189**	P	**P**	**12 56 44.6**	**+2.4**
	0.3nm,0.9s,baz=2.3,slow=4.9,SNR=9.0						
	0.3nm,0.9s						
BVAR	**Borovoye Array**	**56.66**	**317**	P	**P**	**12 57 11.6**	**+0.3**
	1.2nm,0.4s,baz=86,slow=7.1,SNR=8.6						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**76.43**	**334**	P	**P**	**12 59 17.6**	**+4.0**
	0.9nm,0.7s,baz=50,slow=4.5,SNR=5.4						
	0.9nm,0.7s						

*IDC **20** 12:52:43.1±1.0, 52.2N×172.89E, h0km, mb3.5/9, mbtmp3.5/10, ML2.1/1, Error ellipse: s-maj=32.0km s-min=8.9km az=13.0*
*NEIC **20** 12:52:45.3±1.5, 52.5N±0.2×173.11E±0.07, h21km±9km, mb4.0/67, Error ellipse: s-maj=36.4km s-min=3.6km az=172.0*
ISC 20 12:52:46.9±0.9, 52.7N±0.2×172.98E±0.06, h31km, n92, σ1§11/87, mb4.0/27, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**0.68**	**83**	Pg	**Pb**	**12 52 58.1**	**-2.2**
	798nm,0.3s,baz=229,slow=15,SNR=850						
SHEM				Lg	Lg	12 53 08.0	
	1μm,0.3s,baz=248,slow=21,SNR=34						
PEA0B	**Petropavlovsk-**	**9.26**	**279**	Pn	**Pn**	**12 54 57.7**	**-0.4**
PETK	**Petropavlovsk-**	**9.26**	**279**	Pn	**Pn**	**12 54 58.9**	**+0.8**
PETK	**Petropavlovsk-**	**9.26**	**279**	Pn	**Pn**	**12 54 58.0**	**-0.1**
	0.1nm,0.3s,baz=104,slow=17,SNR=1.3						
PETK				Sn	**Sn**	**12 56 36.0**	**-5.0**
	0.1nm,0.3s,baz=92,slow=18,SNR=1.8						
	1.0nm,0.5s						
L14K	**Kuka Creek**	**15.77**	**47**		**P**	**12 56 28.8**	**-1.1**
L14K				IAmb	IAmb	12 56 41.7	
	comp=Z,9.4nm,1.0s						
M14K	**Bethel**	**15.88**	**49**		**P**	**12 56 29.9**	**-1.3**
N15K	**Kwethluk River**	**16.59**	**52**	Pn	**Pn**	**12 56 35.3**	**-1.6**
CHGN	**Chignik**	**16.96**	**66**	Pn	**Pn**	**12 56 40.6**	**-0.9**
F15K	**North Star Dit**	**17.25**	**32**		**P**	**12 56 47.3**	**+1.0**
F15K				IAmb	IAmb	12 56 53.5	
	comp=Z,22nm,1.3s						
L16K	**Owhat River**	**17.33**	**48**		**Pn**	**12 56 46.4**	**+0.2**
L16K				IAmb	IAmb	12 56 54.5	
	comp=Z,13nm,1.4s						
M16K	**Timber Creek**	**17.36**	**50**		**P**	**12 56 47.5**	**-0.2**
J16K	**Anvik River**	**17.45**	**42**		**P**	**12 56 50.3**	**+1.7**
J16K				IAmb	IAmb	12 56 59.5	
	comp=Z,24nm,1.5s						
I17K	**Unalakleet**	**17.68**	**40**	Pn	**Pn**	**12 56 49.6**	**-0.7**
G16K	**Koyuk River**	**17.83**	**35**		**P**	**12 56 54.2**	**+1.5**
G16K				IAmb	IAmb	12 57 00.5	
	comp=Z,15nm,1.3s						
N17K	**Nushagak Hills**	**18.08**	**52**		**Pn**	**12 56 55.0**	**-0.4**
N17K				IAmb	IAmb	12 57 04.3	
	comp=Z,18nm,1.4s						
M17K	**Holitna River**	**18.17**	**50**	Pn	**Pn**	**12 56 54.3**	**-2.2**
M17K				IAmb	IAmb	12 57 16.8	
	comp=Z,12nm,1.3s						
N18K	**Kilae Creek**	**18.74**	**52**	P	**P**	**12 57 02.4**	**-0.4**
N18K				IAmb	IAmb	12 57 25.3	
	comp=Z,13nm,1.4s						
L18K	**Granite Mounta**	**18.74**	**47**	P	**Pn**	**12 57 03.8**	**+0.4**
L18K				IAmb	IAmb	12 57 09.1	
	comp=Z,9.9nm,1.2s						
P18K	**Big Mountain,**	**18.86**	**56**		**P**	**12 57 04.0**	**-0.2**
SVW2	**Sparrevohn**	**18.97**	**51**	P	**P**	**12 57 05.2**	**-0.2**
SVW2				IAmb	IAmb	12 57 11.7	
	comp=Z,13nm,1.5s						
H18K	**Honhosa River**	**19.15**	**38**	P	**P**	**12 57 07.3**	**0.0**
TTA	**Tatalina**	**19.25**	**46**	P	**P**	**12 57 08.8**	**+0.2**
G18K	**Tagagawik**	**19.40**	**36**	P	**Pn**	**12 57 11.0**	**-0.3**
G18K				IAmb	IAmb	12 57 24.3	
	comp=Z,14nm,1.4s						
N19K	**Bonanza Creek**	**19.44**	**52**	P	**P**	**12 57 10.8**	**+0.2**
N19K				IAmb	IAmb	12 57 16.0	
	comp=Z,10nm,1.2s						
L19K	**White Mountain**	**19.56**	**48**	P	**Pn**	**12 57 13.1**	**-0.2**
L19K				IAmb	IAmb	12 57 29.7	
	comp=Z,9.9nm,1.5s						
E18K	**Tukpahlearik C**	**19.57**	**31**	P	**P**	**12 57 12.4**	**+0.6**
Q19K	**Cape Douglas,**	**19.63**	**58**	P	**Pn**	**12 57 13.7**	**-0.5**
M19K	**Big River Lodg**	**19.71**	**49**	P	**P**	**12 57 13.6**	**+0.2**
OHAK	**Old Harbor**	**19.77**	**63**	P	**P**	**12 57 13.0**	**-1.1**
KDAK	**Kodiak Island**	**20.15**	**62**	P	**P**	**12 57 17.3**	**-0.9**
KDAK	**Kodiak Island**	**20.15**	**62**	P	**P**	**12 57 18.0**	**-0.2**
	comp=Z,4.4nm,1.0s,baz=279,slow=13,SNR=1.7						
	comp=Z,4.4nm,1.0s						

K20K	**Telida**	**20.23**	**45**	P	**P**	**12 57 19.5**	**+0.5**
J20K	**Nowinta River**	**20.44**	**43**	P	**P**	**12 57 21.2**	**-0.1**
E19K	**Redstone River**	**20.68**	**33**	P	**P**	**12 57 25.1**	**+1.2**
E19K				IAmb	IAmb	12 57 32.8	
	comp=Z,9.5nm,1.2s						
CNPM	**China Poot**	**20.90**	**57**	P	**P**	**12 57 25.5**	**-0.9**
CNPM				IAmb	IAmb	12 57 31.4	
	comp=Z,14nm,1.2s						
D19K	**Kuna River**	**20.96**	**30**	P	**P**	**12 57 28.5**	**+1.5**
D19K				IAmb	IAmb	12 57 33.7	
	comp=Z,9.8nm,1.2s						
BRLK	**Bradley Lake**	**21.09**	**56**	P	**P**	**12 57 26.7**	**-1.8**
IMAR	**Indian Mountai**	**21.24**	**38**	P	**P**	**12 57 30.0**	**+0.1**
SUA	**Susitna One**	**21.34**	**51**	P	**P**	**12 57 30.2**	**-0.9**
SUA				IAmb	IAmb	12 57 37.9	
	comp=Z,6.3nm,1.1s						
H21K	**Melozitna Rive**	**21.48**	**40**	P	**P**	**12 57 34.9**	**+2.3**
F21K	**Alatna River**	**21.85**	**35**	P	**P**	**12 57 36.7**	**+0.2**
B20K	**Meade River**	**22.12**	**27**		**P**	**12 57 40.6**	**+1.2**
B20K				IAmb	IAmb	12 57 47.6	
	comp=Z,4.7nm,0.8s						
GHO	**Glory Hole Cre**	**22.24**	**51**	P	**P**	**12 57 41.2**	**+0.4**
KNK	**Knik Glacier**	**22.42**	**52**	P	**P**	**12 57 42.0**	**-0.7**
KNK				IAmb	IAmb	12 57 59.0	
	comp=Z,6.9nm,1.1s						
RND	**Reindeer**	**22.52**	**47**	P	**P**	**12 57 43.4**	**-0.4**
RND				IAmb	IAmb	12 58 05.5	
	comp=Z,6.3nm,1.3s						
SML	**Sawmill**	**22.52**	**51**		**P**	**12 57 44.0**	**+0.2**
SML				IAmb	IAmb	12 57 50.6	
	comp=Z,7.1nm,0.8s						
B21K	**Ikpikpuk River**	**22.64**	**29**		**P**	**12 57 46.1**	**+1.2**
I23K	**Minto, Yukon-K**	**22.70**	**42**	P	**P**	**12 57 46.1**	**+0.6**
I23K				IAmb	IAmb	12 57 58.3	
	comp=Z,5.9nm,1.4s						
E22K	**Anaktuvuk Pass**	**22.82**	**34**	P	**P**	**12 57 47.6**	**+0.8**
E22K				IAmb	IAmb	12 57 55.5	
	comp=Z,11nm,1.5s						
G23K	**Bananza Creek**	**22.91**	**38**	P	**P**	**12 57 48.4**	**+0.6**
G23K				IAmb	IAmb	12 57 54.6	
	comp=Z,6.9nm,1.4s						
SCM	**Sheep Creek Mo**	**23.00**	**51**	P	**P**	**12 57 48.8**	**0.0**
SCM				IAmb	IAmb	12 57 53.8	
	comp=Z,6.1nm,0.8s						
WRH	**Wood River Hil**	**23.06**	**44**	P	**P**	**12 57 50.3**	**+1.0**
MDM	**Murphy Dome**	**23.11**	**43**	P	**P**	**12 57 50.8**	**+0.9**
CCB	**Clear Creek Bu**	**23.22**	**44**	P	**P**	**12 57 51.6**	**+0.7**
M24K	**Tolsona, Glenn**	**23.57**	**50**	P	**P**	**12 57 53.3**	**-1.1**
M24K				IAmb	IAmb	12 58 01.7	
	comp=Z,5.6nm,0.9s						
ILAR	**Eielson Array**	**23.63**	**44**	P	**P**	**12 57 54.5**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=249,slow=7.9,SNR=9.9						
	comp=Z,0.7nm,0.7s						
TOLK	**Toolik Lake Re**	**23.78**	**34**	P	**P**	**12 57 56.7**	**+0.3**
TOLK				IAmb	IAmb	12 58 22.8	
	comp=Z,5.3nm,1.3s						
F24K	**Squaw Lake**	**23.97**	**37**	P	**P**	**12 57 58.9**	**+0.8**
N25K	**Chitina, Valde**	**24.28**	**52**	P	**P**	**12 58 01.9**	**+0.8**
N25K				IAmb	IAmb	12 58 21.6	
	comp=Z,4.9nm,1.1s						
GLB	**Gilahina Butte**	**24.65**	**52**	P	**P**	**12 58 04.5**	**0.0**
BERG	**Berg Lake**	**24.71**	**55**	P	**P**	**12 58 04.8**	**-0.1**
VRDI	**Verde Repeater**	**24.82**	**53**	P	**P**	**12 58 05.0**	**-1.2**
VRDI				IAmb	IAmb	12 58 11.8	
	comp=Z,3.0nm,0.9s						
CRQM	**Cirque**	**24.98**	**54**	P	**P**	**12 58 04.4**	**-3.2**
E25K	**Arctic Village**	**24.99**	**36**	P	**P**	**12 58 07.1**	**-0.3**
E25K				IAmb	IAmb	12 58 09.9	
	comp=Z,5.9nm,1.2s						
MCARA	**McCarthy VSAT**	**25.03**	**52**	P	**P**	**12 58 07.6**	**-0.2**
TGL	**Tana Glacier**	**25.13**	**54**	P	**P**	**12 58 08.5**	**-0.3**
BMAR	**Burnt Mountain**	**25.16**	**38**	P	**P**	**12 58 09.8**	**+0.8**
MESA	**MESA**	**25.59**	**55**	P	**P**	**12 58 13.6**	**+0.5**
GRNC	**Granite Creek**	**25.66**	**54**	P	**P**	**12 58 13.7**	**-0.1**
GRNC				IAmb	IAmb	12 58 18.6	
	comp=Z,3.4nm,0.7s						
BARN	**Barnard Glacie**	**25.69**	**53**	P	**P**	**12 58 15.2**	**+1.1**
BARN				IAmb	IAmb	12 58 19.1	
	comp=Z,2.9nm,0.6s						
CTGM	**Chitina Glacie**	**25.86**	**53**	P	**P**	**12 58 14.8**	**-0.7**
CTGM				IAmb	IAmb	12 58 20.8	
	comp=Z,3.8nm,0.8s						
TABL	**Table Mountain**	**25.98**	**54**	P	**P**	**12 58 17.2**	**+0.6**
D27M	**Malcolm River**	**26.92**	**35**	P	**P**	**12 58 25.3**	**+0.4**
C36M	**Paulatuk**	**32.89**	**36**	P	**P**	**12 59 18.2**	**+0.7**
C36M				IAmb	IAmb	12 59 24.0	
	comp=Z,2.4nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**33.20**	**191**	T	T	13 34 32.9	
	baz=6.8,slow=76,SNR=106						
H11N3	**WAKE ISLAND Hy**	**33.21**	**190**	T	T	13 34 33.8	
	baz=6.8,slow=76,SNR=134						
H11N1	**WAKE ISLAND Hy**	**33.22**	**191**	T	T	13 34 32.0	
	baz=6.8,slow=76,SNR=128						
H11S1	**WAKE ISLAND H

QIR1	Qir	1.50	153	Pg		Pg	12 53 44.6	-0.3
DSBU	Dashti - Bushe	1.71	212	Pg		Pg	12 53 49.1	+0.2
DSBU				Sg		Sg	12 54 14.8	+3.7
JHRM	Jahrom	1.74	139	Pg		Pg	12 53 49.3	-0.2
ABEH	Behbahan	1.92	294	Pn		Pb	12 53 50.5	-0.6
IRAM	Ramesheh	1.98	3	Pn		Pn	12 53 50.4	+0.6
IBRJ	Brojen	2.25	337	Pn		Pn	12 53 55.2	+1.5
ISAD	Sadrabad	2.41	30	Pn		Pn	12 53 57.4	+1.7
IMEH	Mehriz	2.54	52	Pn		Pn	12 53 59.2	+1.5
IGAR	Gharneh	2.58	356	Pn		Pn	12 53 59.4	+1.3
ZNGN	Zangian	2.59	332	Pn		Pn	12 53 59.5	+1.2
JHBN	Jahan bin	2.77	330	Pn		Pn	12 54 02.2	+1.4
ICHK	Chekchek	3.02	37	Pn		Pn	12 54 05.4	+1.2
IZEF	Zefreh	3.06	1	Pn		Pn	12 54 06.1	+1.3
IPIR	Pirpir	3.09	338	Pn		Pn	12 54 06.7	+1.5
IBAF	Bafgh	3.33	57	Pn		Pn	12 54 09.8	+1.4
ANAR	Anarak	3.57	20	Pn		Pn	12 54 13.1	+1.4
KHGB	Koh Gabri	3.68	80	Pn		Pn	12 54 14.9	+1.7
ZRDN	Zarand Kerman	3.85	72	Pn		Pn	12 54 16.5	+0.9
QAMS	Qamsar	3.97	349	Pn		Pn	12 54 19.0	+1.7
KRSH	Karshahi	4.13	358	Pn		Pn	12 54 20.2	+0.8
ISFB	Sefidab	4.51	360	Pn		Pn	12 54 25.9	+1.3
TPRV	Parvadeh(Tabas	4.94	49	Pn		Pn	12 54 32.5	+2.1
IQOM	Qom	5.10	349	Pn		Pn	12 54 33.9	+1.1
IVRN	Varamin	5.17	355	Pn		Pn	12 54 34.9	+1.3
TKDS	Koohdasht(Taba	5.59	46	Pn		Pn	12 54 40.9	+1.5
UOSS	Minazif	5.99	143	Pn		Pn	12 54 44.9	+0.2
UOSS				Sn		Sn	12 55 50.3	-3.0
RAYN	Ar Rayn	8.72	226			Pn	12 55 22.3	-0.1
GEYT	Alibeck	9.42	29	Pn		Pn	12 55 31.5	-0.4
MMAI	Mount Meron Ar 2.4nm,0.3s,baz=83,slow=16,SNR=2.4	14.76	287	Pn		P	12 56 50.0	-1.0
KK31	Karatay Array	19.71	43	P		P	12 57 46.6	+1.0
KKAR	Karatay Array	19.71	43	P		P	12 57 47.2	+1.6
ABKAR	Akbulak array	20.26	15	P		P	12 57 51.9	+0.3
BVAR	Borovoye Array 1.6nm,0.8s,baz=217,slow=7.0,SNR=3.7 1.6nm,0.8s	26.71	25	P		P	12 58 55.1	-0.3
KURBB	Kurchatov Arra 0.6nm,0.8s,baz=239,slow=9.4,SNR=3.9 0.6nm,0.8s	28.61	36	P		P	12 59 11.4	-1.0
KURK	Kurchatov	28.71	36	P		P	12 59 14.9	+1.6
MKAR	Makanchi Array	28.77	46	P		P	12 59 14.9	+1.0
MKAR	Makanchi Array 0.3nm,0.7s,baz=239,slow=7.2,SNR=5.8 0.3nm,0.7s	28.77	46	P		P	12 59 13.4	-0.5
ZAA0	Zalesovo Array	33.68	35	P		P	12 59 57.5	+0.5
ZAA0				IAmb	IAmb	IAmb	13 00 01.4	
	comp=Z,1.8nm,0.8s							
ZALV	Zalesovo Beam	33.68	35	P		P	12 59 56.4	-0.6
ZALV	Zalesovo Beam comp=Z,1.3nm,0.6s,baz=246,slow=9.8,SNR=7.3 comp=Z,1.3nm,0.6s	33.68	35	P		P	12 59 56.1	-0.9
FIA1	FINESS Array S	36.04	339	P		P	13 00 16.0	-1.2
FINES	FINESS Array B	36.04	339	P		P	13 00 16.3	-1.0
FINES	FINESS Array B comp=Z,0.6nm,0.3s,baz=141,slow=9.0,SNR=7.5 comp=Z,0.6nm,0.3s	36.04	339	P		P	13 00 16.1	-1.1
HFS	Hagfors comp=Z,0.7nm,0.4s,baz=119,slow=12,SNR=2.2 comp=Z,0.7nm,0.4s	39.79	331	P		P	13 00 47.7	-1.3
NC405	NORSAR Array S	41.13	331	P		P	13 00 58.7	-1.4
NC405				IAmb	IAmb	IAmb	13 01 18.5	
	comp=Z,14nm,1.4s							
TORD	Torodi Ar. Bea comp=Z,1.7nm,0.4s,baz=54,slow=7.7,SNR=1.5 comp=Z,1.7nm,0.4s	49.51	262	P		P	13 02 06.6	-0.5
BOSA	Boshof	63.59	206	P		P	13 03 47.8	+0.6
B20K	Meade River	78.20	10	P		P	13 05 15.4	+0.1
B20K				IAmb	IAmb	IAmb	13 05 28.7	
	comp=Z,5.0nm,1.4s							
A36M	Sachs Harbour	78.45	359	P		P	13 05 16.0	-0.7
B21K	Ikpikpuk River	78.93	9	P		P	13 05 18.0	-1.4
B21K				IAmb	IAmb	IAmb	13 05 46.7	
	comp=Z,5.3nm,1.4s							
C36M	Paulatuk	81.08	359	P		P	13 05 29.8	-1.1
ANM	Nome	81.42	15	P		P	13 05 32.3	-0.6
G19K	Purcell Mounta	81.72	12	P		P	13 05 33.9	-0.6
G19K				IAmb	IAmb	IAmb	13 05 34.2	
	comp=Z,3.6nm,1.1s							
E29M	Blow River	81.79	4	P		P	13 05 34.4	-0.4
E29M				IAmb	IAmb	IAmb	13 05 50.6	
	comp=Z,2.3nm,1.2s							
F31M	Tsiigehtchic	82.93	2	P		P	13 05 40.3	-0.4
F31M				IAmb	IAmb	IAmb	13 05 44.1	
	comp=Z,3.3nm,1.0s							
G30M	tAoh Zraii Nji	83.28	3	P		P	13 05 42.0	-0.7
G30M				IAmb	IAmb	IAmb	13 05 55.1	
	comp=Z,4.8nm,1.4s							
G31M	Satah River	83.42	3	P		P	13 05 42.5	-0.8
I30M	Mount Dempster	85.02	4	P		P	13 05 51.1	-0.6
I30M				IAmb	IAmb	IAmb	13 06 18.0	
	comp=Z,3.4nm,1.4s							
M14K	Bethel	85.51	16	P		P	13 05 55.0	+1.0
M19K	Big River Lodg	86.08	12	P		P	13 05 57.8	+1.0
M19K				IAmb	IAmb	IAmb	13 06 10.6	
	comp=Z,6.4nm,1.4s							
K29M	Barlow Dome	86.33	4	P		P	13 05 58.2	+0.1
K29M				IAmb	IAmb	IAmb	13 06 25.9	
	comp=Z,4.1nm,1.4s							
BCAR	Beaver Creek A	86.75	6	P		P	13 06 00.4	+0.2

*MEX **20** 12:58:52.6±0.6, 14°.62N×92°.30W, h76km±13km, MD3.9*
*GCG **20** 12:58:55.9±0.4, 15°.21N×91°.94W, h35km±829km, MD3.6*
ISC 20 12:58:54.6±1.6, 14°.74N±0°.09×92°.29W±0°.07, h59km±9km, n12, σ1s07/21, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.17	8	eP	Pn	12 59 03.1	-0.8
THIG				iS	Sn	12 59 12.0	+1.5
PATR	El Naranjo	0.38	8	eP	Pn	12 59 04.5	-1.2
PATR				iS	Sn	12 59 14.2	+0.6
CHUJ	Union Juarez	0.39	27	eP	Pn	12 59 04.9	-0.8
CHUJ				iS	Sn	12 59 14.6	+0.8
PAVE	Pavencul	0.46	14	iP	Pn	12 59 05.9	-0.5
PAVE				iS	Sn	12 59 16.3	+1.3
STG3	Santiaguito 3,	0.70	92	eP	Pn	12 59 08.6	-0.4
STG3				eS	Sn	12 59 18.6	-0.8
SULM	Suchitepequez,	0.82	122	eS	Sn	12 59 23.3	+1.3
PCIG		1.31	317	eP	Pn	12 59 15.4	-1.4
PCIG				iS	Sn	12 59 32.5	-0.8
FUG	Fuego 3	1.43	102	eP	Pn	12 59 18.3	-0.2
FUG				eS	Sn	12 59 36.8	+0.3
CCIG	Comitan	1.54	5	iP	Pn	12 59 21.5	+1.5
CCIG				iS	Sn	12 59 37.7	-1.4
PCG	Pacaya	1.67	102	eS	Sn	12 59 41.6	-0.6
TGIG		2.18	339	iS	Sn	12 59 54.0	-0.4
CMIG	Matias Romero	3.42	313	iP	Pn	12 59 46.7	+1.2
CMIG				iS	Sn	13 00 25.2	+0.4

*SOME **20** 13:18:22.9, 40°.83N×69°.82E, h5km*
*KRNET **20** 13:18:24.2±0.1, 41°.03N×69°.67E, h13km, mb3.1*
*NNC **20** 13:18:24.7±3.2, 40°.89N×69°.69E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=22.4km s-min=12.6km az=27.0*
*ISU **20** 13:18:25.1, 40°.96N×69°.59E, h6km*
ISC 20 13:18:25.4±1.2, 41°.05N±0°.02×69°.66E±0°.02, h0km±10km, n38, σ2s06/68, 17C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	Tashkent	0.39	315	P	Pb	13 18 34.3	-0.8
TAS				S	Sb	13 18 41.1	-0.5
YNGY	Yangiyul	0.47	277	P	Pg	13 18 34.6	+0.1
YNGY				S	Sb	13 18 41.6	-2.5
CHRV	Charvak	0.63	21	P	Pn	13 18 40.0	-1.7
CHRV				S	Sn	13 18 51.1	-1.4
TRKS	Terek-Say baz=69	1.22	66	↑eP	Pn	13 18 47.0	-2.8
TRKS				↑eS	Sb	13 19 03.9	-1.8
	baz=69						
CHM	Chimkent 121nm,0.1s	1.27	358	eP	Pg	13 18 52.1	+2.4
CHM				eS	Sn	13 19 12.9	+4.7
	415nm,0.3s						
BTK	Batken baz=38	1.33	138	↑eP	Pn	13 18 49.1	-2.2
BTK				↑eS	Sb	13 19 07.1	-1.8
	baz=38						
KSNS	Kasansay	1.41	85	P	Pg	13 18 53.2	+0.7
KSNS				S	Sg	13 19 14.1	+3.2
NAM	Namangan	1.52	92	P	Pg	13 18 54.8	+0.3
NAM				S	Sg	13 19 17.0	+2.8
CHMI	Chimion	1.62	118	P	Pb	13 18 55.9	-0.3
CHMI				S	Sg	13 19 18.7	+1.2
DZI	Dzhizak	1.68	237	P	Pn	13 18 55.2	-0.8
DZI				S	Sb	13 19 17.7	-1.1
FRG	Fergana	1.75	112	P	Pb	13 18 58.5	0.0
FRG				S	Sg	13 19 23.1	+1.3
BXML	Bakhmal	1.84	223	P	Pg	13 19 00.4	-0.3
BXML				S	Sg	13 19 26.2	+1.6
ARK	Arkit baz=65	1.89	66	↓eP	Pb	13 18 59.6	-1.2
ARK				↓eS	Sb	13 19 25.0	0.0
	baz=65						
KK31	Karatay Array 4.8nm,0.3s,baz=197,slow=15,SNR=87	2.15	17	↓Pn	Pb	13 19 04.8	-0.3
KK31				↓Sn	Sg	13 19 34.3	-0.1
	25nm,0.4s,baz=202,slow=26,SNR=4.1						
KKAR	Karatay Array baz=17	2.15	17	↑eP	Pb	13 19 03.2	-2.0
KKAR				↑eS	Sb	13 19 31.7	-0.7
	baz=17						
DZA	Taraz 73nm,0.1s	2.22	34	eP	Pb	13 19 06.8	+0.3
DZA				eS	Sg	13 19 38.0	+1.1
	138nm,0.3s						
DRK	Karamyk baz=33	2.27	133	↑eP	Pn	13 19 04.7	+0.3
DRK				↑eS	Sb	13 19 34.4	-1.8
	baz=33						
OHH	Osh baz=1.0	2.43	101	↑eP	Pn	13 19 06.7	+0.2
OHH				↑iS	Sn	13 19 38.0	+1.0
	baz=1.0						
ARSB	Arslanbob baz=82	2.53	83	↑eP	Pn	13 19 08.2	+0.4
ARSB				↑eS	Sn	13 19 40.5	+1.2
	baz=82						
MNAS	Manas baz=55	2.57	55	↑eP	Pn	13 19 09.0	+0.6
MNAS				↑eS	Sb	13 19 42.0	-2.6
	baz=55						
MRKS	Merke 7.5nm,0.5s	3.16	56	Pg	Pb	13 19 22.4	-0.1
MRKS				Lg	Lg	13 20 05.1	
	19nm,0.5s						
MRKS	Merke 5.9nm,0.3s	3.16	56	eP	Pb	13 19 22.4	-0.1
MRKS				eS	Sg	13 20 05.2	-1.7
	19nm,0.3s						
EKS2	Erkin-Say baz=61	3.47	61	↓eP	Pn	13 19 22.1	+1.3
EKS2				↓iS	Sn	13 20 03.6	+0.9
	baz=61						
ARLS	Aral baz=75	3.60	75	↓eP	Pn	13 19 23.1	+0.5
ARLS				↓eS	Sn	13 20 06.6	+0.7
	baz=75						
UCH	Uchtor baz=70	3.83	71	↓eP	Pn	13 19 27.2	+1.2
UCH				↓eS	Sn	13 20 12.3	+0.4
	baz=70						
AAK	Ala-Archa baz=64	3.95	65	↑iP	Pn	13 19 28.7	+1.3
AAK				↑iS	Sn	13 20 15.0	+0.6
	baz=64						
TKM2	Tokmak 2 3.1nm,0.8s	4.81	65	↓Pg	Pg	13 19 54.7	-2.9
TKM2				↑Lg	Lg	13 21 00.5	
	5.1nm,0.8s						
DGS	Degeres 4.8nm,0.5s	5.05	62	Pg	Pb	13 19 56.1	+1.5
DGS				Lg	Lg	13 21 03.5	
	9.0nm,0.6s						
DGS	Degeres 4.8nm,0.5s	5.05	62	eP	Pb	13 19 56.1	+1.5
DGS				eS	Sg	13 21 03.5	-4.0
	9.0nm,0.6s						
KST	Kastek 3.8nm,0.8s	5.10	65	Pg	Pb	13 19 58.0	+2.4
KST				Lg	Lg	13 21 05.8	
	11nm,0.6s						
KST	Kastek 3.5nm,0.3s	5.10	65	eP	Pb	13 19 58.0	+2.4
KST				eS	Sg	13 21 05.8	-3.5
	11nm,0.3s						
BTLS	Baital 1.8nm,0.5s	5.12	37	Pg	Pb	13 19 58.8	+3.0
BTLS				Lg	Lg	13 21 07.0	
	4.1nm,0.3s						
BTLS	Baital 1.3nm,0.2s	5.12	37	eP	Pb	13 19 59.7	+3.8
BTLS				eS	Sg	13 21 08.4	-1.6
	6.9nm,0.4s						
MTBS	Maitube 0.8nm,0.3s	5.45	65	Pg	Pb	13 20 03.8	+2.3
MTBS				Lg	Lg	13 21 16.1	
	7.1nm,0.6s						
MTBS	Maitube 0.8nm,0.3s	5.45	65	eP	Pb	13 20 03.8	+2.3
MTBS				eS	Sg	13 21 16.1	-4.4
	7.0nm,0.4s						
KUU	Kurty 4.2nm,0.1s	5.70	58	Pg	Pb	13 20 09.8	+4.1
KUU				Lg	Lg	13 21 26.1	
	6.7nm,0.6s						
KUU	Kurty 4.2nm,0.1s	5.70	58	eP	Pb	13 20 09.8	+4.1
KUU				eS	Sg	13 21 26.1	-2.4
	6.7nm,0.6s						
TNSS	Tian-Shan 1.0nm,0.4s	5.78	68	Pg	Pb	13 20 10.1	+2.8
TNSS				Lg	Lg	13 21 26.9	
	5.4nm,0.6s						

IDC 20 13:19:49.9±297.0, 58°.06N×30°.52E, h0km, Error ellipse: s-maj=122.4km s-min=85.5km az=111.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	3.86	107	I	I	13 46 40.0	
	0.3nm,0.6s,baz=287,slow=336,SNR=2.3						
I37NO	I37NO	12.23	340	I	I	14 25 50.0	
	baz=146,slow=328,SNR=1.7						
I26DE	FREYUNG INFRAS	13.57	234	I	I	14 48 00.0	
	baz=41,slow=330,SNR=1.5						
I46RU	ZALESOVO INFRA	29.94	74	I	I	16 20 00.0	
	baz=299,slow=331,SNR=1.3						

*IDC **20** 13:43:44.1±1.2, 15°.81N×121°.36E, h0km, mb3.3/6, mbtmp3.3/6, Error ellipse: s-maj=33.1km s-min=14.4km az=87.0*
ISC 20 13:43:49.1±1.1, 15°.8N±0°.1×121°.3E±0°.2, h35km, n10, σ0s65/7, mb3.2/6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	1.69	192	Pg	Pn	13 44 15.5	-0.7
	84nm,0.3s,baz=347,slow=19,SNR=2.1						
TGY				Lg	Lg	13 44 39.6	
	158nm,0.3s,baz=29,slow=19,SNR=2.3						
CMAR	Chiang Mai Arr	21.52	280	P	P	13 48 36.1	+0.7
	0.3nm,0.4s,baz=88,slow=10.0,SNR=1.6						
	0.3nm,0.4s						
SONM	Songino Array	34.27	342	P	P	13 50 31.3	-0.7
	0.1nm,0.5s,baz=166,slow=8.4,SNR=1.6						
	0.1nm,0.5s						
WRA	Warramunga Arr	37.73	160	P	P	13 51 02.1	+0.4
	0.5nm,0.8s,baz=337,slow=9.4,SNR=3.2						
	0.5nm,0.8s						
ASAR	Alice Springs	41.08	162	P	P	13 51 30.1	+0.4
	0.6nm,0.8s,baz=338,slow=6.8,SNR=7.2						
	0.6nm,0.8s						
H11S3	WAKE ISLAND Hy	43.39	80	T	T	14 38 09.6	
	baz=274,slow=74,SNR=38						
H11S1	WAKE ISLAND Hy	43.40	80	T	T	14 38 10.3	
	baz=274,slow=74,SNR=19						
H11S2	WAKE ISLAND Hy	43.40	80	T	T	14 38 10.8	
	baz=274,slow=74,SNR=20						
MKAR	Makanchi Array	44.74	322	P	P	13 51 59.3	+0.1
	0.2nm,0.7s,baz=116,slow=9.8,SNR=2.1						
	0.2nm,0.7s						
STKA	Stephens Creek	51.21	158	P	P	13 52 49.5	+0.3
	0.6nm,0.4s,baz=330,slow=8.1,SNR=1.4						
	0.6nm,0.4s						

*CATAC **20** 13:45:22.2±1.8, 7°.90N×82°.95W, h4km±6km, ML2.6*
*UPA **20** 13:45:26.4±0.3, 8°.16N×83°.02W, h15km±1km, ML3.6*
ISC 20 13:45:26.9±1.5, 8°.09N±0°.08×82°.94W±0°.05, h18km±5km, n9, σ0s83/15, 2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIMO3	Limones	0.07	77	↓iP	Pg	13 45 30.8	+0.3
LIMO3				eS	Sg	13 45 34.1	+1.4
PTPM	Petroterminale	0.13	25	↓iP	Pb	13 45 30.6	+1.1
PTPM				AMP		13 45 30.8	
	comp=Z,26μm,0.1s						
PTPM				iS	Sg	13 45 33.9	+0.2
CCOL	Caracol de Cor	0.32	353	iP	Pg	13 45 33.3	-0.6
CCOL				iS	Sg	13 45 39.0	+0.3
CCOL				IAML		13 45 45.2	
	comp=Z,2μm,1.0s						
BCO2	Palmira	0.75	33	eP	Pb	13 45 41.0	-0.5
BCO2				AMP		13 45 44.0	
	comp=Z,1μm,0.1s						
BCO2				eS	Sg	13 45 52.2	+0.6
PLAN	Los Planes de	0.94	308	iP	Pb	13 45 44.1	-0.6
PLAN				iS	Sb	13 45 57.3	+0.5
PLAN				IAML		13 46 03.5	
	comp=Z,360nm,1.0s						
CHGR2	Aguacate	1.15	43	eP	Pn	13 45 47.1	-1.1
CHGR2				AMP		13 45 47.4	
	comp=Z,1μm,0.1s						
CHGR2				eS	Sb	13 46 02.5	-0.5
SRBA	San Rafael, Bu	1.22	340	iP	Pn	13 45 48.7	-0.4
SRBA				iS	Sg	13 46 06.7	+0.3
SRBA				IAML		13 46 15.4	
	comp=Z,43nm,1.0s						
OCHAL	Ojochal	1.23	325	iP	Pn	13 45 41.2	-8.0
OCHAL				IAML		13 45 50.3	
	comp=Z,2.9nm,1.0s						
CDM	Cerro de Muert	1.67	331	iP	Pn	13 45 56.7	+1.0
CDM				IAML		13 46 30.8	
	comp=Z,51nm,1.0s						

*IDC **20** 14:09:55.8±0.5, 24°.51N×100°.86E, h0km, mb4.3/29, mbtmp4.3/30, ML4.5/1, MS3.5/16, Error ellipse: s-maj=14.7km s-min=11.8km az=60.0*
*MOS **20** 14:09:56.2±1.0, 24°.46N×100°.85E, h16km, mb4.9/52, Error ellipse: s-maj=8.2km s-min=4.7km az=113.6*
*NEIC **20** 14:09:57.9±1.5, 24°.46N±0°.07×100°.84E±0°.08, h10km±1km, mb4.7/102, Error ellipse: s-maj=11.6km s-min=11.6km az=205.0*
*BJI **20** 14:09:57.1±0.0, 24°.46N×100°.77E, h7km, mb4.3/51, mB4.7/30, ML4.4/10, Ms4.3/52, Ms7 4.0/42*
ISC 20 14:09:57.6±0.5, 24°.46N±0°.04×100°.77E±0°.03, h10km±3km, h11km:pP-P, n292, σ1s35/321, mb4.7/135, MS3.5/21, 13C-14D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	1.91	69	↑Pg	Pb	14 10 32.1	-0.4
KMI				Sg	Sg	14 10 58.1	-0.8
KMI				smax	smax		
	comp=N,4μm,0.8s						
KMI				smax	smax		
	comp=E,3μm,1.0s						
PZH	PanZhiHua	2.21	23	Pg	Pb	14 10 36.3	-1.5
PZH				Sg	Sb	14 11 06.6	+1.3
PZH				smax	smax		
	comp=N,4μm,0.9s						
PZH				smax	smax		
	comp=E,6μm,1.0s						
CRAI	Chiangrai	4.23	185		Pn	14 11 02.4	+0.3
SLVN	Son La	4.25	137		Pn	14 11 02.2	-0.2
MND	Mandalay	4.93	241		Pn	14 11 12.6	+1.0
GYA	Guiyang	5.68	68	↓Pn	Pn	14 11 22.8	+0.6
GYA				Sn	Sn	14 12 29.6	+2.1
GYA				smax	smax		
	comp=N,250nm,0.8s						
GYA				smax	smax		
	comp=E,170nm,0.9s						
GYA				LR	LR		
	comp=N,1μm,5.9s						
GYA				LR	LR		
	comp=E,3μm,5.6s						
GYA				LR	LR		
	comp=Z,3μm,6.8s						
CHTO	Chiang Mai	5.87	197		Pn	14 11 24.4	-0.2
CHTO	Chiang Mai	5.87	197	P	Pn	14 11 24.5	-0.2
MOKO	MOKOCHONG	5.96	289	eP	Pn	14 11 30.3	+4.4
MOKO				IAmb	IAmb	14 11 34.0	
	comp=Z,33nm,0.9s						
MOKO				eS	Sn	14 12 32.5	-1.7
KOHI	KOHIMA	6.17	283	eP	Pn	14 11 33.9	+5.0
KOHI				IAmb	IAmb	14 12 08.7	
	comp=Z,93nm,1.3s						
KOHI				eS	Sn	14 12 38.2	-1.4
CM31	Chiang Mai Arr	6.21	196		Pn	14 11 30.6	+1.3
CMAR	Chiang Mai Arr	6.21	196		Pn	14 11 31.1	+1.8
CMAR	Chiang Mai Arr	6.21	196	Pn	Pn	14 11 31.4	+2.0
	comp=Z,2.8nm,0.3s,baz=14,slow=13,SNR=33						
CMAR				Pg	Pg	14 11 55.5	-1.2
	comp=Z,4.5nm,0.3s,baz=4.6,slow=16,SNR=17						
CMAR				Lg	Lg	14 13 13.8	
	baz=15,slow=31						
	comp=Z,6.9nm,0.4s						
IMP	Imphal	6.22	275	eP	Pn	14 11 35.0	+5.5
ZIRO	ZIRO	6.94	298	eP	Pn	14 11 41.2	+1.7
ZIRO				IAmb	IAmb	14 11 54.4	
	comp=Z,33nm,0.5s						
CD2	Chengdu	6.95	22	Pn	Pn	14 11 40.5	+1.1
CD2				Sn	Sn	14 13 00.0	+1.4
CD2				SS	Sb	14 13 18.8	-2.6
CD2				LR	LR		
	comp=Z,2μm,8.7s						
CD2				LR	LR		
	comp=Z,2μm,9.8s						
CD2				LR	LR		
	comp=Z,820nm,8.6s						
SAIH	SAIHA	7.41	256	eP	Pn	14 11 53.0	+7.1
SHL	Shillong	8.14	280	eP	Pn	14 12 00.7	+4.7
GULI	GuiLin	8.75	83	P	Pn	14 12 02.8	-1.4
GULI				S	Sn	14 13 39.5	-3.4
GULI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GULI				LR	LR		
	comp=Z,460nm,5.3s						
GULI				LR	LR		
	comp=Z,1μm,6.8s						
GULI				LR	LR		
	comp=Z,2μm,7.0s						
ENH	Enshi	9.67	51	Pn	Pn	14 12 17.6	+0.8
QIZ	Qiongzhong	10.01	121	P	Pn	14 12 24.0	+2.5
QIZ				S	Sn	14 14 14.0	+0.1
QIZ				pmax	pmax		
	comp=Z,77nm,4.9s						
QIZ				LR	LR		
	comp=Z,570nm,10.1s						
QIZ				LR	LR		
	comp=Z,370nm,9.3s						
QIZ				LR	LR		
	comp=Z,200nm,8.8s						
LSA	Lhasa	10.04	303	Pn	Pn	14 12 24.2	+2.0
LSA	Lhasa	10.04	303	P	Pn	14 12 24.2	+2.0
CNSH	ChangSha	11.52	69	↓P	Pn	14 12 43.8	+1.7
CNSH				S	Sn	14 14 50.0	-0.8
GZH	Guangzhou	11.59	94	P	Pn	14 12 45.3	+2.2
GZH				S	Sn	14 14 58.4	+5.7
GZH				LR	LR		
	comp=Z,500nm,5.7s						
GZH				LR	LR		
	comp=Z,1μm,6.7s						
LZH	Lanzhou	11.88	12	eP	Pn	14 12 50.6	+3.4
LZH				sP		14 12 58.1	
LZH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LZH				LR	LR		
	comp=Z,510nm,10.0s						
LZH				LR	LR		
	comp=Z,1μm,10.3s						
LZH				LR	LR		
	comp=Z,430nm,10.3s						

XAN S Sn 14 14 59.1 -1.0
XAN SS SnSn 14 15 13.1 +0.7
XAN pmax pmax
comp=Z,40nm,0.8s
XAN LR LR
comp=N,2μm,10.2s
XAN LR LR
comp=E,2μm,11.2s
XAN LR LR
comp=Z,650nm,10.7s
WHN Wuhan 13.48 60 P Pn 14 13 10.8 +1.9
WHN pP P 14 13 13.3 -4.9
WHN LR LR
comp=Z,1μm,5.0s
WHN LR LR
comp=Z,1μm,8.6s
WHN LR LR
comp=Z,1μm,16.3s
LYN LuoYang 14.30 43 *e*P Pn 14 13 16.5 -3.6
LYN pP P 14 13 19.5 -7.8
LYN sP 14 13 22.0
LYN S Sn 14 15 46.8 -12
LYN pmax pmax
comp=Z,27nm,0.6s
LYN pmax pmax
comp=Z,130nm,8.9s
LYN LR LR
comp=N,2μm,10.0s
LYN LR LR
comp=E,2μm,10.5s
LYN LR LR
comp=Z,640nm,12.2s
GTA Gaotai 14.93 357 *e*P Pn 14 13 28.6 -0.1
GTA pP P 14 13 34.9 +0.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA LR LR
comp=Z,190nm,13.8s
GTA LR LR
comp=Z,690nm,12.4s
GTA LR LR
comp=Z,420nm,9.8s
TIY Taiyuan 16.54 34 *e*P P 14 13 52.4 +0.1
TIY S S 14 17 04.4 -0.8
TIY pmax pmax
comp=Z,21nm,0.8s
TIY pmax pmax
comp=Z,94nm,5.4s
TIY LR LR
comp=Z,610nm,10.3s
TIY LR LR
comp=Z,550nm,11.7s
TIY LR LR
comp=Z,250nm,12.9s
HNS HongShan 17.56 39 ⇑P P 14 14 03.0 -0.4
HNS *e*S Sn 14 17 14.1 -3.8
HNS pmax pmax
comp=Z,11nm,1.0s
HNS LR LR
comp=Z,440nm,11.9s
HNS LR LR
comp=Z,410nm,11.5s
HNS LR LR
comp=Z,280nm,11.9s
NJ2 Nanjing 17.62 61 *e*P Pn 14 14 03.3 +0.1
NJ2 pP pP 14 14 07.3 -0.2
NJ2 sP sP 14 14 09.6 +0.3
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 pmax pmax
comp=Z,190nm,3.5s
NJ2 LR LR
comp=Z,460nm,6.6s
NJ2 LR LR
comp=Z,440nm,4.3s
NJ2 LR LR
comp=Z,500nm,10.9s
BTO Baotou 17.87 24 *e*P Pn 14 14 06.6 +0.3
BTO pP pP 14 14 10.1 -0.2
BTO sP sP 14 14 13.5 +1.6
BTO PP PnPn 14 14 20.5 +3.4
BTO S Sn 14 17 27.3 +1.8
BTO pmax pmax
comp=Z,56nm,0.9s
BTO pmax pmax
comp=Z,220nm,4.4s
BTO LR LR
comp=Z,420nm,7.1s
BTO LR LR
comp=Z,420nm,7.2s
BTO LR LR
comp=Z,370nm,6.7s
TIA Tai'an 18.31 46 P P 14 14 14.6 +2.8
TIA pmax pmax
comp=Z,5.0nm,0.7s
TIA pmax pmax
comp=Z,46nm,3.5s
TIA LR LR
comp=Z,220nm,12.2s
TIA LR LR
comp=Z,260nm,11.5s
TIA LR LR
comp=Z,57nm,12.2s
HHC Hu-ho-hao-te 18.67 26 *e*P Pn 14 14 16.3 +0.2
HHC PP PnPn 14 14 31.1 +3.0
HHC *e*S Sn 14 17 46.8 +1.8
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,92nm,5.7s
HHC LR LR
comp=Z,320nm,10.2s
HHC LR LR
comp=Z,300nm,10.0s
HHC LR LR
comp=Z,290nm,11.4s
LGTI Lohaghat 18.95 290 *e*P Pn 14 14 20.7 +1.2
LGTI IAmb IAmb 14 14 27.2
comp=Z,7.1nm,0.8s
JHNI Jhansi 20.18 278 *e*P P 14 14 31.8 -0.6
JHNI IAmb IAmb 14 14 37.3
comp=Z,28nm,0.8s
BJT Baijiatuau 20.20 36 P P 14 14 33.3 +0.8
BJT Baijiatuau 20.20 36 P P 14 14 33.3 +0.8
BJT pmax pmax
comp=Z,21nm,1.1s
BJI Beijing 20.22 36 P P 14 14 33.4 +0.7
BJI S Sn 14 18 22.3 0.0
BJI pmax pmax
comp=Z,6.0nm,1.1s
BJI pmax pmax
comp=Z,66nm,4.1s
BJI LR LR
comp=Z,160nm,13.7s
BJI LR LR
comp=Z,160nm,16.4s
KCSI Kotacane, Aceh 21.02 188 P P 14 14 44.7 +3.2
comp=Z,23nm,1.0s
SMLA Simla 21.89 293 *e*P P 14 14 51.3 +0.5
SMLA IAmb IAmb 14 15 02.2
comp=Z,35nm,0.8s
KUDL Kundal 22.07 285 *e*P P 14 14 51.5 -1.2
WMQ Urumqi 22.09 334 *e*P P 14 14 54.9 +2.1
WMQ pP sP 14 14 57.9 -0.1
WMQ pmax pmax
comp=Z,10.0nm,1.1s
DHRM DHARAMSHALA 22.86 295 *e*P P 14 15 00.4 -1.0
DHRM IAmb IAmb 14 15 11.1
comp=Z,33nm,0.8s
XLT XiLinHaoTe 23.09 29 *e*P P 14 15 02.9 -0.6
XLT PcS PcS 14 22 32.9 +1.4
XLT pmax pmax
comp=Z,7.0nm,0.9s
XLT pmax pmax
comp=Z,120nm,5.3s
THN Thein Dam 23.38 296 *e*P P 14 15 05.6 -0.8
THN IAmb IAmb 14 15 08.4
comp=Z,43nm,1.0s
AJM Ajmer 23.66 280 *e*P P 14 15 08.9 -0.4
AJM IAmb IAmb 14 15 11.2
comp=Z,34nm,1.0s
SONM Songino Array 23.75 9 P P 14 15 09.7 -0.4
SONM Songino Array 23.75 9 P P 14 15 09.7 -0.4
SONM pmax pmax
comp=Z,19nm,1.4s
SONM Songino Array 23.75 9 P P 14 15 09.2 -0.9
comp=Z,2.3nm,0.9s,baz=193,slow=10,SNR=16
SONM LR LR 14 24 05.4
comp=Z,52nm,18.8s,baz=322,slow=36
comp=Z,2.3nm,0.9s
ULN Ulaanbaatar 23.88 10⇑ *e*P P 14 15 10.4 -1.0
ULN pmax pmax
comp=Z,3.0nm,0.8s
JOW Kunigami 24.89 79 LR LR 14 25 39.5
comp=Z,143nm,18.4s,baz=66,slow=38
NIL Nilore 25.68 297 P P 14 15 28.6 +0.8
NIL Nilore 25.68 297 P P 14 15 28.6 +0.8
NIL pmax pmax
comp=Z,33nm,0.9s
PALK Pallekele 25.72 232 LR LR 14 25 23.8
comp=Z,77nm,20.4s,baz=148,slow=36
KSH Kashi 25.73 312 P P 14 15 30.8 +2.5
KSH pP sP 14 15 35.8 +2.0
KSH pmax pmax
comp=Z,8.0nm,1.0s
KSH LR LR
comp=Z,210nm,10.3s
KSH LR LR
comp=Z,130nm,13.4s
PRZ Przheval'sk 25.78 320 P P 14 15 27.7 -1.1
PRZ IAmb IAmb 14 15 34.0
comp=Z,18nm,0.9s
PRZ Przheval'sk 25.78 320 P P 14 15 27.7 -1.1
PRZ pmax pmax
comp=Z,18nm,0.9s
ZAK Zakamensk 25.95 4 *e*P P 14 15 29.9 -0.2
ZAK pmax pmax
comp=Z,6.0nm,1.0s
KSRS Korea Array 26.54 54 P P 14 15 33.8 -1.6
comp=Z,0.9nm,0.9s,baz=246,slow=11,SNR=2.5
KSRS LR LR 14 26 04.5
comp=Z,62nm,19.1s,baz=255,slow=37
comp=Z,0.9nm,0.9s
NRN Naryn 26.67 315 P P 14 15 37.1 +0.1
NRN Naryn 26.67 315 P P 14 15 37.1 +0.1
NRN pmax pmax
comp=Z,8.0nm,1.0s
MK31 Makanchi Array 26.75 331 P P 14 15 37.6 +0.4
MK31 Makanchi Array 26.75 331 P P 14 15 37.7 +0.4
MK31 pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 26.75 331 P P 14 15 37.7 +0.4
MKAR Makanchi Array 26.75 331 P P 14 15 38.1 +0.9
comp=Z,9.3nm,0.7s,baz=140,slow=10,SNR=129
comp=Z,9.3nm,0.7s
DGZ Jazzator, Alta 27.26 341⇓ *e*P P 14 15 43.0 +0.9
DGZ pmax pmax
comp=Z,9.0nm,3.0s
BOOM Boomskoye usch 27.27 317 P P 14 15 43.2 +1.0
BOOM Boomskoye usch 27.27 317 P P 14 15 43.3 +1.0
BOOM pmax pmax
comp=Z,5.0nm,0.9s
JNU Nakatsue 27.68 65 P P 14 15 45.5 -0.3
comp=Z,6.2nm,1.0s,baz=177,slow=12,SNR=2.0
JNU LR LR 14 27 46.6
comp=Z,97nm,22.0s,baz=198,slow=39
comp=Z,6.2nm,1.0s
CN2 Changchun 27.92 40 *e*P P 14 15 46.9 -0.9
CN2 *e*S S 14 20 27.3 -4.2
CN2 pmax pmax
comp=Z,10.0nm,1.8s
CN2 LR LR
comp=Z,150nm,10.0s
CN2 LR LR
comp=Z,90nm,10.0s
ARLS Aral 27.97 315 P P 14 15 50.5 +2.0
ARLS pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 28.25 316 P P 14 15 52.5 +1.5
AAK Ala-Archa 28.25 316 P P 14 15 52.5 +1.5
AAK pmax pmax
comp=Z,5.0nm,0.8s
ARSB Arslanbob 28.59 313 P P 14 15 54.8 +0.8
ARSB Arslanbob 28.59 313 P P 14 15 54.8 +0.8
ARSB pmax pmax
comp=Z,1.0nm,1.0s
KBL Kabul 29.28 297 P P 14 16 00.1 -0.2
KBL IAmb IAmb 14 16 02.5
comp=Z,17nm,1.2s
KBL Kabul 29.28 297 P P 14 16 00.1 -0.2
KBL pmax pmax
comp=Z,17nm,1.2s
BTK Batken 29.55 309 P P 14 16 03.1 +0.6
BTK Batken 29.55 309 P P 14 16 03.1 +0.6
BTK pmax pmax
comp=Z,4.0nm,0.6s
BNX BinXian 30.18 39 ⇓P P 14 16 07.9 0.0
BNX pmax pmax
comp=Z,5.0nm,0.8s
BNX pmax pmax
comp=Z,150nm,4.6s
MDJ Mudanjiang 30.86 42 P P 14 16 13.3 -0.6
MDJ PP PnPn 14 17 12.4 -1.8
MDJ PcP PcP 14 19 10.6 -0.1
MDJ S S 14 21 16.6 -1.0
MDJ ScP ScP 14 22 53.6 +0.1
MDJ PcS PcS 14 22 54.8 +0.3
MDJ ScS ScS 14 26 50.8 +0.7
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,74nm,4.5s
KKAR Karatay Array 31.04 314 PcP PcP 14 19 10.6 -0.6
KURBB Kurchatov Arra 31.27 332 P P 14 16 17.5 0.0
comp=Z,4.0nm,0.9s,baz=142,slow=9.4,SNR=37
KURBB PcP PcP 14 19 10.5 -1.1
comp=Z,1.8nm,0.8s,baz=135,slow=2.1,SNR=11
comp=Z,4.0nm,0.9s
KURK Kurchatov 31.30 333 P P 14 16 17.7 0.0
KURK IAmb IAmb 14 16 18.7
comp=Z,6.0nm,0.8s
KURK Kurchatov 31.30 333 P P 14 16 17.7 0.0
KURK pmax pmax
comp=Z,6.0nm,0.8s
ZAA0 Zalesovo Array 31.78 342 P P 14 16 20.8 -1.1
ZALV Zalesovo Beam 31.78 342 P P 14 16 20.9 -1.0
ZALV Zalesovo Beam 31.78 342 P P 14 16 21.9 0.0
comp=Z,5.8nm,0.9s,baz=152,slow=9.6,SNR=22
comp=Z,5.8nm,0.9s
USA0B Ussuriysk Arra 32.15 44 P P 14 16 23.3 -2.0
USA0B IAmb IAmb 14 16 32.1
comp=Z,9.5nm,0.9s
USA0B Ussuriysk Arra 32.15 44 P P 14 16 23.3 -2.0
USA0B pmax pmax
comp=Z,10.0nm,1.0s
USRK Ussuriysk Ar. 32.15 44 P P 14 16 23.9 -1.4
USRK Ussuriysk Ar. 32.15 44 P P 14 16 24.6 -0.7
comp=Z,3.2nm,0.7s,baz=241,slow=11,SNR=7.7
USRK LR LR 14 29 20.9
comp=Z,44nm,20.8s,baz=238,slow=36
comp=Z,3.2nm,0.7s
KPJI Karang Pucung 32.59 165 P P 14 16 31.4 +2.1
comp=Z,15nm,1.9s,comp=Z,550μm
MJAR Matsushiro Arr 34.22 61 LR LR 14 31 34.0
comp=Z,108nm,18.9s,baz=252,slow=38
KLR Kul'dur 34.60 36 P P 14 16 45.6 -0.9
comp=Z,1.0nm,0.8s,baz=243,slow=6.0,SNR=4.0
KLR LR LR 14 32 11.3
comp=Z,76nm,18.9s,baz=228,slow=39
comp=Z,1.0nm,0.8s
ZEA Zeya 35.33 27 *e*P P 14 16 53.4 +0.6
ZEA MLR MLR
comp=Z,100nm,17.0s
BVAR Borovoye Array 36.58 329 P P 14 17 03.2 -0.3
comp=Z,2.5nm,0.8s,baz=114,slow=9.9,SNR=8.7
BVAR PcP PcP 14 19 25.5 -1.2
comp=Z,2.8nm,0.7s,baz=134,slow=4.3,SNR=9.3
comp=Z,2.5nm,0.8s
BRVK Borovoye 36.65 329*d* iP P 14 17 04.1 0.0
BRVK pmax pmax
comp=Z,5.0nm,0.8s
GEYT Alibeck 38.55 301 P P 14 17 21.7 +1.2
GEYT Alibeck 38.55 301 P P 14 17 21.7 +1.2
GEYT pmax pmax
comp=Z,29nm,0.8s
GEYT Alibeck 38.55 301 P P 14 17 22.1 +1.6
comp=Z,21nm,0.8s,baz=111,slow=8.4,SNR=35
comp=Z,21nm,0.8s
GYA0 ALIBECK ARRAY 38.55 301 P P 14 17 21.2 +0.7
GYA0 pmax pmax
comp=Z,25nm,0.9s
GYA0B ALIBECK ARRAY 38.55 301 P P 14 17 21.2 +0.6
ASAJ Asahikawa 39.22 49 P P 14 17 26.1 +0.2
comp=Z,18nm,1.0s,baz=342,slow=6.4,SNR=2.4
ASAJ LR LR 14 35 25.7
comp=Z,43nm,18.3s,baz=316,slow=39
comp=Z,18nm,1.0s
YSS Yuzh-Sakhalins 40.18 45 *e*P P 14 17 36.1 +2.2
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,400nm,15.0s
ABKAR Akbulak array 40.28 319 P P 14 17 35.4 +0.7
ABKAR Akbulak array 40.28 319 P P 14 17 35.2 +0.5
YAK Yakutsk 42.33 20⇓ *e*P P 14 17 51.9 +0.6
YAK pmax pmax
comp=Z,6.0nm,0.7s
GUMO Guam 42.90 96 LR LR 14 36 26.8
comp=Z,45nm,18.6s,baz=64,slow=37
SVE Sverdlovsk 43.37 329 *e*P P 14 18 00.7 +0.9
SVE pmax pmax
comp=Z,10.0nm,0.9s
ARU Arti 44.16 328 P P 14 18 06.5 +0.2
ARU IAmb IAmb 14 18 08.5
comp=Z,7.9nm,1.0s
ARU Arti 44.16 328*d* iP P 14 18 06.4 +0.2
ARU 14 19 45.8
ARU S S 14 24 43.6 +4.5
ARU SS SS 14 28 00.3 +3.6
ARU pmax pmax
comp=Z,11nm,1.2s
NRIK Noril'sk 45.59 353*c e*P P 14 18 18.4 +1.0
NRIK pmax pmax
comp=Z,15nm,3.2s
BELG Belogornoye 48.68 319*c* iP P 14 18 42.1 +0.4
BELG pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 49.10 303⇓ *e*P P 14 18 47.0 +1.6
GNI pmax pmax
comp=Z,12nm,1.3s
MA2 Magadan 49.26 31*c* iP P 14 18 45.9 -0.2
MA2 pmax pmax
comp=Z,6.0nm,0.8s
MA2 Magadan 49.26 31 P P 14 18 44.9 -1.2
comp=Z,7.5nm,0.8s,baz=239,slow=5.9,SNR=11
comp=Z,7.5nm,0.8s
KIRV Kirov 49.55 327*c* iP P 14 18 48.9 +0.6
TIXI Tiksi 49.82 11 P P 14 18 48.2 -2.0
TIXI Tiksi 49.82 11⇓ *i*P P 14 18 49.0 -1.2
TIXI pmax pmax
comp=Z,19nm,1.3s
RAYN Ar Rayn 50.21 281 P P 14 18 53.8 -0.2
RAYN IAmb IAmb 14 18 55.1
comp=Z,9.0nm,1.1s
RAYN Ar Rayn 50.21 281 P P 14 18 53.8 -0.2
RAYN pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 50.59 307⇓ *e*P P 14 18 56.6 +0.2
KBZ Khabaz 50.59 307 P P 14 18 56.5 0.0
comp=Z,1.4nm,0.7s,baz=90,slow=7.5,SNR=6.0
comp=Z,1.4nm,0.7s
KIV Kislovodsk 50.75 308 *e*P P 14 18 58.8 +1.0
KIV pmax pmax
comp=Z,16nm,1.1s
PETK Petropavlovsk- 51.07 40 LR LR 14 43 04.6
comp=Z,62nm,19.1s,baz=133,slow=39
GURO Guroymak-BITLI 51.22 301 P P 14 19 02.4 +0.9
GURO IAmb IAmb 14 19 04.0
comp=Z,8.4nm,1.2s
SEY Seymchan 51.31 27⇓ *e*P P 14 19 01.7 +0.1
SEY pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 51.31 27 P P 14 19 00.7 -1.0
comp=Z,1.0nm,0.8s,baz=322,slow=6.6,SNR=4.8
comp=Z,1.0nm,0.8s
VRH Novokhopyorsk 52.05 317 *e*P P 14 19 05.7 -1.6
VRH pmax pmax
comp=Z,10.0nm,0.5s
VSLR Vesyoloye 52.66 307⇓ *i*P P 14 19 13.2 +1.2
SOC Sochi 52.89 307 *e*P P 14 19 13.0 -0.7
SOC *e* 14 21 12.1
SOC *e*PPP PPP 14 22 19.3
SOC *e*S S 14 26 42.9 +0.3
SOC *e*SS SS 14 30 23.6 +2.2
SOC *e*SSS SSS 14 32 10.4
SOC pmax pmax
comp=Z,8.0nm,0.7s
VSR Storozhevoye 53.65 317 *e*P P 14 19 16.9 -2.3
VSR pmax pmax
comp=Z,6.0nm,0.6s
LPSR Galich'ya Gora 53.94 318 *e*P P 14 19 19.6 -1.6
LPSR pmax pmax
comp=Z,20nm,0.8s
ARPR Arapgir-MALATY 54.07 302 P P 14 19 23.3 +0.6
ARPR IAmb IAmb 14 19 25.2
comp=Z,16nm,1.3s
ANN Anapa 54.53 309 *e*P P 14 19 22.3 -3.4
ANN *e*PP pP 14 19 25.8 -3.9
ANN *e*S S 14 27 01.5 -3.3
ANN pmax pmax
comp=Z,76nm,1.4s
WB0 Warramunga Arr 54.81 140 P P 14 19 27.5 -0.5
WB0 IAmb IAmb 14 19 31.0
comp=Z,3.5nm,0.7s
WRAB Tennant Creek 54.92 141 P P 14 19 28.5 -0.2
WRAB IAmb IAmb 14 19 32.0
comp=Z,4.9nm,0.6s
WRAB Tennant Creek 54.92 141 P P 14 19 28.5 -0.2
WRAB pmax pmax
comp=Z,5.0nm,0.6s
WRA Warramunga Arr 54.92 141 P P 14 19 28.7 -0.1
WRA Warramunga Arr 54.92 141 *i* P P 14 19 28.8 +0.1
WRA pmax pmax
comp=Z,3.0nm,0.5s
WRA Warramunga Arr 54.92 141 P P 14 19 28.9 +0.2
comp=Z,2.6nm,0.6s,baz=332,slow=7.9,SNR=36
WRA PcP PcP 14 20 30.4 -0.4
comp=Z,0.5nm,0.8s,baz=332,slow=3.3,SNR=1.9
comp=Z,2.6nm,0.6s
WB2 Warramunga Arr 54.93 141 P P 14 19 28.4 -0.4
WB2 IAmb IAmb 14 19 33.2
comp=Z,4.2nm,0.8s
KLMR Klimovskoe 55.00 328 *e*P P 14 19 27.0 -1.8
KLMR pmax pmax
comp=Z,25nm,1.1s
WR0 Warramunga Arr 55.05 140 P P 14 19 29.4 -0.2
WR0 IAmb IAmb 14 19 30.1
comp=Z,3.6nm,0.6s
OBN Obninsk 55.61 321 *i* P P 14 19 33.3 +0.1
OBN pmax pmax
comp=Z,10.0nm,0.9s
ASF Jabal al Asfar 56.05 293 LR LR 14 45 47.2
comp=Z,26nm,19.5s,baz=203,slow=38
MMAI Mount Meron Ar 57.15 295 LR LR 14 48 52.0
comp=Z,32nm,18.8s,baz=74,slow=41
AS31 Alice Springs 57.63 144 P P 14 19 47.9 -0.2
ASAR Alice Springs 57.63 144 P P 14 19 48.5 +0.4
comp=Z,1.9nm,0.7s,baz=328,slow=6.8,SNR=13
BR131 Keskin Array S 57.64 303⇓ *e*P P 14 19 50.8 +2.6
BRTR Keskin Array B 57.64 303 *i* P P 14 19 51.7 +3.5
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 57.64 303 P P 14 19 48.2 0.0
comp=Z,1.4nm,0.9s,baz=47,slow=4.2,SNR=4.7
comp=Z,1.4nm,0.9s
EIL Elat 58.16 291 LR LR 14 49 14.8
comp=Z,32nm,19.5s,baz=249,slow=40
BILL Bilibino 58.42 24 *e*P P 14 19 54.5 +1.5
NWAO Narrogin (SRO) 59.19 164 P P 14 19 57.0 -1.7
NWAO Narrogin (SRO) 59.19 164 P P 14 19 57.0 -1.7
NWAO pmax pmax
comp=Z,37nm,1.2s
VALR Valaam 59.22 328⇑ *i*P P 14 19 58.9 +0.3
VALR pmax pmax
comp=Z,9.0nm,0.9s
AKASG Malin Array Be 59.92 316 P P 14 20 02.1 -1.6
AKASG IAmb IAmb 14 20 04.4
comp=Z,7.5nm,0.8s
AKASG Malin Array Be 59.92 316 *i* P P 14 20 03.2 -0.4
AKASG pmax pmax
comp=Z,13nm,0.7s
AKASG Malin Array Be 59.92 316 P P 14 20 03.3 -0.4
comp=Z,8.2nm,0.7s,baz=75,slow=6.9,SNR=24
comp=Z,8.2nm,0.7s
AKBB Malin Array Si 59.92 316 P P 14 20 02.1 -1.6
AKBB Malin Array Si 59.92 316*d* iP P 14 20 03.1 -0.6
AKBB pmax pmax
comp=Z,18nm,0.9s

KIEV	**Kiev**	**59.93**	**316**	P	**P**	**14 20 02.2**	**-1.6**
KIEV	**Kiev**	**59.93**	**316**	P	**P**	**14 20 02.2**	**-1.6**
KIEV				pmax	pmax		
	comp=Z,19nm,0.9s						
MNK	**Minsk**	**60.60**	**320**	*i* P	**P**	**14 20 05.2**	**-3.1**
MNK				*i* S	**S**	**14 28 23.1**	**-1.2**
MNK				*i* SS	**SS**	**14 32 21.4**	**-0.8**
MNK				*i* SSS	SSS	14 35 04.9	
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=E,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,15nm,0.9s						
MNK				MLR	MLR		
	comp=Z,73nm,9.0s						
VSU	**Vasula**	**61.18**	**325**	*ce*P	**P**	**14 20 12.3**	**+0.2**
VSU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FIA1	**FINESS Array S**	**61.53**	**328**	P	**P**	**14 20 13.8**	**-0.6**
FINES	**FINESS Array B**	**61.53**	**328**	P	**P**	**14 20 13.6**	**-0.8**
FINES	**FINESS Array B**	**61.53**	**328**	P	**P**	**14 20 14.6**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=79,slow=9.9,SNR=15						
	comp=Z,5.2nm,0.8s						
KEV	**Kevo**	**61.66**	**338**	P	**P**	**14 20 14.2**	**-1.0**
KEV	**Kevo**	**61.66**	**338**	P	**P**	**14 20 14.2**	**-1.0**
KEV				pmax	pmax		
	comp=Z,40nm,1.5s						
ARCES	**ARCESS Array B**	**62.16**	**337**	P	**P**	**14 20 18.2**	**-0.4**
ARCES	**ARCESS Array B**	**62.16**	**337**	P	**P**	**14 20 18.2**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,24nm,1.3s						
ARCES	**ARCESS Array B**	**62.16**	**337**	P	**P**	**14 20 18.5**	**-0.1**
	comp=Z,5.0nm,0.9s,baz=91,slow=7.1,SNR=8.0						
	comp=Z,5.0nm,0.9s						
MLR	**Muntele Rosu**	**62.58**	**310**	LR	LR	14 52 58.9	
	comp=Z,79nm,19.6s,baz=346,slow=41						
PABE	**Paberze**	**62.81**	**321**	P	**P**	**14 20 23.6**	**+0.5**
LVV	**L'vov**	**63.31**	**315**	*e*P	**P**	**14 20 25.9**	**-0.7**
LVV				*e*S	**S**	**14 28 52.8**	**-6.0**
SUW	**Suwalki**	**63.39**	**320**	*e*P	**P**	**14 20 27.3**	**+0.3**
KWP	**Kalwaria Pacla**	**64.19**	**315**	*e*P	**P**	**14 20 33.8**	**+1.4**
KWP	**Kalwaria Pacla**	**64.19**	**315**	P	**P**	**14 20 33.7**	**+1.3**
KWP				pmax	pmax		
	comp=Z,57nm,1.0s						
DRGR		**64.61**	**312**	P	**P**	**14 20 35.9**	**+0.6**
DRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPB2	**Spitsbergen Ar**	**65.08**	**347**	P	**P**	**14 20 37.3**	**-0.5**
SPITS	**Spitsbergen Ar**	**65.09**	**347**	P	**P**	**14 20 37.2**	**-0.6**
SPITS				pmax	pmax		
	comp=Z,51nm,1.4s						
SPITS	**Spitsbergen Ar**	**65.09**	**347**	P	**P**	**14 20 37.4**	**-0.4**
	comp=Z,8.2nm,0.9s,baz=90,slow=10.0,SNR=2.8						
	comp=Z,8.2nm,0.9s						
CRVS	**Cervenica-Dubn**	**65.11**	**314**	*e*P	**P**	**14 20 40.3**	**+1.9**
CRVS				pmax	pmax		
	comp=Z,23nm,1.3s						
CRVS	**Cervenica-Dubn**	**65.11**	**314**	*e*P	**P**	**14 20 40.3**	**+1.9**
NIE	**Niedzica**	**65.77**	**315**	*e*P	**P**	**14 20 44.1**	**+1.3**
OJC	**Ojcow**	**65.96**	**316**	*e*P	**P**	**14 20 44.2**	**+0.3**
OJC	**Ojcow**	**65.96**	**316**	P	**P**	**14 20 43.3**	**-0.6**
OJC				IAmb	IAmb	14 20 45.2	
	comp=Z,7.0nm,0.9s						
OJC	**Ojcow**	**65.96**	**316**	P	**P**	**14 20 43.3**	**-0.6**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LODK	**Lodwar**	**66.24**	**263**	P	**P**	**14 20 46.3**	**0.0**
LODK				IAmb	IAmb	14 20 48.1	
	comp=Z,4.7nm,0.9s						
AGG	**Agios Georgios**	**66.39**	**304**	P	**P**	**14 20 45.1**	**-1.9**
AGG				IAmb	IAmb	14 21 28.3	
	comp=Z,14nm,1.5s						
AGG	**Agios Georgios**	**66.39**	**304**	P	**P**	**14 20 45.1**	**-1.9**
AGG				pmax	pmax		
	comp=Z,14nm,1.5s						
VYHS	**Vyhne**	**66.89**	**314**	*e*P	**P**	**14 20 50.7**	**+0.8**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	**Vyhne**	**66.89**	**314**	*e*P	**P**	**14 20 50.7**	**+0.8**
MORC	**Moravsky Berou**	**67.47**	**316**	*e*P	**P**	**14 20 54.2**	**+0.6**
MORC	**Moravsky Berou**	**67.47**	**316**	P	**P**	**14 20 54.7**	**+1.1**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PUK	**Puka**	**67.52**	**307**	P	**P**	**14 20 53.5**	**-0.6**
JAVC	**Velka Javorina**	**67.58**	**315**	*e*P	**P**	**14 20 56.1**	**+1.8**
HFS	**Hagfors**	**67.68**	**327**	P	**P**	**14 20 54.4**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=86,slow=9.1,SNR=6.2						
	comp=Z,3.2nm,0.7s						
KSP	**Ksiaz**	**68.04**	**317**	*e*P	**P**	**14 20 56.7**	**-0.4**
VRAC	**Vranov**	**68.17**	**315**	*e*P	**P**	**14 20 58.8**	**+0.8**
VRAC	**Vranov**	**68.17**	**315**	LR	LR	14 56 52.2	
	comp=Z,129nm,21.1s,baz=342,slow=41						
STKA	**Stephens Creek**	**68.27**	**143**	P	**P**	**14 20 59.0**	**+0.3**
STKA	**Stephens Creek**	**68.27**	**143**	P	**P**	**14 20 59.0**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=295,slow=7.1,SNR=2.9						
	comp=Z,1.1nm,0.6s						
KRUC	**Moravsky**	**68.35**	**315**	*e*P	**P**	**14 20 59.7**	**+0.6**
NC405	**NORSAR Array S**	**68.45**	**329**	P	**P**	**14 20 58.9**	**-0.7**
NC303	**NORSAR Array S**	**68.59**	**329**	P	**P**	**14 21 00.2**	**-0.2**
NB2	**NORSAR Subarra**	**68.71**	**329**	P	**P**	**14 21 00.2**	**-0.9**
	comp=Z,4.4nm,0.9s,baz=79,slow=6.5						
NOA	**NORSAR Array B**	**68.71**	**329**	P	**P**	**14 21 00.3**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=78,slow=6.3,SNR=9.2						
	comp=Z,2.1nm,0.7s						
C16K	**Lisburne Hills**	**68.95**	**23**	P	**P**	**14 21 01.9**	**-0.5**
GERES	**GERESS Array B**	**70.13**	**315**	P	**P**	**14 21 10.7**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=53,slow=8.9,SNR=7.9						
	comp=Z,1.5nm,0.5s						
KHC	**Kasperske Hory**	**70.14**	**316**	*i* P	**P**	**14 21 11.3**	**+1.1**
KHC				pmax	pmax		
	comp=Z,13nm,2.5s						
STAL	**STALIGIAL**	**71.46**	**313**	P	**P**	**14 21 17.7**	**-0.6**
STAL				IAmb	IAmb	14 21 38.0	
	comp=Z,7.3nm,1.0s						
K15K	**Wolf Creek Mou**	**72.12**	**29**	P	**P**	**14 21 22.4**	**+0.5**
E19K	**Redstone River**	**72.13**	**23**	P	**P**	**14 21 21.6**	**-0.3**
E19K				IAmb	IAmb	14 21 23.4	
	comp=Z,9.5nm,1.1s						
MBAR	**Mbarara**	**72.13**	**261**	*ce*P	**P**	**14 21 24.6**	**+1.6**
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**72.98**	**314**	P	**P**	**14 21 27.9**	**+0.2**
D22K	**Ayikyak River**	**73.16**	**21**	P	**P**	**14 21 28.3**	**+0.3**
D22K				IAmb	IAmb	14 21 31.7	
	comp=Z,10nm,1.1s						
L16K	**Owhat River**	**73.23**	**29**	P	**P**	**14 21 28.6**	**0.0**
N15K	**Kwethluk River**	**73.48**	**31**	P	**P**	**14 21 30.7**	**+0.6**
M16K	**Timber Creek**	**73.71**	**30**	P	**P**	**14 21 31.8**	**+0.4**
M16K				IAmb	IAmb	14 21 32.8	
	comp=Z,16nm,1.4s						
E22K	**Anaktuvuk Pass**	**73.76**	**22**	P	**P**	**14 21 31.5**	**-0.2**
J18K	**Innoko River**	**73.78**	**27**	P	**P**	**14 21 31.7**	**-0.1**
J18K				IAmb	IAmb	14 21 32.7	
	comp=Z,7.0nm,0.8s						
IMAR	**Indian Mountai**	**73.97**	**24**	P	**P**	**14 21 32.5**	**-0.3**
J19K	**Poorman**	**74.03**	**26**	P	**P**	**14 21 33.6**	**+0.3**
J19K				IAmb	IAmb	14 21 38.0	
	comp=Z,12nm,1.2s						
TOLK	**Toolik Lake Re**	**74.28**	**21**	P	**P**	**14 21 34.6**	**-0.1**
TTA	**Tatalina**	**74.28**	**28**	P	**P**	**14 21 34.8**	**-0.1**
TTA	**Tatalina**	**74.28**	**28**	P	**P**	**14 21 34.8**	**-0.1**
TTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H21K	**Melozitna Rive**	**74.46**	**24**	P	**P**	**14 21 36.0**	**+0.3**
H21K				IAmb	IAmb	14 21 37.0	
	comp=Z,9.0nm,0.9s						
O16K	**Kokwok River B**	**74.63**	**31**	P	**P**	**14 21 37.2**	**+0.5**
O16K				IAmb	IAmb	14 21 40.6	
	comp=Z,13nm,1.4s						
SVW2	**Sparrevohn**	**75.20**	**29**	P	**P**	**14 21 40.6**	**+0.5**
SVW2				IAmb	IAmb	14 21 41.7	
	comp=Z,17nm,1.5s						
MLY	**Manley**	**75.51**	**25**	P	**P**	**14 21 42.1**	**+0.2**
MLY				IAmb	IAmb	14 21 42.9	
	comp=Z,5.7nm,0.7s						
CAST	**Castle Rocks**	**75.70**	**26**	P	**P**	**14 21 43.5**	**+0.6**
CAST				IAmb	IAmb	14 21 44.7	
	comp=Z,15nm,1.4s						
BPAW	**Bear Paw Mtn.**	**75.84**	**25**	P	**P**	**14 21 43.6**	**-0.1**
O18K	**Koktuh Hills**	**75.87**	**30**	P	**P**	**14 21 44.6**	**+0.7**
I23K	**Minto, Yukon-K**	**75.98**	**24**	P	**P**	**14 21 44.5**	**+0.1**
I23K				IAmb	IAmb	14 21 47.5	
	comp=Z,10.0nm,1.5s						
P18K	**Big Mountain,**	**76.05**	**31**	P	**P**	**14 21 44.6**	**-0.4**
P18K				IAmb	IAmb	14 22 28.9	
	comp=Z,15nm,1.5s						
MDM	**Murphy Dome**	**76.49**	**24**	P	**P**	**14 21 47.0**	**-0.4**
MDM				IAmb	IAmb	14 21 48.1	
	comp=Z,8.5nm,0.9s						
BMAR	**Burnt Mountain**	**76.52**	**21**	P	**P**	**14 21 47.9**	**+0.4**
SKT	**Skwentna**	**76.58**	**28**	P	**P**	**14 21 47.1**	**-0.8**
SKT				IAmb	IAmb	14 21 52.2	
	comp=Z,6.9nm,1.1s						
RND	**Reindeer**	**77.00**	**26**	P	**P**	**14 21 49.3**	**-1.1**
RND				IAmb	IAmb	14 21 50.5	
	comp=Z,8.3nm,1.2s						
RND	**Reindeer**	**77.00**	**26**	P	**P**	**14 21 49.3**	**-1.1**
RND				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ILAR	**Eielson Array**	**77.08**	**24**	P	**P**	**14 21 49.2**	**-1.5**
	comp=Z,1.4nm,1.1s,baz=282,slow=6.7,SNR=8.4						
	comp=Z,1.4nm,1.1s						
SUA	**Susitna One**	**77.14**	**28**	P	**P**	**14 21 50.7**	**-0.6**
SUA				IAmb	IAmb	14 21 51.6	
	comp=Z,6.9nm,0.8s						
EKA	**Eskdalemuir Ar**	**77.73**	**325**	P	**P**	**14 21 53.9**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=60,slow=7.1,SNR=2.2						
	comp=Z,2.1nm,0.8s						
RC01	**Rabbit Creek A**	**77.75**	**28**	P	**P**	**14 21 53.7**	**-0.9**
RC01				IAmb	IAmb	14 21 57.3	
	comp=Z,12nm,1.3s						
BRLK	**Bradley Lake**	**77.88**	**29**	P	**P**	**14 21 54.3**	**-1.0**
OHAK	**Old Harbor**	**77.91**	**32**	P	**P**	**14 21 55.1**	**-0.3**
SML	**Sawmill**	**77.99**	**27**	P	**P**	**14 21 55.6**	**-0.3**
SML				IAmb	IAmb	14 21 56.6	
	comp=Z,9.2nm,0.9s						
KDAK	**Kodiak Island**	**78.00**	**32**	P	**P**	**14 21 55.3**	**-0.6**
KDAK	**Kodiak Island**	**78.00**	**32**	*i* P	**P**	**14 21 54.9**	**-1.0**
KDAK				pmax	pmax		
	comp=Z,23nm,1.3s						
KNK	**Knik Glacier**	**78.14**	**27**	P	**P**	**14 21 56.8**	**+0.1**
KNK				IAmb	IAmb	14 21 59.5	
	comp=Z,4.7nm,0.8s						
SCM	**Sheep Creek Mo**	**78.39**	**27**	P	**P**	**14 21 58.1**	**-0.1**
SCM				IAmb	IAmb	14 21 59.0	
	comp=Z,8.3nm,1.0s						
SCM	**Sheep Creek Mo**	**78.39**	**27**	P	**P**	**14 21 58.1**	**-0.1**
SCM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCRK	**Sand Creek**	**78.57**	**24**	P	**P**	**14 21 58.8**	**-0.4**
SCRK				IAmb	IAmb	14 22 00.1	
	comp=Z,7.3nm,1.3s						
M24K	**Tolsona, Glenn**	**78.72**	**26**	P	**P**	**14 22 00.3**	**+0.4**
M24K				IAmb	IAmb	14 22 09.8	
	comp=Z,12nm,1.1s						
A36M	**Sachs Harbour**	**78.79**	**13**	P	**P**	**14 22 00.0**	**0.0**
A36M				IAmb	IAmb	14 22 00.9	
	comp=Z,6.7nm,0.8s						
KLU	**Klutina**	**79.14**	**27**	P	**P**	**14 22 02.4**	**+0.1**
KLU				IAmb	IAmb	14 22 03.4	
	comp=Z,7.4nm,0.7s						
H29M	**Whitestone**	**79.23**	**21**	P	**P**	**14 22 02.1**	**-0.5**
FID	**Port Fidalgo**	**79.30**	**27**	P	**P**	**14 22 02.6**	**-0.5**
FID				IAmb	IAmb	14 22 09.8	
	comp=Z,11nm,1.0s						
INK	**Inuvik**	**79.36**	**18**	P	**P**	**14 22 02.6**	**-0.6**
INK				IAmb	IAmb	14 22 04.0	
	comp=Z,5.9nm,0.9s						
INK	**Inuvik**	**79.36**	**18**	P	**P**	**14 22 02.6**	**-0.6**
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
N25K	**Chitina, Valde**	**79.62**	**26**	P	**P**	**14 22 05.0**	**+0.1**
N25K				IAmb	IAmb	14 22 30.5	
	comp=Z,11nm,1.4s						
F31M	**Tsiigehtchic**	**79.88**	**19**	P	**P**	**14 22 05.7**	**-0.4**
F31M				IAmb	IAmb	14 22 06.1	
	comp=Z,4.0nm,0.7s						
L27K	**Beaver Creek,**	**79.89**	**24**	P	**P**	**14 22 06.5**	**+0.2**
BCAR	**Beaver Creek A**	**79.90**	**24**	P	**P**	**14 22 06.6**	**+0.2**
GLB	**Gilahina Butte**	**80.03**	**26**	P	**P**	**14 22 07.3**	**+0.2**
G31M	**Satah River**	**80.06**	**19**	P	**P**	**14 22 06.3**	**-0.8**
DAWY	**Dawson**	**80.18**	**23**	P	**P**	**14 22 07.5**	**-0.4**
VRDI	**Verde Repeater**	**80.29**	**26**	P	**P**	**14 22 08.7**	**+0.1**
I30M	**Mount Dempster**	**80.50**	**21**	P	**P**	**14 22 08.8**	**-0.9**
RES	**Resolute Bay**	**80.57**	**4**	P	**P**	**14 22 09.9**	**+0.2**
RES	**Resolute Bay**	**80.57**	**4**	P	**P**	**14 22 09.9**	**+0.2**
RES				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BERG	**Berg Lake**	**80.65**	**27**	P	**P**	**14 22 10.7**	**+0.3**
BERG				IAmb	IAmb	14 22 14.0	
	comp=Z,8.6nm,0.6s						
C36M	**Paulatuk**	**81.04**	**15**	P	**P**	**14 22 11.8**	**-0.5**
C36M				IAmb	IAmb	14 22 12.1	
	comp=Z,6.1nm,0.7s						
BARN	**Barnard Glacie**	**81.10**	**26**	P	**P**	**14 22 13.7**	**+0.6**
BARN				IAmb	IAmb	14 22 14.0	
	comp=Z,4.0nm,0.8s						
L29M	**L29M**	**81.22**	**23**	P	**P**	**14 22 13.7**	**+0.2**
L29M				IAmb	IAmb	14 22 14.8	
	comp=Z,7.7nm,1.1s						
CTGM	**Chitina Glacie**	**81.29**	**26**	P	**P**	**14 22 14.1**	**+0.1**
CTGM				IAmb	IAmb	14 22 23.6	
	comp=Z,5.5nm,1.1s						
O30N	**Mendenhall**	**83.44**	**24**	P	**P**	**14 22 25.5**	**+0.4**
O30N				IAmb	IAmb	14 22 26.6	
	comp=Z,4.5nm,1.1s						
N32M	**Quiet Lake**	**84.29**	**23**	P	**P**	**14 22 29.4**	**0.0**
N32M				IAmb	IAmb	14 22 37.0	
	comp=Z,7.5nm,1.1s						
ESDC	**Sonseca Array**	**85.24**	**311**	P	**P**	**14 22 34.8**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=60,slow=4.4,SNR=5.3						
	comp=Z,1.5nm,1.0s						
YKA	**Yellowknife Ar**	**88.87**	**16**	P	**P**	**14 22 51.0**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=329,slow=4.7,SNR=8.3						
	comp=Z,0.4nm,0.6s						
BOSA	**Boshof**	**89.76**	**238**	P	**P**	**14 22 56.0**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=90,slow=3.0,SNR=2.2						
	comp=Z,1.4nm,0.6s						
QSPA	**South Pole Qui**	**114.27**	**180**	PKP	PKPdf	14 28 35.3	-1.5
	comp=Z,1.7nm,1.0s,baz=195,slow=4.0,SNR=2.6						
TXAR	**Lajitas Array**	**121.58**	**25**	PKP	**PKPdf**	**14 28 51.4**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=33,slow=1.0,SNR=6.0						
SDV	**Santo Domingo**	**145.81**	**345**	PKPbc	**PKPdf**	**14 29 36.8**	**-0.8**
	comp=Z,24nm,0.8s,baz=41,slow=2.6,SNR=26						
ROSC	**El Rosal**	**150.49**	**350**	PKPbc	**PKPbc**	**14 29 49.6**	**-1.3**
	comp=Z,8.9nm,0.3s,baz=214,slow=3.6,SNR=5.0						

*JMA **20** 14:11:28.5±0.3, 46°N±2°×14°5E±°, h368km, MV3.5/37, SOUTHERN SEA OF OKHOTSK*
*IDC **20** 14:11:28.9±1.2, 46°.32N×144°.48E, h359km±14km, mb2.9/8, mbtmp3.7/16, Error ellipse: s-maj=18.6km s-min=12.8km az=132.0*
*SKHL **20** 14:11:29.0±0.4, 46°.20N×144°.80E, h342km±2km, mb4.3/8, mbv4.9/2, msh4.6/2, msha4.7/5*

ISC 20 14:11:27.7±0.6, 46°.13N±0°.05×144°.66E±0°.06, h356km±6km, n43, σ1ᵖ55/58, mb3.2/9, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
YSS	**Yuzh-Sakhalins**	**1.55**	**303**	*e*P		**Pn**	**14 12 17.1**	**+0.5**
YSS				AMB		AMB	14 12 17.3	
	30nm,0.3s							
YSS				*e*S		**S**	**14 12 53.8**	**-2.2**
YSS				A		A	14 12 56.2	
	20nm,0.6s							
YSS				A		A	14 12 56.2	
	20nm,0.6s							
JSE	**Soyaes**	**1.87**	**232**	P		**Pn**	**14 12 19.9**	**+1.2**
JWK2	**Keihoku**	**2.10**	**248**	*e*P		**Pn**	**14 12 21.5**	**+1.3**
JWK2				*e*S		**S**	**14 13 03.0**	**+0.6**
JRA	**Rausu**	**2.21**	**171**	*e*P		**Pn**	**14 12 23.2**	**+2.1**
JTKR	**Abashiri--Toko**	**2.22**	**194**	*e*P		**Pn**	**14 12 23.2**	**+2.0**
JTKR				*e*S		**S**	**14 13 06.7**	**+2.5**
YUK	**Yuzh-Kuril'sk**	**2.26**	**157**	*e*P		**Pn**	**14 12 21.8**	**+0.4**
YUK				AMB		AMB	14 12 24.8	
	140nm,0.6s							
YUK				AMB		AMB	14 12 25.7	
	400nm,1.0s							
YUK				*e*S		**S**	**14 13 02.9**	**-1.7**
YUK				A		A	14 13 08.3	
	160nm,0.7s							
YUK				A		A	14 13 08.3	
	170nm,0.7s							
YUK				A		A	14 13 08.9	
	1μm,2.0s							
YUK				A		A	14 13 08.9	
	800nm,2.0s							
KUR	**Kuril'sk**	**2.42**	**111**	*e*P		**Pn**	**14 12 22.4**	**-0.2**
KUR				AMB		AMB	14 12 25.2	
	40nm,0.4s							
KUR				*e*S		**S**	**14 13 03.8**	**-3.0**
KUR				A		A	14 13 09.8	
	30nm,0.6s							
KUR				A		A	14 13 09.8	
	40nm,0.6s							
KUR				A		A	14 13 10.8	
	900nm,3.0s							
KUR				A		A	14 13 10.8	
	500nm,3.0s							
ASAJ	**Asahikawa**	**2.48**	**217**	P		**Pn**	**14 12 24.9**	**+1.8**
	25nm,0.6s,baz=33,slow=9.6,SNR=44							
JRBN	**Rebuntou**	**2.61**	**256**	*e*P		**Pn**	**14 12 24.0**	**-0.2**
JKK2	**Kamakawa 2**	**2.63**	**212**	*e*P		**Pn**	**14 12 26.0**	**+1.6**
SHO	**Shikotan**	**2.73**	**145**	*e*P		**Pn**	**14 12 25.5**	**+0.3**
SHO				AMB		AMB	14 12 26.8	
	30nm,0.2s							
SHO				AMB		AMB	14 12 28.5	
	430nm,3.0s							
SHO				*e*S		**S**	**14 13 09.3**	**-2.2**
SHO				A		A	14 13 13.7	
	220nm,0.5s							
SHO				A		A	14 13 13.7	
	260nm,0.5s							
NMR	**Nemuro--Hokkai**	**2.86**	**164**	*e*P		**Pn**	**14 12 27.3**	**+1.0**
NMR				*e*S		**S**	**14 13 12.5**	**-1.0**
NEM2	**Nemuro 2**	**2.87**	**164**	*e*P		**Pn**	**14 12 27.1**	**+0.8**
NEM2				*e*S		**S**	**14 13 13.0**	**-0.5**
JAR	**Ashorobuto**	**2.90**	**193**	*e*P		**Pn**	**14 12 28.4**	**+1.7**
AKK	**Akkeshi**	**3.11**	**178**	*e*P		**Pn**	**14 12 29.3**	**+0.7**
AKK				*e*S		**S**	**14 13 16.2**	**-1.4**
JAK	**Akkeshi**	**3.13**	**180**	*e*P		**Pn**	**14 12 29.4**	**+0.7**
JAK				*e*S		**S**	**14 13 17.0**	**-0.9**
JHR	**Hokuryu**	**3.17**	**222**	*e*P		**Pn**	**14 12 30.7**	**+1.6**
UGL	**Uglegorsk**	**3.43**	**330**	*e*P		**Pn**	**14 12 30.6**	**-0.7**
UGL				AMB		AMB	14 12 32.4	
	40nm,0.9s							
JCH	**Churui**	**3.63**	**195**	*e*P		**Pn**	**14 12 33.8**	**+0.4**
JCH				*e*S		**S**	**14 13 24.6**	**-1.9**
JEW	**Eniwo**	**4.01**	**216**	*e*P		**Pn**	**14 12 38.9**	**+1.7**
JNBK	**Urakawa-nobuka**	**4.08**	**200**	*e*P		**Pn**	**14 12 38.3**	**+0.3**
JNBK				*e*S		**S**	**14 13 32.4**	**-2.2**
TYV	**Tymovskoe**	**4.92**	**345**	*e*P		**Pn**	**14 12 46.8**	**+0.3**
TYV				AMB		AMB	14 12 48.6	
	30nm,0.5s							
JOT	**Ohata**	**5.42**	**210**	*e*P		**Pn**	**14 12 51.7**	**-0.5**
JOT				*e*S		**S**	**14 13 57.0**	**-3.6**
JOSM	**Okushiri--Mats**	**5.50**	**225**	*e*P		**Pn**	**14 12 53.3**	**+0.2**
JOMM	**Oshimamatsumae**	**5.70**	**218**	*e*P		**Pn**	**14 12 56.4**	**+1.1**
JANG	**Nango**	**6.19**	**203**	*e*P		**Pn**	**14 13 00.1**	**-0.9**
JANG				*e*S		**S**	**14 14 12.5**	**-4.1**
JOM	**Ohasama**	**7.10**	**202**	*e*P		**Pn**	**14 13 11.8**	**+0.5**
JOM				*e*S		**S**	**14 14 33.3**	**-2.4**
USRK	**Ussuriysk Ar.**	**9.16**	**262**	P		**Pn**	**14 13 35.8**	**+0.3**
	2.7nm,0.4s,baz=68,slow=11,SNR=20							
KLR	**Kul'dur**	**9.24**	**294**	P		**Pn**	**14 13 37.1**	**+0.6**
	0.6nm,0.5s,baz=154,slow=11,SNR=2.4							
MJAR	**Matsushiro Arr**	**10.73**	**209**	P		**P**	**14 13 55.7**	**+0.7**
	2.4nm,0.6s,baz=8.5,slow=13,SNR=5.5							
PETK	**Petropavlovsk-**	**10.96**	**46**	P		**Pn**	**14 13 57.2**	**+0.4**
	0.9nm,0.6s,baz=219,slow=7.9,SNR=9.9							
MA2	**Magadan**	**13.96**	**13**	P		**P**	**14 14 30.8**	**+0.6**
	1.6nm,0.5s,baz=203,slow=8.6,SNR=3.8							
KSRS	**Korea Array**	**15.17**	**241**	P		**Pn**	**14 14 45.8**	**-0.5**
	0.8nm,0.6s,baz=53,slow=11,SNR=2.3							
SEY	**Seymchan**	**17.40**	**12**	P		**P**	**14 15 06.8**	**-0.8**
	3.2nm,0.5s,baz=179,slow=8.2,SNR=33							
SONM	**Songino Array**	**25.99**	**288**	P		**P**	**14 16 29.1**	**-0.1**
	0.8nm,0.7s,baz=87,slow=9.4,SNR=1.3							
	0.8nm,0.7s							
ILAR	**Eielson Array**	**40.65**	**38**	P		**P**	**14 18 33.5**	**-0.5**
	0.7nm,0.9s,baz=278,slow=8.4,SNR=7.0							
	0.7nm,0.9s							
MKAR	**Makanchi Array**	**41.95**	**294**	P		**P**	**14 18 42.8**	**-1.9**
	0.6nm,0.8s,baz=64,slow=9.8,SNR=3.5							
	0.6nm,0.8s							
KURBB	**Kurchatov Arra**	**42.84**	**301**	P		**P**	**14 18 50.2**	**-1.6**
	0.4nm,0.6s,baz=72,slow=8.4,SNR=4.3							
	0.4nm,0.6s							
YKA	**Yellowknife Ar**	**54.81**	**34**	P		**P**	**14 20 21.2**	**-0.2**
	0.7nm,0.3s,baz=305,slow=7.2,SNR=4.1							
	0.7nm,0.3s							
FINES	**FINESS Array B**	**61.95**	**331**	P		**P**	**14 21 10.1**	**-0.1**
	0.6nm,0.5s,baz=38,slow=9.3,SNR=1.6							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**66.42**	**191**	P		**P**	**14 21 41.1**	**+1.6**
	0.5nm,0.5s,baz=8.5,slow=6.7,SNR=3

TGUH	**Tegucigalpa,Un**	**1.02**	**26**	*i* P		**Pn**	**14 20 59.6**	**+0.7**
TGUH				IAML			14 21 00.0	
	comp=Z,2μm,1.0s							
TGUH				*i* S		**Sn**	**14 21 20.7**	**-1.3**
TEL3	**Telica 3**	**1.02**	**123**	*i* P		**Pn**	**14 20 59.1**	**+0.2**
TEL3				IAML			14 21 31.0	
	comp=Z,1μm,1.0s							
TECO	**Alcaldia de Te**	**1.10**	**291**	*e*P		**Pn**	**14 20 59.9**	**+0.5**
TECO	**Alcaldia de Te**	**1.10**	**291**	IAML			14 21 00.3	
	comp=Z,540nm,1.0s							
TECO				*i* P		**Pn**	**14 21 00.4**	**+1.0**
TECO				*i* S		**Sn**	**14 21 22.1**	**-0.6**
PACN	**Al O del Volca**	**1.11**	**125**	*i* P		**Pn**	**14 21 00.5**	**+1.0**
PACN				*i* S		**Sn**	**14 21 23.5**	**+0.8**
PACN				IAML			14 21 39.8	
	comp=Z,460nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.13**	**300**	*e*P		**Pn**	**14 21 00.6**	**+0.9**
SCLA	**Alcaldia de Sa**	**1.13**	**300**	*i* P		**Pn**	**14 21 00.1**	**+0.5**
SCLA				IAML			14 21 01.2	
	comp=Z,280nm,1.0s							
SCLA				*i* S		**Sn**	**14 21 22.8**	**-0.3**
ROCN	**Rota Cerro Neg**	**1.14**	**122**	*i* P		**Pn**	**14 21 00.6**	**+0.9**
ROCN				*i* S		**Sn**	**14 21 22.5**	**-0.6**
ROCN				IAML			14 21 31.9	
	comp=Z,280nm,1.0s							
UESV	**Universidad de**	**1.15**	**296**	*i* P		**Pn**	**14 20 59.3**	**-0.5**
UESV				*i* S		**Sn**	**14 21 21.9**	**-1.4**
UESV				IAML			14 21 31.4	
	comp=Z,340nm,1.0s							
CNGN	**Cerro Negro**	**1.18**	**122**	*i* S		**Sn**	**14 21 23.8**	**0.0**
YUSH	**Yuscaran**	**1.18**	**46**	*i* P		**Pn**	**14 21 00.6**	**+0.5**
YUSH				*i* S		**Sn**	**14 21 21.9**	**-2.1**
CNGA	**Al SSO del Vol**	**1.19**	**122**	*i* S		**Sn**	**14 21 25.4**	**+1.6**
MACN	**El Madrono**	**1.22**	**123**	*i* P		**Pn**	**14 21 01.5**	**+1.1**
MACN				*i* S		**Sn**	**14 21 25.6**	**+1.3**
MACN				IAML			14 21 31.9	
	comp=Z,370nm,1.0s							
INTHN	**La Esperanza I**	**1.23**	**343**	*i* P		**Pn**	**14 21 01.7**	**+1.0**
INTHN				*i* S		**Sn**	**14 21 25.4**	**+0.4**
LEVN	**Ruinas Leon Vi**	**1.30**	**124**	*i* P		**Pn**	**14 20 59.3**	**-1.7**
LEVN				*i* S		**Sn**	**14 21 26.7**	**+1.3**
LEVN				IAML			14 21 30.3	
	comp=Z,610nm,1.0s							
PAVA	**Las Pavas**	**1.31**	**296**	*e*P		**Pn**	**14 21 01.8**	**+0.6**
PAVA	**Las Pavas**	**1.31**	**296**	*i* P		**Pn**	**14 21 01.7**	**+0.6**
PAVA				IAML			14 21 02.3	
	comp=Z,880nm,1.0s							
PAVA				*i* S		**Sn**	**14 21 26.2**	**+0.4**
LIMN	**Finca el Limon**	**1.33**	**93**	*i* P		**Pn**	**14 21 01.9**	**+0.6**
LIMN				IAML			14 21 02.2	
	comp=Z,300nm,1.0s							
LIMN				*i* S		**Sn**	**14 21 25.8**	**-0.1**
SJTE	**Alcalda de S**	**1.33**	**291**	*e*P		**Pn**	**14 21 01.9**	**+0.5**
SJTE	**Alcalda de S**	**1.33**	**291**	*i* P		**Pn**	**14 21 01.7**	**+0.4**
SJTE				IAML			14 21 02.5	
	comp=Z,380nm,1.0s							
SJTE				*i* S		**Sn**	**14 21 27.3**	**+1.2**
MOMN	**Momotombo**	**1.36**	**122**	*i* P		**Pn**	**14 21 03.5**	**+2.0**
MOMN				*i* S		**Sn**	**14 21 27.3**	**+0.9**
MOMN				IAML			14 21 37.4	
	comp=Z,13nm,1.0s							
LFRS	**El Faro**	**1.39**	**291**	*e*P		**Pn**	**14 21 02.4**	**+0.6**
LFRS				*e*S		**Sn**	**14 21 28.2**	**+1.3**
MOM2	**El Cardon**	**1.40**	**120**	*i* P		**Pn**	**14 21 02.1**	**+0.4**
MOM2				*i* S		**Sn**	**14 21 27.8**	**+1.0**
MOM2				IAML			14 21 39.6	
	comp=Z,210nm,1.0s							
COPN	**Copaltepe**	**1.46**	**130**	*i* P		**Pn**	**14 21 03.3**	**+1.0**
COPN				IAML			14 21 29.7	
	comp=Z,580nm,1.0s							
PANCS	**Alcalda de**	**1.49**	**289**	*i* P		**Pn**	**14 21 01.9**	**-0.8**
PANCS				IAML			14 21 52.6	
	comp=Z,2μm,1.0s							
LOMA	**Loma Larga**	**1.50**	**290**	*e*P		**Pn**	**14 21 03.3**	**+0.6**
LOMA	**Loma Larga**	**1.50**	**290**	*i* P		**Pn**	**14 21 03.2**	**+0.4**
LOMA				IAML			14 21 04.1	
	comp=Z,480nm,1.0s							
LLGN	**La Laguna**	**1.56**	**311**	*i* P		**Pn**	**14 21 04.2**	**+0.8**
LLGN				*i* S		**Sn**	**14 21 30.1**	**+0.3**
LLGN				IAML			14 21 32.5	
	comp=Z,300nm,1.0s							
LALI	**Alcalda de L**	**1.59**	**283**	*e*P		**Pn**	**14 21 03.9**	**+0.4**
LALI	**Alcalda de L**	**1.59**	**283**	*i* S		**Sn**	**14 21 28.7**	**-1.2**
PMON	**Piamonte**	**1.65**	**291**	*e*P		**Pn**	**14 21 05.0**	**+0.8**
PMON	**Piamonte**	**1.65**	**291**	*i* P		**Pn**	**14 21 03.9**	**-0.3**
PMON				IAML			14 21 38.2	
	comp=Z,460nm,1.0s							
APQ2	**Apoyeque**	**1.65**	**124**	*i* P		**Pn**	**14 21 02.7**	**-1.4**
APQ2				*i* S		**Sn**	**14 21 32.1**	**+1.1**
APQ2				IAML			14 21 34.8	
	comp=Z,380nm,1.0s							
QUEZ	**Alcaldia de Qu**	**1.66**	**295**	*i* P		**Pn**	**14 21 04.7**	**+0.5**
QUEZ				IAML			14 21 05.2	
	comp=Z,2μm,1.0s							
TISN	**Laguna Tiscapa**	**1.73**	**125**	*i* P		**Pn**	**14 21 06.0**	**+1.1**
TISN				IAML			14 21 37.6	
	comp=Z,27nm,1.0s							
UNAN	**Cigeo UNAN**	**1.75**	**125**	*i* P		**Pn**	**14 21 05.8**	**+0.8**
UNAN				*i* S		**Sn**	**14 21 33.4**	**+0.7**
UNAN				IAML			14 21 35.1	
	comp=Z,1μm,1.0s							
CEDA	**San Andres**	**1.75**	**292**	*i* P		**Pn**	**14 21 06.4**	**+1.3**
CEDA				*i* S		**Sn**	**14 21 33.4**	**+0.6**
CEDA				IAML			14 21 50.8	
	comp=Z,3μm,1.0s							
JAYA	**Jayaque - finc**	**1.75**	**287**	*e*P		**Pn**	**14 21 05.6**	**+0.4**
JAYA				IAML			14 21 35.4	
	comp=Z,583nm,0.2s							
JAYA	**Jayaque - finc**	**1.75**	**287**	*i* P		**Pn**	**14 21 05.4**	**+0.2**
JAYA				*i* S		**Sn**	**14 21 33.6**	**+0.5**
JAYA				IAML			14 21 35.3	
	comp=Z,1μm,1.0s							
MATN	**Matagalpa**	**1.77**	**96**	*i* P		**Pn**	**14 21 06.2**	**+0.9**
MATN				IAML			14 21 06.6	
	comp=Z,160nm,1.0s							
MATN				*i* S		**Sn**	**14 21 34.9**	**+1.8**
MAS3	**Al N del Volca**	**1.87**	**126**	*i* S		**Sn**	**14 21 32.7**	**-2.3**
SNJE	**San Jose**	**1.97**	**292**	*e*P		**Pn**	**14 21 08.2**	**+0.8**
CEVE	**Cerro Verde**	**1.97**	**291**	*i* P		**Pn**	**14 21 07.6**	**+0.1**
CEVE				IAML			14 21 51.0	
	comp=Z,440nm,1.0s							
SBLS	**San Blas**	**1.97**	**291**	*e*P		**Pn**	**14 21 08.8**	**+1.3**
RTR	**El Retiro**	**2.02**	**292**	*e*P		**Pn**	**14 21 09.4**	**+1.5**
MTO3	**Montecristo**	**2.02**	**309**	*i* P		**Pn**	**14 21 09.2**	**+1.2**
MTO3				*i* S		**Sn**	**14 21 37.5**	**-0.6**
MTO3				IAML			14 21 54.5	
	comp=Z,77nm,1.0s							
NUBE	**Las Nubes**	**2.14**	**291**	*e*P		**Pn**	**14 21 09.8**	**+0.7**
NUBE	**Las Nubes**	**2.14**	**291**	*i* P		**Pn**	**14 21 09.7**	**+0.5**
NUBE				*i* S		**Sn**	**14 21 40.3**	**+0.2**
NUBE				IAML			14 21 46.4	
	comp=Z,320nm,1.0s							
SLOZ	**Alcaldia de Sa**	**2.19**	**294**	*e*P		**Pn**	**14 21 10.7**	**+1.1**
ORTG	**Ortega, Santa**	**3.54**	**141**	*i* P		**Pn**	**14 21 27.8**	**+2.4**
ORTG				*i* S		**Sn**	**14 22 07.6**	**-1.7**
ORTG				IAML			14 23 54.7	
	comp=Z,54nm,1.0s							
SAJU	**San Juanillo,**	**3.63**	**147**	*i* P		**Pn**	**14 21 28.5**	**+2.0**
SAJU				*i* S		**Sn**	**14 22 08.6**	**-2.6**
SAJU				IAML			14 22 11.6	
	comp=Z,170nm,1.0s							
INDI	**Punta indio, G**	**3.91**	**146**	*i* P		**Pn**	**14 21 31.9**	**+2.0**
INDI				*i* S		**Sn**	**14 22 14.8**	**-2.7**
INDI				IAML			14 22 18.9	
	comp=Z,120nm,1.0s							
JTS	**Las Juntas de**	**3.92**	**136**	P		**Pn**	**14 21 28.9**	**-1.1**
	comp=Z,6.1nm,0.4s,baz=301,slow=19,SNR=6.7							
JTS				S		**Sn**	**14 22 15.0**	**-2.7**
	comp=Z,19nm,0.4s,baz=242,slow=21,SNR=7.6							
LAFE	**Finca La Fe, P**	**4.31**	**140**	*i* P		**Pn**	**14 21 37.1**	**+2.2**
LAFE				IAML			14 21 37.6	
	comp=Z,1.2nm,1.0s							
LAFE				*i* S		**Sn**	**14 22 23.8**	**-2.6**
JACO	**JACO, Garabito**	**4.58**	**139**	*i* P		**Pn**	**14 21 40.2**	**+1.9**
JACO				*i* S		**Sn**	**14 22 29.9**	**-2.6**
JACO				IAML			14 22 36.0	
	comp=Z,78nm,1.0s							
CDM	**Cerro de Muert**	**5.27**	**132**	*i* P		**Pn**	**14 21 50.9**	**+3.3**
CDM				IAmb		IAmb	14 21 52.1	
	comp=Z,41nm,0.6s							
CDM				*i* S		**Sn**	**14 22 50.5**	**+1.3**
CDM				IAML			14 22 54.2	
	comp=Z,100nm,1.0s							
SRBA	**San Rafael, Bu**	**5.78**	**132**	*i* P		**Pn**	**14 21 56.8**	**+2.9**
SRBA				IAmb		IAmb	14 21 57.5	
	comp=Z,24nm,0.5s							
SRBA				IAML			14 21 57.8	
	comp=Z,38nm,1.0s							
SRBA				*i* S		**Sn**	**14 23 01.0**	**+0.4**
SDV	**Santo Domingo**	**17.30**	**102**	P		**Pn**	**14 24 19.2**	**-0.5**
	comp=Z,8.5nm,0.7s,baz=314,slow=8.0,SNR=4.1							
TXAR	**Lajitas Array**	**21.88**	**320**	P		**P**	**14 25 07.7**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=144,slow=11,SNR=4.7							
	comp=Z,0.5nm,0.6s							
SADO	**Sadowa**	**32.37**	**11**	P		**P**	**14 26 39.9**	**-0.5**
	comp=Z,3.6nm,0.5s,baz=215,slow=8.6,SNR=5.1							
	comp=Z,3.6nm,0.5s							
PDAR	**Pinedale Array**	**35.05**	**332**	P		**P**	**14 27 05.0**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=140,slow=7.8,SNR=5.9							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**37.01**	**318**	P		**P**	**14 27 22.5**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=114,slow=11,SNR=1.6							
	comp=Z,0.2nm,0.6s							
ULM	**Lac du Bonnet**	**37.61**	**351**	P		**P**	**14 27 24.4**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=166,slow=10.0,SNR=5.8							
	comp=Z,1.5nm,0.5s							
SCHQ	**Schefferville**	**44.70**	**17**	P		**P**	**14 28 22.5**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=228,slow=8.1,SNR=4.8							
	comp=Z,1.7nm,0.5s							
YKA	**Yellowknife Ar**	**52.88**	**345**	P		**P**	**14 29 25.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=104,slow=8.0,SNR=2.1							
	comp=Z,0.1nm,0.3s							
ILAR	**Eielson Array**	**65.29**	**336**	P		**P**	**14 30 49.7**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=148,slow=4.4,SNR=1.7							
	comp=Z,0.1nm,0.6s							
SPITS	**Spitsbergen Ar**	**80.09**	**12**	P		**P**	**14 32 16.3**	**-0.7**
	comp=Z,9.0nm,1.0s,baz=265,slow=6.7,SNR=2.1							
STKA	**Stephens Creek**	**131.22**	**239**	PKP		**PKPdf**	**14 39 17.5**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=340,slow=8.1,SNR=3.3							
WRA	**Warramunga Arr**	**139.19**	**255**	PKP		**PKiKP**	**14 39 35.3**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=88,slow=2.5,SNR=6.9							
ASAR	**Alice Springs**	**139.27**	**249**	PKhKP		PKPpre	14 39 27.8	
	comp=Z,0.2nm,0.8s,baz=111,slow=2.8,SNR=1.8							
ASAR				PKP		**PKPdf**	**14 39 34.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=96,slow=1.7,SNR=11							

TAP 20 14:38:09.7,24.94N×122.26E,h5km±1km,ML2.1,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.25**	**286**	P		Pg	14 38 15.6	+1.0
	baz=285							
TWB1				*i* S		Sb	14 38 19.8	-1.6
	baz=285							
SXI1	**Grass Mountain**	**0.38**	**294**	*i* P		Pb	14 38 18.4	-0.5
	baz=294							
SXI1				S		Sb	14 38 24.6	-0.5
	baz=294							
NWF	**Wu-fen Shan**	**0.45**	**287**	P		Pb	14 38 20.3	+0.2
	baz=286							
NWF				S		Sb	14 38 26.8	-0.4
	baz=286							
WFSB	**Wu-fen Shan**	**0.45**	**287**	*i* P		Pb	14 38 20.4	+0.3
	baz=286							
WFSB				S		Sb	14 38 27.3	+0.2
	baz=286							
TNOU	**National Taiwa**	**0.48**	**296**	P		Pb	14 38 20.7	0.0
	baz=295							
TNOU				*e*S		Sb	14 38 27.5	-0.7
	baz=295							
TWC	**Suao**	**0.49**	**228**	P		Pb	14 38 20.4	-0.5
	baz=227							
TWC				S		Sb	14 38 29.0	+0.6
	baz=227							
EOS2	**EOS2**	**0.52**	**182**	P		Pb	14 38 20.8	-0.4
	baz=182							
EOS2				*e*S		Sb	14 38 29.7	+0.7
	baz=182							
ESAO	**Su ao**	**0.52**	**226**	*e*P		Pb	14 38 21.2	-0.1
	baz=225							
NDS	**Dongshan**	**0.58**	**238**	P		Pb	14 38 22.2	-0.1
	baz=238							
NDS				*e*S		Sb	14 38 32.3	+1.5
	baz=238							
TWE	**Neicheng**	**0.58**	**248**	*e*P		Pb	14 38 21.8	-0.5
	baz=246							
TWE				*e*S		Sb	14 38 30.2	-0.5
	baz=246							
TWA	**Mucha**	**0.61**	**274**	*e*P		Pb	14 38 23.3	+0.4
	baz=273							
TWA				S		Sb	14 38 31.8	0.0
	baz=273							
FUSB	**Fushanzhiwuyua**	**0.63**	**254**	P		Pb	14 38 22.8	-0.4
	baz=253							
FUSB				S		Sb	14 38 33.9	+1.4
	baz=253							
YM08	**YM08**	**0.65**	**292**	P		Pb	14 38 23.8	+0.2
	baz=292							
YM08				*i* S		Sb	14 38 32.4	-0.6
	baz=292							
EOS3	**EOS3**	**0.65**	**175**	P		Pb	14 38 23.6	+0.1
	baz=174							
EOS3				*e*S		Sb	14 38 33.3	+0.5
	baz=174							
YM01	**YM01**	**0.65**	**288**	*e*P		Pb	14 38 23.4	-0.2
	baz=288							
YM01				*e*S		Sb	14 38 33.9	+0.9
	baz=288							
EWUT	**Wuta**	**0.66**	**221**	P		Pg	14 38 22.7	+0.4
	baz=221							
EWUT				*e*S		Sn	14 38 34.8	-1.5
	baz=221							
NHDH	**Xindian Distri**	**0.66**	**272**	*e*P		Pb	14 38 23.8	+0.1
	baz=271							
NHDH				S		Sb	14 38 33.2	-0.1
	baz=271							
TWY	**Chenhua**	**0.68**	**300**	P		Pb	14 38 24.7	+0.6
	baz=299							
TWY				*e*S		Sn	14 38 36.1	-0.9
	baz=299							
ENA	**Nanau**	**0.69**	**223**	P		Pg	14 38 23.6	+0.5
	baz=221							
ENA				*e*S		Sb	14 38 35.4	+1.3
	baz=221							
NWLT	**Wulai**	**0.70**	**257**	*e*P		Pb	14 38 24.3	-0.2
	baz=256							
NWLT				*e*S		Sb	14 38 34.6	+0.2
	baz=256							
NDT	**Datong Townshi**	**0.75**	**244**	*e*P		Pb	14 38 25.3	0.0
	baz=243							
NDT				S		Sb	14 38 37.2	+1.3
	baz=243							
EOS4	**EOS4**	**0.82**	**176**	P		Pb	14 38 26.3	+0.2
	baz=175							
EOS4				*e*S		Sn	14 38 39.0	-0.8
	baz=175							
YHNB	**Yeheng**	**0.84**	**252**	P		Pb	14 38 26.6	-0.3
	baz=251							
YHNB				S		Sb	14 38 39.2	+0.7
	baz=251							
NACB	**Ninganchiao**	**0.97**	**218**	P		Pg	14 38 28.5	+0.2
	baz=218							
NACB				S		Sn	14 38 43.2	-0.9
	baz=218							
ETLH	**Xiulin Townshi**	**1.01**	**224**	P		Pb	14 38 29.7	-0.1
	baz=223							
ETLH				*e*S		Sn	14 38 45.0	-0.3
	baz=223							
TWD	**Chiawan**	**1.05**	**215**	*e*P		Pg	14 38 29.8	0.0
	baz=214							
TWD				S		Sn	14 38 46.3	+0.4
	baz=214							
NFF	**Wufeng Townshi**	**1.08**	**254**	P		Pn	14 38 31.6	+0.1
	baz=253							
NFF				S		Sn	14 38 48.0	+1.1
	baz=253							
NFF	**Wufeng Townshi**	**1.08**	**254**	P		Pn	14 38 48.0	+1.1
	baz=258							

HEL 20 14:38:16.1±0.1,67.63N×33.80E,h0km,ML1.2, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVZ	**Lovozero**	**0.42**	**50**	PG		Pg	14 38 23.5	-0.6
LVZ				SG		Sg	14 38 29.4	-0.1
VRF	**Varrio**	**1.60**	**276**	PG		Pn	14 38 45.0	-0.7
VRF				MSG			14 39 04.0	
	comp=Z,1.7nm,0.2s							
VRF				SG		Sn	14 39 05.1	-1.9
OLKF	**Oulanka, Finla**	**2.17**	**235**	PG		Pb	14 38 55.2	-1.0
OLKF				MSG			14 39 20.6	
	comp=Z,1.1nm,0.2s							
OLKF				SG		Sb	14 39 23.3	-0.4
RAJF	**Raja-Jooseppi**	**2.23**	**295**	PG		Pb	14 38 55.8	-1.4
RAJF				SB		Sn	14 39 22.7	+0.3
KU6	**Riekki**	**2.24**	**226**	PG		Pn	14 38 55.8	+1.5
	baz=43							
KU6				MSG			14 39 22.2	
	comp=Z,0.8nm,0.2s							
KU6				SG		Sb	14 39 25.2	-0.3
MSF	**Maaselka**	**2.56**	**230**	SG		Sb	14 39 35.7	+1.0
SGF	**Sodankyl**	**2.80**	**269**	SB		Sb	14 39 40.4	-1.3
KMNF	**Kaamanen**	**2.94**	**304**	SB		Sb	14 39 44.2	-1.6
RNF	**Rovaniemi**	**3.21**	**255**	PB		Pn	14 39 09.2	+1.5
KEV	**Kevo**	**3.27**	**314**	PN		Pn	14 39 08.7	+0.2
KEV				SN		Sn	14 39 46.9	-1.1
ARA0	**ARCESS Array S**	**3.59**	**306**	PN		Pn	14 39 12.1	-0.8
ARA0				SN		Sn	14 39 55.8	-0.2
TOF	**Tornio**	**4.05**	**252**	PG		Pb	14 39 27.4	-0.8
TOF				SB		Sb	14 40 16.6	-1.1

TAP 20 14:38:26.3,24.84N×122.16E,h116km,ML2.4,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGS		**0.20**	**271**	S		Sn	14 38 55.7	+1.2
	baz=259							
SXI1	**Grass Mountain**	**0.36**	**314**	P		Pn	14 38 43.7	+0.5
	baz=306							
SXI1				S		Sn	14 38 56.2	+0.4
	baz=306							
TWC	**Suao**	**0.36**	**230**	*e*P		Pn	14 38 43.5	+0.4
	baz=222							
TWC				*e*S		Sn	14 38 56.3	+0.7
	baz=222							
NDS	**Dongshan**	**0.45**	**243**	*i* P		Pn	14 38 44.8	+1.3
	baz=238							
NDS				S		Sn	14 38 58.1	+1.7
	baz=238							
TWE	**Neicheng**	**0.46**	**255**	P		Pn	14 38 44.5	+1.0
	baz=256							
TWE				S		Sn	14 38 56.6	+0.1
	baz=256							
FUSB	**Fushanzhiwuyua**	**0.52**	**261**	P		Pn	14 38 43.9	-0.1
	baz=264							
EWUT	**Wuta**	**0.53**	**221**	*i* P		Pn	14 38 44.3	+0.4
	baz=211							
EWUT				*i* S		Sn	14 38 57.8	+0.5
	baz=211							
ENA	**Nanau**	**0.56**	**223**	*i* P		Pn	14 38 44.7	+0.5
	baz=215							
ENA				*i* S		Sn	14 38 58.2	+0.5
	baz=215							
ENTT	**Nioudou**	**0.57**	**250**	P		Pn	14 38 44.9	+0.6
	baz=254							
ENTT				S		Sn	14 38 58.3	+0.4
	baz=254							
NHDH	**Xindian Distri**	**0.59**	**282**	P		Pn	14 38 44.1	-0.2
	baz=289							
NHDH				*e*S		Sn	14 38 58.0	+0.1
	baz=289							
NWLT	**Wulai**	**0.60**	**264**	P		Pn	14 38 44.7	+0.2
	baz=269							
NWLT				S		Sn	14 38 57.0	-1.2
	baz=269							
NDT	**Datong Townshi**	**0.63**	**248**	*i* P		Pn	14 38 45.5	+0.8
	baz=257							
NDT				S		Sn	14 38 59.6	+1.0
	baz=257							
LATG	**Datong**	**0.65**	**242**	*i* P		Pn	14 38 45.9	+0.9
	baz=251							
LATG				S		Sn	14 39 00.5	+1.5
	baz=251							
YHNB	**Yeheng**	**0.73**	**257**	*i* P		Pn	14 38 46.0	+0.5
	baz=256							
YHNB				*i* S		Sn	14 38 59.9	-0.2
	baz=256							
NNS	**Nan Shan**	**0.82**	**241**	P		Pn	14 38 47.0	+0.6
	baz=245							
NNS				S		Sn	14 39 01.8	+0.2
	baz=245							
ETL	**Fush Village**	**0.84**	**216**	*e*P		Pn	14 38 46.5	0.0
	baz=206							
ETL				S		Sn	14 39 00.7	-0.9
	baz=206							
NACB	**Ninganchiao**	**0.84**	**218**	P		Pn	14 38 46.4	0.0
	baz=223							
NACB				S		Sn	14 39 02.0	+0.3
	baz=223							
ETLH	**Xiulin Townshi**	**0.88**	**224**	*e*P		Pn	14 38 47.0	0.0
	baz=229							
ETLH				*e*S		Sn	14 39 02.0	-0.5
	baz=229							
TWD	**Chiawan**	**0.92**	**214**	P		Pn	14 38 47.3	+0.1
	baz=222							
TWD				S		Sn	14 39 02.5	-0.3
	baz=222							
NFF	**Wufeng Townshi**	**0.97**	**258**	S		Sn	14 39 03.1	-0.8
	baz=258							
ETM	**Tongmen**	**1.06**	**215**	P		Pn	14 38 48.5	-0.2
	baz=217							
ETM				S		Sn	14 39 04.1	-1.4
	baz=217							
LXIB	**Xiulin Townshi**	**1.06**	**220**	*e*S		Sn	14 39 04.5	-1.2
	baz=208							
SHUL	**Shoufeng**	**1.18**	**207**	P		Pn	14 38 49.9	0.0
	baz=202							
SHUL				S		Sn	14 39 07.8	+0.1
	baz=202							
CHGB	**Renai**	**1.19**	**229**	P		Pn	14 38 51.4	+1.2
	baz=225							
CHGB				*i* S		Sn	14 39 08.4	+0.2
	baz=225							
ESL	**Shilin**	**1.22**	**213**	P		Pn	14 38 49.8	-0.5
	baz=213							
ESL				*i* S		Sn	14 39 06.2	-2.2
	baz=213							
WUSB	**Renai**	**1.27**	**228**	*i* P		Pn	14 38 52.1	+1.1
	baz=224							
WUSB				S		Sn	14 39 10.4	+0.7
	baz=224							
WARBT	**Fenglin Townsh**	**1.32**	**212**	*i* P		Pn	14 38 51.0	-0.5
	baz=201							
WARBT				S		Sn	14 39 08.8	-1.7
	baz=201							
VWDT	**VWDT**	**1.43**	**221**	*e*P		Pn	14

HEF				MSG		14 39 45.8	
	comp=Z,1.5nm,0.2s						
HEF				SN	Sg	14 39 47.6	-0.6
KLF	**Kolari**	**1.56**	**110**	PN	Pn	14 39 31.2	-0.2
KLF				MSG		14 39 48.3	
	comp=Z,1.7nm,0.2s						
KLF				SN	Sn	14 39 51.9	-0.4
KTK1	**Kautokeino**	**1.64**	**42**	PG	Pn	14 39 32.4	-0.1
KTK1				SN	Sg	14 39 56.8	+1.7
KALU	**Kalix**	**2.33**	**146**	SN	Sb	14 40 14.6	0.0
KALU	**Kalix**	**2.33**	**146**	SG	Sb	14 40 14.6	0.0
TOF	**Tornio**	**2.39**	**135**	PG	Pb	14 39 44.6	-1.6
TOF				MSG		14 40 11.7	
	comp=Z,1.0nm,0.2s						
TOF				SG	Sn	14 40 12.2	-0.4
RNF	**Rovaniemi**	**2.57**	**116**	PG	Pb	14 39 48.7	-0.6
RNF				SG	Sb	14 40 21.4	0.0
RNF	**Rovaniemi**	**2.57**	**116**	SB	Pb	14 39 48.7	-0.6
ARA0	**ARCESS Array S**	**2.59**	**46**	PB	Pn	14 39 46.5	+0.9
	baz=228						
ARA0				SG	Sb	14 40 22.0	-0.1
RANF	**Ranua**	**3.17**	**122**	SG	Pn	14 39 53.7	+0.2
RANF	**Ranua**	**3.17**	**122**	PB	Pn	14 39 53.7	+0.2

*IDC **20** 14:45:19.9±1.1, 34.52N×135.70E, h399km±13km, mb2.7/8, mbtmp3.5/13, Error ellipse: s-maj=17.8km s-min=13.6km az=95.0*

*JMA **20** 14:45:20.4±0.2, 35°N±1°×13°6E±°, h394km±1km, MV2.6/17, OSAKA PREF*

ISC 20 14:45:19.6±0.7, 34°50N±0'.09×135°69E±0'.09, h400km, n22, σ0s74/26, mb2.9/8, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.15**	**359**	S	**S**	**14 46 47.6**	**-1.2**
JNTK	**Naratenkawa**	**0.28**	**145**	S	**S**	**14 46 48.2**	**-1.0**
JWY	**Kouya**	**0.29**	**196**	S	**S**	**14 46 48.2**	**-1.1**
JTNC	**Tanabenakahech**	**0.68**	**185**	P	**Pn**	**14 46 10.2**	**+0.3**
JTNC				S	**S**	**14 46 49.4**	**-1.0**
JWT	**Wachi**	**0.81**	**343**	P	**Pn**	**14 46 10.2**	**+0.1**
JWT				S	**S**	**14 46 49.1**	**-1.7**
JIE	**Ise**	**0.85**	**97**	P	**Pn**	**14 46 10.8**	**+0.6**
JAI	**Aioi**	**1.25**	**236**	P	**Pn**	**14 46 11.9**	**+0.2**
JAI				S	**S**	**14 46 52.9**	**-0.8**
JYTA	**Yamagatataniai**	**1.39**	**38**	P	**Pn**	**14 46 12.8**	**+0.6**
JYTA				S	**S**	**14 46 53.9**	**-0.8**
JMN	**Monobe**	**1.69**	**243**	P	**Pn**	**14 46 14.0**	**+0.1**
MJAR	**Matsushiro Arr**	**2.89**	**45**	P	**Pn**	**14 46 22.5**	**+0.6**
	11nm,0.6s,baz=227,slow=8.1,SNR=29						
JNU	**Nakatsue**	**4.23**	**252**	P	**Pn**	**14 46 34.3**	**+0.3**
	15nm,0.4s,baz=124,slow=0.7,SNR=43						
KSRS	**Korea Array**	**6.95**	**297**	P	**Pn**	**14 47 03.0**	**+0.4**
	1.0nm,0.5s,baz=113,slow=11,SNR=6.0						
JOW	**Kunigami**	**9.95**	**222**	P	**P**	**14 47 36.4**	**-0.4**
	24nm,0.9s,baz=59,slow=4.8,SNR=3.8						
ASAJ	**Asahikawa**	**10.99**	**27**	P	**Pn**	**14 47 48.5**	**-0.4**
	4.8nm,0.7s,baz=212,slow=16,SNR=9.9						
PETK	**Petropavlovsk-**	**24.29**	**33**	P	**P**	**14 50 02.5**	**-0.2**
	1.2nm,0.8s,baz=166,slow=6.7,SNR=1.5						
	1.2nm,0.8s						
SONM	**Songino Array**	**25.59**	**310**	P	**P**	**14 50 14.5**	**+0.1**
	0.4nm,0.9s,baz=101,slow=7.5,SNR=3.3						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**41.58**	**304**	P	**P**	**14 52 30.7**	**+0.5**
	0.2nm,0.5s,baz=94,slow=11,SNR=2.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**43.95**	**310**	P	**P**	**14 52 49.4**	**+0.6**
	0.4nm,0.7s,baz=83,slow=7.8,SNR=4.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**48.87**	**313**	P	**P**	**14 53 26.9**	**+0.4**
	0.3nm,0.5s,baz=36,slow=5.4,SNR=1.6						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**54.09**	**31**	P	**P**	**14 54 04.3**	**-0.1**
	0.3nm,0.7s,baz=286,slow=6.5,SNR=4.4						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**54.16**	**182**	P	**P**	**14 54 05.9**	**+0.5**
	0.4nm,0.4s,baz=357,slow=7.6,SNR=7.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**57.87**	**182**	P	**P**	**14 54 32.1**	**+0.7**
	0.1nm,0.3s,baz=356,slow=5.8,SNR=13						
	0.1nm,0.3s						

*NEIC **20** 15:02:07.5±1.6, 56.26S±0'.09×27.5W±0'.1, h105km±4km, mb5.2/78, Error ellipse: s-maj=14.1km s-min=11.3km az=202.0*

*MOS **20** 15:02:08.4±0.9, 56.26S×27.55W, h126km, mb5.0/11, Error ellipse: s-maj=18.9km s-min=11.8km az=105.6*

*IDC **20** 15:02:09.3±0.6, 56.22S×27.43W, h123km±4km, mb4.7/16, mbtmp5.1/18, MS4.1/31, Error ellipse: s-maj=12.6km s-min=9.5km az=47.0*

*GCMT **20** 15:02:10.5±0.1, 56.39S±0'.01×27'.03W±0'.02, h118km±1km, MW5.3/146, Moment Tensor Solution. s97,c130; s146,c238; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.58±.01; Mθθ0.12±.02; Mφφ-0.69±.02; Mrθ-0.44±.01; Mθφ0.57±.02; Mφr-0.29±.01; Best double couple: Mo1.00900×10^17 NP1:φs186.00000°, δ59.00000°, λ139.00000°. NP2:φs300.00000°, δ56.00000°, λ38.00000°. Principal axes: T 1.0280, Plg49.0000°, Azm151.0000°; N -0.0380, Plg40.0000°, Azm336.0000°; P -0.9890, Plg2.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 15:02:09.4±0.4, 56°36S±0°.05×27°.59W±0°.05, h128km±2km, h128km:pP-P, n643, σ1s13/658, mb5.1/75, 31C-16D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.49**	**289**		**Pn**	**15 03 29.4**	**+0.4**
HOPE				Sn	**Sn**	**15 04 27.8**	**-3.2**
HOPE	**Hope Point**	**5.49**	**289**	P	**Pn**	**15 03 29.4**	**+0.4**
HOPE						15 04 27.8	
ORCD	**Orcadas**	**9.97**	**237**		**Pn**	**15 04 25.8**	**-3.3**
VNA1	**Neumayer--Stat**	**16.59**	**157**	↑P	**P**	**15 05 55.6**	**+1.3**
	comp=Z,199nm,0.9s						
VNA1	**Neumayer--Stat**	**16.59**	**157**	↑ScP	**ScP**	**15 13 59.3**	**+0.9**
	comp=Z,56nm,1.0s						
VNA3	**Neumayer Olymp**	**16.77**	**160**	↑P	**Pn**	**15 05 56.3**	**-0.1**
	comp=Z,297nm,0.7s						
VNA3				↓S	Sn	15 08 51.4	-11
	comp=Z,23nm,1.0s						
VNA3	**Neumayer Olymp**	**16.77**	**160**	↓ScP	**ScP**	**15 13 59.3**	**+0.5**
	comp=Z,26nm,0.8s						
VNA2	**Neumayer--Watz**	**16.99**	**157**	↑P	**P**	**15 05 58.8**	**+0.1**
	comp=Z,138nm,0.6s,baz=316,slow=13						
VNA2				↑S	**Sn**	**15 09 02.4**	**-5.6**
	comp=Z,13nm,0.9s,baz=323,slow=25						
VNA2	**Neumayer--Watz**	**16.99**	**157**	↓ScP	**ScP**	**15 14 00.1**	**+0.9**
	comp=Z,27nm,0.8s,baz=326,slow=4.0						
SNAA	**Sanae**	**18.55**	**155**	P	**P**	**15 06 16.6**	**+0.7**
SNAA	**Sanae**	**18.55**	**155**	↑*i*P	**Pn**	**15 06 17.2**	**-0.4**
SNAA	**Sanae**	**18.55**	**155**	↑P	**Pn**	**15 06 17.1**	**-0.5**
	comp=Z,10μm,0.6s						
SNAA				↓S	**S**	**15 09 35.7**	**-4.8**
	comp=Z,18nm,0.2s						
SNAA	**Sanae**	**18.55**	**155**	↑ScP	**ScP**	**15 14 02.9**	**+0.3**
	comp=Z,335nm,0.8s						
SNAA	**Sanae**	**18.55**	**155**	P	**Pn**	**15 06 17.1**	**-0.5**
	comp=Z,323nm,0.5s,baz=284,slow=13,SNR=1294						
SNAA				S	**S**	**15 09 36.4**	**-4.1**
	comp=Z,5.1nm,0.7s,baz=174,slow=19,SNR=1.5						
SNAA				PcP	**PcP**	**15 10 40.2**	**+1.0**
	comp=Z,7.0nm,0.7s,baz=343,slow=23,SNR=2.8						
SNAA				ScP	**ScP**	**15 14 02.9**	**+0.3**
	comp=Z,12nm,0.7s,baz=174,slow=0.3,SNR=14						
PMSA	**Palmer Station**	**19.53**	**230**	P	**Pn**	**15 06 27.9**	**-1.1**
PMSA	**Palmer Station**	**19.53**	**230**	P	**Pn**	**15 06 28.3**	**-0.6**
	comp=Z,33nm,0.7s,baz=74,slow=8.3,SNR=6.1						
TROLL	**Troll, Antarti**	**20.07**	**153**	↑P	**P**	**15 06 33.4**	**+1.0**
	comp=Z,18μm,0.8s						
TROLL				↓S	**S**	**15 10 12.9**	**+2.3**
	comp=Z,324nm,0.6s						
TROLL	**Troll, Antarti**	**20.07**	**153**	↓ScP	**ScP**	**15 14 07.1**	**+1.0**
	comp=Z,479nm,0.8s						
NVL	**N'lazarevskaya**	**22.13**	**146**	*e*P	P	15 06 45.1	-9.0
NVL				*e*'PP	pP	15 07 09.1	-8.0
NVL				*e*S	**S**	**15 10 41.2**	**-7.6**
NVL				pmax	pmax		
	comp=Z,83nm,1.6s						
NVL				smax	smax		
	comp=E,332nm,8.1s						
GO08	**Villa O'Higgin**	**28.10**	**267**		**P**	**15 07 50.0**	**+1.2**
GO08				IAmb	IAmb	15 08 35.0	
	comp=Z,78nm,1.6s						
COYC	**Coyhaique**	**29.52**	**272**	P	**P**	**15 08 02.2**	**+0.8**
PLTB	**Pedras Altas**	**30.54**	**313**	P	**P**	**15 08 11.1**	**+0.6**
PLTB				IAmb	IAmb	15 08 12.0	
	comp=Z,28nm,0.6s						
PLTB	**Pedras Altas**	**30.54**	**313**	*e*P	**P**	**15 08 11.2**	**+0.6**
AY01	**Puyuhuapi**	**30.55**	**274**	P	**P**	**15 08 10.3**	**-0.1**
AY01				IAmb	IAmb	15 08 11.4	
	comp=Z,30nm,0.9s						
TBOT	**Tacuaremb**	**31.59**	**309**	*e*P	**P**	**15 08 20.1**	**+0.4**
CPSB	**Cacapava Do Su**	**31.67**	**314**	*e*P	**P**	**15 08 21.4**	**+0.9**
PLCA	**Paso Flores**	**31.84**	**281**	P	**P**	**15 08 21.4**	**-0.6**
	comp=Z,5.4nm,0.9s,baz=145,slow=9.7,SNR=13						
PLCA				PcP	**PcP**	**15 11 10.2**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=123,slow=4.1,SNR=5.1						
PLCA				ScP	**ScP**	**15 14 39.1**	**-1.7**
	comp=Z,4.9nm,0.8s,baz=146,slow=5.3,SNR=15						
PLCA				LR	LR	15 21 17.8	
	comp=Z,447nm,19.2s,baz=128,slow=36						
	comp=Z,5.4nm,0.9s						
PLCA	**Paso Flores**	**31.84**	**281**	*e*P	**P**	**15 08 21.6**	**-0.4**
PLCA	**Paso Flores**	**31.84**	**281**	P	**P**	**15 08 21.6**	**-0.4**
PLCA				PcP	**PcP**	**15 11 10.3**	**+0.7**
PLCA				ScP	**ScP**	**15 14 39.1**	**-1.7**
RODS	**Rosario do Sul**	**32.44**	**312**	*e*P	**P**	**15 08 27.8**	**+0.6**
PSAL	**Palomas, Salto**	**32.84**	**308**	*e*P	**P**	**15 08 30.9**	**+0.3**
ALGR	**Alto Alegre (B**	**32.94**	**316**	*e*P	**P**	**15 08 32.8**	**+1.1**
UNIS	**Unistalda (Bra**	**33.51**	**313**	*e*P	**P**	**15 08 36.9**	**+0.4**
ITQB	**Itaqui**	**33.63**	**310**	P	**P**	**15 08 37.1**	**-0.4**
ITQB				IAmb	IAmb	15 08 38.6	
	comp=Z,44nm,1.1s						
ITQB	**Itaqui**	**33.63**	**310**	*e*P	**P**	**15 08 37.7**	**+0.2**
QSPA	**South Pole Qui**	**33.89**	**180**	P	**P**	**15 08 42.0**	**+2.4**
	comp=Z,59nm,0.5s,baz=183,slow=2.5,SNR=849						
QSPA				PcP	**PcP**	**15 11 15.8**	**+0.9**
	comp=Z,32nm,0.6s,baz=208,slow=1.7,SNR=5.6						
QSPA				ScP	**ScP**	**15 14 46.3**	**-1.2**
	comp=Z,8.2nm,0.8s,baz=253,slow=1.8,SNR=11						
QSPA				LR	LR	15 20 47.3	
	comp=Z,152nm,21.3s,baz=196,slow=33						
	comp=Z,59nm,0.5s						
QSPA	**South Pole Qui**	**33.89**	**180**	P	**P**	**15 08 42.0**	**+2.4**
QSPA				PcP	**PcP**	**15 11 15.8**	**+0.9**
QSPA				ScP	**ScP**	**15 14 46.9**	**-0.6**
ITAB	**Concordia**	**34.01**	**319**	*e*P	**P**	**15 08 41.7**	**+0.8**
CRSM	**Crissiumal (Br**	**34.50**	**316**	*e*P	**P**	**15 08 45.4**	**+0.3**
FRBT	**Francisco Belt**	**35.50**	**318**	*e*P	**P**	**15 08 53.1**	**-0.6**
PTGB	**Pitanga**	**36.28**	**320**	*e*P	**P**	**15 09 00.4**	**-0.1**
CPUP	**Villa Florida**	**36.85**	**312**	P	**P**	**15 09 04.9**	**-0.3**
CPUP				IAmb	IAmb	15 09 06.0	
	comp=Z,22nm,1.0s						
CPUP	**Villa Florida**	**36.85**	**312**	P	**P**	**15 09 04.9**	**-0.3**
CPUP				pmax	pmax		
	comp=Z,22nm,1.0s						
CPUP	**Villa Florida**	**36.85**	**312**	P	**P**	**15 09 05.3**	**+0.2**
	comp=Z,20nm,0.9s,baz=152,slow=11,SNR=26						
CPUP				PcP	**PcP**	**15 11 24.8**	**+0.7**
	comp=Z,9.3nm,0.7s,baz=125,slow=1.4,SNR=6.5						
CPUP				ScP	**ScP**	**15 14 57.0**	**-1.8**
	comp=Z,10nm,1.1s,baz=122,slow=3.6,SNR=6.9						
CPUP				LR	LR	15 24 25.2	
	comp=Z,158nm,19.0s,baz=154,slow=36						
CPUP				PKKP	**PKKPdf**	**15 33 27.4**	**-2.5**
	comp=Z,1.6nm,0.8s,baz=319,slow=20,SNR=3.7						
	comp=Z,20nm,0.9s						
CPUP	**Villa Florida**	**36.85**	**312**	*e*P	**P**	**15 09 05.2**	**0.0**
CPUP	**Villa Florida**	**36.85**	**312**	P	**P**	**15 09 05.1**	**0.0**
CPUP				pP	**pP**	**15 09 33.0**	**+0.4**
CPUP				PcP	**PcP**	**15 11 24.5**	**+0.4**
CPUP				ScP	**ScP**	**15 14 57.7**	**-1.0**
VACA	**Villa Angela C**	**37.16**	**307**	*e*P	**P**	**15 09 08.3**	**+0.5**
LDASE	**Londrina, Braz**	**37.17**	**323**	*e*P	**P**	**15 09 08.2**	**+0.2**
MT09	**Talagante**	**37.20**	**289**	P	**P**	**15 09 06.4**	**-1.8**
MT09				IAmb	IAmb	15 09 37.7	
	comp=Z,61nm,1.6s						
MT01	**Popeta**	**37.27**	**288**	P	**P**	**15 09 07.1**	**-1.5**
PEL	**Peldehue**	**37.53**	**290**	P	**P**	**15 09 10.3**	**-0.6**
PEL				IAmb	IAmb	15 09 11.6	
	comp=Z,27nm,0.5s						
PEL	**Peldehue**	**37.53**	**290**	P	**P**	**15 09 10.3**	**-0.6**
PEL				pmax	pmax		
	comp=Z,27nm,0.5s						
VA05	**Santo Domingo**	**37.62**	**288**	P	**P**	**15 09 10.8**	**-0.8**
MT02	**Curacav**	**37.68**	**289**	P	**P**	**15 09 11.6**	**-0.5**
MT02				IAmb	IAmb	15 09 12.3	
	comp=Z,18nm,0.6s						
VA03	**San Esteban**	**37.76**	**290**	P	**P**	**15 09 12.9**	**0.0**
VA03				IAmb	IAmb	15 10 09.5	
	comp=Z,20nm,0.9s						
TICA	**Tres Isletas**	**38.10**	**308**	*e*P	**P**	**15 09 15.9**	**+0.2**
TRCB	**Terra Rica**	**38.25**	**321**	P	**P**	**15 09 17.2**	**+0.2**
TRCB				IAmb	IAmb	15 09 18.1	
	comp=Z,25nm,0.7s						
TRCB	**Terra Rica**	**38.25**	**321**	*e*P	**P**	**15 09 17.0**	**0.0**
VA06	**Catapilco**	**38.31**	**290**	P	**P**	**15 09 16.6**	**-0.7**
VA06				IAmb	IAmb	15 09 59.3	
	comp=Z,34nm,1.0s						
ESFA	**Espinillo Form**	**38.55**	**312**	*e*P	**P**	**15 09 20.5**	**+1.1**
CO02	**Combarbal**	**39.22**	**291**	IAmb	IAmb	15 09 56.0	
	comp=Z,37nm,1.3s						
CO03	**El Pedregal**	**39.35**	**292**	P	**P**	**15 09 25.9**	**-0.3**
CO03				IAmb	IAmb	15 10 12.8	
	comp=Z,36nm,1.4s						
CER	**Ceres**	**39.37**	**74**	*e*P	**pP**	**15 09 51.8**	**-1.2**
CER				IAmb	IAmb	15 09 57.0	
	comp=Z,181nm,2.3s						
AC05	**El Transito**	**40.75**	**294**	IAmb	IAmb	15 09 39.0	
	comp=Z,34nm,0.9s						
RPRD	**Ribas do Rio P**	**40.76**	**321**	*e*P	**P**	**15 09 38.0**	**+0.3**
LCO	**Las Campanas**	**40.83**	**294**	P	**P**	**15 09 38.1**	**-0.5**
LCO	**Las Campanas**	**40.83**	**294**	P	**P**	**15 09 38.1**	**-0.5**
LCO				pmax	pmax		
	comp=Z,23nm,1.1s						
LCO	**Las Campanas**	**40.83**	**294**	P	**P**	**15 09 38.0**	**-0.5**
LCO				pP	**pP**	**15 10 05.5**	**-0.8**
LCO				ScP	**ScP**	**15 15 12.6**	**-1.8**
SUR	**Sutherland**	**40.93**	**75**	LR	LR	15 23 34.6	
	comp=Z,410nm,18.7s,baz=208,slow=32						
MURT	**Porto Murtinho**	**41.14**	**315**	*e*P	**P**	**15 09 39.8**	**-1.1**
AQDB	**Aquidauana**	**41.48**	**318**	P	**P**	**15 09 43.1**	**-0.6**
AQDB	**Aquidauana**	**41.48**	**318**	*e*P	**P**	**15 09 43.1**	**-0.6**
FRAZ	**Fraserburg**	**41.60**	**75**	*e*P	**P**	**15 09 44.9**	**+0.2**
BUFB	**Buffelsbos**	**41.73**	**80**	*e*P	**P**	**15 09 45.8**	**+0.3**
BUFB				IAmb	IAmb	15 09 46.3	
	comp=Z,1.4nm,0.6s						
GRAN	**Grantham**	**41.73**	**76**	*e*P	**P**	**15 09 45.6**	**-0.1**
GRAN				IAmb	IAmb	15 09 46.3	
	comp=Z,9.4nm,0.8s						
AC02	**Maricunga**	**41.82**	**297**	P	**P**	**15 09 47.5**	**+0.6**
AC02				IAmb	IAmb	15 09 49.0	
	comp=Z,52nm,0.9s						
BDQN	**Bodoquena, MS**	**41.90**	**317**	*e*P	**P**	**15 09 46.8**	**-0.3**
BRAK	**Brakfontein**	**42.52**	**76**	*e*P	**P**	**15 09 52.0**	**-0.1**
BRAK				IAmb	IAmb	15 09 52.6	
	comp=Z,302nm,2.5s						
BFON	**Badsfontein, M**	**42.94**	**77**	↑*i*P	**P**	**15 09 55.4**	**-0.1**
GRAF	**Camdeboo Natio**	**43.00**	**78**	↑*i*P	**P**	**15 09 56.3**	**+0.3**
GRAF				IAmb	IAmb	15 09 57.0	
	comp=Z,33nm,0.9s						
AC01	**Pan de Azucar**	**43.12**	**296**	IAmb	IAmb	15 10 28.1	
	comp=Z,80nm,1.2s						
JANB	**Januaria**	**43.16**	**336**	*e*P	**P**	**15 09 56.1**	**-1.3**
GRHM	**Grahamstown, E**	**43.28**	**81**	*e*P	**P**	**15 09 56.9**	**-1.3**
GRHM				IAmb	IAmb	15 09 58.5	
	comp=Z,14nm,0.8s						
GO02	**Mina Guanaco**	**43.44**	**298**	IAmb	IAmb	15 10 01.2	
	comp=Z,58nm,1.0s						
BDFB	**Brasilia**	**43.53**	**331**	P	**P**	**15 10 01.0**	**+0.7**
BDFB	**Brasilia**	**43.53**	**331**	P	**P**	**15 10 01.0**	**+0.7**
BDFB				pmax	pmax		
	comp=Z,38nm,1.8s						
BDFB	**Brasilia**	**43.53**	**331**	P	**P**	**15 10 01.3**	**+0.9**
	comp=Z,4.0nm,0.6s,baz=138,slow=9.5,SNR=5.3						
BDFB				LR	LR	15 26 39.0	
	comp=Z,216nm,18.8s,baz=157,slow=34						
	comp=Z,4.0nm,0.6s						
UPI	**Upington**	**44.32**	**72**	*e*P	**pP**	**15 10 34.0**	**-0.6**
UPI				IAmb	IAmb	15 10 36.6	
	comp=Z,45nm,1.3s						
ARAG	**Araguaiana, MT**	**44.58**	**326**	*e*P	**P**	**15 10 09.5**	**+0.9**
HVD	**Gariep Dam**	**44.84**	**78**	*e*P	**P**	**15 10 10.0**	**-0.7**
HVD				IAmb	IAmb	15 10 14.6	
	comp=Z,280nm,3.0s						
PB15	**IPOC Station P**	**45.03**	**300**	IAmb	IAmb	15 10 17.9	
	comp=Z,40nm,0.9s						
BBRB	**Robore, Bolivi**	**45.06**	**314**	*e*P	**P**	**15 10 12.1**	**-0.3**
LVC	**Limon Verde**	**45.27**	**301**	P	**P**	**15 10 15.2**	**+0.7**
LVC	**Limon Verde**	**45.27**	**301**	P	**P**	**15 10 15.3**	**+0.9**
	comp=Z,64nm,0.7s,baz=132,slow=4.1,SNR=29						
LVC				ScP	**ScP**	**15 15 31.7**	**-0.8**
	comp=Z,4.3nm,0.7s,baz=117,slow=6.8,SNR=3.7						
LVC				S	**S**	**15 16 43.5**	**-1.8**
	comp=Z,4.3nm,0.8s,baz=300,slow=16,SNR=2.4						
LVC				LR	LR	15 31 49.9	
	comp=Z,86nm,18.8s,baz=170,slow=39						
	comp=Z,64nm,0.7s						
LVC	**Limon Verde**	**45.27**	**301**	*e*P	**P**	**15 10 15.8**	**+1.4**
LVC	**Limon Verde**	**45.27**	**301**	P	**P**	**15 10 15.3**	**+0.9**
LVC				pP	**pP**	**15 10 43.4**	**+0.8**
LVC				ScP	**ScP**	**15 15 31.7**	**-0.8**
PB06	**IPOC Station P**	**45.50**	**300**	IAmb	IAmb	15 10 17.4	
	comp=Z,36nm,0.9s						
SALV	**Santo Antonio**	**45.69**	**321**	*e*P	**P**	**15 10 17.4**	**+0.1**
SBA	**Scott Base**	**45.75**	**184**	P	**P**	**15 10 19.4**	**+2.2**
SBA	**Scott Base**	**45.75**	**184**	P	**P**	**15 10 19.4**	**+2.2**
SBA				pmax	pmax		
	comp=Z,671nm,2.0s						
SBA	**Scott Base**	**45.75**	**184**	P	**P**	**15 10 20.4**	**+3.2**
SBA				pP	**pwP**	**15 10 49.2**	**-0.3**
SBA				sP	**sP**	**15 11 02.1**	**+2.8**
PB04	**IPOC Station P**	**46.10**	**300**	IAmb	IAmb	15 10 22.0	
	comp=Z,58nm,1.0s						
PB09	**IPOC Station P**	**46.12**	**301**	IAmb	IAmb	15 10 23.3	
	comp=Z,54nm,0.8s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**15 10 23.6**	**+2.5**
VNDA				IAmb	IAmb	15 10 25.4	
	comp=Z,64nm,0.9s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**15 10 23.6**	**+2.5**
VNDA				pmax	pmax		
	comp=Z,65nm,1.0s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**15 10 23.9**	**+2.8**
	comp=Z,46nm,0.8s,baz=184,slow=7.4,SNR=89						
VNDA				ScP	**ScP**	**15 15 35.6**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=197,slow=4.4,SNR=3.6						
VNDA				LR	LR	15 28 17.3	
	comp=Z,135nm,18.3s,baz=180,slow=34						
VNDA				PKKP	**PKKPdf**	**15 33 15.8**	**-0.3**
	comp=Z,4.5nm,1.0s,baz=358,slow=1.9,SNR=8.5						
	comp=Z,46nm,0.8s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**15 10 23.9**	**+2.8**
VNDA				ScP	**ScP**	**15 15 37.2**	**+1.9**
BOSA	**Boshof**	**46.26**	**76**	P	**P**	**15 10 20.8**	**-1.2**
BOSA	**Boshof**	**46.26**	**76**	↑*i*P	**P**	**15 10 20.7**	**-1.2**
BOSA				IAmb	IAmb	15 10 21.6	
	comp=Z,17nm,0.9s						
BOSA	**Boshof**	**46.26**	**76**	P	**P**	**15 10 20.8**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,17nm,1.0s						
BOSA	**Boshof**	**46.26**	**76**	P	**P**	**15 10 21.1**	**-0.7**
	comp=Z,8.9nm,0.9s,baz=218,slow=8.3,SNR=8.3						
BOSA				ScP	**ScP**	**15 15 35.3**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=226,slow=5.0,SNR=3.5						
BOSA				LR	LR	15 26 40.0	
	comp=Z,545nm,18.6s,baz=196,slow=32						
	comp=Z,8.9nm,0.9s						
BOSA	**Boshof**	**46.26**	**76**	P	**P**	**15 10 21.2**	**-0.7**
BOSA				pP	**pP**	**15 10 49.9**	**0.0**
BOSA				PcP	**PcP**	**15 11 55.9**	**+0.7**
BBSD	**Serra de San D**	**46.37**	**314**	*e*P	**P**	**15 10 22.3**	**-0.4**
WIN	**Windhoek**	**46.94**	**63**	IAmb	IAmb	15 10 28.7	
	comp=Z,19nm,0.5s						
PTLB	**Pontes e Lacer**	**47.37**	**317**	*e*P	**P**	**15 10 30.5**	**+0.1**
PATCX	**Punta Patache**	**47.39**	**301**	IAmb	IAmb	15 10 32.2	
	comp=Z,48nm,0.7s						
CCD	**Concordia, Ant**	**47.41**	**170**	P	**P**	**15 10 32.0**	**+1.4**
CCD				PcP	**PcP**	**15 12 00.3**	**+1.4**
SWZ	**Schweizer**	**47.43**	**75**	*e*P	**P**	**15 10 30.2**	**-0.8**
SWZ				IAmb	IAmb	15 10 30.9	
	comp=Z,26nm,0.9s						
TA01	**Diego Aracena**	**47.62**	**301**	IAmb	IAmb	15 10 33.8	
	comp=Z,36nm,1.1s						
H04S2	**CROZET ISLANDS**	**47.62**	**114**	T	T	16 02 40.1	
	baz=230,slow=76,SNR=2.5						
H04S3	**CROZET ISLANDS**	**47.63**	**114**	T	T	16 02 58.2	
	baz=230,slow=76,SNR=3.6						
SIV	**San Ignacio**	**47.63**	**314**	P	**P**	**15 10 32.3**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=157,slow=10,SNR=21						
SIV				PcP	**PcP**	**15 12 00.9**	**+0.8**
	com

LSZ pmax pmax
comp=Z,45nm,1.0s
LSZ Lusaka 58.69 69 LR LR 15 34 57.0
comp=Z,342nm,18.4s,baz=212,slow=34
LSZ Lusaka 58.69 69 P **P** **15 11 53.3 -0.3**
LSZ pP **pP** **15 12 23.3 +0.1**
TEFE Tefe 60.41 316 *e*P **P** **15 12 04.6 -0.5**
ATAH Atahualpa 63.16 300 P **P** **15 12 26.4 +2.2**
comp=Z,15nm,0.9s,baz=161,slow=18,SNR=8.7
comp=Z,15nm,0.9s
RPN Rapa Nui 63.38 261 LR LR 15 36 33.2
comp=Z,55nm,21.0s,baz=138,slow=32
VOI Vohitsoka 63.42 90 P **P** **15 12 26.7 +1.2**
VOI IAmb IAmb 15 12 27.9
comp=Z,24nm,0.8s
VOI Vohitsoka 63.42 90 P **P** **15 12 27.6 +2.1**
BOAV Boa Vista 64.39 323 P **P** **15 12 31.2 -0.5**
MDP Montagnes des 64.61 332 LR LR 15 39 19.9
comp=Z,141nm,19.6s,baz=120,slow=35
LIC Lamto 65.07 25⇑*i*P **P** **15 12 35.8 -0.2**
comp=Z,49nm,0.6s
KIC Kosan Boka 65.27 25⇑*i*P **P** **15 12 37.1 -0.2**
comp=Z,56nm,0.9s
TIC Toumodi 65.48 25⇑*i*P **P** **15 12 38.4 -0.3**
comp=Z,9.1nm,0.2s
DBIC Dimbokro 65.54 25 P **P** **15 12 38.9 -0.2**
DBIC IAmb IAmb 15 12 39.8
comp=Z,20nm,0.9s
DBIC Dimbokro 65.54 25 *e*P **P** **15 12 38.5 -0.5**
DBIC IAmb IAmb 15 12 39.6
comp=Z,21nm,1.0s
DBIC Dimbokro 65.54 25 P **P** **15 12 38.9 -0.2**
comp=Z,16nm,0.8s,baz=171,slow=8.3,SNR=16
DBIC LR LR 15 35 18.6
comp=Z,172nm,18.4s,baz=184,slow=30
comp=Z,16nm,0.8s
DBIC Dimbokro 65.54 25 P **P** **15 12 38.8 -0.2**
ABPO Ambohimpanom 65.98 88 P **P** **15 12 43.2 +1.1**
ABPO IAmb IAmb 15 12 45.0
comp=Z,25nm,1.1s
ABPO Ambohimpanom 65.98 88 *e*P **P** **15 12 43.9 +1.7**
ABPO IAmb IAmb 15 12 44.6
comp=Z,25nm,1.1s
ABPO Ambohimpanom 65.98 88 P **P** **15 12 43.2 +1.1**
ABPO pmax pmax
comp=Z,25nm,1.1s
OPO Ambohidratompo 66.32 88 LR LR 15 37 17.4
comp=Z,173nm,18.2s,baz=328,slow=32
RER Riviere de l'E 68.99 97 P **P** **15 13 00.6 -0.4**
OTAV Otavalo 69.65 304 P **P** **15 13 06.4 +1.0**
OTAV Otavalo 69.65 304 P **P** **15 13 06.4 +1.0**
OTAV pmax pmax
comp=Z,38nm,1.5s
OTAV Otavalo 69.65 304 *e*P **P** **15 13 06.5 +1.0**
OTAV Otavalo 69.65 304 *e*P **P** **15 13 07.2 +1.7**
TULM Tulcn-Chalpat 69.76 305 IAmb IAmb 15 13 09.3
comp=Z,59nm,1.1s
BBAC Balboa, Cauca 70.68 306 *e*P **P** **15 13 10.2 -1.2**
POPC Popayan, Colom 70.88 307 *e*P **P** **15 13 15.0 +2.3**
PRAC Prado 71.15 309 *e*P **P** **15 13 14.6 +0.6**
CHIC Chingaza 71.47 311 *e*P **P** **15 13 17.1 +0.6**
ORTC Ortega, Tolima 71.48 309 *e*P **P** **15 13 16.1 0.0**
JAMC Jamundi, Valle 71.48 307 *e*P **P** **15 13 14.8 -1.5**
ROSC El Rosal 71.91 310 LR LR 15 47 44.6
comp=Z,119nm,18.9s,baz=144,slow=38
MBAR Mbarara 72.49 63 P **P** **15 13 21.9 -0.4**
MBAR Mbarara 72.49 63*c i*P **P** **15 13 24.6 +2.3**
MBAR pmax pmax
comp=Z,27nm,1.6s
MBAR Mbarara 72.49 63 LR LR 15 42 51.4
comp=Z,110nm,18.4s,baz=261,slow=34
NORC Norcasia 72.80 310 *e*P **P** **15 13 22.1 -1.8**
PCRV Puerto La Cruz 73.06 322 P **P** **15 13 26.7 +1.3**
comp=Z,28nm,0.7s,baz=123,slow=3.1,SNR=9.5
PCRV pP **pP** **15 13 54.4 -2.2**
comp=Z,14nm,0.5s,baz=144,slow=2.1,SNR=2.3
PCRV LR LR 15 46 49.8
comp=Z,132nm,19.1s,slow=37
comp=Z,28nm,0.7s
BAUV El Baul 73.14 318 P **P** **15 13 26.1 +0.3**
BAUV IAmb IAmb 15 13 57.9
comp=Z,36nm,0.9s
TOA0 Torodi Ar. Sit 73.44 30 P **P** **15 13 27.3 -0.2**
TOA0 IAmb IAmb 15 13 28.7
comp=Z,82nm,1.4s
TORD Torodi Ar. Bea 73.44 30 P **P** **15 13 27.3 -0.2**
TORD IAmb IAmb 15 13 28.7
comp=Z,55nm,1.3s
TORD Torodi Ar. Bea 73.44 30 P **P** **15 13 27.3 -0.2**
comp=Z,18nm,0.5s,baz=198,slow=5.9,SNR=152
TORD pP **pP** **15 13 57.2 -1.3**
comp=Z,12nm,0.8s,baz=179,slow=3.6,SNR=5.4
TORD LR LR 15 41 16.9
comp=Z,125nm,18.2s,baz=147,slow=32
comp=Z,18nm,0.5s
PTBC PUERTO BERRIO, 73.50 311 *e*P **P** **15 13 25.1 -2.8**
SDV Santo Domingo 74.08 315 P **P** **15 13 31.8 +0.3**
SDV Santo Domingo 74.08 315 P **P** **15 13 32.1 +0.6**
comp=Z,14nm,0.8s,baz=179,slow=6.6,SNR=10
SDV LR LR 15 49 09.7
comp=Z,297nm,18.0s,baz=102,slow=38
comp=Z,14nm,0.8s
SDV Santo Domingo 74.08 315 *e*P **P** **15 13 31.9 +0.4**
KMBO Kilima Mbogo 75.36 69 *e*P **P** **15 13 38.9 -0.1**
KMBO IAmb IAmb 15 13 43.7
comp=Z,184nm,2.5s
RPZ Rata Peaks 79.06 194 LR LR 15 45 10.6
comp=Z,76nm,21.0s,baz=160,slow=33
TAU Tasmania Unive 81.00 176 P **P** **15 14 10.2 +0.7**
TAU Tasmania Unive 81.00 176 P **P** **15 14 10.2 +0.7**
TAU pmax pmax
comp=Z,94nm,0.8s
URZ Urewera 83.44 199 LR LR 15 47 48.2
comp=Z,86nm,18.5s,baz=299,slow=33
TOO Toolangi 86.25 174 IAmb IAmb 15 14 38.2
comp=Z,22nm,0.9s
ATD Arta Tunnel 88.99 67 LR LR 15 54 57.2
comp=Z,6.4nm,18.1s,baz=152,slow=36
BBOO Buckleboo 90.09 166 P **P** **15 14 55.2 +0.5**
BBOO IAmb IAmb 15 14 56.5
comp=Z,30nm,0.8s
FORT Forrest 90.76 159 P **P** **15 14 59.0 +1.2**
MDT Midelt 90.95 19 LR LR 15 50 46.7
comp=Z,118nm,18.7s,baz=180,slow=32
STKA Stephens Creek 91.63 171 P **P** **15 15 02.6 +0.8**
STKA Stephens Creek 91.63 171 P **P** **15 15 02.6 +0.8**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 91.63 171 P **P** **15 15 02.8 +1.0**
comp=Z,15nm,0.7s,baz=172,slow=7.3,SNR=30
STKA PP **PP** **15 18 41.6 +0.8**
comp=Z,1.1nm,0.4s,baz=168,slow=8.0,SNR=4.8
STKA LR LR 15 53 44.5
comp=Z,68nm,18.7s,baz=201,slow=34
comp=Z,15nm,0.7s
TEIG Tepich 91.70 305 LR LR 16 02 23.9
comp=Z,224nm,18.2s,baz=238,slow=39
PPT Papeete 91.83 234 LR LR 15 47 07.3
comp=Z,74nm,18.6s,baz=168,slow=29
CMIG Matias Romero 92.14 298 LR LR 15 54 39.8
comp=Z,33nm,19.3s,baz=174,slow=34
RAR Rarotonga 92.86 224 LR LR 15 49 30.7
comp=Z,49nm,20.4s,baz=175,slow=30
KEST Kesra 96.96 30 LR LR 15 56 36.0
comp=Z,136nm,18.4s,baz=254,slow=34
ESDC Sonseca Array 97.75 18 P Pdif 15 15 29.6 +0.2
comp=Z,1.3nm,0.7s,baz=189,slow=5.3,SNR=9.4
comp=Z,1.3nm,0.7s
ASAR Alice Springs 98.76 163 P Pdif 15 15 34.6 +0.1
comp=Z,11nm,0.7s,baz=188,slow=4.2,SNR=201
ASAR PP **PP** **15 19 32.8 -3.4**
comp=Z,4.8nm,0.7s,baz=186,slow=6.6,SNR=4.7
ASAR PKiKP **PKiKP** **15 20 07.2 +2.3**
comp=Z,0.8nm,0.8s,baz=173,slow=1.8,SNR=4.3
ASAR PKKPbc **PKKPdf** **15 32 00.4 -0.6**
comp=Z,0.6nm,0.6s,baz=0.9,slow=2.1,SNR=15
ASAR LR LR 15 58 53.7
comp=Z,69nm,18.2s,baz=182,slow=34
comp=Z,11nm,0.7s
AS31 Alice Springs 98.76 163 IAmb IAmb 15 15 36.1
comp=Z,4.1nm,0.8s
WRA Warramunga Arr 102.47 163 P **Pdif** **15 15 50.9 -0.1**
comp=Z,3.6nm,0.6s,baz=196,slow=4.2,SNR=20
WRA PP **PP** **15 20 02.3 -1.9**
comp=Z,6.4nm,1.0s,baz=194,slow=6.3,SNR=6.8
WRA PKKPbc **PKKPbc** **15 31 50.4 +2.0**
comp=Z,0.7nm,0.4s,baz=353,slow=2.8,SNR=8.4

WB2 Warramunga Arr 102.48 163 Pdif **Pdif** **15 15 51.1 +0.1**
WB0 Warramunga Arr 102.66 163 Pdif **Pdif** **15 15 51.9 +0.1**
TXAR Lajitas Array 106.74 298 PKiKP **PKiKP** **15 20 19.3 +0.1**
comp=Z,0.5nm,0.7s,baz=145,slow=4.6,SNR=4.7
SCHQ Schefferville 115.36 336 PKP **PKPdf** **15 20 34.2 -0.3**
comp=Z,2.8nm,0.9s,baz=189,slow=4.3,SNR=2.3
MVCO Mesa Verde 115.48 299 P **PKPdf** **15 20 35.3 -0.4**
baz=142
WUAZ Wupatki 115.56 296 P **PKPdf** **15 20 35.7 -0.1**
baz=142
KBZ Khabaz 115.94 49⇓*i*PKiKP **PKPdf** **15 20 35.9 0.0**
KBZ Khabaz 115.94 49 PKP **PKPdf** **15 20 36.0 0.0**
comp=Z,1.9nm,0.9s,baz=256,slow=3.0,SNR=7.3
PDMCI Parker Dam,Lak 116.00 293 P **PKiKP** **15 20 36.6 +0.1**
baz=142
KIV Kislovodsk 116.04 49*e*PKiKP **PKiKP** **15 20 36.5 +0.2**
KIV pmax pmax
comp=Z,6.0nm,1.0s
ISCO Idaho Springs 116.15 303 P **PKiKP** **15 20 37.5 +0.5**
baz=143
BC3 Big Chuckawall 116.17 292 P **PKiKP** **15 20 37.3 +0.4**
baz=142
AKASG Malin Array Be 116.58 37 PKP **PKPdf** **15 20 36.1 -0.9**
comp=Z,1.6nm,0.5s,baz=241,slow=1.9,SNR=4.3
AKBB Malin Array Si 116.58 37⇑*i*PKiKP **PKPdf** **15 20 36.2 -0.8**
BELC Belle Mtn. Jos 116.72 292 P **PKiKP** **15 20 38.8 +0.8**
baz=142
GMRC Granite Mounta 117.16 292 P **PKiKP** **15 20 39.4 +0.5**
O20A White River Ci 117.66 301 P **PKiKP** **15 20 40.0 +0.2**
baz=142
FMP Fort Macarthur 117.69 290 P **PKiKP** **15 20 40.9 +1.2**
baz=141
BFSC Mount Baldy Ra 117.77 291 P **PKiKP** **15 20 40.8 +0.8**
baz=141
GSC Goldstone, Bar 118.15 292 P **PKiKP** **15 20 41.9 +1.1**
baz=141
SHOC Shoshone, Teco 118.34 293 P **PKiKP** **15 20 42.1 +1.1**
baz=141,SNR=11
EDW2 Edwards Air Fo 118.44 291 P **PKiKP** **15 20 42.1 +0.9**
baz=141,SNR=9.3
LRMC Laurel Mtn Rad 118.74 291 P **PKiKP** **15 20 42.7 +0.8**
baz=141
AGMN Agassiz Nation 118.75 315 P **PKPdf** **15 20 40.8 -0.4**
baz=144
K22A Casper 118.82 304 P **PKPdf** **15 20 41.0 -0.9**
baz=141
RSSD Black Hills 118.85 307 **PKPdf** **15 20 41.2 -0.7**
RSSD Black Hills 118.85 307 P **PKPdf** **15 20 41.6 -0.3**
baz=142
RSSD Black Hills 118.85 307 PKiKP **PKPdf** **15 20 41.2 -0.7**
MPMC Manual Prospec 119.09 292 P **PKiKP** **15 20 43.4 +0.7**
baz=140
ISA Isabella, Lake 119.29 291 P **PKiKP** **15 20 43.2 +0.3**
baz=140
PKM Mcpherson Peak 119.40 289 P **PKiKP** **15 20 43.9 +0.6**
baz=140
CWC Cottonwood Cre 119.69 292 P **PKiKP** **15 20 44.5 +0.7**
baz=140
GRAC Grapevine Rang 119.74 293 P **PKiKP** **15 20 44.9 +1.1**
baz=140
SMMC Simmler 119.82 290 P **PKiKP** **15 20 45.1 +1.1**
baz=140
R11B Troy Canyon, C 119.87 295 P **PKiKP** **15 20 45.1 +1.0**
baz=140
DUG Dugway, Tooele 119.91 298 P **PKiKP** **15 20 44.6 +0.5**
baz=140
ULM Lac du Bonnet 120.32 316⇓*i*PKiKP **PKPdf** **15 20 42.8 -1.4**
ULM Lac du Bonnet 120.32 316 PKP **PKPdf** **15 20 43.5 -0.7**
comp=Z,4.6nm,0.6s,baz=178,slow=0.9,SNR=13
BW06 Boulder Array 120.32 302 P **PKiKP** **15 20 45.1 +0.2**
baz=140
PDAR Pinedale Array 120.32 302 PKP **PKPdf** **15 20 44.3 -0.5**
comp=Z,1.2nm,0.6s,baz=142,slow=4.6,SNR=16
PDAR PKKPbc **PKKPab** **15 30 52.0 +0.5**
comp=Z,0.5nm,0.8s,baz=42,slow=2.4,SNR=4.3
HFS Hagfors 120.66 23 PKP **PKPdf** **15 20 43.3 -1.3**
comp=Z,3.5nm,0.7s,baz=147,slow=8.2,SNR=6.2
NB2 NORSAR Subarra 120.98 21 PKPdf **PKPdf** **15 20 44.7 -0.5**
comp=Z,3.3nm,1.0s,baz=202,slow=1.9
NOA NORSAR Array B 120.98 21 PKP **PKiKP** **15 20 45.3 0.0**
comp=Z,2.7nm,0.8s,baz=206,slow=2.1,SNR=11
MLAC Mammoth, Mammt 120.98 292 P **PKiKP** **15 20 47.1 +0.7**
baz=140
NVAR Mina Array Bea 121.32 293 PKP **PKiKP** **15 20 48.3 +1.3**
comp=Z,3.7nm,0.6s,baz=123,slow=3.3,SNR=38
NVAR PKKPbc **PKKPab** **15 30 49.2 +1.6**
comp=Z,0.6nm,0.8s,baz=281,slow=5.9,SNR=4.4
LAO LASA Array 121.81 307 P **PKiKP** **15 20 47.7 +0.2**
baz=140
RLMT Red Lodge 121.99 304 P **PKiKP** **15 20 48.3 +0.2**
baz=140
H17A Grant Village 122.04 303 P **PKiKP** **15 20 49.0 +0.8**
baz=139
DGMT Dagmar 122.30 310 P **PKPdf** **15 20 48.1 -0.1**
baz=140
VSU Vasula 122.42 30⇓*i*PKiKP **PKPdf** **15 20 47.9 -0.1**
VSU pmax pmax
comp=Z,27nm,2.5s
OBN Obninsk 122.73 38 *i* PKiKP **PKPdf** **15 20 47.1 -1.5**
OBN pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 123.06 78 PKPdf **PKPdf** **15 20 50.0 -0.1**
NIL Nilore 123.06 78 PKiKP **PKPdf** **15 20 50.0 -0.1**
AFDM Forest Hills D 123.08 292 **PKiKP** **15 20 50.8 +0.6**
HLID Hailey 123.24 300 P **PKiKP** **15 20 50.9 +0.3**
baz=138,SNR=5.4
BOZ Bozeman (W) 123.44 303 P **PKiKP** **15 20 51.4 +0.5**
baz=138
FRB Frobisher Bay 123.86 339 PKP **PKPdf** **15 20 50.4 -0.1**
comp=Z,7.4nm,0.7s,baz=126,slow=8.7,SNR=16
EGMT Eagleton 124.40 306 P **PKiKP** **15 20 52.7 +0.2**
baz=138,SNR=6.5
BELG Belogornoye 124.71 46⇑*i*PKiKP **PKPdf** **15 20 51.7 -0.8**
BELG Belogornoye 124.71 46 PKP **PKPdf** **15 20 52.5 0.0**
comp=Z,25nm,0.8s,baz=338,slow=1.7,SNR=18
FINES FINESS Array B 124.76 28 **PKPdf** **15 20 51.9 -0.5**
FINES FINESS Array B 124.76 28 PKP **PKPdf** **15 20 52.1 -0.2**
comp=Z,12nm,0.5s,baz=155,slow=1.8,SNR=87
FIA1 FINESS Array S 124.76 28 **PKPdf** **15 20 51.9 -0.5**
CMAR Chiang Mai Arr 125.16 111 PKP **PKiKP** **15 20 54.9 -0.1**
comp=Z,9.0nm,0.8s,baz=233,slow=3.8,SNR=51
CMAR PP **PP** **15 22 42.4 -3.3**
comp=Z,1.2nm,0.8s,baz=230,slow=6.8,SNR=5.0
CHTO Chiang Mai 125.46 111 **PKPdf** **15 20 54.4 -0.7**
CHTO Chiang Mai 125.46 111 PKiKP **PKPdf** **15 20 54.4 -0.7**
VALR Valcam 126.00 31*d i*PKiKP **PKPdf** **15 20 53.4 -1.3**
FFC Flin Flon 126.15 316 **PKPdf** **15 20 55.1 -0.2**
FFC Flin Flon 126.15 316 PKiKP **PKPdf** **15 20 55.1 -0.2**
FCC Fort Churchill 126.40 324 **PKPdf** **15 20 54.5 -1.1**
FCC Fort Churchill 126.40 324 PKiKP **PKPdf** **15 20 54.5 -1.1**
J05D Fort Rock, OR 126.40 295 **PKiKP** **15 20 57.4 +0.6**
MND Mandalay 126.60 106 **PKPdf** **15 20 57.0 -0.2**
CRAI Chiangrai 127.38 111 **PKiKP** **15 20 59.2 -0.1**
CHM Chimkent 127.51 68 *e*PKP **PKPdf** **15 20 58.2 -0.1**
baz=68
CHM Chimkent 127.51 68 *e*PKiKP **PKPdf** **15 20 58.2 -0.1**
AKTO Aktyubinsk 127.69 54 PKP **PKPdf** **15 20 58.4 0.0**
comp=Z,14nm,0.9s,baz=236,slow=2.6,SNR=27
AB31 Akbulak array 127.73 56 *i* PKiKP **PKPdf** **15 20 58.0 -0.5**
NEW Newport 127.96 302 P **PKPdf** **15 20 58.9 -0.1**
baz=135
KLMR Klimovskoe 128.21 35 *e*PKiKP **PKPdf** **15 20 56.7 -2.3**
KLMR pmax pmax
comp=Z,34nm,1.4s
KK31 Karatay Array 128.54 68 *i* PKiKP **PKPdf** **15 20 59.6 -0.7**
DZA Taraz 128.82 69 *e*PKP **PKPdf** **15 21 00.5 -0.4**
baz=69
DZA Taraz 128.82 69 *e*PKiKP **PKPdf** **15 21 00.4 -0.4**
KSH Kashi 128.86 75 PKP **PKPdf** **15 21 01.0 -0.1**
EKS2 Erkin-Say 129.93 71 P **PKPdf** **15 21 03.5 +0.4**
SNR=9.9
KIRV Kirov 129.95 42 PKP **PKPdf** **15 21 02.5 +0.1**
comp=Z,16nm,0.7s,baz=225,slow=3.2,SNR=8.2
KIRV SKPbc SKPab 15 24 11.4 -1.2
comp=Z,9.8nm,0.8s,baz=273,slow=6.1,SNR=5.8
UCH Uchtor 130.01 71 P **PKiKP** **15 21 04.2 -0.2**
SNR=12
AAK Ala-Archa 130.29 71 P **PKiKP** **15 21 04.2 -0.4**
SNR=9.9
AAK Ala-Archa 130.29 71 **PKPdf** **15 21 03.9 +0.1**
AAK Ala-Archa 130.29 71*c i*PKiKP **PKPdf** **15 21 04.1 +0.3**
AAK Ala-Archa 130.29 71 PKP **PKiKP** **15 21 04.5 -0.2**
comp=Z,7.6nm,0.6s,baz=152,slow=2.5,SNR=18
AAK SKPbc **SKPab** **15 24 14.5 -0.4**
comp=Z,3.8nm,0.8s,baz=37,slow=2.9,SNR=4.4

KBK Karagaybulak 130.54 71 P **PKPdf** **15 21 04.7 +0.4**
SNR=7.1
USP Ospenovka 130.73 70 P **PKPdf** **15 21 04.8 +0.4**
SNR=7.1
ULHL Ulahol 130.94 73 P **PKiKP** **15 21 05.8 -0.3**
SNR=6.6
TKM2 Tokmak 2 131.07 72 P **PKPdf** **15 21 04.9 -0.5**
SNR=6.1
TKM2 Tokmak 2 131.07 72 PKiKP **PKPdf** **15 21 03.7 -1.6**
ARCES ARCESS Array B 131.31 22 PKP **PKPdf** **15 21 04.8 +0.2**
comp=Z,4.7nm,0.7s,baz=194,slow=1.5,SNR=24
ARCES SKPbc **SKPbc** **15 24 16.4 -1.3**
comp=Z,3.6nm,0.9s,baz=187,slow=3.6,SNR=4.0
BTLS Baital 131.72 68 *e*PKP **PKPdf** **15 21 06.0 -0.3**
baz=68
BTLS Baital 131.72 68 *e*PKiKP **PKPdf** **15 21 05.9 -0.3**
TNSS Tian-Shan 131.86 72 *e*PKP **PKPdf** **15 21 07.0 -0.1**
baz=72
TNSS Tian-Shan 131.86 72 *e*PKiKP **PKPdf** **15 21 07.0 -0.1**
MDOK Medeo 132.00 72 *e*PKP **PKPdf** **15 21 06.7 -0.3**
baz=72
MDOK Medeo 132.00 72 *e*PKiKP **PKPdf** **15 21 06.7 -0.3**
ARU Arti 132.07 48 **PKPdf** **15 21 06.3 -0.1**
ARU Arti 132.07 48 *i* PKiKP **PKPdf** **15 21 06.6 +0.1**
ARU 15 23 29.4
ARU Arti 132.07 48 PKP **PKiKP** **15 21 07.1 -0.4**
comp=Z,9.4nm,0.6s,baz=233,slow=1.1,SNR=23
ARU SKPbc **SKPbc** **15 24 19.7 -1.0**
comp=Z,5.5nm,0.8s,baz=342,slow=2.4,SNR=5.0
KUU Kurty 132.13 71 *e*PKP **PKPdf** **15 21 06.3 -0.8**
baz=71
KUU Kurty 132.13 71 *e*PKiKP **PKPdf** **15 21 06.3 -0.8**
KMI Kunming 132.63 110⇓PKP **PKiKP** **15 21 09.9 -0.1**
KMI PP **PP** **15 23 33.3 -1.3**
SATY Saty 132.66 73 *e*PKP **PKPdf** **15 21 07.7 -0.6**
baz=73
SATY Saty 132.66 73 *e*PKiKP **PKPdf** **15 21 07.6 -0.6**
OTUK Ortayu 133.00 64 PKiKP **PKPdf** **15 21 07.8 -0.8**
UZB Uzynbulak 133.04 74 *e*PKP **PKPdf** **15 21 08.4 -0.6**
baz=74
UZB Uzynbulak 133.04 74 *e*PKiKP **PKPdf** **15 21 08.4 -0.6**
KPKS Kokpek 133.08 73 *e*PKP **PKPdf** **15 21 08.4 -0.6**
baz=73
KPKS Kokpek 133.08 73 *e*PKiKP **PKPdf** **15 21 08.4 -0.6**
SVE Sverdlovsk 133.20 49 *e*PKiKP **PKPdf** **15 21 09.1 +0.5**
SVE pmax pmax
comp=Z,19nm,0.9s
PZH PanZhiHua 133.22 108 PKP **PKiKP** **15 21 11.4 +0.4**
SHLS Shalkode 133.29 74 *e*PKP **PKPdf** **15 21 09.6 +0.1**
baz=74
SHLS Shalkode 133.29 74 *e*PKiKP **PKPdf** **15 21 09.5 +0.1**
PDGK Podgornoye 133.42 74 PKiKP **PKPdf** **15 21 08.0 -1.7**
TDK Taldyqorghan 133.97 71 *e*PKP **PKPdf** **15 21 09.5 -1.0**
baz=71
TDK Taldyqorghan 133.97 71 *e*PKiKP **PKPdf** **15 21 09.4 -1.0**
BRZS Berezniki 134.31 63 *e*PKP **PKPdf** **15 21 10.7 -0.2**
baz=63
BRZS Berezniki 134.31 63 *e*PKiKP **PKPdf** **15 21 10.6 -0.3**
BRVK Borovoye 135.10 58 **PKPdf** **15 21 12.3 0.0**
BRVK Borovoye 135.10 58*ce*PKiKP **PKPdf** **15 21 12.5 +0.2**
BVA0 Borovoye Array 135.13 58 *i* PKiKP **PKPdf** **15 21 10.3 -2.1**
BVAR Borovoye Array 135.13 58 PKP **PKPdf** **15 21 12.5 +0.2**
comp=Z,2.6nm,0.8s,baz=233,slow=1.4,SNR=25
BVAR SKPbc **SKPbc** **15 24 30.2 -0.7**
comp=Z,2.9nm,0.8s,baz=260,slow=1.6,SNR=6.4
YKA Yellowknife Ar 136.25 318 PKP **PKPdf** **15 21 14.1 0.0**
comp=Z,4.1nm,0.6s,baz=122,slow=2.5,SNR=43
YKA SKPbc **SKPbc** **15 24 32.6 -1.5**
comp=Z,5.4nm,0.9s,baz=120,slow=2.0,SNR=20
SPITS Spitsbergen Ar 136.92 12 PKP **PKPdf** **15 21 15.3 +0.3**
comp=Z,7.6nm,0.9s,baz=180,slow=4.3,SNR=5.9
MKAR Makanchi Array 137.19 72 PKhKP PKPpre 15 21 06.8
comp=Z,0.7nm,0.7s,baz=232,slow=3.9,SNR=9.4
MKAR PKP **PKPdf** **15 21 14.8 -1.7**
comp=Z,2.7nm,0.6s,baz=242,slow=1.8,SNR=23
MKAR SKPbc **SKPbc** **15 24 36.0 -1.6**
comp=Z,3.1nm,0.9s,baz=256,slow=3.6,SNR=11
KURBB Kurchatov Arra 137.63 65 PKhKP PKPpre 15 21 08.8
comp=Z,2.4nm,0.2s,baz=250,slow=3.3,SNR=5.2
KURBB PKP **PKPdf** **15 21 15.7 -1.4**
comp=Z,2.1nm,0.4s,baz=264,slow=1.7,SNR=8.6
KURBB SKPbc **SKPbc** **15 24 37.6 -1.0**
comp=Z,4.3nm,0.9s,baz=228,slow=3.2,SNR=11
KURK Kurchatov 137.74 65⇓*i*PKiKP **PKiKP** **15 21 19.2 0.0**
CD2 Chengdu 137.79 106 PKP **PKPdf** **15 21 18.8 +0.7**
WMQ Urumqi 138.18 79 *e*PKP **PKPdf** **15 21 17.3 -1.1**
KOTAN Kotaneelee Air 138.65 311 P **PKPdf** **15 21 19.1 +0.5**
baz=123
U35K Hyder 138.95 303 P **PKPdf** **15 21 20.0 +0.8**
baz=124
ZSN Zaisan 138.97 73 *e*PKP **PKPdf** **15 21 19.6 -0.1**
baz=73
ZSN Zaisan 138.97 73 *e*PKiKP **PKPdf** **15 21 19.5 -0.1**
V35K Ketchikan 139.37 302 P **PKPdf** **15 21 20.9 +0.9**
baz=124
CRAG Craig 140.16 301 P **PKPdf** **15 21 22.6 +1.1**
baz=123
WRAK Wrangell Islan 140.31 303 P **PKPdf** **15 21 22.5 +0.7**
baz=122
DLBC Dease Lake 140.32 306 P **PKPdf** **15 21 21.9 0.0**
baz=122
U33K Whale Pass 140.51 302 P **PKPdf** **15 21 22.5 +0.4**
baz=122
WTLY Watson Lake, Y 140.65 309 P **PKPdf** **15 21 23.1 +0.7**
baz=120,SNR=6.2
TGTN Hyland Airport 141.14 311 P **PKPdf** **15 21 24.2 +1.0**
baz=119
R33M Jennings River 141.24 307 P **PKPdf** **15 21 24.3 +0.8**
baz=120
Q32M Nakina River 141.60 306 P **PKPdf** **15 21 24.4 +0.1**
baz=120
DGZ Jazzator, Alta 141.69 72⇓*e*PKiKP **PKPdf** **15 21 21.4 -3.3**
LZH Lanzhou 141.77 101 *e*PKP **PKPdf** **15 21 24.6 -0.7**
GTA Gaotai 141.93 94 *e*PKP **PKPdf** **15 21 20.5 -4.9**
SIT Sitka 142.05 302 P **PiKiKP** **15 21 26.7 -1.1**
baz=120
R32K Eaglecrest 142.28 304 P **PKPdf** **15 21 26.4 +1.2**
baz=119
P33M Teslin, Yukon 142.45 308 P **PKPdf** **15 21 22.2 -3.5**
baz=118
P32M Atlin 142.56 307 P **PKPdf** **15 21 21.9 -3.8**
baz=118
ZAA0 Zalesovo Array 142.71 64 PKPpre 15 21 21.8
ZALV Zalesovo Beam 142.71 64 PKPpre 15 21 21.7
ZALV Zalesovo Beam 142.71 64 PKHKP PKPpre 15 21 21.7
ZALV Zalesovo Beam 142.71 64 PKhKP PKPpre 15 21 22.2
comp=Z,5.4nm,0.6s,baz=225,slow=4.1,SNR=21
ZALV SKPbc **SKPbc** **15 24 50.1 -1.8**
comp=Z,1.8nm,0.8s,baz=216,slow=4.6,SNR=3.8
S31K Pelican 142.92 303 P **PKPdf** **15 21 23.5 -2.9**
baz=119
XAN Xi'an 142.96 108 PKP **PKPdf** **15 21 23.5 -3.8**
N32M Quiet Lake 143.01 309 P PKPbc 15 21 23.8 0.0
baz=117,SNR=6.0
C36M Paulatuk 143.04 324 P PKPbc 15 21 24.5 +1.0
baz=113
SKAG Skagway 143.22 306 P PKPbc 15 21 24.5 +0.2
baz=118
WHY Whitehorse 143.57 308 P PKPbc 15 21 25.2 -0.2
baz=116,SNR=10
FARO Faro, Yukon 143.60 311 P PKPbc 15 21 25.7 +0.3
baz=115,SNR=27
M31M Drury Creek, Y 144.03 310 P PKPbc 15 21 26.6 -0.1
baz=115,SNR=38
O30N Mendenhall 144.15 307 P **PKPab** **15 21 26.5 -0.2**
baz=116,SNR=10
P30M Million Dollar 144.26 306 P **PKPab** **15 21 27.0 -0.1**
baz=116
A36M Sachs Harbour 144.36 328 PKPdf PKPbc 15 21 27.9 +0.6
A36M Sachs Harbour 144.36 328 P PKPbc 15 21 27.6 +0.3
baz=109
P29M Windy Craggy 144.39 305 P **PKPdf** **15 21 28.4 -0.5**
baz=116
HYT Haines Junctio 144.80 307 P **PKPdf** **15 21 30.0 +0.2**
baz=115,SNR=21
O29M Mount Kennedy 145.06 306 P **PKPab** **15 21 30.2 0.0**
baz=115
PNL Peninsula 145.17 304 P **PKPab** **15 21 31.0 +0.6**
baz=115
M30M Minto, Yukon 145.20 310 P **PKPab** **15 21 30.8 +0.2**
baz=113,SNR=49
LYN LuoYang 145.21 112⇑PKPbc **PKPab** **15 21 31.3 0.0**
MAYO Mayo, Yukon 145.22 312 P **PKPab** **15 21 30.9 +0.4**
baz=112,SNR=24
YUK6 Outpost Mounta 145.23 307 P **PKPab** **15 21 31.4 +0.5**
baz=114,SNR=7.7

H31M	Peel River	145.40 316	P		PKPbc	15 21 30.9	+0.2	
	baz=110							
YUK4	Talbot Arm	145.52 307	P		PKPab	15 21 32.4	+0.4	
	baz=113,SNR=30							
F31M	Tsiigehtchic	145.72 319	P		PKPbc	15 21 31.9	+0.3	
	baz=108							
PINM	Pinnacle	145.74 305	P		PKPab	15 21 33.6	+0.9	
	baz=114,SNR=17							
G31M	Satah River	145.75 318	P		PKPab	15 21 32.1	-0.3	
	baz=109							
J30M	Hart River	145.75 313	P		PKPab	15 21 32.5	-0.2	
	baz=110							
JOW	Kunigami	145.77 139	PKPdf		PKPab	15 21 33.6	-0.1	
M29M	Somme Creek	145.87 309	P		PKPab	15 21 33.1	-0.1	
	baz=112							
INK	Inuvik	145.90 320	PKPdf		PKPbc	15 21 32.5	+0.3	
INK	Inuvik	145.90 320	P		PKPab	15 21 32.8	-0.1	
	baz=107							
INK	Inuvik	145.90 320	PKP2		PKPbc	15 21 32.5	+0.3	
L29M	L29M	145.97 310	P		PKPab	15 21 33.3	-0.2	
	baz=111							
K29M	Barlow Dome	145.98 312	P		PKPbc	15 21 32.8	+0.1	
	baz=111							
YUK8	Steele Glacier	145.99 307	P		PKPab	15 21 34.0	+0.1	
	baz=113,SNR=23							
I30M	Mount Dempster	146.00 314	P		PKPbc	15 21 32.9	+0.1	
	baz=110							
NJ2	Nanjing	146.37 122	⇑PKPbc		PKPbc	15 21 35.1	+0.4	
YUK3	Moose Creek	146.49 307	P		PKPbc	15 21 34.8	+0.3	
	baz=112,SNR=15							
G30M	tAoh Zraii Nji	146.49 318	P		PKPbc	15 21 34.2	+0.2	
	baz=107							
EPYK	Eagle Plains	146.50 316	P		PKPbc	15 21 34.1	0.0	
	baz=108,SNR=77							
F30M	Barrier River	146.52 319	P		PKPbc	15 21 34.6	+0.5	
	baz=106							
MESA	MESA	146.55 304	P		PKPab	15 21 36.0	0.0	
	baz=113,SNR=15							
CTG	Chitna Glacier	146.58 306	P		PKPbc	15 21 35.3	+0.7	
	baz=112,SNR=20							
DAWY	Dawson	146.84 312	P		PKPbc	15 21 35.3	+0.1	
	baz=109,SNR=66							
BVCY	Beaver Creek	146.90 308	P		PKPbc	15 21 35.9	+0.5	
	baz=110,SNR=26							
CRQE	Cirque	147.29 305	P		PKPbc	15 21 36.8	+0.2	
	baz=112,SNR=8.2							
M27K	Edge Creek, AK	147.32 308	P		PKPbc	15 21 36.8	+0.1	
	baz=110							
I28M	Miner Creek	147.49 314	P		PKPbc	15 21 36.9	-0.1	
	baz=107							
E29M	Blow River	147.49 320	P		PKPbc	15 21 36.7	-0.1	
	baz=104							
MCARA	McCarthy VSAT	147.49 306	P		PKPbc	15 21 36.6	-0.3	
	baz=111,SNR=6.6							
L27K	Beaver Creek,	147.54 309	P		PKPbc	15 21 37.4	+0.4	
	baz=109							
TIY	Taiyuan	147.59 108	PKPbc		PKPbc	15 21 38.0	-0.1	
KAIM	Kayak Island	147.60 303	P		PKPbc	15 21 37.7	+0.4	
	baz=112,SNR=9.4							
EGAK	Eagle	147.79 313	P		PKPbc	15 21 37.6	0.0	
	baz=107							
K27K	Chicken	147.94 311	P		PKiKP	15 21 39.0	-0.8	
	baz=107							
F28M	Old Crow	148.03 318	P		PKPbc	15 21 38.8	+0.5	
	baz=103,SNR=68							
BMRM	Bremner River	148.06 305	P		PKPbc	15 21 39.3	+0.8	
	baz=110,SNR=14							
L26K	Log Cabin Wild	148.18 309			PKPbc	15 21 39.2	+0.4	
L26K	Log Cabin Wild	148.18 309	P		PKPbc	15 21 39.3	+0.6	
	baz=108,SNR=13							
I27K	Kandik River	148.20 314	P		PKPbc	15 21 39.4	+0.6	
	baz=105							
N25K	Chitina, Valde	148.28 306	P		PKPbc	15 21 39.9	+0.8	
	baz=109,SNR=13							
H27K	Steamboat Moun	148.33 315	P		PKPbc	15 21 39.6	+0.6	
	baz=104							
BTO	Baotou	148.38 102	*i* PKPbc		PKPbc	15 21 40.5	+0.4	
BTO			PKPab		PKPab	15 21 50.3	+6.6	
BTO			pPKP		pPKPdf	15 22 09.6	-1.0	
BTO			PP		PP	15 25 17.8	+7.1	
BTO			LR		LR			
	comp=Z,230nm,9.7s							
BTO			LR		LR			
	comp=Z,230nm,7.1s							
BTO			LR		LR			
	comp=Z,150nm,5.7s							
EYAK	Cordova Ski Ar	148.44 304	P		PKiKP	15 21 40.4	-0.5	
	baz=110,SNR=22							
HNS	HongShan	148.55 111	⇓PKPbc		PKPdf	15 21 36.8	+0.2	
J26L	Joseph Creek	148.70 311	P		PKiKP	15 21 40.8	-0.6	
	baz=106							
SCRK	Sand Creek	148.74 310	P		PKiKP	15 21 41.0	-0.5	
	baz=106,SNR=42							
I26K	Coal Creek Min	148.75 313	P		PKPbc	15 21 40.5	+0.4	
	baz=104							
D27M	Malcolm River	148.76 321	P		PKiKP	15 21 41.0	-0.4	
	baz=100							
HARP	HAARP	148.78 307	P		PKiKP	15 21 41.0	-0.6	
	baz=108,SNR=10							
KLU	Klutina	148.84 305	P		PKiKP	15 21 41.6	-0.2	
	baz=109,SNR=38							
TIA	Tai'an	148.88 115	⇓PKPbc		PKPbc	15 21 41.4	+0.1	
P23K	Montague Islan	149.02 302	P		PKiKP	15 21 41.8	-0.3	
	baz=110,SNR=15							
RIDG	Independent Ri	149.04 310	P		PKiKP	15 21 42.1	0.0	
	baz=106							
PAX	Paxson	149.09 308	P		PKPbc	15 21 41.7	+0.5	
	baz=107,SNR=30							
M24K	Tolsona, Glenn	149.15 306	P		PKiKP	15 21 42.5	+0.1	
	baz=108,SNR=13							
GLI	Glacier Island	149.18 304	P		PKPbc	15 21 41.9	+0.6	
	baz=109,SNR=6.4							
G26K	Porcupine Rive	149.37 316	P		PKiKP	15 21 42.2	-0.4	
	baz=101							
NRIK	Noril'sk	149.39 39			PKPbc	15 21 41.7	+0.1	
NRIK	Noril'sk	149.39 39	*c i* PKP2		PKPbc	15 21 41.9	+0.4	
NRIK	Noril'sk	149.39 39	PKPbc		PKPbc	15 21 42.0	+0.4	
	comp=Z,18nm,0.7s,baz=359,slow=0.3,SNR=25							
HHC	Hu-ho-hao-te	149.39 103	*e*PKPbc		PKPbc	15 21 43.0	+0.4	
K24K	Donnelly Dome	149.45 310	P		PKiKP	15 21 42.7	-0.3	
	baz=105,SNR=14							
J25K	Salcha River,	149.49 311	P		PKiKP	15 21 42.7	-0.4	
	baz=104							
SCM	Sheep Creek Mo	149.58 306	P		PKiKP	15 21 43.4	+0.1	
	baz=107,SNR=19							
F26K	Sheenjek River	149.65 317	P		PKiKP	15 21 43.4	+0.1	
	baz=100							
M23K	Glacier View	149.75 305	P		PKiKP	15 21 43.6	0.0	
	baz=107,SNR=19							
PRP	Porcupine Dome	149.76 313	P		PKiKP	15 21 43.4	-0.3	
	baz=102							
DHY	Denali Highway	149.95 308	P		PKiKP	15 21 44.4	+0.2	
	baz=105,SNR=22							
KNK	Knik Glacier	149.97 304	P		PKiKP	15 21 44.0	0.0	
	baz=107,SNR=25							
WAT6	Susitna Watana	149.98 307	P		PKiKP	15 21 44.2	0.0	
	baz=106,SNR=11							
MOY	Mondy	150.02 77	*e*PKP2		PKPbc	15 21 43.6	-0.2	
MOY			pmax		pmax			
	comp=Z,15nm,2.2s							
SEW	Seward	150.03 302	P		PKiKP	15 21 43.9	-0.3	
	baz=109,SNR=25							
SML	Sawmill	150.03 305	P		PKiKP	15 21 44.1	-0.1	
	baz=107,SNR=25							
HDA	Harding Lake	150.10 311	P		PKPbc	15 21 43.8	+0.3	
	baz=103,SNR=18							
ILAR	Eielson Array	150.16 311	PKP		PKPdf	15 21 35.9	-2.5	
	comp=Z,2.4nm,0.8s,baz=329,slow=1.2,SNR=32							
ILAR			PKPbc		PKPbc	15 21 43.9	+0.3	
	comp=Z,58nm,0.8s,baz=140,slow=3.9,SNR=238							
ILAR			pPKPbc		pPKPbc	15 22 15.2	-1.8	
	comp=Z,18nm,0.9s,baz=138,slow=2.2,SNR=4.1							
F25K	Christian Rive	150.19 317	P		PKiKP	15 21 44.7	+0.2	
	baz=99							
C26K	Camden Bay	150.22 322	P		PKiKP	15 21 44.6	+0.3	
	baz=95							
E25K	Arctic Village	150.24 318	P		PKiKP	15 21 44.5	+0.1	
	baz=98,SNR=45							
O22K	Cooper Landing	150.28 302	P		PKiKP	15 21 44.6	0.0	
	baz=108,SNR=10							
PMR	Palmer	150.33 305	P		PKiKP	15 21 44.7	0.0	
	baz=106,SNR=6.6							
WAT1	Susitna Watana	150.41 307	P		PKiKP	15 21 44.9	0.0	
	baz=105							
POKR	Poker Plat Res	150.46 312	P		PKPbc	15 21 44.3	0.0	
	baz=102							
RC01	Rabbit Creek A	150.47 303	P		PKiKP	15 21 45.2	+0.1	
	baz=107,SNR=18							
BRSE	Bradley Lake S	150.52 301	P		PKiKP	15 21 45.4	+0.1	
	baz=109,SNR=21							
COLA	College	150.58 311			PKPbc	15 21 44.4	-0.1	
COLA	College	150.58 311	P		PKPbc	15 21 44.6	+0.1	
	baz=102							
COLA	College	150.58 311	PKIKP		PKPbc	15 21 44.4	-0.1	
ZAK	Zakamensk	150.62 81	*e*PKIKP		PKPdf	15 21 39.0	-0.7	
ZAK			pmax		pmax			
	comp=Z,49nm,1.1s							
D25K	Kavik River	150.68 321	P		PKPbc	15 21 44.9	+0.2	
	baz=95							
KDAK	Kodiak Island	150.76 296			PKiKP	15 21 45.8	+0.1	
KDAK	Kodiak Island	150.76 296	P		PKiKP	15 21 46.0	+0.2	
	baz=111							
KDAK	Kodiak Island	150.76 296	PKIKP		PKiKP	15 21 45.8	+0.1	
G24K	Hadweenzic Riv	150.76 315	P		PKiKP	15 21 45.9	+0.3	
	baz=99							
H24K	Noodor Dome	150.78 313	P		PKiKP	15 21 45.6	-0.1	
	baz=100							
MCK	McKinley	150.80 309	P		PKiKP	15 21 45.9	+0.2	
	baz=103,SNR=40							
M22K	Willow	150.83 305	P		PKiKP	15 21 46.2	+0.4	
	baz=106,SNR=39							
OHAK	Old Harbor	150.91 295	P		PKiKP	15 21 46.4	+0.3	
	baz=112							
HOM	Homer	150.93 300	P		PKiKP	15 21 46.5	+0.5	
	baz=108,SNR=5.2							
SYI	Shuyak Island	150.95 298			PKiKP	15 21 46.4	+0.3	
Q20K	Shuyak Island	150.95 298	P		PKiKP	15 21 46.5	+0.3	
	baz=110							
SONM	Songino Array	150.97 87	PKP		PKPdf	15 21 40.1	-0.3	
	comp=Z,2.2nm,0.8s,baz=213,slow=1.7,SNR=19							
SONM			PKPbc		PKPbc	15 21 46.1	0.0	
	comp=Z,34nm,0.6s,baz=223,slow=3.2,SNR=223							
SONM			pPKPbc		pPKPbc	15 22 17.9	-1.9	
	comp=Z,8.2nm,0.8s,baz=240,slow=1.3,SNR=3.5							
CAPN	Captain Cook N	151.03 302	P		PKiKP	15 21 47.5	+1.3	
	baz=107,SNR=5.2							
NEA2	Nenana	151.04 311	P		PKPbc	15 21 45.7	0.0	
	baz=101,SNR=9.5							
SUA	Susitna One	151.04 304	P		PKiKP	15 21 46.8	+0.4	
	baz=106,SNR=24							
CUT	Chulitna	151.07 306	P		PKiKP	15 21 46.8	+0.5	
	baz=104,SNR=33							
I23K	Minto, Yukon-K	151.26 312	P		PKPbc	15 21 46.1	0.0	
	baz=100							
BJI	Beijing	151.28 109	PKPbc		PKPbc	15 21 47.0	0.0	
BJI			PP		PP	15 25 29.4	+2.2	
BJI			AMB		AMB			
	comp=Z,76nm,4.8s							
TRF	Thorofare Moun	151.32 308	P		PKiKP	15 21 46.9	-0.1	
	baz=102,SNR=19							
ULN	Ulaanbaatar	151.35 88			PKPbc	15 21 46.8	-0.4	
ULN	Ulaanbaatar	151.35 88	*c i* PKIKP		PKPbc	15 21 46.7	-0.4	
C24K	Franklin Bluff	151.52 321	P		PKiKP	15 21 47.1	+0.1	
	baz=92							
O20K	Slope Mountain	151.53 301	P		PKiKP	15 21 47.4	0.0	
	baz=107,SNR=7.2							
D24K	Happy Valley	151.53 320	P		PKiKP	15 21 47.0	-0.1	
	baz=93							
SKT	Skwentna	151.54 305	P		PKiKP	15 21 47.3	0.0	
	baz=104,SNR=5.1							
N20K	Mount Spurr	151.65 303	P		PKPbc	15 21 47.4	+0.1	
	baz=105,SNR=11							
Q19K	Cape Douglas,	151.67 298	P		PKiKP	15 21 47.7	+0.1	
	baz=108,SNR=6.7							
P19K	Oil Pt	151.70 300	P		PKiKP	15 21 47.6	-0.1	
	baz=107							
E23K	Chandalar	151.75 318	P		PKiKP	15 21 47.6	-0.1	
	baz=94							
BPAW	Bear Paw Mtn.	151.76 309	P		PKiKP	15 21 47.7	0.0	
	baz=101,SNR=37							
G23K	Bananza Creek	151.77 315	P		PKiKP	15 21 48.4	+0.7	
	baz=97							
TOLK	Toolik Lake Re	151.77 319	P		PKiKP	15 21 48.0	+0.4	
	baz=94							
MLY	Manley	151.82 311	P		PKiKP	15 21 48.1	+0.2	
	baz=99							
COLD	Coldfoot	151.89 316	P		PKiKP	15 21 48.7	+0.9	
	baz=96,SNR=15							
PPLA	Purkeypile	152.04 306	P		PKiKP	15 21 48.6	+0.2	
	baz=102,SNR=11							
IRK	Irkutsk	152.07 78	*e*PKIKP		PKPbc	15 21 47.7	-0.7	
IRK			pmax		pmax			
	comp=Z,41nm,1.7s							
CAST	Castle Rocks	152.11 308	P		PKPbc	15 21 48.2	0.0	
	baz=101,SNR=21							
D23K	Nanushuk River	152.19 320	P		PKiKP	15 21 48.9	+0.4	
	baz=92							
H22K	Ishtalitna Cre	152.21 313	P		PKiKP	15 21 48.9	+0.4	
	baz=97							
M20K	Styx River	152.25 304	P		PKPbc	15 21 48.7	+0.1	
	baz=103							
CHUM	Lake Minchumin	152.29 309	P		PKiKP	15 21 48.9	+0.2	
	baz=100,SNR=18							
I21K	Tanana	152.36 311	P		PKiKP	15 21 48.9	+0.1	
	baz=98							
G22K	Bettles	152.37 315	P		PKiKP	15 21 49.4	+0.6	
	baz=95,SNR=17							
O19K	Port Alsworth	152.38 300	P		PKPbc	15 21 48.8	0.0	
	baz=106,SNR=23							
JNU	Nakatsue	152.41 138			PKPbc	15 21 49.7	-0.1	
E22K	Anaktuvuk Pass	152.57 318	P		PKiKP	15 21 49.9	+0.6	
	baz=92							
Q17K	Contact Creek	152.57 296	P		PKiKP	15 21 49.7	0.0	
	baz=108,SNR=12							
P18K	Big Mountain,	152.59 298	P		PKPbc	15 21 49.3	-0.1	
	baz=107,SNR=12							
N19K	Bonanza Creek	152.62 302	P		PKPbc	15 21 49.3	-0.2	
	baz=104							
O18K	Koktuh Hills	152.71 299	P		PKiKP	15 21 49.9	+0.1	
	baz=106,SNR=17							
L20K	Farewell, AK	152.72 305	P		PKPbc	15 21 49.4	-0.1	
	baz=102,SNR=7.7							
H21K	Melozitna Rive	152.76 312	P		PKiKP	15 21 50.3	+0.6	
	baz=96							
M19K	Big River Lodg	152.83 304	P		PKiKP	15 21 50.1	+0.2	
	baz=102							
D22K	Ayikyak River	152.91 319	P		PKiKP	15 21 50.7	+0.7	
	baz=90							
K20K	Telida	152.97 307	P		PKiKP	15 21 50.4	+0.2	
	baz=100							
Q16K	King Salmon	153.09 296	P		PKiKP	15 21 50.5	0.0	
	baz=107,SNR=12							
L19K	White Mountain	153.10 304	P		PKiKP	15 21 50.5	0.0	
	baz=102							
P17K	Kvichak River	153.13 298	P		PKPbc	15 21 50.5	+0.1	
	baz=106,SNR=6.9							
J20K	Nowinta River	153.14 309	P		PKiKP	15 21 50.8	+0.3	
	baz=98							
F21K	Alatna River	153.17 316	P		PKiKP	15 21 51.0	+0.5	
	baz=93							
CHGN	Chignik	153.20 291	P		PKiKP	15 21 50.9	0.0	
	baz=111							
N18K	Kilae Creek	153.25 301	P		PKPbc	15 21 50.2	-0.5	
	baz=104							
CNBA	Chernabura Isl	153.26 287			PKPbc	15 21 50.9	0.0	
CHNA	Chernabura Isl	153.27 287	P		PKPbc	15 21 50.5	-0.4	
	baz=113							
I20K	Naaghedeneel	153.36 310	P		PKPbc	15 21 50.8	0.0	
	baz=97							
E21K	Killik River	153.38 318	P		PKPbc	15 21 50.6	-0.2	
	baz=103							
M18K	Stony River	153.41 303	P		PKiKP	15 21 51.2	+0.1	
	baz=102							
B21K	Ikpikpuk River	153.58 321	P		PKiKP	15 21 51.8	+0.5	
	baz=87							
H20K	Anotleneega Mo	153.61 312	P		PKiKP	15 21 52.5	+1.0	
	baz=95							
O17K	Koliganek Bris	153.61 299	P		PKiKP	15 21 51.7	+0.1	
	baz=105,SNR=6.3							
C21K	Knifeblade Rid	153.66 320	P		PKiKP	15 21 52.3	+0.8	
	baz=88							
J19K	Poorman	153.75 308	P		PKiKP	15 21 52.7	+0.9	
	baz=97							
TTA	Tatalina	153.77 306	P		PKiKP	15 21 53.0	+1.0	
	baz=99,SNR=9.6							
S14K	Fog Glacier	153.79 290	P		PKiKP	15 21 52.7	+0.5	
	baz=110							
N17K	Nushagak Hills	153.84 300	P		PKiKP	15 21 52.6	+0.5	
	baz=103							
P16K	Nushagak River	153.85 297	P		PKiKP	15 21 52.3	+0.2	
	baz=106							
XLT	XiLinHaoTe	153.92 103	*e*PKPbc		PKPdf	15 21 44.8	0.0	
SDPT	Sand Point	153.94 288	P		PKiKP	15 21 52.8	+0.4	
	baz=112							
F20K	Avaraart Lake	154.03 315	P		PKiKP	15 21 53.1	+0.9	
	baz=91							
O16K	Kokwok River B	154.05 298	P		PKiKP	15 21 52.9	+0.4	
	baz=104							
A21K	Barrow	154.09 325	P		PKiKP	15 21 52.7	+0.5	
	baz=81							
M17K	Holitna River	154.15 302	P		PKiKP	15 21 53.9	+1.2	
	baz=101							
J18K	Innoko River	154.17 307	P		PKiKP	15 21 53.9	+1.2	
	baz=98							
E20K	Nigu River	154.21 318	P		PKiKP	15 21 53.6	+0.9	
	baz=88							
H19K	Roundabout Mou	154.26 312	P		PKiKP	15 21 53.7	+1.0	
	baz=94							
D20K	Etivluk River	154.35 319	P		PKiKP	15 21 53.9	+1.0	
	baz=87							
GCSA	Galena City Sc	154.38 310	P		PKiKP	15 21 54.1	+1.0	
	baz=95							
B20K	Meade River	154.43 322	P		PKiKP	15 21 54.1	+1.1	
	baz=84							
G19K	Purcell Mounta	154.55 313	P		PKiKP	15 21 54.2	+0.8	
	baz=92							
N16K	Nishlik Lake	154.59 300	P		PKiKP	15 21 54.8	+1.1	
	baz=102							
E19K	Redstone River	154.62 316	P		PKiKP	15 21 54.1	+0.6	
	baz=89							
L17K	Donlin	154.69 304	P		PKiKP	15 21 54.8	+1.1	
	baz=99							
K17K	Iditarod	154.78 305	P		PKiKP	15 21 55.0	+1.1	
	baz=98							
M16K	Timber Creek	154.80 301	P		PKiKP	15 21 55.4	+1.4	
	baz=101							
O15K	Ungalikthiuk R	154.80 296	P		PKiKP	15 21 54.2	+0.1	
	baz=104							
F19K	Shaleruckik Mo	154.84 315	P		PKiKP	15 21 54.5	+0.6	
	baz=90							
D19K	Kuna River	154.91 319	P		PKiKP	15 21 55.0	+0.9	
	baz=86							
KSAR	Wonju Array Be	154.95 129	PKPab		PKPab	15 22 11.7	+0.6	
KSAR	Wonju Array Be	154.95 129	PKP2		PKPab	15 22 11.7	+0.6	
KSRS	Korea Array	154.98 129	PKP		PKPdf	15 21 43.9	-2.4	
	comp=Z,0.9nm,0.7s,baz=264,slow=1.4,SNR=3.9							
KSRS			PKPbc		PKiKP	15 21 55.4	+0.2	
	comp=Z,1.8nm,0.8s,baz=180,slow=0.9,SNR=6.8							
KSRS			PKPab		PKPab	15 22 10.8	-0.4	
	comp=Z,3.2nm,0.8s,baz=220,slow=5.0,SNR=6.8							
H18K	Honhosa River	155.04 311	P		PKPdf	15 21 55.1	+10	
	baz=93							
L16K	Owhat River	155.16 302	P		PKPdf	15 21 55.5	+10	
	baz=99							
N15K	Kwethluk River	155.17 299	P		PKPdf	15 21 55.2	+9.4	
	baz=102							
G18K	Tagagawik	155.19 312	P		PKPdf	15 21 55.3	+10	
	baz=91							
FALS	False Pass	155.32 285	P		PKPab	15 22 13.5	+1.3	
	baz=112							
C19K	Lookout Ridge	155.38 320	P		PKPab	15 22 13.7	+1.5	
	baz=83							
O14K	Tigyukauivet M	155.54 296	P		PKPab	15 22 14.9	+1.8	
	baz=103							
M15K	Kasigluk River	155.56 300	P		PKPab	15 22 14.5	+1.4	
	baz=101							
H17K	Granite Mounta	155.69 310	P		PKPab	15 22 14.3	+0.8	
	baz=92							
J16K	Anvik River	155.88 306	P		PKPab	15 22 15.6	+1.1	
	baz=95							
N14K	Kuskokwak Cree	155.90 298	P		PKPab	15 22 15.9	+1.4	
	baz=102							
E18K	Tukpahlearik C	155.92 316	P		PKPab	15 22 15.6	+1.1	
	baz=86							
I17K	Unalakleet	155.97 307	P		PKPab	15 22 16.2	+1.4	
	baz=94							
G17K	Kiwalik Mounta	156.01 311	P		PKPab	15 22 16.2	+1.3	
	baz=90							
C18K	Utukok River	156.02 319	P		PKPab	15 22 16.3	+1.4	
	baz=82							
L15K	Ungalak Mounta	156.11 302	P		PKPab	15 22 16.3	+0.8	
	baz=98							
B18K	Kokolik River	156.13 321	P		PKPab	15 22 16.3	+1.0	
	baz=80							
M14K	Bethel	156.19 300	P		PKPab	15 22 17.1	+1.3	
	baz=100							
K15K	Wolf Creek Mou	156.21 303	P		PKPab	15 22 17.0	+1.1	
	baz=96							
F17K	Baldwin Pennin	156.24 314	P		PKPab	15 22 17.0	+1.2	
	baz=87							
E17K	Hotham Inlet	156.42 315	P		PKPab	15 22 18.0	+1.3	
	baz=85							
UNV	Unalaska Valle	156.61 281	P		PKPab	15 22 18.2	+0.4	
	baz=113							
L14K	Kuka Creek	156.63 301	P		PKPab	15 22 18.3	+0.6	
	baz=98							
H16K	Elim	156.68 309	P		PKPab	15 22 18.6	+0.8	
	baz=90							
G16K	Koyuk River	156.72 311	P		PKPab	15 22 19.0	+1.0	
	baz=89							
C17K	DeLong Mountai	156.77 319	P		PKPab	15 22 19.3	+1.1	
	baz=81							
M13K	Dall Lake	156.81 298	P		PKPab	15 22 20.2	+1.8	
	baz=99							
D17K	Noatak River	156.84 317	P		PKPab	15 22 20.0	+1.6	
	baz=82							
G15K	Niukluk	157.44 310	P		PKPab	15 22 21.0	-0.1	
	baz=88							
C16K	Lisburne Hills	157.59 319	P		PKPab	15 22 22.7	+1.0	
	baz=79							
F15K	North Star Dit	157.66 312	P		PKPab	15 22 22.5	+0.4	
	baz=86							
MJAR	Matsushiro Arr	157.97 148	PKPab		PKPab	15 22 24.7	+0.5	
	comp=Z,5.9nm,0.7s,baz=177,slow=4.5,SNR=9.6							
F14K	Arctic Creek	158.38 312	P		PKPab	15 22 25.8	+0.7	
	baz=84							
CN2	Changchun	158.78 115	*e*PKP		PKPdf	15 21 49.5	-1.4	
TNA	Tin City	159.03 312	P		PKPab	15 22 29.6	+1.7	
	baz=83							
BOD	Bodaibo	159.26 70	*e*PKIKP		PKPdf	15 21 49.2	-1.8	
BOD			*e*			15 22 29.1		
BOD			pmax		pmax			
	comp=Z,13nm,0.9s							
SPIA	Saint Paul Isl	159.68 288	P		PKPab	15 22 31.8	+0.7	
	baz=103							
BNX	BinXian	161.13 114	⇓P		PKPab	15 22 36.8	-0.9	
BNX			pmax		pmax			
	comp=Z,16nm,0.8s							
BNX			pmax		pmax			
	comp=Z,110nm,5.4s							
MDJ	Mudanjiang	161.42 120	PKP		PKPdf	15 21 54.4	+0.5	
MDJ			SS		SS	15 46 32.6	+3.8	
MDJ			AMB		AMB			
	comp=Z,180nm,5.3s							
TIXI	Tiksi	161.74 24	PKPab		PKPab	15 22 40.6	+1.0	
TIXI	Tiksi	161.74

PNIG *i* S **Sg** **15 06 10.7 0.0**
YOIG **Yosondua** 1.18 13 **Pg** **15 06 08.4 -0.8**
YOIG **Sg** **15 06 22.6 -2.0**
YOIG **Yosondua** 1.18 13 *e*P **Pg** **15 06 08.4 -0.8**
YOIG *e*S **Sg** **15 06 22.6 -2.0**
TXIG **Tlaxiaco** 1.55 2 **Pn** **15 06 13.9 -0.6**
TXIG **Sn** **15 06 32.6 -2.3**
TXIG **Tlaxiaco** 1.55 2 *e*P **Pn** **15 06 13.9 -0.6**
TXIG *e*S **Sn** **15 06 32.6 -2.3**
CRIG **Cruz Grande** 1.62 310 **Pn** **15 06 14.1 -1.2**
CRIG **Sn** **15 06 32.4 -4.1**
CRIG **Cruz Grande** 1.62 310 *e*P **Pn** **15 06 14.1 -1.2**
CRIG *e*S **Sn** **15 06 32.4 -4.1**
HUIG **Huatulco** 1.66 87 **Pn** **15 06 14.6 -1.2**
HUIG **Sn** **15 06 33.0 -4.2**
HUIG **Huatulco** 1.66 87 *e*P **Pn** **15 06 14.6 -1.2**
HUIG *e*S **Sn** **15 06 33.0 -4.2**
MGIG **Malinaltepec** 1.71 333 **Pn** **15 06 15.9 -0.8**
MGIG **Sn** **15 06 35.8 -3.1**
MGIG **Malinaltepec** 1.71 333 *e*P **Pn** **15 06 15.9 -0.8**
MGIG *e*S **Sn** **15 06 35.8 -3.1**
OXIG **Oaxaca** 1.72 37 **Pn** **15 06 16.9 0.0**
OXIG **Sn** **15 06 37.3 -1.9**
VHO **Vista Hermosa** 1.72 37 *e*P **Pn** **15 06 16.9 0.0**
VHO *e*S **Sn** **15 06 37.3 -1.8**
TLIG **Tlapa** 1.98 339 Pn **Pn** **15 06 19.9 -0.6**
TLIG **Tlapa** 1.98 339 *e*P **Pn** **15 06 21.7 +1.3**
TLIG *e*S **Sn** **15 06 44.5 -1.1**
HLIG **Huajuapan de L** 2.12 1 *e*P **Pn** **15 06 21.3 -1.1**
HLIG *e*S **Sn** **15 06 47.8 -1.1**
DAIG **Los Arroyos** 2.19 307 *e*P **Pn** **15 06 22.9 -0.2**
DAIG *e*S **Sn** **15 06 46.5 -3.9**
HMTT **Tlapaneco** 2.20 341 *e*P **Pn** **15 06 24.5 +1.1**
HMTT *e*S **Sn** **15 06 49.0 -1.9**
FTIG **Fresnillo de T** 2.22 352 **Pn** **15 06 23.6 0.0**
FTIG **Sn** **15 06 50.3 -0.9**
FTIG **Fresnillo de T** 2.22 352 *e*P **Pn** **15 06 23.6 0.0**
FTIG *i* S **Sn** **15 06 50.3 -0.9**
TOIG **Toxpalan** 2.49 17 **Pn** **15 06 27.7 +0.3**
TOIG **Sn** **15 06 57.1 -0.9**
TOIG **Toxpalan** 2.49 17 *e*P **Pn** **15 06 27.7 +0.3**
TOIG *e*S **Sn** **15 06 57.1 -0.9**
CAIG **El Cayaco** 2.70 300 *e*P **Pn** **15 06 29.1 -1.1**
MEIG **Mezcala** 2.80 322 *e*P **Pb** **15 06 37.2 +0.4**
MEIG *i* S **Sn** **15 07 04.6 -1.1**
CMIG **Matias Romero** 3.14 63 Pn **Pn** **15 06 37.0 +0.8**
6.4nm,0.3s,baz=244,slow=14,SNR=9.3
CMIG LR LR 15 07 10.2
comp=Z,99nm,19.6s,baz=104,slow=27
CMIG Sn **Sn** **15 07 12.8 -1.2**
20nm,0.3s,baz=70,slow=19,SNR=9.4
CMIG Lg Lg 15 07 25.0
9.7nm,0.3s,baz=198,slow=20,SNR=2.2
24nm,0.5s
CMIG **Matias Romero** 3.14 63 *e*P **Pb** **15 06 41.7 -0.9**
CMIG *e*S **Sb** **15 07 23.1 +2.1**
YAIG **Yautepec** 3.36 340 **Pb** **15 06 46.3 -0.1**
YAIG **Sn** **15 07 18.1 -1.4**
YAIG **Yautepec** 3.36 340 *e*P **Pb** **15 06 46.3 -0.1**
YAIG *e*S **Sn** **15 07 18.1 -1.4**
PPM **Popocatepetl** 3.44 347 *e*P **Pb** **15 06 49.0 +1.1**
PPM *e*S **Sn** **15 07 20.7 -1.2**
ARIG **Puente Sto Nin** 3.52 317 *e*P **Pb** **15 06 49.3 +0.3**
ARIG *e*S **Sn** **15 07 22.3 -1.0**
MPVM **San Francisco** 3.66 342 *e*P **Pn** **15 06 47.1 +3.5**
MPVM *e*S **Sn** **15 07 24.3 -2.8**
TLVM **San Miguel Top** 3.71 340 *i* P **Pb** **15 06 49.2 -3.3**
TLVM *e*S **Sn** **15 07 27.6 -1.0**
XCVM **Xochimilco** 3.74 341 *e*P **Pn** **15 06 44.9 +0.1**
XCVM *e*S **Sn** **15 07 26.6 -2.5**
THVM **De Xico** 3.75 343 *e*P **Pn** **15 06 43.9 -1.1**
THVM *e*S Sn 15 07 19.4 -10
AOVM **Tlapan** 3.83 338 *e*P **Pn** **15 06 50.7 +4.6**
AOVM *e*S **Sn** **15 07 27.5 -3.9**
PMUV **Sontecomapan** 3.83 42 *e*P Pn 15 06 42.3 -3.5
PMUV *i* S **Sb** **15 07 38.7 -2.3**
LVIG **Laguna Verde** 4.22 18 *e*P Pn 15 06 44.1 -7.0
LVIG *e*S **Sn** **15 07 36.7 -3.8**
CCIG **Comitan** 5.50 83 Pn **Pn** **15 07 09.3 +0.4**
MTO3 **Montecristo** 8.28 98 **Pn** **15 07 46.8 -0.3**
TEIG **Tepich** 10.14 62 Pn **Pn** **15 08 12.1 -0.3**
H06E1 **SOCORRO T-PHAS** 2.88 286 T T 15 21 55.2
SNR=18
TXAR **Lajitas Array** 14.60 339 Pn **P** **15 09 18.4 -1.6**
baz=160,slow=8.6,SNR=2.9
0.3nm,0.7s
RIMA **Rio Macho** 14.84 112 P **P** **15 09 22.9 +0.1**
ANMO **Albuquerque** 20.67 340 LR LR 15 18 48.7
comp=Z,102nm,19.5s,baz=245,slow=38
GOGA **Godfrey** 21.90 34 P **P** **15 10 39.5 -0.5**
GOGA IAmb IAmb 15 10 48.6
comp=Z,10nm,1.0s
SWET **Sewanee** 22.17 27 P **P** **15 10 42.4 -0.5**
SWET IAmb IAmb 15 10 44.4
comp=Z,15nm,0.7s
WVT **Waverly** 22.21 22 P **P** **15 10 42.3 -1.1**
W50A **Signal Mountai** 22.43 28 P **P** **15 10 45.6 -0.1**
W50A IAmb IAmb 15 10 47.0
comp=Z,15nm,0.7s
CPCT **Cooper Cave** 22.99 29 P **P** **15 10 51.8 +0.1**
CPCT IAmb IAmb 15 10 59.5
comp=Z,9.9nm,1.3s
U54A **Nelsons Funny** 25.16 31 P **P** **15 11 12.9 +0.7**
PDAR **Pinedale Array** 28.79 342 P **P** **15 11 48.1 +3.0**
comp=Z,0.1nm,0.5s,baz=135,slow=12,SNR=2.1
PDAR LR LR 15 22 51.2
comp=Z,94nm,20.5s,baz=158,slow=35
comp=Z,0.1nm,0.5s
ELK **Elko** 29.18 332 LR LR 15 23 23.1
comp=Z,160nm,19.3s,baz=164,slow=36
NEW **Newport** 36.15 338 LR LR 15 30 06.7
comp=Z,102nm,18.1s,baz=176,slow=40
YKA **Yellowknife Ar** 48.22 350 P **P** **15 14 29.0 +1.7**
comp=Z,0.3nm,0.7s,baz=154,slow=7.0,SNR=5.5
comp=Z,0.3nm,0.7s
H03N2 **Juan Fernandez** 52.09 160 T T 16 11 27.5
baz=338,slow=77,SNR=30
H03N1 **Juan Fernandez** 52.09 160 T T 16 11 27.9
baz=338,slow=77,SNR=21
H03N3 **Juan Fernandez** 52.10 160 T T 16 11 27.7
baz=338,slow=77,SNR=17
ILAR **Eielson Array** 59.11 338 P **P** **15 15 49.4 +2.3**
comp=Z,0.4nm,0.9s,baz=155,slow=5.0,SNR=4.2
comp=Z,0.4nm,0.9s

*DNK **20** 15:26:07.1±0.8,68.°44N×11.°59E,h0km,ML3.1(UPP), Suspected explosion*
*HEL **20** 15:26:07.7±0.3,68.°47N×11.°47E,h10km,ML3.5, ML3.1(UPP),Confirmed Earthquake*
*IDC **20** 15:26:07.2±0.8,68.°45N×11.°61E,h0km,mb3.4/4, mbtmp3.5/11,ML3.5/7,Error ellipse: s-maj=13.2km s-min=8.1km az=99.0*
*NAO **20** 15:26:09.1±2.3,68.°46N×11.°51E,h25km±14km,ML3.6*
*UPP **20** 15:26:09.1±2.0,68.°47N×11.°91E,h0km,ML3.1*
*BER **20** 15:26:10.0±3.2,68.°47N×11.°44E,h15km±10km,ML2.8, ML3.6(NAO),Confirmed Earthquake*
*FCIAR **20** 15:26:12.6,68.°66N×12.°08E,h10km,station SPA0 has station magnitude of 3.00*
ISC 20 15:26:07.1±2.1,**68.°43N**±0.°04×**11.°42E**±0.°04,**h16**km±14km, **n124**,σ**2°18**/187,**mb3.5**/4,**Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LOF	**Lofoten**	**0.85**	**110**	Pg		**Pn**	**15 26 24.3**	**0.0**
LOF				Lg		Lg	15 26 36.8	
LOF	**Lofoten**	**0.85**	**110**	*e*P		**Pn**	**15 26 24.3**	**0.0**
LOF				*e*S		**Sn**	**15 26 36.4**	**0.0**
LOF				IAML			15 26 38.1	
	comp=Z,2μm,0.4s							
STEI	**Steigen**	**1.52**	**108**	Pn		**Pb**	**15 26 34.1**	**-0.7**
STEI				Sn		**Sb**	**15 26 53.6**	**-0.1**
STEI	**Steigen**	**1.52**	**108**	*e*P		**Pb**	**15 26 34.1**	**-0.7**
STEI				*e*S		**Sb**	**15 26 53.0**	**-0.7**
STEI				IAML			15 26 59.7	
	comp=Z,350nm,0.4s							
FAUS	**Fauske**	**1.81**	**124**	*e*P		**Pn**	**15 26 38.2**	**+0.7**
FAUS				*e*S		**Sn**	**15 27 00.0**	**0.0**
FAUS				IAML			15 27 14.3	
	comp=Z,213nm,0.4s							
KONS	**Konsvik**	**2.05**	**161**	Pn		**Pn**	**15 26 42.0**	**+1.1**
KONS						**Sn**	**15 27 06.6**	**+0.4**
KONS	**Konsvik**	**2.05**	**161**	*e*P		**Pb**	**15 26 42.1**	**-1.8**
KONS				*e*S		**Sn**	**15 27 06.5**	**+0.4**
KONS				IAML			15 27 11.5	
	comp=Z,174nm,0.4s							
STOK	**Stokkvaagen**	**2.20**	**163**	Pn		**Pn**	**15 26 44.2**	**+1.3**
STOK				Sn		**Sn**	**15 27 10.9**	**+1.2**
STOK	**Stokkvaagen**	**2.20**	**163**	*e*P		**Pb**	**15 26 44.4**	**-2.1**
STOK				*e*S		**Sn**	**15 27 08.7**	**-1.1**
STOK				IAML			15 27 13.9	
	comp=Z,170nm,0.5s							
MOR8	**Moi Rana**	**2.56**	**151**	Pn		**Pn**	**15 26 49.3**	**+1.4**
MOR8				Sn		**Sn**	**15 27 19.4**	**+0.7**
MOR8	**Moi Rana**	**2.56**	**151**	*e*P		**Pn**	**15 26 49.2**	**+1.4**
MOR8				*e*S		**Sn**	**15 27 19.7**	**+1.0**
MOR8				IAML			15 27 21.1	
	comp=Z,456nm,0.2s							
SALU	**Saltoluokta**	**2.88**	**108**	*e*P		**Pn**	**15 26 53.9**	**+1.5**
SALU				*e*S		**Sn**	**15 27 27.7**	**+1.0**
SALU	**Saltoluokta**	**2.88**	**108**	P		**Pn**	**15 26 53.9**	**+1.5**
SALU				S		**Sn**	**15 27 28.1**	**+1.5**
SALU	**Saltoluokta**	**2.88**	**108**	P		**Pn**	**15 26 53.9**	**+1.5**
SALU				S		**Sn**	**15 27 28.1**	**+1.5**
SALU	**Saltoluokta**	**2.88**	**108**	*e*P		**Pn**	**15 26 53.9**	**+1.5**
SALU				*e*S		**Sn**	**15 27 28.1**	**+1.5**
RATU	**Laukkuluspa**	**3.12**	**98**	P		**Pn**	**15 26 57.1**	**+1.4**
RATU				S		**Sn**	**15 27 33.2**	**+0.6**
RATU	**Laukkuluspa**	**3.12**	**98**	P		**Pn**	**15 26 57.1**	**+1.4**
RATU				S		**Sn**	**15 27 33.2**	**+0.6**
RATU	**Laukkuluspa**	**3.12**	**98**	*e*P		**Pn**	**15 26 57.1**	**+1.4**
RATU				*e*S		**Sn**	**15 27 33.2**	**+0.6**
KUA	**Kurravaara**	**3.36**	**94**	P		**Pn**	**15 27 00.6**	**+1.6**
KUA				S		**Sn**	**15 27 39.8**	**+1.3**
KUA	**Kurravaara**	**3.36**	**94**	P		**Pn**	**15 27 00.6**	**+1.6**
KUA				S		**Sn**	**15 27 39.8**	**+1.3**
KUA	**Kurravaara**	**3.36**	**94**	*e*P		**Pn**	**15 27 00.6**	**+1.6**
KUA				*e*S		**Sn**	**15 27 39.8**	**+1.3**
JETT	**Jettan, Norway**	**3.43**	**67**	Pn		**Pn**	**15 27 01.5**	**+1.6**
JETT				Sn		**Sn**	**15 27 40.5**	**+0.4**
JETT				Lg		Lg	15 27 54.9	
JETT	**Jettan, Norway**	**3.43**	**67**	Pn		**Pn**	**15 27 01.5**	**+1.6**
JETT				Sn		**Sn**	**15 27 40.5**	**+0.4**
JETT				Sg		**Sg**	**15 27 54.9**	**-2.1**
KIF	**Kilpisjarvi**	**3.47**	**76**	Pn		**Pn**	**15 27 01.9**	**+1.5**
KIF				Sn		**Sn**	**15 27 40.9**	**-0.2**
KIF	**Kilpisjarvi**	**3.47**	**76**	*e*P		**Pn**	**15 27 01.8**	**+1.5**
KIF				*e*S		**Sn**	**15 27 41.3**	**+0.2**
KIF	**Kilpisjarvi**	**3.47**	**76**	*e*P		**Pn**	**15 27 01.8**	**+1.5**
KIF				*e*S		**Sn**	**15 27 41.4**	**+0.2**
KIF				MSN			15 27 42.6	
	comp=Z,62nm,0.2s							
DUNU	**Dundret**	**3.72**	**106**	P		**Pn**	**15 27 05.3**	**+1.4**
DUNU				S		**Sn**	**15 27 47.0**	**-0.2**
DUNU	**Dundret**	**3.72**	**106**	P		**Pn**	**15 27 05.3**	**+1.4**
DUNU				S		**Sn**	**15 27 47.0**	**-0.2**
DUNU	**Dundret**	**3.72**	**106**	*e*P		**Pn**	**15 27 05.3**	**+1.4**
DUNU				*e*S		**Sn**	**15 27 47.0**	**-0.2**
NSS	**Namsos**	**3.93**	**177**	Pn		**Pn**	**15 27 08.8**	**+2.1**
NSS				Sn		**Sn**	**15 27 55.2**	**+2.8**
NSS	**Namsos**	**3.93**	**177**	*e*P		**Pn**	**15 27 08.4**	**+1.7**
NSS				*e*S		**Sn**	**15 27 52.9**	**+0.6**
NSS				IAML			15 28 04.2	
	comp=Z,54nm,0.3s							
LANU	**Lannavaara**	**3.96**	**91**	P		**Pn**	**15 27 08.3**	**+1.1**
LANU				S		**Sn**	**15 27 52.7**	**-0.5**
LANU	**Lannavaara**	**3.96**	**91**	P		**Pn**	**15 27 08.3**	**+1.1**
LANU				S		**Sn**	**15 27 52.7**	**-0.5**
LANU	**Lannavaara**	**3.96**	**91**	*e*P		**Pn**	**15 27 08.3**	**+1.1**
MASU	**Masugnsbyn**	**4.11**	**99**	P		**Pn**	**15 27 10.5**	**+1.3**
MASU	**Masugnsbyn**	**4.11**	**99**	P		**Pn**	**15 27 10.5**	**+1.3**
MASU	**Masugnsbyn**	**4.11**	**99**	*e*P		**Pn**	**15 27 10.5**	**+1.3**
KTK1	**Kautokeino**	**4.35**	**77**	*e*P		**Pn**	**15 27 13.5**	**+1.0**
KTK1				*e*S		**Sn**	**15 28 01.4**	**-1.3**
KTK1				IAML			15 28 26.5	
	comp=Z,37nm,0.4s							
KTK1	**Kautokeino**	**4.35**	**77**	*e*P		**Pn**	**15 27 13.5**	**+1.0**
KTK1				*e*S		**Sn**	**15 28 01.7**	**-1.0**
HEF	**Hetta**	**4.52**	**85**	Pn		**Pn**	**15 27 16.0**	**+1.2**
HEF				Sn		**Sn**	**15 28 05.5**	**-1.6**
HEF	**Hetta**	**4.52**	**85**	*e*P		**Pn**	**15 27 16.0**	**+1.2**
HEF				*e*S		**Sn**	**15 28 05.7**	**-1.3**
HEF	**Hetta**	**4.52**	**85**	*e*P		**Pn**	**15 27 16.0**	**+1.2**
HEF				MSN			15 28 12.2	
	comp=Z,28nm,0.2s							
LILU	**Lilltraesk**	**4.59**	**130**	P		**Pn**	**15 27 17.4**	**+1.7**
LILU	**Lilltraesk**	**4.59**	**130**	P		**Pn**	**15 27 17.4**	**+1.7**
LILU	**Lilltraesk**	**4.59**	**130**	*e*P		**Pn**	**15 27 17.4**	**+1.7**
PAJU	**Pajala**	**4.67**	**102**	P		**Pn**	**15 27 17.9**	**+1.0**
PAJU	**Pajala**	**4.67**	**102**	P		**Pn**	**15 27 17.9**	**+1.0**
PAJU	**Pajala**	**4.67**	**102**	*e*P		**Pn**	**15 27 17.9**	**+1.0**
HAMF	**Hammerfest**	**4.84**	**57**	*e*P		**Pn**	**15 27 20.1**	**+0.9**
HAMF				*e*S		**Sn**	**15 28 11.0**	**-3.8**
HAMF				IAML			15 28 50.3	
	comp=Z,15nm,0.6s							
SJUU	**Sjulsmark**	**4.96**	**121**	P		**Pn**	**15 27 22.3**	**+1.4**
SJUU	**Sjulsmark**	**4.96**	**121**	P		**Pn**	**15 27 22.3**	**+1.4**
SJUU	**Sjulsmark**	**4.96**	**121**	*e*P		**Pn**	**15 27 22.3**	**+1.4**
SVAU	**Svanoeiden**	**5.13**	**137**	P		**Pn**	**15 27 24.8**	**+1.6**
SVAU	**Svanoeiden**	**5.13**	**137**	P		**Pn**	**15 27 24.8**	**+1.6**
SVAU	**Svanoeiden**	**5.13**	**137**	*e*P		**Pn**	**15 27 24.8**	**+1.6**
ARA0	**ARCESS Array S**	**5.19**	**71**	Pn		**Pn**	**15 27 24.4**	**+0.4**
	baz=255,slow=14							
ARA0	**ARCESS Array S**	**5.19**	**71**	*e*P		**Pn**	**15 27 24.5**	**+0.4**
ARA0				*e*S		**Sn**	**15 28 19.6**	**-3.8**
ARA0				IAML			15 28 58.0	
	comp=Z,29nm,0.4s							
ARCES	**ARCESS Array B**	**5.19**	**71**	Pn		**Pn**	**15 27 24.4**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=256,slow=13,SNR=55							
ARCES				Sn		**Sn**	**15 28 21.8**	**-1.6**
	comp=Z,2.4nm,0.3s,baz=252,slow=18,SNR=7.0							
ARCES				Lg		Lg	15 28 48.9	
	comp=Z,3.7nm,0.3s,baz=265,slow=29,SNR=16							
	comp=Z,1.2nm,0.3s							
NOD	**Norderasen**	**5.21**	**163**	*e*P		**Pn**	**15 27 26.5**	**+2.2**
NOD				*e*S		**Sn**	**15 28 22.9**	**-1.0**
TBLU	**Trondheim**	**5.23**	**186**	*e*S		**Sn**	**15 28 18.8**	**-5.6**
TBLU				IAML			15 28 29.5	
	comp=Z,22nm,0.3s							
BREU	**Bredtraesk**	**5.40**	**144**	P		**Pn**	**15 27 28.6**	**+1.6**
BREU	**Bredtraesk**	**5.40**	**144**	P		**Pn**	**15 27 28.6**	**+1.6**
BREU	**Bredtraesk**	**5.40**	**144**	*e*P		**Pn**	**15 27 28.6**	**+1.6**
ODEU	**Stanfors**	**5.50**	**133**	P		**Pn**	**15 27 30.3**	**+2.1**
ODEU	**Stanfors**	**5.50**	**133**	P		**Pn**	**15 27 30.3**	**+2.1**
ODEU	**Stanfors**	**5.50**	**133**	*e*P		**Pn**	**15 27 30.3**	**+2.1**
TOF	**Tornio**	**5.53**	**109**	MSN			15 28 38.5	
	comp=Z,14nm,0.2s							
KEV	**Kevo**	**5.73**	**69**	Pn		**Pn**	**15 27 32.1**	**+0.6**
KEV				Sn		**Sn**	**15 28 34.9**	**-1.9**
KEV	**Kevo**	**5.73**	**69**	*e*P		**Pn**	**15 27 31.8**	**+0.3**
KEV				*e*S		**Sn**	**15 28 33.2**	**-3.6**
RNF	**Rovaniemi**	**5.89**	**101**	MSN			15 28 42.6	
	comp=Z,22nm,0.2s							
UMAU	**Umeaa**	**5.91**	**136**	*e*P		**Pn**	**15 27 35.5**	**+1.6**
MOL	**Molde**	**6.10**	**197**	Pn		**Pn**	**15 27 37.6**	**+1.0**
MOL				Sn		**Sn**	**15 28 40.5**	**-5.5**
MOL	**Molde**	**6.10**	**197**	*e*P		**Pn**	**15 27 36.9**	**+0.4**
MOL				*e*S		**Sn**	**15 28 40.3**	**-5.6**
MOL				IAML			15 28 54.4	
	comp=Z,23nm,0.5s							
DOMB	**Dombas**	**6.49**	**190**	*e*P		**Pn**	**15 27 43.6**	**+1.6**
DOMB				*e*S		**Sn**	**15 28 49.7**	**-5.9**
DOMB				IAML			15 29 00.2	
	comp=Z,14nm,0.4s							
AKN	**Aaknes**	**6.55**	**198**	Pn		**Pn**	**15 27 43.5**	**+0.9**
AKN	**Aaknes**	**6.55**	**198**	Pn		**Pn**	**15 27 43.5**	**+0.9**
AKN				IAML			15 28 59.1	
	comp=Z,16nm,0.6s							
BJO1	**Bjornoya**	**6.55**	**18**	Pn		**Pn**	**15 27 42.7**	**+0.1**
BJO1				Sn		**Sn**	**15 28 50.3**	**-6.6**
BJO1	**Bjornoya**	**6.55**	**18**	*e*P		**Pn**	**15 27 42.5**	**-0.2**
BJO1				*e*S		**Sn**	**15 28 50.1**	**-6.8**
BJO1				IAML			15 28 54.9	
	comp=Z,7.8nm,0.7s							
VADS	**Vadso**	**6.58**	**67**	*e*P		**Pn**	**15 27 43.2**	**+0.1**
VADS				*e*S		**Sn**	**15 28 53.6**	**-4.0**
VADS				IAML			15 29 19.5	
	comp=Z,10nm,0.4s							
NC204	**NORSAR Array S**	**7.19**	**183**	*e*P		**Pn**	**15 27 52.6**	**+1.1**
NC204				IAML			15 29 45.6	
	comp=Z,9.5nm,0.5s							
FOO	**Floro**	**7.37**	**204**	*e*P		**Pn**	**15 27 55.1**	**+1.2**
FOO				IAML			15 29 19.5	
	comp=Z,21nm,0.6s							
NB2	**NORSAR Subarra**	**7.43**	**181**	Pn		**Pn**	**15 27 56.4**	**+1.6**
	slow=14							
NB2				Sn		**Sn**	**15 29 18.2**	**-0.3**
	slow=28							
NB2	**NORSAR Subarra**	**7.43**	**181**	Pn		**Pn**	**15 27 56.4**	**+1.6**
	slow=14							
NB2				Sn		**Sn**	**15 29 18.2**	**-0.3**
	slow=28							
NOA	**NORSAR Array B**	**7.43**	**181**	Pn		**Pn**	**15 27 55.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=352,slow=13,SNR=18							
NOA				Sn		**Sn**	**15 29 15.4**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=341,slow=15,SNR=3.8							
NOA				Lg		Lg	15 30 00.3	
	comp=Z,0.2nm,0.3s,baz=305,slow=15,SNR=4.3							
	comp=Z,0.3nm,0.3s							
HYA	**Hoyanger**	**7.63**	**199**	*e*P		**Pn**	**15 27 58.5**	**+1.0**
HYA				*e*S		**Sn**	**15 29 19.6**	**-3.8**
HYA				IAML			15 29 40.1	
	comp=Z,13nm,0.4s							
NC602	**NORSAR Array S**	**7.73**	**180**	*e*P		**Pn**	**15 27 59.5**	**+0.7**
NC602				IAML			15 29 42.0	
	comp=Z,6.0nm,0.7s							
NRA0	**NORESS Array S**	**7.73**	**180**	Pn		**Pn**	**15 28 00.1**	**+1.2**
	baz=360,slow=16							
NRA0				Sn		**Sn**	**15 29 22.4**	**-3.6**
	baz=6.4,slow=22							
NRA0	**NORESS Array S**	**7.73**	**180**	Pn		**Pn**	**15 28 00.1**	**+1.2**
	baz=360,slow=16							
NRA0				Sn		**Sn**	**15 29 22.4**	**-3.6**
	baz=6.4,slow=22							
SKAR	**Skarslia**	**7.90**	**191**	*e*P		**Pn**	**15 28 01.5**	**+0.3**
SKAR				*e*S		**Sn**	**15 29 23.6**	**-6.6**
SKAR				IAML			15 29 33.7	
	comp=Z,6.5nm,0.4s							
SUE	**Sulen**	**7.93**	**204**	*e*P		**Pn**	**15 28 02.8**	**+1.2**
SUE				*e*S		**Sn**	**15 29 25.1**	**-5.6**
SUE				IAML			15 29 29.1	
	comp=Z,11nm,0.4s							
APA0	**Apatity Array**	**8.12**	**86**	Pn		**Pn**	**15 28 03.0**	**-1.2**
	baz=294,slow=14							
APA0				Sn		**Sn**	**15 29 28.7**	**-6.9**
	baz=285,slow=28							
APA0	**Apatity Array**	**8.12**	**86**	Pn		**Pn**	**15 28 03.0**	**-1.2**
	baz=294,slow=14							
APA0				Sn		**Sn**	**15 29 28.7**	**-6.9**
	baz=285,slow=28							
HFS	**Hagfors**	**8.39**	**172**	Pn		**Pn**	**15 28 09.1**	**+1.1**
	baz=9.5,slow=12							
HFS	**Hagfors**	**8.39**	**172**	Pn		**Pn**	**15 28 09.1**	**+1.1**
	baz=9.5,slow=12							
HFS	**Hagfors**	**8.39**	**172**	Pn		**Pn**	**15 28 09.0**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=355,slow=11,SNR=29							
HFS				Sn		**Sn**	**15 29 39.1**	**-3.1**
	comp=Z,1.1nm,0.3s,baz=6.2,slow=17,SNR=2.9							
	comp=Z,2.1nm,0.3s							
ASK	**Askoy**	**8.42**	**202**	*e*P		**Pn**	**15 28 12.6**	**+4.4**
ASK				*e*S		**Sn**	**15 29 41.1**	**-1.7**
ASK				IAML			15 29 46.7	
	comp=Z,13nm,0.4s							
HSPB	**Hornsund (broa**	**8.70**	**6**	*e*P		**Pn**	**15 28 09.1**	**-2.9**
HSPB				*e*S		Sn	15 29 40.9	-8.7
HSPB				IAML			15 29 45.3	
	comp=Z,4.3nm,0.8s							
ODD1	**Odda**	**8.80**	**196**	*e*P		**Pn**	**15 28 14.1**	**+0.5**
ODD1				IAML			15 29 50.0	
	comp=Z,2.4nm,0.9s							
KONO	**Kongsberg**	**8.86**	**186**	*e*P		**Pn**	**15 28 14.1**	**-0.1**
HOPEN	**Hopen**	**9.05**	**21**	*e*P		**Pn**	**15 28 16.4**	**-0.5**
HOPEN				IAML			15 29 51.2	
	comp=Z,3.5nm,1.0s							
HOPEN	**Hopen**	**9.05**	**21**	*e*P		**Pn**	**15 28 16.9**	**0.0**
HOPEN				*e*S		Sn	15 29 48.8	-10
BLS5	**Blasjo**	**9.30**	**196**	*e*P		**Pn**	**15 28 21.2**	**+0.8**
FIA0	**FINESS Array S**	**9.35**	**132**	Pn		**Pn**	**15 28 21.8**	**+0.8**
	baz=331,slow=12							
FIA0				Sn		**Sn**	**15 30 01.6**	**-4.0**
	baz=329,slow=28							
FIA0	**FINESS Array S**	**9.35**	**132**	Pn		**Pn**	**15 28 21.8**	**+0.8**
	baz=331,slow=12							
FIA0				Sn		**Sn**	**15 30 01.6**	**-4.0**
	baz=329,slow=28							
FINES	**FINESS Array B**	**9.35**	**132**	Pn		**Pn**	**15 28 21.8**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=338,slow=14,SNR=45							
FINES				Sn		**Sn**	**15 30 01.5**	**-4.1**
	comp=Z,2.9nm,0.3s,baz=334,slow=22,SNR=9.1							
FINES				Lg		Lg	15 30 52.3	
	comp=Z,0.9nm,0.3s,baz=336,slow=26,SNR=2.3							
	comp=Z,4.0nm,0.3s							
STRU	**Stroemstad**	**9.44**	**181**	*e*P		**Pn**	**15 28 22.6**	**+0.4**
KMY	**Karmoy**	**9.64**	**199**	*e*P		**Pn**	**15 28 25.5**	**+0.4**
SPA0	**Spitsbergen Ar**	**9.89**	**6**	Pn		**Pn**	**15 28 29.0**	**+0.5**
	baz=176,slow=14							
SPA0	**Spitsbergen Ar**	**9.89**	**6**	Pn		**Pn**	**15 28 29.0**	**+0.5**
	baz=176,slow=14							
SPA0	**Spitsbergen Ar**	**9.89**	**6**	*e*P		**Pn**	**15 28 28.8**	**+0.4**
SPA0				*e*S		Sn	15 30 09.3	-10
SPITS	**Spitsbergen Ar**	**9.89**	**6**	Pn		**Pn**	**15 28 29.2**	**+0.8**
	baz=174,slow=15							
SPITS				Sn		Sn

TAF	**Taforalt**	**1.26**	**121**	P	**Pn**	**15 30 25.2**	**-0.3**
TAF	**Taforalt**	**1.26**	**121**	S	**Sb**	**15 30 43.9**	**+1.9**
SMIR	**Smir Dam**	**1.36**	**280**	P	**Pn**	**15 30 25.9**	**-1.0**
SMIR	**Smir Dam**	**1.36**	**280**	S	**Sn**	**15 30 42.7**	**-1.5**
EMIJ	**Mijas**	**1.39**	**323**	Pn	**Pb**	**15 30 27.6**	**-0.8**
EMIJ	**Mijas**	**1.39**	**323**	Pn	**Pb**	**15 30 27.6**	**-0.8**
EMIJ				Sn	**Sb**	**15 30 45.4**	**-0.2**
EMIJ				*i* Vmb_Lg		15 30 48.3	
ELGU	**Los Guajares,**	**1.40**	**3**	Pn	**Pn**	**15 30 27.5**	**-0.1**
ELGU				Sn	**Sn**	**15 30 44.2**	**-1.2**
ELGU	**Los Guajares,**	**1.40**	**3**	Pn	**Pn**	**15 30 27.4**	**-0.1**
ELGU				Sn	**Sn**	**15 30 44.7**	**-0.7**
ELGU				*i* Vmb_Lg		15 30 47.4	
CEU	**Ceuta**	**1.41**	**288**	Pn	**Pn**	**15 30 26.2**	**-1.3**
CEU				Sn	**Sn**	**15 30 41.0**	**-4.3**
ECEU	**Ceuta**	**1.41**	**288**	Pn	**Pn**	**15 30 26.8**	**-0.7**
ECEU				Sn	**Sn**	**15 30 43.9**	**-1.6**
ECEU				*i* Vmb_Lg		15 30 45.5	
JBK	**JBK**	**1.48**	**139**	P	**Pn**	**15 30 28.3**	**-0.4**
JBK	**JBK**	**1.48**	**139**	S	**Sb**	**15 30 50.2**	**+1.7**
EBER	**Berja**	**1.58**	**25**	Pn	**Pn**	**15 30 30.6**	**+0.5**
EBER				Sn	**Sn**	**15 30 50.9**	**+0.9**
EBER	**Berja**	**1.58**	**25**	Pn	**Pn**	**15 30 30.6**	**+0.5**
EBER				Sn	**Sn**	**15 30 50.8**	**+0.7**
EBER				*i* Vmb_Lg		15 30 53.2	
EGOR	**Sierra Gorda,**	**1.67**	**350**	Pn	**Pb**	**15 30 32.8**	**-0.5**
EGOR	**Sierra Gorda,**	**1.67**	**350**	Pn	**Pn**	**15 30 32.0**	**+0.7**
EGOR				Sn	**Sb**	**15 30 53.6**	**-0.3**
EGOR				*i* Vmb_Lg		15 31 05.0	
EQUE	**Quentar**	**1.75**	**8**	Pn	**Pb**	**15 30 33.5**	**-1.2**
EQUE				Sn	**Sn**	**15 30 55.2**	**+1.1**
EQUE				*i* Vmb_Lg		15 30 57.9	
EQUA	**Presa de Quent**	**1.75**	**8**	Pn	**Pb**	**15 30 34.2**	**-0.6**
LCRM	**LCR**	**2.00**	**208**	P	**Pb**	**15 30 39.6**	**+0.6**
EQES	**Quesada**	**2.39**	**13**	Pn	**Pn**	**15 30 42.0**	**+0.8**
EQES				Pg	**Pb**	**15 30 44.3**	**-1.3**
EQES				Sn	**Sb**	**15 31 13.0**	**-1.7**
EQES				*i* Vmb_Lg		15 31 15.4	
MD31	**MD31**	**2.73**	**199**	P	**Pn**	**15 30 46.7**	**+1.0**
MDT	**Midelt**	**2.74**	**196**	P	**Pn**	**15 30 46.8**	**+0.8**
EADA	**Adamuz**	**2.78**	**346**	Pn	**Pn**	**15 30 48.4**	**+1.9**
EADA				Sn	**Sn**	**15 31 21.1**	**+1.8**
EADA				*i* Vmb_Lg		15 31 27.2	
ECAB	**El Cabril**	**2.94**	**333**	Pn	**Pn**	**15 30 49.8**	**+1.2**
ECAB				Sn	**Sn**	**15 31 25.0**	**+1.8**
ECAB				*i* Vmb_Lg		15 31 26.9	
CART	**Cartagena**	**3.05**	**45**	Sn	**Sn**	**15 31 23.7**	**-2.3**
ETOB	**Tobarra**	**3.62**	**28**	Pn	**Pn**	**15 30 59.3**	**+1.3**
ETOB				Sn	**Sn**	**15 31 42.4**	**+2.3**
EGRO	**El Granado**	**3.66**	**305**	Pn	**Pn**	**15 30 59.6**	**+1.2**
PVAQ	**Vaqueiros**	**3.75**	**302**	*e*P	**Pn**	**15 31 01.6**	**+1.9**
PVAQ				*e*S	**Sn**	**15 31 43.2**	**0.0**
PVAQ	**Vaqueiros**	**3.75**	**302**	Sn	**Sn**	**15 31 41.9**	**-1.4**
PBAR	**Barrancos**	**3.79**	**317**	*e*P	**Pn**	**15 31 01.8**	**+1.5**
PBAR				*e*S	**Sn**	**15 31 44.3**	**+0.1**
PBAR				A	A	15 31 52.6	
	1.4nm,0.5s						
PBAR	**Barrancos**	**3.79**	**317**	Sn	**Sn**	**15 31 43.0**	**-1.2**
PBDV	**Barranco-do-Ve**	**3.83**	**299**	*e*P	**Pn**	**15 31 02.4**	**+1.6**
PBDV				*e*S	**Sn**	**15 31 44.2**	**-0.9**
PBDV				A	A	15 31 45.8	
	1.9nm,0.9s						
PCVE	**Castro Verde**	**4.09**	**303**	*e*P	**Pn**	**15 31 07.8**	**+3.4**
PCVE				*e*S	**Sn**	**15 31 52.5**	**+1.0**
PCVE				A	A	15 31 54.8	
	2.2nm,0.7s						
EBAD	**Badajoz**	**4.20**	**322**	Sn	**Sn**	**15 31 53.1**	**-1.3**
EBAD	**Badajoz**	**4.20**	**322**	Pn	**Pn**	**15 31 07.4**	**+1.4**
EBAD				Sn	**Sn**	**15 31 54.0**	**-0.3**
EBAD				*i* Vmb_Lg		15 31 57.8	
PNCL	**Nicolau / Gran**	**4.67**	**306**	*e*P	**Pn**	**15 31 14.2**	**+1.9**
PNCL				*e*S	**Sn**	**15 32 06.0**	**+0.1**
PNCL				A	A	15 32 11.3	
	1.0nm,0.1s						

*IDC **20** 15:31:45.1±1.6,31.°08N×140.°34E,h0km,mb3.4/5, mbtmp3.5/8,ML3.5/3,MS3.0/2,Error ellipse: s-maj=69.0km s-min=16.9km az=72.0*
*JMA **20** 15:31:49.3±0.3,32.°N±1.°×14.°1E±.°,h50km,MV3.9/17, NEAR TORISHIMA IS*
ISC 20 15:31:47.2±0.8,31.°51N±0.°06×141.°5E±0.°1,h40km,n22, σ2§32/28,mb3.5/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.75**	**303**	*e*P	**Pn**	**15 32 15.4**	**+0.3**
JAOM				*e*S	**Sn**	**15 32 34.6**	**-1.6**
JHJ2	**Mitsune**	**2.14**	**319**	P	**Pn**	**15 32 21.0**	**+0.6**
JHJ2				*e*S	**Sn**	**15 32 44.1**	**-1.6**
JHJ	**Hachijo jima 2**	**2.16**	**318**	Pn	**Pn**	**15 32 21.1**	**+0.4**
	23nm,0.3s,baz=24,slow=20,SNR=23						
JHJ				Sn	**Sn**	**15 32 44.0**	**-2.3**
	82nm,0.3s,baz=273,slow=22,SNR=9.6						
	90nm,0.2s						
BSO1	**Boso 1**	**3.17**	**352**	*e*P	**Pn**	**15 32 35.4**	**+1.4**
JOD2	**Odawara 2**	**4.25**	**332**	*e*P	**Pn**	**15 32 49.5**	**+0.1**
JOD2				*e*S	**Sn**	**15 33 36.2**	**-1.6**
CBIJ	**Chichi jima**	**4.44**	**172**	*e*P	**Pn**	**15 32 53.5**	**+1.5**
CBIJ				*e*S	**Sn**	**15 33 42.6**	**+0.1**
JCJ	**Chichijima**	**4.44**	**172**	Pn	**Pn**	**15 32 50.4**	**-1.6**
	23nm,0.3s,baz=12,slow=19,SNR=18						
JCJ				Sn	**Sn**	**15 33 35.3**	**-7.2**
	baz=91,slow=22						
	51nm,0.4s						
JHH2	**Haha-jima-NKT2**	**4.90**	**173**	*e*P	**Pn**	**15 33 00.9**	**+2.6**
JHH2				*e*S	**Sn**	**15 33 57.4**	**+3.7**
JRY	**Ryogami san**	**4.99**	**335**	*e*P	**Pn**	**15 33 01.7**	**+2.2**
JAG	**Ashikaga**	**5.19**	**341**	*e*P	**Pn**	**15 33 03.7**	**+1.4**
MJAR	**Matsushiro Arr**	**5.71**	**332**	Pn	**Pn**	**15 33 11.2**	**+1.7**
	0.2nm,0.3s,baz=165,slow=14,SNR=14						
MJAR				Sn	**Sn**	**15 34 13.6**	**-0.2**
	baz=233,slow=26,SNR=2.4						
MJAR				LR	LR	15 35 28.0	
	comp=Z,40nm,21.2s,baz=70,slow=39						
	2.4nm,0.4s						
JMK	**Ichinoseki**	**7.43**	**358**	*e*P	**Pn**	**15 33 33.8**	**+0.8**
JMK				*e*S	**Sn**	**15 34 51.8**	**-4.1**
H11S3	**WAKE ISLAND Hy**	**26.18**	**114**	T	T	16 06 17.0	
	baz=304,slow=74,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**26.18**	**114**	T	T	16 06 16.6	
	baz=304,slow=74,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**26.19**	**114**	T	T	16 06 18.2	
	baz=304						
SONM	**Songino Array**	**31.23**	**312**	P	**P**	**15 38 01.3**	**-1.6**
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.1						
SONM				PcP	**PcP**	**15 40 59.9**	**+3.2**
	0.1nm,0.5s,baz=99,slow=3.6,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**47.29**	**307**	P	**P**	**15 40 16.4**	**-0.2**
	0.2nm,0.3s,baz=86,slow=7.5,SNR=5.4						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**49.59**	**312**	P	**P**	**15 40 34.3**	**+0.1**
	0.3nm,0.2s,baz=93,slow=9.7,SNR=1.9						
WRA	**Warramunga Arr**	**51.62**	**189**	P	**P**	**15 40 48.8**	**-1.0**
	0.3nm,0.3s,baz=4.9,slow=7.6,SNR=8.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**54.44**	**315**	P	**P**	**15 41 11.4**	**+1.0**
	0.2nm,0.5s,baz=70,slow=9.3,SNR=2.2						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**55.34**	**188**	P	**P**	**15 41 17.3**	**+0.2**
	0.1nm,0.5s,baz=7.6,slow=6.5,SNR=6.5						
	0.1nm,0.5s						
YBH	**Yreka Blue Hor**	**73.72**	**51**	LR	LR	16 08 27.9	
	comp=Z,41nm,20.3s,baz=170,slow=30						

*IDC **20** 15:37:01.9±0.8,25.°42S×70.°67W,h0km,mb3.7/4, mbtmp4.0/7,ML4.2/3,MS3.1/2,Error ellipse: s-maj=32.7km s-min=19.2km az=115.0*
*SJA **20** 15:37:01.4±0.7,25.°28S×70.°86W,h7km,ML4.2,MW3.8*
*NEIC **20** 15:37:03.7±1.7,25.°29S±0.°02×70.°9W±0.°1,h10km±2km, mb4.2/6,Error ellipse: s-maj=17.9km s-min=3.7km az=270.0*
*GUC **20** 15:37:08.0±0.8,25.°34S×70.°51W,h18km±3km,ML4.2*
ISC 20 15:37:03.6±1.3,25.°31S±0.°02×70.°71W±0.°04,h11km±8km, n92,σ1§77/120,mb4.1/6,3C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.73**	**22**		**Pn**	**15 37 20.9**	**+0.7**
PB14					**Sn**	**15 37 30.9**	**+2.1**
PB14	**IPOC Station P**	**0.73**	**22**	*i* P	**Pn**	**15 37 21.3**	**+1.1**
PB14				*e*S	**Sn**	**15 37 31.4**	**-0.2**
AC01	**Pan de Azucar**	**0.84**	**173**	Pn	**Pn**	**15 37 22.9**	**+1.5**
AC01					**Sb**	**15 37 32.9**	**+1.2**
AC01	**Pan de Azucar**	**0.84**	**173**	*e*P	**Pg**	**15 37 18.9**	**-1.0**
AC01				*e*S	**Sb**	**15 37 32.9**	**+1.2**
AC01				IAML		15 37 35.4	
	comp=Z,6μm,0.6s						
AC01	**Pan de Azucar**	**0.84**	**173**	*i* P	**Pn**	**15 37 23.0**	**+1.5**
AC01				*e*S	**Sb**	**15 37 32.6**	**+0.9**
AC01				IAML		15 37 34.6	
	comp=E,12μm,0.1s						
GO02	**Mina Guanaco**	**1.02**	**82**		**Pb**	**15 37 24.2**	**+0.6**
GO02				Sn	**Sg**	**15 37 35.8**	**-1.0**
GO02	**Mina Guanaco**	**1.02**	**82**	*e*P	Pg	15 37 18.9	-4.5
GO02				*e*P	**Pg**	**15 37 23.9**	**+0.4**
GO02				*e*S	**Sg**	**15 37 35.9**	**-0.8**
GO02	**Mina Guanaco**	**1.02**	**82**	*i* P	**Pg**	**15 37 23.8**	**+0.4**
GO02				*e*S	**Sg**	**15 37 35.2**	**-1.6**
GO02				IAML		15 37 36.2	
	comp=N,22μm,0.2s						
PB10	**IPOC Station P**	**1.79**	**5**		**Pn**	**15 37 35.5**	**+1.0**
PB10	**IPOC Station P**	**1.79**	**5**	*e*P	**Pn**	**15 37 35.3**	**+0.8**
PB10				*e*P	**Pb**	**15 37 35.9**	**-0.5**
PB10				*e*S	Sn	15 37 42.9	-14
PB10				IAML		15 38 10.8	
	comp=Z,494nm,0.7s						
PB10	**IPOC Station P**	**1.79**	**5**	*i* P	**Pn**	**15 37 35.8**	**+1.3**
AC02	**Maricunga**	**2.08**	**137**		**Pb**	**15 37 41.1**	**-0.6**
AC02	**Maricunga**	**2.08**	**137**	*e*P	**Pb**	**15 37 41.3**	**-0.6**
AC02				*e*S	**Sn**	**15 37 59.9**	**-5.3**
AC02				IAML		15 38 13.2	
	comp=Z,1μm,0.2s						
AC02	**Maricunga**	**2.08**	**137**	*i* P	**Pb**	**15 37 41.2**	**-0.6**
AC02				*e*S	**Sn**	**15 38 06.6**	**+1.4**
AC02				IAML		15 38 06.7	
	comp=E,2μm,0.2s						
GO03	**Copiap**	**2.32**	**169**	Pn	**Pn**	**15 37 43.4**	**+1.6**
GO03	**Copiap**	**2.32**	**169**	*e*P	**Pn**	**15 37 42.9**	**+1.0**
GO03				*e*P	**Pn**	**15 37 43.4**	**+1.6**
GO03				*e*S	**Sb**	**15 38 14.9**	**+0.7**
GO03				IAML		15 38 25.0	
	comp=Z,945nm,0.3s						
GO03	**Copiap**	**2.32**	**169**	*i* P	**Pb**	**15 37 46.3**	**+0.8**
GO03				*e*S	**Sb**	**15 38 15.2**	**+1.0**
GO03				IAML		15 38 23.5	
	comp=E,845nm,0.3s						
PB15	**IPOC Station P**	**2.38**	**29**		**Pn**	**15 37 44.5**	**+1.7**
PB15	**IPOC Station P**	**2.38**	**29**	*e*P	**Pn**	**15 37 44.8**	**+2.1**
PB15				*e*S	**Sb**	**15 38 16.7**	**+0.7**
PB15	**IPOC Station P**	**2.38**	**29**	*i* P	**Pb**	**15 37 47.4**	**+0.8**
PB06	**IPOC Station P**	**2.79**	**22**		**Pn**	**15 37 49.7**	**+1.3**
PB06	**IPOC Station P**	**2.79**	**22**	*e*P	**Pn**	**15 37 49.7**	**+1.3**
PB06				*e*S	**Sn**	**15 38 23.4**	**+1.3**
PB06				*e*S	**Sb**	**15 38 25.4**	**-2.5**
PB06				IAML		15 38 39.9	
	comp=Z,1μm,0.8s						
PB06	**IPOC Station P**	**2.79**	**22**	*i* P	**Pn**	**15 37 49.8**	**+1.3**
PB06				*e*S	**Sb**	**15 38 28.0**	**+0.1**
PB06				IAML		15 38 33.7	
	comp=E,1μm,0.4s						
AC04	**Llanos de Chal**	**2.91**	**186**	Pn	**Pn**	**15 37 49.8**	**-0.1**
AC04	**Llanos de Chal**	**2.91**	**186**	*i* P	**Pb**	**15 37 55.0**	**-0.5**
PB04	**IPOC Station P**	**3.00**	**10**	Pn	**Pn**	**15 37 51.3**	**0.0**
PB04	**IPOC Station P**	**3.00**	**10**	*e*P	**Pn**	**15 37 52.1**	**+0.8**
PB04				*e*S	**Sb**	**15 38 32.9**	**-1.1**
PB04				*e*S	**Sg**	**15 38 41.2**	**+1.0**
PB04				IAML		15 38 43.6	
	comp=Z,804nm,0.5s						
PB04	**IPOC Station P**	**3.00**	**10**	*i* P	**Pn**	**15 37 52.0**	**+0.7**
PB04				*e*S	**Sb**	**15 38 33.7**	**-0.4**
PB04				IAML		15 38 43.6	
	comp=N,1μm,0.4s						
LVC	**Limon Verde**	**3.15**	**32**	Pn	**Pn**	**15 37 55.5**	**+2.0**
LVC	**Limon Verde**	**3.15**	**32**	*e*P	**Pn**	**15 37 55.3**	**+1.8**
LVC				*e*S	**Sn**	**15 38 34.4**	**+3.1**
LVC				IAML		15 38 45.9	
	comp=Z,964nm,0.4s						
LVC	**Limon Verde**	**3.15**	**32**	Pn	**Pn**	**15 37 55.9**	**+2.4**
	comp=Z,8.5nm,0.3s,baz=204,slow=20,SNR=38						
LVC				Pg	**Pb**	**15 37 59.5**	**-0.4**
	comp=Z,46nm,0.3s,baz=228,slow=11,SNR=58						
LVC				Sn	**Sb**	**15 38 36.4**	**-2.1**
	comp=Z,191nm,0.3s,baz=331,slow=17,SNR=17						
	comp=Z,102nm,0.2s						
LVC	**Limon Verde**	**3.15**	**32**	*i* P	**Pb**	**15 37 58.1**	**-1.7**
LVC				*e*S	**Sn**	**15 38 35.5**	**+4.2**
AC05	**El Transito**	**3.54**	**174**		**Pn**	**15 37 59.9**	**+1.2**
AC05	**El Transito**	**3.54**	**174**	*e*P	**Pn**	**15 38 00.8**	**+2.1**
AC05				*e*S	**Sn**	**15 38 43.4**	**+2.8**
AC05				IAML		15 38 57.6	
	comp=Z,348nm,1.1s						
PB07	**IPOC Station P**	**3.64**	**12**		**Pn**	**15 38 00.7**	**+0.6**
PB07	**IPOC Station P**	**3.64**	**12**	*e*P	**Pn**	**15 38 01.0**	**+0.8**
PB07				*e*S	**Sb**	**15 38 50.9**	**-1.5**
PB07				IAML		15 39 06.1	
	comp=Z,607nm,0.4s						
PB07	**IPOC Station P**	**3.64**	**12**	*i* P	**Pn**	**15 38 00.8**	**+0.6**
LCO	**Las Campanas**	**3.69**	**180**	Pn	**Pn**	**15 38 01.4**	**+0.5**
LCO	**Las Campanas**	**3.69**	**180**	*e*P	**Pn**	**15 38 02.9**	**+2.1**
LCO				*e*S	**Sb**	**15 38 52.4**	**-1.5**
LCO	**Las Campanas**	**3.69**	**180**	*i* P	**Pb**	**15 38 06.4**	**-2.7**
PB09	**IPOC Station P**	**3.75**	**21**		**Pn**	**15 38 02.8**	**+1.3**
PB09	**IPOC Station P**	**3.75**	**21**	*e*P	**Pn**	**15 38 03.2**	**+1.6**
PB09				*e*S	**Sn**	**15 38 49.4**	**+3.7**
PB09				*e*S	**Sb**	**15 38 50.9**	**-4.4**
PB09				IAML		15 39 08.2	
	comp=Z,664nm,1.0s						
PB09	**IPOC Station P**	**3.75**	**21**	*i* P	**Pn**	**15 38 03.4**	**+1.8**
PB02	**IPOC Station P**	**4.04**	**11**		**Pn**	**15 38 05.7**	**+0.1**
PB02	**IPOC Station P**	**4.04**	**11**	*e*P	**Pn**	**15 38 06.0**	**+0.5**
PB02				*e*S	**Sb**	**15 39 00.4**	**-3.3**
PB02				IAML		15 39 16.4	
	comp=Z,628nm,0.3s						
PB02	**IPOC Station P**	**4.04**	**11**	*i* P	**Pn**	**15 38 05.6**	**+0.1**
PB01	**IPOC Station P**	**4.39**	**15**		**Pn**	**15 38 10.7**	**+0.4**
PB01	**IPOC Station P**	**4.39**	**15**	*e*P	**Pn**	**15 38 11.1**	**+0.8**
PB01				*e*S	**Sb**	**15 39 10.4**	**-3.4**
PB01				IAML		15 39 16.2	
	comp=Z,245nm,0.4s						
PATCX	**Punta Patache**	**4.49**	**7**		**Pn**	**15 38 12.0**	**+0.3**
CO01	**Juntas del Tor**	**4.69**	**173**		**Pn**	**15 38 15.7**	**+1.1**
TA01	**Diego Aracena**	**4.74**	**6**	Pn	**Pn**	**15 38 14.6**	**-0.5**
TA01	**Diego Aracena**	**4.74**	**6**	*e*P	**Pn**	**15 38 14.7**	**-0.5**
TA01				*e*S	**Sb**	**15 39 23.4**	**-0.5**
TA01				IAML		15 39 43.5	
	comp=Z,175nm,1.2s						
PB08	**IPOC Station P**	**5.34**	**16**		**Pn**	**15 38 24.1**	**+0.4**
PB08	**IPOC Station P**	**5.34**	**16**	*e*P	**Pn**	**15 38 24.2**	**+0.6**
PB08				*e*S	**Sb**	**15 39 46.4**	**+5.0**
PB08				IAML		15 39 53.0	
	comp=Z,119nm,0.8s						
CO06	**Fray Jorge**	**5.41**	**188**	Pn	**Pn**	**15 38 23.3**	**-1.0**
CO03	**El Pedregal**	**5.51**	**180**		**Pn**	**15 38 25.7**	**0.0**
PB11	**IPOC Station P**	**5.60**	**10**		**Pn**	**15 38 26.4**	**-0.7**
GO01	**Chusmiza**	**5.78**	**14**		**Pn**	**15 38 29.5**	**-0.4**
PB12	**IPOC Station P**	**6.67**	**3**		**Pn**	**15 38 41.5**	**-0.2**
MT09	**Talagante**	**8.44**	**182**	Pn	**Pn**	**15 39 05.8**	**-0.3**
BO04	**La Punta**	**8.65**	**179**	Pn	**Pn**	**15 39 09.7**	**+0.9**
LPAZ	**La Paz**	**9.29**	**16**	Pn	**Pn**	**15 39 19.9**	**+1.7**
H03N1	**Juan Fernandez**	**10.81**	**220**	Pn	**Pn**	**15 39 39.9**	**+1.8**
H03N1	baz=109,slow=15			T	T	15 50 17.0	
	baz=47,slow=74,SNR=372						
H03N2	**Juan Fernandez**	**10.82**	**220**	Pn	**Pn**	**15 39 40.2**	**+2.0**
	baz=109,slow=15						
H03N3	**Juan Fernandez**	**10.82**	**219**	Pn	**Pn**	**15 39 39.7**	**+1.3**
	baz=109,slow=15						
H03N3				T	T	15 50 14.4	
	baz=342,slow=74,SNR=377						
H03S3	**Juan Fernandez**	**11.09**	**218**	Pn	**Pn**	**15 39 41.7**	**-0.1**
	baz=171,slow=74						
H03S1	**Juan Fernandez**	**11.10**	**218**	Pn	**Pn**	**15 39 41.6**	**-0.5**
	baz=9.1,slow=74						
H03S2	**Juan Fernandez**	**11.10**	**218**	Pn	**Pn**	**15 39 41.2**	**-0.9**
CPUP	**Villa Florida**	**12.10**	**98**	Pn	**Pn**	**15 39 56.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=262,slow=14,SNR=3.6						
CPUP				LR	LR	15 44 25.1	
	comp=Z,70nm,18.3s,baz=246,slow=37						
	comp=Z,0.9nm,0.5s						
SIV	**San Ignacio**	**12.93**	**46**	Pn	**Pn**	**15 40 09.5**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=237,slow=8.6,SNR=93						
SIV				Sn	**Sn**	**15 42 23.4**	**-8.1**
	baz=290,slow=17,SNR=4.4						
	comp=Z,20nm,0.5s						
PTLB	**Pontes e Lacer**	**14.62**	**50**		**Pn**	**15 40 31.5**	**+1.0**
PLCA	**Paso Flores**	**15.38**	**180**	LR	LR	15 46 09.3	
	comp=Z,86nm,19.1s,baz=6.5,slow=36						
VILB	**Vilhena**	**15.79**	**41**	Pn	**Pn**	**15 40 47.2**	**+1.1**
PLTB	**Pedras Altas**	**16.34**	**117**	Pn	**Pn**	**15 40 54.1**	**+1.0**
TRCB	**Terra Rica**	**16.70**	**85**	P	**P**	**15 41 01.9**	**+1.9**
TRCB				IAmb	IAmb	15 41 09.2	
	comp=Z,16nm,0.7s						
BDFB	**Brasilia**	**23.30**	**70**	P	**P**	**15 42 12.3**	**+0.4**
BDFB				IAmb	IAmb	15 42 25.5	
	comp=Z,10nm,1.4s						
QSPA	**South Pole Qui**	**64.90**	**180**	P	**P**	**15 47 43.1**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=309,slow=1.5,SNR=14						
	comp=Z,2.0nm,0.9s						
PDAR	**Pinedale Array**	**76.61**	**332**	P	**P**	**15 48 55.4**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=123,slow=3.3,SNR=2.1						
	comp=Z,0.2nm,0.8s						
NVAR	**Mina Array Bea**	**77.51**	**324**	P	**P**	**15 49 01.2**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=48,slow=34,SNR=1.5						
	comp=Z,0.3nm,0.7s						
TOA0	**Torodi Ar. Sit**	**80.19**	**70**	P	**P**	**15 49 13.7**	**-0.9**
TOA0				IAmb	IAmb	15 49 26.6	
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**80.19**	**70**	P	**P**	**15 49 12.9**	**-1.6**
TORD				IAmb	IAmb	15 49 26.6	
	comp=Z,1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**80.19**	**70**	P	**P**	**15 49 13.5**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=265,slow=4.4,SNR=8.5						
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**125.79**	**208**	PKP	**PKPdf**	**15 56 05.0**	**-1.2**
	comp=Z,0.4nm,1.0s,baz=120,slow=1.5,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**126.63**	**275**	T	T	18 15 45.3	
	baz=108,slow=75,SNR=160						
H11S1	**WAKE ISLAND Hy**	**126.64**	**275**	T	T	18 15 48.6	
	baz=108,slow=75,SNR=196						
H11S3	**WAKE ISLAND Hy**	**126.64**	**275**	T	T	18 15 47.8	
	baz=108,slow=75,SNR=164						
H11N3	**WAKE ISLAND Hy**	**126.81**	**276**	T	T	18 16 05.1	
	baz=108,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**126.83**	**276**	T	T	18 16 06.6	
	baz=108,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**126.83**	**276**	T	T	18 16 07.9	
	baz=108,slow=75,SNR=15						
KURBB	**Kurchatov Arra**	**145.40**	**35**	PKPbc	**PKPbc**	**15 56 40.7**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=312,slow=2.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**146.09**	**26**	PKPbc	**PKPdf**	**15 56 42.6**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=310,slow=3.4,SNR=6.0						
MKAR	**Makanchi Array**	**149.66**	**38**	PKPbc	**PKPbc**	**15 56 53.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=282,slow=2.6,SNR=6.2						

*JMA **20** 15:42:15.4±0.2,34.°4N±0.°6×140.°3E±0.°7,h47km±2km, MV3.1/33,FAR S OFF BOSO PENINSULA*
*IDC **20** 15:42:18.3±7.7,35.°99N×141.°34E,h92km±42km,mb2.7/2, mbtmp2.9/3,MS2.9/1,Error ellipse: s-maj=163.6km s-min=39.7km az=178.0*
ISC 20 15:42:14.3±1.4,34.°36N±0.°05×140.°31E±0.°06,h62km±12km, n19,σ0§81/20,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.47**	**20**	P	**Pn**	**15 42 26.3**	**+0.5**
BSO3				X		15 42 35.2	
BSO1	**Boso 1**	**0.62**	**62**	P	**Pn**	**15 42 27.4**	**+0.2**
BSO1				X		15 42 37.2	
BSO4	**Boso 4**	**0.63**	**2**	P	**Pn**	**15 42 28.4**	**+0.7**
JMYK	**Miyake Tsubota**	**0.70**	**245**	*e*P	**Pn**	**15 42 29.3**	**+0.6**
JMYK				*e*S	**Sn**	**15 42 39.6**	**+0.4**
TATJ	**Tateyama 2**	**0.75**	**332**	P	**Pn**	**15 42 30.2**	**+0.9**
JMKN	**Mikurajimanish**	**0.76**	**232**	P	**Pn**	**15 42 29.9**	**+0.4**
JMKN				S	**Sn**	**15 42 40.3**	**-0.2**
JIM2	**Oshima 3**	**0.81**	**296**	P

SKR					smax	smax				
	comp=E,8µm,0.6s									
SKR	**Severo-Kuril's**	**0.76**	**312**	*e*P		**Pn**	**16 22 00.8**	**-1.0**
SKR				*e*S		**Sn**	**16 22 09.6**	**-2.8**
PAU	**Pauzhetka**	**1.30**	**354**	PN		**Pn**	**16 22 09.2**	**+0.2**
PAU				S		**Sn**	**16 22 23.3**	**-1.9**
PAU	**Pauzhetka**	**1.30**	**354**	*e*P		**Pn**	**16 22 09.2**	**+0.2**
PAU				*e*S		**Sn**	**16 22 23.3**	**-1.9**
KDTR	**Khodutka, Kamc**	**1.77**	**22**	PN		**Pn**	**16 22 15.0**	**-0.4**
KDTR				S		**Sn**	**16 22 34.3**	**-2.4**
KDTR	**Khodutka, Kamc**	**1.77**	**22**	*e*P		**Pn**	**16 22 15.0**	**-0.4**
KDTR				*e*S		**Sn**	**16 22 34.3**	**-2.4**
ASAK	**Asacha**	**2.28**	**14**	PN		**Pn**	**16 22 22.3**	**-0.2**
ASAK	**Asacha**	**2.28**	**14**	*e*P		**Pn**	**16 22 22.3**	**-0.2**
MTVR	**Mutnovka**	**2.42**	**17**	PN		**Pn**	**16 22 24.5**	**0.0**
MTVR				S		**Sn**	**16 22 51.0**	**-2.0**
MTVR	**Mutnovka**	**2.42**	**17**	*e*P		**Pn**	**16 22 24.5**	**0.0**
MTVR				*e*S		**Sn**	**16 22 51.0**	**-2.0**
RUS	**Russkaya**	**2.45**	**22**	PN		**Pn**	**16 22 24.2**	**-0.5**
RUS				S		**Sn**	**16 22 50.2**	**-3.1**
RUS	**Russkaya**	**2.45**	**22**	*e*P		**Pn**	**16 22 24.2**	**-0.5**
RUS				*e*S		**Sn**	**16 22 50.2**	**-3.1**
GRL	**Gorelyy**	**2.47**	**15**	PN		**Pn**	**16 22 25.3**	**+0.2**
GRL				S		**Sn**	**16 22 52.3**	**-1.8**
GRL	**Gorelyy**	**2.47**	**15**	*e*P		**Pn**	**16 22 25.3**	**+0.2**
GRL				*e*S		**Sn**	**16 22 52.3**	**-1.8**
KRMR	**Karymshinskiy**	**2.75**	**14**	PN		**Pn**	**16 22 29.2**	**+0.4**
KRMR				S		**Sn**	**16 23 01.8**	**+1.1**
KRMR	**Karymshinskiy**	**2.75**	**14**	*e*P		**Pn**	**16 22 29.2**	**+0.4**
KRMR				*e*S		**Sn**	**16 23 01.8**	**+1.1**
APC	**Apacha**	**2.75**	**2**	PN		**Pn**	**16 22 28.9**	**0.0**
APC	**Apacha**	**2.75**	**2**	*e*P		**Pn**	**16 22 28.9**	**0.0**
PEA0B	**Petropavlovsk-**	**2.97**		8*c* *i*PN		**Pn**	**16 22 32.2**	**+0.4**
PETK	**Petropavlovsk-**	**2.97**		8 P		**Pn**	**16 22 30.4**	**-1.4**
	comp=E,11nm,0.4s,baz=189,slow=12,SNR=163									
PETK				S		**Sn**	**16 23 07.0**	**+0.9**
	comp=E,7.4nm,0.4s,baz=61,slow=23,SNR=2.1									
PET	**Petropavlovsk**	**3.03**	**19**	PN		**Pn**	**16 22 33.2**	**+0.5**
PET				S		**Sn**	**16 23 06.6**	**-1.0**
PET	**Petropavlovsk**	**3.03**	**19**	*e*P		**Pn**	**16 22 33.2**	**+0.5**
PET				*e*S		**Sn**	**16 23 06.6**	**-1.0**
DALK	**Dalny**	**3.06**	**20**	PN		**Pn**	**16 22 33.4**	**+0.4**
DALK				S		**Sn**	**16 23 07.2**	**-1.1**
DALK	**Dalny**	**3.06**	**20**	*e*P		**Pn**	**16 22 33.4**	**+0.4**
DALK				*e*S		**Sn**	**16 23 07.2**	**-1.1**
INSR	**Institute**	**3.06**	**18**	*e*P		**Pn**	**16 22 33.8**	**+0.8**
INSR				*e*S		**Sn**	**16 23 08.1**	**-0.3**
UGLR	**Uglovaya**	**3.24**	**20**	PN		**Pn**	**16 22 36.9**	**+1.2**
UGLR	**Uglovaya**	**3.24**	**20**	*e*P		**Pn**	**16 22 36.9**	**+1.2**
AVH	**Avacha**	**3.27**	**18**	PN		**Pn**	**16 22 37.8**	**+1.7**
AVH	**Avacha**	**3.27**	**18**	*e*P		**Pn**	**16 22 37.8**	**+1.7**
KOK	**Koryaka**	**3.28**	**17**	PN		**Pn**	**16 22 38.0**	**+1.8**
KOK	**Koryaka**	**3.28**	**17**	*e*P		**Pn**	**16 22 38.0**	**+1.8**
SMAR	**Somma**	**3.29**	**19**	PN		**Pn**	**16 22 37.3**	**+0.9**
SMAR	**Somma**	**3.29**	**19**	*e*P		**Pn**	**16 22 37.3**	**+0.9**
NLC	**Nalytchevo**	**3.33**	**25**	PN		**Pn**	**16 22 36.0**	**-0.8**
NLC	**Nalytchevo**	**3.33**	**25**	*e*P		**Pn**	**16 22 36.0**	**-0.8**
KRX	**Arik**	**3.34**	**17**	PN		**Pn**	**16 22 38.6**	**+1.4**
KRX				S		**Sn**	**16 23 18.1**	**+2.4**
KRX	**Arik**	**3.34**	**17**	*e*P		**Pn**	**16 22 38.6**	**+1.4**
KRX				*e*S		**Sn**	**16 23 18.1**	**+2.4**
SPN	**Mys Shipunski**	**3.48**	**32**	PN		**Pn**	**16 22 39.5**	**+0.8**
SPN				S		**Sn**	**16 23 16.4**	**-2.2**
SPN	**Mys Shipunski**	**3.48**	**32**	*e*P		**Pn**	**16 22 39.5**	**+0.8**
SPN				*e*S		**Sn**	**16 23 16.4**	**-2.2**
GNL	**Ganaly**	**3.57**	**9**	PN		**Pn**	**16 22 41.0**	**+0.8**
GNL	**Ganaly**	**3.57**	**9**	*e*P		**Pn**	**16 22 41.0**	**+0.8**
KII	**Karymskiy**	**4.15**	**20**	PN		**Pn**	**16 22 49.8**	**+1.8**
KII	**Karymskiy**	**4.15**	**20**	*e*P		**Pn**	**16 22 49.8**	**+1.8**
TUMD	**Tumrok D**	**5.44**	**21**	*e*P		**Pn**	**16 23 07.3**	**+1.6**
TUMR	**Tumrok**	**5.46**	**19**	PN		**Pn**	**16 23 07.3**	**+1.3**
TUMR	**Tumrok**	**5.46**	**19**	*e*P		Pn	16 23 11.0	+4.9
KMNR	**Kamenistaya**	**5.92**	**18**	PN		**Pn**	**16 23 16.3**	**+4.0**
KMNR	**Kamenistaya**	**5.92**	**18**	*e*P		**Pn**	**16 23 16.3**	**+4.0**
KPT	**Kopyto**	**6.11**	**17**	PN		**Pn**	**16 23 17.6**	**+2.6**
KPT	**Kopyto**	**6.11**	**17**	*e*P		**Pn**	**16 23 17.6**	**+2.6**
BZWR	**Bezymyannyi-We**	**6.17**	**19**	PN		**Pn**	**16 23 18.4**	**+2.6**
BZWR	**Bezymyannyi-We**	**6.17**	**19**	*e*P		**Pn**	**16 23 18.4**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**6.18**	**20**	PN		**Pn**	**16 23 18.9**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**6.18**	**20**	*e*P		**Pn**	**16 23 18.9**	**+2.9**
SMKR	**Semkarok**	**6.95**	**21**	PN		**Pn**	**16 23 28.6**	**+2.2**
SMKR	**Semkarok**	**6.95**	**21**	*e*P		**Pn**	**16 23 28.6**	**+2.2**
YSS	**Yuzh-Sakhalins**	**9.98**	**257**	*i*PN		**Pn**	**16 24 11.5**	**+3.6**
MA2	**Magadan**	**10.07**	**342**	P		**Pn**	**16 24 07.5**	**-1.6**
	comp=E,1.2nm,0.3s,baz=156,slow=20,SNR=3.7									
ASAJ	**Asahikawa**	**11.53**	**244**	P		**Pn**	**16 24 31.4**	**+2.4**
	comp=E,5.2nm,0.6s,baz=67,slow=13,SNR=8.4									
MJAR	**Matsushiro Arr**	**19.23**	**232**	P		**Pn**	**16 26 09.5**	**+1.0**
	comp=E,1.6nm,0.7s,baz=26,slow=11,SNR=4.3									
KSRS	**Korea Array**	**24.37**	**250**	P		**P**	**16 27 00.4**	**0.0**
	comp=E,0.9nm,0.7s,baz=46,slow=10,SNR=2.3									
	comp=E,0.9nm,0.7s									
H11N2	**WAKE ISLAND Hy**	**31.38**	**162**	T		T	17 01 48.5			
	baz=348,slow=76,SNR=45									
H11N3	**WAKE ISLAND Hy**	**31.40**	**162**	T		T	17 01 46.6			
	baz=348,slow=76,SNR=80									
H11N1	**WAKE ISLAND Hy**	**31.40**	**162**	T		T	17 01 46.7			
	baz=348,slow=76,SNR=34									
ILAR	**Eielson Array**	**32.26**	**42**	P		P	16 28 01.0	-9.5		
ILAR	**Eielson Array**	**32.26**	**42**	P		P	16 28 01.0	-9.5		
	comp=E,0.6nm,1.1s,baz=268,slow=9.0,SNR=2.7									
	comp=E,0.6nm,1.1s									
H11S1	**WAKE ISLAND Hy**	**32.53**	**163**	T		T	17 03 11.0			
	baz=348,slow=76,SNR=78									
H11S3	**WAKE ISLAND Hy**	**32.55**	**163**	T		T	17 03 11.4			
	baz=348,slow=76,SNR=113									
H11S2	**WAKE ISLAND Hy**	**32.55**	**163**	T		T	17 03 11.9			
	baz=348,slow=76,SNR=82									
CMAR	**Chiang Mai Arr**	**55.68**	**257**	P		**P**	**16 31 17.6**	**-0.7**		
	comp=E,0.6nm,0.4s,baz=30,slow=7.5,SNR=4.2									
	comp=E,0.6nm,0.4s									
PDAR	**Pinedale Array**	**60.67**	**57**	P		P	16 31 46.6	-6.6		
	comp=E,0.1nm,0.6s,baz=320,slow=8.3,SNR=1.5									
	comp=E,0.1nm,0.6s									
SADO	**Sadowa**	**73.59**	**38**	P		P	16 33 06.9	-7.8		
	comp=E,4.7nm,1.1s,baz=315,slow=5.8,SNR=1.6									
	comp=E,4.7nm,1.1s									
TXAR	**Lajitas Array**	**73.60**	**64**	P		P	16 33 06.3	-8.9		
	comp=E,0.2nm,0.6s,baz=318,slow=5.3,SNR=2.1									
	comp=E,0.2nm,0.6s									
ASAR	**Alice Springs**	**76.32**	**202**	P		**P**	**16 33 27.4**	**-3.2**		
	comp=E,0.1nm,0.5s,baz=14,slow=5.4,SNR=1.3									
	comp=E,0.1nm,0.5s									
H03N2	**Juan Fernandez**	**136.15**	**90**	T		T	19 12 34.2			
	baz=313,slow=77,SNR=11									
H03N1	**Juan Fernandez**	**136.16**	**89**	T		T	19 12 39.8			
	baz=313,slow=77,SNR=15									
H03N3	**Juan Fernandez**	**136.17**	**90**	T		T	19 12 34.6			
	baz=313,slow=77,SNR=12									

IDC 20 16:59:44.1±2.3,5°20'S×152°09'E,h0km,mb3.3/3, mbtmp3.4/3,Error ellipse: s-maj=178.8km s-min=30.3km az=127.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.66**	**228**	P	P	17 04 47.4	+0.3
	0.4nm,0.6s,baz=52,slow=9.7,SNR=3.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**25.39**	**222**	P	P	17 05 13.1	-0.3
	0.4nm,0.7s,baz=57,slow=9.0,SNR=3.6						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**82.79**	**22**	P	P	17 12 09.9	+0.1
	0.5nm,0.7s,baz=252,slow=4.9,SNR=6.8						
	0.5nm,0.7s						

*IDC **20** 17:04:56.3±0.6,20°.85S×174°.03W,h0km,mb4.3/13, mbtmp4.3/15,ML3.9/2,MS3.6/22,Error ellipse: s-maj=26.6km s-min=16.2km az=137.0*
*NEIC **20** 17:04:58.6±1.9,20°.7S±0°.1×173°.8W±0°.1,h10km±1km, mb5.0/86,Error ellipse: s-maj=23.3km s-min=16.0km az=133.0*

ISC 20 17:05:00.4±0.5,20°88S±0°09×174°09W±0°10,h26km, n177,σ0°83/154,mb5.0/53,MS3.7/22,1C-5D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.31**	**66**	Pn	Pn	17 05 53.3	-11
NIUE				Sn	Sn	17 06 33.8	-20
AFI	**Afiamalu**	**7.28**	**18**	Pn	Pn	17 06 37.4	-7.8

RAR	**Rarotonga**	**13.38**	**94**	LR		LR	17 14 00.2			
	comp=Z,196nm,18.0s,baz=300,slow=41									
PINNC	**Pines Island,**	**17.24**	**261**	Pn		**Pn**	**17 08 59.5**	**+0.1**		
DZM	**Mont Dzumac**	**18.15**	**263**	P		**Pn**	**17 09 10.0**	**-0.8**		
DZM	**Mont Dzumac**	**18.15**	**263**	*e*P		**P**	**17 09 11.5**	**+0.5**		
	46nm,1.4s									
DZM				*e*LR		LR	17 13 23.3			
	282nm,20.7s									
DZM	**Mont Dzumac**	**18.15**	**263**	P		**P**	**17 09 11.6**	**+0.5**		
	0.2nm,0.3s,baz=90,slow=20,SNR=1.9									
	9.6nm,1.0s									
URZ	**Urewera**	**18.92**	**202**	P		**Pn**	**17 09 19.8**	**-0.1**		
	0.9nm,0.3s,baz=117,slow=4.9,SNR=8.5									
	13nm,0.6s									
TOZ	**Tahuroa Road**	**19.06**	**206**	P		**Pn**	**17 09 21.4**	**-0.2**		
TOZ				IAmb		IAmb	17 09 32.5			
	comp=Z,191nm,2.0s									
RTZ	**Ruatahuna**	**19.28**	**202**	P		**P**	**17 09 22.8**	**-0.5**		
RTZ				IAmb		IAmb	17 09 28.0			
	comp=Z,109nm,1.8s									
BFZ	**Birch Farm**	**21.39**	**200**	P		**P**	**17 09 44.0**	**-1.9**		
BFZ				IAmb		IAmb	17 09 57.8			
	comp=Z,101nm,1.4s									
SNZO	**South Karori**	**22.47**	**203**	P		**P**	**17 09 56.4**	**-1.2**		
PLWZ	**Palliser**	**22.51**	**201**	P		**P**	**17 09 57.1**	**-1.0**		
TCW	**Tory Channel**	**22.54**	**203**	P		**P**	**17 09 56.3**	**-2.1**		
TUWZ	**Tuamarina**	**22.86**	**204**	P		**P**	**17 10 00.4**	**-1.3**		
NNZ	**Nelson**	**22.89**	**205**	P		**P**	**17 10 03.1**	**+1.1**		
PPT2	**Papeete2**	**23.37**	**86**	*e*LR		LR	17 15 24.0			
	comp=Z,162nm,24.8s									
PPT2				*e*LR		LR	17 15 30.6			
	comp=Z,134nm,21.5s									
PPT	**Papeete**	**23.38**	**86**	LR		LR	17 17 19.4			
	comp=Z,193nm,18.9s,baz=242,slow=32									
THZ	**Tophouse**	**23.54**	**205**	P		**P**	**17 10 07.5**	**-1.2**		
LTZ	**Lake Taylor**	**24.66**	**205**	P		**P**	**17 10 18.2**	**-0.8**		
LTZ				IAmb		IAmb	17 10 27.7			
	comp=Z,42nm,1.0s									
INZ	**Inchbonnie**	**24.94**	**206**	P		**P**	**17 10 21.5**	**0.0**		
HNR	**Honiara**	**27.47**	**291**	LR		LR	17 20 18.3			
	comp=Z,2µm,18.9s,baz=172,slow=34									
EIDS	**Eidsvold**	**32.28**	**255**	P		**P**	**17 11 27.3**	**+0.1**		
EIDS				IAmb		IAmb	17 11 59.7			
	comp=Z,34nm,1.6s									
CTA	**Charters Tower**	**37.09**	**264**	LR		LR	17 27 00.7			
	comp=Z,135nm,18.6s,baz=92,slow=36									
CTAO	**Charters Tower**	**37.09**	**264**	P		**P**	**17 12 08.4**	**-0.5**		
TOO	**Toolangi**	**38.66**	**236**	P		**P**	**17 12 22.9**	**+0.9**		
TOO				IAmb		IAmb	17 12 39.1			
	comp=Z,50nm,1.8s									
PMG	**Port Moresby**	**39.00**	**281**	P		**P**	**17 12 25.7**	**+0.7**		
STKA	**Stephens Creek**	**40.93**	**245**	P		**P**	**17 12 40.7**	**-0.2**		
STKA	**Stephens Creek**	**40.93**	**245**	P		**P**	**17 12 40.5**	**-0.3**		
	comp=Z,5.0nm,0.8s,baz=73,slow=10,SNR=8.6									
STKA				LR		LR	17 28 48.0			
	comp=Z,87nm,19.1s,baz=34,slow=35									
	comp=Z,5.0nm,0.8s									
BBOO	**Buckleboo**	**45.66**	**244**	P		**P**	**17 13 18.0**	**-1.1**		
BBOO				IAmb		IAmb	17 15 01.2			
	comp=Z,46nm,1.8s									
WR0	**Warramunga Arr**	**47.98**	**262**	P		**P**	**17 13 36.2**	**-1.2**		
WR0				IAmb		IAmb	17 14 20.9			
	comp=Z,33nm,1.9s									
AS31	**Alice Springs**	**47.99**	**257**			**P**	**17 13 36.5**	**-0.9**		
ASAR	**Alice Springs**	**47.99**	**257**			**P**	**17 13 36.6**	**-0.8**		
ASAR	**Alice Springs**	**47.99**	**257**	P		**P**	**17 13 37.0**	**-0.5**		
	comp=Z,7.5nm,0.9s,baz=90,slow=8.4,SNR=58									
ASAR				PcP		**PcP**	**17 15 06.5**	**+1.0**		
	comp=Z,0.7nm,0.7s,baz=100,slow=5.5,SNR=1.2									
	comp=Z,7.5nm,0.9s									
WB0	**Warramunga Arr**	**48.15**	**262**	P		**P**	**17 13 36.9**	**-1.8**		
WB0				IAmb		IAmb	17 13 49.1			
	comp=Z,23nm,1.6s									
WB0				PcP		**PcP**	**17 15 07.2**	**+1.1**		
WB2	**Warramunga Arr**	**48.16**	**262**	P		**P**	**17 13 37.3**	**-1.4**		
WB2				IAmb		IAmb	17 13 58.9			
	comp=Z,46nm,1.9s									
WRA	**Warramunga Arr**	**48.17**	**262**	P		**P**	**17 13 37.3**	**-1.5**		
WRA				PcP		**PcP**	**17 15 07.3**	**+1.2**		
WRA	**Warramunga Arr**	**48.17**	**262**	P		**P**	**17 13 37.9**	**-1.0**		
	comp=Z,2.7nm,0.7s,baz=100,slow=8.1,SNR=20									
WRA				PcP		**PcP**	**17 15 07.0**	**+0.9**		
	comp=Z,0.9nm,0.7s,baz=104,slow=3.5,SNR=2.4									
	comp=Z,2.7nm,0.7s									
FORT	**Forrest**	**52.50**	**247**	P		**P**	**17 14 11.2**	**-0.3**		
FORT				IAmb		IAmb	17 14 23.5			
	comp=Z,27nm,0.9s									
MTN	**Manton Dam**	**52.82**	**269**	P		**P**	**17 14 13.0**	**-1.0**		
MTN				IAmb		IAmb	17 14 54.4			
	comp=Z,25nm,1.4s									
GUMO	**Guam**	**52.91**	**307**	LR		LR	17 33 45.5			
	comp=Z,34nm,20.8s,baz=74,slow=33									
FITZ	**Fitzroy Crossi**	**56.60**	**262**	P		**P**	**17 14 41.4**	**0.0**		
SOEI	**Soe**	**60.16**	**271**	P		**P**	**17 15 06.7**	**+0.2**		
TNTI	**Ternate**	**61.10**	**283**	P		**P**	**17 15 12.2**	**-0.5**		
PSA00	**Pilbara Seismi**	**61.14**	**256**	P		**P**	**17 15 12.0**	**-1.0**		
MBWA	**Marble Bar**	**61.33**	**257**	P		**P**	**17 15 13.5**	**-0.8**		
QSPA	**South Pole Qui**	**69.19**	**180**	P		**P**	**17 16 05.5**	**+0.8**		
QSPA				IAmb		IAmb	17 16 07.0			
	comp=Z,11nm,0.9s									
QSPA	**South Pole Qui**	**69.19**	**180**	P		**P**	**17 16 05.1**	**+0.5**		
	comp=Z,7.8nm,0.8s,baz=55,slow=1.6,SNR=28									
	comp=Z,7.8nm,0.8s									
KIWB	**Kanaga Island**	**72.47**	**358**	P		**P**	**17 16 24.4**	**+0.1**		
MJAR	**Matsushiro Arr**	**72.73**	**321**	P		**P**	**17 16 25.9**	**-0.4**		
	comp=Z,3.0nm,0.8s,baz=164,slow=5.5,SNR=6.9									
MJAR				LR		LR	17 43 31.6			
	comp=Z,27nm,21.8s,baz=132,slow=32									
	comp=Z,3.0nm,0.8s									
JOW	**Kunigami**	**73.25**	**308**	LR		LR	17 41 55.0			
	comp=Z,41nm,22.0s,baz=295,slow=30									
JNU	**Nakatsue**	**75.10**	**315**	LR		LR	17 44 50.4			
	comp=Z,21nm,20.6s,baz=132,slow=32									
ASAJ	**Asahikawa**	**75.86**	**329**	LR		LR	17 41 36.8			
	comp=Z,56nm,21.6s,baz=144,slow=29									
LPIG	**La Paz**	**76.49**	**57**	LR		LR	17 43 53.4			
	comp=Z,125nm,19.4s,baz=218,slow=31									
LEM	**Lembang**	**76.68**	**268**	LR		LR	17 50 02.5			
	comp=Z,40nm,20.2s,baz=190,slow=35									
TPUB	**Ta-pu**	**77.28**	**301**	P		**P**	**17 16 52.7**	**-0.2**		
PEA0B	**Petropavlovsk-**	**77.63**	**343**	P		**P**	**17 16 55.1**	**+1.0**		
PETK	**Petropavlovsk-**	**77.63**	**343**	P		**P**	**17 16 54.5**	**+0.3**		
PETK	**Petropavlovsk-**	**77.63**	**343**	P		**P**	**17 16 54.1**	**0.0**		
	comp=Z,4.4nm,0.7s,baz=129,slow=7.4,SNR=7.3									
PETK				LR		LR	17 44 02.5			
	comp=Z,34nm,20.9s,baz=149,slow=30									
	comp=Z,4.4nm,0.7s									
MDPB	**Devils Postpil**	**77.86**	**42**	P		**P**	**17 16 55.2**	**-1.0**		
WAKR	**Walker**	**78.19**	**41**	P		**P**	**17 16 57.9**	**+0.1**		
WAKR				IAmb		IAmb	17 17 00.3			
	comp=Z,25nm,1.7s									
DSP	**Deep Springs**	**78.40**	**42**	P		**P**	**17 16 57.6**	**-1.1**		
DSP				IAmb		IAmb	17 17 01.4			
	comp=Z,22nm,1.8s									
GRAC	**Grapevine Rang**	**78.55**	**43**	P		**P**	**17 16 58.9**	**-0.9**		
GRAC				IAmb		IAmb	17 17 02.3			
	comp=Z,39nm,1.7s									
LHV	**Little Huntoon**	**78.60**	**42**	P		**P**	**17 16 58.7**	**-1.1**		
BELA	**Belgrano 2**	**78.69**	**172**	P		**P**	**17 17 00.6**	**+0.7**		
BELA				IAmb		IAmb	17 17 22.7			
	comp=Z,25nm,1.6s									
GMN	**Gold Mountain**	**78.81**	**43**	P		**P**	**17 16 60.0**	**-1.4**		
RYN	**Ryan**	**78.82**	**41**	P		**P**	**17 17 00.1**	**-1.2**		
RYN				IAmb		IAmb	17 17 02.8			
	comp=Z,24nm,1.8s									
NVAR	**Mina Array Bea**	**78.84**	**41**	P		**P**	**17 17 00.6**	**-0.8**		
NVAR	**Mina Array Bea**	**78.84**	**41**	P		**P**	**17 17 01.2**	**-0.3**		
	comp=Z,2.0nm,0.6s,baz=222,slow=8.7,SNR=19									
	comp=Z,2.0nm,0.6s									
NV11	**Mina Array Sit**	**78.93**	**42**	P		**P**	**17 17 01.6**	**-0.3**		
TPH	**Tonopah**	**79.30**	**42**	P		**P**	**17 17 03.8**	**-0.2**		
KVN	**Kaiserville**	**79.34**	**41**	P		**P**	**17 17 03.4**	**-0.8**		
KSRS	**Korea Array**	**79.63**	**317**	LR		LR	17 46 01.7			
	comp=Z,23nm,21.9s,baz=115,slow=31									
K05A	**Summer Lake**	**80.02**	**37**	P		**P**	**17 17 06.9**	**-0.9**		
K05A				IAmb		IAmb	17 18 04.3			
	comp=Z,57nm,2.0s									
O16K	**Kokwok River B**	**81.25**	**8**	P		**P**	**17 17 12.8**	**-0.8**		
USRK	**Ussuriysk Ar.**	**81.38**	**324**	LR		LR	17 49 38.2			
	comp=Z,99nm,19.8s,baz=108,slow=33									
P18K	**Big Mountain,**	**81.47**	**10**	P		**P**	**17 17 14.3**	**-0.6**		
ILSW	**Iliamna Southw**	**82.37**	**10**	P		**P**	**17 17 20.1**	**+0.3**		
M16K	**Timber Creek**	**82.52**	**7**	P		**P**	**17 17 21.7**	**+1.4**		
H03S2	**Juan Fernandez**	**82.75**	**123**	T		T	18 48 37.0			
	baz=242,slow=74,SNR=6.2									
H03S1	**Juan Fernandez**	**82.76**	**123**	T		T	18 48 38.1			
	baz=242,slow=74,SNR=7.0									
H03S3	**Juan Fernandez**	**82.76**	**123**	T		T	18 48 36.9			
	baz=242,slow=74,SNR=5.9									
L16K	**Owhat River**	**83.13**	**7**	P		**P**	**17 17 23.5**	**0.0**		
BMO	**Blue Mountains**	**83.38**	**37**	P		**P**	**17 17 24.9**	**-0.5**		
BMO				IAmb		IAmb	17 17 28.3			
	comp=Z,22nm,2.0s									
K15K	**Wolf Creek Mou**	**83.49**	**6**	P		**P**	**17 17 26.1**	**+0.8**		
TMUT	**Trail Mountain**	**83.84**	**44**	P		**P**	**17 17 27.8**	**-0.3**		
VHRN	**Van Horn**	**83.89**	**54**	P		**P**	**17 17 28.0**	**-0.4**		
VHRN				IAmb		IAmb	17 19 37.9			
	comp=Z,12nm,1.7s									
L18K	**Granite Mounta**	**83.97**	**8**	P		**P**	**17 17 28.6**	**+0.8**		
M19K	**Big River Lodg**	**83.99**	**9**	P		**P**	**17 17 27.8**	**-0.2**		
F10A	**Beach Ranch, E**	**84.11**	**36**	P		**P**	**17 17 28.9**	**-0.2**		
F10A				IAmb		IAmb	17 17 29.9			
	comp=Z,11nm,1.0s									
SUA	**Susitna One**	**84.17**	**11**	P		**P**	**17 17 27.0**	**-2.1**		
SUA				IAmb		IAmb	17 20 37.4			
	comp=Z,15nm,1.4s									
SRU	**San Rafael Swe**	**84.19**	**44**	P		**P**	**17 17 28.7**	**-1.1**		
SRU				IAmb		IAmb	17 17 31.1			
	comp=Z,21nm,1.9s									
TXAR	**Lajitas Array**	**84.21**	**56**	P		**P**	**17 17 28.7**	**-1.3**		
	comp=Z,1.0nm,0.8s,baz=212,slow=3.2,SNR=5.0									
TXAR				LR		LR	17 48 28.9			
	comp=Z,52nm,19.1s,baz=262,slow=31									
	comp=Z,1.0nm,0.8s									
HVU	**Hansel Valley**	**84.23**	**41**	P		**P**	**17 17 29.5**	**-0.4**		
PLID	**Pearl Lake**	**84.26**	**37**	P		**P**	**17 17 29.5**	**-0.5**		
PLID				IAmb		IAmb	17 17 31.7			
	comp=Z,17nm,1.9s									
HLID	**Hailey**	**84.27**	**39**	P		**P**	**17 17 29.3**	**-0.7**		
J16K	**Anvik River**	**84.55**	**6**	P		**P**	**17 17 31.8**	**+1.1**		
TTA	**Tatalina**	**84.74**	**8**	P		**P**	**17 17 32.1**	**+0.3**		
TTA				IAmb		IAmb	17 19 37.2			
	comp=Z,20nm,1.7s									
KLR	**Kul'dur**	**84.75**	**328**	LR		LR	17 50 56.5			
	comp=Z,48nm,19.8s,baz=136,slow=33									
GHO	**Glory Hole Cre**	**84.80**	**12**	P		**P**	**17 17 31.6**	**-0.5**		
GHO				IAmb		IAmb	17 18 33.4			
	comp=Z,5.2nm,0.6s

BMRD	**Maredsous**	**150.62**	**1**	*d*PKiKP	**PKiKP**	**17 24 51.1**	**+0.5**
TREC	**Trest**	**150.63**	**347**	*e*PKP	**PKiKP**	**17 24 51.1**	**+0.4**
KRUC	**Moravsky**	**150.65**	**346**	*e*PKP	**PKiKP**	**17 24 50.4**	**-0.3**
ZVC	**Zvikov**	**150.75**	**349**	*e*PKP	**PKiKP**	**17 24 51.3**	**+0.4**
DOU	**Dourbes**	**150.83**	**2**	*d*PKiKP	**PKiKP**	**17 24 50.7**	**-0.3**
MODS	**Modra-Piesok**	**151.08**	**344**	*e*PKP	**PKiKP**	**17 24 53.3**	**+1.7**
KHC	**Kasperske Hory**	**151.15**	**350**	*e*PKP	**PKiKP**	**17 24 52.1**	**+0.3**
CKRC	**Cesky Krumlov**	**151.32**	**348**	*e*PKP	**PKPbc**	**17 24 51.4**	**-0.2**
GERES	**GERESS Array B**	**151.41**	**349**	PKPbc	**PKiKP**	**17 24 52.6**	**+0.2**
	comp=Z,3.0nm,0.9s,baz=12,slow=5.0,SNR=7.8						
CONA	**Conrad Observa**	**151.84**	**346**	*e*PKiKP	**PKiKP**	**17 24 53.7**	**+0.4**
	comp=Z,7.4nm,1.0s						
RONA	**Rosalia, Austr**	**151.95**	**345**	*e*PKiKP	**PKiKP**	**17 24 53.9**	**+0.4**
	comp=Z,4.6nm,0.6s						
SOKA	**Soboth**	**153.21**	**346**	*i* PKiKP	**PKiKP**	**17 24 57.7**	**+1.5**
	comp=Z,0.2nm,0.1s						
MOTA	**Moosalm**	**153.26**	**352**	*e*PKiKP	**PKiKP**	**17 24 57.0**	**+0.7**
	comp=Z,1.6nm,0.6s						
WTTA	**Wattenberg**	**153.27**	**351**	*e*PKiKP	**PKiKP**	**17 24 57.2**	**+0.8**
	comp=Z,4.4nm,0.5s						
SQTA	**Sankt Quirin**	**153.37**	**352**	*e*PKiKP	**PKiKP**	**17 24 56.9**	**+0.4**
	comp=Z,0.6nm,0.2s						
ABTA	**Abfaltersbach**	**153.64**	**350**	*i* PKiKP	**PKiKP**	**17 24 57.2**	**+0.1**
	comp=Z,2.6nm,0.6s						
ESDC	**Sonseca Array**	**159.44**	**22**	PKPab	**PKPab**	**17 25 35.6**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=328,slow=4.6,SNR=4.0						

PRE ***20*** *17:22:59.4±0.7, 26.30°S×27.72°E, h2km, ML2.8*
IDC ***20*** *17:23:01.8±3.9, 26.23°S×27.64°E, h0km, mb3.8/2, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=92.6km s-min=18.3km az=116.0*
NEIC ***20*** *17:23:01.3±1.6, 26.33°S±0.05°×27.82°E±0.06°, h5km±1km, mb4.5/3, Error ellipse: s-maj=10.4km s-min=6.5km az=40.0*
EAF ***20*** *17:23:04.2±1.4, 26.36°S×27.77°E, h10km, MD3.7*
BUL ***20*** *17:23:04.2±1.4, 26.36°S×27.77°E, h10km, MD4.0*

ISC 20 17:22:59.8±1.2, 26.31°S±0.02°×27.76°E±0.03°, h1km±9km, n50, σ2s22/89, mb4.2/5, 4D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**0.42**	**351**	*eP*	**Pg**	**17 23 07.3**	**-0.6**
HRAO				*eS*	**Sg**	**17 23 12.6**	**-0.8**
HRAO				IAML		17 23 18.5	
	comp=Z,873nm,0.8s						
PRYS	**Parys**	**0.71**	**210**	*eP*	**Pg**	**17 23 13.1**	**-0.3**
PRYS				*eS*	**Sg**	**17 23 23.5**	**+0.8**
PRYS				IAML		17 23 33.8	
	comp=Z,288nm,0.7s						
KSR	**Koster**	**0.90**	**300**	*eP*	**Pg**	**17 23 16.0**	**-1.1**
KSR				*eS*	**Sg**	**17 23 27.9**	**-0.9**
KSR				IAML		17 23 38.0	
	comp=Z,741nm,0.2s						
SNKL	**Senekal, Frees**	**1.96**	**180**	*eP*	**Pn**	**17 23 35.2**	**+0.9**
SNKL				*eS*	**Sb**	**17 24 00.1**	**-1.2**
SNKL				IAML		17 24 08.8	
	comp=Z,297nm,0.4s						
CRLN	**Carolina, Mapu**	**2.06**	**82**	*eP*	**Pn**	**17 23 36.4**	**+0.7**
CRLN				*eS*	**Sb**	**17 24 03.4**	**-0.8**
CRLN				IAML		17 24 05.7	
	comp=Z,96nm,0.6s						
SWZ	**Schweizer**	**2.34**	**248**	*eP*	**Pn**	**17 23 39.2**	**-0.4**
SWZ				*eS*	**Sn**	**17 24 08.2**	**-0.9**
SWZ				IAML		17 24 15.4	
	comp=Z,141nm,0.2s						
LBTB	**Lobatse**	**2.34**	**303**		**Pb**	**17 23 43.0**	**+0.1**
LBTB				Sn	**Sn**	**17 24 10.5**	**+1.5**
LBTB	**Lobatse**	**2.34**	**303**	*i* P	**Pb**	**17 23 43.0**	**+0.1**
LBTB				*i* S	**Sn**	**17 24 11.4**	**+2.3**
LBTB	**Lobatse**	**2.34**	**303**	*eP*	**Pn**	**17 23 39.1**	**-0.5**
LBTB				*eS*	**Sn**	**17 24 08.5**	**-0.5**
LBTB				IAML		17 24 14.4	
	comp=Z,212nm,0.7s						
LBTB	**Lobatse**	**2.34**	**303**	*i* P	**Pb**	**17 23 43.0**	**+0.1**
LBTB				*i* S	**Sn**	**17 24 11.4**	**+2.3**
NWCL	**Newcastle**	**2.37**	**127**	*eP*	**Pn**	**17 23 40.8**	**+0.8**
NWCL				*eS*	**Sb**	**17 24 10.9**	**-2.3**
NWCL				IAML		17 24 20.5	
	comp=Z,89nm,0.4s						
PILG	**Pilgrimsrest,**	**2.99**	**63**	*eP*	**Pn**	**17 23 49.9**	**+1.3**
PILG				*eS*	**Sn**	**17 24 25.9**	**+0.6**
PILG				IAML		17 24 36.9	
	comp=Z,64nm,0.7s						
BOSA	**Boshof**	**3.20**	**224**		**Pn**	**17 23 53.5**	**+2.2**
BOSA				Pg	**Pb**	**17 24 00.6**	**+3.1**
BOSA				Sn	**Sn**	**17 24 30.7**	**+0.5**
BOSA	**Boshof**	**3.20**	**224**	*i* P	**Pn**	**17 23 54.1**	**+2.7**
BOSA				*i* S	**Sn**	**17 24 30.6**	**+0.5**
BOSA	**Boshof**	**3.20**	**224**	*eP*	**Pn**	**17 23 51.6**	**+0.3**
BOSA				*eS*	**Sn**	**17 24 29.3**	**-0.9**
BOSA				IAML		17 24 48.0	
	comp=Z,56nm,0.4s						
BOSA	**Boshof**	**3.20**	**224**	Pn	**Pn**	**17 23 53.5**	**+2.2**
	comp=Z,8.4nm,0.3s,baz=43,slow=13,SNR=336						
BOSA				Pg	**Pb**	**17 24 00.5**	**+3.1**
	comp=Z,9.8nm,0.3s,baz=46,slow=17,SNR=16						
BOSA				Sn	**Sn**	**17 24 30.0**	**-0.2**
	comp=Z,6.5nm,0.3s,baz=184,slow=10.0,SNR=5.4						
BOSA				Lg	Lg	17 24 42.4	
	comp=Z,13nm,0.3s,baz=135,slow=21,SNR=12						
	comp=Z,20nm,0.3s						
BOSA	**Boshof**	**3.20**	**224**	*i* P	**Pn**	**17 23 54.1**	**+2.7**
BOSA				*i* S	**Sn**	**17 24 30.6**	**+0.5**
POGA	**Pongola**	**3.67**	**107**	Pn	**Pn**	**17 23 58.7**	**+1.0**
POGA				Pg	**Pg**	**17 24 08.5**	**-1.6**
POGA				Sn	**Sn**	**17 24 40.1**	**-1.6**
POGA	**Pongola**	**3.67**	**107**	*eP*	**Pn**	**17 23 58.1**	**+0.4**
POGA				*eS*	**Sn**	**17 24 42.5**	**+0.7**
POGA				IAML		17 25 01.5	
	comp=Z,12nm,0.5s						
TEMBE	**Tembe Elephant**	**4.24**	**101**	*eP*	**Pn**	**17 24 05.7**	**+0.2**
TEMBE				*eS*	**Sn**	**17 24 54.9**	**-0.7**
MOPA	**Mopani**	**4.32**	**51**	⇓*iP*	**Pn**	**17 24 09.5**	**+2.9**
MOPA	**Mopani**	**4.32**	**51**	⇓*iP*	**Pn**	**17 24 09.5**	**+2.9**
MUSN	**Musina, Limpop**	**4.44**	**26**	⇓*iP*	**Pn**	**17 24 12.3**	**+4.0**
MUSN				*i* S	**Sn**	**17 25 01.3**	**+0.6**
MUSN	**Musina, Limpop**	**4.44**	**26**	*eP*	**Pn**	**17 24 08.5**	**+0.1**
MUSN				*eS*	**Sn**	**17 24 59.4**	**-1.3**
MUSN				IAML		17 25 20.2	
	comp=Z,30nm,0.4s						
MUSN	**Musina, Limpop**	**4.44**	**26**	⇓*iP*	**Pn**	**17 24 12.3**	**+4.0**
MUSN				*i* S	**Sn**	**17 25 01.3**	**+0.6**
KSTD	**Kokstad**	**4.50**	**163**	*eP*	**Pn**	**17 24 09.8**	**+0.5**
KSTD				*eS*	**Sn**	**17 25 00.8**	**-1.7**
KSTD				IAML		17 25 26.7	
	comp=Z,20nm,0.3s						
UPI	**Upington**	**6.14**	**249**	*eP*	**Pn**	**17 24 31.7**	**0.0**
UPI				*eS*	**Sn**	**17 25 39.2**	**-3.5**
UPI				IAML		17 26 14.2	
	comp=Z,21nm,0.4s						
BLWY	**Bulawayo**	**6.19**	**7**	*i* P	**Pn**	**17 24 33.4**	**+0.8**
BLWY				*i* S	**Sn**	**17 25 42.9**	**-1.2**
BLWY	**Bulawayo**	**6.19**	**7**	*i* P	**Pn**	**17 24 33.4**	**+0.8**
BLWY				*i* S	**Sn**	**17 25 42.9**	**-1.2**
BFON	**Badsfontein, M**	**6.53**	**212**	*eP*	**Pn**	**17 24 37.2**	**+0.1**
BFON				*eS*	**Sn**	**17 25 48.8**	**-3.6**
BFON				IAML		17 26 38.3	
	comp=Z,17nm,0.4s						
GRAF	**Camdeboo Natio**	**6.60**	**205**	*eP*	**Pn**	**17 24 38.4**	**+0.4**
GRAF				*eS*	**Sn**	**17 25 51.4**	**-2.5**
GRAF				IAML		17 26 43.0	
	comp=Z,12nm,0.5s						
BRAK	**Brakfontein**	**6.92**	**217**	*eP*	**Pn**	**17 24 42.9**	**+0.5**
BRAK				*eS*	**Sn**	**17 25 58.6**	**-3.3**
BRAK				IAML		17 26 45.2	
	comp=Z,11nm,0.7s						
GRHM	**Grahamstown, E**	**7.05**	**190**	Pn	**Pn**	**17 24 45.2**	**+1.1**
GRHM	**Grahamstown, E**	**7.05**	**190**	*eP*	**Pn**	**17 24 44.5**	**+0.4**
GRHM				*eS*	**Sn**	**17 26 01.7**	**-3.2**
GRHM				IAML		17 26 20.0	
	comp=Z,4.1nm,0.3s						
ROOI	**Rooidraai Farm**	**7.17**	**210**	*eP*	**Pn**	**17 24 46.6**	**+0.7**
ROOI				*eS*	**Sn**	**17 26 05.1**	**-3.1**
ROOI				IAML		17 26 43.3	
	comp=Z,4.3nm,0.4s						
FRAZ	**Fraserburg**	**7.89**	**223**	*eP*	**Pn**	**17 24 56.2**	**+0.4**
FRAZ				*eS*	**Sn**	**17 26 22.2**	**-3.6**
FRAZ				IAML		17 26 37.5	
	comp=Z,5.2nm,0.6s						
MERW	**Merweville**	**8.35**	**219**	*eP*	**Pn**	**17 25 03.0**	**+0.9**
MERW				*eS*	**Sn**	**17 26 32.7**	**-4.4**
MERW				IAML		17 26 53.0	
	comp=Z,6.1nm,0.5s						
SUR	**Sutherland**	**8.56**	**223**	Pn	**Pn**	**17 25 05.5**	**+0.4**
SUR				Sn	**Sn**	**17 26 38.1**	**-4.4**
SUR	**Sutherland**	**8.56**	**223**	*i* P	**Pn**	**17 25 06.4**	**+1.3**
SUR				*i* S	**Sn**	**17 26 34.7**	**-7.8**
SUR	**Sutherland**	**8.56**	**223**	*eP*	**Pn**	**17 25 05.5**	**+0.4**
SUR				*eS*	**Sn**	**17 26 37.1**	**-5.4**
SUR				IAML		17 26 54.4	
	comp=Z,5.1nm,0.5s						
SUR	**Sutherland**	**8.56**	**223**	*i* P	**Pn**	**17 25 06.4**	**+1.3**
SUR				*i* S	**Sn**	**17 26 34.7**	**-7.8**
KRI	**Karoi**	**9.59**	**11**	*i* S	Sn	17 26 49.2	-19
KRI	**Karoi**	**9.59**	**11**	*i* S	Sn	17 26 49.2	-19
WIN	**Windhoek**	**10.40**	**289**	Pn	**Pn**	**17 25 31.6**	**+1.2**
LSZ	**Lusaka**	**10.99**	**2**	Pn	**Pn**	**17 25 38.2**	**-0.1**
TOA0	**Torodi Ar. Sit**	**46.70**	**324**	P	**P**	**17 31 30.4**	**-0.1**
TOA0				IAmb	IAmb	17 31 31.6	
	comp=Z,1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**46.70**	**324**	P	**P**	**17 31 31.4**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=135,slow=7.1,SNR=8.0						
	comp=Z,0.9nm,0.5s						
SNAA	**Sanae**	**48.50**	**192**	P	**P**	**17 31 43.5**	**-0.5**
SNAA				IAmb	IAmb	17 31 47.5	
	comp=Z,7.9nm,1.1s						
QSPA	**South Pole Qui**	**63.88**	**180**	P	**P**	**17 33 35.0**	**+1.0**
QSPA				IAmb	IAmb	17 34 04.4	
	comp=Z,4.8nm,1.2s						
ESDC	**Sonseca Array**	**72.01**	**335**	P	**P**	**17 34 26.7**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=157,slow=6.7,SNR=1.9						
	comp=Z,0.3nm,0.4s						

IDC ***20*** *17:28:31.8±4.5, 37.44°N×71.67°E, h81km±28km, mb3.4/6, mbtmp3.8/12, MS2.5/1, Error ellipse: s-maj=57.2km s-min=19.6km az=164.0*
NNC ***20*** *17:28:35.1±7.1, 38.07°N×71.56°E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=55.9km s-min=37.5km az=179.0*

ISC 20 17:28:35.6±1.3, 37.7°N±0.1°×71.44°E±0.07°, h109km, n23, σ1s68/28, mb3.4/6, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.06**	**27**	P	**Pn**	**17 29 49.5**	**-0.1**
	SNR=8.3						
EKS2	**Erkin-Say**	**5.23**	**19**	P	**Pn**	**17 29 52.2**	**+0.6**
	SNR=10.0						
KK31	**Karatay Array**	**5.40**	**353**	⇑P	**Pn**	**17 29 55.1**	**+1.3**
	2.4nm,0.4s,baz=52,slow=12,SNR=36						
KK31				⇑S	**Sn**	**17 30 54.6**	**-0.1**
	12nm,0.6s,baz=158,slow=20,SNR=12						
AAK	**Ala-Archa**	**5.42**	**25**	P	**Pn**	**17 29 55.4**	**+1.2**
	SNR=6.8						
AAK	**Ala-Archa**	**5.42**	**25**	P	**Pn**	**17 29 54.9**	**+0.7**
	6.4nm,0.4s,baz=212,slow=13,SNR=31						
AAK				S	**Sn**	**17 30 54.3**	**-1.0**
	3.6nm,0.4s,baz=156,slow=22,SNR=8.5						
AAK				LR	LR	17 32 02.7	
	comp=Z,51nm,21.3s,baz=18,slow=38						
CHMS	**Chumysh**	**5.83**	**25**	P	**Pn**	**17 30 00.2**	**+0.6**
	SNR=5.8						
USP	**Ospenovka**	**5.99**	**22**	P	**Pn**	**17 30 01.6**	**-0.2**
	SNR=7.2						
TKM2	**Tokmak 2**	**6.07**	**30**	P	**Pn**	**17 30 02.6**	**-0.5**
	SNR=12						
TKM2	**Tokmak 2**	**6.07**	**30**	⇓P	**Pn**	**17 30 02.3**	**-0.7**
	4.3nm,0.6s						
TKM2				⇓S	**Sn**	**17 31 08.0**	**-3.2**
	4.9nm,0.8s						
GEYT	**Alibeck**	**10.54**	**275**	P	**Pn**	**17 31 01.4**	**-2.2**
	6.4nm,0.4s,baz=108,slow=12,SNR=25						
GEYT				S	**Sn**	**17 32 55.0**	**-4.5**
	2.8nm,0.4s,baz=82,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**12.09**	**38**	P	**Pn**	**17 31 22.7**	**-1.5**
	1.3nm,0.5s,baz=224,slow=15,SNR=25						
KURBB	**Kurchatov Arra**	**13.83**	**19**	P	Pn	17 31 43.3	-3.6
	0.3nm,0.7s,baz=211,slow=11,SNR=3.5						
AB31	**Akbulak array**	**14.19**	**328**	P	**Pn**	**17 31 50.2**	**-1.2**
	0.4nm,0.3s,baz=134,slow=13,SNR=27						
AB31				⇑S	**Sn**	**17 34 27.4**	**-0.3**
	1.0nm,0.6s,baz=154,slow=23,SNR=4.9						
BVAR	**Borovoye Array**	**15.30**	**358**	P	**Pn**	**17 32 06.0**	**+0.5**
	1.0nm,0.5s,baz=163,slow=10,SNR=9.7						
AKTO	**Aktyubinsk**	**15.90**	**327**	⇑P	**Pn**	**17 32 15.3**	**+2.3**
	4.4nm,1.0s						
AKTO				⇑S	**Sn**	**17 35 09.5**	**+0.5**
	0.8nm,0.7s						
AKTO	**Aktyubinsk**	**15.90**	**327**	P	**Pn**	**17 32 14.0**	**+1.0**
	4.3nm,0.8s,baz=131,slow=9.1,SNR=13						
ZALV	**Zalesovo Beam**	**18.64**	**25**	P	**P**	**17 32 43.9**	**-0.7**
	1.9nm,0.4s,baz=211,slow=11,SNR=20						
KBZ	**Khabaz**	**22.37**	**294**	P	**P**	**17 33 25.8**	**+1.2**
	0.8nm,0.8s,baz=68,slow=11,SNR=2.2						
	0.8nm,0.8s						
SONM	**Songino Array**	**27.36**	**57**	P	**P**	**17 34 09.3**	**-1.2**
	0.4nm,0.3s,baz=259,slow=3.7,SNR=1.9						
	0.4nm,0.3s						
BRTR	**Keskin Array B**	**29.41**	**286**	P	**P**	**17 34 31.5**	**+2.6**
	0.2nm,0.3s,baz=102,slow=8.4,SNR=1.9						
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**40.13**	**337**	P	**P**	**17 36 02.5**	**+2.1**
	2.0nm,1.1s,baz=113,slow=8.9,SNR=5.2						
	2.0nm,1.1s						
HFS	**Hagfors**	**42.31**	**321**	P	**P**	**17 36 20.1**	**+1.8**
	3.2nm,1.1s,baz=97,slow=12,SNR=4.8						
	3.2nm,1.1s						
YKA	**Yellowknife Ar**	**79.99**	**3**	P	**P**	**17 40 32.8**	**+0.4**
	0.3nm,0.6s,baz=348,slow=5.4,SNR=5.1						
	0.3nm,0.6s						

IDC 20 17:32:51.6±3.1, 3.36°S×136.45°E, h0km, mb3.2/2, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=118.6km s-min=33.8km az=80.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.61**	**187**	Pn	Pn	17 36 47.0	+0.9
	0.2nm,0.3s,baz=8.6,slow=12,SNR=5.1						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**20.34**	**187**	P	P	17 37 29.1	-0.5
	0.5nm,0.4s,baz=16,slow=11,SNR=4.2						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**68.94**	**323**	P	P	17 43 58.7	+0.1
	0.1nm,0.5s,baz=114,slow=7.5,SNR=1.7						
	0.1nm,0.5s						

KRSC ***20*** *17:52:22.9±2.0, 55.29°N×166.52°E, h39km±12km, Ml4.1*
IDC ***20*** *17:52:24.4±1.4, 55.72°N×166.22°E, h0km, mb3.5/8, mbtmp3.5/9, ML3.2/1, MS3.2/1, Error ellipse: s-maj=40.9km s-min=19.5km az=159.0*

ISC 20 17:52:26.2±1.0, 55.36°N±0.06°×166.46°E±0.07°, h20km, n52, σ1s27/73, mb3.5/8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.32**	**242**	*eP*	**Pb**	**17 52 31.9**	**-1.2**
BKI				*eS*	**Sb**	**17 52 37.6**	**-0.3**
KBG	**Krutoberegovo**	**2.30**	**295**	*eS*	**Sn**	**17 53 27.3**	**-3.3**
SMKR	**Semkarok**	**3.06**	**296**	*eP*	**Pn**	**17 53 12.4**	**-1.1**
SMKR				*eS*	**Sn**	**17 53 48.6**	**-0.9**
BDR	**Baidarnaya**	**3.19**	**295**	*eP*	**Pn**	**17 53 14.5**	**-0.7**
BDR				*eS*	**Sn**	**17 53 53.0**	**+0.3**
SRKR	**Sorokina**	**3.24**	**296**	*eS*	**Sn**	**17 53 55.0**	**+1.0**
ZLN	**Zelenaya**	**3.27**	**284**	*eP*	**Pn**	**17 53 16.9**	**+0.6**
ZLN				*eS*	**Sn**	**17 53 57.0**	**+2.4**
BZGR	**Bezymyannyi-Gr**	**3.32**	**283**	*eP*	**Pn**	**17 53 17.5**	**+0.5**
BZGR				*eS*	**Sn**	**17 53 58.3**	**+2.5**
BZP	**Bezymyannyi-Pe**	**3.40**	**282**	*eS*	**Sn**	**17 53 57.4**	**-0.6**
KLY	**Klyuchi**	**3.41**	**289**	*eP*	**Pn**	**17 53 16.0**	**-2.1**
KLY				*eS*	**Sn**	**17 53 55.2**	**-2.8**
BZMR	**Bezymyannaya**	**3.43**	**282**	*eP*	**Pn**	**17 53 19.3**	**+0.7**
BZMR				*eS*	**Sn**	**17 54 00.5**	**+1.7**
BZWR	**Bezymyannyi-We**	**3.43**	**283**	*eP*	**Pn**	**17 53 18.5**	**-0.1**
BZWR				*eS*	**Sn**	**17 53 59.6**	**+0.9**
KRSR	**Krestovskiy**	**3.44**	**287**	*eP*	**Pn**	**17 53 17.7**	**-1.0**
KRSR				*eS*	**Sn**	**17 53 57.8**	**-1.0**
TUMD	**Tumrok D**	**3.47**	**270**	*eP*	**Pn**	**17 53 19.1**	**+0.1**
TUMD				*eS*	**Sn**	**17 54 00.0**	**+0.6**
KIRR	**Kirishev**	**3.52**	**282**	*eP*	**Pn**	**17 53 19.7**	**0.0**
KIRR				*eS*	**Sn**	**17 54 01.6**	**+0.7**
KMNR	**Kamenistaya**	**3.56**	**279**	*eP*	**Pn**	**17 53 21.0**	**+0.7**
KMNR				*eS*	**Sn**	**17 54 04.3**	**+2.5**
KPT	**Kopyto**	**3.59**	**282**	*eP*	**Pn**	**17 53 20.5**	**-0.1**
TUMR	**Tumrok**	**3.61**	**271**	*eP*	**Pn**	**17 53 21.5**	**+0.5**
TUMR				*eS*	**Sn**	**17 54 05.2**	**+2.2**
KOZ	**Kozyrevsk**	**3.79**	**283**	*eP*	**Pn**	**17 53 24.1**	**+0.7**
SRDR	**Sredinnyy**	**3.92**	**287**	*eP*	**Pn**	**17 53 25.4**	**+0.1**
KII	**Karymskiy**	**4.28**	**255**	*eP*	**Pn**	**17 53 30.5**	**+0.3**
KII				*eS*	**Sn**	**17 54 20.6**	**+1.1**
SPN	**Mys Shipunski**	**4.40**	**242**	*eP*	**Pn**	**17 53 30.6**	**-1.2**
SPN				*eS*	**Sn**	**17 54 19.7**	**-2.7**
ESO	**Esso**	**4.43**	**281**	*eP*	**Pn**	**17 53 33.2**	**+0.9**
NLC	**Nalytchevo**	**4.71**	**245**	*eS*	**Sn**	**17 54 28.1**	**-1.8**
SMAR	**Somma**	**4.95**	**248**	*eP*	**Pn**	**17 53 39.8**	**+0.3**
SMAR				*eS*	**Sn**	**17 54 36.2**	**0.0**
UGLR	**Uglovaya**	**4.96**	**247**	*eP*	**Pn**	**17 53 40.0**	**+0.4**
UGLR				*eS*	**Sn**	**17 54 37.4**	**+1.0**
AVH	**Avacha**	**4.98**	**248**	*eP*	**Pn**	**17 53 40.7**	**+0.9**
AVH				*eS*	**Sn**	**17 54 37.8**	**+1.0**
KRX	**Arik**	**4.99**	**250**	*eP*	**Pn**	**17 53 40.3**	**+0.4**
KOK	**Koryaka**	**5.02**	**249**	*eP*	**Pn**	**17 53 41.0**	**+0.5**
KOK				*eS*	**Sn**	**17 54 38.4**	**+0.6**
DALK	**Dalny**	**5.09**	**246**	*eP*	**Pn**	**17 53 41.1**	**0.0**
DALK				*eS*	**Sn**	**17 54 37.7**	**-1.5**
PET	**Petropavlovsk**	**5.14**	**246**	*eS*	**Sn**	**17 54 39.1**	**-1.5**
INSR	**Institute**	**5.15**	**247**	*eS*	**Sn**	**17 54 39.9**	**-0.8**
GNL	**Ganaly**	**5.23**	**255**	*eP*	**Pn**	**17 53 44.1**	**+0.8**
KRMR	**Karymshinskiy**	**5.52**	**246**	*eP*	**Pn**	**17 53 47.1**	**+0.1**
KRMR				*eS*	**Sn**	**17 54 49.0**	**-0.8**
RUS	**Russkaya**	**5.54**	**241**	*eP*	**Pn**	**17 53 46.7**	**-0.6**
PETK	**Petropavlovsk-**	**5.61**	**250**	Pn	**Pn**	**17 53 48.1**	**-0.3**
	3.6nm,0.3s,baz=70,slow=16,SNR=28						
PETK				Sn	**Sn**	**17 54 53.7**	**+1.5**
	2.7nm,0.3s,baz=40,slow=2.5,SNR=10						
	7.6nm,0.3s						
MTVR	**Mutnovka**	**5.67**	**243**	*eP*	**Pn**	**17 53 49.6**	**+0.2**
MTVR				*eS*	**Sn**	**17 54 52.2**	**-1.7**
GRL	**Gorelyy**	**5.69**	**244**	*eP*	**Pn**	**17 53 50.2**	**+0.6**
GRL				*eS*	**Sn**	**17 54 54.3**	**-0.1**
ASAK	**Asacha**	**5.87**	**243**	*eP*	**Pn**	**17 53 52.8**	**+0.8**
ASAK				*eS*	**Sn**	**17 54 58.3**	**-0.5**
APC	**Apacha**	**5.98**	**250**	*eP*	**Pn**	**17 53 54.9**	**+1.4**
KDTR	**Khodutka, Kamc**	**6.13**	**238**	*eP*	**Pn**	**17 53 54.5**	**-0.9**
ILAR	**Eielson Array**	**24.54**	**49**	P	**P**	**17 57 43.4**	**-0.6**
	2.6nm,1.0s,baz=257,slow=8.7,SNR=15						
	2.6nm,1.0s						
JHJ	**Hachijo jima 2**	**29.00**	**231**	LR	LR	18 10 46.3	
	comp=Z,51nm,21.0s,baz=334,slow=38						
H11N2	**WAKE ISLAND Hy**	**35.57**	**179**	T	T	18 36 48.0	
	baz=359,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**35.58**	**179**	T	T	18 36 46.3	
	baz=359,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**35.59**	**179**	T	T	18 36 46.6	
	baz=359,slow=76,SNR=24						
SONM	**Songino Array**	**37.00**	**284**	P	**P**	**17 59 34.7**	**+0.5**
	0.5nm,0.7s,baz=62,slow=7.3,SNR=6.2						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**38.93**	**46**	P	**P**	**17 59 50.5**	**+0.5**
	0.1nm,0.4s,baz=300,slow=8.0,SNR=3.9						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**44.67**	**304**	P	**P**	**18 00 36.1**	**-0.9**
	0.2nm,0.3s,baz=48,slow=4.3,SNR=1.7						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**49.76**	**304**	P	**P**	**18 01 15.3**	**-1.5**
	0.5nm,0.7s,baz=53,slow=7.7,SNR=4.8						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**50.48**	**298**	P	**P**	**18 01 20.8**	**-1.5**
	0.2nm,0.6s,baz=53,slow=6.7,SNR=4.2						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**51.85**	**310**	P	**P**	**18 01 31.2**	**-1.2**
	0.6nm,0.6s,baz=53,slow=7.4,SNR=6.7						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**83.47**	**210**	P	**P**	**18 04 55.3**	**+3.2**
	0.3nm,0.7s,baz=12,slow=4.7,SNR=2.2						
	0.3nm,0.7s						

IDC ***20*** *

	comp=Z,65nm,0.3s,baz=243,slow=5.4,SNR=170							
SDV				S	Sn	17 56 45.3	-1.4	
	comp=Z,53nm,0.4s,baz=278,slow=21,SNR=13							
SDV	**Santo Domingo**	**3.18**	**50**	*eP*	**Pn**	**17 56 08.7**	**+0.8**	
SDV				*eS*	**Sn**	**17 56 45.2**	**-1.4**	
SDV				*i*		17 56 49.3		
	comp=Z,42nm,0.4s							
ARGC	**Ariguani, Magd**	**3.19**	**340**	*eP*	**Pn**	**17 56 10.1**	**+2.3**	
ARGC				*eS*	**Sn**	**17 56 48.0**	**+1.5**	
ARGC				*i*		17 56 55.3		
	comp=Z,63nm,0.3s							
ANIL	**Santa Ana**	**3.27**	**224**	*eP*	**Pn**	**17 56 10.5**	**+1.4**	
ANIL				*eS*	**Sn**	**17 56 50.0**	**+1.2**	
ANIL				*i*		17 56 57.9		
	comp=Z,389nm,0.4s							
PRAC	**Prado**	**3.58**	**210**	*eP*	**Pn**	**17 56 12.4**	**-0.4**	
PRAC				*eS*	**Sn**	**17 56 54.8**	**-0.9**	
PRAC				*i*		17 57 01.5		
	comp=Z,204nm,0.7s							
APAC	**Apartado, Choc**	**3.59**	**287**	*eP*	**Pn**	**17 56 13.0**	**+0.2**	
APAC				*eS*	**Sn**	**17 56 55.0**	**-0.7**	
APAC				*i*		17 57 06.2		
	comp=Z,68nm,0.4s							
ORTC	**Ortega, Tolima**	**3.61**	**216**	*eP*	**Pn**	**17 56 13.5**	**+0.3**	
ORTC				*eS*	**Sn**	**17 56 57.2**	**+0.9**	
ORTC				*i*		17 57 07.8		
	comp=Z,90nm,0.4s							
SJCC	**San Jacinto, C**	**3.65**	**326**	*eP*	**Pn**	**17 56 13.4**	**-0.2**	
SJCC				*eS*	**Sn**	**17 56 54.3**	**-2.9**	
SJCC				*i*		17 57 09.3		
	comp=Z,85nm,0.8s							
PLMC	**San Jos del P**	**3.70**	**239**	*eP*	**Pn**	**17 56 14.6**	**+0.3**	
PLMC				*eS*	**Sn**	**17 56 58.8**	**+0.5**	
PLMC				*i*		17 57 03.4		
	comp=Z,60nm,0.6s							
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*eP*	**Pn**	**17 56 19.5**	**-0.6**	
CRJC				*eS*	**Sn**	**17 57 07.3**	**-1.5**	
CRJC				*i*		17 57 10.1		
	comp=Z,76nm,0.2s							
YOTC	**Yotoco, Valle**	**4.30**	**229**	*eP*	**Pn**	**17 56 22.6**	**+0.4**	
YOTC				*i*		17 57 23.5		
	comp=Z,16nm,0.5s							
SMRC	**Santa Marta, M**	**4.42**	**346**	*eP*	**Pn**	**17 56 24.5**	**+0.9**	
SMRC				*eS*	**Sn**	**17 57 12.3**	**-2.8**	
SMRC				*i*		17 57 14.9		
	comp=Z,50nm,0.4s							
PTAC	**Punta Ardita,**	**4.67**	**274**	*eP*	**Pn**	**17 56 26.3**	**-0.6**	
BETC	**Betania**	**4.75**	**209**	*eP*	**Pn**	**17 56 27.3**	**-0.7**	
BETC				*i*		17 57 24.9		
	comp=Z,29nm,0.6s							
JAMC	**Jamundi, Valle**	**5.06**	**225**	*eP*	**Pn**	**17 56 32.5**	**+0.2**	
JAMC				*eS*	**Sn**	**17 57 30.1**	**-0.4**	
JAMC				*i*		17 57 53.3		
	comp=Z,11nm,0.5s							
GARC	**Garzon, Huila**	**5.21**	**207**	*eP*	**Pn**	**17 56 33.5**	**-0.8**	
GARC				*eS*	**Sn**	**17 57 30.5**	**-3.5**	
GARC				*i*		17 57 35.4		
	comp=Z,56nm,0.3s							
POPC	**Popayan, Colom**	**5.56**	**220**	*eP*	**Pn**	**17 56 38.8**	**-0.1**	
POPC				*i*		17 57 49.3		
	comp=Z,7.1nm,0.3s							
FLOC	**Florencia**	**5.81**	**206**	*eP*	**Pn**	**17 56 41.9**	**-0.2**	
FLOC				*eS*	**Sn**	**17 57 43.8**	**-4.4**	
FLOC				*i*		17 57 50.8		
	comp=Z,9.2nm,0.3s							
BBAC	**Balboa, Cauca**	**6.32**	**221**	*eP*	**Pn**	**17 56 50.4**	**+1.4**	
BBAC				*eS*	**Sn**	**17 57 57.1**	**-3.5**	
BBAC				*i*		17 58 07.9		
	comp=Z,6.6nm,0.3s							
CRUC	**La Cruz**	**6.50**	**216**	*eP*	**Pn**	**17 56 55.0**	**+3.6**	
PCRV	**Puerto La Cruz**	**9.01**	**68**	P	**Pn**	**17 57 24.7**	**0.0**	
	comp=Z,10nm,0.9s,baz=281,slow=5.2,SNR=1.2							
ULM	**Lac du Bonnet**	**47.26**	**340**	P	**P**	**18 03 35.3**	**+0.2**	
	comp=Z,1.4nm,0.5s,baz=154,slow=6.2,SNR=4.3							
	comp=Z,1.4nm,0.5s							
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**18 03 42.1**	**+0.4**	
	comp=Z,0.2nm,0.5s,baz=134,slow=7.8,SNR=2.4							
	comp=Z,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**18 05 29.7**	**+0.4**	
	comp=Z,0.7nm,0.7s,baz=123,slow=7.9,SNR=12							
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**76.94**	**335**	P	**P**	**18 06 52.5**	**-0.2**	
	comp=Z,0.1nm,0.5s,baz=92,slow=6.3,SNR=1.8							
	comp=Z,0.1nm,0.5s							
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**18 14 47.4**	**-1.3**	
	comp=Z,0.3nm,0.6s,baz=112,slow=3.0,SNR=1.7							
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**18 14 51.1**	**-0.5**	
	comp=Z,0.3nm,0.5s,baz=103,slow=3.0,SNR=2.1							

*UPP **20** 18:03:45.7±0.1,67.07N×20.91E,h0km,ML2.3,Suspected explosion*
*IDC **20** 18:03:46.9±1.3,67.10N×21.05E,h0km,mbtmp2.6/3, ML1.7/3,Error ellipse: s-maj=22.2km s-min=10.2km az=105.0*
*BER **20** 18:03:47.1±1.6,66.92N×21.19E,h0km,ML1.6,Suspected explosion*

ISC 20 18:03:45.4±0.9,**67.10N**±0.04×**21.02E**±0.04,**h0**km,**n22**, σ1°**03**/28,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.52**	**46**	P	**Pb**	**18 03 56.7**	**-0.8**
MASU				S	**Sb**	**18 04 04.5**	**-1.1**
PAJU	**Pajala**	**0.82**	**94**	P	**Pb**	**18 04 01.7**	**-0.9**
KUA	**Kurravaara**	**0.90**	**343**	P	**Pg**	**18 04 02.6**	**0.0**
RATU	**Laukkuluspa**	**0.91**	**324**	P	**Pg**	**18 04 02.7**	**-0.2**
SALU	**Saltoluokta**	**1.02**	**287**	P	**Pg**	**18 04 04.3**	**-0.6**
LANU	**Lannavaara**	**1.02**	**21**	P	**Pg**	**18 04 05.1**	**+0.1**
KALU	**Kalix**	**1.56**	**142**	P	**Pn**	**18 04 14.4**	**0.0**
SJUU	**Sjulsmark**	**1.62**	**171**	P	**Pn**	**18 04 15.2**	**0.0**
HEF	**Hetta**	**1.66**	**36**	*eP*	**Pb**	**18 04 16.3**	**-0.4**
KIF	**Kilpisjarvi**	**1.92**	**358**	*eP*	**Pb**	**18 04 21.2**	**0.0**
KIF				*eS*	**Sg**	**18 04 47.0**	**+0.1**
KTK1	**Kautokeino**	**2.09**	**22**	*eP*	**Pb**	**18 04 24.1**	**-0.1**
KTK1				*eS*	**Sb**	**18 04 51.5**	**+0.7**
KTK1				IAML		18 04 57.0	
	comp=Z,6.0nm,0.7s						
I37NO	**I37NO**	**2.18**	**337**	I	I	18 17 10.0	
	baz=156,slow=331,SNR=2.9						
FAUS	**Fauske**	**2.25**	**280**	*eP*	**Pn**	**18 04 25.1**	**+1.3**
STEI	**Steigen**	**2.37**	**293**	*eP*	**Pn**	**18 04 26.2**	**+0.7**
STEI				*eS*	**Sb**	**18 04 57.7**	**-1.0**
STEI				IAML		18 05 23.5	
	comp=Z,3.1nm,0.6s						
JETT	**Jettan, Norway**	**2.48**	**355**	*eP*	**Pb**	**18 04 29.0**	**-1.8**
JETT				IAML		18 05 06.8	
	comp=Z,17nm,0.3s						
ARA0	**ARCESS Array S**	**2.96**	**32**	*eP*	**Pn**	**18 04 34.9**	**+1.3**
ARA0				IAML		18 05 21.2	
	comp=Z,4.0nm,0.2s						
ARCES	**ARCESS Array B**	**2.96**	**32**	Pn	**Pn**	**18 04 34.8**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=210,slow=14,SNR=48						
ARCES				Sn	**Sb**	**18 05 13.3**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=219,slow=21,SNR=1.9						
	comp=Z,0.7nm,0.2s						
KONS	**Konsvik**	**3.19**	**263**	*eP*	**Pn**	**18 04 37.6**	**+1.0**
KEV	**Kevo**	**3.46**	**37**	*eP*	**Pn**	**18 04 41.4**	**+0.9**
KEV				*eS*	**Sn**	**18 05 22.8**	**+0.7**
VADS	**Vadso**	**4.30**	**41**	*eP*	**Pn**	**18 04 53.2**	**+1.2**
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**18 05 18.2**	**+1.7**
	baz=344,slow=12,SNR=6.7						
FINES				Sn	**Sn**	**18 06 27.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=2.2						
	comp=Z,0.6nm,0.8s						
NOA	**NORSAR Array B**	**7.44**	**220**	Pn	**Pn**	**18 05 35.7**	**+0.6**
	baz=38,slow=10,SNR=1.1						
	comp=Z,0.5nm,0.9s						

*IDC **20** 18:05:47.9±1.1,71.50N×10.72W,h0km,mb3.5/7, mbtmp3.6/11,ML3.4/4,MS3.4/12,Error ellipse: s-maj=30.0km s-min=12.8km az=39.0*
*NAO **20** 18:05:49.3±4.3,71.56N×10.73W,h6km±29km,ML4.1*
*BER **20** 18:05:50.2±4.1,71.35N×11.25W,h15km±35km,mb(Pn)4.2, ML4.1(NAO),Confirmed Earthquake*
*DNK **20** 18:05:52.8±5.8,71.32N×11.16W,h36km±154km,ML2.1*

ISC 20 18:05:48.1±0.6,**71.42N**±0.07×**11.32W**±0.05,**h10**km,**n48**, σ1°**88**/43,**mb3.3**/7,**MS3.5**/9,**1D**,**Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**0.97**	**119**	Pg	**Pg**	**18 06 06.9**	**+0.2**
JMI				Lg	Lg	18 06 19.8	
JMI	**Jan Mayen**	**0.97**	**119**	*iP*	**Pg**	**18 06 06.8**	**0.0**
JMI				*eS*	**Sb**	**18 06 19.4**	**-0.5**
JMI				IAML		18 06 21.6	
	comp=Z,419nm,0.2s						
JMIC	**Jan Mayen**	**1.01**	**114**	Pg	**Pg**	**18 06 06.8**	**-0.6**
JMIC				Lg	Lg	18 06 19.7	
JMIC	**Jan Mayen**	**1.01**	**114**	*eP*	**Pg**	**18 06 06.9**	**-0.6**
JMIC				*eS*	**Sg**	**18 06 19.6**	**-0.9**
JMIC				IAML		18 06 21.0	
	comp=Z,1μm,0.4s						
JMIC	**Jan Mayen**	**1.01**	**114**	Pn	**Pg**	**18 06 06.9**	**-0.6**
	comp=Z,61nm,0.3s,baz=174,slow=2.7,SNR=18						
JMIC				Sn	**Sg**	**18 06 20.1**	**-0.5**
	comp=Z,308nm,0.3s,baz=177,slow=23,SNR=46						
JMIC				LR	LR	18 06 31.5	
	comp=Z,650nm,19.0s,baz=338,slow=49						
JNE	**Jan Mayen East**	**1.07**	**112**	*eP*	**Pg**	**18 06 07.6**	**-1.0**
JNE				*eS*	**Sg**	**18 06 20.9**	**-1.5**
JNE				IAML		18 06 24.3	
	comp=Z,232nm,0.2s						
SCO	**Scoresbysund**	**3.61**	**260**	*e*	**Pn**	**18 06 42.4**	**-1.6**
	baz=62,slow=11						
SCO				*i* P	Pb	18 06 43.1	-8.8
SCO				*i* S	**Sn**	**18 07 21.8**	**-4.8**
SCO				IAML		18 07 23.9	
	comp=Z,9.8nm,0.4s						
SCO	**Scoresbysund**	**3.61**	**260**	*e*	**Pn**	**18 06 42.4**	**-1.6**
	baz=62,slow=11						
SCO				*i* P	Pb	18 06 43.1	-8.8
SCO				*i* S	**Sn**	**18 07 21.8**	**-4.8**
SCO				IAML		18 07 23.9	
	comp=Z,9.8nm,0.4s						
SOEG	**Soedalen**	**7.63**	**255**	*i* P	**Pn**	**18 07 42.8**	**+3.7**
SOEG	**Soedalen**	**7.63**	**255**	*i* P	**Pn**	**18 07 42.8**	**+3.7**
SUMG	**Summit**	**8.44**	**291**	*eP*	**Pn**	**18 07 52.0**	**+1.4**
SUMG				*eS*	Sn	18 09 20.2	-5.7
SUMG				IAML		18 09 26.6	
	comp=Z,5.5nm,0.4s						
SUMG	**Summit**	**8.44**	**291**	*eP*	**Pn**	**18 07 52.0**	**+1.4**
SUMG				*eS*	Sn	18 09 20.2	-5.7
SUMG				IAML		18 09 26.6	
	comp=Z,5.5nm,0.4s						
HSPB	**Hornsund (broa**	**9.11**	**40**	Pn	**Pn**	**18 07 58.2**	**-1.1**
HSPB	**Hornsund (broa**	**9.11**	**40**	*eP*	**Pn**	**18 07 57.5**	**-1.8**
HSPB				IAML		18 09 28.5	
	comp=Z,3.1nm,0.3s						
BJO1	**Bjornoya**	**9.34**	**57**	*eP*	**Pn**	**18 08 02.5**	**0.0**
BJO1				IAML		18 09 58.6	
	comp=Z,13nm,0.7s						
BRBA	**Barentsburg A**	**9.36**	**34**	*eP*	Pn	18 07 59.2	-3.4
BRBA				IAML		18 09 41.7	
	comp=Z,11nm,0.1s						
BRBB	**Barentsburg B**	**9.37**	**33**	Pn	**Pn**	**18 08 01.1**	**-1.8**
BRBB	**Barentsburg B**	**9.37**	**33**	*eP*	**Pn**	**18 08 00.5**	**-2.5**
KBS	**Kingsbay**	**9.50**	**28**	Pn	**Pn**	**18 08 02.7**	**-1.9**
KBS	**Kingsbay**	**9.50**	**28**	*eP*	**Pn**	**18 08 02.3**	**-2.3**
KBS				*eS*	Sn	18 09 38.8	-12
KBS				IAML		18 09 46.6	
	comp=Z,8.5nm,0.6s						
KBS	**Kingsbay**	**9.50**	**28**	*eP*	**Pn**	**18 08 02.7**	**-1.9**
SPA0	**Spitsbergen Ar**	**9.80**	**34**	Pn	**Pn**	**18 08 08.3**	**-0.5**
	baz=220,slow=16						
SPA0	**Spitsbergen Ar**	**9.80**	**34**	Pn	**Pn**	**18 08 08.3**	**-0.5**
	baz=220,slow=16						
SPITS	**Spitsbergen Ar**	**9.80**	**34**	Pn	**Pn**	**18 08 07.4**	**-1.4**
	baz=221,slow=14						
	comp=Z,8.7nm,0.5s						
HOPEN	**Hopen**	**11.07**	**46**	Pn	**Pn**	**18 08 25.3**	**-0.8**
HOPEN	**Hopen**	**11.07**	**46**	*eP*	**Pn**	**18 08 24.8**	**-1.4**
HOPEN				IAML		18 09 44.0	
	comp=Z,3.2nm,0.9s						
AKN	**Aaknes**	**11.68**	**133**	Pn	**Pn**	**18 08 35.6**	**+1.0**
AKN	**Aaknes**	**11.68**	**133**	Pn	**Pn**	**18 08 35.6**	**+1.0**
ARCES	**ARCESS Array B**	**12.32**	**81**	Pn	**Pn**	**18 08 41.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=296,slow=11,SNR=4.6						
ARCES				LR	LR	18 12 53.7	
	comp=Z,105nm,18.7s,baz=300,slow=35						
	comp=Z,2.6nm,1.0s						
NOA	**NORSAR Array B**	**13.69**	**128**	LR	LR	18 13 49.2	
	comp=Z,64nm,18.3s,baz=270,slow=35						
HFS	**Hagfors**	**15.11**	**126**	LR	LR	18 14 21.3	
	comp=Z,136nm,19.3s,baz=300,slow=34						
EKA	**Eskdalemuir Ar**	**16.53**	**163**	Pn	**P**	**18 09 42.1**	**-0.1**
	baz=347,slow=12						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**17.62**	**105**	P	**Pn**	**18 09 53.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=334,slow=16,SNR=1.1						
	comp=Z,0.6nm,0.8s						
RES	**Resolute Bay**	**22.68**	**317**	P	**P**	**18 10 52.3**	**+3.2**
	comp=Z,5.2nm,0.9s,baz=44,slow=11,SNR=18						
RES				LR	LR	18 19 17.5	
	comp=Z,111nm,19.4s,baz=62,slow=36						
	comp=Z,5.2nm,0.9s						
GERES	**GERESS Array B**	**25.44**	**139**	P	**P**	**18 11 18.0**	**+2.2**
	comp=Z,0.3nm,0.5s,baz=327,slow=7.0,SNR=1.7						
	comp=Z,0.3nm,0.5s						
VRAC	**Vranov**	**25.64**	**135**	LR	LR	18 20 06.0	
	comp=Z,74nm,19.0s,baz=340,slow=34						
DAVOX	**Davos/Dischmat**	**26.68**	**146**	LR	LR	18 20 55.4	
	comp=Z,43nm,20.9s,baz=302,slow=34						
YKA	**Yellowknife Ar**	**36.42**	**310**	P	**P**	**18 12 53.1**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=31,slow=9.1,SNR=13						
	comp=Z,1.1nm,0.9s						
BVAR	**Borovoye Array**	**38.48**	**74**	P	**P**	**18 13 09.7**	**0.0**
	comp=Z,0.4nm,0.8s,baz=355,slow=8.7,SNR=2.2						
	comp=Z,0.4nm,0.8s						
MDT	**Midelt**	**38.83**	**171**	LR	LR	18 28 34.8	
	comp=Z,77nm,18.3s,baz=340,slow=35						
ILAR	**Eielson Array**	**40.74**	**333**	P	**P**	**18 13 29.1**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=5.5,slow=9.9,SNR=6.8						
	comp=Z,0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**43.05**	**69**	P	**P**	**18 13 48.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=338,slow=7.0,SNR=1.4						
	comp=Z,0.3nm,0.5s						
MMAI	**Mount Meron Ar**	**45.71**	**121**	LR	LR	18 35 29.0	
	comp=Z,34nm,18.9s,baz=352,slow=39						
MKAR	**Makanchi Array**	**47.59**	**68**	P	**P**	**18 14 23.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=357,slow=9.1,SNR=3.6						
	comp=Z,0.3nm,0.8s						
NEW	**Newport**	**49.73**	**303**	LR	LR	18 35 00.4	
	comp=Z,69nm,18.0s,baz=17,slow=35						
PDAR	**Pinedale Array**	**52.63**	**294**	LR	LR	18 39 30.8	
	comp=Z,44nm,18.1s,baz=30,slow=38						
TXAR	**Lajitas Array**	**63.24**	**282**	LR	LR	18 43 59.4	
	comp=Z,54nm,18.4s,baz=48,slow=36						
LPIG	**La Paz**	**70.19**	**286**	LR	LR	18 49 05.9	
	comp=Z,56nm,18.6s,baz=5.5,slow=37						

*IDC **20** 18:06:01.2±1.8,1.96N×126.35E,h0km,mb3.3/4, mbtmp3.4/4,Error ellipse: s-maj=174.5km s-min=23.0km az=66.0*
*DJA **20** 18:06:04.9±0.6,2.N±6.°×12.6E±.°,h10km,M3.5/8,mb3.6/1, MLv3.4/8*

ISC 20 18:06:07.2±1.2,**2.09N**±0.08×**126.55E**±0.09,**h47**km,**n11**, σ0°**66**/11,**mb3.4**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.54**	**148**	P	**Pn**	**18 06 32.0**	**-0.3**
SGSI	**Sangihe**	**1.89**	**327**	P	**Pn**	**18 06 36.9**	**-0.2**
LBMI	**Labuha**	**2.87**	**161**	P	**Pn**	**18 06 51.2**	**+0.6**
KMSI	**Cibinong**	**2.98**	**240**	P	**Pn**	**18 06 52.3**	**+0.2**
GTOI	**Gorontalo**	**3.83**	**248**	P	**Pn**	**18 07 03.0**	**-0.7**
SANI	**Sanana**	**4.15**	**188**	P	**Pn**	**18 07 08.2**	**+0.1**
MRSI	**Marisa**	**4.88**	**251**	P	**Pn**	**18 07 18.5**	**+0.3**
WRA	**Warramunga Arr**	**23.19**	**161**	P	**P**	**18 11 09.2**	**-1.0**
	0.9nm,0.5s,baz=339,slow=11,SNR=11						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.58**	**165**	P	**P**	**18 11 40.9**	**-0.4**
	0.2nm,0.5s,baz=346,slow=8.1,SNR=5.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**18 16 02.0**	**+1.1**
	0.1nm,0.4s,baz=129,slow=7.1,SNR=2.0						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.02**	**328**	P	**P**	**18 16 29.2**	**-0.1**
	0.3nm,0.7s,baz=130,slow=6.2,SNR=3.1						
	0.3nm,0.7s						

*NEIC **20** 18:11:52.6±2.2,56.17N±0.09×149.5W±0.1,h26km±9km, ML3.5/58,ML3.3(AEIC),Error ellipse: s-maj=12.9km s-min=8.2km az=172.0*
*AEIC **20** 18:11:56.1±1.7,56.22N±0.09×149.56W±0.06,h9km±7km,*

Error ellipse: s-maj=12.8km s-min=5.0km az=180.0

ISC 20 18:11:51.1±1.4,**56.27N**±0.09×**149.57W**±0.06,**h10**km, **n188**,σ1°**12**/187,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.24**	**314**		**Sn**	**18 12 55.6**	**-0.3**
KDAK	**Kodiak Island**	**2.24**	**314**		**Pn**	**18 12 29.4**	**+1.2**
KDAK	**Kodiak Island**	**2.24**	**314**	IAML		18 12 56.8	
	45nm,0.6s						
KDAK				IAML		18 12 56.9	
	51nm,0.5s						
KDAK	**Kodiak Island**	**2.24**	**314**	S	**Sn**	**18 12 55.6**	**-0.3**
	baz=132						
OHAK	**Old Harbor**	**2.26**	**297**		**Pn**	**18 12 29.0**	**+0.5**
OHAK					**Sn**	**18 12 55.0**	**-1.4**
OHAK	**Old Harbor**	**2.26**	**297**	P	**Pn**	**18 12 29.0**	**+0.5**
	baz=115						
OHAK				S	**Sn**	**18 12 55.0**	**-1.4**
	baz=115						
Q20K	**Shuyak Island**	**2.80**	**328**	P	**Pn**	**18 12 37.3**	**+1.3**
	baz=146						
Q20K				S	**Sn**	**18 13 10.3**	**+0.5**
	baz=146						
SYI	**Shuyak Island**	**2.80**	**328**		**Pn**	**18 12 36.8**	**+0.9**
SYI	**Shuyak Island**	**2.80**	**328**		**Sn**	**18 13 10.3**	**+0.6**
CNPM	**China Poot**	**3.39**	**346**		**Pn**	**18 12 45.0**	**+1.0**
CNPM					**Sn**	**18 13 25.0**	**+0.8**
Q19K	**Cape Douglas,**	**3.45**	**322**	Pn	**Pn**	**18 12 47.4**	**+2.4**
Q19K				IAML		18 13 34.2	
	comp=E,165nm,1.3s						
Q19K				IAML		18 13 47.1	
	comp=N,87nm,1.1s						
BRSE	**Bradley Lake S**	**3.54**	**350**		**Pn**	**18 12 46.8**	**+0.7**
BRSE					**Sn**	**18 13 27.8**	**-0.2**
BRSE	**Bradley Lake S**	**3.54**	**350**	P	**Pn**	**18 12 46.8**	**+0.7**
	baz=169						
BRSE				S	**Sn**	**18 13 27.8**	**-0.2**
	baz=169						
BRLK	**Bradley Lake**	**3.58**	**349**		**Pn**	**18 12 47.2**	**+0.6**
BRLK					**Sn**	**18 13 29.2**	**+0.3**
BRLK	**Bradley Lake**	**3.58**	**349**	IAML		18 13 32.6	
	comp=E,57nm,0.3s						
Q23K	**Middleton Isla**	**3.61**	**27**		**Pn**	**18 12 47.7**	**+0.7**
Q23K	**Middleton Isla**	**3.61**	**27**	IAML		18 14 33.5	
	comp=E,154nm,1.5s						
Q23K				IAML		18 14 57.3	
	comp=N,135nm,1.4s						
Q23K	**Middleton Isla**	**3.61**	**27**	P	**Pn**	**18 12 47.7**	**+0.7**
	baz=209						
MID	**Middleton Isla**	**3.61**	**27**		**Pn**	**18 12 47.7**	**+0.7**
MID	**Middleton Isla**	**3.61**	**27**	IAML		18 13 30.7	
	comp=N,143nm,1.7s						
MID				IAML		18 14 33.5	
	comp=E,157nm,1.5s						
P19K	**Oil Pt**	**3.92**	**332**	Pn	**Pn**	**18 12 53.0**	**+1.8**
P19K				IAML		18 13 41.9	
	comp=E,66nm,0.4s						
P19K				IAML		18 13 43.5	
	comp=N,63nm,0.4s						
P23K	**Montague Islan**	**3.92**	**16**		**Pn**	**18 12 52.1**	**+0.8**
P23K					**Sn**	**18 13 35.0**	**-2.1**
P23K	**Montague Islan**	**3.92**	**16**	P	**Pn**	**18 12 52.1**	**+0.8**
	baz=198						
P23K				S	**Sn**	**18 13 35.1**	**-2.1**
	baz=198						
CNTC	**Contact Creek**	**3.97**	**303**		**Pn**	**18 12 53.5**	**+1.4**
Q17K	**Contact Creek**	**3.97**	**303**	P	**Pn**	**18 12 53.5**	**+1.4**
	baz=118						
ILSW	**Iliamna Southw**	**4.18**	**335**	Pn	Pn	18 12 53.0	-2.0
O22K	**Cooper Landing**	**4.23**	**359**	Pn	**Pn**	**18 12 54.2**	**-1.3**
SLKM	**Skilak Lake**	**4.27**	**356**		**Pn**	**18 12 56.7**	**+0.5**
SLKM					**Sn**	**18 13 45.2**	**-0.7**
P18K	**Big Mountain,**	**4.35**	**318**		**Pn**	**18 12 58.2**	**+0.9**
P18K	**Big Mountain,**	**4.35**	**318**	P	**Pn**	**18 12 58.2**	**+0.9**
	baz=134						
HIN	**Hinchinbrook I**	**4.45**	**20**		**Pn**	**18 12 59.7**	**+1.1**
HIN	**Hinchinbrook I**	**4.45**	**20**	IAML		18 13 53.3	
	comp=E,57nm,0.8s						
HIN				IAML		18 13 55.2	
	comp=N,56nm,0.7s						
RSO	**Redoubt South**	**4.53**	**340**	Pn	**Pn**	**18 13 00.6**	**+0.8**
KAIM	**Kayak Island**	**4.58**	**35**		**Pn**	**18 13 01.4**	**+1.1**
KAIM	**Kayak Island**	**4.58**	**35**	IAML		18 13 58.0	
	comp=E,45nm,0.3s						
KAIM	**Kayak Island**	**4.58**	**35**	P	**Pn**	**18 13 01.4**	**+1.1**
	baz=218						
CAPN	**Captain Cook N**	**4.59**	**350**	Pn	**Pn**	**18 13 01.2**	**+0.7**
O19K	**Port Alsworth**	**4.67**	**329**	Pn	**Pn**	**18 13 02.1**	**+0.6**
O19K				IAML		18 13 58.0	
	comp=N,63nm,0.5s						
O19K				IAML		18 13 59.7	
	comp=E,60nm,0.5s						
P17K	**Kvichak River**	**4.71**	**311**		**Pn**	**18 13 03.4**	**+1.3**
P17K	**Kvichak River**	**4.71**	**311**	P	**Pn**	**18 13 03.4**	**+1.3**
	baz=126						
EYAK	**Cordova Ski Ar**	**4.74**	**23**		**Pn

GHO	Glory Hole Cre	5.53	3			Pn	18 13 14.1	+0.5
S14K	Fog Glacier	5.56	274	P		Pn	18 13 14.0	0.0
	baz=87							
VNFG	Fog Glacier, M	5.56	274			Pn	18 13 14.0	0.0
KLU	Klutina	5.57	18			Pn	18 13 14.8	+0.8
KLU	Klutina	5.57	18	P		Pn	18 13 15.7	+1.6
	baz=201							
BARK	Barkley Ridge	5.58	39			Pn	18 13 15.5	+1.3
SML	Sawmill	5.59	6	Pn		Pn	18 13 15.4	+1.1
MESA	MESA	5.62	43			Pn	18 13 15.7	+0.9
MESA	MESA	5.62	43	P		Pn	18 13 15.7	+0.9
	baz=229							
CRQM	Cirque	5.62	34			Pn	18 13 16.1	+1.2
O16K	Kokwok River B	5.63	310	Pn		Pn	18 13 15.5	+0.7
CRQE	Cirque	5.63	34	P		Pn	18 13 16.1	+1.1
	baz=220							
SCM	Sheep Creek Mo	5.70	11			Pn	18 13 17.4	+1.5
SCM	Sheep Creek Mo	5.70	11	P		Pn	18 13 17.4	+1.5
	baz=192							
TGL	Tana Glacier	5.72	35			Pn	18 13 17.4	+1.2
SVW2	Sparrevohn	5.77	330	Pn		Pn	18 13 17.5	+0.8
ISLE	Juniper Island	5.77	38			Pn	18 13 18.2	+1.3
BAGL	Bagley Icefiel	5.78	40			Pn	18 13 18.1	+1.3
SKT	Skwentna	5.82	351	Pn		Pn	18 13 19.4	+2.0
N17K	Nushagak Hills	5.85	320	Pn		Pn	18 13 17.0	-0.8
CNBA	Chernabura Isl	5.87	260	Pn		Pn	18 13 17.2	-0.9
VRDI	Verde Repeater	5.91	30			Pn	18 13 20.0	+1.2
M20K	Styx River	5.92	343	Pn		Pn	18 13 18.6	-0.3
N25K	Chitina, Valde	5.94	24			Pn	18 13 20.8	+1.6
N25K	Chitina, Valde	5.94	24	P		Pn	18 13 20.7	+1.6
	baz=208							
GLB	Gilahina Butte	5.99	28			Pn	18 13 21.3	+1.5
KIAG	Kiagna River	6.00	36			Pn	18 13 21.5	+1.4
SAMH	Samovar Hills	6.05	47			Pn	18 13 22.6	+1.9
GRNC	Granite Creek	6.07	39			Pn	18 13 22.2	+1.2
TABL	Table Mountain	6.10	43			Pn	18 13 22.6	+1.1
M24K	Tolsona, Glenn	6.11	15	Pn		Pn	18 13 23.7	+2.2
MCARA	McCarthy VSAT	6.15	31			Pn	18 13 21.6	-0.3
MCARA	McCarthy VSAT	6.15	31	P		Pn	18 13 24.2	+2.2
	baz=216							
PTPK	Patty Peak	6.17	34			Pn	18 13 24.0	+1.6
CUT	Chulitna	6.17	357	Pn		Pn	18 13 22.5	+0.3
M19K	Big River Lodg	6.17	338	Pn		Pn	18 13 22.9	+0.6
SDPT	Sand Point	6.22	266			Pn	18 13 22.6	-0.2
SDPT	Sand Point	6.22	266	P		Pn	18 13 22.8	0.0
	baz=78							
PCA	Pinnacle	6.25	48			Pn	18 13 24.7	+1.4
PINM	Pinnacle	6.25	48	P		Pn	18 13 24.7	+1.4
	baz=236							
BARN	Barnard Glacie	6.33	37			Pn	18 13 25.8	+1.1
CTG	Chitna Glacier	6.38	39	P		Pn	18 13 26.6	+1.4
	baz=226							
CTGM	Chitina Glacie	6.38	39			Pn	18 13 26.4	+1.2
PNL	Peninsula	6.40	54			Pn	18 13 26.5	+1.1
PNL	Peninsula	6.40	54	P		Pn	18 13 26.5	+1.1
	baz=242							
LOGN	Logan Glacier	6.40	41			Pn	18 13 26.5	+0.9
BCPM	Bancas Point	6.43	51			Pn	18 13 27.1	+1.3
L19K	White Mountain	6.52	338	Pn		Pn	18 13 27.3	+0.3
M17K	Holitna River	6.57	325	Pn		Pn	18 13 28.1	+0.4
N15K	Kwethluk River	6.79	309	Pn		Pn	18 13 31.3	+0.5
M16K	Timber Creek	6.83	318	Pn		Pn	18 13 31.2	-0.1
PS1A	Pavlof South-1	6.91	268			Pn	18 13 32.4	+0.1
DHY	Denali Highway	6.92		Pn		Pn	18 13 33.6	+1.0
O14K	Tigyukuivet M	6.93	300	Pn		Pn	18 13 32.1	-0.5
L18K	Granite Mounta	6.99	332	Pn		Pn	18 13 32.3	-1.2
M26K	Nabesna, AK	7.01	26	Pn		Pn	18 13 35.0	+1.2
PN7A	Pavlof North-7	7.05	268			Pn	18 13 34.8	+0.5
O29M	Mount Kennedy	7.07	51			Pn	18 13 36.0	+1.4
O29M	Mount Kennedy	7.07	51	P		Pn	18 13 36.1	+1.5
	baz=240							
P29M	Windy Craggy	7.14	57			Pn	18 13 36.0	+0.4
P29M	Windy Craggy	7.14	57	P		Pn	18 13 36.4	+0.8
	baz=247							
RND	Reindeer	7.17	3	Pn		Pn	18 13 36.0	0.0
TRF	Thorofare Moun	7.22	357	Pn		Pn	18 13 36.0	-0.7
M27K	Edge Creek, AK	7.26	30	Pn		Pn	18 13 37.0	-0.3
CAST	Castle Rocks	7.29	351	Pn		Pn	18 13 36.7	-0.8
KTH	Kantishna Hill	7.34	355	Pn		Pn	18 13 38.3	0.0
TTA	Tatalina	7.44	337	Pn		Pn	18 13 38.8	-0.9
S31K	Pelican	7.46	71			Pn	18 13 39.0	-0.9
S31K	Pelican	7.46	71	P		Pn	18 13 39.0	-0.9
	baz=262							
K20K	Telida	7.46	344	Pn		Pn	18 13 40.1	+0.1
L16K	Owhat River	7.47	321	Pn		Pn	18 13 40.1	0.0
HYT	Haines Junctio	7.79	49	Pn		Pn	18 13 43.7	-0.8
K17K	Iditarod	7.84	329	Pn		Pn	18 13 44.8	-0.3
L27K	Beaver Creek,	7.86	27	Pn		Pn	18 13 47.0	+1.6
RIDG	Independent Ri	7.86	16	Pn		Pn	18 13 45.2	-0.2
BCAR	Beaver Creek A	7.87	27	Pn		Pn	18 13 47.2	+1.6
SIT	Sitka	7.89	78	Pn		Pn	18 13 48.1	+2.3
J16K	Innoko River	8.06	337	Pn		Pn	18 13 48.9	+0.8
ISLZ	Isanotski Laza	8.18	265			Pn	18 13 49.4	-0.4
J20K	Nowinta River	8.27	345	Pn		Pn	18 13 48.3	-0.3
WRH	Wood River Hil	8.27	4	Pn		Pn	18 13 52.6	+1.7
BESE	Bessie Mountai	8.28	68			Pn	18 13 50.6	-0.6
N30M	Aishikik Lake	8.30	46	Pn		Pn	18 13 52.8	+1.3
S32K	Killisnoo	8.31	75			Pn	18 13 50.4	-1.1
S32K	Killisnoo	8.31	75	P		Pn	18 13 50.4	-1.1
	baz=268							
O30N	Mendenhall	8.37	52	Pn		Pn	18 13 53.3	+0.9
M29M	Somme Creek	8.39	38			Pn	18 13 55.0	+2.2
R32K	Eaglecrest	8.40	70	Pn		Pn	18 13 53.3	+0.4
CCB	Clear Creek Bu	8.45	5	Pn		Pn	18 13 54.7	+1.3
J25K	Salcha River,	8.63	12	Pn		Pn	18 13 56.8	+0.9
K27K	Chicken	8.63	23	Pn		Pn	18 13 55.4	-0.6
IL31		8.63	8	Pn		Pn	18 13 56.4	+0.5
ILAR	Eielson Array	8.63	8	Pn		Pn	18 13 56.4	+0.4
MDM	Murphy Dome	8.75	4	Pn		Pn	18 13 57.3	-0.2
J26L	Joseph Creek	8.78	17	Pn		Pn	18 13 58.9	+0.9
WHI	Whitehorse	8.86	54	Pn		Pn	18 14 00.3	+1.1
I23K	Minto, Yukon-K	8.91	1	Pn		Pn	18 13 58.4	-1.3
L29M	L29M	8.96	35			Pn	18 14 02.7	+2.2
I21K	Tanana	9.02	354	Pn		Pn	18 14 03.4	+2.1
P32M	Atlin	9.07	62	Pn		Pn	18 14 02.7	+0.8
M30M	Minto, Yukon	9.07	41	Pn		Pn	18 14 03.7	+1.7
U33K	Whale Pass	9.18	84	Pn		Pn	18 14 00.7	-2.7
H21K	Melozitna Rive	9.55	352	Pn		Pn	18 14 10.3	+1.7
I26K	Coal Creek Min	9.59	16	Pn		Pn	18 14 08.8	-0.2
Q32M	Nakina River	9.67	67	Pn		Pn	18 14 11.1	+0.8
P33M	Teslin, Yukon	9.67	59	Pn		Pn	18 14 10.7	+0.4
K29M	Barlow Dome	9.68	33	Pn		Pn	18 14 11.7	+1.3
M31M	Drury Creek, Y	9.78	46	Pn		Pn	18 14 13.7	+2.1
N32M	Quiet Lake	9.87	53	Pn		Pn	18 14 14.2	+1.3
IMAR	Indian Mountai	9.96	350	Pn		Pn	18 14 14.9	+0.9
S34M	Telegraph Cree	10.17	73	Pn		Pn	18 14 16.8	-0.2
FARO	Faro, Yukon	10.22	48	Pn		Pn	18 14 18.9	+1.3
R33M	Jennings River	10.40	65	Pn		Pn	18 14 20.1	-0.1
J30M	Hart River	10.57	33	Pn		Pn	18 14 22.5	-0.1

IDC ***20*** *18:20:09.8±1.1, 60˚.83N×146˚.66W, h0km, mb3.3/4, mbtmp3.4/9, ML3.3/5, MS2.5/1, Error ellipse: s-maj=16.2km s-min=14.6km az=60.0*

NEIC ***20*** *18:20:13.6±1.9, 61˚.06N±0˚.02×147˚.59W±0˚.04, h32km±6km, Error ellipse: s-maj=3.2km s-min=2.4km az=152.0, Moment Tensor Solution. Moment tensor: Scale 1014Nm; Mrr=0.32; Mθθ=0.65; Mφφ=0.97; Mrθ=1.62; Mθφ=2.49; Mφr=0.04; Fault plane solution: M03.10000×10^14 NP1: φs=259.14000°, δ83.49000°, λ-31.52000°. NP2: φs=353.11000°, δ58.71000°, λ-172.38000°. Principal axes: T 3.0594, Plg17.0000°, Azm310.0000°; N 0.0713, Plg58.0000°, Azm69.0000°; P -3.1307, Plg27.0000°, Azm212.0000°;*

AEIC ***20*** *18:20:14.3±1.5, 61˚.02N±0˚.02×147˚.60W±0˚.04, h25km±5km, ML3.6, ML3.7/214(NEIC), Mwr3.6/35(NEIC) Error ellipse: s-maj=3.9km s-min=1.7km az=216.0*

NEIC ***20*** *18:20:14.2, 61˚.02N×147˚.61W, h20km*

ISC 20 18:20:10.3±1.2, 60˚.95N±0˚.02×147˚.69W±0˚.02, h5km±9km, n410, σ0.84/408, mb3.4/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLI	Glacier Island	0.30	104			Sb	18 20 26.4	+3.0
GLI	Glacier Island	0.30	104			Pn	18 20 20.2	-1.2
GLI	Glacier Island	0.30	104	IAML			18 20 26.9	
	comp=N,29µm,0.3s							
GLI				IAML			18 20 27.7	
	comp=E,19µm,0.6s							
GLI	Glacier Island	0.30	104	P		Pn	18 20 20.7	-0.8
	baz=299							
GLI				S		Sb	18 20 26.4	+3.0
	baz=299							
KNK	Knik Glacier	0.59	321			Sb	18 20 32.9	+1.0
KNK	Knik Glacier	0.59	321			Pb	18 20 24.2	+1.0
KNK	Knik Glacier	0.59	321	IAML			18 20 33.2	
	comp=E,10µm,0.2s							
KNK				IAML			18 20 33.3	
	comp=N,9µm,0.4s							
KNK	Knik Glacier	0.59	321	P		Pn	18 20 24.6	-0.9
	baz=134							
KNK				S		Sb	18 20 33.1	+1.2
	baz=134							
FID	Port Fidalgo	0.63	109			Sb	18 20 33.3	+0.4
FID	Port Fidalgo	0.63	109			Pb	18 20 24.1	+0.3
FID	Port Fidalgo	0.63	109	IAML			18 20 34.6	
	comp=N,8µm,0.3s							
FID				IAML			18 20 34.8	
	comp=E,6µm,0.3s							
HIN	Hinchinbrook I	0.81	133			Sn	18 20 41.9	+1.0
HIN	Hinchinbrook I	0.81	133			Pn	18 20 28.7	+0.2
HIN	Hinchinbrook I	0.81	133	IAML			18 20 44.6	
	comp=E,4µm,0.4s							
HIN				IAML			18 20 44.7	
	comp=N,5µm,0.5s							
M23K	Glacier View	0.84	359			Pb	18 20 27.5	+0.1
M23K						Sg	18 20 38.3	+0.9
M23K	Glacier View	0.84	359	P		Pb	18 20 27.6	+0.2
	baz=176							
M23K				S		Sg	18 20 38.5	+1.1
	baz=176							
SCM	Sheep Creek Mo	0.90	11			Sg	18 20 39.7	+0.5
SCM	Sheep Creek Mo	0.90	11			Pg	18 20 28.0	+0.5
SCM	Sheep Creek Mo	0.90	11	IAML			18 20 41.0	
	comp=E,3µm,0.9s							
SCM				IAML			18 20 46.1	
	comp=N,2µm,0.4s							
SCM	Sheep Creek Mo	0.90	11	P		Pg	18 20 28.2	+0.6
	baz=190							
SML	Sawmill	0.91	340	Pn		Pb	18 20 28.6	0.0
SML	Sawmill	0.91	340	P		Pb	18 20 28.6	0.0
	baz=156							
PMR	Palmer	0.95	313	Pn		Pn	18 20 29.7	-0.5
PMR				IAML			18 20 42.6	
	comp=E,4µm,0.4s							
PMR				IAML			18 20 42.8	
	comp=N,2µm,0.2s							
PMR	Palmer	0.95	313			Sb	18 20 42.2	+0.1
PMR	Palmer	0.95	313	P		Pn	18 20 29.8	-0.5
PMR	Palmer	0.95	313	P		Pn	18 20 29.7	-0.5
	baz=128							
PMR				S		Sb	18 20 42.4	+0.3
	baz=128							
DIV	Divide	0.95	78			Pg	18 20 28.8	+0.3
P23K	Montague Islan	0.97	171			Pn	18 20 31.9	+1.3
P23K	Montague Islan	0.97	171	P		Pn	18 20 31.8	+1.1
	baz=354							
RC01	Rabbit Creek A	1.01	279	Pn		Pn	18 20 31.6	+0.4
RC01	Rabbit Creek A	1.01	279			Sn	18 20 45.1	-0.6
RC01	Rabbit Creek A	1.01	279	P		Pn	18 20 31.5	+0.4
	baz=93							
KLU	Klutina	1.01	57			Sg	18 20 42.2	-0.6
KLU	Klutina	1.01	57			Pg	18 20 29.3	-0.4
KLU	Klutina	1.01	57	IAML			18 20 42.8	
	comp=N,2µm,0.5s							
KLU				IAML			18 20 45.9	
	comp=E,3µm,0.2s							
KLU	Klutina	1.01	57	P		Pg	18 20 29.7	0.0
	baz=240							
GHO	Glory Hole Cre	1.01	325			Sb	18 20 43.8	-0.3
GHO	Glory Hole Cre	1.01	325			Pb	18 20 30.7	+0.3
GHO	Glory Hole Cre	1.01	325	IAML			18 20 45.3	
	comp=E,3µm,0.8s							
GHO				IAML			18 20 45.9	
	comp=N,3µm,0.3s							
EYAK	Cordova Ski Ar	1.03	112	P		Pn	18 20 32.0	+0.5
EYAK	Cordova Ski Ar	1.03	112	P		Pn	18 20 31.9	+0.4
	baz=298							
O22K	Cooper Landing	1.11	246			Sn	18 20 49.0	+0.9
O22K	Cooper Landing	1.11	246			Pn	18 20 33.5	+1.1
O22K	Cooper Landing	1.11	246	IAML			18 20 54.0	
	comp=N,6µm,0.3s							
O22K				IAML			18 20 55.2	
	comp=E,6µm,0.3s							
O22K	Cooper Landing	1.11	246	P		Pn	18 20 33.6	+1.1
	baz=62							
SEW	Seward	1.22	226			Sn	18 20 52.4	+1.5
SEW	Seward	1.22	226	P		Pn	18 20 35.0	+0.9
	baz=44							
SEW				S		Sn	18 20 52.4	+1.5
	baz=44							
FIS	Fire Island	1.25	280			Pg	18 20 35.8	+1.7
M24K	Tolsona, Glenn	1.37	31	Pn		Pn	18 20 35.6	-0.5
M24K				IAML			18 20 56.3	
	comp=N,2µm,0.4s							
M24K	Tolsona, Glenn	1.37	31	P		Pn	18 20 35.7	-0.4
	baz=213							
M22K	Willow	1.42	305			Pb	18 20 37.1	-0.2
M22K	Willow	1.42	305	P		Pb	18 20 37.1	-0.2
	baz=120							
BMRM	Bremner River	1.50	88	P		Pn	18 20 37.7	-0.3
	baz=273							
SUA	Susitna One	1.57	290	Pn		Pb	18 20 39.7	-0.1
SUA				IAML			18 21 01.5	
	comp=E,690nm,0.6s							
SUA	Susitna One	1.57	290	P		Pb	18 20 39.8	-0.1
	baz=105							
RAGM	Ragged Mountai	1.59	110			Pn	18 20 39.3	+0.1
N25K	Chitina, Valde	1.63	65	Pn		Pn	18 20 39.1	-0.7
N25K				IAML			18 21 02.1	
	comp=E,1µm,0.6s							
N25K	Chitina, Valde	1.63	65	P		Pn	18 20 39.4	-0.4
	baz=249							
WAT6	Susitna Watana	1.63	359	P		Pn	18 20 38.9	-1.0
	baz=178							
Q23K	Middleton Isla	1.67	156			Pb	18 20 41.6	+0.1
Q23K				IAML			18 21 12.5	
	comp=N,731nm,0.6s							
Q23K				IAML			18 21 17.3	
	comp=E,770nm,0.6s							
Q23K	Middleton Isla	1.67	156	P		Pb	18 20 41.6	+0.1
	baz=339							
MID	Middleton Isla	1.67	156			Pb	18 20 41.6	0.0
MID				IAML			18 21 13.4	
	comp=N,656nm,0.3s							
MID				IAML			18 21 17.3	
	comp=E,803nm,0.6s							
MID	Middleton Isla	1.67	156	P		Pb	18 20 41.7	+0.1
CAPN	Captain Cook N	1.71	265			Pg	18 20 43.1	+0.1
CAPN	Captain Cook N	1.71	265	P		Pg	18 20 43.4	+0.4
	baz=80							
HMT	Hamilton	1.80	109			Pn	18 20 41.9	-0.2
HARP	HAARP	1.89	39			Pn	18 20 43.8	+0.5
HARP	HAARP	1.89	39	P		Pn	18 20 43.8	+0.5
	baz=221							
CUT	Chulitna	1.91	321			Pn	18 20 44.2	+0.7
CUT	Chulitna	1.91	321	P		Pb	18 20 44.6	-1.0
	baz=137							
KAIM	Kayak Island	1.92	121	Pn		Pn	18 20 43.2	-0.4
KAIM	Kayak Island	1.92	121	P		Pn	18 20 43.5	-0.2
	baz=306							
WAT1	Susitna Watana	1.93	348	P		Pn	18 20 43.8	0.0
	baz=166							
GLB	Gilahina Butte	1.94	74	Pn		Pn	18 20 44.0	0.0
GLB				IAML			18 21 09.8	
	comp=N,1µm,0.4s							
GLB				IAML			18 21 09.8	
	comp=E,769nm,0.3s							
BRSE	Bradley Lake S	1.94	233			Pb	18 20 45.5	-0.7
BRSE	Bradley Lake S	1.94	233	P		Pb	18 20 45.5	-0.7
	baz=49							
WASW	Wrangell South	1.95	58			Pn	18 20 44.6	+0.3
WAT7	Susitna Watana	1.96	344			Pn	18 20 44.5	+0.1
BRLK	Bradley Lake	1.99	234	Pn		Pb	18 20 46.0	-1.0
BRLK				IAML			18 21 17.4	
	comp=E,836nm,0.4s							
BRLK				IAML			18 21 18.4	
	comp=N,439nm,0.5s							
WAZA	Wrangell Mount	2.04	55			Pn	18 20 46.0	+0.5
BERG	Berg Lake	2.04	104	Pn		Pn	18 20 44.9	-0.5
VRDI	Verde Repeater	2.08	81	Pn		Pn	18 20 45.6	-0.4
VRDI				IAML			18 21 13.9	
	comp=N,789nm,0.7s							
SKT	Skwentna	2.11	301	Pn		Pn	18 20 46.0	-0.3
SKT	Skwentna	2.11	301	P		Pn	18 20 46.0	-0.3
	baz=116							
SUCK	Suckling Hills	2.13	113			Pn	18 20 46.2	-0.4
SUCK				IAML			18 21 20.2	
	comp=N,581nm,0.4s							
SUCK				IAML			18 21 34.6	
	comp=E,469nm,0.9s							
DHY	Denali Highway	2.13	4	Pn		Pn	18 20 46.6	-0.1
DHY				IAML			18 21 15.3	
	comp=E,749nm,0.5s							
DHY				IAML			18 21 16.2	
	comp=N,645nm,0.4s							
DHY	Denali Highway	2.13	4	P		Pn	18 20 46.9	+0.1
	baz=183							
N20K	Mount Spurr	2.21	278	P		Pn	18 20 48.6	+0.9
	baz=93							
CRQM	Cirque	2.23	93			Pn	18 20 48.1	-0.1
CRQM				IAML			18 21 24.5	
	comp=N,774nm,0.8s							
CRQM				IAML			18 21 25.2	
	comp=E,616nm,0.9s							
GRIN	Grindle Hills	2.26	105			Pn	18 20 48.0	-0.3
CRQE	Cirque	2.26	93	P		Pn	18 20 48.1	-0.3
	baz=279							
CNPM	China Poot	2.28	233	Pn		Pb	18 20 49.8	-2.1
CNPM				IAML			18 21 25.6	
	comp=E,420nm,0.4s							
CNPM				IAML			18 21 25.7	
	comp=N,440nm,0.4s							
PAX	Paxson	2.28	26			Pn	18 20 48.5	-0.2
PAX	Paxson	2.28	26	P		Pn	18 20 49.0	+0.3
	baz=208							
SPBG	Spurr Blockage	2.29	280			Pn	18 20 49.7	+0.8
MCARA	McCarthy VSAT	2.30	77			Pn	18 20 49.1	+0.2
MCARA	McCarthy VSAT	2.30	77	P		Pn	18 20 49.3	+0.4
	baz=262							
BGLC	Bering Glacier	2.33	109			Pn	18 20 49.7	+0.4
BGLC	Bering Glacier	2.33	109	P		Pn	18 20 49.7	+0.4
	baz=295							
HOM	Homer	2.36	238	Pn		Pb	18 20 51.7	-1.6
HOM	Homer	2.36	238	P		Pb	18 20 51.4	-1.9
	baz=54							
TGL	Tana Glacier	2.39	93			Pn	18 20 49.9	-0.3
TGL				IAML			18 21 26.1	
	comp=N,684nm,0.5s							
WAX	Waxell Ridge	2.43	100			Pn	18 20 50.4	-0.4
SPNN	North Nagishla	2.46	282			Pn	18 20 52.5	+1.2
SNH	Sunshine Point	2.52	106			Pn	18 20 51.7	-0.3
SNH				IAML			18 21 34.1	
	comp=E,300nm,0.4s							
RND	Reindeer	2.52	348	Pn		Pn	18 20 52.6	+0.6
RND				IAML			18 21 24.9	
	comp=N,388nm,0.5s							
RND				IAML			18 21 25.2	
	comp=E,421nm,0.6s							
RDSO	Redoubt South	2.54	261			Pn	18 20 52.9	+0.7
RDJH	Redoubt Jeurge	2.54	264			Pn	18 20 53.1	+0.9
RSO	Redoubt South	2.54	261			Pn	18 20 53.0	+0.6
O20K	Slope Mountain	2.59	252	P		Pn	18 20 54.1	+1.1
	baz=67							
ISLE	Juniper Island	2.65	95			Pn	18 20 53.2	-0.6
ISLE				IAML			18 21 36.5	
	comp=E,547nm,0.6s							
ISLE				IAML			18 21 40.2	
	comp=N,414nm,0.8s							
M26K	Nabesna, AK	2.67	55			Pn	18 20 54.3	+0.3
M26K				IAML			18 21 34.7	
	comp=N,346nm,0.6s							
M26K	Nabesna, AK	2.67	55	P		Pn	18 20 54.3	+0.3
	baz=240							
MENT	Mentasta	2.74	42			Pn	18 20 53.2	-1.7
MENT				IAML			18 21 38.8	
	comp=N,378nm,0.4s							
MENT				IAML			18 21 47.7	
	comp=E,396nm,0.6s							
M20K	Styx River	2.78	292			Pn	18 20 56.0	+0.5
M20K				IAML			18 21 38.4	
	comp=N,212nm,0.5s							
TRF	Thorofare Moun	2.79	335	Pn		Pn	18 20 55.7	0.0
TRF				IAML			18 21 38.9	
	comp=N,370nm,0.5s							
TRF				IAML			18 21 43.8	
	comp=E,329nm,0.8s							
TRF	Thorofare Moun	2.79	335	P		Pn	18 20 56.5	+0.8
	baz=152							
MCK	McKinley	2.85	349			Pn	18 20 57.4	+0.9
MCK	McKinley	2.85	349	P		Pn	18 20 57.5	+1.0
	baz=167							
ILSW	Iliamna Southw	2.87	253			Pn	18 20 57.3	+0.4
ILSW				IAML			18 21 41.0	
	comp=E,205nm,0.8s							
PPLA	Purkeypile	2.89	314	P		Pn	18 20 57.3	+0.2
	baz=129							
GRNC	Granite Creek	2.91	92			Pn	18 20 57.3	-0.2
GRNC				IAML			18 21 44.4	
	comp=N,452nm,0.7s							
GRNC				IAML			18 21 47.3	
	comp=E,195nm,0.7s							
L26K	Log Cabin Wild	2.92	43	Pn		Pn	18 20 58.1	+0.6
L26K				IAML			18 21 39.6	
	comp=E,215nm,0.4s							
L26K				IAML			18 21 48.4	
	comp=N,214nm,0.5s							
BARN	Barnard Glacie	2.94	85			Pn	18 20 57.7	-0.1
BARN				IAML			18 21 41.1	
	comp=N,332nm,0.9s							
BARN				IAML			18 21 42.2	
	comp=E,280nm,0.8s							
MESA	MESA	2.94	103			Pn	18 20 57.5	-0.3
MESA				IAML			18 21 51.5	
	comp=E,415nm,0.5s							
MESA	MESA	2.94	103	P		Pn	18 20 57.6	-0.3
	baz=289							
K24K	Donnelly Dome	3.00	16	P		Pn	18 20 59.7	+1.2
	baz=198							
KTH	Kantishna Hill

M19K IAML 18 21 55.9
comp=E,141nm,0.5s
M19K IAML 18 21 56.4
comp=N,133nm,0.7s
M19K Big River Lodg 3.36 289 P **Pn** **18 21 03.6 +0.1**
baz=102
O19K Port Alsworth 3.36 260 **Pn** **18 21 05.1 +1.7**
L27K Beaver Creek, 3.48 50 **Pn** **18 21 05.2 0.0**
HDA Harding Lake 3.49 5 **Pn** **18 21 05.3 +0.1**
HDA IAML 18 21 52.8
comp=N,198nm,0.6s
HDA IAML 18 21 59.6
comp=E,214nm,1.2s
HDA Harding Lake 3.49 5 P **Pn** **18 21 05.6 +0.4**
baz=185
SCRK Sand Creek 3.49 28 **Pn** **18 21 05.0 -0.3**
SCRK Sand Creek 3.49 28 P **Pn** **18 21 05.1 -0.2**
baz=211
BPAW Bear Paw Mtn. 3.51 336 Pn **Pn** **18 21 05.6 +0.1**
BPAW IAML 18 22 00.4
comp=E,145nm,1.6s
BPAW IAML 18 22 02.9
comp=N,217nm,0.9s
BPAW Bear Paw Mtn. 3.51 336 P **Pn** **18 21 05.6 +0.1**
baz=152
SAMH Samovar Hills 3.51 101 **Pn** **18 21 06.4 +0.8**
WRH Wood River Hil 3.54 357 **Pn** **18 21 05.6 -0.2**
WRH IAML 18 22 07.8
comp=E,121nm,1.0s
BVCY Beaver Creek 3.57 63 **Pn** **18 21 07.0 +0.6**
BVCY Beaver Creek 3.57 63 P **Pn** **18 21 07.0 +0.6**
baz=249
YUK3 Moose Creek 3.58 74 **Pn** **18 21 07.2 +0.5**
YUK3 Moose Creek 3.58 74 P **Pn** **18 21 07.4 +0.7**
baz=261
Q19K Cape Douglas, 3.62 238 Pn **Pn** **18 21 08.2 +1.2**
Q19K Cape Douglas, 3.62 238 P **Pn** **18 21 08.4 +1.3**
baz=53
L19K White Mountain 3.64 293 **Pn** **18 21 07.3 -0.1**
L19K White Mountain 3.64 293 P **Pn** **18 21 07.5 +0.1**
baz=106
CHUM Lake Minchumin 3.64 326 **Pn** **18 21 08.0 +0.6**
CHUM Lake Minchumin 3.64 326 P **Pn** **18 21 08.0 +0.6**
baz=141
CCB Clear Creek Bu 3.71 359 Pn **Pn** **18 21 08.1 -0.2**
CCB IAML 18 21 56.7
comp=E,114nm,0.8s
NEA2 Nenana 3.71 351 **Pn** **18 21 07.9 -0.3**
NEA2 IAML 18 21 57.3
comp=E,193nm,0.6s
NEA2 Nenana 3.71 351 P **Pn** **18 21 08.2 0.0**
baz=169
PCA Pinnacle 3.77 100 **Pn** **18 21 08.8 -0.4**
PINM Pinnacle 3.77 100 P **Pn** **18 21 09.0 -0.2**
baz=287
J25K Salcha River, 3.83 15 **Pn** **18 21 09.2 -0.7**
J25K IAML 18 22 11.4
comp=E,122nm,0.6s
SVW2 Sparrevohn 3.84 276 **Pn** **18 21 09.8 -0.3**
SVW2 IAML 18 22 19.8
comp=N,88nm,0.8s
SVW2 Sparrevohn 3.84 276 P **Pn** **18 21 09.8 -0.3**
K20K Telida 3.84 312 **Pn** **18 21 09.8 -0.3**
K20K IAML 18 22 15.6
comp=E,94nm,0.7s
K20K Telida 3.84 312 P **Pn** **18 21 09.8 -0.3**
baz=125
IL31 3.85 5 Pn **Pn** **18 21 09.8 -0.3**
ILAR Eielson Array 3.85 5 Pn **Pn** **18 21 10.7 +0.5**
comp=E,4.9nm,0.3s,baz=191,slow=14,SNR=76
ILAR Sn **Sn** **18 21 53.8 -2.0**
comp=E,6.5nm,0.3s,baz=180,slow=22,SNR=3.6
ILAR LR LR 18 22 33.7
comp=E,66nm,21.2s,baz=274,slow=36
comp=E,12nm,0.3s
YUK8 Steele Glacier 3.86 82 **Pn** **18 21 11.8 +1.2**
YUK8 Steele Glacier 3.86 82 P **Pn** **18 21 11.7 +1.2**
baz=269
O18K Koktuh Hills 3.89 257 Pn **Pn** **18 21 10.5 -0.3**
O18K IAML 18 22 15.3
comp=N,116nm,0.7s
O18K IAML 18 22 21.7
comp=E,81nm,0.7s
O18K Koktuh Hills 3.89 257 P **Pn** **18 21 10.6 -0.2**
baz=70
COLA College 3.94 359 **Pn** **18 21 10.2 -1.2**
COLA College 3.94 359 P **Pn** **18 21 11.5 +0.2**
M18K Stony River 3.97 281 **Pn** **18 21 12.0 +0.2**
M18K Stony River 3.97 281 P **Pn** **18 21 11.8 0.0**
baz=93
N18K Kilae Creek 4.03 270 **Pn** **18 21 12.4 -0.2**
N18K Kilae Creek 4.03 270 P **Pn** **18 21 12.4 -0.2**
baz=82
MDM Murphy Dome 4.03 357 **Pn** **18 21 12.5 -0.2**
MDM IAML 18 22 14.1
comp=N,82nm,1.2s
MDM IAML 18 22 14.2
comp=E,98nm,0.8s
J26L Joseph Creek 4.04 26 **Pn** **18 21 12.6 -0.2**
J26L IAML 18 22 12.2
comp=E,88nm,0.8s
J26L IAML 18 22 16.2
comp=N,89nm,0.7s
J26L Joseph Creek 4.04 26 P **Pn** **18 21 12.9 +0.1**
baz=210
K27K Chicken 4.04 38 **Pn** **18 21 12.8 +0.1**
K27K Chicken 4.04 38 P **Pn** **18 21 13.1 +0.4**
baz=223
KDAK Kodiak Island 4.05 220 Pn **Pn** **18 21 13.7 +0.8**
KDAK Kodiak Island 4.05 220 Pn **Pn** **18 21 13.7 +0.8**
comp=N,11nm,0.3s,baz=44,slow=13,SNR=167
KDAK Sn **Sn** **18 21 57.4 -3.2**
comp=N,3.2nm,0.3s,baz=35,slow=6.7,SNR=1.8
KDAK Lg Lg 18 22 18.6
comp=N,3.6nm,0.3s,baz=326,slow=19,SNR=1.5
comp=N,34nm,0.3s
P18K Big Mountain, 4.08 251 Pn **Pn** **18 21 13.5 +0.2**
P18K Big Mountain, 4.08 251 P **Pn** **18 21 13.6 +0.2**
baz=64
BCPM Bancas Point 4.11 101 **Pn** **18 21 13.1 -0.7**
BCPM IAML 18 22 14.4
comp=N,145nm,0.3s
BCPM IAML 18 22 20.4
comp=E,136nm,0.6s
POKR Poker Plat Res 4.18 1 **Pn** **18 21 14.3 -0.4**
POKR IAML 18 22 23.0
comp=E,76nm,0.8s
POKR IAML 18 22 28.8
comp=N,100nm,0.9s
POKR Poker Plat Res 4.18 1 P **Pn** **18 21 14.8 +0.1**
baz=181
I23K Minto, Yukon-K 4.28 350 **Pn** **18 21 16.0 0.0**
I23K IAML 18 22 22.5
comp=N,90nm,0.7s
I23K IAML 18 22 24.1
comp=E,88nm,0.6s
I23K Minto, Yukon-K 4.28 350 P **Pn** **18 21 16.1 0.0**
baz=168
PNL Peninsula 4.32 104 **Pn** **18 21 16.1 -0.6**
PNL Peninsula 4.32 104 P **Pn** **18 21 16.2 -0.5**
PNL Peninsula 4.32 104 P **Pn** **18 21 16.5 -0.2**
baz=292
MLY Manley 4.32 343 Pn **Pn** **18 21 16.4 -0.3**
MLY IAML 18 22 06.3
comp=N,79nm,0.6s
MLY Manley 4.32 343 P **Pn** **18 21 16.9 +0.2**
baz=159
KAHC Katmai Hardscr 4.36 241 **Pn** **18 21 17.9 +0.7**
KAHC Katmai Hardscr 4.36 241 P **Pn** **18 21 18.0 +0.7**
baz=54
YUK4 Talbot Arm 4.40 81 P **Pn** **18 21 19.1 +1.1**
baz=268
J20K Nowinta River 4.40 320 P **Pn** **18 21 17.8 +0.1**
baz=134
TTA Tatalina 4.40 300 Pn **Pn** **18 21 17.1 -0.7**
TTA Tatalina 4.40 300 P **Pn** **18 21 17.1 -0.7**
TTA Tatalina 4.40 300 P **Pn** **18 21 17.1 -0.7**
baz=112
L18K Granite Mounta 4.48 290 Pn **Pn** **18 21 18.4 -0.4**
L18K IAML 18 22 32.7
comp=E,53nm,1.1s
L18K IAML 18 22 41.4
comp=N,59nm,1.3s
L18K Granite Mounta 4.48 290 P **Pn** **18 21 18.5 -0.4**
baz=102
O29M Mount Kennedy 4.54 94 **Pn** **18 21 20.1 +0.4**
O29M IAML 18 22 28.8
comp=N,99nm,0.8s
O29M IAML 18 22 30.0
comp=E,87nm,0.6s
O29M Mount Kennedy 4.54 94 P **Pn** **18 21 20.6 +0.9**
baz=283
YUK6 Outpost Mounta 4.55 86 **Pn** **18 21 20.6 +0.6**
YUK6 Outpost Mounta 4.55 86 P **Pn** **18 21 20.6 +0.6**
baz=275
M29M Somme Creek 4.64 67 **Pn** **18 21 21.3 +0.2**
M29M Somme Creek 4.64 67 P **Pn** **18 21 21.4 +0.2**
baz=256
I21K Tanana 4.67 337 **Pn** **18 21 21.4 0.0**
I21K IAML 18 22 44.0
comp=E,65nm,1.0s
I21K Tanana 4.67 337 P **Pn** **18 21 21.6 +0.1**
baz=153
N17K Nushagak Hills 4.68 269 **Pn** **18 21 21.4 -0.2**
N17K IAML 18 22 50.7
comp=N,50nm,1.0s
N17K Nushagak Hills 4.68 269 P **Pn** **18 21 21.5 -0.1**
baz=80
PRP Porcupine Dome 4.69 11 Pn **Pn** **18 21 21.4 -0.4**
PRP IAML 18 22 19.6
comp=E,65nm,0.9s
PRP IAML 18 22 39.8
comp=N,77nm,1.2s
PRP Porcupine Dome 4.69 11 P **Pn** **18 21 21.4 -0.4**
baz=193
YUK7 Dusty Glacier 4.71 91 **Pn** **18 21 22.3 +0.2**
P17K Kvichak River 4.72 252 P **Pn** **18 21 22.8 +0.6**
baz=64
OHAK Old Harbor 4.73 220 Pn **Pn** **18 21 22.3 +0.1**
OHAK Old Harbor 4.73 220 P **Pn** **18 21 22.3 +0.1**
OHAK Old Harbor 4.73 220 P **Pn** **18 21 22.5 +0.3**
baz=35
M17K Holitna River 4.74 280 **Pn** **18 21 22.7 +0.3**
M17K IAML 18 22 48.5
comp=N,105nm,0.8s
M17K Holitna River 4.74 280 P **Pn** **18 21 22.4 -0.1**
baz=89
ACHA Angle Creek He 4.76 238 **Pn** **18 21 23.6 +0.8**
J19K Poorman 4.78 313 P **Pn** **18 21 22.5 -0.4**
baz=125
O17K Koliganek Bris 4.82 260 **Pn** **18 21 23.7 +0.2**
O17K Koliganek Bris 4.82 260 P **Pn** **18 21 23.7 +0.2**
baz=71
I26K Coal Creek Min 4.83 23 **Pn** **18 21 23.5 -0.1**
I26K IAML 18 22 39.6
comp=N,76nm,1.1s
I26K IAML 18 22 50.6
comp=E,76nm,0.8s
I26K Coal Creek Min 4.83 23 P **Pn** **18 21 23.5 -0.1**
baz=207
EGAK Eagle 4.86 35 Pn **Pn** **18 21 23.8 -0.3**
EGAK IAML 18 22 45.0
comp=E,60nm,0.9s
EGAK IAML 18 22 50.4
comp=E,72nm,0.7s
EGAK Eagle 4.86 35 P **Pn** **18 21 24.5 +0.5**
baz=221
H24K Noodor Dome 4.90 359 **Pn** **18 21 24.2 -0.4**
H24K IAML 18 22 47.7
comp=E,65nm,1.6s
H24K IAML 18 22 53.8
comp=N,52nm,1.4s
J18K Innoko River 4.92 305 Pn **Pn** **18 21 24.4 -0.5**
J18K Innoko River 4.92 305 P **Pn** **18 21 24.4 -0.5**
baz=116
I20K Naaghedeneel 4.95 324 **Pn** **18 21 25.5 +0.3**
I20K Naaghedeneel 4.95 324 P **Pn** **18 21 25.9 +0.7**
baz=137
DAWY Dawson 4.95 47 Pn **Pn** **18 21 24.4 -0.9**
CNTC Contact Creek 4.96 241 **Pn** **18 21 26.4 +0.9**
Q17K Contact Creek 4.96 241 P **Pn** **18 21 26.4 +0.9**
baz=53
HYT Haines Junctio 4.98 87 Pn **Pn** **18 21 25.8 0.0**
HYT IAML 18 22 52.2
comp=N,45nm,1.1s
HYT Haines Junctio 4.98 87 P **Pn** **18 21 26.2 +0.4**
baz=277
L29M L29M 4.99 60 **Pn** **18 21 25.9 0.0**
L29M IAML 18 22 55.0
comp=N,40nm,1.0s
L29M L29M 4.99 60 P **Pn** **18 21 26.5 +0.6**
baz=249
P29M Windy Craggy 5.12 101 **Pn** **18 21 27.1 -0.6**
P29M IAML 18 22 52.8
comp=E,52nm,0.7s
N30M Aishikik Lake 5.15 80 **Pn** **18 21 27.5 -0.6**
L17K Donlin 5.21 288 **Pn** **18 21 28.5 -0.4**
L17K Donlin 5.21 288 P **Pn** **18 21 28.7 -0.2**
baz=98
H22K Ishtalitna Cre 5.23 343 **Pn** **18 21 29.1 0.0**
H21K Melozitna Rive 5.25 336 **Pn** **18 21 29.1 -0.4**
H21K IAML 18 22 58.3
comp=E,33nm,0.9s
H21K IAML 18 23 00.4
comp=N,40nm,0.9s
H21K Melozitna Rive 5.25 336 P **Pn** **18 21 29.1 -0.4**
baz=151
K17K Iditarod 5.33 294 **Pn** **18 21 30.1 -0.4**
K17K IAML 18 23 01.6
comp=E,58nm,0.9s
K17K IAML 18 23 17.7
comp=N,41nm,1.3s
K17K Iditarod 5.33 294 P **Pn** **18 21 30.1 -0.4**
baz=104
O16K Kokwok River B 5.36 260 **Pn** **18 21 30.7 -0.1**
O16K Kokwok River B 5.36 260 P **Pn** **18 21 30.7 -0.1**
baz=70
I27K Kandik River 5.41 28 **Pn** **18 21 31.9 +0.2**
I27K Kandik River 5.41 28 P **Pn** **18 21 31.9 +0.2**
baz=213
M30M Minto, Yukon 5.42 68 Pn **Pn** **18 21 31.2 -0.6**
N16K Nishlik Lake 5.46 270 **Pn** **18 21 32.3 0.0**
M16K Timber Creek 5.49 276 Pn **Pn** **18 21 32.7 +0.1**
M16K Timber Creek 5.49 276 P **Pn** **18 21 33.0 +0.3**
baz=85
P16K Nushagak River 5.52 254 **Pn** **18 21 33.6 +0.5**
P16K Nushagak River 5.52 254 P **Pn** **18 21 33.6 +0.5**
baz=65
K29M Barlow Dome 5.54 54 **Pn** **18 21 32.8 -0.8**
H20K Anotleneega Mo 5.59 328 **Pn** **18 21 34.1 0.0**
H20K Anotleneega Mo 5.59 328 P **Pn** **18 21 34.1 0.0**
baz=141
GCSA Galena City Sc 5.67 316 **Pn** **18 21 35.3 +0.2**
GCSA Galena City Sc 5.67 316 P **Pn** **18 21 35.5 +0.4**
baz=127
O30N Mendenhall 5.67 87 **Pn** **18 21 34.5 -0.7**
O30N Mendenhall 5.67 87 P **Pn** **18 21 34.6 -0.7**
baz=278
I28M Miner Creek 5.71 35 **Pn** **18 21 36.1 +0.2**
I28M Miner Creek 5.71 35 P **Pn** **18 21 35.8 0.0**
baz=221
L16K Owhat River 5.73 283 Pn **Pn** **18 21 35.6 -0.3**
L16K Owhat River 5.73 283 P **Pn** **18 21 36.1 +0.2**
baz=92
FYU Fort Yukon 5.74 10 Pn **Pn** **18 21 36.1 0.0**
G24K Hadweenzic Riv 5.77 1 Pn **Pn** **18 21 36.3 -0.3**
J17K VABM Dome 5.87 300 **Pn** **18 21 37.1 -0.8**
J17K VABM Dome 5.87 300 P **Pn** **18 21 37.1 -0.8**
baz=109
G23K Bananza Creek 5.87 351 **Pn** **18 21 38.1 +0.1**
G23K Bananza Creek 5.87 351 P **Pn** **18 21 37.7 -0.2**
baz=168
H19K Roundabout Mou 6.06 323 **Pn** **18 21 40.0 -0.4**
H19K Roundabout Mou 6.06 323 P **Pn** **18 21 40.0 -0.4**
baz=135
MAYO Mayo, Yukon 6.11 59 **Pn** **18 21 40.9 -0.3**
N15K Kwethluk River 6.17 268 Pn **Pn** **18 21 42.7 +0.7**
N15K Kwethluk River 6.17 268 P **Pn** **18 21 42.8 +0.7**
baz=77
WHY Whitehorse 6.28 87 Pn **Pn** **18 21 43.3 -0.3**
WHY Whitehorse 6.28 87 P **Pn** **18 21 43.7 +0.1**
baz=279
O15K Ungalikthiuk R 6.33 259 **Pn** **18 21 44.5 +0.3**
O15K Ungalikthiuk R 6.33 259 P **Pn** **18 21 44.5 +0.3**
baz=68
SKAG Skagway 6.34 98 Pn **Pn** **18 21 45.6 +1.3**
J30M Hart River 6.35 50 Pn **Pn** **18 21 45.2 +0.6**
J30M Hart River 6.35 50 P **Pn** **18 21 45.8 +1.1**
baz=240
M15K Kasigluk River 6.37 273 **Pn** **18 21 44.0 -0.7**
M15K Kasigluk River 6.37 273 P **Pn** **18 21 44.4 -0.3**
baz=81
COLD Coldfoot 6.39 351 Pn **Pn** **18 21 45.5 +0.4**
COLD Coldfoot 6.39 351 P **Pn** **18 21 45.2 +0.1**
baz=168
H18K Honhosa River 6.42 316 **Pn** **18 21 45.2 -0.2**
H18K Honhosa River 6.42 316 P **Pn** **18 21 45.4 -0.1**
baz=126
M31M Drury Creek, Y 6.47 73 **Pn** **18 21 46.2 0.0**
J16K Anvik River 6.49 297 Pn **Pn** **18 21 45.6 -0.8**
J16K Anvik River 6.49 297 P **Pn** **18 21 45.4 -1.0**
baz=105
S31K Pelican 6.56 112 Pn **Pn** **18 21 46.7 -0.7**
S31K Pelican 6.56 112 P **Pn** **18 21 46.7 -0.7**
baz=303
F24K Squaw Lake 6.59 359 Pn **Pn** **18 21 47.2 -0.6**
I30M Mount Dempster 6.68 45 **Pn** **18 21 49.5 +0.3**
G19K Purcell Mounta 6.68 325 **Pn** **18 21 49.0 0.0**
G19K Purcell Mounta 6.68 325 P **Pn** **18 21 48.8 -0.3**
baz=136
I17K Unalakleet 6.71 302 Pn **Pn** **18 21 50.1 +0.6**
H29M Whitestone 6.72 34 Pn **Pn** **18 21 48.9 -0.7**
H29M Whitestone 6.72 34 P **Pn** **18 21 49.2 -0.3**
baz=222
K15K Wolf Creek Mou 6.74 288 **Pn** **18 21 49.6 -0.1**
K15K Wolf Creek Mou 6.74 288 P **Pn** **18 21 49.5 -0.2**
baz=95
F21K Alatna River 6.78 341 **Pn** **18 21 49.6 -0.8**
F21K Alatna River 6.78 341 P **Pn** **18 21 50.4 -0.1**
baz=155
H17K Granite Mounta 6.86 311 **Pn** **18 21 51.3 -0.1**
BESE Bessie Mountai 6.90 105 Pn **Pn** **18 21 52.2 +0.1**
F26K Sheenjek River 6.94 11 **Pn** **18 21 52.4 -0.2**
FARO Faro, Yukon 6.96 73 Pn **Pn** **18 21 52.7 -0.3**
M14K Bethel 6.98 275 Pn **Pn** **18 21 53.6 +0.5**
G18K Tagagawik 6.98 320 **Pn** **18 21 53.0 -0.1**
G18K Tagagawik 6.98 320 P **Pn** **18 21 53.4 +0.3**
baz=130
O14K Tigyukauivet M 7.00 262 Pn **Pn** **18 21 54.3 +1.0**
F20K Avaraart Lake 7.06 334 **Pn** **18 21 54.2 0.0**
F20K Avaraart Lake 7.06 334 P **Pn** **18 21 54.3 +0.1**
baz=146
P32M Atlin 7.08 95 Pn **Pn** **18 21 54.1 -0.6**
P32M Atlin 7.08 95 P **Pn** **18 21 54.0 -0.6**
baz=288
N32M Quiet Lake 7.09 82 Pn **Pn** **18 21 54.8 +0.1**
E23K Chandalar 7.18 354 **Pn** **18 21 56.2 +0.3**
E23K Chandalar 7.18 354 P **Pn** **18 21 56.2 +0.3**
baz=172
R32K Eaglecrest 7.20 106 Pn **Pn** **18 21 55.9 -0.2**
E25K Arctic Village 7.25 6 Pn **Pn** **18 21 56.8 -0.1**
JIS Juneau Island 7.26 106 Pn **Pn** **18 21 56.6 -0.4**
JIS Juneau Island 7.26 106 P **Pn** **18 21 57.5 +0.5**
L14K Kuka Creek 7.27 280 Pn **Pn** **18 21 56.9 -0.1**
CHGN Chignik 7.28 235 **Pn** **18 21 57.5 +0.3**
P33M Teslin, Yukon 7.36 89 Pn **Pn** **18 21 57.3 -1.1**
P33M Teslin, Yukon 7.36 89 P **Pn** **18 21 58.5 0.0**
baz=283
F19K Shaleruckim Mo 7.38 327 **Pn** **18 21 58.6 0.0**
E22K Anaktuvuk Pass 7.42 348 **Pn** **18 21 60.0 +0.7**
E22K Anaktuvuk Pass 7.42 348 P **Pn** **18 21 59.5 +0.3**
baz=164
SIT Sitka 7.48 116 Pn **Pn** **18 21 59.2 -0.8**
SIT Sitka 7.48 116 P **Pn** **18 21 59.4 -0.6**
F28M Old Crow 7.49 24 Pn **Pn** **18 22 00.1 -0.1**
F28M Old Crow 7.49 24 P **Pn** **18 22 01.9 +1.7**
baz=210
S32K Killisnoo 7.58 112 Pn **Pn** **18 22 01.4 0.0**
S32K Killisnoo 7.58 112 P **Pn** **18 22 02.0 +0.7**
baz=304
M13K Dall Lake 7.71 273 Pn **Pn** **18 22 02.9 -0.2**
H31M Peel River 7.71 45 Pn **Pn** **18 22 01.8 -1.4**
J14K Nanvaranak Lak 7.71 290 Pn **Pn** **18 22 02.5 -0.6**
E19K Redstone River 7.73 332 **Pn** **18 22 03.4 0.0**
TOLK Toolik Lake Re 7.76 355 Pn **Pn** **18 22 03.8 -0.1**
TOLK Toolik Lake Re 7.76 355 P **Pn** **18 22 05.1 +1.2**
baz=173
G30M tAoh Zraii Nji 7.86 35 Pn **Pn** **18 22 03.8 -1.5**
G16K Koyuk River 7.98 310 Pn **Pn** **18 22 06.8 0.0**
Q32M Nakina River 7.99 98 **Pn** **18 22 06.8 -0.4**
F17K Baldwin Pennin 8.15 318 Pn **Pn** **18 22 09.0 -0.1**
D22K Ayikyak River 8.23 347 Pn **Pn** **18 22 11.0 +0.7**
D24K Happy Valley 8.25 357 Pn **Pn** **18 22 10.1 -0.4**
G31M Satah River 8.40 39 Pn **Pn** **18 22 11.3 -1.2**
D25K Kavik River 8.42 3 Pn **Pn** **18 22 11.6 -1.4**
R33M Jennings River 8.48 93 Pn **Pn** **18 22 13.5 -0.4**
E29M Blow River 8.55 25 **Pn** **18 22 14.7 0.0**
E18K Tukpahlearik C 8.58 325 Pn **Pn** **18 22 16.2 +1.3**
E17K Hotham Inlet 8.72 321 **Pn** **18 22 17.5 +0.6**
E17K Hotham Inlet 8.72 321 P **Pn** **18 22 18.4 +1.5**
baz=128
D19K Kuna River 8.77 334 Pn **Pn** **18 22 17.7 +0.1**
SDPT Sand Point 8.78 236 Pn **Pn** **18 22 18.4 +0.6**
SDPT Sand Point 8.78 236 P **Pn** **18 22 19.2 +1.4**
D27M Malcolm River 8.79 16 Pn **Pn** **18 22 17.8 -0.2**
CNBA Chernabura Isl 8.82 231 Pn **Pn** **18 22 19.1 +0.8**
ANM Nome 8.87 302 Pn **Pn** **18 22 19.9 +0.9**
F31M Tsiigehtchic 8.89 37 **Pn** **18 22 15.0 -4.2**
S34M Telegraph Cree 8.97 103 Pn **Pn** **18 22 20.4 +0.1**
S34M Telegraph Cree 8.97 103 P **Pn** **18 22 21.3 +1.0**
baz=297
F15K North Star Dit 8.98 309 Pn **Pn** **18 22 20.7 +0.2**
U33K Whale Pass 9.02 116 Pn **Pn** **18 22 17.0 -4.1**
B21K Ikpikpuk River 9.16 345 Pn **Pn** **18 22 17.5 -5.5**
DLBC Dease Lake 9.27 98 Pn **Pn** **18 22 17.5 -7.2**
comp=N,0.2nm,0.3s,baz=274,slow=13,SNR=2.2
DLBC Lg Lg 18 24 49.6
comp=N,0.2nm,0.3s,baz=223,slow=27,SNR=1.7
comp=N,0.5nm,0.3s
CRAG Craig 9.44 119 Pn **Pn** **18 22 27.1 +0.3**
INK Inuvik 9.53 33 **Pn** **18 22 27.9 -0.2**
INK Inuvik 9.53 33 Pn **Pn** **18 22 26.4 -1.6**
comp=N,0.2nm,0.3s,baz=240,slow=15,SNR=8.4
INK Lg Lg 18 25 07.4
baz=164,slow=19,SNR=1.8
comp=N,0.8nm,0.7s
C18K Utukok River 9.61 329 Pn **Pn** **18 22 26.9 -2.2**
T35M Bob Quinn 9.84 106 Pn **Pn** **18 22 31.2 -1.1**
B20K Meade River 9.89 341 Pn **Pn** **18 22 30.6 -2.3**
TNA Tin City 10.20 306 Pn **Pn** **18 22 35.2 -1.9**
C16K Lisburne Hills 10.51 322 Pn **Pn** **18 22 41.2 -0.2**
UNV Unalaska Valle 12.36 243 Pn **Pn** **18 23 06.2 -0.6**
UNV Unalaska Valle 12.36 243 P **Pn** **18 23 07.4 +0.6**
A36M Sachs Harbour 14.11 29 Pn **Pn** **18 23 29.3 -1.2**
YKA Yellowknife Ar 15.65 70 Pn **Pn** **18 23 46.1 -5.2**
baz=281,slow=10,SNR=3.3
comp=N,0.3nm,0.8s
FINES FINESS Array B 57.83 4 P **P** **18 30 01.9 -0.3**
comp=N,1.3nm,0.9s,baz=344,slow=9.0,SNR=1.9
comp=N,1.3nm,0.9s
BVAR Borovoye Array 62.38 335 P **P** **18 30 34.9 +1.4**
comp=N,0.2nm,0.5s,baz=24,slow=8.2,SNR=1.9
comp=N,0.2nm,0.5s
KURBB Kurchatov Arra 62.76 329 P **P** **18 30 39.3 +3.3**
comp=N,0.1nm,0.6s,baz=30,slow=6.9,SNR=1.7
comp=N,0.1nm,0.6s
MKAR Makanchi Array 65.25 325 P **P** **18 30 55.2 +2.6**
comp=N,0.1nm,0.5s,baz=35,slow=5.9,SNR=1.8
comp=N,0.1nm,0.5s

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*IDC **20** 18:50:16.9± 1.2, 0.°14N× 123.°69E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=140.9km s-min=20.4km az=66.0*

*DJA **20** 18:50:24.8± 1.2, 0.°5S× 12.°3E± *, h10km± 11km, M4.4/18, mb4.5/13, mB5.0/6, MLv4.5/18, Mw(mB)4.3/6*

ISC 20 18:50:26.8±0.8, 0.°26S±0.°07× 123.°10E±0.°09, h78km, n24, σ1°37/25, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.89**	**354**	P	**Pn**	**18 50 44.9**	**+0.4**
GTOI				S	**Sn**	**18 50 58.6**	**+1.0**
KMSI	**Cibinong**	**1.21**	**47**	P	**Pn**	**18 50 48.8**	**+0.5**
MRSI	**Marisa**	**1.37**	**302**	P	**Pn**	**18 50 48.5**	**-1.8**
TOLI2	**Tolitoli**	**2.69**	**300**	P	**Pn**	**18 51 07.6**	**-0.3**
MPSI	**Mapaga**	**3.25**	**280**	P	**Pn**	**18 51 16.0**	**+0.4**
SANI	**Sanana**	**3.39**	**122**	P	**Pn**	**18 51 16.3**	**-1.2**
SANI	**Sanana**	**3.39**	**122**	P	**Pn**	**18 51 16.3**	**-1.2**
TTSI	**Tana Toraja**	**4.29**	**230**	P	**Pn**	**18 51 29.5**	**-0.2**
TNTI	**Ternate**	**4.39**	**77**	P	**Pn**	**18 51 34.7**	**+3.7**
TNTI	**Ternate**	**4.39**	**77**	P	**Pn**	**18 51 32.5**	**+1.5**
LBMI	**Labuha**	**4.42**	**95**	P	**Pn**	**18 51 32.7**	**+1.3**
NLAI	**Namlea**	**4.98**	**127**	P	**Pn**	**18 51 40.0**	**+1.0**
	57nm,0.6s,0.4nm						

BBSI	**Bau Bau**	**5.22**	**186**	P	**Pn**	**18 51 43.2**	**+0.8**
	28nm,1.0s,0.3nm						
BKB	**Balikpapan**	**6.28**	**261**	P	**Pn**	**18 51 55.8**	**-1.1**
	86nm,0.4s,0.4nm						
BNDI	**Bandanaira**	**8.01**	**122**	P	**Pn**	**18 52 18.8**	**-1.7**
SWI	**Sorong**	**8.18**	**94**	P	**Pn**	**18 52 24.3**	**+1.4**
	12nm,0.7s						
EDFI	**Ende, Flores**	**8.55**	**189**	P	**Pn**	**18 52 29.0**	**+1.0**
	9.3nm,0.6s						
KKM	**Kota Kinabalu**	**9.29**	**312**	P	**Pn**	**18 52 39.8**	**+1.7**
FAKI	**Fak Fak**	**9.52**	**106**	P	**Pn**	**18 52 40.3**	**-0.9**
FAKI	**Fak Fak**	**9.52**	**106**	P	**Pn**	**18 52 40.3**	**-0.9**
WRA	**Warramunga Arr**	**22.45**	**151**	P	**P**	**18 55 18.5**	**-1.1**
	2.2nm,0.7s,baz=332,slow=10,SNR=14						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**25.52**	**156**	P	**P**	**18 55 48.6**	**+0.4**
	1.1nm,0.7s,baz=343,slow=14,SNR=20						
	1.1nm,0.7s						
SONM	**Songino Array**	**50.06**	**345**	P	**P**	**18 59 12.6**	**-1.2**
	0.9nm,0.8s,baz=159,slow=8.8,SNR=8.4						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**58.88**	**328**	P	**P**	**19 00 16.9**	**-0.8**
	0.2nm,0.4s,baz=129,slow=8.2,SNR=6.8						
	0.2nm,0.4s						

*IDC **20** 18:56:34.6±0.8,31°.00N×142°.80E, h0km, mb3.8/14, mbtmp3.8/17, ML3.3/3, MS2.6/3, Error ellipse: s-maj=22.7km s-min=17.2km az=73.0*
*JMA **20** 18:56:35.0±0.2,31°.1N±0°.6×14°3E±°, h54km, MV4.2/34, FAR E OFF IZU ISLANDS*
ISC 20 18:56:38.6±0.8, 31°.18N±0°.05×142°.8E±0°.1, h30km, n32, σ2$19/36, mb3.9/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.16**	**308**	*eS*	**Sn**	**18 58 02.5**	**-0.5**
JHJ	**Hachijo jima 2**	**3.19**	**308**	Pn	**Pn**	**18 57 26.0**	**-0.7**
	12nm,0.3s,baz=247,slow=21,SNR=1.4						
JHJ				Sn	**Sn**	**18 58 02.6**	**-1.1**
	38nm,0.3s,baz=130,slow=23,SNR=6.2						
	133nm,0.8s						
BSO1	**Boso 1**	**3.77**	**337**	P	**Pn**	**18 57 34.4**	**+0.1**
BSO1				*eS*	**Sn**	**18 58 17.6**	**+0.1**
JMYK	**Miyake Tsubota**	**3.95**	**317**	*eS*	**Sn**	**18 58 23.9**	**+1.3**
BSO3	**Boso 3**	**4.08**	**333**	*eP*	**Pn**	**18 57 38.6**	**-0.1**
BSO3				*eS*	**Sn**	**18 58 26.3**	**+1.0**
CBIJ	**Chichi jima**	**4.11**	**187**	*eP*	**Pn**	**18 57 35.4**	**-4.0**
CBIJ				*eS*	**Sn**	**18 58 19.3**	**-7.1**
JCJ	**Chichijima**	**4.11**	**187**	Pn	Pn	18 57 31.8	-7.6
	8.8nm,0.3s,baz=165,slow=23,SNR=7.1						
JCJ				Sn	Sn	18 58 14.0	-12
	27nm,0.3s,baz=276,slow=22,SNR=3.3						
BSO4	**Boso 4**	**4.31**	**332**	*eS*	**Sn**	**18 58 32.1**	**+0.8**
JOD2	**Odawara 2**	**5.11**	**324**	P	**Pn**	**18 57 52.8**	**-0.3**
JOD2				*eS*	**Sn**	**18 58 50.3**	**-0.8**
JYT	**Yasato**	**5.47**	**338**	*eS*	**Sn**	**18 58 59.1**	**-0.8**
JHU	**Hanno**	**5.49**	**329**	*eP*	**Pn**	**18 57 58.2**	**-0.2**
JHU				*eS*	**Sn**	**18 58 57.1**	**-3.4**
JHO	**Hitachi**	**5.71**	**342**	*eP*	**Pn**	**18 58 00.5**	**-0.9**
JHO				*eS*	**Sn**	**18 59 01.9**	**-4.1**
JRY	**Ryogami san**	**5.80**	**327**	*eP*	**Pn**	**18 58 02.5**	**-0.2**
JRY				*eS*	**Sn**	**18 59 07.3**	**-0.9**
JNY	**Yasuok**	**5.85**	**317**	*eP*	**Pn**	**18 58 06.0**	**+2.6**
JAG	**Ashikaga**	**5.91**	**333**	*eP*	**Pn**	**18 58 03.9**	**-0.3**
JFK	**Kawauchi**	**6.36**	**346**	S	**Sn**	**18 59 16.4**	**-5.6**
MJAR	**Matsushiro Arr**	**6.55**	**326**	Pn	**Pn**	**18 58 13.2**	**+0.2**
	0.3nm,0.3s,baz=149,slow=9.8,SNR=15						
MJAR				Sn	**Sn**	**18 59 26.5**	**-0.2**
	0.3nm,0.3s,baz=158,slow=21,SNR=6.8						
MJAR				LR	LR	19 01 10.7	
	comp=Z,32nm,20.1s,baz=212,slow=41						
	1.9nm,0.3s						
KSRS	**Korea Array**	**13.77**	**301**	Pn	P	18 59 54.4	-5.5
	0.2nm,0.3s,baz=112,slow=13,SNR=6.9						
KSRS				LR	LR	19 05 02.6	
	comp=Z,18nm,18.8s,baz=95,slow=36						
	2.4nm,0.7s						
KLR	**Kul'dur**	**19.86**	**338**	P	Pn	19 01 08.8	0.0
	0.9nm,0.8s,baz=145,slow=16,SNR=1.8						
	0.9nm,0.8s						
SONM	**Songino Array**	**32.26**	**312**	P	**P**	**19 03 06.8**	**+2.2**
	1.5nm,0.7s,baz=123,slow=8.4,SNR=12						
	1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.50**	**263**	P	**P**	**19 04 23.4**	**+0.1**
	0.7nm,0.7s,baz=60,slow=7.1,SNR=8.4						
CMAR				LR	LR	19 22 31.5	
	comp=Z,11nm,18.1s,baz=215,slow=38						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**46.81**	**317**	P	**P**	**19 05 06.6**	**+1.2**
	0.5nm,0.6s,baz=106,slow=9.2,SNR=3.6						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**48.36**	**307**	P	**P**	**19 05 19.2**	**+1.6**
	2.7nm,0.7s,baz=89,slow=9.2,SNR=29						
	2.7nm,0.7s						
KURBB	**Kurchatov Arra**	**50.62**	**312**	P	**P**	**19 05 35.9**	**+1.1**
	1.1nm,0.5s,baz=88,slow=7.2,SNR=9.7						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**51.48**	**190**	P	**P**	**19 05 40.4**	**-1.0**
	3.0nm,0.6s,baz=8.8,slow=7.8,SNR=17						
	3.0nm,0.6s						
ILAR	**Eielson Array**	**53.91**	**30**	P	**P**	**19 05 59.6**	**+0.6**
	0.5nm,0.8s,baz=266,slow=6.1,SNR=6.1						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**55.20**	**190**	P	**P**	**19 06 07.8**	**-0.9**
	0.8nm,0.6s,baz=6.4,slow=6.3,SNR=10						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**55.44**	**316**	P	**P**	**19 06 11.4**	**+1.2**
	1.2nm,0.7s,baz=89,slow=7.7,SNR=5.8						
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**68.32**	**29**	P	P	19 07 39.6	+2.9
	0.2nm,0.5s,baz=292,slow=6.8,SNR=3.5						
	0.2nm,0.5s						
KBZ	**Khabaz**	**75.62**	**312**	P	**P**	**19 08 22.4**	**+1.7**
	1.7nm,0.9s,baz=117,slow=2.0,SNR=6.8						
	1.7nm,0.9s						
NVAR	**Mina Array Bea**	**77.61**	**53**	P	**P**	**19 08 32.9**	**+0.5**
	0.4nm,0.7s,baz=300,slow=6.1,SNR=2.6						
	0.4nm,0.7s						
NOA	**NORSAR Array B**	**80.02**	**338**	P	P	19 08 48.0	+3.1
	0.8nm,0.9s,baz=43,slow=7.2,SNR=2.1						
	0.8nm,0.9s						

IDC 20 18:57:48.7±662.0, 22°.54S×70°.22W, h0km, Error ellipse: s-maj=312.2km s-min=173.9km az=77.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I14CL	**ROBINSON CRUSO**	**13.40**	**212**	I	I	20 17 30.0	
	baz=37,slow=322,SNR=1.0						
I20EC	**Galapagos**	**29.32**	**315**	I	I	21 57 10.0	
	baz=141,slow=316,SNR=3.0						
I13CL	**EASTER ISLAND**	**35.72**	**255**	I	I	22 36 30.0	
	baz=88,slow=312,SNR=0.7						

*IDC **20** 19:00:04.2±2.5,6°.41S×130°.45E, h0km, mb3.2/1, mbtmp3.5/3, ML3.8/2, Error ellipse: s-maj=140.6km s-min=33.2km az=70.0*
ISC 20 19:00:18.0±1.3, 6°.9S±0°.1×130°.4E±0°.4, h150km, n10, σ3$00/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.42**	**142**	P	**Pn**	**19 00 47.1**	**+0.4**
BNDI	**Bandanaira**	**2.38**	**348**	P	**Pn**	**19 00 54.9**	**-2.7**
FAKI	**Fak Fak**	**4.32**	**25**	P	Pn	19 01 17.3	-5.2
DRS	**Darwin Rock St**	**5.55**	**175**	P	**Pn**	**19 01 40.4**	**+1.6**
MTN	**Manton Dam**	**5.99**	**173**	P	**Pn**	**19 01 46.5**	**+1.9**
KDU	**Kakadu**	**6.13**	**161**	P	**Pn**	**19 01 47.3**	**+0.8**
SOEI	**Soe**	**6.72**	**244**	P	Pn	19 01 57.4	+2.9
WRA	**Warramunga Arr**	**13.55**	**164**	Pn	**Pn**	**19 03 23.4**	**-0.8**
	0.6nm,0.3s,baz=348,slow=14,SNR=23						
WRA				Sn	**Sn**	**19 05 49.1**	**-5.3**
	0.6nm,0.3s,baz=330,slow=23,SNR=9.1						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**17.04**	**169**	P	**Pn**	**19 04 09.6**	**+2.2**
	0.3nm,0.3s,baz=344,slow=9.3,SNR=14						
ASAR				S	**Sn**	**19 07 15.0**	**-3.2**
	0.2nm,0.4s,baz=318,slow=18,SNR=5.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**68.33**	**327**	P	**P**	**19 11 05.2**	**+2.1**
	0.1nm,0.3s,baz=118,slow=7.1,SNR=2.5						
	0.1nm,0.3s						

*NEIC **20** 19:00:27.6±1.9, 43°.76N±0°.05×105°.40W±0°.08, h0km±1km, ML3.3/92, Error ellipse: s-maj=10.2km s-min=8.0km az=74.0*
*IDC **20** 19:00:28.1±1.3, 43°.83N×105°.49W, h0km, mb3.8/1, mbtmp3.4/7, ML2.9/5, MS3.3/1, Error ellipse: s-maj=25.5km s-min=8.6km az=148.0*
ISC 20 19:00:28.2±0.9, 43°.82N±0°.06×105°.35W±0°.06, h0km, n64, σ1$25/61, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**72**		**Pg**	**19 00 47.4**	**0.0**
K22A	**Casper**	**1.44**	**217**		**Pn**	**19 00 54.4**	**-1.4**
K22A				IAML		19 01 19.7	
	comp=E,605nm,0.3s						
PHWY	**Pilot Hill**	**2.51**	**182**		**Pn**	**19 01 11.3**	**+0.8**
PHWY				IAML		19 01 52.3	
	comp=E,95nm,0.7s						
RWWY	**Rawlins**	**2.53**	**213**		**Pn**	**19 01 10.9**	**+0.2**
LAO	**LASA Array**	**2.94**	**348**		**Pn**	**19 01 17.6**	**+1.4**
N23A	**Red Feather La**	**2.95**	**189**	Pn	**Pn**	**19 01 17.2**	**+0.6**
N23A				IAML		19 02 01.8	
	comp=E,93nm,0.4s						
N23A				IAML		19 02 03.5	
	comp=N,92nm,0.4s						
RLMT	**Red Lodge**	**3.09**	**296**		**Pn**	**19 01 19.6**	**+1.1**
RLMT				IAML		19 02 14.5	
	comp=N,81nm,0.3s						
RLMT				IAML		19 02 15.3	
	comp=N,85nm,0.3s						
PD31	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**19 01 21.6**	**+1.0**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn	**Pn**	**19 01 22.1**	**+1.6**
	comp=N,6.3nm,0.3s,baz=67,slow=14,SNR=79						
PDAR				Lg	Lg	19 02 06.6	
	comp=N,35nm,0.3s,baz=80,slow=32,SNR=16						
BRIGG	**Briggsdale**	**3.32**	**166**		**Pn**	**19 01 22.6**	**+1.0**
YMP	**Mirror Lake Pl**	**3.57**	**287**		**Pn**	**19 01 25.7**	**+0.6**
LKWY	**Lake**	**3.71**	**283**		**Pn**	**19 01 26.5**	**-0.4**
LKWY				IAML		19 01 54.2	
	comp=N,46nm,0.6s						
OGNE	**Ogallala**	**3.78**	**138**		**Pn**	**19 01 28.5**	**+0.7**
H17A	**Grant Village**	**3.81**	**281**	Pn	**Pn**	**19 01 29.9**	**+1.6**
H17A				IAML		19 02 32.9	
	comp=N,38nm,0.6s						
H17A				IAML		19 02 35.6	
	comp=E,32nm,1.2s						
LOHW	**Long Hollow**	**3.81**	**269**		**Pn**	**19 01 29.9**	**+1.5**
FLWY	**Flagg Ranch**	**3.87**	**276**		**Pn**	**19 01 30.4**	**+1.2**
FLWY				IAML		19 02 38.3	
	comp=E,53nm,2.2s						
FLWY				IAML		19 02 47.6	
	comp=E,42nm,1.3s						
MOOW	**Moose Ponds**	**3.90**	**271**		**Pn**	**19 01 31.7**	**+2.1**
YNR	**Norris Junctio**	**3.93**	**285**		**Pn**	**19 01 30.8**	**+0.8**
YNR				IAML		19 02 41.9	
	comp=E,25nm,0.8s						
SNOW	**Snow King Moun**	**3.94**	**267**		**Pn**	**19 01 31.3**	**+1.2**
SNOW				IAML		19 02 47.7	
	comp=E,45nm,1.2s						
SNOW				IAML		19 02 53.0	
	comp=E,44nm,1.0s						
YFT	**Old Faithful**	**4.00**	**281**		**Pn**	**19 01 31.4**	**+0.4**
YFT				IAML		19 02 41.4	
	comp=E,25nm,0.8s						
ISCO	**Idaho Springs**	**4.02**	**183**	Pn	**Pn**	**19 01 31.3**	**0.0**
REDW	**Red Top Meadow**	**4.02**	**265**		**Pn**	**19 01 30.7**	**-0.5**
IMW	**Indian Meadow**	**4.04**	**273**		**Pn**	**19 01 33.6**	**+2.0**
IMW				IAML		19 01 59.0	
	comp=E,46nm,0.5s						
IMW				IAML		19 02 50.8	
	comp=E,31nm,0.9s						
YHH	**Holmes Hill**	**4.06**	**286**		**Pn**	**19 01 35.2**	**+3.3**
TPAW	**Teton Pass**	**4.08**	**267**		**Pn**	**19 01 32.8**	**+0.8**
TPAW				IAML		19 02 54.7	
	comp=E,32nm,0.9s						
FXWY	**Fox Creek**	**4.12**	**269**		**Pn**	**19 01 34.6**	**+2.0**
O20A	**White River Ci**	**4.26**	**211**	Pn	**Pn**	**19 01 35.4**	**+0.9**
O20A				IAML		19 02 57.6	
	comp=E,41nm,0.9s						
E28A	**Huff**	**4.30**	**48**		**Pn**	**19 01 36.5**	**+1.6**
YHL	**Hebgen Lake**	**4.31**	**286**		**Pn**	**19 01 36.2**	**+0.9**
YHL				IAML		19 02 51.6	
	comp=N,31nm,1.1s						
YHL				IAML		19 02 56.3	
	comp=E,33nm,1.1s						
AHID	**Auburn Hatcher**	**4.32**	**258**		**Pn**	**19 01 36.4**	**+1.0**
AHID				IAML		19 02 53.0	
	comp=E,38nm,0.8s						
AHID				IAML		19 03 02.9	
	comp=E,38nm,1.0s						
K30B	**Basset**	**4.35**	**103**		**Pn**	**19 01 37.9**	**+2.3**
RDMU	**Red Mountain**	**4.51**	**225**		**Pn**	**19 01 40.1**	**+2.2**
RDMU				IAML		19 02 55.8	
	comp=E,38nm,1.1s						
RDMU				IAML		19 03 00.7	
	comp=N,26nm,1.3s						
DGMT	**Dagmar**	**4.72**	**9**		**Pn**	**19 01 43.3**	**+2.5**
SMCO	**Snowmass**	**4.79**	**195**		**Pn**	**19 01 41.4**	**-0.6**
SMCO				IAML		19 03 00.7	
	comp=N,28nm,0.3s						
BOZ	**Bozeman (W)**	**4.81**	**294**		**Pn**	**19 01 42.1**	**0.0**
BOZ				IAML		19 03 05.3	
	comp=N,23nm,0.7s						
BOZ				IAML		19 03 06.2	
	comp=N,18nm,0.7s						
Q24A	**Divide**	**4.85**	**178**		**Pn**	**19 01 42.6**	**-0.1**
HWUT	**Hardware Ranch**	**5.08**	**246**		**Pn**	**19 01 45.3**	**-0.5**
EGMT	**Eagleton**	**5.21**	**325**		**Pn**	**19 01 48.3**	**+0.9**
KSCO	**Kaye Shedlock'**	**5.22**	**156**		**Pn**	**19 01 47.0**	**-0.7**
P18A	**Preston Nutter**	**5.56**	**223**		**Pn**	**19 01 52.5**	**+0.1**
MDND	**Maddock**	**5.69**	**43**		Pn	19 02 00.2	+6.2
LYMT	**Lyon Mountain**	**5.81**	**305**		**Pn**	**19 01 56.9**	**+1.0**
HVU	**Hansel Valley**	**5.83**	**252**		**Pn**	**19 01 56.0**	**0.0**
SRU	**San Rafael Swe**	**6.10**	**221**	Pn	**Pn**	**19 01 59.6**	**-0.2**
S22A	**4UR Ranch, Cre**	**6.17**	**191**	Pn	**Pn**	**19 02 02.1**	**+1.3**
OVMT	**Ovando**	**6.28**	**304**		**Pn**	**19 02 03.5**	**+1.3**
BPMT	**Black Pine Rid**	**6.30**	**297**		**Pn**	**19 02 03.6**	**+1.0**
TMUT	**Trail Mountain**	**6.30**	**226**		**Pn**	**19 02 03.7**	**+1.1**
ECSD	**EROS Data Cent**	**6.33**	**88**		**Pn**	**19 02 02.4**	**-0.4**
BGU	**Big Grassy Mou**	**6.38**	**246**	Pn	**Pn**	**19 02 05.3**	**+1.8**
Q16A	**Castle Valley**	**6.56**	**224**		**Pn**	**19 02 06.2**	**0.0**
DUG	**Dugway, Tooele**	**6.63**	**239**		**Pn**	**19 02 07.2**	**+0.2**
T25A	**Trinidad**	**6.71**	**174**		**Pn**	**19 02 06.5**	**-1.7**
MVCO	**Mesa Verde**	**7.02**	**201**		**Pn**	**19 02 13.3**	**+0.8**
HMU	**Henry Mountain**	**7.15**	**217**		**Pn**	**19 02 13.6**	**-0.6**
MSU	**Marysvale**	**7.38**	**226**		**Pn**	**19 02 17.4**	**0.0**
ELK	**Elko**	**7.95**	**251**	Pn	**Pn**	**19 02 26.6**	**+1.4**
	comp=N,0.7nm,0.3s,baz=60,slow=14,SNR=12						
ELK				Lg	Lg	19 04 35.4	
	comp=N,0.1nm,0.3s,baz=131,slow=11,SNR=2.1						
	comp=N,1.1nm,0.3s						
I10CA	**LAC DU BONNET**	**9.02**	**42**	I	I	19 52 27.9	
	comp=N,0.2nm,1.1s,baz=222,slow=332,SNR=6.2						
ULM	**Lac du Bonnet**	**9.12**	**42**	Pn	**Pn**	**19 02 40.2**	**-0.8**
	comp=N,0.5nm,0.3s,baz=231,slow=12,SNR=4.4						
ULM				Lg	Lg	19 05 07.5	
	comp=N,0.2nm,0.3s,baz=139,slow=19,SNR=2.3						
	comp=N,1.5nm,0.4s						
NEW	**Newport**	**9.31**	**303**	Pn	**Pn**	**19 02 41.4**	**-2.3**
	comp=N,0.1nm,0.3s,baz=73,slow=17,SNR=2.1						
NEW				Lg	Lg	19 05 12.4	
	comp=N,0.1nm,0.3s,baz=38,slow=18,SNR=1.8						
	comp=N,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**19 03 09.7**	**+0.7**
	comp=N,0.1nm,0.3s,baz=63,slow=12,SNR=3.9						
	comp=N,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**19.48**	**347**	P	**P**	**19 04 56.3**	**0.0**
	comp=N,0.1nm,0.3s,baz=150,slow=13,SNR=4.3						
	comp=N,0.2nm,0.5s						
ROSC	**El Rosal**	**47.48**	**136**	LR	LR	19 32 08.8	
	comp=N,29nm,18.8s,baz=93,slow=40						
MKAR	**Makanchi Array**	**89.52**	**355**	P	**P**	**19 13 27.2**	**0.0**
	comp=N,0.3nm,0.6s,baz=16,slow=5.1,SNR=5.3						
	comp=N,0.3nm,0.6s						

*IDC **20** 19:03:45.5±2.2,8°.23S×157°.09E, h0km, mb3.5/6, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=77.7km s-min=25.5km az=115.0*
ISC 20 19:03:51.0±1.9, 8°.2S±0°.2×157°.1E±0°.4, h35km, n7, σ0$86/7, mb3.5/6, Bougainville-Solomon Islands region

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

CTA	**Charters Tower**	**15.75**	**220**	Pn	**Pn**	**19 07 31.3**	**+0.9**
	0.1nm,0.3s,baz=28,slow=12,SNR=0.8						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**24.88**	**240**	P	**P**	**19 09 10.9**	**+0.2**
	0.4nm,0.8s,baz=70,slow=9.9,SNR=4.0						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**26.97**	**233**	P	**P**	**19 09 29.1**	**-0.5**
	0.3nm,0.8s,baz=58,slow=12,SNR=1.6						
	0.3nm,0.8s						
STKA	**Stephens Creek**	**27.57**	**209**	P	**P**	**19 09 34.1**	**-0.7**
	1.0nm,0.6s,baz=16,slow=15,SNR=3.0						
	1.0nm,0.6s						
SONM	**Songino Array**	**71.49**	**327**	P	**P**	**19 15 08.8**	**+0.5**
	0.6nm,0.7s,baz=135,slow=6.1,SNR=5.4						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**83.78**	**21**	P	**P**	**19 16 16.7**	**+0.4**
	0.3nm,0.9s,baz=216,slow=7.5,SNR=2.6						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**85.69**	**318**	P	**P**	**19 16 25.4**	**-0.9**
	0.2nm,0.6s,baz=97,slow=7.4,SNR=4.2						
	0.2nm,0.6s						

*AFAD **20** 19:14:55.0±0.0, 35°.11N×26°.81E, h3km±9km, MW3.8*
*IDC **20** 19:14:55.5±1.0, 35°.19N×26°.80E, h0km, mb3.9/14, mbtmp3.8/19, ML3.5/5, Error ellipse: s-maj=22.3km s-min=15.8km az=177.0*
*ISK **20** 19:14:58.7, 35°.12N×26°.87E, h15km, ML3.5/22*
*THE **20** 19:14:59.4, 35°.13N×26°.85E, h0km±1km, ML3.6/6, Error ellipse: s-maj=4.6km s-min=0.9km az=151.0*
*ATH **20** 19:15:00.8, 35°.21N×26°.79E, h5km±1km, ML3.4/12, Error ellipse: s-maj=3.1km s-min=0.8km az=152.0*
*GII **20** 19:15:01.8±0.4, 34°.91N±0°.03×27°.11E±0°.01, h30km, Mws3.5, confirmed*
ISC 20 19:14:55.2±1.3, 34°.89N±0°.04×26°.84E±0°.02, h8km±8km, n166, σ1$64/196, mb3.9/14, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.56**	**294**	Pg	**Pn**	**19 15 09.8**	**+0.3**
ZKR				Sg	**Sn**	**19 15 17.8**	**-1.2**
ZKR	**Zakros**	**0.56**	**294**	P	**Pn**	**19 15 09.4**	**0.0**
ZKR				S	**Sn**	**19 15 18.7**	**-0.3**
	7µm,0.3s						
ZKR	**Zakros**	**0.56**	**294**	P	**Pn**	**19 15 09.5**	**0.0**
ZKR				S	**Sn**	**19 15 17.5**	**-1.5**
ZKR				AML	AML	19 15 19.5	
	comp=N,11015µm,0.5s						
ZKR				AML	AML	19 15 19.7	
	comp=E,18615µm,0.2s						
KARP	**Karpathos**	**0.71**	**22**	Pg	**Pg**	**19 15 08.9**	**+0.1**
KARP				Sg	**Sg**	**19 15 16.0**	**-2.0**
KARP	**Karpathos**	**0.71**	**22**	P	**Pg**	**19 15 09.1**	**+0.3**
KARP				S	**Sg**	**19 15 17.7**	**-0.3**
	comp=E,17µm,0.3s						
KARP	**Karpathos**	**0.71**	**22**	P	**Pg**	**19 15 09.3**	**+0.5**
KARP				S	**Sg**	**19 15 16.0**	**-2.0**
KARP				AML	AML	19 15 18.6	
	comp=N,29681µm,0.2s						
KARP				AML	AML	19 15 18.9	
	comp=E,38046µm,0.4s						
FRMA	**Ierapetra Chan**	**0.92**	**278**	P	**Pn**	**19 15 14.5**	**+0.1**
FRMA				S	**Sn**	**19 15 28.3**	**+0.5**
	comp=E,2µm,0.5s						
FRMA	**Ierapetra Chan**	**0.92**	**278**	P	**Pn**	**19 15 14.7**	**+0.3**
FRMA				S	**Sn**	**19 15 26.4**	**-1.4**
FRMA				AML	AML	19 15 30.2	
	comp=E,15218µm,0.5s						
FRMA				AML	AML	19 15 32.1	
	comp=N,12685µm,0.5s						
KSTL	**Kastelli Herak**	**1.51**	**286**	P	**Pg**	**19 15 23.5**	**-0.6**
KSTL				S	**Sn**	**19 15 40.9**	**-1.5**
	comp=N,522nm,0.5s						
KSTL	**Kastelli Herak**	**1.51**	**286**	P	**Pg**	**19 15 23.5**	**-0.6**
KSTL				S	**Sn**	**19 15 39.9**	**-2.5**
KSTL				AML	AML	19 15 45.9	
	comp=E,1939µm,0.4s						
KSTL				AML	AML	19 15 47.5	
	comp=N,4203µm,0.5s						
IDI	**Anoyia**	**1.65**	**284**	Pn	**Pg**	**19 15 28.7**	**+1.9**
IDI	**Anoyia**	**1.65**	**284**	P	**Pg**	**19 15 29.3**	**+2.5**
IDI	**Anoyia**	**1.65**	**284**	P	**Pg**	**19 15 29.2**	**+2.4**
IDI				S	**Sg**	**19 15 47.9**	**-0.3**
IDI				AML	AML	19 15 59.9	
	comp=E,992µm,0.5s						
IDI				AML	AML	19 16 00.4	
	comp=N,1406µm,0.5s						
ARG	**Arkhangelos**	**1.69**	**38**	Pn	**Pb**	**19 15 26.9**	**+0.4**
ARG	**Arkhangelos**	**1.69**	**38**	P	**Pb**	**19 15 26.8**	**+0.3**
ARG				S	**Sn**	**19 15 47.2**	**+0.4**
	comp=N,1µm,0.6s						
ARG	**Arkhangelos**	**1.69**	**38**	P	**Pb**	**19 15 27.2**	**+0.7**
ARG				AML	AML	19 15 54.0	
	comp=N,2603µm,0.7s						
ARG				AML	AML	19 15 54.1	
	comp=E,3107µm,0.7s						
TMBK	**Timbaki Herakl**	**1.71**	**277**	P	**Pg**	**19 15 30.4**	**+2.4**
NISR	**Nisiros**	**1.73**	**8**	P	**Pn**	**19 15 25.9**	**+0.3**
NISR				S	**Sn**	**19 15 46.7**	**-1.2**
	comp=E,2µm,0.5s						
NISR	**Nisiros**	**1.73**	**8**	P	**Pn**	**19 15 25.8**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.85**	**15**	P	**Pn**	**19 15 27.6**	**+0.4**
YAZI				S	**Sn**	**19 15 50.8**	**-0.1**
SANT	**Santorini**	**1.86**	**323**	Pn	**Pb**	**19

SMG	**Samos**	**2.81**	**360**	P	**Pn**	19 15 40.8	+0.3
SMG				AML	AML	19 16 28.1	
	comp=E,364μm,0.4s						
SMG				AML	AML	19 16 32.3	
	comp=N,278μm,0.5s						
GCAM	**G?zelcaml?**	**2.82**	**6**	P	**Pn**	19 15 40.8	+0.3
CAME	**Cameli-Denizli**	**2.86**	**44**	Pn	**Pn**	19 15 42.9	+1.6
KNIK	**Mula-Seydike**	**2.95**	**48**	P	**Pn**	19 15 44.2	+1.7
DNZT	**Denizli-Tavas-**	**2.97**	**36**	P	**Pn**	19 15 43.9	+1.2
DNZT				P	**Pb**	19 15 44.2	-4.1
DNZT				S	**Sn**	19 16 22.3	+3.8
CAEL	**Denizli, Camel**	**3.00**	**41**	P	**Pn**	19 15 44.6	+1.5
CAEL				S	**Sg**	19 16 34.3	+2.8
ANKY	**Antikythira Is**	**3.05**	**290**	P	**Pb**	19 15 47.9	-1.8
TAVA	**DENIZLI_Tavas**	**3.07**	**32**	P	**Pn**	19 15 45.0	+1.0
TAVA				S	**Sb**	19 16 26.2	-1.5
ELL	**Elmali**	**3.11**	**52**	Pn	**Pn**	19 15 46.7	+2.1
ESEN	**Aydn-Nazilli**	**3.15**	**22**	P	**Pn**	19 15 46.0	+1.0
ESEN				S	**Sn**	19 16 21.7	-1.0
DGB	**zmir**	**3.16**	**1**	P	**Pn**	19 15 45.7	+0.6
GOLH	**Golhisar**	**3.21**	**42**	P	**Pn**	19 15 47.9	+1.9
APMY	**Acipayam-Deniz**	**3.25**	**37**	Pn	**Pn**	19 15 47.6	+1.0
DNIZ	**Denizli-Tavas-**	**3.26**	**32**	P	**Pn**	19 15 47.5	+0.9
ZEYE	**Izmir, Urla-Ze**	**3.35**	**355**	P	**Pn**	19 15 47.5	-0.4
IZMR	**zmir-demi**	**3.36**	**15**	P	**Pn**	19 15 48.7	+0.7
IZMR				S	**Sn**	19 16 31.2	+3.2
URLA	**Izmir**	**3.47**	**357**	Pn	**Pn**	19 15 50.7	+1.2
URLA	**Izmir**	**3.47**	**357**	P	**Pn**	19 15 49.8	+0.3
KIRA	**zmir-Kiraz**	**3.53**	**20**	P	**Pn**	19 15 51.2	+0.8
CHOS	**Chios island**	**3.55**	**350**	Pn	**Pn**	19 15 51.7	+1.1
CHOS	**Chios island**	**3.55**	**350**	P	**Pn**	19 15 51.1	+0.5
INCE	**Denizli-Bozkur**	**3.58**	**37**	P	**Pn**	19 15 51.6	+0.6
VLI	**Veliai**	**3.66**	**301**	P	**Pn**	19 15 54.2	+2.1
VLI	**Veliai**	**3.66**	**301**	P	**Pn**	19 15 54.3	+2.1
VLI				AML	AML	19 16 45.8	
	comp=E,278μm,0.5s						
VLI				AML	AML	19 16 48.8	
	comp=N,405μm,0.9s						
KARB	**zmir-Karabur**	**3.78**	**355**	P	**Pn**	19 15 53.1	-0.7
BRDR	**BURDUR-Merkez**	**3.82**	**42**	P	**Pn**	19 15 56.6	+2.2
MANT	**Manisa**	**3.85**	**20**	P	**Pn**	19 15 55.1	+0.2
KRND	**KRANIDI**	**3.89**	**311**	P	**Pn**	19 15 58.1	+2.9
KRND	**KRANIDI**	**3.89**	**311**	P	**Pn**	19 15 58.1	+2.9
ATHU	**Athens Univers**	**3.94**	**322**	P	**Pn**	19 15 58.2	+2.3
ATHU				AML	AML	19 16 47.0	
	comp=E,57μm,0.6s						
ATHU				AML	AML	19 16 47.0	
	comp=N,74μm,0.8s						
DION	**Dionisos Attik**	**3.95**	**324**	P	**Pn**	19 15 57.9	+1.8
PASA	**Karahalli, USA**	**4.05**	**31**	P	**Pn**	19 15 57.6	0.0
KYMI	**Kymi, Euboea I**	**4.34**	**330**	P	**Pn**	19 16 03.3	+1.9
SIGR	**SIGRI**	**4.38**	**350**	P	**Pn**	19 16 02.2	+0.2
VIL2	**Platees**	**4.39**	**320**	P	**Pn**	19 16 04.1	+1.9
LTK	**Loutraki**	**4.42**	**316**	P	**Pn**	19 16 04.8	+2.2
THAL	**Thalero**	**4.61**	**314**	P	**Pn**	19 16 08.8	+3.7
GUR	**Goura**	**4.73**	**311**	P	**Pn**	19 16 10.7	+3.7
KLV	**Kalavryta, Ach**	**4.92**	**311**	P	**Pn**	19 16 12.2	+2.7
DRO	**Drossia**	**5.14**	**308**	P	**Pn**	19 16 15.9	+3.4
EFP	**Efpalio**	**5.31**	**313**	P	**Pn**	19 16 18.8	+4.1
CSS	**Mathiatis**	**5.33**	**87**	P	**Pn**	19 16 15.8	+0.7
CSS	**Mathiatis**	**5.33**	**87**	S	**Sn**	19 17 14.9	-1.8
ANX	**Ano Chora**	**5.41**	**315**	P	**Pn**	19 16 20.2	+4.0
AGG	**Agios Georgios**	**5.48**	**320**	P	**Pn**	19 16 19.8	+2.6
MAKR	**Makrakomi, Fth**	**5.58**	**319**	P	**Pn**	19 16 21.8	+3.2
BRTR	**Keskin Array B**	**7.25**	**46**	Pn	**Pn**	19 16 41.8	+0.2
	comp=N,0.2nm,0.3s,baz=223,slow=14,SNR=6.6						
	comp=N,0.8nm,0.5s						
SLTI	**Sal'it**	**7.33**	**109**	P	**Pn**	19 16 44.6	+2.0
SLTI	**Sal'it**	**7.33**	**109**	S	**Sn**	19 18 04.5	-1.6
MMC7	**Mount Meron ar**	**7.34**	**102**	P	**Pn**	19 16 45.7	+2.9
MMA0B	**Mount Meron ar**	**7.36**	**102**	S	**Sn**	19 18 05.5	-1.2
MMA0B	**Mount Meron ar**	**7.36**	**102**	P	**Pn**	19 16 45.0	+2.0
MMAI	**Mount Meron Ar**	**7.36**	**102**	Pn	**Pn**	19 16 45.6	+2.7
	comp=N,1.5nm,0.3s,baz=296,slow=12,SNR=9.3						
MMAI				Sn	**Sn**	19 18 05.2	-1.4
	comp=N,3.6nm,0.3s,baz=303,slow=22,SNR=6.9						
	comp=N,0.8nm,0.3s						
KZIT	**Kziot**	**7.49**	**120**	S	**Sn**	19 18 09.0	-1.0
KZIT	**Kziot**	**7.49**	**120**	P	**Pn**	19 16 46.7	+1.9
AMAZ	**Amatzia**	**7.55**	**114**	P	**Pn**	19 16 46.5	+1.0
AMAZ	**Amatzia**	**7.55**	**114**	P	**Pn**	19 16 47.6	+2.1
AMAZ	**Amatzia**	**7.55**	**114**	S	**Sn**	19 18 10.0	-1.4
NATI	**Neve Ativ**	**7.56**	**100**	P	**Pn**	19 16 47.6	+2.0
NATI	**Neve Ativ**	**7.56**	**100**	S	**Sn**	19 18 10.5	-1.0
NATI	**Neve Ativ**	**7.56**	**100**	P	**Pn**	19 16 47.3	+1.7
HMDT	**Nahal Hemdat**	**7.71**	**108**	P	**Pn**	19 16 49.1	+1.4
HMDT	**Nahal Hemdat**	**7.71**	**108**	S	**Sn**	19 18 13.7	-1.5
HMDT	**Nahal Hemdat**	**7.71**	**108**	P	**Pn**	19 16 49.4	+1.7
SHMJ	**Saham**	**7.73**	**104**	P	**Pn**	19 16 49.1	+1.0
YTIR	**Yattir**	**7.78**	**115**	S	**Sn**	19 18 16.2	-0.9
YTIR	**Yattir**	**7.78**	**115**	P	**Pn**	19 16 50.9	+2.1
UJAP	**Al Uja**	**7.78**	**110**	P	**Pn**	19 16 50.2	+1.5
BALJ	**Balqa**	**7.86**	**108**	P	**Pn**	19 16 49.7	-0.2
DSI	**Dead Sea**	**7.88**	**112**	P	**Pn**	19 16 51.0	+0.9
DSI	**Dead Sea**	**7.88**	**112**	S	**Sn**	19 18 18.5	-1.0
DSI	**Dead Sea**	**7.88**	**112**	P	**Pn**	19 16 52.0	+1.9
MSBI	**Mazada**	**7.99**	**114**	P	**Pn**	19 16 52.4	+0.9
MSBI	**Mazada**	**7.99**	**114**	P	**Pn**	19 16 53.4	+1.9
MSBI	**Mazada**	**7.99**	**114**	S	**Sn**	19 18 20.5	-1.5
GHAJ	**Ghor Haditha**	**8.15**	**114**	P	**Pn**	19 16 54.3	+0.6
GHAJ	**Ghor Haditha**	**8.15**	**114**	P	**Pn**	19 16 56.9	+3.2
GHAJ	**Ghor Haditha**	**8.15**	**114**	S	**Sn**	19 18 24.7	-1.2
KRMI	**Paran Flat**	**8.18**	**123**	S	**Sn**	19 18 26.5	-0.5
KRMI	**Paran Flat**	**8.18**	**123**	P	**Pn**	19 16 56.4	+2.1
PRNI	**Paran**	**8.24**	**121**	P	**Pn**	19 16 56.4	+1.4
PRNI	**Paran**	**8.24**	**121**	S	**Sn**	19 18 27.5	-0.8
PRNI	**Paran**	**8.24**	**121**	P	**Pn**	19 16 56.9	+1.9
HRFI	**Mount Harif**	**8.45**	**123**	P	**Pn**	19 16 58.4	+0.5
HRFI	**Mount Harif**	**8.45**	**123**	S	**Sn**	19 18 32.7	-0.7
HRFI	**Mount Harif**	**8.45**	**123**	P	**Pn**	19 16 60.0	+2.1
MBRI	**Mt Berech**	**8.51**	**124**	P	**Pn**	19 17 00.8	+2.0
EIL	**Elat**	**8.61**	**125**	Pn	**Pn**	19 17 03.4	+3.3
	comp=N,0.4nm,0.3s,baz=304,slow=1.3,SNR=7.8						
EIL				Sn	**Sn**	19 18 34.3	-3.2
	comp=N,1.7nm,0.3s,baz=318,slow=4.0,SNR=8.0						
	comp=N,1.0nm,0.3s						
EIL	**Elat**	**8.61**	**125**	P	**Pn**	19 17 01.3	+1.2
EIL	**Elat**	**8.61**	**125**	P	**Pn**	19 17 02.7	+2.5
MLR	**Muntele Rosu**	**10.61**	**357**	Pn	**Pn**	19 17 23.8	-3.7
	comp=N,0.3nm,0.3s,baz=185,slow=9.8,SNR=4.2						
	comp=N,1.0nm,0.4s						
KBZ	**Khabaz**	**15.22**	**50**	Pn	**P**	19 18 33.6	-1.8
	baz=204,slow=18,SNR=1.3						
	comp=N,2.0nm,1.0s						
BELG	**Belogornoye**	**22.93**	**34**	P	**P**	19 19 58.3	-1.2
	comp=N,2.5nm,0.3s,baz=325,slow=4.9,SNR=6.8						
	comp=N,2.5nm,0.3s						
ESDC	**Sonseca Array**	**24.90**	**290**	P	**P**	19 20 18.7	+0.1
	comp=N,1.1nm,0.7s,baz=90,slow=9.6,SNR=7.6						
	comp=N,1.1nm,0.7s						
GEYT	**Alibeck**	**25.29**	**74**	P	**P**	19 20 22.2	+0.1
	comp=N,1.1nm,0.5s,baz=263,slow=8.3,SNR=2.5						
	comp=N,1.1nm,0.5s						
FINES	**FINESS Array B**	**26.58**	**359**	P	**P**	19 20 32.2	-1.3
	comp=N,0.8nm,0.9s,baz=170,slow=11,SNR=1.0						
	comp=N,0.8nm,0.9s						
EKA	**Eskdalemuir Ar**	**29.06**	**324**	P	**P**	19 20 55.1	-0.6
	comp=N,0.6nm,0.6s,baz=122,slow=10,SNR=1.6						
	comp=N,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.40**	**233**	P	**P**	19 21 19.1	+2.3
	comp=N,0.8nm,0.3s,baz=35,slow=11,SNR=4.3						
	comp=N,0.8nm,0.3s						
ARCES	**ARCESS Array B**	**34.71**	**359**	P	**P**	19 21 43.7	-1.5
	comp=N,1.8nm,1.0s,baz=178,slow=8.6,SNR=1.2						
	comp=N,1.8nm,1.0s						
BVAR	**Borovoye Array**	**35.54**	**46**	P	**P**	19 21 52.6	+0.1
	comp=N,0.5nm,0.5s,baz=260,slow=8.1,SNR=2.9						
	comp=N,0.5nm,0.5s						
KURBB	**Kurchatov Array**	**40.22**	**51**	P	**P**	19 22 32.6	+0.5
	comp=N,1.8nm,0.5s,baz=277,slow=8.8,SNR=19						
	comp=N,1.8nm,0.5s						
MKAR	**Makanchi Array**	**42.77**	**56**	P	**P**	19 22 54.0	+0.9
	comp=N,1.4nm,0.5s,baz=278,slow=6.8,SNR=31						
	comp=N,1.4nm,0.5s						
SPITS	**Spitsbergen Ar**	**43.63**	**357**	P	**P**	19 22 58.8	-0.7
	comp=N,1.6nm,0.8s,baz=151,slow=6.3,SNR=1.7						
	comp=N,4.6nm,0.8s						
ZALV	**Zalesovo Beam**	**44.20**	**46**	P	**P**	19 23 04.3	-0.1
	comp=N,2.9nm,0.6s,baz=263,slow=7.8,SNR=17						
	comp=N,2.9nm,0.6s						
SONM	**Songino Array**	**58.59**	**51**	P	**P**	19 24 53.1	+0.6
	comp=N,0.3nm,0.6s,baz=265,slow=7.0,SNR=4.6						
	comp=N,0.3nm,0.6s						
SCHQ	**Schefferville**	**64.28**	**320**	P	**P**	19 25 32.1	+1.3

comp=N,0.9nm,0.5s,baz=56,slow=7.3,SNR=1.7
comp=N,0.9nm,0.5s

CATAC ***20*** *19:31:36.9±0.3, 9.˚78N×83.˚90W, h4km±1km, ML2.6*
UCR ***20*** *19:31:36.7±1.0, 9.˚80N×83.˚90W, h7km±2km, MW3.5*

ISC 20 19:31:37.1±0.9, 9.78N±0.˚02×83.90W±0.˚02, h3km±7km, n41, σ0^{s}72/57, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RIMA	**Rio Macho**	**0.04**	**104**	*e*P		**Pg**		**19 31 37.9**	**-0.2**
RIMA				*e*S		**Sg**		**19 31 39.0**	**0.0**
RIMA	**Rio Macho**	**0.04**	**104**	*i* P		**Pg**		**19 31 38.0**	**-0.2**
RIMA				IAML				19 31 39.2	
	comp=E,28μm,1.0s								
REPA	**Paraso**	**0.06**	**31**	*e*P		**Pg**		**19 31 39.2**	**+0.7**
REPA				*e*S		**Sg**		**19 31 40.3**	**+0.8**
TAGO	**Cartago**	**0.09**	**345**	*e*P		**Pg**		**19 31 39.0**	**0.0**
TAGO				*e*S		**Sg**		**19 31 40.7**	**+0.3**
LCR2	**La Lucha 2**	**0.11**	**252**	*e*P		**Pg**		**19 31 39.5**	**+0.2**
LCR2				*e*S		**Sg**		**19 31 41.6**	**+0.8**
LCR2	**La Lucha 2**	**0.11**	**252**	*i* P		**Pg**		**19 31 39.4**	**0.0**
LCR2				*i* S		**Sg**		**19 31 41.7**	**+0.8**
LCR2				IAML				19 31 41.8	
	comp=Z,4μm,1.0s								
OCM	**Ochomogo**	**0.13**	**333**	*e*P		**Pg**		**19 31 39.6**	**-0.3**
OCM				*e*S		**Sg**		**19 31 41.7**	**+0.1**
OCM	**Ochomogo**	**0.13**	**333**	*i* P		**Pg**		**19 31 39.5**	**-0.3**
OCM				*i* S		**Sg**		**19 31 41.7**	**+0.1**
OCM				IAML				19 31 42.5	
	comp=Z,6μm,1.0s								
TRIO	**Tres Rios**	**0.16**	**324**	*e*P		**Pg**		**19 31 40.0**	**-0.2**
PCAYA	**Pacayas**	**0.17**	**32**	*e*P		**Pg**		**19 31 40.4**	**0.0**
PCAYA				*e*S		**Sg**		**19 31 43.3**	**+0.5**
ABE2	**San Pablo**	**0.17**	**245**	*e*P		**Pg**		**19 31 40.8**	**+0.3**
ABE2				*e*S		**Sg**		**19 31 43.7**	**+1.0**
VIRE	**VIRE**	**0.19**	**1**	*i* P		**Pg**		**19 31 40.9**	**0.0**
VIRE				*i* S		**Sg**		**19 31 43.9**	**+0.4**
VIRE				IAML				19 31 47.4	
	comp=Z,7μm,1.0s								
HAYA	**Volcan Irazu**	**0.21**	**15**	*i* P		**Pg**		**19 31 41.4**	**+0.1**
HAYA				*i* S		**Sg**		**19 31 44.3**	**+0.2**
HAYA				IAML				19 31 45.5	
	comp=Z,5μm,1.0s								
VICA	**Volcano Irazu**	**0.21**	**15**	*e*P		**Pg**		**19 31 41.4**	**0.0**
LUJA	**Lujan**	**0.23**	**311**	*e*P		**Pg**		**19 31 42.5**	**+1.0**
VTLA	**Turrialba Volc**	**0.26**	**29**	*e*P		**Pg**		**19 31 42.2**	**+0.1**
CDM	**Cerro de Muert**	**0.26**	**149**	*e*P		**Pg**		**19 31 42.6**	**+0.5**
CDM	**Cerro de Muert**	**0.26**	**149**	*i* P		**Pg**		**19 31 42.6**	**+0.5**
CDM				*i* S		**Sg**		**19 31 47.0**	**+1.4**
CDM				IAML				19 31 50.0	
	comp=Z,790nm,1.0s								
ACOS	**Acosta**	**0.26**	**274**	*e*P		**Pg**		**19 31 42.5**	**+0.3**
ACOS				*e*S		**Sg**		**19 31 46.7**	**+1.1**
VERB	**Verbena**	**0.26**	**50**	*e*P		**Pg**		**19 31 42.5**	**+0.3**
VTCV	**VTCV, Calle Va**	**0.27**	**40**	*e*P		**Pg**		**19 31 42.5**	**+0.2**
VTCV	**VTCV, Calle Va**	**0.27**	**40**	*i* P		**Pg**		**19 31 42.5**	**+0.2**
VTCV				*i* S		**Sg**		**19 31 46.9**	**+1.0**
VTCV				IAML				19 31 50.6	
	comp=Z,2μm,1.0s								
CVTV	**Tajo**	**0.27**	**33**	*e*P		**Pg**		**19 31 42.6**	**+0.2**
VTR0	**Volcan Turrial**	**0.28**	**30**	*e*P		**Pg**		**19 31 42.7**	**+0.2**
CVTR	**Volcan Turrial**	**0.28**	**30**	*e*P		**Pg**		**19 31 42.6**	**0.0**
VTUN	**Crater Central**	**0.28**	**29**	*i* P		**Pg**		**19 31 42.6**	**0.0**
VTUN				IAML				19 31 49.5	
	comp=Z,950nm,1.0s								
VTUC	**Crater, Volcan**	**0.28**	**29**	*i* P		**Pg**		**19 31 42.7**	**+0.1**
VTUC				*i* S		**Sg**		**19 31 46.6**	**+0.2**
VTUC				IAML				19 31 50.7	
	comp=Z,890nm,1.0s								
HDC3	**Heredia 3**	**0.31**	**317**	*i* P		**Pg**		**19 31 43.3**	**+0.2**
HDC3				IAML				19 31 50.5	
	comp=Z,760nm,1.0s								
HDC	**Heredia**	**0.31**	**317**	*e*P		**Pg**		**19 31 43.2**	**+0.1**
BELE	**Belen**	**0.35**	**305**	*e*P		**Pb**		**19 31 44.8**	**-1.2**
PEZE	**Perez Zeledon,**	**0.45**	**151**	*i* P		**Pg**		**19 31 45.6**	**-0.1**
PEZE				*i* S		**Sg**		**19 31 51.9**	**+0.3**
PEZE				IAML				19 31 55.1	
	comp=Z,410nm,1.0s								
RIFO	**Rio Frio, Sara**	**0.54**	**358**	*i* P		**Pb**		**19 31 48.3**	**-0.9**
RIFO				IAML				19 31 56.1	
	comp=Z,270nm,1.0s								
CPMI	**Catarata Coope**	**0.69**	**317**	*i* P		**Pg**		**19 31 50.1**	**-0.3**
CPMI				IAML				19 32 09.1	
	comp=Z,110nm,1.0s								
JACO	**JACO, Garabito**	**0.76**	**262**	*i* P		**Pg**		**19 31 51.4**	**-0.2**
JACO				IAML				19 32 02.8	
	comp=Z,150nm,1.0s								
SRBA	**San Rafael, Bu**	**0.76**	**135**	*i* P		**Pg**		**19 31 50.9**	**-0.8**
SRBA				IAML				19 32 01.5	
	comp=Z,240nm,1.0s								
SOCE	**Pocosol**	**0.93**	**311**	*i* P		**Pg**		**19 31 54.8**	**-0.1**
SOCE				IAML				19 31 55.3	
	comp=Z,94nm,1.0s								
INDI	**Punta indio, G**	**1.58**	**273**	*i* P		**Pn**		**19 32 05.4**	**-0.6**
INDI				IAML				19 32 41.9	
	comp=Z,66nm,1.0s								
ORTG	**Ortega, Santa**	**1.64**	**291**	*i* P		**Pn**		**19 32 06.0**	**-0.9**
ORTG				IAML				19 32 08.7	
	comp=Z,37nm,1.0s								
SAJU	**San Juanillo,**	**1.81**	**279**	*i* P		**Pn**		**19 32 09.0**	**-0.1**
SAJU				IAML				19 32 12.2	
	comp=Z,45nm,1.0s								
HZTE	**Horizontes, Gu**	**1.91**	**299**	*i* P		**Pb**		**19 32 11.1**	**-1.5**
HZTE				IAML				19 33 27.0	
	comp=Z,160nm,1.0s								
TEL3	**Telica 3**	**4.01**	**314**	*i* P		**Pn**		**19 32 42.6**	**+3.2**

NEIC ***20*** *19:49:43.5±1.4, 35.˚67N×0.˚01×97.˚395W±0.˚008, h10km±3km, Error ellipse: s-maj=1.7km s-min=0.8km az=160.0*

TUL 20 19:49:43.6±0.7, 35.˚670N±0.˚009×97.˚40W±0.˚01, h6km±2km, ML2.8, mb_Lg2.2/19(NEIC), ML2.5/38(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=65.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.03**	**131**	Pg		Pg		19 49 45.1	+0.3
ADOK				Sg		Sg		19 49 46.3	+0.6
OK029	**Liberty Lake**	**0.14**	**339**	Pg		Pg		19 49 46.8	+0.4
OK029				Sg		Sg		19 49 49.1	+0.8
OKCSW	**OKLAHOMA CITY**	**0.27**	**187**	Pg		Pg		19 49 48.9	+0.1
OKCSW				Sg		Sg		19 49 53.1	+0.8
OKCSW				IAML				19 49 53.4	
	comp=E,844nm,0.4s								
OKCSW				IAML				19 49 53.5	
	comp=N,1μm,0.4s								
FNO	**Franklin**	**0.41**	**180**	Pg		Pg		19 49 51.7	+0.1
FNO				Sg		Sg		19 49 57.5	+0.6
FNO				IAML				19 49 58.1	
	comp=E,364nm,0.3s								
OK033	**Mehan**	**0.53**	**45**	Pg		Pg		19 49 54.1	+0.3
OK033				Sg		Sg		19 50 01.4	+0.8
OK033				IAML				19 50 01.8	
	comp=E,295nm,0.3s								
OK033				IAML				19 50 02.2	
	comp=E,268nm,0.2s								
OK052	**Battle Ridge R**	**0.58**	**56**	Pg		Pg		19 49 54.9	+0.1
OK052				Sg		Sg		19 50 03.0	+0.6
OK052				IAML				19 50 03.6	
	comp=E,330nm,0.1s								
OK052				IAML				19 50 03.6	
	comp=E,214nm,0.2s								
W35A	**Tecumseh**	**0.67**	**140**			Pg		19 49 56.4	-0.1
W35A				Sg		Sg		19 50 05.4	+0.2
W35A				IAML				19 50 06.0	
	comp=E,155nm,0.4s								
QUOK	**Quay**	**0.75**	**48**	Pg		Pg		19 49 57.8	-0.2
QUOK				Sg		Sg		19 50 08.3	+0.5
QUOK				IAML				19 50 09.5	
	comp=E,275nm,0.2s								
DEOK	**Depew**	**0.75**	**76**	Pg		Pg		19 49 57.6	-0.4
DEOK				Sg		Sg		19 50 08.1	+0.3
DEOK				IAML				19 50 08.6	
	comp=N,124nm,0.2s								
OK048	**Pawnee Station**	**0.83**	**26**	Pg		Pg		19 49 59.4	-0.2
OK048				Sg		Sg		19 50 10.6	+0.3
OK048				IAML				19 50 10.8	
	comp=N,200nm,0.2s								
OK051	**E0350 and S346**	**0.95**	**28**	Pg		Pg		19 50 01.5	-0.4
OK051				Sg		Sg		19 50 14.1	-0.1
CROK	**Carrier**	**0.96**	**330**	Pg		Pg		19 50 01.6	-0.5
CROK				Sg		Sg		19 50 14.7	+0.2
CROK				IAML				19 50 16.6	
	comp=E,131nm,0.2s								
CROK				IAML				19 50 26.1	
	comp=N,114nm,0.3s								
CSTR	**Hydro, Custer**	**1.05**	**269**	Pg		Pg		19 50 03.1	-0.7
CSTR				Sg		Sb		19 50 17.9	-0.4
BLOK	**Blackwell**	**1.10**	**8**	Pg		Pg		19 50 04.1	-0.6
BLOK				Sg		Sb		19 50 19.5	-0.1
X34A	**Smith Ranch, M**	**1.12**	**199**			Pg		19 50 04.7	-0.4
X34A						Sb		19 50 20.9	+0.6
X34A				IAML				19 50 21.6	
	comp=N,100nm,0.2s								
X34A				IAML				19 50 21.8	
	comp=E,84nm,0.5s								
GC02	**Grant County #**	**1.24**	**343**			Pg		19 50 06.6	-0.8
OK032	**Salt Plains WL**	**1.31**	**330**			Pn		19 50 07.1	-1.3
TUL3	**Leonard**	**1.33**	**79**			Pn		19 50 07.3	-1.4
TUL3				IAML				19 50 27.0	
	comp=E,75nm,0.2s								
KAN13	**South Haven SW**	**1.34**	**357**			Pn		19 50 07.7	-1.2
OK038	**West end E0370**	**1.36**	**307**			Pn		19 50 08.1	-1.0
KAN14	**Manchester OK**	**1.36**	**341**			Pn		19 50 08.7	-0.5
KAN17	**Caldwell West**	**1.40**	**348**	Pg		Pn		19 50 09.2	-0.6
T35A	**Sooner Cattle**	**1.43**	**30**			Pn		19 50 09.8	-0.4
WMOK	**Wichita Mounta**	**1.47**	**231**			Pn		19 50 10.0	-0.6
KAN09	**Caldwell North**	**1.47**	**353**			Pn		19 50 10.7	0.0
KAN09				IAmb_Lg				19 50 31.2	
	comp=Z,30nm,1.2s								
U32A	**Winter Ranch,**	**1.48**	**299**			Pn		19 50 10.4	-0.4
KAN01	**Argonia South**	**1.51**	**349**			Pn		19 50 10.5	-0.7
KAN08	**Anthony NE Sta**	**1.62**	**344**			Pn		19 50 12.9	+0.2
KS21	**Milan North St**	**1.63**	**352**			Pn		19 50 13.0	+0.2
ELIS	**Ellis County**	**1.69**	**284**			Pn		19 50 13.1	-0.6
KAN12	**Harper NE Stat**	**1.69**	**344**			Pn		19 50 12.4	-1.3
X37A	**Clayton**	**1.98**	**122**	Pn		Pn		19 50 16.4	-1.2
X37A				IAmb_Lg				19 50 49.0	
	comp=Z,11nm,0.8s								
RLO	**Rose Lookout**	**1.99**	**75**	Pn		Pn		19 50 16.6	-1.2
WTFS	**Witchita Falls**	**2.09**	**205**	Pn		Pn		19 50 17.2	-2.0
Z35A	**Perchaven, San**	**2.34**	**177**	Pn		Pn		19 50 20.6	-1.9
SMWD	**Samnorwood**	**2.39**	**257**	IAmb_Lg				19 51 01.8	
	comp=Z,9.0nm,0.8s								
U38A	**Gravette**	**2.56**	**72**	Pn		Pn		19 50 26.9	+1.3
U38A				IAmb_Lg				19 51 09.2	
	comp=Z,3.8nm,0.8s								
HHAR	**Hobbs**	**2.87**	**77**	Pn		Pn		19 50 30.2	+0.3
HHAR				IAmb_Lg				19 51 18.9	
	comp=Z,4.7nm,0.8s								
PLPT	**Palo Pinto**	**2.95**	**195**	Pn		Pn		19 50 30.5	-0.5
APMT	**Aspermont**	**3.25**	**225**	Pn		Pn		19 50 33.9	-1.2
DKNS	**Dickens**	**3.53**	**237**	Pn		Pn		19 50 38.5	-0.5
ABTX	**Abilene, Hawle**	**3.56**	**212**

ELT	**Eltsovka**	**3.84**	**326**	PN	**Pg**	**20 03 18.1**	**-3.4**	
ELT						20 04 06.0		
ELT	**Eltsovka**	**3.84**	**326**	Pn	**Pb**	**20 03 12.2**	**-3.6**	
ELT				Pg	**Pg**	**20 03 18.2**	**-3.4**	
ELT				Sg	**Sg**	**20 04 06.0**	**-5.2**	
ERU	**Erunakovo, Kuz**	**4.28**	**340**	Pn	**Pn**	**20 03 11.6**	**-1.5**	
ERU				Pg	**Pg**	**20 03 27.5**	**-2.5**	
ERU				Sg	**Sg**	**20 04 22.1**	**-3.2**	
VCHU	**Verkh-Chumysh,**	**4.35**	**333**	Pn	**Pb**	**20 03 20.1**	**-4.4**	
VCHU				Pg	**Pg**	**20 03 27.9**	**-3.4**	
VCHU				Sg	**Sg**	**20 04 26.4**	**-1.4**	
KOTO	**Kotino, Kuzbas**	**4.43**	**337**	Sg	**Sg**	**20 04 27.8**	**-2.4**	
BJR3	**Bachatsky-3 (S**	**4.67**	**333**	Pg	**Pg**	**20 03 33.9**	**-3.5**	
BJR3				Sg	**Sg**	**20 04 35.9**	**-2.0**	
BJR1	**Bachatsky 1, K**	**4.72**	**332**	Pg	**Pg**	**20 03 34.4**	**-4.0**	
BJR1				Sg	**Sg**	**20 04 35.9**	**-3.5**	
BJR2	**Bachatsky-2, K**	**4.73**	**333**	Pg	**Pg**	**20 03 33.9**	**-4.6**	
ZAA0	**Zalesovo Array**	**4.91**	**323**	⇓Pn	**Pn**	**20 03 24.2**	**+2.4**	
	0.8nm,0.7s							
ZAA0				⇓Pg	**Pb**	**20 03 36.0**	**+2.0**	
	1.9nm,0.5s							
ZAA0				⇑Lg	Lg	20 04 40.9		
	54nm,1.2s							
ZALV	**Zalesovo Beam**	**4.91**	**323**	Pn	**Pn**	**20 03 23.7**	**+2.0**	
	0.9nm,0.3s,baz=144,slow=13,SNR=17							
ZALV				Pg	**Pg**	**20 03 37.6**	**-4.3**	
	3.1nm,0.3s,baz=145,slow=17,SNR=25							
ZALV				Lg	Lg	20 04 41.6		
	6.4nm,0.3s,baz=136,slow=26,SNR=8.7							
ZALV				LR	LR	20 05 24.8		
	comp=Z,71nm,19.5s,baz=176,slow=39							
	1.6nm,0.3s							
SALR	**Pechorkino, Sa**	**4.97**	**331**	Pn	Pn	20 03 27.6	+4.9	
SALR				Pg	**Pg**	**20 03 41.4**	**-1.9**	
SALR				Sg	**Sg**	**20 04 46.7**	**-0.9**	
MINR	**Mina**	**5.47**	**28**	Pn	Pn	20 03 35.6	+6.0	
MINR				Pg	**Pg**	**20 03 50.0**	**-2.8**	
MINR				Sg	**Sg**	**20 05 04.1**	**+0.6**	
BRCR	**Berchikul'**	**5.59**	**351**	Pg	**Pb**	**20 03 48.4**	**+2.8**	
BRCR				Sg	**Sg**	**20 05 03.9**	**-3.3**	
KEM	**Kemerovo**	**5.69**	**338**	Pg	**Pg**	**20 03 55.6**	**-1.2**	
KEM				Sg	**Sg**	**20 05 07.5**	**-2.8**	
KHAR	**Kharino, NSO,**	**5.88**	**322**	Sg	**Sg**	**20 05 15.0**	**-1.8**	
BALAH	**Balakhonka, Ku**	**5.95**	**339**	Sg	**Sg**	**20 05 18.2**	**-0.6**	
MK31	**Makanchi Array**	**6.02**	**239**	⇑Pn	**Pn**	**20 03 37.9**	**+0.9**	
	2.0nm,0.2s,baz=68,slow=12,SNR=160							
MK31				⇑Pg	**Pg**	**20 03 58.4**	**-4.7**	
	27nm,0.5s,baz=66,slow=12,SNR=3.6							
MK31				⇑Lg	Lg	20 05 15.6		
	112nm,0.7s,baz=64,slow=29,SNR=5.9							
MK31	**Makanchi Array**	**6.02**	**239**	PN	**Pn**	**20 03 37.9**	**+0.9**	
MKAR	**Makanchi Array**	**6.02**	**239**	Pn	**Pn**	**20 03 38.3**	**+1.3**	
	3.2nm,0.3s,baz=49,slow=17,SNR=205							
MKAR				Pg	**Pb**	**20 03 51.0**	**-1.8**	
	4.9nm,0.3s,baz=65,slow=18,SNR=12							
MKAR				Sn	**Sn**	**20 04 46.1**	**+0.1**	
	6.1nm,0.3s,baz=55,slow=30,SNR=6.0							
MKAR				Lg	Lg	20 05 14.4		
	12nm,0.3s,baz=66,slow=31,SNR=11							
MKAR				LR	LR	20 06 13.7		
	comp=Z,171nm,21.7s,baz=42,slow=41							
	3.5nm,0.3s							
MKAR	**Makanchi Array**	**6.02**	**239**	Pn	**Pn**	**20 03 38.4**	**+1.3**	
MKAR				Pg	**Pg**	**20 03 58.8**	**-4.3**	
MKAR				Sg	**Sg**	**20 05 18.8**	**-2.2**	
MAKZ	**Makanchi**	**6.18**	**240**	⇓Pn	**Pn**	**20 03 39.7**	**+0.4**	
	20nm,0.8s							
MAKZ				⇑Pg	Pg	20 04 00.3	-6.0	
	55nm,1.0s							
MAKZ				⇑Lg	Lg	20 05 19.1		
	98nm,0.7s							
MAKZ	**Makanchi**	**6.18**	**240**	PN	**Pn**	**20 03 39.7**	**+0.4**	
MAKZ				PG	Pg	20 04 00.3	-6.0	
MAKZ	**Makanchi**	**6.18**	**240**	Pn	**Pn**	**20 03 40.1**	**+0.8**	
MAKZ				Pg	**Pg**	**20 04 03.6**	**-2.7**	
MAKZ				Sg	**Sg**	**20 05 20.9**	**-5.4**	
NVSIi	**Novosibirsk**	**6.19**	**322**	Pn	**Pn**	**20 03 40.7**	**+1.3**	
NVSII				Pg	Pg	20 04 00.6	-5.9	
NVSII				Sg	**Sg**	**20 05 25.6**	**-1.0**	
WMQ	**Urumqi**	**6.48**	**194**	Pn	**Pn**	**20 03 44.8**	**+1.3**	
WMQ				Sn	**Sn**	**20 04 57.3**	**-0.2**	
WMQ				smax	smax			
	comp=N,130nm,1.1s							
WMQ				smax	smax			
	comp=E,95nm,1.1s							
GZLN	**Zheleznogorsk**	**6.69**	**19**	Sg	**Sg**	**20 05 43.4**	**+0.8**	
KURK	**Kurchatov**	**7.17**	**279**	⇑Pn	**Pn**	**20 03 52.2**	**-0.7**	
	comp=E,10nm,0.6s							
KURK				⇑Sn	**Sn**	**20 05 12.0**	**-2.4**	
	comp=E,17nm,0.5s							
KURK				⇑Lg	Lg	20 05 48.2		
	comp=E,174nm,0.9s							
KURK	**Kurchatov**	**7.17**	**279**	P	**Pn**	**20 03 52.2**	**-0.7**	
KURK				SN	**Sn**	**20 05 12.2**	**-2.2**	
KURBB	**Kurchatov Arra**	**7.23**	**278**	Pn	**Pn**	**20 03 53.4**	**-0.3**	
	comp=E,20nm,0.7s							
KURBB				⇓Sn	**Sn**	**20 05 12.6**	**-3.2**	
	comp=E,46nm,0.5s							
KURBB				⇑Lg	Lg	20 05 49.3		
	comp=E,296nm,0.7s							
KURBB	**Kurchatov Arra**	**7.23**	**278**	P	**Pn**	**20 03 53.4**	**-0.3**	
KURBB				SN	**Sn**	**20 05 12.6**	**-3.2**	
KURBB	**Kurchatov Arra**	**7.23**	**278**	Pn	**Pn**	**20 03 53.8**	**+0.1**	
	comp=E,0.5nm,0.3s,baz=90,slow=14,SNR=71							
KURBB				Sn	**Sn**	**20 05 14.6**	**-1.2**	
	comp=E,0.8nm,0.3s,baz=88,slow=28,SNR=7.3							
KURBB				Lg	Lg	20 05 54.0		
	comp=E,1.4nm,0.3s,baz=87,slow=34,SNR=5.2							
KURBB				LR	LR	20 06 48.4		
	comp=E,183nm,19.9s,baz=162,slow=38							
	comp=E,11nm,0.6s							
MOY	**Mondy**	**7.24**	**73**	*e*P	**Pn**	**20 03 55.6**	**+1.7**	
MOY				eS	**Sn**	**20 05 15.6**	**-0.5**	
MOY	**Mondy**	**7.24**	**73**	Pn	Pb	20 04 05.7	-8.1	
MOY				Pg	**Pg**	**20 04 26.5**	**0.0**	
MOY				Sg	**Sg**	**20 05 53.9**	**-6.2**	
KAPS	**Kapalarasan**	**8.55**	**239**	Pg	Pg	20 04 44.7	-7.0	
	comp=E,5.6nm,0.5s							
KAPS				Lg	Lg	20 06 34.3		
	comp=E,26nm,0.9s							
KNOS	**Konyrlen**	**9.25**	**235**	Pg	Pn	20 04 58.1	+37	
	comp=E,8.2nm,0.8s							
KNOS				Lg	Lg	20 06 58.2		
	comp=E,29nm,0.9s							
KTMS	**Ketmen**	**9.31**	**228**	Pg	Pn	20 04 58.6	+36	
KTMS				Lg	Lg	20 06 58.8		
PDGK	**Podgornoye**	**9.82**	**230**	⇓Pn	**Pn**	**20 04 28.9**	**-0.4**	
	comp=E,8.3nm,0.8s							
PDGK				⇑Lg	Lg	20 07 16.9		
	comp=E,108nm,1.4s							
PDGK	**Podgornoye**	**9.82**	**230**	P	**Pn**	**20 04 28.9**	**-0.4**	
BRZS	**Berezniki**	**11.02**	**276**	Pg	Pn	20 05 28.5	+43	
	comp=E,1.9nm,0.5s							
BRZS				Lg	Lg	20 07 50.6		
	comp=E,30nm,0.9s							
KOTS	**Kotyrbulak**	**11.12**	**236**	Pg	Pn	20 05 32.5	+45	
	comp=E,3.9nm,0.7s							
KOTS				Lg	Lg	20 07 56.4		
	comp=E,25nm,1.0s							
SONM	**Songino Array**	**11.14**	**96**	Pn	**Pn**	**20 04 46.9**	**-0.5**	
	comp=E,0.1nm,0.3s,baz=283,slow=12,SNR=11							
SONM				Pg		20 05 28.3		
	comp=E,0.3nm,0.3s,baz=283,slow=15,SNR=7.1							
SONM				Lg	Lg	20 07 56.2		
	comp=E,0.6nm,0.3s,baz=301,slow=32,SNR=7.3							
SONM				LR	LR	20 09 10.2		
	comp=E,146nm,18.4s,baz=318,slow=38							
	comp=E,1.3nm,0.8s							
OTUK	**Ortayu**	**11.59**	**267**	⇑Pn	**Pn**	**20 04 54.6**	**+1.2**	
	comp=E,3.1nm,0.8s							
OTUK				⇓Lg	Lg	20 08 08.6		
	comp=E,90nm,1.4s							
OTUK	**Ortayu**	**11.59**	**267**	P	**Pn**	**20 04 54.6**	**+1.2**	
BVA0	**Borovoye Array**	**12.42**	**291**	⇓Pn	**Pn**	**20 05 07.3**	**+2.7**	
	comp=E,3.9nm,0.9s,baz=98,slow=14,SNR=8.9							
BVA0				⇑Sn	**Sn**	**20 07 21.4**	**-1.6**	
	comp=E,11nm,1.2s,baz=96,slow=21,SNR=5.3							
BVA0	**Borovoye Array**	**12.42**	**291**	P	**Pn**	**20 05 07.4**	**+2.7**	
BVA0				SN	**Sn**	**20 07 21.4**	**-1.6**	
BVAR	**Borovoye Array**	**12.42**	**291**	Pn	**Pn**	**20 05 05.9**	**+1.2**	
	baz=97,slow=15,SNR=8.9							
BVAR				Sn	**Sn**	**20 07 17.7**	**-5.3**	
	comp=E,0.1nm,0.3s,baz=94,slow=21,SNR=6.4							
BVAR				Lg	Lg	20 08 45.4		
	baz=97,slow=32							
BVAR				LR	LR	20 09 53.7		
	comp=E,90nm,18.2s,baz=58,slow=37							
	comp=E,0.7nm,0.4s							
BRVK	**Borovoye**	**12.48**	**291**	⇓Pn	**Pn**	**20 05 05.5**	**-0.1**	
	comp=E,4.2nm,1.0s							
BRVK				⇑Sn	**Sn**	**20 07 23.1**	**-1.5**	
	comp=E,3.4nm,0.6s							
BRVK	**Borovoye**	**12.48**	**291**	P	**Pn**	**20 05 05.5**	**-0.1**	
BRVK				SN	**Sn**	**20 07 23.1**	**-1.5**	
AAK	**Ala-Archa**	**12.95**	**240**	Pn	**Pn**	**20 05 12.7**	**+0.6**	
	comp=E,0.2nm,0.3s,baz=89,slow=6.0,SNR=11							
AAK				Sn	**Sn**	**20 07 35.0**	**-1.2**	
	comp=E,0.1nm,0.3s,baz=220,slow=22,SNR=1.4							
AAK				Lg	Lg	20 08 54.1		
	baz=209,slow=20							
AAK				LR	LR	20 10 27.3		
	comp=E,121nm,19.2s,baz=30,slow=39							
	comp=E,1.3nm,0.5s							
KSH	**Kashi**	**14.44**	**228**	P	**P**	**20 05 39.6**	**+0.3**	
KSH				pmax	pmax			
	comp=Z,3.0nm,1.5s							
KK31	**Karatay Array**	**14.99**	**249**	⇓Pn	**Pn**	**20 05 38.3**	**-1.5**	
	comp=Z,1.2nm,0.6s,baz=46,slow=13,SNR=16							
KK31				⇑Sn	**Sn**	**20 08 26.0**	**+0.3**	
	comp=Z,1.5nm,0.6s,baz=52,slow=25,SNR=4.7							
KK31				⇑Lg	Lg	20 09 55.8		
	comp=Z,13nm,0.9s,baz=51,slow=31,SNR=4.4							
KK31	**Karatay Array**	**14.99**	**249**	P	**Pn**	**20 05 38.3**	**-1.5**	
KK31				SN	**Sn**	**20 08 26.3**	**+0.5**	
BOD	**Bodaibo**	**16.11**	**52**	*e*P	**P**	**20 05 57.8**	**+0.2**	
BOD				pmax	pmax			
	comp=Z,7.0nm,1.6s							
ARU	**Arti**	**19.60**	**301**	P	**Pn**	**20 06 42.1**	**+4.7**	
ARU	**Arti**	**19.60**	**301**	P	**Pn**	**20 06 38.6**	**+1.2**	
	comp=Z,0.2nm,0.3s,baz=100,slow=22,SNR=2.2							
ARU				S	**Sn**	**20 10 17.7**	**+0.5**	
	comp=Z,1.4nm,0.5s,baz=268,slow=21,SNR=3.5							
ARU				LR	LR	20 14 57.9		
	comp=Z,81nm,21.5s,baz=326,slow=39							
	comp=Z,1.1nm,0.4s							
AKTO	**Aktyubinsk**	**20.24**	**283**	P	Pn	20 06 46.1	+1.0	
	comp=Z,2.1nm,0.6s,baz=86,slow=11,SNR=6.3							
	comp=Z,2.1nm,0.6s							
XAN	**Xi'an**	**21.34**	**132**	⇓P	**P**	**20 06 55.5**	**+0.3**	
XAN				pmax	pmax			
	comp=Z,14nm,0.9s							
YAK	**Yakutsk**	**24.79**	**46**	LR	LR	20 17 28.0		
	comp=Z,118nm,19.4s,baz=302,slow=37							
GEYT	**Alibeck**	**25.64**	**254**	P	**P**	**20 07 38.1**	**+0.4**	
	comp=Z,2.0nm,0.7s,baz=61,slow=12,SNR=3.9							
	comp=Z,2.0nm,0.7s							
BELG	**Belogornoye**	**26.23**	**291**	⇓*i*P	**P**	**20 07 47.6**	**+4.8**	
BELG				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KLR	**Kul'dur**	**26.90**	**76**	LR	LR	20 18 59.0		
	comp=Z,103nm,18.3s,baz=293,slow=38							
USRK	**Usuriysk Ar.**	**28.98**	**85**	LR	LR	20 20 38.5		
	comp=Z,56nm,18.6s,baz=172,slow=38							
KSRS	**Korea Array**	**29.95**	**100**	LR	LR	20 21 24.4		
	comp=Z,43nm,18.4s,baz=335,slow=39							
WSAR	**Wadi Sarin**	**36.22**	**234**	LR	LR	20 27 07.7		
	comp=Z,49nm,18.0s,baz=7.5,slow=41							
JOW	**Kunigami**	**37.45**	**114**	LR	LR	20 27 08.3		
	comp=Z,113nm,18.7s,baz=275,slow=40							
BRTR	**Keskin Array B**	**40.22**	**277**	*e*P	P	20 09 49.4	+4.6	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BRTR	**Keskin Array B**	**40.22**	**277**	P	**P**	**20 09 46.6**	**+1.8**	
	comp=Z,0.9nm,0.8s,baz=100,slow=6.4,SNR=4.4							
	comp=Z,0.9nm,0.8s							
HFS	**Hagfors**	**42.27**	**314**	P	**P**	**20 10 01.7**	**+0.6**	
	comp=Z,1.2nm,0.8s,baz=99,slow=9.1,SNR=2.2							
	comp=Z,1.2nm,0.8s							
NOA	**NORSAR Array B**	**43.06**	**316**	*e*P	**P**	**20 10 11.4**	**+3.8**	
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
NOA	**NORSAR Array B**	**43.06**	**316**	P	**P**	**20 10 07.5**	**-0.2**	
	comp=Z,1.0nm,0.9s,baz=62,slow=7.7,SNR=3.5							
	comp=Z,1.0nm,0.9s							
EIL	**Elat**	**45.63**	**265**	LR	LR	20 32 38.8		
	comp=Z,24nm,18.3s,baz=238,slow=40							
ILAR	**Eielson Array**	**57.31**	**25**	P	**P**	**20 11 55.8**	**+0.4**	
	comp=Z,0.2nm,0.7s,baz=314,slow=5.4,SNR=4.0							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**66.05**	**12**	*e*P	**P**	**20 12 54.4**	**0.0**	
YKA	**Yellowknife Ar**	**66.05**	**12**	P	**P**	**20 12 54.3**	**-0.1**	
	comp=Z,0.4nm,0.7s,baz=339,slow=6.8,SNR=5.6							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**80.09**	**138**	P	**P**	**20 14 16.8**	**-1.1**	
	comp=Z,1.2nm,0.6s,baz=341,slow=5.9,SNR=10.0							
	comp=Z,1.2nm,0.6s							
ASAR	**Alice Springs**	**83.21**	**140**	P	**P**	**20 14 33.3**	**-1.0**	
	comp=Z,0.9nm,0.6s,baz=332,slow=5.1,SNR=20							
	comp=Z,0.9nm,0.6s							

IDC ***20*** *20:25:46.0±1.3, 4.°17S×144.°97E, h0km, mb3.4/4, mbtmp3.6/6, ML3.7/1, MS2.8/2, Error ellipse: s-maj=48.8km s-min=23.5km az=96.0*

ISC 20 20:25:51.3±1.0, 4.°3S±0.°1×145.°0E±0.°2, h38km, n7, σ1s33/7, mb3.3/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.52**	**158**	Pn	**Pn**	**20 27 11.1**	**+0.2**
	12nm,0.4s,baz=335,slow=8.7,SNR=6.2						
PMG				Sn	**Sn**	**20 28 12.4**	**-0.6**
	4.9nm,0.3s,baz=131,slow=22,SNR=2.4						
PMG				LR	LR	20 29 27.6	
	comp=Z,38nm,20.3s,baz=66,slow=39						
WRA	**Warramunga Arr**	**18.74**	**213**	P	**P**	**20 30 06.5**	**-0.5**
	0.3nm,0.3s,baz=37,slow=13,SNR=11						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**22.07**	**208**	P	**P**	**20 30 43.9**	**+0.8**
	0.8nm,0.9s,baz=38,slow=12,SNR=7.4						
	0.8nm,0.9s						
SONM	**Songino Array**	**61.96**	**332**	P	**P**	**20 36 05.5**	**-1.9**
	0.1nm,0.4s,baz=116,slow=6.6,SNR=1.4						
	0.1nm,0.4s						
PPT	**Papete**	**65.27**	**107**	LR	LR	21 02 06.8	
	comp=Z,16nm,20.2s,baz=201,slow=33						
MKAR	**Makanchi Array**	**74.93**	**321**	P	**P**	**20 37 29.8**	**+1.3**
	0.2nm,0.7s,baz=108,slow=7.7,SNR=2.9						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**84.68**	**24**	P	**P**	**20 38 21.4**	**+0.5**
	0.6nm,0.7s,baz=252,slow=5.0,SNR=8.8						
	0.6nm,0.7s						

IDC 20 21:57:00.2±3.7, 13.°21S×72.°95W, h0km, mb3.3/2, mbtmp3.5/3, ML4.4/1, MS2.8/2, Error ellipse: s-maj=322.4km s-min=34.1km az=50.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.99**	**287**	LR	LR	21 59 59.5	
	comp=Z,87nm,18.2s,baz=184,slow=45						
LVC	**Limon Verde**	**10.10**	**158**	LR	LR	22 03 08.7	
	comp=Z,84nm,20.3s,baz=236,slow=36						
CPUP	**Villa Florida**	**19.63**	**134**	P	P	22 01 30.6	+0.2
	0.3nm,0.3s,baz=296,slow=11,SNR=5.0						
	2.0nm,0.6s						
TXAR	**Lajitas Array**	**51.66**	**325**	P	P	22 06 09.3	+0.2
	0.3nm,0.8s,baz=150,slow=9.3,SNR=2.6						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**82.14**	**342**	P	P	22 09 22.2	-0.3
	0.1nm,0.3s,baz=125,slow=5.4,SNR=3.7						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**135.73**	**19**	PKP	PKPdf	22 16 21.5	-1.1
	0.2nm,0.3s,baz=355,slow=3.2,SNR=3.8						
SONM	**Songino Array**	**145.48**	**1**	PKPbc	PKPbc	22 16 39.9	-0.6
	0.7nm,0.6s,baz=340,slow=2.9,SNR=7.8						

IDC ***20*** *22:20:15.6±11.0, 2.°45S×121.°56E, h0km, mb4.5/3, mbtmp4.6/3, Error ellipse: s-maj=207.2km s-min=165.8km az=37.0*

DJA ***20*** *22:21:51.9±0.2, 7.°3S±3.°×12.°5E±.°, h543km±3km, M4.2/22, mB4.8/6, mb4.3/22, MLv4.1/12, Mw(mB)4.1/6*

NEIC ***20*** *22:21:52.7±1.1, 7.°1S±0.°1×125.°4E±0.°2, h539km±8km, mb4.5/10, Error ellipse: s-maj=21.7km s-min=15.2km az=87.0*

ISC 20 22:21:52.1±0.7, 7.°07S±0.°09×125.°41E±0.°09, h550km, n60, σ1s18/62, mb4.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.90**	**203**		P	**22 23 06.6**	**-0.1**
SOEI				S	**S**	**22 24 05.3**	**-2.1**
SOEI	**Soe**	**2.90**	**203**	P	**P**	**22 23 07.1**	**+0.4**
SOEI	**Soe**	**2.90**	**203**	P	**P**	**22 23 06.6**	**-0.1**
SOEI				S	**S**	**22 24 04.7**	**-2.7**
BBSI	**Bau Bau**	**3.23**	**299**	P	**P**	**22 23 09.9**	**+1.3**
MMRI	**Maumere**	**3.51**	**243**	P	**P**	**22 23 09.7**	**-0.8**
EDFI	**Ende, Flores**	**4.05**	**245**	P	**P**	**22 23 13.6**	**-0.9**
NLAI	**Namlea**	**4.16**	**24**	P	**P**	**22 23 15.2**	**0.0**
SANI	**Sanana**	**5.02**	**7**	P	**P**	**22 23 22.1**	**-0.1**
	29nm,0.8s,0.1nm						
BNDI	**Bandanaira**	**5.14**	**61**	P	**P**	**22 23 23.4**	**+0.3**
	194nm,0.7s,11µm0.8nm						
BASI	**Baing, Sumba**	**5.71**	**236**	P	**P**	**22 23 27.6**	**-0.5**
	101nm,0.5s,2µm0.6nm						
SAUI	**Saumlaki**	**5.91**	**99**	P	**P**	**22 23 27.6**	**-2.3**
KAPI	**Kappang**	**5.99**	**290**	P	**P**	**22 23 30.8**	**+0.2**
LUWI	**Luwuk**	**6.54**	**336**		**P**	**22 23 36.2**	**+0.4**
TTSI	**Tana Toraja**	**6.86**	**305**	P	**P**	**22 23 38.6**	**-0.2**
	26nm,0.7s,2µm0.4nm						
PLAI	**Plampang**	**7.76**	**256**	P	**P**	**22 23 46.3**	**-1.2**
PLAI	**Plampang**	**7.76**	**256**	P	**P**	**22 23 45.8**	**-1.7**
	28nm,0.5s,0.1nm						
FAKI	**Fak Fak**	**7.96**	**59**	P	**P**	**22 23 48.4**	**-1.2**
FAKI	**Fak Fak**	**7.96**	**59**	P	**P**	**22 23 48.6**	**-0.9**
FAKI	**Fak Fak**	**7.96**	**59**	P	**P**	**22 23 48.7**	**-0.8**
	114nm,0.6s,2µm						
GTOI	**Gorontalo**	**8.02**	**343**	P	**P**	**22 23 53.0**	**+2.9**
	16nm,1.1s						
MTN	**Manton Dam**	**8.04**	**136**		**P**	**22 23 49.5**	**-0.8**
MRSI	**Marisa**	**8.26**	**335**	P	**P**	**22 23 53.2**	**+0.7**
	39nm,0.8s						
SWI	**Sorong**	**8.49**	**44**	P	**P**	**22 23 54.4**	**-0.3**
	175nm,0.8s						
TWSI	**Taliwang, Sumb**	**8.61**	**258**	P	**P**	**22 23 53.9**	**-2.1**
	16nm,0.8s						
TOLI2	**Tolitoli**	**9.35**	**330**	P	**P**	**22 24 03.9**	**+0.5**
TOLI2	**Tolitoli**	**9.35**	**330**	P	**P**	**22 24 04.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**10.97**	**179**	P	**P**	**22 24 19.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**11.24**	**262**		**P**	**22 24 21.1**	**-1.7**
JAGI	**Jajag, Banyuwa**	**11.24**	**262**	P	**P**	**22 24 22.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**11.24**	**262**	P	**P**	**22 24 21.2**	**-1.7**
BLJI	**Banyuglugur**	**11.74**	**266**	P	**P**	**22 24 27.0**	**-1.0**
	31nm,0.6s,2µm						
BWJI	**Bawean**	**12.73**	**275**	P	**P**	**22 24 36.7**	**-1.6**
	388nm,1.1s						
PWJI	**Pagerwojo**	**13.52**	**265**	P	**P**	**22 24 45.6**	**-0.9**
WB0	**Warramunga Arr**	**15.34**	**146**	P	**P**	**22 25 03.9**	**-1.2**
WB0				IAmb	IAmb	22 25 04.9	
	comp=Z,18nm,1.2s						
WRA	**Warramunga Arr**	**15.46**	**147**	P	**P**	**22 25 05.2**	**-1.1**
	comp=Z,7.1nm,0.5s,baz=324,slow=10.0,SNR=109						
	comp=Z,7.1nm,0.5s						
WR0	**Warramunga Arr**	**15.58**	**146**	P	**P**	**22 25 06.5**	**-1.0**
KPJI	**Karang Pucung**	**16.35**	**268**	P	**P**	**22 25 14.1**	**-1.0**
	comp=Z,33nm,0.9s						
CMJI	**Cimerak**	**16.84**	**266**	P	**P**	**22 25 17.8**	**-1.7**
	comp=Z,56nm,1.0s						
BBJI	**Bungbulang**	**17.62**	**268**	P	**P**	**22 25 28.2**	**+1.5**
WRKA	**Warakurna**	**18.08**	**172**	P	**P**	**22 25 32.1**	**+1.3**
CNJI	**Cibinong**	**18.14**	**268**	P	**P**	**22 25 32.1**	**+0.7**
	comp=Z,38nm,1.0s,comp=Z,408nm						
AS31	**Alice Springs**	**18.41**	**155**	P	**P**	**22 25 34.4**	**+0.6**
AS31				IAmb	IAmb	22 25 36.6	
	comp=Z,6.9nm,0.4s						
ASAR	**Alice Springs**	**18.41**	**155**	P	**P**	**22 25 34.5**	**+0.8**
	comp=Z,11nm,0.6s,baz=344,slow=15,SNR=146						
	comp=Z,11nm,0.6s						
COEN	**Coen**	**18.75**	**113**	P	**P**	**22 25 37.0**	**0.0**
COEN				IAmb	IAmb	22 25 51.1	
	comp=Z,14nm,1.5s						
COEN	**Coen**	**18.75**	**113**	P	**P**	**22 25 37.2**	**+0.2**
QIS	**Mount Isa**	**19.21**	**136**	P	**P**	**22 25 42.2**	**+1.1**
MEEK	**Meekatharra**	**20.51**	**198**	P	**P**	**22 25 53.7**	**+0.9**
OOD	**Oodnadatta**	**22.80**	**156**	P	**P**	**22 26 14.4**	**+1.1**
FORT	**Forrest**	**23.72**	**174**	P	**P**	**22 26 22.1**	**+0.6**
FORT	**Forrest**	**23.72**	**174**	P	**P**	**22 26 22.2**	**+0.7**
MULG	**Mulgathing**	**24.48**	**162**	P	**P

comp=Z,10μm,1.0s

COLC	**Colonia**	**1.18**	**103**	*e*P		**Pn**	**22 30 51.5**	**-1.1**
ENAN	**Enatrel Managu**	**1.19**	**6**	*i* P		**Pn**	**22 30 52.3**	**-0.3**
ENAN				IAML			22 31 44.8	

comp=Z,8μm,1.0s

ABCN	**Banco Central**	**1.19**	**3**	*i* P		**Pn**	**22 30 52.6**	**0.0**
ABCN				IAML			22 31 21.2	

comp=Z,6μm,1.0s

R0529	**La Mascota**	**1.20**	**7**	*i* P		**Pn**	**22 30 51.4**	**-1.4**
R0529				IAML			22 30 51.6	

comp=Z,3μm,1.0s

TISN	**Laguna Tiscapa**	**1.21**	**5**	*i* P		**Pn**	**22 30 52.7**	**-0.3**
TISN				IAML			22 31 12.2	

comp=Z,97nm,1.0s

R45A8	**Distro VI**	**1.22**	**7**	*i* P		**Pn**	**22 30 52.6**	**-0.5**
R45A8				IAML			22 30 52.8	

comp=Z,1μm,1.0s

R4DEC	**Barrio San Lui**	**1.22**	**6**	*i* P		**Pn**	**22 30 52.3**	**-0.8**
R4DEC				IAML			22 31 17.5	

comp=Z,2μm,1.0s

SAPS	**Ciudad Sandino**	**1.23**	**359**	*i* P		**Pn**	**22 30 53.1**	**-0.2**
SAPS				IAML			22 31 19.1	

comp=Z,2μm,1.0s

WILN	**Americas 2**	**1.24**	**9**	*i* P		**Pn**	**22 30 52.8**	**-0.5**
WILN				IAML			22 31 18.6	

comp=Z,780nm,1.0s

VMAR	**Armenia, Volca**	**1.25**	**95**	*e*P		**Pn**	**22 30 53.1**	**-0.4**
VMAR	**Armenia, Volca**	**1.25**	**95**	*i* P		**Pn**	**22 30 53.7**	**+0.2**
VMAR				IAML			22 31 15.9	

comp=Z,2μm,1.0s

COPN	**Copaltepe**	**1.26**	**351**	*i* P		**Pn**	**22 30 52.8**	**-0.8**
COPN				IAML			22 31 17.2	

comp=Z,2μm,1.0s

APQ2	**Apoyeque**	**1.26**	**2**	*i* P		**Pn**	**22 30 53.2**	**-0.5**
APQ2				IAML			22 31 12.1	

comp=Z,3μm,1.0s

APQN	**BB Volcan Apoy**	**1.29**	**3**	*i* P		**Pn**	**22 30 53.5**	**-0.5**
INDI	**Punta indio, G**	**1.36**	**141**	*i* P		**Pn**	**22 30 54.9**	**-0.1**
INDI				IAML			22 31 29.0	

comp=Z,360nm,1.0s

MOM2	**El Cardon**	**1.50**	**356**	*i* P		**Pn**	**22 30 56.2**	**-0.8**
MOM2				IAML			22 31 21.1	

comp=Z,750nm,1.0s

JTS	**Las Juntas de**	**1.54**	**114**	*e*P		**Pn**	**22 30 56.5**	**-1.0**
ACON	**Acoyapa**	**1.57**	**49**	*e*P		**Pn**	**22 30 57.0**	**-0.9**
ACON	**Acoyapa**	**1.57**	**49**	*i* P		**Pn**	**22 30 57.0**	**-0.9**
ACON				IAML			22 31 22.8	

comp=Z,370nm,1.0s

CNGA	**Al SSO del Vol**	**1.59**	**349**	*i* P		**Pn**	**22 30 57.5**	**-0.7**
CNGA				IAML			22 31 20.4	

comp=Z,1μm,1.0s

ROCN	**Rota Cerro Neg**	**1.62**	**347**	*i* P		**Pn**	**22 30 57.1**	**-1.5**
ROCN				IAML			22 31 27.6	

comp=Z,400nm,1.0s

BOAB	**BOACO BROADBAN**	**.67**	**25**	*i* P		**Pn**	**22 30 58.6**	**-0.6**
BOAB				*i* S		**Sb**	**22 31 22.8**	**0.0**
BOAB				IAML			22 31 23.3	

comp=Z,370nm,1.0s

ARE1	**Arenal 1**	**1.70**	**106**	*e*P		**Pn**	**22 31 00.4**	**+0.8**
TEL3	**Telica 3**	**1.70**	**344**	*i* P		**Pn**	**22 30 58.5**	**-1.2**
TEL3				IAML			22 31 26.1	

comp=Z,1μm,1.0s

BRAN	**Las Pilas**	**1.78**	**1**	*i* P		Pn	22 30 52.8	-8.0
BRAN				IAML			22 31 49.0	

comp=Z,2μm,1.0s

LAFE	**Finca La Fe, P**	**1.82**	**127**	*i* P		**Pn**	**22 31 01.7**	**+0.3**
LAFE				IAML			22 31 43.5	

comp=Z,2.8nm,1.0s

MATN	**Matagalpa**	**2.04**	**13**	*i* P		**Pn**	**22 31 04.1**	**-0.3**
MATN				IAML			22 31 45.1	

comp=Z,120nm,1.0s

CPMI	**Catarata Coope**	**2.07**	**108**	*i* P		**Pn**	**22 31 06.2**	**+1.3**
CPMI				IAML			22 31 40.0	

comp=Z,270nm,1.0s

JACO	**JACO, Garabito**	**2.11**	**126**	*i* P		**Pn**	**22 31 05.7**	**+0.4**
JACO				IAML			22 31 45.9	

comp=Z,210nm,1.0s

LIMN	**Finca el Limon**	**2.12**	**0**	*i* P		**Pn**	**22 31 05.0**	**-0.6**
LIMN				IAML			22 31 24.6	

comp=Z,190nm,1.0s

POTN	**Potosi Cosigui**	**2.34**	**332**	*i* P		**Pn**	**22 31 08.9**	**+0.5**
POTN				IAML			22 31 49.1	

comp=Z,48nm,1.0s

CSGN	**Cosiguina Volc**	**2.34**	**331**	*i* P		**Pn**	**22 31 08.5**	**-0.1**
CSGN				IAML			22 31 15.9	

comp=Z,1μm,1.0s

LCR2	**La Lucha 2**	**2.62**	**117**	*i* P		**Pn**	**22 31 13.8**	**+1.3**
LCR2				IAML			22 31 57.3	

comp=Z,140nm,1.0s

RIMA	**Rio Macho**	**2.73**	**115**	*i* P		**Pn**	**22 31 15.2**	**+1.2**
RIMA				IAML			22 32 04.0	

comp=Z,100nm,1.0s

CNCH	**Conchagua**	**2.73**	**329**	*i* P		**Pn**	**22 31 13.9**	**-0.1**
CNCH				IAML			22 31 49.1	

comp=Z,220nm,1.0s

CDM	**Cerro de Muert**	**2.91**	**118**	*i* P		**Pn**	**22 31 17.1**	**+0.3**
CDM				IAML			22 32 18.2	

comp=Z,91nm,1.0s

PLAN	**Los Planes de**	**3.48**	**130**	*i* P		**Pn**	**22 31 24.0**	**-0.2**
PLAN				IAML			22 31 25.0	

comp=Z,140nm,1.0s

IDC 20 23:06:15.7±2.5, 6°73S×129°93E, h0km, mb3.2/1, mbtmp3.4/3, ML3.6/2, MS3.2/1, Error ellipse: s-maj=138.5km s-min=34.0km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.81**	**162**	Pn		Pn	23 09 31.8	-1.2
	0.3nm,0.3s,baz=345,slow=14,SNR=22							
WRA				Sn		Sn	23 11 53.2	-14
	0.4nm,0.3s,baz=338,slow=22,SNR=6.9							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**17.26**	**168**	P		P	23 10 19.5	-0.5
	0.2nm,0.3s,baz=349,slow=9.4,SNR=2.3							
ASAR				S		Sn	23 13 19.1	-12
	0.3nm,0.6s,baz=2.4,slow=29,SNR=1.9							
ASAR				LR		LR	23 17 47.4	
	comp=Z,72nm,19.6s,baz=212,slow=40							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**67.97**	**327**	P		P	23 17 16.6	0.0
	0.1nm,0.4s,baz=132,slow=8.0,SNR=2.6							
	0.1nm,0.4s							

*ISN **20** 23:07:00.4±0.6, 33°72N×45°84E, h18km±4km, ML3.0*
*TEH **20** 23:07:00.5, 33°70N×45°75E, h8km±30km, ML2.9*
ISC 20 23:07:00.2±1.7, 33°67N±0°04×45°80E±0°04, h4km±16km, n13, σ0°46/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILBA	**Ilam Banvizeh**	**0.34**	**98**	Pg		**Pb**	**23 07 08.2**	**-0.6**
ILBA				Sg		**Sb**	**23 07 14.3**	**-0.4**
IBDR	**Badra**	**0.57**	**169**	*e*Pg		**Pb**	**23 07 12.5**	**-0.2**
IBDR				*e*Sg		**Sb**	**23 07 20.5**	**-0.6**
IBDR				AML		AML	23 07 27.3	
	comp=E,614nm,0.6s							
IBDR				AML		AML	23 07 38.9	
	comp=N,659nm,0.6s							
KGS1	**Ghasr-e-Shirin**	**0.85**	**348**	Pg		**Pg**	**23 07 16.4**	**-0.1**
IGHG	**Ghaleghazi**	**0.91**	**44**	Pg		**Pb**	**23 07 18.6**	**-0.1**
IDHR	**Dehrash**	**1.13**	**25**	Pg		**Pb**	**23 07 22.4**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.19**	**59**	Pg		**Pn**	**23 07 23.9**	**+0.1**
BHD	**Baghdad**	**1.25**	**252**	*e*Pg		**Pn**	**23 07 24.0**	**-0.4**
BHD				*e*Sg		**Sb**	**23 07 41.0**	**+0.2**
BHD				AML		AML	23 07 48.3	
	comp=E,417nm,0.5s							
ILIN	**Lien**	**1.57**	**37**	Pg		**Pg**	**23 07 30.8**	**+0.5**
IKFM	**Kafar-mosalman**	**1.71**	**94**	Pg		**Pg**	**23 07 33.6**	**+0.6**
IBZA	**Bozab**	**1.89**	**64**	Pn		**Pg**	**23 07 35.9**	**-0.4**
RAFI	**Al-Rafai**	**1.96**	**172**	*e*Pn		**Pn**	**23 07 35.0**	**+0.9**
RAFI				*e*Sn		**Sb**	**23 08 01.0**	**-0.2**
RAFI				AML		AML	23 08 08.2	
	comp=N,106nm,0.2s							
RAFI				AML		AML	23 08 10.2	
	comp=E,124nm,0.5s							
IDOB	**Doab**	**1.98**	**86**	Pn		**Pb**	**23 07 36.7**	**-0.2**
IKRK	**Kirkuk**	**2.10**	**325**	*e*Pn		**Pn**	**23 07 36.5**	**+0.3**
IKRK				*e*Sn		**Sn**	**23 08 03.0**	**+0.2**
IKRK				AML		AML	23 08 17.0	
	comp=N,144nm,0.4s							
IKRK				AML		AML	23 08 20.7	
	comp=E,142nm,0.6s							

IDC 20 23:17:44.9±3.6, 3°05S×141°09E, h0km, mb3.5/2, mbtmp3.5/3, ML3.7/1, MS2.4/1, Error ellipse: s-maj=118.8km s-min=17.3km az=99.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**8.74**	**137**	LR		LR	23 24 21.1	
	comp=Z,28nm,21.0s,baz=84,slow=45							
WRA	**Warramunga Arr**	**18.04**	**201**	P		P	23 21 58.1	+0.4
	0.3nm,0.3s,baz=23,slow=12,SNR=6.8							
WRA				S		Sn	23 25 19.9	+0.8
	0.2nm,0.7s,baz=25,slow=24,SNR=1.6							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**21.64**	**198**	P		P	23 22 37.5	+0.4
	0.4nm,0.6s,baz=26,slow=11,SNR=8.1							
	0.4nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**33.07**	**49**	T		T	23 58 16.5	
	baz=231,slow=75,SNR=39							
H11S2	**WAKE ISLAND Hy**	**33.09**	**49**	T		T	23 58 14.9	
	baz=231,slow=75,SNR=27							
H11S1	**WAKE ISLAND Hy**	**33.09**	**49**	T		T	23 58 22.0	
	baz=231,slow=75,SNR=28							
H11N1	**WAKE ISLAND Hy**	**33.98**	**47**	T		T	23 59 26.4	
	baz=230,slow=76,SNR=221							
H11N2	**WAKE ISLAND Hy**	**33.99**	**47**	T		T	23 59 27.6	
	baz=230,slow=76,SNR=316							
H11N3	**WAKE ISLAND Hy**	**33.99**	**47**	T		T	23 59 27.6	
	baz=230,slow=76,SNR=154							
MKAR	**Makanchi Array**	**71.51**	**322**	P		P	23 29 07.5	-0.2
	1.6nm,1.0s,baz=110,slow=6.3,SNR=8.5							
	1.6nm,1.0s							

*IDC **20** 23:18:25.5±2.9, 15°59N×93°50W, h0km, mb3.7/5, mbtmp3.7/7, ML4.0/2, MS3.4/4, Error ellipse: s-maj=92.1km s-min=26.4km az=39.0*
*MEX **20** 23:18:28.6±0.4, 15°12N×94°27W, h15km±36km, MD4.5*
*NEIC **20** 23:18:31.1±2.4, 15°30N±0°04×94°18W±0°03, h30km±9km, mb4.3/25, Md4.5/69(MEX), Error ellipse: s-maj=5.6km s-min=4.6km az=151.0*
ISC 20 23:18:26.3±1.7, 15°12N±0°04×94°25W±0°03, h16km±11km, n106, σ2s35/141, mb3.9/8, MS3.5/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCIG		**1.15**	**60**			**Pb**	**23 18 46.9**	**-0.9**
PCIG						**Sb**	**23 19 00.6**	**-1.9**
PCIG		**1.15**	**60**	*e*P		**Pb**	**23 18 46.9**	**-0.9**
PCIG				*e*S		**Sb**	**23 19 00.6**	**-1.9**
CARR	**Arriaga**	**1.16**	**16**	*e*P		**Pg**	**23 18 47.5**	**-1.3**
CARR				*e*S		**Sn**	**23 19 01.1**	**-2.4**
NILT	**Santiago Nilte**	**1.48**	**346**	*e*P		**Pn**	**23 18 51.6**	**-0.6**
NILT				*e*S		**Sn**	**23 19 08.6**	**-2.7**
HUIG	**Huatulco**	**1.91**	**290**			**Pn**	**23 18 57.1**	**-1.1**
HUIG						**Sn**	**23 19 16.9**	**-5.0**
HUIG	**Huatulco**	**1.91**	**290**	*e*P		**Pn**	**23 18 57.1**	**-1.1**
HUIG				*e*S		**Sn**	**23 19 16.9**	**-5.0**
THIG		**1.93**	**96**			**Pn**	**23 18 58.1**	**-0.3**
THIG						**Sn**	**23 19 20.4**	**-2.0**
THIG		**1.93**	**96**	*e*P		**Pn**	**23 18 58.1**	**-0.3**
THIG				*e*S		**Sn**	**23 19 20.4**	**-2.0**
PATR	**El Naranjo**	**1.94**	**90**	*e*P		**Pn**	**23 18 57.8**	**-1.1**
TGIG		**1.97**	**33**			**Pn**	**23 19 00.1**	**+1.0**
TGIG						**Sb**	**23 19 24.7**	**-1.5**
TGIG		**1.97**	**33**	*e*P		**Pn**	**23 19 00.1**	**+1.0**
TGIG				*e*S		**Sb**	**23 19 24.7**	**-1.5**
TGBT	**Tuxtla Gutierr**	**1.98**	**34**			**Pb**	**23 19 01.5**	**-0.6**
TGBT						**Sb**	**23 19 25.1**	**-1.5**
TGBT	**Tuxtla Gutierr**	**1.98**	**34**	*e*P		**Pb**	**23 19 01.5**	**-0.6**
TGBT				*e*S		**Sb**	**23 19 25.1**	**-1.5**
PAVE	**Pavencul**	**2.00**	**88**	*e*P		**Pn**	**23 18 59.1**	**-0.6**
CMIG	**Matias Romero**	**2.05**	**343**			**Pn**	**23 19 00.5**	**+0.3**
CMIG						**Sn**	**23 19 24.3**	**-1.2**
CMIG	**Matias Romero**	**2.05**	**343**	Pn		**Pn**	**23 19 00.4**	**+0.3**
	161nm,0.3s,baz=176,slow=13,SNR=1499							
CMIG				LR		LR	23 19 16.5	
	comp=Z,57nm,19.3s,baz=356,slow=26							
CMIG				Sn		**Sn**	**23 19 25.2**	**-0.2**
	240nm,0.3s,baz=166,slow=11,SNR=26							
CMIG	**Matias Romero**	**2.05**	**343**	*e*P		**Pn**	**23 19 00.5**	**+0.3**
CMIG				*e*S		**Sn**	**23 19 24.3**	**-1.2**
CHUJ	**Union Juarez**	**2.06**	**91**	*e*P		**Pn**	**23 18 59.7**	**-0.9**
PANG	**Puerto Angel**	**2.21**	**284**			**Pn**	**23 19 02.5**	**0.0**
PANG						**Sn**	**23 19 25.6**	**-3.9**
PANG	**Puerto Angel**	**2.21**	**284**	*e*P		**Pn**	**23 19 02.5**	**0.0**
PANG				*e*S		**Sn**	**23 19 25.6**	**-3.9**
CCIG	**Comitan**	**2.33**	**60**			**Pn**	**23 19 05.0**	**+0.8**
CCIG	**Comitan**	**2.33**	**60**	*e*P		**Pb**	**23 19 07.0**	**-1.2**
CCIG				*e*S		**Sn**	**23 19 31.3**	**-1.4**
RTAL	**Retalhuleu**	**2.54**	**103**			**Pn**	**23 19 06.8**	**-0.1**
HUEH	**Huehuetenango**	**2.66**	**85**			**Pn**	**23 19 09.7**	**+0.9**
TUIG	**Tuzandepetl**	**2.90**	**357**	*e*P		**Pn**	**23 19 12.8**	**+1.0**
TUIG				*e*S		**Sb**	**23 19 48.7**	**-4.2**
PEIG	**Puerto Escondi**	**2.93**	**288**			**Pn**	**23 19 11.8**	**-0.5**
PEIG						**Sn**	**23 19 42.7**	**-4.5**
PEIG	**Puerto Escondi**	**2.93**	**288**	*e*P		**Pn**	**23 19 11.8**	**-0.5**
PEIG				*e*S		**Sn**	**23 19 42.7**	**-4.5**
OXIG	**Oaxaca**	**3.08**	**309**			**Pn**	**23 19 17.6**	**+3.1**
OXIG						**Sn**	**23 19 51.0**	**-0.1**
VHJ	**Vista Hermosa**	**3.08**	**309**	*e*P		**Pn**	**23 19 17.6**	**+3.1**
VHO				*e*S		**Sn**	**23 19 51.0**	**-0.1**
PMUV	**Sontecomapan**	**3.50**	**346**	*e*P		**Pn**	**23 19 19.5**	**-0.8**
PMUV				*e*S		**Sn**	**23 19 55.1**	**-6.3**
YOIG	**Yosondua**	**3.61**	**299**			**Pn**	**23 19 23.4**	**+1.5**
YOIG						**Sn**	**23 20 04.5**	**+0.1**
YOIG	**Yosondua**	**3.61**	**299**	*e*P		**Pn**	**23 19 23.4**	**+1.5**
YOIG				*e*S		**Sn**	**23 20 04.5**	**+0.1**
PNIG	**Pinotepa**	**3.94**	**289**			**Pn**	**23 19 26.6**	**+0.3**
PNIG	**Pinotepa**	**3.94**	**289**	*e*P		**Pn**	**23 19 26.6**	**+0.3**
PNIG				*e*S		**Sn**	**23 20 06.6**	**-5.7**
TXIG	**Tlaxiaco**	**3.99**	**303**			**Pn**	**23 19 29.9**	**+2.8**
TXIG						**Sn**	**23 20 12.2**	**-1.6**
TXIG	**Tlaxiaco**	**3.99**	**303**	*e*P		**Pn**	**23 19 29.9**	**+2.8**
TXIG				*e*S		**Sn**	**23 20 12.2**	**-1.6**
TOIG	**Toxpalan**	**4.00**	**318**			**Pn**	**23 19 30.5**	**+3.3**
TOIG						**Sn**	**23 20 16.3**	**+2.4**
TOIG	**Toxpalan**	**4.00**	**318**	*e*P		**Pn**	**23 19 30.5**	**+3.3**
TOIG				*e*S		**Sn**	**23 20 16.3**	**+2.4**
HLIG	**Huajuapan de L**	**4.35**	**309**			**Pn**	**23 19 33.2**	**+1.3**
HLIG						**Sn**	**23 20 25.1**	**+2.7**
HLIG	**Huajuapan de L**	**4.35**	**309**	*e*P		**Pn**	**23 19 33.2**	**+1.3**
HLIG				*e*S		**Sn**	**23 20 25.1**	**+2.7**
TPIG	**Tehuac#an**	**4.43**	**318**			**Pn**	**23 19 32.5**	**-0.6**
TPIG						**Sn**	**23 20 27.9**	**+3.4**
TPIG	**Tehuac#an**	**4.43**	**318**	*e*P		**Pn**	**23 19 32.5**	**-0.6**
TPIG				*e*S		**Sn**	**23 20 27.9**	**+3.4**
PETF	**Flores**	**4.57**	**66**			**Pn**	**23 19 36.5**	**+1.6**
FTIG	**Fresnillo de T**	**4.64**	**307**			**Pn**	**23 19 39.5**	**+3.6**
FTIG						**Sn**	**23 20 29.3**	**-0.4**
FTIG	**Fresnillo de T**	**4.64**	**307**	*e*P		**Pn**	**23 19 39.5**	**+3.6**
FTIG				*e*S		**Sn**	**23 20 29.3**	**-0.4**
MGIG	**Malinaltepec**	**4.71**	**297**			**Pn**	**23 19 39.0**	**+2.1**
MGIG						**Sn**	**23 20 28.5**	**-2.8**
MGIG	**Malinaltepec**	**4.71**	**297**	*e*P		**Pn**	**23 19 39.0**	**+2.1**
MGIG				*e*S		**Sn**	**23 20 28.5**	**-2.8**
ESQI	**Esquipulas**	**4.78**	**96**			**Pn**	**23 19 40.8**	**+3.0**
MTO3	**Montecristo**	**4.78**	**98**			**Pn**	**23 19 39.3**	**+1.3**
TLIG	**Tlapa**	**4.80**	**301**			**Pn**	**23 19 40.0**	**+1.8**
TLIG	**Tlapa**	**4.80**	**301**	*e*S		**Sn**	**23 20 30.7**	**-3.0**
SCIG	**Sabancuy**	**4.81**	**37**	*e*P		**Pn**	**23 19 39.0**	**+0.8**
SCIG				*e*S		**Sn**	**23 20 28.2**	**-5.5**
JAUV	**Jalcomulco**	**4.88**	**330**	*e*P		**Pn**	**23 19 38.3**	**-0.8**
JAUV				*e*S		**Sn**	**23 20 33.0**	**-2.3**
CRIG	**Cruz Grande**	**4.97**	**289**			**Pn**	**23 19 40.1**	**-0.2**
CRIG						**Sn**	**23 20 31.1**	**-6.3**
CRIG	**Cruz Grande**	**4.97**	**289**	*e*P		**Pn**	**23 19 40.1**	**-0.2**
CRIG				*e*S		**Sn**	**23 20 31.1**	**-6.3**
LVIG	**Laguna Verde**	**5.02**	**336**	*e*S		**Sn**	**23 20 32.4**	**-6.4**
TGUH	**Tegucigalpa,Un**	**6.83**	**98**	Pn		**Pn**	**23 20 10.1**	**+4.0**
CRIN	**San Cristobal**	**7.39**	**108**			Pn	23 20 18.9	+5.3
TEIG	**Tepich**	**7.62**	**47**	Pn		**Pn**	**23 20 16.1**	**-0.7**
MOIG	**Morelia**	**8.03**	**305**	Pn		**Pn**	**23 20 26.0**	**+3.4**
BOAB	**BOACO BROADBAN**	**8.75**	**107**	Pn		**Pn**	**23 20 36.0**	**+3.7**
HZTE	**Horizontes, Gu**	**9.50**	**116**	Pn		Pn	23 20 47.9	+5.2
ORTG	**Ortega, Santa**	**9.79**	**118**			**Pn**	**23 20 50.7**	**+4.1**
JTS	**Las Juntas de**	**10.26**	**117**	Pn		Pn	23 20 48.6	-4.5
	0.4nm,0.3s,baz=306,slow=19,SNR=1.3							
	5.0nm,0.8s							
ZAIG	**Zacatecas**	**10.94**	**315**	Pn		**Pn**	**23 21 05.6**	**+3.0**
LCR2	**La Lucha 2**	**11.34**	**117**	Pn		Pn	23 21 13.3	+5.3
RIMA	**Rio Macho**	**11.45**	**117**			**Pn**	**23 21 11.7**	**+2.2**

DRK0	**Durika**	**12.23**	**117**	Pn		**Pn**	**23 21 23.0**	**+2.9**
SOR	**Soroa**	**13.08**	**53**	Pn		**Pn**	**23 21 29.1**	**-2.4**
833A	**Chaparral WMA,**	**13.98**	**341**	Pn		**Pn**	**23 21 45.7**	**+1.9**
HNDO	**Hondo**	**15.07**	**343**			**Pn**	**23 21 59.0**	**+0.3**
435B	**Jarrell**	**15.88**	**349**			**Pn**	**23 22 10.2**	**+0.8**
435B				IAmb		IAmb	23 22 17.7	
	comp=Z,44nm,1.2s							
JCT	**Junction City**	**16.11**	**342**			**Pn**	**23 22 12.9**	**+0.6**
TXAR	**Lajitas Array**	**16.60**	**330**	Pn		**Pn**	**23 22 20.6**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=12							
	comp=Z,1.4nm,0.6s							
WHTX	**Lake Whitney,**	**17.05**	**351**			**Pn**	**23 22 24.0**	**0.0**
WHTX				IAmb		IAmb	23 22 31.6	
	comp=Z,16nm,0.6s							
ALPN	**Alpine**	**17.46**	**332**			**Pn**	**23 22 30.0**	**+0.6**
LPIG	**La Paz**	**17.56**	**303**	LR		LR	23 28 38.8	
	comp=Z,61nm,21.6s,baz=26,slow=34							
MNHN	**Monahans**	**17.93**	**336**	P		**P**	**23 22 36.6**	**+1.0**
MNHN				IAmb		IAmb	23 22 44.9	
	comp=Z,13nm,0.7s							
Z41A	**Richland Creek**	**18.10**	**4**			**P**	**23 22 37.8**	**+0.4**
Z41A				IAmb		IAmb	23 22 46.9	
	comp=Z,13nm,0.7s							
ODSA	**Odessa**	**18.54**	**337**	P		**P**	**23 22 43.2**	**+0.8**
ODSA				IAmb		IAmb	23 22 50.1	
	comp=Z,18nm,0.8s							
MIAR	**Mount Ida**	**19.35**	**2**	P		**P**	**23 22 50.8**	**-0.3**
X37A	**Clayton**	**19.41**	**357**	P		**Pn**	**23 22 53.3**	**+0.3**
X37A				IAmb		IAmb	23 23 01.6	
	comp=Z,13nm,1.2s							
X34A	**Smith Ranch, M**	**19.66**	**351**	P		**P**	**23 22 55.5**	**+0.9**
WM0K	**Wichita Mounta**	**19.95**	**349**			**P**	**23 22 58.4**	**+0.6**
W35A	**Tecumseh**	**20.08**	**354**			**P**	**23 22 59.7**	**+0.5**
W35A				IAmb		IAmb	23 23 01.6	
	comp=Z,13nm,0.6s							
MSTX	**Muleshoe**	**20.29**	**339**	P		**P**	**23 23 03.0**	**+1.4**
MSTX				IAmb		IAmb	23 23 07.0	
	comp=Z,29nm,1.4s							
X48A	**Hartselle**	**20.31**	**17**	P		**P**	**23 23 02.3**	**+0.7**
FCAR	**Ozark Folk Cen**	**20.77**	**5**	P		**P**	**23 23 07.3**	**+0.7**
FCAR				IAmb		IAmb	23 23 32.3	
	comp=Z,12nm,1.0s							
AMTX	**Amarillo**	**20.78**	**343**	P		**P**	**23 23 07.0**	**+0.1**
FPAL	**Fort Paine**	**20.84**	**20**	P		**P**	**23 23 06.5**	**-1.0**
FPAL				IAmb		IAmb	23 23 10.5	
	comp=Z,13nm,1.0s							
121A	**Cookes Peak, D**	**21.26**	**327**	P		**P**	**23 23 14.5**	**+2.3**
121A				IAmb		IAmb	23 23 17.5	
	comp=Z,6.5nm,0.8s							
OK035	**E0210 Rd and N**	**21.86**	**350**	P		**P**	**23 23 20.2**	**+1.8**
KAN12	**Harper NE Stat**	**22.34**	**352**	P		**P**	**23 23 24.7**	**+1.2**
ANMO	**Albuquerque**	**22.59**	**333**	P		**P**	**23 23 27.3**	**+0.9**
ANMO	**Albuquerque**	**22.59**	**333**	P		**P**	**23 23

	0.1nm,0.5s							
ALFC	**Alefka**	**1.12**	**279**	P	**Pn**	**23 29 22.8**	**-0.2**
ALFC				S	**Sn**	**23 29 36.0**	**-1.4**
ALFC				AML	AML	23 29 41.2	
	0.1nm,0.2s						
ALFC				AML	AML	23 29 43.6	
	0.1nm,0.4s						
NATA	**Nata**	**1.15**	**260**	P	**Pn**	**23 29 24.1**	**+0.6**
AKK1	**Akkuyu-Mersin**	**1.20**	**344**	Pn	**Pn**	**23 29 24.3**	**+0.3**
AKKU	**Akkuyu-Mersin**	**1.21**	**345**	Pn	**Pn**	**23 29 24.1**	**-0.1**
KARG	**Kargicak-Mersi**	**1.22**	**351**	Pn	**Pn**	**23 29 24.7**	**+0.3**
YESI	**Yesilovacik-Me**	**1.23**	**348**	Pn	**Pn**	**23 29 24.7**	**+0.3**
IKL	**Isikli**	**1.26**	**350**	Pn	**Pn**	**23 29 25.2**	**+0.3**
OREN	**Orenkoy-Mersin**	**1.28**	**342**	Pn	**Pn**	**23 29 25.2**	**+0.1**
AKMS	**Akamas**	**1.32**	**272**	P	**Pn**	**23 29 26.4**	**+0.7**
AKMS				S	**Sn**	**23 29 43.5**	**+1.2**
TEKE	**Tekeli-Mersin**	**1.33**	**330**	Pn	**Pn**	**23 29 25.7**	**-0.2**
KIZK	**Mersin**	**1.49**	**6**	Pn	**Pn**	**23 29 28.3**	**+0.2**
TEVE	**Tevekalti-Mers**	**1.50**	**344**	Pn	**Pn**	**23 29 28.7**	**+0.5**
BHL	**Bhannes**	**1.78**	**127**	*eP*	**Pn**	**23 29 32.4**	**+0.4**
BHL				*eS*	**Sn**	**23 29 50.5**	**-3.2**
HWQ	**Hawqa**	**1.80**	**113**	*eP*	**Pn**	**23 29 33.1**	**+0.8**
HWQ				*eS*	**Sn**	**23 29 51.6**	**-2.4**
GAZI	**Gazipasa**	**1.82**	**314**	Pn	**Pn**	**23 29 32.5**	**0.0**
DQRL	**Deir Qamar**	**1.86**	**133**	*eP*	**Pn**	**23 29 33.3**	**+0.2**
BEIL	**Beino**	**1.90**	**103**	*eP*	**Pn**	**23 29 34.8**	**+1.2**
ZAHL	**Zahle**	**1.96**	**121**	*eP*	**Pn**	**23 29 35.1**	**+0.5**
HNTI	**Hanita**	**2.16**	**151**	S	**Sn**	**23 30 01.9**	**-0.9**
HNTI	**Hanita**	**2.16**	**151**	P	**Pn**	**23 29 37.5**	**+0.4**
RCY	**Rachaya**	**2.16**	**133**	*eP*	**Pn**	**23 29 37.6**	**+0.3**
SHBL	**Chebaa**	**2.22**	**137**	*eP*	**Pn**	**23 29 38.5**	**+0.5**
NATI	**Neve Ativ**	**2.28**	**139**	P	**Pn**	**23 29 39.8**	**+1.1**
NATI	**Neve Ativ**	**2.28**	**139**	S	**Sn**	**23 30 05.0**	**-0.6**
NATI	**Neve Ativ**	**2.28**	**139**	P	**Pn**	**23 29 39.6**	**+0.8**
GEM	**Giv'at Ha'Em**	**2.28**	**141**	P	**Pn**	**23 29 39.7**	**+0.9**
GEM	**Giv'at Ha'Em**	**2.28**	**141**	S	**Sn**	**23 30 03.3**	**-2.4**
GEM	**Giv'at Ha'Em**	**2.28**	**141**	P	**Pn**	**23 29 39.3**	**+0.6**
HDMB	**Hadim**	**2.30**	**329**	Pn	**Pn**	**23 29 39.8**	**+0.6**
MMC1	**Mount Meron ar**	**2.30**	**148**	P	**Pn**	**23 29 39.6**	**+0.4**
MMC7	**Mount Meron ar**	**2.30**	**148**	P	**Pn**	**23 29 39.3**	**+0.1**
MMA0B	**Mount Meron ar**	**2.31**	**148**	P	**Pn**	**23 29 39.4**	**+0.1**
MMB1	**Mount Meron ar**	**2.32**	**148**	P	**Pn**	**23 29 39.7**	**+0.3**
BLGI	**Bet Lehem HaGe**	**2.48**	**155**	P	**Pn**	**23 29 42.3**	**+0.8**
OFRI	**`Ofer**	**2.52**	**160**	P	**Pn**	**23 29 42.1**	**0.0**
OFRI	**`Ofer**	**2.52**	**160**	P	**Pn**	**23 29 41.9**	**-0.1**
OFRI	**`Ofer**	**2.52**	**160**	S	**Sn**	**23 30 10.8**	**-0.8**
MMLI	**Mount Malkishu**	**2.83**	**154**	P	**Pn**	**23 29 47.0**	**+0.7**
MMLI	**Mount Malkishu**	**2.83**	**154**	S	**Sn**	**23 30 18.2**	**-1.0**
SLTI	**Sal'it**	**2.89**	**161**	P	**Pn**	**23 29 48.5**	**+1.3**
SLTI	**Sal'it**	**2.89**	**161**	P	**Pn**	**23 29 47.8**	**+0.6**
SLTI	**Sal'it**	**2.89**	**161**	S	**Sn**	**23 30 18.8**	**-2.0**
QRNJ	**Al-Qirein**	**2.98**	**152**	P	**Pn**	**23 29 49.8**	**+1.5**
HMDT	**Nahal Hemdat**	**3.03**	**154**	P	**Pn**	**23 29 50.4**	**+1.3**
HMDT	**Nahal Hemdat**	**3.03**	**154**	P	**Pn**	**23 29 49.9**	**+0.8**
HMDT	**Nahal Hemdat**	**3.03**	**154**	S	**Sn**	**23 30 23.5**	**-0.6**
BALJ	**Balqa**	**3.23**	**153**	P	**Pn**	**23 29 52.9**	**+1.2**
UJAP	**Al Uja**	**3.29**	**157**	P	**Pn**	**23 29 53.1**	**+0.6**
UJAP	**Al Uja**	**3.29**	**157**	S	**Sn**	**23 30 29.7**	**-0.6**
HSUJ	**Al Zarqa**	**3.44**	**146**	P	**Pn**	**23 29 56.6**	**+1.9**
AMAZ	**Amatzia**	**3.54**	**166**	S	**Sn**	**23 30 36.4**	**-0.4**
AMAZ	**Amatzia**	**3.54**	**166**	P	**Pn**	**23 29 56.9**	**+0.7**
DSI	**Dead Sea**	**3.62**	**160**	P	**Pn**	**23 29 58.4**	**+1.3**
DSI	**Dead Sea**	**3.62**	**160**	S	**Sn**	**23 30 37.6**	**-0.9**
DSI	**Dead Sea**	**3.62**	**160**	P	**Pn**	**23 29 57.6**	**+0.4**
ASF	**Jabal al Asfar**	**3.74**	**138**	P	**Pn**	**23 30 00.3**	**+1.4**
YTIR	**Yattir**	**3.75**	**164**	P	**Pn**	**23 29 59.9**	**+0.9**
YTIR	**Yattir**	**3.75**	**164**	S	**Sn**	**23 30 41.6**	**-0.3**
YTIR	**Yattir**	**3.75**	**164**	P	**Pn**	**23 29 59.9**	**+0.9**
MSBI	**Mazada**	**3.86**	**162**	P	**Pn**	**23 30 02.3**	**+2.0**
MSBI	**Mazada**	**3.86**	**162**	P	**Pn**	**23 30 01.1**	**+0.7**
MSBI	**Mazada**	**3.86**	**162**	S	**Sn**	**23 30 43.9**	**-0.4**
GHAJ	**Ghor Haditha**	**3.92**	**159**	P	**Pn**	**23 30 02.6**	**+1.4**
KZIT	**Kziot**	**4.09**	**175**	P	**Pn**	**23 30 04.5**	**+0.9**
KZIT	**Kziot**	**4.09**	**175**	S	**Sn**	**23 30 50.1**	**-0.1**
KARJ	**KARJ**	**4.12**	**159**	P	Pn	23 29 53.9	-10
PRNI	**Paran**	**4.71**	**169**	P	**Pn**	**23 30 12.8**	**+0.7**
PRNI	**Paran**	**4.71**	**169**	S	**Sn**	**23 31 05.8**	**+0.3**
PRNI	**Paran**	**4.71**	**169**	P	**Pn**	**23 30 13.1**	**+1.0**
KRMI	**Paran Flat**	**4.91**	**172**	P	**Pn**	**23 30 15.7**	**+0.9**
KRMI	**Paran Flat**	**4.91**	**172**	S	**Sn**	**23 31 10.7**	**+0.4**
HRFI	**Mount Harif**	**5.03**	**169**	P	**Pn**	**23 30 17.0**	**+0.5**
HRFI	**Mount Harif**	**5.03**	**169**	S	**Sn**	**23 31 12.0**	**-1.2**
HRFI	**Mount Harif**	**5.03**	**169**	P	**Pn**	**23 30 17.5**	**+1.0**
MBRI	**Mt Berech**	**5.25**	**171**	P	**Pn**	**23 30 20.2**	**+0.7**
MBRI	**Mt Berech**	**5.25**	**171**	P	**Pn**	**23 30 20.6**	**+1.1**
MBRI	**Mt Berech**	**5.25**	**171**	S	**Sn**	**23 31 17.9**	**-0.9**

*IDC **20** 23:32:01.1±3.6,22.2°26N×143.7°2E,h87km±29km,mb3.3/10, mbtmp3.6/11,Error ellipse: s-maj=29.5km s-min=21.3km az=84.0*

ISC 20 23:32:04.6±1.0,**22.4N**±0.1°×**143.6E**±0.2°,**h118**km,**n11,** σ1**$**23/12,**mb3.3**/10,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.89**	**345**	P	**Pn**	**23 33 15.4**	**-0.6**
	24nm,0.3s,baz=88,slow=9.1,SNR=9.0						
JCJ				S	**Sn**	**23 34 10.0**	**-1.6**
	49nm,0.4s,baz=60,slow=24,SNR=5.7						
SONM	**Songino Array**	**39.09**	**320**	P	**P**	**23 39 21.6**	**+1.3**
	0.2nm,0.4s,baz=117,slow=8.3,SNR=2.4						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.01**	**193**	P	**P**	**23 39 50.9**	**-1.6**
	0.2nm,0.4s,baz=16,slow=9.2,SNR=7.3						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**53.94**	**321**	P	**P**	**23 41 16.0**	**+0.1**
	0.5nm,0.6s,baz=108,slow=12,SNR=2.4						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**54.54**	**312**	P	**P**	**23 41 21.8**	**+1.3**
	0.1nm,0.6s,baz=90,slow=10,SNR=2.4						
	0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**57.31**	**317**	P	**P**	**23 41 41.3**	**+1.3**
	0.6nm,0.6s,baz=96,slow=7.7,SNR=9.9						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**61.27**	**27**	P	**P**	**23 42 06.8**	**-0.3**
	0.3nm,0.8s,baz=260,slow=5.4,SNR=2.5						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**62.43**	**319**	P	**P**	**23 42 16.2**	**+1.2**
	1.1nm,0.4s,baz=89,slow=7.9,SNR=12						
	1.1nm,0.4s						
YKA	**Yellowknife Ar**	**75.69**	**28**	P	**P**	**23 43 37.4**	**+0.7**
	0.2nm,0.5s,baz=294,slow=5.6,SNR=3.9						
	0.2nm,0.5s						
NVAR	**Mina Array Bea**	**82.43**	**52**	P	**P**	**23 44 14.8**	**+0.6**
	0.3nm,0.6s,baz=287,slow=6.0,SNR=3.9						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**82.75**	**335**	P	**P**	**23 44 14.2**	**-0.9**
	1.7nm,1.0s,baz=61,slow=4.6,SNR=6.8						
	1.7nm,1.0s						

*CATAC **20** 23:35:17.7±0.3,9.6°60N×84.3°93W,h5km±2km,ML3.4*
*UCR **20** 23:35:18.6±1.3,9.7°65N×84.7°92W,h18km±5km,MW3.7*

ISC 20 23:35:18.2±1.0,**9.6N**±0.1°×**84.9W**±0.2°,**h18**km±4km, **n52,** σ0**$**97/61,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBL1	**Cabuya**	**0.17**	**264**	*eP*	**Pg**	**23 35 22.3**	**-0.5**
CBL1				*eS*	**Sg**	**23 35 26.0**	**+0.1**
LAFE	**Finca La Fe, P**	**0.20**	**1**	*eP*	**Pg**	**23 35 22.9**	**-0.3**
LAFE				*eS*	**Sg**	**23 35 26.9**	**+0.3**
LAFE	**Finca La Fe, P**	**0.20**	**1**	*i P*	**Pg**	**23 35 22.8**	**-0.3**
LAFE				IAML		23 35 22.9	
	comp=Z,57nm,1.0s						
LAFE				*i S*	**Sg**	**23 35 26.8**	**+0.3**
JACO	**JACO, Garabito**	**0.26**	**78**	*eP*	**Pg**	**23 35 24.0**	**0.0**
JACO	**JACO, Garabito**	**0.26**	**78**	*i P*	**Pg**	**23 35 24.0**	**0.0**
JACO				IAML		23 35 24.1	
	comp=Z,2μm,1.0s						
JACO				*i S*	**Sb**	**23 35 28.7**	**+0.4**
INDI	**Punta indio, G**	**0.63**	**294**	*eP*	**Pg**	**23 35 30.0**	**-0.8**
INDI				*eS*	**Sb**	**23 35 40.5**	**+1.2**
INDI	**Punta indio, G**	**0.63**	**294**	*i P*	**Pg**	**23 35 29.9**	**-0.8**
INDI				*i S*	**Sg**	**23 35 38.8**	**-0.4**
INDI				IAML		23 35 41.9	
	comp=Z,1μm,1.0s						
SRA1	**San Ramn**	**0.64**	**42**	*eP*	**Pg**	**23 35 30.0**	**-0.9**
CMARA	**Lajas Hojancha**	**0.65**	**309**	*eP*	**Pg**	**23 35 29.8**	**-1.2**
JUNT	**Juntas**	**0.67**	**356**	*eP*	**Pg**	**23 35 30.4**	**-1.1**
JTS	**Las Juntas de**	**0.68**	**357**	*eP*	**Pg**	**23 35 30.5**	**-1.2**
DUNO	**Dulce Nombre,**	**0.74**	**310**	*eP*	**Pg**	**23 35 31.8**	**-1.0**
DUNO	**Dulce Nombre,**	**0.74**	**310**	*i P*	**Pg**	**23 35 32.0**	**-0.7**
DUNO				IAML		23 35 43.9	
	comp=Z,7μm,1.0s						
NICO	**Nicoya**	**0.74**	**315**	*eP*	**Pg**	**23 35 31.8**	**-1.0**
ACOS	**Acosta**	**0.76**	**76**	*eP*	**Pg**	**23 35 32.5**	**-0.7**
BELE	**Belen**	**0.81**	**63**	*eP*	**Pb**	**23 35 34.1**	**+0.4**
SOCE	**Pocosol**	**0.82**	**21**	*i P*	**Pg**	**23 35 33.5**	**-0.9**
SOCE				*i S*	**Sb**	**23 35 45.1**	**+0.2**
SOCE				IAML		23 35 47.5	
	comp=Z,980nm,1.0s						
JUD3	**Juan Diaz 3**	**0.83**	**312**	*eP*	**Pg**	**23 35 33.4**	**-1.0**
CPMI	**Catarata Coope**	**0.85**	**38**	*eP*	**Pg**	**23 35 34.1**	**-0.8**
CPMI	**Catarata Coope**	**0.85**	**38**	*i P*	**Pg**	**23 35 34.1**	**-0.8**
CPMI				*i S*	**Sb**	**23 35 46.1**	**+0.3**
CPMI				IAML		23 35 52.5	
	comp=Z,1μm,1.0s						
PLVR	**Palo Verde**	**0.85**	**330**	*eP*	**Pg**	**23 35 33.5**	**-1.4**
ABE2	**San Pablo**	**0.85**	**83**	*eP*	**Pg**	**23 35 34.0**	**-0.9**
ARE1	**Arenal 1**	**0.87**	**13**	*eP*	**Pg**	**23 35 34.5**	**-0.8**
HDC3	**Heredia 3**	**0.88**	**64**	*i P*	**Pg**	**23 35 34.4**	**-1.1**
HDC3				IAML		23 35 57.8	
	comp=Z,930nm,1.0s						
CEDE	**Laguna Cedeo**	**0.90**	**13**	*eP*	**Pg**	**23 35 35.0**	**-0.8**
LCR2	**La Lucha 2**	**0.91**	**81**	*eP*	**Pg**	**23 35 34.5**	**-1.3**
LCR2	**La Lucha 2**	**0.91**	**81**	*i P*	**Pg**	**23 35 34.6**	**-1.3**
LCR2				IAML		23 35 49.8	
	comp=Z,750nm,1.0s						
SAJU	**San Juanillo,**	**0.91**	**300**	*i P*	**Pg**	**23 35 34.4**	**-1.5**
SAJU				*i S*	**Sb**	**23 35 47.6**	**+0.4**
SAJU				IAML		23 35 51.8	
	comp=Z,960nm,1.0s						
ORTG	**Ortega, Santa**	**0.92**	**325**	*i P*	**Pg**	**23 35 34.6**	**-1.6**
ORTG				IAML		23 35 49.5	
	comp=Z,700nm,1.0s						
BAGA	**Bagaces**	**0.98**	**340**	*eP*	**Pb**	**23 35 36.8**	**+0.2**
OCM	**Ochomogo**	**0.98**	**73**	*i P*	**Pg**	**23 35 36.0**	**-1.4**
OCM				IAML		23 35 54.3	
	comp=Z,920nm,1.0s						
RIMA	**Rio Macho**	**1.05**	**81**	*eP*	**Pg**	**23 35 36.9**	**-1.7**
RIMA	**Rio Macho**	**1.05**	**81**	*i P*	**Pg**	**23 35 36.9**	**-1.7**
RIMA				IAML		23 35 53.6	
	comp=Z,390nm,1.0s						
VIRE	**VIRE**	**1.06**	**70**	*i P*	**Pg**	**23 35 37.9**	**-1.0**
VIRE				IAML		23 35 57.8	
	comp=Z,1μm,1.0s						
CUI	**Cuipilapa**	**1.07**	**347**	*eP*	**Pb**	**23 35 37.3**	**-1.0**
COLC	**Colonia**	**1.09**	**345**	*eP*	**Pb**	**23 35 38.0**	**-0.6**
HAYA	**Volcan Irazu**	**1.12**	**71**	*i P*	**Pb**	**23 35 39.5**	**+0.2**
HAYA				IAML		23 35 59.4	
	comp=Z,1μm,1.0s						
CDM	**Cerro de Muert**	**1.14**	**93**	*eP*	**Pb**	**23 35 39.2**	**-0.4**
CDM	**Cerro de Muert**	**1.14**	**93**	*i P*	**Pb**	**23 35 38.9**	**-0.7**
CDM				IAML		23 35 59.3	
	comp=Z,810nm,1.0s						
CVTQ	**Turrialba Volc**	**1.20**	**71**	*eP*	**Pb**	**23 35 40.8**	**+0.2**
RIFO	**Rio Frio, Sara**	**1.21**	**54**	*i P*	**Pg**	**23 35 41.8**	**+0.3**
RIFO				IAML		23 36 03.9	
	comp=Z,1μm,1.0s						
COVE	**Coope Vega, Sa**	**1.22**	**24**	*i P*	**Pn**	**23 35 39.8**	**-0.5**
COVE				IAML		23 36 00.3	
	comp=Z,1μm,1.0s						
VTCV	**VTCV, Calle Va**	**1.23**	**72**	*i P*	**Pn**	**23 35 41.4**	**+0.7**
VTCV				IAML		23 36 01.1	
	comp=Z,690nm,1.0s						
VERB	**Verbena**	**1.25**	**74**	*eP*	**Pn**	**23 35 40.9**	**0.0**
HZTE	**Horizontes, Gu**	**1.29**	**329**	*i P*	**Pn**	**23 35 41.0**	**-0.3**
HZTE				IAML		23 36 02.9	
	comp=Z,610nm,1.0s						
OCHAL	**Ojochal**	**1.35**	**112**	*i P*	**Pn**	**23 35 40.9**	**-1.3**
OCHAL				IAML		23 38 02.7	
	comp=Z,3.7nm,1.0s						
PLAN	**Los Planes de**	**1.53**	**127**	*i P*	**Pg**	**23 35 48.7**	**+1.0**
PLAN				IAML		23 36 17.6	
	comp=Z,430nm,1.0s						
POTG	**Potrero Grande**	**1.86**	**107**	*i P*	**Pn**	**23 35 49.3**	**+0.1**
POTG				IAML		23 37 06.6	
	comp=Z,750nm,1.0s						
MORN	**Al O del Volca**	**2.06**	**340**	*i P*	**Pn**	**23 35 53.6**	**+1.7**
MORN				IAML		23 35 56.6	
	comp=Z,530nm,1.0s						
CONN	**Concepcion**	**2.07**	**340**	*i P*	**Pn**	**23 35 53.9**	**+1.8**
CONN				IAML		23 35 56.9	
	comp=Z,3μm,1.0s						
ACON	**Acoyapa**	**2.36**	**354**	*i P*	**Pn**	**23 35 58.1**	**+2.0**
ACON				IAML		23 36 50.5	
	comp=Z,140nm,1.0s						
BOAB	**BOACO BROADBAN**	**2.92**	**345**	*i P*	**Pb**	**23 36 10.4**	**+0.6**

*IDC **20** 23:40:48.0±2.8,0.9°94N×98.8°85E,h71km±23km,mb4.0/17, mbtmp4.3/18,MS3.7/5,Error ellipse: s-maj=29.0km s-min=12.3km az=58.0*
*NEIC **20** 23:40:49.7±2.3,1.0°04N±0.0°06×98.7°73E±0.0°05,h82km±8km, mb4.5/39,Error ellipse: s-maj=8.8km s-min=7.4km az=193.0*
*DJA **20** 23:40:49.0±0.2,1.2°N±2.2°×98.9°E±0.2°,h80km±5km,M4.8/17, mb4.8/12,mB5.4/3,MLv4.8/17,Mw(mB)4.9/3*

ISC 20 23:40:47.5±0.4,**0.98N**±0.0°×**98.75E**±0.0°,**h65**km,**n104,** σ1**$**40/105,**mb4.5**/51,**1C-3D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**1.13**	**205**	P	**Pn**	**23 41 10.6**	**+3.2**
GSI	**Gunungsitoli**	**1.22**	**285**	Pn	**Pn**	**23 41 11.1**	**+2.5**
GSI				Sn	**Sn**	**23 41 26.0**	**+1.7**
GSI	**Gunungsitoli**	**1.22**	**285**	P	**Pn**	**23 41 11.0**	**+2.4**
RPSI	**Rantau Prapat**	**1.71**	**6**	Pn	**Pn**	**23 41 17.6**	**+2.4**
RPSI				Sn	**Sn**	**23 41 35.7**	**-0.4**
SISI	**Saibi**	**2.31**	**172**	P	**Pn**	**23 41 25.7**	**+2.3**
BKNI	**Bangkinang**	**2.38**	**106**		**Pn**	**23 41 26.8**	**+2.6**
BKNI	**Bangkinang**	**2.38**	**106**	P	**Pn**	**23 41 26.8**	**+2.6**
KCSI	**Kotacane, Aceh**	**2.71**	**339**	P	**Pn**	**23 41 30.0**	**+1.3**
SNSI	**Sinabang, Aceh**	**2.81**	**300**	P	**Pn**	**23 41 31.9**	**+1.9**
PPSI	**Pulau Pagai**	**3.92**	**161**	P	**Pn**	**23 41 46.2**	**+0.9**
MLSI	**Meulaboh, Aceh**	**4.02**	**324**	P	**Pn**	**23 41 48.2**	**+1.6**
KRJI	**Kerinci**	**4.08**	**138**	P	**Pn**	**23 41 50.6**	**+3.0**
IPM	**Ipoh**	**4.16**	**33**		**Pn**	**23 41 51.8**	**+3.3**
LHMI	**Lhok Sumawe**	**4.59**	**337**		**Pn**	**23 41 54.9**	**+0.5**
LHMI	**Lhok Sumawe**	**4.59**	**337**	P	**Pn**	**23 41 55.4**	**+1.0**
KULM	**Kulim**	**4.69**	**24**	Pn	**Pn**	**23 41 58.1**	**+2.3**
MYKOM	**Kota Tinggi**	**5.16**	**81**	Pn	**Pn**	**23 42 04.9**	**+2.7**
TPRI	**Tanjung Pinang**	**5.78**	**91**	P	**Pn**	**23 42 13.5**	**+2.8**
	84nm,0.5s,1.3nm						
DSRI	**Dabo**	**6.01**	**104**	P	**Pn**	**23 42 15.7**	**+1.9**
	26nm,0.5s,0.2nm						
MNAI	**Manna**	**6.77**	**142**	Pn	**Pn**	**23 42 26.0**	**+1.8**
MNAI	**Manna**	**6.77**	**142**	P	**Pn**	**23 42 26.2**	**+1.9**
	133nm,1.1s,0.9nm						
SRIT	**Nakonsritamara**	**7.61**	**6**	Pn	**Pn**	**23 42 35.6**	**-0.3**
KASI	**Kota Agung**	**8.64**	**138**	P	**Pn**	**23 42 51.9**	**+2.0**
	23nm,0.6s						
LEM	**Lembang**	**11.77**	**131**	LR	LR	23 47 44.4	
	comp=Z,85nm,20.3s,baz=67,slow=36						
KPJI	**Karang Pucung**	**13.09**	**129**	P	**Pn**	**23 43 52.7**	**+2.0**
	15nm,0.6s						
SBUM	**Sibu**	**13.54**	**84**	Pn	**Pn**	**23 43 59.9**	**+3.1**
UGM	**Wanagama**	**14.69**	**127**	Pn	**Pn**	**23 44 09.7**	**-2.3**
UGM	**Wanagama**	**14.69**	**127**	P	**Pn**	**23 44 12.5**	**+0.5**
	79nm,1.6s						
PWJI	**Pagerwojo**	**15.79**	**125**	P	**Pn**	**23 44 26.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**17.37**	**1**	P	**P**	**23 44 45.8**	**-0.4**
	3.8nm,0.6s,baz=189,slow=11,SNR=15						
CHTO	**Chiang Mai**	**17.73**	**1**		**Pn**	**23 44 49.6**	**-0.4**
KKM	**Kota Kinabalu**	**18.14**	**73**	P	**Pn**	**23 44 56.2**	**+0.9**
BKB	**Balikpapan**	**18.28**	**97**	P	**Pn**	**23 44 57.5**	**+0.7**
PALK	**Pallekele**	**19.05**	**290**	LR	LR	23 51 00.1	
	comp=Z,29nm,21.4s,baz=235,slow=32						
CRAI	**Chiangrai**	**19.20**	**5**	P	**P**	**23 45 05.9**	**-0.3**
SLVN	**Son La**	**20.85**	**14**	P	**P**	**23 45 24.6**	**+0.4**
KAPI	**Kappang**	**21.81**	**106**	P	**P**	**23 45 35.9**	**+1.4**
KAPI				IAmb	IAmb	23 45 39.5	
	comp=Z,12nm,0.7s						
TOLI2	**Tolitoli**	**22.03**	**89**	P	**P**	**23 45 37.0**	**+0.1**
SAIH	**SAIHA**	**22.10**	**346**	*eP*	**P**	**23 45 36.6**	**-1.1**
SAIH				IAmb	IAmb	23 45 42.2	
	comp=Z,22nm,0.9s						
BRDH	**Bariadhala**	**22.65**	**343**	LR	LR	23 56 18.8	
	comp=Z,810nm,21.7s,baz=166,slow=41						
IMP	**Imphal**	**24.16**	**349**	*eP*	**P**	**23 45 57.0**	**-0.8**
IMP				IAmb	IAmb	23 46 03.1	
	comp=Z,8.7nm,0.7s						
KOHI	**KOHIMA**	**25.00**	**350**	*eP*	**P**	**23 46 04.0**	**-1.6**
KOHI				IAmb	IAmb	23 46 09.0	
	comp=Z,19nm,0.7s						
SHL	**Shillong**	**25.33**	**345**	P	**P**	**23 46 07.7**	**-0.9**
SHL	**Shillong**	**25.33**	**345**	*eP*	**P**	**23 46 08.2**	**-0.4**
PZH	**PanZhiHua**	**25.54**	**6**	P	**P**	**23 46 12.3**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
BOK	**Bokaro**	**25.88**	**332**	*eP*	**P**	**23 46 14.7**	**+1.3**
BOK				IAmb	IAmb	23 46 15.8	
	comp=Z,26nm,0.8s						
GUWA	**GUWAHATI**	**25.97**	**345**	*eP*	**P**	**23 46 15.4**	**+1.2**
TEZP	**TEZPUR**	**26.12**	**348**	*eP*	**P**	**23 46 14.5**	**-1.0**
TEZP				IAmb	IAmb	23 46 17.7	
	comp=Z,11nm,0.7s						
ITAN	**ITANAGAR**	**26.46**	**350**	*eP*	**P**	**23 46 18.6**	**+0.1**
ZIRO	**ZIRO**	**26.81**	**350**	*eP*	**P**	**23 46 21.4**	**-0.5**
ZIRO				IAmb	IAmb	23 46 24.5	
	comp=Z,33nm,0.7s						
LSA	**Lhasa**	**29.46**	**346**	P	**P**	**23 46 46.6**	**+0.6**
LSA				IAmb	IAmb	23 46 48.4	
	comp=Z,9.2nm,0.5s						
LGTI	**Lohaghat**	**33.35**	**330**	*eP*	**P**	**23 47 20.2**	**+0.6**
LGTI				IAmb	IAmb	23 47 23.8	
	comp=Z,7.4nm,0.7s						
XAN	**Xi'an**	**34.24**	**15**	⇓P	**P**	**23 47 27.5**	**+0.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LYN	**LuoYang**	**35.78**	**20**	⇓P	**P**	**23 47 41.6**	**+1.2**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DHRM	**DHARAMSHALA**	**37.62**	**328**	*eP*	**P**	**23 47 56.9**	**+0.4**
DHRM				IAmb	IAmb	23 48 01.5	
	comp=Z,16nm,0.4s						
GTA	**Gaotai**	**38.26**	**1**	P	**P**	**23 48 01.6**	**0.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NIL	**Nilore**	**40.34**	**326**	P	**P**	**23 48 16.6**	**-2.3**
NIL				IAmb	IAmb	23 48 24.5	
	comp=Z,6.3nm,0.7s						
WB0	**Warramunga Arr**	**40.58**	**122**	P	**P**	**23 48 19.3**	**-1.8**
WB0				IAmb	IAmb	23 48 19.9	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**40.61**	**123**	P	**P**	**23 48 19.7**	**-1.6**
	comp=Z,4.2nm,0.6s,baz=302,slow=9.0,SNR=35						
WRA				PcP	**PcP**	**23 50 21.3**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=316,slow=2.5,SNR=1.9						
WRA				ScP	**ScP**	**23 54 04.3**	**-2.2**
	comp=Z,0.8nm,1.1s,baz=329,slow=3.1,SNR=2.6						
	comp=Z,4.2nm,0.6s						
WRAB	**Tennant Creek**	**40.62**	**123**	P	**P**	**23 48 19.9**	**-1.5**
WRAB				IAmb	IAmb	23 48 20.7	
	comp=Z,6.1nm,0.7s						
WB2	**Warramunga Arr**	**40.62**	**123**	P	**P**	**23 48 19.9**	**-1.5**
WB2				IAmb	IAmb	23 48 20.7	
	comp=Z,6.0nm,0.

HFS LR LR 00 34 22.7
comp=Z,278nm,18.0s,baz=315,slow=37
comp=Z,1.4nm,0.8s
QSPA South Pole Qui 90.92 180 P **P** **23 53 45.1 +1.0**
comp=Z,1.2nm,0.9s,baz=329,slow=5.9,SNR=5.6
comp=Z,1.2nm,0.9s
SNAA Sanae 94.57 198 ⇑P P 23 54 05.5 +4.8
comp=Z,16nm,0.2s
TXAR Lajitas Array 143.02 34 PKP PKPbc 00 00 11.5 -0.2
comp=Z,0.3nm,0.5s,baz=229,slow=0.7,SNR=8.0

IDC 20 23:51:36.5±2.9, 29°.70S×178°.09W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=77.0km s-min=40.7km az=33.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.57**	**256**	P	P	23 58 26.7	-0.3
	2.2nm,0.6s,baz=80,slow=8.6,SNR=6.6						
	2.2nm,0.6s						
ASAR	**Alice Springs**	**43.07**	**266**	P	P	23 59 38.1	-0.4
	0.3nm,0.5s,baz=106,slow=7.2,SNR=2.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.00**	**271**	P	P	23 59 46.2	+0.2
	0.8nm,0.3s,baz=111,slow=8.0,SNR=19						
	0.8nm,0.3s						
QSPA	**South Pole Qui**	**60.40**	**180**	P	P	00 01 47.4	-0.1
	0.5nm,0.3s,baz=60,slow=8.1,SNR=2.5						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**144.47**	**340**	PKP	PKPdf	00 11 13.6	-0.5
	0.7nm,0.4s,baz=62,slow=3.3,SNR=14						

IDC 20 23:55:17.7±3.8, 15°.27S×168°.49E, h0km, mb3.7/3, mbtmp3.6/4, ML3.3/1, MS3.7/9, Error ellipse: s-maj=86.8km s-min=34.3km az=98.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.04**	**196**	Pn	Pn	23 57 03.1	+0.9
	0.6nm,0.3s,baz=20,slow=5.4,SNR=1.4						
DZM				Sn	Sn	23 58 21.9	-1.1
	0.2nm,0.3s,baz=279,slow=23,SNR=1.8						
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**32.84**	**257**	P	P	00 01 53.5	0.0
	0.9nm,1.0s,baz=83,slow=7.9,SNR=2.7						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**33.59**	**250**	P	P	00 01 59.9	-0.1
	0.7nm,0.7s,baz=79,slow=8.3,SNR=7.4						
	0.7nm,0.7s						
JCJ	**Chichijima**	**49.25**	**329**	LR	LR	00 20 41.7	
	comp=Z,46nm,21.4s,baz=144,slow=31						
MJAR	**Matsushiro Arr**	**58.93**	**332**	LR	LR	00 24 54.9	
	comp=Z,71nm,21.7s,baz=178,slow=30						
KLR	**Kul'dur**	**71.98**	**336**	LR	LR	00 35 37.3	
	comp=Z,28nm,19.6s,baz=162,slow=34						
RPN	**Rapa Nui**	**76.37**	**115**	LR	LR	00 34 13.7	
	comp=Z,25nm,20.5s,baz=50,slow=31						
YAK	**Yakutsk**	**82.89**	**343**	LR	LR	00 45 25.5	
	comp=Z,29nm,18.0s,baz=48,slow=36						
SONM	**Songino Array**	**83.63**	**323**	P	P	00 07 48.1	-0.1
	0.5nm,0.9s,baz=134,slow=4.2,SNR=3.8						
	0.5nm,0.9s						
PFO	**Pinyon Flats O**	**86.36**	**54**	LR	LR	00 36 27.1	
	comp=Z,69nm,20.7s,baz=141,slow=29						
NVAR	**Mina Array Bea**	**86.73**	**49**	LR	LR	00 38 48.8	
	comp=Z,103nm,21.7s,baz=154,slow=30						
ELK	**Elko**	**89.78**	**48**	LR	LR	00 42 30.6	
	comp=Z,113nm,20.4s,baz=115,slow=32						
PDAR	**Pinedale Array**	**94.45**	**47**	LR	LR	00 41 50.7	
	comp=Z,41nm,20.7s,baz=152,slow=30						

*BJI **21** 00:04:09.4±0.0, 1°.19S×127°.54E, h81km, mb4.8/66, mB5.0/27, Ms4.2/8, Ms7 4.0/8*
*IDC **21** 00:04:11.8±1.9, 0°.81S×127°.28E, h59km±15km, mb4.2/20, mbtmp4.5/20, MS3.5/16, Error ellipse: s-maj=23.7km s-min=9.0km az=73.0*
*DJA **21** 00:04:12.5±0.2, 1°.S±2°×12°.7E±°, h60km±3km, M4.9/37, mb5.0/37, mB5.4/13, MLv5.0/17, Mw(mB)4.8/13, MwMwp4.7/1, Mwp5.0/1*
*NEIC **21** 00:04:13.1±1.5, 0°.79S±0°.06×127°.17E±0°.05, h61km±7km, mb4.8/48, Error ellipse: s-maj=8.8km s-min=6.1km az=211.0*
ISC 21 00:04:12.1±0.5, 0°.79S±0°.04×127°.20E±0°.05, h59km±3km, h59km:pP-P, n165, σ1$40/178, mb4.7/67, MS3.7/19, 4C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.34**	**64**	P	**Pn**	**00 04 21.5**	**-0.9**
TNTI	**Ternate**	**1.56**	**6**	Pn	**Pn**	**00 04 38.2**	**+0.6**
TNTI				Sn	**Sn**	**00 04 58.2**	**+1.4**
TNTI	**Ternate**	**1.56**	**6**	P	**Pn**	**00 04 37.0**	**-0.6**
SANI	**Sanana**	**1.74**	**224**	P	**Pn**	**00 04 37.9**	**-2.1**
NLAI	**Namlea**	**2.44**	**182**	P	**Pn**	**00 04 49.0**	**-0.5**
KMSI	**Cibinong**	**3.49**	**293**	P	**Pn**	**00 05 03.8**	**-0.1**
SWI	**Sorong**	**4.07**	**91**	P	**Pn**	**00 05 12.7**	**+0.9**
LUWI	**Luwuk**	**4.43**	**267**		**Pn**	**00 05 15.3**	**-1.5**
BNDI	**Bandanaira**	**4.59**	**144**	P	**Pn**	**00 05 20.1**	**+1.0**
BNDI	**Bandanaira**	**4.59**	**144**	P	**Pn**	**00 05 20.9**	**+1.8**
MRSI	**Marisa**	**5.40**	**283**	P	**Pn**	**00 05 30.4**	**+0.2**
	72nm,0.5s,3µm2.8nm						
FAKI	**Fak Fak**	**5.48**	**113**	Pn	**Pn**	**00 05 31.0**	**-0.2**
FAKI				Sn	**Sn**	**00 06 33.4**	**+0.4**
FAKI	**Fak Fak**	**5.48**	**113**	P	**Pn**	**00 05 32.9**	**+1.7**
FAKI	**Fak Fak**	**5.48**	**113**	P	**Pn**	**00 05 32.4**	**+1.2**
	147nm,1.1s,1µm0.9nm						
BBSI	**Bau Bau**	**6.56**	**225**	P	**Pn**	**00 05 46.5**	**+0.4**
	137nm,0.7s,1µm0.5nm						
TOLI2	**Tolitoli**	**6.68**	**286**	Pn	**Pn**	**00 05 48.2**	**+0.4**
TOLI2	**Tolitoli**	**6.68**	**286**	P	**Pn**	**00 05 49.2**	**+1.5**
MPSI	**Mapaga**	**7.38**	**279**	P	**Pn**	**00 05 56.9**	**-0.4**
	31nm,0.7s,0.5nm						
TTSI	**Tana Toraja**	**7.70**	**253**	P	**Pn**	**00 06 01.3**	**-0.4**
	234nm,0.8s,3µm0.9nm						
DAV	**Davao City (W)**	**7.97**	**348**	LR	LR	00 09 20.4	
	comp=Z,162nm,21.3s,baz=185,slow=38						
KAPI	**Kappang**	**8.54**	**240**	Pn	**Pn**	**00 06 13.4**	**+0.3**
MMRI	**Maumere**	**9.23**	**212**	Pn	**Pn**	**00 06 23.0**	**+0.4**
MMRI	**Maumere**	**9.23**	**212**	P	**Pn**	**00 06 24.4**	**+1.8**
	80nm,1.1s						
SOEI	**Soe**	**9.37**	**198**	Pn	**Pn**	**00 06 27.7**	**+3.1**
SOEI	**Soe**	**9.37**	**198**	P	**Pn**	**00 06 26.6**	**+1.9**
	97nm,0.8s						
EDFI	**Ende, Flores**	**9.62**	**215**	P	**Pn**	**00 06 29.7**	**+1.6**
	117nm,0.7s,2µm						
PLAI	**Plampang**	**12.32**	**229**	P	**Pn**	**00 07 05.4**	**+0.6**
	29nm,0.8s						
MTN	**Manton Dam**	**12.60**	**162**	Pn	**Pn**	**00 07 09.6**	**+1.0**
TWSI	**Taliwang, Sumb**	**12.96**	**232**	P	**Pn**	**00 07 15.8**	**+2.3**
	25nm,0.9s,1µm						
SRBI	**Singaraja**	**13.97**	**238**	P	**Pn**	**00 07 27.7**	**+0.5**
	37nm,0.8s						
ABJI	**Asem Bagus**	**14.67**	**241**	P	**P**	**00 07 38.8**	**-2.5**
	97nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.07**	**239**		**Pn**	**00 07 42.2**	**+0.6**
JAGI	**Jajag, Banyuwa**	**15.07**	**239**	P	**Pn**	**00 07 42.9**	**+1.3**
	120nm,1.0s						
BLJI	**Banyuglugur**	**15.21**	**243**	P	**Pn**	**00 07 45.0**	**+1.5**
	91nm,0.7s						
GMJI	**Gumukmas**	**15.59**	**241**	P	**P**	**00 07 50.8**	**-0.7**
PWJI	**Pagerwojo**	**16.94**	**244**	P	**P**	**00 08 06.6**	**+0.2**
	57nm,1.3s						
SMRI	**Semarang**	**17.83**	**249**	P	**P**	**00 08 16.4**	**+0.1**
SMRI				IAmb	IAmb	00 08 21.0	
	comp=Z,61nm,0.9s						
SMRI	**Semarang**	**17.83**	**249**	P	**P**	**00 08 18.1**	**+1.8**
	comp=Z,59nm,1.0s						
UGM	**Wanagama**	**18.06**	**246**	P	**Pn**	**00 08 20.2**	**+1.1**
UGM				IAmb	IAmb	00 08 28.0	
	comp=Z,93nm,1.4s						
KPJI	**Karang Pucung**	**19.33**	**250**	P	**Pn**	**00 08 34.5**	**+0.1**
	comp=Z,48nm,0.8s,comp=Z,2µm						
CMJI	**Cimerak**	**19.93**	**249**	P	**P**	**00 08 39.0**	**-0.4**
	comp=Z,105nm,0.9s						
WRAB	**Tennant Creek**	**20.28**	**160**	P	**P**	**00 08 41.0**	**-2.1**
WRA	**Warramunga Arr**	**20.28**	**160**	P	**P**	**00 08 41.9**	**-1.2**
	comp=Z,11nm,0.6s,baz=340,slow=11,SNR=54						
WRA				S	**S**	**00 12 28.1**	**+0.6**
	comp=Z,4.7nm,1.2s,baz=350,slow=19,SNR=2.3						
WRA				ScP	**ScP**	**00 16 25.5**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=328,slow=2.3,SNR=1.3						
	comp=Z,11nm,0.6s						
WB2	**Warramunga Arr**	**20.29**	**160**	P	**P**	**00 08 40.9**	**-2.3**
WR0	**Warramunga Arr**	**20.36**	**160**	P	**P**	**00 08 42.3**	**-1.7**
LEM	**Lembang**	**20.43**	**252**	P	**P**	**00 08 45.7**	**+0.8**
	comp=Z,44nm,0.9s,baz=50,slow=7.1,SNR=5.8						
	comp=Z,44nm,0.9s						
LEM	**Lembang**	**20.43**	**252**	P	Pn	00 08 46.1	-1.4
	comp=Z,46nm,0.9s						
COEN	**Coen**	**20.52**	**130**	P	**P**	**00 08 46.0**	**+0.2**
COEN				IAmb	IAmb	00 08 51.4	
	comp=Z,22nm,0.8s						
COEN	**Coen**	**20.52**	**130**	P	**P**	**00 08 46.9**	**+1.1**
BBJI	**Bungbulang**	**20.58**	**251**	P	**P**	**00 08 46.7**	**+0.2**
CNJI	**Cibinong**	**21.03**	**252**	P	**P**	**00 08 51.3**	**+0.1**
	comp=Z,16nm,1.0s						
MBWA	**Marble Bar**	**21.52**	**199**	P	**P**	**00 08 55.1**	**-1.2**
MBWA				IAmb	IAmb	00 08 57.3	
	comp=Z,43nm,1.1s						
PMG	**Port Moresby**	**21.63**	**114**	LR	LR	00 21 23.2	
	comp=Z,59nm,18.3s,baz=18,slow=48						
DLV	**T Lat**	**22.48**	**305**	P	**P**	**00 09 06.8**	**-0.2**
DLV				IAmb	IAmb	00 09 09.9	
	comp=Z,54nm,1.5s						
QIS	**Mount Isa**	**23.09**	**149**	P	**P**	**00 09 13.6**	**+0.5**
KASI	**Kota Agung**	**23.14**	**258**	P	**P**	**00 09 14.4**	**+0.8**
	comp=Z,69nm,0.9s						
ASAR	**Alice Springs**	**23.66**	**165**	P	**P**	**00 09 18.0**	**-0.4**
	comp=Z,17nm,0.9s,baz=348,slow=13,SNR=106						
ASAR				S	**S**	**00 13 27.9**	**-1.1**
	comp=Z,3.0nm,0.9s,baz=342,slow=21,SNR=9.5						
ASAR				ScP	**ScP**	**00 16 33.9**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=354,slow=2.7,SNR=4.1						
ASAR				LR	LR	00 19 01.3	
	comp=Z,86nm,18.5s,baz=348,slow=38						
	comp=Z,17nm,0.9s						
AS01	**Alice Springs**	**23.67**	**164**	P	**P**	**00 09 18.2**	**-0.3**
LHSI	**Lahat**	**23.84**	**262**	P	**P**	**00 09 18.9**	**-1.3**
	comp=Z,444nm,1.1s						
WRKA	**Warakurna**	**24.13**	**178**	P	**P**	**00 09 22.5**	**-0.2**
TWG	**Pinlang**	**24.21**	**346**	P	**P**	**00 09 21.4**	**-2.0**
TWG				IAmb	IAmb	00 09 24.0	
	comp=Z,34nm,0.8s						
YULB	**Yu-li**	**24.71**	**347**	P	**P**	**00 09 26.2**	**-1.7**
YULB				IAmb	IAmb	00 09 33.6	
	comp=Z,22nm,1.0s						
TPUB	**Ta-pu**	**24.78**	**345**	P	**P**	**00 09 28.0**	**-0.7**
RABL	**Rabaul**	**25.17**	**98**	P	**P**	**00 09 33.6**	**+1.3**
SSLB	**Suanglung**	**25.17**	**346**	P	**P**	**00 09 32.2**	**0.0**
SSLB				IAmb	IAmb	00 09 36.4	
	comp=Z,38nm,0.8s						
YHNB	**Yeheng**	**25.93**	**348**	P	**P**	**00 09 38.4**	**-0.7**
QIZ	**Qiongzhong**	**26.04**	**320**	P	**P**	**00 09 41.4**	**+1.3**
QIZ				S	**S**	**00 14 09.1**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
QIZ				LR	LR		
	comp=Z,92nm,11.6s						
QIZ				LR	LR		
	comp=Z,110nm,14.9s						
QIZ				LR	LR		
	comp=Z,91nm,35.8s						
CTA	**Charters Tower**	**26.75**	**137**	LR	LR	00 22 18.6	
	comp=Z,87nm,20.1s,baz=268,slow=41						
OOD	**Oondaatta**	**28.06**	**164**	P	**P**	**00 09 58.2**	**+0.1**
MORW	**Morawa**	**30.07**	**200**	P	**P**	**00 10 14.9**	**-1.1**
MORW				IAmb	IAmb	00 10 32.9	
	comp=Z,40nm,1.4s						
SLVN	**Son La**	**31.64**	**315**	P	**P**	**00 10 29.8**	**-0.3**
BBOO	**Buckleboo**	**32.93**	**166**	P	**P**	**00 10 41.3**	**+0.2**
WHN	**Wuhan**	**33.47**	**340**	P	**P**	**00 10 48.3**	**+2.5**
WHN				pmax	pmax		
	comp=Z,66nm,0.9s						
GYA	**Guiyang**	**33.55**	**325**	⇑P	**P**	**00 10 48.4**	**+1.7**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
NJ2	**Nanjing**	**33.60**	**347**	*e*P	**P**	**00 10 49.1**	**+2.2**
NJ2				pP	**sP**	**00 11 04.8**	**-3.7**
NJ2				sP	pP	00 11 13.4	+12
NJ2				pmax	pmax		
	comp=Z,13nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,160nm,4.1s						
HNR	**Honiara**	**33.70**	**106**	LR	LR	00 24 49.4	
	comp=Z,473nm,18.4s,baz=326,slow=37						
CMAR	**Chiang Mai Arr**	**33.72**	**306**	P	**P**	**00 10 48.5**	**+0.3**
	comp=Z,2.4nm,0.3s,baz=135,slow=7.6,SNR=13						
CMAR				ScP	**ScP**	**00 17 07.1**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=160,slow=1.6,SNR=8.3						
	comp=Z,2.4nm,0.3s						
STKA	**Stephens Creek**	**33.78**	**158**	P	**P**	**00 10 47.4**	**-1.1**
	comp=Z,9.3nm,0.9s,baz=326,slow=8.5,SNR=15						
STKA				LR	LR	00 24 36.0	
	comp=Z,139nm,20.7s,baz=20,slow=36						
	comp=Z,9.3nm,0.9s						
CHTO	**Chiang Mai**	**33.91**	**307**	P	**P**	**00 10 49.5**	**-0.3**
CHTO	**Chiang Mai**	**33.91**	**307**	P	**P**	**00 10 50.5**	**+0.7**
JNU	**Nakatsue**	**33.91**	**6**	LR	LR	00 23 32.4	
	comp=Z,68nm,20.3s,baz=166,slow=34						
KMI	**Kunming**	**34.98**	**319**	⇓P	**P**	**00 11 01.5**	**+2.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ENH	**Enshi**	**35.20**	**333**	P	**P**	**00 11 01.1**	**+0.3**
ENH				IAmb	IAmb	00 11 02.3	
	comp=Z,12nm,0.8s						
PZH	**PanZhiHua**	**36.58**	**320**	P	**P**	**00 11 13.8**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,130nm,6.8s						
ARMA	**Armidale**	**37.51**	**144**	P	**P**	**00 11 20.8**	**+0.2**
LYN	**LuoYang**	**37.77**	**340**	⇑P	**P**	**00 11 23.6**	**+1.0**
LYN				pmax	pmax		
	comp=Z,34nm,0.9s						
LYN				pmax	pmax		
	comp=Z,170nm,8.8s						
KSRS	**Korea Array**	**38.06**	**1**	P	**P**	**00 11 25.5**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=173,slow=10.0,SNR=6.7						
KSRS				LR	LR	00 25 41.9	
	comp=Z,28nm,21.9s,baz=185,slow=34						
	comp=Z,2.5nm,0.7s						
MJAR	**Matsushiro Arr**	**38.53**	**14**	P	**P**	**00 11 27.1**	**-1.9**
	comp=Z,1.7nm,0.5s,baz=193,slow=8.9,SNR=4.5						
	comp=Z,1.7nm,0.5s						
CD2	**Chengdu**	**38.60**	**327**	P	**P**	**00 11 30.5**	**+0.8**
CD2				pP	sP	00 11 46.8	-4.6
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	**Xi'an**	**38.66**	**335**	⇑P	**P**	**00 11 30.8**	**+0.6**
XAN				pP	pP	00 11 46.3	+1.3
XAN				ScP	**S**	**00 17 24.3**	**+1.5**
XAN				pmax	pmax		
	comp=Z,28nm,0.7s						
XAN	**Xi'an**	**38.66**	**335**	P	**P**	**00 11 30.6**	**+0.4**
XAN				pP	**pP**	**00 11 46.0**	**+1.0**
HNS	**HongShan**	**39.72**	**344**	P	**P**	**00 11 38.9**	**+0.1**
HNS				pmax	pmax		
	comp=Z,16nm,0.9s						
TIY	**Taiyuan**	**40.67**	**342**	⇓P	**P**	**00 11 48.0**	**+1.2**
TIY				pmax	pmax		
	comp=Z,25nm,0.5s						
BJT	**Baijiatuau**	**41.84**	**347**	P	**P**	**00 11 54.9**	**-1.4**
BJT				IAmb	IAmb	00 11 57.3	
	comp=Z,11nm,0.7s						
BJT	**Baijiatuau**	**41.84**	**347**	P	**P**	**00 11 56.4**	**0.0**
BJT				pP	**sP**	**00 12 13.0**	**-5.2**
BJI	**Beijing**	**41.86**	**347**	P	**P**	**00 11 56.5**	**0.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,38nm,3.6s						
LZH	**Lanzhou**	**42.64**	**332**	⇑P	**P**	**00 12 04.8**	**+1.6**
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
SHL	**Shillong**	**43.02**	**310**	P	**P**	**00 12 06.0**	**-0.4**
SHL				IAmb	IAmb	00 12 07.5	
	comp=Z,19nm,0.7s						
DZM	**Mont Dzumac**	**43.67**	**122**	*e*LR	LR	00 24 20.5	
	comp=Z,55nm,27.9s						
HHC	**Hu-ho-hao-te**	**43.81**	**343**	*e*P	**P**	**00 12 13.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
HHC				LR	LR		
	comp=Z,73nm,13.1s						
HHC				LR	LR		
	comp=Z,77nm,14.7s						
BTO	**Baotou**	**44.07**	**341**	*e*P	**P**	**00 12 17.8**	**+3.3**
BTO				pP	**sP**	**00 12 36.3**	**-0.2**
BTO				sP	pP	00 12 45.0	+15
BTO				PP	**PcP**	**00 14 03.0**	**+4.0**
BTO				S	**S**	**00 18 47.4**	**+4.5**
BTO				SS	**SS**	**00 22 00.0**	**-2.1**
BTO				pmax	pmax		
	comp=Z,17nm,0.5s						
BTO				pmax	pmax		
	comp=Z,200nm,4.9s						
BTO				LR	LR		
	comp=Z,180nm,5.1s						
BTO				LR	LR		
	comp=Z,380nm,10.1s						
BTO				LR	LR		
	comp=Z,210nm,6.3s						
CN2	**Changchun**	**44.42**	**358**	*e*P	**P**	**00 12 19.8**	**+2.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.99**	**5**	P	**P**	**00 12 21.2**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=186,slow=6.9,SNR=7.1						
	comp=Z,3.6nm,0.7s						
MDJ	**Mudanjiang**	**45.26**	**2**	P	**P**	**00 12 23.9**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.8s						
XLT	**XiLinHaoTe**	**45.59**	**349**	*e*P	**P**	**00 12 25.8**	**-0.7**
XLT				S	**S**	**00 18 57.0**	**-7.7**
XLT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,63nm,4.6s						
XLT				LR	LR		
	comp=Z,240nm,18.0s						
XLT				LR	LR		
	comp=Z,70nm,7.1s						
LSA	**Lhasa**	**45.84**	**314**	P	**P**	**00 12 27.6**	**-1.6**
LSA				IAmb	IAmb	00 12 32.0	
	comp=Z,6.2nm,0.7s						
ASAJ	**Asahikawa**	**46.78**	**15**	LR	LR	00 30 49.0	
	comp=Z,85nm,19.5s,baz=46,slow=34						
GTA	**Gaotai**	**47.22**	**331**	*e*P	**P**	**00 12 40.6**	**+1.2**
GTA				PcP	**PcP**	**00 14 11.0**	**+0.9**
GTA				pmax	pmax		
	comp=Z,20nm,0.8s						
GOMU	**GeErMu**	**47.55**	**324**	P	**P**	**00 12 44.1**	**+1.8**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**51.54**	**343**	P	**P**	**00 13 12.8**	**+0.6**
ULN				IAmb	IAmb	00 13 13.8	
	comp=Z,9.3nm,0.8s						
ULN	**Ulaanbaatar**	**51.54**	**343**	P	**P**	**00 13 12.8**	**+0.6**
ULN				pP	**pP**	**00 13 28.8**	**+1.1**
SONM	**Songino Array**	**51.71**	**342**	P	**P**	**00 13 13.9**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=154,slow=8.0,SNR=51						
SONM				ScP	**ScP**	**00 18 18.3**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=128,slow=4.2,SNR=2.5						
SONM				LR	LR	00 38 11.4	
	comp=Z,66nm,18.8s,baz=154,slow=39						
	comp=Z,5.3nm,0.7s						
WMQ	**Urumqi**	**56.70**	**327**	*e*P	**P**	**00 13 50.8**	**+1.0**
WMQ				pP	sP	00 14 07.3	-4.7
WMQ				ScP	**ScP**	**00 18 39.3**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
PETK	**Petropavlovsk-**	**59.44**	**21**	P	**P**	**00 14 09.6**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=178,slow=4.2,SNR=5.9						
PETK				LR	LR	00 35 50.3	
	comp=Z,25nm,21.8s,baz=193,slow=32						
	comp=Z,4.1nm,0.6s						
ZSN	**Zaisan**	**60.55**	**328**	*e*P	**P**	**00 14 16.1**	**-0.3**
	comp=Z,5.2nm,0.9s,baz=328						
SHLS	**Shalkode**	**61.13**	**322**	*e*P	**P**	**00 14 19.2**	**-1.4**
	comp=Z,4.7nm,0.6s,baz=322						
UZB	**Uzynbulak**	**61.40**	**322**	*e*P	**P**	**00 14 22.6**	**+0.2**
	baz=322						
MKAR	**Makanchi Array**	**61.53**	**327**	P	**P**	**00 14 23.6**	**+0.5**
	comp=Z,10nm,0.4s,baz=118,slow=8.7,SNR=192						
MKAR				ScP	**ScP**	**00 19 00.5**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=116,slow=5.5,SNR=7.3						
MKAR				LR	LR	00 44 07.9	
	comp=Z,26nm,18.6s,baz=83,slow=39						
	comp=Z,10nm,0.4s						
KSH	**Kashi**	**61.59**	**317**	P	**P**	**00 14 24.8**	**+1.0**
KSH				sP	sP	00 14 50.6	+4.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**61.71**	**326**	P	**P**	**00 14 23.9**	**-0.5**
SATY	**Saty**	**61.73**	**321**	*e*P	**P**	**00 14 24.9**	**+0.2**
	comp=Z,6.2nm,0.6s,baz=321						
ZHN	**Zhinishke**	**61.77**	**321**	*e*P	**P**	**00 14 24.9**	**0.0**
	baz=321						
KPKS	**Kokpek**	**61.77**	**322**	*e*P	**P**	**00 14 24.9**	**-0.1**
	comp=Z,5.5nm,0.6s,baz=322						
NRN	**Naryn**	**62.47**	**319**	P	**P**	**00 14 30.0**	**0.0**
NRN				IAmb	IAmb	00 14 31.3	
	comp=Z,4.4nm,0.8s						
MDOK	**Medeo**	**62.64**	**321**	*e*P	**P**	**00 14 30.9**	**+0.1**
	baz=321						
YAK	**Yakutsk**	**62.68**	**1**	P	**P**	**00 14 30.1**	**-0.3**
TDK	**Taldyqorghan**	**62.76**	**323**	*e*P	**P**	**00 14 31.4**	**0.0**
	comp=Z,4.8nm,0.6s,baz=323						
MA2	**Magadan**	**62.96**	**13**	P	**P**	**00 14 33.1**	**+0.7**
MA2				IAmb	IAmb	00 14 34.3	
	comp=Z,13nm,0.9s						
MA2	**Magadan**	**62.96**	**13**	LR	LR	00 39 51.6	
	comp=Z,28nm,21.1s,baz=215,slow=34						
CHKK	**Chushkaly**	**63.03**	**321**	*e*P	**P**	**00 14 32.9**	**-0.3**
	baz=322						
AAK	**Ala-Archa**	**64.03**	**319**	P	**P**	**00 14 40.1**	**+0.1**
ARSB	**Arslanbob**	**64.44**	**317**	P	**P**	**00 14 42.6**	**-0.2**
ZALV	**Zalesovo Beam**	**64.81**	**334**	P	**P**	**00 14 44.0**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=120,slow=5.6,SNR=18						
ZALV				LR	LR	00 43 33.0	
	comp=Z,49nm,18.6s,baz=346,slow=36						
	comp=Z,4.0nm,0.8s						
BTK	**Batken**	**65.41**	**315**	P	**P**	**00 14 49.1**	**+0.

comp=Z,179nm,25.2s

PPT2					*e*LR	LR	00 42 39.7	
	comp=Z,112nm,24.0s							
TTA	**Tatalina**	**84.70**	**27**	P	**P**	**00 16 40.3**	**+0.8**	
TTA				IAmb	IAmb	00 18 26.0		
	comp=Z,18nm,1.8s							
KDAK	**Kodiak Island**	**85.44**	**32**	LR	LR	00 47 48.8		
	comp=Z,86nm,21.6s,baz=256,slow=31							
AKH	**Akhalkalaki**	**85.78**	**311**	P	**P**	**00 16 45.5**	**-0.1**	
KBZ	**Khabaz**	**86.41**	**314**	P	**P**	**00 16 48.1**	**-0.3**	
	comp=Z,0.8nm,0.8s,baz=91,slow=12,SNR=2.9 comp=Z,0.8nm,0.8s							
GURO	**Guroymak-BITLI**	**86.70**	**309**	P	**P**	**00 16 48.4**	**-1.7**	
ILAR	**Eielson Array**	**88.96**	**25**	P	**P**	**00 16 58.9**	**-1.2**	
	comp=Z,0.2nm,0.6s,baz=240,slow=4.8,SNR=2.2 comp=Z,0.2nm,0.6s							
QSPA	**South Pole Qui**	**89.15**	**180**	P	**P**	**00 17 00.7**	**-0.5**	
	comp=Z,1.7nm,0.8s,baz=284,slow=1.7,SNR=6.7 comp=Z,1.7nm,0.8s							
AKASG	**Malin Array Be**	**95.67**	**321**	P	**P**	**00 17 31.2**	**-0.2**	
	comp=Z,0.6nm,0.4s,baz=67,slow=23,SNR=1.6 comp=Z,0.6nm,0.4s							

*IDC **21** 00:12:28.8±0.8, 11°.49N×125°.80E, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=62.8km s-min=18.7km az=68.0*

ISC 21 00:12:34.0±0.9, 11°.4N±0°.2×125°.7E±0°.4, h35km, n13, σ0s99/12, mb4.0/10, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.33**	**165**	P	**P**	**00 19 01.1**	**+1.0**
	0.3nm,0.9s,baz=343,slow=9.3,SNR=1.8						
WRA				PcP	**PcP**	**00 21 49.1**	**+1.4**
	0.5nm,0.8s,baz=344,slow=2.9,SNR=1.2 0.3nm,0.9s						
ASAR	**Alice Springs**	**35.80**	**167**	P	**P**	**00 19 28.3**	**-2.0**
	0.2nm,0.4s,baz=350,slow=9.0,SNR=2.2						
ASAR				PcP	**PcP**	**00 21 58.4**	**+0.8**
	0.1nm,0.3s,baz=349,slow=3.5,SNR=1.5 0.2nm,0.4s						
SONM	**Songino Array**	**39.73**	**340**	P	**P**	**00 20 02.9**	**-0.5**
	0.4nm,0.4s,baz=153,slow=9.7,SNR=3.7 0.4nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**40.45**	**73**	T	T	01 03 29.1	
	baz=265,slow=75,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**40.46**	**73**	T	T	01 03 32.5	
	baz=265,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**40.47**	**73**	T	T	01 03 25.4	
	baz=265,slow=75,SNR=5.3						
MKAR	**Makanchi Array**	**50.75**	**322**	P	**P**	**00 21 31.2**	**+0.5**
	3.4nm,0.8s,baz=122,slow=8.2,SNR=34 3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**53.33**	**331**	P	**P**	**00 21 50.0**	**+0.3**
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.3 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**54.79**	**325**	P	**P**	**00 22 00.5**	**+0.1**
	4.8nm,0.7s,baz=125,slow=7.0,SNR=43 4.8nm,0.7s						
BVAR	**Borovoye Array**	**60.38**	**325**	P	**P**	**00 22 40.2**	**+0.5**
	1.8nm,0.6s,baz=108,slow=9.5,SNR=10 1.8nm,0.6s						
ILAR	**Eielson Array**	**78.65**	**26**	P	**P**	**00 24 32.1**	**-0.1**
	0.3nm,0.8s,baz=241,slow=7.1,SNR=4.3 0.3nm,0.8s						
ARCES	**ARCESS Array B**	**82.90**	**340**	P	**P**	**00 24 54.6**	**-0.3**
	2.2nm,0.7s,baz=26,slow=3.1,SNR=4.0 2.2nm,0.7s						
FINES	**FINESS Array B**	**84.59**	**332**	P	**P**	**00 25 03.4**	**-0.3**
	1.9nm,0.7s,baz=77,slow=5.0,SNR=10 1.9nm,0.7s						

*IDC **21** 00:17:40.3±5.0, 5°.05N×97°.52W, h0km, mb3.6/4, mbtmp3.9/6, ML3.8/2, MS3.7/24, Error ellipse: s-maj=98.5km s-min=50.5km az=175.0*

ISC 21 00:17:40.6±2.9, 4°.9N±0°.3×97°.5W±0°.2, h10km, n30, σ1s32/6, mb3.6/4, MS3.7/24, Eastcentral Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.41**	**12**	Pn	**Pn**	**00 20 37.9**	**+0.4**
	1.0nm,0.3s,baz=108,slow=20,SNR=8.3 2.4nm,0.3s						
JTS	**Las Juntas de**	**13.57**	**66**	Pn	**Pn**	**00 20 53.4**	**0.0**
	0.3nm,0.3s,baz=250,slow=7.8,SNR=3.6 17nm,1.1s						
ATAH	**Atahualpa**	**22.52**	**122**	LR	LR	00 29 03.4	
	comp=Z,72nm,19.4s,baz=288,slow=30						
LPIG	**La Paz**	**22.73**	**328**	LR	LR	00 29 28.5	
	comp=Z,101nm,18.4s,baz=193,slow=31						
ROSC	**El Rosal**	**23.13**	**89**	LR	LR	00 30 25.7	
	comp=Z,120nm,20.6s,baz=226,slow=33						
TXAR	**Lajitas Array**	**25.01**	**347**	LR	LR	00 32 49.7	
	comp=Z,239nm,19.7s,baz=136,slow=37						
NNA	**Nana**	**26.53**	**129**	LR	LR	00 30 43.3	
	comp=Z,82nm,18.3s,baz=296,slow=29						
SDV	**Santo Domingo**	**26.99**	**80**	LR	LR	00 32 53.5	
	comp=Z,125nm,21.2s,baz=270,slow=34						
ANMO	**Albuquerque**	**31.04**	**346**	LR	LR	00 36 24.6	
	comp=Z,370nm,18.6s,baz=250,slow=36						
PCRV	**Puerto La Cruz**	**33.02**	**79**	LR	LR	00 38 24.7	
	comp=Z,74nm,19.1s,slow=38						
TKL	**Tuckaleechee C**	**33.15**	**21**	LR	LR	00 37 49.8	
	comp=Z,73nm,19.6s,baz=172,slow=37						
NVAR	**Mina Array Bea**	**38.37**	**333**	P	**P**	**00 25 01.9**	**-0.4**
	0.6nm,0.9s,baz=160,slow=9.3,SNR=4.4 0.6nm,0.9s						
LVC	**Limon Verde**	**39.11**	**135**	LR	LR	00 36 30.1	
	comp=Z,148nm,20.3s,baz=295,slow=29						
SIV	**San Ignacio**	**41.61**	**121**	LR	LR	00 40 33.0	
	comp=Z,72nm,18.6s,baz=290,slow=33						
YBH	**Yreka Blue Hor**	**43.03**	**332**	LR	LR	00 41 39.3	
	comp=Z,56nm,20.4s,baz=140,slow=34						
MDP	**Montagnes des**	**44.71**	**88**	LR	LR	00 43 21.9	
	comp=Z,76nm,18.8s,baz=272,slow=34						
ULM	**Lac du Bonnet**	**45.24**	**1**	P	**P**	**00 25 57.2**	**-0.7**
	2.6nm,0.8s,baz=198,slow=8.3,SNR=3.7						
ULM				LR	LR	00 44 47.9	
	comp=Z,74nm,18.1s,baz=119,slow=36 2.6nm,0.8s						
NEW	**Newport**	**46.36**	**342**	LR	LR	00 44 53.5	
	comp=Z,91nm,19.3s,baz=150,slow=35						
PLCA	**Paso Flores**	**51.69**	**154**	LR	LR	00 42 16.3	
	comp=Z,158nm,20.9s,baz=324,slow=28						
BBB	**Bella Bella**	**53.51**	**337**	LR	LR	00 47 25.2	
	comp=Z,103nm,21.3s,baz=164,slow=34						
SCHQ	**Schefferville**	**55.62**	**21**	LR	LR	00 51 25.3	
	comp=Z,75nm,19.8s,baz=218,slow=36						
PPT	**Papeete**	**55.99**	**245**	LR	LR	00 45 02.0	
	comp=Z,60nm,18.5s,baz=14,slow=29						
YKA	**Yellowknife Ar**	**58.86**	**351**	P	**P**	**00 27 38.1**	**-1.1**
	0.2nm,0.5s,baz=158,slow=6.6,SNR=5.6						
YKA				LR	LR	00 53 54.6	
	comp=Z,277nm,18.4s,baz=26,slow=37 0.2nm,0.5s						
FRB	**Frobisher Bay**	**62.40**	**14**	LR	LR	00 56 30.8	
	comp=Z,49nm,18.4s,baz=218,slow=37						
RAR	**Rarotonga**	**66.26**	**244**	LR	LR	00 48 02.6	
	comp=Z,124nm,19.3s,baz=20,slow=28						
ILAR	**Eielson Array**	**69.24**	**340**	P	**P**	**00 28 49.2**	**+1.8**
	0.7nm,0.9s,baz=147,slow=5.8,SNR=6.4						
ILAR				LR	LR	01 00 58.5	
	comp=Z,88nm,18.1s,baz=96,slow=38 0.7nm,0.9s						
RES	**Resolute Bay**	**69.76**	**1**	LR	LR	01 01 00.7	
	comp=Z,125nm,18.4s,baz=90,slow=37						
H11S2	**WAKE ISLAND Hy**	**93.92**	**289**	T	T	02 14 27.5	
	baz=86,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**93.92**	**289**	T	T	02 14 24.0	
	baz=86,slow=75,SNR=49						
H11S3	**WAKE ISLAND Hy**	**93.94**	**289**	T	T	02 14 28.9	
	baz=86,slow=75,SNR=44						

*NEIC **21** 00:18:36.5±0.4, 36°.12N±0°.01×97°.82W±0°.01, h4km±5km, Error ellipse: s-maj=1.7km s-min=1.5km az=60.0*

TUL 21 00:18:36.9±0.5, 36°.12N±0°.01×97°.82W±0°.01, h7km±5km, ML3.4, mb_Lg3.2/120(NEIC), ML3.5/62(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=165.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.40**	**340**	Pg	Pg	00 18 44.9	+0.1
CROK				Sg	Sg	00 18 50.8	+0.7
CROK				IAML		00 18 53.2	
	comp=N,5μm,0.2s						
OK029	**Liberty Lake**	**0.44**	**138**	Pg	Pg	00 18 45.5	+0.1
OK029				Sg	Sg	00 18 51.8	+0.6
OK029				IAML		00 18 52.0	
	comp=N,5μm,0.4s						
ADOK	**Arcadia Dam**	**0.59**	**142**		Pg	00 18 48.6	+0.3
ADOK				Sg	Sg	00 18 56.7	+0.7
OK033	**Mehan**	**0.71**	**96**		Pg	00 18 50.5	-0.1
OK033				Sg	Sg	00 19 00.8	+0.8
GC02	**Grant County #**	**0.73**	**357**		Pg	00 18 50.7	-0.2
GC02				Sg	Sg	00 19 00.8	+0.4
OK032	**Salt Plains WL**	**0.75**	**335**		Pg	00 18 51.1	-0.2
OK032				Sg	Sg	00 19 01.3	+0.2
OK032				IAML		00 19 05.8	
	comp=N,2μm,0.2s						
OK048	**Pawnee Station**	**0.76**	**67**		Pg	00 18 51.4	-0.2
OK048				Sg	Sg	00 19 01.6	+0.1
OKCSW	**OKLAHOMA CITY**	**0.78**	**157**	Pg	Pg	00 18 51.6	-0.3
OKCSW				Sg	Sg	00 19 02.4	+0.4
OKCSW				IAML		00 19 05.3	
	comp=N,2μm,0.7s						
OKCSW				IAML		00 19 05.5	
	comp=E,1μm,0.5s						
BLOK	**Blackwell**	**0.80**	**37**		Pg	00 18 52.1	-0.2
OK038	**West end E0370**	**0.83**	**296**	Pg	Pg	00 18 52.4	-0.4
OK038				Sg	Sg	00 19 03.9	+0.3
KAN14	**Manchester OK**	**0.84**	**352**		Pg	00 18 52.6	-0.5
KAN14				IAML		00 19 06.5	
	comp=E,1μm,0.3s						
KAN14				IAML		00 19 09.7	
	comp=N,1μm,0.1s						
CSTR	**Hydro, Custer**	**0.85**	**236**	Pg	Pg	00 18 53.1	-0.3
OK051	**E0350 and S346**	**0.88**	**64**		Pg	00 18 53.5	-0.3
OK051				IAML		00 19 11.6	
	comp=N,2μm,0.2s						
OK051				IAML		00 19 15.9	
	comp=N,2μm,0.2s						
QUOK	**Quay**	**0.90**	**87**		Pg	00 18 53.8	-0.3
QUOK				IAML		00 19 12.6	
	comp=N,1μm,0.2s						
QUOK				IAML		00 19 15.8	
	comp=E,982nm,0.2s						
KAN17	**Caldwell West**	**0.92**	**3**		Pg	00 18 54.1	-0.4
KAN17				IAML		00 19 09.5	
	comp=E,2μm,0.2s						
KAN17				IAML		00 19 17.8	
	comp=N,1μm,0.3s						
FNO	**Franklin**	**0.93**	**159**	Pg	Pg	00 18 54.2	-0.6
FNO				IAML		00 19 10.0	
	comp=E,1μm,0.5s						
KAN13	**South Haven SW**	**0.93**	**17**	Pg	Pg	00 18 54.3	-0.4
KAN13				IAML		00 19 16.3	
	comp=N,2μm,0.3s						
OK035	**E0210 Rd and N**	**0.93**	**309**	Pg	Pg	00 18 54.3	-0.4
OK035				IAML		00 19 09.7	
	comp=N,2μm,0.2s						
KAN05	**Bluff City Nor**	**0.98**	**357**		Pg	00 18 55.3	-0.5
KAN05				IAML		00 19 13.1	
	comp=E,1μm,0.2s						
KAN05				IAML		00 19 15.5	
	comp=N,2μm,0.2s						
U32A	**Winter Ranch,**	**0.99**	**285**		Pg	00 18 55.3	-0.7
KAN09	**Caldwell North**	**1.02**	**9**	Pg	Pg	00 18 56.0	-0.5
KAN10	**Anthony SW Sta**	**1.02**	**347**	Pg	Pg	00 18 56.0	-0.6
KAN10				IAML		00 19 14.5	
	comp=E,1μm,0.4s						
KAN10				IAML		00 19 14.6	
	comp=N,926nm,0.2s						
KAN01	**Argonia South**	**1.03**	**3**	Pg	Pg	00 18 56.1	-0.5
DEOK	**Depew**	**1.10**	**104**		Pg	00 18 57.2	-0.9
DEOK				IAML		00 19 17.8	
	comp=N,666nm,0.2s						
KAN08	**Anthony NE Sta**	**1.11**	**354**	Pg	Pg	00 18 57.5	-0.6
KAN06	**Argonia West S**	**1.12**	**358**		Pg	00 18 57.8	-0.7
KAN06				IAML		00 19 15.3	
	comp=N,739nm,0.3s						
KAN06				IAML		00 19 15.9	
	comp=E,793nm,0.1s						
KS21	**Milan North St**	**1.17**	**6**	IAML		00 19 17.0	
	comp=E,865nm,0.1s						
KS21				IAML		00 19 19.3	
	comp=E,885nm,0.1s						
KS21	**Milan North St**	**1.17**	**6**		Pg	00 18 58.7	-0.6
KAN12	**Harper NE Stat**	**1.18**	**353**		Pg	00 18 58.8	-0.8
KAN12				IAML		00 19 19.3	
	comp=N,1μm,0.3s						
W35A	**Tecumseh**	**1.23**	**141**		Pb	00 18 59.5	-1.1
ELIS	**Ellis County**	**1.30**	**268**		Pn	00 19 00.3	-1.1
ELIS				IAML		00 19 23.2	
	comp=E,767nm,0.2s						
T35A	**Sooner Cattle**	**1.31**	**53**		Pn	00 19 00.7	-1.0
T35A				IAML		00 19 24.9	
	comp=N,1μm,0.6s						
T35A				IAML		00 19 25.4	
	comp=E,834nm,0.2s						
X34A	**Smith Ranch, M**	**1.52**	**181**		Pn	00 19 03.9	-0.5
X34A				IAmb_Lg		00 19 27.0	
	comp=Z,123nm,1.1s						
WMOK	**Wichita Mounta**	**1.59**	**210**		Pn	00 19 04.9	-0.6
TUL3	**Leonard**	**1.65**	**97**	Pg	Pn	00 19 05.9	-0.4
LOOK	**Love County**	**2.19**	**166**		Pn	00 19 14.8	+1.1
SMWD	**Samnorwood**	**2.22**	**243**		Pn	00 19 15.2	+1.1
SMWD				IAmb_Lg		00 19 46.6	
	comp=Z,125nm,0.8s						
RLO	**Rose Lookout**	**2.26**	**88**		Pn	00 19 15.4	+0.8
R32A	**Long Quarter,**	**2.40**	**343**		Pn	00 19 17.9	+1.3
WTFS	**Witchita Falls**	**2.41**	**193**	Pn	Pn	00 19 17.8	+1.0
X37A	**Clayton**	**2.52**	**127**		Pn	00 19 19.0	+0.8
X37A				IAmb_Lg		00 20 02.7	
	comp=Z,93nm,0.8s						
U38A	**Gravette**	**2.79**	**83**	Pn	Pn	00 19 22.5	+0.5
Z35A	**Perchaven, San**	**2.83**	**170**		Pn	00 19 23.5	+1.1
FW03	**Perrin-Whitt E**	**3.08**	**184**		Pn	00 19 27.9	+1.9
CBKS	**Cedar Bluff**	**3.09**	**331**		Pn	00 19 27.2	+1.1
CBKS				IAmb_Lg		00 20 18.5	
	comp=Z,57nm,0.9s						
KSU1	**Kansas State U**	**3.12**	**17**	Pn	Pn	00 19 27.0	+0.5
HHAR	**Hobbs**	**3.14**	**86**		Pn	00 19 27.3	+0.5
PLPT	**Palo Pinto**	**3.33**	**187**	Pn	Pn	00 19 29.9	+0.6
AMTX	**Amarillo**	**3.39**	**250**		Pn	00 19 30.9	+0.6
AMTX				IAmb_Lg		00 20 28.7	
	comp=Z,55nm,0.7s						
DKNS	**Dickens**	**3.54**	**227**		Pn	00 19 31.8	-0.6
TREL	**Terrell**	**3.67**	**157**	IAmb_Lg		00 20 42.6	
	comp=Z,62nm,0.8s						
Z38A	**Mt. Pleasant**	**3.69**	**140**		Pn	00 19 35.5	+1.3
Z38A				IAmb_Lg		00 20 37.4	
	comp=Z,102nm,0.7s						
FW13	**Cleburne**	**3.78**	**175**	IAmb_Lg		00 20 46.2	
	comp=Z,49nm,1.2s						
ABTX	**Abilene, Hawle**	**3.81**	**204**		Pn	00 19 37.5	+1.6
MIAR	**Mount Ida**	**3.81**	**113**	Pn	Pn	00 19 36.0	+0.1
MIAR				IAmb_Lg		00 20 46.4	
	comp=Z,45nm,0.8s						
S39A	**Bolivar**	**3.93**	**65**	Pn	Pn	00 19 38.1	+0.5
S39A				IAmb_Lg		00 20 41.9	
	comp=Z,96nm,0.7s						
SN07	**Snyder 07**	**3.95**	**221**	IAmb_Lg		00 20 47.5	
	comp=Z,94nm,0.8s						
RTBA	**Rita Blanca**	**3.99**	**276**	Pn	Pn	00 19 39.3	+0.8
RTBA				IAmb_Lg		00 20 53.3	
	comp=Z,44nm,0.9s						
SN05	**Snyder 5**	**4.11**	**219**	IAmb_Lg		00 20 57.4	
	comp=Z,55nm,0.8s						
WHTX	**Lake Whitney,**	**4.13**	**176**		Pn	00 19 40.9	+0.5
POST	**Post**	**4.31**	**226**	IAmb_Lg		00 20 58.5	
	comp=Z,45nm,0.8s						
X40A	**Basin Creek Fa**	**4.39**	**110**	Pn	Pn	00 19 44.1	+0.2
X40A				IAmb_Lg		00 21 02.1	
	comp=Z,43nm,0.7s						
WLAR	**White Oak Lake**	**4.56**	**121**	IAmb_Lg		00 21 07.1	
	comp=Z,45nm,0.9s						
WHAR	**Wooly Hollow**	**4.57**	**99**	Pn	Pn	00 19 46.7	+0.2
N33A	**J Bar K, Exete**	**4.62**	**3**	IAmb_Lg		00 21 13.5	
	comp=Z,33nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.62**	**91**		Pn	00 19 47.6	+0.5
KSCO	**Kaye Shedlock'**	**4.79**	**308**	IAmb_Lg		00 21 14.7	
	comp=Z,72nm,0.9s						
P38A	**Dawn**	**4.87**	**43**		Pn	00 19 51.9	+1.4
BRDY	**Brady**	**4.92**	**192**		Pn	00 19 51.7	+0.4
BRDY				IAmb_Lg		00 21 20.7	
	comp=Z,31nm,0.7s						
R40A	**Maddies Statio**	**4.93**	**62**		Pn	00 19 51.3	0.0
SGCY	**Sterling City**	**5.02**	**214**	IAmb_Lg		00 21 19.1	
	comp=Z,56nm,0.8s						
Z41A	**Richland Creek**	**5.02**	**123**	IAmb_Lg		00 21 28.9	
	comp=Z,49nm,1.0s						
NATX	**Nacogdoches**	**5.08**	**148**	IAmb_Lg		00 21 25.5	
	comp=Z,30nm,0.8s						
BGNE	**Belgrade**	**5.28**	**357**	IAmb_Lg		00 21 31.2	
	comp=Z,50nm,0.8s						
435B	**Jarrell**	**5.33**	**178**	IAmb_Lg		00 21 37.3	
	comp=Z,44nm,0.8s						
T25A	**Trinidad**	**5.40**	**283**		Pn	00 19 58.0	0.0
T25A				IAmb_Lg		00 21 35.2	
	comp=Z,36nm,0.8s						
CCAR	**Cane Creek**	**5.43**	**112**	IAmb_Lg		00 21 39.3	
	comp=Z,43nm,0.9s						
CCM	**Cathedral Cave**	**5.59**	**68**		Pn	00 20 01.3	+0.8
JCT	**Junction City**	**5.87**	**197**		Pn	00 20 04.2	-0.1
JCT				IAmb_Lg		00 21 58.3	
	comp=Z,40nm,0.9s						
OZNA	**Ozona**	**5.88**	**209**	IAmb_Lg		00 21 52.3	
	comp=Z,41nm,0.8s						
L34A	**Svendsen Farm,**	**5.94**	**10**	IAmb_Lg		00 21 49.9	
	comp=Z,58nm,0.7s						
PBMO	**Poplar Bluff**	**5.99**	**82**	IAmb_Lg		00 21 48.9	
	comp=Z,44nm,0.7s						
FVM	**French Village**	**6.19**	**70**	IAmb_Lg		00 22 02.7	
	comp=Z,29nm,0.8s						
143A	**Socs Landing,**	**6.30**	**121**	IAmb_Lg		00 22 04.8	
	comp=Z,25nm,0.8s						
MNHN	**Monahans**	**6.30**	**222**	IAmb_Lg		00 21 59.7	
	comp=Z,24nm,0.8s						
GNAR	**Gosnell**	**6.32**	**89**	IAmb_Lg		00 22 04.8	
	comp=Z,50nm,0.7s						
SDCO	**Great Sand Dun**	**6.37**	**287**	IAmb_Lg		00 22 08.9	
	comp=Z,25nm,1.2s						
Q24A	**Divide**	**6.48**	**298**	IAmb_Lg		00 22 18.0	
	comp=Z,27nm,0.7s						
K30B	**Basset**	**6.69**	**349**	IAmb_Lg		00 22 16.0	
	comp=Z,50nm,1.0s						
HNDO	**Hondo**	**6.69**	**191**	IAmb_Lg		00 22 10.8	
	comp=Z,31nm,0.8s						
BRIGG	**Briggsdale**	**6.78**	**313**	IAmb_Lg		00 22 19.6	
	comp=Z,38nm,0.8s						
SCIA	**State Center**	**6.79**	**30**	IAmb_Lg		00 22 17.0	
	comp=Z,52nm,0.8s						
PECS	**Pecos**	**6.92**	**228**	IAmb_Lg		00 22 21.1	
	comp=Z,34nm,0.8s						
EF01	**Eagle Ford 01**	**6.99**	**184**	IAmb_Lg		00 22 32.2	
	comp=Z,24nm,0.8s						
OXF	**Oxford**	**7.06**	**101**	IAmb_Lg		00 22 25.5	
	comp=Z,23nm,0.8s						
DRIO	**Del Rio**	**7.09**	**200**	IAmb_Lg		00 22 36.4	
	comp=Z,23nm,1.0s						
SAND	**Sanderson**	**7.13**	**212**	IAmb_Lg		00 22 29.5	
	comp=Z,24nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.74**	**257**	IAmb_Lg		00 22 43.0	
	comp=Z,40nm,0.9s						
L40A	**Anamosa**	**7.84**	**39**	IAmb_Lg		00 22 51.7	
	comp=Z,42nm,0.9s						
PHWY	**Pilot Hill**	**7.90**	**313**	IAmb_Lg		00 22 59.5	
	comp=Z,16nm,0.8s						
N23A	**Red Feather La**	**7.95**	**309**	IAmb_Lg		00 23 03.3	
	comp=Z,32nm,0.8s						
VHRN	**Van Horn**	**8.01**	**230**	IAmb_Lg		00 22 58.7	
	comp=Z,29nm,1.2s						
I37A	**Lemond, Waseca**	**8.58**	**22**	IAmb_Lg		00 23 11.0	
	comp=Z,20nm,0.9s						
121A	**Cookes Peak, D**	**8.99**	**249**	IAmb_Lg		00 23 36.0	
	comp=Z,17nm,1.1s						
RWWY	**Rawlins**	**9.19**	**310**	IAmb_Lg		00 23 46.2	
	comp=Z,21nm,1.1s						
RSSD	**Black Hills**	**9.30**	**331**	IAmb_Lg		00 23 41.4	
	comp=Z,27nm,1.1s						
I40A	**Norwalk**	**9.52**	**33**	IAmb_Lg		00 23 46.7	
	comp=Z,27nm,1.0s						

*IDC **21** 00:33:05.9±0.9, 10°.09S×120°.50E, h0km, mb4.4/16, mbtmp4.4/17, ML4.3/1, MS3.2/6, Error ellipse: s-maj=37.6km s-min=20.8km az=52.0*
*DJA **21** 00:33:08.0±0.7, 10°.5±3°.×12°.0E±°, h17km±6km, M4.4/12, mb4.5/12, mB4.9/2, MLv4.3/12, Mw(mB)4.2/2*
*NEIC **21** 00:33:10.1±1.4, 10°.48S±0°.07×120°.36E±0°.07, h43km±7km, mb4.5/38, Error ellipse: s-maj=10.3km s-min=9.7km az=51.0*

ISC 21 00:33:08.9±0.4, 10°.50S±0°.05×120°.41E±0°.05, h31km, n116, σ1s89/117, mb4.5/39, MS3.3/4, 1D, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.33**	**31**	Pg	**Pb**	**00 33 15.4**	**-1.4**
EDFI	**Ende, Flores**	**2.15**	**36**	Pn	**Pn**	**00 33 43.3**	**+0.5**
MMRI	**Maumere**	**2.59**	**44**	Pn	**Pn**	**00 33 49.4**	**+0.7**
MMRI				Sn	**Sn**	**00 34 20.3**	**+1.2**
MMRI	**Maumere**	**2.59**	**44**	P	**Pn**	**00 33 49.6**	**+0.9**
MMRI	**Maumere**	**2.59**	**44**	Pn	**Pn**	**00 33 49.0**	**+0.3**
PLAI	**Plampang**	**3.08**	**302**	P	**Pn**	**00 33 56.3**	**+0.9**
PLAI	**Plampang**	**3.08**	**302**	Pn	**Pn**	**00 33 56.4**	**+1.0**
SOEI	**Soe**	**3.88**	**79**	Pn	**Pn**	**00 34 08.2**	**+1.7**
SOEI	**Soe**	**3.88**	**79**	P	**Pn**	**00 34 09.6**	**+3.1**
SOEI	**Soe**	**3.88**	**79**	Pn	**Pn**	**00 34 09.2**	**+2.7**
TWSI	**Taliwang, Sumb**	**3.89**	**296**	Pn	**Pn**	**00 34 07.8**	**+1.2**
BBSI	**Bau Bau**	**5.42**	**23**	P	**Pn**	**00 34 27.3**	**-0.4**
	87nm,1.0s,0.2nm						
KAPI	**Kappang**	**5.49**	**353**	Pn	**Pn**	**00 34 29.6**	**+1.0**
JAGI	**Jajag, Banyuwa**	**6.49**	**288**	Pn	**Pn**	**00 34 41.8**	**-0.6**
JAGI	**Jajag, Banyuwa**	**6.49**	**288**	P	**Pn**	**00 34 42.8**	**+0.5**
JAGI	**Jajag, Banyuwa**	**6.49**	**288**	P	**Pn**	**00 34 40.3**	**-2.0**
GMJI	**Gumukmas**	**7.22**	**287**	P	**Pn**	**00 34 50.6**	**-1.7**
PWJI	**Pagerwojo**	**8.84**	**285**	P	**Pn**	**00 35 15.3**	**+0.7**
	22nm,0.7s						
FITZ	**Fitzroy Crossi**	**9.10**	**147**	Pn	**Pn**	**

NWAO	**Narrogin (SRO)**	**22.51**	**187**	P		**P**	**00 38 06.9**	**+0.8**
COEN	**Coen**	**22.51**	**101**	P		**P**	**00 38 06.7**	**+0.4**
COEN	**Coen**	**22.51**	**101**	P		**P**	**00 38 08.7**	**+2.4**
MULG	**Mulgathing**	**23.43**	**149**	P		**P**	**00 38 18.0**	**+2.5**
STKA	**Stephens Creek**	**28.92**	**141**	P		**P**	**00 39 10.1**	**+4.7**
	comp=Z,2.0nm,0.7s,baz=313,slow=7.2,SNR=3.7							
	comp=Z,2.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**35.73**	**324**	P		**P**	**00 40 04.8**	**-0.3**
	comp=Z,2.9nm,0.3s,baz=148,slow=4.6,SNR=5.9							
CMAR				PcP		**PcP**	**00 42 35.0**	**+2.1**
	comp=Z,1.1nm,0.3s,baz=187,slow=4.5,SNR=1.4							
CMAR				LR		LR	00 56 14.6	
	comp=Z,57nm,19.3s,baz=150,slow=39							
	comp=Z,2.9nm,0.3s							
CHTO	**Chiang Mai**	**36.01**	**324**	P		**P**	**00 40 05.5**	**-2.0**
CHTO				IAmb		IAmb	00 40 12.3	
	comp=Z,3.2nm,0.9s							
CRAI	**Chiangrai**	**36.35**	**327**	P		**P**	**00 40 08.9**	**-1.4**
CRAI				IAmb		IAmb	00 40 11.2	
	comp=Z,3.9nm,0.8s							
PZH	**PanZhiHua**	**41.01**	**334**	P		**P**	**00 40 51.3**	**+1.8**
PZH				pmax		pmax		
	comp=Z,7.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,110nm,5.3s							
ENH	**Enshi**	**41.88**	**346**	P		**P**	**00 40 54.6**	**-1.8**
ENH				IAmb		IAmb	00 40 56.4	
	comp=Z,8.6nm,1.1s							
NJ2	**Nanjing**	**42.34**	**358**	*e*P		**P**	**00 41 02.3**	**+2.2**
NJ2				pP		**sP**	**00 41 15.0**	**+2.2**
NJ2				sP		pP	00 41 21.3	+12
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.6s							
NJ2				pmax		pmax		
	comp=Z,210nm,8.4s							
CD2	**Chengdu**	**44.17**	**339**	P		**P**	**00 41 14.1**	**-0.9**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
JNU	**Nakatsue**	**44.51**	**13**	LR		LR	01 02 52.7	
	comp=Z,29nm,18.1s,baz=38,slow=40							
XAN	**Xi'an**	**45.62**	**347**	⇓P		**P**	**00 41 25.3**	**-1.2**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KSRS	**Korea Array**	**48.22**	**8**	LR		LR	01 03 34.5	
	comp=Z,9.0nm,18.6s,baz=170,slow=38							
BJI	**Beijing**	**50.44**	**356**	P		**P**	**00 42 02.3**	**-1.3**
BJI				sP		**sP**	**00 42 22.0**	**+5.6**
BJI				pmax		pmax		
	comp=Z,3.0nm,0.5s							
BJI				pmax		pmax		
	comp=Z,32nm,6.7s							
HHC	**Hu-ho-hao-te**	**51.74**	**351**	*e*P		**P**	**00 42 15.4**	**+1.9**
HHC				pP		pP	00 42 23.8	+1.1
HHC				*e*S		**S**	**00 49 33.6**	**+0.2**
HHC				sS		sS	00 49 51.0	+1.9
HHC	**Hu-ho-hao-te**	**51.74**	**351**	SS		**SS**	**00 53 12.6**	**+2.1**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,130nm,5.5s							
GTA	**Gaotai**	**53.22**	**340**	P		**P**	**00 42 24.6**	**0.0**
GTA				pP		sP	00 42 36.8	-0.7
GTA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
XLT	**XiLinHaoTe**	**54.28**	**356**	*e*P		**P**	**00 42 31.3**	**-0.9**
XLT				pmax		pmax		
	comp=Z,5.0nm,0.9s							
XLT				pmax		pmax		
	comp=Z,59nm,3.7s							
USRK	**Ussuriysk Ar.**	**55.45**	**10**	P		**P**	**00 42 37.8**	**-2.7**
	comp=Z,1.4nm,0.5s,baz=142,slow=24,SNR=2.8							
	comp=Z,1.4nm,0.5s							
ULN	**Ulaanbaatar**	**59.30**	**350**	P		**P**	**00 43 07.4**	**-0.5**
SONM	**Songino Array**	**59.40**	**349**	P		**P**	**00 43 08.0**	**-0.4**
SONM	**Songino Array**	**59.40**	**349**	P		**P**	**00 43 08.3**	**-0.2**
	comp=Z,6.8nm,0.7s,baz=165,slow=8.4,SNR=64							
	comp=Z,6.8nm,0.7s							
NIL	**Nilore**	**62.74**	**317**	P		**P**	**00 43 29.2**	**-2.2**
NIL				IAmb		IAmb	00 43 30.3	
	comp=Z,4.4nm,0.9s							
KSH	**Kashi**	**64.63**	**323**	P		**P**	**00 43 43.5**	**-0.3**
KSH				pP		sP	00 43 58.8	+2.4
KSH				pmax		pmax		
	comp=Z,17nm,0.7s							
NRN	**Naryn**	**65.86**	**325**	P		**P**	**00 43 50.7**	**-1.3**
NRN				IAmb		IAmb	00 43 52.1	
	comp=Z,4.2nm,0.7s							
KBL	**Kabul**	**66.13**	**315**	P		**P**	**00 43 52.6**	**-1.1**
KBL				IAmb		IAmb	00 43 54.6	
	comp=Z,3.9nm,0.8s							
MK31	**Makanchi Array**	**66.42**	**332**	P		**P**	**00 43 54.7**	**-0.4**
MK31				IAmb		IAmb	00 43 55.4	
	comp=Z,3.8nm,0.8s							
MKAR	**Makanchi Array**	**66.42**	**332**	P		**P**	**00 43 54.3**	**-0.8**
MKAR	**Makanchi Array**	**66.42**	**332**	P		**P**	**00 43 54.8**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=143,slow=7.6,SNR=52							
	comp=Z,4.4nm,0.8s							
AAK	**Ala-Archa**	**67.50**	**325**	P		**P**	**00 44 01.4**	**-0.8**
AAK				IAmb		IAmb	00 44 03.0	
	comp=Z,3.3nm,0.7s							
ARSB	**Arslanbob**	**67.54**	**323**	P		**P**	**00 44 02.0**	**-0.5**
ARSB				IAmb		IAmb	00 44 03.2	
	comp=Z,3.2nm,0.7s							
H04N2	**CROZET ISLANDS**	**67.69**	**224**	T		T	01 58 10.5	
	baz=81,slow=75,SNR=78							
H04N1	**CROZET ISLANDS**	**67.71**	**224**	T		T	01 58 08.0	
	baz=81,slow=75,SNR=68							
H04N3	**CROZET ISLANDS**	**67.71**	**224**	T		T	01 58 06.8	
	baz=81,slow=75,SNR=65							
BTK	**Batken**	**68.08**	**321**	P		**P**	**00 44 04.7**	**-1.2**
BTK				IAmb		IAmb	00 44 07.5	
	comp=Z,4.9nm,0.9s							
SIMJ	**Simiganj**	**68.42**	**319**	P		**P**	**00 44 06.9**	**-1.2**
SIMJ				IAmb		IAmb	00 44 08.4	
	comp=Z,8.3nm,1.4s							
KK31	**Karatay Array**	**70.08**	**323**	P		**P**	**00 44 16.7**	**-1.4**
KK31				IAmb		IAmb	00 44 19.8	
	comp=Z,4.0nm,1.4s							
VNDA	**Vanda**	**70.30**	**171**	P		**P**	**00 44 17.8**	**-1.2**
PETK	**Petropavlovsk-**	**70.90**	**23**	P		**P**	**00 44 23.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=166,slow=2.4,SNR=2.1							
	comp=Z,1.6nm,0.6s							
KURBB	**Kurchatov Arra**	**70.92**	**333**	P		**P**	**00 44 22.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=148,slow=5.2,SNR=20							
	comp=Z,1.2nm,0.5s							
ZAA0	**Zalesovo Array**	**70.93**	**339**	P		**P**	**00 44 21.3**	**-1.7**
ZAA0				IAmb		IAmb	00 44 23.1	
	comp=Z,7.4nm,0.9s							
ZALV	**Zalesovo Beam**	**70.93**	**339**	P		**P**	**00 44 21.9**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=142,slow=4.4,SNR=36							
	comp=Z,5.0nm,0.6s							
KURK	**Kurchatov**	**70.95**	**333**	P		**P**	**00 44 22.0**	**-1.2**
KURK				IAmb		IAmb	00 44 23.6	
	comp=Z,5.5nm,1.0s							
MA2	**Magadan**	**73.98**	**16**	P		**P**	**00 44 41.7**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=178,slow=12,SNR=4.4							
MA2				LR		LR	01 20 23.2	
	comp=Z,29nm,19.0s,baz=81,slow=39							
	comp=Z,2.9nm,0.3s							
GEYT	**Alibeck**	**75.47**	**314**	P		**P**	**00 44 51.4**	**+1.1**
	comp=Z,2.9nm,0.7s,baz=115,slow=6.7,SNR=4.9							
	comp=Z,2.9nm,0.7s							
BVAR	**Borovoye Array**	**76.27**	**332**	P		**P**	**00 44 54.1**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=126,slow=6.5,SNR=15							
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**76.33**	**332**	P		**P**	**00 44 53.4**	**-1.4**
SEY	**Seymchan**	**77.25**	**14**	P		**P**	**00 44 59.3**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=230,slow=7.8,SNR=8.0							
	comp=Z,2.6nm,0.5s							
QSPA	**South Pole Qui**	**79.50**	**180**	P		**P**	**00 45 14.5**	**+2.0**
ABKAR	**Akbulak array**	**79.58**	**325**	P		**P**	**00 45 12.3**	**-0.6**
ABKAR	**Akbulak array**	**79.58**	**325**	P		**P**	**00 45 12.1**	**-0.8**
TIXI	**Tiksi**	**82.16**	**3**	P		**P**	**00 45 25.0**	**-1.2**
TIXI				IAmb		IAmb	00 45 27.4	
	comp=Z,3.6nm,0.8s							
TIXI	**Tiksi**	**82.16**	**3**	P		**P**	**00 45 25.0**	**-1.2**
	comp=Z,2.1nm,0.2s,baz=178,slow=3.9,SNR=6.5							
	comp=Z,2.1nm,0.2s							
KBZ	**Khabaz**	**88.31**	**315**	P		**P**	**00 45 58.2**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=357,slow=0.7,SNR=8.2							
	comp=Z,2.0nm,0.8s							
LBTB	**Lobatse**	**89.92**	**245**	P		**P**	**00 46 04.3**	**-1.5**
MMAI	**Mount Meron Ar**	**91.50**	**303**	P		**P**	**00 46 15.0**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=190,slow=16,SNR=2.3							
	comp=Z,0.2nm,0.4s							
BRTR	**Keskin Array B**	**94.16**	**309**	P		**P**	**00 46 25.6**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=90,slow=4.9,SNR=4.6							
	comp=Z,1.0nm,0.9s							
FINES	**FINESS Array B**	**101.21**	**331**	P		**Pdif**	**00 46 56.7**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=125,slow=7.3,SNR=3.4							

DJA ***21*** *00:41:08.2±0.8, 11°S±5°×12°0E±°, h15km±6km, M4.2/9, mb4.6/4, MLv3.9/9*
IDC ***21*** *00:41:13.1±9.7, 10°.21S×120°.98E, h75km±100km, mb3.9/9, mbtmp4.1/11, ML3.6/2, Error ellipse: s-maj=72.3km s-min=35.9km az=39.0*

ISC 21 00:41:08.6±0.6, 10°.51S±0°.08×120°.52E±0°.07, h35km, n33, σ23/31, mb4.3/9, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.29**	**12**	Pg	**Pn**	**00 41 15.1**	**-1.3**
EDFI	**Ende, Flores**	**2.09**	**34**	Pn	**Pn**	**00 41 42.7**	**+1.4**
MMRI	**Maumere**	**2.52**	**43**	P	**Pn**	**00 41 49.5**	**+2.5**
MMRI	**Maumere**	**2.52**	**43**	Pn	**Pn**	**00 41 49.2**	**+2.2**
PLAI	**Plampang**	**3.17**	**301**	P	**Pn**	**00 41 56.3**	**+0.2**
PLAI	**Plampang**	**3.17**	**301**	Pn	**Pn**	**00 41 56.2**	**+0.2**
SOEI	**Soe**	**3.77**	**79**	P	**Pn**	**00 42 08.0**	**+3.7**
SOEI	**Soe**	**3.77**	**79**	Pn	**Pn**	**00 42 08.2**	**+3.9**
TWSI	**Taliwang, Sumb**	**3.99**	**296**	Pn	**Pn**	**00 42 08.1**	**+0.8**
JAGI	**Jajag, Banyuwa**	**6.60**	**287**	P	**Pn**	**00 42 42.5**	**-0.6**
JAGI	**Jajag, Banyuwa**	**6.60**	**287**	Pn	**Pn**	**00 42 43.0**	**-0.1**
	15nm,1.1s,0.1nm						
GMJI	**Gumukmas**	**7.32**	**287**	Pn	**Pn**	**00 42 53.6**	**+0.5**
PWJI	**Pagerwojo**	**8.95**	**285**	Pn	**Pn**	**00 43 16.1**	**+0.7**
	10nm,0.5s						
UGM	**Wanagama**	**10.20**	**284**	P	**Pn**	**00 43 33.2**	**+0.6**
MTN	**Manton Dam**	**10.65**	**104**	P	**Pn**	**00 43 41.8**	**+3.0**
GIRL	**Giralia**	**13.48**	**206**	P	**Pn**	**00 44 19.8**	**+2.3**
MEEK	**Meekatharra**	**16.15**	**186**	P	**P**	**00 44 54.5**	**-1.4**
WRKA	**Warakurna**	**16.23**	**154**	P	**P**	**00 44 55.6**	**-1.2**
WRA	**Warramunga Arr**	**16.30**	**127**	P	**Pn**	**00 44 55.1**	**+0.3**
	0.2nm,0.3s,baz=297,slow=13,SNR=4.0						
WRA				S	Sn	00 47 45.4	-9.3
	0.2nm,0.5s,baz=170,slow=12,SNR=4.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**18.28**	**137**	P	**Pn**	**00 45 20.4**	**+0.8**
	0.2nm,0.3s,baz=320,slow=12,SNR=11						
ASAR				S	**Sn**	**00 48 35.7**	**-7.2**
	0.6nm,0.7s,baz=314,slow=24,SNR=1.7						
	1.0nm,0.4s						
MORW	**Morawa**	**18.94**	**192**	P	**Pn**	**00 45 29.9**	**+2.4**
CMAR	**Chiang Mai Arr**	**35.80**	**323**	P	**P**	**00 48 06.1**	**+1.3**
	1.7nm,0.3s,baz=151,slow=6.1,SNR=2.3						
	1.7nm,0.3s						
SONM	**Songino Array**	**59.42**	**349**	P	**P**	**00 51 07.1**	**-0.6**
	2.0nm,0.7s,baz=165,slow=9.3,SNR=21						
	2.0nm,0.7s						
MKAR	**Makanchi Array**	**66.47**	**332**	P	**P**	**00 51 54.2**	**-0.3**
	1.4nm,0.7s,baz=141,slow=7.8,SNR=8.3						
	1.4nm,0.7s						
H04N2	**CROZET ISLANDS**	**67.77**	**224**	T	T	02 06 07.8	
	baz=81,slow=75,SNR=27						
H04N1	**CROZET ISLANDS**	**67.78**	**224**	T	T	02 06 07.8	
	baz=81,slow=75,SNR=27						
H04N3	**CROZET ISLANDS**	**67.78**	**224**	T	T	02 06 06.6	
	baz=81,slow=75,SNR=23						
PETK	**Petropavlovsk-**	**70.86**	**23**	P	**P**	**00 52 18.1**	**-3.6**
	2.6nm,0.9s,baz=203,slow=5.8,SNR=2.1						
	2.6nm,0.9s						
KURBB	**Kurchatov Arra**	**70.97**	**333**	P	**P**	**00 52 21.4**	**-1.0**
	0.6nm,0.5s,baz=137,slow=5.6,SNR=7.8						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**70.97**	**339**	P	**P**	**00 52 21.3**	**-1.0**
	0.9nm,0.3s,baz=120,slow=5.9,SNR=5.3						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**76.32**	**332**	P	**P**	**00 52 54.0**	**+0.1**
	0.7nm,0.6s,baz=145,slow=5.3,SNR=2.8						
	0.7nm,0.6s						
AKTO	**Aktyubinsk**	**81.31**	**325**	P	**P**	**00 53 21.6**	**+0.4**
	1.0nm,0.5s,baz=120,slow=5.1,SNR=2.5						
	1.0nm,0.5s						
TIXI	**Tiksi**	**82.16**	**3**	P	**P**	**00 53 24.7**	**-0.5**
	2.8nm,0.3s,baz=145,slow=5.9,SNR=4.4						
	2.8nm,0.3s						

IDC ***21*** *00:46:58.7±3.4, 36°.80N×71°.40E, h67km±27km, mb3.4/10, mbtmp3.8/17, ML3.6/7, MS3.0/2, Error ellipse: s-maj=24.9km s-min=18.6km az=10.0*
NNC ***21*** *00:47:04.8±3.6, 37°.24N×70°.90E, h101km±75km, mb3.9, mpv4.6, Error ellipse: s-maj=27.7km s-min=21.3km az=6.0*

ISC 21 00:47:01.0±0.9, 37°.01N±0°.08×71°.01E±0°.07, h88km, n32, σ29/37, mb3.7/10, 2C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**5.87**	**26**	P	**Pn**	**00 48 26.8**	**+1.1**
	SNR=24						
EKS2	**Erkin-Say**	**6.03**	**20**	P	**Pn**	**00 48 29.5**	**+1.8**
	SNR=88						
KK31	**Karatay Array**	**6.10**	**357**	⇓P	**Pn**	**00 48 30.0**	**+1.5**
	25nm,0.4s,baz=178,slow=13,SNR=769						
KK31				⇓S	**Sn**	**00 49 35.8**	**-1.0**
	7.0nm,0.5s,baz=175,slow=21,SNR=5.7						
AAK	**Ala-Archa**	**6.22**	**24**	P	**Pn**	**00 48 32.0**	**+1.6**
	SNR=34						
AAK	**Ala-Archa**	**6.22**	**24**	P	**Pn**	**00 48 31.1**	**+0.7**
	6.0nm,0.3s,baz=190,slow=6.2,SNR=118						
AAK				S	**Sn**	**00 49 40.1**	**0.0**
	8.6nm,0.4s,baz=345,slow=21,SNR=9.9						
AAK				LR	LR	00 50 51.2	
	comp=Z,76nm,18.2s,baz=352,slow=37						
	18nm,0.4s						
KBK	**Karagaybulak**	**6.40**	**27**	P	**Pn**	**00 48 34.4**	**+1.6**
	SNR=8.5						
ULHL	**Ulahol**	**6.60**	**36**	P	**Pn**	**00 48 37.1**	**+1.5**
	SNR=6.5						
CHMS	**Chumysh**	**6.63**	**24**	P	**Pn**	**00 48 37.2**	**+1.4**
	SNR=41						
CHMS	**Chumysh**	**6.63**	**24**	⇓P	**Pn**	**00 48 36.7**	**+0.9**
	50nm,0.7s						
CHMS				⇓S	**Sn**	**00 49 50.2**	**+0.3**
	11nm,0.7s						
USP	**Ospenovka**	**6.79**	**22**	P	**Pn**	**00 48 38.9**	**+0.9**
	SNR=48						
TKM2	**Tokmak 2**	**6.87**	**29**	P	**Pn**	**00 48 40.4**	**+1.2**
	SNR=32						
TKM2	**Tokmak 2**	**6.87**	**29**	⇓P	**Pn**	**00 48 40.3**	**+1.1**
	17nm,0.6s						
TKM2				⇑S	**Sn**	**00 49 57.5**	**+1.6**
	9.3nm,0.8s						
GEYT	**Alibeck**	**10.29**	**279**	P	**Pn**	**00 49 27.9**	**+2.2**
	0.4nm,0.3s,baz=109,slow=6.8,SNR=4.2						
GEYT				S	**Sn**	**00 51 15.6**	**-3.6**
	4.4nm,0.8s,baz=99,slow=20,SNR=4.1						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**12.88**	**37**	P	**Pn**	**00 49 58.7**	**-1.8**
	0.3nm,0.3s,baz=225,slow=14,SNR=22						
	1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**14.64**	**19**	P	**Pn**	**00 50 22.9**	**-0.4**
	baz=213,slow=12,SNR=3.4						
	0.1nm,0.3s						
AB31	**Akbulak array**	**14.64**	**330**	P	**Pn**	**00 50 22.7**	**-0.8**
	2.3nm,0.5s,baz=136,slow=14,SNR=132						
AB31				⇑S	**Sn**	**00 53 00.1**	**-4.6**
	6.7nm,1.1s,baz=154,slow=23,SNR=7.2						
BVAR	**Borovoye Array**	**16.02**	**359**	P	**Pn**	**00 50 40.8**	**-0.1**
	0.1nm,0.3s,baz=159,slow=11,SNR=19						
	1.8nm,0.4s						
AKTO	**Aktyubinsk**	**16.34**	**329**	⇓P	**P**	**00 50 48.0**	**+1.7**
	2.8nm,0.5s						
AKTO				⇓S	**Sn**	**00 53 41.9**	**-3.8**
	2.3nm,0.9s						
AKTO	**Aktyubinsk**	**16.34**	**329**	P	**P**	**00 50 46.3**	**0.0**
	1.8nm,0.3s,baz=145,slow=7.1,SNR=22						
	5.0nm,0.3s						
ZALV	**Zalesovo Beam**	**19.45**	**25**	P	**P**	**00 51 20.3**	**0.0**
	0.6nm,0.3s,baz=218,slow=9.0,SNR=14						
	1.9nm,0.4s						
ARU	**Arti**	**21.15**	**341**	P	**P**	**00 51 41.4**	**+2.7**
	1.5nm,0.4s,baz=183,slow=2.1,SNR=4.4						
	5.0nm,0.4s						
SONM	**Songino Array**	**28.04**	**56**	P	**P**	**00 52 42.4**	**-1.5**
	0.4nm,0.5s,baz=284,slow=9.5,SNR=3.8						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**37.07**	**326**	P	**P**	**00 54 05.7**	**+3.5**
	0.4nm,0.4s,baz=116,slow=8.9,SNR=5.2						
	0.4nm,0.4s						
HFS	**Hagfors**	**42.67**	**322**	P	**P**	**00 54 51.5**	**+2.9**
	1.8nm,0.9s,baz=182,slow=40,SNR=1.5						
	1.8nm,0.9s						

YAK	**Yakutsk**	**43.55**	**36**	LR		LR	01 14 27.6	
	comp=Z,32nm,18.7s,baz=334,slow=38							
NB2	**NORSAR Subarra**	**43.98**	**323**	P		pP	00 55 22.8	+1.8
	comp=Z,2.5nm,0.8s,baz=95,slow=8.6							
NOA	**NORSAR Array B**	**43.98**	**323**	P		**P**	**00 55 01.6**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=231,slow=11,SNR=1.5							
	comp=Z,0.5nm,0.8s							
KSRS	**Korea Array**	**44.71**	**71**	P		**P**	**00 55 03.0**	**-2.2**
	comp=Z,1.7nm,0.8s,baz=130,slow=9.9,SNR=2.7							
	comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**74.28**	**16**	P		**P**	**00 58 28.4**	**+0.1**
	comp=Z,0.5nm,1.0s,baz=301,slow=4.4,SNR=5.1							
	comp=Z,0.5nm,1.0s							
YKA	**Yellowknife Ar**	**80.73**	**3**	P		**P**	**00 59 05.8**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=347,slow=5.5,SNR=13							
	comp=Z,0.7nm,0.7s							
WRA	**Warramunga Arr**	**82.25**	**122**	P		**P**	**00 59 10.5**	**-2.3**
	comp=Z,0.6nm,0.9s,baz=326,slow=5.1,SNR=5.2							
	comp=Z,0.6nm,0.9s							
ASAR	**Alice Springs**	**84.54**	**125**	P		**P**	**00 59 22.9**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=317,slow=5.0,SNR=4.7							
	comp=Z,0.4nm,0.6s							

VAO ***21*** *01:06:59.2±0.4, 18°.81S×69°.61W, h10km, mb5.1*
SJA ***21*** *01:07:08.2±0.7, 18°.94S×69°.41W, h122km±3km, ML4.7, MW4.5*
MOS ***21*** *01:07:09.1±1.4, 18°.85S×69°.17W, h111km, mb5.0/15, Error ellipse: s-maj=12.7km s-min=7.3km az=109.3*
NEIC ***21*** *01:07:09.6±2.2, 18°.96S±0°.04×69°.27W±0°.07, h109km±3km, mb5.0/337, Mwr4.7/41, Error ellipse: s-maj=9.4km s-min=5.4km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr~1.29; Mθθ-0.27; Mϕϕ1.56; Mrθ0.44; Mθϕ-0.26; Mϕr~0.36; Fault plane solution: M₀1.57000×10¹⁶ NP1:ϕs190.18000°, δ39.74000°, λ-61.86000°. NP2:ϕs335.36000°, δ55.68000°, λ-111.41000°. Principal axes: T 1.6543, Plg8.0000°, Azm80.0000°; N -0.1843, Plg18.0000°, Azm348.0000°; P -1.4700, Plg70.0000°, Azm195.0000°;*
NEIC ***21*** *01:07:09.8, 18°.95S×69°.28W, h110km*
BJI ***21*** *01:07:10.0±0.0, 19°.00S×69°.30W, h110km, mB5.0/3*
IDC ***21*** *01:07:10.6±0.4, 18°.94S×69°.12W, h115km±3km, mb4.5/22, mbtmp4.9/25, MS3.5/9, Error ellipse: s-maj=13.5km s-min=7.8km az=75.0*
GUC ***21*** *01:07:10.7±0.8, 18°.95S×69°.35W, h107km±3km, ML4.9*
GCMT ***21*** *01:07:12.6±0.5, 19°.02S±0°.03×69°.26W±0°.04, h117km±5km, MW4.8/73, Moment Tensor Solution. s15,c16; s73,c88; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.99±.08; Mθθ-0.23±.09; Mϕϕ2.22±.11; Mrθ0.35±.07; Mθϕ-0.37±.11; Mϕr~0.11±.13; Best double couple: M₀2.16900×10¹⁶ NP1:ϕs341.00000°, δ48.00000°, λ-104.00000°. NP2: ϕs182.00000°, δ44.00000°, λ-75.00000°. Principal axes: T 2.2810, Plg2.0000°, Azm81.0000°; N -0.2290, Plg10.0000°, Azm351.0000°; P -2.0560, Plg79.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 01:07:09.4±0.3, 18°.96S±0°.03×69°.27W±0°.04, h110km±3km, h111km; pP-P, n697, σ1932/605, mb4.9/186, 15C-21D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.66**	**340**		**Pn**	**01 07 28.9**	**+0.7**
PB16				Sn	**Sn**	**01 07 42.9**	**+0.7**
PB16	**IPOC Station P**	**0.66**	**340**	*e*P	**Pn**	**01 07 28.2**	**0.0**
PB16				*e*S	**Sn**	**01 07 45.3**	**+3.1**
PB16				IAML		01 07 45.6	
	comp=Z,19μm,0.5s						
PB16	**IPOC Station P**	**0.66**	**340**	⇓*i*P	**Pn**	**01 07 28.9**	**+0.7**
PB16				*i* S	**Sn**	**01 07 43.0**	**+0.7**
PB16				IAML		01 07 44.5	
	comp=N,126μm,0.9s						
GO01	**Chusmiza**	**0.71**	**174**		**Pn**	**01 07 29.6**	**+1.2**
GO01				Sn	**Sn**	**01 07 44.4**	**+1.6**
GO01	**Chusmiza**	**0.71**	**174**	*e*P	**Pn**	**01 07 29.4**	**+1.0**
GO01				*e*S	**Sn**	**01 07 45.0**	**+2.3**
GO01				IAML		01 07 45.9	
	comp=Z,10μm,0.2s						
GO01	**Chusmiza**	**0.71**	**174**	*e*P	**Pn**	**01 07 29.4**	**+1.0**
GO01				*i* S	**Sn**	**01 07 44.3**	**+1.6**
GO01				IAML		01 07 45.3	
	comp=E,49μm,0.3s						
PB11	**IPOC Station P**	**0.88**	**205**		**Pn**	**01 07 30.0**	**+0.4**
PB11				Sn	**Sn**	**01 07 45.0**	**+0.2**
PB11	**IPOC Station P**	**0.88**	**205**	*e*P	**Pn**	**01 07 30.0**	**+0.4**
PB11				*e*S	**Sn**	**01 07 45.7**	**+0.9**
PB11				IAML		01 07 46.5	
	comp=Z,15μm,0.3s						
PB11	**IPOC Station P**

PB02 *i* S **Sn** **01 08 13.1 -4.3**
PB02 IAML 01 08 27.3
comp=N,6µm,0.7s
PB07 IPOC Station P 2.81 192 Pn 01 07 53.6 +0.5
PB07 IPOC Station P 2.81 192 *e*P **Pn** **01 07 48.3 -4.8**
PB07 *e*P 01 07 53.5
PB07 *e*S Sn 01 08 14.3 -12
PB07 IAML 01 08 48.9
comp=Z,2µm,0.6s
PB07 IPOC Station P 2.81 192 *e*P **Pn** **01 07 53.7 +0.6**
PB07 *i* S **Sn** **01 08 22.3 -4.4**
PB09 IPOC Station P 2.82 179 Pn 01 07 54.5 +1.3
PB09 IPOC Station P 2.82 179 *e*P **Pn** **01 07 49.3 -3.9**
PB09 *e*P 01 07 54.5
PB09 IAML 01 08 50.2
comp=Z,2µm,0.6s
PB09 IPOC Station P 2.82 179 *e*P **Pn** **01 07 54.5 +1.3**
PB09 *e*S **Sn** **01 08 22.2 -4.7**
LPAZ La Paz 2.87 22 Pn 01 07 56.8 +2.5
LPAZ La Paz 2.87 22 P **Pn** **01 07 56.8 +2.5**
LPAZ La Paz 2.87 22 *e*P **Pn** **01 07 54.2 -0.1**
PB04 IPOC Station P 3.46 194 Pn **Pn** **01 08 00.7 -0.9**
PB04 IPOC Station P 3.46 194 *e*P **Pn** **01 08 02.0 +0.4**
PB04 *e*S **Sn** **01 08 44.0 +2.1**
PB04 IAML 01 09 13.4
comp=Z,2µm,0.6s
PB04 IPOC Station P 3.46 194 ||*i*P **Pn** **01 08 01.4 -0.2**
LVC Limon Verde 3.65 175 Pn **Pn** **01 08 05.1 +0.7**
LVC Limon Verde 3.65 175 *e*P **Pn** **01 08 05.4 +1.0**
LVC *e*S Sn 01 08 37.5 -9.3
LVC IAML 01 09 18.7
comp=Z,829nm,0.6s
LVC Limon Verde 3.65 175 P **Pn** **01 08 06.1 +1.8**
comp=Z,191nm,0.5s,baz=343,slow=9.3,SNR=116
LVC S **Sn** **01 08 47.0 +0.2**
comp=Z,509nm,0.5s,baz=92,slow=20,SNR=14
PB06 IPOC Station P 3.74 184 Pn 01 08 05.5 +0.1
PB06 IPOC Station P 3.74 184 *e*P **Pn** **01 08 05.8 +0.4**
PB06 *e*S Sn 01 08 37.3 -11
PB06 *e*S 01 08 50.7
PB06 IAML 01 09 18.2
comp=Z,880nm,0.7s
PB06 IPOC Station P 3.74 184 ||*i*P **Pn** **01 08 05.5 +0.1**
AF01 San Pedro de A 4.10 166 Pn 01 08 11.7 +1.4
PB15 IPOC Station P 4.23 183 Pn 01 08 12.5 +0.5
PB15 IPOC Station P 4.23 183 *e*P **Pn** **01 08 12.6 +0.5**
PB15 *e*S Sn 01 08 49.3 -11
PB15 IAML 01 09 30.8
comp=Z,2µm,0.4s
PB10 IPOC Station P 4.69 195 Pn **Pn** **01 08 16.4 -1.6**
YJA Yavi 4.75 133 *e*P **Pn** **01 08 22.9 +3.6**
YJA *e*S Sn 01 09 34.5 +21
PB14 IPOC Station P 5.74 190 Pn **Pn** **01 08 30.5 -2.0**
GO02 Mina Guanaco 6.18 183 Pn 01 08 37.5 -1.0
AC01 Pan de Azucar 7.26 189 Pn 01 08 49.8 -3.0
AC02 Maricunga 7.84 179 Pn 01 08 59.9 -1.2
SIV San Ignacio 8.36 71 P **Pn** **01 09 06.4 -1.5**
comp=Z,150nm,0.4s,baz=264,slow=9.0,SNR=941
SIV S **Sn** **01 10 36.3 -4.4**
comp=Z,26nm,0.6s,baz=309,slow=23,SNR=1.2
BBSD Serra de San D 8.42 79 *e*P **Pn** **01 09 07.1 -1.5**
GO03 Copiap 8.64 186 Pn 01 09 08.1 -3.4
BBRB Robore, Bolivi 9.00 87 *e*P **Pn** **01 09 12.8 -3.6**
AC04 Llanos de Chal 9.35 190 Pn Pn 01 09 16.3 -5.1
ETMB Extrema 9.56 18 Pn **Pn** **01 09 21.4 -2.6**
NNA Nana 10.06 312 Pn **Pn** **01 09 27.9 -3.0**
NNA Nana 10.06 312 *ce*P **Pn** **01 09 28.9 -2.1**
NNA Nana 10.06 312 P **Pn** **01 09 28.8 -2.2**
comp=Z,12nm,0.3s,baz=142,slow=11,SNR=7.8
NNA S **Sn** **01 11 20.2 -1.9**
comp=Z,25nm,0.4s,baz=227,slow=12,SNR=4.9
NNA LR LR 01 14 12.7
comp=Z,78nm,18.1s,baz=136,slow=42
LCO Las Campanas 10.09 187 Pn **Pn** **01 09 27.1 -4.3**
LCO Las Campanas 10.09 187 P **Pn** **01 09 27.1 -4.3**
PTLB Pontes e Lacer 10.29 72 Pn **Pn** **01 09 31.9 -2.1**
PTLB Pontes e Lacer 10.29 72 *e*P **Pn** **01 09 32.1 -1.9**
VILB Vilhena 10.57 57 Pn **Pn** **01 09 36.6 -1.2**
CO01 Juntas del Tor 10.99 184 Pn 01 09 40.1 -3.5
MURT Porto Murtinho 11.27 106 *e*P **Pn** **01 09 45.3 -1.8**
SAML Samuel 11.57 31 Pn **Pn** **01 09 48.4 -2.8**
SAML Samuel 11.57 31 P **Pn** **01 09 48.4 -2.8**
ESFA Espinillo Form 11.64 123 *e*P **Pn** **01 09 50.3 -1.9**
CZSB Cruzeiro do Su 11.65 343 Pn **Pn** **01 09 49.2 -3.1**
BDQN Bodoquena, MS 11.89 99 *e*P **Pn** **01 09 53.0 -2.3**
CO03 El Pedregal 11.90 186 Pn Pn 01 09 49.6 -5.9
AQDB Aquidauana 12.87 99 Pn **Pn** **01 10 07.0 -1.3**
AQDB Aquidauana 12.87 99 *e*P **Pn** **01 10 07.4 -0.9**
CPUP Villa Florida 13.23 126 Pn **Pn** **01 10 11.7 -1.3**
CPUP Villa Florida 13.23 126 P **Pn** **01 10 11.7 -1.3**
CPUP Villa Florida 13.23 126 P **Pn** **01 10 11.4 -1.6**
comp=Z,8.8nm,0.8s,baz=307,slow=13,SNR=14
CPUP S Sn 01 12 25.6 -13
comp=Z,2.9nm,0.7s,baz=66,slow=20,SNR=1.7
CPUP Villa Florida 13.23 126 *e*P **Pn** **01 10 11.7 -1.3**
SALV Santo Antonio 13.31 79 *e*P **Pn** **01 10 11.5 -2.6**
VA06 Catapilco 13.66 187 Pn **Pn** **01 10 17.2 -1.3**
VA03 San Esteban 13.79 185 Pn 01 10 19.0 -1.3
PDRB Porto dos Gac 14.13 61 *e*P **Pn** **01 10 21.3 -3.4**
PEL Peldehue 14.18 185 Pn 01 10 23.0 -2.3
PEL Peldehue 14.18 185 P **Pn** **01 10 23.0 -2.3**
MT02 Curacav 14.34 186 Pn 01 10 25.3 -1.9
MT05 Renca 14.43 185 Pn 01 10 27.7 -0.8
MT03 Universidad Ad 14.52 184 Pn 01 10 28.9 -0.7
RPRD Ribas do Rio P 14.74 98 *e*P **Pn** **01 10 33.4 +0.9**
MT13 San Alfonso 14.75 183 Pn **Pn** **01 10 31.8 -0.8**
MT09 Talagante 14.84 186 Pn 01 10 33.4 -0.3
LMEL Las Melosas 14.85 183 Pn 01 10 33.8 -0.1
MT01 Popeta 14.95 186 Pn 01 10 34.3 -0.7
BO04 La Punta 15.02 184 Pn 01 10 35.1 -0.7
BO04 IAmb IAmb 01 10 41.3
comp=Z,74nm,1.1s
MCR1 Marechal Candi 15.17 114 *e*P **Pn** **01 10 39.0 +1.1**
CLDB Colider 15.29 60 *e*P **Pn** **01 10 38.4 -1.1**
BO01 Tunca 15.45 186 Pn **Pn** **01 10 40.2 -1.1**
BO01 IAmb IAmb 01 10 46.1
comp=Z,49nm,0.8s
ITQB Itaqui 15.69 135 Pn 01 10 43.4 -0.9
ITQB Itaqui 15.69 135 *e*P **P** **01 10 46.3 +0.3**
BO02 Sierra Bellavi 15.83 185 Pn 01 10 45.1 -0.9
BO02 IAmb IAmb 01 10 50.8
comp=Z,97nm,1.2s
TRCB Terra Rica 16.01 107 Pn **Pn** **01 10 47.1 -1.2**
TRCB Terra Rica 16.01 107 *e*P **P** **01 10 49.2 -0.5**
CRSM Crissiumal (Br 16.36 124 *e*P **P** **01 10 53.3 -0.1**
UNIS Unistalda (Bra 16.40 130 *e*P **P** **01 10 55.4 +1.5**
FRBT Francisco Belt 16.52 118 *e*P **P** **01 10 55.2 -0.1**
ML02 Panimavida 16.84 186 P **Pn** **01 10 57.6 -0.9**
ML02 IAmb IAmb 01 11 02.1
comp=Z,66nm,0.8s
PTGB Pitanga 16.96 113 *e*P **P** **01 11 02.1 +1.8**
ARAG Araguaiana, MT 16.98 82 *e*P **P** **01 11 00.3 0.0**
RODS Rosario do Sul 17.07 134 *e*P **P** **01 11 02.3 +1.0**
PCMB Pacaembu 17.10 102 *e*P **Pn** **01 11 02.2 +0.5**
TBOT Tacuaremb 17.46 139 *e*P **P** **01 11 05.2 -0.4**
LDASE Londrina, Braz 17.49 108 *e*P **Pn** **01 11 07.3 +0.8**
ALGR Alto Alegre (B 17.77 126 *e*P **Pn** **01 11 10.4 +0.5**
ITAB Concordia 17.77 121 P **P** **01 11 08.8 -0.3**
ITAB IAmb IAmb 01 11 13.0
comp=Z,184nm,1.3s
ITAB Concordia 17.77 121 *e*P **Pn** **01 11 10.2 +0.4**
MACA Manacapuru-AM 17.81 29 P 01 11 08.0 -1.5
MACA Manacapuru-AM 17.81 29 *e*P **P** **01 11 08.9 -0.6**
ITRB Iturama 17.86 95 *e*P **Pn** **01 11 11.6 +0.7**
MCRA Macar, Loja 17.87 323 P **P** **01 11 09.7 -0.5**
MCRA Macar, Loja 17.87 323 *e*P **P** **01 11 10.6 +0.4**
NPGB Novo Progresso 17.98 51 *e*P **P** **01 11 10.7 -0.7**
BOSC San Juan Bosco 18.12 329 P **P** **01 11 12.0 -1.1**
CPSB Cacapava Do Su 18.33 131 *e*P **Pn** **01 11 16.6 +0.2**
PLTB Pedras Altas 19.02 135 P **P** **01 11 21.6 -1.1**
COHC Cochancay 19.09 328 P **P** **01 11 23.6 +0.1**
COHC Cochancay 19.09 328 *e*P **Pn** **01 11 25.5 0.0**
ITTB Itaituba 19.62 44 *e*P **P** **01 11 28.5 -0.9**
CHSH Refugio Sur-Vo 19.75 330 IAmb IAmb 01 11 48.9
comp=Z,43nm,0.6s
PTLC Puerto Leguiza 19.77 343 *e*P **Pn** **01 11 32.5 -1.0**
PIAT Ana Tenorio 19.91 333 *e*P **Pn** **01 11 34.9 -0.6**
SLOR San Lorenzo - 20.25 332 P **P** **01 11 37.8 +1.1**
SLOR IAmb IAmb 01 11 41.2
comp=Z,33nm,0.7s
BDFB Brasilia 20.56 84 P **P** **01 11 39.3 -0.3**
BDFB Brasilia 20.56 84 P **P** **01 11 39.3 -0.3**
BDFB pmax pmax
comp=Z,96nm,0.5s
BDFB Brasilia 20.56 84 P **P** **01 11 38.8 -0.8**
comp=Z,91nm,0.5s,baz=256,slow=7.9,SNR=157
comp=Z,91nm,0.5s
GO06 Curarrehue 20.64 185 P **P** **01 11 40.1 -0.1**
GO06 IAmb IAmb 01 11 46.2
comp=Z,66nm,0.8s
SPB Sao Paulo 20.86 107 P **P** **01 11 41.0 -1.6**
BONI La Bonita 20.93 336 *e*P **P** **01 11 41.3 -2.3**
OTAV Otavalo 21.10 334 P **P** **01 11 44.9 -0.8**
OTAV Otavalo 21.10 334 P **P** **01 11 44.9 -0.8**
OTAV pmax pmax
comp=Z,29nm,1.5s
OTAV Otavalo 21.10 334 *e*P **P** **01 11 49.7 +4.0**
LR04 Corral 21.15 189 P **P** **01 11 44.9 -0.7**
LR04 IAmb IAmb 01 11 52.5
comp=Z,46nm,0.9s
TULM Tulcn-Chalpat 21.27 336 P **P** **01 11 48.5 +0.9**
TULM Tulcn-Chalpat 21.27 336 *e*P **P** **01 11 49.0 +1.5**
LR05 Currie 21.33 186 P **P** **01 11 47.1 -0.4**
LR05 IAmb IAmb 01 11 50.9
comp=Z,53nm,0.9s
FLOC Florencia 21.36 342 *e*P **P** **01 11 44.6 -3.4**
GCUF Volcan Galeras 21.57 338 *e*P **P** **01 11 53.2 +2.4**
PLCA Paso Flores 21.73 183 P **P** **01 11 52.0 +0.2**
PLCA IAmb IAmb 01 11 55.2
comp=Z,109nm,0.9s
PLCA Paso Flores 21.73 183 P **P** **01 11 52.0 +0.2**
comp=Z,78nm,0.9s,baz=360,slow=12,SNR=83
PLCA PcP **PcP** **01 15 49.2 +0.9**
comp=Z,1.3nm,0.5s,baz=3.0,slow=1.6,SNR=3.3
comp=Z,78nm,0.9s
PLCA Paso Flores 21.73 183 *e*P **P** **01 11 52.6 +0.8**
CRUC La Cruz 21.75 339 *e*P **P** **01 11 54.9 +2.3**
GARC Garzon, Huila 21.89 343 *e*P **P** **01 11 50.5 -3.4**
BBAC Balboa, Cauca 22.28 339 *e*P **P** **01 11 59.7 +1.8**
POPC Popayan, Colom 22.57 340 *e*P **P** **01 12 02.3 +1.3**
BOAV Boa Vista 22.90 23 P **P** **01 12 02.1 -1.8**
BOAV Boa Vista 22.90 23 *e*P **P** **01 12 01.3 -2.6**
PTGC Puerto Gaitan, 23.19 353 *e*P **P** **01 12 06.4 -0.2**
JAMC Jamundi, Valle 23.21 341 *e*P **P** **01 12 07.0 -0.1**
ORTC Ortega, Tolima 23.48 345 *e*P **P** **01 12 06.8 -2.6**
LL01 San Ignacio de 23.50 186 P **P** **01 12 08.8 -0.4**
LL01 IAmb IAmb 01 12 12.0
comp=Z,38nm,0.8s
GR1C Gorgona, Isla 23.52 337 *e*P **P** **01 12 08.5 -1.1**
YOTC Yotoco, Valle 23.84 342 *e*P **P** **01 12 11.3 -1.4**
CHIC Chingaza 23.85 349 *e*P **P** **01 12 11.2 -1.9**
ROSC El Rosal 24.17 348 P **P** **01 12 18.1 +2.1**
comp=Z,8.2nm,0.5s,baz=160,slow=19,SNR=4.8
comp=Z,8.2nm,0.5s
GUY2C Guyana, Caldas 24.77 345 *e*P **P** **01 12 20.4 -1.1**
SPBC San Pablo de B 24.91 349 *e*P **P** **01 12 20.9 -1.4**
NORC Norcasia 24.99 347 *e*P **P** **01 12 21.6 -1.4**
TAMC Tame, Arauca 25.36 354 *e*P **P** **01 12 25.4 -0.9**
AY01 Puyuhuapi 25.54 186 P **P** **01 12 26.9 -0.8**
AY01 IAmb IAmb 01 12 28.8
comp=Z,30nm,0.8s
CBOC Ciudad Bolivar 25.55 344 *e*P **P** **01 12 27.4 -0.9**
BARC Barichara 25.68 351 *e*P **P** **01 12 28.4 -1.1**
HELC Santa Helena 25.74 346 *e*P **P** **01 12 28.4 -1.8**
PTBC PUERTO BERRIO, 25.85 348 *e*P **P** **01 12 27.5 -3.3**
DBBC Dabeiba 26.70 345 *e*P **P** **01 12 38.2 -0.4**
UREC San Jos de Ur 27.25 346 *e*P **P** **01 12 36.8 -6.6**
SDV Santo Domingo 27.70 357 P **P** **01 12 45.7 -1.9**
SDV Santo Domingo 27.70 357 *e*P **P** **01 12 46.5 -1.1**
SDV Santo Domingo 27.70 357 *e*P **P** **01 12 45.5 -2.1**
BAUV El Baul 27.75 3 P **P** **01 12 45.7 -2.1**
PCRV Puerto La Cruz 29.31 9 LR LR 01 26 20.1
comp=Z,79nm,21.9s,slow=39
RCBR Riachuelo 35.02 72 P **P** **01 13 51.3 -0.5**
RCBR Riachuelo 35.02 72 P **P** **01 13 51.3 -0.5**
RCBR pmax pmax
comp=Z,24nm,0.7s
CELP Cerrillos 36.90 4 P **P** **01 14 06.8 -0.7**
GCPR Guaynabo City 37.17 5 P **P** **01 14 07.0 -2.8**
RPN Rapa Nui 37.63 250 LR LR 01 26 02.6
comp=Z,72nm,21.7s,baz=76,slow=30
MTO3 Montecristo 38.61 328 IAmb IAmb 01 14 24.5
comp=Z,14nm,0.8s
PMSA Palmer Station 45.92 177 *e*P **P** **01 15 23.1 +2.5**
DWPF Disney Wildern 48.25 346 P **P** **01 15 38.5 -0.7**
baz=165
TIGA Tifton 51.96 344 P **P** **01 16 07.1 -0.1**
baz=163
352A Blakely 52.36 343 P **P** **01 16 10.0 0.0**
BRAL Brewton 52.69 341 P **P** **01 16 12.5 0.0**
baz=159
ZAIG Zacatecas 52.71 320 P **P** **01 16 13.4 +0.2**
ZAIG IAmb IAmb 01 16 16.0
comp=Z,13nm,1.0s
NHSC New Hope 52.81 349 P **P** **01 16 13.8 +0.4**
baz=167,SNR=5.0
250A Grady 53.21 342 IAmb IAmb 01 16 17.0
comp=Z,23nm,0.8s
152A Waverly Hall 53.42 344 IAmb IAmb 01 16 18.4
comp=Z,21nm,0.9s
GOGA Godfrey 53.81 345 IAmb IAmb 01 16 20.8
comp=Z,12nm,0.7s
GOGA Godfrey 53.81 345 P **P** **01 16 19.7 -1.1**
baz=163
JSC Jenkinsville 54.16 348 IAmb IAmb 01 16 24.2
comp=Z,23nm,1.0s
HODGE Hodges 54.32 347 P **P** **01 16 24.1 -0.3**
HODGE IAmb IAmb 01 16 25.3
comp=Z,15nm,0.9s
Y52A Lilburn 54.39 345 IAmb IAmb 01 16 25.3
comp=Z,15nm,1.1s
LRAL Lakeview Retre 54.41 342 IAmb IAmb 01 16 25.4
comp=Z,9.2nm,0.9s
LRAL Lakeview Retre 54.41 342 P **P** **01 16 23.6 -1.4**
baz=159,SNR=5.3
W57A Gilead 54.77 349 IAmb IAmb 01 16 28.3
comp=Z,20nm,0.9s
Y49A Blount Mountai 55.01 343 IAmb IAmb 01 16 29.6
comp=Z,12nm,0.8s
KMSC Kings Mountain 55.01 348 P **P** **01 16 28.9 -0.5**
KMSC Kings Mountain 55.01 348 P **P** **01 16 29.3 -0.1**
baz=166,SNR=17
BG3 Lake Jocassee 55.20 346 IAmb IAmb 01 16 31.3
comp=Z,11nm,0.7s
833A Chaparral WMA, 55.30 327 P **P** **01 16 31.5 -0.1**
baz=145,SNR=9.4
W52A Murphy 55.53 345 IAmb IAmb 01 16 33.9
comp=Z,18nm,1.0s
U59A Littleton 55.60 352 IAmb IAmb 01 16 33.5
comp=Z,30nm,1.5s
X48A Hartselle 55.75 342 P **P** **01 16 34.0 -0.6**
X48A IAmb IAmb 01 16 35.1
comp=Z,21nm,0.8s
W50A Signal Mountai 55.98 344 IAmb IAmb 01 16 36.9
comp=Z,25nm,0.9s
NATX Nacogdoches 56.00 334 P **P** **01 16 36.8 +0.2**
baz=151
CPCT Cooper Cave 56.01 345 IAmb IAmb 01 16 37.1
comp=Z,22nm,1.2s
TKL Tuckaleechee C 56.03 346 IAmb IAmb 01 16 37.1
comp=Z,20nm,0.8s
SWET Sewanee 56.15 344 P **P** **01 16 36.7 -0.9**
HNDO Hondo 56.23 328 P **P** **01 16 38.5 +0.2**
PTCN Pitcairn Islan 56.32 252 P **P** **01 16 39.0 -0.2**
T57A Hurt 56.45 350 IAmb IAmb 01 16 40.4
comp=Z,33nm,1.3s
435B Jarrell 56.46 331 P **P** **01 16 39.7 -0.1**
baz=148
OXF Oxford 56.52 340 IAmb IAmb 01 16 40.0
comp=Z,27nm,1.1s
OXF Oxford 56.52 340 P **P** **01 16 38.9 -1.3**
baz=157
TZTN Tazewell 56.83 346 P **P** **01 16 41.3 -1.0**
baz=164
BLA Blacksburg 56.85 349 IAmb IAmb 01 16 44.6
comp=Z,17nm,0.8s
BLA Blacksburg 56.85 349 P **P** **01 16 42.1 -0.5**
baz=167
S57A Dark Hollow, R 57.15 351 IAmb IAmb 01 16 46.1
comp=Z,14nm,1.0s
R58B Mineral 57.20 352 IAmb IAmb 01 16 45.7
comp=Z,12nm,0.8s
JCT Junction City 57.27 329 IAmb IAmb 01 16 46.8
comp=Z,11nm,0.8s
JCT Junction City 57.27 329 P **P** **01 16 44.6 -1.0**
baz=145
U49A Red Boiling Sp 57.34 344 IAmb IAmb 01 16 46.0
comp=Z,17nm,0.7s
CBN Corbin Frederi 57.37 352 P **P** **01 16 45.4 -0.7**
baz=171
WHTX Lake Whitney, 57.42 332 P **P** **01 16 45.9 -0.6**
baz=148
WVT Waverly 57.54 342 P **P** **01 16 46.6 -0.7**
WVT IAmb IAmb 01 16 47.2
comp=Z,20nm,0.8s
WVT Waverly 57.54 342 P **P** **01 16 46.7 -0.7**
baz=159
WVT Waverly 57.54 342 P **P** **01 16 46.6 -0.7**
WVT pmax pmax
comp=Z,20nm,0.9s
T50A Nancy 57.59 345 IAmb IAmb 01 16 47.8
comp=Z,16nm,0.7s
HPIG 57.69 321 IAmb IAmb 01 16 50.5
comp=Z,16nm,1.2s
R55A Marlinton 57.84 350 IAmb IAmb 01 16 52.1
comp=Z,15nm,1.1s
MIAR Mount Ida 58.02 336 IAmb IAmb 01 16 51.6
comp=Z,19nm,1.4s
MIAR Mount Ida 58.02 336 P **P** **01 16 49.5 -1.2**
baz=153,SNR=7.3
SAND Sanderson 58.03 326 IAmb IAmb 01 16 52.5
comp=Z,11nm,1.0s
SLBS Sierra La Lagu 58.06 315 P **P** **01 16 52.7 +1.4**
SLBS IAmb IAmb 01 16 53.6
comp=Z,10nm,0.7s
T47A Sharon Grove 58.14 343 P **P** **01 16 50.8 -0.7**
R53A Hurricane 58.22 348 IAmb IAmb 01 16 52.8
comp=Z,17nm,0.7s
OZNA Ozona 58.29 328 IAmb IAmb 01 16 53.8
comp=Z,23nm,1.3s
TXAR Lajitas Array 58.37 325 P **P** **01 16 53.6 +0.2**
comp=Z,4.5nm,1.0s,baz=148,slow=8.0,SNR=30
TXAR PcP **PcP** **01 17 44.7 +1.6**
comp=Z,2.4nm,1.0s,baz=156,slow=6.8,SNR=4.3
comp=Z,4.5nm,1.0s
PLPT Palo Pinto 58.50 331 IAmb IAmb 01 16 55.5
comp=Z,13nm,1.0s
LCAR Lake Charles 58.52 339 P **P** **01 16 53.2 -1.0**
LCAR PcP **PcP** **01 17 43.0 -0.5**
R50A Paris 58.67 346 IAmb IAmb 01 16 55.5
comp=Z,20nm,1.0s
FCAR Ozark Folk Cen 58.69 338 P **P** **01 16 54.0 -1.4**
R49A Shelbyville 58.88 345 IAmb IAmb 01 16 56.7
comp=Z,13nm,0.8s
WUPA West Chester U 58.88 354 IAmb IAmb 01 16 57.2
comp=Z,8.0nm,1.0s
Q52A Bidwell 58.89 348 IAmb IAmb 01 16 57.3
comp=Z,17nm,0.8s
PBMO Poplar Bluff 58.93 340 IAmb IAmb 01 17 26.9
comp=Z,15nm,0.8s
ABTX Abilene, Hawle 58.95 330 P **P** **01 16 57.3 0.0**
ABTX IAmb IAmb 01 16 58.5
comp=Z,20nm,0.8s
ABTX Abilene, Hawle 58.95 330 P **P** **01 16 56.5 -0.8**
baz=146,SNR=8.0
MVL Millersville 59.02 354 P **P** **01 16 57.7 +0.2**
MVL IAmb IAmb 01 16 58.4
comp=Z,9.7nm,0.8s
WCI Wyandotte Cave 59.09 344 P **P** **01 16 56.8 -1.3**
WCI IAmb IAmb 01 16 58.1
comp=Z,24nm,1.1s
WCI Wyandotte Cave 59.09 344 P **P** **01 16 57.0 -1.1**
baz=161
WCI Wyandotte Cave 59.09 344 P **P** **01 16 56.8 -1.3**
WCI pmax pmax
comp=Z,24nm,1.1s
MCWV Mont Chateau 59.14 351 P **P** **01 16 58.0 -0.5**
baz=168
ALPN Alpine 59.16 325 IAmb IAmb 01 17 00.9
comp=Z,7.8nm,0.9s
CGM3 Cape Girardeau 59.17 341 P **P** **01 16 57.8 -0.8**
Q51A Peebles 59.17 347 IAmb IAmb 01 16 59.0
comp=Z,22nm,1.1s
MNHN Monahans 59.46 327 P **P** **01 17 00.9 +0.1**
P52A Corning 59.52 348 P **P** **01 17 00.0 -0.9**
baz=166,SNR=12
HHAR Hobbs 59.69 337 IAmb IAmb 01 17 03.0
comp=Z,16nm,1.2s
PAL Palisades 59.81 356 P **P** **01 17 02.5 -0.5**
baz=175
SSPA Standing Stone 59.83 352 P **P** **01 17 02.3 -0.8**
baz=171
W35A Tecumseh 59.86 334 IAmb IAmb 01 17 04.5
comp=Z,13nm,0.8s
O53A New Philadelph 59.95 349 P **P** **01 17 03.1 -0.8**
baz=167,SNR=9.8
P49A Miami Univ. Ec 59.95 346 P **P** **01 17 02.3 -1.7**
baz=163,SNR=8.5
RLO Rose Lookout 60.00 336 IAmb IAmb 01 17 05.5
comp=Z,16nm,0.9s
U38A Gravette 60.00 337 IAmb IAmb 01 17 04.3
comp=Z,11nm,1.4s
P48A Milroy 60.05 346 P **P** **01 17 02.9 -1.8**
P48A IAmb IAmb 01 17 03.8
comp=Z,13nm,0.7s
PECS Pecos 60.06 326 IAmb IAmb 01 17 06.4
comp=Z,15nm,1.2s
TUL3 Leonard 60.08 335 P **P** **01 17 04.0 -0.9**
baz=151,SNR=5.2
POST Post 60.21 329 IAmb IAmb 01 17 07.8
comp=Z,17nm,0.9s
VHRN Van Horn 60.21 325 IAmb IAmb 01 17 07.4
comp=Z,16nm,0.9s
ACSO Alum Creek Sta 60.26 348 P **P** **01 17 04.3 -1.7**
baz=165,SNR=7.1
WMOK Wichita Mounta 60.32 332 P **P** **01 17 05.4 -1.3**
baz=148,SNR=5.4
CCM Cathedral Cave 60.36 340 P **P** **01 17 05.6 -1.2**
CCM IAmb IAmb 01 17 36.9
comp=Z,11nm,0.8s
CCM Cathedral Cave 60.36 340 P **P** **01 17 05.3 -1.4**
baz=156
CCM Cathedral Cave 60.36 340 P **P** **01 17 05.6 -1.2**
CCM pmax pmax
comp=Z,11nm,0.9s
M57A Sunshine Farm, 60.43 353 IAmb IAmb 01 17 08.6
comp=Z,24nm,1.4s
O49A Covington 60.50 347 P **P** **01 17 06.6 -1.1**
O48B Farmland 60.74 346 P **P** **01 17 08.3 -1.1**
baz=163,SNR=5.5
M55A Ridgway 60.76 352 IAmb IAmb 01 17 10.1
comp=Z,12nm,0.7s
M53A WI Miller and 61.02 350 P **P** **01 17 11.0 -0.2**
M53A WI Miller and 61.02 350 P **P** **01 17 10.6 -0.6**
baz=168,SNR=11
L59A Walton 61.08 355 IAmb IAmb 01 17 12.8
comp=Z,22nm,1.1s
MNTX Cornudas Mount 61.13 325 P **P** **01 17 11.1 -1.1**
baz=141,SNR=19
BINY Binghamton 61.17 354 IAmb IAmb 01 17 13.3
comp=Z,23nm,1.1s
BINY Binghamton 61.17 354 P **P** **01 17 11.5 -0.7**
baz=173
L61B Northampton 61.18 357 P **P** **01 17 11.4 -0.8**
baz=176
HRV Adam Dziewonsk 61.19 358 P **P** **01 17 11.7 -0.6**
baz=178
T35A Sooner Cattle 61.24 335 IAmb IAmb 01 17 14.5
comp=Z,28nm,1.1s
BELA Belgrano 2 61.30 172 IAmb IAmb 01 17 15.6
comp=Z,12nm,1.0s
SFIN Lafayette 61.33 345 P **P** **01 17 12.3 -1.0**
baz=161
MSTX Muleshoe 61.56 329 P **P** **01 17 14.2 -0.9**
baz=144,SNR=6.2
ERPA Erie 61.57 351 P **P** **01 17 14.4 -0.5**
ERPA Erie 61.57 351 P **P** **01 17 14.5 -0.5**
baz=168,SNR=10
WVNY West Valley, N 61.66 352 IAmb IAmb 01 17 16.2
comp=Z,15nm,0.7s
OK032 Salt Plains WL 61.83 334 IAmb IAmb 01 17 17.8
comp=Z,19nm,0.9s
KAN17 Caldwell West 61.85 334 IAmb IAmb 01 17 18.1
comp=Z,24nm,0.9s
P40A Paris 61.96 340 IAmb IAmb 01 17 18.0
comp=Z,22nm,1.2s
KAN06 Argonia West S 62.06 334 P **P** **01 17 18.5 +0.1**
HDIL Hopedale 62.08 343 P **P** **01 17 16.7 -1.6**
HDIL Hopedale 62.08 343 P **P** **01 17 17.4 -0.9**
baz=159,SNR=5.8
P38A Dawn 62.53 339 IAmb IAmb 01 18 00.7
comp=Z,11nm,0.5s
VNA3 Neumayer Olymp 62.58 162 ||P **P** **01 17 22.7 +1.4**
comp=Z,15nm,0.8s

LBNH **Lisbon** 62.94 358 P P 01 17 24.1 +0.1
baz=177
121A **Cookes Peak, D** 63.09 324 P P 01 17 25.6 +0.1
121A IAmb IAmb 01 17 27.8
comp=Z,13nm,1.1s
121A **Cookes Peak, D** 63.09 324 P P 01 17 25.3 -0.2
baz=139
319A **Douglas** 63.09 322 P P 01 17 25.4 0.0
319A IAmb IAmb 01 17 27.6
comp=Z,21nm,0.8s
VNA2 **Neumayer--Watz** 63.15 161 ⇓P P 01 17 26.5 +1.4
comp=Z,17nm,0.6s,baz=284,slow=7.8
KSU1 **Kansas State U** 63.17 336 P P 01 17 25.1 -0.5
KSU1 IAmb IAmb 01 17 26.3
comp=Z,32nm,1.1s
KSU1 **Kansas State U** 63.17 336 P P 01 17 24.9 -0.7
baz=151
L44A **Lake County Fo** 63.22 345 P P 01 17 25.0 -0.8
baz=160
LONY **Lake Ozonia** 63.46 356 IAmb IAmb 01 17 31.8
comp=Z,20nm,1.2s
LONY **Lake Ozonia** 63.46 356 P P 01 17 27.5 +0.1
baz=174
DELO **Deloro Mine** 63.63 353 IAmb IAmb 01 17 29.3
comp=Z,19nm,1.2s
DUN6 **Lazy B Ranch** 63.84 323 IAmb IAmb 01 17 32.1
comp=Z,20nm,0.8s
G62A **West of Eustis** 63.88 359 IAmb IAmb 01 17 31.8
comp=Z,27nm,0.8s
PKME **Peaks-Kenny Pk** 63.91 360 P P 01 17 30.1 -0.2
baz=180
SADO **Sadowa** 64.06 352 IAmb IAmb 01 17 31.8
comp=Z,12nm,0.9s
SADO **Sadowa** 64.06 352 P P 01 17 30.9 -0.4
comp=Z,7.6nm,0.5s,baz=180,slow=7.0,SNR=17
SADO LR LR 01 47 11.5
comp=Z,30nm,20.3s,baz=178,slow=38
comp=Z,7.6nm,0.5s
CBKS **Cedar Bluff** 64.17 334 P P 01 17 32.4 +0.1
baz=148
ANMO **Albuquerque** 64.20 327 P P 01 17 32.7 0.0
ANMO **Albuquerque** 64.20 327 P P 01 17 32.5 -0.2
baz=141
ANMO **Albuquerque** 64.20 327 P P 01 17 32.7 0.0
ANMO pmax pmax
comp=Z,7.0nm,1.0s
SCIA **State Center** 64.49 340 P P 01 17 33.9 -0.3
baz=155
JFWS **Jewell Farm** 64.53 343 IAmb IAmb 01 18 09.2
comp=Z,16nm,0.7s
JFWS **Jewell Farm** 64.53 343 P P 01 17 34.1 -0.3
baz=158
TUC **Tucson** 64.64 322 P P 01 17 36.1 +0.6
TUC **Tucson** 64.64 322 P P 01 17 35.4 -0.1
baz=136
TUC **Tucson** 64.64 322 P P 01 17 36.1 +0.6
TUC pmax pmax
comp=Z,3.0nm,0.9s
SNAA **Sanae** 64.78 161 P P 01 17 36.8 +1.0
SNAA IAmb IAmb 01 17 37.7
comp=Z,21nm,0.8s
SNAA **Sanae** 64.78 161 ⇓P P 01 17 37.1 +1.2
comp=Z,442nm,0.6s
SNAA **Sanae** 64.78 161 *d i* P P 01 17 36.7 +0.8
SNAA pmax pmax
comp=Z,47nm,1.5s
SNAA **Sanae** 64.78 161 P P 01 17 37.1 +1.2
comp=Z,16nm,0.6s,baz=286,slow=7.3,SNR=56
comp=Z,16nm,0.6s
T25A **Trinidad** 64.89 329 IAmb IAmb 01 17 39.1
comp=Z,25nm,1.5s
T25A **Trinidad** 64.89 329 P P 01 17 37.2 0.0
baz=143,SNR=7.3
GLMI **Grayling** 65.00 348 P P 01 17 37.3 -0.2
baz=164
TRQ **Mont Tremblant** 65.05 356 IAmb IAmb 01 17 38.6
comp=Z,21nm,0.7s
E62A **Clayton Lake** 65.27 360 IAmb IAmb 01 17 40.1
comp=Z,10nm,0.6s
KSCO **Kaye Shedlock'** 65.58 332 P P 01 17 40.9 -0.6
baz=145
214A **Organ Pipe Nat** 65.60 320 P P 01 17 43.0 +1.3
214A IAmb IAmb 01 17 44.4
comp=Z,14nm,0.9s
214A **Organ Pipe Nat** 65.60 320 P P 01 17 41.2 -0.5
baz=134,SNR=8.1
D62A **Allapoint, All** 65.73 0 P P 01 17 42.4 +0.3
D62A IAmb IAmb 01 17 43.2
comp=Z,15nm,0.8s
BGNE **Belgrade** 65.76 337 P P 01 17 42.5 0.0
baz=150,SNR=5.7
SDCO **Great Sand Dun** 65.90 329 IAmb IAmb 01 17 45.7
comp=Z,24nm,1.1s
SDCO **Great Sand Dun** 65.90 329 P P 01 17 43.7 -0.1
baz=142,SNR=21
W18A **Petrified Fore** 66.09 324 P P 01 17 45.3 +0.3
baz=138,SNR=5.6
TROLL **Troll, Antarti** 66.49 161 ⇓P P 01 17 48.5 +1.5
comp=Z,1μm,0.6s
S22A **4UR Ranch, Cre** 66.56 328 P P 01 17 48.9 +0.9
baz=141,SNR=8.6
Q24A **Divide** 66.70 330 P P 01 17 49.6 +0.7
baz=143,SNR=8.8
OGNE **Ogallala** 66.92 334 P P 01 17 50.4 +0.4
baz=146
MVCO **Mesa Verde** 67.00 327 IAmb IAmb 01 17 52.7
comp=Z,18nm,1.2s
MVCO **Mesa Verde** 67.00 327 P P 01 17 51.0 +0.3
baz=140,SNR=11
VLDQ **Val d'Or** 67.17 354 P P 01 17 51.3 +0.1
VLDQ IAmb IAmb 01 17 51.9
comp=Z,14nm,0.6s
ECSD **EROS Data Cent** 67.24 339 IAmb IAmb 01 17 52.8
comp=Z,24nm,1.4s
WUAZ **Wupatki** 67.29 324 IAmb IAmb 01 17 55.2
comp=Z,17nm,1.1s
WUAZ **Wupatki** 67.29 324 P P 01 17 53.3 +0.8
baz=137,SNR=11
SPMN **Marine on St.** 67.38 342 P P 01 17 52.5 -0.1
baz=156
ISCO **Idaho Springs** 67.58 330 P P 01 17 54.8 +0.4
baz=143,SNR=14
GLA **Glamis** 67.59 320 P P 01 17 54.7 +0.4
baz=133
BRIGG **Briggsdale** 67.62 332 IAmb IAmb 01 17 56.8
comp=Z,21nm,0.9s
SMCO **Snowmass** 67.74 329 IAmb IAmb 01 17 57.8
comp=Z,9.7nm,0.7s
PDMCI **Parker Dam,Lak** 68.03 321 P P 01 17 58.1 +1.1
baz=134
SWSC **Sam W. Stewart** 68.12 319 P P 01 17 59.1 +1.5
baz=132
DBIC **Dimbokro** 68.36 75 P P 01 17 58.2 -1.3
DBIC IAmb IAmb 01 18 00.2
comp=Z,19nm,0.7s
DBIC **Dimbokro** 68.36 75 P P 01 17 58.9 -0.7
comp=Z,14nm,0.5s,baz=237,slow=6.0,SNR=31
comp=Z,14nm,0.5s
BC3 **Big Chuckawall** 68.38 320 P P 01 18 00.7 +1.4
baz=133,SNR=7.8
U15A **North Rim** 68.46 324 IAmb IAmb 01 18 03.0
comp=Z,13nm,1.0s
MONP2 **Monument Peak** 68.47 318 P P 01 18 01.4 +1.3
baz=132
IRM **Iron Mountain** 68.54 320 P P 01 18 01.7 +1.5
baz=133,SNR=6.2
N23A **Red Feather La** 68.60 331 IAmb IAmb 01 18 02.7
comp=Z,19nm,1.1s
N23A **Red Feather La** 68.60 331 P P 01 18 01.9 +1.2
baz=143,SNR=11
BELC **Belle Mtn. Jos** 68.95 320 P P 01 18 04.1 +1.2
baz=132,SNR=5.5
TPFO **Pinon Flats** 68.97 319 P P 01 18 04.2 +1.2
baz=132
PFO **Pinyon Flats O** 68.97 319 P P 01 18 04.3 +1.2
PFO **Pinyon Flats O** 68.97 319 ⇑ *i* P P 01 18 04.3 +1.2
PFO pmax pmax
comp=Z,15nm,1.0s
O20A **White River Ci** 69.10 329 IAmb IAmb 01 18 05.9
comp=Z,15nm,1.0s
O20A **White River Ci** 69.10 329 P P 01 18 04.6 +0.8
baz=140,SNR=9.7
KNB **Kanab** 69.18 324 IAmb IAmb 01 18 07.6
comp=Z,26nm,0.9s
GMRC **Granite Mounta** 69.28 320 P P 01 18 06.4 +1.5
baz=133,SNR=11

NVL **N'lazarevskaya** 69.31 160 *e* P P 01 17 55.4 -9.0
NVL pmax pmax
comp=Z,49nm,1.5s
V12A **Nelson** 69.44 322 P P 01 18 06.7 +0.8
EYMN **Ely** 69.52 344 P P 01 18 05.8 -0.1
baz=158
HEC **Hector,Ludlow** 69.71 320 P P 01 18 08.3 +0.7
baz=132
P18A **Preston Nutter** 69.72 327 IAmb IAmb 01 18 10.0
comp=Z,11nm,0.7s
P17A **Butcher Ranch,** 69.86 327 IAmb IAmb 01 18 10.6
comp=Z,18nm,1.0s
CCUT **Cedar City** 69.86 324 P P 01 18 10.5 +1.9
CCUT IAmb IAmb 01 18 11.9
comp=Z,16nm,0.9s
TUQ **Turquoise Moun** 69.88 321 P P 01 18 08.7 +0.1
baz=133,SNR=6.2
CIS **Catalina Islan** 70.07 318 P P 01 18 10.4 +0.7
baz=130
BFSC **Mount Baldy Ra** 70.14 319 P P 01 18 10.5 +0.3
baz=131
SHPR **Sheep Range** 70.16 322 P P 01 18 11.2 +0.9
K22A **Casper** 70.26 332 IAmb IAmb 01 18 12.7
comp=Z,11nm,0.8s
K22A **Casper** 70.26 332 P P 01 18 11.2 +0.4
baz=143,SNR=6.3
GSC **Goldstone, Bar** 70.32 320 P P 01 18 11.8 +0.6
baz=132,SNR=5.3
RSSD **Black Hills** 70.38 334 P P 01 18 11.9 +0.4
RSSD **Black Hills** 70.38 334 P P 01 18 12.3 +0.7
baz=145
RSSD **Black Hills** 70.38 334 P P 01 18 11.9 +0.4
RSSD pmax pmax
comp=Z,11nm,0.8s
SHOC **Shoshone, Teco** 70.40 321 P P 01 18 13.3 +1.6
baz=133
B35A **Bob, Littlefor** 70.49 343 IAmb IAmb 01 18 11.8
comp=Z,8.7nm,0.6s
DECC **Green Verdugo** 70.57 318 P P 01 18 13.2 +0.5
baz=131
BSUT **Blindstream Ca** 70.66 328 P P 01 18 13.7 +0.2
BSUT IAmb IAmb 01 18 15.9
comp=Z,17nm,1.1s
SNCC **San Nicolas Is** 70.68 317 P P 01 18 14.4 +1.0
baz=130
EDW2 **Edwards Air Fo** 70.77 319 P P 01 18 14.5 +0.6
baz=131
CCAC **Calif City Air** 70.96 319 IAmb IAmb 01 18 17.6
comp=Z,13nm,0.8s
LRMC **Laurel Mtn Rad** 70.97 320 P P 01 18 16.4 +1.2
baz=132
FURC **Furnace Creek,** 71.13 321 P P 01 18 17.5 +1.5
baz=132,SNR=5.2
QSPA **South Pole Qui** 71.22 180 P P 01 18 17.3 +1.0
QSPA IAmb IAmb 01 18 18.6
comp=Z,18nm,0.7s
MPMC **Manual Prospec** 71.23 320 P P 01 18 17.6 +0.7
baz=132
DUG **Duguay, Tooele** 71.47 326 IAmb IAmb 01 18 20.7
comp=Z,16nm,1.1s
DUG **Dugway, Tooele** 71.47 326 P P 01 18 19.3 +1.1
baz=137,SNR=16
ISA **Isabella, Lake** 71.58 319 P P 01 18 20.1 +1.4
ISA **Isabella, Lake** 71.58 319 P P 01 18 20.0 +1.2
baz=131,SNR=5.4
ISA **Isabella, Lake** 71.58 319 P P 01 18 20.2 +1.4
ISA pmax pmax
comp=Z,9.0nm,1.0s
R11B **Troy Canyon, C** 71.67 323 P P 01 18 20.7 +1.2
baz=134,SNR=11
BW06 **Boulder Array** 71.75 330 P P 01 18 20.4 +0.5
baz=140,SNR=8.4
PDAR **Pinedale Array** 71.75 330 P P 01 18 20.2 +0.3
comp=Z,1.8nm,0.5s,baz=124,slow=7.9,SNR=30
comp=Z,1.8nm,0.5s
GRAC **Grapevine Rang** 71.79 321 P P 01 18 21.2 +1.2
baz=132
CWC **Cottonwood Cre** 71.84 320 P P 01 18 21.5 +1.0
baz=132
MDND **Maddock** 71.85 339 P P 01 18 20.8 +0.7
baz=150
PKM **Mcpherson Peak** 71.91 318 P P 01 18 21.6 +0.6
baz=130
SPUT **South Promonto** 72.09 327 IAmb IAmb 01 18 24.0
comp=Z,19nm,1.1s
SMMC **Simmler** 72.30 318 P P 01 18 23.9 +0.8
baz=130
TPH **Tonopah** 72.43 322 P P 01 18 25.6 +1.6
TPH IAmb IAmb 01 18 26.7
comp=Z,38nm,1.0s
TPH **Tonopah** 72.43 322 P P 01 18 25.6 +1.6
TPH pmax pmax
comp=Z,38nm,1.0s
AHID **Auburn Hatcher** 72.49 329 IAmb IAmb 01 18 26.0
comp=Z,14nm,0.9s
HVU **Hansel Valley** 72.60 327 IAmb IAmb 01 18 26.7
comp=Z,25nm,1.4s
ULM **Lac du Bonnet** 72.81 342 *d i* P P 01 18 24.9 -0.8
ULM **Lac du Bonnet** 72.81 342 P P 01 18 25.2 -0.5
comp=Z,6.9nm,0.7s,baz=152,slow=5.8,SNR=23
ULM pP pP 01 18 55.5 +0.6
comp=Z,5.3nm,0.6s,baz=158,slow=5.7,SNR=4.5
comp=Z,6.9nm,0.7s
ELK **Elko** 73.15 325 P P 01 18 28.9 +0.6
ELK **Elko** 73.15 325 P P 01 18 28.9 +0.6
ELK pmax pmax
comp=Z,4.0nm,0.8s
IMW **Indian Meadow** 73.27 330 IAmb IAmb 01 18 31.0
comp=Z,32nm,1.4s
FLWY **Flagg Ranch** 73.29 330 IAmb IAmb 01 18 31.5
comp=Z,28nm,0.8s
NVAR **Mina Array Bea** 73.30 322 P P 01 18 30.7 +1.6
comp=Z,4.5nm,0.8s,baz=152,slow=6.1,SNR=30
NVAR pP pP 01 18 58.8 +0.6
comp=Z,2.9nm,0.9s,baz=140,slow=6.5,SNR=4.8
comp=Z,4.5nm,0.8s
LAO **LASA Array** 73.36 334 IAmb IAmb 01 18 31.0
comp=Z,31nm,1.3s
LAO **LASA Array** 73.36 334 P P 01 18 30.0 +0.9
baz=144
RLMT **Red Lodge** 73.43 332 IAmb IAmb 01 18 31.9
comp=Z,13nm,0.7s
RLMT **Red Lodge** 73.43 332 P P 01 18 31.1 +1.3
baz=141,SNR=11
H17A **Grant Village** 73.47 330 P P 01 18 30.5 +0.4
H17A **Grant Village** 73.47 330 P P 01 18 32.0 +1.9
baz=139,SNR=12
LKWY **Lake** 73.52 331 IAmb IAmb 01 18 33.6
comp=Z,18nm,0.8s
SCHQ **Schefferville** 73.52 1 P P 01 18 29.7 -0.1
comp=Z,12nm,0.9s,baz=151,slow=2.5,SNR=6.7
SCHQ pP pP 01 18 58.5 -0.7
comp=Z,9.0nm,0.9s,baz=185,slow=3.7,SNR=4.8
comp=Z,12nm,0.9s
YFT **Old Faithful** 73.64 330 P P 01 18 32.2 +1.2
DGMT **Dagmar** 74.02 337 IAmb IAmb 01 18 35.0
comp=Z,21nm,0.9s
DGMT **Dagmar** 74.02 337 P P 01 18 34.4 +1.5
baz=146,SNR=5.3
YHL **Hebgen Lake** 74.10 330 IAmb IAmb 01 18 36.3
comp=Z,11nm,0.7s
YERR **Yerington** 74.21 322 IAmb IAmb 01 18 37.4
comp=Z,25nm,1.4s
HLID **Hailey** 74.72 328 IAmb IAmb 01 18 40.1
comp=Z,14nm,0.8s
HLID **Hailey** 74.72 328 P P 01 18 38.7 +1.4
baz=136,SNR=28
PAHR **Pah Rah Range** 74.77 322 IAmb IAmb 01 18 40.5
comp=Z,24nm,0.8s
BOZ **Bozeman (W)** 74.87 331 P P 01 18 38.7 +0.7
baz=139,SNR=14
MFID **Camas Ranch** 75.34 327 IAmb IAmb 01 18 44.2
comp=Z,19nm,1.0s
EGMT **Eagleton** 75.89 333 IAmb IAmb 01 18 45.4
comp=Z,19nm,0.9s
EGMT **Eagleton** 75.89 333 P P 01 18 44.2 +0.5
baz=141,SNR=11
ORV **Oroville** 75.92 321 IAmb IAmb 01 18 46.9
comp=Z,18nm,1.1s
LYMT **Lyon Mountain** 76.20 331 P P 01 18 45.0 -0.7
PLID **Pearl Lake** 76.61 328 IAmb IAmb 01 18 50.2
comp=Z,22nm,0.9s
J08A **Circle Bar Ran** 76.70 325 P P 01 18 49.4 +1.0
TOA0 **Torodi Ar. Sit** 76.84 71 P P 01 18 48.8 -0.9
TOA0 IAmb IAmb 01 19 20.7
comp=Z,25nm,1.1s
TORD **Torodi Ar. Bea** 76.84 71 P P 01 18 48.7 -1.0
TORD IAmb IAmb 01 19 20.6
comp=Z,22nm,1.1s
TORD **Torodi Ar. Bea** 76.84 71 P P 01 18 49.0 -0.7
comp=Z,5.4nm,0.4s,baz=259,slow=4.5,SNR=8.3
TORD pP pP 01 19 18.4 -0.8
comp=Z,14nm,0.9s,baz=300,slow=3.5,SNR=5.0
TORD LR LR 01 51 14.1
comp=Z,34nm,20.1s,baz=248,slow=34
comp=Z,5.4nm,0.4s
BMO **Blue Mountains** 77.11 327 P P 01 18 51.8 +1.1
BMO IAmb IAmb 01 18 53.0
comp=Z,16nm,0.8s
BMO **Blue Mountains** 77.11 327 P P 01 18 51.8 +1.1
BMO pmax pmax
comp=Z,16nm,0.9s
K05A **Summer Lake** 77.61 324 P P 01 18 54.7 +1.0
K05A IAmb IAmb 01 19 05.0
comp=Z,27nm,1.4s
YBH **Yreka Blue Hor** 78.01 322 LR LR 01 54 11.2
comp=Z,40nm,18.7s,baz=65,slow=36
FFC **Flin Flon** 78.53 341 P P 01 18 58.3 +0.1
FFC **Flin Flon** 78.53 341 P P 01 18 58.3 +0.1
FFC pmax pmax
comp=Z,5.0nm,1.1s
I05D **Terrebonne, OR** 78.90 325 P P 01 19 02.3 +1.7
I05D IAmb IAmb 01 19 03.0
comp=Z,18nm,0.7s
VNDA **Vanda** 79.28 190 P P 01 19 03.4 +1.2
VNDA **Vanda** 79.28 190 P P 01 19 04.2 +2.1
comp=Z,4.2nm,0.8s,baz=136,slow=4.6,SNR=6.7
comp=Z,4.2nm,0.8s
HAWA **Hanford** 79.30 327 P P 01 19 03.7 +1.0
HAWA IAmb IAmb 01 19 05.2
comp=Z,18nm,1.0s
NEW **Newport** 79.39 330 P P 01 19 03.3 +0.1
NEW **Newport** 79.39 330 P P 01 19 04.1 +0.9
baz=134
NEW **Newport** 79.39 330 P P 01 19 03.3 +0.1
NEW pmax pmax
comp=Z,4.0nm,0.7s
MORF **Marmelete** 79.90 45 *e* P P 01 19 07.9 +1.8
comp=Z,49nm,1.6s
MORF **Marmelete** 79.90 45 P P 01 19 06.9 +0.8
MORF IAmb IAmb 01 19 08.4
comp=Z,21nm,0.9s
MORF **Marmelete** 79.90 45 *e* P P 01 19 07.3 +1.2
MORF IAmb IAmb 01 19 08.6
comp=Z,24nm,1.0s
MORF **Marmelete** 79.90 45 *e* P P 01 19 07.3 +1.2
FCC **Fort Churchill** 80.09 347 P P 01 19 07.0 +0.4
FCC **Fort Churchill** 80.09 347 P P 01 19 07.0 +0.4
FCC pmax pmax
comp=Z,15nm,1.2s
SUR **Sutherland** 80.16 121 P P 01 19 08.5 +0.6
SUR IAmb IAmb 01 19 12.3
comp=Z,17nm,1.1s
SUR **Sutherland** 80.16 121 P P 01 19 08.7 +0.8
comp=Z,7.2nm,0.7s,baz=239,slow=4.8,SNR=6.9
comp=Z,7.2nm,0.7s
PBDV **Barranco-do-Ve** 80.35 45 *e* P P 01 19 10.0 +1.4
MDT **Midelt** 80.39 51 LR LR 01 53 23.2
comp=Z,41nm,19.5s,baz=335,slow=34
PNCL **Nicolau / Gran** 80.42 44 *e* P P 01 19 09.8 +0.9
LTY **Liberty** 80.46 327 IAmb IAmb 01 19 11.3
comp=Z,29nm,1.4s
MESJ **Messejana** 80.48 45 *e* P P 01 19 10.6 +1.4
MESJ *e* pP pP 01 19 39.7 +0.8
MESJ **Messejana** 80.48 45 *e* P P 01 19 10.2 +1.0
MESJ IAmb IAmb 01 19 11.0
comp=Z,9.8nm,0.7s
MESJ **Messejana** 80.48 45 *e* P P 01 19 01.0 -8.2
PCVE **Castro Verde** 80.49 45 *e* P P 01 19 10.7 +1.5
PCVE *e* pP pP 01 19 40.9 +1.9
F04A **Amboy** 80.51 326 IAmb IAmb 01 19 11.8
comp=Z,43nm,1.2s
PVAQ **Vaqueiros** 80.58 45 *e* P P 01 19 10.4 +0.7
PBEJ **Beja** 80.82 45 *e* P P 01 19 12.1 +1.1
EVO **Evora** 80.99 44 *e* P P 01 19 13.1 +1.2
D05A **Enumclaw** 81.09 327 IAmb IAmb 01 19 14.8
comp=Z,33nm,0.9s
TSUM **Tsumeb** 81.10 107 P P 01 19 13.2 0.0
TSUM IAmb IAmb 01 19 14.8
comp=Z,12nm,0.8s
TSUM **Tsumeb** 81.10 107 P P 01 19 13.7 +0.5
comp=Z,11nm,0.7s,baz=213,slow=5.7,SNR=11
comp=Z,11nm,0.7s
PMTG **Montargil** 81.14 44 *e* P P 01 19 12.3 -0.4
comp=Z,25nm,2.7s
PMTG *e* pP pP 01 19 43.7 +1.2
PBAR **Barrancos** 81.45 45 *e* P P 01 19 15.3 +1.0
PESTR **Estremoz** 81.45 44 *e* P P 01 19 15.8 +1.4
comp=Z,34nm,1.7s
PCAS **Casmilo, Conde** 81.51 43 *e* P P 01 19 16.1 +1.5
comp=Z,61nm,1.9s
PMRV **Marv??o** 81.88 44 *e* P P 01 19 17.5 +0.9
PTO **Porto** 82.04 42 *e* P P 01 19 18.0 +0.7
comp=Z,68nm,1.5s
PVIS **Viseu** 82.25 42 *e* P P 01 19 19.6 +1.0
FRB **Frobisher Bay** 82.44 0 P P 01 19 18.8 -0.1
comp=Z,4.4nm,0.7s,baz=195,slow=7.0,SNR=8.3
comp=Z,4.4nm,0.7s
PVRL **Vila Real** 82.67 42 *e* P P 01 19 21.6 +0.9
comp=Z,33nm,1.7s
POLO **Lamas de Olo** 82.68 42 *e* P P 01 19 21.6 +0.8
PGC **Sidney** 82.79 327 IAmb IAmb 01 19 23.4
comp=Z,20nm,0.7s
MVO **Moncorvo** 83.05 42 *e* P P 01 19 23.6 +0.9
comp=Z,24nm,1.3s
CLRS **Cowichan Lake** 83.24 327 IAmb IAmb 01 19 25.9
comp=Z,10nm,0.9s
PBRG **Braganca** 83.58 42 *e* P P 01 19 26.0 +0.6
BRLDA **Berland Lookou** 83.62 334 IAmb IAmb 01 19 26.0
comp=Z,28nm,0.9s
PAB **San Pablo** 83.95 45 P P 01 19 27.7 +0.3
PAB IAmb IAmb 01 19 28.9
comp=Z,12nm,0.8s
PAB **San Pablo** 83.95 45 P P 01 19 27.7 +0.3
PAB pmax pmax
comp=Z,12nm,0.8s
ESDC **Sonseca Array** 84.28 45 P P 01 19 29.9 +0.9
comp=Z,6.8nm,0.9s,baz=248,slow=5.5,SNR=30
ESDC pP pP 01 20 00.6 +1.7
comp=Z,6.5nm,0.9s,baz=253,slow=5.3,SNR=9.5
comp=Z,6.8nm,0.9s
CBB **Campbell River** 84.63 327 IAmb IAmb 01 19 32.5
comp=Z,17nm,0.9s
BOSA **Boshof** 84.94 118 P P 01 19 32.0 -0.8
BOSA **Boshof** 84.94 118 P P 01 19 32.0 -0.8
comp=Z,5.9nm,0.8s,baz=263,slow=3.7,SNR=22
BOSA LR LR 01 55 02.2
comp=Z,18nm,18.5s,baz=198,slow=34
comp=Z,5.9nm,0.8s
LBTB **Lobatse** 86.39 115 IAmb IAmb 01 19 41.5
comp=Z,12nm,1.1s
LBTB **Lobatse** 86.39 115 P P 01 19 40.6 +0.6
comp=Z,5.1nm,0.9s,baz=260,slow=9.6,SNR=3.9
comp=Z,5.1nm,0.9s
SFJD **Kangerlussuaq** 86.82 7 *e* P P 01 19 40.7 -0.1
SFJD IAmb IAmb 01 19 41.8
comp=Z,9.2nm,0.9s
SFJD *e* pP pP 01 20 01.5 -9.4
SFJD **Kangerlussuaq** 86.82 7 P P 01 19 40.8 0.0
comp=Z,7.6nm,0.8s,baz=237,slow=3.1,SNR=4.6
comp=Z,7.6nm,0.8s
DY2G **Dye2** 86.91 9 *i* P P 01 19 42.0 +0.4
DY2G IAmb IAmb 01 19 42.8
comp=Z,29nm,0.7s
DY2G *e* pP pP 01 20 12.1 +0.4
YKA **Yellowknife Ar** 88.69 341 P P 01 19 49.8 0.0
YKA **Yellowknife Ar** 88.69 341 P P 01 19 50.4 +0.6
comp=Z,27nm,0.8s,baz=134,slow=4.6,SNR=322
YKA pP pP 01 20 19.7 -0.4
comp=Z,6.2nm,0.6s,baz=133,slow=4.6,SNR=6.8
comp=Z,27nm,0.8s
TOAD **Toad River Com** 90.03 334 P P 01 19 57.5 +1.3
baz=128
FLDN **Fort Liard** 90.22 336 P P 01 19 58.9 +1.8
baz=130
ICESG **Greenland Ices** 90.35 10 *i* P P 01 19 58.4 +0.4
ICESG IAmb IAmb 01 20 01.1
comp=Z,36nm,1.0s
ICESG *e* pP pP 01 20 28.8 +0.7
KOTAN **Kotaneelee Air** 90.37 336 P P 01 19 59.3 +1.6
baz=129
T35M **Bob Quinn** 91.08 331 IAmb IAmb 01 20 03.3
comp=Z,5.7nm,0.7s

T35M	**Bob Quinn**	91.08	331	P		**P**	01 20 02.3	+1.1
	baz=124							
WRAK	**Wrangell Islan**	91.74	330	IAmb		IAmb	01 20 06.2	
	comp=Z,7.9nm,0.7s							
WRAK	**Wrangell Islan**	91.74	330	P		**P**	01 20 05.4	+1.2
	baz=122							
DLBC	**Dease Lake**	91.81	333	P		**P**	01 20 06.1	+1.5
	baz=124,SNR=13							
S34M	**Telegraph Cree**	92.00	332	IAmb		IAmb	01 20 08.6	
	comp=Z,9.7nm,1.2s							
S34M	**Telegraph Cree**	92.00	332	P		**P**	01 20 06.2	+0.9
	baz=123							
WRGLY	**Wrigley**	92.13	338	P		**P**	01 20 06.6	+0.7
	baz=130							
WTLY	**Watson Lake, Y**	92.25	334	IAmb		IAmb	01 20 08.5	
	comp=Z,14nm,1.1s							
WTLY	**Watson Lake, Y**	92.25	334	P		**P**	01 20 07.7	+1.2
	baz=125							
EKA	**Eskdalemuir Ar**	92.64	32	P		**P**	01 20 07.3	-1.1
	comp=Z,2.5nm,0.8s,baz=238,slow=5.3,SNR=9.6							
	comp=Z,2.5nm,0.8s							
R33M	**Jennings River**	92.75	333	IAmb		IAmb	01 20 18.5	
	comp=Z,8.6nm,1.5s							
R33M	**Jennings River**	92.75	333	P		**P**	01 20 10.2	+1.3
	baz=124							
TGTN	**Hyland Airport**	92.86	336	P		**P**	01 20 10.9	+1.5
	baz=126							
Q32M	**Nakina River**	93.07	332	P		**P**	01 20 12.0	+1.4
	baz=122							
S32K	**Killisnoo**	93.33	331	P		**P**	01 20 11.9	+0.4
	baz=121							
SUMG	**Summit**	93.62	9	IAmb		IAmb	01 20 45.0	
	comp=Z,14nm,1.1s							
SUMG	**Summit**	93.62	9	*i* P		**P**	01 20 13.9	+0.8
SUMG				IAmb		IAmb	01 20 15.8	
	comp=Z,30nm,1.4s							
SUMG				*ep*P		**pP**	01 20 44.6	+1.3
P33M	**Teslin, Yukon**	93.97	333	IAmb		IAmb	01 20 15.7	
	comp=Z,3.3nm,0.8s							
P33M	**Teslin, Yukon**	93.97	333	P		**P**	01 20 15.3	+0.7
	baz=122							
P32M	**Atlin**	94.03	333	P		**P**	01 20 15.4	+0.6
	baz=121							
N32M	**Quiet Lake**	94.58	334	P		**P**	01 20 18.5	+1.2
	baz=122							
RES	**Resolute Bay**	94.85	353	P		**P**	01 20 18.2	+0.1
RES				IAmb		IAmb	01 20 51.1	
	comp=Z,7.3nm,1.4s							
RES	**Resolute Bay**	94.85	353	P		**P**	01 20 18.2	+0.1
RES				pmax		pmax		
	comp=Z,7.0nm,1.5s							
RES	**Resolute Bay**	94.85	353	LR		LR	02 04 36.7	
	comp=Z,50nm,18.4s,baz=13,slow=36							
FARO	**Faro, Yukon**	95.25	335	P		**P**	01 20 21.4	+1.1
	baz=121							
O30N	**Mendenhall**	95.66	333	P		**P**	01 20 23.2	+1.0
	baz=119							
M31M	**Drury Creek, Y**	95.66	335	P		**P**	01 20 23.0	+0.9
	baz=120							
P29M	**Windy Craggy**	95.84	332	P		**P**	01 20 23.9	+0.9
	baz=118							
N30M	**Aishikik Lake**	96.41	333	P		**P**	01 20 26.7	+1.1
	baz=118							
O29M	**Mount Kennedy**	96.52	332	P		**P**	01 20 27.0	+0.7
	baz=117							
YUK6	**Outpost Mounta**	96.72	333	P		**P**	01 20 27.7	+0.5
	baz=117							
NEEM	**North Greenlan**	96.80	4	*i* P		**P**	01 20 28.1	+0.7
NEEM				IAmb		IAmb	01 20 29.6	
	comp=Z,5.2nm,0.8s							
NEEM				*ep*P		**pP**	01 20 59.0	+1.4
M30M	**Minto, Yukon**	96.82	334	P		**P**	01 20 28.0	+0.5
	baz=118							
YUK4	**Talbot Arm**	97.03	333	P		Pdif	01 20 29.0	+0.3
	baz=117							
PINM	**Pinnacle**	97.18	331	P		Pdif	01 20 29.8	+0.6
	baz=116							
M29M	**Somme Creek**	97.44	334	P		Pdif	01 20 30.9	+0.5
	baz=117							
H31M	**Peel River**	97.46	338	IAmb		IAmb	01 20 32.2	
	comp=Z,4.7nm,0.9s							
H31M	**Peel River**	97.46	338	P		Pdif	01 20 30.6	+0.3
	baz=120							
L29M	**L29M**	97.61	335	IAmb		IAmb	01 20 32.7	
	comp=Z,6.1nm,0.9s							
L29M	**L29M**	97.61	335	P		Pdif	01 20 31.6	+0.6
	baz=117							
I30M	**Mount Dempster**	97.92	337	P		Pdif	01 20 32.9	+0.4
	baz=118							
MESA	**MESA**	97.98	331	P		Pdif	01 20 33.1	+0.2
	baz=114							
YUK3	**Moose Creek**	97.99	333	P		Pdif	01 20 33.1	+0.1
	baz=115							
G31M	**Satah River**	98.00	339	P		Pdif	01 20 33.2	+0.7
	baz=120							
F31M	**Tsiigehtchic**	98.08	339	P		Pdif	01 20 33.5	+0.6
	baz=120							
A36M	**Sachs Harbour**	98.17	345	P		**P**	01 20 32.5	-0.7
A36M	**Sachs Harbour**	98.17	345	P		Pdif	01 20 33.8	+0.5
	baz=128							
INK	**Inuvik**	98.45	340	P		Pdif	01 20 34.8	+0.2
	baz=120							
DAWY	**Dawson**	98.54	335	P		**P**	01 20 35.2	0.0
	baz=116							
EPYK	**Eagle Plains**	98.58	338	P		Pdif	01 20 36.0	+0.7
	baz=118							
CRQE	**Cirque**	98.73	331	P		Pdif	01 20 36.7	+0.5
	baz=113							
F30M	**Barrier River**	98.85	339	P		Pdif	01 20 37.2	+0.8
	baz=119							
H29M	**Whitestone**	99.11	337	P		**Pdif**	01 20 38.0	+0.4
	baz=116							
L27K	**Beaver Creek,**	99.11	334	P		**Pdif**	01 20 38.2	+0.5
	baz=114							
I28M	**Miner Creek**	99.35	336	P		**Pdif**	01 20 39.4	+0.6
	baz=115							
EGAK	**Eagle**	99.54	336	P		**Pdif**	01 20 40.0	+0.5
	baz=114							
K27K	**Chicken**	99.60	335	P		**Pdif**	01 20 40.9	+1.0
	baz=114							
N25K	**Chitina, Valde**	99.74	332	P		**Pdif**	01 20 41.7	+1.1
	baz=112							
Q23K	**Middleton Isla**	99.75	330	P		**Pdif**	01 20 42.2	+1.6
	baz=111							
EYAK	**Cordova Ski Ar**	99.87	331	P		**Pdif**	01 20 42.1	+1.1
	baz=111							
E29M	**Blow River**	99.92	340	P		**Pdif**	01 20 41.8	+0.7
	baz=116							
F28M	**Old Crow**	100.25	338	P		**Pdif**	01 20 43.3	+0.6
	baz=115							
H27K	**Steamboat Moun**	100.27	337	P		**Pdif**	01 20 44.2	+1.3
	baz=114							
P23K	**Montague Islan**	100.45	330	P		**Pdif**	01 20 45.0	+1.4
	baz=110							
ILAR	**Eielson Array**	101.82	335	P		**Pdif**	01 20 49.9	+0.2
	comp=Z,0.3nm,0.7s,baz=141,slow=2.5,SNR=5.2							
ILAR				PP		**PP**	01 25 03.1	+1.1
	comp=Z,0.5nm,0.8s,baz=110,slow=5.6,SNR=5.8							
H24K	**Noodor Dome**	102.56	336	P		**Pdif**	01 20 53.9	+0.9
	baz=108							
BPAW	**Bear Paw Mtn.**	103.31	333	P		**Pdif**	01 20 57.4	+1.0
	baz=106							
CAST	**Castle Rocks**	103.60	333	P		**Pdif**	01 20 59.0	+1.3
	baz=105							
C24K	**Franklin Bluff**	104.02	339	P		**Pdif**	01 21 01.6	+2.3
	baz=106							
K20K	**Telida**	104.45	332	P		**Pdif**	01 21 03.1	+1.6
	baz=103							
H21K	**Melozitna Rive**	104.46	335	P		**Pdif**	01 21 03.2	+1.8
	baz=104							
N14K	**Kuskokwak Cree**	107.40	328	P		**PKiKP**	01 25 23.5	+1.0
	baz=98							
G17K	**Kiwalik Mounta**	107.64	334	P		**PKiKP**	01 25 24.0	+1.1
	baz=97							
M14K	**Bethel**	107.65	329	P		**PKiKP**	01 25 23.4	+0.5
	baz=97							
E18K	**Tukpahlearik C**	107.84	336	P		**PKiKP**	01 25 23.9	+0.7
	baz=96							
F17K	**Baldwin Pennin**	107.99	335	P		**PKiKP**	01 25 24.4	+1.0
	baz=96							
L14K	**Kuka Creek**	108.07	330	P		**PKiKP**	01 25 24.3	+0.6
	baz=96							
ARCES	**ARCESS Array B**	109.27	22	PKKPbc		PKKPbc	01 36 32.6	-2.1
	comp=Z,2.2nm,0.8s,baz=46,slow=5.2,SNR=4.2							
BRTR	**Keskin Array B**	111.63	54	PKKPab		PKKPab	01 36 34.8	+0.8
	comp=Z,0.8nm,0.7s,baz=64,slow=2.9,SNR=5.0							
MMAI	**Mount Meron Ar**	112.12	61	PKiKP		**PKiKP**	01 25 33.1	+0.7
	comp=Z,0.5nm,0.4s,baz=71,slow=3.9,SNR=5.4							

KBZ	**Khabaz**	118.77	50	⇓*i* PKIKP		**PKiKP**	01 25 44.8	+0.1
KBZ	**Khabaz**	118.77	50	PKP		**PKiKP**	01 25 45.2	+0.5
	comp=Z,3.2nm,1.0s,baz=253,slow=3.8,SNR=9.3							
NCK	**Nalchik**	119.28	50	⇓*i* PKIKP		**PKPdf**	01 25 44.9	-0.8
RAYN	**Ar Rayn**	119.48	73	PKPdf		**PKiKP**	01 25 47.4	+0.6
RAYN	**Ar Rayn**	119.48	73	PKIKP		**PKiKP**	01 25 47.4	+0.6
STKA	**Stephens Creek**	121.43	211	PKPdf		**PKiKP**	01 25 50.4	0.0
STKA	**Stephens Creek**	121.43	211	⇓*i* PKIKP		**PKPdf**	01 25 49.4	-0.9
STKA	**Stephens Creek**	121.43	211	PKP		**PKPdf**	01 25 50.2	-0.1
	comp=Z,3.8nm,0.6s,baz=100,slow=3.1,SNR=9.1							
ARU	**Arti**	126.23	33	PKPdf		**PKiKP**	01 25 59.3	+0.2
ARU	**Arti**	126.23	33	*i* PKIKP		**PKiKP**	01 25 59.5	+0.4
ARU							01 27 57.1	
ARU							01 33 00.1	
ARU				SP		SP	01 37 49.3	+4.3
ARU				SS		**SS**	01 44 42.4	-6.4
TIXI	**Tiksi**	126.24	353	⇑*e*PKIKP		**PKPdf**	01 25 58.4	+0.2
SEY	**Seymchan**	127.64	337	⇓*i* PKIKP		**PKiKP**	01 26 02.2	+0.5
NRIK	**Noril'sk**	127.64	10	⇑*e*PKIKP		**PKiKP**	01 26 02.4	+0.9
FORT	**Forrest**	127.81	199	PKPdf		**PKPdf**	01 26 02.4	-0.2
CTA	**Charters Tower**	127.86	224	PKP		**PKiKP**	01 26 03.6	+0.1
	comp=Z,6.0nm,0.8s,baz=132,slow=3.5,SNR=8.0							
ABKAR	**Akbulak array**	129.50	41	PKPdf		**PKiKP**	01 26 05.7	-0.2
PETK	**Petropavlovsk-**	130.32	325	PKP		**PKiKP**	01 26 07.6	+0.3
	comp=Z,2.1nm,0.4s,baz=32,slow=8.5,SNR=3.6							
GEYT	**Alibeck**	130.70	56	PKP		**PKiKP**	01 26 08.4	-0.3
	comp=Z,1.1nm,0.7s,baz=220,slow=3.8,SNR=3.8							
ASAR	**Alice Springs**	131.97	209	PKPdf		**PKPdf**	01 26 10.0	-0.7
ASAR	**Alice Springs**	131.97	209	PKP		**PKPdf**	01 26 11.1	+0.3
	comp=Z,5.3nm,0.7s,baz=134,slow=1.9,SNR=35							
BRVK	**Borovoye**	133.81	33	PKPdf		**PKPdf**	01 26 13.8	+0.7
BRVK	**Borovoye**	133.81	33	⇑*i* PKIKP		**PKiKP**	01 26 14.6	+0.2
BVAR	**Borovoye Array**	133.88	33	PKP		**PKPdf**	01 26 13.9	+0.7
	comp=Z,1.6nm,0.6s,baz=283,slow=3.3,SNR=14							
WB2	**Warramunga Arr**	134.93	212	PKPdf		**PKPdf**	01 26 16.9	+0.6
WRA	**Warramunga Arr**	134.94	212	PKP		**PKPdf**	01 26 16.8	+0.5
	comp=Z,8.5nm,0.6s,baz=156,slow=1.6,SNR=38							
KURK	**Kurchatov**	139.37	31	⇓*i* PKIKP		**PKiKP**	01 26 24.2	+0.7
KURBB	**Kurchatov Arra**	139.38	31	PKP		**PKPdf**	01 26 24.0	+0.5
	comp=Z,1.3nm,0.5s,baz=308,slow=2.6,SNR=19							
ZAA0	**Zalesovo Array**	139.79	24	PKPpre	PKPpre		01 26 16.6	
ZALV	**Zalesovo Beam**	139.79	24	PKPpre	PKPpre		01 26 14.7	
ZALV	**Zalesovo Beam**	139.79	24	PKhKP	PKPpre		01 26 20.2	
	comp=Z,6.2nm,0.5s,baz=331,slow=1.6,SNR=16							
ZALV				PKP		**PKPdf**	01 26 24.7	+0.6
	comp=Z,6.1nm,0.5s,baz=296,slow=0.9,SNR=23							
FITZ	**Fitzroy Crossi**	140.37	209	PKPpre	PKPpre		01 26 16.7	
AAK	**Ala-Archa**	141.38	44	⇓*e*PKIKP		**PKPdf**	01 26 28.8	+1.2
MTN	**Manton Dam**	142.54	214	PKPdf		**PKPdf**	01 26 27.0	-3.3
ZEA	**Zeya**	143.02	344	⇓*i* PKIKP		**PKPdf**	01 26 31.5	+1.6
KSH	**Kashi**	143.72	48	PKP		PKPbc	01 26 30.4	+0.7
MK31	**Makanchi Array**	143.75	34			PKPab	01 26 28.8	+0.2
MK31	**Makanchi Array**	143.75	34	⇑*e*PKIKP		PKPbc	01 26 29.2	-0.2
MKAR	**Makanchi Array**	143.75	34	PKPpre	PKPpre		01 26 28.4	
MKAR	**Makanchi Array**	143.75	34	PKIKP	PKPab		01 26 28.4	-0.2
MKAR	**Makanchi Array**	143.75	34	PKhKP	PKPpre		01 26 29.1	
	comp=Z,2.4nm,0.7s,baz=330,slow=3.9,SNR=15							
MKAR				PKP		**PKPdf**	01 26 31.4	-0.2
	comp=Z,2.4nm,0.7s,baz=329,slow=2.9,SNR=16							
TARG	**Taragay, Kyrgy**	143.98	44	PKPdf		**PKPdf**	01 26 32.5	-0.1
TARG	**Taragay, Kyrgy**	143.98	44	PKiKP		**PKPdf**	01 26 32.5	-0.1
DGZ	**Jazzator, Alta**	144.10	26	*d* PKIKP		PKPbc	01 26 30.7	+0.2
KLR	**Kul'dur**	145.39	336	*d* PKIKP		**PKPab**	01 26 34.9	+0.3
KLR	**Kul'dur**	145.39	336	PKPbc		**PKPab**	01 26 35.1	+0.5
	comp=Z,23nm,0.7s,baz=53,slow=3.2,SNR=90							
HEH	**HeiHe**	146.06	341	*e*PKPbc		**PKPbc**	01 26 36.3	0.0
MOY	**Mondy**	146.47	11	*e*PKP2		**PKPab**	01 26 38.6	-0.2
MOY				pmax		pmax		
	comp=Z,28nm,1.4s							
ZAK	**Zakamensk**	148.09	9	*e*PKIKP		**PKPdf**	01 26 40.3	+1.4
ZAK				pmax		pmax		
	comp=Z,13nm,1.2s							
USA0B	**Ussuriysk Arra**	149.18	329	PKPbc		**PKiKP**	01 26 45.6	-0.6
USA0B	**Ussuriysk Arra**	149.18	329	PKP2		**PKiKP**	01 26 45.6	-0.6
USRK	**Ussuriysk Ar.**	149.18	329	PKPbc		**PKiKP**	01 26 45.6	-0.6
USRK	**Ussuriysk Ar.**	149.18	329	PKP2		**PKiKP**	01 26 45.6	-0.6
USRK	**Ussuriysk Ar.**	149.18	329	PKPbc		**PKiKP**	01 26 46.2	0.0
	comp=Z,32nm,0.8s,baz=308,slow=0.5,SNR=45							
USRK				pPKPbc		**pPKPbc**	01 27 17.2	+1.0
	comp=Z,8.8nm,0.8s,baz=315,slow=1.2,SNR=3.8							
HYB	**Hyderabad**	149.41	88	*e*PKPbc		**PKPbc**	01 26 45.5	-0.9
HYB				*e*PKiKP		**PKiKP**	01 26 47.6	+0.1
BNX	**BinXian**	149.94	336	⇑PKPbc		**PKPbc**	01 26 46.8	0.0
MDJ	**Mudanjiang**	149.96	333	PKPbc		**PKPbc**	01 26 46.9	0.0
MDJ				AMB		AMB		
	comp=Z,95nm,4.1s							
MJAR	**Matsushiro Arr**	150.19	312	PKPbc		**PKiKP**	01 26 48.9	+0.3
	comp=Z,15nm,0.7s,baz=65,slow=1.3,SNR=39							
MJAR				pPKPbc		**pPKPbc**	01 27 19.7	+0.7
	comp=Z,5.9nm,0.7s,baz=75,slow=1.5,SNR=3.7							
MAJO	**Matsushiro**	150.19	312	PKPbc		**PKiKP**	01 26 48.6	0.0
MAJO	**Matsushiro**	150.19	312	PKIKP		**PKiKP**	01 26 48.6	0.0
MJB9	**Matsu-Tunnel**	150.19	312	PKPbc		**PKiKP**	01 26 49.4	+0.8
SONM	**Songino Array**	150.98	6	PKP		**PKPdf**	01 26 44.4	+0.8
	comp=Z,16nm,0.6s,baz=310,slow=1.5,SNR=48							
SONM				PKPbc		**PKiKP**	01 26 50.6	+0.6
	comp=Z,38nm,0.9s,baz=309,slow=1.2,SNR=113							
SONM				PKPab		**PKPab**	01 26 58.2	+1.0
	comp=Z,5.3nm,0.6s,baz=314,slow=3.3,SNR=7.3							
SONM				pPKPbc		**pPKPbc**	01 27 21.6	+0.8
	comp=Z,8.2nm,0.8s,baz=336,slow=1.5,SNR=4.7							
ULN	**Ulaanbaatar**	151.01	5	PKPbc		**PKiKP**	01 26 50.0	-0.1
ULN	**Ulaanbaatar**	151.01	5	PKIKP		**PKiKP**	01 26 50.0	-0.1
XLT	**XiLinHaoTe**	154.73	351	*e*PKPbc		**PKPbc**	01 26 56.8	-1.0
KSRS	**Korea Array**	156.22	324	PKP		**PKPdf**	01 26 52.5	+1.4
	comp=Z,1.0nm,0.5s,baz=69,slow=6.7,SNR=2.2							
KSRS				PKPbc		PKPbc	01 27 00.7	
	comp=Z,2.9nm,0.8s,baz=16,slow=3.6,SNR=5.6							
KSRS				PKPab		**PKPab**	01 27 19.4	0.0
	comp=Z,3.5nm,0.9s,baz=62,slow=3.8,SNR=5.0							
GTA	**Gaotai**	157.54	23	PKP		**PKPdf**	01 26 54.4	+1.4
GTA				PKPab		**PKPab**	01 27 25.3	0.0
HHC	**Hu-ho-hao-te**	158.17	358	*e*PKP		**PKPdf**	01 26 55.9	+2.2
LZH	**Lanzhou**	161.89	18	*e*PKP		**PKPdf**	01 26 56.6	-1.5
XAN	**Xi'an**	164.90	6	⇓PKP		**PKPdf**	01 27 01.9	+1.1
NJ2	**Nanjing**	165.05	332	*e*PKP		**PKPdf**	01 27 00.8	-0.1
PZH	**PanZhiHua**	168.82	46	PKP		**PKPdf**	01 27 02.4	-1.7

*IDC **21** 01:44:38.5±0.7, 10.10S×115.94E, h0km, mb4.6/15, mbtmp4.6/16, ML4.4/1, MS3.4/3, Error ellipse: s-maj=29.0km s-min=11.3km az=44.0*
*DJA **21** 01:44:42.7±0.5, 11.5S±2.1×11.6E±.1, h34km±7km, M4.9/21, mB5.4/6, mb4.8/21, MLv5.0/18, Mw(mB)4.8/6*
*NEIC **21** 01:44:42.4±2.4, 10.47S±0.07×115.55E±0.07, h35km±2km, mb4.7/39, Error ellipse: s-maj=13.3km s-min=9.9km az=229.0*

ISC 21 01:44:42.4±0.4, **10.42S**±0.06×**115.67E**±0.06, **h35**km, **n142**, σ1.9 **67**/142, **mb4.7**/40, **MS3.8**/3, **3D, South of Bali**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	1.79	345	P		P		01 45 11.8	
DNP				P		Pn	**Pn**	**01 45 11.6**	**+0.8**
TWSI	**Taliwang, Sumb**	2.05	36	P		P	**Pn**	**01 45 15.7**	**+1.2**
SRBI	**Singaraja**	2.36	349	P		P	**Pn**	**01 45 20.7**	**+2.0**
SRBI				S		S	**Sn**	**01 45 49.0**	**+2.5**
JAGI	**Jajag, Banyuwa**	2.45	322	Pn		Pn	**Pn**	**01 45 19.8**	**-0.1**
JAGI				Sn		Sn	**Sn**	**01 45 46.9**	**-1.8**
JAGI	**Jajag, Banyuwa**	2.45	322	P		P	**Pn**	**01 45 20.4**	**+0.5**
JAGI	**Jajag, Banyuwa**	2.45	322	Pn		Pn	**Pn**	**01 45 20.2**	**+0.3**
PLAI	**Plampang**	2.61	53	P		P	**Pn**	**01 45 24.1**	**+1.9**
PLAI	**Plampang**	2.61	53	Pn		Pn	**Pn**	**01 45 23.8**	**+1.6**
ABJI	**Asem Bagus**	2.97	331	P		P	**Pn**	**01 45 28.6**	**+1.6**
GMJI	**Gumukmas**	3.06	314	Pn		Pn	**Pn**	**01 45 28.8**	**+0.5**
GMJI				S		Sn	**Sn**	**01 46 01.9**	**-1.8**
BLJI	**Banyuglugur**	3.35	322	P		P	**Pn**	**01 45 33.7**	**+1.3**
PWJI	**Pagerwojo**	4.50	302	P		P	**Pn**	**01 45 48.4**	**+0.3**
GRJI	**Gresik**	4.70	318	P		P	**Pn**	**01 45 52.2**	**+1.3**
NGJI	**Ngawi**	5.14	306	P		P	**Pn**	**01 45 57.6**	**+0.6**
	81nm,0.8s,0.8nm								
UGM	**Wanagama**	5.66	296	Pn		Pn	**Pn**	**01 46 02.5**	**-1.6**
UGM	**Wanagama**	5.66	296	P		P	**Pn**	**01 46 04.4**	**+0.3**
UGM	**Wanagama**	5.66	296	P		Pn	**Pn**	**01 46 04.1**	**0.0**
	131nm,1.1s,4μm1.7nm								
YOGI	**Yogyakarta**	5.90	296	P		Pn	**Pn**	**01 46 06.4**	**-1.1**
	105nm,1.0s,0.9nm								
SMRI	**Semarang**	6.16	303	Pn		Pn	**Pn**	**01 46 07.6**	**-3.3**
BKSI	**Bulukumba**	6.71	41	P		Pn	**Pn**	**01 46 21.3**	**+2.7**
	66nm,0.5s,1μm0.3nm								
MMRI	**Maumere**	6.72	75				**Pn**	**01 46 19.9**	**+1.3**
MMRI	**Maumere**	6.72	75	P			**Pn**	**01 46 19.5**	**+0.9**

	108nm,0.9s,0.5nm							
KAPI	**Kappang**	6.72	37	Pn		**Pn**	01 46 21.4	+2.7
KPJI	**Karang Pucung**	7.33	294	P		**Pn**	01 46 28.6	+1.6
	51nm,0.6s,0.6nm							
CMJI	**Cimerak**	7.59	290	P		**Pn**	01 46 30.1	-0.6
	58nm,0.7s,2μm0.7nm							
BBJI	**Bungbulang**	8.45	290	P		**Pn**	01 46 42.8	+0.3
SOEI	**Soe**	8.49	86	Pn		**Pn**	01 46 43.2	+0.1
SOEI	**Soe**	8.49	86	P		**Pn**	01 46 44.4	+1.3
SOEI	**Soe**	8.49	86	P		**Pn**	01 46 44.1	+1.0
	24nm,0.9s							
LEM	**Lembang**	8.72	294	Pn		**Pn**	01 46 49.4	+3.0
	4.4nm,0.3s,baz=313,slow=21,SNR=1.3							
LEM				Sn		**Sn**	01 48 30.8	+7.2
	4.9nm,0.3s,baz=352,slow=23,SNR=3.7							
	17nm,0.5s							
CNJI	**Cibinong**	8.98	289	P		**Pn**	01 46 49.6	-0.2
	23nm,0.6s,812nm							
SKJI	**Sukabumi**	9.62	290	P		**Pn**	01 46 59.2	+0.6
	188nm,0.5s,9μm							
XMI	**Christmas Isla**	9.82	269	P		**Pn**	01 47 00.8	-0.4
XMIS	**Christmas Isla**	9.85	269	Pn		**Pn**	01 46 59.4	-2.3
XMIS	**Christmas Isla**	9.85	269	P		**Pn**	01 46 59.9	-1.8
MBWA	**Marble Bar**	11.37	160			**Pn**	01 47 20.4	-2.1
MBWA	**Marble Bar**	11.37	160	P		**Pn**	01 47 20.7	-1.8
PSA00	**Pilbara Seismi**	11.79	161	Pn		**Pn**	01 47 25.8	-2.5
GIRL	**Giralia**	12.23	186	Pn		**Pn**	01 47 33.6	-0.6
GIRL	**Giralia**	12.23	186	P		**Pn**	01 47 33.7	-0.6
FITZ	**Fitzroy Crossi**	12.31	129			**Pn**	01 47 35.6	+0.3
TOLI2	**Tolitoli**	12.53	24	Pn		**Pn**	01 47 39.8	+1.4
KKM	**Kota Kinabalu**	16.36	2	P		**Pn**	01 48 30.1	+0.4
KKM				IAmb		IAmb	01 48 34.5	
	comp=Z,34nm,0.6s							
KKM	**Kota Kinabalu**	16.36	2	P		**P**	01 48 33.2	+0.9
MEEK	**Meekatharra**	16.37	171	P		**Pn**	01 48 29.1	-0.6
MORW	**Morawa**	18.56	179			**Pn**	01 48 56.6	-0.2
MORW	**Morawa**	18.56	179	P		**Pn**	01 48 57.8	+1.1
WRKA	**Warakurna**	18.85	142	P		**Pn**	01 49 02.0	+1.7
DAV	**Davao City (W)**	19.98	30	LR		LR	01 57 22.3	
	comp=Z,87nm,21.7s,baz=226,slow=39							
PBSI	**Pulau Batu**	20.12	300	P		**P**	01 49 12.8	-0.8
	comp=Z,83nm,1.3s							
WB0	**Warramunga Arr**	20.31	119	P		Pn	01 49 17.9	+0.1
WRA	**Warramunga Arr**	20.34	120	P		**P**	01 49 16.3	+0.5
WRA	**Warramunga Arr**	20.34	120	P		Pn	01 49 19.0	+1.0
	comp=Z,6.9nm,0.9s,baz=292,slow=13,SNR=19							
WRA				S		**S**	**01 52 55.2**	**-6.9**
	comp=Z,2.8nm,0.6s,baz=269,slow=23,SNR=

comp=Z,2.2nm,0.3s
MAKZ Makanchi 64.43 335 P P 01 55 14.2 -1.0
TKM2 Tokmak 2 64.46 328 P P 01 55 15.8 +0.1
SNR=6.1
H04N2 CROZET ISLANDS 64.51 224 T T 03 05 18.7
baz=73,slow=75,SNR=59
H04N1 CROZET ISLANDS 64.53 224 T T 03 05 18.8
baz=73,slow=75,SNR=61
H04N3 CROZET ISLANDS 64.53 224 T T 03 05 18.5
baz=73,slow=75,SNR=64
KBK Karagaybulak 64.61 328 P P 01 55 17.2 +0.6
SNR=9.2
ARSB Arslanbob 64.76 326 P P 01 55 16.6 -1.1
AAK Ala-Archa 64.84 328 P P 01 55 18.6 +0.5
SNR=6.2
AAK Ala-Archa 64.84 328 P P 01 55 18.1 -0.1
AAK IAmb IAmb 01 55 19.4
comp=Z,6.1nm,0.9s
WSAR Wadi Sarin 65.05 302 LR LR 02 24 15.9
comp=Z,53nm,19.3s,baz=204,slow=36
BTK Batken 65.16 323 P P 01 55 20.2 +0.1
BTK IAmb IAmb 01 55 21.5
comp=Z,6.7nm,0.6s
EKS2 Erkin-Say 65.24 327 P P 01 55 21.2 +0.6
SNR=12
USP Ospenovka 65.28 328 P P 01 55 20.6 -0.2
SNR=8.2
KK31 Karatay Array 67.31 326 P P 01 55 32.8 -1.0
KK31 IAmb IAmb 01 55 34.9
comp=Z,3.6nm,0.6s
KKAR Karatay Array 67.31 326 P P 01 55 33.1 -0.7
KURBB Kurchatov Arra 68.84 336 P P 01 55 43.0 -0.1
comp=Z,7.2nm,0.8s,baz=150,slow=5.1,SNR=61
comp=Z,7.2nm,0.8s
KURK Kurchatov 68.87 336 P P 01 55 42.7 -0.7
ZAA0 Zalesovo Array 69.25 341 P P 01 55 44.5 -1.1
ZALV Zalesovo Beam 69.25 341 P P 01 55 44.1 -1.6
ZALV Zalesovo Beam 69.25 341 P P 01 55 44.5 -1.1
comp=Z,9.4nm,0.5s,baz=144,slow=4.3,SNR=26
comp=Z,9.4nm,0.5s
GEYT Alibeck 72.10 315 P P 01 56 04.6 +1.1
comp=Z,2.7nm,0.3s,baz=144,slow=5.5,SNR=18
comp=Z,2.7nm,0.3s
PETK Petropavlovsk- 72.71 25 P P 01 56 07.0 +0.3
comp=Z,5.0nm,0.6s,baz=214,slow=4.2,SNR=4.6
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 74.04 333 P P 01 56 14.5 -0.1
comp=Z,12nm,0.7s,baz=138,slow=8.4,SNR=68
comp=Z,12nm,0.7s
BRVK Borovoye 74.11 333 P P 01 56 14.2 -0.7
BRVK IAmb IAmb 01 56 15.7
comp=Z,4.7nm,0.7s
RAYN Ar Rayn 76.40 297 P P 01 56 29.0 +0.1
ABKAR Akbulak array 76.86 326 P P 01 56 30.3 -0.6
ABKAR IAmb IAmb 01 56 32.0
comp=Z,8.1nm,0.8s
ARU Arti 81.52 332 P P 01 56 55.5 -0.7
ARU IAmb IAmb 01 56 57.0
comp=Z,15nm,1.5s
TIXI Tiksi 82.36 4 P P 01 56 58.6 -1.6
TIXI IAmb IAmb 01 56 59.9
comp=Z,6.4nm,0.8s
GURO Guroymak-BITLI 83.93 311 P P 01 57 10.4 +1.2
GURO IAmb IAmb 01 57 16.6
comp=Z,2.7nm,0.7s
KBZ Khabaz 84.98 316 P P 01 57 15.4 +1.2
comp=Z,2.0nm,0.9s,baz=148,slow=0.6,SNR=7.4
comp=Z,2.0nm,0.9s
MMAI Mount Meron Ar 87.57 304 P P 01 57 30.3 +2.9
comp=Z,1.4nm,0.6s,baz=118,slow=6.7,SNR=8.0
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 90.53 310 P P 01 57 42.2 +1.0
comp=Z,0.7nm,0.7s,baz=54,slow=2.1,SNR=3.5
comp=Z,0.7nm,0.7s
FINES FINESS Array B 98.87 331 P Pdif 01 58 18.9 +0.2
comp=Z,0.8nm,0.6s,baz=71,slow=4.7,SNR=2.0
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 116.81 24 PKP PKiKP 02 03 24.5 +1.7
comp=Z,0.6nm,0.6s,baz=306,slow=2.1,SNR=9.8
NVAR Mina Array Bea 124.45 50 PKP PKiKP 02 03 40.5 +1.5
comp=Z,0.7nm,0.7s,baz=284,slow=1.3,SNR=7.8
PDAR Pinedale Array 129.18 42 PKP PKiKP 02 03 50.2 +2.0
comp=Z,0.1nm,0.3s,baz=225,slow=2.4,SNR=3.9
TXAR Lajitas Array 138.76 57 PKhKP PKPpre 02 04 02.5
comp=Z,0.1nm,0.5s,baz=232,slow=0.9,SNR=3.8
MIAR Mount Ida 144.09 43 PKPdf PKPdf 02 04 15.1 +0.1
LCAR Lake Charles 144.74 39 PKPdf PKPbc 02 04 15.2 +0.2
UALR University of 144.78 42 PKPdf PKPdf 02 04 16.1 0.0
WCI Wyandotte Cave 146.02 32 PKPdf PKPdf 02 04 18.0 -0.2
T47A Sharon Grove 146.50 34 PKPbc PKPbc 02 04 20.6 +0.1
M55A Ridgway 146.56 20 PKPbc PKPbc 02 04 20.9 +0.4
Y45A Yeager Farm, C 147.16 41 PKPbc PKPbc 02 04 23.2 +0.7
SSFO Shawnee State 147.17 28 PKPbc PKPbc 02 04 21.9 -0.4
V52A Sevierville 149.23 32 PKPbc PKPbc 02 04 27.9 +0.1
T59A Double "B" Far 150.99 22 PKPbc PKPbc 02 04 32.2 +0.1

*IDC **21** 01:54:20.5±2.3, 6˚.14S×148˚.89E, h60km±18km, mb3.7/5, mbtmp4.1/7, MS3.5/3, Error ellipse: s-maj=36.0km s-min=12.9km az=118.0*
*NEIC **21** 01:54:22.0±2.2, 6˚.34S±0˚.07×149˚.17E±0˚.10, h79km±7km, mb4.3/21, Error ellipse: s-maj=14.1km s-min=10.1km az=107.0*
ISC 21 01:54:19.9±0.5, 6˚.22S±0˚.08×149˚.0E±0˚.1, h60km, n43, σ0s90/46, mb4.3/11, MS3.4/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PMG	**Port Moresby**	**3.67**	**210**			**Pn**	**01 55 15.1**	**+0.9**
PMG	**Port Moresby**	**3.67**	**210**	P		**Pn**	**01 55 15.5**	**+1.3**
	109nm,0.5s,baz=46,slow=5.6,SNR=31							
PMG				S		**Sn**	**01 55 57.0**	**+0.7**
	126nm,0.3s,baz=201,slow=19,SNR=11							
RABL	**Rabaul**	**3.71**	**57**	Pn		**Pn**	**01 55 16.4**	**+1.6**
MANU	**Manus Island**	**4.47**	**338**	Pn		**Pn**	01 55 31.0	+5.9
COEN	**Coen**	**9.61**	**216**	Pn		**Pn**	**01 56 34.8**	**-0.9**
MTN	**Manton Dam**	**18.83**	**248**	P		**P**	**01 58 34.9**	**-0.1**
MTN				IAmb		IAmb	01 58 51.1	
	comp=Z,12nm,1.1s							
EIDS	**Eidsvold**	**19.14**	**174**	P		**P**	**01 58 35.6**	**-2.8**
EIDS				IAmb		IAmb	01 58 57.8	
	comp=Z,22nm,1.4s							
WB0	**Warramunga Arr**	**19.59**	**225**	P		**P**	**01 58 43.8**	**+0.5**
WB0				IAmb		IAmb	01 58 45.2	
	comp=Z,5.7nm,0.7s							
WR0	**Warramunga Arr**	**19.62**	**225**	P		**P**	**01 58 44.5**	**+0.9**
WRAB	**Tennant Creek**	**19.73**	**225**	P		**P**	**01 58 45.4**	**+0.5**
WRAB				IAmb		IAmb	01 58 46.6	
	comp=Z,10nm,0.6s							
WB2	**Warramunga Arr**	**19.74**	**225**	P		**P**	**01 58 45.7**	**+0.7**
WB2				IAmb		IAmb	01 58 46.8	
	comp=Z,11nm,0.6s							
WRA	**Warramunga Arr**	**19.75**	**225**	P		**P**	**01 58 44.4**	**-0.6**
WRA	**Warramunga Arr**	**19.75**	**225**	P		**P**	**01 58 45.5**	**+0.4**
	comp=Z,7.9nm,0.5s,baz=52,slow=11,SNR=64							
WRA				PcP		**PcP**	**02 03 02.3**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=36,slow=2.0,SNR=5.5							
AS31	**Alice Springs**	**22.64**	**218**	P		**P**	**01 59 17.8**	**+1.6**
ASAR	**Alice Springs**	**22.64**	**218**	P		**P**	**01 59 17.4**	**+1.2**
ASAR	**Alice Springs**	**22.64**	**218**	P		**P**	**01 59 17.3**	**+1.1**
	comp=Z,2.6nm,0.5s,baz=52,slow=9.3,SNR=26							
ASAR				PcP		**PcP**	**02 03 08.3**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=57,slow=2.7,SNR=4.5							
ASAR				S		**S**	**02 03 20.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=32,slow=23,SNR=8.9							
ASAR				LR		LR	02 08 05.4	
	comp=Z,83nm,18.5s,baz=12,slow=36							
	comp=Z,2.6nm,0.5s							
DZM	**Mont Dzumac**	**23.05**	**135**	P		**P**	**01 59 20.2**	**-0.2**
DZM				IAmb		IAmb	01 59 30.9	
	comp=Z,18nm,1.4s							
DZM	**Mont Dzumac**	**23.05**	**135**	LR		LR	02 06 30.9	
	comp=Z,149nm,19.6s,baz=68,slow=32							
FITZ	**Fitzroy Crossi**	**25.70**	**241**	P		**P**	**01 59 44.5**	**-0.2**
USA0B	**Ussuriysk Arra**	**52.49**	**345**	P		**P**	**02 03 26.5**	**-0.3**
USA0B				IAmb		IAmb	02 03 48.3	
	comp=Z,3.1nm,0.8s							
USRK	**Ussuriysk Ar.**	**52.49**	**345**	P		**P**	**02 03 26.2**	**-0.6**
PETK	**Petropavlovsk-**	**59.55**	**6**	P		**P**	**02 04 17.7**	**+0.6**
PETK	**Petropavlovsk-**	**59.55**	**6**	P		**P**	**02 04 17.5**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=165,slow=6.2,SNR=4.5							
	comp=Z,3.2nm,0.8s							
SONM	**Songino Array**	**65.59**	**330**	P		**P**	**02 04 57.4**	**-0.2**
SONM	**Songino Array**	**65.59**	**330**	LR		LR	02 36 14.1	
	comp=Z,41nm,18.2s,baz=345,slow=38							
CASY	**Casey**	**65.60**	**196**	P		**P**	**02 04 56.0**	**-1.1**
MKAR	**Makanchi Array**	**78.96**	**320**	P		**P**	**02 06 16.2**	**-1.0**
MKAR	**Makanchi Array**	**78.96**	**320**	P		**P**	**02 06 16.6**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=99,slow=6.9,SNR=4.8							
	comp=Z,0.2nm,0.4s							
J17K	**VABM Dome**	**79.62**	**21**	P		**P**	**02 06 21.2**	**+0.7**
L18K	**Granite Mounta**	**79.81**	**23**	P		**P**	**02 06 22.1**	**+0.6**
L19K	**White Mountain**	**80.50**	**23**	P		**P**	**02 06 26.0**	**+0.7**
L19K				IAmb		IAmb	02 06 35.1	
	comp=Z,9.1nm,1.5s							
K20K	**Telida**	**81.44**	**22**	P		**P**	**02 06 30.4**	**+0.1**
K20K				IAmb		IAmb	02 06 43.8	
	comp=Z,7.8nm,1.4s							
CAST	**Castle Rocks**	**82.24**	**23**	P		**P**	**02 06 32.6**	**-1.8**
CAST				IAmb		IAmb	02 06 47.2	
	comp=Z,4.7nm,1.4s							
IMAR	**Indian Mountai**	**82.98**	**20**	P		**P**	**02 06 38.3**	**+0.1**
D19K	**Kuna River**	**83.03**	**17**	P		**P**	**02 06 37.9**	**-0.6**
RND	**Reindeer**	**83.50**	**24**	P		**P**	**02 06 40.5**	**-0.5**
RND				IAmb		IAmb	02 06 42.3	
	comp=Z,4.6nm,1.0s							
QSPA	**South Pole Qui**	**83.75**	**180**	P		**P**	**02 06 42.0**	**-0.4**
QSPA	**South Pole Qui**	**83.75**	**180**	P		**P**	**02 06 43.3**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=290,slow=1.3,SNR=16							
	comp=Z,1.8nm,0.6s							
ILAR	**Eielson Array**	**84.89**	**23**	P		**P**	**02 06 47.2**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=249,slow=5.1,SNR=15							
	comp=Z,0.8nm,0.7s							
ESDC	**Sonseca Array**	**138.77**	**328**	PKP		**PKPdf**	**02 13 40.1**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=337,slow=1.9,SNR=1.6							
TORD	**Torodi Ar. Bea**	**147.10**	**285**	PKPbc		**PKPbc**	**02 13 57.1**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=55,slow=3.9,SNR=7.8							
BDFB	**Brasilia**	**152.49**	**142**	PKP		**PKPdf**	**02 14 03.9**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=101,slow=5.2,SNR=2.3							
BDFB				PKPbc		**PKiKP**	**02 14 11.4**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=156,slow=6.2,SNR=6.5							
BDFB				PKPab		**PKPab**	**02 14 21.8**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=307,slow=3.0,SNR=4.8							
DBIC	**Dimbokro**	**154.05**	**272**	PKPbc		**PKPbc**	**02 14 13.9**	**-0.1**
	comp=Z,12nm,1.2s,baz=18,slow=3.2,SNR=3.4							

*IDC **21** 01:57:19.6±1.9, 32˚.59S×178˚.86W, h0km, mb3.7/2, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=59.0km s-min=31.1km az=126.0*
*WEL **21** 01:58:40.1, 38˚.5S×39˚×17˚8E±2˚.8, h29km±34km, M2.2/7, ML1.9/3, MLv2.2/7, Error ellipse: s-maj=0.1km s-min=0.0km az=155.9*
ISC 21 01:57:20.3±1.8, 32˚.5S±0˚.1×178˚.8W±0˚.3, h10km, n21, σ1s28/18, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
WMGZ	**Waiomatatini S**	**5.75**	**202**	P		**Pn**	**01 58 47.2**	**+1.5**
HAZ	**Te Kaha**	**5.92**	**207**	P		**Pn**	**01 58 48.7**	**+0.7**
PKGZ	**Pakihiroa**	**5.93**	**204**	P		**Pn**	**01 58 47.8**	**-0.3**
PUZ	**Puketiti**	**6.03**	**202**	P		**Pn**	**01 58 51.6**	**+2.0**
RUGZ	**Raukumara Rang**	**6.14**	**207**	P		**Pn**	**01 58 53.0**	**+1.9**
TWGZ	**Tauwhareparae**	**6.22**	**204**	P		**Pn**	**01 58 53.5**	**+1.3**
MYRZ	**Mayor Island**	**6.24**	**219**	P		Pn	01 58 57.1	+4.6
WHRZ	**Whale Island**	**6.34**	**212**	P		Pn	01 58 47.6	-6.2
CNGZ	**Carnagh Statio**	**6.43**	**201**	P		**Pn**	**01 58 54.9**	**0.0**
MWZ	**Matawai**	**6.52**	**206**	P		**Pn**	**01 58 58.0**	**+1.7**
URZ	**Urewera**	**6.62**	**209**	Pn		**Pn**	**01 58 57.5**	**-0.1**
	0.4nm,0.3s,baz=351,slow=6.1,SNR=1.4							
URZ				Sn		**Sn**	**02 00 11.0**	**-2.0**
	2.4nm,0.3s,baz=259,slow=19,SNR=2.1							
	7.7nm,0.6s							
URZ	**Urewera**	**6.62**	**209**	P		**Pn**	**01 58 58.1**	**+0.5**
SNGZ	**Shannon Statio**	**6.99**	**205**	P		**Pn**	**01 59 03.9**	**+1.2**
MTHZ	**Matangantaniwha**	**7.24**	**208**	P		**Pn**	**01 59 07.1**	**+0.9**
ASAR	**Alice Springs**	**42.33**	**270**	P		**P**	**02 05 14.8**	**+0.1**
	0.4nm,0.6s,baz=98,slow=9.0,SNR=4.0							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**43.51**	**275**	P		**P**	**02 05 25.2**	**+1.0**
	0.9nm,0.6s,baz=113,slow=7.8,SNR=10.0							
	0.9nm,0.6s							
H03N3	**Juan Fernandez**	**80.10**	**123**	T		T	03 38 17.6	
	baz=239,slow=74							
H03N2	**Juan Fernandez**	**80.10**	**123**	T		T	03 38 08.7	
	baz=239							
H03N1	**Juan Fernandez**	**80.12**	**123**	T		T	03 38 05.5	
	baz=239,slow=74							
FINES	**FINESS Array B**	**146.86**	**338**	PKPbc		**PKPab**	**02 17 02.8**	**-0.5**
	0.7nm,0.5s,baz=39,slow=4.7,SNR=8.4							
HFS	**Hagfors**	**151.15**	**347**	PKPbc		**PKPbc**	**02 17 12.1**	**-0.9**
	2.1nm,1.0s,baz=48,slow=2.1,SNR=4.5							
HFS				PKPab		**sPKPab**	**02 17 23.6**	**-0.9**
	1.5nm,0.9s,baz=352,slow=2.9,SNR=2.2							

*IDC **21** 02:18:24.3±2.0, 51˚.57N×82˚.54E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=19.6km s-min=17.0km az=6.0*
*NNC **21** 02:18:25.0±8.8, 51˚.44N×82˚.87E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=90.1km s-min=38.6km az=20.0, Suspected Mining explosion.*
ISC 21 02:18:13.7±1.3, 51˚.23N±0˚.05×83˚.33E±0˚.06, h0km, n8, σ0s84/10, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.87**	**18**	I		I	02 33 55.0	
	baz=212,slow=338,SNR=58							
ZALV	**Zalesovo Beam**	**2.87**	**18**	Pn		**Pg**	**02 19 08.5**	**-0.2**
	0.5nm,0.3s,baz=211,slow=13,SNR=7.3							
ZALV				Sn		**Sb**	**02 19 40.7**	**-0.7**
	0.6nm,0.3s,baz=206,slow=32,SNR=6.5							
	1.3nm,0.3s							
KURK	**Kurchatov**	**3.02**	**262**	⇑Pn		**Pg**	**02 19 11.3**	**-0.2**
	0.1nm,0.4s							
KURK				⇑Sn		**Sb**	**02 19 44.7**	**-1.0**
	3.2nm,0.9s							
KURBB	**Kurchatov Arra**	**3.10**	**260**	⇑Pn		**Pg**	**02 19 13.4**	**+0.4**
	0.3nm,0.3s							
KURBB				⇑Sn		**Sb**	**02 19 47.1**	**-0.8**
	10nm,1.1s							
KURBB	**Kurchatov Arra**	**3.10**	**260**	Pg		**Pg**	**02 19 13.1**	**0.0**
	baz=70,slow=18,SNR=2.7							
KURBB				Lg		Lg	02 19 48.0	
	0.1nm,0.3s,baz=72,slow=33,SNR=2.7							
MK31	**Makanchi Array**	**4.50**	**189**	⇓Pn		**Pg**	**02 19 39.3**	**-0.5**
	0.1nm,0.3s,baz=7.0,slow=10,SNR=11							
MK31				⇓Lg		Lg	02 20 54.9	
	0.5nm,0.5s,baz=16,slow=29							
MKAR	**Makanchi Array**	**4.50**	**189**	Pn		**Pg**	**02 19 39.0**	**-0.8**
	0.2nm,0.3s,baz=5.4,slow=11,SNR=9.3							
MKAR				Lg		Lg	02 20 53.1	
	0.2nm,0.3s,baz=1.1,slow=32,SNR=5.2							
	0.3nm,0.4s							
MAKZ	**Makanchi**	**4.52**	**192**	⇑Pn		**Pb**	**02 19 35.2**	**+1.3**
	2.2nm,0.5s							
MAKZ				⇓Lg		Lg	02 20 54.9	
	2.1nm,0.9s							

*NEIC **21** 02:35:34.6±1.2, 62˚.21S±0˚.08×155˚.9E±0˚.7, h10km±1km, mb4.6/11, Error ellipse: s-maj=56.6km s-min=6.2km az=76.0*
*IDC **21** 02:35:36.0±0.7, 62˚.51S×153˚.13E, h0km, mb4.2/6, mbtmp4.3/7, ML4.3/1, MS4.4/31, Error ellipse: s-maj=63.4km s-min=19.0km az=72.0*
*GCMT **21** 02:35:38.6±0.2, 62˚.10S±0˚.01×154˚.78E±0˚.03, h12km, MW5.1/102, Moment Tensor Solution. s49,c64; s102,c157; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.07±.12; Mθθ3.68±.10; Mϕϕ-3.62±.12; Mrθ-2.24±.29; Mθϕ-3.05±.10; Mϕr0.58±.32; Best double couple: Ms5.22200×10¹⁶ NP1:ϕs243.00000°, δ77.00000°, λ162.00000°. NP2:ϕs337.00000°, δ73.00000°, λ14.00000°. Principal axes: T 5.7070, Plg22.0000°, Azm199.0000°; N -0.9770, Plg68.0000°, Azm28.0000°; P -4.7380, Plg3.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 02:35:36.0±0.5, 62˚.43S±0˚.09×154˚.2E±0˚.3, h10km, n90, σ1s54/58, mb4.4/9, MS4.4/30, 14C-1D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
VNDA	**Vanda**	**15.37**	**174**			**Pn**	**02 39 12.6**	**+0.1**
VNDA					IAmb	IAmb	02 39 51.4	
	comp=Z,28nm,1.4s							
VNDA	**Vanda**	**15.37**	**174**	Pn		**Pn**	**02 39 12.3**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=338,slow=12,SNR=26							
VNDA				Sn		**Sn**	**02 41 58.1**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=10,SNR=1.8							
VNDA				LR		LR	02 44 49.4	
	comp=Z,4μm,18.5s,baz=359,slow=36							
	comp=Z,7.3nm,0.6s							
SBA	**Scott Base**	**16.00**	**170**	Pn		**Pn**	**02 39 19.3**	**-1.5**
SBA				IAmb		IAmb	02 39 38.9	
	comp=Z,92nm,1.3s							
RPZ	**Rata Peaks**	**21.19**	**36**	LR		LR	02 46 58.4	
	comp=Z,3μm,18.9s,baz=184,slow=32							
QSPA	**South Pole Qui**	**27.66**	**180**	P		**P**	**02 41 25.1**	**+1.3**
QSPA				IAmb		IAmb	02 42 01.8	
	comp=Z,14nm,0.8s							
QSPA	**South Pole Qui**	**27.66**	**180**	P		**P**	**02 41 24.9**	**+1.1**
	comp=Z,3.5nm,0.9s,baz=328,slow=16,SNR=1.9							
QSPA				LR		LR	02 52 06.8	
	comp=Z,1μm,21.7s,baz=13,slow=36							
	comp=Z,3.5nm,0.9s							
URZ	**Urewera**	**27.98**	**41**	LR		LR	02 52 30.0	
	comp=Z,1μm,18.1s,baz=300,slow=36							
STKA	**Stephens Creek**	**31.62**	**339**	P		**P**	**02 41 58.0**	**-0.8**
STKA				IAmb		IAmb	02 42 25.3	
	comp=Z,3.4nm,1.4s							
STKA	**Stephens Creek**	**31.62**	**339**	LR		LR	02 51 35.2	
	comp=Z,330nm,21.5s,baz=160,slow=30							
H01W1	**Cape Leeuwin H**	**37.15**	**299**	T		T	03 22 33.2	
	baz=149,slow=75,SNR=49							
H01W2	**Cape Leeuwin H**	**37.15**	**299**	T		T	03 22 33.8	
	baz=149,slow=75,SNR=38							
H01W3	**Cape Leeuwin H**	**37.17**	**299**	T		T	03 22 33.2	
	baz=149,slow=75,SNR=35							
RAO	**Raoul Island**	**37.85**	**42**	LR		LR	02 56 20.7	
	comp=Z,785nm,20.2s,baz=148,slow=33							
ASAR	**Alice Springs**	**41.10**	**331**	P		**P**	**02 43 19.2**	**-0.6**
ASAR	**Alice Springs**	**41.10**	**331**	P		**P**	**02 43 20.0**	**+0.1**
	comp=Z,4.0nm,1.1s,baz=164,slow=9.0,SNR=14							
ASAR				PcP		**PcP**	**02 45 19.9**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=162,slow=4.6,SNR=2.4							
ASAR				LR		LR	02 58 02.4	
	comp=Z,686nm,19.3s,baz=166,slow=33							
	comp=Z,4.0nm,1.1s							
AS31	**Alice Springs**	**41.10**	**331**	P		**P**	**02 43 18.9**	**-1.0**
DZM	**Mont Dzumac**	**41.20**	**17**	LR		LR	02 56 39.4	
	comp=Z,994nm,20.1s,baz=198,slow=30							
CTA	**Charters Tower**	**42.66**	**349**	P		**P**	**02 43 32.9**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=226,slow=8.0,SNR=3.5							
CTA				LR		LR	02 59 24.9	
	comp=Z,617nm,18.2s,baz=160,slow=34							
	comp=Z,1.2nm,0.3s							
CTAO	**Charters Tower**	**42.66**	**349**	P		**P**	**02 43 30.4**	**-2.2**
CTAO				IAmb		IAmb	02 43 54.1	
	comp=Z,22nm,1.4s							
WR0	**Warramunga Arr**	**44.55**	**333**	P		**P**	**02 43 47.6**	**-0.2**
WB2	**Warramunga Arr**	**44.60**	**333**	P		**P**	**02 43 48.2**	**0.0**
WB2				IAmb		IAmb	02 43 54.5	
	comp=Z,12nm,1.2s							
WRA	**Warramunga Arr**	**44.61**	**333**	P		**P**	**02 43 48.1**	**-0.2**
WRA	**Warramunga Arr**	**44.61**	**333**	P		**P**	**02 43 48.7**	**+0.4**
	comp=Z,7.2nm,1.2s,baz=167,slow=4.3,SNR=8.1							
WRA				PcP		**PP**	**02 45 32.6**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=169,slow=2.7,SNR=5.2							
	comp=Z,7.2nm,1.2s							
WRAB	**Tennant Creek**	**44.61**	**333**	P		**P**	**02 43 47.6**	**-0.7**
WB0	**Warramunga Arr**	**44.77**	**333**	P		**P**	**02 43 49.7**	**+0.2**
WB0				IAmb		IAmb	02 44 07.0	
	comp=Z,15nm,1.4s							
SNAA	**Sanae**	**45.24**	**190**	LR		LR	03 03 31.8	
	comp=Z,2μm,21.9s,baz=162,slow=37							
PMSA	**Palmer Station**	**49.98**	**160**	LR		LR	03 04 30.5	
	comp=Z,379nm,18.2s,baz=210,slow=35							
PMG	**Port Moresby**	**53.17**	**351**	LR		LR	03 04 23.5	
	comp=Z,540nm,19.2s,baz=153,slow=32							
PPT	**Papeete**	**59.20**	**67**	LR		LR	03 05 43.5	
	comp=Z,15nm,20.6s,baz=184,slow=30							
LEM	**Lembang**	**65.02**	**307**	LR		LR	03 10 14.2	
	comp=Z,283nm,20.6s,baz=161,slow=32							
PLCA	**Paso Flores**	**71.09**	**146**	P		**P**	**02 46 56.6**	**+2.5**
	comp=Z,2.1nm,1.0s,baz=250,slow=2.9,SNR=3.6							
PLCA				LR		LR	03 12 27.0	
	comp=Z,247nm,19.2s,baz=206,slow=31							
	comp=Z,2.1nm,1.0s							
H03S2	**Juan Fernandez**	**75.05**	**136**	T		T	04 10 06.8	
	baz=201,slow=74,SNR=47							
H03S1	**Juan Fernandez**	**75.05**	**136**	T		T	04 10 06.1	
	baz=201,slow=74,SNR=60							
H03S3	**Juan Fernandez**	**75.07**	**136**	T		T	04 10 08.2	
	baz=201,slow=74,SNR=55							
GUMO	**Guam**	**76.12**	**351**	LR		LR	03 20 20.9	
	comp=Z,113nm,18.4s,baz=88,slow=35							
SUR	**Sutherland**	**78.38**	**219**	LR		LR	03 19 56.8	
	comp=Z,282nm,20.8s,baz=164,slow=34							
BOSA	**Boshof**	**80.52**	**224**	LR		LR	03 19 55.3	
	comp=Z,178nm,20.0s,baz=172,slow=33							
LBTB	**Lobatse**	**83.74**	**226**	LR		LR	03 22 43.0	
	comp=Z,177nm,19.5s,baz=161,slow=34							
CPUP	**Villa Florida**	**88.03**	**152**	P		**P**	**02 48 28.6**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=211,slow=16,SNR=3.1							
	comp=Z,1.4nm,0.7s							
LVC	**Limon Verde**	**88.61**	**141**	LR		LR	03 20 58.3	
	comp=Z,94nm,19.4s,baz=198,slow=31							
PALK	**Pallekele**	**88.85**	**288**	LR		LR	03 21 23.4	
	comp=Z,302nm,19.5s,baz=247,slow=31							
JCJ	**Chichijima**	**89.73**	**349**	LR		LR	03 21 41.3	
	comp=Z,85nm,21.2s,baz=118,slow=31							
JOW

comp=Z,1.4nm,0.6s,baz=108,slow=2.1,SNR=2.2

KIEV	**Kiev**	**148.49**	**274**	⇑P	**PKiKP**	**02 55 23.8 +0.7**
DRGR		**148.73**	**263**	⇑P	**PKPab**	**02 55 25.2 -1.1**
SIRR	**Siria**	**148.82**	**261**	⇑P	**PKPab**	**02 55 26.7 +0.1**
MORH	**Mrgy, Hungar**	**150.17**	**258**	⇑P	**PKPab**	**02 55 30.5 -1.5**
ESDC	**Sonseca Array**	**153.65**	**220**	PKPbc	**PKPbc**	**02 55 34.1 -0.1**

comp=Z,1.5nm,1.0s,baz=184,slow=2.4,SNR=3.3

CATAC ***21*** *02:47:39.9±0.6, 12°.41N×89°.06W, h6km±5km, mb4.2, ML3.9*

IDC ***21*** *02:47:39.7±1.7, 12°.84N×88°.74W, h0km, mb3.8/6, mbtmp3.8/8, ML3.3/2, MS4.0/3, Error ellipse: s-maj=53.6km s-min=26.7km az=41.0*

SNET ***21*** *02:47:43.2±2.4, 12°.48N×89°.06W, h53km, ML3.7*

ISC 21 02:47:40.2±1.5, 12°.48N±0°.05×89°.05W±0°.04, h11km±9km, n88, σ1°§14/111, mb3.9/6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.04**	**345**	*eP*	**Pn**	**02 48 00.9**	**+0.1**
LALI	**Alcalda de L**	**1.04**	**345**	*i* P	**Pn**	**02 48 00.9**	**+0.1**
LALI				IAML		02 48 41.5	
	comp=Z,500nm,1.0s						
TECO	**Alcaldia de Te**	**1.09**	**14**	*eP*	**Pn**	**02 48 01.5**	**+0.1**
TECO				*eS*	**Sn**	**02 48 17.7**	**+1.2**
TECO	**Alcaldia de Te**	**1.09**	**14**	*i* P	**Pn**	**02 48 01.6**	**+0.1**
TECO				*i* S	**Sn**	**02 48 17.7**	**+1.2**
TECO				IAML		02 48 23.8	
	comp=Z,840nm,1.0s						
JUCU	**Jucuarįn**	**1.10**	**45**	*eP*	**Pn**	**02 48 01.8**	**+0.1**
JUCU				*eS*	**Sn**	**02 48 18.8**	**+1.8**
JUCU	**Jucuarįn**	**1.10**	**45**	*i* P	**Pg**	**02 48 01.1**	**-0.3**
JUCU				*i* S	**Sn**	**02 48 18.7**	**+1.8**
JUCU				IAML		02 48 23.9	
	comp=Z,2µm,1.0s						
SJTE	**Alcalda de S**	**1.13**	**2**	*eP*	**Pn**	**02 48 02.3**	**+0.2**
SJTE	**Alcalda de S**	**1.13**	**2**	*i* P	**Pb**	**02 48 02.0**	**+0.1**
SJTE				*i* S	**Sn**	**02 48 18.8**	**+1.1**
SJTE				IAML		02 48 24.0	
	comp=Z,1µm,1.0s						
LFRS	**El Faro**	**1.14**	**359**	*eP*	**Pn**	**02 48 02.6**	**+0.3**
TECA	**Tecapa**	**1.15**	**28**	*eP*	**Pn**	**02 48 03.1**	**+0.7**
LOMA	**Loma Larga**	**1.17**	**354**	*eP*	**Pn**	**02 48 03.2**	**+0.6**
LOMA				*eS*	**Sn**	**02 48 18.9**	**+0.2**
LOMA	**Loma Larga**	**1.17**	**354**	*i* P	**Pn**	**02 48 02.9**	**+0.2**
LOMA				*i* S	**Sn**	**02 48 18.8**	**+0.1**
LOMA				IAML		02 48 24.1	
	comp=Z,1µm,1.0s						
UESV	**Universidad de**	**1.18**	**13**	*i* P	**Pn**	**02 48 03.0**	**+0.2**
UESV				*i* S	**Sn**	**02 48 19.1**	**+0.2**
UESV				IAML		02 48 26.5	
	comp=Z,1µm,1.0s						
LCY	**Lacayo**	**1.20**	**38**	*eP*	**Pn**	**02 48 03.4**	**+0.4**
RANC	**El Ranchito**	**1.21**	**38**	*i* P	**Pb**	**02 48 03.3**	**+0.1**
RANC				*i* S	**Sn**	**02 48 20.2**	**+0.5**
RANC				IAML		02 48 29.7	
	comp=Z,2µm,1.0s						
ITCA	**Escuela Especi**	**1.21**	**349**	*i* P	**Pb**	**02 48 03.3**	**0.0**
ITCA				IAML		02 48 30.7	
	comp=Z,4µm,1.0s						
VSM	**San Miguel**	**1.21**	**39**	*eP*	**Pn**	**02 48 04.4**	**+1.0**
PACA	**Pacayal**	**1.22**	**36**	*eP*	**Pn**	**02 48 04.0**	**+0.6**
PACA	**Pacayal**	**1.22**	**36**	*i* P	**Pn**	**02 48 03.9**	**+0.6**
PACA				*i* S	**Sn**	**02 48 20.9**	**+1.0**
PACA				IAML		02 48 25.6	
	comp=Z,12µm,1.0s						
SNET	**Serv Nac Est T**	**1.22**	**352**	*eP*	**Pb**	**02 48 03.4**	**0.0**
SNET	**Serv Nac Est T**	**1.22**	**352**	*i* P	**Pn**	**02 48 03.5**	**+0.2**
SNET				IAML		02 48 26.7	
	comp=Z,2µm,1.0s						
JAYA	**Jayaque - finc**	**1.23**	**342**	*eP*	**Pn**	**02 48 03.9**	**+0.2**
JAYA				*eS*	**Sn**	**02 48 21.4**	**+1.1**
JAYA				IAML		02 48 29.9	
	comp=Z,1µm,0.3s						
JAYA	**Jayaque - finc**	**1.23**	**342**	*i* P	**Pg**	**02 48 03.4**	**-0.6**
JAYA				*i* S	**Sn**	**02 48 22.5**	**+2.1**
JAYA				IAML		02 48 27.0	
	comp=Z,3µm,1.0s						
PAVA	**Las Pavas**	**1.23**	**5**	*eP*	**Pn**	**02 48 04.0**	**+0.4**
PAVA				*eS*	**Sb**	**02 48 20.1**	**+0.4**
PAVA				IAML		02 48 28.4	
	comp=Z,818nm,0.3s						
PAVA	**Las Pavas**	**1.23**	**5**	*i* P	**Pn**	**02 48 03.8**	**+0.2**
PAVA				*i* S	**Sn**	**02 48 24.0**	**+3.7**
PAVA				IAML		02 48 28.3	
	comp=Z,2µm,1.0s						
BLLM	**Bellamira**	**1.25**	**39**	*eP*	**Pn**	**02 48 04.2**	**+0.5**
UEES	**Universidad Ev**	**1.25**	**352**	*eP*	**Pg**	**02 48 03.7**	**-0.5**
UEES				*eS*	**Sn**	**02 48 21.2**	**+0.6**
UEES	**Universidad Ev**	**1.25**	**352**	*i* P	**Pg**	**02 48 03.6**	**-0.6**
UEES				*i* S	**Sn**	**02 48 21.2**	**+0.6**
UEES				IAML		02 48 28.6	
	comp=Z,970nm,1.0s						
PMON	**Piamonte**	**1.25**	**348**	*i* P	**Sn**	**02 48 04.1**	**+0.2**
PMON				*i* S	**Sn**	**02 48 22.8**	**+2.0**
PMON				IAML		02 48 43.2	
	comp=Z,2µm,1.0s						
SCLA	**Alcaldia de Sa**	**1.26**	**14**	*eP*	**Pn**	**02 48 04.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.26**	**14**	*i* P	**Pn**	**02 48 04.3**	**+0.5**
SCLA				IAML		02 48 37.4	
	comp=Z,720nm,1.0s						
LFU	**La Fuente**	**1.27**	**357**	*eP*	**Pn**	**02 48 04.5**	**+0.5**
BOQS	**Boqueron**	**1.27**	**350**	*eP*	**Pn**	**02 48 04.9**	**+0.7**
PIC2	**El Picacho**	**1.28**	**351**	*eP*	**Pn**	**02 48 04.9**	**+0.7**
PIC2				*eS*	**Sn**	**02 48 24.4**	**+2.8**
CEDA	**San Andres**	**1.36**	**346**	*eP*	**Pn**	**02 48 05.0**	**-0.2**
CEDA				IAML		02 48 44.5	
	comp=Z,1µm,0.4s						
LCND	**La Caada**	**1.40**	**54**	*eP*	**Pn**	**02 48 05.4**	**-0.3**
LCND	**La Caada**	**1.40**	**54**	*i* P	**Pn**	**02 48 05.6**	**-0.2**
LCND				*i* S	**Sg**	**02 48 25.9**	**+0.5**
LCND				IAML		02 48 33.7	
	comp=Z,2µm,1.0s						
CNCH	**Conchagua**	**1.43**	**56**	*eP*	**Pn**	**02 48 06.5**	**+0.2**
CNCH	**Conchagua**	**1.43**	**56**	*i* P	**Pn**	**02 48 06.0**	**-0.2**
CNCH				*i* S	**Sg**	**02 48 26.8**	**+0.5**
CNCH				IAML		02 48 32.3	
	comp=Z,2µm,1.0s						
CEVE	**Cerro Verde**	**1.46**	**338**	*eP*	**Pb**	**02 48 07.3**	**-0.2**
CEVE				*eS*	**Sg**	**02 48 30.2**	**+3.0**
CEVE	**Cerro Verde**	**1.46**	**338**	*i* P	**Pg**	**02 48 07.8**	**-0.4**
CEVE				IAML		02 48 45.9	
	comp=Z,2µm,1.0s						
SBLS	**San Blas**	**1.47**	**338**	*eP*	**Pg**	**02 48 08.2**	**-0.2**
SNJE	**San Jose**	**1.49**	**339**	*eP*	**Pb**	**02 48 08.0**	**0.0**
SNJE				*eP*	**Pb**	**02 48 08.0**	**0.0**
RTR	**El Retiro**	**1.53**	**338**	*eP*	**Pb**	**02 48 08.6**	**-0.1**
CSGN	**Cosiguina Volc**	**1.54**	**71**	*i* P	**Pn**	**02 48 07.5**	**-0.2**
CSGN				IAML		02 48 35.9	
	comp=Z,3µm,1.0s						
UNIC	**Universidad Ca**	**1.57**	**342**	*i* P	**Pn**	**02 48 08.6**	**+0.4**
UNIC				IAML		02 48 10.4	
	comp=Z,540nm,1.0s						
NUBE	**Las Nubes**	**1.58**	**333**	*eP*	**Pn**	**02 48 09.0**	**+0.5**
NUBE	**Las Nubes**	**1.58**	**333**	*i* P	**Pn**	**02 48 08.8**	**+0.4**
NUBE				IAML		02 48 36.6	
	comp=Z,1µm,1.0s						
LOAL	**Lomas de Alarc**	**1.67**	**335**	*i* P	**Pb**	**02 48 10.7**	**-0.4**
LOAL				IAML		02 49 09.8	
	comp=Z,3µm,1.0s						
LLGN	**La Laguna**	**1.68**	**4**	*i* P	**Pn**	**02 48 10.2**	**+0.5**
LLGN				IAML		02 48 11.7	
	comp=Z,600nm,1.0s						
SLOZ	**Alcaldia de Sa**	**1.70**	**335**	*eP*	**Pb**	**02 48 11.2**	**-0.3**
SLOZ				*eS*	**Sg**	**02 48 35.1**	**+0.2**
MTO3	**Montecristo**	**1.94**	**351**	*eP*	**Pb**	**02 48 14.6**	**-1.1**
MTO3				*eS*	**Sg**	**02 48 41.3**	**-1.2**
MTO3	**Montecristo**	**1.94**	**351**	*i* P	**Pn**	**02 48 13.9**	**+0.6**
MTO3				IAML		02 48 45.4	
	comp=Z,650nm,1.0s						
CRIN	**San Cristobal**	**1.97**	**83**	*i* P	**Pn**	**02 48 13.9**	**+0.3**
CRIN				IAML		02 48 48.1	
	comp=Z,2µm,1.0s						
ESQI	**Esquipulas**	**2.09**	**352**	*i* P	**Pb**	**02 48 17.0**	**-1.3**
ESQI				IAML		02 48 52.2	
	comp=Z,1µm,1.0s						
HERN	**Volcan Telica**	**2.17**	**86**	*i* P	**Pn**	**02 48 15.7**	**-0.7**
HERN				IAML		02 48 52.6	
	comp=Z,660nm,1.0s						
PACN	**Al O del Volca**	**2.21**	**89**	*i* P	**Pn**	**02 48 16.2**	**-0.6**
PACN				IAML		02 48 50.7	
	comp=Z,610nm,1.0s						

ROCN	**Rota Cerro Neg**	**2.25**	**89**	*i* P	**Pn**	**02 48 16.8**	**-0.7**
ROCN				IAML		02 48 49.4	
	comp=Z,260nm,1.0s						
CNGA	**Al SSO del Vol**	**2.29**	**89**	*i* P	**Pn**	**02 48 17.3**	**-0.8**
CNGA				IAML		02 48 56.1	
	comp=Z,510nm,1.0s						
CNGN	**Cerro Negro**	**2.30**	**89**	*i* P	**Pn**	**02 48 18.3**	**+0.2**
CNGN				IAML		02 49 01.3	
	comp=Z,540nm,1.0s						
MACN	**El Madrono**	**2.32**	**90**	*i* P	**Pn**	**02 48 18.3**	**-0.1**
MACN				IAML		02 48 59.9	
	comp=Z,280nm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.34**	**48**	*i* P	**Pn**	**02 48 19.8**	**+1.0**
TGUH				IAML		02 48 46.6	
	comp=Z,570nm,1.0s						
COPN	**Copaltepe**	**2.42**	**97**	*i* P	**Pn**	**02 48 18.9**	**-0.9**
COPN				IAML		02 48 55.7	
	comp=Z,600nm,1.0s						
GUNB	**GUNB**	**2.45**	**329**	*i* P	**Pn**	**02 48 20.5**	**0.0**
GUNB				IAML		02 49 07.7	
	comp=Z,320nm,1.0s						
MOMN	**Momotombo**	**2.45**	**91**	*i* P	**Pn**	**02 48 19.9**	**-0.4**
MOMN				IAML		02 48 54.0	
	comp=Z,21nm,1.0s						
MOM2	**El Cardon**	**2.51**	**91**	*i* P	**Pn**	**02 48 21.1**	**+0.1**
MOM2				IAML		02 49 00.6	
	comp=Z,260nm,1.0s						
YUSH	**Yuscaran**	**2.60**	**55**	*eP*	**Pn**	**02 48 23.5**	**+1.1**
LIMN	**Finca el Limon**	**2.68**	**77**	*i* P	**Pn**	**02 48 23.0**	**-0.5**
LIMN				IAML		02 48 57.7	
	comp=Z,200nm,1.0s						
HZTE	**Horizontes, Gu**	**3.81**	**117**	*i* P	**Pn**	**02 48 39.3**	**+0.4**
HZTE				IAML		02 50 13.5	
	comp=Z,150nm,1.0s						
SAJU	**San Juanillo,**	**4.06**	**126**	*i* P	**Pn**	**02 48 42.0**	**-0.3**
SAJU				IAML		02 48 56.3	
	comp=Z,64nm,1.0s						
ORTG	**Ortega, Santa**	**4.10**	**120**	*i* P	**Pn**	**02 48 43.9**	**+0.9**
ORTG				IAML		02 50 13.0	
	comp=Z,81nm,1.0s						
VMAR	**Armenia, Volca**	**4.20**	**113**	*i* P	**Pn**	**02 48 45.6**	**+1.3**
VMAR				IAML		02 49 47.9	
	comp=Z,140nm,1.0s						
INDI	**Punta indio, G**	**4.34**	**126**	*i* P	**Pn**	**02 48 46.5**	**+0.3**
INDI				IAML		02 50 07.8	
	comp=Z,68nm,1.0s						
JTS	**Las Juntas de**	**4.57**	**118**	Pn	**Pn**	**02 48 50.5**	**+1.1**
	comp=Z,2.7nm,0.3s,baz=116,slow=23,SNR=9.6						
JTS				Sn	**Sn**	**02 49 39.3**	**-3.2**
	comp=Z,1.9nm,0.3s,baz=323,slow=20,SNR=5.8						
	comp=Z,9.2nm,0.3s						
LAFE	**Finca La Fe, P**	**4.85**	**123**	*i* P	**Pn**	**02 48 52.8**	**-0.4**
LAFE				IAML		02 49 24.8	
	comp=Z,0.7nm,1.0s						
JACO	**JACO, Garabito**	**5.14**	**123**	*i* P	**Pn**	**02 48 58.7**	**+1.5**
JACO				IAML		02 49 01.0	
	comp=Z,44nm,1.0s						
JACO				IAmb	IAmb	02 49 08.0	
	comp=Z,31nm,1.1s						
CMIG	**Matias Romero**	**7.27**	**310**	Pn	**Pn**	**02 49 28.1**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=179,slow=9.7,SNR=2.1						
CMIG				Sn	**Sn**	**02 50 43.4**	**-5.7**
	comp=Z,0.2nm,0.3s,baz=212,slow=19,SNR=1.3						
	comp=Z,1.2nm,0.3s						
TEIG	**Tepich**	**7.74**	**5**	LR	LR	02 53 01.3	
	comp=Z,2µm,18.1s,baz=211,slow=44						
TXAR	**Lajitas Array**	**21.59**	**323**	P	**P**	**02 52 31.6**	**+1.4**
	comp=Z,6.5nm,0.7s,baz=147,slow=11,SNR=79						
	comp=Z,6.5nm,0.7s						
LPIG	**La Paz**	**23.22**	**303**	LR	LR	03 01 55.2	
	comp=Z,90nm,21.0s,baz=88,slow=37						
TKL	**Tuckaleechee C**	**23.57**	**11**	P	**P**	**02 52 48.6**	**-2.2**
	comp=Z,6.3nm,0.7s,baz=175,slow=11,SNR=8.4						
	comp=Z,6.3nm,0.7s						
NVAR	**Mina Array Bea**	**36.66**	**320**	P	**P**	**02 54 48.5**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=7.6,SNR=6.1						
	comp=Z,0.7nm,0.7s						
YKA	**Yellowknife Ar**	**53.19**	**346**	P	**P**	**02 56 56.2**	**-1.9**
	comp=Z,1.0nm,0.9s,baz=140,slow=7.6,SNR=14						
	comp=Z,1.0nm,0.9s						
DLBC	**Dease Lake**	**55.22**	**335**	P	**P**	**02 57 12.1**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=164,slow=2.4,SNR=4.4						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**65.37**	**336**	P	**P**	**02 58 21.8**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=113,slow=6.0,SNR=3.1						
	comp=Z,0.4nm,0.9s						
SHEM	**Shemya Is, Ala**	**84.29**	**323**	LR	LR	03 37 49.8	
	comp=Z,187nm,19.8s,baz=313,slow=36						
WRA	**Warramunga Arr**	**137.77**	**254**	PKP	**PKPdf**	**03 07 06.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=83,slow=1.1,SNR=2.5						
CMAR	**Chiang Mai Arr**	**148.27**	**345**	PKPbc	**PKPbc**	**03 07 27.2**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=339,slow=4.1,SNR=7.6						

IDC ***21*** *03:04:35.8±1.3, 63°.46N×149°.58W, h90km±15km, mb3.3/2, mbtmp3.6/5, MS3.8/2, Error ellipse: s-maj=23.3km s-min=10.8km az=123.0*

AEIC ***21*** *03:04:36.9±0.9, 63°.65N±0°.04×149°.60W±0°.07, h124km±4km, ML3.2, ML3.4/188(NEIC), Error ellipse: s-maj=5.3km s-min=4.9km az=167.0*

NEIC ***21*** *03:04:36.5±0.8, 63°.66N±0°.04×149°.62W±0°.08, h125km±4km, Error ellipse: s-maj=5.6km s-min=5.1km az=211.0*

ISC 21 03:04:37.2±0.8, 63°.65N±0°.03×149°.63W±0°.02, h125km±5km, n285, σ1°§03/298, mb3.9/3, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCK	**McKinley**	**0.32**	**74**		**Pn**	**03 04 54.4**	**-0.5**
MCK					**Sn**	**03 05 07.7**	**-0.6**
MCK	**McKinley**	**0.32**	**74**	P	**Pn**	**03 04 54.4**	**-0.5**
	baz=255						
MCK				S	**Sn**	**03 05 07.6**	**-0.6**
	baz=255						
TRF	**Thorofare Moun**	**0.35**	**237**		**Sn**	**03 05 08.3**	**-0.5**
TRF	**Thorofare Moun**	**0.35**	**237**	P	**Pn**	**03 04 54.9**	**-0.3**
	baz=57						
TRF				S	**Sn**	**03 05 08.3**	**-0.5**
	baz=57						
RND	**Reindeer**	**0.42**	**124**	Pn	**Pn**	**03 04 54.6**	**-0.9**
RND	**Reindeer**	**0.42**	**124**		**Sn**	**03 05 08.1**	**-1.0**
RND	**Reindeer**	**0.42**	**124**	IAML		03 05 09.0	
	comp=N,604nm,0.8s						
RND				IAML		03 05 09.9	
	comp=E,456nm,0.4s						
BWN	**Browne**	**0.53**	**8**	Pn	**Pn**	**03 04 55.5**	**-0.5**
BWN				IAML		03 05 09.7	
	comp=E,479nm,1.0s						
BWN				IAML		03 05 10.5	
	comp=N,504nm,1.1s						
BWN	**Browne**	**0.53**	**8**		**Sn**	**03 05 09.1**	**-1.0**
KTH	**Kantishna Hill**	**0.58**	**262**		**Sn**	**03 05 10.0**	**-0.8**
KTH	**Kantishna Hill**	**0.58**	**262**	Pn	**Pn**	**03 04 56.0**	**-0.4**
KTH	**Kantishna Hill**	**0.58**	**262**	IAML		03 05 10.5	
	comp=N,491nm,0.4s						
KTH				IAML		03 05 10.5	
	comp=E,803nm,0.8s						
BPAW	**Bear Paw Mtn.**	**0.75**	**308**		**Pn**	**03 04 56.9**	**-0.7**
BPAW					**Sn**	**03 05 11.6**	**-1.4**
BPAW	**Bear Paw Mtn.**	**0.75**	**308**	IAML		03 05 11.8	
	comp=E,614nm,0.8s						
BPAW				IAML		03 05 11.9	
	comp=N,712nm,0.8s						
BPAW	**Bear Paw Mtn.**	**0.75**	**308**	P	**Pn**	**03 04 56.8**	**-0.7**
	baz=126						
BPAW				S	**Sn**	**03 05 11.5**	**-1.4**
	baz=126						
WAT7	**Susitna Watana**	**0.89**	**156**		**Pn**	**03 04 57.9**	**-0.9**
WAT1	**Susitna Watana**	**0.95**	**149**		**Pn**	**03 04 58.4**	**-0.9**
WAT1					**Sn**	**03 05 15.1**	**-0.9**
WAT1	**Susitna Watana**	**0.95**	**149**	P	**Pn**	**03 04 58.4**	**-0.9**
	baz=331						
WAT1				S	**Sn**	**03 05 15.1**	**-0.9**
	baz=331						
NEA2	**Nenana**	**0.98**	**14**	P	**Pn**	**03 04 58.5**	**-1.0**
	baz=194						
WRH	**Wood River Hil**	**1.07**	**39**		**Sn**	**03 05 16.5**	**-1.4**
CAST	**Castle Rocks**	**1.12**	**259**	P	**Pn**	**03 05 00.2**	**-0.7**
	baz=77						
DHY	**Denali Highway**	**1.17**	**118**	Pn	**Pn**	**03 05 01.0**	**-0.5**
DHY				IAML		03 05 20.9	
	comp=N,801nm,0.6s						
DHY				IAML		03 05 21.2	
	comp=E,762nm,0.3s						
DHY	**Denali Highway**	**1.17**	**118**	P	**Pn**	**03 05 01.0**	**-0.5**
	baz=301						

CHUM	**Lake Minchumin**	**1.22**	**283**		**Pn**	**03 05 01.4**	**-0.5**
CHUM					**Sn**	**03 05 19.6**	**-0.9**
CHUM	**Lake Minchumin**	**1.22**	**283**	P	**Pn**	**03 05 01.4**	**-0.5**
	baz=100						
CHUM				S	**Sn**	**03 05 19.6**	**-0.9**
	baz=100						
CUT	**Chulitna**	**1.28**	**193**		**Pn**	**03 05 02.2**	**-0.3**
CUT	**Chulitna**	**1.28**	**193**	P	**Pn**	**03 05 02.2**	**-0.3**
	baz=13						
WAT6	**Susitna Watana**	**1.37**	**140**		**Pn**	**03 05 03.0**	**-0.7**
WAT6					**Sn**	**03 05 22.9**	**-0.8**
WAT6	**Susitna Watana**	**1.37**	**140**	P	**Pn**	**03 05 03.0**	**-0.7**
	baz=323						
WAT6				S	**Sn**	**03 05 23.0**	**-0.8**
	baz=323						
PPLA	**Purkeypile**	**1.38**	**238**		**Pn**	**03 05 03.5**	**-0.3**
PPLA	**Purkeypile**	**1.38**	**238**	P	**Pn**	**03 05 03.5**	**-0.3**
	baz=56						
HDA	**Harding Lake**	**1.41**	**56**	P	**Pn**	**03 05 03.0**	**-1.0**
	baz=238						
COLA	**College**	**1.46**	**31**		**Sn**	**03 05 23.6**	**-1.6**
MLY	**Manley**	**1.47**	**341**	P	**Pn**	**03 05 03.8**	**-0.9**
	baz=160						
I23K	**Minto, Yukon-K**	**1.51**	**4**	P	**Pn**	**03 05 04.3**	**-0.7**
	baz=184						
ILAR	**Eielson Array**	**1.65**	**45**	P	**Pn**	**03 05 05.5**	**-1.1**
	comp=E,51nm,0.4s,baz=227,slow=12,SNR=1409						
ILAR				S	**Sn**	**03 05 27.4**	**-1.8**
	comp=E,25nm,0.8s,baz=225,slow=21,SNR=8.5						
K24K	**Donnelly Dome**	**1.72**	**83**		**Pn**	**03 05 07.1**	**-0.5**
K24K					**Sn**	**03 05 30.1**	**-0.6**
K24K	**Donnelly Dome**	**1.72**	**83**	P	**Pn**	**03 05 07.1**	**-0.5**
	baz=266						
K24K				S	**Sn**	**03 05 30.1**	**-0.6**
	baz=266						
POKR	**Poker Plat Res**	**1.76**	**32**	P	**Pn**	**03 05 07.2**	**-0.8**
	baz=214						
I21K	**Tanana**	**1.85**	**328**		**Pn**	**03 05 08.3**	**-0.7**
I21K	**Tanana**	**1.85**	**328**	IAML		03 05 32.6	
	comp=E,194nm,0.7s						
I21K	**Tanana**	**1.85**	**328**	P	**Pn**	**03 05 08.3**	**-0.7**
	baz=145						
SKT	**Skwentna**	**1.89**	**208**	Pn	**Pn**	**03 05 08.4**	**-1.2**
SKT				IAML		03 05 37.1	
	comp=E,340nm,0.5s						
SKT				IAML		03 05 37.2	
	comp=N,352nm,0.3s						
SKT	**Skwentna**	**1.89**	**208**	P	**Pn**	**03 05 08.6**	**-0.9**
	baz=27						
GHO	**Glory Hole Cre**	**1.91**	**170**		**Pn**	**03 05 09.2**	**-0.6**
GHO				IAML		03 05 40.6	
	comp=E,444nm,0.5s						
GHO				IAML		03 05 45.0	
	comp=N,454nm,0.6s						
M22K	**Willow**	**1.91**	**187**		**Pn**	**03 05 09.5**	**-0.3**
M22K					**Sn**	**03 05 34.5**	**-0.2**
M22K	**Willow**	**1.91**	**187**	P	**Pn**	**03 05 09.5**	**-0.3**
	baz=7.0						
M22K				S	**Sn**	**03 05 34.5**	**-0.2**
	baz=7.0						
SML	**Sawmill**	**1.94**	**161**	Pn	**Pn**	**03 05 09.5**	**-0.7**
SML				IAML		03 05 35.8	
	comp=E,330nm,0.8s						
SML				IAML		03 05 40.5	
	comp=N,366nm,0.7s						
SML	**Sawmill**	**1.94**	**161**	P	**Pn**	**03 05 09.5**	**-0.7**
	baz=343						
PAX	**Paxson**	**2.00**	**108**		**Pn**	**03 05 10.2**	**-0.8**
PAX	**Paxson**	**2.00**	**108**	P	**Pn**	**03 05 10.2**	**-0.8**
	baz=292						
K20K	**Telida**	**2.01**	**264**		**Pn**	**03 05 10.5**	**-0.6**
K20K					**Sn**	**03 05 35.8**	**-1.1**
K20K	**Telida**	**2.01**	**264**	P	**Pn**	**03 05 10.5**	**-0.6**
	baz=80						
K20K				S	**Sn**	**03 05 35.8**	**-1.1**
	baz=80						
M23K	**Glacier View**	**2.06**	**154**		**Pn**	**03 05 10.8**	**-0.9**
M23K	**Glacier View**	**2.06**	**154**	P	**Pn**	**03 05 10.8**	**-0.9**
	baz=336						
J20K	**Nowinta River**	**2.07**	**287**		**Pn**	**03 05 11.0**	**-0.6**
J20K	**Nowinta River**	**2.07**	**287**	IAML		03 05 37.6	
	comp=E,179nm,0.8s						
J20K				IAML		03 05 38.1	
	comp=N,142nm,0.8s						
J20K	**Nowinta River**	**2.07**	**287**	P	**Pn**	**03 05 11.0**	**-0.6**
	baz=103						
PMR	**Palmer**	**2.07**	**173**	Pn	**Pn**	**03 05 11.0**	**-0.7**
PMR				IAML		03 05 45.0	
	comp=E,338nm,0.4s						
PMR				IAML		03 05 46.2	
	comp=N,179nm,0.6s						
PMR	**Palmer**	**2.07**	**173**	P	**Pn**	**03 05 11.2**	**-0.5**
	baz=354						
SCM	**Sheep Creek Mo**	**2.10**	**149**		**Pn**	**03 05 11.4**	**-0.8**
SCM				IAML		03 05 40.0	
	comp=E,400nm,0.6s						
SCM	**Sheep Creek Mo**	**2.10**	**149**	P	**Pn**	**03 05 11.5**	**-0.8**
	baz=331						
J25K	**Salcha River,**	**2.11**	**61**		**Pn**	**03 05 11.3**	**-0.9**
J25K					**Sn**	**03 05 37.4**	**-1.7**
J25K	**Salcha River,**	**2.11**	**61**	IAML		03 05 40.8	
	comp=N,341nm,0.6s						
J25K	**Salcha River,**	**2.11**	**61**	P	**Pn**	**03 05 11.3**	**-0.9**
	baz=244	

SCRK IAML 03 05 50.3
comp=N,258nm,0.4s
SCRK Sand Creek 2.53 80 P Pn **03 05 16.6 -1.0**
baz=265
RC01 Rabbit Creek A 2.56 181 Pn Pn **03 05 17.4 -0.6**
RC01 IAML 03 05 58.6
comp=N,272nm,0.4s
RC01 Rabbit Creek A 2.56 181 Sn 03 05 47.6 -1.8
RC01 Rabbit Creek A 2.56 181 P Pn **03 05 17.5 -0.5**
baz=1.4
RC01 S **Sn 03 05 47.6 -1.8**
baz=1.4
PRP Porcupine Dome 2.58 41 Pn Pn **03 05 16.7 -1.7**
PRP Porcupine Dome 2.58 41 P Pn **03 05 17.2 -1.1**
baz=225
SPCG Spurr Capps Gl 2.61 206 Pn 03 05 18.5 -0.2
SPCP Crater Peak Br 2.66 207 Pn 03 05 18.8 -0.6
J19K Poorman 2.68 280 Pn 03 05 18.6 -0.8
SPNN North Nagishla 2.69 213 Pn 03 05 19.6 -0.2
SPCN Chakachatna No 2.70 207 Pn 03 05 20.0 +0.2
SPBG Spurr Blockage 2.71 209 Pn 03 05 20.3 +0.3
N20K Mount Spurr 2.73 207 P Pn **03 05 20.0 -0.2**
baz=25
SPCR Spurr Chakacha 2.73 207 Pn 03 05 20.0 -0.2
KLU Klutina 2.76 140 Pn 03 05 19.1 -1.5
KLU IAML 03 06 02.1
comp=N,214nm,0.7s
KLU IAML 03 06 02.9
comp=E,177nm,0.7s
KLU Klutina 2.76 140 P Pn **03 05 19.5 -1.1**
baz=324
MENT Mentasta 2.76 102 Pn 03 05 18.5 -2.0
MENT IAML 03 06 10.1
comp=E,208nm,0.4s
MENT IAML 03 06 10.6
comp=N,158nm,0.5s
M19K Big River Lodg 2.80 234 Pn 03 05 20.2 -0.8
M19K **Sn 03 05 53.7 -1.1**
M19K Big River Lodg 2.80 234 P Pn **03 05 20.2 -0.8**
baz=49
M19K S **Sn 03 05 53.7 -1.1**
baz=49
J26L Joseph Creek 2.80 69 Pn 03 05 20.4 -0.7
L19K White Mountain 2.80 241 Pn 03 05 20.4 -0.7
L19K White Mountain 2.80 241 P Pn **03 05 20.4 -0.7**
baz=56
L26K Log Cabin Wild 2.90 100 Pn Pn **03 05 21.1 -1.3**
L26K IAML 03 06 00.8
comp=N,168nm,0.4s
H20K Anotleneega Mo 2.93 312 Pn 03 05 21.8 -0.8
H20K Anotleneega Mo 2.93 312 P Pn **03 05 21.8 -0.8**
baz=127
TTA Tatalina 2.97 259 Pn Pn **03 05 22.3 -0.9**
TTA Tatalina 2.97 259 P Pn **03 05 22.4 -0.9**
baz=73
GLI Glacier Island 3.02 156 Pn 03 05 22.6 -1.2
GLI Glacier Island 3.02 156 IAML 03 06 10.9
comp=N,190nm,0.6s
GLI Glacier Island 3.02 156 P Pn **03 05 22.6 -1.2**
baz=338
G23K Bananza Creek 3.08 357 Pn 03 05 23.9 -0.8
G23K Bananza Creek 3.08 357 P Pn **03 05 23.9 -0.8**
baz=176
N25K Chitina, Valde 3.10 129 Pn Pn **03 05 24.4 -0.5**
N25K IAML 03 06 02.4
comp=E,158nm,0.7s
N25K Chitina, Valde 3.10 129 P Pn **03 05 24.2 -0.7**
baz=314
SLKM Skilak Lake 3.16 185 Pn 03 05 25.4 -0.3
J18K Innoko River 3.17 270 Pn 03 05 25.1 -0.8
J18K Innoko River 3.17 270 P Pn **03 05 25.1 -0.8**
baz=84
O22K Cooper Landing 3.17 181 Pn 03 05 25.0 -0.9
O22K Cooper Landing 3.17 181 P Pn **03 05 25.2 -0.7**
baz=1.0
G24K Hadweenzic Riv 3.20 16 Pn Pn **03 05 25.1 -1.1**
FID Port Fidalgo 3.26 152 Pn 03 05 26.1 -0.9
I26K Coal Creek Min 3.26 56 Pn 03 05 25.9 -1.1
I26K IAML 03 06 08.1
comp=E,119nm,0.7s
I26K IAML 03 06 13.3
comp=N,128nm,0.7s
G21K Allakaket 3.32 332 Pn 03 05 26.7 -1.0
RDT Redoubt 3.35 204 Pn 03 05 27.9 -0.3
K27K Chicken 3.37 80 Pn 03 05 27.2 -1.2
DFR Drift River 3.38 206 Pn 03 05 29.0 +0.3
NCT North Crescent 3.46 208 Pn 03 05 30.1 +0.3
G25K Bearman Lake 3.47 24 Pn 03 05 28.9 -0.8
G25K Bearman Lake 3.47 24 P Pn **03 05 28.9 -0.8**
baz=207
GLB Gilahina Butte 3.49 127 Pn 03 05 29.1 -1.0
GLB Gilahina Butte 3.49 127 IAML 03 06 12.6
comp=E,92nm,0.6s
GLB IAML 03 06 13.0
comp=N,100nm,0.5s
H19K Roundabout Mou 3.49 306 Pn 03 05 29.3 -0.7
H19K IAML 03 06 14.2
comp=N,37nm,0.9s
RDWB Redoubt West 3.51 207 Pn 03 05 30.5 +0.1
RSO Redoubt South 3.52 206 Pn 03 05 30.6 0.0
L18K Granite Mounta 3.53 249 Pn 03 05 29.8 -0.7
SEW Seward 3.55 179 Pn 03 05 29.8 -1.1
SEW Seward 3.55 179 P Pn **03 05 29.8 -1.1**
baz=359
RED Redoubt Volcan 3.56 206 Pn 03 05 31.0 0.0
L27K Beaver Creek, 3.56 96 Pn 03 05 29.7 -1.4
L27K Beaver Creek, 3.56 96 IAML 03 06 14.2
comp=N,50nm,0.4s
L27K IAML 03 06 14.2
comp=E,43nm,0.6s
L27K Beaver Creek, 3.56 96 P Pn **03 05 29.7 -1.4**
baz=283
BMRM Bremner River 3.57 137 Pn 03 05 29.7 -1.4
BMRM Bremner River 3.57 137 P Pn **03 05 29.7 -1.4**
baz=321
HIN Hinchinbrook I 3.58 154 Pn Pn **03 05 30.1 -1.2**
HIN IAML 03 06 31.3
comp=N,116nm,0.5s
BCAR Beaver Creek A 3.58 96 Pn Pn **03 05 29.8 -1.5**
EYAK Cordova Ski Ar 3.60 148 Pn 03 05 30.6 -0.9
EYAK Cordova Ski Ar 3.60 148 P Pn **03 05 30.6 -0.9**
baz=332
COLD Coldfoot 3.61 356 Pn 03 05 30.7 -0.8
COLD Coldfoot 3.61 356 P Pn **03 05 30.7 -0.8**
baz=176
N19K Bonanza Creek 3.64 221 Pn 03 05 31.4 -0.7
VRDI Verde Repeater 3.76 127 Pn Pn **03 05 32.8 -1.0**
VRDI IAML 03 06 19.5
comp=N,71nm,0.6s
VRDI IAML 03 06 19.6
comp=E,49nm,0.6s
M27K Edge Creek, AK 3.76 107 Pn 03 05 32.9 -0.8
M27K IAML 03 06 37.5
comp=E,29nm,1.0s
M27K IAML 03 06 45.8
comp=N,37nm,0.9s
M27K Edge Creek, AK 3.76 107 P Pn **03 05 33.2 -0.6**
baz=294
SVW2 Sparrevohn 3.77 230 Pn 03 05 33.2 -0.5
MCARA McCarthy VSAT 3.81 124 Pn 03 05 34.2 0.0
MCARA IAML 03 06 21.7
comp=E,102nm,0.9s
MCARA IAML 03 06 30.7
comp=N,90nm,0.6s
MCARA McCarthy VSAT 3.81 124 P Pn **03 05 34.3 0.0**
baz=310
O20K Slope Mountain 3.85 203 Pn 03 05 34.7 -0.1
O20K Slope Mountain 3.85 203 P Pn **03 05 34.7 -0.1**
baz=20
EGAK Eagle 3.87 69 Pn Pn **03 05 33.7 -1.4**
EGAK IAML 03 06 33.9
comp=N,96nm,0.6s
EGAK Eagle 3.87 69 P Pn **03 05 34.2 -0.9**
baz=257
F21K Alatna River 3.94 338 Pn 03 05 35.2 -0.7
F21K Alatna River 3.94 338 P Pn **03 05 35.2 -0.7**
baz=154
BRLK Bradley Lake 3.94 189 Pn Pn **03 05 35.7 -0.3**
BRSE Bradley Lake S 3.95 188 Pn 03 05 35.5 -0.7
BRSE Bradley Lake S 3.95 188 P Pn **03 05 35.5 -0.7**
baz=7.4
F24K Squaw Lake 3.96 10 Pn 03 05 35.5 -0.8
IVE Iliamna Volcan 3.98 205 Pn 03 05 36.0 -0.6
ILSW Iliamna Southw 4.03 206 Pn 03 05 36.9 -0.5
ILSW IAML 03 06 32.8
comp=N,26nm,1.0s
ILSW IAML 03 06 36.0
comp=E,32nm,0.8s
K17K Iditarod 4.04 261 Pn 03 05 36.7 -0.5
K17K IAML 03 06 57.6
comp=E,23nm,1.9s
K17K IAML 03 07 50.4
comp=N,27nm,3.3s
G19K Purcell Mounta 4.05 312 Pn 03 05 36.3 -1.1
G19K Purcell Mounta 4.05 312 P Pn **03 05 36.3 -1.1**
baz=125
H18K Honhosa River 4.08 296 Pn 03 05 37.2 -0.7
H18K IAML 03 06 23.7
comp=N,30nm,2.0s
H18K Honhosa River 4.08 296 P Pn **03 05 37.2 -0.7**
baz=108
HOM Homer 4.11 194 Pn Pn **03 05 38.4 +0.1**
PTPK Patty Peak 4.14 123 Pn 03 05 37.4 -1.5
N18K Kilae Creek 4.18 227 Pn Pn **03 05 38.2 -1.0**
BVCY Beaver Creek 4.18 103 Pn 03 05 37.7 -1.5
BVCY Beaver Creek 4.18 103 P Pn **03 05 37.7 -1.5**
baz=291
CRQM Cirque 4.20 131 Pn 03 05 38.2 -1.4
CNPM China Poot 4.20 191 Pn Pn **03 05 38.5 -1.0**
CRQE Cirque 4.22 131 P Pn **03 05 38.2 -1.6**
baz=317
J17K VABM Dome 4.24 271 Pn 03 05 39.0 -0.9
J17K IAML 03 06 59.2
comp=N,22nm,2.5s
J17K IAML 03 08 25.3
comp=E,20nm,3.3s
M17K Holitna River 4.26 242 Pn 03 05 39.0 -1.2
M17K IAML 03 07 03.4
comp=E,35nm,2.6s
M17K IAML 03 07 28.4
comp=N,35nm,2.4s
M17K Holitna River 4.26 242 P Pn **03 05 39.2 -1.1**
baz=55
F20K Avaraart Lake 4.26 326 Pn 03 05 39.8 -0.4
F20K IAML 03 06 27.9
comp=N,22nm,1.4s
BERG Berg Lake 4.29 137 Pn 03 05 39.6 -1.1
F25K Christian Rive 4.30 21 Pn 03 05 39.8 -0.9
F25K Christian Rive 4.30 21 P Pn **03 05 39.8 -0.9**
baz=204
TGL Tana Glacier 4.31 129 Pn 03 05 39.2 -1.7
TGL Tana Glacier 4.31 129 IAML 03 06 30.7
comp=N,62nm,0.6s
TGL IAML 03 06 31.9
comp=E,66nm,0.4s
BMAR Burnt Mountain 4.34 27 Pn Pn **03 05 40.3 -1.0**
P19K Oil Pt 4.36 205 Pn 03 05 40.7 -0.9
P19K Oil Pt 4.36 205 P Pn **03 05 40.7 -0.9**
baz=22
YUK2 White River 4.45 111 Pn 03 05 42.5 -0.5
BARN Barnard Glacie 4.53 121 Pn 03 05 43.5 -0.5
BARN IAML 03 06 44.2
comp=N,21nm,0.8s
BARN IAML 03 06 48.6
comp=E,18nm,0.6s
DAWY Dawson 4.55 80 Pn Pn **03 05 42.7 -1.4**
DAWY IAML 03 06 59.4
comp=E,38nm,0.6s
DAWY IAML 03 07 03.7
comp=N,61nm,0.8s
I28M Miner Creek 4.56 62 Pn 03 05 43.5 -0.8
I28M Miner Creek 4.56 62 IAML 03 06 57.1
comp=N,25nm,0.5s
I28M IAML 03 07 07.2
comp=E,33nm,0.7s
I28M Miner Creek 4.56 62 P Pn **03 05 43.5 -0.8**
baz=251
YUK3 Moose Creek 4.62 110 Pn 03 05 44.5 -0.7
YUK3 Moose Creek 4.62 110 P Pn **03 05 44.6 -0.7**
baz=298
O18K Koktuh Hills 4.63 217 Pn 03 05 44.9 -0.4
O18K Koktuh Hills 4.63 217 IAML 03 06 40.8
comp=N,18nm,2.1s
O18K IAML 03 07 16.3
comp=E,20nm,2.7s
O18K Koktuh Hills 4.63 217 P Pn **03 05 44.9 -0.4**
baz=32
H17K Granite Mounta 4.66 291 Pn 03 05 45.3 -0.2
H17K Granite Mounta 4.66 291 IAML 03 06 37.9
comp=N,19nm,1.2s
H17K IAML 03 06 40.9
comp=E,28nm,1.0s
H17K Granite Mounta 4.66 291 P Pn **03 05 45.3 -0.2**
baz=101
AUCH Augustine Cone 4.67 205 Pn 03 05 45.4 -0.4
F19K Shaleruckik Mo 4.69 317 Pn 03 05 44.1 -1.7
F19K IAML 03 07 04.1
comp=E,15nm,4.2s
CTG Chitina Glacier 4.71 121 P Pn **03 05 46.3 -0.1**
baz=309
CTGM Chitina Glacie 4.71 121 Pn 03 05 46.3 -0.2
CTGM Chitina Glacie 4.71 121 IAML 03 06 54.3
comp=N,17nm,0.7s
N17K Nushagak Hills 4.73 232 Pn Pn **03 05 45.6 -0.9**
N17K IAML 03 06 57.2
comp=N,15nm,3.6s
N17K IAML 03 07 38.6
comp=E,15nm,3.7s
SNH Sunshine Point 4.73 134 Pn Pn **03 05 46.0 -0.5**
SNH IAML 03 06 42.1
comp=N,44nm,0.5s
E25K Arctic Village 4.79 19 Pn Pn **03 05 46.5 -0.8**
E25K Arctic Village 4.79 19 P Pn **03 05 46.6 -0.8**
baz=202
LOGN Logan Glacier 4.93 121 Pn 03 05 49.2 -0.1
LOGN IAML 03 06 53.0
comp=E,16nm,1.1s
LOGN IAML 03 06 56.0
comp=N,19nm,1.0s
L16K Owhat River 4.93 251 Pn Pn **03 05 48.7 -0.5**
L16K IAML 03 07 41.2
comp=E,20nm,3.4s
L16K IAML 03 07 42.1
comp=N,19nm,3.5s
L16K Owhat River 4.93 251 P Pn **03 05 48.5 -0.7**
baz=62
E19K Redstone River 4.96 324 Pn 03 05 49.2 -0.4
E19K IAML 03 06 44.3
comp=E,13nm,1.2s
E19K IAML 03 06 46.6
comp=N,17nm,0.9s
TOLK Toolik Lake Re 5.02 0 Pn Pn **03 05 49.9 -0.5**
P18K Big Mountain, 5.04 215 Pn 03 05 50.5 -0.2
P18K Big Mountain, 5.04 215 IAML 03 06 50.8
comp=E,18nm,3.4s
P18K IAML 03 09 20.6
comp=N,18nm,3.2s
P18K Big Mountain, 5.04 215 P Pn **03 05 50.5 -0.2**
baz=30
M16K Timber Creek 5.08 243 Pn 03 05 50.5 -0.7
M16K IAML 03 06 57.1
comp=E,26nm,3.3s
M16K IAML 03 08 18.8
comp=N,23nm,4.1s
Q19K Cape Douglas, 5.11 204 Pn 03 05 50.8 -0.9
Q19K Cape Douglas, 5.11 204 P Pn **03 05 50.8 -0.9**
baz=21
L29M L29M 5.20 91 Pn 03 05 52.0 -0.9
L29M IAML 03 07 23.7
comp=N,34nm,0.8s
L29M IAML 03 07 26.9
comp=E,38nm,0.8s
M29M Somme Creek 5.22 98 Pn 03 05 51.9 -1.4
M29M Somme Creek 5.22 98 IAML 03 07 28.9
comp=E,19nm,0.5s
M29M IAML 03 07 38.7
comp=N,15nm,0.7s
M29M Somme Creek 5.22 98 P Pn **03 05 51.9 -1.4**
baz=288
Q20K Shuyak Island 5.23 196 P Pn **03 05 52.4 -0.8**
baz=14
SYI Shuyak Island 5.23 196 Pn 03 05 52.4 -0.7
N16K Nishlik Lake 5.34 238 Pn 03 05 53.9 -0.9
N16K Nishlik Lake 5.34 238 P Pn **03 05 53.9 -0.9**
baz=50
H29M Whitestone 5.44 57 Pn 03 05 55.5 -0.5
D24K Happy Valley 5.54 3 Pn 03 05 57.2 -0.2
F28M Old Crow 5.67 41 Pn Pn **03 05 58.2 -0.9**
F28M Old Crow 5.67 41 P Pn **03 05 58.0 -1.1**
baz=230
KAHG Katmai Hook Gl 5.69 207 Pn 03 05 58.9 -0.6
D25K Kavik River 5.85 11 Pn 03 06 01.3 -0.2
M30M Minto, Yukon 5.92 95 Pn Pn **03 06 01.4 -1.2**
M30M Minto, Yukon 5.92 95 P Pn **03 06 01.1 -1.5**
baz=286
I30M Mount Dempster 5.95 69 Pn 03 06 01.7 -1.4
M15K Kasigluk River 5.96 245 Pn 03 06 02.6 -0.5
M15K Kasigluk River 5.96 245 P Pn **03 06 02.6 -0.5**
baz=56
D19K Kuna River 5.96 328 Pn 03 06 02.4 -0.7
BCPM Bancas Point 6.01 123 Pn 03 05 59.9 -3.8
KDAK Kodiak Island 6.06 195 P Pn **03 06 00.6 -3.8**
comp=N,3.3nm,0.3s,baz=49,slow=8.9,SNR=30
KDAK S **Sn 03 07 06.1 -6.2**
comp=N,11nm,0.3s,baz=354,slow=18,SNR=13
ACHA Angle Creek He 6.12 210 Pn 03 06 04.5 -0.7
EPYK Eagle Plains 6.12 58 Pn Pn **03 06 04.6 -0.5**
ANCK Angle Creek 6.16 210 Pn 03 06 05.3 -0.5
N30M Aishikik Lake 6.20 105 Pn 03 06 04.8 -1.5
C23K Itkillik River 6.23 357 Pn 03 06 06.5 -0.1
HYT Haines Junctio 6.33 111 Pn Pn **03 06 08.9 +0.7**
M14K Bethel 6.45 249 Pn 03 06 09.5 -0.1
M14K Bethel 6.45 249 P Pn **03 06 09.5 -0.1**
baz=58
L14K Kuka Creek 6.47 255 Pn 03 06 09.7 -0.1
G30M tAoh Zraii Nji 6.53 53 Pn Pn **03 06 09.3 -1.4**
E29M Blow River 6.74 40 Pn 03 06 12.5 -1.0
B22K Teshekpuk Lake 6.89 349 Pn 03 06 14.5 -0.9
M31M Drury Creek, Y 7.11 95 Pn 03 06 17.7 -0.8
G31M Satah River 7.22 56 Pn Pn **03 06 17.4 -2.5**
G31M Satah River 7.22 56 P Pn **03 06 19.1 -0.8**
baz=250
FARO Faro, Yukon 7.56 93 Pn 03 06 24.1 -0.5
INK Inuvik 8.05 47 Pn 03 06 30.2 -0.9
INK Inuvik 8.05 47 P Pn **03 06 30.2 -0.9**
baz=242
INK Inuvik 8.05 47 P Pn **03 06 30.5 -0.5**
comp=N,3.1nm,0.8s,baz=234,slow=16,SNR=14
YKA Yellowknife Ar 15.79 78 P Pn **03 08 10.9 -1.3**
comp=N,0.6nm,0.6s,baz=291,slow=11,SNR=7.8
SHEM Shemya Is, Ala 21.69 257 P P **03 09 19.6 +2.0**
comp=N,90nm,0.8s,baz=72,slow=20,SNR=3.5
SCHQ Schefferville 40.34 62 P P **03 12 04.8 +2.9**
comp=N,2.1nm,0.9s,baz=293,slow=13,SNR=2.2
comp=N,2.1nm,0.9s
TXAR Lajitas Array 45.00 117 P P **03 12 40.9 +0.9**
comp=N,0.4nm,0.7s,baz=329,slow=6.0,SNR=4.9
TXAR LR LR 03 33 39.5
comp=N,76nm,19.6s,baz=208,slow=39
comp=N,0.4nm,0.7s
KBZ Khabaz 72.51 351 LR LR 03 50 01.7
comp=N,75nm,20.1s,baz=122,slow=38

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*IDC **21** 03:04:42.3±1.1,5°.25S×131°.99E,h0km,mb3.9/7, mbtmp3.8/9,ML3.8/2,MS3.9/4,Error ellipse: s-maj=80.2km s-min=21.6km az=76.0*
*DJA **21** 03:04:49.2±1.4,5°.5S±4°×13°.2E±°,h28km±14km,M4.4/8, mb4.6/2,mB5.0/1,MLv4.3/8,Mw(mB)4.3/1*
ISC 21 03:04:49.0±0.7,5°.48S±0°.06×131°.71E±0°.06,h54km,n24, σ2s82/27,mb3.8/7,MS4.0/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.03**	**298**	P	**Pn**	**03 05 20.5**	**-0.3**
BNDI	**Bandanaira**	**2.03**	**298**	P	**Pn**	**03 05 20.5**	**-0.3**
BNDI				S	**Sn**	**03 05 43.6**	**-1.5**
FAKI	**Fak Fak**	**2.59**	**12**	P	**Pn**	**03 05 26.9**	**-1.7**
FAKI	**Fak Fak**	**2.59**	**12**	P	**Pn**	**03 05 26.7**	**-1.9**
KMPI	**Kaimana, Papua**	**2.68**	**48**	P	**Pn**	**03 05 30.6**	**+0.8**
KMPI				S	**Sn**	**03 06 00.0**	**-1.1**
SWI	**Sorong**	**4.60**	**354**	P	**Pn**	**03 05 53.4**	**-2.7**
NLAI	**Namlea**	**5.10**	**296**	P	**Pn**	**03 06 02.4**	**-0.6**
SANI	**Sanana**	**6.64**	**301**	P	**Pn**	**03 06 22.5**	**-1.6**
	16nm,0.5s,0.1nm						
KDU	**Kakadu**	**7.21**	**174**	P	**Pn**	**03 06 34.1**	**+2.3**
MTN	**Manton Dam**	**7.34**	**184**	P	**Pn**	**03 06 36.5**	**+2.8**
WRA	**Warramunga Arr**	**14.61**	**170**	Pn	**Pn**	**03 08 10.9**	**-1.8**
	0.4nm,0.3s,baz=352,slow=14,SNR=16						
WRA				Sn	**Sn**	**03 10 46.5**	**-6.9**
	0.9nm,0.3s,baz=353,slow=22,SNR=9.9						
	0.8nm,0.6s						
QIS	**Mount Isa**	**16.84**	**154**	P	**P**	**03 08 44.8**	**+2.2**
	5.0nm,1.6s						
ASAR	**Alice Springs**	**18.21**	**174**	P	**P**	**03 08 58.7**	**+0.9**
	0.3nm,0.3s,baz=351,slow=8.2,SNR=23						
ASAR				S	**Sn**	**03 12 13.2**	**-7.5**
	2.5nm,0.7s,baz=356,slow=26,SNR=11						
	2.4nm,0.9s						
PSA00	**Pilbara Seismi**	**19.70**	**215**	P	**Pn**	**03 09 17.1**	**+1.2**
	15nm,1.4s						
OOD	**Oodnadatta**	**22.52**	**171**	P	**P**	**03 09 48.4**	**+4.1**
MULG	**Mulgathing**	**24.77**	**175**	P	**P**	**03 10 09.9**	**+4.1**
ASAJ	**Asahikawa**	**50.33**	**10**	LR	LR	03 32 48.6	
	comp=Z,174nm,21.5s,baz=132,slow=34						
SONM	**Songino Array**	**57.57**	**340**	P	**P**	**03 14 33.5**	**+0.2**
	0.4nm,0.6s,baz=134,slow=4.2,SNR=2.3						
SONM				LR	LR	03 42 57.7	
	comp=Z,59nm,20.6s,baz=150,slow=40						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**67.91**	**326**	P	**P**	**03 15 43.0**	**+0.9**
	1.2nm,0.7s,baz=119,slow=8.2,SNR=15						
	1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**70.99**	**333**	P	**P**	**03 16 01.1**	**+0.2**
	0.9nm,0.4s,baz=101,slow=7.9,SNR=5.1						
ZALV				LR	LR	03 50 30.1	
	comp=Z,64nm,18.7s,baz=162,slow=39						
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**72.12**	**328**	P	**P**	**03 16 08.3**	**+0.5**
	0.4nm,0.4s,baz=124,slow=5.0,SNR=2.6						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**77.70**	**327**	P	**P**	**03 16 40.5**	**+0.5**
	0.6nm,0.6s,baz=120,slow=5.3,SNR=4.1						
BVAR				LR	LR	03 53 23.9	
	comp=Z,78nm,18.2s,baz=124,slow=38						
	0.6nm,0.6s						
QSPA	**South Pole Qui**	**84.49**	**180**	P	**P**	**03 17 18.8**	**+2.8**
	1.3nm,0.7s,baz=66,slow=12,SNR=13						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**91.25**	**25**	P	**P**	**03 17 47.8**	**-0.5**
	0.2nm,0.6s,baz=260,slow=4.7,SNR=5.4						
	0.2nm,0.6s						

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*IDC **21** 03:46:42.6±1.6,33°.49N×141°.22E,h0km,mb3.2/4, mbtmp3.2/5,ML2.2/1,Error ellipse: s-maj=44.5km s-min=27.8km az=64.0*
*JMA **21** 03:46:50.0±0.1,33°.4N±0°.3×14°0E±°,h31km±1km, MV3.3/24,NEAR HACHIJOJIMA ISLAND*
ISC 21 03:46:49.9±1.1,33°.49N±0°.03×139°.63E±0°.07,h19km±5km, n19,σ2s06/19,mb3.2/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.40**	**356**	P	**Pn**	**03 47 00.5**	**-0.3**
JMKN				S	**Sn**	**03 47 08.0**	**+0.1**
JHJ2	**Mitsune**	**0.41**	**157**	*i* P	**Pg**	**03 46 58.3**	**-0.1**
JHJ2				S	**Sg**	**03 47 04.0**	**-0.1**
JHCJ	**Hachijojimakas**	**0.44**	**161**	*i* P	**Pg**	**03 46 58.5**	**-0.5**
JHCJ				S	**Sg**	**03 47 04.3**	**-0.7**
JMYK	**Miyake Tsubota**	**0.57**	**354**	P	**Pn**	**03 47 03.1**	**0.0**
JMYK				*e*S	**Sn**	**03 47 12.4**	**+0.4**
JKO	**Kozu shima**	**0.81**	**330**	P	**Pg**	**03 47 05.9**	**+0.2**
JIM2	**Oshima 3**	**1.24**	**353**	P	**Pg**	**03 47 13.6**	**-0.3**
JIM2				*e*S	**Sg**	**03 47 30.5**	**+0.5**
BSO3	**Boso 3**	**1.50**	**29**	P	**Pg**	**03 47 17.9**	**-1.0**
TK02	**Tokai 2**	**1.62**	**287**	*e*P	**Pn**	**03 47 16.3**	**-1.0**
TK02				*e*S	**Sn**	**03 47 36.0**	**-1.7**
MJAR	**Matsushiro Arr**	**3.26**	**340**	Pn	**Pb**	**03 47 44.9**	**-2.3**
	0.2nm,0.3s,baz=155,slow=14,SNR=8.4						
MJAR				Sn	**Sg**	**03 48 31.6**	**-3.1**
	0.2nm,0.3s,baz=154,slow=17,SNR=4.8						
	2.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.87**	**113**	T	T	04 21 21.0	
	baz=305,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy**	**27.87**	**113**	T	T	04 21 23.2	
	baz=305,slow=75,SNR=39						
H11N3	**WAKE ISLAND Hy**	**27.89**	**113**	T	T	04 21 21.2	
	baz=305,slow=75,SNR=44						
H11S3	**WAKE ISLAND Hy**	**28.43**	**115**	T	T	04 22 07.1	
	baz=307,slow=75,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**28.43**	**115**	T	T	04 22 05.8	
	baz=307,slow=75,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	**28.45**	**115**	T	T	04 22 06.0	
	baz=307,slow=75,SNR=5.2						
SONM	**Songino Array**	**28.74**	**310**	P	**P**	**03 52 50.2**	**+3.9**

0.4nm,0.7s,baz=118,slow=6.9,SNR=2.9
0.4nm,0.7s
MKAR Makanchi Array 44.85 305 P P 03 55 07.1 +4.2
0.2nm,0.7s,baz=83,slow=6.0,SNR=2.7
0.2nm,0.7s
ILAR Eielson Array 53.27 31 P P 03 55 57.5 -10
0.1nm,0.7s,baz=279,slow=6.1,SNR=1.4
0.1nm,0.7s
WRA Warramunga Arr 53.37 186 P P 03 56 05.2 -3.1
0.3nm,0.6s,baz=3.3,slow=7.4,SNR=2.1
0.3nm,0.6s

NAO ***21*** *04:03:49.7±0.6, 66.45N×13.30E, h5km±6km, ML2.4*
HEL ***21*** *04:03:50.8±0.4, 66.42N×13.37E, h10km, ML2.0, ML2.0(UPP), Confirmed Earthquake*
BER ***21*** *04:03:51.1±2.8, 66.43N×13.33E, h0km±7km, ML2.0, ML2.4(NAO), Confirmed Earthquake*
UPP ***21*** *04:03:51.1±1.0, 66.41N×13.70E, h0km, ML2.0*
IDC ***21*** *04:03:52.0±1.6, 66.44N×13.86E, h0km, mbtmp2.9/4, ML1.9/4, Error ellipse: s-maj=19.6km s-min=9.4km az=117.0*

ISC 21 04:03:49.6±1.0, 66.46N±0.02×13.40E±0.03, h6km±8km, n64, σ1s56/104, 1D, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KONS	**Konsvik**	**0.12**	**290**		Pg		**Pg**	**04 03 52.2**	**0.0**
KONS					Lg		Lg	04 03 53.7	
KONS	**Konsvik**	**0.12**	**290**	*i*P			**Pg**	**04 03 52.1**	**0.0**
KONS				*e*S			**Sg**	**04 03 53.7**	**-0.1**
KONS					IAML			04 03 54.0	
	comp=Z,2μm,0.3s								
STOK	**Stokkvaagen**	**0.20**	**231**		Pg		**Pg**	**04 03 53.2**	**-0.4**
STOK					Lg		Lg	04 03 55.9	
STOK	**Stokkvaagen**	**0.20**	**231**	*e*P			**Pg**	**04 03 53.2**	**-0.4**
STOK				*e*S			**Sg**	**04 03 55.8**	**-0.4**
STOK					IAML			04 03 56.7	
	comp=Z,502nm,0.3s								
MOR8	**Moi Rana**	**0.51**	**124**		Pg		**Pb**	**04 04 00.1**	**-0.9**
MOR8					Lg		Lg	04 04 08.3	
MOR8	**Moi Rana**	**0.51**	**124**	*e*P			**Pb**	**04 04 00.3**	**-0.7**
MOR8				*e*S			**Sb**	**04 04 08.3**	**-0.3**
MOR8					IAML			04 04 09.2	
	comp=Z,102nm,0.2s								
FAUS	**Fauske**	**1.19**	**38**	*e*P			**Pg**	**04 04 11.7**	**-0.7**
FAUS				*e*S			**Sb**	**04 04 28.8**	**+0.7**
FAUS					IAML			04 04 40.0	
	comp=Z,23nm,0.4s								
STEI	**Steigen**	**1.64**	**25**	Pn			**Pn**	**04 04 19.5**	**+0.6**
STEI					Lg		Lg	04 04 43.2	
STEI	**Steigen**	**1.64**	**25**	*e*P			**Pn**	**04 04 19.6**	**+0.6**
STEI				*e*Sg			**Sg**	**04 04 44.0**	**+1.6**
STEI					IAML			04 04 46.6	
	comp=Z,19nm,0.3s								
LOF	**Lofoten**	**1.68**	**2**	Pn			**Pn**	**04 04 18.2**	**-1.3**
LOF					Sn		**Sn**	**04 04 39.1**	**-2.2**
LOF					Lg		Lg	04 04 43.8	
LOF	**Lofoten**	**1.68**	**2**	*e*P			**Pn**	**04 04 17.9**	**-1.6**
LOF				*e*S			**Sn**	**04 04 38.9**	**-2.4**
LOF				*e*Sg			**Sb**	**04 04 43.6**	**+1.3**
NSS	**Namsos**	**2.03**	**198**	*e*P			**Pn**	**04 04 25.4**	**+1.1**
NSS				*e*				04 04 28.8	
NSS				*e*Sg			**Sn**	**04 04 52.8**	**+3.0**
NSS					IAML			04 04 55.9	
	comp=Z,10nm,0.4s								
SALU	**Saltoluokta**	**2.21**	**63**	*e*P			**Pn**	**04 04 28.1**	**+1.3**
SALU				*e*				04 04 57.4	
SALU				*e*Sg			**Sg**	**04 05 00.6**	**0.0**
SALU	**Saltoluokta**	**2.21**	**63**	P			**Pn**	**04 04 28.3**	**+1.4**
SALU				S			**Sb**	**04 04 57.7**	**0.0**
SALU	**Saltoluokta**	**2.21**	**63**	*e*P			**Pn**	**04 04 28.3**	**+1.4**
SALU				*e*SB			**Sb**	**04 04 57.7**	**0.0**
RATU	**Laukkuluspa**	**2.78**	**58**	P			**Pn**	**04 04 35.8**	**+1.2**
RATU	**Laukkuluspa**	**2.78**	**58**	*e*P			**Pn**	**04 04 35.8**	**+1.2**
LILU	**Lilltraesk**	**2.90**	**111**	P			**Pn**	**04 04 36.7**	**+0.5**
LILU	**Lilltraesk**	**2.90**	**111**	*e*P			**Pn**	**04 04 36.7**	**+0.5**
DUNU	**Dundret**	**2.92**	**74**	P			**Pn**	**04 04 37.6**	**+1.1**
DUNU				S			**Sn**	**04 05 14.0**	**+2.2**
DUNU	**Dundret**	**2.92**	**74**	*e*P			**Pn**	**04 04 37.6**	**+1.1**
DUNU				*e*S			**Sn**	**04 05 14.0**	**+2.2**
KUA	**Kurravaara**	**3.09**	**58**	P			**Pn**	**04 04 39.9**	**+1.0**
KUA	**Kurravaara**	**3.09**	**58**	*e*P			**Pn**	**04 04 39.9**	**+1.0**
NOD	**Norderasen**	**3.09**	**168**	*e*P			**Pn**	**04 04 40.1**	**+1.3**
NOD				*e*Pg			**Pb**	**04 04 44.5**	**-0.5**
NOD				*e*Sg			**Sb**	**04 05 24.0**	**+1.2**
NOD	**Norderasen**	**3.09**	**168**	P			**Pn**	**04 04 40.2**	**+1.3**
NOD	**Norderasen**	**3.09**	**168**	*e*P			**Pn**	**04 04 40.2**	**+1.3**
SVAU	**Svanoeiden**	**3.25**	**125**	P			**Pn**	**04 04 41.2**	**+0.2**
SVAU	**Svanoeiden**	**3.25**	**125**	*e*P			**Pn**	**04 04 41.2**	**+0.2**
BREU	**Bredtraesk**	**3.38**	**137**	P			**Pn**	**04 04 43.2**	**+0.4**
BREU	**Bredtraesk**	**3.38**	**137**	*e*P			**Pn**	**04 04 43.2**	**+0.4**
SJUU	**Sjulsmark**	**3.49**	**102**	P			**Pn**	**04 04 44.4**	**0.0**
SJUU	**Sjulsmark**	**3.49**	**102**	*e*P			**Pn**	**04 04 44.4**	**0.0**
SOLU	**Sollefteaa**	**3.62**	**151**	P			**Pn**	**04 04 47.3**	**+1.1**
SOLU	**Sollefteaa**	**3.62**	**151**	*e*P			**Pn**	**04 04 47.3**	**+1.1**
ODEU	**Stanfors**	**3.68**	**121**	P			**Pn**	**04 04 47.4**	**+0.4**
ODEU	**Stanfors**	**3.68**	**121**	*e*P			**Pn**	**04 04 47.4**	**+0.4**
LANU	**Lannavaara**	**3.70**	**61**	*e*P			**Pn**	**04 04 49.2**	**+2.0**
LANU				*e*S			**Sn**	**04 05 33.3**	**+2.2**
KIF	**Kilpisjarvi**	**3.80**	**44**	Pn			**Pn**	**04 04 50.2**	**+1.6**
KIF					Sn		**Sn**	**04 04 57.5**	**+3.9**
KIF					Lg		Lg	04 05 52.1	
KIF	**Kilpisjarvi**	**3.80**	**44**	*e*P			**Pn**	**04 04 49.4**	**+0.8**
KIF				*e*S			**Sn**	**04 05 35.1**	**+1.5**
KIF	**Kilpisjarvi**	**3.80**	**44**	*e*P			**Pn**	**04 04 50.9**	**+2.3**
KIF				*e*S			**Sn**	**04 05 37.1**	**+3.5**
KIF					MSG			04 05 53.5	
	comp=Z,2.7nm,0.2s								
JETT	**Jettan, Norway**	**4.08**	**37**	Pn			**Pn**	**04 04 54.1**	**+1.7**
JETT					Sn		**Sn**	**04 05 42.1**	**+1.7**
JETT	**Jettan, Norway**	**4.08**	**37**	Pn			**Pn**	**04 04 54.1**	**+1.7**
JETT					Sn		**Sn**	**04 05 42.1**	**+1.7**
KLF	**Kolari**	**4.24**	**75**	*e*P			**Pn**	**04 04 55.6**	**+0.9**
KLF				*e*S			**Sn**	**04 05 45.2**	**+0.7**
HEF	**Hetta**	**4.41**	**59**	*e*P			**Pn**	**04 04 58.4**	**+1.4**
HEF				*e*S			**Sn**	**04 05 48.5**	**-0.1**
HEF	**Hetta**	**4.41**	**59**	*e*P			**Pn**	**04 04 58.4**	**+1.4**
HEF				*e*S			**Sn**	**04 05 49.1**	**+0.5**
HEF					MSG			04 06 10.4	
	comp=Z,1.8nm,0.2s								
TOF	**Tornio**	**4.43**	**90**	*e*P			**Pn**	**04 04 57.4**	**+0.1**
TOF				*e*S			**Sn**	**04 05 48.4**	**-0.6**
TOF					MSG			04 06 14.5	
	comp=Z,1.9nm,0.3s								
KTK1	**Kautokeino**	**4.53**	**51**	*e*P			**Pn**	**04 04 58.9**	**+0.2**
KTK1				*e*S			**Sn**	**04 05 51.6**	**-0.1**
KTK1					IAML			04 06 14.8	
	comp=Z,2.6nm,0.4s								
DOMB	**Dombas**	**4.82**	**205**	*e*S			**Sn**	**04 05 53.8**	**-4.9**
AKN	**Aaknes**	**5.12**	**216**	*e*P			**Pn**	**04 05 05.7**	**-1.0**
AKN				*e*S			**Sn**	**04 06 03.7**	**-2.4**
OUF	**Merijarvi**	**5.17**	**109**	*e*P			**Pn**	**04 05 06.8**	**-0.7**
OUF				*e*S			**Sn**	**04 06 04.6**	**-2.8**
VAF	**Ylistaro**	**5.24**	**127**	*e*P			**Pn**	**04 05 09.2**	**+0.9**
VAF				*e*S			**Sn**	**04 06 07.5**	**-1.5**
ARA0	**ARCESS Array S**	**5.50**	**50**	Pn			**Pn**	**04 05 11.8**	**-0.1**
	baz=234,slow=14								
ARA0					Sn		**Sn**	**04 06 13.3**	**-2.0**
	baz=238,slow=22								
ARA0	**ARCESS Array S**	**5.50**	**50**	Pn			**Pn**	**04 05 11.8**	**-0.1**
	baz=234,slow=14								
ARA0				*e*S			**Sn**	**04 06 12.8**	**-2.4**
ARA0					IAML			04 06 28.1	
	comp=Z,2.1nm,0.8s								
ARCES	**ARCESS Array B**	**5.50**	**50**	Pn			**Pn**	**04 05 11.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=236,slow=13,SNR=7.9								
ARCES					Sn		**Sn**	**04 06 12.7**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=235,slow=23,SNR=5.8								
ARCES					Lg		Lg	04 06 35.5	
	comp=Z,0.1nm,0.3s,baz=234,slow=21,SNR=1.4								
	comp=Z,1.7nm,0.8s								
NOA	**NORSAR Array B**	**5.53**	**191**	Pn			**Pn**	**04 05 14.9**	**+2.6**
	baz=37,slow=20,SNR=1.3								
NOA					Sn		**Sn**	**04 06 17.2**	**+1.0**
	baz=54,slow=21,SNR=3.4								
NOA					Lg		Lg	04 06 40.3	
	baz=32,slow=20,SNR=5.0								
	comp=Z,0.4nm,0.9s								
NRA0	**NORESS Array S**	**5.81**	**189**	Pn			**Pn**	**04 05 18.0**	**+1.8**
	baz=8.7,slow=12								
NRA0	**NORESS Array S**	**5.81**	**189**	Pn			**Pn**	**04 05 18.0**	**+1.8**
	baz=8.7,slow=12								
KPF	**Kankaanpaa**	**5.99**	**137**	*e*P			**Pn**	**04 05 20.1**	**+1.4**
KPF				*e*S			**Sn**	**04 06 25.8**	**-1.6**
KEV	**Kevo**	**6.06**	**51**	*e*P			**Pn**	**04 05 19.2**	**-0.4**
KEV				*e*S			**Sn**	**04 06 26.2**	**-3.0**
HFS	**Hagfors**	**6.35**	**179**	Pn			**Pn**	**04 05 24.1**	**+0.5**
	baz=11,slow=12								
HFS					Sn		**Sn**	**04 06 35.9**	**-0.5**
HFS	**Hagfors**	**6.35**	**179**	Pn			**Pn**	**04 05 24.1**	**+0.5**
	baz=11,slow=12								
HFS					Sn		**Sn**	**04 06 35.9**	**-0.5**
HFS	**Hagfors**	**6.35**	**179**	Pn			**Pn**	**04 05 26.4**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=13,slow=8.9,SNR=1.9								
HFS					Sn		**Sn**	**04 06 35.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=357,slow=25,SNR=1.7								
HFS					Lg		Lg	04 07 06.7	
	comp=Z,0.3nm,0.3s,baz=354,slow=26,SNR=2.5								
	comp=Z,1.3nm,0.8s								
VADS	**Vadso**	**6.95**	**51**	*e*P			**Pn**	**04 05 31.8**	**0.0**
VADS					IAML			04 06 45.4	
	comp=Z,6.8nm,0.8s								
FINES	**FINESS Array B**	**7.50**	**126**	Pn			**Pn**	**04 05 39.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=316,slow=12,SNR=5.7								
FINES					Sn		**Sn**	**04 07 00.8**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=322,slow=18,SNR=1.4								
FINES					Lg		Lg	04 07 41.9	
	comp=Z,0.4nm,0.3s,baz=324,slow=26,SNR=6.7								
	comp=Z,1.5nm,0.9s								

IDC ***21*** *04:13:43.0±1.6, 3.26S×139.83E, h0km, mb3.5/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=75.3km s-min=29.0km az=96.0*
DJA ***21*** *04:13:53.7±0.4, 4.5±6.1×14.0E±0.1, h55km±23km, M4.2/4, mb4.3/4, MLv4.1/2*

ISC 21 04:13:49.0±0.9, 3.81S±0.07×139.5E±0.1, h35km, n9, σ2s52/12, mb3.7/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.36**	**27**	P			**Pn**	**04 14 14.4**	**+2.8**
GENI				S			**Sn**	**04 14 29.9**	**+1.4**
SMPI	**Sarmi**	**1.99**	**335**	P			**Pn**	**04 14 22.6**	**+2.4**
SMPI				S			**Sn**	**04 14 44.7**	**+0.8**
SOEI	**Soe**	**16.27**	**248**	P			**P**	**04 17 39.4**	**+1.6**
	40nm,1.4s								
WRA	**Warramunga Arr**	**16.82**	**197**	Pn			**P**	**04 17 46.6**	**+2.9**
	0.2nm,0.3s,baz=11,slow=13,SNR=12								
WRA					Sn		**Sn**	**04 20 46.1**	**-1.7**
	0.4nm,0.3s,baz=14,slow=23,SNR=5.1								
	0.5nm,0.3s								
ASAR	**Alice Springs**	**20.48**	**195**	P			Pn	04 18 30.0	+3.7
	0.6nm,0.7s,baz=24,slow=9.5,SNR=4.4								
ASAR				S			**S**	**04 22 13.8**	**+2.4**
	1.0nm,0.7s,baz=12,slow=28,SNR=4.8								
	0.6nm,0.7s								
MKAR	**Makanchi Array**	**71.16**	**322**	P			**P**	**04 25 02.9**	**-1.4**
	0.2nm,0.3s,baz=113,slow=7.4,SNR=4.8								
	0.2nm,0.3s								
BVAR	**Borovoye Array**	**80.68**	**325**	P			**P**	**04 25 56.0**	**-2.4**
	0.6nm,0.5s,baz=99,slow=4.5,SNR=2.6								
	0.6nm,0.5s								
ILAR	**Eielson Array**	**86.49**	**24**	P			**P**	**04 26 24.3**	**-3.7**
	0.4nm,0.8s,baz=264,slow=4.5,SNR=4.4								
	0.4nm,0.8s								
DBIC	**Dimbokro**	**144.44**	**276**	PKP			**PKPab**	**04 33 20.8**	**-0.3**
	2.7nm,0.6s,baz=135,slow=2.9,SNR=1.7								

IDC ***21*** *04:30:55.9±11.0, 33.01N×46.37E, h0km, mb3.6/4, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=186.2km s-min=104.5km az=22.0*
TEH ***21*** *04:31:45.8, 36.54N×51.58E, h11km, ML3.3*

ISC 21 04:31:46.7±0.9, 36.50N±0.04×51.55E±0.03, h10km, n29, σ1s33/29, mb3.4/4, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IPRN	**Peran**	**0.69**	**112**		Pg		**Pb**	**04 31 59.5**	**-1.3**
AMD1	**Meshkindasht**	**0.89**	**213**		Pg		**Pb**	**04 32 04.1**	**-0.1**
IDMV	**Damavand**	**1.00**	**157**		Pg		**Pg**	**04 32 05.4**	**-0.6**
IMHD	**Mahdasht**	**1.08**	**222**		Pg		**Pn**	**04 32 07.6**	**-0.3**
IHSB	**Hasanabad**	**1.08**	**192**		Pg		**Pb**	**04 32 07.4**	**-0.1**
IALA	**Alasht**	**1.10**	**112**		Pg		**Pb**	**04 32 07.1**	**-0.8**
IFIR	**Firoozkooh**	**1.30**	**131**		Pg		**Pb**	**04 32 10.6**	**-0.7**
LHJ2	**Lahijan - Gila**	**1.37**	**300**		Pg		**Pb**	**04 32 11.8**	**-0.5**
JIR1	**Jirandeh**	**1.42**	**279**		Pg		**Pb**	**04 32 13.2**	**-0.7**
IVRN	**Varamin**	**1.51**	**174**		Pg		**Pb**	**04 32 14.6**	**-0.1**
ILAS	**Lasjerd**	**1.60**	**134**		Pg		**Pg**	**04 32 16.7**	**-0.6**
IQOM	**Qom**	**1.70**	**193**		Pg		**Pb**	**04 32 17.9**	**-0.2**
IRAZ	**Razeghan**	**1.71**	**231**		Pg		**Pb**	**04 32 17.8**	**-0.5**
IGLO	**Ghaloghah**	**1.84**	**89**		Pn		**Pb**	**04 32 18.9**	**-1.6**
IANJ	**Anjilo**	**2.18**	**117**		Pn		**Pb**	**04 32 25.1**	**-1.2**
ISFB	**Sefidab**	**2.21**	**165**		Pn		**Pb**	**04 32 25.9**	**-1.0**
HAGD	**Aghdareh**	**2.58**	**230**		Pn		**Pb**	**04 32 30.8**	**-2.3**
QAMS	**Qamsar**	**2.76**	**183**		Pn		**Pb**	**04 32 33.6**	**-2.6**
ISRB	**Sarab**	**3.37**	**294**		Pn		**Pn**	**04 32 40.8**	**+1.2**
IHSH	**Hashtrud**	**3.53**	**284**		Pn		**Pn**	**04 32 43.4**	**+1.6**
IZEF	**Zefreh**	**3.65**	**170**		Pn		**Pn**	**04 32 45.9**	**+2.5**
ANAR	**Anarak**	**3.76**	**151**		Pn		**Pn**	**04 32 46.4**	**+1.6**
IHRS	**Heris**	**4.02**	**298**		Pn		**Pn**	**04 32 50.0**	**+1.5**
GEYT	**Alibeck**	**5.43**	**73**		Pn		**Pg**	**04 33 30.7**	**-0.1**
	0.7nm,0.3s,baz=243,slow=16,SNR=3.8								
	1.6nm,0.4s								
TPRV	**Parvadeh(Tabas**	**5.46**	**128**	Pn			**Pn**	**04 33 10.4**	**+2.1**
BVAR	**Borovoye Array**	**21.16**	**33**	P			**P**	**04 36 32.0**	**+0.3**
	0.4nm,0.4s,baz=244,slow=9.2,SNR=2.7								
	0.4nm,0.4s								
KURBB	**Kurchatov Arra**	**23.95**	**45**	P			**P**	**04 37 01.8**	**+0.9**
	0.8nm,0.5s,baz=247,slow=9.8,SNR=6.6								
	0.8nm,0.5s								
MKAR	**Makanchi Array**	**25.03**	**56**	P			**P**	**04 37 11.7**	**+0.9**
	0.4nm,0.9s,baz=258,slow=5.7,SNR=2.2								
	0.4nm,0.9s								
ZALV	**Zalesovo Beam**	**28.85**	**42**	P			**P**	**04 37 43.4**	**-1.6**
	0.4nm,0.4s,baz=238,slow=8.3,SNR=2.2								
	0.4nm,0.4s								

MEX 21 04:35:39.2±0.8, 16.29N×98.02W, h6km±33km, MD3.4, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**315**	*i*P			Pg	04 35 41.6	-0.7
	baz=170,slow=9.3								
PNIG				*i* S			Sg	04 35 44.4	0.0
PNIG	**Pinotepa**	**0.15**	**315**	*i* P			Pg	04 35 41.5	-0.7
PNIG				*i* S			Sg	04 35 44.4	+0.1
YOIG	**Yosondua**	**0.72**	**39**	*e*P			Pg	04 35 51.9	-1.3
YOIG				*e*S			Sg	04 36 02.3	-0.4
PEIG	**Puerto Escondi**	**0.88**	**109**	*e*P			Pg	04 35 54.1	-2.1
TXIG	**Tlaxiaco**	**0.99**	**14**	*e*P			Pg	04 35 56.6	-1.7
TXIG				*e*S			Sg	04 36 08.1	-3.0

IDC ***21*** *05:22:55.5±1.5, 22.99N×120.95E, h0km, mb3.4/4, mbtmp3.4/4, MS2.9/2, Error ellipse: s-maj=74.6km s-min=29.9km az=65.0*
JMA ***21*** *05:22:59.8±0.2, 23.3N±0.2×120.8E±0.5, h2km±1km, MV4.1/13, TAIWAN REGION*
ASIES ***21*** *05:22:59.6, 23.29N×120.78E, h15km, ML4.0, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}2.92; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$-1.36; $M_{r\theta}$0.82; $M_{\theta\phi}$-1.38; $M_{\phi r}$0.47; Fault plane solution: $M_0$2.85347×10^{21} NP1:ϕ_s44.72000°, δ54.54000°, λ.99.62000°. NP2:ϕ_s208.43000°, δ36.58000°, λ76.79000°. Principal axes: T Plg77.9790°, Azm349.3120°; N Plg7.8270°, Azm219.1050°; P Plg9.0660°, Azm127.8480°;*
TAP ***21*** *05:22:59.6, 23.29N×120.78E, h15km, ML4.0, B*

ISC 21 05:22:59.7±0.9, 23.29N±0.01×120.77E±0.01, h18km±6km, n171, σ0s90/322, mb3.4/4, 6C-25D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STYH	**Taoyuan**	**0.12**	**177**	⇑P			**Pb**	**05 23 03.5**	**+0.1**
	baz=181								
STYH				S			**Sb**	**05 23 05.9**	**+0.2**
	baz=181								
STYT	**Tauyuan**	**0.13**	**185**	⇑*i*P			**Pb**	**05 23 03.7**	**+0.2**
	baz=185								
STYT				*i* S			**Sb**	**05 23 06.4**	**+0.4**
	baz=185								
TPUB	**Ta-pu**	**0.13**	**275**	P			**Pb**	**05 23 03.8**	**+0.3**
TPUB	**Ta-pu**	**0.13**	**275**	⇓P			**Pb**	**05 23 03.8**	**+0.3**
	baz=275								
TPUB				S			**Sb**	**05 23 06.8**	**+0.7**
	baz=275								
WTP	**Ta-pu**	**0.15**	**253**	⇑*i*P			**Pb**	**05 23 04.0**	**+0.1**
	baz=253								
WTP				*i* S			**Sb**	**05 23 07.4**	**+0.7**
	baz=253								
CHN4	**Tsaushan**	**0.17**	**291**	⇓*i*P			**Pb**	**05 23 04.5**	**+0.2**
	baz=291								
CHN4				*i* S			**Sb**	**05 23 08.3**	**+0.8**
	baz=291								
WCKO	**Fanlu**	**0.21**	**314**	⇓P			**Pb**	**05 23 05.1**	**0.0**
	baz=319								
WCKO				S			**Sb**	**05 23 09.6**	**+1.0**
	baz=319								
ALS	**Alishan**	**0.22**	**9**	⇓*i*P			**Pb**	**05 23 05.3**	**-0.1**
	baz=9.0								
ALS				*i* S			**Sb**	**05 23 09.3**	**+0.2**
	baz=9.0								
CHN1	**Nanshi**	**0.24**	**245**	⇑*i*P			**Pb**	**05 23 05.8**	**+0.1**
	baz=251								
CHN1				*i* S			**Sb**	**05 23 10.2**	**+0.6**
	baz=251								
ELDTW	**Lidau**	**0.25**	**114**	⇓*i*P			**Pb**	**05 23 05.6**	**-0.2**
	baz=108								
ELDTW				*i* S			**Sb**	**05 23 09.6**	**-0.3**
	baz=108								
SNST	**Tainan City**	**0.26**	**254**	⇓P			**Pb**	**05 23 05.9**	**0.0**
	baz=255								
SNST				S			**Sb**	**05 23 10.2**	**+0.2**
	baz=255								
TWK	**Hsinying**	**0.26**	**265**	⇓*i*P			**Pb**	**05 23 05.8**	**-0.1**
	baz=265								
TWK				*i* S			**Sb**	**05 23 10.3**	**+0.3**
	baz=265								
SGST	**Jiashian**	**0.27**	**220**	⇑*i*P			**Pg**	**05 23 05.2**	**-0.6**
	baz=220								
SGST				*i* S			**Sg**	**05 23 09.9**	**+0.1**
	baz=220								
CHN5	**Tsauling**	**0.32**	**345**	⇓P			**Pb**	**05 23 06.9**	**0.0**
	baz=343								
CHN5				S			**Sb**	**05 23 12.8**	**+1.0**
	baz=343								
CHN2	**Minshiung**	**0.36**	**312**	⇓P			**Pb**	**05 23 08.3**	**+0.6**
	baz=311								
CHN2				S			**Sb**	**05 23 15.0**	**+2.0**
	baz=311								
CHY	**Chiayi**	**0.38**	**303**	⇓P			**Pb**	**05 23 08.4**	**+0.5**
	baz=303								
CHY				S			**Sb**	**05 23 15.4**	**+1.9**
	baz=303								
EHD	**Haiduan**	**0.43**	**109**	⇓P			**Pb**	**05 23 08.6**	**-0.2**
	baz=105								
EHD				S			**Sg**	**05 23 14.2**	**-0.2**
	baz=105								
CHN3	**Shinhua**	**0.43**	**240**	*i* P			**Pn**	**05 23 10.3**	**-0.7**
	baz=251								
CHN3				*i* S			**Sn**	**05 23 18.3**	**-0.2**
	baz=251								
WGK	**Gukeng**	**0.44**	**334**	⇓*i*P			**Pb**	**05 23 09.6**	**+0.7**
	baz=334								
WGK				*i* S			**Sb**	**05 23 17.1**	**+1.8**
	baz=334								
WDLH	**Douliu**	**0.45**	**332**	*e*P			**Pb**	**05 23 09.8**	**+0.7**
	baz=330								
WDLH				S			**Sb**	**05 23 17.3**	**+1.7**
	baz=330								
ICHU	**Yijhu**	**0.46**	**279**	*e*P			**Pb**	**05 23 09.7**	**+0.4**
	baz=279								
ECS	**Chishang**	**0.46**	**115**	⇓P			**Pb**	**05 23 09.5**	**+0.2**
	baz=112								
ECS				*e*S			**Sb**	**05 23 16.7**	**+0.9**
	baz=112								
SSHA	**Shanhua**	**0.47**	**251**	P			**Pg**	**05 23 08.6**	**-0.6**
	baz=252								
SSHA				S			**Sn**	**05 23 19.2**	**-0.2**
	baz=252								
SHHT	**Tainan City**	**0.47**	**235**	*e*P			**Pn**	**05 23 11.1**	**-0.5**
	baz=245								
SHHT				S			**Sn**	**05 23 19.4**	**-0.1**
	baz=245								
SCST	**Cishan**	**0.48**	**212**	P			**Pb**	**05 23 10.4**	**+0.8**
	baz=215								
SCST				*e*S			**Sb**	**05 23 18.3**	**+2.0**
	baz=215								
TWF1	**Yuli**	**0.49**	**83**	⇓*i*P			**Pb**	**05 23 09.7**	**-0.2**
	baz=82								
TWF1				*e*S			**Sb**	**05 23 16.8**	**0.0**
	baz=82								
YULB	**Yu-li**	**0.50**	**78**	P			**Pg**	**05 23 09.5**	**-0.2

WNT	**Mingjian**	**0.59**	**352**	⇓	*i*	P	**Pb**	**05 23 12.3**	**+0.7**
	baz=338								
WNT					*i*	S	**Sb**	**05 23 21.4**	**+1.8**
	baz=338								
TSMG	**Majia**	**0.59**	**191**			P	**Pb**	**05 23 11.8**	**+0.2**
	baz=190								
TSMG						S	**Sb**	**05 23 20.3**	**+0.6**
	baz=190								
SMLT	**Sun Moon Lake**	**0.60**	**12**	⇓	*i*	P	**Pb**	**05 23 12.2**	**+0.4**
	baz=16								
SMLT					*i*	S	**Sb**	**05 23 21.9**	**+1.8**
	baz=16								
TAI	**Tainan**	**0.60**	**241**		*e*	P	**Pn**	**05 23 13.3**	**-0.1**
	baz=241								
TAI						S	**Sn**	**05 23 23.8**	**+1.0**
	baz=241								
WSF	**Szhu**	**0.61**	**305**	⇓	*i*	P	**Pb**	**05 23 12.1**	**+0.3**
	baz=304								
WSF					*i*	S	**Sb**	**05 23 22.0**	**+1.9**
	baz=304								
TYC	**Yuchr**	**0.62**	**8**	⇓	*i*	P	**Pb**	**05 23 12.6**	**+0.6**
	baz=7.0								
TYC					*i*	S	**Sn**	**05 23 22.5**	**-0.6**
	baz=7.0								
SGLT	**Jiouru**	**0.62**	**205**		*i*	P	**Pn**	**05 23 13.9**	**+0.3**
	baz=196								
SGLT					*e*	S	**Sn**	**05 23 24.3**	**+1.2**
	baz=196								
WNT1	**Nantou City**	**0.62**	**352**			P	**Pb**	**05 23 12.9**	**+0.9**
	baz=338								
WNT1						S	**Sb**	**05 23 22.3**	**+1.8**
	baz=338								
ECBN	**Changbin**	**0.63**	**87**			P	**Pn**	**05 23 13.4**	**-0.3**
	baz=82								
ECBN					*e*	S	**Sn**	**05 23 22.4**	**-1.0**
	baz=82								
HGSD	**Ruisui**	**0.64**	**71**			P	**Pb**	**05 23 12.7**	**+0.4**
	baz=76								
HGSD					*e*	S	**Sb**	**05 23 21.5**	**+0.6**
	baz=76								
TTN	**Taitung**	**0.64**	**147**		*i*	P	**Pn**	**05 23 13.3**	**-0.5**
	baz=147								
TTN						S	**Sn**	**05 23 24.2**	**+0.7**
	baz=147								
TSCK	**Chigu Township**	**0.64**	**257**			P	**Pb**	**05 23 13.5**	**+1.1**
	baz=258								
TSCK						S	**Sn**	**05 23 24.4**	**+0.6**
	baz=258								
SNJT	**Kaohsiung City**	**0.67**	**217**		*e*	P	**Pn**	**05 23 15.2**	**+0.9**
	baz=233								
SNJT						S	**Sn**	**05 23 26.9**	**+2.5**
	baz=233								
MASBT	**Mashibuluo**	**0.69**	**191**			P	**Pb**	**05 23 13.3**	**+0.1**
	baz=189								
MASBT						S	**Sb**	**05 23 23.3**	**+1.0**
	baz=189								
WYL	**Yuanlin Townsh**	**0.69**	**346**			P	**Pb**	**05 23 14.0**	**+0.7**
	baz=344								
WYL						S	**Sn**	**05 23 24.4**	**-0.5**
	baz=344								
WRL	**Guolierlin Hig**	**0.71**	**330**			P	**Pb**	**05 23 14.0**	**+0.5**
	baz=329								
WRL						S	**Sn**	**05 23 25.2**	**-0.2**
	baz=329								
WARBT	**Fenglin Townsh**	**0.71**	**53**			P	**Pb**	**05 23 13.6**	**0.0**
	baz=52								
WARBT					*e*	S	**Sb**	**05 23 23.6**	**+0.5**
	baz=52								
ECL	**Taimali**	**0.71**	**166**	⇓		P	**Pb**	**05 23 13.7**	**+0.1**
	baz=156								
ECL					*e*	S	**Sb**	**05 23 23.9**	**+0.9**
	baz=156								
WMLT	**Mailiao**	**0.72**	**316**		*i*	P	**Pb**	**05 23 14.4**	**+0.7**
	baz=315								
WMLT					*i*	S	**Sb**	**05 23 24.9**	**+1.6**
	baz=315								
WTCT	**Ta-ch'eng**	**0.73**	**322**		*i*	P	**Pb**	**05 23 14.3**	**+0.5**
	baz=322								
WTCT					*i*	S	**Sn**	**05 23 25.4**	**-0.4**
	baz=322								
WPL	**Puli Township**	**0.74**	**13**			P	**Pb**	**05 23 14.6**	**+0.5**
	baz=12								
WPL						S	**Sn**	**05 23 25.4**	**-0.7**
	baz=12								
WWF	**Wufeng**	**0.75**	**355**			P	**Pb**	**05 23 15.2**	**+0.8**
	baz=341								
WWF						S	**Sn**	**05 23 26.3**	**-0.1**
	baz=341								
WUSB	**Renai**	**0.77**	**25**			P	**Pg**	**05 23 14.5**	**-0.3**
	baz=23								
WUSB						S	**Sb**	**05 23 26.2**	**+1.3**
	baz=23								
WCS	**Beigang Elemen**	**0.78**	**10**			P	**Pb**	**05 23 15.1**	**+0.4**
	baz=9.0								
WCS						S	**Sn**	**05 23 26.4**	**-0.6**
	baz=9.0								
ESL	**Shilin**	**0.80**	**49**		*i*	P	**Pb**	**05 23 15.5**	**+0.3**
	baz=49								
ESL					*i*	S	**Sb**	**05 23 26.7**	**+0.9**
	baz=49								
WCHH	**Zhanghua**	**0.81**	**346**			P	**Pb**	**05 23 15.7**	**+0.4**
	baz=345								
WCHH						S	**Sn**	**05 23 28.2**	**+0.3**
	baz=345								
TEGC	**Jichi Village**	**0.82**	**59**			P	**Pn**	**05 23 17.4**	**+0.9**
	baz=46								
TEGC						S	**Sn**	**05 23 29.2**	**+1.0**
	baz=46								
CHGB	**Renai**	**0.85**	**26**			P	**Pg**	**05 23 16.1**	**-0.3**
	baz=25								
CHGB						S	**Sb**	**05 23 28.4**	**+1.0**
	baz=25								
TCU	**Taichung**	**0.86**	**354**			P	**Pn**	**05 23 17.4**	**+0.5**
	baz=342								
TCU					*i*	S	**Sn**	**05 23 29.0**	**-0.1**
	baz=342								
SHUL	**Shoufeng**	**0.88**	**56**			P	**Pn**	**05 23 17.6**	**+0.4**
	baz=43								
SHUL					*e*	S	**Sn**	**05 23 30.2**	**+0.6**
	baz=43								
LDUT	**Ludao**	**0.89**	**133**			P	**Pb**	**05 23 16.4**	**-0.3**
	baz=119								
LDUT						S	**Sn**	**05 23 29.9**	**+0.1**
	baz=119								
EAST	**Anshuo**	**0.91**	**175**	⇓	*i*	P	**Pn**	**05 23 17.6**	**0.0**
	baz=168								
EAST					*i*	S	**Sn**	**05 23 30.7**	**+0.4**
	baz=168								
SCZT	**Fangliau**	**0.92**	**189**		*i*	P	**Pn**	**05 23 18.1**	**+0.2**
	baz=190								
SCZT					*i*	S	**Sn**	**05 23 31.7**	**+1.0**
	baz=190								
TAW	**Tawu**	**0.94**	**173**		*i*	P	**Pg**	**05 23 17.9**	**0.0**
	baz=165								
TAW					*i*	S	**Sn**	**05 23 32.8**	**+1.8**
	baz=165								
LXIB	**Xiulin Townshi**	**0.94**	**39**			P	**Pg**	**05 23 17.8**	**-0.2**
	baz=27								
LXIB						S	**Sn**	**05 23 31.9**	**+0.6**
	baz=27								
ETM	**Tongmen**	**0.94**	**45**			P	**Pn**	**05 23 18.2**	**+0.1**
	baz=54								
ETM						S	**Sg**	**05 23 30.6**	**0.0**
	baz=54								
TAWH	**Dawu Township**	**0.95**	**173**			P	**Pn**	**05 23 18.3**	**0.0**
	baz=166								
TAWH						S	**Sn**	**05 23 33.8**	**+2.4**
	baz=166								
WHF	**Hehuan Shan**	**0.96**	**28**		*i*	P	**Pg**	**05 23 18.5**	**-0.1**
	baz=17								
WHF					*i*	S	**Sn**	**05 23 32.3**	**-0.1**
	baz=17								
WDGT	**Dungji**	**1.02**	**269**		*i*	P	**Pb**	**05 23 18.5**	**-0.4**
	baz=269								
WDGT					*i*	S	**Sb**	**05 23 31.8**	**-0.2**
	baz=269								
TDCB	**Techi**	**1.02**	**20**			P	**Pg**	**05 23 19.5**	**-0.1**
	baz=19								
TDCB						S	**Sg**	**05 23 33.3**	**+0.2**
	baz=19								
HWA	**Hwalien**	**1.03**	**48**		*i*	P	**Pn**	**05 23 20.4**	**+1.2**
	baz=47								
HWA					*i*	S	**Sn**	**05 23 35.4**	**+2.1**
	baz=47								
TWT	**Tachien**	**1.03**	**21**		*i*	P	**Pn**	**05 23 19.8**	**+0.3**
	baz=20								
TWT					*i*	S	**Sn**	**05 23 34.9**	**+1.4**
	baz=20								
SLIU	**Shizi**	**1.07**	**178**			P	**Pg**	**05 23 20.6**	**+0.1**
	baz=181								
SLIU						S	**Sn**	**05 23 35.9**	**+1.6**
	baz=181								
TWD	**Chiawan**	**1.09**	**44**		*i*	P	**Pn**	**05 23 20.5**	**+0.3**
	baz=53								
TWD					*i*	S	**Sn**	**05 23 35.9**	**+1.0**
	baz=53								
NSY	**Sanyi**	**1.12**	**360**		*i*	P	**Pg**	**05 23 22.0**	**+0.6**
	baz=359								
NSY					*i*	S	**Sn**	**05 23 38.1**	**+2.5**
	baz=359								
ETLH	**Xiulin Townshi**	**1.12**	**35**			P	**Pn**	**05 23 21.1**	**+0.4**
	baz=26								
ETLH						S	**Sn**	**05 23 36.4**	**+0.7**
	baz=26								
PHUB	**P'eng-hu**	**1.12**	**282**			P	**Pb**	**05 23 19.7**	**-0.9**
	baz=281								
PHUB						S	**Sb**	**05 23 34.5**	**-0.4**
	baz=281								
PNG	**Penghu**	**1.15**	**284**		*i*	P	**Pn**	**05 23 20.4**	**-0.6**
	baz=271								
PNG					*i*	S	**Sb**	**05 23 35.7**	**0.0**
	baz=271								
NACB	**Ninganchiao**	**1.16**	**41**			P	**Pg**	**05 23 21.7**	**-0.5**
NACB	**Ninganchiao**	**1.16**	**41**			P	**Pb**	**05 23 21.5**	**+0.2**
	baz=54								
NACB						S	**Sg**	**05 23 37.4**	**0.0**
	baz=54								
ETL	**Fush Village**	**1.17**	**42**			P	**Pg**	**05 23 22.2**	**-0.1**
	baz=56								
ETL						S	**Sg**	**05 23 37.9**	**+0.3**
	baz=56								
VCHM	**Qimei**	**1.23**	**266**			P	**Pn**	**05 23 21.4**	**-0.8**
	baz=267								
VCHM						S	**Sb**	**05 23 37.2**	**-0.9**
	baz=267								
NMLH	**Miaoli**	**1.24**	**1**			P	**Pg**	**05 23 23.6**	**-0.2**
	baz=359								
NMLH						S	**Sg**	**05 23 41.6**	**+1.6**
	baz=359								
NNSB	**Datong**	**1.27**	**26**			P	**Pb**	**05 23 23.3**	**+0.1**
	baz=18								
NNSB						S	**Sg**	**05 23 41.6**	**+0.9**
	baz=18								
SMST	**Manzhou Townsh**	**1.27**	**177**		*e*	P	**Pg**	**05 23 24.9**	**+0.7**
SMST					*e*	S	**Sg**	**05 23 42.2**	**+1.5**
	baz=179								
NNS	**Nan Shan**	**1.27**	**26**		*i*	P	**Pb**	**05 23 23.4**	**+0.2**
	baz=25								
NNS					*i*	S	**Sg**	**05 23 41.5**	**+0.5**
	baz=25								
HEN	**Hengchun**	**1.28**	**181**		*i*	P	**Pg**	**05 23 24.8**	**+0.4**
	baz=174								
HEN						S	**Sg**	**05 23 42.3**	**+1.2**
	baz=174								
TWK1	**Hengchun**	**1.34**	**179**		*i*	P	**Pg**	**05 23 25.4**	**-0.2**
	baz=180								
TWK1					*e*	S	**Sg**	**05 23 43.5**	**+0.4**
	baz=180								
TWKBT	**Hengchun**	**1.34**	**178**			P	**Pg**	**05 23 25.1**	**-0.6**
	baz=180								
TWKBT					*e*	S	**Sg**	**05 23 43.8**	**+0.6**
	baz=180								
NSTT	**Nanjuang**	**1.35**	**9**		*i*	P	**Pb**	**05 23 24.6**	**+0.1**
	baz=7.0								
NSTT					*i*	S	**Sg**	**05 23 43.7**	**+0.2**
	baz=7.0								
EAHA	**Aohua**	**1.36**	**40**			P	**Pb**	**05 23 25.1**	**+0.3**
	baz=52								
EAHA						S	**Sg**	**05 23 43.9**	**0.0**
	baz=52								
LIOB	**Emei**	**1.37**	**9**			P	**Pb**	**05 23 25.4**	**+0.5**
	baz=7.0								
LIOB						S	**Sg**	**05 23 44.7**	**+0.7**
	baz=7.0								
NFF	**Wufeng Townshi**	**1.37**	**13**			P	**Pb**	**05 23 25.3**	**+0.4**
	baz=353								
NFF						S	**Sg**	**05 23 44.1**	**-0.1**
	baz=353								
TSEB	**Hengchuen, Pin**	**1.39**	**175**			P	**Pg**	**05 23 26.9**	**+0.4**
	baz=197								
TSEB						S	**Sg**	**05 23 46.2**	**+1.5**
	baz=197								
LATG	**Datong**	**1.42**	**29**			P	**Pg**	**05 23 26.6**	**-0.6**
	baz=16								
LATG						S	**Sg**	**05 23 45.7**	**0.0**
	baz=16								
LAY	**Lan-yu**	**1.44**	**150**		*i*	P	**Pn**	**05 23 25.1**	**+0.1**
	baz=150								
LAY					*e*	S	**Sg**	**05 23 45.7**	**-0.5**
	baz=150								
ENA	**Nanau**	**1.44**	**38**		*i*	P	**Pb**	**05 23 26.2**	**+0.2**
	baz=50								
ENA						S	**Sg**	**05 23 46.3**	**0.0**
	baz=50								
NDT	**Datong Townshi**	**1.47**	**27**			P	**Pg**	**05 23 27.4**	**-0.7**
	baz=17								
NDT						S	**Sg**	**05 23 47.4**	**+0.1**
	baz=17								
EWUT	**Wuta**	**1.48**	**39**			P	**Pg**	**05 23 27.4**	**-0.8**
	baz=50								
EWUT						S	**Sg**	**05 23 46.9**	**-0.5**
	baz=50								
NSK	**Sanguang**	**1.48**	**21**		*i*	P	**Pb**	**05 23 26.9**	**+0.1**
	baz=3.0								
NSK					*i*	S	**Sg**	**05 23 47.7**	**+0.1**
	baz=3.0								
YHNB	**Yeheng**	**1.48**	**22**			P	**Pb**	**05 23 27.2**	**+0.4**
YHNB	**Yeheng**	**1.48**	**22**			P	**Pb**	**05 23 26.8**	**0.0**
	baz=19								
YHNB						S	**Sg**	**05 23 47.9**	**+0.3**
	baz=19								
LYUB	**Lan-yu**	**1.49**	**149**			P	**Pn**	**05 23 23.9**	**-1.6**
	baz=150								
LYUB						S	**Sn**	**05 23 44.7**	**+0.1**
	baz=150								
SBCB	**Hsinchu**	**1.51**	**8**		*e*	P	**Pg**	**05 23 28.3**	**-0.5**
	baz=348								
SBCB						S	**Sg**	**05 23 47.9**	**-0.6**
	baz=348								
HSN	**Hsinchu**	**1.52**	**7**		*e*	P	**Pb**	**05 23 27.7**	**+0.3**
	baz=348								
HSN						S	**Sg**	**05 23 48.4**	**-0.3**
	baz=348								
ENTT	**Nioudou**	**1.53**	**28**		*i*	P	**Pg**	**05 23 28.6**	**-0.6**
	baz=26								
ENTT						S	**Sg**	**05 23 48.9**	**-0.2**
	baz=26								
NDS	**Dongshan**	**1.59**	**33**			P	**Pg**	**05 23 30.0**	**-0.4**
	baz=47								
NDS						S	**Sg**	**05 23 51.4**	**+0.2**
	baz=47								
ESAO	**Su ao**	**1.61**	**37**			P	**Pb**	**05 23 29.7**	**+0.6**
	baz=49								
ESAO						S	**Sb**	**05 23 50.2**	**+1.1**
	baz=49								
NWLT	**Wulai**	**1.62**	**24**			P	**Pb**	**05 23 29.8**	**+0.6**
	baz=22								
NWLT						S	**Sg**	**05 23 51.9**	**-0.3**
	baz=22								
EOS4	**EOS4**	**1.64**	**59**			P	**Pb**	**05 23 29.0**	**-0.3**
	baz=59								
EOS4						S	**Sb**	**05 23 51.0**	**+1.4**
	baz=59								
FUSB	**Fushanzhiwuyua**	**1.64**	**27**			P	**Pb**	**05 23 30.0**	**+0.4**
	baz=16								
FUSB						S	**Sg**	**05 23 51.8**	**-1.0**
	baz=16								
TWC	**Suao**	**1.64**	**37**		*i*	P	**Pb**	**05 23 29.6**	**+0.1**
	baz=48								
TWC					*i*	S	**Sg**	**05 23 52.2**	**-0.6**
	baz=48								
TWE	**Neicheng**	**1.64**	**30**		*i*	P	**Pg**	**05 23 30.5**	**-0.9**
	baz=28								
TWE					*i*	S	**Sg**	**05 23 52.6**	**-0.2**
	baz=28								
NCUH	**Zhongli**	**1.71**	**13**		*e*	P	**Pb**	**05 23 31.0**	**+0.3**
	baz=351								
NCUH						S	**Sb**	**05 23 52.1**	**+0.2**
	baz=351								
EOS3	**EOS3**	**1.73**	**55**			P	**Pb**	**05 23 30.9**	**0.0**
	baz=52								
EOS3						S	**Sb**	**05 23 52.3**	**0.0**
	baz=52								
EOS2	**EOS2**	**1.75**	**50**			P	**Pb**	**05 23 31.7**	**+0.5**
	baz=64								
EOS2					*e*	S	**Sb**	**05 23 53.0**	**+0.2**
	baz=64								
NHDH	**Xindian Distri**	**1.80**	**22**			P	**Pb**	**05 23 33.3**	**+1.1**
	baz=19								
NHDH						S	**Sg**	**05 23 56.3**	**-1.6**
	baz=19								
TWA	**Mucha**	**1.84**	**24**		*i*	P	**Pg**	**05 23 34.0**	**-1.1**
	baz=20								
TWA						S	**Sg**	**05 23 57.9**	**-1.1**
	baz=20								
EGS		**1.88**	**34**			P	**Pb**	**05 23 34.1**	**+0.6**
	baz=48								
EGS					*e*	S	**Sb**	**05 23 56.6**	**-0.1**
	baz=48								
TWS1	**Kuangyinshan**	**1.90**	**18**		*e*	P	**Pb**	**05 23 33.7**	**-0.1**
	baz=357								
TWS1						S	**Sb**	**05 23 58.0**	**+0.7**
	baz=357								
NTST	**Danshui**	**1.97**	**18**		*e*	P	**Pb**	**05 23 34.8**	**-0.3**
	baz=356								
NTST					*e*	S	**Sb**	**05 23 59.4**	**+0.1**
	baz=356								
YM01	**YM01**	**1.99**	**21**		*e*	P	**Pb**	**05 23 34.2**	**-1.2**
	baz=17								
YM01					*e*	S	**Sb**	**05 23 59.9**	**0.0**
	baz=17								
NWF	**Wu-fen Shan**	**2.00**	**27**			P	**Pb**	**05 23 36.0**	**+0.3**
	baz=11								
NWF					*e*	S	**Sb**	**05 24 00.5**	**+0.2**
	baz=11								
WFSB	**Wu-fen Shan**	**2.00**	**27**			P	**Pb**	**05 23 36.0**	**+0.4**
	baz=11								
WFSB					*e*	S	**Sb**	**05 24 01.2**	**+1.0**
	baz=11								
ANP	**Anpu**	**2.01**	**20**		*e*	P	**Pb**	**05 23 35.6**	**-0.2**
	baz=358								
ANP					*e*	S	**Sb**	**05 24 00.7**	**+0.2**
	baz=358								
YM08	**YM08**	**2.03**	**21**		*e*	P	**Pb**	**05 23 35.6**	**-0.6**
	baz=17								
YM08					*e*	S	**Sb**	**05 24 00.4**	**-0.8**
	baz=17								
TWB1	**Santiao Chiao**	**2.04**	**33**		*i*	P	**Pb**	**05 23 35.2**	**-1.1**
	baz=46								
TWB1						S	**Sb**	**05 24 01.4**	**0.0**
	baz=46								
SXI1	**Grass Mountain**	**2.06**	**29**			P	**Pb**	**05 23 36.6**	**-0.1**
	baz=9.0								
SXI1					*e*	S	**Sb**	**05 24 02.1**	**0.0**
	baz=9.0								
VWUC	**VWUC**	**2.08**	**325**			P	**Pn**	**05 23 32.9**	**-0.8**
	baz=322								
VWUC					*e*	S	**Sn**	**05 24 01.4**	**+2.2**
	baz=322								
TWY	**Chenhua**	**2.12**	**21**		*e*	P	**Pb**	**05 23 36.6**	**-1.0**
	baz=1.0								
TWY					*e*	S	**Sb**	**05 24 02.6**	**-1.0**
	baz=1.0								
JYNG	**Yonagunijimaku**	**2.30**	**59**			P	**Pb**	**05 23 39.3**	**-1.5**
JYNG					*e*	S	**Sb**	**05 24 07.9**	**-1.0**
PTMZ	**Houxiangcun**	**2.30**	**319**			P	**Pn**	**05 23 36.9**	**+0.1**
	baz=317								
PTMZ						S	**Sn**	**05 24 04.4**	**-0.3**
	baz=317								
YOJ	**Yonaguni jima**	**2.36**	**60**			P	**Pn**	**05 23 39.7**	**+2.1**
YOJ	**Yonaguni jima**	**2.36**	**60**			P	**Pn**	**05 23 39.4**	**+1.8**
	baz=60								
YOJ					*e*	S	**Sb**	**05 24 09.3**	**-1.3**
	baz=60								
YOJ	**Yonaguni jima**	**2.36**	**60**			P	**Pn**	**05 23 39.8**	**+2.1**
KNM	**Kinmen**	**2.41**	**298**		*e*	P	**Pn**	**05 23 39.9**	**+1.6**
	baz=296								
KNM					*e*	S	**Sb**	**05 24 10.7**	**-1.4**
	baz=296								
KNMB	**Chin-men Tao**	**2.47**	**299**			P	**Pn**	**05 23 38.4**	**-0.7**
	baz=298								
KNMB					*e*	S	**Sb**	**05 24 12.2**	**-1.6**
	baz=298								
ZPLA	**Ao Xicun**	**2.84**	**284**		*e*	P	**Pn**	**05 23 44.0**	**-0.3**
	baz=283								
ZPLA					*e*	S	**Sn**	**05 24 18.3**	**+0.3**
	baz=283								
HATJ	**Hateruma jima**	**2.89**	**74**			P	**Pn**	**05 23 46.9**	**+2.1**
HATJ						S	**Sn**	**05 24 20.8**	**+1.7**
MATB	**Ma-tsu**	**2.94**	**345**		*e*	P	**Pn**	**05 23 45.5**	**-0.2**
	baz=340								
MATB					*e*	S	**Sn**	**05 24 20.8**	**+0.1**
	baz=340								
AXDP	**Jialang**	**3.02**	**303**			P	**Pn**	**05 23 46.4**	**-0.2**
	baz=302								
DSXP	**Dongshan**	**3.10**	**278**		*e*	P	**Pn**	**05 23 47.6**	**-0.1**
	baz=278								
DSXP					*e*	S	**Sn**	**05 24 24.0**	**-0.4**
	baz=278								
JKRS	**Kuro-shima**	**3.12**	**72**		*e*	P	**Pn**	**05 23 50.6**	**+2.6**
JKRS						S	**Sb**	**05 24 28.9**	**-3.4**
JIJ	**Ishigaki jima**	**3.27**	**70**			P	**Pn**	**05 23 51.9**	**+1.8**
JIJ						S	**Sn**	**05 24 30.7**	**+2.1**
LYJJ	**Jianjiangzhen**	**3.37**	**344**			P	**Pn**	**05 23 51.1**	**-0.4**
	baz=339								
LYJJ					*e*	S	**Sn**	**05 24 32.6**	**+1.5**
	baz=339								
JISG	**Ishigakijimahi**	**3.49**	**68**			P	**Pn**	**05 23 54.7**	**+1.6**
JISG					*e*	S	**Sn**	**05 24 36.0**	**+2.0**
XPSS	**Dashiqiu**	**3.66**	**352**			P	**Pn**	**05 23 55.3**	**-0.2**
	baz=351								
KSRS	**Korea Array**	**15.40**	**22**			LR	LR	05 33 05.4	
	comp=Z,17nm,18.0s,baz=10.0,slow=39								
SONM	**Songino Array**	**27.05**	**338**			P	**P**	**05 28 44.2**	**+3.0**
	0.3nm,0.8s,baz=134,slow=8.3,SNR=2.1								
	0.3nm,0.8s								
ASAJ	**Asahikawa**	**27.44**	**36**			LR	LR	05 40 30.9	
	comp=Z,44nm,18.6s,baz=150,slow=38								
MKAR	**Makanchi Array**	**38.72**	**317**			P	**P**	**05 30 23.3**	**+0.4**
	0.5nm,0.6s,baz=117,slow=8.8,SNR=4.1								
	0.5nm,0.6s								
WRA	**Warramunga Arr**	**44.96**	**162**			P	**P**	**05 31 10.1**	**-4.0**
	0.3nm,0.7s,baz=345,slow=8.5,SNR=1.9								
	0.3nm,0.7s								
YKA	**Yellowknife Ar**	**83.94**	**23**			P	**P**	**05 35 27.9**	**-0.6**
	0.2nm,0.6s,baz=310,slow=4.7,SNR=6.4								
	0.2nm,0.6s								

IDC 21 05:25:52.9±2.4,5°98S×130°31E,h0km,mb3.4/1, mbtmp3.2/3,ML3.0/2,Error ellipse: s-maj=122.0km s-min=33.6km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.43**	**165**		Pn	Pn	05 29 17.6	-1.0
	0.1nm,0.3s,baz=344,slow=8.4,SNR=5.5							
WRA					Sn	Sn	05 31 43.6	-16
	0.2nm,0.3s,baz=348,slow=23,SNR=6.5							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**17.93**	**169**		P	P	05 30 04.3	-0.1
	baz=351,slow=11,SNR=4.4							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**67.55**	**326**		P	P	05 36 51.2	0.0
	0.1nm,0.3s,baz=114,slow=6.5,SNR=2.9							
	0.1nm,0.3s							

IDC 21 05:30:19.1±2.8,54°05N×87°18E,h0km,mbtmp3.0/3, ML2.5/3,Error ellipse: s-maj=26.0km s-min=15.3km az=72.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**267**		I	I	05 39 20.0	
	0.1nm,0.7s,baz=82,slow=339,SNR=29							
ZALV	**Zalesovo Beam**	**1.40**	**267**		Pg	Pn	05 30 44.1	-1.7

baz=72,slow=15,SNR=2.2
0.4nm,0.4s

*IDC **21** 05:33:47.4±1.8, 1°.04S×121°.99E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=309.4km s-min=28.1km az=60.0*
*DJA **21** 05:33:49.5±0.8, 0°.5±4°×12°.4E±°, h20km±8km, M3.4/9, MLv3.4/9*
ISC 21 05:33:48.8±1.0, **0°.06S**±0°.08×**124°.23E**±0°.07, **h10**km, **n9, σ1$45/10, mb3.3/3, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.68**	**339**	P	**Pb**	**05 34 03.3**	**+0.6**
KMSI				S	**Sb**	**05 34 13.0**	**+0.8**
LUWI	**Luwuk**	**1.75**	**236**	P	**Pn**	**05 34 18.3**	**-0.9**
MRSI	**Marisa**	**2.35**	**283**	P	**Pn**	**05 34 27.8**	**+0.4**
SANI	**Sanana**	**2.65**	**138**	P	**Pn**	**05 34 30.9**	**-0.6**
LBMI	**Labuha**	**3.33**	**100**	P	**Pn**	**05 34 40.1**	**-0.8**
NLAI	**Namlea**	**4.27**	**138**	P	**Pn**	**05 34 54.5**	**+0.7**
WRA	**Warramunga Arr**	**22.10**	**154**	P	**P**	**05 38 46.9**	**+2.5**
	0.9nm,0.7s,baz=329,slow=12,SNR=8.9						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**25.27**	**159**	P	**P**	**05 39 16.1**	**+0.6**
	0.5nm,0.7s,baz=341,slow=14,SNR=5.8						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.32**	**328**	P	**P**	**05 43 48.7**	**-2.2**
	0.1nm,0.5s,baz=134,slow=8.3,SNR=1.7						
	0.1nm,0.5s						

IDC 21 05:35:09.7±3.9, **53°.59N**×**90°.75E, h0**km, **mbtmp2.8**/3, **ML2.3**/3, **Error ellipse: s-maj=38.5km s-min=25.1km az=30.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.54**	**278**	I	I	05 57 20.0	
	0.1nm,0.9s,baz=92,slow=336,SNR=18						
ZALV	**Zalesovo Beam**	**3.54**	**278**	Pn	Pn	05 36 06.1	+0.3
	0.2nm,0.3s,baz=96,slow=14,SNR=2.0						
ZALV				Lg	Lg	05 37 01.6	
	1.3nm,0.3s,baz=96,slow=30,SNR=7.8						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**8.09**	**253**	Pn	Pn	05 37 08.0	-0.3
	0.1nm,0.3s,baz=65,slow=14,SNR=4.9						
KURBB				Sn	Sn	05 38 39.4	-1.0
	baz=66,slow=23,SNR=2.4						
KURBB				Lg	Lg	05 39 25.9	
	baz=64,slow=31,SNR=3.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**8.70**	**222**	Pn	Pn	05 37 17.5	+0.7
	0.2nm,0.3s,baz=35,slow=12,SNR=6.2						
	0.3nm,0.4s						

*SOME **21** 05:52:33.3, 39°.50N×75°.05E, h0km*
*NNC **21** 05:52:36.0±1.5, 39°.57N×74°.99E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=11.6km s-min=9.4km az=133.0*
*KRNET **21** 05:52:39.7±0.1, 39°.48N×75°.27E, mb2.8*
ISC 21 05:52:37.5±1.7, **39°.47N**±0°.08×**75°.12E**±0°.05, **h10**km, **n28, σ2$96/47, 16C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**2.07**	**19**	⇑*e*P	**Pn**	**05 53 13.7**	**+1.0**
	baz=15						
NRN				⇑*e*S	**Sn**	**05 53 38.6**	**-0.1**
	baz=15						
OHH	**Osh**	**2.08**	**301**	⇑*e*P	**Pb**	**05 53 15.5**	**+0.1**
	baz=99						
OHH				⇑*e*S	**Sb**	**05 53 42.3**	**+0.9**
	baz=99						
ARLS	**Aral**	**2.46**	**346**	⇑*e*P	**Pb**	**05 53 20.3**	**-1.7**
	baz=44						
ARLS				⇑*e*S	**Sn**	**05 53 49.4**	**+1.2**
	baz=44						
ARSB	**Arslanbob**	**2.47**	**319**	⇑*e*P	**Pb**	**05 53 20.7**	**-1.4**
	baz=17						
ARSB				⇑*e*S	**Sb**	**05 53 50.7**	**-1.9**
	baz=17						
DRK	**Karamyk**	**2.57**	**271**	⇓*e*P	**Pb**	**05 53 23.2**	**-0.7**
	baz=71						
DRK				⇓*e*S	**Sb**	**05 53 54.4**	**-1.3**
	baz=71						
UCH	**Uchtor**	**2.79**	**351**	⇑*e*P	**Pn**	**05 53 24.9**	**+2.2**
	baz=48						
UCH				⇑*e*S	**Sn**	**05 53 57.4**	**+0.7**
	baz=48						
ULHL	**Ulahol**	**2.90**	**17**	⇓*i*P	**Pn**	**05 53 25.1**	**+1.2**
	baz=15						
ULHL				⇓*e*S	**Sn**	**05 53 58.6**	**-0.3**
	baz=15						
KDJ	**Kajisay**	**3.08**	**30**	⇑*e*P	**Pn**	**05 53 27.3**	**+0.9**
	baz=28						
KDJ				⇑*e*S	**Sn**	**05 54 02.8**	**-0.6**
	baz=28						
EKS2	**Erkin-Say**	**3.35**	**343**	⇑*e*P	**Pn**	**05 53 32.9**	**+2.9**
	baz=41						
EKS2				⇑*e*S	**Sn**	**05 54 11.1**	**+1.2**
	baz=41						
BTK	**Batken**	**3.37**	**281**	⇑*e*P	**Pb**	**05 53 33.9**	**-3.5**
	baz=81						
BTK				⇑*e*S	**Sn**	**05 54 13.8**	**+3.4**
	baz=81						
MRKS	**Merke**	**3.57**	**337**	Pg	**Pb**	**05 53 38.7**	**-2.2**
	1.9nm,0.7s						
MRKS				Lg	Lg	05 54 25.8	
	3.3nm,0.6s						
MRKS	**Merke**	**3.57**	**337**	*e*P	**Pb**	**05 53 38.7**	**-2.2**
	1.8nm,0.3s						
MRKS				*e*S	**Sb**	**05 54 25.8**	**+1.5**
	4.9nm,0.3s						
MNAS	**Manas**	**3.61**	**327**	⇓*e*P	**Pn**	**05 53 36.8**	**+3.2**
	baz=26						
MNAS				⇓*e*S	**Sn**	**05 54 18.2**	**+1.9**
	baz=26						
KST	**Kastek**	**3.62**	**10**	Pg	**Pb**	**05 53 40.5**	**-1.2**
	2.1nm,0.4s						
KST				Lg	Lg	05 54 29.0	
	8.4nm,0.5s						
KST	**Kastek**	**3.62**	**10**	*e*P	**Pb**	**05 53 40.5**	**-1.2**
	2.1nm,0.4s						
KST				*e*S	**Sb**	**05 54 29.0**	**+3.2**
	8.4nm,0.5s						
MTBS	**Maitube**	**3.79**	**15**	Pg	**Pb**	**05 53 42.8**	**-1.7**
	3.9nm,0.3s						
MTBS				Lg	Lg	05 54 32.3	
	5.1nm,0.4s						
MTBS	**Maitube**	**3.79**	**15**	*e*P	**Pb**	**05 53 42.4**	**-2.1**
	3.9nm,0.3s						
MTBS				*e*S	**Sb**	**05 54 32.3**	**+1.9**
	4.6nm,0.1s						
DGS	**Degeres**	**3.80**	**7**	Pg	**Pb**	**05 53 43.8**	**-1.0**
	3.5nm,0.5s						
DGS				Lg	Lg	05 54 34.6	
	6.1nm,0.5s						
DGS	**Degeres**	**3.80**	**7**	*e*P	**Pb**	**05 53 43.8**	**-1.0**
	3.5nm,0.5s						
DGS				*e*S	**Sb**	**05 54 34.6**	**+3.8**
	6.1nm,0.5s						
TNSS	**Tian-Shan**	**3.82**	**21**	Pg	**Pb**	**05 53 44.8**	**-0.4**
	3.0nm,0.5s						
TNSS				Lg	Lg	05 54 35.7	
	2.4nm,0.8s						
TNSS	**Tian-Shan**	**3.82**	**21**	*e*P	**Pb**	**05 53 44.8**	**-0.4**
	3.0nm,0.5s						
TNSS				*e*S	**Sg**	**05 54 36.4**	**-3.8**
	2.4nm,0.8s						
MDOK	**Medeo**	**3.96**	**21**	Pg	**Pb**	**05 53 47.2**	**-0.4**
	1.1nm,0.3s						
MDOK				Lg	Lg	05 54 39.9	
	5.5nm,0.7s						
MDOK	**Medeo**	**3.96**	**21**	*e*P	**Pb**	**05 53 46.8**	**-0.7**
	1.1nm,0.3s						
MDOK				*e*S	**Sg**	**05 54 39.9**	**-4.9**
	5.5nm,0.7s						
KOTS	**Kotyrbulak**	**4.05**	**21**	Pg	**Pb**	**05 53 49.4**	**+0.4**
	1.4nm,0.3s						
KOTS				Lg	Lg	05 54 44.0	
	12nm,0.8s						
KOTS	**Kotyrbulak**	**4.05**	**21**	*e*P	**Pb**	**05 53 49.3**	**+0.4**
	1.4nm,0.3s						
KOTS				*e*S	**Sg**	**05 54 44.0**	**-3.4**
	12nm,0.8s						
KTBS	**Karatobe**	**4.39**	**15**	Pg	**Pb**	**05 53 56.2**	**+1.3**
	1.4nm,0.3s						
KTBS				Lg	Lg	05 54 55.4	
	4.8nm,0.6s						
KTBS	**Karatobe**	**4.39**	**15**	*e*P	**Pb**	**05 53 56.1**	**+1.3**
	1.4nm,0.3s						
KTBS				*e*S	**Sg**	**05 54 55.4**	**-3.3**
	4.8nm,0.6s						
KUU	**Kurty**	**4.51**	**11**	Pg	**Pb**	**05 53 56.1**	**-0.6**
	2.3nm,0.4s						
KUU				Lg	Lg	05 54 55.0	
	4.6nm,0.8s						

*IDC **21** 05:52:45.7±1.8, 1°.22N×126°.72E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=181.0km s-min=20.4km az=66.0*
*DJA **21** 05:52:52.7±0.7, 1°.1N±15°×12°.7E±1°.1, h21km±16km, M3.6/8, mb3.5/1, MLv3.6/8*
ISC 21 05:52:52.0±1.2, **1°.3N**±0°.1×**126°.86E**±0°.08, **h35**km, **n11, σ1$71/13, mb3.8/4, Northern Moluccа Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.69**	**133**	P	**Pn**	**05 53 06.7**	**+1.4**
TNTI				S	**Sn**	**05 53 17.1**	**+2.2**
LBMI	**Labuha**	**1.98**	**161**	P	**Pn**	**05 53 23.6**	**+0.6**
LBMI				S	**Sn**	**05 53 48.1**	**+1.5**
KMSI	**Cibinong**	**2.95**	**257**	P	**Pn**	**05 53 37.4**	**+1.0**
SANI	**Sanana**	**3.39**	**195**	P	**Pn**	**05 53 41.7**	**-0.7**
GTOI	**Gorontalo**	**3.89**	**261**	P	**Pn**	**05 53 52.1**	**+2.8**
NLAI	**Namlea**	**4.46**	**177**	P	**Pn**	**05 53 57.9**	**+0.7**
LUWI	**Luwuk**	**4.67**	**241**	P	**Pn**	**05 54 00.6**	**+0.5**
WRA	**Warramunga Arr**	**22.30**	**161**	P	**P**	**05 57 44.0**	**-2.6**
	0.6nm,0.4s,baz=339,slow=11,SNR=6.3						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**25.69**	**165**	P	**P**	**05 58 18.6**	**-0.4**
	0.5nm,0.4s,baz=342,slow=11,SNR=16						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.66**	**326**	P	**P**	**06 02 51.8**	**-1.1**
	1.1nm,0.7s,baz=113,slow=7.8,SNR=9.1						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**63.89**	**328**	P	**P**	**06 03 19.8**	**-1.4**
	1.5nm,0.5s,baz=128,slow=6.0,SNR=28						
	1.5nm,0.5s						

*IDC **21** 06:04:22.2±0.9, 4°.81S×151°.81E, h120km±7km, mb3.5/5, mbtmp3.9/6, Error ellipse: s-maj=34.3km s-min=14.9km az=122.0*
ISC 21 06:04:23.2±1.2, **4°.8S**±0°.2×**152°.0E**±0°.3, **h150**km, **n8, σ2$90/10, mb3.7/5, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.46**	**10**	P	**Pn**	**06 04 41.8**	**-2.7**
	15μm,0.3s,baz=196,slow=20,SNR=5.5						
KRVT				S	**Sn**	**06 04 55.6**	**-5.0**
	14μm,0.3s,baz=102,slow=0.0,SNR=4.4						
PMG	**Port Moresby**	**6.63**	**226**	P	**Pn**	**06 05 57.4**	**-0.9**
	13nm,0.5s,baz=77,slow=6.0,SNR=4.4						
PMG				S	**Sn**	**06 07 08.9**	**-3.9**
	24nm,0.4s,baz=331,slow=19,SNR=9.2						
WRA	**Warramunga Arr**	**22.84**	**227**	P	**P**	**06 09 14.1**	**+0.4**
	3.6nm,0.5s,baz=52,slow=10,SNR=36						
	3.6nm,0.5s						
ASAR	**Alice Springs**	**25.62**	**221**	P	**P**	**06 09 39.5**	**+0.5**
	1.2nm,0.6s,baz=57,slow=9.1,SNR=17						
	1.2nm,0.6s						
SONM	**Songino Array**	**65.84**	**328**	P	**P**	**06 14 54.7**	**+2.0**
	0.3nm,0.5s,baz=129,slow=6.5,SNR=3.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**79.74**	**319**	P	**P**	**06 16 16.6**	**+2.0**
	0.4nm,0.8s,baz=104,slow=6.7,SNR=3.2						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**85.20**	**180**	P	**P**	**06 16 44.1**	**+1.5**
	1.7nm,1.1s,baz=101,slow=2.2,SNR=2.2						
	1.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**149.49**	**288**	PKPbc	**PKiKP**	**06 23 57.5**	**+0.6**
	1.0nm,0.4s,baz=95,slow=2.5,SNR=3.5						

IDC 21 06:05:04.0±2.6, **54°.10N**×**86°.32E, h0**km, **mbtmp2.9**/2, **ML2.6**/2, **Error ellipse: s-maj=19.9km s-min=11.9km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**261**	I	I	06 11 40.0	
	baz=81,slow=335,SNR=3.8						
ZALV	**Zalesovo Beam**	**0.90**	**261**	Pg	Pg	06 05 20.1	-1.1
	1.3nm,0.3s,baz=79,slow=15,SNR=12						
ZALV				Lg	Lg	06 05 34.3	
	2.3nm,0.3s,baz=82,slow=29,SNR=11						
KURBB	**Kurchatov Arra**	**5.91**	**237**	Pn	Pn	06 06 33.2	+0.6
	0.1nm,0.3s,baz=54,slow=13,SNR=6.4						
KURBB				Lg	Lg	06 08 11.9	
	baz=55,slow=29,SNR=1.2						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.75**	**201**	Pn	Pn	06 06 59.3	+1.3
	0.1nm,0.3s,baz=21,slow=14,SNR=4.6						
MKAR				Sn	Sn	06 08 26.6	+0.1
	baz=19,slow=27						
MKAR				Lg	Lg	06 09 09.8	
	baz=26,slow=33						
	0.3nm,0.3s						

*JMA **21** 06:13:13.0±0.1, 38°.9N±0°.3×142°.1E±0°.7, h45km±1km, MV3.7/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
*IDC **21** 06:13:25.4±15.0, 38°.49N×141°.09E, h138km±96km, mb3.4/5, mbtmp3.7/6, Error ellipse: s-maj=215.3km s-min=26.7km az=66.0*
ISC 21 06:13:09.3±2.1, **38°.85N**±0°.05×**142°.17E**±0°.09, **h18**km±9km, **n22, σ1$26/23, mb3.6/5, 14D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.45**	**300**	⇓P	**Pn**	**06 13 22.6**	**+1.7**
OFUJ				⇓S	**Sn**	**06 13 29.2**	**+0.7**
JKMT	**Kesennumamotoy**	**0.55**	**266**	⇓*i*P	**Pn**	**06 13 23.4**	**+1.3**
JKMT				⇓S	**Sn**	**06 13 30.4**	**-0.4**
JMK	**Ichinoseki**	**0.75**	**278**	⇓*i*P	**Pn**	**06 13 26.0**	**+1.1**
JMK				⇓S	**Sn**	**06 13 35.2**	**-0.7**
JIO	**Ouri**	**0.76**	**239**	⇓*i*P	**Pn**	**06 13 26.1**	**+1.0**
JIO				⇓S	**Sn**	**06 13 34.9**	**-1.1**
JOM	**Ohasama**	**0.92**	**312**	⇓*i*P	**Pn**	**06 13 28.8**	**+1.4**
JOM				⇓S	**Sn**	**06 13 40.0**	**-0.2**
JOU	**Okura**	**1.28**	**248**	⇓*i*P	**Pb**	**06 13 33.3**	**+0.5**
JOU				⇓*e*S	**Sb**	**06 13 48.4**	**-0.5**
JRG	**Rokugo**	**1.31**	**295**	⇓*i*P	**Pg**	**06 13 34.0**	**-0.7**
JYK	**Kaneyama**	**1.42**	**273**	⇓*i*P	**Pb**	**06 13 35.2**	**0.0**
JMM	**Marumori**	**1.47**	**228**	P	**Pn**	**06 13 35.7**	**+0.9**
JMM				*e*S	**Sn**	**06 13 52.7**	**-0.8**
JANG	**Nango**	**1.60**	**342**	P	**Pb**	**06 13 38.5**	**+0.1**
MJAR	**Matsushiro Arr**	**3.90**	**235**	P	**Pn**	**06 14 12.2**	**+4.0**
	2.7nm,0.5s,baz=34,slow=13,SNR=14						
H11N2	**WAKE ISLAND Hy**	**28.62**	**125**	T	T	06 49 27.3	
	baz=317,slow=75,SNR=170						
H11N1	**WAKE ISLAND Hy**	**28.63**	**125**	T	T	06 49 28.0	
	baz=317,slow=75,SNR=183						
H11N3	**WAKE ISLAND Hy**	**28.64**	**125**	T	T	06 49 28.7	
	baz=317,slow=75,SNR=133						
H11S1	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	06 50 25.5	
	baz=318,slow=76,SNR=79						
H11S3	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	06 50 28.4	
	baz=318,slow=76,SNR=69						
H11S2	**WAKE ISLAND Hy**	**29.42**	**127**	T	T	06 50 26.1	
	baz=318,slow=76,SNR=69						
ZALV	**Zalesovo Beam**	**41.16**	**311**	P	**P**	**06 20 52.1**	**-0.1**
	0.5nm,0.4s,baz=101,slow=7.5,SNR=2.1						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**43.69**	**301**	P	**P**	**06 21 12.6**	**-0.4**
	0.5nm,0.4s,baz=82,slow=9.8,SNR=10.0						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**45.38**	**307**	P	**P**	**06 21 25.9**	**-0.4**
	1.8nm,0.5s,baz=82,slow=8.2,SNR=13						
	1.8nm,0.5s						
BVAR	**Borovoye Array**	**49.81**	**311**	P	**P**	**06 22 00.3**	**-0.5**
	0.7nm,0.4s,baz=69,slow=9.5,SNR=4.9						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**06 23 06.5**	**-0.9**
	0.2nm,0.4s,baz=4.7,slow=7.1,SNR=1.3						
	0.2nm,0.4s						

*NNC **21** 06:14:51.4±11.0, 40°.12N×72°.47E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=88.0km s-min=44.8km az=178.0*
*SOME **21** 06:14:57.2, 40°.47N×72°.60E, h0km*
*KRNET **21** 06:14:59.5±0.1, 40°.52N×72°.62E, h15km, mb2.5*
*ISU **21** 06:15:04.0, 40°.40N×72°.44E, h18km*
ISC 21 06:14:58.1±1.1, **40°.45N**±0°.05×**72°.64E**±0°.03, **h13**km±7km, **n20, σ1$17/36, 19C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.13**	**57**	⇑*e*P	**Pg**	**06 15 01.9**	**+0.3**
	baz=88						
OHH				⇑*e*S	**Sg**	**06 15 03.7**	**-0.3**
	baz=88						
FRG	**Fergana**	**0.66**	**263**	P	**Pn**	**06 15 14.2**	**+1.0**
FRG				S	**Sn**	**06 15 21.7**	**-1.8**
SFK	**Sufi-Kurgan**	**0.79**	**124**	⇑*e*P	**Pn**	**06 15 15.7**	**+0.5**
	baz=26						
SFK				⇑*e*S	**Sn**	**06 15 27.6**	**+0.6**
	baz=26						
CHMI	**Chimion**	**0.88**	**258**	P	**Pn**	**06 15 17.8**	**+1.6**
CHMI				S	**Sn**	**06 15 28.2**	**-0.6**
ARSB	**Arslanbob**	**0.91**	**16**	⇑*e*P	**Pb**	**06 15 16.0**	**+0.2**
	baz=19						
ARSB				⇑*e*S	**Sg**	**06 15 27.9**	**+0.4**
	baz=19						
ARK	**Arkit**	**1.44**	**339**	⇑*e*P	**Pg**	**06 15 25.6**	**-0.2**
	baz=39						
ARK				⇑*e*S	**Sg**	**06 15 44.2**	**-0.3**
	baz=39						
TRKS	**Terek-Say**	**1.56**	**314**	⇓*e*P	**Pg**	**06 15 26.9**	**-1.3**
	baz=11						
TRKS				⇓*e*S	**Sn**	**06 15 46.8**	**+0.8**
	baz=11						
ARLS	**Aral**	**1.89**	**42**	⇑*e*P	**Pg**	**06 15 34.1**	**-0.3**
	baz=43						
ARLS				⇑*e*S	**Sg**	**06 15 59.3**	**+0.3**
	baz=43						
MNAS	**Manas**	**2.03**	**357**	⇑*i*P	**Pg**	**06 15 36.2**	**-0.9**
	baz=58						
MNAS				⇑*e*S	**Sg**	**06 16 02.9**	**-0.6**
	baz=58						
UCH	**Uchtor**	**2.26**	**38**	⇑*e*P	**Pb**	**06 15 39.2**	**+0.1**
	baz=39						
UCH				⇑*e*S	**Sb**	**06 16 09.4**	**+2.2**
	baz=39						
MRKS	**Merke**	**2.33**	**11**	Pg	**Pg**	**06 15 41.7**	**-1.1**
	8.6nm,0.4s						
MRKS				Lg	Lg	06 16 14.0	
	25nm,0.4s						
MRKS	**Merke**	**2.33**	**11**	*e*P	**Pg**	**06 15 41.7**	**-1.1**
	8.6nm,0.4s						
MRKS				*e*S	**Sg**	**06 16 14.0**	**+1.0**
	25nm,0.4s						
EKS2	**Erkin-Say**	**2.36**	**21**	⇑*i*P	**Pb**	**06 15 40.4**	**-0.2**
	baz=22						
EKS2				⇑*i*S	**Sb**	**06 16 11.1**	**+1.3**
	baz=22						
AAK	**Ala-Archa**	**2.59**	**32**	⇓*e*P	**Pb**	**06 15 43.6**	**-0.8**
	baz=33						
AAK				⇓*e*S	**Sb**	**06 16 16.7**	**+0.5**
	baz=33						
NRN	**Naryn**	**2.72**	**68**	⇓*e*P	**Pb**	**06 15 46.3**	**-0.6**
	baz=69						
NRN				⇓*e*S	**Sb**	**06 16 20.2**	**-0.1**
	baz=69						
KK31	**Karatay Array**	**3.09**	**330**	⇑Pg	**Pb**	**06 15 50.8**	**-2.2**
	0.2nm,0.3s,baz=170,slow=14,SNR=6.5						
KK31				⇑Lg	Lg	06 16 35.7	
	2.5nm,0.6s,baz=132,slow=27,SNR=5.3						
TKM2	**Tokmak 2**	**3.31**	**41**	⇑Pg	**Pb**	**06 15 56.1**	**-0.8**
	0.3nm,0.5s						
TKM2				⇓Lg	Lg	06 16 49.1	
	2.6nm,0.9s						
BRLS	**Borolday**	**3.32**	**322**	Pg	**Pb**	**06 15 56.8**	**-0.1**
BRLS				Lg	Lg	06 16 39.6	
BRLS	**Borolday**	**3.32**	**322**	*e*P	**Pb**	**06 15 56.7**	**-0.1**
	0.8nm,0.1s						
BRLS				*e*S	**Sb**	**06 16 39.6**	**+2.3**
	0.8nm,0.2s						
KRBS	**Karabastau**	**3.95**	**34**	*e*P	**Pg**	**06 16 10.9**	**-2.8**
	0.6nm,0.3s						
KRBS				*e*S	**Sg**	**06 17 03.8**	**-1.1**
	1.1nm,0.3s						

*SDD **21** 06:21:29.6±3.0, 19°.70N×71°.28W, h23km±13km, MD3.4, ML3.0, MW3.6*
*OSPL **21** 06:21:30.5±1.8, 19°.64N×71°.28W, h0km±13km, ML2.5*
ISC 21 06:21:28.6±1.0, **19°.65N**±0°.03×**71°.25W**±0°.02, **h14**km±7km, **n22, σ1$44/43, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MADR	**Mao Valverde**	**0.16**	**121**	*e*Pg	**Pg**	**06 21 33.4**	**+0.9**
MADR				*e*Sg	**Sb**	**06 21 37.6**	**+1.1**
MADR				IAML		06 21 38.8	
	comp=N,2μm,0.3s						
LOPP1	**Punta Rusia, P**	**0.21**	**12**	*e*Pg	**Pg**	**06 21 32.4**	**-0.9**
LOPP1				*e*Sg	**Sb**	**06 21 39.2**	**+1.2**
LOPP1				IAML		06 21 39.4	
	comp=N,2μm,0.3s						
LOPP1	**Punta Rusia, P**	**0.21**	**12**	*i* P	**Pb**	**06 21 34.3**	**+0.1**
LOPP1				*e*S	**Sb**	**06 21 37.9**	**0.0**
LOPP1				IAML		06 21 43.2	
	comp=Z,1μm,0.3s						
LUDR	**Luperon**	**0.37**	**48**	*e*Pg	**Pb**	**06 21 36.5**	**-0.4**
LUDR				*e*Sg	**Sb**	**06 21 43.9**	**+1.4**
LUDR				IAML		06 21 45.4	
	comp=N,4μm,0.3s						
LODA1	**ITESIL, Dajabo**	**0.45**	**257**	*i* P	**Pg**	**06 21 37.1**	**-0.4**
LODA1				*e*S	**Sb**	**06 21 43.8**	**-0.9**
LODA1				IAML		06 21 49.2	
	comp=Z,1μm,1.7s						
SC01	**Santiago de lo**	**0.54**	**114**	*e*Pg	**Pg**	**06 21 39.3**	**+0.1**
SC01				*e*Sg	**Sb**	**06 21 48.3**	**+0.9**
SC01				IAML		06 21 52.0	
	comp=N,176nm,0.2s						
SC01	**Santiago de lo**	**0.54**	**114**	*i* P	**Pg**	**06 21 39.3**	**+0.1**
SC01				*e*S	**Sb**	**06 21 48.6**	**+1.3**
SC01				IAML		06 21 57.1	
	comp=Z,166nm,0.8s						
SODR	**Sosua Marina B**	**0.64**	**80**	*e*Pg	**Pg**	**06 21 40.9**	**-0.2**
SODR				*e*Sg	**Sg**	**06 21 49.2**	**-0.4**
SODR				IAML		06 21 58.6	
	comp=N,758nm,0.7s						
SDDR	**Presa de Saban**	**0.66**	**183**	*e*Pg	**Pg**	**06 21 41.8**	**+0.2**
SDDR				*e*Sg	**Sb**	**06 21 51.6**	**+0.5**
SDDR				IAML		06 21 52.2	
	comp=N,278nm,0.7s						
SDDR	**Presa de Saban**	**0.66**	**183**	*i* P	**Pg**	**06 21 41.7**	**+0.2**
SDDR				*e*S	**Sg**	**06 21 51.3**	**+0.9**
SDDR				IAML		06 21 52.1	
	comp=Z,179nm,0.6s						
ABDR	**Alto Bandera**	**1.02**	**145**	*e*Pg	**Pb**	**06 21 46.5**	**-1.7**
ABD

MIDR				*e*Sg	**Sn**	06 22 33.0	**+1.9**
MIDR				IAML		06 22 37.5	
	comp=N,43nm,2.4s						
CRPR	**Cabo Rojo, PR**	**4.24 112**	*e*Pg		**Pb**	06 22 39.6	**-3.4**
CRPR			*e*Sg		**Sb**	06 23 30.3	**-3.8**
CRPR			IAML			06 23 47.2	
	comp=N,49nm,3.6s						
AOPR	**Arecibo Observ**	**4.44 106**	*e*Pg		**Pn**	06 22 39.6	**+4.0**
AOPR			*e*Sg		**Sb**	06 23 36.0	**-3.9**
AOPR			IAML			06 24 10.4	
	comp=N,48nm,1.3s						

*IDC **21** 06:33:29.1±1.1, 14°.88S×179°.25W, h0km, mb4.1/11, mbtmp4.1/12, ML3.3/1, MS4.0/45, Error ellipse: s-maj=45.6km s-min=18.7km az=147.0*
*GCMT **21** 06:33:35.0±0.2, 14°.35S±0°.02×179°.36W±0°.01, h16km±1km, MW4.9/112, Moment Tensor Solution. s23,c26; s112,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.95±.12; $M_{\theta\theta}$0.84±.10; $M_{\phi\phi}$0.11±.10; $M_{r\theta}$0.16±.25; $M_{\theta\phi}$2.30±.07; $M_{\phi r}$-1.09±.31; Best double couple: M_o2.67700×10^{16} NP1:ϕ_s10.00000°,δ74.00000°, λ-149.00000°. NP2:ϕ_s271.00000°,δ60.00000°, λ-18.00000°. Principal axes: T 2.8990, Plg9.0000°, Azm138.0000°; N -0.4430, Plg56.0000°, Azm34.0000°; P -2.4550, Plg33.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 21 06:33:34.6±1.1, 14°.9S±0°.3×179°.3W±0°.2, h35km, n48, σ0s91/13, mb4.1/11, MS4.1/43, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**14.33**	**175**	LR	LR	06 41 40.4	
	comp=Z,833nm,21.9s,baz=349,slow=34						
DZM	**Mont Dzumac**	**15.28**	**240**	Pn	**Pn**	**06 37 07.4**	**-0.4**
DZM	0.1nm,0.3s,baz=115,slow=19,SNR=2.2			LR	LR	06 42 00.4	
	comp=Z,1μm,20.7s,baz=86,slow=33						
RAR	**Rarotonga**	**19.59**	**112**	LR	LR	06 43 58.8	
	comp=Z,281nm,21.6s,baz=294,slow=32						
HNR	**Honiara**	**21.00**	**283**	LR	LR	06 44 57.0	
	comp=Z,15μm,20.2s,baz=115,slow=33						
URZ	**Urewera**	**23.48**	**187**	LR	LR	06 46 48.4	
	comp=Z,286nm,19.7s,baz=116,slow=34						
PPT	**Papeete**	**28.65**	**99**	LR	LR	06 48 15.2	
	comp=Z,93nm,20.0s,baz=279,slow=31						
CTA	**Charters Tower**	**33.22**	**256**	LR	LR	06 52 29.7	
	comp=Z,162nm,18.6s,baz=81,slow=34						
PMG	**Port Moresby**	**33.22**	**276**	LR	LR	06 51 32.3	
	comp=Z,196nm,21.5s,baz=76,slow=33						
STKA	**Stephens Creek**	**39.41**	**238**	P	**P**	**06 41 02.0**	**+0.7**
	1.9nm,0.7s,baz=90,slow=7.3,SNR=3.3						
STKA				LR	LR	06 56 05.4	
	comp=Z,222nm,19.0s,baz=51,slow=34						
	1.9nm,0.7s						
WRA	**Warramunga Arr**	**44.41**	**257**	P	**P**	**06 41 41.3**	**-1.0**
	0.7nm,0.8s,baz=89,slow=7.1,SNR=1.3						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**44.86**	**251**	P	**P**	**06 41 45.8**	**-0.1**
	2.2nm,1.0s,baz=80,slow=8.3,SNR=11						
ASAR				PcP	**PcP**	**06 43 27.0**	**-0.3**
	0.5nm,0.9s,baz=67,slow=5.2,SNR=1.6						
	2.2nm,1.0s						
GUMO	**Guam**	**45.38**	**307**	LR	LR	06 58 17.4	
	comp=Z,137nm,20.5s,baz=111,slow=33						
JCJ	**Chichijima**	**56.05**	**318**	LR	LR	07 03 11.5	
	comp=Z,246nm,20.5s,baz=132,slow=32						
DAV	**Davao City (W)**	**58.84**	**288**	LR	LR	07 06 35.2	
	comp=Z,60nm,19.8s,baz=140,slow=34						
NWAO	**Narrogin (SRO)**	**59.90**	**240**	LR	LR	07 07 44.4	
	comp=Z,338nm,20.8s,baz=76,slow=34						
VNDA	**Vanda**	**63.35**	**185**	LR	LR	07 06 53.6	
	comp=Z,43nm,18.7s,baz=335,slow=32						
MJAR	**Matsushiro Arr**	**65.00**	**323**	P	**P**	**06 44 11.4**	**+0.2**
	0.7nm,0.3s,baz=152,slow=6.3,SNR=5.2						
MJAR				LR	LR	07 07 27.3	
	comp=Z,123nm,21.5s,baz=140,slow=31						
	0.7nm,0.3s						
JOW	**Kunigami**	**65.67**	**309**	LR	LR	07 07 05.0	
	comp=Z,61nm,20.2s,baz=104,slow=31						
RPN	**Rapa Nui**	**65.72**	**113**	LR	LR	07 05 33.7	
	comp=Z,95nm,21.8s,baz=259,slow=29						
JNU	**Nakatsue**	**67.39**	**316**	LR	LR	07 08 37.7	
	comp=Z,79nm,21.4s,baz=117,slow=31						
SHEM	**Shemya Is, Ala**	**67.60**	**356**	LR	LR	07 08 35.4	
	comp=Z,135nm,21.4s,baz=336,slow=31						
ASAJ	**Asahikawa**	**68.25**	**331**	LR	LR	07 07 55.3	
	comp=Z,225nm,22.0s,baz=158,slow=30						
PETK	**Petropavlovsk-**	**70.58**	**346**	P	**P**	**06 44 46.9**	**+0.9**
	9.5nm,1.0s,baz=134,slow=6.4,SNR=5.1						
PETK				LR	LR	07 09 07.3	
	comp=Z,120nm,21.1s,baz=171,slow=30						
	9.5nm,1.0s						
KSRS	**Korea Array**	**71.91**	**318**	LR	LR	07 10 42.9	
	comp=Z,114nm,21.9s,baz=120,slow=31						
USRK	**Ussuriysk Ar.**	**73.67**	**326**	LR	LR	07 10 51.8	
	comp=Z,59nm,21.5s,baz=178,slow=30						
QSPA	**South Pole Qui**	**75.13**	**180**	LR	LR	07 13 09.3	
	comp=Z,87nm,22.0s,baz=36,slow=32						
YBH	**Yreka Blue Hor**	**76.77**	**40**	LR	LR	07 11 24.3	
	comp=Z,105nm,19.6s,baz=230,slow=30						
PFO	**Pinyon Flats O**	**76.86**	**50**	LR	LR	07 11 09.8	
	comp=Z,125nm,18.8s,baz=252,slow=29						
KLR	**Kul'dur**	**77.11**	**330**	LR	LR	07 13 27.7	
	comp=Z,69nm,21.7s,baz=154,slow=31						
LPIG	**La Paz**	**77.71**	**61**	LR	LR	07 11 54.8	
	comp=Z,127nm,18.8s,baz=212,slow=30						
NVAR	**Mina Array Bea**	**77.88**	**45**	P	**P**	**06 45 28.4**	**-0.8**
	1.0nm,0.8s,baz=227,slow=8.8,SNR=12						
NVAR				LR	LR	07 11 53.6	
	comp=Z,174nm,20.2s,baz=246,slow=30						
	1.0nm,0.8s						
BBB	**Bella Bella**	**80.12**	**29**	LR	LR	07 13 10.8	
	comp=Z,90nm,21.5s,baz=242,slow=30						
SEY	**Seymchan**	**80.68**	**347**	LR	LR	07 14 58.9	
	comp=Z,75nm,21.4s,baz=254,slow=31						
ELK	**Elko**	**81.08**	**44**	LR	LR	07 15 03.4	
	comp=Z,136nm,19.8s,baz=266,slow=31						
ILAR	**Eielson Array**	**83.18**	**13**	P	**P**	**06 45 54.7**	**-2.0**
	2.1nm,0.9s,baz=236,slow=6.5,SNR=12						
ILAR				LR	LR	07 18 21.5	
	comp=Z,37nm,22.0s,baz=200,slow=32						
	2.1nm,0.9s						
NEW	**Newport**	**83.61**	**36**	LR	LR	07 19 37.8	
	comp=Z,70nm,18.5s,baz=230,slow=33						
ANMO	**Albuquerque**	**84.92**	**52**	LR	LR	07 16 15.8	
	comp=Z,81nm,19.9s,baz=339,slow=30						
TXAR	**Lajitas Array**	**85.13**	**58**	P	**P**	**06 46 08.2**	**+0.6**
	0.6nm,0.9s,baz=207,slow=5.2,SNR=12						
TXAR				LR	LR	07 18 14.7	
	comp=Z,83nm,18.7s,baz=241,slow=32						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**85.78**	**44**	P	**P**	**06 46 11.2**	**+0.5**
	2.2nm,1.1s,baz=208,slow=2.9,SNR=9.7						
PDAR				LR	LR	07 19 33.5	
	comp=Z,82nm,18.8s,baz=298,slow=32						
	2.2nm,1.1s						
YAK	**Yakutsk**	**86.49**	**338**	LR	LR	07 20 48.6	
	comp=Z,47nm,20.4s,baz=116,slow=33						
CMAR	**Chiang Mai Arr**	**87.07**	**290**	LR	LR	07 21 46.1	
	comp=Z,62nm,20.3s,baz=95,slow=33						
CMIG	**Matias Romero**	**89.12**	**72**	LR	LR	07 18 26.9	
	comp=Z,86nm,18.8s,baz=243,slow=30						
SONM	**Songino Array**	**90.73**	**320**	P	**P**	**06 46 34.5**	**+0.5**
	1.4nm,1.1s,baz=96,slow=1.5,SNR=5.1						
SONM				LR	LR	07 25 19.1	
	comp=Z,48nm,18.1s,baz=266,slow=34						
	1.4nm,1.1s						
YKA	**Yellowknife Ar**	**91.98**	**25**	P	**P**	**06 46 39.8**	**+0.5**
	0.9nm,1.2s,baz=241,slow=4.9,SNR=4.5						
YKA				LR	LR	07 23 36.4	
	comp=Z,72nm,18.2s,baz=276,slow=33						
	0.9nm,1.2s						
PLCA	**Paso Flores**	**94.01**	**134**	LR	LR	07 21 01.5	
	comp=Z,47nm,19.4s,baz=222,slow=30						
TEIG	**Tepich**	**95.97**	**71**	LR	LR	07 23 35.1	
	comp=Z,434nm,18.7s,baz=192,slow=31						
JTS	**Las Juntas de**	**96.75**	**81**	LR	LR	07 19 49.5	
	comp=Z,49nm,19.6s,baz=124,slow=29						
ULM	**Lac du Bonnet**	**97.18**	**40**	LR	LR	07 25 13.9	
	comp=Z,69nm,18.1s,baz=57,slow=32						

*IDC **21** 06:50:31.7±1.9, 2°.12N×98°.54E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=96.7km s-min=19.8km az=54.0*
*DJA **21** 06:50:51.1±0.8, 2°N±5°×9°9E±°, h135km±8km, M4.0/8, mb4.5/1, MLv3.8/8*

ISC 21 06:50:49.9±0.8, 2°.37N±0°.08×98°.99E±0°.10, h150km, n14, σ0s67/15, mb3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**1.67**	**313**	P	**Pn**	**06 51 21.3**	**0.0**
GSI	**Gunungsitoli**	**1.77**	**233**	P	**Pn**	**06 51 23.2**	**+0.9**
PBSI	**Pulau Batu**	**2.51**	**196**	P	**Pn**	**06 51 31.5**	**+0.4**
SNSI	**Sinabang, Aceh**	**2.66**	**271**	P	**Pn**	**06 51 33.9**	**+0.9**
SNSI				S	**Sn**	**06 52 04.6**	**-1.7**
MLSI	**Meulaboh, Aceh**	**3.20**	**306**	P	**Pn**	**06 51 40.2**	**+0.4**
SISI	**Saibi**	**3.67**	**178**	P	**Pn**	**06 51 46.2**	**+0.3**
PPSI	**Pulau Pagai**	**5.20**	**169**	P	**Pn**	**06 52 05.6**	**-0.3**
WRA	**Warramunga Arr**	**41.17**	**124**	P	**P**	**06 58 19.7**	**-0.2**
	0.9nm,0.6s,baz=302,slow=9.2,SNR=5.9						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**42.70**	**129**	P	**P**	**06 58 32.9**	**+0.5**
	0.4nm,0.5s,baz=301,slow=8.1,SNR=7.1						
	0.4nm,0.5s						
SONM	**Songino Array**	**45.74**	**7**	P	**P**	**06 58 56.4**	**+0.2**
	0.3nm,0.4s,baz=199,slow=9.3,SNR=4.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**46.58**	**344**	P	**P**	**06 59 02.9**	**+0.3**
	0.8nm,0.4s,baz=154,slow=9.2,SNR=31						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**51.10**	**343**	P	**P**	**06 59 37.0**	**+0.1**
	0.7nm,0.6s,baz=165,slow=7.2,SNR=11						
	0.7nm,0.6s						
BVAR	**Borovoye Array**	**55.77**	**340**	P	**P**	**07 00 10.6**	**-0.4**
	1.2nm,0.4s,baz=137,slow=7.2,SNR=9.2						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**	**07 02 41.1**	**-0.1**
	0.4nm,0.4s,baz=119,slow=2.4,SNR=5.6						
	0.4nm,0.4s						

*NEIC **21** 06:58:29.6±0.3, 19°.34N±0°.03×155°.33W±0°.03, h36km±1km, Error ellipse: s-maj=4.7km s-min=3.7km az=216.0*

HVO 21 06:58:31.0±0.4, 19°.3N±0°.2×155°.3W±0°.1, h30km±2km, ML3.2/39, MLv3.5/52(NEIC), Error ellipse: s-maj=25.4km s-min=9.1km az=208.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLP	**Hilina Pali**	**0.03**	**217**		Pb	06 58 35.8	-0.3
HLP					Sb	06 58 39.4	-0.2
HLP	**Hilina Pali**	**0.03**	**217**	IAML		06 58 39.5	
	comp=N,11μm,0.2s						
HLP				IAML		06 58 39.6	
	comp=E,10μm,0.2s						
SDHHI	**Sand Hill**	**0.07**	**358**		Pb	06 58 35.9	-0.5
SDHHI					Sb	06 58 39.4	-0.6
SDHHI	**Sand Hill**	**0.07**	**358**	IAML		06 58 39.7	
	comp=N,19μm,0.2s						
SDHHI				IAML		06 58 39.8	
	comp=E,14μm,0.4s						
RIM	**Rim**	**0.08**	**12**	Pg	Pb	06 58 35.9	-0.5
RIM				IAML		06 58 41.4	
	comp=N,10μm,0.3s						
RIM				IAML		06 58 41.6	
	comp=E,8μm,0.4s						
KKO	**Keanakako`i**	**0.08**	**17**		Pb	06 58 35.9	-0.5
KKO					Sb	06 58 39.4	-0.7
KKO	**Keanakako`i**	**0.08**	**17**	IAML		06 58 39.6	
	comp=E,11μm,0.3s						
KKO				IAML		06 58 40.0	
	comp=N,10μm,0.7s						
WRMHI	**West Rim**	**0.09**	**355**		Pb	06 58 35.9	-0.6
WRMHI					Sb	06 58 39.4	-0.8
WRMHI	**West Rim**	**0.09**	**355**	IAML		06 58 43.1	
	comp=N,9μm,0.5s						
WRMHI				IAML		06 58 45.2	
	comp=E,18μm,0.4s						
PUH	**Pauahi**	**0.09**	**51**		Pb	06 58 35.9	-0.5
PUH					Sb	06 58 39.5	-0.6
PUH	**Pauahi**	**0.09**	**51**	IAML		06 58 39.8	
	comp=E,8μm,0.3s						
PUH				IAML		06 58 40.0	
	comp=N,7μm,0.6s						
NPH	**North Pit**	**0.10**	**6**		Pb	06 58 35.8	-0.7
NPH					Sb	06 58 39.4	-0.8
NPH	**North Pit**	**0.10**	**6**	IAML		06 58 39.6	
	comp=E,1μm,0.4s						
NPH				IAML		06 58 41.0	
	comp=N,3μm,0.3s						
BYL	**Byron's Ledge**	**0.10**	**17**		Pb	06 58 36.0	-0.5
BYL						06 58 39.9	
	comp=N,6μm,0.4s			IAML			
BYL				IAML		06 58 39.9	
	comp=E,6μm,0.3s						
OBL	**Observatory Le**	**0.10**	**4**		Pb	06 58 35.8	-0.7
UWE	**Uwekahuna**	**0.10**	**359**		Pb	06 58 36.0	-0.6
UWE					Sb	06 58 39.6	-0.7
UWE	**Uwekahuna**	**0.10**	**359**	IAML		06 58 40.6	
	comp=E,9μm,0.2s						
UWE				IAML		06 58 42.0	
	comp=N,8μm,0.3s						
UWB	**Uwekahuna B**	**0.11**	**7**		Pb	06 58 35.8	-0.7
UWB					Sb	06 58 39.4	-0.9
UWB	**Uwekahuna B**	**0.11**	**7**	IAML		06 58 39.5	
	comp=N,2μm,0.7s						
UWB				IAML		06 58 39.5	
	comp=E,1μm,0.3s						
HATHI	**Halema'uma'u T**	**0.11**	**15**		Pb	06 58 36.0	-0.6
HATHI					Sb	06 58 39.9	-0.4
HATHI	**Halema'uma'u T**	**0.11**	**15**	IAML		06 58 40.1	
	comp=E,7μm,0.6s						
HATHI				IAML		06 58 41.7	
	comp=N,5μm,0.7s						
SBLHI	**Steaming Bluff**	**0.11**	**11**		Pb	06 58 35.9	-0.7
SBLHI					Sb	06 58 39.4	-1.0
SBLHI	**Steaming Bluff**	**0.11**	**11**	IAML		06 58 39.9	
	comp=N,9μm,0.4s						
SBLHI				IAML		06 58 39.9	
	comp=E,7μm,0.4s						
HTC	**Hot Caves**	**0.13**	**232**		Pb	06 58 36.3	-0.3
KNHH	**Kane Nui o Ham**	**0.13**	**62**		Pb	06 58 36.2	-0.5
RSD	**Rainshed**	**0.15**	**5**		Pb	06 58 36.2	-0.7
STCH	**Steam Cracks**	**0.17**	**67**		Pb	06 58 36.5	-0.6
STCH				IAML		06 58 40.7	
	comp=N,7μm,0.2s						
STCH				IAML		06 58 40.8	
	comp=E,6μm,0.3s						
NPOC	**North of Pu'u**	**0.19**	**66**		Pb	06 58 36.6	-0.6
JCUZ	**Jacuzzi**	**0.19**	**70**		Pb	06 58 36.7	-0.5
JCUZ				IAML		06 58 41.0	
	comp=E,7μm,0.5s						
MLH	**Mauna Loa**	**0.20**	**333**		Pb	06 58 37.0	-0.5
MLH				IAML		06 58 41.4	
	comp=E,8μm,0.3s						
MLH				IAML		06 58 43.2	
	comp=N,7μm,0.1s						
JOKA	**Jonika Flow**	**0.29**	**67**		Pb	06 58 37.5	-0.9
KHU	**Kahuku**	**0.31**	**257**		Pb	06 58 37.7	-1.2
KHU					Sb	06 58 42.7	-1.5
KHU	**Kahuku**	**0.31**	**257**	IAML		06 58 43.0	
	comp=N,7μm,0.2s						
KHU				IAML		06 58 43.4	
	comp=E,8μm,0.2s						
MWH	**Moku'aweowe**	**0.33**	**300**		Pb	06 58 38.2	-1.1
MWH					Sb	06 58 43.8	-1.3
MWH	**Moku'aweowe**	**0.33**	**300**	IAML		06 58 44.0	
	comp=N,2μm,0.2s						
MWH				IAML		06 58 53.7	
	comp=E,2μm,0.7s						
HPO	**Honuapo**	**0.34**	**228**		Pb	06 58 37.8	-1.2
HPO					Sb	06 58 42.9	-1.4
HMH	**Humu'ula Sheep**	**0.34**	**328**		Pb	06 58 38.7	-0.6
MLOA	**Mauna Loa Obse**	**0.35**	**309**		Pb	06 58 38.5	-0.9
MLOA	**Mauna Loa Obse**	**0.35**	**309**	IAML		06 58 44.2	
	comp=E,5μm,0.2s						
MLOA				IAML		06 58 44.5	
	comp=N,8μm,0.2s						
ALEP	**Alea Permanent**	**0.40**	**304**		Pb	06 58 38.8	-1.4
POHA	**Pohakuloa**	**0.49**	**333**		Pb	06 58 40.0	-1.5
POHA					Sb	06 58 46.7	-2.0
POHA	**Pohakuloa**	**0.49**	**333**	IAML		06 58 46.9	
	comp=N,3μm,0.3s						
POHA				IAML		06 58 48.9	
	comp=N,5μm,0.1s						

CPH	**Captain Cook**	**0.62**	**286**		Pb	06 58 41.2	-2.2
HUH	**Hualalai**	**0.63**	**306**		Pb	06 58 42.2	-1.6
HUH	**Hualalai**	**0.63**	**306**	IAML		06 58 51.3	
	comp=E,2μm,0.3s						
HUH				IAML		06 58 55.5	
	comp=N,2μm,0.3s						
KHLU	**Kahalu`u**	**0.63**	**296**		Pb	06 58 41.7	-2.0
KHLU					Sb	06 58 49.5	-2.8
KHLU	**Kahalu`u**	**0.63**	**296**	IAML		06 58 49.7	
	comp=N,1μm,0.1s						
KHLU				IAML		06 58 51.4	
	comp=E,1μm,0.1s						
KKH	**Kailua Kona**	**0.77**	**296**		Pn	06 58 43.2	-2.5
KKH					Sb	06 58 52.4	-3.5
HPAH	**Hawaii Prepara**	**0.81**	**332**		Sb	06 58 53.3	-3.9
HPAH	**Hawaii Prepara**	**0.81**	**332**		Pn	06 58 44.0	-2.5
HPAH	**Hawaii Prepara**	**0.81**	**332**	IAML		06 58 53.9	
	comp=N,3μm,0.2s						
HPAH				IAML		06 58 54.0	
	comp=E,4μm,0.2s						
MHA	**Mahukona**	**1.04**	**326**		Pn	06 58 47.4	-2.2
MHA					Sn	06 58 59.3	-3.8
HLK	**Haleakala**	**1.69**	**328**	Pn	Pn	06 58 56.1	-2.8
KHLH	**Kahului Airpor**	**1.90**	**326**	Pn	Pn	06 58 59.4	-2.1
WMR	**Waimanalo Ridg**	**3.00**	**312**		Pn	06 59 13.5	-3.1
DHH	**Diamond Head**	**3.05**	**310**		Pn	06 59 14.1	-3.1
HON	**Honolulu**	**3.23**	**309**		Pn	06 59 16.9	-2.9
HON					Sn	06 59 53.1	-4.1

*SSNC **21** 07:09:39.2±1.5, 18°.51N×74°.15W, h2km±8km, MD3.6, ML3.5, MW3.5*
*SDD **21** 07:09:40.3±4.4, 19°.01N×73°.86W, h18km±294km, MD4.1, ML3.6, MW4.2*
*OSPL **21** 07:09:41.0±0.9, 18°.55N×74°.18W, h19km±10km, ML3.4*

ISC 21 07:09:38.3±1.9, 18°.89N±0°.06×73°.87W±0°.04, h11km±15km, n35, σ1s19/53, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**1.56**	**311**	*e*Pg	**Pb**	**07 10 07.2**	**0.0**
GTBY				*e*Sg	**Sn**	**07 10 26.3**	**+0.1**
GTBY				IAML		07 10 36.8	
	comp=N,1μm,0.6s						
GTBY	**Guantanamo Bay**	**1.56**	**311**	*e*P	**Pn**	**07 10 06.5**	**+0.5**
GTBY				*e*S	**Sb**	**07 10 27.4**	**+0.5**
GTBY				IAML		07 10 28.4	
	comp=N,427nm,0.3s						
GTBY				IAML		07 10 28.6	
	comp=N,639nm,0.3s						
GTBY	**Guantanamo Bay**	**1.56**	**311**	*i* P	**Pn**	**07 10 06.7**	**+0.7**
GTBY				*e*S	**Sb**	**07 10 26.8**	**-0.1**
GTBY				IAML		07 10 32.5	
	comp=Z,118nm,0.3s						
JIDR	**Jimani**	**1.95**	**101**	*e*Pg	**Pb**	**07 10 13.8**	**-0.1**
JIDR				*e*Sg	**Sg**	**07 10 41.5**	**+0.3**
JIDR				IAML		07 10 54.3	
	comp=N,476nm,0.8s						
NMDO	**Nuevo Mundo**	**1.96**	**328**	*e*P	**Pb**	**07 10 14.0**	**0.0**
SABCS	**La Quijada**	**2.00**	**317**	*e*P	**Pn**	**07 10 13.2**	**+1.2**
SABCS				*e*S	**Sn**	**07 10 37.8**	**+0.8**
SABCS				IAML		07 10 41.3	
	comp=N,456nm,0.4s						
SABCS				IAML		07 10 42.6	
	comp=E,316nm,0.4s						
MOAC	**Moa**	**2.04**	**330**	*e*P	**Pb**	**07 10 15.8**	**+0.5**
MOAC				*e*S	**Sg**	**07 10 43.4**	**-0.5**
MOAC				IAML		07 10 44.8	
	comp=E,419nm,0.4s						
MOAC				IAML		07 10 45.6	
	comp=N,246nm,0.5s						
RCC	**Rio Carpintero**	**2.04**	**303**	*e*P	**Pn**	**07 10 12.5**	**-0.1**
RCC				*e*S	**Sn**	**07 10 37.7**	**-0.4**
RCC				IAML		07 10 39.9	
	comp=N,149nm,0.3s						
RCC				IAML		07 10 40.4	
	comp=E,249nm,0.4s						
LOPE2	**Hotel El Peder**	**2.19**	**113**	*e*Pg	**Pb**	**07 10 17.6**	**-0.3**
LOPE2				*e*Sg	**Sb**	**07 10 46.3**	**+1.3**
LOPE2	**Hotel El Peder**	**2.19**	**113**	*i* P	**Pb**	**07 10 17.4**	**-0.4**
LOPE2				*e*S	**Sb**	**07 10 44.0**	**-1.0**
LOPE2				IAML		07 10 50.4	
	comp=Z,165nm,0.6s						
MARVS	**Santiago de Cu**	**2.21**	**300**	*e*P	**Pn**	**07 10 14.8**	**-0.1**
NEDR	**Neiba UASD**	**2.36**	**100**	*e*Pg	**Pb**	**07 10 21.1**	**+0.3**
NEDR				*e*Sg	**Sg**	**07 10 54.2**	**+0.1**
NEDR				IAML		07 11 10.2	
	comp=N,244nm,0.9s						
SDDR	**Presa de Saban**	**2.44**	**87**	*e*Pg	**Pb**	**07 10 21.4**	**-0.9**
SDDR				*e*Sg	**Sb**	**07 10 53.0**	**+0.5**
SDDR				IAML		07 11 05.4	
	comp=N,235nm,1.4s						
SDDR	**Presa de Saban**	**2.44**	**87**	*e*P	**Pb**	**07 10 22.3**	**0.0**
SDDR				*e*S	**Sb**	**07 10 53.9**	**+1.4**
SDDR	**Presa de Saban**	**2.44**	**87**	*i* P	**Pb**	**07 10 22.4**	**+0.1**
SDDR				*e*S	**Sb**	**07 10 54.2**	**+1.8**
SDDR				IAML		07 11 00.7	
	comp=Z,134nm,0.9s						
CHIV	**Chivirico**	**2.63**	**295**	*e*P	**Pn**	**07 10 20.4**	**-0.4**
LOBA2	**Hotel Casa Bon**	**2.75**	**107**	*e*Pg	**Pb**	**07 10 25.6**	**-1.9**
LOBA2				*e*Sg	**Sb**	**07 11 03.6**	**+2.3**
YAR	**Yar**	**2.77**	**302**	*e*P	**Pn**	**07 10 23.1**	**+0.4**
HOJ	**Hope**	**2.87**	**253**	*i* P	**Pn**	**07 10 25.3**	**+1.2**
STH	**Stony Hill**	**2.91**	**254**	*i* P	**Pn**	**07 10 25.0**	**+0.5**
ABDR	**Alto Bandera**	**3.07**	**91**	*e*Pg	**Pb**	**07 10 31.4**	**-1.8**
ABDR				*e*Sg	**Sb**	**07 11 11.9**	**+1.2**
ABDR				IAML		07 11 33.8	
	comp=N,169nm,1.4s						
LMGC	**Las Mercedes**	**3.18**	**292**	*e*P	**Pn**	**07 10 26.6**	**-1.6**
LMGC				*e*S	**Sn**	**07 11 02.4**	**-3.7**
LMGC				IAML		07 11 04.0	
	comp=N,67nm,0.1s						
LMGC				IAML		07 11 04.6	
	comp=E,49nm,0.1s						
BANI	**BANI**	**3.37**	**98**	*e*Pg	**Pb**	**07 10 37.0**	**-1.1**
BANI				*e*Sg	**Sb**	**07 11 20.9**	**+1.9**
MIDR	**Miches**	**4.56**	**88**	*e*Pg	**Pb**	**07 10 55.

mb4.8/234, Error ellipse: s-maj=20.0km s-min=11.0km az=142.0

ISC 21 07:18:53.5±0.4, 50°04N±0°05×155°45E±0°04, h143km±2km, h143km:pP-P, n881, σ1↑20/869, mb4.8/207, 39C-18D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.77**	**33**	*i*	*i*PN	**Pn**	**07 19 15.6**	**0.0**
SKR					*i* S	**Sn**	**07 19 31.5**	**-1.1**
SKR					pmax	pmax		
	comp=Z,885nm,0.7s							
SKR					smax	smax		
	comp=E,8μm,0.7s							
SKR					smax	smax		
	comp=N,7μm,0.5s							
SKR	**Severo-Kuril's**	**0.77**	**33**	*e*P		**Pn**	**07 19 15.9**	**+0.2**
SKR				*e*S		**Sn**	**07 19 32.4**	**-0.2**
PAU	**Pauzhetka**	**1.67**	**31**	P	N	**Pn**	**07 19 26.0**	**+1.7**
PAU				S		**Sn**	**07 19 51.1**	**+3.2**
PAU	**Pauzhetka**	**1.67**	**31**	*e*P		**Pn**	**07 19 26.0**	**+1.7**
PAU				*e*S		**Sn**	**07 19 51.1**	**+3.2**
KDTR	**Khodutka, Kamc**	**2.43**	**42**	PN		**Pn**	**07 19 32.6**	**-0.6**
KDTR				S		**Sn**	**07 20 01.6**	**-2.3**
KDTR	**Khodutka, Kamc**	**2.43**	**42**	*e*P		**Pn**	**07 19 32.6**	**-0.6**
KDTR				*e*S		**Sn**	**07 20 01.6**	**-2.3**
ASAK	**Asacha**	**2.81**	**32**	PN		**Pn**	**07 19 39.2**	**+1.1**
ASAK				S		**Sn**	**07 20 15.6**	**+3.0**
ASAK	**Asacha**	**2.81**	**32**	*e*P		**Pn**	**07 19 39.2**	**+1.1**
ASAK				*e*S		**Sn**	**07 20 15.6**	**+3.0**
MTVR	**Mutnovka**	**2.99**	**34**	PN		**Pn**	**07 19 41.2**	**+0.8**
MTVR				S		**Sn**	**07 20 17.2**	**+0.4**
MTVR	**Mutnovka**	**2.99**	**34**	*e*P		**Pn**	**07 19 41.2**	**+0.8**
MTVR				*e*S		**Sn**	**07 20 17.2**	**+0.4**
GRL	**Gorelyy**	**3.00**	**32**	PN		**Pn**	**07 19 41.8**	**+1.2**
GRL				S		**Sn**	**07 20 18.8**	**+1.7**
GRL	**Gorelyy**	**3.00**	**32**	*e*P		**Pn**	**07 19 41.8**	**+1.2**
GRL				*e*S		**Sn**	**07 20 18.8**	**+1.7**
RUS	**Russkaya**	**3.07**	**38**	PN		**Pn**	**07 19 41.0**	**-0.4**
RUS				S		**Sn**	**07 20 16.2**	**-2.2**
RUS	**Russkaya**	**3.07**	**38**	*e*P		**Pn**	**07 19 41.0**	**-0.4**
RUS				*e*S		**Sn**	**07 20 16.2**	**-2.2**
APC	**Apacha**	**3.08**	**20**	PN		**Pn**	**07 19 42.2**	**+0.8**
APC	**Apacha**	**3.08**	**20**	*e*P		**Pn**	**07 19 42.2**	**+0.8**
KRMR	**Karymshinskiy**	**3.26**	**30**	PN		**Pn**	**07 19 44.9**	**+1.2**
KRMR				S		**Sn**	**07 20 24.4**	**+1.7**
KRMR	**Karymshinskiy**	**3.26**	**30**	*e*P		**Pn**	**07 19 44.9**	**+1.2**
KRMR				*e*S		**Sn**	**07 20 24.4**	**+1.7**
PEA0B	**Petropavlovsk-**	**3.38**	**24**			**Pn**	**07 19 46.9**	**+1.6**
PEA0B	**Petropavlovsk-**	**3.38**	**24**	*ce*PN		**Pn**	**07 19 45.5**	**+0.2**
PETK	**Petropavlovsk-**	**3.38**	**24**	Pn		**Pn**	**07 19 45.9**	**+0.6**
PETK	**Petropavlovsk-**	**3.38**	**24**	PN		**Pn**	**07 19 45.9**	**+0.6**
PETK	**Petropavlovsk-**	**3.38**	**24**	P		**Pn**	**07 19 44.6**	**-0.7**
	comp=N,272nm,0.4s,baz=176,slow=11,SNR=18							
PETK				S		**Sn**	**07 20 27.0**	**+1.5**
	comp=N,61nm,0.8s,baz=216,slow=12,SNR=4.3							
PETK				LR		LR	07 20 57.1	
	comp=N,151nm,21.1s,baz=268,slow=38							
PET	**Petropavlovsk**	**3.59**	**33**	Pn		**Pn**	**07 19 48.6**	**+0.5**
PET	**Petropavlovsk**	**3.59**	**33**	P		**Pn**	**07 19 48.6**	**+0.5**
PET	**Petropavlovsk**	**3.59**	**33**	*i*P	N	**Pn**	**07 19 48.6**	**+0.5**
PET				*e*S		**Sn**	**07 20 29.3**	**-1.2**
PET				pmax	pmax			
	comp=Z,84nm,0.4s							
PET				smax	smax			
	comp=N,1μm,0.5s							
PET				smax	smax			
	comp=E,685nm,0.7s							
PET	**Petropavlovsk**	**3.59**	**33**	*e*P		**Pn**	**07 19 48.7**	**+0.7**
PET				*e*S		**Sn**	**07 20 29.8**	**-0.7**
INSR	**Institute**	**3.61**	**32**	*e*S		**Sn**	**07 20 31.4**	**+0.5**
DALK	**Dalny**	**3.63**	**33**	PN		**Pn**	**07 19 49.2**	**+0.6**
DALK				S		**Sn**	**07 20 30.3**	**-1.2**
DALK	**Dalny**	**3.63**	**33**	*e*P		**Pn**	**07 19 49.2**	**+0.6**
DALK				*e*S		**Sn**	**07 20 30.3**	**-1.2**
UGLR	**Uglovaya**	**3.80**	**32**	PN		**Pn**	**07 19 52.6**	**+1.6**
UGLR				S		**Sn**	**07 20 36.4**	**+0.8**
UGLR	**Uglovaya**	**3.80**	**32**	*e*P		**Pn**	**07 19 52.6**	**+1.6**
UGLR				*e*S		**Sn**	**07 20 36.4**	**+0.8**
KOK	**Koryaka**	**3.81**	**30**	PN		**Pn**	**07 19 53.0**	**+2.0**
KOK				S		**Sn**	**07 20 37.4**	**+1.6**
KOK	**Koryaka**	**3.81**	**30**	*e*P		**Pn**	**07 19 53.0**	**+2.0**
KOK				*e*S		**Sn**	**07 20 37.4**	**+1.6**
AVH	**Avacha**	**3.82**	**31**	PN		**Pn**	**07 19 53.0**	**+1.8**
AVH				S		**Sn**	**07 20 37.8**	**+1.8**
AVH	**Avacha**	**3.82**	**31**	*e*P		**Pn**	**07 19 53.0**	**+1.8**
AVH				*e*S		**Sn**	**07 20 37.8**	**+1.8**
SMAR	**Somma**	**3.84**	**32**	PN		**Pn**	**07 19 53.1**	**+1.6**
SMAR	**Somma**	**3.84**	**32**	*e*P		**Pn**	**07 19 53.1**	**+1.6**
KRER	**Koryakskii**	**3.86**	**31**	PN		**Pn**	**07 19 53.4**	**+1.6**
KRER				S		**Sn**	**07 20 37.8**	**+0.8**
KRER	**Koryakskii**	**3.86**	**31**	*e*P		**Pn**	**07 19 53.4**	**+1.6**
KRER				*e*S		**Sn**	**07 20 37.8**	**+0.8**
KRX	**Arik**	**3.87**	**30**	PN		**Pn**	**07 19 53.5**	**+1.6**
KRX				S		**Sn**	**07 20 37.6**	**+0.4**
KRX	**Arik**	**3.87**	**30**	*e*P		**Pn**	**07 19 53.5**	**+1.6**
KRX				*e*S		**Sn**	**07 20 37.6**	**+0.4**
NLC	**Nalytchevo**	**3.96**	**36**	PN		**Pn**	**07 19 52.3**	**-0.6**
NLC				S		**Sn**	**07 20 34.6**	**-4.5**
NLC	**Nalytchevo**	**3.96**	**36**	*e*P		**Pn**	**07 19 52.3**	**-0.6**
NLC				*e*S		**Sn**	**07 20 34.6**	**-4.5**
GNL	**Ganaly**	**3.97**	**22**	PN		**Pn**	**07 19 54.7**	**+1.6**
GNL	**Ganaly**	**3.97**	**22**	*e*P		**Pn**	**07 19 54.7**	**+1.6**
SPN	**Mys Shipunski**	**4.18**	**41**	PN		**Pn**	**07 19 55.6**	**-0.2**
SPN				S		**Sn**	**07 20 39.6**	**-4.7**
SPN	**Mys Shipunski**	**4.18**	**41**	*e*P		**Pn**	**07 19 55.6**	**-0.2**
SPN				*e*S		**Sn**	**07 20 39.6**	**-4.7**
KII	**Karymskiy**	**4.70**	**30**	PN		**Pn**	**07 20 03.8**	**+1.1**
KII	**Karymskiy**	**4.70**	**30**	*e*P		**Pn**	**07 20 03.8**	**+1.1**
TUMR	**Tumrok**	**5.98**	**27**	PN		**Pn**	**07 20 20.3**	**+0.6**
TUMR	**Tumrok**	**5.98**	**27**	*e*P		**Pn**	**07 20 21.0**	**+1.3**
TUMD	**Tumrok D**	**5.98**	**28**	*e*P		**Pn**	**07 20 20.3**	**+0.6**
KMNR	**Kamenistaya**	**6.41**	**25**	PN		**Pn**	**07 20 27.0**	**+1.5**
KMNR	**Kamenistaya**	**6.41**	**25**	*e*P		**Pn**	**07 20 27.0**	**+1.5**
KPT	**Kopyto**	**6.59**	**24**	PN		**Pn**	**07 20 28.7**	**+0.7**
KPT	**Kopyto**	**6.59**	**24**	*e*P		**Pn**	**07 20 28.7**	**+0.7**
KIRR	**Kirishev**	**6.62**	**25**	PN		**Pn**	**07 20 29.1**	**+0.8**
KIRR	**Kirishev**	**6.62**	**25**	*e*P		**Pn**	**07 20 29.1**	**+0.8**
BZP	**Bezymyannyi-Pe**	**6.63**	**26**	*e*P		**Pn**	**07 20 29.2**	**+0.7**
BZMR	**Bezymyannaya**	**6.64**	**25**	PN		**Pn**	**07 20 29.5**	**+0.9**
BZMR	**Bezymyannaya**	**6.64**	**25**	*e*P		**Pn**	**07 20 29.5**	**+0.9**
BZWR	**Bezymyannyi-We**	**6.67**	**25**	PN		**Pn**	**07 20 30.2**	**+1.2**
BZWR	**Bezymyannyi-We**	**6.67**	**25**	*e*P		**Pn**	**07 20 30.2**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**6.70**	**26**	PN		**Pn**	**07 20 30.6**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**6.70**	**26**	*e*P		**Pn**	**07 20 30.6**	**+1.2**
SRDR	**Sredinnyy**	**6.79**	**21**	PN		**Pn**	**07 20 32.0**	**+1.5**
SRDR	**Sredinnyy**	**6.79**	**21**	*e*P		**Pn**	**07 20 32.0**	**+1.5**
ZLN	**Zelenaya**	**6.80**	**26**	PN		**Pn**	**07 20 32.4**	**+1.7**
ZLN	**Zelenaya**	**6.80**	**26**	*e*P		**Pn**	**07 20 32.4**	**+1.7**
LGNR	**Loginova**	**6.82**	**26**	PN		**Pn**	**07 20 32.5**	**+1.3**
LGNR	**Loginova**	**6.82**	**26**	*e*P		**Pn**	**07 20 32.5**	**+1.3**
KRSR	**Krestovskiy**	**6.91**	**24**	PN		**Pn**	**07 20 32.5**	**+0.3**
KRSR	**Krestovskiy**	**6.91**	**24**	*e*P		**Pn**	**07 20 32.5**	**+0.3**
KLY	**Klyuchi**	**7.01**	**24**	PN		**Pn**	**07 20 35.1**	**+1.6**
KLY	**Klyuchi**	**7.01**	**24**	*e*P		**Pn**	**07 20 35.1**	**+1.6**
KUR	**Kuril'sk**	**7.03**	**230**	*e*PN		**Pn**	**07 20 34.0**	**+0.3**
KUR				*e*S		**Sn**	**07 21 53.5**	**+1.2**
KUR				pmax	pmax			
	comp=Z,136nm,0.6s							
KUR				pmax	pmax			
	comp=N,28nm,0.2s							
KUR				pmax	pmax			
	comp=E,27nm,0.3s							
KUR				smax	smax			
	comp=N,142nm,0.4s							
KUR				smax	smax			
	comp=E,115nm,0.5s							
SMKR	**Semkarok**	**7.47**	**26**	PN		**Pn**	**07 20 39.6**	**-0.1**
SMKR	**Semkarok**	**7.47**	**26**	*e*P		**Pn**	**07 20 39.6**	**-0.1**
TYV	**Tymovskoe**	**8.21**	**281**	*e*PN		**Pn**	**07 20 52.5**	**+2.9**
TYV				*e*S		**Sn**	**07 22 22.0**	**+1.2**
TYV				pmax	pmax			
	comp=Z,200nm,2.4s							
TYV				pmax	pmax			
	comp=Z,38nm,0.9s							
TYV				smax	smax			
	comp=N,100nm,4.6s							
TYV				smax	smax			
	comp=E,100nm,4.6s							
TYV				smax	smax			
	comp=N,5.0nm,1.4s							
TYV				smax	smax			
	comp=E,6.0nm,1.4s							
BKI	**Bering**	**8.22**	**47**	*e*S		Sn	07 22 10.2	-11
SHO	**Shikotan**	**8.53**	**227**	*e*PN		**Pn**	**07 20 49.7**	**-4.2**
SHO				pmax	pmax			
	comp=N,17nm,0.4s							
SHO				pmax	pmax			
	comp=E,27nm,0.4s							
SHO				pmax	pmax			
	comp=Z,46nm,0.4s							
SHO	**Shikotan**	**8.53**	**227**	*e*S		Sn	07 22 18.6	-10
UGL	**Uglegorsk**	**8.76**	**269**	*e*PN		**Pn**	**07 21 00.1**	**+3.2**
UGL				pmax	pmax			
	comp=Z,50nm,0.8s							
YUK	**Yuzh-Kuril'sk**	**8.88**	**231**	*e*PN		**Pn**	**07 20 57.0**	**-1.6**
YUK				pmax	pmax			
	comp=Z,224nm,0.3s							
YUK				pmax	pmax			
	comp=N,85nm,0.4s							
YSS	**Yuzh-Sakhalins**	**8.98**	**255**	Pn		**Pn**	**07 21 00.1**	**+0.3**
YSS	**Yuzh-Sakhalins**	**8.98**	**255**	*e*PN		**Pn**	**07 21 01.1**	**+1.2**
YSS				*e*S		**Sn**	**07 22 41.9**	**+2.6**
YSS				pmax	pmax			
	comp=Z,50nm,0.9s							
YSS				smax	smax			
	comp=E,10.0nm,1.1s							
RUSJ	**Misakicho**	**9.15**	**233**	*e*PN		**Pn**	**07 21 01.7**	**-0.4**
RUSJ				*e*S		**Sn**	**07 22 39.6**	**-3.8**
NMR	**Nemuro--Hokkai**	**9.44**	**229**	*e*PN		Pn	07 21 01.4	-4.6
MA2	**Magadan**	**9.93**	**346**	Pn		**Pn**	**07 21 11.9**	**-0.4**
MA2	**Magadan**	**9.93**	**346**	*ce*PN		**Pn**	**07 21 11.9**	**-0.4**
MA2				pmax	pmax			
	comp=Z,20nm,1.0s							
MA2	**Magadan**	**9.93**	**346**	P		**Pn**	**07 21 12.0**	**-0.4**
	comp=Z,14nm,0.7s,baz=150,slow=10,SNR=12							
MA2				LR		LR	07 24 47.4	
	comp=Z,46nm,21.9s,baz=164,slow=36							
JKA	**Kamikawa-asahi**	**10.57**	**241**	Pn		**Pn**	**07 21 22.4**	**+1.3**
ASAJ	**Asahikawa**	**10.58**	**241**	P		**Pn**	**07 21 22.4**	**+1.3**
	comp=Z,41nm,0.6s,baz=68,slow=13,SNR=33							
JEM	**Erimo**	**11.71**	**231**	P		**Pn**	**07 21 34.0**	**-2.1**
ERM	**Erimo**	**11.71**	**231**	P		**Pn**	**07 21 34.1**	**-2.0**
ERM	**Erimo**	**11.71**	**231**	*i* PN		**Pn**	**07 21 31.9**	**-4.2**
SHEM	**Shemya Is, Ala**	**11.95**	**70**	P		**Pn**	**07 21 42.0**	**+2.9**
	comp=Z,108nm,0.6s,baz=243,slow=3.8,SNR=6.4							
SHEM				S		**Sn**	**07 23 46.3**	**-4.6**
	comp=Z,116nm,0.5s,baz=292,slow=16,SNR=6.8							
SEY	**Seymchan**	**13.03**	**354**	*ce*PN		**Pn**	**07 21 54.1**	**+1.1**
SEY				pmax	pmax			
	comp=Z,42nm,1.0s							
SEY	**Seymchan**	**13.03**	**354**	P		**Pn**	**07 21 53.1**	**+0.1**
	comp=Z,27nm,0.9s,baz=165,slow=11,SNR=97							
KLR	**Kul'dur**	**15.37**	**276**	*ce*P		**Pn**	**07 22 22.8**	**+0.3**
KLR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KLR	**Kul'dur**	**15.37**	**276**	P		**P**	**07 22 23.6**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=81,slow=8.6,SNR=11							
KLR				LR		LR	07 28 01.4	
	comp=Z,60nm,18.1s,baz=34,slow=36							
USA0B	**Ussuriysk Arra**	**16.97**	**259**	*i* P		**P**	**07 22 41.3**	**-0.4**
USRK	**Ussuriysk Ar.**	**16.97**	**259**			**P**	**07 22 41.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**16.97**	**259**	P		**P**	**07 22 41.8**	**+0.1**
	comp=Z,6.3nm,0.8s,baz=57,slow=13,SNR=7.6							
ZEA	**Zeya**	**17.74**	**293**	*e*P		**Pn**	**07 22 50.9**	**-0.4**
ZEA				pmax	pmax			
	comp=N,10.0nm,0.7s							
ZEA				pmax	pmax			
	comp=Z,20nm,0.5s							
HEH	**HeiHe**	**17.93**	**281**	*e*P		**Pn**	**07 22 53.3**	**-0.3**
HEH				sP		**sP**	**07 23 33.6**	**-1.2**
HEH				pmax	pmax			
	comp=Z,13nm,0.8s							
HEH				pmax	pmax			
	comp=Z,170nm,5.6s							
MDJ	**Mudanjiang**	**18.30**	**263**	P		**Pn**	**07 23 00.3**	**+2.3**
MDJ				sP		sP	07 23 42.9	+4.3
MDJ				pmax	pmax			
	comp=Z,18nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,150nm,4.8s							
MDJ	**Mudanjiang**	**18.30**	**263**	P		**P**	**07 22 56.5**	**+0.1**
MJB9	**Matsu-Tunnel**	**18.37**	**229**			**Pn**	**07 22 58.6**	**-0.3**
MAJO	**Matsushiro**	**18.37**	**229**	P		**P**	**07 22 57.9**	**+0.8**
MAJO	**Matsushiro**	**18.37**	**229**	P		**P**	**07 22 57.9**	**+0.8**
MAJO	**Matsushiro**	**18.37**	**229**	*i* P		**P**	**07 22 54.5**	**-2.6**
MJAR	**Matsushiro Arr**	**18.37**	**229**	P		**P**	**07 22 58.0**	**+0.9**
	comp=Z,4.1nm,0.5s,baz=18,slow=13,SNR=13							
YAK	**Yakutsk**	**18.59**	**320**	P		**P**	**07 22 58.9**	**-0.3**
YAK	**Yakutsk**	**18.59**	**320**	*c i*P		**P**	**07 22 59.0**	**-0.3**
YAK				*e*S		**S**	**07 26 21.1**	**-2.2**
YAK				pmax	pmax			
	comp=Z,68nm,0.9s							
YAK				pmax	pmax			
	comp=E,36nm,1.2s							
YAK				pmax	pmax			
	comp=N,16nm,1.3s							
YAK				smax	smax			
	comp=E,17nm,1.1s							
YAK				smax	smax			
	comp=N,64nm,1.5s							
YAK	**Yakutsk**	**18.59**	**320**	P		**P**	**07 22 57.1**	**-2.1**
	comp=N,83nm,0.5s,baz=74,slow=0.8,SNR=21							
YAK				S		**S**	**07 26 20.6**	**-2.7**
	comp=N,21nm,0.5s,baz=103,slow=1.7,SNR=7.1							
YAK				LR		LR	07 30 35.3	
	comp=N,89nm,18.2s,baz=162,slow=38							
BILL	**Bilibino**	**18.83**	**13**	P		**P**	**07 23 01.4**	**-0.5**
BILL	**Bilibino**	**18.83**	**13**	*i*P		**P**	**07 23 01.3**	**-0.6**
BILL				pmax	pmax			
	comp=Z,79nm,1.0s							
BNX	**BinXian**	**19.24**	**268**	P		**P**	**07 23 06.1**	**-0.4**
BNX				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BNX				pmax	pmax			
	comp=Z,86nm,4.6s							
JGF	**Kuroka**	**19.53**	**229**	P		**P**	**07 23 09.8**	**+0.1**
JGF	**Kuroka**	**19.53**	**229**	P		**P**	**07 23 10.9**	**+1.1**
INU	**Inuyama**	**19.90**	**229**	P		**P**	**07 23 14.3**	**+0.6**
SPIA	**Saint Paul Isl**	**21.38**	**57**	P		**P**	**07 23 29.6**	**+0.3**
	comp=Z,266nm,4.6s							
NIKH	**Nikolski High**	**22.26**	**69**	P		**P**	**07 23 40.2**	**+1.7**
	baz=277							
JMN	**Monobe**	**22.76**	**232**	P		**P**	**07 23 46.1**	**+2.6**
KSRS	**Korea Array**	**23.38**	**248**	P		**P**	**07 23 48.7**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=48,slow=10,SNR=9.8							
	comp=Z,3.2nm,0.6s							
M11K	**Mekoryuk**	**23.85**	**50**	P		**P**	**07 23 54.1**	**+0.9**
	baz=262							
INCN	**Inchon**	**24.14**	**250**	P		**P**	**07 23 57.1**	**+1.0**
TNA	**Tin City**	**24.44**	**37**	P		**P**	**07 23 59.1**	**+0.7**
	baz=249							
JNU	**Nakatsue**	**24.80**	**236**	P		**P**	**07 24 04.9**	**+2.8**
JNU	**Nakatsue**	**24.80**	**236**	P		**P**	**07 24 02.3**	**+0.2**
	comp=Z,18nm,0.8s,baz=20,slow=3.8,SNR=8.0							
	comp=Z,18nm,0.8s							
TIXI	**Tiksi**	**24.82**	**340**	P		**P**	**07 24 00.6**	**-1.2**
TIXI				IAmb		IAmb	07 24 01.4	
	comp=Z,16nm,0.7s							
TIXI	**Tiksi**	**24.82**	**340**	*ce*P		**P**	**07 24 00.4**	**-1.4**
TIXI				pmax	pmax			
	comp=Z,15nm,0.6s							
F14K	**Arctic Creek**	**25.04**	**38**	P		**P**	**07 24 04.3**	**+0.4**
	baz=251							
ANM	**Nome**	**25.14**	**40**	P		**P**	**07 24 05.5**	**+0.7**
	baz=254							
FALS	**False Pass**	**25.25**	**63**	P		**P**	**07 24 07.4**	**+1.5**
	baz=277							
M13K	**Dall Lake**	**25.26**	**50**	P		**P**	**07 24 07.4**	**+1.5**
	baz=265							
BOD	**Bodaibo**	**25.27**	**304**	*e*P		**P**	**07 24 05.2**	**-0.8**
BOD				pmax	pmax			
	comp=Z,7.0nm,1.1s							
J14K	**Nanvaranak Lak**	**25.50**	**45**	IAmb		IAmb	07 24 11.5	
	comp=Z,19nm,0.8s							
J14K	**Nanvaranak Lak**	**25.50**	**45**	P		**P**	**07 24 09.3**	**+1.3**
	baz=260							
L14K	**Kuka Creek**	**25.69**	**48**	P		**P**	**07 24 10.9**	**+1.2**
	baz=264							
F15K	**North Star Dit**	**25.77**	**38**	P		**P**	**07 24 10.6**	**0.0**
	baz=252							
G15K	**Niukluk**	**25.81**	**39**	P		**P**	**07 24 11.3**	**+0.5**
	baz=255							
M14K	**Bethel**	**25.98**	**49**	P		**P**	**07 24 12.8**	**+0.4**
	baz=266							
N14K	**Kuskokwak Cree**	**26.05**	**51**	P		**P**	**07 24 13.6**	**+0.6**
	baz=267							
O14K	**Tigyukauivet M**	**26.24**	**53**	P		**P**	**07 24 15.5**	**+0.7**
	baz=269							
L15K	**Ungalak Mounta**	**26.30**	**47**	P		**P**	**07 24 16.4**	**+1.1**
	baz=264							
K15K	**Wolf Creek Mou**	**26.35**	**46**	P		**P**	**07 24 16.9**	**+1.2**
	baz=263							
C16K	**Lisburne Hills**	**26.43**	**32**	P		**P**	**07 24 16.4**	**0.0**
C16K				IAmb		IAmb	07 24 20.7	
	comp=Z,23nm,0.9s							
C16K	**Lisburne Hills**	**26.43**	**32**	P		**P**	**07 24 16.5**	**+0.1**
	baz=247							
H16K	**Elim**	**26.46**	**41**	P		**P**	**07 24 17.4**	**+0.7**
	baz=257							
M15K	**Kasigluk River**	**26.59**	**50**	P		**P**	**07 24 18.4**	**+0.5**
	baz=267							
G16K	**Koyuk River**	**26.60**	**39**	P		**P**	**07 24 17.8**	**-0.1**
	baz=256							
N15K	**Kwethluk River**	**26.86**	**51**	P		**P**	**07 24 21.1**	**+0.7**
	baz=268							
SDPT	**Sand Point**	**26.87**	**62**	P		**P**	**07 24 21.9**	**+1.4**
	baz=278							
J16K	**Anvik River**	**26.92**	**44**	P		**P**	**07 24 21.2**	**+0.4**
	baz=262							
I17K	**Unalakleet**	**26.97**	**43**	P		**P**	**07 24 21.9**	**+0.6**
	baz=260							
O15K	**Ungalikthiuk R**	**26.98**	**53**	P		**P**	**07 24 22.8**	**+1.4**
	baz=271							
D17K	**Noatak River**	**27.01**	**34**	P		**P**	**07 24 22.6**	**+1.1**
	baz=250,SNR=5.0							
C17K	**DeLong Mountai**	**27.25**	**32**	P		**P**	**07 24 24.1**	**+0.3**
	baz=249							
L16K	**Owhat River**	**27.25**	**47**	P		**P**	**07 24 24.5**	**+0.7**
	baz=266							
E17K	**Hotham Inlet**	**27.27**	**35**	P		**P**	**07 24 24.3**	**+0.4**
	baz=253,SNR=11							
S14K	**Fog Glacier**	**27.28**	**59**	P		**P**	**07 24 24.9**	**+0.6**
	baz=276							
F17K	**Baldwin Pennin**	**27.31**	**37**	IAmb		IAmb	07 24 26.4	
	comp=Z,22nm,1.0s							
F17K	**Baldwin Pennin**	**27.31**	**37**	P		**P**	**07 24 23.9**	**-0.3**
	baz=255							
G17K	**Kiwalik Mounta**	**27.32**	**39**	P		**P**	**07 24 25.1**	**+0.7**
	baz=257							
XLT	**XiLinHaoTe**	**27.32**	**272**	*e*P		**P**	**07 24 27.0**	**+2.3**
XLT				pP		pP	07 24 57.9	+3.5
XLT				pmax	pmax			
	comp=Z,7.0nm,0.6s							
XLT				pmax	pmax			
	comp=Z,94nm,6.0s							
CHNA	**Chernabura Isl**	**27.45**	**62**	P		**P**	**07 24 26.7**	**+1.1**
	baz=279							
M16K	**Timber Creek**	**27.46**	**49**	P		**P**	**07 24 25.7**	**+0.1**
	baz=268							
H17K	**Granite Mounta**	**27.50**	**40**	P		**P**	**07 24 26.1**	**+0.1**
	baz=259							
N16K	**Nishlik Lake**	**27.53**	**50**	P		**P**	**07 24 26.9**	**+0.5**
	baz=269							
J17K	**VABM Dome**	**27.61**	**44**	P		**P**	**07 24 27.5**	**+0.5**
	baz=263							
E18K	**Tukpahlearik C**	**27.83**	**35**	P		**P**	**07 24 29.4**	**+0.5**
	baz=254							
L17K	**Donlin**	**27.84**	**47**	P		**P**	**07 24 29.5**	**+0.5**
	baz=266							
O16K	**Kokwok River B**	**27.86**	**52**	P		**P**	**07 24 29.9**	**+0.6**
	baz=271							
K17K	**Iditarod**	**27.89**	**45**	IAmb		IAmb	07 25 03.3	
	comp=Z,20nm,1.3s							
K17K	**Iditarod**	**27.89**	**45**	P		**P**	**07 24 30.2**	**+0.8**
	baz=265							
P16K	**Nushagak River**	**27.93**	**53**	P		**P**	**07 24 30.3**	**+0.5**
	baz=272							
F18K	**Selawik**	**27.97**	**37**	P		**P**	**07 24 30.0**	**-0.1**
	baz=256							
C18K	**Utukok River**	**28.00**	**32**	IAmb		IAmb	07 24 32.5	
	comp=Z,20nm,0.7s							
C18K	**Utukok River**	**28.00**	**32**	P		**P**	**07 24 30.4**	**0.0**
	baz=251							
B18K	**Kokolik River**	**28.04**	**31**	P		**P**	**07 24 30.6**	**-0.2**
	baz=249							
H18K	**Honhosa River**	**28.19**	**40**	IAmb		IAmb	07 24 33.9	
	comp=Z,15nm,0.6s							
H18K	**Honhosa River**	**28.19**	**40**	P		**P**	**07 24 32.4**	**+0.3**
	baz=260							
G18K	**Tagagwik**	**28.21**	**39**	IAmb		IAmb	07 24 34.0	
	comp=Z,20nm,0.6s							
G18K	**Tagagawik**	**28.21**	**39**	P		**P**	**07 24 32.6

K20K	**Telida**	**29.86**	**44**	IAmb	IAmb	07 24 49.4
	comp=Z,18nm,1.2s					
K20K	**Telida**	**29.86**	**44**	P	**P**	**07 24 47.7 +0.9**
	baz=268,SNR=9.3					
J20K	**Nowinta River**	**29.87**	**43**	IAmb	IAmb	07 24 48.9
	comp=Z,28nm,1.4s					
J20K	**Nowinta River**	**29.87**	**43**	P	**P**	**07 24 47.7 +0.7**
	baz=266					
L20K	**Farewell, AK**	**29.92**	**46**	P	**P**	**07 24 48.2 +0.8**
	baz=270					
IMAR	**Indian Mountai**	**30.21**	**39**	P	**P**	**07 24 50.3 +0.4**
M20K	**Styx River**	**30.27**	**47**	P	**P**	**07 24 51.5 +0.8**
	baz=271					
A21K	**Barrow**	**30.37**	**28**	P	**P**	**07 24 51.4 +0.2**
	baz=252					
C21K	**Knifeblade Rid**	**30.37**	**33**	P	**P**	**07 24 52.0 +0.7**
	baz=257					
G21K	**Allakaket**	**30.37**	**38**	IAmb	IAmb	07 24 53.2
	comp=Z,12nm,0.6s					
G21K	**Allakaket**	**30.37**	**38**	P	**P**	**07 24 51.9 +0.6**
	baz=263					
F21K	**Alatna River**	**30.48**	**37**	P	**P**	**07 24 52.8 +0.5**
	baz=262					
B21K	**Ikpikpuk River**	**30.54**	**32**	P	**P**	**07 24 53.4 +0.7**
	baz=257					
H21K	**Melozitna Rive**	**30.56**	**40**	IAmb	IAmb	07 24 54.4
	comp=Z,8.5nm,0.6s					
H21K	**Melozitna Rive**	**30.56**	**40**	P	**P**	**07 24 53.5 +0.5**
	baz=265					
OHAK	**Old Harbor**	**30.58**	**56**	P	**P**	**07 24 53.6 +0.3**
OHAK	**Old Harbor**	**30.58**	**56**	P	**P**	**07 24 54.3 +1.0**
	baz=279					
O20K	**Slope Mountain**	**30.60**	**51**	P	**P**	**07 24 54.5 +1.0**
	baz=275					
CHUM	**Lake Minchumin**	**30.66**	**43**	P	**P**	**07 24 54.9 +1.0**
	baz=269					
PPLA	**Purkeypile**	**30.70**	**45**	P	**P**	**07 24 55.7 +1.3**
	baz=270					
N20K	**Mount Spurr**	**30.73**	**49**	P	**P**	**07 24 55.8 +1.1**
	baz=273,SNR=7.2					
CAST	**Castle Rocks**	**30.75**	**44**	P	**P**	**07 24 55.9 +1.2**
CAST				IAmb	IAmb	07 24 57.1
	comp=Z,14nm,1.0s					
CAST	**Castle Rocks**	**30.75**	**44**	P	**P**	**07 24 55.8 +1.0**
	baz=270,SNR=9.3					
A22K	**Sinclair Lake**	**30.78**	**29**	P	**P**	**07 24 55.1 +0.3**
	baz=254					
I21K	**Tanana**	**30.86**	**41**	IAmb	IAmb	07 24 57.8
	comp=Z,10.0nm,0.6s					
I21K	**Tanana**	**30.86**	**41**	P	**P**	**07 24 56.6 +0.9**
	baz=267					
Q20K	**Shuyak Island**	**30.86**	**54**	P	**P**	**07 24 56.9 +1.1**
	baz=278					
KDAK	**Kodiak Island**	**30.88**	**55**	P	**P**	**07 24 56.4 +0.5**
	baz=279					
KDAK	**Kodiak Island**	**30.88**	**55**	P	**P**	**07 24 55.6 -0.2**
KDAK				pP	**pP**	**07 25 27.2 +0.9**
SKT	**Skwentna**	**31.02**	**47**	P	**P**	**07 24 57.4 +0.2**
	baz=272					
D22K	**Ayikyak River**	**31.05**	**34**	IAmb	IAmb	07 25 00.4
	comp=Z,15nm,0.5s					
D22K	**Ayikyak River**	**31.05**	**34**	P	**P**	**07 24 57.7 +0.4**
	baz=260					
B22K	**Teshekpuk Lake**	**31.11**	**31**	P	**P**	**07 24 57.5 -0.3**
	baz=257					
H22K	**Ishtalitna Cre**	**31.17**	**39**	P	**P**	**07 24 58.7 +0.3**
	baz=266					
BPAW	**Bear Paw Mtn.**	**31.25**	**43**	P	**P**	**07 25 00.2 +1.0**
BPAW				IAmb	IAmb	07 25 04.1
	comp=Z,12nm,0.7s					
BPAW	**Bear Paw Mtn.**	**31.25**	**43**	P	**P**	**07 24 59.7 +0.5**
	baz=270,SNR=11					
KTH	**Kantishna Hill**	**31.27**	**44**	IAmb	IAmb	07 25 01.8
	comp=Z,21nm,1.0s					
MLY	**Manley**	**31.38**	**41**	P	**P**	**07 25 00.7 +0.4**
	baz=268,SNR=10					
ULN	**Ulaanbaatar**	**31.42**	**285**	*ce*P	**P**	**07 24 59.1 -1.9**
ULN				pmax	pmax	
	comp=Z,5.0nm,2.5s					
SUA	**Susitna One**	**31.42**	**48**	P	**P**	**07 25 01.0 +0.2**
	baz=274,SNR=6.0					
TRF	**Thorofare Moun**	**31.56**	**44**	IAmb	IAmb	07 25 05.6
	comp=Z,16nm,0.7s					
TRF	**Thorofare Moun**	**31.56**	**44**	P	**P**	**07 25 02.2 +0.1**
	baz=271,SNR=14					
BRSE	**Bradley Lake S**	**31.58**	**51**	P	**P**	**07 25 02.3 +0.3**
	baz=277					
H11N2	**WAKE ISLAND Hy**	**31.59**	**159**	T	T	07 58 22.0
	baz=349,slow=74,SNR=56					
H11N1	**WAKE ISLAND Hy**	**31.60**	**159**	T	T	07 57 58.5
	baz=349,SNR=78					
H11N3	**WAKE ISLAND Hy**	**31.60**	**159**	T	T	07 58 22.0
	baz=349,slow=74,SNR=66					
HNS	**HongShan**	**31.65**	**262**	⇑P	**P**	**07 25 06.5 +3.7**
HNS				pP	**pwP**	**07 25 37.3 +2.1**
HHC	**Hu-ho-hao-te**	**31.73**	**270**	*e*P	**P**	**07 25 04.5 +0.8**
HHC				eS	**S**	**07 30 06.4 +3.5**
HHC				pmax	pmax	
	comp=Z,4.0nm,0.8s					
HHC				pmax	pmax	
	comp=Z,74nm,4.9s					
COLD	**Coldfoot**	**31.75**	**37**	P	**P**	**07 25 03.7 +0.2**
	baz=265,SNR=11					
G23K	**Bananza Creek**	**31.77**	**38**	IAmb	IAmb	07 25 05.3
	comp=Z,8.5nm,0.5s					
G23K	**Bananza Creek**	**31.77**	**38**	P	**P**	**07 25 04.5 +0.8**
	baz=266,SNR=11					
D23K	**Nanushuk River**	**31.78**	**34**	P	**P**	**07 25 03.9 +0.2**
	baz=262					
SONM	**Songino Array**	**31.84**	**285**	P	**P**	**07 25 02.6 -2.1**
	comp=Z,0.6nm,0.5s,baz=75,slow=7.3,SNR=6.0					
SONM				PcP	**PcP**	**07 27 52.2 +0.4**
	comp=Z,1.7nm,0.6s,baz=105,slow=2.5,SNR=8.6					
RC01	**Rabbit Creek A**	**31.94**	**49**	IAmb	IAmb	07 25 07.5
	comp=Z,50nm,1.8s					
RC01	**Rabbit Creek A**	**31.94**	**49**	P	**P**	**07 25 06.2 +1.0**
	baz=276					
C23K	**Itkillik River**	**31.94**	**32**	P	**P**	**07 25 05.4 +0.3**
	baz=260					
I23K	**Minto, Yukon-K**	**31.97**	**41**	IAmb	IAmb	07 25 07.0
	comp=Z,7.0nm,0.7s					
I23K	**Minto, Yukon-K**	**31.97**	**41**	P	**P**	**07 25 06.0 +0.6**
	baz=269,SNR=9.0					
O22K	**Cooper Landing**	**32.00**	**50**	P	**P**	**07 25 06.2 +0.5**
	baz=276					
E23K	**Chandalar**	**32.05**	**35**	P	**P**	**07 25 06.6 +0.4**
	baz=264					
NEA2	**Nenana**	**32.09**	**42**	P	**P**	**07 25 07.0 +0.6**
	baz=270,SNR=31					
TOLK	**Toolik Lake Re**	**32.13**	**34**	P	**P**	**07 25 07.0 +0.1**
	baz=263,SNR=38					
MCK	**McKinley**	**32.16**	**44**	P	**P**	**07 25 07.2 +0.1**
	baz=272,SNR=20					
SEW	**Seward**	**32.18**	**50**	P	**P**	**07 25 07.2 0.0**
	baz=277					
PMR	**Palmer**	**32.19**	**48**	IAmb	IAmb	07 25 15.0
	comp=Z,35nm,1.9s					
PMR	**Palmer**	**32.19**	**48**	P	**P**	**07 25 07.4 +0.1**
	baz=275					
GHO	**Glory Hole Cre**	**32.27**	**47**	IAmb	IAmb	07 25 09.6
	comp=Z,11nm,0.6s					
WAT1	**Susitna Watana**	**32.37**	**45**	P	**P**	**07 25 09.3 +0.3**
	baz=274					
MDM	**Murphy Dome**	**32.45**	**41**	IAmb	IAmb	07 25 12.2
	comp=Z,18nm,0.8s					
D24K	**Happy Valley**	**32.47**	**33**	P	**P**	**07 25 09.9 +0.3**
	baz=263					
WRH	**Wood River Hil**	**32.51**	**42**	IAmb	IAmb	07 25 12.7
	comp=Z,24nm,0.8s					
NJ2	**Nanjing**	**32.52**	**250**	*e*P	**P**	**07 25 11.1 +0.6**
NJ2				pP	**pP**	**07 25 41.5 +1.1**
NJ2				sP	**sP**	**07 25 57.3 +0.8**
NJ2				pmax	pmax	
	comp=Z,8.0nm,0.7s					
NJ2				pmax	pmax	
	comp=Z,400nm,4.0s					
KNK	**Knik Glacier**	**32.52**	**48**	P	**P**	**07 25 10.6 +0.3**
	baz=276,SNR=12					
SML	**Sawmill**	**32.55**	**47**	P	**P**	**07 25 10.9 +0.3**
SML	**Sawmill**	**32.55**	**47**	P	**P**	**07 25 10.8 +0.3**
	baz=276,SNR=24					
C24K	**Franklin Bluff**	**32.58**	**32**	P	**P**	**07 25 10.7 0.0**
	baz=263,SNR=11					
H24K	**Noodor Dome**	**32.60**	**40**	IAmb	IAmb	07 25 12.8
	comp=Z,7.7nm,0.7s					
H24K	**Noodor Dome**	**32.60**	**40**	P	**P**	**07 25 11.6 +0.7**
	baz=270					
COLA	**College**	**32.61**	**41**	P	**P**	**07 25 12.0 +1.1**
COLA	**College**	**32.61**	**41**	P	**P**	**07 25 12.2 +1.3**
COLA	**College**	**32.61**	**41**	P	**P**	**07 25 11.4 +0.5**
	baz=271					
COLA	**College**	**32.61**	**41**	P	**P**	**07 25 12.0 +1.1**
COLA				pmax	pmax	
	comp=Z,45nm,0.8s					
COLA	**College**	**32.61**	**41**	P	**P**	**07 25 12.1 +1.2**
CCB	**Clear Creek Bu**	**32.63**	**42**	IAmb	IAmb	07 25 13.0
	comp=Z,18nm,0.8s					
F24K	**Squaw Lake**	**32.66**	**37**	IAmb	IAmb	07 25 13.0
	comp=Z,13nm,0.5s					
F24K	**Squaw Lake**	**32.66**	**37**	P	**P**	**07 25 11.8 +0.4**
	baz=267					
H11S1	**WAKE ISLAND Hy**	**32.73**	**160**	T	T	07 59 46.2
	baz=347,slow=76,SNR=489					
H11S3	**WAKE ISLAND Hy**	**32.74**	**160**	T	T	07 59 45.2
	baz=347,slow=76,SNR=327					
H11S2	**WAKE ISLAND Hy**	**32.74**	**160**	T	T	07 59 47.6
	baz=347,slow=76,SNR=316					
WAT6	**Susitna Watana**	**32.76**	**46**	P	**P**	**07 25 13.0 +0.5**
	baz=275,SNR=7.3					
G24K	**Hadweenzic Riv**	**32.78**	**38**	P	**P**	**07 25 13.1 +0.6**
	baz=268,SNR=12					
POKR	**Poker Plat Res**	**32.78**	**41**	P	**P**	**07 25 13.5 +1.0**
	baz=271,SNR=6.3					
ZAK	**Zakamensk**	**32.82**	**291**	*e*P	**P**	**07 25 12.3 -0.8**
ZAK				pmax	pmax	
	comp=Z,8.0nm,1.1s					
M23K	**Glacier View**	**32.83**	**47**	P	**P**	**07 25 13.6 +0.6**
	baz=276,SNR=7.6					
BTO	**Baotou**	**32.85**	**271**	*e*P	**P**	**07 25 14.6 +1.1**
BTO				pP	**pP**	**07 25 44.3 +0.6**
BTO				sP	**sP**	**07 25 57.9 -2.0**
BTO				PP	**PP**	**07 26 31.4 +0.9**
BTO				S	**S**	**07 30 22.6 +2.3**
BTO				SS	**SnSn**	**07 32 25.8 -8.1**
BTO				pmax	pmax	
	comp=Z,15nm,0.5s					
BTO				pmax	pmax	
	comp=Z,320nm,5.6s					
BTO				LR	LR	
	comp=Z,280nm,6.4s					
BTO				LR	LR	
	comp=Z,260nm,7.5s					
BTO				LR	LR	
	comp=Z,190nm,6.3s					
DHY	**Denali Highway**	**32.89**	**45**	IAmb	IAmb	07 25 15.0
	comp=Z,12nm,0.8s					
DHY	**Denali Highway**	**32.89**	**45**	P	**P**	**07 25 13.6 0.0**
	baz=274,SNR=14					
HDA	**Harding Lake**	**33.01**	**42**	P	**P**	**07 25 14.7 +0.2**
	baz=273,SNR=36					
SCM	**Sheep Creek Mo**	**33.02**	**47**	IAmb	IAmb	07 25 16.4
	comp=Z,16nm,0.8s					
SCM	**Sheep Creek Mo**	**33.02**	**47**	P	**P**	**07 25 15.0 +0.4**
	baz=276,SNR=6.8					
IL31		**33.02**	**42**	P	**P**	**07 25 15.0 +0.5**
IL31				IAmb	IAmb	07 25 16.1
	comp=Z,17nm,0.7s					
ILAR	**Eielson Array**	**33.02**	**42**	P	**P**	**07 25 14.5 -0.1**
ILAR	**Eielson Array**	**33.02**	**42**	P	**P**	**07 25 14.5 -0.1**
ILAR	**Eielson Array**	**33.02**	**42**	P	**P**	**07 25 14.7 +0.1**
	comp=Z,13nm,0.8s,baz=260,slow=7.5,SNR=162					
	comp=Z,13nm,0.8s					
P23K	**Montague Islan**	**33.21**	**50**	P	**P**	**07 25 17.1 +0.8**
	baz=279					
GLI	**Glacier Island**	**33.24**	**49**	P	**P**	**07 25 17.0 +0.5**
	baz=278					
G25K	**Bearman Lake**	**33.33**	**38**	P	**P**	**07 25 17.8 +0.6**
	baz=270					
D25K	**Kavik River**	**33.35**	**33**	P	**P**	**07 25 18.3 +0.8**
	baz=266					
F25K	**Christian Rive**	**33.53**	**36**	P	**P**	**07 25 19.7 +0.8**
	baz=269					
M24K	**Tolsona, Glenn**	**33.53**	**46**	P	**P**	**07 25 19.7 +0.6**
	baz=277,SNR=5.9					
K24K	**Donnelly Dome**	**33.56**	**43**	P	**P**	**07 25 19.4 +0.2**
	baz=274,SNR=20					
E25K	**Arctic Village**	**33.57**	**36**	IAmb	IAmb	07 25 21.9
	comp=Z,27nm,1.2s					
E25K	**Arctic Village**	**33.57**	**36**	P	**P**	**07 25 20.1 +0.8**
	baz=268,SNR=22					
PRP	**Porcupine Dome**	**33.58**	**40**	P	**P**	**07 25 19.9 +0.3**
	baz=272,SNR=19					
J25K	**Salcha River,**	**33.68**	**42**	IAmb	IAmb	07 25 21.5
	comp=Z,17nm,0.7s					
J25K	**Salcha River,**	**33.68**	**42**	P	**P**	**07 25 20.0 -0.4**
	baz=274					
KLU	**Klutina**	**33.72**	**48**	IAmb	IAmb	07 25 22.8
	comp=Z,25nm,1.4s					
KLU	**Klutina**	**33.72**	**48**	P	**P**	**07 25 21.8 +1.0**
	baz=278,SNR=6.6					
PAX	**Paxson**	**33.77**	**45**	P	**P**	**07 25 22.1 +0.9**
	baz=276,SNR=6.5					
C26K	**Camden Bay**	**33.91**	**32**	P	**P**	**07 25 23.0 +0.9**
	baz=266					
BMAR	**Burnt Mountain**	**33.93**	**37**	P	**P**	**07 25 24.1 +1.6**
EYAK	**Cordova Ski Ar**	**33.94**	**49**	P	**P**	**07 25 23.9 +1.4**
EYAK	**Cordova Ski Ar**	**33.94**	**49**	P	**P**	**07 25 23.5 +1.0**
	baz=279					
HARP	**HAARP**	**33.97**	**46**	P	**P**	**07 25 23.8 +0.9**
	baz=277,SNR=8.9					
RIDG	**Independent Ri**	**33.97**	**43**	P	**P**	**07 25 21.9 -1.0**
RIDG				IAmb	IAmb	07 25 24.4
	comp=Z,23nm,0.9s					
RIDG	**Independent Ri**	**33.97**	**43**	P	**P**	**07 25 23.0 +0.1**
	baz=275					
F26K	**Sheenjek River**	**34.10**	**36**	P	**P**	**07 25 25.2 +1.3**
	baz=270					
G26K	**Porcupine Rive**	**34.25**	**38**	P	**P**	**07 25 25.8 +0.8**
	baz=272					
SCRK	**Sand Creek**	**34.33**	**43**	P	**P**	**07 25 26.1 +0.1**
SCRK				IAmb	IAmb	07 25 27.7
	comp=Z,16nm,0.8s					
SCRK	**Sand Creek**	**34.33**	**43**	P	**P**	**07 25 26.1 +0.1**
	baz=276,SNR=24					
N25K	**Chitina, Valde**	**34.34**	**47**	IAmb	IAmb	07 25 28.1
	comp=Z,16nm,0.6s					
N25K	**Chitina, Valde**	**34.34**	**47**	P	**P**	**07 25 26.5 +0.4**
	baz=279,SNR=11					
BMRM	**Bremner River**	**34.43**	**48**	P	**P**	**07 25 26.9 0.0**
	baz=280					
J26L	**Joseph Creek**	**34.47**	**42**	P	**P**	**07 25 27.1 -0.1**
	baz=275					
MENT	**Mentasta**	**34.56**	**45**	IAmb	IAmb	07 25 30.0
	comp=Z,10.0nm,0.6s					
I26K	**Coal Creek Min**	**34.58**	**41**	P	**P**	**07 25 28.0 0.0**
	baz=274					
KAIM	**Kayak Island**	**34.70**	**50**	P	**P**	**07 25 30.2 +1.1**
	baz=281					
L26K	**Log Cabin Wild**	**34.72**	**45**	P	**P**	**07 25 29.9 +0.6**
	baz=278,SNR=9.2					
VRDI	**Verde Repeater**	**34.94**	**48**	IAmb	IAmb	07 25 33.0
	comp=Z,7.7nm,0.5s					
MCARA	**McCarthy VSAT**	**35.12**	**47**	P	**P**	**07 25 32.9 +0.2**
MCARA	**McCarthy VSAT**	**35.12**	**47**	P	**P**	**07 25 33.7 +1.1**
	baz=280					
K27K	**Chicken**	**35.16**	**43**	P	**P**	**07 25 34.0 +0.9**
	baz=277					
H27K	**Steamboat Moun**	**35.18**	**39**	P	**P**	**07 25 34.3 +1.1**
	baz=275					
I27K	**Kandik River**	**35.20**	**40**	P	**P**	**07 25 33.7 +0.3**
	baz=275					
CRQE	**Cirque**	**35.20**	**48**	P	**P**	**07 25 34.7 +1.2**
	baz=281,SNR=10					
TGL	**Tana Glacier**	**35.32**	**48**	IAmb	IAmb	07 25 36.4
	comp=Z,12nm,0.5s					
L27K	**Beaver Creek,**	**35.40**	**44**	P	**P**	**07 25 36.7 +1.6**
	baz=279					
BCAR	**Beaver Creek A**	**35.42**	**44**	P	**P**	**07 25 37.2 +1.8**
EGAK	**Eagle**	**35.47**	**41**	P	**P**	**07 25 35.5 -0.1**
	baz=277,SNR=32					
M27K	**Edge Creek, AK**	**35.49**	**46**	IAmb	IAmb	07 25 38.9
	comp=Z,20nm,0.8s					
M27K	**Edge Creek, AK**	**35.49**	**46**	P	**P**	**07 25 37.3 +1.3**
	baz=280					
F28M	**Old Crow**	**35.74**	**36**	P	**P**	**07 25 39.3 +1.4**
F28M				IAmb	IAmb	07 25 40.5
	comp=Z,18nm,0.9s					
F28M	**Old Crow**	**35.74**	**36**	P	**P**	**07 25 39.2 +1.3**
	baz=274,SNR=20					
BARN	**Barnard Glacie**	**35.83**	**48**	IAmb	IAmb	07 25 41.6
	comp=Z,18nm,0.7s					
GRNC	**Granite Creek**	**35.85**	**48**	IAmb	IAmb	07 25 41.5
	comp=Z,14nm,0.6s					
MESA	**MESA**	**35.87**	**49**	P	**P**	**07 25 40.3 +1.0**
	baz=283					
I28M	**Miner Creek**	**35.91**	**40**	IAmb	IAmb	07 25 41.7
	comp=Z,21nm,0.8s					
I28M	**Miner Creek**	**35.91**	**40**	P	**P**	**07 25 40.3 +0.8**
	baz=277					
BVCY	**Beaver Creek**	**35.95**	**45**	P	**P**	**07 25 41.3 +1.5**
	baz=280,SNR=20					
CTG	**Chitna Glacier**	**36.00**	**48**	P	**P**	**07 25 41.9 +1.6**
	baz=282,SNR=8.2					
CTGM	**Chitina Glacie**	**36.00**	**48**	IAmb	IAmb	07 25 42.9
	comp=Z,20nm,0.8s					
LOGN	**Logan Glacier**	**36.19**	**48**	IAmb	IAmb	07 25 43.9
	comp=Z,9.9nm,0.7s					
TABL	**Table Mountain**	**36.20**	**49**	IAmb	IAmb	07 25 44.4
	comp=Z,15nm,0.7s					
YUK3	**Moose Creek**	**36.25**	**46**	P	**P**	**07 25 43.3 +0.7**
	baz=282,SNR=9.3					
TATO	**Taipei**	**36.27**	**239**	P	**P**	**07 25 44.2 +1.4**
DAWY	**Dawson**	**36.33**	**42**	P	**P**	**07 25 44.2 +1.2**
DAWY	**Dawson**	**36.33**	**42**	P	**P**	**07 25 43.8 +0.8**
	baz=279,SNR=9.8					
E29M	**Blow River**	**36.42**	**35**	IAmb	IAmb	07 25 46.4
	comp=Z,32nm,1.1s					
E29M	**Blow River**	**36.42**	**35**	P	**P**	**07 25 44.7 +1.0**
	baz=275					
H29M	**Whitestone**	**36.46**	**39**	IAmb	IAmb	07 25 46.7
	comp=Z,22nm,0.8s					
H29M	**Whitestone**	**36.46**	**39**	P	**P**	**07 25 45.1 +1.1**
	baz=277					
YUK8	**Steele Glacier**	**36.68**	**47**	P	**P**	**07 25 47.2 +0.9**
	baz=283					
PINM	**Pinnacle**	**36.71**	**49**	P	**P**	**07 25 47.3 +1.0**
	baz=284					
NRIK	**Noril'sk**	**36.80**	**327**	P	**P**	**07 25 46.0 -0.9**
NRIK	**Noril'sk**	**36.80**	**327**	*ce*P	**P**	**07 25 45.6 -1.3**
NRIK				pmax	pmax	
	comp=Z,7.0nm,0.9s					
NRIK	**Noril'sk**	**36.80**	**327**	P	**P**	**07 25 45.2 -1.7**
	comp=Z,5.5nm,0.7s,baz=111,slow=4.9,SNR=11					
	comp=Z,5.5nm,0.7s					
M29M	**Somme Creek**	**37.04**	**45**	P	**P**	**07 25 50.6 +1.5**
	baz=282					
L29M	**L29M**	**37.05**	**44**	P	**P**	**07 25 51.2 +2.1**
	baz=282					
EPYK	**Eagle Plains**	**37.10**	**38**	IAmb	IAmb	07 25 51.9
	comp=Z,21nm,1.1s					
EPYK	**Eagle Plains**	**37.10**	**38**	P	**P**	**07 25 51.0 +1.5**
	baz=278,SNR=9.0					
K29M	**Barlow Dome**	**37.18**	**42**	IAmb	IAmb	07 25 53.1
	comp=Z,11nm,0.7s					
K29M	**Barlow Dome**	**37.18**	**42**	P	**P**	**07 25 51.6 +1.3**
	baz=281					
YUK4	**Talbot Arm**	**37.19**	**47**	P	**P**	**07 25 51.6 +1.0**
	baz=284,SNR=6.4					
G30M	**tAoh Zrali Nji**	**37.21**	**37**	P	**P**	**07 25 51.2 +0.8**
	baz=278,SNR=12					
PNL	**Peninsula**	**37.24**	**50**	P	**P**	**07 25 52.0 +1.2**
	baz=285					
F30M	**Barrier River**	**37.29**	**36**	P	**P**	**07 25 52.4 +1.4**
	baz=278					
I30M	**Mount Dempster**	**37.42**	**40**	P	**P**	**07 25 53.5 +1.2**
	baz=280					
YUK6	**Outpost Mounta**	**37.42**	**47**	P	**P**	**07 25 53.9 +1.4**
	baz=284					
O29M	**Mount Kennedy**	**37.48**	**48**	P	**P**	**07 25 53.9 +1.1**
	baz=285					
J30M	**Hart River**	**37.55**	**41**	P	**P**	**07 25 54.0 +0.5**
	baz=281					
M30M	**Minto, Yukon**	**37.77**	**44**	IAmb	IAmb	07 25 58.3
	comp=Z,23nm,1.8s					
M30M	**Minto, Yukon**	**37.77**	**44**	P	**P**	**07 25 56.3 +1.2**
	baz=283,SNR=6.2					
HYT	**Haines Junctio**	**37.86**	**47**	P	**P**	**07 25 57.6 +1.6**
	baz=285,SNR=8.3					
MAYO	**Mayo, Yukon**	**37.94**	**43**	P	**P**	**07 25 58.0 +1.4**
	baz=283,SNR=9.8					
G31M	**Satah River**	**37.98**	**37**	IAmb	IAmb	07 25 59.0
	comp=Z,26nm,1.4s					
G31M	**Satah River**	**37.98**	**37**	P	**P**	**07 25 57.3 +0.5**
	baz=280,SNR=13					
INK	**Inuvik**	**38.04**	**35**	P	**P**	**07 25 58.5 +1.2**
INK				IAmb	IAmb	07 25 59.6
	comp=Z,28nm,1.2s					
INK	**Inuvik**	**38.04**	**35**	P	**P**	**07 25 58.2 +0.9**
	baz=279,SNR=27					
INK	**Inuvik**	**38.04**	**35**	P	**P**	**07 25 58.5 +1.2**
INK				pmax	pmax	
	comp=Z,28nm,1.2s					
P29M	**Windy Craggy**	**38.06**	**49**	P	**P**	**07 25 59.0 +1.3**
	baz=286					
F31M	**Tsiigehtchic**	**38.10**	**36**	IAmb	IAmb	07 25 59.9
	comp=Z,30nm,1.2s					
F31M	**Tsiigehtchic**	**38.10**	**36**	P	**P**	**07 25 58.7 +0.9**
	baz=280,SNR=15					
H31M	**Peel River**	**38.15**	**39**	IAmb	IAmb	07 26 00.5
	comp=Z,13nm,0.8s					
H31M	**Peel River**	**38.15**	**39**	P	**P**	**07 25 59.0 +0.7**
	baz=281					
P30M	**Million Dollar**	**38.30**	**48**	P	**P**	**07 26 01.4 +1.7**
	baz=286					
O30N	**Mendenhall**	**38.54**	**47**	IAmb	IAmb	07 26 04.7
	comp=Z,16nm,0.7s					
O30N	**Mendenhall**	**38.54**	**47**	P	**P**	**07 26 03.2 +1.6**
	baz=286,SNR=16					
M31M	**Drury Creek, Y**	**38.94**	**45**	IAmb	IAmb	07 26 08.0
	comp=Z,20nm,1.1s					
M31M	**Drury Creek, Y**	**38.94**	**45**	P	**P**	**07 26 06.8 +1.8**
	baz=286,SNR=14					
WHY	**Whitehorse**	**39.14**	**47**	IAmb	IAmb	07 26 09.9
	comp=Z,8.6nm,0.7s					
WHY	**Whitehorse**	**39.14**	**47**	P	**P**	**07 26 08.3 +1.6**
	baz=287,SNR=7.4					
FARO	**Faro, Yukon**	**39.41**	**44**	P	**P**	**07 26 10.2 +1.4**
	baz=286,SNR=8.0					
N32M	**Quiet Lake**	**39.84**	**46**	P	**P**	**07 26 14.1 +1.7**
	baz=288					
P32M	**Atlin**	**40.02**	**48**	P	**P**	**07 26 15.9 +1.9**
	baz=289					
GTA	**Gaotai**	**40.07**	**277**	P	**P**	**07 26 15.3 +0.6**
GTA				pP	pP	07 26 49.8 +4.1
GTA				pmax	pmax	
	comp=Z,4.0nm,1.0s					
A36M	**Sachs Harbour**	**40.21**	**28**	P	**P**	**07 26 16.5 +1.2**
	baz=281,SNR=18					
P33M	**Teslin, Yukon**	**40.25**	**47**	P	**P**	**07 26 17.7 +1.8**
P33M	**Teslin, Yukon**	**40.25**	**47**	P	**P**	**07 26 17.4 +1.5**
	baz=289,SNR=9.3					
S32K	**Killisnoo**	**40.31**	**52**	P	**P**	**07 26 16.9 +0.6**
	baz=291					
Q32M	**Nakina River**	**40.94**	**49**	P	**P**	**07 26 23.0 +1.4**
	baz=291					
C36M	**Paulatuk**	**41.19**	**32**	P	**P**	**07 26 24.5 +1.2**
C36M	**Paulatuk**	**41.19**	**32**	P	**P**	**07 26 23.8 +0.5**
	baz=285,SNR=58					
R33M	**Jennings River**	**41.41**	**48**	IAmb	IAmb	07 26 29.0
	comp=Z,12nm,0.8s					
R33M	**Jennings River**	**41.41**	**48**	P	**P**	**07 26 26.9 +1.5**
	baz=291					
U33K	**Whale Pass**	**41.56**	**53**	P	**P**	**07 26 27.1 +0.6**
	baz=293					
CRAG	**Craig**	**41.81**	**54**	P	**P**	**07 26 28.8 +0.2**
	baz=294					
WRAK	**Wrangell Islan**	**41.84**	**52**	P	**P**	**07 26 30.1 +1.4**
	baz=293					
S34M	**Telegraph Cree**	**41.87**	**50**	P	**P**	**07 26 30.0 +0.9**
	baz=293					
TGTN	**Hyland Airport**	**41.91**	**44**	P	**P**	**07 26 30.3 +0.9**
	baz=291,SNR=6.9					
ZAA0	**Zalesovo Array**	**42.02**	**304**	P	**P**	**07 26 29.6 -0.6**
ZAA0				IAmb	IAmb	07 26 30.5
	comp=Z,9.2

U35K	**Hyder**	**43.23**	**52**	P		**P**		**07 26 41.7**	**+1.7**
	baz=295								
WRGLY	**Wrigley**	**43.39**	**41**	IAmb		IAmb		07 26 44.2	
	comp=Z,16nm,1.0s								
WRGLY	**Wrigley**	**43.39**	**41**	P		**P**		**07 26 41.7**	**+0.6**
	baz=292,SNR=9.0								
GRNB	**Grenville Isla**	**44.17**	**55**	P		**P**		**07 26 50.4**	**+2.8**
ZSN	**Zaisan**	**45.02**	**295**	*e*P		**P**		**07 26 54.1**	**-0.3**
	baz=295								
ZSN	**Zaisan**	**45.02**	**295**	*e*P		**P**		**07 26 54.1**	**-0.3**
WMQ	**Urumqi**	**45.25**	**289**	*e*P		**P**		**07 26 56.1**	**-0.2**
WMQ				sP		sP		07 27 44.8	+0.9
WMQ				pmax		pmax			
	comp=Z,16nm,0.9s								
EUNU	**Eureka**	**45.58**	**12**	P		**P**		**07 26 59.1**	**+0.6**
SEM	**Semipalatinsk**	**46.15**	**301**	*e*P		**P**		**07 27 02.2**	**-1.3**
	comp=Z,10nm,0.5s,baz=301								
SEM	**Semipalatinsk**	**46.15**	**301**	*e*P		**P**		**07 27 02.2**	**-1.3**
SEM				pmax		pmax			
	comp=Z,10.0nm,0.5s								
ALE	**Alert**	**46.30**	**6**	P		**P**		**07 27 03.9**	**-0.1**
ALE				PcP		**PcP**		**07 28 37.6**	**+0.9**
MK31	**Makanchi Array**	**46.87**	**296**	P		**P**		**07 27 08.4**	**-0.5**
MK31	**Makanchi Array**	**46.87**	**296**	*i* P		**P**		**07 27 08.9**	**0.0**
MKAR	**Makanchi Array**	**46.87**	**296**	P		**P**		**07 27 08.4**	**-0.5**
MKAR	**Makanchi Array**	**46.87**	**296**	*i* P		**P**		**07 27 08.5**	**-0.4**
MKAR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
MKAR	**Makanchi Array**	**46.87**	**296**	P		**P**		**07 27 07.7**	**-1.2**
	comp=Z,10nm,0.7s,baz=55,slow=6.6,SNR=117								
MKAR				LR		LR		07 49 24.5	
	comp=Z,97nm,18.3s,baz=58,slow=39								
	comp=Z,10nm,0.7s								
KURK	**Kurchatov**	**46.89**	**302**	P		**P**		**07 27 08.4**	**-0.5**
KURK	**Kurchatov**	**46.89**	**302**	P		**P**		**07 27 08.9**	**0.0**
KURK								07 28 39.7	
KURK	**Kurchatov**	**46.89**	**302**	P		**P**		**07 27 08.9**	**0.0**
KURK				S		**S**		**07 33 45.8**	**-2.8**
KURK	**Kurchatov**	**46.89**	**302**	P		**P**		**07 27 08.8**	**-0.1**
KURK				pP		**pP**		**07 27 42.4**	**+1.5**
KURK				PcP		**PcP**		**07 28 39.3**	**0.0**
KURBB	**Kurchatov Arra**	**46.99**	**302**	P		**P**		**07 27 08.9**	**-0.8**
	comp=Z,26nm,0.6s,baz=65,slow=8.4,SNR=169								
KURBB				PcP		**PcP**		**07 28 39.7**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=60,slow=3.2,SNR=8.9								
	comp=Z,26nm,0.6s								
MAKZ	**Makanchi**	**47.04**	**296**	P		**P**		**07 27 09.9**	**-0.3**
MAKZ	**Makanchi**	**47.04**	**296**	P		**P**		**07 27 09.9**	**-0.3**
MAKZ				pmax		pmax			
	comp=Z,9.0nm,0.7s								
MAKZ	**Makanchi**	**47.04**	**296**	P		**P**		**07 27 10.4**	**+0.1**
PZH	**PanZhiHua**	**47.06**	**261**	P		**P**		**07 27 11.8**	**+1.1**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,4.7s								
YKA	**Yellowknife Ar**	**47.37**	**39**	P		**P**		**07 27 13.5**	**+1.0**
YKA	**Yellowknife Ar**	**47.37**	**39**	P		**P**		**07 27 12.8**	**+0.3**
	comp=Z,9.1nm,0.7s,baz=298,slow=7.7,SNR=96								
YKA				PcP		**PcP**		**07 28 41.8**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=309,slow=3.6,SNR=6.1								
	comp=Z,9.1nm,0.7s								
SLVN	**Son La**	**49.44**	**254**	P		**P**		**07 27 30.3**	**+1.4**
SPITS	**Spitsbergen Ar**	**49.65**	**350**	P		**P**		**07 27 27.5**	**-2.3**
	comp=Z,3.8nm,0.4s,baz=57,slow=6.1,SNR=23								
SPITS				PcP		**PcP**		**07 28 49.4**	**+0.6**
	comp=Z,8.7nm,0.9s,baz=66,slow=2.8,SNR=1.8								
	comp=Z,3.8nm,0.4s								
BVAR	**Borovoye Array**	**50.01**	**308**	P		**P**		**07 27 30.2**	**-2.5**
	comp=Z,8.7nm,0.3s,baz=56,slow=8.3,SNR=56								
BVAR				PcP		**PcP**		**07 28 50.8**	**+0.3**
	comp=Z,5.2nm,0.5s,baz=64,slow=3.4,SNR=8.1								
	comp=Z,8.7nm,0.3s								
BRVK	**Borovoye**	**50.04**	**308**	P		**P**		**07 27 32.5**	**-0.6**
BRVK				IAmb		IAmb		07 27 34.1	
	comp=Z,16nm,0.8s								
BRVK	**Borovoye**	**50.04**	**308**	*i* P		**P**		**07 27 32.4**	**-0.6**
BRVK				pmax		pmax			
	comp=Z,16nm,0.8s								
BRVK	**Borovoye**	**50.04**	**308**	P		**P**		**07 27 32.9**	**-0.1**
BRVK	**Borovoye**	**50.04**	**308**	P		**P**		**07 27 32.9**	**-0.2**
BRVK				PcP		**PcP**		**07 28 50.8**	**+0.1**
TDK	**Taldyqorghan**	**50.12**	**296**	*e*P		**P**		**07 27 33.7**	**0.0**
	comp=Z,20nm,0.8s,baz=296								
TDK	**Taldyqorghan**	**50.12**	**296**	*e*P		**P**		**07 27 33.7**	**0.0**
TDK				pmax		pmax			
	comp=Z,20nm,0.8s								
BRLDA	**Berland Lookou**	**50.46**	**50**	IAmb		IAmb		07 27 38.5	
	comp=Z,17nm,1.0s								
BRZS	**Berezniki**	**50.50**	**304**	*e*P		**P**		**07 27 35.9**	**-0.6**
	baz=304								
BRZS	**Berezniki**	**50.50**	**304**	*e*P		**P**		**07 27 35.9**	**-0.6**
SHLS	**Shalkode**	**50.57**	**293**	*e*P		**P**		**07 27 34.8**	**-2.6**
	baz=293								
SHLS	**Shalkode**	**50.57**	**293**	*e*P		**P**		**07 27 34.7**	**-2.6**
UZB	**Uzynbulak**	**50.83**	**293**	*e*P		**P**		**07 27 39.0**	**-0.4**
	baz=294								
UZB	**Uzynbulak**	**50.83**	**293**	*e*P		**P**		**07 27 38.9**	**-0.4**
KPKS	**Kokpek**	**50.85**	**294**	*e*P		**P**		**07 27 39.2**	**-0.1**
	baz=294								
KPKS	**Kokpek**	**50.85**	**294**	*e*P		**P**		**07 27 39.2**	**-0.1**
SATY	**Saty**	**51.25**	**294**	*e*P		**P**		**07 27 42.1**	**-0.4**
	baz=294								
SATY	**Saty**	**51.25**	**294**	*e*P		**P**		**07 27 42.0**	**-0.4**
CHKK	**Chushkaly**	**51.61**	**295**	*e*P		**P**		**07 27 44.1**	**-0.8**
	baz=295								
CHKK	**Chushkaly**	**51.61**	**295**	*e*P		**P**		**07 27 44.1**	**-0.8**
NEEM	**North Greenlan**	**51.71**	**7**	*e*P		**P**		**07 27 44.8**	**-0.7**
NEEM				IAmb		IAmb		07 27 45.7	
	comp=Z,56nm,0.9s								
NEEM				IVmB_BB				07 27 47.2	
	comp=Z,715nm,1.3s								
KUU	**Kurty**	**51.97**	**296**	*e*P		**P**		**07 27 46.6**	**-1.0**
	baz=296								
KUU	**Kurty**	**51.97**	**296**	*e*P		**P**		**07 27 46.6**	**-1.0**
MDOK	**Medeo**	**51.99**	**295**	*e*P		**P**		**07 27 47.4**	**-0.6**
	baz=295								
MDOK	**Medeo**	**51.99**	**295**	*e*P		**P**		**07 27 47.3**	**-0.6**
SVE	**Sverdlovsk**	**52.50**	**316**	*e*P		**P**		**07 27 51.1**	**-0.2**
SVE				pmax		pmax			
	comp=Z,26nm,0.6s								
BTLS	**Baital**	**52.60**	**298**	*e*P		**P**		**07 27 51.7**	**-0.5**
	baz=298								
BTLS	**Baital**	**52.60**	**298**	*e*P		**P**		**07 27 51.7**	**-0.5**
EDM	**Edmonton**	**52.94**	**49**	IAmb		IAmb		07 27 56.5	
	comp=Z,17nm,0.7s								
SGDS	**Sogindy**	**53.22**	**296**	*e*P		**P**		**07 27 56.9**	**0.0**
	baz=296								
SGDS	**Sogindy**	**53.22**	**296**	*e*P		**P**		**07 27 56.8**	**0.0**
ARU	**Arti**	**53.66**	**317**	P		**P**		**07 27 58.8**	**-1.0**
ARU	**Arti**	**53.66**	**317**	*c i*P		**P**		**07 27 58.8**	**-1.0**
ARU				*PP		**pP**		**07 28 34.2**	**+1.7**
ARU								07 29 01.6	
ARU								07 29 59.0	
ARU				S		**S**		**07 35 21.8**	**-0.2**
ARU				pmax		pmax			
	comp=Z,34nm,1.0s								
AAK	**Ala-Archa**	**53.80**	**295**	P		**P**		**07 28 01.1**	**-0.1**
AAK	**Ala-Archa**	**53.80**	**295**	P		**P**		**07 28 01.1**	**-0.1**
AAK				pmax		pmax			
	comp=Z,7.0nm,1.2s								
AAK	**Ala-Archa**	**53.80**	**295**	P		**P**		**07 28 00.3**	**-0.9**
NEW	**Newport**	**53.98**	**56**	P		**P**		**07 28 03.4**	**+1.1**
	baz=308								
SHL	**Shillong**	**54.04**	**268**	IAmb		IAmb		07 28 04.0	
	comp=Z,12nm,0.5s								
SHL	**Shillong**	**54.04**	**268**	P		**P**		**07 28 03.3**	**+0.2**
CHTO	**Chiang Mai**	**54.41**	**256**	P		**P**		**07 28 07.1**	**+1.4**
CHTO				IAmb		IAmb		07 28 08.1	
	comp=Z,11nm,0.8s								
CHTO	**Chiang Mai**	**54.41**	**256**	P		**P**		**07 28 07.1**	**+1.4**
CHTO				pmax		pmax			
	comp=Z,11nm,0.8s								
CHTO	**Chiang Mai**	**54.41**	**256**	P		**P**		**07 28 07.2**	**+1.5**
CHTO	**Chiang Mai**	**54.41**	**256**	P		**P**		**07 28 07.3**	**+1.7**
TNTI	**Ternate**	**54.62**	**215**	P		**P**		**07 28 07.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**54.67**	**256**	P		**P**		**07 28 08.4**	**+0.8**
	comp=Z,5.0nm,0.6s,baz=29,slow=6.7,SNR=22								
	comp=Z,5.0nm,0.6s								
ARCES	**ARCESS Array B**	**55.25**	**341**	P		**P**		**07 28 09.3**	**-1.8**
	comp=Z,3.8nm,0.8s,baz=41,slow=8.0,SNR=14								
	comp=Z,3.8nm,0.8s								
UPNV	**Upernavik**	**55.52**	**11**	*e*P		**P**		**07 28 12.5**	**-0.4**
UPNV				IAmb		IAmb		07 28 12.5	
	comp=Z,15nm,0.7s								
KK31	**Karatay Array**	**55.80**	**298**	P		**P**		**07 28 15.1**	**-0.3**
KK31	**Karatay Array**	**55.80**	**298**	P		**P**		**07 28 15.1**	**-0.3**
KK31				pmax		pmax			
	comp=Z,3.0nm,0.8s								
KKAR	**Karatay Array**	**55.80**	**298**	P		**P**		**07 28 14.6**	**-0.8**
KKAR	**Karatay Array**	**55.80**	**298**	IAmb		IAmb		07 28 15.9	
	comp=Z,3.2nm,0.8s								
KKAR	**Karatay Array**	**55.80**	**298**	P		**P**		**07 28 14.6**	**-0.8**
KIRV	**Kirov**	**56.09**	**323**	*i* P		**P**		**07 28 15.6**	**-1.6**
KIRV	**Kirov**	**56.09**	**323**	P		**P**		**07 28 15.8**	**-1.3**
	comp=Z,21nm,0.5s,baz=41,slow=2.6,SNR=6.8								
	comp=Z,21nm,0.5s								
PLID	**Pearl Lake**	**56.56**	**58**	IAmb		IAmb		07 28 23.3	
	comp=Z,5.3nm,0.7s								
NUUG	**Nuugaatsiaq**	**57.02**	**10**	*e*P		**P**		**07 28 22.8**	**-0.8**
NUUG				IAmb		IAmb		07 28 24.3	
	comp=Z,9.0nm,0.8s								
FFC	**Flin Flon**	**57.23**	**42**	P		**P**		**07 28 26.9**	**+1.6**
FFC				IAmb		IAmb		07 28 27.5	
	comp=Z,13nm,0.7s								
FFC	**Flin Flon**	**57.23**	**42**	P		**P**		**07 28 26.9**	**+1.6**
FFC				pmax		pmax			
	comp=Z,13nm,0.7s								
FFC	**Flin Flon**	**57.23**	**42**	P		**P**		**07 28 26.6**	**+1.3**
SUMG	**Summit**	**57.30**	**5**	P		**P**		**07 28 26.4**	**+0.5**
SUMG	**Summit**	**57.30**	**5**	P		**P**		**07 28 26.5**	**+0.5**
SUMG				pmax		pmax			
	comp=Z,53nm,0.8s								
SUMG	**Summit**	**57.30**	**5**	*i* P		**P**		**07 28 26.4**	**+0.5**
SUMG				IAmb		IAmb		07 28 27.0	
	comp=Z,58nm,0.9s								
ABKAR	**Akbulak array**	**57.53**	**309**	P		**P**		**07 28 26.9**	**-0.5**
ABKAR				IAmb		IAmb		07 28 28.5	
	comp=Z,24nm,1.3s								
BTK	**Batken**	**57.57**	**295**	IAmb		IAmb		07 28 28.9	
	comp=Z,8.6nm,0.8s								
UMMG	**Uummannaq**	**57.96**	**10**	*e*P		**P**		**07 28 29.3**	**-0.8**
EGMT	**Eagleton**	**57.97**	**52**	P		**P**		**07 28 31.4**	**+0.7**
	baz=311								
KLMR	**Klimovskoe**	**58.10**	**329**	*e*P		**P**		**07 28 28.7**	**-2.5**
KLMR				pmax		pmax			
	comp=Z,29nm,1.7s								
HLID	**Hailey**	**58.41**	**59**	P		**P**		**07 28 35.0**	**+1.1**
	baz=311								
BOZ	**Bozeman (W)**	**58.58**	**55**	IAmb		IAmb		07 28 37.6	
	comp=Z,5.5nm,0.7s								
BOZ	**Bozeman (W)**	**58.58**	**55**	P		**P**		**07 28 36.0**	**+1.0**
	baz=311								
ILULI	**Ilulissat**	**59.46**	**11**	*e*P		**P**		**07 28 40.0**	**-0.5**
ILULI				IAmb		IAmb		07 28 40.5	
	comp=Z,23nm,0.7s								
SIMJ	**Simiganj**	**59.55**	**295**	P		**P**		**07 28 41.3**	**-0.5**
SIMJ				IAmb		IAmb		07 28 42.3	
	comp=Z,13nm,0.7s								
SIMJ	**Simiganj**	**59.55**	**295**	P		**P**		**07 28 41.4**	**-0.4**
NVAR	**Mina Array Bea**	**59.58**	**65**	P		**P**		**07 28 43.4**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=297,slow=7.0,SNR=13								
NVAR				pP		**pP**		**07 29 15.0**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=291,slow=7.7,SNR=4.4								
	comp=Z,1.2nm,0.6s								
MLAC	**Mammoth, Mammo**	**59.80**	**66**	P		**P**		**07 28 45.7**	**+2.0**
	baz=312								
LKWY	**Lake**	**59.92**	**55**	IAmb		IAmb		07 30 01.6	
	comp=Z,11nm,0.7s								
H17A	**Grant Village**	**59.94**	**56**	P		**P**		**07 28 45.9**	**+1.3**
	baz=312								
MOOW	**Moose Ponds**	**60.28**	**56**	P		**P**		**07 28 48.3**	**+1.5**
DGMT	**Dagmar**	**60.43**	**49**	IAmb		IAmb		07 28 50.3	
	comp=Z,13nm,1.1s								
DGMT	**Dagmar**	**60.43**	**49**	P		**P**		**07 28 48.5**	**+0.9**
	baz=314								
LAO	**LASA Array**	**60.65**	**51**	P		**P**		**07 28 50.1**	**+1.1**
	baz=313								
SMMC	**Simmler**	**60.66**	**69**	P		**P**		**07 28 50.1**	**+0.8**
	baz=313								
ICESG	**Greenland Ices**	**60.66**	**6**	*i* P		**P**		**07 28 49.2**	**0.0**
ICESG				IAmb		IAmb		07 28 50.0	
	comp=Z,49nm,0.7s								
GRAC	**Grapevine Rang**	**61.09**	**66**	P		**P**		**07 28 53.7**	**+1.5**
	baz=313								
BELG	**Belogornoye**	**61.12**	**318**	*i* P		**P**		**07 28 50.1**	**-1.9**
BELG				pmax		pmax			
	comp=Z,6.0nm,0.9s								
BELG	**Belogornoye**	**61.12**	**318**	P		**P**		**07 28 50.6**	**-1.4**
	comp=Z,28nm,0.8s,baz=7.5,slow=3.5,SNR=11								
	comp=Z,28nm,0.8s								
R11B	**Troy Canyon, C**	**61.22**	**64**	P		**P**		**07 28 54.9**	**+1.7**
	baz=313								
ARVC	**Arvin**	**61.49**	**68**	P		**P**		**07 28 55.9**	**+1.0**
	baz=313								
SPR3	**Spring Creek 3**	**61.50**	**62**	P		**P**		**07 28 57.1**	**+1.8**
DUG	**Dugway, Tooele**	**61.55**	**61**	P		**P**		**07 28 56.8**	**+1.4**
	baz=313								
BW06	**Boulder Array**	**61.59**	**57**	P		**P**		**07 28 56.1**	**+0.5**
	baz=313								
PDAR	**Pinedale Array**	**61.59**	**57**	P		**P**		**07 28 56.9**	**+1.2**
PDAR	**Pinedale Array**	**61.59**	**57**	P		**P**		**07 28 56.6**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=314,slow=1.6,SNR=35								
PDAR				pP		**pP**		**07 29 28.1**	**-1.5**
	comp=Z,2.5nm,0.8s,baz=289,slow=2.2,SNR=7.0								
	comp=Z,3.1nm,0.7s								
SFJD	**Kangerlussuaq**	**61.62**	**11**	P		**P**		**07 28 55.2**	**0.0**
SFJD	**Kangerlussuaq**	**61.62**	**11**	P		**P**		**07 28 55.2**	**0.0**
SFJD				pmax		pmax			
	comp=Z,28nm,1.1s								
SFJD	**Kangerlussuaq**	**61.62**	**11**	*e*P		**P**		**07 28 54.9**	**-0.3**
SFJD				IAmb		IAmb		07 28 55.4	
	comp=Z,28nm,1.1s								
SFJD	**Kangerlussuaq**	**61.62**	**11**	P		**P**		**07 28 54.8**	**-0.4**
SFJD				PcP		**PcP**		**07 29 36.2**	**+0.8**
MPMC	**Manual Prospec**	**61.66**	**67**	P		**P**		**07 28 57.6**	**+1.4**
	baz=313								
FINES	**FINESS Array B**	**61.72**	**335**	*i* P		**P**		**07 28 54.5**	**-1.4**
FINES				pmax		pmax			
	comp=Z,6.0nm,0.4s								
FINES	**FINESS Array B**	**61.72**	**335**	P		**P**		**07 28 54.1**	**-1.8**
	comp=Z,5.6nm,0.4s,baz=32,slow=7.5,SNR=63								
FINES				PcP		**PcP**		**07 29 34.7**	**-1.1**
	comp=Z,2.0nm,0.5s,baz=58,slow=4.6,SNR=6.1								
	comp=Z,5.6nm,0.4s								
FURC	**Furnace Creek,**	**61.75**	**66**	P		**P**		**07 28 57.8**	**+1.3**
	baz=313								
SOEG	**Soedalen**	**61.97**	**3**	*e*P		**P**		**07 28 58.0**	**+0.5**
EDW2	**Edwards Air Fo**	**62.16**	**68**	P		**P**		**07 29 01.0**	**+1.6**
	baz=314								
KBL	**Kabul**	**62.31**	**291**	P		**P**		**07 28 59.5**	**-1.1**
SNCC	**San Nicolas Is**	**62.35**	**70**	P		**P**		**07 29 02.0**	**+1.3**
	baz=314								
GSC	**Goldstone, Bar**	**62.58**	**67**	P		**P**		**07 29 03.4**	**+1.2**
	baz=314								
DY2G	**Dye2**	**62.64**	**10**	*i* P		**P**		**07 29 02.2**	**-0.1**
DY2G				IAmb		IAmb		07 29 02.7	
	comp=Z,18nm,0.7s								
CIS	**Catalina Islan**	**62.92**	**70**	P		**P**		**07 29 05.5**	**+1.0**
	baz=314								
TUQ	**Turquoise Moun**	**63.01**	**66**	P		**P**		**07 29 06.3**	**+1.2**
	baz=314								
ULM	**Lac du Bonnet**	**63.03**	**43**	IAmb		IAmb		07 29 06.2	
	comp=Z,9.0nm,0.8s								
ULM	**Lac du Bonnet**	**63.03**	**43**	P		**P**		**07 29 05.1**	**+0.2**
	comp=Z,6.1nm,0.6s,baz=316,slow=6.6,SNR=21								
	comp=Z,6.1nm,0.6s								
RDMU	**Red Mountain**	**63.09**	**58**	IAmb		IAmb		07 29 08.4	
	comp=Z,8.2nm,0.7s								
SCI2	**San Clemente I**	**63.13**	**70**	P		**P**		**07 29 07.1**	**+1.3**
	baz=314								
MEF	**Metsahovi**	**63.20**	**335**	*e*P		**P**		**07 29 05.5**	**-0.3**
RAF	**Rauma**	**63.21**	**337**	*e*P		**P**		**07 29 05.7**	**-0.1**
BBRC	**Big Bear Solar**	**63.23**	**68**	P		**P**		**07 29 07.8**	**+1.1**
	baz=314								
K22A	**Casper**	**63.28**	**55**	P		**P**		**07 29 08.0**	**+1.2**
	baz=315								
OBN	**Obninsk**	**63.47**	**326**	*e*P		**P**		**07 29 05.2**	**-2.4**
OBN				*e**PP		**PcP**		**07 29 42.7**	**-0.3**
OBN				*e*				07 31 25.7	
OBN				*e*S		**S**		**07 37 23.0**	**-5.9**
OBN				*e*SS		**SS**		**07 41 41.4**	**+4.0**
OBN				pmax		pmax			
	comp=Z,31nm,1.8s								
MURC	**Murrieta**	**63.52**	**69**	P		**P**		**07 29 09.6**	**+1.2**
	baz=314								
RSSD	**Black Hills**	**63.54**	**52**	P		**P**		**07 29 09.6**	**+1.0**
RSSD				IAmb		IAmb		07 29 10.2	
	comp=Z,6.4nm,0.6s								
RSSD	**Black Hills**	**63.54**	**52**	P		**P**		**07 29 09.1**	**+0.5**
	baz=315								
RSSD	**Black Hills**	**63.54**	**52**	P		**P**		**07 29 09.6**	**+1.0**
RSSD				pmax		pmax			
	comp=Z,6.0nm,0.6s								
RSSD	**Black Hills**	**63.54**	**52**	P		**P**		**07 29 09.8**	**+1.2**
RSSD				pP		**pP**		**07 29 43.3**	**+0.6**
SRU	**San Rafael Swe**	**63.57**	**60**	P		**P**		**07 29 10.0**	**+1.1**
SRU	**San Rafael Swe**	**63.57**	**60**	P		**P**		**07 29 10.0**	**+1.1**
SRU				pmax		pmax			
	comp=Z,7.0nm,0.9s								
GMRC	**Granite Mounta**	**63.62**	**67**	P		**P**		**07 29 10.1**	**+1.0**
	baz=314								
VSU	**Vasula**	**64.01**	**333**	*e*P		**P**		**07 29 11.3**	**+0.2**
O20A	**White River Ci**	**64.12**	**58**	P		**P**		**07 29 13.0**	**+0.6**
	baz=315								
ANGG	**Ammassalik, Gr**	**64.24**	**6**	*e*P		**P**		**07 29 12.3**	**-0.1**
IRM	**Iron Mountain**	**64.36**	**67**	P		**P**		**07 29 15.6**	**+1.7**
	baz=315								
VRH	**Novokhopyorsk**	**64.48**	**320**	*e*P		**P**		**07 29 11.6**	**-2.7**
VRH				pmax		pmax			
	comp=Z,10.0nm,0.6s								
LPSR	**Galich'ya Gora**	**64.53**	**323**	*e*P		**P**		**07 29 12.4**	**-2.2**
LPSR				pmax		pmax			
	comp=Z,10.0nm,0.6s								
MTSE	**Matsula**	**64.63**	**334**	*e*P		**P**		**07 29 15.5**	**+0.4**
N23A	**Red Feather La**	**64.83**	**56**	P		**P**		**07 29 18.3**	**+1.2**
	baz=316								
GLA	**Glamis**	**65.32**	**68**	P		**P**		**07 29 21.2**	**+1.1**
	baz=315								
B35A	**Bob, Littlefor**	**65.37**	**43**	IAmb		IAmb		07 29 21.4	
	comp=Z,8.5nm,0.8s								
VSR	**Storozhevoye**	**65.50**	**322**	*e*P		**P**		**07 29 18.5**	**-2.4**
VSR				pmax		pmax			
	comp=Z,9.0nm,0.5s								
NB2	**NORSAR Subarra**	**65.60**	**342**	P		**P**		**07 29 20.0**	**-1.5**
	comp=Z,1.6nm,0.5s,baz=24,slow=6.5								
NOA	**NORSAR Array B**	**65.60**	**342**	P		**P**		**07 29 19.9**	**-1.5**
	comp=Z,3.9nm,0.7s,baz=25,slow=6.4,SNR=14								
NOA				pP		**PcP**		**07 29 52.7**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=2.0,slow=2.4,SNR=0.8								
	comp=Z,3.9nm,0.7s								
WUAZ	**Wupatki**	**65.61**	**63**	P		**P**		**07 29 23.5**	**+1.4**
	baz=315								
VORD	**Divnogorie**	**65.64**	**321**	*e*P		**P**		**07 29 19.9**	**-1.9**
VORD				pmax		pmax			
	comp=Z,9.0nm,0.7s								
ISCO	**Idaho Springs**	**65.78**	**57**	P		**P**		**07 29 24.2**	**+0.9**
	baz=316								
SUSD	**Miller**	**65.84**	**49**	P		**P**		**07 29 23.5**	**+0.3**
	baz=317								
HFS	**Hagfors**	**65.90**	**340**	P		**P**		**07 29 22.0**	**-1.3**
HFS	**Hagfors**	**65.90**	**340**	P		**P**		**07 29 22.0**	**-1.3**
	comp=Z,3.8nm,0.3s,baz=46,slow=4.3,SNR=25								
	comp=Z,3.8nm,0.3s								
MVCO	**Mesa Verde**	**66.04**	**60**	IAmb		IAmb		07 30 02.3	
	comp=Z,26nm,2.0s								
MVCO	**Mesa Verde**	**66.04**	**60**	P		**P**		**07 29 25.7**	**+0.7**
	baz=316								
F33A	**5 Mile Ranch,**	**66.08**	**47**	IAmb		IAmb		07 29 26.4	
	comp=Z,14nm,1.1s								
GEYT	**Alibeck**	**66.25**	**301**	P		**P**		**07 29 25.6**	**-0.3**
	comp=Z,14nm,0.7s,baz=45,slow=4.4,SNR=17								
	comp=Z,14nm,0.7s								
X16A	**Lo Mia Camp, P**	**66.35**	**64**	P		**P**		**07 29 28.8**	**+2.0**
S22A	**4UR Ranch, Cre**	**66.59**	**59**	P		**P**		**07 29 29.4**	**+1.0**
	baz=316								
Q24A	**Divide**	**66.63**	**57**	P		**P**		**07 29 29.9**	**+1.1**
	baz=316								
EYMN	**Ely**	**66.67**	**42**	IAmb		IAmb		07 29 29.7	
	comp=Z,12nm,0.8s								
EYMN	**Ely**	**66.67**	**42**	P		**P**		**07 29 28.5**	**+0.1**
	baz=320								
W18A	**Petrified Fore**	**66.83**	**63**	P		**P**		**07 29 31.5**	**+1

N41A	**Harden Midland**	**72.56**	**47**	IAmb	IAmb	07 30 05.9		
	comp=Z,31nm,1.1s							
WMOK	**Wichita Mounta**	**73.18**	**56**	IAmb	IAmb	07 30 18.0		
	comp=Z,13nm,1.0s							
HDIL	**Hopedale**	**73.41**	**46**	IAmb	IAmb	07 32 37.3		
	comp=Z,16nm,0.8s							
HDIL	**Hopedale**	**73.41**	**46**	P	**P**	**07 30 10.1**	**+0.4**	
	baz=323							
EKA	**Eskdalemuir Ar**	**73.48**	**347**	P	**P**	**07 30 09.1**	**-0.7**	
	comp=Z,1.9nm,0.4s,baz=19,slow=5.2,SNR=23							
	comp=Z,1.9nm,0.4s							
KOLS	**Kolonicke sedl**	**73.52**	**330**	*e*P	**P**	**07 30 10.8**	**+0.6**	
KOLS				pmax	pmax			
	comp=Z,6.0nm,0.6s							
KOLS	**Kolonicke sedl**	**73.52**	**330**	*e*P	**P**	**07 30 10.8**	**+0.6**	
BUR08	**Bucovina Ar. S**	**73.66**	**327**	P	**P**	**07 30 10.9**	**-0.2**	
BUR08				IAmb	IAmb	07 30 11.6		
	comp=Z,7.5nm,0.5s							
BURAR	**Bucovina Array**	**73.68**	**327**	⇑P	**P**	**07 30 11.2**	**0.0**	
BURAR	**Bucovina Array**	**73.68**	**327**	⇑P	**P**	**07 30 11.2**	**0.0**	
TUL3	**Leonard**	**73.86**	**53**	P	**P**	**07 30 13.0**	**+0.7**	
	baz=321							
DPC	**Dobruska-Polom**	**74.06**	**334**	*e*P	**P**	**07 30 13.6**	**+0.3**	
DPC	**Dobruska-Polom**	**74.06**	**334**	*e*P	**P**	**07 30 13.6**	**+0.3**	
CLL	**Collm**	**74.09**	**337**	*e*P	**P**	**07 30 13.0**	**-0.4**	
CLL	**Collm**	**74.09**	**337**	*e*P	**P**	**07 30 13.0**	**-0.4**	
KRLC	**Kraliky**	**74.18**	**334**	*e*P	**P**	**07 30 14.7**	**+0.7**	
KRLC	**Kraliky**	**74.18**	**334**	*e*P	**P**	**07 30 14.7**	**+0.7**	
LANS	**Liptovska Anna**	**74.21**	**332**	*e*P	**P**	**07 30 15.0**	**+0.8**	
LANS				pmax	pmax			
	comp=Z,4.0nm,1.0s							
LANS	**Liptovska Anna**	**74.21**	**332**	*e*P	**P**	**07 30 15.0**	**+0.8**	
MORC	**Moravsky Berou**	**74.23**	**333**	⇑P	**P**	**07 30 15.1**	**+0.8**	
MORC	**Moravsky Berou**	**74.23**	**333**	*e*P	**P**	**07 30 14.3**	**0.0**	
MORC	**Moravsky Berou**	**74.23**	**333**	⇑P	**P**	**07 30 15.1**	**+0.8**	
ABTX	**Abilene, Hawle**	**74.32**	**58**	P	**P**	**07 30 15.6**	**+0.5**	
	baz=320							
LDAQ	**Lac Daran**	**74.41**	**31**	P	**P**	**07 30 15.9**	**+0.5**	
LDAQ				IAmb	IAmb	07 30 16.7		
	comp=Z,14nm,0.9s							
CCM	**Cathedral Cave**	**74.46**	**49**	P	**P**	**07 30 16.3**	**+0.5**	
	baz=322							
AAM	**Ann Arbor**	**74.52**	**41**	P	**P**	**07 30 16.6**	**+0.6**	
	baz=325							
TXAR	**Lajitas Array**	**74.56**	**63**	P	**P**	**07 30 17.4**	**+0.8**	
	comp=Z,3.9nm,0.5s,baz=298,slow=5.2,SNR=86							
TXAR				pP	**pP**	**07 30 50.4**	**-1.3**	
	comp=Z,2.8nm,0.7s,baz=298,slow=4.3,SNR=12							
	comp=Z,3.9nm,0.5s							
SFIN	**Lafayette**	**74.56**	**45**	P	**P**	**07 30 16.2**	**-0.1**	
	baz=324							
COVR	**Voineasa-Covas**	**74.84**	**326**	⇑P	**P**	**07 30 20.2**	**+2.3**	
TPGR	**Topolog**	**74.86**	**324**	⇑P	**P**	**07 30 18.3**	**+0.3**	
GOPC	**GO Pecny, Ondr**	**74.88**	**335**	*e*P	**P**	**07 30 18.6**	**+0.5**	
GOPC	**GO Pecny, Ondr**	**74.88**	**335**	*e*P	**P**	**07 30 18.6**	**+0.5**	
FVM	**French Village**	**74.92**	**48**	IAmb	IAmb	07 30 19.5		
	comp=Z,7.4nm,0.6s							
VRAC	**Vranov**	**74.92**	**334**	⇓P	**P**	**07 30 19.5**	**+1.2**	
VRAC	**Vranov**	**74.92**	**334**	*e*P	**P**	**07 30 18.4**	**+0.1**	
VRAC	**Vranov**	**74.92**	**334**	⇓P	**P**	**07 30 19.5**	**+1.2**	
VRAC	**Vranov**	**74.92**	**334**	P	**P**	**07 30 17.6**	**-0.6**	
	comp=Z,4.1nm,0.5s,baz=51,slow=6.1,SNR=5.7							
	comp=Z,4.1nm,0.5s							
VYHS	**Vyhne**	**74.99**	**332**	*e*P	**P**	**07 30 19.6**	**+0.9**	
VYHS				pmax	pmax			
	comp=Z,21nm,1.6s							
VYHS	**Vyhne**	**74.99**	**332**	*e*P	**P**	**07 30 19.6**	**+0.9**	
JAVC	**Velka Javorina**	**75.01**	**333**	*e*P	**P**	**07 30 19.7**	**+0.8**	
KRUC	**Moravsky**	**75.20**	**334**	*e*P	**P**	**07 30 19.9**	**0.0**	
MARR	**Marisel-Cluj**	**75.21**	**328**	⇑P	**P**	**07 30 18.8**	**-1.3**	
JASK	**Jask - Hormozg**	**75.23**	**293**	P	**P**	**07 30 20.5**	**+0.1**	
MLR	**Muntele Rosu**	**75.24**	**326**	⇑P	**P**	**07 30 20.8**	**+0.5**	
MLR	**Muntele Rosu**	**75.24**	**326**	P	**P**	**07 30 20.4**	**+0.1**	
MLR				IAmb	IAmb	07 30 27.5		
	comp=Z,18nm,1.4s							
MLR	**Muntele Rosu**	**75.24**	**326**	⇑P	**P**	**07 30 20.8**	**+0.5**	
MLR	**Muntele Rosu**	**75.24**	**326**	P	**P**	**07 30 19.9**	**-0.4**	
	comp=Z,4.8nm,0.3s,baz=317,slow=8.5,SNR=20							
	comp=Z,4.8nm,0.3s							
ZVC	**Zvikov**	**75.48**	**335**	*e*P	**P**	**07 30 21.5**	**+0.1**	
O48B	**Farmland**	**75.53**	**44**	P	**P**	**07 30 21.9**	**0.0**	
	baz=325							
MODS	**Modra-Piesok**	**75.56**	**333**	*e*P	**P**	**07 30 22.7**	**+0.7**	
MODS				pmax	pmax			
	comp=Z,21nm,1.3s							
MODS	**Modra-Piesok**	**75.56**	**333**	*e*P	**P**	**07 30 22.7**	**+0.7**	
VOIR		**75.61**	**326**	⇑P	**P**	**07 30 23.1**	**+0.8**	
VOIR		**75.61**	**326**	⇑P	**P**	**07 30 23.1**	**+0.8**	
ARR	**Arges**	**75.82**	**327**	⇑P	**P**	**07 30 24.7**	**+1.2**	
ASAR	**Alice Springs**	**75.83**	**200**	P	**P**	**07 30 24.1**	**+0.5**	
	comp=Z,0.4nm,0.6s,baz=12,slow=5.3,SNR=6.1							
ASAR				pP	**pP**	**07 30 58.8**	**0.0**	
	comp=Z,1.6nm,0.7s,baz=13,slow=5.7,SNR=13							
JCT	**Junction City**	**75.87**	**59**	P	**P**	**07 30 24.0**	**-0.1**	
	baz=320							
KHC	**Kasperske Hory**	**75.92**	**335**	*e*P	**P**	**07 30 24.9**	**+0.9**	
KHC	**Kasperske Hory**	**75.92**	**335**	*i* P	**P**	**07 30 23.7**	**-0.3**	
KHC				pmax	pmax			
	comp=Z,12nm,1.0s							
WHTX	**Lake Whitney,**	**76.00**	**57**	P	**P**	**07 30 25.4**	**+0.7**	
	baz=321							
CKRC	**Cesky Krumlov**	**76.01**	**335**	*e*P	**P**	**07 30 24.9**	**+0.4**	
CKRC	**Cesky Krumlov**	**76.01**	**335**	*e*P	**P**	**07 30 24.9**	**+0.4**	
MIAR	**Mount Ida**	**76.06**	**53**	P	**P**	**07 30 25.3**	**+0.3**	
	baz=322							
SHME	**Shamm**	**76.11**	**294**	P	**P**	**07 30 25.5**	**+0.1**	
BANOM	**Banah**	**76.11**	**294**	P	**P**	**07 30 26.0**	**+0.5**	
E62A	**Clayton Lake**	**76.15**	**30**	IAmb	IAmb	07 30 26.1		
	comp=Z,10nm,0.7s							
GERES	**GERESS Array B**	**76.15**	**335**	P	**P**	**07 30 24.8**	**-0.6**	
	comp=Z,2.8nm,0.6s,baz=38,slow=6.8,SNR=11							
	comp=Z,2.8nm,0.6s							
LONY	**Lake Ozonia**	**76.15**	**34**	P	**P**	**07 30 25.3**	**-0.1**	
	baz=330							
ERPA	**Erie**	**76.19**	**39**	P	**P**	**07 30 26.1**	**+0.4**	
	baz=327							
P49A	**Miami Univ. Ec**	**76.31**	**44**	P	**P**	**07 30 26.8**	**+0.5**	
	baz=325							
SURR	**Surduc**	**76.35**	**328**	⇓P	**P**	**07 30 26.8**	**+0.4**	
CONA	**Conrad Observa**	**76.38**	**333**	*e*P	**P**	**07 30 27.6**	**+0.9**	
	comp=Z,2.3nm,0.4s							
MEM	**Membach**	**76.39**	**341**	*d*P	**P**	**07 30 27.0**	**+0.4**	
MEM				*d*PcP	**PcP**	**07 30 37.9**	**+0.1**	
GZR	**Gura Zlata**	**76.44**	**328**	⇑P	**P**	**07 30 27.1**	**0.0**	
GZR	**Gura Zlata**	**76.44**	**328**	⇑P	**P**	**07 30 27.1**	**0.0**	
RONA	**Rosalia, Austr**	**76.46**	**333**	*i* P	**P**	**07 30 28.0**	**+1.0**	
	comp=Z,2.7nm,0.7s							
M53A	**WI Miller and**	**76.48**	**40**	P	**P**	**07 30 27.3**	**0.0**	
	baz=327							
ACSO	**Alum Creek Sta**	**76.50**	**42**	P	**P**	**07 30 27.1**	**-0.3**	
	baz=326							
MDH	**Madha**	**76.59**	**293**	P	**P**	**07 30 27.6**	**-0.5**	
MASF	**Masafi**	**76.61**	**293**	P	**P**	**07 30 27.8**	**-0.5**	
BZS	**Buzias**	**76.64**	**329**	⇑P	**P**	**07 30 24.9**	**-3.2**	
BZS	**Buzias**	**76.64**	**329**	⇑P	**P**	**07 30 24.9**	**-3.2**	
WCI	**Wyandotte Cave**	**76.66**	**45**	P	**P**	**07 30 29.0**	**+0.7**	
	baz=325							
BCLA	**Clavier**	**76.72**	**341**	*d*P	**P**	**07 30 28.9**	**+0.5**	
WSAR	**Wadi Sarin**	**76.74**	**290**	P	**P**	**07 30 29.8**	**+0.8**	
WSAR				S	**S**	**07 40 04.0**	**-0.2**	
BGES	**Gesves**	**76.80**	**341**	*d*P	**P**	**07 30 29.3**	**+0.5**	
BGES				*d*PcP	**PcP**	**07 30 39.7**	**+0.2**	
UOSS	**Minazif**	**76.91**	**293**	P	**P**	**07 30 30.0**	**+0.1**	
UOSS				IAmb	IAmb	07 30 30.4		
	comp=Z,19nm,0.7s							
UOSS	**Minazif**	**76.91**	**293**	P	**P**	**07 30 30.0**	**+0.1**	
UOSS				S	**S**	**07 40 02.7**	**-3.3**	
BMRD	**Maredsous**	**76.94**	**341**	*d*P	**P**	**07 30 30.1**	**+0.5**	
BMRD				*d*PcP	**PcP**	**07 30 39.1**	**-1.1**	
RCHB	**Rochefort**	**76.98**	**341**	*d*P	**P**	**07 30 29.6**	**-0.3**	
WBK	**Wadi Bani Khal**	**77.00**	**290**	P	**P**	**07 30 31.6**	**+1.1**	
HERR	**Herculane**	**77.02**	**328**	⇑P	**P**	**07 30 30.2**	**0.0**	
BR131	**Keskin Array S**	**77.03**	**318**	P	**P**	**07 30 30.0**	**-0.6**	
BRTR	**Keskin Array B**	**77.03**	**318**	P	**P**	**07 30 30.5**	**-0.1**	
	comp=Z,4.7nm,1.0s,baz=64,slow=2.9,SNR=13							
	comp=Z,4.7nm,1.0s							
HATD	**Hatta, Dubai**	**77.04**	**293**	P	**P**	**07 30 30.6**	**0.0**	
MORH	**Mrgy, Hungar**	**77.08**	**331**	⇑P	**P**	**07 30 30.6**	**+0.1**	
JLN	**Jalan Bani Buh**	**77.08**	**289**	P	**P**	**07 30 32.1**	**+1.2**	
DOU	**Dourbes**	**77.17**	**341**	*d*P	**P**	**07 30 30.9**	**0.0**	
DOU				*d*PcP	**PcP**	**07 30 40.7**	**-0.4**	
J59A	**Piesco**	**77.18**	**35**	IAmb	IAmb	07 30 31.5		
	comp=Z,10nm,0.8s							
ASHO	**Ashiyiah**	**77.19**	**293**	P	**P**	**07 30 31.7**	**+0.1**	
SMDO	**Samad**	**77.22**	**291**	P	**P**	**07 30 32.3**	**+0.5**	
O53A	**New Philadelph**	**77.25**	**41**	P	**P**	**07 30 32.1**	**+0.5**	
	baz=327							
HOQ	**Hoqain**	**77.27**	**291**	P	**P**	**07 30 31.8**	**-0.2**	
SOHO	**SOHO**	**77.32**	**292**	P	**P**	**07 30 32.2**	**0.0**	
P52A	**Corning**	**77.36**	**42**	P	**P**	**07 30 32.9**	**+0.7**	
	baz=326							
H62A	**Milan**	**77.40**	**32**	IAmb	IAmb	07 30 34.1		
	comp=Z,26nm,0.9s							
FAQ	**Al Faqa, Dubai**	**77.42**	**293**	P	**P**	**07 30 32.8**	**+0.1**	
LBNH	**Lisbon**	**77.43**	**33**	P	**P**	**07 30 32.3**	**-0.2**	
	baz=331							
PLVB	**Pleven**	**77.53**	**326**	⇓P	**P**	**07 30 34.0**	**+0.9**	
WVT	**Waverly**	**77.64**	**48**	P	**P**	**07 30 34.4**	**+0.6**	
	baz=324							
FRGS	**Fruska Gora**	**77.64**	**330**	⇑P	**P**	**07 30 34.3**	**+0.6**	
FRGS	**Fruska Gora**	**77.64**	**330**	*e*P	**P**	**07 30 32.7**	**-1.0**	
ASUD	**Al Ashush, Dub**	**77.67**	**293**	P	**P**	**07 30 34.6**	**+0.5**	
BINY	**Binghamton**	**77.71**	**36**	P	**P**	**07 30 34.2**	**+0.1**	
	baz=329							
JMDO	**Jabal Madar**	**77.71**	**290**	P	**P**	**07 30 34.9**	**+0.5**	
LESA	**Schwarzleotal**	**77.73**	**335**	*e*P	**P**	**07 30 35.1**	**+0.9**	
	comp=Z,4.3nm,0.5s							
SOKA	**Soboth**	**77.75**	**333**	*i* P	**P**	**07 30 35.0**	**+0.7**	
	comp=Z,5.4nm,0.5s,SNR=5.0							
ALNE	**Al Ain**	**77.85**	**293**	P	**P**	**07 30 35.5**	**+0.4**	
KBA	**Koelnbreinsper**	**77.86**	**335**	*e*P	**P**	**07 30 36.4**	**+1.3**	
	comp=Z,12nm,0.4s							
ARQ	**Araqi**	**77.93**	**292**	P	**P**	**07 30 36.0**	**+0.4**	
	SNR=7.3							
BSY	**Bisya**	**77.97**	**291**	P	**P**	**07 30 36.3**	**+0.4**	
M57A	**Sunshine Farm,**	**78.00**	**38**	P	**P**	**07 30 35.0**	**-0.7**	
M57A				IAmb	IAmb	07 30 36.5		
	comp=Z,10nm,0.8s							
OBKA	**Obir**	**78.04**	**334**	*e*P	**P**	**07 30 36.5**	**+0.5**	
	comp=Z,8.8nm,0.4s,SNR=5.6							
OBKA	**Obir**	**78.04**	**334**	*e*P	**P**	**07 30 36.1**	**+0.1**	
WATA	**Walderalm**	**78.11**	**336**	*i* P	**P**	**07 30 37.2**	**+0.8**	
	comp=Z,6.6nm,0.6s							
WTTA	**Wattenberg**	**78.16**	**336**	*i* P	**P**	**07 30 37.5**	**+0.8**	
	comp=Z,8.8nm,0.7s,SNR=6.1							
OXF	**Oxford**	**78.17**	**50**	P	**P**	**07 30 36.7**	**-0.1**	
	baz=324							
MYKA	**Terra Mystica**	**78.19**	**334**	*i* P	**P**	**07 30 37.5**	**+0.7**	
	comp=Z,6.5nm,0.4s							
MOTA	**Moosalm**	**78.22**	**336**	*i* P	**P**	**07 30 38.0**	**+0.9**	
	comp=Z,5.2nm,0.5s							
TEKS	**Tekeris**	**78.28**	**329**	*e*P	**P**	**07 30 36.4**	**-0.8**	
SSPA	**Standing Stone**	**78.29**	**39**	P	**P**	**07 30 37.5**	**+0.1**	
	baz=328							
MCWV	**Mont Chateau**	**78.31**	**40**	P	**P**	**07 30 37.8**	**+0.3**	
	baz=326							
ECH	**Echery**	**78.38**	**339**	IAmb	IAmb	07 30 38.7		
	comp=Z,13nm,1.0s							
ABTA	**Abfaltersbach**	**78.40**	**335**	*e*P	**P**	**07 30 38.7**	**+0.7**	
	comp=Z,7.5nm,0.7s,SNR=6.9							
CRES	**Cresnjev**	**78.40**	**333**	*e*P	**P**	**07 30 36.8**	**-1.1**	
DAVA	**Damuels**	**78.59**	**337**	*e*P	**P**	**07 30 40.0**	**+0.9**	
	comp=Z,5.2nm,0.4s							
FETA	**Feichten**	**78.62**	**336**	*i* P	**P**	**07 30 39.5**	**+0.2**	
	comp=Z,4.4nm,0.8s							
A051A	**Mrakovica**	**78.70**	**331**	*e*P	**P**	**07 30 38.5**	**-1.1**	
BOJS	**Bojanci**	**78.75**	**333**	*e*P	**P**	**07 30 38.2**	**-1.6**	
CEY	**Cerknica**	**78.78**	**333**	*e*P	**P**	**07 30 38.8**	**-1.2**	
MHTO	**MHTO**	**78.83**	**289**	P	**P**	**07 30 41.4**	**+0.8**	
	SNR=6.2							
BLY	**Banja Luka**	**78.85**	**331**	*e*P	**P**	**07 30 39.8**	**-0.5**	
HAPS	**Han Pijesak,BI**	**78.88**	**330**	*e*P	**P**	**07 30 39.8**	**-0.8**	
BBLS	**Lazići**	**78.92**	**329**	*e*P	**P**	**07 30 40.1**	**-0.7**	
DAVOX	**Davos/Dischmat**	**79.06**	**337**	P	**P**	**07 30 42.2**	**+0.5**	
	comp=Z,7.9nm,0.7s,baz=20,slow=3.2,SNR=13							
	comp=Z,7.9nm,0.7s							
HRV	**Adm Dziewonsk**	**79.08**	**33**	P	**P**	**07 30 41.7**	**+0.1**	
	baz=332							
FUORN	**Ofenpass-Fuorn**	**79.11**	**336**	IAmb	IAmb	07 30 43.9		
	comp=Z,11nm,0.8s							
RDO	**Rodhopi**	**79.13**	**324**	IAmb	IAmb	07 30 43.0		
	comp=Z,18nm,0.7s							
RUDO	**Rudo**	**79.16**	**329**	*e*P	**P**	**07 30 41.4**	**-0.6**	
MGRS	**Mrkonjic Grad**	**79.18**	**331**	*e*P	**P**	**07 30 43.0**	**+0.8**	
MZWR	**Madinat Zayed**	**79.18**	**294**	P	**P**	**07 30 42.1**	**-0.3**	
UMZA	**Um Al Zommool**	**79.22**	**292**	P	**P**	**07 30 42.5**	**-0.2**	
SHMA	**Al-Shehemyia**	**79.27**	**297**	P	**P**	**07 30 42.7**	**-0.2**	
SJES	**Sjenica**	**79.27**	**329**	*e*P	**P**	**07 30 42.6**	**-0.2**	
TZTN	**Tazewell**	**79.30**	**45**	P	**P**	**07 30 43.1**	**+0.2**	
	baz=326							
TUE	**Stuetta**	**79.48**	**337**	IAmb	IAmb	07 30 46.0		
	comp=Z,22nm,0.8s							
UPM	**Unac-Piva**	**79.68**	**329**	*e*P	**P**	**07 30 44.0**	**-1.1**	
DQM	**DQM**	**79.89**	**289**	P	**P**	**07 30 46.7**	**+0.4**	
SALO	**Salr**	**79.97**	**336**	P	**P**	**07 30 46.6**	**+0.1**	
BRY	**Bratogost**	**80.07**	**329**	*e*P	**P**	**07 30 45.9**	**-1.2**	
SENIN	**Lac Senin/Sane**	**80.09**	**338**	IAmb	IAmb	07 30 50.7		
	comp=Z,25nm,0.8s							
BLA	**Blacksburg**	**80.12**	**42**	P	**P**	**07 30 48.4**	**+1.0**	
	baz=328							
STON	**Ston**	**80.37**	**330**	*e*P	**P**	**07 30 46.6**	**-1.9**	
HCY	**Herceg Novi**	**80.49**	**329**	*e*P	**P**	**07 30 47.7**	**-1.5**	
DRME	**Dracevica, Mon**	**80.49**	**329**	*e*P	**P**	**07 30 48.4**	**-0.8**	
LRAL	**Lakeview Retre**	**80.55**	**49**	P	**P**	**07 30 50.0**	**+0.3**	
	baz=325							
TIR	**Tirane**	**81.01**	**328**	⇑P	**P**	**07 30 52.5**	**+0.5**	
TIR	**Tirane**	**81.01**	**328**	⇑P	**P**	**07 30 52.5**	**+0.5**	
KMSC	**Kings Mountain**	**81.46**	**44**	P	**P**	**07 30 55.0**	**+0.5**	
	baz=327							
BNI	**Bardonecchia**	**81.47**	**338**	IAmb	IAmb	07 30 56.0		
	comp=Z,13nm,0.6s							
ASF	**Jabal al Asfar**	**81.74**	**311**	P	**P**	**07 30 56.2**	**+0.1**	
	comp=Z,17nm,0.8s,baz=344,slow=0.3,SNR=10							
	comp=Z,17nm,0.8s							
SSB	**Saint Sauveur**	**81.75**	**340**	IAmb	IAmb	07 30 57.4		
	comp=Z,16nm,0.7s							
MMAI	**Mount Meron Ar**	**81.77**	**313**	P	**P**	**07 30 56.6**	**+0.4**	
	comp=Z,27nm,0.5s,baz=39,slow=6.8,SNR=48							
	comp=Z,27nm,0.5s							
BRAL	**Brewton**	**82.04**	**50**	P	**P**	**07 30 58.8**	**+1.2**	
	baz=325							
SHAO	**Shalim**	**82.51**	**289**	P	**P**	**07 31 00.3**	**+0.1**	
CNNC	**Cliffs of the**	**82.88**	**41**	P	**P**	**07 31 02.4**	**+0.6**	
	baz=329							
DOK	**Doka**	**82.96**	**290**	P	**P**	**07 31 02.2**	**-0.3**	
DMTO	**DMTO**	**83.16**	**289**	P	**P**	**07 31 03.2**	**-0.3**	
NHSC	**New Hope**	**83.68**	**44**	P	**P**	**07 31 06.9**	**+0.9**	
	baz=328							
WHFO	**Wadi Hawf**	**83.72**	**290**	P	**P**	**07 31 06.0**	**-0.5**	
	SNR=15							
RAYN	**Ar Rayn**	**84.18**	**300**	P	**P**	**07 31 08.6**	**-0.2**	
RAYN				IAmb	IAmb	07 31 10.0		
	comp=Z,16nm,1.1s							
RAYN	**Ar Rayn**	**84.18**	**300**	⇑P	**P**	**07 31 09.2**	**+0.5**	
RAYN	**Ar Rayn**	**84.18**	**300**	P	**P**	**07 31 08.9**	**+0.1**	
ABTO	**Aybut**	**84.44**	**290**	P	**P**	**07 31 09.9**	**-0.2**	
EIL	**Elat**	**84.74**	**311**	P	**P**	**07 31 11.6**	**+0.2**	
	comp=Z,18nm,0.7s,baz=360,slow=3.5,SNR=16							
	comp=Z,18nm,0.7s							
ESDC	**Sonseca Array**	**88.84**	**344**	IAmb	IAmb	07 32 36.2		
	comp=Z,14nm,1.9s							
ESDC	**Sonseca Array**	**88.84**	**344**	P	**P**	**07 31 30.1**	**-1.1**	
	comp=Z,1.8nm,0.7s,baz=357,slow=4.1,SNR=11							
	comp=Z,1.8nm,0.7s							
KEST	**Kesra**	**89.49**	**333**	P	**P**	**07 31 32.6**	**-1.7**	
	comp=Z,6.6nm,0.7s,baz=47,slow=8.2,SNR=2.0							
	comp=Z,6.6nm,0.7s							
KEST	**Kesra**	**89.49**	**333**	P	**P**	**07 31 33.4**	**-0.9**	
QSPA	**South Pole Qui**	**139.78**	**180**	PKP	**PKPdf**	**07 38 03.5**	**+0.6**	
	comp=Z,0.6nm,0.6s,baz=239,slow=1.0,SNR=7.5							
CPUP	**Villa Florida**	**145.46**	**59**	PKPbc	**PKPab**	**07 38 15.2**	**+0.3**	
	comp=Z,3.5nm,0.6s,baz=332,slow=2.7,SNR=11							
PLCA	**Paso Flores**	**146.84**	**92**	PKP2	**PKPbc**	**07 38 18.0**	**-0.3**	
PLCA	**Paso Flores**	**146.84**	**92**	PKPbc	**PKPbc**	**07 38 17.9**	**-0.3**	
	comp=Z,1.4nm,0.8s,baz=300,slow=6.0,SNR=5.2							
ELIB	**Princess Elisa**	**149.44**	**207**	*d*PKP	**PKPbc**	**07 38 24.4**	**+0.2**	
ELIB				*d*pPKP	**pPKPbc**	**07 39 01.2**	**-0.8**	

*IDC **21** 07:22:46.8±1.1, 34°.57N×26°.64E, h0km, mb4.0/13, mbtmp4.0/16, ML3.8/3, Error ellipse: s-maj=22.8km s-min=19.5km az=14.0*
*ISK **21** 07:22:49.1, 34°.48N×26°.63E, h12km, ML3.3/17*
*THE **21** 07:22:50.4, 34°.47N×26°.50E, h0km±2km, ML3.1/5, Error ellipse: s-maj=5.0km s-min=2.2km az=158.0*
*AFAD **21** 07:22:53.0±0.0, 34°.78N×26°.98E, h9km±4km, ML3.1*
*GII **21** 07:22:53.1±0.3, 34°.25N±0°.03×27°.03E±0°.01, h12km, Mws3.5, confirmed*

ISC 21 07:22:49.8±1.5, **34°.41N**±0°.05×**26°.65E**±0°.04, **h28**km±10km, **n94**, σ2**802**/119, **mb3.9**/13, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.79**	**334**	Pg	**Pn**	**07 23 03.1**	**-2.0**
ZKR				Sg	**Sb**	**07 23 13.9**	**-1.5**
ZKR	**Zakros**	**0.79**	**334**	P	**Pn**	**07 23 03.2**	**-1.9**
ZKR				S	**Sb**	**07 23 14.0**	**-1.5**
	3μm,0.3s						
FRMA	**Ierapetra Chan**	**0.97**	**309**	P	**Pn**	**07 23 05.6**	**-1.9**
FRMA				S	**Sn**	**07 23 18.6**	**-1.7**
	1μm,0.2s						
KARP	**Karpathos**	**1.22**	**20**	Pn	**Pb**	**07 23 12.1**	**-0.1**
KARP				Sn	**Sb**	**07 23 27.9**	**+0.4**
KARP	**Karpathos**	**1.22**	**20**	P	**Pb**	**07 23 12.8**	**+0.6**
KARP				S	**Sb**	**07 23 31.8**	**+4.3**
KARP	**Karpathos**	**1.22**	**20**	P	**Pb**	**07 23 13.5**	**+1.3**
KSTL	**Kastelli Herak**	**1.58**	**305**	P	Pn	07 23 11.6	-4.3
KSTL				S	**Sn**	**07 23 30.6**	**-4.7**
	322nm,0.5s						
GVDS	**Gavdos**	**2.15**	**282**	Pn	**Pn**	**07 23 25.9**	**+2.1**
GVDS	**Gavdos**	**2.15**	**282**	P	**Pn**	**07 23 24.9**	**+1.1**
GVDS				S	**Sn**	**07 23 52.0**	**+2.4**
	298nm,0.4s						
GVD	**Gavdhos**	**2.15**	**282**	Pn	**Pn**	**07 23 25.8**	**+2.0**
GVD	**Gavdhos**	**2.15**	**282**	P	**Pn**	**07 23 24.9**	**+1.1**
GVD				S	**Sn**	**07 23 51.3**	**+1.7**
	482nm,0.5s						
ARG	**Arkhangelos**	**2.17**	**33**	Pn	**Pn**	**07 23 25.6**	**+1.5**
SANT	**Santorini**	**2.19**	**334**	Pn	**Pn**	**07 23 25.2**	**+0.8**
YAZI	**Mula-Dat§a-**	**2.37**	**16**	P	**Pn**	**07 23 24.9**	**-1.8**
YAZI				S	**Sn**	**07 23 46.7**	**-8.2**
DAT	**Datca**	**2.44**	**18**	Pn	**Pn**	**07 23 29.0**	**+1.1**
RODP	**Rodopos**	**2.64**	**297**	Pn	**Pn**	**07 23 32.1**	**+1.6**
TURN	**Turunc**	**2.70**	**28**	Pn	**Pn**	**07 23 32.3**	**+1.0**
TURN	**Turunc**	**2.70**	**28**	P	**Pn**	**07 23 33.6**	**+2.3**
TURN				S	**Sn**	**07 24 02.8**	**-0.2**
BODT	**Bodrum**	**2.71**	**11**	Pn	**Pn**	**07 23 32.9**	**+1.5**
APE	**Apeiranthos**	**2.81**	**341**	Pn	**Pn**	**07 23 33.9**	**+1.0**
DALY	**Dalyan (Mula)**	**2.91**	**34**	Pn	**Pn**	**07 23 35.8**	**+1.6**
IZZE	**Mula-Seydike**	**2.92**	**45**	P	**Pn**	**07 23 35.9**	**+1.5**
IZZE				S	**Sn**	**07 24 06.4**	**-2.2**
IZZE				*i* AML	AML	07 24 24.0	
	comp=N,104nm,0.4s						
FETY	**Fethiye**	**2.98**	**41**	Pn	**Pn**	**07 23 36.8**	**+1.5**
FETY	**Fethiye**	**2.98**	**

	0.7nm,0.4s									
MKAR	**Makanchi Array**	**43.17**	**56**	P		**P**		**07 30 49.3**	**+1.3**	
	0.5nm,0.5s,baz=284,slow=6.3,SNR=3.8									
	0.5nm,0.5s									
SPITS	**Spitsbergen Ar**	**44.10**	**357**	P		**P**		**07 30 55.6**	**+0.5**	
	22nm,1.2s,baz=144,slow=10.0,SNR=1.8									
	22nm,1.2s									
ZALV	**Zalesovo Beam**	**44.65**	**46**	P		**P**		**07 31 00.7**	**+1.0**	
	1.4nm,0.3s,baz=266,slow=8.4,SNR=5.2									
	1.4nm,0.3s									
SONM	**Songino Array**	**59.02**	**51**	P		**P**		**07 32 48.0**	**+0.8**	
	0.8nm,0.6s,baz=277,slow=7.5,SNR=5.2									
	0.8nm,0.6s									
USRK	**Ussuriysk Ar.**	**76.50**	**46**	P		**P**		**07 34 37.2**	**+0.1**	
	1.1nm,0.5s,baz=290,slow=6.8,SNR=3.5									
	1.1nm,0.5s									

RHSSO ***21*** *07:35:23.3±0.6, 42˚.53N×20˚.01E, h3km±2km, ML2.3/9*
PDG ***21*** *07:35:25.2±0.2, 42˚.54N×19˚.85E, h6km±2km, MD2.5/2, ML2.4/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
BEO ***21*** *07:35:25.5±0.9, 42˚.51N×19˚.86E, h0km, ML2.1/8*

ISC 21 07:35:24.2±0.9, 42˚.52N±0˚.03×19˚.87E±0˚.02, h13km±5km, n42, σ1§15/78, 7C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVY	**Plav**	**0.10**	**42**	⇓*i*Pg	**Pb**	**07 35 27.4**	**0.0**
PVY				*i* Sg	**Sg**	**07 35 29.1**	**-0.5**
IVA	**Berane**	**0.35**	**3**	⇑*i*Pg	**Pb**	**07 35 31.4**	**-0.9**
IVA				*i* Sg	**Sg**	**07 35 36.4**	**+0.2**
KOME	**Kolasin**	**0.42**	**321**	⇓*i*Pg	**Pg**	**07 35 32.8**	**+0.2**
KOME				*i* Sg	**Sg**	**07 35 38.7**	**+0.4**
DRME	**Dracevica, Mon**	**0.61**	**237**	⇓*i*Pg	**Pn**	**07 35 36.7**	**-1.8**
DRME				*i* Sg	**Sb**	**07 35 45.9**	**+0.7**
DRME	**Dracevica, Mon**	**0.61**	**237**	⇓*i*Pg	**Pb**	**07 35 36.1**	**-0.6**
DRME				*e*Sg	**Sb**	**07 35 45.8**	**+0.6**
CEME	**Cevo**	**0.70**	**272**	⇑*i*Pg	**Pg**	**07 35 37.6**	**-0.3**
CEME				*i* Sg	**Sb**	**07 35 48.6**	**+0.6**
NKME	**Niksic**	**0.72**	**290**	⇑*i*Pg	**Pg**	**07 35 37.0**	**-1.2**
NKME				*i* Sg	**Sb**	**07 35 49.0**	**+0.6**
SJES	**Sjenica**	**0.74**	**6**	*e*Pg	**Pb**	**07 35 38.8**	**-0.2**
SJES				*e*Sg	**Sg**	**07 35 48.1**	**-0.3**
SJES	**Sjenica**	**0.74**	**6**	⇓*i*Pg	**Pg**	**07 35 36.8**	**-1.8**
SJES				*e*Sg	**Sg**	**07 35 47.0**	**-1.4**
BUM	**Brajici-Budva**	**0.76**	**253**	⇓*i*Pg	**Pb**	**07 35 39.1**	**-0.1**
BUM				*i* Sg	**Sn**	**07 35 50.9**	**-1.0**
PLE	**Pljevlja**	**0.88**	**336**	⇑*i*Pg	**Pg**	**07 35 41.2**	**-0.1**
PLE				*i* Sg	**Sn**	**07 35 54.7**	**-0.4**
UPM	**Unac-Piva**	**0.98**	**314**	⇓*i*Pg	**Pg**	**07 35 43.2**	**0.0**
UPM				*i* Sg	**Sn**	**07 35 58.1**	**+0.4**
UPM	**Unac-Piva**	**0.98**	**314**	*e*Pg	**Pb**	**07 35 42.4**	**-0.8**
UPM				*e*Sg	**Sg**	**07 35 56.8**	**+0.7**
HCY	**Herceg Novi**	**1.02**	**266**	⇓*i*Pg	**Pg**	**07 35 44.0**	**+0.1**
HCY				*i* Sg	**Sn**	**07 35 59.9**	**+1.5**
HCY	**Herceg Novi**	**1.02**	**266**	*e*Pg	**Pn**	**07 35 43.5**	**-0.7**
HCY				*e*Sg	**Sn**	**07 35 59.3**	**+0.9**
BRY	**Bratogost**	**1.05**	**292**	⇓*i*Pg	**Pg**	**07 35 44.4**	**-0.1**
BRY				*i* Sg	**Sn**	**07 36 00.5**	**+1.2**
BRY	**Bratogost**	**1.05**	**292**	⇑*i*Pg	**Pb**	**07 35 43.7**	**-0.6**
BRY				*e*Sg	**Sn**	**07 35 59.6**	**+0.3**
IVAS	**Ivanjica**	**1.07**	**11**	*e*Pg	**Pg**	**07 35 44.5**	**-0.4**
IVAS				*e*Sg	**Sn**	**07 35 59.5**	**-0.3**
TREB	**Trebinje**	**1.14**	**280**	⇑*i*Pg	**Pn**	**07 35 45.1**	**-0.7**
TREB				*e*Sg	**Sg**	**07 36 02.7**	**+1.7**
KLINJ	**Klinje**	**1.15**	**305**	*e*Pg	**Pn**	**07 35 44.8**	**-1.2**
KLINJ				*e*Sg	**Sg**	**07 36 02.1**	**+0.9**
SELS	**Selova**	**1.15**	**52**	*e*Pg	**Pg**	**07 35 47.0**	**+0.6**
SELS				*e*Sg	**Sn**	**07 36 02.4**	**+0.8**
RUDO	**Rudo**	**1.16**	**342**	⇑*i*Pg	**Pn**	**07 35 44.7**	**-1.4**
RUDO				*e*Sg	**Sb**	**07 36 00.6**	**-0.3**
DBRK	**Dubrovnik**	**1.28**	**277**	*e*Pn	**Pg**	**07 35 49.2**	**+0.3**
DBRK				Sn	**Sg**	**07 36 08.7**	**+3.1**
BBLS	**Lazići**	**1.39**	**346**	*e*Pg	**Pg**	**07 35 50.9**	**+0.1**
BBLS				*e*Sg	**Sg**	**07 36 09.1**	**+0.2**
BBLS	**Lazići**	**1.39**	**346**	*e*Pg	**Pn**	**07 35 48.8**	**-0.5**
BBLS				*e*Sg	**Sb**	**07 36 08.5**	**+0.9**
BARS	**Barje**	**1.46**	**78**	*e*Pg	**Pg**	**07 35 52.5**	**+0.2**
BARS				*e*Sg	**Sg**	**07 36 11.6**	**+0.3**
GRUS	**Gruza**	**1.50**	**24**	*e*Pg	**Pg**	**07 35 51.9**	**-1.1**
GRUS				*e*Sg	**Sg**	**07 36 15.0**	**+2.5**
NEVS	**Nevesinje**	**1.51**	**301**	*e*Pn	**Pg**	**07 35 52.0**	**-0.1**
NEVS				*e*Sn	**Sg**	**07 36 14.3**	**+1.4**
DIVS	**Divibare**	**1.58**	**3**	*e*Pg	**Pg**	**07 35 54.7**	**+0.2**
DIVS				*e*Sg	**Sg**	**07 36 17.0**	**+2.0**
STON	**Ston**	**1.64**	**283**	*e*Pn	**Pg**	**07 35 55.1**	**-0.6**
STON	**Ston**	**1.64**	**283**	*e*Pg	**Pg**	**07 35 54.8**	**-0.8**
STON				*e*Sg	**Sg**	**07 36 17.9**	**+1.0**
HAPS	**Han Pijesak,BI**	**1.70**	**337**	*e*Pn	**Pn**	**07 35 53.8**	**+0.1**
HAPS				*e*Sn	**Sb**	**07 36 17.0**	**+0.3**
TRUS	**Trudelj**	**1.74**	**13**	*e*Pg	**Pg**	**07 35 57.1**	**-0.6**
TRUS				*e*Sg	**Sg**	**07 36 22.1**	**+1.8**
TEKS	**Tekeris**	**2.04**	**353**	*e*Pn	**Pn**	**07 35 58.4**	**+0.2**
TEKS				*e*Sn	**Sn**	**07 36 24.6**	**+1.0**
LSTV	**Lastovo**	**2.21**	**277**	*e*Pn	**Pb**	**07 36 04.2**	**+0.2**
MAKA	**Makarska**	**2.23**	**291**	*e*Pn	**Pg**	**07 36 05.6**	**-1.3**
RICI	**Ricice**	**2.23**	**297**	*e*Pn	**Pg**	**07 36 06.1**	**-0.8**
RICI				Sn	**Sg**	**07 36 39.9**	**0.0**
HVAR	**Hvar**	**2.60**	**286**	*e*Pn	**Pb**	**07 36 09.1**	**-1.6**
A050A	**Klekovaca**	**3.12**	**310**	*e*Pn	**Pn**	**07 36 13.9**	**+0.8**
A050A				*e*Sn	**Sn**	**07 36 52.9**	**+2.6**
A051A	**Mrakovica**	**3.29**	**320**	*e*Pn	**Pn**	**07 36 16.2**	**+0.8**
A051A				*e*Sn	**Sn**	**07 36 55.8**	**+1.4**
ZIRJ	**Zirje**	**3.30**	**291**	*e*Pn	**Pb**	**07 36 20.3**	**-2.2**
DUGI	**Dugi Otok**	**3.81**	**294**	*e*Pn	**Pb**	**07 36 27.4**	**-3.9**

NEIC ***21*** *07:36:57.9±1.4, 54˚.8N±0˚.1×153˚.8W±0˚.1, h32km±11km, ML3.1/34, ML2.9(AEIC), Error ellipse: s-maj=18.0km s-min=5.9km az=142.0*
IDC ***21*** *07:37:00.6±7.2, 54˚.95N×153˚.23W, h0km, mb2.9/2, mbtmp3.0/4, ML3.1/2, Error ellipse: s-maj=131.1km s-min=32.4km az=71.0*
AEIC ***21*** *07:37:01.9±1.2, 55˚.0N±0˚.1×153˚.8W±0˚.1, h10km±8km, Error ellipse: s-maj=17.8km s-min=9.7km az=150.0*

ISC 21 07:36:58.4±1.4, 55˚.10N±0˚.10×153˚.89W±0˚.06, h10km, n68, σ1§09/68, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.15**	**9**	Pn	**Pn**	**07 37 34.4**	**+0.1**
OHAK	**Old Harbor**	**2.15**	**9**		**Sn**	**07 37 59.6**	**-1.4**
KDAK	**Kodiak Island**	**2.79**	**15**	Pn	**Pn**	**07 37 43.0**	**+0.1**
KDAK				IAML		07 38 15.7	
	34nm,0.5s						
KDAK	**Kodiak Island**	**2.79**	**15**		**Sn**	**07 38 13.8**	**-2.7**
KDAK	**Kodiak Island**	**2.79**	**15**	Pn	**Pn**	**07 37 43.0**	**+0.1**
	3.3nm,0.3s,baz=186,slow=6.6,SNR=159						
KDAK				Sn	**Sn**	**07 38 14.6**	**-2.0**
	2.3nm,0.3s,baz=125,slow=22,SNR=21						
	6.5nm,0.3s						
CHGN	**Chignik**	**2.83**	**297**	IAML		07 38 21.1	
	comp=N,41nm,0.6s						
CHGN				IAML		07 38 22.1	
	comp=E,42nm,0.2s						
CHGN	**Chignik**	**2.83**	**297**		**Pn**	**07 37 42.6**	**-1.0**
CHGN					**Sn**	**07 38 15.7**	**-2.0**
PLK1	**Peulik 1**	**3.10**	**332**		**Pn**	**07 37 48.3**	**+1.0**
R16K	**Pilot Point**	**3.21**	**322**		**Pn**	**07 37 49.2**	**+0.4**
R16K	**Pilot Point**	**3.21**	**322**	IAML		07 38 28.1	
	comp=N,41nm,1.0s						
R16K				IAML		07 39 37.6	
	comp=E,48nm,1.4s						
ACHA	**Angle Creek He**	**3.22**	**346**		**Pn**	**07 37 49.8**	**+0.7**
ANCK	**Angle Creek**	**3.23**	**345**		**Pn**	**07 37 50.1**	**+0.9**
ANCK					**Sn**	**07 38 27.4**	**-0.3**
CNBA	**Chernabura Isl**	**3.30**	**267**		**Pn**	**07 37 48.1**	**-1.9**
CNBA	**Chernabura Isl**	**3.30**	**267**	IAML		07 38 28.4	
	comp=N,29nm,0.9s						
CNBA				IAML		07 38 30.5	
	comp=E,27nm,0.7s						
CNTC	**Contact Creek**	**3.36**	**342**		**Pn**	**07 37 51.6**	**+0.6**
CNTC					**Sn**	**07 38 31.1**	**+0.2**
VNFG	**Fog Glacier, M**	**3.42**	**293**		**Pn**	**07 37 52.1**	**+0.3**
KAHG	**Katmai Hook Gl**	**3.42**	**354**		**Pn**	**07 37 53.1**	**+1.3**
SYI	**Shuyak Island**	**3.61**	**13**	Pn	**Pn**	**07 37 55.0**	**+0.6**
SYI				IAML		07 38 41.8	
	comp=E,18nm,1.4s						
SDPT	**Sand Point**	**3.78**	**276**		**Pn**	**07 37 54.5**	**-2.1**
SDPT	**Sand Point**	**3.78**	**276**	IAML		07 39 05.9	
	comp=E,40nm,1.1s						
Q19K	**Cape Douglas,**	**3.84**	**2**	Pn	**Pn**	**07 37 59.4**	**+1.9**
AUCH	**Augustine Cone**	**4.28**	**3**		**Pn**	**07 38 05.0**	**+1.4**
P17K	**Kvichak River**	**4.33**	**342**		**Pn**	**07 38 05.0**	**+0.8**
P18K	**Big Mountain,**	**4.37**	**351**	Pn	**Pn**	**07 38 05.5**	**+0.8**
P16K	**Nushagak River**	**4.53**	**332**		**Pn**	**07 38 07.4**	**+0.4**
PS4A	**Pavlof South-4**	**4.57**	**276**		**Pn**	**07 38 05.3**	**-2.2**
P19K	**Oil Pt**	**4.58**	**4**		**Pn**	**07 38 09.1**	**+1.5**
CNPM	**China Poot**	**4.66**	**17**	Pn	**Pn**	**07 38 09.1**	**+0.3**
CNPM				IAML		07 39 13.0	
	comp=N,12nm,1.2s						
CNPM				IAML		07 39 40.7	
	comp=E,14nm,1.5s						
O18K	**Koktuh Hills**	**4.82**	**352**	Pn	**Pn**	**07 38 11.8**	**+0.9**
O18K				IAML		07 39 07.7	
	comp=E,9.4nm,1.3s						
O18K				IAML		07 39 10.2	
	comp=N,12nm,1.3s						
ILSW	**Iliamna Southw**	**4.91**	**4**	Pn	**Pn**	**07 38 13.4**	**+1.1**
ILSW				IAML		07 39 15.8	
	comp=E,12nm,1.4s						
ILSW				IAML		07 39 19.1	
	comp=N,10nm,1.3s						
BRLK	**Bradley Lake**	**4.95**	**18**	Pn	**Pn**	**07 38 12.3**	**-0.4**
BRLK				IAML		07 39 07.3	
	comp=N,9.3nm,0.9s						
BRLK				IAML		07 39 07.9	
	comp=E,12nm,1.0s						
IVE	**Iliamna Volcan**	**4.95**	**5**		**Pn**	**07 38 13.7**	**+0.9**
BRSE	**Bradley Lake S**	**4.96**	**19**		**Pn**	**07 38 12.4**	**-0.4**
O17K	**Koliganek Bris**	**5.00**	**341**		**Pn**	**07 38 13.5**	**+0.2**
O20K	**Slope Mountain**	**5.04**	**7**		**Pn**	**07 38 15.2**	**+1.1**
O16K	**Kokwok River B**	**5.05**	**335**		**Pn**	**07 38 14.2**	**+0.2**
O19K	**Port Alsworth**	**5.12**	**358**	Pn	**Pn**	**07 38 15.8**	**+0.9**
O19K				IAML		07 39 32.4	
	comp=E,13nm,0.6s						
O15K	**Ungalikthiuk R**	**5.21**	**324**		**Pn**	**07 38 16.4**	**+0.2**
RSO	**Redoubt South**	**5.41**	**6**	Pn	**Pn**	**07 38 20.0**	**+0.8**
RDT	**Redoubt**	**5.55**	**8**		**Pn**	**07 38 20.9**	**0.0**
N18K	**Kilae Creek**	**5.70**	**350**	Pn	**Pn**	**07 38 24.1**	**+1.1**
N17K	**Nushagak Hills**	**5.72**	**343**	Pn	**Pn**	**07 38 24.3**	**+1.1**
N19K	**Bonanza Creek**	**5.74**	**357**	Pn	**Pn**	**07 38 24.9**	**+1.3**
N16K	**Nishlik Lake**	**5.99**	**336**		**Pn**	**07 38 27.3**	**+0.3**
RC01	**Rabbit Creek A**	**6.40**	**18**	Pn	**Pn**	**07 38 32.4**	**-0.2**
M18K	**Stony River**	**6.49**	**352**		**Pn**	**07 38 34.2**	**+0.3**
M16K	**Timber Creek**	**6.52**	**338**	Pn	**Pn**	**07 38 35.1**	**+0.9**
M17K	**Holitna River**	**6.59**	**345**	Pn	**Pn**	**07 38 36.0**	**+0.7**
SUA	**Susitna One**	**6.59**	**13**	Pn	**Pn**	**07 38 36.1**	**+0.8**
HIN	**Hinchinbrook I**	**6.62**	**34**	Pn	**Pn**	**07 38 36.1**	**+0.5**
M20K	**Styx River**	**6.81**	**3**	Pn	**Pn**	**07 38 40.1**	**+1.8**
M19K	**Big River Lodg**	**6.83**	**358**	Pn	**Pn**	**07 38 39.5**	**+1.0**
PMR	**Palmer**	**6.97**	**19**	Pn	**P**	**07 38 42.1**	**+1.7**
SKT	**Skwentna**	**7.01**	**9**	Pn	**Pn**	**07 38 42.8**	**+1.8**
L19K	**White Mountain**	**7.12**	**356**	Pn	**Pn**	**07 38 43.6**	**+1.1**
GHO	**Glory Hole Cre**	**7.18**	**19**	Pn	**Pn**	**07 38 44.6**	**+1.3**
SML	**Sawmill**	**7.33**	**21**	Pn	**Pn**	**07 38 45.1**	**-0.3**
SCM	**Sheep Creek Mo**	**7.57**	**24**	Pn	**Pn**	**07 38 49.3**	**+0.6**
TTA	**Tatalina**	**7.93**	**353**	Pn	**Pn**	**07 38 54.6**	**+1.0**
BARN	**Barnard Glacie**	**8.80**	**42**	Pn	**Pn**	**07 39 05.9**	**+0.2**
CTGM	**Chitina Glacie**	**8.87**	**43**	Pn	**Pn**	**07 39 06.5**	**-0.1**
LOGN	**Logan Glacier**	**8.92**	**45**	Pn	**Pn**	**07 39 06.4**	**-0.9**
IL31		**10.31**	**17**	Pn	**Pn**	**07 39 27.0**	**+0.9**
ILAR	**Eielson Array**	**10.31**	**17**	Pn	**Pn**	**07 39 26.4**	**+0.2**
ILAR	**Eielson Array**	**10.31**	**17**	Pn	**Pn**	**07 39 25.9**	**-0.3**
	comp=E,0.2nm,0.3s,baz=205,slow=14,SNR=6.3						
ILAR				Sn	Sn	07 41 11.0	-11
	baz=209,slow=24,SNR=1.7						
	comp=E,0.3nm,0.4s						
I23K	**Minto, Yukon-K**	**10.33**	**11**	Pn	**Pn**	**07 39 27.6**	**+1.2**
YKA	**Yellowknife Ar**	**21.36**	**54**	P	**P**	**07 41 46.1**	**+0.7**
	comp=E,0.3nm,0.8s,baz=264,slow=9.7,SNR=7.0						
	comp=E,0.3nm,0.8s						
TXAR	**Lajitas Array**	**43.95**	**105**	P	**P**	**07 45 06.1**	**+0.6**
	comp=E,0.2nm,0.7s,baz=302,slow=5.2,SNR=2.6						
	comp=E,0.2nm,0.7s						

IDC ***21*** *07:37:05.1±2.1, 4˚.28S×143˚.72E, h134km±20km, mb4.4/16, mbtmp4.8/19, MS3.5/8, Error ellipse: s-maj=22.7km s-min=8.7km az=90.0*
NEIC ***21*** *07:37:06.8±1.6, 4˚.25S±0˚.08×143˚.60E±0˚.09, h144km±7km, mb4.7/127, Error ellipse: s-maj=14.0km s-min=9.9km az=121.0*
DJA ***21*** *07:37:07.2±0.4, 4˚S±4˚×14˚4E±˚, h144km±5km, M4.8/30, mB5.2/12, mb4.9/30, MLv5.0/4, Mw(mB)4.6/12*

ISC 21 07:37:07.0±0.3, 4˚.30S±0˚.04×143˚.65E±0˚.05, h150km, n417, σ1§11/377, mb4.7/98, 9C-5D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**2.60**	**248**	P	**Pn**	**07 37 47.7**	**-1.7**
GENI	**Genyem**	**3.87**	**296**	P	**Pn**	**07 38 04.1**	**-1.4**
GENI	**Genyem**	**3.87**	**296**	P	**Pn**	**07 38 04.3**	**-1.2**
MANU	**Manus Island**	**4.34**	**59**		**Pn**	**07 38 11.4**	**-0.4**
MANU	**Manus Island**	**4.34**	**59**	P	**Pn**	**07 38 11.6**	**-0.1**
MMPI	**Merauke**	**5.26**	**218**	P	**Pn**	**07 38 22.8**	**-1.0**
	2µm,0.6s,19µm8.6nm						
SMPI	**Sani**	**5.44**	**295**	P	**Pn**	**07 38 24.9**	**-1.3**
	88nm,1.0s,6µm1.0nm						
PMG	**Port Moresby**	**6.15**	**146**	Pn	**Pn**	**07 38 34.3**	**-1.4**
PMG	**Port Moresby**	**6.15**	**146**	P	**Pn**	**07 38 34.1**	**-1.6**
	72nm,0.5s,baz=356,slow=5.1,SNR=27						
PMG				S	**Sn**	**07 39 40.7**	**-4.6**
	53nm,0.7s,baz=16,slow=14,SNR=4.2						
PMG				LR	LR	07 42 02.9	
	comp=Z,159nm,18.0s,baz=250,slow=49						
COEN	**Coen**	**9.61**	**183**	Pn	**Pn**	**07 39 22.5**	**+0.7**
COEN	**Coen**	**9.61**	**183**	P	**Pn**	**07 39 22.9**	**+1.1**
FAKI	**Fak Fak**	**11.46**	**277**	P	**Pn**	**07 39 46.1**	**-0.2**
	29nm,0.7s						
SWI	**Sorong**	**12.84**	**285**	P	**Pn**	**07 40 04.9**	**+0.7**
	53nm,0.7s						
MTSU	**Mount Surprise**	**13.76**	**177**	P	**Pn**	**07 40 17.1**	**+1.1**
KDU	**Kakadu**	**13.83**	**232**	P	**Pn**	**07 40 15.9**	**-1.0**
DRS	**Darwin Rock St**	**14.97**	**237**	P	**P**	**07 40 32.0**	**-0.9**
MTN	**Manton Dam**	**15.00**	**235**	Pn	**Pn**	**07 40 30.1**	**-1.4**
MTN	**Manton Dam**	**15.00**	**235**	P	**Pn**	**07 40 31.7**	**+0.2**
CTA	**Charters Tower**	**15.90**	**171**	P	**P**	**07 40 43.8**	**+0.6**
CTA	**Charters Tower**	**15.90**	**171**	P	**Pn**	**07 40 43.2**	**+0.6**
	6.4nm,0.9s,baz=2.3,slow=11,SNR=9.8						
CTA				LR	LR	07 46 28.1	
	comp=Z,83nm,20.4s,baz=341,slow=35						
CTAO	**Charters Tower**	**15.90**	**171**	P	**P**	**07 40 43.9**	**+0.7**
LBMI	**Labuha**	**16.53**	**282**	P	**Pn**	**07 40 55.3**	**+4.9**
NLAI	**Namlea**	**16.54**	**273**	P	**Pn**	**07 40 53.9**	**+3.4**
QIS	**Mount Isa**	**16.63**	**193**	P	**P**	**07 40 51.4**	**+0.1**
SANI	**Sanana**	**17.77**	**277**	P	**Pn**	**07 41 04.8**	**-0.4**
WB0	**Warramunga Arr**	**17.82**	**210**		**P**	**07 41 04.5**	**+0.1**
WR0	**Warramunga Arr**	**17.91**	**209**	P	**P**	**07 41 05.5**	**+0.1**
WRAB	**Tennant Creek**	**17.98**	**209**	P	**P**	**07 41 06.3**	**+0.1**
WB2	**Warramunga Arr**	**17.99**	**209**	P	**P**	**07 41 06.6**	**+0.3**
WRA	**Warramunga Arr**	**18.00**	**209**	P	**P**	**07 41 05.4**	**-1.0**
WRA	**Warramunga Arr**	**18.00**	**209**	P	**P**	**07 41 05.4**	**-1.0**
	28nm,0.4s,baz=18,slow=11,SNR=101						
KNRA	**Kununurra**	**18.49**	**231**	P	**P**	**07 41 11.8**	**+0.1**
KNRA				IAmb	IAmb	07 41 42.3	
	comp=Z,23nm,0.7s						
SOEI	**Soe**	**19.98**	**253**	P	**P**	**07 41 27.7**	**-0.3**
SOEI	**Soe**	**19.98**	**253**	P	**P**	**07 41 28.3**	**+0.3**
SOEI	**Soe**	**19.98**	**253**	P	**P**	**07 41 28.4**	**+0.4**
	comp=Z,186nm,0.8s,comp=Z,1µm						
RK1H	**Rockhampton Ha**	**20.09**	**161**	P	**P**	**07 41 30.5**	**+1.5**
AS01	**Alice Springs**	**21.40**	**205**	P	**P**	**07 41 43.4**	**+0.3**
AS31	**Alice Springs**	**21.42**	**205**	P	**P**	**07 41 43.7**	**+0.3**
AS31				IAmb	IAmb	07 41 50.9	
	comp=Z,16nm,0.7s						
ASAR	**Alice Springs**	**21.43**	**205**	P	**P**	**07 41 43.4**	**+0.1**
ASAR	**Alice Springs**	**21.43**	**205**	P	**P**	**07 41 43.3**	**-0.1**
	comp=Z,18nm,0.5s,baz=32,slow=11,SNR=93						
ASAR				S	**S**	**07 45 33.6**	**+1.5**
	comp=Z,11nm,0.8s,baz=29,slow=19,SNR=8.2						
ASAR				LR	LR	07 51 15.2	
	comp=Z,230nm,21.3s,baz=46,slow=40						
	comp=Z,18nm,0.5s						
EIDS	**Eidsvold**	**22.13**	**162**	P	**P**	**07 41 51.8**	**+1.2**
EIDS	**Eidsvold**	**22.13**	**162**	P	**P**	**07 41 53.2**	**+2.6**
QLP	**Quilpie**	**22.16**	**179**	P	**P**	**07 41 53.6**	**+2.7**
EDFI	**Ende, Flores**	**22.25**	**257**	P	**P**	**07 41 48.5**	**-3.5**
FITZ	**Fitzroy Crossi**	**22.32**	**231**	P	**P**	**07 41 51.0**	**-1.5**
FITZ				IAmb	IAmb	07 41 54.1	
	comp=Z,20nm,0.7s						
TOLI2	**Tolitoli**	**23.47**	**283**	P	**P**	**07 42 01.9**	**-1.4**
TOLI2	**Tolitoli**	**23.47**	**283**	P	**P**	**07 42 03.2**	**-0.1**
INKA	**Innaminka**	**23.47**	**186**	P	**P**	**07 42 05.0**	**+1.9**
BASI	**Baing, Sumba**	**23.62**	**254**	P	**P**	**07 42 04.4**	**-0.2**
	comp=Z,490nm,1.1s,comp=Z,4µm						
KAPI	**Kappang**	**23.83**	**267**	P	**P**	**07 42 07.1**	**+0.6**
MPSI	**Mapaga**	**24.17**	**280**	P	**P**	**07 42 08.5**	**-1.1**
	comp=Z,11nm,1.1s						
OOD	**Oodnadatta**	**24.56**	**197**	P	**P**	**07 42 14.7**	**+1.7**
AULRC	**Lightning Ridg**	**25.33**	**171**	P	**P**	**07 42 21.8**	**+1.9**
WRKA	**Warakurna**	**25.35**	**214**	P	**P**	**07 42 21.1**	**+0.8**
PLAI	**Plampang**	**26.08**	**259**	P	**P**	**07 42 23.9**	**-3.1**
LCRK	**Leigh Creek**	**26.51**	**191**	P	**P**	**07 42 32.2**	**+1.7**
CMSA	**Cobar Meteorol**	**27.16**	**176**	P	**P**	**07 42 38.1**	**+1.7**
MULG	**Mulgathing**	**27.38**	**198**	P	**P**	**07 42 39.8**	**+1.4**
STKA	**Stephens Creek**	**27.50**	**184**	P	**P**	**07 42 40.9**	**+1.5**
STKA	**Stephens Creek**	**27.50**	**184**	P	**P**	**07 42 40.0**	**+0.6**
	comp=Z,5.6nm,0.6s,baz=354,slow=8.6,SNR=20						
STKA				LR	LR	07 54 22.4	
	comp=Z,122nm,20.4s,baz=21,slow=38						
	comp=Z,5.6nm,0.6s						
AUPHS	**Peel High Scho**	**27.52**	**166**	P	**P**	**07 42 42.0**	**+2.4**
DZM	**Mont Dzumac**	**28.29**	**131**	P	**P**	**07 42 47.2**	**+0.5**
DZM				IAmb	IAmb	07 42 48.3	
	comp=Z,14nm,0.8s						
DZM	**Mont Dzumac**	**28.29**	**131**	P	**P**	**07 42 48.6**	**+2.0**
	comp=Z,20nm,0.9s						
MBWA	**Marble Bar**	**28.64**	**232**	P	**P**	**07 42 50.0**	**+0.3**
PSA00	**Pilbara Seismi**	**28.78**	**231**	P	**P**	**07 42 50.9**	**+0.1**
PSA00				IAmb	IAmb	07 42 55.8	
	comp=Z,7.1nm,0.6s						
BBOO	**Buckleboo**	**29.24**	**193**	P	**P**	**07 42 55.2**	**+0.4**
BBOO	**Buckleboo**	**29.24**	**193**	P	**P**	**07 42 55.6**	**+0.8**
FORT	**Forrest**	**30.16**	**207**	P	**P**	**07 43 03.7**	**+0.7**
FORT	**Forrest**	**30.16**	**207**	P	**P**	**07 43 04.7**	**+1.7**
YNG	**Young**	**30.17**	**172**	P	**P**	**07 43 05.2**	**+2.1**
ARPS	**Mount Arapiles**	**32.35**	**183**	P	**P**	**07 43 24.3**	**+2.1**
MEEK	**Meekatharra**	**32.65**	**225**	P	**P**	**07 43 25.8**	**+0.8**
BRAT	**Ballarat**	**33.09**	**180**	P	**P**	**07 43 30.9**	**+2.4**
TOO	**Toolangi**	**33.16**	**177**	IAmb	IAmb	07 43 32.7	
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**33.16**	**177**	P	**P**	**07 43 31.1**	**+1.9**
AUHPC	**Hawkesdale P12**	**33.67**	**182**	P	**P**	**07 43 35.9**	**+2.3**
KMBL	**Kambalda**	**33.82**	**215**	P	**P**	**07 43 35.9**	**+0.9**
MORW	**Morawa**	**35.94**	**224**	P	**P**	**07 43 53.4**	**+0.2**
MORW	**Morawa**	**35.94**	**224**	P	**P**	**07 43 53.6**	**+0.4**
KLBR	**Kellerberrin**	**36.45**	**219**	P	**P**	**07 43 57.8**	**+0.3**
BLDU	**Ballidu**	**36.47**	**221**	P	**P**	**07 43 58.3**	**+0.6**
TAU	**T

ULN IAmb IAmb 07 47 07.9
comp=Z,7.3nm,0.8s
SONM Songino Array 61.33 332 P P 07 47 07.1 +0.2
SONM Songino Array 61.33 332 P P 07 47 06.9 +0.1
comp=Z,2.5nm,0.7s,baz=151,slow=6.5,SNR=16
SONM PKP2bc 08 16 30.3
comp=Z,3.8nm,0.9s,baz=293,slow=2.2,SNR=18
comp=Z,2.5nm,0.7s
MA2 Magadan 63.93 4 P P 07 47 23.4 -0.3
MA2 IAmb IAmb 07 47 24.4
comp=Z,5.7nm,0.7s
WMQ Urumqi 69.35 320 eP P 07 47 57.8 -0.7
WMQ pmax pmax
comp=Z,15nm,0.9s
SPIA Saint Paul Isl 71.70 24 P P 07 48 12.8 +0.5
baz=229
FALS False Pass 73.34 29 P P 07 48 22.6 +0.5
baz=236
VNDA Vanda 73.81 176 P P 07 48 25.0 +0.4
comp=Z,5.6nm,0.6s,baz=329,slow=6.3,SNR=16
comp=Z,5.6nm,0.6s
MKAR Makanchi Array 74.08 321 P P 07 48 27.0 +0.3
comp=Z,4.4nm,0.5s,baz=98,slow=8.1,SNR=66
comp=Z,4.4nm,0.5s
MAKZ Makanchi 74.28 321 P P 07 48 27.6 -0.2
MAKZ IAmb IAmb 07 48 29.1
comp=Z,20nm,1.3s
SDPT Sand Point 75.03 29 P P 07 48 32.2 +0.3
baz=239
CHNA Chernabura Isl 75.20 30 P P 07 48 33.2 +0.3
baz=240
ZALV Zalesovo Beam 75.82 329 P P 07 48 35.3 -1.1
ZALV Zalesovo Beam 75.82 329 P P 07 48 35.6 -0.8
comp=Z,6.1nm,0.6s,baz=113,slow=6.3,SNR=15
comp=Z,6.1nm,0.6s
S14K Fog Glacier 75.96 29 P P 07 48 38.0 +0.7
baz=239
NIL Nilore 76.23 306 P P 07 48 38.9 -0.4
TIXI Tiksi 76.42 355 P P 07 48 38.5 -1.0
CHGN Chignik 76.52 29 P P 07 48 40.3 0.0
baz=240
M13K Dall Lake 76.52 24 P P 07 48 41.2 +1.0
baz=235
BOOM Boomskoye usch 76.72 315 IAmb IAmb 07 48 43.4
comp=Z,9.2nm,0.6s
O14K Tigyukauivet M 76.75 26 P P 07 48 42.3 +0.8
baz=237
N14K Kuskokwak Cree 76.93 25 P P 07 48 43.4 +0.9
baz=237
M14K Bethel 77.28 24 P P 07 48 45.3 +0.8
baz=236
L14K Kuka Creek 77.32 23 P P 07 48 45.5 +0.8
baz=236
O15K Ungalikthiuk R 77.33 26 P P 07 48 45.7 +0.9
baz=239
N15K Kwethluk River 77.74 25 P P 07 48 48.3 +1.2
baz=238
KURBB Kurchatov Arra 77.89 324 P P 07 48 48.1 +0.1
comp=Z,1.4nm,0.5s,baz=104,slow=8.6,SNR=10
comp=Z,1.4nm,0.5s
L15K Ungalak Mounta 77.98 24 P P 07 48 49.0 +0.7
baz=237
TNA Tin City 78.02 19 P P 07 48 49.9 +1.4
baz=230
O16K Kokwok River B 78.31 26 P P 07 48 51.0 +0.8
baz=240
K15K Wolf Creek Mou 78.31 23 P P 07 48 51.4 +1.2
baz=236
N16K Nishlik Lake 78.46 25 P P 07 48 52.5 +1.4
baz=239
Q16K King Salmon 78.50 27 P P 07 48 50.8 -0.5
baz=242
M16K Timber Creek 78.66 25 P P 07 48 53.2 +1.1
baz=239
Q17K Contact Creek 78.66 28 P P 07 48 51.8 -0.5
baz=242
L16K Owhat River 78.81 24 P P 07 48 53.5 +0.6
baz=238
O17K Koliganek Bris 78.84 26 P P 07 48 54.0 +0.9
baz=241
P17K Kvichak River 78.85 27 P P 07 48 53.3 +0.2
baz=242
G15K Niukluk 78.95 20 P P 07 48 54.2 +0.6
baz=234
N17K Nushagak Hills 79.17 26 P P 07 48 55.9 +1.0
baz=241
H16K Elim 79.37 21 P P 07 48 56.7 +0.8
baz=235
OHAK Old Harbor 79.44 30 P P 07 48 57.3 +0.8
baz=245
M17K Holitna River 79.49 25 P P 07 48 57.9 +1.2
baz=240
P18K Big Mountain, 79.49 27 P P 07 48 56.4 -0.3
baz=243
I17K Unalakleet 79.51 22 P P 07 48 58.1 +1.5
baz=237
L17K Donlin 79.51 24 P P 07 48 58.1 +1.4
baz=239
O18K Koktuh Hills 79.71 27 P P 07 48 57.9 0.0
baz=243
G16K Koyuk River 79.76 20 P P 07 48 59.0 +1.0
baz=235
N18K Kilae Creek 79.80 26 P P 07 48 59.5 +1.1
baz=242
K17K Iditarod 79.80 23 IAmb IAmb 07 49 00.3
comp=Z,13nm,0.8s
K17K Iditarod 79.80 23 P P 07 48 59.5 +1.2
baz=239
J17K VABM Dome 79.85 23 IAmb IAmb 07 49 00.5
comp=Z,13nm,0.7s
J17K VABM Dome 79.85 23 P P 07 48 60.0 +1.4
baz=238
KDAK Kodiak Island 80.03 29 P P 07 49 00.3 +0.7
baz=245
SVW2 Sparrevohn 80.13 25 IAmb IAmb 07 49 02.1
comp=Z,17nm,1.2s
L18K Granite Mounta 80.20 24 P P 07 49 01.4 +0.9
baz=241
M18K Stony River 80.21 25 P P 07 49 01.5 +0.9
baz=242
O19K Port Alsworth 80.27 27 P P 07 49 00.7 -0.1
baz=243
H17K Granite Mounta 80.36 21 IAmb IAmb 07 49 03.1
comp=Z,9.4nm,0.7s
H17K Granite Mounta 80.36 21 P P 07 49 02.1 +0.9
baz=238
G17K Kiwalik Mounta 80.41 20 P P 07 49 02.5 +1.0
baz=237
N19K Bonanza Creek 80.47 26 IAmb IAmb 07 49 03.6
comp=Z,14nm,0.8s
N19K Bonanza Creek 80.47 26 P P 07 49 02.8 +0.7
baz=243
P19K Oil Pt 80.52 27 P P 07 49 02.2 -0.1
baz=244
KKAR Karatay Array 80.72 315 P P 07 49 03.6 -0.1
F17K Baldwin Pennin 80.73 20 P P 07 49 03.3 +0.2
baz=236
SIMJ Simiganj 80.77 310 P P 07 49 02.1 -2.0
J18K Innoko River 80.80 23 P P 07 49 03.7 0.0
baz=241
TTA Tatalina 80.82 24 P P 07 49 04.4 +0.5
baz=241
D17K Noatak River 80.87 18 P P 07 49 05.0 +1.1
baz=234
E17K Hotham Inlet 80.91 19 P P 07 49 05.1 +1.0
baz=235
L19K White Mountain 80.94 25 IAmb IAmb 07 49 05.8
comp=Z,8.1nm,0.8s
L19K White Mountain 80.94 25 P P 07 49 05.3 +0.9
baz=243
M19K Big River Lodg 81.01 25 P P 07 49 05.8 +1.0
baz=243
H18K Honhosa River 81.04 21 P P 07 49 05.1 +0.3
baz=239
HOM Homer 81.25 28 P P 07 49 06.5 +0.5
baz=246
C17K DeLong Mountai 81.30 17 P P 07 49 06.7 +0.5
baz=234
G18K Tagagawik 81.32 21 IAmb IAmb 07 49 07.5
comp=Z,9.0nm,0.8s
G18K Tagagawik 81.32 21 P P 07 49 06.6 +0.3
baz=239
F18K Selawik 81.35 20 P P 07 49 06.7 +0.2
baz=238
GCSA Galena City Sc 81.38 22 P P 07 49 07.1 +0.5
baz=240,SNR=7.0
L20K Farewell, AK 81.48 25 P P 07 49 08.0 +0.7
baz=244

J19K Poorman 81.49 23 IAmb IAmb 07 49 08.8
comp=Z,8.1nm,0.8s
J19K Poorman 81.49 23 P P 07 49 08.0 +0.8
baz=242
E18K Tukpahlearik C 81.49 19 P P 07 49 07.9 +0.8
baz=236
M20K Styx River 81.53 25 IAmb IAmb 07 49 09.2
comp=Z,8.2nm,0.7s
M20K Styx River 81.53 25 P P 07 49 08.1 +0.5
baz=244
K20K Telida 81.80 24 IAmb IAmb 07 49 10.7
comp=Z,8.4nm,0.8s
K20K Telida 81.80 24 P P 07 49 09.6 +0.6
baz=243
H19K Roundabout Mou 81.92 21 IAmb IAmb 07 49 11.1
comp=Z,8.4nm,0.8s
H19K Roundabout Mou 81.92 21 P P 07 49 10.1 +0.6
baz=241
CAPN Captain Cook N 81.93 27 P P 07 49 10.9 +1.3
baz=246
C18K Utukok River 81.99 18 P P 07 49 09.9 0.0
baz=236
G19K Purcell Mounta 82.00 21 IAmb IAmb 07 49 11.5
comp=Z,8.1nm,0.8s
G19K Purcell Mounta 82.00 21 P P 07 49 10.4 +0.5
baz=240
F19K Shaleruckik Mo 82.11 20 P P 07 49 10.5 +0.1
baz=239
J20K Nowinta River 82.14 23 P P 07 49 11.4 +0.7
baz=243
SKT Skwentna 82.26 26 P P 07 49 10.4 -1.0
baz=246
I20K Naaghedeneel 82.30 22 P P 07 49 11.0 -0.5
baz=243
PPLA Purkeypile 82.37 25 P P 07 49 11.4 -0.7
baz=245
SUA Susitna One 82.39 26 P P 07 49 11.3 -0.9
baz=246
SEW Seward 82.44 28 P P 07 49 12.0 -0.3
baz=248
O22K Cooper Landing 82.46 27 P P 07 49 12.0 -0.4
baz=248
H20K Anotleneega Mo 82.48 22 P P 07 49 12.3 -0.1
baz=242
E19K Redstone River 82.61 19 IAmb IAmb 07 49 14.6
comp=Z,12nm,0.6s
E19K Redstone River 82.61 19 P P 07 49 13.5 +0.5
baz=240
CAST Castle Rocks 82.63 24 P P 07 49 12.9 -0.4
CAST Castle Rocks 82.63 24 P P 07 49 12.8 -0.4
baz=245,SNR=6.0
NRIK Noril'sk 82.66 343 IAmb IAmb 07 49 14.9
comp=Z,21nm,1.3s
NRIK Noril'sk 82.66 343 P P 07 49 13.2 -0.1
comp=Z,7.6nm,0.5s,baz=118,slow=6.0,SNR=22
comp=Z,7.6nm,0.5s
RC01 Rabbit Creek A 82.69 27 P P 07 49 13.2 -0.4
baz=247,SNR=12
C19K Lookout Ridge 82.73 18 IAmb IAmb 07 49 17.2
comp=Z,23nm,1.2s
C19K Lookout Ridge 82.73 18 P P 07 49 14.5 +0.8
baz=237
CHUM Lake Minchumin 82.74 24 P P 07 49 14.3 +0.6
baz=245,SNR=18
M22K Willow 82.78 26 P P 07 49 14.2 +0.2
baz=247
D19K Kuna River 82.86 18 P P 07 49 14.9 +0.5
baz=239
F20K Avaraart Lake 82.92 20 P P 07 49 15.3 +0.7
baz=241
CUT Chulitna 82.97 25 P P 07 49 14.7 -0.2
baz=247
PMR Palmer 83.16 26 P P 07 49 15.5 -0.4
PMR IAmb IAmb 07 49 16.2
comp=Z,14nm,1.3s
PMR Palmer 83.16 26 P P 07 49 15.6 -0.4
baz=248
KTH Kantishna Hill 83.16 24 IAmb IAmb 07 49 49.6
comp=Z,7.8nm,1.0s
GHO Glory Hole Cre 83.31 26 IAmb IAmb 07 49 17.1
comp=Z,6.7nm,0.7s
H21K Melozitna Rive 83.32 22 P P 07 49 17.1 +0.3
baz=244
E20K Nigu River 83.36 19 P P 07 49 17.3 +0.3
baz=241
BPAW Bear Paw Mtn. 83.36 24 P P 07 49 16.8 -0.3
baz=246
TRF Thorofare Moun 83.38 24 P P 07 49 16.6 -0.7
baz=247
KNK Knik Glacier 83.39 27 IAmb IAmb 07 49 18.1
comp=Z,12nm,0.9s
KNK Knik Glacier 83.39 27 P P 07 49 17.3 +0.1
baz=248
I21K Tanana 83.42 23 P P 07 49 17.6 +0.3
baz=245
BVAR Borovoye Array 83.45 324 P P 07 49 17.7 +0.1
comp=Z,11nm,0.5s,baz=107,slow=6.8,SNR=72
comp=Z,11nm,0.5s
D20K Etivluk River 83.45 19 P P 07 49 17.6 +0.2
baz=240
G21K Allakaket 83.45 21 P P 07 49 17.4 0.0
baz=243
BRVK Borovoye 83.52 324 P P 07 49 17.6 -0.3
BRVK IAmb IAmb 07 49 18.6
comp=Z,7.4nm,0.7s
SML Sawmill 83.59 26 P P 07 49 17.6 -0.6
SML Sawmill 83.59 26 P P 07 49 18.1 -0.2
baz=249,SNR=8.2
GLI Glacier Island 83.81 27 P P 07 49 19.2 -0.1
baz=250
MLY Manley 83.84 23 P P 07 49 19.5 0.0
baz=246,SNR=5.9
M23K Glacier View 83.85 26 P P 07 49 19.6 0.0
baz=249
WAT1 Susitna Watana 83.87 25 P P 07 49 19.3 -0.3
baz=248
B20K Meade River 83.93 17 P P 07 49 20.0 +0.2
baz=240
H22K Ishtalitna Cre 83.95 22 P P 07 49 20.2 +0.2
baz=245
SCM Sheep Creek Mo 84.04 26 IAmb IAmb 07 49 21.6
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 84.04 26 P P 07 49 20.4 -0.2
baz=250,SNR=5.3
MCK McKinley 84.05 24 P P 07 49 19.9 -0.6
baz=248,SNR=7.4
WAT6 Susitna Watana 84.13 26 P P 07 49 20.7 -0.4
baz=249
C21K Knifeblade Rid 84.24 18 P P 07 49 21.8 +0.5
baz=242
NEA2 Nenana 84.32 24 P P 07 49 21.4 -0.4
baz=248
EYAK Cordova Ski Ar 84.33 28 P P 07 49 21.7 -0.2
baz=251
I23K Minto, Yukon-K 84.42 23 P P 07 49 22.1 -0.2
baz=247
DHY Denali Highway 84.46 25 IAmb IAmb 07 49 23.6
comp=Z,12nm,0.8s
DHY Denali Highway 84.46 25 P P 07 49 22.8 0.0
baz=249,SNR=12
B21K Ikpikpuk River 84.52 18 P P 07 49 23.1 +0.4
baz=242
KLU Klutina 84.56 27 IAmb IAmb 07 49 24.4
comp=Z,6.6nm,0.8s
KLU Klutina 84.56 27 P P 07 49 23.5 +0.3
baz=251
M24K Tolsona, Glenn 84.65 26 P P 07 49 24.1 +0.5
baz=250
D22K Ayikyak River 84.79 19 P P 07 49 24.6 +0.5
baz=244
G23K Bananza Creek 84.79 21 P P 07 49 24.7 +0.5
baz=247
CCB Clear Creek Bu 84.85 24 IAmb IAmb 07 49 24.2
comp=Z,8.9nm,0.8s
COLA College 84.91 24 P P 07 49 25.1 +0.4
baz=249
COLD Coldfoot 84.93 21 P P 07 49 25.3 +0.5
baz=246
BMRM Bremner River 84.99 28 P P 07 49 25.3 0.0
baz=252
HDA Harding Lake 85.11 24 P P 07 49 24.5 -1.3
baz=250
N25K Chitina, Valde 85.19 27 P P 07 49 26.3 0.0
baz=252
HARP HAARP 85.19 26 P P 07 49 26.0 -0.3
baz=251
B22K Teshekpuk Lake 85.21 18 P P 07 49 26.3 +0.2
baz=243

PAX Paxson 85.24 26 P P 07 49 26.5 -0.1
baz=251
H24K Noodor Dome 85.26 23 P P 07 49 26.7 +0.1
baz=249
IL31 85.26 24 P P 07 49 25.1 -1.4
IL31 IAmb IAmb 07 49 25.9
comp=Z,7.0nm,0.8s
ILAR Eielson Array 85.26 24 P P 07 49 24.9 -1.6
comp=Z,5.5nm,0.7s,baz=257,slow=4.9,SNR=77
comp=Z,5.5nm,0.7s
K24K Donnelly Dome 85.39 25 P P 07 49 27.3 +0.1
baz=251
E23K Chandalar 85.47 20 P P 07 49 28.3 +0.7
baz=247
D23K Nanushuk River 85.48 19 P P 07 49 28.8 +1.2
baz=246
GLB Gilahina Butte 85.50 27 IAmb IAmb 07 49 28.9
comp=Z,9.0nm,0.8s
CRQE Cirque 85.63 28 P P 07 49 28.7 +0.1
baz=253
QSPA South Pole Qui 85.65 180 P P 07 49 29.1 +0.4
QSPA South Pole Qui 85.65 180 P P 07 49 29.1 +0.4
comp=Z,30nm,0.7s,baz=306,slow=0.9,SNR=207
QSPA LR LR 08 27 47.0
comp=Z,58nm,18.4s,baz=280,slow=36
comp=Z,30nm,0.7s
TOLK Toolik Lake Re 85.72 20 P P 07 49 28.7 -0.1
TOLK Toolik Lake Re 85.72 20 P P 07 49 29.3 +0.6
baz=247
G24K Hadweenzic Riv 85.72 22 P P 07 49 28.9 +0.1
baz=249
RIDG Independent Ri 85.76 25 P P 07 49 28.4 -0.7
RIDG IAmb IAmb 07 49 29.9
comp=Z,9.0nm,1.0s
RIDG Independent Ri 85.76 25 P P 07 49 28.7 -0.3
baz=252
TGL Tana Glacier 85.76 28 IAmb IAmb 07 49 30.5
comp=Z,13nm,1.0s
J25K Salcha River, 85.82 24 P P 07 49 28.7 -0.7
baz=251
MCARA McCarthy VSAT 85.85 28 P P 07 49 30.0 +0.5
baz=253
C23K Itkillik River 85.86 18 P P 07 49 30.2 +0.8
baz=246
F24K Squaw Lake 85.87 21 IAmb IAmb 07 49 31.4
comp=Z,7.1nm,0.9s
F24K Squaw Lake 85.87 21 P P 07 49 30.4 +0.9
baz=248
MENT Mentasta 85.99 26 IAmb IAmb 07 49 31.3
comp=Z,5.6nm,0.7s
D24K Happy Valley 86.17 19 IAmb IAmb 07 49 33.3
comp=Z,6.5nm,0.7s
D24K Happy Valley 86.17 19 P P 07 49 32.0 +1.1
baz=248
L26K Log Cabin Wild 86.18 26 IAmb IAmb 07 49 32.2
comp=Z,6.4nm,0.6s
L26K Log Cabin Wild 86.18 26 P P 07 49 31.6 +0.5
baz=253
SCRK Sand Creek 86.19 25 P P 07 49 31.4 +0.1
baz=252
G25K Bearman Lake 86.26 22 P P 07 49 32.5 +1.1
baz=250
BARN Barnard Glacie 86.39 28 P P 07 49 31.6 -0.8
C24K Franklin Bluff 86.42 19 P P 07 49 32.8 +0.6
baz=248
CTG Chitna Glacier 86.52 28 P P 07 49 33.7 +0.7
baz=255,SNR=9.5
J26L Joseph Creek 86.53 24 IAmb IAmb 07 49 34.1
comp=Z,14nm,1.4s
J26L Joseph Creek 86.53 24 P P 07 49 33.2 +0.3
baz=253
LOGN Logan Glacier 86.64 28 P P 07 49 33.1 -0.5
M27K Edge Creek, AK 86.64 27 IAmb IAmb 07 49 35.1
comp=Z,11nm,0.8s
M27K Edge Creek, AK 86.64 27 P P 07 49 34.1 +0.5
baz=254
F25K Christian Rive 86.71 21 P P 07 49 34.4 +0.7
baz=251
PINM Pinnacle 86.82 29 P P 07 49 34.9 +0.5
baz=256
L27K Beaver Creek, 86.86 26 P P 07 49 34.9 +0.4
baz=254
BCAR Beaver Creek A 86.88 26 P P 07 49 33.2 -1.4
E25K Arctic Village 86.91 21 P P 07 49 35.3 +0.7
baz=251
I26K Coal Creek Min 86.94 24 P P 07 49 35.5 +0.8
baz=253
K27K Chicken 87.02 25 IAmb IAmb 07 49 37.2
comp=Z,11nm,1.1s
K27K Chicken 87.02 25 P P 07 49 36.1 +0.9
baz=254
D25K Kavik River 87.04 20 IAmb IAmb 07 49 36.6
comp=Z,5.8nm,0.9s
D25K Kavik River 87.04 20 P P 07 49 35.6 +0.4
baz=250
BVCY Beaver Creek 87.11 27 P P 07 49 36.1 +0.4
baz=255
PNL Peninsula 87.13 30 P P 07 49 36.2 +0.4
baz=257
YUK3 Moose Creek 87.14 27 P P 07 49 36.5 +0.4
baz=256,SNR=9.7
G26K Porcupine Rive 87.18 22 P P 07 49 37.0 +1.1
baz=252
F26K Sheenjek River 87.28 21 P P 07 49 37.4 +1.0
baz=252
YUK8 Steele Glacier 87.34 28 P P 07 49 37.9 +0.8
baz=256
EGAK Eagle 87.60 24 P P 07 49 37.8 -0.1
EGAK IAmb IAmb 07 49 39.0
comp=Z,5.7nm,0.8s
EGAK Eagle 87.60 24 P P 07 49 38.1 +0.2
baz=255,SNR=5.9
I27K Kandik River 87.64 24 P P 07 49 38.7 +0.6
baz=254,SNR=7.4
O29M Mount Kennedy 87.68 29 IAmb IAmb 07 49 40.3
comp=Z,8.0nm,0.8s
O29M Mount Kennedy 87.68 29 P P 07 49 39.1 +0.5
baz=257
C26K Camden Bay 87.72 19 P P 07 49 39.7 +1.3
baz=251
H27K Steamboat Moun 87.84 23 P P 07 49 39.8 +0.7
baz=254
YUK4 Talbot Arm 87.88 28 P P 07 49 40.5 +0.9
baz=257,SNR=9.6
YUK6 Outpost Mounta 87.92 29 P P 07 49 40.2 +0.3
baz=258
P29M Windy Craggy 87.95 30 P P 07 49 40.1 +0.4
baz=258
DAWY Dawson 88.17 25 P P 07 49 38.9 -1.8
DAWY IAmb IAmb 07 49 41.8
comp=Z,4.7nm,0.9s
DAWY Dawson 88.17 25 P P 07 49 41.3 +0.6
baz=256,SNR=5.8
M29M Somme Creek 88.20 27 IAmb IAmb 07 49 42.5
comp=Z,6.7nm,0.8s
M29M Somme Creek 88.20 27 P P 07 49 41.5 +0.5
baz=257
I28M Miner Creek 88.27 24 IAmb IAmb 07 49 42.6
comp=Z,4.1nm,0.8s
I28M Miner Creek 88.27 24 P P 07 49 41.9 +0.7
baz=256
HYT Haines Junctio 88.31 29 IAmb IAmb 07 49 43.1
comp=Z,6.4nm,0.9s
HYT Haines Junctio 88.31 29 P P 07 49 42.0 +0.4
baz=258,SNR=7.3
L29M L29M 88.50 26 P P 07 49 43.1 +0.8
baz=258,SNR=8.0
F28M Old Crow 88.83 22 P P 07 49 44.2 +0.5
baz=256
K29M Barlow Dome 88.92 26 P P 07 49 44.8 +0.5
baz=258
O30N Mendenhall 88.98 29 P P 07 49 45.0 +0.5
baz=260
M30M Minto, Yukon 88.99 27 P P 07 49 45.0 +0.4
baz=259
H29M Whitestone 89.08 23 P P 07 49 45.3 +0.4
baz=257
ABKAR Akbulak array 89.12 319 P P 07 49 44.1 -1.3
SKAG Skagway 89.12 30 P P 07 49 45.8 +0.6
baz=260
S32K Killisnoo 89.18 32 P P 07 49 45.8 +0.3
baz=261
WHY Whitehorse 89.54 29 P P 07 49 47.3 0.0
baz=261
I30M Mount Dempster 89.68 25 IAmb IAmb 07 49 48.9
comp=Z,3.8nm,0.8s
I30M Mount Dempster 89.68 25 P P 07 49 47.9 0.0
baz=259

E29M	**Blow River**	**89.73**	**21**	P		**P**	**07 49 48.1**	**+0.2**
	baz=258							
EPYK	**Eagle Plains**	**89.76**	**23**	P		**P**	**07 49 48.5**	**+0.4**
	baz=259							
P32M	**Atlin**	**89.95**	**30**	P		**P**	**07 49 49.4**	**+0.2**
	baz=262							
M31M	**Drury Creek, Y**	**90.03**	**28**	P		**P**	**07 49 50.0**	**+0.6**
	baz=261							
G30M	**tAoh Zraii Nji**	**90.08**	**23**	P		**P**	**07 49 49.8**	**+0.2**
	baz=259							
WRAK	**Wrangell Islan**	**90.23**	**34**	P		**P**	**07 49 50.2**	**-0.2**
	baz=263							
F30M	**Barrier River**	**90.36**	**22**	P		**P**	**07 49 50.8**	**0.0**
	baz=260							
AKTO	**Aktyubinsk**	**90.50**	**320**	LR		LR	08 32 29.3	
	comp=Z,43nm,18.2s,baz=208,slow=37							
FARO	**Faro, Yukon**	**90.51**	**28**	IAmb		IAmb	07 49 52.9	
	comp=Z,3.5nm,0.7s							
FARO	**Faro, Yukon**	**90.51**	**28**	P		**P**	**07 49 51.8**	**+0.1**
	baz=262							
H31M	**Peel River**	**90.62**	**24**	IAmb		IAmb	07 49 52.8	
	comp=Z,5.2nm,0.7s							
H31M	**Peel River**	**90.62**	**24**	P		**P**	**07 49 51.7**	**-0.4**
	baz=261							
G31M	**Satah River**	**90.82**	**23**	IAmb		IAmb	07 49 53.5	
	comp=Z,4.3nm,0.8s							
G31M	**Satah River**	**90.82**	**23**	P		**P**	**07 49 52.5**	**-0.4**
	baz=261							
S34M	**Telegraph Cree**	**91.07**	**32**	P		**P**	**07 49 54.0**	**-0.3**
	baz=264							
F31M	**Tsiigehtchic**	**91.10**	**23**	P		**P**	**07 49 54.0**	**-0.2**
	baz=262							
INK	**Inuvik**	**91.31**	**22**	P		**P**	**07 49 54.8**	**-0.3**
	baz=262							
R33M	**Jennings River**	**91.32**	**31**	P		**P**	**07 49 56.1**	**+0.5**
	baz=264							
T35M	**Bob Quinn**	**91.45**	**33**	P		**P**	**07 49 56.6**	**+0.5**
	baz=264							
DLBC	**Dease Lake**	**91.71**	**32**	P		**P**	**07 49 57.5**	**+0.1**
	baz=265							
WTLY	**Watson Lake, Y**	**92.48**	**30**	P		**P**	**07 50 01.2**	**+0.4**
	baz=266							
A36M	**Sachs Harbour**	**94.41**	**18**	P		**P**	**07 50 08.8**	**-0.5**
	baz=270							
C36M	**Paulatuk**	**94.81**	**21**	P		**P**	**07 50 10.9**	**-0.3**
	baz=271							
ELIB	**Princess Elisa**	**94.94**	**196**	*d*P		**P**	**07 50 13.3**	**+1.3**
	comp=Z,22nm,0.7s							
ELIB				*d*pP		**pP**	**07 50 47.0**	**-3.2**
SMMC	**Simmler**	**97.65**	**55**	P		**P**	**07 50 24.0**	**-1.1**
	baz=270							
YKA	**Yellowknife Ar**	**99.22**	**27**	P		**Pdif**	**07 50 30.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=283,slow=4.9,SNR=8.6							
YKA				PKKPbc		**PKKPbc**	**08 06 54.8**	**-3.4**
	comp=Z,0.2nm,0.5s,baz=95,slow=2.6,SNR=6.0							
	comp=Z,0.4nm,0.7s							
TROLL	**Troll, Antarti**	**99.81**	**191**	⇓Pdiff		**Pdif**	**07 50 35.1**	**+1.1**
	comp=Z,181nm,0.5s							
ARCES	**ARCESS Array B**	**103.60**	**341**	Pdiff		**Pdif**	**07 50 47.9**	**-2.8**
	comp=Z,12nm,1.2s,baz=23,slow=4.6,SNR=4.6							
ARCES				PKiKP		**PKiKP**	**07 55 08.4**	**+0.1**
	comp=Z,5.9nm,1.1s,baz=79,slow=2.6,SNR=5.7							
ARCES				PKKPbc		**PKKPbc**	**08 06 44.0**	**-1.7**
	comp=Z,3.0nm,0.9s,baz=268,slow=5.7,SNR=3.9							
FINES	**FINESS Array B**	**106.69**	**334**	PKiKP		**PKiKP**	**07 55 13.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=48,slow=2.8,SNR=3.8							
TXAR	**Lajitas Array**	**111.85**	**60**	PKKPbc		PKKPbc	08 06 17.7	-0.9
	comp=Z,0.2nm,0.6s,baz=128,slow=19,SNR=3.4							
ULM	**Lac du Bonnet**	**112.45**	**37**	PKiKP		**PKiKP**	**07 55 24.4**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=206,slow=1.7,SNR=7.9							
NOA	**NORSAR Array B**	**113.11**	**337**	PKiKP		**PKiKP**	**07 55 26.2**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=51,slow=2.1,SNR=1.8							
MIAR	**Mount Ida**	**119.19**	**53**	P		**PKPdf**	**07 55 37.9**	**-0.9**
	baz=286							
CCM	**Cathedral Cave**	**119.90**	**48**	P		**PKPdf**	**07 55 39.2**	**-0.8**
	baz=290							
EKA	**Eskdalemuir Ar**	**122.55**	**338**	PKP		**PKPdf**	**07 55 44.4**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=25,slow=2.7,SNR=19							
WVT	**Waverly**	**123.13**	**49**	P		**PKiKP**	**07 55 46.3**	**-0.3**
	baz=292							
SCHQ	**Schefferville**	**123.92**	**21**	PKKPbc		PKKPbc	08 05 32.7	-3.4
	comp=Z,1.9nm,0.5s,baz=266,slow=11,SNR=5.6							
P49A	**Miami Univ. Ec**	**124.03**	**44**	P		**PKPdf**	**07 55 47.7**	**-0.2**
	baz=296							
PLCA	**Paso Flores**	**125.33**	**148**	PKP		**PKiKP**	**07 55 51.6**	**+0.7**
	comp=Z,8.6nm,0.8s,baz=220,slow=2.4,SNR=35							
LONY	**Lake Ozonia**	**127.70**	**34**	P		**PKiKP**	**07 55 54.9**	**-0.5**
	baz=309							
SSPA	**Standing Stone**	**128.06**	**40**	P		**PKPdf**	**07 55 55.7**	**+0.1**
	baz=303							
BLA	**Blacksburg**	**128.09**	**45**	P		**PKPdf**	**07 55 56.0**	**+0.1**
	baz=298							
PAL	**Palisades**	**130.32**	**37**	P		**PKPdf**	**07 55 60.0**	**+0.1**
	baz=307							
TORD	**Torodi Ar. Bea**	**141.43**	**286**	PKhKP		PKPpre	07 56 15.0	
	comp=Z,0.5nm,0.4s,baz=61,slow=5.3,SNR=2.7							
CPUP	**Villa Florida**	**143.39**	**147**	PKP		PKPbc	07 56 21.9	0.0
	comp=Z,3.3nm,0.5s,baz=230,slow=1.8,SNR=14							
KIC	**Kosan Boka**	**148.46**	**275**	⇑*i*PKP1		**PKPbc**	**07 56 37.3**	**+0.2**
	comp=Z,26nm,0.9s							
DBIC	**Dimbokro**	**148.56**	**276**	PKPbc		**PKPbc**	**07 56 37.6**	**+0.2**
	comp=Z,9.4nm,0.6s,baz=71,slow=3.5,SNR=25							
TIC	**Toumodi**	**148.73**	**276**	⇑*i*PKP1		**PKPbc**	**07 56 37.9**	**+0.1**
	comp=Z,19nm,0.6s							
LIC	**Lamto**	**148.75**	**275**	⇑*i*PKP1		**PKPbc**	**07 56 38.0**	**+0.2**
	comp=Z,46nm,0.7s							
BDFB	**Brasilia**	**157.07**	**150**	PKPbc		PKPbc	07 56 57.5	
	comp=Z,3.0nm,0.9s,baz=276,slow=4.4,SNR=3.7							

*SSNC **21** 07:39:22.6±1.3, 18°.54N×74°.09W, h5km, MD3.6, ML2.7, MW3.5*
*OSPL **21** 07:39:23.2±1.8, 18°.73N×74°.03W, h0km±20km, ML2.8*
ISC 21 07:39:18.5±1.9, 18°.6N±0°.1×74°.08W±0°.06, h4km±13km, n13, σ1§14/22, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**1.61**	**323**	*e*P		**Pg**		**07 39 49.9**	**+0.4**
GTBY				*e*S		**Sg**		**07 40 10.0**	**-0.3**
GTBY	**Guantanamo Bay**	**1.61**	**323**	*i* P		**Pg**		**07 39 49.9**	**+0.4**
GTBY				*e*S		**Sg**		**07 40 10.6**	**+0.2**
GTBY				IAML				07 40 15.0	
	comp=Z,41nm,2.1s								
PAPH	**Port-au-Prince**	**1.70**	**93**	*i* P		**Pb**		**07 39 50.1**	**-0.2**
PAPH				*e*S		**Sg**		**07 40 12.2**	**-0.8**
PAPH				IAML				07 40 14.1	
	comp=Z,102nm,0.3s								
RCC	**Rio Carpintero**	**2.04**	**312**	*e*P		**Pb**		**07 39 55.7**	**-0.3**
RCC				*e*S		**Sb**		**07 40 20.6**	**-1.2**
RCC				IAML				07 40 23.5	
	comp=E,46nm,0.5s								
RCC				IAML				07 40 31.8	
	comp=N,55nm,0.6s								
SABCS	**La Quijada**	**2.08**	**326**	*e*P		**Pb**		**07 39 55.8**	**-0.9**
SABCS				*e*S		**Sb**		**07 40 21.2**	**-1.7**
NMDO	**Nuevo Mundo**	**2.10**	**336**	*e*P		**Pb**		**07 39 57.2**	**+0.1**
MOAC	**Moa**	**2.18**	**338**	*e*P		**Pb**		**07 39 59.0**	**+0.5**
MARVS	**Santiago de Cu**	**2.19**	**309**	*e*P		**Pb**		**07 39 58.3**	**-0.4**
MARVS				*e*S		**Sb**		**07 40 24.9**	**-1.2**
LOPE2	**Hotel El Peder**	**2.30**	**105**	*i* P		**Pb**		**07 40 00.7**	**+0.2**
LOPE2				*e*S		**Sb**		**07 40 27.6**	**-1.6**
LOPE2				IAML				07 40 33.0	
	comp=Z,72nm,1.4s								
PINC	**Pinares de May**	**2.45**	**319**	*e*P		**Pn**		**07 40 00.8**	**+1.6**
SDDR	**Presa de Saban**	**2.67**	**82**	*i* P		**Pb**		**07 40 05.8**	**-1.1**
SDDR				*e*S		**Sn**		**07 40 35.6**	**+0.5**
SDDR				IAML				07 40 44.8	
	comp=Z,38nm,1.1s								
YAR	**Yar**	**2.76**	**309**	*e*P		**Pb**		**07 40 06.2**	**-2.2**
LMGC	**Las Mercedes**	**3.10**	**298**	*e*P		**Pn**		**07 40 10.1**	**+1.9**
LMGC				*e*S		**Sn**		**07 40 45.5**	**-0.3**

*NNC **21** 07:40:00.8±2.1, 53°.47N×87°.80E, h1km±15km, mb3.0, mpv2.6, Error ellipse: s-maj=19.0km s-min=7.9km az=73.0, Suspected Mining explosion.*
*IDC **21** 07:40:01.1±2.9, 53°.57N×87°.76E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=23.6km s-min=14.6km az=62.0*
ISC 21 07:40:00.9±3.6, 53°.6N±0°.1×87°.8E±0°.2, h0km, n9, σ1§22/15, 8C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.80**	**284**	I		I	I	07 51 47.5	
	0.4nm,1.0s,baz=98,slow=336,SNR=15								
ZAA0	**Zalesovo Array**	**1.80**	**284**	⇓Pn		**Pn**		**07 40 32.9**	**-0.2**
	0.2nm,0.3s								
ZAA0				⇓Sn		**Sb**		**07 40 58.4**	**+0.7**
	6.6nm,0.8s								
ZALV	**Zalesovo Beam**	**1.80**	**284**	Pg		**Pn**		**07 40 32.9**	**-0.2**
	1.0nm,0.3s,baz=104,slow=12,SNR=37								
ZALV				Lg		Lg		07 40 58.9	
	1.5nm,0.3s,baz=106,slow=23,SNR=23								
KURK	**Kurchatov**	**6.31**	**247**	⇓Pn		**Pn**		**07 41 35.0**	**-0.1**
	0.2nm,0.4s								
KURK				⇑Sn		**Sn**		**07 42 46.9**	**-0.9**
	0.4nm,0.5s								
KURK				⇑Lg		Lg		07 43 21.1	
	8.9nm,1.0s								
KURBB	**Kurchatov Arra**	**6.41**	**246**	⇑Pn		**Pn**		**07 41 37.5**	**+1.1**
	0.6nm,0.3s								
KURBB				⇓Sn		**Sn**		**07 42 49.4**	**-0.8**
	3.2nm,0.6s								
KURBB				⇑Lg		Lg		07 43 25.9	
	16nm,1.1s								
KURBB	**Kurchatov Arra**	**6.41**	**246**	Pn		**Pn**		**07 41 37.0**	**+0.6**
	0.1nm,0.3s,baz=62,slow=14,SNR=8.0								
KURBB				Sn		**Sn**		**07 42 49.7**	**-0.5**
	baz=64,slow=24,SNR=2.4								
KURBB				Lg		Lg		07 43 21.0	
	baz=65,slow=31,SNR=2.0								
	1.0nm,0.5s								
MK31	**Makanchi Array**	**7.63**	**210**	⇑Pn		**Pn**		**07 41 53.5**	**+0.3**
	0.1nm,0.3s,baz=23,slow=12,SNR=5.9								
MK31				⇑Sn		**Sn**		**07 43 21.0**	**+0.8**
	0.2nm,0.6s								
MK31				⇑Lg		Lg		07 44 02.0	
	2.4nm,0.8s,baz=29,slow=26,SNR=3.0								
MKAR	**Makanchi Array**	**7.63**	**210**	Pn		**Pn**		**07 41 54.9**	**+1.7**
	0.1nm,0.3s,baz=27,slow=14,SNR=6.5								
MKAR				Sn		**Sn**		**07 43 21.5**	**+1.3**
	baz=28,slow=18,SNR=5.6								
MKAR				Lg		Lg		07 44 01.5	
	0.1nm,0.3s,baz=29,slow=28,SNR=5.6								
	0.2nm,0.5s								
MAKZ	**Makanchi**	**7.71**	**211**	⇓Pn		**Pn**		**07 41 51.6**	**-2.7**
	0.7nm,0.5s								
MAKZ				⇑Sn		**Sn**		**07 43 21.0**	**-1.2**
	0.3nm,0.4s								
MAKZ				⇓Lg		Lg		07 44 01.5	
	2.9nm,1.2s								

IDC 21 07:45:36.6±1.6, 54°.67N×83°.75E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=15.0km s-min=9.5km az=11.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**139**	I		I	I	07 51 13.8	
	0.3nm,1.0s,baz=318,slow=337,SNR=2.4								
ZALV	**Zalesovo Beam**	**0.95**	**139**	Pg		Pg		07 45 54.0	-0.9
	3.9nm,0.3s,baz=322,slow=15,SNR=23								
ZALV				Lg		Lg		07 46 08.7	
	8.7nm,0.3s,baz=319,slow=29,SNR=27								
KURBB	**Kurchatov Arra**	**5.15**	**220**	Pn		Pn		07 46 55.3	+0.4
	0.1nm,0.3s,baz=38,slow=13,SNR=3.1								
KURBB				Pg		Pb		07 47 04.9	-2.6
	baz=35,slow=15,SNR=1.2								
KURBB				Lg		Lg		07 48 21.4	
	0.1nm,0.3s,baz=43,slow=32,SNR=2.6								
	0.3nm,0.4s								
MKAR	**Makanchi Array**	**7.94**	**187**	Pn		Pn		07 47 34.0	+0.8
	0.1nm,0.3s,baz=10,slow=12,SNR=5.4								
	0.2nm,0.4s								
BVAR	**Borovoye Array**	**8.07**	**264**	Pn		Pn		07 47 34.0	-1.0
	0.1nm,0.3s,baz=68,slow=13,SNR=8.0								
	0.9nm,0.4s								

IDC 21 07:54:41.4±2.4, 54°.26N×86°.18E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=18.0km s-min=11.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**249**	I		I	I	08 00 22.6	
	baz=68,slow=335,SNR=6.1								
ZALV	**Zalesovo Beam**	**0.86**	**249**	Pg		Pg		07 54 56.9	-1.0
	1.4nm,0.3s,baz=64,slow=18,SNR=10								
ZALV				Lg		Lg		07 55 10.2	
	4.6nm,0.3s,baz=68,slow=28,SNR=14								
KURBB	**Kurchatov Arra**	**5.93**	**235**	Pn		Pn		07 56 11.3	+0.9
	0.1nm,0.3s,baz=50,slow=13,SNR=7.8								
KURBB				Sn		Sn		07 57 19.6	+0.6
	baz=36,slow=37,SNR=1.3								
KURBB				Lg		Lg		07 57 50.6	
	baz=52,slow=30,SNR=1.8								
	0.6nm,0.4s								
MKAR	**Makanchi Array**	**7.88**	**200**	Pn		Pn		07 56 38.2	+1.1
	0.3nm,0.3s,baz=24,slow=12,SNR=12								
MKAR				Sn		Sn		07 58 05.4	-1.5
	0.1nm,0.3s,baz=15,slow=24,SNR=3.5								
MKAR				Lg		Lg		07 58 48.2	
	baz=17,slow=32,SNR=1.0								
	0.5nm,0.4s								

IDC 21 08:04:18.6±2.7, 54°.06N×86°.54E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=21.4km s-min=13.5km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**265**	I		I	I	08 11 10.0	
	0.1nm,0.8s,baz=85,slow=337,SNR=13								
ZALV	**Zalesovo Beam**	**1.02**	**265**	Pg		Pg		08 04 36.6	-1.5
	0.6nm,0.3s,baz=81,slow=18,SNR=6.6								
ZALV				Lg		Lg		08 04 53.0	
	1.7nm,0.3s,baz=83,slow=28,SNR=14								
KURBB	**Kurchatov Arra**	**6.00**	**238**	Pn		Pn		08 05 49.0	+0.6
	0.1nm,0.3s,baz=56,slow=14,SNR=4.4								
KURBB				Lg		Lg		08 07 30.2	
	baz=52,slow=26								
	0.4nm,0.3s								
MKAR	**Makanchi Array**	**7.76**	**202**	Pn		Pn		08 06 14.2	+1.4
	0.2nm,0.3s,baz=24,slow=14,SNR=8.0								
MKAR				Lg		Lg		08 08 23.3	
	baz=20,slow=30,SNR=2.2								
	0.3nm,0.3s								

IDC 21 08:04:59.5±3.3, 54°.61N×86°.47E, h0km, mbtmp2.9/2, ML2.8/2, Error ellipse: s-maj=28.4km s-min=16.1km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**236**	I		I	I	08 12 50.3	
	baz=58,slow=336,SNR=6.3								
ZALV	**Zalesovo Beam**	**1.18**	**236**	Pg		Pg		08 05 20.4	-1.5
	2.0nm,0.3s,baz=54,slow=17,SNR=11								
ZALV				Lg		Lg		08 05 38.4	
	3.7nm,0.3s,baz=52,slow=28,SNR=12								
KURBB	**Kurchatov Arra**	**6.27**	**234**	Pn		Pn		08 06 33.8	+0.7
	0.1nm,0.3s,baz=53,slow=14,SNR=7.8								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**8.26**	**200**	Pn		Pn		08 07 01.6	+1.1
	0.2nm,0.3s,baz=23,slow=13,SNR=6.7								
	0.2nm,0.3s								

*IDC **21** 08:16:19.7±6.2, 1°.81N×98°.30E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=316.1km s-min=30.1km az=53.0*
*DJA **21** 08:16:39.7±0.6, 2°.N±3°.×9°.9E±°, h132km±6km, M3.3/7, MLv3.3/7*
ISC 21 08:16:38.5±1.0, 2°.32N±0°.06×99°.01E±0°.10, h150km, n11, σ1§03/15, mb3.4/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**1.72**	**314**	P		**Pn**		**08 17 10.1**	**-0.4**
KCSI				S		**Sn**		**08 17 33.5**	**-1.5**
GSI	**Gunungsitoli**	**1.75**	**235**	P		**Pn**		**08 17 11.4**	**+0.6**
GSI				S		**Sn**		**08 17 34.8**	**-0.8**
PBSI	**Pulau Batu**	**2.47**	**197**	P		**Pn**		**08 17 20.0**	**+0.8**
PBSI				S		**Sn**		**08 17 50.4**	**-0.2**
SNSI	**Sinabang, Aceh**	**2.68**	**272**	P		**Pn**		**08 17 22.6**	**+0.7**
SNSI				S		**Sn**		**08 17 53.6**	**-1.8**
MLSI	**Meulaboh, Aceh**	**3.25**	**307**	P		**Pn**		**08 17 28.8**	**-0.2**
SISI	**Saibi**	**3.62**	**179**	P		**Pn**		**08 17 32.1**	**-1.7**
WRA	**Warramunga Arr**	**41.12**	**124**	P		**P**		**08 24 08.3**	**+0.2**
	0.5nm,0.6s,baz=301,slow=8.9,SNR=2.6								
	0.5nm,0.6s								
MKAR	**Makanchi Array**	**46.63**	**344**	P		**P**		**08 24 52.8**	**+1.1**
	0.3nm,0.4s,baz=160,slow=7.6,SNR=7.3								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**51.16**	**343**	P		**P**		**08 25 25.9**	**-0.1**
	0.3nm,0.4s,baz=157,slow=7.5,SNR=1.1								
	0.3nm,0.4s								
ZALV	**Zalesovo Beam**	**52.77**	**350**	P		**P**		**08 25 38.7**	**+0.7**
	0.7nm,0.4s,baz=160,slow=8.7,SNR=4.2								
	0.7nm,0.4s								
BVAR	**Borovoye Array**	**55.82**	**340**	P		**P**		**08 26 00.2**	**+0.2**
	0.3nm,0.4s,baz=135,slow=8.0,SNR=1.5								
	0.3nm,0.4s								

*IDC **21** 08:19:58.0±3.2, 55°.52N×149°.71W, h0km, mb3.3/1, mbtmp3.3/3, ML2.9/2, MS3.3/1, Error ellipse: s-maj=52.5km s-min=41.3km az=127.0*
*NEIC **21** 08:20:03.6±1.9, 55°.9N±0°.1×149°.41W±0°.08, h11km±7km, ML3.8/52, ML3.6(AEIC), Error ellipse: s-maj=15.3km s-min=5.0km az=166.0*
*AEIC **21** 08:20:07.5±1.8, 55°.92N±0°.10×149°.4W±0°.1, h1km±7km, Error ellipse: s-maj=14.4km s-min=9.3km az=167.0*
ISC 21 08:20:02.5±1.2, 55°.90N±0°.08×149°.37W±0°.05, h10km, n242, σ1§47/247, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.54**	**303**				**Pn**	**08 20 44.0**	**+0.3**
OHAK							**Sn**	**08 21 12.7**	**-2.0**
OHAK	**Old Harbor**	**2.54**	**303**	P			**Pn**	**08 20 44.0**	**+0.3**
OHAK	**Old Harbor**	**2.54**	**303**	P			**Pn**	**08 20 43.9**	**+0.2**
	baz=120								
OHAK				S			**Sn**	**08 21 12.8**	**-1.8**
	baz=120								
KDAK	**Kodiak Island**	**2.58**	**318**	Pn			**Pn**	**08 20 45.1**	**+0.8**
KDAK	**Kodiak Island**	**2.58**	**318**				**Sn**	**08 21 14.2**	**-1.5**
KDAK	**Kodiak Island**	**2.58**	**318**	S			**Sn**	**08 21 14.3**	**-1.4**
	baz=136								
SYI	**Shuyak Island**	**3.17**	**330**				**Pn**	**08 20 53.4**	**+1.0**
SYI							**Sn**	**08 21 29.8**	**-0.5**
Q20K	**Shuyak Island**	**3.17**	**330**	P			**Pn**	**08 20 53.5**	**+1.1**
	baz=148								
Q20K				S			**Sn**	**08 21 29.8**	**-0.5**
	baz=148								
CNPM	**China Poot**	**3.77**	**345**	Pn			**Pn**	**08 21 01.1**	**+0.5**
CNPM	**China Poot**	**3.77**	**345**				**Sn**	**08 21 44.5**	**-0.5**
Q19K	**Cape Douglas,**	**3.81**	**324**				**Pn**	**08 21 02.8**	**+1.5**
Q19K							**Sn**	**08 21 45.8**	**-0.3**
Q19K	**Cape Douglas,**	**3.81**	**324**	IAML				08 21 52.7	
	comp=N,211nm,0.8s								
Q19K	**Cape Douglas,**	**3.81**	**324**	P			**Pn**	**08 21 02.8**	**+1.5**
	baz=141								
Q19K				S			**Sn**	**08 21 45.8**	**-0.3**
	baz=141								
KAHG	**Katmai Hook Gl**	**3.83**	**315**				**Pn**	**08 21 03.4**	**+1.9**
Q23K	**Middleton Isla**	**3.89**	**23**				**Pn**	**08 21 02.8**	**+0.6**
Q23K	**Middleton Isla**	**3.89**	**23**	IAML				08 21 57.5	
	comp=E,136nm,1.5s								
Q23K				IAML				08 23 21.6	
	comp=N,121nm,1.4s								
Q23K	**Middleton Isla**	**3.89**	**23**	P			**Pn**	**08 21 03.1**	**+0.8**
	baz=207								
MID	**Middleton Isla**	**3.89**	**23**				**Pn**	**08 21 02.8**	**+0.6**
MID	**Middleton Isla**	**3.89**	**23**	IAML				08 21 32.2	
	comp=N,130nm,1.5s								
MID				IAML				08 21 57.5	
	comp=E,123nm,1.4s								
MID	**Middleton Isla**	**3.89**	**23**	P			**Pn**	**08 21 03.2**	**+1.0**
BRSE	**Bradley Lake S**	**3.92**	**350**				**Pn**	**08 21 03.0**	**+0.4**
BRSE							**Sn**	**08 21 47.3**	**-1.4**
BRSE	**Bradley Lake S**	**3.92**	**350**	P			**Pn**	**08 21 03.1**	**+0.4**
	baz=169								
BRSE				S			**Sn**	**08 21 47.5**	**-1.2**
	baz=169								
BRLK	**Bradley Lake**	**3.96**	**349**				**Pn**	**08 21 04.0**	**+0.8**
BRLK	**Bradley Lake**	**3.96**	**349**				**Sn**	**08 21 49.3**	**-0.4**
HOM	**Homer**	**3.96**	**343**	Pn			**Pn**	**08 21 04.9**	**+1.7**
HOM				IAML				08 22 05.8	
	comp=E,145nm,1.0s								
HOM				IAML				08 22 25.6	
	comp=N,202nm,1.5s								
ACHA	**Angle Creek He**	**3.99**	**308**				**Pn**	**08 21 05.1**	**+1.4**
ANCK	**Angle Creek**	**4.06**	**307**				**Pn**	**08 21 06.3**	**+1.6**
ANCK							**Sn**	**08 21 52.0**	**-0.2**
AU22	**Augustine Moun**	**4.08**	**330**				**Pn**	**08 21 06.4**	**+1.5**
AUCH	**Augustine Cone**	**4.10**	**329**				**Pn**	**08 21 06.5**	**+1.3**
PLK3	**Peulik 3**	**4.19**	**298**				**Pn**	**08 21 07.7**	**+1.3**
SEW	**Seward**	**4.21**	**359**				**Pn**	**08 21 06.8**	**+0.2**
SEW	**Seward**	**4.21**	**359**	P			**Pn**	**08 21 06.9**	**+0.3**
	baz=180								
P23K	**Montague Islan**	**4.24**	**13**				**Pn**	**08 21 07.9**	**+0.8**
P23K	**Montague Islan**	**4.24**	**13**	P			**Pn**

CHGN	**Chignik**	**5.08**	**278**			**Pn**	**08 21 18.3**	**-0.2**
CHGN				IAML			08 22 17.5	
	comp=E,89nm,0.1s							
CHGN	**Chignik**	**5.08**	**278**	P		**Pn**	**08 21 18.4**	**-0.2**
	baz=91							
FID	**Port Fidalgo**	**5.09**	**16**			**Sn**	**08 22 14.6**	**-3.0**
FID				IAML			08 22 15.8	
	comp=N,55nm,0.2s							
FID				IAML			08 22 15.9	
	comp=E,59nm,0.6s							
FID	**Port Fidalgo**	**5.09**	**16**			**Pn**	**08 21 19.8**	**+1.0**
SUCK	**Suckling Hills**	**5.13**	**33**			**Sn**	**08 22 16.1**	**-2.4**
SUCK				IAML			08 22 20.0	
	comp=E,68nm,0.2s							
SUCK	**Suckling Hills**	**5.13**	**33**			**Pn**	**08 21 21.1**	**+1.8**
GLI	**Glacier Island**	**5.13**	**13**			**Sn**	**08 22 17.1**	**-1.5**
GLI				IAML			08 22 18.8	
	comp=E,44nm,0.5s							
GLI				IAML			08 22 21.3	
	comp=N,47nm,0.5s							
GLI	**Glacier Island**	**5.13**	**13**			**Pn**	**08 21 20.3**	**+1.0**
GLI	**Glacier Island**	**5.13**	**13**	P		**Pn**	**08 21 20.5**	**+1.2**
	baz=195							
RAGM	**Ragged Mountai**	**5.14**	**27**	Pn		**Pn**	**08 21 21.4**	**+1.9**
HMT	**Hamilton**	**5.20**	**29**			**Pn**	**08 21 22.1**	**+1.8**
RC01	**Rabbit Creek A**	**5.21**	**358**			**Pn**	**08 21 21.4**	**+1.1**
RC01				IAML			08 22 23.2	
	comp=E,63nm,0.5s							
RC01				IAML			08 22 23.9	
	comp=N,37nm,0.3s							
RC01	**Rabbit Creek A**	**5.21**	**358**	P		**Pn**	**08 21 21.1**	**+0.7**
	baz=178							
GOAT	**Goat Mountain**	**5.29**	**26**			**Pn**	**08 21 23.3**	**+1.7**
BERG	**Berg Lake**	**5.41**	**31**			**Pn**	**08 21 24.5**	**+1.4**
GRIN	**Grindle Hills**	**5.44**	**34**			**Pn**	**08 21 25.4**	**+1.9**
SNH	**Sunshine Point**	**5.51**	**36**			**Pn**	**08 21 26.1**	**+1.5**
N20K	**Mount Spurr**	**5.52**	**346**	P		**Pn**	**08 21 25.4**	**+0.7**
	baz=164							
SPCR	**Spurr Chakacha**	**5.52**	**346**			**Pn**	**08 21 24.7**	**+0.1**
KNK	**Knik Glacier**	**5.55**	**5**			**Pn**	**08 21 25.8**	**+0.7**
KNK	**Knik Glacier**	**5.55**	**5**	P		**Pn**	**08 21 25.9**	**+0.9**
	baz=186							
DIV	**Divide**	**5.57**	**18**			**Pn**	**08 21 26.8**	**+1.5**
SPCP	**Crater Peak Br**	**5.57**	**346**			**Pn**	**08 21 26.7**	**+1.2**
KHIT	**Khitrov Hills**	**5.58**	**33**			**Pn**	**08 21 27.0**	**+1.4**
P16K	**Nushagak River**	**5.61**	**308**			**Pn**	**08 21 27.2**	**+1.4**
P16K	**Nushagak River**	**5.61**	**308**	P		**Pn**	**08 21 27.3**	**+1.5**
	baz=121							
N19K	**Bonanza Creek**	**5.61**	**333**			**Pn**	**08 21 26.1**	**+0.2**
N19K	**Bonanza Creek**	**5.61**	**333**	P		**Pn**	**08 21 26.3**	**+0.3**
	baz=150							
SUA	**Susitna One**	**5.62**	**353**			**Pn**	**08 21 26.4**	**+0.3**
SUA	**Susitna One**	**5.62**	**353**	P		**Pn**	**08 21 26.5**	**+0.3**
	baz=172							
BMRM	**Bremner River**	**5.66**	**24**	P		**Pn**	**08 21 28.2**	**+1.6**
	baz=209							
PMR	**Palmer**	**5.71**	**1**	Pn		**Pn**	**08 21 28.9**	**+1.7**
PMR	**Palmer**	**5.71**	**1**	P		**Pn**	**08 21 29.3**	**+2.1**
S14K	**Fog Glacier**	**5.71**	**278**	P		**Pn**	**08 21 28.6**	**+1.2**
	baz=90							
VNFG	**Fog Glacier, M**	**5.71**	**278**			**Pn**	**08 21 28.3**	**+0.9**
WAX	**Waxell Ridge**	**5.71**	**34**			**Pn**	**08 21 28.6**	**+1.2**
SPNN	**North Nagishla**	**5.75**	**344**			**Pn**	**08 21 28.6**	**+0.7**
BARK	**Barkley Ridge**	**5.80**	**36**			**Pn**	**08 21 30.3**	**+1.8**
MESA	**MESA**	**5.82**	**40**			**Pn**	**08 21 30.2**	**+1.3**
MESA	**MESA**	**5.82**	**40**	P		**Pn**	**08 21 30.2**	**+1.3**
	baz=226							
CRQM	**Cirque**	**5.87**	**31**			**Pn**	**08 21 31.2**	**+1.6**
CRQE	**Cirque**	**5.88**	**32**	P		**Pn**	**08 21 31.2**	**+1.5**
	baz=217							
KLU	**Klutina**	**5.89**	**16**			**Pn**	**08 21 31.3**	**+1.6**
KLU	**Klutina**	**5.89**	**16**	P		**Pn**	**08 21 31.5**	**+1.8**
	baz=200							
GHO	**Glory Hole Cre**	**5.89**	**2**			**Pn**	**08 21 31.1**	**+1.3**
N18K	**Kilae Creek**	**5.89**	**327**			**Pn**	**08 21 30.3**	**+0.5**
CNBA	**Chernabura Isl**	**5.93**	**264**			**Pn**	**08 21 28.9**	**-1.4**
SML	**Sawmill**	**5.95**	**5**			**Pn**	**08 21 32.0**	**+1.5**
SML	**Sawmill**	**5.95**	**5**	P		**Pn**	**08 21 32.2**	**+1.7**
	baz=186							
O16K	**Kokwok River B**	**5.96**	**312**			**Pn**	**08 21 31.8**	**+1.2**
TGL	**Tana Glacier**	**5.96**	**33**			**Pn**	**08 21 32.4**	**+1.6**
M23K	**Glacier View**	**5.97**	**8**			**Pn**	**08 21 32.5**	**+1.7**
M23K	**Glacier View**	**5.97**	**8**	P		**Pn**	**08 21 32.7**	**+1.9**
	baz=189							
ISLE	**Juniper Island**	**6.00**	**35**			**Pn**	**08 21 32.9**	**+1.6**
SCM	**Sheep Creek Mo**	**6.04**	**9**			**Pn**	**08 21 33.4**	**+1.5**
SCM	**Sheep Creek Mo**	**6.04**	**9**	P		**Pn**	**08 21 33.6**	**+1.8**
	baz=191							
SVW2	**Sparrevohn**	**6.14**	**331**	Pn		**Pn**	**08 21 33.8**	**+0.6**
SVW2	**Sparrevohn**	**6.14**	**331**	P		**Pn**	**08 21 33.5**	**+0.3**
VRDI	**Verde Repeater**	**6.17**	**28**			**Pn**	**08 21 35.0**	**+1.3**
SKT	**Skwentna**	**6.20**	**350**			**Pn**	**08 21 34.6**	**+0.7**
SKT	**Skwentna**	**6.20**	**350**	P		**Pn**	**08 21 34.6**	**+0.7**
	baz=169							
N17K	**Nushagak Hills**	**6.21**	**322**	Pn		**Pn**	**08 21 34.1**	**+0.1**
SAMH	**Samovar Hills**	**6.22**	**44**			**Pn**	**08 21 36.6**	**+2.2**
N25K	**Chitina, Valde**	**6.23**	**21**			**Pn**	**08 21 36.3**	**+1.8**
N25K	**Chitina, Valde**	**6.23**	**21**	P		**Pn**	**08 21 36.6**	**+2.1**
	baz=206							
KIAG	**Kiagna River**	**6.24**	**33**			**Pn**	**08 21 36.1**	**+1.5**
GLB	**Gilahina Butte**	**6.26**	**25**			**Pn**	**08 21 36.2**	**+1.3**
GRNC	**Granite Creek**	**6.29**	**36**			**Pn**	**08 21 36.9**	**+1.6**
TABL	**Table Mountain**	**6.29**	**40**			**Pn**	**08 21 37.2**	**+1.8**
M20K	**Styx River**	**6.31**	**344**	Pn		**Pn**	**08 21 36.2**	**+0.7**
SDPT	**Sand Point**	**6.32**	**270**			**Pn**	**08 21 35.4**	**-0.2**
SDPT	**Sand Point**	**6.32**	**270**	P		**Pn**	**08 21 35.4**	**-0.2**
SDPT	**Sand Point**	**6.32**	**270**	P		**Pn**	**08 21 35.4**	**-0.2**
	baz=80							
PCA	**Pinnacle**	**6.41**	**45**			**Pn**	**08 21 38.8**	**+1.9**
PTPK	**Patty Peak**	**6.41**	**31**			**Pn**	**08 21 38.8**	**+1.7**
PINM	**Pinnacle**	**6.41**	**45**	P		**Pn**	**08 21 39.0**	**+2.1**
	baz=233							
MCARA	**McCarthy VSAT**	**6.41**	**28**			**Pn**	**08 21 39.0**	**+2.1**
MCARA	**McCarthy VSAT**	**6.41**	**28**	P		**Pn**	**08 21 39.0**	**+2.1**
	baz=214							
M24K	**Tolsona, Glenn**	**6.44**	**14**			**Pn**	**08 21 39.3**	**+2.0**
M24K	**Tolsona, Glenn**	**6.44**	**14**	P		**Pn**	**08 21 39.3**	**+2.0**
	baz=197							
O15K	**Ungalikthiuk R**	**6.51**	**305**			**Pn**	**08 21 39.4**	**+1.2**
O15K	**Ungalikthiuk R**	**6.51**	**305**	P		**Pn**	**08 21 39.4**	**+1.2**
	baz=116							
PNL	**Peninsula**	**6.53**	**51**			**Pn**	**08 21 40.2**	**+1.7**
PNL	**Peninsula**	**6.53**	**51**	P		**Pn**	**08 21 40.4**	**+1.9**
PNL	**Peninsula**	**6.53**	**51**	P		**Pn**	**08 21 40.5**	**+1.9**
	baz=239							
M18K	**Stony River**	**6.53**	**332**			**Pn**	**08 21 38.7**	**+0.2**
M18K	**Stony River**	**6.53**	**332**	P		**Pn**	**08 21 38.8**	**+0.2**
	baz=147							
M19K	**Big River Lodg**	**6.55**	**339**	Pn		**Pn**	**08 21 40.2**	**+1.4**
BARN	**Barnard Glacie**	**6.56**	**35**			**Pn**	**08 21 40.9**	**+1.9**
BCPM	**Bancas Point**	**6.58**	**48**			**Pn**	**08 21 41.1**	**+1.9**
CTG	**Chitna Glacier**	**6.59**	**36**	P		**Pn**	**08 21 41.5**	**+2.0**
	baz=224							
CTGM	**Chitina Glacie**	**6.60**	**36**			**Pn**	**08 21 41.2**	**+1.7**
LOGN	**Logan Glacier**	**6.61**	**38**			**Pn**	**08 21 41.5**	**+1.7**
WAT6	**Susitna Watana**	**6.75**	**6**			**Pn**	**08 21 42.8**	**+1.1**
WAT6	**Susitna Watana**	**6.75**	**6**	P		**Pn**	**08 21 43.5**	**+1.9**
	baz=188							
HARP	**HAARP**	**6.87**	**17**			**Pn**	**08 21 45.6**	**+2.6**
HARP	**HAARP**	**6.87**	**17**	P		**Pn**	**08 21 45.7**	**+2.6**
	baz=201							
M17K	**Holitna River**	**6.93**	**326**			**Pn**	**08 21 44.9**	**+0.9**
WAT7	**Susitna Watana**	**6.96**	**2**			**Pn**	**08 21 46.1**	**+1.7**
WAT1	**Susitna Watana**	**6.96**	**3**			**Pn**	**08 21 46.1**	**+1.7**
WAT1	**Susitna Watana**	**6.96**	**3**	P		**Pn**	**08 21 46.3**	**+1.9**
	baz=184							
PS1A	**Pavlof South-1**	**7.02**	**271**			**Pn**	**08 21 44.7**	**-0.5**
PN7A	**Pavlof North-7**	**7.16**	**271**			**Pn**	**08 21 47.4**	**+0.2**
M16K	**Timber Creek**	**7.18**	**320**			**Pn**	**08 21 48.8**	**+1.3**
P29M	**Windy Craggy**	**7.25**	**54**			**Pn**	**08 21 50.1**	**+1.6**
P29M	**Windy Craggy**	**7.25**	**54**	P		**Pn**	**08 21 50.0**	**+1.5**
	baz=244							
DHY	**Denali Highway**	**7.27**	**7**			**Pn**	**08 21 50.5**	**+1.8**
DHY	**Denali Highway**	**7.27**	**7**	P		**Pn**	**08 21 50.4**	**+1.7**
	baz=189							
PAX	**Paxson**	**7.36**	**14**			**Pn**	**08 21 51.5**	**+1.5**
PAX	**Paxson**	**7.36**	**14**	P		**Pn**	**08 21 51.5**	**+1.5**
	baz=198							
YUK8	**Steele Glacier**	**7.36**	**39**			**Pn**	**08 21 51.9**	**+1.7**
YUK8	**Steele Glacier**	**7.36**	**39**	P		**Pn**	**08 21 51.9**	**+1.7**
	baz=227							
YUK2	**White River**	**7.37**	**33**			**Pn**	**08 21 52.4**	**+2.3**
YUK7	**Dusty Glacier**	**7.52**	**47**			**Pn**	**08 21 54.9**	**+2.6**
RND	**Reindeer**	**7.53**	**2**			**Pn**	**08 21 54.1**	**+1.8**
TRF	**Thorofare Moun**	**7.59**	**357**			**Pn**	**08 21 54.8**	**+1.7**
TRF	**Thorofare Moun**	**7.59**	**357**	P		**Pn**	**08 21 55.2**	**+2.1**
	baz=176							
MENT	**Mentasta**	**7.62**	**20**	Pn		**Pn**	**08 21 56.4**	**+2.9**
CAST	**Castle Rocks**	**7.66**	**351**			**Pn**	**08 21 55.4**	**+1.4**
CAST	**Castle Rocks**	**7.66**	**351**	P		**Pn**	**08 21 55.5**	**+1.4**
	baz=169							
YUK6	**Outpost Mounta**	**7.67**	**44**			**Pn**	**08 21 57.0**	**+2.7**
YUK6	**Outpost Mounta**	**7.67**	**44**	P		**Pn**	**08 21 56.5**	**+2.2**
	baz=234							
KTH	**Kantishna Hill**	**7.71**	**355**	Pn		**Pn**	**08 21 56.0**	**+1.3**
YUK4	**Talbot Arm**	**7.81**	**41**	P		**Pn**	**08 22 00.3**	**+4.1**
	baz=230							
TTA	**Tatalina**	**7.82**	**337**	Pn		**Pn**	**08 21 56.0**	**-0.2**
P30M	**Million Dollar**	**7.83**	**52**			**Pn**	**08 21 58.6**	**+2.3**
P30M	**Million Dollar**	**7.83**	**52**	P		**Pn**	**08 21 58.6**	**+2.3**
	baz=243							
K20K	**Telida**	**7.84**	**344**	Pn		**Pn**	**08 21 56.6**	**+0.1**
SIT	**Sitka**	**7.86**	**76**	P		**Pn**	**08 21 55.1**	**-1.6**
FALS	**False Pass**	**8.07**	**268**	P		**Pn**	**08 21 59.6**	**0.0**
CHUM	**Lake Minchumin**	**8.14**	**351**			**Pn**	**08 22 02.2**	**+1.7**
CHUM	**Lake Minchumin**	**8.14**	**351**	P		**Pn**	**08 22 02.2**	**+1.7**
	baz=168							
BCAR	**Beaver Creek A**	**8.15**	**25**	Pn		**Pn**	**08 22 01.9**	**+1.2**
RIDG	**Independent Ri**	**8.18**	**14**			**Pn**	**08 22 03.4**	**+2.2**
M14K	**Bethel**	**8.21**	**311**	Pn		**Pn**	**08 22 02.3**	**+0.8**
BPAW	**Bear Paw Mtn.**	**8.26**	**355**	Pn		**Pn**	**08 22 02.9**	**+0.6**
ISLZ	**Isanotski Laza**	**8.27**	**268**			**Pn**	**08 22 01.9**	**-0.4**
BESE	**Bessie Mountai**	**8.31**	**65**			**Pn**	**08 22 03.3**	**+0.3**
SKAG	**Skagway**	**8.32**	**59**			**Pn**	**08 22 05.3**	**+2.2**
SKAG	**Skagway**	**8.32**	**59**	P		**Pn**	**08 22 05.0**	**+2.0**
R32K	**Eaglecrest**	**8.43**	**68**			**Pn**	**08 22 05.1**	**+0.6**
SSLS	**Shishaldin Sou**	**8.43**	**268**			**Pn**	**08 22 04.8**	**+0.2**
JIS	**Juneau Island**	**8.50**	**68**	Pn		**Pn**	**08 22 06.0**	**+0.5**
JIS	**Juneau Island**	**8.50**	**68**	P		**Pn**	**08 22 05.9**	**+0.5**
HDA	**Harding Lake**	**8.62**	**7**			**Pn**	**08 22 09.0**	**+1.9**
WRH	**Wood River Hil**	**8.62**	**4**	Pn		**Pn**	**08 22 08.5**	**+1.4**
CCB	**Clear Creek Bu**	**8.81**	**4**			**Pn**	**08 22 12.0**	**+2.3**
WESE	**West Dahl East**	**8.82**	**267**			**Pn**	**08 22 10.1**	**+0.1**
IL31		**8.98**	**7**			**Pn**	**08 22 13.6**	**+1.5**
ILAR	**Eielson Array**	**8.98**	**7**	Pn		**Pn**	**08 22 14.3**	**+2.2**
ILAR	**Eielson Array**	**8.98**	**7**	Pn		**Pn**	**08 22 12.9**	**+0.8**
	comp=N,0.2nm,0.3s,baz=188,slow=13,SNR=13							
ILAR					Sn	**Sn**	**08 23 51.0**	**-2.2**
	comp=N,0.4nm,0.3s,baz=184,slow=22,SNR=12							
	comp=N,0.6nm,0.4s							
WHY	**Whitehorse**	**8.99**	**52**			**Pn**	**08 22 14.8**	**+2.4**
WHY	**Whitehorse**	**8.99**	**52**	P		**Pn**	**08 22 14.9**	**+2.6**
	baz=245							
P32M	**Atlin**	**9.14**	**60**			**Pn**	**08 22 15.8**	**+1.4**
P32M	**Atlin**	**9.14**	**60**	P		**Pn**	**08 22 16.1**	**+1.7**
	baz=253							
CRAG	**Craig**	**9.19**	**86**	P		**Pn**	**08 22 13.6**	**-1.3**
L29M	**L29M**	**9.20**	**34**			**Pn**	**08 22 17.2**	**+2.1**
L29M	**L29M**	**9.20**	**34**	P		**Pn**	**08 22 17.2**	**+2.1**
	baz=224							
I21K	**Tanana**	**9.40**	**353**			**Pn**	**08 22 19.2**	**+1.5**
I21K	**Tanana**	**9.40**	**353**	P		**Pn**	**08 22 19.9**	**+2.1**
	baz=171							
DAWY	**Dawson**	**9.58**	**27**	Pn		**Pn**	**08 22 22.3**	**+2.0**
EGAK	**Eagle**	**9.78**	**21**	Pn		**Pn**	**08 22 24.2**	**+1.3**
H21K	**Melozitna Rive**	**9.93**	**352**			**Pn**	**08 22 26.6**	**+1.6**
IMAR	**Indian Mountai**	**10.33**	**350**	Pn		**Pn**	**08 22 31.2**	**+0.6**
DLBC	**Dease Lake**	**10.80**	**68**	Pn		**Pn**	**08 22 38.3**	**+1.3**
C36M	**Paulatuk**	**17.59**	**30**	Pn		**Pn**	**08 24 06.9**	**-0.4**
YKA	**Yellowknife Ar**	**18.80**	**55**	P		**P**	**08 24 23.2**	**+1.6**
	baz=262,slow=11,SNR=6.6							
	comp=N,0.6nm,0.7s							
A36M	**Sachs Harbour**	**19.05**	**23**	P		**Pn**	**08 24 26.9**	**+1.7**
YAK	**Yakutsk**	**39.60**	**313**	LR		LR	08 43 30.5	
	comp=N,35nm,18.3s,baz=80,slow=36							
MKAR	**Makanchi Array**	**68.88**	**325**	P		**P**	**08 31 04.8**	**-2.2**
	comp=N,0.2nm,0.7s,baz=20,slow=4.7,SNR=1.9							
	comp=N,0.2nm,0.7s							

*IDC **21** 08:21:09.3±1.0, 37.°14N×141.°39E, h0km, mb3.6/10, mbtmp3.6/12, ML2.4/2, Error ellipse: s-maj=25.3km s-min=20.2km az=156.0*

*NIED **21** 08:21:12.6, 37.°15N×141.°41E, h35km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=3.10; $M_{\theta\theta}$1.69; $M_{\phi\phi}$1.41; $M_{r\theta}$0.73; $M_{\theta\phi}$2.01; $M_{r\phi}$0.92; Fault plane solution: $M_0$3.53000×10^{14} NP1: ϕ_s224.00000°, δ55.00000°, λ-94.00000°. NP2:ϕ_s51.00000°, δ35.00000°, λ-84.00000°.*

*JMA **21** 08:21:12.6±0.2, 37.°2N±0.°3×141.°4E±0.°8, h35km±1km, MV3.7/40, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

ISC 21 08:21:11.4±1.6, 37.°15N±0.°04×141.°43E±0.°06, h16km±10km, n31, σ1°19/34, mb3.6/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.50**	**296**	*i* P	**Pb**	**08 21 22.6**	**+0.8**
JFK				S	**Sb**	**08 21 29.8**	**+0.9**
ONAJ	**Iwakimizuishiy**	**0.51**	**265**	*i* P	**Pb**	**08 21 22.7**	**+0.7**
ONAJ				S	**Sb**	**08 21 30.3**	**+1.1**
JFFD	**Fukushimafurud**	**0.70**	**266**	P	**Pb**	**08 21 25.8**	**+0.6**
JFFD				S	**Sb**	**08 21 35.4**	**+0.7**
JMST	**Minamisoumatoc**	**0.72**	**323**	*i* P	**Pb**	**08 21 25.9**	**+0.3**
JMST				S	**Sb**	**08 21 35.5**	**+0.3**
JHO	**Hitachi**	**0.88**	**233**	*i* P	**Pg**	**08 21 28.0**	**-0.4**
JHO				S	**Sg**	**08 21 39.3**	**-0.7**
JMM	**Marumori**	**0.88**	**325**	*i* P	**Pb**	**08 21 28.4**	**+0.1**
JMM				S	**Sg**	**08 21 39.8**	**-0.4**
JOTO	**OTAMA OYAMA**	**0.97**	**295**	*i* P	**Pn**	**08 21 30.6**	**+0.2**
JOTO				S	**Sg**	**08 21 43.3**	**+0.3**
JIO	**Ouri**	**1.31**	**357**	P	**Pn**	**08 21 34.4**	**-0.6**
JIO				S	**Sb**	**08 21 50.9**	**-1.2**
JOU	**Okura**	**1.36**	**334**	*i* P	**Pb**	**08 21 36.5**	**0.0**
JOU				S	**Sb**	**08 21 54.0**	**+0.3**
JFY	**Yanaizu**	**1.40**	**281**	*i* P	**Pb**	**08 21 37.5**	**+0.2**
JFY				S	**Sg**	**08 21 56.3**	**-0.5**
MJAR	**Matsushiro Arr**	**2.66**	**258**	Pn	**Pn**	**08 21 54.6**	**+1.0**
	0.3nm,0.3s,baz=74,slow=10,SNR=16						
MJAR					Sn	**Sn**	**08 22 21.4**	**-4.0**
	0.7nm,0.3s,baz=246,slow=30,SNR=3.2						
	2.5nm,0.4s						
JHJ	**Hachijo jima 2**	**4.24**	**199**	Pn	**Pn**	**08 22 15.7**	**+0.3**
	1.4nm,0.3s,baz=54,slow=19,SNR=1.9						
JHJ					Sn	**Sn**	**08 23 01.4**	**-3.0**
	11nm,0.3s,baz=58,slow=13,SNR=1.4						
	123nm,0.7s						
SONM	**Songino Array**	**27.74**	**304**	P	**P**	**08 27 00.0**	**+0.8**
	0.6nm,0.8s,baz=108,slow=8.4,SNR=5.1						
	0.6nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.19**	**121**	T	T	08 56 32.2	
	baz=314,slow=75,SNR=86						
H11N1	**WAKE ISLAND Hy**	**28.20**	**121**	T	T	08 56 32.8	
	baz=314,slow=75,SNR=105						
H11N3	**WAKE ISLAND Hy**	**28.21**	**121**	T	T	08 56 33.6	
	baz=314,slow=75,SNR=78						
H11S1	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	08 57 25.7	
	baz=316,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	08 57 23.5	
	baz=316,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**28.92**	**123**	T	T	08 57 20.2	
	baz=316,slow=76,SNR=38						
ZALV	**Zalesovo Beam**	**41.85**	**312**	P	**P**	**08 28 59.6**	**-0.7**
	0.5nm,0.4s,baz=74,slow=6.4,SNR=2.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**44.07**	**302**	P	**P**	**08 29 17.6**	**-1.0**
	0.5nm,0.8s,baz=81,slow=7.9,SNR=6.0						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**45.95**	**308**	P	**P**	**08 29 33.5**	**+0.2**
	0.8nm,0.6s,baz=84,slow=8.1,SNR=7.7						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**49.39**	**32**	P	**P**	**08 30 01.0**	**+1.1**
	1.0nm,0.7s,baz=275,slow=6.4,SNR=13						
	1.0nm,0.7s						
BVAR	**Borovoye Array**	**50.51**	**312**	P	**P**	**08 30 08.4**	**-0.2**
	0.5nm,0.7s,baz=69,slow=4.8,SNR=2.6						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**57.17**	**188**	P	**P**	**08 30 57.1**	**-0.5**
	0.5nm,0.8s,baz=3.4,slow=7.5,SNR=1.5						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**63.70**	**30**	P	**P**	**08 31 42.8**	**+1.1**
	0.3nm,0.7s,baz=302,slow=7.2,SNR=5.9						
	0.3nm,0.7s						
PDAR	**Pinedale Array**	**77.58**	**45**	P	**P**	**08 33 08.6**	**+1.7**
	0.2nm,0.6s,baz=224,slow=4.1,SNR=2.1						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**90.04**	**52**	P	**P**	**08 34 09.8**	**-0.9**
	0.1nm,0.5s,baz=316,slow=3.8,SNR=1.6						
	0.1nm,0.5s						
H03N2	**Juan Fernandez**	**147.02**	**96**	T	T	11 25 12.8	
	baz=291,slow=76,SNR=4.5						
H03N3	**Juan Fernandez**	**147.03**	**96**	T	T	11 25 09.3	
	baz=291,slow=76,SNR=4.6						
H03N1	**Juan Fernandez**	**147.03**	**96**	T	T	11 25 16.3	
	baz=291,slow=76,SNR=4.2						

IDC 21 08:36:01.8±3.4, 54.°23N×87.°36E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=31.1km s-min=18.6km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**261**	I	I	08 44 50.0	
	baz=80,slow=331,SNR=5.4						
ZALV	**Zalesovo Beam**	**1.52**	**261**	Pg	Pn	08 36 28.0	-2.2
	1.6nm,0.3s,baz=80,slow=16,SNR=11						
ZALV				Lg	Lg	08 36 51.2	
	1.7nm,0.3s,baz=80,slow=28,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.49**	**240**	Pn	Pn	08 37 38.4	-0.1
	0.1nm,0.3s,baz=58,slow=14,SNR=2.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.11**	**206**	Pn	Pn	08 38 02.5	+1.8
	0.1nm,0.3s,baz=25,slow=13,SNR=7.7						
	0.2nm,0.2s						

WEL 21 08:42:04.3±1.1, 38.°S±9.°×18.°0W±.°, h33km, M3.2/12, ML3.5/13, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=154.6, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.36**	**262**	P	Pn	08 42 27.0	0.0
MXZ	**Matakaoa Point**	**1.44**	**272**	P	Pn	08 42 28.1	0.0
MXZ				S	Sn	08 42 46.0	+0.2
PUZ	**Puketiti**	**1.53**	**253**	P	Pn	08 42 29.2	-0.1
PKGZ	**Pakihiroa**	**1.63**	**261**	P	Pn	08 42 30.6	-0.2
CNGZ	**Carnagh Statio**	**1.73**	**240**	P	Pn	08 42 32.6	+0.6
CNGZ				S	Sb	08 42 55.6	-1.1
TWGZ	**Tauwhareparae**	**1.77**	**252**	P	Pn	08 42 33.0	+0.3
HAZ	**Te Kaha**	**1.85**	**266**	P	Pn	08 42 34.1	+0.3
HAZ				S	Sn	08 42 57.2	+1.2
RUGZ	**Raukumara Rang**	**1.96**	**260**	P	Pn	08 42 35.3	0.0
TKGZ	**Te Karaka**	**1.96**	**245**	P	Pn	08 42 35.4	+0.2
TKGZ				S	Sn	08 43 00.0	+1.4
RIGZ	**Rimuhau**	**2.14**	**239**	P	Pn	08 42 37.8	+0.1
RIGZ				S	Sn	08 43 03.7	+0.5
MWZ	**Matawai**	**2.16**	**250**	P	Pn	08 42 37.6	-0.4
MWZ				S	Sn	08 43 03.6	0.0
PRGZ	**Paritu Road**	**2.17**	**233**	P	Pn	08 42 38.2	0.0
RAGZ	**Rawiri**	**2.29**	**247**	P	Pn	08 42 40.3	+0.4
RAGZ				S	Sn	08 43 06.7	-0.4
MHGZ	**Mahia Peninsul**	**2.30

baz=26,slow=75,SNR=147
H04N3 CROZET ISLANDS 30.64 198 T T 09 37 14.4
baz=26,slow=75,SNR=152
LBTB Lobatse 37.41 252 LR LR 09 21 06.1
comp=Z,39nm,18.3s,baz=179,slow=36
H01W3 Cape Leeuwin H 46.86 122 T T 09 56 56.7
baz=278,slow=75,SNR=9.0
H01W2 Cape Leeuwin H 46.86 122 T T 09 56 56.1
baz=278,slow=75,SNR=11
H01W1 Cape Leeuwin H 46.87 122 T T 09 56 57.0
baz=278,slow=75,SNR=9.6
ASAR Alice Springs 64.23 108 P **P** **09 09 21.9 -0.1**
1.0nm,0.8s,baz=275,slow=5.8,SNR=6.7
1.0nm,0.8s
WRA Warramunga Arr 65.25 104 P **P** **09 09 28.9 +0.2**
2.2nm,0.9s,baz=265,slow=5.9,SNR=7.0
2.2nm,0.9s
MKAR Makanchi Array 65.86 13 P **P** **09 09 31.9 -0.1**
0.6nm,0.8s,baz=207,slow=10,SNR=5.0
0.6nm,0.8s
STKA Stephens Creek 69.77 118 LR LR 09 36 00.5
comp=Z,29nm,21.9s,baz=207,slow=32
BVAR Borovoye Array 70.38 3 P **P** **09 10 00.3 +0.1**
0.7nm,0.6s,baz=157,slow=4.4,SNR=4.1
0.7nm,0.6s
ZALV Zalesovo Beam 73.16 12 P **P** **09 10 16.3 -0.6**
0.6nm,0.5s,baz=197,slow=4.6,SNR=3.0
0.6nm,0.5s
SONM Songino Array 74.83 27 P **P** **09 10 27.1 +0.1**
1.5nm,0.9s,baz=220,slow=5.5,SNR=6.7
1.5nm,0.9s
PDAR Pinedale Array 154.40 351 PKPbc **PKiKP** **09 18 47.6 0.0**
0.1nm,0.3s,baz=86,slow=3.7,SNR=2.3

*IDC **21** 08:59:22.2±1.2,55°.57N×149°.30W,h0km,mb3.7/5,*
mbtmp3.6/10,ML3.3/5,MS2.9/3,Error ellipse:
s-maj=27.9km s-min=20.3km az=31.0
*NEIC **21** 08:59:25.1±1.5,55°.78N±0°.09×149°.2W±0°.1,h6km±6km,*
mb3.5/2,ML3.8/48,ML3.6(AEIC),Error ellipse:
s-maj=14.3km s-min=8.3km az=155.0
*AEIC **21** 08:59:29.2±1.4,55°.75N±0°.07×149°.2W±0°.1,h5km±6km,*
Error ellipse: s-maj=11.2km s-min=9.6km az=137.0

ISC 21 08:59:24.6±0.9,55.79N±0°.08×149°.20W±0°.05,h10km,
n244,σ1§29/240,mb3.9/5,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.69**	**304**		**Sn**	**09 00 38.1**	**-2.3**
OHAK	**Old Harbor**	**2.69**	**304**	Pn	**Pn**	**09 00 07.9**	**+0.1**
OHAK	**Old Harbor**	**2.69**	**304**	IAML		09 00 45.9	
	comp=N,73nm,1.1s						
OHAK				IAML		09 00 46.0	
	comp=E,75nm,0.4s						
OHAK	**Old Harbor**	**2.69**	**304**	P	**Pn**	**09 00 07.8**	**0.0**
OHAK	**Old Harbor**	**2.69**	**304**	P	**Pn**	**09 00 08.0**	**+0.1**
	baz=121						
OHAK				S	**Sn**	**09 00 38.1**	**-2.3**
	baz=121						
KDAK	**Kodiak Island**	**2.74**	**318**		**Sn**	**09 00 39.7**	**-1.9**
KDAK	**Kodiak Island**	**2.74**	**318**		**Pn**	**09 00 09.1**	**+0.6**
KDAK	**Kodiak Island**	**2.74**	**318**	IAML		09 00 48.8	
	comp=E,64nm,1.0s						
KDAK				IAML		09 00 48.9	
	comp=E,68nm,0.7s						
KDAK	**Kodiak Island**	**2.74**	**318**	S	**Sn**	**09 00 40.7**	**-0.9**
	baz=136						
KDAK	**Kodiak Island**	**2.74**	**318**	Pn	**Pn**	**09 00 08.7**	**+0.2**
	comp=E,13nm,0.3s,baz=145,slow=4.8,SNR=875						
KDAK				Sn	**Sn**	**09 00 40.1**	**-1.4**
	comp=E,7.4nm,0.3s,baz=350,slow=23,SNR=7.7						
KDAK				LR	LR	09 01 26.4	
	comp=E,142nm,20.3s,baz=211,slow=43						
	comp=E,29nm,0.3s						
SYI	**Shuyak Island**	**3.32**	**330**		**Pn**	**09 00 17.4**	**+0.8**
SYI					**Sn**	**09 00 56.2**	**+0.2**
Q20K	**Shuyak Island**	**3.32**	**330**	P	**Pn**	**09 00 17.6**	**+1.0**
	baz=147						
Q20K				S	**Sn**	**09 00 56.8**	**+0.7**
	baz=147						
CNPM	**China Poot**	**3.91**	**345**		**Pn**	**09 00 25.2**	**+0.6**
CNPM					**Sn**	**09 01 09.2**	**-1.3**
MID	**Middleton Isla**	**3.96**	**22**		**Pn**	**09 00 25.8**	**+0.5**
MID	**Middleton Isla**	**3.96**	**22**	IAML		09 01 02.9	
	comp=E,113nm,1.3s						
MID				IAML		09 02 27.1	
	comp=N,83nm,1.5s						
MID	**Middleton Isla**	**3.96**	**22**	P	**Pn**	**09 00 26.0**	**+0.7**
Q23K	**Middleton Isla**	**3.96**	**22**		**Pn**	**09 00 25.8**	**+0.5**
Q23K	**Middleton Isla**	**3.96**	**22**	IAML		09 01 02.9	
	comp=E,113nm,1.4s						
Q23K				IAML		09 01 14.7	
	comp=N,123nm,1.4s						
Q19K	**Cape Douglas,**	**3.97**	**324**		**Pn**	**09 00 26.9**	**+1.4**
Q19K	**Cape Douglas,**	**3.97**	**324**	P	**Pn**	**09 00 26.9**	**+1.4**
	baz=141						
KAHG	**Katmai Hook Gl**	**3.98**	**315**		**Pn**	**09 00 27.5**	**+1.8**
BRSE	**Bradley Lake S**	**4.05**	**349**		**Pn**	**09 00 27.1**	**+0.4**
BRSE					**Sn**	**09 01 12.7**	**-1.4**
BRSE	**Bradley Lake S**	**4.05**	**349**	P	**Pn**	**09 00 27.1**	**+0.4**
	baz=168						
BRSE				S	**Sn**	**09 01 12.7**	**-1.4**
	baz=168						
BRLK	**Bradley Lake**	**4.09**	**348**		**Pn**	**09 00 27.3**	**+0.1**
BRLK	**Bradley Lake**	**4.09**	**348**	IAML		09 01 17.2	
	comp=E,83nm,0.5s						
KCE	**Katmai Mt Cerb**	**4.10**	**309**		**Pn**	**09 00 29.7**	**+2.5**
HOM	**Homer**	**4.10**	**342**	Pn	**Pn**	**09 00 26.9**	**-0.3**
HOM				IAML		09 01 26.2	
	comp=N,183nm,0.7s						
HOM				IAML		09 01 41.1	
	comp=E,151nm,1.1s						
ACHA	**Angle Creek He**	**4.14**	**308**		**Pn**	**09 00 29.1**	**+1.3**
ANCK	**Angle Creek**	**4.21**	**308**		**Pn**	**09 00 30.4**	**+1.6**
KVTA	**Katmai Vly 10**	**4.22**	**311**		**Pn**	**09 00 30.8**	**+1.8**
AUCH	**Augustine Cone**	**4.25**	**329**		**Pn**	**09 00 31.0**	**+1.6**
AUL	**Augustine Lava**	**4.27**	**329**		**Pn**	**09 00 31.2**	**+1.7**
KAHC	**Katmai Hardscr**	**4.27**	**315**		**Pn**	**09 00 31.2**	**+1.6**
KAHC	**Katmai Hardscr**	**4.27**	**315**	P	**Pn**	**09 00 31.4**	**+1.7**
	baz=130						
P23K	**Montague Islan**	**4.33**	**12**		**Pn**	**09 00 31.2**	**+0.8**
P23K	**Montague Islan**	**4.33**	**12**	P	**Pn**	**09 00 31.2**	**+0.8**
	baz=193						
SEW	**Seward**	**4.33**	**358**	P	**Pn**	**09 00 30.8**	**+0.4**
	baz=178						
PLK3	**Peulik 3**	**4.34**	**299**		**Pn**	**09 00 31.8**	**+1.3**
Q17K	**Contact Creek**	**4.42**	**307**	P	**Pn**	**09 00 33.1**	**+1.3**
	baz=122						
P19K	**Oil Pt**	**4.44**	**333**		**Pn**	**09 00 33.0**	**+1.1**
P19K	**Oil Pt**	**4.44**	**333**	IAML		09 01 32.8	
	comp=E,101nm,0.7s						
P19K				IAML		09 01 35.9	
	comp=N,99nm,0.5s						
P19K	**Oil Pt**	**4.44**	**333**	P	**Pn**	**09 00 33.3**	**+1.3**
	baz=149						
KELA	**Mount Kelaz**	**4.45**	**309**		**Pn**	**09 00 33.4**	**+1.3**
PLK1	**Peulik 1**	**4.55**	**299**		**Pn**	**09 00 34.7**	**+1.4**
O20K	**Slope Mountain**	**4.68**	**338**		**Pn**	**09 00 36.1**	**+0.8**
O20K	**Slope Mountain**	**4.68**	**338**	P	**Pn**	**09 00 36.1**	**+0.8**
	baz=156						
ILSW	**Iliamna Southw**	**4.71**	**335**		**Pn**	**09 00 36.1**	**+0.5**
ILSW	**Iliamna Southw**	**4.71**	**335**	IAML		09 01 32.8	
	comp=E,38nm,0.6s						
ILSW				IAML		09 01 40.7	
	comp=N,47nm,0.9s						
IVE	**Iliamna Volcan**	**4.71**	**336**		**Pn**	**09 00 35.9**	**+0.3**
O22K	**Cooper Landing**	**4.72**	**357**		**Pn**	**09 00 36.3**	**+0.6**
O22K	**Cooper Landing**	**4.72**	**357**	P	**Pn**	**09 00 36.7**	**+1.0**
	baz=176						
SLKM	**Skilak Lake**	**4.77**	**354**		**Pn**	**09 00 36.8**	**+0.4**
HIN	**Hinchinbrook I**	**4.84**	**16**		**Pn**	**09 00 37.9**	**+0.5**
HIN	**Hinchinbrook I**	**4.84**	**16**		**Sn**	**09 01 31.4**	**-2.1**
HIN				IAML		09 01 36.8	
	comp=E,106nm,0.7s						
P18K	**Big Mountain,**	**4.86**	**321**		**Pn**	**09 00 38.4**	**+0.7**
P18K	**Big Mountain,**	**4.86**	**321**	P	**Pn**	**09 00 38.3**	**+0.7**
	baz=136						
KAIM	**Kayak Island**	**4.87**	**30**		**Pn**	**09 00 38.7**	**+0.9**
KAIM	**Kayak Island**	**4.87**	**30**	IAML		09 01 35.8	
	comp=E,85nm,0.7s						
KAIM	**Kayak Island**	**4.87**	**30**	P	**Pn**	**09 00 38.7**	**+0.9**
	baz=213						
Q16K	**King Salmon**	**4.98**	**309**		**Pn**	**09 00 40.6**	**+1.3**
Q16K	**King Salmon**	**4.98**	**309**	P	**Pn**	**09 00 40.6**	**+1.3**
	baz=123						
RSO	**Redoubt South**	**5.05**	**340**		**Pn**	**09 00 40.9**	**+0.4**
RDT	**Redoubt**	**5.09**	**342**		**Pn**	**09 00 40.7**	**-0.3**
RDWB	**Redoubt West**	**5.10**	**339**		**Pn**	**09 00 40.6**	**-0.4**
EYAK	**Cordova Ski Ar**	**5.11**	**19**		**Pn**	**09 00 42.0**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**09 00 42.2**	**+1.1**
EYAK	**Cordova Ski Ar**	**5.11**	**19**	P	**Pn**	**09 00 42.0**	**+0.9**
	baz=202						
ANNW	**Aniakchak Nort**	**5.15**	**287**		**Pn**	**09 00 43.0**	**+1.2**
DFR	**Drift River**	**5.16**	**340**		**Pn**	**09 00 42.4**	**+0.5**
SUCK	**Suckling Hills**	**5.18**	**32**		**Pn**	**09 00 43.0**	**+0.9**
SUCK	**Suckling Hills**	**5.18**	**32**	IAML		09 01 42.7	
	comp=E,62nm,0.7s						
SUCK				IAML		09 01 45.3	
	comp=N,54nm,0.5s						
FID	**Port Fidalgo**	**5.18**	**15**		**Pn**	**09 00 42.6**	**+0.5**
FID	**Port Fidalgo**	**5.18**	**15**		**Sn**	**09 01 38.6**	**-3.3**
FID				IAML		09 01 40.1	
	comp=N,46nm,0.4s						
FID				IAML		09 01 41.3	
	comp=E,60nm,0.5s						
P17K	**Kvichak River**	**5.19**	**314**		**Pn**	**09 00 43.3**	**+1.1**
P17K	**Kvichak River**	**5.19**	**314**	P	**Pn**	**09 00 43.3**	**+1.1**
	baz=128						
O18K	**Koktuh Hills**	**5.19**	**324**		**Pn**	**09 00 43.0**	**+0.7**
O18K				IAML		09 01 49.0	
	comp=N,25nm,1.1s						
O18K	**Koktuh Hills**	**5.19**	**324**	P	**Pn**	**09 00 43.0**	**+0.7**
	baz=139						
CHGN	**Chignik**	**5.19**	**280**		**Pn**	**09 00 42.0**	**-0.2**
CHGN	**Chignik**	**5.19**	**280**		**Sn**	**09 01 39.1**	**-3.0**
CHGN				IAML		09 01 41.5	
	comp=E,52nm,0.4s						
CHGN				IAML		09 01 43.7	
	comp=N,73nm,0.5s						
O19K	**Port Alsworth**	**5.19**	**330**		**Pn**	**09 00 42.7**	**+0.5**
O19K	**Port Alsworth**	**5.19**	**330**	P	**Pn**	**09 00 42.7**	**+0.5**
	baz=146						
RAGM	**Ragged Mountai**	**5.20**	**26**		**Pn**	**09 00 43.5**	**+1.1**
GLI	**Glacier Island**	**5.23**	**11**		**Pn**	**09 00 43.6**	**+0.9**
GLI	**Glacier Island**	**5.23**	**11**	IAML		09 01 44.5	
	comp=N,40nm,0.5s						
GLI				IAML		09 01 45.6	
	comp=E,56nm,0.5s						
GLI	**Glacier Island**	**5.23**	**11**	P	**Pn**	**09 00 43.6**	**+0.9**
	baz=193						
NICHA	**Nichawak Mount**	**5.26**	**30**		**Pn**	**09 00 44.3**	**+1.2**
HMT	**Hamilton**	**5.26**	**28**		**Pn**	**09 00 44.4**	**+1.2**
RC01	**Rabbit Creek A**	**5.33**	**357**	Pn	**Pn**	**09 00 45.0**	**+0.9**
RC01				IAML		09 01 48.4	
	comp=E,54nm,0.4s						
RC01				IAML		09 01 48.9	
	comp=N,39nm,0.4s						
RC01	**Rabbit Creek A**	**5.33**	**357**	P	**Pn**	**09 00 44.8**	**+0.7**
	baz=177						
GOAT	**Goat Mountain**	**5.36**	**24**		**Pn**	**09 00 45.7**	**+1.1**
FIS	**Fire Island**	**5.40**	**355**	Pn	**Pn**	**09 00 46.7**	**+1.6**
BERG	**Berg Lake**	**5.46**	**30**		**Pn**	**09 00 46.8**	**+0.9**
SNH	**Sunshine Point**	**5.55**	**35**		**Pn**	**09 00 48.4**	**+1.1**
KHIT	**Khitrov Hills**	**5.63**	**32**		**Pn**	**09 00 49.2**	**+0.8**
N20K	**Mount Spurr**	**5.66**	**345**	P	**Pn**	**09 00 48.7**	**0.0**
	baz=162						
KNK	**Knik Glacier**	**5.66**	**4**	Pn	**Pn**	**09 00 50.1**	**+1.5**
SPCP	**Crater Peak Br**	**5.71**	**346**		**Pn**	**09 00 50.4**	**+0.9**
SPCG	**Spurr Capps Gl**	**5.72**	**346**		**Pn**	**09 00 49.8**	**+0.3**
BMRM	**Bremner River**	**5.73**	**23**	P	**Pn**	**09 00 50.9**	**+1.3**
	baz=207						
SUA	**Susitna One**	**5.75**	**353**		**Pn**	**09 00 50.6**	**+0.5**
SUA	**Susitna One**	**5.75**	**353**	P	**Pn**	**09 00 50.6**	**+0.5**
	baz=171						
P16K	**Nushagak River**	**5.76**	**308**	P	**Pn**	**09 00 51.5**	**+1.5**
	baz=121						
WAX	**Waxell Ridge**	**5.76**	**33**		**Pn**	**09 00 50.9**	**+0.8**
N19K	**Bonanza Creek**	**5.76**	**333**		**Pn**	**09 00 50.3**	**+0.2**
O17K	**Koliganek Bris**	**5.81**	**317**		**Pn**	**09 00 51.7**	**+1.0**
O17K	**Koliganek Bris**	**5.81**	**317**	P	**Pn**	**09 00 52.0**	**+1.3**
	baz=130						
PMR	**Palmer**	**5.83**	**0**	Pn	**Pn**	**09 00 52.1**	**+1.2**
PMR	**Palmer**	**5.83**	**0**	P	**Pn**	**09 00 52.0**	**+1.2**
VNFG	**Fog Glacier, M**	**5.83**	**279**		**Pn**	**09 00 52.0**	**+0.9**
BARK	**Barkley Ridge**	**5.84**	**35**		**Pn**	**09 00 52.0**	**+0.8**
MESA	**MESA**	**5.85**	**38**		**Pn**	**09 00 52.4**	**+0.9**
MESA	**MESA**	**5.85**	**38**	P	**Pn**	**09 00 52.5**	**+1.1**
	baz=224						
SPNN	**North Nagishla**	**5.89**	**343**		**Pn**	**09 00 52.6**	**+0.7**
STLK	**Strandline Lak**	**5.89**	**348**		**Pn**	**09 00 52.3**	**+0.3**
CRQM	**Cirque**	**5.92**	**30**		**Pn**	**09 00 53.3**	**+0.9**
CRQE	**Cirque**	**5.93**	**30**	P	**Pn**	**09 00 53.5**	**+1.0**
	baz=215						
KLU	**Klutina**	**5.97**	**15**		**Pn**	**09 00 54.4**	**+1.4**
KLU	**Klutina**	**5.97**	**15**	P	**Pn**	**09 00 54.4**	**+1.4**
	baz=198						
GHO	**Glory Hole Cre**	**6.01**	**1**		**Pn**	**09 00 54.5**	**+1.0**
ISLE	**Juniper Island**	**6.04**	**34**		**Pn**	**09 00 54.9**	**+0.9**
N18K	**Kilae Creek**	**6.05**	**327**		**Pn**	**09 00 54.5**	**+0.5**
SML	**Sawmill**	**6.06**	**4**		**Pn**	**09 00 55.4**	**+1.3**
SML	**Sawmill**	**6.06**	**4**	P	**Pn**	**09 00 55.1**	**+1.0**
	baz=185						
O16K	**Kokwok River B**	**6.11**	**312**		**Pn**	**09 00 56.0**	**+1.3**
SCM	**Sheep Creek Mo**	**6.14**	**8**		**Pn**	**09 00 56.7**	**+1.4**
SCM	**Sheep Creek Mo**	**6.14**	**8**	P	**Pn**	**09 00 56.7**	**+1.4**
	baz=190						
VRDI	**Verde Repeater**	**6.23**	**26**		**Pn**	**09 00 57.7**	**+1.0**
SAMH	**Samovar Hills**	**6.25**	**42**		**Pn**	**09 00 58.0**	**+1.3**
SVW2	**Sparrevohn**	**6.29**	**330**		**Pn**	**09 00 57.5**	**+0.1**
SVW2	**Sparrevohn**	**6.29**	**330**	P	**Pn**	**09 00 57.8**	**+0.5**
N25K	**Chitina, Valde**	**6.31**	**20**		**Pn**	**09 00 59.2**	**+1.5**
N25K	**Chitina, Valde**	**6.31**	**20**	P	**Pn**	**09 00 59.2**	**+1.5**
	baz=204						
GLB	**Gilahina Butte**	**6.33**	**24**	Pn	**Pn**	**09 00 59.3**	**+1.4**
SKT	**Skwentna**	**6.33**	**350**		**Pn**	**09 00 58.7**	**+0.8**
N17K	**Nushagak Hills**	**6.36**	**322**		**Pn**	**09 00 59.1**	**+0.9**
SDPT	**Sand Point**	**6.42**	**271**		**Pn**	**09 00 59.0**	**0.0**
SDPT	**Sand Point**	**6.42**	**271**	P	**Pn**	**09 00 59.3**	**+0.3**
PINM	**Pinnacle**	**6.43**	**44**	P	**Pn**	**09 01 00.8**	**+1.6**
	baz=232						
M20K	**Styx River**	**6.45**	**343**		**Pn**	**09 00 59.6**	**+0.1**
MCARA	**McCarthy VSAT**	**6.47**	**27**		**Pn**	**09 01 01.1**	**+1.2**
MCARA	**McCarthy VSAT**	**6.47**	**27**	P	**Pn**	**09 01 01.1**	**+1.2**
	baz=212						
M24K	**Tolsona, Glenn**	**6.53**	**13**		**Pn**	**09 01 02.6**	**+2.0**
M24K	**Tolsona, Glenn**	**6.53**	**13**	P	**Pn**	**09 01 01.7**	**+1.1**
	baz=195						
PNL	**Peninsula**	**6.53**	**49**		**Pn**	**09 01 01.9**	**+1.2**
PNL	**Peninsula**	**6.53**	**49**	P	**Pn**	**09 01 02.1**	**+1.4**
PNL	**Peninsula**	**6.53**	**49**	P	**Pn**	**09 01 01.9**	**+1.2**
	baz=238						
BCPM	**Bancas Point**	**6.59**	**47**		**Pn**	**09 01 02.9**	**+1.5**
BARN	**Barnard Glacie**	**6.60**	**34**		**Pn**	**09 01 03.4**	**+1.6**
CTG	**Chitna Glacier**	**6.63**	**35**	P	**Pn**	**09 01 03.2**	**+1.0**
	baz=222						
CTGM	**Chitina Glacie**	**6.64**	**35**		**Pn**	**09 01 03.5**	**+1.3**
LOGN	**Logan Glacier**	**6.64**	**37**		**Pn**	**09 01 03.3**	**+1.0**
O15K	**Ungalikthiuk R**	**6.66**	**305**		**Pn**	**09 01 03.7**	**+1.3**
O15K	**Ungalikthiuk R**	**6.66**	**305**	P	**Pn**	**09 01 03.7**	**+1.3**
	baz=116						
M18K	**Stony River**	**6.68**	**332**		**Pn**	**09 01 02.7**	**0.0**
M19K	**Big River Lodg**	**6.70**	**338**	Pn	**Pn**	**09 01 03.3**	**+0.3**
WAT6	**Susitna Watana**	**6.86**	**6**		**Pn**	**09 01 06.2**	**+0.9**
WAT6	**Susitna Watana**	**6.86**	**6**	P	**Pn**	**09 01 05.8**	**+0.6**
	baz=187						
N16K	**Nishlik Lake**	**6.91**	**317**		**Pn**	**09 01 07.0**	**+1.2**
N16K	**Nishlik Lake**	**6.91**	**317**	P	**Pn**	**09 01 07.0**	**+1.2**
	baz=129						
HARP	**HAARP**	**6.95**	**16**		**Pn**	**09 01 07.7**	**+1.3**
HARP	**HAARP**	**6.95**	**16**	P	**Pn**	**09 01 07.7**	**+1.3**
	baz=199						
L19K	**White Mountain**	**7.05**	**338**		**Pn**	**09 01 07.7**	**0.0**
M17K	**Holitna River**	**7.08**	**326**		**Pn**	**09 01 09.2**	**+1.0**
M17K	**Holitna River**	**7.08**	**326**	P	**Pn**	**09 01 09.2**	**+1.0**
	baz=139						
O29M	**Mount Kennedy**	**7.23**	**47**		**Pn**	**09 01 11.9**	**+1.7**
O29M	**Mount Kennedy**	**7.23**	**47**	P	**Pn**	**09 01 11.9**	**+1.7**
	baz=236						
P29M	**Windy Craggy**	**7.25**	**53**		**Pn**	**09 01 11.0**	**+0.6**
N15K	**Kwethluk River**	**7.27**	**312**		**Pn**	**09 01 12.5**	**+1.8**
M16K	**Timber Creek**	**7.33**	**320**		**Pn**	**09 01 12.7**	**+1.1**
O14K	**Tigyukauivet M**	**7.37**	**303**	Pn	**Pn**	**09 01 13.3**	**+1.3**
DHY	**Denali Highway**	**7.37**	**6**		**Pn**	**09 01 13.7**	**+1.5**
DHY	**Denali Highway**	**7.37**	**6**	P	**Pn**	**09 01 13.7**	**+1.5**
	baz=188						
YUK2	**White River**	**7.42**	**32**		**Pn**	**09 01 14.7**	**+1.8**
S31K	**Pelican**	**7.43**	**68**		**Pn**	**09 01 11.0**	**-2.0**
PAX	**Paxson**	**7.45**	**13**		**Pn**	**09 01 15.2**	**+1.8**
PAX	**Paxson**	**7.45**	**13**	P	**Pn**	**09 01 15.2**	**+1.8**
	baz=196						
L18K	**Granite Mounta**	**7.52**	**332**		**Pn**	**09 01 14.1**	**0.0**
YUK3	**Moose Creek**	**7.53**	**33**		**Pn**	**09 01 16.4**	**+2.0**
YUK3	**Moose Creek**	**7.53**	**33**	P	**Pn**	**09 01 16.4**	**+2.0**
	baz=221						
YUK7	**Dusty Glacier**	**7.54**	**46**		**Pn**	**09 01 16.3**	**+1.8**
RND	**Reindeer**	**7.65**	**1**		**Pn**	**09 01 17.6**	**+1.6**
YUK6	**Outpost Mounta**	**7.69**	**43**	P	**Pn**	**09 01 19.0**	**+2.3**
	baz=232						
MENT	**Mentasta**	**7.70**	**19**		**Pn**	**09 01 19.2**	**+2.6**
TRF	**Thorofare Moun**	**7.71**	**356**	Pn	**Pn**	**09 01 18.6**	**+1.7**
CAST	**Castle Rocks**	**7.80**	**350**		**Pn**	**09 01 20.0**	**+2.0**
CAST	**Castle Rocks**	**7.80**	**350**	P	**Pn**	**09 01 20.0**	**+2.0**
	baz=168						
P30M	**Million Dollar**	**7.82**	**51**		**Pn**	**09 01 20.2**	**+1.9**
P30M	**Million Dollar**	**7.82**	**51**	P	**Pn**	**09 01 20.3**	**+1.9**
	baz=241						
KTH	**Kantishna Hill**	**7.84**	**354**		**Pn**	**09 01 19.9**	**+1.3**
N14K	**Kuskokwak Cree**	**7.84**	**307**		**Pn**	**09 01 20.1**	**+1.6**
L17K	**Donlin**	**7.91**	**327**		**Pn**	**09 01 20.2**	**+0.8**
L17K	**Donlin**	**7.91**	**327**	P	**Pn**	**09 01 20.6**	**+1.2**
	baz=140						
HYT	**Haines Junctio**	**7.96**	**46**	Pn	**Pn**	**09 01 21.5**	**+1.2**
TTA	**Tatalina**	**7.96**	**337**	Pn	**Pn**	**09 01 20.1**	**-0.3**
TTA	**Tatalina**	**7.96**	**337**	P	**Pn**	**09 01 20.0**	**-0.3**
L16K	**Owhat River**	**7.98**	**322**		**Pn**	**09 01 21.4**	**+0.9**
L16K	**Owhat River**	**7.98**	**322**	P	**Pn**	**09 01 21.7**	**+1.2**
	baz=134						
L27K	**Beaver Creek,**	**8.20**	**24**		**Pn**	**09 01 25.1**	**+1.5**
BCAR	**Beaver Creek A**	**8.22**	**24**	Pn	**Pn**	**09 01 25.4**	**+1.6**
S32K	**Killisnoo**	**8.24**	**72**		**Pn**	**09 01 22.1**	**-1.8**
BESE	**Bessie Mountai**	**8.28**	**64**		**Pn**	**09 01 24.6**	**0.0**
SKAG	**Skagway**	**8.30**	**58**	Pn	**Pn**	**09 01 26.3**	**+1.5**
SKAG	**Skagway**	**8.30**	**58**	P	**Pn**	**09 01 25.9**	**+1.1**
K17K	**Iditarod**	**8.36**	**330**		**Pn**	**09 01 25.9**	**+0.2**
BPAW	**Bear Paw Mtn.**	**8.39**	**355**		**Pn**	**09 01 26.2**	**+0.1**
BPAW	**Bear Paw Mtn.**	**8.39**	**355**	P	**Pn**	**09 01 26.2**	**+0.1**
	baz=173						
JIS	**Juneau Island**	**8.46**	**67**	P	**Pn**	**09 01 26.8**	**-0.2**
O30N	**Mendenhall**	**8.52**	**49**		**Pn**	**09 01 29.3**	**+1.4**
SCRK	**Sand Creek**	**8.62**	**16**	Pn	**Pn**	**09 01 31.3**	**+1.9**
M29M	**Somme Creek**	**8.65**	**35**		**Pn**	**09 01 31.1**	**+1.3**
M29M	**Somme Creek**	**8.65**	**35**	P	**Pn**	**09 01 31.1**	**+1.3**
	baz=224						
L15K	**Ungalak Mounta**	**8.69**	**318**		**Pn**	**09 01 31.7**	**+1.5**
J20K	**Nowinta River**	**8.77**	**346**		**Pn**	**09 01 32.9**	**+1.6**
J20K	**Nowinta River**	**8.77**	**346**	P	**Pn**	**09 01 32.9**	**+1.6**
	baz=161						
M13K	**Dall Lake**	**8.81**	**308**	Pn	**Pn**	**09 01 32.9**	**+1.2**
CCB	**Clear Creek Bu**	**8.92**	**4**		**Pn**	**09 01 35.0**	**+1.8**
L14K	**Kuka Creek**	**8.97**	**314**		**Pn**	**09 01 36.2**	**+2.2**
ILAR	**Eielson Array**	**9.09**	**6**	Pn	**Pn**	**09 01 36.5**	**+0.9**
ILAR	**Eielson Array**	**9.09**	**6**	Pn	**Pn**	**09 01 36.4**	**+0.8**
	comp=N,0.3nm,0.3s,baz=189,slow=14,SNR=14						
ILAR				Sn	**Sn**	**09 03 13.8**	**-4.1**
	comp=N,0.4nm,0.3s,baz=185,slow=22,SNR=9.7						
	comp=N,0.7nm,0.4s						
MLY	**Manley**	**9.31**	**356**	Pn	**Pn**	**09 01 40.1**	**+1.4**
DAWY	**Dawson**	**9.64**	**27**	Pn	**Pn**	**09 01 44.0**	**+0.7**
EGAK	**Eagle**	**9.85**	**20**	Pn	**Pn**	**09 01 47.5**	**+1.3**
M31M	**Murry Creek, Y**	**9.97**	**44**		**Pn**	**09 01 50.0**	**+2.3**
K29M	**Barlow Dome**	**9.98**	**31**		**Pn**	**09 01 50.1**	**+2.2**
H21K	**Melozitna Rive**	**10.06**	**351**		**Pn**	**09 01 50.6**	**+1.7**
R33M	**Jennings River**	**10.42**	**62**	Pn	**Pn**	**09 01 55.0**	**+0.9**
IMAR	**Indian Mountai**	**10.47**	**350**	Pn	**Pn**	**09 01 55.7**	**+1.2**
DLBC	**Dease Lake**	**10.75**	**68**	Pn	**Pn**	**09 01 59.1**	**+0.7**
DLBC	**Dease Lake**	**10.75**	**68**	Pn	**Pn**	**09 01 58.0**	**-0.5**
	comp=N,0.2nm,0.3s,baz=245,slow=13,SNR=5.5						
	comp=N,0.8nm,0.4s						
BMAR	**Burnt Mountain**	**11.88**	**9**	Pn	**Pn**	**09 02 15.5**	**+1.6**

KTK1	**Kautokeino**	**2.11**	**27**	SG	Sb	09 02 53.3	-0.9
RNF	**Rovaniemi**	**2.23**	**102**	SG	Sb	09 02 57.5	-0.1
SGF	**Sodankyl**	**2.34**	**80**	SG	Sb	09 03 01.8	+1.1
RANF	**Ranua**	**2.75**	**112**	SG	Sb	09 03 12.0	-0.5
ARA0	**ARCESS Array S** baz=224	**3.01**	**35**	PB	Pb	09 02 40.8	-1.9
ARA0				SN	Sn	09 03 13.9	0.0
KMNF	**Kaamanen**	**3.13**	**48**	SN	Sn	09 03 15.2	-1.6

IDC 21 09:07:16.0±2.8, 54°.00N×86°.57E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=23.2km s-min=13.1km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**268**	I	I	09 14 20.0	
	0.1nm,0.8s,baz=86,slow=336,SNR=12						
ZALV	**Zalesovo Beam**	**1.04**	**268**	Pg	Pg	09 07 35.2	-0.6
	0.9nm,0.3s,baz=85,slow=17,SNR=13						
ZALV				Lg	Lg	09 07 51.1	
	1.8nm,0.3s,baz=88,slow=30,SNR=4.7						
KURBB	**Kurchatov Arra**	**5.98**	**239**	Pn	Pn	09 08 45.5	-0.2
	0.2nm,0.3s,baz=54,slow=14,SNR=4.6						
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**7.72**	**202**	Pn	Pn	09 09 11.5	+2.0
	0.1nm,0.3s,baz=18,slow=12,SNR=4.7						
MKAR				Lg	Lg	09 11 18.0	
	baz=20,slow=22,SNR=1.8						
	0.3nm,0.5s						

*MOS **21** 09:09:54.8±0.8, 42°.32N×142°.87E, h109km, mb4.0/4, Error ellipse: s-maj=12.3km s-min=9.2km az=76.2*
*NEIC **21** 09:09:57.0±1.4, 42°.35N±0°.05×142°.8E±0°.1, h104km±7km, mb4.0/21, Error ellipse: s-maj=12.0km s-min=7.3km az=108.0*
*IDC **21** 09:09:56.5±2.3, 42°.35N×142°.89E, h105km±14km, mb3.5/11, mbtmp3.8/12, Error ellipse: s-maj=24.0km s-min=16.7km az=135.0*
*SKHL **21** 09:09:57.7±0.1, 42°.50N×143°.10E, h111km±3km, mb4.9/3, msha5.6/3*
*NIED **21** 09:09:57.4, 42°.42N×143°.03E, h101km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=0.31; Mθθ=0.92; Mφφ=-0.61; Mrθ=3.04; Mrφ=-0.45; Mθφ=0.69; Fault plane solution: M0=3.19000×10^14^ NP1: φs=283.00000°, δ=84.00000°, λ=-92.00000°. NP2: φs=116.00000°, δ=6.00000°, λ=-76.00000°.*
*JMA **21** 09:09:57.4±0.2, 42°.4N±0°.5×143°.0E±0°.7, h101km±1km, MD3.4/40, MV3.7/40, HIDAKA MOUNTAINS REGION*
JMA Felt I J1 at HIDAKA MOUNTAINS REGION .

ISC 21 09:09:56.7±0.7, 42°.31N±0°.04×143°.00E±0°.03, h110km±5km, n105, σ1§36/123, mb4.0/22, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.19**	**261**	*e*P	**Pn**	**09 10 12.0**	**-0.1**
JNBK				*e*S	**Sn**	**09 10 23.4**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.19**	**261**	A	A	09 10 12.0	
	comp=E,8.0nm,0.6s,comp=N,12nm,0.4s						
JTHR	**Tokachihiroo**	**0.22**	**94**	*e*P	**Pn**	**09 10 12.1**	**-0.1**
JTHR				*e*S	**Sn**	**09 10 22.8**	**-0.9**
JTHR	**Tokachihiroo**	**0.22**	**94**	A	A	09 10 12.1	
	comp=E,6.0nm,0.3s,comp=N,5.0nm,0.4s						
JEM	**Erimo**	**0.31**	**158**	*e*P	**Pn**	**09 10 12.8**	**+0.2**
ERM	**Erimo**	**0.32**	**159**		**Pn**	**09 10 12.8**	**+0.2**
ERM	**Erimo**	**0.32**	**159**	PN	**Pn**	**09 10 12.8**	**+0.2**
JCH	**Churui**	**0.41**	**41**	*e*P	**Pn**	**09 10 12.2**	**-0.8**
JCH				*e*S	**Sn**	**09 10 23.4**	**-1.8**
JCH	**Churui**	**0.41**	**41**	A	A	09 10 12.2	
	comp=E,3.0nm,0.5s,comp=N,4.0nm,0.5s						
JSHD	**Hidakashinhida**	**0.41**	**285**	*e*P	**Pn**	**09 10 13.1**	**+0.1**
JSHD				*e*S	**Sn**	**09 10 25.9**	**+0.7**
JSHD	**Hidakashinhida**	**0.41**	**285**	A	A	09 10 13.1	
	comp=E,8.0nm,0.7s,comp=N,9.0nm,0.7s						
JBT2	**Biratori 2**	**0.67**	**315**	*e*P	**Pn**	**09 10 13.9**	**-0.9**
JOB	**Onbets**	**0.85**	**46**	*e*P	**Pn**	**09 10 16.3**	**-0.2**
JOB				*e*S	**Sn**	**09 10 30.6**	**-0.7**
JIAM	**Iburiatsuma**	**0.86**	**292**	*e*P	**Pn**	**09 10 16.9**	**+0.4**
JIAM				*e*S	**Sn**	**09 10 32.2**	**+0.8**
JIAM	**Iburiatsuma**	**0.86**	**292**	A	A	09 10 16.9	
	comp=E,4.0nm,0.6s,comp=N,9.0nm,0.3s						
JFR	**Furan**	**0.91**	**341**	*e*P	**Pn**	**09 10 15.8**	**-1.2**
JFR				*e*S	**Sn**	**09 10 31.1**	**-1.2**
JAR	**Ashorobuto**	**1.14**	**29**	*e*P	**Pn**	**09 10 18.5**	**-0.8**
JAR				*e*S	**Sn**	**09 10 34.3**	**-2.2**
JEW	**Eniwo**	**1.26**	**295**	*e*P	**Pn**	**09 10 20.5**	**-0.3**
JEW				*e*S	**Sn**	**09 10 37.9**	**-1.1**
JAB	**Ashibetsu**	**1.33**	**335**	*e*P	**Pn**	**09 10 20.5**	**-0.9**
JAB				*e*S	**Sn**	**09 10 38.9**	**-1.4**
JAK	**Akkeshi**	**1.43**	**61**	P	**Pn**	**09 10 22.1**	**-0.5**
JAK				*e*S	**Sn**	**09 10 40.9**	**-1.4**
JAK	**Akkeshi**	**1.43**	**61**	A	A	09 10 22.1	
	comp=E,3.0nm,1.5s,comp=N,4.0nm,0.3s						
JNB	**Noboribetsu**	**1.46**	**277**	*e*P	**Pn**	**09 10 21.9**	**-1.2**
JNB				*e*S	**Sn**	**09 10 40.6**	**-2.4**
JISS	**Ishikarishitsu**	**1.52**	**310**	*e*P	**Pn**	**09 10 23.4**	**-0.3**
JISS				*e*S	**Sn**	**09 10 43.4**	**-0.8**
JKB	**Kayabe**	**1.52**	**255**	*e*P	**Pn**	**09 10 22.8**	**-1.0**
JKB				*e*S	**Sn**	**09 10 41.8**	**-2.6**
AKK	**Akkeshi**	**1.53**	**62**	*e*P	**Pn**	**09 10 23.3**	**-0.6**
JKK2	**Kamakawa 2**	**1.57**	**353**	*e*P	**Pn**	**09 10 23.6**	**-0.9**
JHR	**Hokuryu**	**1.71**	**327**	*e*P	**Pn**	**09 10 25.5**	**-0.6**
JHR				*e*S	**Sn**	**09 10 47.4**	**-1.1**
JMP	**Maruseppu**	**1.72**	**9**	*e*P	**Pn**	**09 10 25.6**	**-0.6**
JMP				*e*S	**Sn**	**09 10 47.2**	**-1.5**
JOT	**Ohata**	**1.73**	**238**	*e*P	**Pn**	**09 10 25.4**	**-0.9**
JTKR	**Abashiri--Toko**	**1.79**	**21**	*e*P	**Pn**	**09 10 26.4**	**-0.7**
JTKR				*e*S	**Sn**	**09 10 48.2**	**-1.9**
JKA	**Kamikawa-asahi**	**1.83**	**351**		**Pn**	**09 10 26.7**	**-0.8**
JKA				Sn	**Sn**	**09 10 49.9**	**-1.2**
JKA	**Kamikawa-asahi**	**1.83**	**351**	*e*P	**Pn**	**09 10 27.6**	**0.0**
ASAJ	**Asahikawa**	**1.83**	**351**	P	**Pn**	**09 10 26.7**	**-0.9**
	comp=N,42nm,0.3s,baz=205,slow=18,SNR=68						
ASAJ				S	**Sn**	**09 10 49.5**	**-1.6**
	comp=N,172nm,0.8s,baz=31,slow=28,SNR=34						
JTM	**Tenmabayashi**	**2.10**	**224**		**Pn**	**09 10 30.1**	**-0.9**
JTM				Sn	**Sn**	**09 10 54.8**	**-2.4**
NMR	**Nemuro--Hokkai**	**2.27**	**61**	⇓*i*PN	**Pn**	**09 10 32.0**	**-1.0**
NMR				*e*S	**Sn**	**09 10 57.3**	**-3.7**
NMR	**Nemuro--Hokkai**	**2.27**	**61**	*i*P	**Pn**	**09 10 32.1**	**-1.0**
NMR				*e*S	**Sn**	**09 10 57.6**	**-3.4**
RUSJ	**Misakicho**	**2.43**	**42**	⇓*i*PN	**Pn**	**09 10 35.4**	**+0.2**
RUSJ				*e*S	**Sn**	**09 11 06.8**	**+2.0**
YUK	**Yuzh-Kuril'sk**	**2.71**	**50**	*e*PN	**Pn**	**09 10 38.9**	**0.0**
YUK				*e*S	**Sn**	**09 11 09.2**	**-2.1**
YUK				pmax	pmax		
	comp=Z,213nm,0.2s						
YUK				pmax	pmax		
	comp=N,22nm,0.1s						
YUK				pmax	pmax		
	comp=E,37nm,0.1s						
YUK				smax	smax		
	comp=N,445nm,0.4s						
YUK				smax	smax		
	comp=E,427nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.71**	**50**	*e*P	**Pn**	**09 10 38.6**	**-0.3**
YUK				AMB	AMB	09 10 39.7	
	comp=E,210nm,0.2s						
YUK				*e*S	**Sn**	**09 11 09.2**	**-2.1**
YUK				A	A	09 11 17.1	
	comp=E,450nm,0.4s						
YUK				A	A	09 11 17.1	
	comp=E,430nm,0.4s						
SHO	**Shikotan**	**3.21**	**60**	*e*PN	**Pn**	**09 10 44.9**	**-0.5**
SHO				*e*S	**Sn**	**09 11 19.0**	**-4.0**
SHO				pmax	pmax		
	comp=E,4.0nm,0.1s						
SHO				pmax	pmax		
	comp=Z,17nm,0.1s						
SHO				pmax	pmax		
	comp=N,12nm,0.2s						
SHO				smax	smax		
	comp=N,259nm,0.2s						
SHO				smax	smax		
	comp=E,263nm,0.2s						
SHO	**Shikotan**	**3.21**	**60**	*e*P	**Pn**	**09 10 44.9**	**-0.5**
SHO				AMB	AMB	09 10 45.4	
	comp=E,20nm,0.1s						
SHO				*e*S	**Sn**	**09 11 19.3**	**-3.7**
SHO				A	A	09 11 22.1	
	comp=E,260nm,0.2s						
SHO				A	A	09 11 22.1	
	comp=E,260nm,0.2s						
KUR	**Kuril'sk**	**4.58**	**49**	*e*PN	Pn	09 11 11.2	+7.4
KUR				*e*S	**Sn**	**09 11 55.2**	**-0.7**
KUR				smax	smax		
	comp=N,48nm,0.3s						
KUR				smax	smax		
	comp=E,33nm,0.3s						
KUR	**Kuril'sk**	**4.58**	**49**	*e*P	**Pn**	**09 11 04.1**	**+0.3**
KUR				AMB	AMB	09 11 10.3	
	comp=E,20nm,0.4s						
KUR				*e*S	**Sn**	**09 11 53.2**	**-2.7**
KUR				A	A	09 11 58.7	
	comp=E,60nm,0.3s						
KUR				A	A	09 11 58.7	
	comp=E,40nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.65**	**358**	Pn	**Pn**	**09 11 03.9**	**-0.8**
YSS	**Yuzh-Sakhalins**	**4.65**	**358**	*e*PN	**Pn**	**09 11 04.7**	**0.0**
YSS				*e*S	**Sn**	**09 11 57.1**	**-0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				smax	smax		
	comp=N,20nm,0.8s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.65**	**358**	*e*P	**Pn**	**09 11 04.9**	**+0.2**
YSS				AMB	AMB	09 11 10.0	
	comp=E,10.0nm,0.8s						
YSS				*e*S	**Sn**	**09 11 55.4**	**-2.2**
YSS				A	A	09 12 01.0	
	comp=E,20nm,0.8s						
YSS				A	A	09 12 01.0	
	comp=E,10.0nm,0.8s						
JMM	**Marumori**	**4.75**	**202**		**Pn**	**09 11 05.5**	**-0.7**
MJAR	**Matsushiro Arr**	**6.85**	**214**	P	**Pn**	**09 11 33.8**	**-0.8**
	comp=E,1.1nm,0.3s,baz=26,slow=12,SNR=5.3						
JGF	**Kuroka**	**8.01**	**215**	Pn	**Pn**	**09 11 49.5**	**-0.8**
USA0B	**Ussuriysk Arra**	**8.26**	**287**	Pn	**Pn**	**09 11 50.9**	**-2.7**
USA0B	**Ussuriysk Arra**	**8.26**	**287**	PN	**Pn**	**09 11 50.9**	**-2.7**
USRK	**Ussuriysk Ar.**	**8.26**	**287**	Pn	**Pn**	**09 11 50.7**	**-2.9**
USRK	**Ussuriysk Ar.**	**8.26**	**287**	PN	**Pn**	**09 11 50.7**	**-2.9**
SONM	**Songino Array**	**26.26**	**295**	P	**P**	**09 15 21.5**	**-0.2**
	comp=E,0.5nm,0.5s,baz=123,slow=5.3,SNR=2.0						
	comp=E,0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.24**	**131**	T	T	09 47 38.1	
	baz=325,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**30.25**	**131**	T	T	09 47 42.2	
	baz=325,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**30.26**	**131**	T	T	09 47 44.6	
	baz=325,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**31.11**	**132**	T	T	09 48 48.0	
	baz=326,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**31.12**	**132**	T	T	09 48 48.3	
	baz=326,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**31.13**	**132**	T	T	09 48 52.5	
	baz=326,slow=76,SNR=18						
L16K	**Owhat River**	**38.79**	**40**	P	**P**	**09 17 11.1**	**+0.8**
L16K				IAmb	IAmb	09 17 31.9	
	comp=Z,4.0nm,1.1s						
H17K	**Granite Mounta**	**38.88**	**35**	P	**P**	**09 17 12.9**	**+2.0**
H17K				IAmb	IAmb	09 17 32.3	
	comp=Z,3.5nm,1.1s						
C18K	**Utukok River**	**39.04**	**29**	P	**P**	**09 17 12.2**	**-0.1**
C18K				IAmb	IAmb	09 17 28.9	
	comp=Z,2.9nm,1.1s						
J17K	**VABM Dome**	**39.09**	**37**	P	**P**	**09 17 14.4**	**+1.7**
ZALV	**Zalesovo Beam**	**39.46**	**308**	P	**P**	**09 17 15.6**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=76,slow=9.3,SNR=4.4						
	comp=Z,0.9nm,0.6s						
G18K	**Tagagawik**	**39.52**	**33**	P	**P**	**09 17 15.8**	**-0.5**
G18K				IAmb	IAmb	09 17 36.2	
	comp=Z,2.9nm,1.1s						
M17K	**Holitna River**	**39.76**	**40**	P	**P**	**09 17 20.1**	**+1.8**
E19K	**Redstone River**	**40.29**	**31**	P	**P**	**09 17 23.0**	**+0.4**
E19K				IAmb	IAmb	09 17 41.3	
	comp=Z,1.5nm,0.8s						
MK31	**Makanchi Array**	**42.56**	**298**	P	**P**	**09 17 41.3**	**-0.2**
MK31	**Makanchi Array**	**42.56**	**298**	P	**P**	**09 17 41.3**	**-0.2**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**42.56**	**298**	P	**P**	**09 17 40.6**	**-0.8**
MKAR	**Makanchi Array**	**42.56**	**298**	P	**P**	**09 17 40.6**	**-0.8**
MKAR	**Makanchi Array**	**42.56**	**298**	P	**P**	**09 17 40.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=87,slow=7.8,SNR=3.6						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**42.56**	**298**	*e*P	**P**	**09 17 40.6**	**-0.8**
KTH	**Kantishna Hill**	**42.75**	**37**	P	**P**	**09 17 44.2**	**+1.4**
KTH				IAmb	IAmb	09 17 48.4	
	comp=Z,4.8nm,1.1s						
MAKZ	**Makanchi**	**42.76**	**298**	P	**P**	**09 17 42.1**	**-1.0**
MAKZ				IAmb	IAmb	09 17 50.0	
	comp=Z,0.9nm,0.5s						
MAKZ	**Makanchi**	**42.76**	**298**	P	**P**	**09 17 42.1**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MDM	**Murphy Dome**	**43.85**	**35**	P	**P**	**09 17 53.0**	**+1.4**
MDM				IAmb	IAmb	09 17 53.1	
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**44.43**	**35**	P	**P**	**09 17 56.7**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=259,slow=5.4,SNR=32						
	comp=Z,0.6nm,0.5s						
SCRK	**Sand Creek**	**45.77**	**36**	P	**P**	**09 18 07.5**	**+0.5**
BCAR	**Beaver Creek A**	**46.90**	**37**	P	**P**	**09 18 17.7**	**+2.0**
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**09 18 25.0**	**+0.2**
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**09 18 25.0**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=84,slow=8.8,SNR=10						
	comp=Z,1.2nm,0.4s						
I30M	**Mount Dempster**	**48.77**	**34**	P	**P**	**09 18 31.9**	**+1.7**
INK	**Inuvik**	**49.16**	**29**	P	**P**	**09 18 33.4**	**+0.5**
INK	**Inuvik**	**49.16**	**29**	P	**P**	**09 18 33.4**	**+0.5**
INK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
INK	**Inuvik**	**49.16**	**29**	P	**P**	**09 18 33.1**	**+0.2**
	comp=Z,0.7nm,0.2s,baz=298,slow=9.7,SNR=11						
	comp=Z,0.7nm,0.2s						
WHY	**Whitehorse**	**50.67**	**39**	P	**P**	**09 18 46.9**	**+2.3**
WHY				IAmb	IAmb	09 18 51.0	
	comp=Z,2.3nm,1.1s						
C36M	**Paulatuk**	**52.15**	**27**	P	**P**	**09 18 55.8**	**+0.5**
ABKAR	**Akbulak array**	**55.57**	**308**	P	**P**	**09 19 21.1**	**+0.6**
RES	**Resolute Bay**	**57.20**	**16**	P	**P**	**09 19 31.8**	**+0.2**
RES				IAmb	IAmb	09 19 32.2	
	comp=Z,2.3nm,1.0s						
RES	**Resolute Bay**	**57.20**	**16**	P	**P**	**09 19 31.8**	**+0.2**
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RES	**Resolute Bay**	**57.20**	**16**	P	**P**	**09 19 31.4**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=316,slow=6.3,SNR=9.7						
	comp=Z,1.6nm,0.6s						
YKA	**Yellowknife Ar**	**58.66**	**32**	P	**P**	**09 19 42.6**	**+0.5**
	comp=Z,0.2nm,0.8s,baz=301,slow=7.1,SNR=4.8						
	comp=Z,0.2nm,0.8s						
FIA1	**FINESS Array S**	**64.74**	**332**	P	**P**	**09 20 22.4**	**-0.4**
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**09 20 22.3**	**-0.5**
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**09 20 22.3**	**-0.5**
FINES	**FINESS Array B**	**64.74**	**332**	P	**P**	**09 20 22.2**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=49,slow=7.9,SNR=23						
	comp=Z,2.3nm,0.5s						
G06A	**Carlson Farm,**	**65.39**	**51**	P	**P**	**09 20 29.0**	**+1.6**
G06A				IAmb	IAmb	09 20 46.1	
	comp=Z,2.3nm,0.9s						
FCC	**Fort Churchill**	**68.76**	**28**	P	**P**	**09 20 49.0**	**+0.7**
FCC	**Fort Churchill**	**68.76**	**28**	P	**P**	**09 20 49.0**	**+0.7**
NC405	**NORSAR Array S**	**69.60**	**337**	P	**P**	**09 20 53.5**	**-0.1**
HFS	**Hagfors**	**69.79**	**336**	P	**P**	**09 20 54.5**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=39,slow=5.7,SNR=9.4						
	comp=Z,1.2nm,0.5s						
NOA	**NORSAR Array B**	**69.80**	**337**	P	**P**	**09 20 54.6**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=34,slow=6.3,SNR=3.5						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**73.14**	**47**	P	**P**	**09 21 16.6**	**+1.1**

*IDC **21** 09:28:23.4±1.3, 7°.83S×126°.31E, h0km, mb4.0/4, mbtmp4.0/6, ML4.1/2, Error ellipse: s-maj=162.4km s-min=21.5km az=59.0*
*DJA **21** 09:28:30.7±0.6, 8°.5×6°.×12°.5E±°, h10km, M3.9/7, mb4.2/3, MLv3.8/7*

ISC 21 09:28:28.2±0.9, 8°.14S±0°.09×126°.0E±0°.1, h35km, n11, σ1§66/13, mb4.0/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.32**	**226**	P	**Pn**	**09 29 06.2**	**+2.1**
EDFI	**Ende, Flores**	**4.28**	**262**	P	**Pn**	**09 29 30.3**	**-0.7**
BBSI	**Bau Bau**	**4.28**	**308**	P	**Pn**	**09 29 32.2**	**+1.2**
BKSI	**Bulukumba**	**6.45**	**295**	P	**Pn**	**09 29 59.3**	**-1.4**
	7.9nm,0.9s,0.0nm						
PLAI	**Plampang**	**8.13**	**265**	P	**Pn**	**09 30 22.7**	**-1.2**
WRA	**Warramunga Arr**	**14.26**	**146**	Pn	**Pn**	**09 31 49.0**	**+1.2**
	1.0nm,0.3s,baz=319,slow=14,SNR=23						
WRA				Sn	**Sn**	**09 34 21.6**	**-3.3**
	0.3nm,0.3s,baz=335,slow=22,SNR=2.3						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**17.21**	**155**	P	**P**	**09 32 27.8**	**+0.4**
	0.4nm,0.3s,baz=324,slow=10,SNR=34						
ASAR				S	**Sn**	**09 35 34.4**	**-2.1**
	1.1nm,0.8s,baz=314,slow=20,SNR=7.0						
	1.0nm,0.5s						
STKA	**Stephens Creek**	**27.73**	**150**	P	**P**	**09 34 14.1**	**+0.5**
	1.7nm,0.9s,baz=32,slow=9.6,SNR=2.9						
	1.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.55**	**315**	P	**P**	**09 35 39.7**	**+0.3**
	1.4nm,0.3s,baz=130,slow=6.2,SNR=5.6						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**67.06**	**329**	P	**P**	**09 39 18.4**	**+0.3**
	1.0nm,0.6s,baz=128,slow=7.6,SNR=11						
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**70.90**	**336**	P	**P**	**09 39 41.2**	**-0.5**
	0.3nm,0.3s,baz=141,slow=5.5,SNR=1.5						
	0.3nm,0.3s						

*IDC **21** 09:29:48.1±4.5, 36°.26N×71°.17E, h180km±39km, mb3.1/9, mbtmp3.7/13, Error ellipse: s-maj=33.7km s-min=20.5km az=31.0*
*NEIC **21** 09:29:52.4±1.1, 36°.50N±0°.08×71°.22E±0°.09, h206km±10km, mb4.7/6, Error ellipse: s-maj=11.1km s-min=10.6km az=174.0*
*NNC **21** 09:29:54.3±2.3, 36°.94N×71°.23E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=18.0km s-min=16.9km az=132.0*

ISC 21 09:29:50.9±0.6, 36°.39N±0°.05×71°.11E±0°.06, h200km, n57, σ2§93/70, mb3.7/13, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.50**	**223**		**Pn**	**09 30 38.0**	**+2.9**
SIMJ	**Simiganj**	**2.82**	**324**		**Pn**	**09 30 39.5**	**+1.0**
NIL	**Nilore**	**3.25**	**147**	Pn	**Pn**	**09 30 46.6**	**+3.0**
BTK	**Batken**	**3.67**	**356**	Pn	**Pn**	**09 30 50.4**	**+1.7**
JMU	**Jammu**	**4.81**	**138**	*e*P	**Pn**	**09 31 05.3**	**+2.4**
JMU				*e*S	**Sn**	**09 31 58.4**	**-1.2**
KSH	**Kashi**	**4.95**	**49**	Pn	**Pn**	**09 31 00.9**	**-3.8**
KSH				Sn	Sn	09 31 51.1	-12
KSH				smax	smax		
	comp=N,170nm,0.5s						
KSH				smax	smax		
	comp=E,86nm,0.6s						
ARSB	**Arslanbob**	**5.14**	**16**		**Pn**	**09 31 07.0**	**-0.2**
THN	**Thein Dam**	**5.48**	**135**	*e*P	**Pn**	**09 31 13.4**	**+2.0**
THN				IAML		09 32 16.4	
	comp=E,127nm,0.4s						
THN				*e*S	**Sn**	**09 32 17.4**	**+2.4**
THN				IAML		09 32 20.3	
	comp=E,88nm,0.4s						
DHRM	**DHARAMSHALA**	**5.96**	**132**	*e*P	**Pn**	**09 31 18.5**	**+0.7**
DHRM				*e*S	**Sn**	**09 32 24.9**	**-1.6**
DHRM				IAML		09 32 27.3	
	comp=E,297nm,0.7s						
DHRM				IAML		09 32 28.1	
	comp=E,186nm,0.8s						
NRN	**Naryn**	**6.32**	**36**		**Pn**	**09 31 21.0**	**-1.5**
UCH	**Uchtor**	**6.40**	**23**	P	**Pn**	**09 31 23.7**	**0.0**
	SNR=40						
EKS2	**Erkin-Say**	**6.60**	**17**	P	**Pn**	**09 31 26.1**	**+0.2**
	SNR=14						
BHK	**Bhakra**	**6.63**	**137**	*e*P	**Pn**	**09 31 26.7**	**+0.3**
BHK				*e*S	**Sn**	**09 32 40.8**	**-1.3**
BHK				IAML		09 32 42.2	
	comp=N,56nm,0.3s						
BHK				IAML		09 32 43.1	
	comp=E,78nm,0.2s						
KK31	**Karatay Array**	**6.72**	**356**	⇓P	**Pn**	**09 31 27.3**	**-0.1**
	comp=E,8.9nm,0.3s,baz=179,slow=13,SNR=362						
KK31				⇑S	**Sn**	**09 32 39.4**	**-4.7**
	comp=E,9.8nm,0.7s,baz=183,slow=22,SNR=4.2						
KK31	**Karatay Array**	**6.72**	**356**		**Pn**	**09 31 27.5**	**+0.1**
KKAR	**Karatay Array**	**6.72**	**356**		**Pn**	**09 31 27.5**	**+0.1**
AAK	**Ala-Archa**	**6.77**	**22**	P	**Pn**	**09 31 28.5**	**+0.3**
	SNR=30						
AAK	**Ala-Archa**	**6.77**	**22**	Pn	**Pn**	**09 31 28.4**	**+0.3**
AAK	**Ala-Archa**	**6.77**	**22**	P	**Pn**	**09 31 28.0**	**-0.1**
	comp=E,17nm,0.3s,baz=189,slow=6.6,SNR=76						
AAK				S	**Sn**	**09 32 42.6**	**-2.8**
	comp=E,7.2nm,0.6s,baz=139,slow=9.1,SNR=15						
KBK	**Karagaybulak**	**6.93**	**24**	P	**Pn**	**09 31 31.0**	**+0.8**
	SNR=14						
ULHL	**Ulahol**	**7.07**	**33**	P	**Pn**	**09 31 32.0**	**-0.2**
	SNR=8.0						
BOOM	**Boomskoye usch**	**7.15**	**30**		**Pn**	**09 31 33.5**	**+0.4**
CHMS	**Chumysh**	**7.17**	**22**	P	**Pn**	**09 31 33.5**	**+0.2**
	SNR=8.7						
CHMS	**Chumysh**	**7.17**	**22**	⇓P	**Pn**	**09 31 33.0**	**-0.4**
	comp=E,2.6nm,0.3s						
CHMS				⇑S	**Sn**	**09 32 50.3**	**-4.4**
	comp=E,8.4nm,0.8s	

FINES FINES Array B 37.63 326 P P 09 36 46.5 +0.4
FINES FINES Array B 37.63 326 P P 09 36 45.9 -0.2
comp=Z,0.6nm,0.3s,baz=117,slow=11,SNR=10
comp=Z,0.6nm,0.3s
ARCES ARCESS Array B 41.28 338 P P 09 37 15.9 -0.3
comp=Z,2.4nm,0.8s,baz=108,slow=7.8,SNR=8.7
comp=Z,2.4nm,0.8s
HFS Hagfors 43.21 322 P P 09 37 32.8 +0.9
comp=Z,0.9nm,0.5s,baz=113,slow=11,SNR=2.0
comp=Z,0.9nm,0.5s
NOA NORSAR Array B 44.52 323 P P 09 37 42.9 +0.6
comp=Z,0.2nm,0.5s,baz=94,slow=7.4,SNR=2.0
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 65.80 269 P P 09 40 14.2 -0.8
comp=Z,0.4nm,0.5s,baz=43,slow=5.4,SNR=5.8
comp=Z,0.4nm,0.5s
YKA Yellowknife Ar 81.35 3 P P 09 41 45.3 +0.6
comp=Z,0.1nm,0.5s,baz=352,slow=5.5,SNR=5.1
comp=Z,0.1nm,0.5s
WRA Warramunga Arr 81.86 122 P P 09 41 47.5 -0.4
comp=Z,0.3nm,0.7s,baz=326,slow=4.9,SNR=1.3
comp=Z,0.3nm,0.7s
ASAR Alice Springs 84.12 125 P P 09 41 57.6 -1.9
comp=Z,0.3nm,0.7s,baz=318,slow=5.4,SNR=2.6
comp=Z,0.3nm,0.7s

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*IDC **21** 09:34:48.5±1.7, 14°.30N×147°.80E, h0km, mb3.8/5, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=41.5km s-min=24.6km az=90.0*

ISC 21 09:34:53.9±1.5, 14°.3N±0°.2×147°.8E±0°.2, h35km, n12, σ0s79/7, mb3.8/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.90**	**257**	Pn	**Pn**	**09 35 36.8**	**-0.8**
	28nm,0.3s,baz=90,slow=8.1,SNR=9.8						
GUMO				Sn	**Sn**	**09 36 11.8**	**+0.6**
	27nm,0.3s,baz=0.0,slow=20,SNR=9.3						
	51nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**18.63**	**74**	T	T	09 58 01.8	
	baz=262,slow=74						
H11S1	**WAKE ISLAND Hy**	**18.64**	**74**	T	T	09 58 05.3	
	baz=262,slow=74						
H11S2	**WAKE ISLAND Hy**	**18.64**	**74**	T	T	09 58 03.5	
	baz=262,slow=74						
H11N1	**WAKE ISLAND Hy**	**19.07**	**71**	T	T	09 58 33.6	
	baz=256,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**19.08**	**71**	T	T	09 58 34.6	
	baz=256,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**19.09**	**71**	T	T	09 58 35.2	
	baz=256,slow=75,SNR=21						
WRA	**Warramunga Arr**	**36.46**	**202**	P	**P**	**09 41 56.1**	**+0.4**
	1.1nm,0.8s,baz=27,slow=9.6,SNR=5.3						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**40.05**	**200**	P	**P**	**09 42 25.9**	**-0.1**
	0.5nm,0.7s,baz=23,slow=7.2,SNR=6.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**62.99**	**315**	P	**P**	**09 45 18.1**	**+0.8**
	0.4nm,0.9s,baz=90,slow=8.2,SNR=4.9						
	0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**65.96**	**319**	P	**P**	**09 45 35.8**	**-0.7**
	1.1nm,0.2s,baz=96,slow=7.4,SNR=5.4						
	1.1nm,0.2s						
BVAR	**Borovoye Array**	**71.17**	**321**	P	**P**	**09 46 08.6**	**-0.5**
	0.6nm,0.5s,baz=72,slow=4.7,SNR=2.9						
	0.6nm,0.5s						

IDC 21 09:46:01.2±3.5, 54°.42N×86°.86E, h0km, mbtmp2.8/2, ML2.5/1, Error ellipse: s-maj=31.0km s-min=19.3km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**249**	I	I	09 53 55.9	
	baz=71,slow=334,SNR=3.4						
ZALV	**Zalesovo Beam**	**1.29**	**249**	Pg	Pg	09 46 23.8	-2.1
	1.0nm,0.3s,baz=69,slow=17,SNR=13						
ZALV				Lg	Lg	09 46 43.0	
	1.2nm,0.3s,baz=64,slow=23,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.34**	**237**	Pn	Pn	09 47 36.6	+0.7
	0.5nm,0.3s,baz=53,slow=14,SNR=5.2						
MKAR	**Makanchi Array**	**8.16**	**203**	Pn	Pn	09 48 02.6	+1.7
	0.1nm,0.3s,baz=26,slow=13,SNR=4.2						
	0.1nm,0.3s						

IDC 21 09:49:02.3±2.6, 53°.73N×86°.83E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=24.6km s-min=14.0km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**281**	I	I	09 56 56.9	
	baz=101,slow=333,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.21**	**281**	Pg	Pg	09 49 23.7	-1.8
	0.7nm,0.3s,baz=99,slow=16,SNR=7.6						
ZALV				Lg	Lg	09 49 42.4	
	1.5nm,0.3s,baz=101,slow=28,SNR=9.7						
KURBB	**Kurchatov Arra**	**5.98**	**242**	Pn	Pn	09 50 33.2	+1.2
	0.1nm,0.3s,baz=57,slow=13,SNR=1.9						
	0.4nm,0.2s						
MKAR	**Makanchi Array**	**7.53**	**205**	Pn	Pn	09 50 54.6	+1.3
	0.1nm,0.3s,baz=26,slow=14,SNR=9.5						
	0.2nm,0.2s						

IDC 21 09:54:28.4±2.1, 5°.79S×127°.13E, h0km, mb3.7/2, mbtmp3.8/4, ML4.1/2, MS2.8/1, Error ellipse: s-maj=327.0km s-min=26.6km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.72**	**154**	Pn	Pn	09 58 13.3	+2.0
	0.7nm,0.3s,baz=332,slow=12,SNR=14						
	1.6nm,0.3s						
ASAR	**Alice Springs**	**18.93**	**161**	P	P	09 58 50.1	-0.9
	0.6nm,0.3s,baz=344,slow=10,SNR=44						
	2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.78**	**312**	LR	LR	10 18 45.8	
	comp=Z,12nm,18.3s,baz=90,slow=40						
MKAR	**Makanchi Array**	**65.67**	**328**	P	P	10 05 15.3	+0.6
	0.3nm,0.4s,baz=114,slow=8.1,SNR=9.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**70.01**	**329**	P	P	10 05 41.1	-0.7
	0.5nm,0.5s,baz=126,slow=4.9,SNR=5.9						
	0.5nm,0.5s						

IDC 21 09:55:10.6±2.4, 54°.24N×86°.09E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=18.3km s-min=11.3km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.80**	**249**	I	I	10 00 40.0	
	baz=69,slow=334,SNR=1.6						
ZALV	**Zalesovo Beam**	**0.80**	**249**	Pg	Pg	09 55 25.0	-1.0
	1.9nm,0.3s,baz=66,slow=17,SNR=14						
ZALV				Lg	Lg	09 55 37.6	
	5.8nm,0.3s,baz=69,slow=29,SNR=18						
KURBB	**Kurchatov Arra**	**5.87**	**235**	Pn	Pn	09 56 39.8	+1.0
	0.2nm,0.3s,baz=52,slow=13,SNR=4.1						
KURBB				Lg	Lg	09 58 17.6	
	0.1nm,0.3s,baz=46,slow=5.4,SNR=1.8						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**7.84**	**200**	Pn	Pn	09 57 06.8	+1.0
	0.2nm,0.3s,baz=23,slow=12,SNR=14						
MKAR				Sn	Sn	09 58 35.2	-0.1
	baz=23,slow=23						
	0.5nm,0.4s						

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*IDC **21** 10:03:23.8±1.1, 2°.87S×154°.36E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=35.2km s-min=21.9km az=100.0*

ISC 21 10:03:29.1±1.0, 2°.9S±0°.1×154°.4E±0°.2, h35km, n7, σ0s74/7, mb3.5/7, North of Solomon Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**22.36**	**149**	P	**P**	**10 08 24.8**	**+0.4**
	3.8nm,0.5s,baz=320,slow=16,SNR=10						
	3.8nm,0.5s						
WRA	**Warramunga Arr**	**25.85**	**228**	P	**P**	**10 08 58.1**	**+0.5**
	1.3nm,0.6s,baz=52,slow=9.1,SNR=10						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**28.57**	**222**	P	**P**	**10 09 21.6**	**-0.5**
	0.7nm,0.7s,baz=56,slow=8.5,SNR=5.4						
	0.7nm,0.7s						
PETK	**Petropavlovsk-**	**55.90**	**2**	P	**P**	**10 13 04.0**	**+0.7**
	1.7nm,0.7s,baz=159,slow=8.6,SNR=1.3						
	1.7nm,0.7s						
SONM	**Songino Array**	**65.60**	**327**	P	**P**	**10 14 09.9**	**+0.3**
	0.1nm,0.3s,baz=107,slow=4.8,SNR=2.4						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**79.85**	**22**	P	**P**	**10 15 32.8**	**-0.9**
	0.3nm,0.7s,baz=259,slow=4.4,SNR=5.7						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**79.95**	**318**	P	**P**	**10 15 34.5**	**-0.2**
	0.2nm,0.6s,baz=91,slow=7.2,SNR=4.7						
	0.2nm,0.6s						

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*IDC **21** 10:04:21.2±1.2, 22°.46S×66°.05W, h234km±12km, mb3.1/5, mbtmp3.8/9, Error ellipse: s-maj=22.2km s-min=16.4km az=147.0*

*SJA **21** 10:04:21.6±0.7, 22°.40S×66°.18W, h270km±4km, ML4.1, MW3.8*

*NEIC **21** 10:04:22.1±1.2, 22°.48S±0°.08×66°.15W±0°.05, h247km±8km, mb4.3/12, Error ellipse: s-maj=12.1km s-min=5.5km az=154.0*

ISC 21 10:04:22.4±0.7, 22°.46S±0°.05×66°.28W±0°.05, h253km±6km, n94, σ1s22/119, mb3.8/9, 1C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**0.76**	**68**	*e*P	**Pn**	**10 04 58.6**	**+1.4**
YJA				*e*S	**S**	**10 05 25.1**	**+0.6**
AF01	**San Pedro de A**	**1.82**	**254**	Pn	**Pn**	**10 05 03.8**	**-0.1**
SLA	**San Lorenzo**	**2.36**	**163**	*e*P	**Pn**	**10 05 10.3**	**+1.7**
LVC	**Limon Verde**	**2.44**	**266**		**Pn**	**10 05 09.7**	**0.0**
LVC	**Limon Verde**	**2.44**	**266**	*e*P	**Pn**	**10 05 11.2**	**+1.5**
LVC				*e*S	**S**	**10 05 48.1**	**+1.2**
LVC	**Limon Verde**	**2.44**	**266**	P	**Pn**	**10 05 10.3**	**+0.6**
	36nm,0.4s,baz=92,slow=5.4,SNR=73						
LVC				S	**S**	**10 05 47.1**	**+0.1**
	28nm,0.3s,baz=17,slow=19,SNR=31						
LVC	**Limon Verde**	**2.44**	**266**	↑*i*P	**Pn**	**10 05 11.0**	**+1.3**
LVC				*e*S	**S**	**10 05 46.9**	**0.0**
LVC				IAML		10 05 48.2	
	275nm,0.3s						
PB09	**IPOC Station P**	**2.83**	**283**		**Pn**	**10 05 15.1**	**+1.6**
PB09	**IPOC Station P**	**2.83**	**283**	*e*P	**Pn**	**10 05 15.1**	**+1.6**
PB09				*e*S	**S**	**10 05 54.7**	**+0.9**
PB09				IAML		10 05 58.1	
	comp=Z,138nm,0.4s						
PB15	**IPOC Station P**	**3.04**	**255**		**Pn**	**10 05 17.5**	**+1.7**
PB15	**IPOC Station P**	**3.04**	**255**	*e*P	**Pn**	**10 05 17.4**	**+1.7**
PB15				*e*S	**S**	**10 05 58.4**	**+0.4**
PB15				IAML		10 06 01.1	
	comp=Z,1μm,0.2s						
PB15	**IPOC Station P**	**3.04**	**255**	*i* P	**Pn**	**10 05 17.1**	**+1.4**
PB15				*e*S	**S**	**10 05 57.3**	**-0.6**
PB06	**IPOC Station P**	**3.05**	**265**		**Pn**	**10 05 16.3**	**+0.4**
PB06	**IPOC Station P**	**3.05**	**265**	*e*P	**Pn**	**10 05 17.1**	**+1.2**
PB06				*e*S	**S**	**10 05 59.2**	**+1.0**
PB06				IAML		10 06 01.1	
	comp=Z,138nm,0.3s						
PB06	**IPOC Station P**	**3.05**	**265**	*e*P	**Pn**	**10 05 17.0**	**+1.2**
PB06				*i* S	**S**	**10 05 57.5**	**-0.6**
PB01	**IPOC Station P**	**3.30**	**295**		**Pn**	**10 05 19.5**	**+0.9**
PB01	**IPOC Station P**	**3.30**	**295**	*e*P	**Pn**	**10 05 19.5**	**+0.9**
PB01				*e*S	**S**	**10 06 02.7**	**-0.3**
PB01				IAML		10 06 04.1	
	comp=Z,258nm,0.3s						
PB01	**IPOC Station P**	**3.30**	**295**	*e*P	**Pn**	**10 05 19.5**	**+0.9**
PB01				*i* S	**S**	**10 06 02.0**	**-1.0**
PB07	**IPOC Station P**	**3.42**	**282**		**Pn**	**10 05 21.1**	**+1.1**
PB07	**IPOC Station P**	**3.42**	**282**	*e*P	**Pn**	**10 05 21.3**	**+1.3**
PB07				IAML		10 06 09.1	
	comp=Z,241nm,0.4s						
PB07	**IPOC Station P**	**3.42**	**282**	*e*P	**Pn**	**10 05 20.9**	**+0.9**
PB07				*e*S	**S**	**10 06 03.8**	**-1.8**
PB08	**IPOC Station P**	**3.54**	**310**		**Pn**	**10 05 23.2**	**+1.7**
PB08	**IPOC Station P**	**3.54**	**310**	*e*P	**Pn**	**10 05 23.4**	**+1.8**
PB08				*e*S	**S**	**10 06 09.2**	**+0.9**
PB08	**IPOC Station P**	**3.54**	**310**	↓*e*P	**Pn**	**10 05 23.2**	**+1.7**
PB08				*e*S	**S**	**10 06 07.5**	**-0.8**
PB02	**IPOC Station P**	**3.55**	**288**		**Pn**	**10 05 22.2**	**+0.9**
PB02	**IPOC Station P**	**3.55**	**288**	*e*P	**Pn**	**10 05 22.2**	**+0.9**
PB02				*e*S	**S**	**10 06 06.8**	**-1.2**
PB02				IAML		10 06 08.3	
	comp=Z,400nm,0.2s						
PB02	**IPOC Station P**	**3.55**	**288**	*e*P	**Pn**	**10 05 22.0**	**+0.7**
PB02				*e*S	**S**	**10 06 06.0**	**-2.0**
PB04	**IPOC Station P**	**3.58**	**271**		**Pn**	**10 05 22.6**	**+0.8**
PB04	**IPOC Station P**	**3.58**	**271**	*e*P	**Pn**	**10 05 22.9**	**+1.2**
PB04				IAML		10 06 11.6	
	comp=Z,170nm,0.1s						
PB04	**IPOC Station P**	**3.58**	**271**	*e*P	**Pn**	**10 05 22.6**	**+0.8**
PB04				*e*S	**S**	**10 06 06.9**	**-1.9**
GO01	**Chusmiza**	**3.89**	**315**		**Pn**	**10 05 26.4**	**+0.7**
GO01	**Chusmiza**	**3.89**	**315**	*e*P	**Pn**	**10 05 26.8**	**+1.2**
GO01				*e*S	**S**	**10 06 18.0**	**+2.2**
GO01	**Chusmiza**	**3.89**	**315**	*e*P	**Pn**	**10 05 26.8**	**+1.2**
GO01				*i* S	**S**	**10 06 17.2**	**+1.4**
PATCX	**Punta Patache**	**3.96**	**294**		**Pn**	**10 05 26.5**	**+0.5**
PATCX	**Punta Patache**	**3.96**	**294**	*e*P	**Pn**	**10 05 26.5**	**+0.5**
PATCX				*e*S	**S**	**10 06 14.1**	**-2.4**
HMBC	**Humberstone**	**4.00**	**302**	*e*P	**Pn**	**10 05 26.8**	**+0.1**
HMBC				*e*S	**S**	**10 06 14.8**	**-2.7**
GO02	**Mina Guanaco**	**4.05**	**228**	Pn	**Pn**	**10 05 28.1**	**+0.8**
PB10	**IPOC Station P**	**4.08**	**254**		**Pn**	**10 05 28.1**	**+0.8**
PB10	**IPOC Station P**	**4.08**	**254**	*e*P	**Pn**	**10 05 28.4**	**+1.2**
TA01	**Diego Aracena**	**4.09**	**297**		**Pn**	**10 05 27.7**	**+0.2**
TA01	**Diego Aracena**	**4.09**	**297**	*e*P	**Pn**	**10 05 28.4**	**+0.9**
TA01				*e*S	**S**	**10 06 17.8**	**-1.5**
TA01				IAML		10 06 20.5	
	comp=Z,108nm,0.3s						
PB11	**IPOC Station P**	**4.14**	**310**		**Pn**	**10 05 28.5**	**+0.2**
PB11	**IPOC Station P**	**4.14**	**310**	*e*P	**Pn**	**10 05 28.8**	**+0.5**
PB11				*e*S	**S**	**10 06 18.8**	**-1.8**
PB11				IAML		10 06 20.5	
	comp=Z,140nm,0.2s						
PB14	**IPOC Station P**	**4.36**	**240**	Pn	**Pn**	**10 05 31.5**	**+0.6**
AC02	**Maricunga**	**5.07**	**210**	Pn	**Pn**	**10 05 40.1**	**+0.5**
AC02	**Maricunga**	**5.07**	**210**	*e*P	**Pn**	**10 05 40.5**	**+0.9**
PB16	**IPOC Station P**	**5.10**	**323**		**Pn**	**10 05 41.2**	**+1.0**
PB16	**IPOC Station P**	**5.10**	**323**	*e*P	**Pn**	**10 05 41.6**	**+1.4**
AC01	**Pan de Azucar**	**5.38**	**226**		**Pn**	**10 05 42.5**	**-0.5**
AC01	**Pan de Azucar**	**5.38**	**226**	*e*P	**Pn**	**10 05 42.5**	**-0.5**
AC01				*e*S	**S**	**10 06 43.1**	**-4.3**
AC01				IAML		10 06 48.7	
	comp=Z,70nm,0.7s						
PB12	**IPOC Station P**	**5.39**	**315**	Pn	**Pn**	**10 05 42.8**	**-0.5**
PB12	**IPOC Station P**	**5.39**	**315**	*e*P	**Pn**	**10 05 43.1**	**-0.1**
PB12				*e*S	**S**	**10 06 44.3**	**-3.5**
GO03	**Copiap**	**6.24**	**214**	Pn	**Pn**	**10 05 52.9**	**-0.8**
LPAZ	**La Paz**	**6.38**	**344**		**Pn**	**10 05 56.3**	**+0.1**
AC04	**Llanos de Chal**	**7.18**	**216**	Pn	**Pn**	**10 06 04.2**	**-1.1**
AC05	**El Transito**	**7.30**	**209**		**Pn**	**10 06 06.5**	**-0.5**
LCO	**Las Campanas**	**7.64**	**211**	Pn	**Pn**	**10 06 10.2**	**-1.3**
SIV	**San Ignacio**	**8.10**	**38**	P	**Pn**	**10 06 15.4**	**-1.7**
	comp=Z,25nm,0.7s,baz=228,slow=7.4,SNR=78						
CO01	**Juntas del Tor**	**8.23**	**204**		**Pn**	**10 06 18.6**	**-0.2**
GO04	**Tololo Observa**	**8.68**	**207**	Pn	**Pn**	**10 06 23.6**	**-0.9**
CO03	**El Pedregal**	**9.23**	**204**	Pn	**Pn**	**10 06 30.6**	**-0.7**
CO06	**Fray Jorge**	**9.48**	**209**	Pn	**Pn**	**10 06 34.4**	**+0.1**
CO02	**Combarbal**	**9.67**	**205**	Pn	**Pn**	**10 06 36.4**	**-0.6**
PTLB	**Pontes e Lacer**	**9.71**	**45**		**Pn**	**10 06 36.1**	**-1.3**
VA03	**San Esteban**	**10.94**	**199**	Pn	**Pn**	**10 06 53.4**	**+0.6**
MT13	**San Alfonso**	**11.78**	**197**		**Pn**	**10 07 04.7**	**+1.4**
BO04	**La Punta**	**12.10**	**197**	Pn	**Pn**	**10 07 07.9**	**+0.7**
ETMB	**Extrema**	**12.57**	**0**	Pn	**Pn**	**10 07 12.8**	**-0.4**
BO01	**Tunca**	**12.61**	**198**		**Pn**	**10 07 13.9**	**+0.5**
BO02	**Sierra Bellavi**	**12.90**	**197**	P	**P**	**10 07 18.1**	**-0.8**
GO05	**Huala**	**13.45**	**200**		**Pn**	**10 07 23.9**	**+0.2**
ML02	**Panimavida**	**13.99**	**198**	P	**Pn**	**10 07 30.2**	**-0.1**
GO06	**Curarrehue**	**17.63**	**193**	P	**P**	**10 08 10.8**	**-0.1**
GO06				IAmb	IAmb	10 08 16.1	
	comp=Z,16nm,1.2s						
LR05	**Currie**	**18.37**	**194**	P	**P**	**10 08 19.7**	**+1.0**
BDFB	**Brasilia**	**18.54**	**72**	P	**P**	**10 08 17.9**	**-3.0**
	comp=Z,2.1nm,0.5s,baz=230,slow=14,SNR=3.3						
PLCA	**Paso Flores**	**18.57**	**190**	P	**P**	**10 08 20.9**	**-0.1**
PLCA				IAmb	IAmb	10 08 23.1	
	comp=Z,7.2nm,1.2s						
PLCA	**Paso Flores**	**18.57**	**190**	P	**P**	**10 08 20.9**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=351,slow=8.4,SNR=5.4						
COVE	**Coope Vega, Sa**	**37.46**	**330**	P	**P**	**10 11 11.4**	**-0.6**
V53A	**Saluda**	**59.90**	**344**	P	**P**	**10 14 01.7**	**-0.3**
V53A				IAmb	IAmb	10 14 14.4	
	comp=Z,7.1nm,1.1s						
WVT	**Waverly**	**61.74**	**340**	P	**P**	**10 14 14.1**	**0.0**
QSPA	**South Pole Qui**	**67.74**	**180**	P	**P**	**10 14 54.2**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=60,slow=9.1,SNR=1.0						
	comp=Z,0.5nm,0.7s						
D62A	**Allapoint, All**	**69.26**	**358**	P	**P**	**10 15 02.4**	**+0.4**
D62A				IAmb	IAmb	10 15 46.0	
	comp=Z,13nm,1.4s						
BSUT	**Blindstream Ca**	**75.10**	**326**	P	**P**	**10 15 38.0**	**+0.9**
TOA0	**Torodi Ar. Sit**	**75.40**	**69**	P	**P**	**10 15 37.5**	**-1.4**
TOA0				IAmb	IAmb	10 16 16.5	
	comp=Z,8.2nm,1.5s						
TORD	**Torodi Ar. Bea**	**75.40**	**69**	P	**P**	**10 15 38.1**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=259,slow=5.6,SNR=8.8						
	comp=Z,0.7nm,0.4s						
PDAR	**Pinedale Array**	**76.18**	**329**	P	**P**	**10 15 44.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=130,slow=8.0,SNR=2.1						
	comp=Z,0.2nm,0.5s						
VNDA	**Vanda**	**76.32**	**190**	P	**P**	**10 15 43.5**	**+0.4**
SCHQ	**Schefferville**	**76.98**	**360**	P	**P**	**10 15 47.3**	**+0.4**
SCHQ				IAmb	IAmb	10 15 56.1	
	comp=Z,8.8nm,1.4s						
ULM	**Lac du Bonnet**	**76.99**	**341**	P	**P**	**10 15 47.4**	**+0.3**
NVAR	**Mina Array Bea**	**77.77**	**321**	P	**P**	**10 15 53.5**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=132,slow=7.4,SNR=2.0						
	comp=Z,0.3nm,0.8s						
YKA	**Yellowknife Ar**	**92.92**	**340**	P	**P**	**10 17 07.1**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=128,slow=4.5,SNR=10						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**130.12**	**204**	PKP	**PKiKP**	**10 23 04.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=151,slow=2.4,SNR=2.0						
WRA	**Warramunga Arr**	**133.29**	**207**	PKP	**PKiKP**	**10 23 11.0**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=168,slow=1.7,SNR=2.0						
MKAR	**Makanchi Array**	**144.92**	**39**	PKP	**PKPdf**	**10 23 30.1**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=309,slow=3.9,SNR=9.8						

HEL 21 10:13:00.1±0.5, 61°.70N×31°.39E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**1.20**	**258**	PG	Pg	10 13 22.0	-1.1
	baz=76						
RUF				MSG		10 13 36.7	
	comp=Z,5.7nm,0.2s						
RUF				SG	Sg	10 13 37.0	-1.7
JOF	**Joensuu**	**1.23**	**358**	PN	Pn	10 13 24.4	-0.1
JOF				SN	Sb	10 13 40.4	0.0
VJF	**Virojoki**	**2.20**	**240**	PB	Pn	10 13 37.7	-0.1
VJF				MSG		10 14 05.2	
	comp=Z,3.0nm,0.2s						
VJF				SG	Sn	10 14 06.6	+1.0
NIF	**Nilsia**	**2.38**	**317**	PG	Pb	10 13 43.6	-0.1
NIF				SG	Sb	10 14 14.7	+1.2
KAF	**Kangasniemi**	**2.44**	**282**	PG	Pb	10 13 44.2	-0.7
KAF				MSG		10 14 12.4	
	comp=Z,2.2nm,0.2s						
KAF				SG	Sb	10 14 14.3	-1.2
KAF	**Kangasniemi**	**2.44**	**282**	PG	Sb	10 14 14.3	-1.2
FIA0	**FINESS Array S**	**2.56**	**267**	PB	Pn	10 13 43.4	+0.7
FIA0				MSG		10 14 15.5	
	comp=Z,2.3nm,0.2s						
FIA0				SB	Sn	10 14 16.3	+1.8
RMF	**Romuvaara**	**2.62**	**346**	PB	Pb	10 13 46.1	-1.7
RMF				MSG		10 14 17.3	
	comp=Z,1.0nm,0.2s						
SUF	**Sumiainen**	**2.66**	**295**	PG	Pb	10 13 47.6	-1.0
SUF				MSG		10 14 18.6	
	comp=Z,1.1nm,0.2s						
SUF				SG	Sb	10 14 22.9	+1.2
PVF	**Pernaja**	**2.92**	**249**	PB	Pn	10 13 48.5	+0.7
PVF				MSG		10 14 26.1	
	comp=Z,2.0nm,0.2s						
PVF				SG	Sb	10 14 29.4	+0.2
KEF	**Keuruu**	**3.12**	**282**	MSG		10 14 31.8	
	comp=Z,1.4nm,0.2s						
KEF				SB	Sb	10 14 33.3	-1.6
NUR	**Nurmijrvi**	**3.48**	**253**	PN	Pn	10 13 56.5	+1.1
OBF4	**Vikkela, Lumij**	**4.22**	**320**	PB	Pb	10 14 11.0	-4.2
VAF	**Ylistaro**	**4.28**	**292**	PB	Pb	10 14 14.4	-1.8
RAF	**Rauma**	**4.68**	**266**	SG	Sg	10 15 25.2	-5.2

HEL 21 10:13:07.3±0.4, 64°.88N×20°.28E, h0km, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BURU	**Burvik**	**0.56**	**122**	PG	Pg	10 13 17.7	-0.3
BURU				SG	Sg	10 13 24.7	-0.4
UMAU	**Umeaa**	**1.02**	**170**	PN	Pn	10 13 28.5	-0.3
	baz=352						
UMAU				SN	Sb	10 13 42.4	+0.7
OBF8	**Ulkokalla**	**1.47**	**111**	PN	Pn	10 13 34.4	-0.6
OBF8				MSG		10 13 51.6	
	comp=Z,1.8nm,0.2s						
KALU	**Kalix**	**1.62**	**51**	PG	Pn	10 13 36.7	-0.3
	baz=237						
KALU				SN	Sn	10 13 58.7	+0.1
OBF0	**Syolatti, Pyha**	**1.74**

UCH	**Uchtor**	**2.61**	**343**	⇑*iP*		**Pg**	**10 16 13.3**	**-0.8**
	baz=42								
UCH				⇑*iS*		**Sb**	**10 16 45.8**	**+1.7**
	baz=42								
TARG	**Taragay, Kyrgy**	**2.62**	**40**	⇓*eP*		**Pg**	**10 16 13.3**	**-0.9**
	baz=41								
TARG				⇓*eS*		**Sb**	**10 16 45.9**	**+1.7**
	baz=41								
KDJ	**Kajisay**	**2.68**	**27**	⇑*eP*		**Pg**	**10 16 14.1**	**-1.3**
	baz=28								
KDJ				⇑*eS*		**Sb**	**10 16 47.2**	**+1.3**
	baz=28								
BOOM	**Boomskoye usch**	**2.76**	**6**	⇓*eP*		**Pb**	**10 16 15.1**	**+1.1**
	baz=6.0								
BOOM				⇓*eS*		**Sb**	**10 16 49.0**	**+0.8**
	baz=6.0								
DRK	**Karamyk**	**2.92**	**266**	⇑*eP*		**Pg**	**10 16 19.0**	**-1.0**
	baz=64								
DRK				⇑*eS*		**Sg**	**10 16 55.9**	**-2.0**
	baz=64								
KBK	**Karagaybulak**	**2.95**	**351**	P		**Pg**	**10 16 19.6**	**-1.0**
	SNR=11								
KBK	**Karagaybulak**	**2.95**	**351**	⇑*eP*		**Pb**	**10 16 17.8**	**+0.6**
	baz=51								
KBK				⇑*eS*		**Sb**	**10 16 53.6**	**-0.1**
	baz=51								
AAK	**Ala-Archa**	**3.01**	**345**	P		**Pg**	**10 16 20.0**	**-1.6**
	SNR=16								
AAK	**Ala-Archa**	**3.01**	**345**	⇓*eP*		**Pb**	**10 16 18.6**	**+0.5**
	baz=44								
AAK				⇓*eS*		**Sb**	**10 16 54.9**	**-0.3**
	baz=44								
FRU1	**Bishkek**	**3.15**	**347**	⇑*eP*		**Pb**	**10 16 20.9**	**+0.4**
	baz=47								
FRU1				⇑*eS*		**Sb**	**10 16 58.9**	**-0.3**
	baz=47								
TKM2	**Tokmak 2**	**3.18**	**0**	P		**Pb**	**10 16 21.8**	**+0.7**
	SNR=12								
TKM2	**Tokmak 2**	**3.18**	**0**	⇓Pn		**Pb**	**10 16 21.5**	**+0.4**
	4.9nm,0.5s								
TKM2				⇑Lg		Lg	10 17 06.6		
	63nm,0.8s								
CHMS	**Chumysh**	**3.31**	**350**	P		**Pb**	**10 16 23.8**	**+0.4**
	SNR=7.2								
CHMS	**Chumysh**	**3.31**	**350**	⇓Pn		**Pb**	**10 16 22.9**	**-0.4**
	7.6nm,0.5s								
CHMS				⇓Lg		Lg	10 17 06.2		
	35nm,0.9s								
KST	**Kastek**	**3.31**	**5**	Pg		**Pb**	**10 16 23.7**	**+0.4**
	5.7nm,0.5s								
KST				Lg		Lg	10 17 11.9		
	14nm,0.6s								
KST	**Kastek**	**3.31**	**5**	*eP*		**Pb**	**10 16 23.7**	**+0.4**
	5.7nm,0.5s								
KST				*eS*		**Sg**	**10 17 11.3**	**+0.8**
	14nm,0.6s								
IZV	**Izvestkoviy**	**3.39**	**13**	Pg		**Pb**	**10 16 25.5**	**+0.9**
	9.4nm,0.5s								
IZV				Lg		Lg	10 17 14.5		
	50nm,0.7s								
ARK	**Arkit**	**3.42**	**308**	⇑*eP*		**Pb**	**10 16 24.6**	**-0.6**
	baz=7.0								
ARK				⇑*eS*		**Sb**	**10 17 06.1**	**-1.1**
	baz=7.0								
ANVS	**Anan'yevo**	**3.43**	**27**	⇑*eP*		**Pb**	**10 16 24.3**	**-1.0**
	baz=27								
ANVS				⇑*eS*		**Sb**	**10 17 05.3**	**-2.1**
	baz=27								
MTBS	**Maitube**	**3.45**	**11**	Pg		**Pb**	**10 16 25.8**	**+0.2**
	6.2nm,0.4s								
MTBS				Lg		Lg	10 17 15.6		
	13nm,0.4s								
MTBS	**Maitube**	**3.45**	**11**	*eP*		**Pb**	**10 16 25.8**	**+0.2**
	6.2nm,0.4s								
MTBS				*eS*		**Sg**	**10 17 15.0**	**+0.2**
	17nm,0.2s								
TNSS	**Tian-Shan**	**3.46**	**17**	Pg		**Pb**	**10 16 26.1**	**+0.2**
	9.1nm,0.5s								
TNSS				Lg		Lg	10 17 15.7		
	27nm,0.8s								
TNSS	**Tian-Shan**	**3.46**	**17**	*eP*		**Pb**	**10 16 26.0**	**+0.2**
	9.1nm,0.5s								
TNSS				*eS*		**Sg**	**10 17 15.3**	**+0.3**
	27nm,0.8s								
MRKS	**Merke**	**3.48**	**330**	Pg		**Pb**	**10 16 24.4**	**-1.8**
	3.8nm,0.7s								
MRKS				Lg		Lg	10 17 12.3		
	10nm,0.7s								
MRKS	**Merke**	**3.48**	**330**	*eP*		**Pb**	**10 16 24.4**	**-1.8**
	3.8nm,0.7s								
MRKS				*eS*		**Sb**	**10 17 12.3**	**+3.4**
	10nm,0.7s								
DGS	**Degeres**	**3.50**	**2**	Pg		**Pb**	**10 16 26.6**	**0.0**
	9.4nm,0.6s								
DGS				Lg		Lg	10 17 16.8		
	25nm,0.6s								
DGS	**Degeres**	**3.50**	**2**	*eP*		**Pb**	**10 16 26.7**	**+0.1**
	9.4nm,0.6s								
DGS				*eS*		**Sg**	**10 17 16.4**	**-0.2**
	25nm,0.6s								
MNAS	**Manas**	**3.59**	**321**	⇑*eP*		**Pb**	**10 16 26.9**	**-1.2**
	baz=20								
MNAS				⇑*eS*		**Sb**	**10 17 09.8**	**-2.2**
	baz=20								
MDOK	**Medeo**	**3.60**	**18**	Pg		**Pb**	**10 16 28.4**	**+0.2**
	3.3nm,0.4s								
MDOK				Pn		**Pg**	**10 16 29.6**	**-3.4**
	1.6nm,0.4s								
MDOK				Lg		Lg	10 17 18.6		
	66nm,0.9s								
MDOK				Lg		Lg	10 17 19.2		
	34nm,0.6s								
MDOK	**Medeo**	**3.60**	**18**	*eP*		**Pb**	**10 16 28.4**	**+0.2**
	3.3nm,0.4s								
MDOK				*eS*		**Sg**	**10 17 19.2**	**-0.3**
	34nm,0.6s								
USP	**Ospenovka**	**3.62**	**348**	P		**Pb**	**10 16 28.1**	**-0.4**
	SNR=11								
KNDC	**Almaty**	**3.63**	**16**	⇓Pn		**Pb**	**10 16 30.2**	**+1.5**
	13nm,0.3s								
KNDC				⇓Lg		Lg	10 17 19.0		
	155nm,1.0s								
BTK	**Batken**	**3.67**	**277**	⇓*eP*		**Pb**	**10 16 28.8**	**-0.6**
	baz=75								
BTK				⇓*eS*		**Sb**	**10 17 12.9**	**-1.3**
	baz=75								
KOTS	**Kotyrbulak**	**3.68**	**18**	Pg		**Pb**	**10 16 30.2**	**+0.6**
	4.0nm,0.5s								
KOTS				Lg		Lg	10 17 22.6		
	57nm,0.7s								
KOTS	**Kotyrbulak**	**3.68**	**18**	*eP*		**Pb**	**10 16 30.3**	**+0.7**
	4.0nm,0.5s								
KOTS				*eS*		**Sg**	**10 17 22.6**	**+0.3**
	57nm,0.7s								
SGDS	**Sogindy**	**3.78**	**350**	Pg		**Pb**	**10 16 32.1**	**+0.9**
	2.5nm,0.6s								
SGDS				Lg		Lg	10 17 25.5		
	21nm,0.8s								
SATY	**Saty**	**3.94**	**32**	Pg		**Pb**	**10 16 34.1**	**0.0**
	4.6nm,1.6s								
SATY				Lg		Lg	10 17 28.9		
	32nm,0.5s								
SATY	**Saty**	**3.94**	**32**	*eP*		**Pb**	**10 16 34.0**	**0.0**
	4.6nm,1.6s								
SATY				*eS*		**Sg**	**10 17 28.9**	**-1.8**
	32nm,0.5s								
KRBS	**Karabastau**	**3.96**	**1**	Pg		**Pb**	**10 16 35.1**	**+0.9**
	1.2nm,0.5s								
KRBS				Lg		Lg	10 17 30.8		
	17nm,0.6s								
KRBS	**Karabastau**	**3.96**	**1**	*eP*		**Pb**	**10 16 35.1**	**+0.9**
	1.2nm,0.5s								
KRBS				*eS*		**Sg**	**10 17 30.9**	**-0.2**
	17nm,0.6s								
ZHN	**Zhinishke**	**4.05**	**31**	Pg		**Pb**	**10 16 36.4**	**+0.6**
	0.9nm,0.1s								
ZHN				Lg		Lg	10 17 32.8		
	19nm,0.6s								
ZHN	**Zhinishke**	**4.05**	**31**	*eP*		**Pb**	**10 16 36.3**	**+0.5**
	0.9nm,0.1s								
ZHN				*eS*		**Sg**	**10 17 32.8**	**-1.2**
	19nm,0.6s								
KTBS	**Karatobe**	**4.06**	**11**	Pg		**Pb**	**10 16 37.0**	**+1.1**
	10nm,0.5s								
KTBS				Lg		Lg	10 17 34.2		
	40nm,0.5s								
KTBS	**Karatobe**	**4.06**	**11**	*eP*		**Pb**	**10 16 37.0**	**+1.1**
	0.8nm,0.3s								
KTBS				*eS*		**Sg**	**10 17 34.2**	**-0.1**
	40nm,0.5s								
KUU	**Kurty**	**4.19**	**8**	Pg		**Pb**	**10 16 38.9**	**+0.6**
	1.4nm,0.4s								
KUU				Lg		Lg	10 17 37.2		
	34nm,1.0s								
KUU	**Kurty**	**4.19**	**8**	*eP*		**Pb**	**10 16 38.9**	**+0.6**
	0.9nm,0.1s								
KUU				*eS*		**Sg**	**10 17 37.2**	**-1.4**
	25nm,0.3s								
KURS	**Kuram**	**4.22**	**27**	Pg		**Pb**	**10 16 39.4**	**+0.6**
	2.0nm,0.5s								
KURS				Lg		Lg	10 17 38.2		
	16nm,1.0s								
KURS	**Kuram**	**4.22**	**27**	*eP*		**Pb**	**10 16 39.4**	**+0.6**
	2.0nm,0.5s								
KURS				*eS*		**Sg**	**10 17 38.1**	**-1.5**
	16nm,1.0s								
CHKK	**Chushkaly**	**4.25**	**14**	Pg		**Pb**	**10 16 40.2**	**+1.0**
	1.9nm,0.3s								
CHKK				Lg		Lg	10 17 40.0		
	45nm,0.6s								
CHKK	**Chushkaly**	**4.25**	**14**	*eP*		**Pb**	**10 16 40.5**	**+1.3**
	0.6nm,0.1s								
CHKK				*eS*		**Sg**	**10 17 40.0**	**-0.4**
	45nm,0.6s								
UZB	**Uzymbulak**	**4.28**	**36**	Pg		**Pb**	**10 16 40.7**	**+0.9**
	4.8nm,0.4s								
UZB				Lg		Lg	10 17 40.1		
	11nm,0.7s								
UZB	**Uzymbulak**	**4.28**	**36**	*eP*		**Pb**	**10 16 40.6**	**+0.7**
	4.8nm,0.4s								
UZB				*eS*		**Sg**	**10 17 40.1**	**-1.4**
	15nm,0.4s								
KPKS	**Kokpek**	**4.40**	**31**	Pg		**Pb**	**10 16 42.4**	**+0.6**
	2.3nm,0.1s								
KPKS				Lg		Lg	10 17 43.4		
	29nm,0.5s								
KPKS	**Kokpek**	**4.40**	**31**	*eP*		**Pb**	**10 16 42.4**	**+0.6**
	2.3nm,0.1s								
KPKS				*eS*		**Sg**	**10 17 43.4**	**-1.8**
	29nm,0.5s								
SHLS	**Shalkode**	**4.50**	**39**	Pg		**Pb**	**10 16 49.3**	**-0.9**
	2.8nm,0.3s								
SHLS				Lg		Lg	10 17 54.6		
	9.7nm,0.7s								
SHLS	**Shalkode**	**4.50**	**39**	*eP*		**Pg**	**10 16 48.9**	**-1.3**
	2.8nm,0.3s								
SHLS				*eS*		**Sg**	**10 17 54.6**	**+6.2**
	9.7nm,0.7s								
PDGK	**Podgornoye**	**4.64**	**38**	Pg		**Pb**	**10 16 47.2**	**+1.2**
	1.2nm,1.0s								
PDGK				Lg		Lg	10 17 51.3		
	11nm,0.8s								
PDGK	**Podgornoye**	**4.64**	**38**	⇑Pg		**Pg**	**10 16 53.9**	**+1.0**
	1.0nm,0.5s								
PDGK				⇑Lg		Lg	10 17 50.6		
	30nm,0.8s								
KK31	**Karatay Array**	**5.08**	**313**	⇓Pg		**Pg**	**10 17 01.8**	**+0.6**
	0.5nm,0.4s,baz=134,slow=17,SNR=5.8								
KK31				⇓Lg		Lg	10 18 09.9		
	2.3nm,0.6s,baz=129,slow=28,SNR=4.8								
KTMS	**Ketmen**	**5.16**	**43**	Pg		**Pb**	**10 16 55.9**	**+1.2**
	0.6nm,0.2s								
KTMS				Lg		Lg	10 18 06.4		
	4.5nm,0.5s								
KTMS	**Ketmen**	**5.16**	**43**	*eP*		**Pb**	**10 16 55.9**	**+1.2**
	0.6nm,0.2s								
KTMS				*eS*		**Sg**	**10 18 06.4**	**-3.1**
	4.5nm,0.5s								
KNOS	**Konyrlen**	**5.34**	**29**	Pg		**Pb**	**10 16 59.8**	**+1.9**
	4.9nm,0.6s								
KNOS				Lg		Lg	10 18 14.6		
	5.6nm,0.8s								
DJR	**Jarkent**	**5.56**	**33**	Pg		**Pb**	**10 17 03.7**	**+2.1**
	0.7nm,0.2s								
DJR				Lg		Lg	10 18 20.1		
	3.7nm,0.5s								
DJR	**Jarkent**	**5.56**	**33**	*eP*		**Pb**	**10 17 03.7**	**+2.1**
	0.7nm,0.2s								
DJR				*eS*		**Sg**	**10 18 20.1**	**-2.5**
	6.2nm,0.3s								
KAPS	**Kapalarasan**	**6.21**	**26**	Pg		**Pb**	**10 17 14.8**	**+2.2**
	0.8nm,0.3s								
KAPS				Lg		Lg	10 18 39.9		
	6.0nm,0.9s								
KAPS	**Kapalarasan**	**6.21**	**26**	*eP*		**Pb**	**10 17 15.3**	**+2.7**
	0.8nm,0.3s								
KAPS				*eS*		**Sg**	**10 18 39.9**	**-3.4**
	6.0nm,0.9s								

*IDC **21** 10:15:33.2±15.0, 37°.54N×20°.43E, h0km, mb3.6/7, mbtmp3.6/7, Error ellipse: s-maj=300.3km s-min=37.9km az=38.0*

*ATH **21** 10:15:34.1, 37°.67N×20°.13E, h4km±1km, ML3.5/11, Manual Solution by A.Andreou This location: 2020/05/28 06:50:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **21** 10:15:36.8, 37°.77N×20°.11E, h12km±4km, ML3.2/10, Error ellipse: s-maj=5.7km s-min=1.4km az=255.0*

ISC 21 10:15:35.7±1.6, 37°.72N±0°.05×20°.18E±0°.05, h10km±8km, n49, σ1s06/72, mb3.7/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PSDA	**Pessada-Kefalo**	**0.51**	**39**	P		**Pg**	**10 15 45.4**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.52**	**23**	P		**Pg**	**10 15 45.9**	**0.0**
LXRA				S		**Sg**	**10 15 53.0**	**+0.3**
LTHK	**Lithakia**	**0.52**	**91**	P		**Pg**	**10 15 45.1**	**-0.8**
LTHK				S		**Sg**	**10 15 52.0**	**-0.8**
DMLN	**Damoulianata-K**	**0.54**	**17**	P		**Pg**	**10 15 45.9**	**-0.4**
DMLN				S		**Sg**	**10 15 53.8**	**+0.5**
VLS	**Valsamata**	**0.56**	**35**	P		**Pg**	**10 15 46.3**	**-0.3**
KEF4	**Livadi, Kephal**	**0.57**	**20**	P		**Pg**	**10 15 46.5**	**-0.3**
KEF4				S		**Sg**	**10 15 54.4**	**0.0**
FSK	**Fiskardo**	**0.80**	**22**	P		**Pg**	**10 15 50.7**	**-0.4**
EVGI	**Lefkada island**	**0.97**	**23**	P		**Pg**	**10 15 54.0**	**-0.5**
EVGI				S		**Sb**	**10 16 09.1**	**+1.5**
	2μm,0.2s							
EVGI	**Lefkada island**	**0.97**	**23**	P		**Pg**	**10 15 54.1**	**-0.4**
DRAG	**Dragano-Lefkad**	**1.01**	**18**	P		**Pg**	**10 15 54.8**	**-0.3**
DRAG				S		**Sn**	**10 16 10.7**	**+0.5**
DRAG	**Dragano-Lefkad**	**1.01**	**18**	P		**Pg**	**10 15 54.9**	**-0.3**
DRAG				S		**Sb**	**10 16 09.5**	**+0.8**
NYDR	**Nydri-Lefkada**	**1.07**	**22**	P		**Pg**	**10 15 56.0**	**-0.3**
NYDR				S		**Sb**	**10 16 11.7**	**+1.3**
	975nm,0.5s							
NYDR	**Nydri-Lefkada**	**1.07**	**22**	P		**Pg**	**10 15 55.6**	**-0.7**
NYDR				S		**Sg**	**10 16 10.6**	**+0.3**
RLS	**Riolos of Patr**	**1.07**	**71**	P		**Pg**	**10 15 55.7**	**-0.6**
RLS				S		**Pg**	**10 16 10.7**	**+0.4**
LKD2	**Lefkada island**	**1.13**	**19**	P		**Pg**	**10 15 56.8**	**-0.7**
LKD2				S		**Sb**	**10 16 13.3**	**+1.2**
	970nm,0.3s							
LKD2	**Lefkada island**	**1.13**	**19**	P		**Pg**	**10 15 57.2**	**-0.3**
LKD2				S		**Sb**	**10 16 13.3**	**+1.2**
TSLK	**Tsoukalades, L**	**1.17**	**19**	P		**Pg**	**10 15 57.2**	**-0.9**
TSLK				S		**Sb**	**10 16 14.0**	**+1.0**
	1μm,0.5s							
TSLK	**Tsoukalades, L**	**1.17**	**19**	P		**Pb**	**10 15 57.9**	**0.0**
TSLK				S		**Sb**	**10 16 14.2**	**+1.2**
DRO	**Drossia**	**1.23**	**79**	P		**Pb**	**10 16 00.1**	**+1.0**
DRO				S		**Sn**	**10 16 18.2**	**+2.5**
	1μm,0.5s							
DRO	**Drossia**	**1.23**	**79**	P		**Pg**	**10 15 58.8**	**-0.6**
PATG	**Patra B**	**1.33**	**67**	P		**Pn**	**10 16 00.1**	**-0.2**
PATC	**Patra C**	**1.36**	**66**	P		**Pb**	**10 16 01.0**	**-0.3**
PVO	**Paravola**	**1.39**	**49**	P		**Pn**	**10 16 00.7**	**-0.4**
PVO				S		**Sb**	**10 16 20.0**	**+0.5**
	8μm,0.4s							
PVO	**Paravola**	**1.39**	**49**	P		**Pn**	**10 16 00.9**	**-0.2**
PYL	**PYLOS**	**1.49**	**123**	P		**Pg**	**10 16 05.2**	**+0.8**
EFP	**Efpalio**	**1.54**	**62**	P		**Pn**	**10 16 02.9**	**-0.2**
EFP				S		**Sn**	**10 16 23.7**	**+0.7**
	415nm,0.5s							
EFP	**Efpalio**	**1.54**	**62**	P		**Pn**	**10 16 03.2**	**+0.1**
KLV	**Kalavryta, Ach**	**1.59**	**78**	P		**Pb**	**10 16 05.0**	**-0.2**
KLV				S		**Sb**	**10 16 26.3**	**+0.9**
	208nm,0.7s							
KLV	**Kalavryta, Ach**	**1.59**	**78**	P		**Pb**	**10 16 04.5**	**-0.8**
ANX	**Ano Chora**	**1.63**	**57**	P		**Pn**	**10 16 04.4**	**0.0**
ANX				S		**Sn**	**10 16 26.6**	**+1.1**
	752nm,0.5s							
ANX	**Ano Chora**	**1.63**	**57**	P		**Pn**	**10 16 04.5**	**+0.1**
GUR	**Goura**	**1.73**	**82**	P		**Pb**	**10 16 07.2**	**-0.3**
GUR				S		**Sb**	**10 16 29.7**	**+0.4**
	488nm,0.5s							
THAL	**Thalero**	**1.99**	**80**	P		**Pb**	**10 16 10.9**	**-1.1**
THAL				S		**Sn**	**10 16 36.0**	**+1.7**
THAL	**Thalero**	**1.99**	**80**	P		**Pn**	**10 16 09.4**	**0.0**
DBRK	**Dubrovnik**	**5.18**	**343**	*e*Pn		**Pn**	**10 16 54.0**	**+0.8**
STON	**Ston**	**5.48**	**341**	*e*Pn		**Pn**	**10 16 58.4**	**+1.1**
STON				Sn		**Sn**	**10 17 57.2**	**-3.2**
LSTV	**Lastovo**	**5.63**	**335**	*e*Pn		**Pn**	**10 16 59.2**	**-0.2**
MAKA	**Makarska**	**6.06**	**338**	*e*Pn		**Pn**	**10 17 06.8**	**+1.6**
RICI	**Ricice**	**6.21**	**339**	*e*Pn		**Pn**	**10 17 08.9**	**+1.5**
RICI				Sn		**Sn**	**10 18 16.1**	**-2.4**
KIJV	**Kijevo**	**6.90**	**337**	*e*Pn		**Pn**	**10 17 18.8**	**+2.0**
MORI	**Morici**	**7.01**	**332**	*e*Pn		**Pn**	**10 17 20.0**	**+1.7**
DUGI	**Dugi Otok**	**7.37**	**330**	*e*Pn		**Pn**	**10 17 25.8**	**+2.6**
HFS	**Hagfors**	**22.81**	**352**	P		**P**	**10 20 39.3**	**+1.0**
	0.8nm,0.5s,baz=163,slow=10,SNR=5.0							
	0.8nm,0.5s							
FINES	**FINESS Array B**	**24.03**	**7**	P		**P**	**10 20 51.2**	**+0.7**
	1.1nm,0.5s,baz=172,slow=8.9,SNR=9.2							
	1.1nm,0.5s							
ARCES	**ARCESS Array B**	**32.01**	**4**	P		**P**	**10 22 02.3**	**+0.6**
	2.5nm,0.9s,baz=185,slow=10.0,SNR=4.6							
	2.5nm,0.9s							
KURBB	**Kurchatov Arra**	**42.72**	**53**	P		**P**	**10 23 31.1**	**-1.5**
	0.3nm,0.4s,baz=277,slow=8.7,SNR=3.5							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**45.77**	**58**	P		**P**	**10 23 55.8**	**-1.4**
	0.3nm,0.4s,baz=277,slow=8.4,SNR=7.4							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**46.20**	**48**	P		**P**	**10 23 59.5**	**-0.9**
	0.6nm,0.5s,baz=289,slow=9.0,SNR=2.7							
	0.6nm,0.5s							
SONM	**Songino Array**	**60.96**	**50**	P		**P**	**10 25 47.6**	**-1.4**
	0.2nm,0.3s,baz=304,slow=3.3,SNR=2.3							
	0.2nm,0.3s							

IDC 21 10:15:49.2±5.0, 17°.13S×173°.44W, h0km, mb3.7/3, mbtmp3.7/3, MS2.3/1, Error ellipse: s-maj=392.9km s-min=35.0km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.54**	**110**	LR		LR	10 23 30.7	
	comp=Z,12nm,18.9s,baz=150,slow=34							
WRA	**Warramunga Arr**	**49.43**	**258**	P		P	10 24 41.1	-0.3
	0.3nm,0.7s,baz=96,slow=7.6,SNR=1.6							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**49.56**	**253**	P		P	10 24 42.4	0.0
	1.2nm,0.5s,baz=88,slow=8.6,SNR=23							
	1.2nm,0.5s							
PDAR	**Pinedale Array**	**83.58**	**42**	P		P	10 28 19.6	0.0
	0.4nm,0.6s,baz=225,slow=3.4,SNR=4.5							
	0.4nm,0.6s							

*IDC **21** 10:27:51.8±0.5, 52°.87S×9°.97E, h0km, mb4.6/13, mbtmp4.6/14, ML4.2/1, MS4.5/43, Error ellipse: s-maj=22.6km s-min=15.5km az=99.0*

*NEIC **21** 10:27:55.3±1.6, 52°.95S±0°.1×9°.93E±0°.08, h10km±1km, mb5.2/43, Ms_20 4.7/29, Error ellipse: s-maj=17.2km s-min=8.4km az=185.0*

*GCMT **21** 10:27:58.3±0.1, 52°.99S±0°.01×10°.19E±0°.01, h18km, MW5.1/141, Moment Tensor Solution. s71,c94; s141,c227; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}0.99±.12; $M_{\theta\theta}$4.50±.12; $M_{\phi\phi}$-5.49±.11; $M_{r\theta}$1.69±.28; $M_{\theta\phi}$-1.57±.09; $M_{r\phi}$0.85±.24; Best double couple: M_o5.60900×10¹⁶ NP1:ϕ_s52.00000°, δ83.00000°, λ159.00000°. NP2:ϕ_s145.00000°, δ69.00000°, λ8.00000°. Principal axes: T 5.3060, Plg20.0000°, Azm7.0000°; N 0.6080, Plg68.0000°, Azm214.0000°; P -5.9110, Plg9.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 10:27:54.7±0.3, 52°.88S±0°.06×9°.91E±0°.08, h12km, n201, σ1s05/145, mb5.2/59, MS4.6/53, 9C-5D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**19.47**	**187**	⇓P		**Pn**	**10 32 22.8**	**+0.4**
	comp=Z,2μm,0.9s							
VNA1	**Neumayer--Stat**	**19.64**	**198**	⇓P		**Pn**	**10 32 25.9**	**+1.7**
	comp=Z,44nm,1.0s							
SNAA	**Sanae**	**19.68**	**192**	P		**P**	**10 32 23.6**	**+0.2**
SNAA					IAmb	IAmb	10 32 28.1	
	comp=Z,116nm,1.1s							
SNAA	**Sanae**	**19.68**	**192**	*e*P		**Pn**	**10 32 24.5**	**-0.3**
SNAA	**Sanae**	**19.68**	**192**	⇓P		**P**	**10 32 23.8**	**+0.4**
	comp=Z,1μm,0.9s							
SNAA	**Sanae**	**19.68**	**192**	P		**P**	**10 32 22.2**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=19,slow=7.8,SNR=41							
SNAA					S	S	10 35 46.2	-19
	comp=Z,2.0nm,1.0s,baz=345,slow=20,SNR=1.5							
SNAA					LR	LR	10 38 13.1	
	comp=Z,1μm,21.0s,baz=7.5,slow=32							
	comp=Z,49nm,0.9s							
VNA2	**Neumayer--Watz**	**19.71**	**197**	⇓P		**Pn**	**10 32 24.9**	**-0.2**
	comp=Z,22nm,0.8s,baz=27,slow=15							
VNA3	**Neumayer Olymp**	**20.39**	**198**	⇓P		**P**	**10 32 29.2**	**-1.8**
	comp=Z,47nm,0.9s							
CER	**Ceres**	**20.64**	**23**	*e*P		**P**	**10 32 33.8**	**-0.2**
CER					IAmb	IAmb	10 32 35.7	
	comp=Z,132nm,1.0s							
ROSN	**Rosenhof**	**21.48**	**35**	*e*P		**P**	**10 32 43.7**	**+0.7**
MERW	**Merweville**	**21.86**	**27**	⇑*i*P		**P**	**10 32 47.8**	**+0.4**
MERW					IAmb	IAmb	10 32 48.8	
	comp=Z,149nm,0.9s							
SUR	**Sutherland**	**21.95**	**25**	P		**P**	**10 32 48.5**	**+0.2**
SUR					IAmb	IAmb	10

BOSA Boshof 26.77 31 P **P 10 33 31.9 -2.6**
comp=Z,19nm,0.9s,baz=202,slow=7.9,SNR=18
BOSA LR LR 10 42 35.6
comp=Z,982nm,19.1s,baz=202,slow=33
comp=Z,19nm,0.9s
H04S2 CROZET ISLANDS 27.42 94 T T 11 02 33.8
baz=242,slow=75,SNR=58
H04S3 CROZET ISLANDS 27.42 94 T T 11 02 35.7
baz=242,slow=75,SNR=61
H04S1 CROZET ISLANDS 27.43 94 T T 11 02 34.7
baz=242,slow=75,SNR=58
SNKL Senekal, Frees 27.92 35 *eP* **P 10 33 44.9 +0.1**
SNKL IAmb IAmb 10 33 46.3
comp=Z,62nm,1.4s
SWZ Schweizer 28.13 30 *eP* **P 10 33 45.9 -0.8**
SWZ IAmb IAmb 10 33 47.2
comp=Z,62nm,1.5s
PRYS Parys 29.02 34 *eP* **P 10 33 54.7 +0.1**
PRYS IAmb IAmb 10 33 55.2
comp=Z,31nm,1.0s
BELA Belgrano 2 29.69 197 P **P 10 33 59.5 -0.4**
KSR Koster 29.86 32 *eP* **P 10 34 00.9 -1.1**
KSR IAmb IAmb 10 34 02.9
comp=Z,79nm,1.1s
HRAO HartRAO 30.08 33 *eP* **P 10 34 02.4 -1.6**
LBTB Lobatse 30.24 29 P **P 10 34 05.1 -0.3**
LBTB IAmb IAmb 10 34 06.1
comp=Z,25nm,0.8s
LBTB Lobatse 30.24 29 *eP* **P 10 34 05.2 -0.3**
LBTB IAmb IAmb 10 34 05.8
comp=Z,25nm,0.8s
LBTB Lobatse 30.24 29 LR LR 10 44 58.2
comp=Z,804nm,18.2s,baz=198,slow=34
NYAT Nyati, Northwe 30.53 33 *eP* **P 10 34 07.1 -0.8**
NYAT IAmb IAmb 10 34 08.8
comp=Z,67nm,1.4s
TSWA Tswaing Meteor 30.65 34 *eP* **P 10 34 08.5 -0.5**
TSWA IAmb IAmb 10 34 09.9
comp=Z,84nm,1.5s
WIN Windhoek 30.76 13 P **P 10 34 10.0 -0.1**
WIN IAmb IAmb 10 34 11.9
comp=Z,52nm,1.0s
WIN IAMs_20 IAMs_20 10 44 19.5
comp=Z,2µm,19.0s
RUST Rust De Winter 30.97 34 *eP* **P 10 34 11.0 -0.8**
RUST IAmb IAmb 10 34 12.9
comp=Z,36nm,1.0s
DULL Dullstroom, Mp 31.43 37 *eP* **P 10 34 15.1 -0.9**
DULL IAmb IAmb 10 34 17.1
comp=Z,41nm,1.4s
LEPH Lephalale, Lim 32.01 32 *eP* **P 10 34 20.1 -0.8**
LEPH IAmb IAmb 10 34 21.7
comp=Z,93nm,1.3s
PILG Pilgrimsrest, 32.02 37 *eP* **P 10 34 20.9 -0.3**
PILG IAmb IAmb 10 34 22.3
comp=Z,57nm,1.3s
WTBG Waterberg Wild 32.04 34 *eP* **P 10 34 20.9 -0.4**
WTBG IAmb IAmb 10 34 29.5
comp=Z,77nm,1.7s
HOED Hoedspruit, Li 32.58 37⇑*iP* **P 10 34 25.7 -0.2**
HOED IAmb IAmb 10 34 26.8
comp=Z,78nm,1.3s
MOPA Mopani 33.56 37 *eP* **P 10 34 35.1 +0.6**
MOPA IAmb IAmb 10 34 36.2
comp=Z,62nm,1.0s
TSUM Tsumeb 34.14 13 P **P 10 34 39.0 -0.5**
TSUM Tsumeb 34.14 13 IAMs_20 IAMs_20 10 46 05.1
comp=Z,1µm,20.0s
TSUM Tsumeb 34.14 13 *eP* **P 10 34 39.5 -0.1**
TSUM IAmb IAmb 10 34 41.3
comp=Z,72nm,1.1s
TSUM Tsumeb 34.14 13 LR LR 10 46 17.0
comp=Z,1µm,20.5s,baz=150,slow=32
MUSN Musina, Limpop 34.15 34⇑*iP* **P 10 34 39.2 -0.4**
MUSN IAmb IAmb 10 34 39.9
comp=Z,18nm,1.0s
QSPA South Pole Qui 37.36 180 P **P 10 35 06.8 -0.1**
QSPA South Pole Qui 37.36 180 IAMs_20 IAMs_20 10 49 48.4
comp=Z,2µm,19.0s
QSPA South Pole Qui 37.36 180 P **P 10 35 05.9 -1.0**
comp=Z,4.3nm,1.0s,baz=237,slow=8.8,SNR=6.5
QSPA LR LR 10 49 49.2
comp=Z,1µm,19.2s,baz=225,slow=35
comp=Z,4.3nm,1.0s
PMSA Palmer Station 37.77 222 LR LR 10 47 20.6
comp=Z,187nm,19.3s,baz=68,slow=31
KRI Karoi 39.16 31 *eP* **P 10 35 21.0 -1.5**
LSZ Lusaka 40.21 28 IAMs_20 IAMs_20 10 50 07.7
comp=Z,988nm,20.0s
LSZ Lusaka 40.21 28 LR LR 10 50 56.5
comp=Z,798nm,18.3s,baz=200,slow=34
VOI Vohitsoka 41.82 57 P **P 10 35 45.2 +0.8**
VOI IAmb IAmb 10 36 46.1
comp=Z,91nm,2.0s
VNDA Vanda 48.70 172 P **P 10 36 38.3 +0.1**
VNDA IAmb IAmb 10 37 03.5
comp=Z,53nm,1.6s
VNDA Vanda 48.70 172 P **P 10 36 36.8 -1.4**
comp=Z,3.4nm,0.9s,baz=209,slow=2.3,SNR=2.5
VNDA LR LR 10 56 40.4
comp=Z,921nm,18.7s,baz=200,slow=36
comp=Z,3.4nm,0.9s
SPB Sao Paulo 51.93 281 IAMs_20 IAMs_20 10 53 15.2
comp=Z,710nm,22.0s
LL02 Futaleuf 52.70 245 P **P 10 37 09.3 +0.5**
LL02 IAmb IAmb 10 37 11.5
comp=Z,30nm,1.3s
PLCA Paso Flores 53.60 249 P **P 10 37 15.8 +0.2**
PLCA Paso Flores 53.60 249 P **P 10 37 13.6 -2.0**
comp=Z,2.9nm,0.8s,baz=135,slow=11,SNR=6.7
PLCA LR LR 10 56 32.6
comp=Z,216nm,21.7s,baz=131,slow=32
comp=Z,2.9nm,0.8s
LR05 Currie 54.76 248 P **P 10 37 24.7 +0.8**
LR05 IAmb IAmb 10 37 33.6
comp=Z,27nm,1.1s
MBAR Mbarara 54.92 26 P **P 10 37 26.7 +1.2**
MBAR Mbarara 54.92 26 LR LR 10 59 55.5
comp=Z,899nm,18.1s,baz=169,slow=35
KIBK Kibwezi 55.51 35 P **P 10 37 30.2 +0.6**
KIBK IAmb IAmb 10 37 33.1
comp=Z,31nm,1.3s
CPUP Villa Florida 55.85 271 P **P 10 37 32.6 +0.6**
CPUP IAmb IAmb 10 37 47.6
comp=Z,22nm,1.2s
CPUP Villa Florida 55.85 271 P **P 10 37 31.3 -0.6**
comp=Z,5.7nm,0.9s,baz=124,slow=7.2,SNR=7.8
CPUP LR LR 10 57 15.7
comp=Z,352nm,21.8s,baz=146,slow=32
comp=Z,5.7nm,0.9s
BDFB Brasilia 58.45 287 P **P 10 37 49.6 -1.0**
comp=Z,2.9nm,0.5s,baz=132,slow=9.8,SNR=3.8
BDFB LR LR 10 57 52.5
comp=Z,628nm,19.7s,baz=144,slow=31
comp=Z,2.9nm,0.5s
RCBR Riachuelo 59.96 305 LR LR 10 58 10.1
comp=Z,202nm,19.6s,baz=126,slow=30
LODK Lodwar 60.06 30 P **P 10 38 02.4 +0.9**
LODK IAmb IAmb 10 38 05.9
comp=Z,33nm,2.0s
LODK IAMs_20 IAMs_20 11 02 37.7
comp=Z,474nm,19.0s
LIC Lamto 60.23 343⇑*iP* **P 10 38 01.9 -0.7**
comp=Z,74nm,0.9s
KIC Kosan Boka 60.31 343⇑*eP* **P 10 38 02.3 -0.9**
comp=Z,22nm,0.9s
DBIC Dimbokro 60.63 343 P **P 10 38 05.1 -0.2**
DBIC Dimbokro 60.63 343 P **P 10 38 04.4 -1.0**
comp=Z,32nm,0.8s,baz=152,slow=8.0,SNR=26
DBIC LR LR 10 58 31.1
comp=Z,259nm,20.8s,baz=156,slow=30
comp=Z,32nm,0.8s
TIC Toumodi 60.64 343⇑*iP* **P 10 38 04.7 -0.7**
comp=Z,86nm,0.8s
CO01 Juntas del Tor 60.87 258 P **P 10 38 08.4 +1.1**
CO01 IAmb IAmb 10 38 18.7
comp=Z,51nm,1.7s
AC02 Maricunga 62.60 261 P **P 10 38 20.3 +1.0**
AC02 IAmb IAmb 10 38 25.7
comp=Z,49nm,1.7s
PTLB Pontes e Lacer 65.19 277 P **P 10 38 37.2 +1.4**
LVC Limon Verde 65.63 264 P **P 10 38 40.7 +1.7**
LVC IAmb IAmb 10 38 48.4
comp=Z,44nm,1.8s
LVC Limon Verde 65.63 264 LR LR 11 03 58.9
comp=Z,223nm,21.1s,baz=147,slow=33
SIV San Ignacio 65.94 275 LR LR 11 03 18.1
comp=Z,720nm,20.6s,baz=108,slow=32
TOA0 Torodi Ar. Sit 66.13 351 P **P 10 38 41.2 -0.6**
TOA0 IAmb IAmb 10 38 42.3
comp=Z,25nm,1.1s
TORD Torodi Ar. Bea 66.13 351 P **P 10 38 41.0 -0.7**
TORD IAmb IAmb 10 38 42.3
comp=Z,22nm,1.1s
TORD Torodi Ar. Bea 66.13 351 P **P 10 38 40.3 -1.5**
comp=Z,15nm,1.1s,baz=171,slow=5.3,SNR=46
TORD LR LR 11 01 21.2
comp=Z,249nm,21.6s,baz=168,slow=30
comp=Z,15nm,1.1s
FURI Furi 66.25 31 IAMs_20 IAMs_20 11 06 35.8
comp=Z,613nm,20.0s
PB01 IPOC Station P 67.16 265 P **P 10 38 50.0 +1.4**
PB01 IAmb IAmb 10 38 57.5
comp=Z,27nm,1.6s
PB11 IPOC Station P 68.24 266 P **P 10 38 55.4 0.0**
PB11 IAmb IAmb 10 38 57.4
comp=Z,20nm,1.2s
PB16 IPOC Station P 69.24 267 P **P 10 39 02.9 +0.7**
PB16 IAmb IAmb 10 39 09.3
comp=Z,33nm,1.8s
ATD Arta Tunnel 70.09 35 P **P 10 39 07.5 +0.8**
ATD Arta Tunnel 70.09 35 LR LR 11 07 35.3
comp=Z,7.9nm,21.6s,baz=162,slow=34
H01W2 Cape Leeuwin H 70.70 122 T T 11 57 15.0
baz=219,slow=75,SNR=22
H01W3 Cape Leeuwin H 70.71 122 T T 11 57 16.3
baz=219,slow=75,SNR=23
H01W1 Cape Leeuwin H 70.71 122 T T 11 57 20.6
baz=219,slow=75,SNR=22
MBO M'Bour 70.88 332 P **P 10 39 11.2 -0.2**
SAML Samuel 72.72 278 P **P 10 39 23.0 +0.3**
SAML Samuel 72.72 278 IAMs_20 IAMs_20 11 08 48.9
comp=Z,484nm,19.0s
NWAO Narrogin (SRO) 73.83 123 LR LR 11 05 27.6
comp=Z,198nm,19.0s,baz=222,slow=31
ETMB Entre 73.86 275 P **P 10 39 29.5 +0.2**
KAAM Kaadhehdhoo 74.48 68 IAMs_20 IAMs_20 11 12 51.8
comp=Z,511nm,20.0s
TAM Tamanrasset 75.44 356 P **P 10 39 38.9 +0.5**
TAM IAmb IAmb 10 39 40.8
comp=Z,19nm,1.1s
MDP Montagnes des 77.99 295 LR LR 11 10 03.6
comp=Z,404nm,20.0s,baz=120,slow=32
COCO West Island 78.54 95 P **P 10 39 56.6 +0.5**
NNA Nana 78.59 265 LR LR 11 11 11.2
comp=Z,133nm,21.5s,baz=158,slow=33
CZSB Cruzeiro do Su 79.42 271 P **P 10 39 59.9 -1.0**
RAYN Ar Rayn 82.14 33 P **P 10 40 16.8 +1.7**
RAYN IAmb IAmb 10 41 42.0
comp=Z,6.2nm,0.3s
RPZ Rata Peaks 82.43 166 LR LR 11 14 03.8
comp=Z,333nm,21.3s,baz=208,slow=34
ATAH Atahualpa 83.34 267 LR LR 11 15 25.9
comp=Z,184nm,21.2s,baz=152,slow=34
PALK Pallekele 84.39 70 LR LR 11 10 18.8
comp=Z,214nm,19.5s,baz=321,slow=30
RPN Rapa Nui 84.44 231 LR LR 11 08 57.3
comp=Z,39nm,21.7s,baz=110,slow=29
EIL Elat 85.06 22 LR LR 11 18 08.5
comp=Z,443nm,18.1s,baz=240,slow=36
STKA Stephens Creek 85.70 140 P **P 10 40 33.4 0.0**
comp=Z,2.6nm,0.8s,baz=133,slow=2.5,SNR=4.4
comp=Z,2.6nm,0.8s
MDT Midelt 86.27 348 LR LR 11 13 54.6
comp=Z,165nm,18.6s,baz=160,slow=32
KEST Kesra 88.24 360 LR LR 11 17 38.1
comp=Z,107nm,19.0s,baz=250,slow=34
MMAI Mount Meron Ar 88.38 21 LR LR 11 20 14.0
comp=Z,244nm,18.9s,baz=179,slow=36
URZ Urewera 88.56 170 LR LR 11 18 02.2
comp=Z,206nm,20.8s,baz=301,slow=34
IDI Anoyia 88.76 12 LR LR 11 22 11.7
comp=Z,234nm,19.3s,baz=160,slow=37
PCRV Puerto La Cruz 88.89 288 LR LR 11 16 27.8
comp=Z,546nm,20.8s,slow=33
OTAV Otavalo 89.19 271 P **P 10 40 51.7 +0.7**
LEM Lembang 89.25 100 LR LR 11 12 36.7
comp=Z,164nm,20.8s,baz=190,slow=30
ASAR Alice Springs 89.61 131 P **P 10 40 52.4 0.0**
ASAR Alice Springs 89.61 131 P **P 10 40 51.0 -1.4**
comp=Z,0.8nm,0.8s,baz=204,slow=2.7,SNR=6.3
ASAR LR LR 11 13 44.9
comp=Z,166nm,21.4s,baz=200,slow=31
comp=Z,0.8nm,0.8s
CSS Mathiatis 89.83 19 IAMs_20 IAMs_20 11 21 56.5
comp=Z,244nm,19.0s
VAE Valguarnera 90.07 4 LR LR 11 19 39.2
comp=Z,233nm,19.1s,baz=146,slow=34
ROSC El Rosal 90.34 278 LR LR 11 18 11.9
comp=Z,620nm,19.9s,baz=142,slow=33
CEL Celeste 90.91 5 P **P 10 40 59.1 +1.3**
ELL Elmali 90.94 16 P **P 10 40 59.8 +1.8**
SDV Santo Domingo 91.35 283 IAMs_20 IAMs_20 11 18 16.1
comp=Z,427nm,22.0s
SDV Santo Domingo 91.35 283 LR LR 11 18 27.2
comp=Z,383nm,21.4s,baz=98,slow=33
RPSI Rantau Prapat 91.53 88 P **P 10 41 02.8 +1.5**
TIP Timpagrande 91.87 5 P **P 10 41 03.8 +1.6**
GAZ Gaziantep 92.77 22 P **P 10 41 07.4 +1.0**
ESDC Sonseca Array 92.96 349 P **P 10 41 08.0 +0.8**
ESDC IAmb IAmb 10 41 09.2
comp=Z,11nm,1.4s
ESDC Sonseca Array 92.96 349 P **P 10 41 07.2 -0.1**
comp=Z,4.4nm,1.1s,baz=178,slow=4.9,SNR=10
ESDC LR LR 11 19 17.1
comp=Z,108nm,19.1s,baz=163,slow=33
comp=Z,4.4nm,1.1s
BRTR Keskin Array B 94.50 18 P **P 10 41 11.7 -2.8**
comp=Z,0.5nm,0.7s,baz=204,slow=6.3,SNR=1.8
comp=Z,0.5nm,0.7s
ARPR Arapgir-MALATY 94.86 22 IAMs_20 IAMs_20 11 25 33.9
comp=Z,310nm,18.0s
EIDS Eidsvold 95.06 145 P **P 10 41 16.8 -0.7**
GNI Garni 97.44 26 LR LR 11 26 41.9
comp=Z,276nm,18.1s,baz=208,slow=36
CTA Charters Tower 98.08 139 LR LR 11 19 40.3
comp=Z,82nm,19.9s,baz=245,slow=32
MLR Muntele Rosu 98.95 11 LR LR 11 29 09.5
comp=Z,257nm,18.3s,baz=176,slow=37
DAVOX Davos/Dischmat 99.28 360 LR LR 11 24 05.6
comp=Z,112nm,19.8s,baz=234,slow=34
GEYT Alibeck 99.64 37 LR LR 11 28 21.4
comp=Z,155nm,19.1s,baz=202,slow=36
TBI Tubuai 102.00 199 *e*LR LR 11 15 12.3
comp=Z,904nm,27.0s
DZM Mont Dzumac 102.63 158 *e*LR LR 11 15 25.0
comp=Z,158nm,22.3s
AKASG Malin Array Be 104.48 13 PKiKP **PKiKP 10 46 12.1 -2.6**
comp=Z,0.5nm,0.4s,baz=203,slow=6.1,SNR=1.4
PPT2 Papeete2 107.61 201 *e*SS SS 11 01 51.8 +1.6
comp=Z,48nm,26.5s
PPT2 Papeete2 107.61 201 *e*LR LR 11 17 42.5
comp=Z,190nm,23.8s
PPT2 *e*LR LR 11 17 49.3
comp=Z,232nm,23.2s
TAOE Nuku Hiva Isla 113.41 213 *e*LR LR 11 20 22.2
comp=Z,342nm,26.2s
MKAR Makanchi Array 116.87 47 PKP **PKPdf 10 46 37.5 -0.8**
comp=Z,0.9nm,0.9s,baz=264,slow=2.4,SNR=7.8
BVAR Borovoye Array 116.97 36 PKP **PKPdf 10 46 37.9 -0.3**
comp=Z,1.7nm,0.9s,baz=202,slow=1.6,SNR=6.2
KURBB Kurchatov Arra 118.19 42 PKP **PKPdf 10 46 39.3 -1.3**
comp=Z,0.2nm,0.2s,baz=228,slow=2.9,SNR=4.4
GTA Gaotai 120.15 64 PKP **PKiKP 10 46 45.1 +0.1**
ZALV Zalesovo Beam 123.25 43 PKP **PKPdf 10 46 48.5 -1.7**
comp=Z,0.4nm,0.4s,baz=253,slow=4.4,SNR=2.0
NJ2 Nanjing 125.96 83 *e*P **PKiKP 10 46 57.3 +0.8**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
BTO Baotou 126.64 69 *e*PKP **PKPdf 10 46 55.3 -2.0**
BTO sPKP 10 47 09.8
BTO PP **PP 10 48 54.5 -0.1**
BTO SKS **SKSac 10 54 01.9 -0.6**
BTO Baotou 126.64 69 SS SS 11 06 02.3 +2.3
BTO pmax pmax
comp=Z,15nm,0.6s
BTO LR LR
comp=N,260nm,7.3s
BTO LR LR
comp=E,200nm,4.6s
BTO LR LR
comp=Z,190nm,7.8s
TXAR Lajitas Array 126.82 271 PKP **PKPdf 10 46 56.5 -1.5**
comp=Z,0.7nm,0.9s,baz=145,slow=4.6,SNR=5.4
HHC Hu-ho-hao-te 127.67 70 *e*P **PKPdf 10 46 57.1 -2.2**
SONM Songino Array 129.34 60 PKP **PKPdf 10 47 00.9 -1.4**
comp=Z,0.8nm,0.7s,baz=190,slow=4.0,SNR=6.1
OGNE Ogallala 133.69 284 IAMs_20 IAMs_20 11 46 35.6
comp=Z,220nm,20.0s
CN2 Changchun 137.55 75 *e*P PKPpre 10 47 05.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MDJ Mudanjiang 140.46 77 PKP **PKPdf 10 47 23.5 +0.6**
MDJ PP **PP 10 50 26.0 +3.4**
NVAR Mina Array Bea 141.88 269 PKhKP PKPpre 10 47 19.4
comp=Z,0.6nm,0.8s,baz=125,slow=5.6,SNR=5.4
PLID Pearl Lake 144.41 280 PKPdf PKPbc 10 47 28.7 -0.1
J08A Circle Bar Ran 144.94 275 PKPbc 10 47 30.6 +0.2
BMO Blue Mountains 145.06 278 **PKPbc 10 47 30.0 -0.8**
F10A Beach Ranch, E 145.61 280 **PKPab 10 47 33.4 +0.6**
I07A Izee 145.97 276 **PKPab 10 47 34.8 +0.6**
K05A Summer Lake 146.05 273 **PKPab 10 47 35.8 +1.1**
G08A Pilot Rock 146.29 278 **PKPab 10 47 35.5 +0.1**
E09A Wood Farm, Sta 146.43 280 PKPdf **PKPbc 10 47 34.8 0.0**
J05D Fort Rock, OR 146.57 273 **PKPab 10 47 37.2 +0.6**
PINE Pine Mountain 146.68 274 **PKPab 10 47 37.4 +0.3**
NEW Newport 146.68 284 PKPdf **PKPdf 10 47 34.4 +0.6**
D08A Wollman Farm, 147.17 281 **PKPbc 10 47 36.5 -0.3**
HAWA Hanford 147.20 279 PKPab **PKiKP 10 47 39.7 +0.4**
TIXI Tiksi 147.93 31 PKPdf **PKPbc 10 47 37.2 -0.9**
YSS Yuzh-Sakhalins 149.52 82 IAMs_20 IAMs_20 11 57 24.8
comp=Z,125nm,20.0s
YKA Yellowknife Ar 149.76 311 PKPbc **PKPbc 10 47 42.3 -0.7**
comp=Z,8.2nm,0.9s,baz=92,slow=2.5,SNR=97
HILA High Level 150.25 302 **PKPbc 10 47 44.7 +0.3**
A36M Sachs Harbour 152.82 331 **PKPbc 10 47 50.0 +0.1**
WRGLY Wrigley 153.85 312 PKPab **PKPab 10 48 06.2 +0.6**
INK Inuvik 156.83 326 PKPab **PKPab 10 48 18.7 +0.4**
G31M Satah River 157.62 323 PKPab **PKPab 10 48 22.3 +0.6**
FARO Faro, Yukon 158.47 310 PKPab **PKPab 10 48 26.2 +0.5**
M30M Minto, Yukon 159.97 312 PKPab **PKPab 10 48 32.3 +0.1**
DAWY Dawson 160.65 317 PKPab **PKPab 10 48 35.3 +0.2**
E25K Arctic Village 160.75 332 PKPab **PKPab 10 48 37.5 +2.2**
BCAR Beaver Creek A 162.01 316 PKPab **PKPab 10 48 41.6 +0.5**
SCRK Sand Creek 162.53 320 PKPab **PKPab 10 48 43.7 +0.3**
ILAR Eielson Array 163.21 324 PKPab **PKPab 10 48 46.6 +0.4**
ILAR Eielson Array 163.21 324 PKPab **PKPab 10 48 46.4 +0.2**
comp=Z,1.7nm,0.9s,baz=34,slow=4.1,SNR=17
F21K Alatna River 163.49 337 PKPab **PKPab 10 48 49.3 +1.9**

IDC 21 10:43:05.9±376.0, 53.92N×40.78E, h0km, Error ellipse: s-maj=174.8km s-min=70.2km az=154.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.47**	**326**	I	I	11 05 20.0	
	0.4nm,0.6s,baz=143,slow=335,SNR=2.9						
I37NO	**I37NO**	**18.33**	**334**	I	I	12 31 20.0	
	baz=133,slow=330,SNR=1.6						
I46RU	**ZALESOVO INFRA**	**25.62**	**72**	I	I	13 19 40.0	
	baz=289,slow=331,SNR=1.2						

IDC 21 10:44:13.4±3.8, 53.95N×89.95E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=37.9km s-min=23.6km az=34.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.03**	**272**	I	I	11 04 38.8	
	baz=88,slow=335,SNR=5.3						
ZALV	**Zalesovo Beam**	**3.03**	**272**	Pn	Pn	10 45 04.6	+2.0
	0.4nm,0.3s,baz=88,slow=16,SNR=6.1						
ZALV				Lg	Lg	10 45 48.4	
	0.9nm,0.3s,baz=86,slow=28,SNR=9.3						
	0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**7.75**	**249**	Pn	Pn	10 46 07.1	-0.3
	0.1nm,0.3s,baz=64,slow=15,SNR=5.5						
KURBB				Sn	Sn	10 47 35.0	-0.8
	baz=66,slow=1.1,SNR=2.7						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.67**	**217**	Pn	Pn	10 46 20.8	+0.7
	0.2nm,0.3s,baz=30,slow=13,SNR=13						
	0.2nm,0.3s						

*ISN **21** 10:53:09.0±1.0, 34.48N×46.22E, h5km±11km, ML2.3*
*TEH **21** 10:53:10.2, 34.64N×46.22E, h10km±78km, ML2.5*
ISC 21 10:53:10.5±1.2, 34.63N±0.05×46.26E±0.07, h13km±11km, n7, σ0.76/9, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.13**	**55**	Pg	**Pg**	**10 53 13.6**	**-0.5**
IGHG	**Ghaleghazi**	**0.39**	**139**	Pg	**Pb**	**10 53 18.9**	**-0.4**
ILIN	**Lien**	**0.65**	**63**	Pg	**Pg**	**10 53 23.8**	**+0.6**
KCHF	**Cheshme Sefid,**	**0.73**	**118**	Pg	**Pb**	**10 53 25.2**	**0.0**
ILBA	**Ilam Banvizeh**	**1.00**	**182**	Pg	**Pn**	**10 53 29.8**	**-0.4**
IBDR	**Badra**	**1.54**	**190**	*e*Pg	**Pg**	**10 53 40.0**	**0.0**
	baz=10.0						
IBDR				*e*Sg	**Sg**	**10 54 01.0**	**+1.1**
IBDR				AML	AML	10 54 06.7	
	comp=E,52nm,0.4s						
IBDR				AML	AML	10 54 13.3	
	comp=N,56nm,0.4s						
IKRK	**Kirkuk**	**1.75**	**297**	*e*Pn	**Pn**	**10 53 41.0**	**+0.5**
IKRK				*e*Sn	**Sn**	**10 54 02.0**	**-0.8**

*HEL **21** 10:59:10.6±0.2, 64.86N×20.29E, h0km, ML1.5, Explosion*
UPP 21 10:59:10.2±0.1, 64.85N×20.30E, h0km, ML2.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LILU	**Lilltraesk**	**0.48**	**336**	P	Pg	10 59 19.4	+0.1
LILU				S	Sg	10 59 25.5	0.0
ODEU	**Stanfors**	**0.48**	**158**	P	Pg	10 59 19.4	+0.1
ODEU				S	Sg	10 59 26.4	+0.9
SVAU	**Svanoeiden**	**0.48**	**221**	P	Pg	10 59 19.3	0.0
BURU	**Burvik**	**0.53**	**120**	P	Pg	10 59 20.3	-0.1
BURU	**Burvik**	**0.53**	**120**	PG	Pg	10 59 20.2	-0.2
BURU				SG	Sg	10 59 27.2	-0.1
SJUU	**Sjulsmark**	**0.86**	**39**	P	Pg	10 59 26.4	-0.3
UMAU	**Umeaa**	**0.99**	**170**	P	Pg	10 59 28.9	-0.1
UMAU	**Umeaa**	**0.99**	**170**	PG	Pg	10 59 28.5	-0.5
	baz=353						
UMAU				SB	Sg	10 59 42.0	+0.2
BREU	**Bredtraesk**	**1.22**	**219**	P	Pg	10 59 33.3	-0.3
OBF8	**Ulkokalla**	**1.45**	**110**	PG	Pn	10 59 37.8	+0.1
OBF8				MSG		10 59 54.4	
	comp=Z,5.3nm,0.2s						
OBF8				SG	Sg	10 59 56.7	-0.1
HUSU	**Husum**	**1.59**	**198**	P	Pn	10 59 39.4	-0.1
HUSU	**Husum**	**1.59**	**198**	PN	Pn	10 59 39.7	+0.2
	baz=18						
HUSU				SN	Sn	11 00 00.7	0.0
KALU	**Kalix**	**1.63**	**50**	P	Pn	10 59 40.3	+0.2
KALU	**Kalix**	**1.63**	**50**	PG	Pn	10 59 40.1	0.0
KALU				SN	Sb	11 00 02.3	+0.1
OBF0	**Syolatti, Pyha**	**1.73**	**100**	PG	Pb	10 59 42.2	-0.5
	baz=288						
OBF0				MSG		11 00 02.4	
	comp=Z,5.9nm,0.2s						
OBF0				SN	Sb	11 00 05.3	+0.3
OUF	**Merijarvi**	**1.97**	**102**	PG	Pb	10 59 46.1	-0.8
	baz=284						
OUF				MSG		11 00 09.4	
	comp=Z,1.9nm,0.2s						
OUF				SG	Sn	11 00 10.7	+0.6
OBF4	**Vikkela, Lumij**	**2.05**	**89**	PG	Pn	10 59 46.6	+0.7
	baz=270						
OBF4				MSG		11 00 11.8	
	comp=Z,1.7nm,0.2s						
OBF4				SG	Sb	11 00 13.5	-0.8
TOF	**Tornio**	**2.08**	**52**	PG	Pb	10 59 47.8	-0.9
TOF				MSG		11 00 12.5	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sb	11 00 14.3	-0.8
VAF	**Ylistaro**	**2.10**	**149**	PG	Pb	10 59 48.0	-1.0
VAF				MSG		11 00 12.8	
	comp=Z,5.2nm,0.2s						
VAF				SG	Sb	11 00 15.6	+0.1
OUL	**Oulu**	**2.39**	**82**	SG	Sb	11 00 24.0	0.0
HEMU	**Hemsoen**	**2.41**	**206**	PG	Pb	10 59 53.4	-0.8
HEMU				SG	Sb	11 00 25.6	+1.2

PAJU	**Pajala**	**2.47**	**27**	PN	Pn	10 59 52.1	+0.5
PAJU				SN	Sn	11 00 23.5	+1.0
KLF	**Kolari**	**2.82**	**30**	SN	Sn	11 00 32.2	+1.1
KLF				MSG		11 00 33.5	
	comp=Z,0.7nm,0.2s						
RANF	**Ranua**	**2.95**	**64**	SG	Sb	11 00 41.0	+0.9
LANU	**Lannavaara**	**3.28**	**11**	PN	Pn	11 00 03.7	+0.9
LANU				SN	Sn	11 00 43.3	+0.8
SUF	**Sumiainen**	**3.36**	**127**	SG	Sb	11 00 52.4	+0.4
SGF	**Sodankyl**	**3.63**	**41**	SN	Sn	11 00 51.2	+0.3
MSF	**Maaselka**	**3.81**	**70**	SN	Sn	11 00 55.9	+0.5
HEF	**Hetta**	**3.81**	**19**	PG	Pb	11 00 19.5	+1.2
HEF				SN	Sn	11 00 55.9	+0.3
KU6	**Riekki**	**4.17**	**69**	SN	Sn	11 01 04.8	+0.4
KIF	**Kilpisjarvi**	**4.18**	**2**	PG	Pb	11 00 25.3	+0.9
KIF				SN	Sn	11 01 06.6	+2.2
FIA0	**FINESS Array S**	**4.31**	**140**	SG	Sb	11 01 23.3	+4.2
KTK1	**Kautokeino**	**4.34**	**14**	PN	Pn	11 00 17.9	+0.6
VRF	**Varrio**	**4.75**	**48**	SN	Sn	11 01 15.9	-2.7

HEL 21 10:59:32.6±0.6, 60.61N×29.05E, h0km, ML1.2, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.74**	**265**	PG	Pg	10 59 46.0	-0.8
VJF				MSG		10 59 56.0	
	comp=Z,2.8nm,0.2s						
VJF				SB	Sg	10 59 56.3	-0.2
RUF	**Ruokolahti**	**0.82**	**356**	PB	Pg	10 59 48.3	0.0
RUF				MSG		10 59 58.0	
	comp=Z,1.8nm,0.2s						
PVF	**Pernaja**	**1.58**	**269**	PG	Pn	11 00 00.3	-1.5
PVF				MSG		11 00 19.8	
	comp=Z,3.4nm,0.2s						
PVF				SN	Sg	11 00 24.2	+1.0
FIA0	**FINESS Array S**	**1.67**	**301**	PG	Pn	11 00 02.2	-0.9
FIA0				MSG		11 00 22.6	
	comp=Z,2.1nm,0.2s						
FIA0				SN	Sb	11 00 25.7	-0.1
FIA0	**FINESS Array S**	**1.67**	**301**	PG	Sn	11 00 25.7	+0.5
ARBE	**Arbavere**	**1.94**	**234**	PG	Pn	11 00 07.5	+0.8
KAF	**Kangasniemi**	**2.01**	**320**	PN	Pn	11 00 08.8	+1.1
KAF	**Kangasniemi** baz=139	**2.01**	**320**	PG	Pn	11 00 08.8	+1.1
KAF				MSG		11 00 32.2	
	comp=Z,1.2nm,0.2s						
NUR	**Nurmijrvi**	**2.18**	**269**	MSG		11 00 37.1	
	comp=Z,0.9nm,0.2s						
NUR				SG	Sb	11 00 40.7	+0.4
JOF	**Joensuu**	**2.55**	**24**	SG	Sb	11 00 51.5	+0.3
OBF0	**Syolatti, Pyha**	**4.49**	**332**	SG	Sb	11 01 48.2	+1.3

*IDC **21** 11:22:10.7±2.3,5.°32S×152.°29E, h72km±14km, mb3.7/12, mbtmp4.0/13, MS3.5/3, Error ellipse: s-maj=37.2km s-min=14.7km az=114.0*

ISC 21 11:22:06.8±0.9, 5.°42S±0.°08×152.°5E±0.°1, h40km, n17, σ1§46/17, mb3.9/12, MS3.4/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 2µm,0.3s,baz=191,slow=24,SNR=1.1	**1.21**	**337**	P	**Pn**	**11 22 27.8**	**+0.5**
KRVT	1µm,0.3s,baz=11,slow=24,SNR=0.9			S	**Sn**	**11 22 45.2**	**+2.8**
PMG	**Port Moresby** 27nm,0.7s,baz=40,slow=5.3,SNR=11	**6.61**	**233**	P	**Pn**	**11 23 43.6**	**+2.0**
PMG	36nm,0.4s,baz=148,slow=22,SNR=10			S	**Sn**	**11 24 55.0**	**-0.7**
DZM	**Mont Dzumac** comp=Z,99nm,18.8s,baz=229,slow=34	**21.35**	**142**	LR	LR	11 34 17.2	
WRA	**Warramunga Arr** 3.5nm,0.8s,baz=51,slow=10,SNR=11 3.5nm,0.8s	**22.81**	**229**	P	**P**	**11 27 07.1**	**+0.6**
ASAR	**Alice Springs** 0.4nm,0.4s,baz=59,slow=8.5,SNR=18 0.4nm,0.4s	**25.49**	**223**	P	**P**	**11 27 32.3**	**+0.7**
JCJ	**Chichijima** comp=Z,74nm,21.5s,baz=134,slow=32	**33.83**	**343**	LR	LR	11 40 06.2	
RPZ	**Rata Peaks** comp=Z,58nm,19.0s,baz=340,slow=35	**41.49**	**160**	LR	LR	11 46 18.1	
CMAR	**Chiang Mai Arr** 0.7nm,0.3s,baz=70,slow=6.0,SNR=1.3 0.7nm,0.3s	**57.87**	**296**	P	**P**	**11 31 52.9**	**-2.2**
PETK	**Petropavlovsk-** 2.2nm,0.8s,baz=154,slow=5.6,SNR=4.5 2.2nm,0.8s	**58.48**	**4**	P	**P**	**11 31 57.5**	**-1.2**
SONM	**Songino Array** 0.6nm,0.6s,baz=147,slow=4.6,SNR=6.0	**66.69**	**328**	P	**P**	**11 32 53.1**	**-0.7**
SONM	0.3nm,0.5s,baz=146,slow=5.6,SNR=2.7 0.6nm,0.6s			PcP	**PcP**	**11 33 23.5**	**+0.8**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=94,slow=7.6,SNR=8.4 0.5nm,0.6s	**80.60**	**319**	P	**P**	**11 34 14.6**	**-0.8**
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=115,slow=6.0,SNR=3.9 0.7nm,0.5s	**81.50**	**326**	P	**P**	**11 34 19.0**	**-1.0**
ILAR	**Eielson Array** 1.4nm,0.8s,baz=246,slow=5.3,SNR=22 1.4nm,0.8s	**82.84**	**22**	P	**P**	**11 34 26.1**	**-0.7**
KURBB	**Kurchatov Arra** 0.9nm,0.8s,baz=108,slow=4.4,SNR=7.5 0.9nm,0.8s	**84.10**	**322**	P	**P**	**11 34 32.3**	**-1.2**
BVAR	**Borovoye Array** 1.6nm,0.6s,baz=108,slow=5.3,SNR=9.9 1.6nm,0.6s	**89.56**	**323**	P	**P**	**11 34 59.5**	**-0.6**
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=216,slow=5.4,SNR=2.8 0.3nm,0.6s	**92.70**	**52**	P	**P**	**11 35 17.5**	**+2.2**
YKA	**Yellowknife Ar** 0.4nm,0.7s,baz=272,slow=4.7,SNR=8.0 0.4nm,0.7s	**96.11**	**28**	P	**P**	**11 35 30.5**	**+0.4**

*IDC **21** 11:23:07.1±7.2,34.°43N×23.°79E, h0km, mb3.7/4, mbtmp3.6/5, ML2.9/1, Error ellipse: s-maj=139.4km s-min=48.6km az=19.0*

*THE **21** 11:23:14.4,34.°61N×23.°94E, h13km±1km, ML3.2/5, Error ellipse: s-maj=2.2km s-min=1.1km az=20.0*

*ATH **21** 11:23:17.1,34.°78N×24.°04E, h17km±1km, ML3.1/6, Error ellipse: s-maj=4.4km s-min=1.5km az=222.0*

*GII **21** 11:23:23.3±0.7, 33.°94N×24.°81E, h13km, Mws3.6, confirmed*

ISC 21 11:23:11.9±2.2, 34.°54N±0.°08×23.°86E±0.°07, h10km±10km, n33, σ1§29/33, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.35**	**32**	P	**Pg**	**11 23 19.5**	**+0.6**
GVD				S	**Sg**	**11 23 24.5**	**+0.9**
	40µm,0.4s						
GVD	**Gavdhos**	**0.35**	**32**	P	**Pg**	**11 23 19.6**	**+0.6**
GVD				S	**Sg**	**11 23 23.2**	**-0.4**
GVD	comp=E,84792µm,0.4s			AML	AML	11 23 24.8	
GVD	comp=N,75272µm,0.3s			AML	AML	11 23 25.9	
GVDS	**Gavdos**	**0.35**	**32**	P	**Pg**	**11 23 19.4**	**+0.4**
GVDS				S	**Sg**	**11 23 24.1**	**+0.4**
	comp=N,21µm,0.3s						
TMBK	**Timbaki Herakl**	**0.91**	**54**	P	**Pg**	**11 23 29.4**	**-0.2**
PRNS	**Prines Rethymn**	**0.97**	**32**	P	**Pg**	**11 23 29.3**	**-1.4**
PRNS				S	**Sg**	**11 23 41.8**	**-1.6**
	comp=N,615nm,0.8s						
CHAN	**Chania**	**0.99**	**9**	P	**Pg**	**11 23 30.3**	**-0.6**
CHAN				S	**Sg**	**11 23 41.1**	**-2.6**
CHAN	comp=N,4971µm,0.6s			AML	AML	11 23 51.0	
CHAN	comp=E,5610µm,0.5s			AML	AML	11 23 53.8	
RODP	**Rodopos**	**1.02**	**355**	P	**Pb**	**11 23 32.3**	**+0.6**
RODP				S	**Sb**	**11 23 45.5**	**+0.3**
	comp=E,365nm,0.5s						
KSTL	**Kastelli Herak**	**1.25**	**52**	P	**Pb**	**11 23 36.6**	**+1.0**
KSTL				S	**Sn**	**11 23 54.9**	**+2.5**
KSTL	**Kastelli Herak**	**1.25**	**52**	P	**Pb**	**11 23 37.4**	**+1.7**
KSTL	comp=E,843µm,0.5s			AML	AML	11 24 04.4	
KSTL	comp=N,1821µm,0.6s			AML	AML	11 24 08.7	
IACM	**Heraklion**	**1.25**	**52**	P	**Pb**	**11 23 35.4**	**-0.2**
IACM				S	**Sb**	**11 23 51.3**	**-0.6**
IACM	**Heraklion**	**1.25**	**52**	P	**Pb**	**11 23 35.5**	**-0.2**
ANKY	**Antikythira Is**	**1.40**	**341**	P	**Pn**	**11 23 38.8**	**+1.2**
ANKY				S	**Sn**	**11 23 56.1**	**0.0**
	comp=N,525nm,0.8s						
ANKY	**Antikythira Is**	**1.40**	**341**	P	**Pn**	**11 23 38.9**	**+1.4**
ANKY				AML	AML	11 24 10.1	
ANKY	comp=E,1148µm,1.0s			AML	AML	11 24 10.3	
	comp=N,947µm,0.6s						
FRMA	**Ierapetra Chan**	**1.61**	**72**	P	**Pn**	**11 23 42.5**	**+2.1**
FRMA				AML	AML	11 24 19.8	
FRMA	comp=N,791µm,0.7s			AML	AML	11 24 20.4	
	comp=E,647µm,0.8s						
ZKR	**Zakros**	**2.02**	**73**	P	**Pn**	**11 23 47.2**	**+1.1**
ZKR				AML	AML	11 24 28.9	
ZKR	comp=E,581µm,1.0s			AML	AML	11 24 31.1	
	comp=N,201µm,0.7s						
MHLO	**Agia Marina, M**	**2.19**	**11**	P	**Pn**	**11 23 49.1**	**+0.7**
SNT5	**Nea Kammeni, S**	**2.24**	**34**	P	**Pn**	**11 23 48.6**	**-0.6**
VLI	**Veliai**	**2.30**	**341**	P	**Pn**	**11 23 51.8**	**+1.9**
KARP	**Karpathos**	**2.89**	**69**	P	**Pn**	**11 23 59.0**	**+0.9**
BRTR	**Keskin Array B** comp=N,0.1nm,0.3s,baz=244,slow=13,SNR=3.2 comp=N,0.6nm,0.7s	**9.36**	**54**	Pn	**Pn**	**11 25 27.8**	**+0.7**
KZIT	**Kziot**	**9.59**	**109**	S	Sn	11 27 06.6	-11
KZIT	**Kziot**	**9.59**	**109**	P	**Pn**	**11 25 29.1**	**-1.0**
DSI	**Dead Sea**	**10.11**	**104**	S	Sn	11 27 20.6	-10
DSI	**Dead Sea**	**10.11**	**104**	P	Pn	11 25 35.3	-1.9
KRMI	**Paran Flat**	**10.19**	**113**	P	**Pn**	**11 25 36.8**	**-1.6**
KRMI	**Paran Flat**	**10.19**	**113**	S	Sn	11 27 20.6	-12
MBRI	**Mt Berech**	**10.49**	**114**	P	**Pn**	**11 25 41.8**	**-0.7**
MBRI	**Mt Berech**	**10.49**	**114**	S	Sn	11 27 27.4	-13
EIL	**Elat**	**10.58**	**114**	P	Pn	11 25 41.1	-2.6
HFS	**Hagfors** comp=N,1.4nm,0.9s,baz=162,slow=11,SNR=1.5 comp=N,1.4nm,0.9s	**26.45**	**349**	P	**P**	**11 28 46.6**	**-2.2**
KURBB	**Kurchatov Arra** comp=N,0.4nm,0.5s,baz=276,slow=8.5,SNR=4.7 comp=N,0.4nm,0.5s	**42.34**	**50**	P	P	11 31 03.0	-2.9
MKAR	**Makanchi Array** comp=N,0.3nm,0.4s,baz=263,slow=7.9,SNR=11 comp=N,0.3nm,0.4s	**45.01**	**56**	P	P	11 31 25.6	-2.0
ZALV	**Zalesovo Beam** comp=N,0.6nm,0.4s,baz=281,slow=6.5,SNR=4.3 comp=N,0.6nm,0.4s	**46.20**	**46**	P	P	11 31 33.9	-3.0

*IDC **21** 11:36:12.1±0.9, 2.°38N×98.°15W, h0km, mb3.8/8, mbtmp3.8/9, ML3.2/1, MS3.8/31, Error ellipse: s-maj=47.4km s-min=21.4km az=73.0*

*NEIC **21** 11:36:16.4±1.7, 2.°10N±0.°04×98.°9W±0.°2, h10km±2km, mb4.4/40, Error ellipse: s-maj=26.1km s-min=4.3km az=258.0*

ISC 21 11:36:14.8±0.8, 2.°1N±0.°1×99.°0W±0.°1, h10km, n88, σ1§18/52, mb4.3/22, MS3.8/28, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote** comp=Z,43nm,19.4s,baz=279,slow=33	**15.37**	**33**	LR	LR	11 44 09.4	
TLIG	**Tlapa**	**15.39**	**2**	Pn	**Pn**	**11 39 53.6**	**+1.2**
TLIG	comp=Z,22nm,1.4s			IAmb	IAmb	11 39 58.9	
CMIG	**Matias Romero** comp=Z,0.1nm,0.3s,baz=149,slow=20,SNR=1.5	**15.46**	**15**	Pn	Pn	11 39 44.1	-9.1
CMIG	comp=Z,697nm,19.4s,baz=169,slow=32 comp=Z,1.0nm,0.6s			LR	LR	11 44 14.2	
CCIG	**Comitan**	**15.66**	**25**		**Pn**	**11 39 55.5**	**-0.4**
CCIG	comp=Z,21nm,1.1s			IAmb	IAmb	11 40 02.3	
ESQI	**Esquipulas**	**15.66**	**37**	Pn	**Pn**	**11 39 56.6**	**+0.7**
ESQI	comp=Z,64nm,1.5s			IAmb	IAmb	11 40 11.3	
CRIN	**San Cristobal**	**15.87**	**48**		**Pn**	**11 39 58.0**	**-0.6**
JTS	**Las Juntas de** comp=Z,525nm,19.1s,baz=198,slow=31	**16.18**	**59**	LR	LR	11 44 11.3	
TGUH	**Tegucigalpa,Un**	**16.63**	**44**	Pn	**Pn**	**11 40 08.7**	**+0.4**
TGUH	comp=Z,52nm,1.1s			IAmb	IAmb	11 40 12.2	
JRQG	**Juriquilla Cam**	**18.56**	**356**	P	**P**	**11 40 32.3**	**+0.1**
ARNL	**Arenillas**	**19.75**	**106**	P	**P**	**11 40 44.6**	**-0.6**
MCRA	**Macar, Loja**	**20.10**	**109**	P	**P**	**11 40 49.0**	**-0.1**
COHC	**Cochancay**	**20.27**	**103**	P	**P**	**11 40 50.9**	**+0.1**
OTAV	**Otavalo**	**20.65**	**95**		**P**	**11 40 55.1**	**-0.3**
OTAV	comp=Z,16nm,1.4s			IAmb	IAmb	11 41 08.5	
ZAIG	**Zacatecas**	**20.85**	**351**	P	**P**	**11 40 59.0**	**+1.8**
ZAIG	comp=Z,21nm,1.4s			IAmb	IAmb	11 41 02.0	
IMBA	**Imbabura, San**	**20.90**	**95**	P	**P**	**11 40 58.8**	**+0.7**
BOSC	**San Juan Bosco**	**21.17**	**104**	P	**P**	**11 41 00.9**	**+0.2**
TULM	**Tulcn-Chalpat**	**21.27**	**93**	P	**P**	**11 41 02.1**	**0.0**
TULM	comp=Z,47nm,1.4s			IAmb	IAmb	11 41 09.2	
ATAH	**Atahualpa** comp=Z,2.7nm,0.6s,baz=14,slow=15,SNR=2.7	**22.53**	**114**	P	P	11 41 06.6	-9.0
ATAH	comp=Z,119nm,20.1s,baz=270,slow=32 comp=Z,2.7nm,0.6s			LR	LR	11 47 48.4	
LPIG	**La Paz** comp=Z,243nm,19.7s,baz=149,slow=31	**24.46**	**334**	LR	LR	11 48 53.2	
ROSC	**El Rosal**	**24.81**	**83**	P	**P**	**11 41 36.6**	**-1.2**
ROSC	comp=Z,24nm,1.4s			IAmb	IAmb	11 42 13.3	
HPIG		**25.52**	**346**	P	**P**	**11 41 44.7**	**+0.8**
833A	**Chaparral WMA,**	**26.10**	**359**	P	**P**	**11 41 49.4**	**+0.5**
NNA	**Nana** comp=Z,111nm,18.5s,baz=296,slow=32	**26.10**	**123**	LR	LR	11 49 45.5	
HNDO	**Hondo**	**27.30**	**360**	P	**P**	**11 41 59.7**	**-0.1**
HNDO	comp=Z,6.6nm,0.9s			IAmb	IAmb	11 42 09.3	
TX31	**Lajitas Ar. Si**	**27.46**	**351**	P	**P**	**11 42 02.0**	**+0.7**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=78,slow=7.6,SNR=4.8	**27.46**	**351**	P	**P**	**11 42 00.7**	**-0.6**
TXAR	comp=Z,217nm,18.2s,baz=130,slow=34 comp=Z,0.1nm,0.3s			LR	LR	11 51 52.2	
SAND	**Sanderson**	**27.88**	**354**	P	**P**	**11 42 05.4**	**+0.4**
SAND	comp=Z,12nm,1.2s			IAmb	IAmb	11 42 11.5	
SDV	**Santo Domingo** comp=Z,86nm,21.7s,baz=261,slow=33	**29.04**	**75**	LR	LR	11 51 42.3	
RPN	**Rapa Nui** comp=Z,265nm,19.9s,baz=39,slow=30	**30.69**	**198**	LR	LR	11 51 37.4	
WMOK	**Wichita Mounta**	**32.49**	**0**	P	**P**	**11 42 46.4**	**+0.7**
WMOK	comp=Z,3.9nm,0.7s			IAmb	IAmb	11 42 48.6	
ANMO	**Albuquerque** comp=Z,270nm,18.2s,baz=259,slow=35	**33.42**	**349**	LR	LR	11 55 27.0	
OXF	**Oxford**	**33.49**	**14**	P	**P**	**11 42 56.2**	**+1.8**
PCRV	**Puerto La Cruz** comp=Z,91nm,20.6s,slow=37	**35.09**	**75**	LR	LR	11 57 17.3	
PFO	**Pinyon Flats O** comp=Z,98nm,18.4s,baz=112,slow=31	**35.36**	**334**	LR	LR	11 54 45.9	
S39A	**Bolivar**	**35.82**	**8**	P	**P**	**11 43 14.5**	**-0.1**
S39A	comp=Z,11nm,1.4s			IAmb	IAmb	11 43 20.2	
TKL	**Tuckaleechee C** comp=Z,128nm,19.8s,baz=203,slow=36	**36.28**	**21**	LR	LR	11 57 53.7	
T47A	**Sharon Grove**	**36.44**	**16**	P	**P**	**11 43 20.1**	**+0.3**
SIUC	**Southern Illin**	**36.59**	**13**	P	**P**	**11 43 21.6**	**+0.5**
SAML	**Samuel**	**37.36**	**108**	P	**P**	**11 43 28.6**	**+0.6**
SAML	comp=Z,9.2nm,1.4s			IAmb	IAmb	11 43 33.7	
WCT	**Wildcat Mounta**	**38.17**	**337**	P	**P**	**11 43 35.7**	**+1.0**
WCT	comp=Z,7.6nm,1.5s			IAmb	IAmb	11 43 44.5	
R49A	**Shelbyville**	**38.21**	**18**	P	**P**	**11 43 35.2**	**+0.3**
R49A	comp=Z,15nm,1.1s			IAmb	IAmb	11 43 36.4	
LVC	**Limon Verde** comp=Z,105nm,19.0s,baz=292,slow=31	**38.28**	**132**	LR	LR	11 55 34.7	
RDMU	**Red Mountain**	**39.49**	**347**	P	**P**	**11 43 48.0**	**+2.2**
H03N2	**Juan Fernandez** baz=330,slow=77,SNR=14	**40.09**	**154**	T	T	12 26 41.8	
H03N1	**Juan Fernandez** baz=330,slow=77,SNR=20	**40.10**	**153**	T	T	12 26 47.1	
H03N3	**Juan Fernandez** baz=330,slow=77,SNR=17	**40.11**	**154**	T	T	12 26 38.1	
NVAR	**Mina Array Bea**	**40.25**	**336**	P	**P**	**11 43 52.2**	**0.0**
	comp=Z,0.5nm,0.7s,baz=154,slow=8.2,SNR=4.3 comp=Z,0.5nm,0.7s						
K30B	**Basset**	**40.42**	**359**	P	**P**	**11 43 55.5**	**+2.2**
HWUT	**Hardware Ranch**	**40.94**	**346**	P	**P**	**11 43 59.2**	**+1.4**
HWUT				IAmb	IAmb	11 44 13.9	
	comp=Z,8.7nm,1.3s						
ECSD	**EROS Data Cent**	**41.53**	**3**	P	**P**	**11 44 02.2**	**-0.2**
ECSD	comp=Z,6.7nm,1.1s			IAmb	IAmb	11 44 11.5	
SIV	**San Ignacio** comp=Z,93nm,18.1s,baz=108,slow=35	**41.58**	**117**	LR	LR	11 59 59.7	
PD31	**Pinedale Array**	**41.59**	**348**	P	**P**	**11 44 02.9**	**-0.3**
PDAR	**Pinedale Array**	**41.59**	**348**	P	**P**	**11 44 03.0**	**-0.2**
PDAR	**Pinedale Array** comp=Z,0.9nm,0.7s,baz=144,slow=8.2,SNR=8.4	**41.59**	**348**	P	**P**	**11 44 00.6**	**-2.7**
PDAR	comp=Z,130nm,21.2s,baz=164,slow=34 comp=Z,0.9nm,0.7s			LR	LR	11 59 30.0	
TPAW	**Teton Pass**	**42.58**	**347**	P	**P**	**11 44 13.4**	**+2.0**
IMW	**Indian Meadow**	**42.96**	**347**	P	**P**	**11 44 14.5**	**+0.1**
YHH	**Holmes Hill**	**43.79**	**348**	P	**P**	**11 44 22.6**	**+1.5**
PAL	**Palisades**	**44.90**	**27**	P	**P**	**11 44 30.2**	**+0.5**
SADO	**Sadowa** comp=Z,143nm,18.1s,baz=278,slow=36	**45.99**	**20**	LR	LR	12 03 45.9	
MDP	**Montagnes des** comp=Z,87nm,18.5s,baz=255,slow=37	**46.38**	**85**	LR	LR	12 03 57.1	
ULM	**Lac du Bonnet** comp=Z,1.4nm,0.6s,baz=177,slow=6.0,SNR=4.1	**48.07**	**3**	P	**P**	**11 44 51.3**	**-3.1**
ULM	comp=Z,76nm,19.6s,baz=195,slow=36 comp=Z,1.4nm,0.6s			LR	LR	12 04 25.2	
NEW	**Newport** comp=Z,90nm,20.7s,baz=153,slow=37	**48.58**	**344**	LR	LR	12 05 55.6	
CPUP	**Villa Florida** comp=Z,47nm,18.2s,baz=291,slow=35	**49.17**	**128**	LR	LR	12 04 42.5	
PLCA	**Paso Flores** comp=Z,86nm,18.6s,baz=336,slow=30	**49.90**	**152**	LR	LR	12 01 20.4	
PPT	**Papeete** comp=Z,49nm,20.6s,baz=93,slow=28	**53.49**	**246**	LR	LR	12 01 41.2	
SCHQ	**Schefferville** comp=Z,264nm,20.8s,baz=242,slow=36	**58.75**	**21**	LR	LR	12 10 39.8	
YKA	**Yellowknife Ar** comp=Z,0.8nm,1.0s,baz=159,slow=6.5,SNR=7.3 comp=Z,0.8nm,1.0s	**61.39**	**352**	P	**P**	**11 46 28.3**	**-2.5**
FRB	**Frobisher Bay** comp=Z,74nm,18.2s,baz=264,slow=37	**65.46**	**14**	LR	LR	12 16 16.2	
INK	**Inuvik**	**70.14**	**347**	P	**P**	**11 47 27.3**	**+0.1**
ILAR	**Eielson Array** comp=Z,1.2nm,0.8s,baz=152,slow=5.0,SNR=14 comp=Z,1.2nm,0.8s	**71.34**	**340**	P	**P**	**11 47 32.5**	**-2.1**
A36M	**Sachs Harbour**	**71.75**	**352**	P	**P**	**11 47 37.4**	**+0.5**
A36M	comp=Z,4.0nm,0.9s			IAmb	IAmb	11 47 43.2	
H24K	**Noodor Dome** comp=Z,3.5nm,1.1s	**72.33**	**341**	IAmb	IAmb	11 47 41.2	
H24K				P	**P**	**11 47 42.0**	**+1.4**
CAST	**Castle Rocks**	**72.40**	**338**	P	**P**	**11 47 41.8**	**+0.8**
CAST	comp=Z,6.6nm,1.2s			IAmb	IAmb	11 47 47.4	
RES	**Resolute Bay** comp=Z,96nm,18.8s,baz=334,slow=35	**72.56**	**1**	LR	LR	12 18 34.5	
SFJD	**Kangerlussuaq** comp=Z,98nm,19.4s,baz=188,slow=36	**72.91**	**18**	LR	LR	12 19 20.8	
JMIC	**Jan Mayen** comp=Z,79nm,21.7s,baz=266,slow=35	**88.22**	**19**	LR	LR	12 26 55.8	
RPZ	**Rata Peaks** comp=Z,72nm,18.3s,baz=57,slow=31	**91.37**	**226**	LR	LR	12 24 14.0	
QSPA	**South Pole Qui** comp=Z,2.1nm,0.8s,baz=127,slow=1.0,SNR=9.8	**92.10**	**180**	P	**P**	**11 49 25.5**	**+1.3**
QSPA	comp=Z,61nm,21.1s,baz=258,slow=31 comp=Z,2.1nm,0.8s			LR	LR	12 23 43.9	
H11N3	**WAKE ISLAND Hy** baz=86,slow=75,SNR=8.8	**93.13**	**290**	T	T	13 32 59.6	
H11N2	**WAKE ISLAND Hy** baz=86,slow=75,SNR=9.5	**93.14**	**290**	T	T	13 33 05.8	
H11N1	**WAKE ISLAND Hy** baz=86,slow=75,SNR=9.6	**93.15**	**290**	T	T	13 33 08.1	
H11S2	**WAKE ISLAND Hy** baz=86,slow=75,SNR=41	**93.40**	**289**	T	T	13 33 20.7	
H11S1	**WAKE ISLAND Hy** baz=86,slow=75,SNR=47	**93.40**	**289**	T	T	13 33 21.8	
H11S3	**WAKE ISLAND Hy** baz=86,slow=75,SNR=48	**93.41**	**289**	T	T	13 33 22.1	
NOA	**NORSAR Array B** comp=Z,28nm,18.0s,baz=320,slow=35	**97.86**	**27**	LR	LR	12 32 38.4	
ASAR	**Alice Springs** comp=Z,0.5nm,0.9s,baz=110,slow=2.0,SNR=4.7	**124.52**	**243**	PKP	**PKPdf**	**11 55 15.1**	**-0.3**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.7s,baz=101,slow=2.4,SNR=5.3	**124.98**	**247**	PKP	**PKiKP**	**11 55 16.6**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.8s,baz=350,slow=2.4,SNR=5.5	**127.46**	**2**	PKP	**PKPdf**	**11 55 19.0**	**-1.2**

*NNC **21** 11:42:07.4±1.3, 50.°39N×73.°44E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=13.3km s-min=10.1km az=109.0, Suspected Mining explosion.*

*IDC **21** 11:42:10.4±0.9, 50.°11N×73.°67E, h0km, mbtmp2.8/5, ML2.3/5, Error ellipse: s-maj=11.2km s-min=8.5km az=48.0*

ISC 21 11:42:07.2±0.9, 50.°26N±0.°04×73.°39E±0.°05, h0km, n12, σ1§21/15, 8C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu** 7.0nm,0.5s	**2.14**	**199**	⇑Pn	**Pb**	**11 42 46.5**	**-0.3**
OTUK	42nm,0.8s			⇑Sn	**Sg**	**11 43 15.2**	**-0.6**
KURBB	**Kurchatov Arra** 2.4nm,0.5s	**3.31**	**82**	⇑Pg	**Pb**	**11 43 07.3**	**+0.6**
KURBB	67nm,0.6s			⇑Lg	Lg	11 43 52.4	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=260,slow=12,SNR=11	**3.31**	**82**	Pn	**Pn**	**11 42 59.7**	**-0.5**
KURBB	0.3nm,0.3s,baz=271,slow=22,SNR=14			Pg	**Pb**	**11 43 06.9**	**+0.2**
KURBB	0.5nm,0.3s,baz=264,slow=31,SNR=17 0.5nm,0.6s			Lg	Lg	11 43 50.7	
BVA0	**Borovoye Array** 2.3nm,0.5s,baz=138,slow=16,SNR=23	**3.34**	**327**	Pg	**Pb**	**11 43 06.7**	**-0.5**
BVA0	7.6nm,0.9s,baz=135,slow=26,SNR=7.0			⇑Lg	Lg	11 43 50.0	
BVAR	**Borovoye Array** 0.3nm,0.3s,baz=144,slow=16,SNR=35	**3.34**	**327**	Pn	**Pb**	**11 43 06.2**	**-1.1**
BVAR	0.3nm,0.3s,baz=143,slow=24,SNR=14 4.3nm,0.4s			Sn	**Sb**	**11 43 50.6**	**+2.2**
KURK	**Kurchatov** 0.4nm,0.3s	**3.37**	**80**	⇓Pg	**Pb**	**11 43 08.4**	**+0.6**
KURK	16nm,0.8s			⇑Lg	Lg	11 43 54.0	
BRVK	**Borovoye** 1.9nm,0.4s	**3.40**	**327**	⇑Pg	**Pb**	**11 43 08.2**	**-0.1**
BRVK	9.8nm,0.8s			⇑Lg	Lg	11 43 51.0	
MK31	**Makanchi Array** 6.4nm,0.8s,baz=313,slow=26,SNR=7.4	**6.85**	**117**	⇓Lg	Lg	11 45 48.0	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=303,slow=12,SNR=3.7	**6.85**	**117**	Pn	**Pn**	**11 43 49.6**	**+0.6**
MKAR	0.1nm,0.3

WRA	**Warramunga Arr** 0.3nm,0.3s,baz=96,slow=7.4,SNR=10 0.3nm,0.3s	**44.86**	**261**	P		P		12 12 36.5	-0.1
ASAR	**Alice Springs** 0.5nm,0.5s,baz=99,slow=7.4,SNR=8.2 0.5nm,0.5s	**44.89**	**256**	P		P		12 12 36.5	-0.2
TXAR	**Lajitas Array** 0.2nm,0.8s,baz=242,slow=7.0,SNR=2.6 0.2nm,0.8s	**86.33**	**57**	P		P		12 17 04.6	+0.1
ILAR	**Eielson Array** 0.2nm,0.5s,baz=215,slow=5.0,SNR=4.3 0.2nm,0.5s	**87.10**	**13**	P		P		12 17 07.2	-0.1
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=224,slow=5.0,SNR=2.9 0.3nm,0.7s	**88.02**	**43**	P		P		12 17 12.5	0.0

*IDC **21** 12:17:31.8±1.0, 14.°29N×146.°15E, h0km, mb3.8/13, mbtmp3.8/13, Error ellipse: s-maj=26.4km s-min=18.7km az=117.0*
ISC 21 12:17:43.7±0.9, **14.°1N**±0.°1×**145.°7E**±0.°2, **h100**km, **n20**, σ**2s08/15**, **mb3.7/13**, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 122nm,0.3s,baz=350,slow=2.2,SNR=34	**0.89**	**239**	Pn		**Pn**		**12 17 60.0**	**-3.0**
GUMO	209nm,0.3s,baz=20,slow=22,SNR=14			Sn		**Sn**		**12 18 15.2**	**-2.2**
H11S3	**WAKE ISLAND Hy 20.66** baz=263,slow=75,SNR=9.8	**75**		T		T		12 43 46.2	
H11S1	**WAKE ISLAND Hy 20.68** baz=263,slow=75,SNR=4.6	**75**		T		T		12 43 47.8	
H11S2	**WAKE ISLAND Hy 20.68** baz=263,slow=75,SNR=4.6	**75**		T		T		12 43 45.2	
H11N1	**WAKE ISLAND Hy 21.08** baz=261	**72**		T		T		12 44 08.3	
H11N2	**WAKE ISLAND Hy 21.09** baz=261	**72**		T		T		12 44 17.7	
H11N3	**WAKE ISLAND Hy 21.10** baz=261	**72**		T		T		12 44 11.0	
KSRS	**Korea Array** 0.8nm,0.4s,baz=144,slow=9.7,SNR=5.5 0.8nm,0.4s	**28.15**	**329**	P		**P**		**12 23 27.0**	**+0.6**
WRA	**Warramunga Arr** 0.7nm,1.0s,baz=22,slow=8.9,SNR=2.8 0.7nm,1.0s	**35.57**	**198**	P		**P**		**12 24 34.3**	**+2.7**
ASAR	**Alice Springs** 0.2nm,0.8s,baz=12,slow=9.5,SNR=1.9 0.2nm,0.8s	**39.21**	**197**	P		**P**		**12 25 04.1**	**+1.8**
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=88,slow=6.4,SNR=1.6 0.5nm,0.3s	**44.96**	**282**	P		**P**		**12 25 51.7**	**+2.4**
SONM	**Songino Array** 0.5nm,0.5s,baz=129,slow=11,SNR=4.0 0.5nm,0.5s	**46.80**	**324**	P		**P**		**12 26 02.4**	**-1.0**
MKAR	**Makanchi Array** 0.9nm,0.4s,baz=92,slow=8.7,SNR=24 0.9nm,0.4s	**61.69**	**316**	P		**P**		**12 27 53.9**	**+2.5**
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=95,slow=7.2,SNR=1.7 0.4nm,0.5s	**61.69**	**324**	P		**P**		**12 27 52.3**	**+1.1**
KURBB	**Kurchatov Arra** 1.3nm,0.6s,baz=98,slow=6.9,SNR=15 1.3nm,0.6s	**64.77**	**320**	P		**P**		**12 28 13.2**	**+1.7**
ILAR	**Eielson Array** 0.3nm,0.4s,baz=255,slow=5.8,SNR=8.9 0.3nm,0.4s	**67.82**	**25**	P		**P**		**12 28 29.1**	**-1.7**
BVAR	**Borovoye Array** 1.5nm,0.5s,baz=100,slow=7.6,SNR=7.1 1.5nm,0.5s	**70.04**	**322**	P		**P**		**12 28 46.3**	**+1.6**
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=287,slow=5.7,SNR=4.5 0.3nm,0.8s	**82.10**	**28**	P		**P**		**12 29 50.9**	**-2.1**
NVAR	**Mina Array Bea** 0.5nm,0.6s,baz=262,slow=5.4,SNR=4.1 0.5nm,0.6s	**86.04**	**52**	P		**P**		**12 30 14.1**	**+0.4**
FINES	**FINESS Array B** 0.6nm,0.4s,baz=57,slow=5.1,SNR=3.9 0.6nm,0.4s	**91.06**	**335**	P		**P**		**12 30 36.2**	**-0.5**

*IPEC **21** 12:20:01.8±0.2, 50.°18N×19.°13E, h1km, ML2.5/4, Error ellipse: s-maj=2.5km s-min=1.0km az=167.0*
*PRU **21** 12:20:02.5, 50.°18N×19.°11E, h0km*
ISC 21 12:20:01.6±0.9, **50.°12N**±0.°04×**19.°09E**±0.°02, **h0**km, **n22**, σ**0s75/37**, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**77**	*e*Pg		**Pg**		**12 20 10.1**	**-0.4**
OJC				*e*Sg		**Sg**		**12 20 16.2**	**-0.3**
OKC	**Ostrava-Krasne**	**0.67**	**246**	*e*PG		**Pb**		**12 20 15.6**	**-0.5**
OKC	comp=Z,46nm,0.8s			*e*SG		**Sb**		**12 20 25.9**	**-0.1**
LANS	**Liptovska Anna**	**1.00**	**166**	*e*PG		**Pb**		**12 20 21.3**	**-0.4**
LANS				*e*SG		**Sb**		**12 20 35.2**	**-0.2**
LANS				*e*LG		Lg		12 20 35.7	
NIE	**Niedzica**	**1.05**	**131**	*e*Pg		**Pg**		**12 20 21.5**	**-0.1**
NIE				*e*Sg		**Sb**		**12 20 36.5**	**-0.4**
MORC	**Moravsky Berou** baz=68	**1.06**	**252**	*e*Pg		**Pb**		**12 20 22.9**	**+0.2**
MORC	64nm,0.6s,baz=68			*e*Sg		**Sb**		**12 20 36.6**	**-0.5**
KRLC	**Kraliky**	**1.49**	**269**	*e*PG		**Pn**		**12 20 29.0**	**-0.6**
KRLC				*e*SG		**Sb**		**12 20 49.7**	**+0.1**
STHS	**Stebnicka Huta**	**1.56**	**116**	*e*PN		**Pn**		**12 20 30.5**	**-0.1**
JAVC	**Velka Javorina** baz=35	**1.56**	**217**	*e*Pn		**Pg**		**12 20 31.6**	**+0.1**
VYHS	**Vyhne**	**1.63**	**186**	*e*PN		**Pn**		**12 20 31.3**	**-0.2**
VYHS				*e*SN		**Sn**		**12 20 53.1**	**-0.2**
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*PG		**Pn**		**12 20 34.1**	**+0.3**
DPC	comp=Z,40nm,0.6s			*e*SG		**Sg**		**12 20 59.0**	**-0.2**
VRAC	**Vranov** baz=61	**1.81**	**244**	*e*Pn		**Pb**		**12 20 34.9**	**-0.7**
VRAC	32nm,0.7s,baz=61			*e*Sg		**Sg**		**12 21 00.0**	**+0.3**
KECS	**Kecovo**	**1.87**	**150**	*e*PN		**Pn**		**12 20 34.1**	**-0.7**
KECS				*e*SN		**Sn**		**12 20 57.4**	**-1.7**
KECS				*e*LG		Lg		12 21 02.3	
OSTC	**Ostas**	**1.90**	**285**	*e*PG		**Pb**		**12 20 37.2**	**+0.2**
OSTC				*e*SG		**Sg**		**12 21 03.3**	**+0.9**
CRVS	**Cervenica-Dubn**	**1.96**	**127**	*e*PG		**Pb**		**12 20 38.3**	**+0.1**
CRVS				*e*SG		**Sg**		**12 21 05.2**	**+0.5**
KRUC	**Moravsky** baz=57	**2.05**	**240**	*e*Pn		**Pn**		**12 20 38.1**	**+0.9**
KRUC	24nm,0.8s,baz=57			*e*Sg		**Sg**		**12 21 07.6**	**+0.3**
MODS	**Modra-Piesok**	**2.11**	**215**	*e*PG		**Pg**		**12 20 42.2**	**+0.2**
MODS				*e*SN		**Sn**		**12 21 05.7**	**+0.6**
MODS				*e*LG		Lg		12 21 12.9	
KOLS	**Kolonicke sedl**	**2.39**	**119**	*e*		**Pg**		**12 20 49.8**	**+2.5**
GOPC	**GO Pecny, Ondr**	**2.78**	**267**	*e*SG		**Sg**		**12 21 31.1**	**+0.2**
PRU	**Pruhonice**	**2.94**	**269**	*e*SG		**Sg**		**12 21 34.9**	**-0.9**
ZVC	**Zvikov**	**3.25**	**260**	*e*PG		**Pb**		**12 21 01.5**	**+1.5**
BRG	**Berggiesshubel**	**3.37**	**285**	Pg		**Pg**		**12 21 05.4**	**-0.8**
BRG				Sg		**Sg**		**12 21 50.8**	**+0.9**
BRG				Amp				12 21 58.6	
KHC	**Kasperske Hory** comp=Z,11nm,0.6s	**3.72**	**257**	*e*SG		**Sg**		**12 22 00.6**	**-0.3**

*IDC **21** 12:20:16.1±4.4, 14.°05N×147.°07E, h0km, mb3.6/6, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=106.8km s-min=35.4km az=155.0*
ISC 21 12:20:20.9±3.9, **13.°9N**±0.°6×**147.°0E**±0.°3, **h35**km, **n7**, σ**0s40/8**, **mb3.6/6**, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 15nm,0.3s,baz=73,slow=7.5,SNR=1.9	**2.10**	**261**	Pn		**Pn**		**12 20 53.6**	**0.0**
GUMO	21nm,0.3s,baz=28,slow=20,SNR=2.1			Sn		**Sn**		**12 21 18.3**	**-0.3**
SONM	**Songino Array** 0.2nm,0.4s,baz=126,slow=7.3,SNR=1.5 0.2nm,0.4s	**47.69**	**324**	P		**P**		**12 28 54.1**	**-0.1**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=94,slow=6.1,SNR=2.0 0.3nm,0.4s	**62.58**	**324**	P		**P**		**12 30 40.9**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=96,slow=7.6,SNR=6.8 0.2nm,0.5s	**62.71**	**316**	P		**P**		**12 30 43.0**	**+0.5**
KURBB	**Kurchatov Arra**	**65.73**	**319**	P		**P**		**12 31 02.2**	**+0.1**
	0.9nm,0.4s,baz=97,slow=7.1,SNR=9.1 0.9nm,0.4s								
ILAR	**Eielson Array** 0.1nm,0.5s,baz=246,slow=6.5,SNR=4.4 0.1nm,0.5s	**67.39**	**25**	P		**P**		**12 31 12.1**	**-0.4**
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=98,slow=7.9,SNR=3.8 0.5nm,0.5s	**70.97**	**322**	P		**P**		**12 31 35.0**	**+0.2**

*NNC **21** 12:23:17.2±3.5, 53.°50N×63.°08E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=48.5km s-min=10.1km az=156.0, Suspected Mining explosion.*
*IDC **21** 12:23:23.6±4.5, 52.°89N×63.°00E, h0km, mbtmp2.9/1, ML2.0/1, Error ellipse: s-maj=73.7km s-min=35.6km az=180.0*
ISC 21 12:23:14.7±3.1, **53.°4N**±0.°3×**63.°2E**±0.°1, **h0**km, **n10**, σ1s**73/6**, **5C-1D**, **Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARU	**Arti** 1.1nm,0.3s,baz=122,slow=18,SNR=4.2	**3.99**	**320**	Lg		Lg		12 25 39.2	
BRVK	**Borovoye** 0.2nm,0.4s	**4.30**	**92**	⇑Pg		**Pg**		**12 24 37.8**	**+0.8**
BRVK	2.5nm,0.7s			⇑Lg		Lg		12 25 36.7	
BVA0	**Borovoye Array** 0.2nm,0.3s,baz=290,slow=13,SNR=11	**4.37**	**93**	Pg		**Pg**		**12 24 35.8**	**-2.6**
BVA0	3.1nm,1.1s,baz=284,slow=27,SNR=5.3			⇑Lg		Lg		12 25 37.2	
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=288,slow=14,SNR=11	**4.37**	**93**	Pn		**Pb**		**12 24 33.1**	**+0.8**
BVAR	0.1nm,0.3s,baz=284,slow=21,SNR=5.1			Sn		**Sb**		**12 25 26.2**	**+0.6**
BVAR	0.1nm,0.3s,baz=267,slow=27,SNR=4.2 0.8nm,0.3s			Lg		Lg		12 25 43.3	
AKTO	**Aktyubinsk** 0.1nm,0.4s	**4.38**	**229**	⇑Pg		**Pg**		**12 24 38.1**	**-0.5**
AKTO	1.2nm,0.7s			⇓Lg		Lg		12 25 35.3	
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=92,slow=23,SNR=2.4	**4.38**	**229**	Lg		Lg		12 25 33.0	
I31KZ	**AKTYUBINSK INF** 0.1nm,0.6s,baz=47,slow=341,SNR=6.3	**4.39**	**228**	I		I		12 48 20.0	
AB31	**Akbulak array** 0.2nm,0.3s,baz=22,slow=16,SNR=8.1	**4.65**	**207**	⇑Pg		**Pg**		**12 24 43.2**	**-0.5**
AB31	1.4nm,0.6s,baz=25,slow=24,SNR=6.8			Lg		Lg		12 25 43.2	
I46RU	**ZALESOVO INFRA** baz=275,slow=316,SNR=3.0	**12.85**	**79**	I		I		13 46 40.0	
I43RU	**DUBNA INFRASONI** baz=91,slow=341,SNR=2.8	**15.17**	**293**	I		I		14 00 10.0	

IDC 21 12:28:22.4±446.0, **48.°55N×49.°11E, h0**km, **Error ellipse: s-maj=147.1km s-min=117.9km az=38.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF** 0.1nm,0.5s,baz=256,slow=326,SNR=3.0	**6.11**	**69**	I		I		13 01 40.0	
I43RU	**DUBNA INFRASONI** baz=133,slow=343,SNR=2.9	**10.90**	**323**	I		I		13 34 50.0	
I46RU	**ZALESOVO INFRA** baz=272,slow=332,SNR=0.9	**22.83**	**63**	I		I		14 49 09.6	

*MOS **21** 12:53:58.7, 42.°42N×44.°64E, h13km, MPVA3.7*
*DRS **21** 12:53:58.8, 42.°33N×44.°77E, h10km*
*NORS **21** 12:53:59.6, 42.°35N×44.°60E, h6km, MPVA3.9*
*TIF **21** 12:53:59.2, 42.°42N×44.°66E, h12km*
ISC 21 12:54:00.1±0.9, **42.°40N**±0.°02×**44.°65E**±0.°01, **h7**km±7km, **n49**, σ0s**67**/95, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.14**	**297**	P		**Pg**		**12 54 03.2**	**0.0**
GUDG				S		**Sg**		**12 54 05.6**	**+0.4**
GUDG	**Gudauri**	**0.14**	**297**	*e*Pg		**Pg**		**12 54 03.2**	**0.0**
GUDG				*e*Sg		**Sg**		**12 54 05.7**	**+0.4**
CHRG	**Chargali**	**0.22**	**109**	P		**Pg**		**12 54 04.3**	**-0.2**
CHRG				S		**Sg**		**12 54 07.7**	**+0.3**
MTEO	**Meteo**	**0.29**	**343**	P		**Pg**		**12 54 06.0**	**0.0**
MTEO				S		**Sg**		**12 54 10.2**	**+0.3**
SHTL	**Shatili**	**0.45**	**55**	P		**Pg**		**12 54 08.7**	**-0.2**
SHTL				S		**Sg**		**12 54 14.2**	**-0.6**
SHTL	**Shatili**	**0.45**	**55**	*e*Pg		**Pg**		**12 54 08.7**	**-0.2**
SHTL				*e*Sg		**Sg**		**12 54 14.2**	**-0.6**
LACR	**Lac**	**0.50**	**329**	*i* Pg		**Pg**		**12 54 09.5**	**-0.3**
LACR				*e*Sg		**Sg**		**12 54 16.4**	**+0.1**
VLKR	**Vladikavkaz**	**0.65**	**2**	*e*Pg		**Pg**		**12 54 12.4**	**-0.2**
VLKR				*e*Sg		**Sb**		**12 54 22.0**	**-1.0**
KMGR	**Komgaron**	**0.68**	**14**	*e*Pg		**Pg**		**12 54 13.0**	**-0.1**
KMGR				*e*Sg		**Sb**		**12 54 23.4**	**-0.5**
ALIG	**Mtskhetisjvari**	**0.80**	**249**	P		**Pg**		**12 54 15.2**	**-0.2**
KORR	**Kora**	**0.81**	**328**	*e*Pg		**Pb**		**12 54 16.9**	**+0.4**
KORR				*e*Sg		**Sn**		**12 54 29.5**	**-0.7**
ARNR	**Ardon**	**0.82**	**341**	*e*Pg		**Pb**		**12 54 17.1**	**+0.4**
ARNR				*e*Sg		**Sn**		**12 54 29.4**	**-1.2**
ONI	**Oni**	**0.90**	**282**	P		**Pg**		**12 54 17.4**	**-0.1**
ONI				S		**Sb**		**12 54 30.3**	**-0.1**
ONI	**Oni**	**0.90**	**282**	*e*Pg		**Pg**		**12 54 17.4**	**-0.1**
ONI				*e*Sg		**Sb**		**12 54 30.3**	**-0.1**
DIGR	**Digorskoe uzhe**	**0.93**	**303**	*e*Pg		**Pg**		**12 54 17.1**	**-0.9**
DIGR				*e*Sg		**Sg**		**12 54 29.9**	**-0.2**
TRLG	**Trialeti**	**0.95**	**205**	P		**Pg**		**12 54 18.4**	**+0.1**
BTKR	**Batakoyurt**	**0.97**	**355**	*e*Pg		**Pn**		**12 54 20.5**	**+0.3**
BTKR				*e*Sg		**Sn**		**12 54 36.4**	**+2.0**
BRNG	**Burnasheti**	**0.99**	**218**	P		**Pg**		**12 54 19.4**	**+0.4**
BRNG				S		**Sb**		**12 54 34.0**	**+1.1**
BRNG	**Burnasheti**	**0.99**	**218**	*e*Pg		**Pg**		**12 54 19.4**	**+0.4**
BRNG				*e*Sg		**Sb**		**12 54 34.0**	**+1.1**
STDR	**Stavd-Durt**	**1.06**	**336**	*i* Pg		**Pn**		**12 54 21.9**	**+0.6**
STDR				*e*Sg		**Sn**		**12 54 37.3**	**+0.9**
LSNR	**Lesken**	**1.06**	**326**	*i* Pg		**Pn**		**12 54 21.0**	**+0.2**
LSNR				*e*Sg		**Sn**		**12 54 37.0**	**+0.5**
DMNI	**Dmanisi**	**1.12**	**198**	P		**Pg**		**12 54 20.9**	**-0.7**
DVE	**Vedeno**	**1.22**	**63**	*e*Pg		**Pn**		**12 54 23.6**	**0.0**
DVE				*e*Sg		**Sn**		**12 54 41.8**	**+1.3**
TKB	**Tkibuli**	**1.23**	**268**	P		**Pn**		**12 54 23.4**	**-0.3**
TKB				S		**Sg**		**12 54 40.0**	**+0.5**
TKB	**Tkibuli**	**1.23**	**268**	*e*Pg		**Pn**		**12 54 23.4**	**-0.3**
TKB				*e*Sg		**Sg**		**12 54 40.0**	**+0.5**
LGD	**Lagodekhi**	**1.31**	**115**	P		**Pn**		**12 54 24.8**	**-0.1**
LGD				S		**Sn**		**12 54 42.6**	**-0.1**
LGD	**Lagodekhi**	**1.31**	**115**	*e*Pg		**Pn**		**12 54 24.8**	**-0.1**
LGD				*e*Sg		**Sn**		**12 54 42.6**	**-0.1**
TRKR	**Terskaya**	**1.32**	**3**	*e*Pg		**Pn**		**12 54 24.9**	**-0.1**
TRKR				*e*Sg		**Sn**		**12 54 45.3**	**+2.4**
PRTR	**Priterechnaya**	**1.38**	**349**	*e*Pg		**Pn**		**12 54 24.8**	**-1.0**
PRTR				*e*Sg		**Sg**		**12 54 44.4**	**+0.1**
ABS	**Abastumani**	**1.51**	**245**	P		**Pn**		**12 54 27.8**	**0.0**
ABS				S		**Sb**		**12 54 48.3**	**+0.4**
ABS	**Abastumani**	**1.51**	**245**	*e*Pg		**Pn**		**12 54 27.8**	**0.0**
ABS				*e*Sg		**Sb**		**12 54 48.3**	**+0.4**
XNZR	**Khunzakh**	**1.53**	**84**	*e*Pg		**Pb**		**12 54 28.5**	**-0.3**
XNZR				*e*Sg		**Sg**		**12 54 48.8**	**-0.4**
DLMR	**Dylym**	**1.61**	**65**	*e*Pg		**Pg**		**12 54 30.9**	**+0.1**
DLMR				*e*Sg		**Sg**		**12 54 52.7**	**+1.0**
UNCR	**Uncukul**	**1.62**	**78**	*e*Pg		**Pg**		**12 54 31.1**	**0.0**
UNCR				*e*Sg		**Sg**		**12 54 52.6**	**+0.6**
NEUR	**Neytrino**	**1.67**	**302**	*e*Pg		**Pb**		**12 54 31.1**	**-0.2**
NEUR				*e*Sg		**Sg**		**12 54 53.9**	**+0.1**
KBTC	**Kuba-Taba**	**1.68**	**328**	*e*Pg		**Pn**		**12 54 30.2**	**+0.2**
KBTC				*e*Sg		**Sg**		**12 54 53.5**	**-0.7**
GNBR	**Gunib**	**1.72**	**90**	*e*Pg		**Pg**		**12 54 32.5**	**-0.5**
GNBR				*e*Sg		**Sg**		**12 54 55.4**	**+0.2**
KRNR	**Karanay**	**1.72**	**75**	*e*Pg		**Pg**		**12 54 33.1**	**0.0**
KRNR				*e*Sg		**Sg**		**12 54 56.2**	**+0.8**
DBC	**Dubki**	**1.72**	**68**	*e*Pg		**Pg**		**12 54 32.5**	**+0.4**
DBC				*e*Sg		**Sg**		**12 54 56.7**	**+1.2**
ARKR	**Arakani**	**1.75**	**83**	*e*Pg		**Pg**		**12 54 33.6**	**0.0**
ARKR				*e*Sg		**Sg**		**12 54 57.0**	**+0.8**
VSHL	**Vashlovani**	**1.76**	**131**	P		**Pb**		**12 54 32.8**	**+0.1**
VSHL				S		**Sg**		**12 54 55.7**	**-0.8**
VSHL	**Vashlovani**	**1.76**	**131**	*e*Pg		**Pb**		**12 54 32.8**	**+0.1**
VSHL				*e*Sg		**Sg**		**12 54 55.7**	**-0.8**
KMKR	**Kumukh**	**1.84**	**98**	*e*Pg		**Pb**		**12 54 34.5**	**+0.4**
KMKR				*e*Sg		**Sg**		**12 54 59.0**	**-0.1**
KBZ	**Khabaz**	**1.84**	**317**	*e*Pg		**Pb**		**12 54 34.0**	**-0.1**
KBZ				*e*Sg		**Sg**		**12 54 58.9**	**-0.4**
SHA1	**Shidzhatmaz**	**1.98**	**313**	*e*Pg		**Pb**		**12 54 36.0**	**-0.6**
SHA1				*e*Sg		**Sg**		**12 55 02.8**	**-0.9**
BEYR	**Belyy Ugol+**	**2.09**	**321**	*e*Pg		**Pn**		**12 54 34.4**	**-1.3**
BEYR				*e*Sg		**Sn**		**12 55 03.0**	**+1.1**
KIV	**Kislovodsk**	**2.12**	**318**	*e*Pg		**Pn**		**12 54 34.8**	**-1.2**
KIV				*e*Sg		**Sb**		**12 55 04.5**	**-0.8**
GNI	**Garni**	**2.25**	**178**	*e*Pn		**Pb**		**12 54 40.7**	**-0.5**
GNI				*e*Sn		**Sg**		**12 55 11.7**	**-0.7**
AKT	**Akhty**	**2.48**	**111**	*e*Pn		**Pn**		**12 54 41.2**	**+0.3**
AKT				*e*Sn		**Sb**		**12 55 14.0**	**-1.7**

*IDC **21** 12:56:06.0±6.7, 35.°89N×69.°08E, h0km, mb3.4/2, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=203.4km s-min=38.1km az=101.0*
*NNC **21** 12:56:30.1±7.9, 36.°75N×70.°34E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=62.1km s-min=56.1km az=160.0*
ISC 21 12:56:25.7±2.1, **35.°9N**±0.°1×**71.°1E**±0.°3, **h100**km, **n11**, σ**2s09/13**, **3C-3D**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor** SNR=6.4	**6.87**	**22**	P		**Pn**		**12 58 06.5**	**+2.3**
EKS2	**Erkin-Say** SNR=5.3	**7.08**	**16**	P		**Pn**		**12 58 09.0**	**+2.2**
KK31	**Karatay Array** 1.0nm,0.5s,baz=185,slow=12,SNR=11	**7.24**	**356**	⇑P		**Pn**		**12 58 07.8**	**-1.0**
KK31	2.5nm,0.6s,baz=182,slow=20,SNR=15			⇓S		Sn		12 59 18.6	-11
AAK	**Ala-Archa** SNR=5.7	**7.24**	**20**	P		**Pn**		**12 58 11.2**	**+2.2**
CHMS	**Chumysh** 1.9nm,0.4s	**7.65**	**20**	⇓P		**Pn**		**12 58 13.8**	**-0.6**
CHMS	0.9nm,0.6s			⇑S		**Sn**		**12 59 36.8**	**-2.6**
USP	**Ospenovka** SNR=10	**7.83**	**18**	P		**Pn**		**12 58 17.8**	**+0.9**
TKM2	**Tokmak 2** SNR=6.0	**7.84**	**25**	P		**Pn**		**12 58 18.8**	**+1.6**
TKM2	**Tokmak 2** 0.5nm,0.4s	**7.84**	**25**	⇑P		**Pn**		**12 58 17.7**	**+0.5**
TKM2	0.9nm,0.6s			⇓S		**Sn**		**12 59 47.1**	**+2.7**
MKAR	**Makanchi Array** baz=222,slow=12,SNR=4.6 0.3nm,0.8s	**13.75**	**34**	Pn		**Pn**		**12 59 34.7**	**-1.6**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=220,slow=11,SNR=4.8 0.5nm,0.3s	**20.45**	**24**	P		**P**		**13 00 52.2**	**-2.7**
ASAR	**Alice Springs** 0.2nm,0.6s,baz=328,slow=4.3,SNR=4.6 0.2nm,0.6s	**83.82**	**125**	P		**P**		**13 08 44.5**	**+0.3**

IDC 21 13:02:15.6±433.0, **48.°36N×50.°09E, h0**km, **Error ellipse: s-maj=143.5km s-min=112.6km az=39.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF** baz=251,slow=328,SNR=1.1	**5.58**	**66**	I		I		13 34 50.0	
I43RU	**DUBNA INFRASONI** baz=132,slow=339,SNR=2.1	**11.45**	**322**	I		I		14 12 00.0	
I46RU	**ZALESOVO INFRA** baz=273,slow=322,SNR=7.0	**22.33**	**62**	I		I		15 17 10.0	

*THE **21** 13:03:29.7, 35.°10N×24.°14E, h25km±2km, ML2.3/6, Error ellipse: s-maj=2.8km s-min=0.8km az=113.0*
*ATH **21** 13:03:30.1, 35.°10N×24.°16E, h21km±2km, ML2.5/4, Error ellipse: s-maj=2.3km s-min=1.1km az=211.0*
ISC 21 13:03:29.9±1.1, **35.°11N**±0.°03×**24.°14E**±0.°04, **h22**km±10km, **n16**, σ0s**86**/27, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GVDS	**Gavdos** 3μm,0.1s	**0.27**	**189**	P		**Pb**		**13 03 35.7**	**-0.6**
GVDS				S		**Sb**		**13 03 41.3**	**+0.7**
GVD	**Gavdhos** 3μm,0.2s	**0.27**	**189**	P		**Pb**		**13 03 35.7**	**-0.7**
GVD				S		**Sb**		**13 03 41.5**	**+0.8**
GVD	**Gavdhos**	**0.27**	**189**	P		**Pb**		**13 03 35.6**	**-0.7**
GVD				S		**Sb**		**13 03 40.9**	**+0.2**
GVD	comp=E,5511μm,0.2s			AML		AML		13 03 42.5	
GVD	comp=N,7183μm,0.2s			AML		AML		13 03 42.5	
IMMV	**Iera Moni Meta**	**0.37**	**340**	P		**Pb**		**13 03 37.6**	**-0.3**
IMMV	comp=N,838nm,0.3s			S		**Sb**		**13 03 44.4**	**+1.0**
IMMV	**Iera Moni Meta**	**0.37**	**340**	P		**Pb**		**13 03 37.6**	**-0.3**
IMMV				S		**Sb**		**13 03 44.2**	**+0.8**
IMMV	comp=N,1838μm,0.3s			AML		AML		13 03 45.3	
IMMV	comp=E,1423μm,0.2s			AML		AML		13 03 45.9	
PRNS	**Prines Rethymn**	**0.39**	**49**	P		**Pb**		**13 03 36.8**	**-1.4**
PRNS	comp=E,230nm,0.3s			S		**Sb**		**13 03 43.1**	**-0.7**
CHAN	**Chania**	**0.42**	**349**	P		**Pb**		**13 03 38.7**	**+0.1**
CHAN				S		**Sb**		**13 03 45.7**	**+1.2**
CHAN	comp=N,1022μm,0.4s			AML		AML		13 03 47.8	
CHAN	comp=E,1203μm,0.6s			AML		AML		13 03 49.1	
TMBK	**Timbaki Herakl**	**0.51**	**94**	P		**Pb**		**13 03 39.8**	**-0.5**
TMBK				S		**Sb**		**13 03 47.0**	**-0.3**
RODP	**Rodopos**	**0.55**	**325**	P		**Pb**		**13 03 40.8**	**-0.1**
RODP	comp=E,88nm,0.3s			S		**Sb**		**13 03 48.2**	**-0.1**
KSTL	**Kastelli Herak**	**0.79**	**76**	P		**Pn**		**13 03 48.2**	**+2.6**
KSTL	comp=E,130μm,0.3s			AML		AML		13 04 08.5	
KSTL	comp=N,442μm,0.4s			AML		AML		13 04 09

az=310.0

ISC 21 13:13:24.8±0.8, 41°25S±0°1×86°6W±0°1, h10km, n73, σ1§12/44, mb4.6/10, MS4.0/25, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**9.59**	**42**	T	T	13 25 51.5	
	baz=212,slow=73						
H03S1	**Juan Fernandez**	**9.59**	**42**	T	T	13 25 49.2	
	baz=212,slow=73						
H03S3	**Juan Fernandez**	**9.61**	**42**	T	T	13 26 01.8	
	baz=212,slow=73						
H03N3	**Juan Fernandez**	**9.89**	**41**	T	T	13 26 20.1	
	baz=222						
H03N2	**Juan Fernandez**	**9.90**	**41**	T	T	13 26 12.8	
	baz=222						
H03N1	**Juan Fernandez**	**9.91**	**41**	T	T	13 26 14.5	
	baz=222						
LR04	**Corral**	**10.14**	**87**	Pn	**Pn**	**13 15 51.7**	**+1.2**
GO06	**Curarrehue**	**11.68**	**87**	Pn	**Pn**	**13 16 12.2**	**+0.6**
PLCA	**Paso Flores**	**12.17**	**93**	Pn	**Pn**	**13 16 19.4**	**+1.1**
PLCA	**Paso Flores**	**12.17**	**93**	Pn	**Pn**	**13 16 19.2**	**+1.0**
	0.1nm,0.3s,baz=273,slow=13,SNR=3.5						
PLCA				Sn	Sn	13 18 25.2	-8.8
	baz=359,slow=18,SNR=1.5						
PLCA				LR	LR	13 19 59.1	
	comp=Z,437nm,19.8s,baz=262,slow=32 0.8nm,0.6s						
GO08	**Villa O'Higgin**	**12.32**	**131**	Pn	**Pn**	**13 16 19.7**	**-0.4**
GO05	**Huala**	**13.13**	**66**	Pn	**Pn**	**13 16 30.8**	**-0.6**
BO02	**Sierra Bellavi**	**14.05**	**68**	Pn	**Pn**	**13 16 41.1**	**-2.8**
BO01	**Tunca**	**14.05**	**66**	Pn	**Pn**	**13 16 42.4**	**-1.6**
VA05	**Santo Domingo**	**14.12**	**62**	Pn	**Pn**	**13 16 44.7**	**-0.1**
MT09	**Talagante**	**14.47**	**64**		**Pn**	**13 16 48.6**	**-1.2**
BO04	**La Punta**	**14.60**	**65**	Pn	**Pn**	**13 16 49.8**	**-1.8**
MT02	**Curacav**	**14.67**	**62**	Pn	**Pn**	**13 16 50.4**	**-2.1**
LMEL	**Las Melosas**	**14.96**	**66**		**Pn**	**13 16 55.5**	**-1.0**
PEL	**Peldehue**	**15.04**	**63**		**Pn**	**13 16 57.2**	**-0.3**
PEL				IAmb	IAmb	13 17 06.7	
	comp=Z,23nm,0.9s						
VA03	**San Esteban**	**15.37**	**62**		**Pn**	**13 17 02.0**	**+0.2**
CO06	**Fray Jorge**	**16.06**	**54**	Pn	**Pn**	**13 17 11.9**	**+1.3**
CO02	**Combarbal**	**16.08**	**56**		**Pn**	**13 17 11.2**	**+0.1**
CO02				IAmb	IAmb	13 17 14.0	
	comp=Z,62nm,1.1s						
CO03	**El Pedregal**	**16.53**	**56**	Pn	**Pn**	**13 17 16.8**	**0.0**
CO03				IAmb	IAmb	13 17 22.8	
	comp=Z,39nm,1.2s						
CO05	**La Serena**	**16.84**	**53**	Pn	**Pn**	**13 17 21.2**	**+0.7**
CO05				IAmb	IAmb	13 17 38.7	
	comp=Z,51nm,1.3s						
CO01	**Juntas del Tor**	**17.49**	**55**	P	**P**	**13 17 30.2**	**0.0**
AC05	**El Transito**	**18.20**	**52**		**Pn**	**13 17 37.6**	**0.0**
AC05				IAmb	IAmb	13 17 44.5	
	comp=Z,49nm,1.3s						
GO03	**Copiap**	**19.14**	**50**	P	**Pn**	**13 17 49.2**	**+0.1**
AC02	**Maricunga**	**20.36**	**51**	P	**P**	**13 18 02.9**	**+0.9**
AC02				IAmb	IAmb	13 18 07.9	
	comp=Z,54nm,1.4s						
PB14	**IPOC Station P**	**21.39**	**44**	P	**P**	**13 18 13.6**	**+0.6**
GO02	**Mina Guanaco**	**21.39**	**47**	P	**P**	**13 18 14.0**	**+1.0**
GO02				IAmb	IAmb	13 18 17.9	
	comp=Z,48nm,1.4s						
PB15	**IPOC Station P**	**23.03**	**44**	P	**P**	**13 18 29.7**	**-0.6**
RPN	**Rapa Nui**	**23.38**	**300**	LR	LR	13 25 05.2	
	comp=Z,421nm,21.5s,baz=104,slow=30						
LVC	**Limon Verde**	**23.82**	**44**	P	**P**	**13 18 39.1**	**+0.7**
LVC				IAmb	IAmb	13 18 51.7	
	comp=Z,21nm,1.2s						
LVC	**Limon Verde**	**23.82**	**44**	LR	LR	13 25 44.3	
	comp=Z,346nm,19.9s,baz=242,slow=31						
AF01	**San Pedro de A**	**23.93**	**46**	P	**P**	**13 18 40.0**	**+0.7**
PB02	**IPOC Station P**	**24.39**	**41**	P	**P**	**13 18 43.1**	**-0.3**
PB02				IAmb	IAmb	13 19 02.4	
	comp=Z,15nm,1.0s						
PB01	**IPOC Station P**	**24.82**	**41**	P	**P**	**13 18 47.9**	**+0.6**
PB01				IAmb	IAmb	13 19 02.7	
	comp=Z,15nm,1.2s						
PMSA	**Palmer Station**	**26.91**	**159**	LR	LR	13 26 32.5	
	comp=Z,213nm,20.6s,baz=287,slow=30						
PB16	**IPOC Station P**	**27.14**	**38**	P	**P**	**13 19 08.8**	**0.0**
CPUP	**Villa Florida**	**28.37**	**68**	P	**P**	**13 19 19.0**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=230,slow=7.9,SNR=2.4						
CPUP				LR	LR	13 29 54.9	
	comp=Z,380nm,19.2s,baz=238,slow=35 comp=Z,2.1nm,0.9s						
NNA	**Nana**	**30.38**	**19**	LR	LR	13 28 48.9	
	comp=Z,244nm,18.1s,baz=190,slow=30						
AQDB	**Aquidauana**	**33.40**	**61**	P	**P**	**13 20 03.7**	**+0.1**
SIV	**San Ignacio**	**33.47**	**49**	LR	LR	13 32 39.5	
	comp=Z,281nm,21.5s,baz=285,slow=34						
ATAH	**Atahualpa**	**34.73**	**14**	LR	LR	13 30 59.3	
	comp=Z,331nm,21.4s,baz=209,slow=30						
PTLB	**Pontes e Lacer**	**35.02**	**51**	P	**P**	**13 20 17.8**	**+0.1**
PTLB				IAmb	IAmb	13 20 18.9	
	comp=Z,14nm,1.3s						
BDFB	**Brasilia**	**41.96**	**64**	P	**P**	**13 21 15.2**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=249,slow=7.5,SNR=3.5						
BDFB				LR	LR	13 38 11.8	
	comp=Z,273nm,20.5s,baz=204,slow=35 comp=Z,3.1nm,0.6s						
ROSC	**El Rosal**	**47.22**	**17**	LR	LR	13 39 16.1	
	comp=Z,382nm,21.3s,baz=218,slow=33						
QSPA	**South Pole Qui**	**49.00**	**180**	P	**P**	**13 22 09.3**	**-2.1**
QSPA				IAmb	IAmb	13 22 39.1	
	comp=Z,9.9nm,1.4s						
QSPA	**South Pole Qui**	**49.00**	**180**	LR	LR	13 39 22.2	
	comp=Z,99nm,21.1s,baz=120,slow=32						
SNAA	**Sanae**	**49.55**	**156**	LR	LR	13 38 24.5	
	comp=Z,111nm,20.1s,baz=190,slow=30						
JTS	**Las Juntas de**	**51.29**	**2**	LR	LR	13 39 26.4	
	comp=Z,33nm,18.8s,baz=178,slow=30						
SDV	**Santo Domingo**	**52.00**	**20**	LR	LR	13 42 28.9	
	comp=Z,95nm,21.3s,baz=242,slow=33						
VNDA	**Vanda**	**54.49**	**194**	LR	LR	13 43 11.2	
	comp=Z,86nm,18.0s,baz=109,slow=33						
MDP	**Montagnes des**	**55.61**	**42**	LR	LR	13 44 52.1	
	comp=Z,120nm,20.9s,baz=266,slow=34						
RCBR	**Riachuelo**	**57.24**	**66**	LR	LR	13 47 02.4	
	comp=Z,154nm,22.0s,baz=250,slow=35						
RPZ	**Rata Peaks**	**70.39**	**229**	LR	LR	13 48 29.8	
	comp=Z,619nm,20.4s,baz=57,slow=30						
TX31	**Lajitas Ar. Si**	**71.97**	**344**	P	**P**	**13 24 50.0**	**+1.5**
TXAR	**Lajitas Array**	**71.97**	**344**	P	**P**	**13 24 49.6**	**+1.1**
TXAR	**Lajitas Array**	**71.97**	**344**	P	**P**	**13 24 49.0**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=166,slow=8.1,SNR=5.0 comp=Z,0.7nm,0.9s						
CASY	**Casey**	**72.00**	**187**	P	**P**	**13 24 50.7**	**+2.5**
RAO	**Raoul Island**	**72.27**	**247**	LR	LR	13 48 20.3	
	comp=Z,133nm,19.9s,baz=126,slow=29						
TKL	**Tuckaleechee C**	**76.57**	**2**	LR	LR	13 52 53.5	
	comp=Z,60nm,20.1s,baz=173,slow=31						
SUR	**Sutherland**	**80.87**	**125**	LR	LR	13 55 25.1	
	comp=Z,93nm,18.5s,baz=193,slow=31						
BBTS	**Babate**	**85.22**	**66**	LR	LR	14 01 35.2	
	comp=Z,105nm,19.3s,baz=114,slow=34						
PDAR	**Pinedale Array**	**86.14**	**343**	P	**P**	**13 26 05.7**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=137,slow=7.1,SNR=2.3 comp=Z,0.3nm,0.8s						
BOSA	**Boshof**	**86.24**	**125**	LR	LR	13 58 19.5	
	comp=Z,96nm,20.2s,baz=200,slow=31						
TSUM	**Tsumeb**	**87.73**	**114**	LR	LR	14 03 50.1	
	comp=Z,19nm,18.1s,baz=155,slow=34						
LBTB	**Lobatse**	**89.01**	**123**	LR	LR	14 00 13.9	
	comp=Z,63nm,18.4s,baz=192,slow=32						
SCHQ	**Schefferville**	**97.18**	**11**	LR	LR	14 10 19.0	
	comp=Z,52nm,18.8s,baz=202,slow=35						
TIXI	**Tiksi**	**144.82**	**341**		**PKPdf**	**13 33 00.8**	**+0.1**
MJAR	**Matsushiro Arr**	**145.08**	**277**	PKP	**PKPbc**	**13 32 59.6**	**-2.1**
	comp=Z,1.3nm,0.8s,baz=156,slow=2.5,SNR=4.5						
JSD	**Sado**	**145.57**	**280**	PKPdf	**PKPdf**	**13 33 02.3**	**-0.7**

*NIED **21** 13:18:43.6, 39°.89N×143°.58E, h21km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.09; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-2.19; $M_{r\theta}$1.97; $M_{\theta\phi}$-0.15; $M_{r\phi}$1.13; Fault plane solution: M_{o2}.94000×10^{14} NP1:ϕ_{s1}42.00000°, δ76.00000°, λ126.00000°. NP2:ϕ_{s2}150.00000°, δ39.00000°, λ22.00000°.*

JMA 21 13:18:43.6±0.3, 39°9N±0°8×144°4E±°, h21km, MV3.5/34, FAR E OFF SANRIKU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.32**	**273**	P	Pn	13 19 06.8	+0.1
MIYJ	**Miyakonagasawa**	**1.39**	**258**	*i* P	Pn	13 19 08.3	+0.5
MIYJ				*eS*	Sn	13 19 25.6	+0.2
JKEN	**Kujiedanarisaw**	**1.47**	**283**	P	Pn	13 19 09.1	+0.3
JANG	**Nango**	**1.66**	**288**	P	Pn	13 19 11.7	+0.3
JOM	**Ohasama**	**1.81**	**258**	*i* P	Pb	13 19 14.8	-1.2
JMK	**Ichinoseki**	**2.05**	**244**	P	Pn	13 19 17.7	+0.9
JMK				S	Sn	13 19 42.3	+0.6
JTM	**Tenmabayashi**	**2.12**	**296**	P	Pn	13 19 19.2	+1.5
JEM	**Erimo**	**2.15**	**352**	*eP*	Pb	13 19 20.1	-1.6
JEM				*eS*	Sb	13 19 46.8	-1.2
JOT	**Ohata**	**2.44**	**309**	P	Pn	13 19 23.6	+1.5
JNBK	**Urakawa-nobuka**	**2.47**	**346**	*eP*	Pn	13 19 24.4	+1.8
JNBK				*eS*	Sn	13 19 54.5	+2.4
JYK	**Kaneyama**	**2.68**	**250**	P	Pn	13 19 27.1	+1.6
JCH	**Churui**	**2.73**	**357**	P	Pn	13 19 27.2	+1.1
JCH				S	Sn	13 19 58.4	0.0
JAK	**Akkeshi**	**3.22**	**15**	P	Pn	13 19 33.2	+0.3
JAK				*eS*	Sn	13 20 09.4	-1.1

*MEX **21** 13:24:55.8±1.0, 14°.64N×94°.55W, h16km±12km, MD3.9*
*GCG **21** 13:24:58.9±0.7, 14°.70N×94°.03W, h0km±504km, MD4.0*
*IDC **21** 13:25:00.3±2.6, 15°.91N×93°.38W, h0km, mb3.8/6, mbtmp3.7/7, ML2.9/1, Error ellipse: s-maj=71.2km s-min=15.4km az=29.0*

ISC 21 13:24:53.0±0.9, 14°.63N±0°.07×94°.56W±0°.04, h10km, n25, σ2§48/38, mb3.9/6, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.68**	**50**	*i* P	**Pn**	**13 25 20.8**	**-1.7**
PCIG				*eS*	**Sn**	**13 25 40.1**	**-4.1**
CARR	**Arriaga**	**1.73**	**21**	*i* P	**Pn**	**13 25 22.0**	**-1.1**
CARR				*i* S	**Sn**	**13 25 41.9**	**-3.3**
HUIG	**Huatulco**	**1.87**	**307**	*i* P	**Pn**	**13 25 24.5**	**-0.7**
HUIG				*i* S	**Sn**	**13 25 44.7**	**-4.2**
NILT	**Santiago Nilte**	**1.93**	**359**	*i* P	**Pn**	**13 25 24.9**	**-0.9**
NILT				*i* S	**Sn**	**13 25 46.5**	**-3.6**
PATR	**El Naranjo**	**2.31**	**78**	*eP*	**Pn**	**13 25 29.4**	**-1.9**
PATR				*eS*	**Sn**	**13 25 55.9**	**-4.0**
PAVE	**Pavencul**	**2.38**	**76**	*eP*	**Pn**	**13 25 30.7**	**-1.5**
PAVE				*i* S	**Sn**	**13 25 57.7**	**-3.9**
CHUJ	**Union Juarez**	**2.42**	**79**	*eP*	**Pn**	**13 25 31.5**	**-1.4**
CHUJ				*eS*	**Sn**	**13 25 58.8**	**-3.9**
CMIG	**Matias Romero**	**2.47**	**353**	Pg	**Pn**	**13 25 33.2**	**-0.2**
	15nm,0.3s,baz=174,slow=14,SNR=110						
CMIG				Lg	Lg	13 26 00.3	
	32nm,0.3s,baz=65,slow=20,SNR=12						
CMIG	**Matias Romero**	**2.47**	**353**	*i* P	**Pn**	**13 25 33.1**	**-0.2**
CMIG				*eS*	**Sn**	**13 26 00.5**	**-3.1**
TGIG		**2.55**	**33**	*eP*	**Pn**	**13 25 34.3**	**-0.2**
TGIG				*eS*	**Sn**	**13 26 06.1**	**+0.4**
TGBT	**Tuxtla Gutierr**	**2.56**	**33**	*i* P	**Pn**	**13 25 36.2**	**+1.5**
TGBT				*i* S	**Sn**	**13 26 06.3**	**+0.4**
PEIG	**Puerto Escondi**	**2.84**	**299**	*eP*	**Pn**	**13 25 38.5**	**0.0**
PEIG				*eS*	**Sn**	**13 26 07.2**	**-5.6**
CCIG	**Comitan**	**2.86**	**55**	*eP*	**Pn**	**13 25 40.0**	**+1.1**
STG3	**Santiaguito 3,**	**2.90**	**88**	*eP*	**Pn**	**13 25 39.0**	**-0.4**
STG3				*i* S	**Sn**	**13 26 11.4**	**-3.1**
FUG	**Fuego 3**	**3.61**	**92**	*i* P	**Pn**	**13 25 49.5**	**+0.3**
FUG				*i* S	**Sn**	**13 26 29.3**	**-2.7**
PCG	**Pacaya**	**3.84**	**93**	*i* P	**Pn**	**13 25 53.3**	**+0.9**
PCG				*i* S	**Sn**	**13 26 35.5**	**-2.3**
MRL	**Marmol**	**4.74**	**84**	*i* P	**Pn**	**13 26 05.7**	**+0.9**
TXAR	**Lajitas Array**	**16.88**	**332**	Pn	**Pn**	**13 28 52.3**	**+2.7**
	baz=144,slow=11,SNR=2.6 0.4nm,0.8s						
ULM	**Lac du Bonnet**	**35.54**	**359**	P	**P**	**13 31 48.6**	**-1.6**
	1.6nm,0.8s,baz=155,slow=8.8,SNR=3.9 1.6nm,0.8s						
YKA	**Yellowknife Ar**	**49.87**	**348**	P	**P**	**13 33 47.2**	**+0.9**
	0.4nm,0.7s,baz=152,slow=7.1,SNR=9.4 0.4nm,0.7s						
ILAR	**Eielson Array**	**61.29**	**337**	P	**P**	**13 35 12.3**	**+3.9**
	0.3nm,1.0s,baz=134,slow=6.4,SNR=3.0 0.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**78.91**	**36**	P	**P**	**13 36 56.2**	**-0.4**
	3.0nm,0.8s,baz=281,slow=5.9,SNR=6.6 3.0nm,0.8s						
ESDC	**Sonseca Array**	**81.27**	**51**	P	**P**	**13 37 09.5**	**-0.3**
	1.5nm,0.8s,baz=284,slow=6.7,SNR=6.6 1.5nm,0.8s						
NOA	**NORSAR Array B**	**84.77**	**28**	P	**P**	**13 37 28.5**	**+1.1**
	0.4nm,0.5s,baz=290,slow=5.2,SNR=3.8 0.4nm,0.5s						
ASAR	**Alice Springs**	**133.52**	**251**	PKP	PKiKP	13 44 22.6	+11
	0.3nm,0.7s,baz=57,slow=2.5,SNR=1.8						

*IDC **21** 13:41:41.5±0.6, 36°.83S×179°.11E, h0km, mb4.5/6, mbtmp4.5/7, ML4.7/1, MS3.5/7, Error ellipse: s-maj=26.1km s-min=22.3km az=23.0*
*NOU **21** 13:41:48.3, 37°.34S×179°.03E, h42km, mb4.7/33, Off E. Coast of N. Island, N.Z.*
*WEL **21** 13:41:48.2±0.8, 37°.5S±5°×17°.9E±°, h33km, M4.5/31, ML4.8/31, MLv4.5/31, Error ellipse: s-maj=0.0km s-min=0.0km az=79.4, confirmed*
*NEIC **21** 13:41:49.6±1.9, 37°.2S±0°.1×178°.8E±0°.1, h42km±6km, mb4.7/20, Error ellipse: s-maj=16.1km s-min=14.4km az=71.0*

ISC 21 13:41:48.0±0.8, 37°.23S±0°.05×179°.08E±0°.07, h41km±6km, n252, σ1§39/257, mb4.7/19, MS3.6/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.70**	**241**		**Pn**	**13 42 00.6**	**-0.9**
MXZ	**Matakaoa Point**	**0.70**	**241**	P	**Pn**	**13 42 00.8**	**-0.6**
MXZ	**Matakaoa Point**	**0.70**	**241**	P	**Pn**	**13 42 00.7**	**-0.8**
MXZ				S	**Sn**	**13 42 10.5**	**-0.6**
WMGZ	**Waiomatatini S**	**0.79**	**221**	P	**Pn**	**13 42 03.9**	**+1.2**
WMGZ				S	**Sn**	**13 42 15.1**	**+1.7**
PKGZ	**Pakihiroa**	**1.03**	**230**	P	**Pn**	**13 42 07.0**	**+1.0**
PKGZ				S	**Sn**	**13 42 22.0**	**+2.6**
PUZ	**Puketiti**	**1.06**	**217**	P	**Pn**	**13 42 07.4**	**+0.9**
PUZ				S	**Sn**	**13 42 21.7**	**+1.6**
HAZ	**Te Kaha**	**1.16**	**242**	P	**Pn**	**13 42 07.6**	**-0.1**
TWGZ	**Tauwhareparae**	**1.28**	**222**	P	**Pn**	**13 42 11.1**	**+1.5**
TWGZ				S	**Sn**	**13 42 27.9**	**+2.3**
RUGZ	**Raukumara Rang**	**1.33**	**236**	P	**Pn**	**13 42 11.5**	**+1.4**
CNGZ	**Carnagh Statio**	**1.43**	**208**	P	**Pn**	**13 42 11.2**	**+1.7**
WIZ	**White Island**	**1.53**	**258**	P	**Pn**	**13 42 11.9**	**-1.0**
WIZ				S	**Sn**	**13 42 32.9**	**+1.4**
WSRZ	**White Island S**	**1.54**	**259**	P	**Pn**	**13 42 12.5**	**-0.5**
WSRZ				S	**Sn**	**13 42 31.0**	**-0.8**
TKGZ	**Te Karaka**	**1.55**	**218**	P	**Pn**	**13 42 13.8**	**+0.7**
MWZ	**Matawai**	**1.65**	**228**	P	**Pn**	**13 42 15.6**	**+1.1**
MWZ				S	**Sn**	**13 42 34.3**	**-0.3**
WHRZ	**Whale Island**	**1.78**	**249**	P	**Pn**	**13 42 17.6**	**+1.2**
RIGZ	**Rimuhau**	**1.80**	**215**	P	**Pn**	**13 42 17.4**	**+0.8**
RIGZ				S	**Sn**	**13 42 39.7**	**+1.3**
RAGZ	**Rawiri**	**1.82**	**226**	P	**Pn**	**13 42 18.0**	**+1.1**
URZ	**Urewera**	**1.87**	**236**	P	**Pn**	**13 42 18.4**	**+0.9**
URZ	**Urewera**	**1.87**	**236**	Pn	**Pn**	**13 42 18.3**	**+0.9**
	260nm,0.3s,baz=312,slow=1.8,SNR=624						
URZ				Sn	**Sn**	**13 42 42.0**	**+2.2**
	316nm,0.3s,baz=259,slow=23,SNR=31						
URZ				LR	LR	13 43 13.2	
	comp=Z,705nm,20.8s,baz=123,slow=43 647nm,0.3s						
URZ	**Urewera**	**1.87**	**236**	P	**Pn**	**13 42 18.5**	**+1.0**
PRGZ	**Paritu Road**	**1.94**	**209**	P	**Pn**	**13 42 19.1**	**+0.6**
EDRZ	**Edgecumbe**	**2.05**	**244**	P	**Pn**	**13 42 21.4**	**+1.4**
MARZ	**Manawahe**	**2.05**	**248**	P	**Pn**	**13 42 20.8**	**+0.8**
SNGZ	**Shannon Statio**	**2.07**	**221**	P	**Pn**	**13 42 20.8**	**+0.5**
KNZ	**Kokohu**	**2.10**	**211**	P	**Pn**	**13 42 20.5**	**-0.2**
MHGZ	**Mahia Peninsul**	**2.13**	**205**	P	**Pn**	**13 42 21.6**	**+0.5**
RTZ	**Ruatahuna**	**2.16**	**229**		**Pn**	**13 42 21.5**	**0.0**
RTZ	**Ruatahuna**	**2.16**	**229**	P	**Pn**	**13 42 22.5**	**+1.0**
MUGZ	**Murupara**	**2.21**	**235**	P	**Pn**	**13 42 22.8**	**+0.6**
MKRZ	**Makatiti**	**2.26**	**245**	P	**Pn**	**13 42 25.9**	**+3.0**
TARZ	**Mount Tarawera**	**2.27**	**243**	P	**Pn**	**13 42 24.4**	**+1.3**
LIRZ	**Lichensteins R**	**2.27**	**249**	P	**Pn**	**13 42 24.7**	**+1.6**
TGRZ	**Tauranga**	**2.29**	**257**	P	**Pn**	**13 42 23.7**	**+0.3**
RAHZ	**Arahi**	**2.30**	**222**	P	**Pn**	**13 42 24.3**	**+0.7**
RRRZ	**Republican Roa**	**2.31**	**241**	P	**Pn**	**13 42 24.6**	**+1.0**
OMRZ	**Omania**	**2.32**	**247**	P	**Pn**	**13 42 24.8**	**+1.1**
WHHZ	**Waihua**	**2.35**	**218**	P	**Pn**	**13 42 24.8**	**+0.7**
KARZ	**Kaharoa**	**2.38**	**250**	P	**Pn**	**13 42 25.4**	**+0.8**
HLRZ	**Highlands Stat**	**2.39**	**244**	P	**Pn**	**13 42 25.9**	**+1.2**
MTHZ	**Maungataniwha**	**2.40**	**227**	P	**Pn**	**13 42 25.7**	**+0.9**
NGRZ	**Ngongotaha**	**2.45**	**248**	P	**Pn**	**13 42 27.6**	**+2.0**
PRRZ	**Plateau Road**	**2.47**	**238**	P	**Pn**	**13 42 26.3**	**+0.5**
UTU	**Utuhina**	**2.47**	**247**	P	**Pn**	**13 42 28.0**	**+2.2**
HSRZ	**Hossack Road**	**2.49**	**243**	P	**Pn**	**13 42 27.5**	**+1.4**
HRRZ	**Handcock Road**	**2.50**	**241**	P	**Pn**	**13 42 27.2**	**+1.1**
ALRZ	**Allen Road**	**2.54**	**238**	P	**Pn**	**13 42 27.3**	**+0.6**
KMRZ	**Kaimai**	**2.57**	**255**	P	**Pn**	**13 42 27.5**	**+0.4**
NMHZ	**Naumai**	**2.58**	**223**	P	**Pn**	**13 42 28.1**	**+0.7**
GRRZ	**Galatos Road**	**2.60**	**244**	P	**Pn**	**13 42 28.9**	**+1.3**
ARHZ	**Aropaoanui**	**2.61**	**218**	P	**Pn**	**13 42 28.1**	**+0.4**
MRHZ	**Matea Rd**	**2.64**	**232**	P	**Pn**	**13 42 28.7**	**+0.6**
WPRZ	**Whakapapatarin**	**2.64**	**240**	P	**Pn**	**13 42 29.3**	**+1.2**
THQ2	**Tauhara North**	**2.71**	**237**	P	**Pn**	**13 42 32.1**	**+3.1**
KUZ	**Kuaotunu**	**2.73**	**279**	P	**Pn**	**13 42 28.1**	**-1.2**
KUZ	**Kuaotunu**	**2.73**	**279**	P	**Pn**	**13 42 28.1**	**-1.2**
BKZ	**Black Stump Fm**	**2.81**	**226**		**Pn**	**13 42 30.5**	**0.0**
BKZ	**Black Stump Fm**	**2.81**	**226**	P	**Pn**	**13 42 30.7**	**+0.3**
BKZ	**Black Stump Fm**	**2.81**	**226**	P	**Pn**	**13 42 30.8**	**+0.3**
WHTZ	**Whakaora**	**2.85**	**239**	P	**Pn**	**13 42 32.4**	**+1.3**
KUTZ	**Kaahu Road**	**2.87**	**243**	P	**Pn**	**13 42 32.3**	**+1.0**
TOZ	**Tahuroa Road**	**2.89**	**259**		**Pn**	**13 42 30.8**	**-0.7**
TOZ	**Tahuroa Road**	**2.89**	**259**	P	**Pn**	**13 42 31.4**	**-0.1**
MCHZ	**McNeill Hill**	**2.90**	**219**	P	**Pn**	**13 42 31.9**	**+0.3**
TLZ	**Tolley Road**	**3.01**	**247**	P	**Pn**	**13 42 34.2**	**+1.0**
WATZ	**Wairara**	**3.03**	**240**	P	**Pn**	**13 42 34.4**	**+1.0**
KWHZ	**Kaweka Forest**	**3.03**	**223**	P	**Pn**	**13 42 33.2**	**-0.2**
GRZ	**Great Barrier**	**3.06**	**287**	P	**Pn**	**13 42 33.2**	**-0.7**
RATZ	**Rangitukua**	**3.08**	**237**	P	**Pn**	**13 42 35.2**	**+1.1**
RITZ	**Rihia Road**	**3.08**	**234**	P	**Pn**	**13 42 34.9**	**+0.7**
KAHZ	**Kahuranaki**	**3.09**	**213**	P	**Pn**	**13 42 33.7**	**-0.7**
MKAZ	**Moumakai**	**3.13**	**271**	P	**Pn**	**13 42 34.3**	**-0.5**
WIAZ	**Waiheke Island**	**3.18**	**277**	P	**Pn**	**13 42 35.3**	**-0.3**
KATZ	**Kakaramea**	**3.19**	**236**	P	**Pn**	**13 42 36.7**	**+1.0**
KRHZ	**Kereru**	**3.21**	**221**	P	**Pn**	**13 42 35.2**	**-0.8**
TMVZ	**Te Maari**	**3.26**	**234**	P	**Pn**	**13 42 36.9**	**+0.2**
ETVZ	**East Tongariro**	**3.27**	**233**	P	**Pn**	**13 42 36.9**	**+0.1**
NTVZ	**North Tongarir**	**3.27**	**234**	P	**Pn**	**13 42 37.2**	**+0.4**
BHHZ	**Black Hill Sta**	**3.27**	**225**	P	**Pn**	**13 42 36.8**	**0.0**
KRVZ	**Karewarewa**	**3.29**	**234**	P	**Pn**	**13 42 37.3**	**+0.2**
PXZ	**Pawanui**	**3.29**	**211**	P	**Pn**	**13 42 35.6**	**-1.4**
OTVZ	**Oturere**	**3.31**	**233**	P	**Pn**	**13 42 37.7**	**+0.3**
NNVZ	**North Ngauruho**	**3.32**	**234**	P	**Pn**	**13 42 38.5**	**+0.9**
ETAZ	**East Tamaki Re**	**3.33**	**273**	P	**Pn**	**13 42 37.6**	**+0.1**
WTVZ	**West Tongariro**	**3.33**	**234**	P	**Pn**	**13 42 38.3**	**+0.6**
SNVZ	**South Ngauruho**	**3.34**	**233**	P	**Pn**	**13 42 38.6**	**+0.7**
NGZ	**Ngauruhoe**	**3.36**	**234**	P	**Pn**	**13 42 38.9**	**+0.8**
MBAZ	**Motutapu North**	**3.38**	**277**	P	**Pn**	**13 42 38.2**	**0.0**
MOVZ	**Moawhango**	**3.40**	**229**	P	**Pn**	**13 42 38.3**	**-0.3**
TWVZ	**Taurewa**	**3.41**	**236**	P	**Pn**	**13 42 39.6**	**+0.9**
COVZ	**Chateau Observ**	**3.41**	**234**	P	**Pn**	**13 42 39.4**	**+0.1**
WHVZ	**Whangaehu Hut**	**3.43**	**232**	P	**Pn**	**13 42 39.9**	**+0.8**
FWVZ	**Far West T-bar**	**3.43**	**233**	P	**Pn**	**13 42 39.1**	**-0.1**
MAVZ	**Matarangi**	**3.44**	**233**	P	**Pn**	**13 42 39.3**	**0.0**
WNVZ	**Wahianoa**	**3.45**	**231**	P	**Pn**	**13 42 39.1**	**-0.2**
ABAZ	**Army Bay**	**3.46**	**279**	P

AS01	**Alice Springs**	**40.82**	**276**	P	**P**	**13 49 25.2**	**-0.5**
AS31	**Alice Springs**	**40.85**	**276**	P	**P**	**13 49 25.3**	**-0.7**
ASAR	**Alice Springs**	**40.85**	**276**	P	**P**	**13 49 24.5**	**-1.5**
ASAR	**Alice Springs**	**40.85**	**276**	P	**P**	**13 49 25.2**	**-0.8**
	comp=Z,7.2nm,0.6s,baz=118,slow=8.0,SNR=121						
ASAR				PcP	**PcP**	**13 51 23.6**	**-2.7**
	comp=Z,0.1nm,0.4s,baz=124,slow=3.7,SNR=0.7						
	comp=Z,7.2nm,0.6s						
WR0	**Warramunga Arr**	**42.30**	**281**	P	**P**	**13 49 36.1**	**-1.8**
WR0				IAmb	IAmb	13 49 37.4	
	comp=Z,8.4nm,0.9s						
FORT	**Forrest**	**42.36**	**263**	P	**P**	**13 49 37.0**	**-1.3**
FORT				IAmb	IAmb	13 49 55.3	
	comp=Z,19nm,0.8s						
FORT	**Forrest**	**42.36**	**263**	P	**P**	**13 49 37.2**	**-1.1**
WRA	**Warramunga Arr**	**42.47**	**281**	P	**P**	**13 49 38.0**	**-1.3**
WRA	**Warramunga Arr**	**42.47**	**281**	P	**P**	**13 49 38.0**	**-1.3**
	comp=Z,12nm,0.6s,baz=120,slow=7.9,SNR=110						
WRA				PcP	**PcP**	**13 51 30.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=121,slow=3.1,SNR=2.2						
	comp=Z,12nm,0.6s						
WRKA	**Warakurna**	**44.65**	**271**	P	**P**	**13 49 55.0**	**-1.9**
CASY	**Casey**	**48.01**	**210**	P	**P**	**13 50 24.0**	**+1.4**
CASY				IAmb	IAmb	13 50 35.7	
	comp=Z,12nm,1.1s						
MTN	**Manton Dam**	**49.12**	**287**	P	**P**	**13 50 30.5**	**-1.3**
KLBR	**Kellerberrin**	**50.14**	**257**	P	**P**	**13 50 38.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**50.34**	**277**	P	**P**	**13 50 40.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**50.34**	**277**	P	**P**	**13 50 40.1**	**-0.9**
BLDU	**Ballidu**	**51.36**	**258**	P	**P**	**13 50 47.9**	**-0.7**
MEEK	**Meekatharra**	**51.62**	**263**	P	**P**	**13 50 50.1**	**-0.5**
MORW	**Morawa**	**52.55**	**259**	P	**P**	**13 50 55.3**	**-2.2**
MORW	**Morawa**	**52.55**	**259**	P	**P**	**13 50 55.8**	**-1.7**
QSPA	**South Pole Qui**	**52.90**	**180**	P	**P**	**13 51 02.8**	**+3.1**
QSPA				IAmb	IAmb	13 51 04.1	
	comp=Z,15nm,1.2s						
QSPA	**South Pole Qui**	**52.90**	**180**	P	**P**	**13 51 02.8**	**+3.1**
	comp=Z,5.0nm,0.8s,baz=271,slow=0.9,SNR=30						
	comp=Z,5.0nm,0.8s						
FAKI	**Fak Fak**	**54.84**	**297**	P	**P**	**13 51 12.7**	**-1.7**
BELA	**Belgrano 2**	**63.36**	**172**	P	**P**	**13 52 14.2**	**+1.7**
BELA				IAmb	IAmb	13 52 15.4	
	comp=Z,4.9nm,0.8s						
KKM	**Kota Kinabalu**	**72.60**	**292**	P	**P**	**13 53 10.0**	**-1.5**
H03S2	**Juan Fernandez**	**78.71**	**124**	T	T	15 20 15.1	
	baz=230						
H03S1	**Juan Fernandez**	**78.72**	**124**	T	T	15 20 17.8	
	baz=230						
H03S3	**Juan Fernandez**	**78.73**	**124**	T	T	15 20 20.1	
	baz=230						
H03N3	**Juan Fernandez**	**78.94**	**124**	T	T	15 20 32.0	
	baz=234,slow=72,SNR=19						
H03N2	**Juan Fernandez**	**78.95**	**124**	T	T	15 20 30.7	
	baz=234,slow=72,SNR=22						
H03N1	**Juan Fernandez**	**78.96**	**124**	T	T	15 20 39.0	
	baz=234,slow=72,SNR=28						
PLCA	**Paso Flores**	**79.61**	**134**	P	**P**	**13 53 51.7**	**+0.6**
	comp=Z,2.0nm,1.0s,baz=227,slow=7.2,SNR=4.7						
	comp=Z,2.0nm,1.0s						
BO02	**Sierra Bellavi**	**83.34**	**129**	P	**P**	**13 54 12.8**	**+1.9**
BO02				IAmb	IAmb	13 54 50.0	
	comp=Z,15nm,1.4s						
NJ2	**Nanjing**	**88.94**	**313**	*e*P	**P**	**13 54 41.3**	**+3.2**
NJ2				pP	**pwP**	**13 54 51.8**	**-0.7**
NJ2				sP	**sP**	**13 54 54.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,480nm,5.7s						
MDJ	**Mudanjiang**	**92.94**	**327**	P	**P**	**13 54 58.3**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.8s						
CMAR	**Chiang Mai Arr**	**93.42**	**290**	P	**P**	**13 54 58.6**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=146,slow=3.8,SNR=6.2						
CMAR				LR	LR	14 39 15.7	
	comp=Z,17nm,20.1s,baz=200,slow=37						
	comp=Z,0.6nm,0.5s						
ATAH	**Atahualpa**	**95.60**	**103**	LR	LR	14 28 25.0	
	comp=Z,28nm,20.7s,baz=356,slow=29						
KLR	**Kul'dur**	**95.75**	**331**	LR	LR	14 35 10.0	
	comp=E,21nm,18.6s,baz=124,slow=34						
PZH	**PanZhiHua**	**96.35**	**298**	P	**P**	**13 55 14.8**	**+2.1**
PZH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.3s						
HHC	**Hu-ho-hao-te**	**99.26**	**315**	*e*P	**Pdif**	**13 55 28.4**	**+3.0**
HHC				sP	sP	13 55 44.0	+2.4
HHC	**Hu-ho-hao-te**	**99.26**	**315**	*e*S	**S**	**14 06 53.8**	**-0.2**
HHC	**Hu-ho-hao-te**	**99.26**	**315**	sS	sS	14 07 08.5	-5.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,92nm,5.9s						
HHC				LR	LR		
	comp=N,140nm,16.7s						
HHC				LR	LR		
	comp=E,120nm,18.1s						
YKA	**Yellowknife Ar**	**112.62**	**27**	PKiKP	**PKiKP**	**14 00 19.0**	**0.0**
	comp=E,0.1nm,0.4s,baz=261,slow=1.6,SNR=7.5						
MKAR	**Makanchi Array**	**120.17**	**308**	PKP	**PKPdf**	**14 00 32.7**	**-1.4**
	comp=E,0.2nm,0.6s,baz=101,slow=1.2,SNR=3.5						
ZALV	**Zalesovo Beam**	**121.39**	**316**	PKP	**PKPdf**	**14 00 34.4**	**-1.7**
	comp=E,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**123.88**	**311**	PKP	**PKPdf**	**14 00 39.5**	**-1.5**
	comp=E,1.0nm,0.5s,baz=113,slow=1.8,SNR=14						
NRIK	**Noril'sk**	**124.80**	**334**	PKP	**PKPdf**	**14 00 41.5**	**-0.7**
	comp=E,2.9nm,0.5s,baz=78,slow=4.0,SNR=7.3						
BVAR	**Borovoye Array**	**129.39**	**312**	PKP	**PKPdf**	**14 00 50.3**	**-1.1**
	comp=E,0.8nm,0.6s,baz=39,slow=1.9,SNR=5.2						
ARU	**Arti**	**136.55**	**316**	PKP	**PKiKP**	**14 01 05.9**	**-0.7**
	comp=E,1.7nm,0.4s,baz=243,slow=2.3,SNR=3.3						
SPA0	**Spitsbergen Ar**	**138.30**	**355**	*e*PKPdf	**PKiKP**	**14 01 09.6**	**0.0**
SPITS	**Spitsbergen Ar**	**138.30**	**355**	PKP	**PKPdf**	**14 01 08.5**	**+1.0**
	comp=E,15nm,1.1s,baz=57,slow=3.1,SNR=9.3						
ARA0	**ARCESS Array S**	**144.62**	**344**	*e*PKPbc	**PKPab**	**14 01 17.4**	**-0.4**
ARCES	**ARCESS Array B**	**144.62**	**344**	PKPdf	**PKPab**	**14 01 17.3**	**-0.4**
ARCES	**ARCESS Array B**	**144.62**	**344**	PKP	PKPbc	14 01 18.1	+0.2
	comp=E,2.7nm,0.5s,baz=37,slow=2.7,SNR=29						
KTK1	**Kautokeino**	**145.52**	**345**	*e*PKPbc	**PKPdf**	**14 01 20.1**	**-0.5**
JETT	**Jettan, Norway**	**145.61**	**347**	*e*PKPbc	**PKPdf**	**14 01 20.8**	**0.0**
TRO	**Tromso**	**145.80**	**348**	*e*PKPdf	**PKPab**	**14 01 22.0**	**-0.1**
STEI	**Steigen**	**147.94**	**349**	*e*PKPdf	**PKPbc**	**14 01 26.6**	**-1.1**
FAUS	**Fauske**	**148.43**	**348**	*e*PKPdf	**PKPbc**	**14 01 28.3**	**-0.7**
DBIC	**Dimbokro**	**149.37**	**172**	PKPbc	**PKPbc**	**14 01 32.2**	**-0.9**
	comp=E,4.6nm,0.7s,baz=200,slow=4.0,SNR=4.9						
KONS	**Konsvik**	**149.58**	**349**	*e*PKPdf	**PKPbc**	**14 01 30.5**	**-1.4**
MOR8	**Moi Rana**	**149.67**	**348**	*e*PKPdf	**PKPdf**	**14 01 29.7**	**+2.2**
STOK	**Stokkvaagen**	**149.75**	**349**	*e*PKPbc	**PKPbc**	**14 01 32.0**	**-0.4**
FIA1	**FINESS Array S**	**150.46**	**334**		**PKPbc**	**14 01 33.1**	**-1.1**
FINES	**FINESS Array B**	**150.46**	**334**		**PKPbc**	**14 01 32.7**	**-1.5**
FINES	**FINESS Array B**	**150.46**	**334**	PKPbc	**PKPbc**	**14 01 33.4**	**-0.8**
	comp=E,2.4nm,0.5s,baz=48,slow=3.1,SNR=23						
NSS	**Namsos**	**151.60**	**348**	*e*PKPbc	**PKPbc**	**14 01 35.6**	**-1.2**
BRTR	**Keskin Array B**	**152.92**	**285**	PKPbc	**PKPbc**	**14 01 39.6**	**-1.1**
	comp=E,0.7nm,0.5s,baz=123,slow=4.6,SNR=3.9						
DOMB	**Dombas**	**154.39**	**349**	*e*PKPbc	**PKPbc**	**14 01 42.7**	**-0.4**
AKN	**Aaknes**	**154.54**	**351**	*e*PKPbc	**PKiKP**	**14 01 43.6**	**+0.2**
AKASG	**Malin Array Be**	**154.67**	**312**	PKPbc	**PKiKP**	**14 01 44.3**	**+0.3**
	comp=E,0.5nm,0.4s,baz=56,slow=1.7,SNR=1.5						
NOA	**NORSAR Array B**	**154.96**	**346**	PKPbc	**PKPbc**	**14 01 43.9**	**-0.5**
	comp=E,1.6nm,0.7s,baz=30,slow=2.1,SNR=6.0						
NC602	**NORSAR Array S**	**155.18**	**345**	*e*PKPbc	PKPdf	14 01 43.9	+8.1
HFS	**Hagfors**	**155.24**	**342**	PKPbc	PKPdf	14 01 44.1	+8.2
	comp=E,2.1nm,0.7s,baz=162,slow=0.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**155.91**	**186**	PKPab	**PKPab**	**14 02 05.8**	**+0.8**
	comp=E,2.2nm,0.8s,baz=154,slow=3.2,SNR=9.5						
KONO	**Kongsberg**	**156.56**	**347**	*e*PKPdf	**PKPdf**	**14 01 39.1**	**+1.4**

*IDC **21** 13:54:29.7±1.2,2.7°S×140.34°E, h0km, mb3.9/9, mbtmp3.9/10, ML4.3/1, MS3.6/15, Error ellipse: s-maj=48.5km s-min=20.8km az=86.0*
*NEIC **21** 13:54:34.7±1.7,2.9°S±0.1°×140.12°E±0.09, h29km±6km, mb4.4/17, Error ellipse: s-maj=16.3km s-min=12.3km az=203.0*

ISC 21 13:54:36.9±0.6,**2.99S**±0.07°×**140.11E**±0.09,**h54**km,**n52,** σ1**63**/40,**mb4.2**/15,**MS3.5**/13,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**7.85**	**270**	Pn	**Pn**	**13 56 27.1**	**-1.4**
PMG	**Port Moresby**	**9.48**	**133**	Pn	**Pn**	**13 56 48.5**	**-2.4**
COEN	**Coen**	**11.31**	**165**	Pn	**Pn**	**13 57 14.9**	**-1.1**
RABL	**Rabaul**	**12.09**	**96**	Pn	**Pn**	**13 57 24.9**	**-1.8**
MTN	**Manton Dam**	**13.22**	**222**		**Pn**	**13 57 40.6**	**-1.4**
KNRA	**Kununurra**	**16.85**	**221**		**Pn**	**13 58 29.9**	**+0.7**
KNRA				IAmb	IAmb	13 59 05.9	
	comp=Z,12nm,0.8s						
SOEI	**Soe**	**17.11**	**246**	P	**Pn**	**13 58 32.5**	**-0.2**
SOEI				IAmb	IAmb	13 59 10.5	
	comp=Z,52nm,1.2s						
GUMO	**Guam**	**17.13**	**16**	LR	LR	14 03 19.4	
	comp=Z,192nm,21.0s,baz=180,slow=31						
WB0	**Warramunga Arr**	**17.59**	**198**	P	**Pn**	**13 58 37.0**	**-1.4**
WRA	**Warramunga Arr**	**17.77**	**198**	P	**Pn**	**13 58 39.9**	**-0.7**
WRA	**Warramunga Arr**	**17.77**	**198**	P	**Pn**	**13 58 40.6**	**0.0**
	comp=Z,0.9nm,0.3s,baz=23,slow=12,SNR=41						
WRA				S	**Sn**	**14 01 53.8**	**-4.2**
	comp=Z,3.6nm,0.9s,baz=6.0,slow=21,SNR=7.7						
	comp=Z,2.5nm,0.5s						
CTA	**Charters Tower**	**18.03**	**161**	LR	LR	14 05 54.9	
	comp=Z,261nm,21.1s,baz=298,slow=38						
FITZ	**Fitzroy Crossi**	**20.66**	**222**	P	**P**	**13 59 13.6**	**+1.3**
AS31	**Alice Springs**	**21.41**	**196**	P	**P**	**13 59 21.1**	**+0.6**
ASAR	**Alice Springs**	**21.42**	**196**	P	**P**	**13 59 20.7**	**+0.2**
ASAR	**Alice Springs**	**21.42**	**196**	P	**P**	**13 59 21.1**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=28,slow=10.0,SNR=36						
ASAR				S	**S**	**14 03 18.3**	**+2.8**
	comp=Z,1.8nm,0.7s,baz=13,slow=29,SNR=6.9						
ASAR				LR	LR	14 08 21.8	
	comp=Z,316nm,18.6s,baz=16,slow=38						
	comp=Z,2.0nm,0.6s						
EIDS	**Eidsvold**	**24.63**	**156**	P	**P**	**13 59 55.4**	**+2.8**
EIDS				IAmb	IAmb	14 00 01.9	
	comp=Z,20nm,0.9s						
MBWA	**Marble Bar**	**26.82**	**226**	P	**P**	**14 00 15.7**	**+3.3**
STKA	**Stephens Creek**	**28.77**	**177**	LR	LR	14 13 43.4	
	comp=Z,193nm,18.9s,baz=5.2,slow=40						
JCJ	**Chichijima**	**29.97**	**4**	LR	LR	14 10 30.9	
	comp=Z,115nm,21.8s,baz=77,slow=32						
JHJ	**Hachijo jima 2**	**35.91**	**360**	LR	LR	14 12 54.4	
	comp=Z,85nm,19.0s,baz=172,slow=31						
NWAO	**Narrogin (SRO)**	**36.69**	**213**	LR	LR	14 18 13.6	
	comp=Z,196nm,21.4s,baz=114,slow=38						
JNU	**Nakatsue**	**36.96**	**347**	LR	LR	14 13 52.5	
	comp=Z,56nm,19.8s,baz=154,slow=32						
KSRS	**Korea Array**	**41.80**	**345**	LR	LR	14 16 42.0	
	comp=Z,40nm,21.9s,baz=160,slow=32						
CMAR	**Chiang Mai Arr**	**45.79**	**299**	P	**P**	**14 02 53.4**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=131,slow=6.9,SNR=5.2						
	comp=Z,1.1nm,0.3s						
ASAJ	**Asahikawa**	**46.94**	**2**	LR	LR	14 21 22.1	
	comp=Z,50nm,21.1s,baz=170,slow=34						
URZ	**Urewera**	**48.72**	**141**	LR	LR	14 23 45.8	
	comp=Z,52nm,20.0s,baz=308,slow=36						
RPZ	**Rata Peaks**	**48.95**	**150**	LR	LR	14 23 42.3	
	comp=Z,96nm,18.8s,baz=274,slow=36						
SONM	**Songino Array**	**58.57**	**334**	P	**P**	**14 04 28.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=148,slow=8.5,SNR=2.5						
	comp=Z,0.3nm,0.7s						
YAK	**Yakutsk**	**65.33**	**355**	LR	LR	14 29 55.6	
	comp=Z,24nm,21.0s,baz=98,slow=33						
MK31	**Makanchi Array**	**70.86**	**322**	P	**P**	**14 05 47.9**	**-0.4**
MK31				IAmb	IAmb	14 05 58.5	
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**70.86**	**322**	P	**P**	**14 05 48.3**	**0.0**
MKAR	**Makanchi Array**	**70.86**	**322**	P	**P**	**14 05 48.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=107,slow=8.2,SNR=12						
	comp=Z,1.0nm,0.6s						
MAKZ	**Makanchi**	**71.06**	**322**	P	**P**	**14 05 49.5**	**0.0**
MAKZ				IAmb	IAmb	14 05 59.6	
	comp=Z,5.3nm,0.9s						
ZALV	**Zalesovo Beam**	**72.88**	**329**	P	**P**	**14 05 59.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=125,slow=7.4,SNR=1.9						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**74.76**	**325**	P	**P**	**14 06 11.1**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=117,slow=4.9,SNR=4.5						
	comp=Z,0.4nm,0.8s						
VNDA	**Vanda**	**75.39**	**175**	LR	LR	14 37 39.9	
	comp=Z,53nm,20.9s,baz=284,slow=34						
SIMJ	**Simiganj**	**77.23**	**311**	P	**P**	**14 06 25.9**	**+0.2**
SIMJ				IAmb	IAmb	14 06 29.0	
	comp=Z,5.8nm,1.1s						
KK31	**Karatay Array**	**77.30**	**315**	P	**P**	**14 06 24.8**	**-1.1**
KK31				IAmb	IAmb	14 06 39.9	
	comp=Z,3.0nm,1.4s						
KKAR	**Karatay Array**	**77.30**	**315**	P	**P**	**14 06 24.4**	**-1.6**
K17K	**Idlitarod**	**80.04**	**24**	P	**P**	**14 06 43.2**	**+2.8**
BVAR	**Borovoye Array**	**80.34**	**325**	P	**P**	**14 06 42.6**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=107,slow=7.5,SNR=8.5						
	comp=Z,1.4nm,0.5s						
M20K	**Styx River**	**81.89**	**26**	P	**P**	**14 06 50.7**	**+0.2**
K20K	**Telida**	**82.06**	**25**	P	**P**	**14 06 51.3**	**0.0**
K20K				IAmb	IAmb	14 06 52.0	
	comp=Z,4.8nm,1.1s						
ILAR	**Eielson Array**	**85.51**	**24**	P	**P**	**14 07 06.5**	**-2.3**
	comp=Z,0.7nm,0.9s,baz=260,slow=4.9,SNR=6.4						
	comp=Z,0.7nm,0.9s						
C23K	**Itkillik River**	**85.76**	**19**	P	**P**	**14 07 09.3**	**-0.6**
QSPA	**South Pole Qui**	**86.96**	**180**	P	**P**	**14 07 18.2**	**+2.1**
QSPA	**South Pole Qui**	**86.96**	**180**	P	**P**	**14 07 19.0**	**+2.8**
	comp=Z,1.6nm,0.7s,baz=350,slow=1.2,SNR=8.0						
	comp=Z,1.6nm,0.7s						
BMAR	**Burnt Mountain**	**87.13**	**22**	P	**P**	**14 07 17.1**	**+0.2**
BCAR	**Beaver Creek A**	**87.27**	**26**	P	**P**	**14 07 18.7**	**+1.1**
DLBC	**Dease Lake**	**92.45**	**32**	LR	LR	14 46 57.3	
	comp=Z,22nm,18.5s,baz=285,slow=34						
DBIC	**Dimbokro**	**144.90**	**277**	PKPbc	**PKiKP**	**14 14 11.2**	**-1.8**
	comp=Z,3.7nm,0.6s,baz=110,slow=3.4,SNR=5.8						

IDC 21 14:11:30.9±3.7,**33.24N×96.48E,h0km,mb3.2/2, mbtmp3.2/4,ML2.8/1,Error ellipse: s-maj=187.7km s-min=37.9km az=73.0,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.88**	**171**	Pn	**Pn**	**14 15 02.8**	**0.0**
	0.5nm,0.8s,baz=346,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**17.33**	**326**	P	Pn	14 15 34.3	+0.2
	baz=144,slow=12,SNR=2.6						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**21.82**	**328**	P	P	14 16 24.4	-0.1
	0.6nm,0.7s,baz=134,slow=11,SNR=6.4						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**22.30**	**342**	P	P	14 16 29.9	+0.1
	1.2nm,0.8s,baz=150,slow=10,SNR=5.3						
	1.2nm,0.8s						

*IDC **21** 14:18:43.0±0.8,30.61N×139.18E, h401km±12km, mb2.8/11, mbtmp3.6/16, Error ellipse: s-maj=21.8km s-min=12.4km az=67.0*
*JMA **21** 14:18:43.2±0.3,31.1°N×13.9°E±, h431km±3km, MV3.5/32, NEAR TORISHIMA IS*

ISC 21 14:18:43.1±0.7,**30.74N**±0.06×**139.15E**±0.10,**h400**km,**n28,** σ1**93**/32,**mb3.0**/11,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.43**	**13**	P	**Pn**	**14 19 43.9**	**+2.1**
JHJ	**Hachijo jima 2**	**2.44**	**13**	P	**Pn**	**14 19 43.7**	**+1.9**
	156nm,0.8s,baz=284,slow=23,SNR=6.2						
JHJ				S	**S**	**14 20 29.2**	**-0.2**
	80nm,0.2s,baz=74,slow=21,SNR=5.9						
JIE	**Ise**	**4.19**	**331**	*e*P	**Pn**	**14 19 57.8**	**+0.9**
BSO1	**Boso 1**	**4.20**	**21**	S	**S**	**14 20 56.5**	**+0.6**
BSO3	**Boso 3**	**4.21**	**15**	S	**S**	**14 20 55.8**	**-0.9**
BSO4	**Boso 4**	**4.36**	**13**	S	**S**	**14 20 59.5**	**-0.1**
CBIJ	**Chichi jima**	**4.50**	**143**	P	**Pn**	**14 20 03.8**	**+3.7**
CBIJ				S	**S**	**14 21 04.7**	**+2.1**
JCJ	**Chichijima**	**4.50**	**143**	P	**Pn**	**14 19 59.7**	**-0.4**
	113nm,0.8s,baz=355,slow=22,SNR=6.7						
JCJ				S	**S**	**14 21 00.5**	**-2.1**
	77nm,0.2s,baz=264,slow=23,SNR=14						
JHU	**Hanno**	**5.10**	**1**	P	**Pn**	**14 20 06.0**	**0.0**
JHU				S	**S**	**14 21 07.8**	**-5.7**
JRY	**Ryogami san**	**5.27**	**358**	P	**Pn**	**14 20 08.9**	**+1.1**
JYT	**Yasato**	**5.54**	**9**	S	**S**	**14 21 17.1**	**-4.9**
JAG	**Ashikaga**	**5.68**	**2**	P	**Pn**	**14 20 11.5**	**-0.6**
MJAR	**Matsushiro Arr**	**5.84**	**353**	P	**Pn**	**14 20 13.7**	**-0.2**
	0.8nm,0.3s,baz=201,slow=11,SNR=2.5						
JHO	**Hitachi**	**5.98**	**11**	P	**Pn**	**14 20 15.4**	**+0.1**
JMK	**Ichinoseki**	**8.37**	**11**	P	**P**	**14 20 43.7**	**+1.3**
KSRS	**Korea Array**	**11.46**	**309**	P	**P**	**14 21 16.6**	**-0.1**
	1.4nm,0.6s,baz=124,slow=9.5,SNR=8.9						
ASAJ	**Asahikawa**	**13.63**	**11**	P	**Pn**	**14 21 42.0**	**-0.9**
	4.8nm,1.0s,baz=195,slow=12,SNR=1.2						
SONM	**Songino Array**	**30.27**	**314**	P	**P**	**14 24 19.4**	**+0.3**
	0.7nm,0.9s,baz=112,slow=7.5,SNR=3.6						
	0.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.35**	**261**	P	**P**	**14 25 28.0**	**+0.2**
	0.4nm,0.3s,baz=66,slow=7.0,SNR=2.3						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**45.01**	**317**	P	**P**	**14 26 21.0**	**+0.5**
	0.3nm,0.4s,baz=92,slow=4.5,SNR=2.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**46.14**	**307**	P	**P**	**14 26 29.7**	**+0.3**
	1.2nm,0.7s,baz=91,slow=9.6,SNR=18						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**48.61**	**312**	P	**P**	**14 26 48.9**	**+0.8**
	0.5nm,0.4s,baz=92,slow=10.0,SNR=20						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**50.60**	**186**	P	**P**	**14 27 01.2**	**-2.0**
	0.3nm,0.8s,baz=16,slow=7.7,SNR=2.0						
	0.3nm,0.8s						
AAK	**Ala-Archa**	**52.03**	**302**	P	**P**	**14 27 14.2**	**+0.5**
	0.7nm,0.5s,baz=148,slow=7.0,SNR=4.0						
	0.7nm,0.5s						
BVAR	**Borovoye Array**	**53.58**	**316**	P	**P**	**14 27 25.8**	**+1.3**
	1.5nm,0.6s,baz=95,slow=7.9,SNR=10						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**54.33**	**186**	P	**P**	**14 27 29.1**	**-1.0**
	0.2nm,0.8s,baz=0.5,slow=6.7,SNR=1.8						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**55.84**	**30**	P	**P**	**14 27 39.0**	**-1.3**
	0.2nm,0.6s,baz=286,slow=7.4,SNR=2.3						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**70.21**	**28**	P	**P**	**14 29 15.7**	**+2.1**
	0.1nm,0.5s,baz=303,slow=6.3,SNR=2.9						
	0.1nm,0.5s						

*NOU **21** 14:19:13.7, 38.78S×175.84E, h128km, MLv3.6/11, North Island, New Zealand*
*WEL **21** 14:19:15.8±0.5, 39.3°S±3.1°×17.6E±, h104km±4km, M2.9/57, ML2.7/32, MLv2.9/57, Error ellipse: s-maj=0.0km s-min=0.0km az=143.7, confirmed*

ISC 21 14:19:13.1±1.5,**38.73S**±0.03×**175.80E**±0.04,**h133**km±7km, **n136,** σ0**88**/149,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	**Wairara**	**0.06**	**288**	P	**Pn**	**14 19 31.2**	**+0.2**
RATZ	**Rangitukua**	**0.14**	**189**	P	**Pn**	**14 19 31.3**	**+0.1**
KUTZ	**Kaahu Road**	**0.24**	**4**	P	**Pn**	**14 19 31.6**	**+0.1**
KUTZ				S	**Sn**	**14 19 44.9**	**-0.4**
RITZ	**Rihia Road**	**0.26**	**170**	P	**Pn**	**14 19 32.0**	**+0.6**
KATZ	**Kakaramea**	**0.26**	**198**	P	**Pn**	**14 19 31.9**	**+0.3**
WPRZ	**Whakapapatarin**	**0.35**	**54**	P	**Pn**	**14 19 31.8**	**+0.1**
NTVZ	**North Tongarir**	**0.39**	**195**	P	**Pn**	**14 19 32.6**	**+0.5**
KRVZ	**Karewarewa**	**0.39**	**199**	P	**Pn**	**14 19 32.4**	**+0.3**
TMVZ	**Te Maari**	**0.40**	**191**	P	**Pn**	**14 19 32.5**	**+0.4**
ETVZ	**East Tongariro**	**0.42**	**190**	P	**Pn**	**14 19 32.8**	**+0.6**
ETVZ				S	**Sn**	**14 19 46.7**	**0.0**
WTVZ	**West Tongariro**	**0.42**	**203**	P	**Pn**	**14 19 32.7**	**+0.5**
NNVZ	**North Ngauruho**	**0.43**	**200**	P	**Pn**	**14 19 32.8**	**+0.5**
GRRZ	**Galatos Road**	**0.45**	**33**	P	**Pn**	**14 19 32.4**	**+0.2**
TLZ	**Tolley Road**	**0.45**	**332**	P	**Pn**	**14 19 32.3**	**+0.1**
TLZ				S	**Sn**	**14 19 45.8**	**-0.9**
**TWVZ

WTAZ	**Waiatarua**	**2.04**	**331**	P	**Pn**	**14 19 48.6 +0.9**
MBAZ	**Motutapu North**	**2.08**	**340**	P	**Pn**	**14 19 48.8 +0.6**
OGWZ	**Otaki Gorge**	**2.15**	**193**	P	**Pn**	**14 19 49.6 +0.7**
HOWZ	**Holdsworth Sta**	**2.18**	**186**	P	**Pn**	**14 19 49.7 +0.3**
CPWZ	**Castlepoint**	**2.20**	**172**	P	**Pn**	**14 19 50.7 +1.1**
KIW	**Kapiti Island**	**2.24**	**198**	P	**Pn**	**14 19 50.4 +0.3**
WMGZ	**Waiomatatini S**	**2.25**	**67**	P	**Pn**	**14 19 50.5 +0.4**
MXZ	**Matakaoa Point**	**2.29**	**60**	P	**Pn**	**14 19 51.6 +0.8**
MXZ	**Matakaoa Point**	**2.29**	**60**	P	**Pn**	**14 19 51.5 +0.8**
TMWZ	**Te Maipa**	**2.38**	**178**	P	**Pn**	**14 19 52.1 +0.2**
MTW	**Mount Morrison**	**2.44**	**185**	P	**Pn**	**14 19 52.5 -0.1**
CAW	**Cannon Point**	**2.44**	**193**	P	**Pn**	**14 19 52.7 +0.1**
DUWZ	**D'Urville Isla**	**2.53**	**214**	P	**Pn**	**14 19 54.6 +0.9**
PAWZ	**Paruwai Farm**	**2.67**	**186**	P	**Pn**	**14 19 55.2 -0.3**
TRWZ	**Traveller**	**2.67**	**182**	P	**Pn**	**14 19 55.4 -0.2**
WEL	**Wellington**	**2.68**	**197**	P	**Pn**	**14 19 55.4 -0.2**
SNZO	**South Karori**	**2.72**	**198**	P	**Pn**	**14 19 55.6 -0.5**
TCW	**Tory Channel**	**2.75**	**205**	P	**Pn**	**14 19 56.2 -0.3**
BHW	**Baring Head**	**2.77**	**195**	P	**Pn**	**14 19 56.4 -0.4**
PLWZ	**Palliser**	**2.87**	**188**	P	**Pn**	**14 19 57.5 -0.6**
TUWZ	**Tuamarina**	**3.05**	**207**	P	**Pn**	**14 20 00.1 -0.4**
NNZ	**Nelson**	**3.11**	**216**	P	**Pn**	**14 20 00.9 -0.2**
QRZ	**Quartz Range**	**3.28**	**229**	P	**Pn**	**14 20 03.6 +0.2**
QRZ	**Quartz Range**	**3.28**	**229**	P	**Pn**	**14 20 03.5 +0.2**
BSWZ	**Blackbirch Sta**	**3.33**	**206**	P	**Pn**	**14 20 03.3 -0.7**
MRNZ	**Matariki Terra**	**3.55**	**220**	P	**Pn**	**14 20 06.3 -0.5**
THZ	**Tophouse**	**3.76**	**215**	P	**Pn**	**14 20 09.4 -0.3**
OUZ	**Omahuta**	**3.92**	**333**	P	**Pn**	**14 20 13.4 +1.6**
OUZ	**Omahuta**	**3.92**	**333**	P	**Pn**	**14 20 13.5 +1.6**
KHZ	**Kahutara**	**4.07**	**204**	P	**Pn**	**14 20 12.7 -1.0**
KHZ	**Kahutara**	**4.07**	**204**	P	**Pn**	**14 20 12.7 -1.0**
GVZ	**Greta Valley S**	**4.73**	**205**	P	**Pn**	**14 20 21.1 -1.4**
TMZ	**Timaru**	**6.70**	**211**	P	**Pn**	**14 20 47.3 -1.6**

NOU 21 14:53:00.9, 17°37S×168°43E, h0km, MLv4.3/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YATNC	**Mamie plateau,**	**4.88**	**197**	P	Pn	14 54 15.5	-0.2
DZM	**Mont Dzumac**	**5.04**	**201**	P	Pn	14 54 18.1	+0.3
KOUNC	**Koumac, New Ca**	**5.04**	**230**	P	Pn	14 54 18.0	+0.2
OUENC	**Ouen Island, N**	**5.24**	**196**	P	Pn	14 54 21.2	+0.7
PINNC	**Pines Island,**	**5.30**	**190**	P	Pn	14 54 20.6	-0.7

*IDC **21** 14:53:03.6±3.2, 7°.06S×129°.31E, h122km±29km, mb4.1/19, mbtmp4.5/22, Error ellipse: s-maj=18.8km s-min=9.3km az=58.0*
*DJA **21** 14:53:06.6±0.3, 7°.5±2°×12°.9E±°, h194km±6km, M4.5/24, mb4.4/24, mB5.0/12, MLv4.9/16, Mw(mB)4.3/12, MwMwp7.1/1, Mwp6.9/1*
*NEIC **21** 14:53:07.5±1.7, 7°.09S±0°.08×129°.41E±0°.08, h161km±9km, mb4.5/40, Error ellipse: s-maj=11.5km s-min=10.9km az=102.0*

ISC 21 14:53:06.4±0.3, 7°.12S±0°.05×129°.36E±0°.05, h150km, n148, σ1°62/151, mb4.3/36, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.10**	**114**	Pn	**Pn**	**14 53 45.3**	**+2.6**
SAUI	**Saumlaki**	**2.10**	**114**	P	**Pn**	**14 53 45.8**	**+3.1**
SAUI	**Saumlaki**	**2.10**	**114**	P	**Pn**	**14 53 45.3**	**+2.6**
BNDI	**Bandanaira**	**2.64**	**12**	P	**Pn**	**14 53 53.4**	**+4.2**
BNDI	**Bandanaira**	**2.64**	**12**	P	**Pn**	**14 53 52.9**	**+3.7**
NLAI	**Namlea**	**4.47**	**330**	P	**Pn**	**14 54 16.9**	**+4.1**
FAKI	**Fak Fak**	**5.07**	**35**	Pn	**Pn**	**14 54 20.2**	**-0.5**
FAKI	**Fak Fak** 157nm,0.4s,8μm2.8nm	**5.07**	**35**	P	**Pn**	**14 54 20.6**	**-0.1**
DRS	**Darwin Rock St**	**5.49**	**164**	P	**Pn**	**14 54 27.7**	**+1.4**
SOEI	**Soe**	**5.68**	**242**	Pn	**Pn**	**14 54 30.6**	**+1.7**
SOEI	**Soe**	**5.68**	**242**	P	**Pn**	**14 54 30.2**	**+1.3**
SOEI	**Soe** 104nm,0.6s,2μm1.5nm	**5.68**	**242**	P	**Pn**	**14 54 30.3**	**+1.3**
MTN	**Manton Dam**	**5.95**	**163**	Pn	**Pn**	**14 54 33.3**	**+0.9**
MTN	**Manton Dam**	**5.95**	**163**	P	**Pn**	**14 54 33.2**	**+0.8**
SANI	**Sanana**	**6.06**	**326**	P	**Pn**	**14 54 37.7**	**+3.8**
SANI	**Sanana** 47nm,0.8s,666nm0.2nm	**6.06**	**326**	P	**Pn**	**14 54 37.2**	**+3.3**
KDU	**Kakadu**	**6.32**	**151**	P	**Pn**	**14 54 37.9**	**+0.5**
SWI	**Sorong**	**6.50**	**17**	P	**Pn**	**14 54 39.8**	**+0.1**
LBMI	**Labuha** 245nm,0.7s,3μm0.8nm	**6.70**	**344**	P	**Pn**	**14 54 46.0**	**+3.5**
BBSI	**Bau Bau** 32nm,1.0s,0.1nm	**6.94**	**283**	P	**Pn**	**14 54 48.0**	**+2.3**
MMRI	**Maumere**	**7.22**	**257**	Pn	**Pn**	**14 54 51.3**	**+2.0**
MMRI	**Maumere** 52nm,1.0s,0.2nm	**7.22**	**257**	P	**Pn**	**14 54 50.7**	**+1.3**
EDFI	**Ende, Flores** 18nm,0.7s,0.1nm	**7.77**	**257**	P	**Pn**	**14 54 58.7**	**+1.8**
TNTI	**Ternate**	**8.09**	**346**		**Pn**	**14 55 01.9**	**+0.9**
TNTI	**Ternate**	**8.09**	**346**	P	**Pn**	**14 55 04.5**	**+3.5**
TNTI	**Ternate** 82nm,0.9s,809nm	**8.09**	**346**	P	**Pn**	**14 55 02.8**	**+1.8**
KNRA	**Kununurra**	**8.52**	**184**	Pn	**Pn**	**14 55 06.3**	**-0.4**
KNRA	**Kununurra**	**8.52**	**184**	P	**Pn**	**14 55 06.4**	**-0.4**
BASI	**Baing, Sumba** 113nm,0.8s,2μm	**9.21**	**250**	P	**Pn**	**14 55 15.9**	**-0.1**
BKSI	**Bulukumba** 13nm,1.0s	**9.36**	**280**	P	**Pn**	**14 55 19.6**	**+1.7**
GTOI	**Gorontalo** 12nm,0.8s	**9.98**	**320**	P	**Pn**	**14 55 30.9**	**+4.8**
TTSI	**Tana Toraja** 25nm,0.9s	**10.33**	**293**	P	**Pn**	**14 55 32.6**	**+1.8**
MRSI	**Marisa** 29nm,1.0s,511nm	**10.57**	**315**	P	**Pn**	**14 55 37.4**	**+3.4**
SGSI	**Sangihe** 554nm,0.8s	**11.40**	**340**	P	**Pn**	**14 55 46.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.50**	**198**	Pn	**Pn**	**14 55 44.3**	**-1.8**
FITZ	**Fitzroy Crossi**	**11.50**	**198**	P	**Pn**	**14 55 44.0**	**-2.1**
PLAI	**Plampang**	**11.60**	**261**	P	**Pn**	**14 55 45.7**	**-1.8**
PLAI	**Plampang** 75nm,0.7s,841nm	**11.60**	**261**	P	**Pn**	**14 55 46.0**	**-1.5**
TABU	**Tabubil**	**11.93**	**82**	P	**Pn**	**14 55 54.7**	**+2.8**
TWSI	**Taliwang, Sumb** 16nm,1.2s	**12.47**	**262**	P	**Pn**	**14 55 57.9**	**-0.9**
WRA	**Warramunga Arr**	**13.63**	**160**	Pn	Pn	14 56 09.8	-3.9
WRA	**Warramunga Arr** 24nm,0.6s,baz=334,slow=14,SNR=113	**13.63**	**160**	P	**Pn**	**14 56 11.3**	**-2.4**
WRA	43nm,0.6s,baz=333,slow=23,SNR=15			S	Sn	14 58 33.2	-11
WB2	**Warramunga Arr**	**13.63**	**160**	Pn	**Pn**	**14 56 11.3**	**-2.4**
SRBI	**Singaraja** 19nm,1.1s	**14.06**	**265**	P	**Pn**	**14 56 19.2**	**+0.1**
JAGI	**Jajag, Banyuwa**	**15.13**	**264**	Pn	**Pn**	**14 56 31.7**	**-0.9**
JAGI	comp=Z,35nm,1.1s			IAmb	IAmb	14 56 32.8	
JAGI	**Jajag, Banyuwa** comp=Z,22nm,0.8s,comp=Z,906nm	**15.13**	**264**	P	**Pn**	**14 56 31.5**	**-1.0**
COEN	**Coen**	**15.18**	**118**	P	**Pn**	**14 56 32.9**	**-0.2**
COEN	comp=Z,51nm,1.4s			IAmb	IAmb	14 56 37.4	
COEN	**Coen**	**15.18**	**118**	P	**Pn**	**14 56 34.0**	**+0.9**
KMMI	**Kalianget**	**15.28**	**269**	P	**P**	**14 56 36.8**	**+1.0**
BLJI	**Banyuglugur** comp=Z,29nm,0.6s	**15.65**	**267**	P	**Pn**	**14 56 38.5**	**-0.4**
GMJI	**Gumukmas** comp=Z,23nm,1.5s	**15.82**	**265**	P	**Pn**	**14 56 39.3**	**-1.7**
QIS	**Mount Isa**	**16.64**	**144**	P	**P**	**14 56 50.6**	**-0.2**
MBWA	**Marble Bar**	**16.78**	**213**	P	**P**	**14 56 52.6**	**+0.3**
MBWA	comp=Z,31nm,1.4s			IAmb	IAmb	14 56 55.7	
AS31	**Alice Springs**	**17.02**	**166**		**P**	**14 56 54.2**	**-0.8**
AS31	comp=Z,19nm,0.9s			IAmb	IAmb	14 56 57.3	
ASAR	**Alice Springs**	**17.02**	**166**		**P**	**14 56 56.2**	**+1.2**
ASAR	**Alice Springs** comp=Z,44nm,0.7s,baz=346,slow=9.1,SNR=505	**17.02**	**166**	P	**P**	**14 56 54.9**	**-0.1**
ASAR	comp=Z,5.3nm,0.8s,baz=337,slow=17,SNR=4.7			S	S	14 59 53.1	-12
AS01	**Alice Springs**	**17.03**	**165**	P	**P**	**14 56 54.9**	**-0.2**
PSA00	**Pilbara Seismi**	**17.06**	**212**	P	**P**	**14 56 56.2**	**+0.8**
PSA00	comp=Z,18nm,0.8s			IAmb	IAmb	14 56 57.5	
PSA00	**Pilbara Seismi**	**17.06**	**212**	P	**P**	**14 56 55.6**	**+0.3**
PSA00	comp=Z,5.2nm,0.8s			IAmb	IAmb	14 57 00.3	
PWJI	**Pagerwojo** comp=Z,36nm,0.7s	**17.43**	**266**	P	**P**	**14 56 58.1**	**-1.4**
PMG	**Port Moresby** comp=Z,1.3nm,0.3s,baz=269,slow=22,SNR=1.0	**17.76**	**99**	P	**P**	**14 57 02.2**	**-0.9**
PMG				S	**S**	**15 00 13.5**	**-6.4**
	comp=Z,2.0nm,0.2s,baz=190,slow=22,SNR=1.2						
WRKA	**Warakurna**	**17.85**	**183**	P	**P**	**14 57 05.1**	**+1.1**
MTSU	**Mount Surprise**	**18.22**	**128**	P	**Pn**	**14 57 10.4**	**+0.4**
KKM	**Kota Kinabalu**	**18.52**	**315**	P	**P**	**14 57 12.0**	**+0.4**
KKM	**Kota Kinabalu**	**18.52**	**315**	P	**P**	**14 57 13.8**	**+2.2**
SBUM	**Sibu**	**19.57**	**298**	P	**P**	**14 57 24.6**	**+1.7**
SBUM	comp=Z,34nm,1.5s			IAmb	IAmb	14 57 26.9	
CTA	**Charters Tower** comp=Z,9.5nm,0.9s,baz=299,slow=11,SNR=8.1	**20.84**	**130**	P	**P**	**14 57 36.6**	**+0.1**
CTA	comp=Z,4.8nm,0.9s,baz=18,slow=7.2,SNR=1.9 comp=Z,9.5nm,0.9s			S	**S**	**15 01 26.4**	**+5.6**
CTAO	**Charters Tower**	**20.84**	**130**	P	**P**	**14 57 36.9**	**+0.5**
CTAO	comp=Z,20nm,1.1s			IAmb	IAmb	14 58 17.1	
KSM	**Kuching**	**20.84**	**293**	P	**P**	**14 57 34.8**	**-1.7**
KSM	**Kuching**	**20.84**	**293**	P	**P**	**14 57 37.5**	**+1.0**
OOD	**Oodnadatta**	**21.42**	**164**	P	**P**	**14 57 42.9**	**+0.4**
BBJI	**Bungbulang**	**21.54**	**268**	P	**P**	**14 57 43.1**	**-1.0**
LEM	**Lembang** comp=Z,29nm,0.6s,baz=19,slow=20,SNR=6.3 comp=Z,29nm,0.6s	**21.59**	**269**	P	**P**	**14 57 44.2**	**-0.4**
INKA	**Innaminka**	**23.17**	**154**	P	**P**	**14 58 01.3**	**+1.6**
MULG	**Mulgathing**	**23.46**	**170**	P	**P**	**14 58 03.9**	**+1.6**
FORT	**Forrest**	**23.57**	**183**	P	**P**	**14 58 04.0**	**+0.7**
FORT	**Forrest**	**23.57**	**183**	P	**P**	**14 58 05.1**	**+1.8**
QLP	**Quilpie**	**23.98**	**146**	P	**P**	**14 58 08.5**	**+1.4**
LCRK	**Leigh Creek**	**24.65**	**161**	P	**P**	**14 58 14.2**	**+1.1**
MORW	**Morawa**	**25.19**	**208**	P	**P**	**14 58 17.9**	**-0.2**
MORW	comp=Z,11nm,1.1s			IAmb	IAmb	14 58 51.0	
BBOO	**Buckleboo**	**26.31**	**167**	P	**P**	**14 58 28.0**	**-0.1**
BBOO	comp=Z,13nm,0.8s			IAmb	IAmb	14 58 32.7	
STKA	**Stephens Creek**	**27.15**	**157**	P	**P**	**14 58 36.0**	**+0.4**
STKA	**Stephens Creek**	**27.15**	**157**	P	**P**	**14 58 36.5**	**+0.9**
STKA	**Stephens Creek** comp=Z,9.5nm,0.5s,baz=329,slow=10,SNR=21 comp=Z,9.5nm,0.5s	**27.15**	**157**	P	**P**	**14 58 36.2**	**+0.6**
IPM	**Ipoh**	**30.54**	**291**	P	**P**	**14 59 06.6**	**+0.6**
IPM	comp=Z,23nm,1.4s			IAmb	IAmb	14 59 14.0	
KULM	**Kulim**	**31.19**	**293**	P	**P**	**14 59 11.8**	**+0.1**
TPUB	**Ta-pu**	**31.42**	**344**	P	**P**	**14 59 11.0**	**-2.5**
ARPS	**Mont Arapiles**	**31.63**	**161**	P	**P**	**14 59 16.6**	**+1.4**
PSI	**Prapat**	**31.94**	**287**	P	**P**	**14 59 19.4**	**+1.0**
GSI	**Gunungsitoli**	**32.80**	**284**	P	**P**	**14 59 24.6**	**-1.2**
SRIT	**Nakonsritamara**	**33.52**	**297**	P	**P**	**14 59 32.2**	**+0.2**
SRIT	**Nakonsritamara**	**33.52**	**297**	P	**P**	**14 59 34.3**	**+2.3**
NONG	**Nongkai**	**36.00**	**314**	P	**P**	**14 59 52.9**	**-0.3**
CM31	**Chiang Mai Arr**	**39.33**	**311**	P	**P**	**15 00 21.2**	**0.0**
CM31	comp=Z,8.2nm,0.8s			IAmb	IAmb	15 00 22.4	
CMAR	**Chiang Mai Arr**	**39.33**	**311**	P	**P**	**15 00 20.3**	**-0.8**
CMAR	**Chiang Mai Arr** comp=Z,4.8nm,0.8s,baz=140,slow=7.2,SNR=43	**39.33**	**311**	P	**P**	**15 00 21.4**	**+0.2**
CMAR	comp=Z,1.3nm,0.8s,baz=175,slow=2.1,SNR=8.1 comp=Z,4.8nm,0.8s			PcP	**PcP**	**15 02 27.9**	**+1.1**
CRAI	**Chiangrai**	**39.39**	**314**	P	**P**	**15 00 21.3**	**-0.4**
CHTO	**Chiang Mai**	**39.54**	**311**	P	**P**	**15 00 22.8**	**-0.1**
CHTO	comp=Z,11nm,0.8s			IAmb	IAmb	15 00 24.1	
CHTO	**Chiang Mai**	**39.54**	**311**	P	**P**	**15 00 23.1**	**+0.1**
KMI	**Kunming**	**41.22**	**322**	⇑P	**P**	**15 00 36.3**	**-0.6**
KMI	comp=Z,8.0nm,1.1s			pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,1.5nm,0.5s,baz=196,slow=8.0,SNR=5.8 comp=Z,1.5nm,0.5s	**44.22**	**10**	P	**P**	**15 00 59.2**	**-1.5**
MAJO	**Matsushiro**	**44.22**	**10**	P	**P**	**15 00 59.8**	**-0.9**
MAJO	comp=Z,14nm,1.2s			IAmb	IAmb	15 01 00.7	
MJB9	**Matsu-Tunnel**	**44.22**	**10**	P	**P**	**15 01 00.3**	**-0.4**
MJB9	comp=Z,15nm,1.2s			IAmb	IAmb	15 01 01.7	
KSRS	**Korea Array** comp=Z,0.9nm,0.6s,baz=178,slow=9.0,SNR=5.3 comp=Z,0.9nm,0.6s	**44.36**	**358**	P	**P**	**15 01 01.1**	**-0.6**
BJT	**Baijiatuan**	**48.46**	**346**	P	**P**	**15 01 33.2**	**-0.5**
BJT	comp=Z,5.9nm,0.6s			IAmb	IAmb	15 01 34.1	
SHL	**Shillong**	**48.82**	**313**	P	**P**	**15 01 35.8**	**-1.1**
SHL	comp=Z,13nm,1.0s			IAmb	IAmb	15 01 37.3	
HHC	**Hu-ho-hao-te**	**50.46**	**343**	*e*P	**P**	**15 01 51.6**	**+2.6**
HHC				pP	sP	15 02 38.8	+0.7
HHC	comp=Z,7.0nm,0.6s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,2.2nm,0.6s,baz=181,slow=8.4,SNR=5.5 comp=Z,2.2nm,0.6s	**51.14**	**2**	P	**P**	**15 01 53.5**	**-0.3**
LSA	**Lhasa**	**51.85**	**317**	P	**P**	**15 01 59.5**	**-0.5**
LSA	comp=Z,4.8nm,0.7s			IAmb	IAmb	15 02 06.8	
JKA	**Kamikawa-asahi**	**52.38**	**12**	P	**P**	**15 02 02.9**	**-0.1**
GTA	**Gaotai**	**53.78**	**332**	P	**P**	**15 02 13.6**	**+0.1**
GTA				sP	PcP	15 03 18.6	+1.1
GTA	comp=Z,3.0nm,0.7s			pmax	pmax		
HEH	**HeiHe**	**57.16**	**359**	*e*P	**P**	**15 02 37.5**	**+0.2**
HEH	comp=Z,7.0nm,1.0s			pmax	pmax		
HEH	comp=Z,150nm,6.0s			pmax	pmax		
SONM	**Songino Array**	**58.36**	**342**	P	**P**	**15 02 46.4**	**+0.5**
SONM	**Songino Array** comp=Z,1.8nm,0.6s,baz=156,slow=6.3,SNR=19 comp=Z,1.8nm,0.6s	**58.36**	**342**	P	**P**	**15 02 46.6**	**+0.7**
PETK	**Petropavlovsk-**	**64.64**	**18**	P	**P**	**15 03 27.5**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,4.4nm,0.9s,baz=195,slow=4.2,SNR=9.4 comp=Z,4.4nm,0.9s	**64.64**	**18**	P	**P**	**15 03 28.7**	**+0.9**
KSH	**Kashi**	**67.68**	**318**	P	**P**	**15 03 48.3**	**+0.6**
KSH				PcP	**PcP**	**15 04 14.9**	**+1.4**
KSH	comp=Z,2.0nm,0.8s			pmax	pmax		
MK31	**Makanchi Array**	**67.98**	**327**	P	**P**	**15 03 49.0**	**-0.2**
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**15 03 48.7**	**-0.5**
MKAR	**Makanchi Array** comp=Z,4.3nm,0.5s,baz=125,slow=7.7,SNR=79 comp=Z,4.3nm,0.5s	**67.98**	**327**	P	**P**	**15 03 49.3**	**0.0**
MAKZ	**Makanchi**	**68.16**	**327**	P	**P**	**15 03 49.6**	**-0.8**
YAK	**Yakutsk**	**68.94**	**0**	P	**P**	**15 03 54.6**	**-0.2**
AAK	**Ala-Archa**	**70.23**	**320**	P	**P**	**15 04 03.3**	**-0.1**
AAK	**Ala-Archa** comp=Z,0.7nm,0.3s,baz=159,slow=4.5,SNR=7.4 comp=Z,0.7nm,0.3s	**70.23**	**320**	P	**P**	**15 04 03.0**	**-0.4**
ARSB	**Arslanbob**	**70.56**	**318**	P	**P**	**15 04 05.6**	**+0.2**
ZAA0	**Zalesovo Array**	**71.41**	**334**	P	**P**	**15 04 08.9**	**-1.2**
ZAA0	comp=Z,5.6nm,0.9s			IAmb	IAmb	15 04 10.7	
ZALV	**Zalesovo Beam**	**71.41**	**334**	P	**P**	**15 04 09.6**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,3.2nm,0.4s,baz=117,slow=5.2,SNR=20 comp=Z,3.2nm,0.4s	**71.41**	**334**	P	**P**	**15 04 09.3**	**-0.8**
KURBB	**Kurchatov Arra** comp=Z,3.0nm,0.4s,baz=131,slow=5.2,SNR=30 comp=Z,3.0nm,0.4s	**72.28**	**329**	P	**P**	**15 04 15.2**	**-0.1**
KURK	**Kurchatov**	**72.29**	**329**	P	**P**	**15 04 14.7**	**-0.7**
KURK	comp=Z,7.1nm,1.0s			IAmb	IAmb	15 04 16.2	
VNDA	**Vanda** comp=Z,3.3nm,0.9s,baz=315,slow=5.7,SNR=2.2 comp=Z,3.3nm,0.9s	**72.41**	**173**	P	**P**	**15 04 15.9**	**+0.3**
KK31	**Karatay Array**	**73.02**	**319**	P	**P**	**15 04 18.4**	**-1.4**
KKAR	**Karatay Array**	**73.02**	**319**	P	**P**	**15 04 19.1**	**-0.8**
BVAR	**Borovoye Array** comp=Z,1.9nm,0.5s,baz=122,slow=8.5,SNR=22 comp=Z,1.9nm,0.5s	**77.83**	**328**	P	**P**	**15 04 46.9**	**-0.2**
BRVK	**Borovoye**	**77.90**	**328**	P	**P**	**15 04 46.5**	**-1.0**
TIXI	**Tiksi**	**78.61**	**360**	P	**P**	**15 04 50.4**	**-0.6**
TIXI	comp=Z,4.0nm,0.6s			IAmb	IAmb	15 04 51.2	
NRIK	**Noril'sk** comp=Z,3.3nm,0.5s,baz=101,slow=5.2,SNR=7.5 comp=Z,3.3nm,0.5s	**81.52**	**346**	P	**P**	**15 05 06.2**	**-0.4**
ABKAR	**Akbulak array**	**82.21**	**322**	P	**P**	**15 05 09.8**	**-0.9**
QSPA	**South Pole Qui** comp=Z,3.1nm,0.8s,baz=294,slow=0.4,SNR=17 comp=Z,3.1nm,0.8s	**82.86**	**180**	P	**P**	**15 05 13.9**	**0.0**
AKTO	**Aktyubinsk** comp=Z,2.2nm,0.5s,baz=113,slow=6.4,SNR=9.6 comp=Z,2.2nm,0.5s	**83.78**	**322**	P	**P**	**15 05 18.7**	**-0.1**
ILAR	**Eielson Array**	**93.72**	**25**	P	**P**	**15 06 04.2**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=242,slow=4.9,SNR=7.5 comp=Z,0.6nm,0.8s						
ARCES	**ARCESS Array B** comp=Z,4.5nm,1.0s,baz=74,slow=5.2,SNR=5.4	**101.47**	**340**	P	**Pdif**	**15 06 39.1**	**-1.5**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.3s,baz=96,slow=0.9,SNR=2.6	**117.42**	**45**	PKP	**PKPdf**	**15 11 34.4**	**-0.4**
EKA	**Eskdalemuir Ar** comp=Z,0.2nm,0.3s,baz=46,slow=4.1,SNR=1.8	**118.97**	**331**	PKP	**PKPdf**	**15 11 36.2**	**-0.9**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.4s,baz=213,slow=3.3,SNR=3.8	**125.53**	**59**	PKP	**PKPdf**	**15 11 50.4**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,2.0nm,0.4s,baz=73,slow=2.4,SNR=1.9	**128.21**	**281**	PKP	**PKPdf**	**15 11 55.8**	**-0.1**
DBIC	**Dimbokro** comp=Z,3.4nm,0.6s,baz=148,slow=3.4,SNR=4.6	**134.56**	**272**	PKP	**PKPdf**	**15 12 08.8**	**+0.8**
CPUP	**Villa Florida** comp=Z,4.2nm,0.8s,baz=249,slow=1.2,SNR=6.2	**146.12**	**169**	PKPbc	**PKPdf**	**15 12 30.0**	**+1.5**

*IDC **21** 15:10:13.9±2.6, 36°.53N×71°.41E, h157km±22km, mb3.5/18, mbtmp4.0/25, MS3.8/2, Error ellipse: s-maj=17.7km s-min=12.6km az=2.0*
*MOS **21** 15:10:16.3±1.1, 36°.74N×71°.29E, h184km, mb4.2/15, Error ellipse: s-maj=7.6km s-min=4.4km az=85.5*
*NEIC **21** 15:10:18.2±1.7, 36°.79N±0°.07×71°.35E±0°.10, h186km±6km, mb4.2/49, Error ellipse: s-maj=11.6km s-min=9.9km az=83.0*
*NNC **21** 15:10:19.3±2.4, 37°.01N×70°.90E, h156km±42km, mb3.6, mpv4.4, Error ellipse: s-maj=22.7km s-min=13.0km az=156.0*

ISC 21 15:10:17.6±0.4, 36°.70N±0°.04×71°.25E±0°.04, h200km, n181, σ2°26/211, mb4.0/46, 11C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMJ	**Simiganj**	**2.64**	**318**	Pn	**Pn**	**15 11 01.9**	**-1.3**
KBL	**Kabul**	**2.81**	**220**	Pn	**Pn**	**15 11 05.0**	**-0.3**
KBL	**Kabul**	**2.81**	**220**	PN	**Pn**	**15 11 05.0**	**-0.3**
BTK	**Batken**	**3.37**	**354**	Pn	**Pn**	**15 11 11.1**	**-0.6**
BTK	**Batken**	**3.37**	**354**	PN	**Pn**	**15 11 11.1**	**-0.6**
NIL	**Nilore**	**3.46**	**151**	Pn	**Pn**	**15 11 12.8**	**0.0**
NIL	**Nilore**	**3.46**	**151**	PN	**Pn**	**15 11 12.8**	**0.0**
OHH	**Osh**	**4.00**	**17**	PN	**Pn**	**15 11 18.5**	**-1.0**
KSH	**Kashi**	**4.67**	**52**	Pn	**Pn**	**15 11 23.1**	**-4.8**
KSH				Sn	Sn	15 12 09.6	-14
KSH	comp=Z,49nm,0.3s			pmax	pmax		
KSH	comp=N,350nm,0.7s			smax	smax		
KSH	comp=E,290nm,0.4s			smax	smax		
ARSB	**Arslanbob**	**4.81**	**16**	Pn	**Pn**	**15 11 27.4**	**-2.3**
ARSB	**Arslanbob**	**4.81**	**16**	PN	**Pn**	**15 11 27.4**	**-2.3**
TRKS	**Terek-Say**	**4.82**	**359**	PN	**Pn**	**15 11 28.2**	**-1.7**
JMU	**Jammu**	**4.98**	**142**	*e*P	**Pn**	**15 11 30.6**	**-1.3**
JMU				*e*S	**Sn**	**15 12 25.5**	**-4.8**
ARK	**Arkit**	**5.12**	**6**	PN	**Pn**	**15 11 32.3**	**-1.3**
THN	**Thein Dam**	**5.63**	**138**	*e*P	**Pn**	**15 11 39.2**	**-0.9**
THN				*e*S	**Sn**	**15 12 42.0**	**-3.3**
THN	comp=E,186nm,0.4s			IAML		15 12 42.9	
THN	comp=E,185nm,0.4s			IAML		15 12 50.1	
ARLS	**Aral**	**5.68**	**24**	PN	**Pn**	**15 11 39.1**	**-1.7**
NRN	**Naryn**	**6.00**	**37**	Pn	**Pn**	**15 11 42.2**	**-2.9**
NRN	**Naryn**	**6.00**	**37**	PN	**Pn**	**15 11 42.2**	**-2.9**
UCH	**Uchtor** SNR=37	**6.07**	**24**	P	**Pn**	**15 11 44.9**	**-1.2**
DHRM	**DHARAMSHALA**	**6.09**	**135**	*e*P	**Pn**	**15 11 45.1**	**-1.2**
DHRM				*e*S	**Sn**	**15 12 51.2**	**-5.2**
DHRM	comp=E,487nm,0.2s			IAML		15 12 53.8	
DHRM	comp=N,300nm,0.2s			IAML		15 12 54.5	
DHRM	comp=N,314nm,0.3s			IAML		15 12 55.1	
EKS2	**Erkin-Say** SNR=22	**6.26**	**17**	P	**Pn**	**15 11 47.7**	**-0.6**
KK31	**Karatay Array** comp=N,28nm,0.4s,baz=174,slow=12,SNR=409	**6.42**	**355**	⇓P	**Pn**	**15 11 48.6**	**-1.7**
KK31	comp=N,46nm,0.6s,baz=180,slow=23,SNR=20			⇑S	**Sn**	**15 12 56.4**	**-7.3**
KK31	**Karatay Array**	**6.42**	**355**	Pn	**Pn**	**15 11 49.1**	**-1.2**
KK31	**Karatay Array**	**6.42**	**355**	PN	**Pn**	**15 11 49.1**	**-1.2**
KKAR	**Karatay Array**	**6.42**	**355**	Pn	**Pn**	**15 11 48.9**	**-1.3**
KKAR	**Karatay Array**	**6.42**	**355**	PN	**Pn**	**15 11 48.9**	**-1.3**
AAK	**Ala-Archa** SNR=33	**6.43**	**22**	P	**Pn**	**15 11 49.9**	**-0.7**
AAK	**Ala-

comp=E,4.1nm,0.3s,baz=268,slow=13,SNR=3.6
GYA0 ALIBECK ARRAY 10.53 281 P **Pn** **15 12 41.8 -2.0**
GYA0 S **Sn** **15 14 35.9 -5.4**
GYA0B ALIBECK ARRAY 10.53 281 ⇑P **Pn** **15 12 41.8 -2.0**
GYA0B ⇓S **Sn** **15 14 35.9 -5.4**
GYA0B ALIBECK ARRAY 10.53 281 Pn **Pn** **15 12 41.4 -2.4**
AJM Ajmer 10.59 163 *eP* **Pn** **15 12 42.8 -1.8**
AJM *eS* **Sn** **15 14 35.6 -7.3**
AJM IAML 15 14 39.9
comp=E,17nm,0.3s
AJM IAML 15 14 42.8
comp=N,13nm,0.5s
MAKZ Makanchi 12.87 35 Pn **Pn** **15 13 11.0 -2.4**
MAKZ Makanchi 12.87 35 P **Pn** **15 13 11.0 -2.4**
MK31 Makanchi Array 13.01 36 Pn **Pn** **15 13 14.2 -1.0**
MK31 Makanchi Array 13.01 36 *i* P **Pn** **15 13 14.7 -0.4**
MKAR Makanchi Array 13.01 36 Pn **Pn** **15 13 13.3 -1.8**
MKAR Makanchi Array 13.01 36 *ce*P **Pn** **15 13 15.1 0.0**
MKAR Makanchi Array 13.01 36 P **Pn** **15 13 13.1 -2.0**
comp=N,0.4nm,0.5s,baz=216,slow=11,SNR=11
WMQ Urumqi 14.42 55 *eP* **P** **15 13 35.6 +1.6**
KURBB Kurchatov Arra 14.87 18 P **Pn** **15 13 36.2 -1.8**
comp=N,0.5nm,0.5s,baz=206,slow=11,SNR=6.8
KURK Kurchatov 14.98 18 *ce*P **Pn** **15 13 38.2 -1.1**
KURK pmax pmax
comp=E,4.0nm,2.5s
AB31 Akbulak array 15.01 330 ⇓P **Pn** **15 13 38.6 -1.2**
comp=E,2.0nm,0.3s,baz=145,slow=10,SNR=232
AB31 ⇓S **S** **15 16 18.4 -7.9**
comp=E,14nm,0.6s,baz=145,slow=24,SNR=16
AB31 Akbulak array 15.01 330 P **Pn** **15 13 38.6 -1.2**
AB31 S **S** **15 16 18.4 -7.9**
ABKAR Akbulak array 15.01 330 Pn **Pn** **15 13 38.4 -1.3**
BVAR Borovoye Array 16.33 358 P **Pn** **15 13 55.6 -0.2**
comp=E,2.7nm,0.4s,baz=166,slow=13,SNR=23
BVAR S **S** **15 16 52.9 -2.8**
comp=E,1.8nm,0.5s,baz=168,slow=22,SNR=5.1
BRVK Borovoye 16.37 358 **P** **15 13 54.9 -0.5**
BRVK Borovoye 16.37 358 *ce*P **P** **15 13 54.4 -1.0**
BRVK pmax pmax
comp=E,5.0nm,1.0s
AKTO Aktyubinsk 16.71 329 ⇓P **P** **15 13 59.2 0.0**
comp=E,3.8nm,0.5s
AKTO ⇓S **S** **15 17 02.4 -0.9**
comp=E,4.0nm,0.7s
AKTO Aktyubinsk 16.71 329 P **Pn** **15 14 00.7 +0.5**
comp=E,12nm,0.5s,baz=139,slow=9.3,SNR=38
AKTO S **S** **15 17 00.5 -2.8**
comp=E,4.3nm,0.7s,baz=147,slow=22,SNR=5.2
DGZ Jazzator, Alta 17.50 37 *i* P **Pn** **15 14 09.1 -0.6**
DGZ pmax pmax
comp=E,2.0nm,0.8s
LSA Lhasa 18.04 107 P **Pn** **15 14 15.8 -0.8**
LSA Lhasa 18.04 107 P **Pn** **15 14 15.8 -0.8**
LSA pmax pmax
comp=E,5.0nm,0.9s
ZAA0 Zalesovo Array 19.65 24 P **P** **15 14 30.7 -0.3**
ZAA0 IAmb IAmb 15 14 36.0
comp=E,4.4nm,0.6s
ZALV Zalesovo Beam 19.65 24 P **P** **15 14 30.0 -0.9**
ZALV Zalesovo Beam 19.65 24 *i* P **Pn** **15 14 33.9 -1.0**
ZALV pmax pmax
comp=E,4.0nm,0.4s
ZALV Zalesovo Beam 19.65 24 P **P** **15 14 31.6 +0.6**
comp=E,4.2nm,0.4s,baz=219,slow=9.8,SNR=28
SHL Shillong 20.81 116 P **P** **15 14 45.6 +1.7**
SHL IAmb IAmb 15 14 50.1
comp=E,9.9nm,0.9s
SHL Shillong 20.81 116 P **P** **15 14 45.6 +1.7**
SHL pmax pmax
comp=E,10.0nm,0.9s
GNI Garni 21.02 288 *i* P **P** **15 14 47.8 +1.8**
GNI pmax pmax
comp=E,5.0nm,1.1s
ARU Arti 21.51 341 P **P** **15 14 51.9 +1.3**
comp=E,1.3nm,0.3s,baz=110,slow=15,SNR=2.3
comp=E,1.3nm,0.3s
KBZ Khabaz 22.69 297 *i* P **P** **15 15 03.0 +1.0**
KBZ pmax pmax
comp=E,3.0nm,1.1s
KBZ Khabaz 22.69 297 P **P** **15 15 04.3 +2.4**
comp=E,1.1nm,0.8s,baz=97,slow=8.1,SNR=2.7
comp=E,1.1nm,0.8s
KIV Kislovodsk 22.87 297 *eP* **P** **15 15 06.2 +2.4**
KIV *eS* **S** **15 19 02.0 +3.9**
KIV pmax pmax
comp=E,3.0nm,1.0s
SOC Sochi 24.96 296 *eP* **P** **15 15 22.0 -0.6**
SOC *e* 15 16 08.8
SOC *eS* **S** **15 19 30.4 -0.8**
RAYN Ar Rayn 25.76 247 P **P** **15 15 31.7 +1.6**
RAYN Ar Rayn 25.76 247 P **P** **15 15 31.7 +1.6**
RAYN pmax pmax
comp=E,3.0nm,0.5s
SONM Songino Array 28.05 56 P **P** **15 15 51.8 +1.4**
comp=E,2.0nm,0.6s,baz=269,slow=7.6,SNR=2.7
comp=E,2.0nm,0.6s
MMAI Mount Meron Ar 29.54 274 P **P** **15 16 04.8 +1.2**
comp=E,2.0nm,0.3s,baz=62,slow=10,SNR=1.7
comp=E,2.0nm,0.3s
BRTR Keskin Array B 29.57 287 P **P** **15 16 06.7 +2.8**
comp=E,1.1nm,0.7s,baz=98,slow=8.9,SNR=7.1
comp=E,1.1nm,0.7s
AKASG Malin Array Be 32.98 309 P **P** **15 16 35.5 +2.1**
comp=E,0.8nm,0.4s,baz=79,slow=7.8,SNR=10.0
comp=E,0.8nm,0.4s
AKBB Malin Array Si 32.98 309 P **P** **15 16 35.2 +1.9**
AKBB IAmb IAmb 15 16 38.4
comp=E,2.8nm,0.7s
AKBB Malin Array Si 32.98 309 P **P** **15 16 35.3 +1.9**
AKBB pmax pmax
comp=E,3.0nm,0.7s
KIEV Kiev 32.99 309 P **P** **15 16 35.2 +1.8**
KIEV IAmb IAmb 15 16 38.4
comp=E,2.5nm,0.6s
KIEV Kiev 32.99 309 P **P** **15 16 35.3 +1.8**
KIEV pmax pmax
comp=E,3.0nm,0.6s
MNK Minsk 34.50 315 *i* P **P** **15 16 46.8 +0.4**
comp=E,9.0nm,0.9s
MNK *i* P **P** **15 16 46.8 +0.4**
comp=N,15nm,0.8s
MNK *i* P **P** **15 16 46.8 +0.4**
comp=E,6.0nm,0.7s,baz=103
MNK *i* pP **pP** **15 17 26.4 -1.9**
MNK *i* PP **PP** **15 18 08.7 -0.1**
MNK *i* S **S** **15 22 00.9 +1.1**
MNK *i* sS **sS** **15 23 11.6 -3.5**
MNK *i* SS **SS** **15 24 35.7 -0.5**
MNK *i* LR LR 15 29 52.1
MNK Minsk 34.50 315 *i* P **P** **15 16 46.8 +0.4**
MNK *i* *PP **pP** **15 17 26.3 -1.9**
MNK *i* 15 18 08.7
MNK *i* 15 19 17.8
MNK *i* S **S** **15 22 00.9 +1.1**
MNK *i* *SS **sS** **15 23 11.6 -3.5**
MNK pmax pmax
comp=E,9.0nm,0.9s
MNK pmax pmax
comp=N,15nm,0.8s
MNK pmax pmax
comp=E,6.0nm,0.6s
BURAR Bucovina Array 35.35 303 P **P** **15 16 56.4 +2.5**
BUR08 Bucovina Ar. S 35.36 303 P **P** **15 16 56.8 +2.7**
VOIR 35.49 299 P **P** **15 16 58.4 +3.2**
WHN Wuhan 36.18 87 P P 15 17 09.5 +8.4
WHN pmax pmax
comp=E,1μm,3.4s
KWP Kalwaria Pacla 37.05 306 P **P** **15 17 12.2 +4.0**
KWP Kalwaria Pacla 37.05 306 P **P** **15 17 12.2 +4.0**
KWP pmax pmax
comp=E,13nm,1.4s
FIA1 FINESS Array S 37.43 326 P **P** **15 17 14.1 +2.9**
FINES FINESS Array B 37.43 326 P **P** **15 17 13.4 +2.2**
FINES FINESS Array B 37.43 326 *i* P **P** **15 17 13.6 +2.4**
FINES pmax pmax
comp=E,1.0nm,0.3s
FINES FINESS Array B 37.43 326 P **P** **15 17 13.1 +1.9**
comp=E,1.2nm,0.3s,baz=116,slow=9.4,SNR=16
comp=E,1.2nm,0.3s
ARCES ARCESS Array B 41.04 337 P **P** **15 17 43.2 +2.3**
comp=E,0.7nm,0.4s,baz=115,slow=8.6,SNR=17
comp=E,0.7nm,0.4s
BRG Berggiesshubel 42.66 308 P **P** **15 17 57.2 +2.9**
GERES GERESS Array B 42.98 305 LR LR 15 37 32.8
comp=Z,125nm,20.0s,baz=320,slow=38
HFS Hagfors 43.03 322 P **P** **15 17 59.2 +2.1**
comp=E,4.3nm,0.5s,baz=99,slow=9.6,SNR=27
comp=E,4.3nm,0.5s
YAK Yakutsk 43.69 36 *ce*P **P** **15 18 04.4 +2.1**
YAK pmax pmax
comp=E,5.0nm,0.6s
NC405 NORSAR Array S 44.11 323 P **P** **15 18 07.7 +2.0**
NC405 IAmb IAmb 15 18 08.5
comp=E,7.4nm,1.1s
NC602 NORSAR Array S 44.16 322 P **P** **15 18 07.6 +1.5**
NC602 IAmb IAmb 15 18 12.2
comp=E,9.0nm,1.4s
NC303 NORSAR Array S 44.28 323 P **P** **15 18 09.3 +2.1**
NC303 IAmb IAmb 15 18 10.4
comp=E,9.8nm,0.9s
NB2 NORSAR Subarra 44.34 323 P **P** **15 18 09.2 +1.6**
comp=E,6.8nm,0.9s,baz=96,slow=7.9
NOA NORSAR Array B 44.34 323 P **P** **15 18 09.5 +1.8**
comp=E,1.5nm,0.6s,baz=106,slow=7.2,SNR=16
comp=E,1.5nm,0.6s
NBO00 NORSAR Array S 44.55 323 P **P** **15 18 10.7 +1.4**
VAE Valguarnera 44.74 289 LR LR 15 42 16.8
comp=E,101nm,19.4s,baz=163,slow=43
KONO Kongsberg 45.06 321 P **P** **15 18 14.9 +1.7**
KONO IAmb IAmb 15 18 27.4
comp=E,8.3nm,1.1s
KONO Kongsberg 45.06 321 P **P** **15 18 14.9 +1.7**
KONO pmax pmax
comp=E,8.0nm,1.2s
TIXI Tiksi 45.51 22 P **P** **15 18 17.7 +1.1**
TIXI Tiksi 45.51 22 P **P** **15 18 17.7 +1.1**
TIXI pmax pmax
comp=E,2.0nm,0.8s
EKA Eskdalemuir Ar 52.28 316 P **P** **15 19 10.3 +2.0**
comp=E,2.6nm,0.5s,baz=94,slow=9.2,SNR=4.9
comp=E,2.6nm,0.5s
ESDC Sonseca Array 57.54 298 P **P** **15 19 47.9 +1.6**
comp=E,0.7nm,0.6s,baz=60,slow=8.8,SNR=4.9
comp=E,2.0nm,0.6s
SUMG Summit 60.94 341 P **P** **15 20 11.5 +2.1**
SUMG Summit 60.94 341 P **P** **15 20 11.5 +2.1**
SUMG pmax pmax
comp=Z,17nm,1.5s
TOA0 Torodi Ar. Sit 65.92 269 P **P** **15 20 42.7 +0.2**
TOA0 IAmb IAmb 15 20 43.4
comp=Z,3.4nm,0.6s
TORD Torodi Ar. Bea 65.92 269 P **P** **15 20 42.9 +0.5**
comp=Z,2.6nm,0.4s,baz=45,slow=5.6,SNR=2.3
comp=Z,2.6nm,0.4s
C18K Utukok River 68.02 18 P **P** **15 20 56.5 +1.7**
C18K IAmb IAmb 15 21 16.2
comp=E,7.1nm,1.4s
B21K Ikpikpuk River 68.82 16 P **P** **15 21 00.4 +0.7**
D19K Kuna River 68.89 17 P **P** **15 21 01.8 +1.6**
D19K IAmb IAmb 15 21 27.1
comp=E,5.6nm,1.4s
C23K Itkillik River 69.48 14 P **P** **15 21 06.3 +2.5**
C23K IAmb IAmb 15 21 07.5
comp=E,4.3nm,1.3s
F17K Baldwin Pennin 69.62 20 P **P** **15 21 06.7 +2.1**
TOLK Toolik Lake Re 70.68 15 P **P** **15 21 13.0 +1.8**
TOLK IAmb IAmb 15 21 34.6
comp=E,5.5nm,1.4s
G19K Purcell Mounta 70.95 19 P **P** **15 21 13.5 +0.7**
G19K IAmb IAmb 15 21 26.3
comp=E,3.8nm,1.4s
F21K Alatna River 70.99 17 P **P** **15 21 14.2 +1.2**
IMAR Indian Mountai 71.92 18 P **P** **15 21 19.5 +0.9**
BMAR Burnt Mountain 72.70 14 P **P** **15 21 25.4 +2.1**
J19K Poorman 73.03 20 P **P** **15 21 26.8 +1.6**
J19K IAmb IAmb 15 21 38.8
comp=E,6.2nm,1.4s
J18K Innoko River 73.14 20 P **P** **15 21 27.4 +1.6**
J18K IAmb IAmb 15 21 55.4
comp=E,8.1nm,1.5s
K17K Iditarod 73.27 21 P **P** **15 21 28.3 +1.7**
J20K Nowinta River 73.27 19 P **P** **15 21 27.4 +0.8**
J20K IAmb IAmb 15 21 42.2
comp=E,6.5nm,1.4s
C36M Paulatuk 73.66 6 P **P** **15 21 30.1 +1.3**
INK Inuvik 73.67 9 P **P** **15 21 30.4 +1.6**
INK IAmb IAmb 15 21 32.2
comp=E,6.7nm,1.4s
INK Inuvik 73.67 9 P **P** **15 21 30.4 +1.6**
INK pmax pmax
comp=E,7.0nm,1.5s
K20K Telida 73.96 19 P **P** **15 21 32.5 +1.9**
K20K IAmb IAmb 15 21 45.2
comp=E,6.7nm,1.4s
L18K Granite Mounta 74.13 21 P **P** **15 21 33.3 +1.7**
L18K IAmb IAmb 15 21 58.5
comp=E,9.4nm,1.4s
CAST Castle Rocks 74.43 19 P **P** **15 21 35.3 +2.0**
CAST IAmb IAmb 15 21 44.7
comp=E,3.7nm,1.3s
F31M Tsiigehtchic 74.46 10 P **P** **15 21 35.0 +1.6**
ILAR Eielson Array 74.53 16 P **P** **15 21 35.2 +1.3**
comp=E,0.4nm,0.9s,baz=300,slow=4.4,SNR=3.5
comp=E,0.4nm,0.9s
H29M Whitestone 74.89 12 P **P** **15 21 37.6 +1.7**
I28M Miner Creek 75.32 13 P **P** **15 21 39.9 +1.4**
SKT Skwentna 75.76 19 P **P** **15 21 41.9 +0.9**
H31M Peel River 75.91 11 P **P** **15 21 43.1 +1.4**
H31M IAmb IAmb 15 21 50.5
comp=E,3.8nm,1.3s
O18K Koktuh Hills 76.45 22 P **P** **15 21 45.9 +1.0**
M24K Tolsona, Glenn 77.00 17 P **P** **15 21 49.8 +1.8**
BCAR Beaver Creek A 77.12 15 P **P** **15 21 50.9 +2.3**
M27K Edge Creek, AK 77.73 15 P **P** **15 21 54.3 +2.1**
M27K IAmb IAmb 15 22 09.4
comp=E,5.2nm,1.2s
BOSA Boshof 78.03 220 P **P** **15 21 55.0 +0.9**
comp=E,1.5nm,0.7s,baz=45,slow=2.9,SNR=2.0
comp=E,1.5nm,0.7s
M29M Somme Creek 78.34 14 P **P** **15 21 57.6 +2.2**
SUCK Suckling Hills 79.35 17 P **P** **15 22 02.9 +2.0**
YKA Yellowknife Ar 81.03 3 P **P** **15 22 11.1 +1.3**
YKA Yellowknife Ar 81.03 3 *ce*P **P** **15 22 11.6 +1.9**
YKA Yellowknife Ar 81.03 3 P **P** **15 22 11.5 +1.7**
comp=E,0.5nm,0.5s,baz=348,slow=5.4,SNR=14
comp=E,0.5nm,0.5s
WRA Warramunga Arr 81.92 122 P **P** **15 22 15.0 -0.1**
WRA Warramunga Arr 81.92 122 P **P** **15 22 15.0 -0.1**
comp=E,0.4nm,0.4s,baz=326,slow=5.2,SNR=7.7
comp=E,0.4nm,0.4s
WB2 Warramunga Arr 81.93 122 P **P** **15 22 15.0 -0.1**
WB2 IAmb IAmb 15 22 33.4
comp=E,6.2nm,1.2s
ASAR Alice Springs 84.20 125 P **P** **15 22 26.8 +0.1**
ASAR Alice Springs 84.20 125 P **P** **15 22 26.8 +0.1**
ASAR Alice Springs 84.20 125 P **P** **15 22 26.7 0.0**
comp=E,0.6nm,0.6s,baz=312,slow=5.1,SNR=14
comp=E,0.6nm,0.6s
WCI Wyandotte Cave 102.61 342 P **Pdif** **15 23 52.9 +1.3**

*IDC **21** 15:42:14.9±6.2, 23°.08N×141°.06E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=265.8km s-min=23.1km az=75.0*
ISC 21 15:42:15.4±8.8, 23°.4N±0°.7×14°.3E±°, h35km, n6, σ0°32/6, mb3.8/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.83**	**191**	P	**P**	**P**	**15 50 18.4**	**+0.1**
	0.9nm,0.5s,baz=8.7,slow=8.5,SNR=7.6							
	0.9nm,0.5s							
ASAR	**Alice Springs**	**47.55**	**191**	P	**P**	**P**	**15 50 47.4**	**-0.1**
	0.3nm,0.7s,baz=8.4,slow=7.9,SNR=1.2							
	0.3nm,0.7s							
ZALV	**Zalesovo Beam**	**52.49**	**321**	P	**P**	**P**	**15 51 25.1**	**+0.3**
	0.4nm,0.3s,baz=100,slow=7.7,SNR=2.5							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**53.10**	**312**	P	**P**	**P**	**15 51 29.2**	**-0.2**
	0.1nm,0.5s,baz=88,slow=7.1,SNR=4.2							
	0.1nm,0.5s							
KURBB	**Kurchatov Arra**	**55.86**	**316**	P	**P**	**P**	**15 51 49.5**	**+0.2**
	0.9nm,0.2s,baz=78,slow=4.8,SNR=2.1							
	0.9nm,0.2s							
BVAR	**Borovoye Array**	**60.98**	**319**	P	**P**	**P**	**15 52 24.7**	**-0.3**
	0.9nm,0.3s,baz=92,slow=7.8,SNR=7.9							
	0.9nm,0.3s							

IDC 21 15:47:13.9±12.0, 8°.94S×158°.13E, h0km, mb3.5/4, mbtmp3.4/4, Error ellipse: s-maj=363.3km s-min=38.4km az=115.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.47**	**242**	P	P	P	15 52 44.7	+0.7
	0.4nm,0.7s,baz=69,slow=10,SNR=2.0							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**27.41**	**235**	P	P	P	15 53 00.9	-0.7
	0.4nm,1.0s,baz=60,slow=11,SNR=2.1							
	0.4nm,1.0s							
SONM	**Songino Array**	**72.65**	**326**	P	P	P	15 58 43.9	+0.3
	0.5nm,0.6s,baz=120,slow=5.3,SNR=3.8							
	0.5nm,0.6s							
MKAR	**Makanchi Array**	**86.91**	**318**	P	P	P	16 00 00.5	-0.4
	0.2nm,0.6s,baz=102,slow=5.7,SNR=4.5							
	0.2nm,0.6s							

*IDC **21** 15:52:16.1±1.2, 54°.04N×169°.46E, h0km, mb3.5/10, mbtmp3.5/12, ML3.6/2, MS3.0/6, Error ellipse: s-maj=41.7km s-min=14.7km az=4.0*
*KRSC **21** 15:52:22.2±1.4, 53°.83N×168°.80E, h51km±33km, Ml4.1*
ISC 21 15:52:20.4±0.8, 53°.84N±0°.09×169°.37E±0°.05, h35km, n55, σ1°75/56, mb3.5/10, MS3.0/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.41**	**306**	*eP*		**Pn**	**15 52 58.2**	**+0.9**
BKI				*eS*		**Sn**	**15 53 23.7**	**-1.8**
SHEM	**Shemya Is, Ala**	**3.05**	**109**	Pn		**Pn**	**15 53 06.2**	**+0.2**
	21nm,0.3s,baz=324,slow=6.4,SNR=15							
SHEM				Sn		**Sn**	**15 53 43.0**	**+1.8**
	74nm,0.3s,baz=338,slow=20,SNR=9.2							
	198nm,0.6s							
SMKR	**Semkarok**	**5.30**	**304**	*eP*		**Pn**	**15 53 37.5**	**+0.6**
SMKR				*eS*		**Sn**	**15 54 35.2**	**-1.5**
TUMD	**Tumrok D**	**5.40**	**288**	*eP*		**Pn**	**15 53 40.3**	**+1.9**
TUMD				*eS*		**Sn**	**15 54 37.2**	**-2.1**
BZGR	**Bezymyannyi-Gr**	**5.43**	**296**	*eP*		**Pn**	**15 53 41.2**	**+2.3**
BZGR				*eS*		**Sn**	**15 54 40.2**	**+0.1**
BZWR	**Bezymyannyi-We**	**5.55**	**296**	*eP*		**Pn**	**15 53 43.6**	**+3.1**
TUMR	**Tumrok**	**5.56**	**289**	*eP*		**Pn**	**15 53 42.5**	**+1.9**
TUMR				*eS*		**Sn**	**15 54 42.2**	**-1.1**
KLY	**Klyuchi**	**5.59**	**300**	*eP*		**Pn**	**15 53 39.9**	**-1.0**
KLY				*eS*		**Sn**	**15 54 40.5**	**-3.3**
KRSR	**Krestovskiy**	**5.60**	**299**	*eP*		**Pn**	**15 53 43.4**	**+2.3**
KRSR				*eS*		**Sn**	**15 54 42.8**	**-1.4**
KMNR	**Kamenistaya**	**5.62**	**294**	*eP*		**Pn**	**15 53 43.1**	**+1.6**
KMNR				*eS*		**Sn**	**15 54 42.1**	**-2.7**
KIRR	**Kirishev**	**5.62**	**296**	*eP*		**Pn**	**15 53 43.7**	**+2.1**
SPN	**Mys Shipunski**	**5.63**	**266**	*eP*		**Pn**	**15 53 43.4**	**+1.9**
KPT	**Kopyto**	**5.69**	**296**	*eP*		**Pn**	**15 53 44.8**	**+2.3**
KII	**Karymskiy**	**5.87**	**276**	*eP*		**Pn**	**15 53 45.8**	**+1.1**
KOZ	**Kozyrevsk**	**5.91**	**296**	*eP*		**Pn**	**15 53 48.6**	**+3.3**
NLC	**Nalytchevo**	**6.02**	**268**	*eP*		**Pn**	**15 53 47.7**	**+0.9**
NLC				*eS*		**Sn**	**15 54 51.2**	**-3.2**
SRDR	**Sredinnyy**	**6.08**	**298**	*eP*		**Pn**	**15 53 49.3**	**+1.7**
UGLR	**Uglovaya**	**6.32**	**269**	*eP*		**Pn**	**15 53 52.7**	**+1.6**
SMAR	**Somma**	**6.33**	**269**	*eP*		**Pn**	**15 53 52.1**	**+0.9**
KRER	**Koryakskii**	**6.35**	**269**	*eP*		**Pn**	**15 53 52.7**	**+1.1**
AVH	**Avacha**	**6.36**	**269**	*eP*		**Pn**	**15 53 53.1**	**+1.5**
DALK	**Dalny**	**6.40**	**267**	*eP*		**Pn**	**15 53 53.6**	**+1.6**
KRX	**Arik**	**6.40**	**270**	*eP*		**Pn**	**15 53 53.3**	**+1.1**
KOK	**Koryaka**	**6.42**	**269**	*eP*		**Pn**	**15 53 53.6**	**+1.2**
RUS	**Russkaya**	**6.68**	**262**	*eP*		**Pn**	**15 53 57.8**	**+1.8**
GNL	**Ganaly**	**6.78**	**273**	*eP*		**Pn**	**15 53 59.4**	**+2.1**
KRMR	**Karymshinskiy**	**6.81**	**266**	*eP*		**Pn**	**15 53 59.6**	**+1.9**
MTVR	**Mutnovka**	**6.86**	**263**	*eP*		**Pn**	**15 54 00.0**	**+1.5**
MTVR				*eS*		**Sn**	**15 55 13.4**	**-2.0**
GRL	**Gorelyy**	**6.91**	**264**	*eP*		**Pn**	**15 54 01.0**	**+1.9**
PETK	**Petropavlovsk-**	**7.01**	**269**	Pn		**Pn**	**15 54 01.6**	**+1.2**
	2.2nm,0.3s,baz=93,slow=21,SNR=52							
PETK				Sn		**Sn**	**15 55 20.2**	**+1.4**
	baz=98,slow=18							
	3.4nm,0.5s							
ASAK	**Asacha**	**7.06**	**263**	*eP*		**Pn**	**15 54 03.0**	**+1.9**
KDTR	**Khodutka, Kamc**	**7.14**	**258**	*eP*		**Pn**	**15 54 03.8**	**+1.7**
KDTR				*eS*		**Sn**	**15 55 19.3**	**-2.6**
APC	**Apacha**	**7.36**	**268**	*eP*		**Pn**	**15 54 06.9**	**+1.6**
MA2	**Magadan**	**11.71**	**307**	LR		LR	15 59 08.7	
	comp=Z,44nm,18.3s,baz=86,slow=36							
KDAK	**Kodiak Island**	**21.54**	**64**	P		**P**	**15 57 05.4**	**-0.8**
	4.0nm,1.1s,baz=316,slow=21,SNR=1.5							
	4.0nm,1.1s							
YAK	**Yakutsk**	**22.28**	**307**	LR		LR	16 06 17.3	
	comp=Z,38nm,18.4s,baz=290,slow=38							
KLR	**Kul'dur**	**23.66**	**274**	LR		LR	16 06 39.3	
	comp=Z,41nm,18.5s,baz=44,slow=36							
ILAR	**Eielson Array**	**24.32**	**46**	P		**P**	**15 57 33.3**	**-1.0**
	0.4nm,0.8s,baz=253,slow=7.8,SNR=9.9							
	0.4nm,0.8s							
KSRS	**Korea Array**	**32.73**	**257**	LR		LR	16 13 10.9	
	comp=Z,14nm,18.2s,baz=180,slow=38							
H11N2	**WAKE ISLAND Hy**	**34.10**	**184**	T		T	16 35 18.7	
	baz=3.0,slow=76,SNR=3302							
H11N3	**WAKE ISLAND Hy**	**34.11**	**184**	T		T	16 35 19.6	
	baz=3.0,slow=76,SNR=2242							
H11N1	**WAKE ISLAND Hy**	**34.11**	**184**	T		T	16 35 22.6	
	baz=3.0,slow=76,SNR=2709							
H11S1	**WAKE ISLAND Hy**	**35.32**	**184**	T		T	16 36 52.1	
	baz=3.0,slow=76,SNR=1784							
H11S3	**WAKE ISLAND Hy**	**35.33**	**184**	T		T	16 36 51.9	
	baz=3.0,slow=76,SNR=594							
H11S2	**WAKE ISLAND Hy**	**35.34**	**184**	T		T	16 36 51.8	
	baz=3.0,slow=76,SNR=1131							
YKA	**Yellowknife Ar**	**38.76**	**46**	P		**P**	**15 59 40.0**	**-0.8**
	0.2nm,0.6s,baz=296,slow=8.0,SNR=2.4							
	0.2nm,0.6s							
SONM	**Songino Array**	**39.05**	**288**	P		**P**	**15 59 44.7**	**+1.1**
	0.2nm,0.4s,baz=69,slow=8.0,SNR=1.8							
SONM				LR		LR	16 17 35.1	
	comp=Z,66nm,18.5s,baz=217,slow=39							
	0.2nm,0.4s							
NVAR	**Mina Array Bea**	**50.22**	**77**	P		**P**	**16 01 13.3**	**+0.4**
	0.6nm,0.7s,baz=305,slow=10,SNR=4.2							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**52.02**	**306**	P		**P**	**16 01 25.8**	**-0.1**
	0.6nm,0.3s,baz=53,slow=6.7,SNR=1.6							
	0.6nm,0.3s							
PDAR	**Pinedale Array**	**52.22**	**67**	P		**P**	**16 01 28.1**	**+0.2**
	0.2nm,0.5s,baz=316,slow=3.8,SNR=1.9							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**52.70**	**300**	P		**P**	**16 01 32.1**	**+1.0**
	0.3nm,0.8s,baz=42,slow=5.2,SNR=2.7							
	0.3nm,0.8s							
BVAR	**Borovoye Array**	**54.13**	**313**	P		**P**	**16 01 41.2**	**-0.3**
	0.4nm,0.2s,baz=51,slow=11,SNR=4.8							
	0.4nm,0.2s							
ANMO	**Albuquerque**	**59.42**	**72**	LR		LR	16 27 13.6	
	comp=Z,225nm,19.3s,baz=262,slow=35							
CMAR	**Chiang Mai Arr**	**63.77**	**266**	LR		LR	16 31 52.8	
	comp=Z,9.7nm,18.7s,baz=50,slow=37							
TXAR	**Lajitas Array**	**65.17**	**74**	P		**P**	**16 02 57.6**	**-0.3**
	0.5nm,0.6s,baz=310,slow=4.2,SNR=3.9							
	0.5nm,0.6s							

*CATAC **21** 15:55:17.5±0.6, 12°.38N×88°.89W, h26km±5km, MB4.9, mb4.5, ML3.9*
*SNET **21** 15:55:18.6±1.7, 12°.51N×89°.02W, h4km, ML3.8*
*IDC **21** 15:55:18.3±1.6, 13°.21N×88°.37W, h0km, mb3.8/9, mbtmp3.8/11, ML3.4/2, MS3.3/2, Error ellipse: s-maj=49.6km s-min=25.7km az=42.0*
*NEIC **21** 15:55:21.3±2.6, 12°.64N±0°.08×88°.80W±0°.08, h35km±2km, mb4.4/30, Error ellipse: s-maj=17.5km s-min=8.9km az=224.0*
ISC 21 15:55:15.1±1.5, 12°.32N±0°.04×88°.94W±0°.04, h12km±9km, n107, σ1°50/131, mb4.4/25, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**1.15**	**36**	⇑*iP*		**Pg**	**15 55 38.7**	**+1.3**
JUCU	**Jucuarįn**	**1.15**	**36**	*iP*		**Pb**	**15 55 36.4**	**-0.7**
JUCU				*i*S		**Sb**	**15 55 51.2**	**-0.8**
JUCU				IAML			15 55 59.1	
	comp=E,1μm,1.0s							
LALI	**Alcalda de L**	**1.22**	**342**	*eP*		**Pn**	**15 55 38.0**	**-0.1**
TECO	**Alcaldia de Te**	**1.22**	**7**	*eP*		**Pb**	**15 55 38.5**	**+0.2**
TECO	**Alcaldia de Te**	**1.22**	**7**	*iP*		**Pg**	**15 55 38.7**	**0.0**
TECO				IAML			15 55 46.7	
	comp=Z,590nm,1.0s							

TECO				*i* S		**Sb**	**15 55 53.5**	**-0.5**	
TECA	**Tecapa**	**1.25**	**20**	*e*P		**Pg**	**15 55 39.6**	**+0.4**	
TECA				*e*S		**Sg**	**15 55 55.8**	**+0.4**	
LCY	**Lacayo**	**1.27**	**30**	*e*P		**Pg**	**15 55 40.3**	**+0.7**	
SJTE	**Alcalda de S**	**1.29**	**357**	*e*P		**Pn**	**15 55 39.2**	**+0.1**	
SJTE	**Alcalda de S**	**1.29**	**357**	*i* P		**Pb**	**15 55 39.4**	**-0.1**	
SJTE				*i* S		**Sb**	**15 55 55.2**	**-0.9**	
SJTE				IAML			15 56 09.0		
	comp=Z,520nm,1.0s								
PACA	**Pacayal**	**1.29**	**28**	*e*P		**Pg**	**15 55 41.0**	**+0.9**	
PACA	**Pacayal**	**1.29**	**28**	*i* P		**Pn**	**15 55 38.8**	**-0.4**	
PACA				*i* S		**Sb**	**15 55 55.0**	**-1.2**	
PACA				IAML			15 56 05.2		
	comp=Z,7μm,1.0s								
LFRS	**El Faro**	**1.30**	**355**	*e*P		**Pn**	**15 55 39.4**	**+0.1**	
BLLM	**Bellamira**	**1.31**	**31**	*e*P		**Pg**	**15 55 41.0**	**+0.6**	
LOMA	**Loma Larga**	**1.34**	**350**	*e*P		**Pn**	**15 55 39.8**	**0.0**	
LOMA	**Loma Larga**	**1.34**	**350**	*i* P		**Pn**	**15 55 39.7**	**-0.1**	
LOMA				*i* S		**Sb**	**15 55 56.4**	**-1.1**	
LOMA				IAML			15 56 02.8		
	comp=Z,900nm,1.0s								
PAVA	**Las Pavas**	**1.39**	**0**	*e*P		**Pn**	**15 55 40.8**	**+0.3**	
PAVA	**Las Pavas**	**1.39**	**0**	*i* P		**Pn**	**15 55 39.8**	**-0.7**	
PAVA				IAML			15 55 49.0		
	comp=Z,2μm,1.0s								
PAVA				*i* S		**Sn**	**15 55 57.5**	**-1.3**	
SNET	**Serv Nac Est T**	**1.39**	**348**	Pn		**Pn**	**15 55 39.3**	**-1.2**	
JAYA	**Jayaque - finc**	**1.42**	**340**	*e*P		**Pn**	**15 55 40.7**	**-0.2**	
JAYA	**Jayaque - finc**	**1.42**	**340**	*i* P		**Pn**	**15 55 40.5**	**-0.4**	
JAYA				*i* S		**Sn**	**15 55 58.5**	**-1.1**	
JAYA				IAML			15 56 01.7		
	comp=Z,2μm,1.0s								
LCND	**La Caada**	**1.42**	**46**	*e*P		**Pg**	**15 55 42.6**	**+0.1**	
PMON	**Piamonte**	**1.43**	**345**	*i* P		**Pn**	**15 55 41.0**	**-0.1**	
PMON				*i* S		**Sn**	**15 55 59.5**	**-0.4**	
PMON				IAML			15 56 10.4		
	comp=Z,1μm,1.0s								
CNCH	**Conchagua**	**1.44**	**48**	*e*P		**Pg**	**15 55 43.5**	**+0.6**	
CNCH	**Conchagua**	**1.44**	**48**	*i* P		**Pn**	**15 55 41.1**	**-0.1**	
CNCH				*i* S		**Sn**	**15 55 58.3**	**-1.9**	
CNCH				IAML			15 56 11.9		
	comp=Z,2μm,1.0s								
BOQS	**Boqueron**	**1.45**	**347**	*e*P		**Pn**	**15 55 41.7**	**+0.3**	
CSGN	**Cosiguina Volc**	**1.50**	**64**	*i* P		**Pn**	**15 55 41.5**	**-0.5**	
CSGN				IAML			15 56 11.2		
	comp=Z,3μm,1.0s								
POTN	**Potosi Cosigui**	**1.56**	**64**	*i* P		**Pn**	**15 55 42.5**	**-0.2**	
POTN				*i* S		**Sn**	**15 56 01.2**	**-1.6**	
POTN				IAML			15 56 11.8		
	comp=Z,190nm,1.0s								
AMPH	**Amapala**	**1.58**	**52**	*e*P		**Pb**	**15 55 45.0**	**+0.7**	
AMPH				*e*S		**Sg**	**15 56 06.9**	**+0.9**	
SNJE	**San Jose**	**1.67**	**337**	*e*P		**Pn**	**15 55 44.5**	**0.0**	
SNJE				*e*P		**Pb**	**15 55 44.7**	**-1.4**	
NUBE	**Las Nubes**	**1.77**	**333**	*i* P		**Pn**	**15 55 45.4**	**-0.4**	
NUBE				*i* S		**Sn**	**15 56 08.3**	**-0.1**	
CRIN	**San Cristobal**	**1.89**	**78**	Pn		**Pb**	**15 55 49.7**	**+0.1**	
MTO3	**Montecristo**	**2.11**	**349**	Pn		**Pn**	**15 55 50.6**	**+0.1**	
MTO3	**Montecristo**	**2.11**	**349**	*e*P		**Pn**	**15 55 51.8**	**+1.3**	
MTO3	**Montecristo**	**2.11**	**349**	*i* P		**Pn**	**15 55 50.9**	**+0.4**	
MTO3				*i* S		**Sn**	**15 56 15.7**	**-1.1**	
MTO3				IAML			15 56 26.1		
	comp=Z,340nm,1.0s								
CNGN	**Cerro Negro**	**2.20**	**85**	Pn		**Pb**	**15 55 53.5**	**-1.4**	
ESQI	**Esquipulas**	**2.26**	**350**	Pn		**Pn**	**15 55 53.9**	**+1.4**	
ESQI	**Esquipulas**	**2.26**	**350**	*i* P		**Pn**	**15 55 53.0**	**+0.5**	
ESQI				IAML			15 56 05.1		
	comp=Z,800nm,1.0s								
ESQI				*i* S		**Sn**	**15 56 19.6**	**-0.8**	
TGUH	**Tegucigalpa,Un**	**2.37**	**43**	Pn		**Pn**	**15 55 54.9**	**+0.8**	
MATN	**Matagalpa**	**3.01**	**78**	Pn		**Pn**	**15 56 03.5**	**+0.7**	
RCPN	**Sur Rio San Ju**	**3.03**	**66**	*i* P		**Pn**	**15 56 02.9**	**-0.1**	
RCPN				IAML			15 56 08.4		
	comp=Z,0.6nm,1.0s								
RCPN				*i* S		**Sn**	**15 56 38.5**	**-0.8**	
BOAB	**BOACO BROADBAN**	**3.20**	**87**	Pn		**Pb**	**15 56 09.0**	**-3.0**	
HZTE	**Horizontes, Gu**	**3.65**	**116**	Pn		**Pb**	**15 56 16.6**	**-2.9**	
HZTE	**Horizontes, Gu**	**3.65**	**116**	*i* P		**Pn**	**15 56 12.0**	**+0.5**	
HZTE				*i* S		**Sn**	**15 56 54.9**	**+0.5**	
HZTE				IAML			15 57 36.3		
	comp=Z,140nm,1.0s								
ACON	**Acoyapa**	**3.70**	**95**	Pn		**Pn**	**15 56 16.3**	**+4.1**	
SAJU	**San Juanillo,**	**3.88**	**125**	*i* P		**Pn**	**15 56 16.0**	**+1.4**	
SAJU				IAML			15 56 19.9		
	comp=Z,60nm,1.0s								
SAJU				*i* S		**Sn**	**15 57 00.4**	**+0.2**	
ORTG	**Ortega, Santa**	**3.93**	**119**	Pn		**Pb**	**15 56 20.6**	**-3.9**	
ORTG	**Ortega, Santa**	**3.93**	**119**	*i* P		**Pn**	**15 56 15.8**	**+0.4**	
ORTG				*i* S		**Sn**	**15 57 02.6**	**+1.1**	
ORTG				IAML			15 58 39.3		
	comp=Z,320nm,1.0s								
SMCA	**Catarina**	**3.96**	**310**	*i* P		**Pn**	**15 56 15.9**	**+0.2**	
SMCA				*i* S		**Sn**	**15 57 03.2**	**+1.1**	
INDI	**Punta indio, G**	**4.16**	**125**	*i* P		**Pn**	**15 56 18.8**	**+0.3**	
INDI				*i* S		**Sn**	**15 57 08.2**	**+1.0**	
INDI				IAML			15 57 55.6		
	comp=Z,49nm,1.0s								
JTS	**Las Juntas de**	**4.40**	**117**	Pn		**Pb**	**15 56 28.0**	**-4.4**	
	comp=Z,3.6nm,0.3s,baz=301,slow=21,SNR=8.3								
JTS				Sn		**Sn**	**15 57 16.5**	**+3.5**	
	comp=Z,1.9nm,0.3s,baz=239,slow=22,SNR=1.7								
	comp=Z,8.5nm,0.3s								
PETF	**Flores**	**4.66**	**349**	Pn		**Pn**	**15 56 27.0**	**+1.6**	
LAFE	**Finca La Fe, P**	**4.68**	**122**	*i* P		**Pn**	**15 56 25.9**	**+0.3**	
LAFE				IAML			15 56 35.2		
	comp=Z,1.4nm,1.0s								
LAFE				*i* S		**Sn**	**15 57 19.9**	**0.0**	
JACO	**JACO, Garabito**	**4.96**	**122**	*i* P		**Pn**	**15 56 30.8**	**+1.2**	
JACO				*i* S		**Sn**	**15 57 27.2**	**+0.3**	
JACO				IAML			15 58 55.6		
	comp=Z,73nm,1.0s								
LCR2	**La Lucha 2**	**5.48**	**117**	Pn		Pn	15 56 42.5	+5.6	
LCR2	**La Lucha 2**	**5.48**	**117**	*i* P		**Pn**	**15 56 38.0**	**+1.1**	
LCR2				IAmb	IAmb		15 56 49.8		
	comp=Z,21nm,0.8s								
LCR2				IVmB_BB			15 56 52.1		
	comp=Z,1μm,1.0s								
LCR2				IAML			15 57 12.5		
	comp=Z,50nm,1.0s								
LCR2				*i* S		**Sn**	**15 57 39.9**	**-0.1**	
RIMA	**Rio Macho**	**5.59**	**116**	Pn		**Pn**	**15 56 43.1**	**+4.7**	
RIMA	**Rio Macho**	**5.59**	**116**	*i* P		**Pn**	**15 56 38.6**	**+0.2**	
RIMA				IVmB_BB			15 56 47.1		
	comp=Z,1μm,1.0s								
RIMA				IAML			15 56 54.1		
	comp=Z,59nm,1.0s								
RIMA				IAmb	IAmb		15 56 54.1		
	comp=Z,42nm,0.6s								
CDM	**Cerro de Muert**	**5.78**	**118**	*i* P		**Pn**	**15 56 42.1**	**+0.9**	
CDM				IAML			15 57 00.4		
	comp=Z,81nm,1.0s								
CDM				IAmb	IAmb		15 57 00.7		
	comp=Z,47nm,0.7s								
CDM				*i* S		**Sn**	**15 57 48.4**	**+0.7**	
SRBA	**San Rafael, Bu**	**6.28**	**119**	Pn		**Pn**	**15 56 52.1**	**+4.3**	
CMIG	**Matias Romero**	**7.45**	**310**	Pn		**Pn**	**15 57 08.2**	**+4.4**	
	comp=Z,0.3nm,0.3s,baz=128,slow=12,SNR=7.3								
	comp=Z,3.3nm,0.7s								
TEIG	**Tepich**	**7.89**	**5**	LR		LR	16 00 06.2		
	comp=Z,588nm,21.3s,baz=196,slow=41								
SDV	**Santo Domingo**	**18.32**	**99**	LR		LR	16 07 57.3		
	comp=Z,37nm,18.0s,baz=294,slow=42								
435B	**Jarrell**	**20.04**	**338**	P		**P**	**15 59 47.9**	**-0.2**	
JCT	**Junction City**	**20.68**	**333**	P		**P**	**15 59 55.4**	**+0.2**	
JCT				IAmb	IAmb		15 59 56.2		
	comp=Z,9.2nm,0.7s								
BRDY	**Brady**	**21.04**	**335**	P		**P**	**15 59 58.8**	**-0.2**	
BRDY				IAmb	IAmb		16 00 00.2		
	comp=Z,18nm,0.8s								
OZNA	**Ozona**	**21.67**	**331**	P		**P**	**16 00 05.9**	**+0.1**	
TXAR	**Lajitas Array**	**21.78**	**323**	P		**P**	**16 00 07.9**	**+0.8**	
TXAR	**Lajitas Array**	**21.78**	**323**	P		**P**	**16 00 08.4**	**+1.3**	
	comp=Z,4.1nm,0.7s,baz=144,slow=11,SNR=34								
	comp=Z,4.1nm,0.7s								
TX31	**Lajitas Ar. Si**	**21.78**	**323**	P		**P**	**16 00 08.2**	**+1.1**	
FW07	**Weatherford**	**21.85**	**340**	P		**P**	**16 00 08.3**	**+0.6**	
FW07				IAmb	IAmb		16 00 20.4		
	comp=Z,14nm,0.9s								
PLPT	**Palo Pinto**	**22.14**	**339**	P		**P**	**16 00 09.9**	**-0.9**	
PLPT				IAmb	IAmb		16 00 22.5		
	comp=Z,11nm,1.0s								
MIAR	**Mount Ida**	**22.53**	**350**	P		**P**	**16 00 15.5**	**+0.5**	
MIAR				IAmb	IAmb		16 00 18.0		
	comp=Z,18nm,0.8s								
MNHN	**Monahans**	**22.82**	**328**	P		**P**	**16 00 17.2**	**-1.0**	
WHAR	**Wooly Hollow**	**23.07**	**353**	P		**P**	**16 00 21.1**	**+0.5**	
WHAR				IAmb	IAmb		16 00 22.8		
	comp=Z,7.6nm,0.8s								
SN05	**Snyder 5**	**23.21**	**334**	P		**P**	**16 00 21.6**	**-0.6**	
SN05				IAmb	IAmb		16 00 23.0		
	comp=Z,13nm,0.8s								
APMT	**Aspermont**	**23.28**	**336**	P		**P**	**16 00 22.0**	**-0.8**	
FCAR	**Ozark Folk Cen**	**23.65**	**354**	P		**P**	**16 00 26.3**	**-0.1**	
TKL	**Tuckaleechee C**	**23.70**	**11**	P		**P**	**16 00 25.7**	**-1.3**	
	comp=Z,4.1nm,0.7s,baz=195,slow=11,SNR=5.6								
FNO	**Franklin**	**24.09**	**343**	P		**P**	**16 00 30.5**	**-0.1**	
PBMO	**Poplar Bluff**	**24.39**	**357**	P		**P**	**16 00 32.3**	**-1.1**	
PBMO				IAmb	IAmb		16 00 33.8		
	comp=Z,10nm,0.9s								
OK052	**Battle Ridge R**	**24.62**	**345**	P		**P**	**16 00 35.2**	**-0.3**	
OK052				IAmb	IAmb		16 00 35.9		
	comp=Z,15nm,0.9s								
T47A	**Sharon Grove**	**24.62**	**4**	P		**P**	**16 00 34.9**	**-0.6**	
T47A				IAmb	IAmb		16 00 35.8		
	comp=Z,8.6nm,0.7s								
QUOK	**Quay**	**24.76**	**345**	P		**P**	**16 00 35.7**	**-1.1**	
QUOK				IAmb	IAmb		16 00 37.1		
	comp=Z,13nm,0.8s								
CSTR	**Hydro, Custer**	**24.84**	**341**	P		**P**	**16 00 34.7**	**-2.9**	
SMWD	**Samnorwood**	**24.89**	**338**	P		**P**	**16 00 37.8**	**-0.3**	
SMWD				IAmb	IAmb		16 00 38.8		
	comp=Z,16nm,1.0s								
MGMO	**Mountain Grove**	**24.91**	**354**	P		**P**	**16 00 37.0**	**-1.1**	
MSTX	**Muleshoe**	**24.97**	**332**	P		**P**	**16 00 36.6**	**-2.2**	
S39A	**Bolivar**	**25.57**	**352**	P		**P**	**16 00 44.7**	**+0.6**	
S39A				IAmb	IAmb		16 00 46.8		
	comp=Z,9.5nm,0.7s								
CCM	**Cathedral Cave**	**25.71**	**356**	P		**P**	**16 00 44.8**	**-0.6**	
RTBA	**Rita Blanca**	**27.04**	**335**	P		**P**	**16 00 57.8**	**+0.2**	
P40A	**Paris**	**27.24**	**355**	P		**P**	**16 00 58.0**	**-1.2**	
P40A				IAmb	IAmb		16 00 59.2		
	comp=Z,8.9nm,0.8s								
ODNJ	**Ogdensburg**	**31.30**	**21**	P		**P**	**16 01 36.8**	**+1.7**	
SPMN	**Marine on St.**	**32.96**	**355**	P		**P**	**16 01 48.2**	**-1.5**	
PDAR	**Pinedale Array**	**35.22**	**333**	P		**P**	**16 02 10.9**	**+1.3**	
	comp=Z,0.5nm,0.8s,baz=172,slow=6.8,SNR=2.6								
	comp=Z,0.5nm,0.8s								
EYMN	**Ely**	**35.58**	**357**	P		**P**	**16 02 10.1**	**-2.3**	
EYMN				IAmb	IAmb		16 02 11.5		
	comp=Z,4.4nm,0.7s								
AGMN	**Agassiz Nation**	**36.33**	**352**	P		**P**	**16 02 17.5**	**-1.3**	
AGMN				IAmb	IAmb		16 02 18.5		
	comp=Z,4.6nm,0.8s								
NVAR	**Mina Array Bea**	**36.85**	**320**	P		**P**	**16 02 25.7**	**+2.0**	
	comp=Z,0.6nm,0.8s,baz=130,slow=6.7,SNR=3.5								
	comp=Z,0.6nm,0.8s								
ULM	**Lac du Bonnet**	**38.25**	**353**	P		**P**	**16 02 33.2**	**-1.8**	
	comp=Z,2.2nm,0.7s,baz=172,slow=11,SNR=4.1								
	comp=Z,2.2nm,0.7s								
SCHQ	**Schefferville**	**45.84**	**18**	P		**P**	**16 03 34.4**	**-2.5**	
	comp=Z,2.0nm,0.8s,baz=192,slow=9.3,SNR=3.7								
	comp=Z,2.0nm,0.8s								
YKA	**Yellowknife Ar**	**53.37**	**345**	P		**P**	**16 04 33.5**	**-0.7**	
YKA	**Yellowknife Ar**	**53.37**	**345**	P		**P**	**16 04 33.3**	**-0.9**	
	comp=Z,0.8nm,0.8s,baz=142,slow=7.6,SNR=14								
	comp=Z,0.8nm,0.8s								
DLBC	**Dease Lake**	**55.41**	**335**	P		**P**	**16 04 50.0**	**+0.7**	
	comp=Z,1.4nm,0.6s,baz=155,slow=19,SNR=4.1								
	comp=Z,1.4nm,0.6s								
RES	**Resolute Bay**	**62.44**	**358**	P		**P**	**16 05 36.5**	**-1.3**	
	comp=Z,0.6nm,0.7s,baz=183,slow=8.6,SNR=3.5								
	comp=Z,0.6nm,0.7s								
INK	**Inuvik**	**62.90**	**343**	P		**P**	**16 05 41.7**	**+0.8**	
	comp=Z,0.5nm,0.5s,baz=170,slow=25,SNR=7.4								
	comp=Z,0.5nm,0.5s								
WRA	**Warramunga Arr**	**137.83**	**254**	PKP		**PKiKP**	**16 14 46.7**	**+4.3**	
	comp=Z,0.7nm,0.9s,baz=73,slow=2.3,SNR=3.3								
ASAR	**Alice Springs**	**137.87**	**248**	PKP		**PKiKP**	**16 14 46.9**	**+4.4**	
	comp=Z,0.6nm,0.9s,baz=90,slow=2.6,SNR=2.7								
CMAR	**Chiang Mai Arr**	**148.45**	**346**	PKPbc		**PKiKP**	**16 15 04.0**	**-0.3**	
	comp=Z,0.8nm,0.6s,baz=348,slow=3.9,SNR=7.7								

*CATAC **21** 15:56:44.8±0.4, 13°.87N×91°.57W, h22km, mb4.0, ML4.3*
*GCG **21** 15:56:45.0±0.3, 14°.07N×91°.60W, h89km±46km, MD4.0*
*SNET **21** 15:56:46.9±0.7, 14°.02N×91°.51W, h34km±340km, ML4.3*
ISC 21 15:56:45.2±1.7, 13°.87N±0°.08×91°.58W±0°.05, h32km±12km, n41, σ1°.41/61, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SULM	**Suchitepequez,**	**0.44**	**2**	*e*P		**Pb**	**15 56 58.0**	**+3.2**
RTAL	**Retalhuleu**	**0.67**	**350**	*i* P		**Pb**	**15 56 58.8**	**+0.3**
RTAL				*i* S		**Sn**	**15 57 08.5**	**+0.7**
RTAL				IAML			15 57 10.2	
	comp=Z,4μm,1.0s							
STG3	**Santiaguito 3,**	**0.84**	**1**	*e*P		**Pb**	**15 57 01.6**	**0.0**
FUG	**Fuego**	**0.92**	**51**	*e*P		**Pb**	**15 57 03.3**	**+0.5**
PCG	**Pacaya**	**1.08**	**61**	*e*P		**Pb**	**15 57 05.8**	**+0.2**
SMCA	**Catarina**	**1.10**	**334**	*i* P		**Pn**	**15 57 04.6**	**+0.2**
SMCA				*i* S		**Sb**	**15 57 18.2**	**-1.5**
SMCA				IAML			15 57 18.4	
	comp=Z,3μm,1.0s							
SMSP	**San Marcos**	**1.12**	**350**	*i* P		**Pb**	**15 57 05.7**	**-0.6**
SMSP				*i* S		**Sb**	**15 57 19.5**	**-1.1**
SMSP				IAML			15 57 23.2	
	comp=Z,19μm,1.0s							
GUMI	**Mixco**	**1.21**	**51**	*i* P		**Pb**	**15 57 07.1**	**-0.6**
GUMI				IAML			15 57 07.5	
	comp=Z,24μm,1.0s							
GUMI				*i* S		**Sb**	**15 57 22.3**	**-0.8**
GCG4	**OSOP**	**1.24**	**55**	*i* P		**Pb**	**15 57 07.7**	**-0.6**
GCG4				IAML			15 57 09.1	
	comp=Z,12μm,1.0s							
GCG4				*i* S		**Sb**	**15 57 24.1**	**0.0**
NBG	**Las Nubes**	**1.40**	**59**	*e*P		**Pb**	**15 57 11.4**	**+0.5**
GUNB	**GUNB**	**1.40**	**59**	*i* P		**Pb**	**15 57 09.7**	**-1.3**
GUNB				*i* S		**Sb**	**15 57 27.2**	**-1.4**
GUNB				IAML			15 57 31.7	
	comp=Z,3μm,1.0s							
HUEH	**Huehuetenango**	**1.45**	**3**	*i* P		**Pb**	**15 57 09.9**	**-1.8**
HUEH				*i* S		**Sb**	**15 57 27.5**	**-2.4**
HUEH				IAML			15 57 42.7	
	comp=Z,4μm,1.0s							
NUBE	**Las Nubes**	**1.75**	**89**	*e*P		**Pn**	**15 57 13.9**	**+0.4**
NUBE	**Las Nubes**	**1.75**	**89**	*i* P		**Pn**	**15 57 14.0**	**+0.5**
NUBE				IAML			15 57 15.3	
	comp=Z,3μm,1.0s							
NUBE				*i* S		**Sn**	**15 57 35.4**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.75**	**85**	*e*P		**Pn**	**15 57 14.2**	**+0.8**
LOAL	**Lomas de Alarc**	**1.75**	**85**	*i* P		**Pn**	**15 57 13.7**	**+0.3**
LOAL				IAML			15 57 17.1	
	comp=Z,5μm,1.0s							
LOAL				*i* S		**Sn**	**15 57 35.7**	**+1.0**
JUAM	**Asuncion Mita**	**1.88**	**75**	*i* P		**Pn**	**15 57 15.4**	**+0.2**
JUAM				IAML			15 57 17.0	
	comp=Z,1μm,1.0s							
JUAM				*i* S		**Sb**	**15 57 39.0**	**-3.0**
RTR	**El Retiro**	**1.88**	**89**	*e*P		**Pn**	**15 57 16.7**	**+1.4**
CEVE	**Cerro Verde**	**1.90**	**91**	*e*P		**Pn**	**15 57 16.6**	**+0.9**
CEVE				*e*S		**Sn**	**15 57 40.5**	**+1.9**
CEVE				IAML			15 57 41.9	
	comp=Z,3μm,0.4s							
CEVE	**Cerro Verde**	**1.90**	**91**	*i* P		**Pn**	**15 57 16.2**	**+0.5**
CEVE				*i* S		**Sn**	**15 57 39.5**	**+0.9**
CEVE				IAML			15 57 41.6	
	comp=Z,3μm,1.0s							
SBLS	**San Blas**	**1.90**	**91**	*e*P		**Pn**	**15 57 16.6**	**+0.9**
SNJE	**San Jose**	**1.92**	**90**	*e*P		**Pn**	**15 57 16.9**	**+1.1**
SNJE				*e*P		**Pb**	**15 57 17.0**	**-2.7**
AVCB	**Coban**	**1.96**	**35**	*i* P		**Pn**	**15 57 16.9**	**+0.5**
AVCB				IAML			15 58 08.8	
	comp=Z,6μm,1.0s							
JAYA	**Jayaque - finc**	**2.08**	**96**	*e*P		**Pn**	**15 57 18.6**	**+0.5**
JAYA				IAML			15 57 50.6	
	comp=Z,1μm,0.2s							
JAYA	**Jayaque - finc**	**2.08**	**96**	*i* P		**Pn**	**15 57 18.2**	**+0.1**
JAYA				*i* S		**Sn**	**15 57 43.4**	**+0.4**
JAYA				IAML			15 57 50.4	
	comp=Z,4μm,1.0s							
MRL	**Marmol**	**2.20**	**56**	*e*P		**Pb**	**15 57 24.6**	**+0.1**
PMON	**Piamonte**	**2.21**	**94**	*i* P		**Pn**	**15 57 20.3**	**+0.6**
PMON				*i* S		**Sn**	**15 57 47.4**	**+1.4**
PMON				IAML			15 57 52.6	
	comp=Z,2μm,1.0s							
MTO3	**Montecristo**	**2.22**	**76**	*e*P		**Pn**	**15 57 20.7**	**+0.7**
MTO3	**Montecristo**	**2.22**	**76**	*i* P		**Pn**	**15 57 20.4**	**+0.4**
MTO3				IAML			15 57 22.8	
	comp=Z,290nm,1.0s							
MTO3				*i* S		**Sn**	**15 57 47.9**	**+1.5**
LALI	**Alcalda de L**	**2.23**	**99**	*e*P		**Pn**	**15 57 20.8**	**+0.8**
LALI	**Alcalda de L**	**2.23**	**99**	*i* P		**Pn**	**15 57 19.9**	**0.0**
LALI				*i* S		**Sn**	**15 57 47.6**	**+1.2**
LALI				IAML			15 57 54.0	
	comp=Z,380nm,1.0s							
BOQS	**Boqueron**	**2.24**	**93**	*e*P		**Pn**	**15 57 21.4**	**+1.2**
PIC2	**El Picacho**	**2.26**	**93**	*e*P		**Pn**	**15 57 22.2**	**+1.6**
ESQI	**Esquipulas**	**2.28**	**72**	*i* P		**Pn**	**15 57 21.1**	**+0.4**
ESQI				*i* S		**Sn**	**15 57 49.1**	**+1.3**
ESQI				IAML			15 58 05.7	
	comp=Z,730nm,1.0s							
LOMA	**Loma Larga**	**2.35**	**95**	*e*P		**Pn**	**15 57 23.2**	**+1.4**
LFRS	**El Faro**	**2.46**	**95**	*e*P		**Pn**	**15 57 24.8**	**+1.6**
CCIG	**Comitan**	**2.46**	**347**	*i* P		**Pn**	**15 57 24.4**	**+1.1**
CCIG				*i* S		**Sb**	**15 57 53.8**	**-5.2**
CCIG				IAML			15 58 06.6	
	comp=Z,710nm,1.0s							
SJTE	**Alcalda de S**	**2.51**	**95**	*e*P		**Pn**	**15 57 25.5**	**+1.5**
PAVA	**Las Pavas**	**2.57**	**93**	*e*P		**Pn**	**15 57 26.2**	**+1.4**
PETF	**Flores**	**3.45**	**28**	*i* P		**Pn**	**15 57 37.2**	**+0.4**
PETF				*i* S		**Sn**	**15 58 18.9**	**+2.2**
PETF				IAML			15 58 45.8	
	comp=Z,750nm,1.0s							
TLIG	**Tlapa**	**7.67**	**300**	*i* P		**Pn**	**15 58 35.5**	**+0.7**
TLIG				IAmb	IAmb		15 58 52.4	
	comp=Z,8.3nm,0.7s							
TLIG				IAML			16 00 22.7	
	comp=Z,37nm,1.0s							

*AZER **21** 15:56:53.5, 41°.52N×48°.24E, h29km, ml2.7*
*DRS **21** 15:56:55.4, 41°.62N×48°.32E, h17km*
ISC 21 15:56:55.1±0.9, 41°.60N±0°.02×48°.29E±0°.03, h24km±6km, n35, σ1°.28/63, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
QSAR	**Qusar**	**0.08**	**196**	P		**Pb**	**15 56 59.3**	**-0.3**
QSAR				S		**Sb**	**15 57 03.7**	**+1.1**
KSMR	**Kasumkent**	**0.12**	**274**	*e*Pg		**Pb**	**15 56 59.4**	**-0.5**
	2μm,0.1s							
QUBA	**Quba, Azerbaij**	**0.28**	**148**	P		**Pb**	**15 57 01.4**	**-0.5**
QUBA				S		**Sb**	**15 57 06.9**	**+0.5**
DRN	**Derbent**	**0.44**	**4**	*i* Pg		**Pb**	**15 57 03.6**	**-0.6**
	566nm,0.1s							
DRN				*e*Sg		**Sb**	**15 57 10.4**	**0.0**
	37nm,0.1s							
AKT	**Akhty**	**0.44**	**255**	*i* Pg		**Pb**	**15 57 03.3**	**-1.1**
	2μm,0.1s							
AKT				*e*Sg		**Sb**	**15 57 09.6**	**-1.0**
	3μm,0.4s							
XNQ	**Khinaliq**	**0.44**	**195**	P		**Pb**	**15 57 03.3**	**-1.1**
XNQ				S		**Sb**	**15 57 10.0**	**-0.7**
SIZA	**Siyzn**	**0.69**	**138**	P		**Pb**	**15 57 08.2**	**-0.4**
SIZA				S		**Sn**	**15 57 19.9**	**+0.4**
QBL	**Gabala**	**0.73**	**208**	P		**Pb**	**15 57 07.5**	**-1.8**
QBL				S		**Sb**	**15 57 18.1**	**-0.8**
URKR	**Urkarakh**	**0.75**	**319**	*e*Pg		**Pb**	**15 57 08.5**	**-1.2**

MKAR	**Makanchi Array**	**12.74**	**37**	P		Pn	16 09 04.6	-0.9
	0.2nm,0.6s,baz=234,slow=13,SNR=4.3							
KURBB	**Kurchatov Arra**	**14.49**	**19**	P		Pn	16 09 28.8	+0.7
	0.2nm,0.6s,baz=206,slow=10.0,SNR=2.8							
ZALV	**Zalesovo Beam**	**19.31**	**25**	P		P	16 10 24.9	+0.1
	0.8nm,0.3s,baz=216,slow=9.6,SNR=5.6							

*IDC **21** 16:07:37.4±2.5,56˚.07N×149˚.28W,h0km,mb3.7/1, mbtmp3.4/6,ML3.3/5,Error ellipse: s-maj=36.4km s-min=23.3km az=0.0*

*NEIC **21** 16:07:41.9±1.8,56˚.34N±0˚.09×149˚.21W±0˚.08,h24km±9km, ML3.5/62,ML3.3(AEIC),Error ellipse: s-maj=12.7km s-min=6.5km az=172.0*

*AEIC **21** 16:07:44.4±1.9,56˚.28N±0˚.09×149˚.17W±0˚.10,h8km±7km, Error ellipse: s-maj=12.8km s-min=7.8km az=174.0*

ISC 21 16:07:40.8±1.4,**56˚.39N**±0˚.09×**149˚.22W**±0˚.05,**h10**km, **n242**,σ1**s08**/156,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.31**	**309**		Pn	16 08 18.6	-0.3
KDAK					**Sn**	**16 08 44.5**	**-2.8**
KDAK	**Kodiak Island**	**2.31**	**309**	Pn	Pn	16 08 18.5	-0.4
KDAK	**Kodiak Island**	**2.31**	**309**	S	**Sn**	**16 08 45.6**	**-1.7**
	baz=128						
KDAK	**Kodiak Island**	**2.31**	**309**	Pn	Pn	16 08 18.6	-0.2
	2.3nm,0.3s,baz=118,slow=5.5,SNR=69						
KDAK				Sn	**Sn**	**16 08 45.9**	**-1.4**
	3.7nm,0.3s,baz=77,slow=22,SNR=17 5.7nm,0.2s						
OHAK	**Old Harbor**	**2.39**	**292**	Pn	Pn	16 08 18.8	-1.2
OHAK				Sn	**Sn**	**16 08 45.9**	**-3.4**
OHAK	**Old Harbor**	**2.39**	**292**	P	Pn	16 08 19.3	-0.7
OHAK	**Old Harbor**	**2.39**	**292**	P	Pn	16 08 19.3	-0.6
	baz=111						
OHAK				S	**Sn**	**16 08 46.5**	**-2.8**
	baz=111						
SYI	**Shuyak Island**	**2.81**	**324**	Pn	Pn	16 08 25.2	-0.5
SYI				Sn	**Sn**	**16 08 58.7**	**-0.9**
Q20K	**Shuyak Island**	**2.81**	**324**	P	**Pn**	**16 08 26.2**	**+0.5**
	baz=142						
Q20K				S	**Sn**	**16 08 59.4**	**-0.2**
	baz=142						
CNPM	**China Poot**	**3.32**	**342**	Pn	Pn	16 08 32.3	-0.5
CNPM				Sn	**Sn**	**16 09 11.7**	**-0.6**
Q23K	**Middleton Isla**	**3.41**	**25**	Pn	Pn	16 08 33.3	-0.6
Q23K				Sn	**Sn**	**16 09 11.6**	**-2.8**
Q23K				IAML		16 09 19.0	
	comp=N,154nm,1.6s						
Q23K				IAML		16 09 24.6	
	comp=E,146nm,1.6s						
Q23K	**Middleton Isla**	**3.41**	**25**	P	Pn	16 08 33.8	-0.1
	baz=207						
Q23K				S	**Sn**	**16 09 12.1**	**-2.3**
	baz=207						
MID	**Middleton Isla**	**3.41**	**26**	Pn	Pn	16 08 33.4	-0.5
MID				Sn	**Sn**	**16 09 11.7**	**-2.7**
MID				IAML		16 09 12.6	
	comp=N,134nm,1.2s						
MID				IAML		16 09 24.6	
	comp=E,149nm,1.6s						
MID	**Middleton Isla**	**3.41**	**26**	P	Pn	16 08 34.0	0.0
BRSE	**Bradley Lake S**	**3.46**	**347**		Pn	16 08 34.6	0.0
BRSE					**Sn**	**16 09 14.7**	**-0.9**
BRSE	**Bradley Lake S**	**3.46**	**347**	P	Pn	16 08 34.6	0.0
	baz=166						
BRSE				S	**Sn**	**16 09 14.7**	**-0.9**
	baz=166						
Q19K	**Cape Douglas,**	**3.48**	**319**	Pn	**Pn**	**16 08 36.1**	**+1.1**
Q19K				Sn	**Sn**	**16 09 15.4**	**-0.9**
Q19K				IAML		16 09 19.1	
	comp=N,147nm,0.6s						
Q19K	**Cape Douglas,**	**3.48**	**319**	P	**Pn**	**16 08 36.0**	**+1.0**
	baz=136						
Q19K				S	**Sn**	**16 09 15.6**	**-0.7**
	baz=136						
BRLK	**Bradley Lake**	**3.50**	**346**	Pn	Pn	16 08 34.8	-0.5
BRLK				Sn	**Sn**	**16 09 14.8**	**-1.8**
HOM	**Homer**	**3.52**	**340**	Pn	Pn	16 08 35.7	+0.2
HOM				IAML		16 09 21.7	
	comp=E,119nm,0.9s						
HOM				IAML		16 09 24.5	
	comp=N,133nm,0.6s						
KAHG	**Katmai Hook Gl**	**3.57**	**308**		**Pn**	**16 08 37.2**	**+0.9**
AUJK	**Augustine Jueg**	**3.72**	**325**		**Pn**	**16 08 39.2**	**+1.0**
SEW	**Seward**	**3.73**	**358**	Pn	Pn	16 08 37.9	-0.4
SEW	**Seward**	**3.73**	**358**	P	Pn	16 08 38.3	-0.1
	baz=178						
AUCH	**Augustine Cone**	**3.74**	**325**		**Pn**	**16 08 39.4**	**+0.8**
P23K	**Montague Islan**	**3.74**	**14**		Pn	16 08 38.7	+0.1
AUL	**Augustine Lava**	**3.75**	**325**		**Pn**	**16 08 39.7**	**+1.0**
ACHA	**Angle Creek He**	**3.78**	**301**		**Pn**	**16 08 40.4**	**+1.2**
P19K	**Oil Pt**	**3.91**	**329**	Pn	**Pn**	**16 08 41.6**	**+0.8**
P19K				IAML		16 09 31.2	
	comp=N,78nm,0.4s						
P19K				IAML		16 09 31.3	
	comp=E,107nm,0.4s						
P19K	**Oil Pt**	**3.91**	**329**	P	**Pn**	**16 08 41.7**	**+0.8**
	baz=146						
CNTC	**Contact Creek**	**4.07**	**300**		**Pn**	**16 08 44.2**	**+1.0**
Q17K	**Contact Creek**	**4.07**	**300**	P	**Pn**	**16 08 44.3**	**+1.0**
	baz=116						
O22K	**Cooper Landing**	**4.11**	**356**	Pn	Pn	16 08 43.6	0.0
O22K	**Cooper Landing**	**4.11**	**356**	P	**Pn**	**16 08 44.1**	**+0.5**
	baz=176						
O20K	**Slope Mountain**	**4.12**	**335**		Pn	16 08 43.9	+0.1
O20K	**Slope Mountain**	**4.12**	**335**	P	**Pn**	**16 08 44.5**	**+0.7**
	baz=153						
IVE	**Iliamna Volcan**	**4.15**	**333**		Pn	16 08 44.3	-0.1
ILSW	**Iliamna Southw**	**4.16**	**332**	Pn	Pn	16 08 44.1	-0.3
SLKM	**Skilak Lake**	**4.16**	**353**		Pn	16 08 44.2	-0.2
HIN	**Hinchinbrook I**	**4.26**	**18**	Pn	Pn	16 08 45.9	+0.1
KAIM	**Kayak Island**	**4.36**	**34**	Pn	**Pn**	**16 08 47.2**	**+0.2**
KAIM	**Kayak Island**	**4.36**	**34**	P	**Pn**	**16 08 47.6**	**+0.5**
	baz=216						
P18K	**Big Mountain,**	**4.40**	**316**	Pn	Pn	16 08 47.3	-0.4
P18K	**Big Mountain,**	**4.40**	**316**	P	Pn	16 08 47.8	+0.2
	baz=131						
RED	**Redoubt Volcan**	**4.45**	**337**		Pn	16 08 47.9	-0.5
RSO	**Redoubt South**	**4.49**	**337**	Pn	**Pn**	**16 08 49.5**	**+0.5**
CAPN	**Captain Cook N**	**4.51**	**348**	Pn	Pn	16 08 47.1	-1.9
RDT	**Redoubt**	**4.52**	**340**		Pn	16 08 49.0	-0.3
RDWB	**Redoubt West**	**4.53**	**337**		Pn	16 08 49.4	-0.1
EYAK	**Cordova Ski Ar**	**4.55**	**22**	Pn	**Pn**	**16 08 50.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.55**	**22**	P	**Pn**	**16 08 50.2**	**+0.6**
EYAK	**Cordova Ski Ar**	**4.55**	**22**	P	**Pn**	**16 08 50.1**	**+0.5**
	baz=204						
DFR	**Drift River**	**4.59**	**338**		Pn	16 08 50.0	-0.3
FID	**Port Fidalgo**	**4.60**	**17**	Pn	Pn	16 08 50.3	-0.1
FID				IAML		16 09 41.8	
	comp=E,56nm,0.4s						
FID				IAML		16 09 46.9	
	comp=N,52nm,0.4s						
NCT	**North Crescent**	**4.61**	**337**		Pn	16 08 50.3	-0.3
GLI	**Glacier Island**	**4.64**	**13**	Pn	Pn	16 08 50.8	0.0
GLI				IAML		16 09 49.0	
	comp=E,47nm,0.6s						
GLI				IAML		16 09 51.4	
	comp=N,34nm,0.7s						
RAGM	**Ragged Mountai**	**4.67**	**29**	Pn	**Pn**	**16 08 51.9**	**+0.7**
O19K	**Port Alsworth**	**4.67**	**327**	Pn	Pn	16 08 50.9	-0.4
O19K				IAML		16 09 51.1	
	comp=N,82nm,0.5s						
SUCK	**Suckling Hills**	**4.68**	**36**	Pn	**Pn**	**16 08 52.1**	**+0.6**
SUCK				IAML		16 09 45.9	
	comp=N,79nm,0.3s						
SUCK				IAML		16 09 49.1	
	comp=E,60nm,1.4s						
O18K	**Koktuh Hills**	**4.71**	**320**	Pn	Pn	16 08 51.6	-0.2
O18K				IAML		16 09 49.8	
	comp=N,24nm,2.3s						
O18K	**Koktuh Hills**	**4.71**	**320**	P	**Pn**	**16 08 52.2**	**+0.4**
	baz=136						
RC01	**Rabbit Creek A**	**4.72**	**357**	Pn	Pn	16 08 52.0	0.0
RC01				IAML		16 09 47.3	
	comp=N,25nm,0.3s						
RC01				IAML		16 09 47.7	
	comp=E,33nm,0.6s						
RC01	**Rabbit Creek A**	**4.72**	**357**	P	Pn	16 08 52.2	+0.2
	baz=176						
NICHA	**Nichawak Mount**	**4.75**	**33**		**Pn**	**16 08 52.9**	**+0.5**
P17K	**Kvichak River**	**4.78**	**309**		**Pn**	**16 08 53.5**	**+0.7**
FIS	**Fire Island**	**4.80**	**354**	Pn	Pn	16 08 53.2	+0.2
FIS				IAML		16 10 30.8	
	comp=E,66nm,4.1s						
GOAT	**Goat Mountain**	**4.82**	**27**		**Pn**	**16 08 53.7**	**+0.3**
BERG	**Berg Lake**	**4.95**	**34**	Pn	**Pn**	**16 08 55.8**	**+0.6**
GRIN	**Grindle Hills**	**4.99**	**36**		Pn	16 08 55.4	-0.3
KNK	**Knik Glacier**	**5.05**	**4**	Pn	Pn	16 08 56.8	+0.2
KNK				IAML		16 10 05.6	
	comp=E,28nm,0.6s						
KNK				IAML		16 10 08.4	
	comp=N,18nm,0.7s						
KNK	**Knik Glacier**	**5.05**	**4**	P	**Pn**	**16 08 57.0**	**+0.4**
	baz=184						
N20K	**Mount Spurr**	**5.07**	**343**	P	Pn	16 08 56.8	-0.1
	baz=161						
SPCR	**Spurr Chakacha**	**5.07**	**343**		Pn	16 08 56.8	-0.1
SNH	**Sunshine Point**	**5.07**	**39**	Pn	**Pn**	**16 08 57.7**	**+0.8**
SNH				IAML		16 09 55.0	
	comp=E,39nm,0.8s						
SNH				IAML		16 10 01.5	
	comp=N,41nm,0.5s						
CHGN	**Chignik**	**5.12**	**273**	Pn	**Pn**	**16 08 57.0**	**-0.4**
CHGN				IAML		16 10 07.5	
	comp=E,28nm,2.3s						
CHGN				IAML		16 11 28.1	
	comp=N,19nm,3.5s						
SPCP	**Crater Peak Br**	**5.12**	**344**		**Pn**	**16 08 58.0**	**+0.4**
KHIT	**Khitrov Hills**	**5.13**	**35**		**Pn**	**16 08 58.1**	**+0.4**
SUA	**Susitna One**	**5.15**	**352**	Pn	Pn	16 08 55.9	-2.2
SUA				IAML		16 10 11.4	
	comp=E,18nm,4.1s						
SUA				IAML		16 11 58.4	
	comp=N,17nm,4.3s						
BMRM	**Bremner River**	**5.18**	**26**	Pn	**Pn**	**16 08 58.9**	**+0.5**
BMRM	**Bremner River**	**5.18**	**26**	P	**Pn**	**16 08 59.1**	**+0.7**
	baz=209						
PMR	**Palmer**	**5.22**	**0**	Pn	**Pn**	**16 08 59.4**	**+0.6**
PMR				IAML		16 10 04.5	
	comp=E,16nm,0.7s						
PMR				IAML		16 10 04.5	
	comp=N,15nm,0.6s						
PMR	**Palmer**	**5.22**	**0**	P	**Pn**	**16 08 59.4**	**+0.6**
N19K	**Bonanza Creek**	**5.22**	**330**	Pn	Pn	16 08 58.8	-0.2
N19K				IAML		16 10 04.0	
	comp=E,16nm,4.0s						
N19K				IAML		16 11 35.3	
	comp=N,16nm,3.6s						
STLK	**Strandline Lak**	**5.30**	**346**		**Pn**	**16 09 00.4**	**+0.4**
SPNN	**North Nagishla**	**5.31**	**342**		**Pn**	**16 09 00.8**	**+0.6**
BARK	**Barkley Ridge**	**5.36**	**39**		**Pn**	**16 09 01.1**	**+0.3**
O17K	**Koliganek Bris**	**5.38**	**312**		**Pn**	**16 09 01.9**	**+0.8**
KLU	**Klutina**	**5.39**	**17**	Pn	**Pn**	**16 09 01.8**	**+0.5**
KLU	**Klutina**	**5.39**	**17**	P	**Pn**	**16 09 02.0**	**+0.7**
	baz=199						
MESA	**MESA**	**5.39**	**42**	Pn	**Pn**	**16 09 01.3**	**-0.2**
MESA	**MESA**	**5.39**	**42**	P	**Pn**	**16 09 01.7**	**+0.3**
	baz=227						
CRQM	**Cirque**	**5.41**	**33**	Pn	**Pn**	**16 09 02.3**	**+0.7**
CRQE	**Cirque**	**5.42**	**34**	P	**Pn**	**16 09 02.5**	**+0.8**
	baz=218						
SML	**Sawmill**	**5.45**	**4**	Pn	Pn	16 09 02.3	+0.2
SML	**Sawmill**	**5.45**	**4**	P	**Pn**	**16 09 03.1**	**+1.0**
	baz=185						
TGL	**Tana Glacier**	**5.50**	**35**	Pn	**Pn**	**16 09 03.6**	**+0.7**
N18K	**Kilae Creek**	**5.54**	**324**	Pn	Pn	16 09 03.0	-0.2
SCM	**Sheep Creek Mo**	**5.54**	**9**	Pn	**Pn**	**16 09 03.9**	**+0.5**
SCM	**Sheep Creek Mo**	**5.54**	**9**	P	**Pn**	**16 09 04.1**	**+0.8**
	baz=190						
ISLE	**Juniper Island**	**5.55**	**38**	Pn	**Pn**	**16 09 03.5**	**-0.1**
BAGL	**Bagley Icefiel**	**5.56**	**39**		**Pn**	**16 09 04.1**	**+0.7**
O16K	**Kokwok River B**	**5.71**	**308**	Pn	**Pn**	**16 09 06.0**	**+0.4**
SKT	**Skwentna**	**5.73**	**349**	Pn	Pn	16 09 05.1	-0.8
N25K	**Chitina, Valde**	**5.75**	**23**	P	**Pn**	**16 09 06.9**	**+0.7**
	baz=206						
SVW2	**Sparrevohn**	**5.76**	**328**	Pn	Pn	16 09 05.9	-0.4
SVW2	**Sparrevohn**	**5.76**	**328**	P	Pn	16 09 06.4	+0.1
KIAG	**Kiagna River**	**5.78**	**35**		**Pn**	**16 09 07.3**	**+0.6**
GLB	**Gilahina Butte**	**5.79**	**27**	Pn	Pn	16 09 06.5	-0.2
SAMH	**Samovar Hills**	**5.82**	**46**		**Pn**	**16 09 07.8**	**+0.6**
GRNC	**Granite Creek**	**5.85**	**39**	Pn	**Pn**	**16 09 08.1**	**+0.5**
M20K	**Styx River**	**5.86**	**342**	Pn	Pn	16 09 07.1	-0.7
TABL	**Table Mountain**	**5.87**	**43**	Pn	**Pn**	**16 09 08.7**	**+0.7**
N17K	**Nushagak Hills**	**5.89**	**318**	Pn	Pn	16 09 07.9	-0.1
M24K	**Tolsona, Glenn**	**5.94**	**14**	Pn	**Pn**	**16 09 10.0**	**+1.2**
M24K	**Tolsona, Glenn**	**5.94**	**14**	P	**Pn**	**16 09 10.2**	**+1.4**
	baz=196						
MCARA	**McCarthy VSAT**	**5.95**	**30**	Pn	**Pn**	**16 09 09.8**	**+1.0**
MCARA	**McCarthy VSAT**	**5.95**	**30**	P	**Pn**	**16 09 09.9**	**+1.1**
	baz=214						
PTPK	**Patty Peak**	**5.95**	**33**		**Pn**	**16 09 09.9**	**+0.8**
PCA	**Pinnacle**	**6.01**	**48**	Pn	**Pn**	**16 09 10.4**	**+0.6**
PINM	**Pinnacle**	**6.01**	**48**	P	**Pn**	**16 09 10.0**	**+0.2**
	baz=235						
BARN	**Barnard Glacie**	**6.11**	**37**	Pn	**Pn**	**16 09 12.1**	**+0.8**
M19K	**Big River Lodg**	**6.13**	**336**	Pn	Pn	16 09 10.8	-0.7
M18K	**Stony River**	**6.15**	**329**		Pn	16 09 11.3	-0.3
CTG	**Chitna Glacier**	**6.15**	**39**	P	**Pn**	**16 09 12.5**	**+0.7**
	baz=224						
CTGM	**Chitina Glacie**	**6.16**	**39**	Pn	**Pn**	**16 09 12.2**	**+0.4**
PNL	**Peninsula**	**6.16**	**54**		**Pn**	**16 09 11.9**	**0.0**
PNL	**Peninsula**	**6.16**	**54**	P	**Pn**	**16 09 12.8**	**+1.0**
PNL	**Peninsula**	**6.16**	**54**	P	**Pn**	**16 09 11.9**	**0.0**
	baz=241						
LOGN	**Logan Glacier**	**6.18**	**41**	Pn	Pn	16 09 11.8	-0.4
BCPM	**Bancas Point**	**6.20**	**51**	Pn	**Pn**	**16 09 12.1**	**-0.2**
WAT6	**Susitna Watana**	**6.25**	**6**		**Pn**	**16 09 13.9**	**+0.7**
WAT6	**Susitna Watana**	**6.25**	**6**	P	**Pn**	**16 09 13.9**	**+0.7**
	baz=187						
O15K	**Ungalikthiuk R**	**6.32**	**301**		**Pn**	**16 09 15.2**	**+1.2**
O15K	**Ungalikthiuk R**	**6.32**	**301**	P	**Pn**	**16 09 15.2**	**+1.2**
	baz=112						
HARP	**HAARP**	**6.37**	**17**		**Pn**	**16 09 15.5**	**+0.8**
HARP	**HAARP**	**6.37**	**17**	P	**Pn**	**16 09 15.5**	**+0.8**
	baz=200						
SDPT	**Sand Point**	**6.42**	**265**	P	**Pn**	**16 09 15.9**	**+0.5**
WAT7	**Susitna Watana**	**6.47**	**2**		**Pn**	**16 09 16.9**	**+0.8**
WAT1	**Susitna Watana**	**6.47**	**3**		**Pn**	**16 09 17.0**	**+1.0**
WAT1	**Susitna Watana**	**6.47**	**3**	P	**Pn**	**16 09 17.0**	**+1.0**
	baz=183						
L19K	**White Mountain**	**6.48**	**336**	Pn	Pn	16 09 15.4	-0.8
M17K	**Holitna River**	**6.58**	**323**	Pn	Pn	16 09 17.5	-0.1
DHY	**Denali Highway**	**6.77**	**7**	P	**Pn**	**16 09 21.0**	**+0.7**
	baz=188						
O29M	**Mount Kennedy**	**6.83**	**51**	Pn	**Pn**	**16 09 22.3**	**+1.2**
PAX	**Paxson**	**6.87**	**14**	Pn	**Pn**	**16 09 23.1**	**+1.5**
PAX	**Paxson**	**6.87**	**14**	P	**Pn**	**16 09 22.6**	**+1.1**
	baz=197						
N15K	**Kwethluk River**	**6.87**	**308**	Pn	**Pn**	**16 09 21.8**	**+0.3**
M16K	**Timber Creek**	**6.88**	**316**	Pn	**Pn**	**16 09 22.0**	**+0.4**
P29M	**Windy Craggy**	**6.91**	**57**	Pn	**Pn**	**16 09 22.1**	**+0.1**
YUK2	**White River**	**6.92**	**35**		**Pn**	**16 09 22.9**	**+0.7**
YUK8	**Steele Glacier**	**6.93**	**41**		**Pn**	**16 09 23.7**	**+1.1**
YUK8	**Steele Glacier**	**6.93**	**41**	P	**Pn**	**16 09 23.7**	**+1.1**
	baz=228						
L18K	**Granite Mounta**	**6.98**	**330**	Pn	Pn	16 09 21.6	-1.4
RND	**Reindeer**	**7.04**	**1**	Pn	**Pn**	**16 09 24.6**	**+0.7**
M27K	**Edge Creek, AK**	**7.06**	**29**	Pn	**Pn**	**16 09 25.8**	**+1.6**
M27K	**Edge Creek, AK**	**7.06**	**29**	P	**Pn**	**16 09 25.4**	**+1.2**
	baz=215						
TRF	**Thorofare Moun**	**7.10**	**356**	Pn	**Pn**	**16 09 25.8**	**+1.0**
MENT	**Mentasta**	**7.13**	**21**	Pn	**Pn**	**16 09 26.7**	**+1.6**
CAST	**Castle Rocks**	**7.20**	**350**	Pn	Pn	16 09 25.7	-0.3
CAST	**Castle Rocks**	**7.20**	**350**	P	Pn	16 09 26.3	+0.4
	baz=167						
S31K	**Pelican**	**7.23**	**72**	Pn	Pn	16 09 24.5	-1.9
S31K	**Pelican**	**7.23**	**72**	P	Pn	16 09 25.3	-1.1
	baz=262						
KTH	**Kantishna Hill**	**7.24**	**354**	Pn	Pn	16 09 26.7	+0.1
K20K	**Telida**	**7.40**	**343**	Pn	**Pn**	**16 09 29.8**	**+1.1**
TTA	**Tatalina**	**7.40**	**335**	Pn	Pn	16 09 29.0	+0.1
TTA	**Tatalina**	**7.40**	**335**	P	**Pn**	**16 09 30.4**	**+1.5**
L16K	**Owhat River**	**7.51**	**319**	Pn	Pn	16 09 29.8	-0.4
HYT	**Haines Junctio**	**7.56**	**49**	Pn	Pn	16 09 29.9	-1.2
L27K	**Beaver Creek,**	**7.66**	**26**	Pn	Pn	16 09 32.3	0.0
BCAR	**Beaver Creek A**	**7.67**	**26**	Pn	**Pn**	**16 09 32.9**	**+0.4**
SIT	**Sitka**	**7.67**	**79**	Pn	Pn	16 09 28.6	-3.9
RIDG	**Independent Ri**	**7.69**	**15**	Pn	**Pn**	**16 09 33.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**7.78**	**354**	Pn	Pn	16 09 33.1	-0.9
BPAW	**Bear Paw Mtn.**	**7.78**	**354**	P	Pn	16 09 33.9	-0.1
	baz=173						
K17K	**Iditarod**	**7.84**	**328**	Pn	Pn	16 09 33.8	-0.9
SKAG	**Skagway**	**8.01**	**62**	Pn	**Pn**	**16 09 37.1**	**+0.1**
J18K	**Innoko River**	**8.03**	**335**	Pn	Pn	16 09 37.1	-0.2
SCRK	**Sand Creek**	**8.04**	**17**	Pn	Pn	16 09 36.9	-0.7
BESE	**Bessie Mountai**	**8.04**	**68**	Pn	**Pn**	**16 09 37.0**	**-0.6**
S32K	**Killisnoo**	**8.08**	**76**	Pn	Pn	16 09 35.8	-2.3
HDA	**Harding Lake**	**8.12**	**7**	Pn	**Pn**	**16 09 39.3**	**+0.7**
WRH	**Wood River Hil**	**8.13**	**3**	Pn	**Pn**	**16 09 39.8**	**+1.1**
O30N	**Mendenhall**	**8.14**	**52**	Pn	**Pn**	**16 09 39.5**	**+0.6**
M29M	**Somme Creek**	**8.17**	**38**	Pn	**Pn**	**16 09 40.8**	**+1.3**
M29M	**Somme Creek**	**8.17**	**38**	P	**Pn**	**16 09 40.1**	**+0.7**
	baz=226						
R32K	**Eaglecrest**	**8.17**	**71**	Pn	**Pn**	**16 09 38.7**	**-0.7**
J20K	**Nowinta River**	**8.18**	**345**	Pn	Pn	16 09 38.1	-1.3
JIS	**Juneau Island**	**8.24**	**71**	Pn	**Pn**	**16 09 39.7**	**-0.6**
JIS	**Juneau Island**	**8.24**	**71**	P	**Pn**	**16 09 40.8**	**+0.5**
J19K	**Poorman**	**8.26**	**340**	Pn	Pn	16 09 38.2	-2.3
CCB	**Clear Creek Bu**	**8.31**	**4**	Pn	**Pn**	**16 09 42.1**	**+0.8**
K27K	**Chicken**	**8.44**	**22**	Pn	**Pn**	**16 09 43.1**	**+0.1**
J25K	**Salcha River,**	**8.46**	**11**	Pn	**Pn**	**16 09 43.2**	**-0.1**
IL31		**8.49**	**7**	Pn	Pn	16 09 43.8	+0.2
ILAR	**Eielson Array**	**8.49**	**7**	Pn	**Pn**	**16 09 43.8**	**+0.1**
ILAR	**Eielson Array**	**8.49**	**7**	Pn	Pn	16 09 43.0	-0.6
	comp=N,0.4nm,0.3s,baz=188,slow=13,SNR=39						
ILAR					**Sn**	**16 11 17.6**	**-1.7**
	comp=N,0.2nm,0.3s,baz=186,slow=24,SNR=3.9 comp=N,0.9nm,0.4s						
L14K	**Kuka Creek**	**8.55**	**311**	Pn	**Pn**	**16 09 46.9**	**+2.4**
J26L	**Joseph Creek**	**8.60**	**17**	Pn	**Pn**	**16 09 45.6**	**+0.3**
MDM	**Murphy Dome**	**8.61**	**3**	Pn	Pn	16 09 45.1	-0.3
K15K	**Wolf Creek Mou**	**8.63**	**318**	Pn	**Pn**	**16 09 45.4**	**-0.2**
WHY	**Whitehorse**	**8.63**	**54**	Pn	Pn	16 09 44.7	-1.0
MLY	**Manley**	**8.70**	**356**	Pn	**Pn**	**16 09 47.2**	**+0.6**
L29M	**L29M**	**8.75**	**35**	Pn	**Pn**	**16 09 48.1**	**+0.8**
I23K	**Minto, Yukon-K**	**8.79**	**360**	Pn	Pn	16 09 47.5	-0.2
POKR	**Poker Plat Res**	**8.80**	**5**	Pn	**Pn**	**16 09 49.0**	**+1.1**
P32M	**Atlin**	**8.83**	**62**	Pn	**Pn**	**16 09 48.7**	**+0.2**
P32M	**Atlin**	**8.83**	**62**	P	**Pn**	**16 09 48.5**	**+0.1**
	baz=255						
U33K	**Whale Pass**	**8.97**	**85**	Pn	Pn	16 09 46.9	-3.3
CRAG	**Craig**	**9.08**	**89**	P	Pn	16 09 48.8	-3.0
EGAK	**Eagle**	**9.29**	**22**	Pn	**Pn**	**16 09 56.9**	**+2.2**
I26K	**Coal Creek Min**	**9.42**	**16**	Pn	**Pn**	**16 09 58.0**	**+1.6**
Q32M	**Nakina River**	**9.43**	**67**	Pn	**Pn**	**16 09 56.7**	**-0.1**
P33M	**Teslin, Yukon**	**9.44**	**59**	Pn	**Pn**	**16 09 56.3**	**-0.5**
H21K	**Melozitna Rive**	**9.46**	**351**	Pn	**Pn**	**16 09 56.5**	**-0.5**
K29M	**Barlow Dome**	**9.47**	**33**	Pn	**Pn**	**16 09 57.2**	**0.0**
H24K	**Noodor Dome**	**9.50**	**3**	Pn	**Pn**	**16 10 00.6**	**+3.0**
M31M	**Drury Creek, Y**	**9.55**	**46**	Pn	**Pn**	**16 09 59.7**	**+1.5**
H19K	**Roundabout Mou**	**9.81**	**342**	Pn	**Pn**	**16 10 03.3**	**+1.6**
IMAR	**Indian Mountai**	**9.87**	**349**	Pn	Pn	16 10 01.8	-0.7
S34M	**Telegraph Cree**	**9.94**	**74**	Pn	Pn	16 10 02.0	-1.6
I28M	**Miner Creek**	**10.13**	**23**	Pn	**Pn**	**16 10 08.2**	**+2.0**
R33M	**Jennings River**	**10.16**	**65**	Pn	**Pn**	**16 10 07.2**	**+0.4**
J30M	**Hart River**	**10.36**	**32**	Pn	**Pn**	**16 10 12.1**	**+2.7**
G23K	**Bananza Creek**	**10.36**	**358**	Pn	**Pn**	**16 10 09.8**	**+0.4**
FYU	**Fort Yukon**	**10.38**	**9**	Pn	Pn	16 10 09.3	-0.3
T35M	**Bob Quinn**	**10.45**	**79**	Pn	**Pn**	**16 10 11.2**	**+0.7**
DLBC	**Dease Lake**	**10.55**	**71**	Pn	**Pn**	**16 10 12.3**	**+0.4**
DLBC	**Dease Lake**	**10.55**	**71**	Pn	**Pn**	**16 10 11.9**	**0.0**
	comp=N,0.5nm,0.3s,baz=281,slow=9.0,SNR=10 comp=N,1.1nm,0.2s						
F21K	**Alatna River**	**11.05**	**351**	Pn	**Pn**	**16 10 19.4**	**+0.6**
F20K	**Avaraart Lake**	**11.12**	**347**	Pn	Pn	16 10 19.6	0.0
BMAR

TGIG 1.99 35 *eP* Pn 16 12 03.6 -0.4
TGIG *eS* Sn 16 12 27.1 -0.5
THIG 1.99 97 *eP* Pn 16 12 01.3 -2.6
THIG *eS* Sn 16 12 24.7 -2.9
PATR El Naranjo 2.00 90 *eP* Pn 16 12 02.3 -2.0
PATR *i* S Sn 16 12 25.6 -2.7
TGBT Tuxtla Gutierr 2.00 36 *eP* Pn 16 12 03.9 -0.2
TGBT *eS* Sn 16 12 27.9 0.0
CMIG Matias Romero 2.01 344 Pn 16 12 03.3 -1.0
CMIG Matias Romero 2.01 344 P Pn 16 12 03.8 -0.5
201nm,0.3s,baz=165,slow=10,SNR=1235
CMIG S Sn 16 12 27.1 -1.2
4µm,0.4s,baz=86,slow=22,SNR=17
CMIG LR LR 16 13 03.0
comp=Z,8µm,19.8s,baz=112,slow=43
706nm,0.4s
CMIG Matias Romero 2.01 344 *eP* Pn 16 12 03.3 -1.0
PAVE Pavencul 2.06 88 *iP* Pn 16 12 03.7 -1.4
PAVE *i* S Sn 16 12 27.8 -1.9
CHUJ Union Juarez 2.12 91 *iP* Pn 16 12 04.3 -1.8
CHUJ *eS* Sn 16 12 27.7 -3.7
PANG Puerto Angel 2.15 284 *eP* Pn 16 12 04.1 -2.1
PANG *eS* Sn 16 12 26.1 -5.6
SMCA Catarina 2.18 97 *iP* Pn 16 12 05.9 -0.6
SMCA *i* S Sn 16 12 30.4 -1.9
SMCA IAML 16 12 39.5
comp=Z,20µm,1.0s
CCIG Comitan 2.38 61 Pn 16 12 09.9 +0.5
CCIG Sn Sn 16 12 35.4 -2.0
CCIG Comitan 2.38 61 *eP* Pn 16 12 09.9 +0.5
CCIG *eS* Sn 16 12 38.1 +0.6
CCIG Comitan 2.38 61 *i* P Pn 16 12 07.9 -1.5
CCIG *i* S Sn 16 12 31.7 -5.8
CCIG IAML 16 12 47.7
comp=Z,23µm,1.0s
SMSP San Marcos 2.45 94 *eP* Pn 16 12 08.7 -1.8
SMSP *eS* Sn 16 12 37.2 -2.1
SMSP San Marcos 2.45 94 *iP* Pn 16 12 09.9 -0.6
SMSP *i* S Sn 16 12 36.7 -2.6
SMSP IAML 16 12 48.2
comp=Z,34µm,1.0s
RTAL Retalhuleu 2.60 103 Pn Pn 16 12 11.9 -0.5
RTAL Sn Sn 16 12 41.5 -1.2
RTAL Retalhuleu 2.60 103 *eP* Pn 16 12 10.7 -1.6
RTAL *eS* Sn 16 12 41.5 -1.2
RTAL Retalhuleu 2.60 103 *iP* Pn 16 12 13.0 +0.7
RTAL *i* S Sn 16 12 42.4 -0.3
RTAL IAML 16 12 49.0
comp=Z,13µm,1.0s
STG3 Santiaguito 3, 2.68 99 *eP* Pn 16 12 13.2 -0.4
HUEH Huehuetenango 2.71 86 Pn 16 12 14.3 +0.2
HUEH Huehuetenango 2.71 86 *eP* Pn 16 12 14.5 +0.4
HUEH *eS* Sn 16 12 48.4 +2.3
HUEH Huehuetenango 2.71 86 *iP* Pn 16 12 13.7 -0.4
HUEH *i* S Sn 16 12 43.0 -2.8
HUEH IAML 16 13 00.5
comp=Z,66µm,1.0s
SULM Suchitepequez, 2.78 107 *eP* Pn 16 12 15.5 +0.7
PEIG Puerto Escondi 2.87 288 *eP* Pn 16 12 14.2 -1.7
PEIG *eS* Sn 16 12 43.3 -5.9
TUIG Tuzandepetl 2.88 358 *eP* Pn 16 12 14.9 -1.2
TUIG *eS* Sn 16 12 49.7 +0.2
NEUV Arroyo Zacate 2.93 331 *eP* Pn 16 12 14.5 -2.3
NEUV *i* S Sn 16 12 48.5 -2.3
OXBJ Oaxaca 3.01 310 *eP* Pn 16 12 16.3 -1.8
OXBJ *eS* Sn 16 12 50.2 -2.9
VHO Vista Hermosa 3.02 310 *eP* Pn 16 12 19.0 +0.7
VHO *eS* Sn 16 12 47.5 -5.8
VHSA Villahermosa 3.11 25 *iP* Pn 16 12 18.7 -0.6
VHSA *i* S Sn 16 13 04.5 +9.2
FUG Fuego 3 3.42 101 *eP* Pn 16 12 24.3 +0.5
PMUV Sontecomapan 3.47 347 *eP* Pn 16 12 21.9 -2.5
PMUV *eS* Sn 16 13 02.8 -1.5
YOIG Yosondua 3.55 299 *eP* Pn 16 12 26.2 +0.6
YOIG *eS* Sn 16 12 56.5 -10
GUMI Mixco 3.61 98 *iP* Pn 16 12 25.7 -0.7
GUMI *i* S Sn 16 13 05.9 -2.0
GUMI IAML 16 13 25.0
comp=Z,8µm,1.0s
PCG Pacaya 3.66 101 *eP* Pn 16 12 27.7 +0.6
GCG4 OSOP 3.69 98 *iP* Pn 16 12 27.3 -0.2
GCG4 *i* S Sn 16 13 08.3 -1.6
GCG4 IAML 16 13 49.0
comp=Z,9µm,1.0s
AVCB Coban 3.78 85 *iP* Pn 16 12 27.6 -1.1
AVCB *i* S Sn 16 13 09.3 -2.7
AVCB IAML 16 13 54.8
comp=Z,22µm,1.0s
GUNB GUNB 3.87 98 *iP* Pn 16 12 30.6 +0.5
GUNB *i* S Sn 16 13 12.4 -2.1
GUNB IAML 16 13 28.9
comp=Z,4µm,1.0s
NBG Las Nubes 3.87 98 *eP* Pn 16 12 33.7 +3.7
PNIG Pinotepa 3.88 289 *eP* Pn 16 12 29.1 -0.9
PNIG *eS* Sn 16 13 08.5 -5.8
TXIG Tlaxiaco 3.93 303 *eP* Pn 16 12 31.7 +0.8
TXIG *eS* Sn 16 13 15.8 -0.1
TOIG Toxpalan 3.95 318 *eP* Pn 16 12 32.8 +1.8
TOIG *eS* Sn 16 13 10.6 -5.6
HLIG Huajuapan de L 4.29 309 *eP* Pn 16 12 37.1 +1.4
HLIG *eS* Sn 16 13 18.4 -6.3
TPIG Tehuac#an 4.38 319 *eP* Pn 16 12 37.9 +0.9
TPIG *eS* Sn 16 13 18.3 -8.5
MRL Marmol 4.47 90 *eP* Pn 16 12 39.8 +1.6
SLOZ Alcaldia de Sa 4.52 104 *eP* Pn 16 12 39.0 +0.3
JUAM Asuncion Mita 4.53 100 *iP* Pn 16 12 38.4 -0.4
JUAM *i* S Sn 16 13 28.7 -1.5
JUAM IAML 16 13 44.4
comp=Z,3µm,1.0s
NUBE Las Nubes 4.56 105 *eP* Pn 16 12 40.4 +1.1
NUBE *eS* Sn 16 13 30.5 -0.6
FTIG Fresnillo de T 4.58 307 *eP* Pn 16 12 41.2 +1.7
FTIG *eS* Sn 16 13 32.8 +1.0
PETF Flores 4.62 67 Pn 16 12 40.6 +0.6
PETF Sn Sn 16 13 30.3 -2.2
PETF Flores 4.62 67 *eP* Pn 16 12 40.3 +0.2
PETF *eS* Sn 16 13 30.6 -1.9
PETF Flores 4.62 67 *iP* Pn 16 12 39.0 -1.1
PETF *i* S Sn 16 13 26.9 -5.6
PETF IAML 16 14 03.8
comp=Z,5µm,1.0s
CEVE Cerro Verde 4.72 105 *eP* Pn 16 12 42.8 +1.1
CEVE *eS* Sn 16 13 35.6 +0.2
SNJE San Jose 4.73 105 *eP* Pn 16 12 42.5 +0.7
TLIG Tlapa 4.74 301 Pn Pn 16 12 43.6 +1.7
TLIG Tlapa 4.74 301 *eP* Pn 16 12 43.0 +1.1
TLIG *eS* Sn 16 13 37.6 +1.8
TLIG Tlapa 4.74 301 *iP* Pn 16 12 43.5 +3.9
TLIG *i* S Sn 16 13 41.8 +6.1
TLIG IAML 16 13 56.8
comp=Z,1µm,1.0s
JAUV Jalcomulco 4.83 331 *eP* Pn 16 12 40.3 -2.7
JAUV *eS* Sn 16 13 32.9 -4.8
SCIG Sabancuy 4.83 38 *eP* Pn 16 12 42.1 -0.9
SCIG *eS* Sn 16 13 29.1 -8.7
ESQI Esquipulas 4.84 96 Pn 16 12 44.9 +1.8
ESQI Esquipulas 4.84 96 *iP* Pn 16 12 43.6 +0.4
ESQI *i* S Sn 16 13 35.2 -2.8
ESQI IAML 16 14 27.4
comp=Z,8µm,1.0s
MTO3 Montecristo 4.84 98 Pn 16 12 43.3 -0.1
CRIG Cruz Grande 4.90 289 *eP* Pn 16 12 43.7 -0.3
CRIG *eS* Sn 16 13 30.3 -9.1
JAYA Jayaque - finc 4.94 107 *eP* Pn 16 12 45.2 +0.6
JAYA *eS* Sn 16 13 39.9 -0.7
JAYA IAML 16 13 48.9
comp=Z,1µm,0.4s
CEDA San Andres 4.94 105 IAML 16 14 10.5
comp=Z,3µm,0.6s
LVIG Laguna Verde 4.98 336 *i* P Pn 16 12 41.7 -3.3
LVIG *eS* Sn 16 13 32.6 -8.7
PIC2 El Picacho 5.09 105 *eP* Pn 16 12 48.6 +1.9
LALI Alcalda de L 5.11 108 *eP* Pn 16 12 48.7 +1.9
LALI IAML 16 14 11.1
comp=Z,814nm,0.6s
SNET Serv Nac Est T 5.13 106 Pn 16 12 48.0 +0.9
LOMA Loma Larga 5.20 106 *i* P Pn 16 12 48.6 +0.5
LOMA IVmB_BB 16 12 58.3
comp=Z,7µm,1.0s
LOMA IAmb IAmb 16 12 58.4
comp=Z,730nm,0.7s
LOMA *i* S Sn 16 13 45.5 -1.4
LOMA IAML 16 14 04.0
comp=Z,2µm,1.0s
SJTE Alcalda de S 5.36 106 *i* P Pn 16 12 51.6 +1.3
SJTE IAmb IAmb 16 13 01.0
comp=Z,480nm,0.7s
SJTE IVmB_BB 16 13 42.9
comp=Z,5µm,1.0s
SJTE *i* S Sn 16 13 50.1 -0.7
SJTE IAML 16 14 11.7
comp=Z,2µm,1.0s
PAVA Las Pavas 5.39 105 *eP* Pn 16 12 51.8 +0.9
PAVA Las Pavas 5.39 105 *iP* Pn 16 12 51.1 +0.3
PAVA IAmb IAmb 16 12 58.5
comp=Z,1µm,0.6s
PAVA IVmB_BB 16 13 28.4
comp=Z,16µm,1.0s
PAVA *i* S Sn 16 13 50.9 -0.9
PAVA IAML 16 14 27.8
comp=Z,3µm,1.0s
DAIG Los Arroyos 5.46 291 *eP* Pn 16 12 50.9 -0.8
DAIG *eS* Sn 16 13 48.5 -4.9
IZABA Izabal, Puerto 5.55 83 *iP* Pn 16 12 51.3 -1.6
IZABA IAmb IAmb 16 13 20.9
comp=Z,8.4nm,1.1s
IZABA IVmB_BB 16 13 49.7
comp=Z,840nm,1.0s
IZABA *i* S Sn 16 13 51.8 -3.6
IZABA IAML 16 15 01.7
comp=Z,29nm,1.0s
TECO Alcaldia de Te 5.59 106 *eP* Pn 16 12 54.7 +1.3
SCLA Alcaldia de Sa 5.59 104 *iP* Pn 16 12 54.6 +1.1
SCLA IAmb IAmb 16 13 04.9
comp=Z,430nm,0.7s
SCLA IVmB_BB 16 13 22.8
comp=Z,4µm,1.0s
SCLA *i* S Sn 16 13 56.5 -0.1
SCLA IAML 16 14 22.7
comp=Z,1µm,1.0s
PPM Popocatepetl 5.68 314 *eP* Pn 16 12 56.0 +0.9
PPM *eS* Sn 16 13 58.3 -1.0
MEIG Mezcala 5.80 299 *iP* Pn 16 12 58.1 +1.8
MEIG *eS* Sn 16 13 50.6 -11
ALJI Alcalda de J 5.85 107 *eS* Sn 16 14 01.7 -1.1
YAIG Yautepec 5.87 310 *eP* Pn 16 12 59.3 +1.9
YAIG *eS* Sn 16 13 55.8 -7.6
PLIG Platanillo 5.93 304 *eP* Pn 16 12 58.3 +0.1
PLIG *eS* Sn 16 14 01.6 -3.4
CAIG El Cayaco 6.03 289 *eP* Pn 16 12 59.5 0.0
CAIG *eS* Sn 16 14 00.1 -7.2
PACA Pacayal 6.04 105 *iP* Pn 16 13 00.3 +0.6
PACA IVmB_BB 16 13 29.1
comp=Z,25µm,1.0s
PACA IAmb IAmb 16 13 29.2
comp=Z,3µm,0.8s
PACA *i* S Sn 16 14 07.7 +0.1
PACA IAML 16 14 34.0
comp=Z,8µm,1.0s
UNM Universidad Na 6.24 313 Pn Pn 16 13 06.1 +3.4
UNM Universidad Na 6.24 313 *iP* Pn 16 13 06.0 +3.4
UNM *eS* Sn 16 14 21.1 +8.3
ARIG Puente Sto Nin 6.57 299 *eP* Pn 16 13 09.0 +2.0
ARIG *eS* Sn 16 14 17.4 -3.3
AMPH Amapala 6.71 105 *eP* Pn 16 13 08.2 -0.5
DEIG Demacu 6.83 319 *eP* Pn 16 13 10.3 -0.3
DEIG *eS* Sn 16 14 25.9 -1.2
TGUH Tegucigalpa,Un 6.90 98 Pn 16 13 11.6 +0.1
MYIG Mrida 7.23 36 *eP* Pn 16 13 15.5 -0.4
MYIG *eS* Sn 16 14 34.5 -2.3
CTUV Llano Grande 7.37 329 *eP* Pn 16 13 17.5 -0.4
CTUV *eS* Sn 16 14 31.2 -9.1
CRIN San Cristobal 7.45 108 Pn 16 13 20.1 +1.1
TEIG Tepich 7.66 48 Pn Pn 16 13 19.7 -2.0
TEIG Tepich 7.66 48 LR LR 16 16 46.8
comp=Z,37µm,20.1s,baz=9.5,slow=41
CNGN Cerro Negro 7.84 109 Pn 16 13 26.5 +2.0
MOIG Morelia 7.97 305 Pn Pn 16 13 29.4 +3.1
MOIG Morelia 7.97 305 *eP* Pn 16 13 27.0 +0.8
MOIG *eS* Sn 16 14 57.1 +1.9
MOIG Morelia 7.97 305 *iP* Pn 16 13 30.0 +3.8
MOIG IVmB_BB 16 13 33.9
comp=Z,2µm,1.0s
MOIG IAmb IAmb 16 13 35.6
comp=Z,250nm,0.9s
MOIG *i* S Sn 16 15 01.1 +5.9
JRQG Juriquilla Cam 8.04 314 Pn Pn 16 13 30.4 +3.1
SAPS Ciudad Sandino 8.23 110 *iP* Pn 16 13 31.2 +1.5
SAPS IAML 16 13 40.5
comp=Z,660nm,1.0s
SAPS IVmB_BB 16 13 40.5
comp=Z,6µm,1.0s
SAPS IAmb IAmb 16 13 40.9
comp=Z,500nm,0.9s
SAPS *i* S Sn 16 15 01.5 +0.1
MATN Matagalpa 8.43 104 Pn 16 13 34.5 +2.0
RPIG Rio Verde 8.60 322 *eS* Sn 16 15 05.6 -4.9
BOAB BOACO BROADBAN 8.81 107 Pn 16 13 38.2 +0.6
MMIG Aquila 9.21 291 *eP* Pn 16 13 43.5 +0.5
MMIG *eS* Sn 16 15 24.0 -1.4
ACON Acoyapa 9.43 108 Pn Pn 16 13 46.4 +0.3
HZTE Horizontes, Gu 9.57 116 Pn Pn 16 13 49.9 +1.9
ORTG Ortega, Santa 9.85 118 Pn 16 13 53.6 +1.6
ESPN Las Esperanzas 10.16 106 Pn 16 13 57.4 +1.3
JTS Las Juntas de 10.32 117 Pn 16 14 01.1 +2.8
JTS Las Juntas de 10.32 117 P Pn 16 13 57.0 -1.4
comp=Z,1.8nm,0.3s,baz=295,slow=11,SNR=6.2
JTS S Sn 16 15 53.1 +0.3
comp=Z,21nm,0.9s,baz=309,slow=23,SNR=0.5
comp=Z,5.2nm,0.4s
ARE1 Arenal 1 10.45 115 Pn 16 14 00.6 +0.6
LNIG Linares 10.85 334 *eP* Pn 16 14 07.9 +2.4
LNIG *i* S Sn 16 16 10.4 +4.8
JACO JACO, Garabito 10.88 119 Pn 16 14 08.0 +2.0
ZAIG Zacatecas 10.89 315 Pn Pn 16 14 09.5 +3.2
CJM Chamela 11.13 294 *eP* Pn 16 14 11.7 +2.4
ANIG Ahuacatlan 11.35 303 *eP* Pn 16 14 18.0 +5.6
LCR2 La Lucha 2 11.40 117 Pn Pn 16 14 15.2 +1.9
RIMA Rio Macho 11.51 116 Pn 16 14 15.9 +1.1
PEZE Perez Zeledon, 11.86 118 Pn 16 14 20.2 +0.7
SRBA San Rafael, Bu 12.21 118 Pn 16 14 24.9 +0.7
DRK0 Durika 12.29 117 Pn 16 14 26.3 +0.9
HBVL Hebbronville 12.54 342 Pn Pn 16 14 30.6 +2.0
BRU2 Volcan 13.00 118 Pn Pn 16 14 34.8 -0.3
SOR Soroa 13.11 53 Pn Pn 16 14 34.1 -2.4
833A Chaparral WMA, 13.94 341 Pn Pn 16 14 49.3 +1.6
833A Chaparral WMA, 13.94 341 P Pn 16 14 48.9 +1.2
baz=159,SNR=34
735A Kenedy 14.03 347 Pn 16 14 50.0 +1.2
MCIG Muzquiz 14.32 333 *iP* Pn 16 14 50.7 -2.2
EF01 Eagle Ford 01 14.42 346 Pn 16 14 54.3 +0.2
HKT Hockley 14.80 355 Pn Pn 16 14 59.2 0.0
HNDO Hondo 15.03 343 Pn 16 15 03.3 +1.0
HNDO IAmb IAmb 16 15 15.9
comp=Z,54nm,0.7s
DRIO Del Rio 15.36 339 Pn Pn 16 15 06.6 0.0
SSIG Sanalona 15.42 311 *eP* P 16 15 13.0 +1.7
HPIG 15.80 320 Pn 16 15 14.0 +1.5
435B Jarrell 15.86 350 Pn Pn 16 15 13.6 +0.6
435B Jarrell 15.86 350 P Pn 16 15 13.9 +0.9
baz=168
JCT Junction City 16.08 343 Pn 16 15 17.0 +1.2
JCT IAmb IAmb 16 15 27.4
comp=Z,44nm,0.7s
JCT Junction City 16.08 343 P Pn 16 15 16.3 +0.4
baz=160
SAND Sanderson 16.40 335 Pn Pn 16 15 20.9 +0.9
NATX Nacogdoches 16.54 359 Pn Pn 16 15 20.9 -0.8
NATX IAmb IAmb 16 15 23.8
comp=Z,120nm,1.5s
NATX Nacogdoches 16.54 359 P Pn 16 15 21.2 -0.5
baz=176
TXAR Lajitas Array 16.55 330 Pn Pn 16 15 23.4 +1.5
TXAR Lajitas Array 16.55 330 P P 16 15 23.8 -0.2
comp=Z,0.5nm,0.3s,baz=156,slow=13,SNR=18
TXAR LR LR 16 22 17.8
comp=Z,183nm,21.7s,baz=117,slow=39
comp=Z,1.4nm,0.5s
BRDY Brady 16.63 346 P 16 15 24.1 -0.6
BRDY IAmb IAmb 16 15 39.1
comp=Z,101nm,0.8s
OZNA Ozona 16.90 339 P 16 15 27.7 -0.1
OZNA IAmb IAmb 16 15 35.7
comp=Z,99nm,0.8s
WHTX Lake Whitney, 17.02 351 P P 16 15 28.5 -0.5
baz=169,SNR=17
WHTX Lake Whitney, 17.02 351 P P 16 15 28.1 -0.8
baz=169,SNR=17
BRAL Brewton 17.28 21 P P 16 15 31.5 -0.4
BRAL IAmb IAmb 16 15 37.1
comp=Z,108nm,0.8s
BRAL Brewton 17.28 21 P Pn 16 15 29.1 -1.8
baz=204
VBMS Vicksburg 17.35 11 P P 16 15 32.0 -0.6
VBMS Vicksburg 17.35 11 P Pn 16 15 31.0 -0.6
baz=192
FW13 Cleburne 17.37 351 P Pn 16 15 32.2 +0.2
FW13 IAmb IAmb 16 15 40.4
comp=Z,78nm,0.7s
ALPN Alpine 17.42 332 P 16 15 34.8 +1.2
FW16 Waxahatchie 17.42 353 P P 16 15 33.0 -0.4
553A Crawfordville 17.51 30 P Pn 16 15 32.8 -0.9
553A IAmb IAmb 16 15 36.3
comp=Z,168nm,1.1s
DWPF Disney Wildern 17.58 41 P Pn 16 15 32.3 -2.2
baz=225
143A Socs Landing, 17.68 8 P P 16 15 35.6 -0.6
143A IAmb IAmb 16 15 45.4
comp=Z,117nm,1.4s
FW07 Weatherford 17.77 350 P P 16 15 37.4 +0.2
SGCY Sterling City 17.82 341 P 16 15 38.2 +0.3
SGCY IAmb IAmb 16 15 44.6
comp=Z,84nm,0.7s
656A Willston 17.84 36 P P 16 15 37.0 -1.1
656A IAmb IAmb 16 15 59.0
comp=Z,101nm,1.0s
MNHN Monahans 17.88 336 P P 16 15 40.4 +1.8
MNHN IAmb IAmb 16 15 47.8
comp=Z,54nm,0.8s
PLPT Palo Pinto 17.96 349 P Pn 16 15 39.1 -0.2
PLPT IAmb IAmb 16 15 50.5
comp=Z,57nm,0.8s
FW06 Azle 17.99 351 P Pn 16 15 38.9 -0.7
FW06 IAmb IAmb 16 16 06.1
comp=Z,49nm,0.8s
Z38A Mt. Pleasant 18.05 358 P P 16 15 40.9 +0.6
Z38A IAmb IAmb 16 15 51.0
comp=Z,53nm,0.8s
ABTX Abilene, Hawle 18.07 345 Pn 16 15 40.9 +0.3
ABTX Abilene, Hawle 18.07 345 P Pn 16 15 41.4 +0.8
baz=163,SNR=18
Z41A Richland Creek 18.09 4 P P 16 15 40.6 -0.2
Z41A IAmb IAmb 16 15 50.7
comp=Z,148nm,1.3s
FW03 Perrin-Whitt E 18.14 350 P Pn 16 15 41.4 -0.1
FW03 IAmb IAmb 16 15 58.8
comp=Z,61nm,0.8s
250A Grady 18.29 22 P P 16 15 41.8 -1.2
250A IAmb IAmb 16 15 45.5
comp=Z,122nm,1.3s
Z35A Perchaven, San 18.30 352 P P 16 15 42.5 -0.6
Z35A IAmb IAmb 16 16 07.0
comp=Z,57nm,0.8s
PECS Pecos 18.37 333 P Pn 16 15 45.4 +1.1
352A Blakely 18.39 26 P Pn 16 15 43.6 -0.9
VHRN Van Horn 18.39 330 P Pn 16 15 45.8 +1.1
WLAR White Oak Lake 18.50 3 Pn 16 15 45.9 +0.2
WLAR IAmb IAmb 16 16 07.0
comp=Z,117nm,1.2s
SN05 Snyder 5 18.64 342 P P 16 15 46.6 -0.3
SN05 IAmb IAmb 16 16 00.2
comp=Z,50nm,0.8s
SN07 Snyder 07 18.84 343 P Pn 16 15 50.2 +0.2
SN07 IAmb IAmb 16 15 55.1
comp=Z,43nm,0.7s
Z47A Carrollton 18.85 16 P P 16 15 47.9 -1.2
Z47A IAmb IAmb 16 16 18.7
comp=Z,100nm,1.1s
APMT Aspermont 18.85 345 P Pn 16 15 49.7 -0.4
APMT IAmb IAmb 16 16 21.4
comp=Z,45nm,0.8s
WTFS Witchita Falls 18.92 349 Pn 16 15 50.4 -0.5
WTFS IAmb IAmb 16 16 01.8
comp=Z,108nm,1.1s
TIGA Tifton 18.95 29 P P 16 15 49.2 -1.1
baz=213,SNR=7.2
POST Post 19.00 341 P P 16 15 51.5 +0.6
POST IAmb IAmb 16 15 56.4
comp=Z,46nm,0.7s
LRAL Lakeview Retre 19.01 19 P 16 15 50.5 -0.4
LRAL Lakeview Retre 19.01 19 P P 16 15 49.4 -1.5
baz=202,SNR=7.2
X40A Basin Creek Fa 19.31 4 Pn 16 15 54.5 -1.0
MIAR Mount Ida 19.33 2 P P 16 15 53.4 -1.0
MIAR IAmb IAmb 16 16 16.0
comp=Z,60nm,1.1s
MIAR Mount Ida 19.33 2 P P 16 15 52.9 -1.5
baz=182,SNR=20
MNTX Cornudas Mount 19.34 330 P P 16 15 54.4 -0.1
baz=146,SNR=6.5
SJCC San Jacinto, C 19.38 103 *eP* P 16 15 53.8 -1.4
X37A Clayton 19.39 357 P P 16 15 55.1 +0.1
X37A IAmb IAmb 16 16 06.5
comp=Z,43nm,0.7s
DKNS Dickens 19.39 343 P Pn 16 15 55.9 -0.7
DBBC Dabeiba 19.50 112 *eP* Pn 16 16 00.9 +2.8
152A Waverly Hall 19.50 25 Pn 16 15 58.2 +0.4
152A IAmb IAmb 16 16 09.7
comp=Z,149nm,1.5s
UALR University of 19.63 5 P P 16 15 56.8 -0.8
X34A Smith Ranch, M 19.63 351 Pn 16 15 58.5 -0.9
OXF Oxford 19.79 12 P P 16 15 57.9 -1.5
baz=194
UREC San Jos de Ur 19.80 110 *eP* P 16 15 58.0 -1.7
Z51A Franklin 19.90 23 P Pn 16 16 00.8 -1.7
WMOK Wichita Mounta 19.92 349 P 16 16 01.2 +0.3
WMOK IAmb IAmb 16 16 29.8
comp=Z,34nm,0.9s
WMOK Wichita Mounta 19.92 349 P P 16 16 01.0 +0.1
baz=167,SNR=14
Y49A Blount Mountai 19.95 20 P P 16 16 00.6 -0.6
GR1C Gorgona, Isla 19.97 126 *eP* Pn 16 16 02.9 -0.5
W35A Tecumseh 20.06 354 P P 16 16 02.0 -0.3
W35A IAmb IAmb 16 16 14.8
comp=Z,53nm,0.8s
CBOC Ciudad Bolivar 20.20 115 *eP* Pn 16 16 06.2 -0.2
MSTX Muleshoe 20.25 339 P P 16 16 03.9 -0.7
baz=156,SNR=7.8
HELC Santa Helena 20.47 114 *eP* Pn 16 16 09.3 -0.5
GOGA Godfrey 20.67 26 P P 16 16 07.3 -1.7
baz=211,SNR=24
TUL3 Leonard 20.72 357 P P 16 16 08.4 -1.2
baz=176,SNR=6.5
AMTX Amarillo 20.75 343 P P 16 16 09.6 -0.3
baz=159
OK029 Liberty Lake 20.76 353 P 16 16 09.4 -0.5
OK029 IAmb IAmb 16 16 14.2
comp=Z,56nm,0.7s
OK052 Battle Ridge R 20.88 354 P 16 16 10.6 -0.7
RLO Rose Lookout 20.95 358 P 16 16 12.3 +0.4
RLO IAmb IAmb 16 16 37.1
comp=Z,27nm,0.9s
OK033 Mehan 20.95 354 P 16 16 11.3 -0.7
LCAR Lake Charles 21.03 7 P P 16 16 12.0 -0.9
LCAR IAmb IAmb 16 16 48.6
comp=Z,32nm,0.9s
JAMC Jamundi, Valle 21.03 123 *eP* P 16 16 14.0 +0.7
GUY2C Guyana, Caldas 21.07 116 *eP* 16 16 15.4
121A Cookes Peak, D 21.21 327 P P 16 16 15.9 +0.9
baz=141,SNR=27
PTBC PUERTO BERRIO, 21.27 112 *eP* P 16 16 16.0 +0.3
BBAC Balboa, Cauca 21.29 126 *eP* P 16 16 17.3 +1.3
ANIL Santa Ana 21.40 118 *eP* P 16 16 20.3 +3.0
POPC Popayan, Colom 21.43 124 *eP* P 16 16 19.1 +1.5
OTAV Otavalo 21.56 132 P P 16 16 20.8 +1.6
OTAV IAmb IAmb 16 16 21.9
comp=Z,35nm,1.2s
BLOK Blackwell 21.68 354 P 16 16 19.2 -0.7
WVT Waverly 21.69 14 P P 16 16 19.6 -0.2
WVT IAmb IAmb 16 16 25.8
comp=Z,36nm,1.0s
WVT Waverly 21.69 14 P P 16 16 18.6 -1.3
baz=197
IMBA Imbabura, San 21.72 131 P P 16 16 22.8 +2.0
T35A Sooner Cattle 21.77 355 P P 16 16 19.9 -0.9
T35A IAmb IAmb 16 16 59.8
comp=Z,38nm,0.9s
ORTC Ortega, Tolima 21.84 119 *eP* P 16 16 23.3 +1.6
DUN6 Lazy B Ranch 21.94 325 P P 16 16 25.3 +2.5
KAN14 Manchester OK 21.97 352 P P 16 16 23.0 +0.1
KAN14 IAmb IAmb 16 16 25.4

NHSC **New Hope** 22.00 33 P P 16 16 22.0 -1.3
baz=219
Y22D **IRIS PASSCAL I** 22.02 331 P P 16 16 23.7 0.0
baz=146
Y22F **Passcal Instru** 22.02 331 P P 16 16 23.4 -0.3
baz=146
BONI **La Bonita** 22.09 130 eP P 16 16 27.1 +2.5
KAN09 **Caldwell North** 22.10 353 P P 16 16 23.0 -1.3
KAN09 IAmb IAmb 16 16 26.7
comp=Z,37nm,0.7s
ROSC **El Rosal** 22.16 115 P P 16 16 26.5 +0.9
comp=Z,49nm,1.1s,baz=288,slow=19,SNR=19
comp=Z,49nm,1.1s
PRAC **Prado** 22.24 119 eP P 16 16 26.8 +0.7
BARC **Barichara** 22.40 110 eP P 16 16 29.8 +1.8
TKL **Tuckaleechee C** 22.50 23 LR LR 16 27 04.0
comp=Z,639nm,20.1s,baz=204,slow=41
ANMO **Albuquerque** 22.54 333 P P 16 16 28.6 -0.7
baz=148
ANMO **Albuquerque** 22.54 333 P P 16 16 30.9 +1.6
comp=Z,5.1nm,0.7s,baz=234,slow=10.0,SNR=8.3
comp=Z,5.1nm,0.7s
PAMC **Pamplona, Colo** 22.55 108 eP P 16 16 29.7 -0.2
TUC **Tucson** 22.74 322 P P 16 16 31.2 -0.1
baz=135
CHIC **Chingaza** 22.78 115 eP P 16 16 34.4 +2.2
CCM **Cathedral Cave** 22.98 6 P P 16 16 32.0 -1.7
baz=187
VILC **Villavicencio,** 23.06 116 eP P 16 16 36.7 +1.9
KMSC **Kings Mountain** 23.07 28 P P 16 16 32.3 -2.3
baz=213
R40A **Maddies Statio** 23.13 4 P P 16 16 33.5 -1.5
R40A IAmb IAmb 16 16 46.7
comp=Z,32nm,0.9s
TZTN **Tazewell** 23.37 22 P P 16 16 34.6 -3.0
baz=207
T25A **Trinidad** 23.68 340 P P 16 16 41.9 +1.2
T25A **Trinidad** 23.68 340 P P 16 16 41.8 +1.2
baz=155,SNR=22
214A **Organ Pipe Nat** 23.77 318 P P 16 16 41.3 0.0
baz=130
X18A **Snowflake** 23.90 327 P P 16 16 44.2 +1.5
KSU1 **Kansas State U** 23.95 356 P P 16 16 40.8 -2.2
baz=174
SDV **Santo Domingo** 23.96 102 P P 16 16 44.1 +0.6
SDV IAmb IAmb 16 17 19.8
comp=Z,36nm,0.9s
SDV **Santo Domingo** 23.96 102 LR LR 16 28 04.2
comp=Z,547nm,18.7s,baz=282,slow=42
BOSC **San Juan Bosco** 23.99 138 P P 16 16 45.4 +1.7
CBKS **Cedar Bluff** 24.06 350 P P 16 16 42.6 -1.4
baz=167,SNR=10
WCI **Wyandotte Cave** 24.06 16 P P 16 16 40.3 -3.6
baz=199
W18A **Petrified Fore** 24.24 328 P 16 16 47.5 +1.7
W18A IAmb IAmb 16 16 59.5
comp=Z,46nm,1.4s
W18A **Petrified Fore** 24.24 328 P P 16 16 46.6 +0.7
baz=141
SDCO **Great Sand Dun** 24.60 338 P P 16 16 49.2 0.0
baz=153,SNR=11
KSCO **Kaye Shedlock'** 24.88 344 P P 16 16 52.5 +1.0
KSCO IAmb IAmb 16 17 11.2
comp=Z,28nm,0.9s
KSCO **Kaye Shedlock'** 24.88 344 P P 16 16 51.3 -0.3
baz=160
113A **Mohawk Valley,** 24.91 318 P P 16 16 53.7 +2.0
113A IAmb IAmb 16 17 06.8
comp=Z,30nm,1.3s
S22A **4UR Ranch, Cre** 25.10 336 P P 16 16 52.4 -1.4
baz=150
BLA **Blacksburg** 25.21 27 P P 16 16 52.9 -1.6
baz=213
MVCO **Mesa Verde** 25.34 333 P P 16 16 57.5 +1.6
MVCO IAmb IAmb 16 17 09.6
comp=Z,19nm,0.9s
MVCO **Mesa Verde** 25.34 333 P P 16 16 55.5 -0.3
baz=146
WUAZ **Wupatki** 25.41 326 P P 16 16 55.6 -0.9
baz=138
Q24A **Divide** 25.57 340 P P 16 16 57.2 -0.9
baz=155
HDIL **Hopedale** 25.69 9 P P 16 16 56.6 -2.1
baz=191
P49A **Miami Univ. Ec** 25.71 17 P P 16 16 57.0 -2.0
baz=202
GLA **Glamis** 25.77 317 P P 16 16 58.4 -1.2
baz=129
SFIN **Lafayette** 25.92 13 P P 16 16 57.4 -3.4
baz=196
PDMCI **Parker Dam,Lak** 26.15 320 P P 16 17 01.3 -1.6
baz=132
O48B **Farmland** 26.27 16 P P 16 17 00.6 -3.3
baz=200
BGNE **Belgrade** 26.38 353 P P 16 17 03.5 -1.6
baz=171
ISCO **Idaho Springs** 26.48 340 P P 16 17 04.6 -1.7
baz=155
OGNE **Ogallala** 26.57 347 P P 16 17 07.5 +0.7
OGNE **Ogallala** 26.57 347 P P 16 17 05.9 -0.9
baz=163
U15A **North Rim** 26.58 326 P P 16 17 09.5 +2.3
P52A **Corning** 26.63 21 P P 16 17 05.0 -2.3
baz=207
IRM **Iron Mountain** 26.68 319 P P 16 17 06.8 -1.0
baz=130
BELC **Belle Mtn. Jos** 27.13 318 P P 16 17 12.5 +0.5
baz=128
ATAH **Atahualpa** 27.18 143 LR LR 16 26 29.4
comp=Z,604nm,18.9s,baz=308,slow=33
PFO **Pinyon Flats O** 27.20 316 LR LR 16 28 09.1
comp=Z,507nm,21.6s,baz=131,slow=36
GMRC **Granite Mounta** 27.41 319 P P 16 17 15.1 +0.6
baz=130
V12A **Nelson** 27.54 322 P P 16 17 16.7 +1.1
PHWY **Pilot Hill** 27.80 342 P P 16 17 18.8 +0.7
JFWS **Jewell Farm** 27.89 6 P P 16 17 17.2 -1.4
JFWS IAmb IAmb 16 17 20.5
comp=Z,17nm,0.7s
JFWS **Jewell Farm** 27.89 6 P P 16 17 17.5 -1.1
baz=188
Q16A **Castle Valley** 27.95 331 P P 16 17 20.6 +1.3
MSU **Marysvale** 28.11 329 P P 16 17 23.1 +2.3
TMUT **Trail Mountain** 28.27 332 P P 16 17 24.0 +1.7
BSUT **Blindstream Ca** 29.08 334 P P 16 17 31.0 +1.4
NLU **North Lily Min** 29.20 331 P P 16 17 30.9 +0.4
PCRV **Puerto La Cruz** 29.35 96 LR LR 16 29 41.2
comp=Z,316nm,21.3s,slow=37
MPMC **Manual Prospec** 29.37 319 P P 16 17 33.8 +1.8
baz=129
SPR3 **Spring Creek 3** 29.57 327 P P 16 17 35.5 +1.5
SPR3 IAmb IAmb 16 17 48.2
comp=Z,19nm,1.4s
DUG **Dugway, Tooele** 29.73 331 P P 16 17 35.9 +0.8
R11B **Troy Canyon, C** 29.78 325 P P 16 17 37.1 +1.5
baz=135
CWC **Cottonwood Cre** 29.98 319 P P 16 17 38.2 +0.9
baz=129
SPMN **Marine on St.** 30.01 2 P P 16 17 35.5 -1.8
RSSD **Black Hills** 30.05 346 P P 16 17 39.0 +1.1
baz=161
BGU **Big Grassy Mou** 30.41 331 P P 16 17 42.1 +1.0
BW06 **Boulder Array** 30.49 338 P P 16 17 42.5 +0.7
baz=150
PD31 **Pinedale Array** 30.49 338 P P 16 17 42.5 +0.7
PDAR **Pinedale Array** 30.49 338 P P 16 17 43.2 +1.3
comp=Z,1.5nm,0.8s,baz=145,slow=8.1,SNR=8.9
PDAR PcP PcP 16 20 39.6 -0.8
comp=Z,0.5nm,0.6s,baz=139,slow=4.8,SNR=2.6
PDAR LR LR 16 32 43.5
comp=Z,250nm,19.6s,baz=146,slow=42
comp=Z,1.5nm,0.8s
DSP **Deep Springs** 30.50 321 P 16 17 44.0 +2.3
AHID **Auburn Hatcher** 31.08 336 P P 16 17 47.8 +0.8
AHID IAmb IAmb 16 18 03.2
comp=Z,13nm,1.1s
CZSB **Cruzeiro do Su** 31.23 135 P P 16 17 49.0 +0.7
ELK **Elko** 31.34 329 LR LR 16 32 22.7
comp=Z,745nm,19.1s,baz=158,slow=40
MDPB **Devils Postpil** 31.35 320 P P 16 17 52.6 +3.0
NVAR **Mina Array Bea** 31.39 322 P P 16 17 51.8 +1.9
NVAR **Mina Array Bea** 31.39 322 P P 16 17 51.9 +2.1
comp=Z,3.1nm,0.7s,baz=136,slow=8.7,SNR=17
NVAR PcP PcP 16 20 43.6 +0.8
comp=Z,1.0nm,0.9s,baz=107,slow=4.8,SNR=2.2
NVAR LR LR 16 31 36.5
comp=Z,368nm,19.2s,baz=136,slow=38
comp=Z,3.1nm,0.7s
SNOW **Snow King Moun** 31.53 337 P P 16 17 52.4 +1.3
E28A **Huff** 31.79 352 P P 16 17 52.8 -0.2
NNA **Nana** 32.03 146 LR LR 16 28 30.7
comp=Z,481nm,20.4s,baz=343,slow=32
FLWY **Flagg Ranch** 32.04 337 P P 16 17 55.8 +0.3
SADO **Sadowa** 32.21 20 LR LR 16 33 49.9
comp=Z,363nm,18.4s,baz=219,slow=42
H17A **Grant Village** 32.27 338 P P 16 17 56.6 -0.9
baz=149
RLMT **Red Lodge** 32.45 340 P P 16 17 57.6 -1.4
baz=152
EYMN **Ely** 32.79 3 P P 16 17 59.6 -2.2
baz=185,SNR=7.6
MDND **Maddock** 32.90 353 P P 16 18 02.5 -0.2
baz=170
LAO **LASA Array** 32.99 345 P P 16 18 04.0 +0.4
LAO IAmb IAmb 16 18 10.2
comp=Z,11nm,1.2s
LAO **LASA Array** 32.99 345 P P 16 18 03.0 -0.6
baz=158
AGMN **Agassiz Nation** 33.09 358 P P 16 18 02.5 -1.8
AGMN **Agassiz Nation** 33.09 358 P P 16 18 03.7 -0.6
baz=177,SNR=18
HLID **Hailey** 33.12 333 P P 16 18 05.0 0.0
HLID **Hailey** 33.12 333 P P 16 18 05.1 +0.2
baz=142
B35A **Bob, Littlefor** 33.13 1 P P 16 18 02.7 -2.0
B35A IAmb IAmb 16 18 05.7
comp=Z,22nm,0.8s
MFID **Camas Ranch** 33.65 331 P P 16 18 12.0 +2.5
BOZ **Bozeman (W)** 33.68 338 P P 16 18 09.5 -0.2
baz=149
DGMT **Dagmar** 34.22 348 P P 16 18 14.8 +0.5
baz=163
J08A **Circle Bar Ran** 34.89 329 P P 16 18 21.2 +1.0
PLID **Pearl Lake** 35.03 333 P P 16 18 22.6 +1.1
ULM **Lac du Bonnet** 35.04 358 P P 16 18 19.7 -1.5
comp=Z,16nm,0.8s,baz=172,slow=11,SNR=18
ULM LR LR 16 35 49.8
comp=Z,265nm,21.1s,baz=156,slow=42
comp=Z,16nm,0.8s
EGMT **Eagleton** 35.19 342 P P 16 18 22.9 +0.3
baz=153
YBH **Yreka Blue Hor** 36.10 323 P P 16 18 30.9 +0.3
comp=Z,1.6nm,0.7s,baz=115,slow=3.5,SNR=4.2
YBH LR LR 16 32 52.8
comp=Z,411nm,21.3s,baz=148,slow=35
comp=Z,1.6nm,0.7s
F10A **Beach Ranch, E** 36.26 333 P P 16 18 33.0 +1.1
ETMB **Extrema** 37.28 130 P P 16 18 40.1 -0.7
NEW **Newport** 38.01 335 P P 16 18 47.2 +0.6
baz=142
NEW **Newport** 38.01 335 P P 16 18 47.9 +1.3
comp=Z,0.8nm,0.4s,baz=158,slow=8.2,SNR=2.9
NEW LR LR 16 37 20.2
comp=Z,473nm,18.1s,baz=156,slow=41
comp=Z,0.8nm,0.4s
SAML **Samuel** 39.05 126 P P 16 18 54.2 -1.4
PB16 **IPOC Station P** 41.28 143 P P 16 19 15.4 +0.7
PB16 IAmb IAmb 16 19 17.0
comp=Z,15nm,1.1s
MDP **Montagnes des** 42.14 99 LR LR 16 37 45.8
comp=Z,457nm,21.8s,baz=294,slow=37
PB11 **IPOC Station P** 42.32 144 P P 16 19 23.3 +0.5
PB11 IAmb IAmb 16 19 24.3
comp=Z,29nm,1.1s
GO01 **Chusmiza** 42.51 144 P P 16 19 25.4 +0.7
GO01 IAmb IAmb 16 19 27.0
comp=Z,29nm,1.2s
PB08 **IPOC Station P** 42.91 144 P P 16 19 27.9 +0.1
PB02 **IPOC Station P** 43.44 146 P P 16 19 32.0 +0.2
PB02 IAmb IAmb 16 19 33.6
comp=Z,24nm,1.1s
VILB **Vilhena** 43.81 128 P P 16 19 34.4 -0.3
VILB IAmb IAmb 16 19 58.3
comp=Z,22nm,0.9s
RPN **Rapa Nui** 44.48 199 LR LR 16 33 29.4
comp=Z,360nm,20.3s,baz=15,slow=30
SCHQ **Schefferville** 44.97 22 P P 16 19 44.5 +1.0
comp=Z,1.0nm,0.5s,baz=218,slow=17,SNR=1.3
SCHQ LR LR 16 40 36.9
comp=Z,989nm,19.8s,baz=233,slow=39
comp=Z,1.0nm,0.5s
LVC **Limon Verde** 45.02 146 LR LR 16 37 42.5
comp=Z,228nm,19.8s,baz=314,slow=35
SIV **San Ignacio** 45.10 132 LR LR 16 38 01.7
comp=Z,330nm,19.4s,baz=292,slow=35
BBB **Bella Bella** 45.68 331 LR LR 16 41 28.4
comp=Z,209nm,18.3s,baz=164,slow=39
GO02 **Mina Guanaco** 46.75 149 P P 16 19 58.2 0.0
AC02 **Maricunga** 48.37 149 P P 16 20 12.3 +1.3
YKA **Yellowknife Ar** 49.42 348 P P 16 20 17.5 -0.5
YKA **Yellowknife Ar** 49.42 348 P P 16 20 17.9 -0.1
comp=Z,6.2nm,0.8s,baz=150,slow=7.1,SNR=28
YKA LR LR 16 46 11.6
comp=Z,236nm,18.6s,baz=138,slow=42
comp=Z,6.2nm,0.8s
DLBC **Dease Lake** 50.71 337 P P 16 20 29.1 +1.1
DLBC IAmb IAmb 16 21 01.4
comp=Z,21nm,1.4s
DLBC **Dease Lake** 50.71 337 P P 16 20 28.0 0.0
baz=133
DLBC **Dease Lake** 50.71 337 P P 16 20 29.4 +1.4
comp=Z,2.3nm,0.7s,baz=120,slow=3.6,SNR=5.2
DLBC LR LR 16 44 57.4
comp=Z,210nm,18.1s,baz=138,slow=40
comp=Z,2.3nm,0.7s
WTLY **Watson Lake, Y** 51.44 339 P P 16 20 33.0 -0.4
baz=136
R33M **Jennings River** 51.73 337 P P 16 20 35.5 -0.2
baz=133
FRB **Frobisher Bay** 51.73 14 LR LR 16 44 32.1
comp=Z,403nm,20.9s,baz=196,slow=38
Q32M **Nakina River** 51.93 336 P P 16 20 37.1 -0.2
baz=131
TGTN **Hyland Airport** 52.29 340 P P 16 20 39.7 0.0
baz=137
P32M **Atlin** 52.91 336 P P 16 20 44.2 -0.2
baz=130
S31K **Pelican** 52.94 333 P P 16 20 44.6 +0.1
baz=126
P33M **Teslin, Yukon** 52.97 337 P P 16 20 44.6 -0.2
baz=131
N32M **Quiet Lake** 53.69 338 P P 16 20 50.4 +0.4
baz=131
WHY **Whitehorse** 54.04 337 P P 16 20 52.9 +0.2
baz=129
FARO **Faro, Yukon** 54.50 339 P P 16 20 55.6 -0.3
baz=132
P30M **Million Dollar** 54.53 335 P P 16 20 56.6 +0.4
baz=126
P29M **Windy Craggy** 54.55 335 P P 16 20 56.0 -0.4
baz=125
O30N **Mendenhall** 54.58 336 P P 16 20 55.6 -0.9
baz=128
CPUP **Villa Florida** 54.70 139 P P 16 20 56.5 -1.3
comp=Z,24nm,1.3s,baz=334,slow=8.3,SNR=7.4
CPUP LR LR 16 45 39.6
comp=Z,140nm,18.4s,baz=336,slow=38
comp=Z,24nm,1.3s
M31M **Drury Creek, Y** 54.85 338 P P 16 20 57.8 -0.6
baz=130
BDFB **Brasilia** 55.02 122 P P 16 20 59.6 -0.8
comp=Z,4.4nm,0.4s,baz=300,slow=9.8,SNR=6.8
BDFB LR LR 16 46 19.8
comp=Z,167nm,18.8s,baz=321,slow=38
comp=Z,4.4nm,0.4s
HYT **Haines Junctio** 55.16 336 P P 16 21 00.6 -0.2
baz=126
PNL **Peninsula** 55.27 334 P P 16 21 01.0 -0.5
baz=124
O29M **Mount Kennedy** 55.29 335 P P 16 21 01.1 -0.6
baz=125
PINM **Pinnacle** 55.87 334 P P 16 21 05.5 -0.3
baz=123
YUK4 **Talbot Arm** 55.92 336 P P 16 21 05.7 -0.6
baz=126
M30M **Minto, Yukon** 55.95 338 P P 16 21 05.3 -1.1
baz=128
YUK8 **Steele Glacier** 56.33 336 P P 16 21 07.8 -1.5
baz=124
M29M **Somme Creek** 56.49 337 P P 16 21 09.8 -0.5
baz=126
MESA **MESA** 56.63 334 P P 16 21 09.2 -2.2
baz=121
L29M **L29M** 56.77 338 P P 16 21 11.3 -0.9
baz=127
CTG **Chitna Glacier** 56.79 335 P P 16 21 11.7 -0.8
baz=122
YUK3 **Moose Creek** 56.88 336 P P 16 21 12.1 -1.1
baz=124
K29M **Barlow Dome** 57.00 339 P P 16 21 13.6 -0.3
baz=128
J30M **Hart River** 57.05 340 P P 16 21 13.6 -0.7
baz=130
H31M **Peel River** 57.23 342 P P 16 21 15.4 0.0
baz=132
BVCY **Beaver Creek** 57.39 336 P P 16 21 16.6 0.0
baz=124
I30M **Mount Dempster** 57.48 340 P P 16 21 16.5 -0.8
baz=130
KAIM **Kayak Island** 57.58 333 P P 16 21 16.9 -0.9
baz=118
MCARA **McCarthy VSAT** 57.70 335 P P 16 21 18.1 -0.6
baz=121
M27K **Edge Creek, AK** 57.76 336 P P 16 21 19.6 +0.3
baz=122
DAWY **Dawson** 57.79 338 P P 16 21 19.7 +0.3
baz=126
G31M **Satah River** 57.97 343 P P 16 21 21.0 +0.5
baz=133
L27K **Beaver Creek,** 58.12 337 P P 16 21 21.9 +0.2
baz=123
BMRM **Bremner River** 58.16 334 P P 16 21 22.1 +0.1
baz=119
F31M **Tsiigehtchic** 58.18 343 P P 16 21 22.3 +0.4
baz=134
Q23K **Middleton Isla** 58.21 332 P P 16 21 22.4 +0.1
baz=116
EYAK **Cordova Ski Ar** 58.46 333 P P 16 21 24.8 +0.8
baz=118
N25K **Chitina, Valde** 58.47 334 P P 16 21 23.6 -0.6
baz=119
G30M **tAoh Zraii Nji** 58.58 342 P P 16 21 24.8 -0.1
baz=131
INK **Inuvik** 58.72 344 P P 16 21 25.2 -0.5
baz=134
INK **Inuvik** 58.72 344 LR LR 16 51 11.8
comp=Z,469nm,18.2s,baz=178,slow=40
K27K **Chicken** 58.74 338 P P 16 21 25.1 -0.9
baz=123
H29M **Whitestone** 58.75 341 P P 16 21 25.8 -0.2
baz=128
I28M **Miner Creek** 58.80 340 P P 16 21 25.6 -0.8
baz=126
EGAK **Eagle** 58.83 339 P P 16 21 26.5 -0.1
baz=124
F30M **Barrier River** 58.87 343 P P 16 21 27.0 +0.2
baz=132
P23K **Montague Islan** 58.94 332 P P 16 21 27.4 0.0
baz=116
KLU **Klutina** 58.97 334 P P 16 21 27.6 -0.1
baz=118
HARP **HAARP** 59.09 335 P P 16 21 29.4 +1.0
baz=119
SFJD **Kangerlussuaq** 59.12 18 LR LR 16 49 40.2
comp=Z,289nm,18.0s,baz=218,slow=39
M24K **Tolsona, Glenn** 59.37 335 P P 16 21 30.4 -0.1
baz=118
SCRK **Sand Creek** 59.43 337 P P 16 21 31.1 +0.2
baz=121
I27K **Kandik River** 59.46 339 P P 16 21 31.9 +0.9
baz=124
PAX **Paxson** 59.49 336 P P 16 21 31.3 0.0
baz=119
RES **Resolute Bay** 59.54 360 LR LR 16 52 33.9
comp=Z,130nm,19.6s,baz=190,slow=41
J26L **Joseph Creek** 59.55 338 P P 16 21 31.1 -0.6
baz=122
RIDG **Independent Ri** 59.63 337 P P 16 21 31.1 -1.1
baz=120
A36M **Sachs Harbour** 59.71 349 P P 16 21 32.1 -0.4
baz=145
SCM **Sheep Creek Mo** 59.72 334 P P 16 21 32.8 -0.1
baz=117
H27K **Steamboat Moun** 59.79 340 P P 16 21 33.6 +0.4
baz=125
PLCA **Paso Flores** 59.81 159 P P 16 21 32.3 -1.4
comp=Z,13nm,1.1s,baz=334,slow=7.5,SNR=12
PLCA LR LR 16 42 14.1
comp=Z,173nm,18.2s,baz=1.5,slow=31
comp=Z,13nm,1.1s
I26K **Coal Creek Min** 59.83 339 P P 16 21 34.0 +0.5
baz=123
M23K **Glacier View** 59.88 334 P P 16 21 33.3 -0.6
baz=116
SEW **Seward** 59.92 332 P P 16 21 33.2 -0.9
baz=114
E29M **Blow River** 59.98 343 P P 16 21 35.0 +0.6
baz=130
K24K **Donnelly Dome** 60.02 336 P P 16 21 34.6 -0.2
baz=119
KNK **Knik Glacier** 60.02 333 P P 16 21 34.8 -0.1
baz=115
F28M **Old Crow** 60.08 342 P P 16 21 35.0 -0.2
baz=127
SML **Sawmill** 60.14 334 P P 16 21 35.2 -0.5
baz=116
O22K **Cooper Landing** 60.20 332 P P 16 21 35.2 -0.8
baz=114
WAT6 **Susitna Watana** 60.23 335 P P 16 21 36.2 -0.3
baz=117
J25K **Salcha River,** 60.27 337 P P 16 21 36.6 0.0
baz=128
DHY **Denali Highway** 60.31 335 P P 16 21 36.6 -0.4
baz=117
BRSE **Bradley Lake S** 60.38 331 P P 16 21 36.2 -1.1
baz=112
PMR **Palmer** 60.39 333 P P 16 21 38.6 +1.2
baz=115
RC01 **Rabbit Creek A** 60.45 333 P P 16 21 37.0 -0.8
baz=114
KDAK **Kodiak Island** 60.58 328 LR LR 16 46 41.1
comp=Z,178nm,20.1s,baz=131,slow=35
WAT1 **Susitna Watana** 60.68 335 P P 16 21 40.0 +0.6
baz=116
HDA **Harding Lake** 60.77 337 P P 16 21 39.4 -0.5
baz=118
PRP **Porcupine Dome** 60.79 338 P P 16 21 41.1 +1.0
PRP IAmb IAmb 16 21 52.9
comp=Z,12nm,1.2s
PRP **Porcupine Dome** 60.79 338 P P 16 21 40.4 +0.3
baz=120
IL31 60.92 337 P P 16 21 41.8 +0.9
IL31 IAmb IAmb 16 21 54.1
comp=Z,19nm,1.4s
ILAR **Eielson Array** 60.92 337 P P 16 21 42.1 +1.1
ILAR **Eielson Array** 60.92 337 P P 16 21 41.3 +0.4
comp=Z,0.9nm,0.5s,baz=134,slow=5.3,SNR=36
ILAR LR LR 16 51 21.9
comp=Z,250nm,18.7s,baz=134,slow=39
comp=Z,0.9nm,0.5s
G26K **Porcupine Rive** 60.94 340 P P 16 21 41.4 +0.4
baz=123
SUA **Susitna One** 61.05 333 P P 16 21 42.0 0.0
baz=113
RND **Reindeer** 61.06 335 P P 16 21 43.1 +1.1
CUT **Chulitna** 61.22 334 P P 16 21 43.5 +0.6
baz=114
MCK **McKinley** 61.23 336 P P 16 21 43.4 +0.3
baz=116
POKR **Poker Plat Res** 61.29 337 P P 16 21 42.9 -0.5
baz=118
COLA **College** 61.33 337 P P 16 21 43.0 -0.6
baz=118
O20K **Slope Mountain** 61.39 331 P P 16 21 44.7 +0.5
baz=110
BMAR **Burnt Mountain** 61.46 340 P P 16 21 44.7 +0.1
F26K **Sheenjek River** 61.46 341 P P 16 21 45.0 +0.4
baz=123
RCBR **Riachuelo** 61.50 105 LR LR 16 50 23.5
comp=Z,192nm,19.3s,baz=278,slow=38
P19K **Oil Pt** 61.53 330 P P 16 21 45.4 +0.3
baz=110
SKT **Skwentna** 61.59 333 P P 16 21 45.6 0.0
baz=112
N20K **Mount Spurr** 61.60 332 P P 16 21 45.6 0.0
baz=112
G25K **Bearman Lake** 61.62 339 P P 16 21 46.8 +1.2
baz=120
BWN **Browne** 61.64 336 P P 16 21 46.0 +0.2
TRF **Thorofare Moun** 61.66 335 P P 16 21 47.1 +0.9
baz=114,SNR=6.8
H24K **Noodor Dome** 61.79 338 P P 16 21 47.2 +0.3

baz=118
F25K Christian Rive 61.90 340 P P 16 21 48.3 +0.7
baz=121
I23K Minto, Yukon-K 62.03 337 P P 16 21 49.3 +0.9
I23K Minto, Yukon-K 62.03 337 P P 16 21 49.4 +1.0
baz=116
G24K Hadweenzic Riv 62.06 339 P P 16 21 49.6 +0.9
baz=119
BPAW Bear Paw Mtn. 62.21 335 P P 16 21 49.6 -0.1
baz=114
PPLA Purkeypile 62.23 334 P P 16 21 49.7 -0.3
baz=112
M20K Styx River 62.26 333 P P 16 21 50.7 +0.6
baz=111
CAST Castle Rocks 62.39 335 P P 16 21 51.0 +0.2
CAST IAmb IAmb 16 22 02.8
comp=Z,9.8nm,1.1s
CAST Castle Rocks 62.39 335 P P 16 21 51.1 +0.3
baz=113
Q17K Contact Creek 62.40 328 P P 16 21 51.5 +0.4
baz=106
P18K Big Mountain, 62.41 330 P P 16 21 51.2 +0.1
baz=108
MLY Manley 62.50 337 P P 16 21 52.3 +0.7
MLY IAmb IAmb 16 22 04.2
comp=Z,19nm,1.4s
MLY Manley 62.50 337 P P 16 21 52.3 +0.7
baz=115
N19K Bonanza Creek 62.50 331 P P 16 21 52.2 +0.4
baz=109
O18K Koktuh Hills 62.54 330 P P 16 21 52.6 +0.6
baz=108
F24K Squaw Lake 62.60 340 P P 16 21 52.8 +0.5
baz=119
CHUM Lake Minchumin 62.66 335 P P 16 21 53.0 +0.3
baz=113
L20K Farewell, AK 62.80 333 P P 16 21 53.9 +0.3
baz=110
M19K Big River Lodg 62.83 333 P P 16 21 53.7 -0.1
baz=110
G23K Bananza Creek 62.97 338 P P 16 21 54.7 +0.1
baz=116
D25K Kavik River 63.03 342 P P 16 21 55.1 0.0
baz=121
H22K Ishtalitna Cre 63.11 337 P P 16 21 56.0 +0.4
baz=114
N18K Kilae Creek 63.12 331 P P 16 21 56.6 +0.9
baz=108
K20K Telida 63.19 334 P P 16 21 57.1 +0.9
baz=111
M18K Stony River 63.34 332 P P 16 21 57.2 0.0
baz=108
O17K Koliganek Bris 63.42 330 P P 16 21 57.5 -0.3
baz=106
E23K Chandalar 63.44 340 P P 16 21 58.1 +0.2
baz=117
J20K Nowinta River 63.52 335 P P 16 21 59.0 +0.6
baz=111
H21K Melozitna River 63.55 337 P P 16 21 58.5 -0.1
baz=113
TOLK Toolik Lake Re 63.70 340 P P 16 21 59.4 -0.1
baz=118
D24K Happy Valley 63.70 341 P P 16 21 58.9 -0.5
baz=119
S14K Fog Glacier 63.83 326 P P 16 22 01.5 +0.9
baz=102
I20K Naaghedeneel 63.88 336 P P 16 22 00.4 -0.3
baz=111
TTA Tatalina 63.88 333 P P 16 22 01.2 +0.4
baz=109
C24K Franklin Bluff 63.94 342 P P 16 22 00.6 -0.4
baz=119
L18K Granite Mounta 63.95 332 P P 16 22 00.9 -0.3
baz=108
J19K Poorman 64.06 335 P P 16 22 02.6 +0.7
baz=110
G21K Allakaket 64.15 338 P P 16 22 02.4 0.0
baz=113
D23K Nanushuk River 64.20 340 P P 16 22 03.7 +0.9
baz=117
E22K Anaktuvuk Pass 64.21 339 P P 16 22 03.2 +0.3
baz=115
H20K Anotleneega Mo 64.29 336 P P 16 22 03.8 +0.4
baz=111
J18K Innoko River 64.35 334 P P 16 22 03.7 -0.2
baz=108
F21K Alatna River 64.42 338 P P 16 22 05.3 +1.1
F21K Alatna River 64.42 338 P P 16 22 04.5 +0.2
baz=113
N16K Nishlik Lake 64.42 330 P P 16 22 04.4 +0.1
baz=105
C23K Itkillik River 64.58 341 P P 16 22 06.3 +1.2
baz=117
D22K Ayikyak River 64.82 340 P P 16 22 08.1 +1.3
D22K Ayikyak River 64.82 340 P P 16 22 07.8 +1.0
baz=115
H19K Roundabout Mou 64.91 336 P P 16 22 08.3 +0.9
baz=109
F20K Avaraart Lake 65.17 338 P P 16 22 09.9 +0.9
baz=111
G19K Purcell Mounta 65.36 337 P P 16 22 10.7 +0.3
baz=109
C21K Knifeblade Rid 65.62 340 P P 16 22 11.1 -0.9
baz=113
B22K Teshekpuk Lake 65.67 341 P P 16 22 12.8 +0.6
B22K IAmb IAmb 16 22 15.4
comp=Z,18nm,1.4s
B22K Teshekpuk Lake 65.67 341 P P 16 22 12.1 -0.1
baz=114
FALS False Pass 65.74 324 P P 16 22 13.5 +0.6
baz=98
SUMG Summit 65.74 16 *i* P P 16 22 14.0 +0.8
B21K Ikpikpuk River 65.75 341 P P 16 22 13.2 +0.5
baz=113
E20K Nigu River 65.76 339 P P 16 22 12.8 -0.2
baz=111
F19K Shaleruckik Mo 65.85 337 P P 16 22 15.5 +2.0
F19K IAmb IAmb 16 22 27.0
comp=Z,24nm,1.5s
F19K Shaleruckik Mo 65.85 337 P P 16 22 14.0 +0.5
baz=109
E19K Redstone River 65.86 338 P P 16 22 13.5 -0.1
baz=109
G18K Tagagawik 65.89 336 P P 16 22 14.8 +1.0
baz=107
D20K Etivluk River 66.07 339 P P 16 22 16.2 +1.3
baz=111
A22K Sinclair Lake 66.41 342 P P 16 22 17.9 +1.0
baz=113
L14K Kuka Creek 66.48 331 P P 16 22 18.5 +0.9
baz=102
F18K Selawik 66.49 337 P P 16 22 17.8 +0.2
baz=107
D19K Kuna River 66.52 339 P P 16 22 18.5 +0.8
baz=109
G17K Kiwalik Mounta 66.58 335 P P 16 22 18.9 +0.7
baz=105
B20K Meade River 66.71 341 P P 16 22 20.3 +1.3
baz=111
UNV Unalaska Valle 67.41 322 P P 16 22 24.7 +1.1
baz=95
E17K Hotham Inlet 67.45 337 P P 16 22 24.9 +1.3
baz=105,SNR=5.4
B18K Kokolik River 68.05 339 P P 16 22 28.5 +1.1
baz=106
F15K North Star Dit 68.24 335 P P 16 22 27.5 -1.1
baz=102
NIKH Nikolski High 68.75 321 P P 16 22 33.8 +1.7
baz=93
BORG Borgarnes 69.16 26 LR LR 16 55 11.0
comp=Z,176nm,18.2s,baz=241,slow=38
JMIC Jan Mayen 74.43 20 LR LR 16 57 15.9
comp=Z,387nm,18.9s,baz=276,slow=37
BBTS Babate 74.74 79 LR LR 16 54 32.7
comp=Z,182nm,18.6s,baz=152,slow=34
EKA Eskdalemuir Ar 78.35 36 P P 16 23 27.6 -0.9
comp=Z,2.1nm,0.6s,baz=285,slow=5.6,SNR=12
comp=Z,2.1nm,0.6s
SHEM Shemya Is, Ala 79.06 322 LR LR 16 56 58.4
comp=Z,39nm,18.8s,baz=308,slow=34
SPITS Spitsbergen Ar 79.41 11 P P 16 23 33.8 -0.1
comp=Z,5.9nm,0.8s,baz=324,slow=7.1,SNR=4.8
SPITS LR LR 17 01 47.9
comp=Z,122nm,18.6s,baz=275,slow=38
comp=Z,5.9nm,0.8s
BILL Bilibino 79.57 338 P P 16 23 35.6 +0.7
BILL IAmb IAmb 16 23 48.6
comp=Z,28nm,1.5s

ESDC Sonseca Array 80.76 51 P P 16 23 40.6 -1.3
comp=Z,1.9nm,1.0s,baz=290,slow=6.0,SNR=6.8
comp=Z,1.9nm,1.0s
PMSA Palmer Station 82.94 167 LR LR 16 51 39.5
comp=Z,139nm,21.8s,baz=23,slow=29
DOU Dourbes 84.13 40 *d*P P 16 23 59.3 +0.1
comp=Z,5.2nm,1.0s
BMRD Maredsous 84.17 40 *d*P P 16 23 59.2 -0.3
NB2 NORSAR Subarra 84.20 28 P P 16 24 00.1 +0.7
comp=Z,64nm,1.7s,baz=293,slow=4.4
NB2 NORSAR Subarra 84.20 28 P P 16 24 00.1 +0.7
baz=293,slow=4.4
NOA NORSAR Array B 84.20 28 P P 16 23 59.5 +0.1
comp=Z,3.6nm,1.1s,baz=291,slow=5.1,SNR=6.9
NOA LR LR 17 01 34.4
comp=Z,144nm,18.1s,baz=290,slow=36
comp=Z,3.6nm,1.1s
BGES Gesves 84.35 39 *d*P P 16 24 00.3 0.0
comp=Z,13nm,0.7s
BCLA Clavier 84.47 39 *d*P P 16 24 01.0 +0.1
comp=Z,9.0nm,0.9s
RCHB Rochefort 84.50 40 *d*P P 16 24 01.4 +0.3
BHOU Houvegnez 84.92 39 *d*PcP PcP 16 24 05.5 -1.0
HFS Hagfors 85.68 29 P P 16 24 06.9 +0.1
comp=Z,2.8nm,0.8s,baz=298,slow=9.3,SNR=4.7
HFS LR LR 17 02 17.6
comp=Z,172nm,18.4s,baz=270,slow=36
comp=Z,2.8nm,0.8s
ARCES ARCESS Array B 85.75 18 P P 16 24 06.8 -0.2
comp=Z,2.9nm,0.7s,baz=292,slow=3.8,SNR=12
ARCES LR LR 17 03 26.6
comp=Z,331nm,18.7s,baz=286,slow=36
comp=Z,2.9nm,0.7s
DBIC Dimbokro 87.76 84 P P 16 24 17.4 -0.4
comp=Z,6.8nm,0.9s,baz=296,slow=6.7,SNR=3.9
DBIC LR LR 17 01 14.6
comp=Z,104nm,20.2s,baz=293,slow=34
comp=Z,6.8nm,0.9s
PETK Petropavlovsk- 88.44 325 LR LR 17 04 25.1
comp=Z,29nm,18.8s,baz=61,slow=36
DAVOX Davos/Dischmat 88.52 42 LR LR 17 00 15.3
comp=Z,148nm,21.5s,baz=280,slow=33
TIXI Tiksi 88.67 347 LR LR 17 07 56.0
comp=Z,86nm,21.9s,baz=26,slow=38
CLL Collm 88.76 37 *e*P P 16 24 24.0 +2.2
CLL AMS AMS 17 00 00.0
comp=Z,300nm,21.0s
MA2 Magadan 89.06 333 LR LR 17 06 43.7
comp=Z,53nm,19.4s,baz=65,slow=37
GERES GERESS Array B 90.14 39 P P 16 24 29.0 +0.5
comp=Z,2.0nm,0.8s,baz=302,slow=5.6,SNR=5.4
GERES LR LR 17 05 42.3
comp=Z,165nm,19.1s,baz=297,slow=36
comp=Z,2.0nm,0.8s
FINES FINESS Array B 90.40 24 P P 16 24 30.3 +0.9
comp=Z,1.1nm,0.6s,baz=318,slow=2.6,SNR=8.1
FINES LR LR 17 05 55.5
comp=Z,179nm,18.4s,baz=304,slow=36
comp=Z,1.1nm,0.6s
VRAC Vranov 91.67 38 LR LR 17 09 57.8
comp=Z,68nm,18.0s,baz=284,slow=38
RAO Raoul Island 91.85 240 LR LR 16 55 32.6
comp=Z,50nm,20.4s,baz=72,slow=29
KEST Kesra 91.98 52 LR LR 17 00 42.4
comp=Z,122nm,20.6s,baz=264,slow=32
TORD Torodi Ar. Bea 92.28 76 P P 16 24 39.9 +0.9
comp=Z,1.4nm,0.3s,baz=336,slow=6.3,SNR=1.6
TORD LR LR 17 02 24.4
comp=Z,149nm,20.6s,baz=322,slow=33
comp=Z,1.4nm,0.3s
MODS Modra-Piesok 92.49 38 *e*P P 16 24 49.0 +10
VYHS Vyhne 93.36 38 *e*P P 16 24 52.9 +10
VAE Valguarnera 95.12 49 LR LR 17 02 40.0
comp=Z,333nm,21.0s,baz=336,slow=32
YAK Yakutsk 95.66 341 LR LR 17 14 50.4
comp=Z,62nm,19.0s,baz=6.5,slow=40
NRIK Noril'sk 95.73 359 LR LR 17 11 24.8
comp=Z,112nm,20.9s,baz=344,slow=38
AKASG Malin Array Be 97.98 32 LR LR 17 08 15.3
comp=Z,124nm,21.4s,baz=311,slow=35
URZ Urewera 98.12 233 LR LR 17 00 08.6
comp=Z,98nm,20.6s,baz=121,slow=30
OBN Obninsk 98.66 26 LR LR 17 11 36.5
comp=Z,150nm,18.1s,baz=356,slow=36
MLR Muntele Rosu 99.08 38 LR LR 17 11 05.3
comp=Z,105nm,20.8s,baz=308,slow=36
MKAR Makanchi Array 118.28 3 PKP PKPdf 16 30 14.2 -1.3
comp=Z,0.2nm,0.5s,baz=321,slow=0.7,SNR=5.1
HHC Hu-ho-hao-te 119.34 338 *e*P PKiKP 16 30 19.8 +1.9
BTO Baotou 120.11 339 *e*PKP PKPdf 16 30 18.1 -1.2
BTO sPKP 16 30 32.4
BTO PP PP 16 31 45.3 +2.0
BTO Baotou 120.11 339 SS SS 16 48 11.8 +5.4
BTO pmax pmax
comp=Z,11nm,0.5s
BTO pmax pmax
comp=Z,210nm,4.4s
BTO LR LR
comp=N,200nm,5.9s
BTO LR LR
comp=E,200nm,10.7s
BTO LR LR
comp=Z,150nm,7.0s
BOSA Boshof 122.86 114 PKP PKPdf 16 30 23.4 -1.4
comp=Z,2.3nm,1.0s,baz=288,slow=6.0,SNR=1.6
STKA Stephens Creek 126.66 241 PKP PKPdf 16 30 31.1 -0.8
comp=Z,1.5nm,0.8s,baz=91,slow=4.9,SNR=3.0
WRA Warramunga Arr 133.49 257 PKP PKPdf 16 30 45.8 +0.6
comp=Z,0.6nm,0.7s,baz=83,slow=2.5,SNR=6.9
ASAR Alice Springs 133.92 252 PKHKP PKPpre 16 30 36.4
comp=Z,0.2nm,0.8s,baz=104,slow=3.3,SNR=4.1
ASAR PKP PKPdf 16 30 45.6 -0.3
comp=Z,0.6nm,0.7s,baz=88,slow=1.5,SNR=9.8
PZH PanZhiHua 135.76 339 PKP PKPdf 16 30 49.5 0.0
CMAR Chiang Mai Arr 144.15 338 PKP PKPbc 16 31 03.2 +0.4
comp=Z,3.0nm,1.1s,baz=347,slow=4.8,SNR=14

NIED ***21*** *16:12:01.9, 28.12N×128.09E, h12km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.98; $M_{\theta\theta}$4.53; $M_{\phi\phi}$-3.55; $M_{r\theta}$-1.91; $M_{\theta\phi}$7.23; $M_{\phi r}$-1.45; Fault plane solution: M_o8.57000×10^{14} NP1: ϕ_s194.00000°, δ83.00000°, λ169.00000°. NP2: ϕ_s285.00000°, δ79.00000°, λ8.00000°.*

JMA 21 16:12:01.9±0.2, 28.1N±0.4×128.1E±0.6, h12km±2km, MV3.6/17, NW OFF OKINAWAJIMA IS, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	Tokunoshima	0.83	114	P	Pg	16 12 17.7	-0.4
JTK				S	Sg	16 12 28.4	-0.6
JOKE	Okinoerabujima	0.87	151	P	Pg	16 12 18.3	-0.5
JOKE				S	Sb	16 12 30.6	0.0
JAMN	Amaminishikomi	0.97	83	P	Pb	16 12 19.9	-0.7
JAMN				S	Sb	16 12 33.6	+0.4
JIH	Iheya	1.09	186	P	Pb	16 12 22.3	-0.4
JIH				S	Sb	16 12 36.4	-0.5
JYRO	Yoronjima	1.14	164	P	Pb	16 12 23.1	-0.5
JYRO				S	Sb	16 12 37.5	-0.8
JOW	Kunigami	1.30	173	P	Pn	16 12 25.6	-0.2
JOW				*e*S	Sb	16 12 42.2	-0.6
JAM	Amami Oshima	1.37	78	P	Pn	16 12 26.9	+0.1
JTAJ	Takarajima	1.42	43	P	Pn	16 12 27.5	+0.1
JNTH	Nagotoyohara	1.60	182	P	Pn	16 12 30.4	+0.4
JNTH				S	Sn	16 12 49.9	-0.7
JZK	Kikaishima	1.67	83	*e*P	Pg	16 12 34.4	+0.4
JZK				*e*S	Sg	16 12 56.1	+0.3
JAGN	Aguni-jima	1.70	206	*e*P	Pn	16 12 31.5	+0.1
JAGN				*e*S	Sn	16 12 53.7	+0.6
JKE	Kume jima 2	2.13	213	*e*P	Pn	16 12 37.6	+0.3
JYAK	Yakushimahirau	2.99	45	*e*P	Pn	16 12 50.1	+1.0

IDC ***21*** *16:51:58.2±5.6, 17.7S×178.1W, h553km±63km, mb3.1/9, mbtmp4.0/9, Error ellipse: s-maj=27.0km s-min=20.7km az=124.0*

NEIC ***21*** *16:51:58.6±2.6, 17.8S±0.1×178.1W±0.2, h551km±8km, mb4.0/17, Error ellipse: s-maj=26.2km s-min=15.8km az=131.0*

ISC 21 16:51:57.9±0.6, 17.7S±0.1×178.2W±0.1, h550km, n38, σ0s87/38, mb3.8/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.22	59	P	P	16 53 49.0	+0.9

LIFNC LIFOU 14.11 255 P P 16 54 59.1 +0.9
RTZ Ruatahuna 21.26 191 P P 16 56 05.6 +0.3
FOZ Fox Glacier 27.68 199 P P 16 57 00.8 -1.2
MLZ Mavora Lakes 29.86 200 P P 16 57 21.3 +0.3
CTA Charters Tower 33.70 260 P P 16 57 52.1 -1.9
1.7nm,0.6s,baz=121,slow=5.9,SNR=1.2
1.7nm,0.6s
COEN Coen 37.33 270 P P 16 58 26.0 +1.9
COEN IAmb IAmb 16 58 46.8
comp=Z,5.6nm,1.1s
BBOO Buckleboo 43.70 241 P P 16 59 15.1 +0.4
BBOO IAmb IAmb 16 59 41.5
comp=Z,9.2nm,1.1s
OPA Opana 43.85 28 P P 16 59 15.3 -0.5
WRA Warramunga Arr 44.89 259 P P 16 59 24.5 +0.5
comp=Z,0.6nm,0.4s,baz=92,slow=7.4,SNR=9.5
WRA PcP PcP 17 00 53.0 -0.8
comp=Z,0.5nm,0.7s,baz=91,slow=4.2,SNR=2.6
comp=Z,0.6nm,0.4s
AS31 Alice Springs 45.06 254 P P 16 59 26.2 +0.8
ASAR Alice Springs 45.06 254 P P 16 59 25.4 0.0
ASAR Alice Springs 45.06 254 P P 16 59 25.8 +0.4
comp=Z,1.9nm,0.5s,baz=88,slow=8.3,SNR=60
ASAR PcP PcP 17 00 53.6 -0.9
comp=Z,0.4nm,0.5s,baz=92,slow=3.8,SNR=5.2
comp=Z,1.9nm,0.5s
QSPA South Pole Qui 72.35 180 P P 17 02 27.6 -0.4
QSPA South Pole Qui 72.35 180 P P 17 02 27.7 -0.4
comp=Z,1.5nm,0.6s,baz=27,slow=1.2,SNR=11
comp=Z,1.5nm,0.6s
PETK Petropavlovsk- 73.54 345 P P 17 02 35.0 +0.2
comp=Z,3.0nm,1.0s,baz=110,slow=7.6,SNR=4.6
comp=Z,3.0nm,1.0s
P18K Big Mountain, 79.08 12 P P 17 03 04.7 -0.4
P18K IAmb IAmb 17 03 15.2
comp=Z,4.6nm,1.1s
NVAR Mina Array Bea 79.12 44 P P 17 03 06.6 +0.5
comp=Z,0.7nm,0.8s,baz=222,slow=8.2,SNR=5.3
comp=Z,0.7nm,0.8s
O18K Koktuh Hills 79.51 12 P P 17 03 06.5 -0.9
J05D Fort Rock, OR 80.02 38 P P 17 03 11.7 +1.1
J05D IAmb IAmb 17 03 12.1
comp=Z,2.6nm,0.7s
L18K Granite Mounta 81.45 10 P P 17 03 17.8 +0.4
GHO Glory Hole Cre 82.56 14 P P 17 03 22.8 -0.3
GHO IAmb IAmb 17 03 23.7
comp=Z,5.9nm,1.0s
K20K Telida 82.96 11 P P 17 03 25.0 0.0
K20K IAmb IAmb 17 03 25.7
comp=Z,4.5nm,1.1s
CAST Castle Rocks 83.38 11 P P 17 03 25.6 -1.5
CAST IAmb IAmb 17 03 26.7
comp=Z,2.5nm,0.9s
M24K Tolsona, Glenn 83.48 15 P P 17 03 27.3 -0.4
M24K IAmb IAmb 17 03 38.1
comp=Z,8.5nm,1.1s
RND Reindeer 84.02 13 P P 17 03 29.1 -1.2
RND IAmb IAmb 17 03 30.8
comp=Z,2.2nm,0.8s
ILAR Eielson Array 85.64 13 P P 17 03 37.2 -0.9
comp=Z,0.2nm,0.4s,baz=218,slow=5.4,SNR=12
comp=Z,0.2nm,0.4s
TXAR Lajitas Array 85.70 58 P P 17 03 40.3 +1.0
comp=Z,0.6nm,0.7s,baz=212,slow=6.6,SNR=6.1
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 87.05 43 P P 17 03 45.5 0.0
comp=Z,0.3nm,0.6s,baz=285,slow=2.9,SNR=4.6
comp=Z,0.3nm,0.6s
KWP Kalwaria Pacla 143.97 337 PKPdf 17 10 30.8 -0.1
BUR08 Bucovina Ar. S 144.52 332 PKPdf PKPdf 17 10 31.6 -0.5
BURAR Bucovina Array 144.53 332 PKPdf PKPbc 17 10 32.0 -0.2
BRTR Keskin Array B 144.79 315 PKPdf PKPbc 17 10 33.0 -0.3
BRTR Keskin Array B 144.79 315 PKP PKPdf 17 10 32.5 -0.3
comp=Z,0.2nm,0.4s,baz=64,slow=5.6,SNR=4.1
MMAI Mount Meron Ar 146.22 303 PKPbc PKPbc 17 10 37.2 -0.4
comp=Z,0.9nm,0.4s,baz=92,slow=4.2,SNR=4.2
GERES GERESS Array B 147.47 345 PKPbc PKPbc 17 10 40.0 -0.3
comp=Z,0.9nm,0.5s,baz=19,slow=6.3,SNR=3.4
FUORN Ofenpass-Fuorn 150.33 348 PKPbc PKPbc 17 10 47.3 -0.3
FNA Florina 151.49 328 PKPbc PKPbc 17 10 48.2 -2.1

IDC 21 17:03:15.9±0.3, 7.49S×155.27E, h168km±135km, mb3.2/3, mbtmp3.9/4, ML5.1/1, MS3.3/1, Error ellipse: s-maj=100.7km s-min=38.8km az=115.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.01	113	P	Pn	17 04 29.8	0.0
	66nm,0.3s,baz=285,slow=20,SNR=4.3						
HNR				S	Sn	17 05 28.2	+0.5
	428nm,0.6s,baz=288,slow=13,SNR=1.8						
	202nm,0.4s						
DZM	Mont Dzumac	18.06	145	LR	LR	17 13 55.2	
	comp=Z,87nm,18.3s,baz=58,slow=35						
WRA	Warramunga Arr	23.76	237	P	P	17 08 13.4	+0.3
	2.8nm,0.9s,baz=61,slow=9.5,SNR=9.5						
	2.8nm,0.9s						
ASAR	Alice Springs	26.05	230	P	P	17 08 33.6	-0.2
	0.3nm,0.4s,baz=62,slow=9.5,SNR=17						
	0.3nm,0.4s						
CMAR	Chiang Mai Arr	61.24	296	P	P	17 13 13.6	0.0
	0.4nm,0.4s,baz=116,slow=6.1,SNR=4.1						
	0.4nm,0.4s						

PRU ***21*** *17:30:54.9, 51.45N×16.10E, h0km*
VIE ***21*** *17:30:54.3, 51.44N×16.17E, h0km, ML2.5/2, Suspected Mining induced.*

ISC 21 17:30:52.3±1.2, 51.53N±0.05×16.11E±0.03, h0km, n26, σ0s78/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.70	171	*e*Pg	Pg	17 31 06.0	+0.3
KSP				*e*Sg	Sg	17 31 15.4	+0.7
CHVC	Chvalec	0.95	182	*e*PG	Pg	17 31 10.6	+0.2
CHVC				*e*SG	Sg	17 31 23.2	+0.6
OSTC	Ostas	0.98	176	*e*PG	Pg	17 31 11.3	+0.3
OSTC				*e*SG	Sg	17 31 24.1	+0.4
	comp=Z,21nm,0.3s						
UPC	Upice	1.03	184	*e*PG	Pg	17 31 12.0	0.0
UPC				*e*SG	Sg	17 31 25.3	0.0
DPC	Dobruska-Polom	1.19	174	*e*PG	Pg	17 31 14.3	-0.8
DPC				*e*SG	Sg	17 31 29.7	-0.8
	comp=Z,22nm,0.6s						
PVCC	Panska Ves	1.40	225	*e*PG	Pn	17 31 18.8	-0.3
PVCC				*e*SG	Sn	17 31 38.1	-0.1
	comp=Z,42nm,0.2s						
BRG	Berggiesshubel	1.52	245	Pn	Pn	17 31 20.4	-0.3
BRG				Pg	Pg	17 31 21.7	+0.3
BRG				Sg	Sn	17 31 41.5	+0.4
BRG				Amp		17 31 44.0	
	comp=Z,23nm,0.4s						
KRLC	Kraliky	1.52	164	*e*PG	Pn	17 31 20.5	-0.2
KRLC				*e*SG	Sg	17 31 41.0	-0.1
	comp=Z,27nm,0.5s						
RICC	Richard	1.61	233	*e*SG	Sb	17 31 43.8	0.0
	comp=Z,34nm,0.6s						
PRU	Pruhonice	1.84	213	*e*PG	Pb	17 31 26.3	-0.5
HSKC	Hora Svate Kat	1.93	242	*e*PG	Pb	17 31 27.9	-0.4
HSKC				*e*SG	Sb	17 31 53.2	+0.3
	comp=Z,17nm,0.4s						
CLL	Collm	1.96	265	*e*Pn	Pn	17 31 26.0	-0.7
CLL				*e*Pg	Pb	17 31 29.0	+0.2
CLL				*i* x	x	17 31 33.4	
CLL				*ex*	x	17 31 47.0	
CLL				*e*Sg	Sg	17 31 55.0	-0.2
	comp=Z,11nm,0.8s						
MORC	Moravsky Berou	1.98	152	*e*PN	Pn	17 31 25.6	-1.5
MORC				*e*SG	Sn	17 31 53.3	+0.7
VRAC	Vranov	2.25	172	*e*PN	Pn	17 31 30.6	-0.1
VRAC				*e*SG	Sb	17 32 00.9	-1.2
ZVC	Zvikov	2.43	211	*e*PN	Pn	17 31 32.9	-0.3
ZVC				*e*PN	Pb	17 31 37.2	+0.4
KRUC	Moravsky	2.48	176	*e*PN	Pn	17 31 33.9	0.0
KRUC				*e*SG	Sb	17 32 10.1	+1.3
NKC	Novy Kostel	2.66	242	*e*PN	Pn	17 31 36.9	+0.5
NKC				*e*PG	Pg	17 31 42.7	-0.6
NKC				*e*SG	Sg	17 32 18.9	+1.2
	comp=Z,14nm,0.3s						
OJC	Ojcow	2.68	118	*e*Pg	Pg	17 31 43.4	-0.1
OJC				*e*Sg	Sg	17 32 18.9	+0.6
KHC	Kasperske Hory	2.90	215	*e*PN	Pn	17 31 39.2	-0.5

KHC ePG Pb 17 31 45.5 +0.6
KHC eSG Sg 17 32 24.8 -0.7
comp=Z,8.4nm,0.6s
CKRC Cesky Krumlov 2.95 204 ePN Pn 17 31 40.9 +0.5
CKRC ePG Pb 17 31 46.5 +0.7
CKRC eSG Sg 17 32 25.1 -2.0
MODS Modra-Piesok 3.25 166 ePG Pg 17 31 54.8 +0.3
MODS eSG Sg 17 32 35.9 -0.8
VYHS Vyhne 3.51 149 ePN Pn 17 31 48.8 +0.7
VYHS ePG Pg 17 32 00.0 +0.5
CONA Conrad Observa 3.61 183 ePn Pg 17 31 59.9 -1.6
comp=Z,0.4nm,0.1s
CONA Sg Sg 17 32 46.3 -1.9
comp=Z,3.4nm,0.3s
MOA Molln 3.88 199 Sg Sg 17 32 57.4 +0.6
comp=Z,2.9nm,0.3s
STHS Stebnicka Huta 3.90 121 e Pg 17 32 06.3 -0.7
BIOA Bad Ischl, Aus 4.17 204 Sg Sg 17 33 07.9 +1.8
comp=Z,8.1nm,0.5s

DJA 21 17:48:39.7±0.4, 9°S±5°×10°8E±°, h52km±12km, M3.6/7, mb4.3/3, mbB5.8/1, MLv3.2/7, Mw(mB)5.4/1, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.75**	**10**	P	Pn	17 48 55.4	+1.2
CMJI				S	Sn	17 49 06.5	+1.7
KPJI	**Karang Pucung**	**1.33**	**27**	S	Sn	17 49 19.0	+0.3
CNJI	**Cibinong**	**1.69**	**316**	P	Pn	17 49 07.3	+0.4
CNJI				S	Sn	17 49 27.1	-0.3
UGM	**Wanagama**	**2.27**	**74**	P	Pn	17 49 14.3	-0.4
PWJI	**Pagerwojo**	**3.48**	**82**	P	Pn	17 49 30.6	-0.8
KASI	**Kota Agung**	**4.83**	**308**	P	Pn	17 49 50.0	+0.1
BLJI	**Banyuglugur**	**5.28**	**82**	P	Pn	17 49 56.7	+0.6
	21nm,0.5s,0.2nm						
LWLI	**Liwa**	**5.48**	**309**	P	Pn	17 49 58.8	-0.2
	29nm,0.8s,9µm1.5nm						
JAGI	**Jajag, Banyuwa**	**5.77**	**90**	P	Pn	17 50 02.8	0.0

*IDC **21** 17:59:59.6±1.3, 47°.42N×92°.90W, h0km, mb2.9/1, mbtmp3.2/5, ML0.8/1, Error ellipse: s-maj=23.3km s-min=9.4km az=64.0*
*NEIC **21** 18:00:01.5±2.1, 47°.43N±0°.02×93°.07W±0°.05, h0km±1km, mb_Lg3.0/44, ML2.8/6, Error ellipse: s-maj=5.9km s-min=2.9km az=66.0*
ISC 21 17:59:59.2±0.7, 47°.42N±0°.04×93°.04W±0°.04, h0km, n40, σ1§60/25, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
B35A	**Bob, Littlefor**	**1.05**	**334**		**Pb**	**18 00 20.9**	**+0.7**
B35A				IAML		18 00 36.8	
	comp=E,288nm,1.1s						
B35A				IAML		18 00 39.8	
	comp=N,229nm,0.8s						
EYMN	**Ely**	**1.17**	**63**		**Pb**	**18 00 23.2**	**+0.8**
EYMN				IAML		18 00 47.9	
	comp=N,149nm,0.9s						
E38A	**The Farm, Brul**	**1.30**	**128**		**Pb**	**18 00 25.5**	**+0.8**
E38A				IAML		18 00 49.6	
	comp=N,304nm,0.9s						
F36A	**Milaca**	**1.59**	**192**		**Pg**	**18 00 30.4**	**+0.6**
AGMN	**Agassiz Nation**	**2.09**	**296**		**Pn**	**18 00 36.9**	**+1.3**
AGMN					**Sb**	**18 01 03.9**	**-0.6**
AGMN				IAmb_Lg		18 01 06.6	
	comp=Z,73nm,0.7s						
SPMN	**Marine on St.**	**2.20**	**176**		**Pn**	**18 00 37.9**	**+0.9**
SPMN					**Sb**	**18 01 08.0**	**+0.2**
F33A	**5 Mile Ranch,**	**2.74**	**236**		**Pn**	**18 00 45.1**	**+0.7**
G40A	**Rib Lake**	**2.92**	**137**		**Pn**	**18 00 48.2**	**+1.3**
COWI	**Conover**	**2.99**	**115**	Pn	**Pn**	**18 00 49.2**	**+1.2**
COWI				IAmb_Lg		18 01 35.9	
	comp=Z,52nm,0.9s						
D41A	**Chassel**	**3.07**	**95**		**Pn**	**18 00 49.8**	**+0.7**
ULM	**Lac du Bonnet**	**3.39**	**328**	IAmb_Lg		18 01 47.2	
	comp=Z,42nm,0.7s						
ULM	**Lac du Bonnet**	**3.39**	**328**	Pn	**Pn**	**18 00 54.9**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=147,slow=10,SNR=1.7						
ULM				Pg	**Pb**	**18 01 01.6**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=148,slow=16,SNR=6.7						
ULM				Sn	**Sn**	**18 01 34.0**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=128,slow=15,SNR=5.0						
ULM				Lg	Lg	18 01 44.9	
	comp=Z,2.6nm,0.3s,baz=196,slow=16,SNR=27						
I10CA	**LAC DU BONNET**	**3.41**	**326**	I	I	18 22 00.0	
	comp=Z,0.1nm,1.1s,baz=137,slow=337,SNR=3.6						
I37A	**Lemond, Waseca**	**3.42**	**184**		**Pn**	**18 00 56.0**	**+2.3**
I40A	**Norwalk**	**3.92**	**153**		**Pn**	**18 01 02.2**	**+1.5**
I40A				IAmb_Lg		18 02 09.2	
	comp=Z,28nm,1.1s						
E43A	**Lone Tree Farm**	**4.28**	**102**	Pn	**Pn**	**18 01 08.8**	**+3.2**
MDND	**Maddock**	**4.46**	**278**		**Pn**	**18 01 10.1**	**+2.1**
ECSD	**EROS Data Cent**	**4.46**	**215**		**Pn**	**18 01 10.3**	**+2.2**
I42A	**Draeger Farm,**	**4.57**	**139**	IAmb_Lg		18 02 25.2	
	comp=Z,27nm,1.0s						
K38A	**Parkersburg**	**4.78**	**178**	IAmb_Lg		18 02 45.0	
	comp=Z,30nm,0.9s						
JFWS	**Jewell Farm**	**4.92**	**155**	IAmb_Lg		18 02 34.8	
	comp=Z,34nm,1.0s						
SUSD	**Miller**	**5.09**	**236**	IAmb_Lg		18 02 48.1	
	comp=Z,22nm,0.7s						
E28A	**Huff**	**5.30**	**264**	IAmb_Lg		18 02 50.7	
	comp=Z,25nm,0.8s						
SCIA	**State Center**	**5.51**	**181**	IAmb_Lg		18 03 03.7	
	comp=Z,25nm,1.0s						
L42A	**Oliver, Polo**	**5.93**	**155**	IAmb_Lg		18 03 07.8	
	comp=Z,26nm,0.8s						
L34A	**Svendsen Farm,**	**5.95**	**205**	IAmb_Lg		18 03 17.1	
	comp=Z,31nm,0.9s						
N38A	**Joes South For**	**6.63**	**181**	IAmb_Lg		18 03 33.7	
	comp=Z,18nm,0.7s						
N35A	**Tabor**	**6.82**	**197**	IAmb_Lg		18 03 52.6	
	comp=Z,18nm,0.8s						
BGNE	**Belgrade**	**7.03**	**213**	IAmb_Lg		18 04 01.5	
	comp=Z,26nm,0.7s						
P40A	**Paris**	**7.92**	**174**	IAmb_Lg		18 04 35.2	
	comp=Z,17nm,1.1s						
KSU1	**Kansas State U**	**8.71**	**199**	IAmb_Lg		18 04 51.6	
	comp=Z,19nm,1.1s						
Q44A	**Meyer Farm, Va**	**9.01**	**160**	IAmb_Lg		18 04 56.4	
	comp=Z,19nm,0.9s						
R40A	**Maddies Statio**	**9.14**	**176**	IAmb_Lg		18 05 06.5	
	comp=Z,10nm,1.0s						
O48B	**Farmland**	**9.15**	**139**	IAmb_Lg		18 05 00.6	
	comp=Z,19nm,1.1s						
O49A	**Covington**	**9.58**	**136**	IAmb_Lg		18 05 14.4	
	comp=Z,11nm,0.7s						
PDAR	**Pinedale Array**	**12.56**	**254**	Pn	**Pn**	**18 02 58.6**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=79,slow=9.3,SNR=6.4						
PDAR				Lg	Lg	18 06 28.2	
	comp=Z,0.1nm,0.3s,baz=70,slow=35,SNR=1.7						
TKL	**Tuckaleechee C**	**13.64**	**146**	Pn	**Pn**	**18 03 10.3**	**-3.5**
	comp=Z,3.1nm,0.6s,baz=283,slow=3.6,SNR=6.4						
TKL				Lg	Lg	18 07 00.3	
	comp=Z,0.2nm,0.3s,baz=292,slow=19,SNR=1.8						
YKA	**Yellowknife Ar**	**19.37**	**329**	P	**P**	**18 04 25.4**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=128,slow=12,SNR=6.3						
YKA				Lg	Lg	18 09 56.0	
	baz=134,slow=26						
TXAR	**Lajitas Array**	**19.85**	**208**	P	**P**	**18 04 32.5**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=46,slow=5.2,SNR=2.5						
ILAR	**Eielson Array**	**33.39**	**321**	P	**P**	**18 06 38.1**	**-0.9**
	comp=Z,0.1nm,0.7s,baz=90,slow=8.1,SNR=1.7						
	comp=Z,0.1nm,0.7s						

IDC 21 18:02:23.2±2.2, 6.75S×128.93E, h0km, mb3.2/1, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=115.2km s-min=33.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.13**	**159**	Pn	Pn	18 05 44.6	-0.2
	0.2nm,0.3s,baz=337,slow=12,SNR=9.9						
WRA				Sn	Sn	18 08 07.6	-15
	0.4nm,0.3s,baz=343,slow=22,SNR=7.9						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**17.49**	**165**	P	Pn	18 06 28.8	+0.1
	0.1nm,0.3s,baz=351,slow=11,SNR=12						
ASAR				S	Sn	18 09 32.9	-11
	0.1nm,0.4s,baz=349,slow=24,SNR=4.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.44**	**327**	P	P	18 13 20.8	0.0
	0.1nm,0.5s,baz=126,slow=7.9,SNR=2.8						
	0.1nm,0.5s						

*IDC **21** 18:05:49.4±1.6, 6.84S×129.38E, h0km, mb3.8/2, mbtmp4.0/4, ML4.2/2, Error ellipse: s-maj=78.2km s-min=26.0km az=58.0*
*DJA **21** 18:06:00.4±0.5, 7°S×3°×13°0E±°, h157km±10km, M4.2/13, mb4.0/5, mB5.0/4, MLv4.2/13, Mw(mB)4.2/4*
ISC 21 18:06:01.3±0.9, 6.81S±0.07×130.07E±0.08, h104km, n24, σ1§47/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.69**	**134**	P	**Pn**	**18 06 31.8**	**+1.7**
SAUI				S	**Sn**	**18 06 56.3**	**+4.3**
BNDI	**Bandanaira**	**2.28**	**356**	P	**Pn**	**18 06 39.8**	**+2.2**
FAKI	**Fak Fak**	**4.43**	**29**	P	**Pn**	**18 07 06.2**	**-0.2**
FAKI	**Fak Fak**	**4.43**	**29**	P	**Pn**	**18 07 06.1**	**-0.3**
NLAI	**Namlea**	**4.62**	**320**	P	**Pn**	**18 07 09.9**	**+1.0**
DRS	**Darwin Rock St**	**5.65**	**172**	P	**Pn**	**18 07 21.6**	**-1.3**
SWI	**Sorong**	**6.02**	**11**	P	**Pn**	**18 07 27.4**	**-0.6**
MTN	**Manton Dam**	**6.09**	**170**	P	**Pn**	**18 07 28.4**	**-0.5**
KDU	**Kakadu**	**6.30**	**158**	P	**Pn**	**18 07 30.8**	**-1.0**
SOEI	**Soe**	**6.45**	**243**	P	**Pn**	**18 07 34.2**	**+0.3**
SOEI	**Soe**	**6.45**	**243**	P	**Pn**	**18 07 33.8**	**-0.1**
	14nm,0.7s,0.2nm						
LBMI	**Labuha**	**6.64**	**337**	P	**Pn**	**18 07 36.7**	**+0.3**
WRA	**Warramunga Arr**	**13.70**	**163**	Pn	Pn	18 09 06.3	-4.9
	1.3nm,0.3s,baz=340,slow=14,SNR=12						
WRA				Sn	Sn	18 11 29.9	-12
	2.3nm,0.3s,baz=333,slow=23,SNR=13						
	2.0nm,0.4s						
COEN	**Coen**	**14.71**	**120**	P	**Pn**	**18 09 23.2**	**-1.1**
QIS	**Mount Isa**	**16.50**	**147**	P	**Pn**	**18 09 45.0**	**-1.7**
ASAR	**Alice Springs**	**17.16**	**168**	P	**Pn**	**18 09 52.3**	**-2.5**
	0.8nm,0.3s,baz=345,slow=10,SNR=28						
ASAR				S	Sn	18 12 52.2	-14
	1.3nm,0.5s,baz=348,slow=22,SNR=5.7						
	2.4nm,0.5s						
AS01	**Alice Springs**	**17.17**	**168**	P	**Pn**	**18 09 54.3**	**-0.6**
MTSU	**Mount Surprise**	**17.88**	**130**	P	**Pn**	**18 10 03.4**	**0.0**
WRKA	**Warakurna**	**18.21**	**185**	P	**P**	**18 10 06.3**	**0.0**
CTA	**Charters Tower**	**20.51**	**132**	P	Pn	18 10 35.5	+1.0
	4.2nm,0.9s,baz=305,slow=12,SNR=2.3						
	4.2nm,0.9s						
OOD	**Oodnadatta**	**21.54**	**166**	P	**P**	**18 10 43.0**	**+0.7**
MULG	**Mulgathing**	**23.65**	**171**	P	**P**	**18 11 03.6**	**+0.3**
LCRK	**Leigh Creek**	**24.73**	**163**	P	**P**	**18 11 13.5**	**+0.5**
MKAR	**Makanchi Array**	**68.11**	**327**	P	**P**	**18 16 48.9**	**-1.1**
	0.4nm,0.5s,baz=114,slow=8.3,SNR=9.6						
	0.4nm,0.5s						

*IDC **21** 18:08:20.2±2.5, 42°.13N×143°.62E, h68km±18km, mb3.3/11, mbtmp3.6/15, MS2.7/1, Error ellipse: s-maj=27.0km s-min=15.5km az=101.0*
*MOS **21** 18:08:22.9±1.1, 42°.10N×143°.13E, h97km, mb4.3/1, Error ellipse: s-maj=15.5km s-min=9.2km az=68.2*
*SKHL **21** 18:08:22.0±0.3, 42°.10N×142°.80E, h75km±5km, mb4.7/3*
*JMA **21** 18:08:22.2±0.2, 42°.2N±0°.7×142°.8E±0°.6, h52km±1km, MD3.5/40, MV3.7/40, HIDAKA REGION*
JMA Felt I J1 at HIDAKA REGION .
*NIED **21** 18:08:22.2, 42°.16N×142°.77E, h52km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.45; $M_{\theta\theta}$=1.24; $M_{\phi\phi}$=-0.79; $M_{r\theta}$=-0.97; $M_{\theta\phi}$=3.85; $M_{\phi r}$=-0.73; Fault plane solution: M_0=4.13000×10^{14} NP1: ϕ_s=278.00000°, δ=80.00000°, λ=10.00000°. NP2: ϕ_s=187.00000°, δ=80.00000°, λ=170.00000°.*
ISC 21 18:08:21.0±0.8, 42.03N±0.05×142.78E±0.03, h57km±6km, n62, σ1§33/61, mb3.6/11, 10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.25**	**355**	*e*P	**Pn**	**18 08 30.3**	**-0.2**
JNBK				*e*S	**Sn**	**18 08 37.0**	**-0.1**
JNBK	**Urakawa-nobuka**	**0.25**	**355**	A	A	18 08 30.3	
	comp=E,16nm,0.4s,comp=N,24nm,0.5s						
JEM	**Erimo**	**0.28**	**93**	*e*P	**Pn**	**18 08 31.8**	**+1.2**
JEM				*e*S	**Sn**	**18 08 38.8**	**+1.3**
JEM	**Erimo**	**0.28**	**93**	A	A	18 08 31.8	
	comp=E,5.0nm,0.7s,comp=N,4.0nm,1.7s						
JSHD	**Hidakashinhida**	**0.44**	**328**	*e*P	**Pn**	**18 08 31.9**	**-0.3**
JTHR	**Tokachihiroo**	**0.47**	**56**	⇓*e*P	**Pn**	**18 08 32.7**	**+0.3**
JTHR				⇓*e*S	**Sn**	**18 08 40.7**	**+0.2**
JTHR	**Tokachihiroo**	**0.47**	**56**	A	A	18 08 32.7	
	comp=E,4.0nm,0.6s,comp=N,10.0nm,1.0s						
JCH	**Churui**	**0.72**	**36**	⇓*e*P	**Pn**	**18 08 35.2**	**-0.2**
JCH				⇓*e*S	**Sn**	**18 08 45.2**	**-0.7**
JCH	**Churui**	**0.72**	**36**	A	A	18 08 35.2	
	comp=E,3.0nm,2.4s,comp=N,2.0nm,0.3s						
JBT2	**Biratori 2**	**0.81**	**338**	*e*P	**Pn**	**18 08 36.0**	**-0.5**
JBT2	**Biratori 2**	**0.81**	**338**	A	A	18 08 36.0	
	comp=E,2.0nm,5.7s,comp=N,3.0nm,5.1s						
JIAM	**Iburiatsuma**	**0.87**	**313**	*e*P	**Pn**	**18 08 38.1**	**+0.9**
JIAM	**Iburiatsuma**	**0.87**	**313**	A	A	18 08 38.1	
	comp=E,7.0nm,2.2s,comp=N,15nm,0.5s						
JFR	**Furan**	**1.14**	**353**	*e*P	**Pn**	**18 08 40.1**	**-0.7**
JOB	**Onbets**	**1.17**	**41**	⇓*e*P	**Pn**	**18 08 42.0**	**+0.8**
JOB				⇓*e*S	**Sn**	**18 08 57.1**	**+0.9**
JOB	**Onbets**	**1.17**	**41**	A	A	18 08 42.0	
	comp=E,3.0nm,3.2s,comp=N,5.0nm,3.6s						
JEW	**Eniwo**	**1.27**	**310**	*e*P	**Pn**	**18 08 43.0**	**+0.4**
JEW				*e*S	**Sn**	**18 08 58.6**	**-0.1**
JKB	**Kayabe**	**1.31**	**264**	⇓*e*P	**Pn**	**18 08 43.8**	**+0.8**
JKB				⇓*e*S	**Sn**	**18 09 00.2**	**+0.7**
JNB	**Noboribetsu**	**1.36**	**289**	*e*P	**Pn**	**18 08 43.6**	**-0.2**
JNB				*e*S	**Sn**	**18 09 00.1**	**-0.7**
JAR	**Ashorobuto**	**1.46**	**30**	⇓*e*P	**Pn**	**18 08 44.8**	**-0.3**
JAR				⇓*e*S	**Sn**	**18 09 01.9**	**-1.3**
JAR	**Ashorobuto**	**1.46**	**30**	A	A	18 08 44.8	
	comp=E,2.0nm,0.7s,comp=N,2.0nm,1.7s						
JAB	**Ashibetsu**	**1.53**	**345**	*e*P	**Pn**	**18 08 46.0**	**0.0**
AKK	**Akkeshi**	**1.81**	**56**	*e*P	**Pn**	**18 08 49.9**	**0.0**
ASAJ	**Asahikawa**	**2.09**	**356**	P	**Pn**	**18 08 54.4**	**+0.8**
	comp=N,48nm,0.4s,baz=202,slow=15,SNR=325						
ASAJ				S	**Sn**	**18 09 19.2**	**+0.7**
	comp=N,112nm,0.8s,baz=66,slow=27,SNR=3.8						
JKA	**Kamikawa-asahi**	**2.09**	**356**	*e*P	**Pn**	**18 08 54.4**	**+0.8**
NMR	**Nemuro--Hokkai**	**2.55**	**57**	*e*PN	**Pn**	**18 08 59.3**	**-0.6**
NMR				*e*S	**Sn**	**18 09 28.6**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.55**	**57**	*e*P	**Pn**	**18 08 59.7**	**-0.2**
NMR				*e*S	**Sn**	**18 09 28.4**	**-1.4**
RUSJ	**Misakicho**	**2.75**	**40**	*e*PN	**Pn**	**18 09 03.9**	**+1.3**
RUSJ				*e*S	**Sn**	**18 09 37.7**	**+3.1**
YUK	**Yuzh-Kuril'sk**	**3.02**	**47**	*e*PN	**Pn**	**18 09 07.7**	**+1.4**
YUK				*e*S	**Sn**	**18 09 41.6**	**+0.4**
YUK				pmax	pmax		
	comp=E,58nm,0.2s						
YUK				pmax	pmax		
	comp=Z,198nm,0.2s						
YUK				pmax	pmax		
	comp=N,29nm,0.1s						
YUK				smax	smax		
	comp=N,166nm,0.2s						
YUK				smax	smax		
	comp=E,373nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.02**	**47**	*e*P	**Pn**	**18 09 07.7**	**+1.4**
YUK				AMB	AMB	18 09 08.3	
	comp=E,110nm,0.3s						
YUK				*e*S	**Sn**	**18 09 41.7**	**+0.5**
YUK				A	A	18 09 43.7	
	comp=E,200nm,0.3s						
YUK				A	A	18 09 43.7	
	comp=E,210nm,0.3s						
SHO	**Shikotan**	**3.50**	**57**	*e*PN	**Pn**	**18 09 13.0**	**+0.2**
SHO				*e*S	**Sn**	**18 09 52.0**	**-0.9**
SHO				pmax	pmax		
	comp=Z,30nm,0.1s						
SHO				pmax	pmax		
	comp=N,22nm,0.2s						
SHO				pmax	pmax		
	comp=E,11nm,0.1s						
SHO				smax	smax		
	comp=N,201nm,0.3s						
SHO				smax	smax		
	comp=E,143nm,0.4s						
SHO	**Shikotan**	**3.50**	**57**	*e*P	**Pn**	**18 09 13.2**	**+0.4**
SHO				AMB	AMB	18 09 14.3	
	comp=E,30nm,0.1s						
SHO				*e*S	**Sn**	**18 09 52.0**	**-0.9**
SHO				A	A	18 09 56.8	
	comp=E,200nm,0.3s						
SHO				A	A	18 09 56.8	
	comp=E,140nm,0.3s						
KUR	**Kuril'sk**	**4.88**	**47**	*e*PN	**Pn**	**18 09 34.1**	**+2.2**
KUR				*e*S	**Sn**	**18 10 28.4**	**+1.3**
KUR				pmax	pmax		
	comp=Z,44nm,0.6s						
KUR				pmax	pmax		
	comp=N,13nm,0.3s						
KUR				smax	smax		
	comp=N,33nm,0.5s						
KUR				smax	smax		
	comp=E,50nm,0.5s						
KUR	**Kuril'sk**	**4.88**	**47**	*e*P	**Pn**	**18 09 34.1**	**+2.2**
KUR				AMB	AMB	18 09 36.2	
	comp=E,40nm,0.5s						
KUR				*e*S	**Sn**	**18 10 27.1**	**0.0**
KUR				A	A	18 10 35.5	
	comp=E,50nm,0.4s						
KUR				A	A	18 10 35.5	
	comp=E,60nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.92**	**360**	*e*P	**Pn**	**18 09 34.6**	**+2.2**
YSS				AMB	AMB	18 09 36.4	
YSS				*e*S	**Sn**	**18 10 28.5**	**+0.6**
YSS				A	A	18 10 31.8	
	comp=E,10.0nm,0.4s						
MJAR	**Matsushiro Arr**	**6.53**	**214**	P	Pn	18 09 59.8	+5.3
	comp=E,1.7nm,0.3s,baz=25,slow=16,SNR=8.9						
JHJ	**Hachijo jima 2**	**9.21**	**196**	P	**Pn**	**18 10 30.0**	**-1.1**
	comp=E,67nm,0.6s,baz=67,slow=18,SNR=1.3						
KLR	**Kul'dur**	**10.55**	**317**	LR	LR	18 14 57.3	
	comp=E,42nm,20.1s,baz=228,slow=36						
KSRS	**Korea Array**	**12.31**	**253**	P	Pn	18 11 20.8	+7.3
	comp=E,2.8nm,0.5s,baz=64,slow=14,SNR=11						
MA2	**Magadan**	**18.25**	**13**	P	**P**	**18 12 26.9**	**-2.7**
	comp=E,0.6nm,0.3s,baz=197,slow=8.2,SNR=3.7						
YAK	**Yakutsk**	**21.51**	**343**	P	**P**	**18 13 04.6**	**-0.3**
	comp=E,1.1nm,0.3s,baz=132,slow=10,SNR=2.1						
	comp=E,1.1nm,0.3s						
SEY	**Seymchan**	**21.69**	**12**	P	**P**	**18 13 02.5**	**-4.3**
	comp=E,0.6nm,0.4s,baz=219,slow=13,SNR=5.0						
	comp=E,0.6nm,0.4s						
SONM	**Songino Array**	**26.23**	**295**	P	**P**	**18 13 53.4**	**+2.7**
	comp=E,0.1nm,0.3s,baz=98,slow=10,SNR=2.6						
	comp=E,0.1nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**30.18**	**130**	T	T	18 45 58.9	
	baz=324,slow=75,SNR=66						
H11N1	**WAKE ISLAND Hy**	**30.20**	**130**	T	T	18 46 01.1	
	baz=324,slow=75,SNR=65						
H11N3	**WAKE ISLAND Hy**	**30.20**	**130**	T	T	18 46 04.4	
	baz=324,slow=75,SNR=64						
H11S1	**WAKE ISLAND Hy**	**31.05**	**132**	T	T	18 47 09.8	
	baz=325,slow=76,SNR=66						
H11S3	**WAKE ISLAND Hy**	**31.05**	**132**	T	T	18 47 10.2	
	baz=325,slow=76,SNR=59						
H11S2	**WAKE ISLAND Hy**	**31.07**	**132**	T	T	18 47 10.7	
	baz=325,slow=76,SNR=55						
ZALV	**Zalesovo Beam**	**39.50**	**308**	P	**P**	**18 15 47.2**	**+1.4**
	comp=E,0.5nm,0.5s,baz=88,slow=9.1,SNR=2.7						
	comp=E,0.5nm,0.5s						
MKAR	**Makanchi Array**	**42.54**	**298**	P	**P**	**18 16 13.7**	**+2.7**
	comp=E,0.2nm,0.5s,baz=77,slow=8.7,SNR=2.8						
	comp=E,0.2nm,0.5s						
KURK	**Kurchatov**	**43.84**	**304**	P	**P**	**18 16 22.6**	**+1.3**
KURK	**Kurchatov**	**43.84**	**304**	*e*P	**P**	**18 16 22.6**	**+1.3**
KURBB	**Kurchatov Arra**	**43.91**	**304**	P	**P**	**18 16 22.6**	**+0.7**
	comp=E,0.7nm,0.3s,baz=77,slow=8.9,SNR=8.3						
	comp=E,0.7nm,0.3s						
ILAR	**Eielson Array**	**44.75**	**35**	P	P	18 16 21.7	-6.7
	comp=E,0.1nm,0.6s,baz=266,slow=6.0,SNR=2.1						
	comp=E,0.1nm,0.6s						
BVAR	**Borovoye Array**	**48.11**	**309**	P	**P**	**18 16 56.1**	**+1.2**
	comp=E,0.5nm,0.4s,baz=72,slow=9.2,SNR=6.6						
	comp=E,0.5nm,0.4s						
WRA	**Warramunga Arr**	**62.15**	**189**	P	**P**	**18 18 35.6**	**-0.8**
	comp=E,0.1nm,0.5s,baz=6.6,slow=7.1,SNR=1.1						
	comp=E,0.1nm,0.5s						
FINES	**FINESS Array B**	**64.90**	**332**	P	**P**	**18 18 53.7**	**-0.4**
	comp=E,0.5nm,0.4s,baz=53,slow=7.6,SNR=7.9						
	comp=E,0.5nm,0.4s						
HFS	**Hagfors**	**69.98**	**336**	P	**P**	**18 19 24.9**	**-1.1**
	comp=E,1.1nm,0.8s,baz=74,slow=11,SNR=1.6						
	comp=E,1.1nm,0.8s						
H03N2	**Juan Fernandez**	**146.19**	**89**	T	T	21 11 10.9	
	baz=300,slow=76,SNR=13						
H03N3	**Juan Fernandez**	**146.20**	**89**	T	T	21 11 11.8	
	baz=300,slow=76,SNR=16						
H03N1	**Juan Fernandez**	**146.21**	**89**	T	T	21 11 12.3	
	baz=300,slow=76,SNR=8.9						

*VIE **21** 18:40:11.3±0.6, 50°.34N×18°.63E, h0km, mb3.0/9, ml2.9/7, ms3.6/6, Error ellipse: s-maj=6.7km s-min=2.4km az=162.0, Suspected Mining induced.*
*IDC **21** 18:40:11.5±0.7, 50°.03N×18°.83E, h0km, mb3.2/2, mbtmp3.2/10, ML2.9/8, MS3.1/2, Error ellipse: s-maj=10.7km s-min=6.6km az=153.0*
*IPEC **21** 18:40:11.7±0.2, 50°.24N×18°.74E, h1km, ML3.0/4, Error ellipse: s-maj=2.2km s-min=1.1km az=166.0*
*PRU **21** 18:40:13.0, 50°.25N×18°.64E, h0km*
ISC 21 18:40:10.5±0.6, 50°.31N±0°.03×18°.76E±0°.02, h0km, n73, σ1§44/108, 7C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.42**	**239**	*e*PG	**Pb**	**18 40 20.6**	**-0.3**
RAC				*e*SG	**Sb**	**18 40 26.7**	**-1.1**
OKC	**Ostrava-Krasne**	**0.61**	**220**	*e*PG	**Pg**	**18 40 23.1**	**+0.

KOLS	**Kolonicke sedl**	**2.67 120**	*e*PN		**Pn**	**18 40 55.6**	**+0.9**
PRU	**Pruhonice**	**2.73 265**	*e*SG		**Sb**	**18 41 35.1**	**+0.9**
	comp=Z,31nm,0.5s						
CONA	**Conrad Observa**	**3.05 220**	*e*Pn		**Pn**	**18 41 00.7**	**+0.7**
	1.6nm,0.4s						
CONA			*e*Sn		**Sn**	**18 41 38.2**	**+1.0**
	27nm,0.5s						
CONA			*e*Sg		**Sg**	**18 41 52.3**	**+4.0**
	19nm,0.4s						
RONA	**Rosalia, Austr**	**3.07 213**	*i* Pn		**Pn**	**18 41 00.3**	**0.0**
	1.1nm,0.2s						
RONA			*i* Sn		**Sn**	**18 41 37.3**	**-0.4**
	4.1nm,0.3s						
BRG	**Berggiesshubel**	**3.12 282**	Pg		**Pg**	**18 41 10.5**	**+0.3**
BRG			Sg		**Sg**	**18 41 51.8**	**+1.1**
BRG			Amp			18 42 02.7	
	comp=Z,28nm,0.5s						
CKRC	**Cesky Krumlov**	**3.25 245**	*e*PN		**Pn**	**18 41 03.8**	**+1.0**
CKRC			*e*PG		**Pb**	**18 41 10.2**	**+1.1**
HSKC	**Hora Svate Kat**	**3.42 277**	*e*SG		**Sg**	**18 42 00.2**	**0.0**
	comp=Z,31nm,0.8s						
KHC	**Kasperske Hory**	**3.56 253**	*e*PN		**Pn**	**18 41 07.4**	**+0.4**
KHC			*e*PG		**Pb**	**18 41 15.6**	**+1.3**
KHC			*e*SG		**Sg**	**18 42 02.4**	**-2.4**
	comp=Z,47nm,0.5s						
GERES	**GERESS Array B**	**3.60 248**	Pn		**Pn**	**18 41 07.6**	**0.0**
	comp=Z,0.6nm,0.3s,baz=66,slow=14,SNR=6.2						
GERES			Pg		**Pb**	**18 41 16.4**	**+1.3**
	comp=Z,1.6nm,0.3s,baz=65,slow=17,SNR=11						
GERES			Lg		Lg	18 42 02.3	
	comp=Z,7.9nm,0.3s,baz=66,slow=26,SNR=10						
	comp=Z,0.9nm,0.3s						
ARSA	**Arzberg**	**3.73 216**	*e*Pn		**Pn**	**18 41 10.9**	**+1.5**
	comp=Z,1.0nm,0.3s						
ARSA			Sg		**Sg**	**18 42 10.8**	**+0.5**
	comp=Z,11nm,0.7s						
CLL	**Collm**	**3.78 288**	*e*Pg		**Pg**	**18 41 24.0**	**+1.0**
CLL			*ex*		x	18 41 30.0	
CLL			*e*Sg		**Sg**	**18 42 13.0**	**+1.0**
	comp=Z,38nm,0.7s						
MORH	**Mrgy, Hungar**	**4.09 181**	⇑P		**Pn**	**18 41 14.0**	**-0.3**
BIOA	**Bad Ischl, Aus**	**4.26 234**	*e*Sg		**Sg**	**18 42 29.4**	**+1.9**
	comp=Z,63nm,0.6s						
SIRR	**Siria**	**4.48 153**	⇑P		**Pn**	**18 41 19.6**	**0.0**
MARR	**Marisel-Cluj**	**4.65 140**	⇓P		**Pn**	**18 41 22.3**	**+0.3**
KBA	**Koelnbreinsper**	**4.82 230**	*e*Sn		**Sn**	**18 42 21.2**	**+0.1**
	comp=Z,2.9nm,0.4s						
LESA	**Schwarzleotal**	**4.94 237**	*e*Sn		**Sn**	**18 42 22.9**	**-1.0**
	comp=Z,4.0nm,0.6s						
BURAR	**Bucovina Array**	**5.04 120**	⇓P		**Pn**	**18 41 28.5**	**+1.1**
BZS	**Buzias**	**5.07 157**	⇑P		**Pn**	**18 41 28.1**	**+0.4**
SURR	**Surduc**	**5.08 152**	⇑P		**Pn**	**18 41 28.5**	**+0.6**
BSD	**Bornholm Skovb**	**5.35 336**	*i* P		**Pn**	**18 41 32.0**	**+0.5**
BSD			*e*S		**Sn**	**18 42 31.4**	**-2.4**
BSD			IAML			18 42 44.4	
	comp=Z,6.2nm,0.8s						
ABTA	**Abfaltersbach**	**5.47 232**	*i* Pg		**Pg**	**18 41 52.4**	**-2.8**
	comp=Z,2.0nm,0.5s						
WATA	**Walderalm**	**5.60 241**	*e*Sg		**Sg**	**18 43 06.4**	**-3.7**
	comp=Z,4.5nm,0.4s						
WTTA	**Wattenberg**	**5.60 240**	*e*Sg		**Sg**	**18 43 06.6**	**-3.8**
	comp=Z,9.2nm,0.5s						
GZR	**Gura Zlata**	**5.61 150**	⇓P		**Pn**	**18 41 36.7**	**+1.5**
MOTA	**Moosalm**	**5.86 243**	*e*Pg		**Pg**	**18 42 03.0**	**+0.3**
	comp=Z,1.5nm,0.3s						
MOTA			*e*Sg		**Sg**	**18 43 17.5**	**-1.0**
	comp=Z,12nm,0.6s						
SQTA	**Sankt Quirin**	**5.87 241**	*e*Sg		**Sg**	**18 43 17.9**	**-1.0**
	comp=Z,8.4nm,0.3s						
HERR	**Herculane**	**5.96 154**	⇓P		**Pn**	**18 41 40.9**	**+0.9**
RETA	**Reutte**	**5.98 245**	*e*Sg		**Sg**	**18 43 24.8**	**+2.3**
	comp=Z,3.8nm,0.2s						
LUNU	**Lund**	**6.22 331**	*e*P		**Pn**	**18 41 44.8**	**+1.3**
LUNU			*e*S		**Sn**	**18 42 52.9**	**-2.3**
FETA	**Feichten**	**6.25 241**	*e*Pg		**Pg**	**18 42 09.4**	**-0.8**
	comp=Z,1.3nm,0.5s						
FETA			*e*Sg		**Sg**	**18 43 31.3**	**+0.2**
	comp=Z,1.7nm,0.4s						
BLEU	**Blekinge**	**6.26 345**	*e*P		**Pn**	**18 41 46.0**	**+1.9**
AKASG	**Malin Array Be**	**6.69 83**	Pn		**Pn**	**18 41 47.9**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=268,slow=12,SNR=1.2						
AKASG			Pg		**Pb**	**18 42 07.1**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=272,slow=15,SNR=2.3						
AKASG			Sn		**Sn**	**18 43 01.7**	**-5.1**
	comp=Z,0.6nm,0.3s,baz=268,slow=21,SNR=1.5						
AKASG			Lg		Lg	18 43 37.4	
	comp=Z,1.0nm,0.3s,baz=264,slow=24,SNR=1.7						
	comp=Z,0.3nm,0.4s						
NACGM	**Naroch**	**6.71 44**	*e*P		**Pn**	**18 41 47.7**	**-2.5**
	comp=Z,6.0nm,0.8s,baz=226						
BJUU	**Bjuv**	**6.72 331**	*e*P		**Pn**	**18 41 50.7**	**+0.4**
MLR	**Muntele Rosu**	**6.82 132**	Pn		**Pn**	**18 41 50.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=252,slow=13,SNR=1.4						
	comp=Z,0.7nm,0.4s						
DEL	**Delary**	**6.83 337**	*i* P		**Pn**	**18 41 53.0**	**+1.2**
DAVOX	**Davos/Dischmat**	**6.87 242**	Pn		**Pn**	**18 41 52.7**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=66,slow=10.0,SNR=3.6						
DAVOX			Sn		**Sn**	**18 43 08.4**	**-3.1**
	comp=Z,0.4nm,0.3s,baz=155,slow=14,SNR=1.5						
DAVOX			Lg		Lg	18 43 46.7	
	comp=Z,0.5nm,0.3s,baz=86,slow=11,SNR=2.2						
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**10.26 346**	Pn		**Pn**	**18 42 38.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=166,slow=38,SNR=1.8						
HFS			Sn		**Sn**	**18 44 30.2**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=168,slow=28,SNR=2.3						
	comp=Z,1.2nm,0.8s						
NOA	**NORSAR Array B**	**11.56 341**	Pn		**Pn**	**18 42 55.7**	**-1.0**
	baz=151,slow=12,SNR=4.7						
NOA			Sn		**Sn**	**18 45 04.2**	**-2.1**
	baz=60,slow=22,SNR=1.2						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**11.88 17**	Pn		**Pn**	**18 42 59.5**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=199,slow=10,SNR=7.6						
FINES			Sn		Sn	18 45 03.8	-10
	comp=Z,0.2nm,0.3s,baz=207,slow=20,SNR=3.0						
	comp=Z,1.1nm,0.6s						
EKA	**Eskdalemuir Ar**	**14.15 299**	Pn		**Pn**	**18 43 34.5**	**+2.5**
	baz=104,slow=13						
	comp=Z,0.3nm,0.4s						
GNI	**Garni**	**20.83 109**	LR		LR	18 55 03.7	
	comp=Z,27nm,19.4s,baz=312,slow=43						
BVAR	**Borovoye Array**	**31.57 65**	P		**P**	**18 46 36.8**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=282,slow=8.7,SNR=2.7						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**41.07 69**	P		**P**	**18 47 56.8**	**+1.2**
	comp=Z,0.1nm,0.5s,baz=308,slow=7.5,SNR=1.9						
	comp=Z,0.1nm,0.5s						
MBAR	**Mbarara**	**51.74 165**	LR		LR	19 13 32.6	
	comp=Z,29nm,18.1s,baz=303,slow=39						

IDC 21 18:41:50.3±1.5, 4°94S×142°29E, *h*0km, mb3.2/3, mbtmp3.4/5, ML1.0/1, Error ellipse: s-maj=42.4km s-min=27.2km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.56**	**133**	Pn	Pn	18 43 29.3	+1.3
	0.2nm,0.3s,baz=252,slow=16,SNR=1.1						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**16.80**	**207**	Pn	Pn	18 45 47.5	+0.3
	2.0nm,0.9s,baz=30,slow=11,SNR=11						
WRA				Sn	Sn	18 48 55.2	+0.6
	baz=27,slow=25,SNR=1.6						
ASAR	**Alice Springs**	**20.30**	**203**	P	P	18 46 27.4	-0.5
	0.5nm,0.6s,baz=31,slow=7.4,SNR=8.9						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**73.73**	**322**	P	P	18 53 26.6	+0.3
	0.2nm,0.7s,baz=98,slow=5.7,SNR=2.3						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**86.39**	**24**	P	P	18 54 33.9	-0.4
	0.2nm,0.8s,baz=268,slow=5.4,SNR=1.4						
	0.2nm,0.8s						

*IDC **21** 18:43:52.1±5.1, 35°.57N×30°.85E, h0km, mb3.5/3, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=90.5km s-min=32.2km az=81.0*
*ISK **21** 18:43:54.4, 35°.62N×31°.26E, h5km, ML2.8/24*
*AFAD **21** 18:43:55.7±0.0, 35°.61N×31°.33E, h19km±1km, ML2.8*
*NIC **21** 18:43:56.3, 35°.45N×31°.03E, h5km×31km, Ml2.8/7*
*GII **21** 18:43:59.3±0.5, 35°.449N±0°.007×31°.102E±0°.003, h40km, Mws3.0, confirmed*
ISC 21 18:43:56.4±1.1, 35°.62N±0°.03×31°.23E±0°.02, h8km±9km, n80, σ1ᵍ56/107, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**1.00**	**314**	P	**Pg**	**18 44 14.5**	**-1.1**
AKUM				S	**Sn**	**18 44 31.1**	**+0.1**
GAZI	**Gazipasa**	**1.07**	**55**	Pg	**Pg**	**18 44 15.5**	**-1.4**
GAZI				Sg	**Sg**	**18 44 30.6**	**-0.2**
GAZI	**Gazipasa**	**1.07**	**55**	P	**Pg**	**18 44 14.3**	**-2.6**
GAZI				S	**Sg**	**18 44 26.9**	**-3.9**
AKMS	**Akamas**	**1.08**	**124**	P	**Pg**	**18 44 15.3**	**-1.9**
AKMS				S	**Sn**	**18 44 35.8**	**+2.7**
AKMS				AML	AML	18 44 40.8	
	0.7nm,0.5s						
AKMS				AML	AML	18 44 41.4	
	0.6nm,0.5s						
ALAN	**Alanya-ANTALYA**	**1.14**	**35**	Pn	**Pg**	**18 44 17.3**	**-0.8**
ALAN				Sn	**Sg**	**18 44 33.9**	**+1.0**
ALFC	**Alefka**	**1.21**	**112**	P	**Pg**	**18 44 16.9**	**-2.7**
ALFC				S	**Sn**	**18 44 41.0**	**+4.9**
ALFC				AML	AML	18 44 44.9	
	0.7nm,0.6s						
ALFC				AML	AML	18 44 45.8	
	0.6nm,0.7s						
KEPZ	**Antalya-Kepez**	**1.31**	**13**	P	**Pn**	**18 44 18.7**	**-2.3**
KEPZ				S	**Sb**	**18 44 39.1**	**+0.9**
ANTB	**Antalya**	**1.36**	**340**	Pn	**Pn**	**18 44 21.5**	**-0.1**
NATA	**Nata**	**1.38**	**127**	P	**Pn**	**18 44 22.5**	**+0.5**
NATA				S	**Sg**	**18 44 46.1**	**+5.4**
NATA				AML	AML	18 44 54.1	
	1.9nm,0.6s						
NATA				AML	AML	18 44 57.9	
	1.1nm,0.7s						
LEF	**Lefka**	**1.44**	**110**	Pn	**Pn**	**18 44 21.9**	**-0.9**
AKDN	**Akdeniz- Kıbrı**	**1.45**	**102**	Pn	**Pn**	**18 44 22.3**	**-0.6**
AKAS	**Kas**	**1.46**	**295**	Pn	**Pg**	**18 44 23.1**	**-1.2**
AKAS	**Kas**	**1.46**	**295**	P	**Pg**	**18 44 24.9**	**+0.6**
AKAS				S	**Sn**	**18 44 42.2**	**-0.2**
AKAS				*i* AML	AML	18 44 57.0	
	comp=E,75nm,0.8s						
AKAS				*i* AML	AML	18 45 04.0	
	comp=N,122nm,0.8s						
BOZY	**Bozyazi-Mersin**	**1.50**	**71**	Pn	**Pn**	**18 44 23.2**	**-0.2**
TROD	**Troodos**	**1.50**	**116**	P	**Pn**	**18 44 24.0**	**+0.3**
TROD				S	**Sg**	**18 44 47.9**	**+3.4**
TROD				AML	AML	18 44 57.5	
	0.2nm,0.8s						
TROD				AML	AML	18 45 01.7	
	0.2nm,0.6s						
KORT	**Korkueli**	**1.55**	**333**	Pn	**Pn**	**18 44 24.5**	**+0.1**
KORT	**Korkueli**	**1.55**	**333**	P	**Pg**	**18 44 25.5**	**-0.6**
KORT				S	**Sg**	**18 44 50.3**	**+4.1**
ELL	**Elmali**	**1.55**	**317**	Pn	**Pb**	**18 44 24.6**	**-0.8**
ELL	**Elmali**	**1.55**	**317**	P	**Pg**	**18 44 26.2**	**0.0**
ELL				S	**Sg**	**18 44 46.7**	**+0.4**
TEKE	**Tekeli-Mersin**	**1.61**	**71**	Pn	**Pn**	**18 44 25.1**	**0.0**
HDMB	**Hadim**	**1.68**	**37**	Pn	**Pn**	**18 44 25.9**	**-0.3**
KNIK	**Mula-Seydike**	**1.81**	**313**	P	**Pb**	**18 44 29.1**	**-0.7**
KNIK				S	**Sn**	**18 44 50.9**	**-0.3**
IZZE	**Mula-Seydike**	**1.82**	**297**	P	**Pn**	**18 44 27.9**	**0.0**
CSS	**Mathiatis**	**1.84**	**110**	Pn	**Pn**	**18 44 27.9**	**-0.3**
CSS	**Mathiatis**	**1.84**	**110**	P	**Pn**	**18 44 29.0**	**+0.9**
CSS				S	**Sg**	**18 44 57.9**	**+2.5**
CSS				AML	AML	18 45 05.3	
	0.2nm,0.6s						
CSS				AML	AML	18 45 12.7	
	0.2nm,0.6s						
CSS	**Mathiatis**	**1.84**	**110**	P	**Pn**	**18 44 28.7**	**+0.5**
SEYD	**Seydisehir-KON**	**1.84**	**15**	Pn	**Pn**	**18 44 28.8**	**+0.4**
ASGA	**Asgata**	**1.85**	**116**	P	**Pn**	**18 44 29.3**	**+1.0**
ASGA				S	**Sb**	**18 44 55.0**	**+1.4**
ASGA				AML	AML	18 45 07.0	
	0.3nm,0.6s						
ASGA				AML	AML	18 45 07.5	
	0.3nm,0.6s						
SEDI	**Konya, Seydise**	**1.87**	**13**	P	**Pn**	**18 44 28.2**	**-0.5**
SEDI				S	**Sb**	**18 44 54.9**	**+0.4**
SEDI				*i* AML	AML	18 45 02.0	
	comp=E,84nm,0.5s						
LFK	**Lefkose**	**1.91**	**100**	Pn	**Pn**	**18 44 29.2**	**0.0**
AKIN	**Akıncılar- Kıb**	**1.92**	**108**	Pn	**Pn**	**18 44 29.4**	**0.0**
AKK1	**Akkuyu-Mersin**	**1.94**	**74**	Pn	**Pn**	**18 44 29.8**	**+0.2**
AKK2	**Akkuyu-Mersin**	**1.95**	**74**	Pn	**Pn**	**18 44 29.7**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.96**	**73**	Pn	**Pn**	**18 44 29.5**	**-0.3**
GULN	**MERSİN_Gulnar**	**1.96**	**73**	P	**Pn**	**18 44 29.3**	**-0.5**
GULN				S	**Sn**	**18 44 53.7**	**-0.9**
GULN				*i* AML	AML	18 45 03.0	
	comp=N,72nm,0.6s						
TEVE	**Tevekalti-Mers**	**1.97**	**65**	Pn	**Pn**	**18 44 29.9**	**-0.1**
FETY	**Fethiye**	**2.01**	**301**	Pn	**Pn**	**18 44 31.1**	**+0.5**
CAME	**Cameli-Denizli**	**2.04**	**311**	Pn	**Pn**	**18 44 31.4**	**+0.3**
MVOU	**Mavrovouni**	**2.05**	**106**	P	**Pn**	**18 44 31.8**	**+0.7**
MVOU				S	**Sb**	**18 45 02.0**	**+2.5**
MVOU				AML	AML	18 45 13.8	
	0.1nm,1.0s						
MVOU				AML	AML	18 45 16.6	
	0.2nm,0.6s						
GOLH	**Golhisar**	**2.10**	**321**	P	**Pb**	**18 44 34.4**	**-0.3**
KKBE	**Karaman, Kazim**	**2.10**	**40**	P	**Pn**	**18 44 32.5**	**+0.6**
KKBE				S	**Sn**	**18 44 58.0**	**-0.3**
ISP	**Isparta**	**2.27**	**346**	Pn	**Pn**	**18 44 34.7**	**+0.5**
BRDR	**BURDUR-Merkez**	**2.27**	**336**	P	**Pb**	**18 44 38.0**	**+0.4**
KMER	**Konya-Meram**	**2.33**	**23**	P	**Pn**	**18 44 36.7**	**+1.6**
KMER				S	**Sb**	**18 45 06.9**	**-0.7**
EREN	**Erenkoy**	**2.40**	**91**	P	**Pn**	**18 44 36.4**	**+0.6**
EREN				*i* AML	AML	18 45 16.0	
	comp=N,68nm,0.7s						
EREN				*i* AML	AML	18 45 21.0	
	comp=E,73nm,0.4s						
DALY	**Dalyan (Mula)**	**2.40**	**300**	Pn	**Pn**	**18 44 36.4**	**+0.5**
APMY	**Acipayam-Deniz**	**2.41**	**320**	Pn	**Pn**	**18 44 36.9**	**+0.7**
BASM	**Basmaki-Afyon**	**2.48**	**338**	Pn	**Pn**	**18 44 37.7**	**+0.6**
KONT	**Konya--Tatoy**	**2.49**	**21**	Pn	**Pn**	**18 44 37.7**	**+0.5**
KONT	**Konya--Tatoy**	**2.49**	**21**	P	**Pn**	**18 44 38.3**	**+1.2**
KONT				S	**Sb**	**18 45 13.0**	**+0.9**
DOGA	**KONYA_Doganhis**	**2.50**	**8**	P	**Pn**	**18 44 37.7**	**+0.2**
DOGA				*i* AML	AML	18 45 22.0	
	comp=N,41nm,0.6s						
DOGA				*i* AML	AML	18 45 27.0	
	comp=E,52nm,0.7s						
KIZK	**Mersin**	**2.51**	**69**	P	**Pn**	**18 44 38.5**	**+1.1**
KIZK				S	**Sn**	**18 45 08.5**	**+0.4**
YVAC	**Isparta, Yalva**	**2.64**	**0**	P	**Pn**	**18 44 39.2**	**-0.2**
YVAC				S	**Sn**	**18 45 13.1**	**+1.4**
AFYN	**Afyon-Dinar-K**	**2.71**	**348**	P	**Pn**	**18 44 42.3**	**+2.0**
LADK	**Ladik-KONYA**	**2.73**	**19**	Pn	**Pn**	**18 44 40.9**	**+0.4**
KERG	**Konya-Eregli**	**2.94**	**52**	P	**Pn**	**18 44 44.5**	**+1.1**
KERG				S	**Sn**	**18 45 21.1**	**+2.2**
ALIN	**Konya, Altinte**	**2.98**	**26**	P	**Pn**	**18 44 45.3**	**+1.3**
KDHN	**Kadınhani**	**2.98**	**13**	P	**Pn**	**18 44 45.9**	**+1.9**
UCKU	**Afyonkarahisar**	**3.01**	**3**	P	**Pn**	**18 44 45.7**	**+1.3**
CBEY	**Konya-Cihanbey**	**3.30**	**22**	P	**Pn**	**18 44 49.8**	**+1.4**
CBEY				*i* AML	AML	18 45 43.0	
	comp=N,29nm,0.6s						
CBEY				*i* AML	AML	18 45 44.0	
	comp=E,25nm,0.5s						
GULE	**Gulek**	**3.30**	**59**	P	**Pn**	**18 44 49.0**	**+0.6**
GULE				S	**Sn**	**18 45 31.4**	**+3.4**
GULE				*i* AML	AML	18 45 44.0	
	comp=N,39nm,0.4s						
KARP	**Karpathos**	**3.32**	**270**	P	**Pn**	**18 44 47.5**	**-1.1**
KARP				S	Sn	18 44 53.6	-35
MMA0B	**Mount Meron ar**	**4.32**	**126**	P	**Pn**	**18 45 02.6**	**+0.2**
MMA0B	**Mount Meron ar**	**4.32**	**126**	S	**Sn**	**18 45 51.6**	**-1.3**
MMAI	**Mount Meron Ar**	**4.32**	**126**	Pn	**Pn**	**18 45 02.3**	**-0.1**
	4.5nm,0.3s,baz=309,slow=12,SNR=20						
MMAI				Sn	**Sn**	**18 45 51.2**	**-1.8**
	5.2nm,0.3s,baz=321,slow=28,SNR=8.0						
	2.2nm,0.3s						
BRTR	**Keskin Array B**	**4.52**	**24**	Pn	**Pn**	**18 45 05.2**	**+0.1**
	0.2nm,0.3s,baz=203,slow=15,SNR=4.3						
BRTR				Sn	**Sn**	**18 46 02.3**	**+4.3**
	0.1nm,0.3s,baz=214,slow=27,SNR=1.1						
	0.9nm,0.4s						
KSHT	**Keshet**	**4.61**	**124**	P	**Pn**	**18 45 07.4**	**+1.0**
SLTI	**Sal'it**	**4.62**	**136**	P	**Pn**	**18 45 06.6**	**+0.1**
APE	**Apeiranthos**	**4.82**	**289**	P	**Pn**	**18 45 08.7**	**-0.6**
HMDT	**Nahal Hemdat**	**4.90**	**132**	P	**Pn**	**18 45 10.8**	**+0.5**
DSI	**Dead Sea**	**5.32**	**138**	P	**Pn**	**18 45 16.9**	**+0.8**
MSBI	**Mazada**	**5.51**	**140**	P	**Pn**	**18 45 18.7**	**+0.1**
PRNI	**Paran**	**6.14**	**148**	S	**Sn**	**18 46 34.4**	**-3.3**
PRNI	**Paran**	**6.14**	**148**	P	**Pn**	**18 45 27.4**	**+0.1**
KRMI	**Paran Flat**	**6.23**	**151**	P	**Pn**	**18 45 28.4**	**-0.1**
EIL	**Elat**	**6.71**	**151**	S	**Sn**	**18 46 48.4**	**-3.4**
EIL	**Elat**	**6.71**	**151**	P	**Pn**	**18 45 35.0**	**-0.2**
BELG	**Belogornoye**	**20.41**	**30**	P	**P**	**18 48 32.6**	**-1.0**
	3.0nm,0.6s,baz=216,slow=19,SNR=5.0						
	3.0nm,0.6s						
MKAR	**Makanchi Array**	**39.36**	**57**	P	**P**	**18 51 25.4**	**-0.8**
	0.4nm,0.5s,baz=269,slow=9.5,SNR=12						
	0.4nm,0.5s						
SONM	**Songino Array**	**55.31**	**52**	P	**P**	**18 53 29.7**	**-0.8**
	0.1nm,0.4s,baz=286,slow=7.8,SNR=1.9						
	0.1nm,0.4s						

*IDC **21** 18:50:23.5±2.1, 3°.31S×127°.25E, h0km, mb3.5/2, mbtmp3.7/3, ML4.2/1, MS2.8/1, Error ellipse: s-maj=134.2km s-min=28.2km az=66.0*
*DJA **21** 18:50:26.3±1.3, 3°S±4°×12°9E±°, h22km±13km, M3.8/10, mb4.0/4, MLv3.7/10*
ISC 21 18:50:26.4±0.9, 2°.59S±0°.06×128°.67E±0°.05, h35km, n12, σ1ᵍ92/14, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.70**	**248**	P	**Pn**	**18 50 55.5**	**+2.0**
LBMI	**Labuha**	**2.26**	**329**	P	**Pn**	**18 51 02.2**	**+0.9**
LBMI				S	**Sn**	**18 51 29.3**	**+1.3**
BNDI	**Bandanaira**	**2.28**	**147**	P	**Pn**	**18 51 04.3**	**+2.8**
SANI	**Sanana**	**2.73**	**281**	P	**Pn**	**18 51 06.7**	**-1.1**
SWI	**Sorong**	**3.10**	**57**	P	**Pn**	**18 51 13.3**	**+0.4**
SWI				S	**Sn**	**18 51 49.5**	**+0.7**
TNTI	**Ternate**	**3.58**	**339**	P	**Pn**	**18 51 19.9**	**+0.4**
FAKI	**Fak Fak**	**3.59**	**95**	P	**Pn**	**18 51 20.0**	**+0.4**
LUWI	**Luwuk**	**6.09**	**285**	P	**Pn**	**18 51 55.7**	**+1.7**
	24nm,0.8s,0.2nm						
WRA	**Warramunga Arr**	**18.11**	**163**	P	**Pn**	**18 54 33.0**	**-2.4**
	0.8nm,0.3s,baz=336,slow=13,SNR=40						
WRA				S	Sn	18 57 42.4	-14
	0.2nm,0.4s,baz=329,slow=16,SNR=1.9						
	1.4nm,0.3s						
ASAR	**Alice Springs**	**21.56**	**167**	P	**P**	**18 55 12.8**	**-0.1**
	3.2nm,0.7s,baz=354,slow=12,SNR=37						
ASAR				S	**S**	**18 59 06.2**	**-3.9**
	0.6nm,0.6s,baz=352,slow=25,SNR=7.0						
	3.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**35.97**	**307**	LR	LR	19 13 38.1	
	comp=Z,13nm,19.1s,baz=270,slow=40						
MKAR	**Makanchi Array**	**63.84**	**326**	P	**P**	**19 00 56.0**	**+0.7**
	0.2nm,0.7s,baz=128,slow=5.3,SNR=2.1						
	0.2nm,0.7s						

*IDC **21** 18:56:40.3±1.6, 26°.43N×140°.61E, h366km±14km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=57.2km s-min=23.3km az=95.0*
*JMA **21** 18:56:46.1±0.2, 27°N±2°×141°1E±°, h393km, MV4.3/34, NEAR CHICHIJIMA ISLAND*
ISC 21 18:56:44.6±2.0, 26°.7N±0°.2×141°.2E±0°.3, h400km, n16, σ1ᵍ93/17, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**0.90**	**96**	*e*P	**Pn**	**18 57 36.4**	**+1.0**
JHH2				S	**S**	**18 58 16.1**	**-0.2**
CBIJ	**Chichi jima**	**0.97**	**68**	P	**Pn**	**18 57 35.6**	**+0.1**
CBIJ				*e*S	**S**	**18 58 14.9**	**-1.8**
JCJ	**Chichijima**	**0.97**	**68**	P	Pn	18 57 31.4	-4.2
	66nm,0.6s,baz=251,slow=23,SNR=16						
JCJ				S	**S**	**18 58 10.8**	**-6.0**
	112nm,0.3s,baz=270,slow=20,SNR=16						
BSO1	**Boso 1**		**7.90 359**	*e*P	**P**	**18 58 38.2**	**+0.1**
BSO3	**Boso 3**		**8.06 356**	*e*P	**P**	**18 58 40.3**	**0.0**
JIE	**Ise**		**8.55 334**	*e*P	**P**	**18 58 46.3**	**+0.3**
JNY	**Yasuok**		**9.05 343**	*e*P	**P**	**18 58 52.4**	**+0.7**
JHU	**Hanno**		**9.23 350**	*e*P	**Pn**	**18 58 52.4**	**-1.3**
JRY	**Ryogami san**		**9.46 349**	*e*P	**Pn**	**18 58 55.9**	**-0.4**
JYT	**Yasato**		**9.50 355**	*e*P	**Pn**	**18 58 57.1**	**+0.4**
JAG	**Ashikaga**		**9.77 352**	*e*P	**Pn**	**18 58 58.9**	**-1.0**
JHO	**Hitachi**		**9.86 357**	*e*P	**Pn**	**18 59 01.4**	**+0.5**
MJAR	**Matsushiro Arr**	**10.10**	**346**	P	**P**	**18 59

MNAI Sn **Sn** **19 31 24.6 +3.3**
MNAI Manna 1.41 348 P **Pn** **19 31 08.0 +4.1**
MNAI Manna 1.41 348 P **Pn** **19 31 07.6 +3.7**
LHSI Lahat 1.93 8 S **Sn** **19 31 35.4 +1.2**
PMBI Palembang 3.19 29 Pn **Pn** **19 31 29.3 +0.8**
SKJI Sukabumi 3.52 111 P **Pn** **19 31 37.7 +4.8**
DBJI Dramaga 3.58 103 P **Pn** **19 31 37.5 +3.8**
KRJI Kerinci 4.05 334 P Pn 19 31 45.5 +5.2
CNJI Cibinong 4.16 112 P **Pn** **19 31 44.5 +2.8**
PPSI Pulau Pagai 4.38 313 P Pn 19 31 50.4 +5.6
LEM Lembang 4.48 104 P Pn 19 31 53.5 +7.3
211nm,1.1s,baz=231,slow=6.6,SNR=30
LEM S **Sn** **19 32 44.4 +7.1**
32nm,0.7s,baz=234,slow=19,SNR=0.9
LEM LR LR 19 33 50.2
comp=Z,97nm,21.5s,baz=336,slow=42
LEM Lembang 4.48 104 P **Pn** **19 31 49.5 +3.3**
BBJI Bungbulang 4.70 111 P **Pn** **19 31 52.4 +3.2**
XMI Christmas Isla 5.26 153 P **Pn** **19 31 58.8 +2.0**
XMIS Christmas Isla 5.27 153 Pn **Pn** **19 31 58.4 +1.4**
XMIS Sn **Sn** **19 32 50.8 -5.8**
XMIS Christmas Isla 5.27 153 P **Pn** **19 31 58.6 +1.6**
DSRI Dabo 5.41 14 P **Pn** **19 31 59.7 +0.8**
28nm,1.0s,765nm0.2nm
CMJI Cimerak 5.55 112 P **Pn** **19 32 03.5 +2.7**
49nm,0.5s,2µm0.3nm
KPJI Karang Pucung 5.87 106 P **Pn** **19 32 07.4 +2.2**
28nm,0.5s,0.1nm
SISI Saibi 6.04 317 P **Pn** **19 32 12.1 +4.5**
53nm,0.6s,0.3nm
MYKOM **Kota Tinggi 7.52 5** Pn **Pn** **19 32 29.8 +1.9**
PBSI Pulau Batu 7.52 319 P Pn 19 32 33.7 +5.7
UGM Wanagama 7.54 107 Pn **Pn** **19 32 32.6 +4.4**
UGM Wanagama 7.54 107 P **Pn** **19 32 32.5 +4.3**
UGM Wanagama 7.54 107 P **Pn** **19 32 32.1 +3.9**
73nm,1.2s,0.5nm
GSI Gunungsitoli 9.01 321 **Pn** **19 32 49.8 +1.4**
GSI Gunungsitoli 9.01 321 P **Pn** **19 32 50.8 +2.4**
JAGI Jajag, Banyuwa 11.16 105 **Pn** **19 33 19.1 +1.2**
PLAI Plampang 14.74 103 P **Pn** **19 34 08.5 +1.8**
TOLI2 Tolitoli 18.80 69 P **P** **19 34 56.1 -1.2**
TOLI2 Tolitoli 18.80 69 P **P** **19 34 57.9 +0.6**
MBWA Marble Bar 22.14 135 P **P** **19 35 37.3 +3.9**
MBWA IAmb IAmb 19 35 51.5
comp=Z,24nm,1.4s
CMAR Chiang Mai Arr 24.43 350 P **P** **19 35 55.0 -1.3**
CMAR Chiang Mai Arr 24.43 350 P **P** **19 35 54.8 -1.4**
comp=Z,1.2nm,0.6s,baz=180,slow=9.1,SNR=12
comp=Z,1.2nm,0.6s
CHTO Chiang Mai 24.78 350 P **P** **19 35 56.6 -2.8**
MTN Manton Dam 28.39 106 P **P** **19 36 33.8 +1.7**
H01W3 Cape Leeuwin H 30.69 162 T T 20 10 06.0
baz=342
H01W2 Cape Leeuwin H 30.70 162 T T 20 09 56.1
baz=342
H01W1 Cape Leeuwin H 30.70 162 T T 20 09 44.4
baz=342
WB0 Warramunga Arr 33.34 118 P **P** **19 37 16.6 +0.9**
WB0 IAmb IAmb 19 37 18.1
comp=Z,9.1nm,1.3s
WRA Warramunga Arr 33.35 118 P **P** **19 37 17.8 +2.0**
comp=Z,0.3nm,0.3s,baz=305,slow=8.8,SNR=5.7
WRA PcP **PcP** **19 39 58.6 +1.3**
comp=Z,0.4nm,0.9s,baz=312,slow=1.7,SNR=4.6
comp=Z,0.3nm,0.3s
WB2 Warramunga Ar 33.36 118 P **P** **19 37 16.4 +0.5**
WB2 IAmb IAmb 19 37 39.8
comp=Z,10.0nm,1.2s
WR0 Warramunga Arr 33.53 118 P **P** **19 37 18.1 +0.7**
WR0 IAmb IAmb 19 37 36.7
comp=Z,9.5nm,1.4s
ASAR Alice Springs 34.46 124 P **P** **19 37 25.6 +0.2**
ASAR Alice Springs 34.46 124 P **P** **19 37 28.0 +2.6**
comp=Z,0.8nm,0.7s,baz=299,slow=7.8,SNR=12
ASAR PcP **PcP** **19 40 02.4 +2.0**
comp=Z,0.5nm,0.5s,baz=297,slow=2.2,SNR=6.3
comp=Z,0.8nm,0.7s
AS31 Alice Springs 34.46 124 P **P** **19 37 27.1 +1.6**
AS31 IAmb IAmb 19 37 34.6
comp=Z,1.1nm,0.5s
ENH Enshi 36.32 9 P **P** **19 37 39.0 -2.2**
ENH IAmb IAmb 19 37 48.2
comp=Z,8.3nm,1.4s
LSA Lhasa 37.11 342 **P** **19 37 48.7 +0.2**
COEN Coen 40.13 105 P **P** **19 38 13.6 0.0**
COEN IAmb IAmb 19 38 14.0
comp=Z,15nm,1.4s
JOW Kunigami 40.46 36 P **P** **19 38 14.8 -1.2**
STKA Stephens Creek 44.26 131 P **P** **19 38 49.1 +2.0**
STKA Stephens Creek 44.26 131 P **P** **19 38 50.6 +3.5**
comp=Z,1.4nm,0.6s,baz=316,slow=9.6,SNR=4.6
comp=Z,1.4nm,0.6s
GTA Gaotai 45.05 356 P **P** **19 38 53.3 0.0**
GTA pmax pmax
comp=Z,2.0nm,0.7s
HHC Hu-ho-hao-te 47.00 9 *e*P P 19 39 14.3 +5.7
HHC pP pP 19 39 20.8 +2.5
HHC PP PP 19 41 12.0 +12
HHC *e*S **S** **19 46 00.0 +2.1**
HHC sS sS 19 46 17.6 +3.4
HHC pmax pmax
comp=Z,8.0nm,0.5s
HHC pmax pmax
comp=Z,58nm,4.9s
HHC LR LR
comp=N,120nm,14.7s
HHC LR LR
comp=Z,110nm,14.8s
MJAR Matsushiro Arr 53.30 35 P **P** **19 39 53.1 -3.2**
comp=Z,1.8nm,0.7s,baz=222,slow=8.1,SNR=4.6
comp=Z,1.8nm,0.7s
SONM Songino Array 53.43 3 P **P** **19 39 56.9 -0.3**
SONM IAmb IAmb 19 39 58.0
comp=Z,2.9nm,0.8s
SONM Songino Array 53.43 3 P **P** **19 39 56.4 -0.9**
comp=Z,2.7nm,0.6s,baz=180,slow=8.8,SNR=32
SONM PcP **PcP** **19 41 03.9 -0.2**
comp=Z,0.3nm,0.5s,baz=173,slow=4.5,SNR=1.6
comp=Z,2.7nm,0.6s
TAU Tasmania Unive 53.65 141 P **P** **19 39 59.5 +0.7**
ARSB Arslanbob 54.42 332 P **P** **19 40 04.4 -0.2**
ARSB IAmb IAmb 19 40 06.2
comp=Z,2.1nm,1.4s
AAK Ala-Archa 54.79 334 P **P** **19 40 07.4 0.0**
comp=Z,0.3nm,0.3s,baz=67,slow=11,SNR=1.8
comp=Z,0.3nm,0.3s
MK31 Makanchi Array 55.52 343 P **P** **19 40 11.7 -0.6**
MK31 IAmb IAmb 19 40 13.1
comp=Z,1.4nm,0.6s
MKAR Makanchi Array 55.52 343 P **P** **19 40 11.7 -0.7**
comp=Z,2.0nm,0.5s,baz=151,slow=8.8,SNR=60
comp=Z,2.0nm,0.5s
BNX BinXian 55.62 20 ⇓P **P** **19 40 11.6 -1.4**
BNX pmax pmax
comp=Z,9.0nm,0.7s
BNX pmax pmax
comp=Z,150nm,4.9s
USA0B Ussuriysk Arra 56.06 25 P P 19 40 12.1 -4.1
USRK Ussuriysk Ar. 56.06 25 P **P** **19 40 15.1 -1.1**
USRK Ussuriysk Ar. 56.06 25 P **P** **19 40 14.6 -1.6**
comp=Z,6.2nm,0.7s,baz=210,slow=6.0,SNR=12
comp=Z,6.2nm,0.7s
KK31 Karatay Array 56.96 332 P **P** **19 40 21.9 -0.8**
KKAR Karatay Array 56.96 332 P **P** **19 40 22.2 -0.4**
KKAR Karatay Array 56.96 332 P **P** **19 40 21.9 -0.8**
KKAR IAmb IAmb 19 40 23.6
comp=Z,0.9nm,0.8s
HEH HeiHe 59.58 18 *e*P **P** **19 40 39.3 -1.5**
HEH pmax pmax
comp=Z,9.0nm,0.8s
HEH pmax pmax
comp=Z,120nm,4.6s
H04N2 CROZET ISLANDS 59.82 219 T T 20 47 00.3
baz=64,slow=75,SNR=21
H04N1 CROZET ISLANDS 59.84 219 T T 20 47 02.3
baz=64,slow=75,SNR=62
H04N3 CROZET ISLANDS 59.84 219 T T 20 46 58.5
baz=64,slow=75,SNR=84
H04S1 CROZET ISLANDS 60.05 218 T T 20 47 14.5
baz=66
H04S3 CROZET ISLANDS 60.07 218 T T 20 47 15.7
baz=66
KURBB Kurchatov Arra 60.07 342 P **P** **19 40 43.8 -0.3**
comp=Z,0.6nm,0.3s,baz=156,slow=4.9,SNR=1.7
comp=Z,0.6nm,0.3s
H04S2 CROZET ISLANDS 60.07 218 T T 20 47 15.4
baz=66
ZAA0 Zalesovo Array 61.47 348 P **P** **19 40 53.1 -0.5**
ZALV Zalesovo Beam 61.47 348 P **P** **19 40 52.5 -1.0**
ZALV Zalesovo Beam 61.47 348 P **P** **19 40 52.9 -0.7**
comp=Z,5.5nm,0.6s,baz=149,slow=4.7,SNR=32
comp=Z,5.5nm,0.6s
BVAR Borovoye Array 64.81 339 P **P** **19 41 15.3 -0.5**
comp=Z,1.2nm,0.3s,baz=134,slow=8.2,SNR=12
comp=Z,1.2nm,0.3s
ABKAR Akbulak array 66.47 331 P **P** **19 41 26.3 -0.3**
MBAR Mbarara 72.53 271 P **P** **19 42 02.5 -2.5**
MBAR IAmb IAmb 19 42 19.9
comp=Z,1.5nm,0.7s
FINES FINESS Array B 88.92 332 P **P** **19 43 32.5 +1.2**
comp=Z,0.5nm,0.5s,baz=110,slow=4.9,SNR=8.7
comp=Z,0.5nm,0.5s
APMT Aspermont 145.01 35 PKPbc **PKPbc** **19 50 13.4 -0.8**
TXAR Lajitas Array 145.42 44 PKPdf **PKPbc** **19 50 13.3 -2.5**
TXAR Lajitas Array 145.42 44 PKP **PKPbc** **19 50 15.8 0.0**
comp=Z,1.1nm,0.8s,baz=284,slow=2.1,SNR=10
U38A Gravette 145.44 26 PKPdf **PKPbc** **19 50 14.6 -1.0**

*IDC **21** 19:42:37.0±1.0,39.°51N×74.°12E,h0km,mb3.5/7, mbtmp3.5/11,ML2.9/5,MS2.4/1,Error ellipse: s-maj=20.7km s-min=14.5km az=98.0*
*SOME **21** 19:42:38.1,39.°72N×74.°12E,h5km*
*NNC **21** 19:42:39.6±1.6,39.°85N×73.°76E,h0km,mb4.0,mpv3.8, Error ellipse: s-maj=11.9km s-min=9.7km az=166.0*
*KRNET **21** 19:42:40.0±0.1,39.°77N×74.°06E,h11km,mb3.5*
ISC 21 19:42:39.1±1.4,39.76N±0.04×74.08E±0.03,h5km±8km, n77,σ2s22/114,mb3.6/8,34C-29D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.51**	**300**	⇑*i*P	**Pg**	**19 42 49.8**	**+0.9**
	baz=0.0						
SFK				⇑*i*S	**Sg**	**19 42 56.8**	**+1.2**
	baz=0.0						
OHH	**Osh**	**1.25**	**308**	⇓*e*P	**Pb**	**19 43 03.5**	**+0.3**
	baz=8.0						
OHH				⇓*i*S	**Sn**	**19 43 20.8**	**+0.2**
	baz=8.0						
ARSB	**Arslanbob**	**1.77**	**332**	⇑*i*P	**Pb**	**19 43 13.0**	**+0.9**
	baz=32						
ARSB				⇑*i*S	**Sg**	**19 43 37.0**	**+1.0**
	baz=32						
DRK	**Karamyk**	**1.78**	**262**	⇑*i*P	**Pb**	**19 43 13.2**	**+0.8**
	baz=61						
DRK				⇑*i*S	**Sg**	**19 43 37.3**	**+0.9**
	baz=61						
ARLS	**Aral**	**2.10**	**5**	⇓*i*P	**Pb**	**19 43 18.4**	**+0.5**
	baz=6.0						
ARLS				⇓*i*S	**Sg**	**19 43 46.5**	**-0.2**
	baz=6.0						
NRN	**Naryn**	**2.22**	**41**	⇓*i*P	**Pb**	**19 43 19.7**	**-0.2**
	baz=41						
NRN				⇓*i*S	**Sb**	**19 43 49.0**	**+1.2**
	baz=41						
UCH	**Uchtor**	**2.48**	**7**	P	**Pg**	**19 43 27.0**	**+0.3**
	SNR=77						
UCH	**Uchtor**	**2.48**	**7**	⇓*e*P	**Pb**	**19 43 24.1**	**-0.4**
	baz=8.0						
UCH				⇓*i*S	**Sb**	**19 43 56.2**	**+0.6**
	baz=8.0						
BTK	**Batken**	**2.53**	**278**	⇓*i*P	**Pb**	**19 43 24.2**	**-0.8**
	baz=78						
BTK				⇓*i*S	**Sb**	**19 43 56.3**	**-0.1**
	baz=78						
ARK	**Arkit**	**2.59**	**322**	⇑*i*P	**Pb**	**19 43 25.2**	**-0.9**
	baz=23						
ARK				⇑*i*S	**Sb**	**19 43 58.1**	**-0.2**
	baz=23						
TRKS	**Terek-Say**	**2.85**	**309**	⇑*i*P	**Pn**	**19 43 27.7**	**+2.3**
	baz=9.0						
TRKS				⇑*i*S	**Sb**	**19 44 02.7**	**-3.1**
	baz=9.0						
AAK	**Ala-Archa**	**2.89**	**6**	P	**Pb**	**19 43 32.2**	**+1.0**
	SNR=26						
AAK	**Ala-Archa**	**2.89**	**6**	Pn	**Pb**	**19 43 30.5**	**-0.7**
	9.8nm,0.3s,baz=169,slow=7.8,SNR=68						
AAK				Sn	**Sg**	**19 44 10.7**	**-1.2**
	12nm,0.3s,baz=119,slow=19,SNR=20						
AAK				LR	LR	19 44 53.9	
	comp=Z,62nm,19.1s,baz=308,slow=44						
	26nm,0.4s						
AAK	**Ala-Archa**	**2.89**	**6**	⇑*i*P	**Pb**	**19 43 29.4**	**-1.8**
	baz=6.0						
AAK				⇑*i*S	**Sb**	**19 44 05.4**	**-1.6**
	baz=6.0						
EKS2	**Erkin-Say**	**2.91**	**356**	P	**Pb**	**19 43 29.3**	**-2.2**
	SNR=22						
EKS2	**Erkin-Say**	**2.91**	**356**	⇓*i*P	**Pb**	**19 43 29.6**	**-1.9**
	baz=56						
EKS2				⇓*i*S	**Sb**	**19 44 05.9**	**-1.5**
	baz=56						
KBK	**Karagaybulak**	**2.96**	**12**	P	**Pg**	**19 43 35.2**	**-0.7**
	SNR=6.5						
KBK	**Karagaybulak**	**2.96**	**12**	⇓*e*P	**Pb**	**19 43 30.6**	**-1.9**
	baz=13						
KBK				⇑*i*S	**Sb**	**19 44 07.3**	**-1.8**
	baz=13						
MNAS	**Manas**	**2.97**	**337**	⇓*i*P	**Pb**	**19 43 30.5**	**-2.1**
	baz=37						
MNAS				⇓*i*S	**Sb**	**19 44 07.3**	**-2.0**
	baz=37						
ULHL	**Ulahol**	**2.97**	**33**	P	**Pb**	**19 43 34.3**	**+1.7**
	SNR=8.5						
ULHL	**Ulahol**	**2.97**	**33**	⇓*e*P	**Pb**	**19 43 30.6**	**-2.1**
	baz=33						
ULHL				⇓*i*S	**Sb**	**19 44 07.7**	**-1.7**
	baz=33						
MRKS	**Merke**	**3.05**	**348**	Pg	**Pb**	**19 43 34.8**	**+0.9**
	24nm,0.3s						
MRKS				Lg	Lg	19 44 15.8	
	58nm,0.4s						
MRKS	**Merke**	**3.05**	**348**	*e*P	**Pb**	**19 43 34.8**	**+0.9**
	24nm,0.3s						
MRKS				*e*S	**Sg**	**19 44 15.8**	**-1.3**
	104nm,0.2s						
FRU1	**Bishkek**	**3.07**	**8**	⇑*i*P	**Pb**	**19 43 32.2**	**-2.1**
	baz=8.0						
FRU1				⇑*i*S	**Sb**	**19 44 10.1**	**-2.0**
	baz=8.0						
CHMS	**Chumysh**	**3.27**	**9**	P	**Pb**	**19 43 36.6**	**-1.1**
	SNR=11						
CHMS	**Chumysh**	**3.27**	**9**	⇓Pg	**Pb**	**19 43 39.2**	**+1.6**
	7.2nm,0.5s						
CHMS				⇓Lg	Lg	19 44 23.5	
	88nm,0.7s						
CHMS	**Chumysh**	**3.27**	**9**	⇓*e*P	**Pn**	**19 43 34.6**	**+3.5**
	baz=9.0						
CHMS				⇓*i*S	**Sb**	**19 44 14.5**	**-3.4**
	baz=9.0						
KDJ	**Kajisay**	**3.33**	**44**	⇓*i*P	**Pb**	**19 43 35.9**	**-2.9**
	baz=44						
KDJ				⇓*i*S	**Sb**	**19 44 16.7**	**-3.0**
	baz=44						
TKM2	**Tokmak 2**	**3.36**	**19**	P	**Pb**	**19 43 41.7**	**+2.5**
	SNR=28						
TKM2	**Tokmak 2**	**3.36**	**19**	⇑Pg	**Pb**	**19 43 40.7**	**+1.5**
	9.3nm,0.4s						
TKM2				⇓Lg	Lg	19 44 24.5	
	30nm,0.7s						
TKM2	**Tokmak 2**	**3.36**	**19**	⇑*i*P	**Pn**	**19 43 35.7**	**+3.3**
	baz=20						
TKM2				⇑*i*S	**Sb**	**19 44 16.8**	**-3.6**
	baz=20						
USP	**Ospenovka**	**3.52**	**5**	P	**Pg**	**19 43 45.2**	**-1.2**
	SNR=22						
USP	**Ospenovka**	**3.52**	**5**	⇑*i*P	**Pn**	**19 43 38.1**	**+3.7**
	baz=5.0						
USP				⇑*i*S	**Sn**	**19 44 20.2**	**+3.7**
	baz=5.0						
KST	**Kastek**	**3.57**	**23**	Pg	**Pb**	**19 43 44.7**	**+1.9**
	12nm,0.4s						
KST				Lg	Lg	19 44 34.3	
	92nm,0.6s						
KST	**Kastek**	**3.57**	**23**	*e*P	**Pb**	**19 43 44.9**	**+2.1**
	12nm,0.4s						
KST				*e*S	**Sg**	**19 44 33.2**	**-0.6**
	92nm,0.6s						
DGS	**Degeres**	**3.70**	**20**	Pg	**Pb**	**19 43 47.8**	**+2.7**
	32nm,0.6s						
DGS				Lg	Lg	19 44 38.4	
	54nm,0.9s						
DGS	**Degeres**	**3.70**	**20**	*e*P	**Pb**	**19 43 47.9**	**+2.8**
	32nm,0.6s						
DGS				*e*S	**Sg**	**19 44 38.4**	**+0.4**
	54nm,0.9s						
SGDS	**Sogindy**	**3.71**	**6**	Pg	**Pb**	**19 43 48.0**	**+2.9**
	15nm,0.5s						
SGDS				Lg	Lg	19 44 37.7	
	46nm,0.6s						
MTBS	**Maitube**	**3.80**	**27**	Pg	**Pb**	**19 43 49.9**	**+3.2**
	5.2nm,0.2s						
MTBS				Lg	Lg	19 44 41.6	
	37nm,0.6s						
MTBS	**Maitube**	**3.80**	**27**	*e*P	**Pb**	**19 43 49.9**	**+3.2**
	12nm,0.2s						
MTBS				*e*S	**Sg**	**19 44 41.6**	**+0.4**
	37nm,0.6s						
TNSS	**Tian-Shan**	**3.92**	**32**	Pg	**Pb**	**19 43 51.5**	**+2.6**
	30nm,0.5s						
TNSS				Lg	Lg	19 44 44.6	
	11nm,0.5s						
TNSS	**Tian-Shan**	**3.92**	**32**	*e*P	**Pb**	**19 43 51.6**	**+2.6**
	30nm,0.5s						
TNSS				*e*S	**Sg**	**19 44 44.6**	**-0.4**
	20nm,0.3s						
ANVS	**Anan'yevo**	**4.05**	**41**	⇓*i*P	**Pn**	**19 43 45.8**	**+3.9**
	baz=41						
ANVS				⇓*i*S	**Sn**	**19 44 33.7**	**+3.8**
	baz=41						
MDOK	**Medeo**	**4.07**	**32**	Pg	**Pb**	**19 43 53.7**	**+2.4**
	36nm,0.6s						
MDOK				Pg	**Pg**	**19 43 53.9**	**-3.1**
	14nm,0.4s						
MDOK				Lg	Lg	19 44 48.4	
	40nm,0.9s						
MDOK				Lg	Lg	19 44 49.0	
	28nm,0.7s						
MDOK	**Medeo**	**4.07**	**32**	*e*P	**Pb**	**19 43 54.2**	**+3.0**
	36nm,0.3s						
MDOK				*e*S	**Sg**	**19 44 49.0**	**-0.6**
	28nm,0.7s						
KNDC	**Almaty**	**4.08**	**31**	⇑Pg	**Pg**	**19 43 56.3**	**-0.8**
	16nm,0.3s						
KNDC				⇑Lg	Lg	19 44 49.9	
	148nm,0.8s						
KRBS	**Karabastau**	**4.11**	**16**	Pg	**Pb**	**19 43 54.9**	**+2.9**
	14nm,0.2s						
KRBS				Lg	Lg	19 44 50.2	
	40nm,0.6s						
KRBS	**Karabastau**	**4.11**	**16**	*e*P	**Pb**	**19 43 54.9**	**+2.9**
	14nm,0.2s						
KRBS				*e*S	**Sg**	**19 44 50.2**	**-0.8**
	40nm,0.6s						
KOTS	**Kotyrbulak**	**4.15**	**32**	Pg	**Pb**	**19 43 55.8**	**+3.1**
	47nm,0.5s						
KOTS				Lg	Lg	19 44 52.5	
	60nm,0.6s						
KOTS	**Kotyrbulak**	**4.15**	**32**	*e*P	**Pb**	**19 43 56.3**	**+3.6**
	47nm,0.5s						
KOTS				*e*S	**Sg**	**19 44 52.5**	**+0.2**
	84nm,0.4s						
PRZ	**Przheval'sk**	**4.25**	**49**	⇑*i*P	**Pn**	**19 43 48.5**	**+3.9**
	baz=49						
PRZ				⇑*i*S	**Sn**	**19 44 38.5**	**+3.8**
	baz=49						
KK31	**Karatay Array**	**4.28**	**322**	⇑Pg	**Pn**	**19 43 49.3**	**+4.4**
	1.4nm,0.4s,baz=133,slow=14,SNR=28						
KK31				⇓Lg	Lg	19 44 47.9	
	24nm,0.8s,baz=136,slow=30,SNR=6.9						
KKAR	**Karatay Array**	**4.28**	**322**	⇑*e*P	**Pn**	**19 43 48.4**	**+3.5**
	baz=22						
KKAR				⇑*i*S	**Sn**	**19 44 38.6**	**+3.3**
	baz=22						
KTBS	**Karatobe**	**4.40**	**25**	Pg	**Pb**	**19 43 59.9**	**+3.0**
	13nm,0.5s						
KTBS				Lg	Lg	19 44 58.8	
	47nm,0.7s						
KTBS	**Karatobe**	**4.40**	**25**	*e*P	**Pb**	**19 43 59.9**	**+3.0**
	13nm,0.5s						
KTBS				*e*S	**Sg**	**19 44 58.8**	**-1.6**
	47nm,0.7s						
KUU	**Kurty**	**4.46**	**22**	Pg	**Pb**	**19 44 00.7**	**+2.8**
	13nm,0.5s						
KUU				Lg	Lg	19 45 00.1	
	20nm,0.5s						
KUU	**Kurty**	**4.46**	**22**	*e*P	**Pb**	**19 44 00.7**	**+2.8**
	13nm,0.5s						
KUU				*e*S	**Sg**	**19 45 00.1**	**-2.1**
	43nm,0.4s						
BRLS	**Borolday**	**4.57**	**317**	*e*P	**Pb**	**19 44 02.6**	**+2.9**
	3.8nm,0.2s						
BRLS				*e*S	**Sg**	**19 45 03.4**	**-2.3**
	11nm,0.2s						
CHKK	**Chushkaly**	**4.63**	**27**	Pg	**Pb**	**19 44 04.8**	**+4.0**
	4.9nm,0.4s						
CHKK				Lg	Lg	19 45 06.4	
	20nm,0.5s						
CHKK	**Chushkaly**	**4.63**	**27**	*e*P	**Pb**	**19 44 04.2**	**+3.4**
	4.3nm,0.2s						
CHKK				*e*S	**Sg**	**19 45 06.3**	**-1.5**
	22nm,0.3s						
PDGK	**Podgornoye**	**5.40**	**47**	⇓Pn	Pn	19 44 05.7	+5.2
	0.4nm,0.3s						
PDGK				⇑Pg	**Pg**	**19 44 21.4**	**-1.1**
	2.1nm,0.5s						
PDGK				⇑Lg	Lg	19 45 34.9	
	12nm,0.8s						
OTUK	**Ortayu**	**8.57**	**352**	⇓Pn	**Pn**	**19 44 42.7**	**-1.2**
	0.2nm,0.3s						
OTUK				⇑Lg	Lg	19 47 07.6	
	6.6nm,0.7s						
MAKZ	**Makanchi**	**9.09**	**37**	⇓Pn	**Pn**	**19 44 51.1**	**+0.1**
	0.1nm,0.5s						
MAKZ				⇑Lg	Lg	19 47 32.2	
	2.1nm,0.9s						
MK31	**Makanchi Array**	**9.23**	**38**	⇑Pn	**Pn**	**19 44 56.0**	**+3.2**
	0.1nm,0.4s,baz=219,slow=15,SNR=4.0						
MK31				⇑Lg	Lg	19 47 37.4	
	1.1nm,0.7s,baz=228,slow=27,SNR=3.7						
MKAR	**Makanchi Array**	**9.23**	**38**	Pn	**Pn**	**19 44 55.6**	**+2.7**
	baz=199,slow=7.2,SNR=1.7						
MKAR				Lg	Lg	19 47 28.0	
	baz=241,slow=30,SNR=1.5						
KURBB	**Kurchatov Arra**	**11.30**	**15**	Lg	Lg	19 48 35.0	
	0.1nm,0.3s,baz=210,slow=33,SNR=4.2						
GEYT	**Alibeck**	**12.58**	**267**	Pn	**Pn**	**19 45 38.0**	**-0.7**
	0.2nm,0.3s,baz=92,slow=12,SNR=3.0						
GEYT				Sn	**Sn**	**19 47 57.7**	**-1.6**
	0.1nm,0.3s,baz=72,slow=28,SNR=1.7						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**13.51**	**350**	Pn	**Pn**	**19 45 52.8**	**+1.5**
	baz=164,slow=8.1,SNR=3.4						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**15.95**	**24**	Pn	**P**	**19 46 27.4**	**-0.3**
	0.1nm,0.3s,baz=210,slow=14,SNR=2.4						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**36.24**	**323**	P	**P**	**19 49 43.7**	**+0.9**
	0.7nm,0.5s,baz=113,slow=12,SNR=8.1						
	0.7nm,0.5s						
HFS	**Hagfors**	**42.08**	**320**	P	**P**	**19 50 32.0**	**+0.4**
	0.5nm,0.4s,baz=92,slow=11,SNR=4.2						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	**43.31**	**321**	P	**P**	**19 50 41.7**	**+0.1**
	0.3nm,0.4s,baz=100,slow=8.0,SNR=2.0						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**68.21**	**269**	P	**P**	**19 53 39.9**	**-1.0**
	0.4nm,0.7s,baz=49,slow=6.6,SNR=2.5						
ILAR	**Eielson Array**	**70.97**	**17**	P	**P**	**19 53 56.0**	**-1.2**
	0.2nm,0.7s,baz=323,slow=5.8,SNR=2.4						
	0.2nm,0.7s						
YKA	**Yellowknife Ar**	**77.85**	**4**	P	**P**	**19 54 36.9**	**-0.4**
	0.2nm,0.6s,baz=6.9,slow=5.7,SNR=2.0						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**81.74**	**124**	P	**P**	**19 54 56.8**	**-2.1**
	0.6nm,0.7s,baz=323,slow=5.2,SNR=6.8						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**84.20**	**127**	P	**P**	**19 55 09.9**	**-1.7**
	0.3nm,0.6s,baz=325,slow=5.4,SNR=4.6						
	0.3nm,0.6s						

*IDC **21** 19:44:40.6±1.5,28.°44S×69.°60W,h0km,mb4.5/2, mbtmp4.5/2,Error ellipse: s-maj=107.1km s-min=37.7km az=109.0*
*GUC **21** 19:44:53.8±0.6,28.°63S×69.°47W,h113km±4km,ML3.5*
ISC 21 19:44:55.0±0.9,28.64S±0.04×69.45W±0.07,h115km±8km, n20,σ0s88/27,4C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
AC05	**El Transito**	**0.75**	**255**	⇑*e*P	**Pn**	**19 45 14.1**	**-0.3**

AC05					*e*S		**Sn**	19 45 29.1	**+0.1**
AC05					IAML			19 45 29.8	
	comp=E,869nm,0.6s								
VCA	**Vinchina**	**1.10**	**95**	*e*P			**Pn**	19 45 16.2	**-1.6**
LCO	**Las Campanas**	**1.16**	**251**⇑	*e*P			**Pn**	19 45 18.2	**-0.3**
LCO					*e*S		**Sn**	19 45 36.6	**+0.3**
LCO					IAML			19 45 37.6	
	comp=E,5μm,0.4s								
GO03	**Copiap**	**1.25**	**326**	*e*P			**Pn**	19 45 18.6	**-0.7**
GO03					*e*S		**Sn**	19 45 37.5	**-0.3**
GO03					IAML			19 45 39.3	
	comp=N,253nm,0.3s								
CO01	**Juntas del Tor**	**1.45**	**203**	*e*P			**Pn**	19 45 22.0	**+0.3**
CO01					*e*S		**Sn**	19 45 43.9	**+1.9**
AC04	**Llanos de Chal**	**1.50**	**287**	*e*P			**Pn**	19 45 21.7	**-0.4**
AC04					*e*S		**Sn**	19 45 42.2	**-0.4**
AC04					IAML			19 45 42.8	
	comp=E,305nm,0.3s								
AC02	**Maricunga**	**1.82**	**9**	*e*P			**Pn**	19 45 26.7	**+0.3**
AC02					*e*S		**Sn**	19 45 51.9	**+1.5**
AC02					IAML			19 45 52.4	
	comp=E,629nm,0.5s								
GO04	**Tololo Observa**	**1.93**	**217**	*e*P			**Pn**	19 45 27.3	**-0.2**
CO05	**La Serena**	**2.02**	**230**	*e*P			**Pn**	19 45 27.9	**-0.5**
CO03	**El Pedregal**	**2.44**	**206**⇑	*e*P			**Pn**	19 45 33.4	**-0.5**
AC01	**Pan de Azucar**	**2.69**	**337**⇑	*e*P			**Pn**	19 45 36.6	**-0.5**
AC01					AMP			19 46 17.3	
	comp=E,680nm,0.3s								
CO06	**Fray Jorge**	**2.78**	**223**	*e*P			**Pn**	19 45 36.8	**-1.4**
CO02	**Combarbal**	**2.89**	**207**	*e*P			**Pn**	19 45 38.7	**-1.0**
GO02	**Mina Guanaco**	**3.47**	**358**	*e*P			**Pn**	19 45 47.4	**-0.2**
GO02					*e*S		**Sn**	19 46 28.8	**+0.5**
QSPA	**South Pole Qui**	**61.58**	**180**	P			**P**	19 55 01.2	**+1.2**
	comp=E,1.1nm,0.6s,baz=135,slow=4.3,SNR=8.5								
	comp=E,1.1nm,0.6s								
TORD	**Torodi Ar. Bea**	**80.27**	**69**	P			**P**	19 56 53.5	**+0.1**
	comp=E,3.0nm,0.3s,baz=275,slow=5.6,SNR=1.7								
	comp=E,3.0nm,0.3s								
WRA	**Warramunga Arr**	**126.51**	**208**	PKP			**PKiKP**	20 03 45.2	**-0.5**
	comp=E,0.3nm,0.6s,baz=169,slow=1.4,SNR=2.3								
KURBB	**Kurchatov Arra**	**147.38**	**39**	PKPbc			**PKiKP**	20 04 25.9	**-1.2**
	comp=E,0.2nm,0.5s,baz=301,slow=3.0,SNR=3.0								
ZALV	**Zalesovo Beam**	**148.50**	**29**	PKPbc			**PKiKP**	20 04 28.3	**-1.0**
	comp=E,0.4nm,0.4s,baz=318,slow=1.9,SNR=2.4								
MKAR	**Makanchi Array**	**151.45**	**43**	PKPbc			**PKiKP**	20 04 35.9	**+0.2**
	comp=E,0.5nm,0.6s,baz=301,slow=2.0,SNR=7.1								

*IDC **21** 19:49:18.8±1.8,27.°91S×69.°52W, h0km, mb4.2/2, mbtmp4.2/2, Error ellipse: s-maj=123.0km s-min=44.8km az=107.0*
*GUC **21** 19:49:31.7±0.6,28.°02S×69.°64W, h97km±4km, ML3.3*
ISC 21 19:49:32.0±0.9,**28.°01S**±0.°04×**69.°67W**±0.°06,**h103**km±8km, **n17**,σ0°**34**/25,**6C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
GO03	**Copiap**	**0.65**	**309**⇓	*i*P		**Pn**	**19 49 49.0**		**-0.3**
GO03				*e*S		**Sn**	**19 50 02.2**		**-0.2**
GO03				IAML			19 50 04.3		
	comp=E,1μm,0.6s								
AC05	**El Transito**	**0.98**	**213**⇓	*i*P		**Pn**	**19 49 52.5**		**-0.2**
AC05				*e*S		**Sn**	**19 50 08.2**		**0.0**
AC05				IAML			19 50 09.8		
	comp=N,1μm,0.4s								
AC04	**Llanos de Chal**	**1.26**	**261**⇑	*i*P		**Pn**	**19 49 55.5**		**0.0**
AC04				*e*S		**Sn**	**19 50 13.5**		**+0.2**
AC04				IAML			19 50 20.9		
	comp=E,718nm,0.4s								
AC02	**Maricunga**	**1.26**	**22**⇑	*i*P		**Pn**	**19 49 56.5**		**+0.3**
AC02				*e*S		**Sn**	**19 50 14.8**		**+0.5**
AC02				IAML			19 50 16.6		
	comp=E,1μm,0.6s								
LCO	**Las Campanas**	**1.35**	**222**⇑	*i*P		**Pn**	**19 49 56.9**		**0.0**
LCO				*e*S		**Sn**	**19 50 16.3**		**+0.5**
VCA	**Vinchina**	**1.48**	**120**	*i*P		**Pn**	**19 49 58.3**		**0.0**
VCA				*e*S		**Sn**	**19 50 17.9**		**-0.4**
VCA				IAML			19 50 20.4		
	comp=E,320nm,0.2s								
CO01	**Juntas del Tor**	**2.00**	**191**⇑	*i*P		**Pn**	**19 50 05.5**		**+0.5**
CO01				*e*S		**Sn**	**19 50 30.8**		**+0.7**
CO01				IAML			19 50 35.4		
	comp=N,183nm,0.3s								
AC01	**Pan de Azucar**	**2.03**	**336**⇑	*i*P		**Pn**	**19 50 05.3**		**+0.2**
CO05	**La Serena**	**2.35**	**215**	*i*P		**Pn**	**19 50 09.2**		**0.0**
GO04	**Tololo Observa**	**2.38**	**204**	*i*P		**Pn**	**19 50 09.6**		**-0.2**
GO02	**Mina Guanaco**	**2.83**	**1**⇑	*i*P		**Pn**	**19 50 16.1**		**+0.2**
CO03	**El Pedregal**	**2.96**	**197**	*i*P		**Pn**	**19 50 17.4**		**0.0**
CO03				*e*S		**Sn**	**19 50 52.6**		**+0.2**
QSPA	**South Pole Qui**	**62.21**	**180**	P		**P**	**19 59 42.8**		**+0.3**
	comp=N,0.6nm,0.6s,baz=180,slow=6.1,SNR=1.3								
	comp=N,0.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**80.23**	**69**	P		**P**	**20 01 31.0**		**-0.6**
	comp=N,3.1nm,0.5s,baz=270,slow=3.6,SNR=1.5								
	comp=N,3.1nm,0.5s								
KURBB	**Kurchatov Arra**	**147.01**	**38**	PKPbc		**PKPbc**	**20 09 02.1**		**-0.2**
	comp=N,0.5nm,0.6s,baz=305,slow=3.1,SNR=6.7								
ZALV	**Zalesovo Beam**	**148.04**	**29**	PKPbc		**PKPbc**	**20 09 05.1**		**0.0**
	comp=N,0.7nm,0.5s,baz=318,slow=4.2,SNR=4.2								
MKAR	**Makanchi Array**	**151.11**	**42**	PKPbc		**PKPbc**	**20 09 12.8**		**0.0**
	comp=N,1.0nm,0.6s,baz=294,slow=2.2,SNR=17								

*CATAC **21** 19:53:53.4±0.3,9.°18N×83.°88W, h17km±3km, ML3.1*
*UCR **21** 19:53:53.5±1.1,9.°14N×83.°89W, h30km±6km, MW3.5*
ISC 21 19:53:54.0±1.0,**9.°18N**±0.°03×**83.°88W**±0.°03,**h30**km±7km, **n40**,σ0°**60**/60,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
OCHAL	**Ojochal**	**0.24**	**109**	*i*P		**Pb**	**19 54 00.2**		**-0.5**
OCHAL				*i*S		**Sb**	**19 54 05.7**		**+0.4**
OCHAL				IAML			19 54 07.2		
	comp=Z,33nm,1.0s								
PEZE	**Perez Zeledon,**	**0.28**	**44**	*e*P		**Pb**	**19 54 01.1**		**-0.3**
PEZE	**Perez Zeledon,**	**0.28**	**44**	*i*P		**Pb**	**19 54 01.1**		**-0.3**
PEZE				IAML			19 54 01.4		
	comp=Z,2μm,1.0s								
PEZE				*i*S		**Sn**	**19 54 07.0**		**-0.5**
LLNJ	**Naranjito**	**0.37**	**323**	*e*P		**Pb**	**19 54 01.9**		**-0.5**
CDM	**Cerro de Muert**	**0.39**	**17**	*e*P		**Pb**	**19 54 02.6**		**-0.5**
CDM				*e*S		**Sb**	**19 54 10.0**		**+0.7**
CDM	**Cerro de Muert**	**0.39**	**17**	*i*P		**Pb**	**19 54 02.5**		**-0.6**
CDM				*i*S		**Sb**	**19 54 09.9**		**+0.6**
CDM				IAML			19 54 10.6		
	comp=Z,2μm,1.0s								
SRBA	**San Rafael, Bu**	**0.51**	**84**	*e*P		**Pb**	**19 54 04.3**		**-0.4**
SRBA	**San Rafael, Bu**	**0.51**	**84**	*i*P		**Pb**	**19 54 04.3**		**-0.4**
SRBA				*i*S		**Sb**	**19 54 12.1**		**0.0**
SRBA				IAML			19 54 17.7		
	comp=Z,400nm,1.0s								
PLAN	**Los Planes de**	**0.54**	**159**	*i*P		**Pb**	**19 54 04.6**		**-0.5**
PLAN				*i*S		**Sn**	**19 54 13.7**		**0.0**
PLAN				IAML			19 54 14.4		
	comp=Z,2μm,1.0s								
ABE2	**San Pablo**	**0.55**	**342**	*e*P		**Pb**	**19 54 04.9**		**-0.6**
ABE2				*e*S		**Sn**	**19 54 14.3**		**0.0**
LCR2	**La Lucha 2**	**0.57**	**347**	*e*P		**Pb**	**19 54 05.1**		**-0.7**
LCR2				*e*S		**Sb**	**19 54 13.8**		**-0.1**
LCR2	**La Lucha 2**	**0.57**	**347**	*i*P		**Pb**	**19 54 05.1**		**-0.7**
LCR2				IAML			19 54 05.8		
	comp=Z,610nm,1.0s								
LCR2				*i*S		**Sb**	**19 54 13.9**		**0.0**
RIMA	**Rio Macho**	**0.59**	**1**	*e*P		**Pb**	**19 54 05.3**		**-0.7**
RIMA	**Rio Macho**	**0.59**	**1**	*i*P		**Pb**	**19 54 05.3**		**-0.7**
RIMA				*i*S		**Sb**	**19 54 13.0**		**-1.2**
RIMA				IAML			19 54 14.5		
	comp=Z,530nm,1.0s								
OCM	**Ochomogo**	**0.72**	**353**	*i*P		**Pb**	**19 54 07.1**		**-1.1**
OCM				*i*S		**Sb**	**19 54 17.0**		**-0.8**
OCM				IAML			19 54 19.2		
	comp=Z,520nm,1.0s								
PCAYA	**Pacayas**	**0.74**	**5**	*e*P		**Pb**	**19 54 08.0**		**-0.5**
POTG	**Potrero Grande**	**0.76**	**99**	*i*P		**Pn**	**19 54 08.8**		**+0.1**
POTG				*i*S		**Sn**	**19 54 19.4**		**+0.2**
POTG				IAML			19 54 20.3		
	comp=Z,2μm,1.0s								
VIRE	**VIRE**	**0.79**	**359**	*i*P		**Pb**	**19 54 08.8**		**-0.6**
VIRE				*i*S		**Sb**	**19 54 19.3**		**-0.6**
VIRE				IAML			19 54 20.8		
	comp=Z,940nm,1.0s								
HAYA	**Volcan Irazu**	**0.80**	**2**	*i*P		**Pb**	**19 54 08.9**		**-0.8**
HAYA				IAML			19 54 23.3		
	comp=Z,650nm,1.0s								
VICA	**Volcano Irazu**	**0.80**	**2**	*e*P		**Pb**	**19 54 09.2**		**-0.6**
VTCV	**VTCV, Calle Va**	**0.81**	**11**	*i*P		**Pb**	**19 54 09.3**		**-0.5**
VTCV				*i*S		**Sb**	**19 54 20.9**		**+0.4**
VTCV				IAML			19 54 21.8		
	comp=Z,2μm,1.0s								
VTRT	**Volcan Turrial**	**0.82**	**6**	*i*P		**Pb**	**19 54 09.4**		**-0.6**
VTRT				IAML			19 54 09.7		
	comp=Z,1μm,1.0s								
VTRT				*i*S		**Sb**	**19 54 21.2**		**+0.2**
CVTQ	**Turrialba Volc**	**0.83**	**8**	*e*P		**Pb**	**19 54 09.7**		**-0.4**
CVTV	**Tajo**	**0.83**	**9**	*e*P		**Pb**	**19 54 09.8**		**-0.4**
VTR0	**Volcan Turrial**	**0.84**	**8**	*e*P		**Pb**	**19 54 10.1**		**-0.4**
CVTR	**Volcan Turrial**	**0.84**	**8**	*e*P		**Pb**	**19 54 09.8**		**-0.6**
VTUN	**Crater Central**	**0.85**	**8**	*i*P		**Pb**	**19 54 10.0**		**-0.5**
VTUN				IAML			19 54 10.2		
	comp=Z,710nm,1.0s								
VTUN				*i*S		**Sb**	**19 54 21.8**		**+0.1**
VTUC	**Crater, Volcan**	**0.85**	**8**	*i*P		**Pb**	**19 54 10.0**		**-0.5**
VTUC				IAML			19 54 10.5		
	comp=Z,600nm,1.0s								
VTUC				*i*S		**Sb**	**19 54 22.1**		**+0.4**
HDC	**Heredia**	**0.85**	**344**	*i*S		**Sn**	**19 54 22.7**		**+1.1**
HDC3	**Heredia 3**	**0.85**	**344**	*i*S		**Sn**	**19 54 22.5**		**+0.9**
JACO	**JACO, Garabito**	**0.91**	**302**	*e*P		**Pb**	**19 54 10.4**		**-0.9**
JACO	**JACO, Garabito**	**0.91**	**302**	*i*P		**Pb**	**19 54 10.3**		**-1.0**
JACO				*i*S		**Sn**	**19 54 24.2**		**+1.3**
JACO				IAML			19 54 26.2		
	comp=Z,150nm,1.0s								
VPS6	**Volcano Poas**	**1.06**	**341**	*e*P		**Pn**	**19 54 13.3**		**+0.1**
LAFE	**Finca La Fe, P**	**1.20**	**302**	*i*P		**Pn**	**19 54 14.7**		**0.0**
LAFE				IAML			19 54 20.5		
	comp=Z,1.7nm,1.0s								
CPMI	**Catarata Coope**	**1.21**	**336**	*e*P		**Pn**	**19 54 15.4**		**+0.3**
CPMI	**Catarata Coope**	**1.21**	**336**	*i*P		**Pn**	**19 54 15.3**		**+0.3**
CPMI				*i*S		**Sb**	**19 54 31.5**		**-0.2**
CPMI				IAML			19 54 32.0		
	comp=Z,340nm,1.0s								
SOCE	**Pocosol**	**1.40**	**329**	*i*P		**Pb**	**19 54 18.8**		**-0.8**
SOCE				*i*S		**Sb**	**19 54 37.7**		**+0.5**
SOCE				IAML			19 54 40.9		
	comp=Z,500nm,1.0s								
ARE1	**Arenal 1**	**1.52**	**327**	*e*P		**Pb**	**19 54 21.4**		**-0.2**
JTS	**Las Juntas de**	**1.53**	**316**	*e*P		**Pn**	**19 54 19.7**		**+0.4**
ORTG	**Ortega, Santa**	**1.95**	**307**	*i*S		**Sn**	**19 54 49.4**		**+0.6**

*JMA **21** 19:54:44.2±0.1,26.°N×12.°6E, h74km, MV3.3/21, NEAR OKINAWAJIMA ISLAND*
*IDC **21** 19:54:52.5±2.9,26.°38N×126.°56E, h80km±29km, mb3.5/14, mbtmp3.8/14, MS2.2/1, Error ellipse: s-maj=29.7km s-min=17.5km az=60.0*
ISC 21 19:54:46.0±1.1,**25.°6N**±0.°1×**126.°27E**±0.°08,**h48**km±12km, **n35**,σ1°**41**/41,**mb3.7**/14,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
JKE	**Kume jima 2**	**0.86**	**33**	*i*P		**Pn**	**19 55 01.3**		**-0.5**
JKE				*e*S		**Sn**	**19 55 14.4**		**+1.0**
JIKM	**Ikemajima**	**1.14**	**234**	P		**Pn**	**19 55 05.1**		**-0.5**
JIKM				S		**Sn**	**19 55 21.4**		**+1.4**
JOGS	**Gusukube**	**1.14**	**223**	P		**Pn**	**19 55 04.5**		**-1.1**
JOGS				*e*S		**Sn**	**19 55 20.5**		**+0.4**
JMJ2	**Miyako jima3**	**1.20**	**225**	P		**Pn**	**19 55 05.4**		**-1.0**
JMJ2				*e*S		**Sn**	**19 55 21.5**		**-0.1**
JIRB	**Irabujima**	**1.25**	**233**	P		**Pn**	**19 55 06.2**		**-0.8**
JIRB				S		**Sn**	**19 55 24.1**		**+1.4**
JAGN	**Aguni-jima**	**1.32**	**41**	P		**Pn**	**19 55 07.8**		**-0.2**
JJT3	**Tamagusuku3**	**1.47**	**68**	P		**Pn**	**19 55 10.7**		**+0.6**
JJT3				*e*S		**Sn**	**19 55 30.2**		**+2.0**
JTJ	**Tarama**	**1.71**	**236**	P		**Pn**	**19 55 12.4**		**-0.9**
JTJ				*e*S		**Sn**	**19 55 34.2**		**+0.3**
JNTH	**Nagotoyohara**	**1.83**	**59**	P		**Pn**	**19 55 14.4**		**-0.5**
JNTH				*e*S		**Sn**	**19 55 39.2**		**+2.3**
JISG	**Ishigakijimahi**	**2.04**	**241**	P		**Pn**	**19 55 16.7**		**-1.1**
JISG				*e*S		**Sn**	**19 55 42.0**		**-0.1**
JIH	**Iheya**	**2.09**	**46**	P		**Pn**	**19 55 18.5**		**-0.1**
JIH				S		**Sn**	**19 55 43.9**		**+0.5**
JOW	**Kunigami**	**2.18**	**55**	P		**Pn**	**19 55 18.9**		**-1.0**
JOW	**Kunigami**	**2.18**	**55**	P		**Pn**	**19 55 19.5**		**-0.4**
	19nm,0.3s,baz=252,slow=17,SNR=23								
JOW				S		**Sn**	**19 55 39.2**		**-6.4**
	61nm,0.3s,baz=202,slow=11,SNR=5.2								
JIJ	**Ishigaki jima**	**2.29**	**238**	P		**Pn**	**19 55 19.7**		**-1.5**
JYRO	**Yoronjima**	**2.42**	**54**	P		**Pn**	**19 55 22.7**		**-0.4**
JKRS	**Kuro-shima**	**2.46**	**237**	P		**Pn**	**19 55 23.4**		**-0.2**
JOKE	**Okinoerabujima**	**2.71**	**49**	P		**Pn**	**19 55 26.2**		**-0.9**
JMZ	**Minamidaito 2**	**4.48**	**86**	P		Pn	19 55 43.9	-7.4	
JMZ				S		Sn	19 56 29.2	-13	
JKDJ	**Kitadaitoujima**	**4.55**	**84**	*e*P		Pn	19 55 45.0	-7.3	
JKDJ				S		Sn	19 56 31.6	-12	
CMAR	**Chiang Mai Arr**	**26.27**	**260**	LR		LR	20 12 18.1		
	comp=Z,4.7nm,19.9s,baz=305,slow=39								
SONM	**Songino Array**	**27.17**	**330**	P		**P**	**20 00 25.1**		**+0.2**
	0.8nm,0.5s,baz=151,slow=10,SNR=8.9								
	0.8nm,0.5s								
MKAR	**Makanchi Array**	**40.65**	**313**	P		**P**	**20 02 21.9**		**+0.4**
	1.0nm,0.4s,baz=98,slow=9.2,SNR=58								
	1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**41.70**	**324**	P		**P**	**20 02 29.2**		**-0.7**
	0.5nm,0.4s,baz=121,slow=9.4,SNR=3.7								
	0.5nm,0.4s								
KURBB	**Kurchatov Arra**	**44.11**	**317**	P		**P**	**20 02 49.1**		**-0.3**
	0.5nm,0.3s,baz=108,slow=9.2,SNR=12								
	0.5nm,0.3s								
WRA	**Warramunga Arr**	**45.94**	**169**	P		P	20 03 13.4	+9.1	
	0.8nm,0.9s,baz=350,slow=8.9,SNR=3.5								
	0.8nm,0.9s								
ASAR	**Alice Springs**	**49.53**	**171**	P		P	20 03 40.7	+8.6	
	0.5nm,1.0s,baz=356,slow=8.1,SNR=5.2								
	0.5nm,1.0s								
BVAR	**Borovoye Array**	**49.58**	**319**	P		**P**	**20 03 32.1**		**0.0**
	0.6nm,0.5s,baz=105,slow=11,SNR=4.2								
	0.6nm,0.5s								
GEYT	**Alibeck**	**58.08**	**300**	P		**P**	**20 04 36.4**		**+1.9**
	0.4nm,0.3s,baz=15,slow=6.1,SNR=2.4								
	0.4nm,0.3s								
FINES	**FINESS Array B**	**72.54**	**330**	P		**P**	**20 06 07.5**		**-0.1**
	0.4nm,0.3s,baz=43,slow=5.1,SNR=11								
	0.4nm,0.3s								
AKASG	**Malin Array Be**	**74.86**	**319**	P		**P**	**20 06 21.5**		**+0.1**
	1.3nm,0.5s,baz=66,slow=5.3,SNR=4.8								
	1.3nm,0.5s								
BRTR	**Keskin Array B**	**76.02**	**307**	P		**P**	**20 06 29.1**		**+0.6**
	0.6nm,0.7s,baz=60,slow=3.5,SNR=3.1								
	0.6nm,0.7s								
HFS	**Hagfors**	**78.55**	**332**	P		**P**	**20 06 41.4**		**-0.7**
	0.8nm,0.8s,baz=69,slow=8.4,SNR=1.4								
	0.8nm,0.8s								
NB2	**NORSAR Subarra**	**79.09**	**333**	P		**P**	**20 06 45.0**		**-0.1**
	comp=Z,0.3nm,0.5s,baz=52,slow=5.9								
NOA	**NORSAR Array B**	**79.09**	**333**	P		**P**	**20 06 44.4**		**-0.7**
	comp=Z,0.9nm,0.8s,baz=52,slow=5.6,SNR=4.0								
	comp=Z,0.9nm,0.8s								
YKA	**Yellowknife Ar**	**79.83**	**24**	P		**P**	**20 06 48.2**		**-0.9**
	comp=Z,0.4nm,0.8s,baz=302,slow=5.5,SNR=5.7								
	comp=Z,0.4nm,0.8s								

*TEH **21** 19:56:52.1,34.°52N×45.°95E, h10km±87km, ML2.6*
*ISN **21** 19:56:52.5±1.1,34.°57N×45.°94E, h21km±7km, ML2.7*
ISC 21 19:56:52.4±1.0,**34.°54N**±0.°04×**45.°95E**±0.°04,**h10**km,**n10**, σ0°**76**/14,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.30**	**265**	Pg		**Pg**	**19 56 58.5**		**+0.1**
IDHR	**Dehrash**	**0.39**	**65**	Pg		**Pg**	**19 56 59.9**		**-0.3**
ILIN	**Lien**	**0.92**	**65**	Pg		**Pg**	**19 57 09.6**		**-0.5**
ILBA	**Ilam Banvizeh**	**0.93**	**167**	Pg		**Pg**	**19 57 09.4**		**-0.9**
IBDR	**Badra**	**1.42**	**181**	*e*Pg		**Pg**	**19 57 19.0**		**-0.7**
IBDR				*e*Sg		**Sg**	**19 57 38.0**		**-0.1**
IBDR				AML		AML	19 57 53.1		
	comp=E,134nm,0.5s								
IBDR				AML		AML	19 57 54.6		
	comp=N,64nm,0.5s								
IBZA	**Bozab**	**1.58**	**92**	Pg		**Pg**	**19 57 22.3**		**-0.3**
IKRK	**Kirkuk**	**1.58**	**304**	*e*Pn		**Pb**	**19 57 21.0**		**-0.7**
IKRK				*e*Sn		**Sb**	**19 57 42.0**		**+0.2**
IKRK				AML		AML	19 57 48.4		
	comp=N,161nm,0.1s								
IKRK				AML		AML	19 57 51.9		
	comp=E,134nm,0.3s								
BHD	**Baghdad**	**1.82**	**226**	*e*Pn		**Pn**	**19 57 24.0**		**+0.3**
BHD				*e*Sn		**Sb**	**19 57 48.0**		**-0.6**
IKFM	**Kafar-mosalman**	**1.87**	**122**	Pn		**Pb**	**19 57 26.5**		**-0.1**
RAFI	**Al-Rafai**	**2.81**	**177**	*e*Pn		**Pn**	**19 57 38.0**		**+0.7**
RAFI				*e*Sn		**Sn**	**19 58 13.0**		**+1.7**

*IDC **21** 20:02:34.4±0.7,27.°62N×140.°28E, h448km±24km, mb2.8/6, mbtmp3.6/6, Error ellipse: s-maj=72.6km s-min=24.7km az=74.0*
ISC 21 20:02:34.4±1.0,**27.°6N**±0.°2×**140.°3E**±0.°2,**h450**km,**n7**, σ0°**42**/8,**mb3.1**/6,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
JCJ	**Chichijima**	**1.79**	**107**	P		**P**	**20 03 34.1**		**+0.3**
	29nm,0.4s,baz=288,slow=19,SNR=9.5								
JCJ				S		**S**	**20 04 21.6**		**-0.3**
	29nm,0.3s,baz=287,slow=19,SNR=9.8								
WRA	**Warramunga Arr**	**47.63**	**188**	P		**P**	**20 10 28.3**		**-0.1**
	0.1nm,0.4s,baz=1.2,slow=7.4,SNR=1.3								
	0.1nm,0.4s								
ZALV	**Zalesovo Beam**	**47.97**	**319**	P		**P**	**20 10 29.8**		**-0.7**
	0.2nm,0.3s,baz=118,slow=6.2,SNR=2.3								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**48.82**	**309**	P		**P**	**20 10 37.3**		**+0.2**
	0.1nm,0.6s,baz=97,slow=6.8,SNR=1.4								
	0.1nm,0.6s								
KURBB	**Kurchatov Arra**	**51.45**	**314**	P		**P**	**20 10 56.6**		**+0.2**
	0.7nm,0.5s,baz=91,slow=8.1,SNR=15								
	0.7nm,0.5s								
BVAR	**Borovoye Array**	**56.50**	**317**	P		**P**	**20 11 32.5**		**+0.3**
	1.5nm,0.4s,baz=88,slow=7.6,SNR=15								
	1.5nm,0.4s								
FINES	**FINESS Array B**	**76.72**	**333**	P		**P**	**20 13 37.8**		**+0.1**
	0.7nm,0.4s,baz=72,slow=6.3,SNR=8.5								
	0.7nm,0.4s								

*NEIC **21** 20:05:19.1±1.7,55.°95N±0.°10×149.°4W±0.°1, h7km±8km, ML3.7/50, ML3.3(AEIC), Error ellipse: s-maj=15.0km s-min=9.7km az=157.0*
*AEIC **21** 20:05:25.0±1.5,56.°0N±0.°1×149.°4W±0.°1, h6km±8km, Error ellipse: s-maj=15.6km s-min=10.5km az=167.0*
ISC 21 20:05:19.4±2.1,**56.°0N**±0.°1×**149.°34W**±0.°05,**h10**km,**n129**, σ1°**63**/127,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
OHAK	**Old Harbor**	**2.48**	**300**			**Pn**	**20 06 00.3**		**+0.6**
OHAK	**Old Harbor**	**2.48**	**300**	P		**Pn**	**20 06 00.3**		**+0.6**
	baz=117								
OHAK				S		**Sn**	**20 06 28.1**		**-2.0**
	baz=117								
KDAK	**Kodiak Island**	**2.49**	**316**			**Pn**	**20 06 00.1**		**+0.2**
KDAK	**Kodiak Island**	**2.49**	**316**			**Sn**	**20 06 29.1**		**-1.3**
SYI	**Shuyak Island**	**3.06**	**329**			**Pn**	**20 06 09.2**		**+1.4**
Q20K	**Shuyak Island**	**3.06**	**328**	P		**Pn**	**20 06 09.2**		**+1.4**
	baz=146								
R18K	**Karluk**	**3.20**	**301**			**Pn**	**20 06 10.9**		**+1.2**
R18K						**Sn**	**20 06 46.0**		**-1.8**
R18K	**Karluk**	**3.20**	**301**	IAML			20 06 49.6		
	comp=N,177nm,0.4s								
R18K				IAML			20 06 50.6		
	comp=E,178nm,0.4s								
R18K	**Karluk**	**3.20**	**301**	P		**Pn**

RC01	**Rabbit Creek A**	**5.07**	**358**	Pn	**Pn**	**20 06 37.4**	**+2.1**
RC01	comp=N,39nm,0.3s			IAML		20 07 34.2	
RC01	comp=E,63nm,0.4s			IAML		20 07 36.8	
HMT	**Hamilton**	**5.07**	**30**		**Pn**	**20 06 37.3**	**+1.9**
CHGN	**Chignik**	**5.08**	**277**	Pn	**Pn**	**20 06 36.1**	**+0.7**
CHGN	comp=N,41nm,0.4s			IAML		20 07 32.3	
CHGN	comp=E,33nm,0.1s			IAML		20 07 32.8	
GOAT	**Goat Mountain**	**5.16**	**26**		**Pn**	**20 06 38.5**	**+1.8**
BERG	**Berg Lake**	**5.28**	**32**		**Pn**	**20 06 39.6**	**+1.3**
BERG	comp=N,57nm,0.2s			IAML		20 07 42.7	
GRIN	**Grindle Hills**	**5.31**	**34**		**Pn**	**20 06 40.5**	**+1.8**
SNH	**Sunshine Point**	**5.39**	**37**	Pn	**Pn**	**20 06 41.3**	**+1.5**
KNK	**Knik Glacier**	**5.41**	**4**		**Pn**	**20 06 41.6**	**+1.6**
KNK	**Knik Glacier** baz=186	**5.41**	**4**	P	**Pn**	**20 06 41.6**	**+1.6**
SPCP	**Crater Peak Br**	**5.44**	**346**		**Pn**	**20 06 41.9**	**+1.4**
SUA	**Susitna One**	**5.49**	**353**	Pn	**Pn**	**20 06 42.2**	**+1.0**
N19K	**Bonanza Creek**	**5.49**	**333**	Pn	**Pn**	**20 06 41.5**	**+0.2**
BMRM	**Bremner River**	**5.53**	**25**	Sn	**Sn**	**20 07 43.3**	**-1.9**
BMRM	**Bremner River** baz=209	**5.53**	**25**	P	**Pn**	**20 06 43.5**	**+1.9**
WAX	**Waxell Ridge**	**5.59**	**35**		**Sn**	**20 07 42.7**	**-4.1**
WAX	**Waxell Ridge**	**5.59**	**35**		**Pn**	**20 06 44.2**	**+1.7**
STLK	**Strandline Lak**	**5.62**	**348**		**Pn**	**20 06 44.2**	**+1.2**
MESA	**MESA**	**5.70**	**40**		**Pn**	**20 06 45.4**	**+1.2**
CRQM	**Cirque**	**5.74**	**32**		**Pn**	**20 06 46.4**	**+1.7**
KLU	**Klutina**	**5.75**	**17**		**Pn**	**20 06 46.5**	**+1.8**
KLU	**Klutina** baz=200	**5.75**	**17**	P	**Pn**	**20 06 46.5**	**+1.8**
CRQE	**Cirque** baz=218	**5.75**	**32**	P	**Pn**	**20 06 46.4**	**+1.6**
GHO	**Glory Hole Cre**	**5.75**	**2**		**Pn**	**20 06 46.2**	**+1.4**
N18K	**Kilae Creek**	**5.79**	**326**	Pn	**Pn**	**20 06 45.5**	**+0.3**
SML	**Sawmill**	**5.80**	**5**		**Pn**	**20 06 47.4**	**+1.9**
SML	**Sawmill** baz=186	**5.80**	**5**	P	**Pn**	**20 06 47.4**	**+1.9**
ISLE	**Juniper Island**	**5.87**	**36**		**Pn**	**20 06 48.3**	**+1.8**
BAGL	**Bagley Icefiel**	**5.87**	**38**		**Pn**	**20 06 48.2**	**+1.9**
O16K	**Kokwok River B**	**5.88**	**311**	Pn	**Pn**	**20 06 47.7**	**+1.3**
SCM	**Sheep Creek Mo**	**5.90**	**9**		**Pn**	**20 06 48.5**	**+1.7**
SCM	**Sheep Creek Mo** baz=191	**5.90**	**9**	P	**Pn**	**20 06 48.5**	**+1.7**
CNBA	**Chernabura Isl**	**5.96**	**262**	Pn	**Pn**	**20 06 45.8**	**-1.8**
SVW2	**Sparrevohn**	**6.03**	**330**	Pn	**Pn**	**20 06 49.3**	**+0.8**
VRDI	**Verde Repeater**	**6.04**	**28**		**Pn**	**20 06 50.5**	**+1.7**
SKT	**Skwentna**	**6.06**	**350**	Pn	**Pn**	**20 06 49.9**	**+0.9**
N25K	**Chitina, Valde**	**6.10**	**22**		**Pn**	**20 06 51.3**	**+1.8**
N25K	**Chitina, Valde** baz=206	**6.10**	**22**	P	**Pn**	**20 06 51.3**	**+1.8**
GLB	**Gilahina Butte**	**6.13**	**26**		**Pn**	**20 06 51.7**	**+1.8**
GRNC	**Granite Creek**	**6.16**	**37**		**Pn**	**20 06 51.5**	**+0.9**
TABL	**Table Mountain**	**6.17**	**41**		**Pn**	**20 06 52.5**	**+1.8**
M20K	**Styx River**	**6.18**	**343**	Pn	**Pn**	**20 06 52.3**	**+1.7**
MCARA	**McCarthy VSAT**	**6.28**	**29**		**Pn**	**20 06 54.0**	**+2.0**
MCARA	**McCarthy VSAT** baz=214	**6.28**	**29**	P	**Pn**	**20 06 54.0**	**+2.0**
M24K	**Tolsona, Glenn**	**6.30**	**14**		**Pn**	**20 06 54.7**	**+2.5**
M24K	**Tolsona, Glenn** baz=197	**6.30**	**14**	P	**Pn**	**20 06 54.7**	**+2.5**
PINM	**Pinnacle** baz=234	**6.30**	**46**	P	**Pn**	**20 06 54.5**	**+2.2**
PNL	**Peninsula** baz=240	**6.43**	**51**	P	**Pn**	**20 06 56.1**	**+2.1**
M19K	**Big River Lodg**	**6.43**	**338**	Pn	**Pn**	**20 06 54.4**	**+0.4**
BARN	**Barnard Glacie**	**6.43**	**35**		**Pn**	**20 06 56.3**	**+2.1**
O15K	**Ungalikthiuk R**	**6.45**	**303**		**Pn**	**20 06 56.0**	**+1.7**
O15K	**Ungalikthiuk R** baz=115	**6.45**	**303**	P	**Pn**	**20 06 56.0**	**+1.7**
CTG	**Chitna Glacier** baz=224	**6.47**	**37**	P	**Pn**	**20 06 56.5**	**+1.8**
CTGM	**Chitina Glacie**	**6.47**	**37**		**Pn**	**20 06 56.5**	**+1.7**
LOGN	**Logan Glacier**	**6.49**	**39**		**Pn**	**20 06 56.7**	**+1.7**
WAT6	**Susitna Watana**	**6.61**	**6**		**Pn**	**20 06 58.4**	**+1.8**
WAT6	**Susitna Watana** baz=188	**6.61**	**6**	P	**Pn**	**20 06 58.4**	**+1.8**
L19K	**White Mountain**	**6.78**	**338**	Pn	**Pn**	**20 06 59.8**	**+1.0**
M17K	**Holitna River**	**6.83**	**325**	Pn	**Pn**	**20 06 59.9**	**+0.5**
N15K	**Kwethluk River**	**7.04**	**310**	Pn	**Pn**	**20 07 03.6**	**+1.3**
M16K	**Timber Creek**	**7.09**	**319**	Pn	**Pn**	**20 07 04.5**	**+1.5**
O29M	**Mount Kennedy**	**7.11**	**49**		**Pn**	**20 07 05.4**	**+1.9**
DHY	**Denali Highway**	**7.12**	**7**		**Pn**	**20 07 05.6**	**+1.9**
DHY	**Denali Highway** baz=189	**7.12**	**7**	P	**Pn**	**20 07 05.6**	**+1.9**
M26K	**Nabesna, AK**	**7.16**	**24**	Pn	**Pn**	**20 07 05.7**	**+1.7**
P29M	**Windy Craggy**	**7.16**	**55**		**Pn**	**20 07 05.9**	**+1.9**
P29M	**Windy Craggy** baz=245	**7.16**	**55**	P	**Pn**	**20 07 05.9**	**+1.9**
KTH	**Kantishna Hill**	**7.58**	**355**	Pn	**Pn**	**20 07 12.5**	**+2.7**
K20K	**Telida**	**7.71**	**344**	Pn	**Pn**	**20 07 12.0**	**+0.4**
MCK	**McKinley**	**7.72**	**1**	Pn	**Pn**	**20 07 13.3**	**+1.7**
L16K	**Owhat River**	**7.73**	**321**	Pn	**Pn**	**20 07 11.7**	**-0.1**

DJA 21 20:13:13.3±1.0,5°N±4°×9°6E±°,h10km,M3.9/6,mb4.2/2, MLv3.7/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.82**	**146**	P	Pg	20 13 29.0	-0.2
MLSI				S	Sb	20 13 40.6	-0.2
LHMI	**Lhok Sumawe**	**1.04**	**75**	P	Pg	20 13 32.9	-0.4
LHMI				S	Sn	20 13 48.4	-0.2
KCSI	**Kotacane, Aceh**	**2.31**	**128**	P	Pb	20 13 55.0	-0.1
GSI	**Gunungsitoli**	**3.97**	**156**	P	Pn	20 14 15.4	+1.1

*NEIC **21** 20:33:51.1±1.2,56°1N±0°1×150°1W±0°1,h28km±18km, ML3.0/36,ML2.5(AEIC),Error ellipse: s-maj=19.9km s-min=11.0km az=171.0*

AEIC 21 20:33:54.6±1.9,56°1N±0°2×150°3W±0°1,h10km±9km, Error ellipse: s-maj=24.3km s-min=11.8km az=179.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.02**	**305**		Pn	20 34 22.6	-6.1
OHAK					Sn	20 34 47.4	-6.6
KDAK	**Kodiak Island**	**2.12**	**324**		Pn	20 34 24.4	-5.6
KDAK					Sn	20 34 49.3	-7.0
R18K	**Karluk**	**2.73**	**304**		Pn	20 34 33.2	-5.4
R18K	**Karluk** comp=E,63nm,0.5s	**2.73**	**304**	IAML		20 35 00.2	
SYI	**Shuyak Island**	**2.77**	**336**		Pn	20 34 33.8	-5.3
KAHG	**Katmai Hook Gl**	**3.34**	**318**		Pn	20 34 43.2	-3.8
KAPH	**Katmai Pasha**	**3.34**	**320**		Pn	20 34 43.1	-3.9
Q19K	**Cape Douglas,**	**3.38**	**329**		Pn	20 34 43.3	-4.1
CNPM	**China Poot**	**3.48**	**352**		Pn	20 34 42.7	-6.1
CNPM	**China Poot** comp=E,15nm,0.6s	**3.48**	**352**	IAML		20 35 43.0	
CNPM	comp=N,16nm,0.4s			IAML		20 35 44.5	
ANCK	**Angle Creek**	**3.54**	**309**		Pn	20 34 45.7	-4.1
BRSE	**Bradley Lake S**	**3.66**	**356**		Pn	20 34 45.1	-6.3
BRLK	**Bradley Lake**	**3.69**	**355**	Pn	Pn	20 34 44.9	-6.8
BRLK	comp=E,16nm,0.3s			IAML		20 35 49.6	
AUCH	**Augustine Cone**	**3.69**	**334**		Pn	20 34 47.5	-4.3
AUL	**Augustine Lava**	**3.71**	**334**		Pn	20 34 48.1	-3.9
CNTC	**Contact Creek**	**3.75**	**308**		Pn	20 34 47.6	-5.1
P19K	**Oil Pt**	**3.90**	**337**		Pn	20 34 50.1	-4.5
ILSW	**Iliamna Southw**	**4.19**	**340**		Pn	20 34 53.0	-5.6
P18K	**Big Mountain,**	**4.24**	**323**		Pn	20 34 54.2	-5.1
P18K	**Big Mountain,** comp=N,7.8nm,1.3s	**4.24**	**323**	IAML		20 36 28.0	
P17K	**Kvichak River**	**4.54**	**316**		Pn	20 34 58.9	-4.5
O18K	**Koktuh Hills**	**4.59**	**327**		Pn	20 34 58.6	-5.5
O18K	**Koktuh Hills** comp=E,8.8nm,1.0s	**4.59**	**327**	IAML		20 36 17.6	
O18K	comp=N,8.6nm,1.1s			IAML		20 36 22.9	
HIN	**Hinchinbrook I**	**4.75**	**23**		Pn	20 34 59.9	-6.3
HIN	**Hinchinbrook I** comp=N,23nm,1.1s	**4.75**	**23**	IAML		20 36 08.8	
KAIM	**Kayak Island**	**4.94**	**37**		Pn	20 35 02.3	-6.5
KAIM	**Kayak Island** comp=E,19nm,1.3s	**4.94**	**37**	IAML		20 36 21.8	
FID	**Port Fidalgo**	**5.07**	**21**		Pn	20 35 04.4	-6.2
FID	**Port Fidalgo** comp=N,12nm,0.7s	**5.07**	**21**	IAML		20 36 15.0	
FID	comp=E,12nm,0.5s			IAML		20 36 17.7	
RAGM	**Ragged Mountai**	**5.21**	**32**	Pn	Pn	20 35 05.5	-7.1
N19K	**Bonanza Creek**	**5.22**	**337**	Pn	Pn	20 35 07.9	-4.9
N19K	comp=E,4.3nm,1.4s			IAML		20 37 37.2	
SUCK	**Suckling Hills**	**5.26**	**38**	Pn	Pn	20 35 06.4	-6.9
SUCK	comp=E,13nm,1.5s			IAML		20 36 35.6	
SUCK	comp=N,14nm,1.5s			IAML		20 36 43.6	
HMT	**Hamilton**	**5.30**	**34**		Pn	20 35 07.3	-6.5
N18K	**Kilae Creek**	**5.46**	**330**	Pn	Pn	20 35 10.4	-5.7
BERG	**Berg Lake**	**5.52**	**36**	Pn	Pn	20 35 10.4	-6.4
SNH	**Sunshine Point**	**5.67**	**41**	Pn	Pn	20 35 13.1	-5.9
WAX	**Waxell Ridge**	**5.86**	**39**	Pn	Pn	20 35 14.9	-6.6
KLU	**Klutina**	**5.86**	**21**		Pn	20 35 15.1	-6.4
ISLE	**Juniper Island**	**6.14**	**39**	Pn	Pn	20 35 19.2	-6.3
VRDI	**Verde Repeater**	**6.25**	**32**	Pn	Pn	20 35 20.0	-7.0
N25K	**Chitina, Valde**	**6.25**	**26**	Pn	Pn	20 35 21.9	-5.0
GLB	**Gilahina Butte**	**6.32**	**29**	Pn	Pn	20 35 21.2	-6.6
GRNC	**Granite Creek**	**6.44**	**40**	Pn	Pn	20 35 23.3	-6.4
TABL	**Table Mountain**	**6.48**	**44**	Pn	Pn	20 35 23.8	-6.5
M17K	**Holitna River**	**6.50**	**328**	Pn	Pn	20 35 25.1	-5.1
MCARA	**McCarthy VSAT**	**6.50**	**32**	Pn	Pn	20 35 23.8	-6.4
LOGN	**Logan Glacier**	**6.78**	**42**	Pn	Pn	20 35 27.1	-7.2
BCPM	**Bancas Point**	**6.84**	**51**	Pn	Pn	20 35 28.1	-6.8

*IDC **21** 20:35:33.1±20.0, 19°16N×145°57E,h223km±201km, mb2.9/8,mbtmp3.5/8,Error ellipse: s-maj=37.6km s-min=29.7km az=35.0*

ISC 21 20:35:32.1±1.0,19°2N±0°2×145°6E±0°2,h214km,n11, σ0s52/8,mb3.2/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy** baz=272	**20.02**	**88**	T	T	21 00 41.5	
H11S1	**WAKE ISLAND Hy** baz=272	**20.03**	**88**	T	T	21 00 37.0	
H11S2	**WAKE ISLAND Hy** baz=272	**20.03**	**88**	T	T	21 00 42.3	
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=21,slow=8.7,SNR=2.1 0.3nm,0.5s	**40.38**	**196**	P	**P**	**20 42 49.3**	**-0.1**
MKAR	**Makanchi Array** 0.1nm,0.7s,baz=96,slow=7.4,SNR=1.6 0.1nm,0.7s	**58.05**	**314**	P	**P**	**20 45 03.2**	**+0.3**
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=90,slow=6.7,SNR=4.8 0.2nm,0.4s	**60.89**	**318**	P	**P**	**20 45 22.4**	**+0.3**
ILAR	**Eielson Array** 0.2nm,0.4s,baz=255,slow=5.8,SNR=6.3 0.2nm,0.4s	**63.30**	**26**	P	**P**	**20 45 37.4**	**-0.5**
BVAR	**Borovoye Array** 0.3nm,0.5s,baz=103,slow=6.5,SNR=1.8 0.3nm,0.5s	**66.04**	**320**	P	**P**	**20 45 56.0**	**+0.3**
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=285,slow=5.6,SNR=5.3 0.3nm,0.8s	**77.65**	**28**	P	**P**	**20 47 04.9**	**+0.3**
NVAR	**Mina Array Bea** 0.7nm,0.7s,baz=267,slow=3.5,SNR=4.1 0.7nm,0.7s	**82.97**	**52**	P	**P**	**20 47 34.1**	**+0.4**
FINES	**FINESS Array B** 0.7nm,0.5s,baz=42,slow=5.9,SNR=7.2 0.7nm,0.5s	**86.41**	**335**	P	**P**	**20 47 49.3**	**-0.8**

*IDC **21** 20:41:34.0±0.8,6°82N×127°23E,h0km,mb3.7/9, mbtmp3.7/9,MS3.0/5,Error ellipse: s-maj=20.6km s-min=14.3km az=23.0*

ISC 21 20:41:40.7±0.9,6°8N±0°1×127°1E±0°2,h50km,n13, σ0s81/11,mb3.8/9,MS2.9/4,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)** 198nm,0.3s,baz=80,slow=1.7,SNR=8.0	**1.56**	**281**	Pg	**Pn**	**20 42 05.9**	**-0.1**
DAV				Lg	Lg	20 42 25.7	
TGY	**Tagaytay City** comp=Z,67nm,20.1s,baz=311,slow=40	**9.49**	**321**	LR	LR	20 47 54.7	
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=342,slow=11,SNR=6.0 0.2nm,0.3s	**27.47**	**165**	P	**P**	**20 47 22.8**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,16nm,18.1s,baz=170,slow=36	**29.80**	**296**	LR	LR	20 59 45.1	
ASAR	**Alice Springs** 0.1nm,0.3s,baz=341,slow=6.9,SNR=4.9	**30.96**	**168**	P	**P**	**20 47 52.8**	**-0.5**
ASAR	0.2nm,0.4s,baz=341,slow=1.8,SNR=2.3 0.1nm,0.3s			PcP	**PcP**	**20 50 48.7**	**-0.1**
MJAR	**Matsushiro Arr** 1.4nm,0.7s,baz=200,slow=8.6,SNR=2.6	**31.33**	**17**	P	**P**	**20 47 55.0**	**-1.4**
MJAR	comp=Z,11nm,18.1s,baz=186,slow=44 1.4nm,0.7s			LR	LR	21 04 30.0	
SONM	**Songino Array** 0.1nm,0.4s,baz=144,slow=6.2,SNR=1.7 0.1nm,0.4s	**44.58**	**340**	P	**P**	**20 49 48.6**	**+0.6**
PALK	**Pallekele** comp=Z,18nm,18.9s,baz=334,slow=37	**46.05**	**274**	LR	LR	21 10 00.8	
MKAR	**Makanchi Array** 1.3nm,0.5s,baz=118,slow=7.6,SNR=51 1.3nm,0.5s	**55.32**	**324**	P	**P**	**20 51 09.5**	**+0.1**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=145,slow=5.3,SNR=2.5 0.4nm,0.4s	**58.09**	**332**	P	**P**	**20 51 28.3**	**-0.5**
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=126,slow=6.1,SNR=13 0.5nm,0.5s	**59.43**	**326**	P	**P**	**20 51 37.9**	**-0.3**
BVAR	**Borovoye Array** 1.2nm,0.5s,baz=84,slow=3.8,SNR=12	**65.02**	**326**	P	**P**	**20 52 15.6**	**0.0**
BVAR	comp=Z,35nm,19.3s,baz=325,slow=40 1.2nm,0.5s			LR	LR	21 25 25.9	
ILAR	**Eielson Array** 0.3nm,0.6s,baz=241,slow=4.9,SNR=8.0 0.3nm,0.6s	**82.22**	**26**	P	**P**	**20 53 57.8**	**+1.5**

*IDC **21** 20:51:02.8±1.9,3°15S×130°22E,h0km,mb3.5/3, mbtmp3.4/4,ML3.3/1,MS3.4/2,Error ellipse: s-maj=155.6km s-min=25.8km az=74.0*

*DJA **21** 20:51:16.2±0.6,4°S±5°×13°0E±°,h93km±12km,M3.8/7, mb4.8/1,mB5.6/1,MLv3.3/7,Mw(mB)5.1/1*

ISC 21 20:51:17.6±1.3,3°99S±0°08×130°27E±0°08,h100km,n12, σ1s83/8,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.65**	**215**	P	**Pn**	**20 51 33.2**	**-1.3**
FAKI	**Fak Fak**	**2.24**	**62**	P	**Pn**	**20 51 52.3**	**-1.0**
SWI	**Sorong**	**3.26**	**18**	P	**Pn**	**20 52 05.7**	**-1.1**
SAUI	**Saumlaki**	**4.10**	**166**	P	**Pn**	**20 52 15.6**	**-2.5**
SANI	**Sanana**	**4.69**	**294**	P	**Pn**	**20 52 25.0**	**-1.2**
KMSI	**Cibinong**	**7.75**	**306**	P	**Pn**	**20 53 07.6**	**-0.1**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=350,slow=12,SNR=8.2 0.2nm,0.4s	**16.34**	**166**	P	**P**	**20 55 04.3**	**+1.9**
ASAR	**Alice Springs** 0.8nm,0.4s,baz=350,slow=11,SNR=18 0.8nm,0.4s	**19.87**	**170**	P	**Pn**	**20 55 44.8**	**+1.2**
JHJ	**Hachijo jima 2** comp=Z,39nm,21.5s,baz=171,slow=30	**37.99**	**13**	LR	LR	21 09 21.3	
SONM	**Songino Array** 0.4nm,0.9s,baz=142,slow=7.3,SNR=3.5 0.4nm,0.9s	**55.70**	**341**	P	P	21 00 35.3	-8.4
MKAR	**Makanchi Array** comp=Z,49nm,18.1s,baz=266,slow=37	**65.89**	**326**	LR	LR	21 31 16.8	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=116,slow=7.3,SNR=2.8 0.2nm,0.3s	**70.11**	**328**	P	P	21 02 12.4	-6.7

*DJA **21** 20:56:08.9±0.3,8°S±3°×12°8E±°,h199km±10km,M4.5/12, mb4.5/11,mB5.0/5,MLv4.5/12,Mw(mB)4.3/5*

*NEIC **21** 20:56:09.5±1.3,7°49S±0°08×128°29E±0°08,h166km±7km, mb4.3/35,Error ellipse: s-maj=11.3km s-min=10.8km az=204.0*

*IDC **21** 20:56:13.3±4.5,7°48S×128°26E,h200km±43km,mb3.6/14, mbtmp4.2/15,Error ellipse: s-maj=29.5km s-min=12.3km az=66.0*

ISC 21 20:56:08.1±0.4,7°55S±0°05×128°24E±0°05,h150km,n107, σ1s85/111,mb4.1/23,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.07**	**98**		**Pn**	**20 56 57.7**	**+1.4**
SAUI	**Saumlaki**	**3.07**	**98**	P	**Pn**	**20 56 59.8**	**+3.5**
SAUI	**Saumlaki**	**3.07**	**98**	P	**Pn**	**20 56 58.6**	**+2.3**
SAUI				S	**Sn**	**20 57 36.5**	**+2.9**
BNDI	**Bandanaira**	**3.44**	**29**	P	**Pn**	**20 57 04.8**	**+3.8**
NLAI	**Namlea**	**4.43**	**345**	P	**Pn**	**20 57 18.6**	**+4.6**
SOEI	**Soe**	**4.49**	**241**		**Pn**	**20 57 17.3**	**+2.3**
SOEI	**Soe**	**4.49**	**241**	P	**Pn**	**20 57 17.2**	**+2.3**
SOEI	**Soe**	**4.49**	**241**	P	**Pn**	**20 57 17.3**	**+2.3**
SOEI				S	**Sn**	**20 58 08.2**	**+1.2**
DRS	**Darwin Rock St**	**5.51**	**152**	P	**Pn**	**20 57 29.2**	**+0.9**
SANI	**Sanana**	**5.91**	**338**	P	**Pn**	**20 57 37.5**	**+3.9**
SANI	**Sanana** 30nm,0.9s,0.1nm	**5.91**	**338**	P	**Pn**	**20 57 37.0**	**+3.4**
MTN	**Manton Dam**	**5.98**	**152**		**Pn**	**20 57 35.5**	**+0.9**
MTN	**Manton Dam**	**5.98**	**152**	P	**Pn**	**20 57 35.4**	**+0.9**
MMRI	**Maumere**	**6.04**	**259**	Pn	**Pn**	**20 57 37.1**	**+1.8**
MMRI	**Maumere** 22nm,0.5s,0.4nm	**6.04**	**259**	P	**Pn**	**20 57 38.9**	**+3.6**
FAKI	**Fak Fak**	**6.09**	**41**		**Pn**	**20 57 35.6**	**-0.4**
FAKI	**Fak Fak** 30nm,0.6s,1µm0.2nm	**6.09**	**41**	P	**Pn**	**20 57 36.2**	**+0.1**
EDFI	**Ende, Flores** 7.3nm,1.0s,0.1nm	**6.59**	**259**	P	**Pn**	**20 57 45.4**	**+2.6**
KDU	**Kakadu**	**6.59**	**141**	P	**Pn**	**20 57 43.3**	**+0.6**
LBMI	**Labuha** 68nm,0.9s,0.2nm	**6.91**	**354**	P	**Pn**	**20 57 49.5**	**+2.6**
SWI	**Sorong** 91nm,0.7s,1µm0.4nm	**7.29**	**25**	P	**Pn**	**20 57 52.7**	**+0.6**
BASI	**Baing, Sumba**	**8.02**	**250**	P	**Pn**	**20 58 03.9**	**+2.1**
KNRA	**Kununurra**	**8.09**	**176**		**Pn**	**20 58 02.2**	**-0.6**
KNRA	**Kununurra**	**8.09**	**176**	P	**Pn**	**20 58 02.3**	**-0.4**
TNTI	**Ternate**	**8.31**	**354**	Pn	**Pn**	**20 58 03.8**	**-2.0**
PLAI	**Plampang**	**10.43**	**262**	P	**Pn**	**20 58 33.8**	**-0.1**
PLAI	**Plampang**	**10.43**	**262**	P	**Pn**	**20 58 33.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**10.78**	**193**		**Pn**	**20 58 36.1**	**-2.4**
TWSI	**Taliwang, Sumb**	**11.30**	**263**	P	**Pn**	**20 58 47.3**	**+2.0**
TOLI2	**Tolitoli**	**11.37**	**319**	P	**Pn**	**20 58 49.7**	**+3.5**
WB0	**Warramunga Arr**	**13.53**	**154**		**Pn**	**20 59 11.7**	**-2.4**
WRAB	**Tennant Creek**	**13.66**	**155**		**Pn**	**20 59 13.5**	**-2.2**
WRA	**Warramunga Arr**	**13.67**	**155**		**Pn**	**20 59 13.1**	**-2.8**
WRA	**Warramunga Arr** 15nm,0.5s,baz=325,slow=13,SNR=97	**13.67**	**155**	P	**Pn**	**20 59 13.2**	**-2.6**
WRA	21nm,0.4s,baz=332,slow=22,SNR=13			S	Sn	21 01 37.3	-10
WB2	**Warramunga Arr**	**13.67**	**155**		**Pn**	**20 59 13.7**	**-2.2**
WR0	**Warramunga Arr**	**13.77**	**154**		**Pn**	**20 59 14.8**	**-2.3**
MBWA	**Marble Bar**	**15.83**	**210**	P	**Pn**	**20 59 42.6**	**-0.2**
MBWA	comp=Z,28nm,1.4s			IAmb	IAmb	20 59 55.0	
MBWA	**Marble Bar**	**15.83**	**210**	P	**Pn**	**20 59 44.2**	**+1.4**
COEN	**Coen**	**15.99**	**115**		**Pn**	**20 59 45.9**	**+1.0**
COEN	comp=Z,18nm,1.4s			IAmb	IAmb	20 59 57.4	
COEN	**Coen**	**15.99**	**115**	P	**P**	**20 59 47.4**	**+2.0**
PSA00	**Pilbara Seismi**	**16.12**	**209**	P	**Pn**	**20 59 46.8**	**+0.4**
PSA00	comp=Z,15nm,0.7s			IAmb	IAmb	21 00 03.1	
PSA00	**Pilbara Seismi**	**16.12**	**209**		**Pn**	**20 59 46.3**	**-0.1**
PSA00	comp=Z,4.8nm,1.0s			IAmb	IAmb	20 59 47.3	
PSA00	**Pilbara Seismi**	**16.12**	**209**	P	**Pn**	**20 59 47.5**	**+1.1**
AS31	**Alice Springs**	**16.92**	**162**	Pn	**P**	**20 59 57.0**	**+1.4**
AS31	comp=Z,12nm,0.5s			IAmb	IAmb	20 59 58.5	
ASAR	**Alice Springs**	**16.92**	**162**		**P**	**20 59 55.9**	**+0.3**
ASAR	**Alice Springs** comp=Z,23nm,0.6s,baz=340,slow=11,SNR=342	**16.92**	**162**	P	**P**	**20 59 57.5**	**+1.9**
ASAR	comp=Z,4.6nm,0.4s,baz=325,slow=16,SNR=7.2			S	**S**	**21 02 56.9**	**-7.5**
AS01	**Alice Springs**	**16.93**	**162**	P	**P**	**20 59 57.2**	**+1.4**
QIS	**Mount Isa**	**16.98**	**141**	P	**P**	**20 59 57.6**	**+1.3**
WRKA	**Warakurna**	**17.39**	**180**	P	**P**	**21 00 01.6**	**+0.9**
UGM	**Wanagama**	**17.56**	**268**	P	**P**	**21 00 02.1**	**-0.5**
UGM	**Wanagama**	**17.56**	**268**	P	**P**	**21 00 03.0**	**+0.3**
KKM	**Kota Kinabalu**	**18.06**	**318**	P	**Pn**	**21 00 12.3**	**+2.5**
SBUM	**Sibu**	**18.82**	**301**		**P**	**21 00 18.6**	**+2.3**
SBUM	comp=Z,19nm,1.3s			IAmb	IAmb	21 00 20.4	
KSM	**Kuching**	**20.00**	**296**	P	**P**	**21 00 30.6**	**+1.4**
BBJI	**Bungbulang**	**20.41**	**269**	P	**P**	**21 00 34.0**	**+0.3**
MEEK	**Meekatharra**	**21.07**	**205**	P	**P**	**21 00 41.8**	**+1.2**
OOD	**Oodnadatta**	**21.34**	**162**	P	**P**	**21 00 44.9**	**+1.6**
CTA	**Charters Tower** comp=Z,1.2nm,0.4s,baz=29,slow=6.2,SNR=1.4 comp=Z,1.2nm,0.4s	**21.45**	**127**	P	**P**	**21 00 46.5**	**+1.8**
FORT	**Forrest**	**23.11**	**180**	P	**P**	**21 00 59.8**	**-1.1**
FORT	**Forrest**	**23.11**	**180**	P	**P**	**21 01 03.3**	**+2.5**
MULG	**Mulgathing**	**23.26**	**167**	P	**P**	**21 01 04.3**	**+2.0**
MORW	**Morawa**	**24.29**	**207**	P	**P**	**21 01 12.9**	**+1.2**
MORW	comp=Z,19nm,1.3s			IAmb	IAmb	21 01 55.9	
MORW	**Morawa**	**24.29**	**207**	P	**P**	**21 01 13.4**	**+1.7**
BLDU	**Ballidu**	**25.36**	**204**	P	**P**	**21 01 24.2**	**+2.9**
BBOO	**Buckleboo**	**26.16**	**165**	P	**P**	**21 01 28.6**	**+0.1**
BBOO	**Buckleboo**	**26.16**	**165**	P	**P**	**21 01 29.9**	**+1.4**
STKA	**Stephens Creek**	**27.22**	**155**	P	**P**	**21 01 38.6**	**+0.7**
STKA	**Stephens Creek**	**27.22**	**155**	P	**P**	**21 01 39.5**	**+1.5**
STKA	**Stephens Creek** comp=Z,1

comp=Z,1.5nm,0.3s,baz=106,slow=5.4,SNR=4.0
comp=Z,1.5nm,0.3s

ABKAR	**Akbulak array**	**81.86**	**322**	P	**P**	**21**	**08**	**09.2 -1.4**
QSPA	**South Pole Qui**	**82.43**	**180**	P	**P**	**21**	**08**	**13.3 -0.2**
QSPA				IAmb	IAmb	21	08	16.7

comp=Z,5.4nm,1.3s

QSPA	**South Pole Qui**	**82.43**	**180**	P	**P**	**21**	**08**	**13.4 0.0**

comp=Z,1.4nm,0.8s,baz=320,slow=1.8,SNR=7.1
comp=Z,1.4nm,0.8s

ARU	**Arti**	**85.25**	**328**	P	**P**	**21**	**08**	**27.0 -0.7**
ARU				IAmb	IAmb	21	08	27.4

comp=Z,3.3nm,0.7s

B21K	**Ikpikpuk River**	**92.58**	**20**	P	**P**	**21**	**09**	**00.8 -1.2**
B21K				IAmb	IAmb	21	09	22.7

comp=Z,4.4nm,1.2s

BELA	**Belgrano 2**	**94.17**	**184**	P	**P**	**21**	**09**	**09.5 +0.1**
ILAR	**Eielson Array**	**94.59**	**25**	P	**P**	**21**	**09**	**09.6 -1.9**

comp=Z,0.2nm,0.9s,baz=251,slow=2.8,SNR=1.5
comp=Z,0.2nm,0.9s

PDAR	**Pinedale Array**	**118.52**	**45**	PKP	**PKPdf**	**21**	**14**	**37.5 -1.1**

comp=Z,0.2nm,0.7s,baz=319,slow=3.8,SNR=2.9

EKA	**Eskdalemuir Ar**	**118.80**	**331**	PKP	**PKPdf**	**21**	**14**	**36.8 -1.6**

comp=Z,0.2nm,0.3s,baz=20,slow=2.5,SNR=3.9

TORD	**Torodi Ar. Bea**	**127.20**	**281**	PKP	**PKPdf**	**21**	**14**	**54.5 -1.2**

comp=Z,0.6nm,0.6s,baz=66,slow=3.6,SNR=3.5

CPUP	**Villa Florida**	**145.89**	**171**	PKPbc	**PKPdf**	**21**	**15**	**30.1 +0.3**

comp=Z,1.6nm,0.4s,baz=212,slow=2.5,SNR=4.7

*REN **21** 20:59:09.6±0.6, 39°.34N±0°.01×120°.03W±0°.02, h5km±4km, Error ellipse: s-maj=2.2km s-min=1.5km az=107.0*
*NCEDC **21** 20:59:10.7±0.9, 39°.344N±0°.005×120°.03W±0°.02, h-2km±1km, Md2.9/34, ML2.6/15(REN), ML2.5/46(NEIC), Error ellipse: s-maj=2.1km s-min=0.7km az=99.0*
NEIC 21 20:59:09.8±1.0, 39°.35N±0°.01×120°.02W±0°.02, h8km±8km, Error ellipse: s-maj=2.6km s-min=0.9km az=139.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPK	**Martis Peak**	**0.06**	**185**		Sg	20 59 13.0	-0.3
MPK	**Martis Peak**	**0.06**	**185**	Pg	Pg	20 59 11.8	-0.1
MPK	**Martis Peak**	**0.06**	**185**	IAML		20 59 13.1	

comp=N,53μm,0.1s

MPK				IAML		20 59 13.6	

comp=E,43μm,0.2s

BABR	**Babbit Peak**	**0.26**	**346**		Pg	20 59 15.5	+0.4
BABR					Sg	20 59 19.8	+1.1
PEAR	**Peavine Mounta**	**0.26**	**11**		Pg	20 59 15.5	+0.4
PEAR					Sg	20 59 19.7	+1.0
RUBR	**Rubicon Trail**	**0.32**	**199**		Pg	20 59 16.2	+0.1
RUBR					Sg	20 59 20.8	+0.5
LOY	**Loyalton**	**0.35**	**332**		Pg	20 59 17.0	+0.3
EMB	**Emerald Bay**	**0.38**	**189**		Pg	20 59 17.3	-0.1
EMB					Sg	20 59 22.7	+0.3
EMB	**Emerald Bay**	**0.38**	**189**	IAML		20 59 23.2	

comp=E,1μm,0.2s

EMB				IAML		20 59 23.2	

comp=N,1μm,0.2s

PNTR	**Pine Nut**	**0.42**	**128**		Pg	20 59 18.3	+0.2
PNTR	**Pine Nut**	**0.42**	**128**	IAML		20 59 25.7	

comp=N,510nm,0.5s

PNTR				IAML		20 59 27.1	

comp=E,514nm,0.8s

BEKR	**Beckworth**	**0.58**	**333**		Pg	20 59 21.1		0.0
BEKR					Sg	20 59 29.2		+0.6
PAHR	**Pah Rah Range**	**0.61**	**54**		Pg	20 59 21.7		+0.1
PAHR					Sg	20 59 30.4		+0.8
PAHR	**Pah Rah Range**	**0.61**	**54**	IAML		20 59 30.6		

comp=N,114nm,0.2s

PAHR				IAML		20 59 35.7	

comp=E,112nm,0.4s

YERR	**Yerington**	**0.71**	**121**		Pg	20 59 23.4	-0.1
YERR					Sg	20 59 33.0	+0.3
YERR	**Yerington**	**0.71**	**121**	IAML		20 59 34.0	

comp=N,282nm,0.5s

YERR				IAML		20 59 34.4	

comp=E,329nm,0.3s

BMRR	**Black Mountain**	**0.78**	**345**		Pg	20 59 24.9	-0.1	
AFDM	**Forest Hills D**	**0.84**	**242**		Pg	20 59 25.6	-0.3	
AFDM					Sg	20 59 37.5	+0.6	
AFDM	**Forest Hills D**	**0.84**	**242**	IAML		20 59 38.5		

comp=N,166nm,0.3s

AFDM				IAML		20 59 41.2	

comp=E,158nm,0.3s

OHCM	**Honcut**	**1.13**	**270**		Pg	20 59 30.7	-0.9	
OWYM	**Wyandotte**	**1.14**	**276**		Pg	20 59 30.8	-0.9	
OBHM	**Bloomer Hill**	**1.15**	**286**		Pg	20 59 32.0	0.0	
ORV	**Oroville**	**1.16**	**281**	Pg	Pg	20 59 31.4	-0.7	
ORV				IAML		20 59 46.7		

comp=N,125nm,0.4s

ORV				IAML		20 59 49.1	

comp=E,77nm,0.5s

PAM	**Palermo**	**1.16**	**275**		Pg	20 59 31.2	-0.9	
OSTM	**Stimpson Lane**	**1.22**	**271**		Pb	20 59 32.3	-0.8	
OGOM	**Van Goodin Ran**	**1.27**	**284**		Pn	20 59 33.4	-0.4	
CMB	**Columbia Colle**	**1.34**	**192**		Pn	20 59 34.1	-0.8	
CMB	**Columbia Colle**	**1.34**	**192**		Pn	20 59 34.0	-0.9	
CMB	**Columbia Colle**	**1.34**	**192**	IAML		20 59 52.5		

comp=N,95nm,0.2s

CMB				IAML		20 59 52.6	

comp=E,92nm,0.1s

SUTB	**Sutter Butte**	**1.37**	**265**		Pn	20 59 35.1	-0.2	
RYN	**Ryan**	**1.37**	**121**		Pn	20 59 35.6	+0.2	
RYN	**Ryan**	**1.37**	**121**	IAML		20 59 54.8		

comp=N,117nm,0.4s

RYN				IAML		20 59 57.0	

comp=E,106nm,0.5s

LCMM	**Colby Mountain**	**1.40**	**305**		Pn	20 59 36.1	+0.2	
OSUM	**Sutter Buttes**	**1.42**	**267**		Pb	20 59 36.3	-0.3	
MCUB	**Copperopolis B**	**1.45**	**199**		Pn	20 59 36.1	-0.3	
KVN	**Kaiserville**	**1.52**	**101**		Pb	20 59 38.4	0.0	
KVN	**Kaiserville**	**1.52**	**101**	IAML		20 59 59.8		

comp=E,65nm,0.3s

KVN				IAML		21 00 01.9	

comp=N,64nm,0.5s

NV09	**Mina Array Sit**	**1.60**	**124**		Pb	20 59 39.5	-0.3	
LHV	**Little Huntoon**	**1.62**	**132**		Pb	20 59 40.1	+0.2	
LHV	**Little Huntoon**	**1.62**	**132**	IAML		21 00 04.6		

comp=N,61nm,0.7s

LHV				IAML		21 00 07.0	

comp=E,57nm,0.6s

NVAR	**Mina Array Bea**	**1.63**	**124**		Pb	20 59 39.6	-0.6	
NV08	**Mina Array Sit**	**1.63**	**125**		Pb	20 59 39.9	-0.4	
O03E	**Paynes Creek**	**1.66**	**305**		Pb	20 59 40.5	-0.2	
HCK	**Huntoon Valley**	**1.70**	**138**		Pg	20 59 41.8	-0.5	
NV11	**Mina Array Sit**	**1.72**	**122**		Pb	20 59 41.3	-0.5	
NV11	**Mina Array Sit**	**1.72**	**122**	IAML		21 00 06.0		

comp=N,28nm,0.5s

NV11				IAML		21 00 07.1	

comp=E,31nm,0.6s

LBCM	**Butte Creek Ri**	**1.80**	**326**		Pb	20 59 42.9	-0.2	
MDPB	**Devils Postpil**	**1.87**	**156**		Pb	20 59 44.5	+0.2	
MDPB	**Devils Postpil**	**1.87**	**156**	IAML		21 00 10.2		

comp=N,32nm,0.4s

MDPB				IAML		21 00 10.9	

comp=E,42nm,0.7s

MTOS	**Mt Oso, Westle**	**2.11**	**209**		Pb	20 59 47.4	-0.9	
LSHM	**Sage Hen Hill**	**2.11**	**314**		Pb	20 59 48.5	0.0	
MCDM	**Chidago Canyon**	**2.19**	**145**		Pn	20 59 45.9	-0.7	
Q09A	**Carvers**	**2.27**	**102**		Pb	20 59 50.0	-1.2	
HOPS	**Hopland Field**	**2.40**	**262**		Pn	20 59 48.3	-1.0	
HOPS				IAML		21 00 10.6		

comp=N,30nm,3.9s

HOPS				IAML		21 00 34.0	

comp=E,24nm,3.8s

BMN	**Battle Mountai**	**2.41**	**63**		Pn	20 59 49.0	-0.7	
BMN	**Battle Mountai**	**2.41**	**63**	IAML		21 00 29.0		

comp=N,15nm,0.7s

DSP	**Deep Springs**	**2.55**	**140**		Pn	20 59 51.7	+0.2	
LGMM	**Garner Mountai**	**2.64**	**329**		Pb	20 59 57.7	+0.3	
MZP	**Montezuma Peak**	**2.65**	**128**	Pn	Pn	20 59 54.6	+1.6	
SAO	**San Andreas Ge**	**2.82**	**204**	Pn	Pn	20 59 56.1	+0.9	
LCH	**Last Change Ra**	**2.82**	**138**		Pn	20 59 55.7	+0.4	
BBGB	**Big Mountain B**	**2.88**	**196**		Pn	20 59 56.3	+0.2	
GMN	**Gold Mountain**	**2.99**	**132**		Pb	21 00 03.9	+0.5	
WVOR	**Wild Horse Val**	**3.25**	**18**		Pn	21 00 01.6	+0.3	
SGV	**South Grapevin**	**3.34**	**134**		Pb	21 00 10.2	+0.8	
K05A	**Summer Lake**	**3.44**	**349**	Pg	Pb	21 00 11.3	+0.3	
R11B	**Troy Canyon, C**	**3.61**	**105**	Pn	Pn	21 00 07.0	+0.9	
ELK	**Elko**	**3.93**	**68**		Pn	21 00 11.1	+0.4	
J05D	**Fort Rock, OR**	**4.04**	**347**		Pb	21 00 22.9	+1.6	

*NEIC **21** 21:06:34.7±1.3, 43°.74N±0°.05×105°.35W±0°.07, h0km±1km, ML3.3/72, Error ellipse: s-maj=9.2km s-min=8.7km az=46.0*
*IDC **21** 21:06:35.5±0.8, 43°.81N×105°.60W, h0km, mb3.9/7, mbtmp3.7/13, ML3.1/4, MS2.2/1, Error ellipse: s-maj=23.7km s-min=6.5km az=146.0*
ISC 21 21:06:35.8±0.7, 43°.79N±0°.06×105°.32W±0°.05, h0km, n60, σ1s11°/60, mb4.0/7, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**70**	Pg	**Pb**	**21**	**06**	**55.4 -0.4**
K22A	**Casper**	**1.44**	**218**		**Pn**	**21**	**07**	**01.0 -2.3**
K22A				IAML		21	07	22.1

comp=E,739nm,0.3s

PHWY	**Pilot Hill**	**2.49**	**182**		**Pn**	**21**	**07**	**17.6 -0.3**
PHWY				IAML		21	07	52.1

comp=E,137nm,0.4s

PHWY				IAML		21 07 57.2	

comp=E,163nm,0.7s

RWWY	**Rawlins**	**2.52**	**214**		**Pn**	**21**	**07**	**17.9 -0.3**
N23A	**Red Feather La**	**2.93**	**189**	Pn	**Pn**	**21**	**07**	**24.2 +0.3**
N23A				IAML		21	08	04.7

comp=E,130nm,0.7s

LAO	**LASA Array**	**2.96**	**348**		**Pn**	**21**	**07**	**25.1 +1.0**
LAO				IAML		21	08	25.0

comp=E,139nm,0.9s

RLMT	**Red Lodge**	**3.12**	**297**		**Pn**	**21**	**07**	**27.6 +1.2**
RLMT				IAML		21	08	22.1

comp=E,64nm,0.5s

RLMT				IAML		21 08 25.0	

comp=E,78nm,0.5s

PD31	**Pinedale Array**	**3.26**	**253**		**Pn**	**21**	**07**	**28.6 +0.2**
PDAR	**Pinedale Array**	**3.26**	**253**		**Pn**	**21**	**07**	**28.7 +0.3**
PDAR	**Pinedale Array**	**3.26**	**253**	Pn	**Pn**	**21**	**07**	**28.9 +0.6**
PDAR				IAML		21	08	38.1

comp=E,14nm,0.3s,baz=72,slow=16,SNR=101

PDAR				Pg	**Pb**	**21**	**07**	**33.9 -0.7**

comp=E,17nm,0.3s,baz=66,slow=21,SNR=38

PDAR				Lg	Lg	21 08 12.2	

comp=E,19nm,0.3s,baz=68,slow=35,SNR=2.3

PDAR				LR	LR	21 08 52.6	

comp=E,40nm,21.7s,baz=124,slow=45

BRIGG	**Briggsdale**	**3.30**	**167**	Pn	**Pn**	**21**	**07**	**28.6 -0.2**
YMP	**Mirror Lake Pl**	**3.60**	**287**		**Pn**	**21**	**07**	**34.2 +1.2**
LKWY	**Lake**	**3.73**	**284**		**Pn**	**21**	**07**	**34.4 -0.5**
LKWY				IAML		21	07	58.0

comp=E,54nm,0.8s

LKWY				IAML		21 07 58.5	

comp=E,44nm,0.5s

OGNE	**Ogallala**	**3.75**	**138**	Pn	**Pn**	**21**	**07**	**34.7 -0.2**
H17A	**Grant Village**	**3.83**	**281**		**Pn**	**21**	**07**	**36.9 +0.7**
H17A				IAML		21	08	38.1

comp=E,42nm,0.4s

LOHW	**Long Hollow**	**3.83**	**269**		**Pn**	**21**	**07**	**36.8 +0.5**
FLWY	**Flagg Ranch**	**3.89**	**276**		**Pn**	**21**	**07**	**37.9 +0.8**
FLWY				IAML		21	08	54.2

comp=E,51nm,1.4s

FLWY				IAML		21 08 55.5	

comp=E,34nm,1.9s

MOOW	**Moose Ponds**	**3.93**	**271**		**Pn**	**21**	**07**	**38.6 +1.1**
YNR	**Norris Junctio**	**3.96**	**285**		**Pn**	**21**	**07**	**38.4 +0.4**
YNR				IAML		21	09	17.3

comp=E,36nm,0.1s

ISCO	**Idaho Springs**	**4.00**	**183**	Pn	**Pn**	**21**	**07**	**38.5 -0.1**
REDW	**Red Top Meadow**	**4.04**	**266**		**Pn**	**21**	**07**	**39.8 +0.7**
IMW	**Indian Meadow**	**4.06**	**273**		**Pn**	**21**	**07**	**40.0 +0.5**
IMW				IAML		21	08	09.4

comp=E,40nm,0.5s

IMW				IAML		21 08 09.9	

comp=E,40nm,0.5s

YHH	**Holmes Hill**	**4.09**	**286**		**Pn**	**21**	**07**	**39.9 +0.1**
TPAW	**Teton Pass**	**4.10**	**268**		**Pn**	**21**	**07**	**40.1 +0.2**
TPAW				IAML		21	09	18.4

comp=E,38nm,1.0s

O20A	**White River Ci**	**4.25**	**212**	Pn	**Pn**	**21**	**07**	**42.1 +0.1**
E28A	**Huff**	**4.29**	**48**	Pn	**Pn**	**21**	**07**	**43.9 +1.5**
K30B	**Basset**	**4.32**	**103**		**Pn**	**21**	**07**	**44.1 +1.4**
AHID	**Auburn Hatcher**	**4.34**	**258**		**Pn**	**21**	**07**	**44.1 +0.9**
AHID				IAML		21	08	57.1

comp=E,44nm,0.7s

AHID				IAML		21 09 04.8	

comp=E,40nm,0.7s

DGMT	**Dagmar**	**4.74**	**9**		**Pn**	**21**	**07**	**50.3 +1.8**
Q24A	**Divide**	**4.83**	**178**		**Pn**	**21**	**07**	**49.3 -0.6**
BOZ	**Bozeman (W)**	**4.84**	**294**		**Pn**	**21**	**07**	**50.5 +0.5**
BOZ				IAML		21	09	09.7

comp=E,16nm,1.4s

HWUT	**Hardware Ranch**	**5.09**	**247**	Pn	**Pn**	**21**	**07**	**53.2 -0.3**
HWUT				IAML		21	09	14.0

comp=E,29nm,1.0s

HWUT				IAML		21 09 31.8	

comp=E,30nm,0.9s

BSUT	**Blindstream Ca**	**5.19**	**233**	Pn	**Pn**	**21**	**07**	**55.0 0.0**
BSUT				IAML		21	09	27.7

comp=N,14nm,0.8s

BSUT				IAML		21 09 35.5	

comp=E,20nm,0.9s

KSCO	**Kaye Shedlock'**	**5.19**	**156**		**Pn**	**21**	**07**	**53.5 -1.3**
EGMT	**Eagleton**	**5.24**	**325**		**Pn**	**21**	**07**	**56.1 +0.7**
P18A	**Preston Nutter**	**5.56**	**223**		**Pn**	**21**	**07**	**59.6 -0.4**
LYMT	**Lyon Mountain**	**5.84**	**305**		**Pn**	**21**	**08**	**04.4 +0.6**
SDCO	**Great Sand Dun**	**6.04**	**181**		**Pn**	**21**	**08**	**05.9 -0.7**
ECSD	**EROS Data Cent**	**6.31**	**88**		**Pn**	**21**	**08**	**10.6 +0.6**
BPMT	**Black Pine Rid**	**6.39**	**298**		**Pn**	**21**	**08**	**10.1 -0.4**
BGU	**Big Grassy Mou**	**6.39**	**246**		**Pn**	**21**	**08**	**09.9 -1.4**
CBKS	**Cedar Bluff**	**6.51**	**138**		**Pn**	**21**	**08**	**11.9 -1.0**
DUG	**Dugway, Tooele**	**6.64**	**240**	Pn	**Pn**	**21**	**08**	**13.9 -0.7**
T25A	**Trinidad**	**6.68**	**174**		**Pn**	**21**	**08**	**14.1 -1.3**
MVCO	**Mesa Verde**	**7.01**	**201**		**Pn**	**21**	**08**	**20.6 +0.8**
ELK	**Elko**	**7.96**	**251**	Pn	**Pn**	**21**	**08**	**31.4 -1.4**

comp=E,0.1nm,0.3s,baz=66,slow=15,SNR=3.9

ELK				Lg	Lg	21	10	40.4

baz=186,slow=19,SNR=1.0
comp=E,0.7nm,0.4s

I10CA	**LAC DU BONNET**	**9.02**	**41**	I	I	21	56	15.0

comp=E,0.2nm,1.1s,baz=222,slow=321,SNR=8.6

ULM	**Lac du Bonnet**	**9.12**	**42**	Pn	**Pn**	**21**	**08**	**47.9 -0.7**

comp=E,2.0nm,0.3s,baz=230,slow=12,SNR=14

ULM				Sn	**Sn**	**21**	**10**	**29.0 -2.9**

comp=E,0.4nm,0.3s,baz=161,slow=13,SNR=1.8

ULM				Lg	Lg	21	11	18.1

comp=E,0.2nm,0.3s,baz=146,slow=22,SNR=1.7
comp=E,4.5nm,0.3s

NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**21**	**09**	**17.3 +0.6**

comp=E,0.6nm,0.6s,baz=47,slow=11,SNR=2.0

YBH	**Yreka Blue Hor**	**12.95**	**267**	Pn	**Pn**	**21**	**09**	**45.6 +4.6**

comp=E,0.2nm,0.3s,baz=1.9,slow=11,SNR=2.4

TXAR	**Lajitas Array**	**14.49**	**174**	Pn	**Pn**	**21**	**10**	**04.2 +2.0**

comp=E,0.1nm,0.3s,baz=356,slow=12,SNR=1.7
comp=E,0.2nm,0.6s

YKA	**Yellowknife Ar**	**19.50**	**347**	P	**P**	**21**	**11**	**04.0 -0.2**

comp=E,0.1nm,0.3s,baz=167,slow=12,SNR=2.2
comp=E,0.2nm,0.5s

TEIG	**Tepich**	**27.48**	**143**	LR	LR	21	25	51.0

comp=E,418nm,19.1s,baz=188,slow=42

ARCES	**ARCESS Array B**	**61.38**	**18**	P	**P**	**21**	**16**	**52.2 -0.7**

comp=E,1.1nm,0.5s,baz=339,slow=6.5,SNR=9.0
comp=E,1.1nm,0.5s

FINES	**FINESS Array B**	**67.99**	**23**	P	**P**	**21**	**17**	**36.2 0.0**

comp=E,2.2nm,1.0s,baz=328,slow=6.8,SNR=3.4
comp=E,2.2nm,1.0s

ZALV	**Zalesovo Beam**	**82.25**	**354**	P	**P**	**21**	**18**	**58.1 -0.5**

comp=E,0.8nm,0.4s,baz=19,slow=5.0,SNR=5.9
comp=E,0.8nm,0.4s

BVAR	**Borovoye Array**	**83.49**	**3**	P	**P**	**21**	**19**	**05.2 +0.1**

comp=E,0.5nm,0.5s,baz=336,slow=6.6,SNR=4.0
comp=E,0.5nm,0.5s

SONM	**Songino Array**	**84.57**	**339**	P	**P**	**21**	**19**	**11.1 +0.3**

comp=E,0.4nm,0.6s,baz=11,slow=4.0,SNR=4.2
comp=E,0.4nm,0.6s

KURBB	**Kurchatov Arra**	**85.91**	**358**	P	**P**	**21**	**19**	**17.1 -0.1**

comp=E,0.2nm,0.4s,baz=1.4,slow=3.7,SNR=1.7
comp=E,0.2nm,0.4s

MKAR	**Makanchi Array**	**89.55**	**355**	P	**P**	**21**	**19**	**34.8 -0.1**

comp=E,0.6nm,0.8s,baz=4.9,slow=4.8,SNR=7.1
comp=E,0.6nm,0.8s

*IDC **21** 21:27:28.7±2.1, 8°.93S×126°.14E, h0km, mb3.1/1, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=183.2km s-min=34.2km az=59.0*
*DJA **21** 21:27:32.7±0.4, 9°.54×12°.6E±°, h10km, M3.4/4, mb4.4/2, mB5.2/2, MLv2.8/4, Mw(mB)4.5/2*

ISC 21 21:27:34.1±1.0, 9°.5S±0°.1×125°.65E±0°.06, h35km, n7, σ1s20°/9, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.38**	**259**	P	**Pn**	**21**	**27**	**57.3 +0.3**
SOEI				S	**Sn**	**21**	**28**	**15.7 +1.5**
EDFI	**Ende, Flores**	**3.98**	**280**	P	**Pn**	**21**	**28**	**32.5 -0.2**
BASI	**Baing, Sumba**	**5.04**	**261**	P	**Pn**	**21**	**28**	**47.1 -0.2**
SAUI	**Saumlaki**	**5.79**	**75**	P	**Pn**	**21**	**28**	**58.6 +1.1**

138nm,1.0s,4μm0.5nm

WRA	**Warramunga Arr**	**13.36**	**142**	Pn	**Pn**	**21**	**30**	**42.2 +0.9**

0.1nm,0.3s,baz=319,slow=13,SNR=6.4

WRA				Sn	**Sn**	**21**	**33**	**07.5 -1.1**

0.1nm,0.3s,baz=328,slow=21,SNR=2.2
0.3nm,0.4s

ASAR	**Alice Springs**	**16.15**	**152**	Pn	**P**	**21**	**31**	**20.6 -0.9**

0.1nm,0.3s,baz=326,slow=12,SNR=4.4
0.2nm,0.4s

MKAR	**Makanchi Array**	**68.06**	**329**	P	**P**	**21**	**38**	**28.7 -1.4**

0.1nm,0.5s,baz=116,slow=6.6,SNR=2.3
0.1nm,0.5s

*CATAC **21** 21:30:48.2±1.3, 13°.30N×90°.50W, h10km±8km, ML4.2*
*SNET **21** 21:30:48.1±1.5, 13°.32N×90°.55W, h22km, ML4.3*
*GCG **21** 21:30:56.2±0.7, 13°.76N×90°.58W, h51km±23km, MD3.9*
ISC 21 21:30:48.5±1.6, 13°.33N±0°.06×90°.52W±0°.04, h28km±16km, n82, σ0s88°/87, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.91**	**52**	*e*P	**Pb**	**21**	**31**	**05.9 0.0**
NUBE				*e*S	**Sb**	**21**	**31**	**17.0 -0.8**
NUBE	**Las Nubes**	**0.91**	**52**	*i* P	**Pb**	**21**	**31**	**05.9 0.0**
NUBE				IAML		21	31	18.7

comp=Z,2μm,1.0s

LOAL	**Lomas de Alarc**	**0.97**	**47**	*e*P	**Pn**	**21**	**31**	**07.1 +0.7**
LOAL	**Lomas de Alarc**	**0.97**	**47**	*i* P	**Pn**	**21**	**31**	**07.2 +0.7**
LOAL				IAML		21	31	21.0

comp=Z,16μm,1.0s

SLOZ	**Alcaldia de Sa**	**0.99**	**46**	*e*P	**Pn**	**21**	**31**	**07.2 +0.5**
SLOZ				*e*S	**Sb**	**21**	**31**	**19.2 -0.6**
CEVE	**Cerro Verde**	**1.00**	**60**	*e*P	**Pb**	**21**	**31**	**07.4 0.0**
CEVE	

PACA	**Pacayal**	**2.14**	**86**	*eP*	**Pn**	**21 31 24.1 +1.5**
PACA	**Pacayal**	**2.14**	**86**	*i* P	**Pn**	**21 31 23.5 +1.0**
PACA				IAML		21 31 55.3	
	comp=Z,10μm,1.0s						
RANC	**El Ranchito**	**2.17**	**87**	*i* P	**Pn**	**21 31 24.5 +1.5**
RANC				IAML		21 32 14.6	
	comp=Z,1μm,1.0s						
JUCU	**Jucuarįn**	**2.21**	**92**	*eP*	**Pn**	**21 31 24.0 +0.6**
JUCU	**Jucuarįn**	**2.21**	**92**	*i* P	**Pn**	**21 31 24.4 +0.9**
JUCU				IAML		21 31 56.4	
	comp=Z,880nm,1.0s						
BLLM	**Bellamira**	**2.22**	**87**	*eP*	**Pn**	**21 31 24.0 +0.4**
LCND	**La Caada**	**2.56**	**90**	*eP*	**Pn**	**21 31 29.1 +1.0**
CNCH	**Conchagua**	**2.61**	**91**	*i* P	**Pn**	**21 31 30.1 +1.1**
CNCH				IAML		21 32 08.4	
	comp=Z,4μm,1.0s						
POTN	**Potosi Cosigui**	**2.95**	**96**	*i* P	**Pn**	**21 31 34.9 +1.3**
POTN				IAML		21 32 24.4	
	comp=Z,130nm,1.0s						
CRIN	**San Cristobal**	**3.44**	**100**	*i* P	**Pn**	**21 31 41.9 +1.6**
CRIN				IAML		21 32 33.2	
	comp=Z,2μm,1.0s						
PKGN	**Cerro Pekin**	**3.51**	**100**	*i* P	**Pn**	**21 31 42.4 +1.1**
PKGN				IAML		21 32 28.9	
	comp=Z,1μm,1.0s						
MOMN	**Momotombo**	**3.99**	**103**	*i* P	**Pn**	**21 31 49.5 +1.6**
MOMN				IAML		21 32 37.1	
	comp=Z,14nm,1.0s						
COPN	**Copaltepe**	**4.00**	**106**	*i* P	**Pn**	**21 31 48.8 +0.8**
COPN				IAML		21 32 56.6	
	comp=Z,480nm,1.0s						
LIMN	**Finca el Limon**	**4.05**	**93**	*i* P	**Pn**	**21 31 49.4 +0.6**
LIMN				IAML		21 31 51.0	
	comp=Z,170nm,1.0s						
BOAB	**BOACO BROADBAN**	**4.81**	**100**	*i* P	**Pn**	**21 31 59.8 +0.6**
BOAB				IAML		21 33 09.9	
	comp=Z,50nm,1.0s						

IDC ***21*** *21:48:41.3±0.7,38°.56N×70°.73E,h0km,mb3.9/18, mbtmp3.9/27,ML3.2/9,MS3.4/1,Error ellipse: s-maj=12.2km s-min=9.5km az=147.0*
NNC ***21*** *21:48:45.7±5.4,38°.39N×71°.50E,h304km±49km,mb2.8, mpv4.1,Error ellipse: s-maj=57.0km s-min=33.4km az=15.0*
MOS ***21*** *21:48:47.3±1.2,38°.71N×70°.75E,h50km,mb4.2/11,Error ellipse: s-maj=7.4km s-min=5.2km az=73.5*
NEIC ***21*** *21:48:48.0±2.1,38°.69N±0°.04×70°.70E±0°.06,h48km±5km, mb4.2/16,Error ellipse: s-maj=6.9km s-min=5.4km az=107.0*
SOME ***21*** *21:48:48.5,39°.42N×71°.95E,h5km*
ISC 21 21:48:48.3±0.4,38°.65N±0°.04×70°.66E±0°.04,h50km,n136, σ2ᵒ33/166,mb4.0/25,13C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SIMJ	**Simiganj**	**1.30**	**271**			**Pn**	**21 49 08.5**	**-1.7**
SIMJ				Sn		**Sn**	**21 49 27.3**	**+0.8**
BTK	**Batken**	**1.41**	**5**	Pn		**Pn**	**21 49 08.1**	**-3.7**
BTK				Sn		**Sn**	**21 49 26.4**	**-2.9**
ARSB	**Arslanbob**	**3.21**	**33**			**Pn**	**21 49 36.0**	**-0.4**
ARSB	**Arslanbob**	**3.21**	**33**	PN		**Pn**	**21 49 36.0**	**-0.4**
KSH	**Kashi**	**4.22**	**77**	Pn		**Pn**	**21 49 45.8**	**-4.5**
KSH				Sn		**Sn**	**21 50 45.0**	**+6.7**
KSH				smax		smax		
	comp=N,380nm,1.0s							
KSH				smax		smax		
	comp=E,220nm,0.8s							
DZA	**Taraz**	**4.27**	**7**	*eP*		**Pn**	**21 49 52.5**	**+1.7**
	comp=E,123nm,0.4s							
DZA				*eS*		**Sn**	**21 50 43.6**	**+4.3**
	comp=E,206nm,0.3s							
KBL	**Kabul**	**4.30**	**198**			**Pn**	**21 49 52.6**	**+1.1**
KBL	**Kabul**	**4.30**	**198**	PN		**Pn**	**21 49 52.6**	**+1.1**
BRLS	**Borolday**	**4.42**	**352**	*eP*		Pn	21 49 58.2	+5.4
	comp=E,12nm,0.4s							
BRLS				*eS*		Sn	21 50 54.1	+11
	comp=E,70nm,0.3s							
KK31	**Karatay Array**	**4.45**	**359**	⇑P		Pn	21 49 57.8	+4.6
	comp=E,16nm,0.3s,baz=185,slow=14,SNR=360							
KK31				⇑S		Sn	21 51 02.8	+19
	comp=E,67nm,0.8s,baz=178,slow=29,SNR=6.8							
KK31	**Karatay Array**	**4.45**	**359**	Pn		**Pn**	**21 49 53.2**	**-0.1**
KK31	**Karatay Array**	**4.45**	**359**	PN		**Pn**	**21 49 53.2**	**-0.1**
KKAR	**Karatay Array**	**4.45**	**359**			**Pn**	**21 49 53.2**	**-0.1**
KKAR	**Karatay Array**	**4.45**	**359**	Pn		**Pn**	**21 49 53.0**	**-0.3**
KKAR	**Karatay Array**	**4.45**	**359**	PN		**Pn**	**21 49 53.2**	**-0.1**
MRKS	**Merke**	**4.53**	**25**	*eP*		**Pn**	**21 49 54.7**	**+0.3**
	comp=E,23nm,0.2s							
MRKS				*eS*		**Sn**	**21 50 47.6**	**+1.8**
	comp=E,103nm,0.2s							
UCH	**Uchtor**	**4.62**	**38**	P		**Pn**	**21 49 58.4**	**+2.3**
	SNR=12							
EKS2	**Erkin-Say**	**4.65**	**30**	P		**Pn**	**21 49 58.0**	**+1.9**
	SNR=34							
AAK	**Ala-Archa**	**4.93**	**35**	P		**Pn**	**21 50 02.2**	**+2.1**
	SNR=9.2							
AAK	**Ala-Archa**	**4.93**	**35**	Pn		**Pn**	**21 49 59.4**	**-0.7**
AAK	**Ala-Archa**	**4.93**	**35**	*ce*PN		**Pn**	**21 50 00.1**	**0.0**
AAK				pmax		pmax		
	comp=Z,20nm,0.6s							
AAK	**Ala-Archa**	**4.93**	**35**	Pn		**Pn**	**21 50 00.8**	**+0.7**
	comp=Z,5.2nm,0.3s,baz=216,slow=4.9,SNR=76							
AAK				Sn		**Sn**	**21 50 59.4**	**+3.5**
	comp=Z,1.6nm,0.3s,baz=160,slow=20,SNR=1.6							
AAK				Lg	Lg		21 51 18.7	
	comp=Z,2.1nm,0.3s,baz=162,slow=19,SNR=1.3							
	comp=Z,30nm,0.5s							
NRN	**Naryn**	**4.95**	**54**	Pn		**Pn**	**21 49 58.8**	**-1.6**
NRN	**Naryn**	**4.95**	**54**	PN		**Pn**	**21 49 58.8**	**-1.6**
FRU1	**Bishkek**	**5.13**	**35**			**Pn**	**21 50 03.0**	**+0.3**
FRU1	**Bishkek**	**5.13**	**35**	PN		**Pn**	**21 50 03.0**	**+0.3**
KBK	**Karagaybulak**	**5.16**	**38**	P		**Pn**	**21 50 06.2**	**+3.1**
	SNR=60							
CHMS	**Chumysh**	**5.34**	**34**	P		**Pn**	**21 50 04.7**	**-0.7**
	SNR=50							
CHMS	**Chumysh**	**5.34**	**34**	⇓P		**Pn**	**21 50 06.2**	**+0.8**
	comp=Z,15nm,0.5s							
CHMS				⇑S		**Sn**	**21 51 08.1**	**+2.5**
	comp=Z,65nm,0.7s							
CHMS	**Chumysh**	**5.34**	**34**	PN		**Pn**	**21 50 06.2**	**+0.8**
CHMS				S		**Sn**	**21 51 08.1**	**+2.5**
NIL	**Nilore**	**5.41**	**156**			**Pn**	**21 50 08.1**	**+1.6**
NIL	**Nilore**	**5.41**	**156**	PN		**Pn**	**21 50 08.1**	**+1.6**
USP	**Ospenovka**	**5.45**	**31**	P		**Pn**	**21 50 08.3**	**+1.3**
	SNR=35							
TKM2	**Tokmak 2**	**5.67**	**40**	P		**Pn**	**21 50 12.2**	**+1.9**
	SNR=27							
TKM2	**Tokmak 2**	**5.67**	**40**	⇑P		**Pn**	**21 50 11.9**	**+1.6**
	comp=Z,7.8nm,0.5s							
TKM2				⇓S		**Sn**	**21 51 17.7**	**+3.5**
	comp=Z,34nm,0.8s							
TKM2	**Tokmak 2**	**5.67**	**40**	PN		**Pn**	**21 50 11.9**	**+1.6**
TKM2				S		**Sn**	**21 51 17.7**	**+3.5**
KST	**Kastek**	**5.95**	**41**	*eP*		**Pn**	**21 50 16.2**	**+2.2**
	comp=Z,3.1nm,0.2s							
KST				*eS*		**Sn**	**21 51 26.2**	**+5.4**
	comp=Z,24nm,0.4s							
DGS	**Degeres**	**6.00**	**39**	*eP*		**Pn**	**21 50 16.7**	**+2.1**
	comp=Z,3.8nm,0.3s							
DGS				*eS*		**Sn**	**21 51 27.3**	**+5.3**
	comp=Z,18nm,0.6s							
TARG	**Taragay, Kyrgy**	**6.27**	**58**			**Pn**	**21 50 18.8**	**+0.1**
TARG	**Taragay, Kyrgy**	**6.27**	**58**	PN		**Pn**	**21 50 18.8**	**+0.1**
KRBS	**Karabastau**	**6.30**	**35**	*eP*		**Pn**	**21 50 23.0**	**+4.4**
	comp=Z,6.1nm,0.5s							
KRBS				*eS*		Sn	21 51 38.5	+9.2
	comp=Z,8.7nm,0.3s							
PRZ	**Przheval'sk**	**7.02**	**55**	Pn		**Pn**	**21 50 28.9**	**+0.2**
PRZ	**Przheval'sk**	**7.02**	**55**	PN		**Pn**	**21 50 28.9**	**+0.2**
THN	**Thein Dam**	**7.45**	**145**	*eP*		**Pn**	**21 50 35.8**	**+1.4**
THN				*eS*		**Sn**	**21 52 00.2**	**+2.8**
THN				IAML			21 52 04.4	
	comp=E,26nm,0.6s							
THN				IAML			21 52 04.4	
	comp=N,34nm,0.6s							
DHRM	**DHARAMSHALA**	**7.87**	**143**	*eP*		**Pn**	**21 50 41.6**	**+1.3**
DHRM				*eS*		**Sn**	**21 52 08.5**	**+0.3**
DHRM				IAML			21 52 18.2	
	comp=E,72nm,0.6s							
DHRM				IAML			21 52 19.0	
	comp=N,71nm,0.6s							
DHRM				IAML			21 52 26.8	
	comp=N,72nm,0.7s							
HRA	**Herat**	**8.00**	**240**	Pn		**Pn**	**21 50 41.8**	**-0.4**
SMLA	**Simla**	**9.21**	**143**	*eP*		**Pn**	**21 50 57.0**	**-1.5**
SMLA				*eS*		**Sn**	**21 52 39.1**	**-1.6**
SMLA				IAML			21 52 46.4	
	comp=E,42nm,0.6s							
GEYT	**Alibeck**	**9.89**	**270**	Pn		**Pn**	**21 51 06.5**	**-1.4**
GEYT	**Alibeck**	**9.89**	**270**	P		**Pn**	**21 51 05.0**	**-2.9**
GEYT	**Alibeck**	**9.89**	**270**	Pn		**Pn**	**21 51 05.0**	**-2.9**
	comp=E,0.2nm,0.3s,baz=84,slow=13,SNR=2.3							
GEYT				Sn		**Sn**	**21 52 53.9**	**-3.6**
	comp=E,0.2nm,0.3s,baz=77,slow=19,SNR=1.5							
GEYT				Lg	Lg		21 53 57.8	
	comp=E,0.2nm,0.3s,baz=57,slow=30,SNR=1.3							
	comp=E,1.2nm,0.7s							
DDI	**Dehra Dun**	**10.30**	**142**	*eS*		**Sn**	**21 53 07.6**	**0.0**
DDI				IAML			21 53 13.8	
	comp=E,65nm,0.5s							
DDI				IAML			21 53 14.1	
	comp=N,74nm,0.2s							
KUDL	**Kundal**	**11.55**	**153**	*eP*		**Pn**	**21 51 29.1**	**-1.4**
KUDL				*eS*		**Sn**	**21 53 37.7**	**-0.3**
MAKZ	**Makanchi**	**11.64**	**42**	Pn		**Pn**	**21 51 30.1**	**-1.6**
MAKZ	**Makanchi**	**11.64**	**42**	P		**Pn**	**21 51 30.1**	**-1.6**
MK31	**Makanchi Array**	**11.79**	**43**	Pn		**Pn**	**21 51 32.1**	**-1.7**
MK31	**Makanchi Array**	**11.79**	**43**	*ce*P		**Pn**	**21 51 32.9**	**-0.9**
MKAR	**Makanchi Array**	**11.79**	**43**	*i* P		**Pn**	**21 51 33.0**	**-0.8**
MKAR				pmax		pmax		
	comp=Z,4.0nm,1.0s							
MKAR	**Makanchi Array**	**11.79**	**43**	Pn		**Pn**	**21 51 31.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=230,slow=13,SNR=24							
MKAR				Lg		Lg	21 54 47.8	
	comp=Z,0.1nm,0.3s,baz=251,slow=29,SNR=1.2							
	comp=Z,3.5nm,1.0s							
AB31	**Akbulak array**	**13.10**	**327**	P		**Pn**	**21 51 47.8**	**-3.8**
	comp=Z,1.9nm,0.4s,baz=141,slow=9.0,SNR=95							
AB31				⇑S		**Sn**	**21 54 19.2**	**+3.5**
	comp=Z,3.5nm,0.7s,baz=151,slow=22,SNR=5.2							
AB31	**Akbulak array**	**13.10**	**327**	P		**Pn**	**21 51 47.8**	**-3.8**
AB31				S		**Sn**	**21 54 19.2**	**+3.5**
ABKAR	**Akbulak array**	**13.10**	**327**	Pn		**Pn**	**21 51 47.1**	**-4.4**
ABKAR	**Akbulak array**	**13.10**	**327**	Pn		**Pn**	**21 51 47.1**	**-4.4**
KURBB	**Kurchatov Arra**	**13.20**	**22**	Pn		**Pn**	**21 51 48.5**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=11							
KURBB				Sn		**Sn**	**21 54 12.2**	**-5.9**
	baz=218,slow=29,SNR=2.2							
KURBB				Lg		Lg	21 55 35.9	
	baz=215,slow=28,SNR=4.3							
	comp=Z,0.2nm,0.4s							
KURK	**Kurchatov**	**13.31**	**22**	Pn		**Pn**	**21 51 51.3**	**-3.1**
KURK	**Kurchatov**	**13.31**	**22**	*ce*P		**Pn**	**21 51 52.8**	**-1.7**
KURK				pmax		pmax		
	comp=Z,5.0nm,2.5s							
BVAR	**Borovoye Array**	**14.38**	**359**	Pn		**Pn**	**21 52 04.4**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=164,slow=9.0,SNR=12							
BVAR				Sn		**Sn**	**21 54 38.6**	**-8.1**
	baz=150,slow=16,SNR=1.2							
BVAR				Lg		Lg	21 56 10.2	
	baz=200,slow=25,SNR=1.6							
	comp=Z,1.4nm,0.5s							
BRVK	**Borovoye**	**14.41**	**359**	Pn		**Pn**	**21 52 06.6**	**-2.7**
BRVK	**Borovoye**	**14.41**	**359**	*ce*P		**Pn**	**21 52 07.7**	**-1.6**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
AKTO	**Aktyubinsk**	**14.81**	**327**	⇑P		Pn	21 52 06.8	-7.7
	comp=Z,1.6nm,0.5s							
AKTO				⇓S		**Sn**	**21 54 53.4**	**-3.8**
	comp=Z,3.5nm,0.8s							
AKTO	**Aktyubinsk**	**14.81**	**327**	Pn		**Pn**	**21 52 11.7**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=131,slow=11,SNR=15							
AKTO				Sn		**Sn**	**21 54 50.8**	**-6.4**
	comp=Z,0.2nm,0.3s,baz=97,slow=16,SNR=2.8							
AKTO				Lg		Lg	21 56 35.5	
	baz=210,slow=20,SNR=1.8							
	comp=Z,5.9nm,0.9s							
DGZ	**Jazzator, Alta**	**16.29**	**42**	*i* P		**P**	**21 52 34.6**	**-1.4**
DGZ				pmax		pmax		
	comp=Z,3.0nm,0.6s							
LKRN	**Lenkeran, Azer**	**17.09**	**277**	P		**P**	**21 52 46.1**	**+1.4**
ZAA0	**Zalesovo Array**	**18.10**	**28**			**P**	**21 52 54.4**	**-1.4**
ZALV	**Zalesovo Beam**	**18.10**	**28**	P		**P**	**21 52 54.1**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=219,slow=12,SNR=14							
	comp=Z,2.6nm,0.5s							
SEKA	**Sheki**	**18.17**	**286**	P		**Pn**	**21 52 57.8**	**+0.9**
MNGR	**Mingechevir, A**	**18.25**	**284**	P		**Pn**	**21 52 59.8**	**+1.9**
WSAR	**Wadi Sarin**	**18.48**	**217**	P		**P**	**21 52 58.2**	**-2.0**
	baz=323,slow=7.0,SNR=2.0							
	comp=Z,2.2nm,0.9s							
GANJ	**Ganja**	**18.84**	**284**	P		**Pn**	**21 53 06.8**	**+1.8**
ARU	**Arti**	**19.52**	**340**	P		**P**	**21 53 10.3**	**-0.9**
ARU	**Arti**	**19.52**	**340**	*di*P		**P**	**21 53 11.2**	**-0.1**
ARU				S		**Sn**	**21 56 53.2**	**+2.2**
ARU				pmax		pmax		
	comp=Z,7.0nm,0.8s							
ARU	**Arti**	**19.52**	**340**	P		**P**	**21 53 10.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=141,slow=5.7,SNR=11							
ARU				LR		LR	22 02 00.8	
	comp=Z,116nm,21.9s,baz=222,slow=41							
	comp=Z,6.6nm,0.9s							
NAX	**Nakhchivan**	**19.58**	**279**	P		**Pn**	**21 53 15.5**	**+1.6**
GNI	**Garni**	**20.07**	**282**	*ce*P		Pn	21 53 20.6	+0.8
GNI				pmax		pmax		
	comp=Z,7.0nm,0.7s							
GNI	**Garni**	**20.07**	**282**	P		**P**	**21 53 17.2**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=149,slow=12,SNR=1.7							
	comp=Z,3.3nm,0.7s							
AKH	**Akhalkalaki**	**20.96**	**286**	P		**P**	**21 53 28.0**	**+0.8**
AKH	**Akhalkalaki**	**20.96**	**286**	P		**P**	**21 53 28.0**	**+0.8**
AKH				pmax		pmax		
	comp=Z,40nm,1.3s							
ONI	**Oni**	**20.99**	**289**	P		**P**	**21 53 28.4**	**+0.9**
ONI				IAmb		IAmb	21 53 35.0	
	comp=Z,15nm,0.8s							
ONI	**Oni**	**20.99**	**289**	P		**P**	**21 53 28.4**	**+0.9**
ONI				pmax		pmax		
	comp=Z,15nm,0.8s							
BELG	**Belogornoye**	**21.08**	**318**	P		**P**	**21 53 28.4**	**+0.3**
	comp=Z,6.9nm,0.5s,baz=167,slow=4.3,SNR=2.5							
	comp=Z,6.9nm,0.5s							
KBZ	**Khabaz**	**21.45**	**293**	*eP*		**P**	**21 53 35.2**	**+2.9**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KBZ	**Khabaz**	**21.45**	**293**	P		**P**	**21 53 31.6**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=108,slow=12,SNR=2.3							
	comp=Z,2.0nm,0.7s							
KVAR	**Kislovodsk Arr**	**21.61**	**293**	P		**P**	**21 53 33.3**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=42,slow=12,SNR=1.7							
	comp=Z,1.8nm,0.9s							
KIV	**Kislovodsk**	**21.62**	**293**	P		**P**	**21 53 33.0**	**-1.3**
KIV				IAmb		IAmb	21 53 55.9	
	comp=Z,7.5nm,0.8s							
KIV	**Kislovodsk**	**21.62**	**293**	*eP*		**P**	**21 53 36.1**	**+1.9**
KIV				*eS*		**S**	**21 57 34.4**	**+3.4**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,56nm,14.0s							
SHL	**Shillong**	**22.14**	**120**	P		**P**	**21 53 37.9**	**-2.2**
SHL				IAmb		IAmb	21 53 43.8	
	comp=Z,6.1nm,0.9s							
SHL	**Shillong**	**22.14**	**120**	P		**P**	**21 53 37.9**	**-2.2**
SHL				pmax		pmax		
	comp=Z,6.0nm,0.9s							
GTA	**Gaotai**	**22.62**	**79**	*eP*		**P**	**21 53 46.1**	**+1.1**
GTA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
SONM	**Songino Array**	**27.39**	**59**	P		**P**	**21 54 28.5**	**-0.5**
	comp=Z,0.8nm,1.1s,baz=237,slow=8.3,SNR=5.2							
	comp=Z,0.8nm,1.1s							
ULN	**Ulaanbaatar**	**27.84**	**59**	*ce*P		**P**	**21 54 33.7**	**+0.7**
ULN				pmax		pmax		
	comp=Z,2.0nm,1.7s							
AKASG	**Malin Array Be**	**31.43**	**306**	*i* P		**P**	**21 55 06.3**	**+1.7**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**31.43**	**306**	P		**P**	**21 55 04.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=106,slow=9.9,SNR=5.5							
	comp=Z,0.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**31.76**	**121**	P		**P**	**21 55 07.7**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=299,slow=9.2,SNR=1.4							
	comp=Z,0.8nm,0.3s							
MNK	**Minsk**	**32.81**	**313**	*i* P		**P**	**21 55 17.6**	**+0.9**
	comp=E,8.0nm,0.9s							
MNK				*i* P		**P**	**21 55 17.6**	**+0.9**
	comp=N,6.0nm,0.9s							
MNK				*i* P		**P**	**21 55 17.6**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=101							
MNK				*i* PP		**PnPn**	**21 56 27.9**	**+1.5**
MNK				*i* PPP		PPP	21 56 38.9	
MNK				*i* S		**S**	**22 00 34.5**	**+4.4**
MNK				*i* SS		**SnSn**	**22 02 33.4**	**+3.5**
MNK				*i* SSS		SSS	22 02 54.9	
MNK				*i* LR		LR	22 08 51.6	
MNK	**Minsk**	**32.81**	**313**	*i* P		**P**	**21 55 17.6**	**+0.9**
MNK				*i*			21 56 27.9	
MNK				*i* PPP		PPP	21 56 38.8	
MNK				*i*			21 58 03.2	
MNK				*i* S		**S**	**22 00 34.5**	**+4.4**
MNK				*i* SS		**SnSn**	**22 02 33.3**	**+3.5**
MNK				*i* SSS		SSS	22 02 54.8	
MNK				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MNK				pmax		pmax		
	comp=N,6.0nm,0.9s							
MNK				pmax		pmax		
	comp=E,8.0nm,0.9s							
FIA1	**FINESS Array S**	**35.56**	**325**	P		**P**	**21 55 39.8**	**-0.6**
FINES	**FINESS Array B**	**35.56**	**325**	P		**P**	**21 55 40.0**	**-0.4**
FINES	**FINESS Array B**	**35.56**	**325**	*i* P		**P**	**21 55 40.7**	**+0.3**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**35.56**	**325**	P		**P**	**21 55 40.2**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=116,slow=8.7,SNR=8.8							
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**39.06**	**337**	P		**P**	**21 56 09.9**	**-0.1**
	comp=Z,3.6nm,1.0s,baz=110,slow=7.8,SNR=3.5							
	comp=Z,3.6nm,1.0s							
HFS	**Hagfors**	**41.23**	**320**	P		**P**	**21 56 28.0**	**+0.1**
	comp=Z,3.3nm,0.4s,baz=98,slow=11,SNR=33							
	comp=Z,3.3nm,0.4s							
CLL	**Collm**	**41.66**	**307**	*eP*		**P**	**21 56 36.0**	**+4.4**
CLL				*e**PP		**pP**	**21 56 47.0**	**+1.5**
CLL	**Collm**	**41.66**	**307**	*eP*		**P**	**21 56 31.0**	**-0.6**
CLL				*ex*		x	21 56 36.0	
CLL				*ep*P		**pP**	**21 56 47.0**	**+1.5**
NC405	**NORSAR Array S**	**42.28**	**322**	P		**P**	**21 56 36.0**	**-0.6**
NB2	**NORSAR Subarra**	**42.52**	**322**	P		**P**	**21 56 38.1**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=93,slow=8.6							
NOA	**NORSAR Array B**	**42.52**	**322**	P		**P**	**21 56 38.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=93,slow=8.2,SNR=6.6							
	comp=Z,0.6nm,0.5s							
TIXI	**Tiksi**	**43.89**	**23**	P		**P**	**21 56 48.5**	**-0.9**
TIXI				IAmb		IAmb	21 56 52.4	
	comp=Z,2.8nm,0.8s							
TIXI	**Tiksi**	**43.89**	**23**	*ce*P		**P**	**21 56 51.5**	**+2.1**
TIXI				pmax		pmax		
	comp=Z,2.0nm,0.7s							
TIXI	**Tiksi**	**43.89**	**23**	P		**P**	**21 56 49.1**	**-0.3**
	comp=Z,2.7nm,0.2s,baz=283,slow=2.7,SNR=9.1							
	comp=Z,2.7nm,0.2s							
EKA	**Eskdalemuir Ar**	**50.57**	**315**	P		**P**	**21 57 41.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=58,slow=7.9,SNR=2.0							
	comp=Z,0.1nm,0.3s							
TOA0	**Torodi Ar. Sit**	**65.52**	**267**	P		**P**	**21 59 25.9**	**-0.9**
TOA0				IAmb		IAmb	21 59 39.5	
	comp=Z,6.9nm,1.5s							
TORD	**Torodi Ar. Bea**	**65.52**	**267**	P		**P**	**21 59 28.3**	**+1.5**
	comp=Z,1.5nm,0.6s,baz=46,slow=8.1,SNR=2.8							
	comp=Z,1.5nm,0.6s							
B20K	**Meade River**	**66.22**	**16**	P		**P**	**21 59 30.7**	**+0.3**
B20K				IAmb		IAmb	21 59 43.3	
	comp=Z,5.7nm,1.4s							
C23K	**Itkillik River**	**67.70**	**14**	P		**P**	**21 59 40.7**	**+0.8**
IMAR	**Indian Mountai**	**70.21**	**18**	P		**P**	**21 59 54.8**	**-0.7**
BMAR	**Burnt Mountain**	**70.92**	**14**	P		**P**	**22 00 00.4**	**+0.5**
ILAR	**Eielson Array**	**72.79**	**16**	*eP*		**P**	**22 00 13.7**	**+2.7**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ILAR	**Eielson Array**	**72.79**	**16**	P		**P**	**22 00 11.2**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=320,slow=6.1,SNR=7.6							
	comp=Z,0.5nm,0.8s							
I28M	**Miner Creek**	**73.53**	**13**	P		**P**	**22 00 15.3**	**-0.2**
DBIC	**Dimbokro**	**74.56**	**266**	P		**P**	**22 00 21.2**	**-1.0**
DBIC	**Dimbokro**	**74.56**	**266**	P		**P**	**22 00 21.2**	**-1.0**
DBIC				pmax		pmax		
	comp=Z,14nm,1.4s							
K29M	**Barlow Dome**	**75.42**	**12**	P		**P**	**22 00 26.8**	**+0.2**
K29M				IAmb		IAmb	22 00 29.8	
	comp=Z,3.9nm,1.4s							
YKA	**Yellowknife Ar**	**79.11**	**2**	*eP*		**P**	**22 00 49.6**	**+2.5**

VTRT	**Volcan Turrial**	**0.58**	**74**	*i* P		**Pg**	**21 51 56.7**	**-0.1**
VTRT				IAML			21 51 58.8	
	comp=Z,800nm,1.0s							
SOCE	**Pocosol**	**0.60**	**335**	*e*P		**Pg**	**21 51 57.1**	**+0.2**
SOCE	**Pocosol**	**0.60**	**335**	*i* P		**Pg**	**21 51 57.2**	**+0.2**
SOCE				*i* S		**Sg**	**21 52 04.6**	**-0.4**
SOCE				IAML			21 52 06.4	
	comp=Z,2μm,1.0s							
VTUN	**Crater Central**	**0.62**	**73**	*i* P		**Pg**	**21 51 57.6**	**+0.2**
VTUN				IAML			21 51 59.4	
	comp=Z,770nm,1.0s							
VTUN				*i* S		**Sg**	**21 52 04.9**	**-0.8**
VTUC	**Crater, Volcan**	**0.62**	**72**	*i* P		**Pg**	**21 51 57.6**	**+0.1**
VTUC				IAML			21 51 59.4	
	comp=Z,580nm,1.0s							
VTUC				*i* S		**Sg**	**21 52 04.7**	**-1.1**
CVTR	**Volcan Turrial**	**0.62**	**73**	*e*P		**Pg**	**21 51 57.5**	**+0.1**
CVTV	**Tajo**	**0.62**	**75**	*e*P		**Pg**	**21 51 57.6**	**0.0**
VTCV	**VTCV, Calle Va**	**0.64**	**77**	*e*P		**Pg**	**21 51 58.1**	**+0.3**
VTCV	**VTCV, Calle Va**	**0.64**	**77**	*i* P		**Pg**	**21 51 58.0**	**+0.2**
VTCV				*i* S		**Sg**	**21 52 06.2**	**-0.2**
VTCV				IAML			21 52 21.4	
	comp=Z,480nm,1.0s							
CDM	**Cerro de Muert**	**0.65**	**116**	*e*P		**Pg**	**21 51 57.9**	**-0.2**
CDM	**Cerro de Muert**	**0.65**	**116**	*i* P		**Pg**	**21 51 57.8**	**-0.3**
CDM				*i* S		**Sg**	**21 52 06.1**	**-0.8**
CDM				IAML			21 52 07.7	
	comp=Z,330nm,1.0s							
VERB	**Verbena**	**0.66**	**81**	*e*P		**Pg**	**21 51 58.4**	**+0.2**
ARE1	**Arenal 1**	**0.71**	**330**	*e*P		**Pg**	**21 51 59.1**	**0.0**
CEDE	**Laguna Cedeo**	**0.73**	**332**	*e*P		**Pg**	**21 51 59.8**	**+0.4**
JTS	**Las Juntas de**	**0.74**	**308**	*e*P		**Pg**	**21 51 59.2**	**-0.4**
CBL1	**Cabuya**	**0.76**	**251**	*e*P		**Pg**	**21 52 00.2**	**+0.2**
INDI	**Punta indio, G**	**1.13**	**272**	*i* P		**Pg**	**21 52 05.7**	**-1.2**
INDI				IAML			21 52 06.2	
	comp=Z,150nm,1.0s							
INDI				*i* S		**Sg**	**21 52 21.6**	**-0.1**
SRBA	**San Rafael, Bu**	**1.16**	**121**	*i* P		**Pb**	**21 52 07.5**	**+0.7**
SRBA				*i* S		**Sg**	**21 52 21.9**	**-0.7**
SRBA				IAML			21 52 27.4	
	comp=Z,140nm,1.0s							
ORTG	**Ortega, Santa**	**1.20**	**296**	*i* P		**Pg**	**21 52 07.2**	**-1.2**
ORTG				*i* S		**Sg**	**21 52 24.0**	**-0.1**
ORTG				IAML			21 52 26.1	
	comp=Z,190nm,1.0s							
ALIBA	**Liberia Airpor**	**1.39**	**303**	*e*P		**Pg**	**21 52 12.0**	**+0.1**
BRU2	**Volcan**	**1.95**	**122**	*e*P		**Pg**	**21 52 22.7**	**+0.1**
BRU2				*e*S		**Sn**	**21 52 43.8**	**+1.9**
BC3P	**Paso Ancho**	**2.00**	**120**	*e*P		**Pb**	**21 52 22.6**	**+1.3**
BCO2	**Palmira**	**2.12**	**121**	*e*P		**Pb**	**21 52 22.9**	**-0.5**
BCO2				*e*S		**Sn**	**21 52 42.1**	**-4.1**
CHGR2	**Aguacate**	**2.36**	**112**	*e*P		**Pn**	**21 52 26.2**	**+2.9**
CHGR2				*e*S		**Sn**	**21 52 46.6**	**-5.4**

IDC 21 22:03:35.9±17.0, 24.92S×179.82E, h650km±200km, mb2.8/5, mbtmp3.7/5, Error ellipse: s-maj=198.8km s-min=87.1km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.33**	**272**	P	P	22 09 06.0	-0.6
	1.7nm,0.4s,baz=101,slow=10,SNR=1.8						
	1.7nm,0.4s						
ASAR	**Alice Springs**	**41.72**	**262**	P	P	22 10 31.4	+0.4
	0.2nm,0.8s,baz=101,slow=6.6,SNR=1.8						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**42.19**	**267**	P	P	22 10 34.7	0.0
	0.6nm,0.5s,baz=104,slow=6.8,SNR=12						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**93.06**	**14**	P	P	22 15 41.2	-0.3
	0.4nm,1.0s,baz=218,slow=5.7,SNR=2.6						
	0.4nm,1.0s						
SONM	**Songino Array**	**97.77**	**319**	P	P	22 16 04.7	+1.4
	0.1nm,0.4s,baz=126,slow=3.7,SNR=1.6						
	0.1nm,0.4s						
YKA	**Yellowknife Ar**	**101.35**	**26**	P	Pdif	22 16 18.4	-0.3
	0.5nm,0.4s,baz=243,slow=4.8,SNR=7.6						

*BJI **21** 22:09:14.5±0.0, 14.60N×147.28E, h13km, mb4.6/63, mB5.0/30, Ms4.3/13, Ms7 4.2/15*
*IDC **21** 22:09:15.1±0.6, 14.51N×146.94E, h0km, mb4.4/27, mbtmp4.4/28, ML4.0/1, MS3.6/20, Error ellipse: s-maj=18.1km s-min=12.7km az=99.0*
*NEIC **21** 22:09:16.9±1.8, 14.40N±0.07×147.08E±0.07, h10km±1km, mb4.8/72, Error ellipse: s-maj=13.2km s-min=10.4km az=47.0*

ISC 21 22:09:16.5±0.4, 14.43N±0.06×147.04E±0.06, h10km, n164, σ1§34/154, mb4.7/78, MS3.9/26, 2C-3D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.27**	**249**	Pn	**Pn**	**22 09 54.5**	**+0.5**
	45nm,0.3s,baz=155,slow=13,SNR=11						
GUMO				Sn	**Sn**	**22 10 20.7**	**-1.4**
	66nm,0.3s,baz=38,slow=18,SNR=6.2						
GUMO				LR	LR	22 10 38.2	
	comp=Z,161nm,21.4s,baz=24,slow=38						
	158nm,0.4s						
PATS	**Pohnpei**	**13.40**	**123**	Pn	**Pn**	**22 12 23.8**	**-3.1**
H11S3	**WAKE ISLAND Hy**	**19.27**	**75**	T	T	22 33 24.4	
	baz=268						
H11S1	**WAKE ISLAND Hy**	**19.28**	**75**	T	T	22 33 36.7	
	baz=268						
H11S2	**WAKE ISLAND Hy**	**19.28**	**75**	T	T	22 33 39.7	
	baz=268						
H11N1	**WAKE ISLAND Hy**	**19.68**	**72**	T	T	22 33 57.9	
	baz=255,slow=75,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**19.69**	**72**	T	T	22 33 58.0	
	baz=255,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**19.70**	**72**	T	T	22 33 56.9	
	baz=255,slow=75,SNR=8.0						
JOW	**Kunigami**	**21.43**	**308**	P	**P**	**22 14 04.2**	**-0.6**
JOW				IAmb	IAmb	22 14 18.3	
	comp=Z,34nm,0.9s						
JOW	**Kunigami**	**21.43**	**308**	P	**P**	**22 14 04.0**	**-0.8**
	comp=Z,13nm,0.5s,baz=114,slow=15,SNR=2.2						
	comp=Z,13nm,0.5s						
DAV	**Davao City (W)**	**22.30**	**253**	LR	LR	22 24 29.3	
	comp=Z,88nm,18.2s,baz=63,slow=41						
FAKI	**Fak Fak**	**22.63**	**222**	P	**P**	**22 14 18.2**	**+0.4**
JGF	**Kuroka**	**22.80**	**339**	P	**P**	**22 14 20.5**	**+1.0**
MJAR	**Matsushiro Ar**	**23.39**	**342**	P	**P**	**22 14 22.5**	**-3.0**
	comp=Z,2.0nm,0.6s,baz=165,slow=9.0,SNR=5.0						
MJAR				LR	LR	22 23 23.9	
	comp=Z,124nm,19.3s,baz=150,slow=36						
	comp=Z,2.0nm,0.6s						
PMG	**Port Moresby**	**23.68**	**180**	P	**P**	**22 14 28.1**	**-0.4**
PMG				IAmb	IAmb	22 14 46.2	
	comp=Z,28nm,0.8s						
PMG	**Port Moresby**	**23.68**	**180**	P	**P**	**22 14 29.5**	**+1.0**
	comp=Z,14nm,0.8s,baz=329,slow=5.1,SNR=4.7						
	comp=Z,14nm,0.8s						
JNU	**Nakatsue**	**23.71**	**324**	P	**P**	**22 14 27.4**	**-1.3**
	comp=Z,6.1nm,0.8s,baz=151,slow=11,SNR=2.7						
	comp=Z,6.1nm,0.8s						
JMM	**Marumori**	**23.99**	**348**	P	**P**	**22 14 31.4**	**+0.1**
JMM				IAmb	IAmb	22 15 07.4	
	comp=Z,31nm,1.0s						
YHNB	**Yeheng**	**26.20**	**297**	P	**P**	**22 14 51.2**	**-0.4**
HNR	**Honiara**	**26.94**	**151**	LR	LR	22 25 58.1	
	comp=Z,2μm,18.5s,baz=309,slow=37						
LUWI	**Luwuk**	**28.52**	**239**	P	**P**	**22 15 11.4**	**-1.0**
KSRS	**Korea Array**	**28.54**	**327**	P	**P**	**22 15 10.9**	**-1.5**
	comp=Z,6.1nm,0.8s,baz=142,slow=9.2,SNR=13						
	comp=Z,6.1nm,0.8s						
KSAR	**Wonju Array Be**	**28.55**	**327**	P	**P**	**22 15 12.5**	**0.0**
NJ2	**Nanjing**	**31.14**	**309**	*e*P	**P**	**22 15 36.9**	**+1.4**
NJ2				sP	**sP**	**22 15 41.4**	**+4.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.6s						
MTN	**Manton Dam**	**31.35**	**211**	P	**P**	**22 15 35.7**	**-1.7**
USRK	**Ussuriysk Ar.**	**32.33**	**340**	P	**P**	**22 15 44.4**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=155,slow=7.9,SNR=4.6						
	comp=Z,2.5nm,0.8s						
SOEI	**Soe**	**32.98**	**225**	P	**P**	**22 15 52.5**	**+0.5**
KAPI	**Kappang**	**33.25**	**236**	P	**P**	**22 15 53.8**	**-0.4**
KAPI				IAmb	IAmb	22 15 55.3	
	comp=Z,9.0nm,0.8s						
CTA	**Charters Tower**	**34.31**	**181**	LR	LR	22 29 01.6	
	comp=Z,65nm,21.0s,baz=62,slow=34						

QIZ	**Qiongzhong**	**35.87**	**283**	P	**P**	**22 16 16.8**	**-0.1**
QIZ				S	**S**	**22 21 56.3**	**+1.3**
QIZ				LR	LR		
	comp=Z,140nm,9.8s						
QIZ				LR	LR		
	comp=Z,150nm,12.9s						
QIZ				LR	LR		
	comp=Z,180nm,18.6s						
WB0	**Warramunga Arr**	**36.19**	**200**	P	**P**	**22 16 18.9**	**-0.6**
WRA	**Warramunga Arr**	**36.37**	**200**	P	**P**	**22 16 21.4**	**+0.3**
WRA	**Warramunga Arr**	**36.37**	**200**	P	**P**	**22 16 21.0**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=22,slow=9.2,SNR=8.9						
	comp=Z,3.2nm,0.9s						
HNS	**HongShan**	**36.70**	**315**	⇓P	**P**	**22 16 24.3**	**+0.5**
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
KLR	**Kul'dur**	**36.90**	**343**	LR	LR	22 30 37.0	
	comp=Z,89nm,21.0s,baz=156,slow=35						
LYN	**LuoYang**	**37.03**	**309**	⇑P	**P**	**22 16 26.8**	**+0.2**
LYN				pmax	pmax		
	comp=Z,23nm,0.7s						
LYN				LR	LR		
	comp=Z,290nm,14.4s						
BJT	**Baijiatuau**	**37.13**	**319**	P	**P**	**22 16 26.7**	**-0.7**
BJI	**Beijing**	**37.14**	**319**	P	**P**	**22 16 27.4**	**0.0**
BJI				pP	**sP**	**22 16 31.6**	**+3.0**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,38nm,4.4s						
BJI				LR	LR		
	comp=Z,87nm,16.3s						
BJI				LR	LR		
	comp=Z,71nm,16.7s						
BJI				LR	LR		
	comp=Z,110nm,19.6s						
ENH	**Enshi**	**37.94**	**301**	P	**P**	**22 16 33.2**	**-1.2**
ENH				IAmb	IAmb	22 16 35.7	
	comp=Z,28nm,1.3s						
TIY	**Taiyuan**	**38.44**	**314**	*e*P	**P**	**22 16 40.1**	**+1.5**
TIY				pmax	pmax		
	comp=Z,13nm,0.8s						
TIY				LR	LR		
	comp=Z,140nm,8.6s						
TIY				LR	LR		
	comp=Z,140nm,4.1s						
TIY				LR	LR		
	comp=Z,120nm,5.3s						
HEH	**HeiHe**	**39.13**	**340**	*e*P	**P**	**22 16 42.6**	**-1.5**
HEH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HEH				pmax	pmax		
	comp=Z,200nm,4.6s						
XLT	**XiLinHaoTe**	**39.49**	**324**	*e*P	**P**	**22 16 44.0**	**-3.3**
XLT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,100nm,7.5s						
PETK	**Petropavlovsk-**	**39.50**	**10**	P	**P**	**22 16 47.3**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=158,slow=5.9,SNR=2.0						
	comp=Z,2.3nm,0.8s						
GYA	**Guiyang**	**39.52**	**294**	⇓P	**P**	**22 16 49.3**	**+1.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XAN	**Xi'an**	**39.56**	**306**	⇑P	**P**	**22 16 48.0**	**0.0**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AS31	**Alice Springs**	**39.98**	**199**	P	**P**	**22 16 51.2**	**-0.3**
ASAR	**Alice Springs**	**39.98**	**199**	P	**P**	**22 16 50.6**	**-0.9**
ASAR	**Alice Springs**	**39.98**	**199**	P	**P**	**22 16 51.6**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=27,slow=9.2,SNR=7.7						
	comp=Z,1.1nm,0.9s						
HHC	**Hu-ho-hao-te**	**40.55**	**317**	*e*P	**P**	**22 16 56.6**	**+0.4**
HHC				pP	sP	22 17 02.4	+5.1
HHC				*e*S	**S**	**22 23 04.0**	**-1.5**
HHC				sS	sS	22 23 15.3	+8.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=Z,120nm,13.1s						
HHC				LR	LR		
	comp=Z,170nm,17.8s						
HHC				LR	LR		
	comp=Z,120nm,14.7s						
DZM	**Mont Dzumac**	**40.96**	**152**	*e*P	**P**	**22 17 01.2**	**+1.5**
	comp=Z,34nm,1.4s						
DZM	**Mont Dzumac**	**40.96**	**152**	LR	LR	22 32 43.5	
	comp=Z,155nm,18.4s,baz=62,slow=34						
BTO	**Baotou**	**41.45**	**316**	*e*P	**P**	**22 17 05.3**	**+1.7**
BTO				PP	**PnPn**	**22 18 45.3**	**+1.3**
BTO				S	**S**	**22 23 18.3**	**-0.7**
BTO				SS	**SS**	**22 26 20.1**	**-3.1**
BTO				pmax	pmax		
	comp=Z,26nm,0.9s						
BTO				pmax	pmax		
	comp=Z,180nm,5.6s						
BTO				LR	LR		
	comp=Z,200nm,10.1s						
BTO				LR	LR		
	comp=Z,250nm,4.4s						
BTO				LR	LR		
	comp=Z,230nm,6.0s						
SLVN	**Son La**	**41.52**	**286**	P	**P**	**22 17 04.5**	**+0.1**
KMI	**Kunming**	**42.85**	**291**	⇓P	**P**	**22 17 16.9**	**+1.5**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CD2	**Chengdu**	**42.88**	**300**	P	**P**	**22 17 15.4**	**0.0**
PZH	**PanZhiHua**	**43.89**	**293**	P	**P**	**22 17 23.8**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,100nm,5.8s						
LZH	**Lanzhou**	**44.16**	**307**	*e*P	**P**	**22 17 26.8**	**+1.0**
LZH				pP	sP	22 17 31.3	+4.4
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
MBWA	**Marble Bar**	**44.38**	**218**	P	**P**	**22 17 27.7**	**+0.2**
MBWA				IAmb	IAmb	22 17 31.7	
	comp=Z,16nm,1.2s						
PSA00	**Pilbara Seismi**	**44.64**	**217**	P	**P**	**22 17 29.2**	**-0.2**
PSA00				IAmb	IAmb	22 17 54.7	
	comp=Z,19nm,1.3s						
MA2	**Magadan**	**45.15**	**3**	P	**P**	**22 17 33.8**	**+0.7**
MA2				IAmb	IAmb	22 17 47.6	
	comp=Z,13nm,1.1s						
MA2	**Magadan**	**45.15**	**3**	P	**P**	**22 17 32.8**	**-0.3**
	comp=Z,2.9nm,0.3s,baz=152,slow=8.7,SNR=5.9						
MA2				LR	LR	22 34 19.7	
	comp=Z,29nm,20.6s,baz=292,slow=33						
	comp=Z,2.9nm,0.3s						
CHTO	**Chiang Mai**	**46.19**	**282**	P	**P**	**22 17 41.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**46.20**	**282**	P	**P**	**22 17 41.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**46.20**	**282**	P	**P**	**22 17 41.0**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=81,slow=6.0,SNR=22						
CMAR				LR	LR	22 37 59.4	
	comp=Z,34nm,18.1s,baz=80,slow=37						
	comp=Z,1.4nm,0.3s						
STKA	**Stephens Creek**	**46.34**	**186**	P	**P**	**22 17 42.7**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=280,slow=12,SNR=2.4						
	comp=Z,2.4nm,0.9s						
TNCH	**TengChong**	**46.66**	**291**	P	**P**	**22 17 45.9**	**+0.1**
TNCH				pP	sP	22 17 49.4	+2.5
TNCH				sP	pwP	22 17 52.9	-3.5
TNCH				S	**S**	**22 24 34.1**	**-1.4**
TNCH				SS	**ScS**	**22 27 50.3**	**+8.7**
TNCH				pmax	pmax		
	comp=Z,15nm,1.0s						
TNCH				pmax	pmax		
	comp=Z,110nm,3.7s						
TNCH				LR	LR		
	comp=Z,130nm,4.5s						
TNCH				LR	LR		
	comp=Z,90nm,3.5s						
TNCH				LR	LR		
	comp=Z,67nm,4.5s						
ULN	**Ulaanbaatar**	**46.93**	**324**	P	**P**	**22 17 47.6**	**+0.1**
ULN				IAmb	IAmb	22 17 49.6	
	comp=Z,4.4nm,0.8s						
SONM	**Songino Array**	**47.29**	**323**	P	**P**	**22 17 50.0**	**-0.3**
SONM				IAmb	IAmb	22 17 52.5	
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**47.29**	**323**	P	**P**	**22 17 49.7**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=134,slow=7.9,SNR=29						
	comp=Z,3.3nm,0.7s						

BBOO	**Buckleboo**	**48.13**	**192**	P	**P**	**22 17 56.9**	**+0.1**
GTA	**Gaotai**	**48.22**	**310**	*e*P	**P**	**22 17 57.8**	**+0.2**
GTA				pP	sP	22 18 02.9	+4.1
GTA				PcP	**PcP**	**22 19 26.3**	**+1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				LR	LR		
	comp=Z,95nm,15.3s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
GTA				LR	LR		
	comp=Z,130nm,13.5s						
SEY	**Seymchan**	**48.59**	**3**	LR	LR	22 36 42.4	
	comp=Z,44nm,20.9s,baz=202,slow=34						
YAK	**Yakutsk**	**49.13**	**349**	P	**P**	**22 18 02.8**	**-1.2**
YAK	**Yakutsk**	**49.13**	**349**	P	**P**	**22 18 02.8**	**-1.2**
	comp=Z,8.8nm,0.3s,baz=272,slow=1.1,SNR=6.2						
	comp=Z,8.8nm,0.3s						
GSI	**Gunungsitoli**	**50.57**	**260**	P	**P**	**22 18 14.7**	**-1.1**
GSI				IAmb	IAmb	22 18 15.8	
	comp=Z,10nm,0.8s						
SHL	**Shillong**	**52.68**	**291**	P	**P**	**22 18 30.8**	**-0.9**
SHL				IAmb	IAmb	22 18 31.9	
	comp=Z,13nm,1.0s						
LSA	**Lhasa**	**53.50**	**296**	P	**P**	**22 18 38.5**	**+0.5**
LSA				IAmb	IAmb	22 18 40.2	
	comp=Z,12nm,0.8s						
WMQ	**Urumqi**	**58.10**	**313**	*e*P	**P**	**22 19 11.3**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
TIXI	**Tiksi**	**58.23**	**353**	P	**P**	**22 19 10.8**	**+0.2**
ZSN	**Zaisan**	**60.74**	**317**	*e*P	**P**	**22 19 28.6**	**+0.2**
	comp=Z,8.7nm,1.2s,baz=316						
O18K	**Koktuh Hills**	**61.66**	**29**	P	**P**	**22 19 35.6**	**+1.2**
ZAA0	**Zalesovo Array**	**62.18**	**324**	P	**P**	**22 19 36.9**	**-1.1**
ZAA0				IAmb	IAmb	22 19 39.9	
	comp=Z,6.5nm,1.2s						
ZALV	**Zalesovo Beam**	**62.18**	**324**	P	**P**	**22 19 36.9**	**-1.1**
ZALV	**Zalesovo Beam**	**62.18**	**324**	P	**P**	**22 19 37.2**	**-0.8**
	comp=Z,3.3nm,0.7s,baz=103,slow=6.4,SNR=12						
	comp=Z,3.3nm,0.7s						
KDAK	**Kodiak Island**	**62.25**	**32**	LR	LR	22 45 23.4	
	comp=Z,82nm,19.8s,baz=248,slow=35						
MK31	**Makanchi Array**	**62.36**	**315**	P	**P**	**22 19 39.5**	**+0.1**
MKAR	**Makanchi Array**	**62.36**	**315**	P	**P**	**22 19 39.4**	**0.0**
MKAR	**Makanchi Array**	**62.36**	**315**	P	**P**	**22 19 39.6**	**+0.2**
	comp=Z,8.0nm,0.5s,baz=90,slow=8.0,SNR=230						
MKAR				LR	LR	22 48 31.1	
	comp=Z,41nm,18.0s,baz=64,slow=38						
	comp=Z,8.0nm,0.5s						
SHLS	**Shalkode**	**63.95**	**311**	*e*P	**P**	**22 19 47.7**	**-2.4**
	baz=311						
E19K	**Redstone River**	**63.97**	**21**	P	**P**	**22 19 50.9**	**+1.3**
E19K				IAmb	IAmb	22 20 24.3	
	comp=Z,5.3nm,1.1s						
SEM	**Semipalatinsk**	**64.24**	**319**	*e*P	**P**	**22 19 50.8**	**-1.3**
	comp=Z,7.4nm,1.2s,baz=319						
CAST	**Castle Rocks**	**64.32**	**26**	P	**P**	**22 19 53.9**	**+1.8**
CAST				IAmb	IAmb	22 19 56.4	
	comp=Z,4.7nm,0.8s						
IMAR	**Indian Mountai**	**64.60**	**23**	P	**P**	**22 19 55.3**	**+1.5**
PRZ	**Przheval'sk**	**64.68**	**310**	P	**P**	**22 19 55.7**	**+0.7**
SATY	**Saty**	**64.71**	**311**	*e*P	**P**	**22 19 55.1**	**-0.1**
	baz=311						
TDK	**Taldyorghan**	**64.85**	**313**	*e*P	**P**	**22 19 55.7**	**-0.2**
	comp=Z,9.5nm,0.8s,baz=313						
BPAW	**Bear Paw Mtn.**	**65.01**	**25**	P	**P**	**22 19 57.8**	**+1.2**
BPAW				IAmb	IAmb	22 20 00.3	
	comp=Z,9.3nm,1.2s						
KURK	**Kurchatov**	**65.31**	**319**	P	**P**	**22 19 58.4**	**-0.3**
KURBB	**Kurchatov Arra**	**65.36**	**319**	P	**P**	**22 19 58.7**	**-0.3**
	comp=Z,28nm,0.6s,baz=99,slow=6.8,SNR=342						
PALK	**Pallekele**	**65.36**	**271**	LR	LR	22 48 04.4	
	comp=Z,20nm,19.1s,baz=239,slow=36						
MLY	**Manley**	**65.42**	**24**	P	**P**	**22 20 00.7**	**+1.4**
MLY				IAmb	IAmb	22 20 28.7	
	comp=Z,5.7nm,1.1s						
SML	**Sawmill**	**65.47**	**28**	P	**P**	**22 20 00.8**	**+1.2**
MDOK	**Medeo**	**65.71**	**311**	*e*P	**P**	**22 20 01.1**	**-0.5**
	baz=311						
TNSS	**Tian-Shan**	**65.78**	**311**	*e*P	**P**	**22 20 01.3**	**-1.1**
	baz=311						
CHKK	**Chushkaly**	**65.79**	**312**	*e*P	**P**	**22 20 01.5**	**-0.5**
	baz=312						
AAA	**Alma-Ata**	**65.81**	**311**	*e*P	**P**	**22 20 02.3**	**+0.1**
	baz=311						
SCM	**Sheep Creek Mo**	**65.94**	**28**	P	**P**	**22 20 04.1**	**+1.4**
I23K	**Minto, Yukon-K**	**66.01**	**24**	P	**P**	**22 20 04.6**	**+1.6**
I23K				IAmb	IAmb	22 20 22.0	
	comp=Z,12nm,1.4s						
NRIK	**Noril'sk**	**66.04**	**340**	P	**P**	**22 20 02.3**	**-0.7**
NRIK				IAmb	IAmb	22 20 03.3	
	comp=Z,4.4nm,0.8s						
NRIK	**Noril'sk**	**66.04**	**340**	P	**P**	**22 20 02.4**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=112,slow=9.6,SNR=6.9						
	comp=Z,4.1nm,0.7s						
FID	**Port Fidalgo**	**66.07**	**30**	P	**P**	**22 20 04.7**	**+1.2**
KUU	**Kurty**	**66.26**	**312**	*e*P	**P**	**22 20 04.3**	**-0.7**
	comp=Z,11nm,0.9s,baz=312						
WRH	**Wood River Hil**	**66.33**	**25**	P	**P**	**22 20 05.6**	**+0.5**
WRH				IAmb	IAmb	22 20 25.2	
	comp=Z,6.9nm,1.2s						
MDM	**Murphy Dome**	**66.41**	**25**	P	**P**	**22 20 06.9**	**+1.3**
MDM				IAmb	IAmb	22 20 46.4	
	comp=Z,4.8nm,1.1s						
KSH	**Kashi**	**66.42**	**307**	P	**P**	**22 20 08.8**	**+2.6**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NRN	**Naryn**	**66.42**	**309**	P	**P**	**22 20 06.9**	**+0.4**
ILAR	**Eielson Array**	**66.91**	**25**	P	**P**	**22 20 08.5**	**-0.3**
ILAR	**Eielson Array**	**66.91**	**25**	P	**P**	**22 20 08.2**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=255,slow=5.4,SNR=29						
ILAR				LR	LR	22 47 15.9	
	comp=Z,53nm,21.2s,baz=170,slow=34						
	comp=Z,1.2nm,0.5s						
RIDG	**Independent Ri**	**67.51**	**27**	P	**P**	**22 20 13.9**	**+1.3**
AAK	**

ABKAR	**Akbulak array**	**77.34**	**318**	P	**P**	**22 21 10.9**	**-0.5**
ABKAR	**Akbulak array**	**77.34**	**318**	P	**P**	**22 21 10.8**	**-0.7**
GEYT	**Alibeck**	**80.44**	**307**	P	**P**	**22 21 29.1**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=90,slow=3.0,SNR=5.2						
	comp=Z,2.9nm,0.7s						
YBH	**Yreka Blue Hor**	**80.73**	**49**	LR	LR	22 50 40.6	
	comp=Z,55nm,19.0s,baz=348,slow=31						
YKA	**Yellowknife Ar**	**81.14**	**28**	P	**P**	**22 21 32.2**	**+0.2**
YKA	**Yellowknife Ar**	**81.14**	**28**	P	**P**	**22 21 32.8**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=286,slow=5.5,SNR=15						
	comp=Z,1.3nm,0.7s						
RES	**Resolute Bay**	**83.24**	**14**	P	**P**	**22 21 43.2**	**+0.5**
NVAR	**Mina Array Bea**	**84.75**	**52**	P	**P**	**22 21 51.4**	**-0.1**
NVAR	**Mina Array Bea**	**84.75**	**52**	P	**P**	**22 21 53.0**	**+1.5**
	comp=Z,1.7nm,0.9s,baz=256,slow=4.0,SNR=9.3						
	comp=Z,1.7nm,0.9s						
ELK	**Elko**	**86.44**	**49**	LR	LR	22 54 57.2	
	comp=Z,44nm,19.5s,baz=329,slow=32						
WCT	**Wildcat Mounta**	**86.45**	**53**	P	**P**	**22 22 00.7**	**+0.8**
ARCES	**ARCESS Array B**	**86.93**	**343**	P	**P**	**22 22 01.5**	**+0.1**
	comp=Z,4.4nm,1.1s,baz=46,slow=5.2,SNR=5.5						
	comp=Z,4.4nm,1.1s						
Q12A	**Willow Creek R**	**87.21**	**51**	P	**P**	**22 22 03.6**	**0.0**
Q12A				IAmb	IAmb	22 22 32.1	
	comp=Z,7.9nm,1.1s						
PFO	**Pinyon Flats O**	**87.42**	**56**	LR	LR	23 02 18.6	
	comp=Z,63nm,18.1s,baz=244,slow=36						
DUG	**Dugway, Tooele**	**88.37**	**49**	P	**P**	**22 22 09.4**	**+0.3**
DUG				IAmb	IAmb	22 22 13.6	
	comp=Z,7.2nm,1.2s						
PDAR	**Pinedale Array**	**89.88**	**46**	P	**P**	**22 22 15.7**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=284,slow=4.5,SNR=1.8						
PDAR				LR	LR	22 59 09.1	
	comp=Z,41nm,19.0s,baz=347,slow=33						
	comp=Z,0.2nm,0.4s						
KBZ	**Khabaz**	**90.06**	**315**	P	**P**	**22 22 15.8**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=64,slow=11,SNR=2.1						
	comp=Z,1.1nm,0.9s						
FINES	**FINESS Array B**	**91.28**	**336**	P	**P**	**22 22 21.0**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=58,slow=5.2,SNR=11						
	comp=Z,2.2nm,0.7s						
ANMO	**Albuquerque**	**94.87**	**52**	LR	LR	23 05 28.0	
	comp=Z,36nm,19.0s,baz=84,slow=36						
HFS	**Hagfors**	**96.80**	**338**	P	**P**	**22 22 47.2**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=33,slow=5.5,SNR=1.5						
	comp=Z,0.9nm,0.8s						
DBIC	**Dimbokro**	**145.12**	**305**	PKP	**PKPbc**	**22 28 54.9**	**+0.2**
	comp=Z,18nm,0.7s,baz=52,slow=2.9,SNR=18						

NEIC 21 22:23:57.3±0.2, 36°29N±0°.01×97°52W±0°.01, h4km±4km, mb_Lg2.4/36, ML2.7/58, Error ellipse: s-maj=1.6km s-min=1.4km az=223.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.43**	**300**	Pg	Pg	22 24 06.3	+0.6
CROK				Sg	Sg	22 24 12.6	+1.2
CROK				IAML		22 24 12.7	
	comp=N,962nm,0.5s						
CROK				IAML		22 24 14.8	
	comp=E,460nm,0.2s						
OK048	**Pawnee Station**	**0.48**	**74**	Pg	Pg	22 24 07.1	+0.5
OK048				Sg	Sg	22 24 13.5	+0.7
OK029	**Liberty Lake**	**0.49**	**174**	Pg	Pg	22 24 07.4	+0.6
OK029				Sg	Sg	22 24 14.2	+0.9
OK033	**Mehan**	**0.53**	**117**	Pg	Pg	22 24 08.0	+0.5
OK033				IAML		22 24 15.5	
	comp=E,433nm,0.3s						
BLOK	**Blackwell**	**0.53**	**27**	Pg	Pg	22 24 08.1	+0.6
BLOK				IAML		22 24 25.1	
	comp=E,738nm,0.2s						
OK051	**E0350 and S346**	**0.59**	**68**		Pg	22 24 09.1	+0.5
OK051				Sg	Sg	22 24 17.0	+0.6
OK051				IAML		22 24 18.1	
	comp=E,411nm,0.2s						
OK051				IAML		22 24 21.4	
	comp=E,381nm,0.2s						
GC02	**Grant County #**	**0.63**	**334**	Pg	Pg	22 24 09.7	+0.4
GC02				Sg	Sg	22 24 18.2	+0.7
ADOK	**Arcadia Dam**	**0.65**	**169**	Pg	Pg	22 24 10.1	+0.4
OK052	**Battle Ridge R**	**0.65**	**117**	Pg	Pg	22 24 10.2	+0.5
OK052				Sg	Sg	22 24 18.9	+0.7
OK052				IAML		22 24 19.2	
	comp=E,290nm,0.3s						
QUOK	**Quay**	**0.66**	**100**	Pg	Pg	22 24 10.5	+0.4
QUOK				Sg	Sg	22 24 19.4	+0.7
KAN13	**South Haven SW**	**0.72**	**2**	Pg	Pg	22 24 11.3	+0.1
KAN13				IAML		22 24 33.4	
	comp=E,336nm,0.3s						
KAN13				IAML		22 24 35.5	
	comp=N,340nm,0.3s						
KAN14	**Manchester OK**	**0.76**	**332**		Pg	22 24 12.1	+0.2
KAN14				Sg	Sg	22 24 21.9	+0.2
KAN14				IAML		22 24 23.5	
	comp=N,456nm,0.1s						
OK032	**Salt Plains WL**	**0.76**	**313**	Pg	Pg	22 24 12.2	+0.2
OK032				Sg	Sg	22 24 22.4	+0.7
OK032				IAML		22 24 23.1	
	comp=N,388nm,0.2s						
KAN17	**Caldwell West**	**0.78**	**345**	Pg	Pg	22 24 12.5	+0.2
KAN17				Sg	Sg	22 24 22.9	+0.5
KAN17				IAML		22 24 23.4	
	comp=E,355nm,0.2s						
KAN17				IAML		22 24 30.5	
	comp=N,225nm,0.3s						
KAN09	**Caldwell North**	**0.85**	**355**		Pg	22 24 13.8	+0.2
KAN09				Sg	Sg	22 24 25.3	+0.6
KAN05	**Bluff City Nor**	**0.87**	**341**	Pg	Pg	22 24 13.8	-0.1
KAN05				IAML		22 24 29.0	
	comp=E,376nm,0.2s						
KAN05				IAML		22 24 29.7	
	comp=N,381nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.88**	**176**	Pg	Pg	22 24 14.4	+0.2
OKCSW				IAML		22 24 31.6	
	comp=E,240nm,0.5s						
OKCSW				IAML		22 24 32.1	
	comp=N,218nm,0.7s						
DEOK	**Depew**	**0.94**	**118**	Pg	Pg	22 24 15.2	-0.1
DEOK				Sg	Sg	22 24 27.9	+0.4
DEOK				IAML		22 24 28.2	
	comp=N,162nm,0.3s						
KAN10	**Anthony SW Sta**	**0.95**	**331**	Pg	Pg	22 24 15.7	0.0
KAN10				IAML		22 24 29.5	
	comp=N,194nm,0.1s						
KAN06	**Argonia West S**	**1.00**	**344**		Pg	22 24 16.3	-0.1
KAN06				Sg	Sg	22 24 29.8	+0.4
KAN06				IAML		22 24 30.7	
	comp=N,314nm,0.1s						
KS21	**Milan North St**	**1.00**	**353**	IAML		22 24 30.8	
	comp=N,259nm,0.1s						
KS21				IAML		22 24 32.1	
	comp=N,220nm,0.1s						
KS21	**Milan North St**	**1.00**	**353**	Pg	Pg	22 24 16.5	-0.1
OK038	**West end E0370**	**1.01**	**281**	Pg	Pg	22 24 16.6	-0.1
T35A	**Sooner Cattle**	**1.02**	**52**	Pg	Pg	22 24 17.1	+0.1
T35A				Sg	Sg	22 24 30.3	0.0
T35A				IAML		22 24 31.5	
	comp=N,221nm,0.3s						
T35A				IAML		22 24 31.5	
	comp=E,164nm,0.2s						
FNO	**Franklin**	**1.03**	**175**	Pg	Pg	22 24 16.9	-0.2
FNO				IAML		22 24 33.0	
	comp=E,220nm,0.2s						
OK035	**E0210 Rd and N**	**1.05**	**294**	Pg	Pg	22 24 17.4	-0.1
OK035				IAML		22 24 37.9	
	comp=E,224nm,0.3s						
KAN12	**Harper NE Stat**	**1.08**	**339**	Pg	Pg	22 24 17.9	-0.1
CSTR	**Hydro, Custer**	**1.15**	**236**	Pg	Pg	22 24 19.0	-0.3
U32A	**Winter Ranch,**	**1.20**	**275**		Pg	22 24 20.0	-0.4
U32A				IAML		22 24 40.2	
	comp=N,109nm,0.1s						
U32A				IAML		22 24 54.5	
	comp=E,110nm,0.3s						
W35A	**Tecumseh**	**1.25**	**155**		Pg	22 24 20.5	-0.8
W35A				IAML		22 24 38.3	
	comp=N,122nm,0.2s						
TUL3	**Leonard**	**1.45**	**105**		Pn	22 24 23.7	-0.6
ELIS	**Ellis County**	**1.55**	**262**		Pn	22 24 25.8	0.0
X34A	**Smith Ranch, M**	**1.70**	**189**		Pb	22 24 28.8	-0.4
WMOK	**Wichita Mounta**	**1.86**	**214**		Pn	22 24 30.0	-0.1
RLO	**Rose Lookout**	**2.02**	**93**		Pn	22 24 32.9	+0.6
LOOK	**Love County**	**2.31**	**173**	Pn	Pn	22 24 37.4	+1.2
X37A	**Clayton**	**2.44**	**133**		Pn	22 24 38.4	+0.4
X37A				IAmb_Lg		22 25 16.8	
	comp=Z,13nm,0.7s						
SMWD	**Samnorwood**	**2.51**	**243**	IAmb_Lg		22 25 15.5	
	comp=Z,13nm,0.9s						
U38A	**Gravette**	**2.53**	**86**		Pn	22 24 40.6	+1.3
WTFS	**Witchita Falls**	**2.63**	**197**	IAmb_Lg		22 25 26.5	
	comp=Z,8.8nm,0.7s						
KSU1	**Kansas State U**	**2.90**	**14**	Pn	Pn	22 24 44.9	+0.6
KSU1				IAmb_Lg		22 25 28.8	
	comp=Z,16nm,0.7s						
S39A	**Bolivar**	**3.64**	**66**	Pn	Pn	22 24 55.0	+0.5
S39A				IAmb_Lg		22 25 52.7	
	comp=Z,7.5nm,0.8s						
MIAR	**Mount Ida**	**3.66**	**117**	Pn	Pn	22 24 55.6	+0.9
AMTX	**Amarillo**	**3.67**	**249**	IAmb_Lg		22 25 54.4	
	comp=Z,9.6nm,0.7s						
RTBA	**Rita Blanca**	**4.22**	**274**		Pn	22 25 02.8	+0.2
SN07	**Snyder 07**	**4.23**	**222**	IAmb_Lg		22 26 18.8	
	comp=Z,7.1nm,0.8s						
MGMO	**Mountain Grove**	**4.30**	**77**	IAmb_Lg		22 26 17.6	
	comp=Z,8.8nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.38**	**94**	IAmb_Lg		22 26 16.4	
	comp=Z,6.9nm,1.1s						
SN05	**Snyder 5**	**4.39**	**220**	IAmb_Lg		22 26 16.1	
	comp=Z,5.2nm,0.8s						
POST	**Post**	**4.59**	**227**	IAmb_Lg		22 26 26.1	
	comp=Z,8.1nm,0.7s						
N35A	**Tabor**	**4.80**	**17**	IAmb_Lg		22 26 33.5	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**5.31**	**69**	IAmb_Lg		22 26 44.7	
	comp=Z,9.3nm,0.8s						
PBMO	**Poplar Bluff**	**5.73**	**83**	IAmb_Lg		22 27 00.7	
	comp=Z,7.0nm,0.7s						
FVM	**French Village**	**5.91**	**71**	IAmb_Lg		22 27 05.3	
	comp=Z,7.2nm,0.7s						
K30B	**Basset**	**6.58**	**346**	IAmb_Lg		22 27 39.5	
	comp=Z,8.6nm,0.7s						
Q24A	**Divide**	**6.62**	**296**	IAmb_Lg		22 27 29.8	
	comp=Z,4.5nm,0.7s						
ANMO	**Albuquerque**	**7.40**	**262**	IAmb_Lg		22 28 00.8	
	comp=Z,2.1nm,1.1s						
N23A	**Red Feather La**	**8.04**	**307**	IAmb_Lg		22 28 19.0	
	comp=Z,4.6nm,0.9s						

NEIC 21 22:24:30.2±0.3, 36°285N±0°.010×97°519W±0°.007, h5km±4km, mb_Lg2.7/55, ML2.8/36, Error ellipse: s-maj=1.5km s-min=0.8km az=165.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.43**	**300**	Pg	Pg	22 24 38.9	+0.3
CROK				Sg	Sg	22 24 45.1	+0.9
CROK				IAML		22 24 54.1	
	comp=E,855nm,0.3s						
OK048	**Pawnee Station**	**0.48**	**74**	Pg	Pg	22 24 39.8	+0.3
OK048				Sg	Sg	22 24 46.3	+0.6
OK029	**Liberty Lake**	**0.49**	**174**	Pg	Pg	22 24 40.0	+0.4
OK029				Sg	Sg	22 24 46.8	+0.8
OK051	**E0350 and S346**	**0.59**	**68**	Pg	Pg	22 24 41.7	+0.1
OK051				Sg	Sg	22 24 49.8	+0.5
OK051				IAML		22 24 52.2	
	comp=E,622nm,0.2s						
OK051				IAML		22 24 57.7	
	comp=E,634nm,0.2s						
ADOK	**Arcadia Dam**	**0.64**	**169**	Pg	Pg	22 24 42.8	+0.3
OK052	**Battle Ridge R**	**0.65**	**116**	Pg	Pg	22 24 43.0	+0.3
OK052				Sg	Sg	22 24 51.6	+0.5
OK052				IAML		22 24 51.9	
	comp=E,480nm,0.3s						
QUOK	**Quay**	**0.67**	**100**	Pg	Pg	22 24 43.1	+0.2
QUOK				IAML		22 24 56.6	
	comp=E,388nm,0.2s						
KAN13	**South Haven SW**	**0.73**	**3**	Pg	Pg	22 24 44.3	+0.2
KAN13				IAML		22 24 59.0	
	comp=E,543nm,0.3s						
KAN13				IAML		22 25 08.2	
	comp=N,497nm,0.3s						
KAN17	**Caldwell West**	**0.78**	**345**	Pg	Pg	22 24 45.2	0.0
KAN17				IAML		22 25 00.1	
	comp=N,405nm,0.3s						
KAN09	**Caldwell North**	**0.85**	**355**	Pg	Pg	22 24 46.5	-0.1
OKCSW	**OKLAHOMA CITY**	**0.88**	**176**	Pg	Pg	22 24 47.1	+0.1
OKCSW				IAML		22 25 00.6	
	comp=N,314nm,0.2s						
OKCSW				IAML		22 25 06.6	
	comp=E,401nm,0.6s						
KAN01	**Argonia South**	**0.89**	**348**	Pg	Pg	22 24 47.2	0.0
KAN01				IAML		22 24 59.4	
	comp=E,413nm,0.8s						
KAN01				IAML		22 25 01.6	
	comp=N,374nm,0.1s						
DEOK	**Depew**	**0.94**	**118**	Pg	Pg	22 24 48.0	-0.2
DEOK				IAML		22 25 02.5	
	comp=N,296nm,0.2s						
DEOK				IAML		22 25 02.9	
	comp=E,230nm,0.2s						
KAN06	**Argonia West S**	**1.00**	**344**	Pg	Pg	22 24 49.1	-0.2
T35A	**Sooner Cattle**	**1.03**	**52**	Pg	Pg	22 24 50.0	+0.1
T35A				IAML		22 25 04.2	
	comp=E,285nm,0.2s						
FNO	**Franklin**	**1.03**	**175**	Pg	Pg	22 24 49.7	-0.2
FNO				IAML		22 25 06.9	
	comp=N,226nm,0.1s						
U32A	**Winter Ranch,**	**1.20**	**275**	Pg	Pg	22 24 52.8	-0.4
U32A				IAML		22 25 12.7	
	comp=N,161nm,0.2s						
TUL3	**Leonard**	**1.45**	**104**	IAmb_Lg		22 25 17.5	
	comp=Z,29nm,0.8s						
X34A	**Smith Ranch, M**	**1.70**	**189**		Pb	22 25 01.6	-0.3
X37A	**Clayton**	**2.44**	**133**	IAmb_Lg		22 25 49.4	
	comp=Z,24nm,0.8s						
S39A	**Bolivar**	**3.64**	**66**	Pn	Pn	22 25 27.8	+0.7
S39A				IAmb_Lg		22 26 34.0	
	comp=Z,16nm,0.8s						
MIAR	**Mount Ida**	**3.66**	**117**	Pn	Pn	22 25 28.0	+0.6
AMTX	**Amarillo**	**3.67**	**249**	IAmb_Lg		22 26 27.1	
	comp=Z,14nm,0.7s						
DKNS	**Dickens**	**3.83**	**228**	IAmb_Lg		22 26 33.7	
	comp=Z,9.9nm,0.7s						
RTBA	**Rita Blanca**	**4.21**	**274**		Pn	22 25 35.7	+0.5
SN07	**Snyder 07**	**4.23**	**222**	IAmb_Lg		22 26 55.1	
	comp=Z,9.5nm,0.8s						
MGMO	**Mountain Grove**	**4.31**	**77**	IAmb_Lg		22 26 49.6	
	comp=Z,14nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.39**	**94**	IAmb_Lg		22 26 46.3	
	comp=Z,8.1nm,0.9s						
SN05	**Snyder 5**	**4.39**	**220**	IAmb_Lg		22 26 52.9	
	comp=Z,11nm,0.7s						
UALR	**University of**	**4.48**	**108**	IAmb_Lg		22 26 57.0	
	comp=Z,13nm,1.0s						
P38A	**Dawn**	**4.59**	**42**	IAmb_Lg		22 26 57.7	
	comp=Z,16nm,0.8s						
POST	**Post**	**4.59**	**227**	IAmb_Lg		22 26 58.8	
	comp=Z,13nm,0.7s						
N35A	**Tabor**	**4.80**	**17**	IAmb_Lg		22 27 08.4	
	comp=Z,20nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.88**	**305**	IAmb_Lg		22 27 18.8	
	comp=Z,12nm,0.8s						
BGNE	**Belgrade**	**5.14**	**355**	IAmb_Lg		22 27 20.8	
	comp=Z,18nm,0.8s						
LCAR	**Lake Charles**	**5.15**	**91**	IAmb_Lg		22 27 17.7	
	comp=Z,9.9nm,0.9s						
SGCY	**Sterling City**	**5.29**	**215**	IAmb_Lg		22 27 23.6	
	comp=Z,8.2nm,0.7s						
CCM	**Cathedral Cave**	**5.31**	**69**	IAmb_Lg		22 27 18.1	
	comp=Z,16nm,0.8s						
N38A	**Joes South For**	**5.62**	**35**	IAmb_Lg		22 27 36.3	
	comp=Z,18nm,0.8s						
PBMO	**Poplar Bluff**	**5.73**	**83**	IAmb_Lg		22 27 35.6	
	comp=Z,16nm,0.9s						
FVM	**French Village**	**5.92**	**71**	IAmb_Lg		22 27 41.1	
	comp=Z,15nm,0.8s						
JCT	**Junction City**	**6.10**	**199**	IAmb_Lg		22 27 49.4	
	comp=Z,9.8nm,0.8s						
CGM3	**Cape Girardeau**	**6.39**	**79**	IAmb_Lg		22 27 50.5	
	comp=Z,16nm,0.9s						
MLDN	**Muldoon**	**6.50**	**177**	IAmb_Lg		22 28 15.3	
	comp=Z,14nm,0.7s						
K30B	**Basset**	**6.58**	**346**	IAmb_Lg		22 28 01.9	
	comp=Z,15nm,0.8s						
MNHN	**Monahans**	**6.58**	**223**	IAmb_Lg		22 28 09.5	
	comp=Z,5.3nm,0.7s						
Q24A	**Divide**	**6.62**	**296**	IAmb_Lg		22 28 09.7	
	comp=Z,6.2nm,0.7s						
SAND	**Sanderson**	**7.40**	**213**	IAmb_Lg		22 28 33.9	
	comp=Z,7.8nm,1.1s						
N23A	**Red Feather La**	**8.04**	**307**	IAmb_Lg		22 28 55.5	
	comp=Z,12nm,1.2s						

*IDC **21** 22:30:18.0±2.6, 52°.05N×159°.83E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=66.3km s-min=36.8km az=18.0*

*KRSC **21** 22:30:26.5±0.9, 52°.43N×159°.71E, h37km±12km, Ml4.0*

ISC 21 22:30:24.1±1.9, 52°.38N±0°.06×159°.91E±0°.06, h28km±11km, n45, σ1.969/52, mb3.9/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.73**	**6**	eP	**Pn**	**22 30 40.8**	**+2.3**
SPN				eS	**Sn**	**22 30 51.3**	**+2.6**
RUS	**Russkaya**	**0.85**	**274**	eP	**Pn**	**22 30 41.0**	**+0.7**
RUS				eS	**Sn**	**22 30 51.2**	**-0.6**
NLC	**Nalytchevo**	**0.87**	**337**	eP	**Pn**	**22 30 41.4**	**+1.0**
NLC				eS	**Sb**	**22 30 52.5**	**+0.8**
DALK	**Dalny**	**0.96**	**314**	eP	**Pn**	**22 30 42.2**	**+0.5**
DALK				eS	**Sb**	**22 30 54.1**	**-0.3**
PET	**Petropavlovsk**	**1.00**	**311**	eP	**Pn**	**22 30 43.2**	**+0.9**
PET				eS	**Sb**	**22 30 55.3**	**-0.3**
INSR	**Institute**	**1.05**	**312**	eP	**Pb**	**22 30 44.0**	**+0.4**
INSR				eS	**Sb**	**22 30 56.4**	**-0.6**
MTVR	**Mutnovka**	**1.06**	**276**	eP	**Pn**	**22 30 44.2**	**+1.0**
MTVR				eS	**Sn**	**22 30 57.0**	**-0.2**
UGLR	**Uglovaya**	**1.06**	**322**	eP	**Pb**	**22 30 44.6**	**+0.7**
SDLR	**Sedlovina**	**1.09**	**326**	eP	**Pb**	**22 30 44.1**	**-0.3**
SMAR	**Somma**	**1.11**	**323**	eP	**Pb**	**22 30 45.0**	**+0.2**
GRL	**Gorelyy**	**1.14**	**280**	eP	**Pb**	**22 30 46.0**	**+0.8**
AVH	**Avacha**	**1.14**	**322**	eP	**Pb**	**22 30 45.9**	**+0.7**
KRER	**Koryakskii**	**1.16**	**323**	eP	**Pb**	**22 30 46.2**	**+0.5**
KRMR	**Karymshinskiy**	**1.17**	**293**	eP	**Pb**	**22 30 45.4**	**-0.3**
KRMR				eS	**Sb**	**22 30 58.8**	**-1.7**
KOK	**Koryaka**	**1.20**	**320**	eP	**Pb**	**22 30 46.5**	**+0.3**
ASAK	**Asacha**	**1.23**	**271**	eP	**Pb**	**22 30 47.0**	**+0.3**
ASAK				eS	**Sn**	**22 31 02.2**	**+1.0**
KRX	**Arik**	**1.25**	**323**	eP	**Pb**	**22 30 47.0**	**0.0**
KDTR	**Khodutka, Kamc**	**1.26**	**244**	eP	**Pb**	**22 30 47.3**	**+0.1**
KDTR				eS	**Sn**	**22 31 03.0**	**+1.1**
PETK	**Petropavlovsk-**	**1.53**	**300**	Pn	**Pb**	**22 30 50.3**	**-1.5**
	40nm,0.3s,baz=117,slow=22,SNR=102						
PETK				Sn	**Sb**	**22 31 09.8**	**-0.9**
	40nm,0.3s,baz=112,slow=30,SNR=3.7						
PETK				LR	LR	22 31 39.7	
	comp=Z,212nm,20.7s,baz=173,slow=49						
KII	**Karymskiy**	**1.69**	**351**	eP	**Pb**	**22 30 54.8**	**+0.3**
KII				eS	**Sn**	**22 31 15.2**	**+2.7**
APC	**Apacha**	**1.76**	**289**	eP	**Pb**	**22 30 55.1**	**-0.6**
APC				eS	**Sb**	**22 31 17.3**	**-0.1**
GNL	**Ganaly**	**1.77**	**319**	eP	**Pb**	**22 30 55.1**	**-0.9**
PAU	**Pauzhetka**	**2.12**	**246**	eP	**Pb**	**22 31 02.2**	**+0.4**
TUMD	**Tumrok D**	**2.85**	**6**	eP	**Pb**	**22 31 12.4**	**-1.8**
TUMR	**Tumrok**	**2.92**	**3**	eP	**Pb**	**22 31 13.3**	**-2.1**
KMNR	**Kamenistaya**	**3.39**	**3**	eP	**Pn**	**22 31 19.4**	**+4.1**
BZP	**Bezymyannyi-Pe**	**3.56**	**6**	eP	**Pn**	**22 31 21.6**	**+4.0**
BZMR	**Bezymyannaya**	**3.58**	**5**	eP	**Pb**	**22 31 23.9**	**-2.9**
KIRR	**Kirishev**	**3.59**	**4**	eP	**Pb**	**22 31 23.7**	**-3.3**
BZGR	**Bezymyannyi-Gr**	**3.60**	**7**	eP	**Pb**	**22 31 23.3**	**-3.8**
KPT	**Kopyto**	**3.60**	**3**	eP	**Pb**	**22 31 23.7**	**-3.4**
BZNR	**Bezymyannyi-We**	**3.61**	**5**	eP	**Pb**	**22 31 24.0**	**-3.3**
H11N2	**WAKE ISLAND Hy**	**33.03**	**168**	T	T	23 12 51.7	
	baz=352,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**33.05**	**168**	T	T	23 12 48.8	
	baz=352,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**33.05**	**168**	T	T	23 12 46.7	
	baz=352,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**34.22**	**168**	T	T	23 14 16.2	
	baz=350						
H11S3	**WAKE ISLAND Hy**	**34.23**	**169**	T	T	23 14 24.9	
	baz=350						
H11S2	**WAKE ISLAND Hy**	**34.23**	**168**	T	T	23 14 15.1	
	baz=350						
SPITS	**Spitsbergen Ar**	**47.82**	**350**	P	**P**	**22 38 58.6**	**+0.1**
	12nm,1.0s,baz=46,slow=6.2,SNR=1.7						
	12nm,1.0s						
MKAR	**Makanchi Array**	**48.37**	**296**	P	**P**	**22 39 01.6**	**-1.5**
	0.2nm,0.5s,baz=63,slow=6.7,SNR=6.6						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**50.75**	**309**	P	**P**	**22 39 19.6**	**-1.5**
	0.6nm,0.6s,baz=52,slow=7.3,SNR=2.6						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**60.73**	**337**	P	**P**	**22 40 32.6**	**+0.1**
	1.6nm,0.9s,baz=38,slow=9.3,SNR=3.6						
	1.6nm,0.9s						
NOA	**NORSAR Array B**	**64.20**	**344**	P	**P**	**22 40 56.1**	**+0.3**
	0.2nm,0.5s,baz=24,slow=6.5,SNR=1.6						
	0.2nm,0.5s						
HFS	**Hagfors**	**64.60**	**342**	P	**P**	**22 40 58.4**	**0.0**
	1.6nm,0.8s,baz=38,slow=7.8,SNR=6.6						
	1.6nm,0.8s						
MMAI	**Mount Meron Ar**	**82.14**	**316**	P	**P**	**22 42 42.5**	**+0.3**
	0.5nm,0.4s,baz=30,slow=6.7,SNR=4.0						
	0.5nm,0.4s						

IDC 21 22:42:25.1±7.6, 18°.20S×177°.82W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=332.8km s-min=117.0km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.13**	**260**	P	P	22 50 43.4	-0.4
	0.6nm,0.8s,baz=97,slow=7.3,SNR=5.2						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**45.25**	**254**	P

Moment tensor: Scale 10^{16}Nm; M_{rr}2.24; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-1.53; $M_{r\theta}$0.54; $M_{r\phi}$-1.67; $M_{\theta\phi}$2.20; Fault plane solution: M_o3.44000×10^{16} NP1:ϕ_s20.53000°,δ66.86000°, λ,72.81000°. NP2:ϕ_s238.74000°,δ28.54000°,λ,124.67000°. Principal axes: T 3.2696, Plg64.0000°, Azm262.0000°; N 0.3266, Plg16.0000°, Azm27.0000°; P -3.5962, Plg20.0000°, Azm123.0000°;

*NIED **21** 23:10:40.8,23.4′40N×121.5′51E,h43km,MW5.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.69; $M_{\theta\theta}$0.31; $M_{\phi\phi}$-2.00; $M_{r\theta}$3.57; $M_{\theta\phi}$-1.32; $M_{\phi r}$4.40; Fault plane solution: M_o6.08000×10^{16} NP1:ϕ_s39.00000°, δ80.00000°,λ,98.00000°. NP2:ϕ_s180.00000°,δ13.00000°, λ,51.00000°.*

*ASIES **21** 23:10:41.4,23.4′41N×121.5′53E,h36km,ML5.7,Mw5.0, Moment Tensor Solution. Moment tensor: Scale 10^{23}Nm; M_{rr}2.11; $M_{\theta\theta}$-1.67; $M_{\phi\phi}$-2.93; $M_{r\theta}$-0.60; $M_{\theta\phi}$-2.11; $M_{\phi r}$1.70; Fault plane solution: M_o3.95081×10^{23} NP1:ϕ_s13.00000°, δ58.65000°,λ,60.37000°. NP2:ϕ_s240.55000°,δ42.07000°, λ,129.06000°. Principal axes: T Plg63.2270°, Azm232.0980°; N Plg24.9740°, Azm29.4850°; P Plg9.0340°, Azm123.7310°;*

*IDC **21** 23:10:41.7±1.3,23.4′43N×121.5′70E,h45km±11km,mb4.5/36, mbtmp4.8/41,ML4.2/5,MS4.3/59 Error ellipse: s-maj=11.2km s-min=10.4km az=56.0*

*TAP **21** 23:10:41.4,23.4′41N×121.53E,h36km,ML5.7,C*

*GCMT **21** 23:10:41.2±0.2,23.3′3N±0.01×121.5′49E±0.01,h35km, MW5.1/107,Moment Tensor Solution. s78,c117; s107,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.65±.16; $M_{\theta\theta}$-0.49±.11; $M_{\phi\phi}$-4.16±.11; $M_{r\theta}$-0.42±.12; $M_{\theta\phi}$-2.91±.07; $M_{\phi r}$2.17±.12; Best double couple: M_o5.71100×10^{16} NP1:ϕ_s12.00000°,δ57.00000°, λ,69.00000°. NP2:ϕ_s227.00000°,δ39.00000°,λ,119.00000°. Principal axes: T 5.3800, Plg70.0000°, Azm233.0000°; N 0.6610, Plg18.0000°, Azm24.0000°; P -6.0410, Plg9.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **21** 23:10:47.3,24.4′48N×121.5′25E,h33km,mb5.3,Ms4.9*

ISC 21 23:10:41.5±0.2,23.3′8N±0.02×121.5′64E±0.02,h36km, h39km:pP-P,n1381,σ1939/1571,mb5.1/276,MS4.4/73, 80C-161D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ECBN	**Changbin** baz=209	**0.18**	**249**	⇑*i*P			**Pn**	**23 10 48.0**	**-1.7**
ECBN				*i*	S		**Sn**	**23 10 52.8**	**-4.0**
HGSD	**Ruisui** baz=308	**0.22**	**299**	⇑*i*P			**Pn**	**23 10 47.7**	**-1.7**
HGSD				*e*	S		**Sn**	**23 10 52.7**	**-3.4**
CHKH	**Chenggong** baz=201	**0.29**	**229**	P			**Pn**	**23 10 48.7**	**-0.8**
CHKH					S		**Sn**	**23 10 54.1**	**-1.6**
EYUL	**Yuli** baz=266	**0.29**	**263**	⇓*i*P			**Pn**	**23 10 48.7**	**-0.8**
EYUL				*e*	S		**Sn**	**23 10 54.4**	**-1.4**
YULB	**Yu-li**	**0.31**	**272**				**Pn**	**23 10 48.4**	**-1.3**
YULB					Sg		**Sn**	**23 10 52.6**	**-3.4**
YULB	**Yu-li**	**0.31**	**272**	P			**Pn**	**23 10 48.3**	**-1.3**
YULB	**Yu-li** baz=277	**0.31**	**272**	⇓*i*P			**Pn**	**23 10 48.4**	**-1.3**
YULB				*i*	S		**Sn**	**23 10 53.1**	**-2.8**
EHY	**Hungye** baz=296	**0.32**	**293**	⇓*i*P			**Pn**	**23 10 48.3**	**-1.4**
EHY					S		**Sn**	**23 10 52.6**	**-3.3**
TWF1	**Yuli** baz=266	**0.32**	**264**	⇓*i*P			**Pn**	**23 10 48.5**	**-1.1**
TWF1					S		**Sn**	**23 10 53.6**	**-2.4**
TEGC	**Jichi Village** baz=7.0	**0.34**	**345**	⇑*i*P			**Pn**	**23 10 49.5**	**-0.3**
TEGC				*i*	S		**Sn**	**23 10 56.0**	**-0.1**
CHKT	**Chengkung** baz=199	**0.38**	**222**	⇓*i*P			**Pn**	**23 10 49.7**	**-0.6**
CHKT					S		**Sn**	**23 10 55.7**	**-1.0**
WARBT	**Fenglin Townsh** baz=329	**0.41**	**325**	⇓*i*P			**Pn**	**23 10 49.4**	**-1.3**
WARBT					S		**Sn**	**23 10 54.4**	**-3.0**
SHUL	**Shoufeng** baz=11	**0.41**	**350**	⇑*i*P			**Pn**	**23 10 50.6**	**-0.2**
SHUL				*i*	S		**Sn**	**23 10 57.2**	**-0.1**
EHD	**Haiduan** baz=240	**0.46**	**240**	⇓*i*P			**Pn**	**23 10 50.0**	**-1.5**
EHD				*e*	S		**Sn**	**23 10 56.1**	**-2.5**
ESL	**Shilin** baz=339	**0.47**	**336**	⇓*i*P			**Pn**	**23 10 50.3**	**-1.3**
ESL				*e*	S		**Sn**	**23 10 56.4**	**-2.4**
ECS	**Chishang** baz=234	**0.48**	**233**	⇓*i*P			**Pn**	**23 10 51.0**	**-0.8**
ECS				*e*	S		**Sn**	**23 10 58.7**	**-0.4**
EDH	**Donghe** baz=220	**0.51**	**217**	⇓*e*P			**Pn**	**23 10 50.4**	**-1.9**
VWDT	**VWDT** baz=313	**0.59**	**309**	⇓*i*P			**Pn**	**23 10 52.2**	**-1.2**
VWDT					S		**Sn**	**23 10 59.1**	**-2.6**
HWA	**Hwalien** baz=17	**0.59**	**357**	⇑P			**Pn**	**23 10 53.1**	**-0.4**
ETM	**Tongmen** baz=346	**0.59**	**347**	⇓P			**Pn**	**23 10 52.3**	**-1.3**
ELDTW	**Lidau** baz=244	**0.60**	**251**	⇓*i*P			**Pn**	**23 10 51.9**	**-1.9**
LONT	**Longtian** baz=217	**0.67**	**225**	⇓P			**Pn**	**23 10 53.0**	**-1.5**
LXIB	**Xiulin Townshi** baz=345	**0.67**	**342**	⇓*i*P			**Pn**	**23 10 53.2**	**-1.5**
LXIB				*e*	S		**Sn**	**23 11 00.8**	**-3.2**
TWD	**Chiawan** baz=352	**0.69**	**357**	⇓*i*P			**Pn**	**23 10 54.1**	**-0.7**
TWD				*e*	S		**Sn**	**23 11 03.0**	**-1.3**
LDUT	**Ludao** baz=177	**0.72**	**192**	⇓P			**Pn**	**23 10 54.1**	**-1.1**
LDUT				*e*	S		**Sn**	**23 11 04.0**	**-1.0**
SSLB	**Suanglung**	**0.74**	**303**				**Pn**	**23 10 54.2**	**-1.3**
SSLB					Sg		**Sn**	**23 11 02.8**	**-2.8**
SSLB	**Suanglung**	**0.74**	**303**	P			**Pn**	**23 10 54.3**	**-1.3**
SSLB	**Suanglung** baz=301	**0.74**	**303**	⇓*i*P			**Pn**	**23 10 54.3**	**-1.3**
SSLB					S		**Sn**	**23 11 02.7**	**-2.9**
TWGBT	**Beinan**	**0.76**	**222**	P			**Pn**	**23 10 54.6**	**-1.2**
TWGBT	**Beinan** baz=216	**0.76**	**222**	⇓*i*P			**Pn**	**23 10 54.1**	**-1.6**
TWG	**Pinlang**	**0.77**	**223**				**Pn**	**23 10 54.1**	**-1.6**
TWG					Sg		**Sn**	**23 11 03.8**	**-2.3**
TWG	**Pinlang** baz=216	**0.77**	**223**	⇓*i*P			**Pn**	**23 10 54.1**	**-1.6**
WUSB	**Renai** baz=333	**0.77**	**322**	⇓*i*P			**Pn**	**23 10 55.0**	**-1.0**
WUSB				*e*	S		**Sn**	**23 11 03.5**	**-3.0**
ETL	**Fush Village** baz=354	**0.77**	**359**	⇓P			**Pn**	**23 10 55.1**	**-0.9**
TTN	**Taitung** baz=218	**0.77**	**216**	P			**Pn**	**23 10 55.6**	**-0.3**
ALS	**Alishan** baz=279	**0.78**	**280**	⇓*i*P			**Pn**	**23 10 55.4**	**-0.8**
ALS				*i*	S		**Sn**	**23 11 05.0**	**-1.8**
NACB	**Ninganchiao**	**0.79**	**357**				**Pn**	**23 10 55.1**	**-1.0**
NACB					Sg		**Sn**	**23 11 04.9**	**-1.8**
NACB	**Ninganchiao**	**0.79**	**357**	P			**Pn**	**23 10 55.4**	**-0.7**
NACB	**Ninganchiao** baz=353	**0.79**	**357**	⇓*i*P			**Pn**	**23 10 55.1**	**-1.0**
NACB					S		**Sn**	**23 11 04.3**	**-2.3**
CHGB	**Renai** baz=339	**0.80**	**328**	⇓*i*P			**Pn**	**23 10 55.5**	**-0.9**
CHGB				*e*	S		**Sn**	**23 11 04.3**	**-2.9**
STYH	**Taoyuan** baz=247	**0.82**	**255**	⇓*i*P			**Pn**	**23 10 55.7**	**-0.8**
STYH					S		**Sn**	**23 11 05.5**	**-2.0**
WHF	**Hehuan Shan** baz=342	**0.83**	**336**	⇓*i*P			**Pn**	**23 10 55.9**	**-1.3**
WHF					S		**Sn**	**23 11 05.6**	**-2.8**
ETLH	**Xiulin Townshi** baz=357	**0.83**	**350**	⇓*i*P			**Pn**	**23 10 55.6**	**-1.2**
STYT	**Tauyuan** baz=247	**0.84**	**255**	⇓*i*P			**Pn**	**23 10 56.0**	**-0.8**
STYT					S		**Sn**	**23 11 06.0**	**-2.1**
SMLT	**Sun Moon Lake** baz=313	**0.84**	**306**	⇓*i*P			**Pn**	**23 10 56.1**	**-0.8**
SMLT				*i*	S		**Sn**	**23 11 06.9**	**-1.2**
TYC	**Yuchr** baz=316	**0.88**	**306**	⇓*i*P			**Pn**	**23 10 56.8**	**-0.6**
TYC				*i*	S		**Sn**	**23 11 08.2**	**-0.8**
WPL	**Puli Township** baz=322	**0.88**	**315**	⇓*i*P			**Pn**	**23 10 56.7**	**-0.8**
WPL					S		**Sn**	**23 11 07.8**	**-1.3**
CHN5	**Tsauling** baz=283	**0.91**	**284**	⇓*i*P			**Pn**	**23 10 57.8**	**-0.1**
CHN5				*i*	S		**Sn**	**23 11 09.2**	**-0.6**
DPDB	**Guoxing** baz=323	**0.92**	**315**	⇓*i*P			**Pn**	**23 10 57.4**	**-0.5**
DPDB				*e*	S		**Sn**	**23 11 09.3**	**-0.7**
EHP	**Heping Village** baz=12	**0.93**	**6**	*e*P			**Pn**	**23 10 57.2**	**-0.9**
TPUB	**Ta-pu**	**0.93**	**265**				**Pn**	**23 10 57.7**	**-0.4**
TPUB							**Sn**	**23 11 09.0**	**-1.2**
TPUB	**Ta-pu**	**0.93**	**265**	P			**Pn**	**23 10 58.0**	**-0.1**
TPUB	**Ta-pu** baz=263	**0.93**	**265**	⇓*i*P			**Pn**	**23 10 57.8**	**-0.3**
TPUB				*i*	S		**Sn**	**23 11 09.0**	**-1.2**
WJS	**Zhushan** baz=299	**0.94**	**298**	⇓*i*P			**Pn**	**23 10 58.4**	**+0.1**
WJS					S		**Sn**	**23 11 10.7**	**+0.2**
WCS	**Beigang Elemen** baz=324	**0.94**	**315**	⇓*i*P			**Pn**	**23 10 57.9**	**-0.4**
WCS					S		**Sn**	**23 11 09.6**	**-1.0**
EAHA	**Aohua** baz=359	**0.95**	**6**	⇓P			**Pn**	**23 10 57.8**	**-0.5**
EAHA				*e*	S		**Sn**	**23 11 09.7**	**-0.9**
WCKO	**Fanlu** baz=272	**0.95**	**274**	⇓*i*P			**Pn**	**23 10 58.3**	**0.0**
WCKO				*i*	S		**Sn**	**23 11 10.3**	**-0.4**
WTP	**Ta-pu** baz=259	**0.95**	**262**	⇓*i*P			**Pn**	**23 10 58.1**	**-0.2**
WTP				*i*	S		**Sn**	**23 11 10.3**	**-0.5**
CHN4	**Tsaushan** baz=261	**0.96**	**268**	⇓*i*P			**Pn**	**23 10 58.6**	**+0.1**
CHN4				*i*	S		**Sn**	**23 11 11.2**	**+0.2**
EOS4	**EOS4** baz=45	**0.96**	**40**	⇑P			**Pn**	**23 10 58.8**	**+0.6**
TWT	**Tachien** baz=344	**0.96**	**334**	⇓*i*P			**Pn**	**23 10 58.4**	**-0.3**
TWT				*i*	S		**Sn**	**23 11 09.2**	**-2.1**
TDCB	**Techi** baz=344	**0.97**	**333**	⇓*i*P			**Pn**	**23 10 58.5**	**-0.3**
TDCB				*i*	S		**Sn**	**23 11 09.1**	**-2.3**
WNT	**Mingjian** baz=288	**1.00**	**300**	⇓*i*P			**Pn**	**23 10 59.3**	**+0.3**
WNT				*i*	S		**Sn**	**23 11 12.0**	**+0.1**
ECL	**Taimali** baz=213	**1.00**	**219**	⇑*i*P			**Pn**	**23 10 57.3**	**-1.7**
SGST	**Jiashian** baz=242	**1.02**	**253**	⇓*i*P			**Pn**	**23 10 58.3**	**-0.9**
SGST				*i*	S		**Sn**	**23 11 11.7**	**-0.5**
WNT1	**Nantou City** baz=290	**1.02**	**301**	⇓*i*P			**Pn**	**23 10 59.7**	**+0.4**
WNT1				*i*	S		**Sn**	**23 11 12.7**	**+0.3**
WGK	**Gukeng** baz=287	**1.03**	**287**	⇓*i*P			**Pn**	**23 10 59.6**	**+0.1**
WGK				*i*	S		**Sn**	**23 11 12.5**	**-0.2**
CHN1	**Nanshi** baz=257	**1.04**	**259**	⇓*i*P			**Pn**	**23 10 59.8**	**+0.2**
CHN1				*i*	S		**Sn**	**23 11 13.2**	**+0.4**
ENA	**Nanau** baz=359	**1.04**	**5**	⇓*i*P			**Pn**	**23 10 59.3**	**-0.3**
ENA				*e*	S		**Sn**	**23 11 11.5**	**-1.5**
WDLH	**Douliu** baz=287	**1.05**	**287**	⇓*i*P			**Pn**	**23 11 00.0**	**+0.3**
WDLH				*e*	S		**Sn**	**23 11 13.4**	**+0.2**
SNST	**Tainan City** baz=259	**1.06**	**261**	⇓*i*P			**Pn**	**23 11 00.1**	**+0.2**
SNST				*i*	S		**Sn**	**23 11 13.7**	**+0.3**
TWK	**Hsinying** baz=262	**1.06**	**264**	⇓*i*P			**Pn**	**23 11 00.0**	**+0.1**
TWK				*i*	S		**Sn**	**23 11 13.3**	**-0.2**
EWUT	**Wuta** baz=21	**1.06**	**7**	⇓*e*P			**Pn**	**23 10 59.7**	**-0.2**
NNSB	**Datong** baz=1.0	**1.07**	**347**	⇓*i*P			**Pn**	**23 10 59.5**	**-0.6**
NNSB					S		**Sn**	**23 11 11.5**	**-2.2**
NNSH	**Datong** baz=2.0	**1.07**	**347**	⇓*i*P			**Pn**	**23 10 59.5**	**-0.5**
CHN2	**Minshiung** baz=287	**1.08**	**278**	⇓P			**Pn**	**23 11 00.7**	**+0.6**
CHN2					S		**Sn**	**23 11 14.8**	**+1.0**
NNS	**Nan Shan** baz=1.0	**1.08**	**347**	⇓*i*P			**Pn**	**23 10 59.7**	**-0.6**
NNS					S		**Sn**	**23 11 11.8**	**-2.2**
WWF	**Wufeng** baz=309	**1.08**	**307**	⇓*i*P			**Pn**	**23 11 00.8**	**+0.7**
WWF					S		**Sn**	**23 11 14.8**	**+0.8**
EOS3	**EOS3** baz=36	**1.09**	**35**	⇑*e*P			**Pn**	**23 11 01.0**	**+0.9**
CHY	**Chiayi** baz=275	**1.12**	**276**	*e*P			**Pn**	**23 11 00.8**	**+0.2**
CHY					S		**Sn**	**23 11 15.0**	**+0.2**
SSD	**Sandimen** baz=230	**1.12**	**236**	⇓*e*P			**Pn**	**23 10 59.9**	**-0.8**
WYL	**Yuanlin Townsh** baz=291	**1.13**	**301**	⇓*i*P			**Pn**	**23 11 00.3**	**-0.4**
WYL				*e*	S		**Sn**	**23 11 14.1**	**-0.9**
TSMG	**Majia** baz=225	**1.14**	**234**	*e*P			**Pn**	**23 11 00.7**	**-0.2**
LATG	**Datong** baz=360	**1.15**	**355**	⇓P			**Pn**	**23 11 00.6**	**-0.7**
SCST	**Cishan** baz=242	**1.16**	**245**	⇓*e*P			**Pn**	**23 11 02.4**	**+1.2**
SCST				*e*	S		**Sn**	**23 11 18.7**	**+2.8**
TCU	**Taichung** baz=313	**1.16**	**311**	⇓*i*P			**Pn**	**23 11 02.1**	**+0.8**
TCU					S		**Sn**	**23 11 16.6**	**+0.7**
EOS2	**EOS2** baz=38	**1.17**	**28**	⇑*e*P			**Pn**	**23 11 02.4**	**+1.3**
WTK	**Tuku** baz=285	**1.19**	**285**	⇓*e*P			**Pn**	**23 11 01.6**	**+0.1**
ESAO	**Su ao** baz=22	**1.20**	**9**	*e*P			**Pn**	**23 11 02.1**	**+0.4**
MASBT	**Mashibuluo** baz=227	**1.20**	**231**	⇓P			**Pn**	**23 11 01.2**	**-0.6**
MASBT				*e*	S		**Sn**	**23 11 16.1**	**-0.7**
WCHH	**Zhanghua** baz=306	**1.21**	**305**	⇓*i*P			**Pn**	**23 11 02.5**	**+0.6**
WCHH					S		**Sn**	**23 11 17.3**	**+0.3**
CHN3	**Shinhua** baz=266	**1.21**	**256**	⇓P			**Pn**	**23 11 03.4**	**+1.5**
CHN3					S		**Sn**	**23 11 19.4**	**+2.4**
NDT	**Datong Townshi** baz=8.0	**1.22**	**355**	⇓P			**Pn**	**23 11 01.8**	**-0.3**
TAW	**Tawu** baz=211	**1.23**	**214**	⇑*e*P			**Pn**	**23 11 00.9**	**-1.3**
EAST	**Anshuo** baz=213	**1.23**	**216**	⇑*i*P			**Pn**	**23 11 01.1**	**-1.2**
TWC	**Suao** baz=23	**1.23**	**9**	⇓*i*P			**Pn**	**23 11 02.5**	**+0.2**
TWC				*e*	S		**Sn**	**23 11 18.1**	**+0.4**
SHHT	**Tainan City** baz=252	**1.24**	**253**	P			**Pn**	**23 11 04.0**	**+1.7**
SHHT				*e*	S		**Sn**	**23 11 20.7**	**+2.9**
SGLT	**Jiouru** baz=226	**1.24**	**238**	*e*P			**Pn**	**23 11 03.4**	**+1.1**
SGLT				*e*	S		**Sn**	**23 11 21.1**	**+3.2**
TWQ1	**Liyutan** baz=323	**1.25**	**321**	⇓*i*P			**Pn**	**23 11 03.5**	**+1.1**
TWQ1				*i*	S		**Sn**	**23 11 19.3**	**+1.3**
NDS	**Dongshan** baz=358	**1.25**	**3**	*e*P			**Pn**	**23 11 02.2**	**-0.2**
TAWH	**Dawu Township** baz=211	**1.25**	**214**	⇑P			**Pn**	**23 11 01.1**	**-1.3**
ICHU	**Yijhu** baz=268	**1.25**	**269**	⇓*i*P			**Pn**	**23 11 02.8**	**+0.4**
ICHU					S		**Sn**	**23 11 18.7**	**+0.7**
TWM1	**Shoushan** baz=241	**1.25**	**244**	⇑P			**Pn**	**23 11 04.4**	**+1.9**
ENTT	**Nioudou** baz=1.0	**1.25**	**357**	⇓*i*P			**Pn**	**23 11 02.3**	**-0.3**
ENTT				*e*	S		**Sn**	**23 11 17.2**	**-0.9**
TSPT	**Pingtung City** baz=223	**1.27**	**236**	*e*P			**Pn**	**23 11 04.8**	**+2.1**
TSPT				*e*	S		**Sn**	**23 11 21.9**	**+3.5**
SSHA	**Shanhua** baz=271	**1.27**	**259**	P			**Pn**	**23 11 03.7**	**+1.1**
SSHA					S		**Sn**	**23 11 20.4**	**+2.0**
WRL	**Guolierlin Hig** baz=295	**1.27**	**294**	⇓*e*P			**Pn**	**23 11 02.9**	**+0.2**
WRL					S		**Sn**	**23 11 19.4**	**+0.9**
RLNB	**Erlin** baz=294	**1.28**	**294**	⇓P			**Pn**	**23 11 03.0**	**+0.2**
RLNB					S		**Sn**	**23 11 19.3**	**+0.7**
WSL	**Shuilin Townsh** baz=276	**1.30**	**276**	*e*P			**Pn**	**23 11 03.2**	**0.0**
WSL				*e*	S		**Sn**	**23 11 19.4**	**+0.1**
YHNB	**Yeheng**	**1.30**	**349**				**Pn**	**23 11 03.2**	**0.0**
YHNB						Sn	**Sn**	**23 11 18.7**	**-0.8**
YHNB	**Yeheng**	**1.30**	**349**	P			**Pn**	**23 11 03.7**	**+0.4**
YHNB	**Yeheng** baz=353	**1.30**	**349**	⇓*i*P			**Pn**	**23 11 03.4**	**+0.1**
YHNB					S		**Sn**	**23 11 18.6**	**-0.8**
NSY	**Sanyi** baz=325	**1.30**	**322**	⇓*i*P			**Pn**	**23 11 04.3**	**+1.1**
NSY					S		**Sn**	**23 11 21.5**	**+2.1**
CHN8	**Yiju** baz=268	**1.31**	**269**	⇓P			**Pn**	**23 11 03.5**	**+0.3**
CHN8				*i*	S		**Sn**	**23 11 19.8**	**+0.3**
NSK	**Sanguang** baz=353	**1.31**	**349**	⇓*i*P			**Pn**	**23 11 03.5**	**+0.1**
NSK					S		**Sn**	**23 11 18.8**	**-0.9**
WSF	**Szhu** baz=281	**1.32**	**281**	*e*P			**Pn**	**23 11 03.3**	**-0.1**
WSF				*e*	S		**Sn**	**23 11 19.0**	**-0.9**
NFF	**Wufeng Townshi** baz=347	**1.33**	**339**	⇓*i*P			**Pn**	**23 11 04.1**	**+0.5**
NFF				*e*	S		**Sn**	**23 11 20.3**	**+0.2**
TWE	**Neicheng** baz=6.0	**1.33**	**1**	⇓*i*P			**Pn**	**23 11 03.4**	**-0.1**
WTCT	**Ta-ch'eng** baz=292	**1.33**	**291**	⇓P			**Pn**	**23 11 03.6**	**0.0**
WTCT					S		**Sn**	**23 11 20.0**	**-0.1**
LAY	**Lan-yu** baz=169	**1.34**	**183**	*e*P			**Pn**	**23 11 02.7**	**-1.0**
TAI1	**Yung-k'ang** baz=254	**1.34**	**256**	*e*P			**Pn**	**23 11 05.2**	**+1.5**
SCLT	**Jiali** baz=260	**1.34**	**261**	*e*P			**Pn**	**23 11 04.1**	**+0.4**
SCLT				*e*	S		**Sn**	**23 11 20.4**	**+0.1**
SNJT	**Kaohsiung City** baz=241	**1.35**	**243**	⇑*e*P			**Pn**	**23 11 05.9**	**+2.0**
SNJT				*e*	S		**Sn**	**23 11 24.1**	**+3.5**
WMLT	**Mailiao** baz=288	**1.36**	**288**	*e*P			**Pn**	**23 11 04.7**	**+0.7**
WMLT				*e*	S		**Sn**	**23 11 20.5**	**-0.3**
FUSB	**Fushanzhiwuyua** baz=2.0	**1.37**	**358**	⇓*i*P			**Pn**	**23 11 04.0**	**-0.1**
NSTT	**Nanjuang** baz=338	**1.37**	**335**	⇓*i*P			**Pn**	**23 11 05.2**	**+1.0**
NSTT					S		**Sn**	**23 11 20.6**	**-0.4**
LYUB	**Lan-yu** baz=169	**1.38**	**182**	⇓*e*P			**Pn**	**23 11 02.5**	**-1.7**
SCZT	**Fangliau** baz=218	**1.38**	**223**	⇑P			**Pn**	**23 11 04.1**	**-0.1**
SCZT				*e*	S		**Sn**	**23 11 22.6**	**+1.5**
ILA	**Ilan** baz=359	**1.38**	**4**	*e*P			**Pn**	**23 11 04.7**	**+0.4**
LIOB	**Emei** baz=338	**1.38**	**336**	⇓P			**Pn**	**23 11 05.3**	**+1.1**
LIOB					S		**Sn**	**23 11 22.4**	**+1.1**
NMLH	**Miaoli** baz=328	**1.39**	**326**	⇓*i*P			**Pn**	**23 11 05.3**	**+1.0**
NMLH					S		**Sn**	**23 11 22.9**	**+1.5**
NWLT	**Wulai** baz=10.0	**1.39**	**355**	⇓*e*P			**Pn**	**23 11 04.5**	**+0.1**
SLIU	**Shizi** baz=205	**1.40**	**214**	⇑*e*P			**Pn**	**23 11 03.4**	**-1.0**
NJD	**Zhudong** baz=328	**1.44**	**340**	*e*P			**Pn**	**23 11 06.8**	**+1.7**
TSCK	**Chigu Township** baz=260	**1.45**	**261**	*e*P			**Pn**	**23 11 05.8**	**+0.7**
TSCK				*e*	S		**Sn**	**23 11 23.9**	**+1.0**
KAU	**Kaohsiung** baz=236	**1.47**	**237**	*e*P			**Pn**	**23 11 07.5**	**+2.0**
NJN	**Zhunan** baz=334	**1.47**	**332**	*e*P			**Pn**	**23 11 06.5**	**+1.0**
NJN					S		**Sn**	**23 11 24.7**	**+1.2**
NTC	**Toucheng** baz=1.0	**1.48**	**7**	*e*P			**Pn**	**23 11 07.9**	**+2.4**
EGS	baz=3.0	**1.48**	**10**	*e*P			**Pn**	**23 11 06.7**	**+1.1**
HSN1	**Hsinchu** baz=330	**1.50**	**338**	*e*P			**Pn**	**23 11 07.2**	**+1.3**
HSN1					S		**Sn**	**23 11 26.2**	**+2.0**
SBCB	**Hsinchu** baz=339	**1.52**	**337**	⇓P			**Pn**	**23 11 07.3**	**+1.1**
SBCB					S		**Sn**	**23 11 26.5**	**+1.7**

baz=339
HSN Hsinchu 1.54 337 ⇓P Pn 23 11 07.5 +1.1
baz=328
HSN S Sn 23 11 26.8 +1.7
baz=328
SMST Manzhou Townsh 1.54 209 eP Pn 23 11 05.8 -0.7
baz=198
TWP Hsiaoliuchiu 1.56 229 ⇑P Pn 23 11 09.3 +2.6
baz=227
TWP eS Sn 23 11 30.3 +4.5
baz=227
NHDH Xindian Distri 1.58 356⇓eP Pn 23 11 07.6 +0.7
baz=359
NHDH eS Sn 23 11 26.1 0.0
baz=359
TWA Mucha 1.59 358⇓iP Pn 23 11 07.9 +0.7
baz=11
TATO Taipei 1.59 355 Pn 23 11 07.6 +0.5
TATO Taipei 1.59 355 P Pn 23 11 08.0 +0.9
TATO Taipei 1.59 355⇓iP Pn 23 11 07.8 +0.7
baz=7.0
TATO S Sn 23 11 25.9 -0.5
baz=7.0
TATO Taipei 1.59 355 P Pn 23 11 08.2 +1.0
JYNG Yonagunijimaku 1.60 48 iP Pn 23 11 08.8 +1.5
JYNG S Sn 23 11 27.7 +1.0
JYNG Yonagunijimaku 1.60 48 A A 23 11 08.8
comp=E,137nm,1.0s,comp=N,93nm,0.9s
HEN Hengchun 1.60 211 eP Pn 23 11 08.7 +1.4
baz=200
BACT New Taipei Cit 1.62 354 eP Pn 23 11 06.8 -0.7
baz=12
TSEB Hengchuen, Pin 1.63 205 ⇑P Pn 23 11 07.5 -0.1
baz=205
TSEB eS Sn 23 11 28.1 +0.7
baz=205
TWKBT Hengchun 1.63 208⇑eP Pn 23 11 07.1 -0.5
baz=206
TWKBT eS Sn 23 11 27.6 +0.2
baz=206
TWK1 Hengchun 1.63 208 eP Pn 23 11 07.5 -0.2
baz=198
NCUH Zhongli 1.63 345⇓eP Pn 23 11 08.7 +1.0
baz=348
NCU National Centr 1.63 345 eP Pn 23 11 08.9 +1.2
baz=348
NCU S Sn 23 11 29.7 +2.2
baz=348
NTY Taoyuan 1.64 349 eP Pn 23 11 08.9 +1.1
baz=5.0
NTY eS Sn 23 11 29.7 +2.1
baz=5.0
TWB1 Santiao Chiao 1.65 11⇑iP Pn 23 11 09.3 +1.4
baz=28
TWB1 eS Sn 23 11 29.4 +1.5
baz=28
YOJ Yonaguni jima 1.65 49 Pn 23 11 09.4 +1.4
YOJ Yonaguni jima 1.65 49 P Pn 23 11 09.9 +1.9
YOJ Yonaguni jima 1.65 49 ⇓P Pn 23 11 09.5 +1.5
baz=52
YOJ S Sn 23 11 29.2 +1.3
baz=52
YOJ Yonaguni jima 1.65 49 P Pn 23 11 09.4 +1.4
YOJ Yonaguni jima 1.65 49 P Pn 23 11 09.5 +1.5
YOJ S Sn 23 11 28.9 +1.0
YOJ Yonaguni jima 1.65 49 A A 23 11 09.5
comp=E,56nm,1.6s,comp=N,70nm,1.7s
TAP Taipei 1.65 356 eP Pn 23 11 08.3 +0.4
baz=359
NWF Wu-fen Shan 1.69 4 P Pn 23 11 09.3 +0.8
baz=8.0
WFSB Wu-fen Shan 1.69 4 eP Pn 23 11 09.4 +1.0
baz=8.0
NHW Xinwu Township 1.70 342 eP Pn 23 11 09.5 +0.8
baz=328
NHW eS Sn 23 11 31.1 +1.9
baz=328
SXI1 Grass Mountain 1.72 7⇓eP Pn 23 11 09.8 +0.8
baz=357
SXI1 S Sn 23 11 32.0 +2.3
baz=357
TWS1 Kuangyinshan 1.72 353 P Pn 23 11 09.9 +0.9
baz=11
YM01 YM01 1.76 358⇓eP Pn 23 11 09.8 +0.3
baz=1.0
TNOU National Taiwa 1.76 4 eP Pn 23 11 09.7 +0.2
baz=7.0
NTST Danshui 1.78 354 eP Pn 23 11 10.3 +0.5
baz=11
YM08 YM08 1.80 359⇓eP Pn 23 11 09.9 -0.1
baz=2.0
ANP Anpu 1.80 357 eP Pn 23 11 10.1 +0.1
baz=360
NWRT Kuosheng 1.81 1 eP Pn 23 11 10.6 +0.4
baz=4.0
WDGT Dungji 1.82 267⇓iP Pn 23 11 09.9 -0.4
baz=266
WDGT eS Sn 23 11 29.8 -2.4
baz=266
TWY Chenhua 1.88 359 eP Pn 23 11 11.9 +0.7
baz=2.0
NSM Shimen 1.90 359 eP Pn 23 11 12.1 +0.8
baz=2.0
PHUB P'eng-hu 1.90 274 ⇓P Pn 23 11 10.9 -0.5
baz=261
PHUB eS Sn 23 11 31.4 -2.7
baz=261
PNG Penghu 1.92 276⇓iP Pn 23 11 11.3 -0.4
baz=275
PNG eS Sn 23 11 32.6 -2.0
baz=275
VCHM Qimei 2.04 266 ⇓P Pn 23 11 12.8 -0.5
baz=265
VCHM eS Sn 23 11 34.7 -2.8
baz=265
HATJ Hateruma jima 2.10 71 P Pn 23 11 15.5 +1.4
HATJ S Sn 23 11 40.2 +1.3
HATJ Hateruma jima 2.10 71 A A 23 11 15.5
comp=E,71nm,1.9s,comp=N,41nm,2.0s
PCYT Pengchaiyu 2.27 10 eP Pn 23 11 17.5 +1.0
baz=2.0
JKRS Kuro-shima 2.33 68 iP Pn 23 11 19.1 +1.8
JKRS S Sn 23 11 46.8 +2.0
JKRS Kuro-shima 2.33 68 A A 23 11 19.1
comp=E,40nm,1.6s,comp=N,48nm,2.4s
JIJ Ishigaki jima 2.49 66 iP Pn 23 11 20.6 +1.1
JIJ S Sn 23 11 49.5 +0.8
JIJ Ishigaki jima 2.49 66 A A 23 11 20.6
comp=E,14nm,2.5s,comp=N,13nm,0.7s
VWUC VWUC 2.56 309⇓eP Pn 23 11 19.6 -0.9
baz=309
JISG Ishigakijimahi 2.72 63 iP Pn 23 11 23.7 +1.0
JISG S Sn 23 11 54.6 +0.3
JISG Ishigakijimahi 2.72 63 A A 23 11 23.7
comp=E,25nm,0.8s,comp=N,21nm,0.6s
PTMZ Houxiangcun 2.83 306⇓eP Pn 23 11 23.5 -0.7
baz=306
JTJ Tarama 3.07 65 P Pn 23 11 28.5 +1.1
JTJ S Sn 23 12 03.6 +0.7
JTJ Tarama 3.07 65 A A 23 11 28.5
comp=E,25nm,1.1s,comp=N,18nm,1.4s
KNM Kinmen 3.11 290⇓eP Pn 23 11 28.5 +0.5
baz=288
MATB Ma-tsu 3.16 331⇓eP Pn 23 11 27.6 -1.1
baz=332
KNMB Chin-men Tao 3.16 291 Pn 23 11 27.6 -1.1
KNMB Chin-men Tao 3.16 291⇓eP Pn 23 11 27.6 -1.1
baz=289
MSUT Lienchiang 3.18 331 eP Pn 23 11 28.2 -0.8
baz=332
QZH Quanzhou 3.19 300⇓iPn Pn 23 11 28.1 -1.0
QZH Sn Sn 23 12 02.6 -3.2
QZH smax smax
comp=N,4μm,0.4s
QZH smax smax
comp=N,5μm,0.7s
QZH LR LR
comp=N,21μm,14.6s
JIRB Irabujima 3.54 65 P Pn 23 11 35.0 +1.1
JIRB S Sn 23 12 15.1 +0.6
JIRB Irabujima 3.54 65 A A 23 11 35.0
comp=E,12nm,2.2s,comp=N,11nm,1.1s
LYJJ Jianjiangzhen 3.58 332⇓eP Pn 23 11 33.8 -0.7
baz=333
LYJJ eS Sn 23 12 13.0 -2.6
baz=333
ZPLA Ao Xicun 3.61 279 eP Pn 23 11 33.9 -1.0
baz=278
JMJ Miyako jima 2 3.63 66 P Pn 23 11 37.0 +1.8
JMJ Miyako jima 2 3.63 66 ⇓P Pn 23 11 36.9 +1.7
baz=68
JMJ eS Sn 23 12 16.9 +0.1
baz=68
JMJ2 Miyako jima3 3.63 67 P Pn 23 11 36.6 +1.3
JMJ2 S Sn 23 12 18.4 +1.6
JMJ2 Miyako jima3 3.63 67 A A 23 11 36.6
comp=E,14nm,2.7s,comp=N,14nm,4.0s
JIKM Ikemajima 3.64 64 P Pn 23 11 36.5 +1.2
JIKM S Sn 23 12 17.8 +0.8
JIKM Ikemajima 3.64 64 A A 23 11 36.5
comp=E,13nm,5.2s,comp=N,10.0nm,1.4s
AXDP Jialang 3.67 295⇓eP Pn 23 11 34.9 -0.9
baz=294
JOGS Gusukube 3.71 68 P Pn 23 11 37.9 +1.7
JOGS S Sn 23 12 20.2 +1.5
JOGS Gusukube 3.71 68 A A 23 11 37.9
comp=E,16nm,4.2s,comp=N,12nm,3.9s
XPSS Dashiqiu 3.77 340⇓eP Pn 23 11 36.1 -1.0
baz=341
DSXP Dongshan 3.88 276⇓eP Pn 23 11 37.7 -0.9
baz=274
SXFK Yanhouchang 4.71 310⇓eP Pn 23 11 49.3 -0.7
baz=311
VDOS Pratas Island 5.28 241 eP Pn 23 11 59.3 +1.5
baz=240
JOW Kunigami 6.93 59 Pn Pn 23 12 19.7 -0.7
JOW Kunigami 6.93 59 P Pn 23 12 20.9 +0.4
JOW Kunigami 6.93 59 eP Pn 23 12 19.8 -0.7
baz=70
JOW Kunigami 6.93 59 P Pn 23 12 19.3 -1.2
comp=N,18nm,0.3s,baz=170,slow=11,SNR=37
JOW S Sn 23 13 35.0 -3.0
comp=N,65nm,0.4s,baz=321,slow=29,SNR=6.1
comp=N,48nm,0.3s
HKPS Hong Kong Po S 7.00 262 Pn Pn 23 12 22.0 +0.4
HKPS Hong Kong Po S 7.00 262 P Pn 23 12 22.4 +0.8
HKPS Hong Kong Po S 7.00 262 eP Pn 23 12 22.0 +0.4
baz=261
GZH Guangzhou 7.63 269 Pn Pn 23 12 26.5 -3.7
GZH smax smax
comp=N,720nm,0.7s
GZH smax smax
comp=N,820nm,0.9s
SSE Sheshan 7.69 357 Pn Pn 23 12 30.1 -0.9
SSE Sn Sn 23 13 54.3 -2.6
SSE smax smax
comp=N,110nm,0.8s
SSE smax smax
comp=N,120nm,0.8s
SSE LR LR
comp=N,1μm,15.5s
SSE LR LR
comp=N,2μm,15.9s
NJ2 Nanjing 8.98 345 ⇑P Pn 23 12 47.8 -0.8
NJ2 S Sn 23 14 23.1 -5.4
NJ2 smax smax
comp=N,480nm,1.1s
NJ2 smax smax
comp=N,380nm,1.1s
NJ2 LR LR
comp=N,3μm,7.6s
NJ2 LR LR
comp=N,3μm,6.9s
NJ2 LR LR
comp=N,3μm,13.0s
JMZ Minamidaito 2 9.05 73 Pn Pn 23 12 50.5 +0.8
CNSH ChangSha 9.19 303 ⇑P Pn 23 12 50.4 -1.1
CNSH S Sn 23 14 25.6 -8.0
CNSH smax smax
comp=N,2μm,0.8s
CNSH smax smax
comp=N,1μm,1.3s
TGY Tagaytay City 9.26 184 P Pn 23 12 56.8 +4.2
comp=N,108nm,0.3s,baz=351,slow=9.2,SNR=5.8
TGY LR LR 23 16 36.3
comp=N,2μm,20.6s,baz=52,slow=38
WHN Wuhan 9.65 319 P Pn 23 12 56.4 -1.4
WHN pP 23 13 02.0
WHN S Sn 23 14 41.1 -3.8
WHN sS 23 14 54.5
WHN pmax pmax
comp=N,1μm,4.0s
WHN LR LR
comp=N,11μm,6.6s
WHN LR LR
comp=N,7μm,4.6s
WHN LR LR
comp=N,16μm,10.6s
GULI GuiLin 10.45 283 P Pn 23 13 06.6 -2.3
GULI pmax pmax
comp=N,30nm,1.2s
GULI LR LR
comp=N,3μm,14.1s
GULI LR LR
comp=N,5μm,15.2s
GULI LR LR
comp=N,6μm,15.2s
QIZ Qiongzhong 11.82 251 P Pn 23 13 27.9 +0.2
QIZ S Sn 23 15 40.3 +1.9
QIZ pmax pmax
comp=N,15nm,1.3s
QIZ LR LR
comp=N,3μm,16.7s
QIZ LR LR
comp=N,2μm,15.9s
QIZ LR LR
comp=N,3μm,17.0s
QIZ Qiongzhong 11.82 251 Pn 23 13 28.3 +0.7
JNU Nakatsue 12.66 38 Pn Pn 23 13 40.3 +1.2
JNU Nakatsue 12.66 38 P Pn 23 13 41.5 +2.4
JNU Nakatsue 12.66 38 P Pn 23 13 39.0 -0.1
comp=N,0.6nm,0.3s,baz=170,slow=4.4,SNR=12
comp=N,19nm,0.8s
ENH Enshi 12.83 305 Pn Pn 23 13 41.4 0.0
JTU Tsushima 13.01 30 Pn Pn 23 13 45.0 +1.2
TIA Tai'an 13.37 344 P P 23 13 54.5 -3.2
TIA S S 23 16 28.3 -11
TIA pmax pmax
comp=Z,98nm,4.4s
TIA pmax pmax
comp=Z,8.0nm,0.7s
TIA LR LR
comp=N,900nm,9.2s
TIA LR LR
comp=E,930nm,7.1s
TIA LR LR
comp=Z,1μm,13.3s
LYN LuoYang 13.71 326 ⇑P Pn 23 13 56.6 +3.2
LYN PP P 23 14 04.8 +3.3
LYN S Sn 23 16 31.5 +7.1
LYN SS S 23 16 45.1 -1.1
LYN pmax pmax
comp=Z,32nm,1.5s
LYN pmax pmax
comp=Z,370nm,4.3s
LYN LR LR
comp=Z,8μm,12.9s
LYN LR LR
comp=Z,2μm,9.3s
LYN LR LR
comp=Z,8μm,14.1s
TJN Taejon 13.86 20 Pn Pn 23 13 55.6 +0.1
TJN Taejon 13.86 20 P Pn 23 13 58.3 +2.9
TJN Taejon 13.86 20 P Pn 23 13 55.6 +0.1
GYA Guiyang 13.93 286 ⇑iP Pn 23 13 56.8 +0.3
GYA S Sn 23 16 30.8 +0.8
GYA pmax pmax
comp=Z,39nm,1.4s
GYA pmax pmax
comp=Z,250nm,4.0s
GYA LR LR
comp=Z,3μm,10.2s
GYA LR LR
comp=Z,6μm,13.6s
GYA LR LR
comp=Z,7μm,18.8s
INCN Inchon 14.69 16 P P 23 14 09.9 -2.6
KSAR Wonju Array Be 15.01 20 P 23 14 14.0 -1.9
KSAR Wonju Array Be 15.01 20 P P 23 14 14.0 -1.9
KSRS Korea Array 15.03 20 P Pn 23 14 12.2 +1.0
comp=Z,36nm,0.8s,baz=200,slow=13,SNR=48
KSRS LR LR 23 20 59.9
comp=Z,912nm,18.8s,baz=200,slow=41
KS19 Wonju Array Si 15.05 19 P P 23 14 14.2 -2.3
HNS HongShan 15.19 338 ⇓P Pn 23 14 15.4 +2.1
HNS PP pP 23 14 27.8 +0.7
HNS S Sn 23 17 06.8 +6.5
HNS SS S 23 17 19.8 +3.5
HNS pmax pmax
comp=Z,37nm,1.2s
HNS pmax pmax
comp=Z,400nm,4.5s
HNS LR LR
comp=Z,2μm,15.9s
HNS LR LR
comp=Z,3μm,13.5s
XAN Xi'an 15.38 316 ⇓P Pn 23 14 15.8 -0.2
XAN pP P 23 14 21.8 +1.6
XAN PP pP 23 14 28.6 -1.2
XAN S Sn 23 17 06.1 +0.8
XAN sS S 23 17 13.4 -7.2
XAN pmax pmax
comp=Z,50nm,1.4s
XAN pmax pmax
comp=Z,470nm,4.8s
XAN LR LR
comp=Z,4μm,11.0s
XAN LR LR
comp=Z,6μm,15.5s
XAN LR LR
comp=Z,10μm,16.2s
DL2 Dalian 15.47 360 P P 23 14 25.3 +4.2
DL2 S S 23 17 23.9 +1.7
DL2 pmax pmax
comp=Z,47nm,1.1s
DL2 pmax pmax
comp=Z,260nm,5.7s
DL2 LR LR
comp=N,710nm,18.9s
DL2 LR LR
comp=E,2μm,18.5s
DL2 LR LR
comp=Z,1μm,14.2s
TIY Taiyuan 16.32 333 ⇑P P 23 14 31.3 +0.7
TIY SS S 23 17 49.8 +10
TIY pmax pmax
comp=Z,16nm,0.6s
TIY pmax pmax
comp=Z,360nm,3.6s
TIY LR LR
comp=Z,2μm,8.6s
TIY LR LR
comp=Z,2μm,9.6s
TIY LR LR
comp=Z,3μm,14.7s
SLVN Son La 16.53 266 P P 23 14 32.4 -0.6
DAV Davao City (W) 16.66 166 LR LR 23 20 37.8
comp=Z,976nm,20.6s,baz=343,slow=36
DLV T Lat 16.91 230 P 23 14 37.5 +0.1
DLV T Lat 16.91 230 P Pn 23 14 35.0 -0.7
BJT Baijiatuao 17.22 346 P Pn 23 14 39.3 +0.1
BJT Baijiatuao 17.22 346 P Pn 23 14 39.3 +0.1
BJT pmax pmax
comp=Z,44nm,1.4s
BJI Beijing 17.24 346 P P 23 14 41.3 +0.7
BJI sP pP 23 14 47.4 -2.5
BJI S S 23 17 54.3 -3.9
BJI pmax pmax
comp=Z,12nm,1.3s
BJI LR LR
comp=Z,670nm,13.6s
BJI LR LR
comp=Z,360nm,15.3s
BJI LR LR
comp=Z,680nm,13.2s
KMI Kunming 17.32 280 ⇑P P 23 14 44.5 +2.5
KMI S S 23 17 58.5 -2.0
KMI pmax pmax
comp=Z,32nm,0.9s
KMI pmax pmax
comp=Z,200nm,4.2s
KMI LR LR
comp=Z,1μm,17.4s
KMI LR LR
comp=Z,3μm,16.9s
KMI LR LR
comp=Z,4μm,17.8s
CD2 Chengdu 17.58 299 P Pn 23 14 43.9 +0.1
CD2 pP pP 23 14 51.1 -2.8
CD2 sP sP 23 14 54.3 -4.3
CD2 S Sn 23 18 00.8 +2.3
CD2 sS S 23 18 07.5 +2.1
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,370nm,7.9s
CD2 LR LR
comp=Z,3μm,10.1s
CD2 LR LR
comp=Z,4μm,16.7s
CD2 LR LR
comp=Z,5μm,14.6s
INU Inuyama 17.91 45 P 23 14 49.5 +1.3
INU Inuyama 17.91 45 P P 23 14 50.7 +2.6
KKM Kota Kinabalu 18.01 198 P 23 14 50.6 +1.1
NONG Nongkai 18.08 256 P P 23 14 51.7 +1.5
JGF Kuroka 18.29 45 P Pn 23 14 52.9 +0.5
PZH PanZhiHua 18.31 284 P Pn 23 14 55.5 +2.7
PZH PP sP 23 15 08.3 +1.2
PZH S Sn 23 18 12.3 -4.1
PZH sS S 23 18 23.5 +3.2
PZH SS SnSn 23 18 37.6 +7.4
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,220nm,5.7s
PZH LR LR
comp=Z,2μm,12.9s
PZH LR LR
comp=Z,3μm,15.9s
PZH LR LR
comp=Z,4μm,15.7s
SNY Shenyang 18.46 5 ⇓P Pn 23 14 55.5 +1.0
SNY pmax pmax
comp=Z,11nm,0.7s
SNY LR LR
comp=Z,710nm,12.3s
SNY LR LR
comp=Z,580nm,12.1s
SNY LR LR
comp=Z,1μm,14.2s
JHJ Hachijo jima 2 18.67 55 P P 23 14 54.8 -1.8
comp=Z,8.8nm,0.3s,baz=182,slow=1.8,SNR=2.1
JHJ LR LR 23 21 45.0
comp=Z,741nm,21.9s,baz=262,slow=36
comp=Z,215nm,0.9s
JCJ Chichijima 18.95 74 Pn 23 15 00.7 +0.2
JCJ Chichijima 18.95 74 P Pn 23 15 02.7 +2.2
JCJ Chichijima 18.95 74 P P 23 14 57.6 -2.0
comp=Z,4.0nm,0.3s,baz=270,slow=6.9,SNR=5.4
JCJ LR LR 23 21 18.5
comp=Z,392nm,18.8s,baz=275,slow=34
comp=Z,329nm,1.1s
HHC Hu-ho-hao-te 19.37 336⇑iP Pn 23 15 06.4 +0.9
HHC sP pP 23 15 16.0 +2.6
HHC PP sP 23 15 22.8 +3.7
HHC S Sn 23 18 45.0 +3.3
HHC SS SnSn 23 19 02.6 +6.4
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,250nm,3.8s
HHC LR LR
comp=Z,1μm,15.3s
HHC LR LR
comp=Z,870nm,17.8s
HHC LR LR
comp=Z,2μm,16.1s
MAJO Matsushiro 19.41 44 P Pn 23 15 05.7 -0.2
MAJO Matsushiro 19.41 44 P Pn 23 15 07.6 +1.7
MAJO Matsushiro 19.41 44 iP P 23 15 04.1 -0.5
MJB9 Matsu-Tunnel 19.41 44 Pn 23 15 05.4 -0.5
MJAR Matsushiro Arr 19.41 44 P P 23 15 02.9 -1.7
comp=Z,0.1nm,0.3s,baz=235,slow=9.5,SNR=20
MJAR LR LR 23 22 44.9
comp=Z,726nm,21.9s,baz=221,slow=37
comp=Z,14nm,0.8s
BTO Baotou 19.76 333 eP Pn 23 15 11.5 +1.3
BTO pP pP 23 15 19.8 +1.9

BTO PP PnPn 23 15 30.3 +5.8
BTO SS Sn 23 19 11.6 +20
BTO pmax pmax
comp=Z,37nm,0.8s
BTO pmax pmax
comp=Z,860nm,3.9s
BTO LR LR
comp=Z,7μm,12.8s
BTO LR LR
comp=Z,4μm,15.7s
BTO LR LR
comp=Z,9μm,13.1s
LZH Lanzhou 19.93 313 *e*P **Pn 23 15 13.3 +1.0**
LZH pP pP 23 15 18.5 -1.6
LZH S **Sn 23 18 54.8 -0.8**
LZH SS **SnSn 23 19 16.0 +5.8**
LZH pmax pmax
comp=Z,86nm,1.4s
LZH LR LR
comp=Z,3μm,12.7s
LZH LR LR
comp=Z,3μm,12.4s
LZH LR LR
comp=Z,5μm,12.0s
CRAI Chiangrai 19.99 265 Pn 23 15 12.5 -0.5
CN2 Changchun 20.61 8 *e*P Pn 23 15 18.8 -1.1
CN2 *ep*P pP 23 15 26.8 +0.8
CN2 *e*S **S 23 19 02.3 -3.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,700nm,13.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,600nm,14.0s
XLT XiLinHaoTe 20.97 349 *e*P **P 23 15 21.5 -0.1**
XLT pP pP 23 15 28.0 -3.0
XLT S **S 23 19 13.3 0.0**
XLT sS Sn 23 19 21.8 +1.6
XLT PcP **PcP 23 19 28.6 +0.5**
XLT SS **SnSn 23 19 40.1 +4.6**
XLT pmax pmax
comp=Z,29nm,0.9s
XLT pmax pmax
comp=Z,130nm,4.5s
XLT LR LR
comp=Z,77nm,7.5s
XLT LR LR
comp=Z,730nm,13.4s
XLT LR LR
comp=Z,980nm,12.7s
TNCH TengChong 21.15 279 ⇑P **P 23 15 25.1 +1.3**
TNCH pP pP 23 15 27.8 -5.7
TNCH sP sP 23 15 31.1 -7.1
TNCH PP **PnPn 23 15 49.8 +6.2**
TNCH S **S 23 19 13.4 -3.9**
TNCH SS **SnSn 23 19 46.3 +6.3**
TNCH pmax pmax
comp=Z,38nm,1.1s
TNCH LR LR
comp=Z,830nm,8.6s
TNCH LR LR
comp=Z,2μm,13.5s
TNCH LR LR
comp=Z,3μm,16.6s
NAYO Nakonayok 21.22 248 P P 23 15 26.4 +2.1
CHTO Chiang Mai 21.65 262 P P 23 15 29.6 +0.6
CHTO Chiang Mai 21.65 262 P P 23 15 30.5 +1.5
CHTO Chiang Mai 21.65 262 P P 23 15 29.6 +0.6
CHTO pmax pmax
comp=Z,38nm,1.0s
CHTO Chiang Mai 21.65 262 P P 23 15 30.6 +1.6
CHTO P P **23 15 30.6 +1.6**
CM31 Chiang Mai Arr 21.75 261 P P 23 15 31.3 +1.3
CM31 Chiang Mai Arr 21.75 261 P P 23 15 31.2 +1.1
SNR=17
CM31 P P **23 15 31.2 +1.1**
SNR=17
CMAR Chiang Mai Arr 21.75 261 P P 23 15 31.1 +1.0
CMAR Chiang Mai Arr 21.75 261 P P 23 15 31.1 +1.0
CMAR Chiang Mai Arr 21.75 261 P P 23 15 30.0 -0.1
comp=Z,28nm,1.1s,baz=66,slow=8.9,SNR=55
CMAR PcP **PcP 23 19 29.8 -0.2**
comp=Z,2.3nm,0.4s,baz=38,slow=0.9,SNR=14
CMAR ScP **ScP 23 23 03.3 -1.2**
comp=Z,1.0nm,0.3s,baz=96,slow=1.8,SNR=4.2
CMAR LR LR 23 24 46.9
comp=Z,2μm,18.3s,baz=75,slow=39
comp=Z,28nm,1.1s
TOLI2 Tolitoli 22.16 182 P P 23 15 33.5 -0.9
TOLI2 IAmb IAmb 23 15 36.9
comp=Z,54nm,0.8s
TOLI2 Tolitoli 22.16 182 P P 23 15 35.6 +1.2
MDJ Mudanjiang 22.16 15 P P 23 15 33.9 -0.3
MDJ pP pP 23 15 36.8 -6.2
MDJ S **S 23 19 33.4 -2.9**
MDJ PcS **PcS 23 23 15.3 +6.5**
MDJ ScS **ScS 23 26 57.5 +7.7**
MDJ pmax pmax
comp=Z,8.0nm,0.9s
MDJ pmax pmax
comp=Z,140nm,5.8s
MDJ LR LR
comp=Z,1μm,15.8s
MDJ LR LR
comp=Z,1μm,15.1s
MDJ LR LR
comp=Z,1μm,15.8s
MDJ Mudanjiang 22.16 15 P P 23 15 33.7 -0.6
USA0B Ussuriysk Arra 22.44 20 P P 23 15 37.2 0.0
USA0B Ussuriysk Arra 22.44 20 *i*P **P 23 15 36.4 -0.8**
USRK Ussuriysk Ar. 22.44 20 P P 23 15 37.5 +0.3
USRK Ussuriysk Ar. 22.44 20 P P 23 15 37.5 +0.3
USRK Ussuriysk Ar. 22.44 20 P P 23 15 35.1 -2.1
comp=Z,11nm,0.8s,baz=206,slow=9.3,SNR=19
comp=Z,11nm,0.8s
GTOI Gorontalo 22.65 176 P P 23 15 39.1 -0.6
comp=Z,40nm,0.8s,comp=Z,428nm
SBUM Sibu 22.72 205 P P 23 15 39.9 -0.6
SBUM IAmb IAmb 23 15 43.1
comp=Z,65nm,0.9s
MRSI Marisa 22.77 179 P P 23 15 42.5 +1.5
comp=Z,112nm,0.7s,comp=Z,1μm
BNX BinXian 22.79 10 ⇓P **P 23 15 40.3 -0.6**
BNX pP **pP 23 15 48.5 -1.1**
BNX sP **pwP 23 15 52.9 -0.3**
BNX PP **PnPn 23 16 05.6 -0.1**
BNX S **S 23 19 47.9 +0.4**
BNX pmax pmax
comp=Z,12nm,0.7s
BNX pmax pmax
comp=Z,95nm,5.4s
BNX LR LR
comp=Z,350nm,11.7s
BNX LR LR
comp=Z,460nm,13.6s
BNX LR LR
comp=Z,720nm,13.6s
MPSI Mapaga 22.97 184 P P 23 15 43.6 +0.6
comp=Z,82nm,0.7s,comp=Z,974nm
SRDT SRDT 23.10 251 P P 23 15 45.0 +0.6
TNTI Ternate 23.16 165 P P 23 15 43.8 -1.1
TNTI IAmb IAmb 23 16 02.7
comp=Z,41nm,1.0s
TNTI Ternate 23.16 165 P P 23 15 44.4 -0.5
MND Mandalay 23.58 272 P P 23 15 50.1 +1.1
GUMO Guam 24.06 110 P P 23 15 54.4 +0.8
GUMO Guam 24.06 110 P P 23 15 55.3 +1.7
GUMO Guam 24.06 110 P P 23 15 54.4 +0.8
GUMO pmax pmax
comp=Z,561nm,0.9s
GUMO Guam 24.06 110 LR LR 23 23 15.8
comp=Z,691nm,21.2s,baz=287,slow=31
LUWI Luwuk 24.30 177 P P 23 15 54.3 -1.5
LUWI Luwuk 24.30 177 P P 23 15 55.8 0.0
LUWI Luwuk 24.30 177 P P 23 15 55.5 -0.3
comp=Z,199nm,1.2s,comp=Z,2μm
KSM Kuching 24.40 208 P P 23 15 56.8 +0.1
KSM Kuching 24.40 208 P P 23 15 57.4 +0.7
GTA Gaotai 24.45 316 *e*P **P 23 15 56.8 -0.3**
GTA sP pP 23 16 04.8 -2.5
GTA PcP **PcP 23 19 34.9 -0.5**
GTA S **S 23 20 12.5 -2.4**
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,220nm,6.2s
GTA LR LR
comp=Z,1μm,15.6s
GTA LR LR
comp=Z,2μm,15.6s
GTA LR LR
comp=Z,3μm,16.0s
LBMI Labuha 24.55 166 P P 23 15 59.0 +1.0
comp=Z,162nm,0.9s,comp=Z,2μm
BKB Balikpapan 24.93 191 P P 23 16 01.3 -0.2
BKB Balikpapan 24.93 191 P P 23 16 01.4 -0.1
BKB Balikpapan 24.93 191 P P 23 16 01.6 +0.1
comp=Z,126nm,0.9s,comp=Z,2μm
MTKI Muara Teweh, K 25.05 196 P P 23 16 03.6 +1.0
comp=Z,50nm,0.8s
STKI Sintang 25.19 204 P P 23 16 04.8 +0.9
comp=Z,102nm,1.5s
SURA Surathani 25.36 240 P P 23 16 06.8 +1.3
SANI Sanana 25.63 170 P P 23 16 05.8 -2.1
comp=Z,57nm,0.8s,comp=Z,450nm
SRIT Nakonsritamara 25.73 239 P P 23 16 09.2 +0.5
SRIT Nakonsritamara 25.73 239 P P 23 16 10.3 +1.5
ERM Erimo 25.82 39 *i*P **P 23 16 11.4 +2.0**
SKLT Songkhla 25.84 235 P P 23 16 11.3 +1.5
HIA Hailar 25.88 357 P P 23 16 09.5 -0.4
HIA Hailar 25.88 357 *i*P **P 23 16 08.6 -1.2**
HIA pmax pmax
comp=Z,18nm,1.1s
TTSI Tana Toraja 26.33 184 P P 23 16 15.4 +1.2
comp=Z,33nm,0.6s,comp=Z,1μm
GOMU GeErMu 26.45 305 P P 23 16 16.4 +0.8
GOMU pP pP 23 16 19.8 -6.0
GOMU PcP **PcP 23 19 40.9 +0.6**
GOMU S **S 23 20 53.9 +6.5**
GOMU pmax pmax
comp=Z,5.0nm,1.2s
GOMU LR LR
comp=Z,1μm,16.3s
GOMU LR LR
comp=Z,2μm,16.9s
GOMU LR LR
comp=Z,4μm,16.2s
ASAJ Asahikawa 26.90 35 LR LR 23 28 23.7
comp=Z,734nm,19.2s,baz=232,slow=40
NLAI Namlea 26.99 168 P P 23 16 21.7 +1.6
comp=Z,73nm,0.9s,comp=Z,5μm
KLR Kul'dur 27.00 15*ce*P **P 23 16 20.2 +0.2**
KLR pmax pmax
comp=Z,22nm,1.3s
KLR Kul'dur 27.00 15 P **P 23 16 19.4 -0.6**
comp=Z,11nm,0.5s,baz=188,slow=6.2,SNR=37
KLR PcP **PcP 23 19 39.4 -1.4**
comp=Z,3.7nm,0.8s,baz=279,slow=3.7,SNR=4.8
KLR LR LR 23 28 09.1
comp=Z,694nm,19.6s,baz=198,slow=39
comp=Z,11nm,0.5s
ULN Ulaanbaatar 27.06 338 P P 23 16 20.1 -0.6
ULN Ulaanbaatar 27.06 338 *i*P **P 23 16 19.5 -1.2**
ULN pmax pmax
comp=Z,13nm,0.9s
ULN Ulaanbaatar 27.06 338 P P 23 16 20.5 -0.2
ULN P P **23 16 20.5 -0.2**
KULM Kulim 27.07 232 P P 23 16 21.7 +0.8
KULM IAmb IAmb 23 16 23.1
comp=Z,70nm,1.4s
SHL Shillong 27.14 281 P P 23 16 21.8 0.0
SHL IAmb IAmb 23 16 38.9
comp=Z,31nm,0.9s
SHL Shillong 27.14 281 P P 23 16 21.8 0.0
SHL pmax pmax
comp=Z,31nm,0.9s
SHL Shillong 27.14 281 P P 23 16 24.1 +2.3
SNR=17
HEH HeiHe 27.20 8 *e*P **P 23 16 21.0 -0.7**
HEH sP **pP 23 16 31.9 +1.1**
HEH S **S 23 21 00.1 +2.0**
HEH pmax pmax
comp=Z,12nm,0.8s
HEH pmax pmax
comp=Z,280nm,5.5s
HEH LR LR
comp=Z,850nm,14.2s
HEH LR LR
comp=Z,420nm,12.3s
HEH LR LR
comp=Z,1μm,14.4s
SONM Songino Array 27.26 337 P P 23 16 21.8 -0.7
SONM IAmb IAmb 23 16 54.0
comp=Z,66nm,1.8s
SONM Songino Array 27.26 337 P P 23 16 21.5 -1.0
comp=Z,6.7nm,0.7s,baz=153,slow=9.4,SNR=58
SONM PcP **PcP 23 19 40.5 -1.1**
comp=Z,1.4nm,0.8s,baz=151,slow=4.1,SNR=2.4
SONM ScP **ScP 23 23 16.7 -2.7**
comp=Z,0.8nm,0.7s,baz=170,slow=2.5,SNR=3.7
SONM LR LR 23 28 27.0
comp=Z,2μm,18.0s,baz=150,slow=39
comp=Z,6.7nm,0.7s
IPM Ipoh 27.37 230 P P 23 16 23.6 -0.1
IPM IAmb IAmb 23 16 24.9
comp=Z,51nm,1.0s
IPM Ipoh 27.37 230 P P 23 16 23.8 +0.2
MYKOM Kota Tinggi 27.54 221 P P 23 16 25.6 +0.6
TPRI Tanjung Pinang 27.83 219 P P 23 16 28.5 +0.8
comp=Z,59nm,1.1s,comp=Z,4μm
LSA Lhasa 27.94 290 P P 23 16 29.8 +0.6
LSA Lhasa 27.94 290 P P 23 16 29.8 +0.6
LSA pmax pmax
comp=Z,18nm,0.8s
FAKI Fak Fak 28.11 157 P P 23 16 30.9 +0.7
FAKI IAmb IAmb 23 16 44.5
comp=Z,34nm,0.9s
KAPI Kappang 28.29 184 P P 23 16 30.6 -1.0
KAPI IAmb IAmb 23 16 37.4
comp=Z,22nm,0.7s
KAPI Kappang 28.29 184 P P 23 16 30.7 -1.0
KAPI pmax pmax
comp=Z,22nm,0.7s
BKSI Bulukumba 28.57 183 P P 23 16 35.0 +0.8
comp=Z,17nm,0.7s
YSS Yuzh-Sakhalins 29.00 31 P P 23 16 41.8 +4.0
YSS Yuzh-Sakhalins 29.00 31 *e*P **P 23 16 42.1 +4.3**
YSS *e*S **S 23 21 31.1 +4.7**
YSS pmax pmax
comp=Z,200nm,3.8s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,600nm,21.0s
PPBI Pangkal Pinang 29.54 213 P P 23 16 44.1 +1.2
comp=Z,97nm,0.9s,comp=Z,5μm
PSI Prapat 30.03 230 P P 23 16 48.6 +1.2
PSI Prapat 30.03 230 P P 23 16 47.7 +0.3
PSI pmax pmax
comp=Z,50nm,1.1s
RPSI Rantau Prapat 30.11 230 P P 23 16 47.6 -0.3
RPSI IAmb IAmb 23 16 49.4
comp=Z,50nm,1.1s
BKNI Bangkinang 30.42 224 P P 23 16 51.4 +0.6
BKNI Bangkinang 30.42 224 P P 23 16 51.9 +1.2
ZAK Zakamensk 30.52 337 *e*P **P 23 16 49.5 -1.9**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
ZEA Zeya 30.61 7 *e*P **P 23 16 51.4 -0.6**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=N,700nm,15.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
PMBI Palembang 30.89 214 P P 23 16 56.2 +1.3
ABJI Asem Bagus 31.82 194 P P 23 17 04.6 +1.6
comp=Z,48nm,1.0s
MMRI Maumere 31.83 179 P P 23 17 02.7 -0.3
MMRI Maumere 31.83 179 P P 23 17 03.8 +0.7
MMRI Maumere 31.83 179 P P 23 17 03.0 -0.1
comp=Z,124nm,0.9s,comp=Z,3μm
BLJI Banyuglugur 31.92 195 P P 23 17 04.5 +0.6
comp=Z,88nm,0.8s,comp=Z,9μm
EDFI Ende, Flores 31.94 180 P P 23 17 03.0 -1.1
comp=Z,228nm,0.7s,comp=Z,2μm
GSI Gunungsitoli 32.04 230 P P 23 17 03.8 -1.2
GSI IAmb IAmb 23 17 14.2
comp=Z,29nm,1.1s
GSI Gunungsitoli 32.04 230 P P 23 17 05.0 0.0
comp=Z,19nm,1.1s
NGJI Ngawi 32.14 199 P P 23 17 07.8 +2.0
comp=Z,114nm,1.0s
PLAI Plampang 32.23 187 P P 23 17 06.6 0.0
PLAI Plampang 32.23 187 P P 23 17 05.3 -1.3
comp=Z,64nm,0.8s
TWSI Taliwang, Sumb 32.26 189 P P 23 17 06.3 -0.6
comp=Z,43nm,1.1s
MOY Mondy 32.41 336 *e*P **P 23 17 06.8 -1.2**
PBSI Pulau Batu 32.52 228 P P 23 17 10.2 +1.0
comp=Z,64nm,1.2s
PWJI Pagerwojo 32.66 198 P P 23 17 10.9 +0.5
comp=Z,89nm,0.9s
SISI Saibi 32.93 225 P P 23 17 13.1 +0.3
comp=Z,75nm,1.2s
UGM Wanagama 32.95 201 P P 23 17 13.2 +0.2
UGM Wanagama 32.95 201 P P 23 17 14.1 +1.2
UGM Wanagama 32.95 201 P P 23 17 14.9 +2.0
comp=Z,191nm,1.2s
KPJI Karang Pucung 32.96 204 P P 23 17 14.8 +1.8
comp=Z,121nm,1.2s
LEM Lembang 33.01 206 P P 23 17 15.0 +1.4
comp=Z,139nm,1.1s
SBJI Serang 33.01 209 P P 23 17 14.6 +1.2
comp=Z,232nm,1.4s,comp=Z,7μm
SOEI Soe 33.03 175 P P 23 17 12.9 -0.9
SOEI Soe 33.03 175 P P 23 17 13.9 +0.1
SOEI Soe 33.03 175 P P 23 17 13.0 -0.8
comp=Z,64nm,0.6s
LWLI Liwa 33.04 213 P P 23 17 15.3 +1.5
comp=Z,569nm,0.9s,comp=Z,18μm
MNAI Manna 33.06 216 P P 23 17 13.8 -0.1
comp=Z,192nm,1.0s
DBJI Dramaga 33.12 208 P P 23 17 14.6 +0.2
comp=Z,181nm,1.5s
KASI Kota Agung 33.25 212 P P 23 17 15.8 +0.2
comp=Z,196nm,1.0s,comp=Z,2μm
BASI Baing, Sumba 33.41 182 P P 23 17 15.2 -1.7
comp=Z,159nm,0.7s,comp=Z,2μm
PPSI Pulau Pagai 33.46 222 P P 23 17 19.0 +1.6
comp=Z,68nm,1.0s
CMJI Cimerak 33.55 204 P P 23 17 19.0 +0.8
comp=Z,55nm,1.1s
BBJI Bungbulang 33.57 206 P P 23 17 18.2 -0.2
SKJI Sukabumi 33.61 208 P P 23 17 18.1 -0.6
comp=Z,113nm,0.8s
CNJI Cibinong 33.64 207 P P 23 17 18.6 -0.3
comp=Z,41nm,1.0s,comp=Z,451nm
WMQ Urumqi 34.51 314 *e*P **P 23 17 29.6 +3.2**
WMQ sP sP 23 17 40.0 -2.0
WMQ pmax pmax
comp=Z,16nm,1.5s
WMQ pmax pmax
comp=Z,150nm,4.1s
WMQ LR LR
comp=Z,670nm,14.5s
WMQ LR LR
comp=Z,1μm,16.1s
WMQ LR LR
comp=Z,690nm,16.1s
MANU Manus Island 35.59 132 P P 23 17 37.5 +1.7
XMIS Christmas Isla 37.11 207 P P 23 17 47.4 -1.4
XMIS IAmb IAmb 23 17 48.5
comp=Z,51nm,0.8s
DGZ Jazzator, Alta 37.48 323 *i*P **P 23 17 51.6 -0.2**
DGZ pmax pmax
comp=Z,9.0nm,0.8s
ZSN Zaisan 37.87 319 *e*P **P 23 17 54.0 -1.0**
baz=319
ZSN Zaisan 37.87 319 *e*P **P 23 17 54.0 -1.0**
YAK Yakutsk 39.02 6 P **P 23 18 03.0 -1.3**
YAK Yakutsk 39.02 6 *e*P **P 23 18 03.3 -1.0**
YAK *e**PP **pP 23 18 13.9 -0.7**
YAK *e* 23 19 40.6
YAK *e* 23 20 13.1
YAK *e*S **S 23 24 00.3 -0.4**
YAK *e**SS **sS 23 24 10.8 -6.3**
YAK *e*SS **SS 23 26 43.1 -10**
YAK pmax pmax
comp=Z,15nm,0.8s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK smax smax
comp=N,7.0nm,1.0s
YAK Yakutsk 39.02 6 P **P 23 18 03.0 -1.3**
comp=N,11nm,0.4s,baz=358,slow=3.3,SNR=5.3
YAK LR LR 23 35 33.7
comp=N,290nm,19.2s,baz=168,slow=38
comp=N,11nm,0.4s
MK31 Makanchi Array 39.20 316 P **P 23 18 06.1 0.0**
MK31 Makanchi Array 39.20 316 *i*P **P 23 18 05.4 -0.8**
MK31 pmax pmax
comp=Z,25nm,0.8s
MKAR Makanchi Array 39.20 316*ce*P **P 23 18 06.1 -0.1**
MKAR pmax pmax
comp=Z,22nm,0.8s
MKAR Makanchi Array 39.20 316 P **P 23 18 06.2 +0.1**
comp=Z,22nm,0.8s,baz=111,slow=10,SNR=218
MKAR PcP **PcP 23 20 14.1 -0.9**
comp=Z,3.9nm,0.8s,baz=120,slow=2.5,SNR=4.1
MKAR ScP **ScP 23 23 58.5 -2.3**
comp=Z,1.9nm,0.7s,baz=89,slow=4.9,SNR=7.8
MKAR LR LR 23 35 36.4
comp=Z,1μm,19.8s,baz=105,slow=38
comp=Z,22nm,0.8s
MAKZ Makanchi 39.41 316 P **P 23 18 08.0 +0.1**
MAKZ IAmb IAmb 23 18 09.1
comp=Z,33nm,1.0s
MAKZ Makanchi 39.41 316 P **P 23 18 08.0 +0.1**
MAKZ pmax pmax
comp=Z,33nm,1.0s
SHLS Shalkode 39.89 310 *e*P **P 23 18 09.0 -3.1**
baz=310
SHLS Shalkode 39.89 310 *e*P **P 23 18 09.0 -3.1**
BULU Kimbe 40.13 132 P **P 23 18 14.8 +0.6**
UZB Uzynbulak 40.20 310 *e*P **P 23 18 14.2 -0.5**
baz=310
UZB Uzynbulak 40.20 310 *e*P **P 23 18 14.1 -0.5**
PEA0B Petropavlovsk- 40.30 33 P **P 23 18 15.8 +0.6**
PEA0B IAmb IAmb 23 19 16.6
comp=Z,52nm,1.4s
PEA0B Petropavlovsk- 40.30 33 P **P 23 18 15.8 +0.6**
PEA0B pmax pmax
comp=Z,52nm,1.4s
PETK Petropavlovsk- 40.30 33 P **P 23 18 15.4 +0.2**
PETK Petropavlovsk- 40.30 33 P **P 23 18 15.4 +0.2**
PETK Petropavlovsk- 40.30 33 P **P 23 18 13.2 -2.0**
comp=Z,6.0nm,0.9s,baz=164,slow=5.9,SNR=7.0
PETK LR LR 23 35 01.4
comp=Z,416nm,19.9s,baz=227,slow=36
comp=Z,6.0nm,0.9s
RABL Rabaul 40.47 129 P P 23 18 17.8 +0.8
PRZ Przheval'sk 40.47 309 P P 23 18 18.0 +1.0
PRZ Przheval'sk 40.47 309 P P 23 18 18.0 +1.0
PRZ pmax pmax
comp=Z,18nm,1.1s
KPKS Kokpek 40.52 310 *e*P **P 23 18 16.4 -0.9**
baz=310
KPKS Kokpek 40.52 310 *e*P **P 23 18 16.4 -0.9**
SATY Saty 40.61 310 *e*P **P 23 18 17.6 -0.5**
baz=310
SATY Saty 40.61 310 *e*P **P 23 18 17.5 -0.5**
ZHN Zhinishke 40.62 310 *e*P **P 23 18 17.4 -0.7**
baz=310
ZHN Zhinishke 40.62 310 *e*P **P 23 18 17.4 -0.7**
HYB Hyderabad 40.70 270 *e*P **P 23 18 19.5 +0.4**
TARG Taragay, Kyrgy 40.73 307 P **P 23 18 19.3 -0.1**
TARG Taragay, Kyrgy 40.73 307 P **P 23 18 19.3 -0.1**
TARG pmax pmax
comp=Z,10.0nm,0.9s
PET Petropavlovsk 40.74 34 *e*P **P 23 18 20.5 +1.7**
PET *e*S **S 23 24 29.4 +2.7**
PET pmax pmax
comp=Z,50nm,1.1s
PET MLR MLR
comp=Z,500nm,16.0s
PET MLR MLR
comp=Z,600nm,16.0s
PMG Port Moresby 41.05 140 P **P 23 18 22.6 +0.8**

PMG **Port Moresby** 41.05 140 P **P** 23 18 23.4 +1.6
PMG **Port Moresby** 41.05 140 *ce*P **P** 23 18 22.7 +0.9
PMG pmax pmax
comp=Z,21nm,1.0s
PMG **Port Moresby** 41.05 140 LR LR 23 34 47.5
comp=Z,265nm,19.1s,baz=296,slow=35
ZAA0 Zalesovo Array 41.14 327 P **P** 23 18 20.6 -1.5
ZALV Zalesovo Beam 41.14 327 P **P** 23 18 20.9 -1.1
ZALV Zalesovo Beam 41.14 327 P **P** 23 18 20.8 -1.2
comp=Z,13nm,0.5s,baz=111,slow=8.1,SNR=40
ZALV PcP **PcP** 23 20 19.7 -1.3
comp=Z,2.6nm,0.6s,baz=145,slow=5.3,SNR=2.4
ZALV ScP **ScP** 23 24 04.3 -3.9
comp=Z,0.7nm,0.4s,baz=101,slow=3.1,SNR=3.8
ZALV LR LR 23 36 38.7
comp=Z,875nm,18.8s,baz=126,slow=38
comp=Z,13nm,0.5s
TDK Taldyqorghan 41.14 312 *e*P **P** 23 18 21.6 -0.7
comp=Z,23nm,1.0s,baz=312
TDK Taldyqorghan 41.14 312 *e*P **P** 23 18 21.5 -0.7
TDK pmax pmax
comp=Z,23nm,1.0s
MA2 Magadan 41.57 22 P **P** 23 18 25.4 -0.1
MA2 Magadan 41.57 22 P **P** 23 18 26.5 +1.0
MA2 Magadan 41.57 22 *ce*P **P** 23 18 25.5 0.0
MA2 pmax pmax
comp=Z,29nm,1.3s
MA2 Magadan 41.57 22 P **P** 23 18 24.6 -0.9
comp=Z,7.3nm,0.5s,baz=220,slow=8.1,SNR=11
MA2 LR LR 23 37 40.7
comp=Z,408nm,18.1s,baz=216,slow=39
comp=Z,7.3nm,0.5s
MDOK Medeo 41.60 309 *e*P **P** 23 18 25.4 -0.8
baz=309
MDOK Medeo 41.60 309 *e*P **P** 23 18 25.3 -0.9
KSH Kashi 41.69 304 P **P** 23 18 30.0 +3.1
KSH pP pP 23 18 35.1 -2.3
KSH PcP **PcP** 23 20 24.3 +1.1
KSH pmax pmax
comp=Z,11nm,1.4s
KSH LR LR
comp=Z,950nm,16.8s
KSH LR LR
comp=Z,1μm,17.2s
KSH LR LR
comp=Z,2μm,16.8s
CHKK Chushkaly 41.81 310 *e*P **P** 23 18 27.1 -0.7
baz=310
CHKK Chushkaly 41.81 310 *e*P **P** 23 18 27.1 -0.7
SEM Semipalatinsk 41.90 321 *e*P **P** 23 18 27.3 -1.3
comp=Z,30nm,1.3s,baz=321
SEM Semipalatinsk 41.90 321 *e*P **P** 23 18 27.3 -1.3
SEM pmax pmax
comp=Z,30nm,1.3s
ULHL Ulahol 41.98 308 P **P** 23 18 30.7 +1.3
SNR=5.2
NRN Naryn 41.99 307 P **P** 23 18 29.9 +0.3
NRN Naryn 41.99 307 P **P** 23 18 29.9 +0.3
NRN pmax pmax
comp=Z,17nm,0.8s
H11N1 WAKE ISLAND Hy 42.12 86 T T 00 03 40.0
baz=283,slow=75,SNR=1026
H11N2 WAKE ISLAND Hy 42.12 86 T T 00 03 44.1
baz=283,slow=75,SNR=837
H11N3 WAKE ISLAND Hy 42.14 86 T T 00 03 36.5
baz=283,slow=75,SNR=864
H11S3 WAKE ISLAND Hy 42.23 88 T T 00 03 47.9
baz=285,slow=75,SNR=778
H11S1 WAKE ISLAND Hy 42.24 88 T T 00 03 47.0
baz=285,slow=75,SNR=601
H11S2 WAKE ISLAND Hy 42.25 88 T T 00 03 49.5
baz=285,slow=75,SNR=561
KUU Kurty 42.28 310 *e*P **P** 23 18 30.6 -1.0
comp=Z,28nm,1.4s,baz=310
KUU Kurty 42.28 310 *e*P **P** 23 18 30.5 -1.0
KUU pmax pmax
comp=Z,28nm,1.4s
PALK Pallekele 42.42 255 LR LR 23 37 50.8
comp=Z,369nm,19.0s,baz=160,slow=38
TKM2 Tokmak 2 42.58 309 P **P** 23 18 35.3 +1.0
SNR=20
TKM2 Tokmak 2 42.58 309 *i* P **P** 23 18 33.9 -0.4
TKM2 pmax pmax
comp=Z,20nm,0.9s
COEN Coen 42.68 148 P **P** 23 18 35.7 +0.7
COEN IAmb IAmb 23 18 37.8
comp=Z,52nm,0.8s
COEN Coen 42.68 148 P **P** 23 18 36.3 +1.3
KURK Kurchatov 42.97 320 P **P** 23 18 36.2 -0.9
KURK Kurchatov 42.97 320 *ce*P **P** 23 18 36.6 -0.4
KURK pmax pmax
comp=Z,21nm,1.0s
KURK Kurchatov 42.97 320 P **P** 23 18 37.4 +0.3
KURBB Kurchatov Arra 42.99 320 P **P** 23 18 36.4 -0.8
comp=Z,16nm,0.9s,baz=115,slow=7.5,SNR=84
KURBB PcP **PcP** 23 20 28.1 +0.9
comp=Z,1.4nm,0.6s,baz=117,slow=2.7,SNR=1.9
KURBB ScP **ScP** 23 24 12.9 -2.7
comp=Z,0.4nm,0.6s,baz=108,slow=3.7,SNR=4.6
KURBB LR LR 23 38 37.5
comp=Z,323nm,20.2s,baz=151,slow=39
comp=Z,16nm,0.9s
KBK Karagaybulak 43.00 308 P **P** 23 18 38.7 +1.1
SNR=13
CHMS Chumysh 43.21 309 P **P** 23 18 39.8 +0.7
SNR=12
UCH Uchtor 43.23 307 P **P** 23 18 41.3 +1.5
SNR=20
FRU1 Bishkek 43.26 308 P **P** 23 18 39.5 -0.1
FRU1 Bishkek 43.26 308 P **P** 23 18 39.5 -0.1
FRU1 pmax pmax
comp=Z,12nm,0.9s
AAK Ala-Archa 43.32 308 P **P** 23 18 41.0 +0.8
SNR=7.5
AAK Ala-Archa 43.32 308 P **P** 23 18 40.1 -0.2
AAK Ala-Archa 43.32 308 *i* P **P** 23 18 40.9 +0.7
SNR=16
AAK Ala-Archa 43.32 308 *ce*P **P** 23 18 37.6 -2.6
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 43.32 308 LR LR 23 38 00.3
comp=Z,806nm,18.1s,baz=94,slow=38
AAK Ala-Archa 43.32 308 P **P** 23 18 41.1 +0.8
AAK P **P** 23 18 41.1 +0.8
SGDS Sogindy 43.39 309 *e*P **P** 23 18 40.0 -0.7
baz=309
SGDS Sogindy 43.39 309 *e*P **P** 23 18 39.9 -0.7
NIL Nilore 43.39 295 P **P** 23 18 40.0 -0.8
NIL Nilore 43.39 295 P **P** 23 18 40.0 -0.8
NIL pmax pmax
comp=Z,16nm,0.9s
NIL Nilore 43.39 295 P **P** 23 18 41.4 +0.6
NIL P **P** 23 18 41.4 +0.6
USP Ospenovka 43.44 309 P **P** 23 18 41.5 +0.4
SNR=7.7
EKS2 Erkin-Say 43.85 308 P **P** 23 18 44.8 +0.4
SNR=9.2
BTLS Baital 44.14 311 *e*P **P** 23 18 45.9 -0.8
baz=311
BTLS Baital 44.14 311 *e*P **P** 23 18 45.8 -0.8
ARSB Arslanbob 44.21 306 P **P** 23 18 47.3 -0.1
ARSB Arslanbob 44.21 306 P **P** 23 18 47.3 -0.1
ARSB pmax pmax
comp=Z,2.0nm,1.0s
MBWA Marble Bar 44.31 183 P **P** 23 18 46.3 -1.8
MBWA IAmb IAmb 23 18 47.4
comp=Z,29nm,0.8s
MBWA Marble Bar 44.31 183 P **P** 23 18 46.6 -1.4
SEY Seymchan 44.59 19 *i* P **P** 23 18 49.6 -0.3
SEY pmax pmax
comp=Z,10.0nm,0.8s
SEY Seymchan 44.59 19 P **P** 23 18 49.8 -0.1
comp=Z,3.8nm,0.6s,baz=230,slow=7.2,SNR=12
comp=Z,3.8nm,0.6s
WB0 Warramunga Arr 44.66 163 P **P** 23 18 49.5 -1.4
WB0 IAmb IAmb 23 18 50.7
comp=Z,24nm,0.8s
PSA00 Pilbara Seismi 44.72 182 P **P** 23 18 49.6 -1.7
PSA00 Pilbara Seismi 44.72 182 P **P** 23 18 49.7 -1.7
PSA00 IAmb IAmb 23 18 50.8
comp=Z,28nm,0.8s
WRA Warramunga Arr 44.81 163 P **P** 23 18 50.7 -1.4
comp=Z,26nm,0.8s,baz=344,slow=8.7,SNR=93
WRA PcP **PcP** 23 20 32.8 -1.0
comp=Z,5.1nm,1.0s,baz=354,slow=4.9,SNR=3.3
WRA ScP **ScP** 23 24 19.4 -4.0
comp=Z,1.0nm,0.9s,baz=6.6,slow=5.9,SNR=2.1
comp=Z,26nm,0.8s
WB2 Warramunga Arr 44.81 163 P **P** 23 18 50.9 -1.3
WB2 IAmb IAmb 23 18 52.1
comp=Z,38nm,0.8s
DZA Taraz 45.66 308 *e*P **P** 23 18 58.1 -0.7
comp=Z,6.9nm,0.9s,baz=308
DZA Taraz 45.66 308 *e*P **P** 23 18 58.1 -0.7
DZA pmax pmax
comp=Z,7.0nm,0.9s
BTK Batken 45.69 304 P **P** 23 18 58.7 -0.4
BTK Batken 45.69 304 P **P** 23 18 58.7 -0.4
BTK pmax pmax
comp=Z,11nm,1.0s
KK31 Karatay Array 46.29 308 P **P** 23 19 03.3 -0.4
KK31 Karatay Array 46.29 308 P **P** 23 19 03.3 -0.4
KK31 pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 46.29 308 P **P** 23 19 03.6 -0.1
KKAR PcP **PcP** 23 20 37.7 -1.0
KKAR Karatay Array 46.29 308 P **P** 23 19 03.9 +0.2
KKAR IAmb IAmb 23 19 07.1
comp=Z,15nm,1.1s
KKAR Karatay Array 46.29 308 P **P** 23 19 03.6 -0.1
KKAR pmax pmax
comp=Z,15nm,1.1s
BRZS Berezniki 46.30 318 *e*P **P** 23 19 02.4 -1.3
baz=318
BRZS Berezniki 46.30 318 *e*P **P** 23 19 02.4 -1.3
GIRL Giralia 46.31 189 P **P** 23 19 04.7 +0.8
BRLS Borolday 46.77 308 *e*P **P** 23 19 06.8 -0.7
baz=307
BRLS Boroldoy 46.77 308 *e*P **P** 23 19 06.7 -0.7
MTSU Mount Surprise 46.83 150 P **P** 23 19 10.2 +2.1
CHM Chimkent 46.85 307 *e*P **P** 23 19 07.5 -0.6
baz=307
CHM Chimkent 46.85 307 *e*P **P** 23 19 07.5 -0.6
KBL Kabul 46.88 296 P **P** 23 19 08.7 0.0
KBL IAmb IAmb 23 19 17.7
comp=Z,24nm,0.9s
KBL Kabul 46.88 296 P **P** 23 19 08.7 0.0
KBL pmax pmax
comp=Z,25nm,1.0s
KBL Kabul 46.88 296 P **P** 23 19 09.6 +0.9
SNR=23
KBL P **P** 23 19 09.6 +0.9
SNR=23
SIMJ Simiganj 46.99 302 P **P** 23 19 09.2 -0.1
SIMJ IAmb IAmb 23 20 42.0
comp=Z,12nm,0.8s
QIS Mount Isa 47.06 157 P **P** 23 19 10.4 +0.6
AS31 Alice Springs 48.26 165 P **P** 23 19 18.4 -0.8
ASAR Alice Springs 48.26 165 P **P** 23 19 18.5 -0.7
ASAR PcP **PcP** 23 20 45.1 -0.7
ASAR Alice Springs 48.26 165 P **P** 23 19 18.3 -0.9
comp=Z,15nm,0.8s,baz=343,slow=6.3,SNR=74
ASAR PcP **PcP** 23 20 44.8 -1.1
comp=Z,6.2nm,0.9s,baz=343,slow=2.9,SNR=4.9
ASAR ScP **ScP** 23 24 34.2 -3.6
comp=Z,0.9nm,0.9s,baz=358,slow=4.6,SNR=3.1
comp=Z,15nm,0.8s
TIXI Tiksi 48.47 3 P **P** 23 19 18.3 -1.8
TIXI IAmb IAmb 23 19 29.7
comp=Z,15nm,0.9s
TIXI Tiksi 48.47 3 *ce*P **P** 23 19 18.8 -1.3
TIXI pmax pmax
comp=Z,14nm,0.8s
TIXI Tiksi 48.47 3 P **P** 23 19 18.6 -1.6
comp=Z,9.1nm,0.6s,baz=168,slow=3.9,SNR=27
TIXI LR LR 23 41 27.7
comp=Z,420nm,20.8s,baz=200,slow=38
comp=Z,9.1nm,0.6s
BVAR Borovoye 48.55 321 P **P** 23 19 20.3 -0.8
comp=Z,8.9nm,0.7s,baz=108,slow=9.5,SNR=40
BVAR PcP **PcP** 23 20 45.4 -1.2
comp=Z,5.2nm,0.7s,baz=117,slow=5.2,SNR=4.3
BVAR ScP **ScP** 23 24 35.6 -3.1
comp=Z,3.1nm,0.8s,baz=90,slow=4.3,SNR=8.8
BVAR LR LR 23 41 50.4
comp=Z,228nm,19.3s,baz=99,slow=38
comp=Z,8.9nm,0.7s
BRVK Borovoye 48.62 321 P **P** 23 19 21.0 -0.7
BRVK IAmb IAmb 23 19 24.1
comp=Z,24nm,0.9s
BRVK Borovoye 48.62 321 *i* P **P** 23 19 21.1 -0.6
BRVK pmax pmax
comp=Z,21nm,0.9s
BRVK Borovoye 48.62 321 P **P** 23 19 21.8 +0.1
SHEM Shemya Is, Ala 49.17 40 LR LR 23 39 23.5
comp=Z,134nm,21.5s,baz=290,slow=35
CTA Charters Tower 49.43 149 LR LR 23 38 53.6
comp=Z,425nm,21.2s,baz=317,slow=34
CTAO Charters Tower 49.43 149 P **P** 23 19 29.5 +1.3
CTAO IAmb IAmb 23 19 51.4
comp=Z,20nm,1.1s
CTAO Charters Tower 49.43 149 P **P** 23 19 29.7 +1.5
CTAO Charters Tower 49.43 149 P **P** 23 19 29.5 +1.3
CTAO pmax pmax
comp=Z,20nm,1.1s
HNR Honiara 49.67 127 LR LR 23 39 01.5
comp=Z,2μm,19.4s,baz=318,slow=34
NRIK Noril'sk 50.28 345 P **P** 23 19 33.2 -0.8
NRIK Noril'sk 50.28 345 *ce*P **P** 23 19 32.4 -1.6
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 50.28 345 P **P** 23 19 32.8 -1.2
comp=Z,2.9nm,0.6s,baz=139,slow=12,SNR=9.1
NRIK LR LR 23 42 48.1
comp=Z,404nm,20.1s,baz=146,slow=38
comp=Z,2.9nm,0.6s
BILL Bilibino 52.29 20 P **P** 23 19 49.0 -0.2
BILL IAmb IAmb 23 19 58.4
comp=Z,24nm,0.9s
BILL Bilibino 52.29 20 *e*P **P** 23 19 47.8 -1.3
BILL pmax pmax
comp=Z,23nm,1.0s
KAAM Kaadhehdhoo 52.38 251 P **P** 23 19 52.7 +2.2
MORW Morawa 52.43 186 P **P** 23 19 49.3 -1.2
MORW IAmb IAmb 23 20 07.5
comp=Z,61nm,1.8s
HRA Herat 52.50 296 P **P** 23 19 50.9 -0.6
HRA PcP **PcP** 23 21 00.8 -0.9
FORT Forrest 54.20 173 P **P** 23 20 03.1 -0.4
ABKAR Akbulak array 54.30 315 P **P** 23 20 04.0 -0.1
ABKAR Akbulak array 54.30 315 P **P** 23 20 03.7 -0.4
ABKAR IAmb IAmb 23 20 05.3
comp=Z,17nm,0.8s
NGCH Negor - Chabah 54.73 285 P **P** 23 20 07.9 +0.2
SVE Sverdlovsk 54.93 324 *e*P **P** 23 20 08.4 -0.2
SVE pmax pmax
comp=Z,34nm,1.1s
SVE MLR MLR
comp=Z,628nm,16.0s
GEYT Alibeck 55.56 301 P **P** 23 20 13.7 +0.1
GEYT IAmb IAmb 23 20 15.7
comp=Z,23nm,1.0s
GEYT Alibeck 55.56 301 P **P** 23 20 13.7 +0.1
GEYT pmax pmax
comp=Z,23nm,1.0s
GEYT Alibeck 55.56 301 P **P** 23 20 12.7 -0.9
comp=Z,12nm,0.8s,baz=89,slow=6.5,SNR=27
GEYT LR LR 23 48 27.3
comp=Z,1μm,18.4s,baz=79,slow=41
comp=Z,12nm,0.8s
GYA0B ALIBECK ARRAY 55.56 301 P **P** 23 20 13.8 +0.2
GYA0B IAmb IAmb 23 20 15.7
comp=Z,20nm,1.0s
AKTO Aktyubinsk 55.63 316 LR LR 23 45 48.5
comp=Z,989nm,18.6s,baz=56,slow=38
ARU Arti 55.99 323 P **P** 23 20 15.2 -1.0
ARU IAmb IAmb 23 20 21.2
comp=Z,22nm,0.8s
ARU Arti 55.99 323 *c i*P **P** 23 20 15.3 -1.0
ARU 23 21 09.9
ARU 23 22 17.3
ARU S **S** 23 28 03.3 +1.4
ARU SS **SS** 23 31 45.8 -2.2
ARU pmax pmax
comp=Z,31nm,1.2s
ARU Arti 55.99 323 LR LR 23 44 50.6
comp=Z,440nm,21.4s,baz=91,slow=37
NWAO Narrogin (SRO) 56.15 184 P **P** 23 20 16.5 -1.1
NWAO IAmb IAmb 23 20 47.6
comp=Z,52nm,1.4s
NWAO Narrogin (SRO) 56.15 184 P **P** 23 20 16.5 -1.1
NWAO pmax pmax
comp=Z,52nm,1.4s
NWAO Narrogin (SRO) 56.15 184 LR LR 23 45 53.7
comp=Z,52nm,21.1s,baz=20,slow=38
NWAO Narrogin (SRO) 56.15 184 P **P** 23 20 17.4 -0.2
EIDS Eidsvold 56.24 148 P **P** 23 20 18.2 -0.1
EIDS IAmb IAmb 23 21 03.9
comp=Z,55nm,1.7s
DGAR Diego Garcia 56.97 244 P **P** 23 20 23.8 0.0
JLN Jalan Bani Buh 56.98 282 P **P** 23 20 24.9 +1.0
JLN P **P** 23 20 24.9 +1.0
WBK Wadi Bani Khal 57.27 283 P **P** 23 20 26.7 +0.8
WBK P **P** 23 20 26.7 +0.8
WSAR Wadi Sarin 57.42 283 LR LR 23 47 08.1
comp=Z,316nm,21.4s,baz=136,slow=38
WSAR Wadi Sarin 57.42 283 P **P** 23 20 27.4 +0.4
JASK Jask - Hormozg 57.51 287 P **P** 23 20 28.6 +1.0
BBOO Buckleboo 57.55 166 P **P** 23 20 27.1 -0.4
BIDO Bidbid 57.81 284 P **P** 23 20 29.4 -0.3
SMDO Samad 57.99 283 P **P** 23 20 31.4 +0.3
SMDO P **P** 23 20 31.4 +0.3
JMDO Jabal Madar 58.10 283 P **P** 23 20 31.6 -0.2
JMDO P **P** 23 20 31.6 -0.2
STKA Stephens Creek 58.17 160 P **P** 23 20 31.6 -0.3
STKA Stephens Creek 58.17 160 *c i*P **P** 23 20 31.2 -0.7
STKA Stephens Creek 58.17 160 P **P** 23 20 31.4 -0.5
comp=Z,28nm,0.7s,baz=339,slow=7.5,SNR=60
STKA LR LR 23 45 52.9
comp=Z,135nm,21.8s,baz=360,slow=36
comp=Z,28nm,0.7s
HOQ Hoqain 58.52 284 P **P** 23 20 34.6 -0.1
MHTO MHTO 58.58 281 P **P** 23 20 34.5 -0.6
MHTO P **P** 23 20 34.5 -0.6
BSY Bisya 58.82 283 P **P** 23 20 36.7 -0.1
BSY P **P** 23 20 36.7 -0.1
SPIA Saint Paul Isl 58.83 36 P **P** 23 20 36.8 +0.5
baz=265
GAMB Gambell 58.98 28 P **P** 23 20 38.3 +1.1
baz=260
SOHO SOHO 59.08 285 P **P** 23 20 38.7 +0.3
SOHO SOHO 59.08 285 P **P** 23 20 38.8 +0.3
SOHO P **P** 23 20 38.8 +0.3
P08K Saint George I 59.17 37 P **P** 23 20 39.2 +0.6
baz=266
ARQ Araqi 59.28 284 P **P** 23 20 40.3 +0.3
ARQ P **P** 23 20 40.3 +0.3
ASHO Ashiyiah 59.37 286 P **P** 23 20 40.5 -0.1
ASHO Ashiyiah 59.37 286 P **P** 23 20 40.7 +0.1
NIKH Nikolski High 59.41 41 P **P** 23 20 40.8 +0.4
baz=269
FAQ Al Faqa, Dubai 59.77 286 P **P** 23 20 43.7 +0.4
ALNE Al Ain 59.79 285 P **P** 23 20 43.7 +0.2
ALNE P **P** 23 20 43.7 +0.2
ASUD Al Ashush, Dub 60.03 286 P **P** 23 20 44.5 -0.6
ASUD Al Ashush, Dub 60.03 286 P **P** 23 20 44.9 -0.2
KOUNC Koumac, New Ca 60.29 133 P **P** 23 20 48.0 +1.3
UMZA Um Al Zommool 60.65 284 P **P** 23 20 48.7 -0.6
UMZA P **P** 23 20 48.7 -0.6
ARMA Armidale 60.75 150 P **P** 23 20 51.0 +1.1
ARMA IAmb IAmb 23 20 52.2
comp=Z,13nm,0.8s
UNV Unalaska Valle 60.83 40 P **P** 23 20 50.6 +0.6
baz=270
KIRV Kirov 61.11 325 *ce*P **P** 23 20 50.5 -1.3
KIRV Kirov 61.11 325 LR LR 23 49 25.5
comp=Z,594nm,18.9s,baz=97,slow=38
M11K Mekoryuk 61.16 33 P **P** 23 20 53.2 +1.0
baz=267
F14K Arctic Creek 61.52 27 P **P** 23 20 55.4 +0.9
baz=264
SHAO Shalim 61.52 278 P **P** 23 20 52.4 -3.0
ANM Nome 61.83 28 P **P** 23 20 57.8 +1.1
baz=265
JRN Qarnain Island 62.14 287 P **P** 23 20 58.9 -0.5
JRN P **P** 23 20 58.9 -0.5
BELG Belogornoye 62.16 318 *i* P **P** 23 20 56.8 -2.3
BELG pmax pmax
comp=Z,10.0nm,1.3s
C16K Lisburne Hills 62.21 24 P **P** 23 20 59.3 +0.2
C16K IAmb IAmb 23 21 04.9
comp=Z,24nm,1.2s
C16K Lisburne Hills 62.21 24 P **P** 23 20 59.9 +0.8
baz=263
DMTO DMTO 62.23 278 P **P** 23 20 59.0 -1.1
F15K North Star Dit 62.23 27 P **P** 23 21 00.4 +1.0
baz=265
G15K Niukluk 62.44 27 P **P** 23 21 01.7 +1.0
baz=266
J14K Nanvaranak Lak 62.54 30 P **P** 23 21 02.3 +0.9
baz=268
M13K Dall Lake 62.58 33 P **P** 23 21 03.1 +1.5
baz=269
FALS False Pass 62.61 39 P **P** 23 21 03.0 +1.0
baz=272
DOK Doka 62.71 280 P **P** 23 21 02.2 -1.1
DOK P **P** 23 21 02.2 -1.1
DZM Mont Dzumac 62.79 133 P **P** 23 21 05.1 +1.4
DZM IAmb IAmb 23 21 06.2
comp=Z,14nm,0.8s
DZM Mont Dzumac 62.79 133 LR LR 23 43 24.9
comp=Z,292nm,21.8s,baz=106,slow=31
L14K Kuka Creek 62.91 32 P **P** 23 21 05.5 +1.6
L14K Kuka Creek 62.91 32 P **P** 23 21 05.0 +1.1
baz=270
D17K Noatak River 63.01 24 P **P** 23 21 05.5 +1.1
baz=266
C17K DeLong Mountai 63.03 24 P **P** 23 21 05.1 +0.5
baz=265
MAK Makhachkala 63.10 308 *e*P P 23 20 59.7 -5.8
MAK *e* 23 23 20.8
MAK *e*S **S** 23 29 29.2 -4.8
MAK *e*SS **SS** 23 33 37.0 -3.0
MAK pmax pmax
comp=Z,128nm,1.0s
MAK MLR MLR
comp=Z,255nm,14.0s
G16K Koyuk River 63.17 27 P **P** 23 21 05.8 +0.3
baz=268
H16K Elim 63.19 28 P **P** 23 21 05.8 +0.1
baz=268
WHFO Wadi Hawf 63.24 279 P **P** 23 21 06.0 -0.9
WHFO P **P** 23 21 06.0 -0.9
M14K Bethel 63.27 32 P **P** 23 21 06.4 +0.2
baz=270
OUENC Ouen Island, N 63.29 133 P **P** 23 21 08.1 +1.1
OUENC IAmb IAmb 23 21 09.8
comp=Z,21nm,0.7s
SLWR Sila 63.38 286 P **P** 23 21 07.7 0.0
N14K Kuskokwak Cree 63.41 33 P **P** 23 21 08.1 +0.9
baz=271
E17K Hotham Inlet 63.45 25 P **P** 23 21 08.1 +0.7
baz=267
K15K Wolf Creek Mou 63.47 31 P **P** 23 21 08.5 +0.9
K15K IAmb IAmb 23 21 22.1
comp=Z,26nm,1.1s
K15K Wolf Creek Mou 63.47 31 P **P** 23 21 08.3 +0.7
baz=270
SHMA Al-Shehemyia 63.57 288 P **P** 23 21 10.8 +1.9
B18K Kokolik River 63.59 23 P **P** 23 21 09.1 +0.8
baz=266
O14K Tigyukauivet M 63.64 34 P **P** 23 21 09.6 +0.8
baz=272
F17K Baldwin Pennin 63.66 26 P **P** 23 21 09.9 +1.2
baz=268
ABTO Aybut 63.84 279 P **P** 23 21 10.2 -0.6
ABTO P **P** 23 21 10.2 -0.6
I17K Unalakleet 63.85 29 P **P** 23 21 11.2 +1.1
baz=270
G17K Kiwalik Mounta 63.88 27 P **P** 23 21 11.1 +0.8
baz=269
J16K Anvik River 63.89 29 P **P** 23 21 11.4 +1.0
baz=270
M15K Kasigluk River 63.89 32 P **P** 23 21 11.3 +0.9
baz=272
A19K Wainwright 63.90 22 P **P** 23 21 11.0 +0.7
baz=266
SAKB Bahrain 63.91 289 P **P** 23 21 10.7 -0.4
E18K Tukpahlearik C 63.94 25 P **P** 23 21 11.1 +0.5
baz=268
SMRA Abu-Samra 63.97 287 P **P** 23 21 11.2 -0.3
H17K Granite Mounta 64.19 28 P **P** 23 21 12.7 +0.4
baz=270
N15K Kwethluk River 64.20 33 P **P** 23 21 13.1 +0.6
baz=272
SDPT Sand Point 64.27 38 P **P** 23 21 13.6 +0.6
baz=274

F18K Selawik 64.30 26 P P 23 21 14.0 +1.1
baz=270,SNR=10
C19K Lookout Ridge 64.37 23 P P 23 21 13.9 +0.4
baz=268
O15K Ungalikthiuk R 64.39 34 P P 23 21 14.3 +0.6
baz=273
L16K Owhat River 64.45 31 P P 23 21 14.9 +0.9
baz=272
J17K VABM Dome 64.58 29 P P 23 21 16.2 +1.3
baz=272
TOO Toolangi 64.65 159 P P 23 21 16.3 +0.6
TOO IAmb IAmb 23 21 17.3
comp=Z,21nm,0.8s
TOO Toolangi 64.65 159 P P 23 21 16.3 +0.6
TOO pmax pmax
comp=Z,21nm,0.9s
G18K Tagagawik 64.71 27 P P 23 21 17.0 +1.3
baz=271
S14K Fog Glacier 64.72 37 P P 23 21 17.3 +1.2
baz=275
M16K Timber Creek 64.72 32 P P 23 21 16.6 +0.7
baz=273
CHNA Chernabura Isl 64.83 39 P P 23 21 17.1 +0.6
baz=275
H18K Honhosa River 64.84 27 P P 23 21 17.7 +1.1
baz=272
N16K Nishlik Lake 64.85 33 P P 23 21 17.8 +1.1
baz=273
D19K Kuna River 64.90 24 P P 23 21 18.3 +1.3
baz=270
K17K Iditarod 64.95 30 P P 23 21 18.5 +1.2
baz=273
F19K Shaleruckik Mo 65.05 26 P P 23 21 19.2 +1.4
baz=271
B20K Meade River 65.23 22 P P 23 21 20.4 +1.4
baz=270
O16K Kokwok River B 65.24 34 P P 23 21 20.6 +1.4
baz=274
E19K Redstone River 65.24 25 P P 23 21 20.3 +1.1
baz=271
P16K Nushagak River 65.34 34 P P 23 21 21.1 +1.3
baz=275
G19K Purcell Mounta 65.34 26 P P 23 21 21.1 +1.3
baz=272
M17K Holitna River 65.44 31 P P 23 21 21.9 +1.4
baz=274
D20K Etivluk River 65.45 23 P P 23 21 21.9 +1.5
baz=271
GCSA Galena City Sc 65.49 28 P P 23 21 22.3 +1.6
baz=273
GNI Garni 65.60 305 P P 23 21 22.5 +0.4
GNI Garni 65.60 305 *ce*P P 23 21 21.9 -0.2
GNI pmax pmax
comp=Z,46nm,1.7s
GNI Garni 65.60 305 P P 23 21 22.9 +0.7
E20K Nigu River 65.62 24 P P 23 21 22.7 +1.1
baz=272
N17K Nushagak Hills 65.62 32 P P 23 21 23.0 +1.3
baz=275
H19K Roundabout Mou 65.63 27 P P 23 21 23.1 +1.5
baz=273
J18K Innoko River 65.64 29 P P 23 21 22.6 +0.8
baz=274
R16K Pilot Point 65.69 36 P P 23 21 23.7 +1.6
baz=276
L18K Granite Mounta 65.73 31 P P 23 21 23.7 +1.3
baz=274
O17K Koliganek Bris 65.73 33 P P 23 21 23.8 +1.4
baz=275
F20K Avaraart Lake 65.84 25 P P 23 21 24.2 +1.2
baz=273
NCK Nalchik 65.84 309 *i* P P 23 21 22.6 -0.9
NCK pmax pmax
comp=Z,9.0nm,1.2s
VRH Novokhopyorsk 65.92 317 ⇓*i*P P 23 21 23.4 -0.4
VRH pmax pmax
comp=Z,61nm,0.9s
A22K Sinclair Lake 65.95 21 P P 23 21 24.8 +1.2
baz=272
TTA Tatalina 65.99 30 P P 23 21 24.4 +0.3
TTA IAmb IAmb 23 21 27.0
comp=Z,22nm,1.3s
TTA Tatalina 65.99 30 P P 23 21 25.2 +1.1
baz=275,SNR=5.9
TTA Tatalina 65.99 30 P P 23 21 24.5 +0.3
TTA pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 66.06 328 *e*P P 23 21 20.4 -4.1
Q16K King Salmon 66.06 34 P P 23 21 25.2 +0.7
baz=276
J19K Poorman 66.08 29 P P 23 21 25.5 +0.8
baz=274
C21K Knifeblade Rid 66.09 23 P P 23 21 25.8 +1.3
baz=273
ONI Oni 66.11 308 P P 23 21 25.0 -0.2
ONI IAmb IAmb 23 21 27.4
comp=Z,37nm,1.2s
ONI Oni 66.11 308 P P 23 21 25.0 -0.2
ONI pmax pmax
comp=Z,37nm,1.2s
P17K Kvichak River 66.12 34 P P 23 21 26.0 +1.1
baz=276
B21K Ikpikpuk River 66.13 22 P P 23 21 25.5 +0.7
baz=273
M18K Stony River 66.20 31 P P 23 21 26.4 +0.9
baz=275
N18K Kilae Creek 66.25 32 P P 23 21 26.8 +1.0
baz=276
H20K Anotleneega Mo 66.28 27 P P 23 21 26.8 +0.8
baz=274
KBZ Khabaz 66.30 309 *ce*P P 23 21 24.3 -2.0
KBZ pmax pmax
comp=Z,24nm,1.1s
KBZ Khabaz 66.30 309 P P 23 21 25.9 -0.4
comp=Z,12nm,1.0s,baz=105,slow=3.8,SNR=22
comp=Z,12nm,1.0s
KIV Kislovodsk 66.41 309 ⇑P P 23 21 27.4 +0.2
KIV Kislovodsk 66.41 309 P P 23 21 27.1 -0.2
KIV Kislovodsk 66.41 309 *i* P P 23 21 27.3 +0.1
SNR=15
KIV Kislovodsk 66.41 309 *e*P P 23 21 27.3 +0.2
KIV pmax pmax
comp=Z,31nm,1.0s
KIV MLR MLR
comp=Z,212nm,17.0s
KIV Kislovodsk 66.41 309 P P 23 21 27.5 +0.2
E21K Killik River 66.43 24 P P 23 21 27.1 +0.3
baz=274
Q17K Contact Creek 66.51 35 P P 23 21 27.8 +0.2
baz=277
I20K Naaghedeneel 66.51 28 P P 23 21 27.8 +0.5
baz=275
L19K White Mountain 66.59 31 P P 23 21 28.9 +0.9
baz=276,SNR=7.9
O18K Koktuh Hills 66.67 33 P P 23 21 29.3 +0.8
baz=277,SNR=10
F21K Alatna River 66.71 25 P P 23 21 29.2 +0.6
baz=275
IMAR Indian Mountai 66.71 26 P P 23 21 29.1 +0.5
J20K Nowinta River 66.71 28 P P 23 21 29.6 +1.0
baz=276
P18K Big Mountain, 66.72 34 P P 23 21 29.5 +0.7
baz=277
KARS Kars 66.75 306 P P 23 21 30.1 +0.6
KARS Kars 66.75 306 P P 23 21 30.1 +0.6
KARS pmax pmax
comp=Z,72nm,1.1s
G21K Allakaket 66.76 26 P P 23 21 29.9 +1.0
baz=275
K20K Telida 66.83 29 P P 23 21 30.6 +1.1
baz=276
M19K Big River Lodg 66.84 31 P P 23 21 30.8 +1.2
baz=276
D22K Ayikyak River 66.86 23 P P 23 21 30.3 +0.8
baz=275,SNR=13
N19K Bonanza Creek 66.92 32 P P 23 21 31.0 +0.9
baz=277
L20K Farewell, AK 67.01 30 P P 23 21 31.9 +1.2
baz=277
H21K Melozitna Rive 67.13 27 P P 23 21 32.4 +1.1
baz=276
GEVA Gevas 67.25 303 P P 23 21 32.2 -0.5
GEVA IAmb IAmb 23 21 34.1
comp=Z,28nm,1.1s
R18K Karluk 67.36 35 P P 23 21 34.1 +1.3
baz=278
VORR Voronezh 67.41 318 *e*P P 23 21 32.8 -0.4
VORR pmax pmax
comp=Z,44nm,0.8s
LPSR Galich'ya Gora 67.43 319 *e*P P 23 21 31.4 -2.0
LPSR pmax pmax
comp=Z,60nm,0.8s
M20K Styx River 67.43 31 P P 23 21 34.6 +1.3
baz=278
VORD Divnogorie 67.47 317 *e*P P 23 21 31.0 -2.7
VORD pmax pmax
comp=Z,20nm,0.9s
C23K Itkillik River 67.50 22 P P 23 21 34.7 +1.2
baz=276
G22K Bettles 67.51 25 P P 23 21 34.6 +1.0
baz=277
VSR Storozhevoye 67.51 318 *e*P P 23 21 31.0 -2.9
VSR pmax pmax
comp=Z,30nm,0.8s
CHUM Lake Minchumin 67.55 29 P P 23 21 35.0 +1.1
baz=277
D23K Nanushuk River 67.58 23 P P 23 21 35.3 +1.2
baz=277
Q19K Cape Douglas, 67.59 34 P P 23 21 34.6 +0.3
baz=278
ERBR Yeremizino-Bor 67.63 312 *e*P P 23 21 35.1 +0.3
ERBR pmax pmax
comp=Z,57nm,1.2s
H22K Ishtalitna Cre 67.69 26 P P 23 21 35.6 +0.8
baz=277
MOS Moscow 67.69 323 *e*P P 23 21 32.0 -2.9
MOS *e* 23 21 55.0
MOS *e* 23 23 59.3
MOS *e*S S 23 30 28.9 -0.8
MOS pmax pmax
comp=Z,45nm,0.7s
ILSW Iliamna Southw 67.69 33 P P 23 21 35.3 +0.3
ILSW IAmb IAmb 23 21 39.8
comp=Z,8.7nm,0.8s
P19K Oil Pt 67.69 33 P P 23 21 35.7 +0.7
baz=278
CAST Castle Rocks 67.71 29 P P 23 21 35.7 +0.7
CAST IAmb IAmb 23 21 51.9
comp=Z,16nm,0.9s
CAST Castle Rocks 67.71 29 P P 23 21 35.9 +0.9
baz=278,SNR=14
PPLA Purkeypile 67.73 30 P P 23 21 36.2 +0.9
baz=278
RSO Redoubt South 67.81 32 P P 23 21 36.7 +0.8
O20K Slope Mountain 67.93 33 P P 23 21 37.9 +1.4
baz=279
APA Apatity 67.96 336 ⇓*i*P P 23 21 31.6 -4.8
APA pmax pmax
comp=Z,8.0nm,0.8s
N20K Mount Spurr 67.97 31 P P 23 21 37.2 +0.5
baz=279,SNR=11
COLD Coldfoot 67.98 25 P P 23 21 37.7 +1.1
baz=278
GURO Guroymak-BITLI 67.98 304 P P 23 21 37.1 -0.2
GURO IAmb IAmb 23 21 39.1
comp=Z,19nm,1.2s
TOLK Toolik Lake Re 68.02 23 P P 23 21 37.5 +0.6
baz=278,SNR=6.3
OHAK Old Harbor 68.03 36 P P 23 21 37.6 +0.6
baz=279
MLY Manley 68.07 27 P P 23 21 38.2 +0.9
MLY IAmb IAmb 23 21 47.4
comp=Z,15nm,1.0s
MLY Manley 68.07 27 P P 23 21 37.9 +0.6
baz=278,SNR=12
E23K Chandalar 68.08 24 P P 23 21 38.2 +0.9
baz=278
BPAW Bear Paw Mtn. 68.10 28 P P 23 21 38.0 +0.6
BPAW IAmb IAmb 23 21 50.2
comp=Z,30nm,1.4s
BPAW Bear Paw Mtn. 68.10 28 P P 23 21 38.5 +1.0
baz=278,SNR=7.3
G23K Bananza Creek 68.12 25 P P 23 21 38.2 +0.7
baz=278
SKT Skwentna 68.17 31 P P 23 21 38.2 +0.2
SKT IAmb IAmb 23 21 50.4
comp=Z,14nm,1.0s
SKT Skwentna 68.17 31 P P 23 21 38.1 +0.2
baz=279
C24K Franklin Bluff 68.17 22 P P 23 21 37.9 +0.1
baz=278
KTH Kantishna Hill 68.21 29 P P 23 21 38.7 +0.5
KTH IAmb IAmb 23 21 56.2
comp=Z,14nm,0.8s
D24K Happy Valley 68.21 23 P P 23 21 38.5 +0.4
baz=278,SNR=11
Q20K Shyak Island 68.28 34 P P 23 21 38.7 +0.1
baz=280
KDAK Kodiak Island 68.32 35 P P 23 21 38.9 +0.1
KDAK Kodiak Island 68.32 35 P P 23 21 39.6 +0.8
baz=280
KDAK Kodiak Island 68.32 35 P P 23 21 38.9 +0.1
KDAK pmax pmax
comp=Z,36nm,1.0s
KDAK Kodiak Island 68.32 35 P P 23 21 38.5 -0.3
comp=Z,20nm,0.6s,baz=293,slow=6.7,SNR=20
KDAK LR LR 23 52 24.8
comp=Z,162nm,21.3s,baz=270,slow=37
comp=Z,20nm,0.6s
OBN Obninsk 68.38 322 P P 23 21 38.1 -1.2
OBN Obninsk 68.38 322 *de*P P 23 21 38.4 -0.9
OBN *e* 23 22 01.4
OBN *e* 23 24 14.7
OBN *e*S S 23 30 37.8 -0.2
OBN pmax pmax
comp=Z,56nm,1.7s
OBN MLR MLR
comp=Z,234nm,16.0s
HOM Homer 68.49 33 P P 23 21 40.7 +0.8
baz=280
TRF Thorofare Moun 68.50 29 P P 23 21 40.9 +0.7
baz=279
CAPN Captain Cook N 68.54 32 P P 23 21 40.9 +0.7
baz=280
SOC Sochi 68.60 309 *e*P P 23 21 38.7 -2.2
SOC *e* 23 24 09.7
SOC *e*PPP PPP 23 25 47.3
SOC *e*S S 23 30 42.3 +1.3
SOC *e*SS SS 23 35 04.9 -0.4
SOC pmax pmax
comp=Z,18nm,0.6s
SOC MLR MLR
comp=Z,317nm,21.0s
SUA Susitna One 68.62 31 P P 23 21 41.2 +0.3
SUA IAmb IAmb 23 21 58.1
comp=Z,26nm,0.8s
SUA Susitna One 68.62 31 P P 23 21 41.5 +0.6
baz=280,SNR=21
I23K Mio, Yukon-K 68.63 27 P P 23 21 41.4 +0.8
baz=280,SNR=5.3
CUT Chulitna 68.69 30 P P 23 21 41.6 +0.5
baz=280
KOPT Kop Dagi 68.81 306 P P 23 21 42.7 0.0
KOPT IAmb IAmb 23 21 45.2
comp=Z,33nm,1.2s
F24K Squaw Lake 68.82 24 P P 23 21 42.6 +0.7
baz=280
NEA2 Nenana 68.84 28 P P 23 21 42.1 +0.1
NEA2 IAmb IAmb 23 21 51.7
comp=Z,23nm,1.1s
NEA2 Nenana 68.84 28 P P 23 21 42.3 +0.2
baz=280
BRLK Bradley Lake 68.85 33 P P 23 21 42.1 -0.1
BRLK IAmb IAmb 23 21 52.2
comp=Z,19nm,0.8s
M22K Willow 68.87 31 P P 23 21 42.2 0.0
baz=280
BRSE Bradley Lake S 68.92 33 P P 23 21 43.1 +0.4
baz=280
RAYN Ar Rayn 68.98 287 P P 23 21 43.0 -0.7
RAYN IAmb IAmb 23 21 44.5
comp=Z,21nm,1.1s
RAYN Ar Rayn 68.98 287 *i* P P 23 21 43.3 -0.5
SNR=20
RAYN Ar Rayn 68.98 287 P P 23 21 43.2 -0.5
RAYN Ar Rayn 68.98 287 P P 23 21 43.5 -0.2
D25K Kavik River 69.05 22 P P 23 21 44.0 +0.7
baz=281
MCK McKinley 69.05 28 P P 23 21 44.3 +0.9
baz=280,SNR=8.2
H24K Noodor Dome 69.12 26 P P 23 21 45.0 +1.2
baz=280
G24K Hadweenzic Riv 69.12 25 P P 23 21 44.6 +0.8
baz=281
RC01 Rabbit Creek A 69.17 31 P P 23 21 44.7 +0.6
RC01 IAmb IAmb 23 22 04.6
comp=Z,43nm,1.6s
RC01 Rabbit Creek A 69.17 31 P P 23 21 44.6 +0.4
baz=281
WRH Wood River Hil 69.28 28 P P 23 21 45.3 +0.5
WRH IAmb IAmb 23 22 02.5
comp=Z,8.4nm,0.6s
O22K Cooper Landing 69.29 32 P P 23 21 45.2 +0.4
baz=281
COLA College 69.31 27 P P 23 21 45.8 +1.0
baz=281
PMR Palmer 69.36 31 P P 23 21 45.2 -0.1
PMR IAmb IAmb 23 21 58.4
comp=Z,45nm,1.6s
PMR Palmer 69.36 31 P P 23 21 45.2 -0.1
baz=281
PMR Palmer 69.36 31 P P 23 21 45.2 -0.1
PMR pmax pmax
comp=Z,45nm,1.6s
WAT1 Susitna Watana 69.39 29 P P 23 21 45.8 +0.3
baz=281
POKR Poker Plat Res 69.43 27 P P 23 21 46.0 +0.2
baz=281
C26K Camden Bay 69.44 22 P P 23 21 46.1 +0.5
baz=282
SEW Seward 69.49 32 P P 23 21 46.1 0.0
baz=281
E25K Arctic Village 69.57 24 P P 23 21 47.1 +0.6
baz=282
G25K Bearman Lake 69.64 25 P P 23 21 47.6 +0.7
baz=282
F25K Christian Rive 69.65 24 P P 23 21 48.1 +1.0
baz=282
SML Sawmill 69.69 30 P P 23 21 47.6 +0.1
baz=282,SNR=6.0
KNK Knik Glacier 69.71 31 P P 23 21 48.0 +0.5
baz=282,SNR=8.6
ILAR Eielson Array 69.73 27 P P 23 21 47.2 -0.3
ILAR Eielson Array 69.73 27 P P 23 21 47.2 -0.3
ILAR Eielson Array 69.73 27 P P 23 21 46.8 -0.8
comp=Z,1.1nm,0.5s,baz=278,slow=5.7,SNR=26
ILAR LR LR 23 54 13.3
comp=Z,120nm,20.7s,baz=270,slow=38
comp=Z,1.1nm,0.5s
HDA Harding Lake 69.78 28 P P 23 21 48.2 +0.4
baz=282
WAT6 Susitna Watana 69.81 30 P P 23 21 48.3 0.0
baz=282,SNR=5.8
DHY Denali Highway 69.87 29 P P 23 21 49.1 +0.5
baz=282
KEV Kevo 69.87 338 P P 23 21 47.7 -0.6
KEV Kevo 69.87 338 P P 23 21 47.7 -0.6
KEV pmax pmax
comp=Z,89nm,1.6s
ANN Anapa 69.93 311 *e*P P 23 21 48.2 -0.9
ANN *e*S S 23 30 57.6 +0.9
ANN pmax pmax
comp=Z,56nm,1.0s
M23K Glacier View 69.98 30 P P 23 21 49.6 +0.5
baz=282,SNR=6.1
BMAR Burnt Mountain 70.08 24 P P 23 21 50.5 +0.8
TAU Tasmania Unive 70.08 160 P P 23 21 50.4 +0.6
TAU IAmb IAmb 23 21 51.7
comp=Z,27nm,1.1s
TAU Tasmania Unive 70.08 160 P P 23 21 50.4 +0.6
TAU pmax pmax
comp=Z,27nm,1.1s
PRP Porcupine Dome 70.14 26 P P 23 21 50.8 +0.6
baz=283
SCM Sheep Creek Mo 70.15 30 P P 23 21 50.4 +0.1
SCM IAmb IAmb 23 22 12.4
comp=Z,29nm,0.9s
SCM Sheep Creek Mo 70.15 30 P P 23 21 50.7 +0.4
baz=282,SNR=9.5
SCM Sheep Creek Mo 70.15 30 P P 23 21 50.4 +0.1
SCM pmax pmax
comp=Z,29nm,0.9s
F26K Sheenjek River 70.19 24 P P 23 21 51.1 +0.8
baz=283
MSEY Mahe Island 70.23 256 P P 23 21 50.9 -0.6
MSEY IAmb IAmb 23 21 53.0
comp=Z,23nm,1.1s
MSEY Mahe Island 70.23 256 *i* P P 23 21 51.5 0.0
SNR=5.8
MSEY Mahe Island 70.23 256 P P 23 21 50.9 -0.6
MSEY pmax pmax
comp=Z,23nm,1.1s
MSEY Mahe Island 70.23 256 P P 23 21 51.8 +0.3
MSEY P P 23 21 51.8 +0.3
MSEY P pP 23 21 51.9 -10
MSEY P pP 23 21 51.9 -10
SPA0 Spitsbergen Ar 70.35 348 *e*P P 23 21 50.5 -0.7
SPA0 IAmb IAmb 23 21 52.5
comp=Z,210nm,2.3s
SPITS Spitsbergen Ar 70.35 348 P P 23 21 50.0 -1.2
SPITS Spitsbergen Ar 70.35 348 P P 23 21 50.0 -1.2
comp=Z,4.3nm,0.8s,baz=88,slow=6.8,SNR=8.4
SPITS LR LR 23 56 52.2
comp=Z,303nm,18.6s,baz=38,slow=39
comp=Z,4.3nm,0.8s
J25K Salcha River, 70.40 27 P P 23 21 52.5 +0.7
baz=283
K24K Donnelly Dome 70.41 28 P P 23 21 51.7 -0.1
baz=283,SNR=8.9
ARA0 ARCESS Array S 70.43 338 *e*P P 23 21 52.9 +1.1
ARCES ARCESS Array B 70.43 338 P P 23 21 51.0 -0.8
ARCES ARCESS Array B 70.43 338 P P 23 21 51.0 -0.8
ARCES pmax pmax
comp=Z,121nm,2.0s
ARCES ARCESS Array B 70.43 338 P P 23 21 50.6 -1.1
comp=Z,3.8nm,0.8s,baz=28,slow=4.1,SNR=10
comp=Z,3.8nm,0.8s
GLI Glacier Island 70.47 31 P P 23 21 52.3 +0.2
baz=283
G26K Porcupine Rive 70.50 25 P P 23 21 52.7 +0.5
baz=284
P23K Montague Islan 70.52 32 P P 23 21 52.9 +0.4
baz=283
M24K Tolsona, Glenn 70.62 30 P P 23 21 54.2 +1.0
baz=283,SNR=7.6
ARPR Arapgir-MALATY 70.66 305 P P 23 21 53.1 -0.8
ARPR IAmb IAmb 23 21 55.5
comp=Z,13nm,1.0s
PAX Paxson 70.74 29 P P 23 21 54.8 +0.9
baz=284
RIDG Independent Ri 70.83 28 P P 23 21 54.7 +0.4
baz=284
KLU Klutina 70.88 30 P P 23 21 55.2 +0.5
KLU IAmb IAmb 23 22 08.2
comp=Z,49nm,1.8s
KLU Klutina 70.88 30 P P 23 21 55.5 +0.8
baz=284,SNR=7.3
D27M Malcolm River 70.94 22 P P 23 21 55.3 +0.3
baz=286
SCRK Sand Creek 71.14 28 P P 23 21 57.4 +1.1
baz=285
I26K Coal Creek Min 71.15 26 P P 23 21 56.8 +0.6
baz=285
Q23K Middleton Isla 71.17 33 P P 23 21 57.1 +0.7
baz=284
J26L Joseph Creek 71.19 27 P P 23 21 57.0 +0.4
baz=285
EYAK Cordova Ski Ar 71.19 31 P P 23 21 57.2 +0.7
baz=284
KTK1 Kautokeino 71.35 338 *e*P P 23 21 57.4 +0.1
KTK1 IAmb IAmb 23 22 11.3
comp=Z,1µm,3.9s
N25K Chitina, Valde 71.47 30 P P 23 21 59.0 +0.7
baz=285
MENT Mentasta 71.52 29 P P 23 21 58.8 +0.2
MENT IAmb IAmb 23 22 20.0
comp=Z,12nm,0.8s
H27K Steamboat Moun 71.55 25 P P 23 21 59.1 +0.4
baz=286
E28M Babbage River 71.62 22 P P 23 21 59.6 +0.6
baz=287
BMRM Bremner River 71.63 31 P P 23 21 59.8 +0.6
baz=285
L26K Log Cabin Wild 71.66 29 P P 23 22 00.3 +1.0
baz=285
D28M Stokes Point 71.68 22 P P 23 21 59.6 +0.3
baz=288
I27K Kandik River 71.69 26 P P 23 21 59.7 +0.2
baz=286
F28M Old Crow 71.78 24 P P 23 22 00.7 +0.7

baz=287,SNR=10
K27K Chicken 71.94 27 P **P** 23 22 01.3 +0.3
baz=286
KAIM Kayak Island 71.99 32 P **P** 23 22 02.1 +0.8
baz=286
GAZ Gaziantep 72.02 303 P **P**
GAZ IAmb IAmb 23 22 03.5 23 22 01.6 -0.5
comp=Z,31nm,1.0s
VRDI Verde Repeater 72.10 30 P **P** 23 22 02.0 -0.2
VRDI IAmb IAmb 23 22 15.0
comp=Z,15nm,1.1s
EGAK Eagle 72.11 27 P **P** 23 22 01.8 -0.2
EGAK IAmb IAmb 23 22 10.5
comp=Z,12nm,0.9s
EGAK Eagle 72.11 27 P **P** 23 22 02.5 +0.6
baz=287,SNR=10.0
JETT Jettan, Norway 72.14 339 *e*P **P** 23 22 01.9 -0.2
SIM Simferopol' 72.18 312 P **P** 23 22 02.4 -0.4
SIM pmax pmax
comp=Z,87nm,1.0s
E29M Blow River 72.26 22 P **P** 23 22 03.2 +0.4
baz=288
MCARA McCarthy VSAT 72.26 30 P **P** 23 22 03.9 +1.0
baz=286
L27K Beaver Creek, 72.32 28 P **P** 23 22 04.3 +0.9
baz=287
BCAR Beaver Creek A 72.34 28 P **P** 23 22 04.0 +0.5
FIA1 FINESS Array S 72.34 330 P **P** 23 22 02.8 -0.6
FINES FINESS Array B 72.34 330 P **P** 23 22 02.6 -0.8
FINES FINESS Array B 72.34 330 *i* P **P** 23 22 02.5 -0.9
FINES pmax pmax
comp=Z,13nm,0.6s
FINES FINESS Array B 72.34 330 P **P** 23 22 02.2 -1.2
comp=Z,13nm,0.6s,baz=66,slow=6.2,SNR=65
FINES LR LR 23 56 25.4
comp=Z,524nm,18.4s,baz=79,slow=38
comp=Z,13nm,0.6s
CRQE Cirque 72.40 31 P **P** 23 22 04.4 +0.5
baz=286
I28M Miner Creek 72.41 26 P **P** 23 22 04.6 +0.8
baz=288
M27K Edge Creek, AK 72.50 29 P **P** 23 22 04.8 +0.2
baz=287,SNR=8.7
TGL Tana Glacier 72.53 31 P **P** 23 22 05.0 +0.4
TGL IAmb IAmb 23 22 26.8
comp=Z,41nm,1.5s
BNN Bunyan 72.59 305 P **P** 23 22 04.9 -0.6
TRO Tromso 72.61 339 *e*P **P** 23 22 05.8 +1.0
H29M Whitestone 72.78 25 P **P** 23 22 06.2 +0.2
baz=289
VSU Vasula 72.88 327 *ce*P **P** 23 22 04.4 -2.2
VSU pmax pmax
comp=Z,53nm,1.0s
VSU Vasula 72.88 327 *e*P **P** 23 22 06.6 0.0
BVCY Beaver Creek 72.94 29 P **P** 23 22 07.6 +0.6
baz=288
DAWY Dawson 73.06 27 P **P** 23 22 08.2 +0.5
DAWY IAmb IAmb 23 22 16.5
comp=Z,12nm,1.0s
DAWY Dawson 73.06 27 P **P** 23 22 07.9 +0.2
baz=288,SNR=8.9
MESA MESA 73.11 31 P **P** 23 22 08.9 +0.6
baz=288
CTG Chitna Glacier 73.16 30 P **P** 23 22 08.9 +0.4
baz=288,SNR=13
F30M Barrier River 73.27 23 P **P** 23 22 08.9 +0.1
baz=291
YUK3 Moose Creek 73.31 29 P **P** 23 22 09.4 -0.1
baz=288
G30M tAoh Zraii Nji 73.33 24 P **P** 23 22 08.5 -0.7
baz=290
EPYK Eagle Plains 73.36 24 P **P** 23 22 09.7 +0.3
baz=290
MNK Minsk 73.41 323 *i* P **P** 23 22 09.4 -0.5
MNK *i* 23 22 25.4
MNK *i* 23 24 52.5
MNK *i* PPP PPP 23 26 37.2
MNK *i* S **SKiKP** 23 31 39.0 +1.0
MNK *i* 23 32 11.5
MNK *i* SS **SS** 23 36 21.9 +3.3
MNK pmax pmax
comp=Z,57nm,0.9s
MNK pmax pmax
comp=N,12nm,0.9s
MNK pmax pmax
comp=E,12nm,1.0s
MNK MLR MLR
comp=N,530nm,17.0s
MNK MLR MLR
comp=Z,799nm,17.0s
MNK MLR MLR
comp=E,230nm,16.0s
J29N Klondike Camp 73.42 26 P **P** 23 22 10.3 +0.4
baz=289
MEF Metsahovi 73.49 329 *e*P **P** 23 22 09.7 -0.5
AKASG Malin Array Be 73.74 319 P **P** 23 22 10.3 -1.6
AKASG Malin Array Be 73.74 319 P **P** 23 22 10.3 -1.6
comp=E,6.5nm,0.6s,baz=60,slow=5.8,SNR=22
comp=E,6.5nm,0.6s
AKBB Malin Array Si 73.74 319 *ce*P **P** 23 22 10.2 -1.7
AKBB pmax pmax
comp=Z,41nm,1.8s
KIEV Kiev 73.75 319 ⇓P **P** 23 22 10.8 -1.2
KIEV Kiev 73.75 319 P **P** 23 22 10.1 -1.8
KIEV IAmb IAmb 23 22 11.5
comp=Z,66nm,1.8s
KIEV Kiev 73.75 319 *i* P **P** 23 22 10.8 -1.2
SNR=8.7
KIEV Kiev 73.75 319 P **P** 23 22 10.7 -1.2
YUK8 Steele Glacier 73.79 30 P **P** 23 22 12.5 +0.2
baz=289
INK Inuvik 73.81 22 P **P** 23 22 11.1 -0.8
INK Inuvik 73.81 22 P **P** 23 22 12.0 +0.1
baz=292,SNR=6.8
INK Inuvik 73.81 22 P **P** 23 22 11.1 -0.8
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 73.81 22 P **P** 23 22 10.6 -1.3
comp=Z,2.5nm,0.5s,baz=282,slow=5.2,SNR=17
INK LR LR 23 58 15.0
comp=Z,203nm,19.8s,baz=352,slow=39
comp=Z,2.5nm,0.5s
I30M Mount Dempster 73.89 25 P **P** 23 22 12.4 -0.3
baz=291
L29M L29M 73.90 28 P **P** 23 22 13.3 +0.6
baz=290
K29M Barlow Dome 73.91 27 P **P** 23 22 13.2 +0.4
baz=290
IZAR Zarasai 73.94 324 *e*P **P** 23 22 14.3 +1.4
PINM Pinnacle 73.94 31 P **P** 23 22 13.0 -0.1
baz=289
BR131 Keskin Array S 73.98 307 P **P** 23 22 12.9 -0.8
BR131 IAmb IAmb 23 22 14.4
comp=Z,27nm,1.1s
BR131 Keskin Array S 73.98 307 *c* *i* P **P** 23 22 13.0 -0.7
BR131 Keskin Array S 73.98 307 P **P** 23 22 13.5 -0.2
SNR=8.4
BRTR Keskin Array B 73.98 307 P **P** 23 22 12.5 -1.2
BRTR Keskin Array B 73.98 307 P **P** 23 22 13.0 -0.8
BRTR Keskin Array B 73.98 307 P **P** 23 22 12.9 -0.8
comp=Z,14nm,0.8s,baz=114,slow=4.8,SNR=63
comp=Z,14nm,0.8s
M29M Somme Creek 73.98 28 P **P** 23 22 13.2 -0.1
baz=290
ISAL Salakas 74.06 324 *e*P **P** 23 22 15.1 +1.5
F31M Tsiigehtchic 74.06 23 P **P** 23 22 12.6 -0.9
baz=292
G31M Satah River 74.07 23 P **P** 23 22 13.4 -0.1
baz=292
J30M Hart River 74.14 26 P **P** 23 22 14.1 -0.1
baz=291
MTSE Matsula 74.25 328 *e*P **P** 23 22 14.3 -0.4
YUK4 Talbot Arm 74.28 30 P **P** 23 22 14.8 -0.2
baz=290
RAF Rauma 74.46 330 *e*P **P** 23 22 15.2 -0.6
H31M Peel River 74.47 25 P **P** 23 22 16.3 +0.4
baz=292
PNL Peninsula 74.49 31 P **P** 23 22 16.3 +0.1
baz=290
STEI Steigen 74.49 338 *e*P **P** 23 22 14.8 -1.1
STEI IAmb IAmb 23 22 15.4
comp=Z,17nm,0.8s
YUK6 Outpost Mounta 74.54 30 P **P** 23 22 17.1 +0.4
baz=290
ANTO Ankara 74.56 307 ⇑P **P** 23 22 16.7 -0.4
ANTO Ankara 74.56 307 P **P** 23 22 16.2 -0.7
ANTO IAmb IAmb 23 22 17.7
comp=Z,40nm,0.9s
ANTO Ankara 74.56 307 P **P** 23 22 16.6 -0.4
ANTO Ankara 74.56 307 P **P** 23 22 16.8 -0.2
PURM Purcari 74.58 314 ⇓P **P** 23 22 16.3 -0.5
BR231 Keskin MP Arra 74.58 307 P **P** 23 22 16.7 -0.4
BR231 IAmb IAmb 23 22 17.8
comp=Z,31nm,0.9s
MMAI Mount Meron Ar 74.65 300 P **P** 23 22 17.1 -0.5
comp=Z,7.6nm,0.9s,baz=60,slow=6.8,SNR=16
MMAI LR LR 23 59 40.1
comp=Z,273nm,19.0s,baz=352,slow=39
comp=Z,7.6nm,0.9s
M30M Minto, Yukon 74.66 28 P **P** 23 22 17.5 +0.3
baz=291,SNR=10
O29M Mount Kennedy 74.66 31 P **P** 23 22 17.7 +0.4
baz=290
FAUS Fauske 74.70 337 *e*P **P** 23 22 16.9 -0.3
FAUS IAmb IAmb 23 22 17.8
comp=Z,28nm,0.9s
A36M Sachs Harbour 74.76 17 P **P** 23 22 16.7 -0.7
baz=299,SNR=11
N30M Aishikik Lake 74.94 29 P **P** 23 22 18.7 0.0
baz=291
HYT Haines Junctio 74.98 30 P **P** 23 22 19.0 0.0
HYT Haines Junctio 74.98 30 P **P** 23 22 19.6 +0.6
baz=291,SNR=6.2
GHAJ Ghor Haditha 75.05 298 P **P** 23 22 19.0 -0.8
GHAJ IAmb IAmb 23 22 21.1
comp=Z,28nm,1.0s
SORM Soroca 75.06 316 ⇑P **P** 23 22 18.5 -1.1
SORM Soroca 75.06 316 P **P** 23 22 18.9 -0.7
VSVD Vaisvydziai 75.10 325 *e*P **P** 23 22 19.6 0.0
PABE Paberze 75.24 324 P **P** 23 22 19.6 -0.9
PABE Paberze 75.24 324 *e*P **P** 23 22 20.2 -0.2
P29M Windy Craggy 75.30 31 P **P** 23 22 21.8 +1.0
baz=291
ATD Arta Tunnel 75.32 276 P **P** 23 22 22.3 +0.5
SLIT Slitere, Latvi 75.38 327 *e*P **P** 23 22 20.1 -1.1
P30M Million Dollar 75.48 30 P **P** 23 22 22.8 +0.9
baz=292
MOR8 Moi Rana 75.51 336 *e*P **P** 23 22 19.2 -2.7
MOR8 IAmb IAmb 23 22 31.1
comp=Z,180nm,2.5s
MDUB Mudurnu 75.54 308 P **P** 23 22 21.4 -1.2
O30N Mendenhall 75.64 30 P **P** 23 22 23.6 +0.8
baz=292
EUNU Eureka 75.66 5 P **P** 23 22 23.0 +0.4
LEOM Leova 75.66 315 ⇑P **P** 23 22 22.7 -0.4
LEOM Leova 75.66 315 P **P** 23 22 22.6 -0.4
CSS Mathiatis 75.67 302 P **P** 23 22 22.4 -1.0
TLCR 75.70 313 ⇑P **P** 23 22 23.3 -0.1
TLCR 75.70 313 P **P** 23 22 23.2 -0.1
M31M Drury Creek, Y 75.84 28 P **P** 23 22 24.8 +0.9
baz=293
VASR Vaslui 75.90 315 ⇑P **P** 23 22 23.6 -0.9
STOK Stokkvaagen 75.96 337 *e*P **P** 23 22 23.3 -1.1
VLDR Vladesti 75.97 314 ⇓P **P** 23 22 24.5 -0.3
TPGR Topolog 76.07 313 ⇓P **P** 23 22 24.5 -1.0
EIL Elat 76.08 296 LR LR 00 00 25.6
comp=Z,234nm,18.9s,baz=56,slow=39
VARL Varlezi 76.11 314 ⇓P **P** 23 22 25.1 -0.5
PBUR Paburge 76.14 325 *e*P **P** 23 22 25.7 +0.1
CFR Carcaliu 76.16 313 ⇑P **P** 23 22 25.6 -0.4
CFR Carcaliu 76.16 313 P **P** 23 22 25.5 -0.4
SUW Suwalki 76.18 323 *e*P **P** 23 22 24.8 -1.1
SUW Suwalki 76.18 323 P **P** 23 22 24.8 -1.1
SUW Suwalki 76.18 323 P **P** 23 22 24.8 -1.1
SUW pmax pmax
comp=Z,108nm,0.9s
SUW Suwalki 76.18 323 *e*P **P** 23 22 25.7 -0.2
TIRR Tirgusor 76.21 313 ⇑P **P** 23 22 25.1 -1.1
TIRR Tirgusor 76.21 313 P **P** 23 22 25.5 -0.7
TIRR Tirgusor 76.21 313 P **P** 23 22 25.5 -0.7
TIRR pmax pmax
comp=Z,111nm,1.0s
WHY Whitehorse 76.23 30 P **P** 23 22 26.1 -0.2
WHY Whitehorse 76.23 30 P **P** 23 22 26.9 +0.7
baz=293,SNR=6.1
BORA Eskisehir 76.27 308 P **P** 23 22 25.4 -1.4
BORA IAmb IAmb 23 22 26.9
comp=Z,28nm,1.0s
FARO Faro, Yukon 76.28 28 P **P** 23 22 26.1 -0.2
FARO Faro, Yukon 76.28 28 P **P** 23 22 27.5 +1.2
baz=294,SNR=9.2
IZVR Izvoarele 76.28 314 ⇓P **P** 23 22 26.6 0.0
C36M Paulatuk 76.42 19 P **P** 23 22 26.5 -0.4
baz=301,SNR=11
TLBR Topalu 76.42 313 ⇓P **P** 23 22 26.8 -0.7
HARR Harsova 76.45 313 ⇑P **P** 23 22 27.2 -0.5
HARR Harsova 76.45 313 P **P** 23 22 27.1 -0.5
SKAG Skagway 76.50 31 P **P** 23 22 27.4 -0.2
baz=293
PANC Panciu 76.58 314 ⇓P **P** 23 22 28.9 +0.6
PRAR RASCA 76.67 316 ⇑P **P** 23 22 28.2 -0.7
ODBI Odobesti 76.68 314 ⇑P **P** 23 22 29.5 +0.7
TESR Tescani 76.69 315 ⇓P **P** 23 22 28.5 -0.5
ICOR Ion Corvin 76.73 312 ⇓P **P** 23 22 28.9 -0.4
N32M Quiet Lake 76.84 29 P **P** 23 22 29.9 +0.3
baz=295
VRI Vrincioaia 76.86 314 ⇑P **P** 23 22 30.1 +0.2
VRI Vrincioaia 76.86 314 P **P** 23 22 30.1 +0.2
GRER 76.86 314 ⇓P **P** 23 22 31.2 +1.2
AMRR Amara 76.88 313 ⇓P **P** 23 22 30.4 +0.4
AMRR Amara 76.88 313 P **P** 23 22 30.4 +0.4
PLOR Plostina 76.91 314 ⇑P **P** 23 22 30.2 -0.2
PLOR Plostina 76.91 314 P **P** 23 22 30.1 -0.2
BISRR Bisoca 76.98 314 ⇑P **P** 23 22 30.3 -0.3
MMPY Sheldon Lake, 77.00 27 P **P** 23 22 30.6 +0.2
baz=296
NSS Namsos 77.17 335 *e*P **P** 23 22 29.6 -1.6
NSS IAmb IAmb 23 22 40.1
comp=Z,105nm,1.7s
LVV L'vov 77.18 319 *e*P **P** 23 22 30.8 -0.9
P32M Atlin 77.20 30 P **P** 23 22 32.0 +0.4
baz=294
COVR Voineasa-Covas 77.21 314 ⇑P **P** 23 22 31.8 -0.1
BUR08 Bucovina Ar. S 77.23 316 P **P** 23 22 31.1 -1.0
BUR08 IAmb IAmb 23 22 32.6
comp=Z,12nm,0.9s
BURAR Bucovina Array 77.23 316 ⇓P **P** 23 22 31.8 -0.3
BURAR Bucovina Array 77.23 316 P **P** 23 22 30.9 -1.2
BURAR IAmb IAmb 23 22 32.9
comp=Z,11nm,0.7s
BURAR Bucovina Array 77.23 316 P **P** 23 22 31.8 -0.3
TURR Turia 77.26 315 ⇓P **P** 23 22 32.8 +0.6
NEHR Nehoiu 77.29 314 ⇑P **P** 23 22 32.6 +0.2
P33M Teslin, Yukon 77.35 30 P **P** 23 22 33.0 +0.5
baz=295
R32K Eaglecrest 77.36 32 P **P** 23 22 33.2 +0.7
baz=294
OZUR 77.39 315 ⇓P **P** 23 22 32.8 -0.2
SIT Sitka 77.45 33 P **P** 23 22 33.6 +0.6
baz=294
BOSR Bodos 77.48 315 ⇑P **P** 23 22 33.8 +0.3
MLR Muntele Rosu 77.50 314 ⇓P **P** 23 22 33.8 +0.1
MLR Muntele Rosu 77.50 314 P **P** 23 22 32.5 -1.2
MLR IAmb IAmb 23 22 34.8
comp=Z,33nm,0.8s
MLR Muntele Rosu 77.50 314 P **P** 23 22 33.8 +0.1
S32K Killisnoo 77.66 32 P **P** 23 22 34.8 +0.7
baz=294
DOPR Dopca 77.70 315 ⇑P **P** 23 22 34.2 -0.5
ELL Elmali 77.71 305 P **P** 23 22 33.4 -1.6
ELL Elmali 77.71 305 P **P** 23 22 33.4 -1.6
ELL pmax pmax
comp=Z,106nm,0.9s
RAZG Razgrad 77.80 312 ⇓P **P** 23 22 34.4 -0.9
LOZB Loznitsa 77.81 312 ⇑P **P** 23 22 34.4 -0.9
RER Riviere de l'E 77.95 241 P **P** 23 22 37.2 +0.8
ARCR ARCALIA 77.97 316 ⇓P **P** 23 22 35.8 -0.3
KWP Kalwaria Pacla 78.05 319 *e*P **P** 23 22 36.5 -0.1
KWP Kalwaria Pacla 78.05 319 P **P** 23 22 35.7 -0.8
KWP Kalwaria Pacla 78.05 319 P **P** 23 22 35.7 -0.8
KWP pmax pmax
comp=Z,37nm,0.8s
VOIR 78.11 314 ⇓P **P** 23 22 36.5 -0.5
VOIR 78.11 314 P **P** 23 22 36.5 -0.5
AKAS Kas 78.12 304 P **P** 23 22 35.3 -2.0
Q32M Nakina River 78.14 31 P **P** 23 22 37.3 +0.2
baz=296
RAO Raoul Island 78.22 129 LR LR 23 50 58.3
comp=Z,134nm,19.3s,baz=11,slow=31
BMR Baia Mare 78.29 317 ⇑P **P** 23 22 37.6 -0.3
BMR Baia Mare 78.29 317 P **P** 23 22 37.6 -0.3
ARR Arges 78.41 314 ⇓P **P** 23 22 38.6 -0.1
TBLU Trondheim 78.44 335 *e*P **P** 23 22 37.0 -1.4
ELND Elena 78.46 312 ⇑P **P** 23 22 38.2 -0.7
HFS Hagfors 78.46 331 P **P** 23 22 37.2 -1.4
comp=Z,15nm,0.7s,baz=107,slow=5.0,SNR=57
HFS LR LR 00 00 52.9
comp=Z,690nm,19.3s,baz=54,slow=38
comp=Z,15nm,0.7s
COPA Copaceanca 78.47 313 ⇓P **P** 23 22 38.4 -0.5
HUMR Humele 78.49 314 ⇑P **P** 23 22 38.2 -0.8
R33M Jennings River 78.55 30 P **P** 23 22 40.0 +0.7
baz=297
KOLS Kolonicke sedl 78.58 318 *e*P **P** 23 22 38.8 -0.7
KOLS pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 78.58 318 *e*P **P** 23 22 38.8 -0.7
CJR Cluj-Napoca 78.58 316 ⇓P **P** 23 22 38.9 -0.7
CJR Cluj-Napoca 78.58 316 P **P** 23 22 40.0 +0.4
TGTN Hyland Airport 78.75 27 P **P** 23 22 41.3 +1.1
baz=298
MESR Meseseni 78.83 317 ⇑P **P** 23 22 40.5 -0.3
NC405 NORSAR Array S 78.87 332 P **P** 23 22 39.6 -1.3
MARR Marisel-Cluj 78.90 316 ⇓P **P** 23 22 41.2 -0.2
LOT Lotru 78.94 315 ⇓P **P** 23 22 41.8 +0.1
U33K Whale Pass 78.95 33 P **P** 23 22 42.5 +1.2
baz=296
DIM Dimitrovgrad 78.98 311 *e*P **P** 23 22 41.8 0.0
CRVS Cervenica-Dubn 79.08 319 *e*P **P** 23 22 43.2 +1.0
CRVS pmax pmax
comp=Z,65nm,1.6s
CRVS Cervenica-Dubn 79.08 319 *e*P **P** 23 22 43.2 +1.0
DRGR 79.12 316 ⇑P **P** 23 22 42.3 -0.2
DRGR 79.12 316 P **P** 23 22 42.3 -0.2
NB2 NORSAR Subarra 79.12 332 P **P** 23 22 40.5 -1.8
comp=Z,16nm,0.9s,baz=60,slow=5.6
NB2 NORSAR Subarra 79.12 332 P **P** 23 22 40.5 -1.8
baz=60,slow=5.6
NOA NORSAR Array B 79.12 332 P **P** 23 22 40.2 -2.1
comp=Z,9.2nm,0.7s,baz=58,slow=5.5,SNR=52
comp=Z,9.2nm,0.7s
NC602 NORSAR Array S 79.13 332 *e*P **P** 23 22 40.3 -1.9
S34M Telegraph Cree 79.14 31 P **P** 23 22 43.9 +1.6
baz=297
PLVB Pleven 79.15 313 ⇓P **P** 23 22 42.2 -0.5
BLEU Blekinge 79.16 327 *e*P **P** 23 22 40.9 -1.5
WTLY Watson Lake, Y 79.19 29 P **P** 23 22 43.5 +0.8
baz=298
WRAK Wrangell Islan 79.21 33 P **P** 23 22 43.4 +0.7
baz=296
DEV Deva 79.34 315 ⇓P **P** 23 22 44.1 +0.3
DEV Deva 79.34 315 P **P** 23 22 44.0 +0.3
RDO Rodhopi 79.34 310 P **P** 23 22 43.0 -0.8
RDO IAmb IAmb 23 22 43.9
comp=Z,19nm,0.9s
RES Resolute Bay 79.38 9 P **P** 23 22 42.2 -1.1
RES Resolute Bay 79.38 9 P **P** 23 22 42.2 -1.1
RES pmax pmax
comp=Z,5.0nm,1.0s
RES Resolute Bay 79.38 9 LR LR 23 59 55.3
comp=Z,155nm,21.6s,baz=2.0,slow=37
DLBC Dease Lake 79.42 31 P **P** 23 22 45.1 +1.1
baz=298
DLBC Dease Lake 79.42 31 P **P** 23 22 43.0 -0.9
comp=Z,2.2nm,0.7s,baz=303,slow=8.0,SNR=3.4
DLBC LR LR 23 59 10.4
comp=Z,131nm,21.5s,baz=285,slow=37
comp=Z,2.2nm,0.7s
DOMB Dombas 79.52 334 *e*P **P** 23 22 42.3 -2.1
OJC Ojcow 79.55 320 *e*P **P** 23 22 44.3 -0.4
OJC Ojcow 79.55 320 P **P** 23 22 44.1 -0.7
OJC Ojcow 79.55 320 P **P** 23 22 44.1 -0.7
OJC pmax pmax
comp=Z,46nm,0.9s
NIE Niedzica 79.58 319 *e*P **P** 23 22 44.8 -0.2
GZR Gura Zlata 79.61 315 ⇑P **P** 23 22 44.6 -0.6
GZR Gura Zlata 79.61 315 P **P** 23 22 44.6 -0.6
RZN Rozhen 79.70 311 *e*P **P** 23 22 45.5 -0.5
JMIC Jan Mayen 79.71 345 LR LR 00 03 09.9
comp=Z,195nm,18.2s,baz=54,slow=40
GKP Gorka Klasztor 79.73 324 *e*P **P** 23 22 45.0 -0.6
GKP Gorka Klasztor 79.73 324 *e*P **P** 23 22 45.7 +0.1
MPEP Malo Peshtene 79.75 313 *e*P **P** 23 22 45.7 -0.3
WRGLY Wrigley 79.83 25 P **P** 23 22 46.8 +0.8
baz=302
VALD Valchedram 79.83 313 *e*P **P** 23 22 46.3 -0.1
KECS Kecovo 79.84 318 *e*P **P** 23 22 47.2 +0.8
KECS Kecovo 79.84 318 *e*P **P** 23 22 47.2 +0.8
OSL Oslo 79.87 331 *e*P **P** 23 22 45.4 -0.8
SURR Surduc 79.89 315 ⇓P **P** 23 22 46.5 -0.2
PUNG Punghina 79.94 314 ⇑P **P** 23 22 47.1 +0.1
SIRR Siria 79.99 316 ⇑P **P** 23 22 46.6 -0.6
BORU Boraas 80.05 329 *e*P **P** 23 22 45.9 -1.4
HERR Herculane 80.05 315 ⇑P **P** 23 22 47.0 -0.5
DEL Delary 80.06 328 *e*P **P** 23 22 46.0 -1.3
DJES Djerdap 80.06 314 ⇑P **P** 23 22 47.0 -0.6
DJES Djerdap 80.06 314 P **P** 23 22 46.3 -1.3
STRU Stroemstad 80.11 331 *e*P **P** 23 22 45.9 -1.7
BSD Bornholm Skovb 80.15 326 *e*P **P** 23 22 46.5 -1.3
BSD IAmb IAmb 23 22 47.3
comp=Z,20nm,1.0s
LANS Liptovska Anna 80.19 319 *e*P **P** 23 22 48.4 +0.1
LANS pmax pmax
comp=Z,20nm,1.9s
LANS Liptovska Anna 80.19 319 *e*P **P** 23 22 48.4 +0.1
NNZ Nelson 80.20 143 P **P** 23 22 47.8 -0.4
BZS Buzias 80.28 315 ⇓P **P** 23 22 47.7 -1.0
BZS Buzias 80.28 315 P **P** 23 22 47.7 -1.0
AKN Aaknes 80.28 334 *e*P **P** 23 22 47.9 -0.6
FABU Falkenberg 80.37 328 *e*P **P** 23 22 49.0 0.0
VTS Vitosha 80.38 312 *e*P **P** 23 22 49.5 -0.1
TJOU Tjoern 80.39 330 *e*P **P** 23 22 48.5 -0.6
URZ Urewera 80.41 139 LR LR 23 56 26.6
comp=Z,87nm,20.2s,baz=118,slow=34
PSZ Piszkesteto 80.43 318 ⇓P **P** 23 22 49.1 -0.5
PSZ Piszkesteto 80.43 318 P **P** 23 22 48.8 -0.8
PSZ IAmb IAmb 23 22 50.3
comp=Z,21nm,1.1s
PSZ Piszkesteto 80.43 318 P **P** 23 22 49.1 -0.5
MMB Musomishta 80.44 311 *e*P **P** 23 22 49.0 -0.8
KONO Kongsberg 80.51 331 P **P** 23 22 48.6 -1.1
KONO IAmb IAmb 23 24 29.9
comp=Z,60nm,1.8s
KONO Kongsberg 80.51 331 *e*P **P** 23 22 48.4 -1.4
KONO Kongsberg 80.51 331 P **P** 23 22 48.6 -1.1
KONO pmax pmax
comp=Z,61nm,1.8s
SKAR Skarslia 80.54 333 *e*P **P** 23 22 51.1 +1.2
ONAU Onsala 80.56 329 *e*P **P** 23 22 49.0 -1.0
BJUU Bjuv 80.66 327 *e*P **P** 23 22 49.7 -0.8
OKC Ostrava-Krasne 80.68 320 *e*P **P** 23 22 50.5 -0.3
OKC Ostrava-Krasne 80.68 320 *e*P **P** 23 22 50.5 -0.3
RPZ Rata Peaks 80.70 146 LR LR 23 58 13.8
comp=Z,79nm,18.8s,baz=310,slow=35
LBZ Lake Benmore 80.73 147 P **P** 23 22 50.9 -0.1
VYHS Vyhne 80.84 319 *e*P **P** 23 22 51.6 -0.1
VYHS pmax pmax
comp=Z,41nm,0.9s
VYHS Vyhne 80.84 319 *e*P **P** 23 22 51.6 -0.1
MORC Moravsky Berou 81.06 320 ⇑P **P** 23 22 52.5 -0.4
MORC Moravsky Berou 81.06 320 P **P** 23 22 52.0 -0.9
MORC IAmb IAmb 23 22 53.6
comp=Z,22nm,1.3s
MORC Moravsky Berou 81.06 320 *e*P **P** 23 22 52.2 -0.7
MORC Moravsky Berou 81.06 320 P **P** 23 22 52.5 -0.4
HYA Hoyanger 81.16 334 *e*P **P** 23 22 52.6 -0.5
SANT Santorini 81.19 306 ⇓P **P** 23 22 52.1 -1.8
SANT Santorini 81.19 306 P **P** 23 22 51.5 -2.4
KSP Ksiaz 81.31 322 *e*P **P** 23 22 53.8 -0.4
KRLC Kraliky 81.37 321 *e*P **P** 23 22 54.2 -0.4
KRLC Kraliky 81.37 321 *e*P **P** 23 22 54.2 -0.4
FOO Floro 81.38 334 *e*P **P** 23 22 53.8 -0.4
JAVC Velka Javorina 81.38 320 *e*P **P** 23 22 55.2 +0.5
OSTC Ostas 81.48 322 *e*P **P** 23 22 54.8 -0.3
OSTC Ostas 81.48 322 *e*P **P** 23 22 54.8 -0.3
DPC Dobruska-Polom 81.52 321 *e*P **P** 23 22 55.3 0.0
DPC Dobruska-Polom 81.52 321 *e*P **P** 23 22 55.3 0.0
CHVC Chvalec 81.56 322 *e*P **P** 23 22 54.7 -0.9
CHVC Chvalec 81.56 322 *e*P **P** 23 22 54.7 -0.9
UPC Upice 81.62 322 *e*P **P** 23 22 55.6 -0.3
UPC *ex* x 23 23 00.3
UPC Upice 81.62 322 *e*P **P** 23 22 55.6 -0.3
UPC *e* 23 23 00.3

FRGS	Fruska Gora	81.63	316	⇑P		P	23 22 55.4	-0.6
FRGS	Fruska Gora	81.63	316	*e*P		P	23 22 55.1	-0.9
ODD1	Odda	81.65	333	*e*P		P	23 22 55.1	-0.8
SUE	Sulen	81.79	334	*e*P		P	23 22 56.1	-0.4
VRAC	Vranov	81.82	320	⇑P		P	23 22 57.3	+0.3
VRAC	Vranov	81.82	320	*e*P		P	23 22 56.7	-0.2
VRAC	Vranov	81.82	320	P		P	23 22 57.2	+0.3
MODS	Modra-Piesok	81.83	319	*e*P		P	23 22 57.5	+0.5
MODS	Modra-Piesok	81.83	319	*e*P		P	23 22 57.5	+0.5
MORH	Mrgy, Hungar	81.92	317	⇓P		P	23 22 56.6	-0.9
BER	Bergen	81.94	333	*e*P		P	23 22 56.6	-0.6
ASK	Askoy	81.94	333	*e*P		P	23 22 59.2	+2.0
BLS5	Blasjo	81.99	332	*e*P		P	23 22 57.0	-0.6
KRUC	Moravsky	82.05	320	*e*P		P	23 22 57.6	-0.5
TEKS	Tekeris	82.06	315	*e*P		P	23 22 55.7	-2.6
SJES	Sjenica	82.31	314	*e*P		P	23 22 59.3	-0.5
MUD	Monsted U'grnd	82.34	329	*i* P		P	23 22 58.0	-1.4
MUD				IAmb		IAmb	23 23 00.5	
	comp=Z,38nm,1.3s							
FNA	Florina	82.39	311	P		P	23 22 58.0	-2.1
FNA				IAmb		IAmb	23 22 59.6	
	comp=Z,11nm,0.8s							
FNA	Florina	82.39	311	P		P	23 22 58.0	-2.1
FNA				pmax		pmax		
	comp=Z,11nm,0.8s							
AGG	Agios Georgios	82.43	309	P		P	23 22 57.7	-2.7
AGG				IAmb		IAmb	23 22 59.2	
	comp=Z,16nm,0.8s							
AGG	Agios Georgios	82.43	309	P		P	23 22 57.7	-2.7
AGG				pmax		pmax		
	comp=Z,16nm,0.8s							
BBLS	Lazići	82.43	315	*e*P		P	23 22 59.8	-0.5
PVCC	Panska Ves	82.43	322	*e*P		P	23 22 59.8	-0.3
PVCC	Panska Ves	82.43	322	*e*P		P	23 22 59.8	-0.3
TREC	Trest	82.47	321	*e*P		P	23 22 59.9	-0.5
TREC	Trest	82.47	321	*e*P		P	23 22 59.9	-0.5
RUDO	Rudo	82.56	314	*e*P		P	23 22 59.5	-1.4
GOPC	GO Pecny, Ondr	82.59	321	*e*P		P	23 23 00.4	-0.6
GOPC	GO Pecny, Ondr	82.59	321	*e*P		P	23 23 00.4	-0.6
BRG	Berggiesshubel	82.62	323	*i* P		P	23 23 00.6	-0.5
BRG				Amp			23 23 03.3	
	comp=Z,11nm,1.0s							
BRG	Berggiesshubel	82.62	323	*i* P		P	23 23 00.5	-0.5
BRG				pmax		pmax		
	comp=Z,11nm,1.0s							
BRG				pmax		pmax		
	comp=Z,6.0nm,1.1s							
HAPS	Han Pijesak,Bl	82.64	315	*e*P		P	23 22 57.6	-3.8
PRU	Pruhonice	82.70	322	*e*P		P	23 23 00.8	-0.7
PRU	Pruhonice	82.70	322	*e*P		P	23 23 00.8	-0.7
RONA	Rosalia, Austr	82.72	319	*i* P		P	23 23 01.9	+0.2
	comp=Z,0.7nm,0.3s							
CONA	Conrad Observa	82.87	319	*i* P		P	23 23 02.3	-0.2
	comp=Z,5.1nm,0.8s,SNR=5.7							
CLL	Collm	82.94	323	P		P	23 23 00.7	-2.0
CLL				IAmb		IAmb	23 23 02.8	
	comp=Z,24nm,1.0s							
CLL	Collm	82.94	323	⇑*i* P		P	23 23 01.6	-1.1
CLL				pmax		pmax		
	comp=Z,19nm,0.9s							
CLL				MLR		MLR		
	comp=Z,500nm,18.3s							
CLL	Collm	82.94	323	⇑*i* P		P	23 23 01.6	-1.1
	comp=Z,19nm,0.9s							
CLL				*i* PcP		PcP	23 23 07.4	0.0
CLL				*i* x		x	23 23 19.9	
CLL				*e*(SS)			23 39 30.0	
CLL				AMS		AMS	23 56 00.0	
	comp=N,400nm,19.8s							
CLL				AMS		AMS	23 56 00.0	
	comp=E,400nm,21.5s							
CLL				AMS		AMS	00 04 00.0	
	comp=N,200nm,19.9s							
CLL				AMS		AMS	00 04 00.0	
	comp=E,400nm,19.7s							
CLL				AMS		AMS	00 04 00.0	
	comp=Z,500nm,18.3s							
CLL	Collm	82.94	323	*e*P		P	23 23 01.8	-0.9
	baz=59,slow=5.1							
HSKC	Hora Svate Kat	83.04	322	*e*P		P	23 23 02.7	-0.6
BSEG	Bad Segeberg	83.07	326	*e*P		P	23 23 03.1	-0.2
	comp=Z,14nm,1.0s,baz=59,slow=5.1							
ZVC	Zvikov	83.16	321	*e*P		P	23 23 03.5	-0.4
DRME	Dracevica, Mon	83.29	313	*e*P		P	23 23 03.8	-0.9
CKRC	Cesky Krumlov	83.38	321	*e*P		P	23 23 04.8	-0.3
CKRC				*ex*		x	23 23 08.9	
CKRC	Cesky Krumlov	83.38	321	*e*P		P	23 23 04.8	-0.3
CKRC				*e*			23 23 08.9	
ARSA	Arzberg	83.39	319	*i* P		P	23 23 04.5	-0.7
	comp=Z,4.0nm,0.8s							
FLTG	Flechtingen	83.39	325	*e*P		P	23 23 04.2	-0.8
	baz=59,slow=5.1							
BRY	Bratogost	83.42	314	*e*P		P	23 23 04.8	-0.7
BLY	Banja Luka	83.48	316	*e*P		P	23 23 05.2	-0.5
YKA	Yellowknife Ar	83.54	23	*i* P		P	23 23 05.0	-0.6
YKA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
YKA	Yellowknife Ar	83.54	23	P		P	23 23 04.7	-0.9
	comp=Z,2.0nm,0.7s,baz=316,slow=4.8,SNR=34							
YKA				LR		LR	00 06 33.6	
	comp=Z,72nm,18.4s,baz=316,slow=40							
	comp=Z,2.0nm,0.7s							
A051A	Mrakovica	83.54	316	*e*P		P	23 23 04.6	-1.5
KHC	Kasperske Hory	83.66	321	P		P	23 23 05.7	-0.8
KHC				IAmb		IAmb	23 23 07.1	
	comp=Z,16nm,1.0s							
KHC	Kasperske Hory	83.66	321	*e*P		P	23 23 05.9	-0.6
KHC	Kasperske Hory	83.66	321	*ce*P		P	23 23 05.4	-1.1
KHC				pmax		pmax		
	comp=Z,60nm,1.7s							
NEUB	Neuenburg	83.66	323	*e*P		P	23 23 06.2	-0.3
	comp=Z,30nm,0.8s,baz=59,slow=5.1							
TANN	Tannenbergstha	83.67	323	*e*P		P	23 23 06.1	-0.5
	comp=Z,11nm,1.0s,baz=59,slow=5.1							
MGRS	Mrkonjic Grad	83.70	316	*e*P		P	23 23 06.4	-0.4
GEC2	GERESS Array S	83.72	321	P		P	23 23 05.9	-1.0
GEC2				IAmb		IAmb	23 23 07.3	
	comp=Z,20nm,0.8s							
GEC2	GERESS Array S	83.72	321	*e*P		P	23 23 06.4	-0.5
	comp=Z,20nm,0.8s,baz=59,slow=5.1							
GERES	GERESS Array B	83.72	321	P		P	23 23 05.8	-1.1
GERES	GERESS Array B	83.72	321	P		P	23 23 06.1	-0.9
	comp=Z,15nm,0.8s,baz=47,slow=6.0,SNR=23							
	comp=Z,15nm,0.8s							
PLN	Plauen	83.81	323	*e*P		P	23 23 06.8	-0.4
	comp=Z,12nm,0.8s,baz=59,slow=5.1							
MOA	Molln	83.86	320	*i* P		P	23 23 07.4	-0.2
	comp=Z,13nm,0.6s,SNR=6.7							
ABPO	Ambohimpanom	83.93	246	P		P	23 23 08.1	-0.4
ABPO	Ambohimpanom	83.93	246	P		P	23 23 08.1	-0.4
ABPO				pmax		pmax		
	comp=Z,45nm,0.9s							
SOKA	Soboth	83.95	318	*i* P		P	23 23 07.3	-0.9
	comp=Z,14nm,0.8s							
A050A	Klekovaca	84.02	316	*e*P		P	23 23 07.8	-0.7
MOX	Moxa	84.03	323	*e*P		P	23 23 07.9	-0.5
	baz=59,slow=5.1							
MOX				*e*L		L	00 04 44.9	
	comp=Z,502nm,18.5s							
WET	Wettzell	84.05	321	*e*P		P	23 23 08.1	-0.4
	baz=59,slow=5.1							
MANZ	Manzenberg	84.08	322	*e*P		P	23 23 08.2	-0.5
	baz=59,slow=5.1							
CRES	Cresnjev	84.08	318	*e*P		P	23 23 07.8	-0.9
CLZ	Clausthal	84.10	324	*e*P		P	23 23 08.5	-0.2
	baz=59,slow=5.1							
ROTZ	Rotzenmuhle	84.13	322	*e*P		P	23 23 08.5	-0.4
	comp=Z,4.0nm,0.9s,baz=59,slow=5.1							
PDKS	Podkum	84.26	318	*i* P		P	23 23 08.9	-0.7
BIOA	Bad Ischl, Aus	84.31	320	*e*PcP		PcP	23 23 14.5	+0.9
	comp=Z,8.7nm,0.7s							
OBKA	Obir	84.32	318	*e*P		P	23 23 08.9	-1.1
	comp=Z,12nm,0.8s							
OBKA	Obir	84.32	318	*e*P		P	23 23 08.7	-1.3
BOJS	Bojanci	84.36	317	*e*P		P	23 23 09.3	-0.8
GTTG	Gottingen	84.47	324	*e*P		P	23 23 10.2	-0.3
	comp=Z,23nm,0.8s,baz=59,slow=5.1							
GBRS	Gornja Briga	84.62	317	*i* P		P	23 23 10.9	-0.5
GBRS				*i*			23 23 12.3	
	comp=Z,40nm,0.8s							
GRA1	Grafenberg Arr	84.72	322	P		P	23 23 10.6	-1.3
GRF	Grafenberg Arr	84.72	322	P		P	23 23 10.6	-1.3
GRF				pmax		pmax		
	comp=Z,90nm,1.7s							
GRF	Grafenberg Arr	84.72	322	*e*P		P	23 23 11.5	-0.4
	baz=59,slow=5.1							
GRF				*e*L		L	23 55 11.0	
	comp=Z,411nm,18.5s							
GRFO	Grafenberg	84.73	322	P		P	23 23 11.0	-0.9
GRFO	Grafenberg	84.73	322	P		P	23 23 11.0	-0.9
GRFO				pmax		pmax		
	comp=Z,93nm,1.7s							
CEY	Cerknica	84.76	318	*e*P		P	23 23 11.1	-1.1
KBA	Koelnbreinsper	84.78	319	*e*P		P	23 23 11.4	-1.1
	comp=Z,4.2nm,0.6s							
MYKA	Terra Mystica	84.82	319	*e*P		P	23 23 13.6	+1.1
	comp=Z,4.5nm,0.6s							
LESA	Schwarzleotal	85.01	320	*e*P		P	23 23 12.5	-1.0
	comp=Z,9.6nm,1.0s							
KIBK	Kibwezi	85.04	265	P		P	23 23 13.4	-0.7
KIBK				IAmb		IAmb	23 23 16.2	
	comp=Z,21nm,1.0s							
KIBK	Kibwezi	85.04	265	P		P	23 23 15.4	+1.2
	SNR=6.4							
IBBN	Ibbenburen	85.23	326	*e*P		P	23 23 14.1	-0.2
	baz=59,slow=5.1							
LODK	Lodwar	85.24	272	P		P	23 23 14.5	-0.7
LODK				IAmb		IAmb	23 23 17.2	
	comp=Z,13nm,1.0s							
LODK	Lodwar	85.24	272	P		P	23 23 16.2	+1.0
	SNR=5.2							
KMBO	Kilima Mbogo	85.29	267	P		P	23 23 15.5	-0.1
KMBO				IAmb		IAmb	23 23 17.7	
	comp=Z,22nm,1.0s							
KMBO	Kilima Mbogo	85.29	267	*i* P		P	23 23 16.6	+0.9
	SNR=26							
KMBO	Kilima Mbogo	85.29	267	P		P	23 23 15.5	-0.1
KMBO				pmax		pmax		
	comp=Z,22nm,1.0s							
KMBO	Kilima Mbogo	85.29	267	P		P	23 23 16.7	+1.1
ABTA	Abfaltersbach	85.44	319	*e*P		P	23 23 13.8	-1.9
	comp=Z,9.0nm,0.8s							
FUR	Furstenfeldbru	85.46	321	*e*P		P	23 23 15.7	0.0
	comp=Z,75nm,1.2s,baz=59,slow=5.1							
KASTN	Kahler Asten	85.48	325	*e*P		P	23 23 15.3	-0.3
	comp=Z,10.0nm,1.0s,baz=59,slow=5.1							
VOI	Vohitsoka	85.60	244	P		P	23 23 16.5	-0.3
VOI	Vohitsoka	85.60	244	P		P	23 23 17.4	+0.6
VOI	Vohitsoka	85.60	244	P		P	23 23 16.6	-0.2
WTTA	Wattenberg	85.70	320	*e*P		P	23 23 16.5	-0.6
	comp=Z,11nm,0.7s							
BUG	Bochum--Univer	85.96	325	*e*P		P	23 23 17.6	-0.3
	comp=Z,30nm,1.1s,baz=59,slow=5.1							
MOTA	Moosalm	85.98	320	*e*P		P	23 23 17.4	-0.9
	comp=Z,7.6nm,0.9s							
SQTA	Sankt Quirin	85.98	320	*i* P		P	23 23 17.5	-0.8
	comp=Z,11nm,0.9s,SNR=5.2							
RETA	Reutte	86.10	321	*e*P		P	23 23 18.4	-0.5
	comp=Z,2.0nm,0.6s							
FETA	Feichten	86.36	320	*e*P		P	23 23 18.7	-1.6
	comp=Z,6.8nm,0.8s							
DAVA	Damuels	86.72	321	*e*P		P	23 23 21.0	-1.1
	comp=Z,1.5nm,0.4s							
BTNL	Ternell	87.03	325	*d*P		P	23 23 22.5	-0.8
	comp=Z,6.2nm,1.0s							
MEM	Membach	87.08	325	*d*P		P	23 23 21.9	-1.6
	comp=Z,7.0nm,1.1s							
BHOU	Houvegnez	87.22	325	*d*P		P	23 23 23.6	-0.6
CEL	Celeste	87.30	311	P		P	23 23 23.8	-1.1
BSTI	Sart Tilman	87.33	325	*d*P		P	23 23 24.1	-0.6
	comp=Z,2.6nm,1.1s							
TUE	Stuetta	87.46	320	P		P	23 23 24.3	-1.4
TUE				IAmb		IAmb	23 23 30.4	
	comp=Z,48nm,1.8s							
WLF	Walferdange	87.53	324	P		P	23 23 24.8	-0.9
WLF	Walferdange	87.53	324	*d*P		P	23 23 25.3	-0.4
	comp=Z,15nm,1.2s							
WLF	Walferdange	87.53	324	P		P	23 23 24.8	-0.9
WLF				pmax		pmax		
	comp=Z,33nm,1.1s							
WLF	Walferdange	87.53	324	*e*P		P	23 23 25.1	-0.6
	comp=Z,40nm,1.2s,baz=59,slow=5.1							
BCLA	Clavier	87.56	325	*d*P		P	23 23 25.1	-0.7
	comp=Z,5.1nm,1.0s							
BORG	Borgarnes	87.60	345	LR		LR	00 05 56.5	
	comp=Z,205nm,19.9s,baz=41,slow=38							
BGES	Gesves	87.69	325	*d*P		P	23 23 26.3	-0.2
	comp=Z,4.9nm,1.0s							
RCHB	Rochefort	87.75	325	*d*P		P	23 23 25.6	-1.1
	comp=Z,10nm,1.1s							
BMRD	Maredsous	87.91	325	*d*P		P	23 23 26.3	-1.2
	comp=Z,7.3nm,1.0s							
DOU	Dourbes	88.12	325	*d*P		P	23 23 26.8	-1.7
	comp=Z,9.1nm,0.9s							
RAR	Rarotonga	88.42	114	LR		LR	23 56 13.7	
	comp=Z,86nm,21.1s,baz=322,slow=31							
EKA	Eskdalemuir Ar	88.61	332	P		P	23 23 28.6	-2.0
	comp=Z,1.5nm,0.6s,baz=21,slow=2.4,SNR=13							
	comp=Z,1.5nm,0.6s							
KESW	Keswick, Cumbr	89.08	331	*e*P		P	23 23 32.1	-0.8
KESW				IAmb		IAmb	23 23 33.3	
	comp=Z,28nm,1.2s							
LBWR	Ladybower, Pea	89.23	330	*e*P		P	23 23 32.5	-1.1
LBWR				IAmb		IAmb	23 23 34.7	
	comp=Z,28nm,0.8s							
CASY	Casey	89.78	184	P		P	23 23 35.6	0.0
CASY				IAmb		IAmb	23 24 57.2	
	comp=Z,20nm,0.8s							
EDM	Edmonton	90.09	30	P		P	23 23 37.1	-0.7
EDM				IAmb		IAmb	23 23 40.7	
	comp=Z,15nm,1.0s							
EDM	Edmonton	90.09	30	P		P	23 23 37.1	-0.7
EDM				pmax		pmax		
	comp=Z,15nm,1.0s							
LLW	Llanuwychllyn	90.47	330	*e*P		P	23 23 37.6	-1.9
MBAR	Mbarara	91.06	270	LR		LR	00 05 09.2	
	comp=Z,124nm,20.8s,baz=358,slow=36							
NEW	Newport	91.42	35	P		P	23 23 45.0	+0.9
	baz=308							
YBH	Yreka Blue Hor	92.06	42	LR		LR	23 59 02.0	
	comp=Z,78nm,20.6s,baz=264,slow=32							
J05D	Fort Rock, OR	92.08	41	P		P	23 23 47.0	-0.4
J05D				IAmb		IAmb	23 23 49.1	
	comp=Z,7.3nm,0.9s							
FRB	Frobisher Bay	92.79	5	LR		LR	00 09 50.5	
	comp=Z,150nm,19.5s,baz=358,slow=38							
FCC	Fort Churchill	92.98	18	P		P	23 23 49.8	-1.1
FCC				IAmb		IAmb	23 24 11.9	
	comp=Z,9.2nm,1.4s							
FCC	Fort Churchill	92.98	18	P		P	23 23 49.8	-1.1
FCC				pmax		pmax		
	comp=Z,9.0nm,1.5s							
KEST	Kesra	93.10	311	P		P	23 23 51.0	-1.2
	comp=Z,11nm,0.8s,baz=321,slow=2.7,SNR=9.1							
	comp=Z,11nm,0.8s							
KEST	Kesra	93.10	311	P		P	23 23 51.7	-0.4
KEST				P		P	23 23 51.7	-0.4
EGMT	Eagleton	95.30	32	P		P	23 24 02.6	+0.6
	baz=314							
PPT	Papeete	95.73	107	LR		LR	23 57 39.2	
	comp=Z,178nm,20.4s,baz=343,slow=29							
HLID	Hailey	95.85	37	P		P	23 24 05.3	+0.6
	baz=310							
BOZ	Bozeman (W)	96.02	34	P		P	23 24 06.3	+0.9
	baz=312							
NVAR	Mina Array Bea	96.73	43	P		P	23 24 09.0	+0.2
	comp=Z,0.5nm,0.7s,baz=322,slow=5.7,SNR=2.4							
NVAR				LR		LR	00 00 58.7	
	comp=Z,91nm,21.6s,baz=269,slow=31							
	comp=Z,0.5nm,0.7s							
ELK	Elko	97.17	40	LR		LR	00 10 06.7	
	comp=Z,31nm,18.3s,baz=320,slow=37							
RLMT	Red Lodge	97.56	34	P		Pdif	23 24 13.1	+0.6
	baz=314							
LSZ	Lusaka	99.02	257	P		Pdif	23 24 17.4	-1.9
LSZ				IAmb		IAmb	23 24 18.9	
	comp=Z,8.5nm,1.0s							
LSZ	Lusaka	99.02	257	P		Pdif	23 24 17.4	-1.9
LSZ				pmax		pmax		
	comp=Z,8.0nm,1.0s							
LSZ	Lusaka	99.02	257	LR		LR	00 05 12.9	
	comp=Z,247nm,21.9s,baz=62,slow=33							
LSZ	Lusaka	99.02	257	P		Pdif	23 24 18.0	-1.3
LSZ				P		Pdif	23 24 18.0	-1.3
ULM	Lac du Bonnet	99.52	23	LR		LR	00 12 45.8	
	comp=Z,91nm,19.8s,baz=354,slow=37							
TORD	Torodi Ar. Bea	110.95	295	PP		PP	23 29 52.4	+2.6
	comp=Z,0.7nm,1.0s,baz=50,slow=9.7,SNR=3.8							
TORD				PKKPab		PKKPab	23 40 19.4	-0.9
	comp=Z,1.1nm,0.8s,baz=277,slow=3.0,SNR=5.7							
QSPA	South Pole Qui	113.18	180	PKiKP		PKiKP	23 29 12.6	-1.9
	comp=Z,2.7nm,1.1s,baz=235,slow=1.3,SNR=3.4							

DBIC	Dimbokro	119.82	293	PKP		PKPdf	23 29 27.5	-1.4
	comp=Z,3.4nm,0.8s,baz=56,slow=3.6,SNR=2.2							
UREC	San Jos de Ur	144.79	30	*e*P		PKPab	23 30 12.5	-2.0
DBBC	Dabeiba	145.11	32	*e*P		PKPbc	23 30 14.2	-1.5
SDV	Santo Domingo	145.76	22	PKPdf		PKPdf	23 30 16.4	-1.0
SDV	Santo Domingo	145.76	22	PKPbc		PKPdf	23 30 16.8	-0.7
	comp=Z,40nm,0.8s,baz=356,slow=1.0,SNR=47							
SDV	Santo Domingo	145.76	22	*e*P		PKPdf	23 30 14.4	-3.0
CBOC	Ciudad Bolivar	146.20	33	*e*P		PKPdf	23 30 17.1	-1.2
PTBC	PUERTO BERRIO	146.36	30	*e*P		PKPdf	23 30 15.2	-3.0
PAMC	Pamplona, Colo	146.40	26	*e*P		PKPdf	23 30 17.9	-1.0
BAUV	El Baul	146.50	18	PKPdf		PKPdf	23 30 18.2	-0.3
BARC	Barichara	146.87	28	*e*P		PKPbc	23 30 20.3	-0.9
NORC	Norcasia	147.02	31	*e*P		PKPdf	23 30 19.0	-0.4
GUY2C	Guyana, Caldas	147.07	32	*e*P		PKPdf	23 30 18.7	-1.4
SPBC	San Pablo de B	147.32	30	*e*P		PKPdf	23 30 20.9	+0.9
RUSC	La Rusia	147.54	28	*e*P		PKPdf	23 30 21.1	+0.3
YOTC	Yotoco, Valle	147.63	35	*e*P		PKPdf	23 30 19.5	-1.1
ROSC	El Rosal	147.91	31	PKPbc		PKPdf	23 30 22.6	+1.2
	comp=Z,16nm,0.7s,baz=115,slow=14,SNR=5.1							
JAMC	Jamundi, Valle	148.10	36	*e*P		PKPdf	23 30 20.9	-0.6
ORTC	Ortega, Tolima	148.26	33	*e*P		PKPdf	23 30 23.0	+1.5
CHIC	Chingaza	148.37	30	*e*P		PKPdf	23 30 20.2	-1.9
PRAC	Prado	148.61	33	*e*P		PKPdf	23 30 23.8	+1.7
POPC	Popayan, Colom	148.66	37	*e*P		PKPdf	23 30 21.8	-0.6
BBAC	Balboa, Cauca	148.76	39	*e*P		PKPdf	23 30 24.3	+1.8
VILC	Villavicencio,	148.84	31	*e*P		PKPdf	23 30 22.2	-0.3
FLF1	Flavio Alfaro-	149.03	45	*e*P		PKPab	23 30 30.7	-0.3
PIAT	Ana Tenorio	150.54	44	*e*P		PKPbc	23 30 30.5	-0.5
COHC	Cochancay	150.99	47			PKPbc	23 30 30.1	-1.4
COHC	Cochancay	150.99	47	*e*P		PKPdf	23 30 26.9	+1.2
MDP	Montagnes des	151.14	348	PKPbc		PKPbc	23 30 30.6	-1.3
	comp=Z,36nm,1.1s,baz=36,slow=5.7,SNR=4.1							
ARNL	Arenillas	151.20	50			PKPbc	23 30 30.8	-1.2
MCRA	Macar, Loja	151.86	51			PKPbc	23 30 31.5	-2.0
MCRA	Macar, Loja	151.86	51	*e*P		PKPbc	23 30 31.1	-2.4
PLCA	Paso Flores	159.89	152	PKPab		PKPab	23 31 16.2	0.0
	comp=Z,3.3nm,1.0s,baz=206,slow=8.9,SNR=4.0							
BDFB	Brasilia	167.57	306	PKP		PKPdf	23 30 43.2	-1.6
	comp=Z,2.1nm,0.7s,baz=231,slow=1.9,SNR=3.7							
BDFB				PKPab		PKPab	23 31 49.6	-1.2
	comp=Z,5.9nm,0.8s,baz=72,slow=4.6,SNR=7.2							
LPAZ	La Paz	168.41	54	PKIKP		PKPdf	23 30 45.1	-0.9
SIV	San Ignacio	172.22	20	PKP		PKPdf	23 30 46.0	-1.4
	comp=Z,2.5nm,0.9s,baz=210,slow=3.1,SNR=8.4							

ATH 21 23:20:13.8, 38.35N×22.51E, h11$^{km}_{\pm}$1^{km}, ML2.2/14, Error ellipse: s-maj=1.4km s-min=0.6km az=259.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLFA	Delphi	0.13	356	P	Pg	23 20 17.3	+0.2
DLFA				S	Sg	23 20 19.6	+0.2
DLFA				AML	AML	23 20 20.2	
	comp=N,5026μm,0.2s						
DLFA				AML	AML	23 20 20.2	
	comp=E,4975μm,0.2s						
THAL	Thalero	0.33	158	P	Pg	23 20 20.6	+0.1
THAL				S	Sg	23 20 24.9	0.0
THAL				AML	AML	23 20 26.4	
	comp=N,2375μm,0.3s						
THAL				AML	AML	23 20 27.9	
	comp=E,2005μm,0.2s						
KLV	Kalavryta, Ach	0.41	223	P	Pg	23 20 21.6	-0.4
KLV				S	Sg	23 20 26.6	-0.8
KLV				AML	AML	23 20 28.3	
	comp=N,151μm,0.3s						
KLV				AML	AML	23 20 28.6	
	comp=E,120μm,0.3s						
GUR	Goura	0.43	198	P	Pg	23 20 22.1	-0.2
GUR				S	Sg	23 20 27.4	-0.6
GUR				AML	AML	23 20 28.6	
	comp=N,1092μm,0.4s						
GUR				AML	AML	23 20 29.5	
	comp=E,704μm,0.2s						
AXAR	Agios Charalam	0.44	16	P	Pg	23 20 22.2	-0.3
AXAR				S	Sg	23 20 27.9	-0.4
AXAR				AML	AML	23 20 34.4	
	comp=E,2075μm,0.3s						
AXAR				AML	AML	23 20 34.5	
	comp=N,3261μm,0.4s						
EFP	Efpalio	0.48	280	P	Pg	23 20 22.8	-0.4
EFP				S	Sg	23 20 29.5	-0.1
EFP				AML	AML	23 20 30.6	
	comp=N,396μm,0.4s						
EFP				AML	AML	23 20 33.1	
	comp=E,533μm,0.5s						
LTK	Loutraki	0.48	131	P	Pg	23 20 23.0	-0.3

IBDR				AML	AML	23 36 51.4
	comp=E,189nm,0.5s					
IBDR				AML	AML	23 36 52.1
	comp=N,271nm,0.5s					
IDOB	**Doab**	**1.29**	**108**	Pg	**Pg**	**23 36 29.6 +1.0**
HAGD	**Aghdareh**	**2.11**	**72**	Pn	**Pg**	**23 36 43.9 -0.4**
BHD	**Baghdad**	**2.14**	**245**	*e*Pn	**Pn**	**23 36 40.0 +0.3**
BHD				*e*Sn	**Sn**	**23 37 07.0 +0.6**
IKRK	**Kirkuk**	**2.29**	**303**	*e*Pn	**Pn**	**23 36 42.0 +0.2**
IKRK				*e*Sn	**Sn**	**23 37 11.0 +0.9**
IKRK				AML	AML	23 37 19.9
	comp=N,108nm,0.7s					
IKRK				AML	AML	23 37 26.5
	comp=E,95nm,0.6s					

NAO ***21*** *23:41:27.6,37˚.32N×16˚.64E,h33km,mb4.0*
AFAD ***21*** *23:41:56.7±0.0,42˚.05N×24˚.89E,h15km±1km,MW4.5*
IDC ***21*** *23:41:57.3±0.5,42˚.08N×24˚.80E,h0km,mb4.1/26, mbtmp4.1/42,ML3.7/17,Error ellipse: s-maj=8.5km s-min=6.6km az=29.0*
SOF ***21*** *23:41:57.7,42˚.07N±0˚.01×24˚.90E±0˚.01,h14km±2km, MD4.7/12*
MOS ***21*** *23:41:57.3±1.1,42˚.06N×24˚.88E,h12km,mb4.4/20,Error ellipse: s-maj=4.3km s-min=2.9km az=90.0*
MED_RC ***21*** *23:41:58.0±0.4,42˚.15N×25˚.09E,h14km±2km,MW4.4/15, Moment Tensor Solution.Mantle waves: s15,c15; Duration: f±0 Moment tensor: Scale 10^15^Nm; Mrr-2.24±.83; Mθθ4.90±.61; Mϕϕ-2.65±.48; Mrθ2.38±.89; Mθϕ-1.77±.54; Mϕr-2.33±.82; Best double couple: M○5.53000×10^15^ NP1:ϕs316.00000°,δ75.00000°, λ-48.00000°. NP2:ϕs62.00000°,δ44.00000°, λ-158.00000°. Principal axes: T 6.2700, Plg19.0000°, Azm16.0000°; N -1.4700, Plg40.0000°, Azm123.0000°; P -4.8000, Plg44.0000°, Azm267.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
PDG ***21*** *23:41:58.8±0.5,42˚.04N×24˚.89E,h14km±1km,ML4.4/12 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
NEIC ***21*** *23:41:59.8±2.0,42˚.05N±0˚.04×24˚.86E±0˚.06,h12km±3km, mb4.4/38,ML5.0/5(BUC),Error ellipse: s-maj=7.0km s-min=4.5km az=51.0*
ISK ***21*** *23:41:59.1,42˚.02N×25˚.07E,h3km,ML4.7/30*
ATH ***21*** *23:41:60.0,42˚.00N×24˚.93E,h5km,Mw4.2,Moment Tensor Solution. s10 Moment tensor: Mrr-1.39; Mθθ1.93; Mϕϕ-0.54; Mrθ-0.07; Mϕϕ-1.70; Mθr-0.93; Fault plane solution: NP1:ϕs81.00000°,δ56.00000°, λ-148.00000°. NP2:ϕs332.00000°,δ64.00000°, λ-39.00000°.*
THE ***21*** *23:42:00.3,41˚.95N×24˚.94E,h9km±1km,ML4.4/7 Error ellipse: s-maj=2.2km s-min=1.1km az=172.0*
BEO ***21*** *23:42:00.1±1.4,42˚.19N×24˚.78E,h2km±6km,ML4.9/7*
CFUSG ***21*** *23:42:01.5,42˚.11N×25˚.18E,h10km,mb4.0/4,Bulgaria Magtype MSH 4.0 from 7 stations*
PRU ***21*** *23:42:01.1,41˚.81N×24˚.51E,h10km,M4.3*
ISC 21 23:41:58.8±0.8, 42°.07N±0°.02×24°.90E±0°.02, h9km±5km, n610, σ1§46/708, mb4.3/69, 36C-53D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.14**	**306**	⇑	*i*Pg	**Pg**	**23 42 02.3**	**+0.4**
PLD					Sg	**Sg**	**23 42 04.2**	**+0.1**
RZN	**Rozhen**	**0.39**	**198**	⇑	*i*Pg	**Pg**	**23 42 06.4**	**-0.2**
RZN					Sg	**Sg**	**23 42 11.4**	**-0.3**
DIM	**Dimitrovgrad**	**0.51**	**92**	⇓	*i*Pg	**Pg**	**23 42 08.8**	**+0.2**
DIM					Sg	**Sg**	**23 42 15.2**	**-0.1**
KDZ	**Kurdzhali**	**0.55**	**143**	⇓	*i*Pg	**Pg**	**23 42 08.9**	**-0.5**
KDZ					Sg	**Sg**	**23 42 15.7**	**-0.9**
PGB	**Panagyurishte**	**0.70**	**310**	⇓	*i*Pg	**Pg**	**23 42 11.4**	**0.0**
PGB					Sg	**Sg**	**23 42 21.1**	**-0.4**
MMB	**Musomishta**	**1.00**	**239**	⇑	*i*Pg	**Pg**	**23 42 17.4**	**-0.7**
MMB					Sg	**Sb**	**23 42 31.9**	**+0.2**
RDO	**Rodhopi**	**1.04**	**152**		Pg	**Pg**	**23 42 17.9**	**-0.8**
RDO					Sg	**Sg**	**23 42 31.5**	**-0.7**
RDO	**Rodhopi**	**1.04**	**152**			**Pg**	**23 42 18.0**	**-0.8**
RDO					Sg	**Sg**	**23 42 31.1**	**-1.0**
RDO	**Rodhopi**	**1.04**	**152**		P	**Pg**	**23 42 18.0**	**-0.8**
RDO					S	**Sg**	**23 42 31.3**	**-0.9**
	31μm,0.4s							
NVR	**Nevrokopi**	**1.06**	**228**		P	**Pb**	**23 42 19.2**	**-0.1**
NVR					S	**Sg**	**23 42 32.7**	**-0.1**
	42μm,0.7s							
PVL	**Pavlikeni**	**1.07**	**11**	⇑	*i*Pg	**Pn**	**23 42 19.9**	**-0.1**
PVL					Sg	**Sn**	**23 42 34.7**	**-0.4**
KAVA	**Kavala**	**1.11**	**195**		P	**Pg**	**23 42 19.2**	**-0.9**
KAVA					S	**Sg**	**23 42 33.8**	**-0.6**
	57μm,0.4s							
ELND	**Elena**	**1.12**	**40**	⇓	P	**Pb**	**23 42 20.1**	**-0.4**
ELND	**Elena**	**1.12**	**40**			**Pb**	**23 42 20.1**	**-0.4**
JMB	**Yambol**	**1.28**	**70**	⇑	*i*Pg	**Pn**	**23 42 22.6**	**-0.3**
JMB					Sg	**Sb**	**23 42 39.6**	**0.0**
KKB	**Krupnik**	**1.34**	**261**	*i*	Pg	**Pb**	**23 42 24.0**	**-0.1**
KKB					Sg	**Sg**	**23 42 41.9**	**0.0**
VTS	**Vitosha**	**1.35**	**295**	*i*	Pg	**Pn**	**23 42 23.2**	**-0.8**
VTS					Sg	**Sb**	**23 42 41.3**	**-0.5**
SRS	**Serrai**	**1.36**	**226**		P	**Pn**	**23 42 24.2**	**+0.2**
SRS					S	**Sg**	**23 42 42.4**	**-0.3**
	86μm,0.9s							
SRS	**Serrai**	**1.36**	**226**	*e*	Pg	**Pb**	**23 42 24.7**	**+0.2**
SRS				*e*	Sg	**Sg**	**23 42 44.6**	**+1.9**
EDRB	**Edirne**	**1.39**	**98**		Pn	**Pn**	**23 42 24.1**	**-0.3**
EDRB					Sn	**Sb**	**23 42 42.4**	**-0.4**
EDRB	**Edirne**	**1.39**	**98**		P	**Pn**	**23 42 24.1**	**-0.3**
EDRB					S	**Sb**	**23 42 42.6**	**-0.2**
	5μm,0.7s							
KOKK	**Kokkinochori,**	**1.42**	**209**		P	**Pn**	**23 42 24.4**	**-0.3**
KOKK					S	**Sn**	**23 42 42.2**	**-1.3**
	9μm,0.8s							
SZH	**Strazhitsa**	**1.44**	**33**	⇑	*i*Pg	**Pg**	**23 42 26.3**	**-0.1**
SZH					Sg	**Sg**	**23 42 45.8**	**+0.7**
ALN	**Alexandroupoli**	**1.45**	**143**		Pn	**Pn**	**23 42 25.4**	**+0.2**
ALN					Sn	**Sb**	**23 42 44.6**	**+0.1**
ALN	**Alexandroupoli**	**1.45**	**143**		Pn	**Pn**	**23 42 25.4**	**+0.2**
ALN					Sn	**Sn**	**23 42 43.8**	**-0.4**
ALN	**Alexandroupoli**	**1.45**	**143**		P	**Pn**	**23 42 25.4**	**+0.2**
ALN					S	**Sn**	**23 42 42.6**	**-1.7**
ALN	**Alexandroupoli**	**1.45**	**143**		P	**Pn**	**23 42 25.4**	**+0.2**
ALN							23 42 43.8	
THAS	**Thassos island**	**1.47**	**185**		P	**Pn**	**23 42 24.8**	**-0.6**
THAS					S	**Sn**	**23 42 43.8**	**-0.8**
	10μm,0.4s							
MPEP	**Malo Peshtene**	**1.55**	**327**	*i*	P	**Pb**	**23 42 27.3**	**-0.3**
MPEP					S	**Sb**	**23 42 47.8**	**+0.5**
UKOP	**Uzunkopru-Edir**	**1.60**	**125**		Pn	**Pn**	**23 42 27.6**	**+0.4**
ZIMR		**1.63**	**12**		P	**Pn**	**23 42 28.4**	**-0.6**
ENEZ	**Enez**	**1.63**	**144**		Pn	**Pn**	**23 42 27.9**	**+0.3**
KIRK	**Kirklareli**	**1.66**	**99**		P	**Pn**	**23 42 27.8**	**-0.3**
KIRK					S	**Sn**	**23 42 48.1**	**-1.5**
CAVK	**Edirne/Enez-Ca**	**1.67**	**145**		P	**Pn**	**23 42 28.0**	**-0.2**
CAVK					S	**Sb**	**23 42 51.0**	**+0.1**
SOH	**Sokhos**	**1.70**	**224**		P	**Pn**	**23 42 29.1**	**+0.4**
SOH					S	**Sb**	**23 42 51.9**	**+0.1**
ENZZ	**Sultanice-Enez**	**1.73**	**147**		Pn	**Pb**	**23 42 30.2**	**-0.5**
LOZB	**Loznitsa**	**1.80**	**43**	⇓	P	**Pb**	**23 42 32.6**	**+0.6**
LOZB	**Loznitsa**	**1.80**	**43**			**Pb**	**23 42 32.6**	**+0.6**
BOSS	**Bosilegrad**	**1.85**	**284**	*e*	Pg	**Pn**	**23 42 31.7**	**+1.0**
ERIK	**Erikli-Kesan**	**1.85**	**138**		Pn	**Pn**	**23 42 30.6**	**0.0**
ARMN	**Kirklareli, Me**	**1.90**	**95**		P	**Pn**	**23 42 31.4**	**+0.1**
ARMN					S	**Sn**	**23 42 53.1**	**-2.3**
VAY	**Valandovo**	**1.90**	**248**	*e*	Pg	**Pg**	**23 42 35.1**	**-0.1**
VAY				*e*	Sg	**Sg**	**23 42 58.7**	**-1.1**
VAY	**Valandovo**	**1.90**	**248**	*i*	Pn	**Pn**	**23 42 32.0**	**+0.7**
RAZG	**Razgrad**	**1.91**	**38**	⇓	P	**Pb**	**23 42 34.4**	**+0.6**
RAZG	**Razgrad**	**1.91**	**38**			**Pb**	**23 42 34.4**	**+0.6**
VALD	**Valchedram**	**1.95**	**327**	*i*	P	**Pn**	**23 42 34.4**	**+0.4**
VALD					eS	**Sb**	**23 42 58.8**	**0.0**
VLAD	**Vladila**	**1.97**	**350**	⇑	P	**Pn**	**23 42 32.8**	**+0.6**
PHSR	**Pinarhisar**	**2.01**	**102**		Pn	**Pn**	**23 42 33.3**	**+0.4**
GADA	**Gvkgeada**	**2.02**	**158**		Pn	**Pn**	**23 42 33.8**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.05**	**144**		Pn	**Pn**	**23 42 34.3**	**+0.9**
GOAD	**anakkale-G¶**	**2.05**	**158**		P	**Pb**	**23 42 36.4**	**+0.2**
ZAPS	**Zavoj**	**2.06**	**307**	*e*	Pg	**Pn**	**23 42 34.6**	**+1.0**
COPA	**Copaceanca**	**2.08**	**6**	⇓	P	**Pb**	**23 42 36.0**	**-0.7**
ROIA	**ROIAK**	**2.10**	**60**	*i*	P	**Pn**	**23 42 34.3**	**+0.2**
ROIA					eS	**Sg**	**23 43 07.0**	**+0.8**
PRVS	**Prvonek**	**2.14**	**283**	*e*	Pg	**Pn**	**23 42 35.7**	**+1.0**
PRD	**Provadia**	**2.15**	**59**	*i*	P	**Pn**	**23 42 35.0**	**+0.2**
PRD					S	**Sg**	**23 43 08.0**	**+0.1**
LPK	**Lapseki**	**2.20**	**140**		Pn	**Pn**	**23 42 36.7**	**+1.2**
RKY	**Sarkoy-Tekirda**	**2.20**	**128**		Pn	**Pn**	**23 42 35.6**	**+0.1**
SART	**Tekirdag**	**2.20**	**128**		P	**Pn**	**23 42 34.8**	**-0.7**
SART					S	**Sb**	**23 43 05.0**	**-1.1**
ECEA	**Canakkale, Ece**	**2.24**	**154**		P	**Pb**	**23 42 40.3**	**+0.9**
ECEA					S	**Sb**	**23 43 05.5**	**-1.6**
VIZE	**Kirklareli, Vi**	**2.25**	**102**		P	**Pn**	**23 42 35.8**	**-0.4**
VIZE					S	**Sn**	**23 43 04.5**	**+0.4**
BLKB	**Belogradchik**	**2.26**	**314**	⇓	P	**Pn**	**23 42 36.5**	**+0.2**
BLKB	**Belogradchik**	**2.26**	**314**			**Pn**	**23 42 36.5**	**+0.2**
BAIL	**Bailesti**	**2.26**	**330**	⇓	P	**Pn**	**23 42 36.5**	**+0.2**
CNKL	**anakkale-Mer**	**2.29**	**150**		P	**Pn**	**23 42 36.5**	**-0.2**
CNKL					P	**Pb**	**23 42 36.7**	**-3.6**
COMU	**Canakkale**	**2.30**	**148**		Pn	**Pn**	**23 42 37.2**	**+0.4**
AVR	**AVREN**	**2.30**	**62**	*i*	P	**Pn**	**23 42 37.1**	**+0.2**
AVR					eS	**Sg**	**23 43 14.0**	**+1.3**
CRLT	**Corlu**	**2.32**	**113**		Pn	**Pn**	**23 42 37.3**	**+0.1**
BOZC	**Bozcaada**	**2.39**	**158**		P	**Pn**	**23 42 36.9**	**-1.2**
BARS	**Barje**	**2.40**	**289**	*e*	Pn	**Pn**	**23 42 39.1**	**+0.8**
KRBG	**Karabiga-Canak**	**2.46**	**132**		Pn	**Pn**	**23 42 39.6**	**+0.5**
EZN	**Ezine**	**2.48**	**154**		Pn	**Pn**	**23 42 40.3**	**+0.9**
EZN	**Ezine**	**2.48**	**154**		P	**Pn**	**23 42 39.4**	**0.0**
MRMT	**Marmara Adasi**	**2.50**	**125**		Pn	**Pn**	**23 42 39.9**	**+0.2**
SKO	**Skopje**	**2.58**	**269**	*e*	Pn	**Pn**	**23 42 42.3**	**+1.6**
SKO	**Skopje**	**2.58**	**269**	*i*	Pn	**Pn**	**23 42 41.8**	**+1.0**
CTYL	**Yalikoy Yolu**	**2.60**	**102**		Pn	**Pn**	**23 42 41.3**	**+0.3**
SLVT	**Silivri**	**2.62**	**108**		Pn	**Pn**	**23 42 41.6**	**+0.4**
CANM	**Can-anakkale**	**2.62**	**141**		Pn	**Pn**	**23 42 40.4**	**-0.9**
ZAGS	**Zajecar**	**2.62**	**313**	*e*	Pn	**Pn**	**23 42 41.2**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**2.64**	**151**		P	**Pn**	**23 42 41.7**	**+0.2**
KNL	**Balıkesir**	**2.67**	**131**		P	**Pn**	**23 42 42.7**	**+0.7**
KOCA	**Canakkale, Ayv**	**2.72**	**159**		P	**Pn**	**23 42 43.2**	**+0.8**
SULR		**2.79**	**20**	⇑	P	**Pn**	**23 42 45.3**	**+1.6**
ELBA	**Catalca**	**2.80**	**108**		P	**Pn**	**23 42 42.4**	**-1.4**
EDC	**Edincik**	**2.82**	**127**		Pn	**Pn**	**23 42 44.7**	**+0.7**
BOVS	**Bovan**	**2.82**	**305**	*e*	Pn	**Pn**	**23 42 44.5**	**+0.4**
CTKS	**Kestanelik-??a**	**2.83**	**106**		Pn	**Pn**	**23 42 44.4**	**+0.3**
PSN	**Preselentsi**	**2.85**	**55**	*e*	P	**Pn**	**23 42 44.9**	**+0.5**
PSN				*e*	S	**Sb**	**23 43 26.0**	**+1.2**
SRE	**Strehaia**	**2.87**	**335**	⇓	P	**Pn**	**23 42 44.7**	**-0.1**
SRE	**Strehaia**	**2.87**	**335**		P	**Pn**	**23 42 44.7**	**-0.1**
GONE	**Gonen-Balikesi**	**2.92**	**133**		Pn	**Pn**	**23 42 45.8**	**+0.5**
FNA	**Florina**	**2.94**	**245**			**Pn**	**23 42 46.3**	**+0.5**
FNA	**Florina**	**2.94**	**245**	*e*	Pn	**Pn**	**23 42 46.5**	**+0.7**
FNA	**Florina**	**2.94**	**245**		P	**Pn**	**23 42 46.3**	**+0.5**
BAND	**Balkesir-Ban**	**2.96**	**124**		P	**Pn**	**23 42 45.6**	**-0.3**
PLAR	**PLOIESTI**	**2.96**	**16**	⇓	P	**Pn**	**23 42 48.2**	**+2.3**
PLAR	**PLOIESTI**	**2.96**	**16**			**Pn**	**23 42 48.2**	**+2.3**
SELS	**Selova**	**3.02**	**294**	*e*	Pn	**Pn**	**23 42 47.3**	**+0.5**
BGKT	**Bogazkoy**	**3.04**	**106**		Pn	**Pn**	**23 42 47.1**	**+0.1**
BUHA	**Balikesir, Bur**	**3.05**	**146**		P	**Pn**	**23 42 47.8**	**+0.6**
RMGR	**Halanga-Turnu**	**3.05**	**329**	⇑	P	**Pn**	**23 42 46.9**	**-0.3**
RMGR	**Halanga-Turnu**	**3.05**	**329**			**Pn**	**23 42 46.9**	**-0.3**
AVCI	**Avcilar-stanb**	**3.06**	**109**		Pn	**Pn**	**23 42 47.9**	**+0.6**
AYVA	**Ayvalik**	**3.07**	**153**		P	**Pn**	**23 42 47.8**	**+0.3**
AMRR	**Amara**	**3.10**	**34**	⇓	P	**Pn**	**23 42 50.1**	**+2.2**
AMRR	**Amara**	**3.10**	**34**		P	**Pn**	**23 42 50.0**	**+2.2**
BALY	**Balya**	**3.11**	**138**		P	**Pn**	**23 42 48.5**	**+0.5**
DJES	**Djerdap**	**3.12**	**327**		Pn	**Pn**	**23 42 47.2**	**-1.0**
MTUR	**Matau**	**3.16**	**2**	⇑	P	**Pn**	**23 42 50.2**	**+1.4**
MTUR	**Matau**	**3.16**	**2**			**Pn**	**23 42 50.2**	**+1.4**
MTUR	**Matau**	**3.16**	**2**		P	**Pn**	**23 42 50.2**	**+1.4**
KCTX	**Karacabey (Bur**	**3.17**	**123**		Pn	**Pn**	**23 42 48.9**	**+0.1**
BLKS	**Balkesir-Sus**	**3.19**	**132**		P	**Pn**	**23 42 49.6**	**+0.4**
KLYT	**Kilyos**	**3.21**	**103**		Pn	**Pn**	**23 42 49.9**	**+0.6**
OHR	**Ohrid**	**3.22**	**254**	*i*	Pn	**Pg**	**23 43 00.4**	**-0.1**
BKES	**Balkesir-Mer**	**3.27**	**134**		P	**Pn**	**23 42 49.8**	**-0.4**
BKES					S	**Sn**	**23 43 28.7**	**-0.6**
ISK	**Istanbul-Kandi**	**3.28**	**106**		Pn	**Pn**	**23 42 49.9**	**-0.4**
ISK	**Istanbul-Kandi**	**3.28**	**106**	*e*	P	**Pn**	**23 42 49.9**	**-0.4**
ISR	**Istrita**	**3.28**	**21**		P	**Pn**	**23 42 52.8**	**+2.4**
KAVV	**Kandilli-Istan**	**3.28**	**106**		Pn	**Pn**	**23 42 50.4**	**+0.1**
ARR	**Arges**	**3.31**	**357**	⇑	P	**Pn**	**23 42 51.2**	**+0.5**
KUBS	**Kucevo**	**3.32**	**316**	*e*	Pn	**Pn**	**23 42 50.5**	**-0.5**
ARMT	**Armutlu**	**3.34**	**115**		Pn	**Pn**	**23 42 51.5**	**+0.3**
HERR	**Herculane**	**3.34**	**328**	⇑	P	**Pn**	**23 42 50.6**	**-0.6**
VOIR		**3.37**	**2**	⇑	P	**Pn**	**23 42 52.8**	**+1.1**
VOIR		**3.37**	**2**		P	**Pn**	**23 42 51.9**	**+0.2**
TLBR	**Topalu**	**3.38**	**42**	⇓	P	**Pn**	**23 42 53.6**	**+2.0**
TLBR	**Topalu**	**3.38**	**42**			**Pn**	**23 42 53.6**	**+2.0**
KBN	**Korca**	**3.42**	**246**			**Pn**	**23 42 53.0**	**+0.7**
KBN	**Korca**	**3.42**	**246**		P	**Pn**	**23 42 53.0**	**+0.7**
HARR	**Harsova**	**3.43**	**39**	⇑	P	**Pn**	**23 42 54.0**	**+1.6**
HARR	**Harsova**	**3.43**	**39**			**Pn**	**23 42 54.0**	**+1.6**
HARR	**Harsova**	**3.43**	**39**		P	**Pn**	**23 42 53.4**	**+1.0**
STEP	**BALIKESIR_Sava**	**3.44**	**141**		P	**Pn**	**23 42 53.2**	**+1.7**
IZMD	**zmir-Dikili-**	**3.44**	**153**		P	**Pn**	**23 42 54.1**	**+1.4**
MDNY	**Mudanya-Bursa**	**3.45**	**118**		Pn	**Pn**	**23 42 53.2**	**+0.5**
SVIS	**Svilajnac**	**3.48**	**310**	*e*	Pn	**Pn**	**23 42 53.9**	**+0.9**
LOT	**Lotru**	**3.48**	**347**	⇑	P	**Pn**	**23 42 53.8**	**+0.6**
MLR	**Muntele Rosu**	**3.51**	**12**	⇓	P	**Pn**	**23 42 55.3**	**+1.7**
MLR	**Muntele Rosu**	**3.51**	**12**		Pn	**Pn**	**23 42 55.2**	**+1.7**
MLR	**Muntele Rosu**	**3.51**	**12**		P	**Pn**	**23 42 55.1**	**+1.5**
MLR	**Muntele Rosu**	**3.51**	**12**		Pn	**Pn**	**23 42 55.3**	**+1.7**
	12nm,0.3s,baz=216,slow=4.1,SNR=340							
MLR					Sn	**Sn**	**23 43 36.7**	**+1.5**
	56nm,0.3s,baz=226,slow=17,SNR=3.5							
MLR					Lg	Lg	23 43 48.0	
	81nm,0.3s,baz=104,slow=19,SNR=7.3							
TIRR	**Tirgusor**	**3.51**	**46**	⇑	P	**Pn**	**23 42 55.9**	**+2.5**
TIRR	**Tirgusor**	**3.51**	**46**		Pn	**Pn**	**23 42 54.9**	**+1.5**
TIRR	**Tirgusor**	**3.51**	**46**			**Pn**	**23 42 55.9**	**+2.5**
TIRR	**Tirgusor**	**3.51**	**46**		P	**Pn**	**23 42 54.9**	**+1.5**
NEHR	**Nehoiu**	**3.51**	**16**	⇓	P	**Pn**	**23 42 55.7**	**+2.2**
NEHR	**Nehoiu**	**3.51**	**16**			**Pn**	**23 42 55.7**	**+2.2**
ZEDA	**zmir-Bergama**	**3.51**	**151**		P	**Pn**	**23 42 54.1**	**+0.6**
GRUS	**Gruza**	**3.57**	**302**	*e*	Pn	**Pn**	**23 42 54.7**	**+0.4**
MDVR	**Moldovita**	**3.57**	**321**	⇑	P	**Pn**	**23 42 54.8**	**+0.4**
KARB	**zmir-Karabur**	**3.59**	**161**		P	**Pn**	**23 42 54.5**	**-0.1**
AGG	**Agios Georgios**	**3.62**	**214**		Pn	**Pn**	**23 42 55.0**	**0.0**
AGG	**Agios Georgios**	**3.62**	**214**		P	**Pn**	**23 42 55.0**	**0.0**
GRER		**3.64**	**24**	⇓	P	**Pn**	**23 42 58.5**	**+3.3**
GRER		**3.64**	**24**			**Pn**	**23 42 58.5**	**+3.3**
DURS	**Dursunbey**	**3.66**	**131**		P	**Pn**	**23 42 56.2**	**+0.5**
GZR	**Gura Zlata**	**3.67**	**336**	⇓	P	**Pn**	**23 42 55.4**	**-0.3**
GZR	**Gura Zlata**	**3.67**	**336**		P	**Pn**	**23 42 55.4**	**-0.3**
PVY	**Plav**	**3.70**	**280**	⇓	*i*Pn	**Pn**	**23 42 56.7**	**+0.4**
PVY					*i* Sn	**Sn**	**23 43 40.7**	**+0.7**
IGD	**Bursa**	**3.71**	**118**		P	**Pn**	**23 42 56.4**	**+0.1**
BISRR	**Bisoca**	**3.72**	**20**	⇑	P	**Pn**	**23 42 58.7**	**+2.2**
PUK	**Puka**	**3.73**	**271**			**Pn**	**23 42 57.9**	**+1.3**
ULDT	**Uludag**	**3.73**	**120**		P	**Pn**	**23 42 56.4**	**-0.4**
IVA	**Berane**	**3.79**	**284**	*e*	Pn	**Pn**	**23 42 58.0**	**+0.6**
IVA					*i* Sn	**Sn**	**23 43 43.1**	**+0.9**
IVAS	**Ivanjica**			**3.81**	**295**	*e*Pn	**Pn**	**23 42 57.6**	**0.0**
SJES	**Sjenica**			**3.82**	**290**	*e*Pn	**Pn**	**23 42 58.8**	**+0.9**
SJES	**Sjenica**			**3.82**	**290**	*e*Pn	**Pn**	**23 42 58.6**	**+0.7**
SEMS	**Kocaeli-K¶rfe**			**3.83**	**107**	P	**Pn**	**23 42 58.0**	**+0.1**
TIR	**Tirane**			**3.84**	**261**		**Pn**	**23 42 59.4**	**+1.4**
TIR	**Tirane**			**3.84**	**261**	P	**Pn**	**23 42 59.4**	**+1.4**
AKHS	**Akhisar**			**3.88**	**144**	P	**Pn**	**23 42 59.2**	**+0.6**
COVR	**Voineasa-Covas**			**3.89**	**14**	⇑	P	**Pn**	**23 42 59.0**	**+1.8**
COVR	**Voineasa-Covas**			**3.89**	**14**			**Pn**	**23 43 00.6**	**+1.8**
CFR	**Carcaliu**			**3.90**	**36**	⇓	P	**Pn**	**23 43 00.1**	**+1.3**
CFR	**Carcaliu**			**3.90**	**36**	P		**Pn**	**23 42 59.6**	**+0.8**
DOPR	**Dopca**			**3.92**	**5**	⇑	P	**Pn**	**23 43 00.6**	**+1.4**
URLA	**Izmir**			**3.92**	**160**	P		**Pn**	**23 42 59.0**	**-0.3**
TRUS	**Trudelj**			**3.93**	**305**	*e*	Pn	**Pn**	**23 42 59.6**	**+0.3**
PLOR	**Plostina**			**3.99**	**18**	⇑	P	**Pn**	**23 43 02.0**	**+1.8**
PLOR	**Plostina**			**3.99**	**18**		P	**Pn**	**23 43 01.9**	**+1.8**
ODBI	**Odobesti**			**4.01**	**22**	⇓	P	**Pn**	**23 43 03.0**	**+2.7**
ODBI	**Odobesti**			**4.01**	**22**			**Pn**	**23 43 03.0**	**+2.7**
ZEYE	**Izmir, Urla-Ze**			**4.01**	**162**	P		**Pn**	**23 42 59.9**	**-0.5**
VRI	**Vrincioaia**			**4.02**	**19**	⇑	P	**Pn**	**23 43 02.4**	**+1.8**
VRI	**Vrincioaia**			**4.02**	**19**	P		**Pn**	**23 43 02.0**	**+1.5**
BOSR	**Bodos**			**4.04**	**8**	⇓	P	**Pn**	**23 43 02.7**	**+1.8**
IZVR	**Izvoarele**			**4.05**	**30**	⇑	P	**Pn**	**23 43 03.3**	**+2.4**
IZVR	**Izvoarele**			**4.05**	**30**			**Pn**	**23 43 03.3**	**+2.4**
KOME	**Kolasin**			**4.06**	**283**	⇑	*i*Pn	**Pn**	**23 43 01.7**	**+0.5**
KOME						*i* Sn	**Sn**	**23 43 49.5**	**+0.7**
TURR	**Turia**			**4.07**	**11**	⇓	P	**Pn**	**23 43 03.2**	**+1.9**
DEV	**Deva**			**4.08**	**340**	⇓	P	**Pn**	**23 43 02.2**	**+0.9**
DEV	**Deva**			**4.08**	**340**		P	**Pn**	**23 43 02.2**	**+0.9**
OZUR				**4.08**	**9**	⇑	P	**Pn**	**23 43 03.1**	**+1.7**
KAND	**Kocaeli-Kandir**			**4.09**	**102**		P	**Pn**	**23 43 04.6**	**+3.2**
SLCR	**Slobozia Conac**			**4.09**	**30**	⇑	P	**Pn**	**23 43 03.7**	**+2.3**
HISA	**Bilecik-Osmane**			**4.11**	**111**	P		**Pn**	**23 43 00.9**	**-0.9**
DIVS	**Divibare**			**4.13**	**301**	*e*	Pn	**Pn**	**23 43 02.1**	**0.0**
DEMI	**Demirci**			**4.19**	**135**	P		**Pn**	**23 43 03.4**	**+0.4**
TATR	**Tataca**			**4.20**	**32**	⇓	P	**Pn**	**23 43 04.7**	**+1.7**
TATR	**Tataca**			**4.20**	**32**			**Pn**	**23 43 04.7**	**+1.7**
BILE	**Bilecik/Merkez**			**4.21**	**115**	P		**Pn**	**23 43 02.2**	**-1.0**
ULC	**Ulcinj**			**4.21**	**270**	⇑	*i*Pn	**Pn**	**23 43 03.8**	**+0.6**
ULC						*i* Sn	**Sn**	**23 43 53.1**	**+0.6**
TLCR				**4.22**	**41**	⇓	P	**Pn**	**23 43 04.7**	**+1.5**
TLCR				**4.22**	**41**			**Pn**	**23 43 04.7**	**+1.5**
TLCR				**4.22**	**41**		P	**Pn**	**23 43 04.7**	**+1.5**
KAYN	**Sakarya, Kayna**			**4.23**	**103**		P	**Pn**	**23 43 03.0**	**-0.4**
BEO	**Beograd**			**4.23**	**312**	*e*	Pn	**Pn**	**23 43 02.3**	**-1.1**
SCTR	**Scanteiesti**			**4.24**	**31**	⇓	P	**Pn**	**23 43 05.6**	**+2.0**
SCTR	**Scanteiesti**			**4.24**	**31**			**Pn**	**23 43 05.6**	**+2.0**
DRME	**Dracevica, Mon**			**4.25**	**274**	⇓	*i*Pn	**Pn**	**23 43 04.2**	**+0.5**
DR

SEV smax smax
comp=E,58nm,0.6s
MORI Morici 6.98 288 *e*Pn **Pn 23 43 42.8 +1.6**
ZIRJ Zirje 6.98 286 *e*Pn **Pn 23 43 42.4 +1.2**
BR131 Keskin Array S 7.02 107 **Pn 23 43 42.6 +0.7**
BR131 Keskin Array S 7.02 107 *i* P **Pn 23 43 42.3 +0.4**
BRTR Keskin Array B 7.02 107 Pn **Pn 23 43 42.8 +0.9**
BRTR Keskin Array B 7.02 107 *i* P **Pn 23 43 43.0 +1.1**
BRTR pmax pmax
comp=E,6.0nm,0.7s
BRTR Keskin Array B 7.02 107 Pn **Pn 23 43 42.5 +0.6**
comp=Z,0.5nm,0.3s,baz=290,slow=11,SNR=26
BRTR Sn **Sn 23 45 03.2 +1.3**
comp=Z,0.2nm,0.3s,baz=273,slow=15,SNR=1.6
BRTR Lg Lg 23 45 42.9
baz=289,slow=19
comp=Z,5.7nm,0.7s
UDBI Udbina 7.11 293 *e*Pn **Pn 23 43 44.1 +1.2**
KOLS Kolonicke sedl 7.11 346 *e*P **Pn 23 43 44.0 +1.0**
KOLS Kolonicke sedl 7.11 346 *e*PN **Pn 23 43 44.0 +1.0**
KECS Kecovo 7.13 336 *e*P **Pn 23 43 46.0 +2.8**
KECS Kecovo 7.13 336 *e*PN **Pn 23 43 46.0 +2.8**
CUC Castrocucco 7.17 256 Pn **Pn 23 43 44.3 +0.4**
YAL Yalta 7.17 67⇓ *i*P **Pn 23 43 43.4 -0.4**
YAL Pm 23 43 48.6
comp=Z,27nm,0.4s
YAL *ex* x 23 45 01.6
YAL *e*S **Sn 23 45 03.9 -1.4**
YAL Sm 23 45 12.3
comp=N,25nm,0.4s
YAL Sm 23 45 12.3
comp=E,18nm,0.3s
YAL Yalta 7.17 67⇓ *i*P **Pn 23 43 43.4 -0.4**
YAL *e*S **Sn 23 45 03.9 -1.4**
YAL pmax pmax
comp=Z,27nm,0.4s
YAL smax smax
comp=N,25nm,0.4s
YAL smax smax
comp=E,18nm,0.3s
SIM Simferopol' 7.29 64⇓ *i*P **Pn 23 43 45.0 -0.4**
SIM Pm 23 43 50.8
comp=Z,72nm,0.4s
SIM *i* S **Sn 23 45 06.5 -1.8**
SIM Sm 23 45 10.1
comp=N,107nm,0.8s
SIM Sm 23 45 10.1
comp=E,85nm,0.6s
SIM x x 23 47 33.8
comp=Z,219nm,8.2s
SIM Simferopol' 7.29 64 *e*P **Pn 23 43 45.0 -0.4**
SIM *e*S **Sn 23 45 04.9 -3.4**
SIM pmax pmax
comp=Z,63nm,1.0s
SIM smax smax
comp=N,199nm,1.0s
SIM smax smax
comp=E,216nm,1.0s
ALU Alushta 7.40 66⇓ *i*P **Pn 23 43 45.9 -1.0**
ALU Pm 23 43 50.0
comp=Z,66nm,0.6s
ALU *ex* x 23 45 05.7
ALU *i* S **Sn 23 45 08.1 -2.8**
ALU Sm 23 45 15.7
comp=N,328nm,0.6s
ALU Sm 23 45 15.7
comp=E,177nm,0.5s
ALU Alushta 7.40 66⇓ *i*P **Pn 23 43 45.9 -1.0**
ALU *i* S **Sn 23 45 08.1 -2.8**
ALU pmax pmax
comp=Z,66nm,0.6s
ALU smax smax
comp=N,328nm,0.6s
ALU smax smax
comp=E,177nm,0.5s
DUGI Dugi Otok 7.46 288 *e*Pn **Pn 23 43 49.5 +1.7**
VIRC Vir 7.53 290 *e*Pn **Pn 23 43 49.8 +1.1**
VYHS Vyhne 7.72 328 *e*P **Pn 23 43 52.1 +0.8**
VYHS Vyhne 7.72 328 *e*PN **Pn 23 43 52.1 +0.8**
KWP Kalwaria Pacla 7.72 349 **Pn 23 43 52.8 +1.5**
KWP Kalwaria Pacla 7.72 349 P **Pn 23 43 52.8 +1.5**
LVV L'vov 7.78 356 *e*P **Pn 23 43 53.3 +1.2**
LVV *e*S **Sn 23 45 22.2 +2.0**
LVV MLR MLR
comp=E,1μm,6.7s
LVV MLR MLR
comp=N,1μm,7.0s
LVV MLR MLR
comp=Z,2μm,7.7s
BOJS Bojanci 7.78 299 *e*Pn **Pn 23 43 52.9 +0.8**
CRES Cresnjev 7.78 302 *e*Pn **Pn 23 43 52.5 +0.3**
PAOL Paolisi 7.82 266 Pn **Pn 23 43 53.2 +0.4**
SUDU Sudak 7.87 66⇓ *i*P **Pn 23 43 52.4 -0.9**
SUDU Pm 23 43 58.3
comp=Z,61nm,0.5s
SUDU *ex* x 23 45 18.2
SUDU *i* S **Sn 23 45 19.1 -3.3**
SUDU Sm 23 45 25.4
comp=N,209nm,0.7s
SUDU Sm 23 45 25.4
comp=E,62nm,0.7s
SUDU Sudak 7.87 66⇓ *i*P **Pn 23 43 52.4 -0.9**
SUDU *i* S **Sn 23 45 19.1 -3.3**
SUDU pmax pmax
comp=Z,61nm,0.5s
SUDU smax smax
comp=N,209nm,0.7s
SUDU smax smax
comp=E,62nm,0.7s
CEL Celeste 7.87 244 Pn **Pn 23 43 53.4 -0.1**
LANS Liptovska Anna 8.04 334 *e*P **Pn 23 43 57.8 +2.1**
LANS Liptovska Anna 8.04 334 *e*PN **Pn 23 43 57.8 +2.1**
FEO Feodosiya 8.17 65 *e*P **Pn 23 43 56.3 -1.2**
FEO Pm 23 44 00.2
comp=Z,52nm,0.6s
FEO *i* S **Sn 23 45 27.3 -2.6**
FEO Sm 23 45 30.8
comp=E,93nm,0.8s
FEO Feodosiya 8.17 65 *e*P **Pn 23 43 56.3 -1.2**
FEO *i* S **Sn 23 45 27.3 -2.6**
FEO pmax pmax
comp=Z,52nm,0.6s
FEO smax smax
comp=E,93nm,0.8s
INTR Introdacqua 8.19 273 Pn **Pn 23 43 58.8 +1.1**
MODS Modra-Piesok 8.29 322 *e*P **Pn 23 44 00.8 +1.7**
MODS *e* 23 45 29.9
MODS Modra-Piesok 8.29 322 *e*PN **Pn 23 44 00.8 +1.7**
MODS *e*SN **Sn 23 45 29.9 -2.9**
RONA Rosalia, Austr 8.31 316 Pn **Pn 23 43 59.4 0.0**
comp=E,12nm,0.3s,SNR=6.7
RONA *i* Sn **Sn 23 45 29.6 -3.7**
comp=E,13nm,0.5s
SMOL Smolenice 8.32 323 *e*P **Pn 23 44 03.5 +3.9**
SMOL *e* 23 45 32.6
CEY Cerknica 8.40 299 *e*Pn **Pn 23 44 01.3 +0.6**
SOKA Soboth 8.44 306 Pn **Pn 23 44 01.2 0.0**
comp=E,11nm,0.3s,SNR=22
SOKA *e*Sn **Sn 23 45 32.5 -4.0**
comp=E,8.4nm,0.4s
ARSA Arzberg 8.46 311 Pn **Pn 23 44 01.6 +0.2**
comp=E,11nm,0.3s,SNR=6.0
ARSA *e*Sn **Sn 23 45 34.7 -2.2**
comp=E,9.2nm,0.4s
JAVC Velka Javorina 8.48 326 *e*PN **Pn 23 44 01.7 -0.1**
CAMP Campotosto 8.53 277 **Pn 23 44 03.5 +0.9**
GUMA Gualdo di Mace 8.60 281 **Pn 23 44 04.5 +1.2**
OBKA Obir 8.65 304 Pn **Pn 23 44 05.2 +1.1**
comp=E,12nm,0.4s,SNR=7.7
OBKA Obir 8.65 304 *e*Pn **Pn 23 44 03.6 -0.5**
CONA Conrad Observa 8.68 316 Pn **Pn 23 44 04.4 -0.2**
comp=E,8.8nm,0.3s,SNR=8.9
CONA *i* Sn **Sn 23 45 37.7 -4.8**
comp=E,7.5nm,0.5s
NRCA Norcia 8.75 279 **Pn 23 44 06.7 +1.2**
BNN Bunyan 8.94 107 **Pn 23 44 09.8 +1.6**
SABO M.te Sabotino 9.03 299 Pn **Pn 23 44 10.2 +0.9**
KIEV Kiev 9.13 18 Pn **Pn 23 44 10.8 +0.2**
KIEV Kiev 9.13 18 P **Pn 23 44 10.8 +0.2**
AKASG Malin Array Be 9.14 18 Pn **Pn 23 44 10.5 -0.2**
AKASG Malin Array Be 9.14 18 P **Pn 23 44 10.5 -0.2**
AKASG Malin Array Be 9.14 18 Pn **Pn 23 44 10.1 -0.6**
comp=E,3.7nm,0.3s,baz=200,slow=12,SNR=12
AKASG Sn **Sn 23 45 47.7 -5.9**
comp=E,3.3nm,0.3s,baz=236,slow=32,SNR=2.8
AKASG Lg Lg 23 46 48.4
comp=E,2.5nm,0.3s,baz=186,slow=30,SNR=4.0
comp=E,2.4nm,0.5s
AKBB Malin Array Si 9.14 18 **Pn 23 44 10.6 -0.1**
AKBB Malin Array Si 9.14 18 *i* P **Pn 23 44 10.3 -0.4**
CESX Cesi 9.14 278 **Pn 23 44 12.0 +1.1**
KRUC Moravsky 9.19 322 *e*PN **Pn 23 44 10.1 -1.3**
MURB Monte Urbino 9.20 282 **Pn 23 44 13.0 +1.3**
MORC Moravsky Berou 9.26 329 Pn **Pn 23 44 13.9 +1.5**
MORC Moravsky Berou 9.26 329 *e*PN **Pn 23 44 11.8 -0.6**
MORC Moravsky Berou 9.26 329 P **Pn 23 44 13.9 +1.5**
MYKA Terra Mystica 9.26 303 Pn **Pn 23 44 14.0 +1.4**
comp=E,12nm,0.6s,SNR=7.6
MYKA *e*Sn **Sn 23 45 53.3 -3.5**
comp=E,5.0nm,0.4s
VAE Valguarnera 9.28 244 Pn **Pn 23 44 11.6 -1.3**
comp=E,0.4nm,0.3s,baz=156,slow=20,SNR=1.4
comp=E,4.2nm,0.8s
VRAC Vranov 9.28 324 *e*PN **Pn 23 44 11.6 -1.1**
VRAC Vranov 9.28 324 Pn **Pn 23 44 13.3 +0.6**
comp=E,0.7nm,0.3s,baz=122,slow=12,SNR=7.6
VRAC Sn **Sn 23 45 54.3 -2.9**
comp=E,0.7nm,0.3s,baz=93,slow=19,SNR=2.4
comp=E,2.0nm,0.4s
RAFF Raffo Rosso 9.46 243 Pn **Pn 23 44 14.5 -0.6**
MOA Molln 9.50 311 *e*Pn **Pn 23 44 17.2 +1.5**
comp=E,1.9nm,0.4s
MOA *e*Sn **Sn 23 45 60.0 -2.5**
comp=E,8.6nm,0.4s
ANN Anapa 9.52 69 *e*P **Pn 23 44 12.8 -3.1**
ANN *e*S **Sn 23 45 59.2 -3.8**
ANN pmax pmax
comp=Z,36nm,1.3s
KBA Koelnbreinsper 9.65 305 *e*Pn **Pn 23 44 17.9 +0.1**
comp=Z,4.5nm,0.4s
KBA *e*Sn **Sn 23 46 02.2 -4.1**
comp=Z,6.0nm,0.4s
STAL STALIGIAL 9.71 300 Pn **Pn 23 44 19.1 +0.5**
BIOA Bad Ischl, Aus 9.77 309 *e*Pn **Pn 23 44 21.7 +2.3**
comp=Z,8.2nm,0.4s
BIOA *e*Sn **Sn 23 46 05.8 -3.4**
comp=Z,12nm,0.4s
KRLC Kraliky 9.79 328 *e*PN **Pn 23 44 21.0 +1.3**
KRLC Kraliky 9.79 328 *e*P **Pn 23 44 21.0 +1.3**
CIMO Cimolais 9.90 300 **Pn 23 44 20.7 -0.6**
ABTA Abfaltersbach 10.02 302 *i* Pn **Pn 23 44 23.4 +0.5**
comp=Z,22nm,0.8s,SNR=12
ABTA *e*Sn **Sn 23 46 13.1 -2.3**
comp=Z,4.8nm,0.4s
CLTB Caltabellotta 10.04 247 **Pn 23 44 23.9 +0.6**
CKRC Cesky Krumlov 10.04 316 *e*PN **Pn 23 44 23.7 +0.5**
CKRC Cesky Krumlov 10.04 316 *e*P **Pn 23 44 23.7 +0.5**
TEOL Teolo 10.13 293 **Pn 23 44 23.8 -0.5**
OSSC Osservatorio P 10.14 283 **Pn 23 44 24.9 +0.4**
DPC Dobruska-Polom 10.19 327 *e*PN **Pn 23 44 26.3 +1.1**
DPC Dobruska-Polom 10.19 327 *e*P **Pn 23 44 26.3 +1.1**
LESA Schwarzleotal 10.21 306 *e*Pn **Pn 23 44 27.3 +1.9**
comp=Z,6.8nm,0.4s
LESA *e*Sn **Sn 23 46 18.0 -2.1**
comp=Z,8.7nm,0.5s
CTI Castel Tesino 10.33 297 Pn **Pn 23 44 27.4 +0.2**
CTI Castel Tesino 10.33 297 P **Pn 23 44 27.4 +0.2**
GEC2 GERESS Array S 10.38 315 **Pn 23 44 28.1 +0.2**
GERES GERESS Array B 10.38 315 Pn **Pn 23 44 27.4 -0.4**
GERES GERESS Array B 10.38 315 P **Pn 23 44 27.4 -0.4**
GERES GERESS Array B 10.38 315 Pn **Pn 23 44 26.5 -1.3**
comp=Z,0.8nm,0.3s,baz=116,slow=15,SNR=7.2
GERES Sn **Sn 23 46 21.1 -3.1**
baz=129,slow=19
comp=Z,4.5nm,0.5s
OSTC Ostas 10.39 328 *e*PN **Pn 23 44 30.9 +2.9**
OSTC Ostas 10.39 328 *e*P **Pn 23 44 30.9 +2.9**
ZCCA Zocca 10.42 287 **Pn 23 44 29.4 +1.0**
CHVC Chvalec 10.48 327 *e*PN **Pn 23 44 31.5 +2.3**
CHVC Chvalec 10.48 327 *e*P **Pn 23 44 31.5 +2.3**
ZVC Zvikov 10.50 318 *e*PN **Pn 23 44 30.3 +1.0**
KHC Kasperske Hory 10.62 316 Pn **Pn 23 44 30.9 -0.1**
KHC Kasperske Hory 10.62 316 *e*PN **Pn 23 44 31.2 +0.2**
KHC AMS AMS 23 49 00.0
comp=Z,1μm,9.8s
KHC Kasperske Hory 10.62 316 *i* P **Pn 23 44 30.4 -0.6**
ARPR Arappgir-MALATY 10.64 102 **Pn 23 44 32.3 +0.8**
WTTA Wattenberg 10.78 303 *e*Pn **Pn 23 44 35.2 +1.9**
comp=Z,6.0nm,0.4s
WTTA *e*Sn **Sn 23 46 31.7 -2.4**
comp=Z,3.9nm,0.4s
WATA Walderalm 10.84 304 *e*Pn **Pn 23 44 35.5 +1.2**
comp=Z,4.5nm,0.4s
WATA *e*Sn **Sn 23 46 34.1 -1.6**
comp=Z,1.9nm,0.3s
SALO Salr 10.97 294 Pn **Pn 23 44 35.7 -0.2**
SOC Sochi 10.99 77 *e*P **Pn 23 44 34.7 -1.4**
SOC *e* 23 46 39.3
SOC pmax pmax
comp=Z,12nm,0.9s
SOC MLR MLR
comp=Z,71nm,14.0s
SQTA Sankt Quirin 11.03 302 *e*Pn **Pn 23 44 39.0 +2.2**
comp=Z,7.3nm,0.4s
SQTA *i* Sn **Sn 23 46 41.0 +0.8**
comp=Z,7.8nm,0.5s
MOTA Moosalm 11.14 303 *i* Pn **Pn 23 44 38.5 +0.2**
comp=Z,7.1nm,0.5s
MOTA *e*Sn **Sn 23 46 43.5 +0.5**
comp=Z,1μm,0.0s
FETA Feichten 11.26 301 *e*Pn **Pn 23 44 41.3 +1.4**
comp=Z,2.8nm,0.4s
RETA Reutte 11.41 303 *i* Pn **Pn 23 44 42.2 +0.2**
comp=Z,1.8nm,0.3s
RETA *e*Sn **Sn 23 46 51.4 +1.9**
comp=Z,1.8nm,0.4s
FUORN Ofenpass-Fuorn 11.42 298 Pn **Pn 23 44 42.4 +0.1**
MSSA Maissana 11.46 287 **Pn 23 44 42.5 0.0**
DAVOX Davos/Dischmat 11.72 299 Pn **Pn 23 44 46.4 +0.1**
comp=Z,1.5nm,0.3s,baz=150,slow=16,SNR=32
DAVOX Sn **Sn 23 46 55.6 -1.7**
comp=Z,0.3nm,0.3s,baz=252,slow=20,SNR=1.5
comp=Z,10.0nm,0.6s
LABN Labinsk 11.80 72 *e*P **Pn 23 44 46.0 -1.3**
LABN *e*S **Sn 23 46 52.7 -6.4**
LABN pmax pmax
comp=Z,10.0nm,0.6s
ERBR Yeremizino-Bor 11.82 67 *e*P **Pn 23 44 46.5 -1.0**
ERBR *e*S **Sn 23 46 52.8 -6.6**
ERBR pmax pmax
comp=Z,13nm,0.9s
DAVA Damuels 11.89 301 *e*Pn **Pn 23 44 48.0 -0.6**
comp=Z,6.8nm,0.6s
TUE Tuetta 11.98 297 **Pn 23 44 50.6 +0.7**
MMAI Mount Meron Ar 12.28 134 Pn **Pn 23 44 53.6 -0.3**
comp=Z,0.2nm,0.3s,baz=299,slow=10,SNR=5.2
comp=Z,3.0nm,0.8s
CLL Collm 12.32 323 *e*P Pn 23 45 01.0 +6.7
CLL Collm 12.32 323 *e*Sg 23 48 43.0
CLL Collm 12.32 323 *e*Pn Pn 23 45 01.0 +6.7
CLL Collm 12.32 323 *e*Sb Sn 23 47 48.0 +36
MNK Minsk 12.60 8 *i* P **Pn 23 44 54.9 -3.1**
comp=E,6.0nm,0.8s
MNK *i* P **Pn 23 44 54.9 -3.1**
comp=N,10.0nm,1.2s
MNK *i* P **Pn 23 44 54.9 -3.1**
comp=Z,3.0nm,0.7s,baz=191
MNK *i* PP **PnPn 23 45 02.8 -3.1**
MNK *i* PPP PPP 23 45 11.7
MNK *i* S **Sn 23 47 16.7 -1.7**
MNK *i* SS **SnSn 23 47 30.0 -0.5**
MNK *i* SSS SSS 23 47 42.5
MNK *i* LQ LQ 23 48 36.4
MNK *i* LR LR 23 49 34.1
MNK *i* LRM MLR 23 50 39.1
comp=E,83nm,14.6s
MNK *i* LRM MLR 23 50 41.0
comp=N,170nm,13.7s
MNK *i* LRM MLR 23 50 47.5
comp=Z,114nm,14.9s
MNK Minsk 12.60 8 *i* P **Pn 23 44 54.9 -3.1**
MNK *i* S **Sn 23 47 16.7 -1.7**
MNK pmax pmax
comp=Z,3.0nm,0.7s
MNK pmax pmax
comp=N,10.0nm,1.3s
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK MLR MLR
comp=E,83nm,15.0s
MNK MLR MLR
comp=N,170nm,14.0s
MNK MLR MLR
comp=Z,114nm,15.0s
NACGM Naroch 12.91 5 *e*P **Pn 23 45 03.4 +1.2**
comp=Z,10.0nm,0.8s,baz=186
KIV Kislovodsk 13.16 76 **Pn 23 45 05.8 0.0**
KIV Kislovodsk 13.16 76 *e*P **Pn 23 45 06.3 +0.5**
KIV *e*S **Sn 23 47 35.2 +3.0**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KVAR Kislovodsk Arr 13.16 76 Pn **Pn 23 45 08.1 +2.2**
baz=246,slow=20
KVAR Sn **Sn 23 47 24.4 -8.0**
baz=292,slow=16
comp=Z,2.2nm,0.8s
BFO Black Forest 13.25 304 Pn **Pn 23 45 06.4 -0.5**
BFO Black Forest 13.25 304 P **Pn 23 45 06.4 -0.5**
VORD Divnogorie 13.30 43 *e*P **Pn 23 45 04.7 -2.9**
VORD pmax pmax
comp=Z,10.0nm,0.6s
KBZ Khabaz 13.30 77 Pn **Pn 23 45 09.5 +1.8**
comp=Z,0.1nm,0.3s,baz=291,slow=17,SNR=1.6
KBZ Sn **Sn 23 47 32.9 -2.7**
comp=Z,0.1nm,0.3s,baz=90,slow=19,SNR=1.7
comp=Z,0.6nm,0.5s
SENIN Lac Senin/Sane 13.33 295 **Pn 23 45 08.0 -0.3**
VSR Storozhevoye 13.39 42 *e*P **Pn 23 45 06.8 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.8s
PABE Paberze 13.46 358 **Pn 23 45 10.6 +0.7**
GURO Guroymak-BITLI 13.54 99 **Pn 23 45 10.8 -0.3**
BNI Bardonecchia 13.55 289 **Pn 23 45 09.9 -1.3**
BNI Bardonecchia 13.55 289 P **Pn 23 45 09.9 -1.3**
KEST Kesra 13.66 248 Pn **Pn 23 45 12.1 -0.5**
comp=Z,0.1nm,0.3s,baz=350,slow=19,SNR=2.5
comp=Z,3.6nm,0.9s
ONI Oni 13.74 82 **Pn 23 45 14.7 +0.9**
ONI Oni 13.74 82 P **Pn 23 45 14.7 +0.9**
AKH Akhalkalaki 13.90 86 **Pn 23 45 16.6 +0.5**
AKH Akhalkalaki 13.90 86 P **Pn 23 45 16.6 +0.5**
ECH Echery 13.94 302 Pn **Pn 23 45 16.7 +0.3**
ECH Echery 13.94 302 P **Pn 23 45 16.7 +0.3**
LPSR Galich'ya Gora 14.17 37 *e*P Pn 23 45 13.3 -6.2
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VRH Novokhopyorsk 14.70 46 *e*P Pn 23 45 21.5 -5.3
VRH pmax pmax
comp=Z,10.0nm,0.6s
EIL Elat 14.80 144 Pn **Pn 23 45 29.3 +1.1**
comp=Z,0.2nm,0.3s,baz=333,slow=6.8,SNR=2.4
comp=Z,3.5nm,0.9s
TATN Tataouine 14.83 235 Pn **Pn 23 45 28.0 -0.7**
SSB Saint Sauveur 15.07 289 Pn **Pn 23 45 30.7 -1.2**
SSB IAmb IAmb 23 45 31.5
comp=Z,10nm,0.9s
SSB Saint Sauveur 15.07 289 P **Pn 23 45 30.7 -1.2**
SSB pmax pmax
comp=Z,10.0nm,0.9s
GNI Garni 15.08 91 **Pn 23 45 33.9 +1.7**
GNI IAmb IAmb 23 45 43.4
comp=Z,13nm,0.9s
GNI Garni 15.08 91 *i* P **Pn 23 45 32.8 +0.7**
GNI Garni 15.08 91 Pn **P 23 45 36.0 -1.5**
comp=Z,0.2nm,0.3s,baz=267,slow=7.7,SNR=4.8
comp=Z,1.5nm,0.5s
OBN Obninsk 15.14 26 Pn **Pn 23 45 33.1 +0.5**
OBN Obninsk 15.14 26⇑ *e*P **Pn 23 45 31.4 -1.2**
OBN *e*S **Sn 23 48 23.1 +2.9**
OBN pmax pmax
comp=Z,26nm,1.2s
OBN MLR MLR
comp=Z,234nm,16.0s
OBN Obninsk 15.14 26 Pn **Pn 23 45 28.7 -3.9**
comp=Z,2.8nm,0.3s,baz=33,slow=14,SNR=4.7
comp=Z,8.9nm,0.5s
BTNL Ternell 15.48 310 *d*P **P 23 45 42.9 +1.2**
MEM Membach 15.56 310 *d*P **P 23 45 43.8 +1.2**
comp=Z,20nm,1.0s
BSTI Sart Tilman 15.80 309 *d*P **P 23 45 47.5 +2.3**
RCHB Rochefort 15.83 307 *d*P **P 23 45 44.4 -1.1**
BCLA Clavier 15.89 308 *d*P **P 23 45 47.1 +0.9**
MOS Moscow 16.00 27 *e*P **Pn 23 45 40.1 -3.7**
MOS *e*SS **S 23 48 49.7 -5.4**
MOS pmax pmax
comp=Z,45nm,1.4s
BGES Gesves 16.00 308 *d*P **P 23 45 48.7 +1.3**
comp=Z,15nm,0.9s
DOU Dourbes 16.18 307 *d*P **P 23 45 50.3 +0.9**
VSU Vasula 16.46 3 *i* P **Pn 23 45 47.3 -2.4**
BELG Belogornoye 18.49 48 *i* P **Pn 23 46 16.1 +1.1**
BELG Belogornoye 18.49 48 P **Pn 23 46 15.1 0.0**
comp=Z,0.5nm,0.3s,baz=233,slow=5.1,SNR=5.3
comp=Z,12nm,0.9s
HFS Hagfors 19.36 343 P **P 23 46 23.3 -1.1**
comp=Z,0.4nm,0.3s,baz=146,slow=14,SNR=11
comp=Z,1.3nm,0.4s
FINES FINESS Array B 19.42 2 P **P 23 46 23.8 -1.3**
FINES FINESS Array B 19.42 2 P **P 23 46 24.4 -0.7**
comp=Z,0.5nm,0.3s,baz=170,slow=11,SNR=32
comp=Z,7.0nm,0.8s
FIA1 FINESS Array S 19.42 2 P **P 23 46 23.8 -1.2**
FIA1 IAmb IAmb 23 46 32.4
comp=Z,33nm,1.1s
VALR Valaam 19.66 9 *i* P **P 23 46 26.2 -1.4**
KONO Kongsberg 19.99 337 P **P 23 46 30.9 -0.3**
KONO IAmb IAmb 23 46 40.2
comp=Z,24nm,1.3s
KONO Kongsberg 19.99 337 P **P 23 46 30.9 -0.3**
KONO pmax pmax
comp=Z,25nm,1.3s
NC602 NORSAR Array S 20.39 341 P **P 23 46 33.4 -2.2**
NAO01 NORSAR Array S 20.65 340 P **P 23 46 36.4 -2.1**
NAO01 IAmb IAmb 23 46 51.6
comp=Z,17nm,1.1s
NB2 NORSAR Subarra 20.74 341 P **P 23 46 38.1 -1.3**
comp=Z,4.5nm,0.8s,baz=169,slow=10
NOA NORSAR Array B 20.74 341 P **P 23 46 37.5 -1.9**
comp=Z,1.4nm,0.8s,baz=157,slow=11,SNR=11
comp=Z,1.4nm,0.8s
KLMR Klimovskoe 20.81 20 *e*P **P 23 46 37.6 -2.5**
KLMR pmax pmax
comp=Z,36nm,1.3s
ESBB Sonseca Array 21.91 273 P **P 23 46 50.8 -1.5**
ESBB IAmb IAmb 23 46 53.2
comp=Z,9.2nm,0.8s
ESDC Sonseca Array 21.91 273 P **P 23 46 51.1 -1.2**
ESDC Sonseca Array 21.91 273 P **P 23 46 51.3 -1.0**
comp=Z,9.1nm,0.8s,baz=70,slow=10,SNR=43
comp=Z,9.1nm,0.8s
PAB San Pablo 22.24 273 P **P 23 46 54.4 -1.4**
PAB IAmb IAmb 23 46 56.2
comp=Z,14nm,1.1s
PAB San Pablo 22.24 273 P **P 23 46 54.4 -1.4**
PAB pmax pmax
comp=Z,14nm,1.1s
KIRV Kirov 22.56 35 *i* P **P 23 47 01.0 +2.0**
KIRV Kirov 22.56 35 P **P 23 46 59.0 0.0**
comp=Z,20nm,0.8s,baz=244,slow=6.5,SNR=8.8
comp=Z,20nm,0.8s
EKA Eskdalemuir Ar 22.59 316 P **P 23 46 58.4 -0.9**
comp=Z,2.6nm,0.4s,baz=113,slow=9.9,SNR=41
comp=Z,2.6nm,0.4s
ESK Eskdalemuir 22.61 316 P **P 23 46 59.0 -0.5**
ESK IAmb IAmb 23 47 00.5
comp=Z,7.8nm,0.7s
ESK Eskdalemuir 22.61 316 P **P 23 46 59.0 -0.5**
ESK pmax pmax
comp=Z,8.0nm,0.7s
PBRG Braganca 23.48 280 *e*P **P 23 47 08.8 +0.2**
comp=Z,32nm,1.8s
MVO Moncorvo 23.82 279 *e*P **P 23 47 12.6 +0.6**
comp=Z,27nm,1.8s
AKTO Aktyubinsk 24.22 58 P **P 23 47 16.1 +0.5**
comp=Z,2.6nm,0.9s,baz=238,slow=9.5,SNR=2.5
comp=Z,2.6nm,0.9s
MTE Manteigas 24.38 277 *e*P **P 23 47 17.8 +0.5**
comp=Z,42nm,1.7s
MTE Manteigas 24.38 277 P **P 23 47 16.3 -1.0**
PCBR Castelo Branco 24.48 276 *e*P **P 23 47 18.4 +0.3**
comp=Z,23nm,1.7s
PMRV Marv??o 24.53 275 *e*P **P 23 47 19.4 +0.8**
comp=Z,42nm,1.5s
PVIS Viseu 24.56 278 *e*P **P 23 47 19.5 +0.6**
PBAR Barrancos 24.65 272 *e*P **P 23 47 20.4 +0.7**
comp=Z,23nm,1.1s

PESTR	**Estremoz**	**24.84**	**274**	*e*P		**P**	**23 47 21.4**	**0.0**
	comp=Z,28nm,1.0s							
PESTR	**Estremoz**	**24.84**	**274**	P		**P**	**23 47 20.6**	**-0.8**
MDT	**Midelt**	**25.08**	**258**	P		**P**	**23 47 23.5**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=21,slow=9.0,SNR=3.6							
	comp=Z,1.4nm,0.7s							
TAM	**Tamanrasset**	**25.13**	**226**	P		**P**	**23 47 25.1**	**+0.9**
TAM				IAmb		IAmb	23 47 32.3	
	comp=Z,7.0nm,1.2s							
TAM	**Tamanrasset**	**25.13**	**226**	P		**P**	**23 47 25.1**	**+0.9**
TAM				pmax		pmax		
	comp=Z,7.0nm,1.2s							
RAYN	**Ar Rayn**	**25.22**	**131**	P		**P**	**23 47 25.8**	**+0.8**
RAYN				IAmb		IAmb	23 47 31.2	
	comp=Z,11nm,0.8s							
RAYN	**Ar Rayn**	**25.22**	**131**	P		**P**	**23 47 25.8**	**+0.8**
RAYN				pmax		pmax		
	comp=Z,11nm,0.8s							
PMTG	**Montargil**	**25.25**	**274**	*e*P		**P**	**23 47 24.4**	**-0.7**
	comp=Z,24nm,1.2s							
EVO	**Evora**	**25.26**	**273**	*e*P		**P**	**23 47 25.0**	**-0.2**
	comp=Z,36nm,1.8s							
PBEJ	**Beja**	**25.32**	**272**	*e*P		**P**	**23 47 26.1**	**+0.4**
	comp=Z,16nm,1.3s							
ABKAR	**Akbulak array**	**25.35**	**61**	P		**P**	**23 47 25.8**	**-0.1**
ABKAR	**Akbulak array**	**25.35**	**61**	P		**P**	**23 47 25.7**	**-0.1**
ABKAR				IAmb		IAmb	23 47 49.8	
	comp=Z,5.1nm,0.9s							
PCVE	**Castro Verde**	**25.58**	**271**	*e*P		**P**	**23 47 28.8**	**+0.7**
	comp=Z,47nm,1.3s							
MESJ	**Messejana**	**25.64**	**272**	*e*P		**P**	**23 47 30.3**	**+1.7**
	comp=Z,27nm,1.8s							
GEYT	**Alibeck**	**25.68**	**88**	P		**P**	**23 47 29.1**	**+0.1**
GEYT				IAmb		IAmb	23 47 34.0	
	comp=Z,7.1nm,0.9s							
GEYT	**Alibeck**	**25.68**	**88**	P		**P**	**23 47 30.3**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=318,slow=2.0,SNR=11							
	comp=Z,3.3nm,0.6s							
PNCL	**Nicolau / Gran**	**25.78**	**272**	*e*P		**P**	**23 47 31.6**	**+1.7**
ARU	**Arti**	**25.93**	**45**	P		**P**	**23 47 30.4**	**-0.7**
ARU				IAmb		IAmb	23 48 03.4	
	comp=Z,11nm,0.9s							
ARU	**Arti**	**25.93**	**45**	*c i*P		**P**	**23 47 30.8**	**-0.3**
ARU				S		**S**	**23 52 02.6**	**+1.5**
ARU				pmax		pmax		
	comp=Z,7.0nm,1.0s							
LVZ	**Lovozero**	**26.42**	**8**	P		**P**	**23 47 36.6**	**+1.2**
LVZ	**Lovozero**	**26.42**	**8**	P		**P**	**23 47 36.6**	**+1.2**
LVZ				pmax		pmax		
	comp=Z,91nm,1.4s							
ARCES	**ARCESS Array B**	**27.54**	**0**	P		**P**	**23 47 45.2**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=174,slow=9.8,SNR=1.8							
	comp=Z,2.3nm,0.9s							
HRA	**Herat**	**30.14**	**92**	P		**P**	**23 48 08.5**	**-0.7**
HRA				IAmb		IAmb	23 48 14.3	
	comp=Z,5.2nm,1.0s							
BRVK	**Borovoye**	**32.02**	**54**	*i* P		**P**	**23 48 25.9**	**+0.6**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.9s							
BVAR	**Borovoye Array**	**32.08**	**54**	P		**P**	**23 48 27.2**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=276,slow=14,SNR=2.3							
	comp=Z,0.6nm,0.6s							
KKAR	**Karatay Array**	**33.28**	**73**	P		**P**	**23 48 37.0**	**+0.5**
KKAR	**Karatay Array**	**33.28**	**73**	P		**P**	**23 48 37.3**	**+0.8**
KKAR				IAmb		IAmb	23 48 48.2	
	comp=Z,2.7nm,1.1s							
KKAR	**Karatay Array**	**33.28**	**73**	P		**P**	**23 48 37.0**	**+0.5**
KKAR							23 48 37.3	
KKAR				pmax		pmax		
	comp=Z,3.0nm,1.1s							
BTK	**Batken**	**34.36**	**78**	P		**P**	**23 48 45.6**	**-0.4**
BTK	**Batken**	**34.36**	**78**	P		**P**	**23 48 45.6**	**-0.4**
BTK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
TOA0	**Torodi Ar. Sit**	**35.16**	**222**	P		**P**	**23 48 53.2**	**+0.3**
TOA0				IAmb		IAmb	23 48 57.4	
	comp=Z,5.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**35.16**	**222**	P		**P**	**23 48 53.3**	**+0.3**
TORD				IAmb		IAmb	23 48 57.4	
	comp=Z,3.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**35.16**	**222**	P		**P**	**23 48 53.6**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=32,slow=9.6,SNR=46							
	comp=Z,4.6nm,0.6s							
ARSB	**Arslanbob**	**35.53**	**75**	P		**P**	**23 48 56.9**	**+0.7**
ARSB	**Arslanbob**	**35.53**	**75**	P		**P**	**23 48 56.9**	**+0.7**
ARSB				pmax		pmax		
	comp=Z,1.0nm,0.7s							
AAK	**Ala-Archa**	**36.23**	**72**	P		**P**	**23 49 03.2**	**+1.1**
AAK				IAmb		IAmb	23 49 13.4	
	comp=Z,3.9nm,1.0s							
AAK	**Ala-Archa**	**36.23**	**72**	*i* P		**P**	**23 49 03.0**	**+0.9**
AAK				pmax		pmax		
	comp=Z,4.0nm,1.0s							
SPITS	**Spitsbergen Ar**	**36.39**	**357**	P		**P**	**23 49 02.0**	**-0.9**
	comp=Z,12nm,1.0s,baz=169,slow=16,SNR=2.1							
	comp=Z,12nm,1.0s							
KSH	**Kashi**	**38.28**	**76**	P		**P**	**23 49 22.8**	**+3.2**
KSH				pP		sP	23 49 27.1	+3.4
KSH				pmax		pmax		
	comp=Z,3.0nm,0.6s							
NIL	**Nilore**	**38.66**	**86**	P		**P**	**23 49 23.6**	**+1.0**
NIL				IAmb		IAmb	23 49 27.8	
	comp=Z,6.6nm,0.8s							
NIL	**Nilore**	**38.66**	**86**	P		**P**	**23 49 23.6**	**+1.0**
NIL				pmax		pmax		
	comp=Z,7.0nm,0.8s							
MK31	**Makanchi Array**	**40.47**	**63**	P		**P**	**23 49 37.8**	**+0.2**
MK31	**Makanchi Array**	**40.47**	**63**	*i* P		**P**	**23 49 38.0**	**+0.4**
MKAR	**Makanchi Array**	**40.47**	**63**	P		**P**	**23 49 38.1**	**+0.5**
MKAR	**Makanchi Array**	**40.47**	**63**	P		**P**	**23 49 37.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=288,slow=7.7,SNR=13							
MKAR				PcP		**PcP**		
	comp=Z,1.0nm,0.8s,baz=278,slow=1.0,SNR=4.2							
	comp=Z,0.5nm,0.5s							
ZAA0	**Zalesovo Array**	**40.62**	**52**	P		**P**	**23 49 38.6**	**-0.1**
ZALV	**Zalesovo Beam**	**40.62**	**52**	P		**P**	**23 49 38.8**	**0.0**
	comp=Z,1.5nm,0.6s,baz=266,slow=8.8,SNR=7.8							
	comp=Z,1.5nm,0.6s							
NRIK	**Noril'sk**	**41.80**	**28**	P		**P**	**23 49 48.9**	**+0.7**
NRIK	**Noril'sk**	**41.80**	**28**	*i* P		**P**	**23 49 48.0**	**-0.2**
NRIK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
NRIK	**Noril'sk**	**41.80**	**28**	P		**P**	**23 49 48.3**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=224,slow=5.5,SNR=7.0							
	comp=Z,1.9nm,0.6s							
MBAR	**Mbarara**	**42.80**	**171**	*i* P		**P**	**23 49 55.2**	**-1.9**
MBAR				pmax		pmax		
	comp=Z,4.0nm,1.5s							
DGZ	**Jazzator, Alta**	**43.06**	**58**	*i* P		**P**	**23 49 58.9**	**0.0**
DGZ				pmax		pmax		
	comp=Z,8.0nm,2.2s							
DBIC	**Dimbokro**	**44.02**	**225**	P		**P**	**23 50 06.7**	**-0.1**
DBIC	**Dimbokro**	**44.02**	**225**	P		**P**	**23 50 06.7**	**-0.1**
DBIC				pmax		pmax		
	comp=Z,14nm,1.2s							
DBIC	**Dimbokro**	**44.02**	**225**	P		**P**	**23 50 06.6**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=21,slow=8.9,SNR=8.2							
	comp=Z,5.4nm,0.8s							
SFJD	**Kangerlussuaq**	**46.61**	**328**	P		**P**	**23 50 26.1**	**-0.6**
SFJD	**Kangerlussuaq**	**46.61**	**328**	P		**P**	**23 50 26.1**	**-0.6**
SFJD				pmax		pmax		
	comp=Z,30nm,1.4s							
TIXI	**Tiksi**	**54.82**	**22**	*i* P		**P**	**23 51 28.2**	**-0.3**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.4s							
SONM	**Songino Array**	**55.43**	**54**	P		**P**	**23 51 34.2**	**+0.7**
SONM	**Songino Array**	**55.43**	**54**	P		**P**	**23 51 34.2**	**+0.7**
SONM				pmax		pmax		
	comp=Z,2.0nm,1.2s							
SONM	**Songino Array**	**55.43**	**54**	P		**P**	**23 51 33.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=289,slow=7.0,SNR=9.5							
	comp=Z,1.0nm,0.7s							
ULN	**Ulaanbaatar**	**55.81**	**54**	*i* P		**P**	**23 51 34.9**	**-1.4**
ULN				pmax		pmax		
	comp=Z,4.0nm,1.6s							
SHL	**Shillong**	**56.67**	**84**	P		**P**	**23 51 42.9**	**+0.1**
SHL	**Shillong**	**56.67**	**84**	P		**P**	**23 51 42.9**	**+0.1**
SHL				pmax		pmax		
	comp=Z,14nm,0.4s							
RES	**Resolute Bay**	**56.96**	**344**	P		**P**	**23 51 44.0**	**+0.1**
RES				IAmb		IAmb	23 51 53.5	
	comp=Z,3.0nm,1.1s							
RES	**Resolute Bay**	**56.96**	**344**	P		**P**	**23 51 44.0**	**+0.1**
RES				pmax		pmax		
	comp=Z,3.0nm,1.1s							
SCHQ	**Schefferville**	**57.90**	**317**	P		**P**	**23 51 49.7**	**-1.1**
SCHQ	**Schefferville**	**57.90**	**317**	P		**P**	**23 51 49.9**	**-0.9**
	comp=Z,3.7nm,0.9s,baz=49,slow=7.9,SNR=5.1							
	comp=Z,3.7nm,0.9s							
HHC	**Hu-ho-hao-te**	**62.11**	**59**	*e*P		**P**	**23 52 20.8**	**+0.7**
HHC	**Hu-ho-hao-te**	**62.11**	**59**	sP		sP	23 52 30.6	+6.3
HHC	**Hu-ho-hao-te**	**62.11**	**59**	PcP		**PcP**	**23 53 07.1**	**+6.8**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,94nm,5.9s							
HHC				LR		LR		
	comp=N,300nm,14.1s							
HHC				LR		LR		
	comp=E,310nm,11.0s							
HHC				LR		LR		
	comp=Z,270nm,12.9s							
CD2	**Chengdu**	**62.30**	**72**	P		**P**	**23 52 25.0**	**+3.6**
ZEA	**Zeya**	**63.75**	**40**	*e*P		P	23 52 22.4	-8.2
XAN	**Xi'an**	**64.13**	**67**	⇑P		**P**	**23 52 36.9**	**+3.4**
XAN				pmax		pmax		
	comp=Z,6.0nm,1.1s							
HEH	**HeiHe**	**65.91**	**43**	*e*P		**P**	**23 52 46.8**	**+2.1**
HEH				pmax		pmax		
	comp=Z,4.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**66.15**	**86**	P		**P**	**23 52 46.9**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=304,slow=7.5,SNR=11							
	comp=Z,1.9nm,0.7s							
BILL	**Bilibino**	**66.44**	**15**	*i* P		**P**	**23 52 47.8**	**-0.1**
BILL				pmax		pmax		
	comp=Z,4.0nm,1.4s							
C36M	**Paulatuk**	**66.56**	**349**	P		**P**	**23 52 48.5**	**-0.1**
C36M				IAmb		IAmb	23 53 12.0	
	comp=Z,4.3nm,1.3s							
SEY	**Seymchan**	**67.28**	**23**	*i* P		**P**	**23 52 55.2**	**+2.0**
SEY				pmax		pmax		
	comp=Z,3.0nm,1.1s							
KLR	**Kul'dur**	**68.74**	**42**	*i* P		**P**	**23 53 01.3**	**-1.4**
KLR				pmax		pmax		
	comp=Z,5.0nm,1.3s							
BOSA	**Boshof**	**70.33**	**180**	P		**P**	**23 53 12.6**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=27,slow=4.6,SNR=3.5							
	comp=Z,2.4nm,0.9s							
YKA	**Yellowknife Ar**	**70.83**	**341**	*i* P		**P**	**23 53 15.3**	**0.0**
YKA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
YKA	**Yellowknife Ar**	**70.83**	**341**	P		**P**	**23 53 14.8**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=33,slow=5.7,SNR=13							
	comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**73.31**	**356**	P		**P**	**23 53 30.6**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=351,slow=4.9,SNR=5.0							
	comp=Z,0.3nm,0.7s							
KSRS	**Korea Array**	**74.30**	**54**	P		**P**	**23 53 37.3**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=311,slow=4.7,SNR=4.1							
	comp=Z,1.2nm,0.6s							
ULM	**Lac du Bonnet**	**74.50**	**325**	P		**P**	**23 53 37.0**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=36,slow=9.2,SNR=5.0							
	comp=Z,1.7nm,0.6s							
YSS	**Yuzh-Sakhalins**	**75.64**	**39**	*e*P		**P**	**23 53 46.7**	**+2.7**
YSS				pmax		pmax		
	comp=Z,20nm,1.0s							
PDAR	**Pinedale Array**	**86.13**	**328**	P		**P**	**23 54 40.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=49,slow=4.5,SNR=5.4							
	comp=Z,0.7nm,0.8s							
NVAR	**Mina Array Bea**	**93.16**	**332**	P		**P**	**23 55 13.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=44,slow=6.9,SNR=2.2							
	comp=Z,0.2nm,0.4s							
TXAR	**Lajitas Array**	**94.59**	**317**	P		**P**	**23 55 20.2**	**0.0**
	comp=Z,0.6nm,0.8s,baz=80,slow=5.0,SNR=3.3							
	comp=Z,0.6nm,0.8s							

ROM 21 23:42:32.9±0.1, 42°836N±0'.005×13°135E±0'.007, h10km, ML1.1/8, 1C-2D, Error ellipse: s-maj=0.7km s-min=0.5km az=296.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.01**	**261**	P	Pg	23 42 34.2	-0.6
NRCA				S	Sg	23 42 34.7	-1.4
NRCA				AML	AML		
	comp=E,6497μm,0.1s						
NRCA				AML	AML		
	comp=E,6193μm,0.1s						
NRCA				AML	AML		
	comp=N,2539μm,0.1s						
NRCA				AML	AML		
	comp=N,2680μm,0.1s						
MC2	**Monte Cornacci**	**0.09**	**28**	P	Pg	23 42 35.7	+0.2
MC2				S	Sg	23 42 37.7	+0.3
T1214	**Arquata del Tr**	**0.09**	**145**	⇑P	Pg	23 42 35.8	+0.2
T1214				S	Sg	23 42 37.6	+0.1
T1214				AML	AML		
	comp=E,146μm,0.1s						
T1214				AML	AML		
	comp=E,145μm,0.1s						
T1214				AML	AML		
	comp=N,128μm,3.3s						
T1214				AML	AML		
	comp=N,105μm,1.1s						
MMO1	**Montemonaco**	**0.15**	**66**	P	Pg	23 42 36.8	+0.4
MMO1				S	Sg	23 42 39.6	+0.8
T1221	**Campello sul C**	**0.21**	**277**	⇓P	Pg	23 42 38.1	+0.8
T1221				S	Sg	23 42 41.9	+1.4
T1221				AML	AML		
	comp=E,56μm,1.6s						
GAVE	**Gavelli**	**0.23**	**231**	⇓P	Pg	23 42 38.5	+0.8
GAVE				S	Sg	23 42 42.6	+1.7
GAVE				AML	AML		
	comp=N,84μm,0.3s						
GAVE				AML	AML		
	comp=E,53μm,0.2s						
GAVE				AML	AML		
	comp=E,157μm,1.7s						
CESI	**CESI - Serrava**	**0.24**	**315**	P	Pg	23 42 38.5	+0.6
CESI				S	Sg	23 42 42.9	+1.7
LNSS	**Leonessa**	**0.24**	**197**	P	Pg	23 42 38.9	+0.9
LNSS				S	Sg	23 42 43.5	+2.2
SM1	**SAN MARTINO**	**0.25**	**144**	P	Pg	23 42 38.7	+0.6
CSP1	**Cessapalombo**	**0.26**	**11**	P	Pb	23 42 39.3	-0.5
CSP1				S	Sb	23 42 43.6	-0.8
GUMA	**Gualdo di Mace**	**0.27**	**33**	P	Pg	23 42 38.4	-0.1
GUMA				S	Sb	23 42 44.2	-0.4
MF5	**Montefalcone A**	**0.28**	**57**	P	Pb	23 42 39.6	-0.5
MF5				S	Sb	23 42 44.1	-0.9

*TIR **21** 23:44:49.6, 37°.58N×20°.18E, h20km±4km, Md4.3, Ml5.3*
*GII **21** 23:44:52.7±0.5, 37°.80N×20°.44E, h15km, confirmed*
*BJI **21** 23:44:52.0±0.0, 37°.82N×20°.38E, h15km, mb4.8/64, mB5.1/27, Ms4.9/16, Ms7 4.4/18*
*IDC **21** 23:44:52.8±0.5, 37°.83N×20°.52E, h0km, mb4.8/31, mbtmp4.7/45, ML4.3/13, MS4.1/38, Error ellipse: s-maj=11.0km s-min=9.3km az=149.0*
*MOS **21** 23:44:53.0±1.1, 37°.86N×20°.43E, h12km, mb5.2/52, MS4.2/12, Error ellipse: s-maj=4.8km s-min=3.0km az=70.7*
*MED_RC **21** 23:44:55.0±0.5, 37°.80N×20°.36E, h16km±2km, MW4.7/16, Moment Tensor Solution. Mantle waves: s16,c18; Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.19±.08; $M_{\theta\theta}$-0.41±.08; $M_{\phi\phi}$0.22±.05; $M_{r\theta}$1.07±.30; $M_{\theta\phi}$0.19±.05; $M_{\phi r}$-0.69±.20; Best double couple: $M_0$1.32000×10^{16} NP1:ϕ_s124.00000°,δ84.00000°, λ99.00000°. NP2:ϕ_s248.00000°,δ11.00000°,λ34.00000°. Principal axes: T 1.2200, Plg51.0000°, Azm44.0000°; N 0.2000, Plg9.0000°, Azm303.0000°; P -1.4200, Plg38.0000°, Azm205.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*THE **21** 23:44:55.1, 37°.79N×20°.35E, h18km, ML4.8/6 Error ellipse: s-maj=2.2km s-min=0.6km az=61.0*
*NEIC **21** 23:44:56.4±1.9, 37°.85N±0'.05×20°.36E±0'.06, h20km±5km, mb5.0/133, Error ellipse: s-maj=7.5km s-min=7.2km az=225.0*
*BEO **21** 23:44:56.8±1.0, 38°.00N×20°.19E, h0km, ML4.8/6*
*ATH **21** 23:44:56.3, 37°.84N×20°.42E, h9km, Mw4.7, Moment Tensor Solution. s7 Moment tensor: M_{rr}-0.44; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$1.37; $M_{r\theta}$1.02; $M_{\theta\phi}$0.04; $M_{\phi r}$-0.47; Fault plane solution: NP1:ϕ_s320.00000°,δ76.00000°, λ-138.00000°. NP2:ϕ_s218.00000°,δ50.00000°, λ-19.00000°.*
*PDG **21** 23:44:56.9±0.6, 37°.85N×20°.27E, h19km±1km, MD5.0/4, ML4.9/12 Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
*BGR **21** 23:45:02.3±0.7, 38°.26N×20°.98E, h10km, Error ellipse: s-maj=99.0km s-min=40.0km az=56.0*
*NAO **21** 23:45:19.5, 39°.93N×19°.60E, h33km, mb4.8*
ISC 21 23:44:55.1±0.6, 37°.84N±0'.02×20°.40E±0'.02, h15km±3km, n1155, σ1s57/1217, mb5.0/178, MS4.1/44, 64C-43D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.36**	**5**	P	**Pb**	**23 45 03.3**	**+0.1**
LXRA				S	**Sb**	**23 45 10.3**	**+1.5**
LXR1	**Lixouri, Cepha**	**0.36**	**5**	P	**Pb**	**23 45 03.8**	**+0.5**
LXR1				S	**Sb**	**23 45 10.5**	**+1.7**
	761μm,0.4s						
LTHK	**Lithakia**	**0.37**	**110**	P	**Pg**	**23 45 03.1**	**+0.5**
LTHK				S	**Sb**	**23 45 09.0**	**+0.1**
	156μm,0.3s						
LTHK	**Lithakia**	**0.37**	**110**	P	**Pg**	**23 45 03.1**	**+0.5**
LTHK				S	**Sb**	**23 45 09.0**	**+0.1**
LTHK				AML	AML	23 45 09.7	
LTHK				AML	AML	23 45 10.5	
VLS	**Valsamata**	**0.37**	**24**	P	**Pb**	**23 45 03.4**	**0.0**
VLS				S	**Sb**	**23 45 09.9**	**+0.9**
	176μm,0.4s						
VLS	**Valsamata**	**0.37**	**24**	P	**Pb**	**23 45 03.5**	**0.0**
VLS				S	**Sb**	**23 45 09.5**	**+0.4**
VLS				AML	AML	23 45 11.3	
VLS				AML	AML	23 45 11.9	
KRI1	**kERI**	**0.38**	**118**	P	**Pb**	**23 45 03.5**	**0.0**
KRI1				S	**Sb**	**23 45 09.6**	**+0.5**
	151μm,0.5s						
DMLN	**Damoulianata-K**	**0.40**	**357**	P	**Pb**	**23 45 04.2**	**+0.3**
DMLN				S	**Sb**	**23 45 11.0**	**+1.2**
	235μm,0.6s						
DMLN	**Damoulianata-K**	**0.40**	**357**	P	**Pb**	**23 45 04.3**	**+0.3**
DMLN				S	**Sb**	**23 45 11.1**	**+1.2**
KEF4	**Livadi, Kephal**	**0.42**	**3**	P	**Pb**	**23 45 04.5**	**+0.3**
KEF4				S	**Sb**	**23 45 11.9**	**+1.5**
KEF4	**Livadi, Kephal**	**0.42**	**3**	P	**Pb**	**23 45 04.5**	**+0.3**
KEF4				S	**Sb**	**23 45 11.9**	**+1.5**
VSK1	**VASILIKIADES**	**0.58**	**13**	P	**Pb**	**23 45 07.1**	**0.0**
FSK	**Fiskardo**	**0.63**	**12**	P	**Pg**	**23 45 07.8**	**+0.3**
FSK	**Fiskardo**	**0.63**	**12**	P	**Pg**	**23 45 07.8**	**+0.3**
FSK				S	**Sb**	**23 45 18.0**	**+1.4**
FSK				AML	AML	23 45 22.7	
FSK				AML	AML	23 45 23.5	
EVGI	**Lefkada island**	**0.81**	**14**	P	**Pb**	**23 45 11.0**	**+0.1**
EVGI	**Lefkada island**	**0.81**	**14**	P	**Pg**	**23 45 10.8**	**0.0**
EVGI				S	**Sn**	**23 45 23.4**	**-0.3**
DRAG	**Dragano-Lefkad**	**0.85**	**9**	P	**Pb**	**23 45 11.6**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.85**	**9**	P	**Pb**	**23 45 11.6**	**-0.1**
RLS	**Riolos of Patr**	**0.87**	**75**	P	**Pb**	**23 45 12.0**	**0.0**
RLS	**Riolos of Patr**	**0.87**	**75**	P	**Pb**	**23 45 12.0**	**0.0**
RLS				AML	AML	23 45 31.9	
	comp=N,72867μm,0.6s						
RLS				AML	AML	23 45 32.6	
	comp=E,84891μm,0.7s						
NYDR	**Nydri-Lefkada**	**0.90**	**15**	P	**Pb**	**23 45 12.5**	**0.0**
NYDR	**Nydri-Lefkada**	**0.90**	**15**	P	**Pb**	**23 45 12.5**	**0.0**
LKD2	**Lefkada island**	**0.97**	**12**	P	**Pb**	**23 45 13.8**	**+0.2**
	baz=17						
LKD2				S	**Sn**	**23 45 31.5**	**+3.7**
	baz=17						
LKD2				AMP			
	comp=N,196nm,0.6s,baz=17						
LKD2	**Lefkada island**	**0.97**	**12**	P	**Pb**	**23 45 13.2**	**-0.5**
LKD2				S	**Sn**	**23 45 29.0**	**+1.2**
	comp=N,77μm,0.6s						
LKD2	**Lefkada island**	**0.97**	**12**	P	**Pb**	**23 45 13.7**	**0.0**
LKD2				AML	AML	23 45 38.7	
LKD2				AML	AML	23 45 39.1	
TSLK	**Tsoukalades, L**	**1.00**	**11**	P	**Pb**	**23 45 14.4**	**+0.2**
DRO	**Drossia**	**1.04**	**83**	P	**Pb**	**23 45 15.1**	**+0.2**
DRO				AML	AML	23 45 40.5	
DRO				AML	AML	23 45 43.0	
PVO	**Paravola**	**1.18**	**48**	P	**Pb**	**23 45 17.4**	**+0.2**
EFP	**Efpalio**	**1.32**	**63**	P	**Pn**	**23 45 19.5**	**+0.4**
EFP				AML	AML	23 45 45.7	
	comp=E,61693μm,0.6s						
EFP				AML	AML	23 45 47.5	
	comp=N,51985μm,0.5s						
KLV	**Kalavryta, Ach**	**1.40**	**81**	P	**Pb**	**23 45 21.0**	**0.0**
KLV				AML	AML	23 45 53.1	
	comp=E,31328μm,0.7s						
KLV				AML	AML	23 45 53.9	
	comp=N,37996μm,0.8s						
ANX	**Ano Chora**	**1.41**	**57**	P	**Pb**	**23 45 21.2**	**0.0**
ANX				AML	AML	23 45 47.9	
	comp=E,88295μm,0.6s						
ANX				AML	AML	23 45 54.5	
	comp=N,90456μm,0.6s						
TRIZ	**Trizonia**	**1.42**	**68**	P	**Pb**	**23 45 21.1**	**-0.2**
PYL	**PYLOS**	**1.43**	**131**	P	**Pn**	**23 45 20.5**	**0.0**
PYL				AML	AML	23 45 53.5	
	comp=N,16773μm,0.8s						
PYL				AML	AML	23 46 03.1	
	comp=E,21655μm,0.9s						
IGT	**Igoumenitsa**	**1.69**	**358**	P	**Pb**	**23 45 25.6**	**-0.3**
	baz=3.0						
IGT				S	**Sg**	**23 45 51.8**	**+2.3**
	baz=3.0						
IGT				AMP			
	comp=E,61nm,0.5s,baz=3.0						
IGT	**Igoumenitsa**	**1.69**	**358**	P	**Pn**	**23 45 24.9**	**+0.7**
IGT				AML	AML	23 46 04.8	
	comp=E,35397μm,0.5s						
IGT				AML	AML	23 46 08.0	
	comp=N,27748μm,1.2s						
AGG	**Agios Georgios**	**1.92**	**51**	Pn	**Pb**	**23 45 29.8**	**-0.1**
AGG	**Agios Georgios**	**1.92**	**51**	⇑P	**Pb**	**23 45 30.4**	**+0.6**
AGG	**Agios Georgios**	**1.92**	**51**	P	**Pb**	**23 45 29.8**	**-0.1**
KEK	**Kerkira**	**1.93**	**346**	Pn	**Pn**	**23 45 27.1**	**-0.4**
KEK				Sn	**Sn**	**23 45 48.5**	**-3.0**
KEK

PHP	**Peshkopia**	3.84	0	P		Pn	23 45 55.8	+2.0	
	baz=2.0								
PHP				AMP					
	comp=N,6.3nm,0.7s,baz=2.0								
VAY	**Valandovo**	3.86	25	*e*Pn		Pn	23 45 56.6	+2.6	
VAY	**Valandovo**	3.86	25	*i* Pn		Pn	23 45 56.1	+2.2	
SRS	**Serrai**	4.10	36	*e*Pn		Pn	23 45 59.7	+2.4	
APE	**Apeiranthos**	4.15	99	*i* P		Pn	23 45 58.2	+0.1	
APE	**Apeiranthos**	4.15	99	P		Pn	23 45 58.8	+0.8	
CUC	**Castrocucco**	4.17	302	Pn		Pn	23 45 59.1	+0.8	
CUC	**Castrocucco**	4.17	302	⇑P		Pn	23 46 01.2	+2.9	
SKO	**Skopje**	4.20	11	*e*Pn		Pn	23 46 00.5	+1.8	
SKO	**Skopje**	4.20	11	*i* Pn		Pn	23 46 00.3	+1.6	
ULC	**Ulcinj**	4.21	348	*e*Pn		Pn	23 45 59.5	+0.6	
ULC				*i* Sn		Sn	23 46 46.5	-1.3	
PUK	**Puka**	4.22	355	Pn		Pn	23 45 59.7	+0.8	
PUK	**Puka**	4.22	355	P		Pn	23 46 00.1	+1.2	
	baz=358								
SANT	**Santorini**	4.30	108			Pn	23 46 01.3	+1.2	
SANT	**Santorini**	4.30	108	⇑P		Pn	23 46 02.2	+2.1	
IDI	**Anoyia**	4.42	124	S		Sn	23 46 52.3	-0.7	
IDI				P		Pn	23 46 03.3	+1.6	
DRME	**Dracevica, Mon**	4.44	348	⇑*i* Pn		Pn	23 46 03.0	+1.0	
DRME				*i* Sn		Sn	23 46 52.4	-1.0	
DRME	**Dracevica, Mon**	4.44	348	*e*Pn		Pn	23 46 02.8	+0.8	
BCI	**Bajram Curri**	4.53	357	P		Pn	23 46 05.3	+2.1	
	baz=0.0								
BCI				AMP					
	comp=N,18nm,0.7s,baz=0.0								
BUM	**Brajici-Budva**	4.60	346	⇓*i* Pn		Pn	23 46 04.7	+0.5	
BUM				*i* Sn		Sn	23 46 56.1	-1.4	
PVY	**Plav**	4.76	356	*e*Pn		Pn	23 46 07.6	+1.1	
PVY				*i* Sn		Sn	23 47 00.2	-1.3	
VAE	**Valguarnera**	4.77	267	Pn		Pn	23 46 07.5	+1.0	
	comp=N,31nm,0.6s,baz=169,slow=21,SNR=15								
VAE				Sn		Sn	23 47 00.7	-0.8	
	comp=N,29nm,0.3s,baz=328,slow=9.4,SNR=7.0								
HCY	**Herceg Novi**	4.83	343	⇑*i* Pn		Pn	23 46 07.3	0.0	
HCY				*i* Sn		Sn	23 47 00.4	-2.6	
HCY	**Herceg Novi**	4.83	343	*e*Pn		Pn	23 46 06.2	-1.1	
CEME	**Cevo**	4.84	347	⇓*i* Pn		Pn	23 46 08.5	+1.1	
CEME				*i* Sn		Sn	23 47 01.8	-1.4	
RAFF	**Raffo Rosso**	4.84	265	Pn		Pn	23 46 06.6	-0.8	
IVA	**Berane**	5.04	356	⇑*i* Pn		Pn	23 46 11.4	+1.1	
IVA				*i* Sn		Sn	23 47 06.7	-1.6	
NKME	**Niksic**	5.04	348	⇑*i* Pn		Pn	23 46 11.3	+1.0	
NKME				*i* Sn		Sn	23 47 06.7	-1.6	
KOME	**Kolasin**	5.05	353	⇑*i* Pn		Pn	23 46 11.3	+0.9	
KOME				*i* Sn		Sn	23 47 07.0	-1.6	
BARS	**Barje**	5.09	12	*e*Pn		Pn	23 46 12.2	+1.4	
TREB	**Trebinje**	5.12	343	*e*Pn		Pn	23 46 10.4	-0.8	
WDD	**Wied Dalam**	5.12	249	Pn		Pn	23 46 11.3	+0.1	
WDD	**Wied Dalam**	5.12	249	⇑P		Pn	23 46 11.4	+0.1	
DBRK	**Dubrovnik**	5.12	341	*e*Pn		Pn	23 46 11.0	-0.3	
DBRK				Sn		Sn	23 47 08.0	-2.2	
RDO	**Rodhopi**	5.17	49	Pn		Pn	23 46 13.5	+1.6	
BRY	**Bratogost**	5.25	345	*e*Pn		Pn	23 46 13.8	+0.6	
BRY				*i* Sn		Sn	23 47 11.1	-2.5	
BRY	**Bratogost**	5.25	345	*e*Pn		Pn	23 46 12.9	-0.3	
ALN	**Alexandroupoli**	5.33	53	Pn		Pn	23 46 14.6	+0.4	
ALN	**Alexandroupoli**	5.33	53	P		Pn	23 46 14.6	+0.4	
SELS	**Selova**	5.40	6	*e*Pn		Pn	23 46 15.5	+0.3	
SJES	**Sjenica**	5.43	357	*e*Pn		Pn	23 46 16.7	+1.1	
SJES				*e*Sn		Sn	23 47 14.6	-3.2	
SJES	**Sjenica**	5.43	357	*e*Pn		Pn	23 46 16.5	+0.9	
STON	**Ston**	5.43	339	*e*Pn		Pn	23 46 15.2	-0.4	
STON	**Ston**	5.43	339	*e*Pn		Pn	23 46 15.1	-0.4	
UPM	**Unac-Piva**	5.48	348	⇑*i* Pn		Pn	23 46 17.1	+0.7	
UPM				*i* Sn		Sn	23 47 16.8	-2.4	
UPM	**Unac-Piva**	5.48	348	*e*Pn		Pn	23 46 17.4	+1.0	
PAOL	**Paolisi**	5.53	307	Pn		Pn	23 46 19.0	+2.1	
PLE	**Pljevlja**	5.54	352	⇑*i* Pn		Pn	23 46 18.0	+0.9	
PLE				*i* Sn		Sn	23 47 18.6	-2.0	
LSTV	**Lastovo**	5.61	333	*e*Pn		Pn	23 46 17.4	-0.6	
CLTB	**Caltabellotta**	5.70	270			Pn	23 46 21.6	+2.2	
CLTB	**Caltabellotta**	5.70	270	⇑P		Pn	23 46 22.6	+3.2	
IVAS	**Ivanjica**	5.73	358	*e*Pn		Pn	23 46 20.0	+0.2	
RUDO	**Rudo**	5.83	353	*e*Pn		Pn	23 46 20.4	-0.6	
BOVS	**Bovan**	5.87	9	*e*Pn		Pn	23 46 21.3	-0.3	
KARP	**Karpathos**	5.89	111			Pn	23 46 24.0	+2.0	
KARP	**Karpathos**	5.89	111	⇑P		Pn	23 46 24.1	+2.2	
KARP	**Karpathos**	5.89	111	P		Pn	23 46 21.9	-0.1	
MAKA	**Makarska**	6.02	336	*e*Pn		Pn	23 46 23.8	+0.2	
MAKA				Sn		Sn	23 47 29.0	-3.3	
GRUS	**Gruza**	6.05	2	*e*Pn		Pn	23 46 25.0	+1.0	
BBLS	**Lazići**	6.07	353	*e*Pn		Pn	23 46 26.8	+2.4	
BBLS				*e*Sn		Sn	23 47 31.6	-2.0	
BBLS	**Lazići**	6.07	353	*e*Pn		Pn	23 46 26.5	+2.1	
HVAR	**Hvar**	6.12	332	*e*Pn		Pn	23 46 24.4	-0.6	
RICI	**Ricice**	6.17	337	*e*Pn		Pn	23 46 25.6	-0.1	
DIVS	**Divibare**	6.26	357	*e*Pn		Pn	23 46 27.0	0.0	
DIVS				*e*Sn		Sn	23 47 36.2	-2.1	
HAPS	**Han Pijesak,BI**	6.34	350	*e*Pn		Pn	23 46 27.1	-1.0	
TRUS	**Trudelj**	6.38	0	*e*Pn		Pn	23 46 28.6	0.0	
TRUS				*e*Sn		Sn	23 47 38.6	-2.5	
ARG	**Arkhangelos**	6.39	102	Pn		Pn	23 46 31.3	+2.6	
ARG	**Arkhangelos**	6.39	102	⇓P		Pn	23 46 31.9	+3.2	
ARG	**Arkhangelos**	6.39	102	P		Pn	23 46 31.3	+2.6	
INTR	**Introdacqua**	6.50	312	Pn		Pn	23 46 33.1	+2.7	
TEKS	**Tekeris**	6.74	355	*e*Pn		Pn	23 46 32.8	-0.7	
TEKS	**Tekeris**	6.74	355	*e*Pn		Pn	23 46 32.3	-1.2	
ZIRJ	**Zirje**	6.84	330	*e*Pn		Pn	23 46 34.4	-0.4	
KIJV	**Kijevo**	6.86	335	*i* Pn		Pn	23 46 35.5	+0.4	
BEO	**Beograd**	6.96	0	*e*Pn		Pn	23 46 34.8	-1.8	
MORI	**Morici**	6.99	331	*e*Pn		Pn	23 46 37.6	+0.6	
MGRS	**Mrkonjic Grad**	7.03	340	*e*Pn		Pn	23 46 38.4	+0.9	
DOB	**Doboj**	7.10	347	*e*Pn		Pn	23 46 38.3	-0.2	
CAMP	**Campotosto**	7.12	313			Pn	23 46 41.0	+2.2	
A050A	**Klekovaca**	7.25	337	*e*Pn		Pn	23 46 41.4	+0.8	
BLY	**Banja Luka**	7.32	342	*e*Pn		Pn	23 46 41.7	+0.3	
FRGS	**Fruska Gora**	7.33	357	*e*Pn		Pn	23 46 40.8	-0.8	
FRGS				*e*Sn		Sn	23 47 59.9	-4.6	
FRGS	**Fruska Gora**	7.33	357	*e*Pn		Pn	23 46 40.6	-1.0	
DUGI	**Dugi Otok**	7.36	328	*e*Pn		Pn	23 46 42.1	+0.1	
NRCA	**Norcia**	7.47	314			Pn	23 46 45.7	+2.1	
GUMA	**Gualdo di Mace**	7.50	316			Pn	23 46 45.7	+1.8	
UDBI	**Udbina**	7.54	334	*e*Pn		Pn	23 46 45.9	+1.3	
VIRC	**Vir**	7.61	330	*e*Pn		Pn	23 46 45.6	+0.3	
A051A	**Mrakovica**	7.63	341	*e*Pn		Pn	23 46 45.2	-0.6	
CESX	**Cesi**	7.65	311	Pn		Pn	23 46 47.4	+1.4	
PRIJ	**Prijedor**	7.65	340	*e*Pn		Pn	23 46 49.0	+3.0	
ELL	**Elmali**	7.66	95	Pn		Pn	23 46 50.1	+3.9	
ELL	**Elmali**	7.66	95	P		Pn	23 46 50.1	+3.9	
ISP	**Isparta**	8.01	87	*i* P		Pn	23 46 53.9	+2.8	
BOJS	**Bojanci**	8.57	335	*e*Pn		Pn	23 46 58.0	-0.1	
MLR	**Muntele Rosu**	8.70	27	Pn		Pn	23 47 03.2	+2.7	
MLR	**Muntele Rosu**	8.70	27	Pn		Pn	23 47 02.1	+1.6	
	comp=N,1.4nm,0.3s,baz=244,slow=14,SNR=2.4								
	comp=N,57nm,0.8s								
CRES	**Cresnjev**	8.79	337	*e*Pn		Pn	23 47 00.7	-0.9	
CRES				*e*Sn		Sn	23 48 34.1	-6.3	
CRES	**Cresnjev**	8.79	337	*e*Pn		Pn	23 47 01.0	-0.6	
CEY	**Cerknica**	9.06	332	*e*Pn		Pn	23 47 05.7	+0.3	
KEST	**Kesra**	9.12	260			Pn	23 47 06.6	+0.4	
KEST	**Kesra**	9.12	260	Pn		Pn	23 47 05.9	-0.3	
	comp=N,0.6nm,0.3s,baz=94,slow=3.0,SNR=14								
KEST				Sn		Sn	23 48 45.0	-3.6	
	comp=N,0.7nm,0.3s,baz=163,slow=21,SNR=1.2								
	comp=N,10nm,0.7s								
SABO	**M.te Sabotino**	9.58	330	Pn		Pn	23 47 12.0	-0.5	
TATN	**Tataouine**	9.63	240	Pn		Pn	23 47 10.6	-2.6	
TATN	**Tataouine**	9.63	240	⇑P		Pn	23 47 10.4	-2.8	
ZCCA	**Zocca**	9.63	315	Pn		Pn	23 47 14.1	+0.8	
SOKA	**Soboth**	9.68	337	*e*Pn		Pn	23 47 13.1	-0.9	
	comp=N,33nm,0.4s,SNR=10								
SOKA				*i* Sn		Sn	23 48 55.5	-7.0	
	comp=N,66nm,0.8s								
OBKA	**Obir**	9.69	335	*i* Pn		Pn	23 47 14.8	+0.8	
	comp=N,32nm,0.4s								
OBKA	**Obir**	9.69	335	*e*Pn		Pn	23 47 19.7	+5.7	
OBKA				*e*Sn		Sn	23 48 57.9	-4.7	
OBKA	**Obir**	9.69	335	*e*Pn		Pn	23 47 14.2	+0.2	
VLC	**Villacollemand**	9.85	313	P		Pn	23 47 19.9	+3.6	
PRED	**Cave del Predi**	9.98	332			Pn	23 47 17.3	-0.7	
PTCC	**Patocco-Chiusa**	10.03	331	⇑P		Pn	23 47 20.6	+2.0	
ARSA	**Arzberg**	10.07	341	*i* Pn		Pn	23 47 20.6	+1.5	
	comp=N,7.1nm,0.3s								
ARSA				*e*Sn		Sn	23 49 05.3	-6.6	
	comp=N,29nm,0.8s								
ARSA	**Arzberg**	10.07	341	*e*Pn		Pn	23 47 18.6	-0.6	
ARSA				*e*Sn		Sn	23 49 05.4	-6.5	
PSZ	**Piszkesteto**	10.08	358	Pn		Pn	23 47 20.2	+0.8	
PSZ	**Piszkesteto**	10.08	358	P		Pn	23 47 20.2	+0.8	
MYKA	**Terra Mystica**	10.11	332	*i* Pn		Pn	23 47 21.0	+1.3	
	comp=N,13nm,0.4s								
MYKA				*e*Sn		Sn	23 49 09.5	-3.4	
	comp=N,24nm,0.7s								
STAL	**STALIGIAL**	10.17	328	Pn		Pn	23 47 20.1	-0.5	
RONA	**Rosalia, Austr**	10.30	344	Pn		Pn	23 47 27.1	+4.7	
	comp=N,12nm,0.8s								
RONA				*e*Sn		Sn	23 49 17.3	-0.3	
	comp=N,19nm,0.7s								
CIMO	**Cimolais**	10.32	328	Pn		Pn	23 47 21.6	-1.0	
BURAR	**Bucovina Array**	10.39	18	Pn		Pn	23 47 24.2	+0.6	
CTI	**Castel Tesino**	10.47	324	Pn		Pn	23 47 24.4	-0.3	
CTI	**Castel Tesino**	10.47	324	P		Pn	23 47 24.4	-0.3	
BR131	**Keskin Array S**	10.51	76			Pn	23 47 28.1	+2.8	
BR131	**Keskin Array S**	10.51	76	P		Pn	23 47 28.1	+2.8	
BRTR	**Keskin Array B**	10.51	76	Pn		Pn	23 47 27.8	+2.5	
BRTR	**Keskin Array B**	10.51	76	Pn		Pn	23 47 26.1	+0.8	
	comp=N,1.1nm,0.3s,baz=256,slow=12,SNR=14								
	comp=N,5.8nm,0.5s								
KBA	**Koelnbreinsper**	10.60	333	*e*Pn		Pn	23 47 27.7	+1.1	
	comp=N,15nm,0.6s								
KBA				*e*Sn		Sn	23 49 19.9	-5.2	
	comp=N,66nm,0.7s								
KBA	**Koelnbreinsper**	10.60	333	*e*Pn		Pn	23 47 36.4	+10	
KBA				*e*Sn		Sn	23 49 19.6	-5.5	
ZST	**Bratislava**	10.63	348	*e*SN		Sn	23 49 19.3	-6.2	
KECS	**Kecovo**	10.64	0	*e*P		Pn	23 47 29.7	+2.7	
KECS	**Kecovo**	10.64	0	*e*PN		Pn	23 47 29.7	+2.7	
ABTA	**Abfaltersbach**	10.64	329	*e*Pn		Pn	23 47 27.4	+0.4	
	comp=N,11nm,0.5s								
ABTA				Sn		Sn	23 49 21.5	-4.5	
	comp=N,221nm,1.1s								
VYHS	**Vyhne**	10.71	354	*e*P		Pn	23 47 30.3	+2.4	
VYHS				*e*			23 49 21.9		
VYHS	**Vyhne**	10.71	354	*e*PN		Pn	23 47 30.3	+2.4	
VYHS				*e*SN		Sn	23 49 21.9	-5.7	
SALO	**Salr**	10.71	320	Pn		Pn	23 47 28.3	+0.3	
SALO	**Salr**	10.71	320	⇓P		Pn	23 47 29.2	+1.2	
MODS	**Modra-Piesok**	10.77	349	*e*SN		Sn	23 49 24.2	-4.9	
CSS	**Mathiatis**	10.81	101			Pn	23 47 29.5	+0.1	
CSS	**Mathiatis**	10.81	101	⇑P		Pn	23 47 28.3	-1.1	
CSS	**Mathiatis**	10.81	101	P		Pn	23 47 28.2	-1.1	
CSS	**Mathiatis**	10.81	101	P		Pn	23 47 26.7	-2.6	
MOA	**Molln**	10.97	338	*i* Pn		Pn	23 47 31.7	+0.2	
	comp=N,11nm,0.2s								
MOA	**Molln**	10.97	338	*e*Pn		Pn	23 47 29.5	-2.0	
MOA				*e*Sn		Sn	23 49 28.7	-5.2	
MILM	**Milestii Mici**	10.99	32	*e*P		Pn	23 47 34.8	+3.0	
MILM				*e*Lq		LQ	23 51 16.0		
MILM				*e*L		L	23 52 04.0		
MILM				LRM		MLR	23 52 27.0		
	comp=N,2µm,13.0s								
MILM	**Milestii Mici**	10.99	32	*e*P		Pn	23 47 35.0	+3.2	
MILM				MLR		MLR			
	comp=E,2µm,13.0s								
MILM				MLR		MLR			
	comp=Z,2µm,13.0s								
BIOA	**Bad Ischl, Aus**	11.02	335	*i* Pn		Pn	23 47 32.4	+0.1	
	comp=Z,17nm,0.4s,SNR=7.9								
BIOA				*e*Sn		Sn	23 49 31.9	-3.3	
	comp=Z,56nm,0.7s								
LESA	**Schwarzleotal**	11.13	332	*i* Pn		Pn	23 47 35.1	+1.3	
	comp=Z,46nm,0.5s								
LESA				*e*Sn		Sn	23 49 33.5	-4.5	
	comp=Z,48nm,0.5s								
KOLS	**Kolonicke sedl**	11.17	6	*e*P		Pn	23 47 37.3	+3.0	
KOLS	**Kolonicke sedl**	11.17	6	*e*PN		Pn	23 47 37.3	+3.0	
WTTA	**Wattenberg**	11.41	328	*e*Pn		Pn	23 47 40.5	+2.8	
	comp=Z,4.9nm,0.3s								
WTTA				*e*Sn		Sn	23 49 38.3	-6.7	
	comp=Z,106nm,0.7s								
WTTA	**Wattenberg**	11.41	328	*e*Pn		Pn	23 47 40.1	+2.4	
WTTA				*e*Sn		Sn	23 49 38.7	-6.4	
WATA	**Walderalm**	11.50	328	*e*Pn		Pn	23 47 41.5	+2.7	
	comp=Z,45nm,0.6s								
WATA				*e*Sn		Sn	23 49 43.3	-3.7	
	comp=Z,117nm,0.8s								
FUORN	**Ofenpass-Fuorn**	11.54	323	Pn		Pn	23 47 40.5	+0.9	
SQTA	**Sankt Quirin**	11.56	327	*i* Pn		Pn	23 47 42.6	+2.9	
	comp=Z,8.4nm,0.4s								
SQTA				*e*Sn		Sn	23 49 42.4	-6.2	
	comp=Z,63nm,0.8s								
KRUC	**Moravsky**	11.59	347	*e*PN		Pn	23 47 41.0	+1.1	
FETA	**Feichten**	11.62	325	*e*Pn		Pn	23 47 46.2	+5.7	
	comp=Z,9.6nm,0.9s								
FETA				*e*Sn		Sn	23 49 46.9	-3.2	
	comp=Z,16nm,0.9s								
MOTA	**Moosalm**	11.70	327	*e*Pn		Pn	23 47 43.5	+1.8	
	comp=Z,6.8nm,0.4s								
VRAC	**Vranov**	11.79	348	*e*PN		Pn	23 47 44.3	+1.6	
VRAC	**Vranov**	11.79	348	Pn		Pn	23 47 43.3	+0.6	
	comp=Z,0.4nm,0.3s,baz=181,slow=7.1,SNR=3.6								
VRAC				Sn		Sn	23 49 49.4	-4.6	
	comp=Z,0.4nm,0.3s,baz=220,slow=10,SNR=2.7								
VRAC				LR		LR	23 52 49.1		
	comp=Z,201nm,20.3s,baz=196,slow=40								
	comp=Z,6.6nm,0.8s								
CKRC	**Cesky Krumlov**	11.83	340	*e*PN		Pn	23 47 42.7	-0.6	
CKRC				AMS		AMS	23 53 20.0		
	comp=Z,1µm,11.8s								
CKRC	**Cesky Krumlov**	11.83	340	*e*P		Pn	23 47 42.7	-0.6	
CKRC				MLR		MLR			
	comp=Z,1µm,11.8s								
DAVOX	**Davos/Dischmat**	11.84	322	Pn		Pn	23 47 45.9	+2.3	
	comp=Z,0.9nm,0.3s,baz=131,slow=19,SNR=4.2								
DAVOX				Sn		Sn	23 49 49.4	-6.1	
	comp=Z,1.4nm,0.3s,baz=307,slow=23,SNR=6.4								
DAVOX				LR		LR	23 54 34.3		
	comp=Z,444nm,18.3s,baz=114,slow=49								
	comp=Z,6.7nm,0.6s								
TUE	**Stuetta**	11.89	320			Pn	23 47 45.3	+1.0	
TUE	**Stuetta**	11.89	320	⇑P		Pn	23 47 46.4	+2.0	
RETA	**Reutte**	11.96	327	Pn		Pn	23 47 50.9	+5.8	
	comp=Z,4.5nm,0.3s								
GEC2	**GERESS Array S**	12.03	338			Pn	23 47 45.6	-0.4	
GEC2	**GERESS Array S**	12.03	338	*e*Pn		Pn	23 47 43.8	-2.3	
GERES	**GERESS Array B**	12.03	338	Pn		Pn	23 47 45.1	-0.9	
GERES	**GERESS Array B**	12.03	338	Pn		Pn	23 47 45.9	-0.1	
	comp=Z,1.4nm,0.3s,baz=157,slow=13,SNR=12								
GERES				Sn		Sn	23 49 52.9	-7.0	
	comp=Z,1.8nm,0.3s,baz=157,slow=22,SNR=4.8								
GERES				LR		LR	23 53 06.7		
	comp=Z,482nm,19.1s,baz=151,slow=41								
	comp=Z,3.6nm,0.5s								
MORC	**Moravsky Berou**	12.11	351	*e*PN		Pn	23 47 52.3	+5.2	
DAVA	**Damuels**	12.21	324	*e*Pn		Pn	23 47 48.8	+0.2	
	comp=Z,3.5nm,0.5s								
DAVA				*e*Sn		Sn	23 50 03.4	-1.0	
	comp=Z,78nm,0.9s								
DAVA	**Damuels**	12.21	324	*e*Pn		P	23 47 54.9	-6.2	
DAVA				*e*Sn		Sn	23 50 01.4	-3.0	
FUR	**Furstenfeldbru**	12.28	330	*e*Pn		Pn	23 47 50.7	+1.2	
KHC	**Kasperske Hory**	12.32	339	Pn		Pn	23 47 48.9	-1.0	
KHC	**Kasperske Hory**	12.32	339	*e*PN		Pn	23 47 49.4	-0.6	
KHC				*e*SN		Sn	23 49 59.1	-7.9	
KHC				AMS		AMS	23 53 40.0		
	comp=Z,1µm,12.5s								
KHC	**Kasperske Hory**	12.32	339	*i* P		Pn	23 47 47.5	-2.5	
UBR	**Ueberruh**	12.39	326	*e*Pn		P	23 48 02.2	-0.8	
ZVC	**Zvikov**	12.43	341	*e*PN		Pn	23 47 52.3	+0.9	
ZVC				*e*SN		Sn	23 50 02.4	-7.2	
SIM	**Simferopol'**	12.50	51	P		Pn	23 47 49.2	-3.2	
SIM				pmax		pmax			
	comp=Z,45nm,0.9s								
SIM				MLR		MLR			
	comp=Z,361nm,15.4s								
KRLC	**Kraliky**	12.51	349	*e*PN		Pn	23 47 52.9	+0.4	
KRLC				AMS		AMS	23 53 50.0		
	comp=Z,2µm,9.9s								
KRLC	**Kraliky**	12.51	349	*e*P		Pn	23 47 52.9	+0.4	
KRLC				MLR		MLR			
	comp=Z,2µm,9.9s								
WET	**Wettzell**	12.54	337	*e*Pn		Pn	23 47 52.9	-0.1	
DPC	**Dobruska-Polom**	12.84	348	AMS		AMS	23 54 00.0		
	comp=Z,2µm,11.5s								
PRU	**Pruhonice**	12.85	343	AMS		AMS	23 54 20.0		
	comp=Z,1µm,9.9s								
SENIN	**Lac Senin/Sane**	12.92	315	Pn		Pn	23 47 59.3	+1.0	
HNTI	**Hanita**	12.94	107	P		Pn	23 47 57.7	-0.8	
BHL	**Bhannes**	12.98	103	*e*P		Pn	23 47 58.7	-0.4	
OFRI	**`Ofer**	13.01	109	P		Pn	23 47 59.9	+0.5	
UPC	**Upice**	13.05	348	AMS		AMS	23 54 00.0		
	comp=Z,1µm,13.2s								
OSTC	**Ostas**	13.06	348	AMS		AMS	23 54 00.0		
	comp=Z,1µm,13.6s								
HWQ	**Hawqa**	13.07	101	*e*P		Pn	23 47 58.2	-2.1	
BLGI	**Bet Lehem HaGe**	13.11	108	P		Pn	23 48 00.8	0.0	
QRWL	**Qaraoun**	13.14	104	*e*P		Pn	23 47 58.8	-2.4	
MMA0B	**Mount Meron ar**	13.14	107	P		Pn	23 47 58.5	-2.8	
MMAI	**Mount Meron Ar**	13.14	107	Pn		Pn	23 47 58.2	-3.1	
	comp=Z,3.7nm,0.3s,baz=299,slow=13,SNR=26								
MMAI				Sn		Sn	23 50 16.1	-11	
	comp=Z,11nm,0.3s,baz=306,slow=24,SNR=12								
	comp=Z,2.1nm,0.3s								
MMA0	**Mount Meron ar**	13.14	107	P		Pn	23 48 00.2	-1.1	
BEIL	**Beino**	13.17	100	*e*P		Pn	23 47 59.5	-2.1	
SLTI	**Sal'it**	13.23	111	P		Pn	23 48 00.2	-2.2	
GEM	**Giv'at Ha'Em**	13.26	106	⇑P		Pn	23 48 00.2	-2.6	
GEM	**Giv'at Ha'Em**	13.26	106	P		Pn	23 48 00.5	-2.3	
GEM	**Giv'at Ha'Em**	13.26	106	P		Pn	23 47 59.9	-3.0	
RCY	**Rachaya**	13.28	104	*e*P		Pn	23 48 00.9	-2.3	
NATI	**Neve Ativ**	13.29	105	P		Pn	23 48 01.4	-1.9	
ROTZ	**Rotzenmuhle**	13.30	336	*e*Pn		P	23 48 10.5	-2.5	
GAZ	**Gaziantep**	13.37	88			Pn	23 48 03.8	-0.6	
MMLI	**Mount Malkishu**	13.42	109	P		Pn	23 48 02.4	-2.6	
KZIT	**Kziot**	13.46	117	⇑P		Pn	23 48 02.2	-3.4	
KZIT	**Kziot**	13.46	117	P		Pn	23 48 04.5	-1.1	
KZIT	**Kziot**	13.46	117	P		Pn	23 48 02.0	-3.6	
KSHT	**Keshet**	13.47	106	P		Pn	23 48 03.3	-2.5	
AMAZ	**Amatzia**	13.49	113	⇑P		Pn	23 48 04.0	-2.0	
AMAZ	**Amatzia**	13.49	113	P		Pn	23 48 04.5	-1.6	
AMAZ	**Amatzia**	13.49	113	P		Pn	23 48 04.0	-2.0	
MANZ	**Manzenberg**	13.52	337	*e*Pn		Pn	23 48 05.0	-1.4	
SHMJ	**Saham**	13.54	108	P		P

BTNL dx x 23 48 56.6
NRDL Niedersach Rie 16.33 337 *e*Pn **P** **23 48 50.3 +3.8**
MEM Membach 16.37 326 *dx* x 23 48 50.6
RCHB Rochefort 16.41 323 *d*P **P** **23 48 50.0 +2.5**
RCHB dx x 23 48 56.7
RCHB dx x 23 49 06.5
BSTI Sart Tilman 16.55 325 *d*P **P** **23 48 52.5 +3.4**
BCLA Clavier 16.56 324 *d*P **P** **23 48 50.0 +0.9**
BCLA dx x 23 49 15.0
BGES Gesves 16.64 324 *dx* x 23 48 59.7
BEBN Eben Emael 16.66 326 *dx* x 23 48 54.3
DOU Dourbes 16.68 322 *d*P **Pn** **23 48 48.1 -0.1**
DOU dx x 23 48 59.7
CLF Chambon-Foret 16.70 313 P **P** **23 48 50.3 -0.4**
LABN Labinsk 16.71 60 *e*P **P** **23 48 52.3 +1.4**
LABN *e*S **Sn** **23 51 57.2 +3.4**
LABN pmax pmax
comp=Z,197nm,1.1s
BMRD Maredsous 16.73 323 *d*P **Pn** **23 48 49.7 +0.8**
BMRD dx x 23 49 01.2
KLNR Kaliningrad 16.77 360 *i* P **Pn** **23 48 46.9 -2.4**
RETH Rethem/Aller, 16.77 336 *e*Pn **P** **23 48 53.1 +1.6**
ERBR Yeremizino-Bor 16.89 56 *e*P **Pn** **23 48 51.5 +0.6**
ERBR *e*S **S** **23 52 05.1 -3.5**
ERBR pmax pmax
comp=Z,143nm,0.6s
IBBN Ibbenburen 16.96 333 *e*Pn **P** **23 48 54.2 +0.6**
GURO Guroymak-BITLI 17.02 81 Pn **Pn** **23 48 53.0 +0.3**
MNK Minsk 17.43 15 *i* P **Pn** **23 48 54.5 -3.1**
comp=E,10.0nm,0.8s
MNK *i* P **Pn** **23 48 54.5 -3.1**
comp=N,140nm,0.9s
MNK *i* P **Pn** **23 48 54.5 -3.1**
comp=Z,118nm,0.8s,baz=201
MNK *i* PP **pP** **23 49 02.3 -0.4**
MNK *i* PPP PPP 23 49 09.7
MNK *i* S **Sn** **23 52 09.8 -1.5**
MNK *i* SS **SnSn** **23 52 24.7 0.0**
MNK *i* SSS SSS 23 52 37.5
MNK *i* LQ LQ 23 54 02.2
MNK *i* LR LR 23 55 02.4
MNK *i* LRM MLR 23 56 21.4
comp=N,530nm,16.9s
MNK *i* LRM MLR 23 56 28.3
comp=E,230nm,16.4s
MNK *i* LRM MLR 23 56 33.5
comp=Z,943nm,20.1s
MNK Minsk 17.43 15 *i* P **Pn** **23 48 54.5 -3.1**
MNK *i* S **Sn** **23 52 09.8 -1.5**
MNK pmax pmax
comp=N,140nm,0.9s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=Z,118nm,0.8s
MNK MLR MLR
comp=N,530nm,17.0s
MNK MLR MLR
comp=E,230nm,16.0s
MNK MLR MLR
comp=Z,943nm,20.0s
MFF Saint Martin d 17.52 306 ⇓P **P** **23 49 01.0 +1.2**
BSEG Bad Segeberg 17.53 340 *e*Pn **P** **23 49 01.3 +1.4**
NACGM Naroch 17.61 12 *e*P **Pn** **23 48 58.9 -1.0**
BSD Bornholm Skovb 17.68 350 *e*P **P** **23 49 02.9 +1.5**
KARS Kars 17.78 74 P **P** **23 49 02.8 -0.1**
KARS IAmb IAmb 23 49 08.2
comp=Z,73nm,0.8s
KARS Kars 17.78 74 ⇑P **P** **23 49 04.7 +1.8**
KARS Kars 17.78 74 P **P** **23 49 02.8 -0.1**
KARS pmax pmax
comp=Z,73nm,0.8s
PABE Paberze 17.84 7 Pn **Pn** **23 49 01.4 -1.1**
PABE Paberze 17.84 7 *e*P **Pn** **23 49 01.8 -0.8**
KIV Kislovodsk 17.90 63 **Pn** **23 49 03.0 -0.5**
KIV IAmb IAmb 23 49 07.2
comp=Z,56nm,0.9s
KIV Kislovodsk 17.90 63 *i* P **P** **23 49 05.3 +1.2**
SNR=11
KIV Kislovodsk 17.90 63 ⇓P **P** **23 49 04.7 +0.5**
KIV Kislovodsk 17.90 63 *e*P **Pn** **23 49 03.9 +0.4**
KIV *e*S **Sn** **23 52 25.8 +3.0**
KIV pmax pmax
comp=Z,51nm,1.0s
KVAR Kislovodsk Arr 17.90 63 P **Pn** **23 49 03.9 +0.3**
baz=248,slow=19
comp=Z,15nm,0.8s
KBZ Khabaz 18.00 64 *ce*P **P** **23 49 06.2 +1.1**
KBZ pmax pmax
comp=Z,36nm,0.9s
KBZ Khabaz 18.00 64 P **P** **23 49 06.6 +1.5**
comp=Z,34nm,0.8s,baz=283,slow=6.1,SNR=20
AKH Akhalkalaki 18.13 71 P **Pn** **23 49 06.3 -0.3**
AKH IAmb IAmb 23 49 11.8
comp=Z,125nm,0.8s
AKH Akhalkalaki 18.13 71 P **Pn** **23 49 06.3 -0.3**
AKH pmax pmax
comp=Z,125nm,0.8s
ISAL Salakas 18.16 10 *e*P **P** **23 49 06.9 +0.2**
ONI Oni 18.21 68 P **P** **23 49 07.7 +0.1**
ONI IAmb IAmb 23 49 10.9
comp=Z,93nm,0.7s
ONI Oni 18.21 68 P **P** **23 49 07.7 +0.1**
ONI pmax pmax
comp=Z,93nm,0.7s
PBUR Paburge 18.22 3 *e*P **Pn** **23 49 06.5 -0.8**
VSVD Vaisvydziai 18.30 6 *e*P **Pn** **23 49 07.7 -0.6**
IZAR Zarasai 18.35 11 *e*P **P** **23 49 09.4 +0.5**
GOF Gofitskoye 18.41 60 *ce*P **Pn** **23 49 10.6 +0.9**
LUNU Lund 18.41 347 *e*P **P** **23 49 08.7 -0.9**
NCK Nalchik 18.45 65 *i* P **Pn** **23 49 11.2 +0.9**
NCK pmax pmax
comp=Z,57nm,0.9s
HLG Helgoland 18.47 336 *e*Pn **Pn** **23 49 11.9 +1.6**
BLEU Blekinge 18.73 352 *e*P **P** **23 49 12.9 -0.1**
VORD Divnogorie 18.75 40 *e*P **P** **23 49 12.4 -1.0**
VORD pmax pmax
comp=Z,150nm,1.0s
VORD MLR MLR
comp=Z,650nm,8.0s
VSR Storozhevoye 18.84 39 *e*P **P** **23 49 13.5 -0.9**
VSR pmax pmax
comp=Z,40nm,0.5s
VSR MLR MLR
comp=Z,2µm,11.0s
BJUU Bjuv 18.90 347 *e*P **Pn** **23 49 16.8 +1.2**
GNI Garni 19.05 75 P **P** **23 49 17.2 +0.3**
GNI IAmb IAmb 23 49 19.5
comp=Z,97nm,0.9s
GNI Garni 19.05 75 P **Pn** **23 49 18.2 +0.5**
GNI Garni 19.05 75 ⇑P **P** **23 49 17.4 +0.5**
GNI Garni 19.05 75 *c i* P **P** **23 49 16.0 -0.9**
GNI pmax pmax
comp=Z,110nm,0.9s
GNI Garni 19.05 75 P **Pn** **23 49 17.5 -0.2**
comp=Z,5.2nm,0.3s,baz=246,slow=1.8,SNR=78
GNI LR LR 23 57 16.1
comp=Z,319nm,21.7s,baz=267,slow=39
comp=Z,43nm,0.6s
GNI Garni 19.05 75 P **Pn** **23 49 18.4 +0.7**
ESBB Sonseca Array 19.08 283 P **P** **23 49 17.1 0.0**
ESDC Sonseca Array 19.08 283 P **Pn** **23 49 17.3 -0.6**
ESDC Sonseca Array 19.08 283 P **Pn** **23 49 17.4 -0.5**
comp=Z,0.1nm,0.3s,baz=75,slow=10,SNR=8.4
ESDC LR LR 23 57 04.8
comp=Z,268nm,19.1s,baz=82,slow=38
comp=Z,6.6nm,1.0s
DEL Delary 19.14 349 *e*P **Pn** **23 49 19.7 +1.2**
VORR Voronezh 19.15 38 *e*P **P** **23 49 17.9 +0.2**
VORR pmax pmax
comp=Z,116nm,0.8s
PAB San Pablo 19.38 283 **P** **23 49 20.6 +0.1**
PAB San Pablo 19.38 283 P **P** **23 49 20.6 +0.1**
PAB pmax pmax
comp=Z,23nm,1.0s
LPSR Galich'ya Gora 19.62 35 *e*P **P** **23 49 22.1 -0.7**
LPSR pmax pmax
comp=Z,300nm,0.7s
LPSR MLR MLR
comp=Z,820nm,10.0s
TAM Tamanrasset 19.70 225 P **Pn** **23 49 25.4 -0.2**
TAM Tamanrasset 19.70 225 ⇑P **Pn** **23 49 26.6 +1.0**
TAM Tamanrasset 19.70 225 P **Pn** **23 49 25.4 -0.2**
TAM pmax pmax
comp=Z,19nm,1.2s
FABU Falkenberg 19.84 348 *e*P **Pn** **23 49 26.5 -0.3**
SLIT Slitere, Latvi 19.84 3 ⇓P **P** **23 49 24.8 -0.4**
SLIT Slitere, Latvi 19.84 3 *e*P **P** **23 49 25.1 -0.1**
MUD Monsted U'grnd 20.08 342 *i* P **P** **23 49 28.0 +0.2**
VRH Novokhopyorsk 20.14 42 *i* P **P** **23 49 28.8 +0.3**
VRH pmax pmax
comp=Z,224nm,0.7s
ONAU Onsala 20.36 347 *e*P Pn 23 49 32.7 -0.2
BORU Boraas 20.43 348 *e*P Pn 23 49 33.3 -0.5
OBN Obninsk 20.47 27 P **P** **23 49 31.7 -0.3**
OBN IAmb IAmb 23 49 37.2
comp=Z,116nm,0.6s
OBN Obninsk 20.47 27 ⇓P **P** **23 49 31.9 -0.1**
OBN Obninsk 20.47 27 *d i* P **P** **23 49 31.7 -0.3**
OBN *e*S **S** **23 53 20.7 +0.2**
OBN pmax pmax
comp=Z,215nm,1.3s
OBN MLR MLR
comp=Z,859nm,16.0s
OBN Obninsk 20.47 27 P **P** **23 49 30.8 -1.2**
comp=Z,81nm,0.4s,baz=36,slow=3.1,SNR=18
OBN LR LR 23 58 47.5
comp=Z,1µm,18.3s,baz=188,slow=41
comp=Z,81nm,0.4s
MDT Midelt 20.99 264 P **P** **23 49 38.5 +0.6**
comp=Z,5.7nm,0.8s,baz=79,slow=9.9,SNR=6.7
comp=Z,5.7nm,0.8s
MTSE Matsula 21.01 5 *e*P **P** **23 49 38.5 +0.6**
TJOU Tjoern 21.01 347 *e*P **P** **23 49 38.6 +0.8**
VSU Vasula 21.05 9 *ce*P **P** **23 49 38.5 +0.2**
VSU pmax pmax
comp=Z,592nm,0.7s
VSU Vasula 21.05 9 *e*P **P** **23 49 39.0 +0.8**
IFR Ifrane 21.16 266 P **P** **23 49 40.2 +0.3**
PBRG Braganca 21.18 289 *e*P **P** **23 49 40.6 +0.6**
comp=Z,38nm,1.5s
MAK Makhachkala 21.22 68 *c i* P **P** **23 49 39.6 -0.7**
MAK *e*S **S** **23 53 35.3 -0.4**
MAK pmax pmax
comp=Z,556nm,0.8s
MAK MLR MLR
comp=Z,171nm,16.0s
OLDB Oldbury-Upon-S 21.25 318 *e*P **P** **23 49 40.9 +0.4**
MOS Moscow 21.33 27 *e*P **P** **23 49 39.3 -2.1**
MOS *e* 23 49 59.4
MOS *e*S **S** **23 53 36.4 -1.3**
MOS *e*SS **SnSn** **23 54 02.9 +2.6**
MOS pmax pmax
comp=Z,200nm,0.7s
MOS pmax pmax
comp=Z,158nm,0.6s
MOS MLR MLR
comp=Z,700nm,16.0s
MVO Moncorvo 21.39 288 *e*P **P** **23 49 42.2 0.0**
comp=Z,69nm,1.3s
MONM Monmouth 21.48 318 *e*P **P** **23 49 44.1 +1.1**
PBAR Barrancos 21.60 279 *e*P **P** **23 49 45.1 +0.7**
comp=Z,46nm,1.7s
MCH1 Michaelchurch 21.66 318 *e*P **P** **23 49 46.2 +1.3**
MCH1 IAmb IAmb 23 49 54.4
comp=Z,41nm,0.8s
MCH1 Michaelchurch 21.66 318 ⇓P **P** **23 49 49.2 +4.2**
PMRV Marv??o 21.74 283 *e*P **P** **23 49 45.4 -0.5**
comp=Z,32nm,1.8s
PCBR Castelo Branco 21.77 284 *e*P **P** **23 49 46.2 -0.1**
comp=Z,35nm,1.4s
MTE Manteigas 21.80 285 *e*P **P** **23 49 46.8 +0.2**
comp=Z,50nm,1.7s
MTE Manteigas 21.80 285 P **P** **23 49 45.3 -1.3**
MTE IAmb IAmb 23 49 54.6
comp=Z,44nm,1.1s
MTE Manteigas 21.80 285 ⇑P **P** **23 49 47.2 +0.6**
HOMB Homborsund 21.87 343 *e*P **P** **23 49 47.9 +0.8**
HOMB IAmb IAmb 23 49 48.9
comp=Z,22nm,0.8s
PESTR Estremoz 21.95 281 *e*P **P** **23 49 52.3 +4.1**
comp=Z,34nm,1.9s
PESTR Estremoz 21.95 281 P **P** **23 49 51.4 +3.3**
GDLE Glaisdale, N Y 22.02 326 *e*P **P** **23 49 48.9 +0.1**
STRU Stroemstad 22.03 347 *e*P **P** **23 49 48.9 0.0**
PVIS Viseu 22.05 286 *e*P **P** **23 49 49.2 -0.1**
HPK Haverah Park 22.10 324 *e*P **P** **23 49 50.1 +0.5**
SNART Snartemo 22.25 341 *e*P **P** **23 49 52.5 +1.3**
SNART IAmb IAmb 23 50 02.9
comp=Z,149nm,1.1s
SNART Snartemo 22.25 341 *e*P **P** **23 49 52.9 +1.7**
FOEL Foel Wyfa 22.25 320 *e*P **P** **23 49 51.8 +0.6**
FOEL IAmb IAmb 23 49 53.4
comp=Z,53nm,0.8s
PBEJ Beja 22.27 279 *e*P **P** **23 49 54.6 +3.0**
comp=Z,32nm,1.6s
EVO Evora 22.31 281 *e*P **P** **23 49 53.1 +1.0**
comp=Z,24nm,1.4s
EVO Evora 22.31 281 P **P** **23 49 54.0 +1.9**
PGAV Gavieira, Arco 22.33 290 *e*P **P** **23 49 55.3 +3.0**
comp=Z,42nm,1.8s
PMTG Montargil 22.42 282 *e*P **P** **23 49 52.2 -1.0**
comp=Z,33nm,1.5s
LLW Llanuwchllyn 22.46 320 *e*P **P** **23 49 53.6 +0.1**
COI Coimbra 22.47 285 *e*P **P** **23 49 55.0 +1.3**
comp=Z,84nm,1.3s
COI Coimbra 22.47 285 P **P** **23 49 52.4 -1.3**
COI IAmb IAmb 23 50 07.7
comp=Z,62nm,1.1s
COI Coimbra 22.47 285 P **P** **23 49 52.4 -1.3**
COI pmax pmax
comp=Z,62nm,1.1s
MEF Metsahovi 22.54 5 *e*P **P** **23 49 55.3 +1.0**
PCAS Casmilo, Conde 22.55 285 *e*P **P** **23 49 55.6 +1.0**
MESJ Messejana 22.57 279 *e*P **P** **23 49 56.6 +1.7**
comp=Z,52nm,1.6s
MESJ Messejana 22.57 279 P **P** **23 49 54.5 -0.3**
MESJ Messejana 22.57 279 *e*P **P** **23 49 55.6 +0.7**
MESJ IAmb IAmb 23 50 06.2
comp=Z,84nm,1.6s
MESJ Messejana 22.57 279 *e*P **P** **23 49 55.6 +0.7**
RSBS Rosebush, Pemb 22.57 317 *e*P **P** **23 49 55.2 +0.5**
PTO Porto 22.58 287 *e*P **P** **23 49 54.9 0.0**
comp=Z,42nm,1.1s
HFS Hagfors 22.72 351 P **P** **23 49 55.9 -0.3**
comp=Z,37nm,0.5s,baz=156,slow=11,SNR=94
comp=Z,37nm,0.5s
PNCL Nicolau / Gran 22.77 280 *e*P **P** **23 49 59.0 +2.0**
comp=Z,35nm,1.8s
EDMD Edmundbyers 22.80 325 *e*P **P** **23 49 56.9 -0.2**
EDMD IAmb IAmb 23 49 59.1
comp=Z,54nm,1.1s
PUL Pulkovo 22.85 13 *ce*P **P** **23 49 56.2 -1.4**
PUL pmax pmax
comp=Z,355nm,1.0s
YLL Llanberis 22.88 320 *e*P **P** **23 49 58.1 +0.2**
KONO Kongsberg 22.90 346 P **P** **23 49 57.3 -0.8**
KONO IAmb IAmb 23 49 58.5
comp=Z,30nm,0.9s
KONO Kongsberg 22.90 346 *e*P **P** **23 49 57.6 -0.4**
KONO Kongsberg 22.90 346 ⇓P **P** **23 49 57.8 -0.3**
KONO Kongsberg 22.90 346 *ce*P **P** **23 49 56.2 -1.9**
KONO pmax pmax
comp=Z,40nm,1.3s
OSL Oslo 22.96 347 *e*P **P** **23 49 58.4 -0.3**
OSL IAmb IAmb 23 49 58.6
comp=Z,134nm,0.7s
AVE Averroes 23.04 267 P **P** **23 50 00.4 +0.7**
WLF1 Llynfaes 23.07 320 *e*P **P** **23 49 59.9 +0.1**
WLF1 IAmb IAmb 23 50 01.7
comp=Z,35nm,0.9s
WPS Cemaes, Angles 23.18 320 *e*P **P** **23 50 02.3 +1.3**
WPS IAmb IAmb 23 50 03.7
comp=Z,32nm,0.8s
RAF Rauma 23.22 2 *e*P **P** **23 50 00.9 -0.4**
BLS5 Blasjo 23.39 342 *e*P **P** **23 50 03.7 +0.6**
KMY Karmoy 23.51 340 *e*P **P** **23 50 04.7 +0.4**
NC602 NORSAR Array S 23.59 349 P **P** **23 50 04.5 -0.6**
NC602 IAmb IAmb 23 50 06.6
comp=Z,45nm,0.7s
NC602 NORSAR Array S 23.59 349 *e*P **P** **23 50 04.8 -0.2**
EKA Eskdalemuir Ar 23.65 325 P **P** **23 50 06.0 +0.3**
comp=Z,39nm,0.8s,baz=129,slow=10,SNR=63
comp=Z,39nm,0.8s
ESK Eskdalemuir 23.66 325 P **P** **23 50 06.1 +0.3**
ESK IAmb IAmb 23 50 15.2
comp=Z,39nm,0.8s
ESK Eskdalemuir 23.66 325 *e*P **P** **23 50 05.9 +0.1**
ESK IAmb IAmb 23 50 07.4
comp=Z,32nm,0.8s
ESK Eskdalemuir 23.66 325 ⇓P **P** **23 50 06.5 +0.7**
ESK Eskdalemuir 23.66 325 P **P** **23 50 06.1 +0.3**
ESK pmax pmax
comp=Z,39nm,0.8s
IOMK Kirk Michael 23.68 322 *e*P **P** **23 50 06.0 0.0**
IOMK IAmb IAmb 23 50 08.6
comp=Z,40nm,0.7s
ODD1 Odda 23.78 343 *e*P **P** **23 50 07.5 +0.5**
FINES FINESS Array B 23.89 7 P **P** **23 50 07.2 -0.7**
FINES FINESS Array B 23.89 7 P **P** **23 50 07.2 -0.7**
FINES FINESS Array B 23.89 7 P **P** **23 50 07.0 -0.9**
comp=Z,98nm,0.7s,baz=167,slow=5.7,SNR=162
comp=Z,98nm,0.7s
FIA1 FINESS Array S 23.89 7 P **P** **23 50 07.0 -1.0**
BELG Belogornoye 23.91 44 *c i* P **P** **23 50 07.0 -1.2**
BELG pmax pmax
comp=Z,39nm,0.8s
BELG Belogornoye 23.91 44 P **P** **23 50 07.6 -0.6**
comp=Z,256nm,0.8s,baz=298,slow=0.9,SNR=54
BELG LR LR 00 00 39.1
comp=Z,503nm,18.9s,baz=149,slow=40
NB2 NORSAR Subarra 23.93 349 P **P** **23 50 07.9 -0.5**
comp=Z,42nm,0.9s,baz=162,slow=11
NB2 NORSAR Subarra 23.93 349 P **P** **23 50 07.9 -0.5**
baz=162,slow=11
NOA NORSAR Array B 23.93 349 P **P** **23 50 07.7 -0.7**
comp=Z,23nm,0.8s,baz=160,slow=8.3,SNR=95
comp=Z,23nm,0.8s
NEWG New Galloway 24.01 324 *e*P **P** **23 50 10.6 +1.5**
DSB Dublin 24.07 318 P **P** **23 50 09.3 -0.4**
DSB IAmb IAmb 23 50 16.9
comp=Z,71nm,1.4s
SKAR Skarslia 24.11 345 *e*P **P** **23 50 10.7 +0.6**
SKAR IAmb IAmb 23 50 11.3
comp=Z,147nm,1.7s
VALR Valaam 24.44 12 *c i* P **P** **23 50 11.5 -1.5**
VALR pmax pmax
comp=Z,206nm,1.0s
BER Bergen 24.50 342 *e*P **P** **23 50 14.0 +0.4**
BER IAmb IAmb 23 50 15.6
comp=Z,32nm,1.0s
ASK Askoy 24.62 342 *e*P **P** **23 50 18.7 +4.1**
HYA Hoyanger 24.99 344 *e*P **P** **23 50 18.5 +0.5**
HYA IAmb IAmb 23 50 24.5
comp=Z,49nm,1.0s
MCD Coleburn Disti 25.13 329 *e*P **P** **23 50 19.9 +0.6**
DOMB Dombas 25.23 347 *e*P **P** **23 50 21.4 +1.2**
DOMB IAmb IAmb 23 50 22.9
comp=Z,86nm,0.8s
SUE Sulen 25.23 342 *e*P **P** **23 50 21.0 +0.9**
SUE IAmb IAmb 23 50 24.8
comp=Z,87nm,1.3s
FOO Floro 25.64 343 *e*P **P** **23 50 24.1 +0.4**
VAL Valentia 25.65 313 P **P** **23 50 25.4 +1.3**
AKN Aaknes 25.73 345 *e*P **P** **23 50 25.6 +0.8**
RAYN Ar Rayn 25.78 116 P **P** **23 50 26.3 +0.8**
RAYN Ar Rayn 25.78 116 *i* P **P** **23 50 26.2 +0.6**
SNR=9.7
RAYN Ar Rayn 25.78 116 P **P** **23 50 26.3 +0.8**
RAYN pmax pmax
comp=Z,12nm,0.9s
RAYN Ar Rayn 25.78 116 P **P** **23 50 27.0 +1.5**
KPL Plockton 25.98 327 *e*P **P** **23 50 28.8 +1.8**
MOL Molde 25.99 346 *e*P **P** **23 50 27.8 +0.8**
KLMR Klimovskoe 25.99 21 *e*P **P** **23 50 24.6 -2.4**
KLMR pmax pmax
comp=Z,84nm,0.8s
TBLU Trondheim 26.18 350 *e*P **P** **23 50 30.5 +1.7**
LRW Lerwick 26.19 335 ⇓P **P** **23 50 29.5 +0.6**
NSS Namsos 27.20 352 *e*P **P** **23 50 37.9 0.0**
NSS IAmb IAmb 23 50 39.0
comp=Z,29nm,0.9s
KIRV Kirov 27.99 33 *ce*P **P** **23 50 44.2 -0.8**
KIRV Kirov 27.99 33 P **P** **23 50 44.0 -1.1**
comp=Z,35nm,0.6s,baz=257,slow=1.4,SNR=13
KIRV LR LR 00 02 12.7
comp=Z,298nm,20.4s,baz=221,slow=37
comp=Z,35nm,0.6s
SAKB Bahrain 28.06 106 P **P** **23 50 47.8 +1.8**
SHMA Al-Shehemyia 28.45 106 P **P** **23 50 50.0 +0.5**
MOR8 Moi Rana 28.58 355 *e*P **P** **23 50 51.4 +1.1**
MOR8 IAmb IAmb 23 50 56.0
comp=Z,31nm,1.2s
STOK Stokkvaagen 28.85 354 *e*P **P** **23 50 52.5 -0.1**
SMRA Abu-Samra 28.95 108 P **P** **23 50 55.2 +1.3**
KONS Konsvik 29.01 354 *e*P **P** **23 50 54.8 +0.7**
TRNA Turayna 29.25 108 P **P** **23 50 57.3 +0.7**
AKTO Aktyubinsk 29.46 53 P **P** **23 50 57.3 -1.0**
comp=Z,5.8nm,0.3s,baz=243,slow=6.2,SNR=22
AKTO LR LR 00 07 16.7
comp=Z,303nm,18.1s,baz=279,slow=46
comp=Z,5.8nm,0.3s
GEYT Alibeck 29.64 78 P **P** **23 50 59.6 -0.4**
GEYT Alibeck 29.64 78 P **P** **23 50 59.6 -0.4**
GEYT pmax pmax
comp=Z,10.0nm,0.7s
GEYT Alibeck 29.64 78 P **P** **23 50 59.2 -0.8**
comp=Z,7.8nm,0.6s,baz=270,slow=8.4,SNR=19
GEYT LR LR 00 06 35.6
comp=Z,188nm,19.5s,baz=322,slow=44
comp=Z,7.8nm,0.6s
GYA0B ALIBECK ARRAY 29.64 78 P **P** **23 50 59.6 -0.4**
TOA0 Torodi Ar. Sit 29.71 219 P **P** **23 51 00.8 +0.1**
TORD Torodi Ar. Bea 29.71 219 P **P** **23 51 01.1 +0.4**
TORD Torodi Ar. Bea 29.71 219 P **P** **23 51 00.9 +0.2**
comp=Z,6.0nm,0.6s,baz=32,slow=9.9,SNR=23
TORD ScP **ScP** **23 57 45.7 -0.5**
comp=Z,1.2nm,1.0s,baz=27,slow=3.5,SNR=4.2
comp=Z,6.0nm,0.6s
FAUS Fauske 29.73 356 *e*P **P** **23 51 00.6 +0.1**
FAUS IAmb IAmb 23 51 01.1
comp=Z,27nm,0.8s
STEI Steigen 30.28 356 *e*P **P** **23 51 05.5 +0.2**
STEI IAmb IAmb 23 51 06.1
comp=Z,34nm,0.8s
JRN Qarnain Island 30.38 106 P **P** **23 51 07.4 +0.8**
ABKAR Akbulak array 30.51 55 P **P** **23 51 06.8 -0.7**
ABKAR Akbulak array 30.51 55 P **P** **23 51 07.1 -0.5**
ABKAR IAmb IAmb 23 51 23.3
comp=Z,10nm,0.8s
ABKAR Akbulak array 30.51 55 ⇓P **P** **23 51 06.9 -0.6**
LOF Lofoten 30.58 355 *e*P **P** **23 51 06.6 -1.3**
APA Apatity 30.67 10 ⇓*i* P **P** **23 51 07.0 -1.7**
APA pmax pmax
comp=Z,17nm,0.7s
APA MLR MLR
comp=Z,1µm,15.0s
GHWR Ruwais 30.94 107 P **P** **23 51 12.7 +1.2**
PMOZ Porto Moniz, M 30.94 272 *e*P P 23 51 16.4 +4.8
comp=Z,187nm,0.6s
KTK1 Kautokeino 31.27 2 *e*P **P** **23 51 14.1 +0.1**
KTK1 IAmb IAmb 23 51 14.6
comp=Z,41nm,0.9s
ARU Arti 31.38 41 P **P** **23 51 14.0 -1.1**
ARU IAmb IAmb 23 51 31.7
comp=Z,37nm,1.2s
ARU Arti 31.38 41 ⇑P **P** **23 51 13.9 -1.1**
ARU Arti 31.38 41 *c i* P **P** **23 51 13.0 -2.1**
ARU 23 52 14.0
ARU S **S** **23 56 22.0 +0.3**
ARU SS **SnSn** **23 58 05.0 -0.4**
ARU pmax pmax
comp=Z,27nm,1.0s
ARU Arti 31.38 41 LR LR 00 05 42.9
comp=Z,343nm,21.1s,baz=270,slow=40
JETT Jettan, Norway 31.78 0 *e*P **P** **23 51 18.2 -0.3**
MZWR Madinat Zayed 31.81 106 P **P** **23 51 19.8 +0.6**
TRO Tromso 31.86 359 *e*P **P** **23 51 19.0 -0.2**
TRO IAmb IAmb 23 51 19.9
comp=Z,37nm,0.6s
ARA0 ARCESS Array S 31.88 3 *e*P **P** **23 51 18.9 -0.4**
ARCES ARCESS Array B 31.88 3 P **P** **23 51 19.1 -0.3**
ARCES ARCESS Array B 31.88 3 P **P** **23 51 19.0 -0.3**
comp=Z,27nm,0.6s,baz=189,slow=12,SNR=148
ARCES LR LR 00 05 28.9
comp=Z,410nm,21.7s,baz=179,slow=39
comp=Z,27nm,0.6s
KEV Kevo 32.17 4 ⇓P **P** **23 51 22.1 +0.2**
AJN Ajban 32.22 104 P **P** **23 51 23.4 +0.6**
SHME Shamm 32.34 101 *i* P **P** **23 51 23.1 -0.8**
SNR=5.4
SHME Shamm 32.34 101 P **P** **23 51 23.6 -0.2**
ASUD Al Ashush, Dub 32.45 104 P **P** **23 51 25.5 +0.6**
NAZ Nazwa, Dubai 32.51 103 P **P** **23 51 25.5 +0.1**

NAZ	**Nazwa, Dubai**	**32.51**	**103**	P		**P**		**23 51 25.7**	**+0.3**
SVE	**Sverdlovsk**	**32.59**	**41**	*de*P		**P**		**23 51 25.3**	**-0.4**
SVE				pmax		pmax			
	comp=Z,68nm,0.9s								
VADS	**Vadso**	**32.70**	**6**	*e*P		**P**		**23 51 26.9**	**+0.4**
VADS				IAmb		IAmb		23 51 27.6	
	comp=Z,118nm,0.6s								
MASF	**Masafi**	**32.70**	**102**	P		**P**		**23 51 27.2**	**+0.1**
MSFE	**Esma-Masafi**	**32.70**	**102**	P		**P**		**23 51 26.3**	**-0.8**
MDH	**Madha**	**32.84**	**102**	P		**P**		**23 51 27.8**	**-0.5**
MDH	**Madha**	**32.84**	**102**	P		**P**		**23 51 28.0**	**-0.3**
HAMF	**Hammerfest**	**32.91**	**2**	*e*P		**P**		**23 51 28.4**	**0.0**
UOSS	**Minazif**	**32.95**	**102**	P		**P**		**23 51 28.6**	**-0.7**
UOSS				IAmb		IAmb		23 51 37.1	
	comp=Z,12nm,0.7s								
UOSS	**Minazif**	**32.95**	**102**	*i* P		**P**		**23 51 28.8**	**-0.4**
	SNR=9.4								
UOSS	**Minazif**	**32.95**	**102**	P		**P**		**23 51 28.9**	**-0.4**
HATD	**Hatta, Dubai**	**32.96**	**103**	*i* P		**P**		**23 51 28.6**	**-0.7**
	SNR=9.5								
HATD	**Hatta, Dubai**	**32.96**	**103**	P		**P**		**23 51 29.2**	**-0.1**
ASHO	**Ashiyiah**	**32.98**	**103**	*i* P		**P**		**23 51 29.2**	**-0.3**
	SNR=11								
ASHO	**Ashiyiah**	**32.98**	**103**	P		**P**		**23 51 30.0**	**+0.5**
	SNR=18								
ALNE	**Al Ain**	**33.08**	**104**	*i* P		**P**		**23 51 30.5**	**+0.1**
	SNR=12								
ALNE	**Al Ain**	**33.08**	**104**	P		**P**		**23 51 30.5**	**+0.1**
	SNR=12								
UMZA	**Um Al Zommool**	**33.37**	**107**	P		**P**		**23 51 33.0**	**0.0**
SOHO	**SOHO**	**33.64**	**103**	*i* P		**P**		**23 51 34.7**	**-0.5**
	SNR=24								
SOHO	**SOHO**	**33.64**	**103**	P		**P**		**23 51 34.9**	**-0.3**
JASK	**Jask - Hormozg**	**33.77**	**100**	P		**P**		**23 51 36.9**	**+0.5**
HRA	**Herat**	**33.78**	**83**	P		**P**		**23 51 35.6**	**-1.0**
ARQ	**Araqi**	**34.06**	**105**	P		**P**		**23 51 39.2**	**+0.2**
HOQ	**Hoqain**	**34.53**	**104**	P		**P**		**23 51 43.1**	**0.0**
BSY	**Bisya**	**34.91**	**105**	P		**P**		**23 51 44.9**	**-1.4**
DOK	**Doka**	**35.09**	**114**	P		**P**		**23 51 48.2**	**+0.3**
BIDO	**Bidbid**	**35.19**	**103**	P		**P**		**23 51 45.7**	**-3.0**
WHFO	**Wadi Hawf**	**35.28**	**115**	P		**P**		**23 51 50.9**	**+1.3**
ABTO	**Aybut**	**35.31**	**116**	P		**P**		**23 51 50.5**	**+0.6**
SMDO	**Samad**	**35.38**	**104**	P		**P**		**23 51 50.2**	**-0.3**
WSAR	**Wadi Sarin**	**35.73**	**103**	LR		LR		00 10 55.6	
	comp=Z,130nm,18.9s,baz=343,slow=44								
WSAR	**Wadi Sarin**	**35.73**	**103**	P		**P**		**23 51 53.5**	**+0.1**
JMDO	**Jabal Madar**	**35.81**	**105**	P		**P**		**23 51 53.7**	**-0.3**
RBK	**Rabkut**	**35.86**	**115**	P		**P**		**23 51 54.8**	**+0.3**
DMTO	**DMTO**	**36.26**	**114**	P		**P**		**23 51 57.9**	**0.0**
WBK	**Wadi Bani Khal**	**36.34**	**104**	P		**P**		**23 51 58.8**	**+0.2**
BORG	**Borgarnes**	**36.36**	**331**	P		**P**		**23 51 58.4**	**+0.1**
BORG	**Borgarnes**	**36.36**	**331**	P		**P**		**23 51 58.4**	**+0.1**
BORG				pmax		pmax			
	comp=Z,584nm,1.8s								
MHTO	**MHTO**	**36.49**	**107**	P		**P**		**23 52 00.4**	**+0.6**
SHAO	**Shalim**	**36.56**	**113**	*i* P		**P**		**23 52 01.0**	**+0.6**
	SNR=8.9								
SHAO	**Shalim**	**36.56**	**113**	P		**P**		**23 52 01.0**	**+0.6**
	SNR=9.0								
DQM	**DQM**	**36.79**	**108**	P		**P**		**23 52 03.0**	**+0.5**
LODK	**Lodwar**	**36.89**	**155**	P		**P**		**23 52 04.1**	**+0.7**
JLN	**Jalan Bani Buh**	**36.93**	**104**	P		**P**		**23 52 03.9**	**+0.2**
BRVK	**Borovoye**	**37.35**	**50**	P		**P**		**23 52 06.1**	**-0.7**
BRVK				IAmb		IAmb		23 52 07.5	
	comp=Z,21nm,0.9s								
BRVK	**Borovoye**	**37.35**	**50**	⇑P		**P**		**23 52 06.4**	**-0.5**
BRVK	**Borovoye**	**37.35**	**50**	*i* P		**P**		**23 52 05.4**	**-1.4**
BRVK				pmax		pmax			
	comp=Z,23nm,0.9s								
BVAR	**Borovoye Array**	**37.41**	**50**	P		**P**		**23 52 06.4**	**-1.0**
	comp=Z,9.5nm,0.7s,baz=272,slow=5.9,SNR=31								
BVAR				LR		LR		00 09 00.3	
	comp=Z,150nm,18.0s,baz=268,slow=39								
	comp=Z,9.5nm,0.7s								
BRLS	**Borolday**	**37.54**	**66**	*e*P		**P**		**23 52 06.6**	**-2.1**
	baz=66								
BRLS	**Borolday**	**37.54**	**66**	*e*P		**P**		**23 52 06.5**	**-2.1**
SIMJ	**Simiganj**	**37.82**	**73**	P		**P**		**23 52 10.9**	**-0.3**
SIMJ				IAmb		IAmb		23 52 18.4	
	comp=Z,18nm,1.0s								
KK31	**Karatay Array**	**38.02**	**66**	P		**P**		**23 52 11.9**	**-0.8**
KK31				IAmb		IAmb		23 52 14.4	
	comp=Z,15nm,0.7s								
KK31	**Karatay Array**	**38.02**	**66**	P		**P**		**23 52 11.9**	**-0.8**
KK31				pmax		pmax			
	comp=Z,15nm,0.7s								
KKAR	**Karatay Array**	**38.02**	**66**	P		**P**		**23 52 11.5**	**-1.2**
KKAR	**Karatay Array**	**38.02**	**66**	⇓P		**P**		**23 52 12.4**	**-0.3**
KKAR	**Karatay Array**	**38.02**	**66**	P		**P**		**23 52 11.5**	**-1.2**
DBIC	**Dimbokro**	**38.58**	**223**	P		**P**		**23 52 17.3**	**-0.3**
DBIC				IAmb		IAmb		23 52 18.2	
	comp=Z,11nm,0.7s								
DBIC	**Dimbokro**	**38.58**	**223**	⇑P		**P**		**23 52 17.9**	**+0.3**
DBIC	**Dimbokro**	**38.58**	**223**	P		**P**		**23 52 17.6**	**+0.1**
	comp=Z,9.6nm,0.6s,baz=20,slow=9.6,SNR=17								
	comp=Z,9.6nm,0.6s								
DZA	**Taraz**	**38.65**	**66**	*e*P		**P**		**23 52 17.4**	**-0.7**
	baz=66								
DZA	**Taraz**	**38.65**	**66**	*e*P		**P**		**23 52 17.3**	**-0.7**
TIC	**Toumodi**	**38.69**	**223**	⇓*i*P		**P**		**23 52 18.4**	**-0.1**
	comp=Z,16nm,0.7s								
KIC	**Kosan Boka**	**38.78**	**222**	⇓*e*P		**P**		**23 52 19.3**	**+0.1**
	comp=Z,21nm,0.6s								
BRZS	**Berezniki**	**38.81**	**55**	*e*P		**P**		**23 52 17.9**	**-1.3**
	baz=55								
BRZS	**Berezniki**	**38.81**	**55**	*e*P		**P**		**23 52 17.9**	**-1.3**
HOPEN	**Hopen**	**38.82**	**2**	*e*P		**P**		**23 52 19.5**	**+0.5**
BTK	**Batken**	**38.85**	**71**	P		**P**		**23 52 18.5**	**-1.3**
BTK	**Batken**	**38.85**	**71**	P		**P**		**23 52 18.5**	**-1.3**
BTK				pmax		pmax			
	comp=Z,10.0nm,0.8s								
LIC	**Lamto**	**39.04**	**223**	⇓*e*P		**P**		**23 52 21.6**	**+0.1**
	comp=Z,46nm,0.6s								
KBL	**Kabul**	**39.05**	**80**	P		**P**		**23 52 20.7**	**-0.9**
KBL	**Kabul**	**39.05**	**80**	P		**P**		**23 52 20.7**	**-0.9**
KBL				pmax		pmax			
	comp=Z,6.0nm,1.0s								
MBAR	**Mbarara**	**39.42**	**164**	P		**P**		**23 52 24.5**	**-0.4**
MBAR	**Mbarara**	**39.42**	**164**	⇑P		**P**		**23 52 26.6**	**+1.7**
MBAR	**Mbarara**	**39.42**	**164**	*i* P		**P**		**23 52 24.4**	**-0.4**
MBAR				pmax		pmax			
	comp=Z,4.0nm,0.7s								
MBAR	**Mbarara**	**39.42**	**164**	P		**P**		**23 52 26.3**	**+1.5**
MBAR				P		**P**		**23 52 26.3**	**+1.5**
ARSB	**Arslanbob**	**40.16**	**68**	P		**P**		**23 52 30.4**	**-0.4**
ARSB	**Arslanbob**	**40.16**	**68**	P		**P**		**23 52 30.4**	**-0.4**
ARSB				pmax		pmax			
	comp=Z,5.0nm,1.0s								
BTLS	**Baital**	**40.22**	**62**	*e*P		**P**		**23 52 29.8**	**-1.3**
	baz=62								
BTLS	**Baital**	**40.22**	**62**	*e*P		**P**		**23 52 29.7**	**-1.3**
SPITS	**Spitsbergen Ar**	**40.48**	**359**	P		**P**		**23 52 33.5**	**+0.7**
SPITS				pmax		pmax			
	comp=Z,105nm,1.6s								
SPITS	**Spitsbergen Ar**	**40.48**	**359**	P		**P**		**23 52 32.9**	**0.0**
	comp=Z,3.3nm,0.4s,baz=153,slow=13,SNR=27								
SPITS				LR		LR		00 11 33.5	
	comp=Z,340nm,19.3s,baz=132,slow=40								
	comp=Z,3.3nm,0.4s								
AAK	**Ala-Archa**	**40.98**	**66**	P		**P**		**23 52 37.2**	**-0.4**
AAK	**Ala-Archa**	**40.98**	**66**	*i* P		**P**		**23 52 37.4**	**-0.2**
	SNR=30								
AAK	**Ala-Archa**	**40.98**	**66**	⇑P		**P**		**23 52 37.4**	**-0.2**
AAK	**Ala-Archa**	**40.98**	**66**	*ce*P		**P**		**23 52 37.0**	**-0.6**
AAK				pmax		pmax			
	comp=Z,16nm,1.0s								
AAK	**Ala-Archa**	**40.98**	**66**	LR		LR		00 13 00.6	
	comp=Z,179nm,19.5s,baz=284,slow=41								
AAK	**Ala-Archa**	**40.98**	**66**	P		**P**		**23 52 37.0**	**-0.6**
AAK				P		**P**		**23 52 37.0**	**-0.6**
FRU1	**Bishkek**	**41.05**	**65**	P		**P**		**23 52 37.9**	**0.0**
FRU1				IAmb		IAmb		23 52 52.6	
	comp=Z,36nm,1.2s								
FRU1	**Bishkek**	**41.05**	**65**	P		**P**		**23 52 37.9**	**0.0**
FRU1				pmax		pmax			
	comp=Z,36nm,1.2s								
KBS	**Kingsbay**	**41.34**	**358**	*e*P		**P**		**23 52 40.5**	**+0.7**
TKM2	**Tokmak 2**	**41.72**	**65**	*i* P		**P**		**23 52 43.0**	**-0.6**
TKM2				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KMBO	**Kilima Mbogo**	**41.78**	**154**	P		**P**		**23 52 44.8**	**+0.4**
KMBO	**Kilima Mbogo**	**41.78**	**154**	P		**P**		**23 52 44.8**	**+0.4**
KMBO				pmax		pmax			
	comp=Z,8.0nm,1.3s								
KUU	**Kurty**	**42.04**	**63**	*e*P		**P**		**23 52 45.2**	**-0.9**
	comp=Z,14nm,0.7s,baz=63								
KUU	**Kurty**	**42.04**	**63**	*e*P		**P**		**23 52 45.2**	**-0.9**
KUU				pmax		pmax			
	comp=Z,14nm,0.7s								
NRN	**Naryn**	**42.35**	**67**	P		**P**		**23 52 48.7**	**-0.3**
NRN	**Naryn**	**42.35**	**67**	P		**P**		**23 52 48.7**	**-0.3**
NRN				pmax		pmax			
	comp=Z,9.0nm,0.8s								
KURBB	**Kurchatov Arra**	**42.51**	**53**	P		**P**		**23 52 48.8**	**-1.0**
	comp=Z,16nm,0.4s,baz=278,slow=8.6,SNR=86								
KURBB				PP		**PP**		**23 54 26.0**	**-2.1**
	comp=Z,2.9nm,0.7s,baz=278,slow=11,SNR=2.4								
KURBB				LR		LR		00 14 28.5	
	comp=Z,208nm,18.9s,baz=190,slow=42								
	comp=Z,16nm,0.4s								
CHKK	**Chushkaly**	**42.51**	**63**	*e*P		**P**		**23 52 48.7**	**-1.2**
	baz=63								
CHKK	**Chushkaly**	**42.51**	**63**	*e*P		**P**		**23 52 48.7**	**-1.2**
KURK	**Kurchatov**	**42.55**	**53**	P		**P**		**23 52 49.0**	**-1.1**
KURK				IAmb		IAmb		23 52 51.3	
	comp=Z,20nm,0.8s								
KURK	**Kurchatov**	**42.55**	**53**	⇑P		**P**		**23 52 49.1**	**-1.0**
KURK	**Kurchatov**	**42.55**	**53**	*i* P		**P**		**23 52 48.9**	**-1.1**
KURK				pmax		pmax			
	comp=Z,30nm,1.2s								
KURK	**Kurchatov**	**42.55**	**53**	P		**P**		**23 52 49.4**	**-0.6**
KURK				P		**P**		**23 52 49.4**	**-0.6**
NIL	**Nilore**	**42.63**	**79**	P		**P**		**23 52 50.7**	**-0.3**
NIL				IAmb		IAmb		23 52 59.1	
	comp=Z,31nm,1.1s								
NIL	**Nilore**	**42.63**	**79**	P		**P**		**23 52 50.7**	**-0.3**
NIL				pmax		pmax			
	comp=Z,31nm,1.1s								
NIL	**Nilore**	**42.63**	**79**	P		**P**		**23 52 51.2**	**+0.2**
NIL				P		**P**		**23 52 51.2**	**+0.2**
MDOK	**Medeo**	**42.70**	**64**	*e*P		**P**		**23 52 50.8**	**-0.8**
	baz=64								
MDOK	**Medeo**	**42.70**	**64**	*e*P		**P**		**23 52 50.8**	**-0.8**
KSH	**Kashi**	**42.83**	**70**	P		**P**		**23 52 51.4**	**-1.2**
KSH				sP		sP		23 52 59.5	+1.1
KSH				pmax		pmax			
	comp=Z,7.0nm,0.9s								
KSH				LR		LR			
	comp=Z,190nm,15.5s								
KSH				LR		LR			
	comp=Z,220nm,15.1s								
KSH				LR		LR			
	comp=Z,260nm,15.8s								
TDK	**Taldyqorghan**	**43.27**	**61**	*e*P		**P**		**23 52 54.6**	**-1.5**
	baz=61								
TDK	**Taldyqorghan**	**43.27**	**61**	*e*P		**P**		**23 52 54.5**	**-1.5**
TARG	**Taragay, Kyrgy**	**43.59**	**66**	P		**P**		**23 52 58.8**	**-0.3**
TARG	**Taragay, Kyrgy**	**43.59**	**66**	P		**P**		**23 52 58.8**	**-0.3**
TARG				pmax		pmax			
	comp=Z,11nm,1.1s								
SEM	**Semipalatinsk**	**43.62**	**53**	*e*P		**P**		**23 52 58.1**	**-1.0**
	comp=Z,23nm,1.4s,baz=53								
SEM	**Semipalatinsk**	**43.62**	**53**	*e*P		**P**		**23 52 58.0**	**-1.0**
SEM				pmax		pmax			
	comp=Z,23nm,1.4s								
SATY	**Saty**	**43.69**	**64**	*e*P		**P**		**23 52 58.6**	**-1.1**
	baz=64								
SATY	**Saty**	**43.69**	**64**	*e*P		**P**		**23 52 58.5**	**-1.1**
KPKS	**Kokpek**	**43.80**	**63**	*e*P		**P**		**23 52 59.1**	**-1.3**
	baz=64								
KPKS	**Kokpek**	**43.80**	**63**	*e*P		**P**		**23 52 59.1**	**-1.3**
PRZ	**Przheval'sk**	**43.83**	**65**	P		**P**		**23 53 01.2**	**+0.5**
PRZ				IAmb		IAmb		23 53 38.0	
	comp=Z,17nm,1.1s								
PRZ	**Przheval'sk**	**43.83**	**65**	P		**P**		**23 53 01.2**	**+0.5**
PRZ				pmax		pmax			
	comp=Z,17nm,1.1s								
SHLS	**Shalkode**	**44.42**	**64**	*e*P		**P**		**23 53 06.9**	**+1.4**
	baz=64								
SHLS	**Shalkode**	**44.42**	**64**	*e*P		**P**		**23 53 06.8**	**+1.4**
SUMG	**Summit**	**45.10**	**339**	*i* P		**P**		**23 53 11.0**	**+0.3**
MAKZ	**Makanchi**	**45.35**	**58**	P		**P**		**23 53 11.7**	**-0.9**
MAKZ	**Makanchi**	**45.35**	**58**	⇑P		**P**		**23 53 11.6**	**-1.1**
MAKZ	**Makanchi**	**45.35**	**58**	P		**P**		**23 53 11.7**	**-0.9**
MAKZ				pmax		pmax			
	comp=Z,13nm,1.2s								
MK31	**Makanchi Array**	**45.56**	**58**	P		**P**		**23 53 13.3**	**-1.0**
MK31	**Makanchi Array**	**45.56**	**58**	*i* P		**P**		**23 53 12.9**	**-1.4**
MK31				pmax		pmax			
	comp=Z,12nm,0.4s								
MKAR	**Makanchi Array**	**45.56**	**58**	P		**P**		**23 53 13.4**	**-0.9**
MKAR	**Makanchi Array**	**45.56**	**58**	P		**P**		**23 53 13.2**	**-1.2**
	comp=Z,18nm,0.4s,baz=275,slow=7.4,SNR=76								
MKAR				PP		**PP**		**23 55 00.2**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=285,slow=7.3,SNR=1.7								
MKAR				LR		LR		00 15 28.4	
	comp=Z,140nm,18.5s,baz=291,slow=40								
	comp=Z,18nm,0.4s								
ZAA0	**Zalesovo Array**	**45.99**	**48**	P		**P**		**23 53 16.7**	**-0.8**
ZALV	**Zalesovo Beam**	**45.99**	**48**	P		**P**		**23 53 16.9**	**-0.6**
ZALV	**Zalesovo Beam**	**45.99**	**48**	P		**P**		**23 53 16.9**	**-0.6**
ZALV	**Zalesovo Beam**	**45.99**	**48**	P		**P**		**23 53 16.6**	**-0.9**
	comp=Z,53nm,0.6s,baz=276,slow=8.5,SNR=178								
ZALV				PP		**PP**		**23 55 02.6**	**-2.5**
	comp=Z,6.5nm,0.7s,baz=280,slow=10,SNR=2.6								
ZALV				LR		LR		00 15 26.0	
	comp=Z,211nm,19.4s,baz=262,slow=40								
	comp=Z,53nm,0.6s								
DY2G	**Dye2**	**46.73**	**330**	*e*P		**P**		**23 53 25.1**	**+1.5**
DY2G				IAmb		IAmb		23 53 32.1	
	comp=Z,42nm,1.2s								
ZSN	**Zaisan**	**47.13**	**57**	*e*P		**P**		**23 53 25.8**	**-0.9**
	comp=Z,13nm,1.1s,baz=57								
ZSN	**Zaisan**	**47.13**	**57**	*e*P		**P**		**23 53 25.8**	**-0.9**
ZSN				pmax		pmax			
	comp=Z,13nm,1.1s								
NRIK	**Noril'sk**	**47.14**	**26**	P		**P**		**23 53 27.2**	**+0.8**
NRIK	**Noril'sk**	**47.14**	**26**	*i* P		**P**		**23 53 26.9**	**+0.5**
NRIK				pmax		pmax			
	comp=Z,34nm,1.1s								
NRIK	**Noril'sk**	**47.14**	**26**	P		**P**		**23 53 26.4**	**0.0**
	comp=Z,12nm,0.5s,baz=250,slow=3.7,SNR=32								
NRIK				LR		LR		00 16 13.3	
	comp=Z,324nm,18.2s,baz=270,slow=40								
	comp=Z,12nm,0.5s								
DGZ	**Jazzator, Alta**	**48.30**	**53**	*i* P		**P**		**23 53 34.3**	**-1.6**
DGZ				pmax		pmax			
	comp=Z,10.0nm,0.5s								
NEEM	**North Greenlan**	**49.37**	**344**	⇑P		**P**		**23 53 44.9**	**+1.0**
NEEM	**North Greenlan**	**49.37**	**344**	*e*P		**P**		**23 53 44.2**	**+0.3**
NEEM				IAmb		IAmb		23 53 53.0	
	comp=Z,15nm,1.0s								
WMQ	**Urumqi**	**50.01**	**61**	*e*P		**P**		**23 53 48.6**	**-0.3**
WMQ				PP		**PP**		**23 55 44.3**	**+0.6**
WMQ				pmax		pmax			
	comp=Z,12nm,1.3s								
WMQ				LR		LR			
	comp=Z,150nm,21.3s								
LSZ	**Lusaka**	**53.34**	**171**	P		**P**		**23 54 14.6**	**+0.6**
LSZ				IAmb		IAmb		23 54 16.6	
	comp=Z,22nm,1.5s								
LSZ	**Lusaka**	**53.34**	**171**	⇑P		**P**		**23 54 15.8**	**+1.8**
LSZ	**Lusaka**	**53.34**	**171**	P		**P**		**23 54 14.6**	**+0.6**
LSZ				pmax		pmax			
	comp=Z,22nm,1.5s								
HYB	**Hyderabad**	**54.51**	**95**	*e*P		**P**		**23 54 23.0**	**+0.4**
DRLN	**Deer Lake**	**55.24**	**309**	P		**P**		**23 54 27.9**	**+0.4**
EVN	**Everest**	**55.59**	**79**	⇑P		**P**		**23 54 30.0**	**-1.1**
EUNU	**Eureka**	**55.82**	**348**	P		**P**		**23 54 32.4**	**+1.1**
MOY	**Mondy**	**56.05**	**48**	*e*P		**P**		**23 54 33.7**	**+0.3**
FRB	**Frobisher Bay**	**56.38**	**328**	⇓P		**P**		**23 54 36.7**	**+1.3**
ZAK	**Zakamensk**	**57.85**	**49**	*e*P		**P**		**23 54 45.5**	**-0.7**
ZAK				pmax		pmax			
	comp=Z,10.0nm,1.0s								
LSA	**Lhasa**	**58.11**	**75**	P		**P**		**23 54 47.8**	**-0.9**
LSA				IAmb		IAmb		23 54 49.9	
	comp=Z,7.2nm,0.6s								
LSA	**Lhasa**	**58.11**	**75**	P		**P**		**23 54 47.8**	**-0.9**
LSA				pmax		pmax			
	comp=Z,7.0nm,0.6s								
SCHQ	**Schefferville**	**58.64**	**317**	P		**P**		**23 54 51.5**	**0.0**
SCHQ				IAmb		IAmb		23 54 58.8	
	comp=Z,12nm,0.9s								
SCHQ	**Schefferville**	**58.64**	**317**	P		**P**		**23 54 52.5**	**+0.9**
	comp=Z,2.6nm,0.7s,baz=68,slow=5.0,SNR=8.2								
	comp=Z,2.6nm,0.7s								
TIXI	**Tiksi**	**60.00**	**20**	P		**P**		**23 55 00.5**	**-0.1**
TIXI				IAmb		IAmb		23 55 03.9	
	comp=Z,17nm,0.9s								
TIXI	**Tiksi**	**60.00**	**20**	⇑P		**P**		**23 55 01.1**	**+0.5**
TIXI	**Tiksi**	**60.00**	**20**	*ce*P		**P**		**23 55 01.0**	**+0.4**
TIXI				pmax		pmax			
	comp=Z,17nm,0.8s								
TIXI	**Tiksi**	**60.00**	**20**	P		**P**		**23 55 00.7**	**+0.1**
	comp=Z,13nm,0.8s,baz=341,slow=4.4,SNR=34								
TIXI				LR		LR		00 24 52.6	
	comp=Z,995nm,18.3s,baz=330,slow=40								
	comp=Z,13nm,0.8s								
RES	**Resolute Bay**	**60.07**	**344**	P		**P**		**23 55 01.8**	**+0.8**
RES	**Resolute Bay**	**60.07**	**344**	⇓P		**P**		**23 55 02.6**	**+1.6**
RES	**Resolute Bay**	**60.07**	**344**	P		**P**		**23 55 01.8**	**+0.8**
RES				pmax		pmax			
	comp=Z,6.0nm,0.9s								
GTA	**Gaotai**	**60.07**	**61**	*e*P		**P**		**23 55 00.8**	**-1.0**
GTA				PP		**PP**		**23 57 13.3**	**-0.7**
GTA				pmax		pmax			
	comp=Z,7.0nm,1.0s								
BOD	**Bodaibo**	**60.70**	**38**	*e*P		**P**		**23 55 04.6**	**-1.0**
BOD				pmax		pmax			
	comp=Z,10.0nm,1.2s								
SHL	**Shillong**	**60.70**	**79**	P		**P**		**23 55 04.6**	**-1.8**
SHL	**Shillong**	**60.70**	**79**	P		**P**		**23 55 04.6**	**-1.8**
SHL				pmax		pmax			
	comp=Z,27nm,1.1s								
SONM	**Songino Array**	**60.75**	**50**	P		**P**		**23 55 05.5**	**-0.8**
SONM				IAmb		IAmb		23 55 06.8	
	comp=Z,13nm,0.8s								
SONM	**Songino Array**	**60.75**	**50**	P		**P**		**23 55 05.8**	**-0.4**
	comp=Z,11nm,0.8s,baz=283,slow=9.2,SNR=85								
SONM				LR		LR		00 25 36.1	
	comp=Z,96nm,18.4s,baz=340,slow=40								
	comp=Z,11nm,0.8s								
HAL	**Halifax**	**60.86**	**306**	P		**P**		**23 55 07.5**	**+0.6**
HAL	**Halifax**	**60.86**	**306**	P		**P**		**23 55 07.5**	**+0.6**
HAL				pmax		pmax			
	comp=Z,37nm,0.8s								
ULN	**Ulaanbaatar**	**61.13**	**50**	P		**P**		**23 55 08.2**	**-0.7**
ULN				IAmb		IAmb		23 55 09.4	
	comp=Z,15nm,0.8s								
ULN	**Ulaanbaatar**	**61.13**	**50**	⇑P		**P**		**23 55 08.5**	**-0.4**
ULN	**Ulaanbaatar**	**61.13**	**50**	*ce*P		**P**		**23 55 08.2**	**-0.7**
ULN				pmax		pmax			
	comp=Z,17nm,0.8s								
BATG	**Bathurst New B**	**61.27**	**309**	P		**P**		**23 55 10.3**	**+0.6**
PALK	**Pallekele**	**62.23**	**103**	P		**P**		**23 55 16.2**	**-0.4**
PALK				IAmb		IAmb		23 55 32.7	
	comp=Z,19nm,1.1s								
PALK	**Pallekele**	**62.23**	**103**	*i* P		**P**		**23 55 16.2**	**-0.4**
PALK				pmax		pmax			
	comp=Z,22nm,1.0s								
PALK	**Pallekele**	**62.23**	**103**	LR		LR		00 26 18.7	
	comp=Z,61nm,18.7s,baz=83,slow=40								
LBTB	**Lobatse**	**62.71**	**175**	P		**P**		**23 55 20.7**	**+1.2**
LBTB	**Lobatse**	**62.71**	**175**	⇑P		**P**		**23 55 21.3**	**+1.7**
LBTB	**Lobatse**	**62.71**	**175**	P		**P**		**23 55 20.7**	**+1.2**
LBTB				pmax		pmax			
	comp=Z,26nm,1.4s								
D62A	**Allapoint, All**	**63.18**	**310**	P		**P**		**23 55 23.2**	**+0.8**
YAK	**Yakutsk**	**65.45**	**29**	P		**P**		**23 55 36.6**	**-0.4**
YAK	**Yakutsk**	**65.45**	**29**	*e*P		**P**		**23 55 37.0**	**0.0**
YAK				pmax		pmax			
	comp=Z,26nm,0.8s								
YAK				pmax		pmax			
	comp=N,4.0nm,1.1s								
YAK				pmax		pmax			
	comp=E,10.0nm,1.1s								
YAK	**Yakutsk**	**65.45**	**29**	LR		LR		00 28 23.6	
	comp=E,208nm,18.4s,baz=290,slow=40								
TNCH	**TengChong**	**66.11**	**76**	⇑P		**P**		**23 55 42.0

SUR Sutherland 69.86 180 P P 23 56 06.0 +0.6
BINY Binghamton 69.92 308 P P 23 56 05.9 +0.3
baz=57
C36M Paulatuk 69.97 347 P P 23 56 05.9 +0.5
C36M IAmb IAmb 23 56 13.1
comp=Z,18nm,1.1s
C36M Paulatuk 69.97 347 P P 23 56 05.7 +0.3
baz=29,SNR=7.9
CM31 Chiang Mai Arr 70.03 82 P P 23 56 05.7 -0.9
CM31 IAmb IAmb 23 56 07.9
comp=Z,9.7nm,0.9s
CMAR Chiang Mai Arr 70.03 82 P P 23 56 05.8 -0.8
CMAR Chiang Mai Arr 70.03 82 P P 23 56 06.0 -0.7
CMAR Chiang Mai Arr 70.03 82 P P 23 56 06.0 -0.7
comp=Z,5.6nm,0.8s,baz=302,slow=7.2,SNR=29
CMAR LR LR 00 33 19.6
comp=Z,42nm,19.9s,baz=255,slow=42
comp=Z,5.6nm,0.8s
CRAI Chiangrai 70.16 79 P P 23 56 06.4 -1.0
CRAI IAmb IAmb 23 56 07.9
comp=Z,11nm,0.8s
BJI Beijing 70.71 54 P P 23 56 09.8 -0.7
BJI pmax pmax
comp=Z,4.0nm,0.7s
BJI LR LR
comp=Z,74nm,14.4s
BJI LR LR
comp=Z,64nm,16.9s
BJI LR LR
comp=Z,110nm,19.2s
BJT Baijiatuau 70.72 54 P P 23 56 10.1 -0.5
BJT IAmb IAmb 23 56 11.0
comp=Z,29nm,1.8s
BJT Baijiatuau 70.72 54 P P 23 56 10.1 -0.5
BJT pmax pmax
comp=Z,29nm,1.8s
HNS HongShan 71.21 57 ⇑P P 23 56 13.3 -0.2
HNS pmax pmax
comp=Z,10.0nm,0.9s
HEH HeiHe 71.36 40 eP P 23 56 14.4 +0.2
HEH pmax pmax
comp=Z,46nm,0.8s
HEH pmax pmax
comp=Z,160nm,7.1s
BILL Bilibino 71.37 13 P P 23 56 14.1 +0.2
BILL IAmb IAmb 23 56 26.2
comp=Z,16nm,0.9s
BILL Bilibino 71.37 13 *i* P P 23 56 14.2 +0.2
BILL pmax pmax
comp=Z,20nm,1.1s
A22K Sinclair Lake 71.41 358 P P 23 56 14.2 +0.1
baz=3.9
ENH Enshi 71.50 66 P P 23 56 14.5 -1.0
ENH IAmb IAmb 23 56 16.2
comp=Z,14nm,0.9s
SSPA Standing Stone 71.97 308 P P 23 56 18.7 +0.6
baz=55
C26K Camden Bay 72.02 355 P P 23 56 18.2 +0.4
baz=12
D28M Stokes Point 72.04 352 P P 23 56 18.3 +0.4
baz=17
A19K Wainwright 72.26 1 P P 23 56 19.7 +0.4
baz=359
SLVN Son La 72.28 77 P P 23 56 19.7 -0.6
D27M Malcolm River 72.34 353 P P 23 56 21.0 +1.1
D27M IAmb IAmb 23 56 28.9
comp=Z,16nm,1.1s
D27M Malcolm River 72.34 353 P P 23 56 20.6 +0.7
baz=15
INK Inuvik 72.38 350 P P 23 56 20.3 +0.3
INK Inuvik 72.38 350 P P 23 56 20.5 +0.5
baz=21
INK Inuvik 72.38 350 ⇓P P 23 56 20.6 +0.6
INK Inuvik 72.38 350 P P 23 56 20.3 +0.3
INK pmax pmax
comp=Z,11nm,1.3s
ERPA Erie 72.43 310 P P 23 56 21.5 +0.7
baz=55
C23K Itkillik River 72.43 357 P P 23 56 21.6 +1.3
C23K Itkillik River 72.43 357 P P 23 56 20.9 +0.6
baz=7.5
B20K Meade River 72.45 359 P P 23 56 21.1 +0.7
baz=2.0
C24K Franklin Bluff 72.45 356 P P 23 56 21.1 +0.7
baz=9.1
SEY Seymchan 72.48 21 *i* P P 23 56 20.5 -0.3
SEY pmax pmax
comp=Z,15nm,0.8s
SEY Seymchan 72.48 21 LR LR 00 32 21.2
comp=Z,253nm,18.8s,baz=322,slow=39
D25K Kavik River 72.70 355 P P 23 56 22.6 +0.6
baz=11
B21K Ikpikpuk River 72.79 358 P P 23 56 23.5 +1.0
baz=4.2
E28M Babbage River 72.82 352 P P 23 56 23.5 +0.8
baz=16
E29M Blow River 72.85 352 P P 23 56 23.9 +1.0
E29M Blow River 72.85 352 P P 23 56 23.8 +1.0
baz=18
D24K Happy Valley 73.02 356 P P 23 56 25.1 +1.2
baz=8.9
B18K Kokolik River 73.10 1 P P 23 56 26.2 +1.9
baz=358
F31M Tsiigehtchic 73.22 350 P P 23 56 25.4 +0.3
baz=21,SNR=8.8
M53A WI Miller and 73.24 310 P P 23 56 26.0 +0.3
baz=54
C21K Knifeblade Rid 73.26 358 P P 23 56 26.3 +1.0
baz=4.0,SNR=9.6
D23K Nanushuk River 73.30 357 P P 23 56 26.9 +1.3
baz=7.4
F30M Barrier River 73.33 351 P P 23 56 26.8 +1.1
baz=20
C19K Lookout Ridge 73.37 360 P P 23 56 26.9 +0.9
baz=0.0
D22K Ayikyak River 73.47 357 P P 23 56 27.8 +1.2
baz=5.7
TOLK Toolik Lake Re 73.57 356 P P 23 56 28.4 +1.2
TOLK IAmb IAmb 23 57 06.5
comp=Z,12nm,1.1s
TOLK Toolik Lake Re 73.57 356 P P 23 56 28.8 +1.6
baz=8.3,SNR=5.8
YKA Yellowknife Ar 73.67 340 P P 23 56 28.4 +0.6
comp=Z,2.1nm,0.7s,baz=35,slow=5.2,SNR=18
comp=Z,2.1nm,0.7s
D20K Etivluk River 73.74 359 P P 23 56 29.0 +0.8
baz=2.5
MCWV Mont Chateau 73.76 308 P P 23 56 29.8 +1.0
baz=54
G31M Satah River 73.78 350 P P 23 56 29.6 +1.2
baz=21,SNR=9.0
F28M Old Crow 73.81 352 P P 23 56 28.9 +0.4
baz=16,SNR=7.9
E25K Arctic Village 73.83 355 P P 23 56 29.4 +0.7
baz=12,SNR=12
E21K Killik River 73.95 358 P P 23 56 30.8 +1.4
baz=4.7
C17K DeLong Mountai 73.97 1 P P 23 56 30.5 +1.0
baz=357
D19K Kuna River 73.98 359 P P 23 56 30.5 +1.0
D19K Kuna River 73.98 359 P P 23 56 30.6 +1.0
baz=1.2
G30M tAoh Zraii Nji 73.99 351 P P 23 56 30.2 +0.6
baz=19
BNX BinXian 74.10 44 ⇓P P 23 56 30.6 0.0
BNX pmax pmax
comp=Z,26nm,0.8s
BNX pmax pmax
comp=Z,81nm,4.3s
C16K Lisburne Hills 74.12 2 P P 23 56 30.8 +0.5
baz=355
F26K Sheenjek River 74.14 354 P P 23 56 31.4 +0.9
baz=13
E23K Chandalar 74.15 356 P P 23 56 31.5 +0.9
baz=8.2
CN2 Changchun 74.19 47 eP P 23 56 32.8 +1.7
CN2 pmax pmax
comp=Z,10.0nm,0.7s
E20K Nigu River 74.19 359 P P 23 56 31.9 +1.0
baz=2.8
KLR Kul'dur 74.19 39 *i* P P 23 56 30.3 -0.8
KLR pmax pmax
comp=Z,13nm,0.8s
KLR Kul'dur 74.19 39 LR LR 00 33 37.0
comp=Z,130nm,18.6s,baz=310,slow=39
O53A New Philadelph 74.27 309 P P 23 56 32.7 +1.0
baz=54
F25K Christian Rive 74.36 354 P P 23 56 33.4 +1.6
baz=12
BMAR Burnt Mountain 74.43 354 P P 23 56 33.8 +1.6
F24K Squaw Lake 74.59 355 P P 23 56 34.6 +1.5
baz=9.6
EPYK Eagle Plains 74.63 351 P P 23 56 35.1 +1.7
baz=19
MA2 Magadan 74.64 24 P P 23 56 34.0 +0.5
MA2 Magadan 74.64 24 *c* P P 23 56 34.1 +0.6
MA2 pmax pmax
comp=Z,22nm,0.8s
MA2 Magadan 74.64 24 LR LR 00 33 43.2
comp=Z,278nm,18.1s,baz=304,slow=39
D17K Noatak River 74.75 1 P P 23 56 34.8 +0.8
baz=357
G26K Porcupine Rive 74.84 354 P P 23 56 35.5 +1.0
baz=13
H31M Peel River 74.84 350 P P 23 56 36.2 +1.6
baz=20
H29M Whitestone 74.98 351 P P 23 56 36.4 +1.0
baz=17,SNR=9.8
E19K Redstone River 75.01 359 P P 23 56 36.3 +0.7
E19K IAmb IAmb 23 56 37.9
comp=Z,14nm,0.8s
E19K Redstone River 75.01 359 P P 23 56 36.5 +1.0
baz=2.0
COLD Coldfoot 75.01 356 P P 23 56 36.7 +1.2
baz=7.7,SNR=9.9
E18K Tukpahlearik C 75.06 0 P P 23 56 36.9 +1.1
baz=359
F21K Alatna River 75.16 358 P P 23 56 37.9 +1.5
F21K Alatna River 75.16 358 P P 23 56 37.7 +1.3
baz=5.0
P52A Corning 75.20 309 P P 23 56 38.0 +0.9
baz=53
G25K Bearman Lake 75.21 355 P P 23 56 38.0 +1.3
baz=11
WRGLY Wrigley 75.22 344 P P 23 56 37.8 +1.1
baz=29
EYMN Ely 75.30 320 P P 23 56 38.8 +1.3
EYMN Ely 75.30 320 P P 23 56 38.9 +1.3
baz=49
H27K Steamboat Moun 75.32 353 P P 23 56 39.1 +1.7
baz=15
FYU Fort Yukon 75.34 354 P P 23 56 38.9 +1.5
G24K Hadweenzic Riv 75.37 355 P P 23 56 39.0 +1.4
baz=9.9
G22K Bettles 75.38 357 P P 23 56 39.0 +1.3
baz=6.6
E17K Hotham Inlet 75.39 1 P P 23 56 39.0 +1.3
baz=358
F20K Avaraart Lake 75.39 358 P P 23 56 38.6 +0.9
baz=3.2
FFC Flin Flon 75.42 330 P P 23 56 39.1 +1.0
FFC IAmb IAmb 23 56 46.9
comp=Z,12nm,1.1s
FFC Flin Flon 75.42 330 ⇓P P 23 56 39.6 +1.5
FFC Flin Flon 75.42 330 *i* P P 23 56 34.2 -3.9
G23K Bananza Creek 75.52 356 P P 23 56 39.2 +0.7
baz=7.8
BLA Blacksburg 75.57 306 P P 23 56 40.2 +0.9
baz=53
F19K Shaleruckik Mo 75.64 359 P P 23 56 40.0 +0.9
baz=1.5
I30M Mount Dempster 75.68 350 P P 23 56 40.2 +0.7
baz=19
G21K Allakaket 75.87 357 P P 23 56 41.5 +1.1
baz=5.0
F18K Selawik 75.89 0 P P 23 56 41.4 +0.9
baz=360,SNR=7.1
I28M Miner Creek 75.91 352 P P 23 56 41.6 +0.8
baz=16
ULM Lac du Bonnet 75.91 324 P P 23 56 41.3 +0.3
ULM IAmb IAmb 23 56 49.2
comp=Z,23nm,0.9s
ULM Lac du Bonnet 75.91 324 ⇑P P 23 56 42.4 +1.3
ULM Lac du Bonnet 75.91 324 P P 23 56 42.0 +1.0
comp=Z,4.9nm,0.8s,baz=46,slow=3.2,SNR=9.8
comp=Z,4.9nm,0.8s
I27K Kandik River 75.94 352 P P 23 56 42.2 +1.2
baz=15
MDJ Mudanjiang 76.01 44 P P 23 56 49.0 +7.3
MDJ Mudanjiang 76.01 44 pP pP 23 56 54.4 +8.4
MDJ Mudanjiang 76.01 44 PcP PcP 23 57 03.3 +9.3
MDJ pmax pmax
comp=Z,13nm,1.0s
MDJ pmax pmax
comp=Z,11nm,4.2s
MDJ LR LR
comp=N,280nm,14.4s
MDJ LR LR
comp=E,270nm,14.1s
MDJ LR LR
comp=Z,390nm,14.4s
F17K Baldwin Pennin 76.04 1 P P 23 56 43.1 +1.7
baz=359
LHMI Lhok Sumawe 76.19 94 P P 23 56 41.8 -1.3
H24K Noodor Dome 76.25 355 P P 23 56 44.3 +1.6
baz=9.6
J30M Hart River 76.29 350 P P 23 56 44.3 +1.2
baz=19
G19K Purcell Mounta 76.33 359 P P 23 56 44.5 +1.4
baz=2.1
I26K Coal Creek Min 76.39 353 P P 23 56 44.8 +1.4
baz=13
PRP Porcupine Dome 76.39 354 P P 23 56 44.2 +0.6
PRP IAmb IAmb 23 56 52.7
comp=Z,15nm,1.2s
PRP Porcupine Dome 76.39 354 P P 23 56 44.7 +1.1
baz=11
H22K Ishtalitna Cre 76.40 357 P P 23 56 45.4 +1.8
baz=6.7,SNR=14
IMAR Indian Mountai 76.41 358 P P 23 56 44.3 +0.7
G18K Tagagawik 76.59 360 P P 23 56 46.6 +2.0
baz=0.8
EGAK Eagle 76.69 352 P P 23 56 45.2 0.0
EGAK Eagle 76.69 352 P P 23 56 46.7 +1.5
baz=15
H21K Melozitna Rive 76.70 357 P P 23 56 46.9 +1.7
baz=5.5,SNR=12
F15K North Star Dit 76.71 2 P P 23 56 46.7 +1.4
baz=356
TNA Tin City 76.73 4 P P 23 56 46.9 +1.6
baz=353
P49A Miami Univ. Ec 76.84 310 P P 23 56 48.0 +1.5
baz=52
F14K Arctic Creek 76.88 3 P P 23 56 47.3 +1.1
baz=355
H20K Anotleneega Mo 76.93 358 P P 23 56 48.0 +1.5
baz=3.9
H19K Roundabout Mou 76.94 359 P P 23 56 47.8 +1.3
baz=2.6
POKR Poker Plat Res 76.94 355 P P 23 56 48.1 +1.6
baz=9.9
G17K Kiwalik Mounta 76.99 0 P P 23 56 48.3 +1.5
baz=359
I23K Minto, Yukon-K 77.03 356 P P 23 56 48.6 +1.5
baz=8.3
G16K Koyuk River 77.08 1 P P 23 56 47.6 +0.3
G16K IAmb IAmb 23 56 56.0
comp=Z,26nm,1.2s
G16K Koyuk River 77.08 1 P P 23 56 48.8 +1.6
baz=358
MDM Murphy Dome 77.15 355 P P 23 56 48.1 +0.3
MDM IAmb IAmb 23 56 57.0
comp=Z,15nm,1.1s
K29M Barlow Dome 77.15 350 P P 23 56 49.4 +1.4
baz=18
MAYO Mayo, Yukon 77.16 349 P P 23 56 49.2 +1.4
baz=19
DAWY Dawson 77.18 351 P P 23 56 48.2 +0.2
DAWY IAmb IAmb 23 56 56.8
comp=Z,19nm,1.1s
DAWY Dawson 77.18 351 P P 23 56 48.7 +0.7
baz=16,SNR=8.4
J26L Joseph Creek 77.21 353 P P 23 56 49.4 +1.1
baz=13
MLY Manley 77.23 356 P P 23 56 48.6 +0.3
MLY IAmb IAmb 23 56 57.3
comp=Z,16nm,1.2s
MLY Manley 77.23 356 P P 23 56 49.5 +1.2
baz=7.2,SNR=9.4
ILAR Eielson Array 77.24 354 P P 23 56 48.4 +0.2
ILAR Eielson Array 77.24 354 P P 23 56 48.9 +0.6
comp=Z,1.5nm,0.8s,baz=0.2,slow=4.9,SNR=22
ILAR LR LR 00 33 55.1
comp=Z,73nm,18.5s,baz=1.0,slow=38
comp=Z,1.5nm,0.8s
AGMN Agassiz Nation 77.24 322 P P 23 56 49.8 +1.2
baz=47
J25K Salcha River, 77.27 354 P P 23 56 49.8 +1.3
baz=12
MMPY Sheldon Lake, 77.32 347 P P 23 56 49.5 +0.7
MMPY IAmb IAmb 23 56 58.8
comp=Z,16nm,1.0s
MMPY Sheldon Lake, 77.32 347 P P 23 56 50.4 +1.6
baz=23,SNR=9.9
H18K Honhosa River 77.34 359 P P 23 56 50.0 +1.2
baz=1.0
KMSC Kings Mountain 77.40 305 P P 23 56 51.1 +1.4
baz=52
G15K Niukluk 77.44 2 P P 23 56 50.1 +0.7
baz=356
K27K Chicken 77.52 352 P P 23 56 51.1 +1.3
baz=14
H17K Granite Mounta 77.56 0 P P 23 56 51.1 +1.1
baz=360
NEA2 Nenana 77.57 355 P P 23 56 51.1 +1.0
baz=8.5
USRK Ussuriysk Ar. 77.59 43 LR LR 00 34 49.2
comp=Z,139nm,18.8s,baz=304,slow=39
HDA Harding Lake 77.60 354 P P 23 56 50.3 +0.1
HDA IAmb IAmb 23 56 58.3
comp=Z,22nm,1.0s
HDA Harding Lake 77.60 354 P P 23 56 51.0 +0.7
baz=10
I20K Naaghedeneel 77.62 358 P P 23 56 51.5 +1.2
baz=4.2
WRH Wood River Hil 77.62 355 P P 23 56 50.7 +0.3
WRH IAmb IAmb 23 56 58.6
comp=Z,16nm,1.0s
GCSA Galena City Sc 77.73 359 P P 23 56 53.2 +2.2
baz=2.2
SFIN Lafayette 77.74 312 P P 23 56 53.2 +1.7
baz=50
TGTN Hyland Airport 77.76 345 P P 23 56 53.5 +2.2
baz=25
SCRK Sand Creek 77.77 353 P P 23 56 53.0 +1.7
baz=13
H16K Elim 77.84 1 P P 23 56 52.8 +1.2
baz=358
JFWS Jewell Farm 77.92 315 P P 23 56 54.2 +1.8
baz=49
L29M L29M 77.93 350 P P 23 56 53.4 +1.2
baz=17
FARO Faro, Yukon 78.05 348 P P 23 56 54.7 +1.9
baz=21,SNR=6.3
RIDG Independent Ri 78.08 353 P P 23 56 54.8 +1.7
baz=12
KOTAN Kotaneelee Air 78.09 343 P P 23 56 54.9 +1.8
baz=28
K24K Donnelly Dome 78.10 354 P P 23 56 54.6 +1.4
baz=11
QIZ Qiongzhong 78.15 75 P P 23 56 54.4 +0.3
QIZ pmax pmax
comp=Z,21nm,0.8s
QIZ LR LR
comp=Z,230nm,10.1s
QIZ LR LR
comp=Z,320nm,15.7s
QIZ LR LR
comp=Z,310nm,9.0s
BPAW Bear Paw Mtn. 78.17 356 P P 23 56 53.1 -0.4
BPAW IAmb IAmb 23 57 01.9
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 78.17 356 P P 23 56 54.5 +1.0
baz=7.0,SNR=7.5
J20K Nowinta River 78.23 358 P P 23 56 55.2 +1.4
baz=4.4
M31M Drury Creek, Y 78.24 348 P P 23 56 55.7 +1.8
baz=20,SNR=15
M30M Minto, Yukon 78.26 349 P P 23 56 55.9 +1.9
baz=18
GAMB Gambell 78.27 5 P P 23 56 54.8 +0.9
baz=350
MCK McKinley 78.41 355 P P 23 56 55.8 +1.0
baz=8.6
BCAR Beaver Creek A 78.43 352 P P 23 56 56.2 +1.3
L27K Beaver Creek, 78.44 352 P P 23 56 56.3 +1.3
baz=14
CHUM Lake Minchumin 78.45 357 P P 23 56 56.6 +1.7
baz=5.9,SNR=8.5
J19K Poorman 78.45 358 P P 23 56 56.4 +1.4
baz=3.2
M29M Somme Creek 78.62 350 P P 23 56 57.6 +1.5
baz=17
WCI Wyandotte Cave 78.62 310 P P 23 56 58.3 +1.9
baz=51
L26K Log Cabin Wild 78.64 353 P P 23 56 57.6 +1.5
baz=13
RND Reindeer 78.73 355 P P 23 56 56.3 -0.3
RND IAmb IAmb 23 57 01.5
comp=Z,36nm,1.9s
RND Reindeer 78.73 355 P P 23 56 56.3 -0.3
RND pmax pmax
comp=Z,36nm,1.9s
TRF Thorofare Moun 78.78 356 P P 23 56 57.4 +0.4
baz=7.5
PAX Paxson 78.89 353 P P 23 56 58.5 +0.9
baz=11
CAST Castle Rocks 78.90 357 P P 23 56 57.7 +0.1
CAST IAmb IAmb 23 57 06.0
comp=Z,9.7nm,1.0s
CAST Castle Rocks 78.90 357 P P 23 56 58.4 +0.9
baz=6.1
DHY Denali Highway 78.95 354 P P 23 56 58.2 +0.2
DHY IAmb IAmb 23 57 07.0
comp=Z,24nm,1.2s
DHY Denali Highway 78.95 354 P P 23 56 58.8 +0.9
baz=9.8,SNR=10
BVCY Beaver Creek 78.95 351 P P 23 56 59.0 +1.2
baz=15,SNR=6.2
N32M Quiet Lake 79.01 347 P P 23 56 59.3 +1.2
baz=21
J18K Innoko River 79.01 359 P P 23 56 59.2 +1.1
baz=2.4
K20K Telida 79.05 357 P P 23 56 59.3 +1.0
baz=4.5
J17K VABM Dome 79.10 360 P P 23 56 60.0 +1.4
baz=0.5
M27K Edge Creek, AK 79.13 352 P P 23 57 00.1 +1.2
baz=14
WTLY Watson Lake, Y 79.15 345 P P 23 57 00.3 +1.3
baz=24
J16K Anvik River 79.21 0 P P 23 57 01.0 +1.8
baz=359
MDND Maddock 79.35 324 P P 23 57 01.5 +1.3
baz=44
N30M Aishikik Lake 79.36 349 P P 23 57 01.6 +1.5
baz=18
HARP HAARP 79.43 353 P P 23 57 01.6 +1.2
baz=12
PPLA Purkeypile 79.43 357 P P 23 57 01.6 +1.1
baz=6.0
WAT6 Susitna Watana 79.47 354 P P 23 57 02.0 +1.1
baz=9.5
YUK3 Moose Creek 79.52 351 P P 23 57 02.9 +1.7
baz=15,SNR=13
TTA Tatalina 79.53 358 P P 23 57 02.5 +1.5
TTA IAmb IAmb 23 57 09.7
comp=Z,18nm,1.4s
TTA Tatalina 79.53 358 P P 23 57 02.5 +1.5
baz=2.9
TTA Tatalina 79.53 358 P P 23 57 02.5 +1.5
TTA pmax pmax
comp=Z,18nm,1.4s
KSAR Wonju Array Be 79.60 51 P P 23 57 01.4 -0.4
KSAR Wonju Array Be 79.60 51 P P 23 57 01.4 -0.4
KSRS Korea Array 79.62 50 P P 23 57 01.4 -0.4
comp=Z,10.0nm,0.8s,baz=310,slow=4.5,SNR=27
KSRS LR LR 00 36 27.2
comp=Z,131nm,19.0s,baz=335,slow=39
comp=Z,10.0nm,0.8s
YUK4 Talbot Arm 79.70 350 P P 23 57 02.9 +0.8
baz=17
J14K Nanvaranak Lak 79.70 2 P P 23 57 03.1 +1.3
baz=357
WHY Whitehorse 79.78 348 P P 23 57 03.3 +0.8
baz=20
K17K Iditarod 79.78 359 P P 23 57 03.0 +0.7
K17K IAmb IAmb 23 57 11.9
comp=Z,22nm,1.1s
K17K Iditarod 79.78 359 P P 23 57 04.0 +1.7
baz=1.1
M24K Tolsona, Glenn 79.81 354 P P 23 57 04.1 +1.6

baz=11
CUT Chulitna 79.82 356 P P 23 57 04.1 +1.6
baz=7.5
P33M Teslin, Yukon 79.84 347 P P 23 57 03.9 +1.1
baz=21
GOGA Godfrey 79.86 304 P P 23 57 04.1 +0.9
baz=51
O30N Mendenhall 79.87 349 P P 23 57 04.1 +1.3
baz=19
YUK8 Steele Glacier 79.91 350 P P 23 57 04.2 +0.9
baz=16
L20K Farewell, AK 79.92 357 P P 23 57 04.2 +1.1
baz=4.6
HYT Haines Junctio 80.03 349 P P 23 57 04.6 +0.7
HYT IAmb IAmb 23 57 13.0
comp=Z,20nm,1.1s
HYT Haines Junctio 80.03 349 P P 23 57 04.9 +1.0
baz=18
YUK6 Outpost Mounta 80.04 350 P P 23 57 04.9 +0.8
baz=17
N25K Chitina, Valde 80.15 353 P P 23 57 05.1 +0.7
baz=12
SCM Sheep Creek Mo 80.17 354 P P 23 57 05.7 +1.1
baz=9.8
K15K Wolf Creek Mou 80.20 1 P P 23 57 06.0 +1.5
baz=358
MCARA McCarthy VSAT 80.21 352 P P 23 57 05.6 +1.0
MCARA IAmb IAmb 23 57 13.7
comp=Z,16nm,1.2s
MCARA McCarthy VSAT 80.21 352 P P 23 57 06.0 +1.3
baz=13
M23K Glacier View 80.25 354 P P 23 57 06.3 +1.4
baz=9.5
L19K White Mountain 80.25 358 P P 23 57 05.9 +1.0
baz=3.8
R33M Jennings River 80.25 346 P P 23 57 06.3 +1.3
baz=23
L18K Granite Mounta 80.26 359 P P 23 57 06.8 +1.9
baz=2.4
SML Sawmill 80.28 355 P P 23 57 05.3 +0.2
SML IAmb IAmb 23 57 13.3
comp=Z,24nm,1.2s
SML Sawmill 80.28 355 P P 23 57 06.6 +1.5
baz=9.1
SKT Skwentna 80.31 356 P P 23 57 06.3 +1.1
baz=6.5
KLU Klutina 80.39 353 P P 23 57 06.7 +1.0
baz=11
CTG Chitna Glacier 80.42 351 P P 23 57 07.3 +1.4
baz=15
M22K Willow 80.46 355 P P 23 57 07.3 +1.4
baz=7.6
M20K Styx River 80.49 357 P P 23 57 06.8 +0.5
baz=5.2
M19K Big River Lodg 80.51 358 P P 23 57 06.8 +0.5
baz=4.2
PMR Palmer 80.55 355 P P 23 57 07.6 +1.2
baz=8.4
P32M Atlin 80.59 347 P P 23 57 08.1 +1.4
baz=20
P30M Million Dollar 80.62 349 P P 23 57 08.3 +1.4
baz=18
KNK Knik Glacier 80.68 355 P P 23 57 08.3 +1.1
baz=8.9
O29M Mount Kennedy 80.69 350 P P 23 57 09.0 +1.6
baz=17
GRNC Granite Creek 80.69 351 P P 23 57 08.4 +0.8
BMRM Bremner River 80.78 353 P P 23 57 08.9 +1.1
baz=12
SUA Susitna One 80.78 356 P P 23 57 09.4 +1.5
baz=7.1
ECSD EROS Data Cent 80.78 319 P P 23 57 08.4 +0.3
ECSD IAmb IAmb 23 57 16.6
comp=Z,15nm,1.1s
L16K Owhat River 80.80 360 P P 23 57 08.8 +1.0
baz=0.1
L15K Ungalak Mounta 80.82 1 P P 23 57 08.9 +1.0
baz=358
CRQE Cirque 80.83 352 P P 23 57 09.0 +0.8
baz=13
WVT Waverly 80.90 309 P P 23 57 10.4 +1.6
baz=50
Q32M Nakina River 80.91 346 P P 23 57 10.1 +1.4
baz=22
DLBC Dease Lake 80.95 345 P P 23 57 10.1 +1.3
baz=23
M18K Stony River 80.97 358 P P 23 57 10.3 +1.6
baz=3.0
SKAG Skagway 80.99 348 P P 23 57 10.4 +1.6
baz=19
RC01 Rabbit Creek A 81.09 355 P P 23 57 09.6 +0.2
RC01 IAmb IAmb 23 57 17.7
comp=Z,18nm,1.1s
RC01 Rabbit Creek A 81.09 355 P P 23 57 10.7 +1.3
baz=7.9
M17K Holitna River 81.09 359 P P 23 57 10.6 +1.2
baz=1.8
YSS Yuzh-Sakhalins 81.09 36 P P 23 57 09.7 0.0
YSS Yuzh-Sakhalins 81.09 36 *e*P P 23 57 10.2 +0.6
YSS *e*S S 00 07 17.8 -0.8
YSS *e*SS SS 00 12 37.1 +4.9
YSS pmax pmax
comp=N,100nm,3.5s
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,400nm,16.0s
GLI Glacier Island 81.10 354 P P 23 57 10.6 +1.2
baz=10.0
PINM Pinnacle 81.12 350 P P 23 57 11.0 +1.3
baz=15
N20K Mount Spurr 81.12 356 P P 23 57 10.7 +1.0
baz=5.9
P29M Windy Craggy 81.21 349 P P 23 57 11.2 +1.1
baz=17
MESA MESA 81.26 351 P P 23 57 11.9 +1.4
baz=14
EYAK Cordova Ski Ar 81.30 353 P P 23 57 11.9 +1.5
baz=11
PNL Peninsula 81.42 350 P P 23 57 12.2 +1.1
baz=16
M16K Timber Creek 81.49 360 P P 23 57 12.4 +0.9
baz=0.5
CAPN Captain Cook N 81.50 356 P P 23 57 12.7 +1.2
baz=6.8
N19K Bonanza Creek 81.61 357 P P 23 57 13.5 +1.3
baz=4.1
S34M Telegraph Cree 81.66 345 P P 23 57 13.3 +0.9
baz=22
CCM Cathedral Cave 81.69 312 P P 23 57 14.3 +1.3
baz=48
O22K Cooper Landing 81.69 355 P P 23 57 13.0 +0.5
baz=7.9
KAIM Kayak Island 81.78 352 P P 23 57 14.5 +1.4
baz=12
DWPF Disney Wildern 81.78 299 P P 23 57 14.8 +1.2
baz=51
N18K Kilae Creek 81.78 358 P P 23 57 13.8 +0.7
N18K IAmb IAmb 23 57 21.9
comp=Z,22nm,1.2s
N18K Kilae Creek 81.78 358 P P 23 57 14.8 +1.8
baz=3.0
M15K Kasigluk River 81.81 1 P P 23 57 14.4 +1.3
baz=359
N17K Nushagak Hills 81.97 359 P P 23 57 15.6 +1.6
baz=2.0
R32K Eaglecrest 81.97 347 P P 23 57 15.1 +1.1
baz=20,SNR=6.3
M11K Mekoryuk 81.98 3 P P 23 57 14.5 +0.5
baz=355
P23K Montague Islan 82.00 354 P P 23 57 15.5 +1.4
baz=9.7
N16K Nishlik Lake 82.03 360 P P 23 57 15.8 +1.4
baz=0.7
M13K Dall Lake 82.05 2 P P 23 57 14.1 -0.3
baz=357
SEW Seward 82.05 355 P P 23 57 15.9 +1.5
baz=8.1
PEA0B Petropavlovsk- 82.15 24 *i*P P 23 57 12.3 -2.8
PETK Petropavlovsk- 82.15 24 LR LR 00 38 34.6
comp=Z,171nm,19.0s,baz=316,slow=39
O20K Slope Mountain 82.26 356 P P 23 57 17.0 +1.3
baz=5.6
N15K Kwethluk River 82.34 0 P P 23 57 15.9 -0.1
baz=360
LRAL Lakeview Retre 82.38 306 P P 23 57 17.1 +0.5
baz=50
BRLK Bradley Lake 82.48 356 P P 23 57 16.7 -0.1
BRLK IAmb IAmb 23 57 25.2
comp=Z,22nm,1.2s
BRSE Bradley Lake S 82.50 355 P P 23 57 16.9 +0.1
baz=7.1
S31K Pelican 82.56 348 P P 23 57 17.5 +0.4
baz=18
N14K Kuskokwak Cree 82.58 1 P P 23 57 17.6 +0.5
baz=358
O18K Koktuh Hills 82.59 358 P P 23 57 18.6 +1.3
baz=3.5
O17K Koliganek Bris 82.72 359 P P 23 57 18.6 +0.7
baz=2.0
P19K Oil Pt 82.72 357 P P 23 57 18.3 +0.3
baz=5.1
S32K Killisnoo 82.74 347 P P 23 57 19.9 +1.9
baz=20
O16K Kokwok River B 82.91 359 P P 23 57 20.6 +1.7
baz=1.2
P18K Big Mountain, 83.06 358 P P 23 57 20.5 +0.7
baz=3.5
ASAJ Asahikawa 83.11 38 LR LR 00 38 19.6
comp=Z,188nm,19.0s,baz=322,slow=39
S39A Bolivar 83.15 313 P P 23 57 19.9 -0.7
S39A IAmb IAmb 23 57 28.6
comp=Z,6.8nm,0.8s
O14K Tigyukauivet M 83.25 1 P P 23 57 21.1 +0.4
baz=359
BDFB Brasilia 83.28 244 P P 23 57 22.8 +1.2
comp=Z,2.6nm,0.6s,baz=88,slow=8.2,SNR=5.3
comp=Z,2.6nm,0.6s
P17K Kvichak River 83.28 358 P P 23 57 20.3 -0.6
baz=2.5
BRAL Brewton 83.62 305 P P 23 57 24.4 +1.2
baz=49
EGMT Eagleton 83.68 329 P P 23 57 23.4 +0.1
EGMT Eagleton 83.68 329 P P 23 57 23.0 -0.3
baz=37
V35K Ketchikan 84.16 344 P P 23 57 25.8 +0.4
baz=22
SDV Santo Domingo 85.43 278 P P 23 57 32.8 0.0
SDV IAmb IAmb 23 57 41.4
comp=Z,14nm,0.9s
T35A Sooner Cattle 85.52 314 P P 23 57 33.0 +0.3
RLMT Red Lodge 85.78 327 P P 23 57 32.1 -2.0
baz=38
TUL3 Leonard 85.81 313 P P 23 57 33.3 -0.8
baz=45
CBKS Cedar Bluff 85.94 317 P P 23 57 35.6 +0.8
baz=43
CHGN Chignik 86.22 359 P P 23 57 35.6 -0.1
baz=1.0
BBB Bella Bella 86.23 341 LR LR 00 38 27.6
comp=Z,48nm,18.1s,baz=26,slow=37
S14K Fog Glacier 86.24 360 P P 23 57 35.7 -0.3
baz=0.1
MJAR Matsushiro Arr 86.29 46 P P 23 57 36.3 -0.2
comp=Z,2.6nm,0.8s,baz=325,slow=6.3,SNR=6.2
MJAR LR LR 00 38 36.2
comp=Z,40nm,18.5s,baz=333,slow=37
comp=Z,2.6nm,0.8s
NEW Newport 86.31 333 P P 23 57 37.4 +1.0
baz=32
NEW Newport 86.31 333 P P 23 57 37.5 +1.1
comp=Z,1.9nm,0.5s,baz=117,slow=23,SNR=7.3
comp=Z,1.9nm,0.5s
BOZ Bozeman (W) 86.40 328 P P 23 57 38.4 +1.3
baz=36
H17A Grant Village 86.92 327 P P 23 57 39.0 -0.8
baz=37
SHEM Shemya Is, Ala 86.94 16 LR LR 00 41 17.1
comp=Z,42nm,18.1s,baz=295,slow=39
PDAR Pinedale Array 87.77 326 P P 23 57 43.7 -0.2
PDAR Pinedale Array 87.77 326 P P 23 57 44.2 +0.4
comp=Z,0.5nm,0.7s,baz=72,slow=6.1,SNR=5.2
BMO Blue Mountains 89.27 331 ⇑P P 23 57 51.5 +0.8
HMU Henry Mountain 92.17 323 P P 23 58 04.6 +0.1
HMU IAmb IAmb 23 58 11.8
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 95.11 329 LR LR 00 46 57.1
comp=Z,52nm,18.6s,baz=1.0,slow=39
TXAR Lajitas Array 95.14 313 P P 23 58 19.6 +1.5
comp=Z,0.4nm,0.6s,baz=61,slow=5.3,SNR=4.0
comp=Z,0.4nm,0.6s
CPUP Villa Florida 96.81 242 LR LR 00 43 26.4
comp=Z,320nm,18.6s,baz=52,slow=36
WRA Warramunga Arr 120.62 92 PKP PKPdf 00 03 46.2 -0.5
comp=Z,1.9nm,0.9s,baz=314,slow=1.6,SNR=4.5
ASAR Alice Springs 122.23 96 PKP PKPdf 00 03 49.5 -0.2
comp=Z,0.6nm,0.6s,baz=307,slow=2.0,SNR=7.4
QSPA South Pole Qui 127.69 180 PKP PKiKP 00 03 59.1 -0.3
comp=Z,2.2nm,0.9s,baz=261,slow=1.2,SNR=5.1
DZM Mont Dzumac 146.86 71 *e*LR LR 00 52 58.7
comp=Z,120nm,29.8s
PPT2 Papeete2 157.99 334 *e*LR LR 00 58 00.1
comp=Z,67nm,23.8s

KRSC 21 23:48:28.3±1.4, 49.91N×156.51E, h113km±19km, MI3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.81**	**342**	*e*P	Pn	23 48 48.5	+0.6
SKR				*e*S	Sn	23 49 03.8	+1.2
PAU	**Pauzhetka**	**1.57**	**7**	*e*P	Pn	23 48 58.1	+2.0
PAU				*e*S	Sn	23 49 20.3	+3.1
KDTR	**Khodutka, Kamc**	**2.14**	**27**	*e*P	Pn	23 49 04.8	+1.6
KDTR				*e*S	Sn	23 49 32.0	+2.1
ASAK	**Asacha**	**2.63**	**19**	*e*P	Pn	23 49 11.3	+1.8
MTVR	**Mutnovka**	**2.78**	**22**	*e*P	Pn	23 49 13.6	+2.0
MTVR				*e*S	Sn	23 49 46.9	+2.0
GRL	**Gorelyy**	**2.82**	**20**	*e*P	Pn	23 49 14.5	+2.4
RUS	**Russkaya**	**2.82**	**26**	*e*P	Pn	23 49 13.0	+1.0
RUS				*e*S	Sn	23 49 46.8	+1.2
UGLR	**Uglovaya**	**3.60**	**23**	*e*P	Pn	23 49 24.8	+2.3
AVH	**Avacha**	**3.63**	**22**	*e*P	Pn	23 49 25.1	+2.3
KOK	**Koryaka**	**3.64**	**21**	*e*P	Pn	23 49 25.2	+2.4
SMAR	**Somma**	**3.65**	**22**	*e*P	Pn	23 49 25.0	+1.9
KRER	**Koryakskii**	**3.67**	**21**	*e*S	Sn	23 50 08.3	+2.2
KRX	**Arik**	**3.70**	**20**	*e*P	Pn	23 49 25.7	+1.9
NLC	**Nalytchevo**	**3.71**	**27**	*e*S	Sn	23 50 06.5	-0.2
SPN	**Mys Shipunski**	**3.87**	**33**	*e*P	Pn	23 49 28.9	+3.0
SPN				*e*S	Sn	23 50 11.5	+1.0

*SJA **21** 23:55:13.6±0.6, 23.84S×66.65W, h237km±6km, ML3.7, MW3.8*
*GUC **21** 23:55:16.2±0.8, 23.84S×67.14W, h236km±15km, ML3.7*

ISC 21 23:55:13.1±2.0, 23.85S±0.04×66.70W±0.06, h237km±17km, n28, σ1§41/44, 5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.39**	**129**	*e*P	Pn	23 55 50.2	+0.7
YJA	**Yavi**	**1.99**	**33**	*e*P	Pn	23 55 56.0	+1.1
YJA				*e*S	S	23 56 27.1	-0.6
FSA	**Cafayete**	**2.35**	**164**	*e*P	Pn	23 55 59.0	+1.0
FSA				*e*S	S	23 56 31.4	-2.0
LVC	**Limon Verde**	**2.38**	**301**	⇑*i*P	Pn	23 55 59.8	+1.2
LVC				*e*S	S	23 56 32.5	-1.7
LVC				IAML		23 56 35.8	
287nm,0.2s							
PB15	**IPOC Station P**	**2.62**	**284**	*e*P	Pn	23 56 02.3	+1.3
PB15				*e*S	S	23 56 39.7	+1.2
PB15				IAML		23 56 42.3	
comp=Z,653nm,0.2s							
PB15	**IPOC Station P**	**2.62**	**284**	*i* P	Pn	23 56 02.2	+1.3
PB15				*e*S	S	23 56 36.8	-1.7
PB06	**IPOC Station P**	**2.88**	**293**	*e*P	Pn	23 56 05.1	+1.4
PB06				*e*S	S	23 56 42.5	-0.9
PB06				IAML		23 56 47.0	
comp=Z,86nm,0.1s							
PB06	**IPOC Station P**	**2.88**	**293**	⇑*i*P	Pn	23 56 04.9	+1.3
PB06				*e*S	S	23 56 41.4	-1.9
PB06				IAML		23 56 43.6	
comp=N,160nm,0.2s							
GO02	**Mina Guanaco**	**2.94**	**243**	*e*P	Pn	23 56 05.8	+1.3
GO02				*e*S	S	23 56 44.9	0.0
GO02	**Mina Guanaco**	**2.94**	**243**	⇑*i*P	Pn	23 56 05.8	+1.3
GO02				*e*S	S	23 56 43.7	-1.1
PB09	**IPOC Station P**	**3.11**	**311**	*e*P	Pn	23 56 08.1	+1.8
PB09				*e*S	S	23 56 48.0	-0.1
PB09				IAML		23 56 50.5	
comp=Z,104nm,0.2s							
PB09	**IPOC Station P**	**3.11**	**311**	*e*P	Pn	23 56 07.9	+1.7
PB09				IAML		23 56 52.4	
comp=E,88nm,0.2s
AHML Horco Molle 3.17 157 *e*P Pn 23 56 07.9 +1.1
PB14 IPOC Station P 3.47 256 *e*P Pn 23 56 11.6 +1.2
PB14 IAML 23 57 00.8
comp=Z,99nm,0.4s
PB14 IPOC Station P 3.47 256 *i* P Pn 23 56 11.4 +1.0
PB14 *e*S S 23 56 53.2 -2.4
PB04 IPOC Station P 3.52 295 *e*P Pn 23 56 12.1 +1.3
PB04 IAML 23 56 58.9
comp=Z,92nm,0.2s
PB04 IPOC Station P 3.52 295 ⇑*i*P Pn 23 56 11.9 +1.0
PB07 IPOC Station P 3.62 305 *e*P Pn 23 56 13.3 +1.2
PB07 *e*S S 23 56 57.5 -1.1
PB07 IAML 23 56 59.5
comp=Z,76nm,0.1s
PB07 IPOC Station P 3.62 305 ⇑*i*P Pn 23 56 13.1 +1.0
AC02 Maricunga 3.70 216 *e*P Pn 23 56 15.2 +1.9
PB01 IPOC Station P 3.80 317 *e*P Pn 23 56 15.2 +1.0
PB01 *e*S S 23 57 01.4 -0.9
PB01 IAML 23 57 04.5
comp=Z,104nm,0.2s
PB01 IPOC Station P 3.80 317 *e*P Pn 23 56 14.9 +0.8
PB02 IPOC Station P 3.88 310 *e*P Pn 23 56 15.8 +0.7
PATCX Punta Patache 4.39 313 *e*P Pn 23 56 21.4 +0.2
TA01 Diego Aracena 4.59 315 *e*P Pn 23 56 24.6 +1.1
TA01 *e*S S 23 57 17.2 -2.1
TA01 IAML 23 57 22.2
comp=Z,24nm,0.6s
GO01 Chusmiza 4.76 330 *e*P Pn 23 56 27.9 +1.8
GO03 Copiap 4.91 220 *e*P Pn 23 56 28.2 +0.9
GO03 *e*S S 23 57 24.5 -1.8
PB11 IPOC Station P 4.91 325 *e*P Pn 23 56 27.9 +0.3
PB11 *e*S S 23 57 24.4 -2.2
PB11 IAML 23 57 26.0
comp=Z,52nm,0.2s

IDC 21 23:59:10.2±19.0, 7.68S×128.50E, h251km±244km, mb2.3/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=313.5km s-min=98.1km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.45**	**156**	P	Pn	00 02 11.8	+0.2
0.4nm,0.3s,baz=333,slow=12,SNR=22							
1.0nm,0.3s							
ASAR	**Alice Springs**	**16.73**	**163**	P	P	00 02 48.8	-0.2
0.4nm,0.3s,baz=346,slow=12,SNR=22							
1.5nm,0.4s							
MKAR	**Makanchi Array**	**67.98**	**328**	P	P	00 09 42.4	0.0
baz=118,slow=6.4,SNR=1.5							

*IDC **22** 00:10:48.8±0.8, 30.58N×101.82E, h0km, mb3.9/11, mbtmp3.9/13, ML3.9/2, Error ellipse: s-maj=28.2km s-min=14.7km az=65.0*
*BJI **22** 00:10:49.0±0.0, 30.44N×101.51E, h11km, mb3.9/16, mB4.5/3, ML4.0/20, Ms3.9/15, Ms7 3.6/14*

ISC 22 00:10:50.3±0.6, 30.43N±0.04×101.56E±0.06, h10km, n27, σ2§24/31, mb3.9/13, 1C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.96**	**75**	⇓Pg	**Pb**	**00 11 25.8**	**-0.3**
CD2				Sg	**Sg**	**00 11 52.6**	**-0.7**
CD2				smax	smax		
comp=N,3μm,0.8s							
CD2				smax	smax		
comp=E,3μm,1.1s							
PZH	**PanZhiHua**	**3.92**	**178**	Pn	**Pn**	**00 11 53.3**	**+2.6**
PZH				Sn	**Sb**	**00 12 43.3**	**-3.9**
PZH				Sg	**Sg**	**00 12 56.8**	**+0.5**
PZH				smax	smax		
comp=N,190nm,1.2s							
PZH				smax	smax		
comp=E,370nm,1.4s							
PZH				LR	LR		
comp=N,680nm,6.9s							
PZH				LR	LR		
comp=E,920nm,6.0s							
PZH				LR	LR		
comp=Z,980nm,7.2s							
KMI	**Kunming**	**5.39**	**168**	⇓Pn	**Pn**	**00 12 14.1**	**+3.0**
KMI				smax	smax		
comp=N,63nm,1.2s							
KMI				smax	smax		
comp=E,75nm,1.1s							
KMI				LR	LR		
comp=N,800nm,5.7s							
KMI				LR	LR		
comp=E,320nm,6.4s							
KMI				LR	LR		
comp=Z,560nm,5.5s							
LZH	**Lanzhou**	**5.95**	**18**	*e*P	**Pg**	**00 12 42.0**	**-2.4**
GYA	**Guiyang**	**5.99**	**130**	⇓Pn	**Pn**	**00 12 20.6**	**+1.4**
GYA				Sn	**Sn**	**00 13 31.6**	**+3.6**
GYA				smax	smax		
comp=N,55nm,0.6s							
GYA				smax	smax		
comp=E,60nm,0.8s							
GYA				LR	LR		
comp=N,1μm,8.6s							
GYA				LR	LR		
comp=E,1μm,8.7s							
GYA				LR	LR		
comp=Z,470nm,7.2s							
XAN	**Xi'an**	**7.20**	**58**	Pn	**Pn**	**00 12 36.3**	**+0.6**
XAN				smax	smax		
comp=N,280nm,1.1s							
XAN				smax	smax		
comp=E,250nm,0.8s							
XAN				LR	LR		
comp=N,2μm,6.7s							
XAN				LR	LR		
comp=E,500nm,6.7s							
XAN				LR	LR		
comp=Z,360nm,8.3s							
GTA	**Gaotai**	**9.07**	**351**	P	**Pn**	**00 13 04.4**	**+3.0**
GTA				pmax	pmax		
comp=Z,7.0nm,1.0s							
GTA				LR	LR		
comp=N,250nm,8.8s							
GTA				LR	LR		
comp=E,310nm,12.3s							
GTA				LR	LR		
comp=Z,290nm,10.0s							
GULI	**GuiLin**	**9.33**	**121**	P	**Pn**	**00 13 03.1**	**-1.8**
GULI				smax	smax		
comp=N,90nm,1.0s							
GULI				smax	smax		
comp=E,40nm,1.2s							
CNSH	**ChangSha**	**10.18**	**100**	⇑P	**Pn**	**00 13 17.8**	**+1.2**
CNSH				S	**Sn**	**00 15 09.3**	**-1.5**
WHN	**Wuhan**	**11.04**	**86**	P	Pn	00 13 32.4	+4.1
WHN				S	**Sn**	**00 15 38.4**	**+6.5**
WHN				LR	LR		
comp=N,870nm,9.5s							
WHN				LR	LR		
comp=E,900nm,7.2s							
WHN				LR	LR		
comp=Z,1μm,6.8s							
CMAR	**Chiang Mai Arr**	**12.16**	**192**	Pn	Pn	00 13 48.0	+4.3
0.4nm,0.3s,baz=17,slow=9.4,SNR=13							
CMAR				Lg	Lg	00 17 24.5	
baz=236,slow=31							
0.6nm,0.4s							
QIZ	**Qiongzhong**	**13.62**	**145**	P	**Pn**	**00 14 01.1**	**-2.5**
QIZ				S	**Sn**	**00 16 35.6**	**+0.6**
QIZ				LR	LR		
comp=N,250nm,8.8s							
QIZ				LR	LR		
comp=E,320nm,7.1s							
QIZ				LR	LR		
comp=Z,310nm,8.3s							
XLT	**XiLinHaoTe**	**17.70**	**37**	*e*P	**P**	**00 15 00.6**	**+2.7**
XLT				pmax	pmax		
comp=Z,5.0nm,1.1s							
XLT				pmax	pmax		
comp=Z,100nm,5.6s							
SONM	**Songino Array**	**17.77**	**11**	P	**Pn**	**00 14 56.8**	**-1.1**
0.2nm,0.3s,baz=193,slow=11,SNR=22							
4.5nm,1.0s							
MKAR	**Makanchi Array**	**22.12**	**323**	P	**P**	**00 15 45.6**	**-0.3**
3.3nm,0.8s,baz=135,slow=13,SNR=22							
3.3nm,0.8s							
KSH	**Kashi**	**22.78**	**300**	P	P	00 15 59.4	+6.3

KSH					sP	sP	00 16 05.3	+6.4	
KSH					pmax	pmax			
	comp=Z,3.0nm,1.1s								
KSRS	**Korea Array**	**22.92**	**65**		P	**P**	**00 15 51.8**	**-2.7**	
	3.1nm,0.7s,baz=253,slow=9.0,SNR=8.6								
	3.1nm,0.7s								
BNX	**BinXian**	**25.30**	**46**		⇓P	**P**	**00 16 18.3**	**+1.4**	
BNX					pmax	pmax			
	comp=Z,7.0nm,0.9s								
BNX					pmax	pmax			
	comp=Z,66nm,5.2s								
ZALV	**Zalesovo Beam**	**26.43**	**338**		P	**P**	**00 16 26.6**	**-0.5**	
	4.6nm,0.8s,baz=147,slow=9.8,SNR=19								
	4.6nm,0.8s								
KURBB	**Kurchatov Arra**	**26.51**	**326**		P	**P**	**00 16 27.2**	**-0.7**	
	1.3nm,0.7s,baz=132,slow=9.7,SNR=21								
	1.3nm,0.7s								
BVAR	**Borovoye Array**	**32.00**	**324**		P	**P**	**00 17 17.0**	**+0.4**	
	0.6nm,0.5s,baz=139,slow=6.8,SNR=4.7								
	0.6nm,0.5s								
NRIK	**Noril'sk**	**39.77**	**352**		P	**P**	**00 18 21.7**	**-1.3**	
	2.7nm,0.7s,baz=164,slow=5.2,SNR=8.3								
	2.7nm,0.7s								
FINES	**FINESS Array B**	**56.90**	**326**		P	**P**	**00 20 35.0**	**-0.2**	
	1.1nm,0.8s,baz=79,slow=7.2,SNR=2.3								
	1.1nm,0.8s								
ARCES	**ARCESS Array B**	**56.97**	**336**		P	**P**	**00 20 36.6**	**+0.9**	
	1.7nm,0.8s,baz=96,slow=9.2,SNR=1.3								
	1.7nm,0.8s								
WRA	**Warramunga Arr**	**59.19**	**144**		P	**P**	**00 20 51.1**	**-0.7**	
	5.4nm,1.0s,baz=334,slow=7.5,SNR=24								
	5.4nm,1.0s								
ASAR	**Alice Springs**	**62.11**	**146**		P	**P**	**00 21 11.0**	**-0.6**	
	0.4nm,0.5s,baz=322,slow=6.9,SNR=5.2								
	0.4nm,0.5s								
YKA	**Yellowknife Ar**	**82.96**	**16**		P	**P**	**00 23 15.1**	**-0.2**	
	0.2nm,0.6s,baz=325,slow=4.1,SNR=2.4								
	0.2nm,0.6s								

AEIC ***22*** *00:31:00.2±1.6,51°.27N±0°.10×177°.4E±0°.1, h30km±5km, Error ellipse: s-maj=17.3km s-min=3.9km az=142.0*

NEIC 22 00:30:57.9±1.1, 51°.3N±0°.1×176°.9E±0°.2, h35km±2km, mb3.7/3, ML3.1 (AEIC), Error ellipse: s-maj=28.5km s-min=12.3km az=139.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.17**	**57**		Pn	00 31 18.0	+0.2
LSSA					Sn	00 31 31.6	-1.0
LSSE	**Little Sitkin**	**1.19**	**58**		Pn	00 31 18.5	+0.4
LSPA	**Little Sitkin**	**1.21**	**57**		Pn	00 31 18.2	-0.1
LSPA					Sn	00 31 33.0	-0.4
CEPE	**Semis' Perret**	**1.81**	**68**		Pn	00 31 26.4	-0.2
GANE	**Gareloi Northe**	**2.72**	**78**		Pn	00 31 39.4	+0.3
TANO	**Tanaga North**	**3.14**	**77**		Pn	00 31 45.2	+0.3
TAFP	**Tanaga Falls P**	**3.22**	**78**		Pn	00 31 46.1	+0.1
TAFP					Sn	00 32 22.3	-0.9
KIWB	**Kanaga Island**	**3.73**	**79**	Pn	Pn	00 31 52.9	-0.1
ADK	**Adak**	**4.02**	**79**	Pn	Pn	00 31 56.6	-0.3
KOWE	**Korovin West**	**5.56**	**76**		Pn	00 32 18.1	-0.1
ATKA	**Atka Island**	**5.58**	**77**	Pn	Pn	00 32 18.6	+0.3
O18K	**Koktuh Hills**	**17.79**	**51**		Pn	00 35 00.9	-1.6
O18K				IAmb	IAmb	00 35 13.7	
	comp=Z,6.7nm,1.2s						
N19K	**Bonanza Creek**	**18.42**	**48**	P	P	00 35 08.7	-1.3
N19K				IAmb	IAmb	00 35 22.4	
	comp=Z,7.3nm,1.2s						
H18K	**Honhosa River**	**18.82**	**33**	P	P	00 35 13.0	-1.2
H18K				IAmb	IAmb	00 35 20.4	
	comp=Z,6.4nm,1.4s						

SOME ***22*** *00:33:03.0,38°.77N×71°.85E, h10km*

NNC ***22*** *00:33:11.7±9.1,38°.71N×70°.59E, h13km±187km, mb3.4, mpv3.1, Error ellipse: s-maj=189.6km s-min=34.1km az=14.0*

ISC 22 00:33:00.5±2.6, 38°.7N±0°.1×71°.92E±0°.10, h10km, n7, σ2s 06/12, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.13**	**13**	*eP*	**Pg**	**00 34 19.2**	**-0.4**
	1.6nm,0.2s						
MRKS				*eS*	**Sg**	**00 35 13.8**	**+0.7**
	11nm,0.3s						
KK31	**Karatay Array**	**4.50**	**347**	⇓Pn	**Pb**	**00 34 18.5**	**-1.0**
	1.1nm,0.3s,baz=182,slow=14,SNR=23						
KK31				⇑Sn	**Sb**	**00 35 09.6**	**-4.1**
	1.0nm,0.4s,baz=180,slow=28,SNR=8.7						
BRLS	**Borolday**	**4.57**	**340**	*eP*	**Pb**	**00 34 22.1**	**+1.2**
	1.1nm,0.2s						
BRLS				*eS*	**Sb**	**00 35 18.6**	**+2.6**
	5.5nm,0.4s						
TKM2	**Tokmak 2**	**5.03**	**33**	⇑Pn	**Pg**	**00 34 35.3**	**-1.5**
	1.2nm,0.5s						
TKM2				⇓Sn	**Sg**	**00 35 42.1**	**+0.2**
	3.5nm,0.8s						
KTBS	**Karatobe**	**6.13**	**34**	*eP*	**Pg**	**00 34 57.5**	**-0.4**
	0.3nm,0.3s						
KTBS				*eS*	**Sg**	**00 36 20.2**	**+2.8**
	2.2nm,0.6s						
AB31	**Akbulak array**	**13.58**	**325**	P	**Pn**	**00 36 12.8**	**-0.3**
	0.3nm,0.5s,baz=160,slow=11,SNR=8.2						
AKTO	**Aktyubinsk**	**15.30**	**324**	⇓P	**P**	**00 36 42.1**	**+0.9**
	0.4nm,0.7s						

NEIC ***22*** *00:43:27.4±1.2,20°.5S±0°.2×178°.1W±0°.2, h466km±8km, mb4.2/18, Error ellipse: s-maj=26.3km s-min=20.5km az=120.0*

IDC ***22*** *00:43:37.1±4.4,20°.47S×178°.35W, h581km±49km, mb3.4/9, mbtmp4.3/9, Error ellipse: s-maj=23.8km s-min=19.0km az=146.0*

ISC 22 00:43:29.2±0.5, 20°.4S±0°.1×178°.3W±0°.1, h500km, n55, σ1s 31/55, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTZ	**Ruatahuna**	**18.64**	**192**	P	**P**	**00 47 13.1**	**-2.3**
MRZ	**Mangatainoka R**	**20.90**	**193**	P	**P**	**00 47 33.9**	**-2.0**
CTAO	**Charters Tower**	**33.26**	**264**	P	**P**	**00 49 26.8**	**+2.1**
CTAO				IAmb	IAmb	00 49 36.2	
	comp=Z,23nm,1.5s						
STKA	**Stephens Creek**	**37.63**	**244**	P	**P**	**00 50 01.4**	**+0.5**
WR0	**Warramunga Arr**	**44.19**	**262**	P	**P**	**00 50 54.5**	**+1.1**
WR0				IAmb	IAmb	00 50 59.0	
	comp=Z,9.6nm,1.4s						
AS31	**Alice Springs**	**44.31**	**257**	P	**P**	**00 50 55.4**	**+1.0**
ASAR	**Alice Springs**	**44.31**	**257**	P	**P**	**00 50 54.8**	**+0.4**
ASAR	**Alice Springs**	**44.31**	**257**	P	**P**	**00 50 56.0**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=96,slow=7.6,SNR=23						
ASAR				PcP	**PcP**	**00 52 27.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=98,slow=4.5,SNR=5.2						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**44.38**	**262**	P	**P**	**00 50 55.2**	**+0.3**
WRA	**Warramunga Arr**	**44.38**	**262**	P	**P**	**00 50 55.9**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.5,SNR=45						
	comp=Z,0.9nm,0.3s						
VNDA	**Vanda**	**58.02**	**185**	P	**P**	**00 52 34.2**	**+1.2**
QSPA	**South Pole Qui**	**69.70**	**180**	P	**P**	**00 53 49.0**	**+1.0**
QSPA				IAmb	IAmb	00 53 50.2	
	comp=Z,3.9nm,0.8s						
QSPA	**South Pole Qui**	**69.70**	**180**	P	**P**	**00 53 48.7**	**+0.7**
	comp=Z,2.7nm,0.5s,baz=359,slow=0.7,SNR=14						
	comp=Z,2.7nm,0.5s						
PETK	**Petropavlovsk-**	**76.08**	**345**	P	**P**	**00 54 24.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=153,slow=7.9,SNR=2.1						
	comp=Z,1.7nm,0.6s						
BELA	**Belgrano 2**	**79.72**	**173**	P	**P**	**00 54 44.2**	**+0.2**
BELA				IAmb	IAmb	00 55 05.9	
	comp=Z,9.3nm,1.4s						
NVAR	**Mina Array Bea**	**81.10**	**43**	P	**P**	**00 54 53.5**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=225,slow=8.9,SNR=15						
	comp=Z,1.9nm,0.8s						
KVN	**Kaiserville**	**81.58**	**43**	P	**P**	**00 54 56.1**	**+1.5**
J05D	**Fort Rock, OR**	**82.15**	**38**	P	**P**	**00 54 59.3**	**+2.0**
U15A	**North Rim**	**84.05**	**48**	P	**P**	**00 55 09.1**	**+1.9**
U15A				IAmb	IAmb	00 55 09.9	
	comp=Z,3.7nm,1.0s						
GHO	**Glory Hole Cre**	**85.16**	**14**	P	**P**	**00 55 12.3**	**+0.6**
GHO				IAmb	IAmb	00 55 13.5	
	comp=Z,8.2nm,0.9s						
PLID	**Pearl Lake**	**86.26**	**39**	P	**P**	**00 55 18.7**	**+1.1**
PLID				IAmb	IAmb	00 55 19.1	
	comp=Z,1.6nm,0.6s						

RND	**Reindeer**	**86.62**	**13**		P	**P**	**00 55 19.5**	**+0.8**	
RND					IAmb	IAmb	00 55 20.3		
	comp=Z,9.3nm,1.1s								
TXAR	**Lajitas Array**	**87.19**	**57**		P	**P**	**00 55 23.9**	**+1.7**	
TXAR	**Lajitas Array**	**87.19**	**57**		P	**P**	**00 55 24.0**	**+1.8**	
	comp=Z,1.4nm,0.8s,baz=219,slow=7.0,SNR=8.2								
	comp=Z,1.4nm,0.8s								
ILAR	**Eielson Array**	**88.24**	**13**		P	**P**	**00 55 26.1**	**-0.1**	
	comp=Z,1.1nm,0.5s,baz=222,slow=5.6,SNR=26								
	comp=Z,1.1nm,0.5s								
M29M	**Somme Creek**	**88.34**	**17**		P	**P**	**00 55 28.0**	**+1.2**	
M29M					IAmb	IAmb	00 55 28.8		
	comp=Z,3.6nm,0.8s								
PD31	**Pinedale Array**	**89.03**	**43**		P	**P**	**00 55 31.8**	**+1.1**	
PD31					IAmb	IAmb	00 55 32.2		
	comp=Z,1.7nm,0.8s								
PDAR	**Pinedale Array**	**89.03**	**43**		P	**P**	**00 55 31.6**	**+0.9**	
	comp=Z,1.2nm,0.6s,baz=214,slow=3.3,SNR=15								
	comp=Z,1.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**89.84**	**290**		P	**P**	**00 55 34.3**	**-0.4**	
	comp=Z,1.1nm,0.3s,baz=110,slow=2.1,SNR=2.8								
	comp=Z,1.1nm,0.3s								
MKAR	**Makanchi Array**	**110.94**	**313**		PKiKP	**PKiKP**	**01 01 04.4**	**-0.8**	
	comp=Z,0.4nm,0.6s,baz=102,slow=1.1,SNR=7.6								
KURBB	**Kurchatov Arra**	**113.79**	**317**		PKiKP	**PKiKP**	**01 01 09.1**	**-1.3**	
	comp=Z,1.1nm,0.2s,baz=98,slow=2.1,SNR=4.5								
BVAR	**Borovoye Array**	**118.83**	**320**		PKP	**PKiKP**	**01 01 19.3**	**-0.8**	
	comp=Z,0.9nm,0.3s,baz=142,slow=0.7,SNR=7.9								
ARCES	**ARCESS Array B**	**128.75**	**350**		PKP	**PKiKP**	**01 01 38.2**	**-1.1**	
	comp=Z,1.9nm,0.7s,baz=62,slow=2.1,SNR=5.2								
FINES	**FINESS Array B**	**135.58**	**344**		PKP	**PKPdf**	**01 01 49.7**	**-1.9**	
	comp=Z,1.1nm,0.9s,baz=90,slow=2.8,SNR=4.6								
AKASG	**Malin Array Be**	**142.78**	**331**		PKhKP	PKPpre	01 02 01.7		
	comp=Z,3.3nm,0.4s,baz=43,slow=4.2,SNR=12								
EKA	**Eskdalemuir Ar**	**144.90**	**5**		PKPbc	**PKPab**	**01 02 08.6**	**-1.1**	
	comp=Z,2.9nm,0.8s,baz=325,slow=3.3,SNR=7.8								
KWP	**Kalwaria Pacla**	**146.36**	**335**		PKPbc	**PKiKP**	**01 02 14.4**	**-1.4**	
BR131	**Keskin Array S**	**146.57**	**312**		PKPbc	**PKiKP**	**01 02 14.6**	**-2.2**	
BRTR	**Keskin Array B**	**146.57**	**312**		PKPbc	**PKiKP**	**01 02 14.5**	**-2.3**	
BRTR	**Keskin Array B**	**146.57**	**312**		PKPbc	**PKPbc**	**01 02 14.4**	**-0.2**	
	comp=Z,1.2nm,0.5s,baz=81,slow=0.7,SNR=11								
BUR08	**Bucovina Ar. S**	**146.82**	**331**			**PKiKP**	**01 02 15.7**	**-1.3**	
BURAR	**Bucovina Array**	**146.83**	**330**		PKPbc	**PKiKP**	**01 02 16.0**	**-1.0**	
MMAI	**Mount Meron Ar**	**147.54**	**300**		PKPbc	**PKiKP**	**01 02 18.3**	**-0.6**	
	comp=Z,2.3nm,0.4s,baz=74,slow=6.2,SNR=18								
CLL	**Collm**	**147.88**	**347**		PKPbc	**PKiKP**	**01 02 17.9**	**-0.9**	
CSS	**Mathiatis**	**148.63**	**304**		PKPbc	**PKiKP**	**01 02 19.9**	**-1.1**	
KHC	**Kasperske Hory**	**149.78**	**344**		PKPbc	**PKiKP**	**01 02 22.5**	**-0.4**	
GERES	**GERESS Array B**	**150.01**	**344**		PKPbc	**PKiKP**	**01 02 22.9**	**-0.7**	
	comp=Z,1.7nm,0.8s,baz=12,slow=5.0,SNR=2.7								
CONA	**Conrad Observa**	**150.23**	**341**		*e*PKP	**PKPdf**	**01 02 17.2**	**-0.5**	
	comp=Z,5.4nm,1.5s								
RONA	**Rosalia, Austr**	**150.29**	**340**		*e*PKP	**PKPdf**	**01 02 17.3**	**-0.5**	
	comp=Z,4.1nm,0.5s								
ELL	**Elmali**	**150.51**	**310**		PKPbc	**PKiKP**	**01 02 24.3**	**-0.7**	
MOA	**Molln**	**150.77**	**343**		*e*PKP	**PKPdf**	**01 02 16.2**	**-2.3**	
	comp=Z,0.5nm,0.3s								
RDO	**Rodopi**	**151.06**	**321**		PKPbc	**PKiKP**	**01 02 25.0**	**-0.8**	
WATA	**Walderalm**	**151.94**	**346**		PKP	**PKPdf**	**01 02 18.3**	**-2.0**	
	comp=Z,5.2nm,1.9s								
WTTA	**Wattenberg**	**151.99**	**346**		PKP	**PKPdf**	**01 02 18.4**	**-2.1**	
	comp=Z,6.5nm,1.6s								
MOTA	**Moosalm**	**152.04**	**346**		*e*PKP	**PKPdf**	**01 02 19.8**	**-0.8**	
	comp=Z,2.1nm,1.0s								

KRSC 22 01:08:43.0±0.8, 49°.15N×156°.65E, h35km±15km, MI3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.57**	**348**	*eP*	Pn	01 09 09.6	+1.3
KDTR	**Khodutka, Kamc**	**2.82**	**18**	*eP*	Pn	01 09 28.8	+3.4
KDTR				*eS*	Sn	01 10 02.4	+4.3
ASAK	**Asacha**	**3.34**	**13**	*eP*	Pn	01 09 36.1	+3.5
MTVR	**Mutnovka**	**3.48**	**16**	*eP*	Pn	01 09 39.1	+4.5
MTVR				*eS*	Sn	01 10 18.9	+4.3
RUS	**Russkaya**	**3.50**	**19**	*eP*	Pn	01 09 38.6	+3.9
GRL	**Gorelyy**	**3.53**	**14**	*eP*	Pn	01 09 39.9	+4.6
UGLR	**Uglovaya**	**4.29**	**18**	*eP*	Pn	01 09 50.3	+4.6
AVH	**Avacha**	**4.33**	**17**	*eP*	Pn	01 09 50.8	+4.6
KOK	**Koryaka**	**4.33**	**16**	*eP*	Pn	01 09 50.8	+4.4
SMAR	**Somma**	**4.34**	**17**	*eP*	Pn	01 09 50.9	+4.4

NNC ***22*** *02:08:20.8±0.5, 46°.84N×75°.66E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=4.7km s-min=3.2km az=52.0*

SOME ***22*** *02:08:22.0, 46°.77N×75°.82E, h0km*

ISC 22 02:08:21.2±0.8, 46°.82N±0°.03×75°.65E±0°.03, h10km, n60, σ2s 13/86, 2C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLS	**Baital**	**2.10**	**213**	Pg	**Pg**	**02 09 00.4**	**-1.0**
	7.2nm,0.3s						
BTLS				Lg	Lg	02 09 28.6	
	75nm,0.2s						
BTLS	**Baital**	**2.10**	**213**	*eP*	**Pg**	**02 09 01.0**	**-0.4**
	7.5nm,0.1s						
BTLS				*eS*	**Sg**	**02 09 28.6**	**0.0**
	75nm,0.2s						
TDK	**Taldyqorghan**	**2.64**	**132**	Pg	**Pb**	**02 09 08.9**	**+0.3**
	37nm,0.5s						
TDK				Lg	Lg	02 09 42.7	
	113nm,0.4s						
TDK	**Taldyqorghan**	**2.64**	**132**	*eP*	**Pb**	**02 09 08.9**	**+0.3**
	37nm,0.5s						
TDK				*eS*	**Sb**	**02 09 42.7**	**+1.6**
	113nm,0.4s						
OTUK	**Ortayu**	**2.66**	**304**	Pg	**Pb**	**02 09 09.0**	**+0.1**
	1.8nm,0.1s						
OTUK				Lg	Lg	02 09 42.8	
	14nm,0.2s						
OTUK	**Ortayu**	**2.66**	**304**	⇓Pn	**Pn**	**02 09 05.6**	**+1.4**
	0.6nm,0.2s						
OTUK				⇑Lg	Lg	02 09 42.7	
	26nm,0.4s						
KUU	**Kurty**	**2.96**	**170**	Pg	**Pg**	**02 09 16.0**	**-1.9**
	11nm,0.2s						
KUU				Lg	Lg	02 09 55.6	
	31nm,0.2s						
KUU	**Kurty**	**2.96**	**170**	*eP*	**Pg**	**02 09 16.0**	**-1.9**
	11nm,0.2s						
KUU				*eS*	**Sg**	**02 09 55.6**	**-0.7**
	31nm,0.2s						
KAPS	**Kapalarasan**	**3.00**	**119**	Pg	**Pb**	**02 09 15.3**	**+0.6**
	9.6nm,0.3s						
KAPS				Lg	Lg	02 09 53.8	
	30nm,0.2s						
KAPS	**Kapalarasan**	**3.00**	**119**	*eP*	**Pb**	**02 09 15.3**	**+0.6**
	9.6nm,0.3s						
KAPS				*eS*	**Sb**	**02 09 53.8**	**+2.4**
	30nm,0.2s						
ARXS	**Arharly**	**3.02**	**149**	Pg	**Pb**	**02 09 15.3**	**+0.2**
	5.9nm,0.2s						
ARXS				Lg	Lg	02 09 54.1	
	43nm,0.5s						
ARXS	**Arharly**	**3.02**	**149**	*eP*	**Pb**	**02 09 15.3**	**+0.2**
	5.9nm,0.2s						
ARXS				*eS*	**Sb**	**02 09 54.1**	**+2.1**
	43nm,0.5s						
CHKK	**Chushkaly**	**3.11**	**162**	Pg	**Pb**	**02 09 18.3**	**+1.8**
	10nm,0.3s						
CHKK				Lg	Lg	02 09 59.1	
	48nm,0.2s						
CHKK	**Chushkaly**	**3.11**	**162**	*eP*	**Pb**	**02 09 18.3**	**+1.8**
	10nm,0.3s						
CHKK				*eS*	**Sg**	**02 09 59.1**	**-1.9**
	48nm,0.2s						
KRBS	**Karabastau**	**3.12**	**180**	Pg	**Pg**	**02 09 19.2**	**-1.8**
	8.8nm,0.3s						
KRBS				Lg	Lg	02 10 00.4	
	36nm,0.4s						
KRBS	**Karabastau**	**3.12**	**180**	*eP*	**Pg**	**02 09 19.2**	**-1.8**
	8.8nm,0.3s						
KRBS				*eS*	**Sg**	**02 10 00.4**	**-0.9**
	36nm,0.4s						
KTBS	**Karatobe**	**3.19**	**166**	Pg	**Pb**	**02 09 19.2**	**+1.3**
	15nm,0.2s						
KTBS				Lg	Lg	02 10 00.4	
	44nm,0.3s						
KTBS	**Karatobe**	**3.19**	**166**	*eP*	**Pb**	**02 09 19.2**	**+1.3**
	15nm,0.2s						
KTBS				*eS*	**Sg**	**02 10 00.4**	**-3.1**
	44nm,0.3s						
BLB	**Baldybastay**	**3.37**	**143**	Pg	**Pb**	**02 09 22.6**	**+1.5**
	17nm,0.2s						
BLB				Lg	Lg	02 10 06.6	
	33nm,0.4s						
SGDS	**Sogindy**	**3.44**	**193**	Pg	**Pb**	**02 09 24.4**	**+2.2**
	12nm,0.6s						
SGDS				Lg	Lg	02 10 09.1	
	12nm,0.6s						
KNOS	**Konyrlen**	**3.49**	**134**	Pg	**Pb**	**02 09 25.0**	**+1.9**
	7.0nm,0.3s						
KNOS				Lg	Lg	02 10 10.4	
	18nm,0.6s						
DGS	**Degeres**	**3.58**	**179**	Pg	**Pg**	**02 09 27.4**	**-2.3**
	9.3nm,0.3s						
DGS				Lg	Lg	02 10 14.6	
	24nm,0.5s						
DGS	**Degeres**	**3.58**	**179**	*eP*	**Pg**	**02 09 27.4**	**-2.3**
	9.3nm,0.3s						
DGS				*eS*	**Sg**	**02 10 14.6**	**-1.3**
	24nm,0.5s						
MTBS	**Maitube**	**3.73**	**171**	Pg	**Pg**	**02 09 30.6**	**-2.0**
	8.8nm,0.5s						
MTBS				Lg	Lg	02 10 19.7	
	30nm,0.4s						
MTBS	**Maitube**	**3.73**	**171**	*eP*	**Pg**	**02 09 30.6**	**-2.0**
	8.8nm,0.5s						
MTBS				*eS*	**Sg**	**02 10 19.7**	**-1.1**
	30nm,0.4s						
KOTS	**Kotyrbulak**	**3.73**	**163**	Pg	**Pg**	**02 09 30.6**	**-2.0**
	18nm,0.6s						
KOTS				Lg	Lg	02 10 20.5	
	55nm,0.4s						
KOTS	**Kotyrbulak**	**3.73**	**163**	*eP*	**Pg**	**02 09 30.6**	**-2.0**
	18nm,0.6s						
KOTS				*eS*	**Sg**	**02 10 20.5**	**-0.4**
	55nm,0.4s						
BRZS	**Berezniki**	**3.74**	**329**	Pg	**Pb**	**02 09 29.1**	**+1.8**
	4.4nm,0.2s						
BRZS				Lg	Lg	02 10 18.0	
	43nm,0.4s						
BRZS	**Berezniki**	**3.74**	**329**	*eP*	**Pb**	**02 09 28.6**	**+1.4**
	4.4nm,0.2s						
BRZS				*eS*	**Sg**	**02 10 17.8**	**-3.3**
	21nm,0.2s						
KURS	**Kuram**	**3.77**	**151**	Pg	**Pg**	**02 09 30.7**	**-2.8**
	11nm,0.8s						
KURS				Lg	Lg	02 10 20.0	
	19nm,0.8s						
KURS	**Kuram**	**3.77**	**151**	*eP*	**Pg**	**02 09 30.7**	**-2.8**
	11nm,0.8s						
KURS				*eS*	**Sg**	**02 10 20.0**	**-2.3**
	19nm,0.8s						
KST	**Kastek**	**3.78**	**177**	Pg	**Pg**	**02 09 31.0**	**-2.5**
	11nm,0.6s						
KST				Lg	Lg	02 10 20.6	
	28nm,0.4s						
KST	**Kastek**	**3.78**	**177**	*eP*	**Pg**	**02 09 31.0**	**-2.5**
	11nm,0.6s						
KST				*eS*	**Sg**	**02 10 20.6**	**-1.9**
	28nm,0.4s						
MDOK	**Medeo**	**3.79**	**164**	Pg	**Pg**	**02 09 31.5**	**-2.1**
	7.9nm,0.5s						
MDOK				Lg	Lg	02 10 21.4	
	20nm,0.7s						
MDOK	**Medeo**	**3.79**	**164**	*eP*	**Pg**	**02 09 31.5**	**-2.1**
	7.9nm,0.5s						
MDOK				*eS*	**Sg**	**02 10 21.4**	**-1.3**
	20nm,0.7s						
DJR	**Jarkent**	**3.82**	**129**	Pg	**Pb**	**02 09 30.8**	**+2.1**
	3.9nm,0.2s						
DJR				Lg	Lg	02 10 20.5	
	15nm,0.5s						
DJR	**Jarkent**	**3.82**	**129**	*eP*	**Pb**	**02 09 30.8**	**+2.1**
	3.9nm,0.2s						
DJR				*eS*	**Sg**	**02 10 20.5**	**-3.4**
	15nm,0.5s						
CHMS	**Chumysh**	**3.87**	**190**	⇓Pg	**Pg**	**02 09 33.5**	**-1.8**
	3.8nm,0.6s						
CHMS				⇓Lg	Lg	02 10 24.7	
	14nm,0.5s						
TNSS	**Tian-Shan**	**3.89**	**166**	Pg	**Pg**	**02 09 33.7**	**-2.0**
	8.0nm,0.4s						
TNSS				Lg	Lg	02 10 25.2	
	9.0nm,0.6s						
TNSS	**Tian-Shan**	**3.89**	**166**	*eP*	**Pg**	**02 09 33.7**	**-2.0**
	8.0nm,0.4s						
TNSS				*eS*	**Sg**	**02 10 25.2**	**-0.9**
	9.0nm,0.6s						
TKM2	**Tokmak 2**	**3.90**	**181**	⇓Pn	**Pn**	**02 09 22.6**	**+1.3**
	0.6nm,0.5s						
TKM2				⇓Pg	**Pg**	**02 09 33.7**	**-2.1**
	3.1nm,0.3s						
TKM2				⇓Lg	Lg	02 10 25.0	
	22nm,0.6s						
ZHN	**Zhinishke**	**4.15**	**151**	Pg	**Pg**	**02 09 37.7**	**-2.9**
	7.8nm,0.6s						
ZHN				Lg	Lg	02 10 32.5	
	18nm,0.2s						
ZHN	**Zhinishke**	**4.15**	**151**	*eP*	**Pg**	**02 09 37.7**	**-2.9**
	7.8nm,0.6s						
ZHN				*eS*	**Sg**	**02 10 32.5**	**-1.9**
	18nm,0.2s						
SATY	**Saty**	**4.24**	**152**	Pg	**Pg**	**02 09 39.2**	**-3.1**
	4.5nm,0.2s						
SATY				Lg	Lg	02 10 34.4	
	19nm,0.2s						
SATY	**Saty**	**4.24**	**152**	*eP*	**Pg**	**02 09 39.2**	**-3.1**
	4.5nm,0.2s						
SATY				*eS*	**Sg**	**02 10 34.4**

*NOU **22** 02:39:04.1,41˝.86S×174˝.58E,h10km,MLv3.9/10,Cook Strait, New Zealand*
*WEL **22** 02:39:05.1±0.3,42˚S±2˚×17˚4E±˚,h11km±3km,M3.2/19, ML3.5/19,MLv3.2/19,Error ellipse: s-maj=0.0km s-min=0.0km az=139.7,confirmed*

ISC 22 02:39:03.8±1.0,41˝.80S±0˝.03×174˝.40E±0˝.03,h13km±8km, n98,σ1§16/113,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.15**	**291**	P	**Pb**	**02 39 08.6**	**+0.1**
WDFS	**Ward Fire Stat**	**0.20**	**263**	P	**Pb**	**02 39 09.8**	**+0.5**
WDFS				S	**Sg**	**02 39 13.2**	**+2.1**
SDNS	**Seddon**	**0.24**	**305**	P	**Pg**	**02 39 09.3**	**+0.4**
SEDS	**Seddon Fire St**	**0.28**	**298**	P	**Pg**	**02 39 09.7**	**+0.2**
SEDS				S	**Sg**	**02 39 13.6**	**+0.2**
KEKS	**Kekerengu Vall**	**0.35**	**244**	P	**Pb**	**02 39 12.9**	**+1.0**
KEKS				S	**Sb**	**02 39 19.6**	**+2.2**
BSWZ	**Blackbirch Sta**	**0.41**	**282**	P	**Pg**	**02 39 11.9**	**+0.1**
BSWZ				S	**Sg**	**02 39 16.8**	**-0.5**
TUWZ	**Tuamarina**	**0.51**	**317**	P	**Pg**	**02 39 13.3**	**-0.4**
TUWZ				S	**Sg**	**02 39 19.1**	**-1.4**
BWRS	**Waikakaho Road**	**0.52**	**314**	P	**Pg**	**02 39 13.6**	**-0.4**
BWRS				S	**Sg**	**02 39 19.8**	**-1.1**
BHW	**Baring Head**	**0.53**	**42**	P	**Pn**	**02 39 16.2**	**-0.8**
SNZO	**South Karori**	**0.54**	**25**	P	**Pb**	**02 39 15.5**	**+0.4**
WEL	**Wellington**	**0.59**	**28**	P	**Pb**	**02 39 16.6**	**+0.7**
WEL				S	**Sb**	**02 39 24.8**	**+0.7**
QCCS	**Picton Queen C**	**0.60**	**331**	P	**Pg**	**02 39 19.4**	**-2.0**
QCCS				S	**Sg**	**02 39 19.9**	**-3.4**
TCW	**Tory Channel**	**0.60**	**351**	P	**Pg**	**02 39 15.2**	**-0.3**
TCW				S	**Sg**	**02 39 22.6**	**-0.8**
PLWZ	**Palliser**	**0.68**	**70**	P	**Pn**	**02 39 20.0**	**+0.8**
MSWZ	**Moikau Station**	**0.74**	**59**	P	**Pn**	**02 39 21.0**	**+1.0**
MSWZ				S	**Sn**	**02 39 32.8**	**+1.6**
CAW	**Cannon Point**	**0.86**	**36**	P	**Pn**	**02 39 21.4**	**-0.1**
CAW				S	**Sb**	**02 39 32.8**	**+0.9**
PAWZ	**Paruwai Farm**	**0.88**	**62**	P	**Pn**	**02 39 22.5**	**+0.7**
PAWZ				S	**Sn**	**02 39 35.5**	**+1.0**
KHZ	**Kahutara**	**0.89**	**226**	P	**Pn**	**02 39 22.7**	**+0.7**
KHZ	**Kahutara**	**0.89**	**226**	P	**Pn**	**02 39 22.6**	**+0.7**
KHZ				S	**Sn**	**02 39 35.4**	**+0.6**
NNZ	**Nelson**	**0.97**	**307**	P	**Pg**	**02 39 21.3**	**-1.1**
NNZ				S	**Sg**	**02 39 33.1**	**-1.9**
KIW	**Kapiti Island**	**1.02**	**22**	P	**Pg**	**02 39 23.5**	**+0.1**
KIW				S	**Sb**	**02 39 37.1**	**+0.5**
TRWZ	**Traveller**	**1.04**	**68**	P	**Pn**	**02 39 24.7**	**+0.5**
MTW	**Mount Morrison**	**1.05**	**52**	P	**Pn**	**02 39 24.7**	**+0.5**
DUWZ	**D'Urville Isla**	**1.06**	**340**	P	**Pb**	**02 39 23.1**	**-1.0**
THZ	**Tophouse**	**1.12**	**272**	P	**Pb**	**02 39 24.8**	**-0.2**
OGWZ	**Otaki Gorge**	**1.14**	**31**	P	**Pg**	**02 39 26.0**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.23**	**43**	P	**Pg**	**02 39 27.1**	**-0.4**
MRNZ	**Matariki Terra**	**1.30**	**288**	P	**Pn**	**02 39 27.6**	**0.0**
TMWZ	**Te Maipa**	**1.32**	**59**	P	**Pb**	**02 39 28.1**	**-0.3**
TKNZ	**Takaka Hill**	**1.33**	**305**	P	**Pn**	**02 39 27.8**	**-0.4**
MRZ	**Mangatainoka R**	**1.45**	**38**	P	**Pb**	**02 39 30.1**	**-0.5**
TIWZ	**Tintock**	**1.52**	**48**	P	**Pn**	**02 39 30.9**	**+0.2**
GVZ	**Greta Valley S**	**1.54**	**221**	P	**Pn**	**02 39 31.4**	**+0.3**
CPWZ	**Castlepoint**	**1.62**	**57**	P	**Pn**	**02 39 32.5**	**+0.5**
QRZ	**Quartz Range**	**1.72**	**304**	P	**Pn**	**02 39 34.2**	**+0.8**
QRZ	**Quartz Range**	**1.72**	**304**	P	**Pn**	**02 39 34.1**	**+0.7**
PRWZ	**Pori Road**	**1.72**	**44**	P	**Pn**	**02 39 33.6**	**+0.2**
POWZ	**Post Office Ro**	**1.75**	**37**	P	**Pn**	**02 39 34.0**	**+0.2**
BFZ	**Birch Farm**	**1.79**	**52**	P	**Pn**	**02 39 34.0**	**-0.4**
BFZ	**Birch Farm**	**1.79**	**52**	P	**Pn**	**02 39 33.9**	**-0.5**
LTZ	**Lake Taylor**	**1.86**	**238**	P	**Pn**	**02 39 35.6**	**+0.1**
DSZ	**Denniston Nort**	**1.94**	**271**	P	**Pn**	**02 39 37.4**	**+0.8**
DVHZ	**Dannevirke**	**2.01**	**42**	P	**Pn**	**02 39 37.0**	**-0.5**
TSZ	**Takapari Road**	**2.10**	**35**	P	**Pn**	**02 39 38.7**	**-0.1**
PRHZ	**Porangahau**	**2.28**	**48**	P	**Pn**	**02 39 40.4**	**-0.8**
MQZ	**McQueen's Vall**	**2.30**	**214**	P	**Pn**	**02 39 40.4**	**-1.0**
OXZ	**Oxford**	**2.32**	**228**	P	**Pn**	**02 39 40.9**	**-0.8**
PNHZ	**Pukenui**	**2.33**	**36**	P	**Pn**	**02 39 41.5**	**-0.3**
INZ	**Inchbonnie**	**2.38**	**246**	P	**Pn**	**02 39 42.9**	**+0.3**
NMEZ	**Namu Road**	**2.42**	**350**	P	**Pb**	**02 39 47.4**	**+0.3**
KHEZ	**Kahui Hut**	**2.52**	**353**	P	**Pb**	**02 39 47.2**	**-1.8**
KHEZ	**Kahui Hut**	**2.52**	**353**	P	**Pb**	**02 39 47.7**	**-1.3**
NEZ	**North Egmont**	**2.54**	**355**	P	**Pb**	**02 39 47.6**	**-1.8**
RACZ	**Rakaia**	**2.54**	**220**	P	**Pn**	**02 39 42.4**	**-2.4**
MTVZ	**Mangateitei**	**2.55**	**19**	P	**Pn**	**02 39 46.9**	**+2.0**
NBEZ	**Newall Road No**	**2.57**	**351**	P	**Pb**	**02 39 48.3**	**-1.4**
PXZ	**Pawanui**	**2.57**	**47**	P	**Pn**	**02 39 44.0**	**-1.1**
MOVZ	**Moawhango**	**2.60**	**24**	P	**Pn**	**02 39 46.0**	**+0.3**
KRHZ	**Kereru**	**2.62**	**35**	P	**Pn**	**02 39 45.3**	**-0.6**
PKE	**Pukeiti**	**2.63**	**353**	P	**Pn**	**02 39 48.2**	**+2.3**
BHHZ	**Black Hill Sta**	**2.63**	**29**	P	**Pn**	**02 39 46.3**	**+0.2**
WNVZ	**Wahianoa**	**2.64**	**21**	P	**Pn**	**02 39 47.2**	**+1.0**
TRVZ	**Turoa**	**2.65**	**20**	P	**Pn**	**02 39 48.1**	**+1.7**
WHVZ	**Whangaehu Hut**	**2.67**	**20**	P	**Pb**	**02 39 52.3**	**+0.7**
MAVZ	**Matarangi**	**2.68**	**20**	P	**Pb**	**02 39 52.5**	**+0.6**
VRZ	**Vera Road**	**2.69**	**6**	P	**Pn**	**02 39 48.8**	**+2.0**
FWVZ	**Far West T-bar**	**2.69**	**19**	P	**Pn**	**02 39 48.4**	**+1.4**
TUVZ	**Tukino**	**2.71**	**21**	P	**Pb**	**02 39 50.1**	**-2.0**
MHCZ	**Mount Hutt**	**2.71**	**230**	P	**Pn**	**02 39 46.4**	**-0.8**
COVZ	**Chateau Observ**	**2.74**	**19**	P	**Pb**	**02 39 52.7**	**-0.1**
KAHZ	**Kahuranaki**	**2.75**	**44**	P	**Pn**	**02 39 46.5**	**-1.1**
NGZ	**Ngauruhoe**	**2.78**	**20**	P	**Pn**	**02 39 49.5**	**+1.4**
SNVZ	**South Ngauruho**	**2.78**	**20**	P	**Pn**	**02 39 49.2**	**+1.0**
OTVZ	**Oturere**	**2.81**	**20**	P	**Pn**	**02 39 49.6**	**+1.0**
NNVZ	**North Ngauruho**	**2.82**	**19**	P	**Pn**	**02 39 50.1**	**+1.3**
KWHZ	**Kaweka Forest**	**2.83**	**34**	P	**Pn**	**02 39 48.2**	**-0.6**
WTVZ	**West Tongariro**	**2.83**	**19**	P	**Pb**	**02 39 53.4**	**-0.9**
TWVZ	**Taurewa**	**2.84**	**16**	P	**Pn**	**02 39 50.8**	**+1.8**
TMVZ	**Te Maari**	**2.86**	**21**	P	**Pn**	**02 39 50.1**	**+0.8**
KRVZ	**Karewarewa**	**2.87**	**20**	P	**Pn**	**02 39 50.6**	**+1.3**
NTVZ	**North Tongarir**	**2.87**	**20**	P	**Pn**	**02 39 50.2**	**+0.8**
KATZ	**Kakaramea**	**2.99**	**20**	P	**Pb**	**02 39 58.3**	**+1.3**
WVZ	**Waitaha Valley**	**3.00**	**244**	P	**Pb**	**02 39 56.5**	**-0.5**
RITZ	**Rihia Road**	**3.03**	**22**	P	**Pb**	**02 39 58.1**	**+0.4**
BKZ	**Black Stump Fm**	**3.08**	**32**	P	**Pn**	**02 39 51.8**	**-0.4**
RPZ	**Rata Peaks**	**3.12**	**231**	P	**Pn**	**02 39 52.3**	**-0.5**
HIZ	**Hauiti**	**3.31**	**6**	P	**Pn**	**02 39 57.6**	**+2.3**
HIZ	**Hauiti**	**3.31**	**6**	P	**Pn**	**02 39 57.5**	**+2.3**
GCSZ	**Gaunt Creek Bo**	**3.37**	**242**	P	**Pb**	**02 40 01.1**	**-2.3**
TMZ	**Timaru**	**3.58**	**223**	P	**Pn**	**02 39 57.7**	**-1.4**
URZ	**Urewera**	**4.11**	**31**	P	**Pn**	**02 40 06.2**	**0.0**
URZ	**Urewera**	**4.11**	**31**	P	**Pn**	**02 40 06.2**	**0.0**
ODZ	**Otahua Downs**	**4.24**	**219**	P	**Pn**	**02 40 08.0**	**-0.1**
ODZ	**Otahua Downs**	**4.24**	**219**	P	**Pn**	**02 40 07.2**	**-0.9**
RUGZ	**Raukumara Rang**	**4.59**	**34**	P	**Pn**	**02 40 11.1**	**-1.8**
JCZ	**Jackson Bay**	**4.71**	**239**	P	**Pn**	**02 40 17.9**	**+3.3**
JCZ	**Jackson Bay**	**4.71**	**239**	P	**Pn**	**02 40 15.6**	**+1.0**
CTZ	**Chatham Island**	**6.88**	**109**	P	**Pn**	**02 40 45.1**	**+0.7**

IDC 22 02:43:25.9±2.4,4˝.43S×151˝.38E,h0km,mb3.3/3, mbtmp3.4/3,MS3.3/4,Error ellipse: s-maj=225.7km s-min=29.2km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.48**	**220**	LR	LR	02 47 39.3	
	comp=Z,96nm,18.6s,baz=346,slow=39						
HNR	**Honiara**	**9.85**	**121**	LR	LR	02 49 28.4	
	comp=Z,1µm,20.0s,baz=356,slow=37						
WRA	**Warramunga Arr**	**22.66**	**226**	P	P	02 48 28.2	-0.8
	0.6nm,0.9s,baz=51,slow=9.8,SNR=2.5 0.6nm,0.9s						
ASAR	**Alice Springs**	**25.50**	**220**	P	P	02 48 56.8	+0.6
	0.5nm,0.8s,baz=54,slow=8.4,SNR=3.0 0.5nm,0.8s						
RPZ	**Rata Peaks**	**42.81**	**159**	LR	LR	03 07 11.9	
	comp=Z,42nm,19.0s,baz=264,slow=33						
KSRS	**Korea Array**	**47.04**	**334**	LR	LR	03 09 37.1	
	comp=Z,10nm,20.1s,baz=0.0,slow=33						
ILAR	**Eielson Array**	**82.35**	**22**	P	P	02 55 49.5	0.0
	0.5nm,0.7s,baz=244,slow=5.7,SNR=10 0.5nm,0.7s						

*IDC **22** 02:52:22.7±0.9,38˝.44N×70˝.80E,h0km,mb3.8/11, mbtmp3.9/18,ML3.0/7,MS3.5/2,Error ellipse: s-maj=15.3km s-min=11.1km az=141.0*
*NNC **22** 02:52:28.0±3.6,38˝.76N×70˝.68E,h0km,mb4.2,mpv3.7, Error ellipse: s-maj=35.6km s-min=18.4km az=171.0*

ISC 22 02:52:27.9±0.9,38˝.64N±0˝.09×70˝.42E±0˝.07,h23km,n34, σ1§81/38,mb3.9/9,7C-7D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.46**	**1**	⇓Pn	**Pn**	**02 53 36.1**	**+2.0**
	8.1nm,0.3s,baz=173,slow=12,SNR=136						
KK31				⇑Lg	Lg	02 54 43.8	
	83nm,0.8s,baz=175,slow=30,SNR=8.3						
UCH	**Uchtor**	**4.75**	**40**	P	**Pn**	**02 53 40.6**	**+2.1**
	SNR=6.7						
EKS2	**ErNiş-Say**	**4.76**	**31**	P	**Pn**	**02 53 39.8**	**+1.4**
	SNR=24						
AAK	**Ala-Archa**	**5.05**	**37**	P	**Pn**	**02 53 42.4**	**0.0**
	SNR=36						
AAK	**Ala-Archa**	**5.05**	**37**	Pn	**Pn**	**02 53 42.6**	**+0.2**
	2.0nm,0.3s,baz=223,slow=8.4,SNR=59						
AAK				Sn	**Sn**	**02 54 40.9**	**+0.8**
	1.3nm,0.3s,baz=191,slow=14,SNR=4.2						
AAK				Lg	Lg	02 55 05.1	
	2.4nm,0.3s,baz=89,slow=23,SNR=5.9 22nm,0.5s						
KBK	**Karagaybulak**	**5.29**	**39**	P	**Pn**	**02 53 48.0**	**+2.4**
	SNR=66						
CHMS	**Chumysh**	**5.45**	**36**	P	**Pn**	**02 53 47.6**	**-0.2**
	SNR=20						
USP	**Ospenovka**	**5.56**	**32**	P	**Pn**	**02 53 50.2**	**+1.0**
	SNR=32						
TKM2	**Tokmak 2**	**5.81**	**41**	P	**Pn**	**02 53 54.4**	**+1.6**
	SNR=16						
TKM2	**Tokmak 2**	**5.81**	**41**	⇑Pn	**Pn**	**02 53 53.9**	**+1.1**
	8.5nm,0.7s						
TKM2				⇓Sn	**Sn**	**02 54 59.7**	**+1.0**
	46nm,1.0s						
TKM2				⇓Lg	Lg	02 55 27.2	
	30nm,0.8s						
MDOK	**Medeo**	**6.75**	**46**	⇑Pn	**Pn**	**02 54 05.8**	**+0.1**
	5.9nm,0.6s						
MDOK				⇑Lg	Lg	02 55 54.1	
	58nm,1.4s						
PDGK	**Podgornoye**	**8.30**	**53**	⇓Pg	**Pb**	**02 54 54.2**	**+3.2**
	0.9nm,0.7s						
PDGK				⇓Lg	Lg	02 56 44.1	
	29nm,1.2s						
OTUK	**Ortayu**	**9.70**	**8**	⇓Pn	**Pn**	**02 54 47.3**	**+1.4**
	1.8nm,0.6s						
OTUK				⇓Lg	Lg	02 57 31.8	
	7.4nm,0.8s						
MK31	**Makanchi Array**	**11.93**	**43**	⇑Pn	**Pn**	**02 55 14.9**	**-1.6**
	2.5nm,0.7s,baz=228,slow=12,SNR=31						
MK31				⇑Lg	Lg	02 58 42.2	
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**11.93**	**43**	Pn	**Pn**	**02 55 15.1**	**-1.4**
	0.2nm,0.3s,baz=232,slow=13,SNR=34 3.3nm,0.8s						
AB31	**Akbulak array**	**13.01**	**328**	Pn	**Pn**	**02 55 29.8**	**-1.4**
	9.4nm,0.9s,baz=164,slow=8.4,SNR=84						
KURBB	**Kurchatov Arra**	**13.29**	**23**	Pn	**Pn**	**02 55 30.4**	**-4.6**
	baz=216,slow=12,SNR=3.1 0.3nm,0.5s						
BVAR	**Borovoye Array**	**14.39**	**360**	Pn	**Pn**	**02 55 48.5**	**-1.4**
	baz=172,slow=11,SNR=7.0						
BVAR				Sn	**Sn**	**02 58 24.2**	**-4.5**
	baz=172,slow=23,SNR=3.6 0.8nm,0.5s						
AKTO	**Aktyubinsk**	**14.71**	**327**	⇑Pn	**Pn**	**02 55 54.5**	**+0.1**
	5.2nm,0.8s						
AKTO	**Aktyubinsk**	**14.71**	**327**	Pn	**Pn**	**02 55 54.9**	**+0.5**
	0.3nm,0.3s,baz=142,slow=13,SNR=12						
AKTO				Sn	**Sn**	**02 58 35.5**	**-1.2**
	0.2nm,0.3s,baz=32,slow=13,SNR=4.4						
AKTO				LR	LR	03 01 25.1	
	comp=Z,62nm,19.8s,baz=356,slow=36 6.9nm,1.0s						
ZALV	**Zalesovo Beam**	**18.20**	**28**	P	**Pn**	**02 56 35.8**	**-3.1**
	0.2nm,0.3s,baz=218,slow=11,SNR=7.8 1.8nm,0.6s						
ARU	**Arti**	**19.46**	**340**	P	**Pn**	**02 56 54.6**	**+0.5**
	0.3nm,0.3s,baz=149,slow=3.2,SNR=8.0 2.6nm,0.5s						
GNI	**Garni**	**19.88**	**282**	P	**P**	**02 56 58.9**	**+1.2**
	1.6nm,0.5s,baz=156,slow=12,SNR=1.6 1.6nm,0.5s						
BELG	**Belogornoye**	**20.96**	**318**	P	**P**	**02 57 10.4**	**+1.5**
	8.0nm,0.7s,baz=45,slow=5.7,SNR=2.9 8.0nm,0.7s						
KBZ	**Khabaz**	**21.28**	**293**	P	**P**	**02 57 13.7**	**+1.2**
	1.6nm,0.7s,baz=301,slow=5.9,SNR=2.7 1.6nm,0.7s						
FINES	**FINESS Array B**	**35.46**	**325**	P	**P**	**02 59 22.6**	**+0.5**
	0.7nm,0.4s,baz=132,slow=10,SNR=6.6 0.7nm,0.4s						
HFS	**Hagfors**	**41.11**	**320**	P	**P**	**03 00 10.2**	**+0.5**
	2.3nm,0.4s,baz=104,slow=11,SNR=34						
HFS				LR	LR	03 18 43.1	
	comp=Z,179nm,20.2s,baz=252,slow=38 2.3nm,0.4s						
NB2	**NORSAR Subarra**	**42.41**	**322**	P	**P**	**03 00 20.5**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**42.41**	**322**	P	**P**	**03 00 20.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=94,slow=8.1,SNR=6.6 comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.33**	**267**	P	**P**	**03 03 09.1**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=47,slow=6.8,SNR=13 comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**72.85**	**16**	P	**P**	**03 03 53.1**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=338,slow=5.0,SNR=5.0 comp=Z,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**79.13**	**2**	P	**P**	**03 04 29.6**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=350,slow=5.8,SNR=9.4 comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**83.51**	**122**	P	**P**	**03 04 51.2**	**-2.8**
	comp=Z,0.7nm,0.6s,baz=326,slow=5.0,SNR=3.6 comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**85.85**	**125**	P	**P**	**03 05 04.1**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=300,slow=5.1,SNR=4.3 comp=Z,0.5nm,0.8s						

NNC 22 03:11:48.4±6.1,38˝.66N×70˝.66E,h0km,mb3.6,mpv3.2, 3C-3D,Error ellipse: s-maj=54.4km s-min=31.9km az=171.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.44**	**359**	⇑Pn	Pn	03 12 57.0	+0.1
	1.7nm,0.3s,baz=179,slow=12,SNR=4.8						
KK31				⇑Sn	Sn	03 13 50.8	+1.4
	3.0nm,0.4s,baz=174,slow=30,SNR=8.5						
TKM2	**Tokmak 2**	**5.67**	**40**	⇑Pn	Pn	03 13 14.4	+0.4
	1.0nm,0.4s						
TKM2				⇓Sn	Sn	03 14 20.8	+0.9
	5.0nm,0.9s						
AB31	**Akbulak array**	**13.09**	**327**	⇓P	Pn	03 14 51.4	-4.0
	0.5nm,0.6s,baz=141,slow=12,SNR=13						
AKTO	**Aktyubinsk**	**14.80**	**327**	⇓P	P	03 15 22.1	-2.8
	1.0nm,0.8s						

*IDC **22** 03:25:27.3±0.5,2˚.81S×100˚.39E,h0km,mb4.3/22, mbtmp4.3/23,ML4.4/1,MS3.5/20,Error ellipse: s-maj=23.7km s-min=11.9km az=56.0*
*DJA **22** 03:25:32.2±0.2,3˚S±3˚×10˚0E±˚,h38km±6km,M4.8/16, mb4.7/10,mB4.8/3,MLv4.9/16,Mw(mB)4.0/3*
*NEIC **22** 03:25:33.2±0.9,2˚.83S±0˚.04×100˚.38E±0˚.07,h35km±1km, mb4.6/34,Error ellipse: s-maj=12.4km s-min=6.8km az=84.0*

ISC 22 03:25:33.1±0.9,2˚.82S±0˚.06×100˚.41E±0˚.04,h42km±8km, n126,σ0§94/110,mb4.4/37,MS3.6/19,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.41**	**279**	P	**Pn**	**03 25 43.0**	**+0.2**
PPSI				S	**Sn**	**03 25 49.3**	**-0.3**
KRJI	**Kerinci**	**1.27**	**55**	P	**Pn**	**03 25 54.5**	**-0.1**
KRJI				S	**Sn**	**03 26 09.9**	**-0.7**
SISI	**Saibi**	**1.99**	**318**	P	**Pn**	**03 26 04.3**	**0.0**
SISI				S	**Sn**	**03 26 26.2**	**-1.9**
MNAI	**Manna**	**2.96**	**121**	Pn	**Pn**	**03 26 17.9**	**+0.3**
MNAI				Sn	**Sn**	**03 26 53.2**	**+1.2**
MNAI	**Manna**	**2.96**	**121**	P	**Pn**	**03 26 17.6**	**-0.1**
MNAI				S	**Sn**	**03 26 51.7**	**-0.3**
BKNI	**Bangkinang**	**3.19**	**11**		**Pn**	**03 26 21.0**	**+0.2**
BKNI	**Bangkinang**	**3.19**	**11**	P	**Pn**	**03 26 20.7**	**-0.2**
LHSI	**Lahat**	**3.26**	**108**	P	**Pn**	**03 26 22.3**	**+0.5**
JMBI	**JAMBI**	**3.44**	**70**	P	**Pn**	**03 26 24.0**	**-0.2**
PBSI	**Pulau Batu**	**3.48**	**322**	P	**Pn**	**03 26 24.4**	**-0.4**
LWLI	**Liwa**	**4.24**	**121**	P	**Pn**	**03 26 35.0**	**-0.4**
DSRI	**Dabo**	**4.77**	**61**	P	**Pn**	**03 26 42.7**	**+0.2**
KASI	**Kota Agung**	**4.88**	**124**	P	**Pn**	**03 26 43.9**	**-0.1**

GSI	**Gunungsitoli**	**4.99**	**325**	Pn	**Pn**	**03 26 45.2**	**-0.3**
GSI	**Gunungsitoli**	**4.99**	**325**	P	**Pn**	**03 26 44.2**	**-1.3**
TPRI	**Tanjung Pinang**	**5.54**	**48**	P	**Pn**	**03 26 53.4**	**+0.2**
	164nm,0.5s,1.4nm						
RPSI	**Rantau Prapat**	**5.68**	**345**	Pn	**Pn**	**03 26 55.0**	**-0.1**
IPM	**Ipoh**	**7.28**	**5**		**Pn**	**03 27 20.3**	**+3.2**
CNJI	**Cibinong**	**8.04**	**124**	P	**Pn**	**03 27 25.0**	**-2.4**
	32nm,0.8s,678nm						
KULM	**Kulim**	**8.06**	**2**	Pn	**Pn**	**03 27 27.6**	**-0.2**
MLSI	**Meulaboh, Aceh**	**8.10**	**330**	P	**Pn**	**03 27 29.1**	**+0.8**
	40nm,0.5s						
LEM	**Lembang**	**8.21**	**119**	Pn	**Pn**	**03 27 27.6**	**-2.2**
	4.7nm,0.3s,baz=294,slow=20,SNR=1.6						
LEM				LR	LR	03 30 24.6	
	comp=Z,64nm,18.9s,baz=274,slow=36 13nm,0.4s						
CMJI	**Cimerak**	**9.39**	**122**	P	**Pn**	**03 27 43.8**	**-2.2**
	56nm,0.5s						
KPJI	**Karang Pucung**	**9.59**	**118**	P	**Pn**	**03 27 48.2**	**-0.5**
	26nm,0.5s						
UGM	**Wanagama**	**11.26**	**117**	Pn	**Pn**	**03 28 11.4**	**-0.2**
UGM	**Wanagama**	**11.26**	**117**	P	**Pn**	**03 28 10.9**	**-0.7**
	60nm,1.2s						
PWJI	**Pagerwojo**	**12.46**	**115**	P	**Pn**	**03 28 27.3**	**-0.6**
	18nm,1.3s						
SBUM	**Sibu**	**12.91**	**66**	Pn	**Pn**	**03 28 35.8**	**+1.6**
GMJI	**Gumukmas**	**14.05**	**113**	P	**Pn**	**03 28 49.7**	**0.0**
	15nm,1.9s						
TWSI	**Taliwang, Sumb**	**17.40**	**110**	P	**Pn**	**03 29 33.0**	**+0.1**
KAPI	**Kappang**	**19.41**	**97**		**Pn**	**03 29 56.8**	**-0.7**
TOLI2	**Tolitoli**	**20.73**	**79**	P	**P**	**03 30 09.8**	**-0.6**
TOLI2				IAmb	IAmb	03 30 24.2	
	comp=Z,17nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.20**	**356**	P	**P**	**03 30 13.9**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=184,slow=11,SNR=7.6						
CMAR				LR	LR	03 39 44.9	
	comp=Z,78nm,19.2s,baz=175,slow=40 comp=Z,1.8nm,0.6s						
PALK	**Pallekele**	**22.08**	**297**	LR	LR	03 37 29.7	
	comp=Z,113nm,21.6s,baz=222,slow=33						
SLVN	**Son La**	**24.25**	**8**	P	**P**	**03 30 46.0**	**-0.4**
TGY	**Tagaytay City**	**26.40**	**50**	LR	LR	03 43 18.6	
	comp=Z,87nm,18.8s,baz=196,slow=41						
FITZ	**Fitzroy Crossi**	**29.01**	**123**	P	**P**	**03 31 29.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**33.84**	**154**	LR	LR	03 47 20.0	
	comp=Z,39nm,18.0s,baz=340,slow=39						
H01W3	**Cape Leeuwin H**	**34.35**	**160**	T	T	04 08 21.1	
	baz=336,slow=76,SNR=6.5						
H01W2	**Cape Leeuwin H**	**34.37**	**160**	T	T	04 08 20.8	
	baz=336,slow=76,SNR=8.5						
H01W1	**Cape Leeuwin H**	**34.37**	**160**	T	T	04 08 27.7	
	baz=336,slow=76,SNR=5.8						
WB0	**Warramunga Arr**	**37.20**	**119**	P	**P**	**03 32 39.8**	**-0.9**
WB0				IAmb	IAmb	03 32 54.5	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**37.22**	**120**	P	**P**	**03 32 40.0**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=303,slow=9.0,SNR=30						
WRA				S	**S**	**03 38 21.7**	**-3.5**
	comp=Z,0.7nm,0.7s,baz=295,slow=15,SNR=4.0 comp=Z,2.1nm,0.5s						
WRAB	**Tennant Creek**	**37.23**	**120**	P	**P**	**03 32 40.3**	**-0.7**
WRAB				IAmb	IAmb	03 32 54.0	
	comp=Z,10nm,1.1s						
WB2	**Warramunga Arr**	**37.23**	**120**	P	**P**	**03 32 40.4**	**-0.5**
WB2				IAmb	IAmb	03 32 54.8	
	comp=Z,9.4nm,0.8s						
XAN	**Xi'an**	**37.53**	**12**	P	**P**	**03 32 41.6**	**-1.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAR	**Alice Springs**	**38.44**	**126**	P	**P**	**03 32 51.0**	**-0.1**
ASAR	**Alice Springs**	**38.44**	**126**	P	**P**	**03 32 51.0**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=300,slow=7.9,SNR=22

H04S2	**CROZET ISLANDS**	**60.68**	**216**	T	T			04 41 14.0	
	baz=58,slow=76,SNR=119								
BVAR	**Borovoye Array**	**61.09**	**340**	P	**P**			**03 35 42.2**	**-0.6**
	comp=Z,4.8nm,0.5s,baz=143,slow=8.8,SNR=29								
	comp=Z,4.8nm,0.5s								
BRVK	**Borovoye**	**61.16**	**340**	P	**P**			**03 35 42.6**	**-0.6**
ABKAR	**Akbulak array**	**62.56**	**331**	P	**P**			**03 35 52.5**	**-0.2**
ABKAR	**Akbulak array**	**62.56**	**331**	P	**P**			**03 35 52.5**	**-0.2**
AKTO	**Aktyubinsk**	**64.27**	**331**	P	**P**			**03 36 03.1**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=143,slow=4.7,SNR=4.4								
	comp=Z,1.9nm,0.8s								
GNI	**Garni**	**66.40**	**316**	LR	LR			04 05 54.4	
	comp=Z,28nm,20.9s,baz=354,slow=37								
YAK	**Yakutsk**	**68.43**	**14**	LR	LR			04 10 22.3	
	comp=Z,48nm,18.4s,baz=346,slow=39								
KBZ	**Khabaz**	**69.20**	**319**	P	**P**			**03 36 35.9**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=125,slow=7.7,SNR=11								
	comp=Z,4.2nm,0.8s								
MBAR	**Mbarara**	**69.67**	**270**	LR	LR			04 02 03.1	
	comp=Z,36nm,21.9s,baz=252,slow=32								
EIL	**Elat**	**70.31**	**303**	LR	LR			04 07 25.8	
	comp=Z,33nm,18.5s,baz=261,slow=36								
MMAI	**Mount Meron Ar**	**70.85**	**306**	P	**P**			**03 36 45.4**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=134,slow=3.6,SNR=5.9								
	comp=Z,2.8nm,0.7s								
LSZ	**Lusaka**	**72.12**	**255**	LR	LR			04 03 39.8	
	comp=Z,30nm,19.9s,baz=310,slow=32								
MA2	**Magadan**	**73.61**	**24**	LR	LR			04 12 59.8	
	comp=Z,23nm,18.4s,baz=228,slow=39								
BR131	**Keskin Array S**	**74.18**	**313**	P	**P**			**03 37 05.0**	**-0.8**
BR131				IAmb	IAmb			03 37 19.9	
	comp=Z,3.5nm,0.8s								
BRTR	**Keskin Array B**	**74.18**	**313**	P	**P**			**03 37 05.3**	**-0.5**
BRTR	**Keskin Array B**	**74.18**	**313**	P	**P**			**03 37 05.5**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=128,slow=7.4,SNR=15								
	comp=Z,2.7nm,0.8s								
LBTB	**Lobatse**	**75.05**	**245**	LR	LR			04 06 24.1	
	comp=Z,36nm,19.2s,baz=61,slow=33								
BOSA	**Boshof**	**75.62**	**241**	P	**P**			**03 37 15.3**	**+0.9**
BOSA				IAmb	IAmb			03 37 29.3	
	comp=Z,5.2nm,1.1s								
BOSA	**Boshof**	**75.62**	**241**	P	**P**			**03 37 15.3**	**+0.9**
	comp=Z,3.3nm,0.8s,baz=75,slow=5.2,SNR=7.6								
	comp=Z,3.3nm,0.8s								
TIXI	**Tiksi**	**76.60**	**9**	LR	LR			04 14 21.5	
	comp=Z,70nm,19.5s,baz=208,slow=38								
SUR	**Sutherland**	**79.71**	**238**	LR	LR			04 08 06.7	
	comp=Z,45nm,18.1s,baz=131,slow=32								
VNDA	**Vanda**	**81.28**	**169**	P	**P**			**03 37 45.4**	**+0.9**
	comp=Z,4.4nm,1.0s,baz=297,slow=2.3,SNR=1.8								
	comp=Z,4.4nm,1.0s								
RAO	**Raoul Island**	**81.36**	**119**	P	**P**			**03 37 45.3**	**-0.5**
BURAR	**Bucovina Array**	**82.15**	**319**	P	**P**			**03 37 50.1**	**+0.4**
BURAR				IAmb	IAmb			03 37 52.1	
	comp=Z,3.0nm,0.8s								
BUR08	**Bucovina Ar. S**	**82.17**	**319**	P	**P**			**03 37 50.2**	**+0.4**
BUR08				IAmb	IAmb			03 37 52.0	
	comp=Z,3.5nm,0.8s								
TSUM	**Tsumeb**	**82.31**	**251**	LR	LR			04 10 44.8	
	comp=Z,61nm,19.3s,baz=355,slow=33								
KOLS	**Kolonicke sedl**	**84.34**	**320**	*eP*	**P**			**03 38 02.5**	**+1.6**
FINES	**FINESS Array B**	**85.03**	**332**	P	**P**			**03 38 04.4**	**+0.4**
FINES	**FINESS Array B**	**85.03**	**332**	P	**P**			**03 38 04.7**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=105,slow=5.8,SNR=18								
	comp=Z,1.4nm,0.5s								
LANS	**Liptovska Anna**	**86.20**	**319**	*eP*	**P**			**03 38 11.1**	**+0.9**
QSPA	**South Pole Qui**	**87.14**	**180**	P	**P**			**03 38 15.7**	**+1.1**
QSPA				IAmb	IAmb			03 38 31.6	
	comp=Z,6.9nm,1.4s								
QSPA	**South Pole Qui**	**87.14**	**180**	P	**P**			**03 38 16.0**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=285,slow=1.9,SNR=11								
	comp=Z,1.3nm,0.7s								
ARCES	**ARCESS Array B**	**87.38**	**340**	P	**P**			**03 38 16.2**	**+0.7**
HFS	**Hagfors**	**90.79**	**330**	P	**P**			**03 38 32.2**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=118,slow=12,SNR=2.6								
	comp=Z,2.6nm,1.0s								
NOA	**NORSAR Array B**	**92.06**	**331**	P	**P**			**03 38 37.8**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=89,slow=4.9,SNR=3.3								
	comp=Z,1.0nm,0.9s								
NVAR	**Mina Array Bea**	**129.97**	**40**	PKP	**PKiKP**			**03 44 40.9**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=241,slow=1.9,SNR=2.7								
ULM	**Lac du Bonnet**	**130.77**	**14**	PKP	**PKPdf**			**03 44 39.9**	**0.0**
	comp=Z,0.4nm,0.4s,baz=276,slow=6.0,SNR=3.5								
BDFB	**Brasilia**	**143.78**	**239**	PKP	**PKPdf**			**03 45 04.0**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=83,slow=2.8,SNR=4.1								
CPUP	**Villa Florida**	**143.90**	**215**	PKP	**PKPdf**			**03 45 03.7**	**-1.1**
	comp=Z,2.6nm,0.7s,baz=77,slow=2.4,SNR=7.1								
TXAR	**Lajitas Array**	**145.09**	**39**	PKPbc	**PKPdf**			**03 45 06.9**	**0.0**
	comp=Z,2.5nm,0.5s,baz=211,slow=0.7,SNR=13								

IDC ***22*** *03:36:22.4±3.0,35°.83N×70°.90E,h75km±26km,mb3.8/19, mbtmp4.1/24,MS2.8/4,Error ellipse: s-maj=18.8km s-min=13.7km az=177.0*

MOS ***22*** *03:36:23.7±0.7,35°.96N×70°.96E,h96km,mb4.4/12,Error ellipse: s-maj=9.1km s-min=5.1km az=89.8*

NEIC ***22*** *03:36:24.8,35°.95N×70°.92E,h91km*

NEIC ***22*** *03:36:25.1±1.1,35°.96N±0°.05×70°.91E±0°.09,h94km±6km, mb4.3/65,Mwr4.1/15,Error ellipse: s-maj=10.1km s-min=6.9km az=96.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.17; Mθθ=0.64; Mφφ=0.81; Mrθ=1.28; Mθφ=0.48; Mφr=0.57; Fault plane solution: Mo=1.66000×10¹⁵ NP1:φ=241.09000°,δ=86.77000°, λ=-58.15000°. NP2:φ=336.26000°,δ=31.99000°, λ=-173.90000°. Principal axes: T 1.6024, Plg34.0000°, Azm304.0000°; N 0.1081, Plg32.0000°, Azm59.0000°; P -1.7105, Plg40.0000°, Azm180.0000°;*

ISC 22 03:36:24.6±0.4,35.87N±0°.05×70.94E±0°.04,h102km,n173, σ1**974**/181**,mb4.2**/56**,10C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.04**	**230**		**Pn**	**03 36 58.0**	**0.0**
KBL				Sn	**Sn**	**03 37 23.6**	**+0.1**
NIL	**Nilore**	**2.92**	**139**	Pn	**Pn**	**03 37 10.0**	**+0.6**
NIL	**Nilore**	**2.92**	**139**	PN	**Pn**	**03 37 10.0**	**+0.6**
SIMJ	**Simiganj**	**3.18**	**332**	Pn	**Pn**	**03 37 11.1**	**-1.8**
BTK	**Batken**	**4.18**	**359**	Pn	**Pn**	**03 37 26.0**	**-0.3**
BTK	**Batken**	**4.18**	**359**	PN	**Pn**	**03 37 26.0**	**-0.3**
JMU	**Jammu**	**4.54**	**133**	*eP*	**Pn**	**03 37 31.2**	**0.0**
JMU				*eS*	**Sn**	**03 38 21.4**	**-1.5**
THN	**Thein Dam**	**5.24**	**130**	*eP*	**Pn**	**03 37 40.4**	**-0.2**
THN				*eS*	**Sn**	**03 38 41.2**	**+1.4**
THN				IAML		03 38 41.5	
	comp=N,112nm,0.2s						
THN				IAML		03 38 42.3	
	comp=E,134nm,0.3s						
KSH	**Kashi**	**5.40**	**46**	Pn	**Pn**	**03 37 39.4**	**-3.5**
KSH				Sn	Sn	03 38 33.6	-10
KSH				pmax	pmax		
	comp=Z,40nm,0.4s						
KSH				smax	smax		
	comp=N,280nm,0.5s						
KSH				smax	smax		
	comp=E,160nm,0.5s						
ARSB	**Arslanbob**	**5.67**	**16**		**Pn**	**03 37 45.3**	**-1.3**
ARSB	**Arslanbob**	**5.67**	**16**	PN	**Pn**	**03 37 45.3**	**-1.3**
DHRM	**DHARAMSHALA**	**5.73**	**128**	*eP*	**Pn**	**03 37 47.1**	**-0.4**
DHRM				*eS*	**Sn**	**03 38 48.6**	**-3.4**
DHRM				IAML		03 38 51.7	
	comp=E,410nm,0.5s						
DHRM				IAML		03 39 07.8	
	comp=E,284nm,0.2s						
NRN	**Naryn**	**6.82**	**34**	Pn	**Pn**	**03 38 01.5**	**-0.8**
NRN	**Naryn**	**6.82**	**34**	PN	**Pn**	**03 38 01.5**	**-0.8**
UCH	**Uchtor**	**6.93**	**23**	P	**Pn**	**03 38 03.6**	**-0.3**
	SNR=33						
SMLA	**Simla**	**7.03**	**131**	*eP*	**Pn**	**03 38 03.4**	**-1.6**
SMLA				*eS*	**Sn**	**03 39 19.2**	**-4.1**
SMLA				IAML		03 39 24.8	
	comp=E,129nm,0.4s						
SMLA				IAML		03 39 38.0	
	comp=E,161nm,0.5s						
EKS2	**Erkin-Say**	**7.13**	**17**	P	**Pn**	**03 38 06.2**	**-0.1**
	SNR=17						
KK31	**Karatay Array**	**7.23**	**358**	Pn	**Pn**	**03 38 05.9**	**-1.7**
KK31	**Karatay Array**	**7.23**	**358**	PN	**Pn**	**03 38 05.9**	**-1.7**
KKAR	**Karatay Array**	**7.23**	**358**	Pn	**Pn**	**03 38 06.0**	**-1.6**
KKAR	**Karatay Array**	**7.23**	**358**		**Pn**	**03 38 06.1**	**-1.5**
KKAR	**Karatay Array**	**7.23**	**358**	PN	**Pn**	**03 38 06.1**	**-1.5**
AAK	**Ala-Archa**	**7.29**	**21**	P	**Pn**	**03 38 08.7**	**0.0**
	SNR=53						
AAK	**Ala-Archa**	**7.29**	**21**	Pn	**Pn**	**03 38 08.3**	**-0.2**
AAK	**Ala-Archa**	**7.29**	**21**	*ce*PN	**Pn**	**03 38 08.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,16nm,0.5s						
AAK	**Ala-Archa**	**7.29**	**21**	P	**Pn**	**03 38 08.5**	**-0.1**
	comp=Z,30nm,0.4s,baz=195,slow=6.4,SNR=88						
AAK				S	**Sn**	**03 39 28.6**	**-1.3**
	comp=Z,24nm,0.9s,baz=328,slow=14,SNR=3.5						
AAK				LR	LR	03 41 20.9	
	comp=Z,72nm,20.1s,baz=228,slow=41						
KBK	**Karagaybulak**	**7.45**	**23**	P	**Pn**	**03 38 10.8**	**0.0**
	SNR=19						
BOOM	**Boomskoye usch**	**7.66**	**29**		**Pn**	**03 38 13.2**	**-0.4**
BOOM	**Boomskoye usch**	**7.66**	**29**	PN	**Pn**	**03 38 13.2**	**-0.4**
CHMS	**Chumysh**	**7.70**	**21**	P	**Pn**	**03 38 14.2**	**+0.2**
	SNR=9.9						
USP	**Ospenovka**	**7.88**	**19**	P	**Pn**	**03 38 16.3**	**-0.1**
	SNR=17						
TKM2	**Tokmak 2**	**7.91**	**26**	P	**Pn**	**03 38 16.7**	**-0.3**
	SNR=25						
TARG	**Taragay, Kyrgy**	**7.93**	**40**	Pn	**Pn**	**03 38 17.2**	**-0.3**
TARG	**Taragay, Kyrgy**	**7.93**	**40**	PN	**Pn**	**03 38 17.2**	**-0.3**
KUDL	**Kundal**	**9.03**	**147**	*eP*	**Pn**	**03 38 30.0**	**-2.1**
KUDL				*eS*	Sn	03 40 03.1	-8.9
SONA	**Sohna**	**9.21**	**144**	*eS*	**Sn**	**03 40 09.0**	**-7.4**
LGTI	**Lohaghat**	**10.12**	**127**	*eP*	**Pn**	**03 38 43.8**	**-3.2**
LGTI				*eS*	Sn	03 40 29.0	-10
LGTI				IAML		03 40 31.8	
	comp=N,42nm,0.4s						
LGTI				IAML		03 40 33.0	
	comp=E,34nm,0.5s						
GEYT	**Alibeck**	**10.47**	**285**	Pn	**Pn**	**03 38 48.5**	**-3.2**
GEYT	**Alibeck**	**10.47**	**285**	P	**Pn**	**03 38 48.6**	**-3.2**
GEYT	**Alibeck**	**10.47**	**285**	P	Pn	03 38 47.5	-4.2
	comp=E,8.2nm,0.6s,baz=106,slow=11,SNR=13						
GEYT				S	**Sn**	**03 40 40.4**	**-6.7**
	comp=E,2.9nm,0.3s,baz=106,slow=20,SNR=6.2						
GYA0B	**ALIBECK ARRAY**	**10.47**	**285**	Pn	**Pn**	**03 38 48.8**	**-3.0**
MAKZ	**Makanchi**	**13.70**	**34**		**Pn**	**03 39 33.3**	**-1.2**
MAKZ	**Makanchi**	**13.70**	**34**	P	**Pn**	**03 39 33.3**	**-1.2**
MK31	**Makanchi Array**	**13.83**	**34**	Pn	**Pn**	**03 39 34.4**	**-1.8**
MK31	**Makanchi Array**	**13.83**	**34**	*ce*P	**Pn**	**03 39 35.2**	**-1.0**
MKAR	**Makanchi Array**	**13.83**	**34**	Pn	**Pn**	**03 39 35.3**	**-0.9**
MKAR	**Makanchi Array**	**13.83**	**34**	P	**Pn**	**03 39 35.3**	**-0.9**
MKAR	**Makanchi Array**	**13.83**	**34**	P	**Pn**	**03 39 35.6**	**-0.5**
	comp=E,1.2nm,0.8s,baz=224,slow=14,SNR=7.6						
MKAR				LR	LR	03 45 30.8	
	comp=E,44nm,21.3s,baz=268,slow=40						
ABKAR	**Akbulak array**	**15.61**	**332**		**Pn**	**03 39 56.3**	**-2.5**
ABKAR	**Akbulak array**	**15.61**	**332**		**Pn**	**03 39 56.6**	**-2.1**
ABKAR				IAmb	IAmb	03 39 57.6	
	comp=Z,29nm,0.6s						
KURBB	**Kurchatov Arra**	**15.73**	**18**	P	**Pn**	**03 39 57.2**	**-3.1**
	comp=Z,0.7nm,0.7s,baz=209,slow=10,SNR=6.4						
KURK	**Kurchatov**	**15.84**	**18**	Pn	**Pn**	**03 40 00.8**	**-0.8**
KURK	**Kurchatov**	**15.84**	**18**	*ce*P	**P**	**03 40 02.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WSAR	**Wadi Sarin**	**16.51**	**224**	P	**P**	**03 40 13.6**	**+2.7**
	comp=Z,3.1nm,0.6s,baz=84,slow=1.5,SNR=5.0						
BVAR	**Borovoye Array**	**17.15**	**359**	P	**Pn**	**03 40 16.4**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=168,slow=11,SNR=12						
BVAR				S	**Sn**	**03 43 21.3**	**-7.0**
	comp=Z,1.0nm,0.5s,baz=166,slow=19,SNR=3.3						
BRVK	**Borovoye**	**17.19**	**359**		**Pn**	**03 40 15.4**	**-2.8**
BRVK				IAmb	IAmb	03 40 49.5	
	comp=Z,12nm,1.1s						
BRVK	**Borovoye**	**17.19**	**359**	*ce*P	**Pn**	**03 40 17.3**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTO	**Aktyubinsk**	**17.30**	**331**	P	**P**	**03 40 19.4**	**-0.1**
	comp=Z,32nm,0.7s,baz=149,slow=13,SNR=73						
AKTO				S	Sn	03 43 16.4	-16
	comp=Z,3.2nm,0.8s,baz=90,slow=19,SNR=4.6						
DGZ	**Jazzator, Alta**	**18.31**	**36**	*i* P	**P**	**03 40 30.4**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HYB	**Hyderabad**	**19.59**	**158**	*eP*	**P**	**03 40 46.6**	**+1.8**
ZAA0	**Zalesovo Array**	**20.50**	**24**	P	**P**	**03 40 54.2**	**-0.1**
ZAA0				IAmb	IAmb	03 40 54.9	
	comp=Z,8.3nm,1.0s						
ZALV	**Zalesovo Beam**	**20.50**	**24**	P	**P**	**03 40 54.5**	**+0.1**
	comp=Z,4.6nm,0.5s,baz=221,slow=10,SNR=27						
	comp=Z,4.6nm,0.5s						
GNI	**Garni**	**21.05**	**290**	P	**P**	**03 41 00.4**	**-0.1**
GNI	**Garni**	**21.05**	**290**	*ce*P	**P**	**03 41 03.3**	**+2.8**
GNI				pmax	pmax		
	comp=Z,53nm,1.3s						
GNI	**Garni**	**21.05**	**290**	P	**P**	**03 41 03.4**	**+2.9**
	comp=Z,29nm,0.7s,baz=25,slow=3.5,SNR=21						
AKH	**Akhalkalaki**	**22.09**	**293**	P	**P**	**03 41 11.7**	**+0.1**
AKH	**Akhalkalaki**	**22.09**	**293**	P	**P**	**03 41 11.7**	**+0.1**
AKH				pmax	pmax		
	comp=Z,55nm,0.8s						
ARU	**Arti**	**22.21**	**342**	P	**P**	**03 41 12.1**	**-0.3**
ARU				IAmb	IAmb	03 41 17.5	
	comp=Z,11nm,0.8s						
ARU	**Arti**	**22.21**	**342**	*c i*P	**P**	**03 41 12.4**	**-0.1**
ARU						03 41 41.0	
ARU				S	**S**	**03 45 09.4**	**-0.7**
ARU				SS	**SnSn**	**03 45 56.8**	**+9.4**
ARU	**Arti**	**22.21**	**342**	P	**P**	**03 41 14.1**	**+1.7**
	comp=Z,4.2nm,0.3s,baz=142,slow=7.1,SNR=11						
ARU				LR	LR	03 50 06.2	
	comp=Z,39nm,18.7s,baz=169,slow=37						
	comp=Z,4.2nm,0.3s						
ONI	**Oni**	**22.26**	**296**	P	**P**	**03 41 13.4**	**+0.1**
ONI	**Oni**	**22.26**	**296**	P	**P**	**03 41 13.4**	**+0.1**
ONI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NCK	**Nalchik**	**22.31**	**298**	*i* P	**P**	**03 41 14.9**	**+1.2**
NCK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**22.85**	**299**	*ce*P	**P**	**03 41 19.7**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KBZ	**Khabaz**	**22.85**	**299**	P	**P**	**03 41 19.1**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=149,slow=4.4,SNR=6.5						
	comp=Z,2.4nm,0.8s						
KIV	**Kislovodsk**	**23.04**	**299**	*eP*	**P**	**03 41 21.0**	**-0.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BELG	**Belogornoye**	**23.35**	**322**	*i* P	**P**	**03 41 23.2**	**-0.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARPR	**Arpgir-MALATY**	**26.00**	**287**	P	**P**	**03 41 50.4**	**+2.3**
ARPR				IAmb	IAmb	03 41 52.5	
	comp=Z,18nm,1.3s						
KIRV	**Kirov**	**26.78**	**335**	*ce*P	**P**	**03 41 56.1**	**+1.4**
SONM	**Songino Array**	**28.73**	**54**	P	**P**	**03 42 14.4**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=268,slow=8.7,SNR=3.1						
	comp=Z,0.4nm,0.6s						
SIM	**Simferopol'**	**29.26**	**299**	P	**P**	**03 42 15.7**	**-1.2**
SIM				pmax	pmax		
	comp=Z,11nm,0.6s						
BR131	**Keskin Array S**	**29.58**	**289**	P	**P**	**03 42 21.1**	**+1.1**
BR131				IAmb	IAmb	03 42 22.4	
	comp=Z,4.6nm,0.8s						
BR131	**Keskin Array S**	**29.58**	**289**	P	**P**	**03 42 21.1**	**+1.1**
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**29.58**	**289**	P	**P**	**03 42 20.9**	**+0.8**
BRTR	**Keskin Array B**	**29.58**	**289**	*ce*P	**P**	**03 42 21.5**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	**Keskin Array B**	**29.58**	**289**	P	**P**	**03 42 21.9**	**+1.8**
	comp=Z,3.1nm,0.7s,baz=99,slow=8.9,SNR=20						
	comp=Z,3.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.20**	**118**	LR	LR	03 56 33.3	
	comp=Z,15nm,21.3s,baz=270,slow=40						
OBN	**Obninsk**	**30.38**	**320**	*eP*	**P**	**03 42 27.4**	**+0.7**
OBN				pmax	pmax		
	comp=Z,26nm,2.5s						
ELL	**Elmali**	**32.90**	**284**	P	**P**	**03 42 50.2**	**+1.0**
ELL	**Elmali**	**32.90**	**284**	P	**P**	**03 42 50.2**	**+1.0**
ELL				pmax	pmax		
	comp=Z,35nm,0.7s						
AKASG	**Malin Array Be**	**33.30**	**310**	P	**P**	**03 42 53.1**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=82,slow=7.4,SNR=4.1						
	comp=Z,1.0nm,0.5s						
NRIK	**Noril'sk**	**34.75**	**10**	*ce*P	**P**	**03 43 05.2**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BURAR	**Bucovina Array**	**35.59**	**304**	P	**P**	**03 43 13.7**	**+1.5**
VSU	**Vasula**	**36.65**	**322**	*eP*	**P**	**03 43 22.1**	**+1.1**
VSVD	**Vaisvydziai**	**37.46**	**317**	*eP*	**P**	**03 43 29.3**	**+1.5**
FIA1	**FINESS Array S**	**37.98**	**327**	P	**P**	**03 43 33.2**	**+1.1**
FINES	**FINESS Array B**	**37.98**	**327**	P	**P**	**03 43 32.9**	**+0.8**
FINES	**FINESS Array B**	**37.98**	**327**	*i* P	**P**	**03 43 33.0**	**+0.8**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**37.98**	**327**	P	**P**	**03 43 32.8**	**+0.6**
	comp=Z,4.2nm,0.6s,baz=109,slow=9.4,SNR=26						
	comp=Z,4.2nm,0.6s						
MTSE	**Matsula**	**38.18**	**322**	*eP*	**P**	**03 43 35.2**	**+1.3**
KEV	**Kevo**	**41.37**	**339**	P	**P**	**03 44 00.9**	**+0.8**
KEV	**Kevo**	**41.37**	**339**	P	**P**	**03 44 00.9**	**+0.8**
KEV				pmax	pmax		
	comp=Z,81nm,1.5s						
ARCES	**ARCESS Array B**	**41.70**	**338**	P	**P**	**03 44 04.2**	**+1.2**
ARCES	**ARCESS Array B**	**41.70**	**338**	P	**P**	**03 44 04.1**	**+1.2**
	comp=Z,3.7nm,0.6s,baz=102,slow=8.8,SNR=13						
	comp=Z,3.7nm,0.6s						
HFS	**Hagfors**	**43.53**	**322**	P	**P**	**03 44 18.3**	**+0.5**
	comp=Z,5.8nm,0.6s,baz=104,slow=11,SNR=39						
	comp=Z,5.8nm,0.6s						
NC405	**NORSAR Array S**	**44.62**	**324**	P	**P**	**03 44 27.1**	**+0.6**
NC303	**NORSAR Array S**	**44.80**	**324**	P	**P**	**03 44 28.7**	**+0.8**
NB2	**NORSAR Subarra**	**44.85**	**323**	P	**P**	**03 44 28.9**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.85**	**323**	P	**P**	**03 44 28.5**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=97,slow=7.9,SNR=23						
	comp=Z,2.9nm,0.6s						
NBO00	**NORSAR Array S**	**45.06**	**323**	P	**P**	**03 44 30.2**	**+0.2**
NC204	**NORSAR Array S**	**45.09**	**324**	P	**P**	**03 44 30.6**	**+0.3**
KEST	**Kesra**	**49.19**	**289**	P	**P**	**03 45 04.3**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=8.3,slow=6.4,SNR=4.4						
	comp=Z,2.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**52.70**	**316**	P	**P**	**03 45 28.8**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=93,slow=7.2,SNR=1.5						
	comp=Z,0.4nm,0.6s						
MAJO	**Matsushiro**	**53.23**	**68**	P	**P**	**03 45 34.2**	**+1.6**
MAJO				IAmb	IAmb	03 45 57.7	
	comp=Z,4.0nm,0.8s						
MAJO	**Matsushiro**	**53.23**	**68**	P	**P**	**03 45 34.2**	**+1.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ESDC	**Sonseca Array**	**57.71**	**298**	P	**P**	**03 46 04.5**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=52,slow=7.5,SNR=6.8						
	comp=Z,1.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.66**	**269**	P	**P**	**03 46 57.4**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=44,slow=5.9,SNR=12						
	comp=Z,0.9nm,0.7s						
B20K	**Meade River**	**68.82**	**16**	P	**P**	**03 47 18.5**	**+1.1**
B20K				IAmb	IAmb	03 47 19.6	
	comp=Z,8.2nm,1.3s						
D19K	**Kuna River**	**69.75**	**17**	P	**P**	**03 47 24.2**	**+0.9**
D19K				IAmb	IAmb	03 47 24.4	
	comp=Z,4.8nm,1.1s						
C23K	**Itkillik River**	**70.34**	**14**	P	**P**	**03 47 28.2**	**+1.4**
C23K				IAmb	IAmb	03 47 29.0	
	comp=Z,5.2nm,1.1s						
TOLK	**Toolik Lake Re**	**71.54**	**15**	P	**P**	**03 47 35.5**	**+1.4**
TOLK				IAmb	IAmb	03 48 10.5	
	comp=Z,6.8nm,1.4s						
G19K	**Purcell Mounta**	**71.82**	**19**	P	**P**	**03 47 36.6**	**+0.8**
G21K	**Allakaket**	**72.41**	**17**	P	**P**	**03 47 40.0**	**+0.6**
IMAR	**Indian Mountai**	**72.78**	**18**	P	**P**	**03 47 42.1**	**+0.6**
E28M	**Babbage River**	**73.39**	**11**	P	**P**	**03 47 46.9**	**+1.9**
E28M				IAmb	IAmb	03 47 47.1	
	comp=Z,4.4nm,1.4s						
BMAR	**Burnt Mountain**	**73.56**	**14**	P	**P**	**03 47 48.0**	**+1.9**
E29M	**Blow River**	**73.84**	**11**	P	**P**	**03 47 49.0**	**+1.3**
J19K	**Poorman**	**73.89**	**19**	P	**P**	**03 47 49.5**	**+1.4**
J19K				IAmb	IAmb	03 48 09.0	
	comp=Z,6.2nm,1.5s						
J20K	**Nowinta River**

ASAR	**Alice Springs**	**83.94**	**125**	P		**P**	**03 48 44.5**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=312,slow=5.4,SNR=6.8							
	comp=Z,0.9nm,0.6s							

*GCG **22** 03:48:48.4±0.4, 14°.30N×88°.09W, h50km, MD4.0*
*SNET **22** 03:48:49.8±1.0, 12°.92N×88°.81W, h34km±7km, ML4.2*
*CATAC **22** 03:48:49.0±0.7, 12°.91N×88°.79W, h26km±6km, ML4.2*
*IDC **22** 03:48:50.7±2.6, 13°.37N×88°.50W, h61km±28km, mb3.3/7, mbtmp3.6/9, ML3.6/2, Error ellipse: s-maj=52.0km s-min=20.2km az=35.0*

ISC 22 03:48:49.2±1.1, 12°.95N±0°.07×88°.78W±0°.03, h59km±8km, n110, σ0s81/146, mb3.5/7, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.43**	**29**	IAML			03 49 02.4	
	comp=Z,13μm,0.2s							
TECO	**Alcaldia de Te**	**0.58**	**0**	*eP*		**Pn**	**03 49 02.1**	**0.0**
TECO	**Alcaldia de Te**	**0.58**	**0**	*i* P		**Pn**	**03 49 02.3**	**+0.2**
TECO				*i* S		**Sn**	**03 49 11.4**	**0.0**
TECO				IAML			03 49 14.8	
	comp=Z,12μm,1.0s							
COEB	**Comit de Eme**	**0.60**	**24**	*eP*		**Pn**	**03 49 02.7**	**+0.4**
COEB				*eS*		**Sn**	**03 49 12.6**	**+0.7**
COEB				IAML			03 49 15.1	
	comp=Z,13μm,0.3s							
COEB	**Comit de Eme**	**0.60**	**24**	*i* P		**Pn**	**03 49 02.6**	**+0.3**
COEB				IAML			03 49 14.8	
	comp=Z,13μm,1.0s							
TECA	**Tecapa**	**0.61**	**27**	*eP*		**Pn**	**03 49 02.8**	**+0.3**
SNVI	**San Vicente**	**0.66**	**355**	*eP*		**Pn**	**03 49 03.4**	**+0.3**
LCY	**Lacayo**	**0.67**	**45**	*i* P		**Pn**	**03 49 03.5**	**+0.3**
RANC	**El Ranchito**	**0.68**	**45**	*eP*		**Pn**	**03 49 03.8**	**+0.4**
RANC	**El Ranchito**	**0.68**	**45**	*i* P		**Pn**	**03 49 03.6**	**+0.3**
RANC				*i* S		**Sn**	**03 49 14.0**	**+0.4**
RANC				IAML			03 49 17.2	
	comp=Z,8μm,1.0s							
PACA	**Pacayal**	**0.68**	**41**	*eP*		**Pn**	**03 49 04.1**	**+0.8**
PACA				*eS*		**Sn**	**03 49 14.6**	**+1.0**
PACA	**Pacayal**	**0.68**	**41**	*i* P		**Pn**	**03 49 03.7**	**+0.4**
PACA				*i* S		**Sn**	**03 49 13.9**	**+0.3**
PACA				IAML			03 49 16.9	
	comp=Z,78μm,1.0s							
UESV	**Universidad de**	**0.68**	**359**	*eP*		**Pn**	**03 49 03.7**	**+0.4**
UESV				*eS*		**Sn**	**03 49 14.6**	**+1.1**
UESV	**Universidad de**	**0.68**	**359**	*i* P		**Pn**	**03 49 03.6**	**+0.4**
UESV				*i* S		**Sn**	**03 49 14.0**	**+0.5**
UESV				IAML			03 49 16.4	
	comp=Z,13μm,1.0s							
VSM	**San Miguel**	**0.69**	**46**	*eP*		**Pn**	**03 49 04.0**	**+0.5**
SJTE	**Alcalda de S**	**0.70**	**342**	*i* P		**Pn**	**03 49 03.5**	**0.0**
SJTE				*i* S		**Sn**	**03 49 14.0**	**+0.1**
SJTE				IAML			03 49 15.1	
	comp=Z,13μm,1.0s							
PQSS	**Presa 15 de Se**	**0.70**	**18**	*eP*		**Pn**	**03 49 04.3**	**+0.8**
PQSS	**Presa 15 de Se**	**0.70**	**18**	*i* P		**Pn**	**03 49 04.3**	**+0.8**
PQSS				*i* S		**Sn**	**03 49 14.9**	**+1.0**
PQSS				IAML			03 49 17.9	
	comp=Z,22μm,1.0s							
BLLM	**Bellamira**	**0.72**	**47**	⇑*i* P		**Pn**	**03 49 04.1**	**+0.4**
LFRS	**El Faro**	**0.72**	**338**	*i* P		**Pn**	**03 49 04.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.75**	**4**	*eP*		**Pn**	**03 49 04.8**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.75**	**4**	*i* P		**Pn**	**03 49 04.7**	**+0.6**
SCLA				IAML			03 49 18.2	
	comp=Z,10μm,1.0s							
LALI	**Alcalda de L**	**0.75**	**316**	*eP*		**Pn**	**03 49 04.0**	**-0.1**
LALI				*eS*		**Sn**	**03 49 15.1**	**+0.3**
LALI	**Alcalda de L**	**0.75**	**316**	*i* P		**Pn**	**03 49 03.9**	**-0.1**
LALI				*i* S		**Sn**	**03 49 14.5**	**-0.4**
LALI				IAML			03 49 15.2	
	comp=Z,1μm,1.0s							
PANCS	**Alcalda de**	**0.76**	**330**	*eP*		**Pn**	**03 49 04.1**	**-0.2**
PANCS	**Alcalda de**	**0.76**	**330**	*i* P		**Pn**	**03 49 04.1**	**-0.2**
PANCS				*i* S		**Sn**	**03 49 14.9**	**-0.4**
PANCS				IAML			03 49 15.5	
	comp=Z,16μm,1.0s							
PAVA	**Las Pavas**	**0.77**	**349**	*eP*		**Pn**	**03 49 04.9**	**+0.5**
PAVA	**Las Pavas**	**0.77**	**349**	*i* P		**Pn**	**03 49 04.9**	**+0.5**
PAVA				IAML			03 49 17.7	
	comp=Z,44μm,1.0s							
LOMA	**Loma Larga**	**0.79**	**331**	*eP*		**Pn**	**03 49 04.8**	**+0.2**
LOMA				*eS*		**Sn**	**03 49 16.0**	**+0.1**
LOMA	**Loma Larga**	**0.79**	**331**	*i* P		**Pn**	**03 49 04.8**	**+0.2**
LOMA				IAML			03 49 18.4	
	comp=Z,14μm,1.0s							
CNRM	**Centro Naciona**	**0.79**	**49**	*eP*		**Pn**	**03 49 05.0**	**+0.5**
CNRM				*eS*		**Sn**	**03 49 17.2**	**+1.4**
CNRM	**Centro Naciona**	**0.79**	**49**	*i* P		**Pn**	**03 49 04.7**	**+0.2**
CNRM				IAML			03 49 19.4	
	comp=Z,17μm,1.0s							
AEIL	**Aeropuerto Ilo**	**0.81**	**336**	*eP*		**Pn**	**03 49 05.5**	**+0.6**
AEIL				*eS*		**Sn**	**03 49 18.1**	**+1.7**
AEIL				IAML			03 49 19.8	
	comp=Z,10μm,0.3s							
UDBS	**Universidad Do**	**0.84**	**334**	*eP*		**Pn**	**03 49 05.7**	**+0.4**
UDBS				*eS*		**Sn**	**03 49 18.0**	**+0.9**
UDBS	**Universidad Do**	**0.84**	**334**	*i* P		**Pn**	**03 49 05.7**	**+0.4**
UDBS				IAML			03 49 19.5	
	comp=Z,11μm,1.0s							
IGN	**Direccin Gen**	**0.85**	**334**	*eP*		**Pn**	**03 49 05.8**	**+0.4**
IGN				*eS*		**Sn**	**03 49 18.0**	**+0.8**
IGN				*eS*		**Sn**	**03 49 18.0**	**+0.8**
IGN	**Direccin Gen**	**0.85**	**334**	*i* P		**Pn**	**03 49 05.7**	**+0.4**
IGN				IAML			03 49 18.6	
	comp=Z,61μm,1.0s							
UTEC	**Universidad Te**	**0.85**	**331**	*eP*		**Pn**	**03 49 05.6**	**+0.3**
UTEC	**Universidad Te**	**0.85**	**331**	*i* P		**Pn**	**03 49 05.7**	**+0.3**
UTEC				IAML			03 49 21.2	
	comp=Z,8μm,1.0s							
SNET	**Serv Nac Est T**	**0.85**	**329**	*eP*		**Pn**	**03 49 05.6**	**+0.2**
SNET				*eS*		**Sn**	**03 49 17.8**	**+0.5**
SNET	**Serv Nac Est T**	**0.85**	**329**	*i* P		**Pn**	**03 49 05.6**	**+0.2**
SNET				IAML			03 49 19.7	
	comp=Z,18μm,1.0s							
LFU	**La Fuente**	**0.86**	**338**	*eP*		**Pn**	**03 49 06.0**	**+0.5**
SEMO	**Seminario San**	**0.86**	**330**	*eP*		**Pn**	**03 49 05.8**	**+0.3**
SEMO	**Seminario San**	**0.86**	**330**	*i* P		**Pn**	**03 49 05.9**	**+0.3**
SEMO				IAML			03 49 18.9	
	comp=Z,28μm,1.0s							
ITCA	**Escuela Especi**	**0.87**	**326**	*eP*		**Pn**	**03 49 06.8**	**+1.2**
ITCA				*eS*		**Sn**	**03 49 18.0**	**+0.3**
UESS	**Universidad de**	**0.87**	**332**	*eP*		**Pn**	**03 49 05.9**	**+0.3**
MAGS	**Ministerio de**	**0.88**	**326**	*eP*		**Pn**	**03 49 06.1**	**+0.3**
MAGS				*eS*		**Sn**	**03 49 18.1**	**+0.2**
MAGS				*eS*		**Sn**	**03 49 18.2**	**+0.2**
UEES	**Universidad Ev**	**0.88**	**330**	*eP*		**Pn**	**03 49 06.1**	**+0.3**
UEES				*eS*		**Sn**	**03 49 18.5**	**+0.5**
UEES	**Universidad Ev**	**0.88**	**330**	*i* P		**Pn**	**03 49 06.1**	**+0.3**
UEES				IAML			03 49 24.7	
	comp=Z,5μm,1.0s							
PIC2	**El Picacho**	**0.92**	**330**	*eS*		**Sn**	**03 49 20.2**	**+1.2**
PMON	**Piamonte**	**0.92**	**326**	*eP*		**Pn**	**03 49 06.7**	**+0.3**
PMON	**Piamonte**	**0.92**	**326**	*i* P		**Pn**	**03 49 06.6**	**+0.3**
PMON				IAML			03 49 23.6	
	comp=Z,11μm,1.0s							
BOQS	**Boqueron**	**0.92**	**328**	*eP*		**Pn**	**03 49 06.8**	**+0.4**
LCND	**La Caada**	**0.94**	**68**	*eP*		**Pn**	**03 49 06.8**	**+0.3**
LCND				*eP*		**Pn**	**03 49 07.2**	**+0.8**
LCND				*eS*		**Sn**	**03 49 20.0**	**+0.9**
LCND				*eS*		**Sn**	**03 49 20.1**	**+0.9**
LCND	**La Caada**	**0.94**	**68**	*i* P		**Pn**	**03 49 06.7**	**+0.3**
LCND				*i* P		**Pn**	**03 49 06.9**	**+0.5**
LCND				IAML			03 49 10.6	
	comp=Z,12μm,1.0s							
LCND				IAML			03 49 23.7	
	comp=Z,6μm,1.0s							
JAYA	**Jayaque - finc**	**0.96**	**317**	*eP*		**Pn**	**03 49 07.0**	**+0.2**
JAYA				*eS*		**Sn**	**03 49 20.1**	**+0.3**
JAYA	**Jayaque - finc**	**0.96**	**317**	*i* P		**Pn**	**03 49 06.7**	**-0.1**
JAYA				IAML			03 49 20.8	
	comp=Z,25μm,1.0s							
CNCH	**Conchagua**	**0.98**	**70**	*i* P		Pn	03 49 02.9	-4.2
CNCH				*eP*		**Pn**	**03 49 07.2**	**+0.2**
CNCH				*eS*		**Sn**	**03 49 22.2**	**+2.0**
CNCH	**Conchagua**	**0.98**	**70**	*i* P		**Pn**	**03 49 07.2**	**+0.2**
CNCH				IAML			03 49 28.4	
	comp=Z,8μm,1.0s							
QUEZ	**Alcaldia de Qu**	**1.00**	**332**	*eP*		**Pn**	**03 49 07.9**	**+0.6**
QUEZ	**Alcaldia de Qu**	**1.00**	**332**	*i* P		**Pn**	**03 49 07.9**	**+0.6**
QUEZ				IAML			03 49 24.6	
	comp=Z,13μm,1.0s							
CEDA	**San Andres**	**1.04**	**325**	*eP*		**Pn**	**03 49 08.1**	**+0.3**
CEDA				*eS*		**Sn**	**03 49 22.2**	**+0.7**
CEDA				IAML			03 49 25.7	
	comp=Z,4μm,0.3s							
CEDA	**San Andres**	**1.04**	**325**	*i* P		**Pn**	**03 49 08.2**	**+0.4**
CEDA				IAML			03 49 39.4	
	comp=Z,9μm,1.0s							
AMPH	**Amapala**	**1.14**	**73**	*eP*		**Pn**	**03 49 09.6**	**+0.6**
AMPH				*eS*		**Sn**	**03 49 25.9**	**+2.0**
AMPH	**Amapala**	**1.14**	**73**	*i* P		**Pn**	**03 49 09.2**	**+0.1**
CEVE	**Cerro Verde**	**1.20**	**317**	*i* P		**Pn**	**03 49 10.9**	**+0.8**
CEVE				IAML			03 49 35.4	
	comp=Z,6μm,1.0s							
SBLS	**San Blas**	**1.21**	**317**	*eP*		**Pn**	**03 49 11.0**	**+0.8**
LLGN	**La Laguna**	**1.22**	**353**	*i* P		**Pn**	**03 49 10.8**	**+0.6**
LLGN				*eS*		**Sn**	**03 49 28.0**	**+2.2**
LLGN	**La Laguna**	**1.22**	**353**	*i* P		**Pn**	**03 49 10.8**	**+0.6**
LLGN				IAML			03 49 31.6	
	comp=Z,2μm,1.0s							
POTN	**Potosi Cosigui**	**1.24**	**88**	*i* P		**Pn**	**03 49 11.1**	**+0.7**
POTN				IAML			03 49 28.9	
	comp=Z,580nm,1.0s							
RTR	**El Retiro**	**1.26**	**318**	*eP*		**Pn**	**03 49 12.0**	**+1.1**
UNIC	**Universidad Ca**	**1.27**	**324**	*i* P		**Pn**	**03 49 11.3**	**+0.4**
UNIC				IAML			03 49 29.8	
	comp=Z,1μm,1.0s							
NUBE	**Las Nubes**	**1.36**	**314**	*eP*		**Pn**	**03 49 12.8**	**+0.7**
NUBE				*eS*		**Sn**	**03 49 29.8**	**+0.6**
NUBE	**Las Nubes**	**1.36**	**314**	*i* P		**Pn**	**03 49 12.5**	**+0.4**
NUBE				IAML			03 49 30.8	
	comp=Z,6μm,1.0s							
LOAL	**Lomas de Alarc**	**1.43**	**317**	*eP*		**Pn**	**03 49 13.8**	**+0.9**
LOAL	**Lomas de Alarc**	**1.43**	**317**	*i* P		**Pn**	**03 49 13.9**	**+1.0**
LOAL				IAML			03 49 39.4	
	comp=Z,3μm,1.0s							
SLOZ	**Alcaldia de Sa**	**1.45**	**318**	*eP*		**Pn**	**03 49 14.0**	**+0.7**
SLOZ				*eP*		**Pn**	**03 49 14.5**	**+1.2**
SLOZ				*eS*		**Sn**	**03 49 33.4**	**+2.1**
MTO3	**Montecristo**	**1.55**	**339**	*i* P		**Pn**	**03 49 15.4**	**+0.7**
MTO3	**Montecristo**	**1.55**	**339**	*i* P		**Pn**	**03 49 15.4**	**+0.7**
MTO3				IAML			03 49 37.7	
	comp=Z,740nm,1.0s							
JUAM	**Asuncion Mita**	**1.65**	**327**	*i* P		**Pn**	**03 49 16.4**	**+0.5**
JUAM				IAML			03 49 16.8	
	comp=Z,690nm,1.0s							
ESQI	**Esquipulas**	**1.69**	**341**	*i* P		**Pn**	**03 49 17.8**	**+1.2**
ESQI				IAML			03 49 17.8	
	comp=Z,970nm,1.0s							
CRIN	**San Cristobal**	**1.71**	**98**	*i* P		**Pn**	**03 49 17.6**	**+0.9**
CRIN				IAML			03 49 47.4	
	comp=Z,4μm,1.0s							
PKGN	**Cerro Pekin**	**1.78**	**99**	*i* P		**Pn**	**03 49 17.9**	**+0.2**
PKGN				IAML			03 49 41.6	
	comp=Z,3μm,1.0s							
TGUH	**Tegucigalpa,Un**	**1.83**	**53**	*i* P		**Pn**	**03 49 19.2**	**+0.7**
TGUH				IAML			03 49 19.6	
	comp=Z,1μm,1.0s							
TEL3	**Telica 3**	**1.93**	**101**	*i* P		**Pn**	**03 49 20.0**	**+0.3**
TEL3				IAML			03 49 47.2	
	comp=Z,1μm,1.0s							
HERN	**Volcan Telica**	**1.93**	**100**	*i* P		**Pn**	**03 49 19.5**	**-0.3**
HERN				IAML			03 49 50.7	
	comp=Z,1μm,1.0s							
TELN	**Telica**	**1.93**	**100**	*i* P		**Pn**	**03 49 19.5**	**-0.3**
TELN				IAML			03 49 51.9	
	comp=Z,97nm,1.0s							
ROCN	**Rota Cerro Neg**	**2.03**	**102**	*i* P		**Pn**	**03 49 21.3**	**+0.2**
ROCN				IAML			03 49 54.3	
	comp=Z,540nm,1.0s							
ILCN	**San Idelfonso**	**2.06**	**100**	*i* P		**Pn**	**03 49 22.1**	**+0.6**
ILCN				IAML			03 49 51.3	
	comp=Z,200nm,1.0s							
CNGN	**Cerro Negro**	**2.08**	**102**	*i* P		**Pn**	**03 49 22.9**	**+1.1**
CNGN				IAML			03 49 56.7	
	comp=Z,730nm,1.0s							
MACN	**El Madrono**	**2.11**	**103**	*i* P		**Pn**	**03 49 22.3**	**+0.1**
MACN				IAML			03 49 57.1	
	comp=Z,430nm,1.0s							
YUSH	**Yuscaran**	**2.13**	**62**	*eP*		**Pn**	**03 49 23.2**	**+0.6**
YUSH	**Yuscaran**	**2.13**	**62**	*i* P		**Pn**	**03 49 23.2**	**+0.6**
LEVN	**Ruinas Leon Vi**	**2.18**	**104**	*i* P		**Pn**	**03 49 23.9**	**+0.8**
LEVN				IAML			03 49 59.1	
	comp=Z,640nm,1.0s							
GUNB	**GUNB**	**2.23**	**317**	*i* P		**Pn**	**03 49 24.6**	**+0.5**
GUNB				IAML			03 49 53.0	
	comp=Z,300nm,1.0s							
MOMN	**Momotombo**	**2.25**	**104**	*i* P		**Pn**	**03 49 25.4**	**+1.3**
MOMN				IAML			03 49 52.9	
	comp=Z,29nm,1.0s							
MOM2	**El Cardon**	**2.30**	**103**	*i* P		**Pn**	**03 49 25.0**	**+0.3**
MOM2				IAML			03 49 55.3	
	comp=Z,270nm,1.0s							
FUG	**Fuego 3**	**2.50**	**307**	*eP*		**Pn**	**03 49 30.1**	**+2.5**
SULM	**Suchitepequez,**	**3.02**	**297**	*eP*		Pn	03 49 38.9	+4.2
STG3	**Santiaguito 3,**	**3.23**	**303**	*eP*		**Pn**	**03 49 39.8**	**+2.2**
STG3				*eS*		**Sn**	**03 50 14.8**	**-0.1**
JTS	**Las Juntas de**	**4.59**	**125**	P		**Pn**	**03 49 58.0**	**+1.9**
	comp=Z,3.8nm,0.3s,baz=294,slow=23,SNR=5.8							
JTS				S		**Sn**	**03 50 47.1**	**-1.1**
	comp=Z,7.6nm,0.3s,baz=22,slow=19,SNR=3.5							
	comp=Z,4.4nm,0.3s							
CMIG	**Matias Romero**	**7.19**	**306**	P		**Pn**	**03 50 33.5**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=189,slow=13,SNR=10							
CMIG				S		**Sn**	**03 51 52.6**	**+0.6**
	comp=Z,3.0nm,0.3s,baz=43,slow=19,SNR=2.2							
	comp=Z,2.2nm,0.4s							
TXAR	**Lajitas Array**	**21.38**	**322**	P		**P**	**03 53 32.8**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=138,slow=10,SNR=5.4							
	comp=Z,1.0nm,0.6s							
PDAR	**Pindale Array**	**34.73**	**333**	P		**P**	**03 55 33.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=130,slow=12,SNR=5.6							
	comp=Z,0.3nm,0.5s							
NVAR	**Mina Array Bea**	**36.48**	**319**	P		**P**	**03 55 49.6**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=121,slow=11,SNR=2.2							
NVAR				PcP		**PcP**	**03 58 12.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=116,slow=2.0,SNR=4.2							
	comp=Z,0.1nm,0.4s							
ULM	**Las du Bonnet**	**37.65**	**353**	P		P	03 55 54.8	-3.6
	comp=Z,1.1nm,0.5s,baz=173,slow=8.3,SNR=3.6							
	comp=Z,1.1nm,0.5s							
SCHQ	**Schefferville**	**45.19**	**18**	P		**P**	**03 56 58.0**	**-2.2**
	comp=Z,1.7nm,0.8s,baz=221,slow=9.3,SNR=1.6							
	comp=Z,1.7nm,0.8s							
YKA	**Yellowknife Ar**	**52.80**	**345**	P		**P**	**03 57 57.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=139,slow=7.6,SNR=21							
	comp=Z,1.0nm,0.6s							
ILAR	**Eielson Array**	**65.04**	**336**	P		**P**	**03 59 21.6**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=128,slow=4.9,SNR=8.8							
	comp=Z,0.3nm,0.8s							
WRA	**Warramunga Arr**	**138.15**	**255**	PKP		**PKPdf**	**04 08 09.5**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=81,slow=2.3,SNR=2.4							

*IDC **22** 04:16:16.4±2.5, 85°.52N×83°.89E, h0km, mb3.1/3, mbtmp3.3/4, ML3.8/1, MS3.2/4, Error ellipse: s-maj=125.0km s-min=26.2km az=103.0*
*FCIAR **22** 04:16:21.0, 85°.05N×89°.84E, h10km, station SVZ has station magnitude of 3.30 station OMEGA has station magnitude of 3.50*

ISC 22 04:16:18.0±1.0, 85°.12N±0°.09×89°.16E±0°.09, h10km, n10, σ3s35/8, mb3.0/3, MS3.4/3, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SVZ	**Severnaya Zeml**	**6.09**	**158**	*eP*		**Pn**	**04 17 48.3**	**+0.5**
SVZ				*eS*		**Sn**	**04 18 52.8**	**-4.6**
	12nm,0.5s							
OMEGA	**Omega**	**6.46**	**251**	*eP*		**Pn**	**04 17 54.1**	**+1.2**
OMEGA				*eS*		**Sn**	**04 19 02.9**	**-3.6**
	16nm,4.1s							
TIXI	**Tiksi**	**15.01**	**129**	LR		LR	04 24 47.5	
	comp=Z,29nm,21.2s,baz=16,slow=33							
NRIK	**Noril'sk**	**15.88**	**182**	Pn		**P**	**04 20 08.0**	**+3.2**
	0.4nm,0.3s,baz=9.5,slow=9.2,SNR=4.6							
	2.5nm,0.5s							
ILAR	**Eielson Array**	**28.40**	**48**	P		**P**	**04 22 12.0**	**+0.1**
	0.1nm,0.8s,baz=355,slow=10.0,SNR=1.9							
	0.1nm,0.8s							
ARU	**Arti**	**29.61**	**215**	LR		LR	04 36 36.4	
	comp=Z,48nm,19.6s,baz=262,slow=41							
YKA	**Yellowknife Ar**	**32.22**	**21**	P		**P**	**04 22 43.6**	**-2.0**
	0.2nm,0.8s,baz=357,slow=9.3,SNR=5.2							
	0.2nm,0.8s							
KURBB	**Kurchatov Arra**	**34.75**	**192**	LR		LR	04 39 49.3	
	comp=Z,59nm,18.3s,baz=158,slow=40							
MKAR	**Makanchi Array**	**38.52**	**188**	P		**P**	**04 23 42.4**	**+2.4**
	0.2nm,0.6s,baz=17,slow=7.5,SNR=2.7							
	0.2nm,0.6s							
KVAR	**Kislovodsk Arr**	**42.97**	**230**	LR		LR	04 45 14.5	
	comp=Z,54nm,20.6s,baz=89,slow=40							

*IDC **22** 04:17:45.4±2.0, 38°.57N×142°.52E, h0km, mb3.9/4, mbtmp3.7/6, ML3.1/2, MS2.9/2, Error ellipse: s-maj=45.6km s-min=25.2km az=72.0*
*JMA **22** 04:17:55.7±0.1, 38°.3N±0°.3×141°.7E±0°.5, h51km, MV3.9/40, KINKAZAN REGION*
JMA Felt II J1 at KINKAZAN REGION .
*NIED **22** 04:17:55.7, 38°.34N×141°.71E, h51km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.79; $M_{\theta\theta}$0.68; $M_{\phi\phi}$-1.47; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.33; $M_{\phi r}$2.45; Fault plane solution: $M_0$2.74000×10^{14} NP1:ϕ_s10.00000°, δ78.00000°, λ91.00000°. NP2:ϕ_s185.00000°, δ13.00000°, λ86.00000°.*

ISC 22 04:17:54.8±1.4, 38°.31N±0°.06×141°.8E±0°.1, h51km±8km, n26, σ0s70/28, mb3.9/4, 14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.24**	**271**	*i* P		**Pn**	**04 18 04.0**	**+0.5**
JIKH				S		**Sn**	**04 18 09.7**	**+0.1**
JIO	**Ouri**	**0.36**	**294**	⇓*i*P		**Pn**	**04 18 05.0**	**+0.4**
JIO				⇓S		**Sn**	**04 18 11.3**	**-0.2**
JKMT	**Kesennumamotoy**	**0.55**	**335**	⇓*i*P		**Pn**	**04 18 07.1**	**+0.4**
JKMT				⇓S		**Sn**	**04 18 15.0**	**-0.3**
JMK	**Ichinoseki**	**0.77**	**326**	⇓*i*P		**Pn**	**04 18 09.9**	**+0.4**
JMK				⇓S		**Sn**	**04 18 19.9**	**-0.3**
OFUJ	**Ofunato**	**0.78**	**354**	*i* P		**Pn**	**04 18 09.9**	**+0.4**
OFUJ				S		**Sn**	**04 18 19.9**	**-0.3**
JOU	**Okura**	**0.87**	**274**	⇓*i*P		**Pn**	**04 18 11.0**	**+0.2**
JOU				⇓S		**Sn**	**04 18 22.4**	**-0.1**
JMM	**Marumori**	**0.89**	**240**	⇓*i*P		**Pn**	**04 18 10.9**	**0.0**
JMM				⇓S		**Sn**	**04 18 22.0**	**-0.9**
JFK	**Kawauchi**	**1.18**	**217**	⇓*i*P		**Pn**	**04 18 15.2**	**+0.3**
JFK				⇓S		**Sn**	**04 18 29.3**	**-0.6**
JOM	**Ohasama**	**1.22**	**342**	*i* P		**Pn**	**04 18 16.1**	**+0.6**
JOM				S		**Sn**	**04 18 31.0**	**+0.1**
JYK	**Kaneyama**	**1.26**	**299**	⇓*i*P		**Pn**	**04 18 16.3**	**+0.3**
JYS	**Shirataka**	**1.34**	**267**	P		**Pn**	**04 18 17.6**	**+0.4**
JOTO	**OTAMA OYAMA**	**1.36**	**237**	*i* P		**Pn**	**04 18 17.9**	**+0.5**
JRG	**Rokugo**	**1.40**	**321**	⇓*i*P		**Pn**	**04 18 18.6**	**+0.7**
MJAR	**Matsushiro Arr**	**3.34**	**239**	Pn		**Pn**	**04 18 46.7**	**+2.2**
	0.6nm,0.3s,baz=36,slow=14,SNR=9.6							
MJAR						Sn	Sn	04 19 36.9	+14
	0.4nm,0.3s,baz=300,slow=33,SNR=4.6							
MJAR						LR	LR	04 20 27.8	
	comp=Z,44nm,19.1s,baz=86,slow=41							
	2.2nm,0.3s							
USRK	**Ussuriysk Ar.**	**9.42**	**312**	Pn		**Pn**	**04 20 07.4**	**-0.4**
	0.3nm,0.3s,baz=123,slow=14,SNR=4.9							
	0.7nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**28.58**	**123**	T		T	04 54 08.8	
	baz=316,slow=75,SNR=130							
H11N1	**WAKE ISLAND Hy**	**28.59**	**123**	T		T	04 54 08.6	
	baz=316,slow=75,SNR=85							
H11N3	**WAKE ISLAND Hy**	**28.60**	**123**	T		T	04 54 02.9	
	baz=316,slow=75,SNR=69							
H11S1	**WAKE ISLAND Hy**	**29.34**	**125**	T		T	04 54 58.7	
	baz=318,slow=76,SNR=53							
H11S3	**WAKE ISLAND Hy**	**29.34**	**125**	T		T	04 54 58.7	
	baz=318,slow=76,SNR=59							
H11S2	**WAKE ISLAND Hy**	**29.36**	**125**	T		T	04 54 60.0	
	baz=318,slow=76,SNR=56							
ZALV	**Zalesovo Beam**	**41.28**	**311**	P		**P**	**04 25 33.3**	**-1.5**
	0.5nm,0.3s,baz=77,slow=10.0,SNR=2.0							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEVI	**Neviano degli**	**0.16**	**350**	⇑P	**Pg**	**04 33 29.3**	**+0.5**
NEVI				S	**Sg**	**04 33 33.5**	**+1.7**
NEVI				AML	AML		
	comp=N,51500μm,0.5s						
NEVI				AML	AML		
	comp=E,23349μm,1.1s						
NEVI				AML	AML		
	comp=E,23349μm,0.9s						
NEVI				AML	AML		
	comp=E,27500μm,0.6s						
NEVI	**Neviano degli**	**0.16**	**350**	P	**Pg**	**04 33 29.3**	**+0.5**
NEVI				S	**Sg**	**04 33 33.7**	**+2.0**
GSCL	**Gusciola**	**0.18**	**115**	⇑P	**Pg**	**04 33 29.4**	**+0.3**
GSCL				S	**Sg**	**04 33 32.9**	**+0.4**
GSCL				AML	AML		
	comp=N,37900μm,0.2s						
GSCL				AML	AML		
	comp=E,45700μm,0.4s						
GSCL	**Gusciola**	**0.18**	**115**	P	**Pg**	**04 33 29.4**	**+0.3**
GSCL				S	**Sg**	**04 33 33.0**	**+0.5**
GRAM	**Graiana**	**0.22**	**287**	⇑P	**Pg**	**04 33 30.1**	**+0.4**
GRAM				S	**Sg**	**04 33 34.7**	**+1.5**
GRAM				AML	AML		
	comp=E,11350μm,0.4s						
GRAM				AML	AML		
	comp=N,9600μm,0.6s						
GRAM				AML	AML		
	comp=E,11350μm,1.6s						
GRAM	**Graiana**	**0.22**	**287**	P	**Pg**	**04 33 30.1**	**+0.4**
GRAM				S	**Sg**	**04 33 34.8**	**+1.5**
SARO	**Sassorosso**	**0.25**	**172**	⇓P	**Pg**	**04 33 30.4**	**+0.3**
SARO				S	**Sg**	**04 33 35.0**	**+0.9**
SARO				AML	AML		
	comp=E,15550μm,0.4s						
SARO				AML	AML		
	comp=N,19550μm,0.6s						
SARO	**Sassorosso**	**0.25**	**172**	P	**Pg**	**04 33 30.4**	**+0.3**
SARO				S	**Sg**	**04 33 35.1**	**+1.1**
FIVI	**Fivizzano**	**0.25**	**221**	⇑P	**Pb**	**04 33 30.7**	**+0.6**
FIVI				S	**Sg**	**04 33 35.6**	**+1.5**
FIVI				AML	AML		
	comp=E,7525μm,0.4s						
FIVI				AML	AML		
	comp=N,8785μm,0.3s						
FIVI	**Fivizzano**	**0.25**	**221**	P	**Pb**	**04 33 30.7**	**+0.6**
FIVI				S	**Sg**	**04 33 35.7**	**+1.7**
VLC	**Villacollemand**	**0.27**	**175**	P	**Pb**	**04 33 30.7**	**+0.2**
VLC				S	**Sb**	**04 33 35.7**	**+1.0**
VLC				AML	AML		
	comp=N,7910μm,0.7s						
VLC				AML	AML		
	comp=N,7720μm,0.7s						
VLC				AML	AML		
	comp=E,3580μm,0.4s						
VLC				AML	AML		
	comp=E,3745μm,0.4s						
VLC	**Villacollemand**	**0.27**	**175**	P	**Pb**	**04 33 30.8**	**+0.2**
VLC				S	**Sb**	**04 33 35.8**	**+1.1**
EQUI	**Equi**	**0.30**	**209**	⇓P	**Pg**	**04 33 31.0**	**+0.1**
EQUI				S	**Sb**	**04 33 36.9**	**+1.1**
EQUI				AML	AML		
	comp=N,1540μm,0.6s						
EQUI				AML	AML		
	comp=E,1720μm,0.6s						
EQUI	**Equi**	**0.30**	**209**	P	**Pg**	**04 33 31.0**	**+0.1**
EQUI				S	**Sb**	**04 33 36.8**	**+1.1**
PRMA	**PARMA**	**0.34**	**355**	P	**Pg**	**04 33 31.9**	**+0.4**
PRMA				S	**Sb**	**04 33 39.1**	**+2.3**
PRMA				AML	AML		
	comp=E,15050μm,0.9s						
PRMA				AML	AML		
	comp=N,21500μm,0.4s						
PRMA	**PARMA**	**0.34**	**355**	P	**Pg**	**04 33 31.8**	**+0.3**
PRMA				S	**Sb**	**04 33 39.2**	**+2.4**
BDI	**Bagni Di Lucca**	**0.41**	**155**	⇓P	**Pg**	**04 33 32.6**	**-0.2**
BDI				S	**Sb**	**04 33 39.1**	**+0.1**
BDI				AML	AML		
	comp=N,6805μm,0.5s						
BDI				AML	AML		
	comp=N,6795μm,0.4s						
BDI				AML	AML		
	comp=E,6745μm,0.3s						
BDI				AML	AML		
	comp=N,6795μm,1.6s						
BDI				AML	AML		
	comp=E,8235μm,0.3s						
BDI	**Bagni Di Lucca**	**0.41**	**155**	P	**Pg**	**04 33 32.6**	**-0.2**
BDI				S	**Sb**	**04 33 39.2**	**+0.3**
CARD	**Cardoso**	**0.41**	**167**	P	**Pg**	**04 33 32.8**	**-0.1**
CARD				S	**Sb**	**04 33 39.5**	**+0.3**
CARD				AML	AML		
	comp=E,3260μm,0.6s						
CARD				AML	AML		
	comp=N,3780μm,0.5s						
CARD	**Cardoso**	**0.41**	**167**	P	**Pg**	**04 33 32.7**	**-0.2**
CARD				S	**Sb**	**04 33 39.4**	**+0.2**
ZCCA	**Zocca**	**0.45**	**100**	⇑P	**Pb**	**04 33 34.2**	**+0.4**
ZCCA				AML	AML		
	comp=N,2565μm,0.6s						
ZCCA				AML	AML		
	comp=N,2700μm,0.5s						
ZCCA				AML	AML		
	comp=N,2565μm,0.6s						
ZCCA				AML	AML		
	comp=N,2700μm,1.5s						
ZCCA				AML	AML		
	comp=N,2565μm,1.4s						
ZCCA				AML	AML		
	comp=E,2350μm,0.5s						
ZCCA				AML	AML		
	comp=E,2275μm,0.5s						
ZCCA	**Zocca**	**0.45**	**100**	P	**Pb**	**04 33 34.2**	**+0.4**
MODE	**Modena**	**0.47**	**65**	⇓P	**Pb**	**04 33 35.2**	**+1.2**
MODE				S	**Sn**	**04 33 44.9**	**+1.0**
POPM	**Popiglio**	**0.48**	**143**	⇑P	**Pg**	**04 33 33.9**	**-0.2**
POPM				S	**Sb**	**04 33 41.5**	**+0.5**
POPM				AML	AML		
	comp=E,20500μm,0.4s						
POPM				AML	AML		
	comp=N,24200μm,0.6s						
POPM	**Popiglio**	**0.48**	**143**	P	**Pg**	**04 33 33.9**	**-0.2**
POPM				S	**Sb**	**04 33 41.9**	**+0.9**
MAIM	**Mastiano**	**0.53**	**169**	P	**Pg**	**04 33 34.8**	**-0.1**
MAIM				S	**Sb**	**04 33 42.8**	**+0.6**
MAIM				AML	AML		
	comp=E,2260μm,0.8s						
MAIM				AML	AML		
	comp=N,1850μm,0.3s						
MAIM				AML	AML		
	comp=E,2260μm,1.2s						
MAIM	**Mastiano**	**0.53**	**169**	P	**Pg**	**04 33 34.8**	**-0.1**
MAIM				S	**Sb**	**04 33 43.1**	**+1.0**
PLMA	**Palmaria, Port**	**0.53**	**224**	P	**Pb**	**04 33 35.1**	**+0.2**
PLMA				S	**Sn**	**04 33 44.3**	**-0.9**
NDIM	**Novi di Modena**	**0.60**	**40**	P	**Pb**	**04 33 36.6**	**+0.5**
FNVD	**Fontana Vidola**	**0.61**	**115**	⇑P	**Pb**	**04 33 36.4**	**0.0**
FNVD				S	**Sn**	**04 33 46.6**	**-1.0**
FNVD				AML	AML		
	comp=N,2735μm,1.4s						
FNVD				AML	AML		
	comp=E,2625μm,1.6s						
FNVD				AML	AML		
	comp=N,2735μm,0.6s						
MSSA	**Maissana**	**0.61**	**260**	⇑P	**Pb**	**04 33 36.7**	**+0.3**
MSSA				S	**Sn**	**04 33 46.6**	**-0.9**
MSSA				AML	AML		
	comp=E,892μm,0.8s						
MSSA				AML	AML		
	comp=N,1550μm,1.5s						
MSSA				AML	AML		
	comp=E,892μm,1.2s						
MSSA	**Maissana**	**0.61**	**260**	P	**Pg**	**04 33 36.8**	**+0.3**
MSSA				S	**Sb**	**04 33 46.3**	**+1.7**
MTCR	**Monte La Croce**	**0.61**	**131**	⇓P	**Pb**	**04 33 36.2**	**-0.3**
MTCR				S	**Sb**	**04 33 46.1**	**+1.3**
MTCR				AML	AML		
	comp=E,3445μm,0.9s						
MTCR				AML	AML		
	comp=E,3440μm,0.9s						
MTCR				AML	AML		
	comp=N,2865μm,0.8s						
MTCR				AML	AML		
	comp=E,3440μm,1.1s						
MTCR	**Monte La Croce**	**0.61**	**131**	P	**Pb**	**04 33 36.2**	**-0.3**
MTCR				S	**Sb**	**04 33 45.8**	**+1.1**
CAVE	**Cavezzo**	**0.64**	**47**	⇑P	**Pb**	**04 33 37.2**	**+0.4**
CAVE				AML	AML		
	comp=E,14850μm,0.8s						
CAVE				AML	AML		
	comp=N,27200μm,0.7s						
CAVE	**Cavezzo**	**0.64**	**47**	P	**Pb**	**04 33 37.2**	**+0.4**
RAVA	**Ravarino**	**0.64**	**59**	P	**Pn**	**04 33 38.8**	**+0.4**
RAVA	**Ravarino**	**0.64**	**59**	P	**Pn**	**04 33 38.7**	**+0.4**
RAVA				S	**Sn**	**04 33 50.1**	**+2.1**
MPPT	**Montemurlo**	**0.71**	**132**	P	**Pb**	**04 33 38.3**	**+0.2**
MPPT				S	**Sg**	**04 33 48.7**	**+0.9**
PII	**Pisa**	**0.72**	**170**	⇓P	**Pb**	**04 33 38.3**	**+0.1**
PII				S	**Sg**	**04 33 48.9**	**+0.9**
PII				AML	AML		
	comp=N,5370μm,0.4s						
PII				AML	AML		
	comp=E,5610μm,0.3s						
PII				AML	AML		
	comp=N,5370μm,1.6s						
PII	**Pisa**	**0.72**	**170**	P	**Pb**	**04 33 38.4**	**+0.1**
PII				S	**Sg**	**04 33 48.8**	**+0.9**
BOB	**Bobbio (Coli)**	**0.73**	**298**	P	**Pn**	**04 33 40.6**	**+0.9**
BOB	**Bobbio (Coli)**	**0.73**	**298**	P	**Pg**	**04 33 39.4**	**+0.7**
MOCL	**Monte Cuccoli**	**0.73**	**125**	⇓P	**Pb**	**04 33 38.6**	**+0.1**
MOCL				S	**Sn**	**04 33 50.4**	**0.0**
SBPO	**S.Benedetto Po**	**0.74**	**33**	P	**Pg**	**04 33 39.8**	**+0.9**
SBPO				AML	AML		
	comp=N,6600μm,0.4s						
SBPO				AML	AML		
	comp=E,7940μm,0.3s						
GORR	**Gorreto**	**0.78**	**283**	P	**Pg**	**04 33 39.9**	**+0.3**
GORR				S	**Sg**	**04 33 51.1**	**+1.2**
GORR				AML	AML		
	comp=N,708μm,0.4s						
GORR				AML	AML		
	comp=E,886μm,0.5s						
GORR	**Gorreto**	**0.78**	**283**	Pg	**Pg**	**04 33 39.9**	**+0.3**
GORR	**Gorreto**	**0.78**	**283**	Sg	**Sn**	**04 33 51.4**	**-0.3**
GORR	**Gorreto**	**0.78**	**283**	P	**Pg**	**04 33 40.0**	**+0.3**
SEI	**Scarperia**	**0.81**	**117**	⇓P	**Pb**	**04 33 40.1**	**+0.3**
SEI				AML	AML		
	comp=E,4395μm,0.4s						
SEI				AML	AML		
	comp=N,4005μm,0.4s						
SEI	**Scarperia**	**0.81**	**117**	P	**Pb**	**04 33 40.2**	**+0.3**
FIU	**Minerbio Fiu**	**0.84**	**75**	AML	AML		
	comp=N,9505μm,0.5s						
FIU				AML	AML		
	comp=E,9900μm,0.6s						
BRIS	**BRISIGHELLA**	**0.88**	**108**	P	**Pn**	**04 33 45.5**	**+3.8**
BRIS				AML	AML		
	comp=E,1825μm,0.7s						
BRIS				AML	AML		
	comp=E,1570μm,1.2s						
BRIS				AML	AML		
	comp=E,1825μm,1.3s						
BRIS				AML	AML		
	comp=N,1855μm,0.6s						
BRIS				AML	AML		
	comp=N,1765μm,0.6s						
SERM	**Sermide**	**0.89**	**49**	P	**Pb**	**04 33 41.6**	**+0.6**
SERM				S	**Sn**	**04 33 56.5**	**+2.3**
SERM				AML	AML		
	comp=N,1555μm,0.4s						
SERM				AML	AML		
	comp=E,3565μm,0.5s						
SERM				AML	AML		
	comp=N,2280μm,0.7s						
SERM				AML	AML		
	comp=E,1665μm,0.4s						
SERM				AML	AML		
	comp=N,1555μm,1.6s						
SERM	**Sermide**	**0.89**	**49**	P	**Pb**	**04 33 41.7**	**+0.6**
SERM				S	**Sn**	**04 33 56.0**	**+1.8**
IMOL	**Imola, Italy**	**1.00**	**94**	AML	AML		
	comp=E,2220μm,1.5s						
IMOL				AML	AML		
	comp=E,2220μm,0.5s						
IMOL				AML	AML		
	comp=N,3985μm,0.6s						
RNCA	**Ronca, Sant'Ol**	**1.01**	**273**	P	**Pg**	**04 33 44.3**	**+0.4**
RNCA				S	**Sn**	**04 33 58.9**	**+1.7**
RNCA	**Ronca, Sant'Ol**	**1.01**	**273**	Pg	**Pg**	**04 33 44.2**	**+0.4**
RNCA	**Ronca, Sant'Ol**	**1.01**	**273**	Sg	**Sn**	**04 33 58.3**	**+1.1**
RNCA	**Ronca, Sant'Ol**	**1.01**	**273**	P	**Pg**	**04 33 44.3**	**+0.4**
RUFI	**Rufina**	**1.02**	**125**	⇑P	**Pn**	**04 33 44.1**	**+0.4**
RUFI	**Rufina**	**1.02**	**125**	P	**Pn**	**04 33 44.1**	**+0.4**
LMD	**Lutirano**	**1.03**	**109**	P	**Pg**	**04 33 45.5**	**+1.0**
CMPO	**Campotto Po**	**1.05**	**81**	P	**Pg**	**04 33 45.9**	**+1.2**
CMPO				S	**Sg**	**04 34 03.0**	**+4.6**
OPPE	**Oppeano**	**1.05**	**33**	P	**Pb**	**04 33 43.8**	**-0.2**
OPPE				S	**Sg**	**04 33 59.6**	**+1.0**
OPPE				AML	AML		
	comp=N,3045μm,0.8s						
OPPE				AML	AML		
	comp=E,2935μm,0.7s						
OPPE	**Oppeano**	**1.05**	**33**	P	**Pb**	**04 33 44.2**	**+0.3**
OPPE				S	**Sg**	**04 33 59.4**	**+0.8**
GROG	**Isola di Gorgo**	**1.06**	**199**	⇓P	**Pn**	**04 33 44.3**	**+0.2**
GROG				S	**Sg**	**04 33 58.7**	**0.0**
SARZ	**Sarezzano**	**1.12**	**293**	P	**Pg**	**04 33 48.1**	**+2.1**
CSNT	**Castellina Chi**	**1.17**	**144**	P	**Pn**	**04 33 45.9**	**+0.1**
MAGO	**Bibbona**	**1.18**	**169**	⇑P	**Pn**	**04 33 45.9**	**0.0**
MAGO				S	**Sg**	**04 34 03.1**	**+0.6**
MAGO				AML	AML		
	comp=E,585μm,0.5s						
MAGO				AML	AML		
	comp=N,652μm,0.5s						
MAGO				AML	AML		
	comp=N,652μm,0.5s						
MAGO				AML	AML		
	comp=E,585μm,0.5s						
SALO	**Salr**	**1.19**	**6**	⇓P	**Pn**	**04 33 46.6**	**+0.4**
SALO				S	**Sg**	**04 34 03.5**	**+0.4**
SALO				AML	AML		
	comp=E,3395μm,1.3s						
SALO				AML	AML		
	comp=N,8230μm,0.9s						
SALO				AML	AML		
	comp=N,7745μm,0.9s						
SALO				AML	AML		
	comp=N,8235μm,0.9s						
SALO				AML	AML		
	comp=E,3325μm,1.4s						
SALO				AML	AML		
	comp=N,8235μm,1.1s						
SALO				AML	AML		
	comp=E,3325μm,0.6s						
SALO				AML	AML		
	comp=N,7745μm,1.1s						
SALO				AML	AML		
	comp=E,3395μm,0.7s						
SALO	**Salr**	**1.19**	**6**	P	**Pn**	**04 33 46.5**	**+0.4**
VOBA	**Vobarno**	**1.22**	**5**	P	**Pn**	**04 33 47.0**	**+0.6**
VOBA				S	**Sg**	**04 34 05.0**	**+1.2**
TREG	**Tregnago**	**1.23**	**27**	P	**Pn**	**04 33 46.4**	**-0.2**
ZEN8	**San Zeno di Mo**	**1.24**	**12**	P	**Pn**	**04 33 46.9**	**+0.1**
ZEN8				S	**Sn**	**04 34 04.2**	**+1.3**
BRSN	**Barisano**	**1.24**	**96**	P	**Pg**	**04 33 50.0**	**+1.6**
GARGN	**Gargnano BS**	**1.28**	**10**	*e*Pg	**Pn**	**04 33 48.1**	**+0.8**
GARGN				*e*Sg	**Sg**	**04 34 06.0**	**+0.2**
BALD	**Monte Baldo**	**1.29**	**15**	*e*Pg	**Pn**	**04 33 47.7**	**0.0**
BALD				*e*Sg	**Sg**	**04 34 06.8**	**+0.4**
PCP	**Piancastagn**	**1.30**	**276**	P	**Pb**	**04 33 49.2**	**+1.0**
PCP				S	**Sg**	**04 34 07.4**	**+1.0**
PCP				AML	AML		
	comp=E,332μm,1.1s						
PCP				AML	AML		
	comp=N,300μm,0.5s						
PCP				AML	AML		
	comp=E,332μm,0.9s						
PCP				AML	AML		
	comp=N,300μm,1.5s						
PCP	**Piancastagn**	**1.30**	**276**	Pn	**Pb**	**04 33 48.6**	**+0.4**
PCP	**Piancastagn**	**1.30**	**276**	Sg	**Sg**	**04 34 07.5**	**+1.1**
ZOVE	**Zovencedo**	**1.30**	**38**	⇓P	**Pn**	**04 33 47.1**	**-0.5**
ZOVE				S	**Sn**	**04 34 04.6**	**+0.1**
MBAL	**Monte Baldo -**	**1.32**	**16**	⇓P	**Pn**	**04 33 47.6**	**-0.3**
MBAL				S	**Sb**	**04 34 06.2**	**+1.1**
MBAL				AML	AML		
	comp=E,1023μm,0.5s						
MBAL				AML	AML		
	comp=N,1255μm,0.4s						
TEOL	**Teolo**	**1.32**	**45**	P	**Pn**	**04 33 47.4**	**-0.4**
TEOL				S	**Sn**	**04 34 05.6**	**+0.7**
ZONE	**Zone**	**1.34**	**353**	⇑P	**Pn**	**04 33 48.5**	**+0.3**
ZONE				S	**Sb**	**04 34 06.5**	**+0.7**
ZONE				AML	AML		
	comp=N,3230μm,0.3s						
ZONE				AML	AML		
	comp=E,485μm,0.3s						
ZONE				AML	AML		
	comp=E,1930μm,0.8s						
ZONE				AML	AML		
	comp=N,768μm,0.2s						
FROS	**Frosini**	**1.35**	**154**	P	**Pn**	**04 33 48.3**	**0.0**
FROS				AML	AML		
	comp=N,1170μm,0.5s						
FROS				AML	AML		
	comp=E,650μm,0.5s						
MARN	**Marana (Italy)**	**1.35**	**26**	*e*Pg	**Pn**	**04 33 47.9**	**-0.3**
MARN				*e*Sg	**Sb**	**04 34 07.6**	**+1.6**
BAG8	**Bagolino**	**1.40**	**3**	P	**Pn**	**04 33 48.9**	**0.0**
CRE	**Caprese Michel**	**1.41**	**125**	P	**Pn**	**04 33 49.8**	**+0.6**
MDI	**Monti di Nese**	**1.42**	**342**	⇓P	**Pn**	**04 33 49.6**	**+0.3**
MDI				S	**Sb**	**04 34 10.0**	**+1.9**
MDI				AML	AML		
	comp=E,1265μm,0.9s						
MDI				AML	AML		
	comp=N,1085μm,0.4s						
MDI				AML	AML		
	comp=E,1295μm,0.9s						
MDI				AML	AML		
	comp=N,1105μm,0.4s						
MDI				AML	AML		
	comp=E,1295μm,1.1s						
MDI				AML	AML		
	comp=E,1265μm,1.1s						
MDI				AML	AML		
	comp=N,1105μm,1.6s						
MDI				AML	AML		
	comp=N,1085μm,1.6s						
VARA	**Varagna**	**1.45**	**15**	*e*Pg	**Pn**	**04 33 50.1**	**+0.4**
VARA				*e*Sg	**Sg**	**04 34 11.2**	**0.0**
VARA	**Varagna**	**1.45**	**15**	⇓P	**Pn**	**04 33 49.4**	**-0.4**
VARA				S	**Sb**	**04 34 10.6**	**+1.6**
VARA				AML	AML		
	comp=E,1840μm,0.3s						
VARA				AML	AML		
	comp=N,2335μm,0.5s						
VARA				AML	AML		
	comp=E,2335μm,0.5s						
VARA				AML	AML		
	comp=N,1720μm,0.3s						
ROTM	**Rocchetta Tana**	**1.49**	**287**	⇑P	**Pg**	**04 33 54.6**	**+1.6**
CANO	**Canova, Maglio**	**1.54**	**262**	P	**Pn**	**04 33 51.6**	**+0.8**
CANO	**Canova, Maglio**	**1.54**	**262**	Pn	**Pn**	**04 33 51.5**	**+0.8**
CANO	**Canova, Maglio**	**1.54**	**262**	Sn	**Sb**	**04 34 11.2**	**-0.1**
SSP9	**Sansepolcro**	**1.54**	**123**	P	**Pb**	**04 33 52.1**	**-0.2**
RONC	**Roncone**	**1.56**	**7**	⇓P	**Pn**	**04 33 51.1**	**-0.3**
RONC				S	**Sn**	**04 34 10.6**	**-0.6**
RONC				AML	AML		
	comp=N,1110μm,1.3s						
RONC				AML	AML		
	comp=E,1250μm,0.3s						
RONC				AML	AML		
	comp=E,1895μm,0.2s						
RONC				AML	AML		
	comp=N,2135μm,0.2s						
RONC				AML	AML		
	comp=N,1110μm,0.7s						
RIBO	**Ribolla Roccas**	**1.56**	**161**	P	**Pn**	**04 33 51.8**	**+0.6**
DOSS	**Dosso del Somm**	**1.57**	**22**	⇓P	**Pn**	**04 33 50.8**	**-0.6**
DOSS				S	**Sb**	**04 34 13.4**	**+1.0**
DOSS				AML	AML		
	comp=E,1270μm,0.4s						
DOSS				AML	AML		
	comp=N,1190μm,1.6s						
DOSS				AML	AML		
	comp=N,1301μm,0.4s						
DOSS				AML	AML		
	comp=E,1290μm,1.6s						
PARC	**Parchiule**	**1.57**	**119**	P	**Pb**	**04 33 52.5**	**-0.2**
LUSI	**Trento, Gardas**	**1.58**	**15**	⇓P	**Pn**	**04 33 51.2**	**-0.3**
LUSI				S	**Sb**	**04 34 13.4**	**+0.6**
LUSI				AML	AML		
	comp=E,1185μm,1.0s						
LUSI				AML	AML		
	comp=N,2390μm,0.3s						
MABI	**Malga Bissina**	**1.63**	**4**	⇑P	**Pn**	**04 33 52.2**	**0.0**
MABI				S	**Sb**	**04 34 15.0**	**+0.8**
MABI				AML	AML		
	comp=E,618μm,0.5s						
MABI				AML	AML		
	comp=N,336μm,0.3s						
MABI				AML	AML		
	comp=E,618μm,1.5s						
MORSI	**Morsiglia**	**1.64**	**206**	Pn	**Pn**	**04 33 52.2**	**0.0**
ATMC	**Monte Cedrone**	**1.65**	**126**	P	**Pn**	**04 33 53.5**	**+1.0**
RORO	**Rocca Rossa**	**1.67**	**260**	P	**Pn**	**04 33 53.4**	**+0.7**
RORO	**Rocca Rossa**	**1.67**	**260**	Pn	**Pn**	**04 33 53.4**	**+0.7**
CASP	**Castiglione de**	**1.68**	**167**	P	**Pn**	**04 33 52.9**	**+0.2**
CASP				AML	AML		
	comp=N,262μm,1.4s						
CASP				AML	AML		
	comp=E,328μm,0.4s						
CASP				AML	AML		
	comp=N,262μm,0.6s						
GAGG	**Gaggia**	**1.71**	**14**	⇓P	**Pn**	**04 33 53.0**	**-0.3**
GAGG				AML	AML		
	comp=E,477μm,1.3s						
GAGG				AML	AML		
	comp=N,850μm,1.1s						
GAGG				AML	AML		
	comp=E,863μm,1.1s						
GAGG				AML	AML		
	comp=N,486μm,1.3s						
GAGG				AML	AML		
	comp=E,863μm,0.9s						
GAGG				AML	AML		
	comp=E,477μm,0.7s						
GAGG				AML	AML		
	comp=N,850μm,0.9s						
GAGG				AML	AML		
	comp=N,486μm,0.7s						
ASOL	**Asolo**	**1.75**	**38**	P	**Pn**	**04 33 53.5**	**-0.2**
ASOL				S	**Sn**	**04 34 15.9**	**+0.3**
PANI	**Panarotta**	**1.76**	**23**	*e*Pn	**Pn**	**04 33 53.6**	**-0.5**
PANI	**Panarotta**	**1.76**	**23**	⇓P	**Pn**	**04 33 53.6**	**-0.5**
PANI				AML	AML		
	comp=E,412μm,0.4s						
PANI				AML	AML		
	comp=N,464μm,0.4s						
ATMI	**Monte Miggiano**	**1.77**	**128**	P	**Pb**	**04 33 55.4**	**-0.7**
CGRP	**Cima Grappa**	**1.77**	**35**	AML	AML		
	comp=E,720μm,0.7s						
CGRP				AML	AML		
	comp=N,824μm,1.0s						
CGRP				AML	AML		
	comp=N,836μm,0.7s						
CGRP				AML	AML		
	comp=N,824μm,1.0s						
CGRP				AML	AML		
	comp=E,722μm,0.7s						
ARCI	**Arcidosso**	**1.77**	**152**	P	**Pn**	**04 33 54.6**	**+0.5**
ATVA	**AVT- Monte Val**	**1.81**	**129**	P	**Pn**	**04 33 55.4**	**+0.8**
PIEI	**Pieia**	**1.81**	**119**	P	**Pb**	**04 33 56.3**	**-0.6**
GBOS	**Grotte di Boss**	**1.81**	**265**	P	**Pn**	**04 33 55.4**	**+0.7**
GBOS				S	**Sb**	**04 34 19.4**	**+0.1**
GBOS				AML	AML		
	comp=E,96μm,0.6s						
GBOS				AML	AML		
	comp=N,174μm,0.7s						
GBOS				AML	AML		
	comp=N,174μm,1.3s						
GBOS	**Grotte di Boss**	**1.81**	**265**	Pn	**Pn**	**04 33 55.5**	**+0.8**
ATVO	**AVT- Monte Val**	**1.82**	**125**	P	**Pn**	**04 33 55.4**	**+0.8**
VARE	**Varese**	**1.82**	**323**	P	**Pn**	**04 33 55.5**	**+0.6**
SF01	**Poggio Pratacc**	**1.84**	**151**	P	**Pn**	**04 33 56.1**	**+1.0**
MONC	**Moncucco Torin**	**1.84**	**291**	P	**Pb**	**04 33 58.6**	**+1.1**
IMI	**Imperia**	**1.85**	**255**	⇓P	**Pn**	**04 33 55.5**	**+0.4**
IMI				S	**Sn**	**04 34 17.9**	**-0.1**
SF04	**Casetta**	**1.85**	**149**	P	**Pn**	**04 33 55.9**	**+0.7**
CTI	**Castel Tesino**	**1.86**	**29**	⇑P	**Pn**	**04 33 55.0**	**-0.3**
CTI				S	**Sn**	**04 34 17.7**	**-0.7**
CTI				AML	AML		
	comp=E,1034μm,1.0s						

CTI AML AML
comp=N,1310µm,0.2s
FRON Frontone 1.94 117 P **Pb 04 33 59.1 0.0**
SACS San Casciano d 1.94 144 ⇑P **Pn 04 33 57.1 +0.6**
ATSC Scheggia e Pas 1.96 120 P **Pn 04 33 58.0 +1.2**
MGAB Montegabbione 1.98 139 ⇑P **Pn 04 33 57.8 +0.8**
VARN Col Varnada, M 1.99 38 AML AML
comp=N,590µm,0.4s
VARN AML AML
comp=E,927µm,0.3s
VARN AML AML
comp=N,584µm,1.6s
VARN AML AML
comp=E,926µm,0.3s
VARN AML AML
comp=N,590µm,1.6s
VARN AML AML
comp=N,584µm,0.4s
BERNI Berninapass 2.00 353 AML AML
comp=N,280µm,0.5s
BERNI AML AML
comp=E,244µm,0.4s
BERNI AML AML
comp=E,244µm,1.6s
CARE Lago del Cares 2.01 7 ⇓P **Pn 04 33 58.0 +0.4**
CARE S **Sn 04 34 21.8 -0.6**
CARE AML AML
comp=E,312µm,0.9s
CARE AML AML
comp=N,198µm,1.2s
CARE AML AML
comp=E,312µm,1.1s
CARE AML AML
comp=N,198µm,0.8s
SSFR Montelago di S 2.02 119 P **Pn 04 33 59.2 +1.8**
ZIAN Ziano 2.03 24 P **Pn 04 33 57.7 -0.1**
ZIAN S **Sn 04 34 22.6 -0.1**
ZIAN AML AML
comp=E,570µm,0.2s
ZIAN AML AML
comp=N,558µm,0.2s
ZIAN AML AML
comp=E,570µm,1.8s
ZIAN AML AML
comp=N,558µm,1.8s
ZIAN AML AML
comp=N,582µm,0.4s
ZIAN AML AML
comp=E,571µm,0.4s
OZOL Ozolo 2.04 14 P **Pn 04 33 58.1 +0.4**
OZOL S **Sn 04 34 22.4 -0.3**
OZOL AML AML
comp=E,976µm,1.0s
OZOL AML AML
comp=N,792µm,0.5s
OZOL AML AML
comp=E,892µm,1.6s
OZOL AML AML
comp=N,792µm,1.5s
OZOL AML AML
comp=N,668µm,0.5s
OZOL AML AML
comp=E,892µm,0.4s
BRMO Bormio 2.05 0 P **Pn 04 33 59.2 +1.3**
BRMO AML AML
comp=E,159µm,1.0s
BRMO AML AML
comp=N,128µm,0.5s
SAOF Saorge 2.06 259 AML AML
comp=E,441µm,0.7s
SAOF AML AML
comp=N,689µm,0.8s
SAOF Saorge 2.06 259 Pn **Pn 04 33 59.0 +0.9**
SAOF Sn **Sn 04 34 24.7 +1.5**
FOSV Fossato di Vic 2.08 122 P **Pn 04 33 59.7 +1.4**
MAON Monte Argentar 2.08 164 P **Pn 04 33 58.8 +0.6**
PGF Pioggiola 2.12 208 *e*Pn **Pn 04 33 58.9 -0.1**
PGF *e*Sn **Sn 04 34 23.5 -1.4**
comp=N,30nm,0.3s
PGF Pioggiola 2.12 208 Pn **Pn 04 33 59.3 +0.4**
PGF Pioggiola 2.12 208 Sn **Sn 04 34 24.5 -0.4**
TRAV Traversella 2.14 301 Pn **Pn 04 33 59.8 +0.6**
TUE Stuetta 2.16 341 ⇑P **Pn 04 34 00.5 +0.9**
TUE S **Sn 04 34 26.6 +0.7**
TUE AML AML
comp=E,208µm,1.6s
TUE AML AML
comp=N,232µm,0.6s
TUE AML AML
comp=E,234µm,1.6s
TUE AML AML
comp=N,283µm,0.6s
TUE AML AML
comp=E,208µm,0.4s
TUE AML AML
comp=N,283µm,1.4s
TUE AML AML
comp=E,234µm,0.4s
SBF Sospel 2.18 256 *e*Pn **Pn 04 33 59.9 +0.3**
SBF *e*Sn **Sn 04 34 25.3 -0.8**
comp=E,100nm,0.5s
STV Sant Anna di V 2.18 266 P **Pn 04 34 00.8 +1.2**
STV S **Sn 04 34 27.9 +1.6**
STV AML AML
comp=N,94µm,0.6s
STV AML AML
comp=E,106µm,0.5s
STV AML AML
comp=N,94µm,1.4s
STV Sant Anna di V 2.18 266 Pn **Pn 04 34 00.9 +1.2**
MOSI Grossmontoni 2.19 4 P **Pn 04 34 01.4 +1.4**
MOSI AML AML
comp=E,500µm,0.6s
MOSI AML AML
comp=N,814µm,0.9s
POLC Polcenigo 2.20 43 AML AML
comp=N,843µm,0.5s
POLC AML AML
comp=N,843µm,1.5s
POLC AML AML
comp=E,751µm,0.4s
EL6 Elcito 2.27 118 P **Pb 04 34 03.6 -1.2**
EL6 AML AML
comp=E,414µm,0.8s
EL6 AML AML
comp=N,403µm,1.6s
EL6 AML AML
comp=E,414µm,1.2s
EL6 AML AML
comp=N,403µm,0.4s
SPIF crte de Spivo 2.27 262 Pn **Pn 04 34 02.5 +1.4**
MOMA Monte Martano 2.29 135 P **Pn 04 34 02.1 +0.9**
MOMA AML AML
comp=E,217µm,0.8s
MOMA AML AML
comp=N,213µm,0.8s
MOMA AML AML
comp=E,217µm,1.2s
MOMA AML AML
comp=N,213µm,1.2s
PZZ Stroppo 2.32 273 Pn **Pn 04 34 02.6 +0.9**
FUSIO Fusio 2.35 330 AML AML
comp=E,341µm,0.4s
FUSIO AML AML
comp=N,163µm,0.8s
FUSIO AML AML
comp=N,163µm,1.2s
DAVOX Davos/Dischmat 2.37 352 AML AML
comp=N,250µm,0.9s
DAVOX AML AML
comp=E,228µm,0.4s
DAVOX AML AML
comp=E,228µm,1.6s
DAVOX Davos/Dischmat 2.37 352 Pn **Pn 04 34 04.4 +1.9**
comp=E,23nm,0.3s,baz=172,slow=15,SNR=147
DAVOX Sn **Sn 04 34 32.8 +1.6**
comp=E,26nm,0.3s,baz=303,slow=20,SNR=9.3
DAVOX LR LR 04 34 46.4
comp=E,52nm,20.1s,baz=238,slow=34
comp=E,78nm,0.4s
ISO Isola 2.38 265 Pn **Pn 04 34 04.4 +1.9**
CIMO Cimolais 2.39 37 AML AML
comp=N,155µm,1.4s
CIMO AML AML
comp=E,161µm,0.5s
CIMO AML AML
comp=N,171µm,1.4s
CIMO AML AML
comp=E,160µm,0.8s
CIMO AML AML
comp=N,171µm,0.6s
CIMO AML AML
comp=E,160µm,1.2s
CIMO AML AML
comp=N,155µm,0.6s
SMPL Sampolo 2.46 199 Pn **Pn 04 34 05.0 +1.4**
BRJN Brijuni 2.47 78 *e*Pn **Pn 04 34 03.2 -0.3**
BRJN Sn **Sn 04 34 31.0 -2.2**
STAL STALIGIAL 2.47 41 P **Pn 04 34 02.7 -1.0**
STAL AML AML
comp=E,591µm,0.2s
STAL AML AML
comp=N,550µm,0.3s
STAL AML AML
comp=E,415µm,0.5s
STAL AML AML
comp=N,486µm,0.3s
LSD Lago del Serru 2.51 295 Pn **Pn 04 34 04.3 0.0**
CALF Calern 2.56 256 Pn **Pn 04 34 06.0 +1.0**
MBDF Montbardon 2.58 278 *e*Pn **Pn 04 34 06.0 +0.8**
MBDF *e*Sn **Sn 04 34 34.8 -1.4**
comp=N,50nm,0.5s
JAUF Jausiers 2.58 271 Pn **Pn 04 34 07.3 +2.0**
RRL Rocca Remolon 2.59 282 Pn **Pn 04 34 07.5 +2.0**
FETA Feichten 2.60 6 Pn **Pn 04 34 07.1 +1.5**
comp=N,13nm,0.6s,SNR=28
FETA *e*Sn **Sn 04 34 39.6 +2.7**
comp=N,20nm,0.5s
ROSI Rosskopf 2.61 16 P **Pn 04 34 06.4 +0.7**
ROSI AML AML
comp=E,652µm,0.6s
ROSI AML AML
comp=E,652µm,1.4s
ROSI AML AML
comp=N,537µm,0.5s
DIX Grande Dixence 2.66 309 Pn **Pn 04 34 07.9 +1.5**
SALSA La sagne 2.69 260 Pn **Pn 04 34 08.9 +2.1**
CLUD Cludinico 2.70 40 AML AML
comp=E,192µm,0.7s
CLUD AML AML
comp=E,193µm,0.7s
CLUD AML AML
comp=N,194µm,0.5s
CLUD AML AML
comp=N,184µm,0.5s
PLONS Plons/SG 2.71 346 *e*Pn **Pn 04 34 09.1 +2.2**
PLONS *e*Sn **Sn 04 34 41.1 +1.9**
OGAG Argentiere 2.73 272 Pn **Pb 04 34 11.0 -1.7**
TRI Trieste 2.73 61 P **Pn 04 34 06.2 -1.1**
TRI AML AML
comp=E,154µm,0.8s
TRI AML AML
comp=N,146µm,1.5s
VINO Villanova 2.76 47 P **Pn 04 34 06.6 -1.0**
VINO AML AML
comp=N,206µm,0.8s
VINO AML AML
comp=E,285µm,0.7s
AJAC Base Areonaval 2.76 206 Pn **Pn 04 34 08.8 +1.2**
ABTA Abfaltersbach 2.77 32 *e*Pn **Pn 04 34 08.7 +0.9**
comp=E,16nm,0.3s,SNR=6.4
ABTA *e*Sn **Sn 04 34 40.9 +0.1**
comp=E,37nm,0.4s
SABO M.te Sabotino 2.77 55 AML AML
comp=E,320µm,1.4s
SABO AML AML
comp=N,1831µm,1.0s
SABO AML AML
comp=N,472µm,1.0s
SABO AML AML
comp=E,320µm,0.6s
SABO AML AML
comp=E,1405µm,0.6s
LPG La Plagne 2.77 294 *e*P **Pb 04 34 11.3 -2.1**
LPG *e*Sn **Sn 04 34 40.2 -0.9**
comp=E,71nm,0.7s
SMRN Sveta Marina 2.77 76 *e*Pn **Pn 04 34 07.0 -0.7**
SMRN Sn **Sn 04 34 38.6 -2.1**
BNALP Bannalp 2.79 332 AML AML
comp=N,92µm,0.6s
BNALP AML AML
comp=E,121µm,0.6s
LPL La Plagne 2.79 294 *e*Pn **Pn 04 34 08.8 +0.6**
LPL *e*Sn **Sn 04 34 40.6 -0.9**
comp=E,35nm,0.5s
SKDS Skadanscina 2.83 65 *i* Pn **Pn 04 34 07.4 -1.1**
SKDS *i* Sn **Sn 04 34 39.4 -2.7**
SKDS IAML 04 34 41.3
comp=Z,39nm,0.2s
SQTA Sankt Quirin 2.85 12 *i* Pn **Pn 04 34 10.6 +1.6**
comp=Z,22nm,0.3s,SNR=184
SQTA *e*Sn **Sn 04 34 46.9 +4.0**
comp=Z,156nm,0.3s
DAVA Damuels 2.88 354 *e*Pn **Pn 04 34 11.4 +2.0**
comp=Z,46nm,0.4s,SNR=69
DAVA *e*Sn **Sn 04 34 46.0 +2.5**
comp=Z,117nm,0.3s
DAVA Damuels 2.88 354 *e*Pn **Pn 04 34 11.3 +2.0**
DAVA *e*Sn **Sn 04 34 46.6 +3.0**
TRIGF Trigance 2.92 258 Pn **Pn 04 34 11.6 +1.6**
RSL Roselend 2.93 297 Pn **Pn 04 34 13.3 +3.3**
MOTA Moosalm 2.96 10 Pn **Pn 04 34 12.5 +2.0**
comp=Z,49nm,0.3s,SNR=37
MOTA *e*Sn **Sn 04 34 49.4 +3.8**
comp=Z,32nm,0.4s
VOJS Vojsko 2.96 56 *i* Pn **Pn 04 34 09.8 -0.7**
VOJS IAML 04 35 01.9
comp=Z,87nm,0.6s
WTTA Wattenberg 2.97 17 *e*Pn **Pn 04 34 11.9 +1.2**
comp=Z,121nm,0.3s,SNR=130
WTTA *e*Sn **Sn 04 34 49.8 +3.8**
comp=Z,84nm,0.4s
WTTA Wattenberg 2.97 17 AML AML
comp=N,294µm,0.4s
WTTA AML AML
comp=E,346µm,0.9s
WTTA Wattenberg 2.97 17 *e*Pn **Pn 04 34 11.9 +1.2**
WTTA *e*Sn **Sn 04 34 49.0 +3.0**
OBER Oberstdorf 2.98 359 *e*Pn **Pn 04 34 12.6 +1.9**
OBER *e*Sn **Sn 04 34 48.0 +2.1**
CADS Cadrg 2.99 52 *e*Pn **Pn 04 34 10.1 -0.7**
CADS IAML 04 35 02.0
comp=Z,43nm,0.3s
LMR La Mourre 2.99 250 *e*Pn **Pn 04 34 11.0 +0.3**
LMR *e*Sn **Sn 04 34 44.5 -1.5**
comp=Z,26nm,0.3s
OGSI Sixt 3.02 304 Pn **Pn 04 34 14.5 +3.2**
WATA Walderalm 3.03 16 *i* Pn **Pn 04 34 13.1 +1.7**
comp=Z,12nm,0.2s,SNR=83
WATA *i* Sn **Sb 04 34 51.9 -2.6**
comp=Z,43nm,0.3s
AIGLE Aigle 3.06 310 Pn **Pn 04 34 14.3 +2.5**
RIY Rijeka 3.07 72 *e*Pn **Pn 04 34 11.1 -0.7**
RIY Sn **Sn 04 34 45.4 -2.7**
RETA Reutte 3.07 5 *e*Pn **Pn 04 34 13.4 +1.5**
comp=Z,21nm,0.3s,SNR=51
RETA *i* Sn **Sn 04 34 50.2 +2.0**
comp=Z,12nm,0.5s
PART Garmisch-Parte 3.11 10 *e*Pn **Pn 04 34 14.3 +1.8**
PART *e*Sn **Sn 04 34 51.5 +2.2**
FLAF Flassans-sur-l 3.14 252 Pn **Pn 04 34 14.1 +1.2**
WILA Wila 3.15 342 *e*Pn **Pn 04 34 14.0 +0.9**
WILA *e*Pg **Pg 04 34 24.0 -0.7**
WILA *e*Sn **Sn 04 34 51.9 +1.7**
WILA *e*Sg **Sg 04 35 07.0 +1.4**
CEV Cerknica 3.17 64 *e*Pn **Pn 04 34 12.2 -1.0**
RABC Rab 3.18 83 *e*Pn **Pn 04 34 13.7 +0.4**
RABC Sn **Sn 04 34 49.9 -0.9**
MYKA Terra Mystica 3.19 45 *i* Pn **Pn 04 34 14.4 +0.8**
comp=Z,2.8nm,0.3s,SNR=4.5
MYKA *e*Sn **Sg 04 35 05.0 -1.8**
comp=Z,21nm,0.4s
ORIF Oris-en-Rattie 3.23 280 *e*P **Pn 04 34 17.4 +3.3**
ORIF *e*Sn **Sn 04 34 50.5 -1.6**
comp=Z,83nm,0.8s
ORIF Oris-en-Rattie 3.23 280 Pn **Pn 04 34 17.9 +3.8**
NVLJ Novalja 3.23 86 *e*Pn **Pn 04 34 14.1 0.0**
UBR Ueberruh 3.26 357 *e*Pn **Pn 04 34 15.9 +1.4**
UBR *e*Sn **Sn 04 34 54.0 +1.2**
VIRC Vir 3.37 91 *e*Pn **Pn 04 34 16.6 +0.6**
KBA Koelnbreinsper 3.38 37 *e*Pn **Pn 04 34 17.0 +0.8**
comp=Z,3.1nm,0.3s,SNR=15
KBA *e*Sn **Sn 04 34 57.6 +1.8**
comp=Z,14nm,0.4s
KBA Koelnbreinsper 3.38 37 *e*Pn **Pn 04 34 16.9 +0.6**
KBA *e*Pg **Pg 04 34 27.5 -1.5**
KBA *e*Sn **Sn 04 34 55.7 -0.1**
KBA *e*Sg **Sg 04 35 10.3 -2.5**
ARTF Artigues 3.39 257 Pn **Pn 04 34 17.8 +1.5**
LESA Schwarzleotal 3.41 28 *i* Pn **Pn 04 34 18.5 +2.0**
comp=Z,12nm,0.3s
LESA *e*Sn **Sn 04 34 59.5 +3.0**
comp=Z,48nm,0.3s
DUGI Dugi Otok 3.41 96 *e*Pn **Pn 04 34 17.2 +0.7**
BSTF la Bastide-des 3.43 262 Pn **Pn 04 34 18.9 +2.0**
BALST Balsthal 3.45 328 Pn **Pn 04 34 18.4 +1.3**
BALST Balsthal 3.45 328 *e*Pn **Pn 04 34 18.1 +0.9**
BALST *e*Sn **Sn 04 34 58.1 +0.5**
VISS Visnje 3.46 65 *i* Pn **Pn 04 34 17.0 -0.2**
VISS IAML 04 35 19.4
comp=Z,54nm,0.7s
SMRF Simiane la Rot 3.47 264 *e*P **Pn 04 34 19.7 +2.3**
SMRF *e*Sn **Sn 04 34 56.1 -1.8**
comp=Z,24nm,0.6s
SULZ Cheisacher 3.47 334 Pn **Pn 04 34 18.4 +1.0**
SULZ Cheisacher 3.47 334 *e*Pn **Pn 04 34 17.9 +0.5**
SULZ *e*Pg **Pg 04 34 31.8 +1.0**
SULZ *e*Sn **Sn 04 34 59.3 +1.3**
SULZ *e*Sg **Sg 04 35 14.4 -1.4**
LEPF PUYLOUBIER 3.48 257 Pn **Pn 04 34 19.1 +1.6**
OGSM Saint Maurice 3.51 291 Pn **Pn 04 34 19.7 +1.8**
RUSF Rustrel 3.54 264 Pn **Pn 04 34 20.4 +2.0**
GIMEL St. Georges / 3.56 308 Pn **Pn 04 34 20.2 +1.5**
OBKA Obir 3.61 53 *e*Pn **Pn 04 34 19.3 0.0**
comp=Z,10nm,0.4s,SNR=12
OBKA *e*Sn **Sn 04 35 00.9 -0.6**
comp=Z,26nm,0.7s
OBKA Obir 3.61 53 *e*Pn **Pn 04 34 19.4 0.0**
OBKA *e*Sn **Sn 04 35 01.1 -0.4**
OBKA *e*Sg **Sg 04 35 18.9 -1.3**
OBKA Obir 3.61 53 *e*Pn **Pn 04 34 19.1 -0.3**
BOJS Bojanci 3.64 71 *e*Pn **Pn 04 34 18.6 -1.1**
BOURR Bourrignon 3.68 325 Pn **Pn 04 34 20.5 +0.2**
CABF La Chapelle 3.71 308 *e*Pn **Pn 04 34 21.4 +0.7**
CABF *e*Sn **Sn 04 35 02.1 -1.9**
comp=Z,34nm,0.8s
GUT Gutenstein 3.74 347 Pn **Pn 04 34 20.9 -0.3**
ENDD Endenburg 3.76 332 Pn **Pn 04 34 21.5 +0.2**
PLIT Plitvice 3.79 81 *e*Pn **Pn 04 34 22.9 +1.1**
OZLJ Ozalj 3.81 70 *e*Pn **Pn 04 34 22.1 0.0**
CRES Cresnjev 3.87 67 *e*Pn **Pn 04 34 21.9 -1.0**
UDBI Udbina 3.87 87 *e*Pn **Pn 04 34 24.5 +1.5**
ZIRJ Zirje 3.89 100 *e*Pn **Pn 04 34 23.3 +0.2**
MORI Morici 3.89 96 *e*Pn **Pn 04 34 24.2 +1.0**
KIZ Kirchzarten 3.91 335 Pn **Pn 04 34 23.3 -0.1**
SOKA Soboth 3.98 54 *e*Pn **Pn 04 34 24.5 0.0**
comp=Z,12nm,0.4s,SNR=17
SOKA *i* Sn **Sn 04 35 09.6 -1.1**
comp=Z,14nm,0.8s
BIOA Bad Ischl, Aus 3.98 34 *i* Pn **Pn 04 34 25.6 +1.1**
comp=Z,7.4nm,0.3s,SNR=9.9
BIOA *i* Sn **Sn 04 35 12.5 +1.9**
comp=Z,14nm,0.3s
PERS Pernice 4.01 55 *i* Pn **Pn 04 34 24.5 -0.3**
VIVF Saint-Julien-l 4.08 278 *e*Pn **Pn 04 34 26.4 +0.7**
VIVF *e*Sn **Sn 04 35 10.8 -2.2**
comp=Z,13nm,0.6s
BFO Black Forest 4.14 341 *e*Pn **Pn 04 34 26.7 +0.1**
BFO *e*Pg **Pg 04 34 41.9 -1.8**
BFO *e*Sn **Sn 04 35 11.3 -3.4**
BFO *e*Sg **Sg 04 35 35.9 -1.4**
HINF Hinteralfeld 4.17 326 *e*Pn **Pn 04 34 27.1 +0.1**
HINF *e*Sn **Sn 04 35 13.3 -2.0**
comp=Z,29nm,0.3s
RONF Ronchamp 4.17 323 Pn **Pn 04 34 28.2 +1.2**
RONF Sn **Sn 04 35 15.1 -0.2**
SSB Saint Sauveur 4.22 284 Pn **Pn 04 34 28.9 +1.2**
PTJ Puntijarka 4.24 68 *e*Pn **Pn 04 34 26.8 -1.2**
A251A Rujevac 4.27 79 *e*Pn **Pn 04 34 28.4 +0.1**
NORI Noerdlinger Ri 4.30 2 *e*Sn **Sn 04 35 15.9 -2.4**
OPP Oppenau 4.33 341 Pn **Pn 04 34 29.0 -0.2**
MOA Molln 4.37 37 *i* Pn **Pn 04 34 30.2 +0.5**
comp=Z,15nm,0.5s,SNR=40
MOA *i* Sn **Sn 04 35 20.1 -0.1**
comp=Z,6.7nm,0.3s
MOA Molln 4.37 37 *e*Pn **Pn 04 34 30.3 +0.5**
MOA *e*Sn **Sn 04 35 20.2 0.0**
KIJV Kijevo 4.37 93 *e*Pn **Pn 04 34 30.7 +0.9**
ECH Echery 4.39 331 Pn **Pn 04 34 30.2 +0.2**
STU Stuttgart 4.42 350 *e*Sn **Sn 04 35 17.5 -3.8**
A050A Klekovaca 4.42 87 *e*Pn **Pn 04 34 29.4 -1.1**
CDF Champ du Feu 4.52 333 *e*Pn **Pn 04 34 31.5 -0.3**
CDF *e*Sn **Sn 04 35 21.6 -2.3**
comp=Z,23nm,0.4s
HAU Haudompre 4.53 324 *e*Pn **Pn 04 34 32.0 +0.1**
HAU *e*Sn **Sn 04 35 21.8 -2.3**
comp=Z,101nm,0.4s
BABA Baden-Baden-Ne 4.54 342 Pn **Pn 04 34 32.1 +0.1**
ARSA Arzberg 4.58 50 *i* Pn **Pn 04 34 32.2 -0.5**
comp=Z,6.2nm,0.4s,SNR=9.7
ARSA *i* Sn **Sn 04 35 24.9 -0.5**
comp=Z,8.0nm,0.7s
ARSA Arzberg 4.58 50 *e*Pn **Pn 04 34 32.1 -0.5**
HVAR Hvar 4.58 104 *e*Pn **Pn 04 34 33.1 +0.5**
LASF Ste Croix 4.68 268 *e*Pn **Pn 04 34 33.9 -0.1**
LASF *e*Sn **Sn 04 35 25.1 -2.7**
comp=Z,9.9nm,0.6s
MOSL Moslavina 4.69 73 *e*Pn **Pn 04 34 34.3 +0.1**
A051A Mrakovica 4.71 81 *e*Pn **Pn 04 34 33.9 -0.5**
MGRS Mrkonjic Grad 4.82 88 *e*Pn **Pn 04 34 36.1 +0.2**
COLF Collangettes 4.85 285 Pn **Pn 04 34 37.8 +1.5**
BLY Banja Luka 4.89 84 *e*Pn **Pn 04 34 36.8 0.0**
LEMB Lembach 4.94 340 Pn **Pn 04 34 37.4 -0.1**
MAKA Makarska 4.95 101 *e*Pn **Pn 04 34 38.4 +0.7**
GEC2 GERESS Array S 4.98 26 *e*Pn **Pn 04 34 37.6 -0.6**
GEC2 *e*Sn **Sn 04 35 32.0 -3.3**
GERES GERESS Array B 4.98 26 Pn **Pn 04 34 37.7 -0.6**
comp=Z,3.3nm,0.3s,baz=204,slow=13,SNR=54
GERES Sn **Sn 04 35 33.1 -2.2**
comp=Z,5.7nm,0.3s,baz=203,slow=24,SNR=14
comp=Z,6.8nm,0.2s
WET Wettzell 5.02 19 *e*Pn **Pn 04 34 37.9 -0.8**
WET *e*Sn **Sn 04 35 32.9 -3.4**
LSTV Lastovo 5.03 107 *e*Pn **Pn 04 34 38.9 +0.1**
SMF Signal de Mont 5.08 298 *e*Pn **Pn 04 34 39.6 +0.1**
SMF *e*Sn **Sn 04 35 34.9 -2.8**
comp=Z,18nm,0.5s
CKRC Cesky Krumlov 5.17 30 *e*PN **Pn 04 34 40.3 -0.4**
CKRC *e*SN **Sn 04 35 37.8 -2.0**
CONA Conrad Observa 5.18 46 *i* Pn **Pn 04 34 40.8 -0.2**
comp=Z,14nm,0.5s,SNR=26
CONA *i* Sn **Sn 04 35 39.9 -0.4**
comp=Z,3.6nm,0.4s
KHC Kasperske Hory 5.20 24 *e*PN **Pn 04 34 40.6 -0.5**
KHC *e*SN **Sn 04 35 37.6 -3.0**
PAGF Fort de Pagny 5.22 324 *e*Pn **Pn 04 34 41.6 +0.2**
baz=140
PAGF *e*Sn **Sn 04 35 38.3 -2.7**
comp=Z,16nm,0.5s
RONA Rosalia, Austr 5.27 50 *i* Pn **Pn 04 34 42.5 +0.4**
comp=Z,9.2nm,0.4s,SNR=12
SFTF Sexfontaines 5.27 318 *e*Pn **Pn 04 34 42.1 0.0**
baz=134
SFTF *e*Sn **Sn 04 35 39.5 -2.9**
comp=Z,3.9nm,0.3s
LOR Lormes 5.35 304 *e*Pn **Pn 04 34 43.3 +0.1**
baz=120
LOR *e*Sn **Sn 04 35 41.6 -2.8**
comp=Z,9.1nm,0.3s
AVF Avril sur Loir 5.45 298 *e*Pn **Pn 04 34 44.8 +0.3**
AVF *e*Sn **Sn 04 35 43.6 -3.1**
comp=Z,2.3nm,0.3s
SSF Saint Saulge 5.47 301 *e*Pn **Pn 04 34 44.8 0.0**
SSF *e*Sn **Sn 04 35 44.3 -2.9**
comp=Z,15nm,0.5s
MEZF Maizieres J'vi 5.48 320 *e*P **Pn 04 34 49.1 +4.2**
MEZF *e*Sn **Sn 04 35 44.6 -2.8**
comp=Z,11nm,0.5s
ROTZ Rotzenmuhle 5.49 13 *e*Pn **Pn 04 34 43.2 -1.9**
ROTZ *e*Sn **Sn 04 35 42.9 -4.7**
STON Ston 5.55 104 *e*Pn **Pn 04 34 46.9 +0.9**
ZVC Zvikov 5.66 26 *e*PN **Pn 04 34 47.2 -0.2**
ZVC *e*SN **Sn 04 35 47.6 -4.2**
BGF Bois d'Agland 5.69 295 *e*Pn **Pn 04 34 47.7 -0.2**
BGF *e*Sn **Sn 04 35 49.5 -3.2**

	comp=Z,21nm,0.7s								
CAF	**Calviac**	**5.93**	**278**	*e*Pn		**Pn**	**04 34 52.5**	**+1.3**	
TNS	**Taunus Mts**	**5.94**	**348**	*e*Pn		**Pn**	**04 34 51.0**	**-0.3**	
TNS				*e*Sn		**Sn**	**04 35 54.9**	**-4.0**	
NKC	**Novy Kostel**	**5.98**	**13**	*e*PN		**Pn**	**04 34 50.6**	**-1.2**	
MTLF	**Montolieu**	**5.98**	**262**	*e*Pn		**Pn**	**04 34 52.3**	**+0.4**	
MTLF				*e*Sn		**Sn**	**04 35 55.8**	**-4.0**	
	comp=Z,2.4nm,0.4s								
TREC	**Trest**	**6.00**	**34**	*e*PN		**Pn**	**04 34 51.6**	**-0.6**	
TCF	**Toulx Ste Croi**	**6.03**	**291**	*e*Pn		**Pn**	**04 34 52.5**	**-0.1**	
TCF				*e*Sn		**Sn**	**04 35 57.6**	**-3.5**	
	comp=Z,4.5nm,0.4s								
TREB	**Trebinje**	**6.05**	**104**	*e*Pn		**Pn**	**04 34 54.3**	**+1.4**	
TANN	**Tannenbergstha**	**6.16**	**13**	*e*Pn		**Pn**	**04 34 52.8**	**-1.5**	
TANN				*e*Sn		**Sn**	**04 35 60.0**	**-4.2**	
HAPS	**Han Pijesak,BI**	**6.18**	**90**	*e*PN		**Pn**	**04 34 53.6**	**-1.1**	
MODS	**Modra-Piesok**	**6.20**	**48**	*e*PN		**Pn**	**04 34 55.1**	**+0.2**	
MODS				*e*SN		**Sn**	**04 36 03.2**	**-2.1**	
KRUC	**Moravsky**	**6.22**	**40**	*e*PN		**Pn**	**04 34 53.7**	**-1.4**	
KRUC				*e*SN		**Sn**	**04 36 03.0**	**-2.7**	
PRU	**Pruhonice**	**6.25**	**26**	*e*PN		**Pn**	**04 34 54.8**	**-0.7**	
GOPC	**GO Pecny, Ondr**	**6.26**	**27**	*e*PN		**Pn**	**04 34 54.7**	**-1.0**	
MOX	**Moxa**	**6.28**	**7**	*e*Pn		**Pn**	**04 34 54.3**	**-1.6**	
MOX				*e*Sn		**Sn**	**04 36 03.2**	**-3.9**	
PRA	**Prague**	**6.29**	**25**	*e*PN		**Pn**	**04 34 54.9**	**-1.1**	
UPM	**Unac-Piva**	**6.31**	**98**	*e*Pn		**Pn**	**04 34 57.5**	**+1.0**	
DUNF	**Dun**	**6.35**	**260**	Pn		**Pn**	**04 34 59.2**	**+2.3**	
HSKC	**Hora Svate Kat**	**6.52**	**18**	*e*PN		**Pn**	**04 34 58.9**	**-0.4**	
BBLS	**Lazići**	**6.54**	**92**	*e*Pn		**Pn**	**04 34 58.9**	**-0.6**	
RUDO	**Rudo**	**6.55**	**94**	*e*Pn		**Pn**	**04 34 59.7**	**0.0**	
TEKS	**Tekeris**	**6.56**	**86**	*e*Pn		**Pn**	**04 34 57.8**	**-2.1**	
DRME	**Dracevica, Mon**	**6.82**	**106**	*e*Pn		**Pn**	**04 35 03.8**	**+0.4**	
BRG	**Berggiesshubel**	**6.89**	**19**	*i* Pn		**Pn**	**04 35 04.5**	**+0.2**	
BRG				Amp			04 35 05.7		
	comp=Z,7.5nm,0.5s								
BRG				r			04 36 19.0		
BRG				r			04 37 04.0		
BRG				Amp			04 37 12.6		
	comp=Z,5.7nm,0.9s								
SJES	**Sjenica**	**7.05**	**96**	*e*Pn		Pn	04 35 00.8	-5.9	
CLL	**Collm**	**7.11**	**14**	*e*Pn		**Pn**	**04 35 06.0**	**-1.3**	
CLL				*ex*		x	04 35 14.0		
CLL				*ex*		x	04 35 32.0		
CLL				*e*Sn		Sn	04 36 18.0	-9.5	
CLL				*ex*		x	04 36 39.0		
CLL				*ex*		x	04 37 02.0		
CLL				*e*Sg		**Sg**	**04 37 09.0**	**-3.2**	
MAUC	**Maruska**	**7.11**	**43**	*e*PN		**Pn**	**04 35 07.2**	**-0.2**	
VYHS	**Vyhne**	**7.13**	**52**	*e*PN		**Pn**	**04 35 08.4**	**+0.8**	
KRLC	**Kraliky**	**7.14**	**35**	*e*PN		**Pn**	**04 35 06.8**	**-1.0**	
DPC	**Dobruska-Polom**	**7.17**	**32**	*e*PN		**Pn**	**04 35 07.0**	**-1.2**	
UPC	**Upice**	**7.19**	**30**	*e*PN		**Pn**	**04 35 07.6**	**-0.8**	
CHVC	**Chvalec**	**7.27**	**30**	*e*PN		**Pn**	**04 35 08.4**	**-1.1**	
OSTC	**Ostas**	**7.30**	**31**	*e*PN		**Pn**	**04 35 08.9**	**-1.1**	
ESDC	**Sonseca Array**	**11.65**	**251**	Pn		**Pn**	**04 36 11.3**	**+1.6**	
	comp=Z,0.1nm,0.3s,baz=61,slow=14,SNR=4.9								
	comp=Z,1.1nm,0.8s								
FINES	**FINESS Array B**	**19.40**	**23**	P		**P**	**04 37 49.3**	**+0.3**	
	comp=Z,0.1nm,0.3s,baz=198,slow=13,SNR=4.6								
	comp=Z,0.8nm,0.6s								
TORD	**Torodi Ar. Bea**	**32.05**	**196**	P		**P**	**04 39 49.6**	**-0.3**	
	comp=Z,0.5nm,0.7s,baz=11,slow=7.3,SNR=4.0								
	comp=Z,0.5nm,0.7s								
YKA	**Yellowknife Ar**	**64.70**	**335**	P		**P**	**04 44 00.6**	**-0.1**	
	comp=Z,0.5nm,0.8s,baz=43,slow=6.4,SNR=8.7								
	comp=Z,0.5nm,0.8s								
NEW	**Newport**	**76.83**	**327**	LR		LR	05 21 22.1		
	comp=Z,58nm,19.5s,baz=94,slow=37								

*ROM **22** 04:38:10.7±0.1,41°.935N±0°.006×15°.526E±0°.010,h5km, ML2.5/9,Error ellipse: s-maj=0.8km s-min=0.7km az=249.0*

ISC 22 04:38:11.1±0.9,**41°.95N**±0°.03×**15°.52E**±0°.03,**h12**km±7km, **n29**,σ0**°62**/46,**Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	**0.18**	**357**	P	**Pg**	**04 38 15.2**	**+0.1**
TREM				S	**Sg**	**04 38 18.5**	**+0.6**
SGRT	**San Giovanni R**	**0.25**	**139**	P	**Pg**	**04 38 15.8**	**-0.7**
SGRT				S	**Sg**	**04 38 19.8**	**-0.3**
SGRT				END			
MELA	**Melanico ??? S**	**0.38**	**231**	P	**Pg**	**04 38 18.0**	**-0.7**
MELA				S	**Sg**	**04 38 24.2**	**+0.4**
MELA				END			
CIGN	**Sant'Elia a Pi**	**0.55**	**238**	P	**Pg**	**04 38 21.7**	**0.0**
GATE	**Gambatesa**	**0.63**	**227**	P	**Pb**	**04 38 23.6**	**-0.4**
CAPA	**Cerignola FG**	**0.82**	**164**	P	**Pg**	**04 38 26.2**	**-0.7**
CAPA				S	**Sb**	**04 38 38.6**	**+0.4**
SGTA	**Sant Agata di**	**0.82**	**188**	P	**Pb**	**04 38 27.4**	**+0.1**
SGTA				S	**Sb**	**04 38 38.8**	**+0.5**
SGTA				AML	AML		
	comp=E,328µm,0.8s						
SGTA				AML	AML		
	comp=N,320µm,0.7s						
SGTA				AML	AML		
	comp=E,348µm,0.8s						
SGTA				AML	AML		
	comp=N,268µm,1.5s						
SACR	**S. Croce Del S**	**0.82**	**228**	P	**Pb**	**04 38 27.1**	**-0.2**
SACR				S	**Sb**	**04 38 38.9**	**+0.5**
PSB1	**Pescosannita**	**0.90**	**217**	P	**Pg**	**04 38 27.7**	**-0.7**
PSB1				S	**Sb**	**04 38 41.6**	**+1.1**
MRB1	**Monte Rocchett**	**0.92**	**207**	P	**Pb**	**04 38 28.9**	**0.0**
MRB1				S	**Sn**	**04 38 42.9**	**0.0**
CAFE	**Carife**	**0.94**	**193**	P	**Pb**	**04 38 29.3**	**-0.1**
CAFE				S	**Sn**	**04 38 43.6**	**0.0**
VULT	**Monte Vulture**	**0.99**	**176**	P	**Pb**	**04 38 30.4**	**+0.2**
VULT				S	**Sn**	**04 38 45.0**	**+0.1**
VITU	**Vitulano (BN)**	**1.01**	**222**	P	**Pb**	**04 38 31.1**	**+0.5**
VITU				S	**Sn**	**04 38 45.4**	**+0.1**
VITU				AML	AML		
	comp=N,456µm,0.9s						
VITU				AML	AML		
	comp=E,256µm,1.3s						
VITU				AML	AML		
	comp=N,392µm,1.4s						
VITU				AML	AML		
	comp=E,148µm,0.9s						
VITU				AML	AML		
	comp=N,144µm,0.6s						
VITU				AML	AML		
	comp=N,144µm,1.4s						
VITU				AML	AML		
	comp=N,392µm,0.6s						
VITU				AML	AML		
	comp=N,130µm,0.3s						
VITU				AML	AML		
	comp=E,119µm,0.3s						
RSF3	**Rocca San Feli**	**1.02**	**195**	P	**Pg**	**04 38 30.0**	**-0.7**
RSF3				S	**Sn**	**04 38 45.5**	**+0.1**
SGG	**Gregorio Mates**	**1.02**	**237**	P	**Pb**	**04 38 31.2**	**+0.4**
SGG				S	**Sb**	**04 38 45.3**	**+1.2**
LGS3	**Luogosano**	**1.04**	**203**	P	**Pb**	**04 38 31.2**	**+0.2**
LGS3				S	**Sn**	**04 38 46.0**	**+0.2**
SNAL	**S. Angelo Dei**	**1.05**	**193**	P	**Pg**	**04 38 30.6**	**-0.7**
SNAL				S	**Sn**	**04 38 46.3**	**+0.2**
SNAL				AML	AML		
	comp=E,246µm,2.3s						
SNAL				AML	AML		
	comp=N,249µm,1.5s						
SNAL				AML	AML		
	comp=N,151µm,0.2s						
SNAL				AML	AML		
	comp=N,112µm,1.5s						
SNAL				AML	AML		
	comp=E,232µm,1.0s						
PALZ	**Palazzo San Ge**	**1.05**	**162**	P	**Pb**	**04 38 31.0**	**-0.2**
PALZ				S	**Sn**	**04 38 46.6**	**+0.3**
RDM3	**Ruvo Del Monte**	**1.07**	**179**	P	**Pn**	**04 38 32.1**	**+0.2**
CERA	**Filignano**	**1.18**	**253**	P	**Pg**	**04 38 32.8**	**-1.0**
ACER	**Acerenza**	**1.20**	**165**	P	**Pg**	**04 38 33.3**	**-0.9**
ACER				AML	AML		
	comp=E,452µm,1.0s						
ACER				AML	AML		
	comp=E,492µm,1.0s						
ACER				AML	AML		
	comp=N,290µm,1.6s						
ACER				AML	AML		
	comp=E,492µm,1.0s						
ACER				AML	AML		
	comp=E,452µm,1.0s						
ACER				AML	AML		
	comp=N,290µm,0.4s						
ACER				AML	AML		
	comp=N,324µm,0.9s						
ACER				AML	AML		
	comp=N,296µm,0.4s						
ACER				AML	AML		
	comp=N,287µm,0.4s						
ACER				AML	AML		
	comp=E,418µm,0.4s						
ACER				AML	AML		
	comp=E,393µm,0.4s						
INTR	**Introdacqua**	**1.21**	**274**	P	**Pg**	**04 38 32.5**	**-1.9**
LSTV	**Lastovo**	**1.31**	**51**	*e*Pn	**Pn**	**04 38 35.6**	**+0.5**
HVAR	**Hvar**	**1.41**	**29**	*e*Pn	**Pn**	**04 38 36.5**	**0.0**
ZIRJ	**Zirje**	**1.71**	**3**	*e*Pn	**Pn**	**04 38 40.1**	**-0.5**
STON	**Ston**	**1.86**	**59**	*e*Pn	**Pb**	**04 38 44.5**	**-0.5**
MORI	**Morici**	**1.92**	**4**	*e*Pn	**Pn**	**04 38 42.6**	**-1.0**
MORI				Sn	**Sn**	**04 39 08.0**	**+0.3**
KIJV	**Kijevo**	**2.16**	**17**	*e*Pn	**Pn**	**04 38 47.9**	**+1.1**
VIRC	**Vir**	**2.37**	**352**	*e*Pn	**Pn**	**04 38 49.2**	**-0.5**

*SOME **22** 04:56:28.3,43°.48N×82°.47E,h0km*
*NNC **22** 04:56:29.8±1.3,43°.46N×82°.53E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=12.3km s-min=6.3km az=153.0*

ISC 22 04:56:30.4±2.1,**43°.54N**±0°.07×**82°.41E**±0°.07,**h5**km±14km, **n45**,σ1**°94**/67,**3C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.50**	**267**	P	**Pg**	**04 56 59.3**	**0.0**
KTMS				S	**Sg**	**04 57 22.1**	**+3.3**
KTMS	**Ketmen** 7.4nm,0.2s	**1.50**	**267**	*e*P	**Pg**	**04 56 59.3**	**0.0**
KTMS				*e*S	**Sg**	**04 57 22.1**	**+3.3**
	77nm,0.3s						
DJR	**Jarkent** 7.9nm,0.3s	**2.06**	**294**	Pg	**Pb**	**04 57 09.0**	**+0.7**
DJR				Lg	Lg	04 57 39.1	
	33nm,0.4s						
DJR	**Jarkent** 7.9nm,0.3s	**2.06**	**294**	*e*P	**Pb**	**04 57 09.0**	**+0.7**
DJR				*e*S	**Sg**	**04 57 39.1**	**+2.7**
	33nm,0.4s						
PDGK	**Podgornoye** 3.8nm,0.2s	**2.14**	**265**	Pg	**Pb**	**04 57 09.3**	**-0.3**
PDGK				Lg	Lg	04 57 38.8	
	36nm,0.4s						
PDGK	**Podgornoye** 2.4nm,0.3s	**2.14**	**265**	⇑Pn	**Pb**	**04 57 09.4**	**-0.2**
PDGK				⇑Sn	**Sg**	**04 57 39.5**	**+0.3**
	34nm,0.4s						
SHLS	**Shalkode** 21nm,0.3s	**2.19**	**261**	Pg	**Pn**	**04 57 06.3**	**-1.2**
SHLS				Lg	Lg	04 57 33.6	
	116nm,0.5s						
SHLS	**Shalkode** 21nm,0.3s	**2.19**	**261**	*e*P	**Pn**	**04 57 06.3**	**-1.2**
SHLS				*e*S	**Sn**	**04 57 33.5**	**-1.4**
	116nm,0.5s						
KNOS	**Konyrlen** 5.9nm,0.1s	**2.48**	**290**	Pg	**Pb**	**04 57 16.4**	**+1.0**
KNOS				Lg	Lg	04 57 51.6	
	13nm,0.3s						
UZB	**Uzynbulak** 2.7nm,0.2s	**2.50**	**262**	Pg	**Pb**	**04 57 16.7**	**+0.8**
UZB				Lg	Lg	04 57 51.4	
	32nm,0.5s						
UZB	**Uzynbulak** 2.7nm,0.2s	**2.50**	**262**	*e*P	**Pb**	**04 57 16.8**	**+0.8**
UZB				*e*S	**Sg**	**04 57 51.4**	**+0.5**
	32nm,0.5s						
KAPS	**Kapalarasan** 1.0nm,0.1s	**2.80**	**310**	*e*P	**Pb**	**04 57 21.7**	**+0.8**
KAPS				*e*S	**Sg**	**04 57 59.8**	**-0.6**
	10nm,0.3s						
BLB	**Baldybastay** 3.5nm,0.1s	**2.90**	**282**	Pg	**Pb**	**04 57 23.4**	**+0.7**
BLB				Lg	Lg	04 58 03.3	
	11nm,0.2s						
ZHN	**Zhinishke** 1.6nm,0.2s	**2.93**	**264**	Pg	**Pb**	**04 57 24.4**	**+1.3**
ZHN				Lg	Lg	04 58 04.5	
	34nm,0.1s						
ZHN	**Zhinishke** 1.6nm,0.2s	**2.93**	**264**	*e*P	**Pb**	**04 57 24.4**	**+1.3**
ZHN				*e*S	**Sg**	**04 58 04.5**	**+0.1**
	34nm,0.1s						
SATY	**Saty** 1.9nm,0.1s	**2.96**	**262**	Pg	**Pb**	**04 57 24.4**	**+0.6**
SATY				Lg	Lg	04 58 04.5	
	57nm,0.4s						
SATY	**Saty** 1.9nm,0.1s	**2.96**	**262**	*e*P	**Pb**	**04 57 24.4**	**+0.6**
SATY				*e*S	**Sg**	**04 58 04.5**	**-1.1**
	57nm,0.4s						
KURS	**Kuram** 1.6nm,0.5s	**3.09**	**271**	Pg	**Pb**	**04 57 27.5**	**+1.7**
KURS				Lg	Lg	04 58 10.0	
	9.5nm,0.5s						
KURS	**Kuram** 1.6nm,0.5s	**3.09**	**271**	*e*P	**Pb**	**04 57 27.5**	**+1.7**
KURS				*e*S	**Sg**	**04 58 10.0**	**+0.4**
	9.5nm,0.5s						
MK31	**Makanchi Array** 3.5nm,0.4s,baz=172,slow=15,SNR=55	**3.26**	**359**	Pg	**Pg**	**04 57 31.8**	**-1.0**
MK31				⇓Lg	Lg	04 58 17.5	
	1.2nm,0.3s,baz=174,slow=30,SNR=4.4						
ARXS	**Arharly**	**3.38**	**283**	Pg	**Pb**	**04 57 32.0**	**+1.2**
ARXS				Lg	Lg	04 58 18.2	
ARXS	**Arharly** 6.4nm,0.5s	**3.38**	**283**	*e*P	**Pb**	**04 57 32.0**	**+1.2**
ARXS				*e*S	**Sg**	**04 58 18.2**	**-0.8**
	8.6nm,0.2s						
KOTS	**Kotyrbulak** 2.3nm,0.3s	**3.88**	**267**	Pg	**Pb**	**04 57 41.7**	**+2.4**
KOTS				Lg	Lg	04 58 34.9	
	28nm,0.8s						
KOTS	**Kotyrbulak** 2.3nm,0.3s	**3.88**	**267**	*e*P	**Pb**	**04 57 41.7**	**+2.4**
KOTS				*e*S	**Sg**	**04 58 34.9**	**0.0**
	28nm,0.8s						
MDOK	**Medeo** 1.6nm,0.3s	**3.93**	**266**	Pg	**Pb**	**04 57 41.7**	**+1.4**
MDOK				Lg	Lg	04 58 34.2	
	9.0nm,0.5s						
MDOK	**Medeo** 1.6nm,0.3s	**3.93**	**266**	*e*P	**Pb**	**04 57 41.6**	**+1.4**
MDOK				*e*S	**Sg**	**04 58 34.2**	**-2.4**
	9.0nm,0.5s						
CHKK	**Chushkaly** 1.3nm,0.2s	**3.95**	**276**	Pg	**Pg**	**04 57 44.1**	**-1.9**
CHKK				Lg	Lg	04 58 38.7	
	20nm,0.4s						
CHKK	**Chushkaly** 0.6nm,0.1s	**3.95**	**276**	*e*P	**Pb**	**04 57 43.3**	**+2.9**
CHKK				*e*S	**Sg**	**04 58 37.0**	**-0.1**
	9.8nm,0.3s						
TNSS	**Tian-Shan** 2.0nm,0.3s	**4.02**	**265**	Pg	**Pb**	**04 57 44.6**	**+2.7**
TNSS				Lg	Lg	04 58 39.2	
	4.2nm,0.4s						
TNSS	**Tian-Shan** 2.0nm,0.3s	**4.02**	**265**	*e*P	**Pb**	**04 57 44.6**	**+2.7**
TNSS				*e*S	**Sg**	**04 58 39.2**	**-0.4**
	4.2nm,0.4s						
KTBS	**Karatobe** 0.5nm,0.3s	**4.17**	**274**	Pg	**Pg**	**04 57 47.6**	**-2.6**
KTBS				Lg	Lg	04 58 44.7	
	15nm,0.8s						
KTBS	**Karatobe** 0.5nm,0.3s	**4.17**	**274**	*e*P	**Pg**	**04 57 47.6**	**-2.6**
KTBS				*e*S	**Sg**	**04 58 44.7**	**+0.6**
	15nm,0.8s						
ZSN	**Zaisan** 5.8nm,0.9s	**4.27**	**23**	Pg	**Pb**	**04 57 47.3**	**+1.3**
ZSN				Lg	Lg	04 58 44.7	
	6.7nm,0.7s						
ZSN	**Zaisan** 1.4nm,0.2s	**4.27**	**23**	*e*P	**Pb**	**04 57 45.5**	**-0.4**
ZSN				*e*S	**Sb**	**04 58 40.9**	**+3.0**
	3.7nm,0.3s						
MTBS	**Maitube** 0.3nm,0.1s	**4.38**	**267**	Pg	**Pb**	**04 57 51.1**	**+3.2**
MTBS				Lg	Lg	04 58 50.4	
	8.4nm,0.4s						
KUU	**Kurty**	**4.42**	**277**	Pg	**Pb**	**04 57 50.9**	**+2.5**
KUU				Lg	Lg	04 58 50.2	
KUU	**Kurty** 3.0nm,0.1s	**4.42**	**277**	*e*P	**Pb**	**04 57 51.0**	**+2.5**
KUU				*e*S	**Sg**	**04 58 50.4**	**-1.9**
	6.1nm,0.3s						
KST	**Kastek** 0.7nm,0.6s	**4.74**	**266**	Pg	**Pb**	**04 57 57.6**	**+3.7**
KST				Lg	Lg	04 59 01.7	
	4.6nm,0.6s						
KST	**Kastek** 0.7nm,0.6s	**4.74**	**266**	*e*P	**Pb**	**04 57 57.6**	**+3.7**
KST				*e*S	**Sg**	**04 59 01.7**	**-0.8**
	4.6nm,0.6s						
DGS	**Degeres** 1.1nm,0.5s	**4.85**	**269**	Pg	**Pb**	**04 57 58.9**	**+3.1**
DGS				Lg	Lg	04 59 04.2	
	9.4nm,0.8s						
DGS	**Degeres** 1.1nm,0.5s	**4.85**	**269**	*e*P	**Pb**	**04 57 58.9**	**+3.1**
DGS				*e*S	**Sg**	**04 59 04.2**	**-1.9**
	9.4nm,0.8s						
KRBS	**Karabastau** 0.9nm,0.8s	**4.90**	**274**	Pg	**Pb**	**04 57 59.5**	**+2.9**
KRBS				Lg	Lg	04 59 05.4	
	3.5nm,0.4s						
KRBS	**Karabastau** 0.9nm,0.8s	**4.90**	**274**	*e*P	**Pb**	**04 57 59.5**	**+2.9**
KRBS				*e*S	**Sg**	**04 59 05.4**	**-2.2**
	3.5nm,0.4s						
TKM2	**Tokmak 2** 1.3nm,0.6s	**5.02**	**265**	⇓Pg	**Pb**	**04 58 00.1**	**+1.3**
TKM2				⇑Lg	Lg	04 59 11.6	
	4.5nm,0.6s						

*IDC **22** 05:03:17.9±9.1,0°.03N×127°.12E,h118km±88km,mb3.7/6, mbtmp4.0/6,MS3.2/1,Error ellipse: s-maj=114.9km s-min=19.3km az=67.0*
*NEIC **22** 05:03:20.0±1.1,0°.05N±0°.08×127°.2E±0°.1,h130km±7km, mb4.3/14,Error ellipse: s-maj=17.0km s-min=11.0km az=73.0*
*DJA **22** 05:03:20.8±0.4,0°.S±3°×12°.7E±°,h98km±6km,M4.3/12, mb4.1/3,mB4.5/1,MLv4.4/12,Mw(mB)3.7/1*

ISC 22 05:03:19.2±0.7,**0°.01N**±0°.05×**127°.08E**±0°.06,**h130**km,**n34**, σ1**°26**/39,**mb4.2**/12,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.77**	**147**	P	**Pn**	**05 03 40.2**	**+0.1**
LBMI				S	**Sn**	**05 03 55.0**	**-1.0**
TNTI	**Ternate**	**0.81**	**21**	P	**Pn**	**05 03 40.5**	**+0.2**
TNTI	**Ternate**	**0.81**	**21**	P	**Pn**	**05 03 40.6**	**+0.2**
TNTI				S	**Sn**	**05 03 55.1**	**-1.4**
SANI	**Sanana**	**2.32**	**208**	P	**Pn**	**05 03 56.4**	**-0.7**
SANI				S	**Sn**	**05 04 22.1**	**-4.1**
KMSI	**Cibinong**	**3.15**	**280**	P	**Pn**	**05 04 07.7**	**0.0**
KMSI				S	**Sn**	**05 04 42.8**	**-2.4**
NLAI	**Namlea**	**3.23**	**180**	P	**Pn**	**05 04 09.5**	**+0.7**
NLAI				S	**Sn**	**05 04 45.4**	**-1.7**
SGSI	**Sangihe**	**3.96**	**337**	P	**Pn**	**05 04 19.1**	**+0.6**
LUWI	**Luwuk**	**4.43**	**256**	Pn	**Pn**	**05 04 27.1**	**+2.5**
MRSI	**Marisa**	**5.16**	**275**	P	**Pn**	**05 04 32.7**	**-1.7**
	32nm,0.6s,654nm0.3nm						
TOLI2	**Tolitoli**	**6.39**	**280**	Pn	**Pn**	**05 04 51.3**	**+0.3**
MPSI	**Mapaga**	**7.19**	**273**	P	**Pn**	**05 05 02.3**	**+0.6**
KAPI	**Kappang**	**8.86**	**236**	Pn	**Pn**	**05 05 27.5**	**+3.3**
WB0	**Warramunga Arr**	**20.92**	**160**	P	**P**	**05 07 51.7**	**0.0**
WB0				IAmb	IAmb	05 07 53.9	
	comp=Z,15nm,0.5s						
WRAB	**Tennant Creek**	**21.06**	**161**	P	**P**	**05 07 52.8**	**-0.3**
WRAB				IAmb	IAmb	05 07 55.1	
	comp=Z,10.0nm,0.4s						
WRA	**Warramunga Arr**	**21.07**	**161**	P	**P**	**05 07 52.9**	**-0.3**
	comp=Z,6.5nm,0.5s,baz=339,slow=10,SNR=54						
	comp=Z,6.5nm,0.5s						
WB2	**Warramunga Arr**	**21.07**	**161**	P	**P**	**05 07 53.0**	**-0.2**
WB2				IAmb	IAmb	05 07 55.5	
	comp=Z,9.7nm,0.7s						
AS31	**Alice Springs**	**24.45**	**165**	P	**P**	**05 08 26.9**	**+0.7**
AS31				IAmb	IAmb	05 08 29.4	
	comp=Z,3.1nm,1.1s						
ASAR	**Alice Springs**	**24.45**	**165**	P	**P**	**05 08 25.8**	**-0.3**
ASAR	**Alice Springs**	**24.45**	**165**	P	**P**	**05 08 26.1**	**0.0**
	comp=Z,4.7nm,0.8s,baz=352,slow=16,SNR=34						
ASAR				PcP	**PcP**	**05 12 01.4**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=342,slow=1.8,SNR=4.2						
	comp=Z,4.7nm,0.8s						
CTA	**Charters Tower**	**27.42**	**138**	LR	LR	05 23 09.1	
	comp=Z,43nm,18.0s,baz=268,slow=44						
FORT	**Forrest**	**30.64**	**178**	P	**P**	**05 09 22.2**	**+1.0**
MORW	**Morawa**	**30.78**	**199**	P	**P**	**05 09 23.4**	**+0.9**
MORW				IAmb	IAmb	05 09 42.7	
	comp=Z,5.3nm,1.0s						
CM31	**Chiang Mai Arr**	**33.16**	**305**	P	**P**	**05 09 44.2**	**+0.7**
BBOO	**Buckleboo**	**33.73**	**166**	P	**P**	**05 09 48.4**	**+0.2**
EIDS	**Eidsvold**	**34.27**	**139**	P	**P**	**05 09 51.8**	**-1.3**
EIDS				IAmb	IAmb	05 09 57.7	
	comp=Z,7.4nm,1.1s						
STKA	**Stephens Creek**	**34.56**	**158**	P	**P**	**05 09 55.3**	**-0.1**
STKA	**Stephens Creek**	**34.56**	**158**	P	**P**	**05 09 55.4**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=331,slow=6.8,SNR=7.9						
	comp=Z,1.4nm,0.4s						
ARMA	**Armidale**	**38.22**	**145**	P	**P**	**05 10 27.1**	**+0.4**
ARMA				IAmb	IAmb	05 10 35.0	
	comp=Z,5.5nm,1.1s						
SONM	**Songino Array**	**50.92**	**342**	P	**P**	**05 12 08.1**	**+0.9**
SONM	**Songino Array**	**50.92**	**342**	P	**P**	**05 12 07.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=153,slow=8.6,SNR=5.3						
	comp=Z,0.5nm,0.6s						
MK31	**Makanchi Array**	**60.81**	**326**	P	**P**	**05 13 18.3**	**+0.7**
MKAR	**Makanchi Array**	**60.81**	**326**	P	**P**	**05 13 18.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=113,slow=7.9,SNR=12						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**64.05**	**334**	P	**P**	**05 13 38.8**	**-0.2**
KURBB	**Kurchatov Arra**	**65.05**	**328**	P	**P**	**05 13 45.4**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=130,slow=6.1,SNR=11						
	comp=Z,0.8nm,0.5s						

*MOS **22** 05:15:31.2±1.3,34°.27N×25°.11E,h15km,mb4.4/17,Error ellipse: s-maj=7.8km s-min=4.4km az=75.5*
*IDC **22** 05:15:31.1±0.7,34°.43N×25°.01E,h0km,mb4.2/22, mbtmp4.2/29,ML4.1/6,MS3.5/17,Error ellipse: s-maj=17.4km s-min=12.8km az=171.0*
*NEIC **22** 05:15:32.3±2.2,34°.26N±0°.08×24°.99E±0°.07,h10km±1km, mb4.2/34,Error ellipse: s-maj=13.9km s-min=9.7km az=184.0*
*ISK **22** 05:15:33.5,34°.32N×24°.88E,h94km±1km,ML4.0/23*
*HLW **22** 05:15:33.9,34°.29N×25°.20E,h11km±18km,Md4.2,Ml4.4*
*THE **22** 05:15:34.7,34°.30N×24°.99E,h0km±1km,ML3.6/7,Error

GVD S **Sb** 05 16 06.9 -0.2
GVD Gavdhos 1.06 305 P **Pn** 05 15 52.3 -1.1
GVD S **Sb** 05 16 05.5 -1.6
GVD AML AML 05 16 13.3
comp=E,37098µm,0.6s
GVD AML AML 05 16 13.6
comp=N,30070µm,0.5s
KSTL Kastelli Herak 1.07 357 P **Pn** 05 15 52.7 -0.9
KSTL S **Sb** 05 16 07.4 -0.1
comp=N,2µm,0.8s
KSTL Kastelli Herak 1.07 357 P **Pn** 05 15 52.3 -1.3
KSTL S **Sb** 05 16 05.2 -2.3
KSTL AML AML 05 16 23.1
comp=E,5626µm,0.9s
KSTL AML AML 05 16 23.6
comp=N,7058µm,0.6s
IACM Heraklion 1.08 357 P **Pb** 05 15 54.4 +0.4
IACM S **Sn** 05 16 08.9 +1.1
IACM Heraklion 1.08 357 P **Pb** 05 15 54.3 +0.4
PRNS Prines Rethymn 1.25 335 P **Pn** 05 15 55.7 -0.3
PRNS S **Sb** 05 16 12.9 +0.4
comp=N,3µm,0.6s
ZKR Zakros 1.25 45 Pn **Pb** 05 15 58.2 +1.3
ZKR Zakros 1.25 45 P **Pb** 05 15 58.5 +1.5
ZKR S **Sb** 05 16 17.7 +5.0
comp=N,3µm,0.7s
ZKR Zakros 1.25 45 P **Pb** 05 15 58.5 +1.5
ZKR AML AML 05 16 25.5
comp=N,2928µm,0.7s
ZKR AML AML 05 16 28.1
comp=E,8139µm,0.7s
IMMV Iera Moni Meta 1.56 323 Pn **Pn** 05 15 58.7 -1.5
IMMV Iera Moni Meta 1.56 323 P **Pn** 05 16 00.5 +0.3
IMMV S **Sb** 05 16 20.9 -0.4
IMMV Iera Moni Meta 1.56 323 P **Pn** 05 16 00.8 +0.6
CHAN Chania 1.57 325 P **Pn** 05 16 00.1 -0.3
CHAN AML AML 05 16 40.1
comp=E,8372µm,0.7s
CHAN AML AML 05 16 41.0
comp=N,18491µm,0.8s
RODP Rodopos 1.75 320 Pn **Pn** 05 16 01.2 -1.7
RODP Rodopos 1.75 320 P **Pn** 05 16 04.0 +1.1
RODP S **Sn** 05 16 25.1 +0.7
KARP Karpathos 2.12 51 Pn **Pb** 05 16 10.8 -0.9
KARP Karpathos 2.12 51 **Pb** 05 16 12.1 +0.4
KARP Karpathos 2.12 51 P **Pb** 05 16 11.6 -0.1
KARP Karpathos 2.12 51 P **Pb** 05 16 11.2 -0.5
KARP Karpathos 2.12 51 P **Pb** 05 16 11.5 -0.3
SANT Santorini 2.15 7 ⇑P **Pb** 05 16 14.9 +2.6
SANT Santorini 2.15 7 Pn **Pn** 05 16 08.1 -0.4
SANT Santorini 2.15 7 **Pn** 05 16 09.0 +0.5
SANT Santorini 2.15 7 P **Pn** 05 16 08.9 +0.5
SANT AML AML 05 16 55.7
comp=E,3916µm,0.8s
SANT AML AML 05 16 55.8
comp=N,1063µm,0.8s
SNT5 Nea Kammeni, S 2.18 5 P **Pn** 05 16 09.1 +0.3
ANKY Antikythira Is 2.22 318 P **Pn** 05 16 09.9 +0.5
ANKY Antikythira Is 2.22 318 P **Pn** 05 16 09.8 +0.4
CMBO Columbo, Santo 2.25 5 P **Pn** 05 16 11.8 +2.1
MHLO Agia Marina, M 2.53 346 P **Pn** 05 16 14.7 +1.1
SLUM Salum 2.73 179 P **Pn** 05 16 18.5 +2.2
SLUM baz=179 S **Sn** 05 16 49.9 +1.3
baz=179
APE Apeiranthos 2.85 6 ⇑P **Pn** 05 16 18.3 +0.2
APE Apeiranthos 2.85 6 Pn **Pn** 05 16 17.6 -0.5
APE Apeiranthos 2.85 6 ⇑P **Pn** 05 16 18.3 +0.2
APE Apeiranthos 2.85 6 P **Pn** 05 16 18.2 +0.1
VLI Veliai 3.07 325 P **Pn** 05 16 20.8 -0.2
VLI S **Sn** 05 16 57.6 +0.7
comp=N,510nm,0.9s
YAZI Mula-Datşa- 3.09 37 P **Pn** 05 16 22.4 +1.0
YAZI S **Sn** 05 16 53.0 -4.5
ARG Arkhangelos 3.15 50 Pn **Pn** 05 16 23.9 +1.8
ARG Arkhangelos 3.15 50 Pn **Pn** 05 16 24.7 +2.6
ARG Arkhangelos 3.15 50 P **Pn** 05 16 25.1 +3.0
ARG S **Sb** 05 17 04.7 -2.5
ARG Arkhangelos 3.15 50 P **Pn** 05 16 24.7 +2.6
DAT Datca 3.19 38 Pn **Pn** 05 16 24.0 +1.2
DAT Datca 3.19 38 P **Pn** 05 16 24.5 +1.7
DAT S **Sn** 05 16 57.6 -2.6
BDRM Kayabasi 3.40 33 P **Pn** 05 16 26.0 +0.5
KRND KRANIDI 3.54 333 P **Pn** 05 16 27.3 -0.2
TURN Turunc 3.59 44 Pn **Pn** 05 16 29.6 +1.5
TURN Turunc 3.59 44 P **Pn** 05 16 29.9 +1.7
TURN S **Sn** 05 17 06.9 -2.9
MLSB Milas 3.74 34 Pn **Pn** 05 16 30.9 +0.7
VLY Voula,Athens 3.78 344 P **Pn** 05 16 31.3 +0.5
DALY Dalyan (Mula) 3.86 47 Pn **Pn** 05 16 33.3 +1.5
GCAM G?zelcami? 3.86 26 Pn **Pn** 05 16 32.3 +0.3
GCAM G?zelcami? 3.86 26 P **Pn** 05 16 32.0 +0.1
DION Dionisos Attik 3.96 346 P **Pn** 05 16 33.9 +0.6
MULA Mugla, Merkez- 3.98 40 P **Pn** 05 16 36.1 +2.5
MULA S **Sn** 05 17 14.1 -5.5
IZZE Mula-Seydike 4.00 55 P **Pn** 05 16 35.6 +1.7
IZZE S **Sn** 05 17 17.7 -2.3
FETY Fethiye 4.02 52 Pn **Pn** 05 16 35.8 +1.7
FETY Fethiye 4.02 52 P **Pn** 05 16 35.1 +1.0
FETY S **Sn** 05 17 17.1 -3.4
SABU Mula-Dalaman 4.06 49 P **Pn** 05 16 36.9 +2.2
KSL Kastellorizon 4.11 61 P **Pn** 05 16 38.3 +2.9
LOUT Loutraki 4.14 336 P **Pn** 05 16 36.6 +0.8
AKAS Kas 4.17 60 Pn **Pn** 05 16 38.0 +1.8
AKAS Kas 4.17 60 P **Pn** 05 16 37.9 +1.6
AKAS S **Sn** 05 17 19.6 -4.6
DB3 El Dabaa 4.29 137 P **Pn** 05 16 39.2 +1.5
baz=138
URLA Izmir 4.29 15 Pn **Pn** 05 16 37.2 -0.6
URLA Izmir 4.29 15 P **Pn** 05 16 39.2 +1.4
CAME Cameli-Denizli 4.34 50 Pn **Pn** 05 16 39.9 +1.3
DNZT Denizli-Tavas- 4.39 45 P **Pn** 05 16 40.3 +1.1
DNZT P **Pn** 05 16 41.0 +1.7
DNZT S **Sn** 05 17 28.8 -0.9
ESEN Aydn-Nazilli 4.41 35 P **Pn** 05 16 41.3 +1.9
TAVA DENIZLI_Tavas 4.45 42 P **Pn** 05 16 41.8 +1.7
TAVA S **Sn** 05 17 28.8 -2.5
KNIK Mula-Seydike 4.46 53 P **Pn** 05 16 42.7 +2.5
KNIK S **Sn** 05 17 28.9 -2.6
CAEL Denizli, Camel 4.46 48 P **Pn** 05 16 42.7 +2.3
IZMR zmir-demi 4.51 29 P **Pn** 05 16 42.7 +1.8
ELL Elmali 4.63 56 Pn **Pn** 05 16 44.0 +1.4
ELL Elmali 4.63 56 Pn **Pn** 05 16 45.0 +2.4
ELL Elmali 4.63 56 P **Pn** 05 16 45.0 +2.4
DNIZ Denizli-Tavas- 4.64 42 P **Pn** 05 16 44.7 +2.0
APMY Acipayam-Deniz 4.68 45 Pn **Pn** 05 16 44.2 +1.0
GOLH Golhisar 4.69 49 P **Pn** 05 16 46.0 +2.6
GOLH S **Sn** 05 17 34.4 -2.6
EFP Efpalio 4.94 329 P **Pn** 05 16 48.0 +1.3
EFP S **Sn** 05 17 44.7 +1.7
comp=N,190nm,1.2s
AXAR Agios Charalam 4.95 337 P **Pn** 05 16 48.5 +1.6
SWA2 4.98 177 P **Pn** 05 16 48.8 +1.5
SWA2 baz=177 S **Sn** 05 17 44.0 -0.1
baz=177
INCE Denizli-Bozkur 5.00 45 P **Pn** 05 16 49.8 +2.1
SIGR SIGRI 5.01 6 Pn **Pn** 05 16 46.4 -1.2
KORT Korkueli 5.07 55 Pn **Pn** 05 16 49.7 +1.1
ANX Ano Chora 5.07 330 P **Pn** 05 16 49.4 +0.8
ANX S **Sn** 05 17 47.9 +1.4
comp=N,172nm,0.7s
KULA Kula-Manisa 5.13 33 Pn **Pn** 05 16 49.7 +0.2
AGG Agios Georgios 5.29 336 Pn **Pn** 05 16 48.7 -2.9
AGG Agios Georgios 5.29 336 Pn **Pn** 05 16 52.2 +0.6
AGG Agios Georgios 5.29 336 P **Pn** 05 16 52.8 +1.2
AGG S **Sn** 05 17 54.2 +2.4
AGG Agios Georgios 5.29 336 P **Pn** 05 16 52.2 +0.6
VLS Valsamata 5.39 318 P **Pn** 05 16 54.2 +1.3
BASM Basmaki-Afyon 5.42 46 Pn **Pn** 05 16 54.2 +0.8
FSK Fiskardo 5.61 320 P **Pn** 05 16 57.7 +1.8
EZN Ezine 5.67 9 Pn **Pn** 05 16 55.2 -1.5
EVGI Lefkada island 5.68 322 P **Pn** 05 16 57.8 +0.9
NYDR Nydri-Lefkada 5.73 323 P **Pn** 05 16 58.6 +1.0
DRAG Dragano-Lefkad 5.77 322 P **Pn** 05 16 59.4 +1.2
LKD2 Lefkada island 5.81 323 P **Pn** 05 17 00.2 +1.5
TSLK Tsoukalades, L 5.84 323 P **Pn** 05 17 00.1 +1.1
THL Klokotos Trika 5.88 336 P **Pn** 05 17 01.1 +1.4
KPRO Kipourio 6.46 333 P **Pn** 05 17 08.7 +1.0
ERIK Erikli-Kesan 6.52 9 Pn **Pn** 05 17 06.9 -1.5
HMYD Mayadein 6.53 131 P **Pn** 05 17 10.4 +1.8
baz=131

ALN Alexandroupoli 6.70 6 Pn **Pn** 05 17 10.1 -0.7
ALN Alexandroupoli 6.70 6 P **Pn** 05 17 10.1 -0.7
CSS Mathiatis 6.79 82 **Pn** 05 17 12.7 +0.5
CSS Mathiatis 6.79 82 P **Pn** 05 17 14.5 +2.3
RDO Rodhopi 6.91 2 Pn **Pn** 05 17 15.2 +1.4
LSK Leskovik 6.93 330 P **Pn** 05 17 15.6 +1.4
KEK Kerkira 6.94 324 Pn **Pn** 05 17 10.6 -3.7
KEK Kerkira 6.94 324 Pn **Pn** 05 17 09.9 -4.3
NEST Nestorio 6.98 333 P **Pn** 05 17 16.4 +1.5
GRG Griva 7.06 343 Pn **Pn** 05 17 12.5 -3.4
KOT Kottamia 7.11 125 P **Pn** 05 17 17.8 +1.2
baz=125
FNA Florina 7.19 337 Pn **Pn** 05 17 18.3 +0.6
FNA Florina 7.19 337 P **Pn** 05 17 18.3 +0.6
KBN Korca 7.26 333 Pn **Pn** 05 17 18.2 -0.5
KBN Korca 7.26 333 P **Pn** 05 17 18.2 -0.5
NBNS Bani Suef 7.67 135 P **Pn** 05 17 26.2 +1.9
baz=135
NBNS S **Sn** 05 18 48.1 -2.4
baz=135
SCTE Santa Cesarea 7.90 320 Pn **Pn** 05 17 25.6 -1.7
ZAF Zafarana 8.01 126 P **Pn** 05 17 30.3 +1.5
baz=126
ZNM Zenema 8.17 124 P **Pn** 05 17 32.6 +1.5
baz=124
TAMRE El Minia 8.20 141 P **Pn** 05 17 33.0 +1.5
baz=141
CEL Celeste 8.48 301 **Pn** 05 17 34.0 -1.4
KZIT Kziot 8.49 110 P **Pn** 05 17 37.1 +1.7
KZIT Kziot 8.49 110 S **Sn** 05 19 05.6 -4.9
KZIT Kziot 8.49 110 P **Pn** 05 17 35.8 +0.4
SLTI Sal'it 8.53 101 P **Pn** 05 17 38.4 +2.4
SLTI Sal'it 8.53 101 S **Sn** 05 19 07.2 -4.3
SLTI Sal'it 8.53 101 P **Pn** 05 17 36.3 +0.3
MMC7 Mount Meron ar 8.64 95 P **Pn** 05 17 38.2 +0.6
MMA0 Mount Meron ar 8.65 95 P **Pn** 05 17 40.0 +2.3
MMA0B Mount Meron ar 8.65 95 P **Pn** 05 17 38.3 +0.6
MMA0B Mount Meron ar 8.65 95 S **Sn** 05 19 10.9 -3.6
MMAI Mount Meron Ar 8.65 95 Pn **Pn** 05 17 37.8 +0.1
comp=N,6.9nm,0.3s,baz=266,slow=13,SNR=12
MMAI Sn **Sn** 05 19 10.8 -3.7
comp=N,6.5nm,0.3s,baz=299,slow=18,SNR=3.3
comp=N,6.3nm,0.4s
AMAZ Amatzia 8.65 105 P **Pn** 05 17 40.1 +2.4
AMAZ Amatzia 8.65 105 S **Sn** 05 19 10.2 -4.4
AMAZ Amatzia 8.65 105 P **Pn** 05 17 37.8 +0.1
BR131 Keskin Array S 8.74 49 **Pn** 05 17 37.5 -1.5
BR131 Keskin Array S 8.74 49 *i* P **Pn** 05 17 38.4 -0.6
BRTR Keskin Array B 8.74 49 **Pn** 05 17 38.6 -0.4
BRTR Keskin Array B 8.74 49 Pn **Pn** 05 17 40.4 +1.4
comp=N,2.4nm,0.8s,baz=221,slow=14,SNR=10
BRTR LR LR 05 22 04.1
comp=N,291nm,19.6s,baz=208,slow=45
ASUT 8.77 139 P **Pn** 05 17 41.0 +1.7
baz=139
MMLI Mount Malkishu 8.79 99 S **Sn** 05 19 13.9 -4.1
MMLI Mount Malkishu 8.79 99 P **Pn** 05 17 39.6 0.0
GEM Giv'at Ha'Em 8.83 94 S **Sn** 05 19 15.1 -3.7
GEM Giv'at Ha'Em 8.83 94 P **Pn** 05 17 40.7 +0.6
PUK Puka 8.83 334 Pn **Pn** 05 17 38.1 -2.0
YTIR Yattir 8.87 106 P **Pn** 05 17 41.8 +1.0
YTIR Yattir 8.87 106 S **Sn** 05 19 15.3 -4.8
YTIR Yattir 8.87 106 P **Pn** 05 17 40.9 +0.1
NATI Neve Ativ 8.88 93 P **Pn** 05 17 42.7 +1.9
HMDT Nahal Hemdat 8.92 100 P **Pn** 05 17 44.0 +2.6
HMDT Nahal Hemdat 8.92 100 S **Sn** 05 19 17.1 -4.1
HMDT Nahal Hemdat 8.92 100 P **Pn** 05 17 41.7 +0.3
QRNJ Al-Qirein 8.94 99 P **Pn** 05 17 42.8 +1.2
UJAP Al Uja 8.96 102 P **Pn** 05 17 43.8 +2.0
KSHT Keshet 8.99 95 P **Pn** 05 17 43.1 +0.8
KSHT Keshet 8.99 95 S **Sn** 05 19 20.0 -2.9
SHMJ Saham 9.00 97 P **Pn** 05 17 44.2 +1.7
DSI Dead Sea 9.01 104 P **Pn** 05 17 45.0 +2.4
DSI Dead Sea 9.01 104 S **Sn** 05 19 19.1 -4.2
DSI Dead Sea 9.01 104 P **Pn** 05 17 42.8 +0.2
BALJ Balqa 9.06 101 Pn **Pn** 05 17 45.4 +2.1
MDBI Mazsada 9.08 106 P **Pn** 05 17 44.9 +1.3
MSBI Mazada 9.08 106 P **Pn** 05 17 45.1 +1.5
MSBI Mazada 9.08 106 P **Pn** 05 17 43.9 +0.3
MSBI Mazada 9.08 106 S **Sn** 05 19 20.4 -4.7
KRMI Paran Flat 9.10 114 P **Pn** 05 17 44.2 +0.3
KRMI Paran Flat 9.10 114 S **Sn** 05 19 20.4 -5.2
PRNI Paran 9.20 112 P **Pn** 05 17 47.5 +2.2
PRNI Paran 9.20 112 S **Sn** 05 19 23.4 -4.7
PRNI Paran 9.20 112 P **Pn** 05 17 45.9 +0.6
LISJ El Lisan 9.21 106 P **Pn** 05 17 47.6 +2.3
ZFRI Zfri 9.24 111 P **Pn** 05 17 47.8 +2.0
ZFRI Zfri 9.24 111 P **Pn** 05 17 45.8 0.0
GHAJ Ghor Haditha 9.25 106 **Pn** 05 17 47.0 +1.1
GHAJ Ghor Haditha 9.25 106 P **Pn** 05 17 48.3 +2.4
GHAJ Ghor Haditha 9.25 106 P **Pn** 05 17 46.1 +0.2
GHAJ Ghor Haditha 9.25 106 S **Sn** 05 19 24.2 -5.1
RAFF Raffo Rosso 9.26 292 Pn **Pn** 05 17 43.7 -2.3
MATE Matera 9.27 316 ⇑P **Pn** 05 17 47.6 +1.5
HRFI Mount Harif 9.37 114 P **Pn** 05 17 50.2 +2.6
HRFI Mount Harif 9.37 114 S **Sn** 05 19 27.8 -4.6
HRFI Mount Harif 9.37 114 P **Pn** 05 17 48.4 +0.8
KARJ KARJ 9.39 106 P **Pn** 05 17 48.0 -2.8
MBRI Mt Berech 9.40 115 P **Pn** 05 17 50.3 +2.2
MBRI Mt Berech 9.40 115 P **Pn** 05 17 48.4 +0.3
CUC Castrocucco 9.41 310 **Pn** 05 17 46.3 -1.7
EIL Elat 9.49 116 Pn **Pn** 05 17 50.2 +1.0
comp=N,5.9nm,0.3s,baz=254,slow=6.2,SNR=28
EIL Sn **Sn** 05 19 29.5 -5.8
comp=N,2.4nm,0.3s,baz=328,slow=13,SNR=2.7
comp=N,12nm,0.4s
EIL Elat 9.49 116 P **Pn** 05 17 51.2 +2.0
EIL Elat 9.49 116 S **Sn** 05 19 29.4 -5.8
EIL Elat 9.49 116 P **Pn** 05 17 49.2 0.0
AQBJ Aqaba 9.54 115 P **Pn** 05 17 52.1 +2.3
BNN Bunyan 9.77 59 **Pn** 05 17 54.9 +1.8
ASF Jabal al Asfar 10.06 98 Pn **Pn** 05 17 57.6 +0.5
comp=N,0.9nm,0.3s,baz=331,slow=4.8,SNR=6.8
ASF Sn **Sn** 05 19 46.4 -2.9
comp=N,1.4nm,0.3s,baz=142,slow=0.2,SNR=3.1
comp=N,2.6nm,0.4s
TIRR Tirgusor 10.53 13 Pn **Pn** 05 18 02.1 -1.2
TIRR Tirgusor 10.53 13 P **Pn** 05 18 02.1 -1.2
SGRT San Giovanni R 10.55 318 Pn **Pn** 05 18 03.0 -0.8
MLR Muntele Rosu 11.27 3 ⇓P **Pn** 05 18 20.8 +7.2
MLR Muntele Rosu 11.27 3 ⇓P **Pn** 05 18 20.8 +7.2
MLR Muntele Rosu 11.27 114 LR LR 05 23 41.2
comp=N,207nm,19.1s,baz=186,slow=44
GZR Gura Zlata 11.30 351 ⇑P **Pn** 05 18 23.0 +9.0
GZR Gura Zlata 11.30 351 ⇑P **Pn** 05 18 23.0 +9.0
VRI Vrincioaia 11.69 5 ⇑P **Pn** 05 18 25.9 +6.6
VRI Vrincioaia 11.69 5 ⇑P **Pn** 05 18 25.9 +6.7
NRCA Norcia 12.73 316 Pn **Pn** 05 18 33.0 -0.6
SIM Simferopol' 12.74 30 P **Pn** 05 18 34.9 +1.3
SIM pmax pmax
comp=Z,12nm,0.6s
BURAR Bucovina Array 13.37 0 ⇑P **P** 05 18 51.8 +0.1
BURAR Bucovina Array 13.37 0 ⇑P **P** 05 18 51.8 +0.1
SORM Soroca 14.10 9 ⇑P **Pn** 05 18 55.9 +3.8
SORM Soroca 14.10 9 ⇑P **Pn** 05 18 55.9 +3.8
SOKA Soboth 14.61 331 *i* Pn **P** 05 19 05.6 +0.2
comp=Z,1.3nm,0.5s
OBKA Obir 14.67 330 *e*Pn **P** 05 19 05.6 -0.4
comp=Z,20nm,1.6s
SOC Sochi 14.68 46 *e*P **Pn** 05 18 58.8 -1.3
SOC *e* 05 21 42.0
SOC MLR MLR
comp=Z,76nm,14.0s
KOLS Kolonicke sedl 14.85 353 *e*P **Pn** 05 19 04.0 +1.7
KOLS Kolonicke sedl 14.85 353 *e*PN **Pn** 05 19 04.0 +1.7
KOLS Kolonicke sedl 14.85 353 *e*P P 05 19 17.0 +9.1
ARSA Arzberg 14.89 334 *e*Pn **P** 05 19 09.3 +0.8
comp=Z,1.5nm,0.3s
RONA Rosalia, Austr 15.01 336 *e*Pn **P** 05 19 09.2 -0.6
comp=Z,0.9nm,0.3s
MYKA Terra Mystica 15.15 328 *i* Pn **P** 05 19 10.7 -0.7
comp=Z,14nm,1.3s
STAL STALIGIAL 15.29 326 Pn **Pn** 05 19 07.5 -0.7
STAL IAmb IAmb 05 19 33.9
comp=Z,22nm,1.2s
MODS Modra-Piesok 15.30 340 *e*P **P** 05 19 12.8 -0.2
MODS Modra-Piesok 15.30 340 *e*PN **P** 05 19 12.8 -0.2
CONA Conrad Observa 15.35 336 *i* Pn **P** 05 19 14.5 +0.8
comp=Z,0.4nm,0.3s
CIMO Cimolais 15.45 325 Pn **Pn** 05 19 07.4 -3.0
CIMO IAmb IAmb 05 19 20.9
comp=Z,3.3nm,0.7s

KBA Koelnbreinsper 15.62 329 *e*Pn **P** 05 19 17.3 +0.5
comp=Z,2.8nm,0.5s
CTI Castel Tesino 15.65 323 Pn **Pn** 05 19 10.0 -3.0
CTI IAmb IAmb 05 19 38.8
comp=Z,12nm,1.2s
CTI Castel Tesino 15.65 323 P **Pn** 05 19 10.0 -3.0
CTI pmax pmax
comp=Z,12nm,1.2s
ABTA Abfaltersbach 15.74 326 *e*Pn **P** 05 19 19.0 +1.0
comp=Z,2.3nm,0.4s
MOA Molln 15.87 332 *i* Pn **P** 05 19 20.1 +0.8
comp=Z,3.1nm,0.6s
LESA Schwarzleotal 16.18 328 *i* Pn **P** 05 19 22.8 0.0
comp=Z,2.9nm,0.4s
VRAC Vranov 16.34 340 LR LR 05 27 05.9
comp=Z,121nm,20.6s,baz=151,slow=43
WTTA Wattenberg 16.53 326 *e*Pn **P** 05 19 29.6 +2.9
ONI Oni 16.58 54 **Pn** 05 19 25.2 +0.3
ONI IAmb IAmb 05 19 31.6
comp=Z,17nm,1.2s
ONI Oni 16.58 54 P **Pn** 05 19 25.2 +0.3
ONI pmax pmax
comp=Z,17nm,1.2s
WATA Walderalm 16.61 326 *i* Pn **P** 05 19 27.5 -0.1
comp=Z,1.9nm,0.4s
CKRC Cesky Krumlov 16.66 334 *e*P **P** 05 19 29.3 +1.3
CKRC Cesky Krumlov 16.66 334 *e*P **P** 05 19 29.3 +1.3
GNI Garni 16.69 64 LR LR 05 27 28.3
comp=Z,244nm,18.9s,baz=274,slow=43
SQTA Sankt Quirin 16.70 325 *i* Pn **P** 05 19 31.4 +2.8
comp=Z,1.4nm,0.4s
KIV Kislovodsk 16.70 49 *e*P **Pn** 05 19 27.6 +1.1
KIV pmax pmax
comp=Z,26nm,1.1s
KIV MLR MLR
comp=Z,30nm,13.0s
KBZ Khabaz 16.72 50 *ce*P **Pn** 05 19 27.5 +0.9
KBZ pmax pmax
comp=Z,26nm,1.1s
KBZ Khabaz 16.72 50 Pn **P** 05 19 29.6 +0.8
comp=Z,0.3nm,0.3s,baz=251,slow=10.0,SNR=22
KBZ LR LR 05 27 42.8
comp=Z,76nm,20.0s,baz=252,slow=44
comp=Z,16nm,0.9s
AKASG Malin Array Be 16.73 9 Pn **Pn** 05 19 26.1 -0.6
AKASG Malin Array Be 16.73 9 Pn **Pn** 05 19 25.6 -1.1
comp=Z,1.7nm,0.3s,baz=201,slow=11,SNR=17
AKASG LR LR 05 25 59.8
comp=Z,76nm,18.5s,baz=186,slow=38
comp=Z,2.8nm,0.6s
AKBB Malin Array Si 16.73 9 Pn **Pn** 05 19 25.8 -0.9
AKBB IAmb IAmb 05 19 28.1
comp=Z,22nm,0.9s
AKBB Malin Array Si 16.73 9 *ce*P **Pn** 05 19 27.0 +0.3
AKBB pmax pmax
comp=Z,24nm,0.9s
FUORN Ofenpass-Fuorn 16.74 322 **Pn** 05 19 25.8 -1.3
FETA Feichten 16.79 324 *e*Pn **P** 05 19 31.2 +1.6
comp=Z,1.6nm,0.6s
MOTA Moosalm 16.84 325 *i* Pn **P** 05 19 31.6 +1.4
comp=Z,1.0nm,0.3s
GEC2 GERESS Array S 16.90 333 P **Pn** 05 19 28.9 -0.1
GERES GERESS Array B 16.90 333 Pn **P** 05 19 30.4 -0.4
comp=Z,0.6nm,0.3s,baz=148,slow=13,SNR=5.9
KRLC Kraliky 16.99 341 *e*P **P** 05 19 31.1 -0.6
KRLC Kraliky 16.99 341 *e*P **P** 05 19 31.1 -0.6
DAVOX Davos/Dischmat 17.05 322 Pn **Pn** 05 19 30.1 -0.8
comp=Z,0.1nm,0.3s,baz=330,slow=20,SNR=1.3
comp=Z,0.8nm,0.4s
RETA Reute 17.10 325 *i* Pn **P** 05 19 34.5 +1.5
comp=Z,0.9nm,0.3s
KHC Kasperske Hory 17.18 334 P **Pn** 05 19 32.4 0.0
KHC Kasperske Hory 17.18 334 *e*P **P** 05 19 35.4 +1.5
KHC Kasperske Hory 17.18 334 *ce*P **Pn** 05 19 31.9 -0.5
KHC pmax pmax
comp=Z,22nm,2.5s
ZVC Zvikov 17.22 335 *e*P **Pn** 05 19 33.4 +0.6
DAVA Damuels 17.39 323 *i* Pn **P** 05 19 36.0 -0.3
comp=Z,1.7nm,0.6s
SENIN Lac Senin/Sane 18.17 317 P **Pn** 05 19 43.7 -1.2
SENIN IAmb IAmb 05 20 09.0
comp=Z,28nm,0.9s
CLL Collm 19.21 336 *e*P **Pn** 05 19 59.0 +1.9
CLL Collm 19.21 336 *e*P **P** 05 19 54.0 -2.1
CLL *es*P **Pn** 05 19 59.0 +1.9
CLL *ex* x 05 20 05.0
CLL *e*PP **PnPn** 05 20 08.0 -2.1
comp=Z,8.0nm,0.9s
CLL *ex* x 05 20 23.0
VSR Storozhevoye 19.80 27 *e*P **P** 05 20 02.3 -0.3
VSR pmax pmax
comp=Z,5.0nm,0.5s
SUW Suwalki 19.83 357 P **P** 05 20 00.1 -2.7
SUW Suwalki 19.83 357 P **P** 05 20 00.1 -2.7
SUW pmax pmax
comp=Z,38nm,1.0s
VORR Voronezh 20.19 26 P **Pn** 05 20 13.8 +5.1
VORR pmax pmax
comp=Z,12nm,1.4s
NACGM Naroch 20.70 3 *e*P **P** 05 20 10.1 -2.3
comp=Z,9.0nm,0.9s,baz=184
RAYN Ar Rayn 20.74 116 **P** 05 20 12.9 -0.2
RAYN Ar Rayn 20.74 116 P **P** 05 20 12.9 -0.2
RAYN pmax pmax
comp=Z,5.0nm,1.0s
VRH Novokhopyorsk 20.80 30 *e*P **P** 05 20 12.6 -0.8
VRH pmax pmax
comp=Z,24nm,1.0s
WLF Walferdange 20.82 324 *d*P Pn 05 20 18.3 +2.1
LPSR Galich'ya Gora 20.85 24 *e*P P 05 20 06.4 -7.6
LPSR pmax pmax
comp=Z,10.0nm,0.8s
BTNL Ternell 21.45 325 *d*P **P** 05 20 20.5 +0.1
MEM Membach 21.52 325 *d*P **P** 05 20 22.9 +1.8
OBN Obninsk 22.35 17 *ce*P **P** 05 20 30.3 +0.3
OBN pmax pmax
comp=Z,12nm,0.4s
OBN Obninsk 22.35 17 LR LR 05 29 39.1
comp=Z,131nm,19.0s,baz=326,slow=38
BLEU Blekinge 22.99 347 *e*P **P** 05 20 32.5 -4.2
DEL Delary 23.55 344 *i* P **P** 05 20 38.0 -4.3
ESBB Sonseca Array 23.83 292 P **P** 05 20 44.3 -0.9
ESBB IAmb IAmb 05 20 56.8
comp=Z,9.6nm,1.1s
ESDC Sonseca Array 23.83 292 P **P** 05 20 44.0 -1.3
comp=Z,2.1nm,0.9s,baz=79,slow=7.9,SNR=14
comp=Z,2.1nm,0.9s
PAB San Pablo 24.11 291 P **P** 05 20 48.1 +0.1
PAB IAmb IAmb 05 21 12.8
comp=Z,6.0nm,1.0s
PAB San Pablo 24.11 291 P **P** 05 20 48.1 +0.1
PAB pmax pmax
comp=Z,6.0nm,1.0s
BELG Belogornoye 24.27 35 *i* P **P** 05 20 47.5 -1.7
BELG pmax pmax
comp=Z,5.0nm,1.0s
HFS Hagfors 26.98 347 P **P** 05 21 11.5 -2.1
comp=Z,7.0nm,0.4s,baz=125,slow=9.3,SNR=8.6
comp=Z,0.7nm,0.4s
FINES FINESS Array B 27.24 1 P **P** 05 21 14.0 -1.9
FINES FINESS Array B 27.24 1 *i* P **P** 05 21 14.0 -1.9
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 27.24 1 P **P** 05 21 13.8 -2.1
comp=Z,1.5nm,0.7s,baz=167,slow=9.4,SNR=7.0
comp=Z,1.5nm,0.7s
FIA1 FINESS Array S 27.24 1 P **P** 05 21 14.8 -1.1
NC602 NORSAR Array S 27.95 346 P **P** 05 21 21.3 -1.1
NAO01 NORSAR Array S 28.18 345 P **P** 05 21 23.5 -0.9
KLMR Klimovskoe 28.22 15 *e*P **P** 05 21 21.6 -3.1
KLMR pmax pmax
comp=Z,13nm,1.1s
NB201 NORSAR Array S 28.29 346 P **P** 05 21 23.7 -1.6
NB201 IAmb IAmb 05 21 38.1
comp=Z,5.0nm,0.9s
NOA NORSAR Array B 28.30 346 P **P** 05 21 23.2 -2.3
comp=Z,0.5nm,0.8s,baz=143,slow=9.4,SNR=6.0
comp=Z,0.5nm,0.8s
UOSS Minazif 28.46 101 P **P** 05 21 28.2 +1.0
UOSS IAmb IAmb 05 21 30.5
comp=Z,3.3nm,0.7s
EKA Eskdalemuir Ar 28.80 326 P **P** 05 21 29.1 -0.7
comp=Z,0.3nm,0.4s,baz=133,slow=7.8,SNR=2.2
comp=Z,0.3nm,0.4s
AKTO Aktyubinsk 28.90 46 P **P** 05 21 30.1 -0.9
comp=Z,2.5nm,0.7s,baz=248,slow=7.7,SNR=7.8

AKTO				LR	LR	05 38 19.3	
	comp=Z,78nm,19.7s,baz=19,slow=47						
	comp=Z,2.5nm,0.7s						
ABKAR	**Akbulak array**	**29.69**	**49**	P	**P**	**05 21 38.9**	**+1.0**
ABKAR	**Akbulak array**	**29.69**	**49**	P	**P**	**05 21 37.8**	**-0.1**
ABKAR				IAmb	IAmb	05 21 53.9	
	comp=Z,2.2nm,1.1s						
TOA0	**Torodi Ar. Sit**	**29.88**	**231**	P	**P**	**05 21 40.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**05 21 41.0**	**+1.1**
TORD				IAmb	IAmb	05 21 49.7	
	comp=Z,3.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.88**	**231**	P	**P**	**05 21 40.8**	**+0.9**
	comp=Z,3.0nm,0.4s,baz=36,slow=8.8,SNR=6.2						
TORD				LR	LR	05 34 50.6	
	comp=Z,111nm,18.4s,baz=354,slow=39						
	comp=Z,3.0nm,0.4s						
ARU	**Arti**	**31.82**	**35***c i*	P	**P**	**05 21 55.7**	**-0.9**
ARU				S	**S**	**05 27 05.6**	**+0.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARU	**Arti**	**31.82**	**35**	P	**P**	**05 21 55.1**	**-1.5**
	comp=Z,4.1nm,0.2s,baz=235,slow=11,SNR=7.3						
	comp=Z,4.1nm,0.2s						
SVE	**Sverdlovsk**	**33.01**	**36**	*e*P	**P**	**05 22 07.3**	**+0.2**
LVZ	**Lovozero**	**34.16**	**6**	P	**P**	**05 22 15.8**	**-1.2**
LVZ	**Lovozero**	**34.16**	**6**	P	**P**	**05 22 15.8**	**-1.2**
LVZ				pmax	pmax		
	comp=Z,26nm,1.1s						
ARCES	**ARCESS Array B**	**35.36**	**0**	P	**P**	**05 22 25.8**	**-1.5**
ARCES				IAmb	IAmb	05 22 37.4	
	comp=Z,4.1nm,1.1s						
ARCES	**ARCESS Array B**	**35.36**	**0**	P	**P**	**05 22 25.8**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	**ARCESS Array B**	**35.36**	**0**	P	**P**	**05 22 24.7**	**-2.6**
	comp=Z,4.8nm,0.9s,baz=178,slow=8.5,SNR=8.2						
ARCES				LR	LR	05 37 40.3	
	comp=Z,119nm,20.7s,baz=182,slow=38						
	comp=Z,4.8nm,0.9s						
KK31	**Karatay Array**	**36.15**	**62**	P	**P**	**05 22 34.8**	**+0.4**
KK31				IAmb	IAmb	05 22 37.0	
	comp=Z,3.8nm,0.8s						
KK31	**Karatay Array**	**36.15**	**62**	P	**P**	**05 22 34.8**	**+0.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	**Karatay Array**	**36.15**	**62**	P	**P**	**05 22 34.8**	**+0.4**
KKAR				IAmb	IAmb	05 22 37.0	
	comp=Z,3.8nm,0.8s						
KKAR	**Karatay Array**	**36.15**	**62**	P	**P**	**05 22 34.8**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**36.95**	**45**	P	**P**	**05 22 41.1**	**0.0**
BRVK				IAmb	IAmb	05 22 42.7	
	comp=Z,2.4nm,0.8s						
BRVK	**Borovoye**	**36.95**	**45***ce*	P	**P**	**05 22 40.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	**Borovoye Array**	**37.01**	**45**	P	**P**	**05 22 42.5**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=258,slow=7.4,SNR=9.4						
BVAR				LR	LR	05 42 27.9	
	comp=Z,59nm,19.2s,baz=263,slow=44						
	comp=Z,1.9nm,0.8s						
ARSB	**Arslanbob**	**38.08**	**65**	P	**P**	**05 22 51.4**	**+0.4**
ARSB	**Arslanbob**	**38.08**	**65**	P	**P**	**05 22 51.4**	**+0.4**
DBIC	**Dimbokro**	**38.98**	**232**	P	**P**	**05 23 00.5**	**+1.9**
	comp=Z,1.2nm,0.4s,baz=25,slow=7.4,SNR=4.3						
	comp=Z,1.2nm,0.4s						
AAK	**Ala-Archa**	**39.09**	**63**	P	**P**	**05 22 60.0**	**+0.5**
AAK	**Ala-Archa**	**39.09**	**63***ce*	P	**P**	**05 22 59.8**	**+0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**39.09**	**63**	P	**P**	**05 23 01.2**	**+1.7**
	comp=Z,2.4nm,0.7s,baz=230,slow=5.6,SNR=7.5						
AAK				LR	LR	05 43 01.3	
	comp=Z,47nm,18.3s,baz=309,slow=42						
	comp=Z,2.4nm,0.7s						
NRN	**Naryn**	**40.33**	**64**	P	**P**	**05 23 09.7**	**-0.3**
NRN				IAmb	IAmb	05 23 13.3	
	comp=Z,5.7nm,0.8s						
NRN	**Naryn**	**40.33**	**64**	P	**P**	**05 23 09.7**	**-0.3**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	**Kurchatov Arra**	**41.72**	**50**	P	**P**	**05 23 22.0**	**+1.1**
	comp=Z,5.3nm,0.7s,baz=278,slow=8.8,SNR=14						
	comp=Z,5.3nm,0.7s						
KURK	**Kurchatov**	**41.78**	**50**	P	**P**	**05 23 22.0**	**+0.5**
KURK				IAmb	IAmb	05 23 23.0	
	comp=Z,6.2nm,0.8s						
KURK	**Kurchatov**	**41.78**	**50***ce*	P	**P**	**05 23 21.9**	**+0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SPITS	**Spitsbergen Ar**	**44.22**	**357**	P	**P**	**05 23 39.7**	**-1.0**
	comp=Z,18nm,1.1s,baz=140,slow=11,SNR=10.0						
	comp=Z,18nm,1.1s						
MK31	**Makanchi Array**	**44.31**	**56**	P	**P**	**05 23 43.0**	**+1.1**
MK31				IAmb	IAmb	05 23 59.1	
	comp=Z,5.3nm,0.9s						
MK31	**Makanchi Array**	**44.31**	**56***ce*	P	**P**	**05 23 42.7**	**+0.8**
MKAR	**Makanchi Array**	**44.31**	**56**	P	**P**	**05 23 43.2**	**+1.3**
	comp=Z,4.5nm,0.7s,baz=274,slow=7.1,SNR=18						
MKAR				LR	LR	05 44 22.2	
	comp=Z,44nm,18.3s,baz=256,slow=39						
	comp=Z,4.5nm,0.7s						
KBS	**Kingsbay**	**45.15**	**356**	P	**P**	**05 23 48.5**	**+0.4**
KBS	**Kingsbay**	**45.15**	**356**	P	**P**	**05 23 48.6**	**+0.4**
KBS				pmax	pmax		
	comp=Z,14nm,0.9s						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	**P**	**05 23 52.2**	**-0.3**
	comp=Z,6.6nm,0.7s,baz=269,slow=8.5,SNR=4.3						
	comp=Z,6.6nm,0.7s						
NRIK	**Noril'sk**	**48.73**	**25***ce*	P	**P**	**05 24 14.3**	**-1.9**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TSUM	**Tsumeb**	**53.62**	**189**	LR	LR	05 51 20.1	
	comp=Z,114nm,18.9s,baz=334,slow=40						
GTA	**Gaotai**	**58.42**	**61**	*e*P	**P**	**05 25 29.4**	**+1.5**
GTA				pP	pwP	05 25 41.3	+3.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LBTB	**Lobatse**	**58.92**	**180**	LR	LR	05 50 42.4	
	comp=Z,57nm,18.2s,baz=321,slow=36						
SONM	**Songino Array**	**60.09**	**50**	P	**P**	**05 25 40.5**	**+1.1**
SONM				IAmb	IAmb	05 25 41.4	
	comp=Z,2.3nm,0.9s						
SONM	**Songino Array**	**60.09**	**50**	P	**P**	**05 25 40.5**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=284,slow=8.3,SNR=13						
	comp=Z,2.2nm,0.8s						
TIXI	**Tiksi**	**62.04**	**20**	LR	LR	05 55 00.3	
	comp=Z,42nm,18.2s,baz=28,slow=38						
SCHQ	**Schefferville**	**63.88**	**320**	P	**P**	**05 26 04.5**	**-0.1**
SCHQ	**Schefferville**	**63.88**	**320**	P	**P**	**05 26 04.3**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=67,slow=4.9,SNR=10						
	comp=Z,2.7nm,0.7s						
PZH	**PanZhiHua**	**65.13**	**74**	P	**P**	**05 26 15.3**	**+2.0**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC	**Hu-ho-hao-te**	**66.17**	**56**	*e*P	**P**	**05 26 20.6**	**+0.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,79nm,5.2s						
CMAR	**Chiang Mai Arr**	**66.70**	**83**	LR	LR	06 01 02.7	
	comp=Z,17nm,18.9s,baz=325,slow=41						
HEH	**HeiHe**	**71.56**	**41**	*e*P	**P**	**05 26 53.9**	**+0.9**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**77.51**	**45**	P	**P**	**05 27 28.0**	**+0.3**
USRK	**Ussuriysk Ar.**	**77.51**	**45**	P	**P**	**05 27 28.0**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=295,slow=6.8,SNR=5.8						
	comp=Z,3.5nm,0.6s						
YKA	**Yellowknife Ar**	**78.33**	**342**	P	**P**	**05 27 31.5**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=39,slow=5.7,SNR=3.9						
	comp=Z,0.2nm,0.7s						
KSRS	**Korea Array**	**78.86**	**52**	P	**P**	**05 27 35.7**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=310,slow=5.4,SNR=5.1						
	comp=Z,0.9nm,0.3s						
ILAR	**Eielson Array**	**81.13**	**357**	P	**P**	**05 27 47.5**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=11,slow=1.8,SNR=2.5						
	comp=Z,0.3nm,0.8s						
QSPA	**South Pole Qui**	**124.08**	**180**	PKhKP	PKPpre	05 34 27.0	
	comp=Z,1.5nm,0.9s,baz=282,slow=1.7,SNR=2.6						
QSPA				PKP	**PKPdf**	**05 34 29.6**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=325,slow=0.8,SNR=5.7						

IDC 22 05:17:25.4±2.5, 51.45N×91.90E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=31.8km s-min=20.9km az=31.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**4.98**	**303**	Pn	Pn	05 18 43.1	+1.8
	0.4nm,0.3s,baz=123,slow=13,SNR=3.7						
ZALV				Pg	Pb	05 18 55.8	+2.4
	1.0nm,0.3s,baz=114,slow=16,SNR=12						
ZALV				Lg	Lg	05 20 01.5	
	2.2nm,0.3s,baz=127,slow=27,SNR=19						
	0.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**4.98**	**303**	I	I	05 47 20.0	
	0.1nm,0.7s,baz=120,slow=336,SNR=9.4						
MKAR	**Makanchi Array**	**7.84**	**237**	Pn	Pn	05 19 21.4	+0.8
	0.1nm,0.3s,baz=56,slow=10,SNR=6.3						
MKAR				Lg	Lg	05 21 28.9	
	0.1nm,0.3s,baz=51,slow=30,SNR=2.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**8.47**	**270**	Pn	Pn	05 19 33.5	+4.2
	baz=80,slow=15,SNR=2.3						
KURBB				Lg	Lg	05 21 53.8	
	0.1nm,0.3s,baz=81,slow=33,SNR=9.1						
SONM	**Songino Array**	**10.07**	**105**	Pg	Pn	05 20 27.7	+36
	0.1nm,0.3s,baz=299,slow=18,SNR=6.2						
SONM				Lg	Lg	05 22 44.6	
	baz=296,slow=30,SNR=2.2						

UPA 22 05:18:03.4±1.1, 7.30N×79.87W, h0km±7km, MW3.4
RSNC 22 05:18:04.5±0.6, 7.21N×79.88W, h4km±9km, ML3.0
ISC 22 05:18:03.3±3.7, 7.21N±0.08×79.85W±0.04, h17km±27km, n13, σ1°47/20, 2C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZU	**Azuero**	**0.71**	**324**	*i* P	**Pb**	**05 18 16.7**	**-0.6**
	baz=160,slow=9.3						
AZU				*e*S	**Sb**	**05 18 26.2**	**-0.6**
AZU	**Azuero**	**0.71**	**324**	*i* P	**Pb**	**05 18 16.7**	**-0.6**
AZU				*e*S	**Sb**	**05 18 26.4**	**-0.4**
AZU				*i*		05 18 29.6	
	comp=Z,704nm,0.5s						
CALO3	**Calobre, Verag**	**1.48**	**318**	*e*P	**Pn**	**05 18 29.1**	**0.0**
CALO3				*e*S	**Sb**	**05 18 49.2**	**+0.4**
RSUS3	**Rio de Jesus,**	**1.51**	**301**	*e*P	**Pn**	**05 18 29.9**	**+0.3**
RSUS3				*e*S	**Sn**	**05 18 47.0**	**-1.9**
UPA	**Univ. de Panam**	**1.78**	**10**	*e*P	**Pn**	**05 18 34.6**	**+1.2**
UPA				*e*S	**Sb**	**05 18 57.7**	**0.0**
BCIP	**Isla Barro Col**	**1.94**	**0**	*e*P	**Pb**	**05 18 37.2**	**-1.0**
BCIP				*e*S	**Sb**	**05 19 02.3**	**+0.2**
BCIP				*i*		05 19 04.4	
	comp=Z,101nm,0.3s						
PTAC	**Punta Ardita,**	**2.02**	**92**	*e*S	**Sn**	**05 18 58.6**	**-3.1**
TOTI	**Torti**	**2.29**	**42**	*e*P	**Pn**	**05 18 41.5**	**+1.2**
TOTI				*e*S	**Sb**	**05 19 13.2**	**+1.0**
BCO2	**Palmira**	**3.05**	**300**	*e*P	**Pn**	**05 18 51.8**	**+0.9**
BCO2				*e*S	**Sn**	**05 19 30.0**	**+2.9**
DBBC	**Dabeiba**	**3.62**	**93**	*e*P	**Pn**	**05 19 00.3**	**+1.6**
CBOC	**Ciudad Bolivar**	**4.04**	**109**	*e*P	**Pn**	**05 19 04.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**4.88**	**114**	*e*P	**Pn**	**05 19 18.2**	**+1.9**
NORC	**Norcasia**	**5.21**	**108**	*e*P	Pn	05 19 28.1	+7.5

IDC 22 05:21:06.5±3.9, 53.66N×91.10E, h0km, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=38.6km s-min=26.8km az=24.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.73**	**277**	I	I	05 43 40.0	
	0.1nm,0.8s,baz=91,slow=336,SNR=11						
ZALV	**Zalesovo Beam**	**3.73**	**277**	Pn	Pn	05 22 06.4	+1.1
	0.5nm,0.3s,baz=96,slow=17,SNR=6.0						
ZALV				Lg	Lg	05 23 03.6	
	1.8nm,0.3s,baz=91,slow=26,SNR=9.6						
	1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**8.30**	**254**	Pn	Pn	05 23 07.5	-0.5
	0.1nm,0.3s,baz=64,slow=15,SNR=4.8						
KURBB				Sn	Sn	05 24 41.6	-0.8
	baz=66,slow=25,SNR=7.6						
KURBB				Lg	Lg	05 25 28.9	
	baz=84,slow=33,SNR=6.3						
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**8.88**	**223**	Pn	Pn	05 23 16.5	+0.5
	0.1nm,0.3s,baz=37,slow=14,SNR=2.3						
SONM	**Songino Array**	**11.30**	**115**	Lg	Lg	05 27 01.5	
	baz=126,slow=44						

IDC 22 05:26:47.0±2.9, 65.44N×112.14E, h0km, mb3.3/3, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=253.4km s-min=24.7km az=143.0, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**17.78**	**243**	P	P	05 30 57.2	+0.8
	0.2nm,0.3s,baz=40,slow=11,SNR=1.6						
	0.8nm,0.2s						
KURBB	**Kurchatov Arra**	**22.77**	**246**	P	P	05 31 49.8	-0.8
	0.9nm,0.5s,baz=37,slow=11,SNR=7.3						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**24.61**	**235**	P	P	05 32 08.8	+0.2
	0.3nm,0.5s,baz=40,slow=8.0,SNR=5.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**38.12**	**43**	P	P	05 34 07.0	-0.1
	0.2nm,0.7s,baz=308,slow=6.6,SNR=4.5						
	0.2nm,0.7s						

IDC 22 05:36:27.0±1.2, 58.66N×151.27W, h0km, mb3.5/3, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=29.7km s-min=10.3km az=127.0
AEIC 22 05:36:28.6±1.1, 58.64N±0.02×151.09W±0.08, h7km±5km, ML3.2, mb3.7/5(NEIC), ML3.4/124(NEIC), Error ellipse: s-maj=6.4km s-min=2.7km az=110.0
NEIC 22 05:36:29.4±1.2, 58.65N±0.02×151.15W±0.06, h10km±1km, Error ellipse: s-maj=5.2km s-min=3.6km az=296.0
ISC 22 05:36:29.2±0.7, 58.63N±0.04×151.13W±0.04, h18km, n313, σ1°03/308, mb3.8/5, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SYI	**Shuyak Island**	**0.66**	**269**	Pg	**Pb**	**05 36 41.0**	**-1.2**
SYI				IAML		05 36 52.7	
	comp=E,1μm,0.4s						
SYI				IAML		05 36 52.7	
	comp=N,2μm,0.4s						
SYI	**Shuyak Island**	**0.66**	**269**		**Sb**	**05 36 50.3**	**-0.7**
Q20K	**Shuyak Island**	**0.66**	**269**	P	**Pb**	**05 36 41.0**	**-1.3**
	baz=87						
Q20K				S	**Sb**	**05 36 50.3**	**-0.7**
	baz=87						
CNPM	**China Poot**	**0.90**	**356**	Pg	**Pb**	**05 36 45.3**	**-1.0**
CNPM	**China Poot**	**0.90**	**356**		**Sb**	**05 36 56.8**	**-1.2**
CNPM	**China Poot**	**0.90**	**356**	IAML		05 37 02.4	
	comp=N,1μm,0.6s						
CNPM				IAML		05 37 02.7	
	comp=E,2μm,0.8s						
HOM	**Homer**	**1.06**	**346**		**Pn**	**05 36 49.3**	**+0.1**
HOM	**Homer**	**1.06**	**346**		**Sn**	**05 37 03.2**	**-0.3**
HOM	**Homer**	**1.06**	**346**	IAML		05 37 07.8	
	comp=E,3μm,0.4s						
HOM				IAML		05 37 08.1	
	comp=N,3μm,0.7s						
HOM	**Homer**	**1.06**	**346**	P	**Pb**	**05 36 48.6**	**-0.5**
	baz=164						
HOM				S	**Sn**	**05 37 03.2**	**-0.3**
	baz=164						
BRSE	**Bradley Lake S**	**1.13**	**10**		**Pn**	**05 36 49.5**	**-0.7**
BRSE					**Sn**	**05 37 05.2**	**0.0**
BRSE	**Bradley Lake S**	**1.13**	**10**	P	**Pn**	**05 36 49.5**	**-0.7**
	baz=189						
BRSE				S	**Sn**	**05 37 05.2**	**0.0**
	baz=189						
BRLK	**Bradley Lake**	**1.14**	**6**		**Pn**	**05 36 49.7**	**-0.6**
BRLK	**Bradley Lake**	**1.14**	**6**		**Sb**	**05 37 05.1**	**+0.2**
BRLK	**Bradley Lake**	**1.14**	**6**	IAML		05 37 09.3	
	comp=E,645nm,0.5s						
BRLK				IAML		05 37 10.1	
	comp=N,528nm,0.8s						
KDAK	**Kodiak Island**	**1.15**	**223**	Pg	**Pn**	**05 36 50.1**	**-0.2**
KDAK				IAML		05 37 13.1	
	comp=N,600nm,0.6s						

KDAK	**Kodiak Island**	**1.15**	**223**		**Sn**	**05 37 06.2**	**+0.6**
KDAK	**Kodiak Island**	**1.15**	**223**	Pg	**Pn**	**05 36 49.8**	**-0.6**
	comp=N,54nm,0.3s,baz=62,slow=12,SNR=1978						
KDAK				LR	LR	05 36 53.7	
	comp=N,36nm,21.7s,baz=356,slow=24						
KDAK				Lg	Lg	05 37 04.2	
	comp=N,93nm,0.3s,baz=315,slow=20,SNR=15						
Q19K	**Cape Douglas,**	**1.35**	**284**	Pn	**Pn**	**05 36 53.3**	**+0.2**
Q19K	**Cape Douglas,**	**1.35**	**284**	P	**Pn**	**05 36 52.5**	**-0.6**
	baz=101						
AU22	**Augustine Moun**	**1.37**	**304**		**Pn**	**05 36 53.3**	**-0.2**
AUL	**Augustine Lava**	**1.41**	**303**		**Pn**	**05 36 53.7**	**-0.3**
P19K	**Oil Pt**	**1.49**	**314**		**Pb**	**05 36 55.9**	**-0.5**
P19K	**Oil Pt**	**1.49**	**314**	P	**Pn**	**05 36 55.0**	**-0.1**
	baz=132						
O20K	**Slope Mountain**	**1.65**	**333**		**Pn**	**05 36 58.0**	**+0.7**
O20K	**Slope Mountain**	**1.65**	**333**	P	**Pn**	**05 36 58.0**	**+0.7**
	baz=151						
IVE	**Iliamna Volcan**	**1.69**	**326**		**Pn**	**05 36 58.0**	**0.0**
ILSW	**Iliamna Southw**	**1.71**	**324**		**Pn**	**05 36 58.6**	**+0.4**
ILSW				IAML		05 37 26.0	
	comp=N,452nm,0.7s						
SEW	**Seward**	**1.71**	**29**		**Pn**	**05 36 58.2**	**+0.2**
SEW	**Seward**	**1.71**	**29**	P	**Pn**	**05 36 58.2**	**+0.2**
	baz=210						
KAHG	**Katmai Hook Gl**	**1.80**	**267**		**Pn**	**05 37 00.2**	**+0.9**
OHAK	**Old Harbor**	**1.82**	**220**		**Pn**	**05 37 00.5**	**+0.9**
OHAK	**Old Harbor**	**1.82**	**220**	P	**Pn**	**05 36 59.9**	**+0.3**
OHAK	**Old Harbor**	**1.82**	**220**	P	**Pn**	**05 37 00.3**	**+0.7**
	baz=38						
SLKM	**Skilak Lake**	**1.94**	**13**		**Pn**	**05 37 01.9**	**+0.7**
RED	**Redoubt Volcan**	**1.98**	**336**		**Pn**	**05 37 02.8**	**+0.9**
O22K	**Cooper Landing**	**1.99**	**20**		**Pn**	**05 37 02.6**	**+0.7**
O22K	**Cooper Landing**	**1.99**	**20**	P	**Pn**	**05 37 02.6**	**+0.7**
	baz=201						
RDSO	**Redoubt South**	**2.01**	**336**		**Pn**	**05 37 03.2**	**+0.9**
RSO	**Redoubt South**	**2.02**	**336**		**Pn**	**05 37 03.6**	**+1.1**
KAHC	**Katmai Hardscr**	**2.03**	**272**		**Pn**	**05 37 03.6**	**+1.0**
KAHC	**Katmai Hardscr**	**2.03**	**272**	P	**Pn**	**05 37 03.6**	**+1.0**
	baz=88						
RDT	**Redoubt**	**2.06**	**342**		**Pn**	**05 37 03.6**	**+0.7**
RDWB	**Redoubt West**	**2.06**	**336**		**Pn**	**05 37 03.9**	**+0.9**
DFR	**Drift River**	**2.12**	**339**		**Pn**	**05 37 04.6**	**+0.8**
CAPN	**Captain Cook N**	**2.14**	**360**		**Pb**	**05 37 06.5**	**-1.0**
CAPN	**Captain Cook N**	**2.14**	**360**	P	**Pb**	**05 37 06.1**	**-1.3**
	baz=179						
KCE	**Katmai Mt Cerb**	**2.17**	**261**		**Pb**	**05 37 07.7**	**-0.2**
ACHA	**Angle Creek He**	**2.25**	**261**		**Pb**	**05 37 09.6**	**+0.2**
P18K	**Big Mountain,**	**2.26**	**292**		**Pn**	**05 37 06.2**	**+0.5**
P18K	**Big Mountain,**	**2.26**	**292**	P	**Pn**	**05 37 06.4**	**+0.7**
	baz=108						
O19K	**Port Alsworth**	**2.26**	**315**		**Pn**	**05 37 07.2**	**+1.5**
O19K	**Port Alsworth**	**2.26**	**315**	P	**Pn**	**05 37 07.2**	**+1.5**
	baz=132						
ANCK	**Angle Creek**	**2.34**	**261**		**Pn**	**05 37 08.9**	**+2.1**
O18K	**Koktuh Hills**	**2.43**	**302**		**Pn**	**05 37 09.2**	**+1.2**
O18K				IAML		05 37 54.4	
	comp=N,186nm,0.7s						
O18K				IAML		05 37 56.5	
	comp=E,161nm,0.8s						
O18K	**Koktuh Hills**	**2.43**	**302**	P	**Pn**	**05 37 08.9**	**+0.9**
	baz=118						
CNTC	**Contact Creek**	**2.53**	**264**		**Pn**	**05 37 11.4**	**+2.0**
Q17K	**Contact Creek**	**2.53**	**264**	P	**Pn**	**05 37 11.4**	**+1.9**
	baz=79						
FIS	**Fire Island**	**2.56**	**10**		**Pn**	**05 37 11.3**	**+1.5**
RC01	**Rabbit Creek A**	**2.56**	**15**		**Pn**	**05 37 10.9**	**+1.1**
RC01				IAML		05 37 51.9	
	comp=E,133nm,0.5s						
RC01				IAML		05 37 57.3	
	comp=N,137nm,1.0s						
RC01	**Rabbit Creek A**	**2.56**	**15**	P	**Pn**	**05 37 10.7**	**+0.8**
	baz=196						
N20K	**Mount Spurr**	**2.63**	**349**	P	**Pn**	**05 37 11.8**	**+0.9**
	baz=167						
SPCR	**Spurr Chakacha**	**2.63**	**349**		**Pn**	**05 37 11.8**	**+0.9**
SPCN	**Chakachatna No**	**2.66**	**349**		**Pn**	**05 37 12.2**	**+1.1**
SPCP	**Crater Peak Br**	**2.69**	**349**		**Pn**	**05 37 12.7**	**+0.9**
SPCG	**Spurr Capps Gl**	**2.71**	**351**		**Pn**	**05 37 13.1**	**+1.2**
N19K	**Bonanza Creek**	**2.77**	**324**		**Pn**	**05 37 13.9**	**+1.1**
N19K	**Bonanza Creek**	**2.77**	**324**	IAML		05 37 56.0	
	comp=N,133nm,0.8s						
N19K				IAML		05 38 00.2	
	comp=E,164nm,0.8s						
N19K	**Bonanza Creek**	**2.77**	**324**	P	**Pn**	**05 37 13.9**	**+1.1**
	baz=140						
P17K	**Kvichak River**	**2.81**	**284**		**Pn**	**05 37 15.2**	**+2.0**
P17K	**Kvichak River**	**2.81**	**284**	P	**Pn**	**05 37 15.2**	**+2.0**
	baz=99						
SUA	**Susitna One**	**2.85**	**4**		**Pn**	**05 37 14.9**	**+1.1**
SUA				IAML		05 38 10.6	
	comp=N,129nm,1.0s						
SUA				IAML		05 38 12.3	
	comp=E,115nm,1.0s						
SUA	**Susitna One**	**2.85**	**4**	P	**Pn**	**05 37 14.7**	**+0.9**
	baz=184						
SPNN	**North Nagishla**	**2.86**	**345**		**Pn**	**05 37 15.7**	**+1.7**
STLK	**Strandline Lak**	**2.90**	**353**		**Pn**	**05 37 16.2**	**+1.7**
HIN	**Hinchinbrook I**	**2.95**	**51**	Pn	**Pn**	**05 37 15.9**	**+0.8**
HIN				IAML		05 38 19.4	
	comp=E,129nm,1.3s						
GLI	**Glacier Island**	**3.04**	**40**		**Pn**	**05 37 16.5**	**+0.2**
GLI				IAML	

N17K Nushagak Hills 3.62 304 Pn 05 37 25.3 +0.9
N17K Nushagak Hills 3.62 304 IAML 05 38 29.2
comp=N,71nm,0.8s
N17K Nushagak Hills 3.62 304 P Pn 05 37 25.3 +0.9
baz=119
M19K Big River Lodg 3.66 335 Pn 05 37 25.9 +0.9
M19K Big River Lodg 3.66 335 IAML 05 38 27.9
comp=E,56nm,1.1s
M19K Big River Lodg 3.66 335 P Pn 05 37 25.8 +0.9
baz=152
DIV Divide 3.68 45 Pn 05 37 26.0 +0.7
M18K Stony River 3.71 323 Pn 05 37 26.4 +0.9
M18K Stony River 3.71 323 P Pn 05 37 26.4 +0.9
baz=138
O16K Kokwok River B 3.72 288 Pn 05 37 26.9 +1.3
O16K Kokwok River B 3.72 288 IAML 05 38 28.2
comp=N,52nm,1.1s
O16K Kokwok River B 3.72 288 P Pn 05 37 27.0 +1.3
baz=102
SCM Sheep Creek Mo 3.73 29 Pn 05 37 27.1 +1.3
SCM IAML 05 38 35.0
comp=N,50nm,1.2s
SCM IAML 05 38 42.7
comp=E,62nm,0.9s
SCM Sheep Creek Mo 3.73 29 P Pn 05 37 27.0 +1.1
baz=212
RAGM Ragged Mountai 3.73 59 Pn 05 37 26.1 +0.3
RAGM IAML 05 38 53.4
comp=N,73nm,0.8s
GOAT Goat Mountain 3.79 56 Pn 05 37 27.6 +0.9
KLU Klutina 3.88 40 Pn 05 37 29.0 +1.1
KLU Klutina 3.88 40 P Pn 05 37 28.6 +0.7
baz=224
HMT Hamilton 3.90 61 Pn 05 37 28.9 +0.7
HMT IAML 05 38 18.7
comp=E,51nm,0.5s
HMT IAML 05 38 56.0
comp=N,38nm,0.8s
NICHA Nichawak Mount 3.99 63 Pn 05 37 30.1 +0.6
L19K White Mountain 4.01 334 Pn 05 37 30.6 +0.9
L19K White Mountain 4.01 334 IAML 05 38 36.4
comp=N,44nm,0.9s
L19K IAML 05 38 42.0
comp=E,61nm,0.9s
L19K White Mountain 4.01 334 P Pn 05 37 30.6 +0.9
baz=151
BMRM Bremner River 4.04 52 Pn Pn 05 37 30.5 +0.3
BMRM Bremner River 4.04 52 P Pn 05 37 30.5 +0.3
baz=237
L20K Farewell, AK 4.09 342 Pn 05 37 31.6 +0.8
L20K Farewell, AK 4.09 342 P Pn 05 37 31.6 +0.8
baz=159
BERG Berg Lake 4.17 62 Pn Pn 05 37 32.0 0.0
M17K Holitna River 4.21 314 Pn 05 37 33.8 +1.4
M17K Holitna River 4.21 314 P Pn 05 37 33.8 +1.4
baz=128
M24K Tolsona, Glenn 4.26 33 Pn 05 37 35.0 +1.7
M24K Tolsona, Glenn 4.26 33 P Pn 05 37 34.8 +1.5
baz=217
WAT6 Susitna Watana 4.30 21 Pn 05 37 34.6 +0.9
WAT6 Susitna Watana 4.30 21 P Pn 05 37 34.7 +0.9
baz=204
N16K Nishlik Lake 4.31 299 Pn 05 37 35.3 +1.5
N16K Nishlik Lake 4.31 299 P Pn 05 37 35.3 +1.5
baz=112
PPLA Purkeypile 4.31 354 Pn Pn 05 37 35.6 +1.7
PPLA Purkeypile 4.31 354 P Pn 05 37 35.1 +1.2
baz=172
GRIN Grindle Hills 4.31 64 Pn 05 37 34.0 +0.1
WAT7 Susitna Watana 4.36 14 Pn 05 37 35.8 +1.2
WAT1 Susitna Watana 4.40 16 Pn 05 37 36.1 +1.0
WAT1 Susitna Watana 4.40 16 P Pn 05 37 36.1 +1.0
baz=198
KHIT Khitrov Hills 4.40 62 Pn 05 37 35.8 +0.7
N25K Chitina, Valde 4.42 45 Pn 05 37 36.2 +0.8
N25K Chitina, Valde 4.42 45 P Pn 05 37 36.2 +0.8
baz=230
SNH Sunshine Point 4.51 66 Pn Pn 05 37 37.7 +1.1
SNH IAML 05 39 34.1
comp=N,26nm,1.9s
L18K Granite Mounta 4.53 325 Pn 05 37 37.5 +0.7
L18K IAML 05 39 01.1
comp=N,34nm,1.3s
L18K IAML 05 39 03.5
comp=E,45nm,1.4s
L18K Granite Mounta 4.53 325 P Pn 05 37 37.7 +0.9
baz=140
WAX Waxell Ridge 4.59 63 Pn 05 37 37.9 +0.2
WAX IAML 05 39 23.8
comp=N,34nm,1.2s
CRQE Cirque 4.59 59 P Pn 05 37 38.5 +0.7
baz=246
M16K Timber Creek 4.62 305 Pn 05 37 39.7 +1.6
M16K IAML 05 39 02.0
comp=E,39nm,1.1s
M16K Timber Creek 4.62 305 P Pn 05 37 39.0 +0.9
baz=118
GLB Gilahina Butte 4.62 49 Pn 05 37 38.7 +0.5
VRDI Verde Repeater 4.66 53 Pn 05 37 39.4 +0.7
TGL Tana Glacier 4.71 60 Pn 05 37 39.6 +0.2
BARK Barkley Ridge 4.74 64 Pn 05 37 40.9 +1.1
WACK Wrangell Chich 4.77 42 Pn 05 37 41.3 +1.0
HARP HAARP 4.79 35 Pn 05 37 41.8 +1.3
HARP HAARP 4.79 35 P Pn 05 37 41.8 +1.3
baz=220
DHY Denali Highway 4.82 21 Pn Pn 05 37 42.3 +1.4
DHY IAML 05 39 05.7
comp=N,27nm,1.1s
DHY IAML 05 39 06.0
comp=E,31nm,1.2s
DHY Denali Highway 4.82 21 P Pn 05 37 42.2 +1.2
baz=204
CAST Castle Rocks 4.83 355 Pn 05 37 41.5 +0.6
CAST IAML 05 39 04.7
comp=E,28nm,1.7s
CAST Castle Rocks 4.83 355 P Pn 05 37 42.1 +1.2
baz=174
N15K Kwethluk River 4.83 292 P Pn 05 37 42.5 +1.4
baz=104
TRF Thorofare Moun 4.85 4 Pn Pn 05 37 43.2 +1.8
TRF IAML 05 38 56.7
comp=E,37nm,0.6s
TRF Thorofare Moun 4.85 4 P Pn 05 37 42.8 +1.4
baz=185
ISLE Juniper Island 4.88 62 Pn 05 37 41.6 -0.1
ISLE IAML 05 38 56.4
comp=N,21nm,1.3s
WAZA Wrangell Mount 4.89 42 Pn 05 37 42.8 +0.8
MCARA McCarthy VSAT 4.91 52 Pn 05 37 42.5 +0.5
MCARA IAML 05 38 54.0
comp=E,22nm,0.6s
MCARA IAML 05 39 23.5
comp=N,20nm,1.6s
MCARA McCarthy VSAT 4.91 52 P Pn 05 37 42.7 +0.6
baz=239
RND Reindeer 4.92 12 Pn 05 37 43.5 +1.3
RND IAML 05 39 04.5
comp=N,21nm,1.0s
RND IAML 05 39 24.1
comp=E,19nm,0.8s
TTA Tatalina 4.93 333 Pn 05 37 42.6 +0.2
TTA IAML 05 39 05.2
comp=N,24nm,1.9s
TTA IAML 05 39 15.6
comp=E,17nm,2.0s
TTA Tatalina 4.93 333 P Pn 05 37 43.8 +1.4
TTA Tatalina 4.93 333 P Pn 05 37 43.3 +0.9
baz=148
MESA MESA 4.94 68 P Pn 05 37 43.6 +1.0
baz=256
KTH Kantishna Hill 4.94 1 Pn Pn 05 37 43.8 +1.2
K20K Telida 4.95 344 Pn 05 37 43.3 +0.7
K20K IAML 05 39 10.4
comp=N,21nm,1.9s
K20K IAML 05 39 32.9
comp=E,24nm,1.9s
K20K Telida 4.95 344 P Pn 05 37 43.5 +0.8
baz=162
BAGL Bagley Icefiel 4.96 64 Pn 05 37 43.8 +1.1
KIAG Kiagna River 4.99 59 Pn 05 37 44.0 +0.7
PTPK Patty Peak 5.06 56 Pn 05 37 44.9 +0.7
PAX Paxson 5.16 30 Pn 05 37 46.9 +1.4
PAX Paxson 5.16 30 P Pn 05 37 46.5 +1.0
baz=215
L16K Owhat River 5.19 310 Pn 05 37 47.3 +1.5
L16K Owhat River 5.19 310 P Pn 05 37 46.7 +0.9
baz=123
GRNC Granite Creek 5.20 62 Pn 05 37 47.1 +0.9
GRNC IAML 05 39 03.3
comp=N,20nm,0.7s
MCK McKinley 5.23 11 Pn 05 37 48.0 +1.6
MCK McKinley 5.23 11 P Pn 05 37 48.2 +1.8
baz=192
O14K Tigyukauivet M 5.29 281 Pn 05 37 50.0 +2.9
O14K IAML 05 39 28.1
comp=E,20nm,1.7s
O14K Tigyukauivet M 5.29 281 P Pn 05 37 50.1 +2.9
baz=92
CHUM Lake Minchumin 5.30 354 Pn 05 37 48.5 +1.2
CHUM Lake Minchumin 5.30 354 P Pn 05 37 48.5 +1.2
baz=173
BARN Barnard Glacie 5.36 59 Pn 05 37 49.2 +0.8
TABL Table Mountain 5.39 66 Pn 05 37 50.1 +1.2
TABL IAML 05 38 54.5
comp=N,16nm,0.8s
TABL IAML 05 39 04.8
comp=E,21nm,1.2s
K17K Iditarod 5.41 322 Pn 05 37 49.8 +1.0
K17K Iditarod 5.41 322 P Pn 05 37 50.0 +1.2
baz=136
CTG Chitna Glacier 5.47 61 P Pn 05 37 50.6 +0.8
baz=249
CTGM Chitina Glacie 5.47 61 Pn 05 37 50.7 +0.8
BPAW Bear Paw Mtn. 5.49 1 Pn Pn 05 37 50.9 +0.9
BPAW Bear Paw Mtn. 5.49 1 P Pn 05 37 50.6 +0.6
baz=180
SAMH Samovar Hills 5.50 70 Pn 05 37 51.2 +1.0
J18K Innoko River 5.56 333 Pn 05 37 51.1 +0.2
J18K Innoko River 5.56 333 P Pn 05 37 52.0 +1.1
baz=148
LOGN Logan Glacier 5.57 62 Pn 05 37 52.0 +0.7
PCA Pinnacle 5.75 71 Pn 05 37 54.5 +0.8
J20K Nowinta River 5.75 347 Pn 05 37 54.1 +0.6
J20K Nowinta River 5.75 347 P Pn 05 37 54.2 +0.6
baz=164
PINM Pinnacle 5.75 71 P Pn 05 37 54.6 +1.0
baz=260
J19K Poorman 5.80 340 Pn 05 37 55.3 +1.0
J19K Poorman 5.80 340 P Pn 05 37 55.0 +0.8
baz=156
M27K Edge Creek, AK 5.90 47 Pn 05 37 56.8 +1.0
M27K Edge Creek, AK 5.90 47 P Pn 05 37 56.7 +0.9
baz=235
RIDG Independent Ri 5.96 28 Pn 05 37 56.8 +0.3
RIDG Independent Ri 5.96 28 P Pn 05 37 57.7 +1.3
baz=213
YUK2 White River 6.02 54 Pn 05 37 58.9 +1.5
BCPM Bancas Point 6.04 72 Pn 05 37 58.0 +0.5
WRH Wood River Hil 6.04 13 Pn Pn 05 37 58.4 +0.9
NEA2 Nenana 6.06 8 Pn 05 37 58.3 +0.4
NEA2 Nenana 6.06 8 P Pn 05 37 58.2 +0.4
baz=190
SDPT Sand Point 6.08 241 P Pn 05 37 57.3 -0.7
PNL Peninsula 6.12 75 Pn 05 37 59.5 +0.7
PNL Peninsula 6.12 75 P Pn 05 37 59.4 +0.7
PNL Peninsula 6.12 75 P Pn 05 37 59.5 +0.7
baz=265
HDA Harding Lake 6.13 17 Pn 05 37 59.5 +0.7
J17K VABM Dome 6.14 324 Pn 05 37 59.8 +0.8
J17K VABM Dome 6.14 324 P Pn 05 37 59.8 +0.8
baz=137
CCB Clear Creek Bu 6.24 13 Pn 05 38 00.8 +0.6
L27K Beaver Creek, 6.35 42 Pn 05 38 03.3 +1.4
SCRK Sand Creek 6.37 30 Pn Pn 05 38 02.4 +0.3
SCRK Sand Creek 6.37 30 P Pn 05 38 02.7 +0.6
baz=216
BCAR Beaver Creek A 6.37 42 Pn Pn 05 38 03.6 +1.6
MLY Manley 6.43 1 Pn Pn 05 38 04.2 +1.3
MLY Manley 6.43 1 P Pn 05 38 03.7 +0.9
baz=182
COLA College 6.45 13 Pn 05 38 03.5 +0.4
COLA College 6.45 13 P Pn 05 38 04.0 +0.8
M13K Dall Lake 6.47 291 Pn Pn 05 38 04.8 +1.3
IL31 6.48 16 Pn 05 38 04.6 +1.1
ILAR Eielson Array 6.48 16 Pn Pn 05 38 03.8 +0.2
ILAR Eielson Array 6.48 16 Pn Pn 05 38 04.2 +0.6
comp=E,2.4nm,0.3s,baz=207,slow=13,SNR=158
ILAR Sn Sn 05 39 17.9 +0.9
comp=E,0.5nm,0.3s,baz=202,slow=23,SNR=5.0
MDM Murphy Dome 6.50 11 Pn 05 38 04.4 +0.6
J16K Anvik River 6.56 319 Pn 05 38 05.7 +1.0
J16K Anvik River 6.56 319 P Pn 05 38 05.2 +0.6
baz=131
I23K Minto, Yukon-K 6.59 7 Pn 05 38 05.6 +0.5
I23K Minto, Yukon-K 6.59 7 P Pn 05 38 05.5 +0.5
baz=188
J25K Salcha River, 6.60 22 Pn 05 38 06.0 +0.8
J25K Salcha River, 6.60 22 P Pn 05 38 05.5 +0.3
baz=207
O29M Mount Kennedy 6.61 70 Pn 05 38 07.1 +1.6
O29M Mount Kennedy 6.61 70 P Pn 05 38 06.9 +1.4
baz=261
POKR Poker Plat Res 6.74 13 Pn 05 38 08.7 +1.6
POKR Poker Plat Res 6.74 13 P Pn 05 38 08.3 +1.2
baz=196
J26L Joseph Creek 6.90 28 Pn 05 38 10.3 +0.9
J26L Joseph Creek 6.90 28 P Pn 05 38 10.2 +0.8
baz=215
P29M Windy Craggy 6.96 76 Pn 05 38 10.4 +0.2
P29M Windy Craggy 6.96 76 P Pn 05 38 10.7 +0.5
baz=268
H21K Melozitna Rive 7.09 354 Pn 05 38 12.4 +0.4
H21K Melozitna Rive 7.09 354 P Pn 05 38 12.7 +0.7
baz=173
H22K Ishtalitna Cre 7.29 359 Pn 05 38 15.4 +0.7
H22K Ishtalitna Cre 7.29 359 P Pn 05 38 15.4 +0.7
baz=179
M29M Somme Creek 7.32 53 Pn 05 38 16.2 +1.1
M29M Somme Creek 7.32 53 P Pn 05 38 16.1 +1.0
baz=244
H19K Roundabout Mou 7.36 342 Pn 05 38 16.8 +1.2
H19K Roundabout Mou 7.36 342 P Pn 05 38 16.4 +0.9
baz=158
H18K Honhosa River 7.38 336 Pn 05 38 17.0 +1.1
H18K Honhosa River 7.38 336 P Pn 05 38 17.0 +1.1
baz=149
H24K Noodor Dome 7.39 10 Pn 05 38 17.6 +1.5
H24K Noodor Dome 7.39 10 P Pn 05 38 17.3 +1.3
baz=193
PRP Porcupine Dome 7.39 18 Pn 05 38 15.8 -0.3
PRP Porcupine Dome 7.39 18 P Pn 05 38 17.5 +1.3
baz=203
IMAR Indian Mountai 7.48 352 Pn Pn 05 38 17.7 +0.5
H17K Granite Mounta 7.57 330 Pn 05 38 19.9 +1.4
H17K Granite Mounta 7.57 330 P Pn 05 38 19.6 +1.1
baz=142
I26K Coal Creek Min 7.67 26 Pn 05 38 20.5 +0.6
I26K Coal Creek Min 7.67 26 P Pn 05 38 20.9 +1.0
baz=213
L29M L29M 7.76 49 Pn 05 38 21.8 +0.6
L29M L29M 7.76 49 P Pn 05 38 22.1 +0.9
baz=240
DAWY Dawson 7.83 41 Pn Pn 05 38 23.2 +1.0
O30N Mendenhall 7.90 68 Pn Pn 05 38 24.6 +1.6
G21K Allakaket 7.99 353 Pn Pn 05 38 25.2 +1.0
G19K Purcell Mounta 8.03 342 Pn Pn 05 38 26.0 +1.2
M30M Minto, Yukon 8.08 55 Pn Pn 05 38 25.6 +0.1
G23K Bananza Creek 8.13 3 Pn Pn 05 38 26.5 +0.4
SKAG Skagway 8.19 77 Pn Pn 05 38 28.5 +1.5
SKAG Skagway 8.19 77 P Pn 05 38 28.2 +1.2
FYU Fort Yukon 8.41 16 Pn Pn 05 38 30.9 +0.9
WHY Whitehorse 8.47 69 Pn Pn 05 38 32.1 +1.1
COLD Coldfoot 8.64 2 Pn 05 38 34.5 +1.4
COLD Coldfoot 8.64 2 P Pn 05 38 34.5 +1.4
baz=183
P32M Atlin 9.01 76 Pn Pn 05 38 38.8 +0.5
F24K Squaw Lake 9.04 8 Pn 05 38 39.0 +0.4
BMAR Burnt Mountain 9.31 16 Pn Pn 05 38 42.7 +0.3
E25K Arctic Village 9.84 12 Pn 05 38 49.7 +0.1
U33K Whale Pass 10.04 97 Pn Pn 05 38 52.1 -0.2
DLBC Dease Lake 11.02 82 Pn Pn 05 39 07.7 +1.9
comp=E,0.2nm,0.3s,baz=230,slow=13,SNR=3.6
comp=E,0.9nm,0.5s
B21K Ikpikpuk River 11.14 354 Pn Pn 05 39 06.2 -1.1
C23K Itkillik River 11.25 1 Pn Pn 05 39 10.6 +1.7
G31M Satah River 11.30 36 Pn Pn 05 39 10.7 +1.2
F31M Tsiigehtchic 11.79 34 Pn Pn 05 39 16.8 +0.5
INK Inuvik 12.43 31 Pn Pn 05 39 26.4 +1.5
comp=E,0.1nm,0.3s,baz=263,slow=7.4,SNR=3.9
comp=E,0.4nm,0.6s
C36M Paulatuk 15.82 36 Pn Pn 05 40 10.2 -0.5
C36M IAmb IAmb 05 40 15.8
comp=E,2.3nm,0.6s
ADK Adak 15.99 256 P Pn 05 40 10.3 -2.6
A36M Sachs Harbour 16.98 28 Pn 05 40 25.5 +0.1
YKA Yellowknife Ar 18.19 62 P Pn 05 40 39.6 -0.8
YKA Yellowknife Ar 18.19 62 P P 05 40 41.7 +1.1
comp=Z,0.1nm,0.3s,baz=274,slow=11,SNR=7.2
comp=Z,0.4nm,0.7s
LON Longmire 21.18 111 P P 05 41 10.8 -2.6
LON IAmb IAmb 05 41 32.2
comp=Z,4.3nm,1.1s
EDM Edmonton 21.63 88 P P 05 41 18.4 +0.3
EDM IAmb IAmb 05 41 23.8
comp=Z,3.5nm,0.6s
FCC Fort Churchill 28.87 65 P P 05 42 27.8 +1.5
SONM Songino Array 56.38 308 P P 05 46 10.0 +0.9
comp=Z,0.2nm,0.5s,baz=18,slow=6.1,SNR=2.7
comp=Z,0.2nm,0.5s
BVAR Borovoye Array 63.73 333 P P 05 46 59.3 +0.1
comp=Z,0.5nm,0.5s,baz=13,slow=8.4,SNR=3.6
comp=Z,0.5nm,0.5s
MKAR Makanchi Array 66.11 323 P P 05 47 14.5 -0.3
comp=Z,0.2nm,0.5s,baz=47,slow=5.9,SNR=4.2
comp=Z,0.2nm,0.5s

WEL 22 05:43:41.7±1.1,33°S±14°×17°8W±3°7,**h264**km±15km,
M4.4/6,mB4.8/2,ML4.9/6,MLv4.4/6,Mw(mB)4.1/2,Error ellipse: s-maj=0.1km s-min=0.0km az=110.7,confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.33	6	P	Pn	05 44 35.4	-3.2
GLKZ				S	S	05 45 26.0	+2.1
MXZ	Matakaoa Point	5.68	208	S	S	05 46 15.9	+2.3
WMGZ	Waiomatatini S	5.86	206	S	S	05 46 21.1	+3.4
PKGZ	Pakihiroa	6.05	208	P	Pn	05 45 10.6	0.0
PKGZ				S	S	05 46 23.2	+1.1
HAZ	Te Kaha	6.06	211	P	Pn	05 45 09.2	-1.5
HAZ				S	S	05 46 22.5	+0.3
PUZ	Puketiti	6.14	206	P	Pn	05 45 14.0	+2.2
PUZ				S	S	05 46 26.2	+2.1
RUGZ	Raukumara Rang	6.28	210	P	Pn	05 45 10.6	-2.9
RUGZ				S	S	05 46 26.3	-1.0
TWGZ	Tauwhareparae	6.34	207	P	Pn	05 45 12.6	-1.7
TWGZ				S	S	05 46 31.9	+3.3
CNGZ	Carnagh Statio	6.53	205	P	Pn	05 45 15.9	-0.6
TKGZ	Te Karaka	6.62	207	S	S	05 46 35.6	+0.9
MWZ	Matawai	6.66	209	S	S	05 46 34.0	-1.7
URZ	Urewera	6.77	212	P	Pn	05 45 15.4	-4.1
URZ				S	S	05 46 35.0	-3.3
RIGZ	Rimuhau	6.88	206	S	S	05 46 40.9	0.0
PRGZ	Paritu Road	7.03	205	S	S	05 46 43.1	-1.1
SNGZ	Shannon Statio	7.11	208	P	Pn	05 45 22.6	-1.2
SNGZ				S	S	05 46 46.0	-0.1
KWHZ	Kaweka Forest	8.04	210	P	Pn	05 45 32.2	-3.3
KWHZ				S	S	05 47 03.1	-4.2
FWVZ	Far West T-bar	8.30	215	P	Pn	05 45 44.2	+5.3
MAVZ	Matarangi	8.30	215	P	Pn	05 45 43.6	+4.5
TRVZ	Turoa	8.33	215	P	Pn	05 45 44.4	+5.1

IDC 22 05:44:60.0±27.0, 18°38S×178°02W, h650km±357km, mb2.9/6, mbtmp3.9/6, Error ellipse: s-maj=108.7km s-min=27.7km az=92.0

ISC 22 05:44:52.5±1.0,**18°3S**±0°3×**177°9W**±0°2,**h557**km,**n6,**
σ0.86/6,mb3.6/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.07	260	P	P	05 52 19.9	+0.3
	0.7nm,0.4s,baz=97,slow=7.6,SNR=17						
	0.7nm,0.4s						
ASAR	Alice Springs	45.18	255	P	P	05 52 20.8	+0.4
	1.2nm,0.5s,baz=91,slow=8.2,SNR=12						
	1.2nm,0.5s						
QSPA	South Pole Qui	71.74	180	P	P	05 55 18.1	-0.4
	1.9nm,0.7s,baz=11,slow=5.2,SNR=14						
	1.9nm,0.7s						
NVAR	Mina Array Bea	79.36	44	P	P	05 56 01.5	+0.2
	0.3nm,0.7s,baz=221,slow=6.8,SNR=2.4						
	0.3nm,0.7s						
TXAR	Lajitas Array	85.78	57	P	P	05 56 34.5	+0.9
	1.0nm,0.7s,baz=206,slow=6.0,SNR=5.8						
	1.0nm,0.7s						
ILAR	Eielson Array	86.17	13	P	P	05 56 33.6	-1.0
	0.2nm,0.6s,baz=208,slow=7.1,SNR=2.4						
	0.2nm,0.6s						

SSNC 22 05:47:03.9±1.3, 18°41N×74°20W, h5km, MD2.7, ML2.3, MW2.4
OSPL 22 05:47:04.4±1.9, 18°56N×74°16W, h0km±27km, ML2.4

ISC 22 05:47:01.9±3.5,**18°5N**±0°1×**74°19W**±0°07,**h8**km±24km,**n11,**
σ0.82/21,1C,Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTBY	Guantanamo Bay	1.64	328	eP	Pb	05 47 32.1	-0.3
GTBY				eS	Sb	05 47 53.1	0.0
GTBY				IAML		05 47 53.9	
	27nm,0.3s						
GTBY				IAML		05 47 55.2	
	comp=Z,32nm,0.2s						
GTBY	Guantanamo Bay	1.64	328	i P	Pb	05 47 32.5	+0.1
GTBY				eS	Sb	05 47 53.3	+0.1
GTBY				IAML		05 47 57.0	
	comp=Z,38nm,4.1s						
PAPH	Port-au-Prince	1.80	90	eP	Pn	05 47 32.7	-0.6
PAPH				eS	Sn	05 47 55.0	-1.3
PAPH	Port-au-Prince	1.80	90	i P	Pn	05 47 32.8	-0.6
PAPH				eS	Sn	05 47 55.8	-0.5
PAPH				IAML		05 47 57.0	
	comp=Z,36nm,0.3s						
RCC	Rio Carpintero	2.03	316	eP	Pb	05 47 38.2	-0.9
RCC				eS	Sn	05 48 03.1	+1.0
RCC				IAML		05 48 06.3	
	comp=E,16nm,0.6s						
RCC				IAML		05 48 09.8	
	comp=N,16nm,0.2s						
SABCS	La Quijada	2.10	330	eP	Pn	05 47 38.2	+0.6
SABCS				eS	Sn	05 48 03.9	0.0
LOPE2	Hotel El Peder	2.38	102	i P	Pn	05 47 42.3	+1.0
LOPE2				eS	Sn	05 48 11.5	+0.9
LOPE2				IAML		05 48 16.3	
	comp=Z,46nm,1.5s						
PINC	Pinares de May	2.46	323	eP	Pn	05 47 42.8	+0.4
PINC				eS	Sn	05 48 11.6	-1.0
PINC				IAML		05 48 18.1	
	comp=N,13nm,0.3s						
PINC				IAML		05 48 18.4	
	comp=E,12nm,0.1s						
CHIV	Chivirico	2.54	305	eP	Pn	05 47 43.9	+0.4
CHIV				eS	Sn	05 48 13.7	-1.0
SDDR	Presa de Saban	2.79	80	i P	Pn	05 47 48.5	+1.5
LMGC	Las Mercedes	3.06	300	eP	Pn	05 47 51.2	+0.6
LMGC				eS	Sn	05 48 27.3	-0.2
LMGC				IAML		05 48 29.8	
	comp=N,10nm,0.2s						
LMGC				IAML		05 48 30.5	
	comp=E,8.2nm,0.1s						

IDC 22 05:47:52.2±7.2,**19°14S**×**176°31W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=323.1km s-min=112.0km az=153.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.38	260	P	P	05 56 20.5	-0.1
	0.2nm,0.3s,baz=97,slow=7.1,SNR=7.9						
	0.2nm,0.3s						
ASAR	Alice Springs	46.39	255	P	P	05 56 20.6	-0.2
	0.9nm,0.7s,baz=92,slow=8.0,SNR=9.3						
	0.9nm,0.7s						
AKASG	Malin Array Be	142.56	333	PKP	PKPdf	06 07 26.7	-0.3
	0.2nm,0.3s,baz=42,slow=4.0,SNR=4.0						

MOS 22 05:48:54.9±0.9, 23°74N×44°91W, h4km, mb5.1/56, MS4.6/8, Error ellipse: s-maj=8.7km s-min=5.5km az=51.8

IDC ***22*** *05:48:56.0±0.5,23˚.71N×44˚.96W,h0km,mb4.6/33, mbtmp4.6/33,MS4.6/80,Error ellipse: s-maj=15.0km s-min=12.3km az=166.0*

NEIC ***22*** *05:48:58.6±1.3,23˚.8N±0˚.1×45˚.0W±0˚.1,h10km±1km, mb5.0/475,Ms_20 4.9/253,Mwb5.4/27,Mww5.3/29,Error ellipse: s-maj=18.0km s-min=15.7km az=151.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.10; Mθθ=0.78; Mφφ=0.68; Mrθ=0.10; Mθφ=-1.35; Mrφ=-0.07; Fault plane solution: M₀1.54000×10¹⁷ NP1: φs104.08000°,δ87.85000°,λ175.41000°. NP2: φs194.25000°,δ85.41000°,λ2.16000°. Principal axes: T 1.4882, Plg5.0000°, Azm59.0000°; N 0.0950, Plg85.0000°, Azm259.0000°; P -1.5832, Plg2.0000°, Azm149.0000°;*

NEIC ***22*** *05:48:59,23˚.82N×44˚.96W,h10km*

NEIC ***22*** *05:48:59,23˚.82N×44˚.96W,h16km*

NEIC ***22*** *05:48:59,23˚.92N×45˚.07W,h16km,Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10¹⁷Nm; Mrr=0.17; Mθθ=0.29; Mφφ=0.46; Mrθ=0.29; Mθφ=-0.91; Mφr=0.19; Fault plane solution: M₀1.05000×10¹⁷ NP1: φs283.36000°,δ75.19000°,λ-164.21000°. NP2: φs189.23000°,δ74.74000°,λ-15.37000°. Principal axes: T 1.0666, Plg0.0000°, Azm56.0000°; N -0.0303, Plg68.0000°, Azm325.0000°; P -1.0363, Plg22.0000°, Azm146.0000°;*

GCMT ***22*** *05:49:00.6±0.1,23˚.80N±0˚.01×44˚.91W±0˚.01,h15km, MW5.3/153,Moment Tensor Solution. s100,c156; s153,c292; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.01±.02; Mθθ-0.41±.02; Mφφ0.40±.02; Mrθ0.19±.04; Mθφ-1.14±.02; Mφr0.06±.03; Best double couple: M₀1.22800×10¹⁷ NP1:φs280.00000°,δ86.00000°, λ-172.00000°. NP2:φs190.00000°,δ82.00000°, λ-4.00000°. Principal axes: T 1.2110, Plg3.0000°, Azm55.0000°; N 0.0350, Plg81.0000°, Azm306.0000°; P -1.2450, Plg9.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 05:48:58.4±0.3, 23.78N±0.05×44.93W±0.05, h15km, n994, σ1§13/678, mb5.0/339, MS4.8/216, 17C-9D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBE	**Ff, Capester**	**17.44**	**247**	P	**Pn**	**05 53 00.6**	**-0.7**
CBE				IAmb	IAmb	05 53 05.8	
	comp=Z,133nm,1.0s						
GDHS	**Morne Mazeau,**	**17.48**	**248**	P	**Pn**	**05 53 00.8**	**-1.0**
H05S1	**Guadeloupe/Mar**	**17.66**	**241**	T	T	06 10 39.8	
	SNR=8.0						
MPOM	**Morne Pois Mar**	**17.67**	**241**	P	**Pn**	**05 53 04.0**	**-0.1**
SVN	**Savane Anatole**	**17.70**	**243**	P	**Pn**	**05 53 02.3**	**-2.2**
FDF	**Fort de France**	**17.74**	**242**	P	**Pn**	**05 53 04.8**	**-0.3**
FDF	**Fort de France**	**17.74**	**242**	P	**Pn**	**05 53 04.8**	**-0.3**
FDF				pmax	pmax		
	comp=Z,609nm,1.8s						
BBSR	**BB Station**	**19.41**	**301**	P	**P**	**05 53 22.9**	**-1.1**
BBSR				IAmb	IAmb	05 53 29.7	
	comp=Z,147nm,1.8s						
GRGR	**Grenville**	**19.65**	**237**	P	**P**	**05 53 26.9**	**0.0**
MDP	**Montagnes des**	**20.00**	**203**	LR	LR	05 59 22.9	
	comp=Z,1μm,20.3s,baz=26,slow=32						
HUMP	**Col San Antoni**	**20.31**	**258**	P	**P**	**05 53 34.7**	**+0.7**
HUMP				IAmb	IAmb	05 53 46.2	
	comp=Z,136nm,1.4s						
GCPR	**Guaynabo City**	**20.47**	**259**	P	**P**	**05 53 35.4**	**-0.3**
ROSA	**Rosais**	**20.58**	**40**	P	**P**	**05 53 36.5**	**-0.2**
CELP	**Cerrillos**	**20.99**	**258**	P	**P**	**05 53 40.7**	**-0.7**
OBIP	**Obispado Ponce**	**21.02**	**258**	P	**P**	**05 53 40.9**	**-0.8**
OBIP				IAmb	IAmb	05 53 42.2	
	comp=Z,107nm,1.1s						
UUPR	**Utuado, UPR, P**	**21.06**	**259**	P	**P**	**05 53 40.3**	**-1.8**
UUPR				IAmb	IAmb	05 53 42.6	
	comp=Z,66nm,0.8s						
PCRV	**Puerto La Cruz**	**23.15**	**238**	LR	LR	06 01 47.7	
	comp=Z,2μm,21.8s,slow=34						
MCPB	**Macapa, AP**	**24.97**	**197**	*eP*	**P**	**05 54 21.8**	**+0.3**
SDDR	**Presa de Saban**	**24.98**	**264**	P	**P**	**05 54 22.1**	**+0.3**
SDDR	**Presa de Saban**	**24.98**	**264**	*eP*	**P**	**05 54 23.9**	**+2.2**
HAL	**Halifax**	**25.79**	**328**	P	**P**	**05 54 29.5**	**+0.8**
HAL	**Halifax**	**25.79**	**328**	P	**P**	**05 54 29.5**	**+0.8**
HAL				pmax	pmax		
	comp=Z,70nm,1.2s						
BOAV	**Boa Vista**	**26.07**	**218**	P	**P**	**05 54 31.3**	**-0.3**
BOAV				IAmb	IAmb	05 55 04.4	
	comp=Z,41nm,1.5s						
BOAV	**Boa Vista**	**26.07**	**218**	*eP*	**P**	**05 54 31.2**	**-0.3**
M65A	**Busby, Falmout**	**27.82**	**316**	P	**P**	**05 54 46.8**	**-0.3**
	baz=122						
NBCL	**Cascavel-CE**	**28.57**	**166**	*eP*	**P**	**05 54 56.9**	**+2.9**
SDV	**Santo Domingo**	**28.69**	**243**	P	**P**	**05 54 54.9**	**-0.4**
SDV	**Santo Domingo**	**28.69**	**243**	LR	LR	06 04 51.7	
	comp=Z,1μm,21.5s,baz=68,slow=33						
SDV	**Santo Domingo**	**28.69**	**243**	*eP*	**P**	**05 54 56.1**	**+0.8**
SDV	**Santo Domingo**	**28.69**	**243**	*eP*	**P**	**05 54 55.7**	**+0.4**
HRV	**Adam Dziewonsk**	**28.90**	**317**	P	**P**	**05 54 56.5**	**-0.2**
	baz=122						
BATG	**Bathurst New B**	**28.90**	**329**	P	**P**	**05 54 56.7**	**+0.1**
BATG				IAmb	IAmb	05 55 34.7	
	comp=Z,54nm,1.4s						
PKME	**Peaks-Kenny Pk**	**29.16**	**323**	P	**P**	**05 54 59.0**	**0.0**
	baz=129						
K62A	**Royalston**	**29.41**	**316**	P	**P**	**05 55 02.0**	**+0.8**
PQI	**Presque Isle**	**29.42**	**327**	P	**P**	**05 55 02.2**	**+0.9**
L61B	**Northampton**	**29.58**	**316**	P	**P**	**05 55 03.1**	**+0.3**
	baz=120						
PAL	**Palisades**	**29.70**	**312**	P	**P**	**05 55 04.6**	**+0.7**
	baz=116						
G62A	**West of Eustis**	**29.82**	**322**	P	**P**	**05 55 06.0**	**+1.1**
G62A				IAmb	IAmb	05 55 06.4	
	comp=Z,52nm,1.4s						
ITTB	**Itaituba**	**29.89**	**202**	*eP*	**P**	**05 55 06.7**	**+1.0**
F62A	**Pittston Farm,**	**29.93**	**324**	P	**P**	**05 55 06.6**	**+0.8**
F62A				IAmb	IAmb	05 55 07.5	
	comp=Z,20nm,1.0s						
LBNH	**Lisbon**	**30.06**	**319**	IAMs_20	IAMs_20	06 04 35.0	
	comp=Z,2μm,21.0s						
LBNH	**Lisbon**	**30.06**	**319**	P	**P**	**05 55 08.1**	**+1.1**
	baz=124						
T60A	**Surry**	**30.32**	**303**	P	**P**	**05 55 10.0**	**+0.7**
WUPA	**West Chester U**	**30.44**	**309**	P	**P**	**05 55 10.6**	**+0.2**
ACCN	**Adirondack Com**	**30.68**	**317**	P	**P**	**05 55 12.4**	**0.0**
ACCN				IAmb	IAmb	05 56 05.1	
	comp=Z,46nm,1.6s						
RCBR	**Riachuelo**	**30.72**	**162**	LR	LR	06 04 06.9	
	comp=Z,865nm,21.0s,baz=325,slow=30						
CNNC	**Cliffs of the**	**30.74**	**299**	P	**P**	**05 55 13.8**	**+0.8**
	baz=103						
MVL	**Millersville**	**30.99**	**309**	P	**P**	**05 55 16.3**	**+1.1**
TAMC	**Tame, Arauca**	**31.04**	**241**	*eP*	**P**	**05 55 16.0**	**+0.1**
CBN	**Corbin Frederi**	**31.13**	**305**	P	**P**	**05 55 16.5**	**0.0**
	baz=108						
FRNY	**Flat Rock**	**31.38**	**319**	P	**P**	**05 55 19.5**	**+0.9**
FRNY				IAmb	IAmb	05 55 20.8	
	comp=Z,26nm,1.1s						
BINY	**Binghamton**	**31.63**	**313**	P	**P**	**05 55 21.8**	**+0.9**
	baz=116						
MNTQ	**Montreal, Queb**	**31.77**	**320**	P	**P**	**05 55 22.1**	**+0.1**
MNTQ				IAmb	IAmb	05 55 24.8	
	comp=Z,19nm,1.0s						
V58A	**Windy Hill, Pi**	**31.83**	**300**	P	**P**	**05 55 22.2**	**-0.5**
V58A				IAmb	IAmb	05 55 24.7	
	comp=Z,18nm,0.9s						
LONY	**Lake Ozonia**	**31.87**	**318**	P	**P**	**05 55 23.8**	**+0.9**
	baz=121						
Y58A	**Scranton**	**31.92**	**296**	P	**P**	**05 55 22.9**	**-0.7**
P57A	**Homestead Farm**	**32.01**	**307**	P	**P**	**05 55 24.5**	**+0.3**
P57A				IAmb	IAmb	05 55 40.5	
	comp=Z,27nm,1.2s						
M57A	**Sunshine Farm,**	**32.05**	**311**	P	**P**	**05 55 25.0**	**+0.4**
M57A				IAmb	IAmb	05 55 26.4	
	comp=Z,16nm,0.9s						
BARC	**Barichara**	**32.06**	**242**	*eP*	**P**	**05 55 24.0**	**-1.2**
NHSC	**New Hope**	**32.23**	**295**	P	**P**	**05 55 27.1**	**+0.9**
	baz=98						
NPGB	**Novo Progresso**	**32.28**	**200**	*eP*	**P**	**05 55 28.1**	**+1.3**
SSPA	**Standing Stone**	**32.32**	**309**	P	**P**	**05 55 27.1**	**+0.2**
SSPA				IAmb	IAmb	05 55 42.0	
	comp=Z,16nm,1.1s						
SSPA	**Standing Stone**	**32.32**	**309**	P	**P**	**05 55 28.2**	**+1.3**
	baz=111						
RUSC	**La Rusia**	**32.39**	**241**	*eP*	**P**	**05 55 28.5**	**+0.2**
W57A	**Gilead**	**32.41**	**299**	P	**P**	**05 55 26.8**	**-0.9**
W57A				IAmb	IAmb	05 55 29.8	
	comp=Z,19nm,0.9s						
WBO	**Williamsburg**	**32.49**	**318**	P	**P**	**05 55 28.9**	**+0.5**
WBO				IAmb	IAmb	05 55 44.1	
	comp=Z,16nm,1.1s						
L56A	**Greenwood**	**32.66**	**312**	P	**P**	**05 55 31.1**	**+1.1**
L56A				IAmb	IAmb	05 55 32.1	
	comp=Z,15nm,0.8s						
PTGC	**Puerto Gaitan,**	**32.67**	**238**	*eP*	**P**	**05 55 29.6**	**-0.6**
BIRD	**Birdtown, Kers**	**32.69**	**298**	P	**P**	**05 55 30.6**	**+0.3**
BIRD				IAmb	IAmb	05 55 32.3	
	comp=Z,24nm,1.0s						
U56A	**King**	**32.96**	**301**	P	**P**	**05 55 33.2**	**+0.7**
U56A				IAmb	IAmb	05 55 51.5	
	comp=Z,27nm,1.3s						
BLA	**Blacksburg**	**33.18**	**302**	P	**P**	**05 55 35.6**	**+1.0**
BLA				IAMs_20	IAMs_20	06 05 40.7	
	comp=Z,1μm,21.0s						
BLA	**Blacksburg**	**33.18**	**302**	P	**P**	**05 55 35.7**	**+1.0**
	baz=104,SNR=8.0						
BLA	**Blacksburg**	**33.18**	**302**	P	**P**	**05 55 35.6**	**+1.0**
BLA				pmax	pmax		
	comp=Z,45nm,1.2s						
M55A	**Ridgway**	**33.24**	**310**	P	**P**	**05 55 34.9**	**-0.1**
JSC	**Jenkinsville**	**33.29**	**297**	IAmb	IAmb	05 55 37.5	
	comp=Z,24nm,0.9s						
UREC	**San Jos de Ur**	**33.37**	**247**	*eP*	**P**	**05 55 36.8**	**+0.4**
MCWV	**Mont Chateau**	**33.41**	**307**	P	**P**	**05 55 38.0**	**+1.5**
	baz=108						
WVNY	**West Valley, N**	**33.48**	**312**	IAmb	IAmb	05 55 39.4	
	comp=Z,14nm,0.8s						
KMSC	**Kings Mountain**	**33.48**	**298**	IAmb	IAmb	05 55 39.2	
	comp=Z,14nm,0.8s						
KMSC	**Kings Mountain**	**33.48**	**298**	P	**P**	**05 55 37.8**	**+0.6**
	baz=100,SNR=6.2						
CHIC	**Chingaza**	**33.66**	**240**	*eP*	**P**	**05 55 38.5**	**-0.8**
PTEO	**Sao Teotonio**	**33.82**	**58**	*eP*	**P**	**05 55 39.3**	**-0.7**
	comp=Z,88nm,1.8s						
PAULI	**Pauline**	**33.82**	**297**	IAmb	IAmb	05 55 42.3	
	comp=Z,18nm,0.9s						
VILC	**Villavicencio,**	**33.94**	**239**	*eP*	**P**	**05 55 41.1**	**-0.3**
ROSC	**El Rosal**	**34.00**	**241**	P	**P**	**05 55 42.8**	**+0.5**
	comp=Z,2.7nm,0.4s,baz=180,slow=20,SNR=1.8						
ROSC				LR	LR	06 09 16.4	
	comp=Z,1μm,21.5s,baz=48,slow=36						
	comp=Z,2.7nm,0.4s						
NORC	**Norcasia**	**34.02**	**243**	*eP*	**P**	**05 55 39.5**	**-2.6**
HODGE	**Hodges**	**34.10**	**296**	IAmb	IAmb	05 55 44.7	
	comp=Z,20nm,0.9s						
PNCL	**Nicolau / Gran**	**34.10**	**57**	*eP*	**P**	**05 55 42.8**	**+0.3**
	comp=Z,41nm,1.7s						
U54A	**Nelsons Funny**	**34.13**	**300**	IAmb	IAmb	05 55 53.0	
	comp=Z,14nm,0.8s						
AVE	**Averroes**	**34.15**	**65**	IAMs_20	IAMs_20	06 06 10.5	
	comp=Z,1μm,19.0s						
DBBC	**Dabeiba**	**34.33**	**246**	*eP*	**P**	**05 55 44.4**	**-0.4**
ERPA	**Erie**	**34.33**	**311**	P	**P**	**05 55 45.4**	**+1.0**
	baz=111						
PBDV	**Barranco-do-Ve**	**34.37**	**58**	*eP*	**P**	**05 55 45.3**	**+0.4**
	comp=Z,78nm,1.7s						
PCVE	**Castro Verde**	**34.37**	**58**	*eP*	**P**	**05 55 44.1**	**-0.7**
PVAQ	**Vaqueiros**	**34.57**	**58**	*eP*	**P**	**05 55 46.9**	**+0.3**
M53A	**WI Miller and**	**34.57**	**309**	P	**P**	**05 55 47.5**	**+0.9**
	baz=110						
PMTG	**Montargil**	**34.58**	**55**	*eP*	**P**	**05 55 46.1**	**-0.5**
	comp=Z,40nm,1.4s						
O53A	**New Philadelph**	**34.59**	**307**	P	**P**	**05 55 48.0**	**+1.3**
	baz=107						
EVO	**Evora**	**34.60**	**56**	*eP*	**P**	**05 55 46.0**	**-0.8**
	comp=Z,18nm,1.7s						
GUY2C	**Guyana, Caldas**	**34.62**	**243**	*eP*	**P**	**05 55 46.0**	**-1.7**
COI	**Coimbra**	**34.75**	**53**	IAMs_20	IAMs_20	06 05 26.2	
	comp=Z,2μm,21.0s						
V53A	**Saluda**	**34.76**	**299**	IAmb	IAmb	05 55 50.5	
	comp=Z,16nm,1.0s						
CBOC	**Ciudad Bolivar**	**34.79**	**244**	*eP*	**P**	**05 55 48.3**	**-0.6**
SADO	**Sadowa**	**34.81**	**315**	LR	LR	06 07 18.3	
	comp=Z,891nm,20.8s,baz=100,slow=32						
TIGA	**Tifton**	**34.96**	**291**	P	**P**	**05 55 51.3**	**+1.3**
	baz=93						
GOGA	**Godfrey**	**35.00**	**295**	P	**P**	**05 55 50.7**	**+0.3**
GOGA	**Godfrey**	**35.00**	**295**	P	**P**	**05 55 51.1**	**+0.8**
	baz=96						
GOGA	**Godfrey**	**35.00**	**295**	P	**P**	**05 55 50.7**	**+0.3**
GOGA				pmax	pmax		
	comp=Z,18nm,1.2s						
Q52A	**Bidwell**	**35.02**	**305**	IAmb	IAmb	05 55 52.5	
	comp=Z,34nm,1.4s						
SCHQ	**Schefferville**	**35.04**	**338**	P	**P**	**05 55 50.8**	**+0.4**
SCHQ				IAmb	IAmb	05 56 44.6	
	comp=Z,27nm,1.4s						
SCHQ	**Schefferville**	**35.04**	**338**	P	**P**	**05 55 50.5**	**+0.1**
	comp=Z,5.3nm,0.9s,baz=128,slow=8.6,SNR=6.1						
SCHQ				LR	LR	06 08 10.1	
	comp=Z,998nm,21.8s,baz=145,slow=33						
	comp=Z,5.3nm,0.9s						
P52A	**Corning**	**35.09**	**306**	P	**P**	**05 55 52.2**	**+1.1**
	baz=106						
PRAC	**Prado**	**35.12**	**240**	*eP*	**P**	**05 55 49.2**	**-2.5**
PBAR	**Barrancos**	**35.26**	**57**	*eP*	**P**	**05 55 53.2**	**+0.7**
	comp=Z,45nm,1.5s						
PMRV	**Marv??o**	**35.29**	**55**	*eP*	**P**	**05 55 52.2**	**-0.6**
	comp=Z,28nm,1.5s						
PMRV				*e*LR	LR	06 05 09.8	
	comp=Z,1μm,18.0s						
ORTC	**Ortega, Tolima**	**35.29**	**241**	*eP*	**P**	**05 55 51.4**	**-1.7**
VLDQ	**Val d'Or**	**35.39**	**322**	P	**P**	**05 55 55.9**	**+2.4**
PGAV	**Gavieira, Arco**	**35.40**	**50**	*eP*	**P**	**05 55 56.8**	**+3.0**
	comp=Z,87nm,2.1s						
PGAV				*e*LR	LR	06 05 18.2	
	comp=Z,827nm,22.0s						
V52A	**Sevierville**	**35.42**	**299**	IAmb	IAmb	05 55 56.0	
	comp=Z,35nm,1.6s						
MTE	**Manteigas**	**35.44**	**53**	*eP*	**P**	**05 55 54.5**	**+0.3**
	comp=Z,51nm,1.5s						
MTE				*e*LR	LR	06 05 11.4	
	comp=Z,1μm,20.0s						
MTE	**Manteigas**	**35.44**	**53**	IAMs_20	IAMs_20	06 06 11.5	
	comp=Z,2μm,21.0s						
TZTN	**Tazewell**	**35.50**	**300**	P	**P**	**05 55 55.2**	**+0.5**
TZTN				IAMs_20	IAMs_20	06 06 54.1	
	comp=Z,1μm,22.0s						
TZTN	**Tazewell**	**35.50**	**300**	P	**P**	**05 55 55.6**	**+0.9**
	baz=100,SNR=7.1						
TKL	**Tuckaleechee C**	**35.53**	**299**	IAmb	IAmb	05 56 13.8	
	comp=Z,44nm,1.5s						
TKL	**Tuckaleechee C**	**35.53**	**299**	LR	LR	06 07 38.0	
	comp=Z,930nm,19.9s,baz=103,slow=32						
Y52A	**Lilburn**	**35.54**	**295**	IAmb	IAmb	05 55 56.8	
	comp=Z,18nm,1.1s						
W52A	**Murphy**	**35.58**	**298**	IAmb	IAmb	05 56 11.2	
	comp=Z,20nm,0.9s						
SSFO	**Shawnee State**	**35.66**	**304**	P	**P**	**05 55 55.7**	**-0.3**
P51A	**Williamsport**	**35.74**	**305**	P	**P**	**05 55 57.0**	**+0.3**
ACSO	**Alum Creek Sta**	**35.88**	**306**	P	**P**	**05 55 58.5**	**+0.6**
ACSO				IAmb	IAmb	05 55 59.9	
	comp=Z,41nm,1.6s						
ACSO	**Alum Creek Sta**	**35.88**	**306**	P	**P**	**05 55 58.8**	**+0.9**
	baz=106						
SDBA	**SAO DESIDERIO**	**35.96**	**180**	*eP*	**P**	**05 55 59.8**	**+1.0**
152A	**Waverly Hall**	**35.99**	**293**	IAmb	IAmb	05 56 16.9	
	comp=Z,46nm,1.6s						
V51A	**Loudon**	**36.02**	**299**	IAmb	IAmb	05 56 17.5	
	comp=Z,32nm,1.6s						
MVO	**Moncorvo**	**36.04**	**52**	*eP*	**P**	**05 55 59.5**	**+0.2**
	comp=Z,41nm,2.0s						
MVO				*e*LR	LR	06 05 34.1	
X51A	**Calhoun**	**36.27**	**296**	IAmb	IAmb	05 56 03.3	
	comp=Z,21nm,0.8s						
MDT	**Midelt**	**36.45**	**67**	LR	LR	06 07 43.5	
	comp=Z,865nm,20.6s,baz=329,slow=31						
T50A	**Nancy**	**36.60**	**301**	IAmb	IAmb	05 56 06.4	
	comp=Z,22nm,0.9s						
W50A	**Signal Mountai**	**36.72**	**297**	IAmb	IAmb	05 56 21.4	
	comp=Z,23nm,1.0s						
JAMC	**Jamundi, Valle**	**36.85**	**241**	*eP*	**P**	**05 56 04.8**	**-1.8**
FPAL	**Fort Paine**	**36.89**	**296**	IAmb	IAmb	05 56 23.0	
	comp=Z,21nm,1.0s						
TBTG	**Tabatinga, AM**	**36.95**	**224**	*eP*	**P**	**05 56 06.7**	**-0.4**
AAM	**Ann Arbor**	**36.96**	**309**	P	**P**	**05 56 08.0**	**+0.9**
	baz=108						
P49A	**Miami Univ. Ec**	**37.00**	**305**	IAmb	IAmb	05 56 09.2	
	comp=Z,43nm,1.5s						
P49A	**Miami Univ. Ec**	**37.00**	**305**	P	**P**	**05 56 07.8**	**+0.4**
	baz=103						
PDRB	**Porto dos Gac**	**37.02**	**199**	*eP*	**P**	**05 56 11.9**	**+4.2**
FLOC	**Florencia**	**37.03**	**238**	*eP*	**P**	**05 56 05.9**	**-2.1**
SAML	**Samuel**	**37.10**	**211**	P	**P**	**05 56 07.5**	**-0.9**
SAML	**Samuel**	**37.10**	**211**	IAMs_20	IAMs_20	06 09 43.5	
	comp=Z,2μm,21.0s						
SAML	**Samuel**	**37.10**	**211**	P	**P**	**05 56 07.5**	**-0.9**
SAML				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SAML	**Samuel**	**37.10**	**211**	*eP*	**P**	**05 56 07.8**	**-0.6**
SAML	**Samuel**	**37.10**	**211**	*eP*	**P**	**05 56 07.2**	**-1.1**
PTLC	**Puerto Leguiza**	**37.28**	**235**	*eP*	**P**	**05 56 10.6**	**+0.6**
IVI	**Ivigtut**	**37.47**	**357**	*iP*	**P**	**05 56 11.3**	**+0.2**
IVI				IAmb	IAmb	05 56 14.1	
	comp=Z,30nm,1.0s						
O48B	**Farmland**	**37.50**	**306**	P	**P**	**05 56 11.7**	**0.0**
	baz=104						
PAB	**San Pablo**	**37.61**	**56**	IAMs_20	IAMs_20	06 08 45.9	
	comp=Z,2μm,21.0s						
CLTN	**Cedars of Leba**	**37.65**	**299**	IAmb	IAmb	05 56 15.2	
	comp=Z,39nm,1.5s						
LRAL	**Lakeview Retre**	**37.92**	**294**	P	**P**	**05 56 15.4**	**0.0**
	baz=93						
ESDC	**Sonseca Array**	**37.93**	**55**	P	**P**	**05 56 15.0**	**-0.4**
ESDC	**Sonseca Array**	**37.93**	**55**	P	**P**	**05 56 15.0**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=256,slow=7.8,SNR=10						
ESDC				LR	LR	06 08 48.8	
	comp=Z,1μm,19.4s,baz=234,slow=31						
	comp=Z,3.5nm,1.0s						
WCI	**Wyandotte Cave**	**37.95**	**302**	P	**P**	**05 56 15.8**	**+0.4**
WCI	**Wyandotte Cave**	**37.95**	**302**	P	**P**	**05 56 16.1**	**+0.7**
	baz=100						
WCI	**Wyandotte Cave**	**37.95**	**302**	P	**P**	**05 56 15.8**	**+0.4**
WCI				pmax	pmax		
	comp=Z,15nm,1.0s						
BBAC	**Balboa, Cauca**	**38.02**	**240**	*eP*	**P**	**05 56 14.9**	**-1.7**
X48A	**Hartselle**	**38.06**	**296**	IAmb	IAmb	05 56 35.0	
	comp=Z,24nm,1.1s						
GR1C	**Gorgona, Isla**	**38.18**	**242**	*eP*	**P**	**05 56 16.0**	**-1.7**
GCUF	**Volcan Galeras**	**38.58**	**239**	*eP*	**P**	**05 56 20.6**	**-1.0**
WVT	**Waverly**	**38.86**	**299**	P	**P**	**05 56 23.6**	**+0.4**
WVT	**Waverly**	**38.86**	**299**	IAMs_20	IAMs_20	06 09 11.2	
	comp=Z,1μm,20.0s						
WVT	**Waverly**	**38.86**	**299**	P	**P**	**05 56 23.6**	**+0.4**
	baz=96						
WVT	**Waverly**	**38.86**	**299**	P	**P**	**05 56 23.6**	**+0.4**
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
PLAL	**Pickwick Lake**	**38.95**	**297**	IAmb	IAmb	05 56 39.9	
	comp=Z,29nm,1.0s						
SFIN	**Lafayette**	**38.97**	**305**	P	**P**	**05 56 24.8**	**+0.8**
	baz=102						
G45A	**Suttons Bay**	**39.20**	**313**	IAmb	IAmb	05 56 28.0	
	comp=Z,20nm,0.8s						
TULM	**Tulcn-Chalpat**	**39.24**	**239**	IAmb	IAmb	05 56 28.5	
	comp=Z,38nm,1.2s						
TULM	**Tulcn-Chalpat**	**39.24**	**239**	*eP*	**P**	**05 56 25.7**	**-1.4**
BDFB	**Brasilia**	**39.29**	**185**	P	**P**	**05 56 26.7**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=58,slow=9.5,SNR=2.5						
BDFB				LR	LR	06 12 20.7	
	comp=Z,821nm,18.7s,baz=355,slow=36						
	comp=Z,1.3nm,0.5s						
ETMB	**Extrema**	**39.34**	**214**	P	**P**	**05 56 25.5**	**-1.8**
ETMB	**Extrema**	**39.34**	**214**	*eP*	**P**	**05 56 26.4**	**-0.9**
OLIL	**Olney**	**39.43**	**303**	IAmb	IAmb	05 56 37.5	
	comp=Z,36nm,1.2s						
VILB	**Vilhena**	**39.44**	**204**	P	**P**	**05 56 28.4**	**+0.3**
VILB	**Vilhena**	**39.44**	**204**	*eP*	**P**	**05 56 28.5**	**+0.3**
ARAG	**Araguaiana, MT**	**39.81**	**190**	*eP*	**P**	**05 56 30.9**	**-0.3**
IMBA	**Imbabura, San**	**39.83**	**239**	P	**P**	**05 56 32.4**	**+0.3**
L44A	**Lake County Fo**	**39.97**	**308**	IAMs_20	IAMs_20	06 10 26.3	
	comp=Z,919nm,19.0s						
L44A	**Lake County Fo**	**39.97**	**308**	P	**P**	**05 56 32.2**	**-0.2**
	baz=104						
OXF	**Oxford**	**40.01**	**296**	P	**P**	**05 56 33.2**	**+0.4**
	baz=93						
OTAV	**Otavalo**	**40.05**	**239**	P	**P**	**05 56 33.5**	**-0.4**
OTAV	**Otavalo**	**40.05**	**239**	P	**P**	**05 56 33.5**	**-0.4**
OTAV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OTAV				MLR	MLR		
	comp=Z,800nm,21.0s						
OTAV	**Otavalo**	**40.05**	**239**	*eP*	**P**	**05 56 33.6**	**-0.2**
OTAV	**Otavalo**	**40.05**	**239**	*eP*	**P**	**05 56 33.5**	**-0.4**
Q44A	**Meyer Farm, Va**	**40.16**	**303**	P	**P**	**05 56 34.0**	**0.0**
Q44A				IAmb	IAmb	05 56 49.8	
	comp=Z,33nm,1.1s						
S44A	**Carbondale**	**40.18**	**301**	IAmb	IAmb	05 56 47.6	
	comp=Z,44nm,1.4s						
TEIG	**Tepich**	**40.23**	**274**	IAMs_20	IAMs_20	06 08 50.1	
	comp=Z,980nm,19.0s						
TEIG	**Tepich**	**40.23**	**274**	LR	LR	06 10 28.5	
	comp=Z,5μm,19.5s,baz=210,slow=32						
JTS	**Las Juntas de**	**40.39**	**258**	LR	LR	06 09 42.2	
	comp=Z,462n

H10N1 ASCENSION HYDR 43.27 133 T T 06 42 57.2
baz=317,slow=75,SNR=706
SFJD Kangerlussuaq 43.37 357 LR LR 06 12 27.1
comp=Z,614nm,18.1s,baz=178,slow=32
MIAR Mount Ida 43.45 296 IAmb IAmb 05 57 19.2
comp=Z,61nm,1.9s
MIAR Mount Ida 43.45 296 P P **05 57 01.6 +0.6**
baz=91
BBSD Serra de San D 43.50 202 *e*P P **05 57 01.6 +0.2**
N38A Joes South For 43.65 305 IAmb IAmb 05 57 03.9
comp=Z,28nm,0.9s
ARNL Arenillas 43.69 236 IAmb IAmb 05 57 02.9
comp=Z,24nm,0.9s
SCIA State Center 43.79 306 IAmb IAmb 05 57 04.9
comp=Z,25nm,0.8s
SCIA State Center 43.79 306 P P **05 57 04.1 +0.4**
baz=99
EYMN Ely 43.92 315 P P **05 57 04.4 -0.3**
baz=106
H10S3 ASCENSION HYDR 43.97 134 T T 06 43 51.0
baz=317,slow=74,SNR=394
H10S2 ASCENSION HYDR 43.98 134 T T 06 43 52.2
baz=263,slow=74,SNR=116
EKA Eskdalemuir Ar 43.99 33 P P **05 57 05.9 +0.8**
comp=Z,1.9nm,0.7s,baz=240,slow=8.5,SNR=7.2
comp=Z,1.9nm,0.7s
SPMN Marine on St. 44.12 311 IAmb IAmb 05 57 07.8
comp=Z,24nm,0.8s
SPMN Marine on St. 44.12 311 P P **05 57 06.3 +0.1**
baz=103,SNR=11
MCRA Macar, Loja 44.13 235 *e*P P **05 57 05.0 -1.7**
U38A Gravette 44.16 298 IAmb IAmb 05 57 19.0
comp=Z,39nm,1.6s
BBRB Robore, Bolivi 44.25 200 *e*P P **05 57 07.1 -0.4**
ALF01 Guarapari-ES 44.32 174 *e*P P **05 57 08.8 +1.0**
RLO Rose Lookout 44.67 298 IAmb IAmb 05 58 46.3
comp=Z,46nm,0.6s
ATAH Atahualpa 44.85 231 LR LR 06 17 37.5
comp=Z,506nm,18.7s,baz=30,slow=38
X37A Clayton 44.93 296 IAmb IAmb 05 57 31.3
comp=Z,31nm,1.3s
AQDB Aquidauana 45.22 194 P P **05 57 16.0 +0.9**
AQDB Aquidauana 45.22 194 *e*P P **05 57 16.3 +1.2**
TUL3 Leonard 45.29 298 IAmb IAmb 05 57 40.1
comp=Z,19nm,1.1s
TUL3 Leonard 45.29 298 P P **05 57 15.2 -0.4**
baz=91
TOA0 Torodi Ar. Sit 45.30 95 P P **05 57 15.2 -0.8**
TOA0 IAmb IAmb 05 57 16.3
comp=Z,22nm,0.9s
TORD Torodi Ar. Bea 45.30 95 P P **05 57 14.4 -1.6**
TORD IAmb IAmb 05 57 16.3
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 45.30 95 P P **05 57 14.9 -1.1**
comp=Z,14nm,0.8s,baz=314,slow=8.3,SNR=23
TORD LR LR 06 13 19.1
comp=Z,667nm,20.6s,baz=284,slow=32
comp=Z,14nm,0.8s
ICESG Greenland Ices 45.44 3 *i* P P **05 57 15.9 -0.9**
ICESG IAmb IAmb 05 57 21.1
comp=Z,16nm,1.0s
BDQN Bodoquena, MS 45.44 196 *e*P P **05 57 16.8 -0.1**
N35A Tabor 45.47 305 IAmb IAmb 05 57 18.2
comp=Z,22nm,1.0s
LPAZ La Paz 45.82 212 P P **05 57 19.8 -0.9**
T35A Sooner Cattle 45.89 299 IAmb IAmb 05 57 47.2
comp=Z,16nm,1.2s
QUOK Quay 46.03 298 IAmb IAmb 05 57 38.9
comp=Z,16nm,1.0s
KSU1 Kansas State U 46.06 302 IAMs_20 IAMs_20 06 13 12.7
comp=Z,1μm,21.0s
KSU1 Kansas State U 46.06 302 P P **05 57 20.9 -0.8**
baz=94
OK051 E0350 and S346 46.14 298 IAmb IAmb 05 57 36.3
comp=Z,14nm,1.0s
OK051 IAMs_20 IAMs_20 06 16 19.9
comp=Z,703nm,18.0s
TAM Tamanrasset 46.16 81 P P **05 57 24.0 +1.1**
TAM IAmb IAmb 05 57 25.3
comp=Z,19nm,1.1s
TAM IAMs_20 IAMs_20 06 13 45.3
comp=Z,857nm,21.0s
TAM Tamanrasset 46.16 81 P P **05 57 24.0 +1.1**
TAM pmax pmax
comp=Z,19nm,1.1s
OK048 Pawnee Station 46.23 298 IAmb IAmb 05 57 24.2
comp=Z,19nm,1.1s
DOU Dourbes 46.40 43 *d*P P **05 57 25.0 +0.8**
BMRD Maredsous 46.56 42 *d*P P **05 57 25.4 -0.1**
KAN13 South Haven SW 46.66 299 IAmb IAmb 05 57 43.7
comp=Z,17nm,1.1s
BNI Bardonecchia 46.68 50 P P **05 57 27.7 +1.0**
BNI IAMs_20 IAMs_20 06 13 28.8
comp=Z,1μm,20.0s
BNI Bardonecchia 46.68 50 P P **05 57 27.7 +1.0**
BNI pmax pmax
comp=Z,42nm,1.4s
FW13 Cleburne 46.72 293 P P **05 57 27.5 +0.5**
WHTX Lake Whitney, 46.76 292 P P **05 57 26.8 -0.6**
baz=86
BGES Gesves 46.78 42 *d*P P **05 57 27.7 +0.5**
KAN09 Caldwell North 46.78 299 P P **05 57 27.7 +0.3**
RCHB Rochefort 46.80 43 *d*P P **05 57 27.7 +0.3**
MURT Porto Murtinho 46.82 196 *e*P P **05 57 27.1 -0.6**
BCLA Clavier 46.92 42 *d*P P **05 57 28.8 +0.5**
435B Jarrell 46.96 291 P P **05 57 28.8 -0.1**
baz=85
CMIG Matias Romero 47.09 272 LR LR 06 14 44.0
comp=Z,728nm,21.7s,baz=80,slow=33
UMMG Ummannaq 47.11 357 *i* P P **05 57 29.1 -0.3**
UMMG IAML 05 57 50.4
comp=Z,9.9nm,0.8s
UMMG IAmb IAmb 05 57 50.4
comp=Z,9.9nm,0.8s
SPB Sao Paulo 47.15 183 IAMs_20 IAMs_20 06 14 37.8
comp=Z,825nm,20.0s
OK032 Salt Plains WL 47.25 299 IAMs_20 IAMs_20 06 13 58.2
comp=Z,866nm,21.0s
WLF Walferdange 47.26 44 IAMs_20 IAMs_20 06 13 38.8
comp=Z,1μm,19.0s
NNA Nana 47.30 225 LR LR 06 16 42.0
comp=Z,607nm,21.1s,baz=34,slow=35
ULM Lac du Bonnet 47.31 317 P P **05 57 31.3 -0.1**
comp=Z,17nm,1.0s,baz=95,slow=7.7,SNR=26
ULM LR LR 06 15 01.0
comp=Z,812nm,21.1s,baz=108,slow=33
comp=Z,17nm,1.0s
BHOU Houvegnez 47.34 43 *d*P P **05 57 32.4 +0.9**
comp=Z,9.4nm,1.4s
MEM Membach 47.41 42 *d*P P **05 57 32.7 +0.7**
BGNE Belgrade 47.41 305 P P **05 57 32.4 +0.2**
baz=95
PLPT Palo Pinto 47.44 293 IAmb IAmb 05 57 34.3
comp=Z,22nm,1.2s
BTNL Ternell 47.48 42 *d*P P **05 57 32.8 +0.1**
WTFS Witchita Falls 47.52 295 IAmb IAmb 05 57 50.5
comp=Z,16nm,1.1s
WMOK Wichita Mounta 47.74 296 IAmb IAmb 05 57 36.4
comp=Z,20nm,1.1s
WMOK Wichita Mounta 47.74 296 P P **05 57 34.8 -0.2**
baz=88,SNR=20
KEST Kesra 48.07 63 P P **05 57 38.6 +1.1**
comp=Z,26nm,0.7s,baz=175,slow=2.3,SNR=22
KEST LR LR 06 15 10.6
comp=Z,798nm,21.6s,baz=242,slow=33
comp=Z,26nm,0.7s
VSL Villasalto 48.12 58 IAMs_20 IAMs_20 06 14 32.3
comp=Z,918nm,20.0s
BRDY Brady 48.13 291 IAmb IAmb 05 57 41.1
comp=Z,15nm,1.1s
SUSD Miller 48.30 309 P P **05 57 38.7 -0.4**
baz=97
BFO Black Forest 48.37 46 P P **05 57 39.7 0.0**
BFO IAmb IAmb 05 57 41.3
comp=Z,22nm,1.1s
BFO Black Forest 48.37 46 P P **05 57 39.7 0.0**
BFO pmax pmax
comp=Z,21nm,1.1s
CBKS Cedar Bluff 48.49 302 IAmb IAmb 05 57 41.6
comp=Z,16nm,0.8s
CBKS IAMs_20 IAMs_20 06 15 20.9
comp=Z,1μm,20.0s
CBKS Cedar Bluff 48.49 302 P P **05 57 40.5 -0.3**
baz=91,SNR=5.8
ABTX Abilene, Hawle 48.57 293 IAmb IAmb 05 57 42.6
comp=Z,24nm,1.4s
ABTX Abilene, Hawle 48.57 293 P P **05 57 41.1 -0.3**
baz=86,SNR=5.2
SCO Scoresbysund 48.62 10 *i* P P **05 57 40.8 -0.4**
SCO IAmb IAmb 05 57 43.4
comp=Z,8.0nm,0.6s
TUE Stuetta 48.75 48 IAMs_20 IAMs_20 06 14 45.3
comp=Z,1μm,20.0s
833A Chaparral WMA, 48.80 288 P P **05 57 42.4 -0.8**
baz=82
JCT Junction City 48.89 290 IAmb IAmb 05 57 46.9
comp=Z,21nm,1.4s
JCT Junction City 48.89 290 P P **05 57 43.2 -0.8**
baz=84
APMT Aspermont 48.92 294 IAmb IAmb 05 57 47.4
comp=Z,20nm,0.9s
SUMG Summit 48.97 3 IAmb IAmb 05 57 53.7
comp=Z,17nm,1.1s
SUMG Summit 48.97 3 *i* P P **05 57 44.0 -0.3**
FCC Fort Churchill 49.12 329 P P **05 57 45.5 +0.3**
FCC IAmb IAmb 05 57 54.9
comp=Z,20nm,0.9s
FCC Fort Churchill 49.12 329 P P **05 57 45.5 +0.3**
FCC pmax pmax
comp=Z,20nm,1.0s
DAVOX Davos/Dischmat 49.15 48 LR LR 06 15 18.9
comp=Z,1μm,20.4s,baz=261,slow=32
MDND Maddock 49.22 313 IAmb IAmb 05 57 46.9
comp=Z,24nm,1.1s
MDND Maddock 49.22 313 P P **05 57 45.7 -0.4**
baz=99
DAVA Damuels 49.23 47 *e*P P **05 57 46.9 +0.5**
comp=Z,24nm,1.0s,SNR=5.4
GO01 Chusmiza 49.24 211 IAmb IAmb 05 58 22.9
comp=Z,16nm,1.1s
FUORN Ofenpass-Fuorn 49.39 48 IAmb IAmb 05 57 51.3
comp=Z,36nm,1.8s
FUORN IAMs_20 IAMs_20 06 15 16.4
comp=Z,940nm,19.0s
DKNS Dickens 49.57 295 IAmb IAmb 05 57 50.2
comp=Z,33nm,1.6s
SN07 Snyder 07 49.58 294 IAmb IAmb 05 57 49.7
comp=Z,10.0nm,0.7s
SN05 Snyder 5 49.59 294 IAmb IAmb 05 58 15.2
comp=Z,25nm,1.5s
PB08 IPOC Station P 49.63 210 IAmb IAmb 05 58 26.6
comp=Z,22nm,1.4s
FETA Feichten 49.76 48 *e*P P **05 57 51.3 +0.8**
comp=Z,25nm,1.1s,SNR=6.4
E28A Huff 49.77 312 IAmb IAmb 05 57 51.0
comp=Z,14nm,0.8s
RETA Reutte 49.85 47 *i* P P **05 57 52.2 +1.2**
comp=Z,12nm,1.1s
SGCY Sterling City 49.88 292 IAmb IAmb 05 58 03.3
comp=Z,14nm,0.8s
MOTA Moosalm 50.06 47 *e*P P **05 57 53.6 +0.8**
comp=Z,19nm,1.2s
SQTA Sankt Quirin 50.11 48 *e*P P **05 57 53.9 +0.8**
comp=Z,29nm,1.1s,SNR=7.4
AMTX Amarillo 50.12 296 P P **05 57 53.5 +0.2**
baz=87
CTI Castel Tesino 50.28 49 P P **05 57 54.6 +0.2**
CTI Castel Tesino 50.28 49 P P **05 57 54.6 +0.2**
CTI pmax pmax
comp=Z,68nm,1.5s
OGNE Ogallala 50.31 304 IAMs_20 IAMs_20 06 16 41.0
comp=Z,1μm,20.0s
OGNE Ogallala 50.31 304 P P **05 57 53.8 -0.9**
baz=92,SNR=5.9
WATA Walderalm 50.38 47 *e*P P **05 57 55.8 +0.7**
comp=Z,35nm,1.5s,SNR=5.7
WTTA Wattenberg 50.41 48 *i* P P **05 57 55.9 +0.5**
comp=Z,26nm,0.9s,SNR=5.3
GRFO Grafenberg 50.49 44 P P **05 57 56.3 +0.6**
GRFO Grafenberg 50.49 44 P P **05 57 56.3 +0.6**
GRFO pmax pmax
comp=Z,106nm,1.9s
KSCO Kaye Shedlock' 50.74 302 IAmb IAmb 05 57 59.6
comp=Z,40nm,1.6s
KSCO Kaye Shedlock' 50.74 302 P P **05 57 58.0 0.0**
baz=90
ABTA Abfaltersbach 50.95 48 *i* P P **05 57 59.8 +0.4**
comp=Z,20nm,1.0s
MSTX Muleshoe 51.08 295 IAmb IAmb 05 58 14.3
comp=Z,16nm,0.9s
MSTX Muleshoe 51.08 295 P P **05 58 00.1 -0.5**
baz=85,SNR=7.9
LESA Schwarzleotal 51.13 47 *e*P P **05 58 00.7 -0.1**
comp=Z,13nm,0.8s
CPUP Villa Florida 51.24 194 P P **05 58 02.8 +1.3**
CPUP Villa Florida 51.24 194 P P **05 58 00.8 -0.7**
comp=Z,3.6nm,1.0s,baz=40,slow=8.4,SNR=4.3
CPUP LR LR 06 18 04.4
comp=Z,583nm,21.7s,baz=14,slow=34
comp=Z,3.6nm,1.0s
CPUP Villa Florida 51.24 194 *e*P P **05 58 01.3 -0.2**
NKC Novy Kostel 51.36 44 *e*P P **05 58 03.3 +1.0**
NKC Novy Kostel 51.36 44 *e*P P **05 58 03.3 +1.0**
KBA Koelnbreinsper 51.55 48 *e*P P **05 58 03.9 0.0**
comp=Z,14nm,0.8s
JMIC Jan Mayen 51.66 14 LR LR 06 14 34.8
comp=Z,237nm,19.0s,baz=80,slow=30
LVC Limon Verde 51.67 209 P P **05 58 05.8 +0.5**
LVC Limon Verde 51.67 209 P P **05 58 05.8 +0.5**
LVC pmax pmax
comp=Z,9.0nm,1.0s
LVC Limon Verde 51.67 209 LR LR 06 19 59.5
comp=Z,739nm,18.6s,baz=14,slow=36
MYKA Terra Mystica 51.71 49 *e*P P **05 58 06.0 +0.9**
comp=Z,23nm,1.2s
BIOA Bad Ischl, Aus 51.81 47 *e*P P **05 58 05.8 0.0**
comp=Z,24nm,1.2s,SNR=6.0
CLL Collm 51.88 43 IAMs_20 IAMs_20 06 15 17.9
comp=Z,1μm,20.0s
CLL Collm 51.88 43 *i* P P **05 58 06.2 +0.1**
CLL *e*S S **06 05 31.0 +2.8**
CLL pmax pmax
comp=Z,17nm,1.1s
CLL MLR MLR
comp=Z,900nm,18.9s
CLL Collm 51.88 43 *i* P P **05 58 06.2 +0.1**
comp=Z,17nm,1.1s
CLL *e*S S **06 05 31.0 +2.8**
CLL *ex* x 06 07 48.0
CLL *e*SS SS **06 09 00.0 -4.7**
CLL AMS AMS 06 15 00.0
comp=N,300nm,22.0s
CLL AMS AMS 06 15 00.0
comp=E,800nm,20.9s
CLL AMS AMS 06 15 00.0
comp=Z,1μm,20.2s
RSSD Black Hills 51.91 308 P P **05 58 06.8 0.0**
RSSD Black Hills 51.91 308 P P **05 58 06.8 0.0**
baz=93
RSSD Black Hills 51.91 308 P P **05 58 06.8 0.0**
RSSD pmax pmax
comp=Z,18nm,1.8s
KHC Kasperske Hory 51.93 45 *e*P P **05 58 07.0 +0.4**
KHC AMS AMS 06 21 50.0
comp=Z,600nm,17.8s
KHC Kasperske Hory 51.93 45 *ce*P P **05 58 06.0 -0.6**
KHC pmax pmax
comp=Z,75nm,2.5s
GEC2 GERESS Array S 51.98 46 IAmb IAmb 05 58 08.6
comp=Z,32nm,1.4s
GERES GERESS Array B 51.98 46 P P **05 58 07.1 0.0**
comp=Z,2.2nm,0.6s,baz=336,slow=2.9,SNR=6.0
GERES LR LR 06 16 43.9
comp=Z,329nm,20.1s,baz=260,slow=32
comp=Z,2.2nm,0.6s
FFC Flin Flon 52.00 322 P P **05 58 07.5 +0.5**
FFC IAmb IAmb 05 58 16.4
comp=Z,14nm,0.9s
FFC Flin Flon 52.00 322 P P **05 58 07.5 +0.5**
FFC pmax pmax
comp=Z,14nm,1.0s
KONO Kongsberg 52.02 32 *ce*P P **05 58 06.8 -0.3**
KONO pmax pmax
comp=Z,21nm,1.7s
HSKC Hora Svate Kat 52.04 43 *e*P P **05 58 08.1 +0.7**
HSKC AMS AMS 06 15 40.0
comp=Z,900nm,22.1s
BRIGG Briggsdale 52.04 304 P P **05 58 08.3 +0.6**
BRIGG IAmb IAmb 05 58 09.3
comp=Z,27nm,0.9s
BRIGG IAMs_20 IAMs_20 06 17 42.8
comp=Z,840nm,20.0s
TICA Tres Isletas 52.06 198 *e*P P **05 58 08.4 +0.7**
VAE Valguarnera 52.08 60 LR LR 06 17 44.9
comp=Z,833nm,19.2s,baz=346,slow=33
T25A Trinidad 52.21 299 P P **05 58 09.4 +0.2**
baz=87
MOA Molln 52.24 47 *e*P P **05 58 08.8 -0.2**
comp=Z,12nm,1.1s
OBKA Obir 52.32 49 *e*P P **05 58 09.4 -0.2**
comp=Z,23nm,0.9s
DGMT Dagmar 52.35 314 IAmb IAmb 05 58 11.1
comp=Z,20nm,1.1s
DGMT Dagmar 52.35 314 IAMs_20 IAMs_20 06 17 28.7
comp=Z,658nm,20.0s
DGMT Dagmar 52.35 314 P P **05 58 09.9 +0.1**
baz=96
TXAR Lajitas Array 52.37 290 P P **05 58 10.0 -0.3**
TXAR Lajitas Array 52.37 290 P P **05 58 10.2 -0.1**
comp=Z,1.5nm,0.7s,baz=105,slow=8.2,SNR=10
TXAR LR LR 06 20 26.2
comp=Z,91nm,21.2s,baz=77,slow=36
comp=Z,1.5nm,0.7s
ZVC Zvikov 52.37 45 *e*P P **05 58 10.2 +0.4**
ZVC *e*P P **05 58 10.3 +0.4**
ZVC AMS AMS 06 22 00.0
comp=Z,700nm,19.7s
TX31 Lajitas Ar. Si 52.37 290 P P **05 58 10.2 -0.1**
CKRC Cesky Krumlov 52.37 46 *e*P P **05 58 10.1 +0.2**
CKRC Cesky Krumlov 52.37 46 *e*P P **05 58 10.1 +0.2**
BRG Berggiesshubel 52.40 43 *i* P P **05 58 10.9 +0.9**
BRG Amp 05 58 11.9
comp=Z,16nm,1.1s
BRG Berggiesshubel 52.40 43 P P 05 58 20.6 +11
BRG Amp 05 58 22.9
comp=Z,8.2nm,1.1s
BRG Berggiesshubel 52.40 43 *i* P P **05 58 10.9 +0.9**
BRG S S 06 05 49.0 +14
BRG pmax pmax
comp=Z,16nm,1.2s
BRG pmax pmax
comp=Z,8.0nm,1.1s
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG smax smax
comp=Z,931nm,19.8s
SOKA Soboth 52.67 49 *e*P P **05 58 13.3 +1.1**
comp=Z,16nm,1.6s
Q24A Divide 52.71 302 IAmb IAmb 05 58 15.0
comp=Z,16nm,0.9s
Q24A Divide 52.71 302 P P **05 58 13.3 +0.4**
baz=88,SNR=9.7
PHWY Pilot Hill 52.90 305 IAMs_20 IAMs_20 06 17 54.5
comp=Z,1μm,21.0s
SDCO Great Sand Dun 53.04 300 IAMs_20 IAMs_20 06 17 33.5
comp=Z,1μm,22.0s
SDCO Great Sand Dun 53.04 300 P P **05 58 15.6 +0.2**
baz=87
ARSA Arzberg 53.04 48 *i* P P **05 58 14.9 0.0**
comp=Z,14nm,0.8s
ISCO Idaho Springs 53.04 303 IAMs_20 IAMs_20 06 18 20.5
comp=Z,1μm,21.0s
ISCO Idaho Springs 53.04 303 P P **05 58 15.7 +0.3**
baz=88,SNR=8.5
CUC Castrocucco 53.09 57 IAMs_20 IAMs_20 06 17 55.7
comp=Z,627nm,20.0s
NC204 NORSAR Array S 53.10 30 P P **05 58 15.8 +0.7**
NC204 IAmb IAmb 05 58 16.6
comp=Z,39nm,1.4s
CEL Celeste 53.22 59 IAMs_20 IAMs_20 06 19 19.2
comp=Z,588nm,19.0s
NB2 NORSAR Subarra 53.23 30 P P **05 58 16.7 +0.7**
comp=Z,12nm,0.8s,baz=250,slow=7.9
NOA NORSAR Array B 53.23 30 P P **05 58 16.8 +0.7**
comp=Z,5.1nm,0.7s,baz=252,slow=7.8,SNR=22
NOA LR LR 06 16 46.2
comp=Z,853nm,21.9s,baz=250,slow=31
comp=Z,5.1nm,0.7s
N23A Red Feather La 53.27 304 P P **05 58 17.8 +0.8**
baz=89
NC602 NORSAR Array S 53.29 31 P P **05 58 17.3 +0.8**
NC602 IAmb IAmb 05 58 17.8
comp=Z,12nm,0.9s
VHRN Van Horn 53.29 292 IAmb IAmb 05 58 25.7
comp=Z,28nm,1.6s
CONA Conrad Observa 53.32 47 *e*P P **05 58 17.4 +0.3**
comp=Z,14nm,1.1s,SNR=5.7
MNTX Cornudas Mount 53.50 293 P P **05 58 19.5 +1.0**
baz=82
LAO LASA Array 53.58 311 P P **05 58 18.6 -0.3**
baz=93
RONA Rosalia, Austr 53.60 47 *e*P P **05 58 18.9 -0.1**
comp=Z,21nm,1.0s,SNR=7.1
K22A Casper 53.69 306 P P **05 58 20.0 +0.1**
baz=90
KRUC Moravsky 53.77 46 *e*P P **05 58 19.7 -0.4**
NEEM North Greenlan 53.81 358 *i* P P **05 58 19.7 -0.7**
NEEM IAmb IAmb 05 58 25.3
comp=Z,8.6nm,1.1s
DPC Dobruska-Polom 53.84 44 *e*P P **05 58 21.5 +0.8**
DPC Dobruska-Polom 53.84 44 *e*P P **05 58 21.5 +0.8**
TIP Timpagrande 53.85 58 IAMs_20 IAMs_20 06 20 22.8
comp=Z,722nm,20.0s
KSP Ksiaz 53.87 43 *e*P P **05 58 19.5 -1.4**
VRAC Vranov 53.92 45 *e*P P **05 58 20.9 -0.4**
VRAC Vranov 53.92 45 LR LR 06 19 09.1
comp=Z,331nm,19.5s,baz=252,slow=34
ANMO Albuquerque 54.02 297 P P **05 58 22.9 +0.4**
ANMO Albuquerque 54.02 297 P P **05 58 23.6 +1.1**
baz=84
ANMO Albuquerque 54.02 297 P P **05 58 22.9 +0.4**
ANMO pmax pmax
comp=Z,12nm,1.3s
ANMO Albuquerque 54.02 297 LR LR 06 18 51.7
comp=Z,451nm,21.9s,baz=182,slow=33
TULEG Thule 54.13 353 IAMs_20 IAMs_20 06 14 38.9
comp=Z,579nm,18.0s
HFS Hagfors 54.14 32 P P **05 58 23.1 +0.4**
comp=Z,18nm,0.7s,baz=232,slow=7.2,SNR=57
HFS LR LR 06 17 23.0
comp=Z,1μm,20.1s,baz=252,slow=32
comp=Z,18nm,0.7s
ZST Bratislava 54.17 47 *e*P P **05 58 23.1 0.0**
ZST pmax pmax
comp=Z,168nm,2.0s
ZST Bratislava 54.17 47 *e*P P **05 58 23.1 0.0**
GO02 Mina Guanaco 54.20 208 IAmb IAmb 05 58 41.0
comp=Z,20nm,1.1s
RWWY Rawlins 54.21 305 IAmb IAmb 05 58 32.3
comp=Z,19nm,0.9s
RWWY IAMs_20 IAMs_20 06 19 45.2
comp=Z,1μm,20.0s
MODS Modra-Piesok 54.30 47 *e*P P **05 58 24.0 -0.1**
MODS pmax pmax
comp=Z,72nm,1.5s
MODS Modra-Piesok 54.30 47 *e*P P **05 58 24.0 -0.1**
ITQB Itaqui 54.32 193 *e*P P **05 58 24.4 +0.2**
SMOL Smolenice 54.41 46 *e*P P **05 58 25.2 +0.3**
SMOL pmax pmax
comp=Z,12nm,0.8s
Y22D IRIS PASSCAL I 54.50 296 P P **05 58 26.2 +0.2**
baz=83
Y22F Passcal Instru 54.50 296 P P **05 58 26.2 +0.2**
baz=83
HPIG 54.52 287 IAmb IAmb 05 58 31.1
comp=Z,23nm,1.3s
MORC Moravsky Berou 54.57 45 IAmb IAmb 05 58 37.3
comp=Z,35nm,1.7s
MORC Moravsky Berou 54.57 45 *e*P P **05 58 26.3 +0.2**
JAVC Velka Javorina 54.59 46 *e*P P **05 58 25.7 -0.5**
MAUC Maruska 54.73 45 *e*P P **05 58 28.4 +1.2**
O20A White River Ci 55.05 303 IAmb IAmb 05 58 46.4
comp=Z,28nm,1.4s
O20A White River Ci 55.05 303 P P **05 58 30.6 +0.7**
baz=87,SNR=8.7
VYHS Vyhne 55.34 47 *e*P P **05 58 31.5 -0.1**
VYHS pmax pmax
comp=Z,11nm,1.0s
VYHS Vyhne 55.34 47 *e*P P **05 58 31.5 -0.1**
121A Cookes Peak, D 55.41 294 IAmb IAmb 05 58 44.9
comp=Z,19nm,0.9s
121A Cookes Peak, D 55.41 294 P P **05 58 33.3 +0.7**
baz=82,SNR=10
MVCO Mesa Verde 55.46 300 IAmb IAmb 05 58 50.5
comp=Z,21nm,1.2s
MVCO Mesa Verde 55.46 300 P P **05 58 33.5 +0.5**
baz=85,SNR=8.9
RLMT Red Lodge 55.66 309 IAmb IAmb 05 58 36.5
comp=Z,21nm,0.9s
RLMT Red Lodge 55.66 309 P P **05 58 34.6 +0.3**
baz=90,SNR=25

LANS **Liptovska Anna** **55.79 46** *e*P **P** **05 58 35.9 +1.0**
LANS pmax pmax
comp=Z,7,0nm,1.7s
LANS **Liptovska Anna** **55.79 46** *e*P **P** **05 58 35.9 +1.0**
PD31 **Pinedale Array** **55.92 307** IAmb IAmb 05 58 37.2
comp=Z,15nm,1.0s
PDAR **Pinedale Array** **55.92 307** P **P** **05 58 36.3 +0.1**
comp=Z,9.2nm,0.9s,baz=93,slow=7.5,SNR=65
PDAR LR LR 06 20 19.5
comp=Z,545nm,20.9s,baz=94,slow=34
comp=Z,9.2nm,0.9s
BW06 **Boulder Array** **55.92 307** P **P** **05 58 36.1 -0.1**
baz=88,SNR=23
EGMT **Eagleton** **56.03 313** IAMs_20 IAMs_20 06 19 37.0
comp=Z,733nm,21.0s
EGMT **Eagleton** **56.03 313** P **P** **05 58 37.2 +0.5**
baz=91,SNR=17
PSZ **Piszkesteto** **56.03 47** IAmb IAmb 05 59 02.3
comp=Z,27nm,1.6s
PSZ IAMs_20 IAMs_20 06 19 27.0
comp=Z,788nm,19.0s
OJC **Ojcow** **56.05 44** *e*P **P** **05 58 37.6 +0.9**
NIE **Niedzica** **56.34 45** *e*P **P** **05 58 41.2 +2.4**
LKWY **Lake** **56.48 309** IAmb IAmb 05 58 42.9
comp=Z,12nm,0.9s
LKWY IAMs_20 IAMs_20 06 20 50.1
comp=Z,898nm,21.0s
H17A **Grant Village** **56.61 309** P **P** **05 58 42.6 +1.5**
baz=88
W18A **Petrified Fore** **56.68 297** IAmb IAmb 05 58 51.2
comp=Z,12nm,0.9s
W18A **Petrified Fore** **56.68 297** P **P** **05 58 41.8 +0.2**
baz=83,SNR=7.8
FLWY **Flagg Ranch** **56.71 308** IAmb IAmb 05 58 47.2
comp=Z,23nm,1.2s
MOOW **Moose Ponds** **56.75 308** IAMs_20 IAMs_20 06 20 28.4
comp=Z,496nm,18.0s
SNOW **Snow King Moun** **56.77 307** IAmb IAmb 05 58 51.0
comp=Z,16nm,1.2s
TPAW **Teton Pass** **56.91 307** IAmb IAmb 05 58 51.5
comp=Z,14nm,1.1s
BSUT **Blindstream Ca** **56.94 304** IAmb IAmb 05 59 19.9
comp=Z,16nm,1.4s
P17A **Butcher Ranch,** **57.01 303** IAmb IAmb 05 58 52.9
comp=Z,14nm,1.1s
YHL **Hebgen Lake** **57.03 309** IAmb IAmb 05 58 54.3
comp=Z,22nm,1.1s
AHID **Auburn Hatcher** **57.05 307** IAmb IAmb 05 59 15.3
comp=Z,18nm,1.4s
AHID IAMs_20 IAMs_20 06 18 28.5
comp=Z,644nm,21.0s
CRVS **Cervenica-Dubn** **57.09 46** *e*P **P** **05 58 45.1 +1.0**
CRVS pmax pmax
comp=Z,86nm,1.8s
CRVS **Cervenica-Dubn** **57.09 46** *e*P **P** **05 58 45.1 +1.0**
RES **Resolute Bay** **57.10 346** LR LR 06 20 34.7
comp=Z,496nm,21.6s,baz=142,slow=33
HMU **Henry Mountain** **57.16 301** IAmb IAmb 05 59 20.0
comp=Z,23nm,1.2s
BOZ **Bozeman (W)** **57.32 310** P **P** **05 58 46.5 +0.5**
baz=88,SNR=12
TMUT **Trail Mountain** **57.39 303** IAmb IAmb 05 59 24.2
comp=Z,13nm,1.1s
Q16A **Castle Valley** **57.40 302** IAmb IAmb 05 58 56.2
comp=Z,14nm,1.0s
HWUT **Hardware Ranch** **57.47 305** IAmb IAmb 05 58 48.2
comp=Z,8.9nm,0.8s
HWUT IAMs_20 IAMs_20 06 20 41.6
comp=Z,835nm,20.0s
KOLS **Kolonicke sedl** **57.63 46** *e*P **P** **05 58 49.0 +1.1**
KOLS pmax pmax
comp=Z,8.0nm,0.8s
KOLS **Kolonicke sedl** **57.63 46** *e*P **P** **05 58 49.0 +1.1**
MPU **Maple Canyon** **57.65 303** IAmb IAmb 05 58 50.1
comp=Z,13nm,0.9s
TUC **Tucson** **57.95 294** P **P** **05 58 50.4 -0.2**
TUC **Tucson** **57.95 294** IAMs_20 IAMs_20 06 22 05.8
comp=Z,564nm,20.0s
TUC **Tucson** **57.95 294** P **P** **05 58 51.1 +0.5**
baz=80
TUC **Tucson** **57.95 294** P **P** **05 58 50.4 -0.2**
TUC pmax pmax
comp=Z,8.0nm,0.9s
WUAZ **Wupatki** **57.95 298** IAmb IAmb 05 58 53.2
comp=Z,15nm,1.0s
WUAZ **Wupatki** **57.95 298** P **P** **05 58 51.7 +1.1**
baz=82,SNR=11
NLU **North Lily Min** **57.99 303** IAmb IAmb 05 59 00.4
comp=Z,11nm,1.0s
DUG **Dugway, Tooele** **58.54 304** IAMs_20 IAMs_20 06 21 51.8
comp=Z,810nm,20.0s
DUG **Dugway, Tooele** **58.54 304** P **P** **05 58 54.8 +0.2**
baz=84,SNR=24
U15A **North Rim** **58.57 299** IAmb IAmb 05 59 05.4
comp=Z,9.2nm,1.0s
BGU **Big Grassy Mou** **58.63 305** IAmb IAmb 05 59 04.4
comp=Z,18nm,1.0s
LVV **L'vov** **58.77 45** *e*P **P** **05 58 56.5 +0.6**
PABE **Paberze** **58.85 38** *e*P **P** **05 58 56.5 +0.3**
MTSE **Matsula** **58.98 35** *e*P **P** **05 58 57.0 -0.1**
SZCU **Shurtz Canyon** **59.05 301** IAmb IAmb 05 59 03.4
comp=Z,18nm,1.5s
LPIG **La Paz** **59.23 285** LR LR 06 25 12.1
comp=Z,233nm,19.8s,baz=79,slow=37
CCUT **Cedar City** **59.27 301** IAmb IAmb 05 59 10.2
comp=Z,18nm,1.1s
MEF **Metsahovi** **59.41 33** *e*P **P** **05 59 00.1 0.0**
HLID **Hailey** **59.42 308** IAmb IAmb 05 59 02.2
comp=Z,8.2nm,0.8s
HLID IAMs_20 IAMs_20 06 22 13.0
comp=Z,569nm,20.0s
HLID **Hailey** **59.42 308** P **P** **05 59 01.2 +0.5**
baz=85,SNR=18
Y14A **Wickenburg** **59.52 297** IAmb IAmb 05 59 11.5
comp=Z,13nm,0.9s
BURAR **Bucovina Array** **59.62 48** P **P** **05 59 03.3 +1.4**
214A **Organ Pipe Nat** **59.71 294** P **P** **05 59 03.6 +0.9**
baz=79,SNR=18
YKA **Yellowknife Ar** **59.81 330** P **P** **05 59 02.7 -0.1**
YKA **Yellowknife Ar** **59.81 330** P **P** **05 59 02.7 -0.1**
YKA **Yellowknife Ar** **59.81 330** P **P** **05 59 02.5 -0.3**
comp=Z,5.4nm,1.1s,baz=97,slow=7.4,SNR=31
YKA LR LR 06 24 01.4
comp=Z,515nm,19.8s,baz=93,slow=35
comp=Z,5.4nm,1.1s
SPR3 **Spring Creek 3** **59.84 302** IAmb IAmb 05 59 13.9
comp=Z,16nm,0.9s
MLR **Muntele Rosu** **60.26 50** IAMs_20 IAMs_20 06 21 35.1
comp=Z,1µm,20.0s
MLR **Muntele Rosu** **60.26 50** LR LR 06 21 57.2
comp=Z,885nm,22.0s,baz=266,slow=33
ELK **Elko** **60.31 305** IAmb IAmb 05 59 16.1
comp=Z,12nm,1.1s
ELK **Elko** **60.31 305** LR LR 06 24 04.1
comp=Z,479nm,18.4s,baz=84,slow=35
PIX **Pinacate** **60.32 294** IAmb IAmb 05 59 12.2
comp=Z,13nm,1.1s
FINES **FINESS Array B** **60.34 32** P **P** **05 59 06.9 +0.5**
FINES **FINESS Array B** **60.34 32** P **P** **05 59 06.9 +0.5**
FINES **FINESS Array B** **60.34 32** P **P** **05 59 06.8 +0.3**
comp=Z,7.2nm,0.8s,baz=267,slow=3.8,SNR=21
FINES LR LR 06 20 44.6
comp=Z,1µm,21.8s,baz=262,slow=32
comp=Z,7.2nm,0.8s
FIA1 **FINESS Array S** **60.34 32** P **P** **05 59 06.8 +0.3**
113A **Mohawk Valley,** **60.35 295** IAmb IAmb 05 59 12.6
comp=Z,12nm,1.2s
PDMCI **Parker Dam,Lak** **60.39 297** P **P** **05 59 08.4 +1.1**
baz=80
PLID **Pearl Lake** **60.43 310** IAmb IAmb 05 59 09.0
comp=Z,16nm,0.8s
NACGM **Naroch** **60.44 39** *e*P **P** **05 59 07.1 -0.2**
comp=Z,27nm,1.2s,baz=270
MFID **Camas Ranch** **60.46 308** IAmb IAmb 05 59 09.4
comp=Z,14nm,0.9s
VSU **Vasula** **60.49 35** *e*P **P** **05 59 07.6 +0.1**
IDI **Anoyia** **60.72 62** LR LR 06 24 42.5
comp=Z,87nm,19.4s,baz=297,slow=35
V12A **Nelson** **60.72 299** IAmb IAmb 05 59 19.6
comp=Z,13nm,1.2s
BLYC **Blythe** **60.80 297** IAmb IAmb 05 59 48.3
comp=Z,20nm,1.6s
BRLDA **Berland Lookou** **60.89 320** IAmb IAmb 05 59 11.2
comp=Z,14nm,0.9s
R11B **Troy Canyon, C** **60.90 302** IAmb IAmb 05 59 16.3
comp=Z,22nm,1.8s
R11B **Troy Canyon, C** **60.90 302** P **P** **05 59 11.2 +0.3**
baz=82,SNR=10.0
NEW **Newport** **60.95 313** IAMs_20 IAMs_20 06 22 50.3
comp=Z,746nm,20.0s
NEW **Newport** **60.95 313** P **P** **05 59 11.6 +0.6**
baz=86,SNR=19
NEW **Newport** **60.95 313** LR LR 06 23 32.8
comp=Z,655nm,20.6s,baz=84,slow=34
MNK **Minsk** **61.09 40** *i* P **P** **05 59 10.5 -1.1**
comp=E,12nm,0.8s
MNK *i* P **P** **05 59 10.5 -1.1**
comp=N,13nm,0.8s
MNK *i* P **P** **05 59 10.5 -1.1**
comp=Z,12nm,0.8s,baz=271
MNK *i* PcP **PcP** **05 59 53.6 -1.0**
MNK *i* PP **PP** **06 01 24.8 -1.2**
MNK *i* PPP PPP 06 02 48.8
MNK *i* S **S** **06 07 29.7 -0.3**
MNK *i* SS SS 06 11 43.3 +14
MNK *i* LQ LQ 06 17 28.4
MNK *i* LR LR 06 20 48.9
MNK *i* LRM MLR 06 23 09.2
comp=N,325nm,17.1s
MNK *i* LRM MLR 06 23 16.0
comp=Z,576nm,17.1s
MNK *i* LRM MLR 06 23 19.2
comp=E,199nm,17.1s
MNK **Minsk** **61.09 40** *i* P **P** **05 59 10.5 -1.1**
MNK *i* 05 59 53.6
MNK *i* 06 01 24.8
MNK *i* S **S** **06 07 29.7 -0.3**
MNK pmax pmax
comp=Z,12nm,0.9s
MNK pmax pmax
comp=E,12nm,0.9s
MNK pmax pmax
comp=N,13nm,0.8s
ARCES **ARCESS Array B** **61.11 22** P **P** **05 59 12.0 +0.4**
ARCES **ARCESS Array B** **61.11 22** P **P** **05 59 12.0 +0.4**
ARCES pmax pmax
comp=Z,24nm,1.0s
ARCES **ARCESS Array B** **61.11 22** P **P** **05 59 11.8 +0.1**
comp=Z,15nm,0.8s,baz=265,slow=4.4,SNR=18
ARCES LR LR 06 20 30.5
comp=Z,458nm,21.9s,baz=262,slow=31
comp=Z,15nm,0.8s
SPITS **Spitsbergen Ar** **61.12 12** P **P** **05 59 13.9 +2.4**
comp=Z,5.0nm,0.8s,baz=297,slow=9.5,SNR=4.5
SPITS LR LR 06 19 24.2
comp=Z,307nm,21.1s,baz=208,slow=30
comp=Z,5.0nm,0.8s
GLA **Glamis** **61.18 296** P **P** **05 59 13.3 +0.6**
baz=79
F10A **Beach Ranch, E** **61.21 311** IAmb IAmb 05 59 21.9
comp=Z,11nm,1.1s
IRM **Iron Mountain** **61.23 297** P **P** **05 59 14.6 +1.5**
baz=80
GMRC **Granite Mounta** **61.54 298** P **P** **05 59 16.3 +1.1**
baz=80,SNR=9.6
BC3 **Big Chuckawall** **61.58 297** P **P** **05 59 16.4 +0.8**
baz=79
TUQ **Turquoise Moun** **61.63 299** P **P** **05 59 17.2 +1.2**
baz=80,SNR=5.9
C09A **Chrisman Ranch** **61.76 313** IAmb IAmb 05 59 17.0
comp=Z,8.0nm,0.9s
BELC **Belle Mtn. Jos** **61.96 297** P **P** **05 59 19.8 +1.6**
baz=79
WCT **Wildcat Mounta** **61.96 300** IAmb IAmb 05 59 28.8
comp=Z,17nm,1.1s
SWSC **Sam W. Stewart** **62.00 296** P **P** **05 59 20.1 +1.8**
baz=79
KIEV **Kiev** **62.06 44** P **P** **05 59 17.6 -0.7**
KIEV IAmb IAmb 05 59 18.6
comp=Z,12nm,0.8s
KIEV **Kiev** **62.06 44** P **P** **05 59 17.6 -0.7**
KIEV pmax pmax
comp=Z,12nm,0.9s
AKASG **Malin Array Be** **62.07 44** P **P** **05 59 17.8 -0.6**
comp=Z,8.1nm,0.7s,baz=272,slow=6.1,SNR=26
AKASG LR LR 06 24 03.4
comp=Z,290nm,19.4s,baz=279,slow=34
comp=Z,8.1nm,0.7s
AKBB **Malin Array Si** **62.07 44** IAmb IAmb 05 59 18.6
comp=Z,14nm,0.9s
AKBB **Malin Array Si** **62.07 44***ce*P **P** **05 59 16.6 -1.8**
AKBB pmax pmax
comp=Z,17nm,0.9s
HEC **Hector,Ludlow** **62.08 298** P **P** **05 59 19.8 +1.0**
baz=79
GWY **Greenwater Val** **62.10 300** IAmb IAmb 05 59 29.1
comp=Z,12nm,1.1s
FURC **Furnace Creek,** **62.20 300** P **P** **05 59 21.1 +1.6**
baz=80
IKP **In-Ko-Pah, Jac** **62.31 296** P **P** **05 59 21.1 +0.6**
baz=78
PMD **Palm Desert** **62.34 297** IAmb IAmb 05 59 30.9
comp=Z,12nm,1.2s
GSC **Goldstone, Bar** **62.37 299** IAmb IAmb 05 59 39.9
comp=Z,23nm,1.7s
GSC **Goldstone, Bar** **62.37 299** P **P** **05 59 21.2 +0.4**
baz=79
GMN **Gold Mountain** **62.37 301** IAmb IAmb 05 59 30.6
comp=Z,7.8nm,1.0s
J08A **Circle Bar Ran** **62.38 308** IAmb IAmb 05 59 32.2
comp=Z,9.0nm,1.0s
TPFO **Pinon Flats** **62.41 297** P **P** **05 59 21.5 +0.3**
baz=79
PFO **Pinyon Flats O** **62.41 297** P **P** **05 59 21.7 +0.6**
baz=79
PFO **Pinyon Flats O** **62.41 297** LR LR 06 24 30.5
comp=Z,362nm,21.7s,baz=88,slow=34
E08A **Dider Farm, El** **62.42 311** IAmb IAmb 05 59 35.9
comp=Z,12nm,1.0s
G08A **Pilot Rock** **62.49 310** IAmb IAmb 05 59 30.0
comp=Z,9.4nm,1.1s
GRAC **Grapevine Rang** **62.51 301** P **P** **05 59 22.9 +1.2**
baz=80,SNR=8.1
MONP2 **Monument Peak** **62.52 296** P **P** **05 59 22.8 +0.8**
baz=78
RRX **Edison Barstow** **62.60 298** P **P** **05 59 23.5 +1.3**
baz=79
WVOR **Wild Horse Val** **62.62 307** IAMs_20 IAMs_20 06 21 21.8
comp=Z,640nm,22.0s
BBRC **Big Bear Solar** **62.66 298** P **P** **05 59 23.8 +0.9**
baz=79
LCH **Last Change Ra** **62.69 301** IAmb IAmb 05 59 32.7
comp=Z,7.2nm,0.9s
MPMC **Manual Prospec** **62.78 300** P **P** **05 59 24.4 +0.7**
baz=79,SNR=9.7
NVAR **Mina Array Bea** **62.99 302** P **P** **05 59 25.1 0.0**
NVAR **Mina Array Bea** **62.99 302** P **P** **05 59 25.3 +0.2**
comp=Z,2.2nm,0.8s,baz=84,slow=5.6,SNR=18
NVAR LR LR 06 24 23.9
comp=Z,965nm,21.8s,baz=82,slow=34
comp=Z,2.2nm,0.8s
MURC **Murrieta** **63.01 297** P **P** **05 59 26.3 +1.3**
baz=78
I07A **Izee** **63.03 309** IAmb IAmb 05 59 48.0
comp=Z,9.7nm,1.2s
LRMC **Laurel Mtn Rad** **63.04 299** P **P** **05 59 25.6 +0.3**
baz=79
RYN **Ryan** **63.13 303** IAmb IAmb 05 59 35.3
comp=Z,7.2nm,0.9s
CWC **Cottonwood Cre** **63.17 300** P **P** **05 59 27.6 +1.3**
baz=79
TIN **Tinemaha, Big** **63.18 301** P **P** **05 59 27.3 +1.0**
baz=80
MXC **Moxie City** **63.26 312** IAmb IAmb 05 59 36.2
comp=Z,17nm,1.1s
BFSC **Mount Baldy Ra** **63.26 298** P **P** **05 59 27.9 +1.1**
baz=78
CCAC **Calif City Air** **63.37 299** IAmb IAmb 05 59 37.5
comp=Z,14nm,0.9s
EDW2 **Edwards Air Fo** **63.41 298** P **P** **05 59 28.9 +1.2**
baz=78
LTY **Liberty** **63.43 312** IAmb IAmb 05 59 36.4
comp=Z,12nm,1.0s
ISA **Isabella, Lake** **63.64 299** P **P** **05 59 30.3 +1.1**
baz=79,SNR=13
G06A **Carlson Farm,** **63.67 310** IAmb IAmb 05 59 39.2
comp=Z,18nm,1.1s
MDPB **Devils Postpil** **63.74 302** IAmb IAmb 05 59 41.4
comp=Z,14nm,1.1s
APA **Apatity** **63.81 25** *j*P **P** **05 59 28.2 -1.5**
APA pmax pmax
comp=Z,11nm,1.1s
FMP **Fort Macarthur** **63.89 297** P **P** **05 59 31.2 +0.4**
baz=78
WRGLY **Wrigley** **63.90 330** P **P** **05 59 30.9 +0.6**
baz=89
ARVC **Arvin** **64.03 299** P **P** **05 59 33.0 +1.3**
baz=78
CIS **Catalina Islan** **64.05 297** P **P** **05 59 31.6 -0.4**
baz=78
C36M **Paulatuk** **64.14 337** IAMs_20 IAMs_20 06 26 24.8
comp=Z,990nm,19.0s
KOTAN **Kotaneelee Air** **64.30 327** P **P** **05 59 34.3 +1.3**
baz=87
J05D **Fort Rock, OR** **64.39 308** P **P** **05 59 34.9 +0.8**
A36M **Sachs Harbour** **64.60 340** IAMs_20 IAMs_20 06 25 42.7
comp=Z,963nm,19.0s
A36M **Sachs Harbour** **64.60 340** P **P** **05 59 35.9 +1.1**
baz=91,SNR=9.8
PKM **Mcpherson Peak** **64.87 299** P **P** **05 59 38.2 +0.7**
baz=78
ORV **Oroville** **65.24 304** IAmb IAmb 05 59 48.8
comp=Z,17nm,1.3s
YBH **Yreka Blue Hor** **65.73 307** P **P** **05 59 43.0 +0.2**
YBH **Yreka Blue Hor** **65.73 307** P **P** **05 59 43.0 +0.2**
YBH pmax pmax
comp=Z,7.0nm,1.0s
YBH **Yreka Blue Hor** **65.73 307** LR LR 06 26 42.0
comp=Z,415nm,21.0s,baz=71,slow=34
HUMO **Hull Mountain** **65.75 308** P **P** **05 59 42.6 -0.2**
HUMO IAmb IAmb 06 00 03.0
comp=Z,13nm,1.3s
OBN **Obninsk** **66.05 38** *j*i*P* **P** **05 59 44.8 +0.4**
OBN *e* 06 00 13.4
OBN *e*SS SS 06 12 53.5 +6.7
OBN pmax pmax
comp=Z,110nm,1.7s
OBN **Obninsk** **66.05 38** LR LR 06 26 08.2
comp=Z,1µm,18.8s,baz=292,slow=34
TGTN **Hyland Airport** **66.25 329** P **P** **05 59 47.2 +1.5**
baz=84
HOPS **Hopland Field** **66.55 304** IAMs_20 IAMs_20 06 26 35.9
comp=Z,605nm,18.0s
MOS **Moscow** **66.56 38** *e*P **P** **05 59 48.1 +0.4**
MOS *e* 06 02 17.4
MOS pmax pmax
comp=Z,58nm,1.2s
MOS MLR MLR
comp=Z,600nm,19.0s
WTLY **Watson Lake, Y** **66.67 327** P **P** **05 59 48.5 +0.1**
baz=83
BR131 **Keskin Array S** **66.72 55** P **P** **05 59 49.0 -0.2**
BR131 IAmb IAmb 05 59 50.6
comp=Z,11nm,0.9s
BR131 **Keskin Array S** **66.72 55** P **P** **05 59 49.1 -0.2**
BR131 pmax pmax
comp=Z,11nm,0.9s
BRTR **Keskin Array B** **66.72 55** P **P** **05 59 50.0 +0.7**
BRTR **Keskin Array B** **66.72 55***ce*P **P** **05 59 50.0 +0.7**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR **Keskin Array B** **66.72 55** P **P** **05 59 49.9 +0.6**
comp=Z,4.2nm,0.7s,baz=265,slow=6.0,SNR=17
BRTR LR LR 06 28 46.8
comp=Z,284nm,18.5s,baz=0.0,slow=36
comp=Z,4.2nm,0.7s
KLMR **Klimovskoe** **66.86 32** *e*P **P** **05 59 47.4 -2.1**
KLMR pmax pmax
comp=Z,28nm,1.3s
BBB **Bella Bella** **67.49 319** LR LR 06 26 57.8
comp=Z,628nm,21.9s,baz=76,slow=34
DLBC **Dease Lake** **67.53 325** P **P** **05 59 54.7 +0.7**
DLBC IAmb IAmb 05 59 56.0
comp=Z,14nm,1.3s
DLBC **Dease Lake** **67.53 325** P **P** **05 59 54.5 +0.6**
baz=81
DLBC **Dease Lake** **67.53 325** LR LR 06 27 57.5
comp=Z,463nm,20.1s,baz=60,slow=35
INK **Inuvik** **67.63 336** P **P** **05 59 54.2 -0.1**
INK IAmb IAmb 06 00 03.4
comp=Z,8.4nm,1.1s
INK **Inuvik** **67.63 336** P **P** **05 59 55.2 +0.9**
baz=82
INK **Inuvik** **67.63 336** P **P** **05 59 54.2 -0.1**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK **Inuvik** **67.63 336** LR LR 06 27 19.1
comp=Z,562nm,22.0s,baz=12,slow=34
LPSR **Galich'ya Gora** **67.82 41** *e*P **P** **05 59 53.8 -2.0**
LPSR pmax pmax
comp=Z,20nm,0.8s
F31M **Tsiigehtchic** **67.84 335** IAMs_20 IAMs_20 06 27 36.5
comp=Z,964nm,21.0s
F31M **Tsiigehtchic** **67.84 335** P **P** **05 59 57.0 +1.4**
baz=82
R33M **Jennings River** **67.86 327** IAmb IAmb 06 00 06.2
comp=Z,12nm,1.1s
R33M IAMs_20 IAMs_20 06 26 57.4
comp=Z,674nm,20.0s
R33M **Jennings River** **67.86 327** P **P** **05 59 57.1 +1.0**
baz=81
H09N1 **TRISTAN DA CUN** **67.88 152** T T 07 13 43.2
SNR=7.0
T35M **Bob Quinn** **67.89 324** IAMs_20 IAMs_20 06 26 44.2
comp=Z,779nm,20.0s
T35M **Bob Quinn** **67.89 324** P **P** **05 59 56.8 +0.6**
baz=80
H09W1 **TRISTAN DA CUN** **67.89 152** T T 07 13 44.9
SNR=46
G31M **Satah River** **68.12 335** P **P** **05 59 58.1 +0.7**
baz=81,SNR=6.2
VORR **Voronezh** **68.17 42** P **P** **05 59 58.7 +0.7**
VORR pmax pmax
comp=Z,31nm,1.5s
S34M **Telegraph Cree** **68.19 325** IAMs_20 IAMs_20 06 27 47.3
comp=Z,596nm,21.0s
S34M **Telegraph Cree** **68.19 325** P **P** **05 59 58.7 +0.7**
baz=80
VSR **Storozhevoye** **68.23 42** *e*P **P** **05 59 56.4 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.7s
H31M **Peel River** **68.33 334** P **P** **06 00 00.4 +1.5**
baz=80
VORD **Divnogorie** **68.35 43** *e*P **P** **05 59 56.5 -2.6**
VORD pmax pmax
comp=Z,10.0nm,0.7s
ANN **Anapa** **68.40 49** *e*P **P** **05 59 54.9 -4.6**
ANN MLR MLR
comp=Z,459nm,16.0s
PLCA **Paso Flores** **68.46 201** P **P** **05 59 59.0 -0.9**
PLCA **Paso Flores** **68.46 201** P **P** **05 59 59.0 -0.9**
comp=Z,2.7nm,0.9s,baz=20,slow=8.0,SNR=5.4
PLCA LR LR 06 29 15.6
comp=Z,353nm,21.7s,baz=26,slow=35
comp=Z,2.7nm,0.9s
PLCA **Paso Flores** **68.46 201** *e*P **P** **05 59 59.3 -0.6**
FARO **Faro, Yukon** **68.53 330** IAmb IAmb 06 00 18.2
comp=Z,14nm,1.3s
FARO **Faro, Yukon** **68.53 330** P **P** **06 00 00.9 +0.8**
baz=80,SNR=7.3
F30M **Barrier River** **68.59 336** P **P** **06 00 00.9 +0.6**
baz=80
N32M **Quiet Lake** **68.59 329** IAMs_20 IAMs_20 06 28 05.7
comp=Z,925nm,21.0s
N32M **Quiet Lake** **68.59 329** P **P** **06 00 01.3 +0.8**
baz=80
Q32M **Nakina River** **68.59 326** P **P** **06 00 00.7 -0.1**
baz=79
P33M **Teslin, Yukon** **68.64 328** IAMs_20 IAMs_20 06 27 30.9
comp=Z,884nm,22.0s
P33M **Teslin, Yukon** **68.64 328** P **P** **06 00 02.0 +1.1**
baz=79
G30M **tAoh Zrail Nji** **68.87 335** IAmb IAmb 06 01 06.6
comp=Z,23nm,1.9s
G30M IAMs_20 IAMs_20 06 29 18.7
comp=Z,1µm,20.0s
G30M **tAoh Zrail Nji** **68.87 335** P **P** **06 00 03.2 +1.0**
baz=79
V35K **Ketchikan** **68.94 322** IAMs_20 IAMs_20 06 28 08.2
comp=Z,580nm,19.0s
V35K **Ketchikan** **68.94 322** P **P** **06 00 03.9 +1.2**
baz=78
M31M **Drury Creek, Y** **69.01 330** IAMs_20 IAMs_20 06 29 05.7
comp=Z,804nm,20.0s
M31M **Drury Creek, Y** **69.01 330** P **P** **06 00 04.2 +1.0**
baz=79
WRAK **Wrangell Islan** **69.13 324** P **P** **06 00 02.6 -1.2**
baz=78
EPYK **Eagle Plains** **69.18 334** IAmb IAmb 06 00 13.6
comp=Z,10nm,1.1s
EPYK **Eagle Plains** **69.18 334** P **P** **06 00 05.4 +1.2**
baz=78

P32M	**Atlin**	**69.20**	**327**		IAMs_20	IAMs_20	06 30 21.9		
	comp=Z,619nm,19.0s								
P32M	**Atlin**	**69.20**	**327**		P	**P**	**06 00 04.9**	**+0.5**	
	baz=78								
E29M	**Blow River**	**69.22**	**337**		IAMs_20	IAMs_20	06 29 34.9		
	comp=Z,696nm,19.0s								
E29M	**Blow River**	**69.22**	**337**		P	**P**	**06 00 05.8**	**+1.6**	
	baz=78								
I30M	**Mount Dempster**	**69.28**	**333**		IAmb	IAmb	06 00 17.6		
	comp=Z,9.7nm,1.2s								
I30M					IAMs_20	IAMs_20	06 29 29.6		
	comp=Z,910nm,18.0s								
I30M	**Mount Dempster**	**69.28**	**333**		P	**P**	**06 00 06.0**	**+1.1**	
	baz=78								
D28M	**Stokes Point**	**69.32**	**338**		P	**P**	**06 00 05.9**	**+1.1**	
	baz=78								
J30M	**Hart River**	**69.39**	**333**		IAmb	IAmb	06 00 23.8		
	comp=Z,19nm,1.4s								
J30M					IAMs_20	IAMs_20	06 29 26.6		
	comp=Z,903nm,20.0s								
J30M	**Hart River**	**69.39**	**333**		P	**P**	**06 00 06.7**	**+1.1**	
	baz=78								
WHY	**Whitehorse**	**69.55**	**328**		P	**P**	**06 00 06.3**	**-0.3**	
	baz=78								
U33K	**Whale Pass**	**69.61**	**323**		P	**P**	**06 00 06.9**	**0.0**	
	baz=78								
MMAI	**Mount Meron Ar**	**69.72**	**62**		P	**P**	**06 00 09.1**	**+1.0**	
	comp=Z,1.9nm,0.5s,baz=287,slow=11,SNR=6.5								
MMAI					LR	LR	06 29 09.3		
	comp=Z,83nm,21.9s,baz=264,slow=35								
	comp=Z,1.9nm,0.5s								
CRAG	**Craig**	**69.75**	**323**		P	**P**	**06 00 07.3**	**-0.4**	
	baz=77								
VRH	**Novokhopyorsk**	**69.80**	**42**	*e*	P	**P**	**06 00 08.3**	**+0.2**	
VRH					pmax	pmax			
	comp=Z,42nm,1.8s								
H29M	**Whitestone**	**69.87**	**334**		IAmb	IAmb	06 00 19.7		
	comp=Z,17nm,1.1s								
H29M	**Whitestone**	**69.87**	**334**		P	**P**	**06 00 08.6**	**+0.3**	
	baz=77								
M30M	**Minto, Yukon**	**70.03**	**331**		IAmb	IAmb	06 00 38.9		
	comp=Z,26nm,1.6s								
M30M	**Minto, Yukon**	**70.03**	**331**		P	**P**	**06 00 09.6**	**+0.2**	
	baz=77								
SKAG	**Skagway**	**70.03**	**327**		P	**P**	**06 00 09.9**	**+0.5**	
	baz=77								
K29M	**Barlow Dome**	**70.06**	**332**		IAmb	IAmb	06 00 27.1		
	comp=Z,13nm,1.4s								
K29M	**Barlow Dome**	**70.06**	**332**		P	**P**	**06 00 10.5**	**+0.8**	
	baz=77								
S32K	**Killisnoo**	**70.10**	**325**		P	**P**	**06 00 09.4**	**-0.4**	
	baz=77								
O30N	**Mendenhall**	**70.11**	**329**		IAmb	IAmb	06 00 39.6		
	comp=Z,27nm,1.5s								
O30N					IAMs_20	IAMs_20	06 28 51.8		
	comp=Z,849nm,21.0s								
O30N	**Mendenhall**	**70.11**	**329**		P	**P**	**06 00 09.9**	**0.0**	
	baz=77,SNR=9.0								
F28M	**Old Crow**	**70.11**	**336**		IAmb	IAmb	06 00 13.3		
	comp=Z,12nm,1.1s								
F28M					IAMs_20	IAMs_20	06 28 35.6		
	comp=Z,809nm,22.0s								
F28M	**Old Crow**	**70.11**	**336**		P	**P**	**06 00 10.1**	**+0.3**	
	baz=76,SNR=10.0								
J29N	**Klondike Camp**	**70.21**	**333**		IAmb	IAmb	06 00 14.4		
	comp=Z,20nm,1.3s								
J29N					IAMs_20	IAMs_20	06 30 13.4		
	comp=Z,953nm,20.0s								
EIL	**Elat**	**70.28**	**66**		LR	LR	06 30 48.1		
	comp=Z,438nm,20.6s,baz=255,slow=36								
SOC	**Sochi**	**70.28**	**50**	*e*	P	**P**	**06 00 10.6**	**-0.6**	
SOC				*e*			06 02 42.9		
SOC				*e*	S	**S**	**06 09 24.1**	**+1.4**	
SOC				*e*	SS	**SS**	**06 13 54.7**	**+2.0**	
SOC					pmax	pmax			
	comp=Z,20nm,1.1s								
SOC					MLR	MLR			
	comp=Z,231nm,17.0s								
ERBR	**Yeremizino-Bor**	**70.28**	**48**	*e*	P	**P**	**06 00 12.3**	**+1.1**	
ERBR					pmax	pmax			
	comp=Z,58nm,1.9s								
GHAJ	**Ghor Haditha**	**70.32**	**64**		IAMs_20	IAMs_20	06 33 18.3		
	comp=Z,376nm,19.0s								
ARPR	**Arapgir-MALATY**	**70.41**	**55**		IAmb	IAmb	06 00 14.0		
	comp=Z,15nm,1.1s								
L29M	**L29M**	**70.50**	**331**		IAmb	IAmb	06 00 53.9		
	comp=Z,11nm,1.2s								
L29M	**L29M**	**70.50**	**331**		P	**P**	**06 00 13.2**	**+0.9**	
	baz=76								
PLBC	**Pleasant Camp**	**70.55**	**327**		P	**P**	**06 00 13.6**	**+1.0**	
	baz=76								
SIT	**Sitka**	**70.59**	**325**		P	**P**	**06 00 13.4**	**+0.6**	
	baz=76								
I28M	**Miner Creek**	**70.68**	**334**		IAmb	IAmb	06 01 13.9		
	comp=Z,19nm,1.6s								
I28M	**Miner Creek**	**70.68**	**334**		P	**P**	**06 00 14.8**	**+1.4**	
	baz=75								
P30M	**Million Dollar**	**70.68**	**328**		P	**P**	**06 00 14.3**	**+0.8**	
	baz=76								
HYT	**Haines Junctio**	**70.77**	**329**		IAmb	IAmb	06 00 26.7		
	comp=Z,16nm,1.5s								
HYT	**Haines Junctio**	**70.77**	**329**		P	**P**	**06 00 15.1**	**+1.0**	
	baz=76								
DAWY	**Dawson**	**70.81**	**332**		P	**P**	**06 00 14.7**	**+0.5**	
DAWY					IAmb	IAmb	06 00 31.5		
	comp=Z,13nm,1.2s								
DAWY	**Dawson**	**70.81**	**332**		P	**P**	**06 00 15.3**	**+1.2**	
	baz=75								
M29M	**Somme Creek**	**70.81**	**331**		P	**P**	**06 00 15.3**	**+1.0**	
M29M					IAmb	IAmb	06 01 10.9		
	comp=Z,21nm,1.6s								
M29M					IAMs_20	IAMs_20	06 28 47.2		
	comp=Z,1μm,22.0s								
M29M	**Somme Creek**	**70.81**	**331**		P	**P**	**06 00 15.4**	**+1.0**	
	baz=76								
S31K	**Pelican**	**70.84**	**326**		P	**P**	**06 00 15.3**	**+1.0**	
	baz=76								
H27K	**Steamboat Moun**	**71.10**	**335**		P	**P**	**06 00 16.6**	**+0.7**	
	baz=74								
YUK6	**Outpost Mounta**	**71.15**	**329**		P	**P**	**06 00 16.8**	**+0.3**	
	baz=75								
YUK4	**Talbot Arm**	**71.18**	**329**		P	**P**	**06 00 16.9**	**+0.3**	
	baz=75								
P29M	**Windy Craggy**	**71.18**	**328**		IAMs_20	IAMs_20	06 29 44.2		
	comp=Z,683nm,20.0s								
P29M	**Windy Craggy**	**71.18**	**328**		P	**P**	**06 00 17.9**	**+1.4**	
	baz=75								
C26K	**Camden Bay**	**71.25**	**339**		P	**P**	**06 00 18.5**	**+1.9**	
	baz=72								
I27K	**Kandik River**	**71.31**	**334**		P	**P**	**06 00 18.1**	**+0.9**	
	baz=74								
EGAK	**Eagle**	**71.36**	**333**		IAMs_20	IAMs_20	06 30 26.5		
	comp=Z,903nm,20.0s								
EGAK	**Eagle**	**71.36**	**333**		P	**P**	**06 00 18.3**	**+0.9**	
	baz=74								
O29M	**Mount Kennedy**	**71.42**	**328**		IAMs_20	IAMs_20	06 29 44.3		
	comp=Z,916nm,22.0s								
O29M	**Mount Kennedy**	**71.42**	**328**		P	**P**	**06 00 18.8**	**+0.7**	
	baz=75								
F26K	**Sheenjek River**	**71.67**	**337**		P	**P**	**06 00 20.8**	**+1.5**	
	baz=72								
YUK8	**Steele Glacier**	**71.71**	**330**		P	**P**	**06 00 21.3**	**+1.4**	
	baz=74								
G26K	**Porcupine Rive**	**71.76**	**336**		P	**P**	**06 00 21.0**	**+1.2**	
	baz=72								
BVCY	**Beaver Creek**	**71.89**	**331**		P	**P**	**06 00 22.0**	**+1.2**	
	baz=74								
YUK3	**Moose Creek**	**71.89**	**330**		P	**P**	**06 00 21.8**	**+0.8**	
	baz=74,SNR=8.2								
BMAR	**Burnt Mountain**	**71.91**	**336**		P	**P**	**06 00 22.4**	**+1.6**	
D25K	**Kavik River**	**71.93**	**339**		IAMs_20	IAMs_20	06 31 28.5		
	comp=Z,776nm,20.0s								
D25K	**Kavik River**	**71.93**	**339**		P	**P**	**06 00 22.6**	**+1.8**	
	baz=71								
K27K	**Chicken**	**71.95**	**333**		IAmb	IAmb	06 01 00.0		
	comp=Z,16nm,1.6s								
K27K					IAMs_20	IAMs_20	06 30 58.3		
	comp=Z,884nm,19.0s								
K27K	**Chicken**	**71.95**	**333**		P	**P**	**06 00 22.8**	**+1.8**	
	baz=73								
PNL	**Peninsula**	**71.99**	**328**		P	**P**	**06 00 22.6**	**+1.3**	
	baz=74								
I26K	**Coal Creek Min**	**72.01**	**334**		P	**P**	**06 00 23.0**	**+1.7**	
	baz=72								
E25K	**Arctic Village**	**72.04**	**337**		IAmb	IAmb	06 00 34.1		
	comp=Z,15nm,0.9s								
E25K					IAMs_20	IAMs_20	06 31 36.5		
	comp=Z,477nm,19.0s								
E25K	**Arctic Village**	**72.04**	**337**		P	**P**	**06 00 22.5**	**+1.0**	
	baz=71,SNR=12								
L27K	**Beaver Creek,**	**72.13**	**332**		P	**P**	**06 00 23.0**	**+0.9**	
	baz=73								
KIRV	**Kirov**	**72.23**	**33**	*ce*	P	**P**	**06 00 21.5**	**-1.2**	
KIRV	**Kirov**	**72.23**	**33**		P	**P**	**06 00 21.9**	**-0.8**	
	comp=Z,8.1nm,0.5s,baz=291,slow=5.4,SNR=6.9								
KIRV					LR	LR	06 28 34.9		
	comp=Z,648nm,20.2s,baz=289,slow=33								
	comp=Z,8.1nm,0.5s								
F25K	**Christian Rive**	**72.24**	**337**		P	**P**	**06 00 23.2**	**+0.5**	
	baz=71								
KIV	**Kislovodsk**	**72.25**	**49**	*e*	P	**P**	**06 00 24.2**	**+0.9**	
KIV					pmax	pmax			
	comp=Z,23nm,1.1s								
KIV					MLR	MLR			
	comp=Z,175nm,18.0s								
PINM	**Pinnacle**	**72.28**	**328**		P	**P**	**06 00 23.6**	**+0.5**	
	baz=73								
M27K	**Edge Creek, AK**	**72.36**	**331**		IAmb	IAmb	06 00 27.5		
	comp=Z,12nm,1.1s								
M27K					IAMs_20	IAMs_20	06 30 53.3		
	comp=Z,804nm,20.0s								
M27K	**Edge Creek, AK**	**72.36**	**331**		P	**P**	**06 00 24.1**	**+0.4**	
	baz=73								
LOGN	**Logan Glacier**	**72.42**	**329**		IAmb	IAmb	06 00 46.2		
	comp=Z,12nm,1.0s								
LOGN					IAMs_20	IAMs_20	06 31 18.9		
	comp=Z,845nm,19.0s								
FYU	**Fort Yukon**	**72.42**	**336**		IAMs_20	IAMs_20	06 29 30.7		
	comp=Z,901nm,21.0s								
J26L	**Joseph Creek**	**72.43**	**333**		P	**P**	**06 00 25.0**	**+1.1**	
	baz=72								
KBZ	**Khabaz**	**72.46**	**49**	*ce*	P	**P**	**06 00 23.8**	**-0.6**	
KBZ					pmax	pmax			
	comp=Z,11nm,0.9s								
KBZ	**Khabaz**	**72.46**	**49**		P	**P**	**06 00 25.9**	**+1.4**	
	comp=Z,8.5nm,0.9s,baz=275,slow=5.8,SNR=17								
KBZ					LR	LR	06 33 22.5		
	comp=Z,192nm,18.0s,baz=302,slow=37								
	comp=Z,8.5nm,0.9s								
CTGM	**Chitina Glacie**	**72.53**	**329**		IAmb	IAmb	06 00 42.1		
	comp=Z,18nm,1.2s								
CTGM					IAMs_20	IAMs_20	06 31 12.9		
	comp=Z,740nm,19.0s								
CTG	**Chitna Glacier**	**72.54**	**329**		P	**P**	**06 00 25.5**	**+0.7**	
	baz=73								
C24K	**Franklin Bluff**	**72.56**	**339**		P	**P**	**06 00 25.9**	**+1.4**	
	baz=69								
BARN	**Barnard Glacie**	**72.66**	**330**		IAmb	IAmb	06 00 35.9		
	comp=Z,13nm,0.9s								
BARN					IAMs_20	IAMs_20	06 31 15.1		
	comp=Z,681nm,19.0s								
G25K	**Bearman Lake**	**72.69**	**336**		P	**P**	**06 00 26.9**	**+1.6**	
	baz=70								
SCRK	**Sand Creek**	**72.77**	**333**		IAMs_20	IAMs_20	06 31 14.0		
	comp=Z,918nm,20.0s								
SCRK	**Sand Creek**	**72.77**	**333**		P	**P**	**06 00 26.6**	**+0.5**	
	baz=71								
GRNC	**Granite Creek**	**72.80**	**329**		IAMs_20	IAMs_20	06 31 20.9		
	comp=Z,906nm,19.0s								
D24K	**Happy Valley**	**72.81**	**339**		IAMs_20	IAMs_20	06 32 15.6		
	comp=Z,706nm,19.0s								
PRP	**Porcupine Dome**	**72.89**	**335**		IAmb	IAmb	06 00 40.5		
	comp=Z,18nm,1.4s								
PRP	**Porcupine Dome**	**72.89**	**335**		P	**P**	**06 00 27.1**	**+0.3**	
	baz=70								
BELG	**Belogornoye**	**73.04**	**40**	*i*	P	**P**	**06 00 27.5**	**-0.1**	
BELG					pmax	pmax			
	comp=Z,9.0nm,1.2s								
BELG	**Belogornoye**	**73.04**	**40**		LR	LR	06 30 11.0		
	comp=Z,619nm,20.1s,baz=311,slow=34								
F24K	**Squaw Lake**	**73.08**	**337**		IAMs_20	IAMs_20	06 32 07.9		
	comp=Z,737nm,19.0s								
F24K	**Squaw Lake**	**73.08**	**337**		P	**P**	**06 00 28.3**	**+0.6**	
	baz=69								
ISLE	**Juniper Island**	**73.11**	**329**		IAmb	IAmb	06 00 46.7		
	comp=Z,23nm,1.2s								
J25K	**Salcha River,**	**73.13**	**334**		P	**P**	**06 00 28.9**	**+0.8**	
	baz=70								
C23K	**Itkillik River**	**73.13**	**340**		IAmb	IAmb	06 00 41.1		
	comp=Z,16nm,1.1s								
C23K	**Itkillik River**	**73.13**	**340**		P	**P**	**06 00 28.9**	**+1.0**	
	baz=67								
ONI	**Oni**	**73.18**	**50**		IAmb	IAmb	06 00 31.2		
	comp=Z,11nm,0.8s								
MCARA	**McCarthy VSAT**	**73.18**	**330**		IAmb	IAmb	06 00 32.6		
	comp=Z,20nm,1.0s								
MCARA					IAMs_20	IAMs_20	06 30 38.0		
	comp=Z,771nm,21.0s								
MCARA	**McCarthy VSAT**	**73.18**	**330**		P	**P**	**06 00 29.2**	**+0.8**	
	baz=71								
RIDG	**Independent Ri**	**73.21**	**333**		IAMs_20	IAMs_20	06 31 27.5		
	comp=Z,966nm,20.0s								
RIDG	**Independent Ri**	**73.21**	**333**		P	**P**	**06 00 28.9**	**+0.3**	
	baz=70								
G24K	**Hadweenzic Riv**	**73.22**	**336**		IAmb	IAmb	06 00 48.2		
	comp=Z,19nm,1.3s								
G24K					IAMs_20	IAMs_20	06 29 44.7		
	comp=Z,539nm,22.0s								
G24K	**Hadweenzic Riv**	**73.22**	**336**		P	**P**	**06 00 29.7**	**+1.2**	
	baz=69								
TOLK	**Toolik Lake Re**	**73.25**	**338**		IAmb	IAmb	06 01 02.9		
	comp=Z,28nm,1.6s								
TOLK					IAMs_20	IAMs_20	06 33 43.4		
	comp=Z,534nm,18.0s								
TOLK	**Toolik Lake Re**	**73.25**	**338**		P	**P**	**06 00 28.7**	**0.0**	
	baz=68								
TGL	**Tana Glacier**	**73.30**	**329**		IAMs_20	IAMs_20	06 32 06.9		
	comp=Z,759nm,20.0s								
CRQE	**Cirque**	**73.42**	**330**		P	**P**	**06 00 30.0**	**0.0**	
	baz=71								
VRDI	**Verde Repeater**	**73.43**	**330**		IAMs_20	IAMs_20	06 30 46.5		
	comp=Z,759nm,21.0s								
CRQM	**Cirque**	**73.44**	**330**		IAMs_20	IAMs_20	06 32 00.2		
	comp=Z,670nm,21.0s								
E23K	**Chandalar**	**73.49**	**338**		P	**P**	**06 00 30.2**	**+0.1**	
	baz=68								
D23K	**Nanushuk River**	**73.49**	**339**		P	**P**	**06 00 32.0**	**+1.9**	
	baz=67								
GLB	**Gilahina Butte**	**73.52**	**330**		IAmb	IAmb	06 00 40.5		
	comp=Z,15nm,1.3s								
GLB					IAMs_20	IAMs_20	06 30 36.9		
	comp=Z,1μm,22.0s								
K24K	**Donnelly Dome**	**73.58**	**333**		P	**P**	**06 00 32.1**	**+1.4**	
	baz=70								
H24K	**Noodor Dome**	**73.69**	**335**		IAmb	IAmb	06 01 02.7		
	comp=Z,20nm,1.6s								
H24K	**Noodor Dome**	**73.69**	**335**		P	**P**	**06 00 32.7**	**+1.3**	
	baz=68								
IL31		**73.69**	**334**		IAmb	IAmb	06 00 34.9		
	comp=Z,19nm,1.2s								
ILAR	**Eielson Array**	**73.69**	**334**		P	**P**	**06 00 32.0**	**+0.7**	
ILAR	**Eielson Array**	**73.69**	**334**		P	**P**	**06 00 32.0**	**+0.7**	
ILAR	**Eielson Array**	**73.69**	**334**		P	**P**	**06 00 31.6**	**+0.3**	
	comp=Z,4.2nm,0.9s,baz=72,slow=4.5,SNR=44								
ILAR					LR	LR	06 33 05.9		
	comp=Z,1μm,18.4s,baz=60,slow=36								
	comp=Z,4.2nm,0.9s								
PAX	**Paxson**	**73.73**	**332**		P	**P**	**06 00 32.8**	**+1.1**	
	baz=70								
POKR	**Poker Plat Res**	**73.78**	**335**		P	**P**	**06 00 33.0**	**+1.2**	
	baz=69								
HARP	**HAARP**	**73.80**	**331**		P	**P**	**06 00 33.2**	**+1.2**	
	baz=70								
N25K	**Chitina, Valde**	**73.82**	**331**		IAMs_20	IAMs_20	06 32 00.8		
	comp=Z,776nm,20.0s								
N25K	**Chitina, Valde**	**73.82**	**331**		P	**P**	**06 00 33.0**	**+0.8**	
	baz=70								
HDA	**Harding Lake**	**73.84**	**334**		IAMs_20	IAMs_20	06 32 04.2		
	comp=Z,938nm,20.0s								
HDA	**Harding Lake**	**73.84**	**334**		P	**P**	**06 00 33.6**	**+1.4**	
	baz=69								
COLD	**Coldfoot**	**74.02**	**337**		P	**P**	**06 00 33.9**	**+0.7**	
	baz=67								
CCB	**Clear Creek Bu**	**74.10**	**334**		IAmb	IAmb	06 00 43.0		
	comp=Z,32nm,1.6s								
MDM	**Murphy Dome**	**74.15**	**334**		IAmb	IAmb	06 00 52.3		
	comp=Z,15nm,1.1s								
G23K	**Bananza Creek**	**74.16**	**336**		IAmb	IAmb	06 00 46.4		
	comp=Z,12nm,0.9s								
G23K	**Bananza Creek**	**74.16**	**336**		P	**P**	**06 00 35.1**	**+1.0**	
	baz=67								
D22K	**Ayikyak River**	**74.19**	**339**		IAmb	IAmb	06 00 53.2		
	comp=Z,29nm,1.4s								
D22K	**Ayikyak River**	**74.19**	**339**		P	**P**	**06 00 34.2**	**0.0**	
	baz=65								
RAGM	**Ragged Mountai**	**74.28**	**329**		IAMs_20	IAMs_20	06 33 17.0		
	comp=Z,944nm,20.0s								
TSUM	**Tsumeb**	**74.43**	**120**		LR	LR	06 25 42.3		
	comp=Z,208nm,21.8s,baz=332,slow=30								
KLU	**Klutina**	**74.46**	**331**		IAmb	IAmb	06 00 39.4		
	comp=Z,16nm,1.2s								
KLU	**Klutina**	**74.46**	**331**		P	**P**	**06 00 36.7**	**+0.8**	
	baz=69								
B21K	**Ikpikpuk River**	**74.49**	**340**		IAmb	IAmb	06 00 49.1		
	comp=Z,18nm,1.2s								
B21K	**Ikpikpuk River**	**74.49**	**340**		P	**P**	**06 00 36.4**	**+0.6**	
	baz=64								
DHY	**Denali Highway**	**74.51**	**333**		IAmb	IAmb	06 00 53.8		
	comp=Z,17nm,1.3s								
DHY	**Denali Highway**	**74.51**	**333**		P	**P**	**06 00 36.5**	**+0.2**	
	baz=68								
I23K	**Minto, Yukon-K**	**74.52**	**335**		IAmb	IAmb	06 00 54.8		
	comp=Z,18nm,1.1s								
I23K	**Minto, Yukon-K**	**74.52**	**335**		P	**P**	**06 00 37.4**	**+1.3**	
	baz=67,SNR=5.0								
NEA2	**Nenana**	**74.62**	**334**		IAmb	IAmb	06 00 55.0		
	comp=Z,14nm,1.2s								
NEA2	**Nenana**	**74.62**	**334**		P	**P**	**06 00 38.0**	**+1.2**	
	baz=67								
C21K	**Knifeblade Rid**	**74.75**	**340**		P	**P**	**06 00 38.2**	**+0.7**	
	baz=63								
GNI	**Garni**	**74.84**	**53**		P	**P**	**06 00 40.2**	**+1.5**	
GNI	**Garni**	**74.84**	**53**	*ce*	P	**P**	**06 00 39.3**	**+0.6**	
GNI					pmax	pmax			
	comp=Z,57nm,1.7s								
GNI	**Garni**	**74.84**	**53**		LR	LR	06 32 52.0		
	comp=Z,116nm,19.7s,baz=292,slow=35								
WAT6	**Susitna Watana**	**74.85**	**332**		P	**P**	**06 00 38.2**	**-0.1**	
	baz=68								
MCK	**McKinley**	**74.91**	**333**		P	**P**	**06 00 38.8**	**+0.4**	
	baz=67								
SCM	**Sheep Creek Mo**	**74.95**	**331**		IAMs_20	IAMs_20	06 32 22.7		
	comp=Z,765nm,18.0s								
SCM	**Sheep Creek Mo**	**74.95**	**331**		P	**P**	**06 00 39.6**	**+0.8**	
	baz=68								
H22K	**Ishtalitna Cre**	**74.99**	**336**		P	**P**	**06 00 39.8**	**+0.9**	
	baz=66								
RND	**Reindeer**	**75.00**	**333**		IAmb	IAmb	06 01 19.2		
	comp=Z,27nm,1.6s								
B20K	**Meade River**	**75.09**	**341**		P	**P**	**06 00 41.2**	**+1.8**	
	baz=61								
WAT1	**Susitna Watana**	**75.10**	**333**		P	**P**	**06 00 39.9**	**+0.3**	
	baz=67								
MLY	**Manley**	**75.10**	**335**		P	**P**	**06 00 39.3**	**-0.3**	
	baz=66								
M23K	**Glacier View**	**75.14**	**331**		P	**P**	**06 00 40.5**	**+0.6**	
	baz=68								
F21K	**Alatna River**	**75.18**	**338**		IAMs_20	IAMs_20	06 33 56.4		
	comp=Z,718nm,21.0s								
F21K	**Alatna River**	**75.18**	**338**		P	**P**	**06 00 39.7**	**-0.2**	
	baz=64								
GLI	**Glacier Island**	**75.21**	**330**		IAMs_20	IAMs_20	06 32 05.6		
	comp=Z,902nm,22.0s								
GLI	**Glacier Island**	**75.21**	**330**		P	**P**	**06 00 40.6**	**+0.4**	
	baz=68								
SML	**Sawmill**	**75.40**	**331**		IAMs_20	IAMs_20	06 32 27.6		
	comp=Z,795nm,20.0s								
G21K	**Allakaket**	**75.50**	**337**		P	**P**	**06 00 42.8**	**+1.0**	
	baz=64								
D20K	**Etivluk River**	**75.54**	**339**		P	**P**	**06 00 42.4**	**+0.4**	
	baz=62								
TRF	**Thorofare Moun**	**75.57**	**333**		IAmb	IAmb	06 01 05.8		
	comp=Z,22nm,1.2s								
TRF					IAMs_20	IAMs_20	06 33 07.0		
	comp=Z,869nm,19.0s								
TRF	**Thorofare Moun**	**75.57**	**333**		P	**P**	**06 00 42.6**	**+0.2**	
	baz=66								
BPAW	**Bear Paw Mtn.**	**75.59**	**334**		P	**P**	**06 00 43.1**	**+0.8**	
	baz=65								
KNK	**Knik Glacier**	**75.61**	**331**		IAMs_20	IAMs_20	06 32 47.2		
	comp=Z,888nm,21.0s								
KNK	**Knik Glacier**	**75.61**	**331**		P	**P**	**06 00 43.3**	**+0.7**	
	baz=67								
H21K	**Melozitna Rive**	**75.62**	**336**		IAmb	IAmb	06 01 01.5		
	comp=Z,20nm,1.2s								
H21K					IAMs_20	IAMs_20	06 33 54.2		
	comp=Z,686nm,19.0s								
H21K	**Melozitna Rive**	**75.62**	**336**		P	**P**	**06 00 43.7**	**+1.2**	
	baz=64								
E20K	**Nigu River**	**75.62**	**339**		P	**P**	**06 00 43.7**	**+1.2**	
	baz=62								
GHO	**Glory Hole Cre**	**75.68**	**332**		IAMs_20	IAMs_20	06 32 37.8		
	comp=Z,768nm,21.0s								
KTH	**Kantishna Hill**	**75.79**	**334**		IAMs_20	IAMs_20	06 33 33.7		
	comp=Z,785nm,20.0s								
IMAR	**Indian Mountai**	**75.83**	**336**		P	**P**	**06 00 45.1**	**+1.4**	
PMR	**Palmer**	**75.84**	**331**		IAmb	IAmb	06 01 01.2		
	comp=Z,15nm,1.2s								
PMR	**Palmer**	**75.84**	**331**		P	**P**	**06 00 44.7**	**+0.9**	
	baz=66								
MAK	**Makhachkala**	**75.90**	**49**	*e*	P	**P**	**06 00 40.4**	**-4.1**	
MAK				*e*			06 03 32.9		
MAK				*e*	S	**S**	**06 10 20.2**	**-6.4**	
MAK				*e*	SSS	SSS	06 18 39.0		
MAK					pmax	pmax			
	comp=Z,153nm,0

CAPN	**Captain Cook N**	**77.07**	**331**	P	**P**	**06 00 51.3**	**+0.6**
	baz=64								
MBAR	**Mbarara**	**77.14**	**96**	P	**P**	**06 00 51.8**	**-0.5**
MBAR	**Mbarara**	**77.14**	**96**	P	**P**	**06 00 51.8**	**-0.5**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MBAR	**Mbarara**	**77.14**	**96**	LR	LR	06 33 56.5	
	comp=Z,270nm,18.7s,baz=281,slow=35						
K20K	**Telida**	**77.15**	**334**	P	**P**	**06 00 51.5**	**+0.3**
K20K				IAmb	IAmb	06 01 09.1	
	comp=Z,24nm,1.5s						
K20K				IAMs_20	IAMs_20	06 33 44.6	
	comp=Z,801nm,20.0s						
K20K	**Telida**	**77.15**	**334**	P	**P**	**06 00 52.3**	**+1.1**
	baz=63						
N20K	**Mount Spurr**	**77.35**	**332**	P	**P**	**06 00 53.2**	**+0.8**
	baz=64						
M20K	**Styx River**	**77.44**	**333**	P	**P**	**06 00 53.7**	**+0.7**
	baz=63						
J19K	**Poorman**	**77.46**	**335**	IAmb	IAmb	06 01 11.0	
	comp=Z,14nm,1.2s						
J19K	**Poorman**	**77.46**	**335**	P	**P**	**06 00 53.6**	**+0.7**
	baz=61						
L20K	**Farewell, AK**	**77.47**	**333**	P	**P**	**06 00 53.6**	**+0.5**
	baz=63						
E18K	**Tukpahlearik C**	**77.49**	**339**	IAMs_20	IAMs_20	06 33 53.5	
	comp=Z,965nm,22.0s						
E18K	**Tukpahlearik C**	**77.49**	**339**	P	**P**	**06 00 54.1**	**+1.0**
	baz=58						
ARU	**Arti**	**77.61**	**34***c i*	P	**P**	**06 00 54.7**	**+0.8**
ARU						06 03 44.4	
ARU				S	**S**	**06 10 48.3**	**+3.4**
ARU				SS	**SS**	**06 15 44.0**	**+0.4**
ARU				pmax	pmax		
	comp=Z,22nm,1.5s						
ARU	**Arti**	**77.61**	**34**	P	**P**	**06 00 54.9**	**+1.0**
	comp=Z,7.6nm,0.2s,baz=282,slow=4.4,SNR=6.6						
ARU				LR	LR	06 32 31.3	
	comp=Z,538nm,19.2s,baz=287,slow=34						
	comp=Z,7.6nm,0.2s						
F18K	**Selawik**	**77.61**	**338**	P	**P**	**06 00 55.2**	**+1.5**
	baz=58						
C17K	**DeLong Mountai**	**77.72**	**341**	P	**P**	**06 00 56.3**	**+2.0**
	baz=56						
HOM	**Homer**	**77.78**	**330**	P	**P**	**06 00 57.6**	**+2.9**
	baz=64						
M19K	**Big River Lodg**	**77.96**	**333**	P	**P**	**06 00 57.9**	**+2.2**
	baz=62						
L19K	**White Mountain**	**78.02**	**333**	P	**P**	**06 00 57.5**	**+1.4**
	baz=62						
E17K	**Hotham Inlet**	**78.08**	**339**	P	**P**	**06 00 58.3**	**+2.0**
	baz=57						
HOPE	**Hope Point**	**78.08**	**175**	*i* P	**P**	**06 00 58.8**	**+2.6**
D17K	**Noatak River**	**78.14**	**340**	P	**P**	**06 00 59.2**	**+2.6**
	baz=56						
J18K	**Innoko River**	**78.14**	**335**	P	**P**	**06 00 58.4**	**+1.7**
	baz=60						
F17K	**Baldwin Pennin**	**78.24**	**338**	P	**P**	**06 00 58.7**	**+1.5**
	baz=57						
C16K	**Lisburne Hills**	**78.50**	**341**	P	**P**	**06 01 01.9**	**+3.4**
	baz=54						
N19K	**Bonanza Creek**	**78.51**	**332**	P	**P**	**06 00 59.2**	**+0.3**
	baz=62						
H17K	**Granite Mounta**	**78.58**	**337**	IAmb	IAmb	06 01 18.3	
	comp=Z,11nm,1.0s						
H17K	**Granite Mounta**	**78.58**	**337**	P	**P**	**06 01 00.8**	**+1.7**
	baz=58						
L18K	**Granite Mounta**	**78.75**	**334**	P	**P**	**06 01 03.3**	**+3.2**
	baz=60						
KDAK	**Kodiak Island**	**79.06**	**329**	LR	LR	06 36 11.9	
	comp=Z,587nm,19.4s,baz=73,slow=36						
K17K	**Iditarod**	**79.14**	**334**	P	**P**	**06 01 03.9**	**+1.7**
	baz=59						
O18K	**Koktuh Hills**	**79.29**	**331**	P	**P**	**06 01 04.4**	**+1.2**
	baz=61						
M17K	**Holitna River**	**79.47**	**333**	P	**P**	**06 01 06.4**	**+2.3**
	baz=59						
LODK	**Lodwar**	**79.75**	**91**	IAMs_20	IAMs_20	06 36 08.8	
	comp=Z,416nm,20.0s						
AKTO	**Aktyubinsk**	**79.81**	**39**	LR	LR	06 33 29.3	
	comp=Z,788nm,21.6s,baz=256,slow=34						
O17K	**Koliganek Bris**	**80.16**	**332**	P	**P**	**06 01 09.4**	**+1.6**
	baz=59						
RPN	**Rapa Nui**	**80.16**	**235**	LR	LR	06 33 47.6	
	comp=Z,81nm,18.4s,baz=67,slow=34						
M16K	**Timber Creek**	**80.30**	**333**	P	**P**	**06 01 10.7**	**+2.2**
	baz=58						
F14K	**Arctic Creek**	**80.50**	**339**	P	**P**	**06 01 12.6**	**+3.0**
	baz=52						
N16K	**Nishlik Lake**	**80.51**	**333**	P	**P**	**06 01 12.4**	**+2.7**
	baz=58						
FURI	**Furi**	**80.66**	**84**	IAMs_20	IAMs_20	06 35 43.6	
	comp=Z,481nm,20.0s						
NRIK	**Noril'sk**	**81.07**	**15***ce*	P	**P**	**06 01 13.3**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NRIK	**Noril'sk**	**81.07**	**15**	P	**P**	**06 01 14.7**	**+2.2**
	comp=Z,1.2nm,0.4s,baz=304,slow=5.0,SNR=4.9						
	comp=Z,1.2nm,0.4s						
RAYN	**Ar Rayn**	**81.22**	**68**	P	**P**	**06 01 13.7**	**-0.6**
RAYN				IAmb	IAmb	06 01 16.7	
	comp=Z,25nm,2.0s						
RAYN	**Ar Rayn**	**81.22**	**68**	P	**P**	**06 01 13.7**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,25nm,2.0s						
ABKAR	**Akbulak array**	**81.44**	**40**	P	**P**	**06 01 15.7**	**+0.8**
KMBO	**Kilima Mbogo**	**83.30**	**94**	P	**P**	**06 01 25.6**	**+0.1**
KMBO	**Kilima Mbogo**	**83.30**	**94**	IAMs_20	IAMs_20	06 37 29.0	
	comp=Z,398nm,18.0s						
KMBO	**Kilima Mbogo**	**83.30**	**94**	P	**P**	**06 01 25.6**	**+0.1**
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KMBO				MLR	MLR		
	comp=Z,400nm,18.0s						
ATD	**Arta Tunnel**	**83.43**	**80**	IAMs_20	IAMs_20	06 34 53.7	
	comp=Z,640nm,21.0s						
ATD	**Arta Tunnel**	**83.43**	**80**	LR	LR	06 36 28.8	
	comp=Z,24nm,21.7s,baz=313,slow=34						
LBTB	**Lobatse**	**83.77**	**121**	LR	LR	06 31 26.1	
	comp=Z,312nm,21.5s,baz=298,slow=30						
SUR	**Sutherland**	**83.99**	**129**	LR	LR	06 31 15.3	
	comp=Z,277nm,21.0s,baz=304,slow=30						
KIBK	**Kibwezi**	**84.51**	**95**	P	**P**	**06 01 31.9**	**+0.3**
KIBK				IAmb	IAmb	06 01 35.2	
	comp=Z,24nm,1.9s						
KIBK				IAMs_20	IAMs_20	06 38 44.3	
	comp=Z,305nm,18.0s						
TIXI	**Tiksi**	**84.73**	**2**	P	**P**	**06 01 31.6**	**+0.1**
TIXI	**Tiksi**	**84.73**	**2**	P	**P**	**06 01 31.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,22nm,1.4s						
TIXI	**Tiksi**	**84.73**	**2**	P	**P**	**06 01 30.2**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=334,slow=2.8,SNR=7.2						
	comp=Z,1.2nm,0.3s						
BRVK	**Borovoye**	**85.18**	**33**	P	**P**	**06 01 35.2**	**+1.2**
BRVK	**Borovoye**	**85.18**	**33***ce*	P	**P**	**06 01 34.9**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,19nm,2.5s						
BVAR	**Borovoye Array**	**85.25**	**33**	P	**P**	**06 01 35.9**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=297,slow=4.3,SNR=16						
	comp=Z,2.5nm,0.7s						
BOSA	**Boshof**	**85.30**	**124**	LR	LR	06 32 19.4	
	comp=Z,162nm,21.0s,baz=307,slow=30						
GEYT	**Alibeck**	**85.31**	**51**	P	**P**	**06 01 34.7**	**-0.4**
GEYT	**Alibeck**	**85.31**	**51**	P	**P**	**06 01 34.7**	**-0.4**
GEYT	**Alibeck**	**85.31**	**51**	LR	LR	06 43 05.4	
	comp=Z,135nm,18.1s,baz=338,slow=38						
BILL	**Bilibino**	**85.60**	**349**	IAMs_20	IAMs_20	06 31 22.0	
	comp=Z,354nm,22.0s						
BILL	**Bilibino**	**85.60**	**349**	*i* P	**P**	**06 01 36.1**	**+0.2**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PMSA	**Palmer Station**	**89.50**	**188**	LR	LR	06 42 07.1	
	comp=Z,153nm,20.2s,baz=306,slow=36						
UOSS	**Minazif**	**89.57**	**63**	P	**P**	**06 01 56.3**	**+0.4**
UOSS				IAmb	IAmb	06 02 16.9	
	comp=Z,9.6nm,0.9s						
KURK	**Kurchatov**	**90.71**	**32**	P	**P**	**06 02 01.0**	**+0.3**
KURK				IAmb	IAmb	06 02 02.5	
	comp=Z,17nm,1.6s						
KURK	**Kurchatov**	**90.71**	**32***ce*	P	**P**	**06 01 59.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURBB	**Kurchatov Arra**	**90.73**	**32**	P	**P**	**06 02 01.7**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=309,slow=5.0,SNR=20						
KURBB				LR	LR	06 38 54.8	
	comp=Z,454nm,21.1s,baz=187,slow=33						
	comp=Z,2.2nm,0.6s						
KKAR	**Karatay Array**	**90.88**	**41**	P	**P**	**06 02 02.7**	**+1.1**
KKAR	**Karatay Array**	**90.88**	**41**	P	**P**	**06 02 02.7**	**+1.1**
ZALV	**Zalesovo Beam**	**91.31**	**27**	P	**P**	**06 02 03.6**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=326,slow=7.2,SNR=5.9						
ZALV				LR	LR	06 41 15.3	
	comp=Z,256nm,20.4s,baz=308,slow=34						
	comp=Z,2.3nm,0.8s						
WSAR	**Wadi Sarin**	**92.31**	**63**	LR	LR	06 46 20.0	
	comp=Z,268nm,19.0s,baz=308,slow=37						
AAK	**Ala-Archa**	**93.53**	**40***ce*	P	**P**	**06 02 14.2**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
AAK	**Ala-Archa**	**93.53**	**40**	LR	LR	06 41 57.2	
	comp=Z,360nm,22.0s,baz=322,slow=34						
MAKZ	**Makanchi**	**94.97**	**33**	IAMs_20	IAMs_20	06 42 39.9	
	comp=Z,586nm,21.0s						
MK31	**Makanchi Array**	**95.13**	**33***ce*	P	**P**	**06 02 20.1**	**-1.1**
MKAR	**Makanchi Array**	**95.13**	**33**	LR	LR	06 43 17.7	
	comp=Z,453nm,20.0s,baz=310,slow=34						
DGZ	**Jazzator, Alta**	**95.50**	**29**	*i* P	**P**	**06 02 23.0**	**0.0**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSH	**Kashi**	**96.31**	**42**	P	**P**	**06 02 28.8**	**+2.0**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				LR	LR		
	comp=N,210nm,17.2s						
KSH				LR	LR		
	comp=E,340nm,17.2s						
KSH				LR	LR		
	comp=Z,370nm,20.3s						
SHEM	**Shemya Is, Ala**	**96.58**	**337**	LR	LR	06 45 12.3	
	comp=Z,211nm,21.9s,baz=346,slow=35						
SNAA	**Sanae**	**99.51**	**168**	LR	LR	06 38 01.0	
	comp=Z,158nm,21.7s,baz=4.0,slow=30						
WMQ	**Urumqi**	**99.93**	**33**	*e*P	**Pdif**	**06 02 45.3**	**+2.4**
WMQ				LR	LR		
	comp=N,430nm,19.7s						
WMQ				LR	LR		
	comp=E,660nm,21.1s						
WMQ				LR	LR		
	comp=Z,520nm,24.0s						
BTO	**Baotou**	**111.84**	**20**	*e*PKP	**PKiKP**	**06 07 28.8**	**-4.4**
BTO				sPKP		06 07 42.9	
BTO				PP	**PP**	**06 08 10.8**	**-3.9**
BTO	**Baotou**	**111.84**	**20**	SS	SS	06 23 44.8	-5.3
BTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTO				LR	LR		
	comp=N,680nm,17.5s						
BTO				LR	LR		
	comp=E,350nm,12.6s						
BTO				LR	LR		
	comp=Z,820nm,17.0s						
HHC	**Hu-ho-hao-te**	**112.09**	**19**	*e*P	**PKiKP**	**06 07 29.4**	**-4.3**
HHC				LR	LR		
	comp=N,200nm,14.5s						
HHC				LR	LR		
	comp=E,300nm,16.8s						
HHC				LR	LR		
	comp=Z,410nm,18.3s						
LSA	**Lhasa**	**112.12**	**41**	IAMs_20	IAMs_20	06 53 58.3	
	comp=Z,218nm,21.0s						
BJT	**Baijiatuao**	**114.13**	**16**	IAMs_20	IAMs_20	06 59 40.6	
	comp=Z,303nm,19.0s						
PZH	**PanZhiHua**	**120.53**	**35**	PKP	**PKPdf**	**06 07 49.6**	**-0.7**
NJ2	**Nanjing**	**122.36**	**16**	*e*P	**PKPdf**	**06 07 53.1**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,130nm,3.7s						
CHTO	**Chiang Mai**	**124.92**	**43**	IAMs_20	IAMs_20	07 03 00.1	
	comp=Z,170nm,20.0s						
QIZ	**Qiongzhong**	**130.85**	**32**	PKP	**PKPdf**	**06 08 08.4**	**-1.6**
QIZ				PP	**PP**	**06 10 24.0**	**-0.7**
QIZ	**Qiongzhong**	**130.85**	**32**	SS	SS	06 27 54.9	+1.1
QIZ				LR	LR		
	comp=N,170nm,14.5s						
QIZ				LR	LR		
	comp=E,230nm,10.6s						
QIZ				LR	LR		
	comp=Z,310nm,14.1s						
DLV	**T Lat**	**136.00**	**39**	IAMs_20	IAMs_20	07 07 27.0	
	comp=Z,225nm,21.0s						
MYKOM	**Kota Tinggi**	**140.41**	**54**	IAMs_20	IAMs_20	07 13 57.1	
	comp=Z,238nm,20.0s						
PMBI	**Palembang**	**144.13**	**59**	IAMs_20	IAMs_20	07 14 09.4	
	comp=Z,194nm,20.0s						
MTN	**Manton Dam**	**168.50**	**20**		**PKPdf**	**06 09 03.6**	**-1.9**
WRA	**Warramunga Arr**	**176.12**	**10**	PKPab	**PKPab**	**06 10 47.5**	**-0.7**
	comp=Z,1.4nm,1.0s,baz=344,slow=4.6,SNR=4.2						
ASAR	**Alice Springs**	**178.93**	**84**	PKP	**PKPdf**	**06 09 08.9**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=132,slow=1.4,SNR=2.7						
ASAR				PKPab	**pPKPab**	**06 10 58.9**	**-6.0**
	comp=Z,0.9nm,0.8s,baz=279,slow=3.6,SNR=6.8						

BEO ***22*** *06:00:25.6±0.7, 39°.37N×23°.89E, h0km, ML3.2/3*
IDC ***22*** *06:00:27.0±1.3, 39°.49N×23°.62E, h0km, mb3.5/8, mbtmp3.6/9, ML3.0/1, MS3.6/2, Error ellipse: s-maj=27.5km s-min=20.9km az=170.0*
ISK ***22*** *06:00:27.4, 39°.48N×23°.62E, h14km, ML3.7/51*
TIR ***22*** *06:00:27.6, 39°.60N×23°.80E, h23km±7km, Md4.7, Ml3.9*
SOF ***22*** *06:00:28.4, 39°.57N±0°.08×23°.64E±0°.06, h18km±10km, MD3.9/4*
THE ***22*** *06:00:28.3, 39°.48N×23°.65E, h12km, ML3.8/27, Error ellipse: s-maj=0.7km s-min=0.4km az=132.0*
ATH ***22*** *06:00:28.3, 39°.49N×23°.69E, h12km±1km, ML3.7/27, Error ellipse: s-maj=1.1km s-min=0.7km az=154.0*
PDG ***22*** *06:00:28.3±0.7, 39°.47N×23°.62E, h21km±1km, ML3.8/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
AFAD ***22*** *06:00:28.0±0.0, 39°.53N×23°.68E, h7km±6km, MW4.0*
ISC 22 06:00:28.2±0.9, 39°.49N±0°.01×23°.65E±0°.01, h11km±7km, n237,₀0ᵍ98/315, mb3.5/8, 29C-4D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
XOR	**Xorichti**	**0.38**	**252**	P	**Pg**	**06 00 35.8**	**+0.1**
XOR				S	**Sg**	**06 00 41.3**	**+0.6**
	20μm,0.3s						
XOR	**Xorichti**	**0.38**	**252**	P	**Pg**	**06 00 35.9**	**+0.2**
XOR				S	**Sb**	**06 00 41.8**	**-1.0**
XOR				AML	AML	06 00 44.2	
	comp=E,32224μm,0.4s						
XOR				AML	AML	06 00 45.0	
	comp=N,47362μm,0.3s						
ALNA	**Alonissos**	**0.38**	**154**	P	**Pg**	**06 00 35.6**	**-0.1**
ALNA				S	**Sg**	**06 00 41.3**	**+0.6**
ALNA				AML	AML	06 00 42.1	
	comp=E,50213μm,0.3s						
ALNA				AML	AML	06 00 42.8	
	comp=N,37786μm,0.6s						
NEO	**Neokhori**	**0.38**	**242**	P	**Pg**	**06 00 35.9**	**+0.2**
NEO				S	**Sg**	**06 00 40.1**	**-0.7**
	comp=N,23μm,0.4s						
NEO	**Neokhori**	**0.38**	**242**	P	**Pg**	**06 00 35.9**	**+0.2**
NEO				S	**Sg**	**06 00 41.3**	**+0.6**
NEO				AML	AML	06 00 42.4	
	comp=N,56652μm,0.5s						
NEO				AML	AML	06 00 42.8	
	comp=E,36628μm,0.3s						
PAIG	**Paliouri**	**0.44**	**3**	Pg	**Pb**	**06 00 37.4**	**-0.6**
PAIG				Sg	**Sb**	**06 00 44.2**	**-0.4**
PAIG	**Paliouri**	**0.44**	**3**	P	**Pb**	**06 00 37.4**	**-0.6**
PAIG				S	**Sb**	**06 00 43.8**	**-0.8**
	comp=E,13μm,0.5s						
OUR	**Ouranopolis**	**0.89**	**17**	Pg	**Pg**	**06 00 44.6**	**-0.7**
OUR				Sg	**Sn**	**06 00 58.2**	**-1.2**
OUR	**Ouranopolis**	**0.89**	**17**	P	**Pb**	**06 00 45.3**	**-0.3**
OUR				S	**Sb**	**06 00 57.6**	**+0.2**
	comp=E,9μm,0.6s						
OUR	**Ouranopolis**	**0.89**	**17**	P	**Pb**	**06 00 45.4**	**-0.3**
KYMI	**Kymi, Euboea I**	**0.92**	**158**	P	**Pg**	**06 00 45.7**	**-0.3**
KYMI				S	**Sb**	**06 00 58.1**	**-0.3**
	comp=E,4μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.92**	**158**	P	**Pg**	**06 00 45.5**	**-0.4**
KYMI				S	**Sb**	**06 00 58.0**	**-0.3**
KYMI				AML	AML	06 01 00.3	
	comp=N,9803μm,0.4s						
KYMI				AML	AML	06 01 02.0	
	comp=E,6846μm,0.4s						
SKY	**Skiros Island**	**0.93**	**131**	P	**Pg**	**06 00 45.8**	**-0.3**
SKY				S	**Sb**	**06 00 58.6**	**+0.1**
	comp=E,13μm,0.3s						
SKY	**Skiros Island**	**0.93**	**131**	P	**Pg**	**06 00 45.8**	**-0.3**
SKY				S	**Sg**	**06 00 57.5**	**-0.6**
SKY				AML	AML	06 01 01.4	
	comp=N,21944μm,0.4s						
SKY				AML	AML	06 01 01.6	
	comp=E,29032μm,0.3s						
LRSO	**Larissa Observ**	**0.99**	**281**	P	**Pg**	**06 00 47.3**	**0.0**
LRSO				S	**Sb**	**06 01 00.6**	**+0.2**
	comp=E,7μm,0.5s						
EFSA	**Agios Efstrati**	**1.04**	**87**	P	**Pb**	**06 00 47.2**	**-0.9**
EFSA				S	**Sb**	**06 01 00.5**	**-1.2**
EFSA				AML	AML	06 01 04.0	
	comp=N,5636μm,0.5s						
EFSA				AML	AML	06 01 05.8	
	comp=E,6319μm,1.0s						
AXAR	**Agios Charalam**	**1.05**	**227**	P	**Pb**	**06 00 48.2**	**-0.2**
AXAR				S	**Sn**	**06 01 03.1**	**-0.4**
	comp=E,14μm,0.5s						
AXAR	**Agios Charalam**	**1.05**	**227**	P	**Pb**	**06 00 48.3**	**-0.2**
AXAR				S	**Sn**	**06 01 03.1**	**-0.4**
AXAR				AML	AML	06 01 07.4	
	comp=N,37002μm,0.4s						
AXAR				AML	AML	06 01 09.5	
	comp=E,17129μm,0.5s						
TYRN	**Tyrnavos**	**1.12**	**282**	P	**Pb**	**06 00 49.0**	**-0.6**
TYRN				S	**Sn**	**06 01 04.6**	**-0.5**
	comp=E,2μm,0.5s						
TYRN	**Tyrnavos**	**1.12**	**282**	P	**Pb**	**06 00 48.9**	**-0.6**
TYRN				AML	AML	06 01 07.4	
	comp=E,4363μm,0.4s						
TYRN				AML	AML	06 01 16.7	
	comp=N,3804μm,0.5s						
AGG	**Agios Georgios**	**1.12**	**246**	Pn	**Pb**	**06 00 48.7**	**-1.0**
AGG				Sn	**Sg**	**06 01 04.3**	**-0.2**
AGG	**Agios Georgios**	**1.12**	**246**	P	**Pb**	**06 00 48.9**	**-0.8**
AGG				S	**Sn**	**06 01 05.0**	**-0.3**
	comp=N,4μm,0.9s						
AGG	**Agios Georgios**	**1.12**	**246**	P	**Pb**	**06 00 48.8**	**-0.8**
AGG				S	**Sn**	**06 01 04.7**	**-0.6**
AGG	**Agios Georgios**	**1.12**	**246**	P	**Pb**	**06 00 49.0**	**-0.6**
AGG				S	**Sb**	**06 01 04.0**	**-0.3**
AGG				AML	AML	06 01 07.1	
	comp=E,9080μm,0.6s						
AGG				AML	AML	06 01 13.7	
	comp=N,13619μm,1.3s						
HORT	**Hortiatis**	**1.19**	**339**	Pn	**Pb**	**06 00 49.8**	**-1.0**
HORT				Sn	**Sn**	**06 01 06.5**	**-0.5**
HORT	**Hortiatis**	**1.19**	**339**	P	**Pb**	**06 00 49.8**	**-1.0**
HORT				S	**Sn**	**06 01 06.8**	**-0.3**
	comp=N,4μm,0.5s						
HORT	**Hortiatis**	**1.19**	**339**	P	**Pb**	**06 00 50.0**	**-0.8**
HORT				S	**Sn**	**06 01 06.7**	**-0.3**
HORT				AML	AML	06 01 09.7	
	comp=E,8527μm,0.5s						
HORT				AML	AML	06 01 11.2	
	comp=N,5599μm,0.4s						
LIA	**Limnos Island**	**1.25**	**70**	P	**Pn**	**06 00 50.0**	**-1.6**
LIA				S	**Sg**	**06 01 08.3**	**-0.3**
	comp=N,4μm,0.5s						
LIA	**Limnos Island**	**1.25**	**70**	P	**Pn**	**06 00 50.0**	**-1.6**
LIA				S	**Sb**	**06 01 05.8**	**-2.1**
LIA				AML	AML	06 01 10.6	
	comp=N,8407μm,0.5s						
LIA				AML	AML	06 01 13.3	
	comp=E,6312μm,0.5s						
THE	**Thessaloniki**	**1.26**	**336**	P	**Pn**	**06 00 51.1**	**-0.6**
THE				S	**Sn**	**06 01 08.2**	**-0.4**
	comp=E,1μm,0.4s						
THE	**Thessaloniki**	**1.26**	**336**	P	**Pn**	**06 00 51.2**	**-0.6**
THE				AML	AML	06 01 10.4	
	comp=N,1781μm,0.5s						
THE				AML	AML	06 01 11.9	
	comp=E,2238μm,0.5s						
THL	**Klokotos Trika**	**1.27**	**274**	P	**Pn**	**06 00 51.0**	**-0.8**
THL				S	**Sb**	**06 01 08.1**	**-0.3**
	comp=E,1μm,0.5s						
THL	**Klokotos Trika**	**1.27**	**274**	P	**Pn**	**06 00 51.1**	**-0.7**
THL				AML	AML	06 01 12.6	
	comp=N,2316μm,0.7s						
THL				AML	AML	06 01 16.4	
	comp=E,1676μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.27**	**249**	P	**Pn**	**06 00 51.5**	**-0.4**
MAKR				S	**Sg**	**06 01 09.0**	**-0.1**
	comp=E,6μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.27**	**249**	P	**Pb**	**06 00 51.8**	**-0.3**
MAKR				S	**Sg**	**06 01 09.1**	**-0.1**
MAKR				AML	AML	06 01 15.7	
	comp=E,12474μm,0.5s						
MAKR				AML	AML	06 01 18.0	
	comp=N,12805μm,0.6s						
VIL2	**Platees**	**1.31**	**193**	P	**Pn**	**06 00 51.8**	**-0.5**
VIL2				S	**Sn**	**06 01 09.7**	**0.0**
VIL2				AML	AML	06 01 16.6	
	comp=E,8438μm,0.6s						
VIL2				AML	AML	06 01 16.7	
	comp=N,9469μm,0.7s						
VILL	**Villia**	**1.34**	**191**	P	**Pn**	**06 00 51.7**	**-1.2**
VILL				S	**Sb**	**06 01 10.4**	**-0.3**
	comp=N,7μm,0.7s						
DLFA	**Delphi**	**1.35**	**222**	P	**Pn**	**06 00 52.0**	**-0.9**
DLFA				S	**Sb**	**06 01 10.3**	**-0.4**
DLFA				AML	AML	06 01 14.7	
	comp=N,5204μm,0.4s						
DLFA				AML	AML	06 01 15.3	
	comp=E,6900μm,0.4s						
SOH	**Sokhos**	**1.35**	**350**	P	**Pn**	**06 00 52.5**	**-0.6**
SOH				S	**Sb**	**06 01 10.3**	**-0.7**
	comp=E,2μm,0.6s						
SOH	**Sokhos**	**1.35**	**350**	P	**Pn**	**06 00 52.6**	**-0.6**
SOH				S	**Sb**	**06 01 09.6**	**-1.3**
SOH				AML	AML	06 01 13.6	
	comp=E,4396μm,0.5s						
SOH				AML	AML	06 01 16.4	
	comp=N,4769μm,0.7s						
KOKK	**Kokkinochori,**	**1.36**	**11**	P	**Pn**	**06 00 52.0**	**-1.1**
KOKK				S	**Sg**	**06 01 11.2**	**-0.8**
	comp=N,802nm,0.8s						
KOKK	**Kokkinochori,**	**1.36**	**11**	P	**Pn**	**06 00 52.2**	**-0.8**
KOKK				AML	AML	06 01 16.5	
	comp=N,3091μm,0.6s						
KOKK				AML	AML	06 01 17.7	
	comp=E,3893μm,0.7s						
THAS	**Thassos island**	**1.39**	**36**	P	**Pn**	**06 00 52.1**	**-1.4**
THAS				AML	AML	06 01 17.4	
	comp=N,2494μm,0.8s						
THAS				AML	AML	06 01 17.7	
	comp=E,2573μm,0.5s						
DION	**Dionisos Attik**	**1.42**	**171**	P	**Pb**	**06 00 54.1**	**-0.7**
DION				S	**Sn**	**06 01 12.1**	**-0.6

VLY				AML	AML	06 01 23.0		
	comp=N,5456µm,0.9s							
THAL	**Thalero**	**1.64**	**208**	P	**Pn**	**06 00 56.2**	**-0.7**	
THAL				AML	AML	06 01 28.9		
	comp=N,4173µm,0.5s							
THAL				AML	AML	06 01 30.2		
	comp=E,4930µm,0.6s							
EFP	**Efpalio**	**1.72**	**233**	P	**Pn**	**06 00 58.0**	**-0.1**	
EFP				S	**Sn**	**06 01 19.4**	**-0.6**	
	comp=E,2µm,1.1s							
EFP	**Efpalio**	**1.72**	**233**	P	**Pn**	**06 00 57.9**	**-0.2**	
EFP				S	**Sn**	**06 01 20.0**	**0.0**	
EFP				AML	AML	06 01 29.1		
	comp=N,3360µm,1.0s							
EFP				AML	AML	06 01 29.6		
	comp=E,2735µm,1.0s							
SIGR	**SIGRI**	**1.73**	**98**	Pn	**Pn**	**06 00 58.3**	**+0.1**	
SMTH	**Samothraki Isl**	**1.75**	**55**	P	**Pn**	**06 00 56.6**	**-1.9**	
GRG	**Griva**	**1.75**	**327**	Pn	**Pn**	**06 00 58.3**	**-0.3**	
KNT	**Kendrikon**	**1.77**	**341**	Pn	**Pn**	**06 00 58.7**	**-0.1**	
KNT	**Kendrikon**	**1.77**	**341**	P	**Pn**	**06 00 58.7**	**-0.1**	
KPRO	**Kipourio**	**1.83**	**286**	P	**Pn**	**06 00 59.2**	**-0.4**	
KPRO				S	**Sn**	**06 01 23.0**	**+0.3**	
	comp=E,1µm,0.8s							
KPRO	**Kipourio**	**1.83**	**286**	P	**Pn**	**06 00 59.6**	**0.0**	
GUR	**Goura**	**1.85**	**214**	P	**Pn**	**06 00 59.2**	**-0.8**	
KLV	**Kalavryta, Ach**	**1.86**	**220**	P	**Pn**	**06 00 59.5**	**-0.5**	
GOAD	**anakkale-G¶**	**1.87**	**68**	P	**Pn**	**06 01 00.8**	**+0.7**	
GADA	**Gvkgeada**	**1.87**	**67**	Pn	**Pn**	**06 01 00.5**	**+0.4**	
PVO	**Paravola**	**1.87**	**243**	P	**Pn**	**06 01 00.2**	**+0.1**	
PVO				S	**Sn**	**06 01 22.9**	**-0.7**	
	comp=E,4µm,0.8s							
PVO	**Paravola**	**1.87**	**243**	P	**Pn**	**06 01 00.1**	**+0.1**	
NVR	**Nevrokopi**	**1.87**	**5**	P	**Pn**	**06 01 00.3**	**+0.1**	
NVR				S	**Sn**	**06 01 23.4**	**-0.4**	
	comp=E,510nm,0.6s							
NVR	**Nevrokopi**	**1.87**	**5**	P	**Pn**	**06 01 00.3**	**+0.1**	
NVR				AML	AML	06 01 35.9		
	comp=N,714µm,0.4s							
NVR				AML	AML	06 01 36.5		
	comp=E,1156µm,0.4s							
BOZC	**Bozcaada**	**1.89**	**78**	P	**Pn**	**06 00 58.9**	**-1.5**	
BOZC				S	**Sb**	**06 01 27.2**	**+1.0**	
KOCA	**Canakkale, Ayv**	**1.92**	**89**	P	**Pn**	**06 01 01.6**	**+0.7**	
VAY	**Valandovo**	**2.01**	**336**	*e*Pg	**Pb**	**06 01 03.9**	**-0.9**	
VAY				*e*Sg	**Sg**	**06 01 34.3**	**+1.4**	
VAY	**Valandovo**	**2.01**	**336**	*i* Pn	**Pn**	**06 01 03.0**	**+0.9**	
ECEA	**Canakkale, Ece**	**2.02**	**73**	P	**Pn**	**06 01 02.4**	**+0.2**	
ECEA				S	**Sg**	**06 01 33.0**	**-0.3**	
PRK	**Paraskevi**	**2.04**	**96**	P	**Pn**	**06 01 01.9**	**-0.6**	
PRK				S	**Sn**	**06 01 27.5**	**-0.5**	
	comp=E,2µm,1.0s							
PRK	**Paraskevi**	**2.04**	**96**	P	**Pn**	**06 01 01.7**	**-0.8**	
MMB	**Musomishta**	**2.06**	**2**	*i* P	**Pn**	**06 01 02.3**	**-0.5**	
MMB				S	**Sg**	**06 01 33.9**	**-0.6**	
PENT	**Pentalofos**	**2.06**	**291**	P	**Pn**	**06 01 02.7**	**-0.1**	
EZN	**Ezine**	**2.09**	**80**	Pn	**Pn**	**06 01 03.6**	**+0.5**	
EZN	**Ezine**	**2.09**	**80**	P	**Pn**	**06 01 02.3**	**-0.8**	
EZN				S	**Sn**	**06 01 28.7**	**-0.4**	
EZN	**Ezine**	**2.09**	**80**	P	**Pn**	**06 01 03.8**	**+0.6**	
KRND	**KRANIDI**	**2.13**	**191**	P	**Pn**	**06 01 02.5**	**-1.2**	
KRND				S	**Sn**	**06 01 30.6**	**+0.4**	
	comp=E,1µm,0.6s							
KRND	**KRANIDI**	**2.13**	**191**	P	**Pn**	**06 01 03.3**	**-0.5**	
DRO	**Drossia**	**2.16**	**225**	P	**Pn**	**06 01 04.3**	**+0.3**	
CHOS	**Chios island**	**2.17**	**120**	P	**Pn**	**06 01 03.8**	**-0.5**	
CHOS				S	**Sn**	**06 01 31.4**	**+0.2**	
	comp=E,1µm,0.8s							
FNA	**Florina**	**2.17**	**307**	Pn	**Pn**	**06 01 03.8**	**-0.6**	
FNA	**Florina**	**2.17**	**307**	P	**Pn**	**06 01 04.8**	**+0.4**	
	baz=304							
FNA				S	**Sn**	**06 01 32.1**	**+0.9**	
	baz=304							
FNA	**Florina**	**2.17**	**307**	P	**Pn**	**06 01 04.6**	**+0.2**	
FNA	**Florina**	**2.17**	**307**	P	**Pn**	**06 01 04.7**	**+0.4**	
FNA	**Florina**	**2.17**	**307**	*e*Pn	**Pn**	**06 01 04.6**	**+0.2**	
FNA				*e*Sg	**Sg**	**06 01 41.8**	**+3.7**	
RDO	**Rodhopi**	**2.20**	**40**	Pn	**Pn**	**06 01 03.9**	**-0.7**	
RDO	**Rodhopi**	**2.20**	**40**	P	**Pn**	**06 01 03.3**	**-1.4**	
NEST	**Nestorio**	**2.21**	**296**	P	**Pn**	**06 01 05.2**	**+0.4**	
RLS	**Riolos of Patr**	**2.22**	**231**	P	**Pn**	**06 01 05.7**	**+0.7**	
BAYC	**CANAKKALE_Bayr**	**2.25**	**83**	P	**Pn**	**06 01 04.6**	**-0.8**	
BAYC				S	**Sg**	**06 01 38.7**	**-1.9**	
COMU	**Canakkale**	**2.26**	**73**	Pn	**Pn**	**06 01 05.9**	**+0.4**	
ENEZ	**Enez**	**2.29**	**56**	Pn	**Pn**	**06 01 05.8**	**-0.1**	
KARB	**zmir-Karabur**	**2.30**	**110**	P	**Pb**	**06 01 09.8**	**+0.1**	
KARB				S	**Sg**	**06 01 40.9**	**-1.3**	
ALN	**Alexandroupoli**	**2.31**	**52**	Pn	**Pn**	**06 01 06.3**	**+0.1**	
ALN	**Alexandroupoli**	**2.31**	**52**	P	**Pn**	**06 01 05.2**	**-1.0**	
ALN				S	**Sg**	**06 01 42.5**	**-0.1**	
GELI	**Tayfur-Gelibol**	**2.35**	**66**	Pn	**Pn**	**06 01 07.1**	**+0.3**	
RZN	**Rozhen**	**2.36**	**20**	*i* P	**Pn**	**06 01 06.8**	**-0.2**	
KKB	**Krupnik**	**2.39**	**351**	*i* P	**Pn**	**06 01 07.2**	**-0.1**	
KKB				S	**Sn**	**06 01 36.1**	**-0.4**	
LKD2	**Lefkada island**	**2.43**	**254**	P	**Pb**	**06 01 10.2**	**-1.7**	
	baz=253							
LKD2				S	**Sb**	**06 01 41.8**	**0.0**	
	baz=253							
LKD2				AMP				
	comp=N,1.5nm,0.7s,baz=253							
LSK	**Leskovik**	**2.44**	**287**	P	**Pn**	**06 01 09.4**	**+1.3**	
	baz=284							
LSK				S	**Sb**	**06 01 40.9**	**-1.4**	
	baz=284							
LSK				AMP				
	comp=N,2.1nm,0.8s,baz=284							
KBN	**Korca**	**2.48**	**298**	P	**Pn**	**06 01 08.6**	**+0.1**	
	baz=295							
KBN				S	**Sb**	**06 01 41.4**	**-1.9**	
	baz=295							
KBN				AMP				
	comp=E,1.4nm,0.9s,baz=295							
ERIK	**Erikli-Kesan**	**2.50**	**61**	Pn	**Pn**	**06 01 08.8**	**+0.1**	
ERIK	**Erikli-Kesan**	**2.50**	**61**	P	**Pn**	**06 01 07.6**	**-1.1**	
ERIK				S	**Sb**	**06 01 45.2**	**+1.6**	
LPK	**Lapseki**	**2.55**	**69**	Pn	**Pn**	**06 01 09.8**	**+0.3**	
ZEYE	**Izmir, Urla-Ze**	**2.55**	**118**	P	**Pg**	**06 01 15.8**	**-1.3**	
ZEYE				S	**Sb**	**06 01 47.1**	**+1.9**	
URLA	**Izmir**	**2.56**	**115**	Pn	**Pn**	**06 01 09.9**	**+0.3**	
URLA	**Izmir**	**2.56**	**115**	P	**Pn**	**06 01 09.2**	**-0.4**	
URLA				S	**Sb**	**06 01 46.6**	**+1.1**	
DKL	**Dikili**	**2.56**	**98**	Pn	**Pn**	**06 01 09.9**	**+0.3**	
DKL	**Dikili**	**2.56**	**98**	P	**Pn**	**06 01 10.6**	**+1.0**	
IGT	**Igoumenitsa**	**2.57**	**272**	P	**Pb**	**06 01 12.2**	**-2.1**	
	baz=270							
IGT				S	**Sb**	**06 01 44.5**	**-1.4**	
	baz=270							
IGT				AMP				
	comp=N,1.0nm,0.6s,baz=270							
FSK	**Fiskardo**	**2.62**	**248**	P	**Pn**	**06 01 11.5**	**+1.1**	
BUHA	**Balikesir, Bur**	**2.65**	**89**	P	**Pn**	**06 01 12.2**	**+1.4**	
BUHA				S	**Sg**	**06 01 56.1**	**+2.8**	
CANM	**Can-anakkale**	**2.67**	**78**	Pn	**Pn**	**06 01 11.8**	**+0.6**	
OHR	**Ohrid**	**2.72**	**308**	*i* Pn	**Pn**	**06 01 13.3**	**+1.4**	
VLS	**Valsamata**	**2.72**	**242**	P	**Pn**	**06 01 12.9**	**+1.0**	
PLD	**Plovdiv**	**2.79**	**17**	*i* P	**Pn**	**06 01 13.2**	**+0.5**	
UKOP	**Uzunkopru-Edir**	**2.81**	**53**	Pn	**Pn**	**06 01 13.4**	**+0.4**	
VLI	**Veliai**	**2.82**	**192**	P	**Pn**	**06 01 12.7**	**-0.5**	
APE	**Apeiranthos**	**2.83**	**148**	⇑P	**Pn**	**06 01 12.7**	**-0.6**	
APE	**Apeiranthos**	**2.83**	**148**	Pn	**Pn**	**06 01 12.6**	**-0.8**	
APE	**Apeiranthos**	**2.83**	**148**	P	**Pn**	**06 01 12.7**	**-0.6**	
APE				S	**Sn**	**06 01 44.4**	**-3.1**	
APE	**Apeiranthos**	**2.83**	**148**	P	**Pn**	**06 01 12.6**	**-0.8**	
SRN	**Sarande**	**2.84**	**279**	P	**Pn**	**06 01 15.8**	**+2.3**	
	baz=277							
SRN				S	**Sn**	**06 01 49.6**	**+1.9**	
	baz=277							
SRN				AMP				
	comp=N,0.7nm,0.6s,baz=277							
KRBG	**Karabiga-Canak**	**2.95**	**71**	Pn	**Pn**	**06 01 15.6**	**+0.7**	
DIM	**Dimitrovgrad**	**2.95**	**29**	*i* P	**Pn**	**06 01 14.7**	**-0.2**	
RKY	**Sarkoy-Tekirda**	**2.96**	**65**	Pn	**Pn**	**06 01 15.8**	**+0.6**	
KEK	**Kerkira**	**2.98**	**276**	Pn	**Pn**	**06 01 15.4**	**-0.1**	
KEK	**Kerkira**	**2.98**	**276**	P	**Pn**	**06 01 15.1**	**-0.4**	
KEK	**Kerkira**	**2.98**	**276**	P	**Pn**	**06 01 15.0**	**-0.4**	
PYL	**PYLOS**	**2.99**	**211**	P	**Pn**	**06 01 16.8**	**+1.3**	
SKO	**Skopje**	**3.00**	**327**	*i* Pn	**Pn**	**06 01 16.5**	**+0.9**	
PGB	**Panagyurishte**	**3.05**	**7**	*e*P	**Pn**	**06 01 16.4**	**0.0**	
BOSS	**Bosilegrad**	**3.14**	**344**	*e*Pn	**Pn**	**06 01 18.8**	**+1.2**	
GONE	**Gonen-Balikesi**	**3.16**	**78**	Pn	**Pn**	**06 01 18.6**	**+0.8**	
MRMT	**Marmara Adasi**	**3.23**	**68**	Pn	**Pn**	**06 01 19.6**	**+0.8**	
PRVS	**Prvonek**	**3.25**	**339**	*e*Pn	**Pn**	**06 01 19.8**	**+0.7**	
PHP	**Peshkopia**	**3.29**	**313**	P	**Pn**	**06 01 20.6**	**+0.9**	
	baz=311							
GCAM	**G?zelcaml?**	**3.33**	**121**	Pn	**Pn**	**06 01 20.8**	**+0.7**	
EDRB	**Edirne**	**3.33**	**44**	Pn	**Pn**	**06 01 20.4**	**+0.2**	
EDC	**Edincik**	**3.35**	**74**	Pn	**Pn**	**06 01 21.4**	**+0.9**	
SANT	**Santorini**	**3.42**	**155**	⇑P	**Pn**	**06 01 20.9**	**-0.6**	
SANT	**Santorini**	**3.42**	**155**	Pn	**Pn**	**06 01 22.1**	**+0.6**	
BARS	**Barje**	**3.61**	**338**	*e*Pn	**Pn**	**06 01 24.7**	**+0.7**	
KCTX	**Karacabey (Bur**	**3.70**	**76**	Pn	**Pn**	**06 01 26.3**	**+1.0**	
BODT	**Bodrum**	**3.76**	**129**	Pn	**Pn**	**06 01 26.7**	**+0.6**	
BODT	**Bodrum**	**3.76**	**129**	P	**Pn**	**06 01 25.6**	**-0.5**	
ELND	**Elena**	**3.83**	**25**	⇑P	**Pn**	**06 01 27.5**	**+0.5**	
PUK	**Puka**	**3.83**	**313**	P	**Pn**	**06 01 28.6**	**+1.4**	
	baz=311							
ZAPS	**Zavoj**	**3.86**	**349**	*e*Pn	**Pn**	**06 01 28.2**	**+0.7**	
MPEP	**Malo Peshtene**	**3.87**	**1**	*i* P	**Pn**	**06 01 28.5**	**+0.9**	
RODP	**Rodopos**	**3.92**	**179**	Pn	**Pn**	**06 01 28.9**	**+0.6**	
BCI	**Bajram Curri**	**3.96**	**318**	P	**Pn**	**06 01 29.7**	**+0.9**	
	baz=316							
PLVB	**Pleven**	**3.97**	**10**	⇓P	**Pn**	**06 01 29.9**	**+1.0**	
KULA	**Kula-Manisa**	**4.02**	**102**	Pn	**Pn**	**06 01 30.9**	**+1.1**	
IMMV	**Iera Moni Meta**	**4.03**	**176**	Pn	**Pn**	**06 01 30.6**	**+0.8**	
CTYL	**Yalikoy Yolu**	**4.06**	**59**	Pn	**Pn**	**06 01 32.1**	**+1.9**	
CTKS	**Kestanelik-??a**	**4.10**	**63**	Pn	**Pn**	**06 01 32.5**	**+1.7**	
ARMT	**Armutlu**	**4.14**	**73**	Pn	**Pn**	**06 01 32.9**	**+1.5**	
ULC	**Ulcinj**	**4.16**	**308**	*i* Pn	**Pn**	**06 01 31.8**	**+0.1**	
ULC				*i* Sn	**Sn**	**06 02 18.8**	**-1.5**	
PVY	**Plav**	**4.18**	**319**	⇓*i* Pn	**Pn**	**06 01 32.2**	**+0.2**	
PVY				*i* Sn	**Sn**	**06 02 19.6**	**-1.2**	
BLKB	**Belogradchik**	**4.20**	**350**	⇑P	**Pn**	**06 01 32.8**	**+0.7**	
DRME	**Dracevica, Mon**	**4.33**	**310**	⇑*i* Pn	**Pn**	**06 01 34.1**	**+0.1**	
DRME				*i* Sn	**Sn**	**06 02 23.0**	**-1.4**	
BOVS	**Bovan**	**4.40**	**341**	⇑P	**Pn**	**06 01 35.7**	**+0.9**	
IVA	**Berane**	**4.42**	**321**	⇑*i* Pn	**Pn**	**06 01 35.9**	**+0.7**	
IVA				*i* Sn	**Sn**	**06 02 25.9**	**-0.7**	
ISK	**Istanbul-Kandi**	**4.43**	**67**	Pn	**Pn**	**06 01 37.0**	**+1.7**	
KAVV	**Kandilli-Istan**	**4.43**	**67**	Pn	**Pn**	**06 01 37.1**	**+1.8**	
ZAGS	**Zajecar**	**4.45**	**347**	*e*Pn	**Pn**	**06 01 35.9**	**+0.3**	
TVSB	**Tavsanli**	**4.50**	**89**	Pn	**Pn**	**06 01 37.3**	**+1.0**	
YLV	**Yalova**	**4.52**	**74**	Pn	**Pn**	**06 01 38.1**	**+1.4**	
BUM	**Brajici-Budva**	**4.57**	**309**	*e*Pn	**Pn**	**06 01 37.9**	**+0.6**	
BUM				*i* Sn	**Sn**	**06 02 29.3**	**-1.2**	
KOME	**Kolasin**	**4.59**	**318**	*e*Pn	**Pn**	**06 01 37.8**	**+0.2**	
KOME				*i* Sn	**Sn**	**06 02 29.2**	**-1.7**	
GVD	**Gavdhos**	**4.65**	**176**	Pn	**Pn**	**06 01 39.6**	**+1.3**	
SJES	**Sjenica**	**4.68**	**325**	*e*Pn	**Pn**	**06 01 40.1**	**+1.3**	
CEME	**Cevo**	**4.71**	**312**	*e*Pn	**Pn**	**06 01 39.5**	**+0.3**	
CEME				*i* Sn	**Sn**	**06 02 32.0**	**-1.8**	
DALY	**Dalyan (Mula)**	**4.76**	**122**	Pn	**Pn**	**06 01 41.5**	**+1.7**	
ADVT	**Abdulvahap**	**4.77**	**77**	Pn	**Pn**	**06 01 41.8**	**+1.8**	
ZKR	**Zakros**	**4.82**	**154**	Pn	**Pn**	**06 01 41.7**	**+1.0**	
NKME	**Niksic**	**4.83**	**314**	*e*Pn	**Pn**	**06 01 41.1**	**+0.2**	
NKME				*i* Sn	**Sn**	**06 02 35.0**	**-1.8**	
IVAS	**Ivanjica**	**4.86**	**328**	*e*Pn	**Pn**	**06 01 42.2**	**+0.9**	
APMY	**Acipayam-Deniz**	**4.87**	**113**	Pn	**Pn**	**06 01 43.4**	**+2.0**	
SILT	**Sile**	**4.87**	**68**	Pn	**Pn**	**06 01 43.4**	**+2.0**	
GRUS	**Gruza**	**4.92**	**334**	*e*Pn	**Pn**	**06 01 43.5**	**+1.5**	
PLE	**Pljevlja**	**5.00**	**322**	*e*Pn	**Pn**	**06 01 43.5**	**+0.2**	
PLE				*i* Sn	**Sn**	**06 02 39.2**	**-1.9**	
CAME	**Cameli-Denizli**	**5.12**	**118**	Pn	**Pn**	**06 01 46.9**	**+1.9**	
HUMR	**Humele**	**5.14**	**11**	⇑P	**Pn**	**06 01 45.4**	**+0.4**	
KUBS	**Kucevo**	**5.14**	**344**	*e*Pn	**Pn**	**06 01 44.8**	**-0.3**	
FETY	**Fethiye**	**5.14**	**122**	Pn	**Pn**	**06 01 46.4**	**+1.4**	
BRY	**Bratogost**	**5.15**	**313**	*e*Pn	**Pn**	**06 01 45.9**	**+0.6**	
BRY				*i* Sn	**Sn**	**06 02 43.1**	**-1.7**	
DJES	**Djerdap**	**5.25**	**351**	⇑P	**Pn**	**06 01 47.1**	**+0.6**	
TRUS	**Trudelj**	**5.32**	**334**	*e*Pn	**Pn**	**06 01 48.2**	**+0.7**	
GULT	**Gulveren**	**5.36**	**78**	Pn	**Pn**	**06 01 50.2**	**+2.1**	
DIVS	**Divibare**	**5.36**	**331**	*e*Pn	**Pn**	**06 01 50.0**	**+1.8**	
MATE	**Matera**	**5.46**	**285**	⇓P	**Pn**	**06 01 49.9**	**+0.6**	
MATE	**Matera**	**5.46**	**285**	Pn	**Pn**	**06 01 50.7**	**+1.3**	
HERR	**Herculane**	**5.47**	**351**	⇑P	**Pn**	**06 01 49.2**	**-0.3**	
MTUR	**Matau**	**5.83**	**10**	⇑P	**Pn**	**06 01 55.7**	**+1.1**	
TEKS	**Tekeris**	**5.92**	**330**	*e*Pn	**Pn**	**06 01 56.8**	**+1.0**	
ARR	**Arges**	**5.92**	**7**	⇑P	**Pn**	**06 01 55.9**	**0.0**	
GZR	**Gura Zlata**	**5.94**	**354**	⇑P	**Pn**	**06 01 57.3**	**+1.2**	
LOT	**Lotru**	**5.96**	**1**	⇑P	**Pn**	**06 01 57.0**	**+0.6**	
VOIR		**6.04**	**9**	⇑P	**Pn**	**06 01 58.2**	**+0.8**	
MLR	**Muntele Rosu**	**6.24**	**15**	⇑P	**Pn**	**06 02 01.8**	**+1.5**	
NEHR	**Nehoiu**	**6.25**	**17**	⇑P	**Pn**	**06 02 01.8**	**+1.5**	
BZS	**Buzias**	**6.31**	**347**	⇑P	**Pn**	**06 02 01.5**	**+0.3**	
FRGS	**Fruska Gora**	**6.34**	**335**	⇑P	**Pn**	**06 02 03.5**	**+1.9**	
FRGS	**Fruska Gora**	**6.34**	**335**	*e*Pn	**Pn**	**06 02 02.7**	**+1.1**	
DOPR	**Dopca**	**6.60**	**11**	⇑P	**Pn**	**06 02 06.2**	**+1.0**	
COVR	**Voineasa-Covas**	**6.63**	**16**	⇑P	**Pn**	**06 02 07.2**	**+1.7**	
PLOR	**Plostina**	**6.74**	**18**	⇑P	**Pn**	**06 02 08.3**	**+1.4**	
VRI	**Vrincioaia**	**6.77**	**19**	⇑P	**Pn**	**06 02 08.8**	**+1.4**	
OZUR		**6.79**	**13**	⇑P	**Pn**	**06 02 09.2**	**+1.4**	
TURR	**Turia**	**6.79**	**14**	⇑P	**Pn**	**06 02 09.2**	**+1.4**	
SIRR	**Siria**	**6.94**	**348**	⇑P	**Pn**	**06 02 10.7**	**+1.0**	
MARR	**Marisel-Cluj**	**7.20**	**357**	⇑P	**Pn**	**06 02 14.5**	**+1.0**	
TESR	**Tescani**	**7.36**	**16**	⇑P	**Pn**	**06 02 16.5**	**+1.0**	
BRTR	**Keskin Array B**	**7.72**	**85**	Pn	**Pn**	**06 02 21.5**	**+0.9**	
	comp=N,0.2nm,0.3s,baz=272,slow=11,SNR=4.8							
	comp=N,0.7nm,0.4s							
BURAR	**Bucovina Array**	**8.21**	**7**	⇓P	**Pn**	**06 02 28.6**	**+1.4**	
MODS	**Modra-Piesok**	**10.00**	**335**	*e*PN	Pn	06 02 59.7	+8.0	
AKASG	**Malin Array Be**	**11.88**	**17**	LR	LR	06 08 07.6		
	comp=N,103nm,20.7s,baz=312,slow=39							
ESDC	**Sonseca Array**	**21.26**	**279**	P	**P**	**06 05 14.7**	**+0.3**	
	comp=N,0.9nm,0.9s,baz=72,slow=9.6,SNR=4.6							
	comp=N,0.9nm,0.9s							
HFS	**Hagfors**	**21.60**	**346**	P	**P**	**06 05 17.2**	**-0.5**	
	comp=N,1.6nm,0.8s,baz=150,slow=12,SNR=2.6							
	comp=N,1.6nm,0.8s							
FINES	**FINESS Array B**	**22.04**	**3**	P	**P**	**06 05 21.4**	**-1.1**	
	comp=N,1.1nm,0.8s,baz=190,slow=7.1,SNR=2.0							
	comp=N,1.1nm,0.8s							
NOA	**NORSAR Array B**	**22.92**	**344**	P	**P**	**06 05 32.8**	**+0.9**	
	comp=N,0.7nm,0.7s,baz=149,slow=9.8,SNR=5.6							
	comp=N,0.7nm,0.7s							
EKA	**Eskdalemuir Ar**	**23.88**	**320**	P	**P**	**06 05 42.0**	**+0.6**	
	comp=N,0.7nm,0.6s,baz=117,slow=9.4,SNR=4.4							
	comp=N,0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**32.61**	**223**	P	**P**	**06 06 59.9**	**0.0**	
	comp=N,1.1nm,0.3s,baz=34,slow=9.9,SNR=4.1							
	comp=N,1.1nm,0.3s							
MKAR	**Makanchi Array**	**42.53**	**60**	P	**P**	**06 08 24.6**	**+1.0**	
	comp=N,0.7nm,0.5s,baz=279,slow=7.0,SNR=9.9							
	comp=N,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**42.99**	**49**	P	**P**	**06 08 28.6**	**+1.4**	
	comp=N,0.5nm,0.3s,baz=285,slow=11,SNR=2.1							
	comp=N,0.5nm,0.3s							
OPO	**Ambohidratompo**	**61.80**	**155**	LR	LR	06 38 55.9		
	comp=N,169nm,21.2s,baz=192,slow=37							

*KRNET **22** 06:08:42.5±0.1, 43.00N×79.85E, h20km, mb2.8*
*SOME **22** 06:08:42.7, 42.95N×79.75E, h10km*
*NNC **22** 06:08:42.0±0.8, 42.96N×79.84E, h0km, mb3.4, mpv3.2,*
Error ellipse: s-maj=5.7km s-min=2.8km az=148.0

ISC 22 06:08:41.7±1.3, 43.01N±0.04×79.88E±0.03, h2km±10km,
n55, σ0.84/99, 17C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.34**	**295**	P		**Pg**	**06 08 47.7**	**-0.5**
	122nm,0.1s							
SHLS				S		**Sg**	**06 08 50.9**	**-1.8**
	3µm,0.2s							
SHLS	**Shalkode**	**0.34**	**295**	*e*P		**Pg**	**06 08 47.7**	**-0.5**
	122nm,0.1s							
SHLS				*e*S		**Sg**	**06 08 52.2**	**-0.4**
	3µm,0.2s							
SHLS	**Shalkode**	**0.34**	**295**	*e*P		**Pg**	**06 08 47.7**	**-0.5**
	baz=10.0							
SHLS				*e*S		**Sg**	**06 08 50.8**	**-1.8**
	baz=10.0							
PDGK	**Podgornoye**	**0.42**	**318**	P		**Pb**	**06 08 51.6**	**-0.5**
	12nm,0.1s							
PDGK				S		**Sb**	**06 08 58.2**	**-0.8**
	44nm,0.2s							
PDGK	**Podgornoye**	**0.42**	**318**	⇓P		**Pb**	**06 08 51.5**	**-0.5**
	4.8nm,0.1s							
PDGK				⇑S		**Sb**	**06 08 58.7**	**-0.3**
	59nm,0.2s							
KTMS	**Ketmen**	**0.55**	**38**	P		**Pg**	**06 08 53.6**	**+1.3**
	15nm,0.1s							
KTMS				S		**Sb**	**06 09 01.8**	**-0.9**
	90nm,0.1s							
KTMS	**Ketmen**	**0.55**	**38**	*e*P		**Pg**	**06 08 53.6**	**+1.3**
	15nm,0.1s							
KTMS				*e*S		**Sb**	**06 09 01.8**	**-0.9**
	90nm,0.1s							
KTMS	**Ketmen**	**0.55**	**38**	*e*P		**Pg**	**06 08 53.6**	**+1.3**
	baz=40							
KTMS				*e*S		**Sb**	**06 09 01.7**	**-0.9**
	baz=40							
UZB	**Uzunbulak**	**0.64**	**282**	P		**Pg**	**06 08 54.6**	**+0.6**
	6.2nm,0.1s							
UZB				S		**Sg**	**06 09 03.1**	**+0.7**
	27nm,0.1s							
UZB	**Uzunbulak**	**0.64**	**282**	*e*P		**Pg**	**06 08 54.6**	**+0.6**
	6.2nm,0.1s							
UZB				*e*S		**Sg**	**06 09 03.1**	**+0.7**
	27nm,0.1s							
UZB	**Uzunbulak**	**0.64**	**282**	*e*P		**Pg**	**06 08 54.6**	**+0.6**
	baz=84							
UZB				*e*S		**Sg**	**06 09 03.1**	**+0.7**
	baz=84							
ZHN	**Zhinishke**	**1.07**	**279**	P		**Pg**	**06 09 02.0**	**-0.2**
ZHN				S		**Sg**	**06 09 15.5**	**-0.6**
ZHN	**Zhinishke**	**1.07**	**279**	*e*P		**Pg**	**06 09 02.0**	**-0.2**
	5.2nm,0.1s							
ZHN				*e*S		**Sg**	**06 09 15.5**	**-0.6**
	72nm,0.2s							
SATY	**Saty**	**1.08**	**273**	P		**Pg**	**06 09 02.3**	**-0.1**
	29nm,0.2s							
SATY				S		**Sg**	**06 09 16.8**	**+0.3**
	103nm,0.1s							
SATY	**Saty**	**1.08**	**273**	*e*P		**Pg**	**06 09 02.3**	**-0.1**
	29nm,0.2s							
SATY				*e*S		**Sg**	**06 09 16.8**	**+0.3**
	103nm,0.1s							
SATY	**Saty**	**1.08**	**273**	*e*P		**Pg**	**06 09 02.3**	**-0.1**
	baz=74							
SATY				*e*S		**Sg**	**06 09 16.8**	**+0.3**
	baz=74							
PRZ	**Przheval'sk**	**1.21**	**245**	⇑*i*P		**Pg**	**06 09 03.8**	**-1.1**
	baz=45							
PRZ				⇑*i*S		**Sg**	**06 09 19.9**	**-0.7**
	baz=45							
DJR	**Jarkent**	**1.32**	**357**	P		**Pn**	**06 09 07.4**	**+0.1**
	9.5nm,0.1s							
DJR				S		**Sn**	**06 09 24.9**	**-0.6**
	72nm,0.3s							
DJR	**Jarkent**	**1.32**	**357**	*e*P		**Pn**	**06 09 07.4**	**+0.1**
	9.5nm,0.1s							
DJ

DGS				Lg	Lg	06 10 15.0	
	13nm,0.5s						
DGS	**Degeres**	**3.02**	**276**	*e*P	**Pb**	**06 09 36.6**	**+0.4**
	2.0nm,0.2s						
DGS				*e*S	**Sb**	**06 10 15.0**	**+1.5**
	13nm,0.5s						
KRBS	**Karabastau**	**3.14**	**284**	Pg	**Pb**	**06 09 38.8**	**+0.5**
	0.8nm,0.2s						
KRBS				Lg	Lg	06 10 18.8	
	5.5nm,0.3s						
KRBS	**Karabastau**	**3.14**	**284**	*e*P	**Pb**	**06 09 38.8**	**+0.5**
	0.8nm,0.2s						
KRBS				*e*S	**Sb**	**06 10 18.8**	**+1.7**
	5.5nm,0.3s						
TKM2	**Tokmak 2**	**3.15**	**270**	⇑Pg	**Pb**	**06 09 40.6**	**+2.1**
	1.1nm,0.2s						
TKM2				⇑Lg	Lg	06 10 19.4	
	6.0nm,0.1s						
TKM2	**Tokmak 2**	**3.15**	**270**	⇑*i*P	**Pn**	**06 09 33.5**	**+1.0**
	baz=70						
TKM2				⇑*i*S	**Sn**	**06 10 09.5**	**-1.2**
	baz=70						
MK31	**Makanchi Array**	**4.15**	**24**	⇑Pn	**Pn**	**06 09 48.3**	**+2.2**
	0.1nm,0.1s,baz=203,slow=13,SNR=17						
MK31				⇑Pg	**Pg**	**06 09 58.8**	**-2.3**
	0.4nm,0.2s,baz=192,slow=12,SNR=4.7						
MK31				⇑Lg	Lg	06 10 51.9	
	0.2nm,0.1s						

AFAD ***22*** *06:09:06.6±0.0,36.07N×44.81E,h7km±5km,ML2.6*
ISN ***22*** *06:09:06.3±0.7,36.20N×45.03E,h10km,ML2.5*
TEH ***22*** *06:09:07.6,36.21N×45.05E,h10km±52km,ML2.6*

ISC 22 06:09:06.7±1.2,36.16N±0.03×45.01E±0.04,h18km±6km, n13,σ0 91/19,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDS1	**Sardasht. Az.**	**0.39**	**91**	P	**Pg**	**06 09 14.9**	**+0.1**
SDS1				S	**Sg**	**06 09 20.8**	**+0.5**
MAHB	**Mahabad**	**0.83**	**42**	Pg	**Pb**	**06 09 22.2**	**-0.3**
MAHB				Sg	**Sg**	**06 09 34.1**	**+0.2**
IKRK	**Kirkuk**	**0.93**	**216**	*e*Pg	**Pb**	**06 09 24.5**	**+0.2**
	baz=35						
IKRK				*e*Sg	**Sn**	**06 09 39.0**	**+1.3**
IKRK				AML	AML	06 09 44.2	
	comp=N,133nm,0.3s						
IKRK				AML	AML	06 09 44.3	
	comp=E,142nm,0.2s						
YOVA	**Hakkari_Yksek**	**1.54**	**338**	P	**Pg**	**06 09 36.3**	**-0.1**
YOVA				S	**Sg**	**06 09 58.4**	**+2.0**
YOVA				*i* AML	AML	06 10 00.0	
	comp=E,66nm,0.7s						
YOVA				*i* AML	AML	06 10 00.0	
	comp=E,51nm,0.7s						
CUKT	**Cukurca**	**1.57**	**314**	P	**Pb**	**06 09 34.6**	**-0.5**
CUKT				S	**Sg**	**06 09 57.6**	**+0.3**
CUKT				*i* AML	AML	06 10 00.0	
	comp=E,115nm,0.4s						
CUKT				*i* AML	AML	06 10 02.0	
	comp=E,106nm,0.8s						
IAZR	**Azarshahr**	**1.71**	**27**	Pg	**Pb**	**06 09 38.5**	**+0.9**
HAKT	**HAKKARI**	**1.75**	**324**	P	**Pg**	**06 09 39.6**	**-0.7**
HAKT				S	**Sg**	**06 10 02.5**	**-0.5**
HAKT				*i* AML	AML	06 10 05.0	
	comp=E,108nm,0.6s						
HAKT				*i* AML	AML	06 10 05.0	
	comp=E,84nm,0.3s						
IDHR	**Dehrash**	**1.84**	**142**	Pn	**Pg**	**06 09 41.3**	**-0.8**
ILIN	**Lien**	**2.02**	**127**	Pn	**Pg**	**06 09 44.7**	**-0.8**
IHSH	**Hashtrud**	**2.14**	**57**	Pn	**Pb**	**06 09 45.2**	**+0.1**
ISHB	**Shabestar**	**2.18**	**13**	Pn	**Pb**	**06 09 44.7**	**-0.9**
IMRD	**Marand**	**2.61**	**12**	Pn	**Pb**	**06 09 51.5**	**-1.4**
ILBA	**Ilam Banvizeh**	**2.71**	**158**	Pn	**Pb**	**06 09 54.0**	**-0.6**

IDC 22 06:11:06.5±14.0,2.54S×128.07E,h0km,mb3.8/2, mbtmp3.7/3,ML3.8/1,Error ellipse: s-maj=343.8km s-min=180.7km az=89.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.35**	**161**	P	Pn	06 15 21.4	-1.2
	0.3nm,0.3s,baz=335,slow=13,SNR=16						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**21.75**	**165**	P	P	06 16 01.5	+1.7
	1.4nm,0.5s,baz=338,slow=8.9,SNR=23						
	1.4nm,0.5s						
STKA	**Stephens Creek**	**31.84**	**158**	P	P	06 17 32.1	-1.1
	0.8nm,0.4s,baz=320,slow=13,SNR=3.2						
	0.8nm,0.4s						

IDC ***22*** *06:27:43.5±0.7,15.14S×173.54W,h0km,mb3.9/9, mbtmp3.9/9,MS3.6/5,Error ellipse: s-maj=39.4km s-min=19.1km az=139.0*

ISC 22 06:27:48.3±0.8,15.1S±0.3×173.6W±0.2,h30km,n22, σ0 s82/12,mb3.7/9,MS3.9/4,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.48**	**117**	LR	LR	06 35 09.0	
	comp=Z,82nm,21.5s,baz=274,slow=31						
URZ	**Urewera**	**24.47**	**198**	LR	LR	06 41 18.2	
	comp=Z,148nm,18.3s,baz=122,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.62**	**329**	T	T	07 16 29.4	
	baz=149,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**38.63**	**329**	T	T	07 16 26.0	
	baz=149,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**38.63**	**329**	T	T	07 16 30.5	
	baz=149,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**39.57**	**330**	T	T	07 17 46.3	
	baz=150,slow=76,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**39.57**	**330**	T	T	07 17 46.9	
	baz=150,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**39.58**	**330**	T	T	07 17 44.7	
	baz=150,slow=76,SNR=7.1						
STKA	**Stephens Creek**	**44.00**	**240**	P	**P**	**06 35 53.2**	**0.0**
	2.6nm,0.6s,baz=69,slow=8.5,SNR=4.8						
	2.6nm,0.6s						
WRA	**Warramunga Arr**	**49.71**	**257**	P	**P**	**06 36 37.8**	**-0.3**
	1.0nm,0.5s,baz=92,slow=6.9,SNR=13						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**50.01**	**252**	P	**P**	**06 36 39.9**	**-0.4**
	2.4nm,0.5s,baz=88,slow=8.1,SNR=72						
	2.4nm,0.5s						
PFO	**Pinyon Flats O**	**72.88**	**47**	LR	LR	07 02 12.9	
	comp=Z,62nm,20.5s,baz=62,slow=28						
NVAR	**Mina Array Bea**	**74.26**	**42**	P	**P**	**06 39 22.6**	**-0.4**
	0.3nm,0.7s,baz=226,slow=7.7,SNR=4.3						
NVAR				LR	LR	07 05 56.0	
	comp=Z,57nm,20.7s,baz=178,slow=31						
	0.3nm,0.7s						
KDAK	**Kodiak Island**	**74.69**	**11**	LR	LR	07 05 09.7	
	comp=Z,73nm,20.9s,baz=152,slow=30						
QSPA	**South Pole Qui**	**74.92**	**180**	P	**P**	**06 39 26.3**	**0.0**
	7.8nm,1.0s,baz=42,slow=1.2,SNR=14						
	7.8nm,1.0s						
TXAR	**Lajitas Array**	**80.62**	**56**	P	**P**	**06 39 59.4**	**+0.8**
	0.3nm,0.6s,baz=182,slow=6.9,SNR=2.1						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**82.19**	**42**	P	**P**	**06 40 05.3**	**-1.5**
	0.5nm,0.7s,baz=206,slow=3.4,SNR=7.1						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**82.21**	**11**	P	**P**	**06 40 05.5**	**-0.6**
	0.4nm,0.5s,baz=226,slow=6.0,SNR=8.6						
	0.4nm,0.5s						
YKA	**Yellowknife Ar**	**89.92**	**23**	P	**P**	**06 40 44.4**	**+0.3**
	0.2nm,0.6s,baz=224,slow=1.9,SNR=4.3						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**124.30**	**352**	PKP	**PKPdf**	**06 46 43.9**	**+0.3**
	2.4nm,0.9s,baz=8.5,slow=2.5,SNR=4.6						
MLR	**Muntele Rosu**	**145.53**	**335**	PKPbc	**PKPbc**	**06 47 24.4**	**+0.5**
	1.8nm,0.5s,baz=297,slow=4.5,SNR=3.1						
BRTR	**Keskin Array B**	**145.81**	**321**	PKPbc	**PKPab**	**06 47 26.9**	**+1.4**
	1.2nm,0.6s,baz=82,slow=2.3,SNR=5.6						

IDC ***22*** *06:38:34.0±3.4,27.33S×144.45E,h0km,mbtmp3.4/4, ML3.2/4,Error ellipse: s-maj=56.6km s-min=19.2km az=109.0*
AUST ***22*** *06:38:34.8±0.0,27.47S×144.43E,h10km,Error ellipse: s-maj=1.2km s-min=0.6km az=245.0*
NOU ***22*** *06:38:35.7,27.43S×144.45E,h0km,MLv4.1/9, Queensland, Australia*

ISC 22 06:38:35.3±0.8,27.41S±0.05×144.41E±0.06,h10km,n27, σ1 s68/34,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QLP	**Quilpie**	**0.84**	**349**	P	**Pg**	**06 38 52.3**	**+0.9**
	baz=0.9,SNR=183						
QLP				S	**Sg**	**06 39 03.4**	**+1.1**
	baz=0.9,SNR=8.4						
QLP	**Quilpie**	**0.84**	**349**	P	**Pg**	**06 38 52.5**	**+1.1**
INKA	**Innaminka**	**3.27**	**263**	P	**Pn**	**06 39 27.9**	**+1.4**
	baz=3.3,SNR=7.9						
INKA				S	**Sn**	**06 40 08.7**	**+3.1**
	baz=3.3						
INKA	**Innaminka**	**3.27**	**263**	P	**Pn**	**06 39 28.4**	**+1.8**
CMSA	**Cobar Meteorol**	**4.26**	**165**	P	**Pn**	**06 39 41.4**	**+1.2**
	baz=4.2						
CMSA				S	**Sn**	**06 40 29.5**	**-0.6**
	baz=4.2						
CMSA	**Cobar Meteorol**	**4.26**	**165**	P	**Pn**	**06 39 41.6**	**+1.3**
STKA	**Stephens Creek**	**5.08**	**208**	P	**Pn**	**06 39 53.1**	**+1.5**
	baz=5.1,SNR=8.5						
STKA				S	**Sn**	**06 40 50.2**	**-0.1**
	baz=5.1						
STKA	**Stephens Creek**	**5.08**	**208**	P	**Pn**	**06 39 52.9**	**+1.4**
STKA	**Stephens Creek**	**5.08**	**208**	Pn	**Pn**	**06 39 53.0**	**+1.5**
	0.6nm,0.3s,baz=25,slow=13,SNR=12						
STKA				Sn	**Sn**	**06 40 50.0**	**-0.3**
	1.6nm,0.3s,baz=294,slow=20,SNR=2.9						
STKA				Lg	Lg	06 41 17.8	
	1.9nm,0.3s,baz=311,slow=22,SNR=2.8						
	3.4nm,0.6s						
LCRK	**Leigh Creek**	**6.21**	**239**	P	**Pn**	**06 40 08.8**	**+1.7**
	baz=6.2,SNR=3.7						
LCRK	**Leigh Creek**	**6.21**	**239**	P	**Pn**	**06 40 09.0**	**+1.9**
EIDS	**Eidsvold**	**6.32**	**73**	P	**Pn**	**06 40 08.7**	**+0.2**
	baz=6.3,SNR=5.2						
EIDS	**Eidsvold**	**6.32**	**73**	P	**Pn**	**06 40 09.4**	**+0.9**
ARMA	**Armidale**	**7.00**	**117**	P	**Pn**	**06 40 18.2**	**+0.2**
	baz=6.9						
ARMA	**Armidale**	**7.00**	**117**	P	**Pn**	**06 40 19.4**	**+1.4**
CTA	**Charters Tower**	**7.48**	**13**	Pn	**Pn**	**06 40 22.8**	**-1.7**
	0.1nm,0.3s,baz=188,slow=15,SNR=1.7						
CTA				Lg	Lg	06 42 29.8	
	0.8nm,0.3s,baz=276,slow=21,SNR=4.7						
	1.1nm,0.4s						
HTT	**Hallett**	**7.64**	**217**	P	**Pn**	**06 40 27.3**	**+0.5**
	baz=7.7						
YNG	**Young**	**7.67**	**154**	P	**Pn**	**06 40 26.2**	**-1.0**
	baz=7.6,SNR=12						
YNG	**Young**	**7.67**	**154**	P	**Pn**	**06 40 28.3**	**+1.2**
OOD	**Oodnadatta**	**7.75**	**265**	P	**Pn**	**06 40 29.1**	**+1.0**
	baz=7.8						
QIS	**Mount Isa**	**8.11**	**326**	P	**Pn**	**06 40 34.0**	**+0.8**
	baz=8.2						
CAN	**Canberra**	**8.81**	**155**	P	**Pn**	**06 40 43.1**	**+0.4**
TOO	**Toolangi**	**10.18**	**175**	P	**Pn**	**06 41 01.9**	**+0.4**
	baz=10,SNR=5.2						
ASAR	**Alice Springs**	**10.19**	**289**	Pn	**Pn**	**06 41 01.7**	**0.0**
	0.2nm,0.3s,baz=114,slow=14,SNR=8.5						
ASAR				Sn	**Sn**	**06 42 51.6**	**-4.6**
	0.3nm,0.3s,baz=110,slow=23,SNR=4.9						
	0.4nm,0.3s						
ASPA	**Alice Springs**	**10.19**	**289**	P	**Pn**	**06 41 02.8**	**+1.0**
	baz=10						
WC3	**Warramunga Arr**	**11.81**	**307**	P	**Pn**	**06 41 24.9**	**+1.0**
	baz=12						
WRA	**Warramunga Arr**	**11.84**	**307**	Pn	**Pn**	**06 41 23.9**	**-0.4**
	0.2nm,0.3s,baz=126,slow=13,SNR=5.4						
WRA				Sn	**Sn**	**06 43 32.2**	**-4.4**
	0.3nm,0.3s,baz=132,slow=23,SNR=2.6						
	0.3nm,0.3s						

IDC 22 06:42:58.7±6.7,19.30N×146.30E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=264.0km s-min=25.7km az=80.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.72**	**197**	P	P	06 50 41.3	-0.1
	1.6nm,0.7s,baz=18,slow=9.0,SNR=11						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**44.38**	**196**	P	P	06 51 10.9	-0.2
	0.4nm,0.5s,baz=15,slow=7.4,SNR=7.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.46**	**314**	P	P	06 52 58.0	+1.5
	0.4nm,1.0s,baz=91,slow=8.6,SNR=2.4						
	0.4nm,1.0s						
BVAR	**Borovoye Array**	**66.38**	**320**	P	P	06 53 48.5	-0.9
	0.5nm,0.6s,baz=78,slow=6.4,SNR=2.9						
	0.5nm,0.6s						

IDC ***22*** *06:51:14.9±0.8,34.36N×137.17E,h333km±7km,mb2.9/10, mbtmp3.6/13,Error ellipse: s-maj=18.4km s-min=11.5km az=68.0*
JMA ***22*** *06:51:15.0±0.2,34°N±1'×13°7'E±', h342km±1km,MV3.3/29, ENSYUNADA*

ISC 22 06:51:15.3±0.7,34.39N±0.07×137.18E±0.07,h338km±6km, n27,σ0 s66/35,mb3.1/10,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAA	**Atsumi**	**0.24**	**354**	P	**Pn**	**06 51 58.4**	**+0.8**
JAA				S	**S**	**06 52 31.9**	**+0.3**
JIE	**Ise**	**0.39**	**270**	P	**Pn**	**06 51 58.4**	**+0.5**
JIE				S	**S**	**06 52 31.8**	**-0.2**
TTO1	**TONANKAI O.B.S**	**0.83**	**203**	P	**Pn**	**06 51 59.5**	**+0.7**
JYTA	**Yamagatataniai**	**1.25**	**343**	P	**Pn**	**06 52 01.2**	**+0.4**
JWY	**Kouya**	**1.32**	**263**	P	**Pn**	**06 52 01.6**	**+0.3**
JTNC	**Tanabenakahech**	**1.42**	**247**	P	**Pn**	**06 52 01.9**	**+0.2**
JTNC				*e*S	**S**	**06 52 38.4**	**-0.5**
JYN	**Shimob**	**1.58**	**45**	P	**Pn**	**06 52 02.6**	**0.0**
JWT	**Wachi**	**1.71**	**302**	P	**Pn**	**06 52 03.8**	**+0.4**
JWT				*e*S	**S**	**06 52 41.3**	**-0.7**
JOD2	**Odawara 2**	**1.80**	**61**	P	**Pn**	**06 52 04.0**	**0.0**
JKG	**Kaga**	**2.00**	**340**	P	**Pn**	**06 52 05.4**	**+0.1**
JRY	**Ryogami san**	**2.15**	**41**	P	**Pn**	**06 52 06.8**	**+0.3**
JRY				S	**S**	**06 52 46.8**	**-0.8**
MAT	**Matsushiro**	**2.31**	**21**	P	**Pn**	**06 52 07.7**	**+0.1**
MAT				S	**S**	**06 52 48.6**	**-1.1**
MJAR	**Matsushiro Arr**	**2.31**	**21**	P	**Pn**	**06 52 08.0**	**+0.4**
	32nm,0.5s,baz=197,slow=8.5,SNR=84						
MJAR				S	**S**	**06 52 48.7**	**-1.1**
	14nm,0.8s,baz=194,slow=15,SNR=11						
JAI	**Aioi**	**2.34**	**256**	P	**Pn**	**06 52 07.8**	**-0.2**
JHJ	**Hachijo jima 2**	**2.52**	**120**	P	**Pn**	**06 52 09.1**	**-0.4**
	43nm,0.3s,baz=147,slow=23,SNR=12						
JHJ				S	**S**	**06 52 53.8**	**+0.8**
	75nm,0.5s,baz=72,slow=20,SNR=1.7						
JMN	**Monobe**	**2.81**	**257**	P	**Pn**	**06 52 12.1**	**0.0**
KLR	**Kul'dur**	**15.36**	**346**	P	**P**	**06 54 34.1**	**-0.1**
	1.5nm,0.5s,baz=146,slow=7.6,SNR=7.8						
SONM	**Songino Array**	**26.60**	**310**	P	**P**	**06 56 24.9**	**+1.2**
	0.6nm,0.6s,baz=115,slow=8.6,SNR=5.5						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**42.66**	**304**	P	**P**	**06 58 40.0**	**+0.3**
	0.4nm,0.4s,baz=90,slow=9.8,SNR=15						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**44.97**	**310**	P	**P**	**06 58 57.0**	**-0.6**
	1.0nm,0.6s,baz=96,slow=6.3,SNR=1.8						
	1.0nm,0.6s						
BVAR	**Borovoye Array**	**49.84**	**313**	P	**P**	**06 59 35.3**	**+0.5**
	0.4nm,0.4s,baz=86,slow=9.1,SNR=1.9						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**53.55**	**31**	P	**P**	**07 00 02.0**	**+0.2**
	0.3nm,0.6s,baz=265,slow=5.1,SNR=5.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**54.10**	**183**	P	**P**	**07 00 04.9**	**-1.4**
	0.2nm,0.3s,baz=360,slow=7.6,SNR=5.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**57.82**	**184**	P	**P**	**07 00 31.4**	**-1.0**
	0.1nm,0.3s,baz=1.6,slow=6.5,SNR=1.5						
	0.1nm,0.3s						
YKA	**Yellowknife Ar**	**67.80**	**28**	P	**P**	**07 01 36.8**	**-0.3**
	0.4nm,0.9s,baz=299,slow=6.2,SNR=5.8						
	0.4nm,0.9s						
NVAR	**Mina Array Bea**	**79.33**	**51**	P	**P**	**07 02 45.5**	**+1.0**
	0.4nm,0.7s,baz=280,slow=4.7,SNR=3.7						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**81.96**	**43**	P	**P**	**07 02 59.0**	**+0.7**
	0.4nm,0.7s,baz=318,slow=2.0,SNR=4.6						
	0.4nm,0.7s						

IDC 22 06:56:39.8±1.4,51.90N×74.16E,h0km,mbtmp2.5/2, ML1.7/2,Error ellipse: s-maj=38.9km s-min=10.6km az=24.0,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BVAR	**Borovoye Array**	**2.57**	**298**	Pg	Pb	06 57 25.8	-0.9
	0.1nm,0.3s,baz=114,slow=18,SNR=12						
BVAR				Lg	Lg	06 58 01.1	
	0.3nm,0.3s,baz=115,slow=28,SNR=19						
BVAR				Rg	Rg	06 58 19.5	
	2.1nm,0.7s,baz=125,slow=28,SNR=1.4						
KURBB	**Kurchatov Arra**	**3.03**	**113**	Pn	Pn	06 57 28.4	-0.5
	0.1nm,0.3s,baz=297,slow=14,SNR=5.7						
KURBB				Lg	Lg	06 58 10.3	
	0.1nm,0.3s,baz=296,slow=30,SNR=8.0						
	0.7nm,0.6s						
I46RU	**ZALESOVO INFRA**	**6.76**	**68**	I	I	07 38 10.0	
	baz=256,slow=323,SNR=2.8						
ZALV	**Zalesovo Beam**	**6.76**	**68**	Pn	Pn	06 58 20.4	+0.2
	0.1nm,0.3s,baz=253,slow=15,SNR=2.0						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.36**	**131**	Lg	Lg	07 00 25.9	
	0.1nm,0.3s,baz=322,slow=22,SNR=7.3						
I31KZ	**AKTYUBINSK INF**	**10.24**	**268**	I	I	08 03 10.0	
	0.1nm,1.3s,baz=75,slow=351,SNR=4.5						

IDC 22 07:00:07.2±5.5,55.46N×85.87E,h0km,mbtmp2.6/2, ML1.7/2,Error ellipse: s-maj=54.3km s-min=25.7km az=11.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**202**	I	I	07 12 00.0	
	baz=20,slow=339,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.63**	**202**	Pn	Pn	07 00 37.5	+0.4
	1.4nm,0.3s,baz=17,slow=17,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.56**	**225**	Pn	Pn	07 01 46.0	+1.3
	baz=42,slow=14,SNR=2.1						
KURBB				Sn	Sn	07 02 58.8	-1.4
	baz=40,slow=32,SNR=3.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**8.96**	**196**	Pn	Pn	07 02 16.2	-1.6
	baz=8.6,slow=11,SNR=1.2						
	0.1nm,0.4s						

PDG ***22*** *07:01:01.5±0.0,43.01N×17.78E,h9km,MD3.0/2, ML2.9/12,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
BEO ***22*** *07:01:02.0±0.6,42.95N×17.73E,h5km±2km,ML2.4/9*
RHSSO ***22*** *07:01:03.2±0.4,42.97N×17.85E,h5km±2km,ML2.6/13*

ISC 22 07:01:02.5±1.0,42.99N±0.02×17.82E±0.02,h4km±9km, n57,σ0 s96/99,6C-10D,Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.15**	**216**	*i* Pg	**Pg**	**07 01 05.8**	**+0.5**
STON				Sg	**Sg**	**07 01 08.4**	**+1.1**
DBRK	**Dubrovnik**	**0.40**	**143**	*e*Pg	**Pg**	**07 01 10.3**	**0.0**
DBRK				Sg	**Sg**	**07 01 16.0**	**+0.6**
TREB	**Trebinje**	**0.48**	**125**	*e*Pg	**Pg**	**07 01 11.2**	**-0.4**
TREB				*e*Sg	**Sg**	**07 01 18.8**	**+1.0**
TREB	**Trebinje**	**0.48**	**125**	*e*Pg	**Pg**	**07 01 11.2**	**-0.4**
TREB				*e*Sg	**Sg**	**07 01 18.5**	**+0.7**
BRY	**Bratogost**	**0.54**	**99**	⇓*i*Pg	**Pg**	**07 01 12.1**	**-0.7**
BRY				*i* Sg	**Sg**	**07 01 21.1**	**+1.3**
BRY	**Bratogost**	**0.54**	**99**	⇑*i*Pg	**Pg**	**07 01 12.3**	**-0.5**
BRY				*e*Sg	**Sg**	**07 01 20.4**	**+0.6**
KLINJ	**Klinje**	**0.59**	**72**	*e*Pg	**Pg**	**07 01 12.9**	**-0.9**
KLINJ				*e*Sg	**Sg**	**07 01 21.9**	**+0.4**
MAKA	**Makarska**	**0.66**	**297**	*e*Pg	**Pg**	**07 01 14.6**	**-0.5**
RICI	**Ricice**	**0.71**	**316**	*e*Pg	**Pg**	**07 01 15.4**	**-0.7**
LSTV	**Lastovo**	**0.71**	**252**	*e*Pg	**Pg**	**07 01 15.0**	**-1.2**
HCY	**Herceg Novi**	**0.74**	**137**	⇓*i*Pg	**Pg**	**07 01 15.7**	**-0.9**
HCY				*i* Sg	**Sb**	**07 01 27.9**	**-0.3**
HCY	**Herceg Novi**	**0.74**	**137**	*e*Pg	**Pg**	**07 01 15.4**	**-1.2**
HCY				*e*Sg	**Sg**	**07 01 26.5**	**+0.4**
UPM	**Unac-Piva**	**0.82**	**75**	⇑*i*Pg	**Pg**	**07 01 17.2**	**-1.1**
UPM				*i* Sg	**Sb**	**07 01 30.6**	**-0.4**
UPM	**Unac-Piva**	**0.82**	**75**	*e*Pg	**Pg**	**07 01 17.7**	**-0.6**
UPM				*e*Sg	**Sg**	**07 01 29.6**	**+0.6**
NKME	**Niksic**	**0.86**	**105**	⇑*i*Pg	**Pg**	**07 01 18.2**	**-0.8**
NKME				*i* Sg	**Sb**	**07 01 32.0**	**+0.1**
CEME	**Cevo**	**0.92**	**118**	⇓*i*Pg	**Pg**	**07 01 19.2**	**-1.0**
CEME				*i* Sg	**Sb**	**07 01 34.2**	**+0.5**
HVAR	**Hvar**	**1.02**	**281**	*e*Pg	**Pg**	**07 01 21.1**	**-0.9**
BUM	**Brajici-Budva**	**1.05**	**131**	⇓*i*Pg	**Pg**	**07 01 21.6**	**-1.0**
BUM				*i* Sg	**Sn**	**07 01 38.7**	**-0.4**
PLE	**Pljevlja**	**1.20**	**73**	⇑*i*Pg	**Pg**	**07 01 24.1**	**-1.4**
PLE				*i* Sg	**Sn**	**07 01 43.2**	**+0.3**
KOME	**Kolasin**	**1.25**	**96**	⇓*i*Pg	**Pg**	**07 01 25.3**	**-1.2**
KOME				*i* Sg	**Sn**	**07 01 45.4**	**+1.2**
DRME	**Dracevica, Mon**	**1.29**	**128**	⇓*i*Pg	**Pn**	**07 01 25.9**	**-1.3**
DRME				*i* Sg	**Sn**	**07 01 46.8**	**+1.9**
DRME	**Dracevica, Mon**	**1.29**	**128**	*e*Pg	**Pn**	**07 01 25.9**	**-1.3**
DRME				*e*Sg	**Sb**	**07 01 43.9**	**-0.2**
RUDO	**Rudo**	**1.30**	**60**	*e*Pg	**Pn**	**07 01 26.0**	**-1.4**
RUDO	**Rudo**	**1.30**	**60**	⇓*i*Pg	**Pn**	**07 01 25.9**	**-1.4**
RUDO				*e*Sg	**Sg**	**07 01 44.4**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.37**	**37**	*e*Pg	**Pn**	**07 01 28.0**	**-0.4**
HAPS				*e*Sg	**Pn**	**07 01 48.7**	**+1.6**
HAPS	**Han Pijesak,Bl**	**1.37**	**37**	⇑*i*Pg	**Pn**	**

Tensor Solution. s11 Moment tensor: M_{rr}1.55; $M_{\theta\theta}$5.93; $M_{\phi\phi}$-7.48; $M_{r\theta}$-1.46; $M_{r\phi}$1.11; $M_{\theta\phi}$0.63; Fault plane solution: NP1:ϕ_s312.00000°,δ82.00000°, λ15.00000°. NP2:ϕ_s219.00000°,δ75.00000°,λ172.00000°.

*NEIC **22** 07:07:49.6±2.7, 38.18N±0.05×21.59E±0.07, h10km±1km, mb4.1/11 Error ellipse: s-maj=9.6km s-min=8.2km az=132.0*

*THE **22** 07:07:50.0, 38.12N×21.63E, h17km, ML3.8/25, Error ellipse: s-maj=0.7km s-min=0.4km az=32.0*

*PDG **22** 07:07:50.4±1.2, 38.14N×21.62E, h10km±2km, ML3.8/9, Error ellipse: s-maj=1.5km s-min=1.5km az=0.0*

*NAO **22** 07:08:21.9, 41.30N×22.11E, h33km, mb3.5*

*BEO **22** 07:08:27.4±1.6, 40.87N×21.59E, h23km±6km, ML2.3/4*

*AFAD **22** 07:08:29.4±0.0, 39.27N×25.48E, h7km±6km, ML1.9*

ISC 22 07:07:49.6±0.8, 38.14N±0.02×21.62E±0.02, h16km±5km, n247,σ1§18/310, mb4.0/19, 16C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RLS	**Riolos of Patr**	**0.15**	**234**	P		**Pb**	**07 07 54.2**	**+0.2**
RLS				S		**Sb**	**07 07 57.3**	**+0.3**
	172μm,0.2s							
RLS	**Riolos of Patr**	**0.15**	**234**	P		**Pb**	**07 07 54.3**	**+0.2**
RLS				S		**Sb**	**07 07 57.9**	**+0.9**
UPR	**University Cam**	**0.19**	**44**	P		**Pb**	**07 07 55.2**	**+0.4**
UPR				S		**Sb**	**07 07 59.1**	**+0.8**
DRO	**Drossia**	**0.20**	**159**	P		**Pg**	**07 07 54.6**	**+0.2**
DRO				S		**Sg**	**07 07 58.2**	**+0.6**
	222μm,0.2s							
DRO	**Drossia**	**0.20**	**159**	P		**Pg**	**07 07 54.6**	**+0.2**
DRO				S		**Sb**	**07 07 58.6**	**-0.1**
EFP	**Efpalio**	**0.36**	**39**	P		**Pg**	**07 07 57.5**	**+0.4**
EFP				S		**Sb**	**07 08 03.4**	**+0.2**
	33μm,0.4s							
EFP	**Efpalio**	**0.36**	**39**	P		**Pg**	**07 07 57.4**	**+0.4**
EFP				S		**Sb**	**07 08 03.5**	**+0.2**
ALIK	**Aliki, Aigiali**	**0.41**	**73**	P		**Pg**	**07 07 58.0**	**+0.2**
ALIK				S		**Sb**	**07 08 04.9**	**+0.5**
TRIZ	**Trizonia**	**0.42**	**58**	P		**Pg**	**07 07 58.3**	**+0.2**
TRIZ				S		**Sb**	**07 08 04.7**	**-0.2**
KLV	**Kalavryta, Ach**	**0.43**	**103**	P		**Pg**	**07 07 57.9**	**-0.4**
KLV				S		**Sg**	**07 08 04.7**	**+0.4**
	8μm,0.3s							
KLV	**Kalavryta, Ach**	**0.43**	**103**	P		**Pg**	**07 07 57.9**	**-0.4**
KLV				S		**Sg**	**07 08 04.7**	**+0.4**
PVO	**Paravola**	**0.48**	**351**	P		**Pb**	**07 07 59.9**	**+0.2**
PVO				S		**Sb**	**07 08 08.0**	**+1.5**
	63μm,0.5s							
PVO	**Paravola**	**0.48**	**351**	P		**Pb**	**07 07 59.8**	**+0.2**
PVO				S		**Sb**	**07 08 07.3**	**+0.7**
ANX	**Ano Chora**	**0.51**	**28**	P		**Pg**	**07 07 59.8**	**0.0**
ANX				S		**Sb**	**07 08 08.2**	**+0.7**
	18μm,0.4s							
ANX	**Ano Chora**	**0.51**	**28**	P		**Pg**	**07 07 59.8**	**0.0**
ANX				S		**Sb**	**07 08 08.1**	**+0.5**
AST1	**Astakos**	**0.57**	**314**	P		**Pb**	**07 08 01.4**	**+0.1**
AST1				S		**Sb**	**07 08 10.7**	**+1.4**
	13μm,0.6s							
GUR	**Goura**	**0.61**	**110**	P		**Pg**	**07 08 00.6**	**-1.1**
GUR				S		**Sg**	**07 08 09.8**	**0.0**
	29μm,0.4s							
GUR	**Goura**	**0.61**	**110**	P		**Pg**	**07 08 00.6**	**-1.1**
GUR				S		**Sg**	**07 08 09.5**	**-0.3**
LTHK	**Lithakia**	**0.76**	**235**	P		**Pb**	**07 08 03.4**	**-1.0**
LTHK				S		**Sg**	**07 08 15.7**	**+1.4**
	24μm,0.5s							
LTHK	**Lithakia**	**0.76**	**235**	P		**Pb**	**07 08 03.3**	**-1.1**
DLFA	**Delphi**	**0.77**	**64**	P		**Pb**	**07 08 03.6**	**-1.1**
DLFA				S		**Sb**	**07 08 14.1**	**-0.8**
EVR	**Evrytania**	**0.79**	**11**	P		**Pn**	**07 08 05.7**	**-0.5**
EVR				S		**Sn**	**07 08 17.3**	**-0.4**
	4μm,0.5s							
EVR	**Evrytania**	**0.79**	**11**	P		**Pg**	**07 08 05.5**	**+0.5**
EVR				S		**Sb**	**07 08 15.2**	**-0.3**
KRI1	**kERI**	**0.80**	**233**	P		**Pb**	**07 08 04.1**	**-1.0**
KRI1				S		**Sg**	**07 08 16.8**	**+1.2**
	16μm,0.5s							
VLS	**Valsamata**	**0.81**	**273**	P		**Pb**	**07 08 04.4**	**-1.0**
VLS				S		**Sn**	**07 08 17.7**	**-0.5**
VLS	**Valsamata**	**0.81**	**273**	P		**Pb**	**07 08 04.4**	**-1.0**
PSDA	**Pessada-Kefalo**	**0.82**	**268**	P		**Pb**	**07 08 04.4**	**-1.1**
PSDA				S		**Sn**	**07 08 17.9**	**-0.4**
	6μm,0.3s							
THAL	**Thalero**	**0.83**	**97**	P		**Pb**	**07 08 04.8**	**-0.9**
THAL				S		**Sb**	**07 08 16.4**	**-0.3**
	12μm,0.4s							
THAL	**Thalero**	**0.83**	**97**	P		**Pb**	**07 08 05.0**	**-0.7**
VSK1	**VASILIKIADES**	**0.87**	**288**	P		**Pb**	**07 08 05.7**	**-0.7**
VSK1				S		**Sn**	**07 08 19.3**	**-0.4**
	9μm,0.6s							
FSK	**Fiskardo**	**0.89**	**291**	P		**Pb**	**07 08 06.0**	**-0.7**
FSK				S		**Sn**	**07 08 20.1**	**0.0**
	9μm,0.5s							
FSK	**Fiskardo**	**0.89**	**291**	P		**Pb**	**07 08 06.1**	**-0.6**
EVGI	**Lefkada island**	**0.89**	**302**	P		**Pb**	**07 08 06.3**	**-0.5**
EVGI				S		**Sn**	**07 08 20.1**	**-0.1**
	5μm,0.5s							
NYDR	**Nydri-Lefkada**	**0.92**	**308**	P		**Pb**	**07 08 06.6**	**-0.6**
KEF4	**Livadi, Kephal**	**0.95**	**277**	P		**Pb**	**07 08 07.0**	**-0.7**
KEF4				S		**Sn**	**07 08 21.9**	**+0.4**
KEF4	**Livadi, Kephal**	**0.95**	**277**	P		**Pb**	**07 08 06.9**	**-0.7**
MAKR	**Makrakomi, Fth**	**0.96**	**25**	P		**Pb**	**07 08 07.8**	**-0.1**
MAKR				S		**Sg**	**07 08 20.6**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.98**	**304**	P		**Pb**	**07 08 07.7**	**-0.6**
DRAG	**Dragano-Lefkad**	**0.98**	**304**	P		**Pb**	**07 08 07.5**	**-0.8**
DMLN	**Damoulianata-K**	**0.98**	**276**	P		**Pb**	**07 08 07.3**	**-1.0**
LKD2	**Lefkada island**	**0.99**	**311**	P		**Pb**	**07 08 08.1**	**-0.4**
	baz=321							
LKD2				S		**Sg**	**07 08 22.1**	**+0.2**
	baz=321							
LKD2				AMP				
	comp=N,14nm,0.4s,baz=321							
LKD2	**Lefkada island**	**0.99**	**311**	P		**Pb**	**07 08 08.2**	**-0.3**
LKD2				S		**Sg**	**07 08 22.3**	**+0.5**
	comp=N,5μm,0.7s							
LKD2	**Lefkada island**	**0.99**	**311**	P		**Pb**	**07 08 08.0**	**-0.5**
TSLK	**Tsoukalades, L**	**1.02**	**312**	P		**Pb**	**07 08 08.7**	**-0.2**
AXAR	**Agios Charalam**	**1.03**	**52**	P		**Pb**	**07 08 08.3**	**-0.7**
AXAR				S		**Sb**	**07 08 21.5**	**-0.9**
AGG	**Agios Georgios**	**1.04**	**32**	*e*P		**Pb**	**07 08 08.7**	**-0.6**
AGG	**Agios Georgios**	**1.04**	**32**	Pg		**Pb**	**07 08 08.7**	**-0.6**
AGG	**Agios Georgios**	**1.04**	**32**	P		**Pb**	**07 08 08.4**	**-0.9**
AGG				S		**Sn**	**07 08 23.7**	**-0.2**
	comp=N,3μm,0.6s							
AGG	**Agios Georgios**	**1.04**	**32**	P		**Pb**	**07 08 08.6**	**-0.7**
LTK	**Loutraki**	**1.07**	**96**	P		**Pb**	**07 08 09.0**	**-0.9**
LOUT	**Loutraki**	**1.08**	**98**	P		**Pb**	**07 08 09.2**	**-0.8**
LOUT				S		**Sg**	**07 08 25.1**	**+0.4**
	comp=N,2μm,0.5s							
LOUT	**Loutraki**	**1.08**	**98**	P		**Pb**	**07 08 09.3**	**-0.7**
LOUT				S		**Sb**	**07 08 23.6**	**-0.3**
KLMT	**Kalamata**	**1.14**	**162**	P		**Pn**	**07 08 10.0**	**-0.9**
KLMT				S		**Sb**	**07 08 25.9**	**+0.5**
	comp=N,3μm,0.9s							
PYL	**PYLOS**	**1.25**	**175**	P		**Pn**	**07 08 11.4**	**-1.1**
PYL				S		**Sb**	**07 08 29.0**	**+0.2**
	comp=N,2μm,0.4s							
PYL	**PYLOS**	**1.25**	**175**	P		**Pn**	**07 08 11.5**	**-1.1**
VIL2	**Platees**	**1.30**	**87**	P		**Pn**	**07 08 13.0**	**-0.2**
VILL	**Villia**	**1.33**	**89**	P		**Pn**	**07 08 13.3**	**-0.4**
VILL				S		**Sn**	**07 08 31.0**	**-0.2**
	comp=N,4μm,0.6s							
KRND	**KRANIDI**	**1.43**	**122**	P		**Pn**	**07 08 15.1**	**+0.1**
KRND				S		**Sb**	**07 08 34.1**	**+0.1**
	comp=N,4μm,0.7s							
KRND	**KRANIDI**	**1.43**	**122**	P		**Pn**	**07 08 15.1**	**+0.1**
THL	**Klokotos Trika**	**1.45**	**12**	P		**Pb**	**07 08 16.2**	**-0.1**
THL				S		**Sb**	**07 08 34.9**	**+0.3**
	comp=N,1μm,0.7s							
TYRN	**Tyrnavos**	**1.64**	**17**	P		**Pn**	**07 08 18.6**	**+0.8**
ATH	**Athens Observa**	**1.67**	**95**	P		**Pn**	**07 08 17.6**	**-0.6**
IGT	**Igoumenitsa**	**1.71**	**324**	P		**Pb**	**07 08 20.8**	**0.0**
	baz=329							
IGT				S		**Sg**	**07 08 46.6**	**+1.8**
	baz=329							
IGT				AMP				
	comp=N,2.7nm,0.4s,baz=329							
ATHU	**Athens Univers**	**1.72**	**95**	P		**Pn**	**07 08 18.5**	**-0.5**
XOR	**Xorichti**	**1.73**	**45**	P		**Pn**	**07 08 19.3**	**+0.1**
VLI	**Veliai**	**1.77**	**143**	P		**Pn**	**07 08 18.7**	**-0.9**
VLI				S		**Sn**	**07 08 42.1**	**+0.3**
	comp=N,2μm,0.9s							
ALNA	**Alonissos**	**2.03**	**60**	P		**Pn**	**07 08 23.1**	**-0.1**
KEK	**Kerkira**	**2.11**	**318**	*e*P		**Pn**	**07 08 23.9**	**-0.5**
KEK	**Kerkira**	**2.11**	**318**	Pn		**Pn**	**07 08 23.5**	**-0.8**
KEK	**Kerkira**	**2.11**	**318**	P		**Pn**	**07 08 23.6**	**-0.7**
SRN	**Sarande**	**2.14**	**324**	P		**Pb**	**07 08 27.0**	**-1.1**
	baz=329							
SRN				S		**Sb**	**07 08 54.2**	**-0.2**
	baz=329							
SRN				AMP				
	comp=E,1.3nm,0.7s,baz=329							
LSK	**Leskovik**	**2.15**	**339**	P		**Pb**	**07 08 28.0**	**-0.3**
	baz=342							
LSK				S		**Sg**	**07 08 57.9**	**-1.0**
	baz=342							
LSK				AMP				
	comp=N,4.7nm,0.6s,baz=342							
PAIG	**Paliouri**	**2.40**	**41**	*e*P		**Pn**	**07 08 28.1**	**-0.2**
KBN	**Korca**	**2.56**	**346**			**Pn**	**07 08 32.2**	**+1.7**
KBN	**Korca**	**2.56**	**346**	P		**Pb**	**07 08 33.9**	**-1.3**
	baz=348							
KBN				S		**Sg**	**07 09 10.0**	**-1.9**
	baz=348							
KBN				AMP				
	comp=N,1.8nm,0.9s,baz=348							
FNA	**Florina**	**2.64**	**356**	P		**Pn**	**07 08 34.1**	**+2.4**
FNA	**Florina**	**2.64**	**356**			**Pn**	**07 08 33.1**	**+1.3**
FNA	**Florina**	**2.64**	**356**	P		**Pb**	**07 08 34.2**	**-2.4**
	baz=358							
FNA				S		**Sb**	**07 09 06.1**	**-2.8**
	baz=358							
HORT	**Hortiatis**	**2.71**	**25**	*e*P		**Pn**	**07 08 32.8**	**+0.2**
HORT	**Hortiatis**	**2.71**	**25**	P		**Pn**	**07 08 33.4**	**+0.8**
VLO	**Vlora**	**2.85**	**325**			**Pn**	**07 08 35.8**	**+1.4**
OUR	**Ouranopolis**	**2.85**	**39**	P		**Pn**	**07 08 34.6**	**+0.1**
GRG	**Griva**	**2.87**	**12**	*e*P		**Pn**	**07 08 36.9**	**+2.0**
OHR	**Ohrid**	**3.03**	**348**	*e*Pg		**Pb**	**07 08 40.3**	**-3.0**
OHR	**Ohrid**	**3.03**	**348**	*i* Pn		**Pn**	**07 08 39.8**	**+2.7**
RODP	**Rodopos**	**3.10**	**146**	*e*P		**Pn**	**07 08 41.1**	**+3.2**
SCTE	**Santa Cesarea**	**3.12**	**309**	Pn		**Pn**	**07 08 38.5**	**+0.3**
SCTE	**Santa Cesarea**	**3.12**	**309**	P		**Pn**	**07 08 39.4**	**+1.2**
	baz=313							
KNT	**Kendrikon**	**3.17**	**18**	*e*P		**Pn**	**07 08 40.7**	**+1.8**
VAY	**Valandovo**	**3.26**	**13**	*e*Pg		**Pn**	**07 08 42.8**	**+2.7**
VAY	**Valandovo**	**3.26**	**13**	*i* Pn		**Pn**	**07 08 43.3**	**+3.2**
IMMV	**Iera Moni Meta**	**3.28**	**144**	*e*P		**Pn**	**07 08 42.4**	**+2.0**
APE	**Apeiranthos**	**3.29**	**108**	⇑P		**Pn**	**07 08 40.3**	**-0.2**
APE				⇓S		**Sn**	**07 09 21.4**	**+2.1**
APE	**Apeiranthos**	**3.29**	**108**	*e*P		**Pn**	**07 08 40.5**	**-0.1**
TIR	**Tirane**	**3.47**	**338**	⇓P		**Pn**	**07 08 44.0**	**+0.9**
TIR	**Tirane**	**3.47**	**338**	Pn		**Pn**	**07 08 43.4**	**+0.3**
SANT	**Santorini**	**3.54**	**119**	⇑P		**Pn**	**07 08 44.5**	**+0.5**
SANT	**Santorini**	**3.54**	**119**	*e*P		**Pn**	**07 08 44.7**	**+0.7**
SANT	**Santorini**	**3.54**	**119**			**Pn**	**07 08 45.8**	**+1.7**
PHP	**Peshkopia**	**3.65**	**346**	P		**Pn**	**07 08 47.6**	**+2.0**
	baz=348							
KARB	**zmir-Karabur**	**3.80**	**81**	P		**Pn**	**07 08 47.2**	**-0.4**
SKO	**Skopje**	**3.83**	**358**	*i* Pn		**Pn**	**07 08 50.3**	**+2.3**
ZEYE	**Izmir, Urla-Ze**	**3.85**	**87**	P		Pn	07 08 38.9	-9.3
GVD	**Gavdhos**	**3.85**	**148**	*e*P		**Pn**	**07 08 49.9**	**+1.6**
GOAD	**anakkale-G¶**	**3.90**	**58**	P		**Pn**	**07 08 48.6**	**-0.3**
GOAD				S		**Pb**	**07 09 00.0**	**+2.0**
GOAD				*i* AML		AML	07 09 01.0	
	comp=N,39nm,1.1s							
GOAD				*i* AML		AML	07 09 05.0	
	comp=N,32nm,0.4s							
GADA	**Gvkgeada**	**3.90**	**57**	*e*P		**Pn**	**07 08 49.2**	**+0.2**
URLA	**Izmir**	**3.92**	**85**	*e*P		**Pn**	**07 08 49.8**	**+0.5**
URLA	**Izmir**	**3.92**	**85**	P		**Pn**	**07 08 49.0**	**-0.3**
URLA				S		**Sn**	**07 09 31.5**	**-3.6**
TIP	**Timpagrande**	**3.94**	**287**	Pn		**Pn**	**07 08 49.5**	**0.0**
EZN	**Ezine**	**4.03**	**64**	*e*P		**Pn**	**07 08 51.0**	**+0.3**
PUK	**Puka**	**4.11**	**342**			**Pn**	**07 08 52.2**	**+0.3**
PUK	**Puka**	**4.11**	**342**	P		**Pn**	**07 08 53.7**	**+1.8**
	baz=344							
BAYC	**CANAKKALE_Bayr**	**4.16**	**66**	P		**Pn**	**07 08 52.1**	**-0.4**
BAYC				S		**Pb**	**07 09 01.4**	**-1.1**
ULC	**Ulcinj**	**4.23**	**335**	*e*Pn		**Pn**	**07 08 54.3**	**+0.8**
ULC				*i* Sn		**Sn**	**07 09 42.7**	**+0.2**
COMU	**Canakkale**	**4.25**	**61**	*e*P		**Pn**	**07 08 54.8**	**+1.0**
RDO	**Rodhopi**	**4.26**	**44**	*e*P		**Pn**	**07 08 54.7**	**+0.9**
RDO	**Rodhopi**	**4.26**	**44**			**Pn**	**07 08 55.1**	**+1.3**
PRVS	**Prvonek**	**4.37**	**4**	*e*Pg		**Pn**	**07 08 57.4**	**+1.9**
BCI	**Bajram Curri**	**4.38**	**345**	P		**Pn**	**07 08 58.0**	**+2.4**
	baz=346							
BCI				AMP				
	comp=E,0.9nm,0.9s,baz=346							
GELI	**Tayfur-Gelibol**	**4.39**	**58**	*e*P		**Pn**	**07 08 55.8**	**+0.2**
ALN	**Alexandroupoli**	**4.39**	**50**	*e*P		**Pn**	**07 08 57.8**	**+2.1**
ALN	**Alexandroupoli**	**4.39**	**50**	Pn		**Pn**	**07 08 56.1**	**+0.5**
DRME	**Dracevica, Mon**	**4.45**	**336**	⇑*i*Pn		**Pn**	**07 08 57.3**	**+0.8**
DRME				*i* Sn		**Sn**	**07 09 48.1**	**+0.2**
DRME	**Dracevica, Mon**	**4.45**	**336**	*e*Pn		**Pn**	**07 08 56.7**	**+0.2**
GCAM	**G?zelcaml?**	**4.46**	**94**	*e*P		**Pn**	**07 08 54.9**	**-1.7**
CEL	**Celeste**	**4.51**	**273**	Pn		**Pn**	**07 08 57.4**	**0.0**
ERIK	**Erikli-Kesan**	**4.55**	**55**	*e*P		**Pn**	**07 08 58.7**	**+0.8**
MATE	**Matera**	**4.55**	**305**	⇓P		**Pn**	**07 08 56.6**	**-1.3**
MATE	**Matera**	**4.55**	**305**	*e*P		**Pn**	**07 08 59.5**	**+1.6**
LPK	**Lapseki**	**4.57**	**59**	*e*P		**Pn**	**07 08 58.9**	**+0.8**
PVY	**Plav**	**4.62**	**345**	*e*Pn		**Pn**	**07 09 00.1**	**+1.1**
PVY				*i* Sn		**Sn**	**07 09 52.4**	**0.0**
BUM	**Brajici-Budva**	**4.65**	**334**	⇑*i*Pn		**Pn**	**07 08 59.5**	**+0.3**
BUM				*i* Sn		**Sn**	**07 09 52.7**	**-0.2**
BODT	**Bodrum**	**4.65**	**102**	*e*P		**Pn**	**07 09 00.1**	**+0.9**
BARS	**Barje**	**4.67**	**2**	*e*Pn		**Pn**	**07 09 01.3**	**+1.8**
ZKR	**Zakros**	**4.78**	**128**	*e*P		**Pn**	**07 09 04.3**	**+3.3**
CEME	**Cevo**	**4.86**	**336**	⇑*i*Pn		**Pn**	**07 09 02.3**	**+0.2**
CEME				*i* Sn		**Sn**	**07 09 57.9**	**-0.2**
CUC	**Castrocucco**	**4.88**	**294**	Pn		**Pn**	**07 09 04.3**	**+1.9**
UKOP	**Uzunkopru-Edir**	**4.88**	**51**	*e*P		**Pn**	**07 09 03.6**	**+1.2**
IVA	**Berane**	**4.90**	**345**	⇓*i*Pn		**Pn**	**07 09 03.8**	**+1.0**
IVA				*i* Sn		**Sn**	**07 09 59.1**	**-0.1**
HCY	**Herceg Novi**	**4.92**	**332**	*e*Pn		**Pn**	**07 09 02.9**	**0.0**
HCY				*i* Sn		**Sn**	**07 09 59.1**	**-0.4**
HCY	**Herceg Novi**	**4.92**	**332**	*e*Pn		**Pn**	**07 09 01.4**	**-1.5**
DAT	**Datca**	**4.95**	**105**	*e*P		**Pn**	**07 09 05.1**	**+1.6**
KOME	**Kolasin**	**4.97**	**342**	*e*Pn		**Pn**	**07 09 04.7**	**+1.0**
KOME				*i* Sn		**Sn**	**07 10 00.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**5.00**	**58**	*e*P		**Pn**	**07 09 04.2**	**+0.1**
NKME	**Niksic**	**5.04**	**337**	⇓*i*Pn		**Pn**	**07 09 05.7**	**+1.0**
NKME				*i* Sn		**Sn**	**07 10 02.5**	**-0.2**
KARP	**Karpathos**	**5.14**	**119**	*e*P		**Pn**	**07 09 08.7**	**+2.6**
KARP	**Karpathos**	**5.14**	**119**	Pn		**Pn**	**07 09 08.0**	**+1.9**
TREB	**Trebinje**	**5.20**	**332**	*e*Pn		**Pn**	**07 09 06.3**	**-0.5**
DBRK	**Dubrovnik**	**5.24**	**331**	*e*Pn		**Pn**	**07 09 06.7**	**-0.6**
SJES	**Sjenica**	**5.26**	**347**	*e*Pn		**Pn**	**07 09 09.3**	**+1.5**
SJES	**Sjenica**	**5.26**	**347**	*e*Pn		**Pn**	**07 09 08.7**	**+0.9**
BRY	**Bratogost**	**5.30**	**335**	*e*Pn		**Pn**	**07 09 08.5**	**+0.2**
BRY				*i* Sn		**Sn**	**07 10 08.4**	**-0.7**
BRY	**Bratogost**	**5.30**	**335**	*e*Pn		**Pn**	**07 09 08.4**	**+0.2**
KIRA	**zmir-Kiraz**	**5.34**	**87**	P		**Pn**	**07 09 09.6**	**+0.7**
KIRA				S		Pb	07 09 16.9	-5.8
EDRB	**Edirne**	**5.40**	**45**	*e*P		**Pn**	**07 09 07.6**	**-1.9**
TURN	**Turunc**	**5.45**	**103**	*e*P		**Pn**	**07 09 11.6**	**+1.4**
PLE	**Pljevlja**	**5.45**	**343**	*e*Pn		**Pn**	**07 09 11.3**	**+1.0**
PLE				*i* Sn		**Sn**	**07 10 12.2**	**-0.6**
UPM	**Unac-Piva**	**5.46**	**339**	⇓*i*Pn		**Pn**	**07 09 11.4**	**+0.9**
UPM				*i* Sn		**Sn**	**07 10 12.2**	**-0.9**
BLKB	**Belogradchik**	**5.53**	**8**	⇑P		**Pn**	**07 09 13.5**	**+2.1**
IVAS	**Ivanjica**	**5.54**	**349**	*e*Pn		**Pn**	**07 09 12.2**	**+0.7**
ZAGS	**Zajecar**	**5.68**	**4**	*e*Pn		**Pn**	**07 09 14.5**	**+1.1**
PLVB	**Pleven**	**5.71**	**23**	⇑P		**Pn**	**07 09 15.6**	**+1.8**
RUDO	**Rudo**	**5.73**	**343**	*e*Pn		**Pn**	**07 09 13.7**	**-0.3**
ELND	**Elena**	**5.78**	**33**	⇑P		**Pn**	**07 09 17.4**	**+2.7**
GRUS	**Gruza**	**5.78**	**354**	*e*Pn		**Pn**	**07 09 15.0**	**+0.3**
RAFF	**Raffo Rosso**	**5.83**	**263**	Pn		**Pn**	**07 09 14.2**	**-1.2**
LSTV	**Lastovo**	**5.86**	**324**	*e*Pn		**Pn**	**07 09 15.0**	**-0.8**
BBLS	**Lazići**	**5.96**	**344**	*e*Pn		**Pn**	**07 09 18.4**	**+1.2**
BBLS	**Lazići**	**5.96**	**344**	*e*Pn		**Pn**	**07 09 16.9**	**-0.3**
DIVS	**Divibare**	**6.07**	**349**	*e*Pn		**Pn**	**07 09 19.3**	**+0.4**
TRUS	**Trudelj**	**6.14**	**352**	*e*Pn		**Pn**	**07 09 20.6**	**+0.9**
PAOL	**Paolisi**	**6.16**	**300**			**Pn**	**07 09 21.0**	**+0.9**
MAKA	**Makarska**	**6.21**	**327**	*e*Pn		**Pn**	**07 09 20.5**	**-0.1**
HAPS	**Han Pijesak,BI**	**6.27**	**342**	*e*Pn		**Pn**	**07 09 21.0**	**-0.6**
RICI	**Ricice**	**6.33**	**329**	*e*Pn		**Pn**	**07 09 22.4**	**0.0**
HVAR	**Hvar**	**6.38**	**324**	*e*Pn		**Pn**	**07 09 22.9**	**-0.1**
TEKS	**Tekeris**	**6.59**	**347**	*e*Pn		**Pn**	**07 09 25.6**	**-0.3**
TEKS	**Tekeris**	**6.59**	**347**	*e*Pn		**Pn**	**07 09 24.5**	**-1.4**
ELL	**Elmali**	**6.74**	**99**			**Pn**	**07 09 28.9**	**+0.8**
KIJV	**Kijevo**	**7.05**	**328**	*e*Pn		**Pn**	**07 09 32.4**	**+0.1**
KIJV						Sn	**07 10 51.3**	**-0.8**
INTR	**Introdacqua**	**7.06**	**306**	Pn		**Pn**	**07 09 34.6**	**+2.1**
ZIRJ	**Zirje**	**7.12**	**322**	*e*Pn		**Pn**	**07 09 32.4**	**-0.8**
FRGS	**Fruska Gora**	**7.14**	**350**	⇑P		**Pn**	**07 09 34.2**	**+0.8**
MORI	**Morici**	**7.25**	**324**	*e*Pn		**Pn**	**07 09 34.9**	**-0.1**
GZR	**Gura Zlata**	**7.29**	**6**	⇓P		**Pn**	**07 09 37.3**	**+1.7**
BLY	**Banja Luka**	**7.39**	**335**	*e*Pn		**Pn**	**07 09 35.2**	**-1.7**
A050A	**Klekovaca**	**7.40**	**330**	*e*Pn		**Pn**	**07 09 36.8**	**-0.2**
ARR	**Arges**	**7.56**	**16**	⇑P		**Pn**	**07 09 41.2**	**+1.9**
CAMP	**Campotosto**	**7.65**	**308**	Pn		**Pn**	**07 09 42.5**	**+1.9**
A051A	**Mrakovica**	**7.72**	**334**	*e*Pn		**Pn**	**07 09 39.6**	**-1.8**
VOIR		**7.72**	**18**	⇑P		**Pn**	**07 09 44.0**	**+2.5**
VIRC	**Vir**	**7.88**	**323**	*e*Pn		**Pn**	**07 09 43.3**	**-0.3**
NRCA	**Norcia**	**7.99**	**309**	Pn		**Pn**	**07 09 46.7**	**+1.4**
MLR	**Muntele Rosu**	**8.02**	**22**	⇑P		**Pn**	**07 09 48.0**	**+2.4**
MLR	**Muntele Rosu**	**8.02**	**22**	Pn		**Pn**	**07 09 46.9**	**+1.3**
	comp=E,0.3nm,0.3s,baz=147,slow=18,SNR=2.3							
	comp=E,2.1nm,0.6s							
DOPR	**Dopca**	**8.30**	**19**	⇑P		**Pn**	**07 09 51.8**	**+2.4**
MORH	**Mrgy, Hungar**	**8.36**	**346**	⇑P		**Pn**	**07 09 49.8**	**-0.4**
PLOR	**Plostina**	**8.56**	**24**	⇑P		**Pn**	**07 09 55.1**	**+2.2**
MURB	**Monte Urbino**	**8.59**	**309**	Pn		**Pn**	**07 09 53.3**	**-0.1**
VRI	**Vrincioaia**	**8.60**	**25**	⇑P		**Pn**	**07 09 56.3**	**+2.8**
BOJS	**Bojanci**	**8.75**	**329**	*e*Pn		**Pn**	**07 09 54.5**	**-1.0**
CRES	**Cresnjev**	**8.94**	**331**	*e*Pn		**Pn**	**07 09 56.8**	**-1.3**
CEY	**Cerknica**	**9.29**	**327**	*e*Pn		**Pn**	**07 10 01.4**	**-1.5**
BR131	**Keskin Array S**	**9.50**	**77**				**07 10 07.3**	**+1.3**
BRTR	**Keskin Array B**	**9.50**	**77**	Pn		**Pn**	**07 10 08.2**	**+2.3**
BRTR	**Keskin Array B**	**9.50**	**77**	Pn		**Pn**	**07 10 08.4**	**+2.5**
	comp=E,0.5nm,0.3s,baz=259,slow=12,SNR=12							
	comp=E,1.9nm,0.5s							
SOKA	**Soboth**	**9.82**	**332**	*i* Pn		**Pn**	**07 10 10.2**	**0.0**
	comp=E,3.9nm,0.5s							
OBKA	**Obir**	**9.86**	**330**	*i* Pn		**Pn**	**07

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.50**	**212**	P	**Pg**	**07 19 57.6**	**+0.5**
FAKI	**Fak Fak**	**1.57**	**78**	Pn	**Pn**	**07 19 55.5**	**-0.2**
FAKI	**Fak Fak**	**1.57**	**78**	P	**Pb**	**07 19 56.3**	**-0.8**
FAKI	**Fak Fak**	**1.57**	**78**	P	**Pb**	**07 19 55.6**	**-1.5**
FAKI				S	**Sn**	**07 20 14.7**	**-1.1**
SWI	**Sorong**	**2.43**	**13**	P	**Pn**	**07 20 06.2**	**-1.4**
NLAI	**Namlea**	**3.61**	**270**	P	**Pn**	**07 20 26.4**	**+2.7**
LBMI	**Labuha**	**4.13**	**309**	P	**Pn**	**07 20 30.4**	**-0.5**
LBMI				S	**Sn**	**07 21 17.3**	**-1.6**
SAUI	**Saumlaki**	**4.74**	**173**	Pn	**Pn**	**07 20 39.5**	**+0.2**
SAUI	**Saumlaki**	**4.74**	**173**	P	**Pn**	**07 20 40.8**	**+1.5**
SANI	**Sanana**	**4.87**	**284**	P	**Pn**	**07 20 40.3**	**-0.8**
SANI	**Sanana**	**4.87**	**284**	P	**Pn**	**07 20 39.1**	**-2.0**
SANI				S	**Sn**	**07 21 34.8**	**-2.4**
TNTI	**Ternate**	**5.21**	**320**	Pn	**Pn**	**07 20 45.4**	**-0.4**
TNTI	**Ternate**	**5.21**	**320**	P	**Pn**	**07 20 48.3**	**+2.5**
TNTI	**Ternate**	**5.21**	**320**	P	**Pn**	**07 20 44.4**	**-1.4**
KMSI	**Cibinong**	**7.73**	**299**	P	**Pn**	**07 21 20.9**	**+0.5**
	623nm,0.9s,4.0nm						
SMPI	**Sarmi**	**8.09**	**81**	P	**Pn**	**07 21 25.9**	**+0.6**
	381nm,1.3s,14μm						
LUWI	**Luwuk**	**8.23**	**285**	Pn	**Pn**	**07 21 28.0**	**+0.7**
LUWI	**Luwuk**	**8.23**	**285**	P	**Pn**	**07 21 29.0**	**+1.7**
	392nm,1.2s,5μm10μm						
BBSI	**Bau Bau**	**8.42**	**254**	P	**Pn**	**07 21 30.4**	**+0.6**
	375nm,1.1s,4μm11μm						
SGSI	**Sangihe**	**8.62**	**323**	P	**Pn**	**07 21 32.1**	**-0.5**
	311nm,0.6s,4μm						
SOEI	**Soe**	**9.10**	**224**	Pn	**Pn**	**07 21 41.9**	**+2.6**
SOEI	**Soe**	**9.10**	**224**	P	**Pn**	**07 21 43.2**	**+3.9**
	382nm,1.2s,9μm18μm						
DRS	**Darwin Rock St**	**9.12**	**179**	P	**Pn**	**07 21 39.4**	**-0.1**
GENI	**Genyem**	**9.47**	**86**	P	**Pn**	**07 21 47.1**	**+2.8**
GENI	**Genyem**	**9.47**	**86**	P	**Pn**	**07 21 42.4**	**-1.9**
	714nm,1.1s,6μm12μm						
MRSI	**Marisa**	**9.52**	**293**	P	**Pn**	**07 21 42.4**	**-2.5**
	155nm,0.5s,2μm						
KDU	**Kakadu**	**9.54**	**170**	P	**Pn**	**07 21 43.4**	**-1.8**
	baz=9.5,SNR=112						
KDU	**Kakadu**	**9.54**	**170**	P	**Pn**	**07 21 43.9**	**-1.3**
MTN	**Manton Dam**	**9.54**	**178**	P	**Pn**	**07 21 44.3**	**-1.0**
	baz=9.5,SNR=43						
MTN	**Manton Dam**	**9.54**	**178**	Pn	**Pn**	**07 21 43.5**	**-1.8**
MTN	**Manton Dam**	**9.54**	**178**	P	**Pn**	**07 21 44.6**	**-0.7**
MMRI	**Maumere**	**9.98**	**237**	Pn	**Pn**	**07 21 54.3**	**+2.9**
MMRI	**Maumere**	**9.98**	**237**	P	**Pn**	**07 21 55.9**	**+4.6**
EDFI	**Ende, Flores**	**10.50**	**238**	P	**Pn**	**07 22 01.8**	**+3.2**
	215nm,1.0s,4μm17μm						
TABU	**Tabubil**	**10.67**	**101**	P	**Pn**	**07 22 00.9**	**0.0**
BKSI	**Bulukumba**	**10.76**	**259**	P	**Pn**	**07 22 03.5**	**+1.5**
	372nm,1.4s,4μm10μm						
TOLI2	**Tolitoli**	**10.83**	**293**		**Pn**	**07 22 01.6**	**-1.3**
TOLI2	**Tolitoli**	**10.83**	**293**	P	**Pn**	**07 22 02.3**	**-0.7**
TTSI	**Tana Toraja**	**10.88**	**271**	P	**Pn**	**07 22 06.4**	**+2.8**
	115nm,1.0s,2μm9μm						
KAPI	**Kappang**	**11.07**	**261**		**Pn**	**07 22 07.4**	**+1.1**
KAPI	**Kappang**	**11.07**	**261**	P	**Pn**	**07 22 07.4**	**+1.1**
MPSI	**Mapaga**	**11.38**	**288**	P	**Pn**	**07 22 10.0**	**-0.5**
	60nm,0.8s,1μm8μm						
DAV	**Davao City (W)**	**11.46**	**333**	*eP*	Pn	07 22 17.0	+5.4
DAV	**Davao City (W)**	**11.46**	**333**	LR	LR	07 27 21.8	
	comp=Z,9μm,20.9s,baz=116,slow=42						
BASI	**Baing, Sumba**	**12.21**	**235**	P	Pn	07 22 26.9	+5.0
KNRA	**Kununurra**	**12.50**	**189**		**Pn**	**07 22 24.2**	**-1.6**
KNRA	**Kununurra**	**12.50**	**189**	P	**Pn**	**07 22 26.9**	**+1.1**
PLAI	**Plampang**	**14.00**	**246**	P	**Pn**	**07 22 47.2**	**+0.8**
PLAI	**Plampang**	**14.00**	**246**	P	**Pn**	**07 22 48.4**	**+2.0**
	306nm,0.9s,5μm9μm						
TWSI	**Taliwang, Sumb**	**14.79**	**248**	P	**Pn**	**07 22 59.1**	**+2.0**
	236nm,1.1s,3μm7μm						
FITZ	**Fitzroy Crossi**	**15.57**	**198**	P	**Pn**	**07 23 03.4**	**-4.1**
	baz=16,SNR=42						
MTKI	**Muara Teweh, K**	**15.97**	**278**	P	Pn	07 23 00.1	-13
SRBI	**Singaraja**	**16.15**	**252**	P	**Pn**	**07 23 16.2**	**+1.2**
	176nm,1.3s,3μm7μm						
COEN	**Coen**	**16.27**	**132**	P	**Pn**	**07 23 14.7**	**-1.8**
	baz=16,SNR=10						
COEN	**Coen**	**16.27**	**132**	Pn	**Pn**	**07 23 14.9**	**-1.6**
DNP	**Denpasar**	**16.33**	**250**	P	**Pn**	**07 23 17.8**	**+0.6**
	279nm,0.8s						
MANU	**Manus Island**	**16.68**	**86**	P	**Pn**	**07 23 22.2**	**+0.4**
WB0	**Warramunga Arr**	**16.80**	**168**	Pn	**Pn**	**07 23 21.2**	**-2.1**
WRA	**Warramunga Arr**	**16.96**	**168**		**Pn**	**07 23 22.2**	**-3.0**
WRA	**Warramunga Arr**	**16.96**	**168**	P	**Pn**	**07 23 22.3**	**-3.0**
WRA				pmax	pmax		
	comp=Z,18nm,1.8s						
WRA	**Warramunga Arr**	**16.96**	**168**	Pn	**Pn**	**07 23 20.0**	**-5.3**
	comp=Z,2.3nm,0.3s,baz=353,slow=13,SNR=32						
WB2	**Warramunga Arr**	**16.97**	**168**	P	**Pn**	**07 23 23.6**	**-1.8**
	baz=17						
ABJI	**Asem Bagus**	**17.01**	**254**	P	**Pn**	**07 23 27.4**	**+1.5**
	comp=Z,308nm,1.2s,comp=Z,5μmcomp=Z,8μm						
KMMI	**Kalianget**	**17.10**	**257**	P	**Pn**	**07 23 28.4**	**+1.4**
	comp=Z,286nm,1.2s,comp=Z,4μmcomp=Z,7μm						
KKM	**Kota Kinabalu**	**17.17**	**303**	Pn	**Pn**	**07 23 27.5**	**-0.5**
KKM	**Kota Kinabalu**	**17.17**	**303**	P	**Pn**	**07 23 28.1**	**+0.1**
JAGI	**Jajag, Banyuwa**	**17.27**	**252**		**Pn**	**07 23 28.9**	**-0.2**
JAGI	**Jajag, Banyuwa**	**17.27**	**252**	P	**Pn**	**07 23 29.7**	**+0.6**
JAGI	**Jajag, Banyuwa**	**17.27**	**252**	P	**Pn**	**07 23 29.3**	**+0.2**
	comp=Z,95nm,1.8s,comp=Z,3μmcomp=Z,7μm						
PMG	**Port Moresby**	**17.45**	**111**		**Pn**	**07 23 31.4**	**+0.1**
PMG	**Port Moresby**	**17.45**	**111**	P	**P**	**07 23 32.4**	**-0.1**
PMG	**Port Moresby**	**17.45**	**111**	P	**P**	**07 23 32.3**	**-0.2**
PMG	**Port Moresby**	**17.45**	**111**	P	**P**	**07 23 32.2**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=314,slow=8.7,SNR=22						
	comp=Z,102nm,1.1s						
BLJI	**Banyuglugur**	**17.61**	**255**	P	**Pn**	**07 23 34.4**	**+1.0**
	comp=Z,441nm,0.7s,comp=Z,6μm						
GMJI	**Gumukmas**	**17.89**	**253**	P	**Pn**	**07 23 35.0**	**-1.8**
BWJI	**Bawean**	**18.18**	**261**	P	**Pn**	**07 23 41.4**	**+1.0**
	comp=Z,390nm,1.2s,comp=Z,5μm						
GRJI	**Gresik**	**18.52**	**258**	P	**Pn**	**07 23 45.7**	**+1.1**
	comp=Z,369nm,1.1s,comp=Z,6μmcomp=Z,6μm						
QIS	**Mount Isa**	**19.26**	**154**	P	**P**	**07 23 52.1**	**-0.4**
	baz=19,SNR=71						
QIS	**Mount Isa**	**19.26**	**154**	P	**P**	**07 23 52.2**	**-0.4**
SBUM	**Sibu**	**19.33**	**287**	P	**P**	**07 23 54.3**	**+1.0**
PWJI	**Pagerwojo**	**19.40**	**255**	P	**P**	**07 23 55.6**	**+1.6**
	comp=Z,73nm,1.1s,comp=Z,2μm						
STKI	**Sintang**	**19.50**	**279**	P	**P**	**07 23 56.6**	**+1.4**
	comp=Z,128nm,1.5s						
NGJI	**Ngawi**	**19.60**	**257**	P	**P**	**07 23 57.2**	**+1.0**
	comp=Z,307nm,1.1s,comp=Z,6μm						
TGY	**Tagaytay City**	**19.78**	**331**	P	**P**	**07 23 59.7**	**+1.5**
	comp=Z,235nm,0.6s,baz=294,slow=6.5,SNR=5.2						
TGY				LR	LR	07 31 43.6	
	comp=Z,2μm,21.2s,baz=118,slow=37						
MTSU	**Mount Surprise**	**19.91**	**139**	P	**Pn**	**07 24 01.1**	**-0.3**
	baz=20,SNR=36						
MTSU	**Mount Surprise**	**19.91**	**139**	P	**Pn**	**07 24 00.6**	**-0.7**
AS31	**Alice Springs**	**20.53**	**172**	P	**P**	**07 24 05.7**	**-0.7**
AS31				IAmb	IAmb	07 24 11.0	
	comp=Z,117nm,0.7s						
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**07 24 06.5**	**+0.1**
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**07 24 06.5**	**+0.1**
ASAR	**Alice Springs**	**20.53**	**172**	P	**P**	**07 24 06.0**	**-0.3**
	comp=Z,254nm,0.7s,baz=351,slow=11,SNR=613						
	comp=Z,254nm,0.7s						
ASPA	**Alice Springs**	**20.53**	**172**	P	**P**	**07 24 06.8**	**+0.5**
	baz=20						
SMRI	**Semarang**	**20.54**	**259**	P	**P**	**07 24 05.6**	**-0.9**
SMRI	**Semarang**	**20.54**	**259**	P	**P**	**07 24 06.3**	**-0.2**
SMRI	**Semarang**	**20.54**	**259**	P	**P**	**07 24 05.8**	**-0.7**
	comp=Z,285nm,1.3s,comp=Z,5μmcomp=Z,10μm						
UGM	**Wanagama**	**20.61**	**256**	P	**P**	**07 24 08.2**	**+0.9**
UGM				IAmb	IAmb	07 24 22.2	
	comp=Z,252nm,1.3s						
UGM	**Wanagama**	**20.61**	**256**	P	**P**	**07 24 08.6**	**+1.2**
UGM	**Wanagama**	**20.61**	**256**	P	**P**	**07 24 08.4**	**+1.0**
	comp=Z,168nm,1.3s						
MBWA	**Marble Bar**	**20.76**	**210**	P	**P**	**07 24 07.2**	**-1.6**
MBWA	**Marble Bar**	**20.76**	**210**	P	**P**	**07 24 06.8**	**-2.0**
KSM	**Kuching**	**20.93**	**283**	P	**P**	**07 24 11.8**	**+1.1**
KSM				IAmb	IAmb	07 24 13.6	
	comp=Z,254nm,1.1s						
KSM	**Kuching**	**20.93**	**283**	P	**P**	**07 24 12.2**	**+1.5**
PSA00	**Pilbara Seismi**	**21.05**	**209**	P	**P**	**07 24 09.8**	**-2.2**
PSA00				IAmb	IAmb	07 24 12.6	
	comp=Z,145nm,0.9s						
PSA00	**Pilbara Seismi**	**21.05**	**209**	P	**P**	**07 24 10.1**	**-1.9**
PSA00				IAmb	IAmb	07 24 12.6	
	comp=Z,94nm,1.1s						
PSA00	**Pilbara Seismi**	**21.05**	**209**	P	**P**	**07 24 10.0**	**-1.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**21.43**	**93**	P	**P**	**07 24 15.2**	**-1.0**
RABL				IAmb	IAmb	07 24 20.8	
	comp=Z,252nm,0.9s						
RABL	**Rabaul**	**21.43**	**93**	P	**P**	**07 24 18.4**	**+2.3**
WRKA	**Warakurna**	**21.79**	**186**	P	**P**	**07 24 18.6**	**-1.3**
	baz=22,SNR=306						
WRKA	**Warakurna**	**21.79**	**186**	P	**P**	**07 24 18.7**	**-1.2**
GUMO	**Guam**	**21.85**	**40**	P	**P**	**07 24 20.3**	**-0.2**
GUMO	**Guam**	**21.85**	**40**	P	**P**	**07 24 22.0**	**+1.5**
GUMO	**Guam**	**21.85**	**40**	P	**P**	**07 24 22.1**	**+1.5**
	comp=Z,244nm,1.0s,baz=114,slow=6.4,SNR=4.7						
GUMO				LR	LR	07 31 39.1	
	comp=Z,3μm,21.8s,baz=244,slow=33						
	comp=Z,244nm,1.0s						
KPJI	**Karang Pucung**	**22.06**	**259**	P	**P**	**07 24 20.2**	**-2.7**
	comp=Z,122nm,1.2s,comp=Z,2μm						
TV1H	**Townsville Har**	**22.37**	**137**	P	**P**	**07 24 27.2**	**+1.1**
CTA	**Charters Tower**	**22.58**	**139**	P	**P**	**07 24 28.8**	**+0.3**
CTAO	**Charters Tower**	**22.58**	**139**	P	**P**	**07 24 28.0**	**-0.5**
CTAO				IAmb	IAmb	07 24 30.0	
	comp=Z,55nm,0.8s						
CTAO	**Charters Tower**	**22.58**	**139**	P	**P**	**07 24 28.7**	**+0.3**
CTAO	**Charters Tower**	**22.58**	**139**	P	**P**	**07 24 28.0**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,55nm,0.8s						
CMJI	**Cimerak**	**22.61**	**258**	P	**P**	**07 24 22.8**	**-6.0**
LEM	**Lembang**	**23.27**	**260**	LR	LR	07 34 55.5	
	comp=Z,6μm,21.1s,baz=86,slow=40						
LEM	**Lembang**	**23.27**	**260**	P	**P**	**07 24 31.7**	**-4.2**
	comp=Z,125nm,1.2s						
CNJI	**Cibinong**	**23.82**	**259**	P	**P**	**07 24 36.1**	**-4.9**
DBJI	**Dramaga**	**24.09**	**261**	P	**P**	**07 24 42.0**	**-1.7**
	comp=Z,69nm,0.4s,comp=Z,21μm						
PPBI	**Pangkal Pinang**	**24.57**	**272**	P	**P**	**07 24 49.4**	**+1.4**
	comp=Z,53nm,0.7s,comp=Z,22μm						
OOD	**Oodnadatta**	**24.87**	**169**	P	**P**	**07 24 50.5**	**0.0**
GIRL	**Giralia**	**25.04**	**218**	P	**P**	**07 24 52.4**	**+0.3**
	baz=25,SNR=4.7						
MEEK	**Meekatharra**	**25.98**	**205**	P	**P**	**07 24 58.7**	**-2.0**
	baz=26,SNR=18						
MEEK	**Meekatharra**	**25.98**	**205**	P	**P**	**07 24 58.7**	**-2.0**
INKA	**Innaminka**	**26.17**	**160**	P	**P**	**07 25 02.8**	**+0.5**
KASI	**Kota Agung**	**26.23**	**264**	P	**P**	**07 24 58.0**	**-5.1**
DSRI	**Dabo**	**26.26**	**275**	P	**P**	**07 25 04.3**	**+0.9**
	comp=Z,147nm,1.3s,comp=Z,3μm						
TPRI	**Tanjung Pinang**	**26.50**	**279**	P	**P**		
	comp=Z,227nm,1.1s,comp=Z,10μmcomp=Z,4μm					**07 25 06.4**	**+0.9**
QLP	**Quilpie**	**26.57**	**152**	P	**P**	**07 25 06.9**	**+0.8**
	baz=27,SNR=16						
QLP	**Quilpie**	**26.57**	**152**	P	**P**	**07 25 06.3**	**+0.3**
DLV	**T Lat**	**26.76**	**305**	P	**P**	**07 25 07.0**	**-1.1**
DLV				IAmb	IAmb	07 25 12.7	
	comp=Z,74nm,1.0s						
DLV	**T Lat**	**26.76**	**305**	P	**P**	**07 25 09.8**	**+1.8**
MULG	**Mulgathing**	**27.07**	**174**	P	**P**	**07 25 10.7**	**+0.3**
MYKOM	**Kota Tinggi**	**27.31**	**280**	P	**P**	**07 25 13.7**	**+0.8**
MYKOM				IAmb	IAmb	07 25 15.5	
	comp=Z,100nm,0.9s						
FORT	**Forrest**	**27.50**	**185**	P	**P**	**07 25 14.0**	**-0.2**
	baz=28,SNR=18						
FORT	**Forrest**	**27.50**	**185**	P	**P**	**07 25 13.4**	**-0.9**
FORT	**Forrest**	**27.50**	**185**	P	**P**	**07 25 13.5**	**-0.7**
RK1H	**Rockhampton Ha**	**27.69**	**138**	P	**P**	**07 25 17.5**	**+1.4**
LCRK	**Leigh Creek**	**27.97**	**166**	P	**P**	**07 25 18.9**	**+0.4**
SSLB	**Suanglung**	**28.51**	**341**	P	**P**	**07 25 22.7**	**-0.7**
SSLB				IAmb	IAmb	07 25 26.7	
	comp=Z,56nm,1.2s						
SSLB	**Suanglung**	**28.51**	**341**	P	**P**	**07 25 22.3**	**-1.1**
KMBL	**Kambalda**	**29.18**	**196**	P	**P**	**07 25 28.2**	**-1.2**
	baz=29,SNR=18						
KMBL	**Kambalda**	**29.18**	**196**	P	**P**	**07 25 28.1**	**-1.2**
MORW	**Morawa**	**29.22**	**207**	P	**P**	**07 25 27.9**	**-1.8**
MORW				IAmb	IAmb	07 25 35.9	
	comp=Z,49nm,1.4s						
MORW	**Morawa**	**29.22**	**207**	P	**P**	**07 25 28.1**	**-1.6**
EIDS	**Eidsvold**	**29.45**	**140**	P	**P**	**07 25 31.8**	**+0.1**
	baz=30,SNR=3.6						
EIDS	**Eidsvold**	**29.45**	**140**	P	**P**	**07 25 32.4**	**+0.6**
EIDS				IAmb	IAmb	07 25 40.4	
	comp=Z,55nm,1.2s						
EIDS	**Eidsvold**	**29.45**	**140**	P	**P**	**07 25 31.7**	**-0.1**
BBOO	**Buckleboo**	**29.83**	**171**	P	**P**	**07 25 35.4**	**+0.4**
	baz=30,SNR=6.8						
BBOO	**Buckleboo**	**29.83**	**171**	P	**P**	**07 25 34.6**	**-0.5**
BBOO				IAmb	IAmb	07 25 43.3	
	comp=Z,112nm,1.4s						
BBOO	**Buckleboo**	**29.83**	**171**	P	**P**	**07 25 35.4**	**+0.4**
JOW	**Kunigami**	**30.00**	**356**	LR	LR	07 37 21.4	
	comp=Z,4μm,21.1s,baz=170,slow=36						
QIZ	**Qiongzhong**	**30.20**	**318**	P	**P**	**07 25 38.6**	**+0.2**
QIZ				S	**S**	**07 30 38.0**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,370nm,6.9s						
QIZ				LR	LR		
	comp=Z,2μm,17.3s						
QIZ				LR	LR		
	comp=Z,2μm,17.3s						
QIZ				LR	LR		
	comp=Z,2μm,24.9s						
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 25 39.1**	**+0.2**
	baz=30,SNR=30						
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 25 38.7**	**-0.2**
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 25 38.9**	**0.0**
STKA	**Stephens Creek**	**30.26**	**161**	P	**P**	**07 25 39.1**	**+0.2**
	comp=Z,29nm,0.9s,baz=342,slow=8.9,SNR=39						
	comp=Z,29nm,0.9s						
BLDU	**Ballidu**	**30.27**	**204**	P	**P**	**07 25 37.6**	**-1.3**
	baz=30,SNR=15						
BLDU	**Ballidu**	**30.27**	**204**	P	**P**	**07 25 37.7**	**-1.3**
WHYH	**Whyalla**	**30.32**	**169**	P	**P**	**07 25 40.0**	**+0.7**
IPM	**Ipoh**	**30.64**	**284**	P	**P**	**07 25 43.8**	**+1.3**
KLBR	**Kellerberrin**	**30.72**	**202**	P	**P**	**07 25 42.0**	**-0.9**
	baz=31,SNR=19						
KLBR	**Kellerberrin**	**30.72**	**202**	P	**P**	**07 25 42.1**	**-0.9**
AULRC	**Lightning Ridg**	**30.77**	**150**	P	**P**	**07 25 43.7**	**+0.4**
HTT	**Hallett**	**30.99**	**167**	P	**P**	**07 25 46.0**	**+0.7**
	baz=31,SNR=4.4						
HTT	**Hallett**	**30.99**	**167**	P	**P**	**07 25 46.0**	**+0.7**
UBPT	**Khong Chiam**	**31.04**	**307**	P	**P**	**07 25 46.3**	**+0.4**
UBPT				IAmb	IAmb	07 25 47.6	
	comp=Z,49nm,1.4s						
UBPT	**Khong Chiam**	**31.04**	**307**	P	**P**	**07 25 46.7**	**+0.8**
KULM	**Kulim**	**31.20**	**286**	P	**P**	**07 25 47.4**	**0.0**
KULM				IAmb	IAmb	07 25 51.4	
	comp=Z,34nm,0.9s						
CMSA	**Cobar Meteorol**	**31.48**	**155**	P	**P**	**07 25 50.4**	**+0.8**
	baz=32,SNR=27						
CMSA	**Cobar Meteorol**	**31.48**	**155**	P	**P**	**07 25 49.8**	**+0.2**
SISI	**Saibi**	**31.65**	**273**	P	**P**	**07 25 49.1**	**-2.3**
	comp=Z,200nm,1.3s,comp=Z,3μm						
MUN	**Mundaring**	**31.66**	**204**	P	**P**	**07 25 50.2**	**-1.1**
	baz=32,SNR=6.6						
MUN	**Mundaring**	**31.66**	**204**	P	**P**	**07 25 50.1**	**-1.1**
NWAO	**Narrogin (SRO)**	**32.11**	**202**	P	**P**	**07 25 54.5**	**-0.7**
	baz=32,SNR=9.4						
NWAO				P	**P**	**07 25 54.5**	**-0.7**
	baz=32,SNR=9.4						
NWAO	**Narrogin (SRO)**	**32.11**	**202**	P	**P**	**07 25 54.2**	**-1.0**
NWAO				IAmb	IAmb	07 25 55.2	
	comp=Z,87nm,1.2s						
NWAO	**Narrogin (SRO)**	**32.11**	**202**	P	**P**	**07 25 54.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**32.11**	**202**	P	**P**	**07 25 54.2**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,87nm,1.2s						
NWAO	**Narrogin (SRO)**	**32.11**	**202**	P	**P**	**07 25 54.5**	**-0.7**
JCJ	**Chichijima**	**32.14**	**19**	LR	LR	07 37 18.2	
	comp=Z,2μm,22.0s,baz=208,slow=33						
RPSI	**Rantau Prapat**	**32.32**	**280**	P	**P**	**07 25 56.6**	**-0.6**
RPSI				IAmb	IAmb	07 25 58.3	
	comp=Z,76nm,1.1s						
PSI	**Prapat**	**32.34**	**280**	P	**P**	**07 25 57.0**	**-0.5**
PSI	**Prapat**	**32.34**	**280**	P	**P**	**07 25 56.6**	**-0.9**
PSI				pmax	pmax		
	comp=Z,76nm,1.1s						
SRIT	**Nakonsritamara**	**33.18**	**291**	P	**P**	**07 26 05.0**	**+0.2**
SRIT	**Nakonsritamara**	**33.18**	**291**	P	**P**	**07 26 06.1**	**+1.4**
SURA	**Surathani**	**33.34**	**292**	P	**P**	**07 26 07.7**	**+1.5**
AUDCS	**Dubbo College**	**33.38**	**152**	P	**P**	**07 26 06.7**	**+0.4**
GSI	**Gunungsitoli**	**33.43**	**277**	P	**P**	**07 26 07.1**	**+0.1**
GSI	**Gunungsitoli**	**33.43**	**277**	P	**P**	**07 26 05.9**	**-1.1**
	comp=Z,85nm,1.2s,comp=Z,6μm						
ARMA	**Armidale**	**33.49**	**146**	P	**P**	**07 26 08.1**	**+0.8**
	baz=34,SNR=6.1						
ARMA	**Armidale**	**33.49**	**146**	P	**P**	**07 26 07.6**	**+0.2**
ARMA				IAmb	IAmb	07 26 28.3	
	comp=Z,30nm,0.9s						
ARMA	**Armidale**	**33.49**	**146**	P	**P**	**07 26 08.3**	**+0.9**
KCSI	**Kotacane, Aceh**	**33.60**	**281**	P	**P**	**07 26 06.2**	**-2.3**
	comp=Z,37nm,1.2s						
AUPHS	**Peel High Scho**	**33.61**	**148**	P	**P**	**07 26 09.3**	**+1.0**
RKGY	**Rocky Gully**	**33.72**	**201**	P	**P**	**07 26 09.6**	**+0.4**
	baz=34,SNR=3.9						
RKGY	**Rocky Gully**	**33.72**	**201**	P	**P**	**07 26 09.5**	**+0.4**
NAYO	**Nakonayok**	**33.96**	**302**	P	**P**	**07 26 12.7**	**+1.2**
NONG	**Nongkai**	**34.45**	**309**	P	**P**	**07 26 16.1**	**+0.4**
GULI	**GuiLin**	**34.56**	**326**	⇓P	**P**	**07 26 15.4**	**-1.2**
GULI				pmax	pmax		
	comp=Z,20nm,1.0s						
GULI				LR	LR		
	comp=Z,2μm,20.1s						
GULI				LR	LR		
	comp=Z,2μm,20.1s						
GULI				LR	LR		
	comp=Z,1μm,14.7s						
COCO	**West Island**	**34.69**	**253**	P	**P**	**07 26 18.1**	**+0.3**
LHMI	**Lhok Sumawe**	**34.76**	**284**	P	**P**	**07 26 18.9**	**+0.4**
ARPS	**Mount Arapiles**	**34.90**	**164**	P	**P**	**07 26 20.6**	**+1.3**
	baz=35,SNR=12						
ARPS	**Mount Arapiles**	**34.90**	**164**	P	**P**	**07 26 20.3**	**+0.9**
YNG	**Young**	**35.01**	**154**	P	**P**	**07 26 21.3**	**+0.9**
	baz=35,SNR=13						
YNG	**Young**	**35.01**	**154**	P	**P**	**07 26 21.4**	**+1.0**
MLSI	**Meulaboh, Aceh**	**35.09**	**282**	P	**P**	**07 26 19.3**	**-2.0**
	comp=Z,137nm,1.1s						
SSE	**Sheshan**	**35.34**	**346**	P	**P**	**07 26 24.0**	**+0.8**
SSE				S	**S**	**07 31 59.5**	**+2.4**
SSE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SSE				LR	LR		
	comp=Z,390nm,14.2s						
SSE				LR	LR		
	comp=Z,600nm,19.8s						
SSE				LR	LR		
	comp=Z,580nm,19.0s						
MGCD	**Mangrove Creek**	**35.39**	**150**	P	**P**	**07 26 25.5**	**+1.9**
	baz=35,SNR=5.9						
MGCD	**Mangrove Creek**	**35.39**	**150**	P	**P**	**07 26 25.6**	**+1.9**
CNSH	**ChangSha**	**35.63**	**332**	⇑P	**P**	**07 26 24.8**	**-1.0**
CNSH				S	**S**	**07 32 01.4**	**-0.3**
CNSH				pmax	pmax		
	comp=Z,24nm,1.7s						
CNSH				LR	LR		
	comp=Z,2μm,23.4s						
CNSH				LR	LR		
	comp=Z,2μm,29.7s						
CNSH				LR	LR		
	comp=Z,850nm,18.0s						
SYDH	**Sydney Hard Ro**	**35.65**	**151**	P	**P**	**07 26 28.0**	**+2.1**
SLVN	**Son La**	**35.86**	**314**	P	**P**	**07 26 28.4**	**+0.5**
SRDT	**SRDT**	**35.87**	**300**	P	**P**	**07 26 29.6**	**+1.6**
RIV	**Riverview**	**35.91**	**150**	P	**P**	**07 26 30.5**	**+2.4**
CAN	**Canberra**	**36.13**	**154**	P	**P**	**07 26 30.8**	**+0.7**
JNU	**Nakatsue**	**36.17**	**0**	LR	LR	07 40 45.3	
	comp=Z,2μm,21.7s,baz=162,slow=35						
BRAT	**Ballarat**	**36.23**	**162**	P	**P**	**07 26 32.3**	**+1.5**
WOLH	**Wollongong Har**	**36.24**	**151**	P	**P**	**07 26 33.1**	**+2.2**
AUHPC	**Hawkesdale P12**	**36.28**	**164**	P	**P**	**07 26 33.3**	**+2.1**
**C

DZM eSS **SnSn** **07 35 55.1 +0.7**
comp=Z,666nm,24.1s
DZM eLR LR 07 37 46.6
TJN Taejon 39.55 356 P **P** **07 26 58.8 0.0**
YATNC Mamie plateau, 39.77 121 P **P** **07 27 02.3 +1.4**
MJAR Matsushiro Arr 40.20 9 P **P** **07 27 02.3 -2.0**
comp=Z,12nm,0.9s,baz=189,slow=8.9,SNR=17
MJAR LR LR 07 42 18.3
comp=Z,2μm,21.2s,baz=186,slow=34
MAJO Matsushiro 40.20 9 P **P** **07 27 02.6 -1.7**
MAJO Matsushiro 40.20 9 P **P** **07 27 02.8 -1.5**
MAJO Matsushiro 40.20 9 P **P** **07 27 02.6 -1.7**
MAJO pmax pmax
comp=Z,37nm,0.9s
MJB9 Matsu-Tunnel 40.20 9 P **P** **07 27 03.3 -1.0**
KSAR Wonju Array Be 40.57 357 P **P** **07 27 07.6 +0.3**
KSAR Wonju Array Be 40.57 357 P **P** **07 27 07.6 +0.3**
KSRS Korea Array 40.58 357 P **P** **07 27 07.5 +0.1**
comp=Z,9.3nm,0.7s,baz=175,slow=11,SNR=22
KSRS LR LR 07 43 19.8
comp=Z,2μm,21.7s,baz=180,slow=35
comp=Z,9.3nm,0.7s
KS19 Wonju Array Si 40.63 357 P **P** **07 27 07.5 -0.3**
INCN Inchon 40.70 355 P **P** **07 27 09.8 +1.4**
PZH PanZhiHua 40.73 318 PcP **PcP** **07 29 12.5 +2.1**
PZH PanZhiHua 40.73 318 S **S** **07 33 18.5 -0.8**
PZH PanZhiHua 40.73 318 sS sS 07 33 31.3 +4.5
PZH PanZhiHua 40.73 318 SS SS 07 36 25.8 +5.5
TIA Tai'an 41.26 343 P **P** **07 27 12.5 -0.5**
TIA S **S** **07 33 24.1 -2.5**
TIA pmax pmax
comp=Z,11nm,0.9s
TIA pmax pmax
comp=Z,85nm,3.9s
TIA LR LR
comp=Z,420nm,22.5s
TIA LR LR
comp=Z,610nm,18.4s
TIA LR LR
comp=Z,570nm,21.0s
LYN LuoYang 41.33 337 ⇓P **P** **07 27 13.6 -0.1**
LYN pP sP 07 27 18.3 -1.6
LYN sP pP 07 27 21.0 +2.8
LYN pmax pmax
comp=Z,48nm,1.2s
LYN LR LR
comp=Z,1μm,25.8s
LYN LR LR
comp=Z,3μm,25.8s
LYN LR LR
comp=Z,2μm,20.3s
JMM Marumori 41.96 12 P **P** **07 27 17.7 -1.1**
JMM IAmb IAmb 07 27 38.6
comp=Z,47nm,0.8s
JMM Marumori 41.96 12 P **P** **07 27 19.2 +0.5**
TNCH TengChong 42.03 314 ⇑P **P** **07 27 19.5 -0.2**
TNCH sP sP 07 27 26.8 +0.8
TNCH PP **PP** **07 29 03.8 +6.6**
TNCH S **S** **07 33 38.6 -0.1**
TNCH pmax pmax
comp=Z,57nm,0.3s
TNCH pmax pmax
comp=Z,260nm,2.7s
TNCH LR LR
comp=Z,540nm,12.0s
TNCH LR LR
comp=Z,420nm,12.1s
TNCH LR LR
comp=Z,1μm,21.0s
MND Mandalay 42.13 308 P **P** **07 27 20.7 +0.3**
XAN Xi'an 42.40 333 ⇑P **P** **07 27 21.4 -1.1**
XAN S **S** **07 33 41.3 -2.3**
XAN pmax pmax
comp=Z,70nm,1.3s
XAN pmax pmax
comp=Z,310nm,5.7s
XAN LR LR
comp=Z,1μm,16.2s
XAN LR LR
comp=Z,2μm,15.6s
XAN LR LR
comp=Z,2μm,18.7s
CD2 Chengdu 42.60 325 P **P** **07 27 23.9 -0.2**
CD2 S **S** **07 33 42.5 -4.2**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 LR LR
comp=Z,500nm,10.8s
CD2 LR LR
comp=Z,580nm,10.2s
CD2 LR LR
comp=Z,1μm,22.1s
HNS HongShan 43.09 341 ⇓P **P** **07 27 27.8 -0.1**
HNS S **S** **07 33 49.1 -4.5**
HNS pmax pmax
comp=Z,26nm,1.2s
HNS LR LR
comp=Z,870nm,22.5s
HNS LR LR
comp=Z,1μm,21.6s
HNS LR LR
comp=Z,790nm,18.6s
TIY Taiyuan 44.15 339 ⇓P **P** **07 27 36.6 0.0**
TIY S **S** **07 34 04.3 -4.9**
TIY pmax pmax
comp=Z,58nm,0.9s
TIY pmax pmax
comp=Z,220nm,3.5s
TIY LR LR
comp=Z,880nm,20.6s
TIY LR LR
comp=Z,690nm,16.2s
TIY LR LR
comp=Z,1μm,19.6s
BJT Baijiatuao 45.08 344 P **P** **07 27 43.5 -0.4**
BJT IAmb IAmb 07 27 54.8
comp=Z,37nm,1.0s
BJT Baijiatuao 45.08 344 P **P** **07 27 43.7 -0.2**
BJT Baijiatuao 45.08 344 P **P** **07 27 43.5 -0.4**
BJT pmax pmax
comp=Z,37nm,1.0s
BJI Beijing 45.10 344 P **P** **07 27 43.8 -0.2**
BJI pP **sP** **07 27 48.3 -2.0**
BJI PP **PP** **07 29 33.1 +3.5**
BJI S **S** **07 34 23.4 +0.6**
BJI pmax pmax
comp=Z,15nm,1.1s
BJI pmax pmax
comp=Z,81nm,5.4s
BJI LR LR
comp=Z,290nm,18.3s
BJI LR LR
comp=Z,430nm,24.9s
BJI LR LR
comp=Z,440nm,24.3s
SNY Shenyang 45.33 353 ⇓P **P** **07 27 45.8 0.0**
SNY pP **sP** **07 27 52.4 +0.3**
SNY S **S** **07 34 23.6 -2.5**
SNY pmax pmax
comp=Z,46nm,1.0s
SNY pmax pmax
comp=Z,170nm,4.5s
SNY LR LR
comp=Z,970nm,16.9s
SNY LR LR
comp=Z,910nm,19.6s
SNY LR LR
comp=Z,2μm,18.2s
BRDH Bariadhala 46.02 306 P **P** **07 27 52.6 +1.0**
comp=Z,108nm,0.3s,baz=89,slow=13,SNR=5.6
comp=Z,108nm,0.3s
LZH Lanzhou 46.50 330 ⇑P **P** **07 27 55.8 +0.4**
LZH pP sP 07 28 01.9 +0.2
LZH S **S** **07 34 41.9 -1.5**
LZH SS **ScS** **07 38 00.6 +10**
LZH pmax pmax
comp=Z,65nm,1.4s
LZH pmax pmax
comp=Z,220nm,5.5s
LZH LR LR
comp=Z,2μm,16.5s
LZH LR LR
comp=Z,2μm,17.2s
LZH LR LR
comp=Z,2μm,16.8s
CN2 Changchun 47.08 355 eP **P** **07 27 58.9 -0.6**
CN2 eS **S** **07 34 49.5 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,400nm,12.0s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,200nm,11.0s
HHC Hu-ho-hao-te 47.25 340 eP **P** **07 28 01.3 +0.2**
HHC S **S** **07 34 51.3 -2.6**
HHC ScS **ScS** **07 37 53.8 -1.3**
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,250nm,4.8s
HHC LR LR
comp=Z,600nm,18.5s
HHC LR LR
comp=Z,1μm,19.1s
HHC LR LR
comp=Z,1μm,19.1s
USRK Ussuriysk Ar. 47.25 1 P **P** **07 28 01.1 +0.2**
USRK Ussuriysk Ar. 47.25 1 P **P** **07 28 01.2 +0.3**
comp=Z,20nm,1.0s,baz=165,slow=7.9,SNR=13
USRK LR LR 07 47 17.5
comp=Z,946nm,20.1s,baz=169,slow=35
comp=Z,20nm,1.0s
SHL Shillong 47.29 310 P **P** **07 28 01.5 -0.2**
SHL Shillong 47.29 310 P **P** **07 28 01.5 -0.2**
SHL pmax pmax
comp=Z,57nm,0.9s
SHL Shillong 47.29 310 P **P** **07 28 01.1 -0.6**
SNR=26
BTO Baotou 47.58 339 eP **P** **07 28 04.4 +0.8**
BTO pP **sP** **07 28 08.4 -1.6**
BTO sP **pP** **07 28 12.3 +4.1**
BTO PP **PP** **07 29 52.9 -2.4**
BTO S **S** **07 35 01.6 +3.0**
BTO pmax pmax
comp=Z,25nm,0.9s
BTO pmax pmax
comp=Z,430nm,4.3s
BTO LR LR
comp=Z,850nm,22.4s
BTO LR LR
comp=Z,3μm,25.0s
BTO LR LR
comp=Z,2μm,14.7s
MDJ Mudanjiang 47.66 359 P **P** **07 28 04.0 -0.1**
MDJ pP pP 07 28 06.8 -1.9
MDJ S **S** **07 35 00.8 +1.4**
MDJ pmax pmax
comp=Z,27nm,1.1s
MDJ pmax pmax
comp=Z,140nm,4.6s
MDJ LR LR
comp=Z,870nm,24.7s
MDJ LR LR
comp=Z,900nm,22.0s
MDJ LR LR
comp=Z,2μm,24.7s
MDJ Mudanjiang 47.66 359 P **P** **07 28 03.9 -0.2**
MDJ IAmb IAmb 07 28 14.0
comp=Z,26nm,1.0s
MDJ Mudanjiang 47.66 359 P **P** **07 28 04.6 +0.5**
ASAJ Asahikawa 48.35 11 LR LR 07 49 36.1
comp=Z,933nm,19.8s,baz=197,slow=37
XLT XiLinHaoTe 48.74 346 eP **P** **07 28 12.3 -0.3**
XLT sP sP 07 28 21.6 +2.7
XLT S **S** **07 35 09.6 -5.4**
XLT pmax pmax
comp=Z,30nm,1.1s
XLT pmax pmax
comp=Z,190nm,4.3s
XLT LR LR
comp=Z,1μm,22.3s
XLT LR LR
comp=Z,780nm,25.4s
BNX BinXian 48.86 357 ⇓P **P** **07 28 12.6 -0.7**
BNX PP **PP** **07 30 08.8 +2.0**
BNX S **S** **07 35 17.0 +0.6**
BNX pmax pmax
comp=Z,14nm,1.2s
BNX pmax pmax
comp=Z,170nm,4.1s
BNX LR LR
comp=Z,1μm,25.5s
BNX LR LR
comp=Z,630nm,16.0s
BNX LR LR
comp=Z,2μm,21.7s
DGTI Dogotuki 49.88 109 P **P** **07 28 22.9 +1.3**
LSA Lhasa 50.06 314 P **P** **07 28 23.7 +0.3**
LSA IAmb IAmb 07 28 25.2
comp=Z,30nm,0.9s
LSA Lhasa 50.06 314 P **P** **07 28 24.1 +0.8**
LSA Lhasa 50.06 314 P **P** **07 28 23.7 +0.3**
LSA pmax pmax
comp=Z,30nm,0.9s
LSA Lhasa 50.06 314 P **P** **07 28 24.6 +1.2**
LSA P **P** **07 28 24.6 +1.2**
TAVE Taveuni 50.28 109 P **P** **07 28 25.4 +0.7**
PALK Pallekele 50.99 282 *ce*P **P** **07 28 29.6 -0.5**
PALK pmax pmax
comp=Z,34nm,1.3s
PALK Pallekele 50.99 282 LR LR 07 52 42.0
comp=Z,1μm,19.1s,baz=207,slow=39
PALK Pallekele 50.99 282 P **P** **07 28 29.3 -0.8**
PALK P **P** **07 28 29.3 -0.8**
GTA Gaotai 51.09 329 ⇑P **P** **07 28 30.4 -0.2**
GTA pP sP 07 28 36.3 -0.6
GTA S **S** **07 35 45.3 -2.7**
GTA pmax pmax
comp=Z,35nm,1.1s
GTA pmax pmax
comp=Z,170nm,5.2s
GTA LR LR
comp=Z,850nm,21.5s
GTA LR LR
comp=Z,700nm,16.3s
GTA LR LR
comp=Z,570nm,20.3s
YSS Yuzh-Sakhalins 51.11 11 P **P** **07 28 29.8 -0.5**
YSS Yuzh-Sakhalins 51.11 11 P **P** **07 28 31.3 +1.0**
YSS Yuzh-Sakhalins 51.11 11 eP **P** **07 28 29.9 -0.5**
YSS eS **S** **07 35 47.0 -0.6**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS pmax pmax
comp=Z,200nm,6.6s
YSS MLR MLR
comp=Z,900nm,16.0s
YSS MLR MLR
comp=N,800nm,17.0s
YSS MLR MLR
comp=E,400nm,15.0s
GOMU GeErMu 51.60 323 P **P** **07 28 34.9 +0.1**
GOMU pP sP 07 28 39.9 -1.2
GOMU sP pP 07 28 42.8 +3.5
GOMU PcP **PcP** **07 29 49.8 +1.2**
GOMU S **S** **07 35 55.6 -0.1**
GOMU pmax pmax
comp=E,8.0nm,1.2s
GOMU LR LR
comp=E,640nm,17.9s
GOMU LR LR
comp=E,810nm,17.9s
GOMU LR LR
comp=E,820nm,17.8s
KLR Kul'dur 52.28 1 *d* iP **P** **07 28 39.4 +0.3**
KLR pmax pmax
comp=Z,23nm,1.0s
UGL Uglegorsk 53.04 9 eP **P** **07 28 45.4 +0.7**
UGL pmax pmax
comp=Z,60nm,0.4s
HIA Hailar 53.16 351 P **P** **07 28 46.4 +0.7**
HIA Hailar 53.16 351 ⇓eP **P** **07 28 45.4 -0.3**
HIA pmax pmax
comp=Z,14nm,0.9s
HEH HeiHe 53.37 357 eP **P** **07 28 46.8 -0.3**
HEH pP **pP** **07 28 50.9 -0.8**
HEH S **S** **07 36 15.5 -3.0**
HEH pmax pmax
comp=Z,13nm,1.2s
HEH pmax pmax
comp=Z,280nm,4.6s
HEH LR LR
comp=Z,1μm,22.1s
HEH LR LR
comp=Z,490nm,20.9s
HEH LR LR
comp=Z,2μm,23.7s
TUWZ Tuamarina 54.26 141 P **P** **07 28 53.9 +0.1**
TYV Tymovskoe 54.87 9 eP **P** **07 28 58.4 +0.4**
TYV eS **S** **07 36 40.1 +1.3**
TYV pmax pmax
comp=Z,100nm,2.8s
TYV pmax pmax
comp=Z,7.0nm,1.2s
TYV smax smax
comp=N,300nm,8.0s
TYV smax smax
comp=E,200nm,8.0s
ULN Ulaanbaatar 54.96 341 P **P** **07 28 59.1 +0.1**
ULN IAmb IAmb 07 29 02.8
comp=Z,61nm,1.1s
ULN Ulaanbaatar 54.96 341 P **P** **07 28 59.1 +0.1**
ULN pmax pmax
comp=Z,61nm,1.1s
ULN Ulaanbaatar 54.96 341 P **P** **07 28 60.0 +1.0**
ULN P **P** **07 28 60.0 +1.0**
SONM Songino Array 55.15 340 P **P** **07 29 00.8 +0.4**
SONM IAmb IAmb 07 29 04.0
comp=Z,36nm,1.0s
SONM Songino Array 55.15 340 P **P** **07 29 00.9 +0.6**
comp=Z,36nm,1.0s,baz=158,slow=7.6,SNR=115
comp=Z,36nm,1.0s
HYB Hyderabad 55.39 294 eP **P** **07 29 02.4 -0.1**
HYB ePP **PP** **07 31 06.5 +0.1**
HYB eS **S** **07 36 49.8 +2.8**
ZEA Zeya 56.86 358 eP **P** **07 29 12.2 -0.1**
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.1s
CIT Chita 56.96 347 eP **P** **07 29 14.3 +1.2**
CIT e 07 29 20.7
CIT e 07 30 07.3
CIT pmax pmax
comp=Z,108nm,2.2s
AFI Afiamalu 57.71 104 P **P** **07 29 19.5 +0.4**
AFI Afiamalu 57.71 104 P **P** **07 29 20.4 +1.3**
AFI Afiamalu 57.71 104 P **P** **07 29 19.5 +0.4**
AFI pmax pmax
comp=Z,76nm,1.2s
KAAM Kaadhehdhoo 57.81 273 P **P** **07 29 20.6 +0.8**
DGAR Diego Garcia 58.12 263 *de*P **P** **07 29 23.3 +1.4**
DGAR pmax pmax
comp=Z,341nm,2.5s
DGAR Diego Garcia 58.12 263 P **P** **07 29 23.2 +1.2**
DGAR P **P** **07 29 23.2 +1.2**
ZAK Zakamensk 58.40 340 eP **P** **07 29 23.5 +0.2**
ZAK pmax pmax
comp=Z,23nm,1.2s
IRK Irkutsk 59.65 342 eP **P** **07 29 32.2 +0.3**
IRK pmax pmax
comp=Z,79nm,2.4s
MOY Mondy 60.27 339 eP **P** **07 29 37.1 +0.9**
MOY pmax pmax
comp=Z,110nm,2.4s
PETK Petropavlovsk- 60.56 18 P **P** **07 29 39.1 +1.0**
PETK Petropavlovsk- 60.56 18 P **P** **07 29 39.1 +1.0**
PETK Petropavlovsk- 60.56 18 P **P** **07 29 38.6 +0.5**
comp=Z,18nm,1.0s,baz=195,slow=4.6,SNR=8.9
PETK LR LR 07 53 15.5
comp=Z,483nm,21.9s,baz=202,slow=33
comp=Z,18nm,1.0s
WMQ Urumqi 60.69 326 eP **P** **07 29 39.8 +0.6**
WMQ S **S** **07 37 56.1 +0.5**
WMQ pmax pmax
comp=Z,65nm,1.1s
WMQ pmax pmax
comp=Z,270nm,4.7s
WMQ LR LR
comp=Z,1μm,15.5s
WMQ LR LR
comp=Z,1μm,24.3s
WMQ LR LR
comp=Z,750nm,23.9s
PET Petropavlovsk 60.80 19 eP **P** **07 29 40.2 +0.6**
PET eS **S** **07 37 56.6 +0.2**
PET pmax pmax
comp=Z,54nm,1.4s
BOD Bodaibo 62.34 350 eP **P** **07 29 50.1 +0.1**
BOD pmax pmax
comp=Z,60nm,1.8s
ZSN Zaisan 64.49 327 eP **P** **07 30 04.5 -0.1**
comp=Z,16nm,0.8s,baz=327
ZSN Zaisan 64.49 327 eP **P** **07 30 04.4 -0.1**
ZSN pmax pmax
comp=Z,16nm,0.8s
CASY Casey 64.49 189 P **P** **07 30 04.6 +0.5**
CASY IAmb IAmb 07 30 05.3
comp=Z,40nm,1.1s
DGZ Jazzator, Alta 64.59 330 *c* iP **P** **07 30 05.5 +0.2**
DGZ pmax pmax
comp=Z,49nm,1.1s
MA2 Magadan 64.61 11 P **P** **07 30 05.9 +0.9**
MA2 Magadan 64.61 11 *d* iP **P** **07 30 05.5 +0.5**
MA2 pmax pmax
comp=Z,25nm,1.7s
MA2 Magadan 64.61 11 LR LR 07 56 44.2
comp=Z,512nm,21.8s,baz=202,slow=35
YAK Yakutsk 65.11 359 P **P** **07 30 08.3 +0.2**
YAK Yakutsk 65.11 359 eP **P** **07 30 08.4 +0.2**
YAK e 07 30 40.6
YAK eS **S** **07 38 51.3 +1.2**
YAK e 07 40 01.2
YAK eSS **SS** **07 43 04.5 +1.9**
YAK pmax pmax
comp=Z,59nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK smax smax
comp=E,97nm,2.7s
YAK smax smax
comp=N,68nm,2.7s
YAK Yakutsk 65.11 359 LR LR 07 59 09.5
comp=N,308nm,20.1s,baz=167,slow=36
SHLS Shalkode 65.23 321 eP **P** **07 30 07.8 -1.8**
comp=N,37nm,1.2s,baz=321
SHLS Shalkode 65.23 321 eP **P** **07 30 07.7 -1.8**
SHLS pmax pmax
comp=Z,37nm,1.2s
PDGK Podgornoye 65.30 321 P **P** **07 30 09.7 -0.3**
NIL Nilore 65.36 309 P **P** **07 30 10.8 +0.3**
NIL P **P** **07 30 10.8 +0.3**
UZB Uzynbulak 65.50 321 eP **P** **07 30 10.9 -0.5**
comp=Z,24nm,1.0s,baz=321
UZB Uzynbulak 65.50 321 eP **P** **07 30 10.8 -0.5**
UZB pmax pmax
comp=Z,24nm,1.0s
MK31 Makanchi Array 65.52 326 *i* P **P** **07 30 11.0 -0.2**
MKAR Makanchi Array 65.52 326 P **P** **07 30 11.0 -0.3**
MKAR Makanchi Array 65.52 326 *ce*P **P** **07 30 10.8 -0.4**
MKAR pmax pmax
comp=Z,37nm,0.8s
MKAR Makanchi Array 65.52 326 P **P** **07 30 10.9 -0.3**
comp=Z,36nm,0.8s,baz=122,slow=7.2,SNR=183
MKAR PKP2bc **P'P'bc** **07 58 51.7 -3.6**
comp=Z,0.2nm,0.6s,baz=306,slow=4.1,SNR=3.8
comp=Z,36nm,0.8s
PRZ Przheval'sk 65.57 320 P **P** **07 30 13.0 +1.2**
PRZ Przheval'sk 65.57 320 P **P** **07 30 13.0 +1.2**
PRZ pmax pmax
comp=Z,71nm,1.1s
MAKZ Makanchi 65.71 325 P **P** **07 30 12.2 -0.2**
MAKZ Makanchi 65.71 325 P **P** **07 30 12.3 -0.1**
KSH Kashi 65.78 316 P **P** **07 30 14.6 +1.4**
KSH sP sP 07 30 21.3 +1.7
KSH PcP **PcP** **07 30 43.6 -0.7**
KSH S **S** **07 38 59.3 -0.3**
KSH pmax pmax
comp=Z,27nm,0.9s
KSH LR LR

KSH LR LR
comp=Z,540nm,15.8s
KSH LR LR
comp=Z,400nm,15.5s
KSH LR LR
comp=Z,460nm,21.6s
SATY Saty 65.85 321 *e*P **P 07 30 13.7 +0.1**
comp=Z,27nm,0.9s,baz=320
SATY Saty 65.85 321 *e*P **P 07 30 13.6 +0.1**
SATY pmax pmax
comp=Z,27nm,0.9s
ZHN Zhinishke 65.89 321 *e*P **P 07 30 13.7 -0.1**
comp=Z,21nm,1.1s,baz=321
ZHN Zhinishke 65.89 321 *e*P **P 07 30 13.7 -0.1**
ZHN pmax pmax
comp=Z,21nm,1.1s
NRN Naryn 66.64 318 P **P 07 30 18.7 -0.2**
NRN Naryn 66.64 318 P **P 07 30 18.7 -0.2**
NRN pmax pmax
comp=Z,17nm,0.8s
MDOK Medeo 66.77 320 *e*P **P 07 30 19.3 -0.2**
baz=320
MDOK Medeo 66.77 320 P **P 07 30 19.3 -0.2**
ARXS Arharly 66.79 321 *e*P **P 07 30 19.2 -0.3**
TDK Taldyqorghan 66.83 322 *e*P **P 07 30 19.4 -0.3**
comp=Z,36nm,1.1s,baz=322
TDK Taldyqorghan 66.83 322 *e*P **P 07 30 19.4 -0.3**
TDK pmax pmax
comp=Z,36nm,1.1s
ULHL Ulahol 66.85 319 P **P 07 30 20.9 +0.7**
SNR=8.5
AAA Alma-Ata 66.87 320 *e*P **P 07 30 20.0 -0.1**
baz=320
AAA Alma-Ata 66.87 320 *e*P **P 07 30 19.9 -0.1**
CHKK Chushkaly 67.14 321 *e*P **P 07 30 21.3 -0.4**
baz=321
CHKK Chushkaly 67.14 321 *e*P **P 07 30 21.3 -0.4**
KUU Kurty 67.57 321 *e*P **P 07 30 24.5 0.0**
baz=320
KUU Kurty 67.57 321 *e*P **P 07 30 24.4 0.0**
TKM2 Tokmak 2 67.59 319 P **P 07 30 25.3 +0.5**
SNR=20
TKM2 Tokmak 2 67.59 319 P **P 07 30 25.0 +0.2**
KBK Karagaybulak 67.89 319 P **P 07 30 27.3 +0.6**
SNR=9.9
UCH Uchtor 67.99 318 P **P 07 30 28.5 +0.9**
SNR=53
SEY Seymchan 68.01 10 LR LR 08 00 22.8
comp=Z,553nm,20.0s,baz=199,slow=36
CHMS Chumysh 68.18 319 P **P 07 30 28.7 +0.4**
SNR=7.0
AAK Ala-Archa 68.18 319 P **P 07 30 28.8 +0.4**
SNR=21
AAK Ala-Archa 68.18 319 *i* P **P 07 30 29.1 +0.7**
SNR=7.6
AAK Ala-Archa 68.18 319*c i*P **P 07 30 28.6 +0.1**
AAK pmax pmax
comp=Z,37nm,1.3s
AAK Ala-Archa 68.18 319 LR LR 08 03 29.7
comp=Z,376nm,22.0s,baz=102,slow=39
AAK Ala-Archa 68.18 319 P **P 07 30 29.6 +1.1**
AAK P **P 07 30 29.6 +1.1**
SGDS Sogindy 68.46 319 *e*P **P 07 30 29.8 -0.3**
baz=320
SGDS Sogindy 68.46 319 *e*P **P 07 30 29.7 -0.3**
USP Ospenovka 68.46 319 P **P 07 30 30.5 +0.4**
SNR=60
ZALV Zalesovo Beam 68.57 333 P **P 07 30 29.8 -0.7**
comp=Z,6.2nm,0.4s,baz=117,slow=5.2,SNR=69
ZALV PKP2ab **P'P'ab 07 58 45.6 -0.9**
comp=Z,0.8nm,0.6s,baz=292,slow=4.7,SNR=5.6
comp=Z,6.2nm,0.4s
ARSB Arslanbob 68.63 317 P **P 07 30 31.3 +0.1**
ARSB IAmb IAmb 07 32 45.1
comp=Z,50nm,1.6s
ARSB Arslanbob 68.63 317 P **P 07 30 31.3 +0.1**
ARSB pmax pmax
comp=Z,50nm,1.6s
EKS2 Erkin-Say 68.67 318 P **P 07 30 32.2 +0.8**
SNR=39
SEM Semipalatinsk 68.69 328 *e*P **P 07 30 30.8 -0.7**
comp=Z,49nm,1.7s,baz=328
SEM Semipalatinsk 68.69 328 *e*P **P 07 30 30.8 -0.7**
SEM pmax pmax
comp=Z,49nm,1.7s
KBL Kabul 68.94 309 P **P 07 30 32.7 -0.7**
KBL Kabul 68.94 309 P **P 07 30 32.7 -0.7**
KBL pmax pmax
comp=Z,136nm,1.8s
KBL Kabul 68.94 309 P **P 07 30 33.2 -0.3**
SNR=16
KBL P **P 07 30 33.2 -0.3**
SNR=16
BTLS Baital 69.56 321⇑ *i*P **P 07 30 36.6 -0.2**
comp=Z,21nm,1.5s,baz=321
BTLS Baital 69.56 321*c i*P **P 07 30 36.5 -0.2**
BTLS pmax pmax
comp=Z,21nm,1.5s
BTK Batken 69.62 315 P **P 07 30 37.2 -0.2**
BTK Batken 69.62 315 P **P 07 30 37.2 -0.2**
BTK pmax pmax
comp=Z,181nm,1.8s
KURBB Kurchatov Arra 69.72 328 P **P 07 30 37.1 -0.5**
KURBB Kurchatov Arra 69.72 328 P **P 07 30 37.2 -0.4**
comp=Z,34nm,0.9s,baz=126,slow=5.6,SNR=193
comp=Z,34nm,0.9s
KURK Kurchatov 69.73 328 P **P 07 30 37.5 -0.1**
KURK Kurchatov 69.73 328*ce*P **P 07 30 37.4 -0.2**
KURK pmax pmax
comp=Z,103nm,1.3s
KURK Kurchatov 69.73 328 P **P 07 30 37.8 +0.2**
KURK P **P 07 30 37.8 +0.2**
DZA Taraz 70.39 318 *e*P **P 07 30 41.6 -0.4**
comp=Z,13nm,0.8s,baz=318
DZA Taraz 70.39 318 *e*P **P 07 30 41.6 -0.4**
DZA pmax pmax
comp=Z,13nm,0.8s
SIMJ Simiganj 70.40 313 P **P 07 30 42.0 -0.3**
KK31 Karatay Array 71.03 318 *i* P **P 07 30 46.0 +0.1**
KKAR Karatay Array 71.03 318 P **P 07 30 45.7 -0.2**
KKAR Karatay Array 71.03 318 P **P 07 30 45.7 -0.2**
BRLS Boroldaу 71.46 317⇑ *i*P **P 07 30 48.4 0.0**
comp=Z,26nm,1.2s,baz=317
BRLS Boroldaу 71.46 317*c i*P **P 07 30 48.4 0.0**
BRLS pmax pmax
comp=Z,26nm,1.2s
OTUK Ortayu 72.06 323 P **P 07 30 52.2 +0.3**
BRZS Berezniki 72.65 325⇑ *i*P **P 07 30 55.6 +0.1**
comp=Z,32nm,1.4s,baz=325
BRZS Berezniki 72.65 325*c i*P **P 07 30 55.5 +0.1**
BRZS pmax pmax
comp=Z,32nm,1.4s
NGCH Negor - Chabah 73.07 298 P **P 07 30 59.5 +1.1**
JLN Jalan Bani Buh 74.00 294 P **P 07 31 04.2 +0.3**
SNR=6.1
JLN P **P 07 31 04.2 +0.3**
SNR=6.1
WBK Wadi Bani Khal 74.48 294 P **P 07 31 08.0 +1.2**
SNR=7.5
WBK P **P 07 31 08.0 +1.2**
SNR=7.5
TIXI Tiksi 74.77 359 P **P 07 31 06.6 -0.8**
TIXI Tiksi 74.77 359 P **P 07 31 06.6 -0.8**
TIXI pmax pmax
comp=Z,15nm,0.8s
RER Riviere de l'E 74.81 249 P **P 07 31 09.3 +0.5**
RER Riviere de l'E 74.81 249 P **P 07 31 10.2 +1.4**
WSAR Wadi Sarin 74.90 295 P **P 07 31 09.8 +0.6**
comp=Z,32nm,1.1s,baz=105,slow=11,SNR=18
comp=Z,32nm,1.1s
WSAR Wadi Sarin 74.90 295 P **P 07 31 10.0 +0.8**
SNR=11
MSEY Mahe Island 75.04 266 P **P 07 31 11.0 +0.8**
MSEY Mahe Island 75.04 266 P **P 07 31 11.0 +0.8**
MSEY pmax pmax
comp=Z,127nm,1.8s
MSEY Mahe Island 75.04 266 P **P 07 31 10.0 -0.2**
MSEY P **P 07 31 10.0 -0.2**
MHTO MHTO 75.12 293 P **P 07 31 11.1 +0.6**
SNR=12
MHTO P **P 07 31 11.1 +0.6**
SNR=12
JMDO Jabal Madar 75.23 294 P **P 07 31 12.0 +0.9**
SNR=8.4
JMDO P **P 07 31 12.0 +0.9**
SNR=8.4
BVAR Borovoye Array 75.30 327 P **P 07 31 11.0 +0.1**
BVAR Borovoye Array 75.30 327 P **P 07 31 10.9 +0.1**
comp=Z,60nm,1.0s,baz=121,slow=5.7,SNR=132
comp=Z,60nm,1.0s
BILL Bilibino 75.33 13⇑ *e*P **P 07 31 11.0 +0.3**
BILL pmax pmax
comp=Z,14nm,1.7s
NIKH Nikolski High 75.34 33 P **P 07 31 12.5 +1.5**
baz=244
DQM DQM 75.35 291 P **P 07 31 12.5 +0.7**
BRVK Borovoye 75.38 327 P **P 07 31 11.2 -0.1**
BRVK IAmb IAmb 07 33 24.9
comp=Z,52nm,0.8s
BRVK Borovoye 75.38 327 P **P 07 31 11.2 -0.1**
BRVK pmax pmax
comp=Z,52nm,0.9s
BRVK Borovoye 75.38 327 P **P 07 31 11.7 +0.4**
BRVK P **P 07 31 11.7 +0.4**
SMDO Samad 75.40 295 P **P 07 31 13.1 +0.9**
SNR=12
SMDO P **P 07 31 13.1 +0.9**
SNR=12
BIDO Bidbid 75.41 295 P **P 07 31 13.0 +0.9**
SNR=18
VNDA Vanda 76.06 173 P **P 07 31 14.7 -0.1**
comp=Z,8.7nm,0.9s,baz=337,slow=5.0,SNR=5.6
comp=Z,8.7nm,0.9s
BSY Bisya 76.12 294 P **P 07 31 16.4 +0.2**
SNR=8.2
BSY P **P 07 31 16.4 +0.2**
SNR=8.2
HOQ Hoqain 76.16 295 P **P 07 31 17.0 +0.6**
SNR=19
HOQ P **P 07 31 17.0 +0.6**
SNR=19
ARQ Araqi 76.83 295 P **P 07 31 21.4 +1.1**
SNR=12
ARQ P **P 07 31 21.4 +1.1**
SNR=12
SHAO Shalim 76.87 289 P **P 07 31 22.1 +1.6**
SHAO P **P 07 31 22.1 +1.6**
SOHO SOHO 76.95 296 *i* P **P 07 31 21.2 +0.4**
SNR=9.2
SOHO SOHO 76.95 296 P **P 07 31 21.7 +0.9**
SOHO P **P 07 31 21.7 +0.9**
UNV Unalaska Valle 76.98 33 P **P 07 31 21.9 +1.5**
baz=246
MDH Madha 77.36 297 P **P 07 31 23.8 +0.7**
MDH P **P 07 31 23.8 +0.7**
UOSS Minazif 77.38 296 P **P 07 31 22.8 -0.5**
UOSS Minazif 77.38 296 *i* P **P 07 31 23.6 +0.3**
SNR=11
HATD Hatta, Dubai 77.42 296 *i* P **P 07 31 24.3 +0.7**
SNR=15
HATD Hatta, Dubai 77.42 296 P **P 07 31 25.0 +1.4**
SNR=19
HATD P **P 07 31 25.0 +1.4**
SNR=19
BANOM Banah 77.46 297 P **P 07 31 24.0 +0.2**
ASHO Ashiyiah 77.47 296 *i* P **P 07 31 24.5 +0.7**
SNR=14
ASHO Ashiyiah 77.47 296 P **P 07 31 25.0 +1.2**
SNR=23
ASHO P **P 07 31 25.0 +1.2**
SNR=23
DMTO DMTO 77.47 289 P **P 07 31 24.1 +0.2**
DMTO P **P 07 31 24.1 +0.2**
MSFE Esma-Masafi 77.49 297 *i* P **P 07 31 25.3 +1.4**
SNR=17
MASF Masafi 77.49 297 P **P 07 31 25.7 +1.8**
SNR=25
MASF P **P 07 31 25.7 +1.8**
SNR=25
SHME Shamm 77.62 297 *i* P **P 07 31 25.1 +0.5**
SNR=18
SHME Shamm 77.62 297 P **P 07 31 26.1 +1.5**
SNR=14
SHME P **P 07 31 26.1 +1.5**
SNR=14
ALNE Al Ain 77.64 295 *i* P **P 07 31 25.4 +0.6**
SNR=12
ALNE Al Ain 77.64 295 P **P 07 31 25.8 +1.0**
SNR=23
ALNE P **P 07 31 25.8 +1.0**
SNR=23
NAZ Nazwa, Dubai 77.87 296 *i* P **P 07 31 26.3 +0.3**
SNR=6.7
NAZ Nazwa, Dubai 77.87 296 P **P 07 31 27.0 +1.0**
SNR=14
FAQ Al Faqa, Dubai 77.90 296 *i* P **P 07 31 26.5 +0.4**
SNR=13
FAQ Al Faqa, Dubai 77.90 296 P **P 07 31 27.0 +0.8**
SNR=16
FAQ P **P 07 31 27.0 +0.8**
SNR=16
UMZA Um Al Zommool 77.97 294 P **P 07 31 26.9 +0.3**
UMZA P **P 07 31 26.9 +0.3**
ASUD Al Ashush, Dub 78.11 296 *i* P **P 07 31 28.3 +0.9**
SNR=17
ASUD Al Ashush, Dub 78.11 296 P **P 07 31 29.0 +1.6**
SNR=12
ASUD P **P 07 31 29.0 +1.6**
SNR=12
NRIK Noril'sk 78.12 346 P **P 07 31 26.3 -0.2**
NRIK IAmb IAmb 07 31 39.6
comp=Z,40nm,1.1s
NRIK Noril'sk 78.12 346*ce*P **P 07 31 26.4 0.0**
NRIK pmax pmax
comp=Z,37nm,1.1s
NRIK Noril'sk 78.12 346 P **P 07 31 26.6 +0.1**
comp=Z,26nm,1.0s,baz=131,slow=6.1,SNR=25
comp=Z,26nm,1.0s
RBK Rabkut 78.14 289 P **P 07 31 29.0 +1.3**
SNR=6.6
RBK P **P 07 31 29.0 +1.3**
SNR=6.6
DOK Doka 78.36 290 P **P 07 31 29.0 +0.2**
SNR=13
DOK P **P 07 31 29.0 +0.2**
SNR=13
GEYT Alibeck 78.36 310 P **P 07 31 28.9 +0.4**
GEYT Alibeck 78.36 310 P **P 07 31 29.3 +0.8**
comp=Z,40nm,0.9s,baz=128,slow=4.5,SNR=58
comp=Z,40nm,0.9s
GYA0B ALIBECK ARRAY 78.36 310 P **P 07 31 28.5 0.0**
AJN Ajban 78.41 296 *i* P **P 07 31 29.3 +0.4**
SNR=8.2
AJN Ajban 78.41 296 P **P 07 31 29.9 +0.9**
SNR=9.9
AJN P **P 07 31 29.9 +0.9**
SNR=9.9
WHFO Wadi Hawf 78.61 289 P **P 07 31 30.1 -0.2**
SNR=13
WHFO P **P 07 31 30.1 -0.2**
SNR=13
ABTO Aybut 78.98 288 P **P 07 31 32.4 +0.1**
SNR=19
ABTO P **P 07 31 32.4 +0.1**
SNR=19
FALS False Pass 79.04 33 P **P 07 31 32.2 +0.5**
baz=248
PPT2 Papeete2 79.22 107 *e*P P 07 31 28.9 -4.8
comp=Z,76nm,27.0s
PPT2 Papeete2 79.22 107 *e*PP **PP 07 34 27.0 -6.4**
comp=Z,84nm,29.5s
PPT2 *e*S **S 07 41 38.8 +4.9**
comp=Z,460nm,25.0s
PPT2 Papeete2 79.22 107 *e*LQ LQ 07 52 51.1
comp=Z,1μm,29.2s
PPT2 *e*LR LR 07 56 05.7
comp=Z,645nm,22.0s
PPT2 *e*LR LR 07 56 12.4
comp=Z,556nm,35.0s
TBI Tubuai 79.38 113 *e*S **S 07 41 29.6 -5.6**
comp=Z,3μm,27.8s
TBI Tubuai 79.38 113 *e*LQ LQ 07 53 05.1
comp=Z,5μm,35.0s
TBI *e*LR LR 07 56 12.4
comp=Z,4μm,29.0s
AB31 Akbulak array 80.04 321 *i* P **P 07 31 37.3 -0.1**
ABKAR Akbulak array 80.04 321 P **P 07 31 36.9 -0.5**
ABKAR IAmb IAmb 07 34 06.1
comp=Z,28nm,1.0s
GHWR Ruwais 80.23 295 P **P 07 31 39.7 +0.7**
GHWR P **P 07 31 39.7 +0.7**
JRN Qarnain Island 80.39 296 P **P 07 31 39.9 +0.2**
SNR=7.8
JRN P **P 07 31 39.9 +0.2**
SDPT Sand Point 80.80 33 P **P 07 31 42.4 +1.1**
baz=250
CHNA Chernabura Isl 81.11 33 P **P 07 31 43.9 +1.0**
baz=251
M13K Dall Lake 81.19 27 P **P 07 31 44.1 +0.8**
baz=247
SLWR Sila 81.32 295 P **P 07 31 45.6 +0.8**
SLWR P **P 07 31 45.6 +0.8**
TNA Tin City 81.50 22 P **P 07 31 46.0 +1.2**
baz=242
AKTO Aktyubinsk 81.57 322 P **P 07 31 45.5 0.0**
AKTO Aktyubinsk 81.57 322 P **P 07 31 45.4 -0.2**
comp=Z,14nm,1.0s,baz=96,slow=5.4,SNR=15
comp=Z,14nm,1.0s
S14K Fog Glacier 81.60 32 P **P 07 31 47.2 +1.5**
baz=251
O14K Tigyukauivet M 81.74 29 P **P 07 31 47.3 +1.1**
baz=249
N14K Kuskokwak Cree 81.78 28 P **P 07 31 47.2 +0.8**
baz=249
TRNA Turayna 81.83 295 P **P 07 31 47.7 +0.2**
SNR=7.6
L14K Kuka Creek 81.85 27 P **P 07 31 47.9 +1.1**
baz=248
SVE Sverdlovsk 81.95 329 *e*P **P 07 31 47.7 +0.3**
SVE pmax pmax
comp=Z,35nm,0.9s
M14K Bethel 81.96 27 P **P 07 31 48.4 +1.1**
baz=248
J14K Nanvaranak Lak 82.02 25 P **P 07 31 48.8 +1.2**
baz=247
F14K Arctic Creek 82.05 22 P **P 07 31 49.4 +1.7**
baz=244
SMRA Abu-Samra 82.19 295 P **P 07 31 49.8 +0.5**
SNR=12
SHMA Al-Shemyia 82.20 297 P **P 07 31 50.0 +0.6**
CHGN Chignik 82.21 32 P **P 07 31 49.0 +0.2**
baz=252
O15K Ungalikthiuk R 82.41 29 P **P 07 31 50.3 +0.6**
baz=250
L15K Ungalak Mounta 82.51 26 P **P 07 31 51.5 +1.3**
baz=249
M15K Kasigluk River 82.52 28 P **P 07 31 50.9 +0.6**
baz=250
SAKB Bahrain 82.60 297 P **P 07 31 51.6 +0.1**
N15K Kwethluk River 82.62 28 P **P 07 31 51.7 +0.8**
baz=250
K15K Wolf Creek Mou 82.71 26 P **P 07 31 51.9 +0.6**
baz=249
G15K Niukluk 82.72 23 P **P 07 31 52.0 +0.7**
baz=246
F15K North Star Dit 82.78 22 P **P 07 31 52.0 +0.5**
baz=245
ARU Arti 82.92 328 P **P 07 31 51.9 -0.6**
ARU Arti 82.92 328*c i*P **P 07 31 51.9 -0.6**
ARU 07 34 59.4
ARU S **SKSac 07 42 11.6 -2.1**
ARU SS **SS 07 47 30.7 -3.4**
ARU pmax pmax
comp=Z,50nm,1.7s
ARU Arti 82.92 328 P **P 07 31 52.0 -0.6**
comp=Z,3.1nm,0.3s,baz=90,slow=3.0,SNR=1.6
comp=Z,3.1nm,0.3s
R16K Pilot Point 83.03 31 P **P 07 31 53.4 +0.4**
baz=253
VOI Vohitsoka 83.16 248 P **P 07 31 55.4 +0.8**
VOI Vohitsoka 83.16 248 P **P 07 31 55.5 +0.9**
VOI Vohitsoka 83.16 248 P **P 07 31 55.2 +0.6**
SNR=5.3
P16K Nushagak River 83.26 30 P **P 07 31 55.2 +1.0**
baz=252
H16K Elim 83.29 24 P **P 07 31 55.4 +1.2**
baz=248
N16K Nishlik Lake 83.34 28 P **P 07 31 55.8 +1.2**
baz=251
O16K Kokwok River B 83.38 29 P **P 07 31 55.8 +1.0**
baz=252
L16K Owhat River 83.42 27 P **P 07 31 55.9 +0.9**
baz=250,SNR=7.4
M16K Timber Creek 83.43 27 P **P 07 31 56.0 +1.0**
baz=251
J16K Anvik River 83.47 25 P **P 07 31 56.2 +1.1**
baz=249
G16K Koyuk River 83.53 23 P **P 07 31 56.3 +0.9**
baz=248
C16K Lisburne Hills 83.63 20 P **P 07 31 56.9 +1.0**
baz=244
I17K Unalakleet 83.64 24 P **P 07 31 57.4 +1.3**
baz=249
Q16K King Salmon 83.82 30 P **P 07 31 58.0 +1.0**
baz=253
O17K Koliganek Bris 83.92 29 P **P 07 31 58.5 +1.0**
baz=253
P17K Kvichak River 84.07 30 P **P 07 31 58.3 0.0**
baz=254
Q17K Contact Creek 84.09 31 P **P 07 31 58.4 -0.2**
baz=254,SNR=10
N17K Nushagak Hills 84.10 28 P **P 07 31 59.6 +1.2**
baz=253
J17K VABM Dome 84.15 25 P **P 07 31 59.6 +0.9**
baz=251
D17K Noatak River 84.16 21 P **P 07 31 59.7 +1.0**
baz=247
G17K Kiwalik Mounta 84.23 23 P **P 07 31 59.4 +0.4**
baz=249
M17K Holitna River 84.25 27 P **P 07 32 00.6 +1.4**
baz=252
K17K Iditarod 84.27 26 P **P 07 32 00.1 +0.9**
baz=252,SNR=8.5
H17K Granite Mounta 84.33 24 P **P 07 32 00.3 +0.8**
baz=250
F17K Baldwin Pennin 84.35 22 P **P 07 32 00.1 +0.6**
baz=248
E17K Hotham Inlet 84.37 21 P **P 07 32 00.6 +0.9**
baz=248
C17K DeLong Mountai 84.44 20 P **P 07 32 01.7 +1.6**
baz=246
P18K Big Mountain, 84.73 30 P **P 07 32 02.3 +0.6**
baz=254
N18K Kilae Creek 84.76 28 P **P 07 32 02.7 +0.9**
baz=254
L18K Granite Mounta 84.83 27 P **P 07 32 02.8 +0.7**
baz=253,SNR=16
O18K Koktuh Hills 84.86 29 P **P 07 32 03.5 +1.1**
baz=254
E18K Tukpahlearik C 84.94 21 P **P 07 32 03.4 +0.8**
baz=249
F18K Selawik 85.00 22 P **P 07 32 04.2 +1.4**
baz=250
M18K Stony River 85.01 27 P **P 07 32 04.0 +0.9**
baz=254
H18K Honhosa River 85.02 24 P **P 07 32 04.2 +1.2**
baz=251
G18K Tagagawik 85.15 23 P **P 07 32 04.7 +1.1**
baz=251
OHAK Old Harbor 85.17 32 P **P 07 32 05.0 +1.1**
baz=256
C18K Utukok River 85.18 20 P **P 07 32 04.3 +0.4**
baz=248
J18K Innoko River 85.18 25 P **P 07 32 04.2 +0.3**
baz=253
B18K Kokolik River 85.25 19 P **P 07 32 05.5 +1.4**
baz=248
TTA Tatalina 85.33 26 P **P 07 32 05.7 +0.9**
baz=254,SNR=16
O19K Port Alsworth 85.38 29 P **P 07 32 06.3 +1.4**
baz=255
N19K Bonanza Creek 85.46 28 P **P 07 32 05.5 +0.1**
baz=255
GCSA Galena City Sc 85.49 24 P **P 07 32 06.4 +1.1**
baz=253
L19K White Mountain 85.64 27 P **P 07 32 07.1 +0.9**
baz=255,SNR=19
KDAK Kodiak Island 85.67 32 P **P 07 32 07.3 +0.9**
baz=257
KDAK Kodiak Island 85.67 32 P **P 07 32 07.0 +0.6**
KDAK Kodiak Island 85.67 32 P **P 07 32 07.0 +0.6**
comp=Z,8.6nm,0.7s,baz=253,slow=2.2,SNR=11
comp=Z,8.6nm,0.7s
P19K Oil Pt 85.78 30 P **P 07 32 07.3 +0.4**
baz=256
M19K Big River Lodg 85.78 27 P **P 07 32 07.8 +0.9**
baz=255,SNR=12
A19K Wainwright 85.80 18 P **P 07 32 07.8 +1.0**
baz=248
J19K Poorman 85.80 25 P **P 07 32 07.4 +0.4**
baz=254

G19K	**Purcell Mounta**	85.83	23	P		P	07 32 08.1	+1.0		
	baz=252									
C19K	**Lookout Ridge**	85.89	20	P		P	07 32 08.6	+1.3		
	baz=250									
H19K	**Roundabout Mou**	85.90	24	P		P	07 32 08.7	+1.3		
	baz=253									
Q20K	**Shuyak Island**	85.96	31	P		P	07 32 09.1	+1.3		
	baz=257									
L20K	**Farewell, AK**	86.16	27	P		P	07 32 10.1	+1.3		
	baz=256									
O20K	**Slope Mountain**	86.17	29	P		P	07 32 09.3	+0.3		
	baz=257									
E19K	**Redstone River**	86.18	22	P		P	07 32 09.8	+1.1		
	baz=252									
D19K	**Kuna River**	86.19	20	P		P	07 32 09.1	+0.3		
	baz=251,SNR=7.4									
K20K	**Telida**	86.30	26	P		P	07 32 10.4	+0.9		
	baz=255									
M20K	**Styx River**	86.36	27	P		P	07 32 10.4	+0.6		
	baz=256									
J20K	**Nowinta River**	86.47	25	P		P	07 32 11.0	+0.8		
	baz=255									
I20K	**Naaghedeneel**	86.50	24	P		P	07 32 11.2	+0.9		
	baz=255									
H20K	**Anotleneega Mo**	86.52	24	P		P	07 32 11.9	+1.4		
	baz=254									
HOM	**Homer**	86.56	30	P		P	07 32 12.1	+1.3		
	baz=258									
F20K	**Avaraart Lake**	86.62	22	P		P	07 32 11.1	+0.2		
	baz=254									
N20K	**Mount Spurr**	86.63	28	P		P	07 32 11.4	+0.2		
	baz=257,SNR=6.4									
QSPA	**South Pole Qui**	86.70	180	P		P	07 32 11.3	-0.2		
	comp=Z,28nm,1.1s,baz=295,slow=1.4,SNR=42									
	comp=Z,28nm,1.1s									
D20K	**Etivluk River**	86.78	20	P		P	07 32 11.7	0.0		
	baz=253									
E20K	**Nigu River**	86.80	21	P		P	07 32 12.2	+0.3		
	baz=253,SNR=13									
RAYN	**Ar Rayn**	86.89	294	P		P	07 32 13.3	0.0		
RAYN	**Ar Rayn**	86.89	294	*i* P		P	07 32 13.7	+0.4		
	SNR=19									
RAYN	**Ar Rayn**	86.89	294	P		P	07 32 13.3	0.0		
RAYN					pmax	pmax				
	comp=Z,90nm,1.0s									
B20K	**Meade River**	86.99	19	P		P	07 32 13.1	+0.5		
	baz=252									
PPLA	**Purkeypile**	87.02	27	P		P	07 32 13.7	+0.6		
	baz=257,SNR=5.1									
BRSE	**Bradley Lake S**	87.03	30	P		P	07 32 13.9	+0.8		
	baz=258									
CAPN	**Captain Cook N**	87.04	29	P		P	07 32 13.9	+0.9		
	baz=258									
SKT	**Skwentna**	87.11	28	P		P	07 32 13.2	-0.3		
	baz=258,SNR=12									
CAST	**Castle Rocks**	87.18	26	P		P	07 32 13.5	-0.3		
	baz=257,SNR=9.1									
CHUM	**Lake Minchumin**	87.19	26	P		P	07 32 13.8	+0.1		
	baz=257,SNR=21									
MAK	**Makhachkala**	87.22	313	*e*P		P	07 32 07.6	-6.8		
MAK				*e*			07 42 31.3			
MAK					pmax	pmax				
	comp=Z,200nm,1.2s									
G21K	**Allakaket**	87.33	23	P		P	07 32 14.9	+0.6		
	baz=256									
SUA	**Susitna One**	87.37	28	P		P	07 32 14.4	-0.4		
SUA					IAmb	IAmb	07 34 29.5			
	comp=Z,35nm,1.0s									
SUA	**Susitna One**	87.37	28	P		P	07 32 14.5	-0.3		
	baz=258,SNR=17									
H21K	**Melozitna Rive**	87.39	24	P		P	07 32 15.1	+0.4		
	baz=256									
F21K	**Alatna River**	87.51	22	P		P	07 32 16.5	+1.2		
	baz=256									
C21K	**Knifeblade Rid**	87.54	20	P		P	07 32 15.8	+0.4		
	baz=254,SNR=7.2									
A21K	**Barrow**	87.56	18	P		P	07 32 15.9	+0.5		
	baz=252									
O22K	**Cooper Landing**	87.67	29	P		P	07 32 16.3	+0.1		
	baz=259,SNR=6.0									
M22K	**Willow**	87.72	28	P		P	07 32 17.2	+0.9		
	baz=259									
B21K	**Ikpikpuk River**	87.73	20	P		P	07 32 16.8	+0.6		
	baz=254									
SEW	**Seward**	87.73	30	P		P	07 32 16.7	+0.3		
	baz=260,SNR=7.8									
RC01	**Rabbit Creek A**	87.78	29	P		P	07 32 16.5	-0.2		
	baz=259,SNR=13									
CUT	**Chulitna**	87.78	27	P		P	07 32 16.5	-0.1		
	baz=259									
BPAW	**Bear Paw Mtn.**	87.80	25	P		P	07 32 17.2	+0.4		
	baz=258									
TRF	**Thorofare Moun**	87.98	26	P		P	07 32 18.3	+0.5		
	baz=259									
H22K	**Ishtalitna Cre**	88.02	24	P		P	07 32 18.1	+0.3		
	baz=258									
MLY	**Manley**	88.10	25	P		P	07 32 18.4	+0.2		
	baz=258,SNR=18									
PMR	**Palmer**	88.16	28	P		P	07 32 18.5	+0.1		
	baz=260,SNR=9.0									
D22K	**Ayikyak River**	88.20	21	P		P	07 32 19.4	+0.8		
	baz=256,SNR=7.2									
KIRV	**Kirov**	88.21	329	*e*P		P	07 32 17.2	-1.5		
KIRV	**Kirov**	88.21	329	LR		LR	08 14 46.0			
	comp=Z,274nm,21.7s,baz=100,slow=38									
BELG	**Belogornoye**	88.33	323	*ce*P		P	07 32 18.8	-0.6		
BELG					pmax	pmax				
	comp=Z,5.0nm,0.9s									
BELG	**Belogornoye**	88.33	323	P		P	07 32 18.2	-1.2		
	comp=Z,32nm,0.9s,baz=285,slow=3.5,SNR=13									
BELG					PKKPbc	PKKPbc	07 50 06.9	+2.2		
	comp=Z,7.4nm,0.6s,baz=245,slow=4.7,SNR=3.6									
	comp=Z,32nm,0.9s									
KNK	**Knik Glacier**	88.44	28	P		P	07 32 20.0	+0.2		
	baz=260,SNR=14									
SML	**Sawmill**	88.57	28	P		P	07 32 20.3	-0.1		
	baz=260,SNR=8.1									
MCK	**McKinley**	88.62	26	P		P	07 32 20.5	-0.2		
	baz=260,SNR=7.7									
WAT1	**Susitna Watana**	88.64	27	P		P	07 32 20.4	-0.4		
	baz=260									
I23K	**Minto, Yukon-K**	88.70	25	P		P	07 32 21.0	+0.1		
	baz=259,SNR=15									
NEA2	**Nenana**	88.72	25	P		P	07 32 21.9	+0.9		
	baz=260									
G23K	**Bananza Creek**	88.72	23	P		P	07 32 21.0	-0.1		
	baz=259,SNR=19									
COLD	**Coldfoot**	88.76	22	P		P	07 32 21.1	-0.1		
	baz=259,SNR=9.6									
M23K	**Glacier View**	88.85	28	P		P	07 32 21.8	0.0		
	baz=261,SNR=7.0									
D23K	**Nanushuk River**	88.93	21	P		P	07 32 22.5	+0.5		
	baz=258									
WAT6	**Susitna Watana**	88.97	27	P		P	07 32 22.8	+0.3		
	baz=261,SNR=7.4									
GNI	**Garni**	88.99	310	*ce*P		P	07 32 23.8	+0.7		
GNI					pmax	pmax				
	comp=Z,7.0nm,0.9s									
GLI	**Glacier Island**	89.01	29	P		P	07 32 23.3	+0.8		
	baz=262									
SCM	**Sheep Creek Mo**	89.04	28	P		P	07 32 23.5	+0.8		
	baz=261,SNR=7.1									
C23K	**Itkillik River**	89.13	20	P		P	07 32 23.2	+0.4		
	baz=258									
E23K	**Chandalar**	89.14	22	P		P	07 32 24.1	+1.1		
	baz=259									
DHY	**Denali Highway**	89.21	27	P		P	07 32 23.4	-0.2		
DHY					IAmb	IAmb	07 34 39.3			
	comp=Z,11nm,0.7s									
DHY	**Denali Highway**	89.21	27	P		P	07 32 23.9	+0.3		
	baz=261,SNR=9.9									
TOLK	**Toolik Lake Re**	89.26	21	P		P	07 32 23.6	+0.1		
	baz=259,SNR=5.4									
COLA	**College**	89.28	25	P		P	07 32 24.5	+0.9		
	baz=261									
H24K	**Noodor Dome**	89.42	24	P		P	07 32 24.5	+0.1		
	baz=261									
HDA	**Harding Lake**	89.59	25	P		P	07 32 25.3	+0.1		
	baz=262,SNR=9.8									
D24K	**Happy Valley**	89.62	21	P		P	07 32 26.0	+0.8		
	baz=260									
M24K	**Tolsona, Glenn**	89.62	28	P		P	07 32 26.1	+0.7		
	baz=262									
KLU	**Klutina**	89.66	28	P		P	07 32 26.1	+0.5		
	baz=263									
ILAR	**Eielson Array**	89.67	25	P		P	07 32 23.5	-2.0		
ILAR	**Eielson Array**	89.67	25	P		P	07 32 23.5	-2.0		
ILAR	**Eielson Array**	89.67	25	P		P	07 32 23.9	-1.6		
	comp=Z,1.7nm,0.5s,baz=258,slow=3.7,SNR=36									
ILAR					PKKP	PKKPdf	07 49 60.0	+2.5		
	comp=Z,0.7nm,0.8s,baz=28,slow=1.3,SNR=6.6									
F24K	**Squaw Lake**	89.69	22	P		P	07 32 26.1	+0.5		
	baz=261,SNR=12									
G24K	**Hadweenzic Riv**	89.72	23	P		P	07 32 26.2	+0.4		
	baz=261									
C24K	**Franklin Bluff**	89.76	20	P		P	07 32 25.7	-0.1		
	baz=260,SNR=8.3									
K24K	**Donnelly Dome**	90.02	26	P		P	07 32 27.4	+0.1		
	baz=263,SNR=7.1									
AKH	**Akhalkalaki**	90.04	311	P		P	07 32 28.5	+0.5		
AKH	**Akhalkalaki**	90.04	311	P		P	07 32 28.5	+0.5		
AKH					pmax	pmax				
	comp=Z,94nm,1.2s									
PAX	**Paxson**	90.06	27	P		P	07 32 27.7	+0.2		
	baz=263									
BMRM	**Bremner River**	90.23	29	P		P	07 32 28.5	+0.2		
	baz=264									
G25K	**Bearman Lake**	90.27	23	P		P	07 32 28.7	+0.5		
	baz=262									
J25K	**Salcha River,**	90.30	25	P		P	07 32 28.2	-0.4		
	baz=263									
N25K	**Chitina, Valde**	90.30	28	P		P	07 32 28.0	-0.6		
	baz=264									
PRP	**Porcupine Dome**	90.34	24	P		P	07 32 28.1	-0.8		
	baz=263									
RIDG	**Independent Ri**	90.42	26	P		P	07 32 28.8	-0.4		
	baz=264,SNR=7.3									
D25K	**Kavik River**	90.51	21	P		P	07 32 29.3	-0.1		
	baz=262									
F25K	**Christian River**	90.55	22	P		P	07 32 29.8	+0.2		
	baz=263									
KBZ	**Khabaz**	90.64	314	⇑*e*P		P	07 32 28.4	-2.1		
KBZ					pmax	pmax				
	comp=Z,3.0nm,1.1s									
KBZ	**Khabaz**	90.64	314	P		P	07 32 30.1	-0.4		
	comp=Z,2.4nm,0.9s,baz=146,slow=4.0,SNR=3.8									
	comp=Z,2.4nm,0.9s									
E25K	**Arctic Village**	90.65	22	P		P	07 32 30.5	+0.5		
	baz=263,SNR=9.4									
BGLC	**Bering Glacier**	90.80	30	P		P	07 32 30.8	0.0		
	baz=265									
KIV	**Kislovodsk**	90.81	314	*e*P		P	07 32 30.7	-0.7		
KIV				*e*			07 43 02.3			
KIV					pmax	pmax				
	comp=Z,6.0nm,0.9s									
SCRK	**Sand Creek**	90.83	26	P		P	07 32 31.3	+0.2		
	baz=264,SNR=5.1									
BMAR	**Burnt Mountain**	90.94	23	P		P	07 32 31.6	+0.2		
CRQE	**Cirque**	90.95	29	P		P	07 32 31.5	-0.2		
	baz=265									
GURO	**Guroymak-BITLI**	90.97	308	P		P	07 32 33.4	+1.0		
GURO					IAmb	IAmb	07 34 46.9			
	comp=Z,23nm,0.9s									
L26K	**Log Cabin Wild**	91.03	27	P		P	07 32 32.0	+0.1		
	baz=265									
MCARA	**McCarthy VSAT**	91.03	29	P		P	07 32 32.3	+0.4		
	baz=265									
J26L	**Joseph Creek**	91.06	26	P		P	07 32 31.9	-0.2		
	baz=265,SNR=7.9									
C26K	**Camden Bay**	91.09	20	P		P	07 32 32.7	+0.7		
	baz=264									
F26K	**Sheenjek River**	91.13	22	P		P	07 32 32.4	+0.1		
	baz=264									
G26K	**Porcupine Rive**	91.20	23	P		P	07 32 33.0	+0.4		
	baz=264									
I26K	**Coal Creek Min**	91.31	25	P		P	07 32 33.3	+0.2		
	baz=265									
MESA	**MESA**	91.47	30	P		P	07 32 34.6	+0.4		
	baz=266									
M27K	**Edge Creek, AK**	91.65	28	P		P	07 32 35.2	+0.2		
	baz=266									
K27K	**Chicken**	91.67	26	P		P	07 32 35.0	+0.2		
	baz=266									
L27K	**Beaver Creek,**	91.72	27	P		P	07 32 35.7	+0.6		
	baz=266,SNR=18									
BCAR	**Beaver Creek A**	91.74	27	P		P	07 32 35.2	0.0		
CTG	**Chitna Glacier**	91.82	29	P		P	07 32 36.1	+0.3		
	baz=267,SNR=6.8									
I27K	**Kandik River**	91.97	25	P		P	07 32 36.3	0.0		
	baz=266									
H27K	**Steamboat Moun**	92.05	24	P		P	07 32 36.9	+0.3		
	baz=267,SNR=10									
EGAK	**Eagle**	92.12	25	P		P	07 32 36.6	-0.3		
	baz=267									
BVCY	**Beaver Creek**	92.13	28	P		P	07 32 37.1	+0.1		
	baz=267									
ELIB	**Princess Elisa**	92.26	197	*d*P		P	07 32 38.6	+1.0		
	comp=Z,23nm,1.1s									
YUK3	**Moose Creek**	92.28	28	P		P	07 32 38.0	-0.1		
	baz=267,SNR=5.4									
PINM	**Pinnacle**	92.31	30	P		P	07 32 37.6	-0.3		
	baz=268									
KIBK	**Kibwezi**	92.53	268	P		P	07 32 40.1	+0.1		
KIBK					IAmb	IAmb	07 34 54.6			
	comp=Z,25nm,1.2s									
KIBK	**Kibwezi**	92.53	268	P		P	07 32 41.7	+1.6		
	SNR=7.0									
YUK8	**Steele Glacier**	92.60	29	P		P	07 32 39.0	-0.6		
	baz=268									
I28M	**Miner Creek**	92.66	25	P		P	07 32 39.7	+0.2		
	baz=268									
PNL	**Peninsula**	92.73	31	P		P	07 32 39.8	0.0		
	baz=268									
F28M	**Old Crow**	92.76	23	P		P	07 32 39.9	+0.1		
	baz=268									
DAWY	**Dawson**	92.85	26	P		P	07 32 40.0	-0.4		
	baz=268,SNR=18									
SOC	**Sochi**	92.94	313	*e*P		P	07 32 39.5	-1.6		
SOC				*e*			07 36 22.3			
SOC				*e*S		SKSac	07 43 13.4	-1.5		
SOC				*e*SS		SS	07 49 57.9	-2.9		
SOC				*e*SSS		SSS	07 53 36.5			
YUK4	**Talbot Arm**	93.14	29	P		P	07 32 41.9	0.0		
	baz=269									
D28M	**Stokes Point**	93.21	21	P		P	07 32 42.0	+0.2		
	baz=269									
M29M	**Somme Creek**	93.24	28	P		P	07 32 42.6	+0.3		
	baz=269									
YUK6	**Outpost Mounta**	93.27	29	P		P	07 32 42.3	-0.3		
	baz=269									
H29M	**Whitestone**	93.32	24	P		P	07 32 42.7	+0.3		
	baz=270									
J29N	**Klondike Camp**	93.37	26	P		P	07 32 43.4	+0.6		
	baz=270									
KMBO	**Kilima Mbogo**	93.39	269	P		P	07 32 44.6	+0.4		
KMBO					IAmb	IAmb	07 32 46.4			
	comp=Z,23nm,1.1s									
KMBO	**Kilima Mbogo**	93.39	269	*i* P		P	07 32 45.0	+0.8		
	SNR=13									
KMBO	**Kilima Mbogo**	93.39	269	P		P	07 32 44.6	+0.4		
KMBO					pmax	pmax				
	comp=Z,23nm,1.1s									
KMBO	**Kilima Mbogo**	93.39	269	P		P	07 32 45.5	+1.3		
KMBO						P	07 32 45.5	+1.3		
KLMR	**Klimovskoe**	93.40	331	*e*P		P	07 32 39.2	-3.6		
KLMR					pmax	pmax				
	comp=Z,31nm,1.6s									
L29M	**L29M**	93.40	27	P		P	07 32 43.5	+0.6		
	baz=270									
VSR	**Storozhevoye**	93.48	321	*e*P		P	07 32 40.2	-3.3		
VSR					pmax	pmax				
	comp=Z,10.0nm,1.4s									
E29M	**Blow River**	93.51	22	P		P	07 32 43.3	+0.1		
	baz=270									
P29M	**Windy Craggy**	93.57	31	P		P	07 32 43.8	+0.1		
	baz=270									
LPSR	**Galich'ya Gora**	93.64	322	*e*P		P	07 32 41.6	-2.6		
LPSR					pmax	pmax				
	comp=Z,10.0nm,1.0s									
K29M	**Barlow Dome**	93.68	26	P		P	07 32 43.8	-0.5		
	baz=270,SNR=17									
HYT	**Haines Junctio**	93.69	29	P		P	07 32 44.5	+0.1		
	baz=270									
EPYK	**Eagle Plains**	93.99	24	P		P	07 32 45.1	-0.4		
	baz=271,SNR=8.6									
M30M	**Minto, Yukon**	94.02	28	P		P	07 32 45.3	-0.4		
	baz=271									
I30M	**Mount Dempster**	94.15	25	P		P	07 32 46.7	+0.3		
	baz=271									
G30M	**tAoh Zraii Nji**	94.17	23	P		P	07 32 46.8	+0.4		
	baz=272									
J30M	**Hart River**	94.19	26	P		P	07 32 47.1	+0.5		
	baz=271									
F30M	**Barrier River**	94.32	23	P		P	07 32 46.7	-0.3		
	baz=272									
MOS	**Moscow**	94.41	326	*e*P		P	07 32 45.3	-2.3		
SKAG	**Skagway**	94.80	31	P		P	07 32 49.5	+0.2		
	baz=272									
ASF	**Jabal al Asfar**	94.94	302	P		P	07 32 51.3	+0.5		
	comp=Z,8.5nm,0.9s,baz=45,slow=0.8,SNR=6.5									
	comp=Z,8.5nm,0.9s									
G31M	**Satah River**	94.94	23	P		P	07 32 49.8	0.0		
	baz=273,SNR=9.8									
H31M	**Peel River**	94.98	24	P		P	07 32 50.1	0.0		
	baz=273									
WHY	**Whitehorse**	94.98	30	P		P	07 32 50.5	+0.2		
	baz=272									
OBN	**Obninsk**	95.02	325	⇑*e*P		P	07 32 48.1	-2.3		
OBN					pmax	pmax				
	comp=Z,9.0nm,1.2s									
OBN					MLR	MLR				
	comp=Z,501nm,22.0s									
F31M	**Tsiigehtchic**	95.12	23	P		P	07 32 50.6	0.0		
	baz=274,SNR=10									
INK	**Inuvik**	95.14	22	P		P	07 32 49.9	-0.7		
	baz=274,SNR=15									
INK	**Inuvik**	95.14	22	P		P	07 32 49.3	-1.4		
	comp=Z,10nm,1.1s,baz=266,slow=6.9,SNR=21									
INK					LR	LR	08 14 43.4			
	comp=Z,127nm,18.9s,baz=190,slow=35									
M31M	**Drury Creek, Y**	95.15	28	P		P	07 32 50.6	-0.3		
	baz=273									
FARO	**Faro, Yukon**	95.63	28	P		P	07 32 53.4	+0.3		
	baz=274									
MMAI	**Mount Meron Ar**	96.21	303	P		P	07 32 56.5	+0.1		
	comp=Z,0.8nm,0.2s,baz=97,slow=5.2,SNR=7.5									
	comp=Z,0.8nm,0.2s									
R33M	**Jennings River**	97.03	31	P		P	07 32 59.2	-0.5		
	baz=276									
V35K	**Ketchikan**	97.03	35	P		P	07 32 59.2	-0.4		
	baz=274									
S34M	**Telegraph Cree**	97.08	32	P		Pdif	07 33 00.2	+0.4		
	baz=275									
A36M	**Sachs Harbour**	97.41	18	P		P	07 33 00.5	-0.4		
	baz=282,SNR=6.0									
BR131	**Keskin Array S**	97.51	309	*de*P		P	07 33 01.0	-1.3		
BRTR	**Keskin Array B**	97.51	309	*ce*P		P	07 33 01.9	-0.4		
BRTR					pmax	pmax				
	comp=Z,1.0nm,0.8s									
BRTR	**Keskin Array B**	97.51	309	P		P	07 33 01.4	-1.0		
	comp=Z,1.4nm,1.0s,baz=90,slow=2.5,SNR=4.0									
	comp=Z,1.4nm,1.0s									
DLBC	**Dease Lake**	97.61	32	P		P	07 33 01.2	-1.0		
	baz=276									
DLBC	**Dease Lake**	97.61	32	P		P	07 33 01.8	-0.4		
	comp=Z,1.5nm,0.5s,baz=77,slow=11,SNR=4.1									
	comp=Z,1.5nm,0.5s									
TROLL	**Troll, Antarti**	97.95	194	⇑P		Pdif	07 33 04.4	+0.7		
	comp=Z,513nm,0.8s									
ARCES	**ARCESS Array B**	98.33	340	P		P	07 33 03.7	-1.4		
	comp=Z,3.3nm,0.7s,baz=73,slow=5.1,SNR=9.3									
	comp=Z,3.3nm,0.7s									
C36M	**Paulatuk**	98.37	20	P		P	07 33 04.7	-0.6		
	baz=283,SNR=8.6									
SNAA	**Sanae**	99.45	193	⇑P		Pdif	07 33 10.8	+0.6		
	comp=Z,169nm,0.9s									
SNAA	**Sanae**	99.45	193	P		Pdif	07 33 10.6	+0.4		
	comp=Z,8.4nm,0.9s,baz=118,slow=8.8,SNR=5.6									
	comp=Z,8.4nm,0.9s									
FINES	**FINESS Array B**	99.82	332	LR		LR	08 21 51.0			
	comp=Z,518nm,20.6s,baz=86,slow=38									
MBAR	**Mbarara**	99.92	269	⇑*e*P		Pdif	07 33 13.6	-0.1		
MBAR					pmax	pmax				
	comp=Z,3.0nm,1.1s									
MBAR	**Mbarara**	99.92	269	LR		LR	08 15 38.4			
	comp=Z,768nm,21.2s,baz=84,slow=34									
BOSA	**Boshof**	101.95	240	P		Pdif	07 33 22.0	-0.4		
BOSA	**Boshof**	101.95	240	P		Pdif	07 33 21.9	-0.4		
	comp=Z,4.5nm,0.8s,baz=30,slow=2.1,SNR=6.0									
YKA	**Yellowknife Ar**	104.09	26	Pdiff		Pdif	07 33 30.3	-0.6		
	comp=Z,0.4nm,0.9s,baz=295,slow=4.7,SNR=7.4									
YKA					PP	PKiKP	07 37 45.1	-2.9		
	comp=Z,0.3nm,0.8s,baz=295,slow=6.1,SNR=2.7									
YKA					PKKPbc	PKKPbc	07 49 18.2	-4.0		
	comp=Z,0.9nm,0.9s,baz=108,slow=2.7,SNR=12									
YKA					PKKP	PKKPdf	07 49 25.9	-5.3		
	comp=Z,0.5nm,0.8s,baz=103,slow=2.3,SNR=7.0									
NVAR	**Mina Array Bea**	108.40	51	PKKPbc		PKKPbc	07 49 07.8	-0.6		
	comp=Z,0.5nm,0.8s,baz=151,slow=4.2,SNR=4.2									
NVAR					PKKPab	PKKPab	07 49 20.2	-0.6		
	comp=Z,1.1nm,1.0s,baz=109,slow=8.0,SNR=4.8									
CLL	**Collm**	109.59	324	*e*P		Pdif	07 33 55.0	-0.6		
CLL					MLR	MLR				
	comp=Z,500nm,20.6s									
HLID	**Hailey**	110.12	45	P		PKiKP	07 38 00.4	+0.3		
	baz=285									
MURC	**Murrieta**	110.15	55	P		PKiKP	07 37 59.6	-0.6		
	baz=280									
IKP	**In-Ko-Pah, Jac**	111.21	56	P		PKiKP	07 38 02.3	0.0		
	baz=280									
SWSC	**Sam W. Stewart**	111.41	56	P		PKiKP	07 38 03.3	+0.7		
	baz=280									
EGMT	**Eagleton**	111.85	39	P		PKiKP	07 38 02.8	-0.3		
	baz=291									
RLMT	**Red Lodge**	113.17	42	P		PKiKP	07 38 06.0	+0.2		
	baz=290									
BW06	**Boulder Array**	113.75	44	P		PKiKP	07 38 07.3	+0.2		
	baz=289									

	baz=306							
MVO	**Moncorvo**	**126.50**	**321**	*e*PKPdf	PKiKP	07 38 51.6	+20	
WHTX	**Lake Whitney,**	**126.55**	**52**	P	**PKPdf**	**07 38 31.6**	**-0.1**	
	baz=292							
PGAV	**Gavieira, Arco**	**126.82**	**322**	*e*PKPdf	PKiKP	07 38 49.8	+17	
POLO	**Lamas de Olo**	**126.86**	**321**	*e*PKPdf	PKiKP	07 38 52.1	+20	
PVIS	**Viseu**	**127.30**	**321**	*e*PKPdf	PKiKP	07 38 52.5	+19	
PCBR	**Castelo Branco**	**127.51**	**320**	*e*PKPdf	PKiKP	07 38 53.9	+20	
PBAR	**Barrancos**	**128.11**	**318**	*e*PKPdf	PKiKP	07 38 54.3	+19	
L44A	**Lake County Fo**	**128.13**	**36**	P	**PKiKP**	**07 38 35.2**	**+0.2**	
	baz=308							
HDIL	**Hopedale**	**128.25**	**39**	P	**PKPdf**	**07 38 34.6**	**-0.1**	
	baz=305							
GLMI	**Grayling**	**128.26**	**32**	P	**PKPdf**	**07 38 34.7**	**+0.2**	
	baz=313							
CCM	**Cathedral Cave**	**128.37**	**42**	P	**PKPdf**	**07 38 35.1**	**+0.2**	
	baz=302							
MIAR	**Mount Ida**	**128.44**	**47**	P	**PKPdf**	**07 38 35.5**	**+0.3**	
	baz=297							
TORD	**Torodi Ar. Bea**	**128.68**	**284**	PKP	**PKPdf**	**07 38 36.5**	**+0.3**	
	comp=Z,3.9nm,0.5s,baz=52,slow=4.7,SNR=4.0							
PCVE	**Castro Verde**	**129.06**	**318**	*e*PKPdf	PKiKP	07 38 55.2	+18	
SFIN	**Lafayette**	**129.71**	**38**	P	**PKPdf**	**07 38 37.8**	**+0.3**	
	baz=307							
O48B	**Farmland**	**130.95**	**36**	P	**PKPdf**	**07 38 39.5**	**-0.3**	
	baz=309							
OXF	**Oxford**	**131.47**	**45**	P	**PKPdf**	**07 38 41.1**	**+0.2**	
	baz=301							
WCI	**Wyandotte Cave**	**131.50**	**39**	P	**PKPdf**	**07 38 41.4**	**+0.5**	
	baz=307							
P49A	**Miami Univ. Ec**	**131.67**	**37**	P	**PKPdf**	**07 38 41.7**	**+0.5**	
	baz=309							
WVT	**Waverly**	**131.70**	**43**	P	**PKPdf**	**07 38 42.0**	**+0.7**	
	baz=304							
PLCA	**Paso Flores**	**132.10**	**158**	PKP	**PKPdf**	**07 38 43.0**	**+0.9**	
	comp=Z,2.9nm,0.9s,baz=282,slow=3.4,SNR=6.1							
ACSO	**Alum Creek Sta**	**132.24**	**35**	P	**PKiKP**	**07 38 43.2**	**-0.1**	
	baz=312							
M53A	**WI Miller and**	**132.68**	**32**	P	**PKPdf**	**07 38 43.6**	**+0.5**	
	baz=315							
P52A	**Corning**	**133.12**	**35**	P	**PKPdf**	**07 38 44.1**	**+0.2**	
	baz=312							
LONY	**Lake Ozonia**	**133.16**	**25**	P	**PKPdf**	**07 38 44.7**	**+0.8**	
	baz=324							
LRAL	**Lakeview Retre**	**133.95**	**46**	P	**PKPdf**	**07 38 45.9**	**+0.2**	
	baz=302							
TZTN	**Tazewell**	**134.26**	**39**	P	**PKPdf**	**07 38 46.6**	**+0.4**	
	baz=308							
BINY	**Binghamton**	**134.47**	**28**	P	**PKPdf**	**07 38 46.9**	**+0.5**	
	baz=321							
SSPA	**Standing Stone**	**134.72**	**31**	P	**PKPdf**	**07 38 47.1**	**+0.2**	
	baz=318							
BRAL	**Brewton**	**134.88**	**48**	P	**PKPdf**	**07 38 47.3**	**-0.1**	
	baz=300							
DBIC	**Dimbokro**	**135.62**	**276**	PKP	**PKPdf**	**07 38 49.8**	**+0.5**	
	comp=Z,11nm,1.0s,baz=103,slow=1.9,SNR=6.6							
DBIC				PKKPab		07 47 23.6		
	comp=Z,3.8nm,0.9s,baz=148,slow=5.5,SNR=3.2							
L61B	**Northampton**	**135.73**	**25**	P	**PKPdf**	**07 38 48.8**	**0.0**	
	baz=325							
BLA	**Blacksburg**	**135.74**	**36**	P	**PKPdf**	**07 38 48.8**	**-0.1**	
	baz=312							
HRV	**Adam Dziewonsk**	**136.15**	**24**	P	**PKPdf**	**07 38 50.4**	**+0.9**	
	baz=327							
BBTS	**Babate**	**145.77**	**291**	PKPbc	**PKPdf**	**07 39 08.2**	**+0.7**	
	comp=Z,99nm,0.9s,baz=294,slow=1.1,SNR=12							
MCRA	**Macar, Loja**	**148.44**	**104**	*e*P	**PKPbc**	**07 39 15.9**	**+0.2**	
NNA	**Nana**	**148.70**	**119**	PKP	**PKPdf**	**07 39 11.6**	**-0.9**	
	comp=Z,20nm,1.0s,baz=243,slow=2.3,SNR=5.6							
NNA				PKPbc	**sPKPdf**	**07 39 17.0**	**-2.2**	
	comp=Z,20nm,1.0s,baz=297,slow=4.9,SNR=5.6							
NNA	**Nana**	**148.70**	**119**	*e*P	**PKiKP**	**07 39 17.7**	**0.0**	
ATAH	**Atahualpa**	**149.17**	**110**	PKP	**PKPdf**	**07 39 15.7**	**+1.9**	
	comp=Z,11nm,1.0s,baz=292,slow=5.4,SNR=4.5							
ATAH				PKPbc	**PKiKP**	**07 39 20.1**	**+0.9**	
	comp=Z,11nm,1.0s,baz=270,slow=7.1,SNR=5.6							
CPUP	**Villa Florida**	**149.58**	**166**	PKP	**PKPdf**	**07 39 14.7**	**+1.2**	
	comp=Z,18nm,0.9s,baz=188,slow=1.4,SNR=3.5							
CPUP				PKPbc	**PKPbc**	**07 39 18.4**	**+0.3**	
	comp=Z,18nm,0.9s,baz=227,slow=1.9,SNR=18							
TULM	**Tulcn-Chalpat**	**151.41**	**94**	*e*P	**PKiKP**	**07 39 24.7**	**+0.7**	
GCUF	**Volcan Galeras**	**151.89**	**93**	*e*P	**PKiKP**	**07 39 25.2**	**+0.3**	
APAC	**Apartado, Choc**	**152.46**	**79**	*e*P	**PKPab**	**07 39 36.9**	**+1.5**	
POPC	**Popayan, Colom**	**152.64**	**91**	*e*P	**PKPbc**	**07 39 25.5**	**-0.4**	
YOTC	**Yotoco, Valle**	**152.99**	**88**	*e*P	**PKPbc**	**07 39 26.8**	**+0.3**	
GUY2C	**Guyana, Caldas**	**153.92**	**85**	*e*P	**PKPbc**	**07 39 29.1**	**+0.1**	
ORTC	**Ortega, Tolima**	**154.09**	**88**	*e*P	**PKPbc**	**07 39 28.1**	**-0.8**	
CZSB	**Cruzeiro do Su**	**154.22**	**115**	*e*P	**PKPdf**	**07 39 21.3**	**+0.5**	
SPBC	**San Pablo de B**	**155.18**	**84**	*e*P	**PKPdf**	**07 39 22.4**	**+0.1**	
BARC	**Barichara**	**155.97**	**81**	*e*P	**PKPab**	**07 39 50.9**	**+0.2**	
RUSC	**La Rusia**	**156.14**	**83**	*e*P	PKPab	07 39 42.3	-9.4	
SDV	**Santo Domingo**	**158.06**	**74**	PKP	**PKPdf**	**07 39 26.2**	**0.0**	
	comp=Z,12nm,1.0s,baz=164,slow=1.4,SNR=6.2							
SDV	**Santo Domingo**	**158.06**	**74**	*e*P	**PKPdf**	**07 39 26.4**	**+0.2**	
BDFB	**Brasilia**	**161.19**	**184**	PKP	**PKPdf**	**07 39 28.4**	**-1.1**	
	comp=Z,0.9nm,0.5s,baz=0.0,slow=0.0,SNR=4.1							
BDFB				PKPab	**PKPab**	**07 40 12.3**	**-0.3**	
	comp=Z,5.8nm,1.0s,baz=198,slow=3.2,SNR=4.8							
SAML	**Samuel**	**161.60**	**131**	*e*P	**PKPdf**	**07 39 30.3**	**+0.4**	

FUNV ***22*** *07:20:51.4, 10˚.69N×65˚.75W, h9km, MW3.9*
ISC 22 07:20:51.0±1.6, 10˚.60N±0˚.10×65˚.77W±0˚.04, h13km±12km**, n24, σ2°04'37, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**1.03**	**263**	*e*P	**Pg**	**07 21 10.3**	**-0.5**
FUNV				*e*S	**Sg**	**07 21 23.8**	**-0.5**
PCRV	**Puerto La Cruz**	**1.19**	**110**	*e*P	**Pb**	**07 21 13.4**	**-0.1**
PCRV				*e*S	**Sn**	**07 21 30.9**	**+1.3**
TACV	**Tcata**	**1.31**	**250**	*e*P	**Pn**	**07 21 16.1**	**+0.9**
TACV				*e*S	**Sn**	**07 21 35.1**	**+2.5**
BENV	**Beln**	**1.90**	**251**	*e*P	**Pb**	**07 21 26.5**	**+0.9**
BENV				*e*S	**Sn**	**07 21 48.9**	**+1.7**
TURV	**Turiamo**	**2.04**	**266**	*e*P	**Pn**	**07 21 25.2**	**+0.2**
TURV				*e*S	**Sn**	**07 21 51.9**	**+1.5**
BAUV	**El Baul**	**2.77**	**234**	*e*P	**Pn**	**07 21 36.4**	**+1.2**
BAUV				*e*S	**Sn**	**07 22 09.5**	**+0.9**
CACV	**CAICARA DEL OR**	**3.10**	**194**	*e*P	**Pn**	**07 21 41.0**	**+1.3**
CACV				*e*S	**Sn**	**07 22 16.5**	**-0.3**
TEPV	**Terepaima**	**3.42**	**260**	*e*P	**Pn**	**07 21 44.7**	**+0.5**
TEPV				*e*S	**Sn**	**07 22 23.4**	**-1.3**
SANV	**Sanarito**	**3.86**	**254**	*e*P	**Pn**	**07 21 50.7**	**+0.4**
SANV				*e*S	**Sn**	**07 22 34.3**	**-1.4**
SIQV	**Siquisique**	**3.97**	**271**	*e*P	**Pn**	**07 21 50.5**	**-1.1**
SIQV				*e*S	**Sn**	**07 22 35.9**	**-2.2**
SDV	**Santo Domingo**	**5.08**	**251**	*e*P	**Pn**	**07 22 08.7**	**+1.5**
SOCV	**Socops**	**5.52**	**246**	*e*P	**Pn**	**07 22 13.1**	**+0.1**
SOCV				*e*S	**Sn**	**07 23 12.8**	**-3.5**
LUEV	**Luepa**	**6.36**	**138**	*e*P	**Pn**	**07 22 24.0**	**-0.8**
LUEV				*e*S	**Sn**	**07 23 32.3**	**-5.2**
CAPV	**Capacho**	**7.00**	**248**	*e*P	**Pn**	**07 22 33.3**	**-0.3**
CAPV				*e*S	**Sn**	**07 23 47.9**	**-5.4**
TAMC	**Tame, Arauca**	**7.25**	**236**	*e*P	**Pn**	**07 22 38.7**	**+1.9**
PAMC	**Pamplona, Colo**	**7.57**	**245**	*e*P	**Pn**	**07 22 43.6**	**+2.0**
BARC	**Barichara**	**8.34**	**242**	*e*P	**Pn**	**07 22 54.6**	**+2.7**
RUSC	**La Rusia**	**8.61**	**238**	*e*P	**Pn**	**07 22 56.9**	**+1.0**
PTBC	**PUERTO BERRIO,**	**9.48**	**246**	*e*P	**Pn**	**07 23 08.9**	**+1.5**
SPBC	**San Pablo de B**	**9.57**	**240**	*e*P	**Pn**	**07 23 11.4**	**+2.7**
CHIC	**Chingaza**	**9.87**	**234**	*e*P	**Pn**	**07 23 14.1**	**+1.0**
GUY2C	**Guyana, Caldas**	**10.89**	**241**	*e*P	**Pn**	**07 23 30.0**	**+2.8**
PRAC	**Prado**	**11.33**	**234**	*e*P	**Pn**	**07 23 34.4**	**+1.6**
GARC	**Garzon, Huila**	**12.76**	**230**	*e*P	**Pn**	**07 23 51.9**	**-0.8**

BJI ***22*** *07:21:37.5±0.0, 3˚.34S×131˚.00E, h21km, mb5.3/76, mB5.3/37, Ms5.0/40, Ms7 4.8/41*
IDC ***22*** *07:21:38.1±0.4, 3˚.18S×130˚.86E, h0km, mb5.2/32, mbtmp5.1/33, ML5.0/1, MS4.8/10, Error ellipse: s-maj=21.3km s-min=12.2km az=75.0*
MOS ***22*** *07:21:40.4±0.7, 3˚.15S×130˚.81E, h26km, mb5.4/58, Error ellipse: s-maj=9.1km s-min=4.7km az=116.8*
NEIC ***22*** *07:21:40.6±1.3, 3˚.18S±0˚.06×130˚.82E±0˚.05, h10km±1km, mb5.3/102, Error ellipse: s-maj=11.9km s-min=3.9km az=143.0*
GCMT ***22*** *07:21:40.6±0.2, 3˚.22S±0˚.01×130˚.76E±0˚.01, h13km, MW5.3/117, Moment Tensor Solution. s78,c99; s117,c181; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.86±.03; M_{tt}-0.48±.02; M_{pp}-0.38±.02; M_{rt}-0.36±.05; M_{rp}0.48±.01; M_{tp}0.32±.05; Best double couple: $M_0$1.01500×10^{17} NP1:ϕ_s312.00000°, δ59.00000°, λ90.00000°. NP2:ϕ_s133.00000°, δ31.00000°, λ91.00000°. Principal axes: T 0.9870, Plg76.0000°, Azm221.0000°; N 0.0550, Plg0.0000°, Azm312.0000°; P -1.0420, Plg14.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***22*** *07:21:41.2±0.6, 3˚.3S×13˚.1E±˚, h17km±4km, M5.4/30, mb5.5/30, mB5.8/18, MLv5.2/9, Mw5.2/25, Mw(mB)5.4/18, MwMwp5.6/1, Mwp5.7/1*
ISC 22 07:21:41.4±0.3, 3˚.21S±0˚.03×130˚.81E±0˚.04, h21km±4km**, h22**km**:pP-P, n688, σ1%01/748, mb5.3**/140**, MS4.8**/29**, 47C-10D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.46**	**79**	Pn	**Pn**	**07 22 07.2**	**+0.6**
FAKI	**Fak Fak**	**1.46**	**79**	P	**Pb**	**07 22 07.9**	**0.0**
BNDI	**Bandanaira**	**1.59**	**215**	P	**Pb**	**07 22 11.1**	**+1.1**
SWI	**Sorong**	**2.37**	**11**	P	**Pn**	**07 22 19.6**	**+0.5**
NLAI	**Namlea**	**3.71**	**269**	P	**Pn**	**07 22 38.4**	**+1.0**
LBMI	**Labuha**	**4.18**	**308**	P	**Pn**	**07 22 43.6**	**-0.3**
SAUI	**Saumlaki**	**4.77**	**174**	Pn	**Pn**	**07 22 53.2**	**+1.2**
SANI	**Sanana**	**4.95**	**283**	P	**Pn**	**07 22 53.2**	**-1.4**
GENI	**Genyem**	**9.37**	**86**	P	Pn	07 24 11.2	+16
EDFI	**Ende, Flores**	**10.61**	**238**	P	Pn	07 24 18.7	+6.4
KAPI	**Kappang**	**11.18**	**260**	Pn	**Pn**	**07 24 23.1**	**+3.1**
KAPI	**Kappang**	**11.18**	**260**	P	**Pn**	**07 24 23.1**	**+3.1**
MPSI	**Mapaga**	**11.46**	**288**	P	**Pn**	**07 24 22.6**	**-1.3**
	93nm,1.7s,2μm						
KNRA	**Kununurra**	**12.55**	**189**	P	**Pn**	**07 24 37.7**	**-1.2**
	baz=12						
KNRA	**Kununurra**	**12.55**	**189**	Pn	**Pn**	**07 24 39.0**	**+0.1**
PLAI	**Plampang**	**14.11**	**246**	P	**Pn**	**07 25 02.2**	**+2.1**
	279nm,0.8s,4μm						
TWSI	**Taliwang, Sumb**	**14.90**	**248**	P	**P**	**07 25 14.1**	**-2.3**
FITZ	**Fitzroy Crossi**	**15.64**	**199**	P	**Pn**	**07 25 16.7**	**-4.0**
	baz=16						
FITZ	**Fitzroy Crossi**	**15.64**	**199**	Pn	**Pn**	**07 25 20.8**	**+0.2**
MTKI	**Muara Teweh, K**	**16.06**	**278**	P	**P**	**07 25 31.2**	**+1.8**
COEN	**Coen**	**16.22**	**132**	P	**Pn**	**07 25 27.9**	**-0.3**
	baz=16						
COEN	**Coen**	**16.22**	**132**	Pn	**Pn**	**07 25 27.3**	**-0.8**
MANU	**Manus Island**	**16.58**	**86**	P	**P**	**07 25 36.7**	**+1.6**
WRAB	**Tennant Creek**	**16.98**	**169**		**P**	**07 25 39.4**	**-0.1**
WRAB	**Tennant Creek**	**16.98**	**169**	P	**P**	**07 25 39.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,122nm,0.8s						
WRA	**Warramunga Arr**	**16.98**	**169**		**P**	**07 25 39.4**	**-0.1**
WRA	**Warramunga Arr**	**16.98**	**169**	P	**Pn**	**07 25 37.0**	**-0.8**
WRA	**Warramunga Arr**	**16.98**	**169**	Pn	**Pn**	**07 25 37.0**	**-0.8**
	comp=Z,5.2nm,0.3s,baz=344,slow=12,SNR=8.1						
	comp=Z,67nm,0.8s						
WB2	**Warramunga Arr**	**16.99**	**169**	P	**Pn**	**07 25 37.4**	**-0.5**
	baz=17						
ABJI	**Asem Bagus**	**17.11**	**254**	P	**P**	**07 25 43.6**	**+2.6**
KMMI	**Kalianget**	**17.20**	**257**	P	**P**	**07 25 41.8**	**-0.2**
	comp=Z,401nm,1.2s,comp=Z,4μm						
KKM	**Kota Kinabalu**	**17.23**	**302**		**Pn**	**07 25 40.7**	**-0.4**
PMG	**Port Moresby**	**17.37**	**112**	P	**P**	**07 25 44.1**	**+0.3**
PMG	**Port Moresby**	**17.37**	**112**	P	**P**	**07 25 44.1**	**+0.3**
PMG				pmax	pmax		
	comp=Z,98nm,1.0s						
PMG	**Port Moresby**	**17.37**	**112**	P	**P**	**07 25 45.2**	**+1.3**
	comp=Z,76nm,1.0s,baz=296,slow=4.6,SNR=3.8						
JAGI	**Jajag, Banyuwa**	**17.37**	**252**		**Pn**	**07 25 43.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**17.37**	**252**	P	**Pn**	**07 25 43.0**	**+0.3**
	comp=Z,169nm,0.9s						
BLJI	**Banyuglugur**	**17.72**	**255**	P	**Pn**	**07 25 46.7**	**-0.2**
	comp=Z,344nm,0.8s,comp=Z,6μm						
GMJI	**Gumukmas**	**17.99**	**253**	P	**Pn**	**07 25 48.4**	**-1.9**
	comp=Z,174nm,1.0s						
BWJI	**Bawean**	**18.29**	**261**	P	**P**	**07 25 54.6**	**+0.6**
	comp=Z,630nm,1.1s						
GRJI	**Gresik**	**18.62**	**258**	P	**P**	**07 25 57.1**	**-0.6**
	comp=Z,362nm,1.0s,comp=Z,5μm						
QIS	**Mount Isa**	**19.26**	**154**	P	**Pn**	**07 26 05.7**	**0.0**
	baz=19						
SBUM	**Sibu**	**19.41**	**287**	P	**Pn**	**07 26 07.6**	**-0.1**
PWJI	**Pagerwojo**	**19.51**	**255**	P	**P**	**07 26 07.4**	**0.0**
	comp=Z,150nm,1.4s						
STKI	**Sintang**	**19.60**	**279**	P	**P**	**07 26 08.2**	**-0.2**
	comp=Z,151nm,0.9s						
NGJI	**Ngawi**	**19.70**	**257**	P	**Pn**	**07 26 11.1**	**+0.1**
	comp=Z,355nm,1.2s						
TGY	**Tagaytay City**	**19.79**	**331**	P	**Pn**	**07 26 12.9**	**+0.7**
	comp=Z,226nm,0.3s,baz=205,slow=2.5,SNR=5.5						
MTSU	**Mount Surprise**	**19.88**	**139**	P	**Pn**	**07 26 13.5**	**+0.4**
	baz=20,SNR=6.2						
AS31	**Alice Springs**	**20.55**	**172**	P	**P**	**07 26 19.0**	**+0.3**
AS31				lAmb	lAmb	07 26 20.5	
	comp=Z,90nm,0.7s						
ASAR	**Alice Springs**	**20.56**	**172**	P	**P**	**07 26 19.6**	**+0.8**
ASAR	**Alice Springs**	**20.56**	**172**	P	**P**	**07 26 19.6**	**+0.8**
ASAR	**Alice Springs**	**20.56**	**172**	P	**P**	**07 26 19.1**	**+0.3**
	comp=Z,199nm,0.6s,baz=351,slow=11,SNR=18						
ASAR				S	**S**	**07 30 06.2**	**-1.7**
ASAR				LR	LR	07 36 03.8	
	comp=Z,20nm,0.9s,baz=358,slow=20,SNR=5.7						
	comp=Z,6μm,19.2s,baz=358,slow=42						
	comp=Z,199nm,0.6s						
ASPA	**Alice Springs**	**20.56**	**172**	P	**P**	**07 26 18.6**	**-0.2**
	baz=20						
SMRI	**Semarang**	**20.64**	**259**	P	**P**	**07 26 19.1**	**-0.7**
SMRI	**Semarang**	**20.64**	**259**	P	**P**	**07 26 19.0**	**-0.8**
	comp=Z,293nm,1.5s						
MBWA	**Marble Bar**	**20.85**	**210**	P	**P**	**07 26 20.0**	**-1.9**
KSM	**Kuching**	**21.02**	**282**	P	**P**	**07 26 23.6**	**-0.2**
PSA00	**Pilbara Seismi**	**21.14**	**209**	P	**P**	**07 26 22.5**	**-2.5**
RABL	**Rabaul**	**21.33**	**93**	P	**P**	**07 26 28.7**	**+1.4**
WRKA	**Warakurna**	**21.84**	**186**	P	**P**	**07 26 31.8**	**-0.8**
	baz=22						
KPJI	**Karang Pucung**	**22.16**	**258**	P	**P**	**07 26 34.3**	**-1.9**
	comp=Z,163nm,0.9s,comp=Z,2μm						
GIRL	**Giralia**	**25.13**	**218**	P	**P**	**07 27 05.1**	**0.0**
	baz=25,SNR=6.3						
MEEK	**Meekatharra**	**26.06**	**205**	P	**P**	**07 27 11.3**	**-2.3**
	baz=26						
QLP	**Quilpie**	**26.56**	**152**	P	**P**	**07 27 19.1**	**+1.0**
	baz=27,SNR=3.4						
DLV	**T Lat**	**26.82**	**305**	P	**P**	**07 27 21.4**	**+0.8**
DLV				lAmb	lAmb	07 27 23.6	
	comp=Z,71nm,0.8s						
MYKOM	**Kota Tinggi**	**27.40**	**280**	P	**P**	**07 27 25.8**	**+0.1**
FORT	**Forrest**	**27.55**	**185**	P	**P**	**07 27 26.6**	**-0.2**
	baz=28						
KMBL	**Kambalda**	**29.25**	**196**	P	**P**	**07 27 40.8**	**-1.2**
	baz=29,SNR=5.7						
MORW	**Morawa**	**29.30**	**207**	P	**P**	**07 27 40.8**	**-1.7**
	baz=29,SNR=3.6						
EIDS	**Eidsvold**	**29.42**	**140**	P	**P**	**07 27 44.1**	**+0.6**
	baz=30						
HNR	**Honiara**	**29.59**	**103**	LR	LR	07 40 36.0	
	comp=Z,34μm,18.9s,baz=257,slow=38						
BKNI	**Bangkinang**	**29.96**	**276**	P	**P**	**07 27 49.0**	**+0.5**
QIZ	**Qiongzhong**	**30.23**	**318**	P	**P**	**07 27 51.4**	**+0.6**
QIZ				S	**S**	**07 32 52.6**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,35nm,1.3s						
STKA	**Stephens Creek**	**30.27**	**162**	P	**P**	**07 27 51.9**	**+0.9**
	baz=30						
STKA	**Stephens Creek**	**30.27**	**162**	P	**P**	**07 27 51.4**	**+0.4**
	comp=Z,27nm,0.8s,baz=13,slow=6.0,SNR=4.3						
	comp=Z,27nm,0.8s						
QZH	**Quanzhou**	**30.40**	**338**	*i*P	**P**	**07 27 51.4**	**-0.8**
QZH				LR	LR		
	comp=Z,3μm,25.8s						
IPM	**Ipoh**	**30.73**	**284**	P	**P**	**07 27 55.0**	**-0.3**
KLBR	**Kalberberrin**	**30.79**	**202**	P	**P**	**07 27 54.4**	**-1.3**
	baz=31,SNR=5.0						
UBPT	**Khong Chiam**	**31.09**	**307**	P	**P**	**07 27 58.1**	**-0.3**
KULM	**Kulim**	**31.29**	**286**	P	**P**	**07 28 00.2**	**-0.1**
KULM				lAmb	lAmb	07 28 12.3	
	comp=Z,37nm,0.8s						
MUN	**Mundaring**	**31.74**	**204**	P	**P**	**07 28 02.5**	**-1.5**
	baz=32						
SISI	**Saibi**	**31.75**	**273**	P	**P**	**07 28 02.4**	**-1.9**
	comp=Z,192nm,1.3s,comp=Z,2μm						
NWAO	**Narrogin (SRO)**	**32.18**	**202**	P	**P**	**07 28 06.9**	**-1.0**
	baz=32,SNR=5.8						
NWAO				P	**P**	**07 28 06.9**	**-1.0**
	baz=32,SNR=5.8						
NWAO	**Narrogin (SRO)**	**32.18**	**202**	LR	LR	07 41 30.7	
	comp=Z,4μm,20.2s,baz=20,slow=37						
RPSI	**Rantau Prapat**	**32.41**	**280**	P	**P**	**07 28 09.3**	**-0.8**
PSI	**Prapat**	**32.43**	**280**	P	**P**	**07 28 09.3**	**-1.1**
PSI				pmax	pmax		
	comp=Z,78nm,1.0s						
SRIT	**Nakonsritamara**	**33.26**	**291**	P	**P**	**07 28 17.3**	**-0.2**
ARMA	**Armidale**	**33.47**	**146**	P	**P**	**07 28 20.7**	**+1.5**
	baz=34,SNR=5.6						
ARMA	**Armidale**	**33.47**	**146**	P	**P**	**07 28 20.1**	**+0.8**
ARMA				lAmb	lAmb	07 28 29.3	
	comp=Z,37nm,1.1s						
KCSI	**Kotacane, Aceh**	**33.69**	**281**	P	**P**	**07 28 19.3**	**-2.0**
	comp=Z,40nm,1.7s,comp=Z,2μm						
RKGY	**Rocky Gully**	**33.79**	**201**	P	**P**	**07 28 22.1**	**+0.3**
	baz=34,SNR=7.3						
YNG	**Young**	**35.00**	**154**	P	**P**	**07 28 33.5**	**+1.1**
	baz=35,SNR=7.7						
MLSI	**Meulaboh, Aceh**	**35.17**	**282**	P	**P**	**07 28 32.2**	**-2.0**
	comp=Z,139nm,1.2s						
MGCD	**Mangrove Creek**	**35.37**	**150**	P	**P**	**07 28 37.7**	**+2.1**
	baz=35,SNR=5.9						
CNSH	**ChangSha**	**35.64**	**332**	⇑P	**P**	**07 28 37.8**	**-0.1**
CNSH				pmax	pmax		
	comp=Z,33nm,1.3s						
SLVN	**Son La**	**35.91**	**314**	P	**P**	**07 28 40.8**	**+0.4**
CAN	**Canberra**	**36.13**	**154**	P	**P**	**07 28 42.9**	**+0.8**
CAN				lAmb	lAmb	07 28 51.1	
	comp=Z,71nm,1.1s						
CAN	**Canberra**	**36.13**	**154**	P	**P**	**07 28 42.9**	**+0.8**
CAN				pmax	pmax		
	comp=Z,71nm,1.1s						
CNB	**Canberra Magne**	**36.28**	**154**	P	**P**	**07 28 44.8**	**+1.3**
	baz=36,SNR=4.4						
NJ2	**Nanjing**	**36.86**	**343**	*e*P	**P**	**07 28 49.0**	**+0.7**
NJ2				pP	**pP**	**07 28 53.3**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,17nm,1.0s						
WHN	**Wuhan**	**37.06**	**336**	⇑*i*P	**P**	**07 28 50.8**	**+0.7**
WHN				pP	**pP**	**07 28 57.3**	**+0.9**
GYA	**Guiyang**	**37.62**	**323**	⇓P	**P**	**07 28 55.6**	**+0.6**
GYA				pmax	pmax		
	comp=Z,41nm,1.1s						
CM31	**Chiang Mai Arr**	**38.06**	**306**	P	**P**	**07 28 58.9**	**+0.2**
CM31				lAmb	lAmb	07 29 00.9	
	comp=Z,83nm,1.1s						
CM31	**Chiang Mai Arr**	**38.06**	**306**	P	**P**	**07 28 59.9**	**+1.2**
	SNR=7.2						
CMAR	**Chiang Mai Arr**	**38.06**	**306**	P	**P**	**07 28 58.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**38.06**	**306**	*i* P	**P**	**07 29 00.0**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,29nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.06**	**306**	P	**P**	**07 28 59.0**	**+0.2**
	comp=Z,23nm,1.0s,baz=130,slow=6.7,SNR=12						
CMAR				PcP	**PcP**	**07 31 15.8**	**+1.8**
	comp=Z,2.7nm,0.3s,baz=159,slow=2.5,SNR=4.7						
	comp=Z,23nm,1.0s						
CHTO	**Chiang Mai**	**38.24**	**306**	P	**P**	**07 29 00.6**	**+0.3**
CHTO				lAmb	lAmb	07 29 01.6	
	comp=Z,54nm,1.1s						
CHTO	**Chiang Mai**	**38.24**	**306**	P	**P**	**07 29 00.6**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,54nm,1.1s						
CHTO	**Chiang Mai**	**38.24**	**306**	P	**P**	**07 29 00.6**	**+0.3**
CHTO				P	**P**	**07 29 00.6**	**+0.3**
ENH	**Enshi**	**39.04**	**330**		**P**	**07 29 05.4**	**-1.4**
KMI	**Kunming**	**39.18**	**318**	⇑P	**P**	**07 29 09.4**	**+1.1**
KMI				pmax	pmax

LZH sP sP 07 30 16.8 +0.2
LZH pmax pmax
comp=Z,99nm,1.3s
CN2 Changchun 47.05 355 *e*P **P** **07 30 11.3 -0.1**
CN2 *e*S **S** **07 37 03.3 +1.2**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,400nm,14.0s
CN2 LR LR
comp=Z,300nm,14.0s
CN2 LR LR
comp=Z,200nm,11.0s
USRK Ussuriysk Ar. 47.21 1 P **P** **07 30 12.6 0.0**
USRK Ussuriysk Ar. 47.21 1 P **P** **07 30 13.1 +0.5**
comp=Z,12nm,0.6s,baz=184,slow=6.8,SNR=9.4
comp=Z,12nm,0.6s
HHC Hu-ho-hao-te 47.25 340 *e*P **P** **07 30 13.4 +0.3**
HHC S **S** **07 37 05.9 +0.6**
HHC pmax pmax
comp=Z,35nm,1.1s
HHC pmax pmax
comp=Z,340nm,5.1s
HHC LR LR
comp=Z,770nm,17.6s
HHC LR LR
comp=Z,860nm,19.1s
HHC LR LR
comp=Z,1μm,19.1s
SHL Shillong 47.34 309 P **P** **07 30 13.3 -0.9**
SHL Shillong 47.34 309 P **P** **07 30 13.3 -0.9**
SHL pmax pmax
comp=Z,75nm,0.8s
SHL Shillong 47.34 309 P **P** **07 30 14.2 0.0**
BTO Baotou 47.58 339 *e*P P 07 30 20.5 +4.8
BTO pP sP 07 30 25.6 +0.8
BTO sP pP 07 30 27.9 +5.8
BTO pmax pmax
comp=Z,25nm,0.6s
BTO pmax pmax
comp=Z,510nm,4.9s
BTO LR LR
comp=Z,980nm,20.2s
BTO LR LR
comp=Z,2μm,20.2s
BTO LR LR
comp=Z,630nm,15.3s
MDJ Mudanjiang 47.62 359 P **P** **07 30 16.0 +0.1**
MDJ pP pP 07 30 19.4 -2.9
MDJ sS sS 07 37 26.4 +6.0
MDJ pmax pmax
comp=Z,25nm,1.0s
MDJ pmax pmax
comp=Z,200nm,5.3s
MDJ LR LR
comp=Z,750nm,23.4s
MDJ LR LR
comp=Z,490nm,23.4s
MDJ LR LR
comp=Z,1μm,23.4s
MDJ Mudanjiang 47.62 359 P **P** **07 30 16.2 +0.3**
MDJ lAmb lAmb 07 30 16.9
comp=Z,17nm,0.8s
XLT XiLinHaoTe 48.73 346 *e*P **P** **07 30 24.5 0.0**
XLT sP sP 07 30 34.9 +1.4
XLT S **S** **07 37 23.6 -2.6**
XLT pmax pmax
comp=Z,52nm,1.3s
XLT pmax pmax
comp=Z,250nm,3.6s
XLT LR LR
comp=Z,580nm,14.4s
XLT LR LR
comp=Z,930nm,18.5s
BNX BinXian 48.83 357 ⇓P **P** **07 30 25.1 0.0**
BNX pmax pmax
comp=Z,9.0nm,0.7s
BNX pmax pmax
comp=Z,190nm,4.6s
LSA Lhasa 50.11 314 P **P** **07 30 35.2 -0.6**
LSA lAmb lAmb 07 30 37.0
comp=Z,35nm,0.9s
LSA Lhasa 50.11 314 P **P** **07 30 35.2 -0.6**
LSA pmax pmax
comp=Z,35nm,0.9s
LSA Lhasa 50.11 314 P **P** **07 30 36.2 +0.5**
LSA P **P** **07 30 36.2 +0.5**
YSS Yuzh-Sakhalins 51.05 11 *e*P **P** **07 30 41.9 -0.1**
YSS pmax pmax
comp=Z,20nm,0.8s
PALK Pallekele 51.08 282 P **P** **07 30 42.3 -0.5**
PALK lAmb lAmb 07 30 43.1
comp=Z,35nm,1.1s
PALK Pallekele 51.08 282 *c i*P **P** **07 30 42.2 -0.7**
PALK pmax pmax
comp=Z,38nm,1.2s
PALK Pallekele 51.08 282 P **P** **07 30 42.9 0.0**
PALK P **P** **07 30 42.9 0.0**
GTA Gaotai 51.11 329 ⇑P **P** **07 30 43.0 +0.3**
GTA pP pP 07 30 48.6 -0.6
GTA S **S** **07 37 55.3 -4.3**
GTA pmax pmax
comp=Z,41nm,0.9s
GTA LR LR
comp=Z,450nm,21.9s
GTA LR LR
comp=Z,630nm,19.1s
GTA LR LR
comp=Z,930nm,19.5s
GOMU GeErMu 51.63 323 P **P** **07 30 47.0 0.0**
GOMU pP pP 07 30 51.8 -1.7
GOMU sP sP 07 30 53.9 -2.2
GOMU S **S** **07 38 04.8 -2.7**
GOMU pmax pmax
comp=Z,11nm,1.2s
GOMU LR LR
comp=Z,510nm,20.2s
GOMU LR LR
comp=Z,500nm,20.0s
GOMU LR LR
comp=Z,2μm,19.4s
KLR Kul'dur 52.23 1⇑ *i*P **P** **07 30 51.0 +0.2**
KLR pmax pmax
comp=Z,18nm,1.1s
UGL Uglegorsk 52.99 9 *e*P **P** **07 30 57.3 +1.0**
UGL *e* 07 31 12.3
UGL pmax pmax
comp=Z,30nm,0.8s
HIA Hailar 53.14 351 *d i*P **P** **07 30 58.3 +0.7**
HIA pmax pmax
comp=Z,6.0nm,0.8s
HEH HeiHe 53.33 357 *e*P **P** **07 30 59.1 +0.2**
HEH sP **pP** **07 31 05.3 -0.1**
HEH S **S** **07 38 27.8 -1.6**
HEH SS **SS** **07 42 07.5 -2.2**
HEH pmax pmax
comp=Z,47nm,1.3s
HEH LR LR
comp=Z,700nm,19.4s
HEH LR LR
comp=Z,470nm,19.1s
HEH LR LR
comp=Z,1μm,19.9s
LBZ Lake Benmore 53.69 146 P **P** **07 31 02.8 +1.1**
LBZ lAmb lAmb 07 31 10.3
comp=Z,37nm,0.8s
RPZ Rata Peaks 53.78 145 LR LR 07 54 03.9
comp=Z,2μm,20.1s,baz=309,slow=36
GRNR Gornyy 53.98 4⇑ *i*P **P** **07 31 03.7 0.0**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
TUWZ Tuamarina 54.23 141 P **P** **07 31 05.6 -0.1**
RTZ Ruatahuna 54.81 136 P **P** **07 31 10.2 +0.1**
RTZ lAmb lAmb 07 31 38.6
comp=Z,42nm,1.0s
TYV Tymovskoe 54.81 9 *e*P **P** **07 31 09.7 0.0**
TYV *e*S **S** **07 38 51.0 +1.6**
TYV pmax pmax
comp=Z,100nm,2.6s
TYV pmax pmax
comp=Z,13nm,0.9s
TYV smax smax
comp=N,200nm,6.6s
TYV smax smax
comp=E,200nm,6.6s
ULN Ulaanbaatar 54.95 341 P **P** **07 31 11.6 +0.6**
ULN lAmb lAmb 07 31 12.5
comp=Z,40nm,0.8s
ULN Ulaanbaatar 54.95 341 P **P** **07 31 11.6 +0.6**
ULN pmax pmax
comp=Z,40nm,0.9s
ULN Ulaanbaatar 54.95 341 P **P** **07 31 11.7 +0.6**
ULN LR **P** **07 31 11.7 +0.6**
RAO Raoul Island 55.05 124 LR LR 07 55 25.7
comp=Z,353nm,18.8s,baz=300,slow=37
SONM Songino Array 55.15 340 P **P** **07 31 12.5 +0.1**
SONM lAmb lAmb 07 31 13.7
comp=Z,26nm,0.9s
SONM Songino Array 55.15 340 P **P** **07 31 12.9 +0.5**
comp=Z,26nm,0.9s,baz=160,slow=8.0,SNR=20
comp=Z,26nm,0.9s
HYB Hyderabad 55.46 294 *e*P **P** **07 31 14.0 -1.1**
ZEA Zeya 56.82 357 *e*P **P** **07 31 24.1 +0.1**
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,20nm,0.9s
CIT Chita 56.94 347 *e*P **P** **07 31 25.8 +0.8**
CIT *e* 07 31 31.8
CIT *e* 07 32 20.5
CIT pmax pmax
comp=Z,370nm,1.8s
AFI Afiamalu 57.62 104 P **P** **07 31 30.9 +0.4**
AFI lAmb lAmb 07 31 40.3
comp=Z,50nm,1.0s
AFI Afiamalu 57.62 104 P **P** **07 31 31.0 +0.4**
AFI pmax pmax
comp=Z,50nm,1.0s
KAAM Kaadhehdhoo 57.91 273 P **P** **07 31 33.2 +0.8**
DGAR Diego Garcia 58.22 263⇑ *e*P **P** **07 31 34.1 -0.6**
ZAK Zakamensk 58.39 340 *e*P **P** **07 31 35.3 0.0**
ZAK pmax pmax
comp=Z,24nm,1.3s
IRK Irkutsk 59.64 341 *e*P **P** **07 31 44.1 +0.2**
IRK pmax pmax
comp=Z,115nm,2.2s
MOY Mondy 60.27 339 *e*P **P** **07 31 49.0 +0.7**
MOY pmax pmax
comp=Z,122nm,2.2s
PETK Petropavlovsk- 60.49 18 P **P** **07 31 49.7 0.0**
comp=Z,16nm,0.8s,baz=195,slow=4.6,SNR=8.2
PETK PcP **PcP** **07 32 34.1 -0.1**
comp=Z,3.5nm,0.6s,baz=222,slow=2.2,SNR=4.9
comp=Z,16nm,0.8s
WMQ Urumqi 60.71 325 *e*P **P** **07 31 52.0 +0.6**
WMQ pmax pmax
comp=Z,69nm,1.3s
WMQ pmax pmax
comp=Z,200nm,3.6s
WMQ LR LR
comp=Z,1μm,16.7s
WMQ LR LR
comp=Z,650nm,19.1s
WMQ LR LR
comp=Z,700nm,17.9s
WMQ Urumqi 60.71 325 PP **P** **07 31 51.8 +0.4**
PET Petropavlovsk 60.73 19⇑ *e*P **P** **07 31 50.0 -1.2**
PET pmax pmax
comp=Z,38nm,1.1s
BOD Bodaibo 62.32 350 *e*P **P** **07 32 02.1 +0.2**
BOD pmax pmax
comp=Z,80nm,1.7s
ZSN Zaisan 64.51 327 *e*P **P** **07 32 16.9 +0.2**
baz=327
ZSN Zaisan 64.51 327 *e*P **P** **07 32 16.9 +0.2**
CASY Casey 64.55 189 P **P** **07 32 17.1 +0.6**
CASY lAmb lAmb 07 32 31.0
comp=Z,26nm,1.1s
MA2 Magadan 64.55 11 P **P** **07 32 17.0 +0.4**
MA2 lAmb lAmb 07 32 25.4
comp=Z,17nm,1.0s
MA2 Magadan 64.55 11 *c i*P **P** **07 32 17.1 +0.5**
MA2 pmax pmax
comp=Z,43nm,1.8s
DGZ Jazzator, Alta 64.60 330 *c i*P **P** **07 32 17.8 +0.4**
DGZ pmax pmax
comp=Z,48nm,1.2s
YAK Yakutsk 65.06 359 P **P** **07 32 20.4 +0.5**
YAK Yakutsk 65.06 359 *c i*P **P** **07 32 19.9 0.0**
YAK *e**PP **pP** **07 32 24.1 -2.5**
YAK *e* 07 32 52.6
YAK *e*S **S** **07 41 02.4 +1.5**
YAK *e* 07 42 11.6
YAK *e*SS **SS** **07 45 19.5 +6.1**
YAK pmax pmax
comp=Z,61nm,1.0s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK pmax pmax
comp=Z,225nm,4.2s
YAK pmax pmax
comp=E,77nm,4.7s
YAK smax smax
comp=N,118nm,2.2s
YAK smax smax
comp=E,77nm,2.0s
YAK MLR MLR
comp=Z,693nm,16.0s
YAK MLR MLR
comp=N,636nm,17.0s
YAK MLR MLR
comp=E,243nm,19.0s
SHLS Shalkode 65.27 321⇑ *i*P **P** **07 32 20.7 -1.1**
baz=321
SHLS Shalkode 65.27 321 *c i*P **P** **07 32 20.7 -1.1**
NIL Nilore 65.41 309 P **P** **07 32 22.0 -0.8**
NIL Nilore 65.41 309 P **P** **07 32 22.0 -0.8**
NIL pmax pmax
comp=Z,32nm,0.9s
NIL Nilore 65.41 309 P **P** **07 32 22.8 -0.1**
NIL P **P** **07 32 22.8 -0.1**
UZB Uzynbulak 65.54 321⇑ *i*P **P** **07 32 24.0 +0.3**
baz=321
UZB Uzynbulak 65.54 321 *c i*P **P** **07 32 23.9 +0.3**
MK31 Makanchi Array 65.55 326 *c i*P **P** **07 32 23.5 +0.1**
MKAR Makanchi Array 65.55 326 P **P** **07 32 23.9 +0.4**
comp=Z,43nm,0.6s,baz=122,slow=8.0,SNR=44
comp=Z,43nm,0.6s
PRZ Przheval'sk 65.60 320 P **P** **07 32 24.9 +0.8**
PRZ Przheval'sk 65.60 320 P **P** **07 32 24.9 +0.8**
PRZ pmax pmax
comp=Z,52nm,1.0s
TARG Taragay, Kyrgy 65.62 319 P **P** **07 32 24.8 +0.3**
TARG lAmb lAmb 07 32 35.5
comp=Z,23nm,0.9s
TARG Taragay, Kyrgy 65.62 319 P **P** **07 32 24.8 +0.3**
TARG pmax pmax
comp=Z,23nm,0.9s
MAKZ Makanchi 65.73 325 P **P** **07 32 24.8 +0.2**
MAKZ Makanchi 65.73 325 P **P** **07 32 24.8 +0.2**
MAKZ pmax pmax
comp=Z,49nm,0.6s
KSH Kashi 65.83 316 P **P** **07 32 26.8 +1.3**
KSH PcP **PcP** **07 32 51.8 -4.7**
KSH pmax pmax
comp=Z,37nm,0.8s
KSH LR LR
comp=Z,500nm,18.9s
KSH LR LR
comp=Z,530nm,17.2s
KSH LR LR
comp=Z,840nm,22.0s
SATY Saty 65.88 320⇑ *i*P **P** **07 32 26.5 +0.6**
baz=320
SATY Saty 65.88 320 *c i*P **P** **07 32 26.4 +0.6**
ZHN Zhinishke 65.92 321⇑ *i*P **P** **07 32 26.4 +0.3**
comp=Z,10nm,0.8s,baz=321
ZHN Zhinishke 65.92 321 *c i*P **P** **07 32 26.3 +0.3**
ZHN pmax pmax
comp=Z,10.0nm,0.8s
NRN Naryn 66.67 318 P **P** **07 32 30.8 -0.3**
NRN lAmb lAmb 07 32 31.9
comp=Z,17nm,0.8s
NRN Naryn 66.67 318 P **P** **07 32 30.8 -0.3**
NRN pmax pmax
comp=Z,17nm,0.8s
MDOK Medeo 66.80 320 *i* P **P** **07 32 32.4 +0.6**
baz=320
MDOK Medeo 66.80 320 *i* P **P** **07 32 32.3 +0.6**
ARXS Arharly 66.82 321 *e*P **P** **07 32 31.5 -0.2**
TDK Taldyqorghan 66.86 322 *e*P **P** **07 32 32.3 +0.4**
baz=322
TDK Taldyqorghan 66.86 322 *e*P **P** **07 32 32.3 +0.4**
AAA Alma-Ata 66.91 320 *e*P **P** **07 32 32.9 +0.6**
baz=320
AAA Alma-Ata 66.91 320 *e*P **P** **07 32 32.9 +0.6**
CHKK Chushkaly 67.17 321 *e*P **P** **07 32 33.9 0.0**
baz=321
CHKK Chushkaly 67.17 321 *e*P **P** **07 32 33.9 0.0**
BOOM Boomskoye usch 67.20 319 P **P** **07 32 34.4 +0.1**
BOOM Boomskoye usch 67.20 319 P **P** **07 32 34.4 +0.1**
BOOM pmax pmax
comp=Z,54nm,1.2s
KUU Kurty 67.60 320⇑ *i*P **P** **07 32 36.1 -0.5**
baz=320
KUU Kurty 67.60 320 *c i*P **P** **07 32 37.0 +0.4**
TKM2 Tokmak 2 67.62 319 P **P** **07 32 37.7 +0.7**
SNR=19
KBK Karagaybulak 67.93 319 P **P** **07 32 39.7 +0.8**
SNR=11
SEY Seymchan 67.96 10 P **P** **07 32 39.7 +1.3**
comp=Z,27nm,0.7s,baz=202,slow=5.3,SNR=24
comp=Z,27nm,0.7s
UCH Uchtor 68.02 318 P **P** **07 32 40.8 +0.9**
SNR=21
CHMS Chumysh 68.21 319 P **P** **07 32 40.5 0.0**
SNR=8.2
AAK Ala-Archa 68.22 319 P **P** **07 32 41.2 +0.5**
SNR=11
AAK Ala-Archa 68.22 319 P **P** **07 32 40.4 -0.3**
AAK lAmb lAmb 07 32 51.0
comp=Z,31nm,1.1s
AAK Ala-Archa 68.22 319 *c i*P **P** **07 32 41.0 +0.3**
AAK pmax pmax
comp=Z,28nm,1.2s
AAK Ala-Archa 68.22 319 P **P** **07 32 41.7 +1.0**
AAK P **P** **07 32 41.7 +1.0**
SGDS Sogindy 68.50 319⇑ *i*P **P** **07 32 42.4 0.0**
baz=319
SGDS Sogindy 68.50 319 *c i*P **P** **07 32 42.3 0.0**
USP Ospenovka 68.50 319 P **P** **07 32 42.8 +0.5**
SNR=35
ZAA0 Zalesovo Array 68.58 333 P **P** **07 32 42.0 -0.5**
ZAA0 lAmb lAmb 07 32 42.7
comp=Z,26nm,0.8s
ZALV Zalesovo Beam 68.58 333 P **P** **07 32 42.1 -0.4**
comp=Z,20nm,0.7s,baz=130,slow=6.4,SNR=16
ZALV LR LR 08 05 38.7
comp=Z,349nm,19.7s,baz=134,slow=38
comp=Z,20nm,0.7s
ARSB Arslanbob 68.67 317 P **P** **07 32 43.7 +0.2**
ARSB Arslanbob 68.67 317 P **P** **07 32 43.7 +0.2**
ARSB pmax pmax
comp=Z,13nm,0.9s
EKS2 Erkin-Say 68.70 318 P **P** **07 32 44.6 +0.9**
SNR=19
SEM Semipalatinsk 68.71 328 *e*P **P** **07 32 43.2 -0.5**
comp=Z,14nm,1.0s,baz=328
SEM Semipalatinsk 68.71 328 *e*P **P** **07 32 43.2 -0.5**
SEM pmax pmax
comp=Z,14nm,1.0s
KBL Kabul 68.99 309 P **P** **07 32 45.3 -0.5**
KBL lAmb lAmb 07 32 45.9
comp=Z,21nm,0.8s
KBL Kabul 68.99 309 P **P** **07 32 45.3 -0.5**
KBL pmax pmax
comp=Z,21nm,0.8s
KBL Kabul 68.99 309 P **P** **07 32 45.7 0.0**
SNR=5.7
KBL P **P** **07 32 45.7 0.0**
SNR=5.7
BTLS Baital 69.59 321⇑ *i*P **P** **07 32 49.1 +0.1**
comp=Z,5.9nm,0.8s,baz=321
BTLS Baital 69.59 321 *c i*P **P** **07 32 49.1 +0.1**
BTLS pmax pmax
comp=Z,6.0nm,0.8s
BTK Batken 69.66 315 P **P** **07 32 49.2 -0.4**
BTK lAmb lAmb 07 32 50.4
comp=Z,20nm,0.8s
BTK Batken 69.66 315 P **P** **07 32 49.2 -0.4**
BTK pmax pmax
comp=Z,20nm,0.9s
KURBB Kurchatov Arra 69.74 328 P **P** **07 32 50.1 +0.3**
comp=Z,35nm,0.7s,baz=126,slow=5.7,SNR=31
comp=Z,35nm,0.7s
KURK Kurchatov 69.75 328 *c i*P **P** **07 32 49.8 0.0**
KURK pmax pmax
comp=Z,57nm,0.9s
KURK Kurchatov 69.75 328 P **P** **07 32 50.3 +0.5**
KURK P **P** **07 32 50.3 +0.5**
DZA Taraz 70.43 318 *e*P **P** **07 32 54.4 +0.1**
comp=Z,11nm,0.6s,baz=318
DZA Taraz 70.43 318 *e*P **P** **07 32 54.4 +0.1**
DZA pmax pmax
comp=Z,11nm,0.6s
SIMJ Simiganj 70.44 313 P **P** **07 32 54.2 -0.3**
SIMJ lAmb lAmb 07 32 55.5
comp=Z,31nm,0.9s
KK31 Karatay Array 71.07 318 P **P** **07 32 57.9 -0.2**
KK31 lAmb lAmb 07 32 58.9
comp=Z,25nm,0.9s
KK31 Karatay Array 71.07 318 P **P** **07 32 57.9 -0.2**
KK31 pmax pmax
comp=Z,25nm,0.9s
KKAR Karatay Array 71.07 318 P **P** **07 32 57.6 -0.5**
KKAR lAmb lAmb 07 32 58.9
comp=Z,24nm,0.9s
KKAR Karatay Array 71.07 318 P **P** **07 32 57.6 -0.5**
KKAR pmax pmax
comp=Z,25nm,0.9s
BRLS Borolday 71.49 317⇑ *i*P **P** **07 33 01.0 +0.2**
comp=Z,12nm,0.7s,baz=317
BRLS Borolday 71.49 317 *c i*P **P** **07 33 00.9 +0.2**
BRLS pmax pmax
comp=Z,12nm,0.7s
BRZS Berezniki 72.67 325 *e*P **P** **07 33 08.0 +0.3**
comp=Z,8.9nm,0.7s,baz=325
BRZS Berezniki 72.67 325 *e*P **P** **07 33 07.9 +0.3**
BRZS pmax pmax
comp=Z,9.0nm,0.7s
NGCH Negor - Chabah 73.14 298 P **P** **07 33 11.5 +0.7**
JLN Jalan Bani Buh 74.08 294 P **P** **07 33 19.0 +2.6**
SNR=5.5
JLN P **P** **07 33 19.0 +2.6**
SNR=5.5
WBK Wadi Bani Khal 74.56 294 P **P** **07 33 21.1 +1.8**
SNR=6.1
WBK P **P** **07 33 21.1 +1.8**
SNR=6.1
TIXI Tiksi 74.73 359 P **P** **07 33 19.6 +0.4**
TIXI Tiksi 74.73 359 P **P** **07 33 19.6 +0.4**
TIXI pmax pmax
comp=Z,15nm,0.8s
RER Riviere de l'E 74.92 249 P **P** **07 33 22.1 +0.7**
RER Riviere de l'E 74.92 249 P **P** **07 33 23.0 +1.6**
WSAR Wadi Sarin 74.98 295 P **P** **07 33 21.6 0.0**
comp=Z,26nm,1.0s,baz=124,slow=6.0,SNR=11
comp=Z,26nm,1.0s
WSAR Wadi Sarin 74.98 295 P **P** **07 33 23.2 +1.6**
SNR=10
MSEY Mahe Island 75.14 266 P **P** **07 33 23.1 +0.3**
MSEY Mahe Island 75.14 266 P **P** **07 33 23.1 +0.3**
MSEY pmax pmax
comp=Z,22nm,1.2s
MSEY Mahe Island 75.14 266 P **P** **07 33 23.3 +0.5**
MSEY P **P** **07 33 23.3 +0.5**
MHTO MHTO 75.20 293 P **P** **07 33 23.1 +0.1**
SNR=9.1
MHTO P **P** **07 33 23.1 +0.1**
SNR=9.1
NIKH Nikolski High 75.25 33 P **P** **07 33 22.9 +0.3**
baz=244
BILL Bilibino 75.26 13⇓ *e*P **P** **07 33 22.7 +0.4**
JMDO Jabal Madar 75.31 294 P **P** **07 33 25.0 +1.4**
SNR=6.4
JMDO P **P** **07 33 25.0 +1.4**
SNR=6.4
BVAR Borovoye Array 75.32 327 P **P** **07 33 23.3 +0.3**
comp=Z,46nm,0.8s,baz=126,slow=10,SNR=22
comp=Z,46nm,0.8s
BRVK Borovoye 75.39 327 P **P** **07 33 23.6 +0.2**
BRVK Borovoye 75.39 327 *c i*P **P** **07 33 23.3 -0.1**
BRVK pmax pmax
comp=Z,45nm,0.9s

BRVK Borovoye 75.39 327 P P 07 33 24.1 +0.7
BRVK P P 07 33 24.1 +0.7
DQM DQM 75.43 291 P P 07 33 26.0 +1.7
SNR=5.1
SMDO Samad 75.47 295 P P 07 33 26.0 +1.4
SNR=5.8
SMDO P P 07 33 26.0 +1.4
SNR=5.8
BIDO Bidbid 75.48 295 P P 07 33 26.0 +1.4
SNR=13
VNDA Vanda 76.09 173 P P 07 33 26.8 -0.2
comp=Z,8.4nm,1.0s,baz=316,slow=6.8,SNR=3.5
comp=Z,8.4nm,1.0s
JASK Jask - Hormozg 76.13 297 P P 07 33 29.4 +1.2
BSY Bisya 76.19 294 P P 07 33 30.0 +1.3
SNR=5.2
BSY P P 07 33 30.0 +1.3
SNR=5.2
HOQ Hogain 76.23 295 P P 07 33 30.1 +1.3
SNR=7.9
HOQ P P 07 33 30.1 +1.3
SNR=7.9
SPIA Saint Paul Isl 76.47 29 P P 07 33 29.8 +0.4
baz=242
P08K Saint George I 76.54 29 P P 07 33 30.3 +0.5
baz=242
UNV Unalaska Valle 76.90 33 P P 07 33 32.5 +0.6
baz=246
ARQ Araqi 76.90 295 P P 07 33 33.5 +0.8
SNR=8.8
ARQ P P 07 33 33.5 +0.8
SNR=8.8
SHAO Shalim 76.95 289 P P 07 33 33.3 +0.3
SHAO P P 07 33 33.3 +0.3
SOHO SOHO 77.02 296 P P 07 33 33.9 +0.6
SOHO P P 07 33 33.9 +0.6
UOSS Minazif 77.45 296 P P 07 33 35.9 +0.2
UOSS IAmb IAmb 07 33 36.2
comp=Z,28nm,0.9s
UOSS Minazif 77.45 296 P P 07 33 36.1 +0.4
UOSS P P 07 33 36.1 +0.4
HATD Hatta, Dubai 77.50 296 P P 07 33 38.0 +2.0
SNR=11
HATD P P 07 33 38.0 +2.0
SNR=11
ASHO Ashiyiah 77.54 296 P P 07 33 38.0 +1.7
SNR=12
MASF Masafi 77.56 297 P P 07 33 38.0 +1.7
SNR=14
MASF P P 07 33 38.0 +1.7
SNR=14
SHME Shamm 77.69 297 P P 07 33 38.0 +1.0
SNR=15
SHME P P 07 33 38.0 +1.0
SNR=15
ALNE Al Ain 77.72 295 P P 07 33 38.1 +0.9
SNR=12
ALNE P P 07 33 38.1 +0.9
SNR=12
NAZ Nazwa, Dubai 77.94 296 P P 07 33 40.1 +1.6
SNR=7.3
NAZ P P 07 33 40.1 +1.6
SNR=7.3
FAQ Al Faqa, Dubai 77.97 296 P P 07 33 40.0 +1.4
SNR=7.9
FAQ P P 07 33 40.0 +1.4
SNR=7.9
UMQ Umm Al-Quwin 78.03 297 P P 07 33 41.9 +3.0
SNR=5.1
UMQ P P 07 33 41.9 +3.0
SNR=5.1
UMZA Um Al Zommool 78.05 294 P P 07 33 39.2 +0.2
UMZA P P 07 33 39.2 +0.2
NRIK Noril'sk 78.11 346 P P 07 33 38.7 +0.4
NRIK IAmb IAmb 07 33 39.4
comp=Z,27nm,0.9s
NRIK Noril'sk 78.11 346 *c i* P P 07 33 38.4 0.0
NRIK pmax pmax
comp=Z,24nm,0.9s
NRIK Noril'sk 78.11 346 P P 07 33 38.8 +0.4
comp=Z,17nm,0.7s,baz=118,slow=5.0,SNR=9.5
comp=Z,17nm,0.7s
ASUD Al Ashush, Dub 78.19 296 P P 07 33 42.0 +2.2
SNR=7.5
ASUD P P 07 33 42.0 +2.2
SNR=7.5
RBK Rabkut 78.22 289 P P 07 33 41.0 +0.8
SNR=6.6
RBK P P 07 33 41.0 +0.8
SNR=6.6
GEYT Alibeck 78.42 310 P P 07 33 41.4 +0.6
GEYT Alibeck 78.42 310 P P 07 33 41.4 +0.6
GEYT Alibeck 78.42 310 P P 07 33 41.8 +0.9
comp=Z,45nm,0.7s,baz=134,slow=4.3,SNR=29
GEYT LR LR 08 12 40.6
comp=Z,339nm,21.2s,baz=126,slow=39
comp=Z,45nm,0.7s
GYA0B ALIBECK ARRAY 78.42 310 P P 07 33 39.9 -0.9
DOK Doka 78.44 290 P P 07 33 41.0 -0.2
SNR=8.0
DOK P P 07 33 41.0 -0.2
SNR=8.0
AJN Ajban 78.48 296 P P 07 33 41.7 +0.3
SNR=12
AJN P P 07 33 41.7 +0.3
SNR=12
WHFO Wadi Hawf 78.69 289 P P 07 33 43.0 +0.3
SNR=6.4
WHFO P P 07 33 43.0 +0.3
SNR=6.4
FALS False Pass 78.96 32 P P 07 33 43.9 +0.5
baz=248
ABTO Aybut 79.07 288 P P 07 33 45.2 +0.3
SNR=12
ABTO P P 07 33 45.2 +0.3
SNR=12
MZWR Madinat Zayed 79.36 295 P P 07 33 47.0 +0.8
MZWR P P 07 33 47.0 +0.8
MZR Muzera 79.62 294 P P 07 33 49.0 +1.3
ABKAR Akbulak array 80.07 321 P P 07 33 48.9 -0.7
GHWR Ruwais 80.30 295 P P 07 33 52.3 +0.9
GHWR P P 07 33 52.3 +0.9
JRN Qarnain Island 80.46 296 P P 07 33 52.6 +0.5
SNR=7.5
JRN P P 07 33 52.6 +0.5
SNR=7.5
SDPT Sand Point 80.71 33 P P 07 33 53.5 +0.7
baz=250
CHNA Chernabura Isl 81.03 33 P P 07 33 55.2 +0.6
baz=251
M13K Dall Lake 81.11 27 P P 07 33 55.7 +0.9
baz=247
TNA Tin City 81.42 22 P P 07 33 57.5 +1.1
baz=242
S14K Fog Glacier 81.51 32 P P 07 33 57.9 +0.7
baz=251
AKTO Aktyubinsk 81.60 322 P P 07 33 58.2 +0.5
comp=Z,11nm,0.9s,baz=90,slow=5.7,SNR=10
comp=Z,11nm,0.9s
O14K Tigyukauivet M 81.66 29 P P 07 33 58.6 +0.8
baz=249
N14K Kuskokwak Cree 81.70 28 P P 07 33 59.1 +1.2
baz=249
L14K Kuka Creek 81.77 27 P P 07 33 58.2 -0.1
L14K IAmb IAmb 07 34 00.7
comp=Z,30nm,0.8s
L14K Kuka Creek 81.77 27 P P 07 33 59.3 +1.0
baz=248
M14K Bethel 81.88 27 P P 07 33 59.8 +0.9
M14K Bethel 81.88 27 P P 07 33 59.9 +1.0
baz=248,SNR=5.9
TRNA Turayna 81.91 295 P P 07 34 01.0 +1.1
SNR=11
J14K Nanvaranak Lak 81.94 25 P P 07 34 00.1 +0.9
baz=247
ANM Nome 81.95 23 P P 07 34 00.2 +1.0
baz=245
SVE Sverdlovsk 81.97 329 *e* P P 07 33 59.8 +0.3
SVE pmax pmax
comp=Z,46nm,1.0s
F14K Arctic Creek 81.98 22 P P 07 34 00.3 +1.0
baz=244
CHGN Chignik 82.12 32 P P 07 34 01.2 +0.9
baz=252
SMRA Abu-Samra 82.26 295 P P 07 34 03.0 +1.3
SNR=15
SHMA Al-Shehemyia 82.27 296 P P 07 34 04.0 +2.2
SNR=7.4
O15K Ungalikthiuk R 82.33 29 P P 07 34 02.3 +1.0
baz=250
L15K Ungalak Mounta 82.43 26 P P 07 34 02.8 +1.0
baz=249
M15K Kasigluk River 82.44 28 P P 07 34 03.0 +1.1
baz=250
N15K Kwethluk River 82.53 28 P P 07 34 03.6 +1.2
N15K IAmb IAmb 07 34 22.0
comp=Z,28nm,1.1s
N15K Kwethluk River 82.53 28 P P 07 34 03.5 +1.1
baz=250
K15K Wolf Creek Mou 82.63 26 P P 07 34 04.1 +1.3
baz=249
G15K Niukluk 82.65 23 P P 07 34 03.9 +1.0
baz=246
SAKB Bahrain 82.67 297 P P 07 34 04.5 +0.7
F15K North Star Dit 82.71 22 P P 07 34 04.4 +1.2
baz=245
ABPO Ambohimpanom 82.90 251 P P 07 34 05.8 +0.4
ABPO IAmb IAmb 07 34 06.4
comp=Z,21nm,1.1s
ABPO Ambohimpanom 82.90 251 P P 07 34 05.8 +0.4
ABPO pmax pmax
comp=Z,21nm,1.2s
ARU Arti 82.94 328 P P 07 34 04.5 -0.1
ARU IAmb IAmb 07 34 20.9
comp=Z,27nm,1.0s
ARU Arti 82.94 328 *c i* P P 07 34 04.6 0.0
ARU 07 37 14.5
ARU S SKSac 07 44 23.5 -1.5
ARU SS SS 07 49 43.8 -2.0
ARU pmax pmax
comp=Z,61nm,1.7s
ARU Arti 82.94 328 P P 07 34 04.4 -0.2
comp=Z,9.7nm,0.6s,baz=124,slow=3.9,SNR=5.8
ARU LR LR 08 13 21.2
comp=Z,327nm,21.1s,baz=103,slow=37
comp=Z,9.7nm,0.6s
R16K Pilot Point 82.94 31 P P 07 34 05.3 +0.8
baz=253
FOMA Nahampoana Res 83.07 245 P P 07 34 06.7 +0.8
FOMA Nahampoana Res 83.07 245 P P 07 34 07.2 +1.2
P16K Nushagak River 83.18 30 P P 07 34 06.7 +1.0
baz=252,SNR=5.2
H16K Elim 83.21 24 P P 07 34 06.9 +1.1
baz=248
N16K Nishlik Lake 83.26 28 P P 07 34 07.1 +0.9
baz=251
VOI Vohitsoka 83.27 248 P P 07 34 06.9 -0.3
VOI Vohitsoka 83.27 248 P P 07 34 07.8 +0.6
VOI Vohitsoka 83.27 248 P P 07 34 07.8 +0.6
O16K Kokwok River B 83.30 29 P P 07 34 07.3 +0.9
baz=252
L16K Owhat River 83.34 27 P P 07 34 07.0 +0.5
L16K IAmb IAmb 07 34 08.3
comp=Z,21nm,0.8s
L16K Owhat River 83.34 27 P P 07 34 07.8 +1.3
baz=250,SNR=7.8
M16K Timber Creek 83.34 27 P P 07 34 07.8 +1.3
M16K IAmb IAmb 07 34 08.9
comp=Z,24nm,0.8s
M16K Timber Creek 83.34 27 P P 07 34 07.9 +1.3
baz=251
J16K Anvik River 83.39 25 P P 07 34 08.1 +1.4
baz=249
G16K Koyuk River 83.46 23 P P 07 34 08.3 +1.2
G16K IAmb IAmb 07 34 09.4
comp=Z,30nm,1.1s
G16K Koyuk River 83.46 23 P P 07 34 08.2 +1.2
baz=248
C16K Lisburne Hills 83.56 20 P P 07 34 08.8 +1.3
baz=244
I17K Unalakleet 83.56 24 P P 07 34 08.9 +1.3
baz=249
Q16K King Salmon 83.73 30 P P 07 34 09.7 +1.1
baz=253
O17K Koliganek Bris 83.84 29 P P 07 34 10.2 +1.1
baz=253
P17K Kvichak River 83.99 30 P P 07 34 10.4 +0.5
baz=254
Q17K Contact Creek 84.01 31 P P 07 34 10.6 +0.4
baz=254,SNR=6.9
N17K Nushagak Hills 84.02 28 P P 07 34 11.3 +1.2
N17K Nushagak Hills 84.02 28 P P 07 34 11.0 +0.9
baz=253
J17K VABM Dome 84.07 25 P P 07 34 11.5 +1.2
baz=251
D17K Noatak River 84.09 21 P P 07 34 11.8 +1.6
baz=247,SNR=16
G17K Kiwalik Mounta 84.16 23 P P 07 34 12.0 +1.4
baz=249
M17K Holitna River 84.16 27 P P 07 34 12.2 +1.4
baz=252
K17K Iditarod 84.19 26 P P 07 34 12.0 +1.2
K17K Iditarod 84.19 26 P P 07 34 12.3 +1.4
baz=252,SNR=6.3
H17K Granite Mounta 84.25 24 P P 07 34 11.9 +0.8
H17K IAmb IAmb 07 34 13.2
comp=Z,16nm,0.8s
H17K Granite Mounta 84.25 24 P P 07 34 12.6 +1.5
baz=250
F17K Baldwin Pennin 84.27 22 P P 07 34 12.3 +1.1
F17K IAmb IAmb 07 34 30.1
comp=Z,30nm,1.1s
F17K Baldwin Pennin 84.27 22 P P 07 34 12.5 +1.3
baz=248
E17K Hotham Inlet 84.30 21 P P 07 34 12.8 +1.5
baz=248,SNR=8.2
C17K DeLong Mountai 84.37 20 P P 07 34 13.0 +1.3
baz=246
P18K Big Mountain, 84.64 30 P P 07 34 14.2 +0.9
baz=254
N18K Kilae Creek 84.67 28 P P 07 34 14.6 +1.2
baz=254
L18K Granite Mounta 84.75 27 P P 07 34 14.9 +1.1
L18K IAmb IAmb 07 34 16.4
comp=Z,26nm,0.8s
L18K Granite Mounta 84.75 27 P P 07 34 14.8 +1.1
baz=253,SNR=11
O18K Koktuh Hills 84.78 29 P P 07 34 14.7 +0.8
O18K IAmb IAmb 07 34 16.0
comp=Z,12nm,0.6s
O18K Koktuh Hills 84.78 29 P P 07 34 14.9 +1.0
baz=254
E18K Tukpahlearik C 84.87 21 P P 07 34 15.5 +1.3
baz=249
F18K Selawik 84.93 22 P P 07 34 15.7 +1.2
baz=250
M18K Stony River 84.93 27 P P 07 34 15.9 +1.3
baz=254
SVW2 Sparrevohn 84.94 28 P P 07 34 15.6 +0.9
SVW2 IAmb IAmb 07 34 17.5
comp=Z,18nm,1.0s
H18K Honhosa River 84.94 24 P P 07 34 15.4 +0.8
H18K IAmb IAmb 07 34 31.9
comp=Z,18nm,1.1s
H18K Honhosa River 84.94 24 P P 07 34 16.2 +1.6
baz=251
G18K Tagagawik 85.07 23 P P 07 34 16.1 +0.8
G18K Tagagawik 85.07 23 P P 07 34 16.5 +1.2
baz=251
OHAK Old Harbor 85.09 32 P P 07 34 16.3 +0.8
baz=256
J18K Innoko River 85.10 25 P P 07 34 16.0 +0.5
J18K IAmb IAmb 07 34 17.0
comp=Z,20nm,0.8s
J18K Innoko River 85.10 25 P P 07 34 16.6 +1.1
baz=253
B18K Kokolik River 85.18 19 P P 07 34 17.1 +1.3
baz=248
TTA Tatalina 85.25 26 P P 07 34 17.0 +0.7
TTA IAmb IAmb 07 34 18.0
comp=Z,21nm,0.7s
TTA Tatalina 85.25 26 P P 07 34 17.6 +1.2
baz=254,SNR=15
TTA Tatalina 85.25 26 P P 07 34 17.0 +0.7
TTA pmax pmax
comp=Z,21nm,0.7s
O19K Port Alsworth 85.30 29 P P 07 34 17.6 +1.1
baz=255
Q19K Cape Douglas, 85.31 30 P P 07 34 17.3 +0.7
baz=256
N19K Bonanza Creek 85.38 28 P P 07 34 18.1 +1.1
N19K IAmb IAmb 07 34 28.9
comp=Z,33nm,1.1s
N19K Bonanza Creek 85.38 28 P P 07 34 18.1 +1.0
baz=255
GCSA Galena City Sc 85.42 24 P P 07 34 18.0 +1.1
baz=253
L19K White Mountain 85.56 27 P P 07 34 18.8 +1.0
L19K White Mountain 85.56 27 P P 07 34 19.1 +1.2
baz=255,SNR=12
KDAK Kodiak Island 85.59 32 P P 07 34 18.7 +0.7
KDAK IAmb IAmb 07 34 22.8
comp=Z,20nm,0.9s
KDAK Kodiak Island 85.59 32 P P 07 34 18.8 +0.8
baz=257
KDAK Kodiak Island 85.59 32 *eP* P 07 34 18.5 +0.5
KDAK pmax pmax
comp=Z,83nm,1.8s
KDAK Kodiak Island 85.59 32 P P 07 34 18.8 +0.8
comp=Z,14nm,0.7s,baz=254,slow=3.1,SNR=12
comp=Z,14nm,0.7s
P19K Oil Pt 85.69 30 P P 07 34 19.1 +0.6
baz=256
M19K Big River Lodg 85.70 27 P P 07 34 19.5 +1.0
M19K Big River Lodg 85.70 27 P P 07 34 19.8 +1.3
baz=255,SNR=13
F19K Shaleruckik Mo 85.71 22 P P 07 34 19.1 +0.7
baz=252
J19K Poorman 85.72 25 P P 07 34 19.5 +0.9
baz=254
A19K Wainwright 85.73 18 P P 07 34 19.7 +1.3
baz=248
G19K Purcell Mounta 85.76 23 P P 07 34 19.8 +1.1
baz=252
C19K Lookout Ridge 85.82 20 P P 07 34 20.1 +1.1
baz=250
H19K Roundabout Mou 85.82 24 P P 07 34 20.1 +1.2
baz=253
Q20K Shuyak Island 85.87 31 P P 07 34 20.7 +1.3
baz=257
L20K Farewell, AK 86.08 27 P P 07 34 21.7 +1.3
baz=256
E19K Redstone River 86.11 22 P P 07 34 21.3 +0.9
baz=252
D19K Kuna River 86.12 20 P P 07 34 21.2 +0.7
baz=251,SNR=8.2
K20K Telida 86.22 26 P P 07 34 22.0 +1.0
baz=255
M20K Styx River 86.27 27 P P 07 34 22.3 +0.9
M20K Styx River 86.27 27 P P 07 34 22.6 +1.1
baz=256
J20K Nowinta River 86.39 25 P P 07 34 23.2 +1.4
baz=255
I20K Naaghedeneel 86.42 24 P P 07 34 23.5 +1.6
baz=255
H20K Anotleneega Mo 86.44 24 P P 07 34 23.4 +1.3
baz=254
HOM Homer 86.48 30 P P 07 34 22.8 +0.4
baz=258
F20K Avaraart Lake 86.54 22 P P 07 34 23.4 +0.9
baz=254
N20K Mount Spurr 86.55 28 P P 07 34 23.1 +0.3
baz=257
D20K Etivluk River 86.71 20 P P 07 34 24.1 +0.8
baz=253
E20K Nigu River 86.72 21 P P 07 34 24.1 +0.6
baz=253,SNR=14
QSPA South Pole Qui 86.74 180 P P 07 34 23.7 0.0
comp=Z,14nm,0.8s,baz=305,slow=1.5,SNR=16
comp=Z,14nm,0.8s
B20K Meade River 86.92 19 P P 07 34 25.0 +0.7
baz=252
PPLA Purkeypile 86.94 27 P P 07 34 25.0 +0.2
baz=257,SNR=5.1
BRSE Bradley Lake S 86.94 30 P P 07 34 24.9 +0.2
baz=258
CAPN Captain Cook N 86.95 29 P P 07 34 25.2 +0.6
baz=258
SKT Skwentna 87.03 28 P P 07 34 24.7 -0.3
baz=258,SNR=9.2
CAST Castle Rocks 87.10 26 P P 07 34 25.9 +0.5
baz=257,SNR=5.3
CHUM Lake Minchumin 87.11 26 P P 07 34 26.1 +0.8
baz=257,SNR=20
G21K Allakaket 87.25 23 P P 07 34 26.9 +0.9
baz=256
MAK Makhachkala 87.27 313 *eP* P 07 34 22.2 -4.4
MAK *e* 07 44 46.6
MAK pmax pmax
comp=Z,237nm,1.5s
SUA Susitna One 87.29 28 P P 07 34 26.4 0.0
baz=258,SNR=12
H21K Melozitna Rive 87.32 24 P P 07 34 27.0 +0.6
baz=256
F21K Alatna River 87.44 22 P P 07 34 27.3 +0.3
baz=256
C21K Knifebide Rid 87.47 20 P P 07 34 27.4 +0.4
baz=254
A21K Barrow 87.50 18 P P 07 34 27.7 +0.6
baz=252
E21K Killik River 87.56 21 P P 07 34 27.6 0.0
baz=255
O22K Cooper Landing 87.59 29 P P 07 34 27.8 +0.1
baz=259,SNR=6.9
M22K Willow 87.64 28 P P 07 34 27.9 0.0
baz=259
SEW Seward 87.65 30 P P 07 34 28.2 +0.2
baz=260,SNR=6.4
B21K Ikpikpuk River 87.66 20 P P 07 34 28.2 +0.4
baz=254
RC01 Rabbit Creek A 87.70 29 P P 07 34 28.2 0.0
baz=259,SNR=12
CUT Chulitna 87.70 27 P P 07 34 28.3 +0.1
baz=259
BPAW Bear Paw Mtn. 87.72 25 P P 07 34 28.4 0.0
baz=258
TRF Thorofare Moun 87.90 26 P P 07 34 29.3 -0.1
baz=259
MLY Manley 88.02 25 P P 07 34 30.2 +0.4
baz=258,SNR=8.4
PMR Palmer 88.08 28 P P 07 34 30.1 +0.1
baz=260,SNR=9.3
D22K Ayikyak River 88.13 21 P P 07 34 30.7 +0.5
baz=256
KIRV Kirov 88.23 329 *eP* P 07 34 30.2 -0.6
KIRV Kirov 88.23 329 P P 07 34 31.4 +0.6
comp=Z,8.0nm,0.5s,baz=136,slow=1.5,SNR=4.5
comp=Z,8.0nm,0.5s
BELG Belogornoye 88.36 323 *ce* P P 07 34 31.0 -0.6
BELG pmax pmax
comp=Z,10.0nm,1.3s
BELG Belogornoye 88.36 323 P P 07 34 30.2 -1.3
comp=Z,26nm,0.9s,baz=339,slow=3.1,SNR=6.1
comp=Z,26nm,0.9s
KNK Knik Glacier 88.36 28 P P 07 34 32.0 +0.5
baz=260,SNR=8.6
SML Sawmill 88.49 28 P P 07 34 32.3 +0.2
baz=260,SNR=8.3
MCK McKinley 88.55 26 P P 07 34 32.5 +0.2
baz=260
WAT1 Susitna Watana 88.56 27 P P 07 34 32.4 0.0
baz=260
I23K Minto, Yukon-K 88.62 25 P P 07 34 32.6 0.0
baz=259,SNR=7.0
NEA2 Nenana 88.64 25 P P 07 34 33.1 +0.4
baz=260
P23K Montague Islan 88.65 30 P P 07 34 33.3 +0.6
baz=261
G23K Bananza Creek 88.65 23 P P 07 34 33.3 +0.6
baz=259
COLD Coldfoot 88.68 22 P P 07 34 33.2 +0.4
baz=259,SNR=7.2
M23K Glacier View 88.77 28 P P 07 34 33.8 +0.4
baz=261,SNR=9.1
D23K Nanushuk River 88.86 21 P P 07 34 34.1 +0.5
baz=258
WAT6 Susitna Watana 88.89 27 P P 07 34 34.1 0.0
baz=261
GLI Glacier Island 88.93 29 P P 07 34 34.1 0.0
baz=262
SCM Sheep Creek Mo 88.96 28 P P 07 34 34.7 +0.3
baz=261,SNR=5.4
GNI Garni 89.04 310 *eP* P 07 34 34.6 -0.7
GNI pmax pmax
comp=Z,10.0nm,1.4s
C23K Itkillik River 89.06 20 P P 07 34 34.6 +0.1
baz=258
E23K Chandalar 89.06 22 P P 07 34 35.1 +0.4
baz=259
Q23K Middleton Isla 89.09 30 P P 07 34 35.6 +0.8
baz=262
DHY Denali Highway 89.13 27 P P 07 34 35.3 +0.1

baz=261,SNR=9.2
TOLK Toolik Lake Re 89.19 21 P **P** 07 34 35.4 +0.2
baz=259
COLA College 89.20 25 P **P** 07 34 35.4 +0.2
baz=261
H24K Noodor Dome 89.35 24 P **P** 07 34 36.2 +0.2
baz=261
POKR Poker Plat Res 89.42 25 P **P** 07 34 36.7 +0.4
baz=261
HDA Harding Lake 89.52 25 P **P** 07 34 36.9 +0.1
baz=262
EYAK Cordova Ski Ar 89.54 29 P **P** 07 34 37.2 +0.3
baz=263
M24K Tolsona, Glenn 89.54 28 P **P** 07 34 37.3 +0.3
baz=262
D24K Happy Valley 89.55 21 P **P** 07 34 37.3 +0.5
D24K Happy Valley 89.55 21 P **P** 07 34 37.4 +0.6
baz=260
KLU Klutina 89.58 28 P **P** 07 34 37.7 +0.4
baz=263
ILAR Eielson Array 89.59 25 P **P** 07 34 35.2 -2.0
comp=Z,4.4nm,0.8s,baz=252,slow=4.2,SNR=20
ILAR PKKPbc **PKKPdf** 07 52 11.3 +1.8
comp=Z,0.7nm,0.7s,baz=4.1,slow=1.0,SNR=8.0
comp=Z,4.4nm,0.8s
F24K Squaw Lake 89.61 22 P **P** 07 34 37.8 +0.5
baz=261,SNR=6.3
G24K Hadweenzic Riv 89.64 23 P **P** 07 34 38.0 +0.6
baz=261
C24K Franklin Bluff 89.69 20 P **P** 07 34 37.7 +0.3
baz=260
K24K Donnelly Dome 89.94 26 P **P** 07 34 39.1 +0.3
baz=263
PAX Paxson 89.97 27 P **P** 07 34 39.2 +0.1
baz=263,SNR=5.2
HARP HAARP 90.05 28 P **P** 07 34 39.8 +0.4
baz=263
KAIM Kayak Island 90.13 30 P **P** 07 34 40.5 +0.8
baz=264
BMRM Bremner River 90.15 29 P **P** 07 34 40.6 +0.7
baz=264
G25K Bearman Lake 90.19 23 P **P** 07 34 40.6 +0.7
baz=262
J25K Saicha River, 90.22 25 P **P** 07 34 40.3 +0.1
baz=263
N25K Chitina, Valde 90.22 28 P **P** 07 34 40.4 +0.1
baz=264
PRP Porcupine Dome 90.27 24 P **P** 07 34 40.4 -0.1
baz=263
RIDG Independent Ri 90.34 26 P **P** 07 34 40.6 -0.1
baz=264
D25K Kavik River 90.44 21 P **P** 07 34 41.4 +0.4
baz=262
F25K Christian Rive 90.48 22 P **P** 07 34 41.8 +0.5
baz=263
E25K Arctic Village 90.57 22 P **P** 07 34 42.3 +0.6
baz=263,SNR=5.6
KBZ Khabaz 90.69 314 *de*P **P** 07 34 42.6 -0.1
KBZ pmax pmax
comp=Z,14nm,1.8s
KBZ Khabaz 90.69 314 P **P** 07 34 42.1 -0.5
comp=Z,2.2nm,0.9s,baz=90,slow=12,SNR=3.7
comp=Z,2.2nm,0.9s
SCRK Sand Creek 90.75 26 P **P** 07 34 42.5 -0.2
baz=264
KIV Kislovodsk 90.85 314 *e*P **P** 07 34 44.7 +1.1
KIV pmax pmax
comp=Z,7.0nm,1.0s
CRQE Cirque 90.86 29 P **P** 07 34 43.2 -0.1
baz=265
L26K Log Cabin Wild 90.94 27 P **P** 07 34 43.7 +0.2
baz=265
MCARA McCarthy VSAT 90.95 29 P **P** 07 34 43.2 -0.3
baz=265
J26L Joseph Creek 90.98 26 P **P** 07 34 43.5 -0.3
baz=265,SNR=7.7
C26K Camden Bay 91.02 20 P **P** 07 34 43.3 -0.4
baz=264
F26K Sheenjek River 91.06 22 P **P** 07 34 44.1 +0.2
baz=264
G26K Porcupine Rive 91.12 23 P **P** 07 34 44.5 +0.3
baz=264
I26K Coal Creek Min 91.23 25 P **P** 07 34 44.5 -0.3
baz=265
MESA MESA 91.38 30 P **P** 07 34 45.4 -0.4
baz=266
M27K Edge Creek, AK 91.57 28 P **P** 07 34 46.9 +0.4
baz=266
K27K Chicken 91.59 26 P **P** 07 34 47.2 +0.8
baz=266
L27K Beaver Creek, 91.64 27 P **P** 07 34 47.0 +0.3
baz=266,SNR=14
BCAR Beaver Creek A 91.66 27 P **P** 07 34 47.5 +0.7
CTG Chitna Glacier 91.73 29 P **P** 07 34 48.3 +0.9
baz=267
I27K Kandik River 91.89 25 P **P** 07 34 48.3 +0.4
baz=266
H27K Steamboat Moun 91.97 24 P **P** 07 34 48.8 +0.6
baz=267
EGAK Eagle 92.04 25 P **P** 07 34 49.5 +1.0
baz=267
BVCY Beaver Creek 92.04 28 P **P** 07 34 49.4 +0.7
baz=267
YUK3 Moose Creek 92.20 28 P **P** 07 34 49.9 +0.2
baz=267
PINM Pinnacle 92.23 30 P **P** 07 34 50.0 +0.5
baz=268
ELIB Princess Elisa 92.33 197 *d*P **P** 07 34 51.2 +1.3
YUK8 Steele Glacier 92.51 29 P **P** 07 34 51.2 +0.1
baz=268
I28M Miner Creek 92.58 25 P **P** 07 34 51.5 +0.4
baz=268
KIBK Kibwezi 92.63 268 P **P** 07 34 54.1 +1.6
SNR=6.7
PNL Peninsula 92.64 31 P **P** 07 34 51.7 +0.3
baz=268
F28M Old Crow 92.68 23 P **P** 07 34 51.7 +0.2
baz=268,SNR=6.3
DAWY Dawson 92.77 26 P **P** 07 34 52.2 +0.2
baz=268,SNR=9.1
YUK4 Talbot Arm 93.06 29 P **P** 07 34 53.9 +0.3
baz=269
O29M Mount Kennedy 93.07 30 P **P** 07 34 53.7 +0.1
baz=269
D28M Stokes Point 93.14 21 P **P** 07 34 53.7 +0.3
baz=269
M29M Somme Creek 93.16 28 P **P** 07 34 54.0 +0.1
baz=269
YUK6 Outpost Mounta 93.19 29 P **P** 07 34 54.0 -0.2
baz=269
H29M Whitestone 93.25 24 P **P** 07 34 54.3 +0.2
baz=270
J29N Klondike Camp 93.29 26 P **P** 07 34 55.0 +0.6
baz=270
L29M L29M 93.32 27 P **P** 07 34 55.1 +0.6
baz=270
KLMR Klimovskoe 93.41 331 *e*P P 07 34 49.1 -5.8
KLMR pmax pmax
comp=Z,21nm,1.5s
E29M Blow River 93.44 22 P **P** 07 34 55.4 +0.5
baz=270
P29M Windy Craggy 93.48 31 P **P** 07 34 55.6 +0.2
baz=270
KMBO Kilima Mbogo 93.49 269 P **P** 07 34 57.7 +1.0
KMBO P **P** 07 34 57.7 +1.0
K29M Barlow Dome 93.60 26 P **P** 07 34 56.6 +0.7
K29M IAmb IAmb 07 35 04.6
comp=Z,12nm,1.1s
K29M Barlow Dome 93.60 26 P **P** 07 34 55.9 0.0
baz=270,SNR=11
HYT Haines Junctio 93.60 29 P **P** 07 34 55.9 -0.1
baz=270
EPYK Eagle Plains 93.91 24 P **P** 07 34 56.7 -0.4
baz=271,SNR=5.8
M30M Minto, Yukon 93.94 28 P **P** 07 34 57.0 -0.4
M30M Minto, Yukon 93.94 28 P **P** 07 34 57.3 -0.1
baz=271
I30M Mount Dempster 94.08 25 P **P** 07 34 57.9 -0.2
baz=271
G30M tAoh Zraii Nji 94.10 23 P **P** 07 34 58.1 0.0
baz=272
J30M Hart River 94.11 26 P **P** 07 34 58.2 -0.1
baz=271
F30M Barrier River 94.25 23 P **P** 07 34 58.6 -0.1
baz=272
S31K Pelican 94.27 32 P **P** 07 34 58.9 0.0
baz=271
O30N Mendenhall 94.30 29 P **P** 07 34 59.3 +0.2
baz=271
MOS Moscow 94.43 326 *e*P **P** 07 34 58.9 -0.8
SKAG Skagway 94.71 31 P **P** 07 35 01.4 +0.5
baz=272
SIT Sitka 94.78 33 P **P** 07 35 01.2 0.0
baz=272
G31M Satah River 94.87 23 P **P** 07 35 01.4 -0.1
baz=273,SNR=6.6
WHY Whitehorse 94.90 30 P **P** 07 35 01.7 -0.2
baz=272
H31M Peel River 94.90 24 P **P** 07 35 01.2 -0.5
baz=273
ASF Jabal al Asfar 95.01 302 P **P** 07 35 03.3 +0.3
comp=Z,8.3nm,0.9s,baz=338,slow=0.6,SNR=5.9
ASF LR LR 08 26 00.0
comp=Z,325nm,18.2s,baz=225,slow=41
comp=Z,8.3nm,0.9s
F31M Tsiigehtchic 95.04 23 P **P** 07 35 02.0 -0.2
baz=274,SNR=12
OBN Obninsk 95.05 325⇓ *e*P **P** 07 35 00.7 -1.8
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN Obninsk 95.05 325 LR LR 08 22 24.2
comp=Z,360nm,19.3s,baz=86,slow=38
INK Inuvik 95.06 22 P **P** 07 35 01.8 -0.5
baz=274,SNR=10
INK Inuvik 95.06 22 P **P** 07 35 01.6 -0.8
comp=Z,7.7nm,1.0s,baz=282,slow=3.9,SNR=8.8
comp=Z,7.7nm,1.0s
FARO Faro, Yukon 95.55 28 P **P** 07 35 04.5 -0.3
baz=274
N32M Quiet Lake 95.75 29 P **P** 07 35 05.8 +0.1
baz=274
APA Apatity 95.78 338⇓ *i*P P 07 34 57.2 -8.4
APA pmax pmax
comp=Z,9.0nm,1.3s
MMAI Mount Meron Ar 96.27 303 P **P** 07 35 09.3 +0.6
comp=Z,3.6nm,0.8s,baz=32,slow=6.9,SNR=4.9
comp=Z,3.6nm,0.8s
EIL Elat 96.67 299 LR LR 08 25 47.9
comp=Z,424nm,18.6s,baz=72,slow=40
V35K Ketchikan 96.94 35 P **P** 07 35 10.5 -0.7
baz=274
S34M Telegraph Cree 96.99 32 P **P** 07 35 11.3 0.0
baz=275
A36M Sachs Harbour 97.34 18 P **P** 07 35 12.2 -0.4
A36M IAmb IAmb 07 35 12.8
comp=Z,6.6nm,0.9s
A36M Sachs Harbour 97.34 18 P **P** 07 35 12.2 -0.4
baz=282
DLBC Dease Lake 97.52 32 P **P** 07 35 13.4 -0.5
baz=276
T35M Bob Quinn 97.56 33 P **P** 07 35 13.8 -0.1
baz=276
BR131 Keskin Array S 97.56 309⇓ *e*P Pdif 07 35 15.0 +0.4
BRTR Keskin Array B 97.56 309 P **P** 07 35 13.8 -0.8
comp=Z,1.1nm,0.7s,baz=145,slow=5.3,SNR=3.3
comp=Z,1.1nm,0.7s
WTLY Watson Lake, Y 97.95 30 P **P** 07 35 15.5 -0.2
baz=277
TROLL Troll, Antarti 98.01 194⇑ P Pdif 07 35 16.9 +0.9
comp=Z,626nm,0.8s
C36M Paulatuk 98.30 20 P **P** 07 35 16.7 -0.3
baz=283,SNR=9.2
ARCES ARCESS Array B 98.32 340 P **P** 07 35 16.4 -0.8
comp=Z,4.6nm,0.6s,baz=55,slow=6.4,SNR=6.3
comp=Z,4.6nm,0.6s
SNAA Sanae 99.51 193⇑ P **Pdif** 07 35 23.9 +1.4
comp=Z,121nm,0.7s
SNAA Sanae 99.51 193 P **Pdif** 07 35 23.0 +0.5
SNAA Sanae 99.51 193 P **Pdif** 07 35 23.0 +0.5
comp=Z,5.6nm,0.9s,baz=108,slow=9.4,SNR=5.6
comp=Z,5.6nm,0.9s
FINES FINESS Array B 99.83 332 P **Pdif** 07 35 23.2 -0.8
comp=Z,2.4nm,1.0s,baz=88,slow=9.9,SNR=2.7
comp=Z,2.4nm,1.0s
MNK Minsk 100.11 325 *i* P **Pdif** 07 35 23.2 -2.2
MNK comp=E,5.0nm,0.9s *i* P **Pdif** 07 35 23.2 -2.2
MNK comp=N,17nm,0.8s *i* P **Pdif** 07 35 23.2 -2.2
MNK comp=Z,5.0nm,0.8s,baz=81 *i* PP **PKiKP** 07 39 49.8 -3.2
MNK *i* PPP PPP 07 41 09.8
MNK *i* SKS SKiKP 07 44 18.1 +51
MNK *i* SKKS 07 45 03.1
MNK *i* S **SKSac** 07 46 02.0 -1.0
MNK *i* PS PS 07 47 46.6 -44
MNK *i* SS SS 07 53 08.3 -44
MNK *i* SSS SSS 07 57 20.0
MNK *i* LQ LQ 08 14 02.4
MNK *i* LR LR 08 16 30.3
MNK *i* LRM MLR 08 20 55.1
MNK comp=Z,429nm,17.4s *i* LRM MLR 08 21 22.9
MNK comp=E,110nm,17.2s *i* LRM MLR 08 21 25.3
MNK comp=N,306nm,18.6s
MNK Minsk 100.11 325 *i* P **Pdif** 07 35 23.2 -2.2
MNK *i* S **SKSac** 07 46 01.9 -1.0
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,5.0nm,0.9s
MNK pmax pmax
comp=N,17nm,0.9s
MNK MLR MLR
comp=Z,429nm,17.0s
MNK MLR MLR
comp=E,110nm,17.0s
MNK MLR MLR
comp=N,306nm,19.0s
BOSA Boshof 102.06 240 P **Pdif** 07 35 35.1 +0.3
comp=N,7.3nm,0.7s,baz=108,slow=3.8,SNR=14
YKA Yellowknife Ar 104.01 26 Pdiff **Pdif** 07 35 42.6 0.0
comp=N,0.4nm,0.8s,baz=292,slow=4.7,SNR=3.9
YKA PKiKP **PP** 07 40 00.0 +0.1
comp=N,0.4nm,0.9s,baz=299,slow=2.3,SNR=3.4
YKA PKKPbc **PKKPbc** 07 51 31.1 -3.3
comp=N,0.8nm,0.8s,baz=103,slow=2.5,SNR=9.1
YKA PKKP **PKKPdf** 07 51 38.3 -5.0
comp=N,1.2nm,0.8s,baz=104,slow=2.6,SNR=10
NOA NORSAR Array B 106.77 334 Pdiff **Pdif** 07 35 54.0 -1.0
comp=N,0.3nm,0.5s,baz=65,slow=5.3,SNR=2.3
NVAR Mina Array Bea 108.30 51 Pdiff **Pdif** 07 36 04.0 +1.4
comp=N,0.4nm,0.8s,baz=245,slow=6.5,SNR=2.9
EGMT Eagleton 111.75 39 P **PKiKP** 07 40 15.0 +0.1
baz=291
PDAR Pinedale Array 113.65 44 PKKPbc PKKPbc 07 51 02.3 -1.1
comp=N,1.4nm,0.7s,baz=119,slow=5.4,SNR=11
LAO LASA Array 114.48 39 P **PKiKP** 07 40 19.5 -0.5
baz=293
RSSD Black Hills 116.91 41 P **PKPdf** 07 40 24.5 -0.5
baz=294
121A Cookes Peak, D 117.98 55 P **PKPdf** 07 40 26.1 -1.3
baz=285
MDND Maddock 118.01 36 P **PKPdf** 07 40 25.8 -1.0
baz=299
SDCO Great Sand Dun 118.22 48 P **PKPdf** 07 40 27.4 -0.5
baz=290
ANMO Albuquerque 118.37 52 P **PKPdf** 07 40 27.4 -0.7
baz=287
ULM Lac du Bonnet 118.84 32 PKP **PKPdf** 07 40 26.1 -2.1
comp=N,1.2nm,0.8s,baz=214,slow=2.1,SNR=2.9
T25A Trinidad 119.25 49 P **PKPdf** 07 40 29.3 -0.4
baz=290
OGNE Ogallala 119.55 44 P **PKPdf** 07 40 30.1 +0.1
baz=294
KSCO Kaye Shedlock' 119.88 46 P **PKPdf** 07 40 30.4 -0.4
baz=292
MNTX Comudas Mount 120.17 55 P **PKPdf** 07 40 31.1 -0.3
baz=286
MSTX Muleshoe 121.57 52 P **PKPdf** 07 40 34.3 +0.1
baz=290
BGNE Belgrade 121.99 42 P **PKiKP** 07 40 35.0 +0.2
baz=298
CBKS Cedar Bluff 122.03 45 P **PKiKP** 07 40 35.1 +0.1
baz=295
AMTX Amarillo 122.10 50 P **PKiKP** 07 40 35.4 +0.1
baz=291
TXAR Lajitas Array 122.25 57 PKP **PKiKP** 07 40 35.9 +0.2
comp=N,0.6nm,0.7s,baz=288,slow=1.2,SNR=3.8
TXAR PKKPab **PKKPbc** 07 50 32.2 +0.3
comp=N,1.6nm,0.8s,baz=116,slow=7.0,SNR=10
EYMN Ely 122.52 32 P **PKiKP** 07 40 35.8 +0.1
baz=307
KSU1 Kansas State U 124.10 44 P **PKiKP** 07 40 39.3 +0.2
baz=298
WMOK Wichita Mounta 124.37 49 P **PKiKP** 07 40 39.8 +0.1
baz=293
ABTX Abilene, Hawle 124.49 52 P **PKPdf** 07 40 39.8 +0.1
baz=291
SCIA State Center 124.95 39 P **PKiKP** 07 40 41.1 +0.5
baz=302
JCT Junction City 125.10 55 P **PKiKP** 07 40 41.2 -0.1
baz=290
ESDC Sonseca Array 125.32 318 PP **PP** 07 42 34.8 +3.9
comp=N,1.7nm,0.8s,baz=58,slow=6.3,SNR=5.0
TUL3 Leonard 126.11 47 P **PKPdf** 07 40 42.7 0.0
baz=296
833A Chaparral WMA, 126.13 57 P **PKPdf** 07 40 42.7 -0.2
baz=288
JFWS Jewell Farm 126.22 37 P **PKPdf** 07 40 42.8 +0.2
baz=306
L44A Lake County Fo 128.04 36 P **PKPdf** 07 40 46.0 -0.1
baz=308
HDIL Hopedale 128.16 39 P **PKPdf** 07 40 46.3 -0.1
baz=305
CCM Cathedral Cave 128.27 42 P **PKPdf** 07 40 46.9 +0.2
baz=302
MIAR Mount Ida 128.34 47 P **PKPdf** 07 40 47.2 +0.3
baz=297
TORD Torodi Ar. Bea 128.77 284 PKP **PKiKP** 07 40 49.2 +0.3
comp=N,7.4nm,0.6s,baz=55,slow=3.1,SNR=5.2
SFIN Lafayette 129.62 38 P **PKPdf** 07 40 49.1 -0.1
baz=307
O48B Farmland 130.86 36 P **PKPdf** 07 40 51.9 +0.3
baz=309
WCI Wyandotte Cave 131.41 39 P **PKPdf** 07 40 52.9 +0.3
baz=307
P49A Miami Univ. Ec 131.58 37 P **PKPdf** 07 40 53.4 +0.4
baz=309
PLCA Paso Flores 132.10 158 PKP **PKiKP** 07 40 56.1 +1.0
comp=N,3.6nm,0.8s,baz=213,slow=2.9,SNR=7.9
ACSO Alum Creek Sta 132.15 35 P **PKPdf** 07 40 54.2 +0.2
baz=312
ERPA Erie 132.47 31 P **PKPdf** 07 40 54.8 +0.2
baz=316
P52A Corning 133.03 35 P **PKPdf** 07 40 55.7 0.0
baz=312
LONY Lake Ozonia 133.08 25 P **PKPdf** 07 40 55.8 +0.1
baz=324
LRAL Lakeview Retre 133.85 46 P **PKPdf** 07 40 57.7 +0.3
baz=302
TZTN Tazewell 134.16 39 P **PKPdf** 07 40 58.7 +0.7
baz=308
LBNH Lisbon 134.47 23 P **PKiKP** 07 40 59.3 -0.4
baz=327
BLA Blacksburg 135.65 36 P **PKPdf** 07 41 01.2 +0.5
baz=312
DBIC Dimbokro 135.71 276 PKP **PKiKP** 07 41 02.9 -0.2
comp=N,7.0nm,0.7s,baz=255,slow=1.9,SNR=7.4
HRV Adam Dziewonsk 136.07 24 P **PKPdf** 07 41 02.0 +0.7
baz=327
GOGA Godfrey 136.10 43 P **PKPdf** 07 41 02.5 +0.9
baz=306
KMSC Kings Mountain 136.44 39 P **PKPdf** 07 41 02.9 +0.7
baz=310
NHSC New Hope 138.47 41 P **PKPdf** 07 41 06.7 +0.7
baz=309
DWPF Disney Wildern 140.54 48 P **PKPdf** 07 41 10.7 +0.7
baz=303
JTS Las Juntas de 143.82 77 PKP **PKPdf** 07 41 15.6 -0.6
comp=N,6.2nm,0.7s,baz=322,slow=12,SNR=3.8
BBTS Babate 145.85 292 PKPbc **PKPab** 07 41 20.9 +0.3
comp=N,90nm,0.7s,baz=57,slow=2.7,SNR=12
NNA Nana 148.64 119 PKPbc **PKPdf** 07 41 26.2 +1.8
comp=N,10nm,0.6s,baz=279,slow=4.6,SNR=3.6
ATAH Atahualpa 149.09 109 PKPbc **PKiKP** 07 41 30.4 -0.6
comp=N,3.9nm,0.6s,baz=268,slow=4.8,SNR=4.1
CPUP Villa Florida 149.60 165 PKPbc **PKPbc** 07 41 30.5 +0.4
comp=N,13nm,0.7s,baz=169,slow=1.6,SNR=11
SDV Santo Domingo 157.95 74 PKP **PKPdf** 07 41 38.3 +0.3
comp=N,8.4nm,0.9s,baz=4.8,slow=1.5,SNR=4.6
BDFB Brasilia 161.23 184 PKP **PKPdf** 07 41 40.4 -1.1
comp=N,2.7nm,0.9s,baz=135,slow=2.9,SNR=2.2

CATAC ***22*** *07:21:45.6±2.0,6°09N×82°75W,h5km,mb4.5,ML4.3*
UCR ***22*** *07:21:49.8±1.7,6°27N×82°67W,h36km±999km,MWV3.7*
UPA ***22*** *07:21:50.1±1.1,6°48N×82°60W,h6km±8km,ML4.0,MW4.1*
ISC 22 07:21:49.0±1.7,6°42N±0°09×82°65W±0°06,h10km,n107,
σ1°08/126,6C-2D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEDE3	**Pedregal, Chir**	**1.97**	**7**	*e*P	**Pn**	**07 22 22.6**	**+0.2**
PEDE3				*e*S	**Sn**	**07 22 46.4**	**-0.9**
DVD	**David**	**2.02**	**6**	*e*P	**Pn**	**07 22 23.5**	**+0.4**
DVD				*e*S	**Sn**	**07 22 47.5**	**-1.0**
CDITO	**Canoas**	**2.15**	**354**	*e*P	**Pn**	**07 22 24.8**	**-0.3**
CDITO				*e*S	**Sn**	**07 22 51.4**	**-0.4**
CDITO	**Canoas**	**2.15**	**354**	*i* P	**Pn**	**07 22 25.4**	**+0.3**
CDITO				IAML		07 22 56.4	
	comp=Z,290nm,1.0s						
PTJ1	**Puerto Jimnez**	**2.20**	**343**	*e*P	**Pn**	**07 22 25.6**	**-0.1**
BCO2	**Palmira**	**2.29**	**3**	*e*P	**Pn**	**07 22 26.9**	**-0.2**
BCO2				*e*S	**Sn**	**07 22 55.2**	**-0.3**
BRU2	**Volcan**	**2.36**	**359**	*e*P	**Pn**	**07 22 28.2**	**+0.1**
BRU2				AMP		07 22 31.0	
	comp=Z,886nm,0.3s						
BRU2				*i* S	**Sn**	**07 22 57.9**	**+0.6**
BRU2				*e*S	**Sn**	**07 22 57.9**	**+0.6**
BRU2	**Volcan**	**2.36**	**359**	*e*P	**Pn**	**07 22 27.9**	**-0.1**
BRU2				*e*S	**Sn**	**07 22 57.9**	**+0.6**
BRU2	**Volcan**	**2.36**	**359**	*i* P	**Pn**	**07 22 29.8**	**+1.7**
BRU2				IAML		07 23 01.7	
	comp=Z,380nm,1.0s						
MLIR3	**Monte Lirio, C**	**2.37**	**356**	*e*P	**Pn**	**07 22 28.5**	**+0.4**
MLIR3				*e*S	**Sn**	**07 22 58.4**	**+1.1**
LNBQ3	**Los Naranjos,**	**2.37**	**5**	*e*P	**Pn**	**07 22 28.3**	**+0.2**
LNBQ3				*e*S	**Sn**	**07 22 57.5**	**+0.1**
BC3P	**Paso Ancho**	**2.38**	**1**	*e*P	**Pn**	**07 22 29.1**	**+0.7**
VITO	**San Vito**	**2.41**	**352**	*e*P	**Pn**	**07 22 29.3**	**+0.6**
PLAN	**Los Planes de**	**2.46**	**336**	*i* P	**Pn**	**07 22 29.9**	**+0.6**
PLAN				IAML		07 22 30.9	
	comp=Z,600nm,1.0s						
EDPN	**Palmar Norte**	**2.65**	**343**	*e*P	**Pn**	**07 22 31.7**	**-0.2**
POTG	**Potrero Grande**	**2.66**	**350**	*e*P	**Pn**	**07 22 32.3**	**+0.3**
POTG	**Potrero Grande**	**2.66**	**350**	*i* P	**Pn**	**07 22 33.4**	**+1.3**
POTG				IAML		07 23 09.3	
	comp=Z,660nm,1.0s						
CHIT3	**Chitre**	**2.69**	**55**	*e*P	**Pn**	**07 22 32.4**	**-0.1**
CHIT3				*e*S	**Sn**	**07 23 04.4**	**-0.8**
AZU	**Azuero**	**2.73**	**60**⇓	*e*P	**Pn**	**07 22 32.8**	**-0.1**
AZU				*i* S	**Sn**	**07 23 05.5**	**-0.4**
OCHAL	**Ojochal**	**2.84**	**340**	*i* P	**Pn**	**07 22 34.3**	**-0.2**
OCHAL				IAML		07 22 35.9	
	comp=Z,5.3nm,1.0s						
DRK0	**Durika**	**2.89**	**348**	*e*P	**Pn**	**07 22 35.2**	**-0.1**
CNI2	**El Empalme, Bo**	**2.99**	**3**	*e*P	**Pn**	**07 22 39.1**	**+2.5**
CNI2				*e*S	**Sb**	**07 23 15.3**	**-3.9**
PEZE	**Perez Zeledon,**	**3.12**	**341**	*e*P	**Pn**	**07 22 38.1**	**-0.3**
PEZE				*e*S	**Sn**	**07 23 17.0**	**+1.2**
PEZE	**Perez Zeledon,**	**3.12**	**341**	*i* P	**Pn**	**07 22 38.9**	**+0.5**
PEZE				IAML		07 22 40.8	
	comp=Z,370nm,1.0s						
ZELE	**Perez Zeledon**	**3.12**	**340**	*e*P	**Pn**	**07 22 38.8**	**+0.4**
ZELE				*e*S	**Sn**	**07 23 17.2**	**+1.4**
CDM	**Cerro de Muert**	**3.31**	**341**⇓	*i*P	**Pn**	**07 22 41.7**	**+0.4**
CDM				*e*S	**Sn**	**07 23 21.9**	**+1.0**
CDM	**Cerro de Muert**	**3.31**	**341**	*i* P	**Pn**	**07 22 41.7**	**+0.4**
CDM				IAML		07 22 43.2	
	comp=Z,210nm,1.0s						
LLNJ	**Naranjito**	**3.36**	**335**⇑	*e*P	**Pn**	**07 22 41.4**	**-0.2**
RAZU	**San Marcos de**	**3.50**	**337**	*e*P	**Pn**	**07 22 44.0**	**+0.3**
RIMA	**Rio Macho**	**3.54**	**340**	*e*P	**Pn**	**07 22 44.5**	**+0.3**
RIMA	**Rio Macho**	**3.54**	**340**	*i* P	**Pn**	**07 22 44.8**	**+0.5**
RIMA				IAML		07 22 55.4	
	comp=Z,100nm,1.0s						
ABE2	**San Pablo**	**3.55**	**337**	*e*P	**Pn**	**07 22 44.8**	**+0.4**
LCR2	**La Lucha 2**	**3.57**	**338**⇑	*e*P	**Pn**	**07 22 44.7**	**0.0**
LCR2	**La Lucha 2**	**3.57**	**338**	*i* P	**Pn**	**07 22 45.4**	**+0.7**
LCR2				IAML		07 22 46.4	
	comp=Z,99nm,1.0s						
REPA	**Paraso**	**3.60**	**341**	*e*P	**Pn**	**07 22 45.8**	**+0.8**
TAGO	**Cartago**	**3.65**	**340**	*e*P	**Pn**	**07 22 46.0**	**+0.1**
TAGO				*e*S	**Sn**	**07 23 30.7**	**+1.6**
VERB	**Verbena**	**3.66**	**344**	*e*P	**Pn**	**07 22 47.4**	**+1.6**
PCAYA	**Pacayas**	**3.66**	**342**	*e*P	**Pn**	**07 22 47.2**	**+1.2**
RVSTA	**Santa Teresita**	**3.67**	**344**	*e*P	**Pn**	**07 22 48.5**	**+2.5**
ACOS	**Acosta**	**3.68**	**336**⇑	*i*P	**Pn**	**07 22 46.2**	**0.0**
OCM	**Ochomogo**	**3.69**	**340**⇑	*e*P	**Pn**	**07 22 46.8**	**+0.4**

OCM	**Ochomogo**	**3.69**	**340**	*i* P	**Pn**	**07 22 47.0**	**+0.6**
OCM				IAML		07 22 48.6	
	comp=Z,350nm,1.0s						
VTCV	**VTCV, Calle Va**	**3.70**	**343**	*e*P	**Pn**	**07 22 47.5**	**+1.0**
VTCV	**VTCV, Calle Va**	**3.70**	**343**	*i* P	**Pn**	**07 22 48.4**	**+1.9**
VTCV				IAML		07 23 34.1	
	comp=Z,350nm,1.0s						
TRIO	**Tres Rios**	**3.71**	**339**	*e*P	**Pn**	**07 22 47.0**	**+0.4**
CVTV	**Tajo**	**3.73**	**343**	*e*P	**Pn**	**07 22 48.3**	**+1.3**
AMPA	**Desamparados**	**3.73**	**338**	*e*P	**Pn**	**07 22 47.2**	**+0.4**
HAYA	**Volcan Irazu**	**3.73**	**342**	*i* P	**Pn**	**07 22 48.5**	**+1.4**
HAYA				IAML		07 22 51.5	
	comp=Z,410nm,1.0s						
VTLA	**Turrialba Volc**	**3.73**	**343**	*e*P	**Pn**	**07 22 48.0**	**+0.9**
VICA	**Volcano Irazu**	**3.74**	**342**	*e*P	**Pn**	**07 22 48.1**	**+0.8**
VIRE	**VIRE**	**3.74**	**341**	*i* P	**Pn**	**07 22 48.3**	**+1.1**
VIRE				IAML		07 22 49.7	
	comp=Z,440nm,1.0s						
ZANG	**Zanguenga, Cho**	**3.74**	**47**	*e*P	**Pn**	**07 22 48.2**	**+1.3**
VTR0	**Volcan Turrial**	**3.74**	**343**	*e*P	**Pn**	**07 22 49.0**	**+1.7**
IRES	**Siquirres**	**3.75**	**347**	*e*P	**Pn**	**07 22 50.0**	**+2.9**
LUJA	**Lujan**	**3.76**	**338**	*e*P	**Pn**	**07 22 49.0**	**+1.7**
LUPE	**Guadalupe**	**3.77**	**338**	*e*P	**Pn**	**07 22 48.2**	**+0.7**
CORON	**Coronado**	**3.78**	**339**	*e*P	**Pn**	**07 22 49.9**	**+2.3**
CORON				*e*S	**Sn**	**07 23 34.7**	**+2.5**
JACO	**JACO, Garabito**	**3.79**	**328**	*e*P	**Pn**	**07 22 46.9**	**-0.7**
JACO	**JACO, Garabito**	**3.79**	**328**	*i* P	**Pn**	**07 22 46.8**	**-0.7**
JACO				IAML		07 22 49.2	
	comp=Z,180nm,1.0s						
CVIMO	**Finca Echandi**	**3.81**	**340**	*e*P	**Pn**	**07 22 49.1**	**+1.1**
SANTA	**Santa Ana**	**3.81**	**337**	*e*P	**Pn**	**07 22 48.2**	**+0.3**
HDC	**Heredia**	**3.84**	**338**	⇑*i*P	**Pn**	**07 22 49.1**	**+0.6**
HDC				*e*S	**Sn**	**07 23 35.2**	**+1.4**
HDC	**Heredia**	**3.84**	**338**	*i* P	**Pn**	**07 22 49.3**	**+0.9**
HDC				IAML		07 22 49.6	
	comp=Z,410nm,1.0s						
HDC3	**Heredia 3**	**3.84**	**338**	⇑*i*P	**Pn**	**07 22 49.1**	**+0.7**
HDC3	**Heredia 3**	**3.84**	**338**	*i* P	**Pn**	**07 22 49.4**	**+1.0**
HDC3				IAML		07 22 49.6	
	comp=Z,420nm,1.0s						
BELE	**Belen**	**3.85**	**337**	*e*P	**Pn**	**07 22 49.9**	**+1.4**
BCIP	**Isla Barro Col**	**3.90**	**45**	*e*P	**Pn**	**07 22 49.8**	**+0.7**
BCIP	**Isla Barro Col**	**3.90**	**45**	*i* P	**Pn**	**07 22 50.5**	**+1.4**
BCIP				IAML		07 24 08.0	
	comp=Z,99nm,1.0s						
TRB2	**Turrubares**	**3.90**	**333**	*e*P	**Pn**	**07 22 48.4**	**-0.7**
CBL1	**Cabuya**	**3.97**	**323**	*e*P	**Pn**	**07 22 49.5**	**-0.6**
UPA	**Univ. de Panam**	**4.00**	**50**	*e*P	**Pn**	**07 22 50.5**	**0.0**
FRIJ	**El Hiral**	**4.02**	**46**	*e*P	**Pn**	**07 22 51.4**	**+0.7**
LAFE	**Finca La Fe, P**	**4.04**	**327**	*i* P	**Pn**	**07 22 50.7**	**-0.4**
LAFE				IAML		07 22 50.8	
	comp=Z,160nm,1.0s						
SARA	**Sarapiqu**	**4.23**	**341**	*e*P	**Pn**	**07 22 54.9**	**+1.2**
ITAL	**Pital**	**4.32**	**338**	*e*P	**Pn**	**07 22 57.0**	**+2.2**
NYURE	**Nandayure**	**4.39**	**324**	*e*P	**Pn**	**07 22 54.8**	**-1.0**
SOCE	**Pocosol**	**4.39**	**334**	*i* P	**Pn**	**07 22 57.2**	**+1.3**
SOCE				IAML		07 23 03.8	
	comp=Z,130nm,1.0s						
INDI	**Punta indio, G**	**4.44**	**321**	*e*P	**Pn**	**07 22 55.8**	**-0.7**
INDI	**Punta indio, G**	**4.44**	**321**	*i* P	**Pn**	**07 22 55.8**	**-0.7**
INDI				IAML		07 22 56.6	
	comp=Z,71nm,1.0s						
JUNT	**Juntas**	**4.47**	**329**	*e*P	**Pn**	**07 22 56.8**	**-0.1**
JTS	**Las Juntas de**	**4.47**	**330**	*e*P	**Pn**	**07 22 57.1**	**+0.1**
JTS				*e*S	**Sn**	**07 23 49.5**	**+0.3**
JTS	**Las Juntas de**	**4.47**	**330**	*e*P	**Pn**	**07 22 56.6**	**-0.4**
JTS	**Las Juntas de**	**4.47**	**330**	*e*P	**Pn**	**07 22 56.8**	**-0.2**
ARE1	**Arenal 1**	**4.51**	**333**	*e*P	**Pn**	**07 22 58.9**	**+1.4**
CMARA	**Lajas Hojancha**	**4.51**	**323**	*e*P	**Pn**	**07 22 57.3**	**-0.2**
DUNO	**Dulce Nombre,**	**4.60**	**322**	*i* P	**Pn**	**07 22 59.6**	**+0.9**
DUNO				IAML		07 23 54.6	
	comp=Z,160nm,1.0s						
COVE	**Coope Vega, Sa**	**4.61**	**338**	*e*P	**Pn**	**07 22 59.7**	**+0.8**
SAJU	**San Juanillo,**	**4.72**	**320**	*i* P	**Pn**	**07 22 59.7**	**-0.7**
SAJU				IAML		07 23 02.1	
	comp=Z,41nm,1.0s						
PLVR	**Palo Verde**	**4.73**	**326**	*e*P	**Pn**	**07 22 59.8**	**-0.9**
ORTG	**Ortega, Santa**	**4.80**	**325**	*e*P	**Pn**	**07 23 01.3**	**-0.3**
ORTG	**Ortega, Santa**	**4.80**	**325**	*i* P	**Pn**	**07 23 01.7**	**+0.1**
ORTG				IAML		07 23 02.2	
	comp=Z,45nm,1.0s						
ORTG				IAmb	IAmb	07 23 02.5	
	comp=Z,29nm,0.7s						
COLC	**Colonia**	**4.92**	**329**	*e*P	**Pn**	**07 23 04.1**	**+1.0**
ALIBA	**Liberia Airpor**	**5.04**	**326**	*e*P	**Pn**	**07 23 06.0**	**+1.3**
HZTE	**Horizontes, Gu**	**5.17**	**326**	*e*P	**Pn**	**07 23 07.2**	**+0.6**
HZTE	**Horizontes, Gu**	**5.17**	**326**	*i* P	**Pn**	**07 23 07.5**	**+1.0**
HZTE				IAML		07 23 10.2	
	comp=Z,130nm,1.0s						
HZTE				IAmb	IAmb	07 23 10.3	
	comp=Z,83nm,0.7s						
BLUN	**Bluefields**	**5.66**	**349**	IAML		07 23 12.9	
	comp=Z,73nm,1.0s						
BLUN				*i* P	**Pn**	**07 23 14.2**	**+0.9**
BLUN				IAmb	IAmb	07 23 27.1	
	comp=Z,66nm,1.8s						
MALC	**Bahia Malaga**	**5.81**	**114**	*e*P	**Pn**	**07 23 16.8**	**+1.5**
ACON	**Acoyapa**	**6.05**	**336**	*e*P	**Pn**	**07 23 18.5**	**-0.2**
BBAC	**Balboa, Cauca**	**6.94**	**129**	*e*P	**Pn**	**07 23 31.3**	**+0.3**
POPC	**Popayan, Colom**	**7.09**	**123**	*e*P	**Pn**	**07 23 33.9**	**+0.7**
GCUF	**Volcan Galeras**	**7.39**	**134**	*e*P	**Pn**	**07 23 39.2**	**+1.7**
ORTC	**Ortega, Tolima**	**7.78**	**108**	*e*P	**Pn**	**07 23 44.6**	**+2.1**

*IDC **22** 07:31:48.8±4.2,3˚.16S×130˚.71E, h0km, mb3.5/2, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=300.6km s-min=30.7km az=71.0*
*DJA **22** 07:31:50.6±0.6, 3˚S±5˚×13˚1E±˚, h10km±5km, M3.3/7, MLv3.3/7*
ISC 22 07:31:52.1±1.1, **3˚.14S**±0˚.07×**130˚.70E**±0˚.08, **h24**km, **n7**, σ0**946**/7, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.56**	**82**	P	**Pn**	**07 32 18.4**	**0.0**
BNDI	**Bandanaira**	**1.58**	**210**	P	**Pn**	**07 32 18.7**	**0.0**
SWI	**Sorong**	**2.33**	**14**	P	**Pn**	**07 32 28.7**	**-0.3**
LBMI	**Labuha**	**4.05**	**308**	P	**Pn**	**07 32 52.5**	**-0.2**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=348,slow=11,SNR=1.6 1.1nm,0.9s	**17.07**	**168**	P	**Pn**	**07 35 49.1**	**-0.2**
ASAR	**Alice Springs** 3.1nm,0.5s,baz=351,slow=10,SNR=23 3.1nm,0.5s	**20.64**	**172**	P	**P**	**07 36 29.7**	**-0.4**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=110,slow=9.9,SNR=1.8 0.1nm,0.4s	**65.43**	**326**	P	**P**	**07 42 33.7**	**+0.7**

*IDC **22** 07:44:41.6±11.0, 33˚.77N×24˚.26E, h0km, mb3.8/4, mbtmp3.7/5, ML4.1/1, MS4.6/3, Error ellipse: s-maj=206.0km s-min=57.1km az=42.0*
*THE **22** 07:44:52.9, 34˚.37N×25˚.01E, h0km±2km, ML2.7/4, Error ellipse: s-maj=4.0km s-min=1.3km az=175.0*
*ATH **22** 07:44:54.6, 34˚.42N×24˚.98E, h19km±3km, ML2.7/6, Error ellipse: s-maj=4.2km s-min=1.4km az=346.0*
*GII **22** 07:44:58.0±0.1, 33˚.478N±0˚.001×25˚.641E±0˚.001, h1km, Mws3.3, confirmed*
ISC 22 07:44:51.1±1.6, **34˚.23N**±0˚.07×**25˚.04E**±0˚.04, **h26**km±12km, **n40**, σ1**960**/42, **mb3.6**/4, **MS4.7**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMBK	**Timbaki Herakl**	**0.87**	**345**	P	**Pb**	**07 45 07.2**	**-0.4**
TMBK	**Timbaki Herakl**	**0.87**	**345**	P	**Pb**	**07 45 07.4**	**-0.2**
FRMA	**Ierapetra Chan**	**0.97**	**36**	P	**Pn**	**07 45 12.2**	**+3.1**
FRMA	**Ierapetra Chan**	**0.97**	**36**	P	**Pn**	**07 45 11.5**	**+2.4**
FRMA				AML	AML	07 45 41.2	
	comp=N,762μm,0.6s						
FRMA				AML	AML	07 45 43.1	
	comp=E,990μm,0.5s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pb**	**07 45 09.6**	**0.0**
GVD				S	**Sn**	**07 45 24.3**	**+1.8**
	comp=E,1μm,0.4s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pb**	**07 45 09.7**	**+0.1**
GVD				S	**Sb**	**07 45 21.9**	**-0.4**
GVD				AML	AML	07 45 33.5	
	comp=E,2176μm,0.4s						
GVD				AML	AML	07 45 36.6	
	comp=N,1862μm,0.4s						
IDI	**Anoyia**	**1.07**	**354**	P	**Pb**	**07 45 10.4**	**-0.5**
IDI				S	**Sn**	**07 45 24.2**	**-0.3**
	comp=N,348nm,0.4s						
IDI	**Anoyia**	**1.07**	**354**	P	**Pb**	**07 45 10.6**	**-0.3**
IDI				S	**Sb**	**07 45 22.1**	**-2.4**
IDI				AML	AML	07 45 28.9	
	comp=E,853μm,0.4s						
IDI				AML	AML	07 45 37.2	
	comp=N,823μm,0.5s						
KSTL	**Kastelli Herak**	**1.07**	**2**	P	**Pb**	**07 45 10.4**	**-0.6**
KSTL				S	**Sn**	**07 45 24.2**	**-0.4**
KSTL	**Kastelli Herak**	**1.07**	**2**	P	**Pb**	**07 45 10.2**	**-0.9**
KSTL				S	**Sb**	**07 45 21.5**	**-3.1**
KSTL				AML	AML	07 45 29.7	
	comp=N,1258μm,0.4s						
KSTL				AML	AML	07 45 29.9	
	comp=E,581μm,0.4s						
IACM	**Heraklion**	**1.08**	**2**	P	**Pb**	**07 45 11.0**	**-0.1**
ZKR	**Zakros**	**1.32**	**47**	P	**Pb**	**07 45 16.0**	**+0.9**
ZKR				S	**Sb**	**07 45 33.5**	**+1.9**
	comp=E,178nm,0.5s						
ZKR	**Zakros**	**1.32**	**47**	P	**Pb**	**07 45 16.0**	**+0.9**
ZKR				S	**Sn**	**07 45 31.0**	**+0.5**
ZKR				AML	AML	07 45 43.2	
	comp=N,262μm,0.5s						
ZKR				AML	AML	07 45 46.7	
	comp=E,444μm,0.5s						
IMMV	**Iera Moni Meta**	**1.51**	**325**	P	**Pb**	**07 45 18.2**	**-0.2**
IMMV				S	**Sb**	**07 45 38.2**	**+1.1**
	comp=E,335nm,0.6s						
IMMV	**Iera Moni Meta**	**1.51**	**325**	P	**Pn**	**07 45 17.7**	**+1.2**
IMMV				AML	AML	07 45 47.2	
	comp=N,552μm,0.4s						
IMMV				AML	AML	07 45 52.6	
	comp=E,784μm,0.7s						
CHAN	**Chania**	**1.53**	**328**	P	**Pn**	**07 45 17.7**	**+1.1**
ANKY	**Antikythira Is**	**2.17**	**319**	P	**Pn**	**07 45 26.5**	**+1.0**
KARP	**Karpathos**	**2.19**	**52**	P	**Pn**	**07 45 29.2**	**+3.3**
SNT5	**Nea Kammeni, S**	**2.19**	**8**	P	**Pn**	**07 45 26.5**	**+0.6**
MHLO	**Agia Marina, M**	**2.51**	**348**	P	**Pn**	**07 45 31.4**	**+1.2**
DSI	**Dead Sea**	**9.09**	**104**	S	**Sn**	**07 48 38.5**	**-3.6**
DSI	**Dead Sea**	**9.09**	**104**	P	**Pn**	**07 47 01.8**	**+1.2**
MSBI	**Mazada**	**9.16**	**106**	S	**Sn**	**07 48 39.5**	**-4.3**
MSBI	**Mazada**	**9.16**	**106**	P	**Pn**	**07 47 02.5**	**+0.9**
KRMI	**Paran Flat**	**9.18**	**114**	S	Sn	07 48 38.0	-6.2
KRMI	**Paran Flat**	**9.18**	**114**	P	**Pn**	**07 47 01.8**	**0.0**
PRNI	**Paran**	**9.28**	**112**	P	**Pn**	**07 47 03.4**	**+0.2**
PRNI	**Paran**	**9.28**	**112**	S	Sn	07 48 41.1	-5.7
MBRI	**Mt Berech**	**9.48**	**115**	P	**Pn**	**07 47 05.9**	**-0.1**
MBRI	**Mt Berech**	**9.48**	**115**	S	Sn	07 48 45.4	-6.4
EIL	**Elat**	**9.57**	**116**	S	Sn	07 48 47.1	-6.8
EIL	**Elat**	**9.57**	**116**	P	**Pn**	**07 47 06.9**	**-0.2**
AKASG	**Malin Array Be** comp=E,0.7nm,0.3s,baz=202,slow=11,SNR=4.4 comp=E,0.2nm,0.3s	**16.75**	**9**	P	**Pn**	**07 48 44.4**	**+0.7**
FINES	**FINESS Array B** comp=E,0.7nm,0.7s,baz=164,slow=7.2,SNR=3.4 comp=E,0.7nm,0.7s	**27.24**	**1**	P	**P**	**07 50 31.6**	**-1.2**
KURBB	**Kurchatov Arra** comp=E,0.5nm,0.4s,baz=270,slow=8.4,SNR=5.5 comp=E,0.5nm,0.4s	**41.79**	**50**	P	**P**	**07 52 39.0**	**+0.7**
MKAR	**Makanchi Array** comp=E,0.4nm,0.5s,baz=274,slow=7.5,SNR=6.1 comp=E,0.4nm,0.5s	**44.38**	**56**	P	**P**	**07 53 00.5**	**+1.2**
ZALV	**Zalesovo Beam** comp=E,1.1nm,0.4s,baz=276,slow=8.5,SNR=4.0 comp=E,1.1nm,0.4s	**45.73**	**46**	P	**P**	**07 53 09.4**	**-0.4**
LSZ	**Lusaka** comp=E,766nm,21.7s,baz=131,slow=36	**49.32**	**176**	LR	LR	08 14 08.4	
SADO	**Sadowa** comp=E,260nm,20.9s,baz=344,slow=36	**75.62**	**315**	LR	LR	08 29 35.3	
CPUP	**Villa Florida** comp=E,395nm,21.8s,baz=176,slow=35	**98.52**	**244**	LR	LR	08 41 46.2	

IDC 22 07:45:21.5±3.3, **54˚.36N×86˚.94E, h0km, mbtmp2.7**/2, **ML2.4**/2, **Error ellipse: s-maj=28.3km s-min=17.0km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=72,slow=342,SNR=1.8	**1.31**	**253**	I	I	07 53 35.1	
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=73,slow=17,SNR=11	**1.31**	**253**	Pg	Pg	07 45 44.5	-2.2
ZALV				Lg	Lg	07 46 03.8	
	1.3nm,0.3s,baz=74,slow=17,SNR=5.7						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=14,SNR=2.0 0.5nm,0.4s	**6.35**	**237**	Pn	Pn	07 46 57.5	+1.2
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=24,slow=13,SNR=4.9	**8.13**	**203**	Pn	Pn	07 47 22.2	+1.5
MKAR				Sn	Sn	07 48 53.4	+0.1
	0.1nm,0.3s,baz=26,slow=26,SNR=5.0						
MKAR				Lg	Lg	07 49 37.7	
	0.1nm,0.3s,baz=20,slow=32,SNR=6.5 0.1nm,0.4s						

IDC 22 07:50:52.8±3.5, **54˚.55N×87˚.10E, h0km, mbtmp2.7**/2, **ML2.4**/2, **Error ellipse: s-maj=30.7km s-min=21.0km az=46.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=65,slow=340,SNR=1.8	**1.47**	**247**	I	I	07 59 10.3	
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=58,slow=17,SNR=6.0	**1.47**	**247**	Pg	Pn	07 51 17.9	-2.6
ZALV				Lg	Lg	07 51 40.1	
	0.6nm,0.3s,baz=64,slow=26,SNR=4.1						
KURBB	**Kurchatov Arra** baz=54,slow=14,SNR=2.2 0.3nm,0.5s	**6.54**	**236**	Pn	Pn	07 52 30.9	+0.7
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=26,slow=13,SNR=6.6	**8.35**	**203**	Pn	Pn	07 52 56.5	+1.5
MKAR				Lg	Lg	07 55 15.3	
	baz=27,slow=32,SNR=1.9 0.1nm,0.3s						

*IDC **22** 07:54:00.8±3.6, 3˚.16S×130˚.92E, h0km, mb3.8/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=282.5km s-min=26.8km az=72.0*
*DJA **22** 07:54:03.3±0.4, 3˚S±4˚×13˚1E±˚, h10km, M3.7/8, mb3.9/1, MLv3.6/8*
ISC 22 07:54:05.7±0.9, **3˚.32S**±0˚.07×**130˚.71E**±0˚.07, **h35**km, **n11**, σ2**901**/13, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.44**	**214**	P	**Pn**	**07 54 30.4**	**+1.1**
FAKI	**Fak Fak**	**1.59**	**76**	P	**Pn**	**07 54 31.4**	**0.0**
FAKI				S	**Sn**	**07 54 52.1**	**+1.3**
SWI	**Sorong**	**2.50**	**13**	P	**Pn**	**07 54 43.7**	**-0.2**
NLAI	**Namlea**	**3.60**	**271**	P	**Pn**	**07 54 59.0**	**-0.1**
LBMI	**Labuha**	**4.16**	**310**	P	**Pn**	**07 55 05.7**	**-1.1**
SANI	**Sanana**	**4.88**	**285**	P	**Pn**	**07 55 15.1**	**-1.5**
GTOI	**Gorontalo**	**8.64**	**297**	P	**Pn**	**07 56 10.1**	**+1.8**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=349,slow=11,SNR=11	**16.90**	**168**	P	**Pn**	**07 57 58.6**	**-1.0**
WRA				S	Sn	08 00 57.3	-9.2
	0.7nm,0.6s,baz=352,slow=24,SNR=3.5 0.5nm,0.3s						
ASAR	**Alice Springs** 3.5nm,0.3s,baz=351,slow=11,SNR=63	**20.46**	**172**	P	**P**	**07 58 42.2**	**+1.7**
ASAR				S	**S**	**08 02 22.8**	**-5.1**
	0.4nm,0.7s,baz=358,slow=27,SNR=2.1 3.5nm,0.3s						
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=114,slow=9.5,SNR=4.1 0.3nm,0.5s	**65.58**	**326**	P	**P**	**08 04 46.5**	**+0.4**
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=125,slow=7.2,SNR=1.9 0.3nm,0.4s	**75.36**	**327**	P	**P**	**08 05 46.0**	**+0.5**

IDC 22 07:58:33.1±5.1, **2˚.79S×131˚.90E, h0km, mb3.3**/2, **mbtmp3.3**/3, **Error ellipse: s-maj=335.5km s-min=31.2km az=73.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=353,slow=11,SNR=1.7	**17.21**	**172**	P	**Pn**	**08 02 35.9**	**+0.7**
ASAR	**Alice Springs** 0.6nm,0.4s,baz=350,slow=10,SNR=7.2 0.6nm,0.4s	**20.84**	**175**	P	**P**	**08 03 16.1**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=121,slow=5.4,SNR=2.1 0.2nm,0.7s	**65.83**	**325**	P	**P**	**08 09 20.5**	**+0.1**

IDC 22 08:00:58.3±3.2, **3˚.34S×130˚.22E, h0km, mb3.4**/2, **mbtmp3.5**/3, **ML3.0**/1, **Error ellipse: s-maj=221.8km s-min=30.7km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=350,slow=14,SNR=2.9 0.8nm,0.7s	**16.99**	**167**	P	**Pn**	**08 04 58.2**	**+0.7**
ASAR	**Alice Springs** 1.1nm,0.4s,baz=350,slow=11,SNR=16 1.1nm,0.4s	**20.52**	**170**	P	**P**	**08 05 38.0**	**-0.3**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=123,slow=5.3,SNR=2.0 0.1nm,0.4s	**65.32**	**326**	P	**P**	**08 11 42.3**	**0.0**

IDC 22 08:04:09.3±2.9, **3˚.74S×135˚.81E, h0km, mb3.5**/1, **mbtmp4.0**/3, **ML4.1**/2, **Error ellipse: s-maj=107.1km s-min=32.8km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=6.5,slow=12,SNR=23	**16.16**	**185**	Pn	P	**08 07 60.0**	**-1.5**
WRA				Sn	Sn	08 10 41.5	-17
	0.4nm,0.3s,baz=11,slow=23,SNR=4.6 4.0nm,0.5s						
ASAR	**Alice Springs** 0.4nm,0.3s,baz=9.9,slow=10,SNR=45 4.5nm,0.7s	**19.89**	**185**	P	P	08 08 41.7	-0.8
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=111,slow=7.1,SNR=1.9 0.3nm,0.6s	**68.87**	**324**	P	P	08 15 16.0	+0.1

*IDC **22** 08:11:23.8±2.4, 3˚.23S×130˚.89E, h0km, mb3.7/4, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=206.8km s-min=24.5km az=74.0*
*DJA **22** 08:11:27.0±0.6, 3˚S±4˚×13˚1E±˚, h13km±4km, M3.7/6, mb4.3/1, MLv3.4/6*
ISC 22 08:11:28.8±0.9, **3˚.19S**±0˚.06×**130˚.76E**±0˚.07, **h35**km, **n10**, σ1**814**/11, **mb3.7**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.51**	**80**	P	**Pn**	**08 11 53.7**	**+0.3**
BNDI	**Bandanaira**	**1.58**	**213**	P	**Pn**	**08 11 55.3**	**+1.0**
SWI	**Sorong**	**2.36**	**12**	P	**Pn**	**08 12 05.0**	**-0.1**
SWI				S	**Sn**	**08 12 32.8**	**-0.1**
NLAI	**Namlea**	**3.66**	**269**	P	**Pn**	**08 12 22.8**	**-0.1**
LBMI	**Labuha**	**4.13**	**308**	P	**Pn**	**08 12 28.7**	**-0.7**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=351,slow=11,SNR=2.7	**17.02**	**168**	Pn	**Pn**	**08 15 21.9**	**-2.4**
WRA				Sn	Sn	08 18 14.6	-18
	0.1nm,0.3s,baz=352,slow=24,SNR=2.0 0.2nm,0.2s						
ASAR	**Alice Springs** 2.2nm,0.4s,baz=350,slow=11,SNR=26 2.2nm,0.4s	**20.58**	**172**	P	**P**	**08 16 04.2**	**-0.7**
SONM	**Songino Array** 0.3nm,0.4s,baz=160,slow=8.9,SNR=3.0 0.3nm,0.4s	**55.11**	**340**	P	**P**	**08 20 58.7**	**+1.0**
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=117,slow=8.3,SNR=3.8 0.4nm,0.4s	**65.50**	**326**	P	**P**	**08 22 09.4**	**+0.8**
KURBB	**Kurchatov Arra** 0.3nm,0.4s,baz=136,slow=4.8,SNR=8.0 0.3nm,0.4s	**69.70**	**328**	P	**P**	**08 22 36.0**	**+1.0**

*IDC **22** 08:12:19.4±0.6, 56˚.66N×148˚.58W, h0km, mb4.4/26, mbtmp4.4/30, ML3.8/4, MS3.8/16, Error ellipse: s-maj=18.7km s-min=10.8km az=20.0*
*MOS **22** 08:12:19.3±0.8, 56˚.73N×148˚.58W, h11km, mb4.9/47, Error ellipse: s-maj=11.3km s-min=4.8km az=98.6*
*NEIC **22** 08:12:20.6±2.1, 56˚.67N±0˚.07×148˚.60W±0˚.09, h12km±4km, mb4.4/98, ML4.2/86, ML4.1(AEIC), Error ellipse: s-maj=10.3km s-min=6.7km az=168.0*
*AEIC **22** 08:12:23.6±1.9, 56˚.66N±0˚.07×148˚.59W±0˚.09, h4km±4km, Error ellipse: s-maj=10.2km s-min=6.8km az=168.0*
ISC 22 08:12:21.6±0.8, **56˚.63N**±0˚.06×**148˚.57W**±0˚.04, **h16**km±4km, **n775**, σ1**931**/771, **mb4.6**/108, **MS3.9**/17, **15C-7D, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.47**	**300**	Pn	**Pn**	**08 12 59.2**	**-1.9**
KDAK	**Kodiak Island**	**2.47**	**300**		**Sn**	**08 13 27.8**	**-3.1**
KDAK	**Kodiak Island** baz=116	**2.47**	**300**	P	**Pn**	**08 12 59.4**	**-1.6**
KDAK	**Kodiak Island**	**2.47**	**300**	*c* iP	**Pn**	**08 12 59.5**	**-1.6**
KDAK				pmax	pmax		
	comp=Z,82nm,0.9s						
KDAK	**Kodiak Island**	**2.47**	**300**	Pn	**Pn**	**08 12 59.5**	**-1.6**
	comp=Z,13nm,0.3s,baz=105,slow=4.8,SNR=113						
KDAK				Sn	**Sn**	**08 13 28.6**	**-2.3**
	comp=Z,15nm,0.3s,baz=77,slow=3.0,SNR=6.8 comp=Z,52nm,0.4s						
OHAK	**Old Harbor**	**2.65**	**285**	Pn	**Pn**	**08 13 01.3**	**-2.4**
OHAK	**Old Harbor**	**2.65**	**285**		**Sn**	**08 13 30.7**	**-4.8**
OHAK	**Old Harbor** baz=100	**2.65**	**285**	IAML		08 13 37.0	
	comp=E,250nm,0.5s						
OHAK				IAML		08 13 40.4	
	comp=N,241nm,0.6s						
OHAK	**Old Harbor**	**2.65**	**285**	P	**Pn**	**08 13 01.2**	**-2.4**
OHAK	**Old Harbor** baz=100	**2.65**	**285**	P	**Pn**	**08 13 01.1**	**-2.6**
SYI	**Shuyak Island**	**2.86**	**316**		**Pn**	**08 13 05.0**	**-1.5**
SYI	**Shuyak Island**	**2.86**	**316**		**Sn**	**08 13 37.3**	**-3.2**
SYI	**Shuyak Island** comp=N,269nm,0.7s	**2.86**	**316**	IAML		08 13 40.3	
SYI				IAML		08 13 40.4	
	comp=E,339nm,0.8s						
Q20K	**Shuyak Island** baz=132	**2.86**	**316**	P	**Pn**	**08 13 04.9**	**-1.6**
Q23K	**Middleton Isla**	**3.04**	**22**	P

baz=172
Q19K Cape Douglas, 3.56 312 Pn 08 13 15.2 -1.0
Q19K Cape Douglas, 3.56 312 P Pn 08 13 16.1 -0.1
baz=128
KAHG Katmai Hook Gl 3.72 303 Pn 08 13 18.0 -0.5
AUL Augustine Lava 3.78 319 Pn 08 13 18.3 -0.9
O22K Cooper Landing 3.91 352 Pn 08 13 18.6 -2.3
O22K Cooper Landing 3.91 352 P Pn 08 13 19.4 -1.5
baz=171
P19K Oil Pt 3.91 323 Pn 08 13 19.6 -1.4
P19K IAML 08 14 08.6
comp=E,517nm,0.5s
P19K IAML 08 14 08.7
comp=N,474nm,0.6s
P19K Oil Pt 3.91 323 P Pn 08 13 19.8 -1.2
baz=139
KCE Katmai Mt Cerb 3.92 297 Pn 08 13 22.1 +0.9
HIN Hinchinbrook I 3.93 15 Pn Pn 08 13 19.2 -2.0
HIN IAML 08 14 13.8
comp=E,466nm,1.1s
KAIM Kayak Island 3.96 32 Pn Pn 08 13 19.4 -2.3
KAIM IAML 08 14 19.4
comp=N,575nm,1.2s
KAIM IAML 08 14 19.5
comp=E,609nm,1.1s
KAIM Kayak Island 3.96 32 P Pn 08 13 20.4 -1.3
baz=216
SLKM Skilak Lake 3.98 348 Pn 08 13 20.2 -1.7
KAHC Katmai Hardscr 4.01 303 Pn 08 13 22.2 -0.2
KVTA Katmai Vly 10 4.03 299 Pn 08 13 22.4 -0.2
ANCK Angle Creek 4.06 296 Pn 08 13 22.6 -0.5
O20K Slope Mountain 4.07 330 Pn 08 13 21.9 -1.2
O20K Slope Mountain 4.07 330 P Pn 08 13 22.0 -1.2
baz=146
IVE Iliamna Volcan 4.12 327 Pn 08 13 21.7 -2.3
ILSW Iliamna Southw 4.14 326 Pn 08 13 22.2 -2.0
ILSW IAML 08 14 19.1
comp=E,273nm,0.8s
ILSW IAML 08 14 26.0
comp=N,215nm,0.8s
EYAK Cordova Ski Ar 4.20 19 Pn 08 13 23.1 -1.7
EYAK Cordova Ski Ar 4.20 19 P Pn 08 13 23.5 -1.4
EYAK Cordova Ski Ar 4.20 19 P Pn 08 13 23.4 -1.4
baz=202
KELA Mount Kelaz 4.27 298 Pn 08 13 26.1 +0.2
FID Port Fidalgo 4.27 14 Pn 08 13 23.7 -2.2
FID IAML 08 14 25.7
comp=N,194nm,0.9s
FID IAML 08 14 26.9
comp=E,196nm,1.0s
SUCK Suckling Hills 4.28 34 Pn 08 13 24.1 -1.9
SUCK IAML 08 14 24.2
comp=N,371nm,1.0s
SUCK IAML 08 14 36.6
comp=E,323nm,1.1s
CNTC Contact Creek 4.28 296 Pn 08 13 25.3 -0.8
Q17K Contact Creek 4.28 296 P Pn 08 13 25.6 -0.5
baz=109
RAGM Ragged Mountai 4.28 27 Pn 08 13 24.3 -1.8
GLI Glacier Island 4.33 10 Pn 08 13 25.1 -1.5
GLI IAML 08 14 16.4
comp=E,255nm,0.9s
GLI IAML 08 14 38.0
comp=N,176nm,1.1s
GLI Glacier Island 4.33 10 P Pn 08 13 25.2 -1.5
baz=191
HMT Hamilton 4.35 30 Pn 08 13 25.3 -1.7
NICHA Nichawak Mount 4.35 32 Pn 08 13 25.5 -1.5
CAPN Captain Cook N 4.36 343 Pn 08 13 26.4 -0.7
CAPN Captain Cook N 4.36 343 P Pn 08 13 26.6 -0.5
baz=161
RED Redoubt Volcan 4.39 332 Pn 08 13 25.3 -2.4
RDSO Redoubt South 4.41 332 Pn 08 13 25.7 -2.3
RSO Redoubt South 4.42 332 Pn 08 13 26.5 -1.6
RDT Redoubt 4.43 335 Pn 08 13 25.8 -2.4
GOAT Goat Mountain 4.44 25 Pn 08 13 26.6 -1.7
RDWB Redoubt West 4.47 332 Pn 08 13 26.4 -2.4
BGLC Bering Glacier 4.47 36 Pn 08 13 26.9 -1.6
BGLC Bering Glacier 4.47 36 P Pn 08 13 27.2 -1.4
baz=221
P18K Big Mountain, 4.49 311 Pn 08 13 27.1 -1.9
P18K Big Mountain, 4.49 311 P Pn 08 13 27.2 -1.8
baz=125
RC01 Rabbit Creek A 4.51 353 Pn 08 13 27.1 -2.1
RC01 IAML 08 14 32.7
comp=E,180nm,0.8s
RC01 IAML 08 14 33.1
comp=N,169nm,0.8s
RC01 Rabbit Creek A 4.51 353 P Pn 08 13 27.5 -1.7
baz=172
DFR Drift River 4.52 333 Pn 08 13 27.8 -1.6
NCT North Crescent 4.55 332 Pn 08 13 27.7 -2.1
BERG Berg Lake 4.55 32 Pn 08 13 27.9 -1.9
BERG Berg Lake 4.55 32 IAML 08 14 35.5
comp=N,370nm,1.0s
GRIN Grindle Hills 4.58 35 Pn 08 13 28.3 -1.9
FIS Fire Island 4.61 350 Pn 08 13 29.7 -0.8
FIS IAML 08 14 31.9
comp=N,336nm,0.9s
SNH Sunshine Point 4.66 38 Pn Pn 08 13 29.5 -1.8
SNH IAML 08 14 43.3
comp=E,206nm,1.1s
SNH IAML 08 14 58.2
comp=N,218nm,1.4s
O19K Port Alsworth 4.68 322 Pn 08 13 29.5 -2.0
O19K Port Alsworth 4.68 322 P Pn 08 13 29.4 -2.1
baz=137
KHIT Khitrov Hills 4.73 34 Pn 08 13 30.2 -2.0
DIV Divide 4.74 17 Pn 08 13 30.9 -1.5
O18K Koktuh Hills 4.77 315 Pn 08 13 31.5 -1.2
O18K IAML 08 14 44.9
comp=N,162nm,0.9s
O18K Koktuh Hills 4.77 315 P Pn 08 13 30.4 -2.3
baz=130
KNK Knik Glacier 4.80 1 Pn 08 13 31.1 -2.0
KNK IAML 08 15 00.7
comp=E,126nm,0.9s
KNK Knik Glacier 4.80 1 P Pn 08 13 31.5 -1.7
baz=181
Q16K King Salmon 4.80 299 Pn 08 13 32.4 -0.7
Q16K King Salmon 4.80 299 P Pn 08 13 32.6 -0.6
baz=112
BMRM Bremner River 4.81 24 Pn 08 13 31.6 -1.8
BMRM Bremner River 4.81 24 P Pn 08 13 31.9 -1.5
baz=207
WAX Waxell Ridge 4.86 36 Pn 08 13 31.9 -2.2
WAX IAML 08 14 33.5
comp=E,249nm,0.8s
P17K Kvichak River 4.92 305 Pn 08 13 33.3 -1.5
P17K Kvichak River 4.92 305 P Pn 08 13 33.6 -1.2
baz=118
BARK Barkley Ridge 4.95 38 Pn 08 13 33.5 -1.7
N20K Mount Spurr 4.96 339 P Pn 08 13 33.9 -1.4
baz=156
SPCR Spurr Chakacha 4.96 339 Pn 08 13 33.5 -1.9
SUA Susitna One 4.97 348 Pn 08 13 33.9 -1.7
SUA Susitna One 4.97 348 P Pn 08 13 34.0 -1.7
baz=166
MESA MESA 4.98 42 Pn 08 13 34.6 -1.2
MESA IAML 08 14 36.6
comp=N,136nm,0.8s
MESA IAML 08 14 43.0
comp=E,130nm,0.7s
MESA MESA 4.98 42 P Pn 08 13 34.2 -1.6
baz=228
PMR Palmer 4.99 357 Pn 08 13 33.9 -1.7
PMR IAML 08 14 44.4
comp=E,114nm,1.0s
PMR Palmer 4.99 357 P Pn 08 13 34.2 -1.5
PMR Palmer 4.99 357 P Pn 08 13 34.4 -1.2
baz=176
PMR Palmer 4.99 357 P Pn 08 13 33.9 -1.7
SPCG Spurr Capps Gl 5.00 341 Pn 08 13 34.7 -1.4
CRQM Cirque 5.01 32 Pn 08 13 34.3 -1.9
CRQM IAML 08 14 36.6
comp=E,202nm,0.8s
CRQE Cirque 5.02 32 P Pn 08 13 34.4 -1.9
baz=217
KLU Klutina 5.06 15 Pn 08 13 34.8 -2.0
KLU IAML 08 14 38.4
comp=N,188nm,1.0s
KLU IAML 08 14 39.8
comp=E,134nm,1.2s
KLU Klutina 5.06 15 P Pn 08 13 35.4 -1.4
baz=197

TGL Tana Glacier 5.10 34 Pn 08 13 35.3 -2.1
TGL IAML 08 14 42.7
comp=E,199nm,0.8s
TGL IAML 08 15 04.9
comp=N,104nm,1.3s
ISLE Juniper Island 5.14 37 Pn 08 13 36.0 -2.0
ISLE IAML 08 14 58.2
comp=E,157nm,1.1s
ISLE IAML 08 15 13.4
comp=N,192nm,1.3s
BAGL Bagley Icefiel 5.14 39 Pn 08 13 35.9 -1.9
GHO Glory Hole Cre 5.16 358 Pn Pn 08 13 37.2 -1.0
GHO IAML 08 14 43.5
comp=N,184nm,0.7s
STLK Strandline Lak 5.16 342 Pn 08 13 36.6 -1.6
SML Sawmill 5.19 1 Pn Pn 08 13 37.5 -1.1
SML IAML 08 14 53.8
comp=E,138nm,0.7s
SML IAML 08 14 54.7
comp=N,183nm,1.2s
SML Sawmill 5.19 1 P Pn 08 13 37.5 -1.1
baz=182
M23K Glacier View 5.20 4 P Pn 08 13 37.7 -0.9
baz=185
M22K Willow 5.20 352 P Pn 08 13 38.7 +0.1
baz=171
N19K Bonanza Creek 5.20 326 Pn 08 13 37.1 -1.7
N19K Bonanza Creek 5.20 326 P Pn 08 13 37.1 -1.7
baz=141
SPNN North Nagishla 5.21 338 Pn 08 13 37.1 -1.8
SCM Sheep Creek Mo 5.26 6 Pn 08 13 38.5 -1.0
SCM Sheep Creek Mo 5.26 6 P Pn 08 13 38.6 -1.0
baz=188
SCM Sheep Creek Mo 5.26 6 P Pn 08 13 38.5 -1.0
VRDI Verde Repeater 5.32 28 Pn 08 13 38.8 -1.7
VRDI IAML 08 14 48.5
comp=N,98nm,0.9s
VRDI IAML 08 15 02.2
comp=E,100nm,1.1s
KIAG Kiagna River 5.38 34 Pn 08 13 39.5 -1.8
N25K Chitina, Valde 5.39 21 Pn 08 13 40.0 -1.3
N25K IAML 08 14 43.4
comp=N,208nm,0.9s
N25K Chitina, Valde 5.39 21 P Pn 08 13 39.9 -1.4
baz=204
SAMH Samovar Hills 5.39 46 Pn 08 13 40.1 -1.3
GLB Gilahina Butte 5.41 25 Pn Pn 08 13 40.1 -1.6
GLB IAML 08 14 41.2
comp=E,110nm,0.7s
GLB IAML 08 14 46.2
comp=N,100nm,0.8s
GRNC Granite Creek 5.43 38 Pn 08 13 40.3 -1.8
TABL Table Mountain 5.45 42 Pn 08 13 40.5 -1.8
CHGN Chignik 5.47 271 Pn Pn 08 13 40.3 -2.0
CHGN Chignik 5.47 271 P Pn 08 13 40.6 -1.7
baz=82
O17K Koliganek Bris 5.50 308 Pn 08 13 41.3 -1.4
O17K Koliganek Bris 5.50 308 P Pn 08 13 41.4 -1.4
baz=121
PTPK Patty Peak 5.56 32 Pn 08 13 42.1 -1.6
MCARA McCarthy VSAT 5.56 29 Pn 08 13 42.0 -1.6
MCARA McCarthy VSAT 5.56 29 P Pn 08 13 42.4 -1.2
baz=214
N18K Kilae Creek 5.57 320 Pn 08 13 41.6 -2.2
N18K Kilae Creek 5.57 320 P Pn 08 13 42.5 -1.3
baz=134
SKT Skwentna 5.58 345 Pn 08 13 42.8 -1.0
SKT Skwentna 5.58 345 P Pn 08 13 42.5 -1.3
baz=163
P16K Nushagak River 5.58 299 Pn 08 13 43.1 -0.7
P16K Nushagak River 5.58 299 P Pn 08 13 42.9 -0.9
baz=111
PCA Pinnacle 5.59 48 Pn 08 13 42.3 -1.7
PINM Pinnacle 5.59 48 P Pn 08 13 42.7 -1.4
baz=205
M24K Tolsona, Glenn 5.63 12 Pn 08 13 44.1 -0.5
M24K Tolsona, Glenn 5.63 12 P Pn 08 13 44.3 -0.2
baz=194
BARN Barnard Glacie 5.71 36 Pn 08 13 44.0 -1.8
PNL Peninsula 5.73 54 Pn 08 13 44.3 -1.7
PNL Peninsula 5.73 54 P Pn 08 13 44.5 -1.5
PNL Peninsula 5.73 54 P Pn 08 13 44.7 -1.2
baz=242
CTG Chitna Glacier 5.74 38 P Pn 08 13 44.5 -1.8
baz=224
CTGM Chitina Glacie 5.75 38 Pn 08 13 44.3 -2.0
LOGN Logan Glacier 5.76 40 Pn 08 13 44.5 -2.0
M20K Styx River 5.76 338 Pn 08 13 45.0 -1.5
M20K Styx River 5.76 338 P Pn 08 13 44.5 -1.9
baz=154
SVW2 Sparrevohn 5.77 324 Pn Pn 08 13 44.5 -2.0
SVW2 Sparrevohn 5.77 324 P Pn 08 13 44.5 -2.0
BCPM Bancas Point 5.77 51 Pn 08 13 44.7 -1.8
WACK Wrangell Chich 5.79 20 Pn 08 13 46.1 -0.9
O16K Kokwok River B 5.86 304 Pn Pn 08 13 46.8 -0.9
O16K Kokwok River B 5.86 304 P Pn 08 13 47.0 -0.6
baz=116
VNHG Veniaminof 1 5.89 270 Pn 08 13 47.4 -0.9
WAZA Wrangell Mount 5.91 21 Pn 08 13 47.9 -0.7
N17K Nushagak Hills 5.96 314 Pn Pn 08 13 47.4 -1.7
N17K Nushagak Hills 5.96 314 P Pn 08 13 47.3 -1.7
baz=127
WAT6 Susitna Watana 5.98 4 Pn 08 13 48.3 -1.2
WAT6 Susitna Watana 5.98 4 P Pn 08 13 48.4 -1.1
baz=184
HARP HAARP 6.04 15 Pn 08 13 49.7 -0.5
HARP HAARP 6.04 15 P Pn 08 13 49.9 -0.3
baz=198
M19K Big River Lodg 6.07 333 Pn 08 13 48.4 -2.2
M19K Big River Lodg 6.07 333 P Pn 08 13 48.5 -2.2
baz=148
S14K Fog Glacier 6.10 271 P Pn 08 13 50.0 -1.1
baz=82
VNFG Fog Glacier, M 6.10 271 Pn 08 13 50.1 -1.0
M18K Stony River 6.14 326 Pn 08 13 49.1 -2.4
M18K Stony River 6.14 326 P Pn 08 13 49.3 -2.2
baz=139
WAT1 Susitna Watana 6.22 0 P Pn 08 13 52.1 -0.5
baz=180
WAT7 Susitna Watana 6.22 359 Pn 08 13 51.6 -1.2
O29M Mount Kennedy 6.40 51 Pn 08 13 53.7 -1.6
O29M Mount Kennedy 6.40 51 P Pn 08 13 54.1 -1.2
baz=240
L19K White Mountain 6.42 333 Pn Pn 08 13 52.8 -2.6
L19K White Mountain 6.42 333 P Pn 08 13 53.1 -2.4
baz=147
L20K Farewell, AK 6.45 338 Pn 08 13 54.2 -1.7
L20K Farewell, AK 6.45 338 P Pn 08 13 54.2 -1.7
baz=153
P29M Windy Craggy 6.48 58 Pn 08 13 54.0 -2.2
P29M Windy Craggy 6.48 58 P Pn 08 13 54.5 -1.7
baz=247
CHNA Chernabura Isl 6.48 258 P Pn 08 13 54.0 -2.2
baz=69,SNR=7.8
CNBA Chernabura Isl 6.49 258 Pn 08 13 54.0 -2.3
DHY Denali Highway 6.49 5 Pn 08 13 55.4 -1.1
DHY Denali Highway 6.49 5 P Pn 08 13 55.5 -1.0
baz=186
YUK8 Steele Glacier 6.52 41 P Pn 08 13 56.5 -0.4
baz=228
O15K Ungalikthiuk R 6.52 298 Pn 08 13 56.0 -0.8
O15K Ungalikthiuk R 6.52 298 P Pn 08 13 56.5 -0.2
baz=108,SNR=33
PPLA Purkeypile 6.54 345 P Pn 08 13 56.8 -0.4
baz=162
PAX Paxson 6.55 13 Pn 08 13 56.5 -0.7
PAX Paxson 6.55 13 P Pn 08 13 56.1 -1.1
baz=195,SNR=22
PAX Paxson 6.55 13 P Pn 08 13 56.5 -0.7
N16K Nishlik Lake 6.58 310 Pn 08 13 56.8 -0.8
N16K Nishlik Lake 6.58 310 P Pn 08 13 56.5 -1.1
baz=121
M17K Holitna River 6.62 320 Pn 08 13 56.0 -2.1
M17K Holitna River 6.62 320 P Pn 08 13 56.3 -1.8
baz=132
YUK3 Moose Creek 6.63 36 P Pn 08 13 57.7 -0.8
baz=223,SNR=21
M27K Edge Creek, AK 6.67 28 Pn 08 13 57.9 -1.1
M27K Edge Creek, AK 6.67 28 P Pn 08 13 58.1 -0.9
baz=214,SNR=17
YUK7 Dusty Glacier 6.71 50 Pn 08 13 58.4 -1.1
MENT Mentasta 6.78 19 Pn 08 13 59.5 -0.8
MENT Mentasta 6.78 19 P Pn 08 13 59.4 -1.0
RND Reindeer 6.80 359 Pn 08 13 59.8 -0.8
RND Reindeer 6.80 359 P Pn 08 13 59.8 -0.8

SDPT Sand Point 6.80 264 Pn 08 13 59.2 -1.5
SDPT Sand Point 6.80 264 P Pn 08 13 59.3 -1.3
SDPT Sand Point 6.80 264 P Pn 08 13 59.1 -1.5
baz=74,SNR=8.0
S31K Pelican 6.82 74 P Pn 08 13 58.0 -2.9
baz=264,SNR=70
YUK6 Outpost Mounta 6.84 47 Pn 08 14 00.7 -0.7
YUK6 Outpost Mounta 6.84 47 P Pn 08 14 00.6 -0.7
baz=236,SNR=23
TRF Thorofare Moun 6.89 354 Pn 08 14 01.1 -0.9
TRF Thorofare Moun 6.89 354 P Pn 08 14 01.4 -0.7
baz=172,SNR=9.8
L26K Log Cabin Wild 6.93 20 Pn 08 14 01.9 -0.5
M16K Timber Creek 6.96 314 Pn 08 14 01.1 -1.7
M16K Timber Creek 6.96 314 P Pn 08 14 01.4 -1.4
baz=125
L18K Granite Mounta 6.96 327 Pn 08 14 01.0 -1.8
L18K Granite Mounta 6.96 327 P Pn 08 14 02.0 -0.8
baz=140
YUK4 Talbot Arm 6.97 43 P Pn 08 14 03.5 +0.4
baz=232,SNR=28
BVCY Beaver Creek 7.00 31 P Pn 08 14 02.3 -1.0
baz=218,SNR=13
N15K Kwethluk River 7.01 305 Pn 08 14 03.1 -0.5
N15K Kwethluk River 7.01 305 P Pn 08 14 02.8 -0.7
baz=115
CAST Castle Rocks 7.03 347 Pn 08 14 02.4 -1.4
CAST Castle Rocks 7.03 347 P Pn 08 14 02.5 -1.4
baz=164
P30M Million Dollar 7.03 55 Pn 08 14 02.7 -1.2
P30M Million Dollar 7.03 55 P Pn 08 14 02.9 -1.0
baz=245
KTH Kantishna Hill 7.04 351 Pn 08 14 03.0 -1.0
PLBC Pleasant Camp 7.07 61 P Pn 08 14 03.2 -1.1
baz=252
MCK McKinley 7.13 359 Pn 08 14 04.5 -0.6
MCK McKinley 7.13 359 P Pn 08 14 04.5 -0.6
baz=178
MCK McKinley 7.13 359 P Pn 08 14 04.5 -0.6
HYT Haines Junctio 7.13 49 Pn 08 14 04.0 -1.2
HYT Haines Junctio 7.13 49 P Pn 08 14 03.8 -1.4
baz=239
R31K City Hall, Gus 7.14 70 Pn 08 14 03.0 -2.2
R31K City Hall, Gus 7.14 70 P Pn 08 14 03.2 -2.0
baz=261,SNR=14
O14K Tigyukauivet M 7.25 297 Pn 08 14 06.1 -0.6
O14K Tigyukauivet M 7.25 297 P Pn 08 14 06.8 0.0
baz=106
SIT Sitka 7.28 81 P Pn 08 14 03.2 -3.9
L27K Beaver Creek, 7.29 25 P Pn 08 14 06.1 -1.2
baz=211
K20K Telida 7.29 340 P Pn 08 14 06.4 -0.8
baz=155
BCAR Beaver Creek A 7.30 25 Pn 08 14 06.3 -1.2
K24K Donnelly Dome 7.33 10 P Pn 08 14 07.4 -0.5
baz=192,SNR=7.5
TTA Tatalina 7.34 332 Pn 08 14 06.0 -2.1
TTA Tatalina 7.34 332 P Pn 08 14 06.1 -2.0
TTA Tatalina 7.34 332 P Pn 08 14 06.1 -2.0
baz=146
TTA Tatalina 7.34 332 P Pn 08 14 06.0 -2.1
RIDG Independent Ri 7.37 13 Pn 08 14 07.8 -0.6
RIDG Independent Ri 7.37 13 P Pn 08 14 07.9 -0.6
baz=196,SNR=20
L17K Donlin 7.42 322 Pn 08 14 07.0 -2.0
L17K Donlin 7.42 322 P Pn 08 14 07.1 -2.0
baz=134
CHUM Lake Minchumin 7.51 347 Pn 08 14 08.9 -1.3
CHUM Lake Minchumin 7.51 347 P Pn 08 14 08.6 -1.7
baz=164,SNR=13
M15K Kasigluk River 7.51 308 P Pn 08 14 09.2 -1.1
baz=117
L16K Owhat River 7.56 317 Pn 08 14 08.6 -2.5
L16K Owhat River 7.56 317 P Pn 08 14 10.5 -0.6
baz=127
SKAG Skagway 7.58 63 Pn 08 14 09.6 -1.6
SKAG Skagway 7.58 63 P Pn 08 14 09.9 -1.3
SKAG Skagway 7.58 63 P Pn 08 14 10.0 -1.2
baz=254,SNR=19
BWN Browne 7.58 357 Pn 08 14 09.4 -1.9
BPAW Bear Paw Mtn. 7.59 352 Pn 08 14 09.5 -1.9
BPAW Bear Paw Mtn. 7.59 352 P Pn 08 14 10.0 -1.4
baz=170
PN7A Pavlof North-7 7.62 267 Pn 08 14 10.3 -1.6
BESE Bessie Mountai 7.62 69 Pn 08 14 09.5 -2.4
N14K Kuskokwak Cree 7.66 301 P Pn 08 14 10.8 -1.6
baz=110
S32K Killisnoo 7.68 78 Pn 08 14 09.3 -3.3
S32K Killisnoo 7.68 78 P Pn 08 14 09.8 -2.8
baz=270,SNR=16
O30N Mendenhall 7.71 52 Pn 08 14 11.6 -1.5
O30N Mendenhall 7.71 52 P Pn 08 14 11.5 -1.5
baz=243,SNR=6.2
SCRK Sand Creek 7.71 15 Pn 08 14 12.1 -1.1
SCRK Sand Creek 7.71 15 P Pn 08 14 11.6 -1.6
baz=199
R32K Eaglecrest 7.76 72 Pn 08 14 11.2 -2.5
R32K Eaglecrest 7.76 72 P Pn 08 14 11.6 -2.1
baz=264,SNR=27
M29M Somme Creek 7.76 37 Pn 08 14 12.4 -1.5
M29M Somme Creek 7.76 37 P Pn 08 14 13.0 -0.9
baz=226,SNR=58
JIS Juneau Island 7.83 72 Pn 08 14 12.2 -2.5
JIS Juneau Island 7.83 72 P Pn 08 14 12.5 -2.2
K17K Iditarod 7.83 325 Pn Pn 08 14 12.7 -2.1
K17K Iditarod 7.83 325 P Pn 08 14 12.8 -1.9
baz=137
HDA Harding Lake 7.84 5 Pn 08 14 14.3 -0.6
HDA Harding Lake 7.84 5 P Pn 08 14 13.9 -1.0
baz=187
WRH Wood River Hil 7.87 2 Pn 08 14 14.6 -0.7
J18K Innoko River 7.97 333 Pn 08 14 15.4 -1.2
J18K Innoko River 7.97 333 P Pn 08 14 15.4 -1.2
baz=146
NEA2 Nenana 7.99 358 Pn 08 14 15.7 -1.3
NEA2 Nenana 7.99 358 P Pn 08 14 15.4 -1.5
baz=178
CCB Clear Creek Bu 8.05 2 Pn 08 14 16.9 -0.8
J20K Nowinta River 8.05 342 Pn 08 14 16.4 -1.3
J20K Nowinta River 8.05 342 P Pn 08 14 16.7 -1.1
baz=158
K27K Nicken 8.09 21 P Pn 08 14 17.3 -0.9
baz=206
M14K Bethel 8.10 306 Pn 08 14 18.6 +0.3
M14K Bethel 8.10 306 P Pn 08 14 17.6 -0.8
baz=115
J25K Salcha River, 8.16 10 P Pn 08 14 17.5 -1.8
baz=193
J19K Poorman 8.17 338 Pn 08 14 17.6 -1.7
J19K Poorman 8.17 338 P Pn 08 14 17.6 -1.7
baz=152
WHY Whitehorse 8.20 55 Pn 08 14 19.0 -0.9
WHY Whitehorse 8.20 55 P Pn 08 14 18.9 -1.0
baz=247,SNR=21
IL31 8.21 5 Pn 08 14 19.1 -0.8
ILAR Eielson Array 8.21 5 Pn 08 14 19.9 0.0
ILAR Eielson Array 8.21 5 P Pn 08 14 19.9 0.0
ILAR Eielson Array 8.21 5 Pn Pn 08 14 18.8 -1.2
comp=N,0.5nm,0.3s,baz=194,slow=13,SNR=20
ILAR Sn Sn 08 15 49.4 -2.9
comp=N,0.4nm,0.3s,baz=185,slow=13,SNR=4.6
J26L Joseph Creek 8.27 15 P Pn 08 14 19.5 -1.3
baz=200
COLA College 8.28 2 P Pn 08 14 20.9 +0.1
COLA College 8.28 2 P Pn 08 14 20.2 -0.6
baz=183
L15K Ungalak Mounta 8.34 313 P Pn 08 14 20.3 -1.3
baz=122
L29M L29M 8.34 35 P Pn 08 14 20.7 -1.1
baz=224
MDM Murphy Dome 8.36 1 Pn 08 14 20.3 -1.7
P32M Atlin 8.40 63 Pn 08 14 20.0 -2.6
P32M Atlin 8.40 63 P Pn 08 14 20.8 -1.9
baz=256,SNR=18
M30M Minto, Yukon 8.43 40 Pn 08 14 21.3 -1.7
M30M Minto, Yukon 8.43 40 P Pn 08 14 21.5 -1.4
baz=230,SNR=8.1
MLY Manley 8.49 354 Pn 08 14 22.5 -1.3
MLY Manley 8.49 354 P Pn 08 14 21.7 -2.1
baz=172
POKR Poker Plat Res 8.53 3 Pn 08 14 25.6 +1.2
POKR Poker Plat Res 8.53 3 P Pn 08 14 22.4 -1.9
baz=184
I23K Minto, Yukon-K 8.55 358 Pn 08 14 23.1 -1.5
I23K Minto, Yukon-K 8.55 358 P Pn 08 14 23.0 -1.6

baz=177,SNR=11
FALS **False Pass** 8.56 264 P Pn 08 14 22.9 -1.9
FALS **False Pass** 8.56 264 P Pn 08 14 23.2 -1.6
baz=72,SNR=6.9
J17K **VABM Dome** 8.58 327 P Pn 08 14 22.6 -2.3
baz=138
U33K **Whale Pass** 8.59 87 P Pn 08 14 20.4 -4.7
baz=280,SNR=6.7
L14K **Kuka Creek** 8.67 309 P Pn 08 14 24.9 -1.4
baz=117
I20K **Naaghedeneel** 8.68 343 P Pn 08 14 25.2 -1.2
baz=158
CRAG **Craig** 8.72 91 P Pn 08 14 22.6 -4.3
baz=284
DAWY **Dawson** 8.73 28 P Pn 08 14 25.8 -1.2
baz=216,SNR=6.0
ISLZ **Isanotski Laza** 8.77 264 Pn 08 14 25.5 -2.1
WRAK **Wrangell Islan** 8.97 85 P Pn 08 14 26.8 -3.6
baz=278
J16K **Anvik River** 8.98 323 P Pn 08 14 28.4 -2.1
baz=132
P33M **Teslin, Yukon** 9.01 60 Pn 08 14 28.3 -2.6
P33M **Teslin, Yukon** 9.01 60 P Pn 08 14 28.8 -2.1
baz=254,SNR=21
Q32M **Nakina River** 9.01 68 P Pn 08 14 29.4 -1.7
baz=262
PRP **Porcupine Dome** 9.04 8 P Pn 08 14 29.5 -1.9
baz=191
K29M **Barlow Dome** 9.07 33 Pn 08 14 31.2 -0.6
K29M **Barlow Dome** 9.07 33 P Pn 08 14 31.2 -0.6
baz=222
I26K **Coal Creek Min** 9.09 15 P Pn 08 14 31.7 -0.3
baz=199
GCSA **Galena City Sc** 9.09 337 P Pn 08 14 30.6 -1.3
baz=150
M31M **Drury Creek, Y** 9.12 46 Pn 08 14 29.3 -3.2
M31M **Drury Creek, Y** 9.12 46 P Pn 08 14 30.4 -2.1
baz=239,SNR=10
N32M **Quiet Lake** 9.20 54 Pn 08 14 32.7 -0.8
N32M **Quiet Lake** 9.20 54 P Pn 08 14 32.1 -1.4
baz=248
H24K **Noodor Dome** 9.24 2 P Pn 08 14 33.3 -0.8
baz=182
H21K **Melozitna Rive** 9.28 349 P Pn 08 14 33.8 -0.8
baz=165
J29N **Klondike Camp** 9.34 29 Pn 08 14 34.9 -0.6
J29N **Klondike Camp** 9.34 29 P Pn 08 14 34.6 -0.9
baz=218,SNR=19
H22K **Ishtalitna Cre** 9.39 353 P Pn 08 14 34.9 -1.2
baz=170
H20K **Anotleneega Mo** 9.40 344 P Pn 08 14 35.7 -0.4
baz=158
I17K **Unalakleet** 9.43 325 P Pn 08 14 36.5 -0.1
baz=135
S34M **Telegraph Cree** 9.53 75 Pn 08 14 36.1 -1.9
S34M **Telegraph Cree** 9.53 75 P Pn 08 14 36.4 -1.7
baz=270,SNR=8.0
FARO **Faro, Yukon** 9.56 48 Pn 08 14 37.6 -0.8
FARO **Faro, Yukon** 9.56 48 P Pn 08 14 37.5 -1.0
baz=241
V35K **Ketchikan** 9.59 91 P Pn 08 14 35.5 -3.4
baz=285
I27K **Kandik River** 9.60 18 Pn 08 14 38.2 -0.9
I27K **Kandik River** 9.60 18 P Pn 08 14 38.3 -0.7
baz=204,SNR=13
H19K **Roundabout Mou** 9.70 340 P Pn 08 14 40.0 -0.2
baz=153
IMAR **Indian Mountai** 9.71 347 Pn 08 14 39.6 -0.7
J14K **Nanvaranak Lak** 9.73 315 P Pn 08 14 39.7 -1.0
baz=122
R33M **Jennings River** 9.74 66 Pn 08 14 39.0 -2.0
R33M **Jennings River** 9.74 66 P Pn 08 14 39.5 -1.5
baz=261,SNR=24
H18K **Honhosa River** 9.78 335 P Pn 08 14 39.9 -1.4
baz=146
I28M **Miner Creek** 9.78 22 Pn 08 14 41.9 +0.5
I28M **Miner Creek** 9.78 22 P Pn 08 14 41.2 -0.3
baz=209
M11K **Mekoryuk** 9.95 299 P Pn 08 14 43.1 -0.7
baz=104
J30M **Hart River** 9.96 32 P Pn 08 14 43.1 -1.0
baz=223
H17K **Granite Mounta** 9.99 331 P Pn 08 14 42.1 -2.1
baz=141
T35M **Bob Quinn** 10.05 80 Pn 08 14 43.9 -1.3
T35M **Bob Quinn** 10.05 80 P Pn 08 14 43.6 -1.6
baz=276
FYU **Fort Yukon** 10.09 8 Pn Pn 08 14 44.4 -1.2
G24K **Hadweenzic Riv** 10.12 2 Pn Pn 08 14 45.3 -0.8
G24K **Hadweenzic Riv** 10.12 2 P Pn 08 14 45.6 -0.5
baz=184,SNR=7.8
DLBC **Dease Lake** 10.13 72 Pn 08 14 45.2 -1.1
DLBC **Dease Lake** 10.13 72 P Pn 08 14 44.7 -1.6
baz=268,SNR=6.9
DLBC **Dease Lake** 10.13 72 Pn Pn 08 14 45.9 -0.4
comp=N,2.2nm,0.3s,baz=274,slow=8.5,SNR=46
comp=N,5.5nm,0.3s
G23K **Bananza Creek** 10.14 357 Pn Pn 08 14 45.8 -0.6
G23K **Bananza Creek** 10.14 357 P Pn 08 14 45.2 -1.2
baz=176
G21K **Allakaket** 10.19 349 P Pn 08 14 46.0 -1.0
baz=164
H27K **Steamboat Moun** 10.20 16 P Pn 08 14 46.1 -1.0
baz=203
G25K **Bearman Lake** 10.24 6 P Pn 08 14 46.7 -1.0
baz=188
U35K **Hyder** 10.34 86 Pn 08 14 49.2 +0.2
U35K **Hyder** 10.34 86 P Pn 08 14 47.9 -1.2
baz=282
G19K **Purcell Mounta** 10.37 340 P Pn 08 14 48.4 -1.0
baz=153
I30M **Mount Dempster** 10.44 29 Pn Pn 08 14 51.0 +0.5
I30M **Mount Dempster** 10.44 29 P Pn 08 14 49.6 -0.9
baz=220,SNR=11
H16K **Elim** 10.44 326 P Pn 08 14 48.7 -1.8
baz=134
G18K **Tagagawik** 10.47 337 P Pn 08 14 50.3 -0.5
baz=148
G26K **Porcupine Rive** 10.60 10 P Pn 08 14 52.1 -0.4
baz=195
UNV **Unalaska Valle** 10.61 262 P Pn 08 14 50.1 -2.7
baz=67
G17K **Kiwalik Mounta** 10.62 332 P Pn 08 14 52.6 -0.3
baz=141
COLD **Coldfoot** 10.66 357 P Pn 08 14 52.5 -1.0
baz=175
H29M **Whitestone** 10.77 23 P Pn 08 14 53.6 -1.4
baz=212
F21K **Alatna River** 10.87 350 P Pn 08 14 55.3 -1.0
baz=166
F24K **Squaw Lake** 10.93 1 P Pn 08 14 56.4 -0.8
baz=182
WTLY **Watson Lake, Y** 10.94 63 Pn 08 14 56.5 -0.9
WTLY **Watson Lake, Y** 10.94 63 P Pn 08 14 56.2 -1.1
baz=260
BMAR **Burnt Mountain** 10.99 8 Pn Pn 08 14 56.8 -1.2
F25K **Christian Rive** 11.09 6 P Pn 08 14 58.4 -0.9
baz=188
F19K **Shaleruckik Mo** 11.11 341 P Pn 08 14 59.6 +0.1
baz=153
G15K **Niukluk** 11.25 324 P Pn 08 15 01.4 -0.1
baz=131
EPYK **Eagle Plains** 11.26 25 Pn 08 15 01.1 -0.6
EPYK **Eagle Plains** 11.26 25 P Pn 08 15 01.1 -0.6
baz=216
F18K **Selawik** 11.28 337 P Pn 08 15 00.9 -1.0
baz=147
F26K **Sheenjek River** 11.29 9 P Pn 08 15 01.0 -1.1
baz=193
ANM **Nome** 11.43 321 P Pn 08 15 03.8 -0.2
baz=126
H31M **Peel River** 11.44 31 P Pn 08 15 04.0 -0.2
baz=223
E23K **Chandalar** 11.48 358 P Pn 08 15 04.5 -0.2
baz=177
TGTN **Hyland Airport** 11.51 56 P Pn 08 15 04.6 -0.5
baz=254
F17K **Baldwin Pennin** 11.52 334 P Pn 08 15 04.0 -1.1
baz=143
E19K **Redstone River** 11.58 343 P Pn 08 15 04.1 -1.9
baz=156
E25K **Arctic Village** 11.61 6 Pn 08 15 05.8 -0.6
E25K **Arctic Village** 11.61 6 P Pn 08 15 05.7 -0.8
baz=188
F28M **Old Crow** 11.73 17 Pn 08 15 08.8 +0.8
F28M **Old Crow** 11.73 17 P Pn 08 15 07.3 -0.8
baz=204

SPIA **Saint Paul Isl** 11.86 282 P Pn 08 15 10.5 +0.7
baz=83
G30M **tAoh Zraii Nji** 11.88 24 P Pn 08 15 11.0 +0.9
baz=215
F15K **North Star Dit** 11.92 326 P Pn 08 15 10.2 -0.4
baz=132
TOLK **Toolik Lake Re** 12.06 358 Pn 08 15 12.6 -0.1
TOLK **Toolik Lake Re** 12.06 358 P Pn 08 15 12.3 -0.3
baz=177
E17K **Hotham Inlet** 12.17 335 P Pn 08 15 13.0 -1.1
baz=143
E20K **Nigu River** 12.17 346 P Pn 08 15 13.2 -1.0
baz=160
E18K **Tukpahlearik C** 12.18 338 P Pn 08 15 13.4 -0.8
baz=147
NIKH **Nikolski High** 12.25 261 P Pn 08 15 15.0 -0.3
baz=64
G31M **Satah River** 12.30 27 Pn 08 15 14.4 -1.4
G31M **Satah River** 12.30 27 P Pn 08 15 15.1 -0.7
baz=220,SNR=6.0
F14K **Arctic Creek** 12.30 323 P Pn 08 15 15.6 -0.2
baz=128
D23K **Nanushuk River** 12.42 356 P Pn 08 15 17.8 +0.4
baz=175
D22K **Ayikyak River** 12.43 353 P Pn 08 15 17.4 -0.3
baz=169
F30M **Barrier River** 12.50 23 P Pn 08 15 18.0 -0.5
baz=179
D24K **Happy Valley** 12.57 360 P Pn 08 15 18.4 -1.1
baz=179
D20K **Etivluk River** 12.66 347 P Pn 08 15 19.3 -1.4
baz=159
D19K **Kuna River** 12.67 344 P Pn 08 15 19.8 -1.1
baz=155
E29M **Blow River** 12.76 18 P Pn 08 15 19.9 -2.2
baz=208
D25K **Kaktovik River** 12.78 4 P Pn 08 15 21.0 -1.4
baz=186
F31M **Tsiigehtchic** 12.83 26 Pn 08 15 22.2 -0.9
F31M **Tsiigehtchic** 12.83 26 P Pn 08 15 22.3 -0.7
baz=220
C21K **Knifeblade Rid** 12.88 350 P Pn 08 15 23.3 -0.4
baz=164
C24K **Franklin Bluff** 13.14 360 P Pn 08 15 27.6 +0.3
baz=180
C23K **Itkillik River** 13.29 357 P Pn 08 15 29.0 -0.2
baz=175
KOTAN **Kotaneelee Air** 13.30 65 P Pn 08 15 29.3 -0.2
baz=266
B21K **Ikpikpuk River** 13.31 351 P Pn 08 15 26.5 -3.1
baz=165
C19K **Lookout Ridge** 13.45 343 P Pn 08 15 30.0 -1.6
baz=153
D28M **Stokes Point** 13.47 15 P Pn 08 15 30.3 -1.5
baz=204,SNR=10
GAMB **Gambell** 13.48 312 P Pn 08 15 31.0 -0.9
baz=111
INK **Inuvik** 13.56 24 Pn 08 15 32.0 -1.0
INK **Inuvik** 13.56 24 P Pn 08 15 33.3 +0.3
baz=218
INK **Inuvik** 13.56 24 Pn Pn 08 15 34.2 +1.2
comp=N,0.2nm,0.3s,baz=220,slow=12,SNR=10
comp=N,4.9nm,1.0s
FLDN **Fort Liard** 13.59 64 Pn 08 15 33.5 0.0
FLDN **Fort Liard** 13.59 64 P Pn 08 15 34.0 +0.5
baz=266
C17K **DeLong Mountai** 13.60 337 P Pn 08 15 33.3 -0.3
baz=144
B20K **Meade River** 13.95 348 P Pn 08 15 37.8 -0.4
baz=160
C16K **Lisburne Hills** 13.95 334 P Pn 08 15 39.1 +0.8
baz=139
B18K **Kokolik River** 14.07 340 P Pn 08 15 40.1 +0.2
baz=149
WRGLY **Wrigley** 14.14 52 Pn 08 15 40.4 -0.6
WRGLY **Wrigley** 14.14 52 P Pn 08 15 41.0 +0.1
baz=254
A19K **Wainwright** 14.67 343 P Pn 08 15 47.1 -1.1
baz=152
CLRS **Cowichan Lake** 16.67 108 P Pn 08 16 14.4 +0.1
CLRS IAmb IAmb 08 16 56.5
comp=Z,36nm,1.3s
C36M **Paulatuk** 16.74 31 Pn 08 16 13.3 -1.7
C36M IAmb IAmb 08 16 22.8
comp=Z,18nm,0.8s
C36M **Paulatuk** 16.74 31 P Pn 08 16 13.7 -1.4
baz=233,SNR=32
HILA **High Level** 16.94 70 P P 08 16 18.3 -1.2
BRLDA **Berland Lookou** 17.82 85 P Pn 08 16 28.5 -0.2
YKA **Yellowknife Ar** 18.02 57 P Pn 08 16 30.4 -0.6
comp=Z,0.1nm,0.3s,baz=266,slow=11,SNR=46
YKA PcP PcP 08 21 04.4 -0.6
comp=Z,1.0nm,1.1s,baz=261,slow=1.9,SNR=4.9
comp=Z,4.8nm,0.8s
A36M **Sachs Harbour** 18.20 23 Pn 08 16 31.9 -1.3
A36M IAmb IAmb 08 16 41.9
comp=Z,50nm,0.9s
A36M **Sachs Harbour** 18.20 23 P Pn 08 16 32.2 -1.0
baz=224,SNR=48
D05A **Enumclaw** 18.81 109 P P 08 16 39.8 -0.4
D05A IAmb IAmb 08 16 50.2
comp=Z,64nm,1.5s
LTY **Liberty** 19.46 107 P P 08 16 47.4 -0.1
B08A **Colville Reser** 19.51 103 P P 08 16 47.8 -0.1
MXC **Moxie City** 20.10 108 P P 08 16 54.8 +0.4
MXC IAmb IAmb 08 16 58.6
comp=Z,26nm,1.3s
EDM **Edmonton** 20.38 85 P P 08 16 57.8 +0.4
EDM IAmb IAmb 08 17 15.9
comp=Z,21nm,1.0s
EDM **Edmonton** 20.38 85 P P 08 16 57.8 +0.4
EDM pmax pmax
comp=Z,21nm,1.0s
C09A **Chrisman Ranch** 20.41 103 P P 08 16 58.5 +0.8
D08A **Wollman Farm,** 20.52 105 P P 08 16 59.3 +0.4
HAWA **Hanford** 20.62 107 P P 08 17 00.4 +0.5
NEW **Newport** 20.76 100 P P 08 17 01.8 +0.3
NEW IAmb IAmb 08 17 08.2
comp=Z,22nm,1.2s
NEW **Newport** 20.76 100 P P 08 17 01.4 -0.1
baz=306,SNR=9.4
NEW **Newport** 20.76 100 P P 08 17 01.8 +0.3
NEW pmax pmax
comp=Z,22nm,1.2s
NEW **Newport** 20.76 100 P P 08 17 01.4 -0.1
comp=Z,5.7nm,0.8s,baz=312,slow=10,SNR=5.6
NEW LR LR 08 23 37.7
comp=Z,803nm,20.6s,baz=311,slow=33
comp=Z,5.7nm,0.8s
I05D **Terrebonne, OR** 21.08 114 P P 08 17 05.2 +0.2
I05D IAmb IAmb 08 17 09.7
comp=Z,29nm,1.3s
K02D **Willamette Mer** 21.15 121 P P 08 17 07.4 +1.5
K02D IAmb IAmb 08 17 09.5
comp=Z,20nm,1.1s
E09A **Wood Farm, Sta** 21.27 105 P P 08 17 07.8 +0.7
G08A **Pilot Rock** 21.65 109 P P 08 17 11.4 +0.2
PINE **Pine Mountain** 21.67 115 P P 08 17 12.3 +0.7
PINE IAmb IAmb 08 17 18.0
comp=Z,24nm,1.2s
SHEM **Shemya Is, Ala** 21.75 276 LR LR 08 25 59.4
comp=Z,201nm,19.4s,baz=306,slow=38
F10A **Beach Ranch, E** 22.11 105 P P 08 17 16.2 0.0
L04D **Klamath Falls** 22.17 119 P P 08 17 17.7 +0.8
L04D IAmb IAmb 08 17 53.9
comp=Z,27nm,1.1s
K05A **Summer Lake** 22.48 116 P P 08 17 21.0 +0.8
K05A IAmb IAmb 08 17 24.0
comp=Z,29nm,1.1s
BMO **Blue Mountains** 22.81 108 P P 08 17 23.9 +0.3
BMO **Blue Mountains** 22.81 108 P P 08 17 23.9 +0.3
BMO pmax pmax
comp=Z,7.0nm,1.2s
BILL **Bilibino** 23.25 317 P P 08 17 27.2 -0.5
BILL **Bilibino** 23.25 317 eP P 08 17 27.7 -0.1
BILL pmax pmax
comp=Z,32nm,1.3s
WVOR **Wild Horse Val** 23.82 114 P P 08 17 34.2 +0.4
WVOR IAmb IAmb 08 17 35.7
comp=Z,14nm,1.0s
WVOR **Wild Horse Val** 23.82 114 P P 08 17 34.2 +0.4
WVOR pmax pmax
comp=Z,14nm,1.0s
LYMT **Lyon Mountain** 24.16 98 P P 08 17 36.7 -0.4
EGMT **Eagleton** 24.94 94 P P 08 17 43.9 0.0
EGMT IAmb IAmb 08 17 59.3
comp=Z,20nm,1.4s
EGMT **Eagleton** 24.94 94 P P 08 17 43.5 -0.4
baz=305
HLID **Hailey** 25.21 107 P P 08 17 46.4 -0.1
HLID **Hailey** 25.21 107 P P 08 17 46.7 +0.2
baz=313
AFDM **Forest Hills D** 25.36 122 P P 08 17 48.4 +0.7
AFDM IAmb IAmb 08 17 50.7
comp=Z,9.0nm,1.1s
BOZ **Bozeman (W)** 25.37 100 P P 08 17 48.0 +0.1
BOZ **Bozeman (W)** 25.37 100 P P 08 17 47.1 -0.9
baz=309
BOZ **Bozeman (W)** 25.37 100 P P 08 17 48.0 +0.1
BOZ pmax pmax
comp=Z,3.0nm,1.0s
PAHR **Pah Rah Range** 25.51 119 P P 08 17 50.0 +0.7
PAHR IAmb IAmb 08 17 51.0
comp=Z,8.9nm,1.0s
PNTR **Pine Nut** 25.89 120 P P 08 17 53.5 +0.6
PNTR IAmb IAmb 08 17 56.8
comp=Z,13nm,0.9s
FFC **Flin Flon** 25.95 74 P P 08 17 53.0 +0.1
FFC IAmb IAmb 08 18 08.2
comp=Z,7.1nm,1.1s
FFC **Flin Flon** 25.95 74 P P 08 17 53.0 +0.1
FFC pmax pmax
comp=Z,7.0nm,1.1s
BMN **Battle Mountai** 26.02 115 P P 08 17 53.7 -0.2
BMN IAmb IAmb 08 17 57.8
comp=Z,6.2nm,0.9s
BMN **Battle Mountai** 26.02 115 P P 08 17 53.7 -0.2
BMN pmax pmax
comp=Z,6.0nm,0.9s
YHL **Hebgen Lake** 26.09 101 P P 08 17 54.1 -0.5
YHL IAmb IAmb 08 18 10.2
comp=Z,8.4nm,1.1s
YERR **Yerington** 26.14 120 P P 08 17 55.0 -0.1
YERR IAmb IAmb 08 17 57.0
comp=Z,7.9nm,1.0s
YHH **Holmes Hill** 26.31 101 P P 08 17 56.7 0.0
YNR **Norris Junctio** 26.45 101 P P 08 17 58.1 +0.2
YNR IAmb IAmb 08 18 06.3
comp=Z,14nm,1.4s
KVN **Kaiserville** 26.64 118 P P 08 17 59.9 +0.3
KVN IAmb IAmb 08 18 04.8
comp=Z,10nm,1.1s
KVN **Kaiserville** 26.64 118 P P 08 17 59.9 +0.3
KVN pmax pmax
comp=Z,10.0nm,1.1s
H17A **Grant Village** 26.71 101 P P 08 17 59.6 -0.6
H17A IAmb IAmb 08 18 09.1
comp=Z,8.2nm,1.2s
H17A **Grant Village** 26.71 101 P P 08 17 59.6 -0.6
baz=311
RYN **Ryan** 26.77 119 P P 08 18 01.4 +0.7
ELK **Elko** 26.79 112 P P 08 18 01.4 +0.5
ELK IAmb IAmb 08 18 03.0
comp=Z,8.7nm,1.2s
ELK **Elko** 26.79 112 P P 08 18 01.4 +0.5
ELK pmax pmax
comp=Z,9.0nm,1.3s
ELK **Elko** 26.79 112 LR LR 08 26 53.1
comp=Z,510nm,20.0s,baz=300,slow=33
IMW **Indian Meadow** 26.84 102 P P 08 18 01.9 +0.5
FLWY **Flagg Ranch** 26.85 102 P P 08 18 01.4 0.0
FLWY IAmb IAmb 08 18 23.9
comp=Z,11nm,1.3s
RLMT **Red Lodge** 26.96 98 P P 08 18 02.0 -0.3
baz=310
NVAR **Mina Array Bea** 27.03 119 P P 08 18 02.9 -0.2
NVAR **Mina Array Bea** 27.03 119 P P 08 18 03.5 +0.4
comp=Z,5.0nm,0.9s,baz=306,slow=9.0,SNR=27
NVAR PcP PcP 08 21 23.5 -0.5
comp=Z,1.4nm,1.0s,baz=302,slow=2.4,SNR=5.1
comp=Z,5.0nm,0.9s
RES **Resolute Bay** 27.07 28 P P 08 18 02.4 -0.4
RES **Resolute Bay** 27.07 28 P P 08 18 02.4 -0.4
RES pmax pmax
comp=Z,4.0nm,0.8s
NV11 **Mina Array Sit** 27.10 119 P P 08 18 04.1 +0.4
NV11 IAmb IAmb 08 18 05.5
comp=Z,8.3nm,1.1s
LOHW **Long Hollow** 27.21 102 P P 08 18 04.7 0.0
MDPB **Devils Postpil** 27.30 122 P P 08 18 06.2 +0.6
MDPB IAmb IAmb 08 18 07.8
comp=Z,8.0nm,0.9s
LAO **LASA Array** 27.66 93 P P 08 18 09.1 +0.6
baz=307
TPH **Tonopah** 27.84 118 P P 08 18 10.6 +0.3
TPH **Tonopah** 27.84 118 P P 08 18 10.6 +0.3
TPH pmax pmax
comp=Z,29nm,1.1s
MZP **Montezuma Peak** 28.05 119 P P 08 18 12.3 0.0
Q12A **Willow Creek R** 28.27 114 P P 08 18 14.4 +0.3
Q12A IAmb IAmb 08 18 16.1
comp=Z,8.1nm,1.1s
LCH **Last Change Ra** 28.30 120 P P 08 18 15.1 +0.7
LCH IAmb IAmb 08 18 16.5
comp=Z,7.0nm,1.1s
BW06 **Boulder Array** 28.35 103 P P 08 18 14.7 -0.2
baz=313
PDAR **Pinedale Array** 28.35 103 P P 08 18 14.8 0.0
comp=Z,0.8nm,0.8s,baz=306,slow=4.6,SNR=8.1
comp=Z,0.8nm,0.8s
R11B **Troy Canyon, C** 28.43 116 P P 08 18 15.6 0.0
R11B IAmb IAmb 08 18 17.2
comp=Z,7.6nm,1.0s
R11B **Troy Canyon, C** 28.43 116 P P 08 18 16.0 +0.5
baz=321,SNR=14
DUG **Dugway, Tooele** 28.44 110 P P 08 18 16.0 +0.4
baz=318
FCC **Fort Churchill** 28.52 63 P P 08 18 16.4 +0.5
FCC IAmb IAmb 08 18 24.0
comp=Z,7.1nm,0.8s
FCC **Fort Churchill** 28.52 63 P P 08 18 16.5 +0.5
FCC pmax pmax
comp=Z,7.0nm,0.8s
SPR3 **Spring Creek 3** 28.56 113 P P 08 18 17.5 +0.6
SPR3 IAmb IAmb 08 18 19.6
comp=Z,9.0nm,1.1s
GRAC **Grapevine Rang** 28.62 120 P P 08 18 17.9 +0.8
GRAC IAmb IAmb 08 18 19.7
comp=Z,12nm,1.0s
GRAC **Grapevine Rang** 28.62 120 P P 08 18 18.1 +1.0
baz=323,SNR=7.1
CWC **Cottonwood Cre** 28.73 122 P P 08 18 18.4 +0.2
baz=324
VES **Vestal, Richgr** 28.75 124 P P 08 18 17.9 -0.4
baz=326
SMMC **Simmler** 28.78 126 P P 08 18 17.8 -0.6
baz=327
S11A **Rachel** 28.89 117 P P 08 18 20.4 +0.8
ISA **Isabella, Lake** 29.18 123 P P 08 18 22.8 +0.6
baz=326
PKM **Mcpherson Peak** 29.21 126 P P 08 18 22.0 -0.5
baz=327
FURC **Furnace Creek,** 29.29 120 P P 08 18 23.6 +0.7
baz=324,SNR=7.6
MPMC **Manual Prospec** 29.32 121 P P 08 18 24.2 +0.7
baz=324,SNR=5.5
LRMC **Laurel Mtn Rad** 29.70 122 P P 08 18 27.3 +0.5
baz=325
TCRU **Three Creeks R** 29.81 112 P P 08 18 28.5 +0.6
MVU **Marysvale** 30.01 112 P P 08 18 30.1 +0.4
SHOC **Shoshone, Teco** 30.02 120 P P 08 18 30.4 +0.9
baz=324,SNR=5.6
EDW2 **Edwards Air Fo** 30.05 123 P P 08 18 30.4 +0.6
baz=326
K22A **Casper** 30.07 100 P P 08 18 30.4 +0.3
baz=312
SHPR **Sheep Range** 30.08 118 P P 08 18 30.6 +0.4
GSC **Goldstone, Bar** 30.26 121 P P 08 18 32.5 +0.9
baz=325
MTPU **Mount Pierson** 30.38 112 P P 08 18 33.6 +0.6
MTPU IAmb IAmb 08 18 35.5
comp=Z,6.4nm,1.3s
PETK **Petropavlovsk-** 30.45 286 P P 08 18 32.7 -0.4
comp=Z,4.4nm,0.9s,baz=62,slow=13,SNR=3.2
PETK LR LR 08 30 31.5
comp=Z,105nm,21.5s,baz=101,slow=36
comp=Z,4.4nm,0.9s
RSSD **Black Hills** 30.47 95 P P 08 18 33.5 -0.1
RSSD IAmb IAmb 08 18 35.4
comp=Z,4.7nm,0.9s
RSSD **Black Hills** 30.47 95 P P 08 18 33.8 +0.1
baz=310

RSSD	**Black Hills**	**30.47**	**95**	P	**P**	**08 18 33.5**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUQ	**Turquoise Moun**	**30.57**	**120**	P	**P**	**08 18 35.2**	**+0.7**
	baz=324,SNR=5.5						
BFSC	**Mount Baldy Ra**	**30.73**	**124**	P	**P**	**08 18 36.2**	**+0.3**
	baz=326,SNR=5.5						
PKCU	**Pink Cliffs**	**30.77**	**113**	P	**P**	**08 18 36.7**	**+0.2**
V12A	**Nelson**	**30.85**	**118**	P	**P**	**08 18 37.6**	**+0.7**
V12A				lAmb	lAmb	08 18 39.3	
	comp=Z,11nm,1.0s						
HEC	**Hector,Ludlow**	**30.86**	**121**	P	**P**	**08 18 37.6**	**+0.6**
	baz=325						
O20A	**White River Ci**	**30.90**	**105**	P	**P**	**08 18 37.3**	**-0.1**
	baz=316						
HMU	**Henry Mountain**	**31.20**	**111**	P	**P**	**08 18 40.3**	**+0.1**
HMU				lAmb	lAmb	08 18 42.0	
	comp=Z,11nm,1.2s						
MA2	**Magadan**	**31.21**	**301**⇑	*e*P	**P**	**08 18 39.9**	**+0.1**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GMRC	**Granite Mounta**	**31.22**	**120**	P	**P**	**08 18 41.3**	**+1.1**
	baz=325						
ULM	**Lac du Bonnet**	**31.35**	**79**	P	**P**	**08 18 41.9**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=292,slow=11,SNR=4.9						
	comp=Z,2.1nm,0.9s						
BELC	**Belle Mtn. Jos**	**31.70**	**122**	P	**P**	**08 18 44.7**	**+0.2**
	baz=326						
PFO	**Pinyon Flats O**	**31.81**	**123**	P	**P**	**08 18 46.0**	**+0.6**
	baz=326						
TPFO	**Pinon Flats**	**31.82**	**123**	P	**P**	**08 18 46.3**	**+0.8**
	baz=326						
W13A	**Hualapai Mount**	**31.82**	**118**	P	**P**	**08 18 46.2**	**+0.5**
W13A				lAmb	lAmb	08 18 47.7	
	comp=Z,5.6nm,1.0s						
IRM	**Iron Mountain**	**31.98**	**120**	P	**P**	**08 18 47.6**	**+0.8**
	baz=325,SNR=8.0						
BC3	**Big Chuckawall**	**32.24**	**121**	P	**P**	**08 18 49.5**	**+0.3**
	baz=326						
PDMCI	**Parker Dam,Lak**	**32.34**	**119**	P	**P**	**08 18 50.8**	**+0.9**
	baz=324						
MONP2	**Monument Peak**	**32.42**	**123**	P	**P**	**08 18 52.0**	**+1.1**
	baz=327						
AGMN	**Agassiz Nation**	**32.44**	**82**	P	**P**	**08 18 50.8**	**+0.1**
	baz=305						
BLYC	**Blythe**	**32.61**	**120**	P	**P**	**08 18 52.8**	**+0.6**
WUAZ	**Wupatki**	**32.74**	**114**	P	**P**	**08 18 54.4**	**+0.8**
WUAZ				lAmb	lAmb	08 18 55.7	
	comp=Z,7.5nm,0.9s						
WUAZ	**Wupatki**	**32.74**	**114**	P	**P**	**08 18 54.4**	**+0.8**
	baz=322,SNR=6.5						
IKP	**In-Ko-Pah, Jac**	**32.77**	**123**	P	**P**	**08 18 54.8**	**+1.0**
	baz=327						
MVCO	**Mesa Verde**	**32.91**	**109**	P	**P**	**08 18 54.8**	**-0.4**
MVCO	**Mesa Verde**	**32.91**	**109**	P	**P**	**08 18 54.9**	**-0.3**
	baz=319						
Y14A	**Wickenburg**	**33.19**	**118**	P	**P**	**08 18 58.1**	**+0.7**
X16A	**Lo Mia Camp, P**	**33.58**	**116**	P	**P**	**08 19 00.9**	**0.0**
X16A				lAmb	lAmb	08 19 03.4	
	comp=Z,4.7nm,0.9s						
W18A	**Petrified Fore**	**33.88**	**113**	P	**P**	**08 19 04.1**	**+0.5**
	baz=322						
SDCO	**Great Sand Dun**	**34.10**	**105**	P	**P**	**08 19 04.4**	**-1.2**
	baz=318						
KSCO	**Kaye Shedlock'**	**34.73**	**101**	P	**P**	**08 19 11.2**	**+0.3**
KSCO	**Kaye Shedlock'**	**34.73**	**101**	P	**P**	**08 19 11.1**	**+0.3**
	baz=316						
ECSD	**EROS Data Cent**	**34.81**	**89**	P	**P**	**08 19 11.1**	**-0.3**
ECSD				lAmb	lAmb	08 19 18.5	
	comp=Z,5.1nm,0.9s						
214A	**Organ Pipe Nat**	**34.90**	**120**	P	**P**	**08 19 13.6**	**+1.4**
	baz=326						
EYMN	**Ely**	**35.02**	**80**	P	**P**	**08 19 12.8**	**-0.4**
	baz=306,SNR=6.5						
T25A	**Trinidad**	**35.13**	**105**	P	**P**	**08 19 14.4**	**0.0**
	baz=318						
BGNE	**Belgrade**	**35.51**	**93**	P	**P**	**08 19 17.6**	**+0.2**
	baz=313						
TUC	**Tucson**	**35.59**	**117**	P	**P**	**08 19 18.4**	**+0.1**
TUC	**Tucson**	**35.59**	**117**	P	**P**	**08 19 19.3**	**+1.0**
	baz=325						
TUC	**Tucson**	**35.59**	**117**	P	**P**	**08 19 18.4**	**+0.1**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ANMO	**Albuquerque**	**35.71**	**109**	P	**P**	**08 19 19.4**	**+0.1**
	baz=321						
E38A	**The Farm, Brul**	**35.80**	**81**	P	**P**	**08 19 19.4**	**-0.4**
DUN6	**Lazy B Ranch**	**36.24**	**115**	P	**P**	**08 19 24.4**	**+0.6**
CBKS	**Cedar Bluff**	**36.44**	**98**	P	**P**	**08 19 26.3**	**+0.8**
	baz=316						
121A	**Cookes Peak, D**	**36.92**	**113**	P	**P**	**08 19 30.5**	**+0.8**
	baz=323						
NEEM	**North Greenlan**	**37.11**	**21**	*i* P	**P**	**08 19 30.4**	**-0.7**
NEEM				lAmb	lAmb	08 19 32.8	
	comp=Z,4.5nm,0.9s						
KSU1	**Kansas State U**	**37.96**	**95**	P	**P**	**08 19 38.5**	**+0.2**
	baz=315						
I40A	**Norwalk**	**38.02**	**84**	P	**P**	**08 19 38.4**	**-0.3**
AMTX	**Amarillo**	**38.28**	**104**	P	**P**	**08 19 41.8**	**+0.6**
	baz=320						
MSTX	**Muleshoe**	**38.40**	**106**	P	**P**	**08 19 43.1**	**+1.0**
	baz=320						
MNTX	**Cornudas Mount**	**38.81**	**111**	P	**P**	**08 19 44.5**	**-1.0**
	baz=323						
YAK	**Yakutsk**	**39.43**	**313**	*e*P	**P**	**08 19 49.8**	**-0.5**
YAK				*e**PP	**sP**	**08 19 54.0**	**-1.2**
YAK				*e*		08 21 19.4	
YAK				*e*		08 21 58.2	
YAK				*e*S	**S**	**08 25 52.1**	**+1.1**
YAK				*e**SS	**sS**	**08 26 00.6**	**+3.8**
YAK				*e*		08 29 57.8	
YAK				pmax	pmax		
	comp=Z,44nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
YAK				pmax	pmax		
	comp=Z,198nm,4.8s						
YAK				pmax	pmax		
	comp=E,73nm,4.1s						
YAK				pmax	pmax		
	comp=N,82nm,4.7s						
YAK				smax	smax		
	comp=E,108nm,4.4s						
YAK				smax	smax		
	comp=N,52nm,4.2s						
YAK	**Yakutsk**	**39.43**	**313**	LR	LR	08 37 51.5	
	comp=N,161nm,19.1s,baz=111,slow=39						
WMOK	**Wichita Mounta**	**39.95**	**102**	P	**P**	**08 19 54.8**	**-0.2**
WMOK	**Wichita Mounta**	**39.95**	**102**	P	**P**	**08 19 55.7**	**+0.7**
	baz=319,SNR=6.5						
WMOK	**Wichita Mounta**	**39.95**	**102**	P	**P**	**08 19 54.8**	**-0.2**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HDIL	**Hopedale**	**40.98**	**87**	P	**P**	**08 20 02.6**	**-0.8**
	baz=314						
ABTX	**Abilene, Hawle**	**41.10**	**105**	P	**P**	**08 20 04.4**	**-0.1**
	baz=321						
TXAR	**Lajitas Array**	**41.58**	**112**	P	**P**	**08 20 10.0**	**+1.4**
TXAR	**Lajitas Array**	**41.58**	**112**	P	**P**	**08 20 09.9**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=316,slow=7.0,SNR=10						
	comp=Z,1.5nm,0.9s						
CCM	**Cathedral Cave**	**41.66**	**91**	P	**P**	**08 20 07.7**	**-1.3**
	baz=316						
SUMG	**Summit**	**42.48**	**25**	*i* P	**P**	**08 20 16.0**	**+0.2**
SUMG				lAmb	lAmb	08 20 24.3	
	comp=Z,15nm,1.1s						
JCT	**Junction City**	**42.69**	**107**	P	**P**	**08 20 17.3**	**-0.2**
JCT				lAmb	lAmb	08 20 18.8	
	comp=Z,9.6nm,0.9s						
JCT	**Junction City**	**42.69**	**107**	P	**P**	**08 20 18.1**	**+0.6**
	baz=322,SNR=5.1						
JCT	**Junction City**	**42.69**	**107**	P	**P**	**08 20 17.3**	**-0.2**
JCT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DRIO	**Del Rio**	**43.09**	**109**	P	**P**	**08 20 20.4**	**-0.4**
SCHQ	**Schefferville**	**43.47**	**56**	P	**P**	**08 20 24.5**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=308,slow=11,SNR=4.0						
	comp=Z,2.8nm,0.9s						
435B	**Jarrell**	**43.63**	**104**	P	**P**	**08 20 26.1**	**+1.1**
	baz=322						
ASAJ	**Asahikawa**	**43.79**	**284**	LR	LR	08 40 41.3	
	comp=Z,115nm,18.2s,baz=0.5,slow=39						
KBS	**Kingsbay**	**44.19**	**5**	*i* P	P	08 20 35.0	+5.9
ICESG	**Greenland Ices**	**44.47**	**29**	*e*P	**P**	**08 20 32.4**	**+0.6**
ICESG				lAmb	lAmb	08 20 39.6	
	comp=Z,13nm,1.0s						
M53A	**WI Miller and**	**45.10**	**80**	P	**P**	**08 20 36.3**	**-0.4**
	baz=314						
P52A	**Corning**	**45.56**	**82**	P	**P**	**08 20 40.2**	**-0.3**
	baz=315						
KLR	**Kul'dur**	**46.03**	**296**	*de*P	**P**	**08 20 44.1**	**+0.1**
KLR				pmax	pmax		
	comp=Z,27nm,1.3s						
KLR	**Kul'dur**	**46.03**	**296**	LR	LR	08 40 14.4	
	comp=Z,102nm,21.0s,baz=98,slow=36						
HEH	**HeiHe**	**47.47**	**300**	*e*P	**P**	**08 20 54.6**	**-0.6**
HEH				pmax	pmax		
	comp=Z,18nm,1.1s						
HEH				pmax	pmax		
	comp=Z,160nm,4.2s						
NRIK	**Noril'sk**	**47.94**	**337**	P	**P**	**08 20 58.5**	**-0.2**
NRIK	**Noril'sk**	**47.94**	**337**	*c* P	**P**	**08 20 59.1**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NRIK	**Noril'sk**	**47.94**	**337**	P	**P**	**08 20 59.2**	**+0.5**
	comp=Z,3.1nm,0.5s,baz=36,slow=5.6,SNR=9.4						
NRIK				LR	LR	08 44 53.4	
	comp=Z,172nm,18.7s,baz=65,slow=41						
	comp=Z,3.1nm,0.5s						
BOD	**Bodaibo**	**48.25**	**315**	*e*P	**P**	**08 21 01.0**	**-0.2**
BOD				pmax	pmax		
	comp=Z,24nm,0.9s						
USRK	**Ussuriysk Ar.**	**49.32**	**291**	LR	LR	08 43 04.5	
	comp=Z,91nm,18.3s,baz=61,slow=37						
H11N2	**WAKE ISLAND Hy**	**49.40**	**240**	T	T	09 14 22.8	
	baz=30,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**49.41**	**240**	T	T	09 14 24.5	
	baz=30,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	**49.42**	**240**	T	T	09 14 25.7	
	baz=30,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**50.54**	**240**	T	T	09 15 50.8	
	baz=30,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy**	**50.55**	**240**	T	T	09 15 51.6	
	baz=30,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**50.56**	**240**	T	T	09 15 52.8	
	baz=30,slow=76,SNR=31						
BNX	**BinXian**	**50.56**	**296**	⇑P	**P**	**08 21 19.5**	**+0.5**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,120nm,4.9s						
MJAR	**Matsushiro Arr**	**51.50**	**280**	P	**P**	**08 21 26.9**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=19,slow=8.1,SNR=5.5						
MJAR				LR	LR	08 42 24.3	
	comp=Z,69nm,21.3s,baz=20,slow=35						
	comp=Z,0.6nm,0.4s						
HIA	**Hailar**	**51.75**	**304**⇓	*e*P	**P**	**08 21 26.2**	**-1.7**
HIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JHJ	**Hachijo jima 2**	**53.18**	**276**	LR	LR	08 42 49.3	
	comp=Z,34nm,20.5s,baz=77,slow=34						
ARCES	**ARCESS Array B**	**54.06**	**3**	P	**P**	**08 21 43.8**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=347,slow=5.0,SNR=9.1						
	comp=Z,1.1nm,0.5s						
KSRS	**Korea Array**	**56.33**	**288**	P	**P**	**08 22 02.5**	**+1.0**
	comp=Z,8.5nm,1.1s,baz=38,slow=6.4,SNR=12						
KSRS				LR	LR	08 44 42.2	
	comp=Z,40nm,21.8s,baz=35,slow=34						
	comp=Z,8.5nm,1.1s						
KSAR	**Wonju Array Be**	**56.36**	**288**	P	**P**	**08 22 01.0**	**-0.6**
KSAR	**Wonju Array Be**	**56.36**	**288**	P	**P**	**08 22 01.0**	**-0.6**
ZAK	**Zakamensk**	**57.99**	**314**	*e*P	**P**	**08 22 13.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN	**Ulaanbaatar**	**58.41**	**310**	P	**P**	**08 22 16.1**	**-0.1**
ULN	**Ulaanbaatar**	**58.41**	**310**	P	**P**	**08 22 16.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**58.71**	**310**	P	**P**	**08 22 18.6**	**+0.3**
SONM	**Songino Array**	**58.71**	**310**	P	**P**	**08 22 18.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**58.71**	**310**	P	**P**	**08 22 19.3**	**+1.0**
	comp=Z,16nm,1.0s,baz=48,slow=7.0,SNR=63						
SONM				PcP	**PcP**	**08 23 08.8**	**+0.8**
	comp=Z,4.3nm,1.0s,baz=47,slow=3.7,SNR=3.7						
SONM				LR	LR	08 50 43.1	
	comp=Z,109nm,18.1s,baz=92,slow=39						
	comp=Z,16nm,1.0s						
ZALV	**Zalesovo Beam**	**61.48**	**327**	P	**P**	**08 22 36.4**	**-0.5**
ZALV	**Zalesovo Beam**	**61.48**	**327**	P	**P**	**08 22 37.1**	**+0.2**
	comp=Z,13nm,0.9s,baz=27,slow=6.4,SNR=43						
ZALV				LR	LR	08 51 34.9	
	comp=Z,74nm,19.6s,baz=56,slow=38						
	comp=Z,13nm,0.9s						
NC405	**NORSAR Array S**	**61.58**	**11**	P	**P**	**08 22 37.9**	**+0.3**
NB2	**NORSAR Subarra**	**61.59**	**11**	P	**P**	**08 22 37.0**	**-0.7**
	comp=Z,6.4nm,0.9s,baz=348,slow=6.9						
NOA	**NORSAR Array B**	**61.59**	**11**	P	**P**	**08 22 37.3**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=347,slow=6.7,SNR=13						
	comp=Z,3.5nm,0.9s						
HHC	**Hu-ho-hao-te**	**61.89**	**302**	*e*P	**P**	**08 22 40.3**	**+0.2**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
FINES	**FINESS Array B**	**62.19**	**3**	P	**P**	**08 22 41.5**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=4.4,slow=8.8,SNR=16						
	comp=Z,6.1nm,0.8s						
KLMR	**Klimovskoe**	**62.68**	**356**	*e*P	**P**	**08 22 43.5**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,24nm,1.1s						
HFS	**Hagfors**	**62.73**	**10**	P	**P**	**08 22 45.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=322,slow=4.5,SNR=5.3						
	comp=Z,1.6nm,0.7s						
KIRV	**Kirov**	**64.23**	**350**⇑	*e*P	**P**	**08 22 55.2**	**0.0**
DGZ	**Jazzator, Alta**	**64.33**	**323**	*ce*P	**P**	**08 22 57.5**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SVE	**Sverdlovsk**	**64.47**	**343**	*e*P	**P**	**08 22 57.5**	**+0.8**
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
EKA	**Eskdalemuir Ar**	**64.91**	**21**	P	**P**	**08 23 00.2**	**+0.6**
	comp=Z,4.2nm,0.9s,baz=352,slow=5.3,SNR=6.8						
	comp=Z,4.2nm,0.9s						
ARU	**Arti**	**65.18**	**344**	P	**P**	**08 23 00.2**	**-1.1**
ARU	**Arti**	**65.18**	**344**	*c* P	**P**	**08 23 00.6**	**-0.8**
ARU						08 25 22.8	
ARU				S	**S**	**08 31 44.5**	**+1.2**
ARU				SS	**SS**	**08 35 54.1**	**-0.6**
ARU				pmax	pmax		
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	**66.12**	**336**	P	**P**	**08 23 07.4**	**-0.2**
BRVK	**Borovoye**	**66.12**	**336**	*d* P	**P**	**08 23 07.2**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
BVAR	**Borovoye Array**	**66.13**	**335**	P	**P**	**08 23 07.7**	**0.0**
	comp=Z,11nm,0.8s,baz=46,slow=6.4,SNR=46						
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**66.13**	**329**	P	**P**	**08 23 06.9**	**-0.7**
KURK	**Kurchatov**	**66.13**	**329**	*de*P	**P**	**08 23 07.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURBB	**Kurchatov Arra**	**66.24**	**329**	P	**P**	**08 23 08.3**	**0.0**
	comp=Z,4.6nm,0.6s,baz=24,slow=6.0,SNR=39						
	comp=Z,4.6nm,0.6s						
LYN	**LuoYang**	**66.45**	**297**	⇓P	**P**	**08 23 11.3**	**+1.3**
LYN				pP	pwP	08 23 16.3	-2.9
LYN				sP	sP	08 23 17.9	+2.8
LYN				pmax	pmax		
	comp=Z,36nm,1.0s						
LYN				pmax	pmax		
	comp=Z,110nm,4.5s						
ZSN	**Zaisan**	**67.13**	**324**	*e*P	**P**	**08 23 14.3**	**+0.2**
	comp=Z,12nm,0.9s,baz=324						
ZSN	**Zaisan**	**67.13**	**324**	*e*P	**P**	**08 23 14.2**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	**Gaotai**	**68.33**	**309**	P	**P**	**08 23 21.9**	**0.0**
GTA				pP	pwP	08 23 29.5	-1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BRZS	**Berezniki**	**68.39**	**333**	*e*P	**P**	**08 23 21.4**	**-0.6**
	comp=Z,6.0nm,1.0s,baz=333						
BRZS	**Berezniki**	**68.39**	**333**	*e*P	**P**	**08 23 21.4**	**-0.6**
BRZS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	**Obninsk**	**68.53**	**357**⇑	*e*P	**P**	**08 23 23.3**	**+0.6**
OBN				*i*		08 23 30.1	
OBN				*e*		08 25 53.1	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**68.53**	**325**	P	**P**	**08 23 22.1**	**-0.9**
MK31	**Makanchi Array**	**68.53**	**325**	*d* P	**P**	**08 23 22.4**	**-0.6**
MKAR	**Makanchi Array**	**68.53**	**325**	P	**P**	**08 23 22.5**	**-0.5**
MKAR	**Makanchi Array**	**68.53**	**325**	P	**P**	**08 23 22.8**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=45,slow=5.8,SNR=29						
MKAR				LR	LR	08 58 42.1	
	comp=Z,79nm,19.4s,baz=20,slow=41						
	comp=Z,4.3nm,0.8s						
XAN	**Xi'an**	**68.59**	**299**	⇑P	**P**	**08 23 23.5**	**-0.1**
XAN				pP	pwP	08 23 30.6	-2.2
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
MNK	**Minsk**	**69.19**	**2**	*i* P	**P**	**08 23 27.6**	**+0.8**
	comp=E,5.0nm,0.8s						
MNK				*i* P	**P**	**08 23 27.6**	**+0.8**
	comp=N,28nm,0.8s						
MNK				*i* P	**P**	**08 23 27.6**	**+0.8**
	comp=Z,17nm,0.8s,baz=358						
MNK				*i* PcP	**PcP**	**08 23 50.6**	**+0.1**
MNK				*i* PP	**PP**	**08 26 00.9**	**+1.9**
MNK				*i* PPP	PPP	08 27 49.8	
MNK				*i* S	**S**	**08 32 35.7**	**+4.0**
MNK				*i* SS	SS	08 37 54.5	+58
MNK				*i* LQ	LQ	08 50 23.8	
MNK				*i* LR	LR	08 52 42.9	
MNK				*i* LRM	MLR	08 58 18.4	
	comp=N,425nm,17.4s						
MNK				*i* LRM	MLR	08 58 25.2	
	comp=E,159nm,17.6s						
MNK				*i* LRM	MLR	08 59 16.5	
	comp=Z,73nm,16.4s						
MNK	**Minsk**	**69.19**	**2**	*i* P	**P**	**08 23 27.6**	**+0.8**
MNK				*i*		08 23 50.6	
MNK				*i*		08 26 00.8	
MNK				*i* S	**S**	**08 32 35.6**	**+4.0**
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				pmax	pmax		
	comp=N,28nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,425nm,17.0s						
MNK				MLR	MLR		
	comp=E,159nm,18.0s						
LZH	**Lanzhou**	**69.30**	**304**	*e*P	**P**	**08 23 28.5**	**+0.4**
LZH				pP	pwP	08 23 35.1	-2.2
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
WMQ	**Urumqi**	**69.33**	**320**	*e*P	**P**	**08 23 28.1**	**+0.1**
WMQ				pP	pwP	08 23 34.8	-2.5
WMQ				PcP	**PcP**	**08 23 52.6**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
BELG	**Belogornoye**	**70.52**	**350**	*ce*P	**P**	**08 23 35.1**	**+0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	**Galich'ya Gora**	**70.95**	**355**	*e*P	**P**	**08 23 36.6**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TDK	**Taldyqorghan**	**71.34**	**327**	*e*P	**P**	**08 23 40.1**	**-0.2**
	baz=327						
TDK	**Taldyqorghan**	**71.34**	**327**	*e*P	**P**	**08 23 40.0**	**-0.2**
ABKAR	**Akbulak array**	**71.85**	**341**	P	**P**	**08 23 43.3**	**+0.1**
VRH	**Novokhopyorsk**	**72.19**	**353**	*e*P	**P**	**08 23 43.6**	**-1.6**
VRH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VSR	**Storozhevoye**	**72.33**	**355**	*e*P	**P**	**08 23 44.7**	**-1.3**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BTLS	**Baital**	**72.58**	**330**	*e*P	**P**	**08 23 47.3**	**-0.4**
	baz=330						
BTLS	**Baital**	**72.58**	**330**	*e*P	**P**	**08 23 47.2**	**-0.4**
SHLS	**Shalkode**	**72.69**	**325**	*e*P	**P**	**08 23 47.8**	**-0.7**
	comp=Z,13nm,1.1s,baz=325						
SHLS	**Shalkode**	**72.69**	**325**	*e*P	**P**	**08 23 47.7**	**-0.7**
SHLS				pmax	pmax		
	comp=Z,13nm,1.1s						
CHKK	**Chushkaly**	**72.81**	**327**	*e*P	**P**	**08 23 48.0**	**-1.0**
	baz=327						
CHKK	**Chushkaly**	**72.81**	**327**	*e*P	**P**	**08 23 48.0**	**-1.0**
KUU	**Kurty**	**72.97**	**328**	*e*P	**P**	**08 23 48.8**	**-1.2**
	baz=328						
KUU	**Kurty**	**72.97**	**328**	*e*P	**P**	**08 23 48.8**	**-1.2**
ZHN	**Zhinishke**	**73.00**	**326**	*e*P	**P**	**08 23 50.1**	**-0.2**
	baz=326						
ZHN	**Zhinishke**	**73.00**	**326**	*e*P	**P**	**08 23 50.1**	**-0.2**
AKASG	**Malin Array Be**	**73.02**	**1**	P	**P**	**08 23 49.0**	**-1.1**
AKASG	**Malin Array Be**	**73.02**	**1**	P	**P**	**08 23 49.0**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=355,slow=5.8,SNR=11						
	comp=Z,0.6nm,0.4s						
AKBB	**Malin Array Si**	**73.02**	**1**⇑	*e*P	**P**	**08 23 49.8**	**-0.3**
SATY	**Saty**	**73.10**	**326**	*e*P	**P**	**08 23 50.7**	**-0.2**
	baz=326						
SATY	**Saty**	**73.10**	**326**	*e*P	**P**	**08 23 50.7**	**-0.2**
GOMU	**GeErMu**	**73.15**	**311**	P	**P**	**08 23 52.0**	**+0.4**
GOMU				pP	pwP	08 23 57.3	-3.6
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDOK	**Medeo**	**73.42**	**327**	*e*P	**P**	**08 23 52.1**	**-0.8**
	baz=327						
MDOK	**Medeo**	**73.42**	**327**	*e*P	**P**	**08 23 52.0**	**-0.8**
TKM2	**Tokmak 2**	**74.08**	**328**	P	**P**	**08 23 57.6**	**+0.8**
	SNR=8.3						
USP	**Ospenovka**	**74.08**	**329**	P	**P**	**08 23 57.1**	**+0.5**
	SNR=7.6						
LANS	**Liptovska Anna**	**74.12**	**8**	*e*P	**P**	**08 23 57.8**	**+1.1**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	**Liptovska Anna**	**74.12**	**8**	*e*P	**P**	**08 23 57.8**	**+1.1**
KBK	**Karagaybulak**	**74.51**	**328**	P	**P**	**08 23 60.0**	**+0.7**
	SNR=7.3						
AAK	**Ala-Archa**	**74.66**	**329**	P	**P**	**08 24 00.5**	**+0.4**
	SNR=6.6						
AAK	**Ala-Archa**	**74.66**	**329**	P	**P**	**08 24 00.1**	**0.0**
AAK	**Ala-Archa**	**74.66**	**329**⇓	*e*P	**P**	**08 24 00.4**	**+0.3**
AAK		

BRTR					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BRTR	**Keskin Array B**	**83.99**	**358**		P	**P**	**08**	**24**	**51.6 +0.6**
	comp=Z,2.8nm,0.9s,baz=329,slow=1.4,SNR=8.1								
	comp=Z,2.8nm,0.9s								
CMAR	**Chiang Mai Arr**	**86.47**	**299**	*i*	P	**P**	**08**	**25**	**03.7 +0.2**
CMAR					pmax	pmax			
	comp=Z,3.0nm,0.5s								
CMAR	**Chiang Mai Arr**	**86.47**	**299**		P	**P**	**08**	**25**	**02.7 -0.8**
	comp=Z,6.3nm,0.8s,baz=20,slow=4.7,SNR=25								
	comp=Z,6.3nm,0.8s								
RAYN	**Ar Rayn**	**99.28**	**347**			**Pdif**	**08**	**26**	**02.5 -0.3**
RAYN	**Ar Rayn**	**99.28**	**347**		P	**Pdif**	**08**	**26**	**02.5 -0.3**
RAYN					pmax	pmax			
	comp=Z,5.0nm,1.1s								
QSPA	**South Pole Qui**	**146.43**	**180**		PKPbc	**PKPbc**	**08**	**31**	**59.8 -0.5**
	comp=Z,22nm,1.1s,baz=60,slow=1.7,SNR=24								
BOSA	**Boshof**	**151.66**	**11**		PKPbc	**PKPbc**	**08**	**32**	**14.3 -0.6**
	comp=Z,10nm,0.9s,baz=16,slow=5.0,SNR=10								

*NEIC **22** 08:19:42.2±1.1, 17°.31N±0°.07×120°.0E±0°.1, h57km±4km, mb4.0/8, Error ellipse: s-maj=17.8km s-min=9.6km az=76.0*

*IDC **22** 08:19:43.4±2.9, 17°.17N×120°.21E, h82km±29km, mb3.6/13, mbtmp3.9/13, Error ellipse: s-maj=30.6km s-min=15.0km az=72.0*

ISC 22 08:19:38.4±0.5, 17°.17N±0°.06×119°.8E±0°.1, h34km, n34, σ1§58/36, mb3.9/15, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**3.23**	**161**	P		**Pb**		**08 20 31.6**	**-3.5**
	303nm,0.3s,baz=1.1,slow=1.3,SNR=7.6								
TGY				S		**Sb**		**08 21 19.0**	**+5.0**
	612nm,0.4s,baz=307,slow=18,SNR=4.3								
YULB	**Yu-li**	**6.34**	**12**	Pn		**Pn**		**08 21 09.7**	**+0.1**
SSLB	**Suanglung**	**6.67**	**9**	Pn		**Pn**		**08 21 14.3**	**+0.2**
NACB	**Ninganchiao**	**7.16**	**13**	Pn		**Pn**		**08 21 20.3**	**-0.6**
KNMB	**Chin-men Tao**	**7.39**	**350**	Pn		**Pn**		**08 21 20.7**	**-3.2**
HKPS	**Hong Kong Po S**	**7.39**	**314**	Pn		**Pn**		**08 21 22.8**	**-1.2**
YHNB	**Yeheng**	**7.60**	**11**	Pn		**Pn**		**08 21 28.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**19.93**	**277**	P		**Pn**		**08 24 11.4**	**+2.0**
	1.2nm,0.3s,baz=92,slow=9.0,SNR=1.4								
	1.2nm,0.3s								
KSRS	**Korea Array**	**21.43**	**18**	P		**P**		**08 24 22.9**	**-0.6**
	3.4nm,0.7s,baz=206,slow=10,SNR=12								
	3.4nm,0.7s								
BJT	**Baijiatuan**	**22.99**	**353**	P		**P**		**08 24 40.9**	**+0.6**
BJT				IAmb		IAmb		08 24 42.5	
	comp=Z,3.7nm,0.9s								
SONM	**Songino Array**	**32.52**	**343**	P		**P**		**08 26 04.6**	**-1.6**
SONM	**Songino Array**	**32.52**	**343**	P		**P**		**08 26 06.6**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=152,slow=9.5,SNR=3.1								
	comp=Z,0.6nm,0.5s								
KLR	**Kul'dur**	**33.41**	**14**	P		**P**		**08 26 13.4**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=284,slow=4.2,SNR=5.0								
	comp=Z,1.3nm,0.8s								
MK31	**Makanchi Array**	**42.78**	**322**	P		**P**		**08 27 33.3**	**+0.4**
MKAR	**Makanchi Array**	**42.78**	**322**	P		**P**		**08 27 33.7**	**+0.9**
MKAR	**Makanchi Array**	**42.78**	**322**	P		**P**		**08 27 35.9**	**+3.1**
	comp=Z,0.2nm,0.4s,baz=117,slow=8.9,SNR=5.7								
MKAR				PcP		**PcP**		**08 29 24.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=99,slow=3.1,SNR=2.8								
	comp=Z,0.2nm,0.4s								
ASAR	**Alice Springs**	**42.85**	**161**	P		**P**		**08 27 32.0**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=338,slow=6.8,SNR=18								
	comp=Z,0.7nm,0.4s								
ZALV	**Zalesovo Beam**	**45.62**	**332**	P		**P**		**08 27 56.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=134,slow=8.3,SNR=2.5								
	comp=Z,0.9nm,0.6s								
KURK	**Kurchatov**	**46.87**	**325**	P		**P**		**08 28 06.0**	**+0.7**
KURBB	**Kurchatov Arra**	**46.88**	**325**	P		**P**		**08 28 06.9**	**+1.6**
	comp=Z,1.9nm,0.6s,baz=122,slow=8.4,SNR=15								
	comp=Z,1.9nm,0.6s								
BVAR	**Borovoye Array**	**52.47**	**325**	P		**P**		**08 28 49.0**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=107,slow=9.5,SNR=3.1								
	comp=Z,0.6nm,0.7s								
STKA	**Stephens Creek**	**53.04**	**157**	P		**P**		**08 28 51.2**	**-1.1**
STKA				IAmb		IAmb		08 29 13.9	
	comp=Z,2.2nm,1.4s								
STKA	**Stephens Creek**	**53.04**	**157**	P		**P**		**08 28 51.5**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=335,slow=16,SNR=1.6								
	comp=Z,0.9nm,0.4s								
NRIK	**Noril'sk**	**55.87**	**347**	P		**P**		**08 29 12.4**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=90,slow=7.0,SNR=4.2								
	comp=Z,1.4nm,0.4s								
ABKAR	**Akbulak array**	**57.60**	**318**	P		**P**		**08 29 26.1**	**+1.1**
ABKAR				IAmb		IAmb		08 29 28.6	
	comp=Z,1.7nm,1.1s								
D19K	**Kuna River**	**71.25**	**23**	P		**P**		**08 30 53.1**	**-0.9**
D19K				IAmb		IAmb		08 30 55.3	
	comp=Z,3.2nm,1.4s								
B20K	**Meade River**	**71.61**	**21**	P		**P**		**08 30 56.0**	**0.0**
IMAR	**Indian Mountai**	**73.02**	**25**	P		**P**		**08 31 04.2**	**-0.4**
BMAR	**Burnt Mountain**	**76.43**	**23**	P		**P**		**08 31 24.4**	**+0.1**
KHZ	**Kahutara**	**77.18**	**142**	P		**P**		**08 31 29.7**	**+1.0**
BCAR	**Beaver Creek A**	**78.60**	**27**	P		**P**		**08 31 36.5**	**0.0**
HFS	**Hagfors**	**83.05**	**331**	P		**P**		**08 32 01.2**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=93,slow=11,SNR=4.2								
	comp=Z,0.6nm,0.5s								
NB2	**NORSAR Subarra**	**83.82**	**332**	P		**P**		**08 32 04.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=65,slow=4.6								
NOA	**NORSAR Array B**	**83.82**	**332**	P		**P**		**08 32 04.3**	**0.0**
	comp=Z,0.5nm,0.6s,baz=54,slow=2.1,SNR=4.6								
	comp=Z,0.5nm,0.6s								

IDC 22 08:30:29.9±3.3, 53°.59N×87°.98E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=34.6km s-min=20.9km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.91**	**282**	I		I	I	08 42 27.1	
	baz=97,slow=340,SNR=1.9								
ZALV	**Zalesovo Beam**	**1.91**	**282**	Pn		Pn	Pn	08 31 03.2	-0.5
	1.5nm,0.3s,baz=103,slow=15,SNR=13								
ZALV				Sn		Sb	Sb	08 31 29.7	-0.3
	1.8nm,0.3s,baz=104,slow=24,SNR=15								
KURBB	**Kurchatov Arra**	**6.54**	**247**	Pn		Pn	Pn	08 32 07.8	+0.6
	baz=62,slow=14,SNR=4.3								
KURBB				Lg		Lg	Lg	08 33 57.6	
	baz=62,slow=30,SNR=5.6								
	0.4nm,0.7s								
MKAR	**Makanchi Array**	**7.72**	**210**	Pn		Pn	Pn	08 32 24.7	+1.2
	0.1nm,0.3s,baz=33,slow=14,SNR=4.7								
MKAR				Lg		Lg	Lg	08 34 35.3	
	baz=24,slow=32,SNR=7.9								
	0.1nm,0.3s								

*IDC **22** 08:40:25.6±2.0, 56°.41N×148°.65W, h0km, mb3.7/4, mbtmp3.5/8, ML3.1/4, MS2.8/2, Error ellipse: s-maj=37.8km s-min=23.8km az=172.0*

*NEIC **22** 08:40:27.8±1.0, 56°.61N±0°.05×148°.64W±0°.09, h21km±6km, ML3.4/78, ML3.2(AEIC), Error ellipse: s-maj=7.8km s-min=7.1km az=53.0*

*AEIC **22** 08:40:29.7±1.0, 56°.53N±0°.10×148°.6W±0°.1, h6km±7km, Error ellipse: s-maj=14.3km s-min=8.4km az=168.0*

ISC 22 08:40:27.5±1.1, 56°.66N±0°.08×148°.66W±0°.05, h10km, n179, σ1§12/174, mb3.8/4, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.41**	**299**				**Pn**	**08 41 06.3**	**-0.6**
KDAK							**Sn**	**08 41 34.5**	**-2.0**
KDAK	**Kodiak Island**	**2.41**	**299**	Pn			**Pn**	**08 41 06.4**	**-0.6**
	1.9nm,0.3s,baz=141,slow=4.8,SNR=11								
KDAK				Sn			**Sn**	**08 41 34.2**	**-2.3**
	9.0nm,0.3s,baz=135,slow=22,SNR=12								
KDAK				LR			LR	08 41 43.9	
	comp=Z,109nm,20.4s,baz=345,slow=31								
	5.1nm,0.3s								
OHAK	**Old Harbor**	**2.60**	**284**				**Pn**	**08 41 07.8**	**-1.7**
OHAK	**Old Harbor**	**2.60**	**284**				**Sn**	**08 41 37.6**	**-3.5**
OHAK	**Old Harbor**	**2.60**	**284**	IAML				08 41 38.0	
	comp=E,44nm,0.4s								
OHAK				IAML				08 41 38.8	
	comp=N,34nm,0.4s								
OHAK	**Old Harbor**	**2.60**	**284**	P			**Pn**	**08 41 08.3**	**-1.2**
OHAK	**Old Harbor**	**2.60**	**284**	P			**Pn**	**08 41 07.9**	**-1.5**
	baz=103								
OHAK				S			**Sn**	**08 41 37.6**	**-3.5**
	baz=103								
SYI	**Shuyak Island**	**2.80**	**316**				**Pn**	**08 41 12.3**	**0.0**
SYI							**Sn**	**08 41 45.5**	**-0.5**
Q20K	**Shuyak Island**	**2.80**	**316**	P			**Pn**	**08 41 12.3**	**0.0**
	baz=134								
Q20K				S			**Sn**	**08 41 45.5**	**-0.5**
	baz=134								
MID	**Middleton Isla**	**3.04**	**23**	Pn			**Pn**	**08 41 14.5**	**-1.0**
MID				IAML				08 42 07.8	
	comp=N,101nm,1.5s								
MID				IAML				08 42 53.4	
	comp=E,117nm,1.3s								
MID	**Middleton Isla**	**3.04**	**23**	P			**Pn**	**08 41 14.5**	**-1.0**
Q23K	**Middleton Isla**	**3.04**	**23**				**Pn**	**08 41 14.4**	**-1.1**
Q23K							**Sn**	**08 41 49.8**	**-2.1**
Q23K	**Middleton Isla**	**3.04**	**23**	IAML				08 42 16.8	
	comp=N,102nm,1.5s								
Q23K				IAML				08 43 08.6	
	comp=E,113nm,1.2s								
Q23K	**Middleton Isla**	**3.04**	**23**	P			**Pn**	**08 41 14.4**	**-1.1**
	baz=204								
Q23K				S			**Sn**	**08 41 49.8**	**-2.1**
	baz=204								
CNPM	**China Poot**	**3.18**	**336**				**Pn**	**08 41 17.1**	**-0.4**
CNPM							**Sn**	**08 41 53.7**	**-1.8**
BRSE	**Bradley Lake S**	**3.28**	**341**				**Pn**	**08 41 18.2**	**-0.7**
BRSE							**Sn**	**08 41 56.2**	**-1.8**
BRSE	**Bradley Lake S**	**3.28**	**341**	P			**Pn**	**08 41 18.2**	**-0.7**
	baz=160								
BRSE				S			**Sn**	**08 41 56.2**	**-1.8**
	baz=160								
BRLK	**Bradley Lake**	**3.33**	**340**				**Pn**	**08 41 18.9**	**-0.7**
HOM	**Homer**	**3.40**	**334**	Pn			**Pn**	**08 41 20.6**	**+0.1**
HOM				IAML				08 42 12.2	
	comp=E,100nm,1.1s								
HOM				IAML				08 42 12.7	
	comp=N,92nm,0.5s								
P23K	**Montague Islan**	**3.41**	**11**				**Pn**	**08 41 19.7**	**-1.0**
P23K	**Montague Islan**	**3.41**	**11**	P			**Pn**	**08 41 19.7**	**-1.0**
	baz=191								
SEW	**Seward**	**3.48**	**353**				**Pn**	**08 41 20.7**	**-0.9**
SEW	**Seward**	**3.48**	**353**	P			**Pn**	**08 41 20.7**	**-0.9**
	baz=173								
Q19K	**Cape Douglas,**	**3.50**	**313**	Pn			**Pn**	**08 41 21.0**	**-1.0**
Q19K				IAML				08 42 12.7	
	comp=N,88nm,1.2s								
P19K	**Oil Pt**	**3.85**	**323**				**Pn**	**08 41 25.0**	**-1.8**
P19K				IAML				08 42 14.5	
	comp=E,75nm,0.4s								
P19K				IAML				08 42 19.4	
	comp=N,79nm,0.4s								
P19K	**Oil Pt**	**3.85**	**323**	P			**Pn**	**08 41 26.2**	**-0.6**
	baz=140								
O22K	**Cooper Landing**	**3.87**	**352**				**Pn**	**08 41 25.4**	**-1.6**
HIN	**Hinchinbrook I**	**3.91**	**16**				**Pn**	**08 41 27.1**	**-0.5**
SLKM	**Skilak Lake**	**3.94**	**349**				**Pn**	**08 41 27.8**	**-0.3**
KAIM	**Kayak Island**	**3.97**	**33**				**Pn**	**08 41 27.1**	**-1.2**
KAIM	**Kayak Island**	**3.97**	**33**	P			**Pn**	**08 41 27.2**	**-1.2**
	baz=215								
O20K	**Slope Mountain**	**4.01**	**330**				**Pn**	**08 41 28.8**	**-0.3**
O20K	**Slope Mountain**	**4.01**	**330**	P			**Pn**	**08 41 28.8**	**-0.3**
	baz=148								
ILSW	**Iliamna Southw**	**4.08**	**327**				**Pn**	**08 41 30.0**	**-0.1**
ILSW	**Iliamna Southw**	**4.08**	**327**	IAML				08 42 18.6	
	comp=N,30nm,0.5s								
ILSW				IAML				08 42 24.8	
	comp=E,23nm,0.8s								
EYAK	**Cordova Ski Ar**	**4.18**	**20**				**Pn**	**08 41 30.7**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.18**	**20**	P			**Pn**	**08 41 30.8**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.18**	**20**	P			**Pn**	**08 41 30.7**	**-0.6**
	baz=202								
FID	**Port Fidalgo**	**4.25**	**15**				**Pn**	**08 41 31.3**	**-1.0**
FID	**Port Fidalgo**	**4.25**	**15**	IAML				08 42 23.5	
	comp=E,42nm,0.4s								
FID				IAML				08 42 23.9	
	comp=N,26nm,0.3s								
SUCK	**Suckling Hills**	**4.28**	**35**				**Pn**	**08 41 32.0**	**-0.6**
SUCK	**Suckling Hills**	**4.28**	**35**	IAML				08 42 24.6	
	comp=N,43nm,0.6s								
SUCK				IAML				08 42 26.9	
	comp=E,38nm,1.1s								
RAGM	**Ragged Mountai**	**4.28**	**28**				**Pn**	**08 41 32.3**	**-0.4**
GLI	**Glacier Island**	**4.31**	**10**				**Pn**	**08 41 32.4**	**-0.6**
GLI	**Glacier Island**	**4.31**	**10**	IAML				08 42 28.1	
	comp=E,45nm,0.7s								
GLI				IAML				08 42 28.1	
	comp=N,27nm,0.8s								
GLI	**Glacier Island**	**4.31**	**10**	P			**Pn**	**08 41 32.4**	**-0.6**
	baz=191								
CAPN	**Captain Cook N**	**4.32**	**344**	Pn			**Pn**	**08 41 33.5**	**+0.4**
RED	**Redoubt Volcan**	**4.34**	**332**				**Pn**	**08 41 32.8**	**-0.8**
HMT	**Hamilton**	**4.35**	**30**				**Pn**	**08 41 32.9**	**-0.8**
NICHA	**Nichawak Mount**	**4.35**	**33**				**Pn**	**08 41 33.2**	**-0.5**
RSO	**Redoubt South**	**4.37**	**332**				**Pn**	**08 41 32.6**	**-1.5**
GOAT	**Goat Mountain**	**4.44**	**26**				**Pn**	**08 41 34.3**	**-0.6**
P18K	**Big Mountain,**	**4.44**	**311**	Pn			**Pn**	**08 41 34.8**	**-0.1**
BGLC	**Bering Glacier**	**4.48**	**37**				**Pn**	**08 41 34.5**	**-0.8**
BGLC	**Bering Glacier**	**4.48**	**37**	P			**Pn**	**08 41 34.5**	**-0.8**
	baz=220								
RC01	**Rabbit Creek A**	**4.48**	**353**				**Pn**	**08 41 34.9**	**-0.4**
RC01				IAML				08 42 26.6	
	comp=N,26nm,0.5s								
RC01				IAML				08 42 28.1	
	comp=E,31nm,0.5s								
BERG	**Berg Lake**	**4.55**	**33**				**Pn**	**08 41 35.7**	**-0.7**
GRIN	**Grindle Hills**	**4.59**	**35**				**Pn**	**08 41 36.3**	**-0.6**
O19K	**Port Alsworth**	**4.62**	**322**				**Pn**	**08 41 37.0**	**-0.3**
O19K	**Port Alsworth**	**4.62**	**322**	P			**Pn**	**08 41 37.0**	**-0.3**
	baz=138								
SNH	**Sunshine Point**	**4.67**	**39**				**Pn**	**08 41 37.1**	**-0.9**
SNH	**Sunshine Point**	**4.67**	**39**	IAML				08 42 39.8	
	comp=E,29nm,0.9s								
SNH				IAML				08 43 03.1	
	comp=N,27nm,1.4s								
O18K	**Koktuh Hills**	**4.71**	**316**				**Pn**	**08 41 38.1**	**-0.5**
O18K	**Koktuh Hills**	**4.71**	**316**	P			**Pn**	**08 41 38.1**	**-0.5**
	baz=131								
DIV	**Divide**	**4.72**	**17**				**Pn**	**08 41 38.6**	**-0.2**
KHIT	**Khitrov Hills**	**4.73**	**35**				**Pn**	**08 41 38.1**	**-0.9**
KNK	**Knik Glacier**	**4.77**	**1**				**Pn**	**08 41 39.6**	**+0.2**
KNK	**Knik Glacier**	**4.77**	**1**	IAML				08 42 41.8	
	comp=E,18nm,0.8s								
KNK	**Knik Glacier**	**4.77**	**1**	P			**Pn**	**08 41 39.6**	**+0.2**
	baz=181								
BMRM	**Bremner River**	**4.80**	**24**				**Pn**	**08 41 39.5**	**-0.4**
BMRM	**Bremner River**	**4.80**	**24**	P			**Pn**	**08 41 39.5**	**-0.4**
	baz=207								
WAX	**Waxell Ridge**	**4.87**	**36**				**Pn**	**08 41 39.9**	**-0.9**
N20K	**Mount Spurr**	**4.91**	**340**	P			**Pn**	**08 41 41.3**	**-0.1**
	baz=157								
SPCR	**Spurr Chakacha**	**4.91**	**340**				**Pn**	**08 41 41.3**	**-0.1**
SUA	**Susitna One**	**4.94**	**348**				**Pn**	**08 41 41.3**	**-0.5**
SUA	**Susitna One**	**4.94**	**348**	P			**Pn**	**08 41 41.3**	**-0.5**
	baz=167								
BARK	**Barkley Ridge**	**4.95**	**38**				**Pn**	**08 41 41.2**	**-0.7**
PMR	**Palmer**	**4.95**	**357**				**Pn**	**08 41 41.2**	**-0.6**
PMR				IAML				08 42 40.2	
	comp=N,15nm,0.8s								
PMR				IAML				08 42 40.5	
	comp=E,13nm,1.0s								
PMR	**Palmer**	**4.95**	**357**	P			**Pn**	**08 41 41.7**	**-0.1**
MESA	**MESA**	**4.99**	**42**	Pn			**Pn**	**08 41 41.0**	**-1.5**
MESA				IAML				08 42 43.8	
	comp=N,30nm,0.9s								
MESA				IAML				08 42 51.0	
	comp=E,22nm,1.0s								
CRQM	**Cirque**	**5.01**	**33**				**Pn**	**08 41 41.8**	**-1.1**
CRQM	**Cirque**	**5.01**	**33**	IAML				08 42 39.5	
	comp=E,22nm,1.0s								
CRQM				IAML				08 42 41.3	
	comp=N,28nm,0.5s								
CRQE	**Cirque**	**5.03**	**33**	P			**Pn**	**08 41 41.8**	**-1.2**
	baz=217								
KLU	**Klutina**	**5.05**	**15**				**Pn**	**08 41 42.8**	**-0.4**
KLU	**Klutina**	**5.05**	**15**	IAML				08 42 43.9	
	comp=E,18nm,0.4s								
KLU				IAML				08 42 50.5	
	comp=N,24nm,0.8s								
KLU	**Klutina**	**5.05**	**15**	P			**Pn**	**08 41 42.8**	**-0.4**
	baz=197								
TGL	**Tana Glacier**	**5.11**	**34**				**Pn**	**08 41 43.4**	**-0.7**
TGL	**Tana Glacier**	**5.11**	**34**	IAML				08 42 42.7	
	comp=N,17nm,1.4s								
TGL				IAML				08 42 46.9	
	comp=E,25nm,0.5s								
STLK	**Strandline Lak**	**5.12**	**343**				**Pn**	**08 41 44.2**	**-0.1**
GHO	**Glory Hole Cre**	**5.13**	**359**				**Pn**	**08 41 44.5**	**+0.2**
GHO	**Glory Hole Cre**	**5.13**	**359**	IAML				08 42 47.9	
	comp=N,25nm,0.6s								
GHO				IAML				08 42 56.1	
	comp=E,26nm,0.8s								
ISLE	**Juniper Island**	**5.15**	**37**				**Pn**	**08 41 44.0**	**-0.7**
ISLE	**Juniper Island**	**5.15**	**37**	IAML				08 42 50.0	
	comp=N,19nm,1.0s								
ISLE				IAML				08 42 52.2	
	comp=E,19nm,1.0s								
N19K	**Bonanza Creek**	**5.15**	**326**	Pn			**Pn**	**08 41 44.9**	**+0.2**
BAGL	**Bagley Icefiel**	**5.15**	**39**				**Pn**	**08 41 43.7**	**-0.9**
SML	**Sawmill**	**5.16**	**2**				**Pn**	**08 41 45.0**	**+0.1**
SML	**Sawmill**	**5.16**	**2**	IAML				08 42 49.0	
	comp=E,21nm,0.7s								
SML				IAML				08 42 52.6	
	comp=N,21nm,1.3s								
SML	**Sawmill**	**5.16**	**2**	P			**Pn**	**08 41 45.0**	**+0.1**
	baz=182								
VRDI	**Verde Repeater**	**5.31**	**28**				**Pn**	**08 41 46.5**	**-0.5**
VRDI	**Verde Repeater**	**5.31**	**28**	IAML				08 42 46.3	
	comp=N,25nm,0.5s								
VRDI				IAML				08 43 02.3	
	comp=E,10nm,1.3s								
N25K	**Chitina, Valde**	**5.38**	**21**				**Pn**	**08 41 48.0**	**+0.1**
N25K	**Chitina, Valde**	**5.38**	**21**	P			**Pn**	**08 41 48.0**	**+0.1**
	baz=204								
KIAG	**Kiagna River**	**5.38**	**35**				**Pn**	**08 41 47.6**	**-0.4**
GLB	**Gilahina Butte**	**5.41**	**26**				**Pn**	**08 41 47.6**	**-0.6**
O17K	**Koliganek Bris**	**5.44**	**308**				**Pn**	**08 41 48.7**	**+0.2**
O17K	**Koliganek Bris**	**5.44**	**308**	P			**Pn**	**08 41 48.7**	**+0.2**
	baz=122								
GRNC	**Granite Creek**	**5.44**	**39**				**Pn**	**08 41 48.0**	**-0.7**
TABL	**Table Mountain**	**5.46**	**43**				**Pn**	**08 41 48.4**	**-0.7**
N18K	**Kilae Creek**	**5.52**	**320**	Pn			**Pn**	**08 41 48.6**	**-1.1**
PTPK	**Patty Peak**	**5.56**	**33**				**Pn**	**08 41 49.7**	**-0.6**
MCARA	**McCarthy VSAT**	**5.56**	**29**				**Pn**	**08 41 49.9**	**-0.3**
MCARA	**McCarthy VSAT**	**5.56**	**29**	P			**Pn**	**08 41 49.9**	**-0.3**
	baz=213								
PCA	**Pinnacle**	**5.60**	**49**				**Pn**	**08 41 50.4**	**-0.5**
PINM	**Pinnacle**	**5.61**	**49**	P			**Pn**	**08 41 50.4**	**-0.5**
	baz=235								
M24K	**Tolsona, Glenn**	**5.61**	**12**				**Pn**	**08 41 50.8**	**-0.2**
BARN	**Barnard Glacie**	**5.71**	**37**				**Pn**	**08 41 52.0**	**-0.5**
SVW2	**Sparrevohn**	**5.71**	**324**	P			**Pn**	**08 41 52.2**	**-0.1**
CTG	**Chitna Glacier**	**5.75**	**38**	P			**Pn**	**08 41 52.2**	**-0.7**
	baz=224								
CTGM	**Chitina Glacie**	**5.75**	**38**				**Pn**	**08 41 52.2**	**-0.8**
PNL	**Peninsula**	**5.75**	**55**				**Pn**	**08 41 52.0**	**-0.9**
PNL	**Peninsula**	**5.75**	**55**	P			**Pn**	**08 41 52.1**	**-0.9**
PNL	**Peninsula**	**5.75**	**55**	P			**Pn**	**08 41 52.0**	**-0.9**
	baz=241								
WASW	**Wrangell South**	**5.76**	**22**				**Pn**	**08 41 53.5**	**+0.4**
LOGN	**Logan Glacier**	**5.77**	**41**				**Pn**	**08 41 52.4**	**-0.8**
BCPM	**Bancas Point**	**5.79**	**52**				**Pn**	**08 41 52.7**	**-0.7**
O16K	**Kokwok River B**	**5.80**	**304**	Pn			**Pn**	**08 41 53.4**	**0.0**
WAT6	**Susitna Watana**	**5.96**	**4**				**Pn**	**08 41 56.8**	**+1.0**
WAT6	**Susitna Watana**	**5.96**	**4**	P			**Pn**	**08 41 56.8**	**+1.0**
	baz=185								
M19K	**Big River Lodg**	**6.02**	**333**	Pn			**Pn**	**08 41 55.4**	**-1.2**
HARP	**HAARP**	**6.02**	**16**				**Pn**	**08 41 57.7**	**+1.1**
HARP	**HAARP**	**6.02**	**16**	P			**Pn**	**08 41 57.7**	**+1.1**
	baz=198								
WAT7	**Susitna Watana**	**6.19**	**359**				**Pn**	**08 41 59.5**	**+0.5**
L19K	**White Mountain**	**6.37**	**333**	Pn			**Pn**	**08 42 00.3**	**-1.0**
O29M	**Mount Kennedy**	**6.42**	**51**				**Pn**	**08 42 01.6**	**-0.6**
O29M	**Mount Kennedy**	**6.42**	**51**	P			**Pn**	**08 42 01.6**	**-0.6**
	baz=239								
O15K	**Ungalikthiuk R**	**6.46**	**298**				**Pn**	**08 42 03.2**	**+0.7**
O15K	**Ungalikthiuk R**	**6.46**	**298**	P			**Pn**	**08 42 03.2**	**+0.7**
	baz=109								
**D

comp=Z,83nm,18.8s,baz=140,slow=39
PMG Port Moresby 18.75 129 LR LR 09 05 07.3
comp=Z,74nm,18.0s,baz=299,slow=42
WRA Warramunga Arr 22.25 175 P **P 08 57 10.6 -1.1**
0.6nm,0.7s,baz=357,slow=10,SNR=5.8
0.6nm,0.7s
ASAR Alice Springs 25.91 177 P **P 08 57 48.0 +1.3**
0.3nm,0.6s,baz=4.9,slow=12,SNR=7.7
0.3nm,0.6s
HNR Honiara 29.80 114 LR LR 09 09 22.3
comp=Z,774nm,20.2s,baz=252,slow=35
JNU Nakatsue 30.63 357 LR LR 09 10 04.7
comp=Z,40nm,20.8s,baz=334,slow=35
H11S3 WAKE ISLAND Hy 37.17 62 T T 09 37 57.5
baz=248,slow=75,SNR=22
H11S2 WAKE ISLAND Hy 37.19 62 T T 09 38 02.8
baz=248,slow=75,SNR=24
H11S1 WAKE ISLAND Hy 37.19 62 T T 09 38 02.9
baz=248,slow=75,SNR=25
H11N1 WAKE ISLAND Hy 37.81 60 T T 09 38 47.7
baz=246,slow=75,SNR=54
H11N2 WAKE ISLAND Hy 37.82 60 T T 09 38 48.5
baz=246,slow=75,SNR=59
H11N3 WAKE ISLAND Hy 37.83 60 T T 09 38 50.2
baz=246,slow=75,SNR=82
SONM Songino Array 50.58 337 P **P 09 01 12.8 -0.2**
0.8nm,0.9s,baz=149,slow=6.8,SNR=5.0
0.8nm,0.9s
RPZ Rata Peaks 57.46 148 LR LR 09 25 01.3
comp=Z,55nm,19.7s,baz=231,slow=34
MKAR Makanchi Array 61.99 323 P **P 09 02 34.2 -0.1**
0.7nm,0.8s,baz=108,slow=8.0,SNR=8.3
0.7nm,0.8s
KURBB Kurchatov Arra 66.02 326 P **P 09 03 01.0 +0.3**
1.7nm,0.9s,baz=126,slow=5.4,SNR=5.0
1.7nm,0.9s
BVAR Borovoye Array 71.61 326 P **P 09 03 35.6 +0.1**
2.6nm,0.9s,baz=111,slow=8.1,SNR=7.6
2.6nm,0.9s
KIRV Kirov 84.35 329 LR LR 09 46 54.1
comp=Z,39nm,18.2s,baz=285,slow=39

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*UPA **22** 09:03:09.7±0.6,9°.87N×83°.88W,h0km±130km, MD3.7, MW4.2*
*CATAC **22** 09:03:10.1±0.2,9°.79N×83°.91W,h3km±2km, ML2.5*
ISC 22 09:03:09.8±1.2,**9°.80N**±0°.03×**83°.91W**±0°.03,**h2**km±12km, **n26**,σ0**°67**/30,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RIMA	**Rio Macho**	**0.05**	**122**	*i* P			**Pg**	**09 03 11.0**	**0.0**
RIMA						IAML		09 03 12.1	
	comp=Z,20μm,1.0s								
LCR2	**La Lucha 2**	**0.11**	**241**	*i* P			**Pg**	**09 03 12.6**	**+0.6**
LCR2						IAML		09 03 14.7	
	comp=Z,2μm,1.0s								
OCM	**Ochomogo**	**0.11**	**333**	*i* P			**Pg**	**09 03 12.5**	**+0.4**
OCM						IAML		09 03 15.1	
	comp=Z,6μm,1.0s								
VIRE	**VIRE**	**0.17**	**4**	*i* P			**Pg**	**09 03 13.9**	**+0.6**
VIRE				*i* SA				09 03 17.0	
VIRE						IAML		09 03 18.6	
	comp=Z,5μm,1.0s								
VTRT	**Volcan Turrial**	**0.24**	**29**	*i* P			**Pg**	**09 03 14.9**	**+0.5**
VTRT						IAML		09 03 23.9	
	comp=Z,720nm,1.0s								
VTCV	**VTCV, Calle Va**	**0.26**	**44**	*i* P			**Pg**	**09 03 15.5**	**+0.6**
VTCV				*i* SA				09 03 19.9	
VTCV						IAML		09 03 20.4	
	comp=Z,2μm,1.0s								
VTUN	**Crater Central**	**0.27**	**32**	*i* P			**Pg**	**09 03 15.7**	**+0.6**
VTUN						IAML		09 03 27.0	
	comp=Z,530nm,1.0s								
VTUC	**Crater, Volcan**	**0.27**	**33**	*i* P			**Pg**	**09 03 15.6**	**+0.5**
VTUC						IAML		09 03 20.8	
	comp=Z,630nm,1.0s								
CDM	**Cerro de Muert**	**0.28**	**149**	*i* P			**Pg**	**09 03 15.6**	**+0.3**
CDM				*i* S			**Sg**	**09 03 19.9**	**+0.9**
CDM						IAML		09 03 21.2	
	comp=Z,500nm,1.0s								
HDC3	**Heredia 3**	**0.29**	**316**	*i* P			**Pg**	**09 03 16.2**	**+0.8**
HDC3						IAML		09 03 28.9	
	comp=Z,490nm,1.0s								
PEZE	**Perez Zeledon,**	**0.47**	**151**	*i* P			**Pg**	**09 03 18.7**	**-0.2**
PEZE				*i* SA				09 03 25.5	
PEZE						IAML		09 03 28.0	
	comp=Z,300nm,1.0s								
RIFO	**Rio Frio, Sara**	**0.52**	**359**	*i* P			**Pb**	**09 03 20.6**	**-1.1**
RIFO				*i* SA				09 03 27.4	
RIFO						IAML		09 05 44.4	
	comp=Z,280nm,1.0s								
OCHAL	**Ojochal**	**0.74**	**159**	*i* P			**Pg**	**09 03 24.3**	**+0.2**
OCHAL						IAML		09 03 25.0	
	comp=Z,3.3nm,1.0s								
JACO	**JACO, Garabito**	**0.75**	**260**	*i* P			**Pg**	**09 03 24.3**	**0.0**
JACO				*i* SA				09 03 35.2	
JACO						IAML		09 03 35.7	
	comp=Z,78nm,1.0s								
SOCE	**Pocosol**	**0.91**	**310**	*i* P			**Pg**	**09 03 27.6**	**+0.3**
SOCE						IAML		09 03 31.0	
	comp=Z,150nm,1.0s								
POTG	**Potrero Grande**	**1.07**	**133**	*i* P			**Pg**	**09 03 30.9**	**+0.4**
POTG						IAML		09 05 54.9	
	comp=Z,210nm,1.0s								
PLAN	**Los Planes de**	**1.14**	**169**	*i* P			**Pg**	**09 03 32.2**	**+0.5**
PLAN						IAML		09 03 53.1	
	comp=Z,150nm,1.0s								
MLIR3	**Monte Lirio, C**	**1.46**	**133**	*e*P			**Pn**	**09 03 37.0**	**-0.4**
MLIR3				*e*S			**Sn**	**09 03 58.6**	**+1.3**
CNI2	**El Empalme, Bo**	**1.47**	**104**	*e*S			**Sg**	**09 03 55.5**	**-1.5**
VMAR	**Armenia, Volca**	**1.56**	**311**	*i* P			**Pn**	**09 03 38.7**	**0.0**
VMAR						IAML		09 03 48.5	
	comp=Z,100nm,1.0s								
BRU2	**Volcan**	**1.56**	**129**	*e*P			**Pn**	**09 03 38.8**	**-0.1**
BRU2				*e*S			**Sg**	**09 04 00.9**	**+0.8**
INDI	**Punta indio, G**	**1.57**	**273**	*i* P			**Pn**	**09 03 38.4**	**-0.4**
INDI						IAML		09 04 06.8	
	comp=Z,34nm,1.0s								
DUNO	**Dulce Nombre,**	**1.59**	**280**	*i* P			**Pn**	**09 03 38.9**	**-0.1**
DUNO						IAML		09 04 06.0	
	comp=Z,89nm,1.0s								
ORTG	**Ortega, Santa**	**1.63**	**290**	*i* P			**Pn**	**09 03 38.9**	**-0.8**
ORTG						IAML		09 04 05.0	
	comp=Z,77nm,1.0s								
BCO2	**Palmira**	**1.73**	**128**	*e*P			**Pn**	**09 03 41.5**	**+0.3**
BCO2				*e*S			**Sb**	**09 04 04.9**	**0.0**
SAJU	**San Juanillo,**	**1.79**	**279**	*i* P			**Pn**	**09 03 42.0**	**+0.1**
SAJU						IAML		09 03 57.4	
	comp=Z,29nm,1.0s								

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*KRSC **22** 09:05:23.6±1.6,51°.36N×153°.19E,h442km±22km, Ml4.9*
*SKHL **22** 09:05:24.6±0.5,51°.50N×153°.00E,h425km±25km, mb5.4/11,mbv5.1/7,msh5.0/5,msha5.4/6*
*MOS **22** 09:05:25.2±0.8,51°.61N×152°.83E,h429km, mb4.7/40, Error ellipse: s-maj=6.5km s-min=4.2km az=70.6*
*IDC **22** 09:05:26.1±0.7,51°.78N×152°.68E,h411km±7km, mb4.0/30, mbtmp4.8/38,Error ellipse: s-maj=9.4km s-min=6.6km az=157.0*
*NEIC **22** 09:05:26×1.6,51°.8N±0°.1×152°.6E±0°.2,h403km±7km, mb4.2/268,Error ellipse: s-maj=19.7km s-min=12.3km az=153.0*
ISC 22 09:05:25.2±0.4,**51°.55N**±0°.05×**152°.82E**±0°.04,**h414**km±3km, **h414**km:**pP-P,n562,**σ1**946**/548,**mb4.3**/215,**37C-23D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.25**	**111**	PN			**P**	**09 06 24.4**	**+0.4**
SKR	**Severo-Kuril's**	**2.25**	**111**	*e*P			**P**	**09 06 24.4**	**+0.4**
SKR	**Severo-Kuril's**	**2.25**	**111**	*e*P			**P**	**09 06 24.4**	**+0.4**
SKR						AMB	AMB	09 06 25.1	
	270nm,0.4s								
SKR						AMB	AMB	09 06 27.6	
	2μm,3.0s								
SKR				*e*S			**S**	**09 07 11.1**	**-0.6**
SKR				A			A	09 07 16.4	
	680nm,0.8s								
SKR				A			A	09 07 16.4	
	740nm,0.8s								
SKR				A			A	09 07 17.0	
	3μm,4.0s								
SKR				A			A	09 07 17.0	
	3μm,4.0s								
PAU	**Pauzhetka**	**2.50**	**90**	PN			**P**	**09 06 27.5**	**+1.9**
PAU				S			**S**	**09 07 16.3**	**+1.6**
PAU	**Pauzhetka**	**2.50**	**90**	*e*P			**P**	**09 06 27.5**	**+1.9**
PAU				*e*S			**S**	**09 07 16.3**	**+1.6**
PAU	**Pauzhetka**	**2.50**	**90**	*e*P			**P**	**09 06 26.8**	**+1.2**
PAU						AMB	AMB	09 06 28.1	
	2μm,1.0s								
PAU						AMB	AMB	09 06 28.3	
	2μm,0.7s								
PAU				*e*S			**S**	**09 07 15.6**	**+0.9**
PAU				A			A	09 07 17.5	
	4μm,2.0s								
PAU				A			A	09 07 17.5	
	1μm,2.0s								
PAU				A			A	09 07 18.1	
	2μm,0.9s								
PAU				A			A	09 07 18.1	
	570nm,0.9s								
APC	**Apacha**	**3.00**	**61**	PN			**P**	**09 06 29.7**	**+0.4**
APC				S			**S**	**09 07 20.0**	**-1.6**
APC	**Apacha**	**3.00**	**61**	*e*P			**P**	**09 06 29.7**	**+0.4**
APC				*e*S			**S**	**09 07 20.0**	**-1.6**
ASAK	**Asacha**	**3.25**	**73**	PN			**P**	**09 06 32.5**	**+1.0**
ASAK				S			**S**	**09 07 26.0**	**+0.5**
ASAK	**Asacha**	**3.25**	**73**	*e*P			**P**	**09 06 32.5**	**+1.0**
ASAK				*e*S			**S**	**09 07 26.0**	**+0.5**
KDTR	**Khodutka, Kamc**	**3.29**	**83**	PN			**P**	**09 06 31.9**	**+0.3**
KDTR				S			**S**	**09 07 21.5**	**-4.3**
KDTR	**Khodutka, Kamc**	**3.29**	**83**	*e*P			**P**	**09 06 31.9**	**+0.3**
KDTR				*e*S			**S**	**09 07 21.5**	**-4.3**
PEA0B	**Petropavlovsk-**	**3.38**	**61**				**P**	**09 06 32.9**	**+0.5**
PEA0B	**Petropavlovsk-**	**3.38**	**61**	*ce*PN			**P**	**09 06 32.5**	**+0.1**
PETK	**Petropavlovsk-**	**3.38**	**61**				**P**	**09 06 32.4**	**-0.1**
PETK	**Petropavlovsk-**	**3.38**	**61**	PN			**P**	**09 06 32.4**	**-0.1**
PETK	**Petropavlovsk-**	**3.38**	**61**	P			**P**	**09 06 32.0**	**-0.4**
	78nm,0.6s,baz=236,slow=5.8,SNR=85								
PETK				S			**S**	**09 07 27.1**	**-0.1**
	45nm,1.0s,baz=251,slow=31,SNR=5.4								
GRL	**Gorelyy**	**3.40**	**71**	PN			**P**	**09 06 33.9**	**+1.2**
GRL				S			**S**	**09 07 28.9**	**+1.1**
GRL	**Gorelyy**	**3.40**	**71**	*e*P			**P**	**09 06 33.9**	**+1.2**
GRL				*e*S			**S**	**09 07 28.9**	**+1.1**
MTVR	**Mutnovka**	**3.44**	**72**	PN			**P**	**09 06 33.8**	**+0.6**
MTVR				S			**S**	**09 07 28.6**	**0.0**
MTVR	**Mutnovka**	**3.44**	**72**	*e*P			**P**	**09 06 33.8**	**+0.6**
MTVR				*e*S			**S**	**09 07 28.6**	**0.0**
KRMR	**Karymshinskiy**	**3.51**	**67**	PN			**P**	**09 06 34.2**	**+0.7**
KRMR				S			**S**	**09 07 29.6**	**+0.3**
KRMR	**Karymshinskiy**	**3.51**	**67**	*e*P			**P**	**09 06 34.2**	**+0.7**
KRMR				*e*S			**S**	**09 07 29.6**	**+0.3**
RUS	**Russkaya**	**3.63**	**74**	PN			**P**	**09 06 35.0**	**+0.4**
RUS				S			**S**	**09 07 28.2**	**-3.0**
RUS	**Russkaya**	**3.63**	**74**	*e*P			**P**	**09 06 35.0**	**+0.4**
RUS				*e*S			**S**	**09 07 28.2**	**-3.0**
GNL	**Ganaly**	**3.79**	**53**	PN			**P**	**09 06 36.8**	**+0.6**
GNL				S			**S**	**09 07 34.2**	**+0.1**
GNL	**Ganaly**	**3.79**	**53**	*e*P			**P**	**09 06 36.8**	**+0.6**
GNL				*e*S			**S**	**09 07 34.2**	**+0.1**
INSR	**Institute**	**3.86**	**65**	*e*P			**P**	**09 06 37.9**	**+1.3**
INSR				*e*S			**S**	**09 07 33.6**	**-1.4**
PET	**Petropavlovsk**	**3.88**	**65**				**P**	**09 06 37.6**	**+0.8**
PET	**Petropavlovsk**	**3.88**	**65**	PN			**P**	**09 06 37.9**	**+1.2**
PET				S			**S**	**09 07 34.8**	**-0.4**
PET	**Petropavlovsk**	**3.88**	**65**	*e*P			**P**	**09 06 37.9**	**+1.2**
PET				*e*S			**S**	**09 07 34.8**	**-0.4**
PET	**Petropavlovsk**	**3.88**	**65**	*e*P			**P**	**09 06 37.4**	**+0.6**
PET				AMB			AMB	09 06 38.1	
	700nm,2.0s								
PET				AMB			AMB	09 06 38.3	
	150nm,0.5s								
PET				*e*S			**S**	**09 07 34.7**	**-0.4**
PET				A			A	09 07 35.6	
	240nm,0.7s								
PET				A			A	09 07 35.6	
	180nm,0.7s								
PET				A			A	09 07 37.2	
	2μm,2.0s								
PET				A			A	09 07 37.2	
	650nm,2.0s								
DALK	**Dalny**	**3.94**	**66**	PN			**P**	**09 06 38.6**	**+1.3**
DALK				S			**S**	**09 07 34.5**	**-1.7**
DALK	**Dalny**	**3.94**	**66**	*e*P			**P**	**09 06 38.6**	**+1.3**
DALK				*e*S			**S**	**09 07 34.5**	**-1.7**
KOK	**Koryaka**	**3.97**	**62**	PN			**P**	**09 06 39.2**	**+1.5**
KOK				S			**S**	**09 07 36.5**	**-0.5**
KOK	**Koryaka**	**3.97**	**62**	*e*P			**P**	**09 06 39.2**	**+1.5**
KOK				*e*S			**S**	**09 07 36.5**	**-0.5**
KOK	**Koryaka**	**3.97**	**62**	*e*P			**P**	**09 06 39.2**	**+1.5**
KRX	**Arik**	**4.00**	**61**	PN			**P**	**09 06 39.1**	**+1.0**
KRX				S			**S**	**09 07 37.3**	**-0.3**
KRX	**Arik**	**4.00**	**61**	*e*P			**P**	**09 06 39.1**	**+1.0**
KRX				*e*S			**S**	**09 07 37.3**	**-0.3**
AVH	**Avacha**	**4.01**	**62**	PN			**P**	**09 06 39.5**	**+1.4**
AVH				S			**S**	**09 07 37.5**	**-0.2**
AVH	**Avacha**	**4.01**	**62**	*e*P			**P**	**09 06 39.5**	**+1.4**
AVH				*e*S			**S**	**09 07 37.5**	**-0.2**
AVH	**Avacha**	**4.01**	**62**	*e*P			**P**	**09 06 39.5**	**+1.4**
KRER	**Koryakskii**	**4.03**	**62**	PN			**P**	**09 06 39.5**	**+1.1**
KRER				S			**S**	**09 07 37.2**	**-1.0**
KRER	**Koryakskii**	**4.03**	**62**	*e*P			**P**	**09 06 39.5**	**+1.1**
KRER				*e*S			**S**	**09 07 37.2**	**-1.0**
UGLR	**Uglovaya**	**4.04**	**63**	PN			**P**	**09 06 40.0**	**+1.6**
UGLR	**Uglovaya**	**4.04**	**63**	*e*P			**P**	**09 06 40.0**	**+1.6**
SMAR	**Somma**	**4.05**	**63**	PN			**P**	**09 06 39.9**	**+1.3**
SMAR				S			**S**	**09 07 37.8**	**-0.7**
SMAR	**Somma**	**4.05**	**63**	*e*P			**P**	**09 06 39.9**	**+1.3**
SMAR				*e*S			**S**	**09 07 37.8**	**-0.7**
NLC	**Nalytchevo**	**4.32**	**65**	PN			**P**	**09 06 41.1**	**+0.2**
NLC				S			**S**	**09 07 41.2**	**-1.5**
NLC	**Nalytchevo**	**4.32**	**65**	*e*P			**P**	**09 06 41.1**	**+0.2**
NLC				*e*S			**S**	**09 07 41.2**	**-1.5**
NLC	**Nalytchevo**	**4.32**	**65**	*e*P			**P**	**09 06 41.1**	**+0.2**
SPN	**Mys Shipunski**	**4.69**	**68**	PN			**P**	**09 06 44.3**	**-0.1**
SPN				S			**S**	**09 07 43.1**	**-6.2**
SPN	**Mys Shipunski**	**4.69**	**68**	*e*P			**P**	**09 06 44.3**	**-0.1**
SPN				*e*S			**S**	**09 07 43.1**	**-6.2**
KII	**Karymskiy**	**4.73**	**56**	PN			**P**	**09 06 46.4**	**+1.4**
KII	**Karymskiy**	**4.73**	**56**	*e*P			**P**	**09 06 46.4**	**+1.4**
ESO	**Esso**	**5.60**	**36**	PN			**P**	**09 06 55.2**	**+1.5**
ESO	**Esso**	**5.60**	**36**	*e*P			**P**	**09 06 55.2**	**+1.5**
TUMR	**Tumrok**	**5.76**	**47**	PN			**P**	**09 06 57.4**	**+1.9**
TUMR				S			**S**	**09 08 09.3**	**-0.3**
TUMR	**Tumrok**	**5.76**	**47**	*e*P			**P**	**09 06 57.4**	**+1.9**
TUMR				*e*S			**S**	**09 08 09.3**	**-0.3**
TUMD	**Tumrok D**	**5.83**	**48**	*e*P			**P**	**09 06 57.4**	**+1.3**
KMNR	**Kamenistaya**	**6.10**	**43**	PN			**P**	**09 07 01.5**	**+2.4**
KMNR	**Kamenistaya**	**6.10**	**43**	*e*P			**P**	**09 07 01.5**	**+2.4**
KOZ	**Kozyrevsk**	**6.15**	**40**	PN			**P**	**09 07 00.8**	**+1.3**
KOZ	**Kozyrevsk**	**6.15**	**40**	*e*P			**P**	**09 07 00.8**	**+1.3**
KOZ	**Kozyrevsk**	**6.15**	**40**	*e*P			**P**	**09 07 00.8**	**+1.3**
KPT	**Kopyto**	**6.23**	**42**	PN			**P**	**09 07 01.9**	**+1.4**
KPT	**Kopyto**	**6.23**	**42**	*e*P			**P**	**09 07 01.9**	**+1.4**
KIRR	**Kirishev**	**6.27**	**42**	PN			**P**	**09 07 02.7**	**+1.7**
KIRR	**Kirishev**	**6.27**	**42**	*e*P			**P**	**09 07 02.7**	**+1.7**
SRDR	**Sredinnyy**	**6.28**	**38**	PN			**P**	**09 07 02.1**	**+1.2**
SRDR	**Sredinnyy**	**6.28**	**38**	*e*P			**P**	**09 07 02.1**	**+1.2**
BZMR	**Bezymyannaya**	**6.32**	**43**	PN			**P**	**09 07 03.3**	**+1.8**
BZMR	**Bezymyannaya**	**6.32**	**43**	*e*P			**P**	**09 07 03.3**	**+1.8**
BZP	**Bezymyannyi-Pe**	**6.33**	**43**	*e*P			**P**	**09 07 03.7**	**+2.1**
BZWR	**Bezymyannyi-We**	**6.35**	**43**	PN			**P**	**09 07 04.1**	**+2.3**
BZWR	**Bezymyannyi-We**	**6.35**	**43**	*e*P			**P**	**09 07 04.1**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**6.42**	**44**	PN			**P**	**09 07 04.0**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**6.42**	**44**	*e*P			**P**	**09 07 04.0**	**+1.6**
TYV	**Tymovskoe**	**6.42**	**268**	*e*PN			**P**	**09 07 05.6**	**+3.1**
TYV				*e*S			**S**	**09 08 22.6**	**+0.1**
TYV						pmax	pmax		
	comp=Z,200nm,2.3s								
TYV						pmax	pmax		
	comp=Z,60nm,1.0s								
TYV						smax	smax		
	comp=N,10.0nm,1.9s								
TYV						smax	smax		
	comp=E,16nm,1.9s								
TYV						smax	smax		
	comp=N,200nm,4.5s								
TYV						smax	smax		
	comp=E,200nm,4.5s								
TYV	**Tymovskoe**	**6.42**	**268**	*e*P			**P**	**09 07 05.3**	**+2.8**
TYV	**Tymovskoe**	**6.42**	**268**	*e*P			**P**	**09 07 05.3**	**+2.8**
TYV						AMB	AMB	09 07 06.0	
	comp=E,200nm,2.0s								
TYV						AMB	AMB	09 07 06.5	
	comp=E,80nm,0.8s								
TYV				*e*S			**S**	**09 08 24.0**	**+1.5**
TYV				A			A	09 08 28.3	
	comp=E,300nm,5.0s								
TYV				A			A	09 08 28.3	
	comp=E,200nm,5.0s								
TYV				A			A	09 08 32.4	
	comp=E,30nm,0.7s								
TYV				A			A	09 08 32.4	
	comp=E,40nm,0.7s								
ZLN	**Zelenaya**	**6.51**	**43**	PN			**P**	**09 07 06.0**	**+1.9**
ZLN	**Zelenaya**	**6.51**	**43**	*e*P			**P**	**09 07 06.0**	**+1.9**
KRSR	**Krestovskiy**	**6.54**	**41**	PN			**P**	**09 07 05.6**	**+1.2**
KRSR	**Krestovskiy**	**6.54**	**41**	*e*P			**P**	**09 07 05.6**	**+1.2**
KLY	**Klyuchi**	**6.64**	**41**	PN			**P**	**09 07 06.7**	**+1.3**
KLY				S			**S**	**09 08 31.3**	**+4.6**
KLY	**Klyuchi**	**6.64**	**41**	*e*P			**P**	**09 07 06.7**	**+1.3**
KLY				*e*S			**S**	**09 08 31.3**	**+4.6**
SRKR	**Sorokina**	**7.09**	**41**	PN			**P**	**09 07 12.2**	**+1.9**
SRKR	**Sorokina**	**7.09**	**41**	*e*P			**P**	**09 07 12.2**	**+1.9**
KUR	**Kuril'sk**	**7.13**	**209**	*i*PN			**P**	**09 07 11.4**	**+0.5**
KUR						pmax	pmax		
	comp=Z,155nm,0.5s								
KUR						pmax	pmax		
	comp=N,52nm,0.4s								
KUR	**Kuril'sk**	**7.13**	**209**	*e*P			**P**	**09 07 11.5**	**+0.5**
KUR						AMB	AMB	09 07 12.5	
	comp=N,160nm,0.5s								
KUR						AMB	AMB	09 07 12.6	
	comp=N,490nm,1.0s								
KUR				*e*S			**S**	**09 08 37.1**	**+0.4**
KUR				A			A	09 08 40.0	
	comp=N,730nm,1.0s								
KUR				A			A	09 08 40.0	
	comp=N,410nm,1.0s								
SMKR	**Semkarok**	**7.16**	**42**	PN			**P**	**09 07 12.8**	**+1.6**
SMKR	**Semkarok**	**7.16**	**42**	*e*P			**P**	**09 07 12.8**	**+1.6**
UGL	**Uglegorsk**	**7.31**	**254**	*i*PN			**P**	**09 07 15.7**	**+2.8**
UGL				*e*S			**S**	**09 08 37.7**	**-2.7**
UGL						pmax	pmax		
	comp=Z,240nm,0.7s								
UGL						pmax	pmax		
	comp=N,96nm,0.7s								
UGL						pmax	pmax		
	comp=E,74nm,0.4s								
UGL						smax	smax		
	comp=N,35nm,0.6s								
UGL						smax	smax		
	comp=E,46nm,0.8s								
UGL	**Uglegorsk**	**7.31**	**254**	*i* P			**P**	**09 07 15.4**	**+2.5**
UGL						AMB	AMB	09 07 16.7	
	comp=E,180nm,0.6s								
UGL						AMB	AMB	09 07 19.0	
	comp=E,400nm,5.0s								
UGL				*e*S			**S**	**09 08 39.8**	**-0.6**
UGL				A			A	09 08 45.0	
	comp=E,40nm,0.7s								
UGL				A			A	09 08 45.0	
	comp=E,50nm,0.7s								
KBG	**Krutoberegovo**	**7.50**	**47**	PN			**P**	**09 07 14.0**	**-0.8**
KBG	**Krutoberegovo**	**7.50**	**47**	*e*P			**P**	**09 07 14.0**	**-0.8**
YSS	**Yuzh-Sakhalins**	**8.03**	**239**	P			**P**	**09 07 22.8**	**+2.2**
YSS	**Yuzh-Sakhalins**	**8.03**	**239**	*e*PN			**P**	**09 07 23.5**	**+2.8**
YSS				*e*S			**S**	**09 08 56.6**	**+1.4**
YSS				pmax			pmax		
	comp=Z,140nm,0.7s								
YSS				smax			smax		
	comp=N,20nm,0.9s								
YSS	**Yuzh-Sakhalins**	**8.03**	**239**	*e*P			**P**	**09 07 23.1**	**+2.4**
YSS				AMB			AMB	09 07 24.9	
	comp=N,140nm,0.7s								
YSS				AMB			AMB	09 07 30.3	
	comp=N,100nm,3.0s								
YSS				*e*S			**S**	**09 08 56.0**	**+0.8**
YSS				A			A	09 09 01.6	
	comp=N,20nm,0.6s								
YSS				A			A	09 09 01.6	
	comp=N,30nm,0.6s								
YSS				A			A	09 09 01.9	
	comp=N,300nm,4.0s								
YSS				A			A	09 09 01.9	
	comp=N,200nm,4.0s								
MA2	**Magadan**	**8.13**	**353**	P			**P**	**09 07 21.0**	**-0.5**
MA2	**Magadan**	**8.13**	**353**	*c*PN			**P**	**09 07 21.0**	**-0.5**
MA2						pmax	pmax		
	comp=Z,163nm,1.7s								
MA2	**Magadan**	**8.13**	**353**	P			**P**	**09 07 21.3**	**-0.2**
	comp=Z,58nm,0.6s,baz=162,slow=9.1,SNR=80								
MA2	**Magadan**	**8.13**	**353**	*e*P			**P**	**09 07 21.0**	**-0.5**
PALN	**Palana**	**8.58**	**26**	PN			**P**	**09 07 26.3**	**-0.2**
PALN	**Palana**	**8.58**	**26**	*e*P			**P**	**09 07 26.3**	**-0.2**
BKI	**Bering**	**8.67**	**60**	PN			**P**	**09 07 28.6**	**+1.0**
BKI				S			**S**	**09 09 02.5**	**-5.8**
BKI	**Bering**	**8.67**	**60**	*e*P			**P**	**09 07 28.6**	**+1.0**
BKI				*e*S			**S**	**09 09 02.5**	**-5.8**
SHO	**Shikotan**	**8.68**	**210**	*e*PN			**P**	**09 07 25.2**	**-2.7**
SHO				*e*S			**S**	**09 09 01.6**	**-7.1**
SHO				pmax			pmax		
	comp=Z,423nm,0.5s								
SHO				pmax			pmax		
	comp=E,135nm,0.3s								
SHO				pmax			pmax		
	comp=N,176nm,0.5s								
SHO	**Shikotan**	**8.68**	**210**	*e*P			**P**	**09 07 25.4**	**-2.5**
SHO				AMB			AMB	09 07 27.7	
	comp=N,420nm,0.5s								
SHO				*e*S			**S**	**09 09 02.0**	**-6.7**
YUK	**Yuzh-Kuril'sk**	**8.

KLR Kul'dur 13.63 268 eP P 09 08 24.4 +2.1
ZEA Zeya 15.64 288 eP P 09 08 43.7 -0.2
ZEA e 09 11 29.2
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA Zeya 15.64 288 eP P 09 08 44.1 +0.2
ZEA AMB AMB 09 08 44.5
comp=Z,10.0nm,1.0s
USRK Ussuriysk Ar. 15.76 250 P P 09 08 45.8 +0.6
comp=Z,5.5nm,0.6s,baz=56,slow=13,SNR=11
HEH HeiHe 16.06 275 eP P 09 08 47.8 -0.6
HEH pmax pmax
comp=Z,8.0nm,0.7s
HEH pmax pmax
comp=Z,160nm,4.9s
JMM Marumori 16.10 216 P P 09 08 50.7 +1.7
YAK Yakutsk 16.35 319 eP P 09 08 48.7 -2.6
YAK eS S 09 11 38.3 -3.5
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK smax smax
comp=N,187nm,1.5s
YAK smax smax
comp=E,93nm,1.3s
YAK Yakutsk 16.35 319 P P 09 08 49.7 -1.6
comp=E,24nm,0.3s,baz=109,slow=2.7,SNR=12
YAK S S 09 11 38.6 -3.2
comp=E,8.6nm,0.3s,baz=32,slow=23,SNR=29
PSTR Posyet 17.37 248 eP P 09 09 03.6 +1.2
BNX BinXian 17.72 261 ⇑P P 09 09 06.6 +0.5
BNX S S 09 12 11.4 +2.7
BNX pmax pmax
comp=Z,33nm,0.9s
BNX pmax pmax
comp=Z,96nm,4.9s
BILL Bilibino 17.79 17 P P 09 09 05.7 -0.9
BILL IAmb IAmb 09 09 06.6
comp=Z,4.9nm,0.6s
BILL Bilibino 17.79 17⇑ eP P 09 09 05.9 -0.7
BILL pmax pmax
comp=Z,16nm,2.5s
BILL Bilibino 17.79 17 eP P 09 09 05.9 -0.7
MJB9 Matsu-Tunnel 18.26 220 P P 09 09 13.5 +1.6
MAJO Matsushiro 18.26 220 P P 09 09 11.8 0.0
MAJO Matsushiro 18.26 220 ce P P 09 09 13.1 +1.2
MAJO pmax pmax
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 18.26 220 P P 09 09 12.5 +0.6
comp=Z,8.4nm,0.8s,baz=21,slow=9.8,SNR=18
JGF Kuroka 19.42 221 P P 09 09 24.5 +1.1
JGF IAmb IAmb 09 09 26.6
comp=Z,5.0nm,0.5s
ATKA Atka Island 20.29 75 P P 09 09 32.1 +1.0
HIA Hailar 21.10 277 P P 09 09 38.9 +0.3
HIA Hailar 21.10 277 P P 09 09 38.9 +0.3
HIA pmax pmax
comp=Z,33nm,0.8s
KSRS Korea Array 22.52 241 P P 09 09 53.1 +1.6
comp=Z,4.2nm,0.8s,baz=39,slow=8.7,SNR=9.6
comp=Z,4.2nm,0.8s
TIXI Tiksi 22.83 341 P P 09 09 53.7 -0.2
TIXI Tiksi 22.83 341 eP P 09 09 53.7 -0.2
ANM Nome 25.11 43 P P 09 10 15.7 +1.3
ANM Nome 25.11 43 P P 09 10 15.7 +1.3
ANM pmax pmax
comp=Z,31nm,1.3s
M13K Dall Lake 25.62 53 P P 09 10 20.5 +1.5
XLT XiLinHaoTe 25.65 267 eP P 09 10 21.1 +1.5
XLT pmax pmax
comp=Z,28nm,0.9s
XLT pmax pmax
comp=Z,120nm,4.1s
C16K Lisburne Hills 26.09 34 P P 09 10 23.1 +0.1
C16K IAmb IAmb 09 10 46.0
comp=Z,7.8nm,1.3s
G16K Koyuk River 26.52 41 P P 09 10 27.2 +0.3
G16K IAmb IAmb 09 10 40.7
comp=Z,6.7nm,1.1s
O14K Tigyukauivet M 26.71 55 P P 09 10 30.3 +1.7
I17K Unalakleet 27.04 45 P P 09 10 32.7 +1.3
F17K Baldwin Pennin 27.15 39 P P 09 10 33.4 +1.0
F17K IAmb IAmb 09 10 34.0
comp=Z,16nm,1.1s
E18K Tukpahlearik C 27.59 37 P P 09 10 37.3 +1.0
M16K Timber Creek 27.77 51 P P 09 10 39.4 +1.4
M16K IAmb IAmb 09 10 59.6
comp=Z,18nm,1.3s
G18K Tagagawik 28.11 41 IAmb IAmb 09 10 42.6
comp=Z,9.3nm,0.7s
M17K Holitna River 28.49 50 IAmb IAmb 09 10 46.7
comp=Z,17nm,0.7s
F19K Shaleruckik Mo 28.59 39 IAmb IAmb 09 10 46.2
comp=Z,6.1nm,0.7s
D19K Kuna River 28.73 35 IAmb IAmb 09 10 47.4
comp=Z,7.9nm,0.9s
E19K Redstone River 28.88 38 IAmb IAmb 09 10 49.4
comp=Z,8.5nm,0.7s
H19K Roundabout Mou 28.99 42 IAmb IAmb 09 10 50.8
comp=Z,15nm,0.9s
TTA Tatalina 29.11 47 P P 09 10 50.9 +1.1
TTA IAmb IAmb 09 10 51.5
comp=Z,5.6nm,0.7s
TTA Tatalina 29.11 47 P P 09 10 50.9 +1.1
TTA pmax pmax
comp=Z,6.0nm,0.7s
J19K Poorman 29.28 45 IAmb IAmb 09 10 53.0
comp=Z,10nm,1.2s
B20K Meade River 29.38 32 P P 09 10 52.2 +0.3
B20K IAmb IAmb 09 10 53.2
comp=Z,11nm,0.6s
ULN Ulaanbaatar 29.45 281 P P 09 10 53.1 +0.1
ULN Ulaanbaatar 29.45 281 P P 09 10 53.9 +0.8
ULN Ulaanbaatar 29.45 281 eP P 09 10 53.2 +0.1
SONM Songino Array 29.86 281 P P 09 10 56.8 +0.1
SONM Songino Array 29.86 281 P P 09 10 56.8 +0.1
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 29.86 281 P P 09 10 57.4 +0.8
comp=Z,1.7nm,0.4s,baz=71,slow=7.7,SNR=20
SONM PcP PcP 09 13 47.4 0.0
comp=Z,2.6nm,0.8s,baz=89,slow=1.7,SNR=11
comp=Z,1.7nm,0.4s
J20K Nowinta River 29.93 45 IAmb IAmb 09 10 58.7
comp=Z,7.9nm,1.0s
IMAR Indian Mountai 30.12 41 P P 09 10 59.0 +0.5
B21K Ikpikpuk River 30.17 34 IAmb IAmb 09 11 00.5
comp=Z,12nm,0.8s
HNS HongShan 30.27 257 ⇑P P 09 11 02.0 +1.9
HNS pmax pmax
comp=Z,25nm,1.0s
M20K Styx River 30.51 49 P P 09 11 03.7 +1.7
M20K IAmb IAmb 09 11 04.7
comp=Z,14nm,1.2s
ZAK Zakamensk 30.74 288 eP P 09 11 04.7 +0.5
ZAK pmax pmax
comp=Z,5.0nm,1.1s
ZAK Zakamensk 30.74 288 eP P 09 11 04.7 +0.5
D22K Ayikyak River 30.75 35 IAmb IAmb 09 11 05.6
comp=Z,6.6nm,0.5s
CAST Castle Rocks 30.87 46 P 09 11 05.3 +0.2
OHAK Old Harbor 31.18 58 P P 09 11 07.9 +0.2
OHAK IAmb IAmb 09 11 09.0
comp=Z,16nm,1.0s
BTO Baotou 31.21 267 eP P 09 11 08.8 +0.4
BTO pP pP 09 12 21.4 -1.7
BTO PP PP 09 12 31.3 +2.0
BTO sP sP 09 13 11.3 +0.4
BTO PcP PcP 09 13 49.4 -1.7
BTO S S 09 15 48.3 +4.4
BTO SS SS 09 18 09.3 -9.4
BTO pmax pmax
comp=Z,16nm,0.7s
BTO pmax pmax
comp=Z,300nm,5.5s
BTO LR LR
comp=N,200nm,6.9s
BTO LR LR
comp=E,320nm,6.5s
BTO LR LR
comp=Z,70nm,5.0s
SKT Skwentna 31.25 49 P P 09 11 09.5 +1.1
BPAW Bear Paw Mtn. 31.32 45 P P 09 11 09.8 +0.8
KTH Kantishna Hill 31.38 46 IAmb IAmb 09 11 12.4
comp=Z,24nm,1.4s
KDAK Kodiak Island 31.42 57 P P 09 11 10.2 +0.3
KDAK IAmb IAmb 09 11 20.3
comp=Z,27nm,1.4s
KDAK Kodiak Island 31.42 57 P P 09 11 10.2 +0.3
KDAK pmax pmax
comp=Z,27nm,1.4s
C23K Itkillik River 31.58 34 IAmb IAmb 09 11 16.5
comp=Z,11nm,1.4s
MOY Mondy 31.63 291 eP P 09 11 12.2 +0.3
MOY Mondy 31.63 291 eP P 09 11 12.2 +0.3
TRF Thorofare Moun 31.67 46 IAmb IAmb 09 11 14.0
comp=Z,12nm,1.1s
SUA Susitna One 31.69 50 P P 09 11 13.0 +0.7
SUA IAmb IAmb 09 11 14.0
comp=Z,10nm,1.0s
TOLK Toolik Lake Re 31.86 36 IAmb IAmb 09 11 15.0
comp=Z,8.2nm,0.3s
NEA2 Nenana 32.12 44 IAmb IAmb 09 11 17.5
comp=Z,8.2nm,1.1s
D24K Happy Valley 32.16 35 P P 09 11 16.9 +0.8
D24K IAmb IAmb 09 11 17.4
comp=Z,7.2nm,0.6s
RC01 Rabbit Creek A 32.23 50 P P 09 11 17.4 +0.7
RC01 IAmb IAmb 09 11 18.2
comp=Z,7.6nm,1.0s
RND Reindeer 32.32 46 IAmb IAmb 09 11 18.8
comp=Z,11nm,1.0s
PMR Palmer 32.44 49 P P 09 11 19.0 +0.5
PMR Palmer 32.44 49 P P 09 11 19.0 +0.5
PMR pmax pmax
comp=Z,6.0nm,1.1s
GHO Glory Hole Cre 32.51 49 P P 09 11 20.2 +1.0
GHO IAmb IAmb 09 11 20.8
comp=Z,9.8nm,0.8s
WRH Wood River Hil 32.55 44 IAmb IAmb 09 11 21.9
comp=Z,16nm,0.9s
COLA College 32.62 43 P P 09 11 18.7 -1.3
CCB Clear Creek Bu 32.66 43 IAmb IAmb 09 11 22.7
comp=Z,11nm,1.3s
G24K Hadweenzic Riv 32.66 40 IAmb IAmb 09 11 22.5
comp=Z,8.3nm,0.7s
DHY Denali Highway 33.03 46 IAmb IAmb 09 11 25.1
comp=Z,10.0nm,1.0s
D25K Kavik River 33.03 35 IAmb IAmb 09 11 24.9
comp=Z,14nm,0.6s
IL31 33.04 43 P P 09 11 24.3 +0.7
ILAR Eielson Array 33.04 43 P P 09 11 24.1 +0.5
comp=Z,3.4nm,0.8s,baz=270,slow=9.1,SNR=48
ILAR PcP PcP 09 13 54.5 -1.1
comp=Z,0.4nm,0.5s,baz=286,slow=3.4,SNR=4.1
ILAR ScP ScP 09 16 59.0 -0.4
comp=Z,0.7nm,0.8s,baz=290,slow=4.3,SNR=7.6
comp=Z,3.4nm,0.8s
SCM Sheep Creek Mo 33.24 48 IAmb IAmb 09 11 27.9
comp=Z,18nm,0.9s
E25K Arctic Village 33.34 37 P P 09 11 27.5 +1.3
LYN LuoYang 33.51 255 ⇑P P 09 11 29.4 +1.3
LYN pmax pmax
comp=Z,21nm,0.6s
LYN pmax pmax
comp=Z,110nm,4.2s
PRP Porcupine Dome 33.53 42 IAmb IAmb 09 11 30.1
comp=Z,12nm,0.8s
FYU Fort Yukon 33.56 40 P P 09 11 29.6 +1.6
FYU IAmb IAmb 09 11 29.9
comp=Z,15nm,1.1s
BMAR Burnt Mountain 33.75 38 P P 09 11 31.2 +1.5
HIN Hinchinbrook I 33.92 51 P P 09 11 32.5 +1.2
KLU Klutina 33.97 49 IAmb IAmb 09 11 34.1
comp=Z,14nm,1.2s
RIDG Independent Ri 34.05 45 IAmb IAmb 09 11 33.8
comp=Z,5.7nm,0.7s
SCRK Sand Creek 34.39 44 IAmb IAmb 09 11 36.1
comp=Z,6.8nm,0.7s
N25K Chitina, Valde 34.56 48 IAmb IAmb 09 11 38.9
comp=Z,4.9nm,0.6s
NRIK Noril'sk 34.61 325⇓ eP P 09 11 36.1 -0.8
NRIK pmax pmax
comp=Z,4.0nm,1.2s
RAGM Ragged Mountai 34.80 51 P P 09 11 40.0 +1.2
RAGM IAmb IAmb 09 11 41.8
comp=Z,24nm,1.1s
VRDI Verde Repeater 35.18 49 IAmb IAmb 09 11 44.2
comp=Z,7.5nm,0.9s
K27K Chicken 35.21 44 IAmb IAmb 09 11 43.9
comp=Z,7.4nm,0.8s
MCARA McCarthy VSAT 35.35 48 IAmb IAmb 09 11 48.5
comp=Z,8.7nm,1.0s
CRQM Crue 35.45 50 IAmb IAmb 09 11 47.2
comp=Z,19nm,1.0s
EGAK Eagle 35.46 42 IAmb IAmb 09 11 45.2
comp=Z,13nm,1.0s
L27K Beaver Creek, 35.51 45 IAmb IAmb 09 11 47.8
comp=Z,17nm,0.9s
F28M Old Crow 35.53 37 P P 09 11 46.0 +1.3
M27K Edge Creek, AK 35.65 47 IAmb IAmb 09 11 48.7
comp=Z,16nm,0.7s
WAX Waxell Ridge 35.66 50 IAmb IAmb 09 11 48.6
comp=Z,14nm,0.8s
I28M Miner Creek 35.85 41 IAmb IAmb 09 11 49.7
comp=Z,5.8nm,0.5s
XAN Xi'an 36.02 258 ⇑P P 09 11 50.0 +0.7
XAN pmax pmax
comp=Z,13nm,1.1s
BARN Barnard Glacie 36.07 49 IAmb IAmb 09 11 52.1
comp=Z,11nm,0.8s
GRNC Granite Creek 36.11 49 IAmb IAmb 09 11 52.3
comp=Z,11nm,0.8s
CTGM Chitina Glacie 36.25 49 IAmb IAmb 09 11 53.5
comp=Z,15nm,0.8s
LOGN Logan Glacier 36.44 49 P P 09 11 54.0 +1.5
LOGN IAmb IAmb 09 11 56.0
comp=Z,13nm,1.3s
L29M L29M 37.14 45 IAmb IAmb 09 12 01.2
comp=Z,16nm,0.9s
I30M Mount Dempster 37.36 41 IAmb IAmb 09 12 02.0
comp=Z,6.8nm,0.8s
G31M Sash River 37.80 38 IAmb IAmb 09 12 05.5
comp=Z,4.7nm,0.4s
LZH Lanzhou 37.81 265 ⇑P P 09 12 06.1 +1.8
LZH pmax pmax
comp=Z,48nm,1.4s
F31M Tsiigehtchic 37.88 37 IAmb IAmb 09 12 05.8
comp=Z,6.9nm,0.6s
MAYO Mayo, Yukon 37.98 43 IAmb IAmb 09 12 07.6
comp=Z,17nm,0.7s
GTA Gaotai 38.28 273 P P 09 12 09.1 +1.1
GTA pmax pmax
comp=Z,13nm,1.2s
ENH Enshi 38.30 253 P P 09 12 08.1 -0.2
ENH IAmb IAmb 09 12 09.8
comp=Z,20nm,0.8s
O30N Mendenhall 38.75 48 IAmb IAmb 09 12 14.6
comp=Z,9.1nm,1.1s
WHY Whitehorse 39.35 48 IAmb IAmb 09 12 19.4
comp=Z,5.7nm,0.7s
ZAA0 Zalesovo Array 39.80 301 P P 09 12 19.5 -0.5
ZALV Zalesovo Beam 39.80 301 P P 09 12 19.7 -0.3
ZALV Zalesovo Beam 39.80 301 P P 09 12 19.7 -0.3
ZALV Zalesovo Beam 39.80 301 P P 09 12 19.4 -0.6
comp=Z,7.9nm,0.3s,baz=61,slow=7.0,SNR=30
ZALV PcP PcP 09 14 16.0 -0.4
comp=Z,3.1nm,0.3s,baz=87,slow=3.3,SNR=5.7
comp=Z,7.9nm,0.3s
DGZ Jazzator, Alta 40.28 294 d iP P 09 12 25.4 +1.2
DGZ pmax pmax
comp=Z,7.0nm,1.1s
P33M Teslin, Yukon 40.47 48 P P 09 12 27.3 +1.9
C36M Paulatuk 40.81 33 P P 09 12 28.5 +0.5
C36M IAmb IAmb 09 12 28.8
comp=Z,5.0nm,0.6s
WTLY Watson Lake, Y 42.35 47 P P 09 12 42.7 +2.2
WTLY IAmb IAmb 09 12 43.1
comp=Z,5.4nm,0.7s
DLBC Dease Lake 42.50 49 P P 09 12 43.8 +2.1
GOMU GeErMu 43.37 273 P P 09 12 49.8 +0.5
GOMU pmax pmax
comp=Z,13nm,0.7s
KURK Kurchatov 44.68 300 P P 09 12 59.2 +0.3
KURK Kurchatov 44.68 300 de P P 09 12 58.8 0.0
KURK pmax pmax
comp=Z,12nm,0.9s
KURK Kurchatov 44.68 300 eP P 09 12 58.8 0.0
MK31 Makanchi Array 44.72 293 d iP P 09 12 59.2 -0.1
MKAR Makanchi Array 44.72 293 P P 09 12 59.7 +0.4
MKAR Makanchi Array 44.72 293 P P 09 12 59.7 +0.4
comp=Z,9.4nm,0.3s,baz=55,slow=6.5,SNR=185
MKAR PcP PcP 09 14 31.2 -1.9
comp=Z,0.5nm,0.5s,baz=58,slow=6.0,SNR=1.4
comp=Z,9.4nm,0.3s
KURBB Kurchatov Arra 44.77 299 P P 09 13 00.0 +0.4
comp=Z,14nm,0.5s,baz=63,slow=8.1,SNR=94
KURBB PcP PcP 09 14 32.8 -0.4
comp=Z,2.7nm,0.6s,baz=61,slow=3.2,SNR=8.8
comp=Z,14nm,0.5s
MAKZ Makanchi 44.89 293 P P 09 13 00.8 +0.2
MAKZ IAmb IAmb 09 13 01.9
comp=Z,10nm,0.8s
MAKZ Makanchi 44.89 293 P P 09 13 00.8 +0.2
MAKZ pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 46.13 255 ⇑P P 09 13 12.3 +1.6
KMI pmax pmax
comp=Z,14nm,1.0s
RES Resolute Bay 46.36 20 P P 09 13 11.1 -0.4
RES Resolute Bay 46.36 20 P P 09 13 11.1 -0.4
RES pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 47.25 39 P P 09 13 19.4 +1.0
YKA Yellowknife Ar 47.25 39 P P 09 13 19.0 +0.6
comp=Z,4.0nm,0.5s,baz=302,slow=7.5,SNR=104
YKA PcP PcP 09 14 42.4 +0.6
comp=Z,0.8nm,0.4s,baz=360,slow=4.7,SNR=16
YKA ScP ScP 09 17 56.0 +0.9
comp=Z,1.0nm,1.0s,baz=299,slow=4.5,SNR=8.2
YKA S S 09 19 39.6 +0.3
comp=Z,0.7nm,1.0s,baz=302,slow=13,SNR=5.2
comp=Z,4.0nm,0.5s
KBS Kingsbay 47.72 351 eP P 09 13 21.3 -0.5
BVAR Borovoye Array 47.76 306 P P 09 13 22.7 +0.3
comp=Z,15nm,0.4s,baz=53,slow=8.3,SNR=111
BVAR PcP PcP 09 14 43.4 -0.4
comp=Z,3.0nm,0.3s,baz=80,slow=3.3,SNR=6.9
comp=Z,15nm,0.4s
BRVK Borovoye 47.80 306 P P 09 13 22.8 +0.1
BRVK IAmb IAmb 09 13 24.4
comp=Z,13nm,0.7s
BRVK Borovoye 47.80 306 d iP P 09 13 22.5 -0.2
BRVK pmax pmax
comp=Z,19nm,1.0s
BRVK Borovoye 47.80 306 eP P 09 13 22.5 -0.2
SPA0 Spitsbergen Ar 47.85 349 eP P 09 13 21.7 -1.2
SPITS Spitsbergen Ar 47.85 349 P P 09 13 21.6 -1.2
comp=Z,3.9nm,0.5s,baz=341,slow=10.0,SNR=14
comp=Z,3.9nm,0.5s
LSA Lhasa 49.99 269 P P 09 13 40.7 +0.7
LSA IAmb IAmb 09 13 42.8
comp=Z,18nm,0.9s
LSA Lhasa 49.99 269 P P 09 13 40.7 +0.7
LSA pmax pmax
comp=Z,18nm,0.9s
TARG Taragay, Kyrgy 50.29 290 IAmb IAmb 09 13 44.3
comp=Z,24nm,1.5s
TKM2 Tokmak 2 50.84 292 P P 09 13 46.5 +0.7
SNR=11
ULHL Ulahol 50.89 291 P P 09 13 47.0 +0.8
SNR=14
BOOM Boomskoye usch 50.91 292 IAmb IAmb 09 13 48.4
comp=Z,20nm,0.8s
USP Ospenovka 51.26 293 P P 09 13 49.5 +0.8
SNR=15
CHMS Chunysh 51.28 293 P P 09 13 50.1 +1.3
SNR=5.5
ARU Arti 51.41 315 P P 09 13 49.2 -0.3
ARU Arti 51.41 315 c iP P 09 13 49.0 -0.5
ARU 09 15 47.0
ARU S S 09 20 34.9 -1.6
ARU SS SS 09 24 11.9 -6.1
ARU pmax pmax
comp=Z,27nm,0.6s
ARU Arti 51.41 315 eP P 09 13 49.0 -0.5
AAK Ala-Archa 51.65 293 P P 09 13 52.4 +0.7
SNR=25
AAK Ala-Archa 51.65 293 P P 09 13 51.7 0.0
AAK IAmb IAmb 09 13 53.4
comp=Z,19nm,0.8s
AAK Ala-Archa 51.65 293 d iP P 09 13 52.1 +0.4
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 51.65 293 eP P 09 13 52.1 +0.4
VADS Vadso 51.96 339 eP P 09 13 52.6 -0.7
EKS2 Erkin-Say 52.05 293 P P 09 13 55.3 +0.8
SNR=12
SHL Shillong 52.46 265 P P 09 13 58.6 +0.8
SHL Shillong 52.46 265 P P 09 13 58.6 +0.8
SHL pmax pmax
comp=Z,35nm,0.9s
KSH Kashi 52.77 289 P P 09 14 04.8 +5.0
KSH pmax pmax
comp=Z,18nm,0.8s
CHTO Chiang Mai 53.19 253 P P 09 14 03.7 +0.8
CHTO IAmb IAmb 09 14 05.4
comp=Z,9.0nm,0.8s
CHTO Chiang Mai 53.19 253 P P 09 14 03.7 +0.8
CHTO pmax pmax
comp=Z,9.0nm,0.8s
EDM Edmonton 53.20 49 IAmb IAmb 09 14 04.4
comp=Z,7.9nm,0.6s
ARA0 ARCESS Array S 53.27 340 eP P 09 14 02.1 -0.6
ARCES ARCESS Array B 53.27 340 P P 09 14 01.7 -1.1
comp=Z,1.0nm,0.3s,baz=38,slow=8.1,SNR=18
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 53.47 253 i P P 09 14 07.4 +2.5
CMAR pmax pmax
comp=Z,4.0nm,0.6s
CMAR Chiang Mai Arr 53.47 253 P P 09 14 06.8 +1.8
comp=Z,2.5nm,0.4s,baz=24,slow=6.7,SNR=20
CMAR PcP PcP 09 15 06.0 +0.4
comp=Z,1.5nm,0.3s,baz=35,slow=4.9,SNR=4.4
comp=Z,2.5nm,0.4s
KK31 Karatay Array 53.62 296 IAmb IAmb 09 14 06.9
comp=Z,12nm,0.8s
KKAR Karatay Array 53.62 296 IAmb IAmb 09 14 06.9
comp=Z,12nm,0.8s
KIRV Kirov 53.87 321 de P P 09 14 06.5 -0.6
KTK1 Kautokeino 54.17 340 eP P 09 14 07.8 -1.4
JETT Jettan, Norway 54.31 341 eP P 09 14 09.3 -0.9
JETT IAmb IAmb 09 14 12.2
comp=Z,317nm,2.4s
TRO Tromso 54.54 342 eP P 09 14 10.9 -0.8
F07A Phinny Hill Vi 54.55 59 IAmb IAmb 09 14 15.0
comp=Z,9.0nm,0.7s
J05D Fort Rock, OR 55.54 62 P P 09 14 22.3 +2.8
J05D IAmb IAmb 09 14 23.0
comp=Z,12nm,0.7s
SUMG Summit 55.92 4 i P P 09 14 20.0 -1.9
STEI Steigen 56.70 342 eP P 09 14 25.5 -1.4
LOF Lofoten 56.84 343 eP P 09 14 26.9 -1.0
J08A Circle Bar Ran 57.00 60 IAmb IAmb 09 14 32.4
comp=Z,4.3nm,0.7s
FAUS Fauske 57.17 342 eP P 09 14 29.6 -0.6
FAUS IAmb IAmb 09 14 32.3
comp=Z,229nm,2.4s
PLID Pearl Lake 57.17 57 IAmb IAmb 09 14 33.3
comp=Z,8.4nm,0.8s
FFC Flin Flon 57.23 42 P P 09 14 31.3 +0.5
FFC IAmb IAmb 09 14 32.2
comp=Z,8.9nm,0.6s
FFC Flin Flon 57.23 42 P P 09 14 31.3 +0.5
FFC pmax pmax
comp=Z,9.0nm,0.6s
FCC Fort Churchill 57.38 35 IAmb IAmb 09 14 32.2
comp=Z,7.3nm,0.6s
SIMJ Simiganj 57.41 293 P P 09 14 32.3 -0.1
NIL Nilore 58.32 285 P P 09 14 38.5 -0.2
NIL Nilore 58.32 285 P P 09 14 38.5 -0.2
NIL pmax pmax
comp=Z,51nm,0.9s
MOR8 Moi Rana 58.39 342 eP P 09 14 36.4 -2.2
BELG Belogornoye 58.87 316 d iP P 09 14 41.4 -0.6
BELG pmax pmax
comp=Z,11nm,0.9s
BOZ Bozeman (W) 59.08 55 IAmb IAmb 09 14 46.5
comp=Z,6.8nm,0.8s
YERR Yerington 59.54 65 IAmb IAmb 09 14 50.1
comp=Z,6.0nm,0.7s
FIA1 FINESS Array S 59.63 333 P P 09 14 46.0 -0.9
FINES FINESS Array B 59.63 333 i P P 09 14 46.2 -0.8
FINES pmax pmax
comp=Z,14nm,0.3s

FINES	**FINESS Array B**	59.63	333	P		**P**	09 14 46.4	-0.6	
	comp=Z,14nm,0.3s,baz=37,slow=6.7,SNR=213								
	comp=Z,14nm,0.3s								
KVN	**Kaiserville**	60.14	64	IAmb		IAmb	09 14 54.1		
	comp=Z,5.2nm,0.9s								
KBL	**Kabul**	60.21	289	P		**P**	09 14 50.6	-1.0	
KBL	**Kabul**	60.21	289	P		**P**	09 14 50.6	-1.0	
KBL				pmax		pmax			
	comp=Z,20nm,0.9s								
YFT	**Old Faithful**	60.28	55	IAmb		IAmb	09 14 56.5		
	comp=Z,5.8nm,0.7s								
NVAR	**Mina Array Bea**	60.46	65	P		**P**	09 14 55.3	+2.1	
	comp=Z,2.6nm,0.6s,baz=303,slow=7.0,SNR=31								
	comp=Z,2.6nm,0.6s								
RLMT	**Red Lodge**	60.61	54	IAmb		IAmb	09 14 57.2		
	comp=Z,5.3nm,0.9s								
TPAW	**Teton Pass**	60.90	56	IAmb		IAmb	09 14 58.6		
	comp=Z,4.3nm,0.8s								
LOHW	**Long Hollow**	60.99	56	IAmb		IAmb	09 15 00.0		
	comp=Z,7.1nm,1.4s								
LAO	**LASA Array**	61.00	51	IAmb		IAmb	09 15 00.2		
	comp=Z,4.6nm,0.8s								
SNOW	**Snow King Moun**	61.02	56	IAmb		IAmb	09 15 00.4		
	comp=Z,3.7nm,0.8s								
MEF	**Metsahovi**	61.11	333	*e*P		**P**	09 14 56.2	-0.7	
RAF	**Rauma**	61.15	335	*e*P		**P**	09 14 56.6	-0.5	
OBN	**Obninsk**	61.27	324	*ce*P		**P**	09 14 57.3	-0.7	
OBN				*e*			09 17 17.6		
OBN				pmax		pmax			
	comp=Z,68nm,2.5s								
OBN	**Obninsk**	61.27	324	*e*P		**P**	09 14 57.3	-0.7	
DSP	**Deep Springs**	61.39	65	P		**P**	09 15 01.1	+2.0	
VSU	**Vasula**	61.88	331	*e*P		**P**	09 15 01.9	-0.1	
Q12A	**Willow Creek R**	61.96	62	IAmb		IAmb	09 15 06.1		
	comp=Z,5.0nm,0.7s								
GRAC	**Grapevine Rang**	61.99	65	IAmb		IAmb	09 15 06.4		
	comp=Z,5.6nm,0.6s								
PD31	**Pinedale Array**	62.13	56	IAmb		IAmb	09 15 06.2		
	comp=Z,4.1nm,0.6s								
PDAR	**Pinedale Array**	62.13	56	P		**P**	09 15 05.6	+1.3	
	comp=Z,4.4nm,0.6s,baz=335,slow=1.4,SNR=36								
	comp=Z,4.4nm,0.6s								
VRH	**Novokhopyorsk**	62.24	318	⇓*i*P		**P**	09 15 03.4	-1.1	
VRH				pmax		pmax			
	comp=Z,36nm,0.8s								
DUG	**Dugway, Tooele**	62.24	60	IAmb		IAmb	09 15 08.0		
	comp=Z,3.7nm,0.8s								
SPR3	**Spring Creek 3**	62.27	62	IAmb		IAmb	09 15 08.5		
	comp=Z,4.6nm,0.7s								
LPSR	**Galich'ya Gora**	62.30	321	*e*P		**P**	09 15 03.3	-1.6	
LPSR				pmax		pmax			
	comp=Z,40nm,0.7s								
S11A	**Rachel**	62.44	64	IAmb		IAmb	09 15 09.3		
	comp=Z,8.5nm,0.7s								
MTSE	**Matsula**	62.53	333	*e*P		**P**	09 15 05.9	-0.3	
NLU	**North Lily Min**	62.81	59	P		**P**	09 15 10.3	+1.6	
VORR	**Voronezh**	62.91	320	*e*P		**P**	09 15 08.4	-0.4	
VORR				pmax		pmax			
	comp=Z,10.0nm,0.4s								
MOL	**Molde**	62.96	343	*e*P		**P**	09 15 08.4	-0.5	
MOL				IAmb		IAmb	09 15 19.5		
	comp=Z,158nm,2.0s								
GWY	**Greenwater Val**	62.96	65	IAmb		IAmb	09 15 12.4		
	comp=Z,4.5nm,0.8s								
MPU	**Maple Canyon**	63.01	59	IAmb		IAmb	09 15 12.4		
	comp=Z,4.2nm,0.6s								
ULM	**Lac du Bonnet**	63.05	42	P		**P**	09 15 09.6	-0.2	
	comp=Z,2.9nm,0.4s,baz=319,slow=6.7,SNR=15								
	comp=Z,2.9nm,0.4s								
DOMB	**Dombas**	63.15	342	*e*P		**P**	09 15 09.4	-0.9	
DOMB				IAmb		IAmb	09 15 10.2		
	comp=Z,11nm,0.8s								
VSR	**Storozhevoye**	63.27	320	*e*P		**P**	09 15 09.6	-1.6	
VSR				pmax		pmax			
	comp=Z,40nm,0.9s								
VORD	**Divnogorie**	63.41	320	*e*P		**P**	09 15 10.4	-1.7	
VORD				pmax		pmax			
	comp=Z,30nm,0.9s								
AKN	**Aaknes**	63.42	343	*e*P		**P**	09 15 11.6	-0.4	
AKN				IAmb		IAmb	09 15 13.5		
	comp=Z,73nm,1.7s								
NB2	**NORSAR Subarra**	63.63	340	P		**P**	09 15 12.7	-0.7	
	comp=Z,6.3nm,0.7s,baz=26,slow=6.5								
NB2	**NORSAR Subarra**	63.63	340	P		**P**	09 15 12.7	-0.7	
	baz=26,slow=6.5								
NOA	**NORSAR Array B**	63.63	340	P		**P**	09 15 12.5	-0.9	
	comp=Z,8.9nm,0.7s,baz=25,slow=6.5,SNR=42								
	comp=Z,8.9nm,0.7s								
TMUT	**Trail Mountain**	63.75	59	IAmb		IAmb	09 15 17.2		
	comp=Z,4.6nm,0.6s								
NC602	**NORSAR Array S**	63.83	340	*e*P		**P**	09 15 13.6	-1.1	
SLIT	**Slitere, Latvi**	63.88	333	*e*P		**P**	09 15 14.7	-0.3	
HFS	**Hagfors**	63.90	339	P		**P**	09 15 14.2	-0.9	
	comp=Z,6.9nm,0.3s,baz=56,slow=3.7,SNR=106								
	comp=Z,6.9nm,0.3s								
RSSD	**Black Hills**	63.92	51	P		**P**	09 15 16.8	+1.0	
RSSD				IAmb		IAmb	09 15 17.9		
	comp=Z,4.5nm,0.7s								
RSSD	**Black Hills**	63.92	51	P		**P**	09 15 16.8	+1.0	
RSSD				pmax		pmax			
	comp=Z,5.0nm,0.7s								
GEYT	**Alibeck**	64.04	299	P		**P**	09 15 17.2	+0.8	
	comp=Z,16nm,0.6s,baz=33,slow=3.5,SNR=27								
	comp=Z,16nm,0.6s								
SRU	**San Rafael Swe**	64.25	59	IAmb		IAmb	09 15 21.0		
	comp=Z,5.7nm,0.9s								
ISAL	**Salakas**	64.47	330	*e*P		**P**	09 15 19.3	+0.5	
PKCU	**Pink Cliffs**	64.49	61	IAmb		IAmb	09 15 23.1		
	comp=Z,3.4nm,0.8s								
HYA	**Hoyanger**	64.50	343	*e*P		**P**	09 15 18.2	-0.7	
HYA				IAmb		IAmb	09 15 22.9		
	comp=Z,67nm,1.7s								
SKAR	**Skarslia**	64.55	342	*e*P		**P**	09 15 18.5	-0.8	
SKAR				IAmb		IAmb	09 15 26.5		
	comp=Z,132nm,2.3s								
O20A	**White River Ci**	64.72	57	IAmb		IAmb	09 15 23.2		
	comp=Z,5.6nm,0.6s								
MNK	**Minsk**	64.79	328	*i* P		**P**	09 15 19.0	-1.9	
MNK				*i* *PP		**pP**	09 16 48.1	-0.6	
MNK				*i* *SP		**sP**	09 17 32.4	-0.7	
MNK				*i* S		**S**	09 23 25.9	-1.7	
MNK				pmax		pmax			
	comp=E,7.0nm,0.8s								
MNK				pmax		pmax			
	comp=Z,29nm,0.7s								
MNK				pmax		pmax			
	comp=N,15nm,0.7s								
VSVD	**Vaisvydziai**	64.80	331	*e*P		**P**	09 15 20.7	-0.2	
SUE	**Sulen**	64.86	343	*e*P		**P**	09 15 20.5	-0.7	
PABE	**Paberze**	65.19	331	P		**P**	09 15 22.8	-0.5	
PABE	**Paberze**	65.19	331	*e*P		**P**	09 15 23.2	-0.2	
KONO	**Kongsberg**	65.23	340	*e*P		**P**	09 15 23.1	-0.5	
KONO	**Kongsberg**	65.23	340	⇑*e*P		**P**	09 15 23.2	-0.4	
KONO				pmax		pmax			
	comp=Z,26nm,2.5s								
PBUR	**Paburge**	65.36	332	*e*P		**P**	09 15 24.4	0.0	
B35A	**Bob, Littlefor**	65.40	42	IAmb		IAmb	09 15 25.2		
	comp=Z,5.7nm,0.7s								
ODD1	**Odda**	65.59	342	*e*P		**P**	09 15 25.3	-0.6	
SMCO	**Snowmass**	66.08	57	IAmb		IAmb	09 15 31.8		
	comp=Z,2.5nm,0.7s								
Y14A	**Wickenburg**	66.66	65	IAmb		IAmb	09 15 35.5		
	comp=Z,4.6nm,0.6s								
SUW	**Suwalki**	66.70	330	*e*P		**P**	09 15 32.2	-0.8	
SUW	**Suwalki**	66.70	330	*e*P		**P**	09 15 32.8	-0.2	
SNART	**Snartemo**	66.93	341	*e*P		**P**	09 15 33.8	-0.5	
X16A	**Lo Mia Camp, P**	67.18	63	IAmb		IAmb	09 15 39.7		
	comp=Z,4.5nm,0.8s								
KIV	**Kislovodsk**	67.35	313	⇑P		**P**	09 15 36.1	-1.2	
KIV	**Kislovodsk**	67.35	313	P		**P**	09 15 37.5	+0.2	
KIV	**Kislovodsk**	67.35	313	*e*P		**P**	09 15 37.5	+0.2	
KIV				pmax		pmax			
	comp=Z,23nm,1.0s								
KIV	**Kislovodsk**	67.35	313	*e*P		**P**	09 15 37.5	+0.2	
KBZ	**Khabaz**	67.43	312	*d i*P		**P**	09 15 38.0	+0.4	
KBZ				pmax		pmax			
	comp=Z,27nm,0.9s								
KBZ	**Khabaz**	67.43	312	P		**P**	09 15 38.1	+0.6	
	comp=Z,26nm,0.8s,baz=80,slow=3.5,SNR=53								
	comp=Z,26nm,0.8s								
KBZ	**Khabaz**	67.43	312	*e*P		**P**	09 15 38.0	+0.4	
AKASG	**Malin Array Be**	67.47	325	P		**P**	09 15 36.6	-1.1	
	comp=Z,9.5nm,0.4s,baz=32,slow=6.6,SNR=35								
	comp=Z,9.5nm,0.4s								
AKBB	**Malin Array Si**	67.47	325	*d i*P		**P**	09 15 36.5	-1.2	
KIEV	**Kiev**	67.48	325	⇑P		**P**	09 15 36.5	-1.2	
KIEV	**Kiev**	67.48	325	P		**P**	09 15 36.6	-1.2	
KIEV				pmax		pmax			
	comp=Z,17nm,0.9s								
X18A	**Snowflake**	67.92	62	IAmb		IAmb	09 15 44.1		
	comp=Z,2.9nm,0.9s								
SCHQ	**Schefferville**	68.96	23	P		**P**	09 15 46.0	-0.9	
	comp=Z,3.5nm,0.4s,baz=321,slow=8.6,SNR=5.6								
	comp=Z,3.5nm,0.4s								
GKP	**Gorka Klasztor**	69.10	333	*e*P		**P**	09 15 47.7	0.0	
GNI	**Garni**	69.32	309	P		**P**	09 15 49.5	+0.1	
GNI	**Garni**	69.32	309	*de*P		**P**	09 15 50.6	+1.1	
GNI				pmax		pmax			
	comp=Z,30nm,1.7s								
SORM	**Soroca**	69.92	324	⇑P		**P**	09 15 51.5	-1.3	
SORM	**Soroca**	69.92	324	P		**P**	09 15 51.4	-1.3	
KWP	**Kalwaria Pacla**	70.62	328	*e*P		**P**	09 15 57.3	+0.4	
MILM	**Milestii Mici**	70.77	323	*e*P		**P**	09 15 56.0	-1.8	
	comp=Z,30nm,0.8s								
MILM	**Milestii Mici**	70.77	323	*e*P		**P**	09 15 56.0	-1.8	
MILM				pmax		pmax			
	comp=Z,30nm,0.8s								
OJC	**Ojcow**	71.03	330	*e*P		**P**	09 15 59.3	-0.1	
STHS	**Stebnicka Huta**	71.28	329	*e*P		**P**	09 16 00.5	-0.3	
STHS				pmax		pmax			
	comp=Z,12nm,0.6s								
STHS	**Stebnicka Huta**	71.28	329	*e*P		**P**	09 16 00.5	-0.3	
KOLS	**Kolonicke sedl**	71.36	328	*e*P		**P**	09 16 01.1	-0.2	
KOLS				pmax		pmax			
	comp=Z,17nm,0.6s								
KOLS	**Kolonicke sedl**	71.36	328	*e*P		**P**	09 16 01.1	-0.2	
BURAR	**Bucovina Array**	71.49	326	⇓P		**P**	09 16 01.6	-0.6	
BURAR	**Bucovina Array**	71.49	326	P		**P**	09 16 01.6	-0.6	
KSP	**Ksiaz**	71.53	333	*e*P		**P**	09 16 02.0	-0.2	
NIE	**Niedzica**	71.58	330	*e*P		**P**	09 16 03.1	+0.4	
EKA	**Eskdalemuir Ar**	71.63	346	P		**P**	09 16 02.3	-0.5	
	comp=Z,4.8nm,0.4s,baz=16,slow=5.0,SNR=53								
	comp=Z,4.8nm,0.4s								
CRVS	**Cervenica-Dubn**	71.66	329	*e*P		**P**	09 16 03.1	0.0	
CRVS				pmax		pmax			
	comp=Z,15nm,0.7s								
CRVS	**Cervenica-Dubn**	71.66	329	*e*P		**P**	09 16 03.1	0.0	
VLDQ	**Val d'Or**	71.80	33	P		**P**	09 16 02.5	-1.4	
CHVC	**Chvalec**	71.83	333	*e*P		**P**	09 16 04.0	0.0	
CHVC	**Chvalec**	71.83	333	*e*P		**P**	09 16 04.0	0.0	
GURO	**Guroymak-BITLI**	71.88	310	IAmb		IAmb	09 16 07.2		
	comp=Z,13nm,1.0s								
TESR	**Tescani**	71.92	324	⇑P		**P**	09 16 03.0	-1.6	
DPC	**Dobruska-Polom**	71.96	332	*e*P		**P**	09 16 05.0	+0.1	
DPC	**Dobruska-Polom**	71.96	332	*e*P		**P**	09 16 05.0	+0.1	
CLL	**Collm**	72.02	335	*i* P		**P**	09 16 04.4	-0.7	
CLL				pmax		pmax			
	comp=Z,13nm,0.8s								
CLL	**Collm**	72.02	335	*i* P		**P**	09 16 04.4	-0.7	
	comp=Z,13nm,0.8s								
KRLC	**Kraliky**	72.07	332	*e*P		**P**	09 16 05.5	0.0	
KRLC	**Kraliky**	72.07	332	*e*P		**P**	09 16 05.5	0.0	
LANS	**Liptovska Anna**	72.08	330	*e*P		**P**	09 16 06.5	+0.9	
LANS				pmax		pmax			
	comp=Z,13nm,0.6s								
LANS	**Liptovska Anna**	72.08	330	*e*P		**P**	09 16 06.5	+0.9	
MORC	**Moravsky Berou**	72.11	331	⇓P		**P**	09 16 05.6	-0.2	
MORC	**Moravsky Berou**	72.11	331	P		**P**	09 16 05.3	-0.4	
MORC	**Moravsky Berou**	72.11	331	*e*P		**P**	09 16 05.5	-0.2	
MORC	**Moravsky Berou**	72.11	331	P		**P**	09 16 05.3	-0.4	
MORC				pmax		pmax			
	comp=Z,17nm,0.8s								
MAUC	**Maruska**	72.39	331	*e*P		**P**	09 16 07.2	-0.2	
VRI	**Vrincioaia**	72.43	324	⇑P		**P**	09 16 06.9	-0.8	
VRI	**Vrincioaia**	72.43	324	P		**P**	09 16 06.8	-0.8	
PLOR	**Plostina**	72.47	324	⇓P		**P**	09 16 07.3	-0.7	
PLOR	**Plostina**	72.47	324	P		**P**	09 16 07.2	-0.7	
CFR	**Carcaliu**	72.49	322	⇓P		**P**	09 16 07.5	-0.5	
CFR	**Carcaliu**	72.49	322	P		**P**	09 16 07.4	-0.5	
DIKM	**Dikmen**	72.50	316	⇑P		**P**	09 16 07.5	-0.6	
TURR	**Turia**	72.53	324	⇑P		**P**	09 16 07.4	-0.9	
HSKC	**Hora Svate Kat**	72.54	334	*e*P		**P**	09 16 07.9	-0.3	
TPGR	**Topolog**	72.65	322	⇑P		**P**	09 16 08.2	-0.7	
SMWD	**Samnorwood**	72.66	55	IAmb		IAmb	09 16 11.0		
	comp=Z,3.8nm,0.8s								
GOPC	**GO Pecny, Ondr**	72.79	333	*e*P		**P**	09 16 09.6	-0.1	
GOPC	**GO Pecny, Ondr**	72.79	333	*e*P		**P**	09 16 09.6	-0.1	
PRU	**Pruhonice**	72.79	333	*e*P		**P**	09 16 09.5	-0.1	
PRU	**Pruhonice**	72.79	333	*e*P		**P**	09 16 09.5	-0.1	
VRAC	**Vranov**	72.81	332	⇑P		**P**	09 16 08.5	-1.4	
VRAC	**Vranov**	72.81	332	*e*P		**P**	09 16 09.8	0.0	
VRAC	**Vranov**	72.81	332	P		**P**	09 16 08.4	-1.4	
VYHS	**Vyhne**	72.85	330	*e*P		**P**	09 16 10.1	0.0	
VYHS				pmax		pmax			
	comp=Z,10.0nm,0.5s								
VYHS	**Vyhne**	72.85	330	*e*P		**P**	09 16 10.0	0.0	
JAVC	**Velka Javorina**	72.89	331	*e*P		**P**	09 16 11.2	+0.9	
TIRR	**Tirgusor**	72.99	322	⇑P		**P**	09 16 09.8	-1.0	
TIRR	**Tirgusor**	72.99	322	P		**P**	09 16 09.8	-1.0	
WRA	**Warramunga Arr**	73.00	198	P		**P**	09 16 13.0	+1.8	
	comp=Z,1.7nm,0.4s,baz=12,slow=6.0,SNR=17								
	comp=Z,1.7nm,0.4s								
MARR	**Marisel-Cluj**	73.03	326	⇑P		**P**	09 16 09.9	-1.3	
MLR	**Muntele Rosu**	73.04	324	⇓P		**P**	09 16 10.0	-1.3	
MLR	**Muntele Rosu**	73.04	324	P		**P**	09 16 10.0	-1.3	
DRGR		73.07	327	⇓P		**P**	09 16 10.8	-0.6	
DRGR		73.07	327	P		**P**	09 16 10.8	-0.6	
KRUC	**Moravsky**	73.09	332	*e*P		**P**	09 16 11.3	-0.1	
ZVC	**Zvikov**	73.39	333	*e*P		**P**	09 16 13.1	0.0	
VOIR		73.41	324	⇑P		**P**	09 16 13.3	-0.2	
MODS	**Modra-Piesok**	73.44	331	*e*P		**P**	09 16 14.0	+0.6	
MODS				pmax		pmax			
	comp=Z,21nm,1.1s								
MODS	**Modra-Piesok**	73.44	331	*e*P		**P**	09 16 14.0	+0.6	
ICOR	**Ion Corvin**	73.51	322	⇑P		**P**	09 16 14.5	+0.6	
ARR	**Arges**	73.62	325	⇓P		**P**	09 16 15.2	+0.6	
WMOK	**Wichita Mounta**	73.70	55	IAmb		IAmb	09 16 16.5		
	comp=Z,3.6nm,0.6s								
KHC	**Kasperske Hory**	73.84	333	IAmb		IAmb	09 16 16.8		
	comp=Z,10nm,0.8s								
KHC	**Kasperske Hory**	73.84	333	*e*P		**P**	09 16 15.7	0.0	
KHC	**Kasperske Hory**	73.84	333	*de*P		**P**	09 16 15.4	-0.3	
KHC				pmax		pmax			
	comp=Z,35nm,1.3s								
SIRR	**Siria**	73.89	327	⇑P		**P**	09 16 16.2	+0.2	
CKRC	**Cesky Krumlov**	73.91	333	*e*P		**P**	09 16 16.1	-0.1	
CKRC	**Cesky Krumlov**	73.91	333	*e*P		**P**	09 16 16.1	-0.1	
R40A	**Maddies Statio**	74.04	48	IAmb		IAmb	09 16 17.6		
	comp=Z,5.1nm,0.8s								
GEC2	**GERESS Array S**	74.06	333	IAmb		IAmb	09 16 17.5		
	comp=Z,5.4nm,0.8s								
GERES	**GERESS Array B**	74.06	333	P		**P**	09 16 17.1	0.0	
	comp=Z,4.8nm,0.6s,baz=36,slow=6.5,SNR=9.1								
	comp=Z,4.8nm,0.6s								
SURR	**Surduc**	74.17	327	⇑P		**P**	09 16 17.5	-0.2	
GZR	**Gura Zlata**	74.26	326	⇑P		**P**	09 16 17.7	-0.6	
MNHN	**Monahans**	74.26	59	IAmb		IAmb	09 16 20.8		
	comp=Z,4.5nm,0.8s								
CONA	**Conrad Observa**	74.27	332	*i* P		**P**	09 16 18.5	+0.3	
	comp=Z,9.6nm,0.6s								
RONA	**Rosalia, Austr**	74.34	331	*i* P		**P**	09 16 19.2	+0.6	
	comp=Z,9.7nm,1.0s,SNR=4.2								
TRQ	**Mont Tremblant**	74.42	32	P		**P**	09 16 18.6	-0.5	
BZS	**Buzias**	74.47	327	⇑P		**P**	09 16 18.6	-0.8	
COPA	**Copaceanca**	74.47	324	⇑P		**P**	09 16 17.6	-1.7	
ALPN	**Alpine**	74.54	61	IAmb		IAmb	09 16 22.6		
	comp=Z,2.7nm,0.7s								
BR131	**Keskin Array S**	74.78	316	*d i*P		**P**	09 16 21.1	-0.3	
BRTR	**Keskin Array B**	74.78	316	*i* P		**P**	09 16 21.2	-0.2	
BRTR				pmax		pmax			
	comp=Z,7.0nm,0.7s								
BRTR	**Keskin Array B**	74.78	316	P		**P**	09 16 21.5	+0.1	
	comp=Z,7.5nm,0.8s,baz=46,slow=3.6,SNR=21								
	comp=Z,7.5nm,0.8s								
UOSS	**Minazif**	74.79	291	P		**P**	09 16 21.0	-0.5	
HERR	**Herculane**	74.83	326	⇑P		**P**	09 16 20.7	-0.7	
HHAR	**Hobbs**	74.86	50	IAmb		IAmb	09 16 22.8		
	comp=Z,6.3nm,0.8s								
ANTO	**Ankara**	75.03	316	P		**P**	09 16 22.6	-0.1	
ANTO	**Ankara**	75.03	316	P		**P**	09 16 22.6	-0.1	
ANTO				pmax		pmax			
	comp=Z,20nm,0.6s								
TX31	**Lajitas Ar. Si**	75.33	61	IAmb		IAmb	09 16 27.2		
	comp=Z,14nm,1.4s								
TXAR	**Lajitas Array**	75.33	61	P		**P**	09 16 26.4	+1.8	
	comp=Z,4.6nm,0.5s,baz=298,slow=5.2,SNR=77								
TXAR				pP		**pP**	09 17 57.3	+1.5	
	comp=Z,1.5nm,1.0s,baz=297,slow=5.5,SNR=5.8								
	comp=Z,4.6nm,0.5s								
FRGS	**Fruska Gora**	75.48	328	⇑P		**P**	09 16 24.7	-0.4	
SOKA	**Soboth**	75.64	331	*e*P		**P**	09 16 26.1	+0.1	
	comp=Z,5.3nm,0.5s								
SAND	**Sanderson**	75.69	60	IAmb		IAmb	09 16 29.0		
	comp=Z,6.7nm,1.2s								
KBA	**Koelnbreinsper**	75.77	333	*i* P		**P**	09 16 27.4	+0.5	
	comp=Z,22nm,0.6s								
WATA	**Walderalm**	76.03	334	*e*P		**P**	09 16 28.6	+0.3	
	comp=Z,5.3nm,0.5s								
FCAR	**Ozark Folk Cen**	76.05	49	IAmb		IAmb	09 16 28.8		
	comp=Z,5.6nm,0.7s								
WTTA	**Wattenberg**	76.08	334	*e*P		**P**	09 16 29.2	+0.6	
	comp=Z,15nm,0.8s,SNR=5.7								
MYKA	**Terra Mystica**	76.09	332	*e*P		**P**	09 16 28.2	-0.3	
	comp=Z,12nm,1.0s								
RETA	**Reutte**	76.11	335	*e*P		**P**	09 16 28.9	+0.3	
	comp=Z,5.9nm,0.9s								
MOTA	**Moosalm**	76.15	334	*i* P		**P**	09 16 29.2	+0.2	
	comp=Z,14nm,1.0s								
SQTA	**Sankt Quirin**	76.23	334	*e*P		**P**	09 16 29.8	+0.4	
	comp=Z,10nm,0.9s								
ABTA	**Abfaltersbach**	76.31	333	*e*P		**P**	09 16 29.6	-0.2	
	comp=Z,9.2nm,1.2s								
ECH	**Echery**	76.36	337	IAmb		IAmb	09 16 30.4		
	comp=Z,9.3nm,0.9s								
WHAR	**Wooly Hollow**	76.45	50	IAmb		IAmb	09 16 31.9		
	comp=Z,6.7nm,0.7s								
DAVA	**Damuels**	76.53	335	*e*P		**P**	09 16 31.0	-0.1	
	comp=Z,12nm,1.1s								
FETA	**Feichten**	76.55	334	*i* P		**P**	09 16 31.5	+0.4	
	comp=Z,7.4nm,0.7s								
ASAR	**Alice Springs**	76.71	198	P		**P**	09 16 35.0	+2.9	
	comp=Z,3.8nm,0.5s,baz=9.8,slow=5.3,SNR=69								
	comp=Z,3.8nm,0.5s								
WCI	**Wyandotte Cave**	76.77	44	P		**P**	09 16 32.7	+0.4	
WCI				IAmb		IAmb	09 16 33.5		
	comp=Z,7.0nm,0.8s								
WCI	**Wyandotte Cave**	76.77	44	P		**P**	09 16 32.7	+0.4	
WCI				pmax		pmax			
	comp=Z,7.0nm,0.8s								
T50A	**Nancy**	78.41	44	IAmb		IAmb	09 16 42.0		
	comp=Z,6.7nm,0.7s								
SWET	**Sewanee**	79.44	45	IAmb		IAmb	09 16 47.3		
	comp=Z,8.6nm,0.8s								
MMAI	**Mount Meron Ar**	79.51	311	P		**P**	09 16 48.2	+0.8	
	comp=Z,12nm,0.4s,baz=42,slow=6.8,SNR=33								
	comp=Z,12nm,0.4s								
ESDC	**Sonseca Array**	86.91	342	P		**P**	09 17 23.3	-1.2	
	comp=Z,0.9nm,0.7s,baz=15,slow=4.3,SNR=4.7								
	comp=Z,0.9nm,0.7s								
KEST	**Kesra**	87.37	331	P		**P**	09 17 26.8	+0.1	
	comp=Z,4.8nm,0.6s,baz=250,slow=1.2,SNR=8.0								
	comp=Z,4.8nm,0.6s								
BOSA	**Boshof**	134.97	280	PKP		**PKiKP**	09 23 58.1	+0.8	
	comp=Z,0.7nm,0.5s,baz=162,slow=3.2,SNR=3.1								
QSPA	**South Pole Qui**	141.29	180	P

n26,σ1ᵖ34/44,1D,Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
PTAC	**Punta Ardita,**	**0.55**	**98**	*eP*		**Pg**	**09 14 43.9**	**0.0**
PTAC				*eS*		**Sg**	**09 14 51.2**	**+0.2**
UPD2	**Meteti**	**1.35**	**14**	*eP*		**Pn**	**09 14 58.9**	**-0.2**
UPD2	comp=Z,5μm,0.1s			AMP			09 15 00.0	
UPD2				*eS*		**Sb**	**09 15 16.6**	**-0.5**
UPD2	**Meteti**	**1.35**	**14**	*eP*		**Pn**	**09 14 58.9**	**-0.2**
UPD2				*eS*		**Sb**	**09 15 16.5**	**-0.5**
UPD2	comp=Z,326nm,0.5s			*i*			09 15 23.6	
SOLC	**Bahia Solano**	**1.37**	**137**	*eP*		**Pn**	**09 14 56.7**	**-2.5**
SOLC				*eS*		**Sg**	**09 15 16.9**	**-0.4**
TOTI	**Torti**	**1.69**	**1**	*eP*		**Pn**	**09 15 03.9**	**+0.2**
TOTI				*eS*		**Sb**	**09 15 27.5**	**+0.8**
CAPC	**Capurgana**	**1.72**	**35**	*eP*		**Pn**	**09 15 02.2**	**-1.8**
CAPC				*eS*		**Sn**	**09 15 22.0**	**-4.4**
CAPC	comp=Z,74nm,0.2s			*i*			09 15 29.4	
APAC	**Apartado, Choc**	**1.88**	**69**	*eP*		**Pn**	**09 15 06.5**	**+0.2**
APAC				*eS*		**Sb**	**09 15 31.9**	**-0.3**
APAC	comp=Z,111nm,0.4s			*i*			09 15 36.1	
AZU	**Azuero**	**1.98**	**287**	*eP*		**Pn**	**09 15 07.9**	**+0.2**
AZU	comp=Z,653nm,0.1s			AMP			09 15 08.5	
AZU				*eS*		**Sn**	**09 15 31.3**	**-1.7**
AZU	**Azuero**	**1.98**	**287**	*eP*		**Pn**	**09 15 07.9**	**+0.2**
AZU				*eS*		**Sn**	**09 15 31.0**	**-2.0**
AZU	comp=Z,100nm,0.6s			*i*			09 15 44.1	
FLAM	**Flamenco Islan**	**2.04**	**325**	*eS*		**Sb**	**09 15 36.5**	**-0.4**
CHPO	**Chepo, Panama**	**2.07**	**339**	*eP*		**Pn**	**09 15 10.1**	**+1.2**
CHPO	comp=Z,182nm,0.1s			AMP			09 15 11.9	
CHPO				*eS*		**Sn**	**09 15 36.7**	**+1.5**
UPA	**Univ. de Panam**	**2.10**	**326**	*eP*		**Pn**	**09 15 08.9**	**-0.4**
UPA				*eS*		**Sb**	**09 15 37.8**	**-0.7**
DBBC	**Dabeiba**	**2.14**	**95**	*eP*		**Pn**	**09 15 09.0**	**-0.9**
DBBC				*eS*		**Sn**	**09 15 37.0**	**0.0**
DBBC	comp=Z,25nm,0.5s			*i*			09 15 42.5	
CHIT3	**Chitre**	**2.17**	**290**	*eP*		**Pn**	**09 15 10.6**	**+0.4**
CHIT3	comp=Z,1μm,0.1s			AMP			09 15 10.9	
CHIT3				*eS*		**Sn**	**09 15 36.2**	**-1.4**
ZANG	**Zanguenga, Cho**	**2.28**	**319**	*eP*		**Pn**	**09 15 11.9**	**+0.1**
ZANG	comp=Z,771nm,0.1s			AMP			09 15 13.9	
ZANG				*eS*		**Sn**	**09 15 42.5**	**+2.2**
PNME	**Penonome**	**2.32**	**303**	*eP*		**Pn**	**09 15 12.2**	**-0.2**
PNME				*eS*		**Sn**	**09 15 43.0**	**+1.7**
BCIP	**Isla Barro Col**	**2.42**	**323**	*eP*		**Pn**	**09 15 13.0**	**-0.7**
BCIP				*eS*		**Sn**	**09 15 44.4**	**+0.5**
CBOC	**Ciudad Bolivar**	**2.69**	**120**	*eP*		**Pn**	**09 15 16.3**	**-1.3**
UREC	**San Jos de Ur**	**2.85**	**79**	*eP*		**Pn**	**09 15 19.6**	**0.0**
UREC				*eS*		**Sn**	**09 15 53.9**	**-0.5**
UREC	**San Jos de Ur**	**2.85**	**79**	*eP*		**Pn**	**09 15 19.7**	**+0.1**
UREC	comp=Z,14nm,0.8s			*i*			09 16 00.3	
GUY2C	**Guyana, Caldas**	**3.58**	**124**	*eP*		**Pn**	**09 15 30.5**	**+0.5**
NORC	**Norcasia**	**3.84**	**115**	*eP*		**Pn**	**09 15 33.8**	**+0.5**
PTBC	**PUERTO BERRIO,**	**3.93**	**100**	*eP*		**Pn**	**09 15 36.3**	**+1.7**
BARC	**Barichara**	**5.17**	**97**	*eP*		**Pn**	**09 15 52.5**	**+0.7**
BARC	comp=Z,8.3nm,0.6s			*i*			09 17 02.1	
PAMC	**Pamplona, Colo**	**5.61**	**89**	*eP*		**Pn**	**09 15 59.5**	**+1.4**
PAMC				*eS*		**Sn**	**09 17 06.1**	**+2.8**
PAMC	comp=Z,7.4nm,0.5s			*i*			09 17 10.9	
GARC	**Garzon, Huila**	**5.76**	**150**	*eP*		**Pn**	**09 16 01.7**	**+1.8**

IDC 22 09:27:42.3±2.6,53°.63N×86°.90E,h0ᵏᵐ,mbtmp2.5/2, ML2.2/2,Error ellipse: s-maj=26.1km s-min=15.0km az=71.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
I46RU	**ZALESOVO INFRA**	**1.27**	**285**	I		I	09 36 01.3	
	baz=104,slow=338,SNR=2.6							
ZALV	**Zalesovo Beam**	**1.27**	**285**	Pg		Pg	09 28 06.0	-0.7
	0.6nm,0.3s,baz=102,slow=16,SNR=11							
ZALV				Lg		Lg	09 28 23.8	
	0.8nm,0.3s,baz=106,slow=31,SNR=5.7							
KURBB	**Kurchatov Arra**	**5.97**	**243**	Pn		Pn	09 29 12.2	+0.4
	baz=55,slow=13,SNR=1.4							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**7.45**	**205**	Pn		Pn	09 29 33.8	+1.5
	0.1nm,0.3s,baz=27,slow=14,SNR=7.4							
	0.1nm,0.3s							

IDC 22 09:28:18.4±4.7,6°.19S×149°.03E,h62ᵏᵐ±42ᵏᵐ,mb3.7/7, mbtmp4.1/9,ML4.7/1,MS3.5/2,Error ellipse: s-maj=50.8km s-min=20.0km az=99.0

ISC 22 09:28:18.5±1.0,6°.2S±0°.1×149°.0E±0°.3,h60ᵏᵐ,n12, σ1ᵖ23/11,mb4.0/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
PMG	**Port Moresby**	**3.62**	**209**	P		**Pn**	**09 29 13.2**	**+1.1**
	56nm,0.3s,baz=37,slow=5.0,SNR=43							
PMG				S		**Sn**	**09 29 51.3**	**-2.3**
	79nm,0.4s,baz=67,slow=13,SNR=2.3							
HNR	**Honiara**	**11.35**	**107**	LR		LR	09 34 37.5	
	comp=Z,863nm,20.8s,baz=243,slow=34							
CTA	**Charters Tower**	**14.02**	**191**	LR		LR	09 36 00.8	
	comp=Z,64nm,19.4s,baz=28,slow=33							
WRA	**Warramunga Arr**	**19.68**	**225**	P		**P**	**09 32 42.7**	**-0.2**
	2.5nm,0.3s,baz=52,slow=11,SNR=52							
	5.7nm,0.4s							
ASAR	**Alice Springs**	**22.58**	**218**	P		**P**	**09 33 14.2**	**+0.1**
	1.6nm,0.5s,baz=55,slow=10,SNR=45							
	1.6nm,0.5s							
STKA	**Stephens Creek**	**26.43**	**194**	P		**P**	**09 33 51.0**	**+1.3**
	2.8nm,1.1s,baz=15,slow=16,SNR=1.8							
	2.8nm,1.1s							
KSRS	**Korea Array**	**47.68**	**337**	P		**P**	**09 36 50.1**	**+1.0**
	1.0nm,0.6s,baz=152,slow=8.4,SNR=3.0							
	1.0nm,0.6s							
PETK	**Petropavlovsk-**	**59.58**	**6**	P		**P**	**09 38 14.6**	**-1.2**
	3.5nm,0.8s,baz=189,slow=8.3,SNR=10							
	3.5nm,0.8s							
SONM	**Songino Array**	**65.56**	**330**	P		**P**	**09 38 55.9**	**-0.1**
	0.3nm,0.4s,baz=152,slow=6.5,SNR=1.2							
	0.3nm,0.4s							
QSPA	**South Pole Qui**	**83.74**	**180**	P		**P**	**09 40 41.0**	**+0.1**
	1.1nm,0.6s,baz=282,slow=1.6,SNR=11							
	1.1nm,0.6s							
ILAR	**Eielson Array**	**84.94**	**23**	P		**P**	**09 40 45.9**	**-0.9**
	1.0nm,0.7s,baz=250,slow=4.9,SNR=22							
	1.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**147.02**	**285**	PKPbc		**PKPdf**	**09 47 54.1**	**+0.6**
	2.0nm,0.3s,baz=46,slow=5.3,SNR=4.4							

SOME 22 09:35:58.9,43°.20N×83°.48E,h10ᵏᵐ
NNC 22 09:36:02.2±4.0,43°.29N×83°.38E,h0ᵏᵐ,mb3.7,mpv3.4, Error ellipse: s-maj=33.8km s-min=18.5km az=144.0

ISC 22 09:36:00.6±1.9,43°.25N±0°.09×83°.38E±0°.08,h10ᵏᵐ,n29, σ2ᵖ22/41,2C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
KTMS	**Ketmen**	**2.22**	**276**	Pg		**Pg**	**09 36 42.7**	**-0.4**
	6.8nm,0.4s							
KTMS				Lg		Lg	09 37 15.3	
	60nm,0.3s							
KTMS	**Ketmen**	**2.22**	**276**	*eP*		**Pg**	**09 36 42.0**	**-1.2**
	1.3nm,0.2s							
KTMS				*eS*		**Sg**	**09 37 13.3**	**+1.4**
	63nm,0.5s							
DJR	**Jarkent**	**2.82**	**294**	Pg		**Pb**	**09 36 51.6**	**+0.6**
	2.5nm,0.1s							
DJR				Lg		Lg	09 37 30.0	
	28nm,0.4s							
DJR	**Jarkent**	**2.82**	**294**	*eP*		**Pb**	**09 36 51.6**	**+0.6**
	2.5nm,0.1s							
DJR				*eS*		**Sg**	**09 37 30.0**	**-1.1**
	28nm,0.4s							
PDGK	**Podgornoye**	**2.84**	**273**	Pg		**Pb**	**09 36 51.3**	**-0.3**
	2.5nm,0.3s							
PDGK					Lg	Lg	09 37 29.3	
	16nm,0.6s							
PDGK	**Podgornoye**	**2.84**	**273**	⇓Pn		**Pb**	**09 36 51.4**	**-0.1**
	1.9nm,0.2s							
PDGK				⇓Sn		**Sg**	**09 37 30.8**	**-1.1**
	12nm,0.2s							
SHLS	**Shalkode**	**2.87**	**269**	Pg		**Pb**	**09 36 48.8**	**-3.1**
	10nm,0.3s							
SHLS	**Shalkode**	**2.87**	**269**	*eP*		**Pn**	**09 36 48.0**	**+1.5**
	8.2nm,0.2s							
SHLS				*eS*		**Sn**	**09 37 23.4**	**+2.2**
	39nm,0.3s							
UZB	**Uzynbulak**	**3.19**	**270**	Pg		**Pb**	**09 36 56.1**	**-1.3**
	5.1nm,0.2s							
UZB					Lg	Lg	09 37 38.0	
	8.2nm,0.3s							
UZB	**Uzynbulak**	**3.19**	**270**	*eP*		**Pb**	**09 36 57.8**	**+0.3**
	4.4nm,0.2s							
UZB				*eS*		**Sb**	**09 37 40.0**	**+3.5**
	8.6nm,0.2s							
KNOS	**Konyrlen**	**3.24**	**291**	Pg		**Pg**	**09 37 00.7**	**-2.0**
	3.9nm,0.1s							
KNOS					Lg	Lg	09 37 45.8	
	22nm,0.3s							
KAPS	**Kapalarasan**	**3.53**	**306**	Lg		Lg	09 37 49.2	
	14nm,0.5s							
KAPS	**Kapalarasan**	**3.53**	**306**	*eP*		**Pb**	**09 37 04.4**	**+1.1**
	1.8nm,0.1s							
KAPS				*eS*		**Sg**	**09 37 51.5**	**-2.5**
	15nm,0.4s							
MK31	**Makanchi Array**	**3.62**	**348**	⇑Pg		**Pg**	**09 37 09.9**	**-0.1**
	0.9nm,0.1s,baz=158,slow=15,SNR=29							
MK31				⇑Lg		Lg	09 37 59.3	
	3.4nm,0.2s,baz=303,slow=34,SNR=4.3							
SATY	**Saty**	**3.65**	**269**	Pg		**Pb**	**09 37 04.7**	**-0.5**
	3.1nm,0.1s							
SATY					Lg	Lg	09 37 52.7	
	10nm,0.2s							
SATY	**Saty**	**3.65**	**269**	*eP*		**Pb**	**09 37 06.1**	**+0.9**
	1.7nm,0.1s							
SATY				*eS*		**Sg**	**09 37 54.5**	**-3.3**
	17nm,0.2s							
BLB	**Baldybastay**	**3.66**	**285**	Pg		**Pg**	**09 37 07.9**	**-2.7**
	4.9nm,0.2s							
BLB					Lg	Lg	09 37 58.1	
	13nm,0.4s							
KURS	**Kuram**	**3.81**	**275**	Pg		**Pg**	**09 37 12.8**	**-0.7**
	2.4nm,0.4s							
KURS	**Kuram**	**3.81**	**275**	*eP*		**Pb**	**09 37 10.2**	**+2.3**
	1.2nm,0.3s							
KURS				*eS*		**Sg**	**09 38 01.5**	**-1.4**
	4.1nm,0.6s							
ZSN	**Zaisan**	**4.33**	**13**	Pg		**Pb**	**09 37 17.8**	**+1.2**
	3.6nm,0.2s							
ZSN					Lg	Lg	09 38 15.0	
	21nm,0.8s							
ZSN	**Zaisan**	**4.33**	**13**	*eP*		**Pb**	**09 37 17.9**	**+1.2**
	3.6nm,0.2s							
ZSN				*eS*		**Sg**	**09 38 15.0**	**-4.4**
	21nm,0.8s							
KOTS	**Kotyrbulak**	**4.58**	**272**	Pg		**Pg**	**09 37 26.4**	**-1.9**
	2.3nm,0.3s							
KOTS	**Kotyrbulak**	**4.58**	**272**	*eP*		**Pb**	**09 37 23.7**	**+2.5**
	1.9nm,0.3s							
KOTS				*eS*		**Sg**	**09 38 24.8**	**-2.9**
	10nm,0.5s							
MDOK	**Medeo**	**4.63**	**271**	Pg		**Pg**	**09 37 28.6**	**-0.7**
	1.0nm,0.2s							
MDOK	**Medeo**	**4.63**	**271**	*eP*		**Pb**	**09 37 25.1**	**+3.1**
	2.0nm,0.3s							
MDOK				*eS*		**Sg**	**09 38 26.9**	**-2.4**
	4.7nm,0.3s							
KTBS	**Karatobe**	**4.90**	**278**	Pg		**Pg**	**09 37 31.3**	**-3.1**
	0.9nm,0.3s							
KTBS					Lg	Lg	09 38 38.0	
	10nm,0.7s							
KTBS	**Karatobe**	**4.90**	**278**	*eP*		**Pg**	**09 37 31.3**	**-3.1**
	0.9nm,0.3s							
KTBS				*eS*		**Sg**	**09 38 38.0**	**+0.2**
	10nm,0.7s							
DGS	**Degeres**	**5.56**	**272**	Pg		**Pg**	**09 37 42.9**	**-4.1**
	1.1nm,0.3s							
DGS	**Degeres**	**5.56**	**272**	*eP*		**Pg**	**09 37 42.9**	**-4.1**
	1.1nm,0.3s							
DGS				*eS*		**Sg**	**09 38 58.1**	**-0.9**
	6.4nm,0.7s							

IDC 22 09:59:11.8±2.5,55°.93N×150°.15W,h0ᵏᵐ,mb3.5/2, mbtmp3.5/7,ML3.3/5,Error ellipse: s-maj=42.8km s-min=24.4km az=26.0
NEIC 22 09:59:15.7±1.5,56°.18N±0°.10×150°.1W±0°.1,h31ᵏᵐ±12ᵏᵐ, ML3.7/54,ML3.5(AEIC),Error ellipse: s-maj=14.7km s-min=8.2km az=167.0
AEIC 22 09:59:19.1±1.4,56°.31N±0°.10×150°.2W±0°.1,h6ᵏᵐ±8ᵏᵐ, Error ellipse: s-maj=14.1km s-min=9.4km az=167.0

ISC 22 09:59:16.8±1.0,56°.25N±0°.07×150°.11W±0°.05,h35ᵏᵐ, n233,σ0ᵍ89/234,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
OHAK	**Old Harbor**	**2.00**	**300**	Pn		**Pn**	**09 59 47.0**	**-1.1**
OHAK	**Old Harbor**	**2.00**	**300**			**Sn**	**10 00 09.8**	**-2.2**
OHAK	**Old Harbor**	**2.00**	**300**	P		**Pn**	**09 59 47.1**	**-1.1**
OHAK	**Old Harbor**	**2.00**	**300**	P		**Pn**	**09 59 47.0**	**-1.1**
	baz=117							
OHAK				S		**Sn**	**10 00 09.8**	**-2.2**
	baz=117							
KDAK	**Kodiak Island**	**2.05**	**320**	Pn		**Pn**	**09 59 48.2**	**-0.5**
	8.3nm,0.3s,baz=142,slow=5.8,SNR=684							
KDAK				Sn		**Sn**	**10 00 11.8**	**-1.3**
	19nm,0.3s,baz=7.4,slow=20,SNR=48							
	21nm,0.3s							
Q20K	**Shuyak Island**	**2.67**	**333**	P		**Pn**	**09 59 56.5**	**-0.7**
	baz=152							
Q20K				S		**Sn**	**10 00 27.8**	**-0.5**
	baz=152							
SYI	**Shuyak Island**	**2.67**	**333**			**Pn**	**09 59 56.5**	**-0.7**
SYI						**Sn**	**10 00 27.8**	**-0.5**
KAHG	**Katmai Hook Gl**	**3.29**	**315**			**Pn**	**10 00 06.3**	**+0.4**
Q19K	**Cape Douglas,**	**3.29**	**326**			**Pn**	**10 00 06.0**	**+0.1**
Q19K	**Cape Douglas,**	**3.29**	**326**	P		**Pn**	**10 00 06.0**	**+0.1**
	baz=143							
CNPM	**China Poot**	**3.34**	**350**	Pn		**Pn**	**10 00 05.8**	**-0.7**
CNPM					IAML		10 00 45.4	
	comp=E,129nm,0.4s							
CNPM					IAML		10 00 46.0	
	comp=N,107nm,0.3s							
CNPM	**China Poot**	**3.34**	**350**			**Sn**	**10 00 44.0**	**-1.0**
ACHA	**Angle Creek He**	**3.45**	**307**			**Pn**	**10 00 07.9**	**-0.2**
KABU	**Katmai Buttres**	**3.46**	**308**			**Pn**	**10 00 08.6**	**+0.3**
HOM	**Homer**	**3.52**	**347**			**Sn**	**10 00 50.7**	**+1.5**
HOM					IAML		10 00 51.4	
	comp=E,180nm,0.4s							
HOM					IAML		10 00 52.2	
	comp=N,183nm,0.4s							
HOM	**Homer**	**3.52**	**347**			**Pn**	**10 00 08.8**	**0.0**
HOM	**Homer**	**3.52**	**347**	P		**Pn**	**10 00 08.8**	**0.0**
	baz=166							
ANCK	**Angle Creek**	**3.52**	**306**			**Pn**	**10 00 09.2**	**+0.2**
BRSE	**Bradley Lake S**	**3.52**	**355**			**Sn**	**10 00 47.8**	**-1.6**
BRSE	**Bradley Lake S**	**3.52**	**355**	P		**Pn**	**10 00 08.0**	**-1.0**
	baz=175							
BRSE				S		**Sn**	**10 00 47.8**	**-1.6**
	baz=175							
BRLK	**Bradley Lake**	**3.55**	**354**			**Pn**	**10 00 08.1**	**-1.3**
BRLK	**Bradley Lake**	**3.55**	**354**		IAML		10 00 50.5	
	comp=N,82nm,0.2s							
BRLK					IAML		10 00 52.7	
	comp=E,74nm,0.5s							
Q17K	**Contact Creek**	**3.73**	**305**	P		**Pn**	**10 00 11.6**	**-0.4**
	baz=120							
Q23K	**Middleton Isla**	**3.77**	**31**			**Pn**	**10 00 11.8**	**-0.5**
Q23K						**Sn**	**10 00 52.4**	**-3.0**
Q23K	**Middleton Isla**	**3.77**	**31**		IAML		10 01 05.7	
	comp=N,117nm,1.4s							
Q23K					IAML		10 02 30.7	
	comp=E,102nm,1.4s							
Q23K	**Middleton Isla**	**3.77**	**31**	P		**Pn**	**10 00 11.8**	**-0.5**
	baz=215							
Q23K				S		**Sn**	**10 00 52.4**	**-3.0**
	baz=215							
MID	**Middleton Isla**	**3.77**	**31**	Pn		**Pn**	**10 00 11.7**	**-0.7**
MID					IAML		10 01 07.7	
	comp=N,116nm,1.4s							
MID					IAML		10 02 30.7	
	comp=E,106nm,1.4s							
MID	**Middleton Isla**	**3.77**	**31**	P		**Pn**	**10 00 12.1**	**-0.3**
P19K	**Oil Pt**	**3.80**	**335**			**Sn**	**10 00 57.0**	**+0.8**
P19K					IAML		10 01 00.9	
	comp=N,132nm,0.6s							
P19K					IAML		10 01 01.1	
	comp=E,134nm,0.3s							
P19K	**Oil Pt**	**3.80**	**335**			**Pn**	**10 00 12.9**	**+0.1**
P19K	**Oil Pt**	**3.80**	**335**	P		**Pn**	**10 00 12.9**	**+0.1**
	baz=153							
SEW	**Seward**	**3.88**	**5**			**Pn**	**10 00 12.8**	**-1.1**
SEW	**Seward**	**3.88**	**5**	P		**Pn**	**10 00 12.8**	**-1.1**
	baz=186							
P23K	**Montague Islan**	**4.03**	**20**			**Pn**	**10 00 15.4**	**-0.5**
P23K	**Montague Islan**	**4.03**	**20**	P		**Pn**	**10 00 15.4**	**-0.5**
	baz=203							
ILSW	**Iliamna Southw**	**4.08**	**338**			**Sn**	**10 01 02.1**	**-1.1**
ILSW					IAML		10 01 03.4	
	comp=E,59nm,0.5s							
ILSW					IAML		10 01 07.3	
	comp=N,61nm,0.4s							
ILSW	**Iliamna Southw**	**4.08**	**338**			**Pn**	**10 00 15.8**	**-0.9**
IVE	**Iliamna Volcan**	**4.08**	**339**			**Pn**	**10 00 16.2**	**-0.6**
P18K	**Big Mountain,**	**4.17**	**321**			**Sn**	**10 01 04.2**	**-1.3**
P18K	**Big Mountain,**	**4.17**	**321**	P		**Pn**	**10 00 17.2**	**-0.7**
	baz=137							
O22K	**Cooper Landing**	**4.25**	**3**	Pn		**Pn**	**10 00 18.7**	**-0.3**
P17K	**Kvichak River**	**4.50**	**314**			**Pn**	**10 00 22.2**	**-0.2**
P17K	**Kvichak River**	**4.50**	**314**	P		**Pn**	**10 00 22.2**	**-0.2**
	baz=128							
O18K	**Koktuh Hills**	**4.52**	**325**	P		**Pn**	**10 00 22.0**	**-0.7**
	baz=141							
O19K	**Port Alsworth**	**4.54**	**332**			**Pn**	**10 00 22.4**	**-0.5**
O19K	**Port Alsworth**	**4.54**	**332**	P		**Pn**	**10 00 22.4**	**-0.5**
	baz=149							
CAPN	**Captain Cook N**	**4.57**	**354**	Pn		**Pn**	**10 00 23.6**	**+0.3**
CAPN						**Sn**	**10 01 14.9**	**-0.2**
HIN	**Hinchinbrook I**	**4.58**	**23**			**Sn**	**10 01 14.3**	**-1.0**
HIN					IAML		10 01 15.0	
	comp=E,105nm,0.4s							
HIN					IAML		10 01 18.9	
	comp=N,66nm,1.0s							
HIN	**Hinchinbrook I**	**4.58**	**23**			**Pn**	**10 00 23.4**	**-0.1**
CHGN	**Chignik**	**4.63**	**274**			**Pn**	**10 00 23.4**	**-0.8**
CHGN	**Chignik**	**4.63**	**274**	P		**Pn**	**10 00 23.4**	**-0.8**
	baz=86							
KAIM	**Kayak Island**	**4.77**	**37**			**Pn**	**10 00 26.3**	**+0.3**
KAIM	**Kayak Island**	**4.77**	**37**	IAML			10 01 25.8	
	comp=E,96nm,0.5s							
KAIM					IAML		10 01 27.6	
	comp=N,96nm,0.4s							
KAIM	**Kayak Island**	**4.77**	**37**	P		**Pn**	**10 00 26.3**	**+0.3**
	baz=222							
RC01	**Rabbit Creek A**	**4.86**	**2**			**Pn**	**10 00 26.7**	**-0.7**
RC01	**Rabbit Creek A**	**4.86**	**2**	IAML			10 01 24.4	
	comp=E,68nm,0.3s							
RC01					IAML		10 01 24.8	
	comp=N,60nm,0.5s							
RC01	**Rabbit Creek A**	**4.86**	**2**	P		**Pn**	**10 00 26.7**	**-0.7**
	baz=183							
EYAK	**Cordova Ski Ar**	**4.88**	**26**			**Pn**	**10 00 27.7**	**0.0**
EYAK	**Cordova Ski Ar**	**4.88**	**26**	P		**Pn**	**10 00 27.6**	**0.0**
EYAK	**Cordova Ski Ar**	**4.88**	**26**	P		**Pn**	**10 00 27.7**	**0.0**
	baz=210							
FID	**Port Fidalgo**	**4.90**	**21**			**Pn**	**10 00 27.3**	**-0.6**
FID	**Port Fidalgo**	**4.90**	**21**	IAML			10 01 22.3	
	comp=N,71nm,0.2s							
FID					IAML		10 01 25.7	
	comp=E,62nm,0.4s							
GLI	**Glacier Island**	**4.91**	**18**			**Pn**	**10 00 27.4**	**-0.6**
GLI	**Glacier Island**	**4.91**	**18**	IAML			10 01 22.3	
	comp=E,43nm,0.5s							
GLI					IAML		10 01 27.1	
	comp=N,29nm,0.5s							
GLI	**Glacier Island**	**4.91**	**18**	P		**Pn**	**10 00 27.4**	**-0.6**
	baz=200							
RAGM	**Ragged Mountai**	**5.04**	**32**			**Pn**	**10 00 30.0**	**+0.1**
P16K	**Nushagak River**	**5.07**	**307**			**Pn**	**10 00 29.9**	**-0.3**
P16K	**Nushagak River**	**5.07**	**307**	P		**Pn**	**10 00 29.9**	**-0.3**
	baz=120							
N20K	**Mount Spurr**	**5.09**	**348**	P		**Pn**	**10 00 29.8**	**-0.7**
	baz=167							
SPCR	**Spurr Chakacha**	**5.09**	**348**			**Pn**	**10 00 29.8**	**-0.7**
SUCK	**Suckling Hills**	**5.09**	**39**			**Pn**	**10 00 31.2**	**+0.6**
SUCK	**Suckling Hills**	**5.09**	**39**	IAML			10 01 31.1	
	comp=E,47nm,0.4s							
N19K	**Bonanza Creek**	**5.12**	**335**			**Pn**	**10 00 29.9**	**-1.1**
N19K	**Bonanza Creek**	**5.12**	**335**	P		**Pn**	**10 00 29.9**	**-1.1**
	baz=152							
O17K	**Koliganek Bris**	**5.13**	**316**			**Pn**	**10 00 30.5**	**-0.4**
O17K	**Koliganek Bris**	**5.13**	**316**	P		**Pn**	**10 00 30.5**	**-0.4**
	baz=130							
HMT	**Hamilton**	**5.13**	**35**			**Pn**	**10 00 30.9**	**-0.1**
SPCP	**Crater Peak Br**	**5.14**	**349**			**Pn**	**10 00 31.3**	**-0.1**
NICHA	**Nichawak Mount**	**5.15**	**36**			**Pn**	**10 00 32.1**	**+0.8**
GOAT	**Goat Mountain**	**5.18**	**31**			**Pn**	**10 00 32.0**	**+0.1**
SUA	**Susitna One**	**5.24**	**357**	Pn		**Pn**	**10 00 32.1**	**-0.6**
SUA					IAML		10 01 33.1	
	comp=E,24nm,0.5s							
KNK	**Knik Glacier**	**5.25**	**9**			**Pn**	**10 00 32.0**	**-0.7**
KNK	**Knik Glacier**	**5.25**	**9**	IAML			10 01 35.2	
	comp=N,20nm,0.4s							
KNK					IAML		10 01 50.7	
	comp=E,32nm,0.5s							
KNK	**Knik Glacier**	**5.25**	**9**	P		**Pn**	**10 00 32.0**	**-0.7**
	baz=190							
BGLC	**Bering Glacier**	**5.30**	**40**			**Pn**	**10 00 34.1**	**+0.7**
BGLC	**Bering Glacier**	**5.30**	**40**	P		**Pn**	**10 00 34.1**	**+0.7**
	baz=226							
BERG	**Berg Lake**	**5.35**	**36**

N25K	Chitina, Valde	6.08	26			Pn	10 00 44.6 +0.4
N25K	Chitina, Valde baz=211	6.08	26	P		Pn	10 00 44.6 +0.4
M19K	Big River Lodg	6.09	341	Pn		Pn	10 00 45.1 +0.9
GLB	Gilahina Butte	6.15	29			Pn	10 00 45.1 +0.1
KIAG	Kiagna River	6.20	38			Pn	10 00 46.0 +0.2
M24K	Tolsona, Glenn	6.21	17			Pn	10 00 46.9 +0.9
M24K	Tolsona, Glenn baz=201	6.21	17	P		Pn	10 00 46.9 +0.9
N16K	Nishlik Lake	6.22	317			Pn	10 00 45.8 -0.2
N16K	Nishlik Lake baz=129	6.22	317	P		Pn	10 00 45.8 -0.2
GRNC	Granite Creek	6.28	41			Pn	10 00 47.3 +0.3
SAMH	Samovar Hills	6.28	48			Pn	10 00 47.8 +0.9
MCARA	McCarthy VSAT	6.33	33	Pn		Pn	10 00 48.7 +1.2
MCARA	McCarthy VSAT baz=219	6.33	33	P		Pn	10 00 48.4 +0.9
PTPK	Patty Peak	6.35	36			Pn	10 00 48.3 +0.3
M17K	Holitna River	6.42	327			Pn	10 00 48.5 -0.2
M17K	Holitna River baz=140	6.42	327	P		Pn	10 00 48.5 -0.2
L19K	White Mountain	6.43	340			Pn	10 00 48.3 -0.6
L19K	White Mountain baz=156	6.43	340	P		Pn	10 00 48.3 -0.6
WASW	Wrangell South	6.46	26			Pn	10 00 50.0 +0.4
WAT6	Susitna Watana	6.47	10			Pn	10 00 49.7 +0.2
WAT6	Susitna Watana baz=192	6.47	10	P		Pn	10 00 49.7 +0.2
WACK	Wrangell Chich	6.48	25			Pn	10 00 50.5 +0.7
PCA	Pinnacle	6.48	49			Pn	10 00 50.1 +0.4
PINM	Pinnacle baz=238	6.48	49	P		Pn	10 00 50.1 +0.4
N15K	Kwethluk River	6.58	311			Pn	10 00 51.3 +0.4
N15K	Kwethluk River baz=122	6.58	311	P		Pn	10 00 51.3 +0.4
CTG	Chitna Glacier baz=228	6.58	40	P		Pn	10 00 51.6 +0.5
CTGM	Chitina Glacie	6.58	40			Pn	10 00 51.6 +0.4
PS1A	Pavlof South-1	6.61	268			Pn	10 00 50.3 -1.0
LOGN	Logan Glacier	6.61	42			Pn	10 00 51.8 +0.2
WAT7	Susitna Watana	6.64	5			Pn	10 00 52.4 +0.6
M16K	Timber Creek	6.65	320			Pn	10 00 51.8 -0.1
M16K	Timber Creek baz=132	6.65	320	P		Pn	10 00 51.8 -0.1
PNL	Peninsula	6.65	55			Pn	10 00 52.2 +0.3
PNL	Peninsula comp=E,78nm,0.7s	6.65	55	P		Pn	10 00 52.6 +0.7
PNL	Peninsula baz=244	6.65	55	P		Pn	10 00 52.2 +0.3
HARP	HAARP	6.67	20			Pn	10 00 53.0 +0.8
HARP	HAARP baz=205	6.67	20	P		Pn	10 00 53.0 +0.8
BCPM	Bancas Point	6.68	52			Pn	10 00 52.9 +0.6
O14K	Tigyukauivet M	6.69	301			Pn	10 00 52.2 -0.2
O14K	Tigyukauivet M baz=112	6.69	301	P		Pn	10 00 52.2 -0.2
PN7A	Pavlof North-7	6.75	268			Pn	10 00 52.2 -1.1
L18K	Granite Mounta	6.87	333	Pn		Pn	10 00 53.8 -1.2
DHY	Denali Highway	6.99	10			Pn	10 00 56.8 +0.1
DHY	Denali Highway baz=193	6.99	10	P		Pn	10 00 56.8 +0.1
N14K	Kuskokwak Cree	7.16	306			Pn	10 00 58.9 +0.1
N14K	Kuskokwak Cree baz=116	7.16	306	P		Pn	10 00 58.9 +0.1
RND	Reindeer	7.21	5			Pn	10 01 00.2 +0.6
L17K	Donlin	7.24	328			Pn	10 00 59.9 -0.2
L17K	Donlin baz=141	7.24	328	P		Pn	10 00 59.8 -0.2
CAST	Castle Rocks	7.26	353	Pn		Pn	10 01 01.4 +1.0
L16K	Owhat River	7.30	322	Pn		Pn	10 00 59.9 -0.9
O29M	Mount Kennedy	7.31	51			Pn	10 01 01.8 +0.7
O29M	Mount Kennedy baz=242	7.31	51	P		Pn	10 01 01.8 +0.7
TTA	Tatalina	7.34	338	Pn		Pn	10 01 01.1 -0.3
KTH	Kantishna Hill	7.34	357	Pn		Pn	10 01 02.2 +0.8
P29M	Windy Craggy	7.40	58			Pn	10 01 02.8 +0.6
P29M	Windy Craggy baz=249	7.40	58	P		Pn	10 01 02.8 +0.6
K20K	Telida	7.41	346	Pn		Pn	10 01 01.7 -0.6
M27K	Edge Creek, AK	7.43	31			Pn	10 01 03.9 +1.1
M27K	Edge Creek, AK baz=218	7.43	31	P		Pn	10 01 03.9 +1.1
YUK7	Dusty Glacier	7.61	51			Pn	10 01 06.4 +1.1
FALS	False Pass	7.68	265			Pn	10 01 05.1 -0.9
FALS	False Pass comp=E,55nm,0.6s	7.68	265	P		Pn	10 01 05.2 -0.8
FALS	False Pass baz=74	7.68	265	P		Pn	10 01 05.1 -0.9
YUK6	Outpost Mounta	7.73	48			Pn	10 01 08.2 +1.4
YUK6	Outpost Mounta baz=238	7.73	48	P		Pn	10 01 08.3 +1.4
BVCY	Beaver Creek	7.78	34			Pn	10 01 08.7 +1.3
BVCY	Beaver Creek baz=222	7.78	34	P		Pn	10 01 08.7 +1.3
YUK4	Talbot Arm baz=235	7.84	45	P		Pn	10 01 11.1 +2.7
BPAW	Bear Paw Mtn.	7.89	357	Pn		Pn	10 01 09.3 +0.3
P30M	Million Dollar	7.96	55			Pn	10 01 10.7 +0.9
P30M	Million Dollar baz=247	7.96	55	P		Pn	10 01 10.7 +0.9
RIDG	Independent Ri	7.96	17			Pn	10 01 09.7 -0.3
L15K	Ungalak Mounta	8.01	318			Pn	10 01 10.6 +0.1
L15K	Ungalak Mounta baz=128	8.01	318	P		Pn	10 01 10.6 +0.1
L27K	Beaver Creek,	8.01	28			Pn	10 01 11.6 +1.0
L27K	Beaver Creek, baz=216	8.01	28	P		Pn	10 01 11.6 +1.0
SIT	Sitka	8.19	78	Pn		Pn	10 01 10.5 -2.5
J20K	Nowinta River	8.20	348	Pn		Pn	10 01 14.1 +0.9
WRH	Wood River Hil	8.31	6	Pn		Pn	10 01 16.4 +1.7
SCRK	Sand Creek	8.33	19	Pn		Pn	10 01 13.7 -1.3
CCB	Clear Creek Bu	8.50	7	Pn		Pn	10 01 17.3 +0.1
SKAG	Skagway comp=E,25nm,1.2s	8.51	62	P		Pn	10 01 16.3 -1.1
BESE	Bessie Mountai	8.56	68			Pn	10 01 18.5 +0.4
O30N	Mendenhall baz=245	8.62	53	P		Pn	10 01 19.9 +0.9
IL31		8.70	9	Pn		Pn	10 01 21.6 +1.8
ILAR	Eielson Array comp=E,0.3nm,0.3s,baz=193,slow=13,SNR=18	8.70	9	Pn		Pn	10 01 21.1 +1.2
ILAR	comp=E,0.6nm,0.3s,baz=192,slow=23,SNR=11 comp=E,0.7nm,0.4s				Sn	Sn	10 02 53.6 -3.0
JIS	Juneau Island comp=E,9.1nm,0.4s	8.76	70	P		Pn	10 01 20.8 0.0
K27K	Chicken	8.77	24	Pn		Pn	10 01 22.6 +1.7
J26L	Joseph Creek	8.89	19	Pn		Pn	10 01 22.9 +0.3
I23K	Minto, Yukon-K	8.94	2	Pn		Pn	10 01 23.2 0.0
L29M	L29M baz=227	9.15	36	P		Pn	10 01 27.7 +1.4
M30M	Minto, Yukon baz=233	9.28	41	P		Pn	10 01 29.2 +1.2
P32M	Atlin baz=256	9.34	62	P		Pn	10 01 29.2 +0.4
DAWY	Dawson	9.47	30	Pn		Pn	10 01 30.3 -0.3
H21K	Melozitna Rive	9.53	353	Pn		Pn	10 01 30.6 -0.8
CRAG	Craig comp=E,15nm,1.7s	9.59	88	P		Pn	10 01 30.9 -1.2
UNV	Unalaska Valle comp=E,53nm,1.7s	9.71	262	P		Pn	10 01 31.8 -2.0
P33M	Teslin, Yukon baz=254	9.94	59	P		Pn	10 01 37.8 +0.7
DLBC	Dease Lake comp=E,0.3nm,0.3s,baz=278,slow=9.8,SNR=13 comp=E,0.7nm,0.2s	11.06	70	Pn		Pn	10 01 52.8 +0.3
INK	Inuvik baz=207,slow=17,SNR=4.5 comp=E,2.3nm,1.2s	14.27	25	Pn		Pn	10 02 38.1 +2.1
A36M	Sachs Harbour	18.90	24	P		P	10 03 34.1 +0.3
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=265,slow=9.6,SNR=10 comp=E,0.4nm,0.7s	18.94	56	P		Pn	10 03 35.8 +0.5
PDAR	Pinedale Array comp=E,0.1nm,0.4s,baz=301,slow=7.2,SNR=2.3 comp=E,0.1nm,0.4s	29.11	100	P		P	10 05 14.6 +0.3
ZALV	Zalesovo Beam comp=E,0.4nm,0.3s,baz=15,slow=6.0,SNR=1.9 comp=E,0.4nm,0.3s	61.34	327	P		P	10 09 30.2 +1.8

IDC 22 10:06:55.3±3.3, 9°13N×120°70E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=457.4km s-min=37.4km az=61.0, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.5nm,0.5s,baz=336,slow=9.5,SNR=5.0 0.5nm,0.5s	31.86	155	P	P	10 13 23.2	+1.0
ASAR	Alice Springs 0.2nm,0.7s,baz=340,slow=11,SNR=1.9 0.2nm,0.7s	35.05	159	P	P	10 13 49.0	-1.2
GERES	GERESS Array B 2.0nm,0.6s,baz=66,slow=5.5,SNR=3.8 2.0nm,0.6s	94.15	321	P	P	10 20 16.2	-0.1

NEIC 22 10:17:38.0±0.7, 32°92N±0°04×100°87W±0°05, h5km±6km, mb_Lg2.9/107, Error ellipse: s-maj=6.8km s-min=5.8km az=63.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SN05	Snyder 5	0.04	197		Pg	10 17 39.5	+0.3
SN07	Snyder 07	0.17	354		Pg	10 17 42.0	+0.5
POST	Post	0.55	286		Pg	10 17 48.8	+0.2
APMT	Aspermont	0.75	57		Pg	10 17 52.6	+0.2
DKNS	Dickens	0.75	357		Pg	10 17 52.5	+0.1
SGCY	Sterling City	1.02	192		Pg	10 17 57.3	-0.3
ABTX	Abilene, Hawle	1.07	105		Pg	10 17 58.6	0.0
ODSA	Odessa	1.62	241	Pg	Pb	10 18 08.1	-0.5
MSTX	Muleshoe	1.91	304		Pb	10 18 12.5	-0.9
OZNA	Ozona	2.00	186		Pb	10 18 13.9	-1.1
OZNA	comp=Z,54nm,0.7s			IAmb_Lg		10 18 43.6	
AMTX	Amarillo	2.08	341		Pn	10 18 14.5	+0.9
PLPT	Palo Pinto	2.15	92		Pb	10 18 16.2	-1.3
WTFS	Witchita Falls	2.19	67		Pn	10 18 16.4	+1.4
MNHN	Monahans	2.25	226		Pn	10 18 16.8	+0.9
SMWD	Samnorwood	2.25	13		Pb	10 18 17.7	-1.4
BRDY	Brady	2.27	135		Pn	10 18 17.9	+1.6
FW03	Perrin-Whitt E	2.36	86		Pn	10 18 18.7	+1.2
WMOK	Wichita Mounta	2.52	43		Pn	10 18 20.8	+1.1
JCT	Junction City	2.59	159		Pn	10 18 22.2	+1.5
FW07	Weatherford	2.61	94		Pn	10 18 22.1	+1.2
FW06	Azle comp=Z,44nm,0.8s	2.79	88	IAmb_Lg		10 19 13.1	
PECS	Pecos comp=Z,32nm,0.7s	2.97	240	IAmb_Lg		10 19 11.1	
WHTX	Lake Whitney, comp=Z,47nm,0.8s	3.03	107	IAmb_Lg		10 19 16.0	
X34A	Smith Ranch, M X34A	3.04	56	IAmb_Lg	Pn	10 18 28.4 10 19 17.6	+1.6
Z35A	comp=Z,44nm,0.8s Perchaven, San comp=Z,38nm,0.9s	3.06	81	IAmb_Lg		10 19 14.9	
SAND	Sanderson	3.14	200		Pn	10 18 29.4	+1.2
LOOK	Love County	3.27	70	Pn	Pn	10 18 31.4	+1.5
CSTR	Hydro, Custer	3.27	33	Pn	Pn	10 18 31.8	+1.8
ALPN	Alpine ALPN	3.46	224	IAmb_Lg	Pn	10 18 34.6 10 19 37.3	+1.8
DRIO	comp=Z,43nm,0.8s Del Rio	3.49	176		Pn	10 18 34.7	+1.7
HNDO	Hondo	3.64	158		Pn	10 18 36.4	+1.3
OKCSW	OKLAHOMA CITY comp=Z,39nm,0.7s	3.78	48	IAmb_Lg		10 19 35.4	
RTBA	Rita Blanca	3.83	337		Pn	10 18 39.3	+1.4
TREL	Terrell	4.03	91	Pn	Pn	10 18 42.0	+1.5
VHRN	Van Horn comp=Z,30nm,0.7s	4.09	240	IAmb_Lg		10 19 55.6	
CROK	Carrier comp=Z,25nm,0.7s	4.30	33	IAmb_Lg		10 19 53.1	
EF01	Eagle Ford 01 EF01	4.34	150	Pn	Pn IAmb_Lg	10 18 46.8 10 20 05.8	+2.1
DEOK	comp=Z,34nm,0.7s Depew	4.65	50	Pn	Pn	10 18 48.9	0.0
833A	Chaparral WMA,	4.75	164		Pn	10 18 51.4	+1.1
OK048	Pawnee Station comp=Z,23nm,0.7s	4.76	42	IAmb_Lg		10 20 10.0	
X37A	Clayton comp=Z,24nm,0.8s	4.88	68	IAmb_Lg		10 20 24.0	
OK051	E0350 and S346 OK051	4.88	42	Pn IAmb_Lg	Pn	10 18 52.8 10 20 17.7	+0.7
EPT	comp=Z,28nm,1.2s El Paso comp=Z,21nm,0.8s	4.90	258	IAmb_Lg		10 20 26.8	
KAN12	Harper NE Stat comp=Z,23nm,0.7s	4.96	28	IAmb_Lg		10 20 18.8	
KAN09	Caldwell North comp=Z,19nm,0.9s	4.98	31	IAmb_Lg		10 20 17.2	
ANMO	Albuquerque comp=Z,30nm,0.7s ANMO	5.07	295	IAmb_Lg IAmb_Lg		10 20 27.2 10 20 27.3	
TUL3	comp=Z,30nm,0.7s Leonard	5.15	53	Pn	Pn	10 18 55.7	-0.1
R32A	Long Quarter,	5.77	17	Pn	Pn	10 19 04.7	+0.3
RLO	Rose Lookout comp=Z,17nm,0.8s	5.81	54	IAmb_Lg		10 20 48.5	
CBKS	Cedar Bluff comp=Z,17nm,0.8s	5.96	9	IAmb_Lg		10 20 58.0	
MIAR	Mount Ida comp=Z,19nm,0.7s	6.29	73	IAmb_Lg		10 21 06.6	
U38A	Gravette comp=Z,15nm,0.8s	6.39	55	IAmb_Lg		10 21 00.6	
WLAR	White Oak Lake comp=Z,16nm,0.7s	6.54	81	IAmb_Lg		10 21 07.0	
Q24A	Divide comp=Z,13nm,0.9s	6.96	331	IAmb_Lg		10 21 36.0	
HPIG	comp=Z,13nm,1.1s	7.27	216	IAmb_Lg		10 21 27.9	
319A	Douglas comp=Z,18nm,1.1s	7.29	260	IAmb_Lg		10 21 36.6	
WHAR	Wooly Hollow comp=Z,17nm,1.3s	7.50	69	IAmb_Lg		10 21 48.5	
BRIGG	Briggsdale comp=Z,14nm,0.9s	8.13	341	IAmb_Lg		10 22 03.8	
MGMO	Mountain Grove comp=Z,14nm,1.0s	8.22	57	IAmb_Lg		10 22 06.5	
R40A	Maddies Statio comp=Z,11nm,0.9s	8.82	50	IAmb_Lg		10 22 25.5	
P38A	Dawn comp=Z,10.0nm,0.7s	8.94	39	IAmb_Lg		10 22 30.1	
PHWY	Pilot Hill comp=Z,8.1nm,0.7s	9.13	338	IAmb_Lg		10 22 46.1	
CCM	Cathedral Cave comp=Z,10nm,0.7s	9.37	54	IAmb_Lg		10 22 45.3	
HMU	Henry Mountain comp=Z,7.9nm,0.8s	9.48	305	IAmb_Lg		10 22 49.1	

JMA 22 10:17:40.0±0.1, 39°4N±0°3×142°4E±0°6, h33km, MV1.0/30, E OFF IWATE PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.47	289	P	Pb	10 17 49.9	-0.2
MIYJ				eS	Sb	10 17 56.9	-0.3
JTH	Tanohata	0.66	321	eP	Pn	10 17 52.7	-0.2
OFUJ	Ofunato	0.66	239	P	Pn	10 17 52.7	-0.3
OFUJ				S	Sb	10 18 01.7	-0.5
JOM	Ohasama	0.86	274	P	Pn	10 17 55.8	+0.1
JOM				eS	Sn	10 18 07.3	+0.2
JKMT	Kesennumamotoy	0.95	230	eS	Sb	10 18 09.7	-0.4
JKZ	Kuzumaki	1.00	304	eS	Sn	10 18 10.7	+0.1
JMK	Ichinoseki	1.03	243	eP	Pn	10 17 58.4	+0.3
JMK				eS	Sn	10 18 11.8	+0.4
JANG	Nango	1.17	325	eP	Pn	10 18 00.2	+0.3
JANG				eS	Sn	10 18 15.0	+0.2
JRG	Rokugo	1.37	269	eP	Pb	10 18 04.8	-0.3
JRG				eS	Sb	10 18 23.5	+1.3

JMA 22 10:18:10.1±0.2, 33°3N±0°5×134°5E±0°5, h13km±2km, MV0.5/20, SE OFF SHIKOKU, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRT2	Murotomisaki 2	0.29	280	P	Pg	10 18 16.1	-0.1
MRT2				eS	Sg	10 18 20.6	+0.2
JAI	Aioi	0.46	356	P	Pg	10 18 19.2	+0.1
JAI				eS	Sg	10 18 25.2	-0.1
JMN	Monobe	0.64	307	eP	Pg	10 18 22.8	+0.1
JMN				eS	Sg	10 18 31.3	0.0
JWM	Minabe	0.88	54	eS	Sg	10 18 37.3	-1.5
JTNC	Tanabenakahech	1.05	63	eS	Sb	10 18 42.4	-1.5

NEIC 22 10:18:19.7±2.6, 33°15N±0°09×140°87E±0°08, h48km±9km, mb4.3/4, Error ellipse: s-maj=14.6km s-min=6.4km az=147.0

NIED 22 10:18:20.1, 33°28N×140°76E, h60km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.81; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-1.55; $M_{r\theta}$-0.78; $M_{\theta\phi}$-0.05; $M_{r\theta}$0.38; Fault plane solution: $M_0$1.60000×10^{15} NP1: ϕ_s327.00000°, δ66.00000°, λ44.00000°. NP2: ϕ_s216.00000°, δ51.00000°, λ149.00000°.

JMA 22 10:18:20.1±0.1, 33°3N±0°3×140°8E±1°0, h60km±3km, MD4.1/36, MV4.1/36, E OFF HACHIJOJIMA ISLAND

IDC 22 10:18:22.3±1.1, 33°12N×140°45E, h73km±8km, mb3.6/12, mbtmp3.9/13, MS2.8/1, Error ellipse: s-maj=24.2km s-min=11.0km az=81.0

ISC 22 10:18:19.6±1.2, 33°25N±0°04×140°82E±0°06, h49km±11km, n80, σ1°971/81, mb4.1/15, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.85	261		Pn	10 18 35.9	+0.6
JHJ2	Mitsune	0.85	261	P	Pn	10 18 36.1	+0.8
JHJ2	Mitsune	0.85	261	P	Pn	10 18 36.0	+0.7
JHJ2				eS	Sn	10 18 47.6	+0.8
JHJ2	Mitsune comp=E,19nm,0.2s,comp=N,13nm,0.3s	0.85	261	A	A	10 18 36.0	
JHCJ	Hachijojimakas	0.87	259	P	Pn	10 18 36.1	+0.5
JHCJ				eS	Sn	10 18 47.1	-0.2
JHCJ	Hachijojimakas comp=E,7.0nm,3.6s,comp=N,7.0nm,1.4s	0.87	259	A	A	10 18 36.1	
JHJ	Hachijo jima 2 comp=N,4μm,0.3s,baz=121,slow=5.0,SNR=478	0.88	262	P	Pn	10 18 36.0	+0.3
JHJ	comp=N,5μm,0.3s,baz=90,slow=20,SNR=15			S	Sn	10 18 47.6	+0.3
JHJ	comp=N,132nm,21.0s,baz=282,slow=58			LR	LR	10 18 53.1	
JAOM	Aogashimamukai	1.18	229	P	Pn	10 18 40.6	+0.8
JAOM				eS	Sn	10 18 55.6	+0.8
JAOM	Aogashimamukai comp=E,12nm,0.6s,comp=N,9.0nm,0.5s	1.18	229	A	A	10 18 40.6	
JMKN	Mikurajimanish	1.21	302	P	Pn	10 18 40.5	+0.3
JMKN				eS	Sn	10 18 54.7	-0.7
JMKN	Mikurajimanish comp=E,5.0nm,5.4s,comp=N,4.0nm,0.3s	1.21	302	A	A	10 18 40.5	
JMYK	Miyake Tsubota	1.33	308	P	Pn	10 18 42.4	+0.6
JMYK				eS	Sn	10 18 58.3	-0.1
JMYK	Miyake Tsubota comp=E,8.0nm,0.8s,comp=N,9.0nm,0.6s	1.33	308	A	A	10 18 42.4	
BSO1	Boso 1	1.41	5	P	Pn	10 18 43.3	+0.9
BSO1				eS	Sn	10 19 01.6	+2.1
BSO3	Boso 3	1.57	351	P	Pn	10 18 45.8	+1.0
BSO3				eS	Sn	10 19 05.0	+1.1
JKO	Kozu shima	1.68	304	eS	Sn	10 19 07.2	+0.1
JKO	Kozu shima comp=E,12nm,0.6s,comp=N,10.0nm,0.4s	1.68	304	A	A	10 19 07.2	
BSO4	Boso 4	1.78	347	P	Pn	10 18 49.0	+1.1
JTHY	Toshimahigashi	1.80	315	P	Pn	10 18 49.0	+0.8
JTHY				eS	Sn	10 19 10.1	+0.2
JTHY	Toshimahigashi comp=E,5.0nm,2.3s,comp=N,5.0nm,1.9s	1.80	315	A	A	10 18 49.0	
JIM2	Oshima 3	1.86	322	P	Pn	10 18 49.6	+0.5
JIM2				eS	Sn	10 19 09.6	-1.9
JIM2	Oshima 3 comp=E,5.0nm,0.3s,comp=N,4.0nm,1.2s	1.86	322	A	A	10 18 49.6	
JIZS	Izushimoda	2.18	313	P	Pn	10 18 54.5	+1.1
JIZS				eS	Sn	10 19 19.6	+0.4
JOD2	Odawara 2	2.47	325	P	Pn	10 18 58.0	+0.6
JOD2				eS	Sn	10 19 25.2	-1.1
JSG	Sagara	2.61	304		Pn	10 19 00.6	+1.4
JSG	Sagara	2.61	304	P	Pn	10 19 01.5	+2.2
JFNN	Fujinakano	2.62	318	eP	Pn	10 19 00.5	+1.0
JFNN				eS	Sn	10 19 31.1	+0.9
TK02	Tokai 2	2.65	286	P	Pn	10 19 00.9	+1.3
TK04	Tokai 4	2.70	296	P	Pn	10 19 02.1	+1.7
TK04				eS	Sn	10 19 32.5	+0.7
JGF	Kuroka	3.70	310		Pn	10 19 16.9	+2.6
JGF	Kuroka	3.70	310	P	Pn	10 19 16.9	+2.6
INU	Inuyama	3.78	305		Pn	10 19 17.4	+2.0
INU	Inuyama	3.78	305	P	Pn	10 19 17.5	+2.2
MJAR	Matsushiro Arr comp=N,45nm,0.7s,baz=280,slow=29,SNR=78	3.92	328	P	Pn	10 19 19.0	+1.6
MJAR	comp=N,24nm,0.8s,baz=352,slow=16,SNR=7.3			S	Sn	10 20 04.4	+2.3
MAJO	Matsushiro	3.92	328		Pn	10 19 19.8	+2.4
MAJO	Matsushiro	3.92	328	P	Pn	10 19 19.9	+2.5
MJB9	Matsu-Tunnel	3.93	328	Pn	Pn	10 19 20.6	+3.2
JMM	Marumori	4.61	360		Pn	10 19 27.2	+0.5
JMM	Marumori	4.61	360	P	Pn	10 19 27.2	+0.5
JSD	Sado	5.21	337	Pn	Pn	10 19 36.1	+1.1
JMN	Monobe	5.82	277		Pn	10 19 45.0	+1.6
JMN	Monobe	5.82	277	P	Pn	10 19 45.2	+1.8
JCJ	Chichijima	6.25	169	P	Pn	10 19 49.1	-0.1
JCJ	Chichijima comp=N,46nm,0.3s,baz=0.5,slow=21,SNR=16	6.25	169	P	Pn	10 19 43.6	-5.7
JCJ	comp=N,34nm,0.5s,baz=232,slow=19,SNR=1.3			S	Sn	10 20 50.9	-8.4
JTM	Tenmabayashi	7.53	1	Pn	Pn	10 20 06.2	-0.5
JTM	Tenmabayashi	7.53	1	P	Pn	10 20 06.5	-0.2
JNU	Nakatsue	8.33	272	Pn	Pn	10 20 20.0	+2.2
JNU	Nakatsue	8.33	272	P	Pn	10 20 20.1	+2.2
JNU	Nakatsue comp=N,5.2nm,0.5s,baz=131,slow=2.5,SNR=14	8.33	272	P	Pn	10 20 19.9	+2.1
ERM	Erimo	8.95	11	Pn	Pn	10 20 25.3	-0.8
ERM	Erimo	8.95	11	P	Pn	10 20 26.2	+0.1
JEM	Erimo	8.95	11	P	Pn	10 20 26.1	-0.1
ASAJ	Asahikawa comp=N,7.1nm,0.4s,baz=191,slow=14,SNR=15	10.94	7	P	Pn	10 20 51.7	-1.7
ASAJ	comp=N,3.6nm,0.4s,baz=259,slow=16,SNR=1.4			S	Sn	10 22 46.8	-7.6
JKA	Kamikawa-asahi	10.94	7	Pn	Pn	10 20 51.8	-1.6
KSRS	Korea Array comp=N,0.6nm,0.7s,baz=113,slow=15,SNR=4.1	11.33	295	P	Pn	10 21 02.6	+3.8
KSRS	comp=N,48nm,19.3s,baz=95,slow=38			LR	LR	10 25 23.7	
KLR	Kul'dur comp=N,0.4nm,0.7s,baz=163,slow=11,SNR=1.4	17.34	340	P	Pn	10 22 16.7	-1.3
H11N2	WAKE ISLAND Hy 26.86 baz=306,slow=75,SNR=170	114		T	T	10 52 42.4	
H11N1	WAKE ISLAND Hy 26.86 baz=306,slow=75,SNR=101	114		T	T	10 52 44.8	
H11N3	WAKE ISLAND Hy 26.87 baz=306,slow=75,SNR=139	114		T	T	10 52 43.7	
H11S3	WAKE ISLAND Hy 27.43 baz=307,slow=76,SNR=23	116		T	T	10 53 24.3	
H11S1	WAKE ISLAND Hy 27.43 baz=307,slow=76,SNR=28	116		T	T	10 53 25.9	
H11S2	WAKE ISLAND Hy 27.44 baz=307,slow=76,SNR=13	116		T

comp=Z,0.3nm,0.7s,baz=270,slow=4.5,SNR=2.9
comp=Z,0.3nm,0.7s
MMAI Mount Meron Ar 83.75 305 P **P 10 30 43.9 0.0**
comp=Z,2.0nm,0.5s,baz=41,slow=7.7,SNR=4.1
comp=Z,2.0nm,0.5s
TXAR Lajitas Array 92.82 52 P **P 10 31 28.2 +0.8**
comp=Z,0.4nm,0.7s,baz=273,slow=2.5,SNR=5.1
comp=Z,0.4nm,0.7s
QSPA South Pole Qui 123.00 180 PKP **PKPdf 10 37 08.7 -1.0**
comp=Z,0.7nm,0.6s,baz=262,slow=1.2,SNR=7.7

*BUT **22** 10:18:39.4±1.4, 46°.90N±0°.04×112°.53W±0°.06, h10km±7km, Error ellipse: s-maj=6.4km s-min=5.5km az=49.0*
NEIC 22 10:18:38.6±1.7, 46°.89N±0°.04×112°.52W±0°.06, h5km±2km, ML2.9/52, ML3.2/23(BUT), Error ellipse: s-maj=7.4km s-min=5.6km az=49.0, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYMT	**Lyon Mountain**	**0.18**	**62**		Pg	10 18 43.5	+1.3
OVMT	**Ovando**	**0.37**	**299**		Pg	10 18 46.5	+0.7
BPMT	**Black Pine Rid**	**0.78**	**235**		Pg	10 18 54.1	+0.6
LRM	**Limekiln Ridge**	**1.07**	**177**	Sg	Sb	10 19 13.8	-0.2
BOZ	**Bozeman (W)**	**1.43**	**154**		Pn	10 19 05.1	-0.2
BOZ	**Bozeman (W)**	**1.43**	**154**		Sb	10 19 23.9	-0.5
BOZ	101nm,0.4s			IAML		10 19 30.5	
BOZ	103nm,0.3s			IAML		10 19 31.7	
MCMT	**McKenzie Canyo**	**2.07**	**186**		Sn	10 19 41.2	+0.7
EGMT	**Eagleton**	**2.20**	**58**		Pn	10 19 16.5	+0.8
EGMT	**Eagleton**	**2.20**	**58**	IAML		10 19 52.4	
YHL	**Hebgen Lake**	**2.24**	**155**		Pn	10 19 17.1	+0.6
YHL	**Hebgen Lake**	**2.24**	**155**		Sb	10 19 47.8	0.0
YHL	comp=N,133nm,0.9s			IAML		10 19 54.9	
YHL	comp=E,115nm,0.8s			IAML		10 19 56.3	
MKRVA	**Milk River, Al**	**2.31**	**12**		Pn	10 19 18.0	+0.6
MKRVA	**Milk River, Al**	**2.31**	**12**	IAML		10 19 50.7	
YPDC	**Denny Creek**	**2.35**	**157**		Pn	10 19 19.0	+0.9
YMC	**Maple Creek**	**2.38**	**153**		Pn	10 19 19.3	+0.9
YHH	**Holmes Hill**	**2.40**	**150**		Pn	10 19 19.6	+0.8
CMI	**Centennial Mou**	**2.44**	**165**		Pn	10 19 19.9	+0.6
YNR	**Norris Junctio**	**2.52**	**149**	Pn	Pn	10 19 22.2	+1.8
YNR	comp=N,34nm,0.4s			IAML		10 20 04.7	
YFT	**Old Faithful**	**2.71**	**154**	Pn	Pb	10 19 26.3	-1.3
YMP	**Mirror Lake Pl**	**2.71**	**142**	Pn	Pb	10 19 25.4	-2.3
YMP	comp=E,56nm,0.7s			IAML		10 20 09.2	
YMP	comp=N,48nm,0.7s			IAML		10 20 09.3	
LKWY	**Lake**	**2.76**	**147**	Pn	Pb	10 19 27.1	-1.3
LKWY	comp=N,23nm,0.5s			IAML		10 19 48.2	
H17A	**Grant Village**	**2.84**	**151**	Pn	Pn	10 19 26.3	+1.5
RLMT	**Red Lodge**	**2.87**	**127**		Pn	10 19 26.7	+1.4
RLMT	comp=N,44nm,0.4s			IAML		10 20 14.5	
RLMT	comp=N,62nm,0.5s			IAML		10 20 14.5	
PLID	**Pearl Lake**	**3.02**	**235**		Pn	10 19 27.8	+0.5
PLID	comp=N,28nm,0.6s			IAML		10 20 21.1	
PLID	comp=N,32nm,0.5s			IAML		10 20 22.0	
FLWY	**Flagg Ranch**	**3.08**	**155**		Pn	10 19 29.1	+1.0
FLWY	comp=N,17nm,0.9s			IAML		10 20 22.8	
IMW	**Indian Meadow**	**3.19**	**159**		Pn	10 19 30.8	+1.1
IMW	comp=N,64nm,0.4s			IAML		10 20 21.7	
MOOW	**Moose Ponds**	**3.38**	**158**		Pn	10 19 33.7	+1.6
F10A	**Beach Ranch, E**	**3.38**	**256**		Pn	10 19 32.2	+0.2
NEW	**Newport**	**3.41**	**296**	Pn	Pn	10 19 32.9	+0.5
NEW	comp=N,34nm,0.4s			IAML		10 20 29.0	
NEW	comp=N,37nm,0.6s			IAML		10 20 32.8	
FXWY	**Fox Creek**	**3.42**	**161**		Pn	10 19 34.3	+1.6
LOHW	**Long Hollow**	**3.54**	**157**		Pn	10 19 35.2	+0.8
TPAW	**Teton Pass**	**3.57**	**161**	Pn	Pn	10 19 36.8	+1.9
TPAW	comp=N,16nm,0.6s			IAML		10 20 38.9	
TPAW	comp=N,14nm,1.1s			IAML		10 20 40.7	
HLID	**Hailey**	**3.58**	**203**		Pn	10 19 36.5	+1.6
HLID	comp=N,47nm,0.5s			IAML		10 20 33.3	
REDW	**Red Top Meadow**	**3.72**	**161**	Pn	Pn	10 19 38.7	+1.9
BMO	**Blue Mountains**	**3.91**	**240**	Pn	Pn	10 19 39.5	+0.1
BMO	comp=N,9.4nm,0.5s			IAML		10 20 46.9	
BMO	comp=N,9.4nm,0.3s			IAML		10 20 47.2	
C09A	**Chrisman Ranch**	**4.02**	**285**		Pn	10 19 41.4	+0.7
MFID	**Camas Ranch**	**4.18**	**215**		Pn	10 19 43.4	+0.3
LAO	**LASA Array**	**4.33**	**90**	Pn	Pn	10 19 47.1	+2.0
G08A	**Pilot Rock**	**4.75**	**253**	Pn	Pn	10 19 52.3	+1.4
G08A	comp=N,7.6nm,1.1s			IAML		10 21 16.4	
G08A	comp=E,7.3nm,1.3s			IAML		10 21 43.4	
HAWA	**Hanford**	**4.85**	**267**	Pn	Pn	10 19 52.1	-0.2
HAWA	comp=E,14nm,0.7s			IAML		10 21 18.2	

*DJA **22** 10:19:39.3±0.4, 9°.S±4°.×111°.E±°, h10km, M4.2/17, mb4.4/3, MLv4.1/17*
*IDC **22** 10:19:44.4±3.5, 8°.95S×111°.23E, h81km±44km, mb3.4/8, mbtmp3.7/9, ML3.8/1, Error ellipse: s-maj=75.3km s-min=15.3km az=44.0*
ISC 22 10:19:41.3±1.0, 9°.11S±0°.09×111°.25E±0°.05, h55km, n27, σ1§44/32, mb3.8/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**1.22**	**27**	P	**Pn**	**10 20 01.9**	**-0.2**
PWJI				S	**Sn**	**10 20 15.4**	**-2.1**
UGM	**Wanagama**	**1.39**	**329**	P	**Pn**	**10 20 04.4**	**-0.1**
UGM				S	**Sn**	**10 20 23.1**	**+1.3**
YOGI	**Yogyakarta**	**1.59**	**324**	P	**Pn**	**10 20 07.6**	**+0.3**
YOGI				S	**Sn**	**10 20 27.4**	**+0.6**
NGJI	**Ngawi**	**1.75**	**7**	P	**Pn**	**10 20 12.8**	**+3.5**
SMRI	**Semarang**	**2.20**	**339**	P	**Pn**	**10 20 16.7**	**+1.2**
GMJI	**Gumukmas**	**2.33**	**69**	P	**Pn**	**10 20 17.8**	**+0.6**
GRJI	**Gresik**	**2.50**	**29**	P	**Pn**	**10 20 21.4**	**+1.8**
BLJI	**Banyuglugur**	**2.69**	**60**	P	**Pn**	**10 20 23.7**	**+1.5**
KPJI	**Karang Pucung**	**2.90**	**307**	P	**Pn**	**10 20 26.9**	**+1.9**
JAGI	**Jajag, Banyuwa**	**2.94**	**78**	P	**Pn**	**10 20 26.4**	**+0.8**
CMJI	**Cimerak**	**3.07**	**295**	P	**Pn**	**10 20 27.1**	**-0.2**
CMJI				S	**Sn**	**10 21 00.2**	**-2.6**
ABJI	**Asem Bagus**	**3.23**	**66**	P	**Pn**	**10 20 30.0**	**+0.4**
KMMI	**Kalianget**	**3.38**	**53**	P	**Pn**	**10 20 32.1**	**+0.4**
BWJI	**Bawean**	**3.53**	**23**	P	**Pn**	**10 20 34.8**	**+1.1**
SRBI	**Singaraja**	**4.05**	**76**	P	**Pn**	**10 20 42.5**	**+1.6**
LEM	**Lembang**	**4.25**	**302**	P	**Pn**	**10 20 45.3**	**+1.5**
LEM	5.5nm,0.3s,baz=48,slow=11,SNR=4.5			S	**Sn**	**10 21 33.8**	**+1.5**
	29nm,0.5s,baz=342,slow=20,SNR=1.9 28nm,0.6s						
CNJI	**Cibinong**	**4.45**	**293**	P	**Pn**	**10 20 47.1**	**+0.8**
TWSI	**Taliwang, Sumb**	**5.58**	**87**	P	**Pn**	**10 21 02.6**	**+0.8**
	23nm,0.8s,0.1nm						
PLAI	**Plampang**	**6.46**	**88**	P	**Pn**	**10 21 15.4**	**+1.5**
WRA	**Warramunga Arr**	**24.78**	**118**	P	**P**	**10 24 59.4**	**+1.1**
	0.5nm,0.7s,baz=293,slow=12,SNR=6.2 0.5nm,0.7s						
ASAR	**Alice Springs**	**26.05**	**126**	P	**P**	**10 25 11.8**	**+1.9**
	0.4nm,0.5s,baz=303,slow=9.2,SNR=12 0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**56.29**	**18**	P	**P**	**10 29 15.8**	**-0.6**
	1.4nm,0.8s,baz=205,slow=6.4,SNR=4.2 1.4nm,0.8s						
SONM	**Songino Array**	**56.86**	**356**	P	**P**	**10 29 19.2**	**-1.3**
	0.6nm,0.6s,baz=181,slow=9.4,SNR=2.9 0.6nm,0.6s						
MKAR	**Makanchi Array**	**61.36**	**338**	P	**P**	**10 29 50.8**	**-0.7**
	0.4nm,0.5s,baz=148,slow=6.9,SNR=5.8 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**65.92**	**338**	P	**P**	**10 30 21.0**	**-0.5**
	0.3nm,0.5s,baz=153,slow=6.3,SNR=4.1 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**66.68**	**343**	P	**P**	**10 30 25.4**	**-0.8**
	0.5nm,0.4s,baz=142,slow=7.3,SNR=1.7 0.5nm,0.4s						
BVAR	**Borovoye Array**	**70.99**	**335**	P	**P**	**10 30 51.9**	**-1.2**
	0.9nm,0.6s,baz=143,slow=8.4,SNR=5.0 0.9nm,0.6s						

*NEIC **22** 10:25:07±1.5, 56°.2N±0°.1×148°.7W±0°.1, h21km±10km, ML3.4/58, ML3.1(AEIC), Error ellipse: s-maj=15.4km s-min=8.7km az=170.0*
AEIC 22 10:25:08.6±1.8, 56°.1N±0°.1×148°.6W±0°.1, h2km±8km, Error ellipse: s-maj=15.9km s-min=10.4km az=180.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.74**	**309**		Pn	10 25 48.7	-4.9
KDAK					Sn	10 26 19.4	-7.8
OHAK	**Old Harbor**	**2.81**	**295**		Pn	10 25 49.3	-5.3
OHAK					Sn	10 26 20.7	-8.2
OHAK	**Old Harbor**	**2.81**	**295**	P	Pn	10 25 49.3	-5.3
OHAK	baz=111			S	Sn	10 26 20.7	-8.2
	baz=111						
SYI	**Shuyak Island**	**3.23**	**322**		Pn	10 25 55.5	-4.7
SYI					Sn	10 26 33.2	-5.9
SYI	**Shuyak Island**	**3.23**	**322**	IAML		10 26 36.4	
	comp=E,30nm,1.3s						
Q20K	**Shuyak Island**	**3.23**	**322**	P	Pn	10 25 55.5	-4.7
Q20K	baz=139			S	Sn	10 26 33.2	-6.0
	baz=139						
MID	**Middleton Isla**	**3.52**	**19**		Pn	10 25 59.2	-5.0
MID					Sn	10 26 37.9	-8.4
MID	**Middleton Isla**	**3.52**	**19**	IAML		10 26 40.2	
	comp=N,80nm,1.1s						
MID	comp=E,108nm,1.5s			IAML		10 28 09.9	
CNPM	**China Poot**	**3.68**	**339**		Pn	10 26 01.4	-5.1
CNPM					Sn	10 26 43.8	-6.8
BRSE	**Bradley Lake S**	**3.80**	**343**		Pn	10 26 02.8	-5.3
BRSE	**Bradley Lake S**	**3.80**	**343**	P	Pn	10 26 02.8	-5.3
	baz=162						
BRLK	**Bradley Lake**	**3.84**	**342**		Pn	10 26 03.4	-5.3
HOM	**Homer**	**3.89**	**337**		Pn	10 26 05.0	-4.4
HOM	**Homer**	**3.89**	**337**	IAML		10 26 55.5	
	comp=N,78nm,1.2s						
HOM	comp=E,60nm,1.2s			IAML		10 26 59.4	
HOM	**Homer**	**3.89**	**337**	P	Pn	10 26 05.0	-4.4
	baz=154						
Q19K	**Cape Douglas,**	**3.91**	**318**		Pn	10 26 05.2	-4.4
Q19K	**Cape Douglas,**	**3.91**	**318**	IAML		10 27 00.9	
	comp=E,79nm,1.2s						
Q19K	comp=N,55nm,1.2s			IAML		10 28 23.3	
Q19K	**Cape Douglas,**	**3.91**	**318**	P	Pn	10 26 05.2	-4.4
	baz=134						
P23K	**Montague Islan**	**3.93**	**9**		Pn	10 26 04.9	-4.9
P23K	**Montague Islan**	**3.93**	**9**	P	Pn	10 26 04.9	-4.9
	baz=190						
KAHG	**Katmai Hook Gl**	**4.00**	**309**		Pn	10 26 07.3	-3.7
SEW	**Seward**	**4.01**	**354**	P	Pn	10 26 05.8	-5.1
	baz=173						
ACHA	**Angle Creek He**	**4.22**	**302**		Pn	10 26 10.3	-3.6
KABU	**Katmai Buttres**	**4.22**	**303**		Pn	10 26 10.6	-3.5
ANCK	**Angle Creek**	**4.29**	**302**		Pn	10 26 11.6	-3.3
KAHC	**Katmai Hardscr**	**4.29**	**309**	P	Pn	10 26 11.3	-3.7
	baz=123						
P19K	**Oil Pt**	**4.31**	**327**		Pn	10 26 11.0	-4.2
P19K	**Oil Pt**	**4.31**	**327**	IAML		10 27 06.3	
	comp=N,32nm,0.6s						
P19K	comp=E,34nm,1.3s			IAML		10 27 10.6	
P19K	**Oil Pt**	**4.31**	**327**	P	Pn	10 26 11.0	-4.2
	baz=143						
O22K	**Cooper Landing**	**4.40**	**353**		Pn	10 26 11.5	-4.9
O22K	**Cooper Landing**	**4.40**	**353**	P	Pn	10 26 11.5	-4.9
	baz=172						
KAIM	**Kayak Island**	**4.40**	**29**		Pn	10 26 11.7	-4.7
KAIM	**Kayak Island**	**4.40**	**29**	IAML		10 27 04.0	
	comp=N,65nm,0.8s						
KAIM	comp=E,50nm,1.2s			IAML		10 28 21.4	
KAIM	**Kayak Island**	**4.40**	**29**	P	Pn	10 26 11.7	-4.7
	baz=212						
HIN	**Hinchinbrook I**	**4.42**	**14**		Pn	10 26 11.9	-4.7
HIN	**Hinchinbrook I**	**4.42**	**14**	IAML		10 27 00.9	
	comp=N,53nm,1.1s						
HIN	comp=E,56nm,0.7s			IAML		10 27 01.4	
SLKM	**Skilak Lake**	**4.47**	**350**		Pn	10 26 12.4	-5.0
O20K	**Slope Mountain**	**4.50**	**333**	P	Pn	10 26 13.1	-4.7
	baz=150						
CNTC	**Contact Creek**	**4.50**	**301**		Pn	10 26 14.1	-3.8
Q17K	**Contact Creek**	**4.51**	**301**	P	Pn	10 26 14.1	-3.9
	baz=115						
ILSW	**Iliamna Southw**	**4.55**	**330**		Pn	10 26 14.1	-4.5
ILSW	comp=N,15nm,1.1s			IAML		10 27 12.0	
EYAK	**Cordova Ski Ar**	**4.67**	**17**		Pn	10 26 15.8	-4.3
EYAK	**Cordova Ski Ar**	**4.67**	**17**	P	Pn	10 26 15.8	-4.3
	baz=200						
SUCK	**Suckling Hills**	**4.70**	**31**	Pn	Pn	10 26 16.3	-4.2
SUCK	comp=N,38nm,0.5s			IAML		10 27 08.7	
SUCK	comp=E,28nm,0.7s			IAML		10 27 10.4	
RAGM	**Ragged Mountai**	**4.74**	**24**		Pn	10 26 16.9	-4.2
FID	**Port Fidalgo**	**4.76**	**13**		Pn	10 26 16.4	-4.9
FID	**Port Fidalgo**	**4.76**	**13**	IAML		10 27 08.5	
	comp=N,20nm,0.3s						
FID	comp=E,23nm,0.4s			IAML		10 27 10.3	
HMT	**Hamilton**	**4.80**	**27**	Pn	Pn	10 26 19.0	-2.9
GLI	**Glacier Island**	**4.83**	**9**		Pn	10 26 17.1	-5.1
GLI	**Glacier Island**	**4.83**	**9**	IAML		10 27 11.3	
	comp=N,16nm,1.0s						
GLI	comp=E,19nm,0.7s			IAML		10 27 12.3	
GLI	**Glacier Island**	**4.83**	**9**	P	Pn	10 26 17.1	-5.1
	baz=190						
P18K	**Big Mountain,**	**4.83**	**315**		Pn	10 26 17.2	-5.0
P18K	**Big Mountain,**	**4.83**	**315**	P	Pn	10 26 17.3	-5.0
	baz=130						
CAPN	**Captain Cook N**	**4.84**	**345**	Pn	Pn	10 26 19.0	-3.3
RDSO	**Redoubt South**	**4.86**	**335**		Pn	10 26 17.4	-5.4
RDT	**Redoubt**	**4.88**	**337**		Pn	10 26 17.6	-5.5
GOAT	**Goat Mountain**	**4.90**	**23**		Pn	10 26 18.7	-4.6
RDWB	**Redoubt West**	**4.91**	**335**		Pn	10 26 18.3	-5.2
BERG	**Berg Lake**	**4.99**	**29**		Pn	10 26 19.9	-4.6
NCT	**North Crescent**	**4.99**	**335**		Pn	10 26 19.5	-5.1
RC01	**Rabbit Creek A**	**5.01**	**354**		Pn	10 26 20.0	-4.7
RC01	**Rabbit Creek A**	**5.01**	**354**	IAML		10 27 16.6	
	comp=E,16nm,0.5s						
RC01	comp=N,20nm,1.4s			IAML		10 27 16.9	
RC01	**Rabbit Creek A**	**5.01**	**354**	P	Pn	10 26 20.0	-4.7
	baz=173						
Q16K	**King Salmon**	**5.05**	**304**		Pn	10 26 21.6	-3.7
Q16K	**King Salmon**	**5.05**	**304**	P	Pn	10 26 21.6	-3.7
	baz=117						
SNH	**Sunshine Point**	**5.07**	**35**		Pn	10 26 21.3	-4.4
SNH	**Sunshine Point**	**5.07**	**35**	IAML		10 27 19.6	
	comp=N,37nm,1.3s						
SNH	comp=E,26nm,1.4s			IAML		10 29 28.8	
Q19K	**Port Alsworth**	**5.08**	**326**		Pn	10 26 20.8	-4.9
Q19K	comp=E,25nm,1.1s			IAML		10 27 35.0	
Q19K	**Port Alsworth**	**5.08**	**326**	P	Pn	10 26 20.8	-4.8
	baz=141						
FIS	**Fire Island**	**5.10**	**351**		Pn	10 26 20.3	-5.6
O18K	**Koktuh Hills**	**5.13**	**319**		Pn	10 26 21.6	-4.8
O18K	**Koktuh Hills**	**5.13**	**319**	P	Pn	10 26 21.6	-4.8
	baz=134						
KHIT	**Khitrov Hills**	**5.16**	**31**		Pn	10 26 22.2	-4.7
P17K	**Kvichak River**	**5.21**	**309**	P	Pn	10 26 23.5	-4.0
	baz=123						
BMRM	**Bremner River**	**5.28**	**22**		Pn	10 26 23.9	-4.6
BMRM	**Bremner River**	**5.28**	**22**	P	Pn	10 26 23.9	-4.6
	baz=205						
WAX	**Waxell Ridge**	**5.28**	**33**		Pn	10 26 24.1	-4.5
KNK	**Knik Glacier**	**5.30**	**1**		Pn	10 26 23.9	-4.8
KNK	**Knik Glacier**	**5.30**	**1**	IAML		10 27 25.7	
KNK	comp=E,13nm,0.8s			IAML		10 27 25.9	
	comp=N,12nm,1.5s						
KNK	**Knik Glacier**	**5.30**	**1**	P	Pn	10 26 23.9	-4.8
	baz=181						
BARK	**Barkley Ridge**	**5.36**	**34**		Pn	10 26 25.2	-4.4
MESA	**MESA**	**5.37**	**38**		Pn	10 26 25.2	-4.7
MESA	**MESA**	**5.37**	**38**	IAML		10 27 25.7	
MESA	comp=N,24nm,1.5s			IAML		10 27 29.8	
	comp=E,18nm,0.7s						
MESA	**MESA**	**5.37**	**38**	P	Pn	10 26 25.2	-4.7
	baz=224						
N20K	**Mount Spurr**	**5.42**	**341**	P	Pn	10 26 25.5	-4.9
	baz=158						
CRQM	**Cirque**	**5.45**	**29**		Pn	10 26 26.6	-4.4
CRQE	**Cirque**	**5.46**	**30**	P	Pn	10 26 26.5	-4.5
	baz=214						
SUA	**Susitna One**	**5.46**	**349**		Pn	10 26 26.0	-5.1
SUA	**Susitna One**	**5.46**	**349**	P	Pn	10 26 26.0	-5.1
	baz=167						
PMR	**Palmer**	**5.48**	**357**		Pn	10 26 26.8	-4.4
CHGN	**Chignik**	**5.49**	**276**	Pn	Pn	10 26 26.9	-4.3
TGL	**Tana Glacier**	**5.53**	**31**		Pn	10 26 27.5	-4.5
BAGL	**Bagley Icefiel**	**5.55**	**35**		Pn	10 26 27.8	-4.3
KLU	**Klutina**	**5.55**	**13**		Pn	10 26 28.0	-4.3
KLU	**Klutina**	**5.55**	**13**	P	Pn	10 26 28.0	-4.3
	baz=196						
ISLE	**Juniper Island**	**5.56**	**34**		Pn	10 26 27.8	-4.6
N19K	**Bonanza Creek**	**5.62**	**329**		Pn	10 26 28.2	-5.0
N19K	**Bonanza Creek**	**5.62**	**329**	P	Pn	10 26 28.2	-5.0
	baz=144						
STLK	**Strandline Lak**	**5.64**	**344**		Pn	10 26 28.9	-4.6
GHO	**Glory Hole Cre**	**5.66**	**358**		Pn	10 26 29.8	-3.9
SML	**Sawmill**	**5.69**	**1**		Pn	10 26 30.0	-4.2
SML	**Sawmill**	**5.69**	**1**	P	Pn	10 26 30.0	-4.2
	baz=182						
SCM	**Sheep Creek Mo**	**5.75**	**6**	Pn	Pn	10 26 27.4	-7.6
SAMH	**Samovar Hills**	**5.76**	**43**		Pn	10 26 31.4	-3.7
VRDI	**Verde Repeater**	**5.77**	**26**		Pn	10 26 30.6	-4.8
KIAG	**Kiagna River**	**5.81**	**32**		Pn	10 26 31.2	-4.6
O17K	**Koliganek Bris**	**5.81**	**312**		Pn	10 26 31.6	-4.2
O17K	**Koliganek Bris**	**5.81**	**312**	P	Pn	10 26 31.6	-4.2
	baz=125						
P16K	**Nushagak River**	**5.83**	**304**		Pn	10 26 32.5	-3.5
P16K	**Nushagak River**	**5.83**	**304**	P	Pn	10 26 32.5	-3.5
	baz=116						
TABL	**Table Mountain**	**5.84**	**39**		Pn	10 26 32.4	-3.9
GRNC	**Granite Creek**	**5.84**	**35**		Pn	10 26 32.1	-4.3
N25K	**Chitina, Valde**	**5.87**	**19**		Pn	10 26 32.3	-4.3
N25K	**Chitina, Valde**	**5.87**	**19**	P	Pn	10 26 32.3	-4.3
	baz=202						
GLB	**Gilahina Butte**	**5.88**	**23**	Pn	Pn	10 26 32.4	-4.3
PCA	**Pinnacle**	**5.94**	**45**		Pn	10 26 33.4	-4.2
PINM	**Pinnacle**	**5.94**	**45**	P	Pn	10 26 33.4	-4.2
	baz=232						
N18K	**Kilae Creek**	**5.96**	**323**		Pn	10 26 32.7	-5.1
N18K	**Kilae Creek**	**5.96**	**323**	P	Pn	10 26 32.7	-5.1
	baz=137						
MCARA	**McCarthy VSAT**	**6.01**	**27**		Pn	10 26 34.4	-4.0
MCARA	**McCarthy VSAT**	**6.01**	**27**	P	Pn	10 26 34.4	-4.0
	baz=211						
PNL	**Peninsula**	**6.05**	**50**		Pn	10 26 35.1	-3.9
PNL	**Peninsula**	**6.05**	**50**	P	Pn	10 26 35.1	-3.9
	baz=238						
SKT	**Skwentna**	**6.06**	**347**	Pn	Pn	10 26 34.7	-4.4
BCPM	**Bancas Point**	**6.11**	**47**		Pn	10 26 36.0	-3.8
M24K	**Tolsona, Glenn**	**6.12**	**11**	Pn	Pn	10 26 36.9	-3.1
O16K	**Kokwok River B**	**6.14**	**308**		Pn	10 26 36.0	-4.2
O16K	**Kokwok River B**	**6.14**	**308**	P	Pn	10 26 36.0	-4.2
	baz=120						
CTG	**Chitna Glacier**	**6.15**	**35**	P	Pn	10 26 36.3	-4.2
	baz=221						
CTGM	**Chitina Glacie**	**6.16**	**35**		Pn	10 26 36.3	-4.3
LOGN	**Logan Glacier**	**6.16**	**37**		Pn	10 26 36.3	-4.4
M20K	**Styx River**	**6.22**	**340**		Pn	10 26 36.5	-5.0
M20K	**Styx River**	**6.22**	**340**	P	Pn	10 26 36.5	-5.0
	baz=156						
N17K	**Nushagak Hills**	**6.31**	**318**		Pn	10 26 37.7	-5.0
N17K	**Nushagak Hills**	**6.31**	**318**	P	Pn	10 26 37.7	-5.0
	baz=130						
CUT	**Chulitna**	**6.35**	**353**	Pn	Pn	10 26 39.0	-4.1
WAT6	**Susitna Watana**	**6.48**	**3**		Pn	10 26 39.8	-5.3
WAT6	**Susitna Watana**	**6.48**	**3**	P	Pn	10 26 39.8	-5.3
	baz=184						
M19K	**Big River Lodg**	**6.51**	**335**		Pn	10 26 40.1	-5.3
M19K	**Big River Lodg**	**6.51**	**335**	P	Pn	10 26 40.1	-5.3
	baz=150						
M18K	**Stony River**	**6.55**	**328**		Pn	10 26 40.8	-5.1
M18K	**Stony River**	**6.55**	**328**	P	Pn	10 26 40.8	-5.1
	baz=142						
O15K	**Ungalikthiuk R**	**6.75**	**301**		Pn	10 26 44.8	-3.9
O15K	**Ungalikthiuk R**	**6.75**	**301**	P	Pn	10 26 44.8	-3.9
	baz=112						
P29M	**Windy Craggy**	**6.76**	**54**		Pn	10 26 44.6	-4.3
P29M	**Windy Craggy**	**6.76**	**54**	P	Pn	10 26 44.6	-4.3
	baz=244						
L19K	**White Mountain**	**6.87**	**335**		Pn	10 26 44.8	-5.4
L19K	**White Mountain**	**6.87**	**335**	P	Pn	10 26 44.8	-5.4
	baz=149						
N16K	**Nishlik Lake**	**6.90**	**313**		Pn	10 26 46.5	-4.3
N16K	**Nishlik Lake**	**6.90**	**313**	P	Pn	10 26 46.5	-4.3
	baz=125						
M17K	**Holitna River**	**7.00**	**323**		Pn	10 26 47.5	-4.6
M17K	**Holitna River**	**7.00**	**323**	P	Pn	10 26 47.5	-4.6
	baz=135						
RND	**Reindeer**	**7.30**	**359**		Pn	10 26 52.6	-3.6
P30M	**Million Dollar**	**7.34**	**52**		Pn	10 26 53.2	-3.5
P30M	**Million Dollar**	**7.34**	**52**	P	Pn	10 26 53.2	-3.5
	baz=242						
YUK4	**Talbot Arm**	**7.35**	**41**	P	Pn	10 26 55.5	-1.6
	baz=229						
TRF	**Thorofare Moun**	**7.39**	**354**	Pn	Pn	10 26 54.2	-3.4
CAST	**Castle Rocks**	**7.52**	**348**	Pn	Pn	10 26 55.0	-4.1
TTA	**Tatalina**	**7.79**	**334**	Pn	Pn	10 26 57.8	-5.1
RIDG	**Independent Ri**	**7.86**	**12**	Pn	Pn	10 27 00.7	-3.2
BPAW	**Bear Paw Mtn.**	**8.08**	**352**	Pn	Pn	10 27 02.7	-4.2

BLKN SN Sn 10 46 15.5 -6.2
BLKN LG Lg 10 47 32.0
BLKN Trac 10 47 32.0
comp=Z,12nm,0.4s

*IDC **22** 10:44:34.5±4.2,2.°94S×131.°80E, h0km, mb3.8/3, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=300.2km s-min=25.3km az=74.0*
*DJA **22** 10:44:38.1±0.4,3.°5S±3.°×13.°1E±.°, h10km, M3.5/6, mb4.1/3, MLv3.2/6*
ISC 22 10:44:37.4±1.1,**3.°25S**±0.°09×**130.°71E**±0.°08,**h10**km,**n7,** σ1**8**16/9,**Seram**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.57**	**78**	P		**Pn**	**10 45 05.6**	**+0.2**
FAKI				S		**Sn**	**10 45 25.5**	**-0.3**
SWI	**Sorong**	**2.43**	**13**	P		**Pn**	**10 45 16.6**	**-0.6**
SWI				S		**Sn**	**10 45 46.6**	**-0.4**
LBMI	**Labuha**	**4.12**	**309**	P		**Pn**	**10 45 40.2**	**-0.3**
WRA	**Warramunga Arr**	**16.97**	**168**	P		**Pn**	**10 48 33.0**	**-2.1**
	0.1nm,0.3s,baz=352,slow=12,SNR=5.9							
WRA				S		Sn	10 51 31.0	-13
	0.8nm,0.9s,baz=352,slow=23,SNR=2.6							
	0.6nm,1.0s							
ASAR	**Alice Springs**	**20.54**	**172**	P		**P**	**10 49 17.3**	**+1.1**
	3.0nm,0.5s,baz=351,slow=11,SNR=62							
	3.0nm,0.5s							
MKAR	**Makanchi Array**	**65.52**	**326**	P		**P**	**10 55 22.3**	**+1.2**
	0.4nm,0.3s,baz=114,slow=8.1,SNR=9.9							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**69.72**	**328**	P		**P**	**10 55 48.1**	**+0.6**
	0.5nm,0.7s,baz=126,slow=5.3,SNR=7.7							
	0.5nm,0.7s							

*IDC **22** 10:48:39.7±1.4,30.°64N×57.°19E, h0km, mb3.7/7, mbtmp3.7/10, ML3.6/3, Error ellipse: s-maj=26.0km s-min=24.0km az=114.0*
*TEH **22** 10:48:39.8, 30.°71N×57.°24E, h9km±26km, ML4.0*
ISC 22 10:48:41.0±1.3,**30.°69N**±0.°04×**57.°24E**±0.°04,**h6**km±10km, **n49,** σ0**99**/51,**mb3.7**/7,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRM1	**Kerman Provinc**	**0.19**	**170**	Pg		**Pg**	**10 48 44.7**	**-0.1**
KRM1				Sg		**Sg**	**10 48 48.0**	**+0.6**
ZRDN	**Zarand Kerman**	**0.66**	**295**	Pg		**Pg**	**10 48 52.8**	**-1.0**
KHGB	**Koh Gabri**	**0.72**	**245**	Pg		**Pg**	**10 48 53.9**	**-1.1**
TVBK	**TV Kerman**	**0.81**	**210**	Pg		**Pg**	**10 48 56.4**	**-0.3**
CHMN	**Cheshme madani**	**0.87**	**162**	Pg		**Pg**	**10 48 56.4**	**-1.3**
NGRK	**Negar Kerman**	**1.13**	**203**	Pg		**Pg**	**10 49 02.1**	**-0.7**
IBAF	**Bafgh**	**1.69**	**303**	Pg		**Pn**	**10 49 11.4**	**+0.2**
KBAM	**BAM**	**1.87**	**145**	Pn		**Pn**	**10 49 14.4**	**+0.7**
BSRN	**Basiran**	**2.06**	**51**	Pn		**Pn**	**10 49 16.0**	**-0.3**
IKOO	**Kooshah**	**2.30**	**41**	Pn		**Pn**	**10 49 20.2**	**+0.6**
IMEH	**Mehriz**	**2.36**	**288**	Pn		**Pn**	**10 49 20.6**	**+0.1**
TPRV	**Parvadeh(Tabas**	**2.38**	**349**	Pn		**Pn**	**10 49 20.6**	**0.0**
NHDN	**Nehbandan**	**2.52**	**73**	Pn		**Pn**	**10 49 23.2**	**+0.7**
ITEG	**Tejag**	**2.55**	**30**	Pn		**Pn**	**10 49 23.1**	**0.0**
KHNJ	**Kahnooj**	**2.76**	**171**	Pn		**Pn**	**10 49 26.8**	**+0.9**
ICHK	**Chekchek**	**2.87**	**303**	Pn		**Pn**	**10 49 28.7**	**+1.1**
TKDS	**Koohdasht(Taba**	**2.92**	**358**	Pn		**Pn**	**10 49 28.0**	**0.0**
AFRZ	**Afriz**	**3.12**	**29**	Pn		**Pn**	**10 49 31.2**	**+0.4**
IBND	**Bandar-abas**	**3.29**	**191**	Pn		**Pn**	**10 49 33.1**	**+0.1**
TNSJ	**Nastanj**	**3.31**	**351**	Pn		**Pn**	**10 49 33.4**	**0.0**
ZHDN	**Zahedan**	**3.35**	**112**	Pn		**Pn**	**10 49 34.9**	**+0.8**
GENO	**Geno**	**3.41**	**196**	Pn		**Pn**	**10 49 36.5**	**+1.7**
ANAR	**Anarak**	**3.89**	**311**	Pn		**Pn**	**10 49 42.1**	**+0.7**
SHRT	**Shahrakht**	**3.92**	**41**	Pn		**Pn**	**10 49 43.1**	**+1.2**
IRAM	**Ramesheh**	**4.30**	**286**	Pn		**Pn**	**10 49 48.5**	**+1.3**
IZEF	**Zefreh**	**4.72**	**299**	Pn		**Pn**	**10 49 54.2**	**+1.2**
KLNJ	**Kolanjah**	**4.86**	**275**	Pn		**Pn**	**10 49 55.9**	**+0.8**
TBJM	**Torbat-e-JAM**	**5.25**	**29**	Pn		**Pn**	**10 50 00.8**	**+0.5**
KRSH	**Karshahi**	**5.42**	**308**	Pn		**Pn**	**10 50 03.8**	**+1.3**
IKLH	**Kolahrood**	**5.47**	**300**	Pn		**Pn**	**10 50 05.0**	**+1.7**
ISFB	**Sefidab**	**5.58**	**312**	Pn		**Pn**	**10 50 06.0**	**+1.3**
SRVN	**Saravan**	**5.58**	**125**	Pn		**Pn**	**10 50 05.8**	**+1.1**
SBZV	**Sabzevar**	**5.69**	**3**	Pn		**Pn**	**10 50 06.9**	**+0.5**
IMYA	**Miami**	**6.12**	**22**	Pn		**Pn**	**10 50 13.6**	**+1.4**
IVRN	**Varamin**	**6.32**	**314**	Pn		**Pn**	**10 50 16.1**	**+1.3**
ISFR	**Sfrayin**	**6.38**	**6**	Pn		**Pn**	**10 50 17.3**	**+1.5**
IDMV	**Damavand**	**6.54**	**320**	Pn		**Pn**	**10 50 18.8**	**+0.7**
GEYT	**Alibeck**	**7.26**	**6**	Pn		**Pn**	**10 50 29.4**	**+1.7**
	0.9nm,0.3s,baz=191,slow=16,SNR=2.3							
	1.1nm,0.3s							
MZPU	**Pul - Mazandar**	**7.43**	**322**	Pn		**Pn**	**10 50 32.0**	**+1.8**
WSAR	**Wadi Sarin**	**7.52**	**170**	Pn		**Pn**	**10 50 31.1**	**-0.1**
	1.7nm,0.3s,baz=7.1,slow=12,SNR=20							
WSAR				Sn		**Sn**	**10 51 56.1**	**-0.8**
	0.1nm,0.3s,baz=275,slow=16,SNR=1.6							
	12nm,0.6s							
KLST	**Kelardasht - M**	**7.77**	**320**	Pn		**Pn**	**10 50 36.5**	**+1.6**
AAK	**Ala-Archa**	**18.23**	**44**	P		**P**	**10 52 56.9**	**+1.9**
	0.1nm,0.3s,baz=266,slow=10,SNR=3.8							
	0.3nm,0.3s							
BRTR	**Keskin Array B**	**21.24**	**302**	P		**P**	**10 53 27.8**	**0.0**
	2.0nm,0.9s,baz=124,slow=11,SNR=8.6							
	2.0nm,0.9s							
BVAR	**Borovoye Array**	**24.30**	**20**	P		**P**	**10 53 59.0**	**0.0**
	1.8nm,0.5s,baz=198,slow=7.8,SNR=8.2							
	1.8nm,0.5s							
MKAR	**Makanchi Array**	**25.15**	**43**	P		**P**	**10 54 07.0**	**+0.1**
	0.6nm,0.6s,baz=231,slow=8.4,SNR=8.5							
	0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**25.48**	**33**	P		**P**	**10 54 10.0**	**+0.3**
	1.5nm,0.9s,baz=231,slow=9.1,SNR=15							
	1.5nm,0.9s							
ZALV	**Zalesovo Beam**	**30.58**	**33**	P		**P**	**10 54 54.7**	**-0.6**
	1.7nm,0.5s,baz=238,slow=8.7,SNR=7.6							
	1.7nm,0.5s							
GERES	**GERESS Array B**	**37.46**	**312**	P		**P**	**10 55 54.4**	**-0.8**
	0.9nm,0.5s,baz=81,slow=6.2,SNR=1.5							
	0.9nm,0.5s							
SONM	**Songino Array**	**40.99**	**51**	P		**P**	**10 56 24.6**	**-0.3**
	0.2nm,0.5s,baz=266,slow=8.1,SNR=1.9							
	0.2nm,0.5s							

*IDC **22** 10:51:06.8±4.6, 17.°53S×178.°80W, h476km±51km, mb3.4/12, mbtmp4.1/12, Error ellipse: s-maj=22.3km s-min=21.0km az=26.0*
ISC 22 10:51:12.1±0.8,**17.°6S**±0.°2×**178.°9W**±0.°2,**h539**km,**n17,** σ0**86**/18,**mb3.7**/11,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.85**	**189**	P		**P**	**10 55 14.8**	**-1.5**
	3.2nm,0.3s,baz=330,slow=2.5,SNR=8.9							
	3.2nm,0.3s							
STKA	**Stephens Creek**	**38.38**	**241**	P		**P**	**10 57 48.0**	**+0.4**
	3.0nm,0.5s,baz=86,slow=10,SNR=13							
	3.0nm,0.5s							
WRA	**Warramunga Arr**	**44.26**	**259**	P		**P**	**10 58 33.0**	**-1.2**
	1.8nm,0.7s,baz=94,slow=7.7,SNR=15							
	1.8nm,0.7s							
ASAR	**Alice Springs**	**44.45**	**254**	P		**P**	**10 58 35.2**	**-0.5**
	15nm,0.5s,baz=89,slow=7.9,SNR=372							
ASAR				PcP		**PcP**	**11 00 08.0**	**+0.4**
	1.0nm,0.5s,baz=104,slow=4.0,SNR=8.1							
	15nm,0.5s							
MJAR	**Matsushiro Arr**	**67.43**	**324**	P		**P**	**11 01 13.9**	**-0.4**
	2.2nm,0.6s,baz=158,slow=6.5,SNR=6.6							
	2.2nm,0.6s							
QSPA	**South Pole Qui**	**72.42**	**180**	P		**P**	**11 01 44.7**	**+1.1**
	1.9nm,1.1s,baz=252,slow=2.3,SNR=6.5							
	1.9nm,1.1s							
NVAR	**Mina Array Bea**	**79.53**	**44**	P		**P**	**11 02 24.2**	**+0.7**
	0.5nm,0.8s,baz=221,slow=9.5,SNR=4.0							
	0.5nm,0.8s							
ILAR	**Eielson Array**	**85.72**	**13**	P		**P**	**11 02 52.7**	**-1.0**
	0.6nm,0.7s,baz=220,slow=5.4,SNR=9.4							
	0.6nm,0.7s							
PDAR	**Pinedale Array**	**87.45**	**44**	P		**P**	**11 03 02.8**	**+0.1**
	0.2nm,0.5s,baz=252,slow=3.0,SNR=3.6							
	0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**88.39**	**290**	P		**P**	**11 03 08.4**	**+1.1**
	1.0nm,0.3s,baz=115,slow=2.8,SNR=6.0							
	1.0nm,0.3s							
SONM	**Songino Array**	**93.06**	**319**	P		**P**	**11 03 28.9**	**+0.4**
	0.4nm,0.6s,baz=108,slow=4.7,SNR=3.3							
	0.4nm,0.6s							
YKA	**Yellowknife Ar**	**94.27**	**25**	P		**P**	**11 03 32.6**	**-0.8**
	0.3nm,0.8s,baz=232,slow=4.4,SNR=4.3							
	0.3nm,0.8s							

MKAR Makanchi Array 108.64 314 PKiKP **PKiKP 11 08 39.1 -0.8**
0.2nm,0.5s,baz=130,slow=0.5,SNR=5.2
BVAR Borovoye Array 116.36 321 PKP **PKPdf 11 08 54.1 -0.2**
1.0nm,0.7s,baz=46,slow=4.3,SNR=3.8
BRTR Keskin Array B 144.29 315 PKP **PKPab 11 09 47.8 +0.4**
1.3nm,0.4s,baz=44,slow=3.4,SNR=6.1
MMAI Mount Meron Ar 145.63 303 PKPbc **PKPbc 11 09 52.0 +0.7**
2.7nm,0.5s,baz=57,slow=6.1,SNR=5.4
GERES GERESS Array B 147.24 345 PKPbc **PKPbc 11 09 56.0 +0.9**
2.5nm,0.7s,baz=69,slow=5.6,SNR=2.9

*IDC **22** 11:04:58.7±6.3,25.°15S×179.°80E, h540km±80km, mb3.2/7, mbtmp4.2/8, Error ellipse: s-maj=58.5km s-min=26.1km az=3.0*
ISC 22 11:04:55.9±1.0,**25.°0S**×0.°2×**179.°8E**±0.°2,**h501**km,**n9,** σ0**61**/8,**mb3.7**/7,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.41**	**189**	P		**P**	**11 07 48.9**	**-0.2**
	7.9nm,0.7s,baz=142,slow=19,SNR=2.8							
CTA	**Charters Tower**	**31.34**	**272**	P		**P**	**11 10 35.3**	**+0.4**
	6.9nm,0.5s,baz=95,slow=9.9,SNR=23							
	6.9nm,0.5s							
STKA	**Stephens Creek**	**34.17**	**250**	P		**P**	**11 10 59.4**	**+0.5**
	1.1nm,0.4s,baz=96,slow=8.9,SNR=4.9							
	1.1nm,0.4s							
ASAR	**Alice Springs**	**41.71**	**262**	P		**P**	**11 12 00.2**	**-0.3**
	1.0nm,0.3s,baz=91,slow=7.2,SNR=43							
	1.0nm,0.3s							
WRA	**Warramunga Arr**	**42.19**	**267**	P		**P**	**11 12 03.7**	**-0.7**
	3.0nm,0.4s,baz=99,slow=6.9,SNR=83							
	3.0nm,0.4s							
MJAR	**Matsushiro Arr**	**72.72**	**326**	P		**P**	**11 15 32.1**	**-0.5**
	1.4nm,0.8s,baz=174,slow=6.8,SNR=4.4							
	1.4nm,0.8s							
NVAR	**Mina Array Bea**	**85.66**	**44**	P		**P**	**11 16 42.1**	**+0.7**
	0.5nm,0.7s,baz=219,slow=6.9,SNR=3.9							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**91.15**	**58**	P		**P**	**11 17 06.8**	**-0.3**
	0.3nm,0.7s,baz=215,slow=7.7,SNR=4.8							
	0.3nm,0.7s							
HFS	**Hagfors**	**143.60**	**348**	PKP		PKPab	11 23 30.2	-1.0
	1.1nm,0.4s,baz=316,slow=4.0,SNR=10.0							

*IDC **22** 11:11:00.8±0.5,85.°39N×90.°99E, h0km, mb3.9/20, mbtmp3.9/22, ML3.5/2, MS3.7/51, Error ellipse: s-maj=18.6km s-min=11.4km az=113.0*
*MOS **22** 11:11:00.7±1.1, 85.°36N×90.°56E, h12km, mb4.8/27, Error ellipse: s-maj=98.9km s-min=6.9km az=89.2*
*GCMT **22** 11:11:00.8±0.4, 85.°38N±0.°03×91.°0E±0.°5, h13km±1km, MW4.7/80, Moment Tensor Solution. s5,c5; s80,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.19±. 13; Mθθ 0.80±.08; Mϕϕ 0.39±.07; Mrθ~0.56±.23; Mθϕ~0.54±.05; Mϕr~0.19±.22; Best double couple: Mo1.31300×10¹⁶ NP1:ϕs321.00000°, δ39.00000°, λ-62.00000°. NP2: ϕs 321.00000°, δ39.00000°, λ-62.00000°. Principal axes: T 1.2310, Plg9.0000°, Azm211.0000°; N 0.1690, Plg18.0000°, Azm119.0000°; P -1.3950, Plg70.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KOLA **22** 11:11:02.5, 87.°30N×96.°37E, h0km, ML1.7, Arctic Ocean*
*NEIC **22** 11:11:04.8±3.0, 85.°04N±0.°10×85.°0E±0.°4, h10km±1km, mb4.7/131, Error ellipse: s-maj=16.4km s-min=5.4km az=9.0*
*FCIAR **22** 11:11:05.0, 85.°08N×88.°46E, h10km, station SVZ has station magnitude of 3.90 station OMEGA has station magnitude of 3.90 station ZFI2 has station magnitude of 3.80 station LSH has station magnitude of 5.39 station PRGR has station magnitude of 5.18 station KLMR has station magnitude of 5.21*
ISC 22 11:11:04.7±0.3,**85.°00N**±0.°04×**87.°48E**±0.°04,**h10**km,**n231,** σ2**60**/151,**mb4.6**/109,**MS3.8**/51,**15C-4D,North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**6.04**	**154**	*e*P		**Pn**	**11 12 31.6**	**-2.2**
SVZ				*e*S		**Sn**	**11 13 36.5**	**-6.4**
	50nm,0.5s							
ZFI2	**Zemlya Franca-**	**6.27**	**251**	*e*P		**Pn**	**11 12 37.5**	**+0.5**
ZFI2				*e*S		**Sn**	**11 13 45.5**	**-3.0**
	35nm,0.6s							
OMEGA	**Omega**	**6.28**	**250**	*e*P		**Pn**	**11 12 37.5**	**+0.3**
OMEGA				*e*S		**Sn**	**11 13 45.3**	**-3.6**
	41nm,2.7s							
KBS	**Kingsbay**	**11.01**	**281**	Pn		**Pn**	**11 13 39.0**	**-2.9**
KBS				Sn		Sn	11 15 32.0	-13
KBS	**Kingsbay**	**11.01**	**281**	P		**Pn**	**11 13 39.3**	**-2.6**
KBS				S		Sn	11 15 34.8	-10
KBS	**Kingsbay**	**11.01**	**281**	*e*P		**Pn**	**11 13 42.4**	**+0.5**
KBS				pmax		pmax		
	comp=Z,11nm,0.9s							
KBS	**Kingsbay**	**11.01**	**281**	*e*P		**Pn**	**11 13 38.7**	**-3.2**
KBS				*e*S		Sn	11 15 36.5	-8.4
SPB1	**Spitsbergen Ar**	**11.30**	**276**	Pn		**Pn**	**11 13 41.9**	**-3.9**
SPB5	**Spitsbergen Ar**	**11.30**	**276**	Pn		Pn	11 13 41.5	-4.3
SPA1	**Spitsbergen Ar**	**11.30**	**276**	Pn		**Pn**	**11 13 42.2**	**-3.7**
SPA0	**Spitsbergen Ar**	**11.31**	**276**	Pn		**Pn**	**11 13 42.5**	**-3.4**
SPA0	**Spitsbergen Ar**	**11.31**	**276**	*e*P		**Pn**	**11 13 43.6**	**-2.3**
SPA0				*e*S		Sn	11 15 43.2	-8.9
SPITS	**Spitsbergen Ar**	**11.31**	**276**	P		**Pn**	**11 13 44.3**	**-1.6**
SPITS	**Spitsbergen Ar**	**11.31**	**276**	Pn		**Pn**	**11 13 42.4**	**-3.6**
	baz=53,slow=16							
SPITS				Sn		Sn	11 15 38.1	-14
	baz=47,slow=18							
SPA2	**Spitsbergen Ar**	**11.31**	**276**	Pn		Pn	11 13 41.5	-4.5
SPA3	**Spitsbergen Ar**	**11.31**	**276**	Pn		**Pn**	**11 13 42.4**	**-3.5**
SPB4	**Spitsbergen Ar**	**11.31**	**276**	Pn		Pn	11 13 41.2	-4.8
SPB2	**Spitsbergen Ar**	**11.31**	**276**	Pn		**Pn**	**11 13 43.1**	**-2.9**
SPB2				Sn		**Sn**	**11 15 45.3**	**-6.8**
SPB3	**Spitsbergen Ar**	**11.31**	**276**	Pn		**Pn**	**11 13 44.0**	**-2.0**
BRBB	**Barentsburg B**	**11.57**	**278**	P		**Pn**	**11 13 46.7**	**-2.8**
BRBB				S		**Sn**	**11 15 50.4**	**-8.1**
HOPEN	**Hopen**	**12.09**	**264**	*e*S		**Sn**	**11 16 03.5**	**-7.6**
TIXI	**Tiksi**	**15.05**	**126**	Pn		**Pn**	**11 14 36.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=15,slow=9.9,SNR=6.3							
TIXI				LR		LR	11 19 51.8	
	comp=Z,107nm,21.4s,baz=28,slow=35							
	comp=Z,2.4nm,0.3s							
NRIK	**Noril'sk**	**15.75**	**180**	Pn		**Pn**	**11 14 45.9**	**-0.3**
NRIK				lAmb		lAmb	11 15 02.0	
	comp=Z,70nm,1.5s							
NRIK	**Noril'sk**	**15.75**	**180**	*e*P		**P**	**11 14 50.6**	**+0.5**
NRIK				pmax		pmax		
	comp=Z,16nm,0.6s							
NRIK	**Noril'sk**	**15.75**	**180**	Pn		**Pn**	**11 14 44.2**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=6.1,slow=11,SNR=5.8							
NRIK				Sn		**Sn**	**11 17 31.9**	**-8.6**
	comp=Z,0.3nm,0.3s,baz=207,slow=2.3,SNR=1.0							
NRIK				LR		LR	11 21 34.9	
	comp=Z,623nm,18.5s,baz=11,slow=39							
AMDE	**Amderma**	**15.98**	**213**	*e*P		**P**	**11 14 52.3**	**-0.3**
	comp=Z,18nm,1.0s							
KEV	**Kevo**	**18.39**	**254**			**Pn**	**11 15 16.2**	**-3.1**
KEV	**Kevo**	**18.39**	**254**	P		**Pn**	**11 15 16.2**	**-3.1**
KEV				pmax		pmax		
	comp=Z,30nm,1.1s							
ARCES	**ARCESS Array B**	**18.74**	**255**	*e*P		**Pn**	**11 15 28.4**	**+4.9**
ARCES	**ARCESS Array B**	**18.74**	**255**	P		**Pn**	**11 15 23.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=19,slow=12,SNR=1.7							
ARCES				LR		LR	11 23 03.7	
	comp=Z,266nm,19.0s,baz=18,slow=38							
	comp=Z,5.0nm,1.0s							
LVZ	**Lovozero**	**19.59**	**244**	*e*P		**Pn**	**11 15 40.7**	**+7.0**
RES	**Resolute Bay**	**20.44**	**2**	LR		LR	11 23 48.7	
	comp=Z,126nm,18.2s,baz=30,slow=38							
SUMG	**Summit**	**20.88**	**317**	P		**P**	**11 15 46.0**	**-0.8**
SUMG				lAmb		lAmb	11 15 55.0	
	comp=Z,56nm,1.4s							
SUMG	**Summit**	**20.88**	**317**	P		**P**	**11 15 46.0**	**-0.8**
SUMG				pmax		pmax		
	comp=Z,55nm,1.4s							
SUMG	**Summit**	**20.88**	**317**	*i* P		**P**	**11 15 47.0**	**+0.2**
BILL	**Bilibino**	**21.66**	**89**	P		**P**	**11 15 55.3**	**+0.6**
BILL				lAmb		lAmb	11 16 03.0	
	comp=Z,34nm,1.3s							
BILL	**Bilibino**	**21.66**	**89**	*e*P		**P**	**11 15 49.1**	**-5.7**
BILL				pmax		pmax		
	comp=Z,29nm,1.3s							
LSH	**Leshukonskoye**	**21.75**	**230**	*e*P		**P**	**11 16 01.3**	**+5.6**
	comp=Z,146nm,1.4s							
YAK	**Yakutsk**	**24.61**	**130**	*e*P		**P**	**11 16 22.6**	**-1.9**
YAK				*e**PP		**pP**	**11 16 26.3**	**-0.2**
YAK				*e*			11 20 02.2	
YAK				*e*S		**S**	**11 20 44.4**	**-0.7**
YAK				*e**SS		**sS**	**11 20 50.7**	**+2.4**
YAK				*e*SS		SnSn	11 21 47.0	+17
YAK				*e*			11 27 30.3	
YAK				pmax		pmax		
	comp=Z,13nm,0.9s							
YAK				pmax		pmax		
	comp=N,3.0nm,1.0s							
YAK				smax		smax		
	comp=E,85nm,3.9s							
YAK				smax		smax		
	comp=N,23nm,3.9s							
YAK	**Yakutsk**	**24.61**	**130**	LR		LR	11 26 51.6	
	comp=N,97nm,19.7s,baz=348,slow=38							
PRGR	**Permogore**	**24.98**	**229**	*e*P		**P**	**11 16 29.1**	**+1.2**
	comp=N,36nm,0.8s							
F19K	**Shaleruckik Mo**	**25.80**	**56**	P		**P**	**11 16 35.9**	**+0.6**
INK	**Inuvik**	**25.83**	**34**	LR		LR	11 27 52.3	
	comp=N,35nm,18.3s,baz=5.0,slow=40							
KLMR	**Klimovskoe**	**26.18**	**235**	*e*P		**P**	**11 16 39.0**	**+0.3**
KLMR				pmax		pmax		
	comp=Z,38nm,1.1s							
KLMR	**Klimovskoe**	**26.18**	**235**	*e*P		**P**	**11 16 39.1**	**+0.3**
	comp=Z,46nm,1.2s							
F15K	**North Star Dit**	**26.39**	**62**	P		**P**	**11 16 42.8**	**+2.2**
G19K	**Purcell Mounta**	**26.53**	**55**	P		**P**	**11 16 41.3**	**-0.6**
FINES	**FINESS Array B**	**26.65**	**250**	*i* P		**P**	**11 16 48.5**	**+5.6**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.7s							
FINES	**FINESS Array B**	**26.65**	**250**	P		**P**	**11 16 44.2**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=27,slow=9.6,SNR=5.1							
FINES				LR		LR	11 28 05.0	
	comp=Z,90nm,19.7s,baz=21,slow=38							
	comp=Z,2.6nm,0.8s							
G16K	**Koyuk River**	**26.88**	**60**	P		**P**	**11 16 49.0**	**+4.0**
G16K				lAmb		lAmb	11 16 49.9	
	comp=Z,28nm,1.4s							
SFJD	**Kangerlussuaq**	**27.09**	**325**	LR		LR	11 26 45.4	
	comp=Z,81nm,21.4s,baz=353,slow=35							
H18K	**Honhosa River**	**27.42**	**57**	P		**P**	**11 16 50.5**	**+0.7**
H17K	**Granite Mounta**	**27.52**	**58**	P		**P**	**11 16 51.9**	**+1.1**
H17K				lAmb		lAmb	11 16 54.5	
	comp=Z,18nm,1.1s							
H29M	**Whitestone**	**27.65**	**39**	lAmb		lAmb	11 16 55.5	
	comp=Z,29nm,1.4s							
KIRV	**Kirov**	**27.78**	**224**	*e*P		**P**	**11 16 55.5**	**+2.4**
KIRV	**Kirov**	**27.78**	**224**	LR		LR	11 30 03.2	
	comp=Z,216nm,19.1s,baz=337,slow=40							
PRP	**Porcupine Dome**	**27.93**	**45**	P		**P**	**11 16 54.4**	**-0.3**
POKR	**Poker Flat Res**	**28.21**	**47**	lAmb		lAmb	11 17 06.6	
	comp=Z,12nm,1.1s							
H31M	**Peel River**	**28.28**	**35**	P		**P**	**11 16 57.9**	**+0.4**
H31M				lAmb		lAmb	11 17 05.2	
	comp=Z,24nm,1.3s							
I26K	**Coal Creek Min**	**28.29**	**43**	lAmb		lAmb	11 17 08.0	
	comp=Z,10.0nm,1.1s							
MDM	**Murphy Dome**	**28.31**	**48**	lAmb		lAmb	11 17 01.7	
	comp=Z,19nm,1.2s							
NOA	**NORSAR Array B**	**28.32**	**265**	LR		LR	11 28 14.7	
	comp=Z,65nm,18.2s,baz=0.0,slow=36							
COLA	**College**	**28.42**	**48**	P		**P**	**11 16 59.3**	**+0.6**
COLA	**College**	**28.42**	**48**	P		**P**	**11 16 59.3**	**+0.6**
COLA				pmax		pmax		
	comp=Z,28nm,1.4s							
IL31		**28.59**	**47**	P		**P**	**11 16 57.2**	**-3.0**
ILAR	**Eielson Array**	**28.59**	**47**	P		P	11 16 55.6	-4.7
ILAR	**Eielson Array**	**28.59**	**47**	P		P	11 16 55.2	-5.1
	comp=Z,1.5nm,0.9s,baz=350,slow=8.3,SNR=21							
ILAR				LR		LR	11 27 31.8	
	comp=Z,150nm,19.5s,baz=335,slow=35							
	comp=Z,1.5nm,0.9s							
MA2	**Magadan**	**28.65**	**109**	*e*P		P	11 16 55.8	-5.1
MA2				pmax		pmax		
	comp=Z,16nm,1.8s							
MA2	**Magadan**	**28.65**	**109**	LR		LR	11 28 01.4	
	comp=Z,67nm,20.4s,baz=16,slow=36							
HFS	**Hagfors**	**29.00**	**262**	LR		LR	11 27 59.6	
	comp=Z,166nm,20.5s,baz=18,slow=35							
ARU	**Arti**	**29.43**	**213**	*c* *i*P		**P**	**11 17 09.5**	**+1.7**
ARU							11 18 02.4	
ARU				S		**S**	**11 22 07.4**	**+6.1**
ARU				pmax		pmax		
	comp=Z

comp=Z,170nm,19.7s,baz=286,slow=41
LPSR Galich'ya Gora 34.43 234 *e*P **P 11 17 52.3 +0.6**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
KURK Kurchatov 34.51 190⇑ *e*P **P 11 17 53.4 +1.1**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 34.60 190 P **P 11 17 54.2 +1.0**
comp=Z,0.6nm,0.7s,baz=17,slow=7.1,SNR=7.4
KURBB PP **PnPn 11 19 06.1 -2.2**
comp=Z,1.1nm,1.0s,baz=5.5,slow=11,SNR=4.6
KURBB PcP **PcP 11 20 26.5 -0.7**
comp=Z,0.7nm,1.0s,baz=352,slow=2.9,SNR=7.1
KURBB LR LR 11 34 23.6
comp=Z,274nm,20.6s,baz=170,slow=40
comp=Z,0.6nm,0.7s
KDAK Kodiak Island 35.15 54 *i* P P 11 17 40.6 -17
KDAK Kodiak Island 35.15 54 LR LR 11 32 14.0
comp=Z,171nm,18.6s,baz=31,slow=37
DGZ Jazzator, Alta 35.45 180 *e*P **P 11 18 00.4 -0.3**
DGZ pmax pmax
comp=Z,13nm,4.5s
VRH Novokhopyorsk 35.63 231 *e*P **P 11 18 02.6 +0.6**
VRH pmax pmax
comp=Z,10.0nm,0.4s
PETK Petropavlovsk- 35.64 103 LR LR 11 32 29.0
comp=Z,65nm,19.5s,baz=344,slow=36
VSR Storozhevoye 35.79 233 *e*P **P 11 18 03.2 -0.2**
VSR pmax pmax
comp=Z,5.0nm,0.7s
DLBC Dease Lake 35.85 33 LR LR 11 32 37.6
comp=Z,202nm,20.9s,baz=341,slow=37
ABKAR Akbulak array 36.53 211 P **P 11 18 10.9 +1.1**
AKASG Malin Array Be 37.05 244 *e*P **P 11 18 15.1 +1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 37.05 244 P **P 11 18 15.6 +1.4**
comp=Z,0.7nm,0.4s,baz=6.9,slow=8.3,SNR=6.3
comp=Z,0.7nm,0.4s
AKBB Malin Array Si 37.05 244⇑ *e*P **P 11 18 15.6 +1.5**
KLR Kul'dur 37.49 131⇑ *e*P **P 11 18 15.2 -2.7**
KLR pmax pmax
comp=Z,4.0nm,1.3s
KLR Kul'dur 37.49 131 LR LR 11 35 04.7
comp=Z,68nm,18.1s,baz=352,slow=38
SONM Songino Array 37.62 159 P **P 11 18 19.3 +0.1**
SONM Songino Array 37.62 159 P **P 11 18 19.3 +0.1**
SONM pmax pmax
comp=Z,5.0nm,1.1s
SONM Songino Array 37.62 159 P **P 11 18 20.1 +0.9**
comp=Z,1.5nm,0.8s,baz=344,slow=7.2,SNR=10
SONM PcP **PcP 11 20 35.8 -0.7**
comp=Z,0.8nm,0.8s,baz=327,slow=3.5,SNR=2.3
SONM LR LR 11 34 02.9
comp=Z,57nm,19.4s,baz=78,slow=36
comp=Z,1.5nm,0.8s
CLL Collm 37.80 261 *e*P **P 11 18 25.0 +4.5**
CLL Collm 37.80 261 *e*P **P 11 18 23.0 +2.5**
CLL *ex* x 11 18 36.0
MAKZ Makanchi 38.38 186 P **P 11 18 25.8 +0.4**
MAKZ Makanchi 38.38 186 P **P 11 18 25.8 +0.4**
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 38.39 186 P **P 11 18 25.8 +0.3**
MK31 Makanchi Array 38.39 186*d* *i*P **P 11 18 25.4 -0.1**
MKAR Makanchi Array 38.39 186 P **P 11 18 25.8 +0.3**
MKAR Makanchi Array 38.39 186*ce*P P 11 18 31.7 +6.2
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 38.39 186 P **P 11 18 26.1 +0.5**
comp=Z,2.0nm,0.9s,baz=10,slow=7.4,SNR=21
MKAR PcP **PcP 11 20 37.8 -0.9**
comp=Z,1.3nm,0.9s,baz=354,slow=2.9,SNR=2.2
MKAR LR LR 11 35 43.8
comp=Z,157nm,18.2s,baz=41,slow=38
comp=Z,2.0nm,0.9s
KOLS Kolonicke sedl 39.36 251 *e*P P 11 18 42.2 +8.5
VRAC Vranov 39.47 257 LR LR 11 36 01.0
comp=Z,122nm,19.0s,baz=344,slow=38
SCHQ Schefferville 39.94 337 P P 11 18 32.5 -5.9
comp=Z,1.3nm,0.8s,baz=264,slow=10,SNR=1.2
comp=Z,1.3nm,0.8s
GERES GERESS Array B 40.18 259 LR LR 11 34 36.3
comp=Z,98nm,21.3s,baz=40,slow=35
YSS Yuzh-Sakhalins 40.54 120 *e*P **P 11 18 42.8 -0.6**
YSS MLR MLR
comp=Z,200nm,13.0s
BNX BinXian 40.69 136 ⇑P **P 11 18 43.6 -1.1**
BNX pmax pmax
comp=Z,8.0nm,0.9s
BNX pmax pmax
comp=Z,140nm,5.4s
XLT XiLinHaoTe 41.93 149 *e*P **P 11 18 54.8 -0.2**
XLT sP pwP 11 19 03.3 +1.5
XLT pmax pmax
comp=Z,6.0nm,1.0s
USRK Ussuriysk Ar. 42.52 132 LR LR 11 35 57.1
comp=Z,62nm,21.4s,baz=353,slow=35
DAVOX Davos/Dischmat 42.56 263 LR LR 11 40 10.0
comp=Z,112nm,18.0s,baz=268,slow=41
AAK Ala-Archa 42.66 194 P **P 11 19 02.4 +1.3**
AAK Ala-Archa 42.66 194⇑ *e*P **P 11 19 02.1 +1.0**
AAK pmax pmax
comp=Z,6.0nm,1.9s
AAK Ala-Archa 42.66 194 LR LR 11 39 56.9
comp=Z,341nm,18.8s,baz=7.5,slow=40
BOOM Boomskoye usch 42.78 193 P **P 11 19 02.5 +0.5**
BOOM IAmb IAmb 11 19 15.8
comp=Z,12nm,1.1s
BOOM Boomskoye usch 42.78 193 P **P 11 19 02.6 +0.5**
BOOM pmax pmax
comp=Z,12nm,1.1s
KIV Kislovodsk 42.78 229 *e*P **P 11 19 04.5 +2.6**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,71nm,16.0s
KBZ Khabaz 42.99 228*ce*P **P 11 19 05.4 +1.9**
KBZ pmax pmax
comp=Z,4.0nm,1.1s
KBZ Khabaz 42.99 228 P **P 11 19 06.3 +2.9**
comp=Z,2.8nm,1.0s,baz=286,slow=8.9,SNR=3.5
comp=Z,2.8nm,1.0s
ASAJ Asahikawa 43.35 121 LR LR 11 38 41.7
comp=Z,52nm,18.1s,baz=332,slow=38
ULM Lac du Bonnet 44.97 3 P P 11 19 12.5 -6.8
comp=Z,1.7nm,0.7s,baz=22,slow=2.8,SNR=5.3
ULM LR LR 11 38 03.6
comp=Z,141nm,18.4s,baz=46,slow=36
comp=Z,1.7nm,0.7s
BTK Batken 45.33 198 P **P 11 19 24.4 +2.0**
BTK Batken 45.33 198 P **P 11 19 24.4 +2.0**
BTK pmax pmax
comp=Z,14nm,0.9s
GTA Gaotai 45.87 167 *e*P **P 11 19 27.1 +0.4**
GTA pP pwP 11 19 36.0 +2.5
GTA pmax pmax
comp=Z,2.0nm,1.2s
NEW Newport 46.54 23 LR LR 11 39 06.6
comp=Z,87nm,19.0s,baz=22,slow=37
C09A Chrisman Ranch 46.97 24 IAmb IAmb 11 19 38.1
comp=Z,9.7nm,1.2s
EGMT Eagleton 47.00 16 IAmb IAmb 11 19 37.6
comp=Z,9.9nm,1.1s
BR131 Keskin Array S 47.62 237⇑ *e*P **P 11 19 42.6 +2.2**
BRTR Keskin Array B 47.62 237 P **P 11 19 42.9 +2.4**
comp=Z,2.2nm,0.8s,baz=18,slow=4.5,SNR=6.5
comp=Z,2.2nm,0.8s
GEYT Alibeck 47.91 211 P **P 11 19 43.9 +1.3**
comp=Z,1.3nm,0.5s,baz=272,slow=9.6,SNR=3.6
GEYT LR LR 11 42 45.8
comp=Z,107nm,20.1s,baz=22,slow=39
comp=Z,1.3nm,0.5s
E08A Dider Farm, El 48.25 24 IAmb IAmb 11 19 48.5
comp=Z,11nm,1.1s
F10A Beach Ranch, E 48.83 23 IAmb IAmb 11 19 52.9
comp=Z,5.6nm,1.0s
KSRS Korea Array 48.98 137 LR LR 11 42 22.0
comp=Z,33nm,18.4s,baz=5.0,slow=38
GOMU GeErMu 48.99 172 P **P 11 19 52.3 +0.9**
GOMU pmax pmax
comp=Z,2.0nm,0.9s
F33A 5 Mile Ranch, 49.38 3 IAmb IAmb 11 19 56.4
comp=Z,9.9nm,1.2s
PLID Pearl Lake 49.76 22 P **P 11 19 57.7 +0.8**
BMO Blue Mountains 49.95 23 IAmb IAmb 11 20 01.6
comp=Z,7.6nm,1.2s

YHL Hebgen Lake 50.13 17 IAmb IAmb 11 20 03.8
comp=Z,11nm,1.2s
YMP Mirror Lake Pl 50.27 16 IAmb IAmb 11 20 04.6
comp=Z,11nm,1.2s
I05D Terrebonne, OR 50.31 27 IAmb IAmb 11 20 04.3
comp=Z,13nm,1.1s
LKWY Lake 50.44 17 IAmb IAmb 11 20 30.4
comp=Z,11nm,1.4s
YFT Old Faithful 50.54 17 IAmb IAmb 11 20 07.8
comp=Z,8.4nm,1.0s
MJAR Matsushiro Arr 50.56 126 LR LR 11 42 52.1
comp=Z,33nm,18.7s,baz=15,slow=38
H17A Grant Village 50.60 17 IAmb IAmb 11 20 08.7
comp=Z,15nm,1.2s
I07A Izee 50.64 25 IAmb IAmb 11 20 07.8
comp=Z,7.0nm,1.0s
ESDC Sonseca Array 50.82 276 P **P 11 20 05.3 +0.5**
comp=Z,1.3nm,0.8s,baz=0.0,slow=7.4,SNR=6.7
comp=Z,1.3nm,0.8s
PINE Pine Mountain 50.87 26 IAmb IAmb 11 20 09.8
comp=Z,14nm,1.1s
FLWY Flagg Ranch 50.91 17 IAmb IAmb 11 20 12.5
comp=Z,16nm,1.1s
VAE Valguarnera 51.40 257 LR LR 11 43 08.5
comp=Z,137nm,18.1s,baz=312,slow=37
TPAW Teton Pass 51.50 17 IAmb IAmb 11 20 13.4
comp=Z,12nm,1.4s
PDAR Pinedale Array 52.26 16 P P 11 20 09.8 -6.0
comp=Z,0.3nm,0.7s,baz=15,slow=8.0,SNR=2.0
comp=Z,0.3nm,0.7s
WVOR Wild Horse Val 52.31 24 IAmb IAmb 11 20 19.6
comp=Z,8.6nm,1.1s
K22A Casper 52.44 13 IAmb IAmb 11 20 19.1
comp=Z,10nm,1.1s
YBH Yreka Blue Hor 52.86 28 LR LR 11 43 58.2
comp=Z,101nm,20.3s,baz=331,slow=38
HWUT Hardware Ranch 53.36 18 IAmb IAmb 11 20 27.4
comp=Z,9.5nm,1.0s
RWWY Rawlins 53.38 14 IAmb IAmb 11 20 25.8
comp=Z,16nm,1.2s
JNU Nakatsue 53.47 134 LR LR 11 43 58.1
comp=Z,29nm,18.5s,baz=347,slow=37
PHWY Pilot Hill 53.80 12 IAmb IAmb 11 20 30.1
comp=Z,8.5nm,1.4s
MMAI Mount Meron Ar 54.16 235 LR LR 11 48 59.4
comp=Z,31nm,18.9s,baz=346,slow=42
RDMU Red Mountain 54.45 16 IAmb IAmb 11 20 34.6
comp=Z,6.4nm,1.1s
PAHR Pah Rah Range 55.01 25 IAmb IAmb 11 20 39.8
comp=Z,9.0nm,1.2s
ISCO Idaho Springs 55.30 12 IAmb IAmb 11 20 52.2
comp=Z,7.7nm,1.3s
P18A Preston Nutter 55.37 17 IAmb IAmb 11 20 59.3
comp=Z,10nm,1.4s
TMUT Trail Mountain 55.68 18 IAmb IAmb 11 21 09.1
comp=Z,8.6nm,1.4s
AFDM Forest Hills D 55.70 27 IAmb IAmb 11 20 44.0
comp=Z,9.8nm,1.2s
KVN Kaiserville 55.71 24 IAmb IAmb 11 20 45.1
comp=Z,13nm,1.4s
SPR3 Spring Creek 3 55.89 20 IAmb IAmb 11 20 46.8
comp=Z,9.7nm,1.2s
Q16A Castle Valley 56.06 17 IAmb IAmb 11 20 47.0
comp=Z,13nm,1.2s
RYN Ryan 56.12 24 IAmb IAmb 11 20 47.5
comp=Z,11nm,1.2s
Q24A Divide 56.15 12 IAmb IAmb 11 20 48.2
comp=Z,13nm,1.4s
NVAR Mina Array Bea 56.32 24 P P 11 20 40.6 -4.7
comp=Z,0.4nm,0.7s,baz=352,slow=5.5,SNR=3.5
comp=Z,0.4nm,0.7s
TCRU Three Creeks R 56.33 19 IAmb IAmb 11 20 49.6
comp=Z,11nm,1.2s
HMU Henry Mountain 57.05 17 IAmb IAmb 11 21 09.8
comp=Z,6.8nm,1.3s
CCM Cathedral Cave 57.16 359 P **P 11 20 51.2 +0.1**
CCM Cathedral Cave 57.16 359 P **P 11 20 51.2 +0.1**
CCM pmax pmax
comp=Z,18nm,1.3s
SZCU Shurtz Canyon 57.32 19 IAmb IAmb 11 20 56.5
comp=Z,8.7nm,1.2s
CCUT Cedar City 57.36 20 IAmb IAmb 11 20 56.8
comp=Z,8.4nm,1.3s
DSP Deep Springs 57.39 24 P **P 11 20 54.5 +1.9**
DSP IAmb IAmb 11 20 57.3
comp=Z,10nm,1.3s
EIL Elat 57.52 235 LR LR 11 50 02.4
comp=Z,44nm,21.2s,baz=64,slow=40
S39A Bolivar 57.53 1 P **P 11 20 53.7 0.0**
S39A IAmb IAmb 11 20 56.0
comp=Z,9.0nm,0.9s
LCH Last Change Ra 57.54 24 IAmb IAmb 11 20 57.9
comp=Z,6.3nm,1.1s
T35A Sooner Cattle 58.29 4 P **P 11 20 60.0 +0.9**
U15A North Rim 58.51 19 IAmb IAmb 11 21 04.0
comp=Z,7.1nm,1.4s
GWY Greenwater Val 58.62 23 IAmb IAmb 11 21 05.0
comp=Z,8.1nm,1.0s
HHAR Hobbs 58.94 1 P **P 11 21 03.5 0.0**
V12A Nelson 59.13 21 P **P 11 21 06.7 +1.6**
V12A IAmb IAmb 11 21 09.1
comp=Z,6.5nm,1.2s
WUAZ Wupatki 59.45 18 IAmb IAmb 11 21 25.6
comp=Z,7.9nm,1.2s
TKL Tuckaleechee C 59.50 352 LR LR 11 45 00.5
comp=Z,135nm,21.1s,baz=342,slow=34
W13A Hualapai Mount 59.79 20 IAmb IAmb 11 21 13.7
comp=Z,7.9nm,1.4s
ANMO Albuquerque 60.13 13 P **P 11 21 13.3 +1.3**
ANMO IAmb IAmb 11 21 16.0
comp=Z,9.4nm,1.5s
ANMO Albuquerque 60.13 13 P **P 11 21 13.3 +1.3**
ANMO pmax pmax
comp=Z,9.0nm,1.5s
ANMO Albuquerque 60.13 13 LR LR 11 47 16.6
comp=Z,165nm,18.9s,baz=87,slow=36
WMOK Wichita Mounta 60.45 6 P **P 11 21 14.9 +0.9**
WMOK IAmb IAmb 11 21 17.1
comp=Z,11nm,1.2s
WMOK Wichita Mounta 60.45 6 P **P 11 21 14.9 +0.9**
WMOK pmax pmax
comp=Z,11nm,1.3s
X18A Snowflake 60.47 17 IAmb IAmb 11 21 18.1
comp=Z,13nm,1.4s
MIAR Mount Ida 60.67 1 P **P 11 21 15.2 -0.2**
MIAR Mount Ida 60.67 1 P **P 11 21 15.2 -0.2**
MIAR pmax pmax
comp=Z,14nm,1.2s
OXF Oxford 60.70 357 P **P 11 21 15.8 +0.2**
OXF Oxford 60.70 357 P **P 11 21 15.8 +0.2**
OXF pmax pmax
comp=Z,41nm,1.2s
PFO Pinyon Flats O 61.19 23 LR LR 11 48 25.4
comp=Z,89nm,20.8s,baz=338,slow=37
APMT Aspermont 61.84 7 P **P 11 21 24.6 +1.2**
WSAR Wadi Sarin 62.51 210 LR LR 11 52 48.9
comp=Z,45nm,18.6s,baz=48,slow=40
RAYN Ar Rayn 62.92 224 P **P 11 21 31.5 +0.7**
RAYN IAmb IAmb 11 21 43.1
comp=Z,4.1nm,0.9s
RAYN Ar Rayn 62.92 224 P **P 11 21 31.5 +0.7**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
BRDY Brady 63.89 6 IAmb IAmb 11 21 39.9
comp=Z,9.6nm,1.2s
OZNA Ozona 64.23 8 IAmb IAmb 11 21 42.2
comp=Z,7.2nm,1.1s
TXAR Lajitas Array 65.78 11 P P 11 21 43.5 -6.0
comp=Z,0.3nm,0.6s,baz=18,slow=3.5,SNR=5.7
TXAR LR LR 11 50 54.2
comp=Z,79nm,18.8s,baz=16,slow=37
comp=Z,0.3nm,0.6s
CMAR Chng Mai Arr 66.73 168 *i* P **P 11 21 55.0 -0.6**
CMAR Chiang Mai Arr 66.73 168 P **P 11 21 53.9 -1.7**
comp=Z,0.4nm,0.4s,baz=347,slow=6.9,SNR=7.8
CMAR LR LR 11 53 01.8
comp=Z,51nm,19.2s,baz=350,slow=38
comp=Z,0.4nm,0.4s
HPIG 68.13 13 IAmb IAmb 11 22 08.6
comp=Z,8.2nm,1.2s
LPIG La Paz 70.84 17 LR LR 11 54 25.6
comp=Z,91nm,19.2s,baz=359,slow=37
TORD Torodi Ar. Bea 76.62 267 P **P 11 22 54.3 -0.8**
comp=Z,1.7nm,0.4s,baz=16,slow=8.6,SNR=2.5
comp=Z,1.7nm,0.4s
PALK Pallekele 77.78 187 LR LR 12 00 35.0
comp=Z,56nm,19.6s,baz=87,slow=38
CMIG Matias Romero 78.05 2 LR LR 12 00 34.4

comp=Z,48nm,18.4s,baz=22,slow=38
JTS Las Juntas de 84.77 353 LR LR 12 04 43.3
comp=Z,66nm,18.0s,baz=1.0,slow=38
COCO West Island 97.14 171 *i* P **P 11 24 36.1 -0.5**

IDC ***22*** *11:19:02.8±1.0, 12°.48N×87°.79W, h0km, mb4.2/8, mbtmp4.2/11, ML3.2/3, MS3.8/16, Error ellipse: s-maj=42.1km s-min=16.2km az=44.0*
NEIC ***22*** *11:19:04.3±1.5, 12°.12N±0°.07×88°.21W±0°.07, h10km±2km, mb4.7/177, Error ellipse: s-maj=14.0km s-min=8.6km az=216.0*
CATAC ***22*** *11:19:06.3±0.8, 12°.08N×88°.22W, h27km±8km, MB4.5, mb4.2, ML4.0*
UCR ***22*** *11:19:06.1±2.3, 12°.12N×88°.21W, h10km, MW4.3, MB4.7(NEIC)*
SNET ***22*** *11:19:10.9±3.4, 12°.39N×88°.24W, h81km, ML4.1*
ISC 22 11:19:05.4±1.0, 12°.10N±0°.05×88°.22W±0°.04, h22km±7km, n385,σ1§07/322, mb4.6/85, MS3.8/14, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POTN	**Potosi Cosigui**	**1.13**	**38**	*i* P	**Pb**	**11 19 26.9**	**+0.7**
POTN				IAML		11 20 00.7	
	comp=Z,640nm,1.0s						
LCND	**La Caada**	**1.24**	**15**	*e*P	**Pb**	**11 19 28.0**	**-0.2**
LCND				*e*S	**Sb**	**11 19 46.3**	**+2.6**
LCND	**La Caada**	**1.24**	**15**	*i* P	**Pb**	**11 19 28.1**	**0.0**
LCND				IAML		11 19 49.5	
	comp=Z,1μm,1.0s						
ALJI	**Alcalda de J**	**1.26**	**344**	*i* P	**Pb**	**11 19 28.4**	**-0.1**
ALJI				IAML		11 19 40.6	
	comp=Z,2μm,1.0s						
CRIN	**San Cristobal**	**1.28**	**62**		**Pb**	**11 19 28.8**	**-0.2**
CRIN	**San Cristobal**	**1.28**	**62**	*i* P	**Pb**	**11 19 28.6**	**-0.3**
CRIN				IAML		11 20 04.6	
	comp=Z,5μm,1.0s						
AMPH	**Amapala**	**1.30**	**25**	*i* P	**Pb**	**11 19 29.1**	**0.0**
RANC	**El Ranchito**	**1.32**	**357**	*i* P	**Pb**	**11 19 29.4**	**-0.3**
RANC				IAML		11 20 06.0	
	comp=Z,2μm,1.0s						
PKGN	**Cerro Pekin**	**1.34**	**65**	*i* P	**Pb**	**11 19 29.2**	**-0.6**
PKGN				IAML		11 19 57.8	
	comp=Z,4μm,1.0s						
PACA	**Pacayal**	**1.36**	**356**	*e*P	**Pb**	**11 19 30.2**	**-0.1**
PACA				*e*S	**Sb**	**11 19 49.2**	**+1.9**
PACA	**Pacayal**	**1.36**	**356**	*i* P	**Pb**	**11 19 30.3**	**0.0**
PACA				*i* S	**Sb**	**11 19 49.1**	**+1.8**
PACA				IAML		11 19 56.9	
	comp=Z,20μm,1.0s						
COEB	**Comit de Eme**	**1.42**	**348**	*e*P	**Pb**	**11 19 30.4**	**-0.8**
COEB				*e*S	**Sb**	**11 19 50.0**	**+1.0**
COEB	**Comit de Eme**	**1.42**	**348**	*i* P	**Pb**	**11 19 30.4**	**-0.8**
COEB				IAML		11 20 02.7	
	comp=Z,1μm,1.0s						
HERN	**Volcan Telica**	**1.45**	**69**	*i* P	**Pn**	**11 19 30.1**	**-0.2**
HERN				IAML		11 20 12.6	
	comp=Z,2μm,1.0s						
TECO	**Alcaldia de Te**	**1.53**	**339**	*i* P	**Pn**	**11 19 31.8**	**+0.4**
TECO				IAML		11 19 58.4	
	comp=Z,610nm,1.0s						
CNGN	**Cerro Negro**	**1.54**	**75**	Pn	**Pn**	**11 19 31.9**	**+0.4**
CNGN	**Cerro Negro**	**1.54**	**75**	*i* P	**Pn**	**11 19 31.8**	**+0.3**
CNGN				IAML		11 19 47.1	
	comp=Z,2μm,1.0s						
PQSS	**Presa 15 de Se**	**1.55**	**348**	*i* P	**Pb**	**11 19 32.3**	**-1.1**
PQSS				*i* S	**Sb**	**11 19 52.6**	**0.0**
PQSS				IAML		11 19 54.6	
	comp=Z,630nm,1.0s						
MACN	**El Madrono**	**1.55**	**76**	*i* P	**Pn**	**11 19 31.9**	**+0.2**
MACN				IAML		11 20 00.3	
	comp=Z,410nm,1.0s						
ILCN	**San Idelfonso**	**1.56**	**72**	*i* P	**Pn**	**11 19 31.8**	**0.0**
ILCN				IAML		11 19 44.3	
	comp=Z,370nm,1.0s						
LEVN	**Ruinas Leon Vi**	**1.59**	**79**	*i* P	**Pn**	**11 19 32.5**	**+0.3**
LEVN				IAML		11 20 14.4	
	comp=Z,1μm,1.0s						
UESV	**Universidad de**	**1.62**	**340**	*i* P	**Pb**	**11 19 33.7**	**-1.0**
UESV				IAML		11 20 00.1	
	comp=Z,2μm,1.0s						
SCLA	**Alcaldia de Sa**	**1.67**	**343**	*i* P	**Pb**	**11 19 34.0**	**-1.4**
SCLA				*i* S	**Sb**	**11 19 55.3**	**-0.7**
SCLA				IAML		11 20 10.8	
	comp=Z,1μm,1.0s						
MOMN	**Momotombo**	**1.67**	**79**	*i* P	**Pn**	**11 19 32.7**	**-0.6**
MOMN				*i* S	**Sb**	**11 19 55.1**	**-0.9**
MOMN				IAML		11 20 04.4	
	comp=Z,45nm,1.0s						
MSHP	**Masachapa**	**1.67**	**99**	*i* P	**Pn**	**11 19 33.4**	**+0.1**
MSHP				IAML		11 21 34.4	
	comp=Z,590nm,1.0s						
SJTE	**Alcalda de S**	**1.69**	**333**	*i* P	**Pn**	**11 19 34.2**	**+0.5**
SJTE				IAML		11 19 59.2	
	comp=Z,1μm,1.0s						
MOM2	**El Cardon**	**1.73**	**79**	*i* P	**Pn**	**11 19 34.0**	**-0.1**
MOM2				IAML		11 20 18.3	
	comp=Z,1μm,1.0s						
PAVA	**Las Pavas**	**1.75**	**336**	*i* P	**Pn**	**11 19 34.8**	**+0.3**
PAVA				*i* S	**Sb**	**11 19 57.0**	**-1.4**
PAVA				IAML		11 20 18.7	
	comp=Z,2μm,1.0s						
LOMA	**Loma Larga**	**1.79**	**329**	*i* P	**Pn**	**11 19 35.5**	**+0.4**
LOMA				IAML		11 20 10.1	
	comp=Z,930nm,1.0s						
APQ2	**Apoyeque**	**1.85**	**87**	*i* P	**Pn**	**11 19 35.9**	**+0.1**
APQ2				IAML		11 20 03.1	
	comp=Z,1μm,1.0s						
SNET	**Serv Nac Est T**	**1.86**	**328**		**Pn**	**11 19 36.1**	**+0.1**
UNAN	**Cigeo UNAN**	**1.90**	**90**	*i* P	**Pn**	**11 19 36.6**	**+0.1**
UNAN				IAML		11 20 15.3	
	comp=Z,6μm,1.0s						
TISN	**Laguna Tiscapa**	**1.91**	**89**	*i* P	**Pn**	**11 19 36.6**	**0.0**
TISN				IAML		11 19 45.2	
	comp=Z,90nm,1.0s						
PMON	**Piamonte**	**1.92**	**326**	*i* P	**Pn**	**11 19 37.0**	**+0.1**
PMON				IAML		11 20 18.7	
	comp=Z,2μm,1.0s						
JAYA	**Jayaque - finc**	**1.95**	**322**	*i* P	**Pn**	**11 19 37.9**	**+0.5**
JAYA				IAML		11 20 13.8	
	comp=Z,2μm,1.0s						
R45A8	**Distro VI**	**1.96**	**89**	*i* P	**Pn**	**11 19 37.3**	**+0.1**
R45A8				IAML		11 19 47.6	
	comp=Z,1μm,1.0s						
WILN	**Americas 2**	**1.99**	**88**	*i* P	**Pn**	**11 19 37.4**	**-0.3**
WILN				IAML		11 20 32.4	
	comp=Z,750nm,1.0s						
MAS3	**Al N del Volca**	**2.00**	**92**	*i* P	**Pn**	**11 19 37.6**	**-0.3**
MAS3				IAML		11 19 47.5	
	comp=Z,1μm,1.0s						
LIMN	**Finca el Limon**	**2.04**	**62**	*i* P	**Pn**	**11 19 38.5**	**-0.1**
LIMN				IAML		11 20 15.9	
	comp=Z,770nm,1.0s						
NANN	**Nandasmo**	**2.06**	**94**	*i* P	**Pn**	**11 19 39.2**	**+0.5**
NANN				IAML		11 20 15.3	
	comp=Z,10μm,1.0s						
TGUH	**Tegucigalpa,Un**	**2.15**	**25**	Pn	**Pb**	**11 19 41.4**	**-2.4**
TGUH	**Tegucigalpa,Un**	**2.15**	**25**	*i* P	**Pb**	**11 19 41.8**	**-1.9**
TGUH				IAML		11 20 11.6	
	comp=Z,2μm,1.0s						
LLGN	**La Laguna**	**2.17**	**341**	*i* P	**Pb**	**11 19 41.8**	**-2.2**
LLGN				IAML		11 20 22.8	
	comp=Z,910nm,1.0s						
CEVE	**Cerro Verde**	**2.19**	**321**	*i* P	**Pn**	**11 19 41.2**	**+0.4**
CEVE				IAML		11 20 18.8	
	comp=Z,2μm,1.0s						
NUBE	**Las Nubes**	**2.35**	**320**	*i* P	**Pn**	**11 19 42.7**	**-0.1**
NUBE				*i* S	**Sn**	**11 20 11.9**	**+0.8**
NUBE				IAML		11 20 20.1	
	comp=Z,1μm,1.0s						
MATN	**Matagalpa**	**2.38**	**70**		**Pn**	**11 19 43.2**	**0.0**
MATN	**Matagalpa**	**2.38**	**70**	*i* P	**Pn**	**11 19 45.0**	**+1.8**
MATN				IAML		11 20 33.3	
	comp=Z,290nm,1.0s						
RCPN	**Sur Rio San Ju**	**2.51**	**55**	*i* P	**Pn**	**11 19 45.1**	**+0.1**
RCPN				IAML		11 19 48.7	
	comp=Z,1.1nm,1.0s						
BOAB	**BOACO BROADBAN**	**2.52**	**82**	Pn	**Pn**	**11 19 45.3**	**+0.3**
BOAB	**BOACO BROADBAN**	**2.52**	**82**	*i* P	**Pn**	**11 19 45.5**	**+0.5**
BOAB				IAML		11 20 16.6	
	comp=Z,320nm,1.0s						
MTO3	**Montecristo**	**2.54**	**334**		**Pn**	**11 19 46.0**	**+0.5**

CONN Concepcion 2.59 102 *i* P Pn 11 19 46.6 +0.6
CONN IAML 11 20 20.1
comp=Z,6µm,1.0s
ESQI Esquipulas 2.68 336 Pn Pn 11 19 47.3 0.0
ESQI Esquipulas 2.68 336 *i* P Pn 11 19 47.8 +0.5
HZTE Horizontes, Gu 2.92 118 Pn Pn 11 19 50.7 +0.2
HZTE Horizontes, Gu 2.92 118 *i* P Pn 11 19 50.4 -0.1
HZTE *i* S Sn 11 20 25.2 +0.3
HZTE IAML 11 20 56.5
comp=Z,640nm,1.0s
ACON Acoyapa 2.98 92 Pn 11 19 50.6 -0.8
SAJU San Juanillo, 3.19 129 *i* P Pn 11 19 53.7 -0.5
SAJU IAML 11 21 10.9
comp=Z,290nm,1.0s
ORTG Ortega, Santa 3.21 122 Pn Pn 11 19 54.2 -0.4
ORTG Ortega, Santa 3.21 122 *i* P Pn 11 19 54.1 -0.5
ORTG IAML 11 20 15.0
comp=Z,240nm,1.0s
DUNO Dulce Nombre, 3.35 127 *i* P Pn 11 19 53.3 -3.1
INDI Punta indio, G 3.47 130 *i* P Pn 11 19 58.1 0.0
INDI IAML 11 21 14.8
comp=Z,260nm,1.0s
JTS Las Juntas de 3.67 119 Pn Pn 11 20 00.8 -0.1
JTS Las Juntas de 3.67 119 Pn Pn 11 20 00.1 -0.9
comp=Z,4.9nm,0.3s,baz=318,slow=16,SNR=15
JTS Sn Sn 11 20 41.5 -2.1
comp=Z,3.8nm,0.3s,baz=154,slow=22,SNR=4.8
comp=Z,9.6nm,0.3s
ARE1 Arenal 1 3.80 115 Pn Pn 11 20 03.3 +0.7
LAFE Finca La Fe, P 3.97 125 *i* P Pn 11 20 04.3 -0.7
LAFE IAML 11 21 29.1
comp=Z,2.0nm,1.0s
JACO JACO, Garabito 4.25 124 Pn 11 20 09.7 +0.8
JACO JACO, Garabito 4.25 124 *eP* Pn 11 20 09.6 +0.8
JACO JACO, Garabito 4.25 124 *i* P Pn 11 20 10.1 +1.2
JACO IAML 11 20 29.9
comp=Z,160nm,1.0s
ACOS Acosta 4.59 120 *eP* Pn 11 20 15.6 +1.9
ACOS *eS* Sn 11 21 09.1 +2.6
CVIMO Finca Echandi 4.68 116 *eP* Pn 11 20 17.4 +2.5
OCM Ochomogo 4.72 117 *eP* Pn 11 20 17.5 +2.0
OCM Ochomogo 4.72 117 *i* P Pn 11 20 17.9 +2.4
OCM IAML 11 20 30.7
comp=Z,200nm,1.0s
ABE2 San Pablo 4.73 120 *eP* Pn 11 20 17.2 +1.5
LCR2 La Lucha 2 4.76 119 *eP* Pn 11 20 17.3 +1.3
LCR2 La Lucha 2 4.76 119 *i* P Pn 11 20 17.5 +1.5
LCR2 IAML 11 21 22.9
comp=Z,120nm,1.0s
VICA Volcano Irazu 4.78 116 *eP* Pn 11 20 19.9 +3.3
REPA Paraso 4.83 117 *eP* Pn 11 20 20.0 +3.0
VTLA Turrialba Volc 4.83 115 *eP* Pn 11 20 20.9 +3.7
CVTQ Turrialba Volc 4.84 115 *eP* Pn 11 20 21.1 +3.9
CVTR Volcan Turrial 4.84 115 *eP* Pn 11 20 22.0 +4.6
VTR0 Volcan Turrial 4.84 115 *eP* Pn 11 20 21.7 +4.4
CVTV Tajo 4.86 115 *eP* Pn 11 20 21.4 +3.9
RIMA Rio Macho 4.87 118 *eP* Pn 11 20 18.9 +1.4
RIMA Rio Macho 4.87 118 *i* P Pn 11 20 19.4 +1.9
CDM Cerro de Muert 5.06 120 ij *i* P Pn 11 20 21.4 +1.1
CDM Cerro de Muert 5.06 120 *i* P Pn 11 20 21.4 +1.1
PEZE Perez Zeledon, 5.22 121 *eP* Pn 11 20 23.0 +0.9
PEZE Perez Zeledon, 5.22 121 *i* P Pn 11 20 23.1 +0.9
PEZE IAmb IAmb 11 20 24.9
comp=Z,74nm,0.7s
PEZE IAML 11 20 38.0
comp=Z,160nm,1.0s
OCHAL Ojochal 5.40 123 *i* P Pn 11 20 25.5 +0.9
OCHAL IAML 11 20 29.3
comp=Z,1.4nm,1.0s
OCHAL IAmb IAmb 11 20 30.8
comp=Z,0.5nm,0.5s
OCHAL IVmB_BB 11 20 35.8
comp=Z,60nm,1.0s
PLAN Los Planes de 5.62 127 *i* P Pn 11 20 28.4 +0.8
PLAN IAmb IAmb 11 20 30.9
comp=Z,110nm,0.6s
PLAN IVmB_BB 11 20 42.0
comp=Z,4µm,1.0s
PLAN IAML 11 21 32.2
comp=Z,280nm,1.0s
CCIG Comitan 5.63 318 Pn Pn 11 20 28.4 +0.4
BRU2 Volcan 6.35 121 Pn Pn 11 20 38.2 +0.3
TEIG Tepich 8.08 360 LR LR 11 24 28.0
comp=Z,3µm,20.5s,baz=259,slow=42
CMIG Matias Romero 8.14 308 Pn Pn 11 21 03.7 +1.5
comp=Z,0.9nm,0.3s,baz=161,slow=9.8,SNR=16
comp=Z,2.8nm,0.4s
TLIG Tlapa 11.38 300 Pn Pn 11 21 48.3 +1.5
DWPF Disney Wildern 17.14 21 P Pn 11 23 03.2 -0.4
baz=203
SDV Santo Domingo 17.58 99 P Pn 11 23 06.3 -3.1
comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=3.9
SDV LR LR 11 31 44.8
comp=Z,126nm,19.3s,baz=258,slow=44
comp=Z,3.5nm,0.8s
BRAL Brewton 19.00 3 P P 11 23 24.9 -0.7
baz=183
833A Chaparral WMA, 19.22 329 P P 11 23 28.4 +0.4
833A Chaparral WMA, 19.22 329 P P 11 23 28.0 -0.1
baz=145,SNR=23
352A Blakely 19.52 8 P Pn 11 23 33.3 +0.7
352A IAmb IAmb 11 23 34.4
comp=Z,37nm,0.8s
TIGA Tifton 19.71 12 P P 11 23 32.6 -0.7
baz=193
VBMS Vicksburg 20.13 354 IAmb IAmb 11 23 41.0
comp=Z,43nm,0.8s
VBMS Vicksburg 20.13 354 P P 11 23 37.9 -0.1
baz=173
HNDO Hondo 20.16 331 P P 11 23 38.7 +0.3
HNDO IAmb IAmb 11 23 47.1
comp=Z,30nm,0.8s
NATX Nacogdoches 20.45 344 P Pn 11 23 42.1 -1.5
NATX IAmb IAmb 11 23 43.7
comp=Z,30nm,0.9s
NATX Nacogdoches 20.45 344 P P 11 23 41.3 -0.1
baz=162
435B Jarrell 20.51 336 P P 11 23 41.9 -0.2
435B IAmb IAmb 11 23 43.9
comp=Z,52nm,1.3s
435B Jarrell 20.51 336 P P 11 23 41.9 -0.2
baz=153
152A Waverly Hall 20.72 8 IAmb IAmb 11 23 49.1
comp=Z,19nm,0.8s
DRIO Del Rio 20.74 328 P P 11 23 44.0 -0.7
LRAL Lakeview Retre 20.86 3 P Pn 11 23 47.3 -1.1
LRAL Lakeview Retre 20.86 3 P P 11 23 45.9 0.0
baz=183,SNR=6.4
154A Montrose 20.95 12 P P 11 23 46.5 -0.3
154A IAmb IAmb 11 24 01.8
comp=Z,38nm,0.9s
Z47A Carrollton 21.00 0 P P 11 23 47.9 +0.6
JCT Junction City 21.20 331 P P 11 23 49.0 -0.7
JCT IAmb IAmb 11 24 01.3
comp=Z,22nm,0.8s
JCT Junction City 21.20 331 P P 11 23 49.3 -0.4
baz=147,SNR=9.4
ATAH Atahualpa 21.46 152 LR LR 11 30 52.8
comp=Z,165nm,19.9s,baz=353,slow=33
Z41A Richland Creek 21.47 349 P P 11 23 52.3 -0.1
BRDY Brady 21.53 334 P P 11 23 52.6 -0.5
BRDY IAmb IAmb 11 23 54.2
comp=Z,20nm,0.8s
WHTX Lake Whitney, 21.54 338 P P 11 23 53.4 +0.2
baz=155
GOGA Godfrey 21.65 11 P P 11 23 53.8 -0.6
GOGA Godfrey 21.65 11 P P 11 23 54.5 +0.1
baz=193,SNR=6.6
Y45A Yeager Farm, C 21.70 357 IAmb IAmb 11 23 58.1
comp=Z,17nm,0.9s
Y49A Blount Mountai 21.72 4 P P 11 23 55.0 -0.1
SAND Sanderson 21.96 326 P P 11 23 57.1 -0.7
NHSC New Hope 22.16 18 P P 11 23 59.2 -0.6
baz=201
OZNA Ozona 22.21 329 P P 11 23 59.4 -1.1
OZNA IAmb IAmb 11 24 03.0
comp=Z,41nm,1.0s
FW07 Weatherford 22.30 338 IAmb IAmb 11 24 03.6
comp=Z,19nm,0.8s
OXF Oxford 22.33 357 P P 11 24 00.7 -1.0
OXF IAmb IAmb 11 24 03.2
comp=Z,47nm,1.3s
OXF Oxford 22.33 357 P P 11 24 01.8 +0.1
baz=177
TXAR Lajitas Array 22.38 322 P P 11 24 02.9 +0.6

TXAR Lajitas Array 22.38 322 P P 11 24 03.0 +0.7
comp=Z,6.8nm,0.8s,baz=142,slow=11,SNR=62
TXAR PcP PcP 11 27 59.6 +2.4
comp=Z,0.5nm,0.8s,baz=108,slow=2.9,SNR=3.7
comp=Z,6.8nm,0.8s
FPAL Fort Paine 22.46 6 P P 11 24 02.4 -0.7
FW06 Azle 22.47 339 IAmb IAmb 11 24 05.3
comp=Z,11nm,0.7s
PLPT Palo Pinto 22.60 337 P P 11 24 03.5 -1.0
PLPT IAmb IAmb 11 24 06.6
comp=Z,20nm,0.9s
X40A Basin Creek Fa 22.68 350 P P 11 24 05.5 +0.2
HODGE Hodges 22.69 13 IAmb IAmb 11 24 07.4
comp=Z,19nm,0.8s
MIAR Mount Ida 22.87 349 P P 11 24 07.1 -0.3
MIAR Mount Ida 22.87 349 P P 11 24 07.7 +0.3
baz=166,SNR=32
ABTX Abilene, Hawle 22.96 335 IAmb IAmb 11 24 09.8
comp=Z,22nm,0.9s
ABTX Abilene, Hawle 22.96 335 P P 11 24 08.8 +0.4
baz=150,SNR=14
JSC Jenkinsville 22.97 15 IAmb IAmb 11 24 10.3
comp=Z,15nm,1.0s
SWET Sewanee 23.10 5 IAmb IAmb 11 24 28.2
comp=Z,22nm,1.4s
PCRV Puerto La Cruz 23.21 92 LR LR 11 35 56.5
comp=Z,155nm,18.6s,slow=44
BG3 Lake Jocassee 23.29 11 IAmb IAmb 11 24 13.2
comp=Z,12nm,0.8s
X37A Clayton 23.31 345 IAmb IAmb 11 24 14.4
comp=Z,16nm,0.8s
PAULI Pauline 23.35 13 IAmb IAmb 11 24 13.7
comp=Z,26nm,1.2s
WHAR Wooly Hollow 23.38 352 IAmb IAmb 11 24 13.5
comp=Z,27nm,0.9s
WTFS Witchita Falls 23.51 338 IAmb IAmb 11 24 16.7
comp=Z,16nm,0.9s
BIRD Birdtown, Kers 23.52 16 IAmb IAmb 11 24 14.8
comp=Z,11nm,0.7s
SN05 Snyder 5 23.72 333 IAmb IAmb 11 24 26.1
comp=Z,25nm,1.0s
APMT Aspermont 23.77 335 P P 11 24 15.2 -1.1
APMT IAmb IAmb 11 24 17.3
comp=Z,23nm,0.8s
KMSC Kings Mountain 23.77 14 P P 11 24 15.8 -0.6
KMSC Kings Mountain 23.77 14 P P 11 24 16.8 +0.4
baz=197
ODSA Odessa 23.89 329 IAmb IAmb 11 24 27.6
comp=Z,26nm,0.8s
SN07 Snyder 07 23.90 333 IAmb IAmb 11 24 18.3
comp=Z,15nm,1.1s
WVT Waverly 23.92 1 P P 11 24 18.1 +0.3
baz=181
V53A Saluda 23.97 11 IAmb IAmb 11 24 26.6
comp=Z,11nm,0.8s
V52A Sevierville 24.00 9 IAmb IAmb 11 24 20.3
comp=Z,21nm,1.2s
LPIG La Paz 24.11 303 LR LR 11 34 57.0
comp=Z,228nm,18.4s,baz=108,slow=39
POST Post 24.16 332 IAmb IAmb 11 24 20.8
comp=Z,34nm,1.1s
W35A Tecumseh 24.25 343 IAmb IAmb 11 24 23.9
comp=Z,14nm,0.8s
V55A Taylorsville 24.48 14 IAmb IAmb 11 24 24.5
comp=Z,28nm,1.4s
WMOK Wichita Mounta 24.49 339 IAmb IAmb 11 24 23.6
comp=Z,18nm,1.1s
WMOK Wichita Mounta 24.49 339 P P 11 24 22.9 -0.2
baz=154,SNR=18
HHAR Hobbs 24.62 349 IAmb IAmb 11 24 25.9
comp=Z,15nm,0.9s
PBMO Poplar Bluff 24.65 356 IAmb IAmb 11 24 24.2
comp=Z,10nm,0.7s
TUL3 Leonard 24.67 345 IAmb IAmb 11 24 25.2
comp=Z,20nm,0.9s
TUL3 Leonard 24.67 345 P P 11 24 23.9 -0.8
baz=162,SNR=8.4
TZTN Tazewell 24.70 9 P P 11 24 24.6 -0.3
baz=191
RLO Rose Lookout 24.73 347 IAmb IAmb 11 24 27.7
comp=Z,12nm,0.7s
T47A Sharon Grove 24.80 2 IAmb IAmb 11 24 25.5
comp=Z,17nm,0.8s
U38A Grette 24.86 348 IAmb IAmb 11 24 28.6
comp=Z,20nm,0.9s
CNNC Cliffs of the 24.86 20 P P 11 24 26.6 +0.2
baz=204
V58A Windy Hill, Pi 24.98 18 IAmb IAmb 11 24 35.3
comp=Z,13nm,0.7s
MNTX Cornudas Mount 25.11 324 P P 11 24 27.6 -1.1
baz=137,SNR=9.1
CGM3 Cape Girardeau 25.12 357 IAmb IAmb 11 24 28.5
comp=Z,9.4nm,0.9s
U56A King 25.15 15 IAmb IAmb 11 24 39.2
comp=Z,12nm,0.9s
MGMO Mountain Grove 25.21 352 IAmb IAmb 11 24 30.5
comp=Z,17nm,0.9s
MSTX Muleshoe 25.50 331 P P 11 24 31.2 -1.1
baz=145,SNR=13
S44A Carbondale 25.50 358 IAmb IAmb 11 24 32.8
comp=Z,28nm,1.4s
SIUC Southern Illin 25.52 358 IAmb IAmb 11 24 32.7
comp=Z,24nm,1.2s
AMTX Amarillo 25.77 334 P P 11 24 34.3 -0.5
baz=148
BLA Blacksburg 25.96 14 P P 11 24 36.4 0.0
baz=198
CCM Cathedral Cave 25.99 355 P P 11 24 34.9 -1.7
CCM IAmb IAmb 11 24 37.5
comp=Z,11nm,0.7s
CCM Cathedral Cave 25.99 355 P P 11 24 36.1 -0.5
baz=173
WCI Wyandotte Cave 26.07 3 P P 11 24 35.7 -1.7
WCI IAmb IAmb 11 24 37.3
comp=Z,8.7nm,0.7s
WCI Wyandotte Cave 26.07 3 P P 11 24 36.7 -0.6
baz=184
KAN13 South Haven SW 26.16 343 IAmb IAmb 11 24 39.9
comp=Z,22nm,0.9s
OK032 Salt Plains WL 26.19 342 IAmb IAmb 11 24 38.9
comp=Z,15nm,0.8s
R40A Maddies Statio 26.33 353 IAmb IAmb 11 24 40.7
comp=Z,9.6nm,0.7s
KAN08 Anthony NE Sta 26.50 342 IAmb IAmb 11 24 43.3
comp=Z,16nm,0.7s
KAN12 Harper NE Stat 26.58 342 P P 11 24 41.2 -0.8
KAN12 IAmb IAmb 11 24 44.0
comp=Z,17nm,0.7s
121A Cookes Peak, D 27.13 322 P P 11 24 47.3 +0.2
baz=134
Q51A Peebles 27.16 8 IAmb IAmb 11 24 47.4
comp=Z,16nm,0.8s
P40A Paris 27.53 354 IAmb IAmb 11 24 50.7
comp=Z,9.6nm,0.8s
Y22D IRIS PASSCAL I 27.73 325 P P 11 24 52.2 -0.3
baz=138
Y22F Passcal Instru 27.73 325 P P 11 24 51.8 -0.7
baz=138
CBN Corbin Frederi 27.74 19 P P 11 24 52.0 -0.3
baz=203
R32A Long Quarter, 27.83 342 IAmb IAmb 11 24 55.9
comp=Z,12nm,0.9s
KSU1 Kansas State U 27.90 346 IAmb IAmb 11 24 54.8
comp=Z,12nm,0.7s
KSU1 Kansas State U 27.90 346 P P 11 24 53.2 -0.6
baz=162
P52A Corning 27.95 10 P P 11 24 52.6 -1.6
baz=193
ANMO Albuquerque 28.13 327 P P 11 24 55.1 -1.0
baz=140
O48B Farmland 28.17 5 P P 11 24 54.8 -1.4
baz=186
SFIN Lafayette 28.18 2 P P 11 24 55.2 -1.1
baz=182
CBKS Cedar Bluff 28.51 341 P P 11 24 58.9 -0.4
baz=156
O54A Avella 28.81 13 IAmb IAmb 11 25 03.9
comp=Z,7.8nm,0.7s
KSCO Kaye Shedlock' 29.70 337 P P 11 25 09.7 -0.3
baz=151
SDCO Great Sand Dun 29.85 332 P P 11 25 13.4 +1.9
baz=144
JFWS Jewell Farm 30.75 357 P P 11 25 21.1 +2.1
baz=176
ETMB Extrema 30.86 134 P P 11 25 21.4 +1.1
ETMB IAmb IAmb 11 25 23.6
comp=Z,11nm,0.9s
MVCO Mesa Verde 30.92 327 P P 11 25 22.5 +1.6
baz=139
OGNE Ogallala 31.19 340 P P 11 25 25.1 +2.0
baz=153
WUAZ Wupatki 31.34 322 P P 11 25 26.1 +1.5
baz=132
PDMCI Parker Dam,Lak 32.32 317 P P 11 25 34.4 +1.4
baz=127
ECSD EROS Data Cent 32.34 349 IAmb IAmb 11 25 33.0
comp=Z,16nm,1.2s
SAML Samuel 32.51 129 P P 11 25 34.5 -0.3
SAML IAmb IAmb 11 25 36.0
comp=Z,4.6nm,0.8s
HMU Henry Mountain 32.66 326 IAmb IAmb 11 25 51.4
comp=Z,5.6nm,0.9s
BC3 Big Chuckawall 32.83 315 P P 11 25 39.5 +1.9
baz=124
IRM Iron Mountain 32.91 316 P P 11 25 39.7 +1.5
baz=126
O20A White River Ci 33.04 331 IAmb IAmb 11 25 51.6
comp=Z,8.1nm,0.8s
O20A White River Ci 33.04 331 P P 11 25 40.7 +1.2
baz=142
MONP2 Monument Peak 33.09 313 P P 11 25 41.0 +0.9
baz=122
G40A Rib Lake 33.09 357 IAmb IAmb 11 25 38.7
comp=Z,14nm,1.2s
L61B Northampton 33.12 21 P P 11 25 40.7 +0.9
baz=209
SPMN Marine on St. 33.24 354 P P 11 25 39.2 -1.6
baz=172,SNR=11
BELC Belle Mtn. Jos 33.40 315 P P 11 25 43.1 +0.4
baz=124
SADO Sadowa 33.47 12 IAmb IAmb 11 25 53.7
comp=Z,16nm,1.2s
V12A Nelson 33.65 319 P P 11 25 44.9 +0.2
F36A Milaca 33.95 353 IAmb IAmb 11 25 46.6
comp=Z,15nm,1.1s
K22A Casper 34.34 336 P P 11 25 51.1 +0.4
baz=147
LONY Lake Ozonia 34.45 17 P P 11 25 51.2 -0.2
baz=204
E38A The Farm, Brul 34.51 356 IAmb IAmb 11 25 51.0
comp=Z,9.5nm,0.8s
RSSD Black Hills 34.69 340 P P 11 25 54.0 +0.3
RSSD IAmb IAmb 11 25 55.8
comp=Z,4.4nm,0.7s
RSSD Black Hills 34.69 340 P P 11 25 54.6 +0.8
baz=152
PDAR Pinedale Array 35.73 333 P P 11 26 02.6 -0.1
comp=Z,0.7nm,0.6s,baz=122,slow=9.8,SNR=7.5
PDAR PcP PcP 11 28 31.6 +1.0
comp=Z,0.8nm,0.7s,baz=159,slow=3.5,SNR=5.1
comp=Z,0.7nm,0.6s
MDP Montagnes des 35.83 98 LR LR 11 42 56.1
comp=Z,59nm,18.5s,baz=50,slow=40
EYMN Ely 35.84 356 IAmb IAmb 11 26 01.9
comp=Z,6.4nm,0.7s
EYMN Ely 35.84 356 P P 11 26 01.4 -1.9
baz=174,SNR=6.0
E28A Huff 35.94 345 IAmb IAmb 11 26 04.1
comp=Z,9.4nm,0.7s
SBC Santa Barbara 36.24 313 P P 11 26 06.6 -0.4
baz=120
B35A Bob, Littlefor 36.44 354 IAmb IAmb 11 26 07.3
comp=Z,12nm,1.1s
AGMN Agassiz Nation 36.64 351 P P 11 26 09.1 -1.1
baz=167
PKME Peaks-Kenny Pk 36.79 22 P P 11 26 11.7 +0.3
baz=212
SNOW Snow King Moun 36.82 332 IAmb IAmb 11 26 24.6
comp=Z,11nm,0.8s
MDND Maddock 36.89 347 P P 11 26 11.9 -0.5
baz=161
MOOW Moose Ponds 37.03 333 P P 11 26 13.7 -0.2
NVAR Mina Array Bea 37.47 320 P P 11 26 19.6 +1.9
comp=Z,1.1nm,0.8s,baz=136,slow=8.4,SNR=7.3
NVAR PcP PcP 11 28 37.4 +1.4
comp=Z,0.8nm,0.6s,baz=133,slow=4.0,SNR=7.8
comp=Z,1.1nm,0.8s
RLMT Red Lodge 37.50 335 P P 11 26 17.6 -0.2
baz=145
LAO LASA Array 37.68 340 P P 11 26 19.5 +0.4
baz=150
ULM Lac du Bonnet 38.55 352 P P 11 26 23.9 -2.4
comp=Z,18nm,0.7s,baz=171,slow=8.7,SNR=38
comp=Z,18nm,0.7s
DGMT Dagmar 38.62 343 P P 11 26 27.2 +0.2
baz=154,SNR=11
HLID Hailey 38.65 329 P P 11 26 27.6 +0.2
baz=136
BOZ Bozeman (W) 38.88 334 P P 11 26 29.8 +0.5
baz=142
EGMT Eagleton 40.08 337 P P 11 26 39.0 -0.2
EGMT IAmb IAmb 11 26 50.4
comp=Z,8.8nm,0.8s
EGMT Eagleton 40.08 337 P P 11 26 39.6 +0.4
baz=146,SNR=5.1
PLID Pearl Lake 40.53 329 P P 11 26 41.9 -1.3
NEW Newport 43.36 332 P P 11 27 06.6 +0.6
baz=136
FFC Flin Flon 43.88 349 P P 11 27 09.4 -0.7
RPN Rapa Nui 44.06 208 LR LR 11 41 28.9
comp=Z,52nm,18.4s,baz=12,slow=30
SCHQ Schefferville 45.83 17 P P 11 27 23.4 -2.2
comp=Z,9.2nm,0.7s,baz=230,slow=11,SNR=8.5
SCHQ LR LR 11 47 56.9
comp=Z,114nm,18.2s,baz=260,slow=38
comp=Z,9.2nm,0.7s
FCC Fort Churchill 46.78 356 IAmb IAmb 11 27 32.2
comp=Z,7.7nm,0.7s
BDFB Brasilia 48.40 124 P P 11 27 45.7 -0.6
comp=Z,1.5nm,0.4s,baz=270,slow=1.6,SNR=3.5
comp=Z,1.5nm,0.4s
FRB Frobisher Bay 53.40 11 LR LR 11 51 18.4
comp=Z,115nm,18.6s,baz=196,slow=36
YKA Yellowknife Ar 53.75 345 P P 11 28 24.2 -1.5
comp=Z,2.5nm,0.8s,baz=138,slow=7.6,SNR=43
YKA PcP PcP 11 29 31.5 0.0
comp=Z,1.1nm,0.7s,baz=145,slow=3.9,SNR=9.5
comp=Z,2.5nm,0.8s
V35K Ketchikan 54.76 331 P P 11 28 33.9 +0.8
baz=125
DLBC Dease Lake 55.90 335 IAmb IAmb 11 28 50.2
comp=Z,6.4nm,0.9s
DLBC Dease Lake 55.90 335 P P 11 28 41.8 +0.3
baz=128
WRGLY Wrigley 56.80 342 P P 11 28 47.4 -0.3
baz=138
R33M Jennings River 56.87 335 P P 11 28 49.2 +0.7
baz=128
Q32M Nakina River 57.15 335 P P 11 28 50.8 +0.3
baz=126
TGTN Hyland Airport 57.21 338 P P 11 28 51.4 +0.7
baz=132
P33M Teslin, Yukon 58.11 336 P P 11 28 57.0 -0.2
baz=126
WHY Whitehorse 59.21 335 P P 11 29 06.4 +1.6
baz=124
FARO Faro, Yukon 59.52 337 P P 11 29 07.0 +0.2
baz=126
O30N Mendenhall 59.77 335 P P 11 29 08.9 +0.3
baz=123
SFJD Kangerlussuaq 60.26 16 LR LR 11 56 02.4
comp=Z,97nm,18.2s,baz=175,slow=37
PNL Peninsula 60.61 333 P P 11 29 14.2 -0.1
baz=119
YUK6 Outpost Mounta 60.80 335 P P 11 29 15.5 -0.4
baz=121
M30M Minto, Yukon 61.03 337 P P 11 29 16.9 -0.3
baz=123
M29M Somme Creek 61.62 336 P P 11 29 20.9 -0.3
baz=121
L29M L29M 61.84 337 P P 11 29 22.5 -0.1
baz=122
J30M Hart River 61.98 339 P P 11 29 22.8 -0.9
baz=124
H31M Peel River 62.02 340 P P 11 29 23.8 +0.1
baz=127
YUK3 Moose Creek 62.10 335 P P 11 29 24.4 -0.1
baz=119
I30M Mount Dempster 62.36 339 P P 11 29 25.9 -0.3
baz=125
G31M Satah River 62.67 341 IAmb IAmb 11 29 31.8
comp=Z,6.0nm,1.0s
G31M Satah River 62.67 341 P P 11 29 27.1 -1.0
baz=128
DAWY Dawson 62.82 337 P P 11 29 27.6 -1.6
baz=121

F31M	**Tsiigehtchic**	**62.83**	**342**	IAmb	IAmb	11 29 32.9
	comp=Z,4.7nm,1.1s					
F31M	**Tsiigehtchic**	**62.83**	**342**	P	**P**	**11 29 29.2 +0.1**
	baz=128					
M27K	**Edge Creek, AK**	**62.96**	**335**	P	**P**	**11 29 29.7 -0.5**
	baz=118					
MCARA	**McCarthy VSAT**	**63.00**	**334**	P	**P**	**11 29 30.8 +0.4**
	baz=116					
EPYK	**Eagle Plains**	**63.13**	**340**	P	**P**	**11 29 30.5 -0.7**
	baz=125					
L27K	**Beaver Creek,**	**63.27**	**336**	P	**P**	**11 29 31.8 -0.4**
	baz=118					
INK	**Inuvik**	**63.31**	**343**	IAmb	IAmb	11 29 33.4
	comp=Z,4.1nm,1.0s					
INK	**Inuvik**	**63.31**	**343**	P	**P**	**11 29 31.6 -0.6**
	baz=129					
INK	**Inuvik**	**63.31**	**343**	LR	LR	11 59 36.2
	comp=Z,63nm,18.2s,baz=4.0,slow=39					
G30M	**tAoh Zraii Nji**	**63.33**	**341**	P	**P**	**11 29 32.4 -0.1**
	baz=126					
BMRM	**Bremner River**	**63.52**	**333**	P	**P**	**11 29 33.4 -0.5**
	baz=114					
F30M	**Barrier River**	**63.56**	**342**	P	**P**	**11 29 33.7 -0.2**
	baz=126					
H29M	**Whitestone**	**63.60**	**340**	P	**P**	**11 29 34.0 -0.3**
	baz=123					
I28M	**Miner Creek**	**63.74**	**339**	P	**P**	**11 29 34.5 -0.8**
	baz=121					
N25K	**Chitina, Valde**	**63.78**	**334**	P	**P**	**11 29 35.3 -0.4**
	baz=115					
K27K	**Chicken**	**63.83**	**337**	P	**P**	**11 29 35.3 -0.5**
	baz=118					
A36M	**Sachs Harbour**	**63.84**	**348**	IAmb	IAmb	11 29 43.4
	comp=Z,3.4nm,0.8s					
A36M	**Sachs Harbour**	**63.84**	**348**	P	**P**	**11 29 34.8 -0.9**
	baz=139					
EGAK	**Eagle**	**63.84**	**338**	P	**P**	**11 29 35.8 -0.1**
	baz=120					
L26K	**Log Cabin Wild**	**63.87**	**335**	P	**P**	**11 29 36.3 +0.2**
	baz=117					
I27K	**Kandik River**	**64.42**	**338**	P	**P**	**11 29 40.1 +0.3**
	baz=120					
SCRK	**Sand Creek**	**64.55**	**336**	P	**P**	**11 29 40.9 +0.2**
	baz=116					
GLI	**Glacier Island**	**64.60**	**332**	P	**P**	**11 29 40.9 0.0**
	baz=112					
J26L	**Joseph Creek**	**64.63**	**337**	IAmb	IAmb	11 29 41.6
	comp=Z,7.3nm,1.4s					
J26L	**Joseph Creek**	**64.63**	**337**	P	**P**	**11 29 40.2 -0.9**
	baz=117					
E29M	**Blow River**	**64.66**	**342**	P	**P**	**11 29 40.5 -0.7**
	baz=124					
M24K	**Tolsona, Glenn**	**64.67**	**334**	P	**P**	**11 29 39.9 -1.5**
	baz=114					
H27K	**Steamboat Moun**	**64.70**	**339**	P	**P**	**11 29 39.7 -1.8**
	baz=120,SNR=5.6					
PAX	**Paxson**	**64.72**	**335**	P	**P**	**11 29 39.2 -2.6**
	baz=114					
RIDG	**Independent Ri**	**64.79**	**336**	P	**P**	**11 29 41.1 -1.1**
	baz=116					
I26K	**Coal Creek Min**	**64.84**	**338**	P	**P**	**11 29 41.7 -0.8**
	baz=118					
F28M	**Old Crow**	**64.86**	**341**	IAmb	IAmb	11 29 51.4
	comp=Z,5.2nm,0.8s					
F28M	**Old Crow**	**64.86**	**341**	P	**P**	**11 29 41.5 -1.0**
	baz=122,SNR=9.9					
SCM	**Sheep Creek Mo**	**65.06**	**333**	P	**P**	**11 29 43.3 -0.7**
	baz=112					
K24K	**Donnelly Dome**	**65.19**	**336**	P	**P**	**11 29 44.3 -0.5**
	baz=115					
M23K	**Glacier View**	**65.22**	**333**	P	**P**	**11 29 44.3 -0.7**
	baz=112					
J25K	**Salcha River,**	**65.38**	**337**	P	**P**	**11 29 45.9 -0.1**
	baz=115					
KNK	**Knik Glacier**	**65.41**	**333**	P	**P**	**11 29 45.9 -0.3**
	baz=111					
SEW	**Seward**	**65.41**	**331**	P	**P**	**11 29 45.5 -0.6**
	baz=110					
D28M	**Stokes Point**	**65.44**	**342**	P	**P**	**11 29 45.8 -0.4**
	baz=124					
G26K	**Porcupine Rive**	**65.84**	**339**	P	**P**	**11 29 48.3 -0.5**
	baz=118					
RC01	**Rabbit Creek A**	**65.88**	**332**	P	**P**	**11 29 48.5 -0.6**
	baz=110					
HDA	**Harding Lake**	**65.91**	**336**	P	**P**	**11 29 49.1 -0.2**
	baz=114					
WAT1	**Susitna Watana**	**65.96**	**334**	P	**P**	**11 29 49.4 -0.3**
	baz=112					
ILAR	**Eielson Array**	**66.03**	**336**	P	**P**	**11 29 48.8 -1.3**
	comp=Z,1.3nm,0.9s,baz=112,slow=4.9,SNR=10					
ILAR				PP	**PP**	**11 32 14.1 -1.4**
	comp=Z,0.4nm,0.8s,baz=131,slow=8.0,SNR=4.3					
ILAR				LR	LR	12 04 06.4
	comp=Z,59nm,18.2s,baz=64,slow=41					
	comp=Z,1.3nm,0.9s					
D27M	**Malcolm River**	**66.06**	**342**	P	**P**	**11 29 49.6 -0.7**
	baz=122					
KDAK	**Kodiak Island**	**66.26**	**328**	P	**P**	**11 29 51.4 -0.2**
	baz=106					
RND	**Reindeer**	**66.30**	**335**	P	**P**	**11 29 51.8 -0.1**
RND				IAmb	IAmb	11 29 52.3
	comp=Z,6.2nm,1.0s					
F26K	**Sheenjek River**	**66.31**	**340**	P	**P**	**11 29 52.0 +0.1**
	baz=118					
BMAR	**Burnt Mountain**	**66.34**	**339**	P	**P**	**11 29 51.8 -0.3**
MCK	**McKinley**	**66.46**	**335**	P	**P**	**11 29 53.1 +0.2**
	baz=112					
SUA	**Susitna One**	**66.46**	**332**	P	**P**	**11 29 52.3 -0.8**
	baz=109					
OHAK	**Old Harbor**	**66.48**	**327**	P	**P**	**11 29 52.6 -0.5**
	baz=105					
F25K	**Christian Rive**	**66.78**	**339**	P	**P**	**11 29 54.5 -0.4**
	baz=116					
NEA2	**Nenana**	**66.83**	**336**	P	**P**	**11 29 54.9 -0.4**
	baz=112					
H24K	**Noodor Dome**	**66.84**	**337**	P	**P**	**11 29 55.0 -0.4**
	baz=113					
O20K	**Slope Mountain**	**66.92**	**331**	P	**P**	**11 29 55.2 -0.8**
	baz=106					
TRF	**Thorofare Moun**	**66.92**	**334**	P	**P**	**11 29 55.1 -1.0**
	baz=110					
SKT	**Skwentna**	**66.98**	**333**	P	**P**	**11 29 55.7 -0.6**
	baz=108					
E25K	**Arctic Village**	**66.99**	**340**	P	**P**	**11 29 56.2 0.0**
	baz=116					
G24K	**Hadweenzic Riv**	**67.05**	**338**	P	**P**	**11 29 56.3 -0.2**
	baz=114					
P19K	**Oil Pt**	**67.09**	**330**	P	**P**	**11 29 56.3 -0.8**
	baz=106					
Q19K	**Cape Douglas,**	**67.10**	**329**	P	**P**	**11 29 56.3 -0.8**
	baz=105					
I23K	**Minto, Yukon-K**	**67.15**	**336**	P	**P**	**11 29 56.9 -0.4**
	baz=112					
PPLA	**Purkeypile**	**67.56**	**334**	P	**P**	**11 29 59.2 -0.8**
	baz=108					
C26K	**Camden Bay**	**67.60**	**342**	P	**P**	**11 29 60.0 0.0**
	baz=118					
MLY	**Manley**	**67.66**	**336**	P	**P**	**11 29 60.0 -0.6**
	baz=110					
O19K	**Port Alsworth**	**67.77**	**330**	P	**P**	**11 30 00.3 -0.9**
	baz=105					
D25K	**Kavik River**	**67.79**	**341**	P	**P**	**11 30 00.6 -0.7**
D25K				IAmb	IAmb	11 30 09.5
	comp=Z,4.9nm,0.8s					
D25K	**Kavik River**	**67.79**	**341**	P	**P**	**11 30 01.0 -0.3**
	baz=116					
COLD	**Coldfoot**	**68.24**	**338**	P	**P**	**11 30 04.0 -0.1**
	baz=112					
H21K	**Melozitna Rive**	**68.68**	**336**	P	**P**	**11 30 06.4 -0.5**
	baz=108					
C24K	**Franklin Bluff**	**68.70**	**341**	P	**P**	**11 30 06.5 -0.4**
	baz=114					
D23K	**Nanushuk River**	**69.05**	**340**	P	**P**	**11 30 09.5 +0.3**
	baz=112					
I20K	**Naaghedeneel**	**69.09**	**335**	P	**P**	**11 30 08.6 -0.8**
	baz=107					
N17K	**Nushagak Hills**	**69.23**	**330**	P	**P**	**11 30 11.2 +0.8**
	baz=102					
TTA	**Tatalina**	**69.25**	**333**	P	**P**	**11 30 11.4 +0.9**
	baz=104					
C23K	**Itkillik River**	**69.36**	**341**	P	**P**	**11 30 11.1 +0.1**
	baz=112					
L18K	**Granite Mounta**	**69.38**	**332**	P	**P**	**11 30 11.4 +0.1**
	baz=104					
F21K	**Alatna River**	**69.44**	**338**	P	**P**	**11 30 11.6 0.0**
	baz=108					
D22K	**Ayikyak River**	**69.70**	**340**	P	**P**	**11 30 13.1 0.0**
	baz=110					
H19K	**Roundabout Mou**	**70.09**	**336**	P	**P**	**11 30 14.7 -0.9**
	baz=105					
B21K	**Ikpikpuk River**	**70.59**	**340**	P	**P**	**11 30 18.1 -0.4**
	baz=108					
H18K	**Honhosa River**	**70.78**	**335**	P	**P**	**11 30 19.5 -0.4**
	baz=103					
D20K	**Etivluk River**	**71.01**	**339**	P	**P**	**11 30 21.5 +0.3**
	baz=103					
G18K	**Tagagawik**	**71.07**	**336**	P	**P**	**11 30 21.4 -0.2**
	baz=103					
SPITS	**Spitsbergen Ar**	**81.19**	**12**	LR	LR	12 07 18.5
	comp=Z,52nm,21.5s,baz=234,slow=36					
NOA	**NORSAR Array B**	**84.03**	**29**	LR	LR	12 09 07.3
	comp=Z,22nm,18.0s,baz=260,slow=36					
TIXI	**Tiksi**	**92.84**	**349**	LR	LR	12 22 00.3
	comp=Z,28nm,18.1s,baz=20,slow=41					
AKASG	**Malin Array Be**	**97.23**	**35**	LR	LR	12 14 46.8
	comp=Z,59nm,19.3s,baz=270,slow=35					
ASAR	**Alice Springs**	**138.44**	**248**	PKP	**PKPdf**	**11 38 30.4 +0.2**
	comp=Z,0.6nm,0.9s,baz=96,slow=1.5,SNR=4.0					
WRA	**Warramunga Arr**	**138.45**	**254**	PKP	**PKPdf**	**11 38 30.7 +0.5**
	comp=Z,1.4nm,1.2s,baz=92,slow=2.2,SNR=2.6					
CMAR	**Chiang Mai Arr**	**148.82**	**347**	PKPbc	**PKPdf**	**11 38 50.0 +1.7**
	comp=Z,3.6nm,0.7s,baz=339,slow=3.6,SNR=23					

*SDD **22** 11:43:10.1±2.3, 17°59N×74°42W, h17km±737km, MD4.3, ML3.8, MW4.2*
*SSNC **22** 11:43:22.0±1.4, 18°43N×74°13W, h3km±7km, MD3.5, ML3.6, MW3.3*
*OSPL **22** 11:43:25.4±1.6, 19°10N×73°77W, h5km±15km, ML3.3*
ISC 22 11:43:23.4±2.3, 18°9N±0°1×73°94W±0°05, h15km±14km, n27, σ1°61/31, 7C-3D, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTBY	**Guantanamo Bay**	**1.52**	**313**	⇑	*e*P	g	**Pn**	**11 43 50.2**	**0.0**
GTBY				⇑	*e*Sg	g	Sg	11 44 23.0	+11
GTBY					IAML			11 44 28.6	
	comp=N,593nm,0.7s								
GTBY					IAML			11 44 35.3	
	comp=E,432nm,0.8s								
GTBY	**Guantanamo Bay**	**1.52**	**313**		*e*P	g	**Pn**	**11 43 50.0**	**-0.2**
GTBY					*e*S	g	**Sn**	**11 44 10.7**	**+1.1**
GTBY					IAML			11 44 11.5	
	comp=E,483nm,0.3s								
GTBY					IAML			11 44 13.6	
	comp=E,535nm,0.3s								
GTBY	**Guantanamo Bay**	**1.52**	**313**		*i* P	g	**Pn**	**11 43 50.1**	**0.0**
GTBY					*e*S	g	**Sn**	**11 44 10.8**	**+1.1**
GTBY					IAML			11 44 14.6	
	comp=Z,264nm,0.7s								
PAPH	**Port-au-Prince**	**1.59**	**103**		*e*P	g	**Pn**	**11 43 49.8**	**-1.4**
PAPH					*e*S	g	**Sn**	**11 44 12.1**	**+0.6**
PAPH					IAML			11 44 14.1	
	comp=E,846nm,0.3s								
PAPH					IAML			11 44 14.5	
	comp=N,1μm,0.3s								
SABCS	**La Quijada**	**1.96**	**319**		*e*P	g	**Pn**	**11 43 55.8**	**-0.4**
RCC	**Rio Carpintero**	**1.99**	**304**		*e*P	g	**Pn**	**11 43 55.9**	**-0.8**
RCC					*e*S	g	**Sn**	**11 44 20.7**	**-0.7**
MOAC	**Moa**	**2.01**	**332**		*e*P	g	**Pn**	**11 43 59.2**	**+2.3**
MOAC					*e*S	g	**Sg**	**11 44 26.7**	**-1.5**
MOAC					IAML			11 44 27.9	
	comp=E,512nm,0.4s								
MOAC					IAML			11 44 28.2	
	comp=N,260nm,0.4s								
JIDR	**Jimani**	**2.02**	**101**	⇑	*e*Pg	g	**Pn**	**11 43 56.7**	**-0.3**
JIDR				⇓	*e*Sg	g	**Sg**	**11 44 27.5**	**-0.9**
JIDR					IAML			11 44 33.0	
	comp=E,603nm,0.6s								
JIDR					IAML			11 44 36.5	
	comp=N,377nm,0.6s								
MARVS	**Santiago de Cu**	**2.16**	**301**		*e*P	g	**Pn**	**11 43 58.7**	**-0.2**
MARVS					*e*S	g	**Sn**	**11 44 25.6**	**+0.1**
MARVS					IAML			11 44 30.9	
	comp=N,329nm,0.3s								
MARVS					IAML			11 44 32.4	
	comp=E,324nm,0.3s								
LODA1	**ITESIL, Dajabo**	**2.21**	**72**		*i* P	g	**Pn**	**11 43 58.0**	**-1.7**
LODA1					*e*S	g	**Sn**	**11 44 21.7**	**-5.0**
LOPE2	**Hotel El Peder**	**2.25**	**112**		*i* P	g	**Pn**	**11 44 00.6**	**+0.5**
LOPE2					*e*S	g	**Sn**	**11 44 26.7**	**-0.9**
LOPE2					IAML			11 44 38.3	
	comp=Z,240nm,1.3s								
NEDR	**Neiba UASD**	**2.42**	**99**	⇓	*e*Pg	g	**Pn**	**11 44 00.8**	**-1.7**
NEDR				⇑	*e*Sg	g	**Sb**	**11 44 37.6**	**+1.2**
NEDR					IAML			11 44 45.6	
	comp=N,394nm,0.9s								
NEDR					IAML			11 44 52.3	
	comp=E,336nm,0.6s								
SDDR	**Presa de Saban**	**2.51**	**87**	⇑	*e*Pg	g	**Pn**	**11 44 05.8**	**+2.0**
SDDR				⇑	*e*Sg	g	**Sg**	**11 44 47.3**	**+3.1**
SDDR					IAML			11 44 52.9	
	comp=E,170nm,0.6s								
SDDR					IAML			11 45 02.0	
	comp=N,196nm,1.2s								
SDDR	**Presa de Saban**	**2.51**	**87**		*e*P	g	**Pn**	**11 44 05.2**	**+1.4**
SDDR					*e*S	g	**Sn**	**11 44 35.5**	**+1.3**
SDDR					IAML			11 44 44.9	
	comp=N,142nm,0.6s								
SDDR					IAML			11 44 45.6	
	comp=N,135nm,0.6s								
SDDR	**Presa de Saban**	**2.51**	**87**		*i* P	g	**Pn**	**11 44 04.2**	**+0.3**
SDDR					IAML			11 45 04.2	
	comp=Z,104nm,1.1s								
CHIV	**Chivirico**	**2.58**	**295**		*e*P	g	Pn	11 44 02.6	-2.1
YAR	**Yar**	**2.72**	**303**		*e*P	g	**Pn**	**11 44 06.3**	**-0.3**
YAR					*e*S	g	**Sn**	**11 44 38.6**	**-0.7**
YAR					IAML			11 44 52.5	
	comp=E,81nm,1.2s								
YAR					IAML			11 44 57.6	
	comp=N,105nm,0.7s								
LMGC	**Las Mercedes**	**3.12**	**293**		*e*P	g	Pn	11 44 09.8	-2.4
LMGC					*e*S	g	Sn	11 44 45.6	-3.7
LMGC					IAML			11 44 46.8	
	comp=E,87nm,0.1s								
LMGC					IAML			11 44 47.4	
	comp=N,124nm,0.1s								
ABDR	**Alto Bandera**	**3.14**	**91**	⇓	*e*Pg	g	**Pn**	**11 44 14.4**	**+1.7**
ABDR				⇑	*e*Sg	g	**Sg**	**11 45 03.2**	**-1.1**
ABDR					IAML			11 45 24.0	
	comp=N,131nm,0.6s								
ABDR					IAML			11 45 27.6	
	comp=E,144nm,0.5s								
PILO	**Pilon**	**3.43**	**288**		*e*P	g	Pn	11 44 14.1	-2.3
PILO					*e*S	g	Sn	11 44 52.5	-4.4
PILO					IAML			11 44 55.9	
	comp=E,55nm,0.2s								
PILO					IAML			11 44 56.9	
	comp=N,111nm,0.2s								
SDV	**Santo Domingo**	**10.44**	**162**		*e*P	g	Pn	11 45 50.6	-2.3
BARC	**Barichara**	**12.24**	**176**		*e*P	g	Pn	11 46 16.1	-1.5
PTBC	**PUERTO BERRIO,**	**12.28**	**182**		*e*P	g	Pn	11 46 14.9	-3.0
HELC	**Santa Helena**	**12.71**	**187**		*e*P	g	Pn	11 46 23.9	-0.2
NORC	**Norcasia**	**13.27**	**184**		*e*P	g	Pn	11 46 30.4	-1.1
GUY2C	**Guyana, Caldas**	**13.65**	**186**		*e*P	g	Pn	11 46 37.4	+0.3
CHIC	**Chingaza**	**14.17**	**179**		*e*P	g	Pn	11 46 43.0	-1.1

*SDD **22** 11:49:43.9±0.5, 18°11N×71°23W, h20km±14km, MD3.1, ML2.1, MW3.3*
*OSPL **22** 11:49:43.9±0.5, 18°18N×71°25W, h42km±5km, ML1.9*
ISC 22 11:49:42.6±3.6, 18°1N±0°1×71°2W±0°2, h35km±6km, n5, σ0°57/10, 5C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEDR	**Neiba UASD**	**0.40**	**330**	⇑	*e*Pg	g	**Pn**	**11 49 52.3**	**+0.4**
NEDR				⇑	*e*Sg	g	**Sb**	**11 49 57.9**	**-0.3**
NEDR					IAML			11 49 58.8	
	comp=N,314nm,0.6s								
NEDR					IAML			11 49 58.8	
	comp=E,274nm,0.5s								
LOPE2	**Hotel El Peder**	**0.52**	**259**		*i* P	g	**Pn**	**11 49 53.6**	**+0.1**
LOPE2					*e*S	g	**Sb**	**11 50 01.2**	**-0.1**
LOPE2					IAML			11 50 01.6	
	comp=Z,97nm,0.5s								
JIDR	**Jimani**	**0.71**	**300**	⇑	*e*Pg	g	**Pn**	**11 49 56.3**	**+0.2**
JIDR				⇑	*e*Sg	g	**Sn**	**11 50 05.8**	**0.0**
JIDR					IAML			11 50 18.3	
	comp=E,83nm,1.6s								
JIDR					IAML			11 50 34.5	
	comp=N,49nm,3.1s								
SDDR	**Presa de Saban**	**0.84**	**355**	⇓	*e*Pg		**Pn**	**11 49 58.9**	**+0.8**
SDDR				⇑	*e*Sg		**Sb**	**11 50 10.5**	**+0.3**
SDDR					IAML			11 50 10.6	
	comp=E,27nm,2.6s								
SDDR					IAML			11 50 32.9	
	comp=N,41nm,2.7s								
SDDR	**Presa de Saban**	**0.84**	**355**		*i* P		**Pn**	**11 49 57.8**	**-0.3**
SDDR					*e*S		**Sn**	**11 50 08.4**	**-0.9**
SDDR					IAML			11 50 16.0	
	comp=Z,22nm,1.8s								

*IDC **22** 11:49:41.0±13.0, 37°16N×72°25E, h159km±125km, mb3.9/1, mbtmp3.7/6, ML3.1/5, Error ellipse: s-maj=94.6km s-min=55.2km az=169.0*
*NNC **22** 11:49:49.3±6.0, 37°82N×72°16E, h163km±79km, mb2.4, mpv3.3, Error ellipse: s-maj=62.6km s-min=35.3km az=175.0*
ISC 22 11:49:42.3±1.8, 37°4N±0°1×72°1E±0°1, h150km, n10, σ1°67/12, 1C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.84**	**348**		P		**Pn**	**11 51 09.0**	**+2.3**
	2.0nm,0.6s,baz=165,slow=13,SNR=17								
KK31				⇓	S		**Sn**	**11 52 09.8**	**-3.0**
	12nm,0.5s,baz=179,slow=25,SNR=5.4								
TKM2	**Tokmak 2**	**6.12**	**25**	⇓	P		**Pn**	**11 51 12.1**	**+1.4**
	1.3nm,0.3s								
TKM2				⇑	S		**Sn**	**11 52 19.1**	**-0.9**
	1.8nm,0.6s								
MKAR	**Makanchi Array**	**12.04**	**36**		P		**Pn**	**11 52 28.5**	**-0.4**
	0.1nm,0.3s,baz=233,slow=14,SNR=3.4								
	0.2nm,0.5s								
KURBB	**Kurchatov Arra**	**14.00**	**17**		P		**P**	**11 52 56.7**	**-0.4**
	0.1nm,0.3s,baz=207,slow=10,SNR=18								
	1.4nm,0.6s								
AB31	**Akbulak array**	**14.78**	**327**	⇓	P		**P**	**11 53 07.3**	**+1.5**
	0.1nm,0.2s,baz=131,slow=14,SNR=10								
BVAR	**Borovoye Array**	**15.68**	**356**		P		**Pn**	**11 53 14.9**	**+0.1**
	baz=169,slow=12,SNR=5.1								
	0.8nm,0.7s								
AKTO	**Aktyubinsk**	**16.50**	**327**	⇓	P		**P**	**11 53 26.1**	**+1.3**
	0.3nm,0.5s								
AKTO	**Aktyubinsk**	**16.50**	**327**		P		**P**	**11 53 26.1**	**+1.3**
	0.3nm,0.3s,baz=133,slow=11,SNR=3.4								
	1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**18.73**	**24**		P		**P**	**11 53 49.1**	**-0.1**
	0.6nm,0.3s,baz=219,slow=10,SNR=11								
	1.1nm,0.3s								
TORD	**Torodi Ar. Bea**	**66.64**	**269**		P		**P**	**12 00 15.4**	**-1.6**
	1.1nm,0.3s,baz=36,slow=4.9,SNR=2.8								
	1.1nm,0.3s								

*AEIC **22** 12:15:19.4±1.7, 50°20N±0°04×179°5E±0°1, h34km±7km, Error ellipse: s-maj=10.0km s-min=5.3km az=84.0*
NEIC 22 12:15:20.9±0.8, 50°28N±0°04×179°5E±0°1, h27km±4km, mb3.8/8, ML3.2(AEIC), Error ellipse: s-maj=11.4km s-min=5.2km az=87.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.10**	**354**				Pn	12 15 39.0	-1.5
AMKA							Sb	12 15 55.3	+0.1
CESW	**Semis' Southwe**	**1.62**	**2**				Pn	12 15 47.7	+0.1
CESW							Sb	12 16 10.1	0.0
CERB	**Semis' Cerberu**	**1.65**	**3**				Pn	12 15 48.3	+0.2
CERB							Sb	12 16 11.3	+0.2
CETU	**Semis' Tuman**	**1.69**	**0**				Pn	12 15 48.7	+0.1
CEPE	**Semis' Perret**	**1.69**	**4**				Pn	12 15 48.5	-0.1
CEPE							Sb	12 16 11.7	-0.4
LSNW	**Little Sitkin**	**1.79**	**341**				Pn	12 15 49.8	-0.3
TASE	**Tanaga Southea**	**2.21**	**44**				Pn	12 15 55.5	-0.2
TAFP	**Tanaga Falls P**	**2.28**	**44**				Pn	12 15 56.6	-0.1
TAFP							Sn	12 16 24.3	+0.5
TAPA	**Tanaga Point A**	**2.30**	**47**				Pn	12 15 56.6	-0.4
KIWB	**Kanaga Island**	**2.65**	**52**				Pn	12 16 01.1	-0.6
KIRH	**Kanaga Island**	**2.70**	**52**				Pn	12 16 01.8	-0.7
ADK	**Adak**	**2.90**	**55**				Pn	12 16 04.3	-1.0
GSCK	**Great Sitkin C**	**3.25**	**56**				Pn	12 16 09.3	-0.7
GSMY	**Great Sitkin M**	**3.32**	**56**				Pn	12 16 10.4	-0.5
GSTR	**Great Sitkin T**	**3.34**	**55**			Pn	Pn	12 16 11.2	-0.2
ATKA	**Atka Island**	**4.42**	**62**				Pn	12 16 24.3	-1.7
KOFP	**Korovin Flat P**	**4.50**	**61**				Pn	12 16 26.8	-0.5
SKT	**Skwentna**	**19.75**	**43**				P	12 19 48.6	+0.2
IMAR	**Indian Mountai**	**20.88**	**31**			P	P	12 20 00.2	-0.3
D19K	**Kuna River**	**21.29**	**23**			P	P	12 20 05.2	+0.2
D19K						IAmb	IAmb	12 20 30.2	
	comp=Z,5.7nm,1.4s								
RND	**Reindeer**	**21.45**	**40**			P	P	12 20 06.9	+0.1
RND						IAmb	IAmb	12 20 12.5	
	comp=Z,5.7nm,1.4s								
SCM	**Sheep Creek Mo**	**21.57**	**45**			P	P	12 20 08.4	+0.4
DHY	**Denali Highway**	**21.95**	**42**			P	P	12 20 12.1	-0.1
DHY						IAmb	IAmb	12 20 14.2	
	comp=Z,5.2nm,1.2s								
D22K	**Ayikyak River**	**23.00**	**26**			P	P	12 20 23.2	+0.1
RIDG	**Independent Ri**	**23.24**	**41**			P	P	12 20 24.0	-1.7
F24K	**Squaw Lake**	**23.67**	**31**			P	P	12 20 29.7	-0.1
F24K						IAmb	IAmb	12 20 33.2	
	comp=Z,2.3nm,0.8s								

*SJA **22** 12:16:41.7±0.7, 22°99S×69°01W, h80km, ML3.9, MW3.7*
*GUC **22** 12:16:42.9±0.7, 23°05S×69°19W, h100km±3km, ML4.1*
*IDC **22** 12:16:43.8±1.0, 23°11S×69°06W, h104km±7km, mb3.5/6, mbtmp3.9/6, Error ellipse: s-maj=42.8km s-min=28.1km az=9.0*
ISC 22 12:16:43.4±0.7, 23°03S±0°03×69°21W±0°05, h100km±5km, n35, σ0°74/53, mb3.8/6, 5C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.30**	**234**		*i* P		**Pn**	**12 16 58.8**	**+0.5**
PB15					*e*S		**Sn**	**12 17 10.2**	**+0.8**
PB15					IAML			12 17 12.0	
	comp=Z,62μm,0.2s								
PB15	**IPOC Station P**	**0.30**	**234**		*e*P		**Pn**	**12 16 58.7**	**+0.4**
PB15					*e*S		**Sn**	**12 17 09.9**	**+0.5**
PB06	**IPOC Station P**	**0.47**	**314**		*i* P		**Pn**	**12 16 59.5**	**+0.2**
PB06					*e*S		**Sn**	**12 17 11.3**	**+0.3**

comp=E,3µm,0.1s
PB14 IPOC Station P 1.93 214 *e*P **Pn 12 17 15.6 +0.2**
PB14 eS **Sn 12 17 40.7 +1.0**
PB01 IPOC Station P 1.99 352 *i* P **Pn 12 17 15.5 -0.5**
PB01 IAML 12 17 46.7
comp=Z,615nm,0.2s
PB01 IPOC Station P 1.99 352⇑ *e*P **Pn 12 17 16.0 -0.1**
PB01 IAML 12 17 47.8
comp=E,916nm,0.2s
GO02 Mina Guanaco 2.15 189 *i* P **Pn 12 17 18.2 0.0**
GO02 eS **Sn 12 17 45.9 +1.1**
GO02 IAML 12 17 50.8
comp=Z,774nm,0.5s
GO02 Mina Guanaco 2.15 189 *e*P **Pn 12 17 18.6 +0.4**
GO02 eS **Sn 12 17 46.0 +1.1**
PATCX Punta Patache 2.37 338 *e*P **Pn 12 17 20.6 -0.2**
TA01 Diego Aracena 2.61 340 *e*P **Pn 12 17 24.1 +0.1**
GO01 Chusmiza 3.34 0 *i* P **Pn 12 17 33.1 -1.1**
GO01 IAML 12 18 39.3
comp=Z,120nm,0.4s
AC01 Pan de Azucar 3.35 202 *i* P **Pn 12 17 32.7 -1.2**
AC01 IAML 12 18 13.9
comp=Z,186nm,0.3s
YJA Yavi 3.52 77 *i* P **Pn 12 17 38.3 +1.8**
YJA IAML 12 18 21.9
comp=Z,3.7nm,0.7s
AC02 Maricunga 3.79 179 *i* P **Pn 12 17 40.2 0.0**
AC02 IAML 12 18 57.3
comp=Z,139nm,0.4s
GO03 Copiap 4.64 191 *i* P **Pn 12 17 49.9 -1.4**
GO03 IAML 12 19 05.7
comp=Z,125nm,0.6s
BDFB Brasilia 21.29 74 P **P 12 21 21.3 -0.8**
comp=Z,2.5nm,0.3s,baz=252,slow=12,SNR=4.1
comp=Z,2.5nm,0.3s
TXAR Lajitas Array 61.73 326 P **P 12 26 52.5 +1.1**
comp=Z,0.5nm,1.0s,baz=143,slow=9.1,SNR=2.0
comp=Z,0.5nm,1.0s
PDAR Pinedale Array 75.30 330 P **P 12 28 16.7 +1.0**
comp=Z,0.2nm,0.6s,baz=145,slow=6.4,SNR=1.9
comp=Z,0.2nm,0.6s
ULM Lac du Bonnet 76.69 343 P **P 12 28 23.4 +0.2**
comp=Z,1.3nm,0.5s,baz=177,slow=5.7,SNR=4.3
comp=Z,1.3nm,0.5s
TORD Torodi Ar. Bea 78.13 70 P **P 12 28 31.6 -0.4**
comp=Z,1.3nm,0.3s,baz=258,slow=3.4,SNR=1.7
TORD pP **pP 12 28 57.3 -1.4**
comp=Z,1.7nm,0.5s,baz=254,slow=4.6,SNR=1.9
comp=Z,1.3nm,0.3s
YKA Yellowknife Ar 92.53 341 P **P 12 29 43.2 +0.4**
comp=Z,0.3nm,0.8s,baz=136,slow=4.4,SNR=7.2
comp=Z,0.3nm,0.8s
ASAR Alice Springs 128.44 207 PKP **PKiKP 12 35 39.3 -0.5**
comp=Z,0.2nm,0.6s,baz=93,slow=1.9,SNR=2.2
ASAR pPKP **pPKPdf 12 36 06.8 -0.6**
comp=Z,0.3nm,0.8s,baz=149,slow=1.7,SNR=1.6
WRA Warramunga Arr 131.50 210 PKP **PKPdf 12 35 44.4 -0.6**
comp=Z,0.2nm,0.5s,baz=158,slow=1.4,SNR=4.7
WRA pPKP **pPKPdf 12 36 12.8 -0.4**
comp=Z,0.3nm,0.7s,baz=152,slow=1.7,SNR=2.0
MKAR Makanchi Array 147.02 37 PKPbc **PKPbc 12 36 13.5 -1.0**
comp=Z,0.9nm,0.7s,baz=1.5,slow=0.8,SNR=9.9
MKAR pPKPbc pPKPab 12 36 42.6 -1.3
comp=Z,1.0nm,0.9s,baz=319,slow=3.4,SNR=4.0

NOU 22 12:17:12.0, 17.61S×167.31E, h0km, MLv3.9/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**3.15**	**181**	P		Pn	12 18 01.8	-1.1
MARNC	**Mare, Loyalty**	**3.91**	**170**	P		Pn	12 18 13.7	+0.4
KOUNC	**Koumac, New Ca**	**4.09**	**224**	P		Pn	12 18 15.6	-0.2
YATNC	**Mamie plateau,**	**4.44**	**185**	P		Pn	12 18 19.2	-1.5
DZM	**Mont Dzumac**	**4.51**	**190**	P		Pn	12 18 21.5	-0.2
ONTNC	**Ouen Toro**	**4.74**	**190**	P		Pn	12 18 24.9	+0.1
OUENC	**Ouen Island, N**	**4.80**	**185**	P		Pn	12 18 26.6	+1.0
PINNC	**Pines Island,**	**4.98**	**179**	P		Pn	12 18 28.2	+0.2

*IDC **22** 12:17:47.8±19.0, 11.50N×87.49W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=363.3km s-min=103.4km az=4.0*
*SNET **22** 12:18:01.2±1.1, 12.21N×88.22W, h21km±9km, ML2.8*
ISC 22 12:18:00.1±2.2, 12.1N±0.2×88.22W±0.08, h35km, n13, σ1§45/15, mb3.2/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.26**	**17**	*e*P		**Pn**	**12 18 21.3**	**-0.1**
LCND	**La Caada**	**1.28**	**14**	*e*P		**Pn**	**12 18 21.7**	**+0.2**
LCND				IAML			12 18 49.5
	comp=Z,165nm,0.3s						
CRIN	**San Cristobal**	**1.30**	**61**	*e*P		**Pn**	**12 18 23.9**	**+2.0**
BLLM	**Bellamira**	**1.37**	**359**	*e*P		**Pn**	**12 18 23.0**	**+0.1**
PACA	**Pacayal**	**1.40**	**356**	*e*P		**Pn**	**12 18 23.7**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.70**	**343**	*e*P		**Pn**	**12 18 27.9**	**+0.6**
SCLA				IAML			12 18 36.1
	comp=Z,52nm,0.3s						
JAYA	**Jayaque - finc**	**1.99**	**323**	*e*P		**Pn**	**12 18 31.1**	**-0.3**
JAYA				eS		**Sn**	**12 18 55.6**	**+0.5**
JAYA				IAML			12 18 58.0
	comp=Z,246nm,0.2s						
CEVE	**Cerro Verde**	**2.23**	**322**	*e*P		**Pn**	**12 18 36.7**	**+1.9**
CEVE				eS		**Sn**	**12 19 04.1**	**+2.9**
CEVE				IAML			12 19 07.7
	comp=Z,154nm,0.3s						
YUSH	**Yuscaran**	**2.31**	**35**	*e*P		**Pn**	**12 18 36.4**	**+0.6**
NUBE	**Las Nubes**	**2.38**	**320**	*e*P		**Pn**	**12 18 37.5**	**+0.7**
NUBE				IAML			12 19 11.9
	comp=Z,37nm,0.3s						
TXAR	**Lajitas Array**	**22.41**	**322**	P		**P**	**12 22 57.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=140,slow=11,SNR=6.5						
	comp=Z,0.4nm,0.7s						
ULM	**Lac du Bonnet**	**38.59**	**352**	P		**P**	**12 25 17.7**	**-2.0**
	comp=Z,1.4nm,0.6s,baz=149,slow=9.4,SNR=3.4						
	comp=Z,1.4nm,0.6s						
YKA	**Yellowknife Ar**	**53.79**	**345**	P		**P**	**12 27 17.4**	**-1.5**
	comp=Z,0.2nm,0.7s,baz=137,slow=6.6,SNR=2.6						
	comp=Z,0.2nm,0.7s						

*SOME **22** 12:31:17.5, 43.32N×69.34E*
*NNC **22** 12:31:20.9±2.6, 43.41N×69.65E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=18.2km s-min=6.4km az=121.0, Suspected Mining explosion.*
ISC 22 12:31:25.3±2.0, 43.4N±0.1×70.00E±0.08, h0km, n8, σ1§52/11, 2C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.36**	**199**	P		**Pg**	**12 31 32.0**	**-0.2**
	7.2nm,0.2s						
BRLS				S		**Sb**	**12 31 42.6**	**+1.7**
	20nm,0.3s						
KK31	**Karatay Array**	**0.46**	**125**	⇑P		**Pg**	**12 31 33.2**	**-0.9**
	3.2nm,0.3s,baz=292,slow=16,SNR=58						
KK31				⇑S		**Sb**	**12 31 44.0**	**+0.3**
	16nm,0.6s,baz=292,slow=26,SNR=23						
IUG	**Iuzhnay**	**1.22**	**179**	P		**Pg**	**12 31 45.8**	**-2.9**
	25nm,0.3s						
IUG				S		**Sb**	**12 32 06.5**	**+0.7**
	45nm,0.4s						
BTLS	**Baital**	**3.36**	**59**	Pg		**Pb**	**12 32 25.1**	**-0.6**
	2.8nm,0.5s						
BTLS				Lg		Lg	12 33 13.9
	3.2nm,0.4s						
SGDS	**Sogindy**	**3.38**	**87**	Pg		**Pb**	**12 32 26.7**	**+0.6**
	1.8nm,0.2s						
SGDS				Lg		Lg	12 33 16.9
	4.2nm,0.3s						
KRBS	**Karabastau**	**4.14**	**84**	Pg		**Pb**	**12 32 40.7**	**+1.5**
	0.6nm,0.4s						
KRBS				Lg		Lg	12 33 40.2
	3.5nm,0.5s						
DGS	**Degeres**	**4.22**	**90**	Pg		**Pb**	**12 32 41.0**	**+0.5**
	1.7nm,0.4s						
DGS				Lg		Lg	12 33 41.4
	7.5nm,0.7s						
KTBS	**Karatobe**	**4.87**	**84**	Pg		**Pb**	**12 32 53.0**	**+1.4**
	0.3nm,0.2s						
KTBS				Lg		Lg	12 34 01.8
	5.8nm,0.6s						

*GII **22** 12:43:59.6±0.3, 33.53N±0.03×35.774E±0.010, h0km, confirmed*
*GRAL **22** 12:44:02.2±0.3, 33.47N×35.69E, h3km±2km, MD2.8*
ISC 22 12:44:01.3±0.9, 33.48N±0.02×35.70E±0.04, h0km, n23, σ0§98/25, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRWL	**Qaraoun**	**0.07**	**349**	*e*P		**Pg**	**12 44 03.6**	**+1.0**
RCY	**Rachaya**	**0.12**	**82**	*e*P		**Pg**	**12 44 04.5**	**+1.0**
RCY				eS		**Sg**	**12 44 06.2**	**+1.2**
SHBL	**Chebaa**	**0.14**	**164**	*e*P		**Pg**	**12 44 04.7**	**+0.8**
NATI	**Neve Ativ**	**0.22**	**171**	P		**Pg**	**12 44 06.0**	**+0.6**
NATI	**Neve Ativ**	**0.22**	**171**	S		**Sg**	**12 44 10.6**	**+2.3**
DQRL	**Deir Qamar**	**0.25**	**335**	*e*P		**Pg**	**12 44 06.8**	**+0.8**
DQRL				eS		**Sg**	**12 44 10.3**	**+1.0**
GEM	**Giv'at Ha'Em**	**0.27**	**186**	P		**Pg**	**12 44 07.2**	**+0.8**
GEM	**Giv'at Ha'Em**	**0.27**	**186**	S		**Sb**	**12 44 12.7**	**-1.5**
ZAHL	**Zahle**	**0.41**	**23**	*e*P		**Pg**	**12 44 09.9**	**+0.8**
BHL	**Bhannes**	**0.42**	**355**	*e*P		**Pg**	**12 44 10.2**	**+0.7**
KSHT	**Keshet**	**0.51**	**169**	P		**Pg**	**12 44 11.4**	**+0.5**
KSHT	**Keshet**	**0.51**	**169**	S		**Sb**	**12 44 20.9**	**-0.2**
MMC7	**Mount Meron ar**	**0.52**	**209**	P		**Pg**	**12 44 12.2**	**+0.9**
MMA0B	**Mount Meron ar**	**0.53**	**208**	P		**Pg**	**12 44 12.3**	**+0.9**
MMA0B	**Mount Meron ar**	**0.53**	**208**	S		**Sb**	**12 44 22.3**	**+0.7**
HWQ	**Hawqa**	**0.82**	**15**	*e*P		**Pg**	**12 44 17.4**	**+0.3**
OFRI	**`Ofer**	**1.04**	**215**	P		**Pb**	**12 44 22.1**	**-0.1**
OFRI	**`Ofer**	**1.04**	**215**	S		**Sn**	**12 44 38.2**	**-0.3**
MMLI	**Mount Malkishu**	**1.06**	**193**	P		**Pg**	**12 44 22.0**	**+0.3**
MMLI	**Mount Malkishu**	**1.06**	**193**	S		**Sn**	**12 44 38.6**	**-0.5**
BEIL	**Beino**	**1.13**	**21**	*e*P		**Pg**	**12 44 22.6**	**-0.4**
DSI	**Dead Sea**	**1.92**	**188**	P		**Pn**	**12 44 33.6**	**-1.7**
DSI	**Dead Sea**	**1.92**	**188**	S		**Sn**	**12 45 00.1**	**0.0**

*NEIC **22** 12:44:18.1±1.2, 55.8N±0.1×149.2W±0.1, h7km±8km, ML3.6/46, ML3.4(AEIC), Error ellipse: s-maj=17.0km s-min=9.7km az=169.0*
*AEIC **22** 12:44:20.9±1.4, 55.6N±0.1×149.2W±0.1, h4km±8km, Error ellipse: s-maj=17.5km s-min=9.9km az=174.0*
ISC 22 12:44:18.1±2.4, 55.8N±0.1×149.22W±0.06, h10km, n163, σ0§90/163, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.68**	**304**			**Pn**	**12 45 01.1**	**-0.2**
OHAK						**Sn**	**12 45 32.0**	**-1.8**
OHAK	**Old Harbor**	**2.68**	**304**	P		**Pn**	**12 45 01.1**	**-0.2**
	baz=123						
OHAK				S		**Sn**	**12 45 32.0**	**-1.8**
	baz=123						
KDAK	**Kodiak Island**	**2.73**	**319**			**Pn**	**12 45 02.3**	**+0.2**
KDAK						**Sn**	**12 45 34.1**	**-1.0**
SYI	**Shuyak Island**	**3.33**	**330**			**Pn**	**12 45 10.6**	**+0.5**
SYI						**Sn**	**12 45 50.0**	**+0.3**
Q20K	**Shuyak Island**	**3.33**	**330**	P		**Pn**	**12 45 10.6**	**+0.5**
	baz=148						
Q20K				S		**Sn**	**12 45 50.0**	**+0.3**
	baz=148						
CNPM	**China Poot**	**3.92**	**345**			**Pn**	**12 45 18.5**	**+0.2**
CNPM						**Sn**	**12 46 02.9**	**-1.4**
CNPM	**China Poot**	**3.92**	**345**	IAML			12 46 08.1
	comp=N,40nm,0.5s						
Q19K	**Cape Douglas,**	**3.97**	**325**	Pn		**Pn**	**12 45 20.2**	**+1.1**
Q23K	**Middleton Isla**	**3.98**	**22**			**Pn**	**12 45 19.0**	**-0.1**
Q23K	**Middleton Isla**	**3.98**	**22**	IAML			12 45 56.7
	comp=N,89nm,1.5s						
Q23K				IAML			12 47 14.2
	comp=E,119nm,1.4s						
Q23K	**Middleton Isla**	**3.98**	**22**	P		**Pn**	**12 45 19.0**	**-0.1**
	baz=203						
KAHG	**Katmai Hook Gl**	**3.98**	**315**			**Pn**	**12 45 20.5**	**+1.2**
BRSE	**Bradley Lake S**	**4.06**	**349**			**Pn**	**12 45 20.3**	**0.0**
BRSE						**Sn**	**12 46 06.2**	**-1.7**
BRSE	**Bradley Lake S**	**4.06**	**349**	P		**Pn**	**12 45 20.3**	**0.0**
	baz=168						
BRSE				S		**Sn**	**12 46 06.2**	**-1.7**
	baz=168						
BRLK	**Bradley Lake**	**4.10**	**348**			**Pn**	**12 45 20.7**	**-0.2**
BRLK	**Bradley Lake**	**4.10**	**348**			**Sn**	**12 46 09.2**	**+0.4**
BRLK				IAML			12 46 10.9
	comp=E,44nm,0.5s						
HOM	**Homer**	**4.11**	**343**			**Pn**	**12 45 21.9**	**+1.0**
HOM	**Homer**	**4.11**	**343**	IAML			12 46 11.8
	comp=N,93nm,1.4s						
HOM				IAML			12 46 13.8
	comp=E,88nm,1.3s						
HOM	**Homer**	**4.11**	**343**	P		**Pn**	**12 45 21.9**	**+1.0**
	baz=161						
ACHA	**Angle Creek He**	**4.14**	**309**			**Pn**	**12 45 22.5**	**+1.1**
KAHC	**Katmai Hardscr**	**4.27**	**315**			**Pn**	**12 45 24.4**	**+1.2**
KAHC	**Katmai Hardscr**	**4.27**	**315**	P		**Pn**	**12 45 24.4**	**+1.2**
	baz=131						
SEW	**Seward**	**4.35**	**358**			**Pn**	**12 45 24.1**	**0.0**
SEW	**Seward**	**4.35**	**358**	P		**Pn**	**12 45 24.1**	**0.0**
	baz=178						
P23K	**Montague Islan**	**4.35**	**12**			**Pn**	**12 45 24.3**	**+0.2**
P23K	**Montague Islan**	**4.35**	**12**	P		**Pn**	**12 45 24.3**	**+0.2**
	baz=193						
CNTC	**Contact Creek**	**4.42**	**307**			**Pn**	**12 45 26.2**	**+1.0**
Q17K	**Contact Creek**	**4.42**	**307**	P		**Pn**	**12 45 26.2**	**+1.0**
	baz=123						
P19K	**Oil Pt**	**4.44**	**333**			**Pn**	**12 45 25.8**	**+0.2**
P19K				IAML			12 46 22.6
	comp=E,64nm,0.5s						
P19K				IAML			12 46 24.5
	comp=N,54nm,1.3s						
P19K	**Oil Pt**	**4.44**	**333**	P		**Pn**	**12 45 26.1**	**+0.6**
	baz=150						
O20K	**Slope Mountain**	**4.69**	**339**			**Pn**	**12 45 29.3**	**+0.4**
O20K	**Slope Mountain**	**4.69**	**339**	P		**Pn**	**12 45 29.3**	**+0.4**
	baz=156						
ILSW	**Iliamna Southw**	**4.71**	**335**			**Pn**	**12 45 29.5**	**+0.1**
ILSW	**Iliamna Southw**	**4.71**	**335**	IAML			12 46 28.1
	comp=E,31nm,0.7s						
ILSW				IAML			12 46 28.5
	comp=N,28nm,0.4s						
O22K	**Cooper Landing**	**4.73**	**357**	Pn		**Pn**	**12 45 30.2**	**+0.8**
O22K						**Sn**	**12 46 23.4**	**-0.8**
O22K				IAML			12 46 27.0
	comp=E,84nm,0.4s						
SLKM	**Skilak Lake**	**4.78**	**354**			**Pn**	**12 45 30.3**	**+0.1**
HIN	**Hinchinbrook I**	**4.86**	**16**			**Pn**	**12 45 31.5**	**+0.2**
HIN	**Hinchinbrook I**	**4.86**	**16**	IAML			12 46 26.3
	comp=E,67nm,1.3s						
P18K	**Big Mountain,**	**4.86**	**321**			**Pn**	**12 45 31.3**	**0.0**
P18K	**Big Mountain,**	**4.86**	**321**	P		**Pn**	**12 45 31.3**	**0.0**
	baz=137						
KAIM	**Kayak Island**	**4.89**	**30**			**Pn**	**12 45 31.8**	**+0.2**
KAIM	**Kayak Island**	**4.89**	**30**	IAML			12 47 20.2
	comp=N,53nm,1.5s						
KAIM				IAML			12 48 28.5
	comp=E,63nm,1.4s						
KAIM	**Kayak Island**	**4.89**	**30**	P		**Pn**	**12 45 31.8**	**+0.2**
	baz=213						
Q16K	**King Salmon**	**4.98**	**309**			**Pn**	**12 45 33.8**	**+0.9**
Q16K	**King Salmon**	**4.98**	**309**	P		**Pn**	**12 45 33.8**	**+0.9**
	baz=124						
RSO	**Redoubt South**	**5.06**	**340**	Pn		**Pn**	**12 45 34.9**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.13**	**20**	P		**Pn**	**12 45 35.5**	**+0.6**
	baz=202						
CHGN	**Chignik**	**5.18**	**280**	Pn		**Pn**	**12 45 35.2**	**-0.4**
P17K	**Kvichak River**	**5.19**	**314**			**Pn**	**12 45 36.8**	**+1.0**
P17K	**Kvichak River**	**5.19**	**314**	P		**Pn**	**12 45 36.8**	**+1.0**
	baz=129						
O18K	**Koktuh Hills**	**5.19**	**324**			**Pn**	**12 45 36.1**	**+0.2**
O18K	**Koktuh Hills**	**5.19**	**324**	IAML			12 46 42.6
	comp=N,12nm,1.0s						
O18K	**Koktuh Hills**	**5.19**	**324**	P		**Pn**	**12 45 36.1**	**+0.2**
	baz=140						
SUCK	**Suckling Hills**	**5.20**	**32**	Pn		**Pn**	**12 45 36.0**	**+0.1**
SUCK				IAML			12 46 43.1
	comp=N,38nm,1.0s						
SUCK				IAML			12 47 46.0
	comp=E,35nm,1.4s						
FID	**Port Fidalgo**	**5.20**	**15**			**Pn**	**12 45 35.8**	**0.0**
FID	**Port Fidalgo**	**5.20**	**15**	IAML			12 46 32.3
	comp=E,25nm,0.8s						
FID				IAML			12 46 35.9
	comp=N,20nm,0.5s						
O19K	**Port Alsworth**	**5.20**	**331**			**Pn**	**12 45 35.9**	**+0.1**
O19K	**Port Alsworth**	**5.20**	**331**	P		**Pn**	**12 45 36.0**	**+0.1**
	baz=147						
RAGM	**Ragged Mountai**	**5.22**	**26**			**Pn**	**12 45 36.6**	**+0.4**
RAGM	**Ragged Mountai**	**5.22**	**26**	IAML			12 46 37.9
	comp=E,59nm,1.2s						
GLI	**Glacier Island**	**5.24**	**11**			**Pn**	**12 45 36.8**	**+0.3**
GLI	**Glacier Island**	**5.24**	**11**	IAML			12 46 38.2
	comp=E,24nm,0.7s						
GLI				IAML			12 46 39.0
	comp=N,25nm,1.3s						
GLI	**Glacier Island**	**5.24**	**11**	P		**Pn**	**12 45 36.8**	**+0.3**
	baz=193						
NICHA	**Nichawak Mount**	**5.28**	**30**			**Pn**	**12 45 37.6**	**+0.7**
HMT	**Hamilton**	**5.28**	**28**			**Pn**	**12 45 37.5**	**+0.5**
RC01	**Rabbit Creek A**	**5.34**	**357**	Pn		**Pn**	**12 45 38.6**	**+0.8**
RC01						**Sn**	**12 46 37.3**	**-2.0**
RC01				IAML			12 46 40.1
	comp=E,22nm,0.3s						
RC01				IAML			12 46 40.4
	comp=N,18nm,0.4s						
GOAT	**Goat Mountain**	**5.38**	**24**			**Pn**	**12 45 39.0**	**+0.7**
BGLC	**Bering Glacier**	**5.38**	**34**			**Pn**	**12 45 39.1**	**+0.7**
BGLC	**Bering Glacier**	**5.38**	**34**	P		**Pn**	**12 45 39.1**	**+0.7**
	baz=218						
BERG	**Berg Lake**	**5.48**	**30**	Pn		**Pn**	**12 45 40.1**	**+0.4**
SNH	**Sunshine Point**	**5.57**	**35**			**Pn**	**12 45 41.3**	**+0.3**
KHIT	**Khitrov Hills**	**5.65**	**32**			**Pn**	**12 45 42.2**	**0.0**
BMRM	**Bremner River**	**5.75**	**23**			**Pn**	**12 45 43.9**	**+0.5**
BMRM	**Bremner River**	**5.75**	**23**	P		**Pn**	**12 45 43.9**	**+0.5**
	baz=206						
P16K	**Nushagak River**	**5.76**	**308**			**Pn**	**12 45 44.6**	**+1.1**
P16K	**Nushagak River**	**5.76**	**308**	P		**Pn**	**12 45 44.6**	**+1.1**
	baz=122						
SUA	**Susitna One**	**5.76**	**353**	Pn		**Pn**	**12 45 44.7**	**+1.0**
N19K	**Bonanza Creek**	**5.76**	**333**			**Pn**	**12 45 43.6**	**-0.2**
N19K	**Bonanza Creek**	**5.76**	**333**	P		**Pn**	**12 45 43.6**	**-0.2**
	baz=148						
WAX	**Waxell Ridge**	**5.78**	**33**			**Pn**	**12 45 44.0**	**+0.2**
O17K	**Koliganek Bris**	**5.81**	**317**			**Pn**	**12 45 45.2**	**+0.9**
O17K	**Koliganek Bris**	**5.81**	**317**	P		**Pn**	**12 45 45.2**	**+0.9**
	baz=131						
PMR	**Palmer**	**5.84**	**0**	Pn		**Pn**	**12 45 46.2**	**+1.6**
MESA	**MESA**	**5.87**	**38**			**Pn**	**12 45 45.4**	**+0.1**
MESA	**MESA**	**5.87**	**38**	P		**Pn**	**12 45 45.4**	**+0.1**
	baz=223						
STLK	**Strandline Lak**	**5.90**	**348**			**Pn**	**12 45 45.8**	**+0.2**
CRQM	**Cirque**	**5.94**	**30**			**Pn**	**12 45 46.4**	**+0.2**
CRQE	**Cirque**	**5.95**	**30**	P		**Pn**	**12 45 46.4**	**+0.1**
	baz=215						
KLU	**Klutina**	**5.99**	**15**			**Pn**	**12 45 47.4**	**+0.6**
KLU	**Klutina**	**5.99**	**15**	P		**Pn**	**12 45 47.4**	**+0.6**
	baz=198						
GHO	**Glory Hole Cre**	**6.02**	**1**			**Pn**	**12 45 48.3**	**+1.1**
TGL	**Tana Glacier**	**6.03**	**31**			**Pn**	**12 45 47.8**	**+0.5**
N18K	**Kilae Creek**	**6.05**	**327**			**Pn**	**12 45 47.7**	**+0.1**
N18K	**Kilae Creek**	**6.05**	**327**	P		**Pn**	**12 45 47.7**	**+0.1**
	baz=142						
BAGL	**Bagley Icefiel**	**6.05**	**36**			**Pn**	**12 45 47.9**	**+0.4**
ISLE	**Juniper Island**	**6.06**	**34**			**Pn**	**12 45 48.1**	**+0.3**
SML	**Sawmill**	**6.07**	**4**	Pn		**Pn**	**12 45 49.4**	**+1.5**
O16K	**Kokwok River B**	**6.11**	**312**			**Pn**	**12 45 49.3**	**+0.9**
O16K	**Kokwok River B**	**6.11**	**312**	P		**Pn**	**12 45 49.3**	**+0.9**
	baz=126						
SCM	**Sheep Creek Mo**	**6.16**	**8**	Pn		**Pn**	**12 45 50.7**	**+1.6**
VRDI	**Verde Repeater**	**6.25**	**27**			**Pn**	**12 45 50.6**	**+0.2**
SAMH	**Samovar Hills**	**6.26**	**42**			**Pn**	**12 45 51.5**	**+1.0**
SVW2	**Sparrevohn**	**6.29**	**331**	Pn		**Pn**	**12 45 51.2**	**+0.3**
KIAG	**Kiagna River**	**6.30**	**32**			**Pn**	**12 45 51.4**	**+0.3**
N25K	**Chitina, Valde**	**6.33**	**20**			**Pn**	**12 45 52.3**	**+0.9**
N25K	**Chitina, Valde**	**6.33**	**20**	P		**Pn**	**12 45 52.3**	**+0.9**
	baz=204						
SKT	**Skwentna**	**6.34**	**350**	Pn		**Pn**	**12 45 54.2**	**+2.6**
TABL	**Table Mountain**	**6.34**	**39**			**Pn**	**12 45 52.5**	**+0.8**
GRNC	**Granite Creek**	**6.34**	**35**			**Pn**	**12 45 52.5**	**+0.4**
GLB	**Gilahina Butte**	**6.35**	**24**			**Pn**	**12 45 52.2**	**+0.5**
N17K	**Nushagak Hills**	**6.36**	**322**	Pn		**Pn**	**12 45 52.2**	**+0.3**
PCA	**Pinnacle**	**6.45**	**44**			**Pn**	**12 45 53.6**	**+0.5**
PINM	**Pinnacle**	**6.45**	**44**	P		**Pn**	**12 45 53.6**	**+0.5**
	baz=231						
M20K	**Styx River**	**6.45**	**343**	Pn		**Pn**	**12 45 53.0**	**-0.2**
PTPK	**Patty Peak**	**6.48**	**30**			**Pn**	**12 45 54.2**	**+0.6**
MCARA	**McCarthy VSAT**	**6.49**	**27**			**Pn**	**12 45 54.2**	**+0.6**
MCARA	**McCarthy VSAT**	**6.49**	**27**	P		**Pn**	**12 45 54.2**	**+0.6**
	baz=212						
M24K	**Tolsona, Glenn**	**6.54**	**13**			**Pn**	**12 45 56.2**	**+1.8**
M24K	**Tolsona, Glenn**	**6.54**	**13**	P		**Pn**	**12 45 56.2**	**+1.8**
	baz=195						
PNL	**Peninsula**	**6.55**	**49**			**Pn**	**12 45 54.5**	**0.0**
PNL	**Peninsula**	**6.55**	**49**	P		**Pn**	**12 45 54.5**	**0.0**
	baz=237						
BCPM	**Bancas Point**	**6.61**	**47**			**Pn**	**12 45 56.1**	**+0.8**
BARN	**Barnard Glacie**	**6.62**	**34**			**Pn**	**12 45 56.3**	**+0.7**
CTG	**Chitna Glacier**	**6.65**	**35**	P		**Pn**	**12 45 56.4**	**+0.4**
	baz=221						
CTGM	**Chitina Glacie**	**6.65**	**35**			**Pn**	**12 45 56.4**	**+0.4**
O15K	**Ungalikthiuk R**	**6.66**	**305**			**Pn**	**12 45 56.9**	**+1.0**
O15K	**Ungalikthiuk R**	**6.66**	**305**	P		**Pn**	**12 45 56.9**	**+1.0**
	baz=117						
LOGN	**Logan Glacier**	**6.66**	**37**			**Pn**	**12 45 56.7**	**+0.6**
M18K	**Stony River**	**6.69**	**332**			**Pn**	**12 45 56.1**	**-0.2**
M18K	**Stony River**	**6.69**	**332**	P		**Pn**	**12 45 56.1**	**-0.2**
	baz=146						
WACK	**Wrangell Chich**	**6.73**	**20**			**Pn

ILAR	**Eielson Array**	**28.46**	**47**	LR	LR	13 04 03.0		
	comp=Z,44nm,18.4s,baz=126,slow=41							
YKA	**Yellowknife Ar**	**32.25**	**20**	P	**P**	**12 51 34.4**	**-2.3**	
	0.2nm,0.8s,baz=356,slow=8.7,SNR=2.7							
	0.2nm,0.8s							
SONM	**Songino Array**	**37.72**	**160**	P	**P**	**12 52 27.5**	**+3.3**	
	0.3nm,0.8s,baz=5.7,slow=4.3,SNR=2.2							
	0.3nm,0.8s							
MKAR	**Makanchi Array**	**38.52**	**186**	P	P	12 52 38.4	+7.7	
	0.2nm,0.6s,baz=17,slow=6.2,SNR=2.1							
MKAR				LR	LR	13 11 31.4		
	comp=Z,28nm,18.4s,baz=294,slow=41							
	0.2nm,0.6s							

*IDC **22** 12:48:50.9±1.0, 10°.97S×118°.19E, h0km, mb3.8/5, mbtmp3.9/8, ML4.1/3, Error ellipse: s-maj=43.7km s-min=19.8km az=60.0*

ISC 22 12:48:56.0±0.9, 11°.0S±0°.2×118°.2E±0°.2, h35km, n8, σ0s74/8, mb3.9/5, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**11.24**	**291**	Pn	**Pn**	**12 51 34.2**	**-0.1**
	10nm,0.3s,baz=322,slow=17,SNR=4.6						
	20nm,0.4s						
WRA	**Warramunga Arr**	**17.90**	**122**	P	**Pn**	**12 53 01.4**	**-1.0**
	0.3nm,0.3s,baz=285,slow=14,SNR=11						
WRA				S	Sn	12 56 07.9	-13
	0.6nm,0.7s,baz=288,slow=23,SNR=2.1						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**19.55**	**132**	P	**P**	**12 53 21.9**	**+1.0**
	0.5nm,0.3s,baz=316,slow=13,SNR=23						
ASAR				S	S	12 56 49.4	-10
	0.7nm,0.6s,baz=298,slow=24,SNR=4.3						
	2.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**21.82**	**182**	P	**P**	**12 53 45.3**	**0.0**
	4.5nm,0.4s,baz=11,slow=10,SNR=9.9						
	4.5nm,0.4s						
SONM	**Songino Array**	**59.52**	**351**	P	**P**	**12 58 56.4**	**+0.5**
	0.7nm,0.8s,baz=160,slow=8.8,SNR=5.5						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**65.89**	**334**	P	**P**	**12 59 38.2**	**0.0**
	0.3nm,0.5s,baz=146,slow=6.8,SNR=8.7						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**70.42**	**334**	P	**P**	**13 00 06.1**	**-0.4**
	0.3nm,0.5s,baz=146,slow=5.2,SNR=3.1						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**70.64**	**340**	P	**P**	**13 00 07.2**	**-0.5**
	0.5nm,0.3s,baz=129,slow=3.9,SNR=4.4						
	0.5nm,0.3s						

IDC 22 12:49:44.3±49.0, 15°.92S×173°.37W, h0km, mb4.4/3, mbtmp4.4/3, Error ellipse: s-maj=951.7km s-min=174.6km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.81**	**240**	P	P	12 57 52.7	+0.5
	3.8nm,0.8s,baz=62,slow=9.6,SNR=4.7						
	3.8nm,0.8s						
WRA	**Warramunga Arr**	**49.76**	**257**	P	P	12 58 38.9	-0.2
	1.7nm,0.4s,baz=95,slow=7.0,SNR=29						
	1.7nm,0.4s						
ASAR	**Alice Springs**	**49.98**	**252**	P	P	12 58 40.2	-0.5
	4.6nm,0.5s,baz=90,slow=8.3,SNR=56						
	4.6nm,0.5s						

*IDC **22** 12:55:09.9±0.7, 56°.55N×148°.59W, h0km, mb4.1/23, mbtmp4.1/28, ML3.6/5, MS3.4/26, Error ellipse: s-maj=18.3km s-min=13.1km az=30.0*

*MOS **22** 12:55:11.4±1.0, 56°.80N×148°.66W, h12km, mb4.5/18, Error ellipse: s-maj=18.2km s-min=6.2km az=94.2*

*NEIC **22** 12:55:12.0±2.3, 56°.65N±0°.07×148°.54W±0°.03, h20km±5km, mb4.4/22, ML4.0/88, ML3.8(AEIC), Error ellipse: s-maj=10.2km s-min=1.2km az=193.0*

*AEIC **22** 12:55:14.0±1.8, 56°.64N±0°.07×148°.57W±0°.09, h2km±5km, Error ellipse: s-maj=10.7km s-min=6.3km az=161.0*

ISC 22 12:55:11.8±0.5, 56°.68N±0°.06×148°.57W±0°.04, h10km, n404, σ1s28/366, mb4.4/42, MS3.3/23, 11C-4D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.45**	**298**		**Pn**	**12 55 50.1**	**-1.6**
KDAK					**Sn**	**12 56 18.1**	**-3.6**
KDAK	**Kodiak Island**	**2.45**	**298**	*c iP*	**Pn**	**12 55 50.3**	**-1.4**
KDAK				pmax	pmax		
	comp=Z,91nm,0.4s						
KDAK	**Kodiak Island**	**2.45**	**298**	Pn	**Pn**	**12 55 50.4**	**-1.4**
	comp=Z,21nm,0.3s,baz=113,slow=4.9,SNR=213						
KDAK				Sn	**Sn**	**12 56 17.8**	**-3.9**
	comp=Z,17nm,0.3s,baz=358,slow=19,SNR=12						
KDAK				LR	LR	12 56 19.5	
	comp=Z,244nm,20.2s,baz=198,slow=28						
	comp=Z,53nm,0.4s						
OHAK	**Old Harbor**	**2.64**	**284**		**Pn**	**12 55 52.2**	**-2.2**
OHAK	**Old Harbor**	**2.64**	**284**		**Sn**	**12 56 23.0**	**-3.5**
OHAK	**Old Harbor**	**2.64**	**284**	P	**Pn**	**12 55 52.3**	**-2.2**
OHAK	**Old Harbor**	**2.64**	**284**	P	**Pn**	**12 55 52.1**	**-2.2**
	baz=101						
OHAK				S	**Sn**	**12 56 23.0**	**-3.5**
	baz=101						
SYI	**Shuyak Island**	**2.82**	**315**		**Sn**	**12 56 28.5**	**-2.3**
SYI	**Shuyak Island**	**2.82**	**315**	Pn	**Pn**	**12 55 55.9**	**-1.0**
SYI	**Shuyak Island**	**2.82**	**315**	IAML		12 56 30.6	
	comp=N,226nm,0.5s						
SYI				IAML		12 56 38.4	
	comp=E,196nm,0.8s						
Q20K	**Shuyak Island**	**2.82**	**315**	P	**Pn**	**12 55 55.6**	**-1.3**
	baz=132						
Q20K				S	**Sn**	**12 56 28.5**	**-2.4**
	baz=132						
MID	**Middleton Isla**	**3.00**	**22**		**Pn**	**12 55 58.0**	**-1.3**
MID	**Middleton Isla**	**3.00**	**22**		**Sn**	**12 56 32.3**	**-2.9**
MID	**Middleton Isla**	**3.00**	**22**	IAML		12 56 39.5	
	comp=N,267nm,1.0s						
MID				IAML		12 56 41.6	
	comp=E,257nm,0.8s						
MID	**Middleton Isla**	**3.00**	**22**	P	**Pn**	**12 55 57.9**	**-1.3**
Q23K	**Middleton Isla**	**3.00**	**22**		**Sn**	**12 56 33.0**	**-2.2**
Q23K	**Middleton Isla**	**3.00**	**22**		**Pn**	**12 55 58.3**	**-1.0**
Q23K	**Middleton Isla**	**3.00**	**22**	IAML		12 56 39.5	
	comp=N,251nm,1.0s						
Q23K				IAML		12 56 41.7	
	comp=E,233nm,0.8s						
Q23K	**Middleton Isla**	**3.00**	**22**	P	**Pn**	**12 55 57.9**	**-1.4**
	baz=204						
Q23K				S	**Sn**	**12 56 33.0**	**-2.2**
	baz=204						
CNPM	**China Poot**	**3.18**	**335**		**Pn**	**12 56 00.8**	**-1.1**
CNPM	**China Poot**	**3.18**	**335**		**Sn**	**12 56 38.1**	**-1.8**
BRSE	**Bradley Lake S**	**3.28**	**340**		**Pn**	**12 56 01.9**	**-1.3**
BRSE	**Bradley Lake S**	**3.28**	**340**	P	**Pn**	**12 56 01.9**	**-1.3**
	baz=159						
BRLK	**Bradley Lake**	**3.32**	**339**		**Pn**	**12 56 02.5**	**-1.3**
P23K	**Montague Islan**	**3.38**	**10**		**Pn**	**12 56 03.4**	**-1.2**
P23K					**Sn**	**12 56 41.9**	**-2.8**
P23K	**Montague Islan**	**3.38**	**10**	P	**Pn**	**12 56 03.4**	**-1.2**
	baz=191						
P23K				S	**Sn**	**12 56 41.9**	**-2.8**
	baz=191						
HOM	**Homer**	**3.40**	**333**		**Pn**	**12 56 04.5**	**-0.3**
HOM				IAML		12 56 48.9	
	comp=N,487nm,0.9s						
HOM	**Homer**	**3.40**	**333**	P	**Pn**	**12 56 04.1**	**-0.7**
	baz=150						
SEW	**Seward**	**3.46**	**353**		**Pn**	**12 56 04.2**	**-1.5**
SEW	**Seward**	**3.46**	**353**	P	**Pn**	**12 56 04.2**	**-1.5**
	baz=172						
Q19K	**Cape Douglas,**	**3.53**	**312**		**Pn**	**12 56 06.4**	**-0.2**
Q19K	**Cape Douglas,**	**3.53**	**312**	IAML		12 57 01.3	
	comp=N,416nm,1.1s						
Q19K	**Cape Douglas,**	**3.53**	**312**	P	**Pn**	**12 56 06.4**	**-0.2**
	baz=128						
KAHG	**Katmai Hook Gl**	**3.69**	**302**		**Pn**	**12 56 08.9**	**-0.1**
AU22	**Augustine Moun**	**3.71**	**319**		**Pn**	**12 56 08.4**	**-0.6**
AUL	**Augustine Lava**	**3.74**	**318**		**Pn**	**12 56 09.3**	**-0.2**
O22K	**Cooper Landing**	**3.86**	**351**		**Pn**	**12 56 10.1**	**-1.0**
O22K	**Cooper Landing**	**3.86**	**351**	P	**Pn**	**12 56 10.1**	**-1.0**
	baz=171						
P19K	**Oil Pt**	**3.87**	**322**		**Pn**	**12 56 10.7**	**-0.6**
P19K	**Oil Pt**	**3.87**	**322**	P	**Pn**	**12 56 10.7**	**-0.6**
	baz=139						
HIN	**Hinchinbrook I**	**3.88**	**15**		**Pn**	**12 56 10.6**	**-0.9**
HIN				IAML		12 56 57.9	
	comp=E,270nm,1.0s						
KAIM	**Kayak Island**	**3.92**	**32**		**Pn**	**12 56 11.3**	**-0.7**
KAIM				IAML		12 57 07.1	
	comp=E,312nm,0.6s						
KAIM				IAML		12 57 07.3	
	comp=N,317nm,0.6s						
KAIM	**Kayak Island**	**3.92**	**32**	P	**Pn**	**12 56 11.0**	**-1.0**
	baz=215						
KAHC	**Katmai Hardscr**	**3.98**	**302**		**Pn**	**12 56 12.5**	**-0.5**
KAHC	**Katmai Hardscr**	**3.98**	**302**	P	**Pn**	**12 56 12.5**	**-0.5**
	baz=118						
O20K	**Slope Mountain**	**4.02**	**330**		**Pn**	**12 56 12.6**	**-0.9**
O20K	**Slope Mountain**	**4.02**	**330**	P	**Pn**	**12 56 12.6**	**-0.9**
	baz=147						
ANCK	**Angle Creek**	**4.04**	**295**		**Pn**	**12 56 13.9**	**+0.2**
IVE	**Iliamna Volcan**	**4.08**	**327**		**Pn**	**12 56 12.9**	**-1.4**
ILSW	**Iliamna Southw**	**4.09**	**326**		**Pn**	**12 56 13.2**	**-1.3**
ILSW				IAML		12 57 02.0	
	comp=N,198nm,0.4s						
ILSW				IAML		12 57 03.0	
	comp=E,183nm,0.7s						
EYAK	**Cordova Ski Ar**	**4.15**	**20**		**Pn**	**12 56 14.4**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.15**	**20**	P	**Pn**	**12 56 14.3**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.15**	**20**	P	**Pn**	**12 56 14.4**	**-0.7**
	baz=202						
FID	**Port Fidalgo**	**4.22**	**14**		**Pn**	**12 56 14.9**	**-1.2**
FID				IAML		12 57 05.1	
	comp=N,111nm,0.5s						
FID				IAML		12 57 15.7	
	comp=E,142nm,0.9s						
SUCK	**Suckling Hills**	**4.23**	**35**		**Pn**	**12 56 15.4**	**-0.9**
SUCK				IAML		12 57 18.7	
	comp=N,197nm,1.0s						
SUCK				IAML		12 57 19.4	
	comp=E,150nm,1.3s						
RAGM	**Ragged Mountai**	**4.24**	**27**		**Pn**	**12 56 15.8**	**-0.6**
CNTC	**Contact Creek**	**4.26**	**295**		**Pn**	**12 56 16.3**	**-0.4**
Q17K	**Contact Creek**	**4.26**	**295**	P	**Pn**	**12 56 16.3**	**-0.4**
	baz=109						
GLI	**Glacier Island**	**4.28**	**10**		**Pn**	**12 56 16.0**	**-0.9**
GLI	**Glacier Island**	**4.28**	**10**	IAML		12 57 09.3	
	comp=E,154nm,0.7s						
GLI	**Glacier Island**	**4.28**	**10**	P	**Pn**	**12 56 16.0**	**-0.9**
	baz=191						
HMT	**Hamilton**	**4.30**	**30**		**Pn**	**12 56 16.9**	**-0.4**
CAPN	**Captain Cook N**	**4.31**	**343**		**Pn**	**12 56 17.6**	**+0.2**
CAPN	**Captain Cook N**	**4.31**	**343**	P	**Pn**	**12 56 17.6**	**+0.2**
	baz=161						
RSO	**Redoubt South**	**4.38**	**332**		**Pn**	**12 56 17.2**	**-1.3**
GOAT	**Goat Mountain**	**4.39**	**26**		**Pn**	**12 56 17.4**	**-1.2**
BGLC	**Bering Glacier**	**4.43**	**37**		**Pn**	**12 56 18.2**	**-0.7**
BGLC	**Bering Glacier**	**4.43**	**37**	P	**Pn**	**12 56 18.2**	**-0.7**
	baz=221						
RC01	**Rabbit Creek A**	**4.46**	**353**		**Pn**	**12 56 18.3**	**-1.1**
RC01	**Rabbit Creek A**	**4.46**	**353**	IAML		12 57 10.4	
	comp=N,130nm,0.5s						
RC01				IAML		12 57 11.7	
	comp=E,111nm,0.4s						
RC01	**Rabbit Creek A**	**4.46**	**353**	P	**Pn**	**12 56 18.3**	**-1.1**
	baz=172						
P18K	**Big Mountain,**	**4.46**	**310**		**Pn**	**12 56 18.0**	**-1.5**
P18K	**Big Mountain,**	**4.46**	**310**	P	**Pn**	**12 56 18.0**	**-1.5**
	baz=125						
NCT	**North Crescent**	**4.51**	**331**		**Pn**	**12 56 18.5**	**-1.7**
BERG	**Berg Lake**	**4.51**	**32**		**Pn**	**12 56 18.5**	**-1.6**
BERG	**Berg Lake**	**4.51**	**32**	IAML		12 57 16.0	
	comp=N,184nm,0.9s						
GRIN	**Grindle Hills**	**4.54**	**35**		**Pn**	**12 56 19.6**	**-0.9**
FIS	**Fire Island**	**4.56**	**350**		**Pn**	**12 56 20.6**	**0.0**
SNH	**Sunshine Point**	**4.62**	**38**		**Pn**	**12 56 20.5**	**-1.2**
SNH	**Sunshine Point**	**4.62**	**38**	IAML		12 57 32.4	
	comp=N,106nm,1.3s						
SNH				IAML		12 57 35.8	
	comp=E,139nm,0.8s						
O19K	**Port Alsworth**	**4.64**	**322**		**Pn**	**12 56 20.4**	**-1.4**
O19K	**Port Alsworth**	**4.64**	**322**	P	**Pn**	**12 56 20.4**	**-1.4**
	baz=137						
KHIT	**Khitrov Hills**	**4.69**	**34**		**Pn**	**12 56 21.4**	**-1.2**
DIV	**Divide**	**4.69**	**17**		**Pn**	**12 56 22.0**	**-0.6**
O18K	**Koktuh Hills**	**4.73**	**315**		**Pn**	**12 56 21.8**	**-1.3**
O18K	**Koktuh Hills**	**4.73**	**315**	IAML		12 57 25.6	
	comp=N,82nm,0.8s						
O18K	**Koktuh Hills**	**4.73**	**315**	P	**Pn**	**12 56 21.8**	**-1.3**
	baz=130						
KNK	**Knik Glacier**	**4.75**	**1**		**Pn**	**12 56 22.8**	**-0.5**
KNK	**Knik Glacier**	**4.75**	**1**	IAML		12 57 23.1	
	comp=E,73nm,0.7s						
KNK				IAML		12 57 31.8	
	comp=N,70nm,0.8s						
KNK	**Knik Glacier**	**4.75**	**1**	P	**Pn**	**12 56 22.8**	**-0.5**
	baz=181						
BMRM	**Bremner River**	**4.76**	**24**		**Pn**	**12 56 22.8**	**-0.8**
BMRM	**Bremner River**	**4.76**	**24**	P	**Pn**	**12 56 22.8**	**-0.8**
	baz=207						
Q16K	**King Salmon**	**4.78**	**298**		**Pn**	**12 56 23.3**	**-0.5**
Q16K	**King Salmon**	**4.78**	**298**	P	**Pn**	**12 56 23.3**	**-0.5**
	baz=112						
WAX	**Waxell Ridge**	**4.82**	**36**		**Pn**	**12 56 23.1**	**-1.3**
WAX	**Waxell Ridge**	**4.82**	**36**	IAML		12 57 22.0	
	comp=E,153nm,0.4s						
P17K	**Kvichak River**	**4.89**	**304**	P	**Pn**	**12 56 24.6**	**-0.7**
	baz=118						
N20K	**Mount Spurr**	**4.91**	**339**	P	**Pn**	**12 56 24.1**	**-1.5**
	baz=156						
SPCR	**Spurr Chakacha**	**4.91**	**339**		**Pn**	**12 56 24.1**	**-1.5**
SPCN	**Chakachatna No**	**4.92**	**339**		**Pn**	**12 56 24.8**	**-1.0**
SUA	**Susitna One**	**4.92**	**348**	P	**Pn**	**12 56 24.7**	**-1.2**
	baz=166						
PMR	**Palmer**	**4.93**	**357**		**Pn**	**12 56 25.1**	**-0.8**
PMR	**Palmer**	**4.93**	**357**	IAML		12 57 26.7	
	comp=N,67nm,0.8s						
PMR				IAML		12 57 27.2	
	comp=E,63nm,1.0s						
PMR	**Palmer**	**4.93**	**357**	P	**Pn**	**12 56 25.2**	**-0.7**
PMR	**Palmer**	**4.93**	**357**	P	**Pn**	**12 56 25.1**	**-0.8**
	baz=176						
PMR	**Palmer**	**4.93**	**357**	P	**Pn**	**12 56 25.1**	**-0.8**
MESA	**MESA**	**4.94**	**42**	Pn	Pn	12 56 20.7	-5.4
MESA				IAML		12 57 40.9	
	comp=E,84nm,1.0s						
MESA				IAML		12 59 40.1	
	comp=N,141nm,0.2s						
SPCG	**Spurr Capps Gl**	**4.96**	**340**		**Pn**	**12 56 25.6**	**-0.8**
SPCP	**Crater Peak Br**	**4.96**	**340**		**Pn**	**12 56 25.5**	**-0.9**
CRQM	**Cirque**	**4.97**	**32**		**Pn**	**12 56 25.6**	**-1.0**
CRQM	**Cirque**	**4.97**	**32**	IAML		12 57 31.2	
	comp=E,103nm,0.9s						
CRQM				IAML		12 57 35.8	
	comp=N,108nm,0.9s						
CRQE	**Cirque**	**4.98**	**33**	P	**Pn**	**12 56 25.6**	**-1.1**
	baz=217						
BGL	**Barrier Glacie**	**5.00**	**338**		**Pn**	**12 56 25.9**	**-1.1**
KLU	**Klutina**	**5.01**	**15**		**Pn**	**12 56 26.3**	**-0.7**
KLU	**Klutina**	**5.01**	**15**	IAML		12 57 24.8	
	comp=E,79nm,0.5s						
KLU				IAML		12 57 34.2	
	comp=N,82nm,1.0s						
KLU	**Klutina**	**5.01**	**15**	P	**Pn**	**12 56 26.3**	**-0.7**
	baz=197						
TGL	**Tana Glacier**	**5.06**	**34**		**Pn**	**12 56 26.7**	**-1.0**
TGL	**Tana Glacier**	**5.06**	**34**	IAML		12 57 33.6	
	comp=E,91nm,0.5s						
TGL				IAML		12 57 57.9	
	comp=N,66nm,1.3s						
ISLE	**Juniper Island**	**5.10**	**37**		**Pn**	**12 56 27.1**	**-1.2**
ISLE	**Juniper Island**	**5.10**	**37**	IAML		12 57 35.3	
	comp=E,123nm,1.1s						
ISLE				IAML		12 57 35.6	
	comp=N,117nm,1.0s						
BAGL	**Bagley Icefiel**	**5.10**	**39**		**Pn**	**12 56 27.1**	**-1.1**
GHO	**Glory Hole Cre**	**5.11**	**358**		**Pn**	**12 56 28.0**	**-0.3**
GHO	**Glory Hole Cre**	**5.11**	**358**	IAML		12 57 32.2	
	comp=E,107nm,1.1s						
STLK	**Strandline Lak**	**5.12**	**342**		**Pn**	**12 56 27.5**	**-1.0**
SML	**Sawmill**	**5.14**	**1**		**Pn**	**12 56 28.4**	**-0.4**
SML	**Sawmill**	**5.14**	**1**	IAML		12 57 30.7	
	comp=N,99nm,1.1s						
SML				IAML		12 57 34.9	
	comp=E,92nm,0.7s						
SML	**Sawmill**	**5.14**	**1**	P	**Pn**	**12 56 28.4**	**-0.4**
	baz=182						
M23K	**Glacier View**	**5.14**	**4**		**Pn**	**12 56 28.6**	**-0.2**
M23K	**Glacier View**	**5.14**	**4**	P	**Pn**	**12 56 28.6**	**-0.2**
	baz=185						
M22K	**Willow**	**5.15**	**352**	Pn	**Pn**	**12 56 26.9**	**-1.9**
M22K				IAML		12 57 46.1	
	comp=N,132nm,0.9s						
SPNN	**North Nagishla**	**5.16**	**337**		**Pn**	**12 56 28.4**	**-0.8**
N19K	**Bonanza Creek**	**5.16**	**326**		**Pn**	**12 56 27.6**	**-1.6**
N19K	**Bonanza Creek**	**5.16**	**326**	P	**Pn**	**12 56 27.6**	**-1.6**
	baz=141						
SCM	**Sheep Creek Mo**	**5.21**	**6**		**Pn**	**12 56 29.8**	**+0.1**
SCM	**Sheep Creek Mo**	**5.21**	**6**	IAML		12 57 41.3	
	comp=N,99nm,1.4s						
SCM				IAML		12 57 43.5	
	comp=E,98nm,1.2s						
SCM	**Sheep Creek Mo**	**5.21**	**6**	P	**Pn**	**12 56 29.8**	**+0.1**
	baz=188						
SCM	**Sheep Creek Mo**	**5.21**	**6**	P	**Pn**	**12 56 29.8**	**+0.1**
VRDI	**Verde Repeater**	**5.27**	**28**		**Pn**	**12 56 29.9**	**-0.8**
VRDI				IAML		12 57 34.7	
	comp=E,56nm,0.8s						
VRDI				IAML		12 57 59.1	
	comp=N,60nm,1.0s						
KIAG	**Kiagna River**	**5.34**	**35**		**Pn**	**12 56 30.8**	**-0.8**
N25K	**Chitina, Valde**	**5.34**	**21**		**Pn**	**12 56 31.4**	**-0.3**
N25K	**Chitina, Valde**	**5.34**	**21**	IAML		12 57 39.6	
	comp=N,99nm,0.7s						
N25K	**Chitina, Valde**	**5.34**	**21**	P	**Pn**	**12 56 31.4**	**-0.3**
	baz=204						
SAMH	**Samovar Hills**	**5.36**	**47**		**Pn**	**12 56 31.3**	**-0.5**
GLB	**Gilahina Butte**	**5.37**	**25**		**Pn**	**12 56 31.1**	**-0.8**
GLB	**Gilahina Butte**	**5.37**	**25**	IAML		12 57 37.9	
	comp=E,89nm,0.8s						
GLB				IAML		12 57 37.9	
	comp=N,56nm,0.8s						
GRNC	**Granite Creek**	**5.39**	**38**		**Pn**	**12 56 31.3**	**-1.1**
TABL	**Table Mountain**	**5.41**	**43**		**Pn**	**12 56 31.6**	**-1.1**
O17K	**Koliganek Bris**	**5.47**	**308**		**Pn**	**12 56 32.2**	**-1.0**
O17K	**Koliganek Bris**	**5.47**	**308**	P	**Pn**	**12 56 32.2**	**-1.0**
	baz=121						
CHGN	**Chignik**	**5.47**	**270**		**Pn**	**12 56 31.5**	**-1.7**
PTPK	**Patty Peak**	**5.51**	**32**		**Pn**	**12 56 33.3**	**-0.7**
MCARA	**McCarthy VSAT**	**5.51**	**29**		**Pn**	**12 56 33.0**	**-0.9**
MCARA	**McCarthy VSAT**	**5.51**	**29**	P	**Pn**	**12 56 33.0**	**-0.9**
	baz=213						
SKT	**Skwentna**	**5.53**	**345**		**Pn**	**12 56 33.4**	**-0.6**
SKT	**Skwentna**	**5.53**	**345**	P	**Pn**	**12 56 33.4**	**-0.6**
	baz=163						
N18K	**Kilae Creek**	**5.53**	**319**		**Pn**	**12 56 32.5**	**-1.7**
N18K	**Kilae Creek**	**5.53**	**319**	P	**Pn**	**12 56 32.5**	**-1.7**
	baz=134						
PINM	**Pinnacle**	**5.55**	**49**	P	**Pn**	**12 56 33.6**	**-0.9**
	baz=235						
P16K	**Nushagak River**	**5.55**	**299**		**Pn**	**12 56 34.5**	**+0.1**
P16K	**Nushagak River**	**5.55**	**299**	P	**Pn**	**12 56 34.5**	**+0.1**
	baz=112						
M24K	**Tolsona, Glenn**	**5.58**	**12**	P	**Pn**	**12 56 35.0**	**+0.2**
	baz=194						
PNL	**Peninsula**	**5.70**	**55**	P	**Pn**	**12 56 35.6**	**-0.9**
PNL	**Peninsula**	**5.70**	**55**	P	**Pn**	**12 56 35.5**	**-1.0**
	baz=242						
CTG	**Chitna Glacier**	**5.70**	**38**	P	**Pn**	**12 56 35.5**	**-1.1**
	baz=224						
M20K	**Styx River**	**5.71**	**338**		**Pn**	**12 56 35.5**	**-1.2**
M20K	**Styx River**	**5.71**	**338**	P	**Pn**	**12 56 35.5**	**-1.2**
	baz=154						
LOGN	**Logan Glacier**	**5.72**	**40**		**Pn**	**12 56 36.0**	**-0.9**
SVW2	**Sparrevohn**	**5.73**	**324**	P	**Pn**	**12 56 34.9**	**-1.9**
WACK	**Wrangell Chich**	**5.74**	**20**		**Pn**	**12 56 37.2**	**0.0**
CUT	**Chulitna**	**5.80**	**352**		**Pn**	**12 56 37.5**	**-0.3**
O16K	**Kokwok River B**	**5.83**	**304**		**Pn**	**12 56 37.2**	**-1.0**
O16K	**Kokwok River B**	**5.83**	**304**	P	**Pn**	**12 56 37.2**	**-1.0**
	baz=116						
N17K	**Nushagak Hills**	**5.93**	**314**		**Pn**	**12 56 38.5**	**-1.0**
N17K	**Nushagak Hills**	**5.93**	**314**	P	**Pn**	**12 56 38.5**	**-1.0**
	baz=127						
WAT6	**Susitna Watana**	**5.93**	**4**		**Pn**	**12 56 39.2**	**-0.6**
WAT6	**Susitna Watana**	**5.93**	**4**	P	**Pn**	**12 56 39.2**	**-0.6**
	baz=184						
HARP	**HAARP**	**5.99**	**15**		**Pn**	**12 56 40.5**	**+0.1**
HARP	**HAARP**	**5.99**	**15**	P	**Pn**	**12 56 40.5**	**+0.1**
	baz=198						
M19K	**Big River Lodg**	**6.02**	**333**		**Pn**	**12 56 39.3**	**-1.6**
M19K	**Big River Lodg**	**6.02**	**333**	P	**Pn**	**12 56 39.3**	**-1.6**
	baz=148						
M18K	**Stony River**	**6.10**	**325**		**Pn**	**12 56 39.9**	**-2.0**
M18K	**Stony River**	**6.10**	**325**	P	**Pn**	**12 56 39.9**	**-2.0**
	baz=139						
WAT1	**Susitna Watana**	**6.17**	**0**		**Pn**	**12 56 42.7**	**-0.2**
WAT1	**Susitna Watana**	**6.17**	**0**	P	**Pn**	**12 56 42.7**	**-0.2**
	baz=180						
WAT7	**Susitna Watana**	**6.17**	**359**		**Pn**	**12 56 42.6**	**-0.4**
O29M	**Mount Kennedy**	**6.37**	**51**	Pn	**Pn**	**12 56 45.3**	**-0.5**
O29M	**Mount Kennedy**	**6.37**	**51**	P	**Pn**	**12 56 45.1**	**-0.6**
	baz=239						
L19K	**White Mountain**	**6.38**	**332**		**Pn**	**12 56 44.1**	**-1.6**
L19K	**White Mountain**	**6.38**	**332**	P	**Pn**	**12 56 44.1**	**-1.6**
	baz=147						
L20K	**Farewell, AK**	**6.41**	**337**		**Pn**	**12 56 44.6**	**-1.5**
L20K	**Farewell, AK**	**6.41**	**337**	P	**Pn**	**12 56 44.6**	**-1.5**
	baz=153						
DHY	**Denali Highway**	**6.44**	**5**		**Pn

RIDG Independent Ri 7.32 13 P **Pn** 12 56 58.5 -0.1
baz=196
L17K Donlin 7.38 322 **Pn** 12 56 58.0 -1.5
L17K Donlin 7.38 322 P **Pn** 12 56 58.0 -1.5
baz=134
L16K Owhat River 7.53 317 **Pn** 12 57 00.8 -0.7
L16K Owhat River 7.53 317 P **Pn** 12 57 00.8 -0.7
baz=128
BPAW Bear Paw Mtn. 7.54 352 **Pn** 12 57 01.1 -0.5
BPAW Bear Paw Mtn. 7.54 352 P **Pn** 12 57 01.1 -0.5
baz=170
SKAG Skagway 7.55 63 **Pn** 12 57 01.2 -0.5
SKAG Skagway 7.55 63 P **Pn** 12 57 01.0 -0.8
SKAG Skagway 7.55 63 P **Pn** 12 57 01.0 -0.8
baz=254
BESE Bessie Mountai 7.60 70 **Pn** 12 57 00.5 -2.1
PN7A Pavlof North-7 7.62 266 **Pn** 12 57 02.1 -0.8
SCRK Sand Creek 7.66 15 **Pn** 12 57 03.7 +0.2
S32K Killisnoo 7.67 78 P **Pn** 12 56 59.9 -3.5
baz=270
O30N Mendenhall 7.67 53 **Pn** 12 57 02.6 -1.0
O30N Mendenhall 7.67 53 P **Pn** 12 57 02.6 -1.0
baz=243
K17K Iditarod 7.79 325 **Pn** 12 57 03.6 -1.5
K17K Iditarod 7.79 325 P **Pn** 12 57 03.6 -1.5
baz=137
JIS Juneau Island 7.81 72 **Pn** 12 57 03.2 -2.1
JIS Juneau Island 7.81 72 P **Pn** 12 57 03.3 -2.1
WRH Wood River Hil 7.82 2 **Pn** 12 57 05.0 -0.4
NEA2 Nenana 7.94 358 **Pn** 12 57 06.6 -0.6
NEA2 Nenana 7.94 358 P **Pn** 12 57 06.2 -0.9
baz=178
CCB Clear Creek Bu 8.00 2 **Pn** 12 57 08.2 +0.3
J20K Nowinta River 8.01 342 **Pn** 12 57 07.6 -0.4
J20K Nowinta River 8.01 342 P **Pn** 12 57 07.6 -0.4
baz=158
M14K Bethel 8.07 306 **Pn** 12 57 08.8 -0.1
J25K Salcha River, 8.11 10 **Pn** 12 57 09.0 -0.5
J25K Salcha River, 8.11 10 P **Pn** 12 57 09.0 -0.5
baz=193
IL31 8.16 5 **Pn** 12 57 09.5 -0.5
ILAR Eielson Array 8.16 5 **Pn** 12 57 10.2 0.0
ILAR Eielson Array 8.16 5 Pn **Pn** 12 57 09.5 -0.6
comp=N,0.4nm,0.3s,baz=188,slow=13,SNR=18
ILAR Sn **Sn** 12 58 40.0 -2.3
comp=N,0.6nm,0.3s,baz=190,slow=23,SNR=9.3
comp=N,0.7nm,0.3s
WHY Whitehorse 8.17 55 Pn **Pn** 12 57 10.0 -0.3
COLA College 8.23 2 **Pn** 12 57 11.5 +0.5
COLA College 8.23 2 P **Pn** 12 57 12.2 +1.2
COLA College 8.23 2 P **Pn** 12 57 11.5 +0.5
L29M L29M 8.30 35 P **Pn** 12 57 12.3 +0.2
baz=224
P32M Atlin 8.38 63 P **Pn** 12 57 12.4 -0.8
baz=256
M30M Minto, Yukon 8.39 40 Pn **Pn** 12 57 13.1 -0.2
MLY Manley 8.44 354 **Pn** 12 57 14.4 +0.3
I23K Minto, Yukon-K 8.50 358 **Pn** 12 57 15.0 +0.2
I23K Minto, Yukon-K 8.50 358 P **Pn** 12 57 14.6 -0.2
baz=177
U33K Whale Pass 8.59 87 Pn **Pn** 12 57 11.4 -4.7
CRAG Craig 8.73 92 P Pn 12 57 12.4 -5.5
EGAK Eagle 8.89 21 **Pn** 12 57 19.2 -0.9
WRAK Wrangell Islan 8.97 85 Pn **Pn** 12 57 18.9 -2.3
P33M Teslin, Yukon 8.98 60 Pn **Pn** 12 57 17.2 -4.3
P33M Teslin, Yukon 8.98 60 P **Pn** 12 57 20.1 -1.4
baz=253
I26K Coal Creek Min 9.04 15 **Pn** 12 57 21.8 -0.4
I26K Coal Creek Min 9.04 15 P **Pn** 12 57 21.8 -0.4
baz=199
H24K Noodor Dome 9.19 2 **Pn** 12 57 24.4 +0.1
H24K Noodor Dome 9.19 2 P **Pn** 12 57 24.4 +0.1
baz=182
S34M Telegraph Cree 9.52 75 Pn **Pn** 12 57 27.3 -1.5
S34M Telegraph Cree 9.52 75 P **Pn** 12 57 27.4 -1.4
baz=270
H17K Granite Mounta 9.94 331 Pn **Pn** 12 57 33.5 -1.0
FYU Fort Yukon 10.04 8 Pn **Pn** 12 57 36.0 +0.1
T35M Bob Quinn 10.04 81 Pn **Pn** 12 57 34.8 -1.2
DLBC Dease Lake 10.11 72 Pn **Pn** 12 57 36.0 -1.0
comp=N,1.7nm,0.3s,baz=241,slow=8.3,SNR=40
DLBC LR LR 13 01 01.9
comp=N,233nm,18.8s,baz=276,slow=35
comp=N,3.3nm,0.3s
U35K Hyder 10.33 87 **Pn** 12 57 39.6 -0.3
I30M Mount Dempster 10.39 30 **Pn** 12 57 41.6 +0.7
UNV Unalaska Valle 10.62 262 P **Pn** 12 57 42.2 -1.6
TOLK Toolik Lake Re 12.01 358 **Pn** 12 58 03.8 +0.9
D22K Ayikyak River 12.38 353 **Pn** 12 58 08.1 +0.2
BBB Bella Bella 12.71 102 LR LR 13 01 57.2
comp=N,271nm,20.1s,baz=318,slow=32
C23K Itkillik River 13.23 357 **Pn** 12 58 20.1 +0.6
INK Inuvik 13.52 24 **Pn** 12 58 25.5 +2.2
INK Inuvik 13.52 24 P **Pn** 12 58 25.5 +2.2
INK Inuvik 13.52 24 Pn **Pn** 12 58 25.8 +2.5
comp=N,0.1nm,0.3s,baz=238,slow=8.9,SNR=4.7
comp=N,1.2nm,0.8s
FLDN Fort Liard 13.57 64 **Pn** 12 58 25.2 +1.1
C36M Paulatuk 16.69 31 P **Pn** 12 59 04.5 -0.9
YKA Yellowknife Ar 17.99 57 P **P** 12 59 23.1 +1.0
comp=N,0.1nm,0.3s,baz=268,slow=11,SNR=27
YKA PcP **PcP** **13 03 55.5 -0.6**
comp=N,0.2nm,0.6s,baz=266,slow=2.0,SNR=3.4
YKA LR LR 13 06 17.1
comp=N,109nm,18.9s,baz=322,slow=37
comp=N,2.7nm,1.0s
A36M Sachs Harbour 18.15 23 IAmb IAmb 12 59 33.4
comp=Z,22nm,0.8s
NEW Newport 20.77 101 P Pn 12 59 54.9 -0.2
comp=Z,1.9nm,0.9s,baz=306,slow=18,SNR=2.9
NEW LR LR 13 06 41.2
comp=Z,110nm,20.9s,baz=312,slow=33
SHEM Shemya Is, Ala 21.74 275 LR LR 13 08 51.8
comp=Z,49nm,20.2s,baz=27,slow=38
J05D Fort Rock, OR 21.92 116 P **P** **13 00 04.0 -1.1**
J05D IAmb IAmb 13 00 18.2
comp=Z,15nm,1.3s
YBH Yreka Blue Hor 22.37 121 LR LR 13 06 39.3
comp=Z,125nm,20.6s,baz=341,slow=31
BILL Bilibino 23.21 317 P **P** **13 00 14.7 -3.7**
BILL IAmb IAmb 13 00 28.6
comp=Z,20nm,1.3s
BILL Bilibino 23.21 317⇑ *e*P **P** **13 00 19.2 +0.7**
BILL pmax pmax
comp=Z,19nm,1.3s
ELK Elko 26.81 112 LR LR 13 09 33.7
comp=Z,115nm,21.2s,baz=320,slow=32
NVAR Mina Array Bea 27.06 120 P **P** **13 00 54.3 -0.2**
comp=Z,1.3nm,0.8s,baz=306,slow=9.4,SNR=11
NVAR PcP **PcP** **13 04 14.1 -1.1**
comp=Z,0.4nm,0.8s,baz=289,slow=2.8,SNR=2.9
NVAR LR LR 13 09 35.2
comp=Z,99nm,18.7s,baz=34,slow=32
comp=Z,1.3nm,0.8s
PDAR Pinedale Array 28.36 103 P **P** **13 01 05.2 -0.8**
comp=Z,0.4nm,0.7s,baz=343,slow=4.6,SNR=4.2
PDAR LR LR 13 10 48.9
comp=Z,37nm,20.5s,baz=352,slow=33
comp=Z,0.4nm,0.7s
R11B Troy Canyon, C 28.45 116 P **P** **13 01 06.5 -0.3**
PET Petropavlovsk 29.98 286⇓ *e*P **P** **13 01 21.6 +1.6**
PET pmax pmax
comp=Z,63nm,1.7s
PETK Petropavlovsk- 30.44 286 P **P** **13 01 24.4 +0.2**
comp=Z,2.4nm,0.8s,baz=64,slow=14,SNR=5.2
PETK LR LR 13 14 07.3
comp=Z,35nm,19.7s,baz=90,slow=37
comp=Z,2.4nm,0.8s
V12A Nelson 30.88 118 P **P** **13 01 26.6 -1.6**
V12A IAmb IAmb 13 01 37.7
comp=Z,7.1nm,1.4s
MA2 Magadan 31.19 301 LR LR 13 14 40.6
comp=Z,93nm,20.7s,baz=100,slow=38
ULM Lac du Bonnet 31.34 79 LR LR 13 13 41.4
comp=Z,94nm,18.4s,baz=267,slow=35
PFO Pinyon Flats O 31.84 123 LR LR 13 11 33.6
comp=Z,88nm,21.4s,baz=316,slow=31
Q24A Divide 33.41 103 IAmb IAmb 13 01 53.2
comp=Z,4.3nm,0.8s
ANMO Albuquerque 35.72 109 LR LR 13 15 04.2
comp=Z,38nm,21.7s,baz=71,slow=34
YAK Yakutsk 39.40 313 *e*P **P** **13 02 41.7 +0.6**
YAK *e* 13 04 13.2
YAK *e* 13 04 50.9
YAK *e*S **S** **13 08 44.0 +1.8**
YAK *e* 13 12 56.0
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=Z,95nm,3.9s
YAK pmax pmax
comp=E,62nm,4.1s
YAK smax smax
comp=N,47nm,3.5s
TXAR Lajitas Array 41.60 112 P **P** **13 03 00.0 +0.1**
TXAR Lajitas Array 41.60 112 P **P** **13 02 60.0 +0.1**
comp=N,0.5nm,0.9s,baz=318,slow=4.9,SNR=3.7
TXAR LR LR 13 19 12.7
comp=N,42nm,18.8s,baz=24,slow=35
comp=N,0.5nm,0.9s
YSS Yuzh-Sakhalins 41.84 287 *e*P **P** **13 03 03.1 +1.6**
YSS MLR MLR
comp=Z,200nm,14.0s
FCAR Ozark Folk Cen 42.74 94 P **P** **13 03 07.5 -1.5**
SCHQ Schefferville 43.44 56 LR LR 13 21 20.8
comp=Z,78nm,18.6s,baz=102,slow=36
SADO Sadowa 43.66 75 LR LR 13 21 30.2
comp=Z,104nm,18.1s,baz=77,slow=36
ASAJ Asahikawa 43.78 284 LR LR 13 21 32.6
comp=Z,38nm,19.6s,baz=53,slow=36
KLR Kul'dur 46.01 296⇑ *e*P **P** **13 03 35.7 +0.8**
KLR pmax pmax
comp=Z,8.0nm,1.7s
KLR Kul'dur 46.01 296 LR LR 13 23 58.3
comp=Z,41nm,19.2s,baz=38,slow=38
HEH HeiHe 47.44 300 *e*P **P** **13 03 45.3 -0.8**
HEH pmax pmax
comp=Z,5.0nm,1.2s
TKL Tuckaleechee C 47.52 88 LR LR 13 23 48.9
comp=Z,196nm,18.0s,baz=352,slow=36
NRIK Noril'sk 47.90 337⇓ *e*P **P** **13 03 49.9 +0.5**
NRIK pmax pmax
comp=Z,8.0nm,1.6s
NRIK Noril'sk 47.90 337 P **P** **13 03 49.2 -0.2**
comp=Z,1.2nm,0.3s,baz=340,slow=1.4,SNR=4.1
comp=Z,1.2nm,0.3s
H11N2 WAKE ISLAND Hy 49.43 240 T T 13 57 17.4
baz=30,slow=76,SNR=16
H11N3 WAKE ISLAND Hy 49.43 240 T T 13 57 16.1
baz=30,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 49.44 240 T T 13 57 19.0
baz=30,slow=76,SNR=11
H11S1 WAKE ISLAND Hy 50.57 240 T T 13 58 47.4
baz=31,SNR=13
H11S2 WAKE ISLAND Hy 50.58 240 T T 13 58 47.0
baz=31,slow=74,SNR=12
H11S3 WAKE ISLAND Hy 50.59 240 T T 13 58 47.1
baz=31,slow=74,SNR=12
MJAR Matsushiro Arr 51.49 280 LR LR 13 25 17.3
comp=Z,22nm,22.0s,baz=37,slow=35
JHJ Hachijo jima 2 53.18 276 LR LR 13 23 50.7
comp=Z,16nm,21.1s,baz=132,slow=32
ARCES ARCESS Array B 54.01 3 P **P** **13 04 35.2 -0.2**
comp=Z,12nm,1.1s,baz=27,slow=5.6,SNR=4.4
comp=Z,12nm,1.1s
KSRS Korea Array 56.31 288 P **P** **13 04 52.3 -0.1**
comp=Z,1.3nm,0.8s,baz=38,slow=5.6,SNR=3.2
KSRS LR LR 13 27 46.9
comp=Z,15nm,21.9s,baz=0.0,slow=35
comp=Z,1.3nm,0.8s
JNU Nakatsue 58.02 283 LR LR 13 33 52.0
comp=Z,21nm,18.1s,baz=348,slow=40
SONM Songino Array 58.68 310 P **P** **13 05 09.4 +0.2**
SONM IAmb IAmb 13 05 19.0
comp=Z,5.0nm,1.0s
SONM Songino Array 58.68 310 P **P** **13 05 09.4 +0.2**
SONM pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 58.68 310 P **P** **13 05 10.6 +1.4**
comp=Z,2.0nm,0.8s,baz=43,slow=6.0,SNR=16
comp=Z,2.0nm,0.8s
ZAA0 Zalesovo Array 61.44 327 P **P** **13 05 26.6 -1.2**
ZALV Zalesovo Beam 61.44 327 P **P** **13 05 27.1 -0.8**
ZALV Zalesovo Beam 61.44 327 P **P** **13 05 28.1 +0.3**
comp=Z,3.4nm,0.7s,baz=32,slow=7.3,SNR=19
comp=Z,3.4nm,0.7s
NB2 NORSAR Subarra 61.54 11 P **P** **13 05 28.3 -0.2**
comp=Z,2.0nm,0.8s,baz=348,slow=6.9
NOA NORSAR Array B 61.54 11 P **P** **13 05 28.4 0.0**
comp=Z,0.9nm,0.8s,baz=346,slow=6.4,SNR=3.6
comp=Z,0.9nm,0.8s
FINES FINESS Array B 62.14 3 *i* P **P** **13 05 32.5 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 62.14 3 P **P** **13 05 33.0 +0.6**
comp=Z,2.7nm,0.8s,baz=12,slow=9.9,SNR=7.2
comp=Z,2.7nm,0.8s
KLMR Klimovskoe 62.63 356 *e*P **P** **13 05 35.3 -0.4**
KLMR pmax pmax
comp=Z,20nm,2.1s
DGZ Jazzator, Alta 64.29 323⇑ *e*P **P** **13 05 48.2 +1.1**
DGZ pmax pmax
comp=Z,2.0nm,1.2s
EKA Eskdalemuir Ar 64.86 21 P **P** **13 05 51.3 +0.8**
comp=Z,1.8nm,0.8s,baz=287,slow=7.8,SNR=2.0
comp=Z,1.8nm,0.8s
ARU Arti 65.13 344 P **P** **13 05 51.9 -0.3**
ARU Arti 65.13 344 *c* *i*P **P** **13 05 52.3 +0.1**
ARU S **S** **13 14 36.3 +1.9**
ARU SS **SS** **13 18 41.6 -4.0**
ARU pmax pmax
comp=Z,40nm,4.1s
ARU Arti 65.13 344 P **P** **13 05 52.5 +0.3**
comp=Z,1.9nm,0.3s,baz=322,slow=2.2,SNR=5.6
comp=Z,1.9nm,0.3s
BRVK Borovoye 66.08 336 P **P** **13 05 56.5 -1.9**
BRVK IAmb IAmb 13 06 07.1
comp=Z,2.8nm,0.8s
BRVK Borovoye 66.08 336⇑ *e*P **P** **13 05 58.7 +0.3**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 66.08 335 P **P** **13 05 58.9 +0.4**
comp=Z,3.5nm,0.7s,baz=33,slow=7.0,SNR=20
comp=Z,3.5nm,0.7s
KURK Kurchatov 66.09 329 P **P** **13 05 58.0 -0.5**
KURK IAmb IAmb 13 06 07.0
comp=Z,2.9nm,0.7s
KURK Kurchatov 66.09 329⇑ *e*P **P** **13 05 58.8 +0.3**
KURK pmax pmax
comp=Z,2.0nm,1.2s
KURBB Kurchatov Arra 66.20 329 P **P** **13 05 59.5 +0.4**
comp=Z,1.4nm,0.6s,baz=30,slow=6.3,SNR=9.5
comp=Z,1.4nm,0.6s
GTA Gaotai 68.30 309 *e*P **P** **13 06 14.9 +2.0**
GTA pP pwP 13 06 20.5 0.0
GTA pmax pmax
comp=Z,2.0nm,1.2s
MK31 Makanchi Array 68.49 325 IAmb IAmb 13 06 22.2
comp=Z,1.6nm,0.8s
MK31 Makanchi Array 68.49 325 *d* *e*P **P** **13 06 13.6 -0.3**
MKAR Makanchi Array 68.49 325 P **P** **13 06 13.2 -0.6**
MKAR Makanchi Array 68.49 325 *c* *e*P **P** **13 06 13.6 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 68.49 325 P **P** **13 06 13.9 0.0**
comp=Z,0.8nm,0.5s,baz=28,slow=6.3,SNR=18
comp=Z,0.8nm,0.5s
MAKZ Makanchi 68.58 325 P **P** **13 06 14.0 -0.4**
MAKZ IAmb IAmb 13 06 22.9
comp=Z,2.9nm,0.7s
MAKZ Makanchi 68.58 325 P **P** **13 06 14.0 -0.4**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
BELG Belogornoye 70.47 350⇓ *e*P **P** **13 06 25.5 -0.4**
BELG pmax pmax
comp=Z,2.0nm,1.0s
BELG Belogornoye 70.47 350 P **P** **13 06 26.2 +0.3**
comp=Z,7.9nm,0.9s,baz=75,slow=5.9,SNR=4.0
comp=Z,7.9nm,0.9s
AKTO Aktyubinsk 71.00 342 P **P** **13 06 29.4 +0.2**
comp=Z,2.2nm,0.9s,baz=335,slow=3.1,SNR=4.9
comp=Z,2.2nm,0.9s
ABKAR Akbulak array 71.80 341 P **P** **13 06 32.8 -1.3**
ABKAR IAmb IAmb 13 06 42.9
comp=Z,2.7nm,0.8s
KHC Kasperske Hory 73.51 12⇑ *e*P **P** **13 06 43.9 -0.4**
KHC pmax pmax
comp=Z,6.0nm,1.3s
STHS Stebnicka Huta 73.93 7 *e*P **P** **13 06 49.4 +2.7**
STHS Stebnicka Huta 73.93 7 *e*P **P** **13 06 49.4 +2.7**
AAK Ala-Archa 74.61 328⇑ *e*P **P** **13 06 51.9 +0.9**
AAK pmax pmax
comp=Z,3.0nm,1.7s
AAK Ala-Archa 74.61 328 LR LR 13 43 25.8
comp=Z,45nm,20.4s,baz=10,slow=39
MODS Modra-Piesok 74.65 10 *e*P **P** **13 06 53.6 +2.6**
MODS Modra-Piesok 74.65 10 *e*P **P** **13 06 53.5 +2.6**
PZH PanZhiHua 78.26 300 P **P** **13 07 11.3 -0.5**
PZH pmax pmax
comp=Z,7.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.1s
ESDC Sonseca Array 79.45 27 P **P** **13 07 18.9 +0.8**
comp=Z,1.3nm,0.8s,baz=339,slow=5.5,SNR=7.7
comp=Z,1.3nm,0.8s
KBZ Khabaz 79.49 352⇑ *e*P **P** **13 07 19.1 +1.0**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 79.49 352 P **P** **13 07 19.1 +1.0**
comp=Z,1.3nm,0.7s,baz=103,slow=4.7,SNR=3.5
comp=Z,1.3nm,0.7s
GEYT Alibeck 83.07 339 P **P** **13 07 38.4 +1.0**
comp=Z,2.0nm,0.7s,baz=65,slow=12,SNR=4.2
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 83.94 358 P **P** **13 07 42.3 +0.4**
comp=Z,0.8nm,0.8s,baz=44,slow=2.0,SNR=3.2
comp=Z,0.8nm,0.8s
CMAR Chiang Mai Arr 86.44 299 P **P** **13 07 54.8 +0.2**
comp=Z,1.1nm,0.7s,baz=18,slow=5.1,SNR=9.9
comp=Z,1.1nm,0.7s
QSPA South Pole Qui 146.48 180 PKPbc **PKPdf** **13 14 50.5 +0.3**
comp=Z,5.2nm,1.0s,baz=291,slow=0.7,SNR=19
BOSA Boshof 151.60 11 PKPbc **PKPbc** **13 15 05.3 -0.7**
comp=Z,3.8nm,0.8s,baz=154,slow=1.9,SNR=5.5

*HEL **22** 12:57:45.3±0.4, 67.75N×20.20E, h0km, ML1.3, Explosion*
*UPP **22** 12:57:45.5±0.0, 67.82N×20.21E, h0km, ML2.5, Confirmed Induced event*
ISC 22 12:57:44.9±0.9, 67.79N±0.03×20.24E±0.03, h0km, n22, σ1.900/32, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.17**	**13**	P	**Pg**	**12 57 48.5**	**+0.2**
KUA				S	**Sg**	**12 57 50.6**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**279**	P	**Pg**	**12 57 50.1**	**+0.5**
DUNU	**Dundret**	**0.68**	**169**	P	**Pb**	**12 57 59.0**	**-0.7**
LANU	**Lannavaara**	**0.72**	**68**	P	**Pg**	**12 57 58.9**	**+0.3**
LANU	**Lannavaara**	**0.72**	**68**	PG	**Pg**	**12 57 58.7**	**+0.1**
LANU				SG	**Sg**	**12 58 08.3**	**+0.4**
SALU	**Saltoluokta**	**0.78**	**239**	P	**Pb**	**12 58 00.4**	**-0.9**
KIF	**Kilpisjarvi**	**1.24**	**9**	*e*P	**Pn**	**12 58 09.7**	**+0.2**
KIF	**Kilpisjarvi**	**1.24**	**9**	PG	**Pb**	**12 58 09.3**	**+0.1**
KIF				SG	**Sg**	**12 58 24.7**	**-0.1**
KIF				MSG		12 58 25.2	
comp=Z,3.5nm,0.2s							
PAJU	**Pajala**	**1.35**	**123**	P	**Pb**	**12 58 10.7**	**-0.4**
PAJU	**Pajala**	**1.35**	**123**	PN	**Pg**	**12 58 10.3**	**-0.4**
baz=306							
PAJU				SN	**Sn**	**12 58 29.1**	**-0.5**
HEF	**Hetta**	**1.43**	**62**	*e*P	**Pn**	**12 58 11.1**	**-1.0**
HEF	**Hetta**	**1.43**	**62**	PG	**Pn**	**12 58 11.6**	**-0.5**
baz=246							
HEF				MSG		12 58 29.1	
comp=Z,2.2nm,0.2s							
HEF				SN	**Sb**	**12 58 31.4**	**+0.3**
KLF	**Kolari**	**1.54**	**109**	PN	**Pb**	**12 58 13.8**	**-0.5**
KLF				MSG		12 58 31.4	
comp=Z,1.8nm,0.2s							
KLF				SN	**Sg**	**12 58 35.8**	**+1.6**
KTK1	**Kautokeino**	**1.66**	**41**	PG	**Pn**	**12 58 15.5**	**+0.3**
KTK1				SN	**Sg**	**12 58 39.1**	**+0.9**
TRO	**Tromso**	**1.92**	**346**	SG	**Sg**	**12 58 46.8**	**+0.4**
KALU	**Kalix**	**2.29**	**146**	PG	**Pb**	**12 58 26.0**	**-1.1**
baz=326							
TOF	**Tornio**	**2.35**	**135**	PG	**Pb**	**12 58 27.1**	**-1.0**
TOF				MSG		12 58 54.5	
comp=Z,1.2nm,0.2s							
SGF	**Sodankyl**	**2.43**	**95**	PG	**Pb**	**12 58 28.8**	**-0.7**
SGF				SG	**Sb**	**12 59 00.6**	**+0.6**
RNF	**Rovaniemi**	**2.54**	**115**	PG	**Pb**	**12 58 30.1**	**-1.3**
RNF				SG	**Sb**	**12 59 04.1**	**+1.0**
KMNF	**Kaamanen**	**2.84**	**58**	PB	**Pb**	**12 58 34.5**	**-2.0**
KMNF				SB	**Sb**	**12 59 11.4**	**-0.4**
RAJF	**Raja-Jooseppi**	**3.10**	**73**	SG	**Sb**	**12 59 20.1**	**+0.9**
OLKF	**Oulanka, Finla**	**3.88**	**108**	SG	**Sb**	**12 59 44.8**	**+3.2**

*NEIC **22** 13:00:27.0±1.6, 56.68N±0.09×148.6W±0.1, h20km±10km, ML2.9/38, ML2.6(AEIC), Error ellipse: s-maj=14.3km s-min=7.7km az=147.0*
AEIC 22 13:00:28.4±1.7, 56.6N±0.2×148.5W±0.1, h4km±9km, Error ellipse: s-maj=22.7km s-min=10.3km az=166.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.52**	**301**		Pn	13 01 05.4	-4.7
KDAK					Sn	13 01 34.3	-6.8
OHAK	**Old Harbor**	**2.69**	**286**		Pn	13 01 07.1	-5.2
SYI	**Shuyak Island**	**2.92**	**316**		Pn	13 01 10.7	-4.9
SYI					Sn	13 01 43.9	-7.1
SYI	**Shuyak Island**	**2.92**	**316**	IAML		13 01 51.9	
comp=N,17nm,1.4s							
SYI				IAML		13 02 30.9	
comp=E,23nm,1.5s							
MID	**Middleton Isla**	**3.11**	**21**	Pn	Pn	13 01 12.5	-5.6
MID				IAML		13 01 58.5	
comp=N,86nm,1.4s							
Q23K	**Middleton Isla**	**3.11**	**21**	Pn	Pn	13 01 12.5	-5.6
CNPM	**China Poot**	**3.30**	**335**		Pn	13 01 15.7	-5.1
CNPM					Sn	13 01 52.7	-7.8
BRSE	**Bradley Lake S**	**3.40**	**341**		Pn	13 01 16.9	-5.2
BRLK	**Bradley Lake**	**3.45**	**340**		Pn	13 01 17.5	-5.3
BRLK					Sn	13 01 56.3	-8.0
P23K	**Montague Islan**	**3.50**	**9**		Pn	13 01 18.4	-5.1
HOM	**Homer**	**3.52**	**333**		Pn	13 01 19.4	-4.3
Q19K	**Cape Douglas,**	**3.62**	**313**	Pn	Pn	13 01 21.6	-3.6
P19K	**Oil Pt**	**3.98**	**323**		Pn	13 01 25.7	-4.4
Q22K	**Cooper Landing**	**3.98**	**352**		Pn	13 01 26.8	-3.4
Q22K	**Cooper Landing**	**3.98**	**352**	IAML		13 02 55.0	
comp=E,40nm,1.4s							
O22K				IAML		13 02 56.0	
comp=N,41nm,1.4s							
KAIM	**Kayak Island**	**4.02**	**31**	Pn	Pn	13 01 24.7	-5.9
SLKM	**Skilak Lake**	**4.06**	**348**		Pn	13 01 26.4	-4.8
Q20K	**Slope Mountain**	**4.14**	**330**		Pn	13 01 27.6	-4.8
IVE	**Iliamna Volcan**	**4.20**	**328**		Pn	13 01 27.9	-5.2
ILSW	**Iliamna Southw**	**4.21**	**327**	Pn	Pn	13 01 29.1	-4.2
ILSW				IAML		13 02 17.1	
comp=N,8.0nm,1.1s							
EYAK	**Cordova Ski Ar**	**4.26**	**19**		Pn	13 01 30.1	-3.8
FID	**Port Fidalgo**	**4.34**	**14**		Pn	13 01 30.7	-4.4
FID	**Port Fidalgo**	**4.34**	**14**	IAML		13 02 31.4	
comp=E,16nm,1.5s							
FID				IAML		13 03 31.1	
comp=N,14nm,1.4s							
RDSO	**Redoubt South**	**4.48**	**332**		Pn	13 01 31.8	-5.4
RSO	**Redoubt South**	**4.49**	**332**	Pn	Pn	13 01 32.8	-4.6
RDT	**Redoubt**	**4.50**	**335**		Pn	13 01 32.1	-5.3
P18K	**Big Mountain,**	**4.55**	**311**		Pn	13 01 33.2	-4.8
P18K	**Big Mountain,**	**4.55**	**311**	IAML		13 03 50.3	
comp=N,6.1nm,1.5s							
O18K	**Koktuh Hills**	**4.83**	**316**		Pn	13 01 35.6	-6.2
O18K	**Koktuh Hills**	**4.83**	**316**	IAML		13 02 35.1	
comp=N,3.8nm,1.5s							
O18K				IAML		13 02 35.5	
comp=E,4.9nm,1.4s							
CRQM	**Cirque**	**5.07**	**32**	Pn	Pn	13 01 40.8	-4.4
CRQM				IAML		13 02 21.2	
comp=N,16nm,1.3s							
CRQM				IAML		13 02 32.6	
comp=E,13nm,1.3s							
GHO	**Glory Hole Cre**	**5.23**	**358**	Pn	Pn	13 01 42.1	-5.3
GHO				IAML		13 03 58.5	
comp=N,9.0nm,1.3s							
GHO				IAML		13 04 07.5	
comp=E,8.4nm,1.5s							
N19K	**Bonanza Creek**	**5.27**	**326**	Pn	Pn	13 01 42.3	-5.6
N19K				IAML		13 03 26.3	
comp=N,3.1nm,1.1s							

N19K				IAML		13 05 10.2	
	comp=E,3.5nm,1.2s						
BCPM	**Bancas Point**	**5.80**	**50**	Pn	Pn	13 01 51.0	-4.1
M19K	**Big River Lodg**	**6.14**	**333**	Pn	Pn	13 01 53.0	-6.8
L19K	**White Mountain**	**6.49**	**333**	Pn	Pn	13 01 57.1	-7.5
M17K	**Holitna River**	**6.68**	**320**	Pn	Pn	13 02 02.6	-4.6
M16K	**Timber Creek**	**7.02**	**314**	Pn	Pn	13 02 03.9	-8.0

*SOME **22** 13:05:38.7, 42°.12N × 82°.87E, h15km*
*NNC **22** 13:05:41.7±6.9, 42°.33N × 82°.93E, h0km, mb3.3, mpv3.0,*
Error ellipse: s-maj=65.6km s-min=43.3km az=11.0
ISC 22 13:05:40.6±2.2**, 42°.3N**±0°.1×**82°.91E**±0°.10**, h10**km**, n17**, σ1§99/24**, 1C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.20**	**302**	Pg	**Pb**	**13 06 21.0**	**+0.5**
	1.7nm,0.2s						
KTMS				Lg	Lg	13 06 52.2	
	6.4nm,0.3s						
KTMS	**Ketmen**	**2.20**	**302**	*e*P	**Pb**	**13 06 21.0**	**+0.5**
	1.7nm,0.2s						
KTMS				*e*S	**Sg**	**13 06 52.2**	**+0.9**
	6.4nm,0.3s						
SHLS	**Shalkode**	**2.68**	**290**	Pg	**Pn**	**13 06 25.0**	**+1.0**
	15nm,0.6s						
SHLS				Lg	Lg	13 06 58.8	
	22nm,0.4s						
SHLS	**Shalkode**	**2.68**	**290**	*e*P	**Pn**	**13 06 23.3**	**-0.6**
	4.9nm,0.4s						
SHLS				*e*S	**Sn**	**13 06 55.6**	**-0.9**
	9.6nm,0.5s						
PDGK	**Podgornoye**	**2.72**	**293**	Pg	**Pb**	**13 06 28.7**	**-0.6**
	0.9nm,0.4s						
PDGK				Lg	Lg	13 07 05.1	
	4.5nm,0.5s						
PDGK	**Podgornoye**	**2.72**	**293**	⇓Pn	**Pb**	**13 06 30.2**	**+0.8**
	2.0nm,0.6s						
PDGK				⇓Sn	**Sg**	**13 07 08.2**	**+0.3**
	5.7nm,0.5s						
UZB	**Uzynbulak**	**2.99**	**288**	Pg	**Pb**	**13 06 33.3**	**-0.7**
	2.6nm,0.3s						
UZB				Lg	Lg	13 07 12.9	
	7.8nm,0.6s						
UZB	**Uzynbulak**	**2.99**	**288**	*e*P	**Pb**	**13 06 33.3**	**-0.7**
	2.6nm,0.3s						
UZB				*e*S	**Sb**	**13 07 12.9**	**+2.3**
	7.8nm,0.6s						
SATY	**Saty**	**3.41**	**284**	Pg	**Pn**	**13 06 38.2**	**+4.3**
	1.9nm,0.2s						
SATY				Lg	Lg	13 07 21.7	
	7.0nm,0.5s						
SATY	**Saty**	**3.41**	**284**	*e*P	**Pb**	**13 06 39.7**	**-1.4**
	0.7nm,0.2s						
SATY				*e*S	**Sb**	**13 07 23.8**	**+1.1**
	2.7nm,0.3s						
KNOS	**Konyrlen**	**3.41**	**308**	Pg	**Pb**	**13 06 41.7**	**+0.5**
	2.6nm,0.5s						
KNOS				Lg	Lg	13 07 27.4	
	2.1nm,0.5s						
ARXS	**Arharly**	**4.17**	**299**	Pg	**Pb**	**13 06 56.7**	**+2.5**
	1.5nm,0.2s						
ARXS				Lg	Lg	13 07 53.2	
	3.8nm,0.8s						
ARXS	**Arharly**	**4.17**	**299**	*e*P	**Pb**	**13 06 55.8**	**+1.7**
	1.5nm,0.2s						
ARXS				*e*S	**Sg**	**13 07 51.0**	**-3.6**
	3.1nm,0.3s						
MK31	**Makanchi Array**	**4.51**	**355**	⇑Pg	**Pg**	**13 07 05.1**	**-1.9**
	0.8nm,0.7s,baz=174,slow=16,SNR=7.1						
MK31				⇓Lg	Lg	13 08 05.7	
	3.4nm,0.7s,baz=170,slow=25,SNR=5.3						
KTBS	**Karatobe**	**4.78**	**289**	Pg	**Pb**	**13 07 06.2**	**+1.7**
	0.9nm,0.6s						
KTBS				Lg	Lg	13 08 09.6	
	2.5nm,0.9s						
KTBS	**Karatobe**	**4.78**	**289**	*e*P	**Pb**	**13 07 06.2**	**+1.7**
	0.9nm,0.6s						
KTBS				*e*S	**Sg**	**13 08 09.6**	**-4.4**
	2.5nm,0.9s						
KSH	**Kashi**	**5.95**	**244**	P	**Pn**	**13 07 08.8**	**0.0**
KSH				sP	Pb	13 07 15.6	-8.8
KSH				pmax	pmax		
	comp=Z,2.0nm,0.8s						

*JMA **22** 13:18:07.2±0.0, 24°.0N±0°.1×121°.8E±0°.2, h52km, MV2.9/15,*
TAIWAN REGION
*TAP **22** 13:18:07.7, 24°.03N × 121°.81E, h49km, ML3.6, C*
ISC 22 13:18:08.4±1.2**, 24°.02N**±0°.02×**121°.83E**±0°.02**, h43**km±5km**,**
n140, σ1§26/279, 15C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.21**	**258**	⇑*i*P	**Pn**	**13 18 16.3**	**+0.3**
	baz=245						
HWA				S	**Sn**	**13 18 22.4**	**+1.0**
	baz=245						
TWD	**Chiawan**	**0.22**	**285**	⇑*i*P	**Pn**	**13 18 16.1**	**-0.1**
	baz=284						
TWD				*i* S	**Sn**	**13 18 22.0**	**+0.4**
	baz=284						
ETL	**Fush Village**	**0.24**	**306**	⇑*i*P	**Pn**	**13 18 16.2**	**-0.2**
	baz=307						
ETL				S	**Sn**	**13 18 22.6**	**+0.7**
	baz=307						
NACB	**Ninganchiao**	**0.27**	**305**	⇑*i*P	**Pn**	**13 18 16.3**	**-0.2**
	baz=306						
NACB				*i* S	**Sn**	**13 18 22.5**	**+0.2**
	baz=306						
EHP	**Heping Village**	**0.30**	**344**	*e*P	**Pn**	**13 18 16.3**	**-0.6**
	baz=345						
EHP				*e*S	**Sn**	**13 18 23.8**	**+0.9**
	baz=345						
ETM	**Tongmen**	**0.32**	**260**	⇑*i*P	**Pn**	**13 18 16.9**	**-0.1**
	baz=266						
ETM				*i* S	**Sn**	**13 18 23.5**	**+0.4**
	baz=266						
EAHA	**Aohua**	**0.32**	**345**	⇑P	**Pn**	**13 18 16.8**	**-0.3**
	baz=344						
EAHA				S	**Sn**	**13 18 23.6**	**+0.4**
	baz=344						
SHUL	**Shoufeng**	**0.34**	**227**	P	**Pn**	**13 18 17.4**	**+0.2**
	baz=218						
SHUL				S	**Sn**	**13 18 24.4**	**+0.9**
	baz=218						
ETLH	**Xiulin Townshi**	**0.37**	**300**	⇑*i*P	**Pn**	**13 18 17.4**	**-0.3**
	baz=293						
ETLH				*i* S	**Sn**	**13 18 24.2**	**-0.1**
	baz=293						
LXIB	**Xiulin Townshi**	**0.38**	**270**	⇓*i*P	**Pn**	**13 18 17.5**	**-0.4**
	baz=268						
LXIB				*i* S	**Sn**	**13 18 24.4**	**-0.2**
	baz=268						
TEGC	**Jichi Village**	**0.41**	**221**	P	**Pn**	**13 18 18.4**	**+0.3**
	baz=209						
TEGC				S	**Sn**	**13 18 26.1**	**+1.1**
	baz=209						
ENA	**Nanau**	**0.41**	**348**	⇑*i*P	**Pn**	**13 18 17.9**	**-0.3**
	baz=348						
ENA				*i* S	**Sn**	**13 18 25.6**	**+0.5**
	baz=348						
ESL	**Shilin**	**0.42**	**241**	⇓*i*P	**Pn**	**13 18 17.8**	**-0.4**
	baz=246						
ESL				*i* S	**Sn**	**13 18 25.3**	**+0.1**
	baz=246						
EWUT	**Wuta**	**0.43**	**353**	⇑P	**Pn**	**13 18 18.2**	**-0.1**
	baz=353						
EWUT				S	**Sn**	**13 18 26.1**	**+0.8**
	baz=353						
EOS4	**EOS4**	**0.46**	**77**	*e*P	**Pn**	**13 18 18.6**	**+0.3**
	baz=79						
EOS4				*e*S	**Sn**	**13 18 26.7**	**+1.4**
	baz=79						
WARBT	**Fenglin Townsh**	**0.51**	**234**	⇓P	**Pn**	**13 18 18.6**	**-0.8**
	baz=239						
WARBT				*e*S	**Sn**	**13 18 26.7**	**-0.4**
	baz=239						
EOS3	**EOS3**	**0.52**	**59**	*e*P	**Pn**	**13 18 19.9**	**+0.7**
	baz=57						
EOS3				*e*S	**Sn**	**13 18 29.5**	**+2.4**
	baz=57						
WHF	**Hehuan Shan**	**0.53**	**284**	⇓*i*P	**Pn**	**13 18 19.6**	**-0.5**
	baz=277						
WHF				S	**Sn**	**13 18 27.8**	**-0.5**
	baz=277						
EOS2	**EOS2**	**0.54**	**43**	P	**Pn**	**13 18 20.4**	**+0.8**
	baz=47						
EOS2				S	**Sn**	**13 18 30.2**	**+2.6**
	baz=47						
ESAO	**Su ao**	**0.55**	**1**	⇑P	**Pn**	**13 18 19.7**	**-0.2**
	baz=3.0						
ESAO				S	**Sn**	**13 18 28.6**	**+0.5**
	baz=3.0						
NNSB	**Datong**	**0.58**	**315**	⇓P	**Pn**	**13 18 20.0**	**-0.3**
	baz=315						
NNSB				S	**Sn**	**13 18 28.6**	**-0.3**
	baz=315						
NNSH	**Datong**	**0.58**	**315**	*i* P	**Pn**	**13 18 20.0**	**-0.3**
	baz=315						
NNSH				*i* S	**Sn**	**13 18 28.3**	**-0.6**
	baz=315						
LATG	**Datong**	**0.58**	**332**	P	**Pn**	**13 18 19.8**	**-0.6**
	baz=326						
LATG				S	**Sn**	**13 18 29.2**	**+0.2**
	baz=326						
TWC	**Suao**	**0.59**	**1**	⇑*i*P	**Pn**	**13 18 20.4**	**0.0**
	baz=5.0						
TWC				*i* S	**Sn**	**13 18 29.5**	**+0.6**
	baz=5.0						
NNS	**Nan Shan**	**0.59**	**315**	⇓*i*P	**Pn**	**13 18 20.2**	**-0.4**
	baz=316						
NNS				*i* S	**Sn**	**13 18 29.1**	**-0.2**
	baz=316						
CHGB	**Renai**	**0.60**	**274**	⇓*i*P	**Pn**	**13 18 20.5**	**-0.3**
	baz=268						
CHGB				*i* S	**Sn**	**13 18 29.4**	**-0.3**
	baz=268						
NDS	**Dongshan**	**0.62**	**350**	⇑P	**Pn**	**13 18 20.6**	**-0.2**
	baz=352						
NDS				*e*S	**Sn**	**13 18 30.2**	**+0.4**
	baz=352						
TWT	**Tachien**	**0.64**	**291**	P	**Pn**	**13 18 21.3**	**0.0**
	baz=287						
TWT				S	**Sn**	**13 18 30.6**	**+0.1**
	baz=287						
HGSD	**Ruisui**	**0.65**	**216**	P	**Pn**	**13 18 20.9**	**-0.2**
	baz=204						
HGSD				S	**Sn**	**13 18 31.1**	**+0.8**
	baz=204						
NDT	**Datong Townshi**	**0.65**	**333**	⇑P	**Pn**	**13 18 20.8**	**-0.4**
	baz=328						
NDT				S	**Sn**	**13 18 30.3**	**-0.2**
	baz=328						
WUSB	**Renai**	**0.65**	**268**	⇓*i*P	**Pn**	**13 18 21.3**	**-0.1**
	baz=268						
WUSB				*e*S	**Sn**	**13 18 30.3**	**-0.4**
	baz=268						
TDCB	**Techi**	**0.66**	**291**	⇓P	**Pn**	**13 18 21.3**	**-0.1**
	baz=286						
TDCB				S	**Sn**	**13 18 30.8**	**-0.1**
	baz=286						
ENTT	**Nioudou**	**0.66**	**339**	⇑*i*P	**Pn**	**13 18 21.1**	**-0.3**
	baz=333						
ENTT				*i* S	**Sn**	**13 18 30.9**	**+0.1**
	baz=333						
VWDT	**VWDT**	**0.69**	**247**	⇓P	**Pn**	**13 18 21.6**	**0.0**
	baz=239						
VWDT				S	**Sn**	**13 18 32.3**	**+1.1**
	baz=239						
EHY	**Hungye**	**0.69**	**223**	⇓*i*P	**Pn**	**13 18 20.7**	**-1.1**
	baz=219						
EHY				*e*S	**Sn**	**13 18 30.5**	**-0.9**
	baz=219						
TWE	**Neicheng**	**0.71**	**348**	⇑*i*P	**Pn**	**13 18 21.9**	**-0.1**
	baz=343						
TWE				*i* S	**Sn**	**13 18 32.4**	**+0.5**
	baz=343						
ILA	**Ilan**	**0.75**	**354**	*e*P	**Pn**	**13 18 22.8**	**+0.3**
	baz=357						
ILA				S	**Sn**	**13 18 34.4**	**+1.7**
	baz=357						
FUSB	**Fushanzhiwuyua**	**0.77**	**343**	P	**Pn**	**13 18 22.6**	**-0.3**
	baz=338						
FUSB				S	**Sn**	**13 18 33.3**	**-0.1**
	baz=338						
YHNB	**Yeheng**	**0.77**	**327**	⇓P	**Pn**	**13 18 22.6**	**-0.3**
	baz=328						
YHNB				S	**Sn**	**13 18 32.8**	**-0.6**
	baz=328						
ECBN	**Changbin**	**0.78**	**207**	P	**Pn**	**13 18 22.7**	**-0.3**
	baz=194						
ECBN				S	**Sn**	**13 18 33.9**	**+0.3**
	baz=194						
NSK	**Sanguang**	**0.78**	**327**	⇓*i*P	**Pn**	**13 18 22.7**	**-0.3**
	baz=328						
NSK				*i* S	**Sn**	**13 18 33.0**	**-0.7**
	baz=328						
YULB	**Yu-li**	**0.79**	**218**	P	**Pn**	**13 18 22.0**	**-1.2**
	baz=224						
YULB				S	**Sn**	**13 18 32.7**	**-1.2**
	baz=224						
WPL	**Puli Township**	**0.80**	**270**	P	**Pn**	**13 18 23.1**	**-0.1**
	baz=264						
WPL				S	**Sn**	**13 18 34.7**	**+0.7**
	baz=264						
NWLT	**Wulai**	**0.81**	**338**	P	**Pn**	**13 18 23.3**	**-0.1**
	baz=333						
NWLT				S	**Sn**	**13 18 34.0**	**-0.4**
	baz=333						
EYUL	**Yuli**	**0.82**	**215**	*i* P	**Pn**	**13 18 22.7**	**-0.8**
	baz=222						
EYUL				*e*S	**Sn**	**13 18 34.5**	**0.0**
	baz=222						
TWF1	**Yuli**	**0.83**	**217**	*i* P	**Pn**	**13 18 22.5**	**-1.1**
	baz=222						
TWF1				S	**Sn**	**13 18 34.0**	**-0.6**
	baz=222						
DPDB	**Guoxing**	**0.83**	**271**	P	**Pn**	**13 18 23.9**	**+0.2**
	baz=270						
DPDB				S	**Sn**	**13 18 35.7**	**+0.9**
	baz=270						
SSLB	**Suanglung**	**0.84**	**254**	⇓P	**Pn**	**13 18 23.4**	**-0.4**
	baz=256						
SSLB				*e*S	**Sn**	**13 18 35.1**	**+0.1**
	baz=256						
WCS	**Beigang Elemen**	**0.84**	**273**	P	**Pn**	**13 18 23.8**	**0.0**
	baz=271						
WCS				*e*S	**Sn**	**13 18 35.3**	**+0.2**
	baz=271						
SMLT	**Sun Moon Lake**	**0.86**	**261**	*i* P	**Pn**	**13 18 24.0**	**-0.2**
	baz=255						
SMLT				*i* S	**Sn**	**13 18 36.7**	**+1.0**
	baz=255						
NFF	**Wufeng Townshi**	**0.89**	**313**	P	**Pn**	**13 18 24.6**	**0.0**
	baz=314						
NFF				S	**Sn**	**13 18 36.0**	**-0.4**
	baz=314						
TYC	**Yuchr**	**0.90**	**263**	*i* P	**Pn**	**13 18 24.5**	**0.0**
	baz=257						
TYC				*i* S	**Sn**	**13 18 37.4**	**+1.0**
	baz=257						
CHKH	**Chenggong**	**0.92**	**206**	P	**Pn**	**13 18 24.5**	**-0.3**
	baz=194						
CHKH				S	**Sn**	**13 18 36.8**	**0.0**
	baz=194						
LIOB	**Emei**	**0.97**	**310**	P	**Pn**	**13 18 26.3**	**+0.7**
	baz=310						
LIOB				S	**Sn**	**13 18 39.4**	**+1.1**
	baz=310						
NSTT	**Nanjuang**	**0.97**	**309**	*i* P	**Pn**	**13 18 26.2**	**+0.6**
	baz=309						
NSTT				*i* S	**Sn**	**13 18 38.7**	**+0.5**
	baz=309						
NHDH	**Xindian Distri**	**0.98**	**343**	P	**Pn**	**13 18 25.8**	**+0.1**
	baz=336						
NHDH				S	**Sn**	**13 18 38.8**	**+0.4**
	baz=336						
TWA	**Mucha**	**0.98**	**347**	*i* P	**Pn**	**13 18 24.5**	**-1.3**
	baz=337						
TWA				*i* S	**Sn**	**13 18 39.0**	**+0.5**
	baz=337						
NJD	**Zhudong**	**0.98**	**317**	*e*P	**Pn**	**13 18 25.8**	**+0.1**
	baz=314						
NJD				*e*S	**Sn**	**13 18 39.9**	**+1.4**
	baz=314						
TWB1	**Santiao Chiao**	**0.99**	**8**	*i* P	**Pn**	**13 18 25.6**	**-0.2**
	baz=26						
TWB1				S	**Sn**	**13 18 39.6**	**+0.9**
	baz=26						
TATO	**Taipei**	**1.00**	**342**	P	**Pn**	**13 18 26.1**	**+0.2**
	baz=343						
TATO				S	**Sn**	**13 18 39.4**	**+0.5**
	baz=343						
CHKT	**Chengkung**	**1.01**	**205**	*i* P	**Pn**	**13 18 25.1**	**-1.0**
	baz=193						
CHKT				*i* S	**Sn**	**13 18 38.1**	**-1.1**
	baz=193						
TWQ1	**Liyutan**	**1.02**	**289**	*i* P	**Pn**	**13 18 26.6**	**+0.4**
	baz=289						
TWQ1				*i* S	**Sn**	**13 18 41.2**	**+1.7**
	baz=289						
WJS	**Zhushan**	**1.03**	**259**	*i* P	**Pn**	**13 18 27.3**	**+1.0**
	baz=257						
WJS				*i* S	**Sn**	**13 18 41.6**	**+2.0**
	baz=257						
WWF	**Wufeng**	**1.04**	**271**	P	**Pn**	**13 18 27.6**	**+1.2**
	baz=270						
WWF				*e*S	**Sn**	**13 18 42.2**	**+2.4**
	baz=270						
EHD	**Haiduan**	**1.04**	**214**	P	**Pn**	**13 18 25.0**	**-1.5**
	baz=219						
EHD				S	**Sn**	**13 18 38.0**	**-1.9**
	baz=219						
NWF	**Wu-fen Shan**	**1.05**	**357**	*i* P	**Pn**	**13 18 27.2**	**+0.5**
	baz=359						
NWF				*i* S	**Sn**	**13 18 41.5**	**+1.4**
	baz=359						
WFSB	**Wu-fen Shan**	**1.05**	**357**	P	**Pn**	**13 18 27.0**	**+0.4**
	baz=359						
WFSB				S	**Sn**	**13 18 41.5**	**+1.4**
	baz=359						
HSN1	**Hsinchu**	**1.06**	**316**	*e*P	**Pn**	**13 18 26.9**	**+0.1**
	baz=316						
HSN1				*e*S	**Sn**	**13 18 43.3**	**+3.0**
	baz=316						
WNT	**Mingjian**	**1.06**	**263**	⇓*i*P	**Pn**	**13 18 27.8**	**+1.0**
	baz=251						
WNT				*i* S	**Sn**	**13 18 42.4**	**+2.0**
	baz=251						
WNT1	**Nantou City**	**1.06**	**264**	P	**Pn**	**13 18 27.8**	**+1.1**
	baz=262						
WNT1				S	**Sn**	**13 18 42.9**	**+2.5**
	baz=262						
TCU	**Taichung**	**1.06**	**277**	*i* P	**Pn**	**13 18 27.2**	**+0.4**
	baz=276						
TCU				*i* S	**Sn**	**13 18 42.7**	**+2.2**
	baz=276						
ALS	**Alishan**	**1.07**	**242**	*i* P	**Pn**	**13 18 27.4**	**+0.3**
	baz=232						
ALS				*i* S	**Sn**	**13 18 41.6**	**+0.6**
	baz=232						
SXI1	**Grass Mountain**	**1.07**	**2**	P	**Pn**	**13 18 27.2**	**+0.2**
	baz=4.0						
SXI1				S	**Sn**	**13 18 42.9**	**+2.2**
	baz=4.0						
ECS	**Chishang**	**1.08**	**212**	P	**Pn**	**13 18 26.0**	**-1.0**
	baz=209						
ECS				S	**Sn**	**13 18 41.5**	**+0.6**
	baz=209						
NMLH	**Miaoli**	**1.08**	**299**	*i* P	**Pn**	**13 18 27.3**	**+0.3**
	baz=287						
NMLH				*i* S	**Sn**	**13 18 42.9**	**+2.0**
	baz=287						
NTY	**Taoyuan**	**1.09**	**334**	*e*P	**Pn**	**13 18 27.6**	**+0.4**
	baz=335						
NTY				*e*S	**Sn**	**13 18 42.8**	**+1.7**
	baz=335						
SBCB	**Hsinchu**	**1.09**	**315**	*e*P	**Pn**	**13 18 26.9**	**-0.3**
	baz=316						
SBCB				*e*S	**Sn**	**13 18 43.4**	**+2.3**
	baz=316						
JYNG	**Yonagunijimaku**	**1.10**	**67**	*e*P	**Pn**	**13 18 27.4**	**0.0**
JYNG				*e*S	**Sn**	**13 18 41.9**	**+0.5**
HSN	**Hsinchu**	**1.11**	**315**	*e*P	**Pn**	**13 18 28.1**	**+0.7**
	baz=318						
HSN				*e*S	**Sn**	**13 18 43.6**	**+2.1**
	baz=318						
NCUH	**Zhongli**	**1.11**	**328**	*i* P	**Pn**	**13 18 27.5**	**0.0**
	baz=329						
NCUH				*i* S	**Sn**	**13 18 42.8**	**+1.1**
	baz=329						
ELDTW	**Lidau**	**1.11**	**222**	*i* P	**Pn**	**13 18 26.7**	**-0.9**
	baz=214						
ELDTW				*i* S	**Sn**	**13 18 41.5**	**-0.4**
	baz=214						
TWS1	**Kuangyinshan**	**1.14**	**341**	*i* P	**Pn**	**13 18 27.4**	**-0.5**
	baz=342						
TWS1				*i* S	**Sn**	**13 18 43.4**	**+1.0**
	baz=342						
YM01	**YM01**	**1.15**	**348**	P	**Pn**	**13 18 28.0**	**0.0**
	baz=338						
YM01				*e*S	**Sn**	**13 18 42.5**	**0.0**
	baz=338						
WYL	**Yuanlin Townsh**	**1.15**	**267**	P	**Pn**	**13 18 28.9**	**+0.9**
	baz=266						
WYL				S	**Sn**	**13 18 44.9**	**+2.4**
	baz=266						
YOJ	**Yonaguni jima**	**1.16**	**68**	P	**Pn**	**13 18 27.9**	**-0.2**
	baz=69						
YOJ				S	**Sn**	**13 18 43.6**	**+0.8**
	baz=69						
YOJ	**Yonaguni jima**	**1.16**	**68**	P	**Pn**	**13 18 28.1**	**-0.1**
YOJ				*e*S	**Sn**	**13 18 43.4**	**+0.5**
WCHH	**Zhanghua**	**1.17**	**273**	*i* P	**Pn**	**13 18 28.8**	**+0.6**
	baz=284						
WCHH				*i* S	**Sn**	**13 18 45.5**	**+2.5**
	baz=284						
YM08	**YM08**	**1.18**	**349**	P	**Pn**	**13 18 27.7**	**-0.8**
	baz=338						
YM08				*e*S	**Sn**	**13 18 44.3**	**+0.9**
	baz=338						
NTST	**Danshui**	**1.19**	**343**	P	**Pn**	**13 18 28.9**	**+0.3**
	baz=344						
NTST				S	**Sn**	**13 18 45.7**	**+2.1**
	baz=344						
ANP	**Anpu**	**1.20**	**346**	*i* P	**Pn**	**13 18 29.5**	**+0.8**
	baz=336						
WGK	**Gukeng**	**1.21**	**254**	*i* P	**Pn**	**13 18 29.6**	**+0.8**
	baz=241						
WGK				*i* S	**Sn**	**13 18 46.8**	**+2.8**
	baz=241						
WDLH	**Douliu**	**1.23**	**255**	*i* P	**Pn**	**13 18 30.1**	**+1.0**
	baz=242						
WDLH				*i* S	**Sn**	**13 18 46.6**	**+2.1**
	baz=242						
WCKO	**Fanlu**	**1.27**	**243**	P	**Pn**	**13 18 30.5**	**+0.9**
	baz=240						
WCKO				S	**Sn**	**13 18 47.9**	**+2.4**
	baz=240						
LONT	**Longtian**	**1.28**	**210**	*i* P	**Pn**	**13 18 28.6**	**-1.2**
	baz=208						
LONT				*i* S	**Sn**	**13 18 44.5**	**-1.3**
	baz=208						
STYH	**Taoyuan**	**1.29**	**229**	P	**Pn**	**13 18 30.3**	**+0.4**
	baz=219						
STYH				S	**Sn**	**13 18 47.6**	**+1.7**
	baz=219						
STYT	**Tauyuan**	**1.30**	**229**	*i* P	**Pn**	**13 18 30.6**	**+0.4**
	baz=225						
STYT				*i* S	**Sn**	**13 18 47.8**	**+1.3**
	baz=225						
TPUB	**Ta-pu**	**1.31**	**237**	P	**Pn**	**13 18 31.0**	**+0.7**
	baz=234						
TPUB				S	**Sn**	**13 18 48.5**	**+1.8**
	baz=234						
CHN4	**Tsaushan**	**1.32**	**240**	*e*P	**Pn**	**13 18 31.3**	**+1.0**
	baz=228						
CHN4				*e*S	**Sn**	**13 18 49.0**	**+2.3**
	baz=228						
WRL	**Guolierlin Hig**	**1.34**	**265**	P	**Pn**	**13 18 30.9**	**+0.3**
	baz=275						
WRL				S	**Sn**	**13 18 48.8**	**+1.6**
	baz=275						
RLNB	**Erlin**	**1.35**	**265**	P	**Pn**	**13 18 31.4**	**+0.7**
	baz=277						
RLNB				S	**Sn**	**13 18 50.2**	**+2.6**
	baz=277						
WTP	**Ta-pu**	**1.36**	**236**	*i* P	**Pn**	**13 18 31.6**	**+0.7**
	baz=232						
WTP				*i* S	**Sn**	**13 18 50.4**	**+2.7**
	baz=232						
WTK	**Tuku**	**1.36**	**256**	*i* P	**Pn**	**13 18 31.6**	**+0.6**
	baz=244						
WTK				*i* S	**Sn**	**13 18 49.3**	**+1.5**
	baz=244						
LDUT	**Ludao**	**1.38**	**194**	P	**Pn**	**13 18 29.9**	**-1.3**
	baz=184						
LDUT				S	**Sn**	**13 18 46.2**	**-2.0**
	baz=184						
TWGBT	**Beinan**	**1.38**	**210**	P	**Pn**	**13 18 29.4**	**-1.8**
	baz=208						

TWGBT				S		Sn	13 18 47.1	-1.2	
	baz=208								
TWG	**Pinlang**	**1.38**	**210**	*i* P		**Pn**	**13 18 29.7**	**-1.5**	
TWG	baz=208			*i* S		**Sn**	**13 18 47.0**	**-1.4**	
CHY	**Chiayi**	**1.39**	**248**	*e*P		**Pn**	**13 18 31.5**	**+0.2**	
CHY	baz=245			*e*S		**Sn**	**13 18 51.6**	**+3.1**	
WTCT	**Ta-ch'eng**	**1.43**	**264**	*i* P		**Pn**	**13 18 32.1**	**+0.3**	
WTCT	baz=276			*i* S		**Sn**	**13 18 51.5**	**+2.1**	
TWK	**Hsinying**	**1.44**	**239**	*i* P		**Pn**	**13 18 32.5**	**+0.4**	
TWK	baz=235			*i* S		**Sn**	**13 18 50.8**	**+0.9**	
CHN1	**Nanshi**	**1.46**	**235**	*i* P		**Pn**	**13 18 33.1**	**+0.8**	
CHN1	baz=232			*i* S		**Sn**	**13 18 51.4**	**+1.2**	
SNST	**Tainan City**	**1.46**	**237**	P		**Pn**	**13 18 33.0**	**+0.8**	
SNST	baz=233			S		**Sn**	**13 18 52.5**	**+2.3**	
SGST	**Jiashian**	**1.48**	**231**	*i* P		**Pn**	**13 18 32.5**	**0.0**	
SGST	baz=227			*i* S		**Sn**	**13 18 51.0**	**+0.3**	
WSF	**Szhu**	**1.52**	**256**	*e*P		**Pn**	**13 18 33.7**	**+0.6**	
WSF	baz=242			*e*S		**Sn**	**13 18 54.1**	**+2.4**	
WSL	**Shuilin Townsh**	**1.55**	**252**	P		**Pn**	**13 18 34.7**	**+1.2**	
WSL	baz=249			S		**Sn**	**13 18 54.9**	**+2.5**	
ICHU	**Yijhu**	**1.57**	**246**	*i* P		**Pn**	**13 18 34.3**	**+0.6**	
ICHU	baz=242			*i* S		**Sn**	**13 18 55.3**	**+2.5**	
CHN8	**Yiju**	**1.63**	**246**	*i* P		**Pn**	**13 18 34.8**	**+0.2**	
CHN8	baz=243			*i* S		**Sn**	**13 18 56.7**	**+2.4**	
ECL	**Taimali**	**1.63**	**210**	*i* P		**Pn**	**13 18 34.5**	**-0.1**	
ECL	baz=201			S		**Sn**	**13 18 52.9**	**-1.5**	
CHN3	**Shinhua**	**1.64**	**235**	*e*P		**Pn**	**13 18 36.9**	**+2.1**	
CHN3	baz=231			S		**Sn**	**13 18 58.3**	**+3.7**	
SCST	**Cishan**	**1.67**	**228**	*i* P		**Pn**	**13 18 36.6**	**+1.5**	
SCST	baz=223			S		**Sn**	**13 18 58.9**	**+3.6**	
SHHT	**Tainan City**	**1.69**	**234**	P		**Pn**	**13 18 37.1**	**+1.8**	
SHHT	baz=243			S		**Sn**	**13 18 59.9**	**+4.2**	
TSMG	**Majia**	**1.70**	**220**	*i* P		**Pn**	**13 18 37.0**	**+1.4**	
TSMG	baz=206			*i* S		**Sn**	**13 18 57.7**	**+1.5**	
SCLT	**Jiali**	**1.72**	**241**	P		**Pn**	**13 18 35.6**	**-0.2**	
SCLT	baz=237			*i* S		**Sn**	**13 18 59.3**	**+2.7**	
IRIF	**Iriomote-Funau**	**1.76**	**79**	P		**Pn**	**13 18 36.4**	**0.0**	
IRIF				*e*S		**Sn**	**13 18 58.0**	**+0.5**	
MASBT	**Mashibuluo**	**1.78**	**218**	P		**Pn**	**13 18 37.0**	**+0.3**	
MASBT	baz=205			*e*S		**Sn**	**13 19 01.4**	**+3.2**	
HATJ	**Hateruma jima**	**1.80**	**88**	P		**Pn**	**13 18 37.3**	**+0.3**	
HATJ	baz=205			S		**Sn**	**13 18 59.4**	**+0.8**	
TSCK	**Chigu Township**	**1.82**	**242**	P		**Pn**	**13 18 37.4**	**+0.2**	
TSCK	baz=238			S		**Sn**	**13 19 00.1**	**+1.0**	
TAWH	**Dawu Township**	**1.89**	**208**	P		**Pn**	**13 18 37.8**	**-0.3**	
TAWH	baz=206			*e*S		**Sn**	**13 18 59.3**	**-1.4**	
SCZT	**Fangliau**	**1.98**	**214**	*i* P		**Pn**	**13 18 40.8**	**+1.3**	
SCZT	baz=210			*e*S		**Sn**	**13 19 04.8**	**+1.8**	
JKRS	**Kuro-shima**	**2.00**	**83**	P		**Pn**	**13 18 40.1**	**+0.5**	
JKRS				*e*S		**Sn**	**13 19 04.7**	**+1.2**	
PHUB	**P'eng-hu**	**2.13**	**257**	P		**Pn**	**13 18 40.5**	**-0.9**	
PHUB	baz=271			S		**Sn**	**13 19 06.4**	**-0.3**	
PNG	**Penghu**	**2.13**	**258**	P		**Pn**	**13 18 40.8**	**-0.7**	
PNG	baz=256			S		**Sn**	**13 19 06.5**	**-0.2**	
JIJ	**Ishigaki jima**	**2.14**	**80**	P		**Pn**	**13 18 41.2**	**-0.3**	
JIJ				*e*S		**Sn**	**13 19 06.0**	**-0.8**	
JISG	**Ishigakijimahi**	**2.33**	**75**	P		**Pn**	**13 18 43.7**	**-0.5**	
JISG				*e*S		**Sn**	**13 19 10.5**	**-1.1**	
VCHM	**Qimei**	**2.35**	**250**	*e*P		**Pn**	**13 18 44.3**	**-0.2**	
VCHM	baz=235			*e*S		**Sn**	**13 19 11.8**	**-0.2**	
VWUC	**VWUC**	**2.38**	**294**	P		**Pn**	**13 18 43.4**	**-1.4**	
VWUC	baz=285			S		**Sn**	**13 19 09.7**	**-3.0**	
PTMZ	**Houxiangcun**	**2.67**	**293**	P		**Pn**	**13 18 47.5**	**-1.3**	
PTMZ	baz=283			S		**Sn**	**13 19 16.6**	**-3.4**	
JTJ	**Tarama**	**2.69**	**76**	*e*P		**Pn**	**13 18 49.5**	**+0.4**	
JTJ				*e*S		**Sn**	**13 19 20.2**	**-0.2**	
KNM	**Kinmen**	**3.13**	**278**	*e*P		**Pn**	**13 18 55.8**	**+0.6**	
KNM	baz=279			*e*S		**Sn**	**13 19 32.5**	**+1.2**	
LYJJ	**Jianjiangzhen**	**3.14**	**324**	P		**Pn**	**13 18 53.7**	**-1.6**	
LYJJ	baz=335			*e*S		**Sn**	**13 19 28.8**	**-2.8**	
KNMB	**Chin-men Tao**	**3.17**	**279**	P		**Pn**	**13 18 54.3**	**-1.5**	
KNMB	baz=280			*e*S		**Sn**	**13 19 29.1**	**-3.3**	
XPSS	**Dashiqiu**	**3.26**	**333**	*e*P		**Pn**	**13 18 55.3**	**-1.6**	
XPSS	baz=335			*e*S		**Sn**	**13 19 30.4**	**-4.0**	

*IDC **22** 13:20:54.0±1.0, 85°.53N×88°.11E, h0km, mb3.3/6, mbtmp3.5/8, ML3.7/2, Error ellipse: s-maj=36.4km s-min=19.1km az=105.0*
*FCIAR **22** 13:20:58.0, 85°.10N×89°.42E, h10km, station SVZ has station magnitude of 3.40 station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.50*
ISC 22 13:20:54.9±0.8, **85°.38N**±0°.09×**87°.50E**±0°.09, **h10**km, **n11, σ2s 14/14, mb3.4/6, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVZ	**Severnaya Zeml**	**6.38**	**156**	*e*P	**Pn**	**13 22 25.1**	**-3.7**
SVZ				*e*S	Sn	13 23 29.6	-12
	14nm,4.4s						
ZFI2	**Zemlya Franca-**	**6.41**	**247**	*e*P	**Pn**	**13 22 30.8**	**+1.7**
ZFI2				*e*S	**Sn**	**13 23 39.4**	**-2.7**
	14nm,3.3s						
OMEGA	**Omega**	**6.42**	**247**	*e*P	**Pn**	**13 22 31.0**	**+1.7**
OMEGA				*e*S	**Sn**	**13 23 39.3**	**-3.2**
	16nm,4.5s						
SPITS	**Spitsbergen Ar**	**11.28**	**274**	Pn	**Pn**	**13 23 36.6**	**+0.9**
	baz=43,slow=15 9.0nm,1.1s						
NRIK	**Noril'sk**	**16.13**	**180**	Pn	**P**	**13 24 44.7**	**+0.2**
	0.4nm,0.3s,baz=11,slow=13,SNR=2.4 2.4nm,0.5s						
ILAR	**Eielson Array**	**28.33**	**47**	P	**P**	**13 26 48.3**	**+0.1**
	0.2nm,0.7s,baz=349,slow=8.5,SNR=2.7 0.2nm,0.7s						
YKA	**Yellowknife Ar**	**32.02**	**19**	P	**P**	**13 27 20.0**	**-0.8**
	0.6nm,0.8s,baz=357,slow=8.2,SNR=9.5						
YKA				PcP	**PcP**	**13 30 09.4**	**-0.6**
	0.2nm,0.7s,baz=348,slow=3.0,SNR=4.5 0.6nm,0.8s						
BVAR	**Borovoye Array**	**32.73**	**199**	P	**P**	**13 27 30.1**	**+2.9**
	0.3nm,0.6s,baz=30,slow=12,SNR=2.0 0.3nm,0.6s						
SONM	**Songino Array**	**37.98**	**159**	P	**P**	**13 28 13.9**	**+1.5**
	0.4nm,0.7s,baz=351,slow=7.5,SNR=4.5 0.4nm,0.7s						
MKAR	**Makanchi Array**	**38.76**	**186**	P	**P**	**13 28 20.1**	**+1.1**
	0.2nm,0.8s,baz=357,slow=3.0,SNR=2.6 0.2nm,0.8s						
TXAR	**Lajitas Array**	**65.40**	**11**	P	**P**	**13 31 36.7**	**-0.5**
	0.2nm,0.7s,baz=15,slow=3.7,SNR=2.3 0.2nm,0.7s						

*THE **22** 13:23:09.1, 40°.10N×19°.93E, h5km, ML2.5/8, Error ellipse: s-maj=1.7km s-min=0.6km az=111.0*
*ATH **22** 13:23:09.3, 40°.08N×19°.91E, h6km±1km, ML2.5/14, Error ellipse: s-maj=1.8km s-min=1.1km az=201.0*
ISC 22 13:23:09.0±1.2, **40°.09N**±0°.03×**19°.91E**±0°.03, **h7**km±9km, **n40, σ0s 59/53, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.22**	**161**	P	**Pg**	**13 23 13.3**	**0.0**
SRN				S	**Sg**	**13 23 17.1**	**+0.9**
	885nm,0.3s						
KASA	**Kassiopi**	**0.34**	**177**	P	**Pg**	**13 23 15.3**	**-0.3**
KASA				S	**Sg**	**13 23 20.6**	**+0.5**
KASA				AML	AML	13 23 22.8	
	comp=N,1878μm,0.4s						
KASA				AML	AML	13 23 22.8	
	comp=E,1877μm,0.2s						
KEK	**Kerkira**	**0.38**	**193**	P	**Pg**	**13 23 14.6**	**-1.9**
KEK				AML	AML	13 23 21.8	
	comp=N,1342μm,0.5s						
KEK				AML	AML	13 23 22.9	
	comp=E,1906μm,0.2s						
LSK	**Leskovik**	**0.53**	**83**	P	**Pg**	**13 23 18.4**	**-0.9**
LSK				S	**Sg**	**13 23 26.8**	**+0.5**
	comp=E,382nm,0.4s						
IGT	**Igoumenitsa**	**0.64**	**149**	P	**Pg**	**13 23 20.7**	**-0.6**
IGT				S	**Sg**	**13 23 30.7**	**+1.0**
	comp=E,268nm,0.3s						
IGT	**Igoumenitsa**	**0.64**	**149**	P	**Pg**	**13 23 21.2**	**-0.1**
IGT				S	**Sg**	**13 23 30.2**	**+0.6**
IGT				AML	AML	13 23 35.9	
	comp=N,578μm,0.3s						
IGT				AML	AML	13 23 36.1	
	comp=E,490μm,0.5s						
JAN	**Janina**	**0.84**	**120**	P	**Pg**	**13 23 25.4**	**+0.3**
JAN				S	**Sb**	**13 23 37.0**	**-0.4**
	comp=E,525nm,0.2s						
JAN	**Janina**	**0.84**	**120**	P	**Pg**	**13 23 25.2**	**+0.1**
JAN				S	**Sg**	**13 23 36.6**	**+0.6**
JAN				AML	AML	13 23 41.6	
	comp=N,993μm,0.3s						
JAN				AML	AML	13 23 43.6	
	comp=E,1093μm,0.3s						
NEST	**Nestorio**	**0.93**	**69**	P	**Pg**	**13 23 26.3**	**-0.6**
NEST				S	**Sg**	**13 23 38.8**	**-0.2**
NEST	**Nestorio**	**0.93**	**69**	P	**Pg**	**13 23 26.6**	**-0.3**
NEST				AML	AML	13 23 43.9	
	comp=E,219μm,0.5s						
NEST				AML	AML	13 23 48.1	
	comp=N,209μm,0.4s						
PENT	**Pentalofos**	**0.95**	**83**	P	**Pg**	**13 23 26.3**	**-0.9**
PENT	**Pentalofos**	**0.95**	**83**	P	**Pg**	**13 23 26.4**	**-0.9**
SCTE	**Santa Cesarea**	**1.11**	**270**	P	**Pg**	**13 23 30.3**	**+0.1**
SCTE				S	**Sg**	**13 23 45.3**	**+0.7**
SCTE				AML	AML	13 23 47.6	
	comp=E,162μm,0.3s						
SCTE				AML	AML	13 23 48.2	
	comp=N,208μm,0.3s						
KPRO	**Kipourio**	**1.12**	**96**	P	**Pg**	**13 23 29.8**	**-0.7**
KPRO	**Kipourio**	**1.12**	**96**	P	**Pg**	**13 23 30.5**	**0.0**
KPRO				AML	AML	13 23 48.9	
	comp=E,543μm,0.6s						
KPRO				AML	AML	13 23 51.8	
	comp=N,395μm,0.6s						
OHR	**Ohrid**	**1.23**	**33**	*i* Pn	**Pn**	**13 23 33.2**	**+0.6**
FNA	**Florina**	**1.32**	**58**	P	**Pn**	**13 23 33.2**	**-0.6**
FNA				S	**Sn**	**13 23 51.8**	**+0.1**
	comp=N,228nm,0.6s						
FNA	**Florina**	**1.32**	**58**	P	**Pn**	**13 23 33.6**	**-0.3**
TSLK	**Tsoukalades, L**	**1.39**	**155**	P	**Pn**	**13 23 34.8**	**+0.1**
TSLK				S	**Sn**	**13 23 53.9**	**+0.7**
	comp=N,275nm,0.4s						
TSLK	**Tsoukalades, L**	**1.39**	**155**	P	**Pn**	**13 23 34.4**	**-0.2**
TSLK				AML	AML	13 23 56.1	
	comp=E,733μm,0.5s						
TSLK				AML	AML	13 23 56.4	
	comp=N,328μm,0.5s						
LKD2	**Lefkada island**	**1.42**	**156**	P	**Pn**	**13 23 35.1**	**-0.1**
LKD2				S	**Sg**	**13 23 55.0**	**+0.4**
	comp=N,220nm,0.5s						
LKD2	**Lefkada island**	**1.42**	**156**	P	**Pn**	**13 23 34.9**	**-0.3**
LKD2				AML	AML	13 23 57.8	
	comp=N,387μm,0.5s						
LKD2				AML	AML	13 23 57.9	
	comp=E,488μm,0.5s						
DRAG	**Dragano-Lefkad**	**1.49**	**160**	P	**Pn**	**13 23 35.3**	**-0.8**
NYDR	**Nydri-Lefkada**	**1.50**	**156**	P	**Pn**	**13 23 35.5**	**-0.7**
NYDR				S	**Sn**	**13 23 56.2**	**+0.2**
	comp=E,100nm,0.4s						
NYDR	**Nydri-Lefkada**	**1.50**	**156**	P	**Pn**	**13 23 35.9**	**-0.3**
EVGI	**Lefkada island**	**1.57**	**158**	P	**Pn**	**13 23 37.0**	**-0.2**
EVGI	**Lefkada island**	**1.57**	**158**	P	**Pn**	**13 23 36.7**	**-0.6**
FSK	**Fiskardo**	**1.70**	**162**	P	**Pn**	**13 23 38.4**	**-0.6**
THL	**Klokotos Trika**	**1.70**	**107**	P	**Pn**	**13 23 38.5**	**-0.5**
TYRN	**Tyrnavos**	**1.82**	**101**	P	**Pn**	**13 23 41.1**	**+0.4**
KEF4	**Livadi, Kephal**	**1.87**	**167**	P	**Pn**	**13 23 40.4**	**-0.9**
EVR	**Evrytania**	**1.88**	**128**	P	**Pn**	**13 23 41.0**	**-0.6**
EVR				AML	AML	13 24 17.1	
	comp=N,136μm,0.8s						
EVR				AML	AML	13 24 17.1	
	comp=E,158μm,0.7s						
PVO	**Paravola**	**1.93**	**139**	P	**Pn**	**13 23 42.2**	**+0.1**
VLS	**Valsamata**	**1.98**	**164**	P	**Pn**	**13 23 43.0**	**+0.1**
VLS				AML	AML	13 24 18.2	
	comp=E,130μm,0.5s						
VLS				AML	AML	13 24 20.5	
	comp=N,156μm,0.5s						
MAKR	**Makrakomi, Fth**	**2.02**	**121**	P	**Pn**	**13 23 43.1**	**-0.4**
MAKR				AML	AML	13 24 21.4	
	comp=N,322μm,0.6s						
MAKR				AML	AML	13 24 21.6	
	comp=E,394μm,0.4s						
AGG	**Agios Georgios**	**2.15**	**119**	P	**Pn**	**13 23 45.7**	**+0.4**
ANX	**Ano Chora**	**2.16**	**133**	P	**Pn**	**13 23 45.1**	**-0.3**
ANX				AML	AML	13 24 27.1	
	comp=E,128μm,0.5s						
ANX				AML	AML	13 24 30.5	
	comp=N,147μm,0.4s						
EFP	**Efpalio**	**2.27**	**136**	P	**Pn**	**13 23 47.0**	**+0.2**
EFP				AML	AML	13 24 28.9	
	comp=E,76μm,0.4s						
EFP				AML	AML	13 24 29.6	
	comp=N,81μm,0.4s						
HORT	**Hortiatis**	**2.49**	**77**	P	**Pn**	**13 23 50.4**	**+0.5**
DRO	**Drossia**	**2.55**	**146**	P	**Pn**	**13 23 50.5**	**-0.3**

*TAP **22** 13:39:38.8, 24°.83N×122°.48E, h21km±1km, ML3.2, D*
*JMA **22** 13:39:39.0±0.1, 24°.8N±0°.6×122°.5E±0°.2, h5km±1km, MV2.6/13, NW OFF ISHIGAKIJIMA IS*
ISC 22 13:39:38.9±1.0, **24°.81N**±0°.03×**122°.47E**±0°.02, **h16**km±9km, **n37, σ0s 40/70, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.45**	**209**	P	**Pb**	**13 39 49.1**	**+0.8**
	baz=210						
EOS2				*e*S	**Sn**	**13 39 57.0**	**-1.2**
	baz=210						
TWB1	**Santiao Chiao**	**0.48**	**294**	P	**Pg**	**13 39 48.7**	**+0.3**
	baz=292						
TWB1				S	**Sg**	**13 39 55.0**	**+0.1**
	baz=292						
EOS3	**EOS3**	**0.54**	**195**	*e*P	**Pb**	**13 39 50.4**	**+0.5**
	baz=202						
JYNG	**Yonagunijimaku**	**0.56**	**129**	P	**Pg**	**13 39 49.9**	**-0.1**
JYNG				*e*S	**Sg**	**13 39 57.5**	**+0.1**
TWC	**Suao**	**0.60**	**251**	*i* P	**Pg**	**13 39 50.7**	**0.0**
	baz=248						
YOJ	**Yonaguni jima**	**0.60**	**125**	*i* P	**Pg**	**13 39 50.6**	**-0.1**
	baz=117						
YOJ				S	**Sg**	**13 39 58.2**	**-0.5**
	baz=117						
YOJ	**Yonaguni jima**	**0.60**	**125**	P	**Pg**	**13 39 50.5**	**-0.1**
YOJ				*e*S	**Sg**	**13 39 58.5**	**-0.2**
SXI1	**Grass Mountain**	**0.61**	**298**	P	**Pb**	**13 39 51.3**	**+0.1**
	baz=295						
SXI1				S	**Sb**	**13 39 59.7**	**0.0**
	baz=295						
ESAO	**Su ao**	**0.62**	**248**	*e*P	**Pg**	**13 39 51.1**	**+0.2**
	baz=246						
WFSB	**Wu-fen Shan**	**0.68**	**293**	*e*P	**Pb**	**13 39 53.1**	**+0.7**
	baz=291						
WFSB				S	**Sb**	**13 40 01.8**	**+0.3**
	baz=291						
EOS4	**EOS4**	**0.70**	**192**	*e*P	**Pb**	**13 39 53.0**	**+0.5**
	baz=181						
EOS4				*e*S	**Sb**	**13 40 02.0**	**+0.3**
	baz=181						
NDS	**Dongshan**	**0.71**	**256**	P	**Pb**	**13 39 53.3**	**+0.4**
	baz=254						
NDS				*e*S	**Sb**	**13 40 02.6**	**+0.2**
	baz=254						
EWUT	**Wuta**	**0.73**	**240**	P	**Pg**	**13 39 52.9**	**-0.2**
	baz=249						
EWUT				S	**Sb**	**13 40 03.0**	**+0.1**
	baz=249						
TWE	**Neicheng**	**0.74**	**263**	*e*P	**Pg**	**13 39 52.9**	**-0.4**
	baz=261						
TWE				*e*S	**Sg**	**13 40 03.0**	**+0.1**
	baz=261						
ENA	**Nanau**	**0.77**	**240**	P	**Pg**	**13 39 53.4**	**-0.3**
	baz=251						
ENA				*e*S	**Sg**	**13 40 03.6**	**-0.2**
	baz=251						
FUSB	**Fushanzhiwuyua**	**0.81**	**267**	P	**Pg**	**13 39 54.2**	**-0.3**
	baz=277						
FUSB				S	**Sg**	**13 40 04.8**	**-0.3**
	baz=277						
EAHA	**Aohua**	**0.82**	**235**	P	**Pg**	**13 39 54.5**	**-0.3**
	baz=245						
EAHA				*e*S	**Sb**	**13 40 06.1**	**+0.5**
	baz=245						
ENTT	**Nioudou**	**0.84**	**259**	*e*P	**Pb**	**13 39 55.5**	**+0.4**
	baz=245						
ENTT				*e*S	**Sg**	**13 40 06.2**	**0.0**
	baz=245						
NWLT	**Wulai**	**0.88**	**268**	P	**Pb**	**13 39 56.2**	**+0.3**
	baz=278						
NWLT				*e*S	**Sg**	**13 40 06.9**	**-0.6**
	baz=278						
YM01	**YM01**	**0.88**	**293**	P	**Pg**	**13 39 56.0**	**-0.1**
	baz=291						
YM01				*e*S	**Sg**	**13 40 07.7**	**0.0**
	baz=291						
YM08	**YM08**	**0.88**	**295**	*e*P	**Pg**	**13 39 55.8**	**-0.3**
	baz=294						
YM08				S	**Sg**	**13 40 07.5**	**-0.2**
	baz=294						
NDT	**Datong Townshi**	**0.90**	**257**	*e*P	**Pg**	**13 39 55.9**	**-0.4**
	baz=244						
NDT				*e*S	**Sb**	**13 40 08.3**	**+0.5**
	baz=244						
LATG	**Datong**	**0.90**	**253**	P	**Pg**	**13 39 56.0**	**-0.4**
	baz=251						
YHNB	**Yeheng**	**1.01**	**262**	*i* P	**Pb**	**13 39 58.0**	**0.0**
	baz=261						
YHNB				S	**Sb**	**13 40 10.7**	**-0.3**
	baz=261						
ETL	**Fush Village**	**1.01**	**230**	*e*P	**Pb**	**13 39 57.9**	**-0.1**
	baz=238						
ETL				S	**Sg**	**13 40 11.7**	**+0.1**
	baz=238						
NACB	**Ninganchiao**	**1.02**	**232**	P	**Pb**	**13 39 57.5**	**-0.6**
	baz=241						
NACB				*e*S	**Sb**	**13 40 11.3**	**-0.1**
	baz=241						
NSK	**Sanguang**	**1.02**	**263**	P	**Pb**	**13 39 58.3**	**+0.1**
	baz=249						
NSK				*e*S	**Sb**	**13 40 11.1**	**-0.3**
	baz=249						
NNSB	**Datong**	**1.06**	**249**	P	**Pb**	**13 39 58.9**	**-0.1**
	baz=248						
NNSB				*e*S	**Sb**	**13 40 12.9**	**+0.2**
	baz=248						
NNS	**Nan Shan**	**1.06**	**250**	P	**Pb**	**13 39 59.1**	**0.0**
	baz=249						
NNS				*e*S	**Sg**	**13 40 13.6**	**+0.1**
	baz=249						
ETLH	**Xiulin Townshi**	**1.08**	**237**	*e*P	**Pb**	**13 39 59.0**	**-0.3**
	baz=245						
ETLH				S	**Sn**	**13 40 14.7**	**+0.4**
	baz=245						
ETM	**Tongmen**	**1.23**	**227**	P	**Pn**	**13 40 01.5**	**+0.1**
	baz=211						
ETM				*e*S	**Sg**	**13 40 18.2**	**-0.2**
	baz=211						
IRIF	**Iriomote-Funau**	**1.24**	**112**	P	**Pb**	**13 40 02.4**	**+0.5**
IRIF				S	**Sg**	**13 40 18.8**	**-0.2**
LXIB	**Xiulin Townshi**	**1.24**	**231**	P	**Pb**	**13 40 02.2**	**+0.1**
	baz=231						
LXIB				*e*S	**Sg**	**13 40 20.1**	**+1.0**
	baz=231						
HATJ	**Hateruma jima**	**1.43**	**121**	P	**Pb**	**13 40 05.6**	**+0.4**
HATJ				S	**Sg**	**13 40 24.3**	**-0.7**
JKRS	**Kuro-shima**	**1.51**	**112**	P	**Pb**	**13 40 06.8**	**+0.2**
JKRS				S	**Sb**	**13 40 26.1**	**+0.6**
JIJ	**Ishigaki jima**	**1.58**	**106**	P	**Pb**	**13 40 07.8**	**0.0**
JIJ				S	**Sb**	**13 40 28.0**	**+0.4**
JISG	**Ishigakijimahi**	**1.69**	**97**	P	**Pb**	**13 40 09.9**	**+0.3**
JISG				*e*S	**Sg**	**13 40 32.4**	**-0.9**

IDC 22 13:43:44.7±363.0, **50°.48N×59°.20E, h0**km, **Error ellipse: s-maj=148.5km s-min=16.0km az=85.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**0.74**	**265**	I	I	13 47 10.0	
	0.1nm,0.6s,baz=84,slow=335,SNR=12						
I43RU	**DUBNA INFRASON**	**14.43**	**304**	I	I	15 14 10.0	
	baz=104,slow=342,SNR=5.5						
I46RU	**ZALESOVO INFRA**	**16.05**	**68**	I	I	15 20 20.0	
	baz=267,slow=321,SNR=0.9						

*NEIC **22** 13:45:35.2±1.5, 23°.94S±0°.06×68°.0W±0°.1, h162km±5km, mb4.1/6, Error ellipse: s-maj=15.4km s-min=8.7km az=98.0*
*SJA **22** 13:45:36.1±1.6, 23°.97S×67°.93W, h120km, ML3.8, MW3.8*
*GUC **22** 13:45:37.9±0.6, 23°.92S×68°.20W, h156km±6km, ML4.0*
ISC 22 13:45:34.5±0.7, **23°.97S**±0°.03×**68°.02W**±0°.05, **h163**km±7km, **n77, σ1s 45/103, mb4.0/3, 2C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.02**	**352**		**Pn**	**13 46 00.1**	**-1.0**
AF01				Sn	**Sn**	**13 46 19.0**	**-2.5**
AF01	**San Pedro de A**	**1.02**	**352**	IAML		13 46 22.7	
	comp=N,2μm,0.3s						
PB15	**IPOC Station P**	**1.53**	**299**		**Pn**	**13 46 06.9**	**+1.2**
PB15				Sn	**Sn**	**13 46 29.4**	**-0.2**
PB15	**IPOC Station P**	**1.53**	**299**	*e*P	**Pn**	**13 46 06.6**	**+0.8**
PB15				*e*S	**Sn**	**13 46 30.3**	**+0.7**
PB15	**IPOC Station P**	**1.53**	**299**	*i* P	**Pn**	**13 46 06.5**	**+0.8**
LVC	**Limon Verde**	**1.58**	**329**		**Pn**	**13 46 07.3**	**+1.0**
LVC	**Limon Verde**	**1.58**	**329**	*e*P	**Pn**	**13 46 07.1**	**+1.0**
LVC				*e*S	**Sn**	**13 46 30.6**	**-0.2**
LVC				IAML		13 46 34.0	
	comp=Z,638nm,0.3s						
LVC	**Limon Verde**	**1.58**	**329**	*i* P	**Pn**	**13 46 07.3**	**+1.0**
LVC				*e*S	**Sn**	**13 46 29.8**	**-1.1**
GO02	**Mina Guanaco**	**1.86**	**230**		**Pn**	**13 46 10.8**	**+1.6**
GO02	**Mina Guanaco**	**1.86**	**230**	*e*P	**Pn**	**13 46 10.8**	**+1.6**
GO02				*e*S	**Sn**	**13 46 36.9**	**+1.0**
GO02				IAML		13 46 38.7	
	comp=Z,289nm,0.2s						
GO02	**Mina Guanaco**	**1.86**	**230**	*i* P	**Pn**	**13 46 10.8**	**+1.6**
GO02				*e*S	**Sn**	**13 46 36.8**	**+0.8**
GO02				IAML		13 46 38.4	
	comp=N,715nm,0.7s						

PB06	**IPOC Station P**	**1.90**	**311**			**Pn**	**13 46 11.0**	**+1.4**
PB06	**IPOC Station P**	**1.90**	**311**	*e*	P	**Pn**	**13 46 10.9**	**+1.4**
PB06					*e*S	**Sn**	**13 46 37.4**	**+0.8**
PB06					IAML		13 46 40.1	
	comp=Z,991nm,0.3s							
PB06	**IPOC Station P**	**1.90**	**311**	*i*	P	**Pn**	**13 46 11.0**	**+1.4**
PB06					*e*S	**Sn**	**13 46 35.4**	**-1.2**
PB06					IAML		13 46 40.2	
	comp=N,1µm,0.4s							
PB14	**IPOC Station P**	**2.27**	**253**			**Pn**	**13 46 15.2**	**+1.3**
SLA	**San Lorenzo**	**2.41**	**109**	*e*	P	**Pn**	**13 46 16.5**	**+1.1**
PB09	**IPOC Station P**	**2.44**	**332**			**Pn**	**13 46 17.8**	**+2.0**
PB09	**IPOC Station P**	**2.44**	**332**	*e*	P	**Pn**	**13 46 17.2**	**+1.4**
PB09					*e*S	**Sn**	**13 46 48.7**	**+1.0**
PB09					IAML		13 46 56.5	
	comp=Z,267nm,0.5s							
PB09	**IPOC Station P**	**2.44**	**332**	⇓ *i*	P	**Pn**	**13 46 17.8**	**+2.0**
PB09					*e*S	**Sn**	**13 46 47.7**	**0.0**
PB04	**IPOC Station P**	**2.55**	**309**		Pn	**Pn**	**13 46 18.5**	**+1.4**
PB04	**IPOC Station P**	**2.55**	**309**	*e*	P	**Pn**	**13 46 18.1**	**+1.1**
PB04					*e*S	**Sn**	**13 46 50.3**	**+0.3**
PB04					IAML		13 46 59.2	
	comp=Z,467nm,0.4s							
PB04	**IPOC Station P**	**2.55**	**309**	⇑ *i*	P	**Pn**	**13 46 18.4**	**+1.4**
PB04					*e*S	**Sn**	**13 46 48.5**	**-1.5**
PB04					IAML		13 46 52.4	
	comp=N,599nm,0.3s							
PB07	**IPOC Station P**	**2.82**	**322**			**Pn**	**13 46 21.1**	**+0.7**
PB07	**IPOC Station P**	**2.82**	**322**	*e*	P	**Pn**	**13 46 21.9**	**+1.5**
PB07					*e*S	**Sn**	**13 46 56.1**	**+0.2**
PB07					IAML		13 47 05.9	
	comp=Z,395nm,0.5s							
PB07	**IPOC Station P**	**2.82**	**322**	*i*	P	**Pn**	**13 46 21.9**	**+1.5**
PB07					*e*S	**Sn**	**13 46 54.9**	**-1.0**
PB07					IAML		13 46 58.7	
	comp=E,466nm,0.3s							
YJA	**Yavi**	**2.92**	**53**	*e*	P	**Pn**	**13 46 22.9**	**+1.0**
AC02	**Maricunga**	**3.02**	**199**		Pn	**Pn**	**13 46 24.8**	**+1.6**
AC02	**Maricunga**	**3.02**	**199**	*e*	P	**Pn**	**13 46 25.8**	**+2.6**
AC02					*e*S	**Sn**	**13 47 02.3**	**+1.3**
PB02	**IPOC Station P**	**3.16**	**326**			**Pn**	**13 46 25.7**	**+1.1**
PB02	**IPOC Station P**	**3.16**	**326**	*e*	P	**Pn**	**13 46 25.2**	**+0.7**
PB02					*e*S	**Sn**	**13 47 03.3**	**0.0**
PB02					IAML		13 47 15.9	
	comp=Z,533nm,0.3s							
PB02	**IPOC Station P**	**3.16**	**326**	*i*	P	**Pn**	**13 46 25.7**	**+1.1**
PB02					*e*S	**Sn**	**13 47 02.6**	**-0.8**
AC01	**Pan de Azucar**	**3.19**	**227**		Pn	**Pn**	**13 46 25.7**	**+0.9**
AC01	**Pan de Azucar**	**3.19**	**227**	*e*	P	**Pn**	**13 46 25.8**	**+1.0**
AC01					*e*S	**Sn**	**13 47 02.7**	**-1.2**
AC01	**Pan de Azucar**	**3.19**	**227**	*i*	P	**Pn**	**13 46 25.8**	**+1.0**
PB01	**IPOC Station P**	**3.21**	**335**			**Pn**	**13 46 26.1**	**+0.8**
PB01	**IPOC Station P**	**3.21**	**335**	*e*	P	**Pn**	**13 46 26.4**	**+1.1**
PB01					*e*S	**Sn**	**13 47 05.5**	**+0.9**
PB01					IAML		13 47 06.8	
	comp=Z,208nm,0.4s							
PB01	**IPOC Station P**	**3.21**	**335**	*i*	P	**Pn**	**13 46 26.2**	**+0.9**
PATCX	**Punta Patache**	**3.71**	**327**			**Pn**	**13 46 32.1**	**+0.6**
PATCX	**Punta Patache**	**3.71**	**327**	*i*	P	**Pn**	**13 46 33.5**	**+2.0**
AHML	**Horco Molle**	**3.71**	**140**	*e*	P	**Pn**	**13 46 32.7**	**+1.3**
TA01	**Diego Aracena**	**3.94**	**329**		Pn	**Pn**	**13 46 34.4**	**0.0**
TA01	**Diego Aracena**	**3.94**	**329**	*e*	P	**Pn**	**13 46 34.8**	**+0.5**
TA01					*e*S	**Sn**	**13 47 22.7**	**+1.8**
TA01					IAML		13 47 31.6	
	comp=Z,94nm,1.1s							
TA01	**Diego Aracena**	**3.94**	**329**	*i*	P	**Pn**	**13 46 36.0**	**+1.7**
PB08	**IPOC Station P**	**3.95**	**344**			**Pn**	**13 46 36.6**	**+1.7**
PB08	**IPOC Station P**	**3.95**	**344**	*e*	P	**Pn**	**13 46 36.5**	**+1.6**
PB08					*e*S	**Sn**	**13 47 25.2**	**+3.2**
PB08	**IPOC Station P**	**3.95**	**344**	*i*	P	**Pn**	**13 46 37.5**	**+2.6**
GO03	**Copiap**	**4.12**	**209**			**Pn**	**13 46 37.5**	**+0.7**
GO03	**Copiap**	**4.12**	**209**	*e*	P	**Pn**	**13 46 38.1**	**+1.3**
GO03					*e*S	**Sn**	**13 47 25.9**	**+0.5**
GO03					*e*S	**Sn**	**13 47 26.4**	**+1.0**
GO03					IAML		13 47 28.7	
	comp=Z,88nm,0.2s							
TA02	**Huaiquique**	**4.17**	**332**	*i*	P	**Pn**	**13 46 39.4**	**+2.0**
GO01	**Chusmiza**	**4.42**	**345**			**Pn**	**13 46 42.1**	**+1.0**
GO01	**Chusmiza**	**4.42**	**345**	*e*	P	**Pn**	**13 46 42.4**	**+1.3**
GO01					*e*S	**Sn**	**13 47 36.5**	**+3.6**
GO01					IAML		13 47 40.5	
	comp=Z,44nm,0.4s							
GO01	**Chusmiza**	**4.42**	**345**	*i*	P	**Pn**	**13 46 42.1**	**+1.0**
PB11	**IPOC Station P**	**4.46**	**340**		Pn	**Pn**	**13 46 41.2**	**-0.1**
PB11	**IPOC Station P**	**4.46**	**340**	*i*	P	**Pn**	**13 46 43.4**	**+2.1**
VCA	**Vinchina**	**4.75**	**182**	*e*	P	**Pn**	**13 46 47.0**	**+1.9**
CYA	**Choya**	**4.88**	**156**	*e*	P	**Pn**	**13 46 42.6**	**-4.0**
CYA				*e*	P	**Pn**	**13 46 48.7**	**+2.1**
CYA	**Choya**	**4.88**	**156**	*i*	P	**Pn**	**13 46 47.5**	**+0.9**
AC04	**Llanos de Chal**	**5.03**	**212**			**Pn**	**13 46 48.0**	**-0.6**
AC04	**Llanos de Chal**	**5.03**	**212**	*e*	S	**Sn**	**13 47 42.6**	**-4.0**
AC04					IAML		13 48 01.3	
	comp=Z,72nm,0.6s							
AC05	**El Transito**	**5.25**	**202**			**Pn**	**13 46 52.6**	**+1.0**
AC05	**El Transito**	**5.25**	**202**	*e*	P	**Pn**	**13 46 52.6**	**+1.0**
AC05					*e*S	**Sn**	**13 47 52.1**	**+0.1**
AC05					IAML		13 47 55.1	
	comp=Z,48nm,0.7s							
LCO	**Las Campanas**	**5.57**	**205**			**Pn**	**13 46 55.8**	**-0.1**
PB12	**IPOC Station P**	**5.75**	**338**			**Pn**	**13 46 57.0**	**-1.2**
PB16	**IPOC Station P**	**5.78**	**346**			**Pn**	**13 47 00.1**	**+1.1**
CO01	**Juntas del Tor**	**6.26**	**197**		Pn	**Pn**	**13 47 06.5**	**+1.4**
CO03	**El Pedregal**	**7.24**	**199**		Pn	**Pn**	**13 47 17.5**	**-0.4**
CO06	**Fray Jorge**	**7.41**	**205**		Pn	**Pn**	**13 47 18.5**	**-1.5**
LPAZ	**La Paz**	**7.64**	**359**		Pn	**Pn**	**13 47 25.8**	**+2.0**
CO02	**Combarbal**	**7.67**	**199**		Pn	**Pn**	**13 47 23.0**	**-0.6**
PTLB	**Pontes e Lacer**	**11.90**	**46**		Pn	**Pn**	**13 48 18.1**	**-1.1**
VILB	**Vilhena**	**13.23**	**35**		Pn	**Pn**	**13 48 35.0**	**-1.3**
BDFB	**Brasilia**	**20.55**	**70**		P	**P**	**13 50 01.6**	**+0.9**
BDFB					IAmb	IAmb	13 50 03.2	
	comp=Z,7.6nm,0.7s							
GO08	**Villa O'Higgin**	**24.71**	**187**		P	**P**	**13 50 41.3**	**+0.8**
GO08					IAmb	IAmb	13 50 47.3	
	comp=Z,3.5nm,1.0s							
BOAV	**Boa Vista**	**27.20**	**17**		P	**P**	**13 51 02.0**	**-1.2**
BOAV					IAmb	IAmb	13 51 05.7	
	comp=Z,4.3nm,1.2s							
BAUV	**El Baul**	**32.71**	**360**		P	**P**	**13 51 50.3**	**-1.5**
BAUV					IAmb	IAmb	13 51 51.8	
	comp=Z,5.6nm,0.9s							
BCIP	**Isla Barro Col**	**34.90**	**339**		P	**P**	**13 52 10.3**	**-0.4**
QSPA	**South Pole Qui**	**66.23**	**180**		P	**P**	**13 56 05.7**	**+0.8**

*SJA **22** 13:48:49.6±0.7,22°.96S×66°.19W,h266$^{km}_{\pm}$4km,ML3.9, MW3.9*
*GUC **22** 13:48:51.9±0.8,22°.98S±0°.05×**66°.35W**±0°.06,**h250**^{km},**n31**, σ1§**16**/51,**1C**,**Jujuy Province***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.11**	**44**	*e*P	**Pn**	**13 49 27.6**	**+0.2**
YJA				*e*S	**S**	**13 49 55.0**	**-0.8**
SLA	**San Lorenzo**	**1.90**	**156**	*e*P	**Pn**	**13 49 33.5**	**+0.7**
LVC	**Limon Verde**	**2.39**	**278**	*e*P	**Pn**	**13 49 38.9**	**+1.3**
LVC				*e*S	**S**	**13 50 15.8**	**+1.5**
LVC	**Limon Verde**	**2.39**	**278**	*i*P	**Pn**	**13 49 38.7**	**+1.0**
LVC				*i*S	**S**	**13 50 13.7**	**-0.7**
LVC				IAML		13 50 15.2	
	262nm,0.5s						
PB15	**IPOC Station P**	**2.88**	**265**	*e*P	**Pn**	**13 49 43.9**	**+1.3**
PB15				*e*S	**S**	**13 50 24.3**	**+1.2**
PB15	**IPOC Station P**	**2.88**	**265**	*e*P	**Pn**	**13 49 43.6**	**+1.1**
PB15				*e*S	**S**	**13 50 23.0**	**-0.2**
PB09	**IPOC Station P**	**2.92**	**293**	*e*P	**Pn**	**13 49 44.4**	**+1.5**
PB09				*e*S	**S**	**13 50 24.6**	**+0.7**
PB09				IAML		13 50 25.7	
	comp=Z,233nm,0.5s						
PB09	**IPOC Station P**	**2.92**	**293**	*i*P	**Pn**	**13 49 44.5**	**+1.5**
PB09				*e*S	**S**	**13 50 23.9**	**0.0**
PB09				IAML		13 50 27.2	
	comp=E,161nm,0.5s						
PB06	**IPOC Station P**	**2.98**	**275**	*e*P	**Pn**	**13 49 44.7**	**+1.2**
PB06				*e*S	**S**	**13 50 25.4**	**+0.3**
PB06				IAML		13 50 26.1	
	comp=Z,155nm,0.2s						
PB06	**IPOC Station P**	**2.98**	**275** ⇑	*e*P	**Pn**	**13 49 44.6**	**+1.0**
PB06				*e*S	**S**	**13 50 24.4**	**-0.7**
PB06				IAML		13 50 25.8	
	comp=N,337nm,0.3s						
FSA	**Cafayete**	**3.13**	**174**	*e*P	**Pn**	**13 49 45.5**	**+0.4**
PB01	**IPOC Station P**	**3.49**	**303**	*e*P	**Pn**	**13 49 49.8**	**+0.7**
PB01				*e*S	**S**	**13 50 34.6**	**-0.5**
PB01				IAML		13 50 36.5	
	comp=Z,87nm,0.2s						
PB01	**IPOC Station P**	**3.49**	**303**	*e*P	**Pn**	**13 49 49.6**	**+0.5**
PB07	**IPOC Station P**	**3.50**	**290**	*e*P	**Pn**	**13 49 50.4**	**+1.0**
PB07				*e*S	**S**	**13 50 34.1**	**-1.4**
PB07				IAML		13 50 37.3	
	comp=Z,237nm,0.5s						
PB07	**IPOC Station P**	**3.50**	**290**	*i*P	**Pn**	**13 49 50.0**	**+0.6**
PB07				*e*S	**S**	**13 50 33.6**	**-1.9**
PB04	**IPOC Station P**	**3.57**	**280**	*e*P	**Pn**	**13 49 51.1**	**+1.0**
PB04				IAML		13 50 40.9	
	comp=Z,197nm,0.5s						
PB04	**IPOC Station P**	**3.57**	**280**	*e*P	**Pn**	**13 49 50.8**	**+0.7**
PB04				*e*S	**S**	**13 50 35.4**	**-1.4**
GO02	**Mina Guanaco**	**3.67**	**233**	*e*P	**Pn**	**13 49 52.7**	**+1.3**
GO02				*e*S	**S**	**13 50 39.3**	**+0.2**
GO02	**Mina Guanaco**	**3.67**	**233**	*e*P	**Pn**	**13 49 52.4**	**+1.0**
PB02	**IPOC Station P**	**3.68**	**296**	*e*P	**Pn**	**13 49 52.0**	**+0.7**
PB02				*e*S	**S**	**13 50 37.0**	**-2.0**
PB02				IAML		13 50 38.4	
	comp=Z,451nm,0.3s						
PB02	**IPOC Station P**	**3.68**	**296**	*e*P	**Pn**	**13 49 51.8**	**+0.5**
PB02				*e*S	**S**	**13 50 36.8**	**-2.2**
PB08	**IPOC Station P**	**3.85**	**317**	*e*P	**Pn**	**13 49 54.8**	**+1.3**
PB08				*e*S	**S**	**13 50 43.4**	**+0.4**
PB08				IAML		13 50 44.1	
	comp=Z,108nm,0.9s						
PB08	**IPOC Station P**	**3.85**	**317**	*i*P	**Pn**	**13 49 54.7**	**+1.2**
PB14	**IPOC Station P**	**4.06**	**245**	*i*P	**Pn**	**13 49 56.3**	**+0.4**
PATCX	**Punta Patache**	**4.13**	**301**	*e*P	**Pn**	**13 49 56.8**	**+0.2**
PATCX				*e*S	**S**	**13 50 46.1**	**-2.6**
HMBC	**Humberstone**	**4.25**	**309**	*e*P	**Pn**	**13 49 57.5**	**-0.5**
TA01	**Diego Aracena**	**4.29**	**303**	*e*P	**Pn**	**13 49 59.0**	**+0.5**
TA01				*e*S	**S**	**13 50 50.5**	**-1.4**
TA01				IAML		13 50 56.3	
	comp=Z,53nm,0.3s						
TA01	**Diego Aracena**	**4.29**	**303**	*e*P	**Pn**	**13 49 58.0**	**-0.5**
AC01	**Pan de Azucar**	**4.99**	**230**	*e*P	**Pn**	**13 50 06.6**	**-0.1**
AC01				*e*S	**S**	**13 51 04.2**	**-2.8**
AC01				IAML		13 51 09.0	
	comp=Z,32nm,0.7s						
GUSE	**Guasayan**	**5.07**	**165**	*e*P	Pn	13 50 16.8	+9.0
PB16	**IPOC Station P**	**5.49**	**327**	*e*P	**Pn**	**13 50 14.5**	**+1.0**
PB16				*e*S	**S**	**13 51 18.9**	**-0.3**
PB16				IAML		13 51 20.0	
	comp=Z,26nm,0.6s						

*IDC **22** 13:55:11.0±2.9,56°.20N×148°.64W,h0^{km},mb3.6/3, mbtmp3.3/7,ML3.1/4,MS2.8/1,Error ellipse: s-maj=60.4km s-min=24.8km az=179.0*
*NEIC **22** 13:55:12.8±2.2,56°.51N±0°.08×148°.5W±0°.1,h21$^{km}_{\pm}$9^{km}, ML3.3/76,ML3.1(AEIC),Error ellipse: s-maj=12.1km s-min=8.4km az=168.0*
*AEIC **22** 13:55:16.9±1.9,56°.60N±0°.08×148°.6W±0°.1,h7$^{km}_{\pm}$7^{km}, Error ellipse: s-maj=12.1km s-min=8.7km az=174.0*
ISC 22 13:55:13.6±1.1,56°.64N±0°.08×148°.66W±0°.06,h10^{km}, n196,σ1§43/190,mb3.8/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.42**	**300**		**Pn**	**13 55 53.1**	**-0.1**
KDAK					**Sn**	**13 56 20.8**	**-2.1**
KDAK	**Kodiak Island**	**2.42**	**300**	Pn	**Pn**	**13 55 52.7**	**-0.6**
	2.5nm,0.3s,baz=139,slow=5.1,SNR=42						
KDAK				Sn	**Sn**	**13 56 20.6**	**-2.3**
	2.9nm,0.3s,baz=193,slow=10.0,SNR=4.3						
KDAK				LR	LR	13 57 05.8	
	comp=Z,206nm,21.2s,baz=181,slow=43 6.0nm,0.4s						
OHAK	**Old Harbor**	**2.60**	**285**		**Pn**	**13 55 54.6**	**-1.1**
OHAK					**Sn**	**13 56 24.1**	**-3.2**
OHAK	**Old Harbor**	**2.60**	**285**	P	**Pn**	**13 55 55.1**	**-0.6**
OHAK	**Old Harbor**	**2.60**	**285**	P	**Pn**	**13 55 54.6**	**-1.1**
	baz=102						
OHAK				S	**Sn**	**13 56 24.1**	**-3.2**
	baz=102						
SYI	**Shuyak Island**	**2.82**	**316**		**Pn**	**13 55 58.4**	**-0.3**
SYI					**Sn**	**13 56 30.9**	**-1.7**
Q20K	**Shuyak Island**	**2.82**	**316**	P	**Pn**	**13 55 58.4**	**-0.3**
	baz=133						
Q20K				S	**Sn**	**13 56 30.9**	**-1.7**
	baz=133						
MID	**Middleton Isla**	**3.06**	**23**	Pn	**Pn**	**13 56 00.8**	**-1.2**
MID				IAML		13 56 59.5	
	comp=E,120nm,1.4s						
MID				IAML		13 56 59.5	
	comp=N,76nm,1.5s						
MID	**Middleton Isla**	**3.06**	**23**	P	**Pn**	**13 56 02.8**	**+0.8**
Q23K	**Middleton Isla**	**3.06**	**23**		**Pn**	**13 56 00.3**	**-1.7**
Q23K	**Middleton Isla**	**3.06**	**23**	IAML		13 56 27.9	
	comp=E,117nm,1.5s						
Q23K				IAML		13 56 59.5	
	comp=N,116nm,1.5s						
Q23K	**Middleton Isla**	**3.06**	**23**	P	**Pn**	**13 56 00.3**	**-1.7**
	baz=204						
CNPM	**China Poot**	**3.20**	**336**		**Pn**	**13 56 03.2**	**-0.8**
CNPM					**Sn**	**13 56 39.9**	**-2.3**
BRSE	**Bradley Lake S**	**3.30**	**341**		**Pn**	**13 56 04.3**	**-1.0**
BRSE					**Sn**	**13 56 42.5**	**-2.1**
BRSE	**Bradley Lake S**	**3.30**	**341**	P	**Pn**	**13 56 04.3**	**-1.0**
	baz=159						
BRSE				S	**Sn**	**13 56 42.5**	**-2.1**
	baz=159						
BRLK	**Bradley Lake**	**3.35**	**340**		**Pn**	**13 56 04.9**	**-1.1**
HOM	**Homer**	**3.42**	**334**		**Pn**	**13 56 06.7**	**-0.2**
HOM	**Homer**	**3.42**	**334**	P	**Pn**	**13 56 06.7**	**-0.2**
	baz=151						
P23K	**Montague Islan**	**3.44**	**11**		**Pn**	**13 56 06.0**	**-1.2**
P23K	**Montague Islan**	**3.44**	**11**	P	**Pn**	**13 56 06.0**	**-1.2**
	baz=191						
SEW	**Seward**	**3.50**	**354**		**Pn**	**13 56 07.1**	**-1.0**
SEW	**Seward**	**3.50**	**354**	P	**Pn**	**13 56 07.1**	**-1.0**
	baz=172						
Q19K	**Cape Douglas,**	**3.52**	**313**		**Pn**	**13 56 10.2**	**+1.9**
P19K	**Oil Pt**	**3.87**	**323**		**Pn**	**13 56 13.4**	**+0.2**
P19K	**Oil Pt**	**3.87**	**323**	IAML		13 57 02.0	
	comp=E,69nm,0.5s						
P19K	**Oil Pt**	**3.87**	**323**	P	**Pn**	**13 56 13.4**	**+0.2**
	baz=139						
O22K	**Cooper Landing**	**3.90**	**352**		**Pn**	**13 56 12.9**	**-0.6**
HIN	**Hinchinbrook I**	**3.94**	**16**		**Pn**	**13 56 13.1**	**-1.0**
HIN	**Hinchinbrook I**	**3.94**	**16**	IAML		13 57 03.0	
	comp=E,65nm,1.2s						
HIN				IAML		13 57 05.4	
	comp=N,62nm,1.1s						
SLKM	**Skilak Lake**	**3.97**	**349**		**Pn**	**13 56 13.9**	**-0.6**
KAIM	**Kayak Island**	**3.99**	**32**		**Pn**	**13 56 13.3**	**-1.4**
KAIM	**Kayak Island**	**3.99**	**32**	IAML		13 57 17.0	
	comp=N,58nm,1.2s						
KAIM	**Kayak Island**	**3.99**	**32**	P	**Pn**	**13 56 13.4**	**-1.4**
	baz=215						
O20K	**Slope Mountain**	**4.03**	**331**		**Pn**	**13 56 15.4**	**-0.1**
O20K	**Slope Mountain**	**4.03**	**331**	P	**Pn**	**13 56 15.4**	**-0.1**
	baz=147						
IVE	**Iliamna Volcan**	**4.09**	**328**		**Pn**	**13 56 15.6**	**-0.7**
ILSW	**Iliamna Southw**	**4.10**	**327**	Pn	**Pn**	**13 56 16.2**	**-0.2**
ILSW				IAML		13 57 09.4	
	comp=N,30nm,0.4s						
ILSW				IAML		13 57 11.3	
	comp=E,29nm,0.7s						
EYAK	**Cordova Ski Ar**	**4.21**	**20**		**Pn**	**13 56 17.0**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.21**	**20**	P	**Pn**	**13 56 17.1**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.21**	**20**	P	**Pn**	**13 56 17.0**	**-0.7**
	baz=202						
FID	**Port Fidalgo**	**4.28**	**15**		**Pn**	**13 56 17.2**	**-1.6**
FID	**Port Fidalgo**	**4.28**	**15**	IAML		13 57 10.0	
	comp=N,21nm,1.1s						
FID				IAML		13 57 17.5	
	comp=E,22nm,0.8s						
SUCK	**Suckling Hills**	**4.30**	**35**		**Pn**	**13 56 17.5**	**-1.6**
SUCK	**Suckling Hills**	**4.30**	**35**	IAML		13 57 19.7	
	comp=E,51nm,1.5s						
SUCK				IAML		13 57 33.6	
	comp=N,53nm,1.3s						
RAGM	**Ragged Mountai**	**4.30**	**27**		**Pn**	**13 56 17.9**	**-1.2**
GLI	**Glacier Island**	**4.33**	**10**		**Pn**	**13 56 18.2**	**-1.3**
GLI	**Glacier Island**	**4.33**	**10**	IAML		13 57 13.3	
	comp=N,20nm,1.2s						
GLI				IAML		13 57 14.4	
	comp=E,26nm,1.3s						
GLI	**Glacier Island**	**4.33**	**10**	P	**Pn**	**13 56 18.2**	**-1.3**
	baz=191						
CAPN	**Captain Cook N**	**4.34**	**344**	Pn	**Pn**	**13 56 18.5**	**-1.1**
RED	**Redoubt Volcan**	**4.36**	**332**		**Pn**	**13 56 18.7**	**-1.2**
RSO	**Redoubt South**	**4.39**	**333**		**Pn**	**13 56 19.4**	**-1.2**
RDT	**Redoubt**	**4.41**	**335**		**Pn**	**13 56 19.4**	**-1.2**
P18K	**Big Mountain,**	**4.45**	**311**		**Pn**	**13 56 19.7**	**-1.5**
P18K	**Big Mountain,**	**4.45**	**311**	P	**Pn**	**13 56 19.7**	**-1.5**
	baz=126						
GOAT	**Goat Mountain**	**4.46**	**26**			**Pn**	**13 56 20.2**	**-1.0**
RC01	**Rabbit Creek A**	**4.50**	**353**			**Pn**	**13 56 21.1**	**-0.7**
RC01				IAML			13 57 21.1	
	comp=N,17nm,0.9s							
RC01				IAML			13 57 28.5	
	comp=E,18nm,0.6s							
NCT	**North Crescent**	**4.52**	**332**			**Pn**	**13 56 21.4**	**-0.8**
BERG	**Berg Lake**	**4.58**	**33**			**Pn**	**13 56 21.4**	**-1.4**
BERG	**Berg Lake**	**4.58**	**33**	IAML			13 57 36.5	
	comp=N,39nm,1.2s							
FIS	**Fire Island**	**4.59**	**351**	Pn		**Pn**	**13 56 23.2**	**+0.2**
FIS				IAML			13 57 28.2	
	comp=N,37nm,1.2s							
GRIN	**Grindle Hills**	**4.61**	**35**			**Pn**	**13 56 22.2**	**-1.1**
O19K	**Port Alsworth**	**4.64**	**323**			**Pn**	**13 56 22.8**	**-0.9**
O19K	**Port Alsworth**	**4.64**	**323**	P		**Pn**	**13 56 22.8**	**-0.9**
	baz=138							
SNH	**Sunshine Point**	**4.69**	**38**			**Pn**	**13 56 23.3**	**-1.1**
SNH	**Sunshine Point**	**4.69**	**38**	IAML			13 57 14.4	
	comp=N,31nm,1.4s							
SNH				IAML			13 58 12.4	
	comp=E,32nm,1.5s							
O18K	**Koktuh Hills**	**4.73**	**316**			**Pn**	**13 56 24.2**	**-0.7**
O18K	**Koktuh Hills**	**4.73**	**316**	P		**Pn**	**13 56 24.2**	**-0.7**
	baz=130							
KHIT	**Khitrov Hills**	**4.75**	**34**			**Pn**	**13 56 24.1**	**-1.2**
KNK	**Knik Glacier**	**4.79**	**1**	Pn		**Pn**	**13 56 26.1**	**+0.3**
KNK				IAML			13 57 41.5	
	comp=E,15nm,1.4s							
BMRM	**Bremner River**	**4.83**	**24**			**Pn**	**13 56 25.3**	**-1.1**
BMRM	**Bremner River**	**4.83**	**24**	P		**Pn**	**13 56 25.3**	**-1.1**
	baz=207							
WAX	**Waxell Ridge**	**4.88**	**36**			**Pn**	**13 56 25.9**	**-1.3**
WAX	**Waxell Ridge**	**4.88**	**36**	IAML			13 57 33.4	
	comp=E,26nm,1.1s							
N20K	**Mount Spurr**	**4.93**	**340**	P		**Pn**	**13 56 27.0**	**-0.7**
	baz=156							
SPCR	**Spurr Chakacha**	**4.93**	**340**			**Pn**	**13 56 27.1**	**-0.7**
SUA	**Susitna One**	**4.96**	**348**			**Pn**	**13 56 27.7**	**-0.5**
SUA	**Susitna One**	**4.96**	**348**	P		**Pn**	**13 56 27.7**	**-0.5**
	baz=166							
BARK	**Barkley Ridge**	**4.97**	**38**			**Pn**	**13 56 27.1**	**-1.3**
PMR	**Palmer**	**4.98**	**357**	P		**Pn**	**13 56 29.9**	**+1.6**
MESA	**MESA**	**5.00**	**42**	Pn		**Pn**	**13 56 25.3**	**-3.6**
MESA				IAML			13 58 40.4	
	comp=E,24nm,0.7s							
CRQM	**Cirque**	**5.03**	**33**			**Pn**	**13 56 28.2**	**-1.1**
CRQM	**Cirque**	**5.03**	**33**	IAML			13 57 37.3	
	comp=N,23nm,1.0s							
CRQM				IAML			13 57 53.3	
	comp=E,16nm,1.0s							
CRQE	**Cirque**	**5.04**	**33**	P		**Pn**	**13 56 28.2**	**-1.2**
	baz=217							
KLU	**Klutina**	**5.07**	**15**			**Pn**	**13 56 28.9**	**-0.8**
KLU	**Klutina**	**5.07**	**15**	IAML			13 57 32.0	
	comp=N,18nm,1.2s							
KLU				IAML			13 57 32.6	
	comp=E,18nm,1.0s							
KLU	**Klutina**	**5.07**	**15**	P		**Pn**	**13 56 28.9**	**-0.8**
	baz=197							
TGL	**Tana Glacier**	**5.13**	**34**			**Pn**	**13 56 29.5**	**-1.0**
TGL	**Tana Glacier**	**5.13**	**34**	IAML			13 57 27.0	
	comp=E,18nm,1.0s							
TGL				IAML			13 57 27.8	
	comp=N,14nm,0.6s							
STLK	**Strandline Lak**	**5.14**	**343**			**Pn**	**13 56 30.3**	**-0.4**
GHO	**Glory Hole Cre**	**5.15**	**359**			**Pn**	**13 56 30.6**	**-0.2**
GHO	**Glory Hole Cre**	**5.15**	**359**	IAML			13 57 33.3	
	comp=E,19nm,0.5s							
GHO				IAML			13 57

O14K	**Tigyukauivet M**	**7.20**	**297**	Pn		**Pn**	**13 56 59.5**	**+0.7**
L27K	**Beaver Creek,**	**7.30**	**25**	Pn		**Pn**	**13 57 00.4**	**+0.1**
BCAR	**Beaver Creek A**	**7.31**	**25**	Pn		**Pn**	**13 57 00.1**	**-0.3**
TTA	**Tatalina**	**7.32**	**333**	Pn		**Pn**	**13 56 59.9**	**-0.6**
SIT	**Sitka**	**7.33**	**81**	Pn		**Pn**	**13 56 56.3**	**-4.3**
SIT	**Sitka**	**7.33**	**81**	P		**Pn**	**13 56 56.3**	**-4.3**
RIDG	**Independent Ri**	**7.37**	**13**			**Pn**	**13 57 02.4**	**+1.1**
L16K	**Owhat River**	**7.53**	**317**	Pn		**Pn**	**13 57 04.2**	**+0.9**
BPAW	**Bear Paw Mtn.**	**7.57**	**352**	Pn		**Pn**	**13 57 04.8**	**+0.9**
SKAG	**Skagway**	**7.62**	**63**			**Pn**	**13 57 04.1**	**-0.4**
SKAG	**Skagway**	**7.62**	**63**	P		**Pn**	**13 57 04.4**	**-0.1**
S32K	**Killisnoo**	**7.73**	**78**	Pn		**Pn**	**13 57 03.3**	**-2.7**
M29M	**Somme Creek**	**7.79**	**37**			**Pn**	**13 57 06.8**	**-0.2**
K17K	**Iditarod**	**7.80**	**325**	Pn		**Pn**	**13 57 05.9**	**-1.1**
R32K	**Eaglecrest**	**7.80**	**72**	Pn		**Pn**	**13 57 05.2**	**-2.0**
HDA	**Harding Lake**	**7.84**	**5**	Pn		**Pn**	**13 57 05.7**	**-1.9**
JIS	**Juneau Island**	**7.88**	**72**			**Pn**	**13 57 06.2**	**-1.8**
JIS	**Juneau Island**	**7.88**	**72**	P		**Pn**	**13 57 06.5**	**-1.5**
J20K	**Nowinta River**	**8.03**	**343**	Pn		**Pn**	**13 57 09.9**	**-0.3**
K27K	**Chicken**	**8.10**	**21**	Pn		**Pn**	**13 57 11.0**	**-0.2**
ILAR	**Eielson Array**	**8.21**	**5**	Pn		**Pn**	**13 57 14.2**	**+1.6**
	comp=E,0.1nm,0.3s,baz=189,slow=13,SNR=4.6							
ILAR					Sn	**Sn**	**13 58 41.9**	**-3.4**
	comp=E,0.1nm,0.3s,baz=192,slow=22,SNR=8.5							
	comp=E,0.1nm,0.3s							
WHY	**Whitehorse**	**8.23**	**55**			**Pn**	**13 57 12.3**	**-0.9**
COLA	**College**	**8.27**	**2**	P		**Pn**	**13 57 15.9**	**+2.4**
J26L	**Joseph Creek**	**8.28**	**16**	Pn		**Pn**	**13 57 13.3**	**-0.3**
L29M	**L29M**	**8.37**	**35**	Pn		**Pn**	**13 57 15.0**	**+0.1**
P32M	**Atlin**	**8.45**	**63**	Pn		**Pn**	**13 57 14.7**	**-1.3**
U33K	**Whale Pass**	**8.64**	**87**	Pn		**Pn**	**13 57 14.1**	**-4.4**
I21K	**Tanana**	**8.72**	**351**	Pn		**Pn**	**13 57 20.2**	**+0.6**
CRAG	**Craig**	**8.78**	**91**	Pn		**Pn**	**13 57 16.6**	**-3.8**
CRAG	**Craig**	**8.78**	**91**	P		**Pn**	**13 57 16.6**	**-3.8**
P33M	**Teslin, Yukon**	**9.05**	**60**	Pn		**Pn**	**13 57 23.1**	**-1.1**
Q32M	**Nakina River**	**9.06**	**68**	Pn		**Pn**	**13 57 23.3**	**-1.2**
K29M	**Barlow Dome**	**9.09**	**33**	Pn		**Pn**	**13 57 25.3**	**+0.5**
H21K	**Melozitna Rive**	**9.27**	**349**	Pn		**Pn**	**13 57 27.6**	**+0.5**
FARO	**Faro, Yukon**	**9.59**	**48**	Pn		**Pn**	**13 57 31.1**	**-0.5**
V35K	**Ketchikan**	**9.64**	**91**	Pn		**Pn**	**13 57 28.4**	**-3.9**
R33M	**Jennings River**	**9.78**	**66**	Pn		**Pn**	**13 57 32.0**	**-2.3**
DLBC	**Dease Lake**	**10.18**	**72**	Pn		**Pn**	**13 57 38.9**	**-0.8**
DLBC	**Dease Lake**	**10.18**	**72**	Pn		**Pn**	**13 57 39.0**	**-0.7**
	comp=E,0.4nm,0.3s,baz=271,slow=9.7,SNR=13							
	comp=E,0.7nm,0.3s							
YKA	**Yellowknife Ar**	**18.06**	**57**	P		**P**	**13 59 27.7**	**+3.0**
	baz=266,slow=11,SNR=5.9							
	comp=E,0.4nm,0.8s							
SONM	**Songino Array**	**58.67**	**310**	P		**P**	**14 05 13.5**	**+2.6**
	comp=E,0.7nm,0.8s,baz=50,slow=7.7,SNR=4.6							
	comp=E,0.7nm,0.8s							
BVAR	**Borovoye Array**	**66.10**	**335**	P		**P**	**14 06 02.2**	**+1.8**
	comp=E,0.6nm,0.6s,baz=54,slow=7.3,SNR=4.2							
	comp=E,0.6nm,0.6s							
MKAR	**Makanchi Array**	**68.50**	**325**	P		**P**	**14 06 15.4**	**-0.3**
	comp=E,0.2nm,0.7s,baz=44,slow=5.6,SNR=3.5							
	comp=E,0.2nm,0.7s							

IDC 22 13:57:25.0±2.5, 6°28S×130°98E, h0km, mb3.1/1, mbtmp3.1/3, ML3.4/2, Error ellipse: s-maj=120.3km s-min=33.4km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.97**	**167**	Pn	Pn	14 00 43.8	-0.6
	0.2nm,0.3s,baz=347,slow=12,SNR=8.9						
WRA				Sn	Sn	14 03 03.5	-17
	0.2nm,0.3s,baz=356,slow=20,SNR=3.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.51**	**171**	P	Pn	14 01 31.4	+0.5
	0.1nm,0.3s,baz=339,slow=9.3,SNR=10.0						
	0.3nm,0.6s						
PZH	**PanZhiHua**	**43.19**	**320**	PKP	P	14 05 21.3	-6.8
MKAR	**Makanchi Array**	**68.17**	**326**	P	P	14 08 27.2	0.0
	0.1nm,0.5s,baz=114,slow=7.0,SNR=1.9						
	0.1nm,0.5s						

IDC 22 14:09:20.2±4.4, 3°05S×131°24E, h0km, mb3.5/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=301.4km s-min=30.6km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.06**	**170**	P	Pn	14 13 20.5	+0.1
	0.1nm,0.3s,baz=351,slow=11,SNR=5.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**20.66**	**173**	P	P	14 14 01.6	-0.1
	1.5nm,0.4s,baz=350,slow=10,SNR=52						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**65.66**	**325**	P	P	14 20 06.5	+0.1
	0.2nm,0.6s,baz=130,slow=4.5,SNR=2.8						
	0.2nm,0.6s						

SFS 22 14:15:52.9, 37°70N×6°63W, h0km, ML1.7/7, ML2.2/6, MLv1.4/7, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIN	**Mina Concepcio**	**0.07**	**330**	Pg	Pg	14 15 54.1	-0.3
EMIN				Sg	Sg	14 15 55.4	0.0
EMIN	**Mina Concepcio**	**0.07**	**330**	P	Pg	14 15 54.0	-0.4
PBAR	**Barrancos**	**0.57**	**325**	P	Pg	14 16 03.3	-0.6
PBAR	**Barrancos**	**0.57**	**325**	Pg	Pg	14 16 03.6	-0.4
PBAR				Sg	Sg	14 16 11.3	0.0
EGRO	**El Granado**	**0.70**	**256**	P	Pg	14 16 06.4	0.0
EGRO	**El Granado**	**0.70**	**256**	Pg	Pg	14 16 06.2	-0.2
EGRO				Sg	Sg	14 16 16.3	+0.8
ECAB	**El Cabril**	**1.02**	**68**	P	Pg	14 16 11.2	-1.3
ECAB	**El Cabril**	**1.02**	**68**	Pg	Pg	14 16 11.2	-1.3
ECAB				Sg	Sg	14 16 24.7	-1.1
EBAD	**Badajoz**	**1.09**	**344**	P	Pg	14 16 13.7	-0.2
EBAD	**Badajoz**	**1.09**	**344**	Pg	Pg	14 16 12.8	-1.1
EBAD				Sg	Sg	14 16 28.0	-0.2
PCVE	**Castro Verde**	**1.12**	**267**	P	Pg	14 16 14.5	0.0
PCVE	**Castro Verde**	**1.12**	**267**	Pn	Pg	14 16 14.0	-0.5
PCVE				Sn	Sb	14 16 30.1	-0.3
PBDV	**Barranco-do-Ve**	**1.14**	**247**	P	Pg	14 16 14.8	+0.1
PBDV	**Barranco-do-Ve**	**1.14**	**247**	Pn	Pg	14 16 14.2	-0.5
PBDV				Sn	Sg	14 16 29.9	+0.4
EADA	**Adamuz**	**1.68**	**73**	P	Pn	14 16 23.1	-0.5
EADA	**Adamuz**	**1.68**	**73**	Pn	Pn	14 16 22.7	-1.0
EADA				Sn	Sn	14 16 45.3	-0.7

NOU 22 14:29:20.9, 17°87S×168°93E, h68km, MLv4.0/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**3.30**	**209**	P	Pn	14 30 08.9	-1.3
MARNC	**Mare, Loyalty**	**3.69**	**193**	P	Pn	14 30 15.0	-0.5
YATNC	**Mamie plateau,**	**4.59**	**204**	P	Pn	14 30 28.8	+1.0
DZM	**Mont Dzumac**	**4.79**	**209**	P	Pn	14 30 31.4	+0.8
KOUNC	**Koumac, New Ca**	**5.13**	**238**	P	Pn	14 30 35.1	-0.2

*TRN **22** 14:36:40.9, 10°.18N×62°.95W, h18km, MD3.6, Venezuela.*
*FUNV **22** 14:36:43.4, 10°.16N×62°.80W, h31km, MW4.0*
ISC 22 14:36:42.1±1.5, 10°12N±0°08×62°90W±0°04, h32km±13km, n17, σ1°25°29, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.65**	**329**	*eP*	**Pb**	**14 36 54.7**	**-0.5**
CRUV				*eS*	**Sb**	**14 37 04.4**	**+0.4**
TCE	**Chacachacare**	**1.26**	**63**	*eP*	**Pn**	**14 37 04.3**	**+0.6**
TCE				*eS*	**Sb**	**14 37 21.3**	**-0.1**
TRN	**Trinidad (W)**	**1.56**	**70**	*eP*	**Pn**	**14 37 08.6**	**+0.9**
TRN				*eS*	**Sb**	**14 37 29.3**	**-0.5**
PCRV	**Puerto La Cruz**	**1.71**	**272**	*eP*	**Pn**	**14 37 11.0**	**+1.1**
PCRV				*eS*	**Sn**	**14 37 31.6**	**+0.8**
GRFF	**Grenada Fort F**	**2.23**	**30**	*eP*	**Pn**	**14 37 17.4**	**+0.5**
GRFF				*eS*	**Sn**	**14 37 43.5**	**0.0**
GRGR	**Grenville**	**2.34**	**31**	*eP*	**Pn**	**14 37 19.2**	**+0.7**
GRGR				*eS*	**Sn**	**14 37 46.5**	**+0.2**
GCMP	**Grenada, Carri**	**2.76**	**31**	*eP*	**Pn**	**14 37 24.4**	**+0.2**
GCMP				*eS*	**Sn**	**14 37 56.7**	**+0.2**
MERV	**Las Mercedes**	**3.46**	**256**	*eP*	**Pn**	**14 37 35.9**	**+2.0**
MERV				*eS*	**Sn**	**14 38 14.3**	**+0.5**
TACV	**Tcata**	**4.07**	**271**	*eP*	**Pn**	**14 37 43.8**	**+1.5**
TACV				*eS*	**Sn**	**14 38 28.3**	**-0.6**
SLB	**Belfond**	**4.11**	**26**	*eP*	**Pn**	**14 37 43.3**	**+0.4**
SLBI	**Saint Lucia, B**	**4.31**	**26**	*eP*	**Pn**	**14 37 46.0**	**+0.4**
CACV	**CAICARA DEL OR**	**4.40**	**235**	*eP*	Pn	14 37 41.9	-4.9
CACV				*eS*	Sn	14 38 26.9	-10
BENV	**Belo**	**4.63**	**269**	*eP*	**Pn**	**14 37 52.0**	**+1.9**
BENV				*eS*	**Sn**	**14 38 40.2**	**-2.7**
MPOM	**Morne Pois Mar**	**4.74**	**25**	*eP*	**Pn**	**14 37 52.3**	**+0.8**
TURV	**Turiamo**	**4.88**	**274**	*eP*	**Pn**	**14 37 54.6**	**+1.3**
TURV				*eS*	**Sn**	**14 38 46.1**	**-2.7**
BAUV	**El Baul**	**5.21**	**258**	*eP*	**Pn**	**14 37 58.5**	**+0.5**
BAUV				*eS*	**Sn**	**14 38 54.9**	**-2.1**
BAUV	**El Baul**	**5.21**	**258**	*eP*	**Pn**	**14 37 58.2**	**+0.3**
BAUV				*eS*	**Sn**	**14 38 55.4**	**-1.5**

*JSN **22** 14:38:18.4±2.2, 16°.67N×73°.32W, h16km, MD4.5*
*OSPL **22** 14:38:22.8±2.4, 19°.07N×73°.54W, h0km±20km, ML3.2*
*SSNC **22** 14:38:22.1±1.2, 18°.46N×73°.74W, h5km, MD3.3, ML3.3, MW3.2*
ISC 22 14:38:20.0±1.5, 19°04N±0°08×73°51W±0°04, h1km±13km, n16, σ0°92/25, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAPH	**Port-au-Prince**	**1.26**	**114**	*eP*	**Pg**	**14 38 44.7**	**+0.6**
PAPH				*eS*	**Sb**	**14 39 01.5**	**+0.2**
PAPH				IAML		14 39 04.7	
	comp=E,440nm,0.3s						
PAPH				IAML		14 39 04.7	
	comp=N,747nm,0.3s						
PAPH	**Port-au-Prince**	**1.26**	**114**	*i P*	**Pg**	**14 38 44.7**	**+0.6**
PAPH				*eS*	**Sn**	**14 39 02.4**	**0.0**
PAPH				IAML		14 39 04.1	
	comp=Z,475nm,0.4s						
GTBY	**Guantanamo Bay**	**1.75**	**301**	*eP*	**Pn**	**14 38 52.5**	**+1.0**
GTBY				*eS*	**Sb**	**14 39 15.8**	**+0.4**
GTBY				IAML		14 39 19.6	
	comp=Z,194nm,0.4s						
GTBY				IAML		14 39 20.8	
	comp=Z,131nm,0.3s						
GTBY	**Guantanamo Bay**	**1.75**	**301**	*i P*	**Pb**	**14 38 53.0**	**+0.1**
GTBY				*eS*	**Sn**	**14 39 12.4**	**-2.0**
GTBY				IAML		14 39 26.8	
	comp=Z,57nm,0.3s						
LODA1	**ITESIL, Dajabo**	**1.78**	**73**	*i P*	**Pb**	**14 38 52.2**	**-1.3**
LODA1				*eS*	**Sg**	**14 39 15.6**	**-1.7**
LODA1				IAML		14 39 26.1	
	comp=Z,1μm,2.0s						
LOPE2	**Hotel El Peder**	**1.95**	**120**	*i P*	**Pn**	**14 38 55.1**	**+0.8**
LOPE2				IAML		14 39 28.3	
	comp=Z,148nm,0.4s						
SDDR	**Presa de Saban**	**2.11**	**91**	*eP*	**Pb**	**14 38 59.2**	**+0.1**
SDDR				*eS*	**Sg**	**14 39 27.7**	**0.0**
SDDR				IAML		14 39 32.0	
	comp=Z,189nm,0.6s						
SDDR				IAML		14 39 33.6	
	comp=Z,231nm,0.5s						
SDDR	**Presa de Saban**	**2.11**	**91**	*i P*	**Pb**	**14 38 59.2**	**+0.1**
SDDR				IAML		14 39 39.7	
	comp=Z,151nm,0.5s						
MOAC	**Moa**	**2.11**	**320**	*eP*	**Pg**	**14 39 00.4**	**-0.1**
MOAC				*eS*	**Sg**	**14 39 28.6**	**+0.6**
MOAC				IAML		14 39 32.0	
	comp=E,94nm,0.5s						
MOAC				IAML		14 39 32.8	
	comp=N,93nm,0.3s						
RCC	**Rio Carpintero**	**2.27**	**295**	*eP*	**Pn**	**14 38 59.2**	**+0.5**
RCC				*eS*	**Sn**	**14 39 28.2**	**+0.9**
RCC				IAML		14 39 33.6	
	comp=N,106nm,0.2s						
RCC				IAML		14 39 34.1	
	comp=E,146nm,0.3s						
PODR	**Polo**	**2.29**	**112**	*i P*	**Pb**	**14 39 01.4**	**-0.8**
MARVS	**Santiago de Cu**	**2.45**	**293**	*eP*	**Pb**	**14 39 03.9**	**-0.9**
MARVS				*eS*	**Sb**	**14 39 35.6**	**+0.1**
YAR	**Yar**	**2.99**	**297**	*eP*	**Pn**	**14 39 10.1**	**+1.4**
GWJ	**Greenwich**	**3.20**	**253**	*i P*	**Pn**	**14 39 10.9**	**-0.6**
HOJ	**Hope**	**3.24**	**252**	*i P*	**Pn**	**14 39 11.2**	**-0.8**
STH	**Stony Hill**	**3.27**	**254**	*i P*	**Pn**	**14 39 13.2**	**+0.7**

IDC 22 14:41:49.2±831.0, 32°65N×118°20W, h0km, Error ellipse: s-maj=318.9km s-min=39.7km az=56.0, Off coast of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	**1.75**	**57**	I	I	14 55 59.3	
	0.6nm,0.7s,baz=238,slow=318,SNR=14						
I56US	**NEWPORT INFRAS**	**5.62**	**3**	I	I	16 17 10.0	
	baz=180,slow=336,SNR=1.4						
I10CA	**LAC DU BONNET**	**24.02**	**37**	I	I	17 02 40.0	
	baz=224,slow=329,SNR=3.4						

*IDC **22** 14:45:57.8±4.3, 19°.08N×145°.76E, h172km±30km, mb3.4/8, mbtmp4.0/9, Error ellipse: s-maj=93.0km s-min=13.8km az=82.0*
*NEIC **22** 14:46:04.5±1.3, 18°.89N±0°.09×145°.3E±0°.2, h216km±9km, mb4.0/18, Error ellipse: s-maj=26.3km s-min=12.7km az=83.0*
ISC 22 14:46:01.3±0.9, 19°01N±0°08×145°3E±0°2, h200km, n30, σ1°34/28, mb3.9/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**8.56**	**341**	P	**Pn**	**14 48 00.7**	**-1.1**
	63nm,1.0s,baz=264,slow=23,SNR=8.7						
JCJ				S	**Sn**	**14 49 34.1**	**-3.8**
	70nm,0.9s,baz=287,slow=19,SNR=2.4						
JOW	**Kunigami**	**17.53**	**299**	P	**P**	**14 49 52.5**	**+0.4**
MAJO	**Matsushiro**	**18.56**	**342**	P	**Pn**	**14 50 07.0**	**+1.2**
MAJO				IAmb	IAmb	14 50 17.5	
	comp=Z,3.1nm,0.8s						
JKA	**Kamikawa-asahi**	**25.14**	**355**	P	**P**	**14 51 10.4**	**+2.5**
JKA				IAmb	IAmb	14 51 21.7	
	comp=Z,6.1nm,0.8s						
PMG	**Port Moresby**	**28.29**	**176**	P	**P**	**14 51 34.0**	**-2.3**
COEN	**Coen**	**32.83**	**184**	P	**P**	**14 52 16.0**	**-0.1**
COEN				IAmb	IAmb	14 52 16.5	
	comp=Z,6.2nm,1.1s						
MTN	**Manton Dam**	**34.61**	**205**	P	**P**	**14 52 31.5**	**0.0**
SOEI	**Soe**	**35.34**	**218**	P	**P**	**14 52 36.9**	**-1.0**
WB0	**Warramunga Arr**	**40.00**	**196**	P	**P**	**14 53 17.6**	**+0.8**
WB0				IAmb	IAmb	14 53 17.7	
	comp=Z,4.4nm,0.7s						
WRAB	**Tennant Creek**	**40.17**	**196**	P	**P**	**14 53 19.0**	**+0.9**
WRAB				IAmb	IAmb	14 53 19.5	
	comp=Z,7.1nm,0.7s						
WB2	**Warramunga Arr**	**40.18**	**196**	P	**P**	**14 53 18.6**	**+0.4**
WB2				IAmb	IAmb	14 53 19.6	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**40.18**	**196**	P	**P**	**14 53 17.7**	**-0.6**
WRA	**Warramunga Arr**	**40.18**	**196**	P	**P**	**14 53 19.0**	**+0.7**
	comp=Z,6.6nm,0.7s,baz=16,slow=8.9,SNR=30						
	comp=Z,4.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.64**	**209**	P	**P**	**14 53 30.2**	**0.0**
SONM	**Songino Array**	**42.69**	**321**	P	**P**	**14 53 38.3**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=126,slow=7.3,SNR=2.1						
	comp=Z,0.3nm,0.4s						
AS31	**Alice Springs**	**43.86**	**195**	P	**P**	**14 53 48.0**	**+0.1**
ASAR	**Alice Springs**	**43.86**	**195**	P	**P**	**14 53 48.2**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=17,slow=6.4,SNR=40						
	comp=Z,0.9nm,0.5s						
DZM	**Mont Dzumac**	**45.75**	**152**	P	**P**	**14 54 02.6**	**-0.3**
DZM				IAmb	IAmb	14 54 05.7	
	comp=Z,5.3nm,0.9s						
TOO	**Toolangi**	**56.27**	**180**	P	**P**	**14 55 20.9**	**-0.2**
TOO				IAmb	IAmb	14 55 34.0	
	comp=Z,5.2nm,1.1s						
MKAR	**Makanchi Array**	**58.01**	**314**	P	**P**	**14 55 34.8**	**+1.6**
MKAR	**Makanchi Array**	**58.01**	**314**	P	**P**	**14 55 35.3**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=96,slow=8.7,SNR=5.2						
	comp=Z,0.2nm,0.5s						
MAKZ	**Makanchi**	**58.22**	**314**	P	**P**	**14 55 36.3**	**+1.6**
KURBB	**Kurchatov Arra**	**60.86**	**318**	P	**P**	**14 55 53.5**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=92,slow=7.8,SNR=6.4						
	comp=Z,0.2nm,0.4s						
BMAR	**Burnt Mountain**	**64.97**	**24**	P	P	14 56 22.5	+3.1
BVAR	**Borovoye Array**	**66.02**	**320**	P	**P**	**14 56 27.4**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=98,slow=8.2,SNR=9.6						
	comp=Z,1.2nm,0.4s						
H31M	**Peel River**	**68.87**	**26**	P	P	14 56 45.0	+1.1
H31M				IAmb	IAmb	14 56 50.7	
	comp=Z,2.6nm,1.1s						
G31M	**Satah River**	**68.91**	**25**	P	P	14 56 46.2	+2.1
G31M				IAmb	IAmb	14 56 53.5	
	comp=Z,1.5nm,1.1s						
ABKAR	**Akbulak array**	**72.88**	**317**	P	**P**	**14 57 09.1**	**+0.7**
FINES	**FINESS Array B**	**86.46**	**335**	P	**P**	**14 58 20.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=48,slow=4.2,SNR=7.1						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**91.97**	**338**	P	**P**	**14 58 47.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=46,slow=4.2,SNR=1.6						
	comp=Z,0.9nm,0.8s						

*IDC **22** 14:48:45.5±3.0, 22°.70N×12°.21W, h0km, mb3.9/7, mbtmp4.0/9, ML3.8/2, Error ellipse: s-maj=92.4km s-min=29.2km az=79.0*
ISC 22 14:48:45.3±2.3, 22°6N±0°2×12°5W±0°4, h10km, n11, σ0°94/10, mb3.9/7, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.39**	**123**	Pn	**Pn**	**14 52 34.7**	**-1.0**
	0.3nm,0.3s,baz=320,slow=11,SNR=1.2						
	1.8nm,0.2s						
DBIC	**Dimbokro**	**17.43**	**154**	P	**Pn**	**14 52 48.8**	**+0.2**
	0.5nm,0.3s,baz=325,slow=11,SNR=5.0						
	1.6nm,0.4s						
I48TN	**IGSSA INFRASON**	**23.06**	**50**	I	I	17 01 30.0	
	baz=234,slow=320,SNR=1.6						
HFS	**Hagfors**	**41.78**	**19**	P	**P**	**14 56 34.2**	**-0.5**
	1.3nm,0.5s,baz=198,slow=9.1,SNR=7.7						
	1.3nm,0.5s						
FINES	**FINESS Array B**	**46.98**	**24**	P	**P**	**14 57 16.4**	**+0.2**
	1.1nm,0.6s,baz=231,slow=8.8,SNR=6.9						
	1.1nm,0.6s						
KBZ	**Khabaz**	**49.91**	**51**	P	**P**	**14 57 39.7**	**+0.5**
	1.7nm,0.9s,baz=238,slow=9.5,SNR=3.5						
	1.7nm,0.9s						
ARCES	**ARCESS Array B**	**52.15**	**16**	P	**P**	**14 57 54.9**	**-0.7**
	3.2nm,1.0s,baz=233,slow=6.7,SNR=1.5						
	3.2nm,1.0s						
KURBB	**Kurchatov Arra**	**73.49**	**42**	P	**P**	**15 00 19.3**	**+1.2**
	0.6nm,0.5s,baz=280,slow=6.7,SNR=3.1						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**76.18**	**37**	P	**P**	**15 00 32.6**	**-1.0**
	0.5nm,0.4s,baz=300,slow=6.5,SNR=1.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**77.00**	**45**	P	**P**	**15 00 39.7**	**+1.2**
	0.4nm,0.5s,baz=293,slow=5.3,SNR=16						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**149.07**	**99**	PKPbc	**PKiKP**	**15 08 36.3**	**+0.5**
	0.7nm,0.7s,baz=292,slow=2.3,SNR=8.1						

*MEX **22** 15:03:20.9±0.3, 22°.16N×108°.37W, h5km, MD4.3*
*IDC **22** 15:03:21.1±3.8, 22°.35N×108°.45W, h0km, mb3.1/2, mbtmp3.5/7, ML3.5/5, MS3.3/11, Error ellipse: s-maj=63.9km s-min=33.3km az=25.0*
ISC 22 15:03:21.9±1.5, 22°4N±0°1×108°41W±0°06, h10km, n17, σ1°97/12, MS3.5/4, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIG	**Mazatlaan**	**1.99**	**66**	*i* P	**Pn**	**15 03 52.9**	**-2.7**
MAIG				*i* S	**Sn**	**15 04 19.1**	**-1.5**
LPIG	**La Paz**	**2.44**	**314**	P	**Pn**	**15 04 01.2**	**-0.5**
	6.6nm,0.3s,baz=330,slow=8.1,SNR=1.5						
LPIG				Sn	**Sn**	**15 04 27.8**	**-3.8**
	15nm,0.3s,baz=187,slow=22,SNR=13						
LPIG				LR	LR	15 04 49.6	
	comp=Z,340nm,20.9s,baz=143,slow=36						
	36nm,0.4s						
LPIG	**La Paz**	**2.44**	**314**	*eP*	**Pn**	**15 04 01.0**	**-0.7**
SSIG	**Sanalona**	**2.67**	**25**	*eP*	**Pn**	**15 04 04.5**	**-0.5**
PDIG	**Papasquiaro**	**3.81**	**46**	*eP*	**Pn**	**15 04 19.4**	**-1.5**
TXAR	**Lajitas Array**	**8.12**	**31**	Pn	**Pn**	**15 05 22.0**	**+2.1**
	0.6nm,0.3s,baz=206,slow=14,SNR=25						
TXAR				LR	LR	15 08 40.3	
	comp=Z,101nm,18.7s,baz=207,slow=39						
	3.0nm,0.6s						
ANMO	**Albuquerque**	**12.62**	**7**	Pn	Pn	15 06 28.6	+7.0
	0.1nm,0.3s,baz=277,slow=17,SNR=3.4						
ANMO				LR	LR	15 10 57.6	
	comp=Z,95nm,20.4s,baz=266,slow=36						
PFO	**Pinyon Flats O**	**13.23**	**329**	LR	LR	15 10 56.4	
	comp=Z,134nm,21.4s,baz=212,slow=34						
CMIG	**Matias Romero**	**13.78**	**110**	Pn	**Pn**	**15 06 38.3**	**+0.9**
	0.2nm,0.3s,baz=298,slow=12,SNR=5.4						
CMIG				LR	LR	15 11 54.9	
	comp=Z,124nm,18.6s,baz=280,slow=37						
	2.8nm,0.7s						
NVAR	**Mina Array Bea**	**18.09**	**334**	P	**P**	**15 07 35.0**	**+1.1**
	0.1nm,0.3s,baz=154,slow=12,SNR=5.2						
NVAR				LR	LR	15 14 38.1	
	comp=Z,92nm,20.1s,baz=149,slow=38						
	0.9nm,0.8s		

	1.5nm,0.8s							
QSPA	**South Pole Qui**	**71.81**	**180**	P	**P**	**15**	**17**	**20.0 +0.3**
	2.2nm,0.9s,baz=322,slow=0.9,SNR=9.8							
	2.2nm,0.9s							
ILAR	**Eielson Array**	**86.09**	**13**	P	**P**	**15**	**18**	**35.7 -0.1**
	0.6nm,0.7s,baz=217,slow=5.3,SNR=11							
	0.6nm,0.7s							
BRTR	**Keskin Array B**	**145.39**	**315**	PKPbc	**PKPbc**	**15**	**25**	**30.8 -0.9**
	0.9nm,0.7s,baz=79,slow=3.1,SNR=3.9							

*IDC **22** 15:36:47.3±1.8, 83.°40N×123.°64E, h0km, mb3.4/3, mbtmp3.5/4, ML3.4/1, MS3.3/2, Error ellipse: s-maj=221.7km s-min=26.8km az=141.0*
*FCIAR **22** 15:36:50.0, 85.°11N×89.°64E, h10km, station SVZ has station magnitude of 3.10 station OMEGA has station magnitude of 3.40 station ZFI2 has station magnitude of 3.40*
ISC 22 15:36:45.1±1.2, 85.°2N±0.°1×87.°81E±0.°08, h10km, n10, σ3.°92/11, mb3.4/3, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
SVZ	**Severnaya Zeml**	**6.21**	**156**	*e*P	**Pn**	**15**	**38**	**16.4**	**-0.2**
SVZ				*e*S	**Sn**	**15**	**39**	**21.8**	**-5.7**
	7.7nm,1.1s								
ZFI2	**Zemlya Franca-**	**6.37**	**249**	*e*P	**Pn**	**15**	**38**	**21.8**	**+3.1**
ZFI2				*e*S	**Sn**	**15**	**39**	**30.3**	**-1.0**
	14nm,1.9s								
OMEGA	**Omega**	**6.38**	**249**	*e*P	**Pn**	**15**	**38**	**21.6**	**+2.7**
OMEGA				*e*S	**Sn**	**15**	**39**	**30.2**	**-1.4**
	13nm,3.8s								
SPA0	**Spitsbergen Ar**	**11.31**	**275**	P	**Pn**	**15**	**39**	**28.5**	**+2.1**
SPA0				*e*S	**Sn**	**15**	**41**	**25.3**	**-7.4**
NRIK	**Noril'sk**	**15.96**	**180**	Pn	**P**	**15**	**40**	**33.6**	**+0.9**
	0.2nm,0.3s,baz=17,slow=12,SNR=5.8								
	2.0nm,0.6s								
ARU	**Arti**	**29.62**	**213**	LR	LR	15	56	54.0	
	comp=Z,46nm,18.5s,baz=320,slow=38								
YKA	**Yellowknife Ar**	**32.18**	**19**	P	**P**	**15**	**43**	**11.4**	**-0.9**
	0.3nm,0.6s,baz=353,slow=8.9,SNR=3.8								
	0.3nm,0.6s								
BVAR	**Borovoye Array**	**32.58**	**200**	P	P	15	43	28.4	+12
	0.7nm,0.7s,baz=357,slow=7.4,SNR=5.1								
	0.7nm,0.7s								
MKAR	**Makanchi Array**	**38.59**	**186**	P	**P**	**15**	**44**	**10.9**	**+3.2**
	0.3nm,0.8s,baz=6.3,slow=8.3,SNR=3.3								
	0.3nm,0.8s								
NEW	**Newport**	**46.34**	**23**	LR	LR	16	04	57.0	
	comp=Z,36nm,19.0s,baz=142,slow=37								

*IDC **22** 15:38:10.1±5.9, 2.°94S×131.°80E, h0km, mb3.6/2, mbtmp3.6/3, ML3.3/1, MS3.5/2, Error ellipse: s-maj=396.0km s-min=30.5km az=73.0*
ISC 22 15:38:22.1±4.8, 3.°8S±0.°3×131.°0E±0.°2, h35km, n13, σ2.961/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
BNDI	**Bandanaira**	**1.31**	**237**	P	**Pn**	**15**	**38**	**44.6**	**+0.6**
FAKI	**Fak Fak**	**1.52**	**54**	P	Pn	15	38	42.1	-4.7
KDU	**Kakadu**	**8.94**	**171**	P	**Pn**	**15**	**40**	**30.2**	**+1.3**
MTN	**Manton Dam**	**8.98**	**179**	P	**Pn**	**15**	**40**	**32.3**	**+2.9**
COEN	**Coen**	**15.68**	**131**	P	P	15	41	59.9	-4.3
WRA	**Warramunga Arr**	**16.36**	**169**	P	**P**	**15**	**42**	**08.6**	**-3.3**
	0.1nm,0.3s,baz=352,slow=13,SNR=4.6								
WRA				S	**Sn**	**15**	**45**	**07.6**	**-2.3**
	0.5nm,0.7s,baz=343,slow=19,SNR=2.6								
	0.3nm,0.3s								
WB1	**Warramunga Ar.**	**16.38**	**169**	P	**P**	**15**	**42**	**11.1**	**-0.9**
ASAR	**Alice Springs**	**19.94**	**172**	P	Pn	15	42	52.9	-0.2
	3.0nm,0.5s,baz=351,slow=11,SNR=113								
	3.0nm,0.5s								
AS01	**Alice Springs**	**19.94**	**172**	P	Pn	15	42	53.0	-0.1
WRKA	**Warakurna**	**21.27**	**187**	P	**P**	**15**	**43**	**06.0**	**+0.4**
RPZ	**Rata Peaks**	**53.18**	**144**	LR	LR	16	10	06.2	
	comp=Z,32nm,19.7s,baz=146,slow=36								
MKAR	**Makanchi Array**	**66.15**	**326**	P	P	15	48	57.8	-8.4
	0.2nm,0.4s,baz=108,slow=4.7,SNR=3.2								
	0.2nm,0.4s								
QSPA	**South Pole Qui**	**86.15**	**180**	LR	LR	16	27	22.2	
	comp=Z,44nm,21.7s,baz=170,slow=34								

IDC 22 15:46:11.5±3.5, 4.°34S×131.°04E, h0km, mb3.5/2, mbtmp3.5/4, ML3.1/2, MS2.6/1, Error ellipse: s-maj=272.0km s-min=27.6km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**15.84**	**169**	Pn	Pn	15	49	55.8	-0.3
	baz=349,slow=12,SNR=2.2								
	0.6nm,1.0s								
ASAR	**Alice Springs**	**19.41**	**172**	P	P	15	50	39.6	+0.1
	0.2nm,0.3s,baz=351,slow=10,SNR=29								
	0.7nm,0.4s								
KSRS	**Korea Array**	**41.68**	**356**	LR	LR	16	10	20.2	
	comp=Z,9.0nm,21.5s,baz=20,slow=35								
MKAR	**Makanchi Array**	**66.60**	**326**	P	P	15	57	03.8	0.0
	0.3nm,0.6s,baz=124,slow=7.6,SNR=4.9								
	0.3nm,0.6s								
KURBB	**Kurchatov Arra**	**70.81**	**328**	P	P	15	57	29.9	0.0
	0.4nm,0.6s,baz=127,slow=5.6,SNR=6.2								
	0.4nm,0.6s								

OMAN 22 15:52:05.4±0.2, 19.°12N×60.°33E, h10km, mb4.5/1, ml3.2/10, Error ellipse: s-maj=3.8km s-min=1.1km az=283.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
DQM	**DQM**	**2.75**	**288**	P	Pn	15	52	50.2	+0.6
DQM				S	Sn	15	53	24.2	+1.3
MHTO	**MHTO**	**2.89**	**310**	P	Pn	15	52	51.6	+0.1
MHTO				S	Sn	15	53	27.1	+0.7
JLN	**Jalan Bani Buh**	**3.14**	**344**	P	Pn	15	52	54.4	-0.5
	SNR=41								
JLN				S	Sn	15	53	32.0	-0.4
WBK	**Wadi Bani Khal**	**3.70**	**340**	P	Pn	15	53	03.7	+1.0
WBK				S	Sn	15	53	47.5	+1.1
JMDO	**Jabal Madar**	**3.84**	**328**	P	Pn	15	53	05.7	+1.0
	SNR=36								
JMDO				S	Sn	15	53	51.5	+1.5
SMDO	**Samad**	**4.46**	**332**	P	Pn	15	53	14.3	+1.0
	SNR=7.4								
SMDO				S	Sn	15	54	06.0	+0.8
SHAO	**Shalim**	**4.59**	**257**	P	Pn	15	53	13.4	-1.5
	SNR=26								
BSY	**Bisya**	**4.64**	**322**	P	Pn	15	53	17.2	+1.6
BSY				S	Sn	15	54	10.0	+0.3
BIDO	**Bidbid**	**4.84**	**335**	P	Pn	15	53	18.4	+0.1
DMTO	**DMTO**	**5.29**	**256**	P	Pn	15	53	23.0	-1.5
	SNR=21								
ARQ	**Araqi**	**5.50**	**320**	P	Pn	15	53	29.0	+1.6
	SNR=9.6								
ARQ				S	Sn	15	54	31.8	+1.1
DOK	**Doka**	**5.89**	**266**	P	Pn	15	53	32.5	-0.3
WHFO	**Wadi Hawf**	**6.33**	**260**	P	Pn	15	53	38.5	-0.4
	SNR=10								

NOU 22 16:15:56.1, 17.°12S×167.°21E, h0km, MLv4.5/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
LIFNC	**LIFOU**	**3.64**	**180**	P	Pn	16	16	51.9	-1.8
KOUNC	**Koumac, New Ca**	**4.39**	**219**	P	Pn	16	17	04.4	+0.3
MARNC	**Mare, Loyalty**	**4.41**	**170**	P	Pn	16	17	03.8	-0.5
YATNC	**Mamie plateau,**	**4.92**	**183**	P	Pn	16	17	10.3	-1.1
DZM	**Mont Dzumac**	**4.98**	**188**	P	Pn	16	17	12.4	+0.2
ONTNC	**Ouen Toro**	**5.21**	**188**	P	Pn	16	17	15.6	+0.3
OUENC	**Ouen Island, N**	**5.28**	**184**	P	Pn	16	17	16.9	+0.6
PINNC	**Pines Island,**	**5.47**	**178**	P	Pn	16	17	19.6	+0.7

*IDC **22** 16:23:58.7±1.0, 5.°28S×131.°01E, h0km, mb3.9/7, mbtmp4.1/10, ML4.6/2, Error ellipse: s-maj=60.0km s-min=17.8km az=64.0*
*DJA **22** 16:24:05.5±0.2, 5.°5±2.°×13.°1E±.°, h80km±10km, M4.5/11, mb4.4/10, mB5.0/3, MLv4.6/11, Mw(mB)4.3/3*
*NEIC **22** 16:24:05.3±1.7, 5.°08S±0.°05×131.°07E±0.°08, h40km±7km, mb4.2/16, Error ellipse: s-maj=11.4km s-min=7.9km az=83.0*
ISC 22 16:24:05.9±0.5, 5.°10S±0.°04×131.°24E±0.°05, h61km, n75, σ1.989/77, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
BNDI	**Bandanaira**	**1.45**	**293**	P	**Pn**	**16**	**24**	**32.4**	**+2.4**
BNDI	**Bandanaira**	**1.45**	**293**	P	**Pn**	**16**	**24**	**31.2**	**+1.2**
BNDI				S	**Sn**	**16**	**24**	**49.0**	**+0.9**
FAKI	**Fak Fak**	**2.38**	**25**		**Pn**	**16**	**24**	**43.3**	**+0.6**
FAKI				Sn	**Sn**	**16**	**25**	**10.3**	**-0.5**
FAKI	**Fak Fak**	**2.38**	**25**	P	**Pn**	**16**	**24**	**44.0**	**+1.3**
FAKI	**Fak Fak**	**2.38**	**25**	P	**Pn**	**16**	**24**	**43.7**	**+1.0**
FAKI				S	**Sn**	**16**	**25**	**10.4**	**-0.4**
SAUI	**Saumlaki**	**2.87**	**179**		**Pn**	**16**	**24**	**48.9**	**-0.4**
SAUI				Sn	**Sn**	**16**	**25**	**24.1**	**+1.5**
SAUI	**Saumlaki**	**2.87**	**179**	P	**Pn**	**16**	**24**	**49.6**	**+0.3**
SAUI	**Saumlaki**	**2.87**	**179**	P	**Pn**	**16**	**24**	**49.7**	**+0.4**
SWI	**Sorong**	**4.21**	**0**	P	**Pn**	**16**	**25**	**07.0**	**-0.6**
SWI				S	**Sn**	**16**	**25**	**50.9**	**-4.6**
NLAI	**Namlea**	**4.53**	**294**	P	**Pn**	**16**	**25**	**13.8**	**+1.8**
LBMI	**Labuha**	**5.79**	**320**	P	**Pn**	**16**	**25**	**28.9**	**-0.5**
	79nm,1.0s,1µm0.3nm								
SANI	**Sanana**	**6.05**	**300**	P	**Pn**	**16**	**25**	**34.6**	**+1.7**
SANI	**Sanana**	**6.05**	**300**	P	**Pn**	**16**	**25**	**33.0**	**+0.1**
	18nm,0.5s,534nm0.1nm								
TNTI	**Ternate**	**7.00**	**326**	Pn	**Pn**	**16**	**25**	**42.7**	**-3.1**
DRS	**Darwin Rock St**	**7.30**	**183**	P	**Pn**	**16**	**25**	**48.0**	**-1.9**
KDU	**Kakadu**	**7.64**	**171**	P	**Pn**	**16**	**25**	**52.1**	**-2.5**
MTN	**Manton Dam**	**7.70**	**181**		**Pn**	**16**	**25**	**53.5**	**-2.0**
MTN	**Manton Dam**	**7.70**	**181**	P	**Pn**	**16**	**25**	**53.9**	**-1.6**
SMPI	**Sarmi**	**8.06**	**68**	P	**Pn**	**16**	**26**	**03.5**	**+3.0**
SOEI	**Soe**	**8.32**	**236**		**Pn**	**16**	**26**	**02.5**	**-1.6**
SOEI	**Soe**	**8.32**	**236**	P	**Pn**	**16**	**26**	**05.8**	**+1.7**
SOEI	**Soe**	**8.32**	**236**	P	**Pn**	**16**	**26**	**06.1**	**+2.0**
	45nm,1.2s								
MMPI	**Merauke**	**9.67**	**111**	P	**Pn**	**16**	**26**	**21.4**	**-1.1**
	282nm,1.0s								
TABU	**Tabubil**	**9.94**	**91**	P	**Pn**	**16**	**26**	**26.9**	**+0.7**
GTOI	**Gorontalo**	**10.00**	**304**	P	**Pn**	**16**	**26**	**29.9**	**+2.9**
	5.6nm,1.4s								
EDFI	**Ende, Flores**	**10.15**	**249**	P	**Pn**	**16**	**26**	**32.9**	**+3.7**
	13nm,1.1s								
KNRA	**Kununurra**	**10.79**	**193**	Pn	**Pn**	**16**	**26**	**36.7**	**-1.1**
KNRA	**Kununurra**	**10.79**	**193**	P	**Pn**	**16**	**26**	**38.5**	**+0.7**
BKSI	**Bulukumba**	**11.08**	**268**	P	Pn	16	26	46.4	+4.7
FITZ	**Fitzroy Crossi**	**14.04**	**203**	Pn	Pn	16	27	15.1	-6.8
COEN	**Coen**	**14.69**	**128**	P	**Pn**	**16**	**27**	**27.9**	**-2.6**
TWSI	**Taliwang, Sumb**	**14.71**	**255**	P	**Pn**	**16**	**27**	**31.2**	**+0.5**
WB0	**Warramunga Arr**	**14.90**	**168**	Pn	Pn	16	27	26.8	-6.4
WRAB	**Tennant Creek**	**15.05**	**169**		**Pn**	**16**	**27**	**29.6**	**-5.6**
WRAB				IAmb	IAmb	16	27	44.9	
	comp=Z,24nm,1.4s								
WRA	**Warramunga Arr**	**15.06**	**169**	Pn	**Pn**	**16**	**27**	**29.2**	**-6.1**
	comp=Z,2.1nm,0.3s,baz=343,slow=13,SNR=53								
WRA				Sn	Sn	16	30	07.3	-14
	comp=Z,2.2nm,0.3s,baz=358,slow=23,SNR=5.1								
	comp=Z,3.8nm,0.5s								
PMG	**Port Moresby**	**16.36**	**106**	Pn	**Pn**	**16**	**27**	**52.8**	**+1.0**
PMG				IAmb	IAmb	16	28	05.1	
	comp=Z,15nm,1.0s								
PMG	**Port Moresby**	**16.36**	**106**	Pn	**Pn**	**16**	**27**	**53.2**	**+1.4**
	comp=Z,6.4nm,0.7s,baz=280,slow=12,SNR=2.1								
PMG				Sn	Sn	16	30	42.1	-10
	comp=Z,0.5nm,0.3s,baz=281,slow=16,SNR=1.9								
QIS	**Mount Isa**	**17.39**	**153**	P	**Pn**	**16**	**28**	**02.2**	**-2.3**
MTSU	**Mount Surprise**	**18.20**	**136**	P	**P**	**16**	**28**	**14.6**	**+0.6**
AS31	**Alice Springs**	**18.64**	**172**	P	**P**	**16**	**28**	**16.7**	**-2.1**
ASAR	**Alice Springs**	**18.64**	**172**	P	**P**	**16**	**28**	**16.0**	**-2.8**
ASAR	**Alice Springs**	**18.64**	**172**	P	**P**	**16**	**28**	**16.6**	**-2.3**
	comp=Z,2.5nm,0.3s,baz=346,slow=9.4,SNR=107								
ASAR				S	Sn	16	31	33.9	-14
	comp=Z,2.2nm,0.5s,baz=355,slow=28,SNR=3.8								
	comp=Z,7.8nm,0.4s								
AS01	**Alice Springs**	**18.64**	**172**	P	**P**	**16**	**28**	**17.3**	**-1.6**
MBWA	**Marble Bar**	**19.49**	**214**	P	**P**	**16**	**28**	**25.9**	**-2.2**
MBWA				IAmb	IAmb	16	28	54.7	
	comp=Z,13nm,1.1s								
PSA00	**Pilbara Seismi**	**19.76**	**213**	P	**P**	**16**	**28**	**30.1**	**-1.0**
PSA00				IAmb	IAmb	16	28	56.4	
	comp=Z,19nm,1.3s								
PSA00	**Pilbara Seismi**	**19.76**	**213**	P	**P**	**16**	**28**	**30.1**	**-1.0**
PSA00				IAmb	IAmb	16	28	53.3	
	comp=Z,3.7nm,1.0s								
PSA00	**Pilbara Seismi**	**19.76**	**213**	P	**P**	**16**	**28**	**30.2**	**-0.9**
WRKA	**Warakurna**	**20.03**	**188**	P	**P**	**16**	**28**	**33.4**	**-0.6**
CTAO	**Charters Tower**	**20.86**	**137**	P	**P**	**16**	**28**	**45.0**	**+1.9**
OOD	**Oodnadatta**	**22.97**	**170**	P	**P**	**16**	**29**	**04.7**	**-0.7**
INKA	**Innaminka**	**24.27**	**159**	P	**P**	**16**	**29**	**18.2**	**+0.7**
QLP	**Quilpie**	**24.71**	**151**	P	**P**	**16**	**29**	**22.0**	**+0.5**
MULG	**Mulgathing**	**25.19**	**174**	P	**P**	**16**	**29**	**27.1**	**+1.2**
FORT	**Forrest**	**25.72**	**186**	P	**P**	**16**	**29**	**29.9**	**-0.8**
FORT	**Forrest**	**25.72**	**186**	P	**P**	**16**	**29**	**30.1**	**-0.6**
LCRK	**Leigh Creek**	**26.06**	**166**	P	**P**	**16**	**29**	**34.0**	**+0.3**
BBOO	**Buckleboo**	**27.94**	**171**	P	**P**	**16**	**29**	**49.7**	**-0.9**
BBOO	**Buckleboo**	**27.94**	**171**	P	**P**	**16**	**29**	**49.9**	**-0.7**
STKA	**Stephens Creek**	**28.35**	**161**	P	**P**	**16**	**29**	**54.3**	**0.0**
STKA	**Stephens Creek**	**28.35**	**161**	P	**P**	**16**	**29**	**54.6**	**+0.3**
STKA	**Stephens Creek**	**28.35**	**161**	P	**P**	**16**	**29**	**54.4**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=346,slow=8.8,SNR=8.0								
	comp=Z,1.4nm,0.4s								
HTT	**Hallett**	**29.08**	**167**	P	**P**	**16**	**30**	**01.3**	**+0.4**
CMSA	**Cobar Meteorol**	**29.59**	**154**	P	**P**	**16**	**30**	**06.2**	**+0.9**
BKNI	**Bangkinang**	**30.64**	**279**	P	**P**	**16**	**30**	**13.5**	**-1.4**
TOO	**Toolangi**	**34.84**	**160**	P	**P**	**16**	**30**	**52.7**	**+1.4**
TOO				IAmb	IAmb	16	31	03.4	
	comp=Z,7.4nm,1.1s								
MARNC	**Mare, Loyalty**	**39.18**	**118**	P	**P**	**16**	**31**	**32.5**	**+4.2**
CMAR	**Chiang Mai Arr**	**39.52**	**307**	P	**P**	**16**	**31**	**31.8**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=137,slow=7.3,SNR=4.6								
	comp=Z,0.6nm,0.5s								
MK31	**Makanchi Array**	**67.34**	**326**	P	**P**	**16**	**34**	**55.5**	**+0.8**
MK31				IAmb	IAmb	16	35	19.6	
	comp=Z,1.5nm,0.8s								
MKAR	**Makanchi Array**	**67.34**	**326**	P	**P**	**16**	**34**	**55.6**	**+1.0**
MKAR	**Makanchi Array**	**67.34**	**326**	P	**P**	**16**	**34**	**56.3**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=112,slow=8.0,SNR=12								
	comp=Z,0.5nm,0.4s								
MAKZ	**Makanchi**	**67.52**	**326**	P	**P**	**16**	**34**	**56.7**	**+0.9**
MAKZ				IAmb	IAmb	16	35	18.0	
	comp=Z,1.7nm,0.9s								
ZALV	**Zalesovo Beam**	**70.45**	**333**	P	**P**	**16**	**35**	**14.3**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=124,slow=2.6,SNR=2.2								
	comp=Z,0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**71.56**	**328**	P	**P**	**16**	**35**	**21.4**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=129,slow=5.1,SNR=7.7								
	comp=Z,0.4nm,0.5s								
BVAR	**Borovoye Array**	**77.13**	**327**	P	**P**	**16**	**35**	**53.9**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=125,slow=7.8,SNR=4.0								
	comp=Z,0.8nm,0.7s								
QSPA	**South Pole Qui**	**84.87**	**180**	P	**P**	**16**	**36**	**33.8**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=256,slow=2.1,SNR=3.5								
	comp=Z,1.6nm,0.9s								

*JMA **22** 16:27:04.6±0.1, 23.°4N±0.°6×12.°2E±.°, h42km±2km, MV2.9/12, TAIWAN REGION*
*TAP **22** 16:27:05.3, 23.°38N×121.°63E, h29km, ML3.2, C*
ISC 22 16:27:04.6±0.9, 23.°38N±0.°02×121.°70E±0.°02, h25km±6km, n98, σ0.982/188, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
ECBN	**Changbin**	**0.24**	**255**	*i* P	**Pb**	**16**	**27**	**11.0**	**+0.3**
	baz=249								
ECBN				S	**Sb**	**16**	**27**	**15.3**	**+0.4**
	baz=249								
HGSD	**Ruisui**	**0.28**	**294**	P	**Pb**	**16**	**27**	**11.1**	**-0.2**
	baz=302								
HGSD				*e*S	**Sb**	**16**	**27**	**15.4**	**-0.5**
	baz=302								
CHKH	**Chenggong**	**0.34**	**237**	P	**Pb**	**16**	**27**	**11.9**	**-0.3**
	baz=220								
CHKH				*e*S	**Sb**	**16**	**27**	**16.4**	**-0.9**
	baz=220								
EYUL	**Yuli**	**0.35**	**265**	*i* P	**Pb**	**16**	**27**	**12.5**	**0.0**
	baz=263								
EYUL				S	**Sb**	**16**	**27**	**18.1**	**+0.3**
	baz=263								
TEGC	**Jichi Village**	**0.36**	**336**	*e*P	**Pb**	**16**	**27**	**13.2**	**+0.6**
	baz=348								
TEGC				*e*S	**Sn**	**16**	**27**	**19.0**	**-1.6**
	baz=348								
EHY	**Hungye**	**0.37**	**290**	*i* P	**Pb**	**16**	**27**	**12.7**	**0.0**
	baz=295								
EHY				S	**Sb**	**16**	**27**	**18.4**	**+0.2**
	baz=295								
YULB	**Yu-li**	**0.37**	**272**	P	**Pb**	**16**	**27**	**13.0**	**+0.2**
YULB	**Yu-li**	**0.37**	**272**	P	**Pb**	**16**	**27**	**12.8**	**0.0**
	baz=273								
YULB				*e*S	**Sb**	**16**	**27**	**19.0**	**+0.7**
	baz=273								
TWF1	**Yuli**	**0.37**	**266**	P	**Pb**	**16**	**27**	**12.6**	**-0.1**
	baz=260								
TWF1				*e*S	**Sb**	**16**	**27**	**18.5**	**+0.2**
	baz=260								
CHKT	**Chengkung**	**0.41**	**228**	P	**Pb**	**16**	**27**	**12.9**	**-0.5**
	baz=212								
CHKT				*e*S	**Sb**	**16**	**27**	**18.6**	**-0.9**
	baz=212								
SHUL	**Shoufeng**	**0.43**	**343**	P	**Pb**	**16**	**27**	**14.2**	**+0.5**
	baz=1.0								
SHUL				*e*S	**Sn**	**16**	**27**	**21.2**	**-1.1**
	baz=1.0								
WARBT	**Fenglin Townsh**	**0.45**	**320**	P	**Pb**	**16**	**27**	**14.1**	**+0.1**
	baz=316								
WARBT				*e*S	**Sb**	**16**	**27**	**20.5**	**+0.1**
	baz=316								
ESL	**Shilin**	**0.50**	**331**	P	**Pb**	**16**	**27**	**14.8**	**-0.1**
	baz=327								
ESL				*e*S	**Sb**	**16**	**27**	**21.7**	**-0.1**
	baz=327								
EHD	**Haiduan**	**0.51**	**244**	P	**Pb**	**16**	**27**	**14.5**	**-0.5**
	baz=238								
EHD				*e*S	**Sb**	**16**	**27**	**21.7**	**-0.3**
	baz=238								
ECS	**Chishang**	**0.52**	**238**	*e*P	**Pb**	**16**	**27**	**15.5**	**+0.2**
	baz=226								
ECS				*e*S	**Sb**	**16**	**27**	**23.5**	**+1.0**
	baz=226								
HWA	**Hwalien**	**0.60**	**352**	*e*P	**Pn**	**16**	**27**	**17.6**	**-0.1**
	baz=8.0								
HWA				*e*S	**Sn**	**16**	**27**	**26.7**	**+0.1**
	baz=8.0								
ETM	**Tongmen**	**0.62**	**342**	*e*P	**Pb**	**16**	**27**	**16.7**	**-0.1**
	baz=337								
ETM				*e*S	**Sb**	**16**	**27**	**25.3**	**+0.2**
	baz=337								
VWDT	**VWDT**	**0.64**	**306**	*e*P	**Pb**	**16**	**27**	**17.2**	**0.0**
	baz=310								
VWDT				*e*S	**Sb**	**16**	**27**	**25.7**	**+0.1**
	baz=310								
ELDTW	**Lidau**	**0.66**	**254**	P	**Pb**	**16**	**27**	**16.5**	**-1.1**
	baz=241								
ELDTW				*e*S	**Sb**	**16**	**27**	**24.6**	**-1.7**
	baz=241								
LXIB	**Xiulin Townshi**	**0.69**	**338**	*e*P	**Pb**	**16**	**27**	**17.8**	**-0.4**
	baz=335								
LXIB				*e*S	**Sb**	**16**	**27**	**27.3**	**-0.1**
	baz=335								
LONT	**Longtian**	**0.70**	**228**	*e*P	**Pb**	**16**	**27**	**17.4**	**-0.9**
	baz=234								
LONT				*e*S	**Sb**	**16**	**27**	**27.0**	**-0.6**
	baz=234								
TWD	**Chiawan**	**0.71**	**352**	*e*P	**Pb**	**16**	**27**	**18.2**	**-0.1**
	baz=8.0								
TWD				*e*S	**Sn**	**16**	**27**	**28.0**	**-1.2**
	baz=8.0								
LDUT	**Ludao**	**0.73**	**197**	*e*P	**Pb**	**16**	**27**	**17.9**	**-0.9**
	baz=191								
LDUT				*e*S	**Sb**	**16**	**27**	**26.8**	**-1.5**
	baz=191								
ETL	**Fush Village**	**0.78**	**355**	*e*P	**Pb**	**16**	**27**	**19.2**	**-0.4**
	baz=7.0								
ETL				*e*S	**Sn**	**16**	**27**	**30.8**	**-0.3**
	baz=7.0								
SSLB	**Suanglung**	**0.80**	**301**	P	**Pb**	**16**	**27**	**19.5**	**-0.4**
SSLB	**Suanglung**	**0.80**	**301**	*e*P	**Pb**	**16**	**27**	**19.3**	**-0.6**
	baz=298								
SSLB				*e*S	**Sb**	**16**	**27**	**29.1**	**-1.2**
	baz=298								
TWGBT	**Beinan**	**0.80**	**226**	*e*P	**Pb**	**16**	**27**	**18.6**	**-1.3**
	baz=232								
TWGBT				*e*S	**Sb**	**16**	**27**	**28.5**	**-1.8**
	baz=232								
NACB	**Ninganchiao**	**0.80**	**353**	P	**P

baz=31
EOS3 *e*S **Sb** **16 27 37.4 -0.5**
baz=31
SGST Jiashian 1.07 254 *e*P **Pn** **16 27 23.2 -0.8**
baz=244
SGST *e*S **Sb** **16 27 37.8 -0.3**
baz=244
NNSB Datong 1.09 345 *e*P **Pn** **16 27 24.0 -0.4**
baz=349
NNSB *e*S **Sb** **16 27 37.9 -0.8**
baz=349
WGK Gukeng 1.09 287 *e*P **Pb** **16 27 24.8 0.0**
baz=288
WGK *e*S **Sn** **16 27 39.5 +0.8**
baz=288
CHN1 Nanshi 1.09 260 *e*P **Pn** **16 27 24.7 +0.3**
baz=259
CHN1 *e*S **Sn** **16 27 39.4 +0.6**
baz=259
NNS Nan Shan 1.10 344 *e*P **Pb** **16 27 24.8 -0.3**
baz=349
NNS *e*S **Sn** **16 27 38.5 -0.6**
baz=349
WDLH Douliu 1.11 286 *e*P **Pb** **16 27 25.4 +0.2**
baz=288
WDLH *e*S **Sn** **16 27 40.2 +1.1**
baz=288
SNST Tainan City 1.12 262 *e*P **Pn** **16 27 25.0 +0.3**
baz=261
SNST *e*S **Sb** **16 27 40.1 +0.7**
baz=261
TWK Hsinying 1.12 265 *e*P **Pn** **16 27 25.1 +0.3**
baz=263
TWK *e*S **Sb** **16 27 40.0 +0.4**
baz=263
LATG Datong 1.16 352 *e*P **Pn** **16 27 25.4 0.0**
baz=356
LATG *e*S **Sn** **16 27 39.4 -1.2**
baz=356
SSD Sandimen 1.17 238 *i* S **Sn** **16 27 41.1 +0.6**
baz=233
TSMG Majia 1.18 236 *e*P **Pn** **16 27 25.5 -0.1**
baz=231
TSMG *e*S **Sn** **16 27 39.9 -1.0**
baz=231
TCU Taichung 1.21 309 *e*P **Pb** **16 27 27.3 +0.4**
baz=313
TCU *e*S **Sb** **16 27 43.6 +1.5**
baz=313
SCST Cishan 1.21 246 *e*P **Pb** **16 27 26.9 0.0**
baz=244
SCST *e*S **Sb** **16 27 44.1 +1.9**
baz=244
NDT Datong Townshi 1.23 352 *e*P **Pn** **16 27 26.5 +0.2**
baz=356
NDT *e*S **Sn** **16 27 40.3 -1.9**
baz=356
TWC Suao 1.23 6 *e*P **Pb** **16 27 27.4 +0.1**
baz=10.0
TWC *e*S **Sb** **16 27 42.8 0.0**
baz=10.0
WTK Tuku 1.24 285 *e*P **Pb** **16 27 27.3 -0.1**
baz=286
WTK *e*S **Sb** **16 27 43.5 +0.4**
baz=286
MASBT Mashibuluo 1.25 232 *e*P **Pn** **16 27 26.1 -0.3**
baz=228
MASBT *e*S **Sn** **16 27 40.6 -1.8**
baz=228
WCHH Zhanghua 1.26 304 *e*P **Pb** **16 27 27.8 +0.1**
baz=306
WCHH *e*S **Sb** **16 27 45.1 +1.6**
baz=306
ENTT Nioudou 1.26 354 *e*P **Pn** **16 27 27.0 +0.2**
baz=358
ENTT *e*S **Sb** **16 27 42.9 -0.8**
baz=358
CHN3 Shinhua 1.27 257 *e*P **Pb** **16 27 29.1 +1.3**
baz=255
CHN3 *e*S **Sb** **16 27 46.8 +3.1**
baz=255
TWQ1 Liyutan 1.29 319 *e*P **Pb** **16 27 28.7 +0.5**
baz=323
TWQ1 *e*S **Sb** **16 27 45.6 +1.3**
baz=323
SHHT Tainan City 1.29 254 *e*P **Pn** **16 27 28.1 +0.9**
baz=253
SHHT *e*S **Sb** **16 27 47.1 +2.6**
baz=253
TWM1 Shoushan 1.30 245 *e*P **Pb** **16 27 29.6 +1.2**
baz=242
TWM1 *e*S **Sb** **16 27 47.2 +2.5**
baz=242
ICHU Yijhu 1.31 270 *e*P **Pb** **16 27 28.2 -0.3**
baz=269
ICHU *e*S **Sb** **16 27 45.0 +0.1**
baz=269
WRL Guolierlin Hig 1.32 294 *e*P **Pb** **16 27 28.3 -0.5**
baz=296
WRL *e*S **Sb** **16 27 45.5 +0.3**
baz=296
YHNB Yeheng 1.32 347 P **Pb** **16 27 28.2 -0.6**
YHNB Yeheng 1.32 347 *e*P **Pn** **16 27 27.9 +0.3**
baz=351
YHNB *e*S **Sn** **16 27 43.8 -0.7**
baz=351
NSK Sanguang 1.33 346 *e*P **Pn** **16 27 28.1 +0.4**
baz=351
NSK *e*S **Sn** **16 27 44.2 -0.4**
baz=351
NSY Sanyi 1.34 320 *e*P **Pb** **16 27 28.9 -0.3**
baz=339
NSY *e*S **Sb** **16 27 46.9 +0.8**
baz=339
NFF Wufeng Townshi 1.36 337 *e*P **Pb** **16 27 29.9 +0.4**
baz=340
NFF *e*S **Sb** **16 27 48.0 +1.6**
baz=340
CHN8 Yiju 1.37 269 *e*P **Pn** **16 27 28.9 +0.7**
baz=269
CHN8 *e*S **Sb** **16 27 47.1 +0.5**
baz=269
FUSB Fushanzhiwuyua 1.38 356 *e*P **Pn** **16 27 28.8 +0.4**
baz=349
FUSB *e*S **Sb** **16 27 47.5 +0.4**
baz=349
NSTT Nanjuang 1.40 333 *e*P **Pn** **16 27 29.0 +0.4**
baz=348
NSTT *e*S **Sb** **16 27 47.2 -0.5**
baz=348
NWLT Wulai 1.41 353 *e*P **Pb** **16 27 29.6 -0.6**
baz=356
NWLT *e*S **Sn** **16 27 46.1 -0.4**
baz=356
LIOB Emei 1.41 334 *e*P **Pb** **16 27 30.5 +0.2**
baz=349
LIOB *e*S **Sb** **16 27 48.2 +0.3**
baz=349
SCZT Fangliau 1.41 225 *e*P **Pn** **16 27 29.0 +0.3**
baz=210
SCZT *e*S **Sn** **16 27 47.7 +1.1**
baz=210
NMLH Miaoli 1.42 324 *e*P **Pb** **16 27 30.6 +0.1**
baz=328
NMLH *e*S **Sb** **16 27 48.8 +0.5**
baz=328
PHUB P'eng-hu 1.96 274 *e*P **Pn** **16 27 36.3 0.0**
baz=275
PHUB *e*S **Sn** **16 27 59.1 -1.0**
baz=275
PNG Penghu 1.98 276 *e*P **Pn** **16 27 36.8 +0.2**
baz=277
PNG *e*S **Sn** **16 27 59.7 -0.9**
baz=277
HATJ Hateruma jima 2.04 70 *e*P **Pn** **16 27 38.1 +0.7**
HATJ S **Sn** **16 28 02.2 +0.1**
IRIF Iriomote-Funau 2.09 62 *e*S **Sn** **16 28 04.9 +1.7**
JKRS Kuro-shima 2.28 67 P **Pn** **16 27 42.1 +1.4**
JKRS S **Sn** **16 28 09.1 +1.1**
JIJ Ishigaki jima 2.44 66 P **Pn** **16 27 43.7 +0.7**
JIJ S **Sn** **16 28 11.7 -0.3**
VWUC VWUC 2.61 308 *e*P **Pn** **16 27 45.5 +0.3**
baz=312
VWUC *e*S **Sn** **16 28 14.8 -1.3**
baz=312
JISG Ishigakijimahi 2.67 63 P **Pn** **16 27 46.8 +0.7**
JISG *e*S **Sn** **16 28 17.2 -0.5**
PTMZ Houxiangcun 2.88 306 *e*P **Pn** **16 27 49.3 +0.4**
baz=309
PTMZ *e*S **Sn** **16 28 21.3 -1.5**
baz=309
JTJ Tarama 3.02 65 S **Sn** **16 28 27.2 +1.0**

IDC ***22*** *16:55:13.9±0.7, 85°.37N×90°.30E, h0km, mb3.7/14, mbtmp3.8/17, ML3.5/3, MS3.5/36, Error ellipse: s-maj=21.5km s-min=14.5km az=117.0*
NEIC ***22*** *16:55:13.9±2.0, 85°.5N±0°.1×8°.7E±°, h10km±1km, mb4.4/67, Error ellipse: s-maj=19.4km s-min=16.1km az=130.0*
FCIAR ***22*** *16:55:19.0, 84°.77N×88°.08E, h10km, station SVZ has station magnitude of 3.80 station OMEGA has station magnitude of 3.70 station ZFI2 has station magnitude of 3.80 station LSH has station magnitude of 4.91 station PRGR has station magnitude of 4.71*

ISC 22 16:55:13.9±0.5, 85°.42N±0°.07×88°.03E±0°.06, h10km, n129, σ1.5 57/110, mb4.3/50, MS3.5/33, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**6.40**	**157**	*e*P		**Pn**		**16 56 44.3**	**-3.7**
SVZ				*e*S		Sn		16 57 48.5	-13
	43nm,0.5s								
ZFI2	**Zemlya Franca-**	**6.46**	**248**	*e*P		**Pn**		**16 56 49.7**	**+0.8**
ZFI2				*e*S		**Sn**		**16 57 57.9**	**-4.6**
	30nm,0.3s								
OMEGA	**Omega**	**6.48**	**248**	*e*P		**Pn**		**16 56 49.6**	**+0.5**
OMEGA				*e*S		**Sn**		**16 57 57.8**	**-5.1**
	29nm,0.3s								
KBS	**Kingsbay**	**10.98**	**280**	Pn		**Pn**		**16 57 48.4**	**-2.3**
SPB5	**Spitsbergen Ar**	**11.31**	**274**	Pn		**Pn**		**16 57 54.0**	**-1.2**
SPITS	**Spitsbergen At**	**11.32**	**274**	Pn		**Pn**		**16 57 55.4**	**+0.1**
	baz=52,slow=14								
SPITS				Sn		**Sn**		**16 59 57.1**	**-4.5**
	baz=49,slow=22								
SPB2	**Spitsbergen At**	**11.32**	**274**			**Pn**		**16 57 52.2**	**-3.1**
TIXI	**Tiksi**	**15.27**	**128**	Pn		**Pn**		**16 58 48.5**	**-0.5**
	0.1nm,0.3s,baz=32,slow=5.2,SNR=4.6								
TIXI				LR		LR		17 03 39.8	
	comp=Z,50nm,21.9s,baz=20,slow=34								
	1.1nm,0.2s								
NRIK	**Noril'sk**	**16.17**	**181**			**P**		**16 59 02.7**	**-1.4**
NRIK				IAmb		IAmb		16 59 14.4	
	comp=Z,16nm,0.8s								
NRIK	**Noril'sk**	**16.17**	**181**	Pn		**P**		**16 59 03.2**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=15,slow=9.8,SNR=19								
NRIK				LR		LR		17 05 47.9	
	comp=Z,310nm,18.7s,baz=340,slow=39								
	comp=Z,8.3nm,0.6s								
ARCES	**ARCESS Array B**	**18.89**	**255**	P		**Pn**		**16 59 37.0**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=13,slow=5.8,SNR=6.2								
ARCES				LR		LR		17 06 45.1	
	comp=Z,56nm,19.5s,baz=50,slow=36								
	comp=Z,4.5nm,0.9s								
RES	**Resolute Bay**	**20.02**	**2**	LR		LR		17 06 54.0	
	comp=Z,41nm,18.9s,baz=19,slow=35								
BILL	**Bilibino**	**21.61**	**90**	P		**P**		**17 00 02.9**	**-0.6**
LSH	**Leshukonskoye**	**22.06**	**230**	*e*P		**P**		**17 00 07.8**	**-0.5**
	comp=Z,38nm,1.1s								
A36M	**Sachs Harbour**	**22.12**	**27**	P		**P**		**17 00 05.8**	**-3.2**
A36M				IAmb		IAmb		17 00 20.2	
	comp=Z,14nm,1.0s								
B21K	**Ikpikpuk River**	**22.98**	**53**	P		**P**		**17 00 16.8**	**-1.2**
B21K				IAmb		IAmb		17 00 33.2	
	comp=Z,16nm,1.1s								
C23K	**Itkillik River**	**23.02**	**49**	P		**P**		**17 00 14.9**	**-3.5**
C23K				IAmb		IAmb		17 00 27.0	
	comp=Z,23nm,1.4s								
C19K	**Lookout Ridge**	**23.16**	**58**			**P**		**17 00 19.4**	**-0.6**
C19K				IAmb		IAmb		17 00 30.6	
	comp=Z,24nm,1.5s								
C18K	**Utukok River**	**23.50**	**59**	P		**P**		**17 00 21.8**	**-1.6**
C18K				IAmb		IAmb		17 00 33.5	
	comp=Z,14nm,1.4s								
D25K	**Kavik River**	**23.78**	**46**			**P**		**17 00 23.6**	**-2.4**
D24K	**Happy Valley**	**23.80**	**48**			**P**		**17 00 24.9**	**-1.3**
D24K				IAmb		IAmb		17 00 36.9	
	comp=Z,17nm,1.4s								
D22K	**Ayikyak River**	**23.83**	**51**	P		**P**		**17 00 25.4**	**-1.2**
D22K				IAmb		IAmb		17 00 43.4	
	comp=Z,14nm,1.2s								
D19K	**Kuna River**	**23.86**	**56**	P		**P**		**17 00 27.1**	**+0.2**
D19K				IAmb		IAmb		17 00 36.1	
	comp=Z,16nm,1.4s								
D27M	**Malcolm River**	**24.15**	**41**			**P**		**17 00 27.7**	**-2.0**
TOLK	**Toolik Lake Re**	**24.26**	**49**	P		**P**		**17 00 28.8**	**-1.9**
E22K	**Anaktuvuk Pass**	**24.63**	**51**	P		**P**		**17 00 33.2**	**-0.8**
E22K				IAmb		IAmb		17 00 43.9	
	comp=Z,13nm,1.2s								
E18K	**Tukpahlearik C**	**24.75**	**59**	P		**P**		**17 00 35.6**	**+0.6**
E18K				IAmb		IAmb		17 00 43.5	
	comp=Z,12nm,1.3s								
C36M	**Paulatuk**	**24.80**	**27**			**P**		**17 00 34.6**	**-0.8**
YAK	**Yakutsk**	**24.86**	**132**	LR		LR		17 09 58.6	
	comp=Z,55nn,19.7s,baz=26,slow=36								
E25K	**Arctic Village**	**25.01**	**46**	P		**P**		**17 00 36.8**	**-0.7**
E29M	**Blow River**	**25.16**	**39**	P		**P**		**17 00 37.6**	**-1.1**
E29M						**pP**		**17 00 39.0**	**-1.5**
PRGR	**Permogore**	**25.29**	**229**	P		P		17 00 48.4	+8.4
	comp=Z,15nm,0.9s								
F21K	**Alatna River**	**25.42**	**53**	P		**P**		**17 00 41.6**	**+0.5**
F21K				IAmb		IAmb		17 00 51.3	
	comp=Z,9.1nm,1.3s								
F20K	**Avaraart Lake**	**25.45**	**55**	P		**P**		**17 00 41.5**	**+0.2**
F20K				IAmb		IAmb		17 00 52.2	
	comp=Z,15nm,1.4s								
INK	**Inuvik**	**25.45**	**35**	P		**P**		**17 00 41.0**	**-0.4**
F24K	**Squaw Lake**	**25.48**	**48**	P		**P**		**17 00 40.5**	**-1.1**
F24K				IAmb		IAmb		17 00 52.4	
	comp=Z,9.3nm,1.2s								
F19K	**Shaleruckik Mo**	**25.53**	**57**	P		**P**		**17 00 43.1**	**+1.1**
F17K	**Baldwin Pennin**	**25.68**	**60**	P		**P**		**17 00 44.0**	**+0.6**
BMAR	**Burnt Mountain**	**25.76**	**45**			**P**		**17 00 43.4**	**-0.8**
F28M	**Old Crow**	**25.83**	**41**	P		**P**		**17 00 43.4**	**-1.5**
F28M				IAmb		IAmb		17 00 56.3	
	comp=Z,8.3nm,1.1s								
G23K	**Bananza Creek**	**26.15**	**50**	P		**P**		**17 00 47.4**	**-0.3**
F31M	**Tsiigehtchic**	**26.31**	**35**	P		**P**		**17 00 48.7**	**-0.4**
G24K	**Hadweenzic Riv**	**26.31**	**48**	P		**P**		**17 00 49.7**	**+0.5**
G18K	**Tagagawik**	**26.40**	**58**	P		**P**		**17 00 51.0**	**+1.0**
G18K				IAmb		IAmb		17 01 32.7	
	comp=Z,8.1nm,1.4s								
FYU	**Fort Yukon**	**26.58**	**46**	P		**P**		**17 00 52.8**	**+1.3**
G30M	**tAoh Zraii Nji**	**26.65**	**38**	P		**P**		**17 00 52.4**	**+0.1**
G30M				IAmb		IAmb		17 01 03.1	
	comp=Z,14nm,1.2s								
SFJD	**Kangerlussuaq**	**26.77**	**325**	LR		LR		17 11 07.0	
	comp=Z,82nn,18.8s,baz=108,slow=35								
G31M	**Satah River**	**26.80**	**36**	P		**P**		**17 00 52.9**	**-0.6**
G31M				IAmb		IAmb		17 01 04.4	
	comp=Z,9.1nm,1.2s								
FINES	**FINESS Array B**	**26.83**	**250**	P		**P**		**17 00 55.1**	**+1.3**
FINES	**FINESS Array B**	**26.83**	**250**	P		**P**		**17 00 56.7**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=25,slow=10,SNR=4.6								
FINES				PcP		**PcP**		**17 04 17.2**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=28,slow=3.3,SNR=2.0								
FINES				LR		LR		17 11 51.3	
	comp=Z,66nm,18.8s,baz=1.5,slow=37								
	comp=Z,1.0nm,0.6s								
H19K	**Roundabout Mou**	**26.91**	**56**	P		**P**		**17 00 55.6**	**+1.1**
H21K	**Melozitna Rive**	**27.02**	**53**	P		**P**		**17 00 55.9**	**+0.4**
H21K				IAmb		IAmb		17 01 04.8	
	comp=Z,7.4nm,1.2s								
H24K	**Noodor Dome**	**27.15**	**48**	P		**P**		**17 00 56.6**	**-0.1**
H24K				IAmb		IAmb		17 01 09.5	
	comp=Z,6.5nm,1.1s								
H18K	**Honhosa River**	**27.15**	**58**	P		**P**		**17 00 58.4**	**+1.7**
EPYK	**Eagle Plains**	**27.23**	**38**	P		**P**		**17 00 56.5**	**-1.0**
H29M	**Whitestone**	**27.30**	**40**	P		**P**		**17 00 59.1**	**+1.1**
H29M				IAmb		IAmb		17 01 07.6	
	comp=Z,8.1nm,1.4s								
H31M	**Peel River**	**27.91**	**36**	P		**P**		**17 01 04.3**	**+0.7**
H31M				IAmb		IAmb		17 01 17.4	
	comp=Z,8.8nm,1.2s								
I26K	**Coal Creek Min**	**27.95**	**44**	P		**P**		**17 01 04.2**	**+0.3**
I26K				IAmb		IAmb		17 01 18.0	
	comp=Z,9.5nm,1.5s								
MDM	**Murphy Dome**	**28.00**	**49**	P		**P**		**17 01 05.6**	**+1.2**
MDM				IAmb		IAmb		17 01 14.1	
	comp=Z,7.1nm,1.4s								
KIRV	**Kirov**	**28.11**	**224**	LR		LR		17 14 25.0	
	comp=Z,86nn,19.2s,baz=326,slow=41								
ILAR	**Eielson Array**	**28.27**	**48**	P		**P**		**17 01 07.5**	**+0.8**
ILAR	**Eielson Array**	**28.27**	**48**	P		**P**		**17 01 08.3**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=352,slow=8.7,SNR=7.4								
	comp=Z,0.5nm,0.8s								
CCB	**Clear Creek Bu**	**28.34**	**49**	P		**P**		**17 01 08.3**	**+1.1**
I30M	**Mount Dempster**	**28.39**	**38**	P		**P**		**17 01 07.5**	**-0.4**
I30M				IAmb		IAmb		17 01 16.3	
	comp=Z,6.9nm,1.3s								
BPAW	**Bear Paw Mtn.**	**28.68**	**52**	P		**P**		**17 01 10.7**	**+0.3**
BPAW				IAmb		IAmb		17 01 19.9	
	comp=Z,11nm,1.4s								
J16K	**Anvik River**	**28.85**	**61**	P		**P**		**17 01 13.0**	**+1.1**
HFS	**Hagfors**	**29.10**	**262**	LR		LR		17 13 04.8	
	comp=Z,106nm,18.1s,baz=309,slow=37								
K20K	**Telida**	**29.22**	**55**	P		**P**		**17 01 15.7**	**+0.5**
K20K				IAmb		IAmb		17 01 23.8	
	comp=Z,7.1nm,1.4s								
SCRK	**Sand Creek**	**29.23**	**45**	P		**P**		**17 01 15.8**	**+0.4**
RIDG	**Independent Ri**	**29.41**	**46**	P		**P**		**17 01 16.8**	**-0.1**
RIDG				IAmb		IAmb		17 01 59.4	
	comp=Z,8.9nm,1.4s								
TTA	**Tatalina**	**29.52**	**57**	P		**P**		**17 01 18.4**	**+0.5**
TTA				IAmb		IAmb		17 02 00.3	
	comp=Z,1.1nm,1.4s								
K17K	**Iditarod**	**29.57**	**59**	P		**P**		**17 01 19.0**	**+0.7**
L18K	**Granite Mounta**	**30.18**	**57**	P		**P**		**17 01 24.5**	**+0.9**
BCAR	**Beaver Creek A**	**30.26**	**44**	P		**P**		**17 01 24.7**	**+0.3**
M17K	**Holitna River**	**30.94**	**58**	P		**P**		**17 01 30.7**	**+0.3**
M29M	**Somme Creek**	**31.06**	**41**	P		**P**		**17 01 33.0**	**+1.4**
SVW2	**Sparrevohn**	**31.37**	**57**	P		**P**		**17 01 33.5**	**-0.7**
ZAA0	**Zalesovo Array**	**31.63**	**184**	P		**P**		**17 01 35.0**	**-1.5**
ZALV	**Zalesovo Beam**	**31.63**	**184**	P		**P**		**17 01 35.1**	**-1.4**
ZALV	**Zalesovo Beam**	**31.63**	**184**	P		**P**		**17 01 36.9**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=353,slow=10,SNR=4.3								
ZALV				LR		LR		17 15 22.3	
	comp=Z,68nm,20.2s,baz=18,slow=38								
	comp=Z,0.6nm,0.5s								
YKA	**Yellowknife Ar**	**31.97**	**20**	P		**P**		**17 01 38.8**	**-0.6**
YKA	**Yellowknife Ar**	**31.97**	**20**	P		**P**		**17 01 40.5**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=356,slow=8.5,SNR=21								
YKA				PcP		**PcP**		**17 04 30.1**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=330,slow=3.3,SNR=5.4								
YKA				LR		LR		17 16 47.0	
	comp=Z,82nm,18.1s,baz=285,slow=40								
	comp=Z,0.8nm,0.6s								
YKAB2	**New Yellowknif**	**32.04**	**20**	P		**P**		**17 01 38.8**	**-1.2**
OBN	**Obninsk**	**32.37**	**237**	LR		LR		17 20 20.4	
	comp=Z,58nm,18.5s,baz=5.5,slow=46								
BRVK	**Borovoye**	**32.76**	**200**	P		**P**		**17 01 47.1**	**+0.7**
BRVK				IAmb		IAmb		17 01 57.6	
	comp=Z,8.5nm,1.3s								
BVAR	**Borovoye Array**	**32.79**	**200**	P		**P**		**17 01 49.0**	**+2.3**
	comp=Z,1.1nm,0.6s,baz=348,slow=6.7,SNR=7.9								
	comp=Z,1.1nm,0.6s								
SKAG	**Skagway**	**34.20**	**39**	P		**P**		**17 01 59.0**	**+0.1**
SKAG				IAmb		IAmb		17 02 12.8	
	comp=Z,7.3nm,1.3s								
R33M	**Jennings River**	**34.47**	**35**	P		**P**		**17 02 00.9**	**-0.5**
KDAK	**Kodiak Island**	**34.86**	**55**	LR		LR		17 15 46.6	
	comp=Z,50nm,20.6s,baz=27,slow=36								
KURK	**Kurchatov**	**34.93**	**190**	P		**P**		**17 02 04.9**	**-0.4**
KURBB	**Kurchatov Arra**	**35.02**	**191**	P		**P**		**17 02 07.1**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=15,slow=7.5,SNR=4.4								
KURBB				PcP		**PcP**		**17 04 38.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=356,slow=2.7,SNR=4.1								
KURBB				LR		LR		17 18 35.9	
	comp=Z,140nm,20.2s,baz=183,slow=40								
	comp=Z,0.4nm,0.7s								
DLBC	**Dease Lake**	**35.47**	**34**	P		**P**		**17 02 11.2**	**+1.3**
DLBC				IAmb		IAmb		17 02 19.6	
	comp=Z,6.1nm,1.1s								
AKTO	**Aktyubinsk**	**35.82**	**213**	P		**P**		**17 02 14.4**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=34,slow=7.3,SNR=2.7								
AKTO				LR		LR		17 18 21.9	
	comp=Z,99nm,20.0s,baz=54,slow=39								
	comp=Z,0.9nm,0.6s								
S34M	**Telegraph Cree**	**35.94**	**35**	P		**P**		**17 02 13.7**	**-0.3**
S34M				IAmb		IAmb		17 02 23.9	
	comp=Z,9.5nm,1.5s								
ABKAR	**Akbulak array**	**36.92**	**211**	P		**P**		**17 02 22.4**	**+0.1**
ABKAR	**Akbulak array**	**36.92**	**211**	P		**P**		**17 02 21.8**	**-0.5**
ABKAR				IAmb		IAmb		17 02 45.4	
	comp=Z,4.9nm,1.4s								
AKASG	**Malin Array Be**	**37.27**	**244**	P		**P**		**17 02 28.2**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=18,slow=9.2,SNR=2.4								
	comp=Z,0.3nm,0.3s								
AKBB	**Malin Array Si**	**37.27**	**244**	P		**P**		**17 02 25.0**	**-0.3**
AKBB				IAmb		IAmb		17 02 43.1	
	comp=Z,9.8nm,1.3s								
KIEV	**Kiev**	**37.28**	**244**	P		**P**		**17 02 24.7**	**-0.6**
KIEV				IAmb		IAmb		17 02 43.1	
	comp=Z,8.8nm,1.3s								
KLR	**Kul'dur**	**37.74**	**132**	LR		LR		17 17 51.1	
	comp=Z,36nn,18.2s,baz=7.5,slow=36								
SONM	**Songino Array**	**38.00**	**160**	P		**P**		**17 02 32.9**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=328,slow=7.4,SNR=4.9								
SONM				LR		LR		17 18 45.4	
	comp=Z,70nm,18.5s,baz=276,slow=37								
	comp=Z,0.6nm,0.7s								
MK31	**Makanchi Array**	**38.81**	**186**	P		**P**		**17 02 37.9**	**-0.5**
MKAR	**Makanchi Array**	**38.81**	**186**	P		**P**		**17 02 38.4**	**0.0**
MKAR	**Makanchi Array**	**38.81**	**186**	P		**P**		**17 02 39.2**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=12,slow=8.8,SNR=9.2								
	comp=Z,0.8nm,0.7s								
GERES	**GERESS Array B**	**40.30**	**260**	LR		LR		17 21 38.6	
	comp=Z,56nm,18.5s,baz=307,slow=39								
BBB	**Bella Bella**	**41.80**	**33**	LR		LR		17 19 52.3	
	comp=Z,74nm,21.6s,baz=342,slow=35								
AAK	**Ala-Archa**	**43.08**	**195**	LR		LR		17 24 09.7	
	comp=Z,127nm,18.4s,baz=349,slow=40								
NEW	**Newport**	**46.14**	**23**	LR		LR		17 26 15.1	
	comp=Z,48nn,18.1s,baz=41,slow=40								
ILGA	**Ilgaz**	**46.56**	**238**	P		**P**		**17 03 40.0**	**-1.6**
GNI	**Garni**	**46.76**	**226**	LR		LR		17 26 27.7	
	comp=Z,31nn,18.1s,baz=320,slow=40								
BRTR	**Keskin Array B**	**47.88**	**238**	P		**P**		**17 03 52.6**	**+0.9**
BRTR	**Keskin Array B**	**47.88**	**238**	P		**P**		**17 03 55.4**	**+3.6**
	comp=Z,0.9nm,0.6s,baz=347,slow=6.3,SNR=4.0								
BRTR				LR		LR		17 30 36.1	
	comp=Z,33nn,18.6s,baz=0.0,slow=44								
	comp=Z,0.9nm,0.6s								
GEYT	**Alibeck**	**48.30**	**212**	LR		LR		17 27 18.5	
	comp=Z,66nn,18.4s,baz=22,slow=40								
YHH	**Holmes Hill**	**49.79**	**18**	P		**P**		**17 04 05.8**	**-0.7**
ESDC	**Sonseca Array**	**50.83**	**276**	P		**P**		**17 04 17.6**	**+3.4**
	comp=Z,0.6nm,0.7s,baz=1.0,slow=8.2,SNR=4.1								
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	**51.84**	**16**	LR		LR		17 26 53.1	
	comp=Z,71nn,18.5s,baz=73,slow=37								
YBH	**Yreka Blue Hor**	**52.47**	**29**	LR		LR		17 27 59.0	
	comp=Z,55nn,19.4s,baz=359,slow=38								
ELK	**Elko**	**53.71**	**22**	LR		LR		17 27 29.1	
	comp=Z,55nn,20.3s,baz=41,slow=36								
MMAI	**Mount Meron Ar**	**54.44**	**235**	LR		LR		17 34 33.2	
	comp=Z,26nn,18.2s,baz=325,slow=43								
NVAR	**Mina Array Bea**	**55.92**	**25**	LR		LR		17 29 46.8	
	comp=Z,38nn,18.5s,baz=71,slow=37								
R61A	**Willards**	**56.29**	**344**	P		**P**		**17 04 53.5**	**-0.6**
EIL	**Elat**	**57.80**	**235**	LR		LR		17 34 25.4	
	comp=Z,20nn,20.6s,baz=252,slow=41								
TKL	**Tuckaleechee C**	**59.09**	**352**	LR		LR		17 29 22.6	
	comp=Z,120nn,19.2s,baz=86,slow=35								
ANMO	**Albuquerque**	**59.71**	**14**	LR		LR		17 31 18.5	
	comp=Z,76nn,19.5s,baz=117,slow=36								
PFO	**Pinyon Flats O**	**60.78**	**23**	LR		LR		17 31 52.2	
	comp=Z,40nn,21.8s,baz=69,slow=36

ISC 22 16:58:26.6±4.8, 20°.6S±0°.8×173°.5W±0°.7, h10km, n16, σ0§66/17, mb4.9/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**32.88**	**246**	P	**P**	**17 05 01.7**	**+0.5**
ARMA				IAmb	IAmb	17 05 11.3	
	comp=Z,33nm,1.6s						
EIDS	**Eidsvold**	**32.92**	**255**	P	**P**	**17 05 01.1**	**-0.3**
CTA	**Charters Tower**	**37.70**	**263**	P	**P**	**17 05 42.8**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=76,slow=13,SNR=2.2						
	comp=Z,3.5nm,0.5s						
CTAO	**Charters Tower**	**37.70**	**263**	P	**P**	**17 05 42.6**	**0.0**
CTAO				IAmb	IAmb	17 07 00.9	
	comp=Z,37nm,1.3s						
STKA	**Stephens Creek**	**41.59**	**245**	P	**P**	**17 06 15.0**	**+0.1**
STKA	**Stephens Creek**	**41.59**	**245**	P	**P**	**17 06 15.1**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=76,slow=10.0,SNR=3.0						
	comp=Z,0.8nm,0.4s						
BBOO	**Buckleboo**	**46.33**	**244**	P	**P**	**17 06 52.6**	**-0.3**
AS31	**Alice Springs**	**48.63**	**256**	P	**P**	**17 07 10.5**	**-0.6**
ASAR	**Alice Springs**	**48.63**	**256**	P	**P**	**17 07 09.9**	**-1.1**
ASAR	**Alice Springs**	**48.63**	**256**	P	**P**	**17 07 10.8**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=92,slow=8.5,SNR=29						
	comp=Z,1.7nm,0.7s						
WB0	**Warramunga Arr**	**48.77**	**261**	P	**P**	**17 07 11.3**	**-0.8**
WB0				IAmb	IAmb	17 08 28.2	
	comp=Z,33nm,1.9s						
WB0				PcP	**PcP**	**17 08 36.7**	**-0.4**
WB2	**Warramunga Arr**	**48.77**	**261**	P	**P**	**17 07 11.6**	**-0.6**
WB2				IAmb	IAmb	17 07 49.6	
	comp=Z,28nm,1.6s						
WRA	**Warramunga Arr**	**48.79**	**261**	P	**P**	**17 07 11.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.9,SNR=41						
	comp=Z,0.5nm,0.3s						
FORT	**Forrest**	**53.16**	**246**	P	**P**	**17 07 44.5**	**-0.6**
FORT				IAmb	IAmb	17 08 04.6	
	comp=Z,47nm,1.4s						
FITZ	**Fitzroy Crossi**	**57.22**	**261**	P	**P**	**17 08 15.8**	**+1.3**
FITZ				IAmb	IAmb	17 09 30.3	
	comp=Z,5.2nm,1.7s						
MBWA	**Marble Bar**	**61.97**	**256**	P	**P**	**17 08 47.9**	**+0.7**
MBWA				IAmb	IAmb	17 10 08.3	
	comp=Z,28nm,1.5s						

IDC 22 17:08:32.6±7.9, 17°.75S×174°.47W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=386.3km s-min=120.7km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.35**	**259**	P	P	17 17 16.1	-0.4
	0.4nm,0.7s,baz=96,slow=7.9,SNR=5.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**48.45**	**254**	P	P	17 17 17.3	+0.1
	0.3nm,0.4s,baz=90,slow=8.0,SNR=14						
	0.3nm,0.4s						
AKASG	**Malin Array Be**	**142.07**	**335**	PKP	PKPdf	17 28 06.2	-0.5
	0.8nm,0.5s,baz=12,slow=0.1,SNR=4.5						

IDC 22 17:13:45.8±1.5, 1°.85N×126°.28E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=152.9km s-min=18.9km az=65.0
DJA 22 17:13:49.1±0.5, 2°.N±5°×12°.6E±°, h10km, M3.8/9, mb3.9/3, MLv3.8/9
NEIC 22 17:13:50.4±1.7, 2°.0N±0°.1×126°.41E±0°.07, h35km±2km, mb4.1/9, Error ellipse: s-maj=22.8km s-min=7.0km az=205.0

ISC 22 17:13:51.2±0.8, 1°.95N±0°.08×126°.45E±0°.08, h47km, n29, σ0§92/29, mb4.0/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.49**	**142**		**Pn**	**17 14 15.6**	**+0.1**
TNTI	**Ternate**	**1.49**	**142**	P	**Pn**	**17 14 15.9**	**+0.4**
SGSI	**Sangihe**	**1.96**	**332**	P	**Pn**	**17 14 21.5**	**-0.4**
LBMI	**Labuha**	**2.78**	**158**	P	**Pn**	**17 14 33.7**	**+0.5**
KMSI	**Cibinong**	**2.82**	**241**	P	**Pn**	**17 14 34.3**	**+0.5**
GTOI	**Gorontalo**	**3.68**	**249**	P	**Pn**	**17 14 46.4**	**+0.8**
SANI	**Sanana**	**4.00**	**187**	P	**Pn**	**17 14 49.6**	**-0.4**
LUWI	**Luwuk**	**4.73**	**231**	Pn	**Pn**	**17 15 00.8**	**+0.8**
LUWI	**Luwuk**	**4.73**	**231**	P	**Pn**	**17 15 00.6**	**+0.6**
NLAI	**Namlea**	**5.20**	**173**	P	**Pn**	**17 15 07.1**	**+0.7**
	8.4nm,0.9s,0.1nm						
TOLI2	**Tolitoli**	**5.73**	**262**	Pn	**Pn**	**17 15 12.8**	**-0.9**
BKSI	**Bulukumba**	**9.60**	**221**	P	**Pn**	**17 16 07.4**	**+0.6**
MTN	**Manton Dam**	**15.41**	**163**	Pn	**Pn**	**17 17 22.9**	**-2.8**
MTN				IAmb	IAmb	17 17 38.5	
	comp=Z,13nm,1.1s						
WB0	**Warramunga Arr**	**22.95**	**161**	P	**P**	**17 18 50.4**	**-1.2**
WB0				IAmb	IAmb	17 19 14.0	
	comp=Z,8.5nm,1.1s						
WRAB	**Tennant Creek**	**23.09**	**161**	P	**P**	**17 18 52.5**	**-0.6**
WRAB				IAmb	IAmb	17 18 58.0	
	comp=Z,8.5nm,1.1s						
WRA	**Warramunga Arr**	**23.09**	**161**	P	**P**	**17 18 51.9**	**-1.2**
WRA	**Warramunga Arr**	**23.09**	**161**	P	**P**	**17 18 52.9**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=339,slow=11,SNR=40						
	comp=Z,3.4nm,0.8s						
WB2	**Warramunga Arr**	**23.10**	**161**	P	**P**	**17 18 52.5**	**-0.6**
WB2				IAmb	IAmb	17 19 03.3	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**26.48**	**165**	P	**P**	**17 19 24.3**	**+0.1**
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**17 19 23.0**	**-1.2**
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**17 19 24.9**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=343,slow=7.8,SNR=35						
	comp=Z,1.3nm,0.7s						
BBOO	**Buckleboo**	**35.75**	**166**	P	**P**	**17 20 46.3**	**+0.6**
STKA	**Stephens Creek**	**36.58**	**158**	P	**P**	**17 20 53.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=328,slow=8.4,SNR=2.9						
	comp=Z,1.6nm,0.7s						
MK31	**Makanchi Array**	**58.86**	**326**	P	**P**	**17 23 44.8**	**-0.4**
MK31				IAmb	IAmb	17 23 46.7	
	comp=Z,0.6nm,1.1s						
MKAR	**Makanchi Array**	**58.86**	**326**	P	**P**	**17 23 45.5**	**+0.3**
MKAR	**Makanchi Array**	**58.86**	**326**	P	**P**	**17 23 45.8**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=120,slow=7.4,SNR=5.8						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.08**	**328**	P	**P**	**17 24 15.3**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=130,slow=6.2,SNR=11						
	comp=Z,0.6nm,0.5s						
ABKAR	**Akbulak array**	**73.35**	**321**	P	**P**	**17 25 17.8**	**-0.2**
J14K	**Nanvaranak Lak**	**79.20**	**26**	P	**P**	**17 25 51.7**	**+0.7**

IDC 22 17:18:20.8±1.8, 0°.60N×122°.27E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=233.1km s-min=28.4km az=61.0
DJA 22 17:18:45.1±0.9, 0°.N±20°×12°.2E±°, h179km±10km, M2.5/6, MLv2.5/6

ISC 22 17:18:42.6±1.1, 0°.1N±0°.1×121°.84E±0°.08, h200km, n8, σ0§98/11, mb3.0/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.36**	**16**	P	**Pn**	**17 19 09.4**	**+0.1**
MRSI				S	**Sn**	**17 19 28.6**	**-1.5**
GTOI	**Gorontalo**	**1.28**	**67**	P	**Pn**	**17 19 14.4**	**0.0**
GTOI				S	**Sn**	**17 19 38.2**	**-0.8**
LUWI	**Luwuk**	**1.49**	**141**	P	**Pn**	**17 19 16.2**	**0.0**
MPSI	**Mapaga**	**1.95**	**276**	P	**Pn**	**17 19 21.6**	**+1.0**
KMSI	**Cibinong**	**2.19**	**78**	P	**Pn**	**17 19 24.4**	**+1.3**
KMSI				S	**Sn**	**17 19 54.8**	**+0.2**
WRA	**Warramunga Arr**	**23.40**	**149**	P	**P**	**17 23 32.9**	**-0.9**
	0.4nm,0.6s,baz=327,slow=10,SNR=5.6						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**26.39**	**154**	P	**P**	**17 24 01.9**	**+1.1**
	0.1nm,0.6s,baz=344,slow=15,SNR=5.2						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**57.90**	**329**	P	**P**	**17 28 13.5**	**-0.3**
	0.2nm,0.6s,baz=127,slow=6.8,SNR=2.6						
	0.2nm,0.6s						

JMA 22 17:34:21.9±0.1, 35°.3N±0°.1×138°.5E±0°.2, h17km, MV3.1/20, MT. FUJI REGION
JMA Felt I J1 at MT. FUJI REGION .

ISC 22 17:34:21.6±0.9, 35°.26N±0°.03×138°.47E±0°.03, h18km, n12, σ0§43/18, 6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFNN	**Fujinakano**	**0.18**	**109**	P	**Pb**	**17 34 26.6**	**+0.4**
JFNN				S	**Sg**	**17 34 30.3**	**+0.8**
JYN	**Shimob**	**0.25**	**14**	⇓*i*P	**Pg**	**17 34 27.4**	**0.0**
JYN				⇓S	**Sg**	**17 34 31.6**	**+0.3**
SHZ3	**Shizuoka 3**	**0.29**	**229**	P	**Pg**	**17 34 27.8**	**-0.2**
SHZ3				S	**Sg**	**17 34 32.4**	**+0.1**
JOD2	**Odawara 2**	**0.50**	**89**	*i* P	**Pg**	**17 34 31.6**	**-0.2**
JOD2				S	**Sg**	**17 34 38.6**	**0.0**
JSG	**Sagara**	**0.62**	**202**	P	**Pg**	**17 34 34.5**	**+0.5**
JIZS	**Izushimoda**	**0.63**	**148**	⇓*i*P	**Pb**	**17 34 33.3**	**-0.7**
JIZS				⇓S	**Sb**	**17 34 41.8**	**-0.7**
JRY	**Ryogami san**	**0.84**	**25**	⇓*i*P	**Pb**	**17 34 37.4**	**-0.3**
JRY				⇓S	**Sb**	**17 34 48.5**	**-0.1**
JIM2	**Oshima 3**	**0.95**	**124**	P	**Pb**	**17 34 39.4**	**-0.3**
JGF	**Kuroka**	**0.97**	**291**	P	**Pb**	**17 34 39.8**	**-0.2**
TK04	**Tokai 4**	**1.00**	**110**	P	**Pb**	**17 34 40.6**	**+0.3**
INU	**Inuyama**	**1.19**	**275**	P	**Pn**	**17 34 43.3**	**-0.1**
MAJO	**Matsushiro**	**1.30**	**351**	P	**Pn**	**17 34 45.3**	**+0.3**

WEL 22 17:41:30.5±0.2, 39°.S±2°×17°.6E±°, h40km±3km, M3.3/51, ML3.6/50, MLv3.3/51, Error ellipse: s-maj=0.0km s-min=0.0km az=154.7, confirmed
NOU 22 17:41:31.0, 38°.85S×176°.48E, h19km, MLv3.7/9, North Island, New Zealand

ISC 22 17:41:30.9±1.3, 38°.99S±0°.03×176°.52E±0°.03, h56km±6km, n147, σ1§34/164, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.17**	**187**	P	**Pn**	**17 41 39.0**	**-0.8**
BKZ	**Black Stump Fm**	**0.17**	**187**	P	**Pn**	**17 41 38.9**	**-0.9**
BKZ				S	**Sn**	**17 41 46.1**	**-1.1**
MRHZ	**Matea Rd**	**0.18**	**334**	P	**Pn**	**17 41 38.7**	**-1.1**
NMHZ	**Naumai**	**0.25**	**115**	P	**Pn**	**17 41 40.2**	**0.0**
NMHZ				S	**Sn**	**17 41 48.7**	**+1.7**
MTHZ	**Maungataniwha**	**0.29**	**61**	P	**Pn**	**17 41 39.7**	**-0.8**
MTHZ				S	**Sn**	**17 41 46.7**	**-0.8**
HATZ	**Hinemaiaia**	**0.35**	**287**	P	**Pn**	**17 41 40.1**	**-0.8**
HATZ				S	**Sn**	**17 41 47.1**	**-1.2**
THQ2	**Tauhara North**	**0.42**	**320**	P	**Pn**	**17 41 41.2**	**-0.5**
KWHZ	**Kaweka Forest**	**0.44**	**190**	P	**Pn**	**17 41 41.7**	**-0.2**
KWHZ				S	**Sn**	**17 41 51.3**	**+1.4**
RAHZ	**Arahi**	**0.45**	**80**	P	**Pn**	**17 41 41.8**	**-0.1**
RAHZ				S	**Sn**	**17 41 51.0**	**+1.0**
ALRZ	**Allen Road**	**0.45**	**342**	P	**Pn**	**17 41 42.1**	**-0.8**
ALRZ				S	**Sn**	**17 41 50.1**	**+0.1**
ARHZ	**Aropaoanui**	**0.46**	**126**	P	**Pn**	**17 41 42.0**	**0.0**
MCHZ	**McNeill Hill**	**0.47**	**163**	P	**Pn**	**17 41 42.6**	**+0.4**
MCHZ				S	**Sn**	**17 41 52.5**	**+2.2**
ARAZ	**Aratiatia Land**	**0.48**	**319**	P	**Pn**	**17 41 41.9**	**-0.4**
PRRZ	**Plateau Road**	**0.50**	**349**	P	**Pn**	**17 41 41.6**	**-0.9**
PRRZ				S	**Sn**	**17 41 50.3**	**-0.7**
RITZ	**Rihia Road**	**0.52**	**272**	P	**Pn**	**17 41 42.3**	**-0.4**
RITZ				S	**Sn**	**17 41 51.6**	**+0.3**
RTZ	**Ruatahuna**	**0.52**	**44**	P	**Pn**	**17 41 41.9**	**-1.0**
POIZ	**Poihipi**	**0.52**	**314**	P	**Pn**	**17 41 42.8**	**0.0**
WHTZ	**Whakaora**	**0.55**	**307**	P	**Pn**	**17 41 42.9**	**-0.2**
WPRZ	**Whakapapatarin**	**0.55**	**329**	P	**Pn**	**17 41 42.2**	**-0.9**
MUGZ	**Murupara**	**0.55**	**21**	P	**Pn**	**17 41 41.9**	**-1.3**
MUGZ				S	**Sn**	**17 41 50.8**	**-1.2**
WHHZ	**Waihua**	**0.56**	**99**	P	**Pn**	**17 41 43.2**	**0.0**
WHHZ				S	**Sn**	**17 41 54.5**	**+2.3**
RATZ	**Rangitukua**	**0.60**	**282**	P	**Pn**	**17 41 43.1**	**-0.6**
BHHZ	**Black Hill Sta**	**0.61**	**215**	P	**Pn**	**17 41 43.1**	**-0.7**
BHHZ				S	**Sn**	**17 41 53.6**	**+0.4**
HRRZ	**Handcock Road**	**0.63**	**343**	P	**Pn**	**17 41 43.4**	**-0.6**
KATZ	**Kakaramea**	**0.64**	**271**	P	**Pn**	**17 41 43.8**	**-0.5**
KATZ				S	**Sn**	**17 41 53.7**	**-0.3**
ETVZ	**East Tongariro**	**0.65**	**257**	P	**Pn**	**17 41 43.7**	**-0.6**
TMVZ	**Te Maari**	**0.65**	**259**	P	**Pn**	**17 41 43.8**	**-0.6**
TMVZ				S	**Sn**	**17 41 53.2**	**-0.9**
RRRZ	**Republican Roa**	**0.65**	**360**	P	**Pn**	**17 41 43.3**	**-1.0**
KRHZ	**Kereru**	**0.66**	**190**	P	**Pn**	**17 41 44.3**	**-0.1**
NTVZ	**North Tongarir**	**0.67**	**261**	P	**Pn**	**17 41 43.9**	**-0.6**
NTVZ				S	**Sn**	**17 41 54.0**	**-0.5**
SNGZ	**Shannon Statio**	**0.68**	**72**	P	**Pn**	**17 41 44.5**	**-0.1**
SNGZ				S	**Sn**	**17 41 56.5**	**+1.9**
WATZ	**Wairara**	**0.68**	**295**	P	**Pn**	**17 41 44.0**	**-0.6**
OTVZ	**Oturere**	**0.69**	**255**	P	**Pn**	**17 41 44.3**	**-0.5**
KRVZ	**Karewarewa**	**0.69**	**261**	P	**Pn**	**17 41 44.3**	**-0.6**
SNVZ	**South Ngauruho**	**0.71**	**254**	P	**Pn**	**17 41 44.7**	**-0.5**
HSRZ	**Hossack Road**	**0.71**	**342**	P	**Pn**	**17 41 44.3**	**-0.8**
NNVZ	**North Ngauruho**	**0.72**	**259**	P	**Pn**	**17 41 44.7**	**-0.5**
GRRZ	**Galatos Road**	**0.72**	**333**	P	**Pn**	**17 41 44.7**	**-0.4**
MOVZ	**Moawhango**	**0.72**	**235**	P	**Pn**	**17 41 44.4**	**-0.8**
TUVZ	**Tuvo**	**0.73**	**248**	P	**Pn**	**17 41 44.9**	**-0.5**
WTVZ	**West Tongariro**	**0.73**	**260**	P	**Pn**	**17 41 44.9**	**-0.5**
NGZ	**Ngauruhoe**	**0.74**	**255**	P	**Pn**	**17 41 45.0**	**-0.5**
KUTZ	**Kaahu Road**	**0.74**	**313**	P	**Pn**	**17 41 44.9**	**-0.6**
HLRZ	**Highlands Stat**	**0.75**	**350**	P	**Pn**	**17 41 45.7**	**+0.2**
TARZ	**Mount Tarawera**	**0.76**	**359**	P	**Pn**	**17 41 45.0**	**-0.7**
WHVZ	**Whangaehu Hut**	**0.78**	**248**	P	**Pn**	**17 41 45.5**	**-0.6**
COVZ	**Chateau Observ**	**0.79**	**255**	P	**Pn**	**17 41 45.6**	**-0.5**
WNVZ	**Wahianoa**	**0.79**	**245**	P	**Pn**	**17 41 45.6**	**-0.6**
MAVZ	**Matarangi**	**0.79**	**250**	P	**Pn**	**17 41 45.7**	**-0.6**
FWVZ	**Far West T-bar**	**0.80**	**251**	P	**Pn**	**17 41 45.7**	**-0.6**
TRVZ	**Turoa**	**0.81**	**248**	P	**Pn**	**17 41 45.9**	**-0.6**
KAHZ	**Kahuranaki**	**0.85**	**161**	P	**Pn**	**17 41 46.4**	**-0.4**
TWVZ	**Taurewa**	**0.85**	**264**	P	**Pn**	**17 41 46.0**	**-0.9**
MKRZ	**Makatiti**	**0.85**	**357**	P	**Pn**	**17 41 46.6**	**-0.4**
UTU	**Utuhina**	**0.85**	**343**	P	**Pn**	**17 41 46.6**	**-0.3**
RAGZ	**Rawiri**	**0.86**	**55**	P	**Pn**	**17 41 46.6**	**-0.3**
URZ	**Urewera**	**0.87**	**32**	P	**Pn**	**17 41 46.5**	**-0.5**
URZ	**Urewera**	**0.87**	**32**	P	**Pn**	**17 41 45.7**	**-1.3**
OMRZ	**Omania**	**0.89**	**353**	P	**Pn**	**17 41 46.4**	**-1.0**
KNZ	**Kokohu**	**0.90**	**92**	P	**Pn**	**17 41 46.6**	**-0.8**
EDRZ	**Edgecumbe**	**0.90**	**11**	P	**Pn**	**17 41 46.5**	**-1.1**
MTVZ	**Mangateitei**	**0.90**	**244**	P	**Pn**	**17 41 47.0**	**-0.5**
PNHZ	**Pukenui**	**0.95**	**195**	P	**Pn**	**17 41 47.6**	**-0.5**
PKVZ	**Pokaka**	**0.96**	**252**	P	**Pn**	**17 41 47.8**	**-0.4**
KARZ	**Kaharoa**	**1.00**	**347**	P	**Pn**	**17 41 48.2**	**-0.5**
RIGZ	**Rimuhau**	**1.01**	**74**	P	**Pn**	**17 41 48.3**	**-0.7**
MARZ	**Manawahe**	**1.01**	**7**	P	**Pn**	**17 41 48.2**	**-0.8**
TLZ	**Tolley Road**	**1.01**	**311**	P	**Pn**	**17 41 48.1**	**-0.8**
MWZ	**Matawai**	**1.03**	**50**	P	**Pn**	**17 41 48.3**	**-0.8**
PRGZ	**Paritu Road**	**1.07**	**87**	P	**Pn**	**17 41 48.8**	**-0.8**
PXZ	**Pawanui**	**1.07**	**166**	P	**Pn**	**17 41 46.2**	**-3.4**
WPHZ	**Waipukurau**	**1.07**	**183**	P	**Pn**	**17 41 49.0**	**-0.7**
MHGZ	**Mahia Peninsul**	**1.09**	**99**	P	**Pn**	**17 41 49.2**	**-0.8**
TSZ	**Takapari Road**	**1.15**	**202**	P	**Pn**	**17 41 50.0**	**-0.7**
TKGZ	**Te Karaka**	**1.18**	**62**	P	**Pn**	**17 41 53.0**	**+1.9**
WHRZ	**Whale Island**	**1.19**	**18**	P	**Pn**	**17 41 51.6**	**+0.3**
KMRZ	**Kaimai**	**1.23**	**338**	P	**Pn**	**17 41 51.0**	**-0.8**
PRHZ	**Porangahau**	**1.27**	**176**	P	**Pn**	**17 41 51.2**	**-1.3**
TGRZ	**Tauranga**	**1.28**	**351**	P	**Pn**	**17 41 51.6**	**-0.9**
DVHZ	**Dannevirke**	**1.33**	**192**	P	**Pn**	**17 41 51.7**	**-1.5**
RUGZ	**Raukumara Rang**	**1.37**	**42**	P	**Pn**	**17 41 53.1**	**-0.8**
VRZ	**Vera Road**	**1.38**	**264**	P	**Pn**	**17 41 53.6**	**-0.1**
HIZ	**Hauiti**	**1.39**	**290**	P	**Pn**	**17 41 53.7**	**-0.2**
HIZ	**Hauiti**	**1.39**	**290**	P	**Pn**	**17 41 53.6**	**-0.3**
TWGZ	**Tauwhareparae**	**1.41**	**55**	P	**Pn**	**17 41 54.1**	**-0.1**
WAZ	**Wanganui**	**1.41**	**237**	P	**Pn**	**17 41 54.7**	**+0.4**
CNGZ	**Carnagh Statio**	**1.42**	**69**	P	**Pn**	**17 41 54.4**	**+0.2**
ANWZ	**Angora Road**	**1.46**	**181**	P	**Pn**	**17 41 53.5**	**-1.4**
TOZ	**Tahuroa Road**	**1.49**	**327**	P	**Pn**	**17 41 54.6**	**-0.7**
POWZ	**Post Office Ro**	**1.51**	**202**	P	**Pn**	**17 41 54.6**	**-1.0**
OHWZ	**Ohakea**	**1.53**	**217**	P	**Pn**	**17 41 56.5**	**+0.7**
WIZ	**White Island**	**1.56**	**20**	P	**Pn**	**17 41 56.9**	**-0.3**
HAZ	**Te Kaha**	**1.59**	**39**	P	**Pn**	**17 41 55.3**	**-1.3**
PRWZ	**Pori Road**	**1.61**	**195**	P	**Pn**	**17 41 55.6**	**-1.4**
PUZ	**Puketiti**	**1.65**	**56**	P	**Pn**	**17 41 56.6**	**-0.9**
PKGZ	**Pakihiroa**	**1.65**	**48**	P	**Pn**	**17 41 57.1**	**-0.4**
BFZ	**Birch Farm**	**1.70**	**187**	P	**Pn**	**17 41 56.1**	**-2.0**
LREZ	**Lake Rotokare**	**1.71**	**254**	P	**Pn**	**17 41 58.7**	**+0.4**
MHEZ	**Mangahewa**	**1.71**	**267**	P	**Pn**	**17 41 59.7**	**+1.4**
MRZ	**Mangatainoka R**	**1.81**	**203**	P	**Pn**	**17 41 57.9**	**-1.9**
TIWZ	**Tintock**	**1.84**	**195**	P	**Pn**	**17 41 58.3**	**-1.9**
PREZ	**Palmer Road**	**1.87**	**259**	P	**Pn**	**17 42 01.6**	**+1.1**
WMGZ	**Waiomatatini S**	**1.90**	**52**	P	**Pn**	**17 42 00.1**	**-0.8**
NEZ	**North Egmont**	**1.91**	**261**	P	**Pn**	**17 42 01.9**	**+0.9**
KHEZ	**Kahui Hut**	**1.97**	**260**	P	**Pn**	**17 42 03.4**	**+1.5**
KHEZ	**Kahui Hut**	**1.97**	**260**	P	**Pn**	**17 42 03.2**	**+1.3**
PKE	**Pukeiti**	**1.98**	**263**	P	**Pn**	**17 42 02.7**	**+0.7**
MXZ	**Matakaoa Point**	**2.01**	**45**	P	**Pn**	**17 42 02.2**	**-0.1**
MXZ	**Matakaoa Point**	**2.01**	**45**	P	**Pn**	**17 42 02.1**	**-0.2**
HOWZ	**Holdsworth Sta**	**2.05**	**202**	P	**Pn**	**17 42 00.5**	**-2.5**
NBEZ	**Newall Road No**	**2.08**	**262**	P	**Pn**	**17 42 04.9**	**+1.5**
NMEZ	**Namu Road**	**2.09**	**258**	P	**Pn**	**17 42 05.1**	**+1.6**
OGWZ	**Otaki Gorge**	**2.10**	**209**	P	**Pn**	**17 42 01.7**	**-1.9**
TMWZ	**Te Maipa**	**2.16**	**193**	P	**Pn**	**17 42 02.0**	**-2.5**
MKAZ	**Moumakai**	**2.17**	**330**	P	**Pn**	**17 42 04.3**	**-0.2**
KIW	**Kapiti Island**	**2.24**	**213**	P	**Pn**	**17 42 03.6**	**-1.9**
MTW	**Mount Morrison**	**2.30**	**200**	P	**Pn**	**17 42 03.4**	**-2.9**
CAW	**Cannon Point**	**2.39**	**207**	P	**Pn**	**17 42 05.0**	**-2.5**
AWAZ	**Awhitu Peninsu**	**2.43**	**322**	P	**Pn**	**17 42 08.1**	**0.0**
WIAZ	**Waiheke Island**	**2.46**	**333**	P	**Pn**	**17 42 08.3**	**-0.2**
TRWZ	**Traveller**	**2.48**	**195**	P	**Pn**	**17 42 05.7**	**-3.2**
PAWZ	**Paruwai Farm**	**2.53**	**199**	P	**Pn**	**17 42 06.1**	**-3.4**
MBAZ	**Motutapu North**	**2.56**	**330**	P	**Pn**	**17 42 10.2**	**+0.2**
WTAZ	**Waiatarua**	**2.57**	**323**	P	**Pn**	**17 42 10.2**	**+0.2**
DUWZ	**D'Urville Isla**	**2.69**	**227**	P	**Pn**	**17 42 11.3**	**-0.4**
SNZO	**South Karori**	**2.70**	**210**	P	**Pn**	**17 42 14.8**	**+3.0**
ABAZ	**Army Bay**	**2.74**	**330**	P	**Pn**	**17 42 12.5**	**+0.1**
PLWZ	**Palliser**	**2.75**	**200**	P	**Pn**	**17 42 09.0**	**-3.5**
TCW	**Tory Channel**	**2.80**	**217**	P	**Pn**	**17 42 10.5**	**-2.7**
GRZ	**Great Barrier**	**2.87**	**343**	P	**Pn**	**17 42 14.0**	**-0.1**
TUWZ	**Tuamarina**	**3.13**	**218**	P	**Pn**	**17 42 14.6**	**-3.1**
NNZ	**Nelson**	**3.27**	**226**	P	**Pn**	**17 42 22.7**	**+3.0**
BSWZ	**Blackbirch Sta**	**3.39**	**216**	P	**Pn**	**17 42 17.9**	**-3.3**
WCZ	**Waipu Caves**	**3.51**	**330**	P	**Pn**	**17 42 23.1**	**+0.3**
QRZ	**Quartz Range**	**3.57**	**238**	P	**Pn**	**17 42 25.8**	**+2.1**
QRZ	**Quartz Range**	**3.57**	**238**	P	**Pn**	**17 42 23.8**	**+0.1**
MRNZ	**Matariki Terra**	**3.75**	**229**	P	**Pn**	**17 42 25.5**	**-0.7**
THZ	**Tophouse**	**3.91**	**224**	P	**Pn**	**17 42 26.1**	**-2.3**
KHZ	**Kahutara**	**4.10**	**213**	P	**Pn**	**17 42 34.5**	**+3.6**
KHZ	**Kahutara**	**4.10**	**213**	P	**Pn**	**17 42 31.9**	**+0.9**
OUZ	**Omahuta**	**4.43**	**327**	P	**Pn**	**17 42 35.8**	**+0.3**
OUZ	**Omahuta**	**4.43**	**327**	P	**Pn**	**17 42 36.1**	**+0.5**
DSZ	**Denniston Nort**	**4.53**	**231**	P	**Pn**	**17 42 36.6**	**-0.3**
GVZ	**Greta Valley S**	**4.76**	**212**	P	**Pn**	**17 42 37.3**	**-2.8**
FOZ	**Fox Glacier**	**6.79**	**226**	P	**Pn**	**17 43 11.6**	**+3.9**
CTZ	**Cnatham Island**	**7.00**	**135**	P	**Pn**	**17 43 08.9**	**-1.8**
JCZ	**Jackson Bay**	**7.71**	**226**	P	**Pn**	**17 43 23.6**	**+3.2**

IDC 22 17:58:42.4±1.1, 35°.49N×23°.40E, h0km, mb3.8/14, mbtmp3.8/16, ML3.3/2, MS3.1/3, Error ellipse: s-maj=25.8km s-min=18.5km az=178.0
ISK 22 17:58:46.6, 35°.50N×23°.22E, h66km, ML3.7/12
AFAD 22 17:58:48.0±0.0, 35°.59N×23°.08E, h69km±54km, ML3.4
THE 22 17:58:49.4, 35°.32N×23°.23E, h18km, ML3.5/8, Error ellipse: s-maj=0.9km s-min=0.3km az=55.0
ATH 22 17:58:50.0, 35°.36N×23°.35E, h23km±1km, ML3.4/13, Error ellipse: s-maj=2.5km s-min=0.9km az=52.0

ISC 22 17:58:48.6±0.8, 35°.42N±0°.05×23°.28E±0°.05, h49km±7km, n100, σ2§30/118, mb3.7/15, Crete

| Code

THAL	**Thalero**	**2.66**	**349**	P	**Pn**	**17 59 32.5**	**+3.5**
PTL	**Penteli**	**2.66**	**10**	P	**Pn**	**17 59 32.1**	**+3.0**
PTL				AML	AML	18 00 06.4	
	comp=N,694µm,0.5s						
PTL				AML	AML	18 00 19.6	
	comp=E,425µm,0.9s						
DION	**Dionisos Attik**	**2.70**	**11**	P	**Pn**	**17 59 32.3**	**+2.7**
DION	**Dionisos Attik**	**2.70**	**11**	P	**Pn**	**17 59 32.1**	**+2.5**
KLV	**Kalavryta, Ach**	**2.77**	**341**	P	**Pn**	**17 59 33.5**	**+2.9**
KLV				S	**Sn**	**18 00 08.1**	**+5.3**
	comp=E,205nm,0.9s						
KLV	**Kalavryta, Ach**	**2.77**	**341**	P	**Pn**	**17 59 34.1**	**+3.5**
DRO	**Drossia**	**2.82**	**334**	P	**Pn**	**17 59 34.1**	**+2.8**
DRO	**Drossia**	**2.82**	**334**	P	Pn	17 59 34.8	+3.5
RLS	**Riolos of Patr**	**3.01**	**332**	P	**Pn**	**17 59 36.9**	**+3.1**
KARP	**Karpathos**	**3.17**	**87**	Pn	**Pn**	**17 59 36.6**	**+0.6**
KARP	**Karpathos**	**3.17**	**87**	P	**Pn**	**17 59 36.9**	**+0.9**
EFP	**Efpalio**	**3.20**	**340**	P	Pn	17 59 40.1	+3.7
EFP	**Efpalio**	**3.20**	**340**	P	**Pn**	**17 59 39.5**	**+3.2**
ANX	**Ano Chora**	**3.35**	**341**	P	**Pn**	**17 59 41.3**	**+2.8**
ANX	**Ano Chora**	**3.35**	**341**	P	**Pn**	**17 59 42.0**	**+3.4**
AXAR	**Agios Charalam**	**3.38**	**352**	P	**Pn**	**17 59 42.1**	**+3.3**
YAZI	**Mula-Datşa-**	**3.60**	**68**	P	**Pn**	**17 59 42.7**	**+0.7**
YAZI				S	**Sn**	**18 00 20.5**	**-2.7**
BODT	**Bodrum**	**3.64**	**62**	Pn	**Pn**	**17 59 42.9**	**+0.4**
BODT	**Bodrum**	**3.64**	**62**	P	**Pn**	**17 59 42.4**	**-0.1**
AGG	**Agios Georgios**	**3.67**	**348**	Pn	**Pn**	17 59 46.2	+3.3
AGG	**Agios Georgios**	**3.67**	**348**	P	**Pn**	**17 59 45.8**	**+2.9**
DAT	**Datca**	**3.71**	**68**	Pn	**Pn**	**17 59 43.9**	**+0.3**
BDRM	**Kayabasi**	**3.74**	**63**	P	**Pn**	**17 59 43.9**	**0.0**
ARG	**Arkhangelos**	**4.01**	**77**	P	**Pn**	**17 59 48.8**	**+1.2**
TURN	**Turunc**	**4.24**	**70**	P	**Pn**	**17 59 52.1**	**+1.5**
PAIG	**Paliouri**	**4.51**	**4**	Pn	**Pn**	**17 59 53.6**	**-0.8**
ESEN	**Aydn-Nazilli**	**4.71**	**58**	P	**Pn**	**17 59 59.4**	**+2.2**
ESEN				S	**Sn**	**18 00 52.2**	**+1.7**
SABU	**Mula-Dalaman**	**4.81**	**71**	P	**Pn**	**18 00 00.4**	**+1.8**
SABU				S	**Sn**	**18 00 55.7**	**+2.7**
SABU				*i* AML	AML	18 01 07.0	
	comp=E,37nm,1.3s						
IZZE	**Mula-Seydike**	**4.93**	**76**	P	**Pn**	**17 59 60.0**	**-0.2**
IZZE				S	**Sn**	**18 00 52.0**	**-3.8**
IZZE				*i* AML	AML	18 01 05.0	
	comp=E,30nm,0.4s						
IZZE				*i* AML	AML	18 01 10.0	
	comp=E,38nm,0.6s						
TAVA	**DENIZLI_Tavas**	**4.98**	**64**	P	**Pn**	**18 00 03.7**	**+2.9**
KEK	**Kerkira**	**5.10**	**328**	Pn	**Pn**	**18 00 01.1**	**-1.4**
DBRK	**Dubrovnik**	**8.27**	**333**	*e*Pn	**Pn**	**18 00 45.1**	**-0.8**
STON	**Ston**	**8.61**	**331**	*e*Pn	**Pn**	**18 00 49.4**	**-1.2**
MAKA	**Makarska**	**9.23**	**330**	*e*Pn	**Pn**	**18 00 57.3**	**-1.7**
MAKA				Sn	**Sn**	**18 02 34.5**	**-6.9**
BRTR	**Keskin Array B**	**9.27**	**59**	Pn	**Pn**	**18 01 01.9**	**+2.0**
	comp=E,0.1nm,0.3s,baz=240,slow=12,SNR=16						
BRTR				LR	LR	18 05 11.5	
	comp=E,113nm,20.1s,baz=181,slow=42						
RICI	**Ricice**	**9.36**	**331**	*e*Pn	**Pn**	**18 00 59.8**	**-1.0**
HVAR	**Hvar**	**9.38**	**328**	*e*Pn	**Pn**	**18 00 59.1**	**-2.0**
KIJV	**Kijevo**	**10.07**	**330**	*e*Pn	**Pn**	**18 01 09.5**	**-1.1**
ZIRJ	**Zirje**	**10.11**	**327**	*e*Pn	**Pn**	**18 01 11.9**	**+0.8**
MORI	**Morici**	**10.25**	**328**	*e*Pn	**Pn**	**18 01 11.6**	**-1.5**
MLR	**Muntele Rosu**	**10.26**	**11**	LR	LR	18 05 34.5	
	comp=E,77nm,19.6s,baz=176,slow=40						
MMAI	**Mount Meron Ar**	**10.32**	**100**	Pn	**Pn**	**18 01 11.2**	**-2.8**
	comp=E,0.6nm,0.3s,baz=284,slow=8.3,SNR=2.3						
	comp=E,0.3nm,0.3s						
UDBI	**Udbina**	**10.76**	**330**	*e*Pn	**Pn**	**18 01 19.6**	**-0.4**
VYHS	**Vyhne**	**13.47**	**347**	*e*PN	**P**	**18 02 01.6**	**-3.3**
AKASG	**Malin Array Be**	**15.87**	**14**	Pn	**Pn**	**18 02 28.9**	**+0.4**
	comp=E,0.6nm,0.3s,baz=199,slow=11,SNR=2.8						
KBZ	**Khabaz**	**17.22**	**55**	P	**Pn**	**18 02 43.5**	**-2.0**
	baz=259,slow=16,SNR=3.1						
	comp=E,2.0nm,1.1s						
GNI	**Garni**	**17.59**	**68**	LR	LR	18 10 49.6	
	comp=E,67nm,20.6s,baz=284,slow=42						
ESDC	**Sonseca Array**	**21.98**	**289**	P	**P**	**18 03 40.0**	**+1.5**
	comp=E,0.7nm,0.7s,baz=87,slow=11,SNR=4.4						
	comp=E,0.7nm,0.7s						
HFS	**Hagfors**	**25.50**	**349**	P	**P**	**18 04 12.0**	**-0.1**
	comp=E,1.6nm,0.6s,baz=136,slow=9.3,SNR=5.5						
	comp=E,1.6nm,0.6s						
FINES	**FINESS Array B**	**26.10**	**3**	P	**P**	**18 04 16.5**	**-1.0**
	comp=E,2.3nm,1.0s,baz=168,slow=10,SNR=5.8						
	comp=E,2.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**26.95**	**326**	P	**P**	**18 04 28.2**	**+3.0**
	comp=E,1.0nm,0.6s,baz=128,slow=7.9,SNR=2.9						
GEYT	**Alibeck**	**27.95**	**74**	P	**P**	**18 04 34.3**	**-0.2**
	comp=E,1.4nm,0.5s,baz=280,slow=8.6,SNR=3.2						
	comp=E,1.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.52**	**227**	P	**P**	**18 04 49.0**	**+0.5**
	comp=E,0.9nm,0.6s,baz=36,slow=8.5,SNR=4.1						
	comp=E,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**34.19**	**1**	P	**P**	**18 05 27.7**	**-1.3**
	comp=E,1.2nm,0.7s,baz=183,slow=9.4,SNR=5.3						
	comp=E,1.2nm,0.7s						
BVAR	**Borovoye Array**	**37.28**	**47**	P	**P**	**18 05 54.6**	**-1.1**
	comp=E,0.8nm,0.7s,baz=258,slow=7.0,SNR=5.0						
	comp=E,0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**42.15**	**51**	P	**P**	**18 06 35.4**	**-0.7**
	comp=E,2.1nm,0.7s,baz=279,slow=8.5,SNR=25						
	comp=E,2.1nm,0.7s						
SPITS	**Spitsbergen Ar**	**42.96**	**358**	P	**P**	**18 06 42.8**	**+0.4**
	comp=E,6.1nm,0.9s,baz=139,slow=11,SNR=5.8						
	comp=E,6.1nm,0.9s						
MKAR	**Makanchi Array**	**44.91**	**57**	P	**P**	**18 06 57.9**	**-0.6**
	comp=E,0.7nm,0.4s,baz=270,slow=8.0,SNR=16						
	comp=E,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**45.93**	**46**	P	**P**	**18 07 05.3**	**-1.0**
	comp=E,1.0nm,0.4s,baz=258,slow=7.4,SNR=5.0						
	comp=E,1.0nm,0.4s						
SONM	**Songino Array**	**60.50**	**50**	P	**P**	**18 08 53.2**	**-0.5**
	comp=E,0.4nm,0.7s,baz=273,slow=5.8,SNR=3.6						
	comp=E,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**68.06**	**82**	P	**P**	**18 09 43.8**	**+0.3**
	comp=E,0.4nm,0.8s,baz=299,slow=6.4,SNR=4.5						
	comp=E,0.4nm,0.8s						
YKA	**Yellowknife Ar**	**76.72**	**341**	P	**P**	**18 10 34.4**	**+0.2**
	comp=E,0.3nm,0.9s,baz=35,slow=5.7,SNR=3.9						
	comp=E,0.3nm,0.9s						

*HEL **22** 18:08:03.8±0.4, 67.05N×20.69E, h0km, ML2.0, Explosion*
*UPP **22** 18:08:05.4±0.1, 67.07N×20.94E, h0km, ML2.3, Suspected explosion*
*BER **22** 18:08:07.2±1.4, 66.96N×21.12E, h0km, ML1.7, Suspected explosion*
*IDC **22** 18:08:07.2±0.9, 67.06N×21.45E, h0km, mbtmp2.8/4, ML1.9/3, Error ellipse: s-maj=18.7km s-min=8.5km az=114.0*

ISC 22 18:08:05.9±0.8, 67.11N±0.03×20.97E±0.02, h0km, n46, σ1§15/67, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**274**	P	**Pg**	**18 08 08.5**	**-0.3**
DUNU				S	**Sg**	**18 08 10.7**	**-0.2**
MASU	**Masugnsbyn**	**0.53**	**49**	P	**Pg**	**18 08 16.2**	**+0.1**
MASU				S	**Sg**	**18 08 23.6**	**+0.8**
PAJU	**Pajala**	**0.84**	**95**	P	**Pg**	**18 08 21.2**	**-0.8**
PAJU	**Pajala**	**0.84**	**95**	PG	**Pg**	**18 08 20.9**	**-1.2**
	baz=274						
PAJU				SG	**Sg**	**18 08 33.2**	**+0.2**
KUA	**Kurravaara**	**0.88**	**344**	P	**Pg**	**18 08 22.2**	**-0.6**
RATU	**Laukkuluspa**	**0.89**	**324**	P	**Pg**	**18 08 22.2**	**-0.7**
SALU	**Saltoluokta**	**0.99**	**287**	P	**Pg**	**18 08 23.9**	**-1.0**
LANU	**Lannavaara**	**1.02**	**22**	P	**Pg**	**18 08 24.7**	**-0.7**
LANU	**Lannavaara**	**1.02**	**22**	PB	**Pg**	**18 08 24.6**	**-0.8**
LANU				SN	**Sn**	**18 08 41.5**	**-1.0**
KLF	**Kolari**	**1.18**	**83**	PG	**Pg**	**18 08 27.4**	**-1.0**
	baz=265						
KLF				MSG		18 08 43.0	
	comp=Z,23nm,0.2s						
KLF				SB	**Sb**	**18 08 44.6**	**-0.2**
KALU	**Kalix**	**1.58**	**142**	P	**Pn**	**18 08 33.8**	**-1.3**
KALU	**Kalix**	**1.58**	**142**	PN	**Pn**	**18 08 33.7**	**-1.3**
	baz=320						
SJUU	**Sjulsmark**	**1.63**	**171**	P	**Pn**	**18 08 34.5**	**-1.3**
HEF	**Hetta**	**1.66**	**37**	*e*P	**Pn**	**18 08 36.2**	**0.0**
HEF				*e*S	**Sg**	**18 08 59.2**	**+0.2**
HEF	**Hetta**	**1.66**	**37**	PG	**Pn**	**18 08 36.0**	**-0.3**
	baz=220						
HEF				MSG		18 08 56.7	
	comp=Z,7.7nm,0.2s						
HEF				SG	**Sg**	**18 09 00.3**	**+1.2**
TOF	**Tornio**	**1.69**	**126**	PG	**Pn**	**18 08 35.9**	**-0.8**
TOF				MSG		18 08 56.1	
	comp=Z,17nm,0.2s						
TOF				SN	**Sn**	**18 08 59.4**	**+0.4**
KIF	**Kilpisjarvi**	**1.90**	**358**	*e*P	**Pb**	**18 08 41.1**	**-0.3**
KIF				*e*S	**Sg**	**18 09 07.0**	**0.0**
RNF	**Rovaniemi**	**2.06**	**102**	PG	**Pn**	**18 08 42.0**	**+0.3**
RNF				SG	**Sb**	**18 09 11.1**	**+1.0**
KTK1	**Kautokeino**	**2.09**	**23**	*e*P	**Pb**	**18 08 43.9**	**-0.8**
KTK1				IAML		18 09 24.7	
	comp=Z,4.2nm,0.2s						
KTK1	**Kautokeino**	**2.09**	**23**	PG	**Pb**	**18 08 43.3**	**-1.3**
KTK1				SG	**Sg**	**18 09 13.2**	**+0.2**
SGF	**Sodankyl**	**2.18**	**79**	PG	**Pn**	**18 08 44.2**	**+0.7**
	baz=258						
SGF				SG	**Sb**	**18 09 14.7**	**+0.9**
FAUS	**Fauske**	**2.23**	**280**	*e*P	**Pn**	**18 08 45.1**	**+1.2**
FAUS				IAML		18 09 18.2	
	comp=Z,21nm,0.2s						
STEI	**Steigen**	**2.35**	**293**	*e*P	**Pn**	**18 08 46.7**	**+1.1**
JETT	**Jettan, Norway**	**2.46**	**355**	*e*P	**Pb**	**18 08 49.7**	**-1.4**
JETT				IAML		18 09 26.5	
	comp=Z,11nm,0.2s						
RANF	**Ranua**	**2.57**	**113**	PB	**Pn**	**18 08 48.9**	**+0.1**
RANF				SG	**Sb**	**18 09 25.5**	**+0.5**
TRO	**Tromso**	**2.64**	**344**	*e*P	**Pn**	**18 08 50.0**	**+0.3**
TRO				IAML		18 09 34.4	
	comp=Z,5.4nm,0.2s						
OUL	**Oulu**	**2.86**	**133**	PB	**Pn**	**18 08 53.8**	**+1.1**
OUL				SG	**Sb**	**18 09 31.2**	**-1.9**
OBF4	**Vikkela, Lumij**	**2.86**	**142**	PB	**Pn**	**18 08 52.9**	**+0.2**
	baz=322						
OBF4				MSG		18 09 28.5	
	comp=Z,4.5nm,0.2s						
OBF0	**Syolatti, Pyha**	**2.95**	**151**	PG	**Pn**	**18 08 55.4**	**+1.5**
OBF0				MSG		18 09 30.6	
	comp=Z,4.0nm,0.2s						
ARA0	**ARCESS Array S**	**2.96**	**33**	*e*P	**Pn**	**18 08 54.7**	**+0.6**
ARA0				IAML		18 09 44.9	
	comp=Z,3.6nm,0.3s						
ARA0	**ARCESS Array S**	**2.96**	**33**	SN	**Sn**	**18 09 29.5**	**-0.8**
ARCES	**ARCESS Array B**	**2.96**	**33**	Pn	**Pn**	**18 08 54.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=209,slow=14,SNR=49						
ARCES				Sn	**Sn**	**18 09 31.9**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=210,slow=23,SNR=9.9						
	comp=Z,1.7nm,0.2s						
OBF8	**Ulkokalla**	**2.97**	**159**	PB	**Pn**	**18 08 54.1**	**-0.2**
OBF8				MSG		18 09 30.9	
	comp=Z,4.1nm,0.2s						
KMNF	**Kaamanen**	**3.05**	**45**	PN	**Pn**	**18 08 55.5**	**+0.2**
KMNF				SB	**Sb**	**18 09 36.6**	**-1.9**
RAJF	**Raja-Jooseppi**	**3.11**	**60**	PB	**Pn**	**18 08 59.0**	**+2.9**
RAJF				SG	**Sb**	**18 09 42.6**	**+2.3**
OUF	**Merijarvi**	**3.16**	**149**	PB	**Pn**	**18 08 57.1**	**+0.2**
UMAU	**Umeaa**	**3.24**	**182**	PB	**Pn**	**18 08 57.6**	**-0.3**
OLKF	**Oulanka, Finla**	**3.44**	**99**	PN	**Pn**	**18 09 01.3**	**+0.6**
MSF	**Maaselka**	**3.45**	**107**	PN	**Pn**	**18 09 01.2**	**+0.4**
MSF				SG	**Sb**	**18 09 53.1**	**+2.9**
KEV	**Kevo**	**3.47**	**37**	*e*P	**Pn**	**18 09 01.4**	**+0.3**
KEV	**Kevo**	**3.47**	**37**	PN	**Pn**	**18 09 01.3**	**+0.3**
HUSU	**Husum**	**3.86**	**192**	PB	**Pn**	**18 09 06.6**	**+0.2**
HUSU				SB	**Sn**	**18 09 53.8**	**+1.5**
VAF	**Ylistaro**	**4.15**	**169**	SB	**Sn**	**18 10 03.4**	**+3.9**
FINES	**FINESS Array B**	**6.11**	**156**	Pn	**Pn**	**18 09 37.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=7.2						
FINES				Sn	**Sn**	**18 10 46.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=348,slow=26,SNR=1.3						
	comp=Z,0.7nm,0.7s						
NOA	**NORSAR Array B**	**7.43**	**220**	Pn	**Pn**	**18 09 55.4**	**-0.1**
	baz=22,slow=15,SNR=3.9						
NOA				Sn	**Sn**	**18 11 21.4**	**+0.9**
	baz=24,slow=16,SNR=4.6						
	comp=Z,0.1nm,0.3s						
HFS	**Hagfors**	**7.71**	**208**	Pn	**Pn**	**18 09 58.7**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=21,slow=14,SNR=1.5						

IDC 22 18:33:07.8±50.0, 21.97S×174.42W, h0km, mb3.9/3, mbtmp3.9/3, MS3.1/1, Error ellipse: s-maj=939.4km s-min=163.8km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.91**	**203**	LR	LR	18 37 42.8	
	comp=Z,139nm,20.9s,baz=284,slow=35						
STKA	**Stephens Creek**	**40.21**	**246**	P	P	18 40 44.5	-1.7
	1.4nm,0.6s,baz=102,slow=12,SNR=6.6						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**47.45**	**258**	P	P	18 41 44.6	0.0
	0.5nm,0.6s,baz=92,slow=6.5,SNR=10						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**47.72**	**263**	P	P	18 41 47.8	+1.0
	1.4nm,0.5s,baz=98,slow=8.2,SNR=28						
	1.4nm,0.5s						

*NEIC **22** 18:43:27.6±0.6, 19.40N±0.01×155.233W±0.005, h2km±4km, Error ellipse: s-maj=1.8km s-min=0.7km az=179.0*
HVO 22 18:43:27.0±0.4, 19.388N±0.009×155.247W±0.008, h1km±2km, ML2.7/19, ML2.1/44(NEIC), Error ellipse: s-maj=1.5km s-min=0.8km az=210.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKO	**Keanakako`i**	**0.02**	**298**		Pg	18 43 28.1	+0.6
RIM	**Rim**	**0.03**	**286**		Pg	18 43 28.2	+0.6
BYL	**Byron's Ledge**	**0.03**	**333**		Pg	18 43 28.2	+0.6
PUH	**Pauahi**	**0.03**	**116**		Pg	18 43 28.2	+0.6
PUH				IAML		18 43 28.8	
	comp=N,3µm,0.2s						
HATHI	**Halema`uma`u T**	**0.04**	**340**		Pg	18 43 28.6	+0.8
NPH	**North Pit**	**0.04**	**307**		Pg	18 43 28.4	+0.6
NPH				IAML		18 43 28.7	
	comp=E,3µm,0.1s						
NPH				IAML		18 43 29.2	
	comp=N,2µm,0.2s						
SBLHI	**Steaming Bluff**	**0.04**	**333**		Pg	18 43 28.6	+0.8
SBLHI				IAML		18 43 29.0	
	comp=N,3µm,0.3s						
SDHHI	**Sand Hill**	**0.04**	**272**		Pg	18 43 28.7	+0.8
OBL	**Observatory Le**	**0.04**	**310**		Pg	18 43 28.7	+0.8
OBL				IAML		18 43 29.3	
	comp=N,3µm,0.3s						
OBL				IAML		18 43 29.4	
	comp=E,3µm,0.2s						
UWB	**Uwekahuna B**	**0.05**	**321**		Pg	18 43 28.5	+0.6
WRMHI	**West Rim**	**0.05**	**290**		Pg	18 43 28.7	+0.6
WRMHI				IAML		18 43 29.7	
	comp=N,2µm,0.2s						
UWE	**Uwekahuna**	**0.05**	**307**		Pg	18 43 29.0	+0.8
UWE				IAML		18 43 30.0	
	comp=N,2µm,0.2s						
KNHH	**Kane Nui o Ham**	**0.07**	**97**		Pg	18 43 29.2	+0.7
RSD	**Rainshed**	**0.08**	**339**		Pg	18 43 29.3	+0.7
RSD				IAML		18 43 30.9	
	comp=E,1µm,0.3s						
HLP	**Hilina Pali**	**0.11**	**212**		Pg	18 43 30.0	+0.9
HLP				IAML		18 43 32.4	
	comp=N,942nm,0.3s						
STCH	**Steam Cracks**	**0.12**	**91**		Pg	18 43 29.9	+0.7
STCH				IAML		18 43 33.0	
	comp=N,891nm,0.1s						
NPOC	**North of Pu`u**	**0.13**	**88**	Pg	Pg	18 43 29.5	0.0
NPOC				IAML		18 43 33.6	
	comp=E,809nm,0.4s						
NPOC				IAML		18 43 34.1	
	comp=N,806nm,0.4s						
JCUZ	**Jacuzzi**	**0.14**	**92**	Pg	Pg	18 43 29.8	+0.2
JCUZ				IAML		18 43 33.8	
	comp=E,569nm,0.5s						
JCUZ				IAML		18 43 34.0	
	comp=N,550nm,0.7s						
MLH	**Mauna Loa**	**0.17**	**309**		Pg	18 43 31.0	+0.7
MLH				IAML		18 43 35.2	
	comp=N,386nm,0.3s						
MLH				IAML		18 43 35.2	
	comp=E,512nm,0.4s						
HTC	**Hot Caves**	**0.21**	**223**		Pg	18 43 31.7	+0.7
JOKA	**Jonika Flow**	**0.23**	**79**		Pg	18 43 31.8	+0.3
HMH	**Humu`ula Sheep**	**0.31**	**314**	Pg	Pg	18 43 33.5	+0.5
HMH				IAML		18 43 40.3	
	comp=N,241nm,2.6s						
HMH				IAML		18 43 42.5	
	comp=E,209nm,3.0s						
MLOA	**Mauna Loa Obse**	**0.34**	**295**	Pg	Pg	18 43 34.0	+0.3
MLOA				IAML		18 43 40.8	
	comp=N,196nm,1.6s						
MLOA				IAML		18 43 41.5	
	comp=E,277nm,0.4s						
MWH	**Moku'aweowe**	**0.34**	**286**	Pg	Pg	18 43 34.1	+0.4
KHU	**Kahuku**	**0.38**	**248**	Pg	Pg	18 43 34.9	+0.7
KHU				IAML		18 43 41.5	
	comp=N,247nm,0.6s						
ALEP	**Alea Permanent**	**0.40**	**292**		Pg	18 43 35.0	+0.2
ALEP					Sg	18 43 41.0	+0.9
HUH	**Hualalai**	**0.63**	**298**		Pg	18 43 39.2	+0.2
KHLU	**Kahalu`u**	**0.64**	**289**		Pg	18 43 39.2	-0.1

*HEL **22** 18:44:07.0±0.3, 67.75N×20.08E, h0km, ML1.5, Explosion*
*UPP **22** 18:44:08.1±0.0, 67.84N×20.22E, h0km, ML2.8, Confirmed Induced event*
*DNK **22** 18:44:08.4±0.8, 67.83N×20.24E, h0km, ML2.8(UPP), Suspected explosion*

ISC 22 18:44:08.5±0.8, 67.83N±0.02×20.26E±0.03, h0km, n37, σ1§04/49, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**13**	P	**Pg**	**18 44 10.7**	**-0.2**
KUA				S	**Sg**	**18 44 12.6**	**0.0**
KUA	**Kurravaara**	**0.13**	**13**	P	**Pg**	**18 44 10.7**	**-0.2**
KUA				S	**Sg**	**18 44 12.6**	**0.0**
RATU	**Laukkuluspa**	**0.25**	**269**	P	**Pg**	**18 44 12.9**	**-0.5**
RATU	**Laukkuluspa**	**0.25**	**269**	P	**Pg**	**18 44 12.9**	**-0.5**
LANU	**Lannavaara**	**0.69**	**71**	P	**Pg**	**18 44 21.4**	**-0.4**
LANU	**Lannavaara**	**0.69**	**71**	P	**Pg**	**18 44 21.4**	**-0.4**
LANU	**Lannavaara**	**0.69**	**71**	PG	**Pg**	**18 44 20.6**	**-1.1**
LANU				SG	**Sg**	**18 44 31.3**	**+0.6**
DUNU	**Dundret**	**0.72**	**170**	P	**Pg**	**18 44 21.9**	**-0.4**
DUNU	**Dundret**	**0.72**	**170**	P	**Pg**	**18 44 21.9**	**-0.4**
MASU	**Masugnsbyn**	**0.76**	**119**	P	**Pg**	**18 44 22.9**	**-0.2**
MASU	**Masugnsbyn**	**0.76**	**119**	P	**Pg**	**18 44 22.9**	**-0.2**
SALU	**Saltoluokta**	**0.81**	**237**	P	**Pg**	**18 44 23.2**	**-0.8**
SALU	**Saltoluokta**	**0.81**	**237**	P	**Pg**	**18 44 23.2**	**-0.8**
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*P	**Pg**	**18 44 30.8**	**-0.6**
KIF	**Kilpisjarvi**	**1.20**	**9**	PG	**Pg**	**18 44 30.5**	**-0.9**
KIF				SG	**Sg**	**18 44 46.9**	**0.0**
KIF				MSG		18 44 47.2	
	comp=Z,6.4nm,0.2s						
PAJU	**Pajala**	**1.37**	**125**	P	**Pg**	**18 44 32.5**	**-2.2**
PAJU	**Pajala**	**1.37**	**125**	P	**Pg**	**18 44 32.5**	**-2.2**
PAJU	**Pajala**	**1.37**	**125**	PN	**Pg**	**18 44 32.5**	**-2.2**
	baz=302						
PAJU				SN	**Sg**	**18 44 52.4**	**+0.1**
HEF	**Hetta**	**1.40**	**64**	*e*P	**Pn**	**18 44 33.4**	**-1.9**
HEF	**Hetta**	**1.40**	**64**	PG	**Pn**	**18 44 34.0**	**-1.3**
	baz=244						
HEF				MSG		18 44 52.1	
	comp=Z,3.0nm,0.2s						
HEF				SG	**Sg**	**18 44 52.6**	**-0.8**
KLF	**Kolari**	**1.54**	**111**	PN	**Pn**	**18 44 36.5**	**-0.7**
KLF				MSG		18 44 54.4	
	comp=Z,2.9nm,0.2s						
KLF				SN	**Sg**	**18 44 59.1**	**+1.1**
KTK1	**Kautokeino**	**1.62**	**41**	PG	**Pn**	**18 44 38.1**	**-0.1**
KTK1				SN	**Sg**	**18 45 01.5**	**+1.1**
TRO	**Tromso**	**1.88**	**346**	PG	**Pn**	**18 44 42.0**	**+0.3**
TRO				SG	**Sb**	**18 45 06.7**	**-0.8**
KALU	**Kalix**	**2.33**	**147**	PG	**Pn**	**18 44 48.2**	**+0.2**
TOF	**Tornio**	**2.38**	**136**	PG	**Pn**	**18 44 49.2**	**+0.5**
TOF				MSG		18 45 17.2	
	comp=Z,1.5nm,0.2s						
SGF	**Sodankyl**	**2.43**	**96**	PG	**Pb**	**18 44 51.3**	**-1.7**
RNF	**Rovaniemi**	**2.55**	**116**	PG	**Pn**	**18 44 52.4**	**+1.3**
RNF				SG	**Sb**	**18 45 27.6**	**+0.6**
ARA0	**ARCESS Array S**	**2.57**	**46**	PN	**Pn**	**18 44 51.6**	**+0.2**
	baz=235						
ARA0				SN	**Sn**	**18 45 24.4**	**+1.1**
KMNF	**Kaamanen**	**2.81**	**59**	SN	**Sn**	**18 45 30.4**	**+1.1**
RAJF	**Raja-Jooseppi**	**3.08**	**74**	PG	**Pb**	**18 45 04.6**	**+0.5**
RAJF				SB	**Sb**	**18 45 41.5**	**-0.6**
KEV	**Kevo**	**3.12**	**49**	SN	**Sn**	**18 45 38.0**	**+1.2**
RANF	**Ranua**	**3.15**	**122**	PB	**Pn**	**18 45 00.7**	**+1.4**
VRF	**Varrio**	**3.55**	**87**	PG	**Pb**	**18 45 12.5**	**+0.4**
OLKF	**Oulanka, Finla**	**3.88**	**109**	PG	**Pb**	**18 45 18.6**	**+0.8**
UMAU	**Umeaa**	**3.97**	**177**	PB	**Pn**	**18 45 12.3**	**+1.7**
KU6	**Riekki**	**4.20**	**111**	PG	**Pb**	**18 45 23.9**	**+0.7**
	baz=297						
HUSU	**Husum**	**4.53

1.1nm,0.6s,baz=327,slow=12,SNR=5.5
1.1nm,0.6s

IDC 22 19:14:24.8±1.8, 6.72S×129.01E, h0km, mb3.4/2, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=121.6km s-min=29.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.13**	**159**	Pn	Pn	19 17 45.9	-0.4
	0.3nm,0.3s,baz=338,slow=13,SNR=23						
WRA				Sn	Sn	19 20 07.0	-17
	0.9nm,0.3s,baz=327,slow=25,SNR=8.9						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.49**	**165**	P	Pn	19 18 30.6	+0.3
	0.4nm,0.3s,baz=339,slow=10,SNR=55						
ASAR				S	Sn	19 21 30.9	-15
	0.5nm,0.7s,baz=345,slow=25,SNR=3.0						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	19 25 22.1	-0.4
	0.2nm,0.5s,baz=126,slow=7.3,SNR=6.4						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**71.76**	**329**	P	P	19 25 49.4	+0.5
	0.3nm,0.6s,baz=131,slow=5.0,SNR=5.8						
	0.3nm,0.6s						

GUC 22 19:31:13.5±0.5, 37.06S×75.46W, h17km±9km, ML3.7, 4C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**1.84**	**138**	*i* P	Pn	19 31 44.6	+0.3
BI04				IAML		19 32 05.1	
	comp=E,842nm,0.3s						
BI05	**Punta Hualpn**	**1.85**	**81**	*i* P	Pn	19 31 44.5	+0.1
BI05				IAML		19 32 06.2	
	comp=N,1μm,0.2s						
LC02	**Puerto Saavedr**	**2.38**	**137**	*i* P	Pn	19 31 52.6	+0.7
LR04	**Corral**	**3.24**	**151**	*i* P	Pn	19 32 04.0	+0.5
BI02	**San Fabin de**	**3.38**	**85**⇑	*i*P	Pn	19 32 06.8	+1.2
BI02				IAML		19 32 49.1	
	comp=N,101nm,0.2s						
ML02	**Panimavida**	**3.51**	**70**	*i* P	Pn	19 32 08.3	+1.0
ML02				IAML		19 32 59.0	
	comp=E,164nm,0.6s						
GO05	**Huala**	**3.52**	**55**	*i* P	Pn	19 32 08.5	+1.0
LR03	**Panguipulli**	**3.55**	**137**	*i* P	Pn	19 32 09.0	+1.1
BO03	**Pichilemu**	**3.83**	**49**	*i* P	Pn	19 32 12.8	+1.1
GO06	**Curarrehue**	**4.02**	**130**⇑	*i*P	Pn	19 32 16.5	+2.0
LR05	**Currie**	**4.16**	**140**	*i* P	Pn	19 32 17.6	+1.3
BO02	**Sierra Bellavi**	**4.42**	**61**⇑	*i*P	Pn	19 32 21.5	+1.6
BO01	**Tunca**	**4.45**	**55**	*i* P	Pn	19 32 22.1	+1.9
BO04	**La Punta**	**5.01**	**54**	*i* P	Pn	19 32 30.2	+2.3
LMEL	**Las Melosas**	**5.36**	**55**	*i* P	Pn	19 32 35.7	+2.8
FCH	**Farellones**	**5.64**	**50**⇑	*i*P	Pn	19 32 38.0	+1.1

IDC 22 19:43:38.2±3.5, 16.30S×178.81W, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=198.2km s-min=30.5km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.56**	**258**	P	P	19 51 52.3	-0.1
	0.4nm,0.8s,baz=92,slow=7.5,SNR=8.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**44.88**	**253**	P	P	19 51 54.6	-0.2
	0.6nm,0.3s,baz=87,slow=7.9,SNR=10						
	0.6nm,0.3s						
ILAR	**Eielson Array**	**84.42**	**13**	P	P	19 56 12.3	+0.1
	0.2nm,0.7s,baz=229,slow=5.4,SNR=2.2						
	0.2nm,0.7s						
PDAR	**Pinedale Array**	**86.46**	**44**	P	P	19 56 23.1	-0.1
	0.1nm,0.5s,baz=232,slow=2.2,SNR=1.8						
	0.1nm,0.5s						

*CATAC **22** 20:01:08.7±0.2, 9.78N×83.89W, h4km±1km, ML2.9*
*UPA **22** 20:01:08.9±0.3, 9.77N×83.98W, h4km±3km, MW4.1*
ISC 22 20:01:08.3±0.8, 9.78N±0.02×83.92W±0.02, h7km±6km, n26, σ0§69/43, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIMA	**Rio Macho**	**0.06**	**104**	*i* P	**Pg**	**20 01 09.8**	**-0.4**
RIMA				IAML		20 01 09.9	
	comp=Z,39μm,1.0s						
RIMA				*i* S	**Sg**	**20 01 10.9**	**-0.6**
LCR2	**La Lucha 2**	**0.09**	**246**	*i* P	**Pg**	**20 01 11.3**	**+0.6**
LCR2				*i* S	**Sg**	**20 01 13.2**	**+0.8**
LCR2				IAML		20 01 13.4	
	comp=Z,6μm,1.0s						
OCM	**Ochomogo**	**0.12**	**340**	*i* P	**Pg**	**20 01 11.2**	**+0.1**
OCM				*i* S	**Sg**	**20 01 13.3**	**+0.3**
OCM				IAML		20 01 13.8	
	comp=Z,17μm,1.0s						
VIRE	**VIRE**	**0.19**	**6**	*i* P	**Pg**	**20 01 12.6**	**+0.4**
VIRE				*i* S	**Sg**	**20 01 15.7**	**+0.7**
VIRE				IAML		20 01 18.9	
	comp=Z,12μm,1.0s						
HAYA	**Volcan Irazu**	**0.21**	**20**	*i* P	**Pg**	**20 01 13.0**	**+0.3**
HAYA				IAML		20 01 17.3	
	comp=Z,7μm,1.0s						
VTRT	**Volcan Turrial**	**0.25**	**29**	*i* P	**Pg**	**20 01 13.6**	**+0.2**
VTRT				IAML		20 01 28.1	
	comp=Z,2μm,1.0s						
CDM	**Cerro de Muert**	**0.27**	**146**	*i* P	**Pg**	**20 01 14.3**	**+0.5**
CDM				IAML		20 01 14.4	
	comp=Z,2μm,1.0s						
CDM				*i* S	**Sg**	**20 01 18.6**	**+1.1**
VTCV	**VTCV, Calle Va**	**0.28**	**43**	*i* P	**Pg**	**20 01 14.1**	**+0.3**
VTCV				*i* S	**Sg**	**20 01 18.6**	**+1.0**
VTCV				IAML		20 01 19.8	
	comp=Z,4μm,1.0s						
VTUN	**Crater Central**	**0.28**	**32**	*i* P	**Pg**	**20 01 14.3**	**+0.2**
VTUN				IAML		20 01 15.6	
	comp=Z,2μm,1.0s						
VTUN				*i* S	**Sg**	**20 01 18.9**	**+1.0**
VTUC	**Crater, Volcan**	**0.29**	**32**	*i* P	**Pg**	**20 01 14.3**	**+0.2**
VTUC				IAML		20 01 17.3	
	comp=Z,2μm,1.0s						
VTUC				*i* S	**Sg**	**20 01 18.8**	**+0.8**
HDC3	**Heredia 3**	**0.29**	**319**	*i* P	**Pb**	**20 01 14.9**	**-1.0**
HDC3				IAML		20 01 17.1	
	comp=Z,1μm,1.0s						
HDC3				*i* S	**Sb**	**20 01 19.7**	**-1.3**
CPMI	**Catarata Coope**	**0.68**	**318**	*i* P	**Pb**	**20 01 22.0**	**-0.5**
CPMI				IAML		20 01 37.5	
	comp=Z,160nm,1.0s						
JACO	**JACO, Garabito**	**0.74**	**261**	*i* P	**Pb**	**20 01 23.0**	**-0.5**
JACO				*i* S	**Sb**	**20 01 33.8**	**0.0**
JACO				IAML		20 01 34.4	
	comp=Z,330nm,1.0s						
SRBA	**San Rafael, Bu**	**0.77**	**135**	*i* P	**Pg**	**20 01 22.4**	**-0.8**
SRBA				*i* S	**Sg**	**20 01 32.4**	**-0.9**
SRBA				IAML		20 01 34.6	
	comp=Z,290nm,1.0s						
LAFE	**Finca La Fe, P**	**0.98**	**272**	*i* P	**Pn**	**20 01 28.0**	**-0.4**
LAFE				IAML		20 01 40.1	
	comp=Z,1.7nm,1.0s						
LAFE				*i* S	**Sn**	**20 01 42.8**	**+0.3**
PLAN	**Los Planes de**	**1.13**	**168**	*i* P	**Pn**	**20 01 31.4**	**+0.9**
PLAN				IAML		20 01 51.0	
	comp=Z,520nm,1.0s						
JTS	**Las Juntas de**	**1.14**	**297**	*e*P	**Pb**	**20 01 29.6**	**-0.7**
JTS				*e*S	**Sb**	**20 01 45.2**	**-0.1**
BRU2	**Volcan**	**1.56**	**129**	*e*P	**Pb**	**20 01 36.9**	**-0.6**
BRU2				*e*S	**Sg**	**20 01 59.4**	**+1.0**
BRU2	**Volcan**	**1.56**	**129**	*i* P	**Pb**	**20 01 36.9**	**-0.6**
BRU2				IAML		20 02 01.9	
	comp=Z,220nm,1.0s						
INDI	**Punta indio, G**	**1.56**	**273**	*i* P	**Pb**	**20 01 37.0**	**-0.6**
INDI				IAML		20 02 03.0	
	comp=Z,140nm,1.0s						
BC3P	**Paso Ancho**	**1.61**	**126**	*e*P	**Pb**	**20 01 38.5**	**+0.1**
BC3P				*e*S	**Sg**	**20 02 00.9**	**+0.9**
ORTG	**Ortega, Santa**	**1.62**	**291**	*i* P	**Pn**	**20 01 37.6**	**+0.2**
ORTG				IAML		20 02 00.6	
	comp=Z,55nm,1.0s						
BCO2	**Palmira**	**1.73**	**127**	*e*P	**Pb**	**20 01 40.0**	**-0.5**
BCO2				*e*S	**Sg**	**20 02 04.1**	**+0.1**
SAJU	**San Juanillo,**	**1.79**	**279**	*i* P	**Pb**	**20 01 40.7**	**-0.7**
SAJU				IAML		20 02 11.9	
	comp=Z,51nm,1.0s						
HZTE	**Horizontes, Gu**	**1.89**	**299**	*i* P	**Pb**	**20 01 42.8**	**-0.4**
HZTE				IAML		20 02 22.0	
	comp=Z,150nm,1.0s						
CHGR2	**Aguacate**	**1.94**	**115**	*e*P	**Pb**	**20 01 42.7**	**-1.3**
CHGR2				*e*S	**Sb**	**20 02 08.8**	**+0.4**

*IPEC **22** 20:03:06.3±0.3, 50.25N×19.10E, h1km, ML2.7/4, Error ellipse: s-maj=2.5km s-min=1.9km az=167.0*
*PRU **22** 20:03:08.3, 50.26N×18.95E, h0km*
*VIE **22** 20:03:09.4±1.9, 50.29N×18.66E, h0km, mb2.8/7, ml2.6/6, ms3.6/2, Error ellipse: s-maj=12.4km s-min=9.6km az=166.0, Suspected Mining induced.*
ISC 22 20:03:07.2±0.8, 50.29N±0.03×18.99E±0.02, h0km, n53, σ1§41/77, 9C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.52**	**97**	*e*Pg	**Pg**	**20 03 17.6**	**+0.4**
OJC				*e*Sg	**Sg**	**20 03 25.4**	**+1.4**
RAC	**Raciborz**	**0.55**	**249**	*e*PG	**Pb**	**20 03 19.4**	**-0.3**
RAC				*e*SG	**Sb**	**20 03 27.7**	**-0.4**
OKC	**Ostrava-Krasne**	**0.70**	**231**	*e*PG	**Pg**	**20 03 21.1**	**+0.5**
OKC				*e*SG	**Sg**	**20 03 28.6**	**-1.2**
MORC	**Moravsky Berou**	**1.06**	**242**	⇑P	**Pg**	**20 03 27.7**	**+0.2**
MORC				⇓S	**Sb**	**20 03 43.5**	**+0.6**
MORC	**Moravsky Berou**	**1.06**	**242**	*e*Pg	**Pg**	**20 03 27.5**	**0.0**
	baz=64						
MORC				*e*Sg	**Sg**	**20 03 41.0**	**-0.3**
	131nm,0.2s,baz=64						
LANS	**Liptovska Anna**	**1.18**	**165**	*e*PG	**Pg**	**20 03 29.5**	**-0.2**
LANS				*e*SG	**Sb**	**20 03 46.6**	**+0.4**
LANS				*e*LG	Lg	20 03 49.8	
MAUC	**Maruska**	**1.19**	**220**	*e*PG	**Pg**	**20 03 30.0**	**+0.1**
NIE	**Niedzica**	**1.21**	**135**	*e*Pg	**Pg**	**20 03 30.1**	**-0.3**
NIE				*e*Sg	**Sb**	**20 03 48.0**	**+0.8**
KRLC	**Kraliky**	**1.44**	**262**	*e*PG	**Pn**	**20 03 33.8**	**-0.7**
KRLC				*e*SG	**Sg**	**20 03 53.2**	**0.0**
	comp=Z,67nm,0.5s						
JAVC	**Velka Javorina**	**1.67**	**212**	*e*Pn	**Pn**	**20 03 36.7**	**-1.0**
	baz=33						
STHS	**Stebnicka Huta**	**1.70**	**120**	*e*PN	**Pn**	**20 03 38.6**	**+0.5**
DPC	**Dobruska-Polom**	**1.71**	**273**	*e*PG	**Pn**	**20 03 38.4**	**+0.1**
DPC				*e*SG	**Sg**	**20 04 02.2**	**+0.1**
	comp=Z,45nm,0.4s						
VYHS	**Vyhne**	**1.80**	**183**	*e*PN	**Pn**	**20 03 38.4**	**-1.0**
VYHS				*e*SN	**Sb**	**20 04 03.4**	**-0.6**
KSP	**Ksiaz**	**1.81**	**289**	*e*Pg	**Pg**	**20 03 42.4**	**+0.6**
KSP				*e*Sg	**Sg**	**20 04 07.0**	**+1.8**
VRAC	**Vranov**	**1.84**	**239**	⇑P	**Pn**	**20 03 40.2**	**+0.2**
VRAC				⇓S	**Sb**	**20 04 04.7**	**-0.4**
VRAC	**Vranov**	**1.84**	**239**	*e*Pn	**Pn**	**20 03 39.5**	**-0.4**
	baz=59						
VRAC				*e*Sg	**Sb**	**20 04 05.0**	**-0.1**
	55nm,0.3s,baz=59						
CHVC	**Chvalec**	**1.90**	**280**	*e*PG	**Pn**	**20 03 41.2**	**+0.3**
KECS	**Kecovo**	**2.05**	**151**	*e*PN	**Pn**	**20 03 43.6**	**+0.7**
KECS				*e*LG	Lg	20 04 17.3	
KRUC	**Moravsky**	**2.08**	**235**	*e*Pn	**Pn**	**20 03 42.3**	**-1.0**
	baz=55						
KRUC				*e*Sg	**Sg**	**20 04 12.8**	**-1.3**
	37nm,0.3s,baz=55						
CRVS	**Cervenica-Dubn**	**2.12**	**130**	*e*PN	**Pb**	**20 03 45.6**	**-0.9**
MODS	**Modra-Piesok**	**2.22**	**211**	*e*PN	**Pn**	**20 03 44.8**	**-0.4**
MODS				*e*LG	Lg	20 04 27.0	
PSZ	**Piszkesteto**	**2.44**	**166**	⇑P	**Pn**	**20 03 49.5**	**+1.1**
KOLS	**Kolonicke sedl**	**2.53**	**121**	*e*PN	**Pn**	**20 03 49.1**	**-0.4**
KOLS				*e*LG	Lg	20 04 30.6	
GOPC	**GO Pecny, Ondr**	**2.73**	**264**	*e*SG	**Sg**	**20 04 33.9**	**-1.0**
	comp=Z,30nm,0.6s						
PVCC	**Panska Ves**	**2.84**	**277**	*e*PN	**Pn**	**20 03 55.7**	**+2.0**
PRU	**Pruhonice**	**2.88**	**266**	*e*PG	**Pb**	**20 03 58.9**	**-0.4**
PRU				*e*SG	**Sg**	**20 04 38.7**	**-0.9**
	comp=Z,26nm,0.6s						
CONA	**Conrad Observa**	**3.13**	**222**	*e*Pn	**Pn**	**20 03 56.7**	**-1.1**
	0.5nm,0.2s						
CONA				*e*Sn	**Sn**	**20 04 37.2**	**+1.3**
	7.0nm,0.3s						
RONA	**Rosalia, Austr**	**3.14**	**215**	*e*Pn	**Pn**	**20 03 57.6**	**-0.3**
	1.3nm,0.2s						
RONA				*e*Sn	**Sn**	**20 04 36.2**	**+0.1**
	2.9nm,0.2s						
ZVC	**Zvikov**	**3.22**	**257**	*e*PG	**Pb**	**20 04 06.3**	**+1.1**
BRG	**Berggiesshubel**	**3.27**	**282**	Pg	**Pg**	**20 04 09.3**	**-0.5**
BRG				Sg	**Sg**	**20 04 52.9**	**+0.7**
BRG				Amp		20 05 02.0	
	comp=Z,11nm,0.4s						
CKRC	**Cesky Krumlov**	**3.38**	**246**	*e*PN	**Pn**	**20 04 01.9**	**+0.7**
CKRC				*e*PG	**Pb**	**20 04 08.3**	**+0.3**
CKRC				*e*SG	**Sg**	**20 04 53.5**	**-2.3**
	comp=Z,17nm,0.5s						
KHC	**Kasperske Hory**	**3.70**	**254**	*e*PN	**Pn**	**20 04 05.8**	**+0.2**
KHC				*e*PG	**Pb**	**20 04 12.1**	**-1.3**
KHC				*e*SG	**Sg**	**20 05 05.2**	**-0.7**
	comp=Z,21nm,0.4s						
ARSA	**Arzberg**	**3.81**	**218**	Pn	**Pn**	**20 04 09.6**	**+2.6**
	comp=Z,1.8nm,0.6s						
ARSA				Sg	**Sg**	**20 05 09.7**	**+0.4**
	comp=Z,3.0nm,0.4s						
CLL	**Collm**	**3.93**	**287**	*e*Pg	**Pg**	**20 04 23.0**	**+0.5**
CLL				*e*Sg	**Sg**	**20 05 13.0**	**-0.5**
	comp=Z,15nm,0.7s						
MORH	**Mrgy, Hungar**	**4.08**	**183**	⇑P	**Pn**	**20 04 10.3**	**-0.4**
DRGR		**4.28**	**143**	⇑P	**Pn**	**20 04 13.9**	**+0.3**
BIOA	**Bad Ischl, Aus**	**4.38**	**236**	*i* Sg	**Sg**	**20 05 27.1**	**-0.6**
	comp=Z,24nm,0.5s						
BURAR	**Bucovina Array**	**4.90**	**121**	⇑P	**Pn**	**20 04 22.1**	**0.0**
BZS	**Buzias**	**4.99**	**158**	⇑P	**Pn**	**20 04 23.1**	**-0.2**
SURR	**Surduc**	**5.00**	**154**	⇑P	**Pn**	**20 04 23.2**	**-0.2**
LESA	**Schwarzleotal**	**5.06**	**238**	*e*Sg	**Sg**	**20 05 48.4**	**-1.1**
	comp=Z,3.5nm,0.2s						
BSD	**Bornholm Skovb**	**5.43**	**334**	*i* P	**Pn**	**20 04 29.8**	**+0.4**
GZR	**Gura Zlata**	**5.52**	**151**	⇑P	**Pn**	**20 04 31.1**	**+0.5**
ABTA	**Abfaltersbach**	**5.57**	**233**	*e*Sg	**Sg**	**20 06 09.8**	**+3.7**
	comp=Z,8.2nm,0.9s						
WATA	**Walderalm**	**5.72**	**242**	*e*Sg	**Sg**	**20 06 11.8**	**+1.0**
	comp=Z,7.4nm,0.6s						
WTTA	**Wattenberg**	**5.72**	**241**	*e*Sg	**Sg**	**20 06 07.9**	**-3.0**
	comp=Z,8.5nm,0.4s						
MOTA	**Moosalm**	**5.98**	**244**	*e*Sg	**Sg**	**20 06 19.9**	**+0.7**
	comp=Z,11nm,0.6s						
RETA	**Reutte**	**6.11**	**246**	*e*Sg	**Sg**	**20 06 30.1**	**+7.0**
	comp=Z,3.1nm,0.3s						
LUNU	**Lund**	**6.32**	**330**	*e*P	**Pn**	**20 04 41.6**	**+0.2**
FETA	**Feichten**	**6.37**	**242**	*e*Sg	**Sg**	**20 06 35.4**	**+3.7**
	comp=Z,2.6nm,0.5s						
NACGM	**Naroch**	**6.63**	**43**	*e*P	Pn	20 04 40.5	-5.2
DEL	**Delary**	**6.91**	**336**	*i* P	**Pn**	**20 04 50.0**	**+0.4**
DEL				*e*S	**Sn**	**20 06 05.0**	**-3.9**
FABU	**Falkenberg**	**7.69**	**333**	*e*P	**Pn**	**20 05 00.3**	**+0.1**

*IDC **22** 20:21:53.7±2.4, 84.36N×118.54E, h0km, mb3.2/2, mbtmp3.4/3, ML3.7/1, MS3.6/1, Error ellipse: s-maj=528.7km s-min=29.7km az=133.0*
*FCIAR **22** 20:21:53.0, 85.13N×89.09E, h10km, station SVZ has station magnitude of 3.10 station OMEGA has station magnitude of 3.30 station ZFI2 has station magnitude of 3.40*
ISC 22 20:21:57.6±4.1, 84.4N±0.3×85.9E±0.1, h10km, n7, σ1§65/7, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVZ	**Severnaya Zeml**	**5.61**	**149**	*e*P	**Pn**	**20 23 19.8**	**-1.1**
SVZ				*e*S	**Sn**	**20 24 24.8**	**-0.6**
	8.4nm,0.5s						
ZFI2	**Zemlya Franca-**	**5.96**	**254**	*e*P	**Pn**	**20 23 25.5**	**-0.1**
ZFI2				*e*S	**Sn**	**20 24 33.5**	**-0.3**
	13nm,3.3s						
OMEGA	**Omega**	**5.97**	**253**	*e*P	**Pn**	**20 23 25.4**	**-0.5**
OMEGA				*e*S	**Sn**	**20 24 33.8**	**-0.3**
	10.0nm,1.4s						
NRIK	**Noril'sk**	**15.20**	**178**	Pn	**P**	**20 25 39.9**	**+3.0**
	0.3nm,0.3s,baz=8.3,slow=12,SNR=3.6						
	0.9nm,0.3s						
YKA	**Yellowknife Ar**	**32.96**	**17**	P	P	20 28 15.3	-16
	0.1nm,0.4s,baz=351,slow=7.3,SNR=3.0						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**37.81**	**184**	P	P	20 29 21.2	+7.5
	0.3nm,0.8s,baz=13,slow=7.6,SNR=4.4						
	0.3nm,0.8s						
ELK	**Elko**	**54.69**	**20**	LR	LR	20 57 35.4	

comp=Z,50nm,18.3s,baz=108,slow=40

IDC 22 20:51:12.3±5.6, 15.15S×173.68W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=247.6km s-min=37.9km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.92**	**240**	P	P	20 59 21.4	+0.3
	0.6nm,0.4s,baz=74,slow=15,SNR=1.4						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**49.63**	**257**	P	P	21 00 06.1	0.0
	0.3nm,0.6s,baz=90,slow=6.9,SNR=5.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.93**	**252**	P	P	21 00 07.8	-0.5
	0.9nm,0.5s,baz=87,slow=8.0,SNR=17						
	0.9nm,0.5s						
ILAR	**Eielson Array**	**82.25**	**11**	P	P	21 03 35.2	+0.1
	0.2nm,0.6s,baz=216,slow=4.5,SNR=1.9						
	0.2nm,0.6s						

*IDC **22** 21:09:29.4±1.3, 9.87S×160.52E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=27.2km s-min=11.4km az=45.0*
ISC 22 21:09:30.5±1.9, 10.05S±0.3×160.7E±0.4, h10km, n7, σ0§69/6, mb3.6/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.87**	**306**	Pg	Pg	21 09 43.9	-3.4
	875nm,0.3s,baz=146,slow=1.6,SNR=11						
HNR				Lg	Lg	21 09 52.6	
	4μm,0.3s,baz=37,slow=20,SNR=14						
WRA	**Warramunga Arr**	**27.26**	**246**	P	**P**	**21 15 14.3**	**-0.9**
	0.5nm,0.6s,baz=76,slow=9.6,SNR=3.3						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**28.07**	**216**	P	**P**	**21 15 22.2**	**-0.2**
	1.0nm,0.3s,baz=339,slow=17,SNR=2.1						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**28.95**	**239**	P	**P**	**21 15 30.8**	**+0.5**
	0.2nm,0.5s,baz=79,slow=9.5,SNR=1.7						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**67.10**	**295**	P	**P**	**21 20 25.2**	**+0.4**
	0.2nm,0.4s,baz=123,slow=8.2,SNR=2.6						
	0.2nm,0.4s						
SONM	**Songino Array**	**74.88**	**325**	P	**P**	**21 21 11.3**	**-0.3**
	0.3nm,0.6s,baz=132,slow=4.0,SNR=4.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**84.13**	**20**	P	**P**	**21 22 01.5**	**0.0**
	0.3nm,0.6s,baz=251,slow=5.6,SNR=7.7						
	0.3nm,0.6s						

*IDC **22** 21:10:51.0±1.4, 44.99N×106.77W, h0km, mbtmp3.1/3, ML3.7/2, Error ellipse: s-maj=55.4km s-min=10.8km az=136.0*
*NEIC **22** 21:10:51.5±3.0, 45.00N±0.04×106.86W±0.04, h0km±1km, ML2.5/40, Error ellipse: s-maj=7.9km s-min=4.8km az=159.0*
ISC 22 21:10:50.5±1.0, 44.95N±0.04×106.82W±0.04, h0km, n27, σ1§38/27, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLMT	**Red Lodge**	**1.74**	**277**	Pg	**Pg**	**21 11 24.6**	**+0.7**
RLMT				IAML		21 11 54.9	
	40nm,0.6s						
RLMT				IAML		21 12 01.0	
	40nm,0.5s						
LAO	**LASA Array**	**1.79**	**13**		**Pb**	**21 11 23.8**	**-0.5**
LAO				IAML		21 11 51.6	
	85nm,0.5s						
LAO				IAML		21 11 57.4	
	57nm,0.6s						
RSSD	**Black Hills**	**2.16**	**112**		**Pb**	**21 11 30.2**	**-0.3**
RSSD				IAML		21 12 08.3	
	43nm,0.5s						
K22A	**Casper**	**2.31**	**175**		**Pg**	**21 11 34.0**	**-0.6**
K22A				IAML		21 12 07.9	
	comp=E,41nm,0.5s						
YMP	**Mirror Lake Pl**	**2.38**	**266**		**Pb**	**21 11 32.7**	**-1.6**
LKWY	**Lake**	**2.58**	**263**		**Pn**	**21 11 34.8**	**+1.1**
LKWY				IAML		21 12 20.1	
	comp=E,21nm,0.5s						
H17A	**Grant Village**	**2.73**	**260**	Pg	**Pg**	**21 11 42.5**	**-0.4**
YNR	**Norris Junctio**	**2.75**	**267**	Pg	**Pb**	**21 11 41.2**	**+0.5**
YNR				IAML		21 12 22.7	
	comp=E,18nm,0.5s						
YNR				IAML		21 12 26.6	
	comp=N,17nm,0.5s						
YHH	**Holmes Hill**	**2.87**	**268**		**Pg**	**21 11 44.6**	**-0.8**
FLWY	**Flagg Ranch**	**2.90**	**254**	Pg	**Pg**	**21 11 45.3**	**-0.8**
FLWY				IAML		21 12 37.5	
	comp=N,15nm,3.3s						
FLWY				IAML		21 12 55.7	
	comp=N,14nm,4.4s						
BW06	**Boulder Array**	**2.94**	**223**		**Pg**	**21 11 45.5**	**-1.3**
BW06				IAML		21 12 30.1	
	comp=N,10.0nm,0.5s						
PD31	**Pinedale Array**	**2.94**	**223**		**Pg**	**21 11 45.5**	**-1.4**
PDAR	**Pinedale Array**	**2.94**	**223**		**Pg**	**21 11 45.9**	**-1.0**
PDAR	**Pinedale Array**	**2.94**	**223**	Pn	**Pb**	**21 11 43.1**	**-0.8**
	comp=N,2.3nm,0.3s,baz=52,slow=18,SNR=58						
PDAR				Lg	Lg	21 12 24.8	
	comp=N,2.9nm,0.3s,baz=51,slow=28,SNR=17						
	comp=N,1.8nm,0.3s						
MOOW	**Moose Ponds**	**3.06**	**248**	Pn	**Pn**	**21 11 41.9**	**+1.6**
YHL	**Hebgen Lake**	**3.10**	**270**	Pg	**Pg**	**21 11 49.0**	**-0.8**
YHL				IAML		21 12 39.1	
	comp=E,22nm,0.6s						
YHL				IAML		21 12 47.0	
	comp=N,13nm,0.5s						
IMW	**Indian Meadow**	**3.13**	**252**		**Pn**	**21 11 42.2**	**+0.9**
IMW				IAML		21 12 52.3	
	comp=N,15nm,0.6s						
RWWY	**Rawlins**	**3.27**	**185**	Pn	**Pn**	**21 11 44.8**	**+1.6**
RWWY				IAML		21 12 07.5	
	comp=N,11nm,3.5s						
RWWY				IAML		21 12 40.1

JYNG	**Yonagunijimaku**	**0.54**	**105**	P		**Pb**	**21 28 08.5**	**0.0**
JYNG				S		**Sn**	**21 28 17.8**	**-1.2**
EWUT	**Wuta**	**0.56**	**254**	P		**Pb**	**21 28 08.2**	**-0.7**
	baz=263							
EWUT				*eS*		**Sb**	**21 28 16.1**	**-0.3**
	baz=263							
NDS	**Dongshan**	**0.60**	**274**	*eP*		**Pb**	**21 28 08.9**	**-0.6**
	baz=275							
NDS				S		**Sg**	**21 28 18.1**	**+0.5**
	baz=275							
YOJ	**Yonaguni jima**	**0.60**	**103**	P		**Pg**	**21 28 09.7**	**+0.2**
	baz=100							
YOJ				S		**Sg**	**21 28 18.8**	**+1.3**
	baz=100							
YOJ	**Yonaguni jima**	**0.60**	**103**	P		**Pb**	**21 28 09.5**	**+0.1**
YOJ				S		**Sn**	**21 28 19.5**	**-0.9**
ENA	**Nanau**	**0.60**	**254**	P		**Pb**	**21 28 08.8**	**-0.6**
	baz=262							
ENA				*eS*		**Sb**	**21 28 17.1**	**-0.4**
	baz=262							
EAHA	**Aohua**	**0.64**	**245**	*eP*		**Pb**	**21 28 09.7**	**-0.4**
	baz=245							
EAHA				*eS*		**Sb**	**21 28 18.0**	**-0.6**
	baz=245							
TWE	**Neicheng**	**0.65**	**281**	P		**Pb**	**21 28 09.8**	**-0.6**
	baz=275							
TWE				S		**Sg**	**21 28 19.7**	**+0.4**
	baz=275							
SXI1	**Grass Mountain**	**0.67**	**318**	*eP*		**Pg**	**21 28 11.3**	**+0.5**
	baz=327							
SXI1				*eS*		**Sn**	**21 28 21.4**	**-0.8**
	baz=327							
NWF	**Wu-fen Shan**	**0.71**	**311**	*eS*		**Sn**	**21 28 22.6**	**-0.8**
	baz=314							
WFSB	**Wu-fen Shan**	**0.71**	**311**	*eS*		**Sn**	**21 28 22.7**	**-0.6**
	baz=314							
FUSB	**Fushanzhiwuyua**	**0.73**	**283**	*eP*		**Pg**	**21 28 12.1**	**+0.1**
	baz=285							
FUSB				*eS*		**Sb**	**21 28 21.6**	**+0.1**
	baz=285							
ENTT	**Nioudou**	**0.73**	**273**	P		**Pb**	**21 28 11.9**	**0.0**
	baz=266							
ENTT				S		**Sg**	**21 28 21.8**	**0.0**
	baz=266							
LATG	**Datong**	**0.77**	**266**	P		**Pb**	**21 28 12.3**	**-0.2**
	baz=267							
LATG				S		**Sg**	**21 28 23.7**	**+0.6**
	baz=267							
NDT	**Datong Townshi**	**0.78**	**271**	*eP*		**Pb**	**21 28 12.6**	**0.0**
	baz=272							
NDT				S		**Sn**	**21 28 24.2**	**-0.7**
	baz=272							
NWLT	**Wulai**	**0.81**	**283**	*eP*		**Pg**	**21 28 13.4**	**-0.1**
	baz=285							
NWLT				S		**Sg**	**21 28 24.5**	**+0.3**
	baz=285							
TWA	**Mucha**	**0.81**	**298**	*eP*		**Pg**	**21 28 13.6**	**+0.1**
	baz=301							
NACB	**Ninganchiao**	**0.82**	**239**	*eP*		**Pb**	**21 28 12.5**	**-0.8**
	baz=247							
NACB				*eS*		**Sb**	**21 28 22.9**	**-1.3**
	baz=247							
NHDH	**Xindian Distri**	**0.85**	**295**	*eS*		**Sn**	**21 28 26.8**	**+0.2**
	baz=297							
TATO	**Taipei**	**0.89**	**295**	*eP*		**Pg**	**21 28 14.9**	**0.0**
	baz=287							
TATO				*eS*		**Sb**	**21 28 26.2**	**+0.3**
	baz=287							
ETLH	**Xiulin Townshi**	**0.90**	**245**	*eP*		**Pb**	**21 28 14.3**	**-0.4**
	baz=245							
YHNB	**Yeheng**	**0.91**	**275**	*eP*		**Pb**	**21 28 14.9**	**0.0**
	baz=276							
YHNB				*eS*		**Sg**	**21 28 27.4**	**0.0**
	baz=276							
YM01	**YM01**	**0.91**	**307**	*eP*		**Pn**	**21 28 16.2**	**+0.7**
	baz=309							
YM01				*eS*		**Sn**	**21 28 28.0**	**-0.2**
	baz=309							
NNSB	**Datong**	**0.92**	**260**	*eP*		**Pb**	**21 28 14.7**	**-0.3**
	baz=260							
NNSB				*eS*		**Sb**	**21 28 26.9**	**0.0**
	baz=260							
YM08	**YM08**	**0.92**	**310**	*eP*		**Pn**	**21 28 15.7**	**+0.1**
	baz=312							
YM08				*eS*		**Sg**	**21 28 27.5**	**-0.2**
	baz=312							
NNS	**Nan Shan**	**0.92**	**260**	*eP*		**Pb**	**21 28 15.2**	**+0.1**
	baz=261							
NNS				*eS*		**Sg**	**21 28 27.6**	**-0.2**
	baz=261							
NSK	**Sanguang**	**0.93**	**275**	*eP*		**Pb**	**21 28 15.2**	**+0.1**
	baz=276							
NSK				*eS*		**Sg**	**21 28 27.9**	**0.0**
	baz=276							
TWY	**Chenhua**	**0.97**	**314**	*eS*		**Sb**	**21 28 28.3**	**-0.1**
	baz=317							
ETM	**Tongmen**	**1.02**	**232**	*eP*		**Pg**	**21 28 17.9**	**+0.5**
	baz=215							
ETM				*eS*		**Sg**	**21 28 31.1**	**+0.2**
	baz=215							
LXIB	**Xiulin Townshi**	**1.05**	**237**	*eP*		**Pg**	**21 28 17.9**	**-0.1**
	baz=237							
LXIB				*eS*		**Sg**	**21 28 32.2**	**+0.4**
	baz=237							
SHUL	**Shoufeng**	**1.09**	**223**	*eS*		**Sg**	**21 28 34.5**	**+1.3**
	baz=206							
NFF	**Wufeng Townshi**	**1.14**	**272**	*eP*		**Pg**	**21 28 19.9**	**+0.1**
	baz=289							
NFF				*eS*		**Sn**	**21 28 34.0**	**+0.1**
	baz=289							
TWT	**Tachien**	**1.14**	**253**	*eP*		**Pg**	**21 28 20.0**	**+0.2**
	baz=254							
TDCB	**Techi**	**1.16**	**253**	*eS*		**Sg**	**21 28 35.6**	**+0.3**
	baz=253							
CHGB	**Renai**	**1.22**	**244**	*eP*		**Pn**	**21 28 20.0**	**+0.1**
	baz=251							
CHGB				*eS*		**Sg**	**21 28 38.4**	**+1.2**
	baz=251							
LIOB	**Emei**	**1.23**	**272**	*eP*		**Pg**	**21 28 21.4**	**-0.1**
	baz=274							
LIOB				*eS*		**Sg**	**21 28 38.5**	**+0.8**
	baz=274							
NSTT	**Nanjuang**	**1.25**	**272**	*eS*		**Sg**	**21 28 38.6**	**+0.5**
	baz=288							
WARBT	**Fenglin Townsh**	**1.26**	**226**	*eP*		**Pn**	**21 28 19.8**	**-0.4**
	baz=226							
WARBT				*eS*		**Sn**	**21 28 37.0**	**+0.3**
	baz=226							
IRIF	**Iriomote-Funau**	**1.27**	**102**	S		**Sg**	**21 28 38.0**	**-0.6**
WUSB	**Renai**	**1.29**	**242**	*eP*		**Pb**	**21 28 21.9**	**+0.5**
	baz=225							
WUSB				*eS*		**Sb**	**21 28 38.6**	**+0.9**
	baz=225							
HGSD	**Ruisui**	**1.40**	**218**	*eP*		**Pn**	**21 28 22.2**	**0.0**
	baz=204							
HGSD				*eS*		**Sb**	**21 28 41.1**	**+0.3**
	baz=204							
VWDT	**VWDT**	**1.40**	**233**	*eP*		**Pb**	**21 28 23.3**	**0.0**
	baz=216							
VWDT				*eS*		**Sg**	**21 28 42.0**	**-1.0**
	baz=216							
HATJ	**Hateruma jima**	**1.41**	**112**	*eP*		**Pn**	**21 28 22.4**	**0.0**
HATJ				S		**Sb**	**21 28 41.2**	**+0.1**
WCS	**Beigang Elemen**	**1.44**	**248**	*eP*		**Pb**	**21 28 24.5**	**+0.7**
	baz=237							
SSLB	**Suanglung**	**1.52**	**238**	*eP*		**Pb**	**21 28 24.7**	**-0.6**
	baz=223							
SSLB				*eS*		**Sb**	**21 28 45.4**	**+1.1**
	baz=223							
JKRS	**Kuro-shima**	**1.54**	**103**	P		**Pn**	**21 28 24.2**	**+0.2**
JKRS				S		**Sn**	**21 28 43.7**	**+0.2**
TYC	**Yuchr**	**1.54**	**244**	*eP*		**Pb**	**21 28 25.1**	**-0.6**
	baz=227							
TYC				*eS*		**Sb**	**21 28 45.5**	**+0.6**
	baz=227							
YULB	**Yu-li**	**1.55**	**220**	*eP*		**Pn**	**21 28 24.3**	**0.0**
	baz=219							
YULB				*eS*		**Sn**	**21 28 42.7**	**-1.3**
	baz=219							
TWF1	**Yuli**	**1.58**	**219**	*eS*		**Sn**	**21 28 44.1**	**-0.6**
	baz=205							
JIJ	**Ishigaki jima**	**1.63**	**98**	*eP*		**Pn**	**21 28 24.9**	**-0.5**
JIJ				S		**Sn**	**21 28 45.2**	**-0.6**
JISG	**Ishigakijimahi**	**1.77**	**90**	*eP*		**Pn**	**21 28 27.4**	**+0.2**
JISG				*eS*		**Sn**	**21 28 49.1**	**-0.1**
EHD	**Haiduan**	**1.79**	**217**	*eS*		**Sn**	**21 28 50.0**	**0.0**
	baz=231							
ALS	**Alishan**	**1.79**	**233**	*eS*		**Sb**	**21 28 52.5**	**+0.1**
	baz=219							
ELDTW	**Lidau**	**1.87**	**222**	*eP*		**Pn**	**21 28 29.7**	**+0.9**
	baz=208							
ELDTW				*eS*		**Sn**	**21 28 52.7**	**+0.7**
	baz=208							
WCKO	**Fanlu**	**1.98**	**235**	*eS*		**Sb**	**21 28 58.8**	**+1.2**
	baz=234							
STYH	**Taoyuan**	**2.04**	**226**	*eS*		**Sb**	**21 28 57.6**	**-1.5**
	baz=213							
CHN4	**Tsaushan**	**2.05**	**233**	*eP*		**Pb**	**21 28 33.7**	**-0.5**
	baz=216							
CHN4				*eS*		**Sb**	**21 28 59.9**	**+0.5**
	baz=216							
TPUB	**Ta-pu**	**2.05**	**231**	*eP*		**Pb**	**21 28 33.1**	**-1.2**
	baz=219							
TPUB				*eS*		**Sn**	**21 28 57.6**	**+1.3**
	baz=219							
TWK	**Hsinying**	**2.17**	**233**	*eS*		**Sb**	**21 29 03.4**	**+0.3**
	baz=232							
SGST	**Jiashian**	**2.23**	**228**	*eP*		**Pb**	**21 28 35.7**	**-1.6**
	baz=214							
SGST				*eS*		**Sb**	**21 29 04.0**	**-0.5**
	baz=214							

MOS ***22*** *21:36:41.7±0.9,56.˚17N×149.˚21W,h11km,mb4.4/26, Error ellipse: s-maj=11.6km s-min=5.8km az=97.3*

IDC ***22*** *21:36:42.2±0.8,56.˚17N×149.˚29W,h0km,mb4.1/22, mbtmp4.2/26,ML4.5/4,MS3.4/27,Error ellipse: s-maj=23.8km s-min=12.4km az=26.0*

NEIC ***22*** *21:36:43.9±2.1,56.˚12N±0.˚07×149.˚25W±0.˚09,h18km±4km, mb4.5/117,ML4.8/60,Mwr4.3/34,ML4.5(AEIC),Error ellipse: s-maj=10.4km s-min=7.0km az=186.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.56; Mθθ-2.98; Mφφ2.42; Mrθ0.10; Mθφ-0.91; Mφr-1.89; Fault plane solution: Mo3.45000×10¹⁵ NP1: ϕs219.80000°,δ71.46000°,λ25.66000°. NP2: ϕs121.11000°,δ65.76000°,λ159.59000°. Principal axes: T 3.6963, Plg31.0000°, Azm82.0000°; N -0.5533, Plg59.0000°, Azm253.0000°; P -3.1430, Plg4.0000°, Azm349.0000°;*

NEIC ***22*** *21:36:44.4,56.˚11N×149.˚23W,h21km*

AEIC ***22*** *21:36:48.2±1.9,56.˚23N±0.˚07×149.˚26W±0.˚08,h6km±4km, Error ellipse: s-maj=10.6km s-min=6.8km az=184.0*

ISC 22 21:36:43.1±0.4,56.˚16N±0.˚06×149.˚21W±0.˚04,h10km, n748,σ1§01/734,mb4.4/81,MS3.3/22,4C-5D,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.47**	**313**			**Pn**	**21 37 22.7**	**-0.7**
KDAK						**Sn**	**21 37 50.0**	**-3.5**
KDAK	**Kodiak Island**	**2.47**	**313**	P		**Pn**	**21 37 23.0**	**-0.4**
	baz=129							
KDAK	**Kodiak Island**	**2.47**	**313**	*de*P		**Pn**	**21 37 22.8**	**-0.5**
KDAK	**Kodiak Island**	**2.47**	**313**	Pn		**Pn**	**21 37 23.2**	**-0.1**
	105nm,0.3s,baz=152,slow=5.0,SNR=1594							
KDAK				Sn		**Sn**	**21 37 50.2**	**-3.3**
	294nm,0.3s,baz=48,slow=20,SNR=39							
KDAK				LR	LR		21 38 32.0	
	comp=Z,572nm,21.5s,baz=137,slow=45							
	194nm,0.3s							
OHAK	**Old Harbor**	**2.49**	**297**			**Pn**	**21 37 22.4**	**-1.3**
OHAK						**Sn**	**21 37 50.0**	**-4.2**
OHAK				IAML			21 37 51.8	
	comp=N,3μm,0.6s							
OHAK	**Old Harbor**	**2.49**	**297**	P		**Pn**	**21 37 22.6**	**-1.1**
OHAK	**Old Harbor**	**2.49**	**297**	P		**Pn**	**21 37 22.6**	**-1.1**
	baz=113,SNR=8.2							
Q20K	**Shuyak Island**	**3.00**	**326**	P		**Pn**	**21 37 30.5**	**-0.2**
	baz=143,SNR=52							
SYI	**Shuyak Island**	**3.00**	**326**			**Pn**	**21 37 30.4**	**-0.3**
SYI	**Shuyak Island**	**3.00**	**326**			**Sn**	**21 38 04.9**	**-1.8**
R18K	**Karluk**	**3.21**	**298**			**Pn**	**21 37 32.2**	**-1.3**
R18K						**Sn**	**21 38 08.3**	**-3.5**
R18K				IAML			21 38 09.7	
	comp=E,3μm,0.4s							
R18K				IAML			21 38 10.1	
	comp=N,4μm,0.4s							
R18K	**Karluk**	**3.21**	**298**	P		**Pn**	**21 37 33.1**	**-0.5**
	baz=113							
CNPM	**China Poot**	**3.55**	**343**			**Pn**	**21 37 37.8**	**-0.4**
CNPM	**China Poot**	**3.55**	**343**			**Sn**	**21 38 18.7**	**-1.6**
Q23K	**Middleton Isla**	**3.62**	**24**			**Pn**	**21 37 38.9**	**-0.3**
Q23K						**Sn**	**21 38 18.9**	**-3.1**
Q23K	**Middleton Isla**	**3.62**	**24**	IAML			21 38 20.0	
	comp=N,1μm,0.8s							
Q23K				IAML			21 38 20.0	
	comp=E,1μm,0.9s							
Q23K	**Middleton Isla**	**3.62**	**24**	P		**Pn**	**21 37 39.2**	**0.0**
	baz=207,SNR=6.6							
MID	**Middleton Isla**	**3.62**	**24**			**Pn**	**21 37 38.9**	**-0.3**
MID						**Sn**	**21 38 19.1**	**-2.8**
MID	**Middleton Isla**	**3.62**	**24**	IAML			21 38 19.9	
	comp=N,1μm,0.8s							
MID				IAML			21 38 22.6	
	comp=E,982nm,0.9s							
MID	**Middleton Isla**	**3.62**	**24**	P		**Pn**	**21 37 39.0**	**-0.2**
MID	**Middleton Isla**	**3.62**	**24**	P		**Pn**	**21 37 38.9**	**-0.3**
MID							21 38 19.1	
Q19K	**Cape Douglas,**	**3.67**	**321**			**Pn**	**21 37 40.2**	**+0.3**
Q19K	**Cape Douglas,**	**3.67**	**321**	P		**Pn**	**21 37 40.3**	**+0.4**
	baz=137,SNR=43							
BRSE	**Bradley Lake S**	**3.69**	**348**			**Pn**	**21 37 39.5**	**-0.7**
BRSE	**Bradley Lake S**	**3.69**	**348**	P		**Pn**	**21 37 39.8**	**-0.4**
	baz=167,SNR=135							
KAHG	**Katmai Hook Gl**	**3.73**	**311**			**Pn**	**21 37 41.9**	**+1.2**
KAHG						**Sn**	**21 38 24.8**	**+0.2**
BRLK	**Bradley Lake**	**3.73**	**347**			**Pn**	**21 37 40.0**	**-0.7**
HOM	**Homer**	**3.75**	**341**			**Pn**	**21 37 40.9**	**0.0**
HOM				IAML			21 38 27.3	
	comp=N,1μm,0.4s							
HOM				IAML			21 38 30.0	
	comp=E,2μm,0.7s							
HOM	**Homer**	**3.75**	**341**	P		**Pn**	**21 37 40.9**	**0.0**
	baz=159,SNR=5.2							
KCE	**Katmai Mt Cerb**	**3.87**	**305**			**Pn**	**21 37 43.6**	**+1.0**
AU22	**Augustine Moun**	**3.92**	**327**			**Pn**	**21 37 43.6**	**+0.3**
ACHA	**Angle Creek He**	**3.92**	**304**			**Pn**	**21 37 43.4**	**+0.1**
ACHA						**Sn**	**21 38 28.5**	**-0.9**
AUCH	**Augustine Cone**	**3.94**	**327**			**Pn**	**21 37 44.0**	**+0.4**
AUL	**Augustine Lava**	**3.95**	**327**			**Pn**	**21 37 44.1**	**+0.4**
SEW	**Seward**	**3.96**	**358**	Sn		**Sn**	**21 38 28.5**	**-1.8**
SEW	**Seward**	**3.96**	**358**			**Pn**	**21 37 43.1**	**-0.7**
SEW	**Seward**	**3.96**	**358**	P		**Pn**	**21 37 43.2**	**-0.6**
	baz=178,SNR=28							
P23K	**Montague Islan**	**3.97**	**13**	P		**Pn**	**21 37 43.7**	**-0.3**
	baz=195,SNR=15							
ANCK	**Angle Creek**	**3.99**	**303**			**Pn**	**21 37 45.0**	**+0.6**
KVTA	**Katmai Vly 10**	**3.99**	**307**			**Pn**	**21 37 45.0**	**+0.7**
P19K	**Oil Pt**	**4.11**	**330**			**Pn**	**21 37 45.7**	**-0.2**
P19K	**Oil Pt**	**4.11**	**330**	Sn		**Sn**	**21 38 33.2**	**-0.9**
P19K				IAML			21 38 38.1	
	comp=E,2μm,0.4s							
P19K	**Oil Pt**	**4.11**	**330**	P		**Pn**	**21 37 46.0**	**0.0**
	baz=147,SNR=24							
Q17K	**Contact Creek**	**4.20**	**303**	P		**Pn**	**21 37 47.2**	**-0.1**
	baz=117,SNR=52							
KELA	**Mount Kelaz**	**4.22**	**306**			**Pn**	**21 37 47.6**	**+0.1**
O20K	**Slope Mountain**	**4.33**	**337**	P		**Pn**	**21 37 48.7**	**-0.4**
	baz=154,SNR=25							
O22K	**Cooper Landing**	**4.35**	**357**			**Pn**	**21 37 48.9**	**-0.2**
O22K				Sn		**Sn**	**21 38 38.6**	**-1.2**
O22K	**Cooper Landing**	**4.35**	**357**	P		**Pn**	**21 37 48.7**	**-0.5**
	baz=177,SNR=55							
IVE	**Iliamna Volcan**	**4.37**	**334**			**Pn**	**21 37 48.8**	**-0.8**
ILSW	**Iliamna Southw**	**4.37**	**333**			**Pn**	**21 37 48.8**	**-0.8**
ILSW				Sn		**Sn**	**21 38 38.9**	**-1.7**
ILSW				IAML			21 38 40.8	
	comp=N,866nm,0.7s							
HIN	**Hinchinbrook I**	**4.49**	**17**			**Pn**	**21 37 51.0**	**-0.1**
HIN	**Hinchinbrook I**	**4.49**	**17**	Sn		**Sn**	**21 38 40.5**	**-2.8**
HIN				IAML			21 38 43.5	
	comp=E,2μm,0.8s							
KAIM	**Kayak Island**	**4.56**	**32**			**Pn**	**21 37 51.7**	**-0.3**
KAIM				Sn		**Sn**	**21 38 43.8**	**-1.2**
KAIM				IAML			21 38 44.7	
	comp=E,2μm,1.1s							
KAIM	**Kayak Island**	**4.56**	**32**	P		**Pn**	**21 37 52.9**	**+0.9**
	baz=217,SNR=6.1							
P18K	**Big Mountain,**	**4.57**	**318**	Sn		**Sn**	**21 38 42.8**	**-2.8**
P18K	**Big Mountain,**	**4.57**	**318**			**Pn**	**21 37 51.6**	**-0.7**
	baz=132,SNR=22							
RSO	**Redoubt South**	**4.71**	**338**			**Pn**	**21 37 53.4**	**-0.9**
CAPN	**Captain Cook N**	**4.74**	**348**			**Pn**	**21 37 54.4**	**-0.2**
CAPN				IAML			21 38 57.5	
	comp=E,850nm,0.3s							
CAPN				IAML			21 39 11.8	
	comp=N,911nm,0.6s							
CAPN	**Captain Cook N**	**4.74**	**348**	P		**Pn**	**21 37 55.2**	**+0.7**
	baz=167,SNR=12							
Q16K	**King Salmon**	**4.75**	**305**			**Pn**	**21 37 54.8**	**+0.1**
Q16K	**King Salmon**	**4.75**	**305**	P		**Pn**	**21 37 54.9**	**+0.1**
	baz=118,SNR=21							
EYAK	**Cordova Ski Ar**	**4.77**	**21**			**Pn**	**21 37 54.2**	**-0.7**
EYAK						**Sn**	**21 38 48.1**	**-2.0**
EYAK	**Cordova Ski Ar**	**4.77**	**21**	P		**Pn**	**21 37 55.5**	**+0.6**
EYAK	**Cordova Ski Ar**	**4.77**	**21**	P		**Pn**	**21 37 55.2**	**+0.3**
	baz=205,SNR=64							
R16K	**Pilot Point**	**4.81**	**291**	P		**Pn**	**21 37 55.2**	**-0.3**
	baz=103							
DFR	**Drift River**	**4.81**	**339**			**Pn**	**21 37 54.5**	**-1.2**
FID	**Port Fidalgo**	**4.83**	**16**			**Pn**	**21 37 55.2**	**-0.5**
FID	**Port Fidalgo**	**4.83**	**16**	Sn		**Sn**	**21 38 46.9**	**-4.7**
FID				IAML			21 38 48.4	
	comp=E,1μm,0.5s							
FID				IAML			21 38 51.3	
	comp=N,550nm,0.4s							
RDJH	**Redoubt Jeurge**	**4.83**	**338**			**Pn**	**21 37 54.9**	**-1.1**
GLI	**Glacier Island**	**4.87**	**12**			**Pn**	**21 37 56.0**	**-0.3**
GLI	**Glacier Island**	**4.87**	**12**	IAML			21 38 53.2	
	comp=E,643nm,0.5s							
GLI				IAML			21 38 53.5	
	comp=N,479nm,0.6s							
GLI	**Glacier Island**	**4.87**	**12**	P		**Pn**	**21 37 56.1**	**-0.2**
	baz=195,SNR=20							
SUCK	**Suckling Hills**	**4.87**	**34**			**Pn**	**21 37 56.2**	**-0.2**
SUCK						**Sn**	**21 38 51.6**	**-1.1**
SUCK				IAML			21 38 52.0	
	comp=N,1μm,0.7s							
SUCK				IAML			21 38 56.4	
	comp=E,1μm,1.2s							
RAGM	**Ragged Mountai**	**4.87**	**28**			**Pn**	**21 37 56.8**	**+0.4**
O19K	**Port Alsworth**	**4.87**	**328**	Sn		**Sn**	**21 38 51.0**	**-1.7**
O19K	**Port Alsworth**	**4.87**	**328**			**Pn**	**21 37 55.6**	**-0.7**
O19K	**Port Alsworth**	**4.87**	**328**	P		**Pn**	**21 37 55.7**	**-0.7**
	baz=144							
O18K	**Koktuh Hills**	**4.89**	**322**			**Pn**	**21 37 55.8**	**-0.9**
O18K				IAML			21 38 52.0	
	comp=N,504nm,0.7s							
O18K	**Koktuh Hills**	**4.89**	**322**	P		**Pn**	**21 37 56.4**	**-0.3**
	baz=136,SNR=32							
P17K	**Kvichak River**	**4.94**	**311**	P		**Pn**	**21 37 57.5**	**+0.2**
	baz=125,SNR=70							
HMT	**Hamilton**	**4.94**	**30**			**Pn**	**21 37 57.2**	**-0.1**
NICHA	**Nichawak Mount**	**4.94**	**32**			**Pn**	**21 37 57.9**	**+0.6**
RC01	**Rabbit Creek A**	**4.96**	**357**			**Pn**	**21 37 57.2**	**-0.3**
RC01				IAML			21 38 54.9	
	comp=N,379nm,0.4s							
RC01	**Rabbit Creek A**	**4.96**	**357**	P		**Pn**	**21 37 57.3**	**-0.3**
	baz=177,SNR=55							
GOAT	**Goat Mountain**	**5.02**	**26**			**Pn**	**21 37 59.2**	**+0.6**
FIS	**Fire Island**	**5.03**	**354**			**Pn**	**21 37 58.7**	**+0.1**
FIS				IAML			21 38 58.8	
	comp=N,576nm,0.5s							
FIS				IAML			21 39 13.1	
	comp=E,588nm,0.7s							
ANNW	**Aniakchak Nort**	**5.05**	**283**			**Pn**	**21 37 59.6**	**+0.8**
BGLC	**Bering Glacier**	**5.06**	**36**	P		**Pn**	**21 38 00.1**	**+1.1**
	baz=222							
CHGN	**Chignik**	**5.14**	**275**	Pn		**Pn**	**21 37 59.2**	**-0.9**
CHGN				IAML			21 38 56.9	
	comp=N,547nm,0.6s							
CHGN				IAML			21 39 00.6	
	comp=E,468nm,0.5s							
CHGN	**Chignik**	**5.14**	**275**	P		**Pn**	**21 37 59.2**	**-0.9**
	baz=87,SNR=28							
BERG	**Berg Lake**	**5.15**	**32**			**Pn**	**21 38 00.7**	**+0.5**
GRIN	**Grindle Hills**	**5.17**	**35**			**Pn**	**21 38 01.3**	**+0.7**
SNH	**Sunshine Point**	**5.26**	**37**			**Pn**	**21 38 02.2**	**+0.5**
SNH	**Sunshine Point**	**5.26**	**37**	IAML			21 39 00.8	
	comp=N,440nm,0.4s							
SNH				IAML			21 39 04.3	
	comp=E,529nm,0.8s							
KNK	**Knik Glacier**	**5.29**	**4**			**Pn**	**21 38 02.0**	**-0.1**
KNK	**Knik Glacier**	**5.29**	**4**	IAML			21 39 02.2	
	comp=E,309nm,0.6s							
KNK	**Knik Glacier**	**5.29**	**4**	P		**Pn**	**21 38 02.0**	**-0.1**
	baz=185,SNR=22							
N20K	**Mount Spurr**	**5.30**	**344**	P		**Pn**	**21 38 01.5**	**-0.8**
	baz=162,SNR=50							
DIV	**Divide**	**5.30**	**18**			**Pn**	**21 38 02.4**	**+0.1**
CYK	**Cape Yakataga**	**5.31**	**39**			**Pn**	**21 38 02.9**	**+0.6**
CKL	**Chakachamna La**	**5.31**	**343**			**Pn**	**21 38 01.8**	**-0.8**
KHIT	**Khitrov Hills**	**5.32**	**34**			**Pn**	**21 38 03.0**	**+0.3**
SPCG	**Spurr Capps Gl**	**5.36**	**345**			**Pn**	**21 38 02.5**	**-0.6**
SPBG	**Spurr Blockage**	**5.38**	**343**			**Pn**	**21 38 02.6**	**-0.8**
SUA	**Susitna One**	**5.38**	**352**	Pn		**Pn**	**21 38 02.9**	**-0.6**
SUA	**Susitna One**	**5.38**	**352**	P		**Pn**	**21 38 02.7**	**-0.8**
	baz=171,SNR=28							
BMRM	**Bremner River**	**5.39**	**25**			**Pn**	**21 38 03.8**	**+0.2**
BMRM	**Bremner River**	**5.39**	**25**	P		**Pn**	**21 38 04.1**	**+0.5**
	baz=209,SNR=51							
N19K	**Bonanza Creek**	**5.43**	**332**			**Pn**	**21 38 03.3**	**-0.9**
N19K	**Bonanza Creek**	**5.43**	**332**	P		**Pn**	**21 38 03.3**	**-0.9**
	baz=147							
PMR	**Palmer**	**5.45**	**0**	P		**Pn**	**21 38 04.3**	**-0.1**
PMR	**Palmer**	**5.45**	**0**	P		**Pn**	**21 38 04.3**	**-0.1**
	baz=181,SNR=23							
WAX	**Waxell Ridge**	**5.45**

M20K Styx River 6.09 342 Pn 21 38 12.0 -1.2
M20K Styx River 6.09 342 P Pn 21 38 12.2 -1.0
baz=159
MCARA McCarthy VSAT 6.15 29 P Pn 21 38 14.6 +0.7
baz=215,SNR=38
M24K Tolsona, Glenn 6.17 13 Pn 21 38 15.2 +1.0
M24K Tolsona, Glenn 6.17 13 P Pn 21 38 15.5 +1.3
baz=196,SNR=52
PCA Pinnacle 6.17 46 Pn 21 38 15.0 +0.8
PINM Pinnacle 6.17 47 P Pn 21 38 15.3 +1.0
baz=235,SNR=29
CUT Chulitna 6.29 355 Pn 21 38 15.3 -0.6
CUT Chulitna 6.29 355 P Pn 21 38 16.8 +0.9
baz=175
PNL Peninsula 6.30 52 P Pn 21 38 17.2 +1.2
PNL Peninsula 6.30 52 P Pn 21 38 17.0 +1.0
baz=241,SNR=83
CTG Chitna Glacier 6.34 37 P Pn 21 38 17.5 +0.9
baz=224,SNR=27
CTGM Chitina Glacie 6.34 37 Pn 21 38 16.5 -0.2
WASW Wrangell South 6.34 22 Pn 21 38 17.4 +0.6
BCPM Bancas Point 6.35 49 Pn 21 38 17.7 +1.1
LOGN Logan Glacier 6.35 39 Pn 21 38 17.2 +0.3
M19K Big River Lodg 6.35 337 Pn 21 38 15.8 -1.0
M19K Big River Lodg 6.35 337 P Pn 21 38 15.6 -1.1
baz=153
M18K Stony River 6.36 330 Pn 21 38 15.7 -1.0
M18K Stony River 6.36 330 P Pn 21 38 15.7 -1.0
baz=144
WACK Wrangell Chich 6.36 21 Pn 21 38 17.9 +0.8
SDPT Sand Point 6.42 267 Pn Pn 21 38 16.7 -0.9
SDPT Sand Point 6.42 267 P Pn 21 38 16.9 -0.7
SDPT Sand Point 6.42 267 P Pn 21 38 16.5 -1.1
baz=78,SNR=29
O15K Ungalikthiuk R 6.45 302 Pn 21 38 18.2 +0.2
O15K Ungalikthiuk R 6.45 302 P Pn 21 38 17.6 -0.5
baz=113
WAT6 Susitna Watana 6.49 6 P Pn 21 38 19.2 +0.5
baz=188,SNR=47
HARP HAARP 6.59 17 Pn 21 38 20.8 +0.7
HARP HAARP 6.59 17 P Pn 21 38 21.5 +1.4
baz=200,SNR=80
N16K Nishlik Lake 6.64 315 Pn 21 38 21.0 +0.3
N16K Nishlik Lake 6.64 315 P Pn 21 38 20.8 +0.1
baz=126
WAT7 Susitna Watana 6.70 1 Pn 21 38 22.0 +0.4
L19K White Mountain 6.70 337 P Pn 21 38 20.4 -1.1
baz=152,SNR=25
WAT1 Susitna Watana 6.70 3 Pn 21 38 21.9 +0.4
WAT1 Susitna Watana 6.70 3 P Pn 21 38 22.1 +0.5
baz=183
L20K Farewell, AK 6.78 341 P Pn 21 38 22.3 -0.2
baz=157
M17K Holitna River 6.78 324 Pn 21 38 22.2 -0.3
M17K Holitna River 6.78 324 P Pn 21 38 22.2 -0.3
baz=137
PPLA Purkeypile 6.93 349 Pn 21 38 24.5 -0.3
PPLA Purkeypile 6.93 349 P Pn 21 38 25.5 +0.7
baz=166
O29M Mount Kennedy 6.98 49 Pn 21 38 26.5 +1.1
O29M Mount Kennedy 6.98 49 P Pn 21 38 26.7 +1.3
baz=239
DHY Denali Highway 7.00 7 P Pn 21 38 26.5 +0.8
baz=189,SNR=49
N15K Kwethluk River 7.02 309 Pn 21 38 26.3 +0.4
N15K Kwethluk River 7.02 309 P Pn 21 38 26.4 +0.5
baz=120,SNR=9.7
P29M Windy Craggy 7.03 56 P Pn 21 38 26.5 +0.4
baz=246,SNR=260
M16K Timber Creek 7.05 318 Pn 21 38 26.4 +0.1
M16K Timber Creek 7.05 318 P Pn 21 38 26.4 +0.1
baz=129,SNR=13
PAX Paxson 7.09 14 Pn 21 38 27.7 +0.8
PAX Paxson 7.09 14 P Pn 21 38 27.7 +0.8
baz=198,SNR=56
PAX Paxson 7.09 14 P Pn 21 38 27.7 +0.8
PS1A Pavlof South-1 7.11 269 Pn 21 38 26.1 -1.0
YUK8 Steele Glacier 7.11 40 Pn 21 38 29.4 +2.0
YUK8 Steele Glacier 7.11 40 P Pn 21 38 29.2 +1.9
baz=228,SNR=35
PVV Pavlof Volcano 7.14 269 Pn 21 38 26.4 -1.2
O14K Tigyukauivet M 7.17 301 Pn 21 38 27.8 0.0
O14K Tigyukauivet M 7.17 301 P Pn 21 38 28.4 +0.6
baz=110
L18K Granite Mounta 7.19 331 Pn 21 38 27.1 -1.1
L18K Granite Mounta 7.19 331 P Pn 21 38 27.3 -0.9
baz=144,SNR=7.1
YUK3 Moose Creek 7.22 35 P Pn 21 38 30.5 +1.7
baz=223,SNR=23
M27K Edge Creek, AK 7.26 28 Pn 21 38 30.2 +0.9
M27K Edge Creek, AK 7.26 28 P Pn 21 38 30.3 +0.9
baz=215
RND Reindeer 7.28 1 Pn 21 38 30.1 +0.7
RND Reindeer 7.28 1 P Pn 21 38 30.1 +0.7
S31K Pelican 7.30 70 P Pn 21 38 28.1 -1.6
baz=262,SNR=42
TRF Thorofare Moun 7.34 356 Pn 21 38 30.4 0.0
TRF Thorofare Moun 7.34 356 P Pn 21 38 30.4 0.0
baz=176,SNR=22
MENT Mentasta 7.35 20 P Pn 21 38 31.8 +1.4
YUK6 Outpost Mounta 7.43 45 P Pn 21 38 33.3 +1.7
baz=235,SNR=28
CAST Castle Rocks 7.43 350 P Pn 21 38 31.3 -0.1
baz=168,SNR=83
KTH Kantishna Hill 7.47 354 Pn 21 38 32.2 +0.1
L26K Log Cabin Wild 7.50 21 P Pn 21 38 34.3 +1.8
baz=206,SNR=16
M15K Kasigluk River 7.55 312 Pn 21 38 33.6 +0.5
M15K Kasigluk River 7.55 312 P Pn 21 38 33.7 +0.7
baz=122
YUK4 Talbot Arm 7.56 42 P Pn 21 38 36.9 +3.4
baz=232,SNR=55
BVCY Beaver Creek 7.59 31 Pn 21 38 35.3 +1.6
BVCY Beaver Creek 7.59 31 P Pn 21 38 35.3 +1.6
baz=218,SNR=20
L17K Donlin 7.60 326 Pn 21 38 33.0 -0.7
L17K Donlin 7.60 326 P Pn 21 38 33.1 -0.7
baz=138
P30M Million Dollar 7.60 53 Pn 21 38 35.0 +1.2
P30M Million Dollar 7.60 53 P Pn 21 38 35.1 +1.2
baz=244
MCK McKinley 7.60 1 Pn 21 38 35.1 +1.2
MCK McKinley 7.60 1 P Pn 21 38 35.0 +1.2
baz=181,SNR=36
MCK McKinley 7.60 1 P Pn 21 38 35.1 +1.2
PLBC Pleasant Camp 7.61 59 Pn 21 38 34.9 +0.9
PLBC Pleasant Camp 7.61 59 P Pn 21 38 35.1 +1.1
baz=250,SNR=28
TTA Tatalina 7.62 336 Pn 21 38 32.7 -1.5
TTA Tatalina 7.62 336 P Pn 21 38 33.2 -1.0
TTA Tatalina 7.62 336 P Pn 21 38 32.8 -1.4
baz=150,SNR=10
TTA Tatalina 7.62 336 P Pn 21 38 32.7 -1.5
N14K Kuskokwak Cree 7.62 305 P Pn 21 38 34.4 +0.3
baz=114,SNR=5.1
K20K Telida 7.63 343 Pn 21 38 33.3 -0.9
K20K Telida 7.63 343 P Pn 21 38 33.9 -0.3
baz=159
R31K City Hall, Gus 7.64 67 P Pn 21 38 34.6 +0.2
baz=259
L16K Owhat River 7.69 321 P Pn 21 38 34.4 -0.6
baz=132,SNR=18
HYT Haines Junctio 7.71 48 Pn 21 38 36.4 +1.0
HYT Haines Junctio 7.71 48 P Pn 21 38 36.7 +1.3
baz=238,SNR=28
SIT Sitka 7.71 78 Pn Pn 21 38 33.2 -2.2
SIT Sitka 7.71 78 P Pn 21 38 32.9 -2.5
SIT Sitka 7.71 78 P Pn 21 38 33.0 -2.3
baz=270,SNR=11
SIT Sitka 7.71 78 P Pn 21 38 33.2 -2.2
K24K Donnelly Dome 7.86 11 Pn 21 38 38.9 +1.5
K24K Donnelly Dome 7.86 11 P Pn 21 38 39.0 +1.6
baz=194,SNR=15
L27K Beaver Creek, 7.87 25 Pn 21 38 38.4 +0.9
L27K Beaver Creek, 7.87 25 P Pn 21 38 38.6 +1.1
baz=212,SNR=9.3
CHUM Lake Minchumin 7.91 350 P Pn 21 38 37.7 -0.2
baz=167,SNR=32
BPAW Bear Paw Mtn. 8.02 354 Pn 21 38 38.7 -0.9
BPAW Bear Paw Mtn. 8.02 354 P Pn 21 38 39.1 -0.4
baz=173,SNR=24
K17K Iditarod 8.04 329 Pn 21 38 39.0 -0.9
K17K Iditarod 8.04 329 P Pn 21 38 39.1 -0.7
baz=141,SNR=8.0

BWN Browne 8.04 359 Pn Pn 21 38 40.8 +0.9
SKAG Skagway 8.11 60 Pn 21 38 41.6 +0.8
SKAG Skagway 8.11 60 P Pn 21 38 41.8 +1.0
SKAG Skagway 8.11 60 P Pn 21 38 41.5 +0.7
baz=252,SNR=36
M14K Bethel 8.12 310 Pn 21 38 39.8 -1.1
M14K Bethel 8.12 310 P Pn 21 38 41.7 +0.9
baz=119
S32K Killisnoo 8.14 75 Pn 21 38 39.9 -1.2
S32K Killisnoo 8.14 75 P Pn 21 38 40.1 -1.0
baz=267,SNR=21
FALS False Pass 8.17 267 P Pn 21 38 41.0 -0.7
FALS False Pass 8.17 267 P Pn 21 38 40.9 -0.8
baz=74,SNR=42
N30M Aishikik Lake 8.23 45 P Pn 21 38 43.7 +1.3
baz=236,SNR=23
J18K Innoko River 8.24 336 Pn 21 38 41.7 -0.9
J18K Innoko River 8.24 336 P Pn 21 38 42.8 +0.1
baz=149
R32K Eaglecrest 8.25 69 Pn 21 38 41.8 -0.9
R32K Eaglecrest 8.25 69 P Pn 21 38 42.6 -0.1
baz=262
SCRK Sand Creek 8.27 16 Pn 21 38 42.8 -0.3
SCRK Sand Creek 8.27 16 P Pn 21 38 44.1 +1.0
baz=201,SNR=14
O30N Mendenhall 8.28 51 Pn 21 38 44.1 +0.9
O30N Mendenhall 8.28 51 P Pn 21 38 44.4 +1.2
baz=242,SNR=20
JIS Juneau Island 8.32 69 Pn 21 38 43.9 +0.2
JIS Juneau Island 8.32 69 P Pn 21 38 43.9 +0.2
HDA Harding Lake 8.36 7 Pn 21 38 44.8 +0.6
HDA Harding Lake 8.36 7 P Pn 21 38 45.2 +1.1
baz=189,SNR=38
M29M Somme Creek 8.36 37 Pn 21 38 44.5 +0.2
M29M Somme Creek 8.36 37 P Pn 21 38 45.8 +1.5
baz=226
ISNN Isanotski Nort 8.38 267 Pn 21 38 44.0 -0.6
J20K Nowinta River 8.41 345 Pn 21 38 44.2 -0.7
J20K Nowinta River 8.41 345 P Pn 21 38 44.5 -0.4
baz=161
L15K Ungalak Mounta 8.42 316 Pn 21 38 45.2 +0.2
L15K Ungalak Mounta 8.42 316 P Pn 21 38 45.2 +0.2
baz=126
NEA2 Nenana 8.47 0 P Pn 21 38 46.1 +0.4
baz=181,SNR=16
J19K Poorman 8.49 341 Pn 21 38 44.7 -1.3
J19K Poorman 8.49 341 P Pn 21 38 44.6 -1.3
baz=155
SSLN Shishaldin Nor 8.51 267 Pn 21 38 45.5 -0.8
CCB Clear Creek Bu 8.55 4 Pn 21 38 46.9 +0.1
M13K Dall Lake 8.58 306 Pn 21 38 47.3 +0.1
M13K Dall Lake 8.58 306 P Pn 21 38 47.1 -0.2
baz=113
K27K Chicken 8.66 21 Pn 21 38 48.5 +0.2
K27K Chicken 8.66 21 P Pn 21 38 49.3 +1.0
baz=208
J25K Salcha River, 8.69 11 Pn 21 38 48.4 -0.5
J25K Salcha River, 8.69 11 P Pn 21 38 48.8 -0.1
baz=195
L14K Kuka Creek 8.71 312 P Pn 21 38 49.2 +0.1
baz=120
IL31 8.72 7 Pn 21 38 49.2 +0.1
ILAR Eielson Array 8.72 7 Pn Pn 21 38 49.2 +0.1
comp=E,5.3nm,0.3s,baz=189,slow=13,SNR=164
ILAR Sn Sn 21 40 23.3 -4.1
comp=E,5.2nm,0.3s,baz=186,slow=19,SNR=17
ILAR LR LR 21 42 26.0
comp=E,178nm,18.7s,baz=182,slow=40
WHY Whitehorse 8.76 53 P Pn 21 38 51.2 +1.3
baz=246,SNR=96
COLA College 8.77 4 Pn 21 38 50.2 +0.4
COLA College 8.77 4 P Pn 21 38 50.4 +0.5
COLA College 8.77 4 P Pn 21 38 50.3 +0.5
baz=185
COLA College 8.77 4 P Pn 21 38 50.2 +0.4
J17K VARM Dome 8.79 330 P Pn 21 38 48.8 -1.3
baz=141
K15K Wolf Creek Mou 8.81 319 P Pn 21 38 50.2 -0.1
baz=129
J26L Joseph Creek 8.82 16 P Pn 21 38 51.3 +0.7
baz=201
MLY Manley 8.94 356 P Pn 21 38 51.4 -0.8
baz=175,SNR=29
L29M L29M 8.94 34 Pn 21 38 53.4 +1.2
L29M L29M 8.94 34 P Pn 21 38 54.1 +1.9
baz=224
P32M Atlin 8.94 61 P Pn 21 38 52.7 +0.5
baz=255,SNR=61
U33K Whale Pass 8.98 84 Pn Pn 21 38 50.8 -2.0
U33K Whale Pass 8.98 84 P Pn 21 38 50.8 -2.0
baz=277,SNR=23
T33K Petersburg 9.02 79 P Pn 21 38 53.5 +0.3
baz=273
M30M Minto, Yukon 9.02 39 Pn Pn 21 38 53.3 0.0
M30M Minto, Yukon 9.02 39 P Pn 21 38 54.6 +1.3
baz=230,SNR=7.1
I23K Minto, Yukon-K 9.02 360 P Pn 21 38 53.7 +0.4
baz=180,SNR=12
POKR Poker Plat Res 9.03 5 P Pn 21 38 53.9 +0.4
baz=187,SNR=18
I20K Naaghedeneel 9.05 346 P Pn 21 38 54.1 +0.5
baz=161
CRAG Craig 9.08 88 Pn Pn 21 38 52.8 -1.3
CRAG Craig 9.08 88 P Pn 21 38 52.3 -1.8
CRAG Craig 9.08 88 P Pn 21 38 52.7 -1.5
baz=281,SNR=10
I21K Tanana 9.16 353 P Pn 21 38 54.6 -0.5
baz=170
J16K Anvik River 9.16 326 Pn Pn 21 38 54.3 -0.9
J16K Anvik River 9.16 326 P Pn 21 38 54.4 -0.9
baz=136
DAWY Dawson 9.31 28 Pn Pn 21 38 57.1 -0.2
DAWY Dawson 9.31 28 P Pn 21 38 57.9 +0.6
baz=216,SNR=14
WRAK Wrangell Islan 9.38 81 Pn 21 38 58.6 +0.4
WRAK Wrangell Islan 9.38 81 P Pn 21 38 57.3 -0.9
baz=276
GCSA Galena City Sc 9.41 339 P Pn 21 38 58.7 +0.2
baz=153
EGAK Eagle 9.51 21 Pn 21 38 59.2 -0.8
EGAK Eagle 9.51 21 P Pn 21 39 01.6 +1.7
baz=209
Q32M Nakina River 9.52 66 Pn Pn 21 39 00.3 0.0
Q32M Nakina River 9.52 66 P Pn 21 39 01.0 +0.6
baz=261,SNR=13
P33M Teslin, Yukon 9.55 58 P Pn 21 39 01.6 +0.9
baz=232,SNR=117
PRP Porcupine Dome 9.56 9 Pn Pn 21 39 00.1 -0.7
PRP Porcupine Dome 9.56 9 P Pn 21 39 00.8 0.0
baz=193,SNR=12
I26K Coal Creek Min 9.64 15 P Pn 21 39 02.8 +1.0
baz=201
K29M Barlow Dome 9.66 32 Pn 21 39 02.9 +0.7
K29M Barlow Dome 9.66 32 P Pn 21 39 03.6 +1.5
baz=223
H21K Melozitna Rive 9.69 351 P Pn 21 39 01.4 -1.0
baz=168
AKUT Akutan 9.70 265 P Pn 21 39 01.3 -1.2
M31M Drury Creek, Y 9.71 45 Pn 21 39 03.5 +0.8
M31M Drury Creek, Y 9.71 45 P Pn 21 39 04.5 +1.8
baz=238,SNR=24
H24K Noodor Dome 9.74 3 Pn 21 39 04.3 +1.2
H24K Noodor Dome 9.74 3 P Pn 21 39 04.6 +1.5
baz=185
H20K Anotleneega Mo 9.76 346 P Pn 21 39 04.0 +0.5
baz=161
N32M Quiet Lake 9.77 53 Pn 21 39 03.8 +0.3
N32M Quiet Lake 9.77 53 P Pn 21 39 05.2 +1.7
baz=247
H22K Ishtalitna Cre 9.83 355 P Pn 21 39 04.2 -0.1
baz=173
J14K Nanvaranak Lak 9.83 318 P Pn 21 39 05.1 +0.7
baz=126
J29N Klondike Camp 9.93 29 Pn 21 39 06.6 +0.8
J29N Klondike Camp 9.93 29 P Pn 21 39 06.6 +0.8
baz=218,SNR=9.7
V35K Ketchikan 9.96 87 Pn Pn 21 39 04.9 -1.2
V35K Ketchikan 9.96 87 P Pn 21 39 04.8 -1.2
baz=282,SNR=6.6
S34M Telegraph Cree 10.01 72 Pn Pn 21 39 06.8 0.0
S34M Telegraph Cree 10.01 72 P Pn 21 39 06.9 +0.1
baz=268,SNR=8.1
H19K Roundabout Mou 10.04 342 P Pn 21 39 06.2 -0.9
baz=156
H18K Honhosa River 10.07 337 Pn Pn 21 39 07.7 +0.1
H18K Honhosa River 10.07 337 P Pn 21 39 06.4 -1.2
baz=149
IMAR Indian Mountai 10.10 349 Pn Pn 21 39 06.6 -1.4
DIB Dawson Inlet, 10.13 100 Pn Pn 21 39 07.5 -0.9
FARO Faro, Yukon 10.14 47 Pn Pn 21 39 09.0 +0.4
FARO Faro, Yukon 10.14 47 P Pn 21 39 10.3 +1.7
baz=241,SNR=15
I27K Kandik River 10.16 18 P Pn 21 39 10.6 +1.6
baz=205
UNV Unalaska Valle 10.20 264 P Pn 21 39 07.6 -1.9
UNV Unalaska Valle 10.20 264 P Pn 21 39 07.8 -1.6
baz=70,SNR=12
H17K Granite Mounta 10.25 334 P Pn 21 39 09.2 -0.9
baz=144
R33M Jennings River 10.26 64 Pn 21 39 10.8 +0.4
R33M Jennings River 10.26 64 P Pn 21 39 11.0 +0.7
baz=260
I28M Miner Creek 10.35 22 Pn 21 39 11.7 +0.1
I28M Miner Creek 10.35 22 P Pn 21 39 13.5 +2.0
baz=210
T35M Bob Quinn 10.49 78 Pn Pn 21 39 14.1 +0.6
T35M Bob Quinn 10.49 78 P Pn 21 39 13.9 +0.4
baz=274,SNR=19
J30M Hart River 10.56 32 Pn 21 39 15.0 +0.6
J30M Hart River 10.56 32 P Pn 21 39 15.8 +1.4
baz=223
G21K Allakaket 10.60 351 P Pn 21 39 14.2 -0.6
baz=167
G23K Bananza Creek 10.60 358 Pn 21 39 14.2 -0.7
G23K Bananza Creek 10.60 358 P Pn 21 39 14.5 -0.4
baz=178
G24K Hadweenzic Riv 10.61 4 Pn 21 39 15.4 +0.4
G24K Hadweenzic Riv 10.61 4 P Pn 21 39 15.9 +0.8
baz=186
FYU Fort Yukon 10.62 9 Pn Pn 21 39 14.8 -0.3
DLBC Dease Lake 10.62 70 Pn Pn 21 39 16.2 +0.9
DLBC Dease Lake 10.62 70 P Pn 21 39 15.8 +0.5
baz=266,SNR=29
DLBC Dease Lake 10.62 70 Pn Pn 21 39 16.3 +1.0
comp=E,7.4nm,0.3s,baz=245,slow=10,SNR=58
DLBC Sn Sn 21 41 09.8 -4.3
comp=E,1.0nm,0.3s,baz=72,slow=20,SNR=1.4
DLBC LR LR 21 42 33.6
comp=E,258nm,21.6s,baz=297,slow=33
comp=E,17nm,0.4s
H16K Elim 10.65 328 P Pn 21 39 16.1 +0.6
baz=137
G19K Purcell Mounta 10.71 343 Pn 21 39 15.3 -1.0
G19K Purcell Mounta 10.71 343 P Pn 21 39 17.2 +0.8
baz=156
U35K Hyder 10.73 83 Pn 21 39 17.6 +0.9
G25K Bearman Lake 10.75 7 P Pn 21 39 17.9 +1.0
baz=190,SNR=20
H27K Steamboat Moun 10.75 17 P Pn 21 39 17.7 +0.7
baz=204
G18K Tagagawik 10.78 339 Pn Pn 21 39 17.8 +0.5
G18K Tagagawik 10.78 339 P Pn 21 39 17.8 +0.5
baz=151
G17K Kiwalik Mounta 10.89 334 P Pn 21 39 18.5 -0.3
baz=144
I30M Mount Dempster 11.03 29 Pn 21 39 21.2 +0.3
I30M Mount Dempster 11.03 29 P Pn 21 39 23.3 +2.4
baz=221
COLD Coldfoot 11.12 358 P Pn 21 39 22.4 +0.4
baz=177,SNR=28
G26K Porcupine Rive 11.13 11 P Pn 21 39 22.4 +0.4
baz=196
MMPY Sheldon Lake, 11.18 47 Pn Pn 21 39 24.0 +1.1
MMPY Sheldon Lake, 11.18 47 P Pn 21 39 24.4 +1.5
baz=243,SNR=13
G16K Koyuk River 11.25 331 P Pn 21 39 24.2 +0.5
baz=139
F21K Alatna River 11.29 351 P Pn 21 39 24.1 -0.1
baz=168
GRNB Grenville Isla 11.29 94 Pn Pn 21 39 24.2 -0.1
H29M Whitestone 11.35 23 Pn 21 39 25.3 +0.2
H29M Whitestone 11.35 23 P Pn 21 39 26.3 +1.2
baz=213
F20K Avaraart Lake 11.35 347 P Pn 21 39 24.4 -0.7
baz=161
F24K Squaw Lake 11.42 3 Pn 21 39 26.2 +0.1
F24K Squaw Lake 11.42 3 P Pn 21 39 26.7 +0.6
baz=184
G15K Niukluk 11.44 327 P Pn 21 39 27.2 +0.8
baz=134
F19K Shaleruckik Mo 11.45 343 Pn 21 39 25.9 -0.5
F19K Shaleruckik Mo 11.45 343 P Pn 21 39 26.1 -0.4
baz=155
WTLY Watson Lake, Y 11.47 61 Pn 21 39 27.4 +0.5
WTLY Watson Lake, Y 11.47 61 P Pn 21 39 28.0 +1.1
baz=259,SNR=12
BMAR Burnt Mountain 11.52 9 Pn Pn 21 39 27.6 +0.1
ANM Nome 11.59 323 P Pn 21 39 29.1 +0.7
baz=129
F18K Selawik 11.59 339 P Pn 21 39 29.5 +1.2
baz=150
F25K Christian Rive 11.60 7 P Pn 21 39 29.2 +0.6
baz=190
SPIA Saint Paul Isl 11.62 284 Pn 21 39 29.9 +1.1
SPIA Saint Paul Isl 11.62 284 P Pn 21 39 28.9 +0.2
baz=86
F17K Baldwin Pennin 11.80 336 Pn Pn 21 39 31.0 -0.3
F17K Baldwin Pennin 11.80 336 P Pn 21 39 30.9 -0.3
baz=145
F26K Sheenjek River 11.82 9 P Pn 21 39 31.8 +0.3
baz=194
NIKH Nikolski High 11.83 263 P Pn 21 39 30.5 -1.3
NIKH Nikolski High 11.83 263 P Pn 21 39 30.5 -1.3
baz=66
EPYK Eagle Plains 11.85 25 Pn 21 39 31.9 0.0
EPYK Eagle Plains 11.85 25 P Pn 21 39 34.0 +2.0
baz=216
E19K Redstone River 11.94 345 Pn 21 39 32.9 -0.3
E19K Redstone River 11.94 345 P Pn 21 39 33.2 0.0
baz=158
E23K Chandalar 11.95 359 P Pn 21 39 34.6 +1.2
baz=179
H31M Peel River 12.03 30 Pn 21 39 35.0 +0.6
H31M Peel River 12.03 30 P Pn 21 39 35.5 +1.1
baz=224
TGTN Hyland Airport 12.07 55 P Pn 21 39 36.9 +1.8
baz=253,SNR=39
E22K Anaktuvuk Pass 12.08 355 Pn 21 39 36.0 +0.9
E22K Anaktuvuk Pass 12.08 355 P Pn 21 39 36.4 +1.2
baz=173
E25K Arctic Village 12.12 6 Pn Pn 21 39 36.1 +0.4
E25K Arctic Village 12.12 6 P Pn 21 39 37.0 +1.2
baz=190,SNR=11
F15K North Star Dit 12.13 328 P Pn 21 39 36.5 +0.8
baz=135
F28M Old Crow 12.29 17 Pn Pn 21 39 38.9 +0.9
F28M Old Crow 12.29 17 P Pn 21 39 39.4 +1.5
baz=206,SNR=13
G30M tAoh Zraii Nji 12.46 24 Pn 21 39 41.5 +1.2
G30M tAoh Zraii Nji 12.46 24 P Pn 21 39 42.1 +1.8
baz=216
E17K Hotham Inlet 12.46 337 P Pn 21 39 40.7 +0.5
baz=146
F14K Arctic Creek 12.48 325 P Pn 21 39 41.4 +0.8
baz=130
E18K Tukpahlearik C 12.49 339 Pn 21 39 41.0 +0.2
E18K Tukpahlearik C 12.49 339 P Pn 21 39 40.9 +0.2
baz=149
E21K Killik River 12.52 352 Pn 21 39 41.5 +0.3
E21K Killik River 12.52 352 P Pn 21 39 41.6 +0.4
baz=168
TOLK Toolik Lake Re 12.53 359 Pn Pn 21 39 41.7 +0.3
TOLK Toolik Lake Re 12.53 359 P Pn 21 39 42.8 +1.5
baz=179,SNR=15
E20K Nigu River 12.56 348 P Pn 21 39 42.4 +0.7
baz=162
D22K Ayikyak River 12.87 354 Pn 21 39 45.6 -0.2
D22K Ayikyak River 12.87 354 P Pn 21 39 46.3 +0.4
baz=171
D23K Nanushuk River 12.88 358 P Pn 21 39 47.8 +1.9
baz=176
G31M Satah River 12.89 27 Pn Pn 21 39 47.0 +0.9
G31M Satah River 12.89 27 P Pn 21 39 47.7 +1.6
baz=220,SNR=7.9
BBB Bella Bella 12.96 99 Pn Pn 21 39 44.7 -2.5
comp=E,0.5nm,0.3s,baz=296,slow=8.4,SNR=10
BBB Sn Sn 21 42 02.4 -8.9
comp=E,0.2nm,0.3s,baz=131,slow=20,SNR=1.6
BBB LR LR 21 43 33.3
comp=E,249nm,20.2s,baz=299,slow=32
D19K Kuna River 13.03 345 P Pn 21 39 47.9 -0.2
baz=158

D20K Etivluk River 13.04 348 P Pn 21 39 48.1 -0.2
baz=161
D24K Happy Valley 13.05 1 Pn 21 39 49.4 +1.1
D24K Happy Valley 13.05 1 P Pn 21 39 49.7 +1.4
baz=181
F30M Barrier River 13.07 23 P Pn 21 39 50.6 +2.0
baz=215
E28M Babbage River 13.25 16 Pn 21 39 50.8 -0.2
E28M Babbage River 13.25 16 P Pn 21 39 52.0 +1.0
baz=204
D17K Noatak River 13.25 336 P Pn 21 39 51.8 +0.8
baz=144
D25K Kavik River 13.28 4 P Pn 21 39 52.7 +1.2
baz=187
C21K Knifeblade Rid 13.29 351 P Pn 21 39 52.3 +0.7
baz=166,SNR=12
E29M Blow River 13.32 18 Pn Pn 21 39 51.8 -0.1
E29M Blow River 13.32 18 P Pn 21 39 53.1 +1.1
baz=209,SNR=15
F31M Tsiigehtchic 13.42 26 Pn Pn 21 39 53.4 +0.1
F31M Tsiigehtchic 13.42 26 P Pn 21 39 55.3 +2.0
baz=220,SNR=6.9
C24K Franklin Bluff 13.62 1 P Pn 21 39 57.3 +1.3
baz=181,SNR=32
D27M Malcolm River 13.65 13 Pn 21 39 57.4 +0.9
D27M Malcolm River 13.65 13 P Pn 21 39 57.8 +1.3
baz=200
C18K Utukok River 13.67 341 Pn 21 39 56.4 -0.4
C18K Utukok River 13.67 341 P Pn 21 39 56.9 +0.1
baz=151
B21K Ikpikpuk River 13.73 352 P Pn 21 39 57.2 -0.4
baz=167,SNR=9.7
C23K Itkillik River 13.75 358 Pn 21 39 58.5 +0.8
C23K Itkillik River 13.75 358 P Pn 21 39 58.6 +0.8
baz=177
C19K Lookout Ridge 13.81 344 P Pn 21 39 58.0 -0.7
baz=155
KOTAN Kotaneelee Air 13.83 63 P Pn 21 40 00.7 +1.8
baz=265,SNR=8.7
C17K DeLong Mountai 13.91 338 P Pn 21 40 00.8 +0.8
baz=146
C26K Camden Bay 13.95 6 P Pn 21 40 02.3 +1.8
baz=190
D28M Stokes Point 14.03 15 P Pn 21 40 03.3 +1.7
baz=205
FLDN Fort Liard 14.12 63 Pn 21 40 05.0 +2.0
FLDN Fort Liard 14.12 63 P Pn 21 40 04.7 +1.7
baz=265,SNR=6.1
INK Inuvik 14.14 24 Pn Pn 21 40 05.0 +1.8
INK Inuvik 14.14 24 P Pn 21 40 04.5 +1.3
baz=218,SNR=38
INK Inuvik 14.14 24 Pn Pn 21 40 04.9 +1.8
comp=E,0.4nm,0.3s,baz=209,slow=15,SNR=60
comp=E,20nm,0.9s
C16K Lisburne Hills 14.22 335 Pn 21 40 04.6 +0.2
C16K Lisburne Hills 14.22 335 P Pn 21 40 04.5 +0.2
baz=141
B22K Teshekpuk Lake 14.36 354 P Pn 21 40 05.5 -0.6
baz=171
B18K Kokolik River 14.40 342 P Pn 21 40 06.6 -0.2
baz=151
ATKA Atka Island 15.12 265 P Pn 21 40 16.6 0.0
A21K Barrow 15.55 351 P Pn 21 40 22.5 +0.4
baz=164
ADK Adak 16.65 267 P Pn 21 40 34.8 -1.5
C36M Paulatuk 17.33 30 Pn 21 40 43.0 -1.7
C36M Paulatuk 17.33 30 P Pn 21 40 45.7 +1.0
baz=233
HILA High Level 17.44 69 Pn 21 40 46.7 +0.5
BRLDA Berland Lookou 18.22 83 Pn 21 40 56.7 +0.7
BRLDA IAmb IAmb 21 40 59.1
comp=Z,27nm,0.9s
YKA Yellowknife Ar 18.58 56 P P 21 41 00.7 +0.8
YKA Yellowknife Ar 18.58 56 P Pn 21 41 01.4 +1.3
comp=Z,1.0nm,0.3s,baz=265,slow=9.8,SNR=58
YKA LR LR 21 47 53.9
comp=Z,109nm,18.5s,baz=152,slow=36
comp=Z,4.6nm,0.8s
E03A Lebam 18.58 110 P P 21 41 00.0 0.0
A36M Sachs Harbour 18.78 23 P P 21 41 02.9 +0.8
A36M IAmb IAmb 21 41 18.2
comp=Z,37nm,0.9s
A36M Sachs Harbour 18.78 23 P P 21 41 03.4 +1.4
baz=225,SNR=31
LTY Liberty 19.67 105 P P 21 41 12.8 +0.6
LTY IAmb IAmb 21 41 16.8
comp=Z,35nm,1.2s
B08A Colville Reser 19.76 101 P 21 41 13.0 0.0
B08A IAmb IAmb 21 41 17.7
comp=Z,28nm,1.4s
MXC Moxie City 20.30 106 P P 21 41 20.0 +1.2
MXC IAmb IAmb 21 41 24.2
comp=Z,23nm,1.1s
HOOD Mount Hood Mea 20.39 110 P P 21 41 19.7 -0.4
HOOD IAmb IAmb 21 41 39.2
comp=Z,18nm,1.1s
H04A Detroit Lake 20.54 113 P P 21 41 21.6 0.0
H04A IAmb IAmb 21 41 27.3
comp=Z,22nm,1.2s
E07A Sunnyside 20.54 105 P P 21 41 21.9 +0.3
E07A IAmb IAmb 21 41 26.8
comp=Z,19nm,1.0s
G05A Wamic 20.62 110 P P 21 41 23.4 +1.0
I03D Drain, OR 20.65 116 P P 21 41 23.8 +1.1
I03D IAmb IAmb 21 41 25.4
comp=Z,45nm,1.4s
C09A Chrisman Ranch 20.66 101 P P 21 41 22.8 +0.1
D08A Wollman Farm, 20.74 103 P 21 41 24.3 +0.6
D08A IAmb IAmb 21 41 25.9
comp=Z,22nm,1.1s
EDM Edmonton 20.78 83 P 21 41 24.7 +0.6
EDM IAmb IAmb 21 41 55.2
comp=Z,38nm,1.3s
EDM Edmonton 20.78 83 P P 21 41 24.7 +0.6
EDM pmax pmax
comp=Z,38nm,1.3s
HAWA Hanford 20.82 105 P P 21 41 24.5 -0.1
F07A Phinny Hill Vi 20.93 107 P P 21 41 26.6 +0.9
F07A IAmb IAmb 21 41 31.5
comp=Z,17nm,0.9s
E08A Dider Farm, El 21.02 105 P P 21 41 27.3 +0.7
E08A IAmb IAmb 21 41 28.8
comp=Z,22nm,1.2s
NEW Newport 21.03 98 P 21 41 27.7 +0.9
NEW IAmb IAmb 21 41 29.5
comp=Z,15nm,1.2s
NEW Newport 21.03 98 P P 21 41 26.2 -0.6
baz=304,SNR=5.1
NEW Newport 21.03 98 P P 21 41 28.5 +1.7
comp=Z,5.7nm,0.8s,baz=317,slow=7.7,SNR=7.6
NEW LR LR 21 48 36.9
comp=Z,114nm,18.6s,baz=319,slow=34
comp=Z,5.7nm,0.8s
I04A Tendick Farm, 21.05 115 P P 21 41 28.1 +1.0
I04A IAmb IAmb 21 41 32.7
comp=Z,20nm,1.0s
K02D Willamette Mer 21.23 119 P P 21 41 29.7 +0.7
K02D IAmb IAmb 21 41 41.1
comp=Z,24nm,1.3s
E09A Wood Farm, Sta 21.50 104 P P 21 41 32.2 +0.4
E09A IAmb IAmb 21 41 33.8
comp=Z,28nm,1.4s
HUMO Hull Mountain 21.64 118 P P 21 41 33.9 +0.5
HUMO IAmb IAmb 21 41 53.3
comp=Z,21nm,1.2s
PINE Pine Mountain 21.81 113 P P 21 41 35.5 +0.1
G08A Pilot Rock 21.84 107 P P 21 41 36.1 +0.5
G08A IAmb IAmb 21 41 39.6
comp=Z,20nm,1.5s
J05D Fort Rock, OR 22.01 114 P P 21 41 37.2 -0.4
J05D IAmb IAmb 21 41 42.5
comp=Z,15nm,1.0s
K04D Chiloquin, OR 22.23 116 P P 21 41 41.2 +1.3
F10A Beach Ranch, E 22.33 104 P P 21 41 41.1 +0.2
F10A IAmb IAmb 21 41 44.3
comp=Z,14nm,0.8s
I07A Izee 22.35 110 P P 21 41 41.9 +0.8
I07A IAmb IAmb 21 41 43.6
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 22.42 119 LR LR 21 48 19.8
comp=Z,64nm,20.6s,baz=324,slow=31
K05A Summer Lake 22.59 115 P P 21 41 44.2 +0.4
K05A IAmb IAmb 21 42 03.6
comp=Z,31nm,1.4s
BMO Blue Mountains 23.01 106 P P 21 41 48.0 0.0
BMO Blue Mountains 23.01 106 P P 21 41 48.0 0.0
BMO pmax pmax
comp=Z,4.0nm,1.0s
KMRM Mail Ridge 23.10 123 P P 21 41 50.0 +1.0
BILL Bilibino 23.36 318 P P 21 41 51.3 0.0
BILL IAmb IAmb 21 42 06.1
comp=Z,8.3nm,0.9s
BILL Bilibino 23.36 318 *eP* P 21 41 51.2 -0.2
BILL pmax pmax
comp=Z,5.0nm,1.0s
J08A Circle Bar Ran 23.39 110 P P 21 41 52.8 +0.8
J08A IAmb IAmb 21 41 54.6
comp=Z,6.2nm,0.7s
PLID Pearl Lake 23.56 104 P P 21 41 54.2 +0.5
WVOR Wild Horse Val 23.96 112 P P 21 41 58.3 +0.8
WVOR IAmb IAmb 21 42 00.1
comp=Z,9.9nm,0.8s
WVOR Wild Horse Val 23.96 112 P P 21 41 58.3 +0.8
WVOR pmax pmax
comp=Z,10.0nm,0.9s
BPMT Black Pine Rid 24.12 99 P P 21 41 59.5 +0.3
LYMT Lyon Mountain 24.45 96 P P 21 42 01.8 -0.4
GDXM Geysers 24.66 124 P P 21 42 03.8 0.0
GDXM IAmb IAmb 21 42 09.6
comp=Z,19nm,1.4s
ORV Oroville 24.68 121 P P 21 42 02.4 -1.6
ORV IAmb IAmb 21 42 05.4
comp=Z,11nm,1.4s
ORV Oroville 24.68 121 P P 21 42 02.4 -1.6
ORV pmax pmax
comp=Z,11nm,1.5s
MFID Camas Ranch 24.76 107 P P 21 42 04.9 +0.1
MFID IAmb IAmb 21 42 07.2
comp=Z,16nm,1.4s
EGMT Eagleton 25.27 92 P P 21 42 08.1 -1.3
EGMT IAmb IAmb 21 42 12.8
comp=Z,12nm,1.1s
EGMT Eagleton 25.27 92 P P 21 42 09.4 +0.1
baz=304
HLID Hailey 25.42 105 P P 21 42 10.9 0.0
HLID Hailey 25.42 105 P P 21 42 11.1 +0.2
baz=312
BMN Battle Mountai 26.14 113 P P 21 42 17.6 +0.2
BMN Battle Mountai 26.14 113 P P 21 42 17.6 +0.2
BMN pmax pmax
comp=Z,4.0nm,0.9s
YHL Hebgen Lake 26.35 99 P P 21 42 18.6 -0.8
YHL IAmb IAmb 21 42 24.6
comp=Z,8.8nm,0.8s
FFC Flin Flon 26.42 73 P P 21 42 19.9 +0.2
FFC Flin Flon 26.42 73 P P 21 42 19.9 +0.2
FFC pmax pmax
comp=Z,7.0nm,1.3s
YNR Norris Junctio 26.72 99 P P 21 42 20.2 -2.5
KVN Kaiserville 26.74 117 P P 21 42 22.0 -0.8
KVN Kaiserville 26.74 117 P P 21 42 22.0 -0.8
KVN pmax pmax
comp=Z,4.0nm,1.0s
RYN Ryan 26.85 118 P P 21 42 23.9 0.0
ELK Elko 26.94 110 P P 21 42 25.2 +0.5
ELK Elko 26.94 110 P P 21 42 25.3 +0.5
ELK pmax pmax
comp=Z,4.0nm,1.0s
ELK Elko 26.94 110 LR LR 21 51 24.2
comp=Z,80nm,18.0s,baz=337,slow=33
IMW Indian Meadow 27.10 101 P P 21 42 25.3 -0.8
FLWY Flagg Ranch 27.11 100 P P 21 42 23.4 -2.7
FLWY IAmb IAmb 21 42 25.9
comp=Z,13nm,1.1s
NVAR Mina Array Bea 27.11 118 P P 21 42 26.6 +0.4
NVAR Mina Array Bea 27.11 118 P P 21 42 27.4 +1.1
comp=Z,2.0nm,0.8s,baz=299,slow=8.2,SNR=8.6
NVAR LR LR 21 51 25.4
comp=Z,131nm,18.8s,baz=311,slow=32
comp=Z,2.0nm,0.8s
FXWY Fox Creek 27.22 101 P P 21 42 25.3 -1.9
MOOW Moose Ponds 27.30 101 P P 21 42 27.0 -0.9
REDW Red Top Meadow 27.49 101 P P 21 42 30.2 +0.5
HVU Hansel Valley 27.52 106 P P 21 42 30.1 +0.3
HVU Hansel Valley 27.52 106 P P 21 42 30.1 +0.3
HVU pmax pmax
comp=Z,6.0nm,1.3s
TPH Tonopah 27.93 117 P P 21 42 33.1 -0.4
TPH Tonopah 27.93 117 P P 21 42 33.1 -0.4
TPH pmax pmax
comp=Z,14nm,1.0s
BGU Big Grassy Mou 27.98 108 P P 21 42 32.5 -1.5
DGMT Dagmar 28.13 87 P P 21 42 33.7 -1.4
DGMT Dagmar 28.13 87 P P 21 42 34.2 -0.8
baz=303
LCH Last Change Ra 28.37 118 P P 21 42 38.3 +0.9
Q12A Willow Creek R 28.41 112 P P 21 42 37.4 -0.4
R11B Troy Canyon, C 28.54 114 P P 21 42 39.3 +0.3
R11B Troy Canyon, C 28.54 114 P P 21 42 38.9 -0.1
baz=320,SNR=9.2
PDAR Pinedale Array 28.60 101 P P 21 42 38.9 -0.6
PDAR Pinedale Array 28.60 101 P P 21 42 39.9 +0.4
comp=Z,1.0nm,0.7s,baz=338,slow=4.4,SNR=4.7
PDAR LR LR 21 52 38.5
comp=Z,52nm,18.8s,baz=104,slow=33
comp=Z,1.0nm,0.7s
SPR3 Spring Creek 3 28.70 112 P P 21 42 40.8 +0.3
SPR3 IAmb IAmb 21 42 43.8
comp=Z,6.4nm,1.1s
S11A Rachel 29.00 115 P P 21 42 42.2 -0.8
S11A IAmb IAmb 21 42 45.7
comp=Z,9.2nm,1.0s
FCC Fort Churchill 29.06 62 P P 21 42 43.6 +0.6
FCC IAmb IAmb 21 42 45.5
comp=Z,5.6nm,0.8s
FCC Fort Churchill 29.06 62 P P 21 42 43.7 +0.6
FCC pmax pmax
comp=Z,6.0nm,0.8s
WCT Wildcat Mounta 29.22 118 P P 21 42 44.6 -0.3
WCT IAmb IAmb 21 42 59.8
comp=Z,4.1nm,0.5s
BSUT Blindstream Ca 29.48 106 P P 21 42 47.5 0.0
PRN Pahroc Range 29.54 115 P P 21 42 48.2 +0.5
PRN IAmb IAmb 21 42 50.3
comp=Z,13nm,1.4s
QSM Queen of Sheba 29.76 119 P P 21 42 50.5 +0.9
QSM IAmb IAmb 21 42 52.3
comp=Z,6.1nm,1.1s
RDMU Red Mountain 30.09 104 P P 21 42 52.2 -0.6
RDMU IAmb IAmb 21 42 54.4
comp=Z,4.6nm,0.9s
MVU Marysvale 30.17 110 P P 21 42 52.7 -0.8
SHPR Sheep Range 30.18 116 P P 21 42 52.9 -0.6
MSU Marysvale 30.19 110 P P 21 42 53.1 -0.5
MSU Marysvale 30.19 110 P P 21 42 53.1 -0.5
PETK Petropavlovsk- 30.25 287 P P 21 42 52.9 -0.9
comp=Z,1.6nm,0.8s,baz=47,slow=11,SNR=1.2
PETK LR LR 21 54 37.9
comp=Z,49nm,21.7s,baz=78,slow=36
comp=Z,1.6nm,0.8s
MTPU Mount Pierson 30.53 111 P P 21 42 55.6 -1.2
SRU San Rafael Swe 30.62 107 P P 21 42 57.4 0.0
SRU IAmb IAmb 21 42 60.0
comp=Z,10.0nm,1.0s
SRU San Rafael Swe 30.62 107 P P 21 42 57.4 0.0
SRU pmax pmax
comp=Z,10.0nm,1.0s
RSSD Black Hills 30.78 94 P P 21 42 59.0 +0.2
baz=309
O20A White River Ci 31.12 103 P P 21 43 00.9 -1.0
O20A White River Ci 31.12 103 P P 21 43 02.7 +0.8
baz=315
MA2 Magadan 31.16 302 LR LR 21 54 52.4
comp=Z,81nm,21.7s,baz=116,slow=35
GMRC Granite Mounta 31.29 119 P P 21 43 03.1 -0.2
baz=324
SCI2 San Clemente I 31.40 125 P P 21 43 04.4 +0.4
baz=327
ULM Lac du Bonnet 31.79 78 P P 21 43 07.4 +0.1
ULM IAmb IAmb 21 43 09.2
comp=Z,8.9nm,1.2s
ULM Lac du Bonnet 31.79 78 P P 21 43 08.2 +0.8
comp=Z,3.3nm,0.8s,baz=289,slow=11,SNR=5.6
ULM LR LR 21 55 06.1
comp=Z,59nm,20.2s,baz=172,slow=35
comp=Z,3.3nm,0.8s
PV04 Paradox Valley 32.01 107 P P 21 43 08.8 -0.8
PV04 IAmb IAmb 21 43 11.6
comp=Z,5.3nm,0.9s
PV16 Nyswonger Mesa 32.07 107 P P 21 43 09.3 -0.9
PV16 IAmb IAmb 21 43 51.6
comp=Z,13nm,1.5s
PV07 Paradox Valley 32.12 106 P P 21 43 09.2 -1.5
PV07 IAmb IAmb 21 43 12.5
comp=Z,8.7nm,1.1s
PV05 Paradox Valley 32.14 107 P P 21 43 10.2 -0.6
PV15 Paradox Valley 32.28 106 P P 21 43 12.1 +0.1
PV15 IAmb IAmb 21 43 17.1
comp=Z,10.0nm,1.1s
PV01 Paradox Valley 32.38 106 P P 21 43 12.1 -0.9
PV01 IAmb IAmb 21 43 14.9
comp=Z,5.7nm,0.8s
AGMN Agassiz Nation 32.86 81 P P 21 43 15.9 -0.8
AGMN IAmb IAmb 21 43 18.3
comp=Z,3.8nm,0.8s
AGMN Agassiz Nation 32.86 81 P P 21 43 17.3 +0.5
baz=304
WUAZ Wupatki 32.88 113 P P 21 43 16.0 -1.2
WUAZ IAmb IAmb 21 43 30.8
comp=Z,5.5nm,0.8s
WUAZ Wupatki 32.88 113 P P 21 43 17.3 +0.1
baz=321
MVCO Mesa Verde 33.10 108 P P 21 43 19.6 +0.3
baz=318
X16A Lo Mia Camp, P 33.70 114 P P 21 43 24.9 +0.5
X16A IAmb IAmb 21 43 27.4
comp=Z,4.2nm,0.9s
113A Mohawk Valley, 33.85 119 P P 21 43 24.8 -0.7
W18A Petrified Fore 34.03 111 P P 21 43 27.4 +0.1
W18A IAmb IAmb 21 43 29.7
comp=Z,7.1nm,1.2s
W18A Petrified Fore 34.03 111 P P 21 43 26.9 -0.4
baz=321
SDCO Great Sand Dun 34.32 104 P P 21 43 31.4 +1.4
baz=317
X18A Snowflake 34.38 112 P P 21 43 29.6 -0.8
X18A IAmb IAmb 21 43 32.9
comp=Z,11nm,1.4s
214A Organ Pipe Nat 34.98 118 P P 21 43 33.3 -2.1
baz=325
KSCO Kaye Shedlock' 34.99 99 P P 21 43 35.1 -0.5
ECSD EROS Data Cent 35.18 88 P P 21 43 35.5 -1.5
ECSD IAmb IAmb 21 43 38.2
comp=Z,6.2nm,1.0s
T25A Trinidad 35.36 103 P P 21 43 39.1 +0.3
baz=317
EYMN Ely 35.46 78 P P 21 43 39.1 -0.2
EYMN Ely 35.46 78 P P 21 43 40.3 +0.9
baz=306,SNR=7.9
TIXI Tiksi 35.80 328 P P 21 43 42.0 0.0
TIXI IAmb IAmb 21 43 44.1
comp=Z,4.9nm,0.9s
TIXI Tiksi 35.80 328 P P 21 43 42.0 0.0
TIXI pmax pmax
comp=Z,5.0nm,0.9s
TIXI Tiksi 35.80 328 LR LR 22 00 41.4
comp=Z,40nm,18.7s,baz=38,slow=40
BGNE Belgrade 35.84 92 P P 21 43 42.3 -0.4
BGNE Belgrade 35.84 92 P P 21 43 42.6 -0.1
baz=312
ANMO Albuquerque 35.89 108 P P 21 43 41.9 -1.5
ANMO Albuquerque 35.89 108 P P 21 43 43.4 0.0
baz=320
ANMO Albuquerque 35.89 108 P P 21 43 41.9 -1.5
ANMO pmax pmax
comp=Z,3.0nm,1.4s
ANMO Albuquerque 35.89 108 LR LR 21 58 49.6
comp=Z,84nm,18.7s,baz=52,slow=37
E38A The Farm, Brul 36.22 80 P P 21 43 44.8 -1.1
SPMN Marine on St. 36.37 83 P P 21 43 47.8 +0.6
baz=308
CBKS Cedar Bluff 36.73 97 P P 21 43 51.4 +1.1
baz=315
I37A Lemond, Waseca 36.80 85 P P 21 43 50.5 -0.3
121A Cookes Peak, D 37.06 112 P P 21 43 54.2 +0.9
baz=322
MSTX Muleshoe 38.61 105 P P 21 44 06.5 +0.2
baz=320
MNTX Cornudas Mount 38.97 110 P P 21 44 10.5 +1.2
baz=322
YAK Yakutsk 39.49 313 LR LR 22 00 00.7
comp=Z,59nm,18.6s,baz=268,slow=35
WMOK Wichita Mounta 40.21 100 P P 21 44 20.9 +1.3
WMOK IAmb IAmb 21 44 21.6
comp=Z,6.3nm,1.0s
WMOK Wichita Mounta 40.21 100 P P 21 44 20.9 +1.3
baz=318
WMOK Wichita Mounta 40.21 100 P P 21 44 20.9 +1.3
WMOK pmax pmax
comp=Z,6.0nm,1.0s
E46A Sault Ste Mari 40.33 76 P P 21 44 20.8 +0.3
E46A IAmb IAmb 21 44 22.4
comp=Z,22nm,1.5s
HDIL Hopedale 41.36 86 P P 21 44 28.7 -0.3
baz=313
TXAR Lajitas Array 41.74 111 P P 21 44 33.8 +1.4
comp=Z,0.8nm,0.5s,baz=330,slow=7.2,SNR=11
TXAR LR LR 22 00 13.9
comp=Z,36nm,18.6s,baz=356,slow=34
comp=Z,0.8nm,0.5s
CCM Cathedral Cave 42.00 90 P P 21 44 33.3 -1.0
baz=315
SFJD Kangerlussuaq 43.17 35 LR LR 22 02 30.7
comp=Z,50nm,20.2s,baz=180,slow=36
MIAR Mount Ida 43.23 96 P P 21 44 43.9 -0.4
baz=318
ASAJ Asahikawa 43.56 284 LR LR 22 01 26.3
comp=Z,26nm,20.4s,baz=140,slow=34
ACSO Alum Creek Sta 45.10 82 P P 21 44 59.6 +0.4
baz=314
WVT Waverly 45.29 89 P P 21 45 00.6 -0.2
baz=316
ERPA Erie 45.45 77 P P 21 45 02.0 0.0
baz=313
M53A WI Miller and 45.54 79 P P 21 45 03.4 +0.7
baz=313
OXF Oxford 45.58 92 P P 21 45 02.1 -1.0
baz=318
SPITS Spitsbergen Ar 45.63 4 P P 21 45 04.5 +1.5
comp=Z,21nm,1.1s,baz=270,slow=4.3,SNR=2.1
comp=Z,21nm,1.1s
KLR Kul'dur 45.92 296 *eP* P 21 45 05.2 -0.4
KLR pmax pmax
comp=Z,14nm,2.5s
KLR Kul'dur 45.92 296 LR LR 22 05 59.0
comp=Z,43nm,19.1s,baz=58,slow=38
P52A Corning 45.98 82 P P 21 45 06.3 +0.1
baz=314
O53A New Philadelph 46.06 80 P P 21 45 06.0 -0.9
baz=318
LONY Lake Ozonia 46.67 71 P P 21 45 11.4 -0.2
baz=312
X48A Hartselle 46.95 90 P P 21 45 14.5 +0.7
MCWV Mont Chateau 47.23 80 P P 21 45 16.2 +0.3
baz=315
TZTN Tazewell 47.38 86 P P 21 45 17.8 +0.5
baz=316
BINY Binghamton 47.57 75 P P 21 45 19.1 +0.4
baz=314
SSPA Standing Stone 47.62 77 P P 21 45 19.4 +0.4
baz=314
FPAL Fort Paine 47.69 89 P P 21 45 20.5 +0.8
TKL Tuckaleechee C 47.90 87 LR LR 22 05 20.8
comp=Z,185nm,18.9s,baz=125,slow=36
LRAL Lakeview Retre 48.02 92 P P 21 45 22.3 +0.1
baz=318
NRIK Noril'sk 48.24 337 *deP* P 21 45 23.8 +0.4
NRIK pmax pmax
comp=Z,2.0nm,0.6s
NRIK Noril'sk 48.24 337 P P 21 45 23.1 -0.3
comp=Z,1.9nm,0.4s,baz=69,slow=7.6,SNR=2.2
comp=Z,1.9nm,0.4s
BLA Blacksburg 48.64 83 P P 21 45 26.4 -0.7
baz=316
H11N2 WAKE ISLAND Hy 48.86 240 T T 22 38 03.5
baz=31,slow=76,SNR=18
H11N3 WAKE ISLAND Hy 48.86 240 T T 22 38 08.1
baz=31,slow=76,SNR=18
H11N1 WAKE ISLAND Hy 48.87 240 T T 22 38 06.6
baz=31,slow=76,SNR=18
PKME Peaks-Kenny Pk 49.00 67 P P 21 45 30.1 +0.5
baz=313
USRK Ussuriysk Ar. 49.16 291 LR LR 22 05 42.3
comp=Z,74nm,21.5s,baz=1.8,slow=35
GOGA Godfrey 49.72 88 P P 21 45 34.1 -1.1
baz=316
H11S1 WAKE ISLAND Hy 50.00 240 T T 22 39 55.5
baz=30,slow=76,SNR=13

H11S2	**WAKE ISLAND Hy**	**50.01**	**240**	T	T		22 39 52.6	
	baz=30,slow=76,SNR=14							
H11S3	**WAKE ISLAND Hy**	**50.01**	**240**	T	T		22 39 56.0	
	baz=30,slow=76,SNR=15							
JHJ	**Hachijo jima 2**	**52.88**	**276**	LR	LR		22 04 32.6	
	comp=Z,18nm,22.0s,baz=13,slow=32							
ARCES	**ARCESS Array B**	**54.55**	**2**	P	**P**		**21 46 10.6**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=2.2,slow=8.4,SNR=12							
	comp=Z,1.1nm,0.4s							
KSRS	**Korea Array**	**56.14**	**288**	LR	LR		22 13 44.5	
	comp=Z,12nm,18.3s,baz=50,slow=40							
JNU	**Nakatsue**	**57.79**	**282**	LR	LR		22 12 12.3	
	comp=Z,22nm,20.9s,baz=2.5,slow=37							
ULN	**Ulaanbaatar**	**58.45**	**310**	P	**P**		**21 46 39.9**	**+1.0**
ULN				IAmb	IAmb		21 46 51.7	
	comp=Z,3.7nm,0.7s							
ULN	**Ulaanbaatar**	**58.45**	**310**	P	**P**		**21 46 39.9**	**+1.0**
ULN				pmax	pmax			
	comp=Z,4.0nm,0.7s							
SONM	**Songino Array**	**58.75**	**310**	P	**P**		**21 46 42.3**	**+1.3**
SONM	**Songino Array**	**58.75**	**310**	P	**P**		**21 46 42.3**	**+1.3**
SONM				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SONM	**Songino Array**	**58.75**	**310**	P	**P**		**21 46 42.4**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=42,slow=6.9,SNR=23							
	comp=Z,2.4nm,0.8s							
ZALV	**Zalesovo Beam**	**61.69**	**327**	P	**P**		**21 47 01.4**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=26,slow=7.3,SNR=22							
	comp=Z,3.7nm,0.6s							
HHC	**Hu-ho-hao-te**	**61.84**	**302**	*e*P	**P**		**21 47 06.0**	**+3.8**
HHC				pmax	pmax			
	comp=Z,6.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,70nm,5.0s							
NB2	**NORSAR Subarra**	**62.13**	**11**	P	**P**		**21 47 03.6**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=348,slow=6.9							
NOA	**NORSAR Array B**	**62.13**	**11**	P	**P**		**21 47 04.0**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=348,slow=6.7,SNR=5.9							
	comp=Z,0.8nm,0.6s							
FINES	**FINESS Array B**	**62.68**	**3**	P	**P**		**21 47 07.9**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=6.0,slow=8.6,SNR=11							
	comp=Z,3.3nm,0.8s							
HFS	**Hagfors**	**63.26**	**9**	P	**P**		**21 47 11.3**	**0.0**
	comp=Z,1.0nm,0.8s,baz=106,slow=3.7,SNR=6.0							
HFS				LR	LR		22 16 28.8	
	comp=Z,34nm,18.0s,baz=280,slow=38							
	comp=Z,1.0nm,0.8s							
DGZ	**Jazzator, Alta**	**64.50**	**323**↑	*e*P	**P**		**21 47 20.2**	**+0.4**
DGZ				pmax	pmax			
	comp=Z,7.0nm,1.4s							
KURK	**Kurchatov**	**66.36**	**329**↑	*e*P	**P**		**21 47 32.0**	**+0.4**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BRVK	**Borovoye**	**66.41**	**335**↓	*e*P	**P**		**21 47 31.7**	**-0.2**
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.7s							
BVAR	**Borovoye Array**	**66.42**	**335**	P	**P**		**21 47 32.4**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=18,slow=6.2,SNR=7.7							
	comp=Z,1.5nm,0.8s							
KURBB	**Kurchatov Arra**	**66.47**	**329**	P	**P**		**21 47 32.5**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=29,slow=6.6,SNR=16							
KURBB				LR	LR		22 18 27.6	
	comp=Z,40nm,18.9s,baz=183,slow=38							
	comp=Z,1.7nm,0.6s							
MKAR	**Makanchi Array**	**68.72**	**325**	*e*P	**P**		**21 47 46.6**	**0.0**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**68.72**	**325**	P	**P**		**21 47 46.9**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=32,slow=6.1,SNR=41							
	comp=Z,1.8nm,0.5s							
WMQ	**Urumqi**	**69.47**	**320**	*e*P	P		21 48 00.1	+8.7
WMQ				pP	pwP		21 48 04.3	+5.2
WMQ				pmax	pmax			
	comp=Z,7.0nm,0.9s							
CLL	**Collm**	**71.89**	**12**	*i* P	P		21 48 12.1	+6.2
CLL	**Collm**	**71.89**	**12**	*i* pP	pP		21 48 12.1	+4.4
AKASG	**Malin Array Be**	**73.50**	**1**	*i* P	**P**		**21 48 17.0**	**+1.5**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**73.50**	**1**	P	**P**		**21 48 15.6**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=359,slow=6.1,SNR=4.4							
	comp=Z,2.0nm,0.6s							
AKBB	**Malin Array Si**	**73.50**	**1**↓	*e*P	**P**		**21 48 15.4**	**-0.1**
AAK	**Ala-Archa**	**74.88**	**328**	P	**P**		**21 48 23.2**	**-0.7**
AAK	**Ala-Archa**	**74.88**	**328**	*de*P	**P**		**21 48 24.2**	**+0.3**
AAK				pmax	pmax			
	comp=Z,4.0nm,2.5s							
KK31	**Karatay Array**	**75.58**	**331**	P	**P**		**21 48 26.6**	**-1.0**
KK31	**Karatay Array**	**75.58**	**331**	P	**P**		**21 48 26.7**	**-1.0**
KK31				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KKAR	**Karatay Array**	**75.58**	**331**	P	**P**		**21 48 26.5**	**-1.2**
KKAR	**Karatay Array**	**75.58**	**331**	P	**P**		**21 48 27.1**	**-0.6**
KKAR	**Karatay Array**	**75.58**	**331**	P	**P**		**21 48 27.1**	**-0.6**
GDSD	**La Dsirade Is**	**75.59**	**82**	P	**P**		**21 48 27.3**	**-0.8**
SDV	**Santo Domingo**	**76.31**	**95**	P	**P**		**21 48 30.3**	**-2.1**
SDV				IAmb	IAmb		21 48 52.7	
	comp=Z,5.8nm,1.1s							
MPOM	**Morne Pois Mar**	**77.23**	**83**	P	**P**		**21 48 36.8**	**-0.5**
PZH	**PanZhiHua**	**78.22**	**300**	P	P		21 48 48.3	+5.3
PZH				pmax	pmax			
	comp=Z,8.0nm,0.7s							
PZH				pmax	pmax			
	comp=Z,100nm,4.6s							
KIV	**Kislovodsk**	**79.75**	**351**	*e*P	**P**		**21 48 51.4**	**+0.3**
KIV				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KBZ	**Khabaz**	**79.96**	**351**	*e*P	**P**		**21 48 54.4**	**+2.4**
KBZ				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KBZ	**Khabaz**	**79.96**	**351**	P	**P**		**21 48 53.4**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=357,slow=7.5,SNR=4.6							
	comp=Z,1.6nm,0.8s							
ESDC	**Sonseca Array**	**80.08**	**27**	P	**P**		**21 48 53.9**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=356,slow=3.9,SNR=1.7							
	comp=Z,0.4nm,0.8s							
BRTR	**Keskin Array B**	**84.46**	**358**	P	**P**		**21 49 16.4**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=354,slow=2.9,SNR=3.9							
	comp=Z,1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**86.38**	**298**	*e*P	**P**		**21 49 25.4**	**-0.2**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**86.38**	**298**	P	**P**		**21 49 26.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=13,slow=5.3,SNR=5.1							
	comp=Z,0.5nm,0.6s							
QSPA	**South Pole Qui**	**145.95**	**180**	PKPbc	**PKPdf**		**21 56 21.3**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=184,slow=1.3,SNR=1.6							

*IDC **22** 21:44:43.5±1.6,5.°32S×153.°81E, h0km, mb3.5/5, mbtmp3.5/5, MS3.1/1, Error ellipse: s-maj=45.0km s-min=31.3km az=69.0*

ISC 22 21:44:53.1±1.5,5.°5S±0.°2×153.°8E±0.°3, h74km, n6, σ1s0.0/6, mb3.2/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.54**	**145**	P	**P**		**21 49 26.1**	**+0.3**
	2.3nm,0.4s,baz=288,slow=17,SNR=2.5							
	2.3nm,0.4s							
WRA	**Warramunga Arr**	**23.76**	**231**	P	**P**		**21 49 58.1**	**-0.9**
	0.4nm,0.8s,baz=42,slow=8.9,SNR=1.8							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**26.33**	**225**	P	**P**		**21 50 22.7**	**+0.4**
	0.4nm,0.8s,baz=52,slow=8.6,SNR=2.2							
ASAR				LR	LR		22 00 55.6	
	comp=Z,39nm,18.5s,baz=247,slow=37							
	0.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**59.06**	**295**	P	**P**		**21 54 47.1**	**+1.0**
	0.4nm,0.4s,baz=115,slow=5.2,SNR=6.7							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**81.49**	**319**	P	**P**		**21 57 02.0**	**-0.5**
	0.3nm,0.6s,baz=102,slow=6.7,SNR=6.8							
	0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**151.45**	**287**	PKPbc	**PKPbc**		**22 04 38.9**	**-0.8**
	0.8nm,0.3s,baz=69,slow=4.5,SNR=4.5							

*SOF **22** 21:49:08.1,45.°7N±0.°1×26.°42E±0.°02, h13km±20km, MD3.2/3*
*SIGU **22** 21:49:09.5,45.°82N×26.°48E, h150km*
*IDC **22** 21:49:09.4±0.8,45.°93N×26.°03E, h143km±5km, mb3.4/3, mbtmp3.6/5, Error ellipse: s-maj=40.5km s-min=12.4km az=118.0*
*MOLD **22** 21:49:09.1,45.°72N×26.°39E, h140km, MB2.8, Mb3.5*
*BUC **22** 21:49:10.1±0.2,45.°65N×26.°53E, h142km±1km, ml4.0/70,*

Error ellipse: s-maj=1.4km s-min=1.1km az=4.0
*CFUSG **22** 21:49:11.8,45.°71N×26.°75E, h128km, mb2.8/2, Romania*
Magtype MSH 3.5 from 3 stations
*BEO **22** 21:49:19.8±0.7,45.°35N×25.°12E, h0km, ML2.8/3*

ISC 22 21:49:09.3±0.8,45.°69N±0.°02×26.°52E±0.°02, h152km±4km, n129, σ1s0.9/194, mb3.9/3, 77C-53D, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SPBR	**Spulber**	**0.17**	**70**	P	**P**		**21 49 30.1**	**+0.3**
SPBR				S	**S**		**21 49 44.9**	**-0.5**
PLOR	**Plostina**	**0.18**	**29**	P	**P**		**21 49 29.7**	**-0.2**
PLOR				S	**S**		**21 49 44.5**	**-1.1**
BISRR	**Bisoca**	**0.20**	**137**	P	**P**		**21 49 30.3**	**+0.3**
BISRR				S	**S**		**21 49 45.3**	**-0.3**
VRI	**Vrincioaia**	**0.23**	**40**	P	**P**		**21 49 29.9**	**0.0**
VRI				S	**S**		**21 49 44.9**	**-0.7**
COVR	**Voineasa-Covas**	**0.27**	**305**	P	**P**		**21 49 29.8**	**-0.2**
COVR				S	**S**		**21 49 44.5**	**-1.3**
NEHR	**Nehoiu**	**0.31**	**211**	P	**P**		**21 49 30.4**	**+0.2**
NEHR				S	**S**		**21 49 45.3**	**-0.7**
MLR	**Muntele Rosu**	**0.45**	**244**	P	**P**		**21 49 30.8**	**0.0**
MLR				S	**S**		**21 49 46.7**	**-0.5**
MLR	**Muntele Rosu**	**0.45**	**244**	P	**P**		**21 49 30.9**	**+0.1**
	baz=354,slow=10							
MLR				S	**S**		**21 49 46.8**	**-0.4**
	1μm,0.4s,baz=63,slow=11,SNR=87							
TURR	**Turia**	**0.51**	**316**	P	**P**		**21 49 30.9**	**-0.1**
TURR				S	**S**		**21 49 46.5**	**-1.0**
ISR	**Istrita**	**0.57**	**179**	P	**P**		**21 49 31.7**	**+0.3**
OZUR		**0.65**	**308**	P	**P**		**21 49 31.4**	**-0.3**
OZUR				S	**S**		**21 49 47.5**	**-1.4**
BOSR	**Bodos**	**0.71**	**303**	P	**P**		**21 49 32.0**	**-0.1**
BOSR				S	**S**		**21 49 48.6**	**-1.0**
GHRR		**0.72**	**59**	P	**P**		**21 49 32.6**	**+0.5**
GHRR				S	**S**		**21 49 49.7**	**+0.1**
TUDR		**0.81**	**97**	P	**P**		**21 49 32.5**	**-0.2**
TUDR				S	**S**		**21 49 49.9**	**-0.7**
TESR	**Tescani**	**0.82**	**6**	P	**P**		**21 49 32.7**	**-0.2**
TESR				S	**S**		**21 49 49.3**	**-1.6**
DOPR	**Dopca**	**0.84**	**290**	P	**P**		**21 49 33.0**	**0.0**
DOPR				S	**S**		**21 49 50.3**	**-0.8**
PGOR	**Pogoanele**	**0.85**	**157**	P	**P**		**21 49 33.4**	**+0.4**
PLAR	**PLOIESTI**	**0.85**	**204**	P	**P**		**21 49 33.5**	**+0.4**
PLAR				S	**S**		**21 49 51.4**	**+0.2**
SLCR	**Slobozia Conac**	**0.88**	**96**	P	**P**		**21 49 33.1**	**-0.1**
SLCR				S	**S**		**21 49 50.5**	**-1.0**
IZVR	**Izvoarele**	**0.89**	**99**	P	**P**		**21 49 32.9**	**-0.4**
IZVR				S	**S**		**21 49 50.3**	**-1.2**
SCHL	**Schela**	**0.94**	**101**	P	**P**		**21 49 33.6**	**-0.1**
SCHL				S	**S**		**21 49 51.1**	**-1.2**
SCHLR	**Schela**	**0.95**	**103**	P	**P**		**21 49 33.6**	**-0.1**
SCHLR				S	**S**		**21 49 51.4**	**-1.0**
VARL	**Varlezi**	**0.95**	**77**	P	**P**		**21 49 34.0**	**+0.2**
VARL				S	**S**		**21 49 52.0**	**-0.6**
BIR	**Birlad**	**0.96**	**53**	P	**P**		**21 49 34.2**	**+0.3**
BIR				S	**S**		**21 49 52.1**	**-0.6**
NEGRR	**Negrea**	**0.96**	**99**	P	**P**		**21 49 33.9**	**0.0**
NEGRR				S	**S**		**21 49 52.4**	**-0.2**
SULR		**1.03**	**191**	P	**P**		**21 49 34.8**	**+0.3**
SULR				S	**S**		**21 49 53.9**	**+0.2**
SCTR	**Scanteiesti**	**1.03**	**90**	P	**P**		**21 49 34.9**	**+0.4**
SCTR				S	**S**		**21 49 53.0**	**-0.7**
VOIR		**1.06**	**257**	P	**P**		**21 49 34.6**	**-0.3**
VOIR				S	**S**		**21 49 53.3**	**-1.1**
TATR	**Tatarca**	**1.08**	**94**	P	**P**		**21 49 35.2**	**+0.4**
TATR				S	**S**		**21 49 53.9**	**-0.5**
GISR	**Galati**	**1.10**	**103**	P	**P**		**21 49 35.4**	**+0.3**
GISR				S	**S**		**21 49 54.0**	**-0.8**
GIUM	**Giurgiulesti**	**1.20**	**99**	P	**P**		**21 49 36.4**	**+0.4**
GIUM				S	**S**		**21 49 56.1**	**-0.3**
GIUM	**Giurgiulesti**	**1.20**	**99**	P	**P**		**21 49 36.4**	**+0.4**
GIUM				S	**S**		**21 49 56.1**	**-0.3**
AMRR	**Amara**	**1.23**	**152**	P	**P**		**21 49 36.5**	**+0.3**
AMRR				S	**S**		**21 49 56.3**	**-0.6**
JOSR	**Joseni**	**1.23**	**326**	P	**P**		**21 49 36.4**	**0.0**
CFR	**Carcaliu**	**1.25**	**114**	P	**P**		**21 49 36.3**	**-0.2**
CFR				S	**S**		**21 49 56.1**	**-1.1**
GIRR	**Girov**	**1.26**	**359**	P	**P**		**21 49 37.3**	**+0.7**
BIZ	**Bicaz**	**1.28**	**347**	P	**P**		**21 49 58.6**	**+0.6**
VASR	**Vaslui**	**1.30**	**42**	P	**P**		**21 49 37.3**	**+0.4**
VASR				S	**S**		**21 49 57.3**	**-0.8**
CIOR	**Ciorogarla**	**1.32**	**200**	P	**P**		**21 49 37.2**	**-0.1**
CIOR				S	**S**		**21 49 57.7**	**-0.8**
ARR	**Arges**	**1.37**	**257**	P	**P**		**21 49 38.0**	**+0.3**
ARR				S	**S**		**21 49 58.9**	**-0.5**
STFAR	**Stefanesti-Arg**	**1.38**	**234**	S	**S**		**21 49 59.5**	**-0.1**
BUC1	**Bucharest**	**1.39**	**195**	P	**P**		**21 49 37.9**	**+0.1**
BUC1				S	**S**		**21 49 58.9**	**-0.8**
HARR	**Harsova**	**1.41**	**135**	P	**P**		**21 49 38.2**	**+0.1**
LEOM	**Leova**	**1.43**	**56**	P	**P**		**21 49 38.7**	**+0.5**
LEOM				S	**S**		**21 50 00.0**	**-0.5**
LEOM	**Leova**	**1.43**	**56**	P	**P**		**21 49 38.7**	**+0.5**
LEOM				S	**S**		**21 49 59.1**	**-1.4**
SGRR	**Singureni**	**1.52**	**195**	P	**P**		**21 49 39.1**	**-0.1**
SGRR				S	**S**		**21 50 00.6**	**-1.5**
MDB	**Medias**	**1.56**	**288**	P	**P**		**21 49 40.2**	**+0.6**
TLBR	**Topalu**	**1.57**	**136**	P	**P**		**21 49 39.9**	**+0.1**
TLBR				S	**S**		**21 50 01.4**	**-1.7**
TPGR	**Topolog**	**1.58**	**121**	P	**P**		**21 49 39.7**	**-0.2**
TPGR				S	**S**		**21 50 01.7**	**-1.6**
HUMR	**Humele**	**1.60**	**224**	P	**P**		**21 49 39.8**	**-0.3**
HUMR				S	**S**		**21 50 02.2**	**-1.3**
TLCR		**1.69**	**107**	P	**P**		**21 49 41.1**	**0.0**
TLCR				S	**S**		**21 50 04.4**	**-0.9**
CVDA	**Cernavoda**	**1.73**	**141**	P	**P**		**21 49 41.7**	**+0.2**
CVDA				S	**S**		**21 50 04.7**	**-1.5**
COPA	**Copaceanca**	**1.81**	**211**	P	**P**		**21 49 42.2**	**-0.2**
COPA				S	**S**		**21 50 06.4**	**-1.3**
ICOR	**Ion Corvin**	**1.82**	**150**	P	**P**		**21 49 42.9**	**+0.4**
ICOR				S	**S**		**21 50 06.5**	**-1.4**
TIRR	**Tirgusor**	**1.82**	**132**	P	**P**		**21 49 42.5**	**+0.1**
TIRR				S	**S**		**21 50 06.0**	**-1.9**
LOT	**Lotru**	**1.95**	**264**	P	**P**		**21 49 44.4**	**+0.4**
LOT				S	**S**		**21 50 11.3**	**+0.5**
MILM	**Milestii Mici**	**2.01**	**51**	P	**P**		**21 49 44.9**	**+0.4**
MILM	**Milestii Mici**	**2.01**	**51**↑	*i*P	**P**		**21 49 44.9**	**+0.4**
	10μm,0.1s							
MILM				*i* S	**S**		**21 50 10.0**	**-1.7**
	7μm,0.1s							
MFTR	**Murfatlar**	**2.03**	**138**	P	**P**		**21 49 45.0**	**+0.1**
MFTR				S	**S**		**21 50 10.8**	**-1.3**
KIS	**Kishinev**	**2.06**	**50**	P	**P**		**21 49 45.6**	**+0.4**
KIS	**Kishinev**	**2.06**	**50**↑	*i*P	**P**		**21 49 45.5**	**+0.4**
	7μm,0.1s							
KIS				*i* S	**S**		**21 50 11.4**	**-1.4**
	6μm,0.3s							
BURAR	**Bucovina Array**	**2.12**	**335**	P	**P**		**21 49 47.7**	**+1.6**
RAZG	**Razgrad**	**2.12**	**180**	P	**P**		**21 49 45.9**	**-0.2**
EFOR	**EFORIE**	**2.20**	**136**	S	**S**		**21 50 14.7**	**-1.0**
VLAD	**Vladila**	**2.27**	**222**	P	**P**		**21 49 47.2**	**-0.4**
VLAD				S	**S**		**21 50 16.1**	**-1.1**
LOZB	**Loznitsa**	**2.32**	**179**	P	**P**		**21 49 48.1**	**-0.3**
PSN	**Preselentsi**	**2.35**	**150**	P	**P**		**21 49 49.0**	**+0.2**
MANR	**Mangalia**	**2.38**	**141**	S	**S**		**21 50 18.4**	**-1.3**
SZH	**Strazhitsa**	**2.46**	**189**	P	**P**		**21 49 49.6**	**-0.4**
SZH				S	**S**		**21 50 19.8**	**-1.6**
PURM	**Purcari**	**2.48**	**69**↑	*i*P	**P**		**21 49 50.6**	**+0.5**
	14μm,0.2s							
PURM				S	**S**		**21 50 20.5**	**-1.2**
DEV	**Deva**	**2.54**	**276**	P	**P**		**21 49 51.4**	**+0.5**
MARR	**Marisel-Cluj**	**2.56**	**294**	P	**P**		**21 49 51.1**	**-0.2**
SRE	**Strehaia**	**2.56**	**247**	P	**P**		**21 49 51.1**	**-0.1**
SRE				S	**S**		**21 50 22.8**	**-0.8**
PRD	**Provadia**	**2.61**	**166**	P	**P**		**21 49 51.9**	**0.0**
CHRU	**Chernivtsi**	**2.64**	**351**	*e*S	**S**		**21 50 23.7**	**-1.6**
GZR	**Gura Zlata**	**2.65**	**265**	P	**P**		**21 49 52.7**	**+0.3**
GZR				S	**S**		**21 50 26.7**	**+1.0**
ROIA	**ROIAK**	**2.67**	**166**	P	**P**		**21 49 53.0**	**+0.4**
PLVB	**Pleven**	**2.68**	**211**	P	**P**		**21 49 52.4**	**-0.2**
AVR	**AVREN**	**2.70**	**162**	P	**P**		**21 49 53.4**	**+0.4**
SORM	**Soroca**	**2.75**	**26**	P	**P**		**21 49 53.5**	**0.0**
SORM	**Soroca**	**2.75**	**26**↑	*i*P	**P**		**21 49 53.4**	**0.0**
	7μm,0.1s							
SORM				*i* S	**S**		**21 50 25.3**	**-2.4**
	2μm,0.1s							
ELND	**Elena**	**2.80**	**190**	P	**P**		**21 49 54.2**	**-0.1**
KSV	**Kosov**	**2.81**	**340**	*e*P	**P**		**21 49 53.8**	**-0.5**
RAKU	**Rahkiv**	**2.84**	**326**	*e*P	**P**		**21 49 53.5**	**-1.2**
DRGR		**2.86**	**294**	↓P	**P**		**21 49 54.7**	**-0.4**
DRGR		**2.86**	**294**	*e*Pn	**Pn**		**21 49 54.7**	**-0.4**
BMR	**Baia Mare**	**2.88**	**315**	↓P	**Pn**		**21 49 55.6**	**+0.4**
NSLU	**Nyzhne Selyshc**	**2.88**	**331**	*e*P	**Pn**		**21 49 59.8**	**+4.7**
NDNU	**Novodnistrovsk**	**2.96**	**11**↑	*i*P	**Pn**		**21 49 56.1**	**-0.1**
NDNU				Pm			21 49 56.6	
NDNU				*e*S	**Sn**		**21 50 30.1**	**-2.4**
NDNU				Sm			21 50 31.0	
VALD	**Valchedram**	**2.98**	**229**	P	**Pn**		**21 49 56.0**	**-0.4**
HERR	**Herculane**	**3.01**	**256**	↓P	**Pn**		**21 49 56.7**	**-0.1**
MPEP	**Malo Peshtene**	**3.07**	**221**	P	**Pn**		**21 49 57.4**	**-0.2**
SURR	**Surduc**	**3.08**	**273**	↓P	**Pn**		**21 49 58.0**	**+0.2**
JMB	**Yambol**	**3.20**	**180**	P	**Pn**		**21 49 59.1**	**-0.2**
KORU	**Korolevo**	**3.39**	**318**	*e*P	**Pn**		**21 50 00.8**	**-0.8**
SIRR	**Siria**	**3.44**	**281**	*e*Pn	**Pn**		**21 50 02.4**	**+0.1**
BZS	**Buzias**	**3.44**	**270**	↓P	**Pn**		**21 50 02.4**	**+0.1**
BZS	**Buzias**	**3.44**	**270**	*e*Pn	**Pn**		**21 50 02.1**	**-0.2**
MEZ	**Mezhgor'ye**	**3.49**	**325**	*e*P	**Pn**		**21 50 02.0**	**-1.0**
BRIU	**Brid**	**3.57**	**319**	*e*P	**Pn**		**21 50 04.0**	**+0.1**
ZAGS	**Zajecar**	**3.59**	**240**	*e*Pn	**Pn**		**21 50 02.6**	**-1.6**
ZAGS				*e*Sg	**Sn**		**21 50 40.1**	**-6.7**
PGB	**Panagyurishte**	**3.60**	**209**	P	**Pn**		**21 50 04.6**	**+0.1**
KUBS	**Kucevo**	**3.67**	**251**	*e*Pn	**Pn**		**21 50 04.1**	**-1.2**
BERU	**Beregovo**	**3.67**	**315**	*e*P	**Pn**		**21 50 04.8**	**-0.5**
ZAPS	**Zavoj**	**3.69**	**230**	*e*Pn	**Pn**		**21 50 04.7**	**-0.9**
ZAPS				*e*Sg	**Sn**		**21 50 45.6**	**-3.6**
MUKU	**Mukachevo**	**3.81**	**318**	*e*P	**Pn**		**21 50 07.0**	**0.0**
VTS	**Vitosha**	**3.88**	**219**	P	**Pn**		**21 50 08.3**	**+0.1**
PLNA	**Plana**	**3.91**	**216**	P	**Pn**		**21 50 09.8**	**+1.2**
HOLU	**Holmets**	**4.00**	**317**↓	*i*P	**Pn**		**21 50 09.4**	**-0.1**
RZN	**Rozhen**	**4.20**	**199**	P	**Pn**		**21 50 12.3**	**-0.1**
TARU	**Tarkhankut**	**4.24**	**92**	*i* S	**Sn**		**21 51 01.0**	**-0.8**
TARU				Sm			21 51 06.0	
	comp=N,5.0nm,0.3s							
TARU				Sm			21 51 06.0	
	comp=E,19nm,0.3s							
KOLS	**Kolonicke sedl**	**4.34**	**320**	*e*P	**Pn**		**21 50 15.0**	**+1.0**
BARS	**Barje**	**4.44**	**231**	*e*Pn	**Pn**		**21 50 15.6**	**+0.3**
GRUS	**Gruza**	**4.51**	**248**	*e*Pn	**Pn**		**21 50 16.0**	**-0.2**
PRVS	**Prvonek**	**4.51**	**227**	*e*Pn	**Pn**		**21 50 16.4**	**0.0**
PRVS				*e*Sg	**Sn**		**21 51 12.8**	**+4.2**
TRUS	**Trudelj**	**4.58**	**253**	*e*Pn	**Pn**		**21 50 17.3**	**+0.1**
SELS	**Selova**	**4.59**	**239**	*e*Pn	**Pn**		**21 50 16.8**	**-0.6**
CRVS	**Cervenica-Dubn**	**4.71**	**315**	*e*P	**Pn**		**21 50 19.8**	**+1.0**
IVAS	**Ivanjica**	**5.01**	**247**	*e*Pn	**Pn**		**21 50 22.8**	**-0.2**
STHS	**Stebnicka Huta**	**5.16**	**318**	*e*P	**Pn**		**21 50 25.5**	**+0.7**
SEV	**Sevastopol'**	**5.19**	**100**	*e*P	**Pn**		**21 50 25.9**	**+0.8**
SEV				↑*i*P	**Pn**		**21 50 26.3**	**+1.2**
SEV				Pm			21 50 28.6	
	comp=Z,3.0nm,0.3s							
SEV				*i* S	**Sn**		**21 51 23.7**	**-0.6**
SEV				Sm			21 51 25.1	
	comp=N,6.0nm,0.3s							
SEV				Sm			21 51 25.1	
	comp=E,7.0nm,0.4s							
AKASG	**Malin Array Be**	**5.33**	**19**	P	**Pn**		**21 50 27.1**	**+0.1**
	comp=E,2.7nm,0.3s,baz=206,slow=12,SNR=18							
AKASG				S	**Sn**		**21 51 24.6**	**-3.1**
	comp=E,1.9nm,0.5s,baz=204,slow=21,SNR=6.3							
SIM	**Simferopol'**	**5.41**	**95**	*e*S	**Sn**		**21 51 28.0**	**-1.6**
SIM				Sm			21 51 31.2	
	comp=N,33nm,1.0s							
SIM				Sm			21 51 31.2	
	comp=E,50nm,1.0s							
LANS	**Liptovska Anna**	**5.91**	**308**	*e*P	**Pn**		**21 50 35.7**	**+1.0**
**SU

MTO3	**Montecristo**	**2.11**	**354**	*e*P		**Pn**	**21 59 11.5**	**+1.7**
MTO3	**Montecristo**	**2.11**	**354**	*i* P		**Pn**	**21 59 11.4**	**+1.6**
MTO3				IAML			21 59 39.9	
	comp=Z,270nm,1.0s							
PKGN	**Cerro Pekin**	**2.14**	**79**	*i* P		**Pb**	**21 59 12.8**	**-0.5**
PKGN				IAML			21 59 54.1	
	comp=Z,780nm,1.0s							
COPN	**Copaltepe**	**2.49**	**92**	*i* P		**Pb**	**21 59 18.0**	**-1.2**
COPN				IAML			22 00 01.6	
	comp=Z,210nm,1.0s							
YUSH	**Yuscaran**	**2.78**	**53**	*e*P		**Pn**	**21 59 21.1**	**+2.2**

*IDC **22**21:59:55.9±2.3,43˚58N×105˚39W,h0km,mbtmp3.2/2, ML2.0/1,Error ellipse: s-maj=53.2km s-min=10.3km az=152.0*

*NEIC **22**21:59:55.9±0.7,43˚74N±0˚05×105˚29W±0˚07,h0km±1km, ML2.8/50,Error ellipse: s-maj=9.4km s-min=8.9km az=127.0*

ISC 22 21:59:56.3±1.1,43˚72N±0˚06×105˚29W±0˚06,h0km,n22, σ1s24/17,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**66**			**Pb**	**22 00 16.1**	**-0.4**
K22A	**Casper**	**1.40**	**221**			**Pg**	**22 00 21.8**	**-1.3**
K22A				IAML			22 00 44.3	
	comp=E,180nm,0.6s							
K22A				IAML			22 00 46.7	
	comp=N,176nm,0.2s							
PHWY	**Pilot Hill**	**2.42**	**183**			**Pn**	**22 00 38.3**	**+0.9**
PHWY				IAML			22 01 14.0	
	comp=N,33nm,0.7s							
RWWY	**Rawlins**	**2.48**	**216**			**Pn**	**22 00 38.8**	**+0.7**
N23A	**Red Feather La**	**2.87**	**190**			**Pn**	**22 00 45.1**	**+1.5**
N23A				IAML			22 01 25.9	
	comp=E,41nm,0.7s							
LAO	**LASA Array**	**3.04**	**348**	Pn		**Pn**	**22 00 46.4**	**+0.6**
RLMT	**Red Lodge**	**3.18**	**298**			**Pn**	**22 00 48.8**	**+1.0**
RLMT				IAML			22 01 44.7	
	comp=E,23nm,0.7s							
RLMT				IAML			22 01 45.8	
	comp=E,20nm,0.6s							
PD31	**Pinedale Array**	**3.26**	**254**			**Pn**	**22 00 49.9**	**+0.9**
PDAR	**Pinedale Array**	**3.26**	**254**	Pn		**Pn**	**22 00 49.9**	**+0.9**
	comp=E,2.3nm,0.3s,baz=73,slow=16,SNR=34							
PDAR				Lg		Lg	22 01 34.9	
	comp=E,4.7nm,0.3s,baz=73,slow=34,SNR=11							
YMP	**Mirror Lake Pl**	**3.65**	**288**			**Pn**	**22 00 55.3**	**+1.0**
YMP				IAML			22 02 05.3	
	comp=N,23nm,0.8s							
OGNE	**Ogallala**	**3.67**	**138**			**Pn**	**22 00 55.8**	**+1.3**
LKWY	**Lake**	**3.78**	**285**			**Pn**	**22 00 57.8**	**+1.7**
LKWY				IAML			22 02 04.3	
	comp=N,16nm,0.8s							
LKWY				IAML			22 02 07.7	
	comp=N,11nm,1.2s							
LOHW	**Long Hollow**	**3.86**	**270**			**Pn**	**22 00 58.9**	**+1.7**
LOHW				IAML			22 02 01.6	
	comp=N,9.3nm,2.8s							
ISCO	**Idaho Springs**	**3.92**	**184**			**Pn**	**22 00 59.6**	**+1.4**
FLWY	**Flagg Ranch**	**3.93**	**277**			**Pn**	**22 00 59.2**	**+1.1**
FLWY				IAML			22 02 08.1	
	comp=N,15nm,2.9s							
FLWY				IAML			22 02 44.8	
	comp=N,14nm,3.2s							
MOOW	**Moose Ponds**	**3.96**	**272**			**Pn**	**22 00 59.5**	**+1.0**
YFT	**Old Faithful**	**4.07**	**282**	IAML			22 02 19.4	
	comp=E,9.9nm,3.7s							
YFT				IAML			22 02 20.9	
	comp=N,8.7nm,2.0s							
TPAW	**Teton Pass**	**4.12**	**269**	IAML			22 02 27.5	
	comp=N,12nm,1.0s							
TPAW				IAML			22 02 39.3	
	comp=N,13nm,0.9s							
YHL	**Hebgen Lake**	**4.38**	**287**	IAML			22 02 38.0	
	comp=N,14nm,1.3s							
RDMU	**Red Mountain**	**4.48**	**227**	IAML			22 02 20.7	
	comp=N,14nm,1.4s							
RDMU				IAML			22 02 37.0	
	comp=E,14nm,0.9s							
I10CA	**LAC DU BONNET**	**9.06**	**41**	I		I	22 56 30.0	
	baz=226,slow=325,SNR=2.5							
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn		**Pn**	**22 02 09.3**	**-0.4**
	comp=E,0.3nm,0.3s,baz=236,slow=13,SNR=2.1							
ULM				Lg		Lg	22 04 44.5	
	comp=E,0.1nm,0.3s,baz=127,slow=14,SNR=3.3							
	comp=E,0.8nm,0.4s							

IDC 22 22:03:34.3±9.0,3˚22S×138˚61E,h0km,mb3.5/2, mbtmp3.7/3,ML3.9/1,Error ellipse: s-maj=382.3km s-min=32.8km az=86.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.14**	**194**	P		Pn	22 07 34.5	-0.8
	0.5nm,0.3s,baz=15,slow=13,SNR=20							
WRA				S		Sn	22 10 33.3	-13
	0.4nm,0.9s,baz=32,slow=27,SNR=1.0							
	1.0nm,0.3s							
ASAR	**Alice Springs**	**20.83**	**192**	P		P	22 08 18.1	+0.4
	2.0nm,0.6s,baz=16,slow=10,SNR=21							
	2.0nm,0.6s							
MKAR	**Makanchi Array**	**70.13**	**323**	P		P	22 14 48.7	0.0
	0.2nm,0.7s,baz=112,slow=7.2,SNR=2.5							
	0.2nm,0.7s							

IDC 22 22:09:50.0±5.8,3˚35S×145˚13E,h0km,mb3.4/1, mbtmp3.5/2,MLb3.8/1,MS4.1/1,Error ellipse: s-maj=136.2km s-min=79.6km az=106.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.57**	**212**	P		P	22 14 18.8	-0.9
	0.3nm,0.3s,baz=34,slow=10,SNR=12							
WRA				LR		LR	22 22 27.5	
	comp=Z,559nm,18.9s,baz=248,slow=39							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**22.93**	**207**	P		P	22 14 56.8	+0.8
	0.7nm,0.5s,baz=32,slow=12,SNR=8.1							
	0.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**142.59**	**287**	PKP		PKPdf	22 29 24.8	-1.4
	0.6nm,0.3s,baz=102,slow=1.3,SNR=2.4							

IDC 22 22:11:36.9±1.8,6˚58S×129˚42E,h0km,mb3.5/2, mbtmp3.5/4,ML3.4/2,Error ellipse: s-maj=135.9km s-min=29.3km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.11**	**161**	Pn		Pn	22 14 57.4	-0.8
	0.2nm,0.3s,baz=343,slow=13,SNR=3.1							
WRA				Sn		Sn	22 17 19.4	-16
	0.3nm,0.3s,baz=339,slow=21,SNR=2.8							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**17.52**	**166**	P		Pn	22 15 43.3	+0.5
	0.2nm,0.3s,baz=348,slow=11,SNR=10.0							
ASAR				S		Sn	22 18 47.5	-11
	0.6nm,0.6s,baz=349,slow=28,SNR=4.0							
	0.7nm,0.6s							
SONM	**Songino Array**	**57.87**	**342**	P		P	22 21 30.9	+0.3
	0.1nm,0.4s,baz=134,slow=8.3,SNR=2.0							
	0.1nm,0.4s							
MKAR	**Makanchi Array**	**67.57**	**327**	P		P	22 22 35.1	-0.1
	0.3nm,0.3s,baz=119,slow=7.7,SNR=15							
	0.3nm,0.3s							

*IDC **22**22:12:17.3±1.6,14˚18S×179˚94W,h0km,mb4.0/6, mbtmp4.0/6,MS3.9/34,Error ellipse: s-maj=67.8km s-min=29.7km az=157.0*

*GCMT **22**22:12:20.0±0.4,14˚29S±0˚02×179˚30W±0˚02,h14km±2km, MW4.8/72,Moment Tensor Solution. s20,c25; s72,c86; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~0.28±.08; Mθθ0.25±.09; Mϕϕ0.03±.08; Mrθ-0.40±.20; Mϕr1.79±.10; Mθr~0.69±.20; Best double couple: M₀1.93200×10¹⁶ NP1:ϕs181.00000°,δ85.00000°,λ160.00000°. NP2: ϕs273.00000°,δ70.00000°,λ5.00000°. Principal axes: T 2.1720, Plg17.0000°, Azm136.0000°; N -0.4800, Plg70.0000°, Azm348.0000°; P -1.6920, Plg10.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 22 22:12:22.8±1.4,14˚2S±0˚4×180˚0W±0˚3,h35km,n40, σ0s95/10,mb4.1/6,MS4.0/34,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.09**	**237**	LR		LR	22 20 45.7	
	comp=Z,970nm,20.3s,baz=64,slow=34							
HNR	**Honiara**	**20.20**	**281**	LR		LR	22 23 52.0	
	comp=Z,8μm,18.5s,baz=121,slow=34							
RAR	**Rarotonga**	**20.48**	**113**	LR		LR	22 22 44.3	
	comp=Z,178nm,20.5s,baz=304,slow=31							
PPT	**Papeete**	**29.43**	**101**	LR		LR	22 27 20.1	
	comp=Z,75nm,18.1s,baz=190,slow=31							
PMG	**Port Moresby**	**32.49**	**275**	LR		LR	22 29 18.9	
	comp=Z,74nm,20.9s,baz=82,slow=31							
CTA	**Charters Tower**	**32.75**	**255**	LR		LR	22 31 14.9	
	comp=Z,105nm,20.0s,baz=82,slow=35							
STKA	**Stephens Creek**	**39.25**	**237**	LR		LR	22 34 10.9	
	comp=Z,196nm,21.1s,baz=41,slow=33							
GUMO	**Guam**	**44.41**	**307**	LR		LR	22 36 43.5	
	comp=Z,85nm,20.2s,baz=130,slow=33							
ASAR	**Alice Springs**	**44.47**	**251**	P		**P**	**22 20 30.6**	**-0.4**
	0.7nm,0.7s,baz=78,slow=9.6,SNR=6.0							
ASAR				LR		LR	22 37 52.1	
	comp=Z,110nm,18.7s,baz=80,slow=34							
	0.7nm,0.7s							
JCJ	**Chichijima**	**55.06**	**318**	LR		LR	22 42 36.4	
	comp=Z,178nm,19.9s,baz=103,slow=33							
DAV	**Davao City (W)**	**57.99**	**288**	LR		LR	22 45 40.3	
	comp=Z,53nm,19.1s,baz=86,slow=34							
NWAO	**Narrogin (SRO)**	**59.68**	**240**	LR		LR	22 46 19.2	
	comp=Z,267nm,21.1s,baz=52,slow=34							
JHJ	**Hachijo jima 2**	**60.72**	**322**	LR		LR	22 42 52.1	
	comp=Z,115nm,21.9s,baz=130,slow=30							
MJAR	**Matsushiro Arr**	**64.03**	**323**	P		**P**	**22 22 53.5**	**+0.5**
	1.2nm,0.7s,baz=139,slow=7.6,SNR=4.2							
MJAR				LR		LR	22 46 22.6	
	comp=Z,72nm,20.5s,baz=106,slow=32							
	1.2nm,0.7s							
SHEM	**Shemya Is, Ala**	**66.83**	**356**	LR		LR	22 45 33.7	
	comp=Z,100nm,22.0s,baz=7.5,slow=30							
ASAJ	**Asahikawa**	**67.29**	**332**	LR		LR	22 47 13.4	
	comp=Z,156nm,20.9s,baz=123,slow=31							
PETK	**Petropavlovsk-**	**69.71**	**346**	LR		LR	22 48 56.0	
	comp=Z,93nm,20.0s,baz=140,slow=32							
KSRS	**Korea Array**	**70.92**	**318**	LR		LR	22 49 28.7	
	comp=Z,77nm,21.7s,baz=100,slow=31							
KLR	**Kul'dur**	**76.14**	**330**	LR		LR	22 52 14.0	
	comp=Z,58nm,21.9s,baz=100,slow=32							
YBH	**Yreka Blue Hor**	**76.64**	**40**	LR		LR	22 50 22.3	
	comp=Z,105nm,20.8s,baz=274,slow=30							
PFO	**Pinyon Flats O**	**76.89**	**50**	LR		LR	22 49 23.6	
	comp=Z,95nm,20.4s,baz=234,slow=29							
MA2	**Magadan**	**77.22**	**345**	LR		LR	22 54 54.4	
	comp=Z,91nm,19.6s,baz=126,slow=33							
NVAR	**Mina Array Bea**	**77.83**	**45**	P		**P**	**22 24 15.8**	**-1.4**
	2.2nm,0.8s,baz=220,slow=8.3,SNR=4.5							
NVAR				LR		LR	22 51 22.7	
	comp=Z,95nm,19.8s,baz=268,slow=30							
	2.2nm,0.8s							
LPIG	**La Paz**	**77.94**	**61**	LR		LR	22 51 00.2	
	comp=Z,107nm,18.5s,baz=204,slow=30							
BBB	**Bella Bella**	**79.81**	**29**	LR		LR	22 56 05.0	
	comp=Z,84nm,18.3s,baz=220,slow=33							
ELK	**Elko**	**81.02**	**44**	LR		LR	22 53 59.4	
	comp=Z,131nm,18.6s,baz=250,slow=31							
ILAR	**Eielson Array**	**82.63**	**14**	P		**P**	**22 24 41.1**	**-0.9**
	1.9nm,1.0s,baz=231,slow=4.3,SNR=7.8							
	1.9nm,1.0s							
NEW	**Newport**	**83.42**	**37**	LR		LR	22 55 41.1	
	comp=Z,45nm,18.7s,baz=190,slow=31							
ANMO	**Albuquerque**	**85.00**	**52**	LR		LR	22 54 40.6	
	comp=Z,59nm,20.4s,baz=333,slow=30							
TXAR	**Lajitas Array**	**85.31**	**58**	P		**P**	**22 24 57.0**	**+0.3**
	0.8nm,0.7s,baz=216,slow=4.0,SNR=4.1							
TXAR				LR		LR	22 55 36.2	
	comp=Z,65nm,18.6s,baz=252,slow=30							
	0.8nm,0.7s							
YAK	**Yakutsk**	**85.57**	**339**	LR		LR	22 57 33.2	
	comp=Z,42nm,21.4s,baz=112,slow=32							
PDAR	**Pinedale Array**	**85.72**	**44**	P		**P**	**22 25 00.1**	**+1.5**
	1.7nm,1.0s,baz=224,slow=2.5,SNR=7.9							
PDAR				LR		LR	22 57 59.5	
	comp=Z,70nm,18.8s,baz=294,slow=32							
	1.7nm,1.0s							
CMIG	**Maas Romero**	**89.53**	**72**	LR		LR	22 56 28.7	
	comp=Z,123nm,19.8s,baz=194,slow=30							
TIXI	**Tiksi**	**92.19**	**346**	LR		LR	23 04 19.4	
	comp=Z,64nm,19.2s,baz=194,slow=34							
PLCA	**Paso Flores**	**94.99**	**134**	LR		LR	22 59 36.2	
	comp=Z,48nm,19.0s,baz=34,slow=30							
ATAH	**Atahualpa**	**99.40**	**100**	LR		LR	23 00 24.0	
	comp=Z,82nm,21.9s,baz=25,slow=29							
WTTA	**Wattenberg**	**145.62**	**346**	*e*PKP		**PKiKP**	**22 32 02.1**	**+0.3**
	1.9nm,0.5s							
MOTA	**Moosalm**	**145.66**	**347**	*e*PKP		**PKiKP**	**22 32 02.0**	**+0.1**
	2.0nm,0.6s							
ABTA	**Abfaltersbach**	**145.88**	**345**	*e*PKP		**PKiKP**	**22 32 02.9**	**+0.7**
	0.8nm,0.6s							
DAVA	**Damuels**	**145.98**	**348**	*e*PKP		**PKiKP**	**22 32 03.2**	**+0.7**
	1.8nm,0.6s							

*IDC **22**22:15:20.7±0.7,55˚48N×157˚56W,h0km,mb4.4/26, mbtmp4.4/28,ML4.1/2,MS3.9/34,Error ellipse: s-maj=19.7km s-min=11.9km az=5.0*

*MOS **22**22:15:20.4±1.1,55˚45N×157˚52W,h11km,mb4.8/39, Error ellipse: s-maj=10.1km s-min=5.1km az=88.9*

*AEIC **22**22:15:24.3±2.9,55˚28N±0˚05×157˚30W±0˚07,h20km±4km, ML4.4,mb4.6/98(NEIC),ML4.4/39(NEIC),Mwr4.4/36(NEIC), Error ellipse: s-maj=7.6km s-min=5.4km az=147.0*

*NEIC **22**22:15:24.1,55˚36N×157˚64W,h5km*

*NEIC **22**22:15:25.4±2.4,55˚38N±0˚04×157˚46W±0˚08,h28km±4km, Error ellipse: s-maj=7.5km s-min=5.4km az=134.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr~2.03; Mθθ0.45; Mϕϕ1.59; Mrθ4.31; Mϕr1.96; Mθr2.73; Fault plane solution: M₀5.77000×10¹⁵ NP1:ϕs8.90000°, δ17.70000°,λ-136.53000°. NP2:ϕs236.81000°, δ77.93000°,λ-76.96000°. Principal axes: T 6.0447, Plg32.0000°, Azm316.0000°; N -0.5969, Plg13.0000°, Azm54.0000°; P -5.4478, Plg55.0000°, Azm163.0000°.*

ISC 22 22:15:24.7±0.6,55˚44N±0˚05×157˚52W±0˚03,h26km±3km, h25km:pP-P,n586,σ1s43/570,mb4.6/122,MS3.9/37,7C-9D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHGN	**Chignik**	**1.00**	**330**			**Pn**	**22 15 43.4**	**+0.3**
CHGN				IAML			22 15 59.5	
	comp=N,7μm,0.5s							
CHGN				IAML			22 15 59.5	
	comp=E,8μm,0.5s							
CHGN	**Chignik**	**1.00**	**330**			**Sb**	**22 15 59.1**	**+2.9**
CHGN	**Chignik**	**1.00**	**330**	P		**Pn**	**22 15 43.5**	**+0.5**
	baz=148							
CHGN				S		**Sb**	**22 15 59.1**	**+2.9**
	baz=148							
VNSG	**Veniaminof 6**	**1.12**	**309**			**Pn**	**22 15 46.0**	**+1.2**
VNHG	**Veniaminof 1**	**1.22**	**311**			**Pn**	**22 15 47.8**	**+1.7**
CHNA	**Chernabura Isl**	**1.34**	**244**	P		**Pn**	**22 15 46.7**	**-1.0**
	baz=70							
CHNA				S		**Sn**	**22 16 04.4**	**-0.2**
	baz=70							
CNBA	**Chernabura Isl**	**1.34**	**243**	Pn		**Pn**	**22 15 46.9**	**-0.8**
CNBA						**Sn**	**22 16 05.8**	**+1.2**
CNBA				IAML			22 16 13.5	
	comp=E,5μm,1.2s							
CNBA				IAML			22 16 14.7	
	comp=N,5μm,1.1s							
VNWF	**Veniaminof 8**	**1.36**	**303**			**Pn**	**22 15 49.8**	**+1.7**
S14K	**Fog Glacier**	**1.43**	**307**	P		**Pn**	**22 15 51.3**	**+2.2**
	baz=128							
VNFG	**Fog Glacier, M**	**1.43**	**307**			**Pn**	**22 15 50.8**	**+1.7**
VNFG						**Sb**	**22 16 11.5**	**+3.0**
ANNW	**Aniakchak Nort**	**1.58**	**346**			**Pn**	**22 15 52.9**	**+1.8**
SDPT	**Sand Point**	**1.69**	**268**	Pn		**Pn**	**22 15 52.8**	**+0.3**
SDPT				IAML			22 16 24.5	
	comp=E,5μm,1.2s							
SDPT				IAML			22 16 30.0	
	comp=N,5μm,1.3s							
SDPT	**Sand Point**	**1.69**	**268**			**Sn**	**22 16 15.3**	**+2.0**
SDPT	**Sand Point**	**1.69**	**268**	P		**Pn**	**22 15 53.0**	**+0.5**
	baz=91							
SDPT				S		**Sn**	**22 16 15.3**	**+2.0**
	baz=91							
R16K	**Pilot Point**	**2.13**	**359**			**Pn**	**22 16 01.6**	**+3.0**
R16K						**Sn**	**22 16 27.6**	**+3.3**
R16K				IAML			22 17 07.2	
	comp=N,2μm,1.2s							
R16K	**Pilot Point**	**2.13**	**359**	P		**Pn**	**22 16 00.6**	**+2.0**
	baz=176							
R16K				S		**Sb**	**22 16 28.8**	**+0.1**
	baz=176							
PS1A	**Pavlof South-1**	**2.41**	**271**			**Pn**	**22 16 02.7**	**+0.3**
PS1A						**Sn**	**22 16 34.2**	**+3.2**
PN7A	**Pavlof North-7**	**2.55**	**272**			**Pn**	**22 16 05.2**	**+0.8**
R18K	**Karluk**	**2.73**	**37**			**Pn**	**22 16 07.2**	**+0.5**
R18K	**Karluk**	**2.73**	**37**	IAML			22 17 01.9	
	comp=N,2μm,1.1s							
DT1	**Dutton Round H**	**2.75**	**265**			**Pn**	**22 16 07.3**	**+0.3**
OHAK	**Old Harbor**	**2.96**	**51**	Pn		**Pn**	**22 16 09.4**	**-0.5**
OHAK	**Old Harbor**	**2.96**	**51**	P		**Pn**	**22 16 09.0**	**-0.9**
	baz=231							
Q17K	**Contact Creek**	**2.97**	**17**	P		**Pn**	**22 16 10.6**	**+0.4**
	baz=195							
CNTC	**Contact Creek**	**2.97**	**17**			**Pn**	**22 16 10.6**	**+0.4**
ANCK	**Angle Creek**	**2.98**	**21**			**Pn**	**22 16 11.1**	**+0.7**
ACHA	**Angle Creek He**	**3.03**	**22**			**Pn**	**22 16 11.6**	**+0.6**
KELA	**Mount Kelaz**	**3.16**	**17**			**Pn**	**22 16 13.3**	**+0.5**
KVTA	**Katmai Vly 10**	**3.19**	**21**			**Pn**	**22 16 13.7**	**+0.5**
Q16K	**King Salmon**	**3.28**	**8**			**Pn**	**22 16 15.6**	**+1.2**
Q16K	**King Salmon**	**3.28**	**8**	P		**Pn**	**22 16 15.6**	**+1.2**
	baz=186							
FALS	**False Pass**	**3.44**	**263**			**Pn**	**22 16 16.7**	**+0.2**
FALS	**False Pass**	**3.44**	**263**	P		**Pn**	**22 16 16.6**	**+0.1**
FALS	**False Pass**	**3.44**	**263**	P		**Pn**	**22 16 16.7**	**+0.2**
	baz=81							
KDAK	**Kodiak Island**	**3.60**	**47**	Pn		**Pn**	**22 16 19.7**	**+0.9**
KDAK				IAML			22 17 36.2	
	comp=N,760nm,1.4s							
KDAK				IAML			22 17 37.7	
	comp=N,910nm,1.3s							
KDAK	**Kodiak Island**	**3.60**	**47**	*d i*P		**Pn**	**22 16 17.9**	**-0.8**
KDAK	**Kodiak Island**	**3.60**	**47**	Pn		**Pn**	**22 16 17.8**	**-0.9**
	comp=N,3.8nm,0.3s,baz=227,slow=6.6,SNR=34							
KDAK				Sn		**Sn**	**22 16 56.8**	**-3.5**
	comp=N,29nm,0.3s,baz=270,slow=14,SNR=2.3							
	comp=N,12nm,0.3s							
P16K	**Nushagak River**	**3.61**	**356**			**Pn**	**22 16 20.5**	**+1.6**
P16K	**Nushagak River**	**3.61**	**356**	P		**Pn**	**22 16 20.5**	**+1.6**
	baz=174							
ISLZ	**Isanotski Laza**	**3.63**	**261**			**Pn**	**22 16 19.6**	**+0.3**
ISNN	**Isanotski Nort**	**3.65**	**263**			**Pn**	**22 16 20.2**	**+0.8**
SSLS	**Shishaldin Sou**	**3.80**	**262**			**Pn**	**22 16 22.6**	**+1.0**
P17K	**Kvichak River**	**3.81**	**8**	P		**Pn**	**22 16 22.8**	**+1.1**
	baz=187							
O15K	**Ungalikthiuk R**	**3.95**	**342**			**Pn**	**22 16 24.5**	**+0.9**
O15K	**Ungalikthiuk R**	**3.95**	**342**	P		**Pn**	**22 16 24.5**	**+0.9**
	baz=160							
Q19K	**Cape Douglas,**	**4.08**	**29**	Pn		**Pn**	**22 16 27.4**	**+2.0**
Q19K	**Cape Douglas,**	**4.08**	**29**	P		**Pn**	**22 16 26.0**	**+0.5**
	baz=210							
P18K	**Big Mountain,**	**4.15**	**16**	Pn		**Pn**	**22 16 27.2**	**+0.8**
P18K	**Big Mountain,**	**4.15**	**16**	P		**Pn**	**22 16 26.6**	**+0.2**
	baz=196							
O16K	**Kokwok River B**	**4.18**	**356**	Pn		**Pn**	**22 16 28.1**	**+1.4**
O16K	**Kokwok River B**	**4.18**	**356**	P		**Pn**	**22 16 27.5**	**+0.8**
	baz=174							
WESE	**West Dahl East**	**4.19**	**260**			**Pn**	**22 16 27.6**	**+0.7**
Q20K	**Shuyak Island**	**4.24**	**39**	P		**Pn**	**22 16 27.3**	**-0.2**
	baz=221							
SYI	**Shuyak Island**	**4.24**	**39**			**Pn**	**22 16 28.8**	**+1.4**
SYI				IAML			22 17 50.3	
	comp=E,454nm,1.2s							
SYI				IAML			22 17 55.0	
	comp=N,419nm,1.2s							
WEBT	**Westdahl Beart**	**4.25**	**261**			**Pn**	**22 16 28.5**	**+0.8**
O14K	**Tigyukauivet M**	**4.33**	**334**			**Pn**	**22 16 29.8**	**+1.0**
O14K				IAML			22 18 14.3	
	comp=N,384nm,1.3s							
O14K	**Tigyukauivet M**	**4.33**	**334**	P		**Pn**	**22 16 30.4**	**+1.6**
	baz=150							
O17K	**Koliganek Bris**	**4.35**	**3**			**Pn**	**22 16 30.0**	**+0.9**
O17K	**Koliganek Bris**	**4.35**	**3**	P		**Pn**	**22 16 30.0**	**+0.9**
	baz=182							
O18K	**Koktuh Hills**	**4.60**	**15**			**Pn**	**22 16 33.1**	**+0.6**
O18K	**Koktuh Hills**	**4.60**	**15**	IAML			22 18 03.5	
	comp=N,244nm,1.2s							
O18K	**Koktuh Hills**	**4.60**	**15**	P		**Pn**	**22 16 33.1**	**+0.6**
	baz=195							
P19K	**Oil Pt**	**4.81**	**27**			**Pn**	**22 16 36.4**	**+1.0**
P19K				IAML			22 18 11.6	
	comp=N,280nm,1.1s							
P19K				IAML			22 18 17.2	
	comp=E,318nm,1.4s							
N15K	**Kwethluk River**	**4.94**	**345**			**Pn**	**22 16 38.8**	**+1.6**
N15K	**Kwethluk River**	**4.94**	**345**	IAML			22 18 24.5	
	comp=N,284nm,1.4s							
N15K	**Kwethluk River**	**4.94**	**345**	P		**Pn**	**22 16 38.8**	**+1.6**
	baz=162							
AKUT	**Akutan**	**4.95**	**258**	Pn		**Pn**	**22 16 38.0**	**+0.7**
AKUT				IAML			22 18 02.9	
	comp=E,295nm,1.1s							
AKUT	**Akutan**	**4.95**	**258**	P		**Pn**	**22 16 38.0**	**+0.7**
AHB	**Akutan Harbor**	**4.99**	**258**			**Pn**	**22 16 38.1**	**+0.3**
N14K	**Kuskokwak Cree**	**5.02**	**335**			**Pn**	**22 16 40.2**	**+1.9**
N14K	**Kuskokwak Cree**	**5.02**	**335**	P		**Pn**	**22 16 40.2**	**+1.9**
	baz=151							
AKLV	**Akutan Long Va**	**5.05**	**259**			**Pn**	**22 16 38.7**	**0.0**
ZRO	**Akutan Zero**	**5.08**	**258**			**Pn**	**22 16 39.0**	**-0.2**
LVA	**Lava Point**	**5.09**	**259**			**Pn**

M18K Stony River 6.13 8 Pn Pn 22 16 54.4 +0.8
M18K Stony River 6.13 8 P Pn 22 16 54.4 +0.8
baz=188
CAPN Captain Cook N 6.32 30 Pn Pn 22 16 58.3 +2.3
SEW Seward 6.36 39 Pn Pn 22 16 58.7 +2.0
L16K Owhat River 6.37 352 Pn 22 16 58.0 +1.1
L16K Owhat River 6.37 352 P Pn 22 16 58.0 +1.1
baz=169
SLKM Skilak Lake 6.39 34 Pn 22 16 56.6 -0.5
OKER Okmok East Rim 6.46 256 Pn 22 16 57.9 -0.2
SPNN North Nagishla 6.46 21 Pn 22 16 58.9 +0.7
OKTU Okmok Mt. Tuli 6.48 256 Pn 22 16 58.3 +0.1
OKNC Okmok New Cone 6.50 257 Pn 22 16 58.8 +0.2
L14K Kuka Creek 6.51 337 Pn 22 16 60.0 +1.3
L14K Kuka Creek 6.51 337 P Pn 22 16 60.0 +1.3
baz=153
L15K Ungalak Mounta 6.59 343 Pn 22 17 01.0 +1.2
L15K Ungalak Mounta 6.59 343 P Pn 22 17 01.0 +1.2
baz=159
M19K Big River Lodg 6.69 13 Pn 22 17 03.0 +1.9
M19K Big River Lodg 6.69 13 P Pn 22 17 02.1 +0.9
baz=194
L17K Donlin 6.73 357 Pn 22 17 02.4 +0.7
L17K Donlin 6.73 357 P Pn 22 17 02.4 +0.7
baz=175
STLK Strandline Lak 6.77 24 Pn 22 17 02.6 +0.3
M11K Mekoryuk 6.78 321 Pn 22 17 04.2 +1.9
M11K Mekoryuk 6.78 321 P Pn 22 17 04.2 +1.9
baz=133
L18K Granite Mounta 6.82 3 Pn 22 17 03.5 +0.6
L18K Granite Mounta 6.82 3 P Pn 22 17 03.5 +0.6
baz=183
M20K Styx River 6.85 18 Pn 22 17 04.2 +0.6
M20K Styx River 6.85 18 P Pn 22 17 04.1 +0.6
baz=200
FIS Fire Island 6.89 31 Pn Pn 22 17 05.1 +1.2
L19K White Mountain 6.90 10 Pn 22 17 05.0 +0.9
L19K White Mountain 6.90 10 P Pn 22 17 05.0 +0.9
baz=192
RC01 Rabbit Creek A 6.99 33 Pn 22 17 05.5 +0.2
RC01 Rabbit Creek A 6.99 33 P Pn 22 17 04.8 -0.5
baz=218
SUA Susitna One 7.01 28 Pn Pn 22 17 05.7 +0.1
SUA Susitna One 7.01 28 P Pn 22 17 05.6 +0.1
baz=212
NIKH Nikolski High 7.09 254 Pn Pn 22 17 06.9 +0.2
NIKH Nikolski High 7.09 254 P Pn 22 17 08.2 +1.5
K15K Wolf Creek Mou 7.18 345 Pn 22 17 09.5 +1.6
SKT Skwentna 7.26 23 Pn 22 17 10.5 +1.5
SPIA Saint Paul Isl 7.29 289 Pn Pn 22 17 10.8 +1.3
SPIA Saint Paul Isl 7.29 289 P Pn 22 17 06.8 -2.6
K17K Iditarod 7.31 357 Pn 22 17 10.7 +1.0
K17K Iditarod 7.31 357 P Pn 22 17 10.7 +1.0
baz=176
M22K Willow 7.41 28 Pn Pn 22 17 12.8 +1.7
TTA Tatalina 7.55 5 Pn 22 17 13.5 +0.4
TTA Tatalina 7.55 5 P Pn 22 17 13.5 +0.4
baz=186
TTA Tatalina 7.55 5 P Pn 22 17 13.5 +0.4
PMR Palmer 7.57 32 Pn Pn 22 17 15.0 +1.8
PMR Palmer 7.57 32 P Pn 22 17 15.0 +1.8
KNK Knik Glacier 7.64 35 Pn 22 17 15.0 +0.7
HIN Hinchinbrook I 7.68 45 Pn 22 17 14.6 -0.2
GLI Glacier Island 7.75 41 Pn Pn 22 17 14.9 -0.8
GHO Glory Hole Cre 7.77 32 Pn Pn 22 17 15.8 -0.3
FID Port Fidalgo 7.90 43 Pn 22 17 16.6 -1.2
CUT Chulitna 7.92 25 Pn Pn 22 17 19.8 +1.8
PPLA Purkeypile 7.96 18 Pn Pn 22 17 20.3 +1.6
SML Sawmill 7.98 33 Pn Pn 22 17 20.0 +1.1
SML Sawmill 7.98 33 P Pn 22 17 18.9 0.0
baz=220
J17K VABM Dome 8.02 355 Pn Pn 22 17 20.4 +1.0
J17K VABM Dome 8.02 355 P Pn 22 17 20.4 +1.0
baz=173
J18K Innoko River 8.06 3 Pn 22 17 20.8 +0.8
J18K Innoko River 8.06 3 P Pn 22 17 20.6 +0.6
baz=182
EYAK Cordova Ski Ar 8.07 46 Pn Pn 22 17 19.8 -0.4
EYAK Cordova Ski Ar 8.07 46 P Pn 22 17 19.6 -0.6
baz=234
SCM Sheep Creek Mo 8.32 35 Pn 22 17 22.9 -0.7
SCM Sheep Creek Mo 8.32 35 P Pn 22 17 22.7 -0.9
baz=223
SCM Sheep Creek Mo 8.32 35 P Pn 22 17 22.9 -0.7
KAIM Kayak Island 8.33 52 Pn Pn 22 17 22.5 -1.1
DIV Divide 8.41 42 Pn Pn 22 17 25.7 +0.9
CAST Castle Rocks 8.47 17 Pn 22 17 26.7 +1.2
CAST Castle Rocks 8.47 17 P Pn 22 17 26.1 +0.5
baz=200
GOAT Goat Mountain 8.52 48 Pn 22 17 25.0 -1.2
KLU Klutina 8.58 40 Pn 22 17 27.3 +0.2
KLU Klutina 8.58 40 P Pn 22 17 25.8 -1.4
baz=229
I17K Unalakleet 8.63 351 Pn Pn 22 17 30.8 +3.1
J19K Poorman 8.64 6 Pn 22 17 29.3 +1.4
J19K Poorman 8.64 6 P Pn 22 17 27.8 -0.1
baz=186
WAT7 Susitna Watana 8.64 27 Pn 22 17 26.9 -1.1
WAT6 Susitna Watana 8.75 31 Pn 22 17 28.5 -1.1
WAT6 Susitna Watana 8.75 31 P Pn 22 17 28.5 -1.1
baz=218
BMRM Bremner River 8.78 46 Pn 22 17 28.6 -1.2
BMRM Bremner River 8.78 46 P Pn 22 17 28.6 -1.2
baz=235
TRF Thorofare Moun 8.83 22 Pn Pn 22 17 31.9 +1.2
BERG Berg Lake 8.86 50 Pn Pn 22 17 31.1 +0.1
M24K Tolsona, Glenn 8.90 37 Pn Pn 22 17 33.0 +1.5
J20K Nowinta River 8.93 10 Pn Pn 22 17 33.8 +1.9
KHIT Khitrov Hills 9.09 51 Pn 22 17 33.3 -0.8
RND Reindeer 9.12 25 Pn Pn 22 17 35.2 +0.6
RND Reindeer 9.12 25 P Pn 22 17 35.2 +0.6
N25K Chitina, Valde 9.15 42 Pn Pn 22 17 36.0 +1.1
SNH Sunshine Point 9.15 53 Pn Pn 22 17 35.6 +0.6
DHY Denali Highway 9.24 30 Pn Pn 22 17 36.8 +0.6
DHY Denali Highway 9.24 30 P Pn 22 17 35.5 -0.8
baz=218
WAX Waxell Ridge 9.27 51 Pn Pn 22 17 37.9 +1.4
CRQM Cirque 9.28 49 Pn 22 17 37.5 +0.6
BPAW Bear Paw Mtn. 9.29 18 Pn 22 17 36.7 -0.1
GLB Gilahina Butte 9.36 44 Pn 22 17 38.0 +0.2
MCK McKinley 9.38 24 Pn Pn 22 17 38.4 +0.4
MCK McKinley 9.38 24 P Pn 22 17 38.4 +0.4
VRDI Verde Repeater 9.39 46 Pn Pn 22 17 37.6 -0.7
TGL Tana Glacier 9.41 50 Pn Pn 22 17 38.1 -0.6
HARP HAARP 9.45 37 Pn 22 17 38.6 -0.4
HARP HAARP 9.45 37 P Pn 22 17 38.6 -0.4
baz=227
H16K Elim 9.52 348 Pn 22 17 40.6 +0.6
H16K Elim 9.52 348 P Pn 22 17 40.6 +0.6
baz=163
MESA MESA 9.56 54 Pn Pn 22 17 40.7 0.0
ISLE Juniper Island 9.56 51 Pn 22 17 40.8 +0.2
H17K Granite Mounta 9.61 354 Pn 22 17 43.0 +1.9
BWN Browne 9.64 21 Pn 22 17 42.2 +0.6
MCARA McCarthy VSAT 9.65 46 Pn Pn 22 17 42.8 +1.1
KIAG Kiagna River 9.70 49 Pn 22 17 41.3 -1.3
PAX Paxson 9.74 34 Pn Pn 22 17 43.4 +0.4
PAX Paxson 9.74 34 P Pn 22 17 43.4 +0.4
H18K Honhosa River 9.76 358 Pn 22 17 45.0 +1.8
GRNC Granite Creek 9.88 51 Pn 22 17 45.0 0.0
ANM Nome 9.96 340 Pn Pn 22 17 47.7 +1.8
ANM Nome 9.96 340 P Pn 22 17 47.1 +1.2
baz=153
ANM Nome 9.96 340 P Pn 22 17 47.7 +1.8
TABL Table Mountain 10.03 53 Pn Pn 22 17 47.5 +0.3
BARN Barnard Glacie 10.06 50 Pn 22 17 47.9 +0.3
NEA2 Nenana 10.10 21 Pn 22 17 49.1 +1.3
CTGM Chitina Glacie 10.16 50 Pn 22 17 48.9 0.0
LOGN Logan Glacier 10.25 52 Pn Pn 22 17 50.8 +0.7
G16K Koyuk River 10.27 349 Pn 22 17 52.3 +2.2
MENT Mentasta 10.30 38 Pn Pn 22 17 52.4 +1.7
PCA Pinnacle 10.32 56 Pn Pn 22 17 52.2 +1.2
ATKA Atka Island 10.38 259 Pn Pn 22 17 49.8 -1.8
CCB Clear Creek Bu 10.42 24 Pn Pn 22 17 50.6 -1.6
HDA Harding Lake 10.43 26 Pn 22 17 51.4 -1.0
L26K Log Cabin Wild 10.49 38 Pn Pn 22 17 53.2 0.0
G18K Tagagawik 10.51 357 Pn Pn 22 17 56.1 +2.7
BCPM Bancas Point 10.57 57 Pn 22 17 54.8 +0.5
MDM Murphy Dome 10.59 22 Pn 22 17 53.4 -1.3
COLA College 10.60 23 Pn 22 17 56.1 +1.4
COLA College 10.60 23 P Pn 22 17 56.1 +1.4
M27K Edge Creek, AK 10.63 43 Pn Pn 22 17 55.8 +0.5

IL31 10.74 25 Pn 22 17 54.9 -1.6
ILAR Eielson Array 10.74 25 Pn Pn 22 17 54.4 -2.2
ILAR Eielson Array 10.74 25 P Pn 22 17 54.4 -2.2
ILAR Eielson Array 10.74 25 Pn Pn 22 17 53.5 -3.1
comp=N,0.9nm,0.3s,baz=220,slow=14,SNR=38
ILAR Sn Sn 22 19 48.6 -7.2
comp=N,0.3nm,0.3s,baz=203,slow=14,SNR=1.8
ILAR LR LR 22 22 19.3
comp=N,600nm,20.5s,baz=218,slow=39
G19K Purcell Mounta 10.74 1 Pn Pn 22 17 59.7 +3.0
IL03 Eielson Array 10.75 25 Pn Pn 22 17 56.3 -0.4
F15K North Star Dit 10.87 344 Pn 22 18 01.1 +2.6
SCRK Sand Creek 10.93 33 Pn Pn 22 18 00.3 +1.0
L27K Beaver Creek, 11.06 40 Pn 22 18 01.7 +0.7
BCAR Beaver Creek A 11.07 40 Pn 22 18 01.7 +0.4
F17K Baldwin Pennin 11.19 352 Pn 22 18 07.5 +4.8
P29M Windy Craggy 11.41 60 Pn 22 18 06.0 +0.1
H24K Noodor Dome 11.44 20 Pn 22 18 04.4 -1.7
F19K Shaleruckik Mo 11.44 359 Pn 22 18 08.2 +2.1
K27K Chicken 11.58 36 Pn Pn 22 18 09.9 +1.8
PRP Porcupine Dome 11.68 25 Pn 22 18 09.7 0.0
HYT Haines Junctio 11.85 55 Pn Pn 22 18 12.1 +0.2
ADK Adak 11.91 261 Pn Pn 22 18 13.1 +0.5
ADK Adak 11.91 261 P Pn 22 18 14.0 +1.4
ADK Adak 11.91 261 P Pn 22 18 13.1 +0.5
S31K Pelican 11.96 69 Pn Pn 22 18 12.2 -1.0
M29M Somme Creek 12.05 47 Pn 22 18 14.4 -0.2
E18K Tukpahlearik C 12.11 354 Pn 22 18 18.2 +2.8
N30M Aishikik Lake 12.25 52 Pn Pn 22 18 18.7 +1.4
G24K Hadweenzic Riv 12.28 19 Pn 22 18 16.4 -1.2
COLD Coldfoot 12.33 13 Pn Pn 22 18 17.9 -0.4
EGAK Eagle 12.37 34 Pn 22 18 19.2 +0.3
SIT Sitka 12.44 73 Pn Pn 22 18 17.7 -2.1
SIT Sitka 12.44 73 P Pn 22 18 17.7 -2.1
O30N Mendenhall 12.49 56 Pn Pn 22 18 21.4 +0.8
L29M L29M 12.50 44 Pn 22 18 21.6 +0.9
DAWY Dawson 12.53 39 Pn Pn 22 18 21.2 0.0
FYU Fort Yukon 12.62 23 Pn 22 18 23.9 +1.7
M30M Minto, Yukon 12.80 48 Pn Pn 22 18 25.8 +0.9
S32K Killisnoo 12.83 71 Pn Pn 22 18 24.5 -0.7
F24K Squaw Lake 12.94 17 Pn 22 18 27.6 +0.9
E22K Anaktuvuk Pass 13.02 10 Pn 22 18 28.3 +0.6
WHY Whitehorse 13.04 57 Pn Pn 22 18 29.1 +0.9
K29M Barlow Dome 13.10 42 Pn 22 18 30.3 +1.3
D19K Kuna River 13.11 359 Pn 22 18 31.5 +2.5
I28M Miner Creek 13.21 34 Pn Pn 22 18 31.7 +1.3
C18K Utukok River 13.37 354 Pn 22 18 36.1 +3.6
C16K Lisburne Hills 13.38 347 Pn 22 18 36.5 +3.9
P32M Atlin 13.42 62 Pn Pn 22 18 34.1 +0.9
BMAR Burnt Mountain 13.48 22 Pn Pn 22 18 32.6 -1.4
D22K Ayikyak River 13.67 7 Pn 22 18 38.0 +1.4
M31M Drury Creek, Y 13.71 51 Pn Pn 22 18 36.8 -0.3
U33K Whale Pass 13.73 77 Pn Pn 22 18 36.6 -0.8
TOLK Toolik Lake Re 13.74 12 Pn 22 18 40.4 +2.7
C19K Lookout Ridge 13.75 357 Pn 22 18 40.4 +2.7
E25K Arctic Village 13.88 19 Pn Pn 22 18 38.9 -0.6
J30M Hart River 13.93 40 Pn 22 18 40.3 +0.1
P33M Teslin, Yukon 13.96 60 Pn 22 18 40.1 -0.5
Q32M Nakina River 14.10 65 Pn Pn 22 18 44.2 +1.5
FARO Faro, Yukon 14.18 52 Pn Pn 22 18 44.2 +0.7
H29M Whitestone 14.20 33 Pn 22 18 44.3 +0.4
I30M Mount Dempster 14.26 38 Pn 22 18 46.7 +2.0
B21K Ikpikpuk River 14.30 4 P P 22 18 52.6 +0.6
D24K Happy Valley 14.32 13 P P 22 18 52.9 +0.6
S34M Telegraph Cree 14.68 69 P P 22 18 56.6 +0.3
V35K Ketchikan 14.70 80 P P 22 18 58.7 +2.2
F28M Old Crow 14.74 27 Pn Pn 22 18 51.1 -0.1
C23K Itkillik River 14.78 9 Pn 22 18 55.4 +3.8
R33M Jennings River 14.79 64 Pn 22 18 54.0 +2.0
EPYK Eagle Plains 14.81 34 P P 22 19 00.1 +2.2
D25K Kavik River 14.82 16 Pn 22 18 54.8 +2.5
B22K Teshekpuk Lake 15.07 5 Pn Pn 22 18 54.0 -1.6
B22K IAmb IAmb 22 19 02.2
comp=Z,24nm,0.8s
T35M Bob Quinn 15.21 73 P P 22 19 05.2 +2.9
MMPY Sheldon Lake, 15.22 51 Pn Pn 22 18 57.5 -0.1
DLBC Dease Lake 15.25 67 Pn Pn 22 18 59.6 +1.5
DLBC Dease Lake 15.25 67 Pn P 22 19 01.4 -1.4
comp=Z,0.3nm,0.3s,baz=243,slow=14,SNR=2.4
DLBC LR LR 22 24 24.4
comp=Z,301nm,19.4s,baz=277,slow=36
H31M Peel River 15.29 38 P 22 19 04.3 +1.2
H31M IAmb IAmb 22 19 21.4
comp=Z,24nm,0.9s
G30M tAoh Zraii Nji 15.35 33 Pn Pn 22 18 59.8 +0.5
G30M IAmb IAmb 22 19 13.5
comp=Z,25nm,0.9s
E28M Babbage River 15.57 25 Pn 22 19 03.6 +1.4
RUBB Prince Rupert 15.69 83 Pn Pn 22 19 03.7 -0.1
RUBB IAmb IAmb 22 19 05.7
comp=Z,38nm,1.4s
E29M Blow River 15.82 27 Pn Pn 22 19 04.5 -0.8
G31M Satah River 15.93 35 P 22 19 09.4 -0.8
GRNB Grenville Isla 15.99 84 P 22 19 09.5 -1.4
F31M Tsiigehtchic 16.40 33 Pn 22 19 14.0 +1.3
SHEM Shemya Is, Ala 16.82 273 LR LR 22 26 12.9
comp=Z,247nm,19.4s,baz=354,slow=39
INK Inuvik 16.98 31 Pn Pn 22 19 20.2 +0.1
INK IAmb IAmb 22 19 32.4
comp=Z,29nm,0.8s
INK Inuvik 16.98 31 P Pn 22 19 19.0 -1.1
INK Inuvik 16.98 31 Pn Pn 22 19 18.9 -1.1
comp=Z,1.5nm,0.3s,baz=224,slow=11,SNR=27
INK LR LR 22 26 28.3
comp=Z,511nm,19.7s,baz=190,slow=39
comp=Z,7.9nm,0.4s
C36M Paulatuk 20.45 34 P P 22 19 59.1 -0.6
C36M IAmb IAmb 22 20 10.3
comp=Z,28nm,1.1s
BILL Bilibino 20.88 321 P P 22 20 03.4 -1.1
BILL IAmb IAmb 22 20 07.7
comp=Z,19nm,1.0s
BILL Bilibino 20.88 321 *e*P P 22 20 04.1 -0.4
BILL pmax pmax
comp=Z,28nm,1.3s
A36M Sachs Harbour 21.43 27 P P 22 20 09.7 -0.6
A36M IAmb IAmb 22 20 11.8
comp=Z,38nm,0.8s
YKA Yellowknife Ar 22.84 55 P P 22 20 26.6 +1.2
YKA Yellowknife Ar 22.84 55 P P 22 20 25.0 -0.5
YKA Yellowknife Ar 22.84 55 P P 22 20 24.9 -0.5
comp=Z,0.7nm,0.7s,baz=269,slow=9.7,SNR=11
YKA LR LR 22 29 59.4
comp=Z,239nm,18.9s,baz=20,slow=38
YKAB2 New Yellowknif 22.84 55 P P 22 20 27.9 +2.4
LON Longmire 23.82 96 P P 22 20 37.6 +2.2
LON Longmire 23.82 96 P P 22 20 37.6 +2.2
LON pmax pmax
comp=Z,12nm,1.5s
H04A Detroit Lake 24.83 101 P P 22 20 42.4 -2.3
H04A IAmb IAmb 22 20 46.7
comp=Z,12nm,1.0s
J01E Myrtle Point 24.84 106 P P 22 20 43.6 -1.1
DBO Dodson Butte 25.25 105 P P 22 20 51.0 +2.5
DBO IAmb IAmb 22 20 59.1
comp=Z,9.5nm,1.1s
PET Petropavlovsk 25.42 283 *e*P P 22 20 49.7 -0.1
PET *e*S S 22 25 07.9 -6.9
PET pmax pmax
comp=Z,47nm,1.1s
PET MLR MLR
comp=Z,500nm,16.0s
EDM Edmonton 25.53 76 P P 22 20 52.1 +1.3
EDM IAmb IAmb 22 21 00.2
comp=Z,15nm,0.7s
EDM Edmonton 25.53 76 P P 22 20 52.2 +1.3
EDM pmax pmax
comp=Z,15nm,0.7s
NEW Newport 25.66 89 LR LR 22 29 27.6
comp=Z,182nm,21.9s,baz=308,slow=33
HUMO Hull Mountain 25.74 105 P P 22 20 54.9 +2.0
HUMO IAmb IAmb 22 20 57.5
comp=Z,9.0nm,1.0s
PEA0B Petropavlovsk- 25.91 284 P P 22 20 53.9 -0.5
PEA0B Petropavlovsk- 25.91 284 P P 22 20 53.9 -0.5
PEA0B pmax pmax
comp=Z,54nm,1.2s
PETK Petropavlovsk- 25.91 284 P P 22 20 53.2 -1.1
comp=Z,24nm,0.8s,baz=78,slow=11,SNR=16
PETK LR LR 22 31 02.5
comp=Z,154nm,20.4s,baz=80,slow=36
comp=Z,24nm,0.8s
KRMB Red Mountain 25.96 108 P P 22 20 55.4 +0.4

SEY Seymchan 26.11 307 LR LR 22 32 11.4
comp=Z,334nm,19.1s,baz=64,slow=39
J05D Fort Rock, OR 26.25 102 P P 22 20 59.4 +1.7
J05D IAmb IAmb 22 21 09.9
comp=Z,9.7nm,1.0s
YBH Yreka Blue Hor 26.47 107 LR LR 22 28 56.2
comp=Z,471nm,21.8s,baz=316,slow=31
K05A Summer Lake 26.80 103 P P 22 21 03.9 +1.2
K05A IAmb IAmb 22 21 05.1
comp=Z,14nm,1.2s
MA2 Magadan 27.50 300 LR LR 22 33 32.1
comp=Z,169nm,18.4s,baz=90,slow=40
EGMT Eagleton 29.98 84 P P 22 21 32.2 +1.4
EGMT IAmb IAmb 22 21 40.0
comp=Z,7.8nm,0.9s
PNTR Pine Nut 30.01 107 P P 22 21 33.1 +1.7
PNTR IAmb IAmb 22 21 39.3
comp=Z,12nm,0.8s
RES Resolute Bay 30.48 28 LR LR 22 34 45.1
comp=Z,135nm,20.2s,baz=0.0,slow=38
KVN Kaiserville 30.86 105 P P 22 21 37.0 -1.8
KVN Kaiserville 30.86 105 P P 22 21 37.0 -1.8
KVN pmax pmax
comp=Z,4.0nm,0.9s
YPDC Denny Creek 31.02 91 S 22 26 47.9 +4.4
GCR Grayling Creek 31.04 90 S 22 26 46.5 +2.6
YMC Maple Creek 31.12 90 S 22 26 45.2 +0.1
YPWB West Boundary 31.16 91 S 22 26 47.6 +1.8
YMV Mammoth Vault 31.18 90 S 22 26 50.4 +4.5
NVAR Mina Array Bea 31.19 107 P P 22 21 41.2 -0.5
comp=Z,3.3nm,0.7s,baz=302,slow=8.3,SNR=12
NVAR LR LR 22 32 11.4
comp=Z,354nm,18.9s,baz=284,slow=32
comp=Z,3.3nm,0.7s
YPM Purple Mountai 31.26 90 S 22 26 47.1 -0.3
ELK Elko 31.28 100 LR LR 22 32 47.5
comp=Z,205nm,18.8s,baz=294,slow=33
MCID Moose Creek 31.37 91 S 22 26 55.2 +6.3
YML Mary Lake 31.42 90 S 22 26 50.1 +0.1
YLT Little Thumb C 31.55 90 S 22 26 52.6 +0.7
H17A Grant Village 31.59 91 S 22 26 53.2 +0.8
MOOW Moose Ponds 31.89 92 P P 22 21 50.3 +2.5
DSP Deep Springs 32.14 108 P P 22 21 51.5 +1.6
DSP IAmb IAmb 22 21 52.4
comp=Z,6.9nm,0.9s
MZP Montezuma Peak 32.22 106 P P 22 21 50.9 +0.1
LCH Last Change Ra 32.42 107 P P 22 21 53.1 +0.6
GMN Gold Mountain 32.58 107 P P 22 21 53.6 -0.3
ISA Isabella, Lake 33.13 110 P P 22 21 57.5 -1.2
ISA IAmb IAmb 22 22 08.0
comp=Z,5.5nm,0.9s
ISA Isabella, Lake 33.13 110 P P 22 21 57.5 -1.2
ISA pmax pmax
comp=Z,6.0nm,0.9s
PD31 Pinedale Array 33.18 92 P P 22 21 58.5 -0.7
PDAR Pinedale Array 33.18 92 P P 22 21 59.1 -0.1
PDAR Pinedale Array 33.18 92 P P 22 21 59.5 +0.4
comp=Z,0.9nm,0.7s,baz=307,slow=5.2,SNR=12
comp=Z,0.9nm,0.7s
WCT Wildcat Mounta 33.30 107 P P 22 21 59.8 -0.3
PRN Pahroc Range 33.71 104 P P 22 22 04.0 +0.3
PRN IAmb IAmb 22 22 05.7
comp=Z,9.6nm,1.0s
GWY Greenwater Val 33.72 108 P P 22 22 02.9 -1.0
GWY IAmb IAmb 22 22 13.3
comp=Z,6.3nm,0.9s
QSM Queen of Sheba 33.77 108 P P 22 22 04.5 +0.3
QSM IAmb IAmb 22 22 06.0
comp=Z,8.5nm,0.9s
TIXI Tiksi 33.87 327 P P 22 22 03.2 -1.3
TIXI IAmb IAmb 22 22 04.9
comp=Z,13nm,0.9s
TIXI Tiksi 33.87 327 P P 22 22 03.3 -1.3
TIXI pmax pmax
comp=Z,13nm,1.0s
TIXI Tiksi 33.87 327 LR LR 22 37 57.2
comp=Z,206nm,19.0s,baz=40,slow=40
BSUT Blindstream Ca 33.95 96 P P 22 22 06.2 +0.2
BSUT IAmb IAmb 22 22 07.8
comp=Z,4.7nm,1.0s
KIP Kipapa 33.97 181 P P 22 22 07.7 +1.8
KIP Kipapa 33.97 181 P P 22 22 07.7 +1.8
KIP pmax pmax
comp=Z,149nm,1.4s
GSC Goldstone, Bar 34.30 109 P P 22 22 09.4 +0.6
GSC IAmb IAmb 22 22 10.2
comp=Z,8.4nm,1.1s
GSC Goldstone, Bar 34.30 109 P P 22 22 09.4 +0.6
GSC pmax pmax
comp=Z,8.0nm,1.2s
SRU San Rafael Swe 35.05 98 P P 22 22 16.0 +0.6
SRU IAmb IAmb 22 22 17.4
comp=Z,7.7nm,0.8s
SRU San Rafael Swe 35.05 98 P P 22 22 16.0 +0.6
SRU pmax pmax
comp=Z,8.0nm,0.8s
V12A Nelson 35.05 106 P P 22 22 15.4 +0.1
V12A IAmb IAmb 22 22 17.4
comp=Z,7.0nm,0.9s
RSSD Black Hills 35.48 86 pP P 22 22 21.2 +2.1
O20A White River Ci 35.64 94 P P 22 22 19.8 -0.7
O20A IAmb IAmb 22 22 33.9
comp=Z,9.4nm,0.8s
HMU Henry Mountain 35.74 99 P P 22 22 22.1 +0.7
HMU IAmb IAmb 22 22 23.2
comp=Z,7.8nm,0.9s
W13A Hualapai Mount 36.04 106 P P 22 22 24.7 +0.7
W13A IAmb IAmb 22 22 37.7
comp=Z,8.0nm,1.3s
PV21 Cone Mtn., Par 36.30 97 P P 22 22 26.6 +0.4
PV21 IAmb IAmb 22 22 28.7
comp=Z,8.7nm,0.8s
YAK Yakutsk 36.48 311 P P 22 22 25.9 -1.2
YAK Yakutsk 36.48 311 *c i*P P 22 22 25.3 -1.8
YAK *e**PP pP 22 22 28.7 -6.1
YAK *e* 22 23 49.2
YAK *e* 22 24 49.4
YAK *e*S S 22 28 08.7 +1.7
YAK *e**SS pS 22 28 16.0 +0.5
YAK *e* 22 32 40.9
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,57nm,3.3s
YAK pmax pmax
comp=N,51nm,3.5s
YAK smax smax
comp=N,67nm,3.4s
YAK smax smax
comp=E,54nm,3.7s
YAK Yakutsk 36.48 311 LR LR 22 38 58.2
comp=E,79nm,19.0s,baz=88,slow=39
comp=Z,0.8nm,0.5s
UGL Uglegorsk 36.48 286 *e*P P 22 22 27.7 +0.5
UGL pmax pmax
comp=Z,90nm,0.8s
ULM Lac du Bonnet 36.50 72 pP P 22 22 30.7 +3.2
ULM Lac du Bonnet 36.50 72 P P 22 22 29.3 +1.8
comp=Z,0.8nm,0.5s,baz=316,slow=12,SNR=2.0
comp=Z,0.8nm,0.5s
PV18 Skein Mesa, Pa 36.56 97 P P 22 22 27.9 -0.4
YSS Yuzh-Sakhalins 37.30 283 *e*P P 22 22 34.6 +0.3
YSS pmax pmax
comp=Z,10.0nm,0.5s
YSS MLR MLR
comp=Z,100nm,15.0s
X18A Snowflake 38.64 103 P P 22 22 48.4 +2.5
X18A IAmb IAmb 22 22 50.0
comp=Z,13nm,0.8s
OGNE Ogallala 38.64 88 P P 22 22 48.4 +2.6
OGNE IAmb IAmb 22 22 57.9
comp=Z,6.5nm,0.8s
B35A Bob, Littlefor 38.73 73 P P 22 22 49.7 +3.4
214A Organ Pipe Nat 39.00 108 P P 22 22 49.5 +0.7
214A IAmb IAmb 22 22 50.5
comp=Z,6.4nm,0.8s
NEEM North Greenlan 39.96 19 *e*P P 22 22 56.1 -0.4
NEEM IAmb IAmb 22 22 57.0
comp=Z,14nm,0.9s
EYMN Ely 40.18 72 P P 22 22 58.4 0.0
EYMN IAmb IAmb 22 23 07.2
comp=Z,8.6nm,0.8s

ZEA	**Zeya**	**41.64**	**300**	*e*P		**P**		**22 23 08.7**	**-1.7**
ZEA				pmax		pmax				
	comp=Z,10.0nm,1.0s									
KLR	**Kul'dur**	**41.94**	**292**⇓	*e*P		**P**		**22 23 12.1**	**-0.8**
KLR				pmax		pmax				
	comp=Z,13nm,1.7s									
FRB	**Frobisher Bay**	**42.22**	**41**	LR		LR		22 43 10.7		
	comp=Z,120nm,18.1s,baz=241,slow=40									
UMMG	**Ummannaq**	**43.57**	**28**	*e*P		**P**		**22 23 24.7**	**-1.1**
UMMG				lAmb		lAmb		22 23 27.4		
	comp=Z,9.9nm,1.0s									
E43A	**Lone Tree Farm**	**43.57**	**71**	P		**P**		**22 23 26.4**	**+0.3**
E43A				lAmb		lAmb		22 23 37.8		
	comp=Z,9.0nm,1.1s									
HEH	**HeiHe**	**43.59**	**296**	*e*P		**P**		**22 23 23.5**	**-2.7**
HEH				pmax		pmax				
	comp=Z,6.0nm,0.9s									
HEH				pmax		pmax				
	comp=Z,150nm,5.0s									
HEH				LR		LR				
	comp=N,140nm,14.4s									
HEH				LR		LR				
	comp=E,180nm,13.5s									
HEH				LR		LR				
	comp=Z,250nm,14.5s									
CLN7	**Carlsbad 7**	**43.64**	**99**	P		**P**		**22 23 27.1**	**+0.2**
VHRN	**Van Horn**	**44.20**	**102**	P		**P**		**22 23 31.2**	**-0.4**
VHRN				lAmb		lAmb		22 23 33.6		
	comp=Z,13nm,1.3s									
H11N2	**WAKE ISLAND Hy**	**44.58**	**231**	T		T		23 11 06.3		
	baz=28,slow=75,SNR=7.0									
H11N3	**WAKE ISLAND Hy**	**44.58**	**231**	T		T		23 11 02.4		
	baz=28,slow=75,SNR=8.0									
H11N1	**WAKE ISLAND Hy**	**44.59**	**231**	T		T		23 11 06.0		
	baz=28,slow=75,SNR=6.2									
WMOK	**Wichita Mounta**	**44.79**	**92**	P		**P**		**22 23 35.3**	**-0.8**
WMOK				lAmb		lAmb		22 23 36.9		
	comp=Z,4.3nm,0.8s									
WMOK	**Wichita Mounta**	**44.79**	**92**	P		**P**		**22 23 35.3**	**-0.8**
WMOK				pmax		pmax				
	comp=Z,4.0nm,0.8s									
USRK	**Ussuriysk Ar.**	**44.95**	**286**	LR		LR		22 43 16.3		
	comp=Z,81nm,18.6s,baz=72,slow=37									
E46A	**Sault Ste Mari**	**45.02**	**70**	P		**P**		**22 23 38.1**	**+0.4**
E46A				lAmb		lAmb		22 23 46.4		
	comp=Z,7.3nm,0.8s									
BOD	**Bodaibo**	**45.39**	**311**	*e*P		**P**		**22 23 38.9**	**-1.6**
BOD				pmax		pmax				
	comp=Z,14nm,1.2s									
BOD				pmax		pmax				
	comp=Z,14nm,1.3s									
SUMG	**Summit**	**45.56**	**22**	*i* P		**P**		**22 23 41.0**	**-1.1**
SUMG				lAmb		lAmb		22 23 53.4		
	comp=Z,17nm,1.4s									
H11S1	**WAKE ISLAND Hy**	**45.74**	**231**	T		T		23 12 28.7		
	baz=28,slow=75,SNR=15									
H11S2	**WAKE ISLAND Hy**	**45.75**	**231**	T		T		23 12 29.3		
	baz=28,slow=75,SNR=10									
H11S3	**WAKE ISLAND Hy**	**45.75**	**231**	T		T		23 12 30.5		
	baz=28,slow=75,SNR=9.0									
ABTX	**Abilene, Hawle**	**45.84**	**95**	P		**P**		**22 23 41.9**	**-2.5**
ABTX				lAmb		lAmb		22 23 45.1		
	comp=Z,5.7nm,0.8s									
TX31	**Lajitas Ar. Si**	**46.05**	**102**	P		**P**		**22 23 44.9**	**-1.2**
TX31				lAmb		lAmb		22 23 47.6		
	comp=Z,6.4nm,0.9s									
TXAR	**Lajitas Array**	**46.05**	**102**	P		**P**		**22 23 45.2**	**-1.0**
TXAR	**Lajitas Array**	**46.05**	**102**	P		**P**		**22 23 45.2**	**-1.0**
TXAR	**Lajitas Array**	**46.05**	**102**	P		**P**		**22 23 46.8**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=310,slow=5.5,SNR=43									
TXAR				LR		LR		22 42 04.7		
	comp=Z,150nm,18.4s,baz=282,slow=35									
	comp=Z,3.7nm,0.7s									
HDIL	**Hopedale**	**46.11**	**79**	P		**P**		**22 23 48.5**	**+2.1**
SPITS	**Spitsbergen Ar**	**46.59**	**2**	P		**P**		**22 23 49.0**	**-0.7**
	comp=Z,17nm,1.0s,baz=13,slow=5.4,SNR=7.9									
SPITS				LR		LR		22 43 19.4		
	comp=Z,146nm,18.2s,baz=308,slow=36									
	comp=Z,17nm,1.0s									
MJA0	**Matsu Arr-Jizo**	**46.64**	**274**	*e*P		**P**		**22 23 53.7**	**+3.1**
MJA0				pmax		pmax				
	comp=Z,2.0nm,0.8s									
MAJO	**Matsushiro**	**46.66**	**274**	P		**P**		**22 23 50.2**	**-0.6**
MAJO	**Matsushiro**	**46.66**	**274**⇑	*e*P		**P**		**22 23 51.1**	**+0.3**
MAJO				pmax		pmax				
	comp=Z,12nm,1.0s									
MJAR	**Matsushiro Arr**	**46.66**	**274**	P		**P**		**22 23 50.8**	**0.0**
	comp=Z,4.7nm,1.1s,baz=37,slow=8.0,SNR=5.1									
	comp=Z,4.7nm,1.1s									
MJB9	**Matsu-Tunnel**	**46.66**	**274**	P		**P**		**22 23 51.5**	**+0.7**
NRIK	**Noril'sk**	**46.92**	**334**	P		**P**		**22 23 51.8**	**-0.6**
NRIK	**Noril'sk**	**46.92**	**334**	P		**P**		**22 23 51.8**	**-0.6**
NRIK				pmax		pmax				
	comp=Z,15nm,0.9s									
NRIK	**Noril'sk**	**46.92**	**334**	P		**P**		**22 23 52.3**	**-0.1**
	comp=Z,13nm,0.8s,baz=56,slow=6.3,SNR=27									
NRIK				LR		LR		22 47 26.2		
	comp=Z,170nm,19.1s,baz=26,slow=41									
	comp=Z,13nm,0.8s									
JCT	**Junction City**	**47.35**	**97**	P		**P**		**22 23 55.0**	**-1.3**
JCT	**Junction City**	**47.35**	**97**	P		**P**		**22 23 55.0**	**-1.3**
JCT				pmax		pmax				
	comp=Z,13nm,0.7s									
Q44A	**Meyer Farm, Va**	**47.40**	**81**	P		**P**		**22 23 58.9**	**+2.4**
DRIO	**Del Rio**	**47.69**	**99**	P		**P**		**22 23 57.3**	**-1.6**
DRIO				lAmb		lAmb		22 23 58.8		
	comp=Z,4.2nm,0.7s									
ICESG	**Greenland Ices**	**47.83**	**25**	*e*P		**P**		**22 23 58.9**	**-1.0**
MIAR	**Mount Ida**	**47.89**	**88**	P		**P**		**22 23 59.3**	**-1.1**
MIAR				lAmb		lAmb		22 24 09.2		
	comp=Z,6.4nm,1.1s									
MIAR	**Mount Ida**	**47.89**	**88**	P		**P**		**22 23 59.3**	**-1.1**
MIAR				pmax		pmax				
	comp=Z,6.0nm,1.1s									
SCHQ	**Schefferville**	**48.22**	**51**	P		**P**		**22 24 01.8**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=214,slow=12,SNR=4.0									
SCHQ				LR		LR		22 45 45.1		
	comp=Z,168nm,18.4s,baz=252,slow=38									
	comp=Z,2.2nm,0.8s									
M55A	**Ridgway**	**51.27**	**71**	P		**P**		**22 24 25.7**	**-0.4**
L56A	**Greenwood**	**51.45**	**69**			**P**		**22 24 26.9**	**-0.6**
L56A				lAmb		lAmb		22 24 45.3		
	comp=Z,7.8nm,0.9s									
X48A	**Hartselle**	**51.67**	**83**	P		**P**		**22 24 27.5**	**-1.6**
X48A				lAmb		lAmb		22 24 42.9		
	comp=Z,8.2nm,1.2s									
KSRS	**Korea Array**	**51.81**	**283**	*e*P		**P**		**22 24 30.2**	**+0.1**
KSRS				pmax		pmax				
	comp=Z,5.0nm,0.8s									
KSRS	**Korea Array**	**51.81**	**283**	P		**P**		**22 24 30.6**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=46,slow=6.7,SNR=16									
	comp=Z,5.5nm,0.8s									
XLT	**XiLinHaoTe**	**53.59**	**296**	*e*P		**P**		**22 24 42.6**	**-0.7**
XLT				sP		sP		22 24 55.5	+1.2	
XLT				pmax		pmax				
	comp=Z,6.0nm,1.0s									
XLT				pmax		pmax				
	comp=Z,100nm,4.4s									
ZAK	**Zakamensk**	**55.05**	**310**	*e*P		**P**		**22 24 52.0**	**-1.8**
ZAK				pmax		pmax				
	comp=Z,3.0nm,1.6s									
ULN	**Ulaanbaatar**	**55.17**	**305**	P		**P**		**22 24 55.3**	**+0.5**
ULN	**Ulaanbaatar**	**55.17**	**305**	P		**P**		**22 24 55.3**	**+0.5**
ULN				pmax		pmax				
	comp=Z,4.0nm,1.2s									
ARCES	**ARCESS Array B**	**55.31**	**359**	*e*P		**P**		**22 24 55.5**	**+0.1**
ARCES				pmax		pmax				
	comp=Z,15nm,1.2s									
ARCES	**ARCESS Array B**	**55.31**	**359**	P		**P**		**22 24 53.9**	**-1.5**
	comp=Z,8.5nm,1.0s,baz=343,slow=7.8,SNR=5.2									
	comp=Z,8.5nm,1.0s									
T60A	**Surry**	**55.46**	**73**	P		**P**		**22 24 55.5**	**-1.3**
SONM	**Songino Array**	**55.49**	**306**	P		**P**		**22 24 56.8**	**-0.4**
SONM				lAmb		lAmb		22 24 59.0		
	comp=Z,3.2nm,0.9s									
SONM	**Songino Array**	**55.49**	**306**	P		**P**		**22 24 56.8**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=43,slow=6.7,SNR=25									
SONM				PcP		**PcP**		**22 25 57.3**	**+0.3**	
	comp=Z,1.8nm,0.8s,baz=53,slow=1.8,SNR=4.5									
	comp=Z,3.6nm,0.9s									
BORG	**Borgarnes**	**55.54**	**21**	LR		LR		22 52 13.3		
	comp=Z,68nm,18.3s,baz=24,slow=40									
HHC	**Hu-ho-hao-te**	**58.10**	**297**	*e*P		**P**		**22 25 17.0**	**+1.3**
HHC				pmax		pmax				
	comp=Z,5.0nm,0.8s									
HHC				pmax		pmax				
	comp=Z,92nm,5.7s									
HHC				LR		LR				
	comp=N,160nm,16.0s									
HHC				LR		LR				
	comp=E,140nm,15.3s									
HHC				LR		LR				
	comp=Z,160nm,16.8s									
ZAA0	**Zalesovo Array**	**59.58**	**323**	P		**P**		**22 25 25.2**	**-0.4**
ZAA0				lAmb		lAmb		22 25 37.2		
	comp=Z,10.0nm,1.5s									
ZALV	**Zalesovo Beam**	**59.58**	**323**	P		**P**		**22 25 25.1**	**-0.4**
ZALV	**Zalesovo Beam**	**59.58**	**323**	P		**P**		**22 25 25.2**	**-0.4**
ZALV	**Zalesovo Beam**	**59.58**	**323**	P		**P**		**22 25 25.7**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=21,slow=5.4,SNR=14									
ZALV				LR		LR		22 53 42.8		
	comp=Z,241nm,18.8s,baz=48,slow=39									
	comp=Z,2.6nm,0.7s									
DGZ	**Jazzator, Alta**	**62.08**	**318**⇓	*e*P		**P**		**22 25 43.1**	**+0.2**
DGZ				pmax		pmax				
	comp=Z,2.0nm,0.9s									
LYN	**LuoYang**	**62.37**	**291**	⇑P		**P**		**22 25 44.8**	**0.0**
LYN				pmax		pmax				
	comp=Z,21nm,0.8s									
LYN				pmax		pmax				
	comp=Z,82nm,4.6s									
KLMR	**Klimovskoe**	**63.27**	**351**	*e*P		**P**		**22 25 47.7**	**-2.7**
KLMR				pmax		pmax				
	comp=Z,15nm,0.9s									
FINES	**FINESS Array B**	**63.43**	**358**	P		**P**		**22 25 50.9**	**-0.6**
	comp=Z,6.7nm,0.9s,baz=4.1,slow=8.0,SNR=11									
	comp=Z,6.7nm,0.9s									
NC405	**NORSAR Array S**	**63.48**	**6**	P		**P**		**22 25 51.6**	**-0.2**
NB2	**NORSAR Subarra**	**63.52**	**6**	P		**P**		**22 25 52.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=352,slow=6.9									
NOA	**NORSAR Array B**	**63.52**	**6**	P		**P**		**22 25 51.9**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=352,slow=6.6,SNR=13									
	comp=Z,3.4nm,0.8s									
SVE	**Sverdlovsk**	**63.89**	**338**	*e*P		**P**		**22 25 54.5**	**-0.1**
SVE				pmax		pmax				
	comp=Z,18nm,1.4s									
KIRV	**Kirov**	**64.29**	**345**	*de*P		**P**		**22 25 56.4**	**-0.7**
KIRV	**Kirov**	**64.29**	**345**	LR		LR		22 56 33.5		
	comp=Z,114nm,21.2s,baz=11,slow=38									
KURK	**Kurchatov**	**64.38**	**324**	P		**P**		**22 25 57.8**	**-0.1**
KURK				lAmb		lAmb		22 25 59.4		
	comp=Z,6.6nm,0.8s									
KURK	**Kurchatov**	**64.38**	**324**	*de*P		**P**		**22 25 57.9**	**0.0**
KURK				pmax		pmax				
	comp=Z,7.0nm,0.8s									
KURBB	**Kurchatov Arra**	**64.49**	**324**	P		**P**		**22 25 58.8**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=26,slow=6.3,SNR=18									
KURBB				LR		LR		22 58 30.9		
	comp=Z,72nm,18.7s,baz=161,slow=40									
	comp=Z,5.6nm,0.8s									
HFS	**Hagfors**	**64.56**	**5**	P		**P**		**22 25 58.3**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=30,slow=6.8,SNR=6.4									
	comp=Z,5.5nm,0.9s									
ARU	**Arti**	**64.70**	**339**	P		**P**		**22 25 59.5**	**-0.4**
ARU	**Arti**	**64.70**	**339**	*d* P		**P**		**22 25 59.2**	**-0.7**
ARU				S		**S**		**22 34 39.8**	**+1.8**	
ARU				pmax		pmax				
	comp=Z,7.0nm,1.0s									
BRVK	**Borovoye**	**64.91**	**330**	P		**P**		**22 26 01.3**	**0.0**
BRVK				lAmb		lAmb		22 26 13.9		
	comp=Z,7.8nm,1.0s									
BRVK	**Borovoye**	**64.91**	**330**⇓	*e*P		**P**		**22 26 01.0**	**-0.3**
BRVK				pmax		pmax				
	comp=Z,4.0nm,0.8s									
BVAR	**Borovoye Array**	**64.91**	**330**	P		**P**		**22 26 01.3**	**0.0**
	comp=Z,5.4nm,0.8s,baz=43,slow=6.7,SNR=30									
	comp=Z,5.4nm,0.8s									
GTA	**Gaotai**	**64.99**	**303**	*e*P		**P**		**22 26 01.4**	**-0.8**
GTA				pP		pP		22 26 07.5	-2.9	
GTA				pP		pP		22 26 07.5	-2.9	
GTA				pmax		pmax				
	comp=Z,6.0nm,1.0s									
LZH	**Lanzhou**	**65.64**	**298**	*e*P		**P**		**22 26 06.3**	**-0.2**
LZH				pP		pP		22 26 12.0	-2.6	
LZH				pmax		pmax				
	comp=Z,18nm,1.5s									
MKAR	**Makanchi Array**	**66.41**	**320**	P		**P**		**22 26 09.6**	**-1.6**
MKAR	**Makanchi Array**	**66.41**	**320**	*e*P		**P**		**22 26 10.4**	**-0.8**
MKAR				pmax		pmax				
	comp=Z,4.0nm,0.8s									
MKAR	**Makanchi Array**	**66.41**	**320**	P		**P**		**22 26 10.4**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=48,slow=6.4,SNR=34									
	comp=Z,3.3nm,0.8s									
MAKZ	**Makanchi**	**66.52**	**320**	P		**P**		**22 26 10.8**	**-1.0**
MAKZ				lAmb		lAmb		22 26 12.4		
	comp=Z,3.9nm,0.8s									
MAKZ	**Makanchi**	**66.52**	**320**	P		**P**		**22 26 10.8**	**-1.0**
MAKZ				pmax		pmax				
	comp=Z,4.0nm,0.8s									
WMQ	**Urumqi**	**66.80**	**314**	*e*P		**P**		**22 26 14.0**	**+0.3**
WMQ				pP		pP		22 26 21.3	-0.5	
WMQ				PcP		**PcP**		**22 26 42.0**	**-0.4**	
WMQ				pmax		pmax				
	comp=Z,15nm,1.1s									
EKA	**Eskdalemuir Ar**	**67.62**	**16**	P		**P**		**22 26 18.4**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=332,slow=4.6,SNR=4.7									
	comp=Z,2.4nm,0.7s									
OBN	**Obninsk**	**69.21**	**351**⇑	*e*P		**P**		**22 26 27.8**	**-0.7**
OBN				*e*				22 26 50.4		
OBN				pmax		pmax				
	comp=Z,6.0nm,0.8s									
OBN				MLR		MLR				
	comp=Z,110nm,18.0s									
PABE	**Paberze**	**69.41**	**359**	P		**P**		**22 26 29.4**	**-0.4**
CD2	**Chengdu**	**69.78**	**295**	P		**P**		**22 26 32.3**	**-0.2**
CD2				pmax		pmax				
	comp=Z,10.0nm,0.9s									
GOMU	**GeErMu**	**69.92**	**305**	P		**P**		**22 26 32.9**	**-0.9**
GOMU				PcP		**PcP**		**22 26 56.6**	**+0.5**	
GOMU				pmax		pmax				
	comp=Z,3.0nm,0.9s									
AKTO	**Aktyubinsk**	**70.42**	**337**	LR		LR		23 00 58.8		
	comp=Z,98nm,18.5s,baz=160,slow=39									
ABKAR	**Akbulak array**	**71.07**	**335**	P		**P**		**22 26 39.7**	**-0.4**
ABKAR	**Akbulak array**	**71.07**	**335**	P		**P**		**22 26 39.4**	**-0.7**
LPSR	**Galich'ya Gora**	**71.47**	**350**	*e*P		**P**		**22 26 39.9**	**-2.5**
LPSR				pmax		pmax				
	comp=Z,10.0nm,0.8s									
VRH	**Novokhopyorsk**	**72.53**	**347**	*e*P		**P**		**22 26 45.1**	**-3.7**
VRH				pmax		pmax				
	comp=Z,10.0nm,0.4s									
AAK	**Ala-Archa**	**72.80**	**322**	*ce*P		**P**		**22 26 50.8**	**0.0**
AAK				pmax		pmax				
	comp=Z,7.0nm,1.3s									
AAK	**Ala-Archa**	**72.80**	**322**	LR		LR		23 01 56.9		
	comp=Z,194nm,18.3s,baz=42,slow=38									
VSR	**Storozhevoye**	**72.81**	**349**	*e*P		**P**		**22 26 48.0**	**-2.5**
VSR				pmax		pmax				
	comp=Z,10.0nm,0.8s									
VORD	**Divnogorie**	**73.05**	**349**	*e*P		**P**		**22 26 49.7**	**-2.1**
VORD				pmax		pmax				
	comp=Z,10.0nm,0.8s									
CLL	**Collm**	**73.33**	**6**	*e*P		**P**		**22 26 53.0**	**-0.5**
CLL	**Collm**	**73.33**	**6**	*e*P		**P**		**22 26 53.0**	**-0.5**
CLL				*e*PcP		**PcP**		**22 27 12.0**	**+2.2**	
HNR	**Honiara**	**73.71**	**224**	LR		LR		22 54 01.4		
	comp=Z,921nm,19.9s,baz=336,slow=32									
BRG	**Berggiesshubel**	**73.82**	**6**	Amp				22 26 57.5		
	comp=Z,2.7nm,1.0s									
BRG	**Berggiesshubel**	**73.82**	**6**	Amp				22 27 09.7		
	comp=Z,6.1nm,1.2s									
BRG	**Berggiesshubel**	**73.82**	**6**	*e*P		**P**		**22 26 56.7**	**+0.3**
BRG								22 27 07.6		
BRG				pmax		pmax				
	comp=Z,3.0nm,1.0s									
BRG				pmax		pmax				
	comp=Z,6.0nm,1.2s									
BRG	**Berggiesshubel**	**73.82**	**6**	*e*P		**P**		**22 26 56.7**	**+0.3**
BRG	**Berggiesshubel**	**73.82**	**6**	P		P		22 27 07.7	+11	
AKASG	**Malin Array Be**	**74.08**	**356**	P		**P**		**22 27 02.2**	**+4.3**
AKASG	**Malin Array Be**	**74.08**	**356**	*e*P		**P**		**22 26 57.0**	**-0.9**
AKASG				pmax		pmax				
	comp=Z,3.0nm,0.6s									
AKASG	**Malin Array Be**	**74.08**	**356**	P		**P**		**22 26 56.9**	**-1.1**
	comp=Z,3.7nm,0.6s,baz=360,slow=5.3,SNR=9.6									
	comp=Z,3.7nm,0.6s									
AKBB	**Malin Array Si**	**74.08**	**356**	*de*P		**P**		**22 26 57.3**	**-0.6**
PZH	**PanZhiHua**	**74.36**	**294**	P		**P**		**22 27 03.3**	**+3.1**
PZH				pmax		pmax				
	comp=Z,10.0nm,0.7s									
PZH				pmax		pmax				
	comp=Z,120nm,5.5s									
DPC	**Dobruska-Polom**	**74.46**	**4**	*e*P		**P**		**22 27 00.1**	**-0.1**
DPC				*ep*P		**pP**		**22 27 09.1**	**+0.7**	
DPC	**Dobruska-Polom**	**74.46**	**4**	*e*P		**P**		**22 27 00.1**	**-0.1**
DPC				*e*				22 27 09.1		
KRLC	**Kraliky**	**74.75**	**4**	*e*P		**P**		**22 27 01.7**	**-0.2**
KRLC				*ep*P		**pP**		**22 27 10.8**	**+0.7**	
KRLC	**Kraliky**	**74.75**	**4**	*e*P		**P**		**22 27 01.7**	**-0.2**
KRLC				*e*				22 27 10.8		
KSH	**Kashi**	**75.02**	**320**	P		**P**		**22 27 06.8**	**+3.0**
KSH				PcP		**sP**		**22 27 16.0**	**+1.0**	
KSH				pmax		pmax				
	comp=Z,8.0nm,0.9s									
KHC	**Kasperske Hory**	**75.53**	**6**	*e*P		**P**		**22 27 06.3**	**-0.2**
KHC				*ep*P		**sP**		**22 27 18.2**	**+0.5**	
KHC	**Kasperske Hory**	**75.53**	**6**⇓	*e*P		**P**		**22 27 06.8**	**+0.3**
KHC				pmax		pmax				
	comp=Z,8.0nm,1.7s									
LANS	**Liptovska Anna**	**75.75**	**2**	*e*P		**P**		**22 27 08.9**	**+1.2**
LANS				*e*				22 27 20.2		
LANS				pmax		pmax				
	comp=Z,3.0nm,1.1s									
LANS	**Liptovska Anna**	**75.75**	**2**	*e*P		**P**		**22 27 08.9**	**+1.2**
LANS				*e*				22 27 20.2		
KOLS	**Kolonicke sedl**	**76.00**	**0**	*e*P		**P**		**22 27 09.7**	**+0.6**
KOLS				*e*				22 27 20.9		
KOLS				pmax		pmax				
	comp=Z,10.0nm,1.5s									
KOLS	**Kolonicke sedl**	**76.00**	**0**	*e*P		**P**		**22 27 09.7**	**+0.6**
KOLS				*e*				22 27 20.9		
RAR	**Rarotonga**	**76.36**	**182**	LR		LR		22 56 36.3		
	comp=Z,30nm,18.0s,baz=106,slow=32									
VYHS	**Vyhne**	**76.39**	**2**	*e*P		**P**		**22 27 11.3**	**0.0**
VYHS				pmax		pmax				
	comp=Z,5.0nm,1.2s									
VYHS	**Vyhne**	**76.39**	**2**	*e*P		**P**		**22 27 11.3**	**0.0**
MODS	**Modra-Piesok**	**76.47**	**4**	*e*P		**P**		**22 27 12.7**	**+0.9**
MODS				*e*				22 27 23.9		
MODS	**Modra-Piesok**	**76.47**	**4**	*e*P		**P**		**22 27 12.7**	**+0.9**
MODS				*e*				22 27 23.9		
MOTA	**Moosalm**	**77.14**	**8**	*e*P		**P**		**22 27 16.6**	**+0.8**
	comp=Z,1.2nm,0.6s									
WATA	**Walderalm**	**77.19**	**8**	*e*P		**P**		**22 27 16.6**	**+0.6**
	comp=Z,0.5nm,0.3s									
WTTA	**Wattenberg**	**77.26**	**8**	*e*P		**P**		**22 27 16.6**	**+0.1**
	comp=Z,1.9nm,0.7s									
SQTA	**Sankt Quirin**	**77.27**	**8**	*e*P		**P**		**22 27 16.8**	**+0.3**
	comp=Z,0.8nm,0.3s									
KBA	**Koelnbreinsper**	**77.57**	**6**	*e*P		**P**		**22 27 19.1**	**+0.9**
	comp=Z,1.4nm,0.5s									
SOKA	**Soboth**	**78.06**	**5**	*e*P		**P**		**22 27 21.4**	**+0.6**
	comp=Z,0.5nm,0.4s									
OBKA	**Obir**	**78.20**	**6**	*i* P		**P**		**22 27 21.7**	**+0.1**
	comp=Z,4.3nm,0.7s									
PRED	**Cave del Predi**	**78.21**	**6**	P		**P**		**22 27 24.9**	**+3.3**
PRED				lAmb		lAmb		22 27 41.6		
	comp=Z,15nm,1.5s									
CIMO	**Cimolais**	**78.27**	**7**	P		**P**		**22 27 24.3**	**+2.4**
CIMO				lAmb		lAmb		22 27 37.5		
	comp=Z,22nm,1.5s									
STAL	**STALIGIAL**	**78.34**	**7**	P		**P**		**22 27 25.4**	**+3.1**
BNI	**Bardonecchia**	**78.99**	**11**	P		**P**		**22 27 28.8**	**+2.8**
BNI	**Bardonecchia**	**78.99**	**11**	P		**P**		**22 27 28.8**	**+2.8**
BNI				pmax		pmax				
	comp=Z,18nm,1.4s									
KIV	**Kislovodsk**	**79.51**	**345**	*e*P		**P**		**22 27 28.8**	**0.0**
KIV				pmax		pmax				
	comp=Z,9.0nm,1.1s									
KIV				MLR		MLR				
	comp=Z,65nm,19.0s									
KBZ	**Khabaz**	**79.70**	**345**	*e*P		**P**		**22 27 30.4**	**+0.7**
KBZ				pmax		pmax				
	comp=Z,5.0nm,0.9s									
KBZ	**Khabaz**	**79.70**	**345**	P		**P**		**22 27 30.7**	**+1.0**
	comp=Z,4.6nm,0.9s,baz=333,slow=4.2,SNR=11									
KBZ				LR		LR		23 06 04.8		
	comp=Z,101nm,21.1s,baz=8.0,slow=38									
	comp=Z,4.6nm,0.9s									
UBPT	**Khong Chiam**	**81.49**	**284**	P		**P**		**22 27 39.5**	**-0.2**
GEYT	**Alibeck**	**82.14**	**332**

comp=Z,1.7nm,0.7s
KNRA Kununurra 50.96 265 P P 22 25 03.4 -2.2
QSPA South Pole Qui 71.33 180 P P 22 27 18.5 +0.6
QSPA IAmb IAmb 22 27 22.8
comp=Z,3.4nm,0.9s
QSPA South Pole Qui 71.33 180 P P 22 27 18.7 +0.8
comp=Z,3.1nm,0.6s,baz=350,slow=0.8,SNR=22
comp=Z,3.1nm,0.6s
ILAR Eielson Array 86.56 13 P P 22 28 38.1 +0.3
comp=Z,0.3nm,0.6s,baz=222,slow=4.6,SNR=6.5
comp=Z,0.3nm,0.6s

ROM 22 22:24:38.4±0.1, 42°.808N±0°.002×13°.202E±0°.004, h12km, ML1.7/30, 2C-5D, Error ellipse: s-maj=0.3km s-min=0.0km az=82.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.05**	**174**	⇓P		Pg	22 24 41.2	+0.3
T1214				S		Sg	22 24 43.0	+0.3
T1214				AML		AML		
	comp=E,712μm,1.3s							
T1214				AML		AML		
	comp=N,788μm,0.2s							
T1214				AML		AML		
	comp=E,737μm,1.3s							
T1214				AML		AML		
	comp=N,742μm,1.3s							
T1214				AML		AML		
	comp=E,712μm,1.3s							
T1214				AML		AML		
	comp=N,789μm,0.2s							
T1214				AML		AML		
	comp=E,738μm,1.3s							
T1214				AML		AML		
	comp=N,740μm,1.3s							
NRCA	**Norcia**	**0.07**	**292**	⇑P		Pg	22 24 41.2	+0.2
NRCA				S		Sg	22 24 43.1	+0.1
NRCA				AML		AML		
	comp=E,2015μm,0.2s							
NRCA				AML		AML		
	comp=E,2095μm,0.2s							
NRCA				AML		AML		
	comp=N,1615μm,1.6s							
NRCA				AML		AML		
	comp=N,1520μm,1.6s							
NRCA				AML		AML		
	comp=N,1520μm,0.4s							
NRCA				AML		AML		
	comp=N,1615μm,0.4s							
MMO1	**Montemonaco**	**0.13**	**45**	P		Pg	22 24 42.0	+0.3
MMO1				S		Sg	22 24 44.6	+0.4
MTRA	**Matera**	**0.15**	**110**	⇓P		Pg	22 24 42.3	+0.3
MTRA				S		Sg	22 24 45.2	+0.5
MTRA				AML		AML		
	comp=E,587μm,0.1s							
MTRA				AML		AML		
	comp=N,556μm,0.9s							
MTRA				AML		AML		
	comp=E,550μm,0.1s							
MTRA				AML		AML		
	comp=N,586μm,0.9s							
MTRA				AML		AML		
	comp=N,556μm,0.9s							
SMA1	**SAN MARTINO**	**0.20**	**151**	⇓P		Pg	22 24 43.2	+0.3
SMA1				S		Sg	22 24 46.7	+0.7
SMA1				AML		AML		
	comp=E,154μm,1.2s							
SMA1				AML		AML		
	comp=N,186μm,0.4s							
SMA1				AML		AML		
	comp=E,154μm,0.8s							
LNSS	**Leonessa**	**0.24**	**210**	P		Pg	22 24 43.8	+0.4
LNSS				S		Sg	22 24 47.9	+1.0
LNSS				AML		AML		
	comp=E,412μm,0.2s							
LNSS				AML		AML		
	comp=N,384μm,0.6s							
GAVE	**Gavelli**	**0.26**	**243**	P		Pg	22 24 44.0	+0.3
MF5	**Montefalcone A**	**0.26**	**46**	P		Pb	22 24 44.6	-0.5
T1221	**Campello sul C**	**0.27**	**281**	⇑P		Pg	22 24 44.3	+0.3
T1221				S		Sg	22 24 48.7	+1.0
GUMA	**Gualdo di Mace**	**0.27**	**21**	P		Pb	22 24 44.7	-0.5
GUMA				S		Sb	22 24 49.4	-0.4
GUMA				AML		AML		
	comp=E,767μm,0.3s							
GUMA				AML		AML		
	comp=N,460μm,0.7s							
GUMA				AML		AML		
	comp=N,460μm,1.3s							
CSP1	**Cessapalombo**	**0.28**	**0**	⇓P		Pg	22 24 44.5	+0.2
CSP1				S		Sg	22 24 49.2	+1.0
CSP1				AML		AML		
	comp=E,69μm,1.6s							
CSP1				AML		AML		
	comp=E,69μm,0.4s							
CSP1				AML		AML		
	comp=N,32μm,1.4s							
CESI	**CESI - Serrava**	**0.29**	**312**	⇓P		Pg	22 24 44.8	+0.4
CESI				S		Sg	22 24 49.4	+0.9
CESI				AML		AML		
	comp=E,177μm,0.3s							
CESI				AML		AML		
	comp=N,236μm,0.5s							
RM33	**Pellescritta (**	**0.30**	**178**	P		Pg	22 24 44.8	+0.2
RM33				S		Sb	22 24 50.0	-0.6
RM33				AML		AML		
	comp=N,167μm,1.2s							
RM33				AML		AML		
	comp=E,238μm,1.6s							
RM33				AML		AML		
	comp=N,166μm,1.2s							
RM33				AML		AML		
	comp=E,165μm,0.1s							
RM33				AML		AML		
	comp=N,124μm,1.4s							
RM33				AML		AML		
	comp=N,166μm,0.8s							
RM33				AML		AML		
	comp=N,124μm,0.6s							
RM33				AML		AML		
	comp=E,238μm,0.4s							
PF6	**Pievefavera**	**0.34**	**359**	P		Pg	22 24 45.2	-0.1
PF6				S		Sg	22 24 50.5	+0.6
PF6				AML		AML		
	comp=E,119μm,1.6s							
PF6				AML		AML		
	comp=N,57μm,1.6s							
PF6				AML		AML		
	comp=E,119μm,0.4s							
PF6				AML		AML		
	comp=N,57μm,0.4s							
TERO	**Teramo**	**0.35**	**122**	P		Pg	22 24 45.6	+0.2
TERO				S		Sb	22 24 51.1	-0.9
TERO				AML		AML		
	comp=E,176μm,1.1s							
TERO				AML		AML		
	comp=N,202μm,1.5s							
TERO				AML		AML		
	comp=N,202μm,0.5s							
TERO				AML		AML		
	comp=E,176μm,0.9s							

*IDC **22** 22:41:10.2±1.0, 55°.31N×157°.71W, h0km, mb4.0/13, mbtmp4.0/16, ML3.5/3, MS3.7/6, Error ellipse: s-maj=23.2km s-min=15.8km az=166.0*
*NEIC **22** 22:41:13.4±2.3, 55°.34N±0°.05×157°.38W±0°.05, h10km±2km, Error ellipse: s-maj=8.7km s-min=4.5km az=164.0*
*AEIC **22** 22:41:14.1±2.5, 55°.25N±0°.06×157°.31W±0°.08, h20km±4km, ML3.6, mb3.8/9(NEIC), ML3.7/38(NEIC), Error ellipse: s-maj=9.4km s-min=6.2km az=170.0*

ISC 22 22:41:15.4±0.6, 55°.38N±0°.07×157°.39W±0°.05, h35km, n166, σ1.241/163, mb4.0/14, MS3.9/5, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHGN	**Chignik**	**1.09**	**328**			**Pn**	**22 41 33.4**	**-0.7**
CHGN				Sg		**Sn**	**22 41 48.2**	**+0.2**
CHGN				IAML			22 41 49.9	
	comp=N,2μm,0.4s							
CHGN				IAML			22 41 53.8	
	comp=E,2μm,0.4s							
VNSG	**Veniaminof 6**	**1.22**	**309**			**Pn**	**22 41 36.0**	**+0.1**
VNSG						**Sn**	**22 41 52.6**	**+1.3**
CNBA	**Chernabura Isl**	**1.38**	**247**			**Pn**	**22 41 37.2**	**-1.0**
CNBA				Sg		**Sn**	**22 41 56.6**	**+1.4**
CNBA				IAML			22 42 04.1	
	comp=E,1μm,0.7s							
CNBA				IAML			22 42 04.0	
	comp=N,1μm,0.6s							
VNWF	**Veniaminof 8**	**1.45**	**303**			**Pn**	**22 41 39.8**	**+0.6**
VNWF						**Sn**	**22 41 59.9**	**+2.8**
VNFG	**Fog Glacier, M**	**1.52**	**308**			**Sn**	**22 42 03.3**	**+4.5**
VNFG	**Fog Glacier, M**	**1.52**	**308**			**Pn**	**22 41 41.2**	**+1.0**
ANNW	**Aniakchak Nort**	**1.66**	**344**			**Pn**	**22 41 43.0**	**+0.9**
SDPT	**Sand Point**	**1.77**	**270**			**Pn**	**22 41 42.7**	**-0.7**
SDPT				IAML			22 42 16.7	
	comp=E,902nm,0.7s							
SDPT	**Sand Point**	**1.77**	**270**			**Sn**	**22 42 03.4**	**-1.2**
R16K	**Pilot Point**	**2.20**	**357**			**Pn**	**22 41 50.3**	**+0.9**
R16K	**Pilot Point**	**2.20**	**357**	IAML			22 43 05.2	
	comp=N,572nm,1.1s							
PS1A	**Pavlof South-1**	**2.48**	**273**			**Pn**	**22 41 52.8**	**-0.5**
PVV	**Pavlof Volcano**	**2.51**	**272**			**Pn**	**22 41 53.0**	**-0.7**
PN7A	**Pavlof North-7**	**2.63**	**273**			**Pn**	**22 41 55.2**	**-0.2**
OHAK	**Old Harbor**	**2.94**	**49**	Pn		**Pn**	**22 41 59.3**	**-0.2**
OHAK				IAML			22 43 04.8	
	comp=N,178nm,0.7s							
CNTC	**Contact Creek**	**3.01**	**15**			**Pn**	**22 42 01.0**	**+0.4**
ANCK	**Angle Creek**	**3.01**	**19**			**Pn**	**22 42 01.1**	**+0.5**
ACHA	**Angle Creek He**	**3.06**	**21**			**Pn**	**22 42 01.7**	**+0.5**
KELA	**Mount Kelaz**	**3.20**	**16**			**Pn**	**22 42 03.6**	**+0.4**
FALS	**False Pass**	**3.50**	**264**			**Pn**	**22 42 07.1**	**-0.2**
KDAK	**Kodiak Island**	**3.59**	**46**	Pn		**Pn**	**22 42 09.6**	**+1.1**
KDAK				IAML			22 43 26.8	
	comp=N,172nm,1.3s							
KDAK	**Kodiak Island**	**3.59**	**46**	Pn		**Pn**	**22 42 09.2**	**+0.7**
	comp=N,2.2nm,0.3s,baz=176,slow=6.4,SNR=13							
	comp=N,5.9nm,0.3s							
P16K	**Nushagak River**	**3.68**	**355**			**Pn**	**22 42 10.8**	**+1.2**
ISLZ	**Isanotski Laza**	**3.70**	**262**			**Pn**	**22 42 09.4**	**-0.6**
ISNN	**Isanotski Nort**	**3.71**	**264**			**Pn**	**22 42 10.3**	**+0.1**
SSLS	**Shishaldin Sou**	**3.86**	**263**			**Pn**	**22 42 12.2**	**-0.2**
SSLW	**Shishaldin Wes**	**3.92**	**264**			**Pn**	**22 42 12.8**	**-0.3**
O15K	**Ungalikthiuk R**	**4.03**	**342**			**Pn**	**22 42 14.9**	**+0.4**
Q19K	**Cape Douglas,**	**4.10**	**28**			**Pn**	**22 42 17.6**	**+2.0**
P18K	**Big Mountain,**	**4.19**	**15**	Pn		**Pn**	**22 42 17.4**	**+0.6**
SYI	**Shuyak Island**	**4.24**	**38**	Pn		**Pn**	**22 42 16.8**	**-0.6**
SYI				IAML			22 43 33.8	
	comp=E,66nm,0.7s							
SYI				IAML			22 43 58.2	
	comp=N,61nm,1.4s							
O16K	**Kokwok River B**	**4.24**	**355**			**Pn**	**22 42 18.6**	**+1.2**
WESE	**West Dahl East**	**4.25**	**261**			**Pn**	**22 42 17.6**	**-0.1**
WEBT	**Westdahl Beart**	**4.32**	**262**			**Pn**	**22 42 18.5**	**0.0**
WECS	**Westdahl Cape**	**4.34**	**262**			**Pn**	**22 42 19.1**	**+0.2**
O17K	**Koliganek Bris**	**4.41**	**2**			**Pn**	**22 42 20.2**	**+0.4**
O14K	**Tigyukauivet M**	**4.42**	**333**			**Pn**	**22 42 20.6**	**+0.8**
O14K	**Tigyukauivet M**	**4.42**	**333**	IAML			22 43 40.5	
	comp=N,68nm,1.0s							
O18K	**Koktuh Hills**	**4.64**	**14**			**Pn**	**22 42 24.3**	**+1.4**
O18K				IAML			22 43 49.5	
	comp=N,45nm,1.1s							
P19K	**Oil Pt**	**4.83**	**26**	Pn		**Pn**	**22 42 28.6**	**+3.0**
P19K				IAML			22 43 54.9	
	comp=N,69nm,0.8s							
P19K				IAML			22 44 07.0	
	comp=E,73nm,1.0s							
AKUT	**Akutan**	**5.01**	**259**	Pn		**Pn**	**22 42 27.6**	**-0.4**
AKUT				IAML			22 43 55.1	
	comp=E,56nm,1.3s							
N15K	**Kwethluk River**	**5.02**	**344**			**Pn**	**22 42 29.4**	**+1.3**
N14K	**Kuskokwak Cree**	**5.11**	**335**			**Pn**	**22 42 30.2**	**+0.9**
AKLV	**Akutan Long Va**	**5.11**	**260**			**Pn**	**22 42 28.8**	**-0.6**
ILSW	**Iliamna Southw**	**5.15**	**24**			**Pn**	**22 42 32.1**	**+2.2**
ILSW				IAML			22 43 45.5	
	comp=N,42nm,1.1s							
ILSW				IAML			22 43 46.4	
	comp=E,32nm,1.3s							
N16K	**Nishlik Lake**	**5.16**	**352**			**Pn**	**22 42 31.8**	**+1.7**
N17K	**Nushagak Hills**	**5.17**	**1**	Pn		**Pn**	**22 42 31.4**	**+1.3**
N17K				IAML			22 44 08.6	
	comp=E,34nm,1.1s							
CNPM	**China Poot**	**5.32**	**36**	Pn		**Pn**	**22 42 34.3**	**+2.0**
CNPM				IAML			22 43 54.6	
	comp=E,48nm,0.9s							
CNPM				IAML			22 43 55.4	
	comp=N,45nm,0.8s							
O20K	**Slope Mountain**	**5.36**	**26**			**Pn**	**22 42 33.3**	**+0.5**
N18K	**Kilae Creek**	**5.38**	**8**			**Pn**	**22 42 33.3**	**+0.3**
MNAT	**Makushin Natee**	**5.61**	**258**			**Pn**	**22 42 34.8**	**-1.3**
M15K	**Kasigluk River**	**5.61**	**343**			**Pn**	**22 42 36.9**	**+0.6**
BRLK	**Bradley Lake**	**5.62**	**36**	Pn		**Pn**	**22 42 35.8**	**-0.5**
BRSE	**Bradley Lake S**	**5.65**	**37**			**Pn**	**22 42 36.4**	**-0.4**
MSW	**Makushin Switc**	**5.65**	**259**			**Pn**	**22 42 35.5**	**-1.4**
N19K	**Bonanza Creek**	**5.66**	**15**			**Pn**	**22 42 37.3**	**+0.3**
RSO	**Redoubt South**	**5.66**	**24**			**Pn**	**22 42 39.7**	**+2.5**
M16K	**Timber Creek**	**5.72**	**352**			**Pn**	**22 42 38.5**	**+0.8**
SVW2	**Sparrevohn**	**5.81**	**9**	Pn		**Pn**	**22 42 41.8**	**+2.7**
RDT	**Redoubt**	**5.84**	**25**			**Pn**	**22 42 39.8**	**+0.4**
M14K	**Bethel**	**5.91**	**338**	Pn		**Pn**	**22 42 40.9**	**+0.6**
M13K	**Dall Lake**	**5.96**	**330**			**Pn**	**22 42 42.2**	**+1.1**
M17K	**Holitna River**	**6.04**	**360**			**Pn**	**22 42 43.3**	**+1.1**
M18K	**Stony River**	**6.18**	**7**			**Pn**	**22 42 44.9**	**+0.8**
L16K	**Twhat River**	**6.44**	**351**			**Pn**	**22 42 48.2**	**+0.6**
O22K	**Cooper Landing**	**6.54**	**35**	Pn		**Pn**	**22 42 50.9**	**+1.9**
L14K	**Kuka Creek**	**6.60**	**337**			**Pn**	**22 42 50.1**	**+0.4**
L15K	**Ungalak Mounta**	**6.67**	**343**			**Pn**	**22 42 50.9**	**+0.2**
STLK	**Strandline Lak**	**6.79**	**23**			**Pn**	**22 42 52.8**	**+0.3**
L17K	**Donlin**	**6.79**	**356**			**Pn**	**22 42 52.9**	**+0.5**
L18K	**Granite Mounta**	**6.87**	**3**			**Pn**	**22 42 54.3**	**+0.8**
L19K	**White Mountain**	**6.95**	**10**	Pn		**Pn**	**22 42 55.6**	**+1.0**
RC01	**Rabbit Creek A**	**7.00**	**32**			**Pn**	**22 42 57.0**	**+1.7**
SUA	**Susitna One**	**7.03**	**27**			**Pn**	**22 42 55.7**	**0.0**
SKT	**Skwentna**	**7.29**	**22**	Pn		**Pn**	**22 43 01.5**	**+2.2**
K17K	**Iditarod**	**7.38**	**357**			**Pn**	**22 43 00.7**	**+0.3**
TTA	**Tatalina**	**7.61**	**5**	Pn		**Pn**	**22 43 04.0**	**+0.3**
KNK	**Knik Glacier**	**7.65**	**34**	Pn		**Pn**	**22 43 05.7**	**+1.4**
HIN	**Hinchinbrook I**	**7.67**	**45**	Pn		**Pn**	**22 43 04.7**	**+0.2**
GHO	**Glory Hole Cre**	**7.78**	**31**	Pn		**Pn**	**22 43 06.7**	**+0.6**
FID	**Port Fidalgo**	**7.90**	**43**	Pn		**Pn**	**22 43 07.9**	**+0.3**
J16K	**Anvik River**	**8.10**	**350**			**Pn**	**22 43 11.0**	**+0.7**
J18K	**Innoko River**	**8.12**	**2**			**Pn**	**22 43 11.0**	**+0.4**
KAIM	**Kayak Island**	**8.31**	**51**	Pn		**Pn**	**22 43 14.7**	**+1.5**
SCM	**Sheep Creek Mo**	**8.33**	**35**	Pn		**Pn**	**22 43 14.7**	**+1.2**
CAST	**Castle Rocks**	**8.50**	**16**			**Pn**	**22 43 16.8**	**+0.9**
KLU	**Klutina**	**8.58**	**40**			**Pn**	**22 43 17.9**	**+0.9**
WAT6	**Susitna Watana**	**8.76**	**31**			**Pn**	**22 43 18.6**	**-1.0**
KTH	**Kantishna Hill**	**8.83**	**19**	Pn		**Pn**	**22 43 21.5**	**+1.1**
TRF	**Thorofare Moun**	**8.86**	**21**	Pn		**Pn**	**22 43 22.3**	**+1.3**
M24K	**Tolsona, Glenn**	**8.90**	**36**	Pn		**Pn**	**22 43 22.7**	**+1.3**
N25K	**Chitina, Valde**	**9.14**	**42**	Pn		**Pn**	**22 43 26.1**	**+1.4**
RND	**Reindeer**	**9.14**	**25**	Pn		**Pn**	**22 43 25.8**	**+1.1**
WAX	**Waxell Ridge**	**9.24**	**51**	Pn		**Pn**	**22 43 27.3**	**+1.2**
CRQM	**Cirque**	**9.27**	**49**	Pn		**Pn**	**22 43 28.3**	**+1.8**
BPAW	**Bear Paw Mtn.**	**9.32**	**18**	Pn		**Pn**	**22 43 27.0**	**-0.1**
GLB	**Gilahina Butte**	**9.35**	**44**	Pn		**Pn**	**22 43 28.6**	**+1.0**
VRDI	**Verde Repeater**	**9.38**	**46**	Pn		**Pn**	**22 43 29.0**	**+1.0**
TGL	**Tana Glacier**	**9.40**	**49**	Pn		**Pn**	**22 43 29.1**	**+0.9**
ISLE	**Juniper Island**	**9.54**	**51**	Pn		**Pn**	**22 43 31.4**	**+1.1**
MCARA	**McCarthy VSAT**	**9.63**	**46**	Pn		**Pn**	**22 43 33.9**	**+2.5**
GRNC	**Granite Creek**	**9.86**	**51**	Pn		**Pn**	**22 43 35.6**	**+1.0**
TABL	**Table Mountain**	**10.01**	**53**	Pn		**Pn**	**22 43 37.8**	**+1.1**
ANM	**Nome**	**10.04**	**340**	Pn		**Pn**	**22 43 38.2**	**+1.3**
BARN	**Barnard Glacie**	**10.05**	**49**	Pn		**Pn**	**22 43 38.9**	**+1.7**
NEA2	**Nenana**	**10.13**	**21**			**Pn**	**22 43 39.2**	**+1.1**
CTGM	**Chitina Glacie**	**10.14**	**50**	Pn		**Pn**	**22 43 40.9**	**+2.4**
LOGN	**Logan Glacier**	**10.23**	**51**	Pn		**Pn**	**22 43 42.4**	**+2.7**
WRH	**Wood River Hil**	**10.23**	**23**			**Pn**	**22 43 39.4**	**-0.1**
MENT	**Mentasta**	**10.31**	**37**	Pn		**Pn**	**22 43 42.9**	**+2.3**
G16K	**Koyuk River**	**10.34**	**348**			**Pn**	**22 43 43.1**	**+2.1**
CCB	**Clear Creek Bu**	**10.45**	**23**	Pn		**Pn**	**22 43 41.9**	**-0.5**
HDA	**Harding Lake**	**10.45**	**26**			**Pn**	**22 43 42.8**	**+0.3**
L26K	**Log Cabin Wild**	**10.49**	**37**	Pn		**Pn**	**22 43 45.2**	**+2.1**
BCPM	**Bancas Point**	**10.54**	**57**	Pn		**Pn**	**22 43 42.9**	**-0.8**
H21K	**Melozitna Rive**	**10.55**	**10**			**Pn**	**22 43 44.6**	**+0.7**
I23K	**Minto, Yukon-K**	**10.57**	**19**			**Pn**	**22 43 44.7**	**+0.5**
MDM	**Murphy Dome**	**10.62**	**22**			**Pn**	**22 43 44.2**	**-0.7**
IL31		**10.76**	**25**			**Pn**	**22 43 46.0**	**-0.8**
ILAR	**Eielson Array**	**10.76**	**25**	Pn		**Pn**	**22 43 46.4**	**-0.4**
ILAR	**Eielson Array**	**10.76**	**25**	Pn		**Pn**	**22 43 43.5**	**-3.3**
	comp=N,0.4nm,0.3s,baz=212,slow=13,SNR=16							
ILAR						**Sn**	**22 45 39.2**	**-6.6**
	comp=N,0.1nm,0.3s,baz=35,slow=41,SNR=1.7							
ILAR						LR	LR	22 48 07.3
	comp=N,121nm,19.1s,baz=130,slow=38							
	comp=N,0.7nm,0.4s							
IMAR	**Indian Mountai**	**10.79**	**8**	Pn		**Pn**	**22 43 48.1**	**+1.0**
POKR	**Poker Plat Res**	**10.93**	**23**	Pn		**Pn**	**22 43 48.6**	**-0.5**
SCRK	**Sand Creek**	**10.94**	**33**	Pn		**Pn**	**22 43 50.0**	**+0.7**
L27K	**Beaver Creek,**	**11.06**	**40**	Pn		**Pn**	**22 43 51.6**	**+0.8**
BCAR	**Beaver Creek A**	**11.07**	**40**	Pn		**Pn**	**22 43 51.1**	**0.0**
P29M	**Windy Craggy**	**11.38**	**60**	Pn		**Pn**	**22 43 56.9**	**+1.6**
PRP	**Porcupine Dome**	**11.71**	**25**	Pn		**Pn**	**22 43 59.4**	**-0.4**
S31K	**Pelican**	**11.91**	**69**	Pn		**Pn**	**22 44 01.6**	**-1.0**
ADK	**Adak**	**11.97**	**261**	Pn		**Pn**	**22 44 02.8**	**-0.5**
DAWY	**Dawson**	**12.53**	**39**	Pn		**Pn**	**22 44 11.7**	**+0.7**
FYU	**Fort Yukon**	**12.64**	**23**	Pn		**Pn**	**22 44 10.5**	**-1.9**
S32K	**Killisnoo**	**12.78**	**71**	Pn		**Pn**	**22 44 11.8**	**-2.5**
BMAR	**Burnt Mountain**	**13.51**	**21**	Pn		**Pn**	**22 44 23.3**	**-1.1**
TOLK	**Toolik Lake Re**	**13.79**	**12**	Pn		**Pn**	**22 44 31.9**	**+3.8**
C19K	**Lookout Ridge**	**13.81**	**357**	Pn		**Pn**	**22 44 32.0**	**+3.6**
E25K	**Arctic Village**	**13.91**	**19**	Pn		**Pn**	**22 44 28.7**	**-1.1**
F28M	**Old Crow**	**14.76**	**27**	Pn		**Pn**	**22 44 43.3**	**+2.0**
EPYK	**Eagle Plains**	**14.82**	**34**	P		**P**	**22 44 50.5**	**+2.9**
B22K	**Teshekpuk Lake**	**15.12**	**5**	IAmb		IAmb	22 44 51.6	
	comp=Z,4.0nm,0.7s							
MMPY	**Sheldon Lake,**	**15.20**	**51**			**Pn**	**22 44 47.8**	**+0.6**
MMPY				IAmb		IAmb	22 44 58.1	
	comp=Z,4.4nm,1.3s							
H31M	**Peel River**	**15.29**	**38**	IAmb		IAmb	22 45 12.7	
	comp=Z,7.2nm,1.1s							
G31M	**Satah River**	**15.94**	**34**			**Pn**	**22 44 58.7**	**+2.1**
G31M				IAmb		IAmb	22 45 08.6	
	comp=Z,12nm,1.4s							
INK	**Inuvik**	**17.00**	**31**			**Pn**	**22 45 10.1**	**+0.2**
INK				IAmb		IAmb	22 45 22.2	
	comp=Z,7.1nm,1.0s							
INK	**Inuvik**	**17.00**	**31**	Pn		**Pn**	**22 45 09.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=220,slow=5.9,SNR=3.8							
	comp=Z,1.8nm,0.4s							
C36M	**Paulatuk**	**20.46**	**34**	P		**P**	**22 45 48.2**	**-1.3**
A36M	**Sachs Harbour**	**21.45**	**27**	P		**P**	**22 46 00.0**	**-0.1**
YKA	**Yellowknife Ar**	**22.82**	**54**	P		**P**	**22 46 17.0**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=271,slow=9.1,SNR=2.4							
PETK	**Petropavlovsk-**	**26.00**	**284**	P		**P**	**22 46 44.6**	**0.0**
	comp=Z,6.8nm,0.8s,baz=83,slow=13,SNR=9.4							
	comp=Z,6.8nm,0.8s							
NVAR	**Mina Array Bea**	**31.10**	**107**	P		**P**	**22 47 30.9**	**+0.4**
	comp=Z,6.6nm,0.6s,baz=308,slow=8.8,SNR=2.7							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**45.96**	**102**	P		**P**	**22 49 36.6**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=311,slow=4.8,SNR=5.6							
	comp=Z,0.4nm,0.6s							
SPITS	**Spitsbergen Ar**	**46.65**	**2**	P		**P**	**22 49 39.1**	**-0.5**
	comp=Z,16nm,1.1s,baz=46,slow=8.3,SNR=1.7							
	comp=Z,16nm,1.1s							
NRIK	**Norilsk**	**47.01**	**334**	P		**P**	**22 49 41.6**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=72,slow=4.1,SNR=7.8							
	comp=Z,2.3nm,0.6s							
KSRS	**Korea Array**	**51.89**	**283**	P		**P**	**22 50 19.6**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=46,slow=8.0,SNR=2.4							
	comp=Z,0.8nm,0.5s							
ARCES	**ARCESS Array B**	**55.38**	**359**	P		**P**	**22 50 43.9**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=24,slow=9.2,SNR=1.8							
	comp=Z,3.1nm,0.9s							
SONM	**Songino Array**	**55.59**	**306**	P		**P**	**22 50 47.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=34,slow=7.0,SNR=6.0							
SONM				PcP		**PcP**	**22 51 46.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=62,slow=4.8,SNR=2.1							
	comp=Z,0.6nm,0.7s							
FINES	**FINESS Array B**	**63.49**	**358**	P		**P**	**22 51 40.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=29,slow=4.4,SNR=5.5							
	comp=Z,0.7nm,0.6s							
KIRV	**Kirov**	**64.36**	**345**	LR		LR	23 22 21.4	
	comp=Z,82nm,20.6s,baz=40,slow=38							
KURBB	**Kurchatov Arra**	**64.58**	**324**	P		**P**	**22 51 48.7**	**+0.1**
	comp=Z,0.5nm,0.2s,baz=25,slow=6.3,SNR=5.2							
	comp=Z,0.5nm,0.2s							
BVAR	**Borovoye Array**	**64.99**	**330**	P		**P**	**22 51 51.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=30,slow=5.3,SNR=7.9							
	comp=Z,0.8nm,0.5s							
MKAR	**Makanchi Array**	**66.51**	**320**	P		**P**	**22 52 00.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=46,slow=4.3,SNR=8.9							
	comp=Z,0.6nm,0.7s							
BELG	**Belogornoye**	**70.61**	**344**	LR		LR	23 26 41.9	
	comp=Z,64nm,19.1s,baz=132,slow=39							
AKASG	**Malin Array Be**	**74.15**	**356**	LR		LR	23 28 49.5	
	comp=Z,42nm,18.3s,baz=359,slow=38							
MLR	**Muntele Rosu**	**79.46**	**358**	LR		LR	23 31 18.0	
	comp=Z,52nm,18.4s,baz=38,slow=38							
CMAR	**

TSZ	**Takapari Road**	**3.76**	**219**	P	Pn	22 48 17.0	-2.4
VRZ	**Vera Road**	**3.91**	**239**	P	Pn	22 48 21.9	+0.5
WCZ	**Waipu Caves**	**4.01**	**287**	P	Pn	22 48 22.6	-0.1
BFZ	**Birch Farm**	**4.13**	**211**	P	Pn	22 48 20.9	-3.5
PRWZ	**Pori Road**	**4.14**	**215**	P	Pn	22 48 22.5	-2.1
MRZ	**Mangatainoka R**	**4.41**	**217**	P	Pn	22 48 24.9	-3.3
KHEZ	**Kahui Hut**	**4.50**	**241**	P	Pn	22 48 31.2	+1.5
HOWZ	**Holdsworth Sta**	**4.63**	**216**	P	Pn	22 48 27.5	-3.8
OGWZ	**Otaki Gorge**	**4.73**	**219**	P	Pn	22 48 29.2	-3.4
OUZ	**Omahuta**	**4.84**	**292**	P	Pn	22 48 34.6	+0.4
QRZ	**Quartz Range**	**6.26**	**233**	P	Pn	22 48 50.8	-2.9
CTZ	**Chatham Island**	**7.32**	**155**	P	Pn	22 49 07.3	-0.8
GVZ	**Greta Valley S**	**7.40**	**217**	P	Pn	22 49 05.8	-3.5

*SJA **22** 22:47:37.3±0.7, 20°.23S×69°.19W, h98km±2km, ML3.9, MW3.8*
*GUC **22** 22:47:38.9±0.7, 20°.22S×69°.18W, h94km±2km, ML4.0*

ISC 22 22:47:39.7±1.3, 20°.23S±0°.02×69°.28W±0°.05, h89km±6km, n36, σ1§50/69, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.14**	**53**	*eP*	**Pn**	**22 47 52.2**	**-0.7**
PB08				*eS*	**Sn**	**22 48 03.0**	**+0.4**
PB08				IAML		22 48 04.1	
	comp=Z,6μm,0.1s						
PB08	**IPOC Station P**	**0.14**	**53**	⇓*iP*	**Pn**	**22 47 52.4**	**-0.5**
PB08				*eS*	**Sn**	**22 48 02.8**	**+0.1**
PB08				IAML		22 48 03.6	
	comp=N,20μm,0.1s						
PX03	**IPOC Station P**	**0.38**	**243**	*eP*	**Pn**	**22 47 52.4**	**-1.2**
GO01	**Chusmiza**	**0.56**	**8**	*eP*	**Pn**	**22 47 54.6**	**-0.9**
GO01				*eS*	**Sn**	**22 48 07.7**	**+0.6**
GO01				*eS*	**Sn**	**22 48 07.8**	**+0.6**
GO01				IAML		22 48 09.7	
	comp=Z,3μm,0.4s						
GO01	**Chusmiza**	**0.56**	**8**	*eP*	**Pn**	**22 47 54.5**	**-0.9**
GO01				*eS*	**Sn**	**22 48 07.0**	**-0.1**
GO01				IAML		22 48 10.1	
	comp=N,13μm,0.2s						
HMBC	**Humberstone**	**0.58**	**265**	⇑*iP*	**Pn**	**22 47 54.7**	**-0.5**
HMBC				*eS*	**Sn**	**22 48 07.7**	**+1.0**
HMBC				IAML		22 48 10.1	
	comp=E,4μm,0.2s						
PB11	**IPOC Station P**	**0.59**	**323**	*eP*	**Pn**	**22 47 55.0**	**-0.4**
PB11				*eS*	**Sn**	**22 48 07.8**	**+0.9**
PB11				IAML		22 48 08.1	
	comp=Z,6μm,0.3s						
PB11	**IPOC Station P**	**0.59**	**323**	⇑*iP*	**Pn**	**22 47 54.9**	**-0.4**
PB11				*eS*	**Sn**	**22 48 07.6**	**+0.8**
PB11				*i*		22 48 48.8	
TA02	**Huaiquique**	**0.80**	**267**	*eP*	**Pn**	**22 47 57.1**	**-0.1**
TA02				*eS*	**Sn**	**22 48 11.9**	**+1.7**
TA02				IAML		22 48 13.5	
	comp=Z,6μm,0.3s						
TA02	**Huaiquique**	**0.80**	**267**	*eP*	**Pn**	**22 47 56.9**	**-0.3**
TA02				*eS*	**Sn**	**22 48 11.3**	**+1.1**
PB01	**IPOC Station P**	**0.83**	**194**	*eP*	**Pn**	**22 47 56.9**	**-0.7**
PB01				*eS*	**Sn**	**22 48 11.7**	**+0.7**
PB01				IAML		22 48 13.3	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	**0.83**	**194**	⇓*iP*	**Pn**	**22 47 57.1**	**-0.5**
PB01				*eS*	**Sn**	**22 48 11.2**	**+0.2**
PB01				IAML		22 48 12.9	
	comp=E,5μm,0.2s						
TA01	**Diego Aracena**	**0.91**	**248**	*eP*	**Pn**	**22 47 57.8**	**-0.6**
TA01				*eS*	**Sn**	**22 48 12.2**	**-0.1**
TA01				IAML		22 48 14.4	
	comp=Z,1μm,0.3s						
TA01	**Diego Aracena**	**0.91**	**248**	⇑*iP*	**Pn**	**22 47 57.9**	**-0.4**
TA01				*eS*	**Sn**	**22 48 12.7**	**+0.4**
PATCX	**Punta Patache**	**1.01**	**234**	⇑*iP*	**Pn**	**22 47 59.2**	**-0.3**
PATCX				*eS*	**Sn**	**22 48 15.2**	**+0.8**
PATCX				IAML		22 48 19.2	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**1.23**	**208**	*eP*	**Pn**	**22 48 01.8**	**-0.4**
PB02				*eS*	**Sn**	**22 48 20.6**	**+1.5**
PB02				IAML		22 48 25.9	
	comp=Z,2μm,0.1s						
PB02	**IPOC Station P**	**1.23**	**208**	*eP*	**Pn**	**22 48 01.7**	**-0.4**
PB02				IAML		22 48 26.5	
	comp=E,4μm,0.2s						
PB09	**IPOC Station P**	**1.56**	**179**	*eP*	**Pn**	**22 48 05.4**	**-1.0**
PB09				*eP*	**Pn**	**22 48 06.1**	**-0.3**
PB09				*eS*	**Sn**	**22 48 25.8**	**-0.7**
PB09				IAML		22 48 31.2	
	comp=Z,750nm,0.3s						
PB09	**IPOC Station P**	**1.56**	**179**	*eP*	**Pn**	**22 48 05.8**	**-0.5**
PB09				*eS*	**Sn**	**22 48 27.1**	**+0.7**
PB07	**IPOC Station P**	**1.59**	**201**	*eP*	**Pn**	**22 48 06.1**	**-0.7**
PB07				*eS*	**Sn**	**22 48 28.3**	**+1.0**
PB07				IAML		22 48 31.7	
	comp=Z,1μm,0.7s						
PB07	**IPOC Station P**	**1.59**	**201**	*eP*	**Pn**	**22 48 05.9**	**-0.9**
PB07				*eS*	**Sn**	**22 48 27.0**	**-0.3**
PB07				IAML		22 48 34.3	
	comp=E,1μm,0.3s						
PB12	**IPOC Station P**	**1.89**	**328**	*eP*	**Pn**	**22 48 10.0**	**-0.5**
PB12				*eS*	**Sn**	**22 48 30.8**	**-3.2**
PB12				*eS*	**Sn**	**22 48 34.8**	**+0.8**
PB12				IAML		22 48 40.5	
	comp=Z,820nm,0.4s						
PB12	**IPOC Station P**	**1.89**	**328**	*eP*	**Pn**	**22 48 09.7**	**-0.8**
PB12				*eS*	**Sn**	**22 48 34.2**	**+0.2**
PB12				IAML		22 48 40.7	
	comp=E,2μm,0.3s						
PB16	**IPOC Station P**	**1.90**	**353**	*eP*	**Pn**	**22 48 11.2**	**+0.1**
PB16				*eS*	**Sn**	**22 48 30.8**	**-4.1**
PB16	**IPOC Station P**	**1.90**	**353**	*eP*	**Pn**	**22 48 11.6**	**+0.4**
PB16				*eS*	**Sn**	**22 48 36.8**	**+1.9**
PB04	**IPOC Station P**	**2.25**	**201**	*eP*	**Pn**	**22 48 14.8**	**-0.5**
PB04				*eS*	**Sn**	**22 48 40.5**	**-2.0**
PB04				IAML		22 48 51.0	
	comp=Z,362nm,0.4s						
PB04	**IPOC Station P**	**2.25**	**201**	*eP*	**Pn**	**22 48 14.6**	**-0.7**
PB04				IAML		22 48 54.1	
	comp=E,647nm,0.3s						
LVC	**Limon Verde**	**2.39**	**172**	*eP*	**Pn**	**22 48 16.5**	**-1.0**
LVC				*eS*	**Sn**	**22 48 46.0**	**-0.3**
LVC				IAML		22 48 54.9	
	comp=Z,275nm,0.3s						
LVC	**Limon Verde**	**2.39**	**172**	*eP*	**Pn**	**22 48 16.9**	**-0.6**
LVC				*eS*	**Sn**	**22 48 45.8**	**-0.5**
PB06	**IPOC Station P**	**2.48**	**186**	*eP*	**Pn**	**22 48 17.7**	**-0.7**
PB06				*eS*	**Sn**	**22 48 47.7**	**-0.3**
PB06				IAML		22 48 56.0	
	comp=Z,337nm,0.3s						
PB06	**IPOC Station P**	**2.48**	**186**	*eP*	**Pn**	**22 48 16.9**	**-1.5**
PB06				*eS*	**Sn**	**22 48 46.0**	**-2.1**
PB06				IAML		22 48 56.9	
	comp=E,541nm,0.1s						
PB18	**Visviri**	**2.63**	**356**	*eP*	**Pn**	**22 48 23.9**	**+3.0**
PB15	**IPOC Station P**	**2.97**	**183**	*eP*	**Pn**	**22 48 24.5**	**-0.5**
PB15				*eS*	**Sn**	**22 49 06.7**	**+6.8**
PB15				IAML		22 49 10.9	
	comp=Z,1μm,0.2s						
PB15	**IPOC Station P**	**2.97**	**183**	*eP*	**Pn**	**22 48 23.7**	**-1.3**
YJA	**Yavi**	**4.01**	**120**	*eP*	**Pn**	**22 48 40.1**	**+0.8**
LPAZ	**La Paz**	**4.07**	**16**	*eP*	**Pn**	**22 48 42.4**	**+2.1**
LPAZ				*eS*	**Sn**	**22 49 23.2**	**-3.9**

IDC 22 23:12:19.4±663.0, 55°.18N×6°.75E, h0km, Error ellipse: s-maj=305.1km s-min=136.1km az=128.0, Location Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS 7.66 143**			I	I	00 01 30.0	
	baz=327,slow=342,SNR=0.8						
I43RU	**DUBNA INFRASON 7.06 72**			I	I	01 00 00.0	
	baz=279,slow=336,SNR=1.1						
I31KZ	**AKTYUBINSK INF 30.79 77**			I	I	02 15 10.0	
	baz=292,slow=333,SNR=1.7						

IDC 22 23:14:34.4±6.2, 30°.41S×178°.30W, h0km, mb4.0/2, mbtmp4.0/2, MS2.9/1, Error ellipse: s-maj=247.9km s-min=57.2km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**19.00**	**66**	LR	LR	23 25 05.6	

	comp=Z,32nm,19.0s,baz=162,slow=33							
ASAR	**Alice Springs**	**42.85**	**267**	P	P	23 22 34.4	-0.1
	1.3nm,0.6s,baz=104,slow=7.8,SNR=14							
	1.3nm,0.6s							
WRA	**Warramunga Arr**	**43.84**	**272**	P	P	23 22 42.5	-0.1
	0.9nm,0.4s,baz=113,slow=7.9,SNR=10							
	0.9nm,0.4s							
FINES	**FINESS Array B**	**145.07**	**340**	PKPbc	PKPbc	23 34 11.5	-0.9	
	1.7nm,0.9s,baz=32,slow=6.6,SNR=5.7							

*BEO **22** 23:15:02.6±0.5, 42°.00N×24°.97E, h0km, ML3.7/15*
*SOF **22** 23:15:03.8, 42°.05N×24°.89E, h14km±1km, MD3.7/15*
*ISK **22** 23:15:03.6, 42°.05N×24°.91E, h5km, ML3.7/31*
*AFAD **22** 23:15:04.5±0.0, 42°.19N×25°.19E, h7km±2km, MW3.9*
*PDG **22** 23:15:04.8±0.9, 42°.01N×24°.87E, h12km±1km, ML3.8/6, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*THE **22** 23:15:05.5, 41°.99N×24°.95E, h6km, ML3.8/10, Error ellipse: s-maj=0.9km s-min=0.5km az=181.0*
*NEIC **22** 23:15:05.4±1.6, 41°.94N±0°.05×24°.81E±0°.05, h10km±2km, ML4.0/4(BUC), Error ellipse: s-maj=8.0km s-min=6.2km az=162.0*
*ATH **22** 23:15:06.1, 41°.95N×24°.91E, h8km±1km, ML3.7/10, Error ellipse: s-maj=2.0km s-min=0.9km az=187.0*
*CFUSG **22** 23:15:11.8, 41°.86N×25°.69E, h15km, Bulgaria Magtype MSH 3.3 from 2 stations*

ISC 22 23:15:04.3±0.9, 42°.02N±0°.01×24°.90E±0°.01, h9km±6km, n263, σ1§31/336, 32C-33D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.17**	**317**	Pg	**Pg**	**23 15 07.8**	**-0.2**
PLD				Sg	**Sg**	**23 15 10.0**	**-0.5**
PLD	**Plovdiv**	**0.17**	**317**	⇑P	**Pg**	**23 15 07.7**	**-0.2**
PLD				S	**Sg**	**23 15 09.7**	**-0.7**
PLD	**Plovdiv**	**0.17**	**317**	*e*Pg	**Pg**	**23 15 07.7**	**-0.2**
PLD				*e*Sg	**Sg**	**23 15 09.9**	**-0.5**
RZN	**Rozhen**	**0.35**	**201**	⇑P	**Pg**	**23 15 11.9**	**+0.6**
RZN				S	**Sg**	**23 15 16.8**	**+0.9**
DIM	**Dimitrovgrad**	**0.50**	**87**	⇓P	**Pg**	**23 15 14.4**	**+0.3**
DIM				S	**Sg**	**23 15 20.6**	**-0.1**
KDZ	**Kurdzhali**	**0.51**	**140**	Pg	**Pg**	**23 15 14.5**	**+0.3**
KDZ				Sg	**Sg**	**23 15 21.6**	**+0.7**
KDZ	**Kurdzhali**	**0.51**	**140**	P	**Pg**	**23 15 14.5**	**+0.3**
KDZ				S	**Sg**	**23 15 21.3**	**+0.4**
PGB	**Panagyurishte**	**0.73**	**312**	P	**Pg**	**23 15 18.0**	**-0.4**
PGB				S	**Sg**	**23 15 27.5**	**-0.5**
MMB	**Musomishta**	**0.98**	**242**	⇑P	**Pg**	**23 15 22.9**	**-0.3**
MMB				S	**Sn**	**23 15 37.4**	**-1.1**
RDO	**Rodhopi**	**0.99**	**151**	Pg	**Pg**	**23 15 23.4**	**0.0**
RDO				Sg	**Sb**	**23 15 36.7**	**-0.2**
RDO	**Rodhopi**	**0.99**	**151**		**Pg**	**23 15 23.4**	**0.0**
RDO	**Rodhopi**	**0.99**	**151**	P	**Pb**	**23 15 23.7**	**0.0**
RDO				S	**Sb**	**23 15 36.7**	**-0.2**
	5μm,0.4s						
RDO	**Rodhopi**	**0.99**	**151**	P	**Pg**	**23 15 23.5**	**0.0**
RDO				S	**Sg**	**23 15 35.6**	**-0.8**
RDO				AML	AML	23 15 37.8	
	comp=N,7706μm,0.3s						
RDO				AML	AML	23 15 40.0	
	comp=E,10560μm,0.5s						
NVR	**Nevrokopi**	**1.03**	**230**	P	**Pg**	**23 15 24.6**	**+0.5**
NVR				S	**Sn**	**23 15 40.0**	**+0.4**
	comp=E,5μm,0.3s						
NVR	**Nevrokopi**	**1.03**	**230**	P	**Pn**	**23 15 24.8**	**-0.2**
NVR				S	**Sb**	**23 15 38.5**	**+0.5**
NVR				AML	AML	23 15 43.4	
	comp=N,10243μm,0.4s						
NVR				AML	AML	23 15 44.0	
	comp=E,11281μm,0.3s						
KAVA	**Kavala**	**1.06**	**196**	P	**Pg**	**23 15 25.0**	**+0.2**
KAVA				S	**Sn**	**23 15 40.4**	**0.0**
KAVA	**Kavala**	**1.06**	**196**	P	**Pn**	**23 15 25.2**	**-0.3**
KAVA				S	**Sb**	**23 15 38.2**	**-0.7**
PVL	**Pavlikeni**	**1.12**	**10**	⇑P	**Pb**	**23 15 25.4**	**-0.4**
PVL				S	**Sb**	**23 15 40.1**	**-0.4**
KVLA	**Kavala**	**1.15**	**200**	P	**Pb**	**23 15 26.0**	**-0.3**
KVLA				S	**Sg**	**23 15 41.8**	**+0.5**
KVLA				AML	AML	23 15 45.5	
	comp=E,6748μm,0.3s						
KVLA				AML	AML	23 15 46.3	
	comp=N,7289μm,0.4s						
ELND	**Elena**	**1.16**	**38**	⇓P	**Pg**	**23 15 29.6**	**+3.1**
ELND	**Elena**	**1.16**	**38**		**Pg**	**23 15 29.6**	**+3.1**
PLNA	**Plana**	**1.19**	**293**	P	**Pb**	**23 15 26.1**	**-1.0**
JMB	**Yambol**	**1.29**	**68**	Pn	**Pb**	**23 15 28.8**	**0.0**
JMB	**Yambol**	**1.29**	**68**	P	**Pn**	**23 15 28.5**	**-0.1**
JMB				S	**Sb**	**23 15 45.0**	**-0.6**
SOF	**Sofia**	**1.31**	**300**	P	**Pn**	**23 15 28.8**	**-0.1**
SRS	**Serrai**	**1.34**	**228**	P	**Pb**	**23 15 29.6**	**0.0**
SRS				S	**Sg**	**23 15 48.8**	**+1.5**
SRS	**Serrai**	**1.34**	**228**	P	**Pb**	**23 15 29.5**	**-0.1**
SRS				S	**Sn**	**23 15 46.8**	**-0.3**
SRS				AML	AML	23 15 51.5	
	comp=N,8573μm,0.7s						
SRS				AML	AML	23 15 51.9	
	comp=E,26146μm,0.9s						
KKB	**Krupnik**	**1.34**	**263**	P	**Pn**	**23 15 29.2**	**0.0**
KKB				S	**Sg**	**23 15 48.2**	**+0.9**
VTS	**Vitosha**	**1.37**	**296**	P	**Pn**	**23 15 28.8**	**-1.0**
VTS				S	**Sb**	**23 15 47.3**	**-0.7**
VTS	**Vitosha**	**1.37**	**296**	*e*Pg	**Pn**	**23 15 30.0**	**+0.2**
VTS				*e*Sg	**Sg**	**23 15 49.6**	**+1.1**
PLVB	**Pleven**	**1.38**	**351**	⇑P	**Pg**	**23 15 31.5**	**+0.7**
PLVB	**Pleven**	**1.38**	**351**		**Pg**	**23 15 31.5**	**+0.7**
KOKK	**Kokkinochori,**	**1.38**	**210**	P	**Pb**	**23 15 30.5**	**+0.2**
KOKK				S	**Sg**	**23 15 50.1**	**+1.4**
	comp=E,1μm,0.4s						
KOKK	**Kokkinochori,**	**1.38**	**210**	P	**Pb**	**23 15 30.2**	**-0.1**
EDRB	**Edirne**	**1.38**	**97**	Pn	**Pb**	**23 15 30.2**	**-0.2**
EDRB	**Edirne**	**1.38**	**97**	P	**Pn**	**23 15 29.8**	**0.0**
ALN	**Alexandroupoli**	**1.41**	**142**	Pn	**Pb**	**23 15 30.9**	**0.0**
ALN	**Alexandroupoli**	**1.41**	**142**	Pn	**Pb**	**23 15 30.9**	**0.0**
ALN	**Alexandroupoli**	**1.41**	**142**	P	**Pb**	**23 15 30.8**	**0.0**
ALN				S	**Sb**	**23 15 49.1**	**+0.1**
ALN	**Alexandroupoli**	**1.41**	**142**	P	**Pb**	**23 15 30.9**	**0.0**
ALN				AML	AML	23 15 50.6	
	comp=E,1964μm,0.4s						
ALN				AML	AML	23 15 54.2	
	comp=N,2066μm,0.6s						
THAS	**Thassos island**	**1.42**	**186**	P	**Pb**	**23 15 30.6**	**-0.4**
THAS				S	**Sg**	**23 15 49.8**	**-0.2**
	comp=N,2μm,0.3s						
THAS	**Thassos island**	**1.42**	**186**	P	**Pn**	**23 15 30.4**	**+0.1**
THAS				S	**Sn**	**23 15 48.3**	**-0.8**
THAS				AML	AML	23 15 53.3	
	comp=N,3821μm,0.4s						
THAS				AML	AML	23 15 54.3	
	comp=E,3962μm,0.4s						
SZH	**Strazhitsa**	**1.47**	**32**	⇑P	**Pb**	**23 15 31.8**	**-0.1**
SZH				S	**Sg**	**23 15 51.5**	**-0.2**
UKOP	**Uzunkopru-Edir**	**1.57**	**124**	Pn	**Pb**	**23 15 33.3**	**-0.3**
MPEP	**Malo Peshtene**	**1.59**	**328**	P	**Pn**	**23 15 32.5**	**-0.1**
MPEP				S	**Sb**	**23 15 53.7**	**-0.3**
ENEZ	**Enez**	**1.59**	**143**	Pn	**Pb**	**23 15 33.6**	**-0.3**
ENEZ				Sn	**Sg**	**23 15 55.9**	**+0.4**
ENEZ	**Enez**	**1.59**	**143**	P	**Pb**	**23 15 33.3**	**-0.6**
ENEZ				S	**Sb**	**23 15 53.9**	**-0.2**
	comp=E,3μm,0.5s						
SMTH	**Samothraki Isl**	**1.62**	**163**	P	**Pn**	**23 15 33.3**	**+0.2**
SMTH	**Samothraki Isl**	**1.62**	**163**	P	**Pn**	**23 15 33.4**	**+0.4**
SMTH				AML	AML	23 15 58.6	
	comp=N,2116μm,0.9s						
SMTH				AML	AML	23 15 59.0	
	comp=E,2190μm,0.7s						
CAVK	**Edirne/Enez-Ca**	**1.63**	**144**	P	**Pg**	**23 15 35.8**	**+0.1**
CAVK				S	**Sg**	**23 15 56.9**	**+0.1**
CAVK				*i* AML	AML	23 16 00.0	
	comp=E,2μm,0.5s						
CAVK				*i* AML	AML	23 16 01.0	
	comp=E,1μm,0.5s						
KIRK	**Kırklareli**	**1.66**	**98**	P	**Pn**	**23 15 33.8**	**+0.3**
KIRK				S	**Sn**	**23 15 54.1**	**-0.8**
ZIMR		**1.67**	**12**	⇓P	**Pb**	**23 15 35.9**	**+0.7**
ZIMR		**1.67**	**12**		**Pb**	**23 15 35.9**	**+0.7**
SOH	**Sokhos**	**1.67**	**225**	P	**Pb**	**23 15 34.6**	**-0.7**
SOH				S	**Sg**	**23 15 57.8**	**-0.3**
	comp=E,3μm,0.5s						
SOH	**Sokhos**	**1.67**	**225**	P	**Pb**	**23 15 34.5**	**-0.7**
SOH				S	**Sn**	**23 15 55.5**	**0.0**
SOH				AML	AML	23 16 00.1	
	comp=N,7994μm,0.5s						
SOH				AML	AML	23 16 00.2	
	comp=E,9028μm,0.6s						
KNT	**Kendrikon**	**1.73**	**241**	P	**Pn**	**23 15 35.4**	**+0.8**
KNT				S	**Sb**	**23 15 58.6**	**+0.4**
	comp=E,3μm,0.6s						
KNT	**Kendrikon**	**1.73**	**241**	P	**Pn**	**23 15 35.3**	**+0.6**
ERIK	**Erikli-Kesan**	**1.81**	**138**	Pn	**Pn**	**23 15 36.3**	**+0.6**
OUR	**Ouranopolis**	**1.82**	**203**	Pn	**Pn**	**23 15 37.0**	**-0.8**
OUR	**Ouranopolis**	**1.82**	**203**	P	**Pn**	**23 15 36.2**	**+0.4**
OUR				S	**Sb**	**23 16 00.7**	**-0.1**
	comp=E,2μm,0.4s						
OUR	**Ouranopolis**	**1.82**	**203**	P	**Pn**	**23 15 36.0**	**+0.1**
OUR				AML	AML	23 16 06.4	
	comp=E,4805μm,0.4s						
OUR				AML	AML	23 16 06.6	
	comp=N,3411μm,0.4s						
LOZB	**Loznitsa**	**1.83**	**42**	⇑P	**Pb**	**23 15 38.6**	**+0.6**
LOZB	**Loznitsa**	**1.83**	**42**		**Pb**	**23 15 38.6**	**+0.6**
BOSS	**Bosilegrad**	**1.86**	**286**	*e*Pg	**Pn**	**23 15 37.2**	**+0.8**
BOSS				*e*Sg	**Sg**	**23 16 03.8**	**-0.3**
VAY	**Valandovo**	**1.88**	**249**	*i* Pn	**Pn**	**23 15 38.8**	**0.0**
ARMN	**Kirklareli, Me**	**1.89**	**94**	P	**Pn**	**23 15 36.7**	**-0.1**
ARMN				S	**Sn**	**23 15 59.5**	**-1.2**
RAZG	**Razgrad**	**1.94**	**37**	⇓P	**Pb**	**23 15 40.5**	**+0.5**
RAZG	**Razgrad**	**1.94**	**37**		**Pb**	**23 15 40.5**	**+0.5**
HORT	**Hortiatis**	**1.97**	**224**	P	**Pn**	**23 15 38.9**	**+1.0**
HORT				S	**Sb**	**23 16 04.7**	**-0.3**
	comp=N,712nm,0.5s						
HORT	**Hortiatis**	**1.97**	**224**	P	**Pn**	**23 15 38.4**	**+0.4**
HORT				AML	AML	23 16 09.3	
	comp=E,1601μm,0.6s						
HORT				AML	AML	23 16 10.2	
	comp=N,1252μm,0.4s						
GADA	**Gvkgeada**	**1.98**	**157**	Pn	**Pb**	**23 15 39.2**	**-1.3**
VALD	**Valchedram**	**1.99**	**328**	P	**Pn**	**23 15 37.9**	**-0.2**
PHSR	**Pinarhisar**	**2.00**	**100**	Pn	**Pn**	**23 15 39.1**	**+0.9**
GOAD	**anakkale-G¶**	**2.01**	**157**	P	**Pg**	**23 15 42.2**	**-0.6**
GOAD				S	**Sg**	**23 16 09.5**	**+0.7**
GOAD				*i* AML	AML	23 16 13.0	
	comp=N,929nm,0.3s						
GOAD				*i* AML	AML	23 16 14.0	
	comp=N,1μm,0.4s						
GELI	**Tayfur-Gelibol**	**2.01**	**143**	Pn	**Pb**	**23 15 39.6**	**-1.4**
VLAD	**Vladila**	**2.01**	**350**	⇓P	**Pb**	**23 15 41.0**	**0.0**
THE	**Thessaloniki**	**2.02**	**227**	P	**Pn**	**23 15 39.4**	**+0.9**
THE				S	**Sb**	**23 16 05.7**	**-0.6**
	comp=N,1μm,0.5s						
THE	**Thessaloniki**	**2.02**	**227**	P	**Pn**	**23 15 39.1**	**+0.6**
ZAPS	**Zavoj**	**2.09**	**308**	*e*Pg	**Pn**	**23 15 40.0**	**+0.4**
ZAPS				*e*Sg	**Sg**	**23 16 12.5**	**+1.0**
COPA	**Copaceanca**	**2.12**	**6**	⇑P	**Pb**	**23 15 42.8**	**-0.2**
LIA	**Limnos Island**	**2.13**	**174**	P	**Pn**	**23 15 40.5**	**+0.4**
LIA	**Limnos Island**	**2.13**	**174**	P	**Pn**	**23 15 40.4**	**+0.3**
PRVS	**Prvonek**	**2.15**	**284**	*e*Pg	**Pn**	**23 15 41.2**	**+0.7**
PRVS				*e*Sg	**Sb**	**23 16 11.7**	**+1.3**
GRG	**Griva**	**2.16**	**241**	P	**Pn**	**23 15 41.1**	**+0.6**
GRG	**Griva**	**2.16**	**241**	P	**Pb**	**23 15 42.4**	**-1.2**
LPK	**Lapseki**	**2.16**	**139**	Pn	**Pn**	**23 15 41.7**	**+1.2**
RKY	**Sarkoy-Tekirda**	**2.17**	**127**	Pn	**Pn**	**23 15 41.7**	**+1.0**
SART	**Tekirdag**	**2.17**	**127**	P	**Pb**	**23 15 43.7**	**-0.1**
SART				S	**Sg**	**23 16 12.6**	**-1.5**
PRV	**Provadia**	**2.17**	**58**	P	**Pn**	**23 15 41.8**	**+1.0**
ECEA	**Canakkale, Ece**	**2.20**	**154**	P	**Pg**	**23 15 46.2**	**-0.2**
ECEA				S	**Sg**	**23 16 15.2**	**+0.3**
ECEA				*i* AML	AML	23 16 20.0	
	comp=N,878nm,0.7s						
ECEA				*i* AML	AML	23 16 23.0	
	comp=N,732nm,0.5s						
VIZE	**Kirklareli, Vi**	**2.24**	**100**	P	**Pn**	**23 15 42.1**	**+0.5**
VIZE				S	**Sn**	**23 16 08.5**	**-0.8**
CNKL	**anakkale-Mer**	**2.25**	**150**	P	**Pg**	**23 15 47.0**	**-0.5**
CNKL				S	**Sg**	**23 16 18.3**	**+1.6**
COMU	**Canakkale**	**2.26**	**148**	Pn	**Pn**	**23 15 42.7**	**+0.8**
PAIG	**Paliouri**	**2.29**	**204**	P	**Pn**	**23 15 42.5**	**+0.3**
BLKB	**Belogradchik**	**2.29**	**315**	⇓P	**Pn**	**23 15 42.6**	**+0.2**
BLKB	**Belogradchik**	**2.29**	**315**		**Pn**	**23 15 42.6**	**+0.2**
BAIL	**Bailesti**	**2.30**	**331**	⇓P	**Pn**	**23 15 43.9**	**+1.4**
CRLT	**Corlu**	**2.30**	**112**	Pn	**Pn**	**23 15 43.5**	**+1.0**
AVR	**AVREN**	**2.32**	**61**	P	**Pn**	**23 15 43.2**	**+0.5**
SGRR	**Singureni**	**2.33**	**19**	⇓P	**Pb**	**23 15 45.7**	**-0.9**
BARS	**Barje**	**2.42**	**290**	*e*Pg	**Pn**	**23 15 44.6**	**+0.5**
BARS				*e*Sg	**Sb**	**23 16 20.2**	**+2.2**
KRBG	**Karabiga-Canak**	**2.43**	**131**	Pn	**Pn**	**23 15 45.3**	**+1.1**
EZN	**Ezine**	**2.44**	**153**	P	**Pn**	**23 15 44.8**	**+0.4**
MRMT	**Marmara Adasi**	**2.47**	**124**	Pn	**Pn**	**23 15 44.7**	**-0.2**
HUMR	**

AGG	**Agios Georgios**	**3.58**	**214**	P	**Pn**	**23 16 00.0**	**0.0**
GRUS	**Gruza**	**3.60**	**303**	*e*Pn	**Pn**	**23 16 00.2**	**0.0**
GRUS				*e*Sg	**Sg**	**23 17 01.4**	**+1.6**
MDVR	**Moldovita**	**3.61**	**321**	⇓P	**Pn**	**23 16 00.8**	**+0.3**
YLV	**Yalova**	**3.67**	**112**	Pn	**Pn**	**23 16 02.9**	**+1.6**
MAKR	**Makrakomi, Fth**	**3.67**	**216**	P	**Pn**	**23 16 02.3**	**+1.0**
AXAR	**Agios Charalam**	**3.68**	**209**	P	**Pn**	**23 16 01.4**	**+0.1**
GRER		**3.68**	**23**	⇑P	**Pn**	**23 16 04.2**	**+2.9**
GRER		**3.68**	**23**		**Pn**	**23 16 04.2**	**+2.9**
GZR	**Gura Zlata**	**3.71**	**336**	⇓P	**Pn**	**23 16 02.8**	**+1.0**
PVY	**Plav**	**3.71**	**281**	⇑*i*Pn	**Pn**	**23 16 03.1**	**+1.1**
PVY				*i* Sn	**Sn**	**23 16 45.9**	**0.0**
PUK	**Puka**	**3.73**	**272**	Pn	**Pn**	**23 16 01.1**	**-1.1**
CHOS	**Chios island**	**3.74**	**166**	P	**Pn**	**23 16 02.8**	**+0.6**
BISRR	**Bisoca**	**3.76**	**20**	⇓P	**Pn**	**23 16 04.9**	**+2.4**
HRT	**Hereke**	**3.78**	**107**	Pn	**Pn**	**23 16 04.7**	**+1.9**
IVA	**Berane**	**3.80**	**285**	⇑*i*Pn	**Pn**	**23 16 04.3**	**+1.1**
IVA				*i* Sn	**Sn**	**23 16 50.8**	**+2.7**
TPGR	**Topolog**	**3.82**	**41**	⇑P	**Pn**	**23 16 06.1**	**+2.8**
TPGR	**Topolog**	**3.82**	**41**		**Pn**	**23 16 06.1**	**+2.8**
IVAS	**Ivanjica**	**3.83**	**296**	*e*Pn	**Pn**	**23 16 03.0**	**-0.5**
IVAS				*e*Sg	**Sg**	**23 17 04.8**	**-2.4**
TIR	**Tirane**	**3.83**	**262**	Pn	**Pn**	**23 16 02.0**	**-1.5**
EVR	**Evrytania**	**3.90**	**218**	P	**Pn**	**23 16 06.5**	**+2.0**
COVR	**Voineasa-Covas**	**3.94**	**13**	⇓P	**Pn**	**23 16 07.4**	**+2.5**
COVR	**Voineasa-Covas**	**3.94**	**13**		**Pn**	**23 16 07.4**	**+2.5**
DOPR	**Dopca**	**3.96**	**5**	⇑P	**Pn**	**23 16 07.3**	**+2.0**
TRUS	**Trudelj**	**3.96**	**305**	*e*Pn	**Pn**	**23 16 05.0**	**-0.2**
ADVT	**Abdulvahap**	**3.98**	**112**	Pn	**Pn**	**23 16 07.1**	**+1.6**
VIL2	**Platees**	**4.01**	**199**	P	**Pn**	**23 16 06.8**	**+0.8**
DION	**Dionisos Attik**	**4.01**	**191**	P	**Pn**	**23 16 07.1**	**+1.1**
PLOR	**Plostina**	**4.03**	**18**	⇑P	**Pn**	**23 16 08.3**	**+2.0**
VRI	**Vrincioaia**	**4.06**	**18**	⇑P	**Pn**	**23 16 09.2**	**+2.6**
KOME	**Kolasin**	**4.07**	**284**	⇑*i*Pn	**Pn**	**23 16 08.1**	**+1.2**
KOME				*i* Sn	**Sn**	**23 16 56.2**	**+1.5**
TURR	**Turia**	**4.11**	**11**	⇓P	**Pn**	**23 16 09.4**	**+2.0**
ANX	**Ano Chora**	**4.11**	**215**	P	**Pn**	**23 16 07.9**	**+0.5**
OZUR		**4.12**	**9**	⇓P	**Pn**	**23 16 09.5**	**+2.0**
DIVS	**Divibare**	**4.16**	**302**	*e*Pn	**Pn**	**23 16 07.7**	**-0.3**
SURR	**Surduc**	**4.24**	**333**	⇑P	**Pn**	**23 16 09.4**	**+0.4**
SURR	**Surduc**	**4.24**	**333**		**Pn**	**23 16 09.4**	**+0.4**
DRME	**Dracevica, Mon**	**4.26**	**274**	*e*Pn	**Pn**	**23 16 11.2**	**+1.9**
DRME				*i* Sn	**Sn**	**23 17 00.7**	**+1.5**
EFP	**Efpalio**	**4.26**	**214**	P	**Pn**	**23 16 10.0**	**+0.6**
PVO	**Paravola**	**4.27**	**218**	P	**Pn**	**23 16 10.6**	**+1.1**
THAL	**Thalero**	**4.33**	**204**	P	**Pn**	**23 16 11.0**	**+0.6**
VARL	**Varlezi**	**4.42**	**28**	⇑P	**Pn**	**23 16 13.7**	**+2.1**
VARL	**Varlezi**	**4.42**	**28**		**Pn**	**23 16 13.7**	**+2.1**
BBLS	**Lazići**	**4.44**	**296**	*e*Pn	**Pn**	**23 16 12.8**	**+0.9**
BBLS				*e*Sg	**Sg**	**23 17 26.2**	**-0.6**
NKME	**Niksic**	**4.47**	**282**	⇓*i*Pn	**Pn**	**23 16 13.9**	**+1.6**
CEME	**Cevo**	**4.47**	**279**	⇓*i*Pn	**Pn**	**23 16 13.3**	**+1.0**
CEME				*i* Sn	**Sn**	**23 17 05.7**	**+1.2**
BUM	**Brajici-Budva**	**4.48**	**276**	⇑*i*Pn	**Pn**	**23 16 14.7**	**+2.3**
KLV	**Kalavryta, Ach**	**4.50**	**209**	P	**Pn**	**23 16 13.4**	**+0.7**
KEK	**Kerkira**	**4.51**	**241**	Pn	**Pn**	**23 16 11.5**	**-1.2**
KEK	**Kerkira**	**4.51**	**241**	P	**Pn**	**23 16 14.0**	**+1.3**
GUR	**Goura**	**4.53**	**207**	P	**Pn**	**23 16 14.1**	**+0.9**
SMG	**Samos**	**4.56**	**160**	P	**Pn**	**23 16 13.7**	**+0.2**
UPM	**Unac-Piva**	**4.58**	**287**	⇓*i*Pn	**Pn**	**23 16 15.0**	**+1.0**
TESR	**Tescani**	**4.66**	**15**	⇓P	**Pn**	**23 16 17.3**	**+2.4**
TEKS	**Tekeris**	**4.67**	**305**	*e*Pn	**Pn**	**23 16 14.5**	**-0.5**
TEKS				*e*Sg	**Sg**	**23 17 33.9**	**-0.2**
HCY	**Herceg Novi**	**4.78**	**277**	⇓*i*Pn	**Pn**	**23 16 17.7**	**+1.2**
HCY				*i* Sn	**Sn**	**23 17 13.1**	**+1.1**
FRGS	**Fruska Gora**	**4.85**	**312**	⇑P	**Pn**	**23 16 17.1**	**-0.3**
FRGS	**Fruska Gora**	**4.85**	**312**	*e*Pn	**Pn**	**23 16 17.1**	**-0.3**
FRGS				*e*Sg	**Sg**	**23 17 39.0**	**-1.0**
APE	**Apeiranthos**	**4.97**	**174**	⇑P	**Pn**	**23 16 16.2**	**-3.0**
APE	**Apeiranthos**	**4.97**	**174**		**Pn**	**23 16 16.2**	**-3.0**
MDUB	**Mudurnu**	**4.99**	**106**	Pn	**Pn**	**23 16 21.7**	**+2.2**
DBRK	**Dubrovnik**	**5.05**	**280**	*e*Pn	**Pn**	**23 16 22.2**	**+2.0**
LEOM	**Leova**	**5.06**	**27**	⇓P	**Pn**	**23 16 22.7**	**+2.4**
VASR	**Vaslui**	**5.06**	**23**	⇑P	**Pn**	**23 16 22.5**	**+2.1**
VASR	**Vaslui**	**5.06**	**23**		**Pn**	**23 16 22.5**	**+2.1**
ARCR	**ARCALIA**	**5.08**	**356**	⇑P	**Pn**	**23 16 22.3**	**+1.7**
ARCR	**ARCALIA**	**5.08**	**356**		**Pn**	**23 16 22.3**	**+1.7**
STON	**Ston**	**5.40**	**281**	*e*Pn	**Pn**	**23 16 25.8**	**+0.8**
PRAR	**RASCA**	**5.42**	**10**	⇓P	**Pn**	**23 16 27.2**	**+1.9**
PRAR	**RASCA**	**5.42**	**10**		**Pn**	**23 16 27.2**	**+1.9**
BURAR	**Bucovina Array**	**5.60**	**2**	⇓P	**Pn**	**23 16 30.2**	**+2.4**
BURAR	**Bucovina Array**	**5.60**	**2**	Pn	**Pn**	**23 16 28.7**	**+0.8**
BUR08	**Bucovina Ar. S**	**5.63**	**2**	Pn	**Pn**	**23 16 28.9**	**+0.7**
RICI	**Ricice**	**5.91**	**287**	*e*Pn	**Pn**	**23 16 34.3**	**+2.3**
HVAR	**Hvar**	**6.35**	**288**	*e*Pn	**Pn**	**23 16 38.9**	**+0.9**
TARU	**Tarkhankut**	**6.47**	**56**	*e*S	**Sn**	**23 17 53.2**	**-0.3**
TARU				Sm		23 17 55.6	
	comp=N,9.0nm,0.3s						
TARU				Sm		23 17 55.6	
	comp=E,5.0nm,0.5s						
KIJV	**Kijevo**	**6.54**	**291**	*e*Pn	**Pn**	**23 16 40.9**	**+0.3**
SORM	**Soroca**	**6.58**	**21**	⇓P	**Pn**	**23 16 43.7**	**+2.5**
SORM	**Soroca**	**6.58**	**21**		**Pn**	**23 16 43.7**	**+2.5**
IDI	**Anoyia**	**6.72**	**180**	Pn	**Pn**	**23 16 42.4**	**-0.9**
SEV	**Sevastopol'**	**6.88**	**66**	*e*P	**Pn**	**23 16 44.9**	**-0.3**
SEV				Pm		23 16 50.6	
	comp=Z,4.0nm,0.5s						
SEV				*i* S	**Sn**	**23 18 00.2**	**-3.4**
SEV				Sm		23 18 06.3	
	comp=N,1.0nm,0.3s						
SEV				Sm		23 18 06.3	
	comp=E,4.0nm,0.5s						
MORI	**Morici**	**7.00**	**288**	*e*Pn	**Pn**	**23 16 48.9**	**+2.0**
UDBI	**Udbina**	**7.12**	**294**	*e*Pn	**Pn**	**23 16 50.3**	**+1.5**
KOLS	**Kolonicke sedl**	**7.16**	**346**	*e*PN	**Pn**	**23 16 48.3**	**-0.8**
VYHS	**Vyhne**	**7.76**	**329**	*e*PN	**Pn**	**23 16 59.1**	**+1.7**
SUDU	**Sudak**	**7.88**	**65**	*e*P	**Pn**	**23 17 00.5**	**+1.4**
SUDU				Pm		23 17 04.9	
	comp=Z,10.0nm,0.5s						
SUDU				*e*S	**Sn**	**23 18 24.3**	**-4.1**
SUDU				Sm		23 18 24.7	
	comp=N,9.0nm,0.4s						
SUDU				Sm		23 18 24.7	
	comp=E,3.0nm,0.5s						
INTR	**Introdacqua**	**8.19**	**274**	Pn	**Pn**	**23 17 04.0**	**+0.5**
MODS	**Modra-Piesok**	**8.32**	**322**	*e*PN	**Pn**	**23 17 07.3**	**+2.1**
RONA	**Rosalia, Austr**	**8.34**	**316**	*e*Pn	**Pn**	**23 17 06.6**	**+1.2**
	comp=E,2.2nm,0.5s						
ARSA	**Arzberg**	**8.49**	**311**	*i* Pn	**Pn**	**23 17 08.4**	**+1.0**
	comp=E,0.5nm,0.2s						
CAMP	**Campotosto**	**8.54**	**277**	Pn	**Pn**	**23 17 08.7**	**+0.4**
CONA	**Conrad Observa**	**8.71**	**316**	*e*Pn	**Pn**	**23 17 11.4**	**+0.8**
	comp=E,1.1nm,0.4s						
CONA				*e*Sn	**Sn**	**23 18 48.3**	**-0.5**
	comp=E,0.9nm,0.5s						
NRCA	**Norcia**	**8.76**	**279**	Pn	**Pn**	**23 17 11.6**	**+0.4**
CESX	**Cesi**	**9.15**	**278**	Pn	**Pn**	**23 17 17.9**	**+1.4**

*AFAD **22** 23:17:36.5±0.0, 38°.90N×26°.47E, h7km±2km, ML3.0*
*ATH **22** 23:17:36.8, 38°.90N×26°.49E, h13km±1km, ML3.3/7, Error ellipse: s-maj=1.7km s-min=0.8km az=280.0*
*ISK **22** 23:17:36.2, 38°.90N×26°.45E, h10km, ML3.2/37*
*THE **22** 23:17:37.0, 38°.90N×26°.43E, h9km, ML3.2/9, Error ellipse: s-maj=1.2km s-min=0.5km az=270.0*
ISC 22 23:17:36.8±0.8,**38°.90N**±0°.01×**26°.45E**±0°.02,**h12**km±6km,
n88,σ0**68**/116**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAG3	**Mitilini, Lesv**	**0.21**	**25**	P	**Pg**	**23 17 41.2**	**-0.1**
EAG3				S	**Sg**	**23 17 43.8**	**-0.6**
EAG3				AML	AML	23 17 44.6	
	comp=N,31202μm,0.2s						
EAG3				AML	AML	23 17 46.9	
	comp=E,28196μm,0.5s						
LESV	**Lesvos island,**	**0.23**	**22**	P	**Pg**	**23 17 41.3**	**-0.3**
KARB	**zmir-Karabur**	**0.23**	**188**	P	**Pg**	**23 17 42.2**	**+0.4**
KARB				S	**Sg**	**23 17 45.8**	**+0.6**
KARB				*i* AML	AML	23 17 47.0	
	comp=E,2μm,0.4s						
KARB				*i* AML	AML	23 17 47.0	
	comp=E,2μm,0.3s						
CAND	**Candarli**	**0.28**	**78**	Pg	**Pg**	**23 17 42.9**	**+0.4**
FOCM	**Foa**	**0.28**	**130**	Pg	**Pg**	**23 17 42.4**	**-0.2**
FOCM				Sg	**Sg**	**23 17 46.8**	**+0.3**
PRK	**Paraskevi**	**0.38**	**338**	P	**Pg**	**23 17 44.4**	**+0.1**
PRK				S	**Sg**	**23 17 50.0**	**+0.6**
	comp=E,4μm,0.3s						
PRK	**Paraskevi**	**0.38**	**338**	P	**Pg**	**23 17 44.4**	**+0.1**
PRK				S	**Sg**	**23 17 49.9**	**+0.5**
PRK				AML	AML	23 17 52.5	
	comp=N,6139μm,0.6s						
PRK				AML	AML	23 17 52.7	
	comp=E,9808μm,0.4s						
IZMD	**zmir-Dikili-**	**0.38**	**77**	P	**Pg**	**23 17 44.3**	**-0.1**
IZMD				P	**Pg**	**23 17 44.3**	**-0.1**
IZMD				S	**Sg**	**23 17 48.9**	**-0.7**
IZMD				S	**Sb**	**23 17 49.0**	**-2.4**
DKL	**Dikili**	**0.39**	**63**	Pg	**Pg**	**23 17 44.5**	**-0.1**
DKL				Sg	**Sg**	**23 17 50.2**	**+0.3**
EAG2	**Marmaro, Chios**	**0.45**	**218**	P	**Pg**	**23 17 45.9**	**+0.4**
EAG2				S	**Sb**	**23 17 52.4**	**-0.7**
EAG2				AML	AML	23 17 53.5	
	comp=N,48296μm,0.3s						
EAG2				AML	AML	23 17 56.7	
	comp=E,41228μm,0.3s						
AYVA	**Ayvalik**	**0.45**	**24**	P	**Pg**	**23 17 45.4**	**-0.2**
AYVA				S	**Sg**	**23 17 51.2**	**-0.5**
AYVA				*i* AML	AML	23 17 53.0	
	comp=E,1μm,0.3s						
ZEDA	**zmir-Bergama**	**0.49**	**82**	P	**Pg**	**23 17 46.2**	**-0.2**
ZEDA				*i* AML	AML	23 17 53.0	
	comp=E,992nm,0.2s						
ZEDA				S	**S**	**23 17 53.0**	**+0.1**
URLA	**Izmir**	**0.55**	**168**	Pg	**Pg**	**23 17 47.3**	**-0.1**
URLA	**Izmir**	**0.55**	**168**	P	**Pg**	**23 17 47.3**	**-0.1**
URLA				S	**Sg**	**23 17 55.2**	**+0.5**
URLA				*i* AML	AML	23 17 59.0	
	comp=E,1μm,0.6s						
URLA				*i* AML	AML	23 17 59.0	
	comp=E,1μm,0.6s						
SIGR	**SIGRI**	**0.56**	**304**	Pg	**Pb**	**23 17 48.2**	**-0.3**
SIGR				Sg	**Sg**	**23 17 55.7**	**+0.5**
SIGR	**SIGRI**	**0.56**	**304**	P	**Pg**	**23 17 48.0**	**+0.2**
SIGR				S	**Sg**	**23 17 55.0**	**-0.2**
	comp=E,2μm,0.4s						
SIGR	**SIGRI**	**0.56**	**304**	P	**Pb**	**23 17 48.1**	**-0.3**
SIGR				S	**Sb**	**23 17 55.9**	**-0.5**
SIGR				AML	AML	23 17 56.3	
	comp=E,3611μm,0.3s						
SIGR				AML	AML	23 17 56.4	
	comp=N,3060μm,0.4s						
CHOS	**Chios island**	**0.60**	**212**	P	**Pg**	**23 17 48.7**	**+0.2**
CHOS				S	**Sb**	**23 17 57.8**	**+0.2**
	comp=N,3μm,0.2s						
CHOS	**Chios island**	**0.60**	**212**	P	**Pg**	**23 17 48.6**	**+0.2**
CHOS				S	**Sg**	**23 17 56.4**	**+0.1**
CHOS				AML	AML	23 18 01.0	
	comp=E,8280μm,0.3s						
CHOS				AML	AML	23 18 01.4	
	comp=N,4205μm,0.2s						
GPNR	**Gulpinar-Canak**	**0.61**	**336**	Pg	**Pg**	**23 17 48.6**	**-0.1**
KOCA	**Canakkale, Ayv**	**0.65**	**338**	P	**Pg**	**23 17 49.6**	**+0.1**
KOCA				S	**Sb**	**23 17 58.8**	**-0.3**
ZEYE	**Izmir, Urla-Ze**	**0.66**	**177**	P	**Pg**	**23 17 49.2**	**-0.3**
ZEYE				S	**Sb**	**23 17 59.5**	**+0.3**
BUHA	**Balikesir, Bur**	**0.77**	**39**	P	**Pg**	**23 17 51.2**	**-0.6**
BUHA				S	**Sb**	**23 18 02.4**	**-0.2**
BUHA				*i* AML	AML	23 18 04.0	
	comp=N,736nm,0.6s						
BUHA				*i* AML	AML	23 18 06.0	
	comp=N,484nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.85**	**5**	P	**Pg**	**23 17 52.4**	**-0.7**
BAYC				S	**Sg**	**23 18 03.8**	**-0.4**
GMLD	**Gumuldur**	**0.90**	**156**	Pg	**Pg**	**23 17 53.9**	**-0.1**
DGB	**zmir**	**0.91**	**158**	P	**Pb**	**23 17 53.6**	**-0.7**
EZN	**Ezine**	**0.93**	**354**	Pg	**Pb**	**23 17 54.0**	**-0.8**
EZN	**Ezine**	**0.93**	**354**	P	**Pb**	**23 17 54.3**	**-0.5**
EZN				S	**Sb**	**23 18 07.4**	**+0.2**
	comp=N,2μm,0.4s						
AKS	**Akhisar**	**1.06**	**91**	Pg	**Pg**	**23 17 57.2**	**0.0**
AKHS	**Akhisar**	**1.06**	**91**	P	**Pn**	**23 17 57.6**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.09**	**64**	P	**Pb**	**23 17 57.5**	**-0.1**
STEP				*i* AML	AML	23 18 15.0	
	comp=N,634nm,0.6s						
STEP				*i* AML	AML	23 18 15.0	
	comp=N,769nm,0.4s						
GOMA	**Golmarmara-Man**	**1.16**	**99**	Pn	**Pg**	**23 17 59.1**	**0.0**
COMU	**Canakkale**	**1.20**	**1**	Pn	**Pb**	**23 17 59.3**	**-0.1**
CANM	**Can-anakkale**	**1.21**	**22**	Pn	**Pg**	**23 18 00.0**	**0.0**
SMG	**Samos**	**1.22**	**166**	P	**Pn**	**23 17 58.8**	**-0.9**
SMG				S	**Sg**	**23 18 16.3**	**+0.1**
	comp=N,910nm,0.4s						
SMG	**Samos**	**1.22**	**166**	P	**Pn**	**23 17 58.8**	**-0.9**
SMG				AML	AML	23 18 19.3	
	comp=N,1692μm,0.4s						
SMG				AML	AML	23 18 19.6	
	comp=E,1929μm,0.4s						
BALY	**Balya**	**1.24**	**47**	P	**Pn**	**23 17 59.8**	**-0.1**
BALY				*i* AML	AML	23 18 20.0	
	comp=E,445nm,0.5s						
BALY				*i* AML	AML	23 18 21.0	
	comp=E,246nm,0.5s						
EFSA	**Agios Efstrati**	**1.31**	**300**	P	**Pn**	**23 17 59.5**	**-1.3**
GCAM	**G?zelcaml?**	**1.34**	**153**	Pn	**Pb**	**23 18 01.9**	**+0.1**
GADA	**Gvkgeada**	**1.36**	**342**	Pn	**Pn**	**23 18 01.4**	**-0.1**
LIA	**Limnos Island**	**1.40**	**316**	P	**Pn**	**23 18 01.8**	**-0.3**
LIA				S	**Sn**	**23 18 19.8**	**-0.7**
	comp=E,998nm,0.2s						
LIA	**Limnos Island**	**1.40**	**316**	P	**Pn**	**23 18 02.0**	**-0.1**
LIA				S	**Sn**	**23 18 19.4**	**-1.1**
LIA				AML	AML	23 18 23.5	
	comp=E,2291μm,0.3s						
LIA				AML	AML	23 18 23.7	
	comp=N,1683μm,0.2s						
LPK	**Lapseki**	**1.49**	**9**	Pn	**Pn**	**23 18 03.3**	**0.0**
GELI	**Tayfur-Gelibol**	**1.50**	**1**	Pn	**Pn**	**23 18 03.8**	**+0.4**
KRBG	**Karabiga-Canak**	**1.63**	**23**	Pn	**Pn**	**23 18 05.0**	**-0.2**
TNSA	**Tinos**	**1.69**	**217**	P	**Pn**	**23 18 05.2**	**-0.9**
SMTH	**Samothraki Isl**	**1.73**	**336**	P	**Pn**	**23 18 06.3**	**-0.3**
SMTH	**Samothraki Isl**	**1.73**	**336**	P	**Pn**	**23 18 06.4**	**-0.2**
KULA	**Kula-Manisa**	**1.77**	**102**	Pn	**Pn**	**23 18 07.5**	**+0.2**
KULA	**Kula-Manisa**	**1.77**	**102**	P	**Pn**	**23 18 07.4**	**+0.2**
ERIK	**Erikli-Kesan**	**1.77**	**1**	Pn	**Pn**	**23 18 07.5**	**+0.3**
EDC	**Edincik**	**1.81**	**36**	Pn	**Pn**	**23 18 07.7**	**0.0**
DST	**Dursunbey**	**1.82**	**67**	Pn	**Pn**	**23 18 08.9**	**+1.0**
ENEZ	**Enez**	**1.85**	**353**	P	**Pn**	**23 18 08.1**	**-0.2**
ENEZ				S	**Sn**	**23 18 32.2**	**+0.6**
	comp=N,535nm,0.3s						
KYMI	**Kymi, Euboea I**	**1.86**	**263**	P	**Pn**	**23 18 07.7**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.86**	**263**	P	**Pn**	**23 18 07.8**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.87**	**17**	Pn	**Pn**	**23 18 09.3**	**+0.7**
MLSB	**Milas**	**1.91**	**146**	Pn	**Pn**	**23 18 10.2**	**+1.1**
MRMT	**Marmara Adasi**	**1.92**	**27**	Pn	**Pn**	**23 18 09.2**	**-0.1**
BODT	**Bodrum**	**1.95**	**159**	Pn	**Pn**	**23 18 09.3**	**-0.4**
BODT	**Bodrum**	**1.95**	**159**	P	**Pn**	**23 18 08.9**	**-0.8**
APE	**Apeiranthos**	**1.96**	**202**	P	**Pn**	**23 18 08.7**	**-1.2**
APE	**Apeiranthos**	**1.96**	**202**	P	**Pn**	**23 18 08.7**	**-1.2**
SIMA	**Simav-Kutahya**	**1.98**	**84**	Pn	**Pn**	**23 18 11.2**	**+1.1**
KCTX	**Karacabey (Bur**	**2.01**	**46**	Pn	**Pn**	**23 18 10.4**	**0.0**
ALN	**Alexandroupoli**	**2.02**	**351**	P	**Pn**	**23 18 10.2**	**-0.4**
ALN				S	**Sn**	**23 18 36.3**	**+0.5**
	comp=N,242nm,0.4s						
ALN	**Alexandroupoli**	**2.02**	**351**	P	**Pn**	**23 18 10.3**	**-0.3**
DION	**Dionisos Attik**	**2.14**	**248**	P	**Pn**	**23 18 12.8**	**+0.5**
ORLT	**Orhaneli**	**2.21**	**58**	Pn	**Pn**	**23 18 13.9**	**+0.6**
GEDZ	**Gediz**	**2.31**	**85**	Pn	**Pn**	**23 18 15.9**	**+1.3**
VLY	**Voula,Athens**	**2.34**	**244**	P	**Pn**	**23 18 14.5**	**-0.4**
DAT	**Datca**	**2.34**	**157**	Pn	**Pn**	**23 18 15.8**	**+0.7**
RDO	**Rodhopi**	**2.35**	**343**	P	**Pn**	**23 18 15.3**	**+0.1**
MDNY	**Mudanya-Bursa**	**2.38**	**51**	Pn	**Pn**	**23 18 16.9**	**+1.3**
OUR	**Ouranopolis**	**2.39**	**308**	P	**Pn**	**23 18 15.7**	**+0.1**
TVSB	**Tavsanli**	**2.40**	**76**	Pn	**Pn**	**23 18 16.6**	**+0.7**
ARMT	**Armutlu**	**2.50**	**47**	Pn	**Pn**	**23 18 18.3**	**+1.2**
TURN	**Turunc**	**2.55**	**146**	Pn	**Pn**	**23 18 18.8**	**+1.0**
VIL2	**Platees**	**2.59**	**256**	P	**Pn**	**23 18 18.0**	**-0.4**
SNT5	**Nea Kammeni, S**	**2.63**	**199**	P	**Pn**	**23 18 18.3**	**-0.6**
SANT	**Santorini**	**2.64**	**198**	P	**Pn**	**23 18 17.9**	**-1.3**
APMY	**Acipayam-Deniz**	**2.66**	**121**	Pn	**Pn**	**23 18 20.4**	**+1.0**
DALY	**Dalyan (Mula)**	**2.71**	**139**	Pn	**Pn**	**23 18 21.2**	**+1.2**
MHLO	**Agia Marina, M**	**2.74**	**217**	P	**Pn**	**23 18 20.3**	**-0.1**
YLV	**Yalova**	**2.80**	**53**	Pn	**Pn**	**23 18 22.3**	**+0.9**
ADVT	**Abdulvahap**	**2.96**	**58**	Pn	**Pn**	**23 18 24.7**	**+1.2**
DBRK	**Dubrovnik**	**7.34**	**304**	*e*Pg	**Pg**	**23 19 59.4**	**+2.1**
STON	**Ston**	**7.73**	**304**	*e*Pg	**Pg**	**23 20 06.7**	**+2.1**

*ATH **22** 23:21:02.8, 38°.90N×26°.49E, h11km±1km, ML2.3/3, Error ellipse: s-maj=2.1km s-min=0.9km az=294.0*
*ISK **22** 23:21:02.3, 38°.89N×26°.45E, h5km, ML2.4/28*
*AFAD **22** 23:21:03.6±0.0, 38°.98N×26°.45E, h7km±2km, ML2.6*
ISC 22 23:21:02.8±0.9,**38°.90N**±0°.02×**26°.44E**±0°.02,**h10**km±8km,
n45,σ0**67**/61**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAG3	**Mitilini, Lesv**	**0.21**	**29**	P	**Pg**	**23 21 07.1**	**-0.3**
EAG3				S	**Sg**	**23 21 09.8**	**-0.6**
EAG3				AML	AML	23 21 10.4	
	comp=N,6078μm,0.2s						
EAG3				AML	AML	23 21 10.7	
	comp=E,4185μm,0.2s						
CAND	**Candarli**	**0.29**	**79**	Pg	**Pg**	**23 21 08.7**	**0.0**
CAND				Sg	**Sg**	**23 21 13.4**	**+0.7**
FOCM	**Foa**	**0.29**	**129**	Pg	**Pg**	**23 21 08.2**	**-0.5**
FOCM				Sg	**Sg**	**23 21 12.7**	**0.0**
PRK	**Paraskevi**	**0.37**	**340**	P	**Pg**	**23 21 10.3**	**+0.1**
PRK				S	**Sg**	**23 21 15.5**	**+0.4**
DKL	**Dikili**	**0.40**	**65**	Pg	**Pg**	**23 21 10.6**	**-0.2**
DKL				Sg	**Sg**	**23 21 16.4**	**+0.2**
EAG2	**Marmaro, Chios**	**0.44**	**216**	P	**Pg**	**23 21 11.8**	**+0.4**
EAG2				S	**Sg**	**23 21 18.2**	**+1.0**
SIGR	**SIGRI**	**0.55**	**305**	Pg	**Pg**	**23 21 14.2**	**+0.6**
SIGR				Sg	**Sg**	**23 21 21.9**	**+1.1**
SIGR	**SIGRI**	**0.55**	**305**	P	**Pg**	**23 21 14.0**	**+0.4**
SIGR				S	**Sg**	**23 21 21.6**	**+0.8**
SIGR				AML	AML	23 21 22.3	
	comp=E,508μm,0.6s						
SIGR				AML	AML	23 21 22.3	
	comp=N,472μm,0.4s						
URLA	**Izmir**	**0.55**	**167**	Pg	**Pg**	**23 21 13.2**	**-0.4**
URLA				Sg	**Sg**	**23 21 21.2**	**+0.4**
CHOS	**Chios island**	**0.59**	**210**	P	**Pg**	**23 21 14.5**	**+0.2**
CHOS				S	**Sb**	**23 21 24.1**	**+0.4**
CHOS				AML	AML	23 21 26.8	
	comp=E,832μm,0.3s						
CHOS				AML	AML	23 21 27.3	
	comp=N,345μm,0.3s						
GPNR	**Gulpinar-Canak**	**0.60**	**337**	Pg	**Pg**	**23 21 13.9**	**-0.7**
KOCA	**Canakkale, Ayv**	**0.65**	**339**	P	**Pg**	**23 21 15.4**	**0.0**
BUHA	**Balikesir, Bur**	**0.78**	**39**	P	**Pg**	**23 21 17.1**	**-0.8**
BUHA				S	**Sg**	**23 21 28.4**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.85**	**6**	P	**Pg**	**23 21 18.5**	**-0.7**
BAYC				S	**Sg**	**23 21 29.5**	**-0.7**
BAYC				*i* AML	AML	23 21 32.0	
	comp=N,173nm,0.5s						
BAYC				*i* AML	AML	23 21 33.0	
	comp=N,228nm,0.2s						
GMLD	**Gumuldur**	**0.90**	**155**	Pg	**Pg**	**23 21 19.7**	**-0.5**
EZN	**Ezine**	**0.93**	**355**	Pg	**Pg**	**23 21 20.6**	**-0.2**
BOZC	**Bozcaada**	**0.99**	**343**	P	**Pg**	**23 21 21.1**	**-0.8**
BOZC				S	**Sg**	**23 21 34.1**	**-0.6**
BOZC				*i* AML	AML	23 21 37.0

BRSE				S	Sn	00 05 41.8	-0.6		
	baz=166								
BRLK	**Bradley Lake**	**4.17**	**346**		**Pn**	**00 04 54.6**	**-0.1**		
BRLK				IAML		00 05 43.8			
	comp=E,75nm,0.4s								
BRLK				IAML		00 05 43.9			
	comp=N,65nm,0.3s								
HOM	**Homer**	**4.19**	**341**	Pn	**Pn**	**00 04 56.3**	**+1.4**		
KCE	**Katmai Mt Cerb**	**4.24**	**309**		**Pn**	**00 04 56.7**	**+1.1**		
ACHA	**Angle Creek He**	**4.29**	**308**		**Pn**	**00 04 56.3**	**0.0**		
P23K	**Montague Islan**	**4.35**	**10**		**Pn**	**00 04 57.5**	**+0.4**		
P23K					**Sn**	**00 05 45.5**	**-2.3**		
P23K	**Montague Islan**	**4.35**	**10**	P	**Pn**	**00 04 57.5**	**+0.4**		
	baz=192								
P23K				S	**Sn**	**00 05 46.0**	**-1.7**		
	baz=192								
ANCK	**Angle Creek**	**4.36**	**307**		**Pn**	**00 04 57.6**	**+0.4**		
KVTA	**Katmai Vly 10**	**4.37**	**310**		**Pn**	**00 04 57.9**	**+0.6**		
SEW	**Seward**	**4.39**	**357**		**Pn**	**00 04 57.6**	**0.0**		
SEW	**Seward**	**4.39**	**357**	P	**Pn**	**00 04 57.6**	**0.0**		
	baz=177								
P19K	**Oil Pt**	**4.55**	**331**	Pn	**Pn**	**00 05 00.3**	**+0.4**		
P19K				IAML		00 05 56.1			
	comp=E,154nm,0.3s								
P19K	**Oil Pt**	**4.55**	**331**	P	**Pn**	**00 05 00.4**	**+0.5**		
	baz=149								
CNTC	**Contact Creek**	**4.56**	**307**		**Pn**	**00 05 00.1**	**0.0**		
Q17K	**Contact Creek**	**4.57**	**307**	P	**Pn**	**00 05 00.1**	**0.0**		
	baz=122								
KELA	**Mount Kelaz**	**4.59**	**309**		**Pn**	**00 05 00.6**	**+0.1**		
O20K	**Slope Mountain**	**4.78**	**337**		**Pn**	**00 05 03.0**	**0.0**		
O20K	**Slope Mountain**	**4.78**	**337**	P	**Pn**	**00 05 03.0**	**0.0**		
	baz=155								
IVE	**Iliamna Volcan**	**4.81**	**335**		**Pn**	**00 05 03.3**	**-0.2**		
ILSW	**Iliamna Southw**	**4.81**	**334**	Pn	**Pn**	**00 05 02.1**	**-1.5**		
ILSW				IAML		00 06 01.9			
	comp=N,47nm,0.3s								
ILSW				IAML		00 06 03.5			
	comp=E,43nm,0.5s								
KAIM	**Kayak Island**	**4.85**	**28**	Pn	**Pn**	**00 05 04.6**	**+0.7**		
KAIM				IAML		00 07 49.7			
	comp=E,111nm,1.5s								
KAIM	**Kayak Island**	**4.85**	**28**	P	**Pn**	**00 05 04.6**	**+0.7**		
	baz=212								
HIN	**Hinchinbrook I**	**4.85**	**14**	Pn	**Pn**	**00 05 04.9**	**+0.9**		
P18K	**Big Mountain,**	**4.99**	**320**	Pn	**Pn**	**00 05 05.5**	**-0.3**		
P18K	**Big Mountain,**	**4.99**	**320**	P	**Pn**	**00 05 05.3**	**-0.6**		
	baz=136								
EYAK	**Cordova Ski Ar**	**5.11**	**18**		**Pn**	**00 05 08.4**	**+0.9**		
EYAK	**Cordova Ski Ar**	**5.11**	**18**	P	**Pn**	**00 05 08.5**	**+0.9**		
EYAK	**Cordova Ski Ar**	**5.11**	**18**	P	**Pn**	**00 05 08.4**	**+0.9**		
	baz=201								
SUCK	**Suckling Hills**	**5.14**	**30**	Pn	**Pn**	**00 05 07.9**	**-0.1**		
SUCK				IAML		00 06 08.3			
	comp=N,92nm,1.4s								
SUCK				IAML		00 06 10.7			
	comp=E,86nm,1.1s								
RSO	**Redoubt South**	**5.15**	**338**		**Pn**	**00 05 08.0**	**-0.2**		
RDT	**Redoubt**	**5.19**	**341**		**Pn**	**00 05 08.1**	**-0.5**		
FID	**Port Fidalgo**	**5.19**	**13**	Pn	**Pn**	**00 05 09.0**	**+0.3**		
RDWB	**Redoubt West**	**5.20**	**338**		**Pn**	**00 05 07.9**	**-0.9**		
NICHA	**Nichawak Mount**	**5.23**	**28**		**Pn**	**00 05 10.1**	**+0.9**		
GLI	**Glacier Island**	**5.25**	**10**	Pn	**Pn**	**00 05 09.0**	**-0.4**		
GLI	**Glacier Island**	**5.25**	**10**	P	**Pn**	**00 05 10.1**	**+0.7**		
	baz=192								
DFR	**Drift River**	**5.26**	**339**		**Pn**	**00 05 09.2**	**-0.4**		
NCT	**North Crescent**	**5.28**	**338**		**Pn**	**00 05 10.0**	**+0.1**		
O18K	**Koktuh Hills**	**5.32**	**324**		**Pn**	**00 05 09.8**	**-0.5**		
O18K	**Koktuh Hills**	**5.32**	**324**	P	**Pn**	**00 05 09.8**	**-0.5**		
	baz=139								
BGLC	**Bering Glacier**	**5.33**	**32**		**Pn**	**00 05 11.5**	**+1.1**		
BGLC	**Bering Glacier**	**5.33**	**32**	P	**Pn**	**00 05 11.5**	**+1.1**		
	baz=217								
P17K	**Kvichak River**	**5.33**	**314**		**Pn**	**00 05 10.6**	**+0.2**		
P17K	**Kvichak River**	**5.33**	**314**	P	**Pn**	**00 05 10.6**	**+0.2**		
	baz=128								
GOAT	**Goat Mountain**	**5.34**	**23**		**Pn**	**00 05 11.7**	**+0.9**		
RC01	**Rabbit Creek A**	**5.39**	**356**	Pn	**Pn**	**00 05 11.7**	**+0.4**		
RC01	**Rabbit Creek A**	**5.39**	**356**	P	**Pn**	**00 05 11.7**	**+0.4**		
	baz=176								
BERG	**Berg Lake**	**5.43**	**29**		**Pn**	**00 05 12.7**	**+0.7**		
GRIN	**Grindle Hills**	**5.45**	**31**		**Pn**	**00 05 13.3**	**+1.1**		
FIS	**Fire Island**	**5.47**	**353**	Pn	**Pn**	**00 05 13.8**	**+1.5**		
SNH	**Sunshine Point**	**5.51**	**34**	Pn	**Pn**	**00 05 14.1**	**+1.0**		
CYK	**Cape Yakataga**	**5.55**	**36**		**Pn**	**00 05 14.1**	**+0.6**		
KHIT	**Khitrov Hills**	**5.60**	**30**		**Pn**	**00 05 14.9**	**+0.6**		
KNK	**Knik Glacier**	**5.70**	**2**	Pn	**Pn**	**00 05 17.3**	**+1.7**		
KNK	**Knik Glacier**	**5.70**	**2**	P	**Pn**	**00 05 16.5**	**+0.9**		
	baz=183								
BMRM	**Bremner River**	**5.72**	**22**		**Pn**	**00 05 16.5**	**+0.6**		
BMRM	**Bremner River**	**5.72**	**22**	P	**Pn**	**00 05 16.5**	**+0.6**		
	baz=206								
WAX	**Waxell Ridge**	**5.72**	**32**		**Pn**	**00 05 16.7**	**+0.8**		
N20K	**Mount Spurr**	**5.74**	**344**	P	**Pn**	**00 05 16.0**	**-0.3**		
	baz=162								
SPCR	**Spurr Chakacha**	**5.74**	**344**		**Pn**	**00 05 16.0**	**-0.3**		
BARK	**Barkley Ridge**	**5.79**	**34**		**Pn**	**00 05 17.9**	**+0.9**		
MESA	**MESA**	**5.80**	**37**	Pn	**Pn**	**00 05 18.1**	**+0.9**		
MESA	**MESA**	**5.80**	**37**	P	**Pn**	**00 05 18.1**	**+0.9**		
	baz=223								
SPCG	**Spurr Capps Gl**	**5.80**	**345**		**Pn**	**00 05 17.4**	**+0.3**		
SUA	**Susitna One**	**5.82**	**351**	Pn	**Pn**	**00 05 17.5**	**+0.1**		
N19K	**Bonanza Creek**	**5.87**	**332**	Pn	**Pn**	**00 05 17.3**	**-0.7**		
N19K	**Bonanza Creek**	**5.87**	**332**	P	**Pn**	**00 05 17.4**	**-0.6**		
	baz=148								
PMR	**Palmer**	**5.88**	**359**	Pn	**Pn**	**00 05 17.1**	**-0.9**		
CRQM	**Cirque**	**5.89**	**29**		**Pn**	**00 05 19.1**	**+0.7**		
CRQE	**Cirque**	**5.90**	**29**	P	**Pn**	**00 05 19.1**	**+0.7**		
	baz=214								
P16K	**Nushagak River**	**5.91**	**308**		**Pn**	**00 05 18.5**	**+0.1**		
P16K	**Nushagak River**	**5.91**	**308**	P	**Pn**	**00 05 18.5**	**+0.1**		
	baz=121								
O17K	**Koliganek Bris**	**5.95**	**316**		**Pn**	**00 05 18.9**	**-0.1**		
O17K	**Koliganek Bris**	**5.95**	**316**	P	**Pn**	**00 05 18.9**	**-0.1**		
	baz=130								
STLK	**Strandline Lak**	**5.97**	**347**		**Pn**	**00 05 19.6**	**+0.1**		
TGL	**Tana Glacier**	**5.98**	**30**		**Pn**	**00 05 20.2**	**+0.7**		
SPNN	**North Nagishla**	**5.98**	**342**		**Pn**	**00 05 19.7**	**+0.1**		
S14K	**Fog Glacier**	**5.98**	**280**	P	**Pn**	**00 05 18.4**	**-1.1**		
	baz=92								
VNFG	**Fog Glacier, M**	**5.98**	**280**		**Pn**	**00 05 18.4**	**-1.1**		
KLU	**Klutina**	**5.98**	**14**		**Pn**	**00 05 20.6**	**+1.1**		
KLU	**Klutina**	**5.98**	**14**	P	**Pn**	**00 05 20.6**	**+1.1**		
	baz=197								
ISLE	**Juniper Island**	**6.00**	**33**	Pn	**Pn**	**00 05 20.7**	**+0.9**		
GHO	**Glory Hole Cre**	**6.05**	**0**		**Pn**	**00 05 22.0**	**+1.4**		
SML	**Sawmill**	**6.10**	**3**	Pn	**Pn**	**00 05 22.4**	**+1.3**		
SML	**Sawmill**	**6.10**	**3**	P	**Pn**	**00 05 22.5**	**+1.4**		
	baz=184								
CNBA	**Chernabura Isl**	**6.16**	**266**	Pn	Pn	00 05 17.0	-4.8		
N18K	**Kilae Creek**	**6.17**	**326**	Pn	**Pn**	**00 05 21.5**	**-0.6**		
N18K	**Kilae Creek**	**6.17**	**326**	P	**Pn**	**00 05 21.6**	**-0.4**		
	baz=141								
SCM	**Sheep Creek Mo**	**6.17**	**7**	Pn	**Pn**	**00 05 24.0**	**+1.8**		
SCM	**Sheep Creek Mo**	**6.17**	**7**	P	**Pn**	**00 05 23.8**	**+1.7**		
	baz=189								
SAMH	**Samovar Hills**	**6.18**	**41**		**Pn**	**00 05 23.7**	**+1.4**		
VRDI	**Verde Repeater**	**6.21**	**25**	Pn	**Pn**	**00 05 23.6**	**+0.8**		
O16K	**Kokwok River B**	**6.25**	**312**		**Pn**	**00 05 23.2**	**+0.1**		
O16K	**Kokwok River B**	**6.25**	**312**	P	**Pn**	**00 05 23.2**	**+0.1**		
	baz=125								
TABL	**Table Mountain**	**6.27**	**38**		**Pn**	**00 05 25.0**	**+1.4**		
GRNC	**Granite Creek**	**6.28**	**34**		**Pn**	**00 05 24.9**	**+1.1**		
N25K	**Chitina, Valde**	**6.31**	**19**	P	**Pn**	**00 05 25.3**	**+1.3**		
	baz=203								
GLB	**Gilahina Butte**	**6.32**	**23**	Pn	**Pn**	**00 05 25.2**	**+1.1**		
PCA	**Pinnacle**	**6.36**	**43**		**Pn**	**00 05 25.5**	**+0.8**		
PINM	**Pinnacle**	**6.36**	**43**	P	**Pn**	**00 05 25.5**	**+0.8**		
	baz=230								
SKT	**Skwentna**	**6.41**	**349**	Pn	**Pn**	**00 05 25.8**	**+0.5**		
SVW2	**Sparrevohn**	**6.41**	**330**	Pn	**Pn**	**00 05 24.4**	**-0.9**		
SVW2	**Sparrevohn**	**6.41**	**330**	P	**Pn**	**00 05 25.1**	**-0.2**		
PTPK	**Patty Peak**	**6.43**	**29**		**Pn**	**00 05 26.8**	**+0.9**		
MCARA	**McCarthy VSAT**	**6.45**	**26**	Pn	**Pn**	**00 05 26.9**	**+1.0**		
MCARA	**McCarthy VSAT**	**6.45**	**26**	P	**Pn**	**00 05 27.0**	**+1.1**		
	baz=211								
PNL	**Peninsula**	**6.46**	**48**		**Pn**	**00 05 26.6**	**+0.6**		
PNL	**Peninsula**	**6.46**	**48**	P	**Pn**	**00 05 26.6**	**+0.6**		
	baz=236								
BCPM	**Bancas Point**	**6.52**	**46**		**Pn**	**00 05 28.1**	**+1.2**		
M20K	**Styx River**	**6.54**	**342**		**Pn**	**00 05 27.0**	**-0.2**		
M20K	**Styx River**	**6.54**	**342**	P	**Pn**	**00 05 27.0**	**-0.2**		
	baz=159								
M24K	**Tolsona, Glenn**	**6.55**	**11**	Pn	**Pn**	**00 05 29.3**	**+2.1**		
	baz=194								
SDPT	**Sand Point**	**6.56**	**271**	Pn	Pn	00 05 24.1	-3.3		
SDPT	**Sand Point**	**6.56**	**271**	P	Pn	00 05 25.3	-2.1		
BARN	**Barnard Glacie**	**6.56**	**33**		**Pn**	**00 05 28.7**	**+1.1**		
CTG	**Chitna Glacier**	**6.59**	**34**	P	**Pn**	**00 05 28.9**	**+1.0**		
	baz=221								
CTGM	**Chitina Glacie**	**6.59**	**34**		**Pn**	**00 05 28.9**	**+0.9**		
WASW	**Wrangell South**	**6.68**	**20**		**Pn**	**00 05 30.6**	**+1.3**		
CUT	**Chulitna**	**6.72**	**355**	Pn	**Pn**	**00 05 29.0**	**-0.6**		
M18K	**Stony River**	**6.80**	**331**		**Pn**	**00 05 30.0**	**-0.6**		
M18K	**Stony River**	**6.80**	**331**	P	**Pn**	**00 05 30.0**	**-0.6**		
	baz=146								
M19K	**Big River Lodg**	**6.80**	**338**	Pn	**Pn**	**00 05 31.1**	**+0.4**		
O15K	**Ungalikthiuk R**	**6.81**	**305**		**Pn**	**00 05 30.7**	**-0.1**		
O15K	**Ungalikthiuk R**	**6.81**	**305**	P	**Pn**	**00 05 30.7**	**-0.1**		
	baz=116								
WAT6	**Susitna Watana**	**6.89**	**5**		**Pn**	**00 05 33.4**	**+1.3**		
WAT6	**Susitna Watana**	**6.89**	**5**	P	**Pn**	**00 05 33.4**	**+1.3**		
	baz=186								
HARP	**HAARP**	**6.96**	**15**		**Pn**	**00 05 35.0**	**+2.1**		
HARP	**HAARP**	**6.96**	**15**	P	**Pn**	**00 05 35.0**	**+2.1**		
	baz=198								
WAT7	**Susitna Watana**	**7.12**	**0**		**Pn**	**00 05 36.6**	**+1.5**		
O29M	**Mount Kennedy**	**7.15**	**46**		**Pn**	**00 05 36.9**	**+1.3**		
O29M	**Mount Kennedy**	**7.15**	**46**	P	**Pn**	**00 05 36.9**	**+1.3**		
	baz=235								
P29M	**Windy Craggy**	**7.16**	**52**		**Pn**	**00 05 36.0**	**+0.4**		
P29M	**Windy Craggy**	**7.16**	**52**	P	**Pn**	**00 05 36.0**	**+0.4**		
	baz=242								
M17K	**Holitna River**	**7.21**	**325**		**Pn**	**00 05 36.3**	**+0.1**		
M17K	**Holitna River**	**7.21**	**325**	P	**Pn**	**00 05 36.3**	**+0.1**		
	baz=139								
S31K	**Pelican**	**7.32**	**67**	Pn	**Pn**	**00 05 36.1**	**-1.6**		
DHY	**Denali Highway**	**7.41**	**6**	Pn	**Pn**	**00 05 41.0**	**+1.9**		
DHY	**Denali Highway**	**7.41**	**6**	P	**Pn**	**00 05 40.7**	**+1.6**		
	baz=187								
N15K	**Kwethluk River**	**7.41**	**311**		**Pn**	**00 05 39.8**	**+0.8**		
N15K	**Kwethluk River**	**7.41**	**311**	P	**Pn**	**00 05 39.8**	**+0.8**		
	baz=123								
PN7A	**Pavlof North-7**	**7.41**	**273**		**Pn**	**00 05 37.1**	**-2.0**		
YUK7	**Dusty Glacier**	**7.46**	**45**		**Pn**	**00 05 41.5**	**+1.5**		
M16K	**Timber Creek**	**7.47**	**319**		**Pn**	**00 05 40.0**	**+0.1**		
M16K	**Timber Creek**	**7.47**	**319**	P	**Pn**	**00 05 40.0**	**+0.1**		
	baz=131								
YUK3	**Moose Creek**	**7.49**	**33**		**Pn**	**00 05 42.2**	**+1.9**		
YUK3	**Moose Creek**	**7.49**	**33**	P	**Pn**	**00 05 42.2**	**+1.9**		
	baz=220								
O14K	**Tigyukauivet M**	**7.52**	**303**	Pn	**Pn**	**00 05 40.4**	**0.0**		
O14K	**Tigyukauivet M**	**7.52**	**303**	P	**Pn**	**00 05 40.5**	**0.0**		
	baz=113								
M27K	**Edge Creek, AK**	**7.57**	**26**	Pn	**Pn**	**00 05 43.0**	**+1.6**		
M27K	**Edge Creek, AK**	**7.57**	**26**	P	**Pn**	**00 05 42.8**	**+1.5**		
	baz=212								
YUK6	**Outpost Mounta**	**7.62**	**42**		**Pn**	**00 05 44.4**	**+2.2**		
YUK6	**Outpost Mounta**	**7.62**	**42**	P	**Pn**	**00 05 44.4**	**+2.2**		
	baz=231								
SIT	**Sitka**	**7.67**	**74**	Pn	Pn	00 05 39.9	-2.7		
SIT	**Sitka**	**7.67**	**74**	P	Pn	00 05 39.9	-2.7		
RND	**Reindeer**	**7.70**	**0**	Pn	**Pn**	**00 05 43.6**	**+0.6**		
MENT	**Mentasta**	**7.70**	**18**	Pn	**Pn**	**00 05 44.5**	**+1.4**		
P30M	**Million Dollar**	**7.74**	**50**		**Pn**	**00 05 44.8**	**+1.2**		
P30M	**Million Dollar**	**7.74**	**50**	P	**Pn**	**00 05 44.8**	**+1.2**		
	baz=240								
TRF	**Thorofare Moun**	**7.77**	**356**	Pn	**Pn**	**00 05 46.2**	**+2.0**		
YUK4	**Talbot Arm**	**7.78**	**40**	P	**Pn**	**00 05 48.0**	**+3.7**		
	baz=228								
CAST	**Castle Rocks**	**7.87**	**350**		**Pn**	**00 05 46.1**	**+0.8**		
BVCY	**Beaver Creek**	**7.88**	**29**		**Pn**	**00 05 47.3**	**+1.8**		
BVCY	**Beaver Creek**	**7.88**	**29**	P	**Pn**	**00 05 47.3**	**+1.8**		
	baz=215								
HYT	**Haines Junctio**	**7.89**	**45**	Pn	**Pn**	**00 05 47.4**	**+1.6**		
HYT	**Haines Junctio**	**7.89**	**45**	P	**Pn**	**00 05 47.2**	**+1.5**		
	baz=235								
KTH	**Kantishna Hill**	**7.91**	**354**	Pn	**Pn**	**00 05 45.6**	**-0.3**		
M15K	**Kasigluk River**	**7.94**	**314**		**Pn**	**00 05 46.8**	**+0.5**		
M15K	**Kasigluk River**	**7.94**	**314**	P	**Pn**	**00 05 46.8**	**+0.5**		
	baz=124								
N14K	**Kuskokwak Cree**	**7.99**	**307**		**Pn**	**00 05 47.2**	**+0.3**		
N14K	**Kuskokwak Cree**	**7.99**	**307**	P	**Pn**	**00 05 47.2**	**+0.3**		
	baz=117								
TTA	**Tatalina**	**8.07**	**336**	Pn	**Pn**	**00 05 47.8**	**-0.2**		
TTA	**Tatalina**	**8.07**	**336**	P	**Pn**	**00 05 49.5**	**+1.4**		
L16K	**Owhat River**	**8.11**	**322**	Pn	**Pn**	**00 05 48.7**	**+0.1**		
L16K	**Owhat River**	**8.11**	**322**	P	**Pn**	**00 05 48.4**	**-0.3**		
	baz=133								
S32K	**Killisnoo**	**8.11**	**72**	Pn	**Pn**	**00 05 47.3**	**-1.3**		
BESE	**Bessie Mountai**	**8.17**	**64**		**Pn**	**00 05 48.8**	**-0.7**		
BCAR	**Beaver Creek A**	**8.20**	**23**	Pn	**Pn**	**00 05 51.9**	**+2.0**		
SKAG	**Skagway**	**8.20**	**57**	Pn	**Pn**	**00 05 49.9**	**0.0**		
SKAG	**Skagway**	**8.20**	**57**	P	**Pn**	**00 05 50.1**	**+0.2**		
N30M	**Aishikik Lake**	**8.43**	**42**		**Pn**	**00 05 54.6**	**+1.5**		
N30M	**Aishikik Lake**	**8.43**	**42**	P	**Pn**	**00 05 54.6**	**+1.5**		
	baz=232								
O30N	**Mendenhall**	**8.44**	**48**	Pn	**Pn**	**00 05 54.4**	**+1.2**		
O30N	**Mendenhall**	**8.44**	**48**	P	**Pn**	**00 05 54.4**	**+1.2**		
	baz=239								
BPAW	**Bear Paw Mtn.**	**8.45**	**354**	Pn	**Pn**	**00 05 53.4**	**+0.1**		
BWN	**Browne**	**8.47**	**358**	Pn	**Pn**	**00 05 52.6**	**-0.9**		
M14K	**Bethel**	**8.50**	**312**	Pn	**Pn**	**00 05 54.6**	**+0.6**		
ISLZ	**Isanotski Laza**	**8.51**	**269**		Pn	00 05 51.9	-2.2		
M29M	**Somme Creek**	**8.61**	**34**		**Pn**	**00 05 57.2**	**+1.6**		
M29M	**Somme Creek**	**8.61**	**34**	P	**Pn**	**00 05 57.2**	**+1.6**		
	baz=223								
SCRK	**Sand Creek**	**8.63**	**15**	Pn	**Pn**	**00 05 57.5**	**+1.6**		
HDA	**Harding Lake**	**8.76**	**6**	Pn	**Pn**	**00 06 00.2**	**+2.7**		
WRH	**Wood River Hil**	**8.78**	**2**	Pn	**Pn**	**00 05 59.6**	**+1.9**		
L15K	**Ungalek Mounta**	**8.83**	**318**		**Pn**	**00 05 58.7**	**+0.2**		
L15K	**Ungalek Mounta**	**8.83**	**318**	P	**Pn**	**00 05 58.7**	**+0.2**		
	baz=127								
J20K	**Nowinta River**	**8.86**	**345**	Pn	**Pn**	**00 06 00.1**	**+1.3**		
NEA2	**Nenana**	**8.89**	**360**	Pn	**Pn**	**00 06 00.6**	**+1.4**		
WHY	**Whitehorse**	**8.90**	**51**	Pn	**Pn**	**00 06 01.3**	**+1.6**		
J19K	**Poorman**	**8.93**	**341**	Pn	**Pn**	**00 05 58.9**	**-1.0**		
CCB	**Clear Creek Bu**	**8.96**	**3**	Pn	**Pn**	**00 06 02.4**	**+2.2**		
CRAG	**Craig**	**8.96**	**85**	Pn	**Pn**	**00 05 59.5**	**-0.8**		
P32M	**Atlin**	**9.02**	**58**	Pn	**Pn**	**00 06 01.4**	**+0.3**		
P32M	**Atlin**	**9.02**	**58**	P	**Pn**	**00 06 01.5**	**+0.3**		
	baz=251								
J25K	**Salcha River,**	**9.08**	**10**	Pn	**Pn**	**00 06 03.8**	**+1.8**		
L14K	**Kuka Creek**	**9.11**	**314**		**Pn**	**00 06 03.2**	**+0.9**		
L14K	**Kuka Creek**	**9.11**	**314**	P	**Pn**	**00 06 03.2**	**+0.9**		
	baz=122								
IL31		**9.12**	**6**		**Pn**	**00 06 04.6**	**+2.2**		
ILAR	**Eielson Array**	**9.12**	**6**	Pn	**Pn**	**00 06 04.0**	**+1.5**		
ILAR	**Eielson Array**	**9.12**	**6**	Pn	**Pn**	**00 06 03.7**	**+1.2**		
	comp=E,0.2nm,0.3s,baz=193,slow=14,SNR=12								
ILAR				Sn	**Sn**	**00 07 43.6**	**-1.4**		
	comp=E,0.6nm,0.3s,baz=185,slow=22,SNR=11								
	comp=E,0.3nm,0.3s								
J26L	**Joseph Creek**	**9.19**	**15**	Pn	**Pn**	**00 06 05.3**	**+1.8**		
L29M	**L29M**	**9.21**	**32**		**Pn**	**00 06 04.7**	**+1.0**		
L29M	**L29M**	**9.21**	**32**	P	**Pn**	**00 06 05.2**	**+1.5**		
	baz=222								
K15K	**Wolf Creek Mou**	**9.23**	**321**		**Pn**	**00 06 04.6**	**+0.7**		
K15K	**Wolf Creek Mou**	**9.23**	**321**	P	**Pn**	**00 06 04.6**	**+0.7**		
	baz=130								
M30M	**Minto, Yukon**	**9.26**	**37**	Pn	**Pn**	**00 06 05.9**	**+1.5**		
M30M	**Minto, Yukon**	**9.26**	**37**	P	**Pn**	**00 06 05.6**	**+1.2**		
	baz=228								
MDM	**Murphy Dome**	**9.26**	**2**	Pn	**Pn**	**00 06 06.4**	**+2.0**		
I23K	**Minto, Yukon-K**	**9.45**	**359**	Pn	**Pn**	**00 06 07.9**	**+1.0**		
DAWY	**Dawson**	**9.62**	**26**	Pn	**Pn**	**00 06 11.2**	**+1.8**		
P33M	**Teslin, Yukon**	**9.66**	**56**	Pn	**Pn**	**00 06 10.4**	**+0.5**		
P33M	**Teslin, Yukon**	**9.66**	**56**	P	**Pn**	**00 06 10.6**	**+0.7**		
	baz=249								
V35K	**Ketchikan**	**9.83**	**85**	Pn	**Pn**	**00 06 11.8**	**-0.4**		
EGAK	**Eagle**	**9.85**	**20**	Pn	**Pn**	**00 06 12.4**	**0.0**		
M31M	**Drury Creek, Y**	**9.90**	**43**	Pn	**Pn**	**00 06 15.7**	**+2.5**		
K29M	**Barlow Dome**	**9.94**	**31**	Pn	**Pn**	**00 06 15.6**	**+1.8**		
MAYO	**Mayo, Yukon**	**10.26**	**35**	Pn	**Pn**	**00 06 19.6**	**+1.5**		
R33M	**Jennings River**	**10.32**	**62**	Pn	**Pn**	**00 06 19.5**	**+0.5**		
H19K	**Roundabout Mou**	**10.48**	**343**	Pn	**Pn**	**00 06 21.7**	**+0.6**		
IMAR	**Indian Mountai**	**10.54**	**349**	Pn	**Pn**	**00 06 22.7**	**+0.8**		
DLBC	**Dease Lake**	**10.63**	**67**	Pn	**Pn**	**00 06 23.1**	**-0.2**		
DLBC	**Dease Lake**	**10.63**	**67**	Pn	**Pn**	**00 06 22.6**	**-0.7**		
	comp=E,0.5nm,0.3s,baz=270,slow=9.1,SNR=6.9								
DLBC				Sn	**Sn**	**00 08 17.2**	**-5.1**		
	comp=E,0.2nm,0.3s,baz=181,slow=19,SNR=1.4								
	comp=E,1.0nm,0.3s								
J30M	**Hart River**	**10.84**	**30**	Pn	**Pn**	**00 06 28.2**	**+2.1**		
G23K	**Bananza Creek**	**11.03**	**358**	Pn	**Pn**	**00 06 29.2**	**+0.6**		
G19K	**Purcell Mounta**	**11.15**	**343**	Pn	**Pn**	**00 06 30.8**	**+0.5**		
I30M	**Mount Dempster**	**11.33**	**28**	Pn	**Pn**	**00 06 35.5**	**+2.8**		
MMPY	**Sheldon Lake,**	**11.36**	**45**		**Pn**	**00 06 35.1**	**+1.9**		
H29M	**Whitestone**	**11.68**	**22**	Pn	**Pn**	**00 06 39.5**	**+2.0**		
F21K	**Alatna River**	**11.72**	**351**	Pn	**Pn**	**00 06 38.5**	**+0.5**		
BMAR	**Burnt Mountain**	**11.91**	**8**	Pn	**Pn**	**00 06 42.3**	**+1.6**		
INK	**Inuvik**	**14.47**	**23**		**Pn**	**00 07 16.0**	**+0.6**		
INK	**Inuvik**	**14.47**	**23**	Pn	**Pn**	**00 07 17.1**	**+1.6**		
	comp=E,0.1nm,0.3s,baz=211,slow=18,SNR=3.8								
	comp=E,1.3nm,0.9s								
YKA	**Yellowknife Ar**	**18.69**	**55**	P	**P**	**00 08 10.0**	**+1.0**		
	baz=261,slow=10,SNR=2.5								
	comp=E,0.2nm,0.6s								
TXAR	**Lajitas Array**	**41.45**	**110**	LR	LR	00 26 25.5			
	comp=E,22nm,18.3s,baz=82,slow=33								
H11N2	**WAKE ISLAND Hy**	**48.78**	**241**	T	T	01 05 06.6			
	baz=32,slow=76,SNR=4.3								
H11N3	**WAKE ISLAND Hy**	**48.78**	**241**	T	T	01 05 12.5			
	baz=32,slow=76,SNR=4.0								
H11N1	**WAKE ISLAND Hy**	**48.80**	**241**	T	T	01 05 06.9			
	baz=32,slow=76,SNR=4.3								
SONM	**Songino Array**	**59.14**	**311**	P	**P**	**00 13 53.0**	**+1.5**		
	comp=E,0.4nm,0.7s,baz=42,slow=9.7,SNR=3.4								
	comp=E,0.4nm,0.7s								
MKAR	**Makanchi Array**	**69.15**	**325**	P	**P**	**00 14 57.6**	**+0.4**		
	comp=E,0.4nm,0.8s,baz=39,slow=7.4,SNR=4.1								
	comp=E,0.4n

	comp=N,36nm,0.5s								
MESA					IAML			00 14 36.4	
	comp=E,37nm,1.3s								
MESA	**MESA**	**5.08**	**41**	P	**Pn**		**00 13 22.9**	**+0.5**	
	baz=225								
SUA	**Susitna One**	**5.11**	**348**	Pn	**Pn**		**00 13 23.4**	**+0.7**	
SUA				IAML			00 14 39.0		
	comp=E,27nm,0.9s								
SUA	**Susitna One**	**5.11**	**348**	P	**Pn**		**00 13 22.7**	**-0.1**	
	baz=166								
PMR	**Palmer**	**5.12**	**357**	Pn	**Pn**		**00 13 24.1**	**+1.3**	
PMR				IAML			00 14 26.4		
	comp=E,30nm,0.9s								
PMR				IAML			00 14 29.9		
	comp=N,31nm,0.9s								
CRQM	**Cirque**	**5.13**	**31**		**Pn**		**00 13 23.8**	**+0.7**	
CRQM				IAML			00 14 28.2		
	comp=E,44nm,0.9s								
CRQM				IAML			00 14 44.4		
	comp=N,41nm,1.4s								
CRQE	**Cirque**	**5.14**	**32**	P	**Pn**		**00 13 23.4**	**+0.3**	
	baz=215								
KLU	**Klutina**	**5.19**	**14**		**Pn**		**00 13 25.2**	**+1.3**	
KLU				IAML			00 14 34.6		
	comp=E,48nm,1.3s								
KLU				IAML			00 14 40.4		
	comp=N,38nm,1.4s								
KLU	**Klutina**	**5.19**	**14**	P	**Pn**		**00 13 24.7**	**+0.8**	
	baz=196								
TGL	**Tana Glacier**	**5.22**	**33**		**Pn**		**00 13 25.1**	**+0.8**	
TGL				IAML			00 14 29.9		
	comp=E,42nm,1.0s								
BAGL	**Bagley Icefiel**	**5.25**	**38**		**Pn**		**00 13 25.2**	**+0.6**	
ISLE	**Juniper Island**	**5.25**	**36**	Pn	**Pn**		**00 13 25.0**	**+0.3**	
ISLE				IAML			00 14 41.9		
	comp=E,34nm,1.4s								
ISLE				IAML			00 14 54.3		
	comp=N,39nm,1.0s								
GHO	**Glory Hole Cre**	**5.29**	**358**		**Pn**		**00 13 27.1**	**+1.9**	
GHO				IAML			00 14 47.8		
	comp=N,48nm,1.3s								
N19K	**Bonanza Creek**	**5.32**	**327**		**Pn**		**00 13 25.3**	**-0.3**	
N19K	**Bonanza Creek**	**5.32**	**327**	P	**Pn**		**00 13 25.3**	**-0.3**	
	baz=142								
SML	**Sawmill**	**5.33**	**1**	Pn	**Pn**		**00 13 26.7**	**+1.0**	
SPNN	**North Nagishla**	**5.33**	**338**		**Pn**		**00 13 26.3**	**+0.5**	
SCM	**Sheep Creek Mo**	**5.39**	**6**	Pn	**Pn**		**00 13 27.4**	**+0.9**	
VRDI	**Verde Repeater**	**5.44**	**27**	Pn	**Pn**		**00 13 28.2**	**+0.9**	
VRDI				IAML			00 14 34.7		
	comp=E,21nm,1.5s								
VRDI				IAML			00 14 59.7		
	comp=N,22nm,1.3s								
CHGN	**Chignik**	**5.47**	**272**		**Sg**		**00 15 01.5**	**-0.2**	
SAMH	**Samovar Hills**	**5.49**	**45**		**Pn**		**00 13 28.3**	**+0.4**	
KIAG	**Kiagna River**	**5.49**	**34**		**Pn**		**00 13 28.6**	**+0.6**	
N25K	**Chitina, Valde**	**5.52**	**20**		**Pn**		**00 13 29.7**	**+1.3**	
N25K	**Chitina, Valde**	**5.52**	**20**	P	**Pn**		**00 13 28.9**	**+0.5**	
	baz=203								
GLB	**Gilahina Butte**	**5.54**	**24**	Pn	**Pn**		**00 13 29.1**	**+0.6**	
GRNC	**Granite Creek**	**5.54**	**37**		**Pn**		**00 13 29.2**	**+0.4**	
TABL	**Table Mountain**	**5.55**	**42**		**Pn**		**00 13 30.1**	**+1.2**	
O17K	**Koliganek Bris**	**5.58**	**310**		**Pn**		**00 13 29.4**	**+0.3**	
O17K	**Koliganek Bris**	**5.58**	**310**	P	**Pn**		**00 13 29.4**	**+0.3**	
	baz=123								
PCA	**Pinnacle**	**5.68**	**47**		**Pn**		**00 13 30.8**	**+0.3**	
N18K	**Kilae Creek**	**5.68**	**321**		**Pn**		**00 13 29.8**	**-0.6**	
N18K	**Kilae Creek**	**5.68**	**321**	P	**Pn**		**00 13 29.8**	**-0.6**	
	baz=135								
MCARA	**McCarthy VSAT**	**5.68**	**28**	Pn	**Pn**		**00 13 32.6**	**+2.1**	
PINM	**Pinnacle**	**5.68**	**47**	P	**Pn**		**00 13 30.8**	**+0.3**	
	baz=233								
SKT	**Skwentna**	**5.71**	**346**		**Pn**		**00 13 30.3**	**-0.6**	
M24K	**Tolsona, Glenn**	**5.76**	**11**		**Pn**		**00 13 32.7**	**+1.1**	
PNL	**Peninsula**	**5.81**	**53**		**Pn**		**00 13 32.6**	**+0.3**	
PNL	**Peninsula**	**5.81**	**53**	P	**Pn**		**00 13 32.6**	**+0.3**	
	baz=240								
BARN	**Barnard Glacie**	**5.82**	**35**		**Pn**		**00 13 33.5**	**+1.0**	
CTG	**Chitna Glacier**	**5.85**	**37**	P	**Pn**		**00 13 33.3**	**+0.3**	
	baz=222								
CTGM	**Chitina Glacie**	**5.85**	**37**	Pn	**Pn**		**00 13 33.8**	**+0.8**	
BCPM	**Bancas Point**	**5.85**	**50**	Pn	**Pn**		**00 13 34.0**	**+1.1**	
LOGN	**Logan Glacier**	**5.87**	**39**		**Pn**		**00 13 33.4**	**+0.3**	
SVW2	**Sparrevohn**	**5.88**	**325**	Pn	**Pn**		**00 13 33.7**	**+0.5**	
M20K	**Styx River**	**5.89**	**338**	Pn	**Pn**		**00 13 33.6**	**+0.2**	
O16K	**Kokwok River B**	**5.93**	**305**		**Pn**		**00 13 34.1**	**+0.2**	
O16K	**Kokwok River B**	**5.93**	**305**	P	**Pn**		**00 13 34.1**	**+0.2**	
	baz=118								
N17K	**Nushagak Hills**	**6.06**	**315**	Pn	**Pn**		**00 13 35.3**	**-0.4**	
M19K	**Big River Lodg**	**6.19**	**334**	Pn	**Pn**		**00 13 37.0**	**-0.5**	
CNBA	**Chernabura Isl**	**6.46**	**260**	Pn	**Pn**		**00 13 45.5**	**+4.3**	
O29M	**Mount Kennedy**	**6.49**	**50**		**Pn**		**00 13 42.0**	**+0.3**	
O29M	**Mount Kennedy**	**6.49**	**50**	P	**Pn**		**00 13 42.0**	**+0.3**	
	baz=237								
L19K	**White Mountain**	**6.54**	**333**	Pn	**Pn**		**00 13 42.6**	**+0.2**	
P29M	**Windy Craggy**	**6.55**	**57**		**Pn**		**00 13 43.3**	**+0.8**	
P29M	**Windy Craggy**	**6.55**	**57**	P	**Pn**		**00 13 42.5**	**0.0**	
	baz=245								
M17K	**Holitna River**	**6.72**	**321**		**Pn**		**00 13 45.6**	**+0.9**	
M27K	**Edge Creek, AK**	**6.79**	**27**	Pn	**Pn**		**00 13 47.0**	**+1.1**	
S31K	**Pelican**	**6.86**	**73**	Pn	**Pn**		**00 13 45.9**	**-0.7**	
M16K	**Timber Creek**	**7.05**	**314**	Pn	**Pn**		**00 13 50.3**	**+1.0**	
L18K	**Granite Mounta**	**7.08**	**328**	Pn	**Pn**		**00 13 50.2**	**+0.5**	
N15K	**Iliamna Volcan**	**7.09**	**306**		**Pn**		**00 13 51.4**	**+1.5**	
HYT	**Haines Junctio**	**7.22**	**48**	Pn	**Pn**		**00 13 53.3**	**+1.6**	
O14K	**Tigyukauivet M**	**7.31**	**297**	Pn	**Pn**		**00 13 52.6**	**-0.2**	
L27K	**Beaver Creek,**	**7.41**	**25**	Pn	**Pn**		**00 13 55.5**	**+1.2**	
BCAR	**Beaver Creek A**	**7.42**	**25**	Pn	**Pn**		**00 13 55.5**	**+1.1**	
TTA	**Tatalina**	**7.46**	**333**	Pn	**Pn**		**00 13 56.6**	**+1.6**	
SKAG	**Skagway**	**7.64**	**62**	Pn	**Pn**		**00 13 59.0**	**+1.7**	
L16K	**Owhat River**	**7.66**	**317**	Pn	**Pn**		**00 13 57.7**	**0.0**	
S32K	**Killisnoo**	**7.71**	**77**	Pn	**Pn**		**00 13 58.1**	**-0.2**	
N30M	**Aishikik Lake**	**7.74**	**45**		**Pn**		**00 13 59.9**	**+1.2**	
O30N	**Mendenhall**	**7.79**	**51**	Pn	**Pn**		**00 14 00.7**	**+1.2**	
M29M	**Somme Creek**	**7.87**	**37**		**Pn**		**00 14 01.7**	**+1.1**	
JIS	**Juneau Island**	**7.87**	**71**	Pn	**Pn**		**00 14 01.1**	**+0.6**	
K17K	**Iditarod**	**7.95**	**326**	Pn	**Pn**		**00 14 01.9**	**+0.3**	
M14K	**Bethel**	**8.18**	**307**	Pn	**Pn**		**00 14 06.3**	**+1.6**	
J20K	**Nowinta River**	**8.18**	**343**	Pn	**Pn**		**00 14 06.2**	**+1.4**	
K27K	**Chicken**	**8.21**	**20**	Pn	**Pn**		**00 14 07.3**	**+2.2**	
WHY	**Whitehorse**	**8.28**	**54**	Pn	**Pn**		**00 14 07.2**	**+1.0**	
J19K	**Poorman**	**8.29**	**338**	Pn	**Pn**		**00 14 06.4**	**+0.1**	
J26L	**Joseph Creek**	**8.40**	**15**	Pn	**Pn**		**00 14 09.2**	**+1.3**	
L29M	**L29M**	**8.46**	**34**	Pn	**Pn**		**00 14 09.9**	**+1.3**	
P32M	**Atlin**	**8.46**	**62**	Pn	**Pn**		**00 14 09.4**	**+0.6**	
M30M	**Minto, Yukon**	**8.53**	**40**	Pn	**Pn**		**00 14 10.2**	**+0.5**	
U33K	**Whale Pass**	**8.60**	**86**	Pn	**Pn**		**00 14 11.6**	**+1.0**	
L14K	**Kuka Creek**	**8.76**	**309**	Pn	**Pn**		**00 14 14.8**	**+2.1**	
K15K	**Wolf Creek Mou**	**8.79**	**317**	Pn	**Pn**		**00 14 12.5**	**-0.6**	
DAWY	**Dawson**	**8.85**	**27**	Pn	**Pn**		**00 14 15.0**	**+1.1**	
EGAK	**Eagle**	**9.06**	**21**	Pn	**Pn**		**00 14 18.2**	**+1.4**	
P33M	**Teslin, Yukon**	**9.07**	**59**		**Pn**		**00 14 16.9**	**-0.2**	
K29M	**Barlow Dome**	**9.18**	**32**	Pn	**Pn**		**00 14 19.7**	**+1.1**	
M31M	**Drury Creek, Y**	**9.21**	**46**	Pn	**Pn**		**00 14 20.3**	**+1.3**	
I26K	**Coal Creek Min**	**9.22**	**14**	Pn	**Pn**		**00 14 20.8**	**+1.8**	
H24K	**Noodor Dome**	**9.38**	**2**	Pn	**Pn**		**00 14 24.1**	**+2.9**	
H21K	**Melozitna Rive**	**9.41**	**349**	Pn	**Pn**		**00 14 22.6**	**+0.9**	
R33M	**Jennings River**	**9.79**	**65**	Pn	**Pn**		**00 14 28.1**	**+1.1**	
IMAR	**Indian Mountai**	**9.84**	**348**	Pn	**Pn**		**00 14 28.1**	**+0.6**	
I28M	**Miner Creek**	**9.90**	**21**	Pn	**Pn**		**00 14 27.8**	**-0.6**	
I30M	**Mount Dempster**	**10.56**	**29**	Pn	**Pn**		**00 14 38.4**	**+1.0**	
MMPY	**Sheldon Lake,**	**10.69**	**48**	Pn	**Pn**		**00 14 40.9**	**+1.7**	
GRNB	**Grenville Isla**	**10.97**	**96**	Pn	**Pn**		**00 14 42.3**	**-0.6**	
F21K	**Alatna River**	**11.01**	**350**	Pn	**Pn**		**00 14 44.8**	**+1.4**	
F20K	**Avaraart Lake**	**11.11**	**345**	Pn	**Pn**		**00 14 46.0**	**+1.2**	
BMAR	**Burnt Mountain**	**11.13**	**8**	Pn	**Pn**		**00 14 45.7**	**+0.6**	

IDC 23 00:16:19.2±1.3, 2°70'S×132°53'E, h0km, mb3.8/5, mbtmp3.8/6, ML3.6/1, MS3.5/1, Error ellipse: s-maj=69.2km s-min=24.2km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.23**	**174**	P	Pn	00 20 20.1	-1.3
	0.2nm,0.3s,baz=351,slow=12,SNR=8.2						
WRA				S	Sn	00 23 19.3	-15
	0.5nm,0.5s,baz=332,slow=22,SNR=4.7 0.4nm,0.4s						
ASAR	**Alice Springs**	**20.88**	**176**	P	P	00 21 03.6	+0.4
	2.6nm,0.5s,baz=351,slow=11,SNR=24 2.6nm,0.5s						
LEM	**Lembang**	**25.16**	**260**	LR	LR	00 32 46.7	
	comp=Z,96nm,18.3s,baz=126,slow=39						

PETK	**Petropavlovsk-**	**59.49**	**17**	P			00 26 23.7	-0.4	
	6.2nm,0.9s,baz=163,slow=1.5,SNR=3.6 6.2nm,0.9s								
MKAR	**Makanchi Array**	**66.12**	**325**	P	P		00 27 08.3	-0.1	
	0.4nm,0.5s,baz=118,slow=8.4,SNR=14 0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**70.25**	**327**	P	P		00 27 34.6	+0.3	
	0.1nm,0.3s,baz=124,slow=5.7,SNR=1.6 0.1nm,0.3s								
BVAR	**Borovoye Array**	**75.84**	**327**	P	P		00 28 07.8	+0.4	
	0.2nm,0.3s,baz=118,slow=7.0,SNR=2.2 0.2nm,0.3s								

TEH ***23*** *00:18:07.5, 34°.41N×46°.11E, h10km±85km, ML2.5*
ISN ***23*** *00:18:08.0±0.9, 34°.44N×46°.04E, h14km±5km, ML2.4*
ISC 23 00:18:07.8±1.0, 34°.41N±0°.03×46°.12E±0°.04, h10km, n10, σ1§11/14, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.37**	**37**	Pg	**Pg**	**00 18 15.0**	**-0.2**
IDHR				Sg	**Sg**	**00 18 20.7**	**+0.5**
IGHG	**Ghaleghazi**	**0.38**	**101**	Pg	**Pb**	**00 18 16.0**	**-0.9**
KGS1	**Ghasr-e-Shirin**	**0.45**	**283**	Pg	**Pg**	**00 18 16.2**	**-0.4**
KCHF	**Cheshme Sefid,**	**0.78**	**99**	Pg	**Pg**	**00 18 22.4**	**-0.4**
ILBA	**Ilam Banvizeh**	**0.78**	**174**	Pg	**Pg**	**00 18 22.6**	**-0.3**
IBDR	**Badra**	**1.30**	**187**	*e*Pg	**Pg**	**00 18 33.0**	**+0.2**
IBDR				*e*Sg	**Sg**	**00 18 50.0**	**+0.3**
IBDR				AML	AML	00 18 55.6	
	comp=N,60nm,0.4s						
IBDR				AML	AML	00 19 00.3	
	comp=E,79nm,0.6s						
IKFM	**Kafar-mosalman**	**1.69**	**121**	Pg	**Pg**	**00 18 40.7**	**+0.5**
SDS1	**Sardasht. Az.**	**1.81**	**344**	Pn	**Pg**	**00 18 42.5**	**-0.1**
BHD	**Baghdad**	**1.84**	**232**	*e*Pn	**Pn**	**00 18 40.0**	**+0.6**
BHD				*e*Sn	**Sb**	**00 19 04.5**	**0.0**
RAFI	**Al-Rafai**	**2.68**	**180**	*e*Pn	**Pn**	**00 18 53.0**	**+2.1**
RAFI				*e*Sn	**Sb**	**00 19 26.0**	**-2.7**

NEIC ***23*** *00:21:16.3±1.2, 56°.55N±0°.09×148°.7W±0°.1, h20km±10km, ML3.2/40, ML3.1(AEIC), Error ellipse: s-maj=14.2km s-min=8.0km az=161.0*
AEIC 23 00:21:18.2±1.2, 56°.39N±0°.10×148°.6W±0°.1, h12km±8km, Error ellipse: s-maj=14.4km s-min=9.4km az=178.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.57**	**305**	Pn	Pn	00 21 54.9	-4.7
KDAK	**Kodiak Island**	**2.57**	**305**		Sn	00 22 23.3	-7.4
OHAK	**Old Harbor**	**2.69**	**290**		Pn	00 21 56.6	-4.7
OHAK					Sn	00 22 26.1	-7.6
SYI	**Shuyak Island**	**3.01**	**319**		Pn	00 22 00.8	-4.8
SYI				IAML		00 23 40.3	
	comp=E,33nm,1.4s						
SYI	**Shuyak Island**	**3.01**	**319**		Sn	00 22 35.8	-5.8
CNPM	**China Poot**	**3.44**	**337**		Pn	00 22 06.8	-4.8
CNPM					Sn	00 22 45.2	-7.0
BRSE	**Bradley Lake S**	**3.54**	**342**		Pn	00 22 07.7	-5.3
BRSE					Sn	00 22 47.1	-7.7
BRLK	**Bradley Lake**	**3.59**	**341**		Pn	00 22 08.7	-5.0
P23K	**Montague Islan**	**3.68**	**10**		Pn	00 22 09.6	-5.2
SEW	**Seward**	**3.75**	**354**		Pn	00 22 10.6	-5.2
SEW					Sn	00 22 51.1	-8.7
HIN	**Hinchinbrook I**	**4.17**	**15**		Pn	00 22 16.7	-4.9
HIN	**Hinchinbrook I**	**4.17**	**15**	IAML		00 23 12.2	
	comp=E,52nm,1.5s						
KAIM	**Kayak Island**	**4.19**	**30**		Pn	00 22 17.0	-4.9
SLKM	**Skilak Lake**	**4.21**	**349**		Pn	00 22 17.4	-4.9
O20K	**Slope Mountain**	**4.26**	**332**		Pn	00 22 18.1	-4.8
IVE	**Iliamna Volcan**	**4.31**	**329**		Pn	00 22 18.6	-5.0
CNTC	**Contact Creek**	**4.36**	**299**		Pn	00 22 21.2	-3.1
SUCK	**Suckling Hills**	**4.50**	**33**	Pn	Pn	00 22 21.5	-4.6
FID	**Port Fidalgo**	**4.52**	**14**		Pn	00 22 20.8	-5.6
FID				IAML		00 23 05.6	
	comp=N,27nm,1.5s						
GLI	**Glacier Island**	**4.58**	**9**		Pn	00 22 21.3	-5.8
GLI				Sn	Sn	00 23 11.8	-8.3
GLI				IAML		00 24 29.5	
	comp=N,25nm,1.5s						
P18K	**Big Mountain,**	**4.63**	**313**		Pn	00 22 23.5	-4.5
P18K	**Big Mountain,**	**4.63**	**313**	IAML		00 23 20.0	
	comp=N,11nm,1.4s						
BERG	**Bertg Lake**	**4.78**	**31**		Pn	00 22 25.0	-5.0
GRIN	**Grindle Hills**	**4.80**	**33**		Pn	00 22 25.7	-4.6
SNH	**Sunshine Point**	**4.88**	**36**	Pn	Pn	00 22 26.5	-4.8
KHIT	**Khitrov Hills**	**4.95**	**33**		Pn	00 22 27.6	-4.9
KNK	**Knik Glacier**	**5.04**	**1**		Pn	00 22 29.0	-4.5
KNK				IAML		00 25 13.5	
	comp=N,11nm,1.3s						
KNK				IAML		00 25 19.0	
	comp=E,12nm,0.8s						
BMRM	**Bremner River**	**5.05**	**23**		Pn	00 22 29.1	-4.6
WAX	**Waxell Ridge**	**5.08**	**34**		Pn	00 22 29.2	-4.9
KLU	**Klutina**	**5.31**	**14**		Pn	00 22 33.0	-4.3
KLU	**Klutina**	**5.31**	**14**	IAML		00 23 32.6	
	comp=E,11nm,1.2s						
KLU				IAML		00 25 14.4	
	comp=N,16nm,1.3s						
TGL	**Tana Glacier**	**5.33**	**32**		Pn	00 22 32.8	-4.8
TGL	**Tana Glacier**	**5.33**	**32**	IAML		00 24 13.8	
	comp=N,17nm,1.5s						
TGL				IAML		00 24 28.4	
	comp=E,16nm,1.4s						
BAGL	**Bagley Icefiel**	**5.36**	**37**		Pn	00 22 33.3	-4.6
ISLE	**Juniper Island**	**5.36**	**35**		Pn	00 22 33.3	-4.7
ISLE	**Juniper Island**	**5.36**	**35**	IAML		00 25 21.3	
	comp=E,21nm,1.5s						
ISLE				IAML		00 25 25.1	
	comp=N,25nm,1.4s						
N19K	**Bonanza Creek**	**5.39**	**328**		Pn	00 22 33.8	-4.6
N19K	**Bonanza Creek**	**5.39**	**328**	IAML		00 23 49.6	
	comp=E,7.5nm,1.4s						
N19K				IAML		00 25 56.7	
	comp=N,7.9nm,1.4s						
GHO	**Glory Hole Cre**	**5.40**	**359**	Pn	Pn	00 22 33.5	-5.1
GHO				IAML		00 23 35.9	
	comp=E,14nm,1.0s						
GHO				IAML		00 25 12.6	
	comp=N,19nm,0.6s						
CHGN	**Chignik**	**5.44**	**273**		Pn	00 22 39.2	+0.2
VRDI	**Verde Repeater**	**5.55**	**27**		Pn	00 22 35.8	-4.9
SAMH	**Samovar Hills**	**5.59**	**45**		Pn	00 22 36.6	-4.5
KIAG	**Kiagna River**	**5.60**	**33**		Pn	00 22 36.6	-4.8
O17K	**Koliganek Bris**	**5.62**	**311**		Pn	00 22 37.2	-4.4
GLB	**Gilahina Butte**	**5.65**	**24**		Pn	00 22 37.6	-4.4
GRNC	**Granite Creek**	**5.65**	**37**		Pn	00 22 37.5	-4.6
TABL	**Table Mountain**	**5.66**	**41**		Pn	00 22 37.6	-4.6
PCA	**Pinnacle**	**5.78**	**46**		Pn	00 22 39.3	-4.4
BARN	**Barnard Glacie**	**5.92**	**35**		Pn	00 22 41.5	-4.4
BCPM	**Bancas Point**	**5.95**	**49**	Pn	Pn	00 22 41.8	-4.2
CTGM	**Chitina Glacie**	**5.96**	**37**		Pn	00 22 41.7	-4.6
O16K	**Kokwok River B**	**5.97**	**306**	Pn	Pn	00 22 42.5	-3.8
LOGN	**Logan Glacier**	**5.97**	**39**	Pn	Pn	00 22 41.4	-5.1
O29M	**Mount Kennedy**	**6.59**	**49**	Pn	Pn	00 22 50.9	-4.0
M17K	**Holitna River**	**6.78**	**321**	Pn	Pn	00 22 51.6	-5.8
M27K	**Edge Creek, AK**	**6.91**	**27**	Pn	Pn	00 22 55.4	-3.8
S31K	**Pelican**	**6.93**	**72**	Pn	Pn	00 22 54.2	-5.2
M16K	**Timber Creek**	**7.10**	**315**	Pn	Pn	00 22 56.6	-5.2
SIT	**Sitka**	**7.36**	**79**	Pn	Pn	00 23 02.9	-2.4
N30M	**Aishikik Lake**	**7.84**	**45**	Pn	Pn	00 23 08.1	-3.9
M29M	**Somme Creek**	**7.98**	**36**	Pn	Pn	00 23 10.4	-3.6
K17K	**Iditarod**	**8.02**	**326**	Pn	Pn	00 23 11.1	-3.2
WHY	**Whitehorse**	**8.37**	**54**	Pn	Pn	00 23 15.2	-4.0
L29M	**L29M**	**8.56**	**34**	Pn	Pn	00 23 18.3	-3.6

IDC ***23*** *00:36:25.8±0.8, 21°.02N×146°.77E, h0km, mb3.8/14, mbtmp3.9/16, ML4.5/2, Error ellipse: s-maj=26.1km s-min=20.2km az=81.0*
ISC 23 00:36:31.9±0.8, 21°.2N±0°.1×146°.5E±0°.2, h35km, n16, σ1§54/19, mb3.7/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**7.11**	**327**	Pn	**Pn**	**00 38 13.4**	**0.0**
	2.8nm,0.3s,baz=307,slow=19,SNR=2.7						
JCJ				Sn	**Sn**	**00 39 29.0**	**-3.9**
	4.3nm,0.3s,baz=31,slow=22,SNR=1.6 104nm,0.9s						
JOW	**Kunigami**	**17.61**	**292**	P	**P**	**00 40 35.5**	**+0.2**
	4.2nm,0.3s,baz=50,slow=20,SNR=5.8 10nm,0.4s						
SONM	**Songino Array**	**41.75**	**319**	P	**P**	**00 44 20.5**	**+2.7**
	0.2nm,0.3s,baz=128,slow=7.4,SNR=2.0 0.2nm,0.3s						
WRA	**Warramunga Arr**	**42.58**	**197**	P	**P**	**00 44 22.3**	**-2.4**
	1.2nm,0.7s,baz=17,slow=8.9,SNR=11 1.2nm,0.7s						
ASAR	**Alice Springs**	**46.25**	**196**	P	**P**	**00 44 53.0**	**-1.0**
	0.2nm,0.4s,baz=8.6,slow=6.8,SNR=1.6 0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**56.56**	**321**	P	**P**	**00 46 11.3**	**+0.5**
	0.7nm,0.3s,baz=105,slow=7.5,SNR=5.1						
ZALV				PcP	**PcP**	**00 47 07.0**	**-0.1**
	0.3nm,0.4s,baz=107,slow=5.1,SNR=1.7 0.7nm,0.3s						
MKAR	**Makanchi Array**	**57.35**	**313**	P	**P**	**00 46 17.8**	**+1.2**
	0.2nm,0.5s,baz=91,slow=8.8,SNR=4.5						
MKAR				PcP	**PcP**	**00 47 11.0**	**+0.7**
	0.3nm,0.6s,baz=59,slow=6.8,SNR=2.1 0.2nm,0.5s						
NRIK	**Noril'sk**	**59.57**	**339**	P	**P**	**00 46 32.8**	**+1.2**
	0.9nm,0.4s,baz=119,slow=9.0,SNR=4.5 0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**60.03**	**317**	P	**P**	**00 46 36.4**	**+1.3**
	0.7nm,0.6s,baz=93,slow=7.6,SNR=11 0.7nm,0.6s						
ILAR	**Eielson Array**	**61.08**	**27**	P	**P**	**00 46 41.0**	**-1.1**
	0.4nm,0.7s,baz=298,slow=4.7,SNR=2.3 0.4nm,0.7s						
BVAR	**Borovoye Array**	**65.09**	**320**	P	**P**	**00 47 10.3**	**+1.4**
	1.7nm,0.4s,baz=91,slow=7.2,SNR=20 1.7nm,0.4s						
YKA	**Yellowknife Ar**	**75.43**	**28**	P	**P**	**00 48 11.7**	**-0.3**
	0.2nm,0.5s,baz=285,slow=6.0,SNR=4.1 0.2nm,0.5s						
NVAR	**Mina Array Bea**	**80.99**	**52**	P	**P**	**00 48 43.2**	**-0.4**
	0.3nm,0.5s,baz=285,slow=7.4,SNR=2.2 0.3nm,0.5s						
FINES	**FINESS Array B**	**84.97**	**335**	P	**P**	**00 49 03.3**	**0.0**
	2.6nm,0.4s,baz=70,slow=4.8,SNR=40 2.6nm,0.4s						
PDAR	**Pinedale Array**	**85.53**	**46**	P	**P**	**00 49 06.9**	**0.0**
	0.1nm,0.3s,baz=321,slow=1.9,SNR=2.1 0.1nm,0.3s						
HFS	**Hagfors**	**90.38**	**338**	P	**P**	**00 49 28.8**	**-0.6**
	0.5nm,0.4s,baz=297,slow=6.3,SNR=4.2 0.5nm,0.4s						

JMA ***23*** *00:43:24.7±0.4, 44°N±2°×14°8E±°, h0km, MV3.8/23, SE OFF ETOROFU*
SKHL ***23*** *00:43:25.3±0.2, 44°.30N×148°.10E, h45km±5km, mb4.5/3*
ISC 23 00:43:22.2±2.8, 44°.23N±0°.09×148°.2E±0°.2, h17km±11km, n16, σ1§40/25, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.02**	**249**	*i* P	**Pg**	**00 43 42.0**	**+0.1**
SHO				AMB	AMB	00 43 42.2	
	110nm,0.2s						
SHO				*e*S	**Sg**	**00 43 54.5**	**-0.7**
SHO				A	A	00 43 55.1	
	510nm,0.4s						
SHO				A	A	00 43 55.1	
	2µm,0.4s						
KUR	**Kuril'sk**	**1.02**	**349**	*i* P	**Pg**	**00 43 41.5**	**-0.4**
KUR				AMB	AMB	00 43 41.9	
	300nm,0.3s						
KUR				*i* S	**Sb**	**00 43 53.6**	**-0.9**
KUR				A	A	00 43 54.9	
	500nm,0.3s						
KUR				A	A	00 43 54.9	
	660nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**264**	*e*P	**Pn**	**00 43 51.1**	**+0.6**
YUK				AMB	AMB	00 43 53.9	
	150nm,0.2s						
YUK				*e*S	**Sn**	**00 44 10.6**	**-0.8**
YUK				A	A	00 44 14.1	

	comp=Z,36nm,18.2s,baz=285,slow=30							
BOSA	**Boshof**	**38.79**	**254**	LR	LR	01 28 54.6		
	comp=Z,47nm,18.3s,baz=194,slow=34							
TSUM	**Tsumeb**	**47.43**	**266**	LR	LR	01 32 35.3		
	comp=Z,38nm,21.2s,baz=299,slow=33							
ASAR	**Alice Springs**	**59.04**	**104**	P	P	01 16 41.4	+0.5	
	0.5nm,0.6s,baz=254,slow=6.2,SNR=5.4							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**60.48**	**100**	P	P	01 16 50.0	-0.8	
	0.5nm,0.7s,baz=255,slow=6.2,SNR=2.3							
	0.5nm,0.7s							
DAV	**Davao City (W)**	**63.81**	**68**	LR	LR	01 44 08.2		
	comp=Z,56nm,19.9s,baz=354,slow=35							
MKAR	**Makanchi Array**	**72.23**	**10**	P	P	01 18 05.5	+0.1	
	0.4nm,0.7s,baz=200,slow=5.7,SNR=6.0							
	0.4nm,0.7s							

IDC 23 01:17:50.8±4.5, 27°38N×140°53E, h290km±100km, mb2.9/4, mbtmp3.6/4, Error ellipse: s-maj=253.4km s-min=22.3km az=72.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**9.35**	**348**	P	Pn	01 20 00.8	-0.1
	72nm,0.3s,baz=324,slow=49,SNR=99						
SONM	**Songino Array**	**33.50**	**317**	P	P	01 24 02.8	-0.6
	0.3nm,0.6s,baz=105,slow=8.3,SNR=3.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**47.42**	**188**	P	P	01 25 56.7	-0.1
	0.9nm,0.8s,baz=12,slow=8.4,SNR=5.6						
	0.9nm,0.8s						
KURBB	**Kurchatov Array**	**51.79**	**314**	P	P	01 26 28.9	-0.3
	0.3nm,0.5s,baz=89,slow=7.0,SNR=5.9						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**56.84**	**317**	P	P	01 27 05.9	+0.5
	0.6nm,0.7s,baz=94,slow=7.2,SNR=4.8						
	0.6nm,0.7s						

IDC 23 01:19:23.6±4.2, 1°45S×130°59E, h0km, mb3.4/2, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=311.5km s-min=26.0km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.74**	**169**	P	P	01 23 43.0	-1.2
	0.1nm,0.3s,baz=349,slow=11,SNR=4.6						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**22.32**	**172**	P	P	01 24 23.6	+0.5
	0.9nm,0.3s,baz=350,slow=11,SNR=19						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**63.98**	**325**	P	P	01 29 58.9	0.0
	0.2nm,0.5s,baz=120,slow=10,SNR=7.2						
	0.2nm,0.5s						

*TEH **23** 01:23:08.6, 33°.80N×45°.63E, h10km±107km, ML2.9*
*ISN **23** 01:23:08.1±0.4, 33°.82N×45°.73E, h14km±2km, ML2.9*
ISC 23 01:23:09.3±1.0, 33°.78N±0°.04×45°.64E±0°.05, h10km, n9, σ1s05/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILBA	**Ilam Banvizeh**	**0.50**	**108**	Pg	**Pg**	**01 23 18.8**	**-0.3**
ILBA				Sg	**Sb**	**01 23 26.9**	**-0.8**
IBDR	**Badra**	**0.71**	**160**	*e*Pg	**Pg**	**01 23 22.0**	**-1.1**
IBDR				*e*Sg	**Sg**	**01 23 32.0**	**-0.4**
KGS1	**Ghasr-e-Shirin**	**0.72**	**357**	Pg	**Pg**	**01 23 22.6**	**-0.6**
IGHG	**Ghaleghazi**	**0.95**	**55**	Pg	**Pg**	**01 23 27.2**	**-0.4**
IDHR	**Dehrash**	**1.11**	**34**	Pg	**Pg**	**01 23 29.2**	**-1.4**
BHD	**Baghdad**	**1.17**	**244**	*e*Pg	**Pn**	**01 23 31.0**	**-0.6**
BHD				AML	AML	01 23 41.2	
	comp=E,187nm,0.4s						
BHD				*e*Sg	**Sb**	**01 23 48.0**	**+1.3**
KCHF	**Cheshme Sefid,**	**1.27**	**67**	Pg	**Pb**	**01 23 33.0**	**-0.3**
ILIN	**Lien**	**1.58**	**44**	Pg	**Pn**	**01 23 38.9**	**+1.3**
RAFI	**Al-Rafai**	**2.09**	**169**	*e*Pn	**Pn**	**01 23 45.0**	**+0.6**
RAFI				*e*Sn	**Sn**	**01 24 12.0**	**+1.5**
RAFI				AML	AML	01 24 12.9	
	comp=N,116nm,0.0s						
RAFI				AML	AML	01 24 13.4	
	comp=E,115nm,0.2s						

*TIR **23** 01:45:45.0, 42°.65N×21°.02E, h0km±2km, Ml2.5*
*SKO **23** 01:45:47.2, 42°.71N×20°.99E, h0km, ML2.8*
*RHSSO **23** 01:45:47.1±0.6, 42°.85N×20°.98E, h4km±2km, ML2.4/9*
*BEO **23** 01:45:48.5±0.4, 42°.74N×21°.09E, h4km±5km, ML2.5/16*
*PDG **23** 01:45:48.7±0.4, 42°.73N×20°.81E, h12km±1km, ML2.5/12, Error ellipse: s-maj=1.4km s-min=2.2km az=0.0*
ISC 23 01:45:46.3±1.0, 42°.74N±0°.01×21°.01E±0°.01, h9km±9km, n83, σ1s20/147, 25C-15D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELS	**Selova**	**0.49**	**9**	*e*Pg	**Pb**	**01 45 56.2**	**-0.9**
SELS				*e*Sg	**Sb**	**01 46 03.4**	**-1.0**
BARS	**Barje**	**0.60**	**82**	*e*Pg	**Pg**	**01 45 58.3**	**+0.4**
BARS				*e*Sg	**Sb**	**01 46 07.0**	**-0.5**
BARS	**Barje**	**0.60**	**82**	*i*Pg	**Pg**	**01 45 58.2**	**+0.4**
BARS				*i*Sg	**Sb**	**01 46 07.2**	**-0.3**
BCI	**Bajram Curri**	**0.79**	**242**	P	**Pg**	**01 46 00.2**	**-1.3**
	baz=249						
BCI				S	**Sg**	**01 46 12.5**	**+0.8**
	baz=249						
BCI				AMP			
	comp=N,0.9nm,0.5s,baz=249						
PVY	**Plav**	**0.79**	**260**	↑*i*Pg	**Pg**	**01 46 00.3**	**-1.2**
PVY				*i*Sg	**Sg**	**01 46 11.0**	**-0.8**
PRVS	**Prvonek**	**0.82**	**106**	*e*Pg	**Pb**	**01 46 03.3**	**+0.6**
PRVS				*e*Sg	**Sg**	**01 46 13.3**	**+0.6**
SKO	**Skopje**	**0.83**	**157**	↓*i*Pg	**Pg**	**01 46 01.4**	**-0.8**
SKO				*i*Sg	**Sg**	**01 46 12.7**	**-0.2**
BEY	**Berane**	**0.83**	**280**	*i*Pg	**Pg**	**01 46 01.8**	**-0.5**
IVA	**Berane**	**0.83**	**280**	↓*i*Pg	**Pg**	**01 46 01.4**	**-0.9**
IVA				*i*Sg	**Sg**	**01 46 12.4**	**-0.8**
BOVS	**Bovan**	**1.03**	**29**	↓P	**Pn**	**01 46 06.5**	**-0.5**
BOVS				↓S	**Sn**	**01 46 21.1**	**-0.4**
BOVS	**Bovan**	**1.03**	**29**	*e*Pg	**Pn**	**01 46 06.5**	**-0.5**
BOVS				*e*Sg	**Sn**	**01 46 21.0**	**-0.6**
IVAS	**Ivanjica**	**1.05**	**323**	*e*Pg	**Pn**	**01 46 07.3**	**0.0**
IVAS				*e*Sg	**Sn**	**01 46 21.2**	**-0.9**
PUK	**Puka**	**1.08**	**230**	P	**Pg**	**01 46 06.0**	**-1.0**
	baz=235						
PUK				S	**Sg**	**01 46 21.8**	**+0.7**
	baz=235						
PUK				AMP			
	comp=N,0.7nm,0.5s,baz=235						
KOME	**Kolasin**	**1.11**	**276**	↑*i*Pg	**Pg**	**01 46 06.7**	**-0.8**
KOME				*i*Sg	**Sg**	**01 46 20.8**	**-1.1**
BOSS	**Bosilegrad**	**1.11**	**102**	*e*Pg	**Pg**	**01 46 07.4**	**-0.2**
BOSS				*e*Sg	**Sg**	**01 46 21.0**	**-1.0**
PHP	**Peshkopia**	**1.13**	**202**	P	**Pg**	**01 46 06.4**	**-1.7**
	baz=205						
PHP				S	**Sg**	**01 46 22.4**	**-0.3**
	baz=205						
PHP				AMP			
	comp=N,0.9nm,0.5s,baz=205						
GRUS	**Gruza**	**1.17**	**349**	*e*Pg	**Pn**	**01 46 09.2**	**+0.3**
GRUS				*e*Sg	**Sn**	**01 46 27.3**	**+2.3**
ZAPS	**Zavoj**	**1.31**	**65**	*e*Pg	**Pg**	**01 46 11.9**	**+0.6**
ZAPS				*e*Sg	**Sn**	**01 46 28.6**	**+0.2**
PLE	**Pljevlja**	**1.33**	**297**	↑*i*Pg	**Pn**	**01 46 10.7**	**-0.5**
PLE				*i*Sg	**Sn**	**01 46 29.4**	**+0.3**
ZAGS	**Zajecar**	**1.40**	**39**	*e*Pg	**Pn**	**01 46 11.9**	**-0.1**
ZAGS				*e*Sg	**Sg**	**01 46 30.5**	**-0.7**
DRME	**Dracevica, Mon**	**1.46**	**248**	↑*i*Pg	**Pn**	**01 46 13.2**	**+0.4**
DRME				*i*Sg	**Sg**	**01 46 33.7**	**+0.5**
DRME	**Dracevica, Mon**	**1.46**	**248**	*e*Pg	**Pn**	**01 46 13.1**	**+0.3**
DRME				*e*Sg	**Sg**	**01 46 33.6**	**+0.4**
RUDO	**Rudo**	**1.49**	**307**	*e*Pg	**Pn**	**01 46 12.1**	**-1.2**
RUDO				*e*Sg	**Sn**	**01 46 31.3**	**-1.6**
BLKB	**Belogradchik**	**1.50**	**53**	↑P	**Pn**	**01 46 13.7**	**+0.2**
BLKB				↑S	**Sg**	**01 46 35.9**	**+1.3**
NKME	**Niksic**	**1.52**	**272**	↑*i*Pg	**Pb**	**01 46 14.4**	**-0.2**
NKME				*i*Sg	**Sg**	**01 46 35.2**	**+0.2**
ULC	**Ulcinj**	**1.52**	**240**	↑*i*Pg	**Pb**	**01 46 14.8**	**+0.1**
ULC				*i*Sg	**Sg**	**01 46 35.8**	**+0.7**
SVIS	**Svilajnac**	**1.54**	**5**	*e*Pg	**Pg**	**01 46 16.9**	**+1.2**
SVIS				*e*Sg	**Sg**	**01 46 38.1**	**+2.5**
TRUS	**Trudelj**	**1.55**	**344**	*e*Pg	**Pg**	**01 46 16.3**	**+0.3**
TRUS				*e*Sg	**Sg**	**01 46 39.0**	**+2.9**
DIVS	**Divibare**	**1.55**	**332**	*e*Pg	**Pg**	**01 46 15.7**	**-0.3**
DIVS				*e*Sg	**Sg**	**01 46 39.8**	**+3.7**
CEME	**Cevo**	**1.56**	**264**	↑*i*Pg	**Pn**	**01 46 14.7**	**+0.5**
CEME				*i*Sg	**Sg**	**01 46 36.7**	**+0.4**
UPM	**Unac-Piva**	**1.61**	**287**	↓*i*Pg	**Pn**	**01 46 15.5**	**+0.3**
UPM				*e*Sg	**Sb**	**01 46 37.0**	**+0.1**
UPM	**Unac-Piva**	**1.61**	**287**	*e*Pn	**Pn**	**01 46 15.4**	**+0.3**
UPM				*e*Sn	**Sb**	**01 46 36.7**	**-0.2**
BUM	**Brajici-Budva**	**1.62**	**255**	↓*i*Pg	**Pb**	**01 46 16.5**	**0.0**
BUM				*i*Sg	**Sg**	**01 46 38.9**	**+0.4**
BBLS	**Lazići**	**1.63**	**314**	*e*Pg	**Pg**	**01 46 18.5**	**+1.0**
BBLS				*e*Sg	**Sg**	**01 46 43.0**	**+4.4**
BBLS	**Lazići**	**1.63**	**314**	*e*Pg	**Pn**	**01 46 15.2**	**0.0**
BBLS				*e*Sg	**Sn**	**01 46 36.4**	**0.0**
TIR	**Tirane**	**1.63**	**212**	↓P	**Pb**	**01 46 16.8**	**+0.3**
TIR				↑S	**Sg**	**01 46 40.4**	**+1.8**
TIR	**Tirane**	**1.63**	**212**	P	**Pn**	**01 46 16.1**	**+0.9**
	baz=214						
TIR				S	**Sg**	**01 46 39.0**	**+0.4**
	baz=214						
TIR				AMP			
	comp=N,0.1nm,0.7s,baz=214						
OHR	**Ohrid**	**1.63**	**186**	*i*Pn	**Pn**	**01 46 15.7**	**+0.4**
OHR				*i*Sg	**Sb**	**01 46 38.6**	**+1.3**
OHR				*e*Lg	Lg	01 46 39.5	
	comp=N,38nm,0.5s						
OHR				*e*Lg	Lg	01 46 40.7	
	comp=E,167nm,0.9s						
KUBS	**Kucevo**	**1.74**	**16**	*e*Pg	**Pg**	**01 46 19.3**	**-0.4**
KUBS				*e*Sg	**Sg**	**01 46 43.1**	**+0.8**
KKB	**Krupnik**	**1.81**	**119**	*i*Pn	**Pn**	**01 46 17.8**	**+0.1**
BRY	**Bratogost**	**1.83**	**276**	*e*Pn	**Pn**	**01 46 18.7**	**+0.7**
BRY				*i*Sn	**Sb**	**01 46 43.2**	**+0.2**
BRY	**Bratogost**	**1.83**	**276**	*e*Pn	**Pn**	**01 46 18.6**	**+0.6**
BRY				*e*Sn	**Sn**	**01 46 42.2**	**+0.8**
KLINJ	**Klinje**	**1.83**	**284**	*e*Pn	**Pn**	**01 46 18.5**	**+0.4**
KLINJ				*e*Sn	**Sn**	**01 46 41.7**	**+0.2**
HCY	**Herceg Novi**	**1.88**	**262**	*e*Pn	**Pb**	**01 46 20.1**	**-0.7**
HCY				*i*Sn	**Sb**	**01 46 44.9**	**+0.5**
HCY	**Herceg Novi**	**1.88**	**262**	*e*Pn	**Pn**	**01 46 19.3**	**+0.7**
HCY				*e*Sn	**Sb**	**01 46 44.3**	**-0.1**
TREB	**Trebinje**	**1.96**	**270**	*e*Pn	**Pb**	**01 46 21.2**	**-1.0**
TREB				*e*Sn	**Sn**	**01 46 45.7**	**+1.2**
FNA	**Florina**	**1.97**	**172**	P	**Pb**	**01 46 21.7**	**-0.7**
	baz=171						
FNA				S	**Sb**	**01 46 48.2**	**+1.2**
	baz=171						
FNA	**Florina**	**1.97**	**172**	*i*Pn	**Pn**	**01 46 21.4**	**+1.5**
HAPS	**Han Pijesak,BI**	**2.02**	**313**	*e*Pn	**Pn**	**01 46 20.3**	**-0.3**
HAPS				*e*Sn	**Sn**	**01 46 44.9**	**-1.2**
GRG	**Griva**	**2.06**	**149**	*i*Pn	**Pn**	**01 46 20.9**	**-0.2**
MDVR	**Moldovita**	**2.11**	**14**	↑P	**Pg**	**01 46 27.6**	**+1.0**
MDVR				↑S	**Sg**	**01 46 55.1**	**+1.2**
TEKS	**Tekeris**	**2.11**	**330**	*e*Pg	**Pg**	**01 46 25.9**	**-0.7**
TEKS				*e*Sg	**Sg**	**01 46 57.0**	**+3.0**
TEKS	**Tekeris**	**2.11**	**330**	*e*Pn	**Pn**	**01 46 22.0**	**+0.2**
TEKS				*e*Sn	**Sn**	**01 46 46.5**	**-1.6**
DBRK	**Dubrovnik**	**2.11**	**269**	*e*Pn	**Pn**	**01 46 23.0**	**+1.1**
KNT	**Kendrikon**	**2.11**	**138**	*i*Pn	**Pn**	**01 46 21.5**	**-0.3**
KBN	**Korca**	**2.12**	**185**	P	**Pb**	**01 46 25.3**	**+0.4**
	baz=185						
KBN				S	**Sb**	**01 46 53.5**	**+2.2**
	baz=185						
BAIL	**Bailesti**	**2.13**	**52**	↓S	**Sg**	**01 46 57.8**	**+3.0**
NEVS	**Nevesinje**	**2.21**	**286**	*e*Pn	**Pn**	**01 46 23.7**	**+0.5**
NEVS				*e*Sn	**Sn**	**01 46 50.8**	**+0.2**
RMGR	**Halanga-Turnu**	**2.28**	**32**	↓S	**Sg**	**01 47 01.3**	**+1.8**
MMP	**Musomishta**	**2.36**	**119**	*i*Pn	**Pb**	**01 46 29.1**	**+0.1**
HERR	**Herculane**	**2.37**	**25**	↑P	**Pn**	**01 46 26.6**	**+1.2**
STON	**Ston**	**2.44**	**274**	*e*Pn	**Pn**	**01 46 27.8**	**+1.5**
STON	**Ston**	**2.44**	**274**	*e*Pn	**Pn**	**01 46 27.8**	**+1.5**
STON				*e*Sn	**Sn**	**01 46 57.6**	**+1.3**
FRGS	**Fruska Gora**	**2.57**	**341**	↓P	**Pb**	**01 46 30.7**	**-1.9**
FRGS				↑S	**Sg**	**01 47 11.8**	**+3.0**
FRGS	**Fruska Gora**	**2.57**	**341**	*e*Pn	**Pn**	**01 46 27.9**	**-0.2**
FRGS				*e*Sn	**Sn**	**01 46 58.2**	**-1.4**
LSK	**Leskovik**	**2.60**	**187**	P	**Pb**	**01 46 32.5**	**-0.7**
	baz=188						
BANR	**Banloc**	**2.65**	**2**	↑P	**Pg**	**01 46 37.2**	**+0.2**
BANR				↓S	**Sg**	**01 47 14.0**	**+2.8**
PLVB	**Pleven**	**2.72**	**75**	↑P	**Pg**	**01 46 37.8**	**-0.7**
PLVB				↑S	**Sg**	**01 47 16.9**	**+3.2**
DOB	**Doboj**	**2.90**	**314**	*e*Pn	**Pn**	**01 46 32.8**	**+0.1**
BZS	**Buzias**	**2.91**	**8**	↓P	**Pb**	**01 46 36.6**	**-1.8**
BZS				↓S	**Sg**	**01 47 19.5**	**-0.2**
RICI	**Ricice**	**2.94**	**286**	*e*Pn	**Pb**	**01 46 35.1**	**+1.9**
GZR	**Gura Zlata**	**2.94**	**25**	↑P	**Pb**	**01 46 37.0**	**-2.0**
GZR				↑S	**Sg**	**01 47 19.5**	**-1.4**
IGT	**Igoumenitsa**	**3.24**	**189**	P	**Pn**	**01 46 38.6**	**+1.2**
	baz=190						
IGT				S	**Sb**	**01 47 22.9**	**-0.8**
	baz=190						
LOT	**Lotru**	**3.36**	**35**	↑S	**Sg**	**01 47 34.4**	**+0.3**
BLY	**Banja Luka**	**3.42**	**307**	*e*Pn	**Pn**	**01 46 40.4**	**+0.5**
BLY				*e*Sn	**Sn**	**01 47 19.7**	**-0.9**
SIRR	**Siria**	**3.56**	**7**	↑P	**Pg**	**01 46 53.0**	**-1.4**
SIRR				↓S	**Sg**	**01 47 40.9**	**+0.3**
ELND	**Elena**	**3.58**	**85**	↓P	**Pg**	**01 46 53.2**	**-1.6**
ELND				↑S	**Sg**	**01 47 41.0**	**-0.3**
A050A	**Klekovaca**	**3.69**	**300**	*e*Pn	**Pn**	**01 46 43.9**	**+0.3**
A051A	**Mrakovica**	**3.74**	**309**	*e*Pn	**Pn**	**01 46 43.7**	**-0.5**
A051A				*e*Sn	**Sn**	**01 47 26.9**	**-1.5**
ZIRJ	**Zirje**	**4.03**	**285**	*e*Pn	**Pn**	**01 46 48.5**	**+0.3**
UDBI	**Udbina**	**4.21**	**297**	*e*Pn	**Pn**	**01 46 52.0**	**+1.3**
MARR	**Marisel-Cluj**	**4.21**	**20**	↑P	**Pg**	**01 47 06.3**	**-0.7**
MARR				↑S	**Sg**	**01 47 59.7**	**-1.9**
DRGR		**4.23**	**16**	↑P	**Pg**	**01 47 06.1**	**-1.2**

*ROM **23** 01:59:49.5±0.2, 36°.96N±0°.01×16°.09E±0°.01, h22km±1km, ML2.8/18, Error ellipse: s-maj=1.3km s-min=1.1km az=310.0*
*THE **23** 01:59:55.4, 37°.04N×16°.92E, h10km±47km, ML2.6/2, Error ellipse: s-maj=62.9km s-min=4.4km az=254.0*
ISC 23 01:59:48.1±1.5, 36°.93N±0°.05×16°.23E±0°.03, h26km±15km, n24, σ1s54/37, 1C-1D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGST	**Augusta-Monte**	**0.87**	**293**	P	**Pb**	**02 00 04.1**	**-0.5**
AGST				S	**Sb**	**02 00 14.5**	**-1.3**
AGST				AML	AML		
	comp=N,451µm,1.6s						
AGST				AML	AML		
	comp=E,538µm,0.1s						
AGST				AML	AML		
	comp=N,451µm,0.4s						
HPAC	**Pachino**	**0.93**	**256**	↑*i*P	**Pn**	**02 00 06.2**	**+0.8**
HPAC				S	**Sn**	**02 00 18.6**	**+0.6**
HPAC				AML	AML		
	comp=E,981µm,1.4s						
HPAC				AML	AML		
	comp=N,1805µm,1.5s						
HPAC				AML	AML		
	comp=E,981µm,0.6s						
EPOZ	**Pozzillo**	**1.09**	**303**	P	**Pn**	**02 00 08.4**	**+0.7**
SOI	**Samo**	**1.15**	**353**	P	**Pb**	**02 00 10.9**	**+1.6**
MTTG	**Motta San Giov**	**1.16**	**338**	P	**Pn**	**02 00 09.2**	**+0.5**
HMDC	**Modica**	**1.16**	**272**	P	**Pn**	**02 00 08.8**	**+0.1**
HMDC				S	**Sb**	**02 00 23.2**	**-1.0**
HMDC				AML	AML		
	comp=E,1335µm,0.8s						
HMDC				AML	AML		
	comp=N,1670µm,0.3s						
HMDC				AML	AML		
	comp=E,1335µm,1.2s						
HLNI	**Lentini**	**1.17**	**292**	↓*i*P	**Pn**	**02 00 08.4**	**-0.3**
HLNI				S	**Sb**	**02 00 22.5**	**-1.8**
HLNI				AML	AML		
	comp=E,634µm,0.7s						
HLNI				AML	AML		
	comp=N,547µm,0.5s						
HLNI				AML	AML		
	comp=E,634µm,1.3s						
ESML	**S. M. di Licod**	**1.28**	**303**	P	**Pn**	**02 00 10.5**	**+0.1**
ESML				S	**Sn**	**02 00 26.5**	**-0.3**
ESML				AML	AML		
	comp=E,273µm,1.0s						
ESML				AML	AML		
	comp=N,274µm,1.5s						
ESML				AML	AML		
	comp=N,274µm,0.5s						
ESML				AML	AML		
	comp=E,273µm,1.0s						
AIO	**Antillo**	**1.31**	**323**	P	**Pn**	**02 00 11.2**	**+0.4**
CEL	**Celeste**	**1.36**	**349**	P	**Pb**	**02 00 13.4**	**+0.5**
CEL				S	**Sb**	**02 00 30.9**	**+1.0**
CEL				AML	AML		
	comp=E,200µm,0.3s						
CEL				AML	AML		
	comp=E,242µm,0.3s						
CEL				AML	AML		
	comp=N,158µm,1.1s						
CEL				AML	AML		
	comp=E,242µm,1.7s						
CEL				AML	AML		
	comp=E,200µm,1.7s						
CEL				AML	AML		
	comp=N,142µm,1.1s						
EMSG	**Monte Spagnolo**	**1.36**	**312**	P	**Pb**	**02 00 13.1**	**+0.2**
EMSG				S	**Sn**	**02 00 28.6**	**-0.2**
MSRU	**Castanea**	**1.46**	**337**	P	**Pb**	**02 00 14.3**	**-0.2**
RAFF	**Raffo Rosso**	**1.53**	**282**	P	**Pn**	**02 00 14.7**	**+1.0**
RAFF				AML	AML		
	comp=N,392µm,0.3s						
RAFF				AML	AML		
	comp=E,288µm,0.2s						
PLAC	**Placanica**	**1.53**	**6**	P	**Pb**	**02 00 15.5**	**-0.3**
MUCR	**Ucria**	**1.56**	**316**	P	**Pn**	**02 00 15.2**	**+1.0**
MUCR				S	**Sn**	**02 00 34.0**	**+0.4**
MUCR				AML	AML		
	comp=E,217µm,0.3s						
MUCR				AML	AML		
	comp=N,226µm,0.2s						
WDD	**Wied Dalam**	**1.76**	**232**	P	**Pn**	**02 00 17.7**	**+0.8**
WDD				S	**Sn**	**02 00 39.3**	**+0.9**
KEF4	**Livadi, Kephal**	**3.58**	**67**	P	**Pn**	**02 00 43.6**	**+1.6**
KEF4				S	**Sn**	**02 01 21.3**	**-2.2**
VLS	**Valsamata**	**3.68**	**69**	P	**Pn**	**02 00 43.9**	**+0.6**
VLS				S	**Sn**	**02 01 23.0**	**-2.9**
	comp=N,45nm,0.2s						
EVGI	**Lefkada island**	**3.89**	**63**	P	**Pn**	**02 00 47.7**	**+1.5**
LKD2	**Lefkada island**	**3.96**	**61**	P	**Pn**	**02 00 48.5**	**+1.3**
LKD2				S	**Sn**	**02 01 30.3**	**-2.6**
IGT	**Igoumenitsa**	**4.15**	**50**	P	**Pn**	**02 00 50.3**	**+0.6**
PYL	**PYLOS**	**4.41**	**89**	P	**Pn**	**02 00 54.9**	**+1.5**
PYL				S	**Sn**	**02 01 40.8**	**-3.2**
	comp=N,18nm,0.3s						
EVR	**Evrytania**	**4.83**	**64**	P	**Pn**	**02 01 03.3**	**+4.0**
AGG	**Agios Georgios**	**5.25**	**65**	P	**Pn**	**02 01 07.6**	**+2.7**

IDC 23 02:01:16.4±13.0, 51°.35N×91°.56E, h0km, Error ellipse: s-maj=78.5km s-min=73.0km az=124.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**4.86**	**305**	I	I	02 31 00.0	
	0.2nm,0.9s,baz=119,slow=337,SNR=9.4						
ZALV	**Zalesovo Beam**	**4.86**	**305**	Pg	Pb	02 02 44.8	+2.4
	0.2nm,0.3s,baz=115,slow=4,SNR=2.7						
ZALV				Lg	Lg	02 03 51.2	
	0.2nm,0.3s,baz=120,slow=30,SNR=7.6						
KURBB	**Kurchatov Arra**	**8.26**	**270**	Lg	Lg	02 05 41.4	
	baz=84,slow=36,SNR=1.5						
I34MN	**SONGINO INFRAS**	**10.28**	**104**	I	I	03 04 00.0	
	baz=294,slow=334,SNR=2.8						

*ISN **23** 02:06:06.1±1.1, 33°.87N×45°.67E, h10km±5km, ML2.9*
*TEH **23** 02:06:06.4, 33°.88N×45°.61E, h10km±999km, ML2.7*
ISC 23 02:06:07.3±1.1, 33°.87N±0°.04×45°.61E±0°.06, h10km, n8, σ1s21/11, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	**Ghasr-e-Shirin**	**0.63**	**359**	Sg	**Sg**	**02 06 27.9**	**0.0**
IBDR	**Badra**	**0.81**	**160**	*e*Pg	**Pg**	**02 06 22.0**	**-0.8**
IBDR				*e*Sg	**Sg**	**02 06 32.0**	**-1.4**
IGHG	**Ghaleghazi**	**0.92**	**60**	Pg	**Pg**	**02 06 24.8**	**-0.2**
IDHR	**Dehrash**	**1.05**	**38**	Pg	**Pg**	**02 06 27.0**	**-0.5**
BHD	**Baghdad**	**1.19**	**240**	*e*Pg	**Pn**	**02 06 29.0**	**-0.9**
BHD				*e*Sg	**Sb**	**02 06 47.0**	**+1.7**
KCHF	**Cheshme Sefid,**	**1.25**	**71**	Pg	**Pn**	**02 06 29.8**	**-1.3**
IKFM	**Kafar-mosalman**	**1.90**	**100**	Pn	**Pn**	**02 06 41.0**	**+1.3**
RAFI	**Al-Rafai**	**2.19**	**169**	*e*Pn	**Pn**	**02 06 44.0**	**+0.3**
RAFI				*e*Sn	**Sn**	**02 07 12.0**	**+1.2**
RAFI				AML	AML	02 07 16.6	
	comp=N,154nm,0.5s						
RAFI				AML	AML	02 07 17.0	
	comp=E,66nm,0.5s						

*NNC **23** 02:13:19.7±3.2, 41°.46N×84°.05E, h32km±16km, mb4.1, mpv3.6, Error ellipse: s-maj=26.7km s-min=12.6km az=148.0*
*SOME **23** 02:13:38.6, 42°.35N×83°.02E, h10km*
ISC 23 02:13:29.4±2.2, 42°.09N±0°.10×83°.38E±0°.07, h15km, n45, σ2s66/67, 8C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.61**	**302**	Pg	**Pg**	**02 14 19.7**	**+0.3**
	10.0nm,0.5s						
KTMS				Lg	Lg	02 14 48.6	
	7.4nm,0.4s						
KTMS	**Ketmen**	**2.61**	**302**	*e*P	**Pg**	**02 14 19.7**	**+0.3**
	10.0nm,0.5s						
KTMS	

	7.5nm,0.3s							
KURS	**Kuram**	**4.08**	**292**	Pg	**Pg**	02 14 46.9	**-0.6**
	5.4nm,0.3s							
KURS				Lg	Lg	02 15 35.3		
	5.3nm,0.6s							
KURS	**Kuram**	**4.08**	**292**	*e*P	**Pg**	02 14 46.9	**-0.6**
	5.4nm,0.3s							
KURS				*e*S	**Sb**	**02 15 35.3**	**+5.2**
	5.3nm,0.6s							
KAPS	**Kapalarasan**	**4.33**	**319**	*e*P	**Pg**	02 14 50.2	**-1.9**
	3.7nm,0.3s							
KAPS				*e*S	**Sb**	**02 15 40.9**	**+3.8**
	6.1nm,0.3s							
ARXS	**Arharly**	**4.58**	**299**	Pg	**Pg**	02 14 56.4	**-0.7**
	10nm,0.4s							
ARXS				Lg	Lg	02 15 52.0		
	11nm,0.5s							
ARXS	**Arharly**	**4.58**	**299**	*e*P	**Pg**	02 14 56.5	**-0.7**
	10nm,0.4s							
ARXS				*e*S	**Sb**	**02 15 52.0**	**+7.5**
	11nm,0.5s							
KOTS	**Kotyrbulak**	**4.76**	**286**	Pg	**Pg**	02 14 59.5	**-1.1**
	11nm,0.6s							
KOTS				Lg	Lg	02 15 57.0		
	21nm,0.7s							
KOTS	**Kotyrbulak**	**4.76**	**286**	*e*P	**Pg**	02 14 59.5	**-1.1**
	11nm,0.6s							
KOTS				*e*S	**Sg**	**02 15 57.0**	**-5.2**
	21nm,0.7s							
MK05	**Makanchi Array**	**4.76**	**351**	⇓Pn	**Pn**	02 14 39.8	**-0.8**
	0.4nm,0.8s,baz=164,slow=14							
MK05				⇓Pg	**Pg**	**02 14 59.3**	**-1.3**
	1.8nm,0.8s,baz=169,slow=16							
MK05				⇑Lg	Lg	02 16 15.0		
	7.5nm,0.5s,baz=162,slow=28							
MDOK	**Medeo**	**4.79**	**285**	Pg	**Pg**	**02 15 00.9**	**-0.3**
	6.4nm,0.6s							
MDOK				Lg	Lg	02 15 59.6		
	7.3nm,0.4s							
MDOK	**Medeo**	**4.79**	**285**	*e*P	**Pg**	**02 15 00.9**	**-0.3**
	6.4nm,0.6s							
MDOK				*e*S	**Sg**	**02 15 59.6**	**-3.7**
	7.3nm,0.4s							
MAKZ	**Makanchi**	**4.82**	**348**	⇓Pg	**Pg**	**02 15 00.2**	**-1.4**
	1.6nm,0.7s							
MAKZ				⇑Lg	Lg	02 16 18.7		
	9.4nm,0.8s							
TNSS	**Tian-Shan**	**4.85**	**283**	Pg	**Pg**	**02 15 02.1**	**-0.1**
	4.8nm,0.3s							
TNSS				Lg	Lg	02 16 01.4		
	5.1nm,0.3s							
TNSS	**Tian-Shan**	**4.85**	**283**	*e*P	**Pg**	**02 15 02.1**	**-0.1**
	4.8nm,0.3s							
TNSS				*e*S	**Sg**	**02 16 01.4**	**-3.5**
	5.1nm,0.3s							
CHKK	**Chushkaly**	**5.01**	**293**	Pg	**Pg**	**02 15 03.7**	**-1.6**
	2.1nm,0.2s							
CHKK				Lg	Lg	02 16 04.0		
	6.2nm,0.2s							
CHKK	**Chushkaly**	**5.01**	**293**	*e*P	**Pg**	**02 15 03.7**	**-1.6**
	2.1nm,0.2s							
CHKK				*e*S	**Sb**	**02 16 04.0**	**+7.2**
	6.2nm,0.2s							
KTBS	**Karatobe**	**5.18**	**290**	Pg	**Pg**	**02 15 07.7**	**-0.8**
	2.6nm,0.4s							
KTBS				Lg	Lg	02 16 11.2		
	10nm,0.5s							
KTBS	**Karatobe**	**5.18**	**290**	*e*P	**Pg**	**02 15 07.7**	**-0.8**
	2.6nm,0.4s							
KTBS				*e*S	**Sg**	**02 16 11.2**	**-4.4**
	10nm,0.5s							
ZSN	**Zaisan**	**5.46**	**11**	Pg	**Pg**	**02 15 14.4**	**+0.5**
	3.7nm,0.3s							
ZSN				Lg	Lg	02 16 22.5		
	14nm,1.1s							
ZSN	**Zaisan**	**5.46**	**11**	*e*P	**Pg**	**02 15 14.3**	**+0.5**
	3.7nm,0.3s							
ZSN				*e*S	**Sg**	**02 16 22.5**	**-2.0**
	14nm,1.1s							
KUU	**Kurty**	**5.47**	**292**	Pg	**Pg**	**02 15 12.3**	**-1.8**
	2.2nm,0.5s							
KUU				Lg	Lg	02 16 19.0		
	5.3nm,0.5s							
KUU	**Kurty**	**5.47**	**292**	*e*P	**Pg**	**02 15 12.3**	**-1.8**
	2.2nm,0.5s							
KUU				*e*S	**Sg**	**02 16 19.0**	**-5.8**
	5.3nm,0.5s							
KST	**Kastek**	**5.56**	**282**	Pg	**Pg**	**02 15 15.0**	**-0.9**
	2.6nm,0.2s							
KST				Lg	Lg	02 16 23.5		
	16nm,0.7s							
KST	**Kastek**	**5.56**	**282**	*e*P	**Pg**	**02 15 15.0**	**-0.9**
	2.6nm,0.2s							
KST				*e*S	**Sg**	**02 16 23.5**	**-4.3**
	16nm,0.7s							
DGS	**Degeres**	**5.73**	**284**	Pg	**Pg**	**02 15 20.1**	**+1.1**
	2.4nm,0.4s							
DGS				Lg	Lg	02 16 32.1		
	8.3nm,0.8s							
DGS	**Degeres**	**5.73**	**284**	*e*P	**Pg**	**02 15 20.1**	**+1.1**
	2.4nm,0.4s							
DGS				*e*S	**Sg**	**02 16 32.1**	**-1.1**
	8.3nm,0.8s							
TKM2	**Tokmak 2**	**5.81**	**281**	⇑Pn	**Pn**	**02 14 52.3**	**-2.9**
	1.5nm,0.3s							
TKM2				⇑Sn	**Sn**	**02 16 05.8**	**+4.1**
	2.6nm,0.5s							
TKM2				⇑Lg	Lg	02 16 44.9		
	7.5nm,0.6s							
KRBS	**Karabastau**	**5.88**	**288**	Pg	**Pg**	**02 15 21.2**	**-0.8**
	1.4nm,0.6s							
KRBS				Lg	Lg	02 16 34.3		
	4.6nm,0.3s							
KRBS	**Karabastau**	**5.88**	**288**	*e*P	**Pg**	**02 15 21.2**	**-0.8**
	1.4nm,0.6s							
KRBS				*e*S	**Sg**	**02 16 34.3**	**-3.8**
	4.6nm,0.3s							
KURK	**Kurchatov**	**9.23**	**341**	⇑Lg	Lg	02 18 39.0		
	7.1nm,1.1s							

*NOU **23** 02:29:01.8, 40˚.40S×174˚.13E, h113km, MLv3.4/9, Cook Strait, New Zealand*
*WEL **23** 02:29:05.0±0.5, 40˚.5S×174˚.4E±˚, h62km±9km, M3.2/25, ML3.5/26, MLv3.2/25, Error ellipse: s-maj=0.0km s-min=0.0km az=169.4, confirmed*
ISC 23 02:29:01.0±1.4, 40˚.46S±0˚.04×174˚.16E±0˚.04, h110km±8km, n123, σ1§44/132, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.39**	**208**	P	**Pn**	**02 29 17.6**	**+0.4**
DUWZ				S	**Sn**	**02 29 28.0**	**-1.4**
KIW	**Kapiti Island**	**0.70**	**125**	P	**Pn**	**02 29 20.5**	**+1.1**
KIW				S	**Sn**	**02 29 31.9**	**-1.3**
TCW	**Tory Channel**	**0.76**	**173**	P	**Pn**	**02 29 21.2**	**+1.4**
TCW				S	**Sn**	**02 29 33.1**	**-1.0**
OTKS	**Otaki School**	**0.81**	**112**	S	**Sn**	**02 29 32.9**	**-1.8**
FXBS	**Foxton Beach S**	**0.81**	**90**	P	**Pn**	**02 29 20.9**	**+0.5**
POKS	**Katoa Kinderga**	**0.84**	**143**	P	**Pn**	**02 29 21.0**	**+0.5**
POKS				S	**Sn**	**02 29 33.7**	**-1.6**
PWES	**Porirua West**	**0.84**	**143**	P	**Pn**	**02 29 22.3**	**+1.7**
PWES				S	**Sn**	**02 29 35.1**	**-0.2**
POLS	**Porirua Librar**	**0.85**	**143**	S	**Sn**	**02 29 33.9**	**-1.6**
OGWZ	**Otaki Gorge**	**0.85**	**115**	P	**Pn**	**02 29 22.0**	**+1.4**
OGWZ				S	**Sn**	**02 29 34.6**	**-0.9**
HAVS	**Havelock**	**0.86**	**199**	P	**Pn**	**02 29 21.9**	**+1.1**
OHWZ	**Ohakea**	**0.92**	**74**	P	**Pn**	**02 29 22.9**	**+1.6**
CAW	**Cannon Point**	**0.94**	**134**	P	**Pn**	**02 29 23.3**	**+1.7**
WEL	**Wellington**	**0.94**	**151**	P	**Pn**	**02 29 23.4**	**+1.8**
SNZO	**South Karori**	**0.94**	**154**	P	**Pn**	**02 29 23.3**	**+1.7**
WAZ	**Wanganui**	**0.95**	**42**	P	**Pn**	**02 29 23.5**	**+1.8**
NNZ	**Nelson**	**0.96**	**218**	P	**Pn**	**02 29 22.9**	**+1.2**
TUWZ	**Tuamarina**	**0.98**	**190**	P	**Pn**	**02 29 23.3**	**+1.3**
LREZ	**Lake Rotokare**	**1.02**	**11**	P	**Pn**	**02 29 24.2**	**+1.8**
NMEZ	**Namu Road**	**1.07**	**348**	P	**Pn**	**02 29 24.1**	**+1.2**
TKNZ	**Takaka Hill**	**1.08**	**237**	P	**Pn**	**02 29 23.8**	**+0.8**
TKNZ				S	**Sn**	**02 29 38.8**	**-0.9**
BHW	**Baring Head**	**1.09**	**151**	P	**Pn**	**02 29 24.8**	**+1.7**
MRZ	**Mangatainoka R**	**1.10**	**101**	P	**Pn**	**02 29 24.6**	**+1.4**
PREZ	**Palmer Road**	**1.12**	**360**	P	**Pn**	**02 29 25.0**	**+1.5**
HOWZ	**Holdsworth Sta**	**1.12**	**113**	P	**Pn**	**02 29 25.0**	**+1.5**
KHEZ	**Kahui Hut**	**1.17**	**354**	P	**Pn**	**02 29 24.7**	**+0.6**
KHEZ	**Kahui Hut**	**1.17**	**354**	P	**Pn**	**02 29 25.4**	**+1.3**
NEZ	**North Egmont**	**1.19**	**358**	P	**Pn**	**02 29 25.5**	**+1.1**
NBEZ	**Newall Road No**	**1.21**	**349**	P	**Pn**	**02 29 26.0**	**+1.5**
POWZ	**Post Office Ro**	**1.23**	**87**	P	**Pn**	**02 29 25.9**	**+1.2**
MTW	**Mount Morrison**	**1.23**	**125**	P	**Pn**	**02 29 26.3**	**+1.6**
DREZ	**Durham Road**	**1.27**	**1**	P	**Pn**	**02 29 26.8**	**+1.6**
PKE	**Pukeiti**	**1.27**	**354**	P	**Pn**	**02 29 26.7**	**+1.4**
BSWZ	**Blackbirch Sta**	**1.27**	**190**	P	**Pn**	**02 29 27.5**	**+2.4**
CMWZ	**Cape Campbell**	**1.29**	**178**	P	**Pn**	**02 29 28.2**	**+2.8**
QRZ	**Quartz Range**	**1.29**	**253**	P	**Pn**	**02 29 25.7**	**+0.3**
QRZ	**Quartz Range**	**1.29**	**253**	P	**Pn**	**02 29 25.8**	**+0.4**
QRZ				S	**Sn**	**02 29 41.9**	**-2.0**
PAWZ	**Paruwai Farm**	**1.33**	**134**	P	**Pn**	**02 29 27.8**	**+2.0**
TIWZ	**Tintock**	**1.35**	**104**	P	**Pn**	**02 29 27.6**	**+1.5**
PLWZ	**Palliser**	**1.38**	**144**	P	**Pn**	**02 29 28.2**	**+1.7**
PRWZ	**Pori Road**	**1.38**	**95**	P	**Pn**	**02 29 28.2**	**+1.7**
VRZ	**Vera Road**	**1.41**	**19**	P	**Pn**	**02 29 28.5**	**+1.7**
MRNZ	**Matariki Terra**	**1.42**	**228**	P	**Pn**	**02 29 28.4**	**+1.5**
TSZ	**Takapari Road**	**1.44**	**74**	P	**Pn**	**02 29 28.4**	**+1.3**
TMWZ	**Te Maipa**	**1.46**	**117**	P	**Pn**	**02 29 29.3**	**+1.9**
MTVZ	**Mangateitei**	**1.47**	**44**	P	**Pn**	**02 29 29.0**	**+1.5**
PKVZ	**Pokaka**	**1.48**	**38**	P	**Pn**	**02 29 29.2**	**+1.5**
DVHZ	**Dannevirke**	**1.54**	**85**	P	**Pn**	**02 29 29.4**	**+1.1**
TRVZ	**Turoa**	**1.58**	**43**	P	**Pn**	**02 29 30.5**	**+1.5**
WNVZ	**Wahianoa**	**1.58**	**45**	P	**Pn**	**02 29 30.5**	**+1.5**
BFZ	**Birch Farm**	**1.60**	**99**	P	**Pn**	**02 29 30.4**	**+1.3**
BFZ	**Birch Farm**	**1.60**	**99**	P	**Pn**	**02 29 30.4**	**+1.3**
MAVZ	**Matarangi**	**1.61**	**43**	P	**Pn**	**02 29 31.1**	**+1.7**
THZ	**Tophouse**	**1.61**	**216**	P	**Pn**	**02 29 31.1**	**+1.9**
WHVZ	**Whangaehu Hut**	**1.61**	**44**	P	**Pn**	**02 29 31.5**	**+2.1**
FWVZ	**Far West T-bar**	**1.61**	**42**	P	**Pn**	**02 29 31.0**	**+1.6**
MOVZ	**Moawhango**	**1.61**	**50**	P	**Pn**	**02 29 30.5**	**+1.2**
COVZ	**Chateau Observ**	**1.65**	**41**	P	**Pn**	**02 29 31.3**	**+1.6**
PNHZ	**Pukenui**	**1.66**	**71**	P	**Pn**	**02 29 30.8**	**+1.0**
TUVZ	**Tukino**	**1.66**	**44**	P	**Pn**	**02 29 30.8**	**+1.0**
NGZ	**Ngauruhoe**	**1.70**	**41**	P	**Pn**	**02 29 31.9**	**+1.5**
TWVZ	**Taurewa**	**1.70**	**36**	P	**Pn**	**02 29 31.8**	**+1.4**
SNVZ	**South Ngauruho**	**1.71**	**42**	P	**Pn**	**02 29 32.2**	**+1.7**
NNVZ	**North Ngauruho**	**1.74**	**41**	P	**Pn**	**02 29 32.5**	**+1.6**
WTVZ	**West Tongariro**	**1.74**	**40**	P	**Pn**	**02 29 32.4**	**+1.5**
OTVZ	**Oturere**	**1.74**	**42**	P	**Pn**	**02 29 32.5**	**+1.6**
BHHZ	**Black Hill Sta**	**1.75**	**57**	P	**Pn**	**02 29 32.0**	**+1.0**
ANWZ	**Angora Road**	**1.77**	**91**	P	**Pn**	**02 29 32.4**	**+1.4**
KRVZ	**Karewarewa**	**1.78**	**40**	P	**Pn**	**02 29 32.7**	**+1.3**
ETVZ	**East Tongariro**	**1.78**	**43**	P	**Pn**	**02 29 32.9**	**+1.5**
WPHZ	**Waipukurau**	**1.79**	**78**	P	**Pn**	**02 29 32.6**	**+1.3**
NTVZ	**North Tongarir**	**1.79**	**41**	P	**Pn**	**02 29 33.3**	**+1.8**
TMVZ	**Te Maari**	**1.79**	**42**	P	**Pn**	**02 29 33.2**	**+1.7**
KRHZ	**Kereru**	**1.88**	**65**	P	**Pn**	**02 29 33.6**	**+1.0**
KATZ	**Kakaramea**	**1.90**	**39**	P	**Pn**	**02 29 34.5**	**+1.7**
PRHZ	**Porangahau**	**1.90**	**85**	P	**Pn**	**02 29 34.1**	**+1.4**
KHZ	**Kahutara**	**2.01**	**193**	P	**Pn**	**02 29 36.3**	**+2.2**
KHZ	**Kahutara**	**2.01**	**193**	P	**Pn**	**02 29 36.3**	**+2.2**
HIZ	**Hauiti**	**2.02**	**16**	P	**Pn**	**02 29 35.5**	**+1.3**
HIZ	**Hauiti**	**2.02**	**16**	P	**Pn**	**02 29 35.8**	**+1.5**
RATZ	**Rangitukua**	**2.02**	**39**	P	**Pn**	**02 29 37.3**	**+3.0**
KWHZ	**Kaweka Forest**	**2.02**	**60**	P	**Pn**	**02 29 35.2**	**+0.8**
KWHZ				P	**Pn**	**02 29 35.2**	**+0.8**
PXZ	**Pawanui**	**2.11**	**79**	P	**Pn**	**02 29 36.3**	**+0.9**
WATZ	**Wairara**	**2.13**	**35**	P	**Pn**	**02 29 38.4**	**+2.7**
KAHZ	**Kahuranaki**	**2.19**	**73**	P	**Pn**	**02 29 37.4**	**+0.9**
DSZ	**Denniston Nort**	**2.19**	**233**	P	**Pn**	**02 29 38.0**	**+1.4**
MCHZ	**McNeill Hill**	**2.20**	**63**	P	**Pn**	**02 29 37.5**	**+1.0**
BKZ	**Black Stump Fm**	**2.21**	**55**	P	**Pn**	**02 29 37.6**	**+0.8**
BKZ	**Black Stump Fm**	**2.21**	**55**	P	**Pn**	**02 29 37.8**	**+1.0**
TLZ	**Tolley Road**	**2.38**	**27**	P	**Pn**	**02 29 40.7**	**+1.7**
MRHZ	**Matea Rd**	**2.38**	**48**	P	**Pn**	**02 29 39.3**	**+0.4**
NMHZ	**Naumai**	**2.45**	**57**	P	**Pn**	**02 29 40.9**	**+1.0**
MTHZ	**Maungataniwha**	**2.62**	**53**	P	**Pn**	**02 29 42.2**	**+0.2**
GVZ	**Greta Valley S**	**2.64**	**198**	P	**Pn**	**02 29 43.8**	**+1.5**
LTZ	**Lake Taylor**	**2.72**	**211**	P	**Pn**	**02 29 44.5**	**+1.2**
RTZ	**Ruatahuna**	**2.85**	**51**	P	**Pn**	**02 29 45.0**	**-0.2**
TOZ	**Tahuroa Road**	**2.92**	**21**	P	**Pn**	**02 29 47.5**	**+1.6**
AMCZ	**Amberley**	**2.94**	**202**	P	**Pn**	**02 29 47.6**	**+1.4**
INZ	**Inchbonnie**	**3.04**	**221**	P	**Pn**	**02 29 49.0**	**+1.4**
MHGZ	**Mahia Peninsul**	**3.17**	**67**	P	**Pn**	**02 29 49.2**	**0.0**
URZ	**Urewera**	**3.17**	**47**	P	**Pn**	**02 29 48.9**	**-0.4**
URZ	**Urewera**	**3.17**	**47**	P	**Pn**	**02 29 48.7**	**-0.6**
RAGZ	**Rawiri**	**3.19**	**53**	P	**Pn**	**02 29 51.1**	**+1.4**
PRGZ	**Paritu Road**	**3.26**	**63**	P	**Pn**	**02 29 49.9**	**-0.5**
RIGZ	**Rimuhau**	**3.29**	**59**	P	**Pn**	**02 29 50.7**	**-0.1**
MWZ	**Matawai**	**3.36**	**52**	P	**Pn**	**02 29 51.2**	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.41**	**6**	P	**Pn**	**02 29 54.6**	**+2.1**
MQZ	**McQueen's Vall**	**3.43**	**199**	P	**Pn**	**02 29 52.7**	**0.0**
MKAZ	**Moumakai**	**3.44**	**13**	P	**Pn**	**02 29 54.7**	**+1.8**
AKCZ	**Akaroa Harbour**	**3.53**	**195**	P	**Pn**	**02 29 55.0**	**+0.9**
MHCZ	**Mount Hutt**	**3.63**	**211**	P	**Pn**	**02 29 57.1**	**+1.7**
RUGZ	**Raukumara Rang**	**3.70**	**49**	P	**Pn**	**02 29 55.3**	**-1.1**
CNGZ	**Carnagh Statio**	**3.70**	**59**	P	**Pn**	**02 29 55.8**	**-0.6**
MBAZ	**Motutapu North**	**3.73**	**9**	P	**Pn**	**02 29 59.2**	**+2.4**
TWGZ	**Tauwhareparae**	**3.74**	**54**	P	**Pn**	**02 29 56.8**	**-0.1**
WIAZ	**Waiheke Island**	**3.74**	**12**	P	**Pn**	**02 29 57.4**	**+0.5**
HAZ	**Te Kaha**	**3.90**	**47**	P	**Pn**	**02 29 57.9**	**-1.1**
KUZ	**Kuaotunu**	**3.91**	**19**	P	**Pn**	**02 30 00.3**	**+1.3**
GCSZ	**Gaunt Creek Bo**	**4.04**	**224**	P	**Pn**	**02 30 01.9**	**+1.0**
FOZ	**Fox Glacier**	**4.46**	**225**	P	**Pn**	**02 30 06.9**	**+0.4**
TMZ	**Timaru**	**4.56**	**210**	P	**Pn**	**02 30 07.7**	**-0.2**
ODZ	**Otahua Downs**	**5.26**	**208**	P	**Pn**	**02 30 18.8**	**+1.5**
ODZ	**Otahua Downs**	**5.26**	**208**	*e*P	**Pn**	**02 30 18.4**	**+1.1**
JCZ	**Jackson Bay**	**5.38**	**226**	P	**Pn**	**02 30 19.3**	**+0.3**

*IDC **23** 02:39:46.1±0.6, 54˚.62N×168˚.51E, h0km, mb4.1/27, mbtmp4.1/31, ML3.5/3, MS3.5/33, Error ellipse: s-maj=16.9km s-min=10.8km az=173.0*
*KRSC **23** 02:39:48.5±2.2, 54˚.49N×168˚.12E, h47km±27km, Ml4.8*
*NEIC **23** 02:39:48.9±1.5, 54˚.6N±0˚.1×168˚.4E±0˚.1, h10km±1km, mb4.4/57, Error ellipse: s-maj=18.3km s-min=11.5km az=185.0*
*MOS **23** 02:39:49.0±0.9, 54˚.46N×168˚.37E, h36km, mb4.5/23, Error ellipse: s-maj=6.9km s-min=5.7km az=12.8*
ISC 23 02:39:50.3±0.4, 54˚.59N±0˚.06×168˚.44E±0˚.04, h24km, n221, σ1§42/194, mb4.3/59, MS3.6/31, 12C-3D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.55**	**295**	PN	**Pn**	**02 40 12.9**	**-3.5**
BKI				S	**Sn**	**02 40 31.4**	**-4.3**
BKI	**Bering**	**1.55**	**295**	*e*P	**Pn**	**02 40 12.9**	**-3.5**
BKI				*e*S	**Sn**	**02 40 31.4**	**-4.3**
KBG	**Krutoberegovo**	**3.67**	**299**	PN	**Pn**	**02 40 44.0**	**-1.5**
KBG	**Krutoberegovo**	**3.67**	**299**	*e*P	**Pn**	**02 40 44.0**	**-1.5**
KBG				*e*S	**Sn**	**02 41 25.3**	**-2.6**
SHEM	**Shemya Is, Ala**	**3.85**	**117**	Pn	**Pn**	**02 40 45.3**	**-2.6**
SHEM	171nm,0.4s,baz=43,slow=3.0,SNR=28			Sn	**Sn**	**02 41 30.7**	**-1.6**
	62nm,0.3s,baz=238,slow=21,SNR=6.6						
SMKR	**Semkarok**	**4.43**	**300**	PN	**Pn**	**02 40 55.6**	**-0.4**
SMKR	**Semkarok**	**4.43**	**300**	*e*P	**Pn**	**02 40 55.6**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**4.63**	**290**	PN	**Pn**	**02 40 58.2**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**4.63**	**290**	*e*P	**Pn**	**02 40 58.1**	**-0.6**
TUMD	**Tumrok D**	**4.68**	**281**	*e*P	**Pn**	**02 40 58.1**	**-1.3**
TUMD				*e*S	**Sn**	**02 41 49.6**	**-3.4**
BZWR	**Bezymyannyi-We**	**4.75**	**290**	PN	**Pn**	**02 41 00.6**	**+0.1**
BZWR	**Bezymyannyi-We**	**4.75**	**290**	*e*P	**Pn**	**02 41 00.6**	**+0.1**
KLY	**Klyuchi**	**4.76**	**294**	PN	**Pn**	**02 41 00.4**	**0.0**
KLY	**Klyuchi**	**4.76**	**294**	*e*P	**Pn**	**02 41 00.4**	**0.0**
KIRR	**Kirishev**	**4.83**	**290**	PN	**Pn**	**02 41 01.6**	**+0.1**
KIRR	**Kirishev**	**4.83**	**290**	*e*P	**Pn**	**02 41 01.6**	**+0.1**
TUMR	**Tumrok**	**4.83**	**282**	PN	**Pn**	**02 41 01.2**	**-0.4**
TUMR	**Tumrok**	**4.83**	**282**	*e*P	**Pn**	**02 41 01.2**	**-0.4**
KMNR	**Kamenistaya**	**4.85**	**287**	PN	**Pn**	**02 41 01.7**	**0.0**
KMNR	**Kamenistaya**	**4.85**	**287**	*e*P	**Pn**	**02 41 01.7**	**0.0**
KPT	**Kopyto**	**4.90**	**290**	PN	**Pn**	**02 41 03.0**	**+0.6**
KPT	**Kopyto**	**4.90**	**290**	*e*P	**Pn**	**02 41 03.0**	**+0.6**
KOZ	**Kozyrevsk**	**5.11**	**290**	PN	**Pn**	**02 41 06.0**	**+0.7**
KOZ	**Kozyrevsk**	**5.11**	**290**	*e*P	**Pn**	**02 41 06.0**	**+0.7**
SPN	**Mys Shipunski**	**5.20**	**257**	PN	**Pn**	**02 41 04.2**	**-2.3**
SPN	**Mys Shipunski**	**5.20**	**257**	*e*P	**Pn**	**02 41 04.2**	**-2.3**
SRDR	**Sredinnyy**	**5.26**	**293**	PN	**Pn**	**02 41 07.8**	**+0.4**
SRDR	**Sredinnyy**	**5.26**	**293**	*e*P	**Pn**	**02 41 07.8**	**+0.4**
KII	**Karymskiy**	**5.29**	**268**	PN	**Pn**	**02 41 06.5**	**-1.3**
KII	**Karymskiy**	**5.29**	**268**	*e*P	**Pn**	**02 41 06.5**	**-1.3**
NLC	**Nalytchevo**	**5.56**	**259**	PN	**Pn**	**02 41 09.3**	**-2.1**
NLC	**Nalytchevo**	**5.56**	**259**	*e*P	**Pn**	**02 41 09.3**	**-2.1**
SMAR	**Somma**	**5.85**	**261**	PN	**Pn**	**02 41 14.1**	**-1.5**
SMAR	**Somma**	**5.85**	**261**	*e*P	**Pn**	**02 41 14.1**	**-1.5**
UGLR	**Uglovaya**	**5.85**	**260**	PN	**Pn**	**02 41 14.1**	**-1.4**
UGLR	**Uglovaya**	**5.85**	**260**	*e*P	**Pn**	**02 41 14.1**	**-1.4**
KRER	**Koryakskii**	**5.87**	**261**	PN	**Pn**	**02 41 14.8**	**-1.0**
KRER	**Koryakskii**	**5.87**	**261**	*e*P	**Pn**	**02 41 14.8**	**-1.0**
AVH	**Avacha**	**5.88**	**261**	PN	**Pn**	**02 41 15.0**	**-1.0**
AVH	**Avacha**	**5.88**	**261**	*e*P	**Pn**	**02 41 15.0**	**-1.0**
KRX	**Arik**	**5.91**	**262**	PN	**Pn**	**02 41 15.2**	**-1.1**
KRX	**Arik**	**5.91**	**262**	*e*P	**Pn**	**02 41 15.2**	**-1.1**
KOK	**Koryaka**	**5.93**	**261**	PN	**Pn**	**02 41 15.3**	**-1.3**
KOK	**Koryaka**	**5.93**	**261**	*e*P	**Pn**	**02 41 15.3**	**-1.3**
DALK	**Dalny**	**5.95**	**259**	PN	**Pn**	**02 41 14.7**	**-2.0**
DALK	**Dalny**	**5.95**	**259**	*e*P	**Pn**	**02 41 14.7**	**-2.0**
PET	**Petropavlovsk**	**6.00**	**259**	Pn	**Pn**	**02 41 16.0**	**-1.6**
PET	**Petropavlovsk**	**6.00**	**259**	*e*PN	**Pn**	**02 41 15.7**	**-1.8**
PET	comp=Z,86nm,0.7s			pmax	pmax		
PET	comp=Z,300nm,15.0s			MLR	MLR		
PET	**Petropavlovsk**	**6.00**	**259**	*e*P	**Pn**	**02 41 15.8**	**-1.8**
TILK	**Tilichiki**	**6.00**	**349**	PN	**Pn**	**02 41 17.7**	**+0.2**
TILK	**Tilichiki**	**6.00**	**349**	*e*P	**Pn**	**02 41 17.7**	**+0.2**
GNL	**Ganaly**	**6.23**	**266**	PN	**Pn**	**02 41 20.2**	**-0.6**
GNL	**Ganaly**	**6.23**	**266**	*e*P	**Pn**	**02 41 20.2**	**-0.6**
KRMR	**Karymshinskiy**	**6.37**	**258**	PN	**Pn**	**02 41 20.8**	**-1.7**
KRMR	**Karymshinskiy**	**6.37**	**258**	*e*P	**Pn**	**02 41 20.8**	**-1.7**
KRMR				*e*S	**Sn**	**02 42 29.1**	**-5.3**
MTVR	**Mutnovka**	**6.47**	**255**	PN	**Pn**	**02 41 23.4**	**-0.6**
MTVR	**Mutnovka**	**6.47**	**255**	*e*P	**Pn**	**02 41 23.4**	**-0.6**
PALN	**Palana**	**6.48**	**318**	PN	**Pn**	**02 41 25.0**	**+1.1**
PALN	**Palana**	**6.48**	**318**	*e*P	**Pn**	**02 41 25.0**	**+1.1**
GRL	**Gorelyy**	**6.50**	**256**	PN	**Pn**	**02 41 22.9**	**-1.6**
GRL	**Gorelyy**	**6.50**	**256**	*e*P	**Pn**	**02 41 22.9**	**-1.6**
PEA0B	**Petropavlovsk-**	**6.53**	**261**	Pn	**Pn**	**02 41 23.7**	**-1.0**
PEA0B	**Petropavlovsk-**	**6.53**	**261**	⇑*e*PN	**Pn**	**02 41 23.8**	**-0.9**
PETK	**Petropavlovsk-**	**6.53**	**261**	Pn	**Pn**	**02 41 23.5**	**-1.2**
PETK	**Petropavlovsk-**	**6.53**	**261**	Pn	**Pn**	**02 41 23.3**	**-1.4**
	comp=Z,5.6nm,0.3s,baz=67,slow=16,SNR=49						
PETK				Sn	**Sn**	**02 42 39.4**	**+1.0**
	comp=Z,3.1nm,0.3s,baz=119,slow=15,SNR=4.1						
PETK				LR	LR	02 44 11.7	
	comp=Z,242nm,18.3s,baz=80,slow=40 comp=Z,24nm,0.6s						
ASAK	**Asacha**	**6.67**	**255**	PN	**Pn**	**02 41 25.7**	**-1.0**
ASAK	**Asacha**	**6.67**	**255**	*e*P	**Pn**	**02 41 25.7**	**-1.0**
KDTR	**Khodutka, Kamc**	**6.82**	**250**	PN	**Pn**	**02 41 25.6**	**-3.1**
KDTR

DHY	**Denali Highway**	**23.93**	**51**	P	**P**	**02 45 01.9**	**-0.4**
DHY				IAmb	IAmb	02 45 21.8	
	comp=Z,11nm,1.0s						
TIXI	**Tiksi**	**24.02**	**330**	P	**P**	**02 45 01.9**	**-0.9**
TIXI				IAmb	IAmb	02 45 12.9	
	comp=Z,8.7nm,0.7s						
TIXI	**Tiksi**	**24.02**	**330⇑**	*eP*	**P**	**02 45 02.0**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	**Tiksi**	**24.02**	**330**	LR	LR	02 54 39.5	
	comp=Z,58nm,19.5s,baz=64,slow=37						
F24K	**Squaw Lake**	**24.15**	**40**	P	**P**	**02 45 04.0**	**-0.1**
G24K	**Hadweenzic Riv**	**24.17**	**43**	P	**P**	**02 45 04.6**	**+0.3**
G24K				IAmb	IAmb	02 45 16.9	
	comp=Z,6.7nm,0.8s						
D24K	**Happy Valley**	**24.18**	**36**	P	**P**	**02 45 04.4**	**+0.1**
D24K				IAmb	IAmb	02 45 24.5	
	comp=Z,8.5nm,0.8s						
ILAR	**Eielson Array**	**24.21**	**47**	P	**P**	**02 45 03.4**	**-1.2**
	comp=Z,3.7nm,0.6s,baz=252,slow=7.5,SNR=60						
ILAR				LR	LR	02 53 46.7	
	comp=Z,87nm,19.3s,baz=258,slow=35						
	comp=Z,3.7nm,0.6s						
FYU	**Fort Yukon**	**25.04**	**43**	P	**P**	**02 45 12.7**	**+0.6**
E25K	**Arctic Village**	**25.12**	**39**	P	**P**	**02 45 13.3**	**+0.4**
HEH	**HeiHe**	**25.13**	**277**	*eP*	**P**	**02 45 11.8**	**-1.2**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HEH				pmax	pmax		
	comp=Z,110nm,4.4s						
HEH				LR	LR		
	comp=N,290nm,14.9s						
HEH				LR	LR		
	comp=E,210nm,15.1s						
HEH				LR	LR		
	comp=Z,250nm,15.4s						
USRK	**Ussuriysk Ar.**	**25.62**	**261**	LR	LR	02 56 34.7	
	comp=Z,80nm,18.1s,baz=67,slow=39						
L27K	**Beaver Creek,**	**26.46**	**51**	P	**P**	**02 45 25.2**	**+0.1**
L27K				IAmb	IAmb	02 45 36.1	
	comp=Z,8.1nm,0.8s						
F28M	**Old Crow**	**27.21**	**41**	P	**P**	**02 45 32.0**	**+0.2**
BNX	**BinXian**	**27.39**	**268**	⇑P	**P**	**02 45 35.3**	**+1.8**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,84nm,4.6s						
DAWY	**Dawson**	**27.47**	**49**	P	**P**	**02 45 34.9**	**+0.8**
DAWY				IAmb	IAmb	02 45 38.3	
	comp=Z,8.5nm,0.8s						
MJA0	**Matsu Arr-Jizo**	**27.47**	**241**	*eP*	**P**	**02 45 37.0**	**+2.6**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJB9	**Matsu-Tunnel**	**27.49**	**241**	P	**P**	**02 45 36.1**	**+1.5**
MAJO	**Matsushiro**	**27.49**	**241**	P	**P**	**02 45 35.0**	**+0.4**
MAJO	**Matsushiro**	**27.49**	**241⇓**	*eP*	**P**	**02 45 34.5**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,16nm,1.0s						
MJAR	**Matsushiro Arr**	**27.49**	**241**	P	**P**	**02 45 35.0**	**+0.4**
MJAR	**Matsushiro Arr**	**27.49**	**241**	P	**P**	**02 45 35.0**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=16,slow=9.3,SNR=5.2						
MJAR				LR	LR	02 57 15.1	
	comp=Z,32nm,19.1s,baz=42,slow=38						
	comp=Z,3.2nm,0.8s						
K29M	**Barlow Dome**	**28.31**	**49**	P	**P**	**02 45 41.1**	**-0.6**
K29M				IAmb	IAmb	02 45 52.5	
	comp=Z,4.1nm,0.8s						
EPYK	**Eagle Plains**	**28.45**	**44**	P	**P**	**02 45 43.3**	**+0.4**
EPYK				IAmb	IAmb	02 45 44.5	
	comp=Z,6.1nm,0.8s						
INK	**Inuvik**	**29.61**	**40**	LR	LR	02 59 51.2	
	comp=Z,78nm,18.8s,baz=178,slow=41						
M31M	**Drury Creek, Y**	**29.98**	**52**	P	**P**	**02 45 57.1**	**+0.7**
M31M				IAmb	IAmb	02 46 18.6	
	comp=Z,5.3nm,0.8s						
A36M	**Sachs Harbour**	**32.27**	**32**	P	**P**	**02 46 17.4**	**+1.0**
A36M				IAmb	IAmb	02 46 23.9	
	comp=Z,3.8nm,1.0s						
KSRS	**Korea Array**	**32.38**	**255**	P	**P**	**02 46 18.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=154,slow=40,SNR=2.0						
KSRS				LR	LR	02 59 59.4	
	comp=Z,28nm,18.4s,baz=30,slow=37						
	comp=Z,0.7nm,0.4s						
C36M	**Paulatuk**	**32.93**	**37**	P	**P**	**02 46 22.4**	**+0.1**
C36M				IAmb	IAmb	02 46 34.2	
	comp=Z,4.3nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.81**	**183**	T	T	03 23 18.5	
	baz=1.6,slow=76,SNR=9048						
H11N3	**WAKE ISLAND Hy**	**34.83**	**183**	T	T	03 23 19.5	
	baz=1.6,slow=76,SNR=7093						
H11N1	**WAKE ISLAND Hy**	**34.83**	**183**	T	T	03 23 19.9	
	baz=1.6,slow=76,SNR=6862						
H11S1	**WAKE ISLAND Hy**	**36.04**	**183**	T	T	03 24 48.5	
	baz=1.5,slow=76,SNR=2094						
H11S3	**WAKE ISLAND Hy**	**36.05**	**183**	T	T	03 24 49.6	
	baz=1.5,slow=76,SNR=404						
H11S2	**WAKE ISLAND Hy**	**36.05**	**183**	T	T	03 24 50.1	
	baz=1.5,slow=76,SNR=2872						
ULN	**Ulaanbaatar**	**37.92**	**286⇑**	*eP*	**P**	**02 47 05.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SONM	**Songino Array**	**38.30**	**286**	P	**P**	**02 47 08.8**	**0.0**
	comp=Z,2.9nm,0.6s,baz=59,slow=8.4,SNR=24						
SONM				LR	LR	03 03 06.9	
	comp=Z,87nm,18.4s,baz=348,slow=36						
	comp=Z,2.9nm,0.6s						
YKA	**Yellowknife Ar**	**38.63**	**46**	P	**P**	**02 47 09.6**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=293,slow=8.2,SNR=7.7						
	comp=Z,0.6nm,0.7s						
EDM	**Edmonton**	**43.84**	**58**	P	**P**	**02 47 54.3**	**+0.2**
EDM	**Edmonton**	**43.84**	**58**	P	**P**	**02 47 54.3**	**+0.2**
EDM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NEW	**Newport**	**44.82**	**66**	LR	LR	03 06 05.4	
	comp=Z,78nm,18.4s,baz=296,slow=35						
YBH	**Yreka Blue Hor**	**45.86**	**77**	LR	LR	03 03 02.2	
	comp=Z,50nm,21.6s,baz=341,slow=30						
ZALV	**Zalesovo Beam**	**46.04**	**305**	P	**P**	**02 48 09.9**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=61,slow=8.5,SNR=2.4						
ZALV				LR	LR	03 09 35.2	
	comp=Z,41nm,18.1s,baz=34,slow=39						
	comp=Z,0.4nm,0.4s						
DGZ	**Jazzator, Alta**	**47.35**	**299⇑**	*eP*	**P**	**02 48 21.4**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FCC	**Fort Churchill**	**49.12**	**43**	P	**P**	**02 48 35.5**	**+0.2**
FCC				IAmb	IAmb	02 48 46.2	
	comp=Z,4.0nm,0.8s						
FCC	**Fort Churchill**	**49.12**	**43**	P	**P**	**02 48 35.5**	**+0.2**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**50.58**	**77**	P	**P**	**02 48 46.7**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=300,slow=7.1,SNR=5.4						
	comp=Z,0.8nm,0.7s						
ELK	**Elko**	**50.71**	**73**	LR	LR	03 07 18.5	
	comp=Z,46nm,21.4s,baz=339,slow=33						
KURK	**Kurchatov**	**51.03**	**305⇑**	*eP*	**P**	**02 48 48.9**	**-1.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURBB	**Kurchatov Arra**	**51.14**	**305**	P	**P**	**02 48 49.8**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=55,slow=7.6,SNR=11						
	comp=Z,2.7nm,0.6s						
MKAR	**Makanchi Array**	**51.85**	**299**	*eP*	**P**	**02 48 56.6**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**51.85**	**299**	P	**P**	**02 48 54.7**	**-1.5**
	comp=Z,1.9nm,0.7s,baz=53,slow=6.8,SNR=20						
	comp=Z,1.9nm,0.7s						
PDAR	**Pinedale Array**	**52.43**	**67**	P	**P**	**02 48 59.0**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=316,slow=4.1,SNR=5.6						
	comp=Z,0.8nm,0.6s						
BVAR	**Borovoye Array**	**53.22**	**312**	P	**P**	**02 49 05.2**	**-1.0**
	comp=Z,4.6nm,0.6s,baz=50,slow=7.9,SNR=30						
	comp=Z,4.6nm,0.6s						
BRVK	**Borovoye**	**53.24**	**312**	P	**P**	**02 49 05.7**	**-0.7**
BRVK	**Borovoye**	**53.24**	**312⇑**	*eP*	**P**	**02 49 05.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES	**ARCESS Array B**	**53.28**	**345**	*eP*	**P**	**02 49 10.8**	**+4.3**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	**ARCESS Array B**	**53.28**	**345**	P	**P**	**02 49 07.0**	**+0.6**
	comp=Z,3.3nm,0.9s,baz=22,slow=6.8,SNR=5.6						
	comp=Z,3.3nm,0.9s						
ULM	**Lac du Bonnet**	**54.10**	**52**	P	**P**	**02 49 11.2**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=318,slow=7.3,SNR=3.5						
	comp=Z,1.0nm,0.5s						
RSSD	**Black Hills**	**54.39**	**62**	P	**P**	**02 49 14.1**	**-1.1**
RSSD	**Black Hills**	**54.39**	**62**	P	**P**	**02 49 14.1**	**-1.1**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SRU	**San Rafael Swe**	**54.45**	**71**		**P**	**02 49 15.8**	**+0.2**
SRU	**San Rafael Swe**	**54.45**	**71**	P	**P**	**02 49 15.9**	**+0.2**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PFO	**Pinyon Flats O**	**55.05**	**80**	LR	LR	03 10 34.2	
	comp=Z,56nm,18.5s,baz=322,slow=34						
HMU	**Henry Mountain**	**55.16**	**72**	P	**P**	**02 49 21.4**	**+0.5**
SFJD	**Kangerlussuaq**	**55.24**	**18**	LR	LR	03 16 16.3	
	comp=Z,68nm,18.0s,baz=302,slow=40						
ARU	**Arti**	**55.52**	**321**	*c iP*	P	02 49 32.3	+9.5
ARU						02 51 33.2	
ARU				S	S	02 57 28.6	+22
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	**Arti**	**55.52**	**321**	P	**P**	**02 49 21.7**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=329,slow=2.9,SNR=3.4						
ARU				LR	LR	03 16 23.3	
	comp=Z,55nm,19.1s,baz=262,slow=40						
	comp=Z,1.5nm,0.4s						
AAK	**Ala-Archa**	**58.72**	**301⇑**	*eP*	**P**	**02 49 45.0**	**-0.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**58.72**	**301**	P	**P**	**02 49 45.9**	**0.0**
	comp=Z,2.8nm,0.8s,baz=312,slow=2.2,SNR=8.4						
AAK				LR	LR	03 14 46.4	
	comp=Z,60nm,19.1s,baz=57,slow=36						
	comp=Z,2.8nm,0.8s						
ANMO	**Albuquerque**	**59.70**	**71**	LR	LR	03 13 24.6	
	comp=Z,24nm,20.5s,baz=27,slow=34						
AKTO	**Aktyubinsk**	**60.31**	**316**	LR	LR	03 18 16.8	
	comp=Z,50nm,18.0s,baz=230,slow=38						
FINES	**FINESS Array B**	**60.55**	**340**	P	**P**	**02 49 58.8**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=15,slow=7.9,SNR=5.5						
FINES				LR	LR	03 19 33.3	
	comp=Z,30nm,18.1s,baz=298,slow=39						
	comp=Z,1.7nm,0.8s						
BORG	**Borgarnes**	**60.76**	**5**	LR	LR	03 15 53.5	
	comp=Z,62nm,18.1s,baz=196,slow=36						
CMAR	**Chiang Mai Arr**	**63.29**	**264**	*ceP*	**P**	**02 50 17.7**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**63.29**	**264**	P	**P**	**02 50 15.6**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=23,slow=10,SNR=4.9						
CMAR				LR	LR	03 19 24.3	
	comp=Z,22nm,20.4s,baz=225,slow=38						
	comp=Z,1.5nm,0.3s						
NB2	**NORSAR Subarra**	**63.31**	**348**	P	**P**	**02 50 15.8**	**-0.8**
	comp=Z,2.8nm,1.1s,baz=16,slow=6.9						
NOA	**NORSAR Array B**	**63.31**	**348**	P	**P**	**02 50 15.3**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=3.1,slow=5.4,SNR=3.8						
	comp=Z,1.1nm,0.8s						
OBN	**Obninsk**	**63.75**	**332**	*eP*	**P**	**02 50 20.4**	**+0.9**
OBN				*e*		02 50 56.2	
OBN				*e*		02 52 40.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HFS	**Hagfors**	**63.87**	**346**	P	**P**	**02 50 19.7**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=86,slow=7.4,SNR=3.5						
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**65.48**	**74**	P	**P**	**02 50 31.5**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=304,slow=4.6,SNR=23						
	comp=Z,1.5nm,0.7s						
LPIG	**La Paz**	**65.73**	**82**	LR	LR	03 13 19.4	
	comp=Z,38nm,21.5s,baz=22,slow=31						
AKASG	**Malin Array Be**	**69.68**	**334**	P	**P**	**02 50 56.4**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=20,slow=6.8,SNR=2.3						
AKASG				LR	LR	03 22 12.9	
	comp=Z,21nm,18.1s,baz=318,slow=37						
	comp=Z,0.8nm,0.5s						
GEYT	**Alibeck**	**70.25**	**308**	P	**P**	**02 51 01.9**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=35,slow=6.2,SNR=4.0						
	comp=Z,2.8nm,0.7s						
TKL	**Tuckaleechee C**	**70.91**	**55**	LR	LR	03 23 23.4	
	comp=Z,70nm,18.3s,baz=150,slow=37						
VRAC	**Vranov**	**73.81**	**341**	LR	LR	03 28 51.7	
	comp=Z,46nm,18.0s,baz=282,slow=40						
GNI	**Garni**	**74.06**	**318**	LR	LR	03 27 26.0	
	comp=Z,40nm,19.7s,baz=15,slow=39						
BRTR	**Keskin Array B**	**78.39**	**326**	P	**P**	**02 51 49.3**	**+0.6**
BRTR	**Keskin Array B**	**78.39**	**326**	P	**P**	**02 51 48.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=137,slow=19,SNR=2.4						
	comp=Z,0.2nm,0.3s						
WB0	**Warramunga Arr**	**79.58**	**212**	P	**P**	**02 51 55.3**	**+0.2**
WRA	**Warramunga Arr**	**79.76**	**212**	*i* P	**P**	**02 51 57.9**	**+1.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**79.76**	**212**	P	**P**	**02 51 55.6**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=20,slow=6.2,SNR=9.1						
	comp=Z,1.3nm,0.8s						
WSAR	**Wadi Sarin**	**82.09**	**299**	LR	LR	03 31 08.4	
	comp=Z,65nm,18.9s,baz=59,slow=38						
PALK	**Pallekele**	**82.81**	**272**	LR	LR	03 35 33.4	
	comp=Z,46nm,18.1s,baz=276,slow=40						
ASAR	**Alice Springs**	**83.39**	**212**	P	**P**	**02 52 16.3**	**+1.1**
ASAR	**Alice Springs**	**83.39**	**212**	P	**P**	**02 52 16.1**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=20,slow=5.2,SNR=9.9						
	comp=Z,2.3nm,0.9s						
EIL	**Elat**	**87.03**	**321**	LR	LR	03 37 29.8	
	comp=Z,55nm,18.4s,baz=256,slow=40						
CART	**Cartagena**	**87.75**	**352**	P	**P**	**02 52 37.3**	**+0.4**
RPZ	**Rata Peaks**	**97.95**	**178**	LR	LR	03 33 37.5	
	comp=Z,18nm,18.6s,baz=110,slow=33						

VIE ***23*** *02:43:45.9±0.5, 49.°79N×18.°61E, h0km, mb2.5/1, ml1.7/2, Error ellipse: s-maj=6.4km s-min=2.7km az=161.0, Suspected Mining induced.*

IPEC ***23*** *02:43:45.9±0.2, 50.°07N×18.°48E, h1km, ML1.9/4, Error ellipse: s-maj=1.9km s-min=1.0km az=163.0*

PRU ***23*** *02:43:47.5, 50.°06N×18.°36E, h0km*

ISC 23 02:43:45.6±0.8, 50°08'N±0'.03×18°42'E±0'.02, h0km, n19, σ1s06/35, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.30**	**216**		*e*PG		**Pg**	**02 43 52.2**	**+0.8**
OKC					*e*SG		**Sg**	**02 43 56.6**	**+1.3**
	comp=Z,40nm,0.6s								
MORC	**Moravsky Berou**	**0.65**	**242**		*e*Pg		**Pg**	**02 43 58.6**	**+0.7**
	baz=64								
MORC					*e*Sg		**Sg**	**02 44 07.0**	**+0.7**
	23nm,0.6s,baz=64								
OJC	**Ojcow**	**0.90**	**81**		*e*Pg		**Pg**	**02 44 02.6**	**-0.1**
OJC					*e*Sg		**Sg**	**02 44 14.7**	**+0.3**
KRLC	**Kraliky**	**1.06**	**270**		*e*PG		**Pg**	**02 44 05.7**	**-0.1**
KRLC					*e*SG		**Sg**	**02 44 19.2**	**-0.3**
LANS	**Liptovska Anna**	**1.16**	**144**		*e*PG		**Pg**	**02 44 07.7**	**0.0**
LANS					*e*SG		**Sb**	**02 44 24.4**	**+0.4**
JAVC	**Velka Javorina**	**1.32**	**202**		*e*Pg		**Pg**	**02 44 11.0**	**+0.2**
	baz=23								
DPC	**Dobruska-Polom**	**1.38**	**282**		*e*PG		**Pn**	**02 44 11.9**	**-0.2**
DPC					*e*SG		**Sn**	**02 44 30.5**	**-0.5**
	comp=Z,20nm,0.5s								
NIE	**Niedzica**	**1.39**	**118**		*e*Pg		**Pb**	**02 44 12.6**	**+0.1**
NIE					*e*Sg		**Sb**	**02 44 31.0**	**+0.3**
VRAC	**Vranov**	**1.42**	**238**		*e*Pg		**Pn**	**02 44 12.2**	**-0.4**
	baz=57								
VRAC					*e*Sg		**Sg**	**02 44 30.9**	**-0.2**
	8.2nm,0.4s,baz=57								
OSTC	**Ostas**	**1.49**	**289**		*e*PG		**Pn**	**02 44 13.6**	**-0.1**
OSTC					*e*SG		**Sn**	**02 44 34.8**	**+0.9**
KSP	**Ksiaz**	**1.56**	**300**		*e*Pg		**Pn**	**02 44 14.4**	**-0.2**
KSP					*e*Sg		**Sg**	**02 44 36.0**	**+0.4**
CHVC	**Chvalec**	**1.60**	**289**		*e*PG		**Pb**	**02 44 15.6**	**-0.4**
CHVC					*e*SG		**Sg**	**02 44 37.9**	**+1.0**
UPC	**Upice**	**1.60**	**286**		*e*Pg		**Pg**	**02 44 16.1**	**-0.2**
UPC					*e*SG		**Sg**	**02 44 37.4**	**+0.3**
VYHS	**Vyhne**	**1.61**	**170**		*e*PG		**Pb**	**02 44 16.5**	**+0.3**
VYHS					*e*SG		**Sn**	**02 44 37.6**	**+0.8**
KRUC	**Moravsky**	**1.67**	**233**		*e*Pn		**Pn**	**02 44 16.2**	**+0.1**
	baz=53								
KRUC					*e*Sg		**Sn**	**02 44 38.7**	**+0.5**
	8.9nm,0.5s,baz=53								
PRU	**Pruhonice**	**2.50**	**269**		*e*SG		**Sb**	**02 45 03.8**	**+1.1**
CONA	**Conrad Observa**	**2.74**	**219**		*e*Pn		**Pn**	**02 44 30.3**	**-0.5**
	0.3nm,0.3s								
CONA					*e*Sn		**Sn**	**02 45 03.0**	**-1.6**
	1.2nm,0.5s								
KHC	**Kasperske Hory**	**3.29**	**255**		*e*PG		**Pb**	**02 44 45.4**	**+0.5**
KHC					*e*SG		**Sg**	**02 45 29.7**	**-1.6**
ARSA	**Arzberg**	**3.42**	**215**		*i* Sn		**Sn**	**02 45 16.9**	**-4.6**
	0.5nm,0.3s								

AZER ***23*** *02:50:01.4, 38.°81N×48.°65E, h31km, ml2.5*

TEH ***23*** *02:50:04.4, 38.°49N×48.°46E, h9km±66km, ML2.4*

ISC 23 02:50:01.4±1.2, 38°82'N±0'.02×48°62'E±0'.03, h15km±10km, n32, σ1s19/58, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**0.16**	**130**			P	**Pb**	**02 50 08.5**	**+2.3**
LKRN						S	**Sb**	**02 50 13.5**	**+4.2**
LRK	**Lerik**	**0.28**	**232**			P	**Pn**	**02 50 10.4**	**-0.8**
LRK						S	**Sn**	**02 50 16.9**	**-0.3**
ASTR	**Astara**	**0.29**	**152**			P	**Pn**	**02 50 09.4**	**-1.7**
ASTR						S	**Sn**	**02 50 15.2**	**-2.0**
YRD	**Yardimli**	**0.31**	**289**			P	**Pn**	**02 50 11.0**	**-0.6**
YRD						S	**Sn**	**02 50 17.8**	**-0.3**
GLBA	**Clilabad**	**0.46**	**338**			P	**Pn**	**02 50 12.9**	**-0.6**
GLBA						S	**Sn**	**02 50 22.1**	**+0.6**
GAS1	**Astara - Iran**	**0.46**	**158**			Pg	**Pb**	**02 50 11.0**	**-0.2**
GRMI	**Germi**	**0.57**	**269**			Pg	**Pn**	**02 50 14.0**	**-1.0**
GRMI						Sg	**Sn**	**02 50 23.3**	**-0.9**
SAAT	**Saatly**	**1.05**	**352**			P	**Pg**	**02 50 22.2**	**+0.4**
SAAT						S	**Sg**	**02 50 38.4**	**+2.8**
QRD	**Qoradiz**	**1.20**	**303**			P	**Pb**	**02 50 23.7**	**-0.1**
QRD						S	**Sn**	**02 50 39.6**	**0.0**
BLQ	**Beylaqan**	**1.22**	**318**			P	**Pb**	**02 50 24.1**	**-0.2**
BLQ						S	**Sg**	**02 50 41.5**	**+0.6**
ISRB	**Sarab**	**1.24**	**217**			Pg	**Pb**	**02 50 24.1**	**-0.5**
CSN1	**Caspian**	**1.30**	**163**			Pg	**Pn**	**02 50 22.9**	**-2.2**
IHRS	**Heris**	**1.33**	**249**			Pg	**Pb**	**02 50 25.9**	**-0.3**
KDMR	**Kurdemir**	**1.59**	**348**			Pn	**Pn**	**02 50 29.0**	**-0.1**
KDMR						Sn	**Sb**	**02 50 50.8**	**+0.3**
ZRD	**Zardab**	**1.63**	**334**			Pn	**Pn**	**02 50 30.2**	**+0.6**
ZRD						Sn	**Sb**	**02 50 52.9**	**+1.4**
GBS	**Qobustan**	**1.73**	**8**			Pn	**Pn**	**02 50 31.4**	**+0.3**
GBS						Sn	**Sb**	**02 50 55.6**	**+0.9**
AGDM	**Agdam**	**1.74**	**318**			Pn	**Pn**	**02 50 31.4**	**+0.3**
AGDM						Sn	**Sn**	**02 50 53.4**	**+0.3**
BRDA	**Brd**	**1.82**	**323**			Pn	**Pb**	**02 50 33.6**	**-0.9**
BRDA						Sn	**Sb**	**02 50 57.3**	**+0.1**
IHSH	**Hashtrud**	**1.85**	**216**			Pg	**Pn**	**02 50 32.5**	**-0.4**
POL	**Pirkuli**	**1.97**	**359**			Pn	**Pb**	**02 50 35.6**	**-1.5**
POL						Sn	**Sn**	**02 50 59.5**	**+0.6**
IML	**Ismayilli**	**2.00**	**350**			Pn	**Pn**	**02 50 34.9**	**+0.1**
IML						Sn	**Sb**	**02 51 00.8**	**-1.5**
ORD	**Ordubad**	**2.05**	**274**			Pn	**Pn**	**02 50 36.7**	**+1.2**
ORD						Sn	**Sn**	**02 51 02.2**	**+1.4**
ATGJ	**Altiaghaj**	**2.06**	**7**			Pg	**Pg**	**02 50 39.6**	**-1.3**
ATGJ						Sn	**Sb**	**02 51 03.2**	**-0.8**
QBL	**Gabala**	**2.21**	**344**			Pn	**Pn**	**02 50 37.5**	**-0.2**
QBL						Sn	**Sn**	**02 51 04.5**	**-0.2**
SIZA	**Siyzn**	**2.27**	**5**			Pg	**Pb**	**02 50 41.6**	**-0.5**
SIZA						Sg	**Sg**	**02 51 13.2**	**-1.2**
IMRD	**Marand**	**2.28**	**268**			Pn	**Pb**	**02 50 43.1**	**+0.7**
XNQ	**Khinaliq**	**2.38**	**351**			Pn	**Pn**	**02 50 40.3**	**+0.2**
XNQ						Sn	**Sn**	**02 51 09.0**	**-0.2**
SBZ	**Shahbuz**	**2.46**	**285**			Pn	**Pn**	**02 50 42.0**	**+1.0**
SBZ						Sn	**Sn**	**02 51 12.8**	**+2.0**
NAX	**Nakhchivan**	**2.46**	**279**			Pg	**Pb**	**02 50 46.0**	**+0.6**
NAX						Sg	**Sg**	**02 51 18.8**	**-1.8**
GANJ	**Ganja**	**2.54**	**317**			Pn	**Pn**	**02 50 42.3**	**+0.1**
GANJ						Sn	**Sn**	**02 51 12.7**	**-0.3**
SEKA	**Sheki**	**2.63**	**336**			Pn	**Pn**	**02 50 43.1**	**-0.3**
SEKA						Sn	**Sn**	**02 51 13.9**	**-1.1**
GDB	**GEDABAY**	**2.92**	**312**			Pn	**Pn**	**02 50 48.1**	**+0.7**
GDB						Sn	**Sn**	**02 51 22.9**	**+0.6**

MOS ***23*** *03:31:11.4±1.1, 55.°58N×158.°84W, h8km, mb5.0/61, MS4.2/6, Error ellipse: s-maj=8.5km s-min=4.7km az=93.8*

IDC ***23*** *03:31:12.9±0.6, 55.°75N×159.°09W, h0km, mb4.6/35, mbtmp4.6/39, ML4.3/5, MS4.1/67, Error ellipse: s-maj=15.5km s-min=9.0km az=174.0*

BJI ***23*** *03:31:13.4±0.0, 55.°60N×159.°18W, h20km, mb4.9/63, mB5.0/32, Ms4.9/38, Ms7 4.6/38*

NEIC ***23*** *03:31:14.9±1.7, 55.°57N±0.°03×158.°87W±0.°07, h23km±3km, Error ellipse: s-maj=6.0km s

R16K IAML 03 32 26.9
comp=E,14µm,1.1s
R16K Pilot Point 2.10 20 P **Pn 03 31 50.8 +1.4**
baz=200,SNR=19
FALS False Pass 2.68 255 Pn 03 31 58.8 +1.4
FALS **Sn 03 32 31.7 +2.7**
FALS False Pass 2.68 255 P **Pn 03 31 59.8 +2.4**
FALS False Pass 2.68 255 P **Pn 03 31 58.7 +1.3**
baz=73,SNR=193
ISLZ Isanotski Laza 2.88 254 Pn 03 32 01.4 +1.1
ISNN Isanotski Nort 2.88 256 Pn 03 32 01.9 +1.6
BRPK Brown Peak 2.93 253 Pn 03 32 02.1 +1.3
SSLS Shishaldin Sou 3.04 255 Pn 03 32 04.0 +1.5
SSLW Shishaldin Wes 3.09 256 Pn 03 32 03.9 +0.8
Q17K Contact Creek 3.14 31 P **Pn 03 32 04.9 +1.0**
baz=212,SNR=102
ACHA Angle Creek He 3.27 36 Pn 03 32 06.8 +1.2
Q16K King Salmon 3.31 21 Pn 03 32 07.5 +1.4
Q16K King Salmon 3.31 21 P **Pn 03 32 07.6 +1.4**
baz=202,SNR=65
KELA Mount Kelaz 3.33 30 Pn 03 32 07.5 +1.0
KCE Katmai Mt Cerb 3.34 36 Pn 03 32 08.3 +1.7
KVTA Katmai Vly 10 3.41 34 Pn 03 32 09.0 +1.4
WESE West Dahl East 3.45 253 Pn 03 32 09.8 +1.7
P16K Nushagak River 3.46 8 P **Pn 03 32 09.8 +1.6**
baz=186,SNR=24
WEBT Westdahl Beart 3.50 255 Pn 03 32 10.1 +1.3
OHAK Old Harbor 3.53 60 Pn **Pn 03 32 10.0 +0.9**
OHAK IAML 03 33 21.7
comp=N,4µm,0.9s
OHAK Old Harbor 3.53 60 P **Pn 03 32 10.0 +0.9**
baz=244,SNR=9.4
WECS Westdahl Cape 3.53 254 Pn 03 32 10.6 +1.4
O15K Ungalikthiuk R 3.60 353 Pn 03 32 11.2 +1.1
O15K Ungalikthiuk R 3.60 353 P **Pn 03 32 11.3 +1.1**
baz=172
KAHC Katmai Hardscr 3.72 34 Pn 03 32 13.2 +1.4
KAHG Katmai Hook Gl 3.75 38 Pn 03 32 13.6 +1.4
P17K Kvichak River 3.83 20 Pn 03 32 14.9 +1.6
P17K Kvichak River 3.83 20 P **Pn 03 32 14.9 +1.6**
baz=201,SNR=45
O14K Tigyukauivet M 3.86 342 Pn 03 32 14.9 +1.2
O14K Tigyukauivet M 3.86 342 P **Pn 03 32 14.9 +1.2**
baz=160,SNR=44
O16K Kokwok River B 4.02 6 Pn 03 32 16.8 +1.0
O16K Kokwok River B 4.02 6 IAML 03 33 31.5
comp=E,3µm,0.8s
O16K Kokwok River B 4.02 6 P **Pn 03 32 16.9 +1.1**
baz=186,SNR=73
KDAK Kodiak Island 4.12 56 Pn **Pn 03 32 18.2 +0.9**
KDAK IAML 03 33 37.7
comp=E,2µm,1.4s
KDAK Kodiak Island 4.12 56 P **Pn 03 32 18.1 +0.8**
baz=240
KDAK Kodiak Island 4.12 56 *de*P **Pn 03 32 18.4 +1.2**
KDAK pmax pmax
comp=Z,178nm,0.9s
KDAK Kodiak Island 4.12 56 Pn **Pn 03 32 17.8 +0.6**
comp=Z,33nm,0.3s,baz=240,slow=6.1,SNR=233
KDAK Sn **Sn 03 33 04.8 +0.2**
comp=Z,52nm,0.3s,baz=257,slow=18,SNR=5.6
KDAK Lg Lg 03 33 22.8
comp=Z,15nm,0.3s,baz=138,slow=22,SNR=1.0
KDAK LR LR 03 33 47.0
comp=Z,923nm,20.5s,baz=253,slow=37
comp=Z,82nm,0.4s
AKSA Akutan Strait 4.18 252 Pn 03 32 19.8 +1.8
AKUT Akutan 4.22 252 Pn **Pn 03 32 19.7 +1.1**
AKUT IAML 03 33 33.1
comp=E,4µm,1.0s
AKUT Akutan 4.22 252 P **Pn 03 32 20.4 +1.8**
AHB Akutan Harbor 4.25 252 Pn 03 32 20.7 +1.7
P18K Big Mountain, 4.28 26 Pn **Pn 03 32 20.8 +1.2**
P18K Big Mountain, 4.28 26 P **Pn 03 32 20.9 +1.4**
baz=209,SNR=48
O17K Koliganek Bris 4.29 13 Pn 03 32 20.8 +1.3
O17K Koliganek Bris 4.29 13 P **Pn 03 32 20.8 +1.3**
baz=194,SNR=56
AKLV Akutan Long Va 4.31 253 Pn 03 32 21.3 +1.4
AKGG Akutan Green G 4.31 254 Pn 03 32 21.5 +1.5
ZRO Akutan Zero 4.35 252 Pn 03 32 21.8 +1.4
LVA Lava Point 4.35 253 Pn 03 32 22.1 +1.7
Q19K Cape Douglas, 4.39 39 Pn 03 32 22.3 +1.3
Q19K Cape Douglas, 4.39 39 IAML 03 34 29.0
comp=N,4µm,0.9s
Q19K Cape Douglas, 4.39 39 P **Pn 03 32 22.4 +1.4**
baz=222,SNR=22
N14K Kuskokwak Cree 4.56 342 Pn 03 32 25.1 +1.8
N14K Kuskokwak Cree 4.56 342 P **Pn 03 32 24.9 +1.6**
baz=160,SNR=54
N15K Kwethluk River 4.61 353 Pn 03 32 25.5 +1.5
N15K Kwethluk River 4.61 353 P **Pn 03 32 25.5 +1.5**
baz=172,SNR=78
Q20K Shuyak Island 4.66 47 P **Pn 03 32 26.4 +1.8**
baz=232,SNR=7.0
SYI Shuyak Island 4.66 47 Pn 03 32 26.4 +1.8
O18K Koktuh Hills 4.70 24 Pn 03 32 26.7 +1.5
O18K Koktuh Hills 4.70 24 IAML 03 34 16.2
comp=E,1µm,0.8s
O18K IAML 03 34 35.1
comp=N,1µm,1.0s
O18K Koktuh Hills 4.70 24 P **Pn 03 32 26.8 +1.6**
baz=206,SNR=65
UNV Unalaska Valle 4.73 251 P **Pn 03 32 26.8 +1.1**
UNV Unalaska Valle 4.73 251 P **Pn 03 32 26.7 +1.1**
baz=66,SNR=52
AUL Augustine Lava 4.80 36 Pn 03 32 27.7 +1.1
AU22 Augustine Moun 4.82 36 Pn 03 32 28.1 +1.2
MSW Makushin Switc 4.85 253 Pn 03 32 28.7 +1.3
N16K Nishlik Lake 4.87 1 Pn 03 32 29.3 +1.6
N16K Nishlik Lake 4.87 1 P **Pn 03 32 29.0 +1.4**
baz=181
MGOD Makushin Gods 4.95 252 Pn 03 32 29.9 +1.2
MAPS Pakushin South 4.98 252 Pn 03 32 30.4 +1.3
N17K Nushagak Hills 5.01 10 Pn 03 32 30.4 +0.9
N17K Nushagak Hills 5.01 10 IAML 03 34 11.0
comp=E,2µm,1.2s
N17K IAML 03 34 19.4
comp=N,2µm,0.9s
N17K Nushagak Hills 5.01 10 P **Pn 03 32 30.4 +0.9**
baz=191,SNR=42
P19K Oil Pt 5.08 35 Pn 03 32 32.2 +1.8
P19K Oil Pt 5.08 35 IAML 03 34 08.0
comp=E,1µm,1.4s
P19K IAML 03 34 22.1
comp=N,1µm,1.6s
P19K Oil Pt 5.08 35 P **Pn 03 32 32.3 +1.9**
baz=219,SNR=18
M15K Kasigluk River 5.18 350 Pn 03 32 33.1 +1.3
M15K Kasigluk River 5.18 350 P **Pn 03 32 33.3 +1.5**
baz=169
N18K Kilae Creek 5.33 16 Pn 03 32 35.3 +1.4
N18K Kilae Creek 5.33 16 IAML 03 34 31.4
comp=E,1µm,1.4s
N18K Kilae Creek 5.33 16 P **Pn 03 32 35.1 +1.3**
baz=198,SNR=34
M13K Dall Lake 5.35 336 Pn 03 32 36.2 +2.0
M13K Dall Lake 5.35 336 P **Pn 03 32 36.4 +2.2**
baz=152
ILSW Iliamna Southw 5.36 33 Pn 03 32 36.0 +1.6
M14K Bethel 5.39 344 Pn **Pn 03 32 36.2 +1.5**
M14K Bethel 5.39 344 P **Pn 03 32 36.0 +1.3**
baz=161,SNR=176
M16K Timber Creek 5.42 360 Pn 03 32 36.8 +1.6
M16K Timber Creek 5.42 360 P **Pn 03 32 36.8 +1.6**
baz=180,SNR=91
IVE Iliamna Volcan 5.43 33 Pn 03 32 37.1 +1.8
O20K Slope Mountain 5.60 34 Pn 03 32 40.0 +2.3
O20K Slope Mountain 5.60 34 P **Pn 03 32 40.3 +2.6**
baz=219,SNR=25
OKFG Magazine Ridge 5.68 251 Pn 03 32 40.9 +2.3
CNPM China Poot 5.70 43 Pn 03 32 40.7 +1.7
N19K Bonanza Creek 5.72 22 Pn 03 32 41.1 +1.8
N19K Bonanza Creek 5.72 22 P **Pn 03 32 41.2 +1.9**
baz=206,SNR=68
SVW2 Sparrevohn 5.77 16 Pn 03 32 41.2 +1.2
SVW2 Sparrevohn 5.77 16 P **Pn 03 32 41.4 +1.4**
RED Redoubt Volcan 5.82 32 Pn 03 32 42.8 +2.1
M17K Holitna River 5.86 7 Pn 03 32 42.5 +1.4
M17K Holitna River 5.86 7 P **Pn 03 32 42.4 +1.3**
baz=188,SNR=72
RSO Redoubt South 5.86 31 Pn 03 32 42.9 +1.5
NCT North Crescent 5.89 30 Pn 03 32 43.9 +2.2
RDJH Redoubt Jeurge 5.95 31 Pn 03 32 44.9 +2.4
BRLK Bradley Lake 5.99 43 Pn 03 32 43.8 +0.8

P08K Saint George I 6.02 284 Pn 03 32 44.9 +1.5
P08K Saint George I 6.02 284 P **Pn 03 32 44.8 +1.5**
baz=95
BRSE Bradley Lake S 6.03 43 Pn 03 32 44.6 +1.1
BRSE Bradley Lake S 6.03 43 P **Pn 03 32 44.6 +1.1**
baz=230,SNR=9.0
RDT Redoubt 6.06 32 Pn 03 32 46.0 +2.1
L14K Kuka Creek 6.07 343 Pn 03 32 45.2 +1.2
L14K Kuka Creek 6.07 343 P **Pn 03 32 45.0 +1.1**
baz=159
M18K Stony River 6.11 14 Pn 03 32 45.7 +1.1
M18K Stony River 6.11 14 P **Pn 03 32 46.8 +2.2**
baz=196
L16K Owhat River 6.12 358 Pn 03 32 45.6 +0.9
L16K Owhat River 6.12 358 P **Pn 03 32 45.6 +0.9**
baz=177,SNR=69
M11K Mekoryuk 6.15 324 Pn 03 32 46.3 +1.3
M11K Mekoryuk 6.15 324 P **Pn 03 32 46.3 +1.3**
baz=138,SNR=20
L15K Ungalak Mounta 6.22 349 Pn 03 32 47.0 +0.8
L15K Ungalak Mounta 6.22 349 P **Pn 03 32 46.9 +0.8**
baz=166,SNR=57
NIKH Nikolski High 6.38 250 Pn 03 32 49.3 +1.0
NIKH Nikolski High 6.38 250 P **Pn 03 32 50.2 +1.8**
baz=62
SPIA Saint Paul Isl 6.47 289 Pn 03 32 51.4 +1.8
SPIA Saint Paul Isl 6.47 289 P **Pn 03 32 51.2 +1.7**
SPIA Saint Paul Isl 6.47 289 P **Pn 03 32 51.3 +1.8**
baz=100,SNR=19
L17K Donlin 6.55 3 Pn 03 32 51.7 +1.1
L17K Donlin 6.55 3 P **Pn 03 32 51.6 +1.1**
baz=183,SNR=62
CAPN Captain Cook N 6.60 35 Pn 03 32 53.8 +2.5
CAPN Captain Cook N 6.60 35 P **Pn 03 32 54.5 +3.3**
baz=221
N20K Mount Spurr 6.62 29 P **Pn 03 32 54.2 +2.6**
baz=215,SNR=59
SPCR Spurr Chakacha 6.62 29 Pn 03 32 54.2 +2.6
SPBG Spurr Blockage 6.62 29 Pn 03 32 54.6 +2.9
SPNN North Nagishla 6.63 27 Pn 03 32 54.3 +2.5
SPCN Chakachatna No 6.65 29 Pn 03 32 54.7 +2.7
CRP Crater Peak 6.69 29 Pn 03 32 55.8 +3.1
SPCP Crater Peak Br 6.69 29 Pn 03 32 54.4 +1.7
L18K Granite Mounta 6.73 9 Pn 03 32 54.1 +1.1
L18K Granite Mounta 6.73 9 P **Pn 03 32 54.0 +1.0**
baz=191,SNR=45
M19K Big River Lodg 6.73 19 Pn 03 32 55.0 +1.8
M19K Big River Lodg 6.73 19 P **Pn 03 32 55.2 +2.0**
baz=202,SNR=157
SLKM Skilak Lake 6.74 40 Pn 03 32 54.3 +1.1
SPCG Spurr Capps Gl 6.75 30 Pn 03 32 56.0 +2.6
SEW Seward 6.77 44 Pn 03 32 53.7 +0.2
SEW Seward 6.77 44 P **Pn 03 32 55.8 +2.2**
baz=232,SNR=8.3
K15K Wolf Creek Mou 6.83 350 Pn 03 32 56.0 +1.5
K15K Wolf Creek Mou 6.83 350 P **Pn 03 32 56.0 +1.5**
baz=167,SNR=30
O22K Cooper Landing 6.90 41 Pn 03 32 56.2 +0.8
O22K Cooper Landing 6.90 41 P **Pn 03 32 58.6 +3.2**
baz=229,SNR=16
L19K White Mountain 6.92 16 Pn 03 32 56.6 +0.9
L19K White Mountain 6.92 16 P **Pn 03 32 57.0 +1.4**
baz=199,SNR=68
CLCO Concord Point, 6.93 250 Pn 03 32 59.2 +3.3
STLK Strandline Lak 6.97 29 Pn 03 32 59.0 +2.6
M20K Styx River 6.97 23 Pn 03 32 59.1 +2.6
M20K Styx River 6.97 23 P **Pn 03 32 59.1 +2.6**
baz=208
CLES Cleveland East 7.01 251 Pn **Pn 03 32 58.7 +1.8**
K17K Iditarod 7.13 2 Pn 03 33 00.1 +1.5
K17K Iditarod 7.13 2 P **Pn 03 32 59.8 +1.3**
baz=183,SNR=63
SUA Susitna One 7.26 33 Pn 03 33 02.1 +1.7
SUA Susitna One 7.26 33 P **Pn 03 33 02.1 +1.7**
baz=219,SNR=59
RC01 Rabbit Creek A 7.31 38 Pn 03 33 02.5 +1.4
RC01 Rabbit Creek A 7.31 38 P **Pn 03 33 03.2 +2.2**
baz=225,SNR=34
L20K Farewell, AK 7.36 19 Pn 03 33 03.7 +2.0
L20K Farewell, AK 7.36 19 P **Pn 03 33 03.4 +1.7**
baz=203,SNR=50
SKT Skwentna 7.45 28 Pn 03 33 05.2 +2.3
SKT Skwentna 7.45 28 P **Pn 03 33 05.7 +2.8**
baz=214,SNR=31
TTA Tatalina 7.49 10 P **Pn 03 33 04.2 +0.7**
TTA Tatalina 7.49 10 P **Pn 03 33 04.1 +0.6**
baz=192,SNR=76
J14K Nanvaranak Lak 7.54 344 Pn 03 33 05.0 +0.9
J14K Nanvaranak Lak 7.54 344 P **Pn 03 33 04.8 +0.7**
baz=160,SNR=21
P23K Montague Islan 7.56 50 Pn 03 33 05.3 +0.8
P23K Montague Islan 7.56 50 P **Pn 03 33 05.6 +1.1**
baz=239
M22K Willow 7.67 33 P **Pn 03 33 07.1 +1.1**
baz=220,SNR=10
J16K Anvik River 7.74 354 Pn 03 33 07.9 +1.0
J16K Anvik River 7.74 354 P **Pn 03 33 08.4 +1.4**
baz=173,SNR=118
Q23K Middleton Isla 7.78 55 Pn 03 33 09.1 +1.7
MID Middleton Isla 7.78 55 P **Pn 03 33 09.2 +1.8**
J17K VABM Dome 7.81 360 Pn 03 33 08.4 +0.6
J17K VABM Dome 7.81 360 P **Pn 03 33 08.4 +0.6**
baz=179,SNR=22
PMR Palmer 7.88 36 Pn 03 33 09.4 +0.7
PMR Palmer 7.88 36 P **Pn 03 33 09.2 +0.5**
PMR Palmer 7.88 36 P **Pn 03 33 09.1 +0.3**
baz=224,SNR=21
PMR Palmer 7.88 36 P **Pn 03 33 09.4 +0.7**
J18K Innoko River 7.96 7 Pn 03 33 11.0 +1.2
J18K Innoko River 7.96 7 P **Pn 03 33 10.9 +1.0**
baz=189,SNR=35
KNK Knik Glacier 7.99 39 Pn 03 33 10.9 +0.6
KNK Knik Glacier 7.99 39 P **Pn 03 33 10.9 +0.6**
baz=228,SNR=14
GHO Glory Hole Cre 8.07 36 Pn 03 33 11.8 +0.2
PPLA Purkeypile 8.07 23 Pn 03 33 14.4 +2.8
PPLA Purkeypile 8.07 23 P **Pn 03 33 14.3 +2.8**
baz=208,SNR=39
CUT Chulitna 8.14 30 P **Pn 03 33 13.8 +1.4**
baz=217,SNR=19
K20K Telida 8.15 16 Pn 03 33 13.4 +0.9
K20K Telida 8.15 16 P **Pn 03 33 13.4 +0.9**
baz=200,SNR=17
HIN Hinchinbrook I 8.15 49 Pn 03 33 12.8 +0.2
GLI Glacier Island 8.17 45 Pn 03 33 12.5 -0.3
GLI Glacier Island 8.17 45 P **Pn 03 33 14.2 +1.4**
baz=235
SML Sawmill 8.30 37 Pn 03 33 14.8 +0.2
SML Sawmill 8.30 37 P **Pn 03 33 14.7 +0.2**
baz=226,SNR=12
I17K Unalakleet 8.35 355 Pn 03 33 16.7 +1.5
I17K Unalakleet 8.35 355 P **Pn 03 33 16.7 +1.5**
baz=173,SNR=33
FID Port Fidalgo 8.35 47 Pn 03 33 14.5 -0.8
M23K Glacier View 8.50 39 Pn 03 33 18.0 +0.6
M23K Glacier View 8.50 39 P **Pn 03 33 17.6 +0.2**
baz=228,SNR=45
EYAK Cordova Ski Ar 8.55 49 Pn 03 33 18.2 +0.2
EYAK Cordova Ski Ar 8.55 49 P **Pn 03 33 18.5 +0.5**
EYAK Cordova Ski Ar 8.55 49 P **Pn 03 33 18.4 +0.5**
baz=240
CAST Castle Rocks 8.56 21 Pn 03 33 19.8 +1.6
CAST Castle Rocks 8.56 21 P **Pn 03 33 19.8 +1.6**
baz=207,SNR=34
J19K Poorman 8.57 10 Pn 03 33 19.1 +0.8
J19K Poorman 8.57 10 P **Pn 03 33 19.1 +0.8**
baz=192,SNR=58
SCM Sheep Creek Mo 8.67 39 Pn 03 33 20.2 +0.4
SCM Sheep Creek Mo 8.67 39 P **Pn 03 33 20.1 +0.4**
baz=229,SNR=36
SCM Sheep Creek Mo 8.67 39 P **Pn 03 33 20.2 +0.4**
DIV Divide 8.84 46 Pn 03 33 22.5 +0.4
KAIM Kayak Island 8.87 55 Pn 03 33 24.2 +1.8
KAIM Kayak Island 8.87 55 P **Pn 03 33 24.3 +1.8**
baz=247
WAT7 Susitna Watana 8.88 31 Pn 03 33 22.6 -0.1
J20K Nowinta River 8.92 14 Pn 03 33 24.3 +1.3
J20K Nowinta River 8.92 14 P **Pn 03 33 24.3 +1.3**
baz=198,SNR=30
KTH Kantishna Hill 8.93 24 Pn 03 33 24.4 +1.1
CHUM Lake Minchumin 8.94 19 Pn 03 33 24.9 +1.7
CHUM Lake Minchumin 8.94 19 P **Pn 03 33 25.0 +1.7**
baz=205,SNR=22
RAGM Ragged Mountai 8.95 52 Pn 03 33 23.9 +0.4

WAT1 Susitna Watana 8.97 32 Pn 03 33 23.7 -0.1
WAT1 Susitna Watana 8.97 32 P **Pn 03 33 23.4 -0.4**
baz=221
KLU Klutina 8.99 44 Pn 03 33 24.2 +0.2
KLU Klutina 8.99 44 P **Pn 03 33 24.7 +0.6**
baz=234,SNR=68
TRF Thorofare Moun 8.99 26 Pn 03 33 25.6 +1.4
TRF Thorofare Moun 8.99 26 P **Pn 03 33 25.6 +1.4**
baz=213,SNR=33
GOAT Goat Mountain 9.01 51 Pn 03 33 25.0 +0.6
WAT6 Susitna Watana 9.04 35 Pn 03 33 24.4 -0.5
WAT6 Susitna Watana 9.04 35 P **Pn 03 33 24.5 -0.4**
baz=224,SNR=18
HMT Hamilton 9.11 53 Pn 03 33 26.8 +1.1
H16K Elim 9.20 351 Pn 03 33 28.1 +1.1
H16K Elim 9.20 351 P **Pn 03 33 28.0 +1.1**
baz=168,SNR=18
NICHA Nichawak Mount 9.20 54 Pn 03 33 27.6 +0.6
GCSA Galena City Sc 9.22 6 Pn 03 33 28.5 +1.4
GCSA Galena City Sc 9.22 6 P **Pn 03 33 28.3 +1.2**
baz=187,SNR=19
BMRM Bremner River 9.25 49 Pn 03 33 27.6 0.0
BMRM Bremner River 9.25 49 P **Pn 03 33 27.9 +0.2**
baz=240
M24K Tolsona, Glenn 9.26 40 Pn 03 33 28.7 +0.9
M24K Tolsona, Glenn 9.26 40 P **Pn 03 33 28.9 +1.1**
baz=231,SNR=16
RND Reindeer 9.33 29 Pn 03 33 28.7 -0.1
RND Reindeer 9.33 29 P **Pn 03 33 28.7 -0.1**
H17K Granite Mounta 9.37 357 Pn 03 33 31.1 +1.9
H17K Granite Mounta 9.37 357 P **Pn 03 33 30.9 +1.7**
baz=176,SNR=13
BPAW Bear Paw Mtn. 9.39 22 Pn 03 33 31.3 +1.7
BPAW Bear Paw Mtn. 9.39 22 P **Pn 03 33 31.1 +1.5**
baz=208,SNR=7.4
I20K Naaghedeneel 9.47 12 P **Pn 03 33 31.5 +0.9**
baz=195
DHY Denali Highway 9.52 33 Pn 03 33 31.1 -0.2
DHY Denali Highway 9.52 33 P **Pn 03 33 30.9 -0.5**
baz=223,SNR=9.0
GRIN Grindle Hills 9.52 54 Pn 03 33 32.1 +0.8
ANM Nome 9.53 343 Pn 03 33 32.4 +1.0
ANM Nome 9.53 343 P **Pn 03 33 32.2 +0.8**
baz=157,SNR=13
ANM Nome 9.53 343 P **Pn 03 33 32.4 +1.0**
MCK McKinley 9.57 28 Pn 03 33 32.5 +0.5
MCK McKinley 9.57 28 P **Pn 03 33 32.8 +0.8**
baz=216,SNR=20
MCK McKinley 9.57 28 P **Pn 03 33 32.5 +0.5**
H18K Honhosa River 9.57 1 Pn 03 33 33.5 +1.4
H18K Honhosa River 9.57 1 P **Pn 03 33 33.8 +1.8**
baz=182
N25K Chitina, Valde 9.58 45 Pn 03 33 32.6 +0.4
N25K Chitina, Valde 9.58 45 P **Pn 03 33 33.3 +1.1**
baz=237,SNR=16
KHIT Nitrov Hills 9.61 53 Pn 03 33 32.9 +0.3
SNH Sunshine Point 9.70 55 Pn 03 33 35.2 +1.4
G15K Niukluk 9.74 347 Pn 03 33 35.5 +1.2
G15K Niukluk 9.74 347 P **Pn 03 33 35.5 +1.2**
baz=162
CRQM Cirque 9.79 52 Pn 03 33 35.6 +0.4
WAX Waxell Ridge 9.80 54 Pn 03 33 35.3 +0.2
CRQE Cirque 9.81 52 P **Pn 03 33 36.1 +0.7**
baz=245,SNR=9.3
GLB Gilahina Butte 9.82 47 Pn 03 33 35.6 +0.2
HARP HAARP 9.82 41 Pn 03 33 36.1 +0.7
HARP HAARP 9.82 41 P **Pn 03 33 37.0 +1.6**
baz=232,SNR=20
VRDI Verde Repeater 9.86 49 Pn 03 33 36.6 +0.4
WACK Wrangell Chich 9.89 44 Pn 03 33 37.5 +0.9
WASW Wrangell South 9.92 44 Pn 03 33 37.7 +0.7
TGL Tana Glacier 9.93 52 Pn 03 33 37.8 +0.8
G16K Koyuk River 9.95 352 Pn 03 33 38.8 +1.6
G16K Koyuk River 9.95 352 P **Pn 03 33 38.5 +1.3**
baz=169
G17K Kiwalik Mounta 9.96 356 Pn 03 33 38.7 +1.5
G17K Kiwalik Mounta 9.96 356 P **Pn 03 33 38.7 +1.5**
baz=174
H19K Roundabout Mou 10.02 6 P **Pn 03 33 39.0 +0.9**
baz=188
PAX Paxson 10.07 37 P **Pn 03 33 39.4 +0.5**
baz=229,SNR=129
H20K Anotleneega Mo 10.11 10 P **Pn 03 33 40.3 +1.0**
baz=193
MESA MESA 10.12 56 P **Pn 03 33 41.2 +1.5**
baz=250
MCARA McCarthy VSAT 10.12 49 Pn **Pn 03 33 39.0 -0.5**
MCARA McCarthy VSAT 10.12 49 P **Pn 03 33 40.1 +0.6**
baz=242,SNR=6.6
I21K Tanana 10.19 17 P **Pn 03 33 42.0 +1.7**
baz=238
NEA2 Nenana 10.25 25 P **Pn 03 33 42.1 +0.9**
baz=213,SNR=21
MLY Manley 10.27 20 P **Pn 03 33 43.0 +1.4**
baz=207,SNR=44
G18K Tagagawik 10.32 1 P **Pn 03 33 44.1 +1.9**
baz=181
F15K North Star Dit 10.50 347 P **Pn 03 33 46.0 +1.4**
baz=162,SNR=17
H21K Melozitna Rive 10.51 14 P **Pn 03 33 46.0 +1.2**
baz=199
F14K Arctic Creek 10.53 343 P **Pn 03 33 45.2 +0.1**
baz=156
K24K Donnelly Dome 10.54 34 P **Pn 03 33 46.5 +1.2**
baz=225,SNR=30
G19K Purcell Mounta 10.60 4 P **Pn 03 33 47.1 +1.0**
baz=186,SNR=30
HDA Harding Lake 10.64 29 P **Pn 03 33 45.7 -1.0**
baz=219,SNR=37
I23K Minto, Yukon-K 10.65 22 P **Pn 03 33 47.5 +0.7**
baz=210,SNR=66
CTG Chitna Glacier 10.68 53 P **Pn 03 33 48.2 +0.8**
baz=247
COLA College 10.78 26 Pn 03 33 48.1 -0.3
COLA College 10.78 26 P **Pn 03 33 48.6 +0.2**
COLA College 10.78 26 P **Pn 03 33 47.8 -0.6**
baz=215
COLA College 10.78 26 P **Pn 03 33 48.1 -0.3**
L26K Log Cabin Wild 10.86 41 P **Pn 03 33 51.5 +1.8**
baz=234,SNR=35
TNA Tin City 10.90 340 P **Pn 03 33 51.7 +1.7**
baz=152
PINM Pinnacle 10.90 58 P **Pn 03 33 51.8 +1.5**
baz=254
F17K Baldwin Pennin 10.92 355 P **Pn 03 33 52.1 +1.7**
baz=173
H22K Ishtalitna Cre 10.94 17 P **Pn 03 33 52.7 +2.0**
baz=203
ILAR Eielson Array 10.94 28 Pn 03 33 49.4 -1.4
ILAR Eielson Array 10.94 28 P **Pn 03 33 49.4 -1.4**
ILAR Eielson Array 10.94 28 Pn **Pn 03 33 49.5 -1.2**
comp=E,3.4nm,0.3s,baz=216,slow=13,SNR=438
ILAR Sn **Sn 03 35 46.3 -5.9**
comp=E,0.6nm,0.3s,baz=257,slow=15,SNR=1.1
ILAR Lg Lg 03 36 55.5
baz=26,slow=43
ILAR LR LR 03 38 23.2
comp=E,1µm,19.5s,baz=214,slow=40
F18K Selawik 11.03 359 P **Pn 03 33 53.9 +2.1**
baz=178,SNR=34
M27K Edge Creek, AK 11.07 45 P **Pn 03 33 53.6 +1.0**
baz=240,SNR=13
POKR Poker Plat Res 11.08 26 P **Pn 03 33 51.9 -0.7**
baz=216,SNR=25
ADK Adak 11.15 258 Pn 03 33 55.0 +1.5
ADK Adak 11.15 258 P **Pn 03 33 55.4 +1.8**
ADK Adak 11.15 258 P **Pn 03 33 55.1 +1.5**
PNL Peninsula 11.21 61 P **Pn 03 33 55.5 +1.0**
PNL Peninsula 11.21 61 P **Pn 03 33 55.8 +1.3**
baz=257,SNR=6.4
SCRK Sand Creek 11.24 36 Pn **Pn 03 33 54.2 -0.7**
SCRK Sand Creek 11.24 36 P **Pn 03 33 54.4 -0.4**
baz=228,SNR=19
G21K Allakaket 11.24 11 P **Pn 03 33 56.4 +1.6**
baz=196
J25K Salcha River, 11.25 31 P **Pn 03 33 53.6 -1.4**
baz=223
F19K Shaleruckik Mo 11.27 2 P **Pn 03 33 56.8 +1.6**
baz=183
YUK3 Moose Creek 11.39 50 P **Pn 03 33 58.4 +1.3**
baz=245,SNR=19
KIWB Kanaga Island 11.42 258 Pn 03 33 58.9 +1.6
L27K Beaver Creek, 11.46 42 P **Pn 03 33 58.6 +0.8**
baz=237,SNR=44
BVCY Beaver Creek 11.51 46 P **Pn 03 33 59.6 +1.1**
baz=242,SNR=20

YUK8	Steele Glacier baz=249	11.51	53	P	Pn	03 34 01.3	+2.6
H24K	Noodor Dome baz=213	11.57	23	P	Pn	03 33 59.0	-0.3
F20K	Avaraart Lake baz=189	11.57	6	P	Pn	03 34 01.1	+1.7
E17K	Hotham Inlet baz=172	11.59	354	P	Pn	03 34 01.0	+1.5
J26L	Joseph Creek baz=227	11.72	34	P	Pn	03 33 60.0	-1.5
O29M	Mount Kennedy baz=255	11.77	58	P	Pn	03 34 03.2	+1.1
E18K	Tukpahlearik C baz=175,SNR=32	11.88	357	P	Pn	03 34 05.4	+1.9
PRP	Porcupine Dome	11.89	28	Pn	Pn	03 34 03.1	-0.7
PRP	Porcupine Dome baz=219,SNR=21	11.89	28	P	Pn	03 34 02.6	-1.1
E19K	Redstone River baz=184,SNR=46	11.91	3	P	Pn	03 34 06.1	+2.1
G23K	Bananza Creek baz=205,SNR=28	11.92	17	P	Pn	03 34 06.5	+2.5
K27K	Chicken baz=232	11.92	38	P	Pn	03 34 04.2	+0.1
F21K	Alatna River baz=195	11.93	10	P	Pn	03 34 06.4	+2.1
P29M	Windy Craggy baz=260,SNR=15	12.03	62	P	Pn	03 34 06.9	+1.3
YUK4	Talbot Arm baz=250,SNR=8.7	12.04	53	P	Pn	03 34 08.5	+2.6
YUK6	Outpost Mounta baz=253	12.04	55	P	Pn	03 34 07.5	+1.5
D17K	Noatak River baz=169,SNR=9.1	12.28	353	P	Pn	03 34 09.6	+0.7
COLD	Coldfoot baz=204,SNR=11	12.36	16	P	Pn	03 34 11.3	+1.3
G24K	Hadweenzic Riv baz=211	12.39	22	P	Pn	03 34 10.9	+0.4
I26K	Coal Creek Min baz=226	12.41	32	P	Pn	03 34 10.8	+0.1
HYT	Haines Junctio baz=254,SNR=7.0	12.41	56	P	Pn	03 34 13.9	+2.9
P30M	Million Dollar baz=258	12.51	60	P	Pn	03 34 13.9	+1.6
M29M	Somme Creek baz=246,SNR=45	12.53	49	P	Pn	03 34 13.6	+1.1
S31K	Pelican baz=269,SNR=5.5	12.65	70	P	Pn	03 34 13.9	-0.1
EGAK	Eagle baz=232,SNR=10	12.70	37	P	Pn	03 34 13.5	-1.2
PLBC	Pleasant Camp baz=262	12.70	63	P	Pn	03 34 17.1	+2.4
G25K	Bearman Lake baz=215,SNR=10	12.74	24	P	Pn	03 34 16.2	+1.0
E20K	Nigu River baz=187	12.75	5	P	Pn	03 34 18.0	+2.5
N30M	Aishikik Lake baz=252	12.79	54	P	Pn	03 34 16.4	+0.4
DAWY	Dawson	12.92	41	Pn	Pn	03 34 17.6	-0.1
DAWY	Dawson baz=238,SNR=53	12.92	41	P	Pn	03 34 18.2	+0.5
D19K	Kuna River baz=182	12.93	1	P	Pn	03 34 19.4	+1.5
L29M	L29M baz=244	12.95	46	P	Pn	03 34 19.4	+1.3
E22K	Anaktuvuk Pass baz=198	12.99	12	P	Pn	03 34 20.3	+1.6
F24K	Squaw Lake baz=209	13.02	19	P	Pn	03 34 21.4	+2.3
C16K	Lisburne Hills baz=164	13.05	349	P	Pn	03 34 21.9	+2.5
C17K	DeLong Mountai baz=169,SNR=33	13.05	353	P	Pn	03 34 21.9	+2.3
O30N	Mendenhall baz=257,SNR=7.8	13.07	57	P	Pn	03 34 20.6	+0.8
E21K	Killik River baz=192,SNR=12	13.07	8	P	Pn	03 34 22.7	+2.9
I27K	Kandik River baz=228,SNR=8.7	13.08	33	P	Pn	03 34 20.3	+0.3
C18K	Utukok River baz=174	13.12	356	P	Pn	03 34 20.8	+0.3
SIT	Sitka	13.16	74	P	Pn	03 34 21.8	+0.8
SIT	Sitka baz=274	13.16	74	P	Pn	03 34 21.5	+0.5
D20K	Etivluk River baz=186	13.19	4	P	Pn	03 34 22.8	+1.3
E23K	Chandalar baz=204,SNR=17	13.21	15	P	Pn	03 34 23.6	+1.8
SKAG	Skagway baz=263,SNR=5.3	13.22	63	P	Pn	03 34 22.2	+0.3
M30M	Minto, Yukon	13.29	49	Pn	Pn	03 34 23.5	+0.6
M30M	Minto, Yukon baz=248,SNR=8.1	13.29	49	P	Pn	03 34 23.5	+0.6
G26K	Porcupine Rive baz=219,SNR=12	13.45	26	P	Pn	03 34 24.4	-0.4
I28M	Miner Creek baz=232	13.52	36	P	Pn	03 34 25.1	-0.9
K29M	Barlow Dome baz=242	13.52	44	P	Pn	03 34 26.3	+0.2
F25K	Christian River baz=214,SNR=11	13.53	22	P	Pn	03 34 26.6	+0.5
H27K	Steamboat Moun baz=226	13.53	31	P	Pn	03 34 24.5	-1.6
C19K	Lookout Ridge	13.54	359	Pn	Pn	03 34 26.1	-0.2
C19K	Lookout Ridge baz=178,SNR=14	13.54	359	P	Pn	03 34 25.7	-0.6
S32K	Killisnoo baz=272	13.54	72	P	Pn	03 34 27.6	+1.4
J29N	Klondike Camp baz=239,SNR=25	13.56	41	P	Pn	03 34 27.5	+1.0
D22K	Ayikyak River baz=195,SNR=40	13.62	10	P	Pn	03 34 29.1	+1.9
WHY	Whitehorse baz=259,SNR=9.1	13.63	58	P	Pn	03 34 29.0	+1.5
JIS	Juneau Island	13.64	69	P	Pn	03 34 29.7	+2.2
C21K	Knifeblade Rid baz=190	13.72	6	P	Pn	03 34 30.2	+1.6
TOLK	Toolik Lake Re baz=203,SNR=27	13.76	15	P	Pn	03 34 31.5	+2.3
B18K	Kokolik River baz=173	13.86	356	P	Pn	03 34 32.1	+1.6
D23K	Nanushuk River baz=200,SNR=18	13.92	12	P	Pn	03 34 32.4	+1.1
F26K	Sheenjek River baz=217	13.95	24	P	Pn	03 34 33.0	+1.3
E25K	Arctic Village baz=213,SNR=11	13.99	21	P	Pn	03 34 31.4	-0.9
P32M	Atlin baz=264	14.05	63	P	Pn	03 34 35.0	+1.7
MAYO	Mayo, Yukon baz=246,SNR=6.2	14.07	46	P	Pn	03 34 35.3	+1.9
B21K	Ikpikpuk River baz=190	14.19	6	P	Pn	03 34 35.8	+0.8
M31M	Drury Creek, Y baz=253,SNR=15	14.23	52	P	Pn	03 34 37.5	+1.9
J30M	Hart River baz=242	14.33	42	P	Pn	03 34 38.2	+1.1
D24K	Happy Valley baz=204,SNR=18	14.34	15	P	Pn	03 34 38.6	+1.6
U33K	Whale Pass	14.47	77		Pn	03 34 37.9	-1.1
U33K	Whale Pass baz=279	14.47	77	P	Pn	03 34 39.3	+0.3
H29M	Whitestone baz=232,SNR=27	14.50	35	P	Pn	03 34 40.8	+1.5
P33M	Teslin, Yukon baz=263,SNR=23	14.57	61	P	Pn	03 34 41.5	+1.2
N32M	Quiet Lake baz=259	14.59	57	P	Pn	03 34 42.6	+2.1
CRAG	Craig	14.59	80	P	Pn	03 34 41.3	+0.8
CRAG	Craig baz=281	14.59	80	P	Pn	03 34 41.5	+1.0
I30M	Mount Dempster baz=239,SNR=27	14.63	40	P	Pn	03 34 41.6	+0.5
FARO	Faro, Yukon baz=255,SNR=23	14.71	53	P	Pn	03 34 42.6	+0.5
C23K	Itkillik River baz=199,SNR=41	14.75	11	P	Pn	03 34 44.0	+1.4
Q32M	Nakina River baz=268	14.76	66	P	Pn	03 34 44.9	+1.9
WRAK	Wrangell Islan baz=278	14.86	76	P	Pn	03 34 46.2	+2.1
D25K	Kavik River baz=208,SNR=19	14.88	18	P	Pn	03 34 45.4	+1.0
C24K	Franklin Bluff baz=203	14.88	14	P	Pn	03 34 45.6	+1.3
F28M	Old Crow baz=226,SNR=28	14.97	29	P	Pn	03 34 45.6	0.0
EPYK	Eagle Plains	15.13	36		Pn	03 34 47.5	-0.3
EPYK	Eagle Plains	15.13	36	P	Pn	03 34 48.2	+0.4
	baz=235,SNR=26						
S34M	Telegraph Cree baz=273	15.37	70	P	Pn	03 34 52.8	+1.8
R33M	Jennings River baz=268,SNR=14	15.44	64	P	Pn	03 34 53.3	+1.3
V35K	Ketchikan baz=282	15.46	80	P	Pn	03 34 54.3	+2.2
DIB	Dawson Inlet,	15.56	88	Pn	Pn	03 34 51.1	-2.3
G30M	tAoh Zraii Nji baz=234,SNR=49	15.65	34	P	Pn	03 34 54.5	0.0
C26K	Camden Bay baz=210	15.65	18	P	P	03 34 57.0	-1.4
H31M	Peel River comp=Z,115nm,0.9s	15.65	39	IAmb	IAmb	03 35 01.1	
H31M	Peel River baz=241,SNR=51	15.65	39	P	Pn	03 34 54.7	+0.1
E28M	Babbage River baz=224	15.76	27	P	Pn	03 34 56.7	+0.7
A21K	Barrow baz=185,SNR=24	15.80	3	P	Pn	03 34 57.3	+0.8
DLBC	Dease Lake baz=272	15.93	68	P	P	03 35 00.2	-1.5
DLBC	Dease Lake comp=Z,0.3nm,0.3s,baz=251,slow=13,SNR=6.9	15.93	68	Pn	Pn	03 34 59.3	+1.1
DLBC				LR	LR	03 40 45.3	
	comp=Z,670nm,19.0s,baz=285,slow=36 comp=Z,1.6nm,0.3s						
T35M	Bob Quinn baz=277,SNR=8.6	15.93	73	P	Pn	03 34 59.7	+1.5
SHEM	Shemya Is, Ala comp=Z,3.0nm,0.3s,baz=322,slow=19,SNR=2.3	16.01	271	Pn	Pn	03 34 58.3	-0.9
	comp=Z,83nm,0.9s						
E29M	Blow River baz=227,SNR=14	16.04	29	P	Pn	03 34 59.6	0.0
F30M	Barrier River baz=233,SNR=34	16.16	33	P	Pn	03 35 00.8	-0.2
U35K	Hyder baz=281	16.22	77	P	Pn	03 35 02.7	+0.8
G31M	Satah River baz=238,SNR=40	16.25	36	P	Pn	03 35 02.5	+0.3
D28M	Stokes Point baz=224	16.49	26	P	Pn	03 35 06.3	+1.2
WTLY	Watson Lake, Y baz=267,SNR=19	16.57	62	P	P	03 35 08.5	-0.2
F31M	Tsiigehtchic baz=237,SNR=28	16.70	35	P	Pn	03 35 08.6	+0.6
GRNB	Grenville Isla	16.78	84		Pn	03 35 07.1	-1.9
TGTN	Hyland Airport baz=263,SNR=28	16.93	57	P	P	03 35 12.1	-0.6
INK	Inuvik baz=235,SNR=26	17.26	33	P	Pn	03 35 14.9	0.0
INK	Inuvik comp=Z,1.9nm,0.3s,baz=221,slow=11,SNR=52	17.26	33	P	Pn	03 35 14.1	-0.8
INK				S	Sn	03 38 28.2	+2.4
	comp=Z,3.7nm,0.7s,baz=249,slow=19,SNR=1.2						
INK				LR	LR	03 42 32.3	
	comp=Z,1μm,19.1s,baz=196,slow=40						
INK				ScP	ScP	03 43 31.4	+1.8
	comp=Z,4.2nm,0.9s,baz=224,slow=5.1,SNR=5.1 comp=Z,21nm,0.9s						
BBB	Bella Bella	18.40	88	P	Pn	03 35 30.7	+1.7
BBB	Bella Bella comp=Z,0.2nm,0.3s,baz=279,slow=11,SNR=3.7	18.40	88	P	Pn	03 35 29.3	+0.3
BBB				LR	LR	03 41 08.7	
	comp=Z,590nm,20.2s,baz=294,slow=32						
KOTAN	Kotaneelee Air baz=272,SNR=10	18.94	62	P	Pn	03 35 37.8	+2.2
WRGLY	Wrigley baz=263,SNR=142	19.36	52	P	Pn	03 35 41.2	+0.6
BILL	Bilibino	20.24	322	P	P	03 35 48.4	-0.5
BILL	Bilibino	20.24	322	eP	P	03 35 49.7	+0.8
C36M	Paulatuk	20.76	35	P	P	03 35 53.8	-0.7
C36M				IAmb	IAmb	03 35 56.1	
	comp=Z,58nm,0.8s						
C36M	Paulatuk baz=246,SNR=101	20.76	35	P	P	03 35 54.3	-0.2
A36M	Sachs Harbour	21.64	28	P	P	03 36 02.8	-1.1
A36M				IAmb	IAmb	03 36 09.2	
	comp=Z,43nm,0.7s						
A36M	Sachs Harbour baz=238,SNR=46	21.64	28	P	P	03 36 02.9	-1.1
CLRS	Cowichan Lake	22.20	93	P	P	03 36 08.0	-2.1
PGC	Sidney	22.67	93	P	P	03 36 12.4	-2.7
HILA	High Level	22.69	65	P	P	03 36 14.2	-1.2
NLWA	Neilton Lookou	23.11	96	P	P	03 36 17.2	-2.6
YKA	Yellowknife Ar comp=Z,5.5nm,0.8s,baz=278,slow=9.9,SNR=86	23.40	55	P	P	03 36 22.8	+0.3
YKA				ScP	ScP	03 43 45.6	+1.4
	comp=Z,1.1nm,0.8s,baz=285,slow=2.2,SNR=6.0						
YKA				LR	LR	03 45 57.7	
	comp=Z,492nm,19.1s,baz=212,slow=38 comp=Z,5.5nm,0.8s						
BRLDA	Berland Lookou	23.70	76	P	P	03 36 23.2	-2.5
E03A	Lebam comp=Z,46nm,0.9s	23.77	98	IAmb	IAmb	03 36 36.9	
D05A	Enumclaw comp=Z,37nm,1.1s	24.29	95	IAmb	IAmb	03 36 58.8	
PET	Petropavlovsk	24.59	282	eP	P	03 36 37.0	+3.3
PET				eS	S	03 40 49.5	-3.5
PET				pmax	pmax		
	comp=Z,99nm,0.8s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
PEA0B	Petropavlovsk-	25.09	282	P	P	03 36 37.4	-0.9
PEA0B	Petropavlovsk-	25.09	282	ceP	P	03 36 39.9	+1.6
PETK	Petropavlovsk-	25.09	282	P	P	03 36 37.3	-1.0
PETK	Petropavlovsk-	25.09	282	P	P	03 36 37.3	-1.0
PETK	Petropavlovsk- comp=Z,56nm,0.7s,baz=74,slow=9.7,SNR=41	25.09	282	P	P	03 36 37.8	-0.4
PETK				LR	LR	03 47 02.7	
	comp=Z,305nm,20.6s,baz=86,slow=38 comp=Z,56nm,0.7s						
SEY	Seymchan	25.36	307	P	P	03 36 39.9	-0.8
	comp=Z,3.9nm,0.6s,baz=90,slow=11,SNR=18						
SEY				LR	LR	03 47 25.3	
	comp=Z,780nm,19.0s,baz=96,slow=39 comp=Z,3.9nm,0.6s						
HOOD	Mount Hood Mea comp=Z,44nm,0.8s	25.57	98	IAmb	IAmb	03 37 08.2	
H04A	Detroit Lake	25.66	100	P	P	03 36 42.0	-1.5
H04A				IAmb	IAmb	03 36 58.3	
	comp=Z,53nm,1.1s						
C09A	Chrisman Ranch	26.06	90	P	P	03 36 49.3	+2.2
C09A				IAmb	IAmb	03 37 07.9	
	comp=Z,53nm,1.6s						
I04A	Tendick Farm,	26.09	102	P	P	03 36 50.3	+2.8
I04A				IAmb	IAmb	03 37 03.5	
	comp=Z,46nm,1.2s						
EDM	Edmonton	26.27	76	P	P	03 36 47.9	-1.1
EDM	Edmonton	26.27	76	P	P	03 36 47.9	-1.1
EDM				pmax	pmax		
	comp=Z,57nm,0.8s						
NEW	Newport baz=302	26.46	88	P	P	03 36 51.2	+0.4
NEW	Newport comp=Z,371nm,21.8s,baz=292,slow=33	26.46	88	LR	LR	03 45 38.2	
MA2	Magadan	26.71	299	P	P	03 36 52.1	-0.8
MA2	Magadan	26.71	299	eP	P	03 36 54.6	+1.7
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MA2	Magadan comp=Z,1.7nm,0.3s,baz=76,slow=12,SNR=3.5	26.71	299	P	P	03 36 52.3	-0.6
MA2				LR	LR	03 49 15.3	
	comp=Z,351nm,18.8s,baz=98,slow=41 comp=Z,1.7nm,0.3s						
E09A	Wood Farm, Sta comp=Z,24nm,1.0s	26.85	93	IAmb	IAmb	03 37 09.0	
J05D	Fort Rock, OR	27.08	101	P	P	03 36 54.4	-2.1
J05D				IAmb	IAmb	03 37 10.7	
	comp=Z,27nm,1.1s						
YBH	Yreka Blue Hor comp=Z,522nm,20.2s,baz=309,slow=31	27.29	105	LR	LR	03 45 27.1	
RES	Resolute Bay	30.70	28	P	P	03 37 27.1	-1.0
RES	Resolute Bay	30.70	28	P	P	03 37 27.1	-1.0
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay comp=Z,376nm,19.7s,baz=230,slow=39	30.70	28	LR	LR	03 50 59.4	
HLID	Hailey baz=309,SNR=6.2	30.73	94	P	P	03 37 31.0	+1.9
EGMT	Eagleton comp=Z,16nm,1.0s	30.76	83	IAmb	IAmb	03 38 01.1	
EGMT	Eagleton baz=303,SNR=6.1	30.76	83	P	P	03 37 30.6	+1.5
BOZ	Bozeman (W)	31.07	89	P	P	03 37 31.6	-0.4
BOZ	Bozeman (W) baz=306	31.07	89	P	P	03 37 33.8	+1.8
BOZ	Bozeman (W)	31.07	89	P	P	03 37 31.6	-0.4
BOZ				pmax	pmax		
	comp=Z,16nm,1.5s						
FFC	Flin Flon	31.76	67	P	P	03 37 38.8	+1.0
FFC	Flin Flon	31.76	67	P	P	03 37 38.8	+1.0
FFC				pmax	pmax		
	comp=Z,11nm,1.3s						
YHL	Hebgen Lake comp=Z,44nm,1.6s	31.77	89	IAmb	IAmb	03 37 57.9	
NVAR	Mina Array Bea comp=Z,1.8nm,0.6s,baz=305,slow=8.4,SNR=12	32.02	105	P	P	03 37 43.3	+2.9
NVAR				LR	LR	03 48 32.3	
	comp=Z,392nm,19.1s,baz=280,slow=32 comp=Z,1.8nm,0.6s						
ELK	Elko	32.10	99	P	P	03 37 39.8	-1.4
ELK				IAmb	IAmb	03 37 54.4	
	comp=Z,14nm,0.9s						
ELK	Elko	32.10	99	P	P	03 37 39.8	-1.4
ELK				pmax	pmax		
	comp=Z,14nm,0.9s						
ELK	Elko comp=Z,301nm,18.4s,baz=312,slow=33	32.10	99	LR	LR	03 48 57.1	
H17A	Grant Village baz=308	32.39	90	P	P	03 37 45.1	+1.4
YMP	Mirror Lake Pl	32.42	89	P	P	03 37 42.3	-1.7
YMP				IAmb	IAmb	03 38 05.6	
	comp=Z,14nm,0.9s						
IMW	Indian Meadow comp=Z,14nm,1.1s	32.49	91	IAmb	IAmb	03 38 04.7	
FLWY	Flagg Ranch	32.52	90	P	P	03 37 43.2	-1.6
FLWY				IAmb	IAmb	03 38 05.0	
	comp=Z,25nm,1.1s						
RLMT	Red Lodge comp=Z,21nm,1.1s	32.70	88	IAmb	IAmb	03 38 07.4	
RLMT	Red Lodge baz=307,SNR=5.9	32.70	88	P	P	03 37 47.7	+1.4
HVU	Hansel Valley comp=Z,12nm,0.8s	32.80	95	IAmb	IAmb	03 38 07.6	
TIXI	Tiksi	33.28	327	P	P	03 37 50.4	-0.4
TIXI				IAmb	IAmb	03 38 13.2	
	comp=Z,14nm,1.0s						
TIXI	Tiksi	33.28	327	eP	P	03 37 51.0	+0.2
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
TIXI	Tiksi comp=Z,506nm,20.1s,baz=120,slow=36	33.28	327	LR	LR	03 51 00.7	
LAO	LASA Array comp=Z,14nm,1.1s	33.50	83	IAmb	IAmb	03 38 07.1	
LAO	LASA Array baz=305	33.50	83	P	P	03 37 54.4	+1.3
Q12A	Willow Creek R comp=Z,25nm,0.8s	33.50	101	IAmb	IAmb	03 38 13.8	
GRAC	Grapevine Rang baz=317	33.57	106	P	P	03 37 55.9	+2.1
R11B	Troy Canyon, C comp=Z,14nm,1.0s	33.57	103	IAmb	IAmb	03 38 06.9	
R11B	Troy Canyon, C baz=315,SNR=18	33.57	103	P	P	03 37 56.0	+2.0
CWC	Cottonwood Cre baz=318	33.59	108	P	P	03 37 57.6	+3.5
DGMT	Dagmar comp=Z,15nm,1.0s	33.63	79	IAmb	IAmb	03 37 57.5	
DGMT	Dagmar baz=303	33.63	79	P	P	03 37 56.5	+2.3
PKM	Mcpherson Peak baz=320	33.83	111	P	P	03 37 59.8	+3.6
DUG	Dugway, Tooele comp=Z,16nm,1.1s	33.84	97	IAmb	IAmb	03 38 10.0	
DUG	Dugway, Tooele baz=313,SNR=8.8	33.84	97	P	P	03 37 58.9	+2.7
ISA	Isabella, Lake baz=319	33.95	109	P	P	03 38 00.5	+3.3
BW06	Boulder Array baz=310,SNR=5.9	33.99	91	P	P	03 38 00.2	+2.6
PDAR	Pinedale Array comp=Z,1.6nm,0.7s,baz=317,slow=4.4,SNR=17	33.99	91	P	P	03 37 59.5	+1.8
PDAR				LR	LR	03 51 43.3	
	comp=Z,114nm,18.6s,baz=332,slow=36 comp=Z,1.6nm,0.7s						
FCC	Fort Churchill comp=Z,18nm,1.1s	34.06	57	IAmb	IAmb	03 38 23.7	
MPMC	Manual Prospec baz=318	34.19	107	P	P	03 38 04.1	+4.7
FURC	Furnace Creek, baz=318	34.23	106	P	P	03 38 03.6	+4.2
TYV	Tymovskoe	34.38	287	eP	P	03 38 02.0	+1.4
TYV				eS	S	03 43 31.2	+4.6
TYV				pmax	pmax		
	comp=Z,14nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,4.2s						
TYV				smax	smax		
	comp=E,100nm,5.7s						
BSUT	Blindstream Ca comp=Z,20nm,0.9s	34.77	95	IAmb	IAmb	03 38 24.1	
GSC	Goldstone, Bar baz=319	35.12	108	P	P	03 38 10.2	+2.9
CCUT	Cedar City	35.37	101	P	P	03 38 11.8	+2.2
CCUT				IAmb	IAmb	03 38 23.3	
	comp=Z,16nm,1.3s						
BFSC	Mount Baldy Ra baz=320	35.47	110	P	P	03 38 13.9	+3.6
SZCU	Shurtz Canyon comp=Z,16nm,1.1s	35.49	101	IAmb	IAmb	03 38 24.4	
Q16A	Castle Valley comp=Z,24nm,1.1s	35.64	98	IAmb	IAmb	03 38 25.3	
UGL	Uglegorsk	35.65	285	eP	P	03 38 13.2	+1.6
UGL				pmax	pmax		
	comp=Z,110nm,0.9s						
YAK	Yakutsk	35.75	310	P	P	03 38 11.2	-1.0
YAK	Yakutsk	35.75	310	eP	P	03 38 10.9	-1.3
YAK				eS	S	03 43 48.5	+1.1
YAK				eSS	SnSn	03 46 10.8	+0.9
YAK				e		03 48 25.3	
YAK				pmax	pmax		
	comp=Z,12nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax	smax		
	comp=E,59nm,3.0s						
YAK				MLR	MLR		
	comp=Z,365nm,17.0s						
YAK				MLR	MLR		
	comp=N,243nm,17.0s						
YAK				MLR	MLR		
	comp=E,267nm,16.0s						
YAK	Yakutsk comp=E,17nm,0.4s,baz=357,slow=1.8,SNR=1.8	35.75	310	P	P	03 38 11.7	-0.6
YAK				LR	LR	03 55 08.7	
	comp=E,227nm,18.4s,baz=78,slow=40 comp=E,17nm,0.4s						
K22A	Casper comp=Z,26nm,1.1s	35.78	89	IAmb	IAmb	03 38 32.6	
K22A	Casper baz=310	35.78	89	P	P	03 38 15.1	+2.1
GMRC	Granite Mounta baz=319	36.13	107	P	P	03 38 18.1	+2.1
RSSD	Black Hills	36.27	85	P	P	03 38 15.1	-2.1
RSSD				IAmb	IAmb	03 38 29.1	
	comp=Z,13nm,0.8s						
RSSD	Black Hills baz=308	36.27	85	P	P	03 38 19.6	+2.4
RSSD	Black Hills	36.27	85	P	P	03 38 15.1	-2.1
RSSD				pmax	pmax		
	comp=Z,13nm,0.9s						
O20A	White River Ci baz=312,SNR=12	36.46	93	P	P	03 38 21.3	+2.4
YSS	Yuzh-Sakhalins	36.48	281	eP	P	03 38 18.8	+0.1
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=E,200nm,17.0s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
MDND	Maddock baz=305	36.53	77	P	P	03 38 22.0	+2.8
BELC	Belle Mtn. Jos baz=320	36.54	108	P	P	03 38 22.6	+3.1
PFO	Pinyon Flats O	36.59	109	P	P	03 38 18.0	-1.9
PFO	Pinyon Flats O baz=320	36.59	109	P	P	03 38 22.7	+2.8
PFO	Pinyon Flats O	36.59	109	eP	P	03 38 20.5	+0.6
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	36.59	109	LR	LR	03 51 04.5	

comp=Z,369nm,18.3s,baz=274,slow=32
TPFO Pinon Flats 36.60 109 P P 03 38 22.9 +2.9
baz=320
E28A Huff 36.66 79 IAmb IAmb 03 38 23.5
comp=Z,25nm,0.9s
NEE2 Needles Airpor 36.71 106 P P 03 38 24.4 +3.6
baz=319
109C Camp Elliot, M 36.80 110 P P 03 38 26.2 +4.7
baz=321
W13A Hualapai Mount 36.87 105 IAmb IAmb 03 38 35.4
comp=Z,16nm,1.0s
IRM Iron Mountain 36.88 107 P P 03 38 26.2 +3.9
baz=319
BC3 Big Chuckawall 37.10 108 P P 03 38 27.5 +3.2
baz=320
MONP2 Monument Peak 37.16 110 P P 03 38 28.1 +3.2
baz=321
ULM Lac du Bonnet 37.21 71 IAmb IAmb 03 38 43.4
comp=Z,14nm,0.8s
ULM Lac du Bonnet 37.21 71⇑ *e*P P 03 38 26.2 +1.3
ULM pmax pmax
comp=Z,11nm,0.7s
ULM Lac du Bonnet 37.21 71 P P 03 38 25.9 +1.0
comp=Z,10nm,0.7s,baz=304,slow=9.3,SNR=19
ULM LR LR 03 53 31.5
comp=Z,479nm,19.0s,baz=294,slow=36
comp=Z,10nm,0.7s
N23A Red Feather La 37.26 91 IAmb IAmb 03 38 45.8
comp=Z,18nm,1.1s
N23A Red Feather La 37.26 91 P P 03 38 28.5 +2.8
baz=312
PDMCI Parker Dam,Lak 37.32 106 P P 03 38 29.1 +3.2
baz=319
BLYC Blythe 37.53 107 IAmb IAmb 03 38 40.9
comp=Z,37nm,1.1s
WUAZ Wupatki 37.95 102 P P 03 38 34.9 +3.4
baz=317
ISCO Idaho Springs 38.18 92 P P 03 38 36.3 +2.7
ISCO Idaho Springs 38.18 92 P P 03 38 35.5 +2.0
baz=313
ISCO Idaho Springs 38.18 92 P P 03 38 36.3 +2.7
ISCO pmax pmax
comp=Z,24nm,2.0s
JKA Kamikawa-asahi 38.28 278 P P 03 38 33.4 -0.6
JKA IAmb IAmb 03 38 35.9
comp=Z,31nm,0.9s
ASAJ Asahikawa 38.28 278 P P 03 38 33.4 -0.6
ASAJ pmax pmax
comp=Z,31nm,0.9s
ASAJ Asahikawa 38.28 278 P P 03 38 34.1 +0.1
comp=Z,29nm,0.9s,baz=20,slow=4.1,SNR=15
ASAJ LR LR 03 54 57.5
comp=Z,155nm,19.3s,baz=14,slow=37
comp=Z,29nm,0.9s
AGMN Agassiz Nation 38.32 74 IAmb IAmb 03 38 36.5
comp=Z,25nm,0.8s
AGMN Agassiz Nation 38.32 74 P P 03 38 36.1 +1.8
baz=305,SNR=17
MVCO Mesa Verde 38.34 97 P P 03 38 37.1 +2.3
baz=315,SNR=6.2
SUSD Miller 38.93 81 IAmb IAmb 03 38 55.7
comp=Z,37nm,0.8s
SUSD Miller 38.93 81 P P 03 38 40.3 +0.9
baz=309,SNR=7.2
OGNE Ogallala 39.44 87 IAmb IAmb 03 38 57.2
comp=Z,15nm,0.8s
OGNE Ogallala 39.44 87 P P 03 38 45.5 +1.6
baz=312
B35A Bob, Littlefor 39.44 72 IAmb IAmb 03 38 45.6
comp=Z,17nm,0.8s
SDCO Great Sand Dun 39.65 94 P P 03 38 47.6 +1.7
baz=314
214A Organ Pipe Nat 39.83 107 IAmb IAmb 03 39 00.0
comp=Z,19nm,0.9s
214A Organ Pipe Nat 39.83 107 P P 03 38 50.4 +3.3
baz=320,SNR=9.0
NEEM North Greenlan 40.05 19 *i* P P 03 38 47.8 -1.0
NEEM IAmb IAmb 03 38 48.9
comp=Z,16nm,0.9s
KSCO Kaye Shedlock' 40.41 90 IAmb IAmb 03 39 15.7
comp=Z,35nm,1.1s
KSCO Kaye Shedlock' 40.41 90 P P 03 38 54.4 +2.5
baz=313
TUC Tucson 40.66 105 P P 03 38 52.4 -1.7
TUC Tucson 40.66 105 P P 03 38 56.8 +2.7
baz=320
TUC Tucson 40.66 105 P P 03 38 52.4 -1.7
TUC pmax pmax
comp=Z,10.0nm,0.9s
ECSD EROS Data Cent 40.68 80 P P 03 38 53.7 -0.3
T25A Trinidad 40.70 94 P P 03 38 56.9 +2.4
baz=315
ZEA Zeya 40.85 299 *e*P P 03 38 54.7 -0.6
ZEA pmax pmax
comp=Z,10.0nm,0.8s
EYMN Ely 40.89 72 P P 03 38 55.1 -0.6
EYMN IAmb IAmb 03 39 06.8
comp=Z,35nm,0.7s
EYMN Ely 40.89 72 P P 03 38 56.9 +1.2
baz=307,SNR=39
F36A Milaca 41.06 75 IAmb IAmb 03 38 59.8
comp=Z,64nm,2.0s
ANMO Albuquerque 41.11 98 P P 03 38 55.4 -2.5
ANMO Albuquerque 41.11 98 P P 03 38 59.7 +1.9
baz=317
ANMO Albuquerque 41.11 98 P P 03 38 55.4 -2.5
ANMO pmax pmax
comp=Z,14nm,1.5s
ANMO Albuquerque 41.11 98 LR LR 03 54 30.0
comp=Z,183nm,18.7s,baz=36,slow=34
KLR Kul'dur 41.13 291 P P 03 38 57.8 +0.2
comp=Z,6.6nm,0.9s,baz=58,slow=9.2,SNR=17
KLR LR LR 03 56 13.6
comp=Z,214nm,21.8s,baz=42,slow=37
comp=Z,6.6nm,0.9s
BGNE Belgrade 41.33 84 P P 03 39 01.4 +1.9
baz=312
UPNV Upernavik 41.52 26 *i* P P 03 39 00.3 -0.2
UPNV IAmb IAmb 03 39 02.3
comp=Z,12nm,0.7s
E38A The Farm, Brul 41.67 73 IAmb IAmb 03 39 12.9
comp=Z,35nm,0.8s
SPMN Marine on St. 41.85 76 IAmb IAmb 03 39 14.8
comp=Z,17nm,0.7s
SPMN Marine on St. 41.85 76 P P 03 39 05.0 +1.4
baz=309,SNR=6.1
121A Cookes Peak, D 42.15 101 P P 03 39 09.4 +3.0
baz=319,SNR=6.2
N33A J Bar K, Exete 42.17 84 IAmb IAmb 03 39 17.5
comp=Z,38nm,0.8s
CBKS Cedar Bluff 42.18 88 IAmb IAmb 03 39 26.4
comp=Z,29nm,1.1s
CBKS Cedar Bluff 42.18 88 P P 03 39 08.7 +2.3
baz=314
I37A Lemond, Waseca 42.29 77 IAmb IAmb 03 39 16.1
comp=Z,43nm,0.8s
FRB Frobisher Bay 42.62 41 LR LR 03 57 30.8
comp=Z,332nm,18.9s,baz=296,slow=37
HEH HeiHe 42.78 295 *e*P P 03 39 17.3 +6.2
HEH pmax pmax
comp=Z,5.0nm,1.2s
HEH pmax pmax
comp=Z,140nm,5.2s
HEH LR LR
comp=N,370nm,16.8s
HEH LR LR
comp=E,440nm,15.3s
HEH LR LR
comp=Z,380nm,17.6s
NUUG Nuugaatsiaq 42.98 27 *i* P P 03 39 12.5 +0.1
D41A Chassel 43.01 71 IAmb IAmb 03 39 23.2
comp=Z,24nm,1.0s
G40A Rib Lake 43.25 74 IAmb IAmb 03 39 23.5
comp=Z,22nm,0.8s
K38A Parkersburg 43.53 78 IAmb IAmb 03 39 25.2
comp=Z,29nm,1.1s
KSU1 Kansas State U 43.76 85 IAmb IAmb 03 39 31.0
comp=Z,14nm,0.7s
UMMG Uummannaq 43.79 27 *i* P P 03 39 18.5 -0.5
UMMG IAmb IAmb 03 39 21.6
comp=Z,15nm,0.9s
MSTX Muleshoe 43.90 95 P P 03 39 22.7 +2.3
baz=317
F42A Maple Grove Fa 44.06 72 IAmb IAmb 03 39 23.8
comp=Z,46nm,1.1s
H11N2 WAKE ISLAND Hy 44.07 230 T T 04 25 43.2
baz=28,slow=76,SNR=30
H11N3 WAKE ISLAND Hy 44.07 230 T T 04 25 41.2
baz=28,slow=76,SNR=45
H11N1 WAKE ISLAND Hy 44.08 230 T T 04 25 42.1
baz=28,slow=76,SNR=33
MNTX Cornudas Mount 44.12 100 P P 03 39 25.1 +3.0
baz=319,SNR=9.5
USRK Ussuriysk Ar. 44.12 285 LR LR 03 58 39.5
comp=Z,272nm,20.4s,baz=54,slow=37
U32A Winter Ranch, 44.30 90 IAmb IAmb 03 39 44.6
comp=Z,21nm,0.8s
SMWD Samnorwood 44.51 92 IAmb IAmb 03 39 47.6
comp=Z,22nm,1.0s
KAN13 South Haven SW 44.72 88 IAmb IAmb 03 39 49.2
comp=Z,24nm,1.2s
JFWS Jewell Farm 44.75 76 P P 03 39 26.4 -0.5
JFWS IAmb IAmb 03 39 34.7
comp=Z,25nm,0.7s
JFWS Jewell Farm 44.75 76 P P 03 39 27.7 +0.7
baz=311,SNR=6.3
JFWS Jewell Farm 44.75 76 P P 03 39 26.5 -0.5
JFWS pmax pmax
comp=Z,25nm,0.7s
L40A Anamosa 44.78 78 IAmb IAmb 03 39 37.5
comp=Z,29nm,0.9s
I42A Draeger Farm, 44.84 74 P P 03 39 27.7 0.0
I42A IAmb IAmb 03 39 36.2
comp=Z,25nm,0.8s
VHRN Van Horn 45.03 100 IAmb IAmb 03 39 45.0
comp=Z,20nm,1.1s
H11S1 WAKE ISLAND Hy 45.23 229 T T 04 27 19.5
baz=27,slow=76
H11S2 WAKE ISLAND Hy 45.25 229 T T 04 27 17.1
baz=27,slow=76
H11S3 WAKE ISLAND Hy 45.25 229 T T 04 27 35.4
baz=27,slow=76
POST Post 45.28 95 IAmb IAmb 03 39 50.1
comp=Z,9.8nm,0.8s
T35A Sooner Cattle 45.33 87 IAmb IAmb 03 39 57.6
comp=Z,59nm,2.0s
WMOK Wichita Mounta 45.60 91 P P 03 39 32.4 -1.5
WMOK IAmb IAmb 03 39 55.4
comp=Z,14nm,0.8s
WMOK Wichita Mounta 45.60 91 P P 03 39 35.6 +1.8
baz=316,SNR=9.4
WMOK Wichita Mounta 45.60 91 P P 03 39 32.4 -1.5
WMOK pmax pmax
comp=Z,14nm,0.8s
BNX BinXian 45.60 290 ⇑P P 03 39 33.9 +0.1
BNX pmax pmax
comp=Z,9.0nm,1.3s
BNX pmax pmax
comp=Z,150nm,3.5s
SUMG Summit 45.69 21 *i* P P 03 39 34.0 -0.6
E46A Sault Ste Mari 45.71 69 IAmb IAmb 03 39 43.2
comp=Z,24nm,0.8s
PSTR Posyet 45.79 284⇓ *e*P P 03 39 36.0 +0.8
MJAR Matsushiro Arr 45.84 273 P P 03 39 35.9 +0.1
comp=Z,9.5nm,0.6s,baz=250,slow=3.0,SNR=4.6
MJAR LR LR 03 56 10.3
comp=Z,131nm,21.9s,baz=54,slow=33
comp=Z,9.5nm,0.6s
MJB9 Matsu-Tunnel 45.84 273 P P 03 39 35.1 -0.7
MAJO Matsushiro 45.84 273 P P 03 39 34.9 -0.9
MAJO Matsushiro 45.84 273 *ce*P P 03 39 36.3 +0.5
MAJO pmax pmax
comp=Z,39nm,1.0s
N41A Harden Midland 45.89 79 IAmb IAmb 03 39 44.1
comp=Z,22nm,0.8s
SGCY Sterling City 46.35 96 IAmb IAmb 03 40 09.4
comp=Z,13nm,0.9s
NRIK Noril'sk 46.41 333 P P 03 39 39.5 -0.2
NRIK IAmb IAmb 03 39 57.5
comp=Z,8.2nm,0.7s
NRIK Noril'sk 46.41 333⇑ *e*P P 03 39 40.9 +1.2
NRIK pmax pmax
comp=Z,6.0nm,0.7s
NRIK Noril'sk 46.41 333 P P 03 39 39.9 +0.1
comp=Z,4.5nm,0.5s,baz=72,slow=7.7,SNR=4.1
NRIK LR LR 04 03 42.1
comp=Z,375nm,18.1s,baz=60,slow=42
comp=Z,4.5nm,0.5s
SPA0 Spitsbergen Ar 46.43 1 *e*P P 03 39 40.1 +0.2
SPITS Spitsbergen Ar 46.43 1 P P 03 39 39.9 0.0
comp=Z,1.2nm,0.3s,baz=21,slow=4.8,SNR=16
comp=Z,1.2nm,0.3s
TUL3 Leonard 46.45 88 IAmb IAmb 03 40 16.1
comp=Z,10nm,0.9s
SFJD Kangerlussuaq 46.59 31 P P 03 39 40.7 -0.5
SFJD Kangerlussuaq 46.59 31 P P 03 39 40.7 -0.5
SFJD pmax pmax
comp=Z,40nm,0.7s
SFJD Kangerlussuaq 46.59 31 *i* P P 03 39 41.2 0.0
SFJD IAmb IAmb 03 39 42.9
comp=Z,40nm,0.7s
ABTX Abilene, Hawle 46.66 94 IAmb IAmb 03 39 56.3
comp=Z,19nm,0.9s
ABTX Abilene, Hawle 46.66 94 P P 03 39 43.7 +1.4
baz=318
R40A Maddies Statio 46.77 83 IAmb IAmb 03 39 53.1
comp=Z,14nm,0.8s
HDIL Hopedale 46.86 78 P P 03 39 44.4 +0.7
baz=313,SNR=16
TX31 Lajitas Ar. Si 46.87 101 IAmb IAmb 03 40 10.4
comp=Z,18nm,1.2s
TXAR Lajitas Array 46.87 101 P P 03 39 46.1 +2.0
comp=Z,2.1nm,0.7s,baz=311,slow=5.7,SNR=35
TXAR LR LR 03 58 25.6
comp=Z,239nm,18.2s,baz=323,slow=35
comp=Z,2.1nm,0.7s
U38A Gravette 46.87 86 IAmb IAmb 03 40 23.2
comp=Z,8.6nm,0.8s
JGF Kuroka 47.00 272 P P 03 39 44.6 -0.3
OZNA Ozona 47.09 97 IAmb IAmb 03 39 59.7
comp=Z,17nm,1.4s
FW03 Perrin-Whitt E 47.25 92 IAmb IAmb 03 40 07.9
comp=Z,19nm,0.8s
SAND Sanderson 47.26 99 IAmb IAmb 03 40 23.9
comp=Z,21nm,1.6s
PLPT Palo Pinto 47.27 93 P P 03 39 45.4 -1.6
PLPT IAmb IAmb 03 40 08.2
comp=Z,18nm,0.9s
P43A Skaggs, Pawnee 47.37 79 P P 03 39 45.9 -1.8
LPIG La Paz 47.38 111 LR LR 03 56 23.5
comp=Z,88nm,18.9s,baz=8.0,slow=32
JHJ Hachijo jima 2 47.42 268 LR LR 03 57 46.0
comp=Z,142nm,21.9s,baz=90,slow=34
J47A Sumner 47.50 72 IAmb IAmb 03 39 57.0
comp=Z,17nm,0.8s
CCM Cathedral Cave 47.51 82 P P 03 39 47.5 -1.2
CCM IAmb IAmb 03 39 58.2
comp=Z,9.2nm,0.9s
CCM Cathedral Cave 47.51 82 P P 03 39 48.8 +0.1
baz=315
CCM Cathedral Cave 47.51 82 P P 03 39 47.6 -1.2
CCM pmax pmax
comp=Z,9.0nm,1.0s
MGMO Mountain Grove 47.56 84 IAmb IAmb 03 39 58.4
comp=Z,11nm,1.1s
X37A Clayton 47.64 89 P 03 39 47.5 -2.3
X37A IAmb IAmb 03 40 18.5
comp=Z,13nm,0.8s
CN2 Changchun 47.93 289 *e*P P 03 39 52.1 +0.1
CN2 *e*PP PP 03 41 43.0 -0.7
CN2 *e*S S 03 46 45.6 -2.2
CN2 *es*S pS 03 46 55.6 -1.1
CN2 pmax pmax
comp=Z,20nm,1.0s
ICESG Greenland Ices 48.01 25 *i* P P 03 39 51.9 -0.8
ICESG IAmb IAmb 03 39 53.6
comp=Z,17nm,0.7s
FVM French Village 48.02 82 IAmb IAmb 03 40 22.0
comp=Z,15nm,0.7s
BRDY Brady 48.02 95 P P 03 39 50.8 -2.1
BRDY IAmb IAmb 03 40 06.7
comp=Z,9.8nm,1.0s
HOPEN Hopen 48.12 359 *e*P P 03 39 53.9 +0.9
VLDQ Val d'Or 48.12 63 IAmb IAmb 03 40 00.4
comp=Z,24nm,0.9s
JCT Junction City 48.17 96 P P 03 39 53.0 -1.1
JCT IAmb IAmb 03 40 07.6
comp=Z,14nm,0.8s
JCT Junction City 48.17 96 P P 03 39 55.0 +1.0
baz=319
JCT Junction City 48.17 96 P P 03 39 53.0 -1.1
JCT pmax pmax
comp=Z,14nm,0.8s
NUUK Nuuk 48.18 34 *i* P P 03 39 54.1 +0.6
NUUK IAmb IAmb 03 39 55.9
comp=Z,31nm,0.9s
SFIN Lafayette 48.20 77 P P 03 39 53.3 -0.8
SFIN Lafayette 48.20 77 P P 03 39 55.0 +0.9
baz=314,SNR=6.3
DY2G Dye2 48.21 30 *i* P P 03 39 53.4 -0.7
WHTX Lake Whitney, 48.37 93 P P 03 39 56.6 +1.1
baz=318
FCAR Ozark Folk Cen 48.55 85 P P 03 39 54.8 -2.0
FCAR IAmb IAmb 03 40 27.0
comp=Z,8.9nm,0.9s
N47A Urbana 48.63 75 P P 03 39 56.2 -1.1
MIAR Mount Ida 48.69 87 P P 03 39 57.4 -0.6
MIAR IAmb IAmb 03 40 29.8
comp=Z,12nm,0.8s
MIAR Mount Ida 48.69 87 P P 03 39 58.9 +0.9
baz=317
MIAR Mount Ida 48.69 87 P P 03 39 57.4 -0.6
MIAR pmax pmax
comp=Z,12nm,0.9s
SCHQ Schefferville 48.73 50 P P 03 39 56.7 -1.3
SCHQ Schefferville 48.73 50 P P 03 39 58.1 +0.1
comp=Z,4.8nm,0.7s,baz=327,slow=9.0,SNR=16
comp=Z,4.8nm,0.7s
PBMO Poplar Bluff 48.87 83 IAmb IAmb 03 40 16.6
comp=Z,12nm,0.7s
O48B Farmland 49.36 76 P P 03 40 01.6 -1.4
O48B Farmland 49.36 76 P P 03 40 02.9 -0.1
baz=314,SNR=7.4
SADO Sadowa 49.49 67 LR LR 04 00 51.3
comp=Z,187nm,18.9s,baz=27,slow=36
P48A Milroy 49.76 77 P P 03 40 04.3 -1.8
P49A Miami Univ. Ec 50.10 76 P P 03 40 07.0 -1.7
P49A Miami Univ. Ec 50.10 76 P P 03 40 08.7 0.0
baz=315,SNR=7.8
SNY Shenyang 50.28 288 ⇑P P 03 40 10.9 +0.9
SNY S S 03 47 20.6 -0.2
SNY pmax pmax
comp=Z,19nm,0.9s
SNY pmax pmax
comp=Z,75nm,6.5s
SNY LR LR
comp=Z,170nm,18.3s
SNY LR LR
comp=Z,280nm,15.4s
SNY LR LR
comp=Z,300nm,19.4s
JMN Monobe 50.32 274 P P 03 40 09.1 -1.3
DELO Deloro Mine 50.45 67 IAmb IAmb 03 40 22.6
comp=Z,28nm,1.3s
T47A Sharon Grove 50.58 80 IAmb IAmb 03 40 20.7
comp=Z,21nm,0.9s
SOEG Sedalen 50.60 23 *i* P P 03 40 13.6 +1.6
JCJ Chichijima 50.62 261 LR LR 03 59 07.3
comp=Z,218nm,21.9s,baz=111,slow=33
WVT Waverly 50.79 81 P P 03 40 11.9 -2.0
WVT IAmb IAmb 03 40 25.3
comp=Z,22nm,0.8s
WVT Waverly 50.79 81 P P 03 40 15.4 +1.5
baz=316
WVT Waverly 50.79 81 P P 03 40 11.9 -2.0
WVT pmax pmax
comp=Z,22nm,0.8s
TRQ Mont Tremblant 50.86 63 P P 03 40 12.8 -1.5
TRQ IAmb IAmb 03 40 25.2
comp=Z,25nm,1.0s
ERPA Erie 50.86 70 P P 03 40 15.2 +0.9
baz=314
ISOG Isortoq, Green 50.89 28 *i* P P 03 40 13.3 -0.9
M53A WI Miller and 50.97 71 P P 03 40 16.0 +0.8
baz=314
KS19 Wonju Array Si 50.98 281 P P 03 40 14.3 -1.0
KS19 IAmb IAmb 03 40 17.2
comp=Z,28nm,1.1s
KSRS Korea Array 50.98 281 *e*P P 03 40 16.5 +1.2
KSRS pmax pmax
comp=Z,14nm,1.0s
KSRS Korea Array 50.98 281 P P 03 40 15.9 +0.6
comp=Z,14nm,1.0s,baz=49,slow=6.9,SNR=31
KSRS LR LR 04 01 43.7
comp=Z,87nm,21.7s,baz=50,slow=36
comp=Z,14nm,1.0s
KSAR Wonju Array Be 51.01 281 P P 03 40 14.8 -0.7
KSAR Wonju Array Be 51.01 281 P P 03 40 14.8 -0.7
OXF Oxford 51.07 84 P P 03 40 17.3 +1.2
baz=317
ANGG Ammassalik, Gr 51.18 27 *i* P P 03 40 15.6 -0.8
ANGG IAmb IAmb 03 40 16.8
comp=Z,20nm,0.7s
R50A Paris 51.20 77 P P 03 40 15.3 -1.6
Q51A Peebles 51.21 75 P P 03 40 15.5 -1.6
O52A Adamsville 51.27 73 IAmb IAmb 03 40 25.1
comp=Z,28nm,0.9s
N53A Lisbon 51.32 72 IAmb IAmb 03 40 25.6
comp=Z,24nm,0.8s
WBO Williamsburg 51.33 65 IAmb IAmb 03 40 25.7
comp=Z,20nm,0.9s
WVNY West Valley, N 51.40 69 P P 03 40 17.0 -1.4
P52A Corning 51.45 74 P P 03 40 18.8 0.0
baz=315
PLAL Pickwick Lake 51.48 83 IAmb IAmb 03 40 38.8
comp=Z,25nm,0.8s
O53A New Philadelph 51.51 73 P P 03 40 19.7 +0.5
baz=315
SSFO Shawnee State 51.53 76 P P 03 40 18.2 -1.2
V48A Smith Brothers 51.64 81 IAmb IAmb 03 40 33.2
comp=Z,10nm,0.8s
CLTN Cedars of Leba 51.66 80 P P 03 40 18.9 -1.5
Q52A Bidwell 51.85 75 P P 03 40 19.7 -2.1
Q52A IAmb IAmb 03 40 29.4
comp=Z,38nm,1.4s
LONY Lake Ozonia 51.95 64 P P 03 40 22.7 +0.2
baz=314
JMIC Jan Mayen 51.95 12 LR LR 04 04 47.6
comp=Z,119nm,19.0s,baz=311,slow=39
P53A Whipple 51.96 74 P P 03 40 20.5 -2.1
P53A IAmb IAmb 03 40 29.8
comp=Z,22nm,0.8s
M55A Ridgway 51.97 70 P P 03 40 21.2 -1.5
TJN Taejon 52.06 281 *ce*P P 03 40 24.2 +0.8
S51A Beattyville 52.07 77 P P 03 40 21.2 -2.3
J57A Williamstown 52.07 66 P P 03 40 22.2 -1.1
J57A IAmb IAmb 03 40 32.2
comp=Z,29nm,1.0s
L56A Greenwood 52.14 69 P P 03 40 22.1 -1.9
FRNY Flat Rock 52.31 64 P P 03 40 24.2 -1.0
FRNY IAmb IAmb 03 40 32.9
comp=Z,18nm,1.0s
X48A Hartselle 52.45 82 P P 03 40 24.2 -2.1
X48A IAmb IAmb 03 40 44.9
comp=Z,12nm,0.9s
JNU Nakatsue 52.47 275 P P 03 40 25.5 -1.1
JNU IAmb IAmb 03 40 53.0
comp=Z,41nm,1.4s
J58A Remsen 52.47 66 P P 03 40 24.6 -1.8
R53A Hurricane 52.47 75 IAmb IAmb 03 40 33.9
comp=Z,24nm,1.1s
SWET Sewanee 52.52 81 IAmb IAmb 03 40 34.8
comp=Z,56nm,2.0s
MCWV Mont Chateau 52.67 72 IAmb IAmb 03 40 35.7
comp=Z,27nm,0.8s
MCWV Mont Chateau 52.67 72 P P 03 40 28.5 +0.6
baz=316
XLT XiLinHaoTe 52.78 295 *e*P P 03 40 29.8 +1.0
XLT pP pP 03 40 35.8 -0.6
XLT pmax pmax
comp=Z,16nm,0.9s
XLT pmax pmax
comp=Z,68nm,3.6s
XLT LR LR
comp=Z,19nm,14.6s
XLT LR LR
comp=Z,170nm,12.8s
XLT LR LR
comp=Z,150nm,24.0s
Z47A Carrollton 52.79 84 P P 03 40 27.6 -1.3
Z47A IAmb IAmb 03 40 48.8
comp=Z,24nm,0.9s
J59A Piesco 52.80 65 P P 03 40 26.6 -2.2
J59A IAmb IAmb 03 40 37.0
comp=Z,11nm,0.8s
W50A Signal Mountai 52.87 80 IAmb IAmb 03 41 06.1
comp=Z,14nm,0.8s
TZTN Tazewell 52.88 78 P P 03 40 27.6 -1.9
TZTN IAmb IAmb 03 40 37.8
comp=Z,17nm,0.8s
TZTN Tazewell 52.88 78 P P 03 40 30.1 +0.6

baz=317
BINY Binghamton 52.92 68 P **P** **03 40 30.6 +0.8**
baz=315
M57A Sunshine Farm, 52.93 69 P **P** **03 40 28.9 -0.9**
M57A IAmb IAmb 03 40 38.2
comp=Z,42nm,1.5s
D62A Allapoint, All 52.99 59 P **P** **03 40 29.6 -0.5**
D62A IAmb IAmb 03 40 38.1
comp=Z,17nm,1.0s
SSPA Standing Stone 53.03 70 P **P** **03 40 29.0 -1.5**
SSPA Standing Stone 53.03 70 P **P** **03 40 30.8 +0.2**
baz=316
E62A Clayton Lake 53.08 60 P **P** **03 40 30.4 -0.5**
E62A IAmb IAmb 03 40 38.5
comp=Z,20nm,1.0s
CPCT Cooper Cave 53.13 79 P **P** **03 40 28.7 -2.6**
CPCT IAmb IAmb 03 40 39.1
comp=Z,12nm,1.0s
FPAL Fort Paine 53.19 81 P **P** **03 40 31.0 -0.9**
FPAL IAmb IAmb 03 40 42.6
comp=Z,12nm,0.7s
Y49A Blount Mountai 53.24 82 P **P** **03 40 30.7 -1.5**
Y49A IAmb IAmb 03 40 44.8
comp=Z,10nm,0.8s
TKL Tuckaleechee C 53.40 79 LR LR 04 03 45.6
comp=Z,319nm,18.0s,baz=324,slow=36
LRAL Lakeview Retre 53.52 83 P **P** **03 40 34.6 +0.4**
baz=318
LBNH Liebon 53.57 63 P **P** **03 40 35.3 +0.8**
baz=315
G62A West of Eustis 53.58 61 P **P** **03 40 33.1 -1.4**
W52A Murphy 53.73 79 IAmb IAmb 03 40 43.7
comp=Z,13nm,1.0s
P57A Homestead Farm 53.79 71 P **P** **03 40 34.6 -1.5**
U54A Nelsons Funny 53.85 77 P **P** **03 40 34.6 -2.1**
U54A IAmb IAmb 03 40 45.2
comp=Z,27nm,1.1s
V53A Saluda 53.92 78 P **P** **03 40 35.6 -1.6**
V53A IAmb IAmb 03 40 45.6
comp=Z,21nm,0.9s
F63A Nahmakanta, Br 53.94 60 P **P** **03 40 35.5 -1.7**
HAMF Hammerfest 54.03 359 *eP* **P** **03 40 37.4 0.0**
BLA Blacksburg 54.12 75 IAmb IAmb 03 40 46.4
comp=Z,12nm,0.7s
BLA Blacksburg 54.12 75 P **P** **03 40 39.1 +0.5**
baz=317
BATG Bathurst New B 54.29 57 P **P** **03 40 38.4 -1.2**
BATG IAmb IAmb 03 40 48.7
comp=Z,20nm,0.9s
ZAK Zakamensk 54.31 309 *eP* **P** **03 40 39.7 -0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
BG3 Lake Jocassee 54.35 79 P **P** **03 40 38.9 -1.4**
BG3 IAmb IAmb 03 41 15.3
comp=Z,11nm,0.9s
MOY Mondy 54.38 311 *eP* **P** **03 40 40.9 +0.5**
MOY pmax pmax
comp=Z,35nm,3.2s
ULN Ulaanbaatar 54.40 304 P **P** **03 40 39.5 -1.1**
ULN Ulaanbaatar 54.40 304⇑ *eP* **P** **03 40 40.5 -0.2**
ULN pmax pmax
comp=Z,3.0nm,0.8s
K62A Royalston 54.54 65 P **P** **03 40 40.0 -1.6**
KSCT Kent School, K 54.57 66 P **P** **03 40 39.5 -2.3**
KSCT IAmb IAmb 03 40 51.0
comp=Z,21nm,0.8s
V55A Taylorsville 54.67 77 P **P** **03 40 41.2 -1.4**
V55A IAmb IAmb 03 40 50.8
comp=Z,14nm,0.9s
SONM Songino Array 54.73 305 P **P** **03 40 42.4 -0.7**
SONM Songino Array 54.73 305 *eP* **P** **03 40 43.4 +0.4**
SONM pmax pmax
comp=Z,4.0nm,0.6s
SONM Songino Array 54.73 305 P **P** **03 40 42.8 -0.3**
comp=Z,4.3nm,0.6s,baz=49,slow=6.4,SNR=25
SONM PcP **PcP** **03 41 46.6 +1.2**
comp=Z,6.2nm,0.8s,baz=48,slow=1.9,SNR=6.3
SONM LR LR 04 05 47.0
comp=Z,383nm,20.0s,baz=18,slow=38
comp=Z,4.3nm,0.6s
U56A King 54.77 76 IAmb IAmb 03 40 50.9
comp=Z,17nm,1.0s
TRO Tromso 55.05 1 *eP* **P** **03 40 45.3 +0.5**
ARA0 ARCESS Array S 55.11 358 *eP* **P** **03 40 45.2 -0.1**
ARCES ARCESS Array B 55.11 358 *eP* **P** **03 40 44.3 -1.0**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES ARCESS Array B 55.11 358 P **P** **03 40 44.8 -0.6**
comp=Z,2.5nm,0.7s,baz=22,slow=6.8,SNR=18
comp=Z,2.5nm,0.7s
KMSC Kings Mountain 55.13 77 IAmb IAmb 03 40 53.7
comp=Z,16nm,0.9s
KMSC Kings Mountain 55.13 77 P **P** **03 40 45.7 -0.3**
baz=318
JETT Jettan, Norway 55.13 0 *eP* **P** **03 40 46.4 +0.9**
GOGA Godfrey 55.22 80 P **P** **03 40 46.7 +0.1**
baz=318
HODGE Hodges 55.29 79 P **P** **03 40 46.5 -0.5**
HODGE IAmb IAmb 03 40 54.6
comp=Z,14nm,1.0s
BORG Borgarnes 55.66 21 LR LR 04 05 49.3
comp=Z,195nm,21.7s,baz=343,slow=37
KTK1 Kautokeino 55.67 359 *eP* **P** **03 40 49.3 -0.1**
JSC Jenkinsville 55.81 78 P **P** **03 40 49.3 -1.5**
JSC IAmb IAmb 03 40 58.5
comp=Z,14nm,1.0s
JSC Jenkinsville 55.81 78 P **P** **03 40 49.3 -1.5**
JSC pmax pmax
comp=Z,14nm,1.0s
T59A Double "B" Far 55.86 73 P **P** **03 40 49.9 -1.3**
T59A IAmb IAmb 03 40 58.9
comp=Z,21nm,0.8s
LMN Caledonia Moun 55.91 57 P **P** **03 40 50.1 -1.4**
U59A Littleton 56.18 74 P **P** **03 40 52.4 -1.0**
U59A IAmb IAmb 03 41 01.6
comp=Z,12nm,0.7s
STEI Steigen 56.69 3 *eP* **P** **03 40 56.8 +0.2**
APA Apatity 56.79 354⇓ *iP* P 03 41 06.2 +8.9
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,500nm,14.0s
NHSC New Hope 57.28 78 P **P** **03 41 02.3 +1.0**
baz=319
HHC Hu-ho-hao-te 57.30 296 *eP* **P** **03 41 03.3 +1.8**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,48nm,4.5s
HHC LR LR
comp=Z,250nm,16.0s
HHC LR LR
comp=Z,310nm,16.0s
HHC LR LR
comp=Z,300nm,16.8s
HNS HongShan 58.22 291 ⇑P **P** **03 41 08.3 +0.5**
HNS *eS* **S** **03 49 10.9 +3.1**
HNS pmax pmax
comp=Z,14nm,1.0s
HNS LR LR
comp=Z,250nm,19.6s
HNS LR LR
comp=Z,220nm,20.1s
HNS LR LR
comp=Z,350nm,19.1s
JOW Kunigami 58.69 272 LR LR 04 04 16.3
comp=Z,61nm,21.9s,baz=64,slow=34
ZAA0 Zalesovo Array 58.94 322 P **P** **03 41 11.3 -1.3**
ZAA0 IAmb IAmb 03 41 14.6
comp=Z,14nm,1.4s
ZALV Zalesovo Beam 58.94 322 P **P** **03 41 11.2 -1.4**
ZALV Zalesovo Beam 58.94 322 P **P** **03 41 13.2 +0.6**
comp=Z,2.3nm,0.5s,baz=29,slow=6.3,SNR=15
ZALV LR LR 04 07 09.2
comp=Z,331nm,19.4s,baz=28,slow=37
comp=Z,2.3nm,0.5s
NJ2 Nanjing 59.99 284 *eP* **P** **03 41 20.4 +0.3**
NJ2 pP **pP** **03 41 27.3 -0.6**
NJ2 sP **sP** **03 41 30.8 0.0**
NJ2 pmax pmax
comp=Z,16nm,0.5s
DGZ Jazzator, Alta 61.41 317 *c iP* **P** **03 41 30.7 +0.9**
DGZ pmax pmax
comp=Z,11nm,1.3s
CMIG Matias Romero 61.45 102 LR LR 04 05 51.0
comp=Z,91nm,20.9s,baz=7.0,slow=34

LYN LuoYang 61.55 290 *eP* **P** **03 41 31.4 +0.6**
LYN sP pP 03 41 39.4 +0.9
LYN pmax pmax
comp=Z,25nm,1.0s
AKN Aaknes 62.03 7 *eP* **P** **03 41 34.2 +0.6**
DOMB Dombas 62.30 6 *eP* **P** **03 41 34.8 -0.7**
TEIG Tepich 62.65 94 LR LR 04 11 51.3
comp=Z,848nm,18.1s,baz=187,slow=39
KLMR Klimovskoe 62.96 350 *eP* **P** **03 41 38.7 -1.1**
KLMR pmax pmax
comp=Z,17nm,1.0s
VALR Valaam 63.11 355 *d iP* **P** **03 41 41.1 +0.4**
VALR pmax pmax
comp=Z,10.0nm,1.1s
FINES FINESS Array B 63.22 357 *eP* **P** **03 41 41.8 +0.4**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 63.22 357 P **P** **03 41 41.7 +0.2**
comp=Z,4.7nm,0.6s,baz=352,slow=9.1,SNR=14
comp=Z,4.7nm,0.6s
SVE Sverdlovsk 63.42 337 *eP* **P** **03 41 43.6 +0.7**
NB2 NORSAR Subarra 63.43 5 P **P** **03 41 42.8 -0.1**
comp=Z,8.3nm,1.0s,baz=355,slow=6.9
NB2 NORSAR Subarra 63.43 5 P **P** **03 41 42.8 -0.1**
baz=355,slow=6.9
NOA NORSAR Array B 63.43 5 P **P** **03 41 43.0 0.0**
comp=Z,2.2nm,0.8s,baz=353,slow=6.6,SNR=8.7
comp=Z,2.2nm,0.8s
SEM Semipalatinsk 63.46 322 *eP* **P** **03 41 43.6 +0.1**
baz=322
SEM Semipalatinsk 63.46 322 *eP* **P** **03 41 43.6 +0.1**
SKAR Skarslia 63.61 7 *eP* **P** **03 41 44.4 +0.2**
WHN Wuhan 63.61 286 ⇑P P 03 41 52.1 +7.6
WHN pmax pmax
comp=Z,44nm,0.7s
RAF Rauma 63.70 360 *eP* **P** **03 41 44.4 -0.2**
NC602 NORSAR Array S 63.75 5 *eP* **P** **03 41 45.2 +0.2**
KURK Kurchatov 63.76 323 P **P** **03 41 44.7 -0.5**
KURK IAmb IAmb 03 41 47.3
comp=Z,24nm,1.4s
KURK Kurchatov 63.76 323 *de* **P** **03 41 45.2 0.0**
KURK pmax pmax
comp=Z,18nm,1.3s
XAN Xi'an 63.82 292 ⇑P **P** **03 41 46.4 +0.4**
XAN pP pP 03 41 53.6 -0.1
XAN sP sP 03 41 57.0 +0.3
XAN pmax pmax
comp=Z,10.0nm,1.2s
XAN LR LR
comp=Z,400nm,20.0s
XAN LR LR
comp=Z,400nm,19.0s
XAN LR LR
comp=Z,490nm,20.0s
KURBB Kurchatov Arra 63.87 323 P **P** **03 41 45.8 -0.2**
comp=Z,5.8nm,0.9s,baz=27,slow=6.5,SNR=22
KURBB LR LR 04 12 17.7
comp=Z,264nm,18.6s,baz=158,slow=39
comp=Z,5.8nm,0.9s
KIRV Kirov 63.90 344⇑ *eP* **P** **03 41 47.7 +1.7**
KIRV Kirov 63.90 344 P **P** **03 41 46.1 +0.2**
comp=Z,7.5nm,0.6s,baz=11,slow=5.2,SNR=3.7
KIRV LR LR 04 12 59.9
comp=Z,192nm,18.1s,baz=21,slow=39
comp=Z,7.5nm,0.6s
GTA Gaotai 64.22 302 P **P** **03 41 48.5 -0.1**
GTA pP pP 03 41 57.3 +0.9
GTA pmax pmax
comp=Z,5.0nm,1.6s
GTA LR LR
comp=Z,250nm,17.1s
GTA LR LR
comp=Z,740nm,19.9s
GTA LR LR
comp=Z,240nm,15.5s
ZSN Zaisan 64.23 317 *eP* **P** **03 41 49.2 +0.8**
baz=317
ZSN Zaisan 64.23 317 *eP* **P** **03 41 49.2 +0.8**
ARU Arti 64.24 338 *c iP* **P** **03 41 48.3 0.0**
ARU 03 42 23.4
ARU S **S** **03 50 26.1 +2.3**
ARU pmax pmax
comp=Z,7.0nm,0.6s
ARU Arti 64.24 338 LR LR 04 12 07.5
comp=Z,126nm,19.1s,baz=18,slow=38
BVAR Borovoye Array 64.35 329 P **P** **03 41 48.9 -0.2**
comp=Z,2.5nm,0.6s,baz=30,slow=6.8,SNR=18
comp=Z,2.5nm,0.6s
BRVK Borovoye 64.35 330 P **P** **03 41 48.9 -0.2**
BRVK IAmb IAmb 03 42 34.0
comp=Z,8.4nm,0.8s
BRVK Borovoye 64.35 330 *ce* **P** **03 41 49.6 +0.5**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
HFS Hagfors 64.45 4 P **P** **03 41 49.1 -0.5**
comp=Z,3.5nm,0.6s,baz=36,slow=4.0,SNR=12
comp=Z,3.5nm,0.6s
BLS5 Blasjo 64.72 8 *eP* **P** **03 41 51.8 +0.4**
LZH Lanzhou 64.84 297 *eP* **P** **03 41 53.6 +0.8**
LZH pP pP 03 42 01.5 +0.9
LZH sP sP 03 42 05.1 +1.6
LZH pmax pmax
comp=Z,16nm,1.0s
LZH LR LR
comp=Z,170nm,16.0s
LZH LR LR
comp=Z,490nm,15.8s
LZH LR LR
comp=Z,540nm,17.5s
MKAR Makanchi Array 65.75 319 P **P** **03 41 57.9 -0.4**
MKAR Makanchi Array 65.75 319 *eP* **P** **03 41 58.2 -0.1**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 65.75 319 P **P** **03 41 58.3 -0.1**
comp=Z,6.4nm,0.6s,baz=44,slow=5.9,SNR=82
MKAR LR LR 04 13 06.5
comp=Z,383nm,19.3s,baz=32,slow=38
comp=Z,6.4nm,0.6s
MAKZ Makanchi 65.86 319 P **P** **03 41 58.0 -1.0**
MAKZ IAmb IAmb 03 42 00.5
comp=Z,11nm,0.6s
MAKZ Makanchi 65.86 319 P **P** **03 41 58.0 -1.0**
MAKZ pmax pmax
comp=Z,11nm,0.6s
WMQ Urumqi 66.09 313 *eP* **P** **03 42 01.6 +1.0**
WMQ pmax pmax
comp=Z,30nm,0.9s
VSU Vasula 66.18 357 *eP* **P** **03 42 01.8 +1.0**
BRZS Berezniki 66.33 326 *eP* **P** **03 42 02.1 +0.1**
baz=326
BRZS Berezniki 66.33 326 *eP* **P** **03 42 02.0 +0.1**
ENH Enshi 66.45 289 P **P** **03 42 01.7 -1.4**
EKB Eskdalemuir 67.65 15 P **P** **03 42 10.2 0.0**
EKA Eskdalemuir Ar 67.65 15 P **P** **03 42 10.9 +0.6**
comp=Z,3.8nm,0.5s,baz=348,slow=5.0,SNR=20
comp=Z,3.8nm,0.5s
TDK Taldyqorghan 68.71 320 *eP* **P** **03 42 17.2 +0.1**
comp=Z,13nm,0.9s,baz=320
TDK Taldyqorghan 68.71 320 *eP* **P** **03 42 17.2 +0.1**
TDK pmax pmax
comp=Z,13nm,0.9s
VSVD Vaisvydziai 68.74 358 *eP* **P** **03 42 16.9 -0.1**
OBN Obninsk 68.91 351 *eP* **P** **03 42 18.7 +0.7**
OBN *e* 03 42 41.3
OBN *e* 03 44 50.7
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,166nm,18.0s
CD2 Chengdu 68.97 294 P **P** **03 42 19.8 +0.9**
CD2 pP pP 03 42 27.3 +0.5
CD2 pmax pmax
comp=Z,20nm,0.6s
GOMU GeErMu 69.16 304 P **P** **03 42 20.6 +0.1**
GOMU pP pP 03 42 27.6 -0.7
GOMU pmax pmax
comp=Z,5.0nm,1.1s
GOMU LR LR
comp=Z,170nm,13.5s
GOMU LR LR
comp=Z,230nm,13.3s
GOMU LR LR
comp=Z,230nm,13.5s
PABE Paberze 69.21 358 *eP* **P** **03 42 20.6 +0.6**
SHLS Shalkode 69.90 318 *eP* **P** **03 42 24.1 -0.6**
baz=318

SHLS Shalkode 69.90 318 *eP* **P** **03 42 24.0 -0.6**
GULI GuiLin 69.90 285 ⇓P **P** **03 42 23.6 -1.1**
GULI pmax pmax
comp=Z,30nm,1.0s
AKTO Aktyubinsk 69.93 336 LR LR 04 16 10.0
comp=Z,211nm,18.2s,baz=42,slow=39
UZB Uzynbulak 70.07 319 *eP* **P** **03 42 25.6 -0.2**
baz=319
UZB Uzynbulak 70.07 319 *eP* **P** **03 42 25.5 -0.2**
MNK Minsk 70.10 356 *i* P **P** **03 42 24.7 -0.8**
MNK *i* 03 44 59.3
MNK *i* PPP PPP 03 46 41.0
MNK *i* S **S** **03 51 35.8 +1.3**
MNK *i* SS **SS** **03 56 06.0 +3.0**
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK MLR MLR
comp=N,234nm,19.0s
BELG Belogornoye 70.14 343 *de* **P** **03 42 26.5 +0.8**
BELG pmax pmax
comp=Z,3.0nm,0.9s
BELG Belogornoye 70.14 343 LR LR 04 16 07.6
comp=Z,137nm,18.8s,baz=348,slow=38
BTLS Baital 70.21 323 *eP* **P** **03 42 26.8 +0.5**
comp=Z,4.0nm,0.8s,baz=323
BTLS Baital 70.21 323 *eP* **P** **03 42 26.8 +0.5**
BTLS pmax pmax
comp=Z,4.0nm,0.8s
KUU Kurty 70.41 321 *eP* **P** **03 42 27.9 +0.3**
comp=Z,9.3nm,1.0s,baz=321
KUU Kurty 70.41 321 *eP* **P** **03 42 27.9 +0.3**
KUU pmax pmax
comp=Z,9.0nm,1.0s
ABKAR Akbulak array 70.57 334 P **P** **03 42 27.4 -1.1**
ABKAR IAmb IAmb 03 42 42.6
comp=Z,9.9nm,0.7s
MDOK Medeo 70.79 320 *eP* **P** **03 42 30.7 +0.5**
baz=320
MDOK Medeo 70.79 320 *eP* **P** **03 42 30.6 +0.5**
GYA Guiyang 70.98 289 ⇑ *iP* **P** **03 42 32.3 +0.9**
GYA S **S** **03 51 43.0 -2.8**
GYA SS **SS** **03 56 12.8 -5.5**
GYA pmax pmax
comp=Z,27nm,1.1s
GYA pmax pmax
comp=Z,100nm,7.8s
GYA LR LR
comp=Z,150nm,17.1s
GYA LR LR
comp=Z,140nm,22.0s
GYA LR LR
comp=Z,180nm,25.0s
LPSR Galich'ya Gora 71.14 349 *eP* **P** **03 42 31.6 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
GKP Gorka Klasztor 71.43 2 *eP* P 03 42 22.4 -11
TKM2 Tokmak 2 71.52 321 P **P** **03 42 35.5 +0.9**
SNR=8.3
USP Ospenovka 71.61 322 P **P** **03 42 36.0 +1.1**
SNR=10
TARG Taragay, Kyrgy 71.75 319 P **P** **03 42 35.6 -0.7**
TARG IAmb IAmb 03 42 38.7
comp=Z,7.6nm,0.7s
TARG Taragay, Kyrgy 71.75 319 P **P** **03 42 35.6 -0.7**
TARG pmax pmax
comp=Z,8.0nm,0.7s
CHMS Chumysh 71.75 322 P **P** **03 42 37.3 +1.5**
SNR=8.0
ULHL Ulahol 71.88 320 P **P** **03 42 38.1 +1.3**
SNR=5.4
KBK Karagaybulak 71.98 321 P **P** **03 42 38.6 +1.2**
SNR=10
VORR Voronezh 72.03 348 P **P** **03 42 38.7 +1.5**
VORR pmax pmax
comp=Z,11nm,0.6s
AAK Ala-Archa 72.16 321 P **P** **03 42 39.4 +1.0**
SNR=12
AAK Ala-Archa 72.16 321 P **P** **03 42 36.8 -1.6**
AAK IAmb IAmb 03 42 40.4
comp=Z,30nm,1.4s
AAK Ala-Archa 72.16 321 *ce* **P** **03 42 39.6 +1.2**
AAK pmax pmax
comp=Z,19nm,1.3s
AAK Ala-Archa 72.16 321 LR LR 04 16 59.0
comp=Z,237nm,18.2s,baz=24,slow=38
VRH Novokhopyorsk 72.17 347 *eP* **P** **03 42 39.9 +1.8**
VRH pmax pmax
comp=Z,6.0nm,0.9s
EKS2 Erkin-Say 72.39 322 P **P** **03 42 40.9 +1.1**
SNR=9.8
VSR Storozhevoye 72.48 348 *eP* P 03 42 46.4 +6.5
VSR pmax pmax
comp=Z,6.0nm,0.5s
JTS Las Juntas de 72.53 97 LR LR 04 15 59.2
comp=Z,128nm,18.1s,baz=27,slow=37
VORD Divnogorie 72.71 348 *eP* P 03 42 46.4 +5.1
VORD pmax pmax
comp=Z,10.0nm,1.0s
KK31 Karatay Array 73.11 324 P **P** **03 42 42.5 -1.4**
KK31 Karatay Array 73.11 324 P **P** **03 42 42.5 -1.4**
KK31 pmax pmax
comp=Z,46nm,1.6s
KKAR Karatay Array 73.11 324 P **P** **03 42 42.5 -1.4**
KKAR Karatay Array 73.11 324 P **P** **03 42 43.8 -0.1**
KKAR Karatay Array 73.11 324 P **P** **03 42 43.8 -0.1**
CLL Collm 73.23 5 *i* P P 03 42 49.6 +5.2
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 73.23 5 *i* pP pP 03 42 49.6 -2.7
comp=Z,5.0nm,0.7s
HNR Honiara 73.28 223 LR LR 04 10 06.3
comp=Z,1μm,20.6s,baz=335,slow=32
PPT Papeete 73.32 171 LR LR 04 07 52.1
comp=Z,95nm,19.2s,baz=4.5,slow=30
BRLS Boroldav 73.40 325 *eP* **P** **03 42 47.2 +1.7**
baz=325
BRLS Boroldav 73.40 325 *eP* **P** **03 42 47.2 +1.7**
PZH PanZhiHua 73.55 293 P **P** **03 42 47.4 +0.6**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,130nm,6.0s
BMRD Maredsous 73.58 11 *dP* **P** **03 42 47.9 +1.4**
BRG Berggiesshubel 73.71 5 *eP* **P** **03 42 48.8 +1.5**
BRG Amp 03 42 49.7
comp=Z,5.7nm,1.0s
BRG Berggiesshubel 73.71 5 *eP* **P** **03 42 48.7 +1.5**
BRG 03 43 07.7
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 73.83 355 *eP* **P** **03 42 47.7 -0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 73.83 355 P **P** **03 42 47.5 -0.4**
comp=Z,3.9nm,0.4s,baz=6.8,slow=5.6,SNR=16
AKASG LR LR 04 19 00.4
comp=Z,130nm,18.6s,baz=21,slow=39
comp=Z,3.9nm,0.4s
AKBB Malin Array Si 73.83 355 P **P** **03 42 47.2 -0.7**
AKBB IAmb IAmb 03 43 06.0
comp=Z,11nm,0.8s
AKBB Malin Array Si 73.83 355⇑ *eP* **P** **03 42 48.6 +0.7**
KIEV Kiev 73.84 355 ⇓P **P** **03 42 47.8 -0.1**
KIEV Kiev 73.84 355 P **P** **03 42 46.9 -1.0**
KIEV IAmb IAmb 03 43 06.0
comp=Z,9.8nm,0.7s
KIEV Kiev 73.84 355 ⇓P **P** **03 42 47.8 -0.1**
IUG luzhnay 74.12 324 *eP* **P** **03 42 50.4 +0.5**
comp=Z,17nm,1.3s,baz=324
IUG luzhnay 74.12 324 *eP* **P** **03 42 50.4 +0.5**
IUG pmax pmax
comp=Z,17nm,1.3s
DPC Dobruska-Polom 74.33 3 *eP* **P** **03 42 52.9 +2.0**
DPC Dobruska-Polom 74.33 3 *eP* **P** **03 42 52.9 +2.0**
KSH Kashi 74.36 319 P **P** **03 42 55.8 +4.4**
KSH pmax pmax
comp=Z,26nm,1.3s
KSH LR LR
comp=Z,290nm,14.8s
KSH LR LR
comp=Z,620nm,20.3s
KSH LR LR

	comp=Z,390nm,17.5s								
KRLC	**Kraliky**	**74.62**	**3**	*e*P	**P**		**03 42 54.3**	**+1.7**
KRLC	**Kraliky**	**74.62**	**3**	*e*P	**P**		**03 42 54.3**	**+1.7**
MORC	**Moravsky Berou**	**74.94**	**2**	*e*P	**P**		**03 42 55.5**	**+1.1**
KWP	**Kalwaria Pacla**	**75.11**	**359**	P	**P**		**03 42 54.6**	**-0.8**
KWP				IAmb	IAmb	03 43 18.7		
	comp=Z,21nm,1.1s								
KWP	**Kalwaria Pacla**	**75.11**	**359**	P	**P**		**03 42 54.6**	**-0.8**
KWP				pmax	pmax				
	comp=Z,21nm,1.1s								
ZVC	**Zvikov**	**75.16**	**5**	*e*P	**P**		**03 42 57.0**	**+1.3**
STHS	**Stebnicka Huta**	**75.34**	**360**	*e*P	**P**		**03 42 56.5**	**-0.2**
STHS				pmax	pmax				
	comp=Z,7.0nm,0.9s								
STHS	**Stebnicka Huta**	**75.34**	**360**	*e*P	**P**		**03 42 56.5**	**-0.2**
VRAC	**Vranov**	**75.38**	**3**	*e*P	**P**		**03 42 57.7**	**+0.8**
KHC	**Kasperske Hory**	**75.44**	**5**	P	**P**		**03 42 56.5**	**-0.8**
KHC	**Kasperske Hory**	**75.44**	**5**	*e*P	**P**		**03 42 58.9**	**+1.6**
KHC	**Kasperske Hory**	**75.44**	**5⇓**	*e*P	**P**		**03 42 58.5**	**+1.2**
KHC				pmax	pmax				
	comp=Z,15nm,1.3s								
LANS	**Liptovska Anna**	**75.60**	**1**	*e*P	**P**		**03 43 00.6**	**+2.4**
LANS				pmax	pmax				
	comp=Z,4.0nm,1.3s								
LANS	**Liptovska Anna**	**75.60**	**1**	*e*P	**P**		**03 43 00.6**	**+2.4**
KRUC	**Moravsky**	**75.62**	**3**	*e*P	**P**		**03 42 58.9**	**+0.6**
GERES	**GERESS Array B**	**75.73**	**5**	P	**P**		**03 42 57.6**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=357,slow=6.2,SNR=3.2								
	comp=Z,1.4nm,0.6s								
JAVC	**Velka Javorina**	**75.86**	**2**	*e*P	**P**		**03 42 58.7**	**-1.0**
DAV	**Davao City (W)**	**76.01**	**262**	LR	LR	04 12 24.6			
	comp=Z,168nm,21.0s,baz=4.5,slow=32								
LSA	**Lhasa**	**76.24**	**303**	P	**P**		**03 43 01.3**	**-1.4**
LSA				IAmb	IAmb	03 43 23.8			
	comp=Z,12nm,0.8s								
LSA	**Lhasa**	**76.24**	**303**	P	**P**		**03 43 01.3**	**-1.4**
LSA				pmax	pmax				
	comp=Z,12nm,0.8s								
VYHS	**Vyhne**	**76.25**	**2**	*e*P	**P**		**03 43 03.3**	**+1.4**
VYHS	**Vyhne**	**76.25**	**2**	*e*P	**P**		**03 43 03.3**	**+1.4**
MODS	**Modra-Piesok**	**76.33**	**3**	*e*P	**P**		**03 43 03.9**	**+1.5**
MODS	**Modra-Piesok**	**76.33**	**3**	*e*P	**P**		**03 43 03.9**	**+1.5**
TNCH	**TengChong**	**76.43**	**294**	⇓P	**P**		**03 43 03.9**	**+0.4**
TNCH				pP	pP	03 43 12.1	+0.7		
TNCH				sP	PcP	03 43 17.4	+2.2		
TNCH				S	**S**	**03 52 48.8**	**+1.4**		
TNCH				sS	pS	03 52 57.6	+0.2		
TNCH				pmax	pmax				
	comp=Z,24nm,0.8s								
TNCH				pmax	pmax				
	comp=Z,120nm,5.1s								
TNCH				LR	LR				
	comp=Z,96nm,3.8s								
TNCH				LR	LR				
	comp=Z,67nm,4.9s								
TNCH				LR	LR				
	comp=Z,83nm,5.2s								
SORM	**Soroca**	**76.44**	**355**	⇑P	**P**		**03 43 03.2**	**+0.2**
SORM	**Soroca**	**76.44**	**355**	⇑P	**P**		**03 43 03.2**	**+0.2**
RAR	**Rarotonga**	**76.52**	**181**	LR	LR	04 10 33.2			
	comp=Z,67nm,18.6s,baz=345,slow=31								
SLVN	**Son La**	**76.59**	**288**	P	**P**		**03 43 03.2**	**-1.1**
SLVN				IAmb	IAmb	03 43 13.5			
	comp=Z,14nm,0.8s								
CONA	**Conrad Observa**	**76.73**	**4**	*e*P	**P**		**03 43 06.5**	**+1.7**
	comp=Z,4.6nm,0.8s								
RETA	**Reutte**	**76.91**	**7**	*i* P	**P**		**03 43 06.2**	**+0.5**
	comp=Z,0.7nm,0.3s								
DAVA	**Damuels**	**77.04**	**8**	*e*P	**P**		**03 43 07.1**	**+0.5**
	comp=Z,2.5nm,0.7s								
BUR08	**Bucovina Ar. S**	**77.05**	**357**	P	**P**		**03 43 06.2**	**-0.4**
MOTA	**Moosalm**	**77.07**	**7**	*e*P	**P**		**03 43 08.3**	**+1.6**
	comp=Z,2.7nm,0.9s								
BURAR	**Bucovina Array**	**77.08**	**357**	⇑P	**P**		**03 43 05.4**	**-1.4**
BURAR	**Bucovina Array**	**77.08**	**357**	P	**P**		**03 43 07.1**	**+0.3**
BURAR	**Bucovina Array**	**77.08**	**357**	⇑P	**P**		**03 43 05.4**	**-1.4**
LESA	**Schwarzleotal**	**77.09**	**6**	*i* P	**P**		**03 43 09.2**	**+2.4**
	comp=Z,8.1nm,1.5s								
WATA	**Walderalm**	**77.11**	**7**	*i* P	**P**		**03 43 07.3**	**+0.3**
	comp=Z,4.6nm,0.7s								
WTTA	**Wattenberg**	**77.19**	**7**	*e*P	**P**		**03 43 09.3**	**+1.8**
	comp=Z,4.4nm,0.6s								
SQTA	**Sankt Quirin**	**77.20**	**7**	*i* P	**P**		**03 43 09.7**	**+2.3**
	comp=Z,5.0nm,0.6s								
FETA	**Feichten**	**77.37**	**7**	*e*P	**P**		**03 43 10.6**	**+2.2**
	comp=Z,3.4nm,0.8s								
KBA	**Koelnbreinsper**	**77.47**	**5**	*e*P	**P**		**03 43 09.6**	**+0.5**
	comp=Z,6.1nm,0.7s								
SIMJ	**Simiganj**	**77.60**	**323**	P	**P**		**03 43 10.2**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**77.73**	**8**	P	**P**		**03 43 09.7**	**-0.9**
ABTA	**Abfaltersbach**	**77.75**	**6**	*i* P	**P**		**03 43 13.4**	**+2.9**
	comp=Z,2.8nm,0.5s								
SOKA	**Soboth**	**77.95**	**4**	*i* P	**P**		**03 43 13.1**	**+1.5**
	comp=Z,4.4nm,0.7s								
DRGR		**77.96**	**359**	⇓P	**P**		**03 43 11.6**	**0.0**
DRGR		**77.96**	**359**	⇓P	**P**		**03 43 11.6**	**0.0**
OBKA	**Obir**	**78.10**	**5**	*i* P	**P**		**03 43 13.7**	**+1.3**
	comp=Z,18nm,0.7s								
PRED	**Cave del Predi**	**78.12**	**5**	P	**P**		**03 43 11.1**	**-1.4**
MORH	**Mrgy, Hungar**	**78.52**	**2**	⇑P	**P**		**03 43 14.2**	**-0.4**
TURR	**Turia**	**78.62**	**356**	⇑P	P	03 43 20.3	+5.0		
PMG	**Port Moresby**	**78.69**	**234**	LR	LR	04 11 09.1			
	comp=Z,107nm,20.5s,baz=48,slow=30								
DOPR	**Dopca**	**78.72**	**357**	⇓P	P	03 43 22.5	+6.6		
VRI	**Vrincioaia**	**78.78**	**356**	⇑P	**P**		**03 43 16.7**	**+0.6**
VRI	**Vrincioaia**	**78.78**	**356**	⇑P	**P**		**03 43 16.7**	**+0.6**
PLOR	**Plostina**	**78.80**	**356**	⇓P	**P**		**03 43 20.4**	**+4.2**
PLOR	**Plostina**	**78.80**	**356**	⇓P	**P**		**03 43 20.4**	**+4.2**
COVR	**Voineasa-Covas**	**78.82**	**356**	⇓P	**P**		**03 43 17.7**	**+1.4**
BNI	**Bardonecchia**	**78.97**	**10**	P	**P**		**03 43 16.6**	**-0.7**
BNI				IAmb	IAmb	03 43 45.3			
	comp=Z,14nm,1.1s								
BNI	**Bardonecchia**	**78.97**	**10**	P	**P**		**03 43 16.6**	**-0.7**
BNI				pmax	pmax				
	comp=Z,14nm,1.1s								
SURR	**Surduc**	**79.00**	**359**	⇓P	**P**		**03 43 18.4**	**+1.1**
KIV	**Kislovodsk**	**79.12**	**344**	*e*P	**P**		**03 43 17.6**	**-0.5**
KIV				pmax	pmax				
	comp=Z,7.0nm,1.0s								
KIV				MLR	MLR				
	comp=Z,114nm,19.0s								
BZS	**Buzias**	**79.14**	**360**	⇓P	**P**		**03 43 18.4**	**+0.4**
VOIR		**79.26**	**357**	⇑P	P	03 43 26.2	+7.3		
VOIR		**79.26**	**357**	⇑P	P	03 43 26.2	+7.3		
MAK	**Makhachkala**	**79.27**	**341**	*e*P	**P**		**03 43 16.3**	**-2.5**
MAK				*e*S	**S**		**03 53 14.1**	**-3.0**
MAK				pmax	pmax				
	comp=Z,207nm,1.7s								
KBZ	**Khabaz**	**79.31**	**344⇓**	*e*P	**P**		**03 43 21.0**	**+2.0**
KBZ				pmax	pmax				
	comp=Z,10.0nm,0.9s								
KBZ	**Khabaz**	**79.31**	**344**	LR	LR	04 22 28.8			
	comp=Z,153nm,19.0s,baz=8.0,slow=39								
SHL	**Shillong**	**79.33**	**300**	IAmb	IAmb	03 43 28.4			
	comp=Z,25nm,1.4s								
ARR	**Arges**	**79.34**	**357**	⇑P	**P**		**03 43 23.8**	**+4.5**
GZR	**Gura Zlata**	**79.35**	**359**	⇓P	**P**		**03 43 20.4**	**+1.1**
HERR	**Herculane**	**79.87**	**359**	⇑P	P	03 43 28.2	+6.2		
UREC	**San Jos de Ur**	**79.92**	**91**	*e*P	**P**		**03 43 27.5**	**+4.7**
MDVR	**Moldovita**	**79.97**	**360**	⇓P	P	03 43 10.9	-12		
NIL	**Nilore**	**80.56**	**318**	P	**P**		**03 43 25.2**	**-0.7**
NIL	**Nilore**	**80.56**	**318**	P	**P**		**03 43 25.3**	**-0.7**
NIL				pmax	pmax				
	comp=Z,38nm,0.6s								
FAKI	**Fak Fak**	**80.61**	**251**	P	**P**		**03 43 25.4**	**-1.1**
UBPT	**Khong Chiam**	**80.66**	**283**	P	**P**		**03 43 26.2**	**-0.4**
MVO	**Moncorvo**	**80.67**	**21**	*e*pP	pP	03 43 35.3	+0.8		
MTE	**Manteigas**	**81.30**	**22**	*e*P	**P**		**03 43 31.8**	**+1.9**
KBL	**Kabul**	**81.30**	**322**	P	**P**		**03 43 28.0**	**-2.2**
KBL				IAmb	IAmb	03 43 30.5			
	comp=Z,12nm,1.0s								
KBL	**Kabul**	**81.30**	**322**	P	**P**		**03 43 28.0**	**-2.2**
KBL				pmax	pmax				
	comp=Z,12nm,1.0s								
CHTO	**Chiang Mai**	**81.31**	**290**	P	**P**		**03 43 27.7**	**-2.5**
CHTO				IAmb	IAmb	03 43 39.8			
	comp=Z,14nm,1.1s								
CHTO	**Chiang Mai**	**81.31**	**290**	P	**P**		**03 43 27.7**	**-2.5**
CHTO				pmax	pmax				
	comp=Z,14nm,1.1s								
PCAS	**Casmilo, Conde**	**81.43**	**23**	*e*P	**P**		**03 43 31.9**	**+1.4**
PTBC	**PUERTO BERRIO,**	**81.52**	**91**	*e*P	**P**		**03 43 33.4**	**+2.1**
CM31	**Chiang Mai Arr**	**81.60**	**290**	P	**P**		**03 43 30.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**81.60**	**290**	P	**P**		**03 43 31.7**	**0.0**
CMAR	**Chiang Mai Arr**	**81.60**	**290**	*e*P	**P**		**03 43 32.2**	**+0.5**
CMAR				pmax	pmax				
	comp=Z,18nm,0.8s								
CMAR	**Chiang Mai Arr**	**81.60**	**290**	P	**P**		**03 43 31.9**	**+0.1**
	comp=Z,17nm,0.8s,baz=12,slow=5.6,SNR=85								
CMAR				LR	LR	04 22 06.1			
	comp=Z,71nm,19.7s,baz=35,slow=38								
	comp=Z,17nm,0.8s								
GEYT	**Alibeck**	**81.60**	**331**	P	**P**		**03 43 31.2**	**-0.3**
	comp=Z,10nm,0.9s,baz=336,slow=3.3,SNR=15								
	comp=Z,10nm,0.9s								
SDV	**Santo Domingo**	**81.78**	**86**	LR	LR	04 21 51.7			
	comp=Z,141nm,18.5s,baz=64,slow=37								
PCBR	**Castelo Branco**	**81.85**	**22**	*e*P	**P**		**03 43 33.7**	**+1.0**
PCBR				*e*pP	**pP**		**03 43 41.7**	**+1.0**
PAMC	**Pamplona, Colo**	**81.87**	**89**	*e*P	**P**		**03 43 35.8**	**+2.0**
GUY2C	**Guyana, Caldas**	**82.08**	**92**	*e*P	**P**		**03 43 36.9**	**+2.1**
NORC	**Norcasia**	**82.08**	**92**	*e*P	P	03 43 39.2	+4.9		
BARC	**Barichara**	**82.20**	**90**	*e*P	**P**		**03 43 35.0**	**-0.2**
PMRV	**Marv??o**	**82.27**	**22**	*e*P	**P**		**03 43 36.9**	**+2.0**
PMRV				*e*pP	**pP**		**03 43 43.1**	**+0.2**
PMAFR	**Mafra**	**82.31**	**23**	*e*P	**P**		**03 43 36.9**	**+1.8**
PMAFR				*e*pP	**pP**		**03 43 44.4**	**+1.3**
PMTG	**Montargil**	**82.43**	**23**	*e*P	**P**		**03 43 38.0**	**+2.2**
PMTG				*e*pP	**pP**		**03 43 44.3**	**+0.6**
SPBC	**San Pablo de B**	**82.47**	**91**	*e*P	P	03 43 44.0	+7.7		
GNI	**Garni**	**82.49**	**342⇓**	*e*P	**P**		**03 43 38.0**	**+1.7**
GNI				pmax	pmax				
	comp=Z,8.0nm,1.3s								
GNI	**Garni**	**82.49**	**342**	LR	LR	04 25 35.8			
	comp=Z,124nm,19.5s,baz=16,slow=40								
ESDC	**Sonseca Array**	**82.71**	**19**	P	**P**		**03 43 36.4**	**-0.9**
ESDC				IAmb	IAmb	03 43 49.3			
	comp=Z,16nm,1.4s								
ESDC	**Sonseca Array**	**82.71**	**19**	P	**P**		**03 43 37.5**	**+0.3**
	comp=Z,3.9nm,1.1s,baz=346,slow=5.4,SNR=13								
ESDC				LR	LR	04 22 19.5			
	comp=Z,99nm,19.8s,baz=333,slow=37								
	comp=Z,3.9nm,1.1s								
PESTR	**Estremoz**	**82.76**	**22**	*e*pP	pP	03 43 46.3	+0.8		
DZM	**Mont Dzumac**	**82.80**	**212**	LR	LR	04 16 56.6			
	comp=Z,104nm,19.1s,baz=267,slow=33								
RUSC	**La Rusia**	**82.83**	**90**	*e*P	**P**		**03 43 38.9**	**+0.2**
JAMC	**Jamundi, Valle**	**82.98**	**95**	*e*P	**P**		**03 43 38.1**	**-1.1**
EVO	**Evora**	**82.99**	**23**	*e*pP	pP	03 43 47.7	+1.0		
BAUV	**El Baul**	**83.20**	**84**	P	**P**		**03 43 37.4**	**-2.7**
CHIC	**Chingaza**	**83.49**	**91**	*e*P	P	03 43 48.4	+6.3		
POPC	**Popayan, Colom**	**83.53**	**95**	*e*P	P	03 43 48.0	+6.0		
RDO	**Rodhopi**	**83.53**	**357**	P	**P**		**03 43 40.2**	**-1.2**
RDO				IAmb	IAmb	03 43 52.3			
	comp=Z,12nm,0.9s								
PBAR	**Barrancos**	**83.54**	**22**	*e*P	**P**		**03 43 43.1**	**+1.6**
PBAR				*e*pP	**pP**		**03 43 50.7**	**+1.2**
HRA	**Herat**	**83.69**	**327**	P	**P**		**03 43 41.0**	**-1.7**
HRA				IAmb	IAmb	03 43 44.6			
	comp=Z,14nm,1.2s								
BR131	**Keskin Array S**	**84.42**	**350**	P	**P**		**03 43 43.4**	**-2.8**
BR131	**Keskin Array S**	**84.42**	**350⇓**	*e*P	**P**		**03 43 46.5**	**+0.3**
BRTR	**Keskin Array B**	**84.42**	**350**	P	**P**		**03 43 47.1**	**+0.9**
BRTR	**Keskin Array B**	**84.42**	**350**	*e*P	**P**		**03 43 47.6**	**+1.4**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
BRTR	**Keskin Array B**	**84.42**	**350**	P	**P**		**03 43 46.5**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=350,slow=2.3,SNR=14								
BRTR				LR	LR	04 29 07.3			
	comp=Z,75nm,18.4s,baz=0.0,slow=41								
	comp=Z,0.7nm,0.5s								
FLOC	**Florencia**	**84.90**	**95**	*e*P	P	03 43 53.8	+5.1		
BNN	**Bunyan**	**85.06**	**348**	P	**P**		**03 43 48.1**	**-1.3**
MCRA	**Macar, Loja**	**87.37**	**102**	*e*P	P	03 44 07.2	+6.3		
CTA	**Charters Tower**	**88.50**	**230**	LR	LR	04 16 27.6			
	comp=Z,35nm,21.9s,baz=80,slow=31								
KAPI	**Kappang**	**89.21**	**260**	P	**P**		**03 44 08.0**	**-1.5**
KAPI	**Kappang**	**89.21**	**260**	P	**P**		**03 44 08.0**	**-1.5**
KAPI				pmax	pmax				
	comp=Z,15nm,0.9s								
MMAI	**Mount Meron Ar**	**90.87**	**348**	LR	LR	04 30 13.4			
	comp=Z,53nm,18.1s,baz=4.0,slow=39								
WRA	**Warramunga Arr**	**93.92**	**240**	*i* P	**P**		**03 44 31.2**	**0.0**
WRA				pmax	pmax				
	comp=Z,6.0nm,1.0s								
WRA	**Warramunga Arr**	**93.92**	**240**	P	**P**		**03 44 30.9**	**-0.3**
	comp=Z,5.0nm,1.0s,baz=38,slow=5.4,SNR=17								
	comp=Z,5.0nm,1.0s								
EIL	**Elat**	**94.23**	**348**	LR	LR	04 30 46.1			
	comp=Z,35nm,19.4s,baz=273,slow=38								
MDP	**Montagnes des**	**94.92**	**74**	LR	LR	04 25 36.1			
	comp=Z,92nm,22.0s,baz=15,slow=34								
FITZ	**Fitzroy Crossi**	**96.81**	**248**	P	**P**		**03 44 42.2**	**-2.2**
FITZ				IAmb	IAmb	03 46 04.8			
	comp=Z,6.8nm,1.6s								
ASAR	**Alice Springs**	**97.28**	**238**	P	Pdif	03 44 47.1	+0.5		
	comp=Z,1.4nm,0.9s,baz=38,slow=3.6,SNR=9.6								
ASAR				LR	LR	04 23 16.6			
	comp=Z,97nm,21.0s,baz=16,slow=32								
	comp=Z,1.4nm,0.9s								
LEM	**Lembang**	**97.53**	**269**	LR	LR	04 26 53.0			
	comp=Z,49nm,19.2s,baz=253,slow=34								
QSPA	**South Pole Qui**	**145.40**	**180**	PKPbc	**PKPab**		**03 50 50.9**	**+0.6**
	comp=Z,22nm,1.0s,baz=43,slow=0.8,SNR=52								
BOSA	**Boshof**	**152.85**	**352**	PKPbc	**PKPbc**		**03 51 10.4**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=16,slow=3.8,SNR=4.1								

NEIC ***23*** *03:36:30.1±1.1, 55.57N±0.02×158.88W±0.08, h11km±8km, Error ellipse: s-maj=7.0km s-min=1.1km az=111.0*

AEIC 23 03:36:29.1±1.2, 55.57N±0.03×158.87W±0.08, h23km±7km, ML3.7, ML3.8/32(NEIC), Error ellipse: s-maj=7.0km s-min=3.7km az=103.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNSG	**Veniaminof 6**	**0.57**	**348**		Pb	03 36 41.1	+0.6
VNSG					Sb	03 36 49.1	+1.0
VNWF	**Veniaminof 8**	**0.70**	**326**		Pn	03 36 43.7	0.0
CHGN	**Chignik**	**0.78**	**19**		Pb	03 36 44.1	+0.2
CHGN	**Chignik**	**0.78**	**19**		Sb	03 36 54.2	+0.3
VNFG	**Fog Glacier, M**	**0.81**	**332**		Pn	03 36 46.1	+0.8
VNFG					Sn	03 36 57.7	+1.1
VNFG	**Fog Glacier, M**	**0.81**	**332**		Pn	03 36 46.0	+0.8
CNBA	**Chernabura Isl**	**0.86**	**209**		Pn	03 36 46.1	+0.3
CNBA					Sn	03 36 58.1	+0.5
CNBA	**Chernabura Isl**	**0.86**	**209**	IAML		03 36 58.9	
	comp=N,2μm,0.3s						
CNBA				IAML		03 37 00.3	
	comp=E,3μm,0.5s						
SDPT	**Sand Point**	**0.94**	**257**		Pn	03 36 47.0	+0.1
SDPT					Sn	03 37 00.1	+0.6
SDPT	**Sand Point**	**0.94**	**257**	IAML		03 37 05.8	
	comp=N,2μm,0.7s						
ANNE	**Aniakchak Nort**	**1.42**	**18**		Pb	03 36 55.5	+0.6
ANNW	**Aniakchak Nort**	**1.44**	**14**		Pb	03 36 56.3	+0.9
PS1A	**Pavlof South-1**	**1.64**	**266**		Pb	03 36 58.1	-0.5
PS1A					Sb	03 37 20.5	+1.7
PN7A	**Pavlof North-7**	**1.78**	**267**		Pb	03 37 00.9	-0.2
DT1	**Dutton Round H**	**2.00**	**258**		Pb	03 37 03.6	-1.2
R16K	**Pilot Point**	**2.12**	**19**		Pb	03 37 05.0	-1.9
R16K	**Pilot Point**	**2.12**	**19**	IAML		03 37 18.2	
	comp=E,822nm,2.3s						
R16K				IAML		03 37 59.0	
	comp=N,1μm,2.2s						
FALS	**False Pass**	**2.70**	**256**		Pn	03 37 13.6	+2.5
ISLZ	**Isanotski Laza**	**2.90**	**255**		Pn	03 37 16.3	+2.4
ISNN	**Isanotski Nort**	**2.91**	**257**		Pn	03 37 16.4	+2.5
SSLS	**Shishaldin Sou**	**3.07**	**256**		Pn	03 37 19.0	+2.8
CNTC	**Contact Creek**	**3.16**	**30**		Pn	03 37 19.4	+1.9
ANCK	**Angle Creek**	**3.22**	**34**		Pn	03 37 20.7	+2.4
KELA	**Mount Kelaz**	**3.35**	**29**		Pn	03 37 22.0	+2.0
WESE	**West Dahl East**	**3.47**	**254**		Pn	03 37 24.9	+3.2
P16K	**Nushagak River**	**3.50**	**7**		Pn	03 37 24.5	+2.4
OHAK	**Old Harbor**	**3.52**	**60**		Pn	03 37 24.5	+2.2
WECS	**Westdahl Cape**	**3.55**	**255**		Pn	03 37 25.7	+2.9
O15K	**Ungalikthiuk R**	**3.65**	**352**		Pn	03 37 25.9	+1.8
P17K	**Kvichak River**	**3.86**	**19**		Pn	03 37 29.4	+2.3
O14K	**Tigyukauivet M**	**3.91**	**342**		Pn	03 37 29.9	+2.2
O14K	**Tigyukauivet M**	**3.91**	**342**	IAML		03 38 16.0	
	comp=N,178nm,0.5s						
O16K	**Kokwok River B**	**4.05**	**6**		Pn	03 37 31.9	+2.2
KDAK	**Kodiak Island**	**4.12**	**55**		Pn	03 37 32.8	+2.3
KDAK	**Kodiak Island**	**4.12**	**55**	IAML		03 38 51.6	
	comp=N,86nm,3.5s						
P18K	**Big Mountain,**	**4.30**	**26**		Pn	03 37 35.3	+2.1
O17K	**Koliganek Bris**	**4.32**	**12**		Pn	03 37 35.5	+2.2
Q19K	**Cape Douglas,**	**4.40**	**38**		Pn	03 37 37.1	+2.6
N14K	**Kuskokwak Cree**	**4.62**	**342**		Pn	03 37 39.8	+2.4
N15K	**Kwethluk River**	**4.66**	**352**		Pn	03 37 40.9	+3.0
N15K	**Kwethluk River**	**4.66**	**352**	IAML		03 39 03.2	
	comp=N,108nm,1.0s						
SYI	**Shuyak Island**	**4.67**	**47**		Pn	03 37 41.1	+3.0
SYI	**Shuyak Island**	**4.67**	**47**	IAML		03 38 44.8	
	comp=N,87nm,2.7s						
SYI				IAML		03 39 41.9	
	comp=E,108nm,2.9s						
O18K	**Koktuh Hills**	**4.72**	**23**		Pn	03 37 41.8	+2.9
O18K	**Koktuh Hills**	**4.72**	**23**	IAML		03 38 22.7	
	comp=E,71nm,2.0s						
O18K				IAML		03 39 11.1	
	comp=N,61nm,1.8s						
UNV	**Unalaska Valle**	**4.75**	**252**		Pn	03 37 42.5	+3.3
MSW	**Makushin Switc**	**4.88**	**253**		Pn	03 37 44.3	+3.3
N16K	**Nishlik Lake**	**4.92**	**1**		Pn	03 37 44.5	+2.9
N17K	**Nushagak Hills**	**5.05**	**10**		Pn	03 37 45.8	+2.5
N17K	**Nushagak Hills**	**5.05**	**10**	IAML		03 38 43.2	
	comp=N,52nm,1.6s						
N17K				IAML		03 39 14.9	
	comp=E,50nm,2.7s						
M15K	**Kasigluk River**	**5.23**	**350**		Pn	03 37 48.1	+2.4
N18K	**Kilae Creek**	**5.36**	**16**		Pn	03 37 50.4	+2.8
N18K	**Kilae Creek**	**5.36**	**16**	IAML		03 38 32.3	
	comp=N,52nm,2.7s						
N18K				IAML		03 39 36.3	
	comp=E,60nm,2.9s						
ILSW	**Iliamna Southw**	**5.38**	**32**		Pn	03 37 51.1	+3.1
M13K	**Dall Lake**	**5.41**	**336**		Pn	03 37 50.9	+2.7
M14K	**Bethel**	**5.44**	**344**		Pn	03 37 50.7	+2.0
IVE	**Iliamna Volcan**	**5.45**	**33**		Pn	03 37 52.0	+3.1
M16K	**Timber Creek**	**5.47**	**360**		Pn	03 37 51.8	+2.7
CNPM	**China Poot**	**5.71**	**43**		Pn	03 37 55.8	+3.4
N19K	**Bonanza Creek**	**5.74**	**22**		Pn	03 37 56.0	+3.0
M17K	**Holitna River**	**5.89**	**7**		Pn	03 37 57.1	+2.2
BRLK	**Bradley Lake**	**6.00**	**42**		Pn	03 37 58.4	+1.9
BRSE	**Bradley Lake S**	**6.04**	**43**		Pn	03 37 59.0	+2.1
L14K	**Kuka Creek**	**6.12**	**343**		Pn	03 37 59.7	+1.7
M18K	**Stony River**	**6.15**	**14**		Pn	03 38 00.9	+2.6
L16K	**Owhat River**	**6.16**	**357**		Pn	03 38 00.9	+2.3
M11K	**Mekoryuk**	**6.20**	**324**		Pn	03 38 00.9	+1.8
L15K	**Ungalak Mounta**	**6.27**	**349**		Pn	03 38 01.9	+1.7
L17K	**Donlin**	**6.59**	**2**		Pn	03 38 06.5	+2.0
L18K	**Granite Mounta**	**6.76**	**9**		Pn	03 38 08.7	+1.8
M19K	**Big River Lodg**	**6.76**	**18**		Pn	03 38 09.4	+2.5
L19K	**White Mountain**	**6.95**	**16**		Pn	03 38 12.0	+2.6
K17K	**Iditarod**	**7.17**	**2**		Pn	03 38 15.0	+2.6
SUA	**Susitna One**	**7.28**	**32**		Pn	03 38 16.9	+2.9
TTA	**Tatalina**	**7.52**	**10**		Pn	03 38 19.1	+1.7
J14K	**Nanvaranak Lak**	**7.59**	**343**		Pn	03 38 20.1	+2.0
J16K	**Anvik River**	**7.79**	**354**		Pn	03 38 22.7	+1.8
J18K	**Innoko River**	**7.99**	**7**		Pn	03 38 25.6	+1.9
KNK	**Knik Glacier**	**8.00**	**39

h120km±4km, ML3.4, ML3.5/150(NEIC), Error ellipse: s-maj=5.3km s-min=4.7km az=142.0

ISC 23 03:47:52.1±0.7, 59°84N±0'04×153°26W±0'03,
h128km±5km, n392, σ0.75/385, mb4.1/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILSW	**Iliamna Southw**	**0.15**	**22**		**Pn**	**03 48 09.1**	**-0.6**
ILSW				IAML		03 48 22.7	
	comp=E,834nm,0.7s						
ILSW				IAML		03 48 23.6	
	comp=N,722nm,0.4s						
ILSW	**Iliamna Southw**	**0.15**	**22**		**Sn**	**03 48 21.8**	**-1.2**
P19K	**Oil Pt**	**0.19**	**176**		**Pn**	**03 48 09.2**	**-0.5**
P19K					**Sn**	**03 48 22.1**	**-0.8**
P19K	**Oil Pt**	**0.19**	**176**	IAML		03 48 22.7	
	comp=E,3μm,0.5s						
P19K				IAML		03 48 23.3	
	comp=N,2μm,0.7s						
P19K	**Oil Pt**	**0.19**	**176**	P	**Pn**	**03 48 09.2**	**-0.5**
	baz=351						
P19K				S	**Sn**	**03 48 22.1**	**-0.8**
	baz=351						
IVE	**Iliamna Volcan**	**0.21**	**34**		**Pn**	**03 48 09.3**	**-0.5**
O20K	**Slope Mountain**	**0.40**	**52**		**Pn**	**03 48 10.3**	**-0.1**
O20K					**Sn**	**03 48 24.1**	**-0.2**
O20K	**Slope Mountain**	**0.40**	**52**	P	**Pn**	**03 48 10.3**	**-0.1**
	baz=233						
O20K				S	**Sn**	**03 48 24.1**	**-0.2**
	baz=233						
AUL	**Augustine Lava**	**0.47**	**191**		**Pn**	**03 48 10.3**	**-0.4**
AUL					**Sn**	**03 48 24.1**	**-0.6**
AU22	**Augustine Moun**	**0.47**	**186**		**Pn**	**03 48 10.1**	**-0.6**
AUCH	**Augustine Cone**	**0.49**	**191**		**Pn**	**03 48 10.6**	**-0.3**
RED	**Redoubt Volcan**	**0.63**	**22**		**Pn**	**03 48 11.6**	**-0.2**
RED					**Sn**	**03 48 26.0**	**-0.7**
RDSO	**Redoubt South**	**0.67**	**22**		**Pn**	**03 48 11.9**	**-0.3**
RSO	**Redoubt South**	**0.67**	**22**		**Pn**	**03 48 12.0**	**-0.2**
RDWB	**Redoubt West**	**0.68**	**18**		**Pn**	**03 48 11.9**	**-0.3**
NCT	**North Crescent**	**0.74**	**13**		**Pn**	**03 48 12.5**	**-0.1**
RDJH	**Redoubt Jeurge**	**0.79**	**16**		**Pn**	**03 48 12.9**	**-0.1**
DFR	**Drift River**	**0.81**	**20**		**Pn**	**03 48 13.0**	**-0.1**
HOM	**Homer**	**0.84**	**102**		**Pn**	**03 48 13.4**	**+0.2**
HOM	**Homer**	**0.84**	**102**	P	**Pn**	**03 48 13.4**	**+0.2**
	baz=282						
RDT	**Redoubt**	**0.85**	**30**		**Pn**	**03 48 13.3**	**-0.1**
Q19K	**Cape Douglas,**	**0.94**	**192**		**Pn**	**03 48 13.6**	**-0.6**
Q19K					**Sn**	**03 48 29.7**	**-1.2**
Q19K	**Cape Douglas,**	**0.94**	**192**	IAML		03 48 31.6	
	comp=E,2μm,0.7s						
Q19K	**Cape Douglas,**	**0.94**	**192**	P	**Pn**	**03 48 13.6**	**-0.6**
	baz=11						
Q19K				S	**Sn**	**03 48 29.7**	**-1.2**
	baz=11						
O18K	**Koktuh Hills**	**0.99**	**272**		**Pn**	**03 48 13.8**	**-0.8**
O18K					**Sn**	**03 48 30.0**	**-1.7**
O18K	**Koktuh Hills**	**0.99**	**272**	P	**Pn**	**03 48 13.8**	**-0.8**
	baz=91						
O18K				S	**Sn**	**03 48 30.0**	**-1.7**
	baz=91						
CNPM	**China Poot**	**1.07**	**106**	Pn	**Pn**	**03 48 15.4**	**-0.1**
CNPM				IAML		03 48 33.5	
	comp=N,2μm,0.4s						
CNPM				IAML		03 48 34.3	
	comp=E,2μm,0.4s						
CNPM	**China Poot**	**1.07**	**106**		**Sn**	**03 48 32.3**	**-0.9**
P18K	**Big Mountain,**	**1.10**	**247**	Pn	**Pn**	**03 48 14.7**	**-1.0**
P18K	**Big Mountain,**	**1.10**	**247**		**Sn**	**03 48 31.5**	**-2.1**
P18K	**Big Mountain,**	**1.10**	**247**	P	**Pn**	**03 48 14.7**	**-1.0**
	baz=65						
P18K				S	**Sn**	**03 48 31.5**	**-2.1**
	baz=65						
N19K	**Bonanza Creek**	**1.15**	**329**		**Pn**	**03 48 15.9**	**-0.4**
N19K					**Sn**	**03 48 33.7**	**-1.1**
N19K	**Bonanza Creek**	**1.15**	**329**	IAML		03 48 34.0	
	comp=E,324nm,0.7s						
N19K	**Bonanza Creek**	**1.15**	**329**	P	**Pn**	**03 48 15.9**	**-0.4**
	baz=148						
N19K				S	**Sn**	**03 48 33.7**	**-1.1**
	baz=148						
BRLK	**Bradley Lake**	**1.20**	**93**	Pn	**Pn**	**03 48 16.5**	**-0.2**
BRLK				IAML		03 48 35.7	
	comp=E,2μm,0.2s						
BRLK	**Bradley Lake**	**1.20**	**93**		**Sn**	**03 48 34.6**	**-0.8**
BRSE	**Bradley Lake S**	**1.27**	**93**		**Pn**	**03 48 17.3**	**-0.2**
BRSE	**Bradley Lake S**	**1.27**	**93**	P	**Pn**	**03 48 17.3**	**-0.2**
	baz=275						
Q20K	**Shuyak Island**	**1.31**	**160**	P	**Pn**	**03 48 17.4**	**-0.4**
	baz=340						
SYI	**Shuyak Island**	**1.31**	**160**		**Pn**	**03 48 17.5**	**-0.3**
SYI				IAML		03 48 38.5	
	comp=N,2μm,0.6s						
SYI				IAML		03 48 38.6	
	comp=E,1μm,0.5s						
CAPN	**Captain Cook N**	**1.40**	**47**		**Pn**	**03 48 20.6**	**+1.8**
CAPN	**Captain Cook N**	**1.40**	**47**	P	**Pn**	**03 48 20.6**	**+1.8**
	baz=229						
N20K	**Mount Spurr**	**1.46**	**20**	P	**Pn**	**03 48 19.8**	**+0.2**
	baz=202						
SPCR	**Spurr Chakacha**	**1.46**	**20**		**Pn**	**03 48 19.8**	**+0.2**
SPCN	**Chakachatna No**	**1.49**	**20**		**Pn**	**03 48 20.3**	**+0.4**
SPBG	**Spurr Blockage**	**1.49**	**17**		**Pn**	**03 48 20.5**	**+0.5**
KAHC	**Katmai Hardscr**	**1.50**	**218**		**Pn**	**03 48 19.5**	**-0.5**
KAHC	**Katmai Hardscr**	**1.50**	**218**	P	**Pn**	**03 48 19.5**	**-0.5**
	baz=36						
KAHG	**Katmai Hook Gl**	**1.50**	**207**		**Pn**	**03 48 19.8**	**-0.3**
SPCP	**Crater Peak Br**	**1.53**	**20**		**Pn**	**03 48 20.9**	**+0.5**
SPNN	**North Nagishla**	**1.56**	**10**		**Pn**	**03 48 20.8**	**+0.1**
N18K	**Kilae Creek**	**1.56**	**304**		**Pn**	**03 48 20.1**	**-0.5**
N18K	**Kilae Creek**	**1.56**	**304**	P	**Pn**	**03 48 20.1**	**-0.5**
	baz=122						
SPCG	**Spurr Capps Gl**	**1.58**	**22**		**Pn**	**03 48 21.1**	**+0.1**
SLKM	**Skilak Lake**	**1.66**	**65**		**Pn**	**03 48 21.7**	**-0.1**
SVW2	**Sparrevohn**	**1.71**	**319**		**Pn**	**03 48 21.8**	**-0.6**
SVW2	**Sparrevohn**	**1.71**	**319**	IAML		03 48 44.6	
	comp=E,133nm,0.8s						
SVW2	**Sparrevohn**	**1.71**	**319**	P	**Pn**	**03 48 21.8**	**-0.6**
P17K	**Kvichak River**	**1.75**	**250**		**Pn**	**03 48 22.5**	**-0.3**
P17K	**Kvichak River**	**1.75**	**250**	P	**Pn**	**03 48 22.5**	**-0.3**
	baz=67						
KVTA	**Katmai Vly 10**	**1.80**	**217**		**Pn**	**03 48 23.2**	**-0.3**
STLK	**Strandline Lak**	**1.81**	**22**		**Pn**	**03 48 23.9**	**+0.3**
O22K	**Cooper Landing**	**1.88**	**68**		**Pn**	**03 48 24.6**	**+0.2**
O22K	**Cooper Landing**	**1.88**	**68**	P	**Pn**	**03 48 24.6**	**+0.2**
	baz=251						
KCE	**Katmai Mt Cerb**	**1.89**	**213**		**Pn**	**03 48 24.8**	**+0.2**
KELA	**Mount Kelaz**	**1.90**	**223**		**Pn**	**03 48 24.3**	**-0.4**
SEW	**Seward**	**1.93**	**80**		**Pn**	**03 48 24.9**	**-0.1**
SEW	**Seward**	**1.93**	**80**	P	**Pn**	**03 48 24.9**	**-0.1**
	baz=263						
O17K	**Koliganek Bris**	**1.94**	**270**		**Pn**	**03 48 24.9**	**-0.2**
O17K	**Koliganek Bris**	**1.94**	**270**	P	**Pn**	**03 48 24.9**	**-0.2**
	baz=87						
ACHA	**Angle Creek He**	**1.95**	**214**		**Pn**	**03 48 25.0**	**-0.4**
FIS	**Fire Island**	**1.99**	**48**		**Pn**	**03 48 27.0**	**+1.2**
FIS	**Fire Island**	**1.99**	**48**	IAML		03 49 00.6	
	comp=N,554nm,0.6s						
FIS				IAML		03 49 00.9	
	comp=E,599nm,0.3s						
ANCK	**Angle Creek**	**2.01**	**216**		**Pn**	**03 48 25.8**	**-0.2**
SUA	**Susitna One**	**2.05**	**36**		**Pn**	**03 48 27.0**	**+0.5**
SUA				IAML		03 48 54.9	
	comp=N,252nm,0.4s						
SUA				IAML		03 48 55.2	
	comp=E,571nm,0.7s						
SUA	**Susitna One**	**2.05**	**36**	P	**Pn**	**03 48 27.0**	**+0.5**
	baz=218						
M20K	**Styx River**	**2.05**	**2**		**Pn**	**03 48 26.9**	**+0.3**
M20K	**Styx River**	**2.05**	**2**	P	**Pn**	**03 48 26.9**	**+0.3**
	baz=182						
N17K	**Nushagak Hills**	**2.08**	**291**		**Pn**	**03 48 26.8**	**-0.1**
N17K	**Nushagak Hills**	**2.08**	**291**	P	**Pn**	**03 48 26.8**	**-0.1**
	baz=108						
CNTC	**Contact Creek**	**2.08**	**222**		**Pn**	**03 48 26.4**	**-0.6**
M18K	**Stony River**	**2.08**	**324**		**Pn**	**03 48 26.4**	**-0.5**
M18K	**Stony River**	**2.08**	**324**	P	**Pn**	**03 48 26.3**	**-0.5**
	baz=142						
Q17K	**Contact Creek**	**2.08**	**222**	P	**Pn**	**03 48 26.4**	**-0.6**
	baz=40						
KDAK	**Kodiak Island**	**2.09**	**170**	Pn	**Pn**	**03 48 25.6**	**-1.4**
KDAK				IAML		03 48 53.0	
	comp=E,805nm,0.5s						
KDAK	**Kodiak Island**	**2.09**	**170**	P	**Pn**	**03 48 25.6**	**-1.4**
	comp=E,58nm,0.4s,baz=57,slow=15,SNR=56						
KDAK				S	**Sn**	**03 48 50.9**	**-2.8**
	comp=E,237nm,0.3s,baz=138,slow=22,SNR=86						
Q16K	**King Salmon**	**2.10**	**238**		**Pn**	**03 48 26.9**	**-0.1**
Q16K	**King Salmon**	**2.10**	**238**	P	**Pn**	**03 48 26.9**	**-0.1**
	baz=55						
M19K	**Big River Lodg**	**2.15**	**345**		**Pn**	**03 48 27.3**	**-0.3**
M19K	**Big River Lodg**	**2.15**	**345**	P	**Pn**	**03 48 27.3**	**-0.3**
	baz=165						
RC01	**Rabbit Creek A**	**2.15**	**53**		**Pn**	**03 48 27.4**	**-0.3**
RC01	**Rabbit Creek A**	**2.15**	**53**	P	**Pn**	**03 48 27.6**	**-0.1**
	baz=236						
SKT	**Skwentna**	**2.31**	**21**		**Pn**	**03 48 29.9**	**+0.2**
SKT	**Skwentna**	**2.31**	**21**	P	**Pn**	**03 48 29.9**	**+0.2**
	baz=202						
M22K	**Willow**	**2.46**	**37**		**Pn**	**03 48 31.8**	**+0.2**
M22K				IAML		03 49 07.6	
	comp=N,456nm,0.4s						
M22K				IAML		03 49 08.6	
	comp=E,394nm,0.3s						
M22K	**Willow**	**2.46**	**37**	P	**Pn**	**03 48 31.9**	**+0.4**
	baz=220						
O16K	**Kokwok River B**	**2.46**	**266**		**Pn**	**03 48 31.6**	**0.0**
O16K	**Kokwok River B**	**2.46**	**266**	P	**Pn**	**03 48 31.6**	**0.0**
	baz=82						
L19K	**White Mountain**	**2.48**	**342**		**Pn**	**03 48 31.5**	**-0.3**
L19K	**White Mountain**	**2.48**	**342**	IAML		03 49 02.3	
	comp=N,83nm,0.9s						
L19K				IAML		03 49 02.7	
	comp=E,72nm,1.1s						
L19K	**White Mountain**	**2.48**	**342**	P	**Pn**	**03 48 31.5**	**-0.3**
	baz=161						
P16K	**Nushagak River**	**2.55**	**254**		**Pn**	**03 48 33.1**	**+0.4**
P16K	**Nushagak River**	**2.55**	**254**	P	**Pn**	**03 48 33.1**	**+0.4**
	baz=70						
M17K	**Holitna River**	**2.59**	**309**		**Pn**	**03 48 33.3**	**+0.1**
M17K	**Holitna River**	**2.59**	**309**	P	**Pn**	**03 48 33.3**	**+0.1**
	baz=126						
OHAK	**Old Harbor**	**2.62**	**180**	Pn	**Pn**	**03 48 31.9**	**-1.8**
OHAK				IAML		03 49 04.4	
	comp=N,190nm,0.3s						
OHAK				IAML		03 49 04.5	
	comp=E,182nm,0.2s						
OHAK	**Old Harbor**	**2.62**	**180**	P	**Pn**	**03 48 32.0**	**-1.7**
	baz=0.0						
L20K	**Farewell, AK**	**2.67**	**354**		**Pn**	**03 48 34.5**	**+0.3**
L20K	**Farewell, AK**	**2.67**	**354**	P	**Pn**	**03 48 34.5**	**+0.3**
	baz=174						
PMR	**Palmer**	**2.68**	**47**		**Pn**	**03 48 33.3**	**-1.1**
PMR				IAML		03 49 06.2	
	comp=E,186nm,0.5s						
PMR				IAML		03 49 06.8	
	comp=N,148nm,0.5s						
PMR	**Palmer**	**2.68**	**47**	P	**Pn**	**03 48 33.6**	**-0.8**
PMR	**Palmer**	**2.68**	**47**	P	**Pn**	**03 48 33.6**	**-0.8**
	baz=231						
N16K	**Nishlik Lake**	**2.83**	**285**		**Pn**	**03 48 36.6**	**+0.2**
N16K	**Nishlik Lake**	**2.83**	**285**	P	**Pn**	**03 48 36.6**	**+0.2**
	baz=101						
KNK	**Knik Glacier**	**2.84**	**54**		**Pn**	**03 48 35.4**	**-1.1**
KNK				IAML		03 49 11.4	
	comp=N,390nm,0.5s						
KNK				IAML		03 49 16.8	
	comp=E,357nm,0.5s						
KNK	**Knik Glacier**	**2.84**	**54**	P	**Pn**	**03 48 35.7**	**-0.8**
	baz=238						
GHO	**Glory Hole Cre**	**2.88**	**46**	Pn	**Pn**	**03 48 36.1**	**-0.9**
GHO				IAML		03 49 14.1	
	comp=N,159nm,0.4s						
GHO				IAML		03 49 16.6	
	comp=E,226nm,0.6s						
L18K	**Granite Mounta**	**2.92**	**327**		**Pn**	**03 48 37.0**	**-0.4**
L18K	**Granite Mounta**	**2.92**	**327**	P	**Pn**	**03 48 37.0**	**-0.4**
	baz=144						
P23K	**Montague Islan**	**2.95**	**84**		**Pn**	**03 48 38.0**	**+0.2**
P23K	**Montague Islan**	**2.95**	**84**	P	**Pn**	**03 48 38.1**	**+0.2**
	baz=269						
CUT	**Chulitna**	**2.95**	**28**		**Pn**	**03 48 37.9**	**0.0**
CUT	**Chulitna**	**2.95**	**28**	IAML		03 49 16.2	
	comp=E,170nm,0.5s						
CUT				IAML		03 49 24.3	
	comp=N,124nm,0.4s						
CUT	**Chulitna**	**2.95**	**28**	P	**Pn**	**03 48 37.9**	**0.0**
	baz=211						
M16K	**Timber Creek**	**3.07**	**295**		**Pn**	**03 48 39.7**	**+0.3**
M16K	**Timber Creek**	**3.07**	**295**	P	**Pn**	**03 48 39.7**	**+0.3**
	baz=111						
PPLA	**Purkeypile**	**3.11**	**9**		**Pn**	**03 48 41.1**	**+1.0**
PPLA	**Purkeypile**	**3.11**	**9**	P	**Pn**	**03 48 41.1**	**+1.0**
	baz=190						
SML	**Sawmill**	**3.12**	**49**	Pn	**Pn**	**03 48 39.2**	**-0.8**
SML				IAML		03 49 17.6	
	comp=E,148nm,0.7s						
SML				IAML		03 49 17.7	
	comp=N,185nm,0.5s						
SML	**Sawmill**	**3.12**	**49**	P	**Pn**	**03 48 39.3**	**-0.8**
	baz=233						
GLI	**Glacier Island**	**3.23**	**69**		**Pn**	**03 48 40.0**	**-1.5**
GLI	**Glacier Island**	**3.23**	**69**	IAML		03 49 20.4	
	comp=N,249nm,0.6s						
GLI				IAML		03 49 21.4	
	comp=E,294nm,0.6s						
GLI	**Glacier Island**	**3.23**	**69**	P	**Pn**	**03 48 40.0**	**-1.5**
	baz=254						
M23K	**Glacier View**	**3.34**	**52**		**Pn**	**03 48 42.3**	**-0.7**
M23K	**Glacier View**	**3.34**	**52**	P	**Pn**	**03 48 42.3**	**-0.7**
	baz=236						
L17K	**Donlin**	**3.37**	**315**		**Pn**	**03 48 42.9**	**-0.4**
L17K	**Donlin**	**3.37**	**315**	P	**Pn**	**03 48 42.9**	**-0.4**
	baz=131						
TTA	**Tatalina**	**3.37**	**338**	Pn	**Pn**	**03 48 42.8**	**-0.7**
TTA				IAML		03 49 37.5	
	comp=N,33nm,1.3s						
TTA	**Tatalina**	**3.37**	**338**	P	**Pn**	**03 48 43.0**	**-0.4**
TTA	**Tatalina**	**3.37**	**338**	P	**Pn**	**03 48 43.0**	**-0.4**
	baz=156						
O15K	**Ungalikthiuk R**	**3.41**	**262**		**Pn**	**03 48 44.5**	**+0.6**
O15K	**Ungalikthiuk R**	**3.41**	**262**	P	**Pn**	**03 48 44.5**	**+0.6**
	baz=76						
HIN	**Hinchinbrook I**	**3.43**	**78**		**Pn**	**03 48 43.9**	**-0.2**
N15K	**Kwethluk River**	**3.45**	**278**		**Pn**	**03 48 45.3**	**+0.9**
N15K	**Kwethluk River**	**3.45**	**278**	IAML		03 49 25.6	
	comp=N,46nm,2.0s						
N15K				IAML		03 49 38.8	
	comp=E,42nm,2.7s						
N15K	**Kwethluk River**	**3.45**	**278**	P	**Pn**	**03 48 45.3**	**+0.9**
	baz=93						
FID	**Port Fidalgo**	**3.50**	**72**		**Pn**	**03 48 43.4**	**-1.6**
SCM	**Sheep Creek Mo**	**3.52**	**53**		**Pn**	**03 48 44.8**	**-0.7**
SCM				IAML		03 49 29.3	
	comp=N,180nm,0.9s						
SCM				IAML		03 49 29.9	
	comp=E,128nm,0.4s						
SCM	**Sheep Creek Mo**	**3.52**	**53**	P	**Pn**	**03 48 44.7**	**-0.7**
	baz=238						
Q23K	**Middleton Isla**	**3.53**	**94**		**Pn**	**03 48 45.8**	**+0.3**
Q23K	**Middleton Isla**	**3.53**	**94**	P	**Pn**	**03 48 45.8**	**+0.3**
	baz=279						
MID	**Middleton Isla**	**3.54**	**94**	P	**Pn**	**03 48 45.8**	**+0.3**
K20K	**Telida**	**3.55**	**354**		**Pn**	**03 48 45.8**	**+0.1**
K20K	**Telida**	**3.55**	**354**	P	**Pn**	**03 48 45.8**	**+0.1**
	baz=174						
L16K	**Owhat River**	**3.58**	**304**		**Pn**	**03 48 46.1**	**0.0**
L16K	**Owhat River**	**3.58**	**304**	P	**Pn**	**03 48 46.1**	**0.0**
	baz=119						
CAST	**Castle Rocks**	**3.64**	**8**	Pn	**Pn**	**03 48 47.1**	**+0.3**
CAST	**Castle Rocks**	**3.64**	**8**	P	**Pn**	**03 48 47.2**	**+0.3**
	baz=190						
WAT7	**Susitna Watana**	**3.68**	**33**		**Pn**	**03 48 47.0**	**-0.5**
WAT1	**Susitna Watana**	**3.76**	**35**		**Pn**	**03 48 47.9**	**-0.6**
WAT1	**Susitna Watana**	**3.76**	**35**	P	**Pn**	**03 48 47.9**	**-0.6**
	baz=219						
K17K	**Iditarod**	**3.78**	**322**		**Pn**	**03 48 48.5**	**-0.2**
K17K	**Iditarod**	**3.78**	**322**	IAML		03 49 50.5	
	comp=E,29nm,1.6s						
K17K				IAML		03 50 08.9	
	comp=N,26nm,2.8s						
K17K	**Iditarod**	**3.78**	**322**	P	**Pn**	**03 48 48.5**	**-0.2**
	baz=138						
M15K	**Kasigluk River**	**3.80**	**286**		**Pn**	**03 48 49.1**	**+0.1**
M15K	**Kasigluk River**	**3.80**	**286**	P	**Pn**	**03 48 49.1**	**+0.1**
	baz=100						
EYAK	**Cordova Ski Ar**	**3.81**	**76**		**Pn**	**03 48 48.8**	**-0.3**
EYAK	**Cordova Ski Ar**	**3.81**	**76**	P	**Pn**	**03 48 49.6**	**+0.4**
EYAK	**Cordova Ski Ar**	**3.81**	**76**	P	**Pn**	**03 48 48.8**	**-0.3**
	baz=262						
WAT6	**Susitna Watana**	**3.83**	**42**		**Pn**	**03 48 48.9**	**-0.7**
WAT6	**Susitna Watana**	**3.83**	**42**	P	**Pn**	**03 48 48.9**	**-0.7**
	baz=227						
KTH	**Kantishna Hill**	**3.89**	**16**		**Pn**	**03 48 49.9**	**-0.3**
KTH	**Kantishna Hill**	**3.89**	**16**	IAML		03 49 36.2	
	comp=E,32nm,0.8s						
KTH				IAML		03 50 14.3	
	comp=N,39nm,0.9s						
TRF	**Thorofare Moun**	**3.89**	**20**		**Pn**	**03 48 50.3**	**-0.1**
TRF	**Thorofare Moun**	**3.89**	**20**	IAML		03 49 37.7	
	comp=N,59nm,0.5s						
TRF				IAML		03 49 38.0	
	comp=E,33nm,0.5s						
TRF	**Thorofare Moun**	**3.89**	**20**	P	**Pn**	**03 48 50.3**	**-0.1**
	baz=203						
DIV	**Divide**	**3.92**	**68**		**Pn**	**03 48 50.8**	**+0.1**
KLU	**Klutina**	**3.97**	**62**		**Pn**	**03 48 50.6**	**-0.7**
KLU				IAML		03 49 38.6	
	comp=E,179nm,0.4s						
KLU	**Klutina**	**3.97**	**62**	P	**Pn**	**03 48 50.6**	**-0.7**
	baz=248						
J18K	**Innoko River**	**4.00**	**337**	Pn	**Pn**	**03 48 51.8**	**+0.2**
CHUM	**Lake Minchumin**	**4.08**	**6**		**Pn**	**03 48 53.0**	**+0.3**
CHUM	**Lake Minchumin**	**4.08**	**6**	P	**Pn**	**03 48 53.0**	**+0.3**
	baz=187						
M24K	**Tolsona, Glenn**	**4.13**	**54**		**Pn**	**03 48 53.2**	**-0.3**
M24K	**Tolsona, Glenn**	**4.13**	**54**	IAML		03 49 42.8	
	comp=N,152nm,1.1s						
M24K				IAML		03 50 02.6	
	comp=E,140nm,1.1s						
M24K	**Tolsona, Glenn**	**4.13**	**54**	P	**Pn**	**03 48 53.2**	**-0.3**
	baz=240						
RND	**Reindeer**	**4.15**	**29**		**Pn**	**03 48 53.3**	**-0.4**
RND	**Reindeer**	**4.15**	**29**	IAML		03 49 46.9	
	comp=N,20nm,0.6s						
RND				IAML		03 50 22.0	
	comp=E,22nm,0.9s						
DHY	**Denali Highway**	**4.30**	**38**	Pn	**Pn**	**03 48 55.5**	**-0.3**
DHY				IAML		03 49 48.2	
	comp=E,45nm,0.4s						
DHY				IAML		03 49 49.4	
	comp=N,45nm,0.4s						
DHY	**Denali Highway**	**4.30**	**38**	P	**Pn**	**03 48 55.3**	**-0.5**
	baz=224						
J19K	**Poorman**	**4.32**	**346**		**Pn**	**03 48 55.3**	**-0.5**
J19K	**Poorman**	**4.32**	**346**	P	**Pn**	**03 48 55.3**	**-0.5**
	baz=164						
GOAT	**Goat Mountain**	**4.32**	**76**		**Pn**	**03 48 55.2**	**-0.8**
RAGM	**Ragged Mountai**	**4.33**	**79**		**Pn**	**03 48 56.0**	**-0.1**
J20K	**Nowinta River**	**4.37**	**355**		**Pn**	**03 48 56.8**	**+0.2**
J20K	**Nowinta River**	**4.37**	**355**	P	**Pn**	**03 48 56.8**	**+0.2**
	baz=174						
BPAW	**Bear Paw Mtn.**	**4.41**	**13**		**Pn**	**03 48 56.4**	**-0.7**
BPAW	**Bear Paw Mtn.**	**4.41**	**13**	IAML		03 49 49.9	
	comp=N,17nm,0.6s						
BPAW				IAML		03 50 07.6	
	comp=E,20nm,3.2s						
BPAW	**Bear Paw Mtn.**	**4.41**	**13**	P	**Pn**	**03 48 56.4**	**-0.7**
	baz=195						
MCK	**McKinley**	**4.41**	**26**		**Pn**	**03 48 57.0**	**-0.1**
MCK	**McKinley**	**4.41**	**26**	P	**Pn**	**03 48 57.0**	**-0.1**
	baz=210						
BMRM	**Bremner River**	**4.44**	**71**		**Pn**	**03 48 56.6**	**-0.9**
BMRM	**Bremner River**	**4.44**	**71**	P	**Pn**	**03 48 56.6**	**-0.9**
	baz=259						
KAIM	**Kayak Island**	**4.45**	**85**		**Pn**	**03 48 58.1**	**+0.4**
KAIM	**Kayak Island**	**4.45**	**85**	P	**Pn**	**03 48 58.1**	**+0.4**
	baz=272						
J17K	**VABM Dome**	**4.52**	**325**		**Pn**	**03 48 58.0**	**-0.6**
J17K	**VABM Dome**	**4.52**	**325**	IAML		03 50 08.7	
	comp=N,21nm,3.4s						
J17K				IAML		03 51 50.6	
	comp=E,17nm,3.1s						
J17K	**VABM Dome**	**4.52**	**325**	P	**Pn**	**03 48 58.0**	**-0.6**
	baz=140						
HMT	**Hamilton**	**4.53**	**80**		**Pn**	**03 48 58.8**	**0.0**
N25K	**Chitina, Valde**	**4.61**	**64**		**Pn**	**03 48 59.3**	**-0.5**
N25K	**Chitina, Valde**	**4.61**	**64**	IAML		03 49 54.0	
	comp=E,119nm,0.6s						
N25K				IAML		03 49 55.6	
	comp=N,76nm,0.5s						
N25K	**Chitina, Valde**	**4.61**	**64**	P	**Pn**	**03 48 59.3**	**-0.5**
	baz=251						
NICHA	**Nichawak Mount**	**4.68**	**81**		**Pn**	**03 49 00.5**	**-0.2**
HARP	**HAARP**	**4.69**	**53**		**Pn**	**03 49 00.7**	**-0.2**
HARP	**HAARP**	**4.69**	**53**	P	**Pn**	**03 49 00.7**	**-0.2**
	baz=240						
BWN	**Browne**	**4.70**	**21**		**Pn**	**03 49 01.1**	**+0.2**
BWN	**Browne**	**4.70**	**21**	IAML		03 50 29.9	
	comp=N,50nm,2.9s						
BWN				IAML		03 50 56.7	
	comp=E,48nm,2.1s						
K15K	**Wolf Creek Mou**	**4.71**	**305**		**Pn**	**03 49 01.7**	**+0.6**
K15K	**Wolf Creek Mou**	**4.71**	**305**	IAML		03 50 29.9	
	comp=E,26nm,3.8s						
K15K				IAML		03 51 15.5	
	comp=N,18nm,3.9s						
K15K	**Wolf Creek Mou**	**4.71**	**305**	P	**Pn**	**03 49 01.7**	**+0.6**
	baz=118						
VNHG	**Veniaminof 1**	**4.80**	**223**		**Pn**	**03 49 02.4**	**0.0**
WACK	**Wrangell Chich**	**4.86**	**60**		**Pn**	**03 49 02.9**	**-0.4**
PAX	**Paxson**	**4.88**	**47**		**Pn**	**03 49 03.2**	**-0.3

HDA	Harding Lake	5.46	30			Pn	03 49 10.6	-0.5
HDA	Harding Lake baz=216	5.46	30	P		Pn	03 49 10.6	-0.5
ISLE	Juniper Island	5.50	77			Pn	03 49 11.9	+0.2
ISLE	Juniper Island	5.50	77			Sn	03 50 11.1	-2.8
PTPK	Patty Peak	5.50	71			Pn	03 49 11.9	0.0
KIAG	Kiagna River	5.51	74			Pn	03 49 12.4	+0.3
MENT	Mentasta	5.54	52			Pn	03 49 12.3	+0.1
BAGL	Bagley Icefiel	5.62	79			Pn	03 49 14.0	+0.8
I23K	Minto, Yukon-K	5.62	17			Pn	03 49 13.1	-0.2
I23K	Minto, Yukon-K baz=201	5.62	17	P		Pn	03 49 13.1	-0.2
COLA	College	5.64	24			Pn	03 49 13.2	-0.4
COLA	College	5.64	24	P		Pn	03 49 13.0	-0.5
MDM	Murphy Dome	5.64	22			Pn	03 49 13.1	-0.5
MESA	MESA	5.68	82			Sn	03 50 16.3	-2.2
MESA	MESA	5.68	82			Pn	03 49 14.7	+0.3
MESA	MESA baz=271	5.68	82	P		Pn	03 49 14.7	+0.3
H20K	Anotleneega Mo	5.72	353			Pn	03 49 14.9	+0.2
H20K	Anotleneega Mo baz=172	5.72	353	P		Pn	03 49 14.9	+0.2
L26K	Log Cabin Wild	5.73	52	Pn		Pn	03 49 13.3	-1.4
IL31		5.77	28			Pn	03 49 14.5	-0.8
ILAR	Eielson Array	5.77	28	Pn		Pn	03 49 14.2	-1.1
ILAR	Eielson Array comp=E,31nm,0.6s,baz=217,slow=14,SNR=551	5.77	28	P		Pn	03 49 14.4	-0.9
ILAR				S		Sn	03 50 16.5	-3.7
	comp=E,1.6nm,0.4s,baz=213,slow=28,SNR=2.4							
GRNC	Granite Creek	5.79	76			Pn	03 49 16.0	+0.2
H18K	Honhosa River	5.83	338			Pn	03 49 16.3	+0.2
H18K	Honhosa River baz=154	5.83	338	P		Pn	03 49 16.3	+0.2
H21K	Melozitna Rive	5.84	2			Pn	03 49 16.3	0.0
H21K	Melozitna Rive baz=192	5.84	2	P		Pn	03 49 16.3	0.0
BARN	Barnard Glacie	5.87	73			Pn	03 49 17.7	+0.9
POKR	Poker Plat Res	5.94	24			Pn	03 49 17.1	-0.5
POKR	Poker Plat Res baz=210	5.94	24	P		Pn	03 49 17.1	-0.5
CTG	Chitna Glacier baz=264	6.01	74	P		Pn	03 49 19.7	+1.0
CTGM	Chitina Glacie	6.02	74			Pn	03 49 19.7	+0.9
SCRK	Sand Creek	6.03	43	Pn		Pn	03 49 17.8	-1.2
SCRK	Sand Creek baz=231	6.03	43	P		Pn	03 49 17.9	-1.0
J25K	Salcha River,	6.04	34			Pn	03 49 18.4	-0.7
J25K	Salcha River, baz=221	6.04	34	P		Pn	03 49 18.3	-0.7
M27K	Edge Creek, AK	6.07	61			Pn	03 49 19.3	-0.2
M27K	Edge Creek, AK baz=250	6.07	61	P		Pn	03 49 19.3	-0.2
TABL	Table Mountain	6.08	79			Pn	03 49 20.1	+0.4
H22K	Ishtalitna Cre	6.14	7			Pn	03 49 20.0	-0.2
H22K	Ishtalitna Cre baz=189	6.14	7	P		Pn	03 49 20.0	-0.2
LOGN	Logan Glacier	6.17	76			Pn	03 49 21.5	+0.7
IMAR	Indian Mountai	6.17	358	Pn		Pn	03 49 20.8	+0.1
L27K	Beaver Creek,	6.36	55			Pn	03 49 22.9	-0.4
L27K	Beaver Creek, baz=245	6.36	55	P		Pn	03 49 23.1	-0.1
BCAR	Beaver Creek A	6.38	55	Pn		Pn	03 49 23.1	-0.5
YUK2	White River	6.38	67			Pn	03 49 24.5	+0.9
PN7A	Pavlof North-7	6.44	231			Pn	03 49 24.9	+0.4
H24K	Noodor Dome	6.50	20			Pn	03 49 24.3	-0.9
H24K	Noodor Dome baz=205	6.50	20	P		Pn	03 49 24.3	-0.9
J26L	Joseph Creek	6.51	40			Pn	03 49 24.7	-0.6
J26L	Joseph Creek baz=228	6.51	40	P		Pn	03 49 24.7	-0.6
PCA	Pinnacle	6.53	82			Pn	03 49 26.3	+0.7
BVCY	Beaver Creek	6.54	61			Pn	03 49 26.2	+0.6
BVCY	Beaver Creek baz=252	6.54	61	P		Pn	03 49 26.3	+0.6
PINM	Pinnacle baz=273	6.54	82	P		Pn	03 49 26.3	+0.6
YUK3	Moose Creek	6.55	67			Pn	03 49 26.4	+0.3
YUK3	Moose Creek baz=258	6.55	67	P		Pn	03 49 26.4	+0.3
G21K	Allakaket	6.70	359			Pn	03 49 28.1	+0.2
G21K	Allakaket baz=179	6.70	359	P		Pn	03 49 28.1	+0.2
PRP	Porcupine Dome	6.71	29			Pn	03 49 27.8	-0.3
PRP	Porcupine Dome baz=216	6.71	29	P		Pn	03 49 27.8	-0.3
K27K	Chicken	6.74	47			Pn	03 49 28.2	-0.2
K27K	Chicken baz=236	6.74	47	P		Pn	03 49 28.2	-0.2
BCPM	Bancas Point	6.86	83			Pn	03 49 30.2	+0.3
PNL	Peninsula	7.00	85			Pn	03 49 31.9	-0.1
PNL	Peninsula	7.00	85	P		Pn	03 49 32.3	+0.3
PNL	Peninsula baz=277	7.00	85	P		Pn	03 49 31.9	-0.1
G23K	Bananza Creek	7.05	11			Pn	03 49 32.1	-0.4
G23K	Bananza Creek baz=194	7.05	11	P		Pn	03 49 32.1	-0.4
I26K	Coal Creek Min	7.19	36			Pn	03 49 33.2	-1.2
I26K	Coal Creek Min baz=225	7.19	36	P		Pn	03 49 33.2	-1.2
F20K	Avaraart Lake	7.32	352			Pn	03 49 36.9	+0.8
G24K	Hadweenzic Riv	7.36	18			Pn	03 49 35.8	-0.9
G24K	Hadweenzic Riv baz=203	7.36	18	P		Pn	03 49 35.8	-0.9
O29M	Mount Kennedy	7.36	80			Pn	03 49 37.8	+0.9
O29M	Mount Kennedy baz=273	7.36	80	P		Pn	03 49 37.8	+0.9
F21K	Alatna River	7.41	359			Pn	03 49 37.5	+0.1
F21K	Alatna River baz=179	7.41	359	P		Pn	03 49 37.5	+0.1
FALS	False Pass	7.42	232			Pn	03 49 37.7	+0.1
FALS	False Pass baz=44	7.42	232	P		Pn	03 49 37.7	+0.1
EGAK	Eagle	7.50	44			Pn	03 49 37.7	-0.8
COLD	Coldfoot	7.54	9			Pn	03 49 38.7	-0.4
COLD	Coldfoot baz=192	7.54	9	P		Pn	03 49 38.7	-0.4
ISNN	Isanotski Nort	7.58	233			Pn	03 49 40.1	+0.3
M29M	Somme Creek	7.62	64			Pn	03 49 41.1	+0.9
M29M	Somme Creek baz=256	7.62	64	P		Pn	03 49 41.2	+0.9
ISLZ	Isanotski Laza	7.63	232			Pn	03 49 40.6	+0.1
FYU	Fort Yukon	7.66	25	Pn		Pn	03 49 40.2	-0.4
G25K	Bearman Lake	7.66	22			Pn	03 49 39.8	-0.9
G25K	Bearman Lake baz=208	7.66	22	P		Pn	03 49 39.8	-0.9
SSLS	Shishaldin Sou	7.76	233			Pn	03 49 42.0	-0.2
DAWY	Dawson	7.78	51	Pn		Pn	03 49 43.2	+0.8
P29M	Windy Craggy	7.84	85			Pn	03 49 44.0	+0.7
P29M	Windy Craggy baz=278	7.84	85	P		Pn	03 49 44.0	+0.7
E19K	Redstone River	7.85	349			Pn	03 49 44.1	+0.8
E19K	Redstone River baz=165	7.85	349	P		Pn	03 49 44.1	+0.8
I27K	Kandik River	7.87	38			Pn	03 49 43.1	-0.5
I27K	Kandik River baz=228	7.87	38	P		Pn	03 49 43.1	-0.5
L29M	L29M	7.94	59			Pn	03 49 45.0	+0.4
L29M	L29M baz=252	7.94	59	P		Pn	03 49 45.0	+0.4
F24K	Squaw Lake	8.07	15			Pn	03 49 45.6	-0.7
F24K	Squaw Lake baz=200	8.07	15	P		Pn	03 49 45.6	-0.7
N30M	Aishikik Lake	8.11	71			Pn	03 49 46.1	-0.7
N30M	Aishikik Lake baz=266	8.11	71	P		Pn	03 49 46.2	-0.7
G26K	Porcupine Rive	8.30	27			Pn	03 49 48.0	-1.2
G26K	Porcupine Rive baz=215	8.30	27	P		Pn	03 49 48.0	-1.2
I28M	Miner Creek	8.31	42			Pn	03 49 48.5	-1.1
I28M	Miner Creek baz=234	8.31	42	P		Pn	03 49 48.5	-1.1
E22K	Anaktuvuk Pass	8.35	4			Pn	03 49 51.1	+1.0
E23K	Chandalar	8.40	9			Pn	03 49 50.9	0.0
E23K	Chandalar baz=193	8.40	9	P		Pn	03 49 50.8	0.0
J29N	Klondike Camp	8.41	50			Pn	03 49 52.3	+1.4
K29M	Barlow Dome	8.45	55			Pn	03 49 51.7	+0.3
K29M	Barlow Dome baz=249	8.45	55	P		Pn	03 49 51.7	+0.3
F25K	Christian Rive	8.48	20			Pn	03 49 50.6	-1.1
F25K	Christian Rive baz=207	8.48	20	P		Pn	03 49 50.6	-1.1
BMAR	Burnt Mountain	8.53	23	Pn		Pn	03 49 50.7	-1.8
E25K	Arctic Village	8.96	19			Pn	03 49 56.5	-1.8
E25K	Arctic Village baz=206	8.96	19	P		Pn	03 49 56.5	-1.8
TOLK	Toolik Lake Re	8.98	9			Pn	03 49 59.5	+1.0
TOLK	Toolik Lake Re baz=192	8.98	9	P		Pn	03 49 59.5	+1.0
J30M	Hart River	9.21	52	Pn		Pn	03 50 02.6	+0.9
UNV	Unalaska Valle comp=E,39nm,1.9s	9.41	236	P		Pn	03 50 04.1	-0.2
SIT	Sitka	9.80	99	P		Pn	03 50 09.4	-0.1
JIS	Juneau Island	9.84	91	P		Pn	03 50 10.9	+0.8
DLBC	Dease Lake comp=E,1.9nm,0.3s,baz=180,slow=26,SNR=2.1	11.99	87	P		Pn	03 50 40.0	+1.3
DLBC				S		Sn	03 52 49.5	-1.2
	comp=E,0.8nm,0.3s,baz=345,slow=27,SNR=2.2							
INK	Inuvik comp=E,1.0nm,0.5s,baz=246,slow=8.3,SNR=13	12.04	37	P		Pn	03 50 38.8	-0.4
BBB	Bella Bella comp=E,4.4nm,0.9s,baz=236,slow=11,SNR=1.4	15.93	108	P		P	03 51 33.5	+3.7
YKA	Yellowknife Ar comp=E,1.4nm,0.6s,baz=278,slow=10,SNR=24	18.64	65	P		Pn	03 52 01.1	-0.2
KSRS	Korea Array comp=E,1.0nm,0.5s,baz=31,slow=7.1,SNR=2.4 comp=E,1.0nm,0.5s	53.09	282	P		P	03 56 56.4	+0.5
SONM	Songino Array comp=E,0.9nm,0.4s,baz=43,slow=5.4,SNR=5.1 comp=E,0.9nm,0.4s	54.78	306	P		P	03 57 09.2	+0.9
ZALV	Zalesovo Beam comp=E,3.6nm,0.5s,baz=33,slow=7.3,SNR=16 comp=E,3.6nm,0.5s	57.43	323	P		P	03 57 27.5	+0.7
BVAR	Borovoye Array comp=E,1.8nm,0.5s,baz=31,slow=5.7,SNR=12 comp=E,1.8nm,0.5s	62.15	332	P		P	03 57 58.7	-0.4
KURBB	Kurchatov Arra comp=E,1.5nm,0.3s,baz=196,slow=29,SNR=3.2 comp=E,1.5nm,0.3s	62.20	326	P		P	03 57 59.3	-0.2
MKAR	Makanchi Array comp=E,0.3nm,0.5s,baz=39,slow=7.4,SNR=6.4 comp=E,0.3nm,0.5s	64.48	321	P		P	03 58 14.2	-0.3

IDC 23 03:52:15.2±7.3, 18°.92S×178°.90W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=317.3km s-min=39.0km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.6nm,0.5s,baz=96,slow=7.4,SNR=14 0.6nm,0.5s	44.00	261	P	P	04 00 25.0	+0.2
ASAR	Alice Springs 0.8nm,0.7s,baz=88,slow=8.8,SNR=7.5 0.8nm,0.7s	44.08	255	P	P	04 00 24.9	-0.6
ILAR	Eielson Array 0.4nm,1.0s,baz=207,slow=5.1,SNR=4.4 0.4nm,1.0s	86.98	13	P	P	04 05 01.9	0.0

*DSN **23** 04:01:12.7±1.6, 27°.71N×56°.28E, h15km, ML2.6/8, Error ellipse: s-maj=52.3km s-min=14.0km az=89.0*
*TEH **23** 04:01:13.7, 27°.37N×56°.80E, h10km±21km, ML2.7*
*OMAN **23** 04:01:20.1±0.4, 27°.23N×57°.11E, h14km±20km, mb3.8/1, ml2.5/10, Error ellipse: s-maj=41.4km s-min=5.0km az=1.0*

ISC 23 04:01:12.9±1.1, 27°.57N±0°.05×56°.84E±0°.06, h14km±10km, n32, σ1§28/43, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.29	246	Pg	Pg	04 01 19.0	+0.1
IBND				Sg	Sg	04 01 23.1	+0.1
GENO	Geno	0.61	255	Pg	Pg	04 01 24.6	-0.3
KHNJ	Kahnooj	0.86	64	Pg	Pn	04 01 32.8	+2.2
SHME	Shamm	1.63	202	P	Pn	04 01 41.7	+0.5
SHME				S	Sn	04 02 01.4	-0.6
SHME	Shamm SNR=13	1.63	202	P	Pn	04 01 42.1	+1.0
SHME				S	Sn	04 02 01.5	-0.5
BANOM	Banah	1.70	196	P	Pg	04 01 46.0	+0.4
BANOM				S	Sn	04 02 04.1	+0.3
JASK	Jask - Hormozg	1.93	151	Pg	Pb	04 01 46.3	-1.4
JASK	Jask - Hormozg	1.93	151	P	Pb	04 01 46.3	-1.4
KBAM	BAM	2.12	42	Pn	Pg	04 01 53.8	+0.3
MASF	Masafi	2.27	196	P	Pb	04 01 54.1	+0.5
MASF				S	Sb	04 02 23.5	+1.9
MSFE	Esma-Masafi	2.28	196	P	Pn	04 01 51.0	+0.9
MSFE				S	Sb	04 02 22.3	+0.4
MDH	Madha	2.31	192	P	Pn	04 01 51.7	+1.2
MDH	Madha	2.31	192	P	Pb	04 01 53.5	-0.8
CHMN	Cheshme madani	2.37	15	Pn	Pg	04 01 57.5	-0.9
UOSS	Minazif	2.67	192	P	Pn	04 01 56.0	+0.6
UOSS	Minazif	2.67	192	P	Pb	04 01 58.7	-1.8
NAZ	Nazwa, Dubai	2.77	203	P	Pn	04 01 57.5	+0.6
NAZ	Nazwa, Dubai	2.77	203	P	Pb	04 02 01.1	-1.2
HATD	Hatta, Dubai	2.80	193	P	Pn	04 01 58.2	+0.9
HATD	Hatta, Dubai	2.80	193	P	Pb	04 02 01.8	-0.9
ASHO	Ashiyiah	2.95	194	P	Pn	04 01 59.5	+0.1
ASHO	Ashiyiah SNR=5.6	2.95	194	P	Pn	04 02 02.4	+3.0
FAQ	Al Faqa, Dubai	3.02	202	P	Pn	04 02 00.0	-0.3
ASUD	Al Ashush, Dub	3.23	205	P	Pn	04 02 02.3	-0.8
SOHO	SOHO	3.43	185	P	Pn	04 02 09.2	+3.4
ARQ	Araqi	4.22	184	P	Pn	04 02 17.5	+0.7
ARQ				S	Sn	04 03 06.8	+0.9
WSAR	Wadi Sarin SNR=24	4.60	159	P	Pn	04 02 22.7	+0.6
WSAR				S	Sn	04 03 13.5	-1.8
SMDO	Samad	4.62	166	P	Pn	04 02 22.9	+0.5
SMDO				S	Sn	04 03 15.3	-0.6
JMDO	Jabal Madar	5.30	167	P	Pn	04 02 34.0	+2.3
WBK	Wadi Bani Khal SNR=15	5.30	158	P	Pn	04 02 32.0	+0.3
WBK				S	Sn	04 03 32.0	-0.6
JLN	Jalan Bani Buh SNR=7.9	5.88	156	P	Pn	04 02 39.4	-0.1
MHTO	MHTO	6.63	171	P	Pn	04 02 50.9	+1.0
MHTO				S	Sn	04 04 03.1	-2.2

IDC 23 04:07:16.8±13.0, 18°.74N×145°.79E, h673km±151km, mb2.8/7, mbtmp3.9/7, Error ellipse: s-maj=174.9km s-min=21.6km az=75.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.5nm,0.4s,baz=19,slow=8.3,SNR=11 0.5nm,0.4s	40.05	197	P	P	04 13 57.5	0.0
SONM	Songino Array 0.4nm,0.5s,baz=134,slow=6.2,SNR=3.6 0.4nm,0.5s	43.16	321	P	P	04 14 21.4	-0.2
ASAR	Alice Springs 0.3nm,0.4s,baz=12,slow=6.9,SNR=4.8 0.3nm,0.4s	43.72	196	P	P	04 14 26.1	0.0
MKAR	Makanchi Array 0.4nm,0.5s,baz=88,slow=8.2,SNR=7.6 0.4nm,0.5s	58.49	314	P	P	04 16 11.6	+0.1
KURBB	Kurchatov Arra 1.8nm,0.6s,baz=98,slow=6.8,SNR=13 1.8nm,0.6s	61.34	318	P	P	04 16 30.1	+0.1
BVAR	Borovoye Array 0.8nm,0.4s,baz=95,slow=7.4,SNR=4.9 0.8nm,0.4s	66.50	320	P	P	04 17 02.8	+0.4
FINES	FINESS Array B 3.1nm,1.1s,baz=57,slow=10,SNR=3.6 3.1nm,1.1s	86.88	335	P	P	04 18 52.1	-0.1

*SOME **23** 04:13:44.7, 39°.55N×69°.63E, h5km*
*NNC **23** 04:13:47.4±2.0, 39°.63N×69°.87E, h0km, mb3.2, mpv3.4, Error ellipse: s-maj=20.1km s-min=14.6km az=84.0*

ISU 23 04:13:46.2, 39°.86N×67°.82E, h15km, 2C-3D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BXML	Bakhmal	0.24	137	P	Pg	04 13 50.4	-1.1
BXML				S	Sg	04 13 53.5	-1.6
DZI	Dzhizak	0.26	1	P	Pg	04 13 51.9	+0.2
DZI				S	Sb	04 13 56.2	-0.6
KRSA	Karasay	0.27	347	P	Pg	04 13 51.9	0.0
KRSA				S	Sg	04 13 56.1	+0.3
SAM	Samarkand	0.70	254	P	Pg	04 13 59.6	-0.2
SAM				S	Sb	04 14 09.7	+0.2
AGL	Agalyk	0.80	245	P	Pg	04 14 01.5	-0.3
AGL				S	Sb	04 14 12.8	+0.3
YNGY	Yangiyul	1.55	36	P	Pb	04 14 14.6	0.0
YNGY				S	Sg	04 14 35.7	-0.5
BAYS	Baysun	1.72	196	P	Pb	04 14 17.5	0.0
BAYS				S	Sg	04 14 40.7	-0.8
PKMR	Pachkamar	1.72	221	P	Pb	04 14 17.7	+0.2
PKMR				S	Sg	04 14 41.0	-0.6
NUT	Nurota	1.78	294	P	Pb	04 14 18.7	+0.2
NUT				S	Sg	04 14 42.5	-1.0
ZRB	Zarabog	2.13	215	P	Pg	04 14 26.1	-0.9
ZRB				S	Sg	04 14 56.2	+1.5
CHMG	Chimgan	2.37	44	P	Pb	04 14 28.2	-0.5
CHMG				S	Sg	04 15 00.2	-2.2
CHRV	Charvak	2.41	42	P	Pb	04 14 28.6	-0.6
CHRV				S	Sg	04 15 01.1	-2.4
MINT	Mingtut	2.49	75	P	Pb	04 14 29.8	-0.8
MINT				S	Sb	04 15 03.3	+2.2
CHDK	Chadak	2.50	63	P	Pb	04 14 29.9	-0.9
CHDK				S	Sb	04 15 03.5	+2.1
IUG	Iuzhnay 31nm,0.0s	2.83	36	Pg	Pn	04 14 33.1	+2.1
IUG				Lg	Lg	04 15 07.8	
	64nm,0.6s						
IUG	Iuzhnay 31nm,0.0s	2.83	36	*e*P	Pb	04 14 34.1	-2.4
IUG				*e*S	Sb	04 15 10.1	-1.0
	50nm,0.3s						
CHMI	Chimion	2.87	81	P	Pb	04 14 35.1	-2.0
CHMI				S	Sb	04 15 13.4	+1.3
FRG	Fergana	3.08	79	P	Pb	04 14 38.2	-2.5
FRG				S	Sb	04 15 19.3	+1.1
BRLS	Boroldaу 4.3nm,0.3s	3.51	25	Pg	Pb	04 14 44.2	-3.8
BRLS				Lg	Lg	04 15 27.2	
	19nm,0.3s						
BRLS	Boroldaу 3.1nm,0.1s	3.51	25	*e*P	Pb	04 14 44.2	-3.8
BRLS				*e*S	Sb	04 15 27.2	-3.3
	19nm,0.3s						
DZN	Dzhankel'dy	3.56	288	P	Pb	04 14 45.1	-3.8
DZN				S	Sb	04 15 32.1	+0.2
KK31	Karatay Array 0.4nm,0.3s,baz=343,slow=16,SNR=12	3.82	31	⇑Pn	Pn	04 14 43.6	-0.8
KK31				⇑Pg	Pb	04 14 52.0	-1.3
	0.7nm,0.3s,baz=208,slow=17,SNR=9.5						
KK31				⇓Lg	Lg	04 15 40.3	
	1.9nm,0.2s,baz=217,slow=16,SNR=7.6						
MRKS	Merke 2.3nm,0.3s	4.99	53	Pg	Pn	04 15 00.2	-0.4
MRKS				Lg	Lg	04 15 54.6	
	8.0nm,0.7s						
MRKS	Merke 1.1nm,0.2s	4.99	53	*e*P	Pn	04 15 02.3	+1.7
MRKS				*e*S	Sn	04 15 57.8	-0.2
	8.0nm,0.7s						
AB31	Akbulak array 0.4nm,0.4s,baz=166,slow=11,SNR=16	10.94	332	⇓Pn	Pn	04 16 18.7	-3.4
AB31				⇓Sn	Sn	04 18 19.7	-4.4
	0.3nm,0.4s,baz=164,slow=23,SNR=5.9						

*NEIC **23** 04:50:05.0±0.9, 56°.3N±0°.1×148°.7W±0°.1, h21km±2km, ML3.5/14, ML3.3(AEIC), Error ellipse: s-maj=17.8km s-min=11.0km az=172.0*
*AEIC **23** 04:50:08±0.8, 56°.2N±0°.1×148°.7W±0°.1, h12km±9km, Error ellipse: s-maj=18.0km s-min=9.8km az=168.0*

ISC 23 04:50:02.9±2.0, 56°.3N±0°.1×148°.68W±0°.05, h10km, n102, σ1§11/106, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.62	307		Pn	04 50 46.2	+1.0
KDAK					Sn	04 51 15.2	-1.9
OHAK	Old Harbor	2.71	292		Pn	04 50 46.9	+0.4
OHAK					Sn	04 51 17.3	-2.0
OHAK	Old Harbor baz=110	2.71	292	P	Pn	04 50 46.9	+0.4
OHAK				S	Sn	04 51 17.3	-2.0
	baz=110						
SYI	Shuyak Island	3.09	321		Pn	04 50 53.0	+1.4
SYI					Sn	04 51 27.7	-0.9
SYI	Shuyak Island comp=N,58nm,3.0s	3.09	321	IAML		04 51 34.7	
SYI				IAML		04 52 09.7	
	comp=E,74nm,2.4s						
Q20K	Shuyak Island baz=138	3.09	321	P	Pn	04 50 53.0	+1.4
Q20K				S	Sn	04 51 27.7	-0.9
	baz=138						
Q23K	Middleton Isla	3.40	20		Pn	04 50 56.5	+0.5
Q23K	Middleton Isla baz=202	3.40	20	P	Pn	04 50 56.5	+0.5
MID	Middleton Isla	3.40	21	Pn	Pn	04 50 56.4	+0.4
MID				IAML		04 52 27.7	
	comp=N,339nm,1.9s						
CNPM	China Poot	3.54	338		Pn	04 50 58.9	+1.0
CNPM					Sn	04 51 38.5	-1.2
CNPM	China Poot comp=E,48nm,3.0s	3.54	338	IAML		04 51 55.5	
CNPM				IAML		04 52 14.1	
	comp=N,56nm,2.7s						
BRSE	Bradley Lake S	3.65	343		Pn	04 51 00.3	+0.9
BRSE					Sn	04 51 41.4	-1.1
BRSE	Bradley Lake S baz=162	3.65	343	P	Pn	04 51 00.3	+0.9
BRSE				S	Sn	04 51 41.4	-1.1
	baz=162						
BRLK	Bradley Lake	3.69	342		Pn	04 51 00.8	+0.8
BRLK	Bradley Lake comp=E,40nm,2.2s	3.69	342	IAML		04 51 56.5	
Q19K	Cape Douglas,	3.77	317		Pn	04 51 02.8	+1.6
Q19K	Cape Douglas, comp=E,209nm,1.6s	3.77	317	IAML		04 52 50.4	
Q19K				IAML		04 52 51.6	
	comp=N,132nm,1.6s						
Q19K	Cape Douglas, baz=133	3.77	317	P	Pn	04 51 02.8	+1.6
P23K	Montague Islan	3.80	10		Pn	04 51 01.8	+0.3
P23K	Montague Islan baz=190	3.80	10	P	Pn	04 51 01.8	+0.3
SEW	Seward	3.87	354		Pn	04 51 02.4	+0.1
SEW	Seward baz=174	3.87	354	P	Pn	04 51 02.4	+0.1
P19K	Oil Pt	4.17	326		Pn	04 51 08.5	+2.0
P19K	Oil Pt baz=143	4.17	326	P	Pn	04 51 08.5	+2.0
ANCK	Angle Creek	4.18	300		Pn	04 51 08.8	+2.1
HIN	Hinchinbrook I	4.29	15		Pn	04 51 08.9	+0.6
KAIM	Kayak Island	4.30	30		Pn	04 51 08.9	+0.5
KAIM	Kayak Island baz=213	4.30	30	P	Pn	04 51 08.9	+0.5
SLKM	Skilak Lake	4.33	350		Pn	04 51 09.5	+0.8
CNTC	Contact Creek	4.39	300		Pn	04 51 11.7	+2.0
Q17K	Contact Creek baz=115	4.39	300	P	Pn	04 51 11.7	+2.0
ILSW	Iliamna Southw	4.41	329	Pn	Pn	04 51 10.7	+0.7
EYAK	Cordova Ski Ar	4.56	19		Pn	04 51 12.6	+0.7
EYAK	Cordova Ski Ar baz=201	4.56	19	P	Pn	04 51 12.5	+0.7
SUCK	Suckling Hills	4.61	32		Pn	04 51 13.4	+0.8
RAGM	Ragged Mountai	4.63	25		P

CRQE	Cirque baz=215	5.36	31	P		Pn	04 51 23.6	+0.5
KLU	Klutina	5.43	14			Pn	04 51 24.8	+0.9
KLU	Klutina baz=196	5.43	14	P		Pn	04 51 24.8	+0.9
TGL	Tana Glacier	5.44	32			Pn	04 51 24.7	+0.7
BAGL	Bagley Icefiel	5.47	37			Pn	04 51 24.9	+0.6
ISLE	Juniper Island	5.47	35			Pn	04 51 25.1	+0.6
N19K	Bonanza Creek	5.47	329			Pn	04 51 25.0	+0.5
N19K	Bonanza Creek baz=144	5.47	329	P		Pn	04 51 25.0	+0.5
GHO	Glory Hole Cre	5.52	359			Pn	04 51 26.6	+1.4
SAMH	Samovar Hills	5.69	44			Pn	04 51 28.6	+1.1
KIAG	Kiagna River	5.71	33			Pn	04 51 28.3	+0.4
N25K	Chitina, Valde	5.75	20			Pn	04 51 29.3	+1.0
N25K	Chitina, Valde baz=203	5.75	20	P		Pn	04 51 29.3	+1.0
GRNC	Granite Creek	5.76	36			Pn	04 51 29.2	+0.7
TABL	Table Mountain	5.76	40			Pn	04 51 29.4	+0.8
GLB	Gilahina Butte	5.77	24			Pn	04 51 29.2	+0.7
N18K	Kilae Creek	5.82	322			Pn	04 51 29.9	+0.8
N18K	Kilae Creek baz=137	5.82	322	P		Pn	04 51 29.9	+0.8
PCA	Pinnacle	5.88	46			Pn	04 51 30.8	+0.8
PINM	Pinnacle baz=232	5.88	46	P		Pn	04 51 30.8	+0.8
MCARA	McCarthy VSAT	5.91	27			Pn	04 51 31.8	+1.4
MCARA	McCarthy VSAT baz=212	5.91	27	P		Pn	04 51 31.8	+1.4
M24K	Tolsona, Glenn	5.99	11			Pn	04 51 33.5	+1.9
M24K	Tolsona, Glenn baz=193	5.99	11	P		Pn	04 51 33.5	+1.9
PNL	Peninsula	6.00	52			Pn	04 51 32.5	+0.8
PNL	Peninsula baz=239	6.00	52	P		Pn	04 51 32.5	+0.8
O16K	Kokwok River B	6.02	307			Pn	04 51 33.4	+1.5
O16K	Kokwok River B baz=120	6.02	307	P		Pn	04 51 33.4	+1.5
BARN	Barnard Glacie	6.04	34			Pn	04 51 33.1	+0.8
BCPM	Bancas Point	6.05	49			Pn	04 51 33.6	+1.3
CTG	Chitna Glacier baz=222	6.07	36	P		Pn	04 51 33.4	+0.7
CTGM	Chitina Glacie	6.07	36			Pn	04 51 33.4	+0.6
LOGN	Logan Glacier	6.08	38			Pn	04 51 33.4	+0.5
WACK	Wrangell Chich	6.15	20			Pn	04 51 35.5	+1.6
N17K	Nushagak Hills	6.18	317			Pn	04 51 35.3	+1.2
N17K	Nushagak Hills baz=130	6.18	317	P		Pn	04 51 35.3	+1.2
WAT6	Susitna Watana	6.35	4			Pn	04 51 38.3	+1.7
WAT6	Susitna Watana baz=185	6.35	4	P		Pn	04 51 38.3	+1.7
HARP	HAARP	6.40	15			Pn	04 51 39.1	+1.9
HARP	HAARP baz=198	6.40	15	P		Pn	04 51 39.1	+1.9
O29M	Mount Kennedy	6.68	49			Pn	04 51 42.4	+1.3
O29M	Mount Kennedy baz=237	6.68	49	P		Pn	04 51 42.4	+1.3
P29M	Windy Craggy	6.72	55			Pn	04 51 41.9	+0.3
P29M	Windy Craggy baz=244	6.72	55	P		Pn	04 51 41.9	+0.3
DHY	Denali Highway	6.86	5			Pn	04 51 45.2	+1.6
DHY	Denali Highway baz=186	6.86	5	P		Pn	04 51 45.2	+1.6

OSUNB ***23*** *05:16:37.5±0.5, 4.°30S×73.°65W, h122km±9km, mb3.3/5, Error ellipse: s-maj=4.0km s-min=3.8km az=0.0*

ISC 23 05:16:35.7±1.1, **4.°23S**±0.°07×**73.°75W**±0.°07, **h100**km, **n23,** σ1§**65**/26, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.63	163	eP			Pn	05 17 30.5	+0.7
CZSB				eS			Sn	05 18 13.0	+1.2
TBTG	Tabatinga, AM	3.83	89	eP			Pn	05 17 34.3	+1.8
TBTG				eS			Sn	05 18 17.7	+1.0
PTLC	Puerto Leguiza	4.50	347	eP			Pn	05 17 44.8	+3.2
PIAT	Ana Tenorio	5.54	305	eP			Pn	05 17 54.1	-2.0
COHC	Cochancay	5.77	288	eP			Pn	05 18 01.1	+2.2
FLOC	Florencia	6.08	342	eP			Pn	05 18 04.5	+1.3
MCRA	Macar, Loja	6.19	269	eP			Pn	05 18 04.9	+0.2
OTAV	Otavalo	6.46	313	eP			Pn	05 18 12.4	+3.7
GCUF	Volcan Galeras	6.50	326	eP			Pn	05 18 10.1	+0.8
CMBC	Cumbal	6.56	322	eP			Pn	05 18 09.2	-0.8
CRUC	La Cruz	6.59	331	eP			Pn	05 18 09.7	-0.7
GARC	Garzon, Huila	6.61	345	eP			Pn	05 18 10.0	-0.5
BBAC	Balboa, Cauca	7.13	331	eP			Pn	05 18 15.3	-2.3
POPC	Popayan, Colom	7.34	336	eP			Pn	05 18 26.8	+6.4
ORTC	Ortega, Tolima	8.22	349	eP			Pn	05 18 32.2	-0.2
VILC	Villavicencio,	8.29	0	eP			Pn	05 18 34.0	+0.7
CHIC	Chingaza	8.80	0	eP			Pn	05 18 39.4	-1.1
ETMB	Extrema	9.31	127	eP			Pn	05 18 47.2	+0.1
ETMB				eS			Sn	05 20 29.7	-0.4
SPBC	San Pablo de B	9.82	358	eP			Pn	05 18 54.0	-0.2
SAML	Samuel	11.49	115	eP			Pn	05 19 14.0	-2.7
SAML				eS			Sn	05 21 23.0	-0.2
MACA	Manacapuru-AM	13.08	86	eP			Pn	05 19 38.3	+0.6
BOAV	Boa Vista	14.77	64	eP			Pn	05 19 57.1	-2.5
ITTB	Itaituba	17.96	91	eP			Pn	05 20 39.7	+0.6

IDC ***23*** *05:43:34.9±0.8, 15.°81N×97.°84W, h0km, mb4.3/12, mbtmp4.3/14, ML3.9/2, MS4.1/59, Error ellipse: s-maj=18.7km s-min=15.8km az=28.0*

MEX ***23*** *05:43:35.2±2.0, 15.°60N×98.°03W, h16km±263km, MD5.0*

NEIC ***23*** *05:43:39.1±2.8, 16.°01N±0.°04×97.°87W±0.°04, h13km±4km, mb4.8/99, Md5.0/192(MEX), Error ellipse: s-maj=6.1km s-min=5.5km az=101.0*

CATAC ***23*** *05:43:40.9±0.5, 16.°34N×97.°61W, h0km, MB5.5, ML5.2*

GCMT ***23*** *05:43:41.1±0.2, 15.°90N±0.°01×97.°71W±0.°02, h13km, MW4.9/110, Moment Tensor Solution. s50,c59; s110,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.61±.12; $M_{\theta\theta}$-2.07±.08; $M_{\phi\phi}$-0.54±.07; $M_{r\theta}$1.97±.20; $M_{\theta\phi}$0.77±.05; $M_{\phi r}$-0.65±.22; Best double couple: M_o3.24700×10^{16} NP1:ϕ_s110.00000°, δ65.00000°, λ88.00000°. NP2:ϕ_s295.00000°, δ25.00000°, λ94.00000°. Principal axes: T 3.3600, Plg70.0000°, Azm15.0000°; N -0.2300, Plg2.0000°, Azm111.0000°; P -3.1340, Plg20.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 05:43:38.0±0.6, **15.°91N**±0.°03×**97.°88W**±0.°02, **h14**km±3km, **n689,** σ1§**82**/719, **mb4.7**/42, **MS4.1**/57, **14C-2D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.54	334				Pg	05 43 48.3	-0.3
PNIG	Pinotepa	0.54	334	⇑*i*P			Pg	05 43 48.3	-0.3
PNIG				*i* S			Sb	05 43 56.8	+0.1
PEIG	Puerto Escondi	0.71	83				Sg	05 44 00.8	-0.6
PEIG	Puerto Escondi	0.71	83	⇑*i*P			Pg	05 43 50.3	-1.7
PEIG				*i* S			Sg	05 44 00.8	-0.6
YOIG	Yosondua	1.00	19				Pg	05 43 56.3	-1.0
YOIG							Sn	05 44 12.8	+1.0
YOIG	Yosondua	1.00	19	⇑eP			Pg	05 43 56.3	-1.0
YOIG				eS			Sn	05 44 12.8	+1.0
TXIG	Tlaxiaco	1.34	5				Pn	05 44 01.3	-1.2
TXIG	Tlaxiaco	1.34	5	⇑eP			Pn	05 44 01.3	-1.2
TXIG				eS			Sg	05 44 23.7	+2.3
PANG	Puerto Angel	1.38	100	eP			Pn	05 43 58.5	-4.2
PANG				eS			Sn	05 44 14.2	-6.5
CRIG	Cruz Grande	1.45	305	⇑eP			Pn	05 44 00.3	-3.5
CRIG				eS			Sn	05 44 18.3	-4.3
MGIG	Malinaltepec	1.50	331				Pn	05 44 02.8	-1.8
MGIG	Malinaltepec	1.50	331	⇑eP			Pn	05 44 02.8	-1.8
MGIG				eS			Sg	05 44 27.6	+1.2
VHO	Vista Hermosa	1.60	43	eP			Pn	05 44 04.8	-1.2
VHO				eS			Sn	05 44 25.0	-1.6
OXIG	Oaxaca	1.60	43				Pn	05 44 04.8	-1.2
OXIG							Sn	05 44 25.0	-1.6
OXBJ	Oaxaca	1.60	44				Pn	05 44 04.7	-1.3
OXBJ	Oaxaca	1.60	44	eP			Pn	05 44 04.7	-1.3
OXBJ				eS			Sg	05 44 31.7	+2.0
HUIG	Huatulco	1.71	94	⇑eP			Pn	05 44 04.0	-3.4
HUIG				eS			Sn	05 44 22.9	-6.2
TLIG	Tlapa	1.77	338	Pn			Pn	05 44 07.6	-0.7
TLIG	Tlapa	1.77	338	⇑eP			Pn	05 44 07.3	-0.9
TLIG				eS			Sn	05 44 29.8	-0.9
TLIG	Tlapa	1.77	338	*i* P			Pn	05 44 07.4	-0.9
TLIG						IAML		05 44 41.1	
	comp=Z,21μm,1.0s								
HLIG	Huajuapan de L	1.91	2				Pn	05 44 10.0	-0.3
HLIG	Huajuapan de L	1.91	2	⇑eP			Pn	05 44 10.0	-0.3
HLIG				eS			Sg	05 44 40.7	+1.0
HMTT	Tlapaneco	1.99	341	eP			Pb	05 44 14.3	+0.3
HMTT				eS			Sb	05 44 37.1	-1.6
FTIG	Fresnillo de T	2.00	353				Pn	05 44 11.2	-0.3
FTIG							Sb	05 44 38.1	-1.0
FTIG	Fresnillo de T	2.00	353	⇑eP			Pn	05 44 11.2	-0.3
FTIG				eS			Sb	05 44 38.1	-1.0
DAIG	Los Arroyos	2.02	303	⇑eP			Pn	05 44 08.8	-2.9
DAIG				eS			Sn	05 44 32.5	-4.2
VNTA	La Mica	2.11	299	eP			Pg	05 44 18.3	-0.2
VNTA				eS			Sg	05 44 45.9	0.0
ACP2	Acapulco	2.15	297	eP			Sn	05 44 34.0	-5.8
ACP2				eS			Sg	05 44 48.9	+1.7
TOIG	Toxpalan	2.31	20				Pn	05 44 13.8	-1.9
TOIG							Sb	05 44 48.2	+0.2
TOIG	Toxpalan	2.31	20	eP			Pn	05 44 13.8	-1.9
TOIG				eS			Sb	05 44 48.2	+0.2
CAIG	El Cayaco	2.55	297	⇑eP			Pn	05 44 16.1	-2.9
CAIG				eS			Sn	05 44 44.3	-5.5
MEIG	Mezcala	2.61	321				Pn	05 44 18.9	-0.8
MEIG							Sn	05 44 49.0	-2.2
MEIG	Mezcala	2.61	321	⇑eP			Pn	05 44 18.9	-0.8
MEIG				eS			Sn	05 44 49.0	-2.2
NEUV	Arroyo Zacate	2.68	48	eP			Pn	05 44 19.4	-1.3
NEUV				eS			Sn	05 44 54.4	+1.4
ATYC	Atoyac	2.77	298	eP			Sn	05 44 49.2	-5.9
ATYC				eS			Sg	05 45 07.6	+0.6
PLIG	Platanillo	2.92	328				Pn	05 44 24.2	+0.2
PLIG							Sn	05 44 59.2	+0.3
PLIG	Platanillo	2.92	328	eP			Pn	05 44 24.2	+0.2
PLIG				eS			Sn	05 44 59.2	+0.3
OZST	Orizaba	3.03	14	eP			Pn	05 44 24.8	-0.8
OZST				eS			Sg	05 45 13.7	-1.8
CMIG	Matias Romero	3.11	67	Pn			Pn	05 44 24.3	-2.3
	comp=Z,44nm,0.3s,baz=246,slow=11,SNR=379								
CMIG						Sn	Sn	05 45 02.5	-1.0
	comp=Z,38nm,0.3s,baz=300,slow=8.4,SNR=5.0								
CMIG						LR	LR	05 45 08.1	
	comp=Z,1μm,21.4s,baz=209,slow=30								
CMIG						Lg	Lg	05 45 15.9	
	comp=Z,64nm,0.3s,baz=10,slow=7.8,SNR=8.5								
	comp=Z,80nm,0.3s								
PHPU	Puebla	3.13	355				Pn	05 44 25.1	-2.0
PHPU	Puebla	3.13	355	eP			Pn	05 44 25.1	-2.0
PHPU				eS			Sg	05 45 14.9	-3.8
YAIG	Yautepec	3.15	339				Pn	05 44 27.8	+0.5
YAIG							Sn	05 45 03.3	-1.4
YAIG	Yautepec	3.15	339	eP			Pn	05 44 27.8	+0.5
YAIG				eS			Sn	05 45 03.3	-1.4
NILT	Santiago Nilte	3.21	78	eP			Pn	05 44 26.5	-1.4
NILT				eS			Sn	05 45 03.7	-2.2
PPM	Popocatepetl	3.22	347	eP			Pn	05 44 28.7	+0.1
PPM				eS			Sb	05 45 10.7	-3.8
PPIG	Popocatepetl	3.22	347				Pn	05 44 28.7	+0.1
AMVM	AMECAMECA	3.32	345				Pn	05 44 29.8	+0.1
AMVM							Sb	05 45 13.8	-3.4
AMVM	AMECAMECA	3.32	345	eP			Pn	05 44 29.8	+0.1
AMVM				eS			Sb	05 45 13.8	-3.4
ARIG	Puente Sto Nin	3.33	315				Pn	05 44 29.3	-0.4
ARIG							Sn	05 45 07.0	-2.1
ARIG	Puente Sto Nin	3.33	315	⇑eP			Pn	05 44 29.3	-0.4
ARIG				eS			Sn	05 45 07.0	-2.1
MPVM	San Francisco	3.45	342	eP			Pn	05 44 26.9	-4.6
MPVM				eS			Sb	05 45 16.9	-3.9
TLVM	San Miguel Top	3.50	340	eP			Pn	05 44 24.5	-7.8
TLVM				eS			Sb	05 45 21.4	-1.1
XCVM	Xochimilco	3.53	341	eP			Pn	05 44 23.8	-8.9
XCVM				eS			Sn	05 45 16.0	+1.7
THVM	De Xico	3.54	343	eP			Pn	05 44 32.5	-0.3
THVM				eS			Sn	05 45 12.2	-2.3
JAUV	Jalcomulco	3.59	17	eP			Pn	05 44 32.1	-1.2
JAUV				eS			Sb	05 45 19.1	-5.6
CNCY	Coyoacan	3.60	340	eP			Pn	05 44 25.6	-8.0
CNCY				eS			Sn	05 45 15.3	-0.9
AOVM	Tlapan	3.61	338	eP			Pn	05 44 27.1	-6.8
AOVM				eS			Sn	05 45 13.7	-2.9
UNM	Universidad Na	3.62	340				Pn	05 44 32.5	-1.4
UNM	Universidad Na	3.62	340	eP			Pb	05 44 39.4	-2.6
UNM				eS			Sn	05 45 16.8	+0.2
PET2	Petatlan	3.62	297	eS			Sg	05 45 31.2	-3.1
CUP5	Mexico City	3.62	340	eP			Pn	05 44 30.7	-3.2
CUP5				eS			Sn	05 45 18.9	+2.3
COVM	Coyoacan	3.63	341	eP			Pn	05 44 36.3	+2.2
COVM				eS			Sn	05 45 14.9	-1.9
COVM				eS			Sb	05 45 24.1	-2.1
TXVM	Universitario	3.64	344	eP			Pn	05 44 34.4	+0.2
TXVM				eS			Sn	05 45 16.9	-0.2
INVM	La Marquesa	3.66	337	eP			Pn	05 44 26.4	-8.0
INVM				eS			Sn	05 45 15.9	-1.7
BJVM	Benito Juarez	3.66	341	eP			Pn	05 44 27.7	-6.7
BJVM				eS			Sb	05 45 21.4	-5.6
VRVM	Mexico City	3.68	342	eP			Pb	05 44 41.0	-2.0
VRVM				eS			Sn	05 45 15.2	-2.8
CJVM	Cuajimalpa	3.69	339	eP			Pn	05 44 31.5	-3.3
CJVM				eS			Sn	05 45 18.8	+0.7
TEJU	Tejupilco	3.69	324	eS			Sb	05 45 29.9	+2.2
PBVM	Pinon	3.70	342				Sn	05 45 17.8	-0.2
PBVM	Pinon	3.70	342	eP			Pn	05 44 27.2	-7.5
PBVM				eS			Sn	05 45 17.8	-0.2
MHVM	Bosque de Chap	3.70	340	eP			Pn	05 44 25.8	-9.2
MHVM				eS			Sn	05 45 19.6	+1.0
PMUV	Sontecomapan	3.72	45	eP			Pn	05 44 31.7	-3.4
PMUV				eS			Sb	05 45 26.8	-1.7
XALA	Xalapa	3.72	14	eP			Pb	05 44 43.7	+0.1
XALA				eS			Sn	05 45 31.2	+2.5
CTVM	Cuauhtemoc	3.72	341	eS			Sn	05 45 16.8	-2.2
TOVM	TOLUCA	3.77	333	eP			Pn	05 44 27.8	-8.2
TOVM				eS			Sn	05 45 16.5	-3.8
CARR	Arriaga	3.83	84	eP			Pn	05 44 33.7	-2.8
CARR				eS			Sn	05 45 14.6	-6.8
PTVM	Pico Tres Padr	3.85	342	eP			Pn	05 44 33.0	-4.0
PTVM				eS			Sn	05 45 16.9	-5.2
AZVM	Cuida Lopez Ma	3.89	340				Pn	05 44 38.5	+0.8
AZVM							Sn	05 45 22.8	-0.5
AZVM	Cuida Lopez Ma	3.89	340	eP			Pn	05 44 38.5	+0.8
AZVM				eS			Sn	05 45 22.8	-0.5
TUIG	Tuzandepetl	3.93	57	eP			Pn	05 44 36.0	-1.8
TUIG				eS			Sb	05 45 32.9	-1.5
VTVM	Tizayuca	3.93	348				Pn	05 44 38.2	0.0
VTVM	Tizayuca	3.93	348	eP			Pn	05 44 38.2	0.0
VTVM				eS			Sn	05 45 26.1	+1.7
LVIG	Laguna Verde	4.04	20	eP			Pn	05 44 37.1	-2.3
LVIG				eS			Sb	05 45 32.8	-4.9
ZUVM	ZUMPANGO	4.06	344				Sn	05 45 26.9	-0.5
ZUVM	ZUMPANGO	4.06	344	eP			Pn	05 44 42.2	+2.3
ZUVM				eS			Sn	05 45 26.9	-0.5
ATVM	ATLACOMULCO	4.26	334	eP			Pn	05 44 35.9	-6.8
ATVM				eS			Sn	05 45 35.2	+2.8
ACIG	Acambay	4.47	335				Pn	05 44 45.2	-0.3
ACIG							Sn	05 45 37.8	+0.4
ACIG	Acambay	4.47	335	eP			Pn	05 44 45.2	-0.3
ACIG				eS			Sn	05 45 37.8	+0.4
PCIG		4.50	92	eP			Pn	05 44 42.0	-3.7
PCIG				eS			Sn	05 45 29.6	-8.2
DEIG	Demacu	4.50	346	eP			Pn	05 44 43.0	-3.0
DEIG				eS			Sb	05 45 44.6	-6.6
TGIG		4.65	79				Sn	05 45 41.9	+0.2
TGIG		4.65	79	eP			Pn	05 44 46.2	-1.7
TGIG				eS			Sn	05 45 41.9	+0.2
MOIG	Morelia	4.90	320	Pn			Pn	05 45 03.3	+0.9
MOIG	Morelia	4.90	320	eP			Pn	05 44 53.8	+2.4
MOIG				eS			Sn	05 45 52.1	+4.2
JRQG	Juriquilla Cam	5.36	333	Pn			Pn	05 44 57.0	-0.7
JRQG	Juriquilla Cam	5.36	333	eP			Pn	05 44 57.6	-0.1
JRQG				eS			Sn	05 45 59.4	+0.1
PATR	El Naranjo	5.50	97	eP			Pn	05 44 57.7	-2.0
PATR				eS			Sn	05 45 53.2	-10
CCIG	Comitan	5.54	85	Pn			Pn	05 44 59.7	-0.5
CCIG	Comitan	5.54	85	eP			Pn	05 44 59.5	-0.7
CCIG				eS			Sn	05 46 01.3	-2.4
CCIG	Comitan	5.54	85	*i* P			Pn	05 45 00.3	+0.2
CCIG						IVmB_BB		05 45 31.7	
	comp=Z,2μm,1.0s								
CCIG				*i* S			Sn	05 46 04.5	+0.8
CCIG						IAML		05 47 08.8	
	comp=Z,1μm,1.0s								
PAVE	Pavencul	5.55	97	eP			Pn	05 44 58.5	-1.8
PAVE				eS			Sn	05 45 51.9	-12
CTUV	Llano Grande	5.55	355	eP			Pn	05 44 54.1	-6.1
CTUV				eS			Sn	05 46 05.0	+1.2
CHUJ	Union Juarez	5.63	97	eP			Pn	05 44 59.5	-2.0
CHUJ				eS			Sn	05 45 56.1	-10
MMIG	Aquila	5.74	295				Pn	05 45 02.2	-0.5
MMIG							Sn	05 46 06.9	-1.4
MMIG	Aquila	5.74	295	eP			Pn	05 45 02.2	-0.5
MMIG				eS			Sn	05 46 06.9	-1.4
IGIG	Irapuato, Guan	5.82	326	eS			Sn	05 46 16.0	+5.2
SMSP	San Marcos	5.96	98	IVmB_BB				05 45 04.7	
	comp=Z,26μm,1.0s								
SMSP				*i* P			Pn	05 45 09.2	+3.2
SMSP				IAML				05 46 13.3	
	comp=Z,740nm,1.0s								
RTAL	Retalhuleu	6.13	102				Pn	05 45 08.7	+0.5
RTAL	Retalhuleu	6.13	102	*i* P			Pn	05 45 09.1	+0.9
RTAL				IAML				05 47 23.2	
	comp=Z,310nm,1.0s								
HUEH	Huehuetenango	6.18	95				Pn	05 45 08.9	-0.1
HUEH	Huehuetenango	6.18	95	*i* P			Pn	05 45 09.6	+0.6
HUEH				IVmB_BB				05 45 46.8	
	comp=Z,5μm,1.0s								
HUEH				*i* S			Sn	05 46 19.6	+0.1
HUEH				IAML				05 47 26.0	
	comp=Z,1μm,1.0s								
RPIG	Rio Verde	6.27	342	eP			Pn	05 45 16.9	+6.8
RPIG				eS			Sn	05 46 22.6	+1.0
COIG	Colima	6.42	301	eP			Pn	05 45 12.5	+0.3
COIG				eS			Sn	05 46 23.6	-1.8
JUBC	Volcan de Coli	6.50	304	eP			Pn	05 45 11.2	-2.3
JUBC				eS			Sn	05 46 23.6	-4.0
EZ5V		6.50	304				Pn	05 45 15.9	+2.3
EZ5V		6.50	304	eP			Pn	05 45 15.9	+2.3
EZ5V				eS			Sn	05 46 27.9	+0.2
MNGA	Volcan de Coli	6.51	304	eP			Pn	05 45 16.3	+2.7
MNGA				eS			Sn	05 46 14.9	-13
INCO	Volcan de Coli	6.53	304	eP			Pn	05 45 16.7	+2.7
INCO				eS			Sn	05 46 25.3	-3.2
SOMAC	Volcano de Col	6.55	304	eP			Pn	05 45 16.5	+2.2
SOMAC				eS			Sn	05 46 32.9	+3.9
CDAR	Ciudad de Arme	6.58	298	eP			Pn	05 45 15.4	+1.1
CDAR				eS			Sn	05 46 27.4	-1.7
CEGR	Campo Tres	6.67	302	eP			Pn	05 45 16.7	+1.0
CEGR				eS			Sn	05 46 28.2	-3.3
SCIG	Sabancuy	7.08	64	eP			Pn	05 45 16.5	-4.6
SCIG				eS			Sn	05 46 36.1	-5.4
GTIG	Gomez Farias	7.22	351				Pn	05 45 24.7	+1.5
GTIG							Sn	05 46 42.9	-2.2
GTIG	Gomez Farias	7.22	351	eP			Pn	05 45 24.7	+1.5
GTIG				eS			Sn	05 46 42.9	-2.2
CIHU	Emiliano Zapat	7.34	298	eP			Pn	05 45 25.3	+0.6
CIHU				eS			Sn	05 46 38.1	-10
AAIG	Aguscalientes	7.38	325				Pn	05 45 26.1	+0.6
AAIG	Aguscalientes	7.38	325	eP			Pn	05 45 26.1	+0.6
AAIG				eS			Sn	05 46 42.1	-7.0
GUNB	GUNB	7.39	99	*i* P			Pn	05 45 32.4	+6.6
GUNB				IAML				05 47 53.2	
	comp=Z,150nm,1.0s								
CJM	Chamela	7.70	299	eP			Pn	05 45 25.6	-4.2
CJM				eS			Sn	05 46 56.9	+0.1
PETF	Flores	7.76	81	Pn			Pn	05 45 27.7	-2.8
PETF	Flores	7.76	81	*i* P			Pn	05 45 27.8	-2.8
PETF				IVmB_BB				05 45 35.7	
	comp=Z,2μm,1.0s								
PETF				IAML				05 47 56.7	
	comp=Z,220nm,1.0s								
ESTA	Talpa de Allen	7.98	305	eP			Pn	05 45 36.0	+2.3
ESTA				eS			Sn	05 47 07.5	+3.6
ANIG	Ahuacatlan	8.11	310				Sn	05 47 08.3	+1.2
ANIG	Ahuacatlan	8.11	310	eP			Pn	05 45 31.2	-4.2
ANIG				eS			Sn	05 47 08.3	+1.2
ZAIG	Zacatecas	8.13	328	Pn			Pn	05 45 38.7	+2.8
ZAIG	Zacatecas	8.13	328	eP			Pn	05 45 37.9	+2.0
ZAIG				eS			Sn	05 47 11.5	+3.7
ZAIG	Zacatecas	8.13	328	*i* P			Pn	05 45 39.2	+3.3
ZAIG				IAML		

NATX Nacogdoches 16.05 10 P Pn 05 47 21.0 -2.3
baz=191
BRU2 Volcan 16.43 114 Pn 05 47 30.4 +1.9
BRU2 IAmb IAmb 05 47 42.6
comp=Z,57nm,1.1s
ODSA Odessa 16.69 346 Pn 05 47 29.9 -1.7
ABTX Abilene, Hawle 16.72 355 P Pn 05 47 31.5 -0.3
baz=174,SNR=45
FW07 Weatherford 16.72 0 Pn 05 47 30.4 -1.5
FW07 IAmb IAmb 05 47 35.8
comp=Z,96nm,1.1s
TREL Terrell 16.83 5 Pn 05 47 31.2 -1.9
TREL IAmb IAmb 05 47 36.9
comp=Z,63nm,0.9s
CGIG 17.11 329 eP Pn 05 47 33.0 -3.9
SN05 Snyder 5 17.11 351 Pn 05 47 36.2 -0.7
SN05 IAmb IAmb 05 47 41.6
comp=Z,88nm,0.9s
MNTX Cornudas Mount 17.14 338 P Pn 05 47 38.0 +0.9
baz=155,SNR=30
Z35A Perchaven, San 17.36 2 Pn 05 47 39.3 -0.5
Z35A IAmb IAmb 05 47 43.0
comp=Z,65nm,0.8s
VBMS Vicksburg 17.57 21 P Pn 05 47 40.3 -2.1
baz=204,SNR=6.3
WTFS Witchita Falls 17.79 358 Pn 05 47 44.1 -1.1
MSTX Muleshoe 18.52 347 P P 05 47 53.4 -0.6
MSTX Muleshoe 18.52 347 P P 05 47 53.8 -0.3
baz=165,SNR=19
WMOK Wichita Mounta 18.77 358 P P 05 47 55.5 -1.2
WMOK Wichita Mounta 18.77 358 P P 05 47 56.2 -0.5
baz=177,SNR=37
121A Cookes Peak, D 18.83 333 P Pn 05 47 59.8 +1.7
baz=149,SNR=18
MIAR Mount Ida 18.96 11 P P 05 47 57.4 -1.4
baz=193,SNR=26
AMTX Amarillo 19.20 350 P Pn 05 48 02.3 -0.2
baz=169
FNO Franklin 19.27 1 P 05 48 01.1 -1.1
FNO IAmb IAmb 05 48 10.8
comp=Z,86nm,1.3s
UALR University of 19.44 14 P P 05 48 02.1 -1.9
DWPF Disney Wildern 19.47 49 P P 05 48 02.8 -1.6
baz=235
LRAL Lakeview Retre 19.70 28 P P 05 48 06.4 -0.5
baz=213,SNR=12
Y22D IRIS PASSCAL I 19.84 337 P Pn 05 48 09.9 -0.3
Y22D IAmb IAmb 05 48 21.8
comp=Z,54nm,0.9s
Y22D IRIS PASSCAL I 19.84 337 P Pn 05 48 10.1 -0.1
baz=154
Y22F Passcal Instru 19.84 337 P Pn 05 48 09.9 -0.3
baz=154
DEOK Depew 19.89 3 P 05 48 07.8 -1.2
DEOK IAmb IAmb 05 48 10.8
comp=Z,44nm,0.9s
TUL3 Leonard 20.01 5 P P 05 48 09.3 -0.9
baz=186,SNR=9.7
OXF Oxford 20.03 21 P P 05 48 09.5 -1.0
baz=204,SNR=8.0
TUC Tucson 20.10 327 P Pn 05 48 13.2 0.0
TUC Tucson 20.10 327 P Pn 05 48 13.8 +0.5
baz=141
TIGA Tifton 20.22 38 P P 05 48 11.1 -1.5
baz=223,SNR=11
ANMO Albuquerque 20.46 339 P P 05 48 16.8 +1.4
ANMO IAmb IAmb 05 48 18.8
comp=Z,45nm,1.0s
ANMO Albuquerque 20.46 339 P Pn 05 48 17.5 0.0
baz=156
ANMO Albuquerque 20.46 339 P Pn 05 48 17.1 -0.4
comp=Z,36nm,0.9s,baz=243,slow=11,SNR=105
ANMO LR LR 05 56 35.2
comp=Z,2µm,18.2s,baz=248,slow=38
comp=Z,36nm,0.9s
OK051 E0350 and S346 20.54 2 P P 05 48 15.1 -0.9
OK051 IAmb IAmb 05 48 21.1
comp=Z,40nm,0.9s
FCAR Ozark Folk Cen 20.55 13 P P 05 48 14.6 -1.6
214A Organ Pipe Nat 20.97 322 P P 05 48 21.0 +0.3
214A Organ Pipe Nat 20.97 322 P Pn 05 48 22.7 -0.6
baz=136,SNR=8.3
KAN13 South Haven SW 21.02 1 P 05 48 20.6 -0.6
KAN13 IAmb IAmb 05 48 24.4
comp=Z,42nm,0.8s
PIX Pinacate 21.08 320 P P 05 48 23.8 +1.9
KAN05 Bluff City Nor 21.12 0 P P 05 48 21.6 -0.7
KAN10 Anthony SW Sta 21.13 360 P P 05 48 20.8 -1.6
KAN10 IAmb IAmb 05 48 27.1
comp=Z,23nm,0.8s
KAN01 Argonia South 21.16 0 P 05 48 20.6 -2.1
KAN01 IAmb IAmb 05 48 27.5
comp=Z,41nm,0.9s
SFX San Felipe 21.61 317 P P 05 48 29.6 +2.0
GOGA Godfrey 21.76 34 P P 05 48 26.7 -2.5
baz=220,SNR=22
Y52A Lilburn 21.79 32 P P 05 48 27.2 -2.3
Y52A IAmb IAmb 05 48 29.8
comp=Z,39nm,0.9s
W18A Petrified Fore 21.88 333 P P 05 48 33.0 +2.3
baz=148,SNR=15
T25A Trinidad 21.93 346 P P 05 48 32.5 +1.3
T25A Trinidad 21.93 346 P P 05 48 33.2 +2.0
baz=163,SNR=71
SWET Sewanee 22.01 27 P P 05 48 29.7 -2.2
WVT Waverly 22.04 22 P P 05 48 30.3 -1.9
WVT IAmb IAmb 05 48 36.2
comp=Z,36nm,1.0s
WVT Waverly 22.04 22 P P 05 48 30.8 -1.4
baz=206
S39A Bolivar 22.07 10 P P 05 48 31.1 -1.4
113A Mohawk Valley, 22.11 322 P P 05 48 35.1 +2.1
R32A Long Quarter, 22.44 358 P P 05 48 35.6 -0.9
R32A IAmb IAmb 05 48 41.0
comp=Z,45nm,1.1s
CGM3 Cape Girardeau 22.52 17 P P 05 48 34.8 -2.5
Y14A Wickenburg 22.54 326 P P 05 48 39.4 +1.8
Y14A IAmb IAmb 05 48 42.0
comp=Z,30nm,1.1s
SDCO Great Sand Dun 22.77 344 P P 05 48 41.1 +0.8
SDCO IAmb IAmb 05 48 42.9
comp=Z,30nm,1.1s
SDCO Great Sand Dun 22.77 344 P P 05 48 41.3 +1.0
baz=161,SNR=47
CCM Cathedral Cave 22.83 14 P P 05 48 38.9 -1.6
CCM IAmb IAmb 05 48 46.7
comp=Z,23nm,0.8s
CCM Cathedral Cave 22.83 14 P P 05 48 39.7 -0.8
baz=197
R40A Maddies Statio 22.84 11 P P 05 48 38.7 -1.9
CBKS Cedar Bluff 22.88 356 P P 05 48 40.7 -0.5
CBKS IAmb IAmb 05 48 57.0
comp=Z,28nm,1.1s
CBKS Cedar Bluff 22.88 356 P P 05 48 41.1 0.0
baz=175,SNR=6.9
GLA Glamis 22.95 321 P P 05 48 43.6 +1.7
baz=134
WUAZ Wupatki 22.95 331 P P 05 48 43.9 +1.8
WUAZ Wupatki 22.95 331 P P 05 48 44.7 +2.6
baz=145,SNR=11
DBBC Dabeiba 22.98 110 eP P 05 48 50.8 +8.3
S44A Carbondale 23.00 18 P P 05 48 40.5 -1.9
S44A IAmb IAmb 05 48 48.1
comp=Z,30nm,0.9s
SIUC Southern Illin 23.03 18 P P 05 48 41.1 -1.6
SIUC IAmb IAmb 05 48 48.9
comp=Z,38nm,1.1s
HODGE Hodges 23.04 35 P P 05 48 40.7 -2.1
KSU1 Kansas State U 23.13 3 P P 05 48 42.6 -1.1
KSU1 Kansas State U 23.13 3 P P 05 48 44.2 +0.5
baz=183,SNR=17
MVCO Mesa Verde 23.21 338 P P 05 48 46.2 +1.4
baz=153,SNR=32
BG3 Lake Jocassee 23.26 32 P P 05 48 43.3 -1.8
BG3 IAmb IAmb 05 48 46.8
comp=Z,35nm,1.0s
BLYC Blythe 23.26 323 P P 05 48 46.5 +1.5
UREC San Jos de Ur 23.31 108 eP P 05 48 45.3 -0.5
YUH Yuha Desert 23.35 319 P P 05 48 48.2 +2.2
KSCO Kaye Shedlock' 23.39 351 P P 05 48 47.0 +0.6
baz=168,SNR=13
PDMCI Parker Dam,Lak 23.44 324 P P 05 48 48.4 +1.6
baz=137
NHSC New Hope 23.45 40 P P 05 48 45.0 -2.0
NHSC New Hope 23.45 40 P P 05 48 45.7 -1.2
baz=227

SWSC Sam W. Stewart 23.47 319 P P 05 48 49.0 +1.8
baz=132
IKP In-Ko-Pah, Jac 23.47 319 P P 05 48 49.1 +1.8
baz=131
CBOC Ciudad Bolivar 23.66 113 eP P 05 48 51.0 +1.6
PAULI Pauline 23.72 34 P P 05 48 48.2 -1.4
BC3 Big Chuckawall 23.74 321 P P 05 48 51.9 +1.9
baz=134,SNR=7.9
MONP2 Monument Peak 23.83 319 P P 05 48 52.7 +1.7
baz=131
Q24A Divide 23.84 346 P P 05 48 51.9 +0.8
baz=162,SNR=9.1
IRM Iron Mountain 23.91 323 P P 05 48 53.6 +2.2
baz=135,SNR=13
NEE2 Needles Airpor 24.05 324 P P 05 48 54.2 +1.4
baz=137
TZTN Tazewell 24.18 29 P P 05 48 52.4 -1.6
baz=216,SNR=6.7
Q44A Meyer Farm, Va 24.20 17 P P 05 48 53.4 -0.7
KMSC Kings Mountain 24.22 35 P P 05 48 53.0 -1.3
baz=222,SNR=21
YOTC Yotoco, Valle 24.26 117 eP P 05 48 52.4 -2.7
109C Camp Elliot, M 24.27 318 P P 05 48 56.6 +1.8
baz=130
BELC Belle Mtn. Jos 24.31 321 P P 05 48 57.2 +1.9
baz=133
TPFO Pinon Flats 24.32 320 P P 05 48 57.2 +1.8
baz=132
PFO Pinyon Flats O 24.33 320 P P 05 48 55.7 +0.2
PFO Pinyon Flats O 24.33 320 P P 05 48 57.2 +1.8
baz=132
PFO Pinyon Flats O 24.33 320 LR LR 05 57 43.5
comp=Z,386nm,19.1s,baz=128,slow=35
BIRD Birdtown, Kers 24.35 37 P P 05 48 55.1 -0.3
BIRD IAmb IAmb 05 48 56.5
comp=Z,31nm,1.0s
JAMC Jamundi, Valle 24.39 119 eP P 05 48 56.4 +0.1
WCI Wyandotte Cave 24.47 22 P P 05 48 54.8 -1.8
WCI IAmb IAmb 05 48 59.2
comp=Z,25nm,0.8s
WCI Wyandotte Cave 24.47 22 P P 05 48 56.0 -0.5
baz=208
SMCO Snowmass 24.51 343 P P 05 48 59.1 +1.7
GUY2C Guyana, Caldas 24.52 113 eP P 05 48 58.1 +0.3
GMRC Granite Mounta 24.65 323 P P 05 49 00.4 +2.0
baz=135,SNR=10
OTAV Otavalo 24.70 127 P P 05 49 02.8 +3.4
OTAV Otavalo 24.70 127 eP P 05 49 05.2 +5.8
ISCO Idaho Springs 24.74 346 P P 05 49 01.0 +1.6
baz=162,SNR=52
POPC Popayan, Colom 24.75 120 eP P 05 49 04.7 +5.2
PTBC PUERTO BERRIO, 24.77 109 eP P 05 48 59.2 -0.3
MURC Murrieta 24.78 319 P P 05 49 01.4 +2.0
baz=131
NORC Norcasia 24.81 112 eP P 05 49 01.3 +1.4
TULM Tulcn-Chalpat 24.92 125 P P 05 49 05.1 +3.7
GCUF Volcan Galeras 24.96 124 eP P 05 49 03.4 +1.6
BBRC Big Bear Solar 25.05 320 P P 05 49 04.0 +1.9
baz=132
HEC Hector,Ludlow 25.08 322 P P 05 49 04.1 +1.8
baz=134
OGNE Ogallala 25.21 353 P P 05 49 04.4 +1.1
baz=171,SNR=9.8
TUQ Turquoise Moun 25.27 324 P P 05 49 05.8 +1.8
baz=136
SCI2 San Clemente I 25.27 316 P P 05 49 06.7 +2.8
baz=127
BGNE Belgrade 25.41 360 P P 05 49 05.7 +0.6
baz=179,SNR=6.8
CIS Catalina Islan 25.44 317 P P 05 49 07.0 +1.5
baz=135
SPBC San Pablo de B 25.48 111 eP P 05 49 14.4 +8.4
BFSC Mount Baldy Ra 25.49 319 P P 05 49 07.8 +1.8
baz=131
CHSH Refugio Sur-Vo 25.53 131 P P 05 49 08.4 +1.3
CHSH IAmb IAmb 05 49 17.0
comp=Z,16nm,1.0s
CCUT Cedar City 25.54 331 P P 05 49 07.5 +1.0
ROSC El Rosal 25.62 113 P P 05 49 09.7 +2.1
ROSC El Rosal 25.62 113 P P 05 49 07.0 -0.7
comp=Z,2.0nm,0.4s,baz=252,slow=20,SNR=1.2
comp=Z,2.0nm,0.4s
PIAT Ana Tenorio 25.65 129 eP P 05 49 10.6 +2.7
PRAC Prado 25.66 116 eP P 05 48 56.2 -11
HDIL Hopedale 25.67 15 P P 05 49 06.4 -0.9
baz=199,SNR=7.2
GSC Goldstone, Bar 25.68 322 P P 05 49 09.2 +1.5
baz=134
O20A White River Ci 25.77 342 P P 05 49 09.9 +1.3
baz=156,SNR=13
SHOC Shoshone, Teco 25.80 324 P P 05 49 10.5 +1.8
baz=136
N23A Red Feather La 25.86 346 P P 05 49 10.7 +1.2
baz=162,SNR=12
BARC Barichara 25.91 108 eP P 05 49 10.8 +0.8
DECC Green Verdugo 25.93 319 P P 05 49 12.1 +2.2
baz=130
P17A Butcher Ranch, 26.03 337 P P 05 49 11.6 +0.6
PAMC Pamplona, Colo 26.07 106 eP P 05 49 12.8 +1.0
SNCC San Nicolas Is 26.09 315 P P 05 49 14.0 +2.7
baz=126
EDW2 Edwards Air Fo 26.12 320 P P 05 49 13.6 +2.0
baz=131
SFIN Lafayette 26.13 19 P P 05 49 11.1 -0.4
baz=204
P49A Miami Univ. Ec 26.20 24 P P 05 49 11.4 -0.9
baz=210,SNR=14
SCIA State Center 26.22 8 P P 05 49 12.4 0.0
baz=190,SNR=14
GWY Greenwater Val 26.23 324 P P 05 49 14.2 +1.5
CHIC Chingaza 26.24 113 eP P 05 49 19.4 +6.2
BLA Blacksburg 26.26 33 P P 05 49 12.3 -0.5
baz=221,SNR=8.8
RUSC La Rusia 26.28 110 eP P 05 49 13.7 0.0
CNNC Cliffs of the 26.28 39 P P 05 49 12.1 -0.9
baz=228
LRMC Laurel Mtn Rad 26.33 321 P P 05 49 15.8 +2.2
baz=133
FURC Furnace Creek, 26.54 324 P P 05 49 17.7 +2.5
baz=136
MPMC Manual Prospec 26.61 323 P P 05 49 18.0 +1.8
baz=134
O48B Fealand 26.67 22 P P 05 49 15.5 -1.0
baz=208,SNR=7.1
ARVC Arvin 26.80 319 P P 05 49 19.6 +1.9
baz=130
SBC Santa Barbara 26.93 317 P P 05 49 20.8 +1.9
baz=128
GRAC Grapevine Rang 27.20 324 P P 05 49 23.8 +2.5
baz=135
CWC Cottonwood Cre 27.22 323 P P 05 49 24.3 +2.6
baz=133
TAMC Tame, Arauca 27.24 107 eP P 05 49 22.8 +0.8
R11B Troy Canyon, C 27.25 329 P P 05 49 24.1 +2.2
baz=140,SNR=10
PKM Mcpherson Peak 27.27 318 P P 05 49 24.9 +2.8
baz=128
P52A Corning 27.35 27 P P 05 49 21.4 -1.2
baz=215
VES Vestal, Richgr 27.42 320 P P 05 49 25.8 +2.5
baz=131
DUG Dugway, Tooele 27.47 335 P P 05 49 25.9 +2.1
baz=148,SNR=11
ACSO Alum Creek Sta 27.49 25 P P 05 49 23.0 -0.8
baz=212
SDV Santo Domingo 27.49 101 P P 05 49 24.8 +0.4
SDV IAmb IAmb 05 49 36.5
comp=Z,15nm,0.9s
SDV Santo Domingo 27.49 101 LR LR 06 00 23.4
comp=Z,247nm,20.8s,baz=334,slow=37
L44A Lake County Fo 27.55 16 P P 05 49 24.1 -0.2
baz=201
SMMC Simmler 27.65 318 P P 05 49 26.5 +1.1
baz=129
K22A Casper 27.66 346 P P 05 49 27.2 +1.6
baz=162,SNR=6.3
JFWS Jewell Farm 27.70 12 P P 05 49 25.0 -0.7
baz=196
TIN Tinemaha, Big 27.73 323 P P 05 49 28.1 +2.0
baz=134
BGU Big Grassy Mou 28.18 335 P P 05 49 31.3 +1.2
BGU IAmb IAmb 05 49 33.7
comp=Z,22nm,1.4s
O53A New Philadelph 28.26 28 P P 05 49 30.4 -0.4
baz=216
MCWV Mont Chateau 28.43 30 P P 05 49 31.9 -0.3
baz=219

SUSD Miller 28.46 358 P P 05 49 33.0 +0.6
SUSD IAmb IAmb 05 49 36.4
comp=Z,12nm,0.8s
SUSD Miller 28.46 358 P P 05 49 31.8 -0.6
baz=178
MLAC Mammoth, Mammo 28.48 323 P P 05 49 33.5 +0.6
baz=134
BW06 Boulder Array 28.58 342 P P 05 49 34.9 +1.1
baz=156,SNR=8.1
PD31 Pinedale Array 28.58 342 P P 05 49 34.8 +1.0
PD31 IAmb IAmb 05 49 54.3
comp=Z,15nm,1.4s
PDAR Pinedale Array 28.58 342 P P 05 49 34.5 +0.8
comp=Z,1.7nm,0.8s,baz=143,slow=9.2,SNR=14
PDAR LR LR 06 01 32.2
comp=Z,650nm,21.3s,baz=164,slow=38
comp=Z,1.7nm,0.8s
RSSD Black Hills 28.60 351 P P 05 49 34.8 +0.8
baz=168
MDPB Devils Postpil 28.62 323 P P 05 49 36.5 +2.3
CBN Corbin Frederi 28.63 35 P P 05 49 33.5 -0.5
baz=225
NVAR Mina Array Bea 28.74 325 P P 05 49 36.7 +1.5
NVAR Mina Array Bea 28.74 325 P P 05 49 35.7 +0.4
comp=Z,5.4nm,0.9s,baz=151,slow=9.7,SNR=28
NVAR PcP PcP 05 52 44.3 -1.1
comp=Z,0.3nm,0.5s,baz=124,slow=4.5,SNR=1.7
NVAR LR LR 06 01 54.4
comp=Z,561nm,18.3s,baz=120,slow=38
comp=Z,5.4nm,0.9s
ELK Elko 28.97 332 LR LR 06 01 36.1
comp=Z,607nm,18.0s,baz=166,slow=37
AAM Ann Arbor 29.01 22 P P 05 49 36.2 -1.1
baz=209
M53A WI Miller and 29.47 27 P P 05 49 40.4 -1.0
baz=215
SPMN Marine on St. 29.54 7 P P 05 49 41.6 -0.4
baz=190
BAUV El Baul 29.93 100 P P 05 49 48.6 +2.8
ATAH Atahualpa 29.94 138 LR LR 05 59 24.0
comp=Z,237nm,18.5s,baz=310,slow=32
SSPA Standing Stone 30.14 31 P P 05 49 47.2 -0.2
baz=221
ERPA Erie 30.32 27 P P 05 49 47.6 -1.3
baz=216
H17A Grant Village 30.36 342 P P 05 49 50.6 +1.0
baz=155
RLMT Red Lodge 30.66 344 P P 05 49 53.5 +1.2
baz=158,SNR=13
GLMI Grayling 30.93 19 P P 05 49 54.2 -0.1
baz=205
HLID Hailey 30.95 336 P P 05 49 56.1 +1.3
baz=148
LAO LASA Array 31.47 349 P P 05 49 60.0 +0.8
baz=164
BOZ Bozeman (W) 31.77 342 P P 05 50 03.1 +1.2
baz=154,SNR=7.3
MDND Maddock 31.88 358 P P 05 50 03.4 +0.7
baz=177
BINY Binghamton 32.26 31 P P 05 50 05.5 -0.6
baz=222
AGMN Agassiz Nation 32.34 3 P P 05 50 06.8 0.0
baz=184,SNR=20
EYMN Ely 32.38 8 P P 05 50 07.2 +0.2
baz=192
PAL Palisades 32.50 35 P P 05 50 07.4 -0.7
baz=227
SADO Sadowa 32.84 25 LR LR 06 07 26.1
comp=Z,164nm,18.4s,baz=214,slow=44
PCRV Puerto La Cruz 32.86 96 LR LR 06 04 37.2
comp=Z,374nm,18.3s,slow=38
DGMT Dagmar 32.88 352 P P 05 50 11.9 +0.4
DGMT IAmb IAmb 05 50 13.7
comp=Z,16nm,0.9s
DGMT Dagmar 32.88 352 P P 05 50 12.8 +1.2
baz=169,SNR=6.1
LYMT Lyon Mountain 33.21 342 P P 05 50 15.6 +1.0
YBH Yreka Blue Hor 33.46 325 LR LR 06 04 20.8
comp=Z,340nm,19.1s,baz=157,slow=37
EGMT Eagleton 33.49 346 P P 05 50 18.2 +1.3
baz=159,SNR=6.1
L61B Northampton 34.16 34 P P 05 50 21.2 -1.4
baz=227
ULM Lac du Bonnet 34.29 2 P P 05 50 22.8 -0.9
comp=Z,7.2nm,0.9s,baz=188,slow=7.9,SNR=14
ULM LR LR 06 04 41.9
comp=Z,244nm,18.2s,baz=189,slow=37
comp=Z,7.2nm,0.9s
NNA Nana 34.66 142 LR LR 06 01 37.0
comp=Z,325nm,21.3s,baz=334,slow=31
LONY Lake Ozonia 34.74 30 P P 05 50 26.7 -1.0
baz=222
HRV Adam Dziewonsk 34.81 35 P P 05 50 27.8 -0.5
baz=228
LBNH Lisbon 35.79 33 P P 05 50 36.2 -0.4
baz=226
NEW Newport 35.94 338 P P 05 50 39.3 +1.4
baz=147
NEW Newport 35.94 338 LR LR 06 06 45.3
comp=Z,756nm,20.1s,baz=164,slow=39
C09A Chrisman Ranch 35.98 336 P P 05 50 39.2 +0.9
C09A IAmb IAmb 05 50 41.0
comp=Z,12nm,1.1s
LTY Liberty 36.52 334 P P 05 50 44.5 +1.6
LTY IAmb IAmb 05 50 45.1
comp=Z,14nm,1.1s
PKME Peaks-Kenny Pk 37.86 33 P P 05 50 54.2 -0.1
baz=229
FFC Flin Flon 38.87 356 P P 05 51 03.2 +0.5
FFC IAmb IAmb 05 51 04.2
comp=Z,15nm,0.8s
EDM Edmonton 39.17 345 P P 05 51 05.3 +0.1
SAML Samuel 42.31 123 P P 05 51 32.8 +1.1
FCC Fort Churchill 42.88 3 P P 05 51 35.5 -0.1
BBB Bella Bella 43.41 333 LR LR 06 09 56.5
comp=Z,424nm,19.7s,baz=148,slow=36
RPN Rapa Nui 44.20 195 LR LR 06 06 38.7
comp=Z,65nm,19.1s,baz=38,slow=31
SCHQ Schefferville 45.65 25 P P 05 51 57.0 -1.0
comp=Z,11nm,0.9s,baz=233,slow=6.1,SNR=11
comp=Z,11nm,0.9s
MDP Montagnes des 45.66 99 LR LR 06 10 52.8
comp=Z,240nm,21.9s,baz=288,slow=36
VILB Vilhena 47.02 125 P P 05 52 12.8 +3.5
LVC Limon Verde 47.65 143 LR LR 06 08 32.1
comp=Z,160nm,19.9s,baz=339,slow=32
T35M Bob Quinn 47.71 337 P P 05 52 16.0 +1.9
baz=136
YKAB2 New Yellowknif 47.94 350 P P 05 52 15.9 +0.2
YKA Yellowknife Ar 48.00 350 P P 05 52 16.0 -0.2
comp=Z,5.1nm,0.9s,baz=155,slow=7.1,SNR=49
YKA PcP PcP 05 53 43.1 -1.0
comp=Z,0.6nm,0.8s,baz=151,slow=4.0,SNR=4.6
YKA LR LR 06 13 01.6
comp=Z,310nm,18.7s,baz=248,slow=37
comp=Z,5.1nm,0.9s
FLDN Fort Liard 48.01 343 P P 05 52 18.0 +1.7
baz=146
KOTAN Kotaneelee Air 48.08 343 P P 05 52 18.2 +1.3
baz=145
SIV San Ignacio 48.22 129 LR LR 06 10 41.8
comp=Z,160nm,18.4s,baz=322,slow=34
DLBC Dease Lake 48.69 338 P P 05 52 24.2 +2.6
DLBC Dease Lake 48.69 338 P P 05 52 24.3 +2.6
baz=137
DLBC Dease Lake 48.69 338 LR LR 06 12 37.9
comp=Z,919nm,18.8s,baz=130,slow=36
WTLY Watson Lake, Y 49.52 340 P P 05 52 29.8 +1.8
baz=139,SNR=12
R33M Jennings River 49.72 339 P P 05 52 31.3 +1.6
baz=136
TGTN Hyland Airport 50.44 342 P P 05 52 37.3 +2.3
baz=141,SNR=9.1
WRGLY Wrigley 50.51 345 P P 05 52 36.4 +1.0
baz=147
P32M Atlin 50.85 337 P P 05 52 40.2 +2.1
baz=133
P33M Teslin, Yukon 50.96 338 P P 05 52 41.2 +2.3
baz=135
SKAG Skagway 51.37 337 P P 05 52 44.0 +2.1
baz=132
N32M Quiet Lake 51.72 339 P P 05 52 46.5 +1.9
baz=135
FRB Frobisher Bay 51.90 16 LR LR 06 18 28.4
comp=Z,200nm,18.5s,baz=201,slow=40
WHY Whitehorse 52.01 338 P P 05 52 48.5 +1.7
baz=133
H03N2 Juan Fernandez 52.30 160 T T 06 49 05.3

baz=338,slow=77,SNR=268
H03N1 Juan Fernandez 52.31 160 T T 06 49 11.7
baz=338,slow=77,SNR=284
H03N3 Juan Fernandez 52.32 160 T T 06 49 05.4
baz=338,slow=77,SNR=180
P30M Million Dollar 52.43 337 P P 05 52 51.3 +1.5
baz=130
O30N Mendenhall 52.52 338 P P 05 52 51.6 +1.0
baz=131
FARO Faro, Yukon 52.58 340 P P 05 52 53.1 +2.2
baz=135
M31M Drury Creek, Y 52.90 340 P P 05 52 55.3 +2.0
baz=134
HYT Haines Junctio 53.09 337 P P 05 52 56.5 +1.7
baz=130
PNL Peninsula 53.10 335 P P 05 52 57.3 +2.5
baz=127
O29M Mount Kennedy 53.17 336 P P 05 52 57.3 +1.9
baz=128
YUK6 Outpost Mounta 53.49 337 P P 05 53 00.2 +2.3
baz=129
PINM Pinnacle 53.71 335 P P 05 53 01.4 +2.1
baz=126
YUK4 Talbot Arm 53.85 337 P P 05 53 02.6 +2.1
baz=129
M30M Minto, Yukon 53.98 339 P P 05 53 02.4 +1.2
baz=132
YUK8 Steele Glacier 54.23 337 P P 05 53 05.0 +1.6
baz=128
MAYO Mayo, Yukon 54.37 340 P P 05 53 05.7 +1.7
baz=133
M29M Somme Creek 54.48 338 P P 05 53 06.7 +1.7
baz=130
L29M L29M 54.79 339 P P 05 53 08.4 +1.2
L29M IAmb IAmb 05 53 09.4
comp=Z,8.8nm,0.9s
L29M L29M 54.79 339 P P 05 53 08.8 +1.6
baz=130
YUK3 Moose Creek 54.80 337 P P 05 53 08.9 +1.5
baz=127
K29M Barlow Dome 55.07 340 P P 05 53 10.9 +1.6
baz=132
J30M Hart River 55.18 341 P P 05 53 11.5 +1.5
baz=133
CRQE Cirque 55.24 335 P P 05 53 12.0 +1.5
baz=124
BVCY Beaver Creek 55.33 337 P P 05 53 12.8 +1.7
baz=127
KAIM Kayak Island 55.34 334 P P 05 53 12.9 +1.8
baz=122
H31M Peel River 55.45 343 P P 05 53 13.2 +1.4
baz=136
MCARA McCarthy VSAT 55.56 336 P P 05 53 14.3 +1.6
baz=124
I30M Mount Dempster 55.64 341 P P 05 53 14.3 +1.0
baz=134
M27K Edge Creek, AK 55.68 337 P P 05 53 15.1 +1.4
baz=126
DAWY Dawson 55.84 339 P P 05 53 15.3 +0.6
baz=130
C36M Paulatuk 55.88 349 P P 05 53 15.0 +0.2
baz=149
L27K Beaver Creek, 56.08 338 P P 05 53 17.5 +1.1
baz=126
G31M Satah River 56.24 344 P P 05 53 17.8 +0.3
baz=137,SNR=7.3
F31M Tsiigehtchic 56.48 344 P P 05 53 19.9 +0.8
baz=137
EPYK Eagle Plains 56.54 342 P P 05 53 20.5 +0.8
baz=134
L26K Log Cabin Wild 56.62 337 P P 05 53 21.9 +1.6
baz=125
P23K Montague Islan 56.67 333 P P 05 53 21.9 +1.3
baz=119
K27K Chicken 56.75 338 P P 05 53 22.9 +1.8
baz=127
G30M tAoh Zraii Nji 56.82 343 P P 05 53 22.5 +0.8
baz=134
EGAK Eagle 56.89 339 P P 05 53 22.6 +0.6
baz=128
H29M Whitestone 56.92 342 P P 05 53 23.6 +1.2
baz=132
HARP HAARP 56.97 336 P P 05 53 24.5 +1.8
baz=122
INK Inuvik 57.07 345 P P 05 53 23.1 -0.2
INK Inuvik 57.07 345 P P 05 53 24.0 +0.7
baz=138,SNR=13
INK Inuvik 57.07 345 LR LR 06 19 20.4
comp=Z,264nm,19.4s,baz=178,slow=38
F30M Barrier River 57.15 344 P P 05 53 24.6 +0.7
baz=135,SNR=5.9
PAX Paxson 57.40 336 P P 05 53 27.3 +1.4
baz=122
SCRK Sand Creek 57.40 338 P P 05 53 27.4 +1.5
baz=125
I27K Kandik River 57.55 340 P P 05 53 28.5 +1.7
baz=128
J26L Joseph Creek 57.55 338 P P 05 53 28.9 +1.9
baz=125
CPUP Villa Florida 57.59 136 LR LR 06 17 38.7
comp=Z,91nm,19.8s,baz=8.5,slow=36
KNK Knik Glacier 57.81 334 P P 05 53 30.8 +2.1
baz=118
I26K Coal Creek Min 57.88 339 P P 05 53 30.8 +1.7
baz=126
H27K Steamboat Moun 57.91 341 P P 05 53 30.6 +1.2
baz=128
K24K Donnelly Dome 57.97 337 P P 05 53 31.3 +1.5
baz=123
BRSE Bradley Lake S 58.06 332 P P 05 53 31.4 +0.9
baz=115
WAT6 Susitna Watana 58.09 335 P P 05 53 32.1 +1.3
baz=120
KDAK Kodiak Island 58.14 329 LR LR 06 18 56.5
comp=Z,145nm,18.5s,baz=132,slow=36
DHY Denali Highway 58.19 336 P P 05 53 32.8 +1.3
baz=121
RC01 Rabbit Creek A 58.21 333 P P 05 53 33.3 +1.8
baz=117
J25K Salcha River, 58.26 338 P P 05 53 33.2 +1.4
baz=124
E29M Blow River 58.26 344 P P 05 53 32.6 +0.9
baz=133
F28M Old Crow 58.29 342 P P 05 53 32.5 +0.5
F28M IAmb IAmb 05 53 34.0
comp=Z,11nm,0.9s
F28M Old Crow 58.29 342 P P 05 53 32.4 +0.4
baz=131,SNR=11
A36M Sachs Harbour 58.35 350 P P 05 53 32.1 -0.1
A36M Sachs Harbour 58.35 350 P P 05 53 32.2 -0.1
baz=149,SNR=21
WAT1 Susitna Watana 58.54 335 P P 05 53 34.4 +0.6
baz=119
HDA Harding Lake 58.72 337 P P 05 53 36.1 +1.1
baz=122
RES Resolute Bay 58.80 1 LR LR 06 22 54.4
comp=Z,126nm,18.9s,baz=232,slow=40
SUA Susitna One 58.81 333 P P 05 53 37.1 +1.3
baz=116
PRP Porcupine Dome 58.82 339 P P 05 53 36.7 +0.9
baz=124
E28M Babbage River 58.85 343 P P 05 53 36.6 +0.7
baz=132
IL31 58.89 338 P P 05 53 36.2 +0.1
ILAR Eielson Array 58.89 338 P P 05 53 37.1 +0.9
ILAR Eielson Array 58.89 338 P P 05 53 36.7 +0.5
comp=Z,4.2nm,1.1s,baz=138,slow=4.4,SNR=20
ILAR LR LR 06 21 09.0
comp=Z,359nm,18.4s,baz=104,slow=38
comp=Z,4.2nm,1.1s
O20K Slope Mountain 59.06 331 P P 05 53 38.5 +1.0
baz=114
G26K Porcupine Rive 59.07 341 P P 05 53 38.0 +0.7
baz=126
D28M Stokes Point 59.13 344 P P 05 53 38.4 +0.7
baz=133
MCK McKinley 59.13 336 P P 05 53 38.7 +0.9
baz=119
POKR Poker Plat Res 59.27 338 P P 05 53 39.5 +0.7
baz=122
COLA College 59.30 338 P P 05 53 39.9 +1.0
baz=121
SFJD Kangerlussuaq 59.53 20 LR LR 06 21 14.1
comp=Z,180nm,20.7s,baz=209,slow=38
TRF Thorofare Moun 59.53 336 P P 05 53 41.5 +0.7
baz=118
F26K Sheenjek River 59.62 341 P P 05 53 42.3 +1.1
baz=126
G25K Bearman Lake 59.71 340 P P 05 53 42.7 +0.9
baz=124
H24K Noodor Dome 59.81 339 P P 05 53 43.1 +0.5
baz=122
I23K Minto, Yukon-K 59.99 338 P P 05 53 44.4 +0.7
I23K Minto, Yukon-K 59.99 338 P P 05 53 44.6 +0.9
baz=120,SNR=6.4
M20K Styx River 60.02 333 P P 05 53 44.5 +0.4
baz=114
F25K Christian Rive 60.03 341 P P 05 53 45.2 +1.1
baz=125
PPLA Purkeypile 60.05 335 P P 05 53 45.1 +0.8
baz=116
G24K Hadweenzic Riv 60.13 340 P P 05 53 45.4 +0.6
baz=122
O18K Koktuh Hills 60.18 331 P P 05 53 45.3 +0.2
baz=111
N19K Bonanza Creek 60.20 332 P P 05 53 45.2 -0.1
baz=112
CAST Castle Rocks 60.23 335 P P 05 53 46.0 +0.5
baz=116,SNR=6.1
E25K Arctic Village 60.31 341 P P 05 53 46.5 +0.6
baz=125
MLY Manley 60.45 337 P P 05 53 47.4 +0.5
baz=118,SNR=5.2
Q16K King Salmon 60.47 329 P P 05 53 48.0 +0.9
baz=109
CHUM Lake Minchumin 60.53 336 P P 05 53 48.9 +1.5
baz=116
P17K Kvichak River 60.54 330 P P 05 53 48.7 +1.2
baz=109
M19K Big River Lodg 60.57 333 P P 05 53 49.1 +1.2
baz=113
L20K Farewell, AK 60.58 334 P P 05 53 49.1 +1.2
baz=114
R16K Pilot Point 60.59 328 P P 05 53 49.4 +1.5
baz=108
F24K Squaw Lake 60.71 340 P P 05 53 49.8 +1.2
baz=122
N18K Kilae Creek 60.79 331 P P 05 53 50.2 +0.9
baz=111
PPT Papeete 60.84 239 LR LR 06 12 26.4
comp=Z,109nm,21.4s,baz=60,slow=28
L19K White Mountain 60.88 333 P P 05 53 51.2 +1.2
baz=112
CHNA Chernabura Isl 60.92 324 P P 05 53 51.5 +1.3
baz=104
I21K Tanana 60.98 337 P P 05 53 50.9 +0.4
baz=117
G23K Bananza Creek 61.01 339 P P 05 53 51.7 +1.0
baz=120
K20K Telida 61.02 335 P P 05 53 50.8 0.0
baz=114
O17K Koliganek Bris 61.04 330 P P 05 53 51.7 +0.7
baz=105
M18K Stony River 61.05 332 P P 05 53 51.4 +0.4
baz=111
H22K Ishtalitna Cre 61.09 338 P P 05 53 51.8 +0.5
baz=118
C26K Camden Bay 61.17 343 P P 05 53 52.4 +0.7
baz=126
D25K Kavik River 61.24 342 P P 05 53 53.1 +0.9
D25K IAmb IAmb 05 53 59.6
comp=Z,10.0nm,1.1s
D25K Kavik River 61.24 342 P P 05 53 53.1 +0.9
baz=125
COLD Coldfoot 61.32 339 P P 05 53 53.9 +1.1
baz=120
J20K Nowinta River 61.38 335 P P 05 53 53.1 -0.2
J20K IAmb IAmb 05 53 57.5
comp=Z,8.4nm,1.0s
J20K Nowinta River 61.38 335 P P 05 53 53.9 +0.6
baz=114
O16K Kokrok River B 61.47 330 P P 05 53 54.0 +0.1
baz=108
H21K Melozitna Rive 61.50 337 P P 05 53 54.6 +0.5
baz=116
E23K Chandalar 61.55 340 P P 05 53 55.3 +0.9
baz=121
TTA Tatalina 61.66 334 P P 05 53 55.5 +0.2
baz=112
L18K Granite Mounta 61.70 333 P P 05 53 55.8 +0.4
baz=111
I20K Naaghedeneel 61.77 336 P P 05 53 54.7 -1.1
baz=114
PLCA Paso Flores 61.80 157 P P 05 53 55.5 -0.9
comp=Z,2.0nm,0.8s,baz=334,slow=7.9,SNR=5.2
PLCA LR LR 06 14 35.7
comp=Z,190nm,20.4s,baz=0.5,slow=30
comp=Z,2.0nm,0.8s
TOLK Toolik Lake Re 61.84 341 P P 05 53 55.9 -0.5
baz=121,SNR=8.2
D24K Happy Valley 61.88 342 P P 05 53 56.0 -0.5
baz=122
J19K Poorman 61.91 335 P P 05 53 57.1 +0.3
baz=113
N16K Nishlik Lake 62.06 331 P P 05 53 58.3 +0.4
baz=108
G21K Allakaket 62.14 338 P P 05 53 59.2 +0.9
baz=116
C24K Franklin Bluff 62.14 342 P P 05 53 59.3 +1.0
baz=122
J18K Innoko River 62.16 334 P P 05 53 59.0 +0.5
baz=111
O15K Ungalikthiuk R 62.19 329 P P 05 53 59.5 +0.7
baz=106
E22K Anaktuvuk Pass 62.30 340 P P 05 54 00.2 +0.8
baz=118
D23K Nanushuk River 62.35 341 P P 05 54 01.2 +1.5
baz=120
L17K Donlin 62.38 333 P P 05 54 01.1 +1.1
baz=109
F21K Alatna River 62.45 339 P P 05 54 01.3 +0.9
baz=116
K17K Iditarod 62.57 333 P P 05 54 03.0 +1.7
baz=109
L16K Owhat River 62.77 332 P P 05 54 04.0 +1.4
baz=108
C23K Itkillik River 62.77 342 P P 05 54 03.5 +1.0
baz=120
H19K Roundabout Mou 62.83 336 P P 05 54 03.3 +0.5
baz=113
D22K Ayikyak River 62.94 341 P P 05 54 03.9 +0.3
baz=118,SNR=8.3
M15K Kasigluk River 63.03 331 P P 05 54 05.5 +1.2
baz=106
J17K VABM Dome 63.13 334 P P 05 54 04.9 0.0
baz=109
F20K Avaraart Lake 63.16 338 P P 05 54 06.0 +0.9
F20K IAmb IAmb 05 54 06.5
comp=Z,5.6nm,0.9s
F20K Avaraart Lake 63.16 338 P P 05 54 05.8 +0.7
baz=114,SNR=5.1
G19K Purcell Mounta 63.31 337 P P 05 54 06.4 +0.3
baz=112
H18K Honhosa River 63.44 336 P P 05 54 08.0 +1.0
baz=110
L15K Umiaklak Mounta 63.68 332 P P 05 54 10.1 +1.5
baz=106
C21K Knifeblade Rid 63.74 340 P P 05 54 10.0 +1.1
baz=116
J16K Anvik River 63.75 333 P P 05 54 09.7 +0.7
baz=108
G18K Tagagawik 63.81 336 P P 05 54 10.7 +1.2
baz=111
F19K Shaleruckik Mo 63.82 338 P P 05 54 10.1 +0.6
baz=112
E20K Nigu River 63.82 339 P P 05 54 10.2 +0.6
baz=114
E19K Redstone River 63.87 338 P P 05 54 10.3 +0.5
baz=113
K15K Wolf Creek Mou 63.87 332 P P 05 54 11.2 +1.3
baz=106
B21K Ikpikpuk River 63.89 341 P P 05 54 10.2 +0.3
baz=116
H17K Granite Mounta 63.98 335 P P 05 54 12.0 +1.4
baz=109
L14K Kuka Creek 64.14 331 P P 05 54 12.8 +1.1
baz=105
D20K Etivluk River 64.15 340 P P 05 54 12.3 +0.6
baz=114
M13K Dall Lake 64.23 330 P P 05 54 13.9 +1.6
baz=104
F18K Selawik 64.44 337 P P 05 54 14.8 +1.3
baz=110
G17K Kiwalik Mounta 64.46 336 P P 05 54 14.3 +0.6
baz=108
D19K Kuna River 64.57 339 P P 05 54 14.7 +0.3
baz=112
UNV Unalaska Valle 64.71 322 P P 05 54 16.2 +0.8
baz=98
H16K Elim 64.84 335 P P 05 54 17.2 +1.0
baz=106
J14K Nanvaranak Lak 64.89 332 P P 05 54 17.6 +1.1
baz=104
F17K Baldwin Pennin 64.99 337 P P 05 54 17.4 +0.3
baz=108
RCBR Riachuelo 65.03 104 LR LR 06 24 42.9
comp=Z,117nm,19.0s,baz=266,slow=38
E18K Tukpahlearik C 65.07 338 P P 05 54 18.2 +0.6
E18K IAmb IAmb 05 54 19.0
comp=Z,8.7nm,0.9s
E18K Tukpahlearik C 65.07 338 P P 05 54 17.6 0.0
baz=109
G16K Koyuk River 65.10 335 P P 05 54 18.7 +0.9
baz=107
A21K Barrow 65.24 342 P P 05 54 19.7 +1.0
baz=115
C19K Lookout Ridge 65.30 340 P P 05 54 19.8 +0.6
baz=111
E17K Hotham Inlet 65.41 337 P P 05 54 20.4 +0.6
baz=108
G15K Niukluk 65.68 335 P P 05 54 21.7 +0.1
baz=105
C18K Utukok River 65.69 339 P P 05 54 21.7 0.0
C18K IAmb IAmb 05 54 22.2
comp=Z,4.3nm,0.9s
C18K Utukok River 65.69 339 P P 05 54 21.7 0.0
baz=109
NIKH Nikolski High 66.00 321 P P 05 54 25.8 +1.9
baz=95
D17K Noatak River 66.06 338 P P 05 54 25.0 +1.0
baz=107
F15K North Star Dit 66.11 335 P P 05 54 25.8 +1.4
baz=105
ANM Nome 66.12 334 P P 05 54 25.9 +1.4
baz=104
B18K Kokolik River 66.13 340 P P 05 54 25.2 +0.7
baz=109
C17K DeLong Mountai 66.32 339 P P 05 54 26.4 +0.7
baz=107
P08K Saint George I 66.78 325 P P 05 54 29.8 +1.0
baz=96
C16K Lisburne Hills 67.04 338 P P 05 54 31.0 +0.8
baz=105
BORG Borgarnes 70.00 26 LR LR 06 25 36.1
comp=Z,70nm,19.8s,baz=248,slow=36
RAR Rarotonga 71.03 240 LR LR 06 17 56.6
comp=Z,48nm,18.5s,baz=94,slow=29
JMIC Jan Mayen 74.88 20 LR LR 06 31 30.5
comp=Z,101nm,18.1s,baz=284,slow=38
BBTS Babate 77.96 78 LR LR 06 30 04.2
comp=Z,71nm,18.8s,baz=173,slow=36
SPITS Spitsbergen Ar 79.34 11 LR LR 06 33 27.2
comp=Z,286nm,18.5s,baz=285,slow=38
PCAS Casmilo, Conde 79.48 51 eP P 05 55 44.7 +0.4
PCAS epP sP 05 55 50.3 -0.4
EKA Eskdalemuir Ar 79.73 35 P P 05 55 44.4 -0.9
comp=Z,2.8nm,0.9s,baz=270,slow=7.7,SNR=2.4
comp=Z,2.8nm,0.9s
POLO Lamas de Olo 79.73 50 eP P 05 55 45.0 -0.8
PVIS Viseu 79.80 51 eP P 05 55 45.5 -0.6
PVIS epP pP 05 55 51.4 +0.6
PFVI Vila Bisbo 79.84 54 epP pP 05 55 51.8 +0.8
PNCL Nicolau / Gran 79.86 53 epP pP 05 55 52.0 +0.9
PMTG Montargil 79.89 52 eP P 05 55 46.4 -0.2
PMTG epP pP 05 55 52.2 +1.0
MORF Marmelete 79.94 54 epP pP 05 55 52.8 +1.2
MTE Manteigas 80.12 51 eP P 05 55 47.4 -0.5
MTE epP pP 05 55 53.3 +0.7
EVO Evora 80.17 53 eP P 05 55 47.9 -0.2
EVO epP pP 05 55 53.9 +1.1
PCBR Castelo Branco 80.30 51 eP P 05 55 48.8 +0.1
PCBR epP pP 05 55 54.4 +1.0
PCVE Castro Verde 80.35 54 eP P 05 55 48.6 -0.4
PCVE epP sP 05 55 55.2 -0.2
PBEJ Beja 80.39 53 epP pP 05 55 55.2 +1.2
PMRV Marv??o 80.45 52 eP P 05 55 49.3 -0.3
PBAR Barrancos 81.00 53 eP P 05 55 52.2 -0.3
PBAR epP pP 05 55 58.4 +1.2
PAB San Pablo 82.71 51 P P 05 56 01.8 +0.2
PAB IAmb IAmb 05 56 07.8
comp=Z,10nm,1.1s
ESDC Sonseca Array 82.97 51 P P 05 56 03.5 +0.5
ESDC IAmb IAmb 05 56 09.4
comp=Z,4.7nm,1.1s
ESDC Sonseca Array 82.97 51 P P 05 56 02.6 -0.4
comp=Z,2.1nm,0.8s,baz=300,slow=4.9,SNR=13
ESDC LR LR 06 29 00.4
comp=Z,158nm,19.9s,baz=268,slow=33
comp=Z,2.1nm,0.8s
MDT Midelt 84.23 58 LR LR 06 29 42.3
comp=Z,72nm,18.7s,baz=287,slow=33
NOA NORSAR Array B 85.14 27 P P 05 56 12.4 -1.2
comp=Z,1.0nm,0.9s,baz=292,slow=5.0,SNR=3.6
NOA LR LR 06 36 27.0
comp=Z,63nm,18.7s,baz=350,slow=37
comp=Z,1.0nm,0.9s
BMRD Maredsous 85.76 39 dP P 05 56 18.0 +1.3
BGES Gesves 85.93 39 dP P 05 56 18.0 +0.3
ARCES ARCESS Array B 86.06 17 LR LR 06 36 51.7
comp=Z,53nm,18.9s,baz=296,slow=37
HFS Hagfors 86.63 28 LR LR 06 35 47.8
comp=Z,95nm,20.0s,baz=298,slow=36
MA2 Magadan 86.78 332 LR LR 06 34 35.2
comp=Z,91nm,21.9s,baz=90,slow=35
TIXI Tiksi 87.16 347 P P 05 56 22.7 -0.5
TIXI Tiksi 87.16 347 LR LR 06 37 47.3
comp=Z,113nm,21.3s,baz=34,slow=37
RAO Raoul Island 89.25 239 LR LR 06 28 52.9
comp=Z,25nm,19.9s,baz=98,slow=30
DAVOX Davos/Dischmat 90.22 41 LR LR 06 39 10.4
comp=Z,95nm,18.6s,baz=292,slow=37
DBIC Dimbokro 91.09 83 LR LR 06 35 09.2
comp=Z,81nm,19.1s,baz=270,slow=34
FINES FINESS Array B 91.11 23 LR LR 06 38 48.5
comp=Z,103nm,21.6s,baz=308,slow=36
GERES GERESS Array B 91.68 38 LR LR 06 39 15.4
comp=Z,99nm,18.1s,baz=294,slow=36
VRAC Vranov 93.15 37 LR LR 06 41 15.6
comp=Z,90nm,18.0s,baz=314,slow=37
YAK Yakutsk 93.78 340 LR LR 06 39 52.1
comp=Z,94nm,19.5s,baz=89,slow=36
KEST Kesra 94.22 51 LR LR 06 36 49.3
comp=Z,110nm,19.0s,baz=313,slow=34
NRIK Noril'sk 94.89 358 LR LR 06 43 13.5
comp=Z,88nm,18.4s,baz=33,slow=38
TORD Torodi Ar. Bea 95.42 75 LR LR 06 36 51.7
comp=Z,67nm,19.6s,baz=312,slow=34
URZ Urewera 95.86 232 LR LR 06 30 10.4
comp=Z,69nm,20.9s,baz=122,slow=29
ASAJ Asahikawa 98.77 321 LR LR 06 43 43.5
comp=Z,27nm,18.3s,baz=236,slow=36
AKASG Malin Array Be 99.14 31 LR LR 06 44 37.7
comp=Z,59nm,19.0s,baz=322,slow=37
OBN Obninsk 99.45 25 LR LR 06 46 04.4
comp=Z,94nm,19.2s,baz=358,slow=38
HHC Hu-ho-hao-te 117.27 335 eP PKPdf 06 02 22.8 -0.6
HHC LR LR
comp=N,120nm,14.5s
HHC LR LR
comp=E,92nm,14.3s
HHC LR LR
comp=Z,180nm,15.1s
MKAR Makanchi Array 117.59 360 PKP PKPdf 06 02 22.4 -1.3
comp=Z,0.3nm,0.8s,baz=351,slow=3.6,SNR=2.6
WMQ Urumqi 120.34 355 eP PKiKP 06 02 32.9 +3.6
NJ2 Nanjing 120.72 324 eP PKiKP 06 02 32.5 +2.3
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
WRA Warramunga Arr 130.31 257 PKP PKPdf 06 02 47.9 -0.9
comp=Z,3.0nm,1.0s,baz=82,slow=1.8,SNR=9.3
ASAR Alice Springs 130.88 252 PKP PKPdf 06 02 47.9 -1.9
comp=Z,1.2nm,1.0s,baz=93,slow=1.9,SNR=2.8
PZH PanZhiHua 133.73 335 PKP PKPdf 06 02 56.8 +1.5
CMAR Chiang Mai Arr 142.04 333 PKP PKPdf 06 03 09.4 -1.1
comp=Z,0.9nm,0.3s,baz=1.7,slow=3.0,SNR=1.7

SJA 23 05:46:46.9±0.7, 28°30S×67°39W, h151km±3km, ML3.5, MW3.4, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TINO	Tinogasta	0.28	326	eP		Pn	05 47 08.0	+0.3

VCA	**Vinchina**	**0.84**	**238**	*eP*	Pn	05 47 11.3	+0.6	
VCA				*eS*	Sn	05 47 28.8	-0.1	
VCA				IAML		05 47 33.4		
	comp=Z,888nm,0.4s							
ACLC	**CERRO LA CRUZ**	**1.19**	**161**	*eP*	Pn	05 47 14.6	+0.9	
ACLC				*eS*	Sn	05 47 34.5	+0.2	
ACLC				IAML		05 47 34.9		
	comp=Z,345nm,0.2s							
AGUA	**GUANDACOL**	**1.53**	**219**	*eP*	Pn	05 47 17.6	+0.6	
AGUA				*eS*	Sn	05 47 40.3	+0.2	
AGUA				IAML		05 47 42.2		
	comp=Z,878nm,0.4s							
AC02	**Maricunga**	**2.12**	**313**	*eP*	Pn	05 47 24.9	+0.9	
GUSE	**Guasayan**	**2.28**	**80**	*eP*	Pn	05 47 26.4	+0.9	
AHML	**Horco Molle**	**2.37**	**51**	*eP*	Pn	05 47 27.3	+0.8	
ACDV	**Cuesta del Vie**	**2.40**	**219**	*eP*	Pn	05 47 28.2	+1.1	
ACDV				*eS*	Sn	05 47 59.0	+1.0	
ACDV				IAML		05 47 59.2		
	comp=Z,124nm,0.8s							
FSA	**Cafayete**	**2.51**	**30**	*eP*	Pn	05 47 30.3	+1.8	
AC05	**El Transito**	**2.59**	**257**	*eP*	Pn	05 47 30.2	+0.8	
AC05				*eS*	Sn	05 48 02.7	+0.6	
AC05				IAML		05 48 04.7		
	comp=Z,82nm,0.1s							
AROD	**Rodeo**	**2.61**	**224**	*eP*	Pn	05 47 30.9	+1.2	
AROD				*eS*	Sn	05 48 04.1	+1.4	
GO03	**Copiap**	**2.61**	**285**	*eP*	Pn	05 47 29.6	+0.1	
GO03				*eS*	Sn	05 48 01.1	-1.3	
ACCO	**Cerro Coronel**	**2.71**	**212**	*eP*	Pn	05 47 32.0	+1.0	
ACCO				*eS*	Sn	05 48 06.0	+0.9	
ACCO				IAML		05 48 06.5		
	comp=Z,156nm,0.5s							
CO01	**Juntas del Tor**	**2.90**	**234**	*eP*	Pn	05 47 34.6	+1.3	
LCO	**Las Campanas**	**3.00**	**255**	*eP*	Pn	05 47 34.8	+0.3	
LCO				*eS*	Sn	05 48 11.0	-0.3	
DOCA	**Reserva Natura**	**3.03**	**209**	*eP*	Pn	05 47 35.7	+0.7	
DOCA				*eS*	Sn	05 48 12.2	0.0	
DOCA				IAML		05 48 13.6		
	comp=Z,115nm,0.4s							
RTLL	**Cerro Villicun**	**3.17**	**197**	*eP*	Pn	05 47 37.2	+0.7	
RTLL				*eS*	Sn	05 48 14.9	0.0	
RTLL				IAML		05 48 17.5		
	comp=Z,53nm,0.3s							
AC04	**Llanos de Chal**	**3.25**	**271**	*eP*	Pn	05 47 37.1	-0.4	
AC04				*eS*	Sn	05 48 13.9	-2.8	
AC04				IAML		05 48 16.1		
	comp=Z,62nm,0.3s							
GO04	**Tololo Observa**	**3.52**	**237**	*eP*	Pn	05 47 40.5	-0.6	
AC01	**Pan de Azucar**	**3.57**	**306**	*eP*	Pn	05 47 41.6	-0.1	
GO02	**Mina Guanaco**	**3.69**	**327**	*eP*	Pn	05 47 44.2	+0.7	
GO02				*eS*	Sn	05 48 27.3	-0.1	
CO03	**El Pedregal**	**3.83**	**228**	*eP*	Pn	05 47 45.4	+0.3	
CO03				IAML		05 48 36.1		
	comp=Z,42nm,0.4s							
RTLS	**Leoncito**	**3.86**	**205**	*eP*	Pn	05 47 46.6	+0.9	
RTLS				IAML		05 48 34.9		
	comp=Z,80nm,0.3s							
TCA	**Tanti**	**3.88**	**142**	*eP*	Pn	05 47 46.5	+0.8	
TCA				*eS*	Sn	05 48 29.6	-1.9	
CO02	**Combarbal**	**4.27**	**226**	*eP*	Pn	05 47 50.3	-0.5	
CO02				*eS*	Sn	05 48 40.5	-0.1	
CO02				IAML		05 48 40.6		
	comp=Z,36nm,0.6s							
ASAL	**Salagasta**	**4.46**	**196**	*eP*	Pn	05 47 54.0	+0.7	
ASAL				*eS*	Sn	05 48 45.0	0.0	
ASAL				IAML		05 48 46.4		
	comp=Z,16nm,0.4s							
ARCO	**CERRO ARCO**	**4.72**	**196**	*eP*	Pn	05 47 57.6	+0.8	
ARCO				IAML		05 48 53.0		
	comp=Z,23nm,0.3s							
VA03	**San Esteban**	**5.22**	**211**	*eP*	Pn	05 48 04.1	+0.8	
VA03				IAML		05 49 42.7		
	comp=Z,14nm,1.9s							
PB15	**IPOC Station P**	**5.40**	**339**	*eP*	Pn	05 48 07.0	+1.1	
PB15				IAML		05 49 18.4		
	comp=Z,40nm,0.1s							

NOU ***23*** *06:10:37.1, 40°.52S×173°.44E, h180km, MLv3.9/13, Cook Strait, New Zealand*
WEL ***23*** *06:10:41.8±0.7, 41°.3°×17°.4E±°, h132km±6km, M3.7/25, MLv3.7/25, Error ellipse: s-maj=0.0km s-min=0.0km az=87.1, confirmed*

ISC 23 06:10:36.8±1.5, 40°.59S±0°.04×173°.47E±0°.04, h173km±9km, n156, σ1°35/181, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.40**	**122**	P	**Pn**	**06 11 01.6**	**+1.2**
DUWZ				S	**Sn**	**06 11 17.4**	**-1.2**
TKNZ	**Takaka Hill**	**0.59**	**221**	P	**Pn**	**06 11 02.3**	**+1.1**
TKNZ				S	**Sn**	**06 11 18.3**	**-1.8**
NNZ	**Nelson**	**0.63**	**186**	P	**Pn**	**06 11 02.6**	**+1.3**
NNZ				S	**Sn**	**06 11 19.1**	**-1.3**
QRZ	**Quartz Range**	**0.76**	**251**	P	**Pn**	**06 11 03.1**	**+1.1**
QRZ	**Quartz Range**	**0.76**	**251**	P	**Pn**	**06 11 03.2**	**+1.1**
QRZ				S	**Sn**	**06 11 19.7**	**-1.9**
TCW	**Tory Channel**	**0.87**	**136**	P	**Pn**	**06 11 04.5**	**+1.7**
TUWZ	**Tuamarina**	**0.91**	**157**	P	**Pn**	**06 11 04.7**	**+1.6**
TUWZ				S	**Sn**	**06 11 22.1**	**-1.4**
MRNZ	**Matariki Terra**	**0.98**	**213**	P	**Pn**	**06 11 04.9**	**+1.4**
MRNZ				S	**Sn**	**06 11 22.9**	**-1.4**
KIW	**Kapiti Island**	**1.12**	**105**	P	**Pn**	**06 11 06.2**	**+1.4**
KIW				S	**Sn**	**06 11 24.2**	**-2.2**
BSWZ	**Blackbirch Sta**	**1.17**	**165**	P	**Pn**	**06 11 07.0**	**+2.0**
BSWZ				S	**Sn**	**06 11 26.2**	**-0.8**
SNZO	**South Karori**	**1.18**	**128**	P	**Pn**	**06 11 06.8**	**+1.7**
WEL	**Wellington**	**1.20**	**126**	P	**Pn**	**06 11 07.0**	**+1.7**
WEL				S	**Sn**	**06 11 25.9**	**-1.6**
NMEZ	**Namu Road**	**1.21**	**15**	P	**Pn**	**06 11 06.8**	**+1.3**
NMEZ				S	**Sn**	**06 11 27.0**	**-0.5**
THZ	**Tophouse**	**1.25**	**200**	P	**Pn**	**06 11 07.6**	**+1.7**
THZ				S	**Sn**	**06 11 27.5**	**-0.9**
CMWZ	**Cape Campbell**	**1.29**	**155**	P	**Pn**	**06 11 08.5**	**+2.4**
OGWZ	**Otaki Gorge**	**1.31**	**101**	P	**Pn**	**06 11 08.0**	**+1.7**
OGWZ				S	**Sn**	**06 11 27.2**	**-1.9**
CAW	**Cannon Point**	**1.31**	**114**	P	**Pn**	**06 11 07.9**	**+1.6**
LREZ	**Lake Rotokare**	**1.33**	**33**	P	**Pn**	**06 11 08.0**	**+1.4**
LREZ				S	**Sn**	**06 11 29.3**	**-0.1**
BHW	**Baring Head**	**1.34**	**128**	P	**Pn**	**06 11 08.1**	**+1.5**
PREZ	**Palmer Road**	**1.35**	**23**	P	**Pn**	**06 11 08.0**	**+1.3**
PREZ				S	**Sn**	**06 11 29.6**	**-0.3**
NBEZ	**Newall Road No**	**1.35**	**13**	P	**Pn**	**06 11 08.1**	**+1.4**
NBEZ				S	**Sn**	**06 11 29.3**	**-0.5**
KHEZ	**Kahui Hut**	**1.36**	**18**	P	**Pn**	**06 11 08.1**	**+1.2**
KHEZ	**Kahui Hut**	**1.36**	**18**	P	**Pn**	**06 11 08.1**	**+1.2**
KHEZ				S	**Sn**	**06 11 29.3**	**-0.7**
NEZ	**North Egmont**	**1.40**	**20**	P	**Pn**	**06 11 08.2**	**+0.9**
WAZ	**Wanganui**	**1.43**	**55**	P	**Pn**	**06 11 09.3**	**+1.9**
PKE	**Pukeiti**	**1.45**	**16**	P	**Pn**	**06 11 09.0**	**+1.3**
DREZ	**Durham Road**	**1.50**	**22**	P	**Pn**	**06 11 09.5**	**+1.3**
MSWZ	**Moikau Station**	**1.58**	**122**	P	**Pn**	**06 11 10.6**	**+1.7**
MSWZ				S	**Sn**	**06 11 32.1**	**-1.7**
HOWZ	**Holdsworth Sta**	**1.58**	**102**	P	**Pn**	**06 11 10.5**	**+1.5**
HOWZ				S	**Sn**	**06 11 31.8**	**-2.0**
MRZ	**Mangatainoka R**	**1.60**	**93**	P	**Pn**	**06 11 10.6**	**+1.5**
MRZ				S	**Sn**	**06 11 32.1**	**-2.1**
MTW	**Mount Morrison**	**1.64**	**111**	P	**Pn**	**06 11 11.2**	**+1.7**
MTW				S	**Sn**	**06 11 33.1**	**-1.8**
MHEZ	**Mangahewa**	**1.64**	**24**	P	**Pn**	**06 11 11.1**	**+1.5**
PLWZ	**Palliser**	**1.67**	**127**	P	**Pn**	**06 11 11.5**	**+1.7**
PLWZ				S	**Sn**	**06 11 33.9**	**-1.5**
PAWZ	**Paruwai Farm**	**1.68**	**119**	P	**Pn**	**06 11 11.6**	**+1.6**
PAWZ				S	**Sn**	**06 11 33.8**	**-1.8**
DSZ	**Denniston Nort**	**1.71**	**227**	P	**Pn**	**06 11 12.0**	**+1.7**
DSZ				S	**Sn**	**06 11 34.8**	**-1.5**
POWZ	**Post Office Ro**	**1.76**	**84**	P	**Pn**	**06 11 12.0**	**+1.2**
VRZ	**Vera Road**	**1.76**	**35**	P	**Pn**	**06 11 11.8**	**+1.0**
VRZ				S	**Sn**	**06 11 36.1**	**-1.0**
KHZ	**Kahutara**	**1.83**	**178**	P	**Pn**	**06 11 13.3**	**+1.9**
KHZ	**Kahutara**	**1.83**	**178**	P	**Pn**	**06 11 13.6**	**+2.2**
TIWZ	**Tintock**	**1.84**	**97**	P	**Pn**	**06 11 13.3**	**+1.6**
TIWZ				S	**Sn**	**06 11 37.0**	**-1.7**
TRWZ	**Traveller**	**1.86**	**117**	P	**Pn**	**06 11 13.6**	**+1.8**
PRWZ	**Pori Road**	**1.90**	**90**	P	**Pn**	**06 11 14.1**	**+1.9**
TMWZ	**Te Maipa**	**1.91**	**107**	P	**Pn**	**06 11 14.1**	**+1.8**
PKVZ	**Pokaka**	**1.94**	**49**	P	**Pn**	**06 11 14.1**	**+1.4**
MTVZ	**Mangateitei**	**1.95**	**53**	P	**Pn**	**06 11 14.2**	**+1.3**
TSZ	**Takapari Road**	**1.97**	**75**	P	**Pn**	**06 11 14.5**	**+1.4**
TRVZ	**Turoa**	**2.05**	**52**	P	**Pn**	**06 11 15.2**	**+1.1**
WNVZ	**Wahianoa**	**2.06**	**53**	P	**Pn**	**06 11 15.3**	**+1.1**
DVHZ	**Dannevirke**	**2.08**	**83**	P	**Pn**	**06 11 15.5**	**+1.3**
MAVZ	**Matarangi**	**2.08**	**51**	P	**Pn**	**06 11 15.9**	**+1.3**
FWVZ	**Far West T-bar**	**2.08**	**51**	P	**Pn**	**06 11 15.5**	**+1.0**
WHVZ	**Whangaehu Hut**	**2.08**	**52**	P	**Pn**	**06 11 15.8**	**+1.3**
CPWZ	**Castlepoint**	**2.10**	**100**	P	**Pn**	**06 11 16.7**	**+2.3**
COVZ	**Chateau Observ**	**2.11**	**50**	P	**Pn**	**06 11 15.6**	**+0.9**
MOVZ	**Moawhango**	**2.11**	**57**	P	**Pn**	**06 11 15.5**	**+0.8**
BFZ	**Birch Farm**	**2.11**	**93**	P	**Pn**	**06 11 16.1**	**+1.6**
BFZ	**Birch Farm**	**2.11**	**93**	P	**Pn**	**06 11 16.2**	**+1.6**
TWVZ	**Taurewa**	**2.14**	**46**	P	**Pn**	**06 11 15.9**	**+0.9**
NGZ	**Ngauruhoe**	**2.16**	**50**	P	**Pn**	**06 11 16.2**	**+0.9**
SNVZ	**South Ngauruho**	**2.17**	**51**	P	**Pn**	**06 11 16.5**	**+1.0**
PNHZ	**Pukenui**	**2.19**	**73**	P	**Pn**	**06 11 16.7**	**+1.1**
WTVZ	**West Tongariro**	**2.19**	**49**	P	**Pn**	**06 11 16.6**	**+0.9**
NNVZ	**North Ngauruho**	**2.20**	**49**	P	**Pn**	**06 11 16.6**	**+0.9**
OTVZ	**Oturere**	**2.21**	**51**	P	**Pn**	**06 11 16.9**	**+1.1**
KRVZ	**Karewarewa**	**2.24**	**49**	P	**Pn**	**06 11 16.9**	**+0.8**
ETVZ	**East Tongariro**	**2.25**	**51**	P	**Pn**	**06 11 17.5**	**+1.2**
NTVZ	**North Tongarir**	**2.25**	**49**	P	**Pn**	**06 11 17.3**	**+1.0**
TMVZ	**Te Maari**	**2.26**	**50**	P	**Pn**	**06 11 17.6**	**+1.2**
BHHZ	**Black Hill Sta**	**2.27**	**62**	P	**Pn**	**06 11 17.3**	**+0.9**
ANWZ	**Angora Road**	**2.29**	**88**	P	**Pn**	**06 11 18.3**	**+1.8**
WPHZ	**Waipukurau**	**2.33**	**78**	P	**Pn**	**06 11 18.7**	**+1.6**
HIZ	**Hauiti**	**2.33**	**28**	P	**Pn**	**06 11 17.9**	**+0.8**
HIZ	**Hauiti**	**2.33**	**28**	P	**Pn**	**06 11 17.9**	**+0.8**
KATZ	**Kakaramea**	**2.35**	**47**	P	**Pn**	**06 11 18.4**	**+1.0**
LTZ	**Lake Taylor**	**2.37**	**202**	P	**Pn**	**06 11 19.3**	**+1.8**
GVZ	**Greta Valley S**	**2.40**	**188**	P	**Pn**	**06 11 19.9**	**+2.0**
KRHZ	**Kereru**	**2.41**	**68**	P	**Pn**	**06 11 19.1**	**+1.1**
PRHZ	**Porangahau**	**2.43**	**83**	P	**Pn**	**06 11 20.0**	**+1.7**
RATZ	**Rangitukua**	**2.47**	**47**	P	**Pn**	**06 11 20.1**	**+1.3**
KWHZ	**Kaweka Forest**	**2.54**	**64**	P	**Pn**	**06 11 20.7**	**+1.0**
WATZ	**Wairara**	**2.56**	**44**	P	**Pn**	**06 11 21.1**	**+1.3**
INZ	**Inchbonnie**	**2.62**	**215**	P	**Pn**	**06 11 22.1**	**+1.6**
PXZ	**Pawanui**	**2.65**	**79**	P	**Pn**	**06 11 22.4**	**+1.6**
AMCZ	**Amberley**	**2.66**	**193**	P	**Pn**	**06 11 22.7**	**+1.8**
BKZ	**Black Stump Fm**	**2.72**	**60**	P	**Pn**	**06 11 22.3**	**+0.5**
BKZ	**Black Stump Fm**	**2.72**	**60**	P	**Pn**	**06 11 22.4**	**+0.7**
KAHZ	**Kahuranaki**	**2.72**	**74**	P	**Pn**	**06 11 23.4**	**+1.6**
MCHZ	**McNeill Hill**	**2.73**	**66**	P	**Pn**	**06 11 23.2**	**+1.4**
TLZ	**Tolley Road**	**2.76**	**36**	P	**Pn**	**06 11 22.6**	**+0.3**
KUTZ	**Kaahu Road**	**2.77**	**42**	P	**Pn**	**06 11 23.7**	**+1.3**
MRHZ	**Matea Rd**	**2.87**	**53**	P	**Pn**	**06 11 23.7**	**+0.2**
OXZ	**Oxford**	**2.94**	**201**	P	**Pn**	**06 11 25.4**	**+1.1**
NMHZ	**Naumai**	**2.96**	**61**	P	**Pn**	**06 11 26.2**	**+1.5**
ALRZ	**Allen Road**	**3.00**	**49**	P	**Pn**	**06 11 25.8**	**+0.7**
ARHZ	**Aropaoanui**	**3.01**	**65**	P	**Pn**	**06 11 26.3**	**+1.1**
GRRZ	**Galatos Road**	**3.02**	**43**	P	**Pn**	**06 11 26.7**	**+1.2**
PRRZ	**Plateau Road**	**3.07**	**48**	P	**Pn**	**06 11 26.7**	**+0.7**
HSRZ	**Hossack Road**	**3.12**	**44**	P	**Pn**	**06 11 27.7**	**+1.1**
MQZ	**McQueen's Vall**	**3.18**	**191**	P	**Pn**	**06 11 27.9**	**+0.8**
UTU	**Utuhina**	**3.20**	**42**	P	**Pn**	**06 11 29.1**	**+1.5**
WVZ	**Waitaha Valley**	**3.22**	**219**	P	**Pn**	**06 11 29.0**	**+1.3**
RAHZ	**Arahi**	**3.25**	**60**	P	**Pn**	**06 11 28.9**	**+0.7**
NGRZ	**Ngongotaha**	**3.25**	**41**	P	**Pn**	**06 11 29.8**	**+1.5**
TOZ	**Tahuroa Road**	**3.26**	**30**	P	**Pn**	**06 11 28.9**	**+0.6**
WHHZ	**Waihua**	**3.26**	**64**	P	**Pn**	**06 11 29.4**	**+1.1**
MHCZ	**Mount Hutt**	**3.27**	**205**	P	**Pn**	**06 11 29.3**	**+1.0**
RACZ	**Rakaia**	**3.29**	**197**	P	**Pn**	**06 11 29.9**	**+1.3**
AKCZ	**Akaroa Harbour**	**3.31**	**187**	P	**Pn**	**06 11 30.2**	**+1.4**
TARZ	**Mount Tarawera**	**3.32**	**46**	P	**Pn**	**06 11 30.1**	**+0.9**
OMRZ	**Omania**	**3.34**	**43**	P	**Pn**	**06 11 30.5**	**+1.1**
KARZ	**Kaharoa**	**3.34**	**41**	P	**Pn**	**06 11 30.8**	**+1.4**
RTZ	**Ruatahuna**	**3.35**	**55**	P	**Pn**	**06 11 29.6**	**+0.1**
SNGZ	**Shannon Statio**	**3.48**	**60**	P	**Pn**	**06 11 31.9**	**+0.8**
WACZ	**Wakanui South**	**3.57**	**199**	P	**Pn**	**06 11 33.7**	**+1.6**
TGRZ	**Tauranga**	**3.58**	**38**	P	**Pn**	**06 11 33.4**	**+1.1**
KNZ	**Kokohu**	**3.59**	**66**	P	**Pn**	**06 11 32.9**	**+0.5**
GCSZ	**Gaunt Creek Bo**	**3.60**	**220**	P	**Pn**	**06 11 33.7**	**+1.2**
RPZ	**Rata Peaks**	**3.61**	**209**	P	**Pn**	**06 11 33.7**	**+1.1**
RPZ	**Rata Peaks**	**3.61**	**209**	P	**Pn**	**06 11 33.8**	**+1.1**
AWAZ	**Awhitu Peninsu**	**3.63**	**15**	P	**Pn**	**06 11 35.2**	**+2.2**
URZ	**Urewera**	**3.65**	**52**	P	**Pn**	**06 11 32.9**	**-0.3**
URZ	**Urewera**	**3.65**	**52**	P	**Pn**	**06 11 32.9**	**-0.3**
RAGZ	**Rawiri**	**3.69**	**57**	P	**Pn**	**06 11 33.8**	**0.0**
MHGZ	**Mahia Peninsul**	**3.70**	**69**	P	**Pn**	**06 11 34.6**	**+0.8**
MKAZ	**Moumakai**	**3.72**	**21**	P	**Pn**	**06 11 35.6**	**+1.6**
ARCZ	**Arundel**	**3.77**	**206**	P	**Pn**	**06 11 35.3**	**+0.7**
PRGZ	**Paritu Road**	**3.78**	**65**	P	**Pn**	**06 11 35.4**	**+0.5**
ETAZ	**East Tamaki Re**	**3.80**	**18**	P	**Pn**	**06 11 37.1**	**+2.0**
RIGZ	**Rimuhau**	**3.81**	**62**	P	**Pn**	**06 11 35.5**	**+0.2**
MWZ	**Matawai**	**3.86**	**56**	P	**Pn**	**06 11 35.8**	**-0.1**
MYRZ	**Mayor Island**	**3.94**	**34**	P	**Pn**	**06 11 36.0**	**-0.9**
WIAZ	**Waiheke Island**	**4.00**	**19**	P	**Pn**	**06 11 40.3**	**+2.5**
TKGZ	**Te Karaka**	**4.00**	**59**	P	**Pn**	**06 11 38.0**	**+0.3**
FOZ	**Fox Glacier**	**4.01**	**222**	P	**Pn**	**06 11 38.5**	**+0.8**
RUGZ	**Raukumara Rang**	**4.18**	**53**	P	**Pn**	**06 11 39.4**	**-0.7**
TMZ	**Timaru**	**4.21**	**205**	P	**Pn**	**06 11 41.2**	**+0.9**
CNGZ	**Carnagh Statio**	**4.22**	**62**	P	**Pn**	**06 11 41.0**	**+0.5**
TWGZ	**Tauwhareparae**	**4.24**	**57**	P	**Pn**	**06 11 41.3**	**+0.5**
HAZ	**Te Kaha**	**4.38**	**51**	P	**Pn**	**06 11 41.5**	**-1.1**
PKGZ	**Pakihiroa**	**4.47**	**54**	P	**Pn**	**06 11 43.9**	**+0.1**
PUZ	**Puketiti**	**4.48**	**57**	P	**Pn**	**06 11 43.6**	**-0.2**
LBZ	**Lake Benmore**	**4.51**	**212**	P	**Pn**	**06 11 44.8**	**+0.7**
WMGZ	**Waiomatatini S**	**4.73**	**56**	P	**Pn**	**06 11 47.0**	**-0.1**
MXZ	**Matakaoa Point**	**4.82**	**53**	P	**Pn**	**06 11 48.1**	**-0.2**
MXZ	**Matakaoa Point**	**4.82**	**53**	P	**Pn**	**06 11 48.1**	**-0.2**
ODZ	**Otahua Downs**	**4.92**	**204**	P	**Pn**	**06 11 50.8**	**+1.4**
ODZ	**Otahua Downs**	**4.92**	**204**	P	**Pn**	**06 11 50.5**	**+1.1**
JCZ	**Jackson Bay**	**4.92**	**223**	P	**Pn**	**06 11 50.4**	**+0.8**
JCZ	**Jackson Bay**	**4.92**	**223**	P	**Pn**	**06 11 50.2**	**+0.6**
EAZ	**Earnscleugh**	**5.56**	**212**	P	**Pn**	**06 11 58.0**	**+0.2**
MSZ	**Milford Sound**	**5.78**	**223**	P	**Pn**	**06 12 02.2**	**+1.5**
TUZ	**Tuapeka**	**6.05**	**206**	P	**Pn**	**06 12 05.8**	**+1.6**
MLZ	**Mavora Lakes**	**6.18**	**218**	P	**Pn**	**06 12 07.1**	**+1.0**
WHZ	**Wether Hill Ro**	**6.66**	**215**	P	**Pn**	**06 12 12.4**	**+0.1**
SYZ	**Scrubby Hill**	**6.73**	**206**	P	**Pn**	**06 12 14.4**	**+1.2**
CTZ	**Chatham Island**	**8.01**	**116**	P	**Pn**	**06 12 34.5**	**+4.5**

NEIC ***23*** *06:36:10.0±0.7, 36°.516N±0°.010×90°.85W±0°.01, h7km±4km, Error ellipse: s-maj=1.7km s-min=0.7km az=221.0*

SLM 23 06:36:09.8±0.7, 36°.50N±0°.02×90°.85W±0°.01, h11km±8km, Md2.7/15, mb_Lg2.2/10(NEIC), ML2.4/22(NEIC), Error ellipse: s-maj=2.4km s-min=1.4km az=181.0, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBMO	**Poplar Bluff**	**0.44**	**51**	Pg		06 36 18.1	-0.3
PBMO					Sg	06 36 24.1	-0.2
PBMO				IAML		06 36 24.6	
	comp=E,387nm,0.2s						
LCAR	**Lake Charles**	**0.50**	**210**		Pg	06 36 19.0	-0.5
LCAR					Sg	06 36 25.6	-0.5
BETM	**Bethany**	**0.65**	**80**		Pg	06 36 21.8	-0.6
BETM					Sg	06 36 30.7	-0.2
BRNM	**Bernie**	**0.72**	**72**		Sg	06 36 32.9	-0.3
V43A	**Jonesboro**	**0.76**	**161**		Pg	06 36 23.8	-0.7
MLDM	**Malden**	**0.76**	**80**		Pg	06 36 23.7	-0.9
TOPM	**Tallapoosa**	**0.78**	**88**		Pg	06 36 24.0	-0.8
BRGM	**Braggadocio**	**0.85**	**110**		Pg	06 36 23.5	-2.8
GNAR	**Gosnell**	**0.86**	**128**	Pg	Pg	06 36 26.1	-0.3
GNAR				IAML		06 36 40.7	
	comp=N,88nm,0.3s						
GNAR				IAML		06 36 40.8	
	comp=E,90nm,0.3s						
CHNM	**Channel**	**0.88**	**121**		Pg	06 36 26.1	-0.6
PEBM	**Pemiscott Bayo**	**0.89**	**116**		Pg	06 36 26.1	-0.8
PEBM				IAML		06 36 45.1	
	comp=N,89nm,0.2s						
PARMO	**Parma**	**0.90**	**79**		Pg	06 36 25.9	-1.3
PARMO				IAML		06 36 44.7	
	comp=N,91nm,0.2s						
GUAMO	**Guam**	**0.90**	**64**		Pg	06 36 25.7	-1.6
PGVM	**Portageville**	**0.91**	**92**		Pg	06 36 26.6	-0.7
MSAR	**Manila South**	**0.92**	**141**		Pg	06 36 27.1	-0.4
COKM	**Charter Oak**	**0.93**	**77**		Pg	06 36 26.8	-0.9
HBAR	**Harrisburg**	**0.96**	**171**		Pg	06 36 27.7	-0.6
HBAR				IAML		06 36 46.2	
	comp=E,84nm,0.5s						
PENMO	**Penman**	**0.99**	**93**		Pg	06 36 27.5	-1.4
HENM	**Henderson Moun**	**1.13**	**79**		Pb	06 36 30.2	-1.1
DWDM	**Dogwood**	**1.13**	**75**		Pb	06 36 30.0	-1.4
LNXT	**Lenox**	**1.17**	**110**		Pb	06 36 30.9	-1.2
LNXT				IAML		06 37 00.9	
	comp=N,96nm,0.5s						
FCAR	**Ozark Folk Cen**	**1.20**	**240**	Pg	Pn	06 36 31.7	-0.8
FCAR				IAML		06 36 48.8	
	comp=E,64nm,0.1s						
FCAR				IAML		06 36 50.4	
	comp=N,72nm,0.1s						
EPRM	**East Prairie**	**1.22**	**79**		Pn	06 36 31.4	-1.4
EDIT	**Edith**	**1.23**	**121**		Pn	06 36 32.2	-0.7
CGM3	**Cape Girardeau**	**1.24**	**50**		Pb	06 36 33.4	+0.1
FPST	**Four Points**	**1.24**	**114**		Pn	06 36 32.5	-0.6
GLAT	**Glass**	**1.28**	**100**	Pg	Pn	06 36 32.8	-0.9
GLAT				IAmb_Lg		06 36 51.0	
	comp=Z,30nm,0.9s						
GLAT				IAML		06 37 10.0	
	comp=E,72nm,0.5s						
MGMO	**Mountain Grove**	**1.31**	**300**		Pn	06 36 34.0	-0.1
MGMO	**Mountain Grove**	**1.31**	**300**		Pn	06 36 33.7	-0.4
MGMO	**Mountain Grove**	**1.31**	**300**	IAmb_Lg		06 36 52.3	
	comp=Z,10nm,0.8s						
MGMO				IAML		06 36 52.8	
	comp=E,84nm,0.1s						
MGMO				IAML		06 36 53.8	
	comp=N,89nm,0.1s						
HALT	**Halls**	**1.36**	**115**	Pn	Pn	06 36 34.3	-0.4
HDBT	**Hernando Brdge**	**1.49**	**154**	Pn	Pn	06 36 36.5	-0.1
FVM	**French Village**	**1.52**	**13**		Pn	06 36 35.5	-1.5
FVM	**French Village**	**1.52**	**13**	Pn	Pn	06 36 36.5	-0.5
CCM	**Cathedral Cave**	**1.58**	**349**		Pn	06 36 37.6	-0.2
UTMT	**University of**	**1.61**	**95**	Pn	Pn	06 36 38.5	+0.4
U40A	**Yellville**	**1.62**	**265**		Pn	06 36 37.9	-0.4
WHAR	**Wooly Hollow**	**1.68**	**224**	Pn	Pn	06 36 39.3	+0.2
S44A	**Carbondale**	**1.74**	**47**	Pn	Pn	06 36 40.1	+0.1
S44A				IAmb_Lg		06 37 04.3	
	comp=Z,10nm,0.8s						
R40A	**Maddies Statio**	**2.11**	**328**	Pn	Pn	06 36 46.4	+1.2
OXF	**Oxford**	**2.31**	**149**	IAmb_Lg		06 37 21.8	
	comp=Z,15nm,0.8s						
U38A	**Gravette**	**2.85**	**270**	Pn	Pn	06 36 56.4	+1.1
T47A	**Sharon Grove**	**3.05**	**80**	Pn	Pn	06 36 58.6	+0.7
RLO	**Rose Lookout**	**3.39**	**266**	Pn	Pn	06 37 03.8	+1.2
BLOK	**Blackwell**	**5.12**	**275**	IAmb_Lg		06 38 51.4	
	comp=Z,6.9nm,0.9s						
GOGA	**Godfrey**	**6.80**	**115**	IAmb_Lg		06 39 44.7	
	comp=Z,1.8nm,1.1s						

**RSNC 23 06:48:24.0±1.0, 6.80N×73.13W, h145km±5km, ML1.7, 1D, Northern Colomb

ARGC				*e*S	Sn	06 49 52.8	-0.3
ARGC				*i*		06 49 57.0	
	comp=Z,1.5nm,0.3s						
ARGC	**Ariguani, Magd**	**3.24**	**340**	*e*P	Pn	06 49 13.8	-0.5
ARGC				*e*S	Sn	06 49 53.2	+0.1
ARGC				*i*		06 49 56.9	
	comp=Z,1.5nm,0.2s						
PRAC	**Prado**	**3.52**	**210**	*e*P	Pn	06 49 17.4	-0.6
PRAC				*e*S	Sn	06 49 58.9	-0.9
PRAC				*i*		06 50 03.7	
	comp=Z,2.3nm,0.6s						
PRAC	**Prado**	**3.52**	**210**	*e*P	Pn	06 49 17.4	-0.6
PRAC				*e*S	Sn	06 49 59.2	-0.6
PRAC				*i*		06 50 03.8	
	comp=Z,2.3nm,0.6s						
SJCC	**San Jacinto, C**	**3.69**	**327**	*e*P	Pn	06 49 17.3	-2.8
SJCC				*e*S	Sn	06 49 59.0	-4.6
SJCC				*i*		06 50 04.3	
	comp=Z,1.6nm,0.4s						
SJCC	**San Jacinto, C**	**3.69**	**327**	*e*P	Pn	06 49 17.2	-2.9
SJCC				*e*S	Sn	06 49 59.7	-3.9
SJCC				*i*		06 50 09.0	
	comp=Z,1.3nm,0.4s						

NEIC ***23*** *06:54:28.9±1.4,38˚.06N±0˚.02×115˚.27W±0˚.02,h4km±4km, Error ellipse: s-maj=2.7km s-min=2.0km az=130.0*
ANF ***23*** *06:54:31.1±0.3,38˚.13N×115˚.28W,h10km,Error ellipse: s-maj=3.5km s-min=2.1km az=80.0*
REN 23 06:54:29.7±1.0,38˚.03N±0˚.03×115˚.25W±0˚.05,h14km±8km, ML3.2/30,ML3.0/64(NEIC),Error ellipse: s-maj=5.9km s-min=2.5km az=121.0,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R11B	**Troy Canyon, C**	**0.42**	**321**		Pg	06 54 37.5	-0.7
R11B	**Troy Canyon, C**	**0.42**	**321**	P	Pg	06 54 37.6	-0.5
	baz=140						
R11B				S	Sg	06 54 42.6	-1.3
	baz=140						
S11A	**Rachel**	**0.55**	**226**		Pg	06 54 40.4	-0.2
S11A				Sg	Sg	06 54 48.3	+0.4
S11A				IAML		06 54 49.5	
	comp=E,1μm,0.6s						
S11A				IAML		06 54 52.0	
	comp=N,1μm,0.2s						
PRN	**Pahroc Range**	**0.64**	**166**		Pg	06 54 42.5	+0.2
PRN				Sg	Sg	06 54 51.0	+0.2
PRN				IAML		06 54 57.6	
	comp=N,1μm,0.3s						
PRN				IAML		06 54 58.5	
	comp=E,1μm,0.5s						
Q12A	**Willow Creek R**	**1.06**	**18**		Pb	06 54 50.0	0.0
Q12A	**Willow Creek R**	**1.06**	**18**		Sn	06 55 04.7	-0.3
Q12A	**Willow Creek R**	**1.06**	**18**	IAML		06 55 09.0	
	comp=N,1μm,0.6s						
Q12A				IAML		06 55 10.9	
	comp=E,964nm,0.6s						
SPR3	**Spring Creek 3**	**1.21**	**36**		Pn	06 54 51.5	-0.9
SPR3	**Spring Creek 3**	**1.21**	**36**		Sb	06 55 07.2	-1.0
SPR3	**Spring Creek 3**	**1.21**	**36**	IAML		06 55 10.2	
	comp=N,468nm,0.3s						
SPR3				IAML		06 55 10.8	
	comp=E,350nm,0.7s						
CPY	**CP-1**	**1.27**	**211**		Pb	06 54 53.7	+0.2
MCY	**Mercury**	**1.48**	**203**		Pb	06 54 56.6	-0.3
NSP	**Numbskull Pass**	**1.51**	**211**		Pb	06 54 57.1	-0.4
SHPR	**Sheep Range**	**1.52**	**177**	Pn	Pb	06 54 57.7	-0.1
TPH	**Tonopah**	**1.56**	**272**		Pb	06 54 58.0	-0.4
CCUT	**Cedar City**	**1.57**	**107**		Pb	06 54 58.6	0.0
CCUT				IAML		06 55 22.6	
	comp=N,164nm,0.6s						
CCUT				IAML		06 55 23.8	
	comp=E,144nm,0.7s						
WCT	**Wildcat Mounta**	**1.65**	**222**		Pb	06 54 59.2	-0.7
WCT				IAML		06 55 23.7	
	comp=E,264nm,0.4s						
WCT				IAML		06 55 26.6	
	comp=N,173nm,1.0s						
Q09A	**Carvers**	**1.72**	**299**		Pn	06 54 59.9	+0.6
MZP	**Montezuma Peak**	**1.72**	**260**		Pn	06 55 00.3	+0.8
MZP				IAML		06 55 25.6	
	comp=N,180nm,0.5s						
SGV	**South Grapevin**	**1.76**	**234**		Pb	06 55 01.0	-0.9
AMDNV	**Amargosa**	**1.77**	**208**		Pb	06 55 01.4	-0.6
GRAC	**Grapevine Rang**	**1.97**	**239**	P	Pb	06 55 06.1	+0.7
	baz=58,SNR=23						
GRAC				S	Sg	06 55 33.1	0.0
	baz=58						
FURC	**Furnace Creek,**	**2.02**	**220**		Pb	06 55 06.9	+0.7
FURC	**Furnace Creek,**	**2.02**	**220**	P	Pb	06 55 07.0	+0.8
	baz=39,SNR=140						
FURC				S	Sg	06 55 34.3	-0.3
	baz=39						
DSP	**Deep Springs**	**2.26**	**254**		Pn	06 55 08.3	+1.7
DSP				IAML		06 55 43.5	
	comp=E,70nm,0.5s						
DSP				IAML		06 55 44.8	
	comp=N,88nm,0.5s						
SHOC	**Shoshone, Teco**	**2.28**	**201**		Pg	06 55 12.2	-1.2
SHOC	**Shoshone, Teco**	**2.28**	**201**	P	Pb	06 55 10.2	-0.4
	baz=21,SNR=25						
SHOC				Sb	Sg	06 55 44.8	+1.9
	baz=21						
TCRU	**Three Creeks R**	**2.28**	**74**		Pn	06 55 07.8	+0.7
TCRU				IAML		06 55 46.1	
	comp=E,123nm,0.8s						
V12A	**Nelson**	**2.32**	**172**	Pn	Pn	06 55 08.8	+1.3
V12A				IAML		06 55 58.4	
	comp=N,58nm,0.9s						
NV11	**Mina Array Sit**	**2.32**	**281**		Pn	06 55 08.5	+0.9
NV11				IAML		06 55 45.0	
	comp=E,84nm,0.4s						
NV11				IAML		06 55 45.1	
	comp=N,115nm,0.3s						
NVAR	**Mina Array Bea**	**2.44**	**280**		Pn	06 55 09.7	+0.5
NV08	**Mina Array Sit**	**2.45**	**280**		Pn	06 55 10.3	+1.0
KVN	**Kaiserville**	**2.46**	**295**	Pn	Pn	06 55 10.9	+1.4
KVN				IAML		06 55 51.9	
	comp=E,70nm,0.8s						
NV09	**Mina Array Sit**	**2.46**	**280**		Pn	06 55 10.6	+1.0
TIN	**Tinemaha, Big**	**2.56**	**249**	Pb	Pg	06 55 17.7	-1.1
	baz=67						
TIN				Sb	Sg	06 55 51.8	-0.2
	baz=67						
LHV	**Little Huntoon**	**2.58**	**276**		Pn	06 55 11.3	+0.3
TUQ	**Turquoise Moun**	**2.64**	**192**	Pb	Pg	06 55 19.4	-0.9
	baz=12						
TUQ				Sb	Sg	06 55 55.6	+1.0
	baz=12						
RYN	**Ryan**	**2.64**	**284**		Pn	06 55 12.7	+0.6
RYN				IAML		06 55 54.8	
	comp=N,91nm,0.3s						
RYN				IAML		06 55 59.1	
	comp=E,90nm,0.5s						
MPMC	**Manual Prospec**	**2.66**	**223**	Pb	Pg	06 55 19.6	-1.1
	baz=42,SNR=28						
MPMC				Sb	Sg	06 55 54.4	-0.8
	baz=42						
ELK	**Elko**	**2.71**	**0**		Pn	06 55 13.4	+0.3
ELK				IAML		06 55 57.7	
	comp=E,41nm,0.3s						
CWC	**Cottonwood Cre**	**2.76**	**236**		Pg	06 55 21.2	-1.4
CWC	**Cottonwood Cre**	**2.76**	**236**	Sb	Sg	06 55 58.4	0.0
	baz=54						
MLAC	**Mammoth, Mammo**	**2.87**	**263**	Pg	Pg	06 55 25.6	+0.9
	baz=81						
MLAC				Sb	Sg	06 56 01.5	-0.3
	baz=81						
DUG	**Dugway, Tooele**	**2.88**	**40**	P	Pn	06 55 16.9	+1.6
	baz=222						
DUG				Sb	Sg	06 56 00.4	-1.8
	baz=222						
GSC	**Goldstone, Bar**	**2.99**	**205**	Pb	Pg	06 55 26.5	-0.6
	baz=24,SNR=21						
GSC				Sb	Sg	06 56 06.3	+0.4
	baz=24						
GMRC	**Granite Mounta**	**3.25**	**186**		Pb	06 55 27.4	+0.1
GMRC	**Granite Mounta**	**3.25**	**186**	Pb	Pg	06 55 30.8	-1.2
	baz=5.7,SNR=13						
GMRC				Sb	Sg	06 56 13.1	-1.2
	baz=5.7						
YERR	**Yerington**	**3.27**	**288**		Pn	06 55 21.8	+1.0
YERR				IAML		06 56 15.2	
	comp=N,36nm,0.5s						
YERR				IAML		06 56 18.3	
	comp=E,57nm,0.6s						
NEE2	**Needles Airpor**	**3.29**	**171**	Pb	Pg	06 55 31.4	-1.4
	baz=351						
NEE2				Sb	Sg	06 56 15.0	-0.5
	baz=351						
HEC	**Hector,Ludlow**	**3.31**	**196**	Pb	Pg	06 55 32.0	-1.1
	baz=15,SNR=7.8						
HEC				Sb	Sg	06 56 15.7	-0.3
	baz=15						
MPU	**Maple Canyon**	**3.45**	**54**		Pn	06 55 23.5	+0.4
ISA	**Isabella, Lake**	**3.50**	**229**	Pb	Pg	06 55 34.6	-2.2
	baz=46						
ISA				Sb	Sg	06 56 20.7	-1.4
	baz=46						
PNTR	**Pine Nut**	**3.57**	**289**		Pn	06 55 25.9	+1.0
PNTR				IAML		06 56 31.6	
	comp=E,40nm,0.6s						
PNTR				IAML		06 56 32.1	
	comp=N,34nm,0.7s						
EDW2	**Edwards Air Fo**	**3.84**	**216**	Pb	Pg	06 55 40.8	-2.5
	baz=34						
IRM	**Iron Mountain**	**3.86**	**179**	Pb	Pg	06 55 42.2	-1.5
	baz=359						
IRM				Sb	Sg	06 56 32.8	-1.0
	baz=359						
WUAZ	**Wupatki**	**3.99**	**128**	Pb	Pg	06 55 43.4	-2.9
	baz=310						
PEAR	**Peavine Mounta**	**4.00**	**295**		Pn	06 55 33.1	+2.3
HVU	**Hansel Valley**	**4.20**	**26**	Pn	Pn	06 55 35.1	+1.6
HVU				IAML		06 56 52.4	
	comp=E,25nm,0.5s						
BFSC	**Mount Baldy Ra**	**4.25**	**208**	Sb	Sg	06 56 44.4	-1.9
	baz=26						
PMD	**Palm Desert**	**4.46**	**192**	Pn	Pn	06 55 37.0	+0.1
PFO	**Pinyon Flats O**	**4.51**	**193**	Pn	Pn	06 55 38.1	+0.4
TPFO	**Pinon Flats**	**4.52**	**193**	Sb	Sg	06 56 52.8	-2.1
	baz=12						
HWUT	**Hardware Ranch**	**4.56**	**37**	Pn	Pn	06 55 38.9	+0.5
HWUT				IAML		06 57 04.2	
	comp=E,11nm,1.1s						
HWUT				IAML		06 57 04.5	
	comp=E,12nm,1.0s						
AFDM	**Forest Hills D**	**4.58**	**283**	Pn	Pn	06 55 39.6	+1.1
AFDM				IAML		06 57 09.3	
	comp=N,10nm,4.6s						
AFDM				IAML		06 57 33.4	
	comp=E,9.2nm,4.5s						
MVCO	**Mesa Verde**	**5.42**	**97**	Pg	Pg	06 56 11.9	-1.7
	baz=281,SNR=11						
HLID	**Hailey**	**5.57**	**6**	Pb	Pb	06 56 07.5	+0.8
	baz=187,SNR=6.9						

IDC 23 07:17:33.4±2.5,0.76N×127.85E,h0km,mb3.3/4, mbtmp3.3/4,MS3.5/1,Error ellipse: s-maj=249.9km s-min=24.9km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.54**	**163**	P	P	07 22 24.9	+0.4
	0.4nm,0.6s,baz=341,slow=12,SNR=3.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**24.99**	**167**	P	P	07 22 58.8	-0.3
	0.2nm,0.7s,baz=351,slow=10,SNR=2.4						
	2nm,0.7s						
STKA	**Stephens Creek**	**34.98**	**159**	LR	LR	07 40 20.7	
	comp=Z,71nm,18.1s,baz=209,slow=39						
MKAR	**Makanchi Array**	**60.62**	**326**	P	P	07 27 47.3	+1.1
	0.2nm,0.5s,baz=116,slow=8.6,SNR=4.2						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**70.40**	**327**	P	P	07 28 48.4	-1.0
	0.7nm,0.5s,baz=101,slow=7.6,SNR=4.9						
	0.7nm,0.5s						

NNC ***23*** *07:20:10.2±0.2,50˚.00N×78˚.88E,h0km,mb3.2,mpv2.8, Error ellipse: s-maj=5.6km s-min=1.2km az=69.0, Suspected Mining explosion.*
IDC ***23*** *07:20:11.7±1.2,50˚.06N×78˚.80E,h0km,mbtmp3.0/2, ML2.6/2,Error ellipse: s-maj=11.5km s-min=7.2km az=61.0*
ISC 23 07:20:07.4±1.5,49˚.83N±0˚.06×78˚.7E±0˚.1,h0km,n18, σ1§06/27,14C-10D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.76**	**353**	⇓P	**Pb**	**07 20 22.6**	**-0.9**
KUR07				⇑S	**Sg**	**07 20 31.5**	**-0.4**
KUR06	**Kurchatov Arra**	**0.78**	**353**	⇓P	**Pb**	**07 20 23.0**	**-0.8**
KUR06				⇓S	**Sg**	**07 20 32.0**	**-0.5**
KUR14	**Kurchatov Arra**	**0.79**	**356**	⇑P	**Pg**	**07 20 22.9**	**+0.4**
KUR14				⇑S	**Sg**	**07 20 31.9**	**-0.9**
KUR15	**Kurchatov Arra**	**0.80**	**355**	⇑P	**Pb**	**07 20 23.2**	**-0.9**
KUR15				⇑S	**Sg**	**07 20 32.2**	**-0.7**
KURBB	**Kurchatov Arra**	**0.80**	**354**	⇓P	**Pb**	**07 20 23.3**	**-0.9**
	20nm,0.3s						
KURBB				⇑S	**Sg**	**07 20 32.3**	**-0.8**
	71nm,0.7s						
KURBB	**Kurchatov Arra**	**0.80**	**354**	Pg	**Pg**	**07 20 22.8**	**0.0**
	1.9nm,0.3s,baz=165,slow=19,SNR=16						
KURBB				Lg	Lg	07 20 32.5	
	1.7nm,0.3s,baz=162,slow=34,SNR=11						
KUR16	**Kurchatov Arra**	**0.81**	**352**	⇑P	**Pb**	**07 20 23.4**	**-0.9**
KUR16				⇑S	**Sg**	**07 20 32.6**	**-0.8**
KUR17	**Kurchatov Arra**	**0.81**	**351**	⇓P	**Pb**	**07 20 23.5**	**-0.9**
KUR17				⇓S	**Sg**	**07 20 32.7**	**-0.9**
KUR05	**Kurchatov Arra**	**0.82**	**354**	⇓P	**Pg**	**07 20 23.4**	**+0.3**
KUR05				⇑S	**Sg**	**07 20 32.7**	**-1.0**
KUR04	**Kurchatov Arra**	**0.84**	**355**	⇓P	**Pg**	**07 20 23.8**	**+0.3**
KUR04				⇑S	**Sg**	**07 20 33.3**	**-1.1**
KURK	**Kurchatov**	**0.89**	**358**	⇓P	**Pg**	**07 20 24.4**	**0.0**
	8.0nm,0.4s						
KURK				⇑S	**Sg**	**07 20 34.8**	**-1.2**
	16nm,0.5s						
MAKZ	**Makanchi**	**3.74**	**143**	⇑Lg	Lg	07 22 11.9	
	9.4nm,0.7s						
MK31	**Makanchi Array**	**3.88**	**140**	⇑Pn	**Pn**	**07 21 11.0**	**+2.7**
	0.1nm,0.1s,baz=38,slow=11,SNR=4.8						
MK31				⇑Pg	**Pg**	**07 21 21.5**	**-0.2**
	0.8nm,0.3s,baz=326,slow=16,SNR=7.6						
MK31				Lg	Lg	07 22 15.6	
	6.4nm,0.6s,baz=331,slow=34,SNR=15						
MKAR	**Makanchi Array**	**3.88**	**140**	Pn	**Pb**	**07 21 15.1**	**-1.6**
	0.5nm,0.3s,baz=329,slow=10,SNR=5.6						
MKAR				Sn	**Sb**	**07 22 03.1**	**-1.1**
	0.2nm,0.3s,baz=320,slow=24,SNR=1.8						
MKAR				Lg	Lg	07 22 15.7	
	1.6nm,0.3s,baz=325,slow=27,SNR=12						
	0.7nm,0.4s						
OTUK	**Ortayu**	**4.46**	**252**	Lg	Lg	07 22 36.7	
	4.2nm,0.8s						
I46RU	**ZALESOVO INFRA**	**5.61**	**40**	I	I	07 50 10.0	
	baz=225,slow=331,SNR=7.9						
ZALV	**Zalesovo Beam**	**5.61**	**40**	Pn	**Pn**	**07 21 33.9**	**+1.9**
	0.7nm,0.3s,baz=231,slow=14,SNR=12						
ZALV				Sn	**Sn**	**07 22 37.6**	**+0.4**
	0.1nm,0.3s,baz=234,slow=19,SNR=1.4						
ZALV				Lg	Lg	07 22 59.9	
	0.1nm,0.3s,baz=227,slow=25,SNR=1.7						
	1.3nm,0.3s						
PDGK	**Podgornoye**	**6.53**	**175**	⇓Lg	Lg	07 23 42.4	
	5.5nm,0.8s						

NEIC ***23*** *07:20:38.6±1.6,5˚.36S±0˚.07×129˚.58E±0˚.07,h192km±8km, mb4.6/34,Error ellipse: s-maj=11.4km s-min=9.7km az=47.0*
DJA ***23*** *07:20:38.8±0.2,5˚S±2˚×13˚0E±˚,h193km±4km,M4.7/25, mB5.1/17,mb4.8/25,MLv5.3/15,Mw(mB)4.4/17*
IDC ***23*** *07:20:46.9±4.0,5˚.54S×129˚.51E,h285km±42km,mb3.8/8, mbtmp4.5/9,Error ellipse: s-maj=32.7km s-min=9.4km az=69.0*
ISC 23 07:20:38.4±0.4,5˚40S±0˚.04×129˚64E±0˚.05,h200km,n121, σ1§44/123,mb4.4/28,4C-5D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.91**	**17**	P	**Pn**	**07 21 09.3**	**+1.7**
BNDI	**Bandanaira**	**0.91**	**17**	P	**Pn**	**07 21 08.8**	**+1.2**
SAUI	**Saumlaki**	**3.05**	**147**		**Pn**	**07 21 30.5**	**+1.8**
SAUI	**Saumlaki**	**3.05**	**147**	P	**Pn**	**07 21 28.6**	**-0.1**
SAUI				S	**Sn**	**07 22 07.7**	**-0.4**
NLAI	**Namlea**	**3.32**	**310**	P	**Pn**	**07 21 32.8**	**+0.9**
FAKI	**Fak Fak**	**3.58**	**47**		**Pn**	**07 21 34.9**	**-0.2**
FAKI				Sn	**Sn**	**07 22 17.6**	**-1.9**
FAKI	**Fak Fak**	**3.58**	**47**	P	**Pn**	**07 21 34.5**	**-0.6**
SWI	**Sorong**	**4.79**	**20**	P	**Pn**	**07 21 48.8**	**-1.3**
SANI	**Sanana**	**4.93**	**312**	P	**Pn**	**07 21 52.3**	**+0.3**
SANI	**Sanana**	**4.93**	**312**	P	**Pn**	**07 21 52.2**	**+0.3**
LBMI	**Labuha**	**5.19**	**336**	P	**Pn**	**07 21 55.4**	**+0.1**
	636nm,0.4s,10μm4.3nm						
TNTI	**Ternate**	**6.53**	**340**		**Pn**	**07 22 12.9**	**+0.3**
TNTI	**Ternate**	**6.53**	**340**	P	**Pn**	**07 22 13.1**	**+0.4**
TNTI	**Ternate**	**6.53**	**340**	P	**Pn**	**07 22 12.2**	**-0.5**
	175nm,0.8s,2μm0.6nm						
SOEI	**Soe**	**6.86**	**231**	Pn	**Pn**	**07 22 18.2**	**+1.2**
SOEI	**Soe**	**6.86**	**231**	P	**Pn**	**07 22 18.0**	**+1.0**
	118nm,0.9s,2μm0.5nm						
BBSI	**Bau Bau**	**7.04**	**269**	P	**Pn**	**07 22 21.1**	**+1.9**
	146nm,1.0s,1μm0.5nm						
DRS	**Darwin Rock St**	**7.10**	**170**	P	**Pn**	**07 22 20.3**	**+0.3**
MTN	**Manton Dam**	**7.54**	**169**	Pn	**Pn**	**07 22 25.6**	**-0.2**
MTN	**Manton Dam**	**7.54**	**169**	P	**Pn**	**07 22 25.8**	**0.0**
KDU	**Kakadu**	**7.76**	**159**	P	**Pn**	**07 22 28.6**	**0.0**
LUWI	**Luwuk**	**8.11**	**302**	P	**Pn**	**07 22 35.7**	**+2.6**
	133nm,1.2s						
KMSI	**Cibinong**	**8.19**	**316**	P	**Pn**	**07 22 34.5**	**+0.3**
	142nm,0.7s						
EDFI	**Ende, Flores**	**8.56**	**247**	P	**Pn**	**07 22 41.0**	**+1.8**
	32nm,1.6s						
MRSI	**Marisa**	**9.65**	**307**	P	**Pn**	**07 22 53.9**	**+0.7**
	628nm,0.8s,5μm						
KAPI	**Kappang**	**9.85**	**272**	Pn	**Pn**	**07 22 55.3**	**-0.5**
TTSI	**Tana Toraja**	**10.07**	**283**	P	**Pn**	**07 23 00.4**	**+1.8**
	94nm,0.9s						
KNRA	**Kununurra**	**10.25**	**185**		**Pn**	**07 23 01.6**	**+0.6**
KNRA	**Kununurra**	**10.25**	**185**	P	**Pn**	**07 23 01.8**	**+0.8**
TOLI2	**Tolitoli**	**10.96**	**306**	Pn	**Pn**	**07 23 07.8**	**-2.3**
TOLI2	**Tolitoli**	**10.96**	**306**	P	**Pn**	**07 23 11.9**	**+1.8**
MPSI	**Mapaga**	**11.27**	**300**	P	**Pn**	**07 23 15.1**	**+1.0**
	33nm,0.7s,1μm						
TABU	**Tabubil**	**11.54**	**90**	P	**Pn**	**07 23 19.6**	**+2.1**
FITZ	**Fitzroy Crossi**	**13.21**	**197**	Pn	**Pn**	**07 23 37.6**	**-1.0**
FITZ	**Fitzroy Crossi**	**13.21**	**197**	P	**Pn**	**07 23 38.1**	**-0.5**
SRBI	**Singaraja**	**14.57**	**259**	P	**P**	**07 23 57.4**	**+0.7**
	34nm,1.0s						
WRAB	**Tennant Creek**	**15.16**	**163**		**Pn**	**07 24 02.1**	**-0.6**
WRA	**Warramunga Arr**	**15.16**	**163**	P	**Pn**	**07 24 02.0**	**-0.8**
	35nm,0.5s,baz=338,slow=12,SNR=79						
WRA				S	**S**	**07 26 43.2**	**-8.1**
	17nm,0.4s,baz=333,slow=23,SNR=11						
KMMI	**Kalianget**	**15.67**	**263**	P	**Pn**	**07 24 11.1**	**+2.2**
	84nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.67**	**258**		**P**	**07 24 07.0**	**-1.9**
JAGI				IAmb	IAmb	07 24 10.8	
	comp=Z,18nm,0.8s						
COEN	**Coen**	**15.81**	**124**	P	**Pn**	**07 24 11.6**	**+0.9**
COEN				IAmb	IAmb	07 24 20.3	
	comp=Z,40nm,0.9s						
COEN	**Coen**	**15.81**	**124**	P	**Pn**	**07 24 11.8**	**+1.1**
BLJI	**Banyuglugur**	**16.11**	**261**	P	**Pn**	**07 24 16.0**	**+1.8**
	comp=Z,79nm,0.8s,comp=Z,3μm						
KKM	**Kota Kinabalu**	**17.57**	**310**	P	**P**	**07 24 29.0**	**-0.8**
KKM	**Kota Kinabalu**	**17.57**	**310**	P	**Pn**	**07 24 31.6**	**-0.1**
PMG	**Port Moresby**	**17.82**	**104**		**Pn**	**07 24 33.4**	**-1.1**
PMG				IAmb	IAmb	07 24 51.1	
	comp=Z,30nm,0.9s						
PMG	**Port Moresby**	**17.82**	**104**	P	**Pn**	**07 24 35.7**	**+1.2**
PMG	**Port Moresby**	**17.82**	**104**	P	**Pn**	**07 24 35.6**	**+1.1**
PMG	**Port Moresby**	**17.82**	**104**	P	**Pn**	**07 24 36.3**	**+1.8**
	comp=Z,20nm,0.7s,baz=318,slow=8.2,SNR=8.4						
QIS	**Mount Isa**	**17.91**	**148**	P	**Pn**	**07 24 35.2**	**-0.3**
MANU	**Manus Island**	**18.00**	**80**	P	**Pn**	**07 24 35.4**	**-1.2**
MANU				IAmb	IAmb	07 24 38.1	
	comp=Z,29nm,0.6s						
MANU	**Manus Island**	**18.00**	**80**	P	**Pn**	**07 24 37.7**	**+1.1**
MBWA	**Marble Bar**	**18.38**	**211**	P	**P**	**07 24 38.1**	**-0.4**
MBWA				IAmb	IAmb	07 24 40.0	
	comp=Z,32nm,1.1s						
MBWA	**Marble Bar**	**18.38**	**211**	P	**Pn**	**07 24 39.2**	**-1.8**
ASAR	**Alice Springs**	**18.62**	**168**	P	**Pn**	**07 24 43.0**	**-0.9**
	comp=Z,277nm,0.7s,baz=349,slow=11,SNR=1988						
ASAR				S	**S**	**07 27 59.1**	**-3.7**
	comp=Z,29nm,0.9s,baz=348,slow=19,SNR=21						
AS01	**Alice Springs**	**18.63**	**168**	P	**Pn**	**07 24 43.2**	**-0.8**
PSA00	**Pilbara Seismi**	**18.67**	**210**	P	**P**	**07 24 41.6**	**0.0**
PSA00				IAmb	IAmb	07 24 43.2	
	comp=Z,21nm,0.9s						
PSA00	**Pilbara Seismi**	**18.67**	**210**	P	**P**	**07 24 42.0**	**+0.4**
PSA00				IAmb	IAmb	07 24 43.3	
	comp=Z,48nm,1.0s						
PSA00	**Pilbara Seismi**	**18.67**	**210**	P	**P**	**07 24 42.4**	**+0.8**
SBUM	**Sibu**	**19.07**	**294**	P	**P**	**07 24 45.4**	**-0.5**
SBUM				IAmb	IAmb	07 24 50.6	
	comp=Z,15nm,0.7s						
MTSU	**Mount Surprise**	**19.13**	**133**	P	**Pn**	**07 24 48.9**	**-1.0**
WRKA	**Warakurna**	**19.57**	**184**	P	**P**	**07 24 52.6**	**+1.3**
ALOT	**Alotau**	**21.19**	**105**	P	**P**	**07 25 11.2**	**+2.6**
BBJI	**Bungbulang**	**21.95**	**263**	P	**P**	**07 25 16.7**	**+0.3**
OOD	**Oodnadatta**	**23.01**	**166**	P	**P**	**07 25 27.4**	**+1.6**
FORT	**Forrest**	**25.29**	**183**	P	**P**	**07 25 47.4**	**+0.8**
FORT	**Forrest**	**25.29**	**183**	P	**P**	**07 25 47.4**	**+0.8**
LCRK	**Leigh Creek**	**26.20**	**163**	P	**P**	**07 25 56.1**	**+1.4**
MORW	**Morawa**	**26.83**	**207**	P	**P**	**07 26 00.9**	**+0.4**
MORW				IAmb	IAmb	07 26 14.0	
	comp=Z,25nm,1.4s						
KMBL	**Kambalda**	**26.84**	**195**	P	**P**	**07 26 01.0**	**+0.5**
BBOO	**Buckleboo**	**27.93**	**168**	P	**P**	**07 26 10.7**	**+0.6**
BBOO				IAmb	IAmb	07 26 11.6	
	comp=Z,20nm,0.9s						
KLBR	**Kellerberrin**	**28.34**	**202**	P	**P**	**07 26 14.5**	**+0.7**
WHYH	**Whyalla**	**28.47**	**166**	P	**P**	**07 26 17.1**	**+2.2**
STKA	**Stephens Creek**	**28.62**	**158**	P	**P**	**07 26 17.4**	**+1.1**
	comp=Z,3.6nm,0.5s,baz=

GTA	**Gaotai**	**52.41**	**331**	P	**P**	**07 29 30.6**	**+0.1**	
GTA				pP	pP	07 30 12.0	-2.4	
GTA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
TUWZ	**Tuamarina**	**53.32**	**139**	P	**P**	**07 29 37.9**	**+0.9**	
ULN	**Ulaanbaatar**	**56.64**	**342**	P	**P**	**07 30 01.9**	**+1.1**	
SONM	**Songino Array**	**56.82**	**341**	P	**P**	**07 30 02.7**	**+0.6**	
	comp=Z,0.7nm,0.5s,baz=165,slow=6.0,SNR=5.0							
	comp=Z,0.7nm,0.5s							
WMQ	**Urumqi**	**61.86**	**327**	eP	**P**	**07 30 37.8**	**+1.2**	
WMQ				pmax	pmax			
	comp=Z,20nm,0.9s							
MK31	**Makanchi Array**	**66.70**	**327**	⇑Lg	Lg	07 34 31.3		
	comp=Z,0.6nm,0.5s,baz=338,slow=28,SNR=4.1							
MKAR	**Makanchi Array**	**66.70**	**327**	P	**P**	**07 31 08.1**	**+0.2**	
	comp=Z,5.4nm,0.6s,baz=126,slow=8.0,SNR=77							
	comp=Z,5.4nm,0.6s							
MAKZ	**Makanchi**	**66.88**	**326**	⇓Lg	Lg	07 34 20.8		
	comp=Z,2.8nm,1.1s							
MAKZ	**Makanchi**	**66.88**	**326**	P	**P**	**07 31 08.8**	**-0.2**	
AAK	**Ala-Archa**	**69.09**	**320**	P	**P**	**07 31 24.5**	**+1.4**	
ZALV	**Zalesovo Beam**	**70.00**	**334**	P	**P**	**07 31 27.7**	**-0.4**	
	comp=Z,2.4nm,0.6s,baz=130,slow=5.0,SNR=13							
	comp=Z,2.4nm,0.6s							
KURBB	**Kurchatov Arra**	**70.97**	**328**	⇓Pg	**P**	**07 31 35.2**	**+1.1**	
	comp=Z,5.8nm,0.6s							
KURBB				⇓Lg	Lg	07 32 05.6		
	comp=Z,10nm,0.5s							
KURBB	**Kurchatov Arra**	**70.97**	**328**	P	**P**	**07 31 34.2**	**+0.2**	
	comp=Z,6.4nm,0.8s,baz=129,slow=5.1,SNR=34							
	comp=Z,6.4nm,0.8s							
KURK	**Kurchatov**	**70.97**	**328**	⇑Pg	**P**	**07 31 34.7**	**+0.6**	
	comp=Z,9.3nm,0.9s							
KURK				⇓Lg	Lg	07 32 05.6		
	comp=Z,6.9nm,0.8s							
KURK	**Kurchatov**	**70.97**	**328**	P	**P**	**07 31 34.3**	**+0.2**	
KURK				IAmb	IAmb	07 31 35.1		
	comp=Z,9.4nm,0.9s							
SIMJ	**Simiganj**	**71.08**	**314**	P	**P**	**07 31 34.6**	**-0.6**	
KKAR	**Karatay Array**	**71.91**	**319**	P	**P**	**07 31 39.8**	**-0.1**	
BVA0	**Borovoye Array**	**76.52**	**328**	Pg	**P**	**07 32 04.4**	**-1.9**	
	comp=Z,3.4nm,1.1s,baz=109,slow=8.9,SNR=7.9							
BVA0				Lg	Lg	07 32 46.3		
	comp=Z,1.9nm,0.7s,baz=112,slow=28,SNR=4.5							
BVAR	**Borovoye Array**	**76.52**	**328**	P	**P**	**07 32 06.3**	**-0.1**	
	comp=Z,1.9nm,0.8s,baz=116,slow=6.8,SNR=8.6							
	comp=Z,1.9nm,0.8s							
BRVK	**Borovoye**	**76.60**	**328**	⇑Lg	Lg	07 32 48.6		
	comp=Z,3.7nm,0.8s							
UOSS	**Minazif**	**77.38**	**297**	P	**P**	**07 32 12.1**	**+0.4**	
UOSS				IAmb	IAmb	07 32 18.4		
	comp=Z,14nm,1.3s							
ABKAR	**Akbulak array**	**81.04**	**322**	P	**P**	**07 32 30.9**	**-0.1**	
ABPO	**Ambohimpanom**	**81.10**	**252**	P	**P**	**07 32 31.2**	**-1.0**	
ABPO				IAmb	IAmb	07 32 47.4		
	comp=Z,12nm,1.4s							
QSPA	**South Pole Qui**	**84.57**	**180**	P	**P**	**07 32 48.4**	**-0.6**	
QSPA	**South Pole Qui**	**84.57**	**180**	P	**P**	**07 32 48.3**	**-0.7**	
	comp=Z,1.9nm,0.9s,baz=50,slow=1.1,SNR=6.0							
	comp=Z,1.9nm,0.9s							
RAYN	**Ar Rayn**	**86.77**	**294**	P	**P**	**07 33 00.6**	**-0.1**	
RAYN				IAmb	IAmb	07 33 01.5		
	comp=Z,4.3nm,0.7s							

IDC ***23*** *07:21:28.5±1.6,58°.36N×155°.41W,h110km±13km,mb3.3/7, mbtmp3.7/10,Error ellipse: s-maj=26.5km s-min=16.4km az=28.0*

NEIC ***23*** *07:21:28.8±0.8,58°.20N±0°.05×155°.43W±0°.07, h124km±4km,Error ellipse: s-maj=7.4km s-min=5.7km az=180.0*

AEIC ***23*** *07:21:29.8±0.9,58°.19N±0°.05×155°.42W±0°.08, h120km±3km,ML3.6,mb3.6/2(NEIC),ML3.5/102(NEIC), Error ellipse: s-maj=6.7km s-min=5.7km az=174.0*

ISC 23 07:21:28.9±0.7,58°.24N±0°.05×155°.38W±0°.04, h124km±5km,n286,σ0.83/278,mb3.6/6,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ACHA	**Angle Creek He**	**0.04**	**130**		**Pn**	**07 21 45.7**	**-0.2**
ACHA					**Sn**	**07 21 58.0**	**-0.6**
ANCK	**Angle Creek**	**0.07**	**238**		**Pn**	**07 21 45.7**	**-0.1**
ANCK					**Sn**	**07 21 58.3**	**-0.4**
KCE	**Katmai Mt Cerb**	**0.11**	**86**		**Pn**	**07 21 46.1**	**+0.3**
KVTA	**Katmai Vly 10**	**0.15**	**18**		**Pn**	**07 21 46.0**	**0.0**
KCG	**Knife Ck. Glac**	**0.16**	**63**		**Pn**	**07 21 46.0**	**0.0**
CNTC	**Contact Creek**	**0.27**	**276**		**Pn**	**07 21 45.9**	**-0.4**
CNTC					**Sn**	**07 21 58.5**	**-1.0**
Q17K	**Contact Creek**	**0.27**	**276**	P	**Pn**	**07 21 45.9**	**-0.4**
	baz=107						
Q17K				S	**Sn**	**07 21 58.5**	**-1.0**
	baz=107						
KELA	**Mount Kelaz**	**0.28**	**318**		**Pn**	**07 21 46.0**	**-0.3**
KAHC	**Katmai Hardscr**	**0.46**	**25**		**Pn**	**07 21 47.2**	**+0.1**
KAHC	**Katmai Hardscr**	**0.46**	**25**	P	**Pn**	**07 21 47.3**	**+0.1**
	baz=205						
KAHG	**Katmai Hook Gl**	**0.51**	**59**		**Pn**	**07 21 47.7**	**+0.3**
KAHG					**Sn**	**07 22 01.9**	**+0.5**
KAPH	**Katmai Pasha**	**0.66**	**56**		**Pn**	**07 21 48.7**	**+0.3**
KAPH					**Sn**	**07 22 03.7**	**+0.6**
Q16K	**King Salmon**	**0.80**	**304**		**Pn**	**07 21 49.3**	**-0.1**
Q16K					**Sn**	**07 22 04.3**	**-0.7**
Q16K	**King Salmon**	**0.80**	**304**	P	**Pn**	**07 21 49.3**	**-0.1**
	baz=126						
Q16K				S	**Sn**	**07 22 04.5**	**-0.5**
	baz=126						
P17K	**Kvichak River**	**1.11**	**331**		**Pn**	**07 21 52.5**	**+0.3**
P17K					**Sn**	**07 22 10.4**	**+0.3**
P17K	**Kvichak River**	**1.11**	**331**	P	**Pn**	**07 21 52.5**	**+0.3**
	baz=152						
P17K				S	**Sn**	**07 22 10.7**	**+0.6**
	baz=152						
Q19K	**Cape Douglas,**	**1.15**	**52**	Pn	**Pn**	**07 21 53.2**	**+0.5**
Q19K	**Cape Douglas,**	**1.15**	**52**		**Sn**	**07 22 11.4**	**+0.6**
Q19K	**Cape Douglas,**	**1.15**	**52**	P	**Pn**	**07 21 53.2**	**+0.5**
	baz=232						
Q19K				S	**Sn**	**07 22 11.8**	**+1.0**
	baz=232						
P18K	**Big Mountain,**	**1.16**	**4**	Pn	**Pn**	**07 21 52.7**	**-0.2**
P18K	**Big Mountain,**	**1.16**	**4**		**Sn**	**07 22 11.0**	**-0.1**
P18K	**Big Mountain,**	**1.16**	**4**	P	**Pn**	**07 21 52.9**	**0.0**
	baz=185						
R16K	**Pilot Point**	**1.35**	**241**		**Pn**	**07 21 54.0**	**-0.8**
R16K	**Pilot Point**	**1.35**	**241**	IAML		07 22 14.1	
	comp=E,517nm,0.7s						
R16K				IAML		07 22 14.8	
	comp=N,632nm,1.1s						
R16K	**Pilot Point**	**1.35**	**241**	P	**Pn**	**07 21 54.0**	**-0.8**
	baz=61						
OHAK	**Old Harbor**	**1.52**	**131**		**Pn**	**07 21 55.9**	**-0.8**
OHAK	**Old Harbor**	**1.52**	**131**	IAML		07 22 17.3	
	comp=E,762nm,0.3s						
OHAK	**Old Harbor**	**1.52**	**131**	P	**Pn**	**07 21 55.9**	**-0.8**
	baz=311						
KDAK	**Kodiak Island**	**1.56**	**106**	IAML		07 22 20.9	
	comp=E,412nm,0.2s						
KDAK				IAML		07 22 24.3	
	comp=E,385nm,0.3s						
KDAK	**Kodiak Island**	**1.56**	**106**	P	**Pn**	**07 21 56.7**	**-0.5**
	comp=E,140nm,0.3s,baz=321,slow=0.4,SNR=903						
KDAK				S	**Sn**	**07 22 17.8**	**-0.9**
	comp=E,116nm,0.4s,baz=250,slow=23,SNR=18						
KDAK				LR	LR	07 22 36.0	
	comp=E,74nm,19.4s,baz=332,slow=42						
P16K	**Nushagak River**	**1.58**	**301**		**Pn**	**07 21 57.3**	**-0.1**
P16K	**Nushagak River**	**1.58**	**301**	P	**Pn**	**07 21 57.3**	**-0.1**
	baz=121						
Q20K	**Shuyak Island**	**1.62**	**75**	P	**Pn**	**07 21 58.2**	**+0.3**
	baz=256						
SYI	**Shuyak Island**	**1.62**	**75**		**Pn**	**07 21 58.4**	**+0.5**
SYI				IAML		07 22 21.7	
	comp=N,697nm,0.5s						
O18K	**Koktuh Hills**	**1.63**	**3**		**Pn**	**07 21 58.0**	**0.0**
O18K	**Koktuh Hills**	**1.63**	**3**	P	**Pn**	**07 21 58.0**	**0.0**
	baz=184						
O17K	**Koliganek Bris**	**1.78**	**331**		**Pn**	**07 21 59.6**	**-0.1**
O17K	**Koliganek Bris**	**1.78**	**331**	P	**Pn**	**07 21 59.6**	**-0.1**
	baz=151						
P19K	**Oil Pt**	**1.81**	**37**		**Pn**	**07 22 00.9**	**+0.8**
P19K					**Sn**	**07 22 25.3**	**+1.2**
P19K	**Oil Pt**	**1.81**	**37**	IAML		07 22 26.4	
	comp=E,360nm,0.5s						
P19K				IAML		07 22 26.7	
	comp=N,520nm,0.5s						
P19K	**Oil Pt**	**1.81**	**37**	P	**Pn**	**07 22 00.9**	**+0.8**
	baz=219						
P19K				S	**Sn**	**07 22 25.3**	**+1.2**
	baz=219						
O16K	**Kokwok River B**	**1.96**	**315**		**Pn**	**07 22 01.8**	**-0.1**
O16K	**Kokwok River B**	**1.96**	**315**	IAML		07 22 27.3	
	comp=N,362nm,0.8s						
O16K				IAML		07 22 28.0	
	comp=E,421nm,0.9s						
O16K	**Kokwok River B**	**1.96**	**315**	P	**Pn**	**07 22 01.8**	**-0.1**
	baz=134						
ANNW	**Aniakchak Nort**	**1.99**	**231**		**Pn**	**07 22 02.4**	**0.0**
O19K	**Port Alsworth**	**2.04**	**15**		**Pn**	**07 22 03.1**	**+0.1**
O19K	**Port Alsworth**	**2.04**	**15**	IAML		07 22 31.1	
	comp=N,192nm,0.5s						
O19K				IAML		07 23 00.4	
	comp=E,201nm,0.5s						
O19K	**Port Alsworth**	**2.04**	**15**	P	**Pn**	**07 22 03.1**	**+0.1**
	baz=196						
ILSW	**Iliamna Southw**	**2.10**	**32**		**Pn**	**07 22 04.2**	**+0.4**
ILSW	**Iliamna Southw**	**2.10**	**32**	IAML		07 22 32.8	
	comp=E,166nm,0.8s						
IVE	**Iliamna Volcan**	**2.16**	**33**		**Pn**	**07 22 05.2**	**+0.6**
O20K	**Slope Mountain**	**2.33**	**36**		**Pn**	**07 22 07.6**	**+0.9**
O20K	**Slope Mountain**	**2.33**	**36**	P	**Pn**	**07 22 07.6**	**+0.9**
	baz=218						
N18K	**Kilae Creek**	**2.47**	**354**		**Pn**	**07 22 08.6**	**+0.3**
N18K	**Kilae Creek**	**2.47**	**354**	P	**Pn**	**07 22 08.6**	**+0.3**
	baz=174						
N17K	**Nushagak Hills**	**2.48**	**339**		**Pn**	**07 22 08.5**	**0.0**
N17K	**Nushagak Hills**	**2.48**	**339**	P	**Pn**	**07 22 08.5**	**0.0**
	baz=158						
O15K	**Ungalikthiuk R**	**2.50**	**294**		**Pn**	**07 22 08.6**	**-0.2**
O15K	**Ungalikthiuk R**	**2.50**	**294**	P	**Pn**	**07 22 08.6**	**-0.2**
	baz=111						
CNPM	**China Poot**	**2.51**	**57**	Pn	**Pn**	**07 22 09.5**	**+0.6**
CNPM				IAML		07 22 39.7	
	comp=E,187nm,0.4s						
CHGN	**Chignik**	**2.54**	**222**		**Pn**	**07 22 08.1**	**-1.3**
CHGN	**Chignik**	**2.54**	**222**	IAML		07 22 40.0	
	comp=N,186nm,0.1s						
CHGN				IAML		07 22 42.3	
	comp=E,195nm,0.1s						
CHGN	**Chignik**	**2.54**	**222**	P	**Pn**	**07 22 08.1**	**-1.3**
	baz=39						
RSO	**Redoubt South**	**2.61**	**30**		**Pn**	**07 22 10.7**	**+0.4**
N19K	**Bonanza Creek**	**2.63**	**10**		**Pn**	**07 22 11.2**	**+0.7**
N19K	**Bonanza Creek**	**2.63**	**10**	P	**Pn**	**07 22 11.2**	**+0.7**
	baz=191						
DFR	**Drift River**	**2.74**	**29**		**Pn**	**07 22 12.6**	**+0.7**
BRLK	**Bradley Lake**	**2.79**	**55**		**Pn**	**07 22 12.4**	**-0.1**
BRLK	**Bradley Lake**	**2.79**	**55**	IAML		07 22 45.8	
	comp=E,206nm,0.4s						
N16K	**Nishlik Lake**	**2.84**	**324**		**Pn**	**07 22 13.0**	**-0.1**
N16K	**Nishlik Lake**	**2.84**	**324**	P	**Pn**	**07 22 13.0**	**-0.1**
	baz=142						
BRSE	**Bradley Lake S**	**2.84**	**56**		**Pn**	**07 22 13.4**	**+0.2**
BRSE	**Bradley Lake S**	**2.84**	**56**	P	**Pn**	**07 22 13.4**	**+0.2**
	baz=239						
SVW2	**Sparrevohn**	**2.87**	**358**	Pn	**Pn**	**07 22 13.6**	**0.0**
SVW2	**Sparrevohn**	**2.87**	**358**	P	**Pn**	**07 22 14.0**	**+0.4**
S14K	**Fog Glacier**	**2.99**	**231**	P	**Pn**	**07 22 14.6**	**-0.6**
	baz=48						
VNFG	**Fog Glacier, M**	**2.99**	**231**		**Pn**	**07 22 14.6**	**-0.6**
VNFG	**Fog Glacier, M**	**2.99**	**231**	IAML		07 23 15.2	
	comp=E,236nm,1.7s						
VNFG				IAML		07 23 53.6	
	comp=N,188nm,2.6s						
N15K	**Kwethluk River**	**3.10**	**311**		**Pn**	**07 22 16.6**	**0.0**
N15K	**Kwethluk River**	**3.10**	**311**	IAML		07 23 09.7	
	comp=E,51nm,0.8s						
N15K				IAML		07 23 12.2	
	comp=N,70nm,1.0s						
N15K	**Kwethluk River**	**3.10**	**311**	P	**Pn**	**07 22 16.6**	**0.0**
	baz=128						
O14K	**Tigyukauivet M**	**3.23**	**291**	Pn	**Pn**	**07 22 18.1**	**-0.2**
O14K				IAML		07 23 10.0	
	comp=N,57nm,1.0s						
O14K	**Tigyukauivet M**	**3.23**	**291**	P	**Pn**	**07 22 18.1**	**-0.1**
	baz=107						
M18K	**Stony River**	**3.27**	**356**		**Pn**	**07 22 19.5**	**+0.7**
M18K	**Stony River**	**3.27**	**356**	P	**Pn**	**07 22 19.5**	**+0.7**
	baz=176						
M16K	**Timber Creek**	**3.33**	**329**		**Pn**	**07 22 20.0**	**+0.4**
M16K	**Timber Creek**	**3.33**	**329**	IAML		07 23 16.1	
	comp=E,42nm,2.0s						
M16K	**Timber Creek**	**3.33**	**329**	P	**Pn**	**07 22 20.0**	**+0.4**
	baz=146						
M17K	**Holitna River**	**3.34**	**343**		**Pn**	**07 22 20.4**	**+0.8**
M17K	**Holitna River**	**3.34**	**343**	IAML		07 23 00.4	
	comp=N,84nm,1.1s						
M17K				IAML		07 23 01.6	
	comp=E,69nm,1.3s						
M17K	**Holitna River**	**3.34**	**343**	P	**Pn**	**07 22 20.4**	**+0.8**
	baz=184						
SLKM	**Skilak Lake**	**3.49**	**47**		**Pn**	**07 22 22.2**	**+0.5**
SEW	**Seward**	**3.58**	**56**		**Pn**	**07 22 23.1**	**+0.2**
SEW	**Seward**	**3.58**	**56**	P	**Pn**	**07 22 23.0**	**+0.2**
	baz=240						
M15K	**Kasigluk River**	**3.66**	**315**		**Pn**	**07 22 23.6**	**-0.3**
M15K	**Kasigluk River**	**3.66**	**315**	P	**Pn**	**07 22 23.6**	**-0.3**
	baz=131						
N14K	**Kuskokwak Cree**	**3.67**	**300**		**Pn**	**07 22 23.6**	**-0.4**
N14K	**Kuskokwak Cree**	**3.67**	**300**	P	**Pn**	**07 22 23.6**	**-0.4**
	baz=116						
O22K	**Cooper Landing**	**3.67**	**50**		**Pn**	**07 22 24.5**	**+0.5**
M19K	**Big River Lodg**	**3.71**	**7**		**Pn**	**07 22 25.0**	**+0.4**
M19K	**Big River Lodg**	**3.71**	**7**	P	**Pn**	**07 22 25.4**	**+0.8**
	baz=188						
STLK	**Strandline Lak**	**3.73**	**27**		**Pn**	**07 22 26.1**	**+1.2**
M20K	**Styx River**	**3.83**	**16**		**Pn**	**07 22 27.6**	**+1.4**
M20K	**Styx River**	**3.83**	**16**	P	**Pn**	**07 22 27.6**	**+1.4**
	baz=198						
FIS	**Fire Island**	**3.92**	**40**		**Pn**	**07 22 28.4**	**+1.1**
L19K	**White Mountain**	**3.97**	**4**		**Pn**	**07 22 28.9**	**+0.9**
L19K	**White Mountain**	**3.97**	**4**	IAML		07 24 43.9	
	comp=N,26nm,3.4s						
L19K	**White Mountain**	**3.97**	**4**	P	**Pn**	**07 22 28.9**	**+0.9**
	baz=184						
SUA	**Susitna One**	**3.99**	**34**		**Pn**	**07 22 29.1**	**+0.7**
SUA	**Susitna One**	**3.99**	**34**	IAML		07 23 15.1	
	comp=E,86nm,0.8s						
SUA				IAML		07 23 17.3	
	comp=N,54nm,0.6s						
SUA	**Susitna One**	**3.99**	**34**	P	**Pn**	**07 22 29.1**	**+0.7**
	baz=218						
SDPT	**Sand Point**	**4.03**	**226**		**Pn**	**07 22 27.2**	**-1.6**
SDPT	**Sand Point**	**4.03**	**226**	IAML		07 23 35.7	
	comp=N,88nm,2.4s						
SDPT				IAML		07 23 49.7	
	comp=E,80nm,2.8s						
SDPT	**Sand Point**	**4.03**	**226**	P	**Pn**	**07 22 27.2**	**-1.6**
	baz=42						
L16K	**Owhat River**	**4.05**	**331**		**Pn**	**07 22 29.4**	**+0.4**
L16K	**Owhat River**	**4.05**	**331**	P	**Pn**	**07 22 29.3**	**+0.4**
	baz=148						
RC01	**Rabbit Creek A**	**4.05**	**43**		**Pn**	**07 22 29.1**	**+0.1**
RC01	**Rabbit Creek A**	**4.05**	**43**	IAML		07 23 16.6	
	comp=N,94nm,0.5s						
RC01	**Rabbit Creek A**	**4.05**	**43**	P	**Pn**	**07 22 29.1**	**+0.1**
	baz=227						
L18K	**Granite Mounta**	**4.05**	**351**	Pn	**Pn**	**07 22 29.6**	**+0.5**
CNBA	**Chernabura Isl**	**4.14**	**216**	Pn	**Pn**	**07 22 30.4**	**+0.1**
CNBA				IAML		07 23 32.9	
	comp=E,50nm,2.2s						
CNBA				IAML		07 23 58.0	
	comp=N,58nm,3.4s						
L17K	**Donlin**	**4.17**	**341**		**Pn**	**07 22 30.9**	**+0.2**
L17K	**Donlin**	**4.17**	**341**	P	**Pn**	**07 22 30.9**	**+0.2**
	baz=159						
M14K	**Bethel**	**4.20**	**310**		**Pn**	**07 22 30.7**	**-0.3**
M14K	**Bethel**	**4.20**	**310**	IAML		07 24 49.0	
	comp=E,48nm,3.5s						
M14K				IAML		07 25 07.0	
	comp=N,60nm,2.8s						
M14K	**Bethel**	**4.20**	**310**	P	**Pn**	**07 22 30.7**	**-0.3**
	baz=125						
SKT	**Skwentna**	**4.22**	**26**	Pn	**Pn**	**07 22 32.4**	**+1.0**
SKT				IAML		07 23 26.2	
	comp=E,26nm,1.4s						
SKT				IAML		07 23 37.3	
	comp=N,29nm,3.2s						
P23K	**Montague Islan**	**4.48**	**63**		**Pn**	**07 22 34.6**	**-0.1**
P23K	**Montague Islan**	**4.48**	**63**	P	**Pn**	**07 22 34.6**	**-0.1**
	baz=250						
PS1A	**Pavlof South-1**	**4.49**	**234**		**Pn**	**07 22 33.9**	**-1.1**
PMR	**Palmer**	**4.61**	**40**	P	**Pn**	**07 22 36.4**	**-0.1**
L15K	**Ungalak Mounta**	**4.62**	**321**		**Pn**	**07 22 37.0**	**+0.4**
L15K	**Ungalak Mounta**	**4.62**	**321**	P	**Pn**	**07 22 37.0**	**+0.4**
	baz=136						
M13K	**Dall Lake**	**4.63**	**302**		**Pn**	**07 22 36.7**	**0.0**
M13K	**Dall Lake**	**4.63**	**302**	P	**Pn**	**07 22 36.7**	**0.0**
	baz=115						
K17K	**Iditarod**	**4.72**	**343**		**Pn**	**07 22 38.8**	**+0.8**
K17K	**Iditarod**	**4.72**	**343**	IAML		07 24 09.4	
	comp=N,28nm,2.6s						
K17K				IAML		07 24 24.7	
	comp=E,28nm,4.2s						
K17K	**Iditarod**	**4.72**	**343**	P	**Pn**	**07 22 38.8**	**+0.8**
	baz=161						
TTA	**Tatalina**	**4.72**	**357**	Pn	**Pn**	**07 22 38.9**	**+0.8**
TTA				IAML		07 25 11.7	
	comp=N,17nm,3.7s						
TTA	**Tatalina**	**4.72**	**357**	P	**Pn**	**07 22 39.2**	**+1.1**
KNK	**Knik Glacier**	**4.73**	**45**		**Pn**	**07 22 37.4**	**-0.8**
KNK	**Knik Glacier**	**4.73**	**45**	P	**Pn**	**07 22 37.3**	**-0.8**
	baz=230						
GHO	**Glory Hole Cre**	**4.80**	**40**		**Pn**	**07 22 38.5**	**-0.8**
GHO	**Glory Hole Cre**	**4.80**	**40**	IAML		07 23 32.2	
	comp=N,54nm,0.3s						
GHO				IAML		07 23 32.6	
	comp=E,54nm,0.4s						
L14K	**Kuka Creek**	**4.83**	**313**		**Pn**	**07 22 39.7**	**+0.3**
L14K	**Kuka Creek**	**4.83**	**313**	IAML		07 24 30.5	
	comp=N,30nm,3.8s						
L14K				IAML		07 24 52.1	
	comp=E,38nm,4.2s						
L14K	**Kuka Creek**	**4.83**	**313**	P	**Pn**	**07 22 39.7**	**+0.3**
	baz=126						
Q23K	**Middleton Isla**	**4.84**	**72**		**Pn**	**07 22 39.8**	**+0.2**
Q23K	**Middleton Isla**	**4.84**	**72**	P	**Pn**	**07 22 39.8**	**+0.2**
	baz=259						
MID	**Middleton Isla**	**4.85**	**72**	P	**Pn**	**07 22 40.0**	**+0.3**
CUT	**Chulitna**	**4.89**	**29**	Pn	**Pn**	**07 22 40.3**	**0.0**
GLI	**Glacier Island**	**4.98**	**54**		**Pn**	**07 22 41.5**	**0.0**
GLI	**Glacier Island**	**4.98**	**54**	P	**Pn**	**07 22 40.1**	**-1.4**
	baz=241						
SML	**Sawmill**	**5.03**	**42**		**Pn**	**07 22 41.1**	**-1.1**
SML	**Sawmill**	**5.03**	**42**	IAML		07 23 36.7	
	comp=E,38nm,0.9s						
SML				IAML		07 23 49.1	
	comp=N,38nm,2.1s						
SML	**Sawmill**	**5.03**	**42**	P	**Pn**	**07 22 41.1**	**-1.1**
	baz=228						
HIN	**Hinchinbrook I**	**5.04**	**61**		**Pn**	**07 22 42.7**	**+0.4**
K15K	**Wolf Creek Mou**	**5.09**	**326**		**Pn**	**07 22 43.5**	**+0.5**
K15K	**Wolf Creek Mou**	**5.09**	**326**	IAML		07 24 03.8	
	comp=N,31nm,3.0s						
K15K				IAML		07 24 33.5	
	comp=E,23nm,3.7s						
K15K	**Wolf Creek Mou**	**5.09**	**326**	P	**Pn**	**07 22 43.5**	**+0.5**
	baz=141						
K20K	**Telida**	**5.18**	**7**		**Pn**	**07 22 44.8**	**+0.6**
K20K	**Telida**	**5.18**	**7**	IAML		07 24 11.6	
	comp=N,16nm,3.9s						
K20K				IAML		07 24 53.1	
	comp=E,16nm,4.1s						
K20K	**Telida**	**5.18**	**7**	P	**Pn**	**07 22 44.8**	**+0.6**
	baz=188						
FID	**Port Fidalgo**	**5.19**	**57**		**Pn**	**07 22 43.3**	**-1.0**
J18K	**Innoko River**	**5.29**	**353**		**Pn**	**07 22 46.6**	**+1.0**
J18K				IAML		07 25 44.5	
	comp=E,10nm,4.2s						
J18K				IAML		07 25 47.8	
	comp=N,10nm,3.0s						
SCM	**Sheep Creek Mo**	**5.41**	**45**		**Pn**	**07 22 47.2**	**-0.2**
SCM	**Sheep Creek Mo**	**5.41**	**45**	P	**Pn**	**07 22 47.2**	**-0.2**
	baz=232						
EYAK	**Cordova Ski Ar**	**5.44**	**61**		**Pn**	**07 22 47.5**	**-0.2**
EYAK	**Cordova Ski Ar**	**5.44**	**61**	P	**Pn**	**07 22 47.7**	**0.0**
EYAK	**Cordova Ski Ar**	**5.44**	**61**	P	**Pn**	**07 22 47.5**	**-0.2**
	baz=249						
CAST	**Castle Rocks**	**5.45**	**16**		**Pn**	**07 22 48.7**	**+0.9**
CAST	**Castle Rocks**	**5.45**	**16**	P	**Pn**	**07 22 48.7**	**+0.9**
	baz=199						
J17K	**VABM Dome**	**5.48**	**342**		**Pn**	**07 22 48.7**	**+0.5**
J17K	**VABM Dome**	**5.48**	**342**	P	**Pn**	**07 22 48.7**	**+0.5**
	baz=159						
WAT7	**Susitna Watana**	**5.63**	**32**		**Pn**	**07 22 49.1**	**-1.1**
DIV	**Divide**	**5.67**	**55**		**Pn**	**07 22 50.8**	**0.0**
J16K	**Anvik River**	**5.67**	**335**		**Pn**	**07 22 51.0**	**+0.2**
J16K	**Anvik River**	**5.67**	**335**	P	**Pn**	**07 22 51.0**	**+0.2**
	baz=151						
WAT1	**Susitna Watana**	**5.71**	**33**		**Pn**	**07 22 50.2**	**-1.1**
WAT1	**Susitna Watana**	**5.71**	**33**	P	**Pn**	**07 22 50.2**	**-1.1**
	baz=219						
WAT6	**Susitna Watana**	**5.77**	**38**		**Pn**	**07 22 51.1**	**-1.1**
WAT6	**Susitna Watana**	**5.77**	**38**	P	**Pn**	**07 22 51.1**	**-1.1**
	baz=224						
KLU	**Klutina**	**5.78**	**52**		**Pn**	**07 22 51.8**	**-0.5**
KLU	**Klutina**	**5.78**	**52**	P	**

LOGN	Logan Glacier	7.76	64			Pn		07 23 19.5	+0.4	
MAPS	Pakushin South	7.84	241			Pn		07 23 18.6	-1.6	
M27K	Edge Creek, AK	7.87	53			Pn		07 23 21.0	+0.4	
M27K	Edge Creek, AK baz=244	7.87	53	P		Pn		07 23 21.0	+0.4	
ANM	Nome	7.95	327	Pn		Pn		07 23 22.6	+1.2	
PCA	Pinnacle	7.99	70			Pn		07 23 22.4	+0.3	
PINM	Pinnacle baz=263	8.00	70	P		Pn		07 23 22.5	+0.3	
YKU2	Yakutat	8.24	74	P		Pn		07 23 26.6	+1.2	
BCPM	Bancas Point	8.29	71			Pn		07 23 26.3	+0.3	
PNL	Peninsula	8.39	73			Pn		07 23 27.6	+0.2	
PNL	Peninsula	8.39	73	P		Pn		07 23 27.8	+0.4	
PNL	Peninsula baz=267	8.39	73	P		Pn		07 23 27.6	+0.2	
F20K	Avaraart Lake	8.85	359			Pn		07 23 34.0	+0.5	
O29M	Mount Kennedy	8.85	69			Pn		07 23 34.4	+0.6	
O29M	Mount Kennedy baz=264	8.85	69	P		Pn		07 23 34.4	+0.6	
P29M	Windy Craggy	9.23	74			Pn		07 23 39.2	+0.4	
P29M	Windy Craggy baz=269	9.23	74	P		Pn		07 23 39.2	+0.4	
E19K	Redstone River	9.29	356	Pn		Pn		07 23 40.0	+0.5	
M29M	Somme Creek	9.38	56			Pn		07 23 41.5	+0.7	
M29M	Somme Creek baz=251	9.38	56	P		Pn		07 23 41.5	+0.7	
HYT	Haines Junctio	9.44	67	Pn		Pn		07 23 43.5	+1.9	
P30M	Million Dollar	9.64	71			Pn		07 23 44.9	+0.6	
P30M	Million Dollar baz=266	9.64	71	P		Pn		07 23 44.9	+0.6	
L29M	L29M	9.76	53			Pn		07 23 46.4	+0.5	
L29M	L29M baz=248	9.76	53	P		Pn		07 23 46.4	+0.5	
O30N	Mendenhall	10.12	67			Pn		07 23 50.9	+0.1	
I28M	Miner Creek	10.25	39	Pn		Pn		07 23 53.5	+1.0	
SKAG	Skagway	10.46	75			Pn		07 23 56.1	+0.9	
SKAG	Skagway	10.46	75	P		Pn		07 23 57.1	+1.9	
WHY	Whitehorse	10.71	68	Pn		Pn		07 23 59.2	+0.6	
SIT	Sitka	10.81	88	P		Pn		07 24 02.1	+2.2	
JIS	Juneau Island	11.06	81	P		Pn		07 24 05.1	+1.9	
J30M	Hart River	11.09	47	Pn		Pn		07 24 05.2	+1.4	
P33M	Teslin, Yukon	11.71	71	Pn		Pn		07 24 12.6	+0.6	
Q32M	Nakina River	12.06	77			Pn		07 24 18.2	+1.5	
R33M	Jennings River	12.69	74			Pn		07 24 26.6	+1.8	
DLBC	Dease Lake comp=N,4.6nm,0.5s,baz=276,slow=7.8,SNR=16	13.30	78	P		Pn		07 24 34.6	+2.0	
DLBC				S		Sn		07 26 56.4	-2.7	
	comp=N,0.9nm,0.5s,baz=135,slow=20,SNR=1.4									
T35M	Bob Quinn	13.51	85	Pn		P		07 24 38.6	-1.5	
INK	Inuvik	13.99	35	Pn		Pn		07 24 41.2	-0.1	
INK	Inuvik comp=N,0.5nm,0.7s,baz=215,slow=12,SNR=5.8	13.99	35	P		Pn		07 24 42.2	+0.9	
C36M	Paulatuk	17.49	38	P		P		07 25 24.1	+0.1	
C36M				IAmb		IAmb		07 25 42.6		
	comp=Z,7.4nm,1.5s									
A36M	Sachs Harbour	18.41	30	P		P		07 25 32.7	-1.2	
A36M				IAmb		IAmb		07 25 56.2		
	comp=Z,2.3nm,0.9s									
YKA	Yellowknife Ar comp=Z,0.6nm,0.7s,baz=275,slow=10.0,SNR=14 comp=Z,0.6nm,0.7s	20.35	61	P		P		07 25 55.7	+0.7	
PETK	Petropavlovsk- comp=Z,6.2nm,1.0s,baz=70,slow=10,SNR=5.4 comp=Z,6.2nm,1.0s	26.50	279	P		P		07 26 56.0	+1.6	
NVAR	Mina Array Bea comp=Z,0.3nm,0.6s,baz=300,slow=9.6,SNR=3.8 comp=Z,0.3nm,0.6s	31.05	113	P		P		07 27 37.1	+2.1	
PDAR	Pinedale Array comp=Z,0.7nm,0.5s,baz=322,slow=4.3,SNR=14 comp=Z,0.7nm,0.5s	32.26	98	P		P		07 27 47.2	+1.6	
TXAR	Lajitas Array comp=Z,0.4nm,0.6s,baz=286,slow=6.5,SNR=4.5 comp=Z,0.4nm,0.6s	45.59	106	P		P		07 29 37.2	+0.7	
SONM	Songino Array comp=Z,0.3nm,0.4s,baz=68,slow=3.9,SNR=2.3 comp=Z,0.3nm,0.4s	54.82	305	P		P		07 30 45.7	-0.1	
FINES	FINESS Array B comp=Z,0.2nm,0.3s,baz=8.3,slow=10,SNR=1.1 comp=Z,0.2nm,0.3s	60.65	359	P		P		07 31 24.5	-1.6	

*NEIC **23** 08:49:08.5±1.5,27.86N±0.09×67.74E±0.10,h10km±2km, mb4.3/26, Error ellipse: s-maj=16.8km s-min=12.2km az=137.0*

*IDC **23** 08:49:10.7±0.8,28.14N×67.33E,h0km, mb4.0/26, mbtmp4.0/28, ML4.0/1, MS3.6/29, Error ellipse: s-maj=18.4km s-min=13.8km az=19.0*

*MOS **23** 08:49:11.6±1.2,28.34N×67.53E,h12km, mb4.7/20, Error ellipse: s-maj=9.0km s-min=4.8km az=90.2*

ISC 23 08:49:11.3±0.4,**28.08N**±0.05×**67.44E**±0.04,**h10km**,**n181**, σ**23**/207,**mb4.3**/56,**MS3.6**/29,**7C-1D**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
NGCH	Negor - Chabah SNR=14	6.25	246	P		Pn	08	50	45.7	+2.1
NGCH				S		Sn	08	51	55.4	+0.3
KBL	Kabul	6.58	12	Pn		Pn	08	50	49.3	+0.9
KBL				Sn		Sn	08	52	02.9	-0.7
KBL	Kabul	6.58	12	P		Pn	08	50	49.3	+0.9
KBL							08	52	02.9	
KBL	Kabul SNR=58	6.58	12	P		Pn	08	50	50.0	+1.6
KBL				S		Sn	08	52	03.1	-0.5
AJM	Ajmer	6.61	102	*e*P		Pn	08	50	51.3	+2.7
AJM				*e*S		Sn	08	52	03.3	-0.6
AJM				IAML			08	52	11.3	
	comp=N,67nm,0.6s									
AJM				IAML			08	52	14.9	
	comp=E,71nm,0.7s									
KHET	Khetri	7.39	88	*e*P		Pn	08	51	00.8	+1.5
KHET				*e*S		Sn	08	52	19.5	-3.8
NIL	Nilore	7.47	41	Pn		Pn	08	50	58.1	-2.3
NIL	Nilore	7.47	41	P		Pn	08	50	58.1	-2.3
HRA	Herat	7.70	326	Pn		Pn	08	51	05.2	+1.6
JMU	Jammu	7.93	53	*e*P		Pn	08	51	09.4	+2.8
JMU				*e*S		Sn	08	52	34.0	-2.4
KUDL	Kundal	7.99	87	*e*P		Pn	08	51	08.7	+1.2
KUDL				*e*S		Sn	08	52	33.9	-4.1
THN	Thein Dam	8.37	57	*e*P		Pn	08	51	15.0	+2.3
THN				*e*S		Sn	08	52	44.1	-3.1
THN				IAML			08	52	52.6	
	comp=E,111nm,0.6s									
THN				IAML			08	52	55.8	
	comp=E,88nm,0.4s									
BHK	Bhakra	8.48	65	*e*P		Pn	08	51	16.2	+1.9
BHK				*e*S		Sn	08	52	47.7	-2.4
BHK				IAML			08	52	51.5	
	comp=E,101nm,0.2s									
BHK				IAML			08	52	58.5	
	comp=E,148nm,0.4s									
SONA	Sohna	8.52	87	*e*P		Pn	08	51	16.2	+1.5
SONA				*e*S		Sn	08	52	47.2	-3.6
DHRM	DHARAMSHALA	8.72	59	*e*P		Pn	08	51	19.8	+2.0
DHRM				*e*S		Sn	08	52	53.6	-2.7
DHRM				IAML			08	53	02.3	
	comp=N,334nm,0.7s									
DHRM				IAML			08	53	05.6	
	comp=N,335nm,0.8s									
DHRM				IAML			08	53	06.1	
	comp=E,280nm,0.6s									
JASK	Jask - Hormozg	8.82	258	P		Pn	08	51	17.7	-1.2
SMLA	Simla	9.00	68	*e*P		Pn	08	51	22.9	+1.6
SMLA				*e*S		Sn	08	53	00.6	-2.0
SMLA				IAML			08	53	06.8	
	comp=E,265nm,0.8s									
SMLA				IAML			08	53	08.1	
	comp=E,240nm,0.8s									
WSAR	Wadi Sarin	9.29	241	Pn		Pn	08	51	25.6	+0.3
	comp=E,1.6nm,0.3s,baz=76,slow=9.4,SNR=30									
WSAR				Sn		Sn	08	53	00.6	-9.4
	comp=E,0.5nm,0.3s,baz=29,slow=3.0,SNR=5.0 comp=E,6.1nm,0.5s									
WSAR	Wadi Sarin SNR=20	9.29	241	P		Pn	08	51	24.5	-0.8
WSAR				S		Sn	08	53	04.1	-5.9
JLN	Jalan Bani Buh	9.37	233	P		Pn	08	51	24.7	-1.6
JLN				S		Sn	08	53	07.5	-4.3
WBK	Wadi Bani Khal SNR=16	9.40	236	P		Pn	08	51	27.0	+0.2
WBK				S		Sn	08	53	10.2	-2.4
BIDO	Bidbid	9.54	244	P		Pn	08	51	26.9	-1.9
DDI	Dehra Dun	9.54	74	*e*P		Pn	08	51	32.5	+3.7
DDI				*e*S		Sn	08	53	13.9	-2.3
DDI				IAML			08	53	18.9	
	comp=E,217nm,0.4s									
DDI				IAML			08	53	20.6	
	comp=E,159nm,0.5s									
SMDO	Samad	9.84	242	P		Pn	08	51	33.7	+0.7
SMDO				S		Sn	08	53	19.9	-3.7
HOQ	Hoqain	10.16	246	P		Pn	08	51	36.2	-1.1
JMDO	Jabal Madar SNR=10	10.18	238	P		Pn	08	51	33.9	-3.7
JMDO				S		Sn	08	53	29.4	-2.5
JHNI	Jhansi	10.26	102	*e*P		Pn	08	51	40.6	+2.0
JHNI				*e*S		Sn	08	53	32.4	-1.3
JHNI				IAML			08	53	33.8	
	comp=N,21nm,0.2s									
JHNI				IAML			08	53	35.4	
	comp=E,14nm,0.1s									
SHME	Shamm	10.27	261	P		Pn	08	51	39.2	+0.5
SHME	Shamm SNR=5.9	10.27	261	P		Pn	08	51	40.7	+1.9
SHME				P		Pn	08	51	40.7	+1.9
	SNR=5.9									
MDH	Madha	10.34	257	P		Pn	08	51	40.0	+0.2
MDH	Madha	10.34	257	P		Pn	08	51	39.9	+0.2
MDH				P		Pn	08	51	39.9	+0.2
MASF	Masafi	10.44	258	P		Pn	08	51	40.1	-1.0
MSFE	Esma-Masafi	10.44	258	P		Pn	08	51	38.5	-2.7
UOSS	Minazif	10.53	255			Pn	08	51	42.2	-0.2
UOSS	Minazif	10.53	255	P		Pn	08	51	42.0	-0.4
UOSS	Minazif	10.53	255	P		Pn	08	51	40.2	-2.2
UOSS				P		Pn	08	51	40.2	-2.2
SOHO	SOHO	10.56	251	P		Pn	08	51	41.6	-1.1
SOHO	SOHO	10.56	251	P		Pn	08	51	41.8	-0.9
SOHO				P		Pn	08	51	41.8	-0.9
SIMJ	Simiganj	10.63	7	Pn		Pn	08	51	43.4	-0.4
HATD	Hatta, Dubai	10.64	255	P		Pn	08	51	43.5	-0.3
HATD	Hatta, Dubai	10.64	255	P		Pn	08	51	42.6	-1.2
HATD				P		Pn	08	51	42.6	-1.2
BSY	Bisya SNR=11	10.67	242	P		Pn	08	51	45.8	+1.5
BSY				P		Pn	08	51	45.8	+1.5
	SNR=11									
ASHO	Ashiyiah	10.75	254	P		Pn	08	51	46.6	+1.3
ASHO				S		Sn	08	53	34.6	-11
ASHO	Ashiyiah SNR=7.8	10.75	254	P		Pn	08	51	47.5	+2.1
ASHO				P		Pn	08	51	47.5	+2.1
	SNR=7.8									
ASHO				S		Sn	08	53	41.0	-4.8
ASHO				S		Sn	08	53	41.0	-4.8
ARQ	Araqi SNR=6.9	10.92	247	P		Pn	08	51	51.3	+3.6
ARQ				S		Sn	08	53	46.5	-3.4
NAZ	Nazwa, Dubai	10.98	256	P		Pn	08	51	50.6	+2.1
NAZ	Nazwa, Dubai	10.98	256	P		Pn	08	51	51.6	+3.0
NAZ				P		Pn	08	51	51.6	+3.0
FAQ	Al Faqa, Dubai	11.12	255	P		Pn	08	51	51.0	+0.5
FAQ	Al Faqa, Dubai	11.12	255	P		Pn	08	51	51.2	+0.7
FAQ				P		Pn	08	51	51.2	+0.7
MHTO	MHTO	11.14	233	P		Pn	08	51	49.1	-1.6
MHTO				P		Pn	08	51	49.1	-1.6
MHTO				S		Sn	08	53	53.5	-1.8
MHTO				S		Sn	08	53	53.5	-1.8
ALNE	Al Ain	11.24	252	P		Pn	08	51	53.7	+1.6
ALNE	Al Ain SNR=8.0	11.24	252	P		Pn	08	51	54.8	+2.7
PTH	Pithoragarh	11.30	80	*e*P		Pn	08	51	53.8	+0.7
LGTI	Lohaghat	11.32	80	*e*P		Pn	08	51	51.6	-1.5
LGTI				*e*S		Sn	08	53	49.9	-10
LGTI				IAML			08	53	56.6	
	comp=E,42nm,0.5s									
LGTI				IAML			08	53	58.8	
	comp=N,72nm,1.0s									
ASUD	Al Ashush, Dub	11.39	255	P		Pn	08	51	54.7	+0.6
AKL	Akola	11.40	128	*e*P		Pn	08	51	57.7	+3.4
BTK	Batken	12.27	12	Pn		Pn	08	52	05.9	-0.3
BTK	Batken	12.27	12	P		Pn	08	52	05.9	-0.3
UMZA	Um Al Zommool	12.31	247	P		Pn	08	52	08.3	+1.6
UMZA				P		Pn	08	52	08.3	+1.6
GEYT	Alibeck comp=N,0.8nm,0.4s,baz=158,slow=20,SNR=3.9	12.55	324	Pn		Pn	08	52	10.6	+0.6
GEYT				LR		LR	08	58	18.8	
	comp=N,83nm,21.9s,baz=156,slow=44									
GYA0B	ALIBECK ARRAY	12.55	324	Pn		Pn	08	52	10.8	+0.9
KSH	Kashi	13.42	30	P		Pn	08	52	17.6	-4.4
KSH				S		Sn	08	54	32.1	-19
KSH				pmax		pmax				
	comp=Z,34nm,0.9s									
KSH				smax		smax				
	comp=N,82nm,0.9s									
KSH				smax		smax				
	comp=E,79nm,0.9s									
KSH				LR		LR				
	comp=N,510nm,15.5s									
KSH				LR		LR				
	comp=E,610nm,14.4s									
KSH				LR		LR				
	comp=Z,540nm,12.7s									
ARSB	Arslanbob	13.97	18			Pn	08	52	28.3	-1.1
ARSB	Arslanbob	13.97	18	P		Pn	08	52	28.3	-1.1
SHAO	Shalim	14.77	230	P		Pn	08	52	39.1	-1.2
TRNA	Turayna	14.91	261	P		Pn	08	52	41.4	-0.9
NRN	Naryn	15.05	26			Pn	08	52	41.4	-2.9
NRN				IAmb		IAmb	08	52	56.4	
	comp=Z,13nm,0.8s									
NRN	Naryn	15.05	26	P		Pn	08	52	41.4	-2.9
NRN				pmax		pmax				
	comp=Z,13nm,0.8s									
KK31	Karatay Array	15.20	9	Pn		Pn	08	52	45.3	-0.6
KK31	Karatay Array	15.20	9	P		Pn	08	52	45.3	-0.6
KK31				pmax		pmax				
	comp=Z,5.0nm,1.0s									
KKAR	Karatay Array	15.20	9			Pn	08	52	45.2	-0.8
KKAR	Karatay Array	15.20	9	P		Pn	08	52	45.2	-0.8
KKAR				pmax		pmax				
	comp=Z,5.0nm,1.0s									
DOK	Doka	15.42	235	P		Pn	08	52	50.1	+1.1
AAK	Ala-Archa	15.61	20	Pn		Pn	08	52	50.2	-1.4
AAK	Ala-Archa	15.61	20	*i* P		Pn	08	52	49.8	-1.8
AAK	Ala-Archa comp=Z,0.5nm,0.3s,baz=213,slow=12,SNR=8.2	15.61	20	Pn		Pn	08	52	49.9	-1.7
AAK				Sn		Sn	08	55	34.8	-10
	comp=Z,0.1nm,0.3s,baz=353,slow=8.3,SNR=2.6									
AAK				LR		LR	09	00	25.9	
	comp=Z,138nm,21.2s,baz=201,slow=43									
AAK	Ala-Archa	15.61	20	P		Pn	08	52	50.2	-1.4
AAK				S		Sn	08	55	39.8	-4.9
FRU1	Bishkek	15.81	20	Pn		Pn	08	52	51.5	-2.6
FRU1	Bishkek	15.81	20	P		Pn	08	52	51.5	-2.6
FRU1				pmax		pmax				
	comp=Z,33nm,0.3s									
BOOM	Boomskoye usch	15.95	23			Pn	08	52	54.1	-1.8
BOOM	Boomskoye usch	15.95	23	P		Pn	08	52	54.1	-1.8
BOOM				pmax		pmax				
	comp=Z,8.0nm,0.9s									
TARG	Taragay, Kyrgy	16.04	29	Pn		Pn	08	52	53.5	-3.8
TARG	Taragay, Kyrgy	16.04	29	P		Pn	08	52	53.5	-3.8
TARG				pmax		pmax				
	comp=Z,14nm,1.1s									
WHFO	Wadi Hawf	16.13	234	P		P	08	53	02.2	+0.7
ABTO	Aybut	16.84	234	P		Pn	08	53	07.3	-0.1
PRZ	Przheval'sk	16.91	29	P		Pn	08	53	05.6	-2.6
PRZ				IAmb		IAmb	08	53	19.1	
	comp=Z,20nm,0.8s									
PRZ	Przheval'sk	16.91	29	P		Pn	08	53	05.6	-2.6
PRZ				pmax		pmax				
	comp=Z,20nm,0.8s									
RAYN	Ar Rayn	20.26	262			P	08	53	45.2	-1.8
RAYN				IAmb		IAmb	08	53	54.3	
	comp=Z,8.0nm,0.9s									
RAYN	Ar Rayn	20.26	262	P		P	08	53	45.2	-1.8
RAYN				pmax		pmax				
	comp=Z,8.0nm,1.0s									
RAYN	Ar Rayn	20.26	262	P		P	08	53	47.6	+0.6
MAKZ	Makanchi	21.91	28	P		P	08	54	02.5	-2.1
MAKZ				IAmb		IAmb	08	54	14.6	
	comp=Z,15nm,1.1s									
MAKZ	Makanchi	21.91	28	P		P	08	54	02.5	-2.1
MAKZ				pmax		pmax				
	comp=Z,15nm,1.2s									
ABKAR	Akbulak array	21.92	347	P		P	08	54	04.0	-0.6
ABKAR				IAmb		IAmb	08	54	06.4	
	comp=Z,9.7nm,1.0s									
MK31	Makanchi Array	22.02	28	*i* P		P	08	54	04.0	-1.8
MKAR	Makanchi Array	22.02	28	P		P	08	54	02.6	-3.3
MKAR	Makanchi Array comp=Z,3.1nm,0.9s,baz=213,slow=11,SNR=13	22.02	28	P		P	08	54	05.6	-0.2
MKAR				S		S	08	57	54.8	-14
	comp=Z,0.1nm,0.3s,baz=97,slow=31,SNR=1.7									
MKAR				LR		LR	09	04	02.9	
	comp=Z,139nm,18.4s,baz=232,slow=40 comp=Z,3.1nm,0.9s									
GNI	Garni	22.25	309	P		P	08	54	08.4	-0.1
GNI				IAmb		IAmb	08	54	22.6	
	comp=Z,19nm,1.0s									
GNI	Garni	22.25	309	*ce*P		P	08	54	10.0	+1.5
GNI				pmax		pmax				
	comp=Z,35nm,1.8s									
GNI	Garni comp=Z,3.5nm,0.3s,baz=145,slow=2.9,SNR=7.5	22.25	309	P		P	08	54	08.9	+0.4
GNI				LR		LR	09	04	10.0	
	comp=Z,197nm,18.6s,baz=126,slow=41 comp=Z,3.5nm,0.3s									
WMQ	Urumqi	22.62	41	*e*P		P	08	54	14.8	+2.5
WMQ				pP		sP	08	54	18.8	+2.3
WMQ				pmax		pmax				
	comp=Z,18nm,1.1s									
WMQ				pmax		pmax				
	comp=Z,140nm,4.9s									
WMQ				LR		LR				
	comp=Z,180nm,17.9s									
GEVA	Gevas	22.75	303	P		P	08	54	12.6	-1.3
GEVA				IAmb		IAmb	08	54	33.9	
	comp=Z,9.9nm,1.2s									
AKTO	Aktyubinsk comp=Z,3.1nm,0.8s,baz=159,slow=11,SNR=7.4	23.45	345	P		P	08	54	20.8	+0.1
AKTO				LR		LR	09	06	15.8	
	comp=Z,46nm,20.6s,baz=28,slow=44 comp=Z,3.1nm,0.8s									
GURO	Guroymak-BITLI	23.59	303	P		P	08	54	22.1	-0.3
GURO				IAmb		IAmb	08	54	27.0	
	comp=Z,8.7nm,1.1s									
AKH	Akhalkalaki	23.65	310	P		P	08	54	23.7	+0.7
AKH	Akhalkalaki	23.65	310	P		P	08	54	23.7	+0.7
AKH				pmax		pmax				
	comp=Z,42nm,0.9s									
KURBB	Kurchatov Arra comp=Z,1.3nm,0.8s,baz=210,slow=10,SNR=6.6	24.04	18	P		P	08	54	25.9	-0.5
KURBB				LR		LR	09	05	24.0	
	comp=Z,127nm,18.4s,baz=161,slow=40 comp=Z,1.3nm,0.8s									
KURK	Kurchatov	24.15	18	P		P	08	54	25.5	-1.8
KURK				IAmb		IAmb	08	54	35.5	
	comp=Z,9.7nm,1.1s									
KURK	Kurchatov	24.15	18	*i* P		P	08	54	26.0	-1.4
KURK				pmax		pmax				
	comp=Z,11nm,1.1s									
MARD	Mardin	24.19	299	P		P	08	54	27.2	-0.8
PALK	Pallekele	24.20	146	LR		LR	09	05	20.0	
	comp=Z,196nm,18.5s,baz=81,slow=40									
ONI	Oni	24.23	313	P		P	08	54	27.7	-0.6
ONI				IAmb		IAmb	08	54	41.2	
	comp=Z,4.5nm,0.9s									
ONI	Oni	24.23	313	P		P	08	54	27.7	-0.6
ONI				pmax		pmax				
	comp=Z,4.0nm,0.9s									
NCK	Nalchik	24.59	315	*i* P		P	08	54	31.9	+0.3
NCK				pmax		pmax				
	comp=Z,8.0nm,0.6s									
BVAR	Borovoye Array comp=Z,5.1nm,0.8s,baz=176,slow=8.7,SNR=26	25.02	4	P		P	08	54	35.8	+0.5
BVAR				LR		LR	09	06	42.5	
	comp=Z,82nm,19.5s,baz=172,slow=42 comp=Z,5.1nm,0.8s									
BRVK	Borovoye	25.04	4	P		P	08	54	33.8	-1.7
BRVK				IAmb		IAmb	08	54	39.0	
	comp=Z,10nm,1.1s									
BRVK	Borovoye	25.04	4	*ce*P		P	08	54	36.3	+0.8
BRVK				pmax		pmax				
	comp=Z,11nm,1.3s									
BRVK	Borovoye	25.04	4	P		P	08	54	36.7	+1.2
KBZ	Khabaz	25.15	315	*ce*P		P	08	54	37.9	+1.4
KBZ				pmax		pmax				
	comp=Z,8.0nm,0.9s									
KBZ	Khabaz comp=Z,6.3nm,0.9s,baz=120,slow=9.9,SNR=16 comp=Z,6.3nm,0.9s	25.15	315	P		P	08	54	37.2	+0.7
KOPT	Kop Dagi	25.20	305	P		P	08	54	36.2	-1.2
KOPT				IAmb		IAmb	08	54	59.8	
	comp=Z,9.7nm,1.1s									
KIV	Kislovodsk	25.39	315	P		P	08	54	36.9	-2.0
KIV				IAmb		IAmb	08	54	43.3	
	comp=Z,13nm,1.1s									
KIV	Kislovodsk	25.39	315	*e*P		P	08	54	40.8	+1.9
KIV				pmax		pmax				
	comp=Z,10.0nm,1.1s									
KIV				MLR		MLR				
	comp=Z,44nm,15.0s									
DGZ	Jazzator, Alta	26.46	30	*i* P		P	08	54	45.7	-2.9
DGZ				pmax		pmax				
	comp=Z,11nm,1.2s									
MMAI	Mount Meron Ar comp=Z,1.04nm,18.5s

AKBB				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BURAR	**Bucovina Array**	**38.05**	**312**	P	**P**	**08 56 29.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**38.16**	**59**	*e*P	P	08 56 26.4	-4.6
HHC				pmax	pmax			
	comp=Z,5.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,47nm,4.5s							
MNK	**Minsk**	**38.95**	**324**	*i* P	**P**	**08 56 38.7**	**+1.5**
	comp=E,6.0nm,0.8s							
MNK				*i* P	**P**	**08 56 38.7**	**+1.5**
	comp=N,14nm,0.9s							
MNK				*i* P	**P**	**08 56 38.7**	**+1.5**
	comp=Z,16nm,0.8s,baz=116							
MNK				*i* PP	**PP**	**08 58 01.0**	**-5.4**
MNK				*i* S	**S**	**09 02 41.8**	**+6.1**
MNK				*i* SS	**SS**	**09 05 35.0**	**+7.9**
MNK				*i* LQ	LQ	09 09 59.2		
MNK				*i* LR	LR	09 12 58.9		
MNK	**Minsk**	**38.95**	**324**	*i* P	**P**	**08 56 38.7**	**+1.5**
MNK				*i* S	**S**	**09 02 41.7**	**+6.1**
MNK				pmax	pmax			
	comp=Z,16nm,0.8s							
MNK				pmax	pmax			
	comp=E,6.0nm,0.8s							
MNK				pmax	pmax			
	comp=N,14nm,0.9s							
NACGM	**Naroch**	**39.70**	**324**	⇓*i* P	**P**	**08 56 45.0**	**+1.4**
	comp=Z,39nm,1.4s,baz=115							
XLT	**XiLinHaoTe**	**41.79**	**55**	*e*P	P	08 57 08.3	+7.2
XLT				pmax	pmax			
	comp=Z,14nm,0.9s							
XLT				pmax	pmax			
	comp=Z,64nm,5.9s							
NRIK	**Noril'sk**	**42.93**	**10**	*i* P	**P**	**08 57 09.5**	**-0.3**
NRIK				pmax	pmax			
	comp=Z,6.0nm,1.5s							
NRIK	**Noril'sk**	**42.93**	**10**	P	**P**	**08 57 11.2**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=199,slow=13,SNR=1.9							
	comp=Z,0.9nm,0.3s							
FINES	**FINESS Array B**	**43.17**	**332**	P	**P**	**08 57 09.7**	**-2.2**
FINES	**FINESS Array B**	**43.17**	**332**	P	**P**	**08 57 11.6**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=141,slow=9.0,SNR=4.2							
FINES				LR	LR	09 18 01.4		
	comp=Z,198nm,18.7s,baz=124,slow=40							
	comp=Z,2.4nm,0.9s							
VRAC	**Vranov**	**44.01**	**313**	LR	LR	09 20 09.0		
	comp=Z,60nm,19.1s,baz=206,slow=42							
PAOL	**Paolisi**	**44.79**	**301**	P	**P**	**08 57 24.3**	**-1.0**
GEC2	**GERESS Array S**	**45.83**	**312**	P	**P**	**08 57 33.1**	**-0.4**
GERES	**GERESS Array B**	**45.83**	**312**	P	**P**	**08 57 34.3**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=98,slow=7.3,SNR=6.2							
	comp=Z,4.5nm,0.8s							
KHC	**Kasperske Hory**	**45.94**	**312**	*ce*P	**P**	**08 57 35.6**	**+1.3**
KHC				pmax	pmax			
	comp=Z,29nm,2.5s							
BRG	**Berggiesshubel**	**45.95**	**315**	*i* P	**P**	**08 57 36.3**	**+2.0**
BRG				Amp		08 57 37.9		
	comp=Z,6.2nm,0.8s							
BRG	**Berggiesshubel**	**45.95**	**315**	P	P	08 57 41.2	+6.9	
BRG				Amp		08 57 42.8		
	comp=Z,3.5nm,0.8s							
BRG	**Berggiesshubel**	**45.95**	**315**	*i* P	**P**	**08 57 36.2**	**+2.0**
BRG						08 57 41.2		
BRG				pmax	pmax			
	comp=Z,6.0nm,0.8s							
BRG				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ARCES	**ARCESS Array B**	**47.97**	**342**	P	**P**	**08 57 49.9**	**0.0**
	comp=Z,2.6nm,0.9s,baz=116,slow=8.1,SNR=3.8							
ARCES				LR	LR	09 19 60.0		
	comp=Z,98nm,19.2s,baz=75,slow=39							
	comp=Z,2.6nm,0.9s							
HFS	**Hagfors**	**48.17**	**327**	P	**P**	**08 57 52.6**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=128,slow=11,SNR=6.2							
HFS				LR	LR	09 22 04.6		
	comp=Z,118nm,18.1s,baz=101,slow=41							
	comp=Z,2.1nm,0.7s							
CN2	**Changchun**	**48.55**	**55**	*e*P	P	08 57 45.4	-9.3	
CN2				*ep*P	pP	08 57 51.4	-6.5	
CN2				*e*S	S	09 04 43.9	-12	
CN2				*es*S	pS	09 04 53.9	-6.1	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.3s							
NOA	**NORSAR Array B**	**49.60**	**328**	P	**P**	**08 58 02.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=107,slow=7.5,SNR=5.1							
NOA				LR	LR	09 22 21.6		
	comp=Z,70nm,18.4s,baz=270,slow=40							
	comp=Z,1.0nm,0.7s							
KSRS	**Korea Array**	**50.95**	**63**	P	**P**	**08 58 14.6**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=274,slow=7.2,SNR=8.3							
KSRS				LR	LR	09 23 05.2		
	comp=Z,49nm,18.2s,baz=40,slow=40							
	comp=Z,2.6nm,0.8s							
TGY	**Tagaytay City**	**51.44**	**94**	LR	LR	09 21 29.8		
	comp=Z,174nm,21.9s,baz=253,slow=38							
LEM	**Lembang**	**52.04**	**126**	LR	LR	09 22 40.9		
	comp=Z,48nm,18.4s,baz=296,slow=38							
KLR	**Kul'dur**	**52.79**	**48**	LR	LR	09 24 32.0		
	comp=Z,64nm,18.8s,baz=294,slow=40							
JNU	**Nakatsue**	**54.11**	**68**	LR	LR	09 24 59.5		
	comp=Z,56nm,18.9s,baz=242,slow=40							
ESDC	**Sonseca Array**	**58.99**	**301**	P	**P**	**08 59 09.6**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=71,slow=7.7,SNR=6.4							
ESDC				LR	LR	09 26 16.1		
	comp=Z,47nm,19.6s,baz=266,slow=38							
	comp=Z,1.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**62.65**	**271**	P	**P**	**08 59 36.4**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=56,slow=8.5,SNR=10							
	comp=Z,1.6nm,0.7s							
SEY	**Seymchan**	**63.13**	**31**	*i* P	P	08 59 33.5	-5.4	
SEY				pmax	pmax			
	comp=Z,2.0nm,1.0s							
BORG	**Borgarnes**	**64.46**	**332**	LR	LR	09 30 44.9		
	comp=Z,106nm,18.8s,baz=62,slow=39							
PETK	**Petropavlovsk-**	**68.21**	**40**	LR	LR	09 34 02.0		
	comp=Z,50nm,19.8s,baz=64,slow=39							
WRA	**Warramunga Arr**	**80.37**	**119**	P	**P**	**09 01 25.1**	**+1.9**
	comp=Z,2.4nm,0.9s,baz=319,slow=4.6,SNR=5.3							
	comp=Z,2.4nm,0.9s							
ASAR	**Alice Springs**	**82.15**	**122**	P	**P**	**09 01 34.0**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=306,slow=5.5,SNR=17							
	comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**83.67**	**14**	P	**P**	**09 01 40.7**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=317,slow=3.8,SNR=2.7							
	comp=Z,0.3nm,0.9s							
YKA	**Yellowknife Ar**	**89.73**	**1**	P	**P**	**09 02 10.3**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=349,slow=5.6,SNR=8.6							
	comp=Z,0.6nm,0.9s							
CTA	**Charters Tower**	**89.93**	**113**	LR	LR	09 49 02.7		
	comp=Z,32nm,18.2s,baz=238,slow=40							

IDC 23 08:51:08.7±2.2,2°.51N×128°.80E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=183.4km s-min=22.9km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.96**	**167**	P	P	08 56 15.1	+0.1
	0.5nm,0.5s,baz=346,slow=10,SNR=2.8						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.49**	**169**	P	P	08 56 47.4	-0.6
	0.1nm,0.3s,baz=0.6,slow=8.3,SNR=1.8						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**59.73**	**325**	P	P	09 01 16.2	+0.8
	0.4nm,0.4s,baz=114,slow=8.0,SNR=7.2						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.88**	**327**	P	P	09 01 43.2	-0.1
	0.4nm,0.5s,baz=124,slow=5.6,SNR=4.2						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**69.47**	**327**	P	P	09 02 18.3	-0.6
	0.5nm,0.6s,baz=122,slow=5.2,SNR=2.8						
	0.5nm,0.6s						

RSNC 23 08:57:37.1±0.7,6°.20N×73°.69W,h109km±7km,ML0.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.64**	**52**	*e*P	Pn	08 57 55.1	0.0
BARC				*e*S	Sn	08 58 08.7	+0.1
SPBC	**San Pablo de B**	**0.67**	**215**	*e*P	Pn	08 57 54.8	-0.4
SPBC				*e*S	Sn	08 58 08.8	0.0
SPBC				*i*		08 58 14.8		
	comp=Z,2.2nm,0.1s						
SPBC	**San Pablo de B**	**0.67**	**215**	*e*P	Sn	08 58 08.8	0.0
RUSC	**La Rusia**	**0.68**	**117**	*e*P	Pn	08 57 55.0	-0.7
RUSC				*e*S	Sn	08 58 09.2	-0.5
RUSC				*i*		08 58 10.3		
	comp=Z,0.8nm,0.2s						
PTBC	**PUERTO BERRIO,**	**0.83**	**294**	*e*P	Pn	08 57 55.8	-0.8
PTBC				*e*S	Sn	08 58 10.6	-0.6
PTBC				*i*		08 58 12.7		
	comp=Z,1.0nm,0.1s						
PTBC	**PUERTO BERRIO,**	**0.83**	**294**	*e*P	Sn	08 58 10.4	-0.9
NORC	**Norcasia**	**1.33**	**242**	*e*P	Pn	08 58 01.3	-0.7
NORC				*e*S	Sn	08 58 20.6	-0.2
NORC				*i*		08 58 21.8		
	comp=Z,1.2nm,0.2s						

RSNC 23 08:57:44.0±0.5,6°.74N×73°.14W,h143km±5km,ML1.1, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.15**	**198**	*e*P	Pn	08 58 03.4	-0.3
BARC				*e*S	Sn	08 58 18.2	-0.3
BARC				*i*		08 58 20.7		
	comp=Z,2.1nm,0.3s						
PAMC	**Pamplona, Colo**	**0.73**	**36**	*e*P	Pn	08 58 06.3	-0.3
PAMC				*e*S	Sn	08 58 23.4	-0.3
PAMC				*i*		08 58 26.1		
	comp=Z,2.2nm,0.2s						
RUSC	**La Rusia**	**0.84**	**176**	*e*P	Pn	08 58 06.6	-0.8
RUSC				*e*S	Sn	08 58 24.8	-0.4
RUSC				*i*		08 58 26.8		
	comp=Z,1.9nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.33**	**261**	*e*S	Sn	08 58 31.3	-0.7
PTBC				*i*		08 58 33.4		
	comp=Z,1.3nm,0.1s						
SPBC	**San Pablo de B**	**1.43**	**221**	*e*S	Sn	08 58 33.9	-0.1
SPBC				*i*		08 58 36.0		
	comp=Z,2.3nm,0.1s						
OCAC	**Ocana**	**1.50**	**353**	*e*S	Sn	08 58 36.0	+0.5
NORC	**Norcasia**	**2.08**	**236**	*e*S	Sn	08 58 48.0	+0.8

*SCB **23** 09:00:47.4±1.4,20°.95S×66°.39W,h247km±14km,ML3.5/4, Error ellipse: s-maj=5.5km s-min=3.9km az=2.0*

ISC 23 09:00:47.0±2.3,20°.96S±0°.06×66°.38W±0°.06, h255km±21km,n26,σ1§24/36,1C-1D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOVT	**TarijaAcel**	**1.67**	**111**	Pg	**Pn**	**09 01 27.8**	**+0.5**
PB08	**IPOC Station P**	**2.72**	**287**	⇓*e*P	**Pn**	**09 01 38.0**	**+0.8**
PB08				*e*S	**S**	**09 02 17.7**	**+0.7**
PB08				IAML		09 02 23.0		
	comp=E,32nm,0.2s						
PB08	**IPOC Station P**	**2.72**	**287**	Pg	**Pn**	**09 01 37.7**	**+0.5**
SOEO	**Opoqueri**	**2.77**	**329**	Pg	**Pn**	**09 01 38.9**	**+1.0**
SOTI	**Planta Incahua**	**2.79**	**67**	Pg	**Pn**	**09 01 37.7**	**0.0**
PB09	**IPOC Station P**	**2.79**	**252**	⇓*e*P	**Pn**	**09 01 39.9**	**+2.2**
PB09				*e*S	**S**	**09 02 18.9**	**+1.0**
PB09				IAML		09 02 20.6		
	comp=N,20nm,0.4s						
PB09	**IPOC Station P**	**2.79**	**252**	Pg	**Pn**	**09 01 39.2**	**+1.5**
LVC	**Limon Verde**	**2.87**	**234**	Pg	**Pn**	**09 01 38.5**	**-0.2**
SOET	**ToroToro**	**2.88**	**11**	Pg	**Pn**	**09 01 38.9**	**0.0**
PB01	**IPOC Station P**	**2.90**	**268**	*e*P	**Pn**	**09 01 39.4**	**+0.7**
PB01				*e*S	**S**	**09 02 18.7**	**-1.1**
PB01				IAML		09 02 20.5		
	comp=E,75nm,0.3s						
PB01	**IPOC Station P**	**2.90**	**268**	Pg	**Pn**	**09 01 39.5**	**+0.7**
PB01				Sg	**S**	**09 02 18.5**	**-1.3**
PB01				IAML		09 02 20.2		
	comp=E,48nm,0.3s						
GO01	**Chusmiza**	**2.93**	**295**	*e*P	**Pn**	**09 01 40.0**	**+0.5**
GO01				*e*S	**S**	**09 02 23.5**	**+2.4**
GO01				IAML		09 02 32.2		
	comp=N,97nm,0.1s						
GO01	**Chusmiza**	**2.93**	**295**	Pg	**Pn**	**09 01 40.2**	**+0.6**
PB11	**IPOC Station P**	**3.29**	**291**	*i* P	**Pn**	**09 01 42.9**	**-0.2**
PB11				Sg	**S**	**09 02 26.1**	**-1.5**
PB11	**IPOC Station P**	**3.29**	**291**	Pg	**Pn**	**09 01 43.1**	**0.0**
PB11				Sg	**S**	**09 02 25.9**	**-1.7**
PB11				IAML		09 02 28.1		
	comp=N,85nm,0.1s						
PB02	**IPOC Station P**	**3.30**	**263**	Pg	**Pn**	**09 01 43.8**	**+0.7**
PB02				Sg	**S**	**09 02 25.6**	**-2.0**
PB02				IAML		09 02 29.2		
	comp=N,79nm,0.2s						
HMBC	**Humberstone**	**3.35**	**281**	*e*P	**Pn**	**09 01 43.3**	**-0.4**
HMBC				*e*S	**S**	**09 02 26.4**	**-2.3**
PB07	**IPOC Station P**	**3.35**	**256**	Pg	**Pn**	**09 01 44.7**	**+0.9**
PB07				Sg	**S**	**09 02 26.8**	**-2.1**
PB07				IAML		09 02 27.5		
	comp=N,82nm,0.2s						
PB06	**IPOC Station P**	**3.44**	**239**	Pg	**Pn**	**09 01 46.1**	**+1.4**
PB15	**IPOC Station P**	**3.64**	**231**	Pg	**Pn**	**09 01 48.0**	**+1.0**
PB16	**IPOC Station P**	**3.93**	**311**	Pg	**Pn**	**09 01 51.6**	**+0.8**
SOEJ	**Jacaque**	**4.31**	**336**	Pg	**Pn**	**09 01 56.7**	**+1.4**
BBOE	**La Paz, Chanca**	**4.39**	**340**	Pg	**Pn**	**09 01 57.4**	**+1.2**
BBOD	**La Paz, Gloria**	**4.78**	**334**	Pg	**Pn**	**09 02 01.6**	**+0.7**
LPAZ	**La Paz**	**4.93**	**340**	Pg	**Pn**	**09 02 02.7**	**0.0**
GO02	**Mina Guanaco**	**5.12**	**215**	Pg	**Pn**	**09 02 05.2**	**+0.5**

*IDC **23** 09:07:29.2±1.3,9°.42N×126°.51E,h0km,mb3.7/5, mbtmp3.7/6,ML3.9/1,MS3.2/1,Error ellipse: s-maj=53.2km s-min=21.0km az=79.0*

ISC 23 09:07:34.1±1.1,9°.4N±0°.1×126°.6E±0°.2,h35km,n13, σ1§81/7,mb3.5/5,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.54**	**203**	P	**Pn**	**09 08 10.4**	**-2.5**
	24nm,0.3s,baz=18,slow=11,SNR=1.4						
DAV				Sn	**Sn**	**09 08 45.1**	**+2.5**
	76nm,0.3s,baz=278,slow=1.2,SNR=2.3						
	101nm,0.4s						
WRA	**Warramunga Arr**	**30.17**	**165**	P	**P**	**09 13 41.5**	**+0.3**
	0.4nm,0.6s,baz=346,slow=9.6,SNR=1.4						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**33.66**	**168**	P	**P**	**09 14 11.6**	**-0.3**
	0.2nm,0.3s,baz=348,slow=7.1,SNR=7.9						
	0.2nm,0.3s						
ASAJ	**Asahikawa**	**37.26**	**19**	LR	LR	09 30 11.6		
	comp=Z,39nm,20.0s,baz=145,slow=36						
H11S3	**WAKE ISLAND Hy**	**39.88**	**72**	T	T	09 58 11.5		
	baz=262,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**39.90**	**72**	T	T	09 58 06.8		
	baz=262,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**39.90**	**72**	T	T	09 58 08.0		
	baz=262,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**40.25**	**71**	T	T	09 58 44.2		
	baz=266,slow=75,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**40.25**	**71**	T	T	09 58 34.1		
	baz=266,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**40.26**	**71**	T	T	09 58 44.1		
	baz=266,slow=75,SNR=6.9						
STKA	**Stephens Creek**	**43.51**	**161**	P	**P**	**09 15 34.9**	**+0.5**
	0.7nm,0.4s,baz=346,slow=10,SNR=5.2						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**52.88**	**323**	P	**P**	**09 16 46.9**	**+0.3**
	0.1nm,0.4s,baz=130,slow=7.2,SNR=2.9						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**85.08**	**340**	P	**P**	**09 20 06.4**	**+0.3**
	2.7nm,0.9s,baz=82,slow=6.5,SNR=6.2						
	2.7nm,0.9s						

*NNC **23** 09:17:19.3±0.7,51°.70N×75°.42E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=15.7km s-min=4.1km az=26.0, Suspected Mining explosion.*

*IDC **23** 09:17:22.3±1.0,51°.71N×75°.67E,h0km,mbtmp2.5/4, ML1.8/4,Error ellipse: s-maj=22.7km s-min=8.2km az=29.0*

ISC 23 09:17:20.4±1.0,51°.73N±0°.08×75°.54E±0°.05,h0km,n12, σ1§23/12,8C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.18**	**119**	⇑Pg	**Pb**	**09 17 60.0**	**-0.8**
	4.7nm,0.7s						
KURBB				⇑Lg	Lg	09 18 31.2		
	45nm,0.7s						
KURBB	**Kurchatov Arra**	**2.18**	**119**	Pn	**Pn**	**09 17 58.5**	**+0.6**
	0.2nm,0.3s,baz=299,slow=19,SNR=26						
KURBB				Lg	Lg	09 18 29.9		
	0.4nm,0.3s,baz=306,slow=31,SNR=9.0						
	1.0nm,0.4s						
KURK	**Kurchatov**	**2.19**	**116**	⇑Pg	**Pb**	**09 18 00.1**	**-0.7**
	3.4nm,0.8s						
KURK				⇓Lg	Lg	09 18 30.2		
	12nm,0.7s						
BVA0	**Borovoye Array**	**3.41**	**294**	⇓Pg	**Pb**	**09 18 21.2**	**-0.5**
	3.7nm,1.3s,baz=112,slow=13,SNR=5.1						
BVA0				Lg	Lg	09 19 03.8		
	4.2nm,0.6s,baz=104,slow=22,SNR=8.8						
BVAR	**Borovoye Array**	**3.41**	**294**	Pn	**Pn**	**09 18 16.4**	**+1.6**
	baz=110,slow=13,SNR=5.7						
BVAR				Sn	**Sb**	**09 19 01.1**	**-2.6**
	0.2nm,0.3s,baz=107,slow=25,SNR=11						
	0.9nm,0.5s						
BRVK	**Borovoye**	**3.48**	**295**	⇓Pg	**Pb**	**09 18 22.8**	**-0.1**
	2.9nm,1.2s						
BRVK				⇑Lg	Lg	09 19 05.7		
	4.9nm,0.6s						
OTUK	**Ortayu**	**4.05**	**212**	⇑Lg	Lg	09 19 26.4		
	3.1nm,0.6s						
I46RU	**ZALESOVO INFRA**	**6.05**	**65**	I	I	09 51 00.0		
	baz=252,slow=326,SNR=9.9						
ZALV	**Zalesovo Beam**	**6.05**	**65**	Pn	**Pn**	**09 18 52.0**	**+1.1**
	0.2nm,0.3s,baz=253,slow=15,SNR=4.1						
ZALV				Sn	**Sn**	**09 20 00.8**	**0.0**
	0.1nm,0.3s,baz=248,slow=31,SNR=2.2						
ZALV				Lg	Lg	09 20 33.4		
	0.2nm,0.3s,baz=247,slow=26,SNR=1.6						
	0.7nm,0.5s						
MAKZ	**Makanchi**	**6.48**	**137**	⇑Lg	Lg	09 20 44.5		
	3.4nm,0.8s						
MK31	**Makanchi Array**	**6.62**	**136**	⇑Sn	**Sn**	**09 20 16.3**	**+1.1**
	0.7nm,0.6s,baz=336,slow=16,SNR=3.8						
MK31				⇑Lg	Lg	09 20 46.9		
	2.0nm,0.6s,baz=325,slow=26,SNR=5.9						
MKAR	**Makanchi Array**	**6.62**	**136**	Pn	**Pn**	**09 18 59.3**	**+0.3**
	baz=319,slow=14,SNR=3.5						
MKAR				Sn	**Sn**	**09 20 14.7**	**-0.5**
	0.1nm,0.3s,baz=328,slow=16,SNR=2.2						
MKAR				Lg	Lg	09 20 47.0		
	0.3nm,0.3s,baz=320,slow=25,SNR=8.6						
	0.3nm,0.8s						

*IDC **23** 09:18:47.1±1.8,0°.74N×125°.86E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=193.1km s-min=22.9km az=65.0*

*DJA **23** 09:18:49.1±1.8,1°.N±10°×12°.7E±°,h19km±19km,M3.4/6, mB5.7/1,MLv3.4/6,Mw(mB)5.2/1*

ISC 23 09:18:49.0±1.2,1°.2N±0°.1×126°.7E±0°.1,h10km,n10, σ1§99/9,mb3.4/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.82**	**122**	P	**Pg**	**09 19 05.9**	**+1.1**
LBMI	**Labuha**	**2.01**	**156**	P	**Pn**	**09 19 24.5**	**+1.4**
KMSI	**Cibinong**	**2.77**	**257**	P	Pg	09 19 53.8	+12
SANI	**Sanana**	**3.31**	**192**	P	**Pn**	**09 19 40.9**	**-0.1**
GTOI	**Gorontalo**	**3.71**	**261**	P	**Pn**	**09 19 48.4**	**+2.0**
NLAI	**Namlea**	**4.44**	**174**	P	**Pn**	**09 19 58.5**	**+2.0**
WRA	**Warramunga Arr**	**22.33**	**161**	P	**P**	**09 23 44.5**	**-2.7**
	0.6nm,0.3s,baz=336,slow=11,SNR=7.0						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**25.71**	**165**	P	**P**	**09 24 17.7**	**-2.0**
	0.3nm,0.3s,baz=345,slow=12,SNR=19						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.59**	**326**	P	**P**	**09 28 53.2**	**0.0**
	0.1nm,0.3s,baz=117,slow=6.5,SNR=2.9						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**63.83**	**328**	P	**P**	**09 29 20.3**	**-1.2**
	0.3nm,0.5s,baz=122,slow=5.7,SNR=1.9						
	0.3nm,0.5s						

SJA 23 09:32:13.9±0.6,32°.00S×68°.39W,h116km±4km,ML4.1, MW4.1,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAL	**Salagasta**	**0.70**	**212**	*e*P	Pn	09 32 33.8	+0.8
RTLS	**Leoncito**	**0.80**	**285**	*e*P	Pn	09 32 34.8	+0.8
ARCO	**CERRO ARCO**	**0.95**	**208**	*e*P	Pn	09 32 36.0	+0.7
ARCO				IAML		09 32 36.3		
	comp=Z,71nm,0.3s						
AAGR	**Agrelo**	**1.14**	**199**	*e*P	Pn	09 32 38.0	+0.9
AAGR				IAML		09 32 56.9		
	comp=Z,63nm,0.2s						
DOCA	**Reserva Natura**	**1.20**	**330**	*e*P	Pn	09 32 39.0	+0.9
DOCA				*e*S	Sn	09 32 57.6	+1.2
ACCO	**Cerro Coronel**	**1.52**	**338**	*e*P	Pn	09 32 43.0	+1.3
ACCO				*e*S	Sn	09 33 05.6	+2.8
ACDV	**Cuesta del Vie**	**1.93**	**341**	*e*P	Pn	09 32 47.9	+1.4
ACDV				*e*S	Sn	09 33 12.7	+1.4
VA03	**San Esteban**	**1.98**	**247**	*e*P	Pn	09 32 48.2	+1.3
AROD	**Rodeo**	**2.05**	**333**	*e*P	Pn	09 32 49.6	+1.4
AROD				*e*S	Sn	09 33 15.7	+1.4
CO03	**El Pedregal**	**2.28**	**300**	*e*P	Pn	09 32 52.1	+1.3
CO02	**Combarbal**	**2.36**	**289**	*e*P	Pn	09 32 53.0	+1.1
CO02				*e*S	Sn	09 33 11.0	-10
CO02				IAML		09 33 48.5		
	comp=Z,915nm,1.0s						
ROC1	**El Roble**	**2.42**	**246**	*e*P	Pn	09 32 53.3	+0.6
ROC1				*e*S	Sn	09 33 06.4	-16
CO01	**Juntas del Tor**	**2.49**	**324**	*e*P	Pn	09 32 56.1	+2.4
CO01				*e*S	Sn	09 33 26.4	+2.3
AGUA	**GUANDACOL**	**2.51**	**358**	*e*P	Pn	09 32 56.4	+2.6
RFA	**San Rafael**	**2.76**	**181**	*e*P	Pn	09 32 57.9	+0.8
RFA				*e*S	Sn	09 33 39.0	+8.8
ACLC	**CERRO LA CRUZ**	**2.85**	**26**	*e*P	Pn	09 32 59.6	+1.3
VCA	**Vinchina**	**3.26**	**3**	*e*S	Sn	09 33 54.9

MT01					*e*S		**Sg**	**09 33 09.5**	**-0.1**
MT01					IAML			09 33 10.9	
	comp=E,11µm,0.3s								
MT01	**Popeta**	**1.11**	**136**		IAML			09 33 31.1	
	comp=Z,545nm,1.4s								
MT09	**Talagante**	**1.22**	**126**				**Pg**	**09 32 57.4**	**+0.1**
MT09	**Talagante**	**1.22**	**126**	⇓	*i* P		**Pg**	**09 32 57.2**	**-0.1**
MT09					*e*S		**Sg**	**09 33 12.5**	**-0.6**
MT09					IAML			09 33 13.7	
	comp=N,14µm,0.5s								
MT05	**Renca**	**1.24**	**106**				**Pg**	**09 32 57.8**	**+0.1**
MT05	**Renca**	**1.24**	**106**		*e*P		**Pg**	**09 32 57.9**	**+0.1**
MT05	**Renca**	**1.24**	**106**	⇓	*i* P		**Pg**	**09 32 57.8**	**+0.1**
MT05					*e*S		**Sg**	**09 33 13.3**	**-0.6**
MT05					IAML			09 33 22.8	
	comp=E,6µm,0.4s								
PEL	**Peldehue**	**1.25**	**94**				**Pn**	**09 32 58.2**	**+0.1**
PEL	**Peldehue**	**1.25**	**94**		*e*P		**Pn**	**09 32 58.2**	**+0.1**
PEL	**Peldehue**	**1.25**	**94**		*e*P		**Pg**	**09 32 57.8**	**-0.1**
PEL					*e*S		**Sb**	**09 33 14.4**	**-0.1**
PEL					IAML			09 33 20.7	
	comp=N,4µm,0.4s								
MT10	**Hacienda Santa**	**1.39**	**99**		*e*P		**Pn**	**09 33 00.0**	**-0.1**
MT10					*i* S		**Sg**	**09 33 18.4**	**0.0**
VA03	**San Esteban**	**1.39**	**78**				**Pb**	**09 33 00.4**	**-0.1**
VA03	**San Esteban**	**1.39**	**78**		*e*P		**Pn**	**09 33 00.0**	**-0.2**
VA03					*e*S		**Sg**	**09 33 18.3**	**-0.3**
VA03					IAML			09 33 26.4	
	comp=E,6µm,0.8s								
VA03	**San Esteban**	**1.39**	**78**		*e*S		**Pb**	**09 33 00.5**	**-0.1**
MT14	**Cerro Cal¡n**	**1.41**	**104**		*e*P		**Pn**	**09 33 00.6**	**+0.1**
MT14					*e*S		**Sb**	**09 33 18.7**	**-0.4**
MT14					IAML			09 33 22.5	
	comp=E,10µm,0.5s								
MT16	**CCHEN**	**1.43**	**105**				**Pb**	**09 33 00.9**	**-0.2**
MT16	**CCHEN**	**1.43**	**105**	⇑	*e*P		**Pn**	**09 33 00.6**	**0.0**
MT16					*e*S		**Sb**	**09 33 18.9**	**-0.8**
MT16					IAML			09 33 24.5	
	comp=N,3µm,0.6s								
MT03	**Universidad Ad**	**1.46**	**108**				**Pn**	**09 33 01.3**	**+0.2**
MT03	**Universidad Ad**	**1.46**	**108**		IAML			09 33 41.0	
	comp=Z,1µm,0.6s								
MT03	**Universidad Ad**	**1.46**	**108**	⇓	*e*P		**Pn**	**09 33 01.3**	**+0.2**
MT03					*e*S		**Sb**	**09 33 19.8**	**-0.7**
MT03					IAML			09 33 25.6	
	comp=N,7µm,0.4s								
MT03	**Universidad Ad**	**1.46**	**108**		*e*P		**Pb**	**09 33 01.4**	**-0.2**
MT15	**Las Vizcachas**	**1.49**	**112**	⇓	*e*P		**Pn**	**09 33 01.7**	**+0.1**
MT15					*e*S		**Sn**	**09 33 20.3**	**-1.2**
MT15					IAML			09 33 28.4	
	comp=N,8µm,0.4s								
MT12	**Pirque**	**1.51**	**117**		*e*P		**Pn**	**09 33 01.9**	**+0.1**
MT12					*e*S		**Sn**	**09 33 20.7**	**-1.3**
FCH	**Farellones**	**1.60**	**100**	⇓	*e*P		**Pn**	**09 33 03.7**	**+0.5**
FCH					*e*S		**Sn**	**09 33 24.4**	**-0.1**
FCH					IAML			09 33 29.5	
	comp=E,3µm,0.7s								
BO04	**La Punta**	**1.60**	**126**				**Pn**	**09 33 03.0**	**0.0**
BO04	**La Punta**	**1.60**	**126**		*e*P		**Pn**	**09 33 03.1**	**0.0**
BO04					*e*S		**Sn**	**09 33 23.5**	**-0.6**
BO04					IAML			09 33 30.4	
	comp=E,2µm,0.4s								
BO01	**Tunca**	**1.61**	**146**				**Pn**	**09 33 02.8**	**-0.3**
BO01	**Tunca**	**1.61**	**146**		IAML			09 33 42.2	
	comp=Z,502nm,0.5s								
BO01	**Tunca**	**1.61**	**146**		*i* P		**Pn**	**09 33 02.7**	**-0.3**
BO01					*e*S		**Sn**	**09 33 21.5**	**-2.8**
BO01	**Tunca**	**1.61**	**146**		*e*P		**Pn**	**09 33 02.9**	**-0.1**
MT13	**San Alfonso**	**1.72**	**114**				**Pb**	**09 33 05.5**	**-0.6**
LMEL	**Las Melosas**	**1.82**	**116**		Pn		**Pn**	**09 33 07.0**	**+0.8**
GO05	**Huala**	**1.95**	**174**		Pn		**Pn**	**09 33 07.9**	**0.0**
BO02	**Sierra Bellavi**	**2.08**	**147**				**Pn**	**09 33 10.3**	**+0.7**
CO02	**Combarbal**	**2.10**	**28**		Pn		**Pn**	**09 33 10.4**	**+0.5**
CO06	**Fray Jorge**	**2.42**	**11**		Pn		**Pn**	**09 33 13.9**	**-0.3**
CO03	**El Pedregal**	**2.55**	**30**		Pn		**Pn**	**09 33 16.6**	**+0.5**
CO03	**El Pedregal**	**2.55**	**30**		*e*S		**Pn**	**09 33 16.9**	**+0.8**
ML02	**Panimavida**	**2.77**	**167**				**Pn**	**09 33 19.7**	**+0.7**
GO04	**Tololo Observa**	**3.11**	**22**		Pn		**Pn**	**09 33 25.3**	**+1.4**
CO05	**La Serena**	**3.23**	**14**		Pn		**Pn**	**09 33 25.6**	**+0.2**
BI05	**Punta Hualpn**	**3.77**	**193**		Pn		**Pn**	**09 33 30.9**	**-1.9**
LCO	**Las Campanas**	**4.23**	**18**		Pn		**Pn**	**09 33 39.5**	**+0.2**
AC05	**El Transito**	**4.51**	**22**		Pn		**Pn**	**09 33 44.6**	**+1.4**
AC05	**El Transito**	**4.51**	**22**		*e*S		**Pn**	**09 33 44.7**	**+1.5**
AC04	**Llanos de Chal**	**4.93**	**11**		Pn		**Pn**	**09 33 48.2**	**-0.6**
H03N1	**Juan Fernandez**	**5.66**	**264**		T		T	09 40 28.6	
	baz=90,slow=74,SNR=46								
H03N3	**Juan Fernandez**	**5.67**	**264**		T		T	09 40 41.0	
	baz=90,slow=74,SNR=49								
H03N2	**Juan Fernandez**	**5.68**	**264**		T		T	09 40 24.4	
	baz=90,slow=74,SNR=43								
H03S1	**Juan Fernandez**	**5.69**	**260**		T		T	09 40 17.1	
	baz=86,slow=75,SNR=139								
H03S3	**Juan Fernandez**	**5.69**	**260**		T		T	09 40 15.9	
	baz=86,slow=75,SNR=124								
GO03	**Copiap**	**5.70**	**18**		Pn		**Pn**	**09 33 59.2**	**-0.2**
H03S2	**Juan Fernandez**	**5.70**	**260**		T		T	09 40 21.8	
	baz=86,slow=75,SNR=226								
GO06	**Curarrehue**	**6.53**	**175**				**Pn**	**09 34 12.1**	**+1.2**
LR03	**Panguipulli**	**6.56**	**181**		Pn		**Pn**	**09 34 11.9**	**+0.8**
AC02	**Maricunga**	**6.74**	**24**				**Pn**	**09 34 14.3**	**+0.2**
LR04	**Corral**	**6.88**	**188**		Pn		**Pn**	**09 34 14.5**	**-1.0**
AC01	**Pan de Azucar**	**7.02**	**12**		Pn		**Pn**	**09 34 17.1**	**-0.4**
LR05	**Currie**	**7.16**	**179**		Pn		**Pn**	**09 34 19.8**	**+0.5**
PLCA	**Paso Flores**	**7.77**	**171**				**Pn**	**09 34 28.7**	**+0.9**
PLCA	**Paso Flores**	**7.77**	**171**		Pn		**Pn**	**09 34 28.8**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=346,slow=15,SNR=32								
PLCA					Sn		**Sn**	**09 36 00.6**	**+4.4**
	baz=95,slow=23								
PLCA					Lg		Lg	09 36 32.3	
	comp=Z,0.2nm,0.3s,baz=86,slow=24,SNR=2.0								
PLCA					LR		LR	09 37 54.5	
	comp=Z,70nm,19.5s,baz=350,slow=41								
	comp=Z,2.3nm,0.4s								
GO02	**Mina Guanaco**	**8.19**	**17**		Pn		**Pn**	**09 34 32.3**	**-1.5**
LL05	**Los Muermos**	**8.39**	**187**		Pn		**Pn**	**09 34 36.1**	**-0.2**
PB14	**IPOC Station P**	**8.54**	**11**		Pn		**Pn**	**09 34 37.5**	**-1.2**
LL01	**San Ignacio de**	**9.30**	**181**		Pn		**Pn**	**09 34 47.9**	**-0.9**
LVC	**Limon Verde**	**10.80**	**16**		LR		LR	09 39 19.5	
	comp=Z,171nm,20.8s,baz=196,slow=38								
CPUP	**Villa Florida**	**14.53**	**66**		Pn		**Pn**	**09 36 01.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=225,slow=13,SNR=2.2								
CPUP					Sn		**Sn**	**09 38 42.4**	**+0.5**
	baz=48,slow=6.2								
CPUP					Lg		Lg	09 39 53.1	
	comp=Z,0.1nm,0.3s,baz=347,slow=18,SNR=1.8								
CPUP					LR		LR	09 41 57.0	
	comp=Z,198nm,3.3s,baz=298,slow=39								
	comp=Z,0.9nm,0.3s								
SIV	**San Ignacio**	**19.74**	**33**		P		**P**	**09 37 04.4**	**-0.4**
	baz=219,slow=13,SNR=9.3								
	comp=Z,2.0nm,0.8s								
PTLB	**Pontes e Lacer**	**21.14**	**37**		P		**P**	**09 37 19.5**	**-0.5**
PTLB					IAmb		IAmb	09 37 21.1	
	comp=Z,12nm,1.3s								
ETMB	**Extrema**	**23.78**	**15**		P		**P**	**09 37 48.4**	**+0.8**
SAML	**Samuel**	**25.39**	**21**		P		**P**	**09 38 04.1**	**+1.7**
SAML					IAmb		IAmb	09 38 05.1	
	comp=Z,5.9nm,0.9s								
BDFB	**Brasilia**	**27.91**	**57**		P		**P**	**09 38 25.3**	**0.0**
	comp=Z,1.2nm,0.4s,baz=187,slow=8.1,SNR=3.6								
	comp=Z,1.2nm,0.4s								
BOSC	**San Juan Bosco**	**30.34**	**347**		P		**P**	**09 38 47.6**	**+0.7**
RPN	**Rapa Nui**	**32.58**	**271**		LR		LR	09 49 07.2	
	comp=Z,55nm,19.9s,baz=84,slow=31								
BELA	**Belgrano 2**	**47.82**	**170**		P		**P**	**09 41 13.1**	**+1.0**
SNAA	**Sanae**	**52.49**	**158**		P		**P**	**09 41 48.1**	**+0.5**
SNAA					IAmb		IAmb	09 41 49.8	
	comp=Z,7.7nm,1.1s								
QSPA	**South Pole Qui**	**57.17**	**180**		P		**P**	**09 42 21.7**	**0.0**
QSPA					IAmb		IAmb	09 42 27.2	
	comp=Z,6.3nm,1.2s								
QSPA	**South Pole Qui**	**57.17**	**180**		P		**P**	**09 42 22.8**	**+1.1**
	comp=Z,2.9nm,1.0s,baz=142,slow=5.7,SNR=7.8								
	comp=Z,2.9nm,1.0s								
TXAR	**Lajitas Array**	**68.86**	**331**		P		**P**	**09 43 37.5**	**-2.2**
	comp=Z,0.1nm,0.6s,baz=150,slow=9.1,SNR=1.7								
	comp=Z,0.1nm,0.6s								
T50A	**Nancy**	**70.72**	**349**		P		**P**	**09 43 52.5**	**+1.6**
BOSA	**Boshof**	**80.60**	**118**		P		**P**	**09 44 47.6**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=210,slow=4.0,SNR=4.8								
	comp=Z,2.0nm,0.7s								
TORD	**Torodi Ar. Bea**	**83.99**	**70**		P		**P**	**09 45 05.3**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=222,slow=1.9,SNR=11								
	comp=Z,1.8nm,0.8s								

BVAR	**Borovoye Array**	**146.66**	**42**		PKPbc		**PKPab**	**09 52 17.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=290,slow=4.3,SNR=2.7								
KURBB	**Kurchatov Arra**	**152.25**	**42**		PKPbc		**PKPbc**	**09 52 29.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=303,slow=3.0,SNR=4.9								
KURBB					PKPab		**PKPab**	**09 52 39.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=289,slow=2.8,SNR=2.1								
ZALV	**Zalesovo Beam**	**153.49**	**31**		PKPbc		**PKPbc**	**09 52 33.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=327,slow=2.4,SNR=3.8								
MKAR	**Makanchi Array**	**156.22**	**47**		PKPab		**PKPab**	**09 52 57.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=298,slow=2.6,SNR=3.4								

*CATAC **23** 09:36:24.0±0.7,9.°20N×82.°32W, h5km, ML2.8*
*UPA **23** 09:36:24.4±1.2,9.°12N×82.°33W, h6km±4km, MW2.5*
ISC 23 09:36:21.2±1.8,**9.°25N**±0.°04×**82.°21W**±0.°07,**h17**km±9km,
n27,σ0.°98/48,2C-2D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC		Time h m s	Res ISC
CNI2	**El Empalme, Bo**	**0.31**	**304**	⇓	*e*P		**Pn**	**09 36 31.9**	**+1.0**
CNI2					*e*S		**Sn**	**09 36 38.2**	**+1.3**
CHGR2	**Aguacate**	**0.32**	**168**	⇓	*e*P		**Pn**	**09 36 30.1**	**-1.0**
CHGR2					*e*S		**Sb**	**09 36 34.6**	**+1.3**
LNBQ3	**Los Naranjos,**	**0.51**	**206**		*e*P		**Pb**	**09 36 32.4**	**+0.6**
LNBQ3					*e*S		**Sg**	**09 36 38.3**	**-0.1**
BC3P	**Paso Ancho**	**0.59**	**222**		*e*P		**Pb**	**09 36 33.3**	**+0.2**
BC3P					*e*S		**Sg**	**09 36 39.9**	**-0.8**
BCO2	**Palmira**	**0.62**	**210**	⇑	*e*P		**Pb**	**09 36 33.9**	**+0.4**
BCO2					*e*S		**Sg**	**09 36 41.7**	**0.0**
PTAR3	**Potrerillos Ar**	**0.62**	**207**		*e*P		**Pn**	**09 36 35.2**	**-0.1**
PTAR3					*e*S		**Sg**	**09 36 41.6**	**-0.3**
BRU2	**Volcan**	**0.66**	**226**	⇑	*e*P		**Pb**	**09 36 34.4**	**+0.1**
BRU2					*e*S		**Sg**	**09 36 42.5**	**-0.5**
BRU2	**Volcan**	**0.66**	**226**		*i* P		**Pb**	**09 36 34.4**	**+0.1**
BRU2					*i* S		**Sg**	**09 36 42.2**	**-0.8**
BRU2					IAML			09 36 44.2	
	comp=Z,370nm,1.0s								
MLIR3	**Monte Lirio, C**	**0.76**	**233**		*e*P		**Pn**	**09 36 36.8**	**-0.4**
MLIR3					*e*S		**Sg**	**09 36 46.7**	**+0.6**
DVD	**David**	**0.85**	**196**		*e*S		**Sb**	**09 36 48.7**	**+0.2**
POTG	**Potrero Grande**	**0.92**	**257**		*i* P		**Pb**	**09 36 38.8**	**+0.2**
POTG					*i* S		**Sb**	**09 36 50.2**	**-0.4**
POTG					IAML			09 36 51.9	
	comp=Z,770nm,1.0s								
CDITO	**Canoas**	**0.94**	**224**		*i* P		**Pg**	**09 36 39.5**	**+0.1**
CDITO					*i* S		**Sb**	**09 36 51.7**	**+0.6**
CDITO					IAML			09 36 54.4	
	comp=Z,260nm,1.0s								
PTPM	**Petroterminale**	**1.23**	**212**		*e*P		**Pb**	**09 36 44.2**	**+0.2**
PTPM					*e*S		**Sn**	**09 37 00.7**	**+0.9**
OCHAL	**Ojochal**	**1.42**	**264**		*i* P		**Pg**	**09 36 48.7**	**+0.1**
OCHAL					IAML			09 36 48.9	
	comp=Z,13nm,1.0s								
OCHAL					*i* S		**Sb**	**09 37 06.8**	**+1.7**
PEZE	**Perez Zeledon,**	**1.45**	**275**		*i* P		**Pg**	**09 36 49.0**	**-0.2**
PEZE					*i* S		**Sb**	**09 37 07.3**	**+1.3**
PEZE					IAML			09 37 08.7	
	comp=Z,200nm,1.0s								
CDM	**Cerro de Muert**	**1.56**	**281**		*i* P		**Pb**	**09 36 50.5**	**+0.7**
CDM					*i* S		**Sb**	**09 37 10.4**	**+1.0**
CDM					IAML			09 37 11.9	
	comp=Z,230nm,1.0s								
PLAN	**Los Planes de**	**1.56**	**248**		*i* P		**Pb**	**09 36 50.3**	**+0.7**
PLAN					IAML			09 37 09.8	
	comp=Z,100nm,1.0s								
PLAN					*i* S		**Sb**	**09 37 10.0**	**+0.9**
VTCV	**VTCV, Calle Va**	**1.66**	**296**		*i* P		**Pg**	**09 36 53.3**	**+0.2**
VTCV					*i* S		**Sg**	**09 37 13.8**	**-1.0**
RIMA	**Rio Macho**	**1.71**	**288**		*i* P		**Pb**	**09 36 52.6**	**+0.4**
RIMA					*i* S		**Sb**	**09 37 14.1**	**+0.6**
RIMA					IAML			09 37 16.1	
	comp=Z,110nm,1.0s								
VTUC	**Crater, Volcan**	**1.71**	**297**		*i* S		**Sn**	**09 37 09.3**	**-2.9**
VTUN	**Crater Central**	**1.71**	**297**		*i* S		**Sn**	**09 37 09.3**	**-2.9**
LCR2	**La Lucha 2**	**1.83**	**285**		*i* P		**Pb**	**09 36 54.8**	**+0.4**
LCR2					*i* S		**Sb**	**09 37 17.8**	**+0.7**
LCR2					IAML			09 37 18.8	
	comp=Z,76nm,1.0s								
OCM	**Ochomogo**	**1.84**	**290**		*i* P		**Pb**	**09 36 55.2**	**+0.8**
OCM					*i* S		**Sb**	**09 37 17.7**	**+0.5**
OCM					IAML			09 37 25.3	
	comp=Z,96nm,1.0s								
RIFO	**Rio Frio, Sara**	**1.99**	**302**		*i* S		**Sb**	**09 37 22.5**	**+1.1**
HDC3	**Heredia 3**	**2.01**	**292**		*i* S		**Sb**	**09 37 23.2**	**+0.9**
HDC	**Heredia**	**2.02**	**292**		*i* S		**Sb**	**09 37 23.6**	**+1.3**
JACO	**JACO, Garabito**	**2.45**	**280**		*i* P		**Pb**	**09 37 03.3**	**-1.4**
JACO					*i* S		**Sb**	**09 37 34.2**	**-0.4**
JACO					IAML			09 37 46.6	
	comp=Z,38nm,1.0s								

*TRN **23** 09:37:38.5, 10.°72N×62.°25W, h91km, MD2.8, North of the Paria peninsula.*
*FUNV **23** 09:37:39.2, 10.°37N×62.°54W, h68km, MW3.3*
ISC 23 09:37:32.8±1.4,**10.°53N**±0.°05×**62.°47W**±0.°04,
h111km±13km,**n13,σ2.°57/22,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC		Time h m s	Res ISC
TCE	**Chacachacare**	**0.72**	**76**	*e*P		**Pn**	**09 37 54.0**	**+2.5**
CRUV	**Carupano**	**0.77**	**281**	*e*P		**Pn**	**09 37 53.6**	**+1.7**
CRUV				*e*S		**Sn**	**09 38 04.2**	**-2.0**
TRN	**Trinidad (W)**	**1.05**	**83**	*e*P		**Pn**	**09 37 56.2**	**+1.6**
TRN				*e*S		**Sn**	**09 38 09.6**	**-1.6**
TBH	**Brigand Hill**	**1.38**	**92**	*e*P		**Pn**	**09 38 01.1**	**+2.8**
GRFF	**Grenada Fort F**	**1.67**	**25**	*e*P		**Pn**	**09 38 02.6**	**+0.8**
GRFF				*e*S		**Sn**	**09 38 21.0**	**-2.9**
GRGR	**Grenville**	**1.78**	**27**	*e*P		**Pn**	**09 38 03.7**	**+0.5**
GRGR				*e*S		**Sn**	**09 38 24.1**	**-2.2**
TPR	**Prospect**	**1.79**	**68**	*e*P		**Pn**	**09 38 03.8**	**+0.6**
PCRV	**Puerto La Cruz**	**2.16**	**261**	*e*P		**Pn**	**09 38 10.6**	**+2.7**
PCRV				*e*S		**Sn**	**09 38 33.8**	**-1.0**
GCMP	**Grenada, Carri**	**2.20**	**28**	*e*P		**Pn**	**09 38 11.4**	**+3.0**
GCMP				*e*S		**Sn**	**09 38 33.8**	**-1.8**
LUEV	**Luepa**	**4.76**	**168**	*e*P		**Pn**	**09 38 45.5**	**+2.8**
LUEV				*e*S		**Sn**	**09 39 34.1**	**-2.7**
CACV	**CAICARA DEL OR**	**4.98**	**234**	*e*P		**Pn**	**09 38 42.7**	**-2.8**
CACV				*e*S		Sn	09 39 30.2	-12
BENV	**Beln**	**5.08**	**264**	*e*P		**Pn**	**09 38 50.6**	**+3.8**
BENV				*e*S		**Sn**	**09 39 43.4**	**-1.0**
BAUV	**El Baul**	**5.71**	**254**	*e*P		**Pn**	**09 38 57.9**	**+2.6**
BAUV				*e*S		**Sn**	**09 39 56.0**	**-3.6**

IDC 23 09:46:13.6±3.7,**8.°25N×126.°84E, h0km, mb3.4/3,**
mbtmp3.4/3, Error ellipse: s-maj=294.7km
s-min=28.7km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC		Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.97**	**165**	P	P		09 52 15.0	-0.1
	0.5nm,0.9s,baz=346,slow=10,SNR=1.7							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**32.47**	**168**	P	P		09 52 46.0	+0.1
	0.2nm,0.4s,baz=343,slow=6.9,SNR=7.2							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**53.97**	**323**	P	P		09 55 39.3	-0.1
	0.2nm,0.4s,baz=127,slow=7.2,SNR=4.3							
	0.2nm,0.4s							

IDC 23 10:06:47.5±6.5,**4.°26S×150.°59E, h0km, mb3.2/3,**
mbtmp3.2/3, Error ellipse: s-maj=200.9km
s-min=40.4km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC		Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.21**	**224**	P	P		10 11 45.4	-0.4
	0.6nm,0.9s,baz=48,slow=9.9,SNR=2.7							
	0.6nm,0.9s							
ASAR	**Alice Springs**	**25.13**	**218**	P	P		10 12 14.7	+0.2
	0.4nm,1.0s,baz=52,slow=9.6,SNR=2.7							
	0.4nm,1.0s							
MKAR	**Makanchi Array**	**78.48**	**319**	P	P		10 18 50.7	+0.1
	0.2nm,0.7s,baz=117,slow=5.7,SNR=2.8							
	0.2nm,0.7s							

*IDC **23** 10:21:52.4±1.1,39.°30N×72.°95E, h0km, mb3.8/11, mbtmp3.8/19, ML3.3/8, MS3.3/10, Error ellipse: s-maj=20.1km s-min=13.2km az=145.0*
*KRNET **23** 10:21:53.9±0.1,39.°42N×72.°83E, h14km, mb4.2*
*SOME **23** 10:21:53.8, 39.°62N×72.°57E, h10km*

*MOS **23** 10:21:54.9±1.2,39.°42N×72.°78E, h11km, mb4.5/8, Error ellipse: s-maj=7.9km s-min=4.0km az=75.4*
*NNC **23** 10:21:56.2±1.9,39.°57N×72.°87E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=15.6km s-min=8.7km az=2.0*
*NEIC **23** 10:22:01.1±1.9,39.°58N±0.°06×72.°74E±0.°08, h48km±7km, mb4.5/24, Error ellipse: s-maj=9.3km s-min=8.2km az=134.0*
ISC 23 10:21:54.3±1.2,**39.°41N**±0.°03×**72.°73E**±0.°02,**h4**km±8km,
n195,σ2.°26/246,mb4.5/29,MS3.3/7,37C-34D,Kyrgyzstan

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC		Time h m s	Res ISC
DRK	**Karamyk**	**0.73**	**276**	⇑	*i* P		**Pb**	**10 22 09.2**	**-0.5**
	baz=75								
DRK				⇑	*i* S		**Sb**	**10 22 20.4**	**+0.2**
	baz=75								
OHH	**Osh**	**1.12**	**2**		*i* PG		**Pb**	**10 22 14.9**	**-1.4**
OHH					*i* S		**Sg**	**10 22 30.2**	**0.0**
OHH	**Osh**	**1.12**	**2**	⇑	*i* P		**Pb**	**10 22 14.8**	**-1.5**
	baz=58								
OHH				⇑	*i* S		**Sg**	**10 22 30.2**	**0.0**
	baz=58								
BTK	**Batken**	**1.61**	**294**		Pn		**Pg**	**10 22 25.3**	**+0.1**
BTK					Sn		**Sg**	**10 22 50.8**	**+4.7**
BTK	**Batken**	**1.61**	**294**		*i* PN		**Pg**	**10 22 25.3**	**+0.1**
BTK					*i* S		**Sg**	**10 22 47.9**	**+1.8**
BTK	**Batken**	**1.61**	**294**	⇑	*i* P		**Pg**	**10 22 25.3**	**+0.1**
	baz=93								
BTK				⇑	*i* S		**Sg**	**10 22 47.9**	**+1.8**
	baz=93								
ARSB	**Arslanbob**	**1.93**	**6**				**Pb**	**10 22 29.5**	**-0.6**
ARSB					Sn		**Sg**	**10 22 58.0**	**+1.8**
ARSB	**Arslanbob**	**1.93**	**6**		PN		**Pb**	**10 22 29.5**	**-0.6**
ARSB								10 22 58.0	
ARSB	**Arslanbob**	**1.93**	**6**	⇑	*i* P		**Pb**	**10 22 29.5**	**-0.6**
	baz=4.0								
ARSB				⇑	*i* S		**Sb**	**10 22 55.4**	**+0.8**
	baz=4.0								
TRKS	**Terek-Say**	**2.45**	**331**	⇑	*e*P		**Pb**	**10 22 36.8**	**-2.2**
	baz=29								
TRKS				⇑	*e*S		**Sb**	**10 23 07.5**	**-2.0**
	baz=29								
ARK	**Arkit**	**2.46**	**346**		*i* PN		**Pb**	**10 22 37.6**	**-1.6**
ARK					*i* S		**Sb**	**10 23 09.4**	**-0.5**
ARK	**Arkit**	**2.46**	**346**	⇓	*i* P		**Pb**	**10 22 37.6**	**-1.6**
	baz=45								
ARK				⇓	*i* S		**Sb**	**10 23 09.4**	**-0.5**
	baz=45								
KSH	**Kashi**	**2.51**	**86**		Pn		Pn	10 22 31.4	-4.6
KSH					Sn		**Sn**	**10 23 01.5**	**-5.7**
KSH					pmax		pmax		
	comp=Z,260nm,0.8s								
KSH					smax		smax		
	comp=N,2µm,0.7s								
KSH					smax		smax		
	comp=E,1µm,1.1s								
ARLS	**Aral**	**2.74**	**26**		*i* PN		**Pn**	**10 22 40.1**	**+0.9**
ARLS					*i* S		**Sn**	**10 23 14.4**	**+1.6**
ARLS	**Aral**	**2.74**	**26**	⇓	*i* P		**Pn**	**10 22 40.1**	**+0.9**
	baz=25								
ARLS				⇓	*i* S		**Sn**	**10 23 14.4**	**+1.6**
	baz=25								
SIMJ	**Simiganj**	**3.00**	**257**				**Pb**	**10 22 46.8**	**-1.5**
MNAS	**Manas**	**3.08**	**357**	⇓	*e*P		**Pn**	**10 22 46.2**	**+2.3**
	baz=56								
MNAS				⇓	*e*S		**Sn**	**10 23 24.3**	**+2.9**
	baz=56					

comp=E,61nm,0.4s,baz=26,slow=33,SNR=4.7
KK31 Karatay Array 4.06 336 Pn 10 23 00.1 +2.9
KK31 Karatay Array 4.06 336 *e*PN **Pn 10 23 00.1 +2.9**
KK31 10 23 49.8
KKAR Karatay Array 4.06 336 Pn 10 23 00.2 +3.0
KKAR Karatay Array 4.06 336 Pn 10 23 00.2 +3.0
KKAR Karatay Array 4.06 336 *e*PN **Pn 10 22 59.7 +2.5**
KKAR Karatay Array 4.06 336 ⇑*i*P **Pn 10 22 59.7 +2.5**
baz=35
KKAR ⇑*i*S **Sn 10 23 47.5 +2.3**
baz=35
USP Ospenovka 4.08 18 P **Pn 10 23 00.1 +2.6**
SNR=14
USP Ospenovka 4.08 18 *i* PN **Pn 10 22 59.3 +1.7**
USP Ospenovka 4.08 18 ⇑*i*P **Pn 10 22 59.3 +1.7**
baz=18
USP ⇑*i*S **Sn 10 23 46.8 +1.0**
baz=18
TKM2 Tokmak 2 4.12 31 P **Pn 10 23 00.1 +1.8**
SNR=51
TKM2 Tokmak 2 4.12 31 ⇓Pn **Pn 10 22 59.2 +0.9**
comp=E,75nm,1.4s
TKM2 ⇑Lg Lg 10 24 01.3
TKM2 Tokmak 2 4.12 31 PN **Pn 10 22 59.2 +0.9**
TKM2 10 24 01.2
TKM2 Tokmak 2 4.12 31 ⇓*i*P **Pn 10 22 59.9 +1.6**
baz=30
TKM2 ⇓*i*S **Sn 10 23 48.2 +1.1**
baz=30
BRLS Borolday 4.23 330 *e*P Pb 10 23 04.7 -4.6
comp=E,14nm,0.2s
BRLS *e*S **Sb 10 23 55.5 -5.2**
comp=E,48nm,0.3s
KDJ Kajisay 4.34 50 *i* PN **Pn 10 23 02.6 +1.4**
KDJ Kajisay 4.34 50 ⇑*i*P **Pn 10 23 02.6 +1.4**
baz=49
KDJ ⇑*i*S **Sn 10 23 52.7 +0.4**
baz=49
DGS Degeres 4.46 30 Pg **Pb 10 23 14.4 +1.0**
comp=E,56nm,0.3s
DGS Lg Lg 10 24 12.6
comp=E,110nm,0.8s
DGS Degeres 4.46 30 *e*P **Pb 10 23 14.4 +1.0**
comp=E,56nm,0.3s
DGS *e*S **Sb 10 24 12.6 +5.0**
comp=E,110nm,0.8s
TARG Taragay, Kyrgy 4.51 57 Pn **Pn 10 23 04.3 +0.5**
TARG Taragay, Kyrgy 4.51 57 *i* PN **Pn 10 23 04.5 +0.8**
TARG Taragay, Kyrgy 4.51 57 ⇓*i*P **Pn 10 23 04.5 +0.8**
baz=57
TARG ⇓*i*S **Sn 10 23 56.8 0.0**
baz=57
MTBS Maitube 4.65 36 Pg **Pb 10 23 17.6 +1.2**
comp=E,50nm,0.3s
MTBS Lg Lg 10 24 18.1
comp=E,141nm,0.7s
MTBS Maitube 4.65 36 *e*P **Pb 10 23 17.6 +1.2**
comp=E,50nm,0.3s
MTBS *e*S **Sb 10 24 18.1 +5.3**
comp=E,141nm,0.7s
TNSS Tian-Shan 4.82 40 Pg **Pb 10 23 20.6 +0.9**
comp=E,32nm,0.2s
TNSS Lg Lg 10 24 23.2
comp=E,39nm,0.5s
TNSS Tian-Shan 4.82 40 *e*P **Pb 10 23 20.6 +0.9**
comp=E,32nm,0.2s
TNSS *e*S **Sb 10 24 23.2 +5.1**
comp=E,39nm,0.5s
AAA Alma-Ata 4.94 38 Pg **Pb 10 23 23.7 +2.4**
comp=E,47nm,0.1s
AAA Lg Lg 10 24 28.3
comp=E,216nm,0.5s
AAA Alma-Ata 4.94 38 *e*P **Pb 10 23 23.7 +2.4**
comp=E,47nm,0.1s
AAA *e*S **Sg 10 24 28.3 -4.5**
comp=E,216nm,0.5s
KNDC Almaty 4.97 39 ⇑Pg **Pb 10 23 20.7 -1.1**
comp=E,134nm,0.8s
KNDC ⇓Lg Lg 10 24 27.8
comp=E,416nm,1.2s
KNDC Almaty 4.97 39 PN **Pb 10 23 20.7 -1.1**
MDOK Medeo 4.97 39 ⇑Pn **Pn 10 23 10.3 +0.4**
comp=E,12nm,0.6s
MDOK ⇓Pg **Pb 10 23 22.2 +0.3**
comp=E,52nm,0.8s
MDOK Pg Pg 10 23 23.1 -6.3
comp=E,36nm,0.3s
MDOK ⇓Lg Lg 10 24 26.0
comp=E,131nm,1.2s
MDOK Lg Lg 10 24 27.4
comp=E,88nm,0.5s
MDOK Medeo 4.97 39 *e*P **Pb 10 23 23.1 +1.2**
comp=E,36nm,0.3s
MDOK *e*S **Sb 10 24 27.4 +5.3**
comp=E,88nm,0.5s
MDOK Medeo 4.97 39 PN **Pn 10 23 10.2 +0.4**
MDOK 10 23 22.7
MDOK 10 24 27.4
ANVS Anan'yevo 5.03 46 *i* PN **Pn 10 23 12.0 +1.3**
ANVS *i* S **Sn 10 24 09.2 -0.2**
ANVS Anan'yevo 5.03 46 ⇓*i*P **Pn 10 23 12.0 +1.3**
baz=46
ANVS ⇓*i*S **Sn 10 24 09.2 -0.2**
baz=46
KOTS Kotyrbulak 5.05 39 Pg **Pb 10 23 25.2 +1.9**
comp=E,70nm,0.3s
KOTS Lg Lg 10 24 31.0
comp=E,240nm,0.5s
KOTS Kotyrbulak 5.05 39 *e*P **Pb 10 23 25.2 +1.9**
comp=E,70nm,0.3s
KOTS *e*S **Sg 10 24 31.0 -5.5**
comp=E,240nm,0.5s
KTBS Karatobe 5.22 33 Pg **Pb 10 23 28.0 +1.8**
comp=E,37nm,0.6s
KTBS Lg Lg 10 24 35.9
comp=E,151nm,0.4s
KTBS Karatobe 5.22 33 *e*P **Pb 10 23 28.1 +1.8**
comp=E,37nm,0.6s
KTBS *e*S **Sb 10 24 35.9 +6.6**
comp=E,151nm,0.4s
KUU Kurty 5.24 30 Pg **Pb 10 23 27.5 +1.1**
comp=E,47nm,0.3s
KUU Lg Lg 10 24 35.1
comp=E,74nm,0.4s
KUU Kurty 5.24 30 *e*P **Pb 10 23 27.5 +1.1**
comp=E,47nm,0.3s
KUU *e*S **Sb 10 24 35.1 +5.4**
comp=E,74nm,0.4s
PRZ Przheval'sk 5.28 53 Pn 10 23 15.9 +1.8
PRZ Przheval'sk 5.28 53 PN **Pn 10 23 15.9 +1.8**
PRZ Przheval'sk 5.28 53 ⇑*i*P **Pn 10 23 15.6 +1.5**
baz=52
PRZ ⇑*i*S **Sn 10 24 15.1 -0.5**
baz=52
CHKK Chushkaly 5.47 34 Pg **Pb 10 23 32.9 +2.5**
comp=E,19nm,0.6s
CHKK Lg Lg 10 24 44.2
comp=E,65nm,0.5s
CHKK Chushkaly 5.47 34 *e*P **Pb 10 23 32.9 +2.5**
comp=E,19nm,0.6s
CHKK *e*S **Sg 10 24 44.2 -5.7**
comp=E,65nm,0.5s
KBL Kabul 5.68 212 Pn Pn 10 23 24.4 +4.7
KBL Kabul 5.68 212 PN Pn 10 23 24.4 +4.7
BTLS Baital 5.72 9 Pg **Pb 10 23 38.0 +3.5**
comp=E,4.9nm,0.2s
BTLS Lg Lg 10 24 53.1
comp=E,36nm,0.3s
BTLS Baital 5.72 9 *e*P **Pb 10 23 38.0 +3.5**
comp=E,4.9nm,0.2s
BTLS *e*S **Sg 10 24 53.0 -4.7**
comp=E,36nm,0.3s
NIL Nilore 5.76 176 Pn Pn 10 23 25.2 +4.6
NIL Nilore 5.76 176 PN Pn 10 23 25.2 +4.6
KURS Kuram 5.77 43 *e*P **Pb 10 23 40.2 +4.6**
KURS *e*S **Sg 10 24 56.5 -3.1**
ARXS Arharly 6.13 37 *e*P **Pb 10 23 44.4 +2.8**
comp=E,35nm,0.5s
ARXS *e*S **Sg 10 25 03.6 -7.4**
comp=E,86nm,0.6s
PDGK Podgornoye 6.42 50 ⇓Pn **Pn 10 23 29.6 -0.1**
comp=E,6.1nm,0.7s
PDGK ⇑Pg **Pb 10 23 46.4 -0.2**
comp=E,16nm,0.7s
PDGK ⇑Lg Lg 10 25 09.5
comp=E,75nm,1.1s
PDGK Podgornoye 6.42 50 PN **Pn 10 23 28.9 -0.8**
PDGK 10 23 50.1
PDGK 10 25 09.4
THN Thein Dam 7.37 160 *e*P **Pn 10 23 46.3 +3.7**
THN *e*S **Sn 10 25 07.3 +0.7**
THN *e*S **Sn 10 25 07.6 +0.9**
THN IAML 10 25 12.3
comp=E,57nm,0.5s
THN IAML 10 25 17.2
comp=E,65nm,0.7s
DHRM DHARAMSHALA 7.70 157 *e*P **Pn 10 23 51.0 +3.5**
DHRM *e*S **Sn 10 25 15.5 +0.1**
DHRM IAML 10 25 24.5
comp=E,65nm,0.6s
DHRM IAML 10 25 27.6
comp=E,115nm,0.6s
OTUK Ortayu 8.84 358 ⇑Pn **Pn 10 24 04.7 +1.9**
comp=E,6.2nm,1.1s
OTUK ⇑Lg Lg 10 26 31.2
comp=E,50nm,1.0s
OTUK Ortayu 8.84 358 P **Pn 10 24 04.7 +1.9**
SMLA Simla 9.02 155 *e*P **Pn 10 24 06.1 +0.8**
SMLA *e*S **Sn 10 25 42.5 -4.8**
SMLA *e*S **Sn 10 25 43.0 -4.3**
SMLA IAML 10 25 47.6
comp=E,37nm,0.4s
SMLA IAML 10 25 48.9
comp=E,37nm,0.4s
SMLA IAML 10 25 57.9
comp=E,41nm,0.4s
MAKZ Makanchi 10.02 39 ⇑Pn **Pn 10 24 16.3 -2.6**
comp=E,5.3nm,0.9s
MAKZ ⇓Lg Lg 10 27 05.3
comp=E,14nm,1.2s
MAKZ Makanchi 10.02 39 Pn **Pn 10 24 17.4 -1.6**
MAKZ Makanchi 10.02 39 P **Pn 10 24 17.4 -1.6**
MK31 Makanchi Array 10.16 40 ⇓Pn **Pn 10 24 20.1 -0.8**
comp=E,3.1nm,0.8s,baz=228,slow=11,SNR=12
MK31 ⇓Lg Lg 10 27 09.5
comp=E,10nm,1.0s,baz=223,slow=29,SNR=5.4
MK31 Makanchi Array 10.16 40 Pn **Pn 10 24 20.5 -0.4**
MK31 Makanchi Array 10.16 40 *e*P **Pn 10 24 22.4 +1.4**
MKAR Makanchi Array 10.16 40 Pn **Pn 10 24 21.7 +0.7**
MKAR Makanchi Array 10.16 40 Pn **Pn 10 24 20.9 0.0**
comp=E,0.1nm,0.3s,baz=223,slow=14,SNR=12
MKAR Lg Lg 10 27 08.7
comp=E,0.2nm,0.3s,baz=229,slow=26,SNR=1.8
MKAR LR LR 10 28 30.4
comp=E,109nm,21.4s,baz=245,slow=39
comp=E,1.4nm,0.8s
GEYT Alibeck 11.52 267 Pn **Pn 10 24 41.6 +2.0**
comp=E,0.6nm,0.3s,baz=78,slow=14,SNR=2.4
GEYT LR LR 10 30 19.2
comp=E,31nm,20.5s,baz=40,slow=43
comp=E,2.8nm,0.5s
KUDL Kundal 11.66 163 *e*P **Pn 10 24 41.7 +0.2**
KUDL *e*S **Sn 10 26 43.7 -8.4**
KURBB Kurchatov Arra 11.94 18 Pn **Pn 10 24 43.1 -2.1**
comp=E,0.1nm,0.3s,baz=209,slow=13,SNR=5.9
KURBB Lg Lg 10 28 08.3
comp=E,0.1nm,0.3s,baz=201,slow=29,SNR=6.0
comp=E,0.4nm,0.5s
WMQ Urumqi 12.03 64 *e*P Pn 10 24 51.9 +5.3
KURK Kurchatov 12.05 18 ⇓Lg Lg 10 28 07.5
comp=E,35nm,1.2s
KURK Kurchatov 12.05 18 *i* P **Pn 10 24 47.2 +0.5**
AB31 Akbulak array 13.43 321 P **Pn 10 25 04.5 -1.0**
comp=E,1.5nm,0.4s,baz=129,slow=13,SNR=104
AB31 Akbulak array 13.43 321 P **Pn 10 25 04.5 -1.0**
ABKAR Akbulak array 13.43 321 Pn **Pn 10 25 04.6 -1.0**
BVA0 Borovoye Array 13.72 354 ⇑P **P 10 25 13.9 -4.5**
comp=E,0.9nm,0.4s,baz=149,slow=9.7,SNR=7.9
BVA0 Borovoye Array 13.72 354 *e*P **P 10 25 19.2 +0.8**
BVAR Borovoye Array 13.72 354 Pn **Pn 10 25 08.1 -1.4**
baz=159,slow=13,SNR=5.1
BVAR Lg Lg 10 29 08.4
baz=171,slow=20,SNR=1.3
BVAR LR LR 10 31 14.2
comp=E,45nm,19.2s,baz=136,slow=41
comp=E,0.8nm,0.5s
BRVK Borovoye 13.76 354 Pn **Pn 10 25 11.2 +1.2**
BRVK Borovoye 13.76 354 *i* P **Pn 10 25 12.5 +2.4**
DGZ Jazzator, Alta 14.66 41 *i* P **Pn 10 25 25.2 +2.6**
AKTO Aktyubinsk 15.14 322 ⇑P **Pn 10 25 28.3 -0.7**
comp=E,3.9nm,0.5s
AKTO Aktyubinsk 15.14 322 Pn **Pn 10 25 28.6 -0.4**
comp=E,0.8nm,0.3s,baz=127,slow=12,SNR=7.6
AKTO LR LR 10 32 03.1
comp=E,69nm,21.8s,baz=64,slow=40
comp=E,2.0nm,0.4s
ZAA0 Zalesovo Array 16.71 26 Pn **Pn 10 25 49.5 +0.4**
ZALV Zalesovo Beam 16.71 26 Pn **Pn 10 25 49.4 +0.3**
ZALV Zalesovo Beam 16.71 26 P **Pn 10 25 49.4 +0.3**
ZALV Zalesovo Beam 16.71 26 Pn **Pn 10 25 46.9 -2.2**
comp=E,6.0nm,0.3s,baz=218,slow=11,SNR=9.2
comp=E,1.0nm,0.3s
ARU Arti 19.43 336 P **Pn 10 26 24.8 +2.2**
ARU S **S 10 30 04.6 +3.0**
ARU Arti 19.43 336 P **Pn 10 26 22.3 -0.3**
comp=E,0.6nm,0.3s,baz=189,slow=3.3,SNR=4.6
comp=E,2.0nm,0.2s
GTA Gaotai 20.90 81 P **P 10 26 37.3 -0.5**
GTA pP sP 10 26 44.8 +3.2
GTA pmax pmax
comp=E,5.0nm,0.7s
BELG Belogornoye 21.64 315 ⇓*i*P **P 10 26 45.5 +0.1**
BELG pmax pmax
comp=E,2.0nm,0.8s
BELG Belogornoye 21.64 315 P **P 10 26 45.9 +0.5**
comp=E,10nm,0.6s,baz=287,slow=0.6,SNR=8.8
comp=E,10nm,0.6s
KBZ Khabaz 22.67 291 LR LR 10 38 36.9
comp=E,42nm,19.4s,baz=109,slow=44
KIRV Kirov 24.32 330 LR LR 10 37 28.3
comp=E,98nm,18.2s,baz=235,slow=38
LZH Lanzhou 24.76 88 *e*P **P 10 27 22.8 +5.6**
LZH pP sP 10 27 30.4 +10
LZH pmax pmax
comp=E,13nm,1.1s
SOC Sochi 24.98 290 *e*P **P 10 27 19.8 +0.8**
SOC *e* 10 27 53.9
SOC *e*PPP PPP 10 28 01.0
SOC *e*S **S 10 31 44.3 +1.0**
SOC *e*SS **SnSn 10 32 33.0 +2.0**
SOC *e*SSS SSS 10 32 51.9
SOC MLR MLR
comp=E,56nm,16.0s
SONM Songino Array 25.62 60 P **P 10 27 22.9 -2.0**
comp=E,0.8nm,0.7s,baz=264,slow=9.1,SNR=3.8
SONM LR LR 10 38 19.0
comp=E,95nm,20.2s,baz=310,slow=39
comp=E,0.8nm,0.7s
PZH PanZhiHua 27.40 109 P **P 10 27 42.9 +1.8**
PZH pmax pmax
comp=E,10.0nm,0.6s
PZH pmax pmax
comp=E,140nm,5.5s
OBN Obninsk 28.73 315 *e*P **P 10 27 54.9 +2.3**
OBN *e* 10 28 47.6
OBN *e*PPP PPP 10 28 56.9
OBN pmax pmax
comp=E,3.0nm,0.8s
HHC Hu-ho-hao-te 29.57 75 *e*P **P 10 28 02.4 +2.1**
HHC pmax pmax
comp=E,5.0nm,0.6s
HHC pmax pmax
comp=E,86nm,5.3s
BRTR Keskin Array B 29.98 283 P **P 10 28 05.3 +1.3**
comp=E,2.0nm,0.4s,baz=97,slow=9.0,SNR=1.9
comp=E,2.0nm,0.4s
NACGM Naroch 34.18 312 *e*P **P 10 28 41.0 +0.5**
comp=E,9.0nm,1.1s,baz=97
FINES FINESS Array B 35.90 323 *e*P **P 10 28 58.6 +3.4**
FINES pmax pmax
comp=E,1.0nm,0.4s
FINES FINESS Array B 35.90 323 P **P 10 28 55.7 +0.5**
comp=E,1.9nm,0.6s,baz=115,slow=9.5,SNR=6.7
FINES LR LR 10 44 58.3
comp=E,113nm,18.4s,baz=314,slow=38
comp=E,1.9nm,0.6s
NJ2 Nanjing 37.82 87 *e*P **P 10 29 12.8 +0.9**
NJ2 pmax pmax
comp=E,5.0nm,0.5s
ARCES ARCESS Array B 39.02 336 P **P 10 29 20.8 -0.8**
ARCES ARCESS Array B 39.02 336 P **P 10 29 20.8 -0.8**
ARCES pmax pmax
comp=E,19nm,1.4s
ARCES ARCESS Array B 39.02 336 P **P 10 29 20.1 -1.5**
comp=E,3.0nm,1.0s,baz=48,slow=1.8,SNR=4.8
comp=E,3.0nm,1.0s
HFS Hagfors 41.68 320 P **P 10 29 43.2 -0.5**
comp=E,1.1nm,0.5s,baz=93,slow=14,SNR=5.4
HFS LR LR 10 49 36.3
comp=E,117nm,20.4s,baz=358,slow=40
comp=E,1.1nm,0.5s
NOA NORSAR Array B 42.93 321 P **P 10 29 54.5 +0.5**
comp=E,0.5nm,0.6s,baz=92,slow=8.0,SNR=2.0
NOA LR LR 10 48 40.3
comp=E,52nm,19.9s,baz=280,slow=37
comp=E,0.5nm,0.6s
NC204 NORSAR Array S 43.16 321 P **P 10 29 56.0 +0.2**
KBS Kingsbay 46.10 346 *ce*P P 10 30 23.2 +4.2
KBS pmax pmax
comp=E,70nm,1.7s
MJB9 Matsu-Tunnel 50.66 71 P **P 10 30 55.9 +1.0**
MAJO Matsushiro 50.67 71 P **P 10 30 54.9 +0.1**
MAJO IAmb IAmb 10 30 55.0
comp=E,7.6nm,0.9s
MAJO Matsushiro 50.67 71 P **P 10 30 54.9 +0.1**
MAJO pmax pmax
comp=E,8.0nm,1.0s
C23K Itkillik River 66.57 15 P **P 10 32 45.8 +0.7**
C23K IAmb IAmb 10 32 52.1
comp=E,10nm,1.4s
TOA0 Torodi Ar. Sit 67.16 268 P **P 10 32 48.9 -0.8**
TORD Torodi Ar. Bea 67.16 268 P **P 10 32 49.0 -0.7**
comp=E,0.9nm,0.6s,baz=52,slow=5.6,SNR=7.5
comp=E,0.9nm,0.6s
TOLK Toolik Lake Re 67.77 15 P **P 10 32 52.2 -0.5**
F21K Alatna River 68.06 18 P **P 10 32 54.0 -0.6**
F21K IAmb IAmb 10 33 22.3
comp=E,5.7nm,1.5s
A36M Sachs Harbour 68.19 6 P **P 10 32 56.0 +0.7**
A36M IAmb IAmb 10 33 01.7
comp=E,3.5nm,0.9s
J16K Anvik River 69.21 23 P **P 10 33 02.8 +0.9**
J16K IAmb IAmb 10 33 19.0
comp=E,8.6nm,1.4s
BMAR Burnt Mountain 69.80 14 P **P 10 33 05.3 -0.1**
G24K Hadweenzic Riv 69.84 16 P **P 10 33 04.9 -0.8**
G24K IAmb IAmb 10 33 08.0
comp=E,9.0nm,1.4s
E29M Blow River 70.11 12 P **P 10 33 06.8 -0.4**
INK Inuvik 70.82 10 P **P 10 33 11.4 -0.1**
INK IAmb IAmb 10 33 25.9
comp=E,4.6nm,1.2s
INK Inuvik 70.82 10 P **P 10 33 11.4 -0.1**
INK pmax pmax
comp=E,5.0nm,1.2s
C36M Paulatuk 70.85 6 P **P 10 33 10.5 -1.2**
C36M IAmb IAmb 10 33 24.7
comp=E,5.2nm,1.3s
F31M Tsiigehtchic 71.60 10 P **P 10 33 15.1 -1.2**
F31M IAmb IAmb 10 33 26.8
comp=E,5.8nm,1.3s
ILAR Eielson Array 71.61 17 *e*P **P 10 33 19.9 +3.4**
ILAR pmax pmax
comp=E,1.0nm,0.9s
ILAR Eielson Array 71.61 17 P **P 10 33 14.3 -2.2**
comp=E,2.0nm,0.8s,baz=331,slow=5.4,SNR=1.9
comp=E,2.0nm,0.8s
G31M Satah River 72.00 11 P **P 10 33 18.3 -0.4**
H29M Whitestone 72.01 13 P **P 10 33 18.3 -0.5**
H29M IAmb IAmb 10 33 37.4
comp=E,8.5nm,1.4s
I30M Mount Dempster 73.26 12 P **P 10 33 26.3 -0.1**
SUA Susitna One 73.46 20 P **P 10 33 27.9 +0.1**
O18K Koktuh Hills 73.51 23 P **P 10 33 28.1 +0.2**
YKA Yellowknife Ar 78.28 3 P **P 10 33 54.4 -0.6**
comp=E,0.7nm,1.0s,baz=345,slow=6.0,SNR=2.9
comp=E,0.7nm,1.0s
WRA Warramunga Arr 82.40 123 P **P 10 34 16.2 -1.6**
comp=E,0.4nm,0.7s,baz=333,slow=5.4,SNR=1.7
comp=E,0.4nm,0.7s
WB2 Warramunga Arr 82.41 123 P **P 10 34 18.3 +0.5**
WB2 IAmb IAmb 10 34 40.4
comp=E,7.5nm,1.4s
VLDQ Val d'Or 88.92 341 P **P 10 34 48.4 -1.4**

MOS ***23*** *10:23:46.3,43.˚19N×46.˚16E,h12km,MPVA3.6*
NORS ***23*** *10:23:46.8,43.˚21N×46.˚22E,h18km,MPVA3.8*
DRS ***23*** *10:23:47.2,43.˚34N×46.˚14E,h17km*
TIF ***23*** *10:23:47.8,43.˚17N×46.˚08E,h12km±1km*
ISC 23 10:23:47.5±1.0,43.˚20N±0.˚03×46.˚15E±0.˚02,h17km±8km,
n38,σ1s11/75,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time (h m s)	Res (ISC)
DVE	**Vedeno**	**0.24**	**185**	*i* Pg	**Pg**		**10 23 52.9**	**-0.1**
DVE				*e*Sg	**Sb**		**10 23 57.9**	**+0.4**
DLMR	**Dylym**	**0.37**	**110**	*e*Pg	**Pb**		**10 23 55.5**	**-0.3**
DLMR				*e*Sg	**Sb**		**10 24 01.5**	**+0.3**
DBC	**Dubki**	**0.53**	**109**	*e*Pg	**Pg**		**10 23 57.8**	**-0.2**
DBC				*e*Sg	**Sb**		**10 24 06.1**	**+0.3**
KRNR	**Karanay**	**0.67**	**124**	*e*Pg	**Pg**		**10 24 00.2**	**-0.5**
KRNR				*e*Sg	**Sb**		**10 24 10.1**	**+0.3**
UNCR	**Uncukul**	**0.67**	**135**	*e*Pg	**Pb**		**10 24 00.6**	**-0.3**
UNCR				*e*Sg	**Sb**		**10 24 10.7**	**+0.7**
XNZR	**Khunzakh**	**0.77**	**148**	*e*Pg	**Pg**		**10 24 02.7**	**+0.1**
XNZR				*e*Sg	**Sn**		**10 24 13.9**	**-1.3**
BUJR	**Buynaksk**	**0.79**	**118**	*e*Pg	**Pn**		**10 24 03.5**	**-0.5**
BUJR				*e*Sg	**Sn**		**10 24 15.6**	**+0.1**
ARKR	**Arakani**	**0.86**	**134**	*e*Pg	**Pg**		**10 24 04.2**	**0.0**
ARKR				*e*Sg	**Sn**		**10 24 16.5**	**-0.6**
SHTL	**Shatili**	**0.91**	**234**	P	**Pb**		**10 24 04.6**	**-0.4**
SHTL				S	**Sb**		**10 24 16.6**	**-0.3**
SHTL	**Shatili**	**0.91**	**234**	*e*Pg	**Pb**		**10 24 04.7**	**-0.4**
SHTL				*e*Sg	**Sb**		**10 24 16.6**	**-0.3**
KMGR	**Komgaron**	**0.95**	**262**	*e*Pg	**Pn**		**10 24 08.6**	**+2.3**
KMGR				*e*Sg	**Sn**		**10 24 22.4**	**+2.9**
GNBR	**Gunib**	**1.00**	**143**	*e*Pg	**Pg**		**10 24 07.5**	**+0.5**
GNBR				*e*Sg	**Sn**		**10 24 22.3**	**+1.6**
VLKR	**Vladikavkaz**	**1.09**	**263**	*e*Pg	**Pg**		**10 24 10.0**	**+1.4**
VLKR				*i* Sg	**Sg**		**10 24 25.6**	**+2.7**
TRKR	**Terskaya**	**1.16**	**297**	*e*Pg	**Pg**		**10 24 10.0**	**0.0**
TRKR				*e*Sg	**Sg**		**10 24 26.3**	**+1.2**
BTKR	**Batakoyurt**	**1.19**	**279**	*e*Pg	**Pg**		**10 24 10.6**	**+0.1**
BTKR				*e*Sg	**Sg**		**10 24 27.6**	**+1.5**
CHRG	**Chargali**	**1.25**	**227**	P	**Pb**		**10 24 11.0**	**+0.2**
CHRG				S	**Sg**		**10 24 27.5**	**-0.5**
KMKR	**Kumukh**	**1.27**	**146**	*e*Pg	**Pg**		**10 24 12.0**	**-0.2**
KMKR				*e*Sg	**Sg**		**10 24 30.3**	**+1.5**
MTEO	**Meteo**	**1.30**	**247**	P	**Pb**		**10 24 11.4**	**-0.3**
MTEO				S	**Sn**		**10 24 28.9**	**+0.3**
SGKR	**Sergokala**	**1.33**	**123**	*e*Pg	**Pg**		**10 24 12.4**	**-0.7**
SGKR				*e*Sg	**Sg**		**10 24 31.2**	**+0.7**
LGD	**Lagodekhi**	**1.36**	**177**	P	**Pg**		**10 24 13.0**	**-0.4**
LGD				S	**Sg**		**10 24 31.9**	**+0.4**
LGD	**Lagodekhi**	**1.36**	**177**	*e*Pg	**Pg**		**10 24 13.4**	**-0.4**
LGD				*e*Sg	**Sg**		**10 24 31.9**	**+0.4**
LACR	**Lac**	**1.41**	**255**	*i* Pg	**Pb**		**10 24 13.2**	**-0.3**
LACR				*e*Sg	**Sg**		**10 24 32.1**	**-1.0**
GUDG	**Gudauri**	**1.43**	**240**	*e*Pg	**Pn**		**10 24 12.7**	**-0.3**
GUDG				*e*Sg	**Sb**		**10 24 32.1**	**0.0**
URKR	**Urkarakh**	**1.50**	**133**	*e*Pg	**Pb**		**10 24 15.2**	**+0.2**
URKR				*e*Sg	**Sg**		**10 24 36.4**	**+0.4**
STDR	**Stavd-Durt**	**1.54**	**277**	*e*Pg	**Pb**		**10 24 14.6**	**-1.0**
STDR				*e*Sg	**Sg**		**10 24 36.1**	**-1.0**
LSNR	**Lesken**	**1.70**	**274**	*e*Pg	**Pn**		**10 24 16.1**	**-0.4**
LSNR				*e*Sg	**Sg**		**10 24 42.3**	**-0.1**
DIGR	**Digorskoe uzhe**	**1.91**	**262**	*e*Pg	**Pb**		**10 24 21.3**	**-0.8**
DIGR				*e*Sg	**Sb**		**10 24 46.8**	**+1.1**
VSHL	**Vashlovani**	**1.97**	**175**	P	**Pg**		**10 24 24.4**	**-1.1**
VSHL				S	**Sg**		**10 24 53.7**	**+2.6**
DRN	**Derbent**	**1.98**	**125**	*e*Pg	**Pb**		**10 24 22.3**	**-0.9**
DRN				*e*Sg	**Sb**		**10 24 47.7**	**+0.1**
KBTC	**Kuba-Taba**	**2.09**	**288**	*e*Pg	**Pn**		**10 24 23.0**	**+1.1**
KBTC				*e*Sg	**Sb**		**10 24 50.1**	**-0.6**
TRLG	**Trialeti**	**2.25**	**223**	P	**Pb**		**10 24 26.1**	**-1.7**
TRLG				S	**Sg**		**10 24 59.1**	**-0.7**
TRLG	**Trialeti**	**2.25**	**223**	*e*Pg	**Pb**		**10 24 26.1**	**-1.7**
DMNI	**Dmanisi**	**2.37**	**219**	P	**Pb**		**10 24 28.1**	**-1.7**
DMNI				S	**Sg**		**10 25 02.1**	**-1.5**
PYA1	**Pyatigorsk**	**2.38**	**292**	*e*Pn	**Pn**		**10 24 27.1**	**+1.2**
PYA1				*e*Sn	**Sb**		**10 24 57.3**	**-1.8**
KBZ	**Khabaz**	**2.43**	**284**	*e*Pn	**Pn**		**10 24 26.0**	**-0.5**
KBZ				*e*Sn	**Sn**		**10 24 57.5**	**+1.8**
BEYR	**Belyy Ugol+**	**2.56**	**290**	*e*Pn	**Pn**		**10 24 27.3**	**-1.0**
BEYR				*e*Sn	**Sn**		**10 25 00.3**	**+1.3**

SHA1	**Shidzhatmaz**	**2.60**	**283**	*e*Pn	**Pn**	**10 24 28.3**	**-0.8**
SHA1				*e*Sn	**Sn**	**10 25 01.3**	**+0.9**
KIV	**Kislovodsk**	**2.63**	**288**	*e*Pn	**Pb**	**10 24 31.8**	**-2.5**
KIV				*e*Sn	**Sb**	**10 25 04.6**	**-1.7**

*IDC **23** 10:42:30.2±0.8, 3°25.5S×130°52.6E, h0km, mb4.0/12, mbtmp4.1/14, ML3.3/2, MS3.6/18, Error ellipse: s-maj=40.0km s-min=15.8km az=68.0*
*NEIC **23** 10:42:32.0±1.6, 3°25.5S±0°07×130°72.2E±0°.06, h10km±1km, mb4.5/34, Error ellipse: s-maj=11.2km s-min=9.5km az=180.0*
*DJA **23** 10:42:33.2±0.4, 3°S×4°×13°1E±°, h10km, M4.3/9, mb4.5/2, mB4.5/2, MLv4.2/9, Mw(mB)3.7/2*
ISC 23 10:42:31.0±0.4, 3°23S±0°04×130°83E±0°.04, h10km, n91, σ1s72/79, mb4.3/27, MS3.5/17, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.45**	**78**		**Pg**	**10 42 59.0**	**+0.1**
FAKI	**Fak Fak**	**1.45**	**78**	P	**Pg**	**10 42 59.3**	**+0.4**
BNDI	**Bandanaira**	**1.58**	**216**	P	**Pg**	**10 43 03.1**	**+1.7**
BNDI	**Bandanaira**	**1.58**	**216**	P	**Pg**	**10 43 02.9**	**+1.5**
SWI	**Sorong**	**2.39**	**10**	P	**Pn**	**10 43 10.2**	**0.0**
SWI				S	**Sn**	**10 43 38.2**	**-1.3**
NLAI	**Namlea**	**3.72**	**270**	P	**Pn**	**10 43 30.6**	**+2.0**
LBMI	**Labuha**	**4.20**	**308**	P	**Pn**	**10 43 35.3**	**+0.1**
SAUI	**Saumlaki**	**4.75**	**174**	Pn	**Pn**	**10 43 41.6**	**-1.1**
SANI	**Sanana**	**4.97**	**283**	P	**Pn**	**10 43 45.6**	**-0.2**
TNTI	**Ternate**	**5.27**	**319**	Pn	**Pn**	**10 43 49.0**	**-0.9**
LUWI	**Luwuk**	**8.34**	**285**	Pn	**Pn**	**10 44 31.8**	**-0.3**
DRS	**Darwin Rock St**	**9.15**	**180**	P	**Pn**	**10 44 46.4**	**+3.3**
SOEI	**Soe**	**9.19**	**225**	Pn	**Pn**	**10 44 42.2**	**-1.7**
SOEI	**Soe**	**9.19**	**225**	P	Pn	10 45 00.5	+17
MTN	**Manton Dam**	**9.56**	**178**	Pn	**Pn**	**10 44 50.4**	**+1.6**
TOLI2	**Tolitoli**	**10.93**	**293**	Pn	**Pn**	**10 45 08.7**	**+1.1**
TOLI2	**Tolitoli**	**10.93**	**293**	P	**Pn**	**10 45 09.5**	**+1.9**
DAV	**Davao City (W)**	**11.49**	**333**	LR	LR	10 50 32.9	
	comp=Z,388nm,19.7s,baz=120,slow=42						
PLAI	**Plampang**	**14.12**	**246**	P	**P**	**10 45 55.6**	**-3.3**
FITZ	**Fitzroy Crossi**	**15.63**	**199**	Pn	**Pn**	**10 46 09.2**	**-2.3**
COEN	**Coen**	**16.20**	**132**	Pn	**Pn**	**10 46 19.4**	**+0.5**
COEN				IAmb	IAmb	10 46 30.2	
	comp=Z,33nm,1.4s						
WB0	**Warramunga Arr**	**16.80**	**168**	Pn	**Pn**	**10 46 24.7**	**-1.9**
WRAB	**Tennant Creek**	**16.96**	**169**	Pn	**Pn**	**10 46 25.2**	**-3.4**
WRAB				IAmb	IAmb	10 46 46.9	
	comp=Z,32nm,1.4s						
WRA	**Warramunga Arr**	**16.96**	**169**	Pn	**Pn**	**10 46 27.1**	**-1.5**
WRA	**Warramunga Arr**	**16.96**	**169**	Pn	**Pn**	**10 46 28.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=341,slow=13,SNR=12						
WRA				Sn	**Sn**	**10 49 29.6**	**-7.8**
	comp=Z,0.2nm,0.3s,baz=344,slow=24,SNR=3.4						
	comp=Z,7.9nm,0.8s						
WB2	**Warramunga Arr**	**16.97**	**169**	Pn	**Pn**	**10 46 27.5**	**-1.2**
KKM	**Kota Kinabalu**	**17.26**	**302**	Pn	**Pn**	**10 46 28.4**	**-4.0**
KKM				IAmb	IAmb	10 46 54.8	
	comp=Z,41nm,1.2s						
PMG	**Port Moresby**	**17.35**	**111**	Pn	**Pn**	**10 46 33.0**	**-0.5**
PMG	**Port Moresby**	**17.35**	**111**	P	**P**	**10 46 37.7**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=28,slow=3.5,SNR=2.7						
	comp=Z,6.0nm,0.7s						
QIS	**Mount Isa**	**19.23**	**154**	P	**Pn**	**10 46 57.3**	**+0.8**
SBUM	**Sibu**	**19.44**	**287**	P	**P**	**10 46 55.6**	**-2.2**
AS31	**Alice Springs**	**20.54**	**172**	P	Pn	10 47 11.2	-0.8
AS31				IAmb	IAmb	10 47 13.1	
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**20.54**	**172**	P	**P**	**10 47 10.8**	**+1.0**
ASAR	**Alice Springs**	**20.54**	**172**	P	**P**	**10 47 11.0**	**+1.2**
	comp=Z,30nm,0.6s,baz=352,slow=11,SNR=369						
ASAR				S	**S**	**10 50 58.4**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=353,slow=20,SNR=4.7						
	comp=Z,30nm,0.6s						
AS01	**Alice Springs**	**20.54**	**172**	P	Pn	10 47 11.2	-0.9
SMRI	**Semarang**	**20.66**	**259**	P	**P**	**10 47 09.8**	**-1.3**
MBWA	**Marble Bar**	**20.84**	**210**	P	**P**	**10 47 12.8**	**-0.3**
KSM	**Kuching**	**21.04**	**283**	P	**P**	**10 47 14.2**	**-1.1**
PSA00	**Pilbara Seismi**	**21.13**	**209**	P	**P**	**10 47 15.7**	**-0.5**
PSA00	**Pilbara Seismi**	**21.13**	**209**	P	**P**	**10 47 15.8**	**-0.5**
PSA00				IAmb	IAmb	10 47 16.9	
	comp=Z,18nm,0.8s						
RABL	**Rabaul**	**21.31**	**93**	P	**P**	**10 47 17.4**	**-0.8**
RABL				IAmb	IAmb	10 47 41.4	
	comp=Z,25nm,0.9s						
GUMO	**Guam**	**21.75**	**40**	LR	LR	10 55 46.9	
	comp=Z,92nm,18.2s,baz=200,slow=36						
CTA	**Charters Tower**	**22.52**	**139**	LR	LR	10 57 47.4	
	comp=Z,159nm,18.2s,baz=317,slow=40						
CTAO	**Charters Tower**	**22.52**	**139**	P	**P**	**10 47 32.2**	**+1.0**
CTAO				IAmb	IAmb	10 47 57.4	
	comp=Z,20nm,1.3s						
OOD	**Oodnadatta**	**24.87**	**170**	P	**P**	**10 47 55.4**	**+1.5**
MYKOM	**Kota Tinggi**	**27.43**	**280**	P	**P**	**10 48 18.1**	**+0.9**
MYKOM				IAmb	IAmb	10 48 20.9	
	comp=Z,13nm,0.9s						
FORT	**Forrest**	**27.53**	**185**	P	**P**	**10 48 18.9**	**+0.9**
TWG	**Pinlang**	**27.59**	**340**	P	**P**	**10 48 17.3**	**-1.3**
JOW	**Kunigami**	**29.98**	**355**	LR	LR	10 59 20.2	
	comp=Z,176nm,21.1s,baz=152,slow=34						
STKA	**Stephens Creek**	**30.25**	**162**	P	**P**	**10 48 43.5**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=329,slow=4.6,SNR=6.0						
	comp=Z,2.1nm,0.6s						
KULM	**Kulim**	**31.31**	**286**	P	**P**	**10 48 52.4**	**+0.6**
KULM				IAmb	IAmb	10 48 55.8	
	comp=Z,7.7nm,0.8s						
JCJ	**Chichijima**	**32.08**	**19**	LR	LR	11 00 19.0	
	comp=Z,152nm,19.6s,baz=318,slow=33						
NWAO	**Narrogin (SRO)**	**32.17**	**202**	P	**P**	**10 48 58.9**	**-0.3**
RPSI	**Rantau Prapat**	**32.43**	**280**	P	**P**	**10 49 01.3**	**-0.3**
RPSI				IAmb	IAmb	10 49 02.4	
	comp=Z,7.5nm,0.8s						
JNU	**Nakatsue**	**36.15**	**0**	LR	LR	11 05 06.4	
	comp=Z,73nm,18.6s,baz=184,slow=38						
NJ2	**Nanjing**	**36.88**	**343**	*e*P	**P**	**10 49 42.8**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JHJ	**Hachijo jima 2**	**37.13**	**12**	LR	LR	11 02 56.6	
	comp=Z,162nm,21.7s,baz=134,slow=33						
CMAR	**Chiang Mai Arr**	**38.08**	**306**	P	**P**	**10 49 50.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.08**	**306**	P	**P**	**10 49 48.8**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=139,slow=8.3,SNR=6.2						
CMAR				ScP	**ScP**	**10 55 54.3**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=168,slow=4.6,SNR=4.4						
	comp=Z,0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**40.16**	**9**	LR	LR	11 05 28.9	
	comp=Z,78nm,18.8s,baz=196,slow=34						
KSRS	**Korea Array**	**40.56**	**356**	P	**P**	**10 50 11.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=172,slow=8.8,SNR=2.4						
KSRS				LR	LR	11 06 29.2	
	comp=Z,68nm,20.2s,baz=180,slow=36						
	comp=Z,0.6nm,0.5s						
PZH	**PanZhiHua**	**40.80**	**318**	P	**P**	**10 50 15.8**	**+2.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,130nm,5.1s						
USRK	**Ussuriysk Ar.**	**47.22**	**1**	P	**P**	**10 51 04.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=202,slow=10,SNR=1.3						
	comp=Z,1.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**47.27**	**340**	*e*P	**P**	**10 51 00.9**	**-3.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,99nm,5.7s						
ASAJ	**Asahikawa**	**48.30**	**11**	LR	LR	11 10 06.7	
	comp=Z,49nm,21.4s,baz=276,slow=34						
GTA	**Gaotai**	**51.13**	**329**	*e*P	**P**	**10 51 36.0**	**+1.7**
GTA				pP	sP	10 51 42.8	+4.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLR	**Kul'dur**	**52.25**	**1**	LR	LR	11 15 28.1	
	comp=Z,26nm,19.2s,baz=184,slow=38						
SONM	**Songino Array**	**55.17**	**340**	P	**P**	**10 52 04.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=160,slow=9.0,SNR=5.0						
SONM				LR	LR	11 18 02.0	
	comp=Z,39nm,19.6s,baz=142,slow=39						
	comp=Z,0.8nm,0.8s						
PETK	**Petropavlovsk-**	**60.51**	**18**	LR	LR	11 16 24.5	
	comp=Z,35nm,21.6s,baz=118,slow=34						
YAK	**Yakutsk**	**65.08**	**359**	P	**P**	**10 53 12.2**	**+0.7**
YAK	**Yakutsk**	**65.08**	**359**	LR	LR	11 21 46.7	
	comp=Z,30nm,20.9s,baz=106,slow=36						
MK31	**Makanchi Array**	**65.57**	**326**	P	**P**	**10 53 14.9**	**-0.1**
MK31				IAmb	IAmb	10 53 23.2	
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**10 53 15.0**	**0.0**
MKAR	**Makanchi Array**	**65.57**	**326**	P	**P**	**10 53 15.1**	**0.0**
	comp=Z,1.7nm,0.7s,baz=119,slow=8.2,SNR=17						
MKAR				LR	LR	11 23 37.3	
	comp=Z,32nm,18.8s,baz=60,slow=38						
	comp=Z,1.7nm,0.7s						
TARG	**Taragay, Kyrgy**	**65.64**	**319**	P	**P**	**10 53 15.7**	**-0.4**
TARG				IAmb	IAmb	10 53 44.0	
	comp=Z,7.3nm,1.5s						
MAKZ	**Makanchi**	**65.75**	**325**	P	**P**	**10 53 15.9**	**-0.3**
ZAA0	**Zalesovo Array**	**68.61**	**333**	P	**P**	**10 53 35.0**	**+0.9**
ZAA0				IAmb	IAmb	10 53 35.7	
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**68.61**	**333**	P	**P**	**10 53 34.2**	**+0.1**
ZALV	**Zalesovo Beam**	**68.61**	**333**	P	**P**	**10 53 33.9**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=95,slow=4.9,SNR=4.9						
	comp=Z,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**69.77**	**328**	P	**P**	**10 53 41.8**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=126,slow=5.7,SNR=14						
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**69.77**	**328**	P	**P**	**10 53 41.3**	**-0.1**
KK31	**Karatay Array**	**71.09**	**318**	P	**P**	**10 53 49.7**	**0.0**
KK31				IAmb	IAmb	10 54 04.0	
	comp=Z,2.5nm,1.1s						
KKAR	**Karatay Array**	**71.09**	**318**	P	**P**	**10 53 49.2**	**-0.5**
TIXI	**Tiksi**	**74.75**	**359**	LR	LR	11 28 51.7	
	comp=Z,41nm,18.3s,baz=202,slow=37						
BVAR	**Borovoye Array**	**75.35**	**327**	P	**P**	**10 54 14.5**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=130,slow=6.4,SNR=7.1						
	comp=Z,1.8nm,0.7s						
BRVK	**Borovoye**	**75.42**	**327**	P	**P**	**10 54 15.9**	**+0.9**
BRVK				IAmb	IAmb	10 54 23.2	
	comp=Z,3.6nm,0.9s						
ABKAR	**Akbulak array**	**80.10**	**321**	P	**P**	**10 54 41.5**	**+0.4**
TTA	**Tatalina**	**85.26**	**26**	P	**P**	**10 55 08.9**	**+1.1**
TTA				IAmb	IAmb	10 55 11.0	
	comp=Z,4.9nm,1.1s						
QSPA	**South Pole Qui**	**86.72**	**180**	P	**P**	**10 55 16.3**	**+1.1**
QSPA				IAmb	IAmb	10 55 18.6	
	comp=Z,3.1nm,1.0s						
QSPA	**South Pole Qui**	**86.72**	**180**	P	**P**	**10 55 15.9**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=324,slow=0.9,SNR=3.2						
QSPA				LR	LR	11 34 17.1	
	comp=Z,50nm,19.6s,baz=238,slow=36						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**89.60**	**25**	P	**P**	**10 55 30.2**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=276,slow=3.5,SNR=2.4						
ILAR				LR	LR	11 32 22.9	
	comp=Z,33nm,20.7s,baz=180,slow=33						
	comp=Z,0.3nm,0.7s						

*NNC **23** 10:56:50.8±0.7, 50.01N×78.43E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=13.2km s-min=2.4km az=84.0, Suspected Mining explosion.*
*IDC **23** 10:56:51.6±0.8, 50.18N×79.01E, h0km, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=9.8km s-min=5.6km az=52.0*
ISC 23 10:56:50.8±0.8, 50.10N±0.05×78.83E±0.08, h0km, n17, σ0s89/31, 16C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.52**	**337**	↑P	**Pb**	**10 57 02.1**	**-0.8**
KUR07				↑S	**Sb**	**10 57 10.9**	**-0.1**
KUR14	**Kurchatov Arra**	**0.54**	**343**	↑P	**Pb**	**10 57 02.4**	**-0.7**
KUR14				↓S	**Sb**	**10 57 11.0**	**-0.4**
KUR06	**Kurchatov Arra**	**0.54**	**339**	↓P	**Pb**	**10 57 02.4**	**-0.8**
KUR06				↑S	**Sb**	**10 57 11.5**	**0.0**
KUR15	**Kurchatov Arra**	**0.55**	**342**	↑P	**Pb**	**10 57 02.7**	**-0.6**
KUR15				↑S	**Sb**	**10 57 11.5**	**-0.2**
KURBB	**Kurchatov Arra**	**0.56**	**340**	↓P	**Pb**	**10 57 02.8**	**-0.6**
KURBB				↓S	**Sb**	**10 57 12.2**	**+0.2**
	21nm,0.3s						
KURBB	**Kurchatov Arra**	**0.56**	**340**	Pg	**Pg**	**10 57 01.4**	**-0.1**
	0.9nm,0.3s,baz=144,slow=24,SNR=57						
KURBB				Lg	Lg	10 57 10.7	
	1.8nm,0.3s,baz=147,slow=34,SNR=19						
KUR16	**Kurchatov Arra**	**0.57**	**338**	↑P	**Pb**	**10 57 02.9**	**-0.7**
KUR16				↑S	**Sb**	**10 57 12.1**	**-0.2**
KUR05	**Kurchatov Arra**	**0.57**	**341**	↑P	**Pb**	**10 57 03.2**	**-0.6**
KUR05				↑S	**Sb**	**10 57 12.1**	**-0.4**
KUR17	**Kurchatov Arra**	**0.58**	**336**	↑P	**Pb**	**10 57 03.2**	**-0.7**
KUR17				↓S	**Sb**	**10 57 12.7**	**+0.1**
KUR04	**Kurchatov Arra**	**0.59**	**342**	↑P	**Pb**	**10 57 03.6**	**-0.5**
KUR04				↓S	**Sb**	**10 57 12.6**	**-0.4**
KURK	**Kurchatov**	**0.63**	**348**	↑P	**Pb**	**10 57 03.8**	**-0.9**
KURK				↑S	**Sb**	**10 57 14.5**	**+0.4**
	7.0nm,0.4s						
MAKZ	**Makanchi**	**3.90**	**146**	↓Pn	**Pn**	**10 57 54.0**	**+1.9**
	0.4nm,0.3s						
MAKZ				↑Pg	**Pg**	**10 58 03.4**	**-2.3**
	0.6nm,0.4s						
MAKZ				↓Lg	Lg	10 58 58.3	
	2.7nm,0.7s						
MK31	**Makanchi Array**	**4.03**	**144**	↑Pn	**Pn**	**10 57 55.0**	**+1.2**
	0.1nm,0.1s,baz=300,slow=46,SNR=22						
MK31				Pg	**Pg**	**10 58 07.3**	**-0.8**
	0.2nm,0.2s,baz=327,slow=14,SNR=16						
MK31				↓Lg	Lg	10 59 02.2	
	1.9nm,0.5s,baz=328,slow=29,SNR=9.0						
MKAR	**Makanchi Array**	**4.03**	**144**	Pn	**Pn**	**10 57 55.0**	**+1.2**
	0.3nm,0.3s,baz=323,slow=10,SNR=18						
MKAR				Pg	**Pb**	**10 58 02.1**	**-0.6**
	0.8nm,0.3s,baz=330,slow=15,SNR=21						
MKAR				Sn	**Sn**	**10 58 43.5**	**+1.7**
	0.3nm,0.3s,baz=331,slow=27,SNR=1.5						
MKAR				Lg	Lg	10 58 56.2	
	1.1nm,0.3s,baz=335,slow=28,SNR=12						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**5.34**	**42**	Pn	**Pn**	**10 58 12.5**	**+0.8**
	0.5nm,0.3s,baz=228,slow=14,SNR=6.7						
ZALV				Lg	Lg	10 59 35.5	
	0.1nm,0.3s,baz=225,slow=28,SNR=1.5						
	0.9nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.34**	**42**	I	I	11 26 50.0	
	baz=222,slow=326,SNR=6.0						
BVAR	**Borovoye Array**	**6.02**	**302**	Pn	**Pn**	**10 58 21.2**	**0.0**
	baz=120,slow=16,SNR=1.9						
BVAR				Sn	**Sn**	**10 59 30.5**	**-0.3**
	0.1nm,0.3s,baz=112,slow=25,SNR=5.5						
	0.3nm,0.3s						

*IDC **23** 11:05:41.0±2.1, 51°.90N×178°.51E, h99km±18km, mb3.3/13, mbtmp3.7/15, Error ellipse: s-maj=22.2km s-min=12.9km az=172.0*
*NEIC **23** 11:05:41.7±2.0, 51°.9N±0°.2×178°.47E±0°.05, h100km±6km, mb4.0/60, ML3.7(AEIC), Error ellipse: s-maj=23.9km s-min=1.8km az=189.0*
*AEIC **23** 11:05:42.4±2.2, 51°.8N±0°.2×178°.44E±0°.08, h99km±5km, Error ellipse: s-maj=22.1km s-min=6.9km az=185.0*
ISC 23 11:05:41.4±0.7, 51°.85N±0°.09×178°.47E±0°.04, h104km±5km, n124, σ0s95/123, mb4.0/33, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSSE	**Little Sitkin**	**0.10**	**39**		**Pn**	**11 05 55.9**	**0.0**
LSNW	**Little Sitkin**	**0.12**	**15**		**Pn**	**11 05 55.8**	**-0.1**
LSPA	**Little Sitkin**	**0.12**	**33**		**Pn**	**11 05 55.9**	**0.0**
LSPA					**Sn**	**11 06 08.4**	**+1.6**
CESW	**Semis' Southwe**	**0.68**	**86**		**Pn**	**11 05 58.9**	**-0.1**
CEAP	**Semis' Anvil P**	**0.70**	**77**		**Pn**	**11 05 59.4**	**+0.2**
AMKA	**Amchitka**	**0.71**	**132**		**Pn**	**11 05 59.0**	**-0.1**
AMKA					**Sn**	**11 06 11.6**	**-1.0**
CERB	**Semis' Cerberu**	**0.72**	**83**		**Pn**	**11 05 59.9**	**+0.5**
CERB					**Sn**	**11 06 12.7**	**-0.2**
CEPE	**Semis' Perret**	**0.74**	**81**		**Pn**	**11 05 59.5**	**-0.1**
GANO	**Gareloi North**	**1.69**	**90**		**Pn**	**11 06 10.1**	**-0.1**
GAEA	**Gareloi East**	**1.73**	**91**		**Pn**	**11 06 10.7**	**+0.1**
GAEA					**Sn**	**11 06 34.2**	**+1.2**
TANO	**Tanaga North**	**2.12**	**87**		**Pn**	**11 06 15.6**	**0.0**
TASE	**Tanaga Southea**	**2.17**	**89**		**Pn**	**11 06 16.1**	**-0.1**
TAFP	**Tanaga Falls P**	**2.20**	**87**		**Pn**	**11 06 16.5**	**-0.2**
TAFP					**Sn**	**11 06 44.2**	**+0.5**
KICM	**Kanaga Island**	**2.69**	**87**		**Pn**	**11 06 23.2**	**+0.2**
KIWB	**Kanaga Island**	**2.72**	**88**		**Pn**	**11 06 23.4**	**0.0**
SHEM	**Shemya Is, Ala**	**2.82**	**290**	P	**Pn**	**11 06 24.6**	**-0.1**
	105nm,0.3s,baz=68,slow=4.6,SNR=30						
SHEM				S	**Sn**	**11 06 58.4**	**+0.3**
	39nm,0.3s,baz=171,slow=19,SNR=1.3						
ADK	**Adak**	**3.01**	**88**		**Pn**	**11 06 26.7**	**-0.5**
GSTR	**Great Sitkin T**	**3.39**	**84**	Pn	**Pn**	**11 06 32.8**	**+0.4**
GSMY	**Great Sitkin M**	**3.40**	**85**		**Pn**	**11 06 32.1**	**-0.3**
ATKA	**Atka Island**	**4.54**	**83**		**Pn**	**11 06 48.1**	**+0.3**
KOFP	**Korovin Flat P**	**4.61**	**82**		**Pn**	**11 06 49.4**	**+0.7**
MAPS	**Pakushin South**	**9.05**	**72**		**Pn**	**11 07 51.1**	**+2.1**
MGOD	**Makushin Gods**	**9.09**	**72**		**Pn**	**11 07 51.6**	**+2.1**
PEA0B	**Petropavlovsk-**	**12.72**	**284**	Pn	**Pn**	**11 08 38.9**	**+0.7**
PETK	**Petropavlovsk-**	**12.72**	**284**	P	**Pn**	**11 08 37.8**	**-0.4**
	2.2nm,0.8s,baz=94,slow=17,SNR=1.8						
SDPT	**Sand Point**	**12.97**	**66**	Pn	**Pn**	**11 08 39.9**	**-1.5**
CNBA	**Chernabura Isl**	**13.43**	**69**	Pn	**Pn**	**11 08 45.0**	**-2.5**
O14K	**Tigyukauivet M**	**13.62**	**49**	Pn	**Pn**	**11 08 48.2**	**-1.6**
M14K	**Bethel**	**14.00**	**43**	Pn	**Pn**	**11 08 52.8**	**-1.9**
CHGN	**Chignik**	**14.26**	**63**	Pn	**Pn**	**11 08 57.4**	**-0.6**
N15K	**Kwethluk River**	**14.54**	**47**	Pn	**Pn**	**11 09 03.3**	**+1.6**
L16K	**Owhat River**	**15.52**	**42**		**Pn**	**11 09 15.3**	**+1.3**
L16K				IAmb	IAmb	11 09 28.7	
	comp=Z,11nm,1.2s						
N17K	**Nushagak Hills**	**16.01**	**48**	Pn	**Pn**	**11 09 20.3**	**+0.2**
N17K				IAmb	IAmb	11 09 39.2	
	comp=Z,22nm,1.5s						
M17K	**Holitna River**	**16.25**	**45**		**Pn**	**11 09 23.7**	**+0.6**
M17K				IAmb	IAmb	11 09 41.2	
	comp=Z,22nm,1.4s						
K17K	**Iditarod**	**16.50**	**40**		**P**	**11 09 29.1**	**+2.1**
K17K				IAmb	IAmb	11 09 29.9	
	comp=Z,8.8nm,1.1s						
OHAK	**Old Harbor**	**17.17**	**61**	P	**Pn**	**11 09 32.2**	**-2.2**
O19K	**Port Alsworth**	**17.24**	**50**	P	**Pn**	**11 09 33.1**	**-2.2**
O19K				IAmb	IAmb	11 10 00.9	
	comp=Z,9.1nm,1.1s						
J18K	**Innoko River**	**17.50**	**39**	P	**P**	**11 09 37.5**	**-0.6**
TTA	**Tatalina**	**17.53**	**41**	P	**P**	**11 09 38.4**	**0.0**
KDAK	**Kodiak Island**	**17.61**	**59**	P	**P**	**11 09 38.6**	**-0.7**
H18K	**Honhosa River**	**17.85**	**33**	P	**P**	**11 09 40.9**	**-1.0**
C16K	**Lisburne Hills**	**18.23**	**19**	P	**P**	**11 09 45.8**	**-0.2**
K20K	**Telida**	**18.51**	**41**	P	**P**	**11 09 49.3**	**+0.2**
E18K	**Tukpahlearik C**	**18.69**	**26**	P	**Pn**	**11 09 52.9**	**+0.3**
E18K				IAmb	IAmb	11 10 21.2	
	comp=Z,9.1nm,1.5s						
J20K	**Nowinta River**	**18.85**	**39**	P	**P**	**11 09 53.8**	**+1.1**
J20K				IAmb	IAmb	11 09 59.0	
	comp=Z,5.6nm,1.4s						
SUA	**Susitna One**	**19.28**	**48**	P	**P**	**11 09 58.0**	**+0.4**
C18K	**Utukok River**	**19.45**	**22**	P	**P**	**11 10 00.1**	**+0.7**
O22K	**Cooper Landing**	**19.52**	**51**	P	**P**	**11 09 59.6**	**-0.6**
BPAW	**Bear Paw Mtn.**	**20.06**	**41**	P	**P**	**11 10 04.7**	**-1.3**
H21K	**Melozitna Rive**	**20.07**	**36**	P	Pn	11 10 08.1	-0.7
H21K				IAmb	IAmb	11 10 26.1	
	comp=Z,7.2nm,1.4s						
D19K	**Kuna River**	**20.11**	**25**	P	**P**	**11 10 08.0**	**+1.4**
I21K	**Tanana**	**20.14**	**37**	P	Pn	11 10 08.8	-0.7
I21K				IAmb	IAmb	11 10 27.2	
	comp=Z,12nm,1.5s						
GHO	**Glory Hole Cre**	**20.20**	**48**	P	Pn	11 10 09.7	-0.7
KNK	**Knik Glacier**	**20.33**	**49**	P	**P**	**11 10 10.0**	**+1.1**
KNK				IAmb	IAmb	11 10 34.5	
	comp=Z,12nm,1.1s						
SML	**Sawmill**	**20.48**	**48**	P	**P**	**11 10 11.6**	**+1.0**
SML				IAmb	IAmb	11 10 15.4	
	comp=Z,27nm,1.4s						
F21K	**Alatna River**	**20.67**	**31**	P	**P**	**11 10 11.9**	**-0.5**
SCM	**Sheep Creek Mo**	**20.95**	**48**	P	**P**	**11 10 16.2**	**+0.6**
I23K	**Minto, Yukon-K**	**21.12**	**39**	P	**P**	**11 10 16.8**	**-0.6**
KLU	**Klutina**	**21.54**	**50**	P	**P**	**11 10 21.9**	**0.0**
KLU				IAmb	IAmb	11 10 24.9	
	comp=Z,14nm,1.2s						
G23K	**Bananza Creek**	**21.57**	**34**	P	**P**	**11 10 23.4**	**+1.3**
G23K				IAmb	IAmb	11 10 30.9	
	comp=Z,6.4nm,1.5s						
B21K	**Ikpikpuk River**	**21.81**	**25**	P	**P**	**11 10 25.9**	**+1.4**
**IL

PDAR **Pinedale Array** 47.78 71 P **P** 11 14 07.6 -0.4
PDAR **Pinedale Array** 47.78 71 P **P** 11 14 07.0 -1.0
comp=Z,0.4nm,0.7s,baz=237,slow=1.3,SNR=3.9
comp=Z,0.4nm,0.7s
SPITS **Spitsbergen Ar** 49.77 355 P **P** 11 14 21.2 -1.3
comp=Z,16nm,1.0s,baz=19,slow=7.9,SNR=5.5
ZALV **Zalesovo Beam** 52.45 312 PcP **PcP** 11 15 51.2 -0.9
comp=Z,0.4nm,0.4s,baz=32,slow=5.6,SNR=2.2
KURBB **Kurchatov Arra** 57.55 312 P **P** 11 15 20.2 +0.7
comp=Z,0.8nm,0.5s,baz=41,slow=6.8,SNR=8.3
KURBB PcP **PcP** 11 16 11.9 +0.1
comp=Z,0.5nm,0.6s,baz=44,slow=3.9,SNR=4.1
comp=Z,0.8nm,0.5s
MKAR **Makanchi Array** 58.39 307 P **P** 11 15 25.9 +0.3
MKAR **Makanchi Array** 58.39 307 P **P** 11 15 25.4 -0.1
comp=Z,0.2nm,0.3s,baz=50,slow=6.1,SNR=8.7
comp=Z,0.2nm,0.3s
BVAR **Borovoye Array** 59.41 318 P **P** 11 15 33.0 +0.6
comp=Z,0.9nm,0.3s,baz=66,slow=6.7,SNR=7.2
BVAR PcP **PcP** 11 16 18.8 -0.3
comp=Z,0.7nm,0.5s,baz=56,slow=2.1,SNR=2.6
comp=Z,0.9nm,0.3s
TXAR **Lajitas Array** 60.25 79 P **P** 11 15 39.2 +0.5
TXAR **Lajitas Array** 60.25 79 P **P** 11 15 38.7 0.0
comp=Z,0.2nm,0.5s,baz=300,slow=5.7,SNR=8.3
comp=Z,0.2nm,0.5s
ABKAR **Akbulak array** 66.51 321 P **P** 11 16 20.8 +1.4
KKAR **Karatay Array** 66.79 311 P **P** 11 16 21.6 +0.2
BATG **Bathurst New B** 66.87 42 P **P** 11 16 21.3 -0.5
WRA **Warramunga Arr** 81.21 222 P **P** 11 17 45.4 0.0
comp=Z,0.6nm,0.4s,baz=30,slow=5.8,SNR=8.1
comp=Z,0.6nm,0.4s
ASAR **Alice Springs** 84.72 220 P **P** 11 18 04.5 +1.1
comp=Z,0.7nm,0.7s,baz=22,slow=5.4,SNR=11
comp=Z,0.7nm,0.7s
STKA **Stephens Creek** 89.43 211 P **P** 11 18 26.3 +0.3
comp=Z,1.3nm,0.6s,baz=345,slow=7.9,SNR=4.4
comp=Z,1.3nm,0.6s
QSPA **South Pole Qui** 141.61 180 PKP **PKPdf** 11 24 59.3 +0.5
comp=Z,1.1nm,0.9s,baz=100,slow=18,SNR=7.5
BOSA **Boshof** 149.37 309 PKPbc **PKPbc** 11 25 18.2 +0.3
comp=Z,1.2nm,0.6s,baz=33,slow=17,SNR=1.5

*IDC **23** 11:12:16.4±1.1, 43.42N×139.19E, h222km±11km, mb3.2/9, mbtmp3.7/13, Error ellipse: s-maj=16.1km s-min=12.3km az=101.0*
*JMA **23** 11:12:17.2±0.5, 43.1N±2.2°×13.9E±.1°, h235km±3km, MV3.1/26, NW OFF SHAKOTAN PEN*
ISC 23 11:12:17.4±0.7, 43.32N±0.07°×139.48E±0.07, h250km, n27, σ1§52/32, mb3.5/10, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSH	**Shimam**	**0.79**	**148**	*eP*	**Pn**	**11 12 49.6**	**-1.8**
JOSM	**Okushiri--Mats**	**1.24**	**180**	P	**Pn**	**11 12 52.7**	**-1.1**
JOSM				*eS*	**S**	**11 13 20.5**	**-2.1**
JYM2	**Yakumo 2**	**1.37**	**151**	*eP*	**Pn**	**11 12 53.9**	**-0.9**
JYM2				*eS*	**S**	**11 13 22.4**	**-1.7**
JNB	**Noboribetsu**	**1.42**	**126**	*eP*	**Pn**	**11 12 54.4**	**-0.7**
JHR	**Hokuryu**	**1.68**	**75**	*eP*	**Pn**	**11 12 56.4**	**-0.7**
JOMM	**Oshimamatsumae**	**1.83**	**168**	*eP*	**Pn**	**11 12 57.7**	**-0.7**
JOT	**Ohata**	**2.26**	**149**	*eP*	**Pn**	**11 13 01.5**	**-0.8**
ASAJ	**Asahikawa**	**2.39**	**69**	P	**Pn**	**11 13 03.2**	**-0.3**
	8.3nm,0.5s,baz=238,slow=6.5,SNR=16						
ASAJ				S	**S**	**11 13 38.1**	**-1.8**
	5.6nm,0.6s,baz=342,slow=20,SNR=1.2						
JKK2	**Kamakawa 2**	**2.44**	**76**	*eP*	**Pn**	**11 13 04.0**	**+0.1**
JNBK	**Urakawa-nobuka**	**2.62**	**112**	*eS*	**S**	**11 13 43.1**	**-0.9**
JCH	**Churui**	**2.93**	**103**	*eP*	**Pn**	**11 13 07.8**	**-1.2**
JCH				*eS*	**S**	**11 13 46.8**	**-3.2**
JAR	**Ashorobuto**	**3.13**	**89**	*eP*	**Pn**	**11 13 11.4**	**+0.2**
JAR				*eS*	**S**	**11 13 53.1**	**-0.6**
JTKR	**Abashiri--Toko**	**3.28**	**77**	*eP*	**Pn**	**11 13 12.8**	**0.0**
JANG	**Nango**	**3.31**	**152**	*eP*	**Pn**	**11 13 12.4**	**-0.9**
MJAR	**Matsushiro Arr**	**6.84**	**189**	P	**Pn**	**11 13 56.5**	**+0.5**
	3.5nm,0.4s,baz=4.0,slow=15,SNR=13						
KLR	**Kul'dur**	**7.97**	**321**	P	**Pn**	**11 14 07.2**	**-2.9**
	0.5nm,0.5s,baz=132,slow=12,SNR=1.9						
MA2	**Magadan**	**17.69**	**19**	P	**P**	**11 16 05.6**	**-0.6**
	3.5nm,0.6s,baz=148,slow=18,SNR=2.7						
SEY	**Seymchan**	**21.04**	**17**	P	**P**	**11 16 39.9**	**-2.0**
	1.0nm,0.5s,baz=174,slow=8.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**36.78**	**306**	P	**P**	**11 19 00.9**	**-0.1**
	1.1nm,0.6s,baz=105,slow=9.8,SNR=4.2						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**39.79**	**296**	P	**P**	**11 19 25.6**	**-0.6**
	0.4nm,0.9s,baz=87,slow=5.9,SNR=2.2						
	0.4nm,0.9s						
KURBB	**Kurchatov Arra**	**41.17**	**302**	P	**P**	**11 19 36.5**	**-0.8**
	0.2nm,0.3s,baz=78,slow=8.9,SNR=3.7						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**45.10**	**35**	P	**P**	**11 20 10.8**	**+2.3**
	0.9nm,0.7s,baz=288,slow=8.7,SNR=11						
	0.9nm,0.7s						
INK	**Inuvik**	**49.54**	**29**	P	**P**	**11 20 44.5**	**+2.1**
	3.6nm,0.3s,baz=281,slow=3.7,SNR=63						
	3.6nm,0.3s						
ARCES	**ARCESS Array B**	**57.61**	**338**	P	**P**	**11 21 41.6**	**+0.8**
	2.1nm,0.8s,baz=67,slow=9.9,SNR=1.9						
	2.1nm,0.8s						
FINES	**FINESS Array B**	**62.60**	**330**	P	**P**	**11 22 14.6**	**0.0**
	0.7nm,0.4s,baz=46,slow=6.9,SNR=7.7						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**63.12**	**185**	P	**P**	**11 22 20.2**	**+1.6**
	0.3nm,0.4s,baz=16,slow=6.9,SNR=8.3						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**66.85**	**186**	P	**P**	**11 22 45.4**	**+2.9**
	0.2nm,0.4s,baz=360,slow=5.8,SNR=9.8						
	0.2nm,0.4s						

*FUNV **23** 11:46:34.5, 6.48N×71.88W, h30km, MW3.4*
*RSNC **23** 11:46:35.5±1.5, 6.59N×71.95W, h0km±7km, ML2.1*
ISC 23 11:46:33.5±1.1, 6.62N±0.04×71.84W±0.04, h32km±9km, n10, σ1§15/20, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAMC	**Tame, Arauca**	**0.19**	**167**	⇓*iP*	**Pb**	**11 46 39.9**	**-0.1**
TAMC				*eS*	**Sb**	**11 46 44.4**	**0.0**
TAMC				*i*		11 46 45.0	
	comp=Z,529nm,0.1s						
PAMC	**Pamplona, Colo**	**1.11**	**310**	*eP*	**Pb**	**11 46 54.8**	**+0.2**
PAMC				*eS*	**Sb**	**11 47 09.0**	**0.0**
PAMC				*i*		11 47 12.3	
	comp=Z,82nm,0.3s						
CAPV	**Capacho**	**1.32**	**339**	*eP*	**Pb**	**11 46 58.8**	**+0.8**
CAPV				*eS*	**Sb**	**11 47 15.5**	**+0.8**
BARC	**Barichara**	**1.34**	**269**	*eP*	**Pb**	**11 46 57.5**	**-0.7**
BARC				*eS*	**Sb**	**11 47 14.7**	**-0.5**
BARC				*i*		11 47 17.0	
	comp=Z,91nm,0.3s						
RUSC	**La Rusia**	**1.44**	**240**	*eP*	**Pb**	**11 46 59.4**	**-0.6**
RUSC				*eS*	**Sb**	**11 47 17.9**	**-0.3**
RUSC				*i*		11 47 20.8	
	comp=Z,9.4nm,0.3s						
SOCV	**Socops**	**1.92**	**30**	*eP*	**Pb**	**11 47 07.3**	**-0.6**
SOCV				*eS*	**Sb**	**11 47 30.3**	**-1.1**
OCAC	**Ocana**	**2.18**	**318**	*eP*	**Pb**	**11 47 12.7**	**+0.2**
OCAC				*eS*	**Sb**	**11 47 40.9**	**+1.7**
PTBC	**PUERTO BERRIO,**	**2.61**	**268**	*eP*	**Pb**	**11 47 18.2**	**-1.5**
PTBC				*eS*	**Sb**	**11 47 49.2**	**-2.0**
PTBC				*i*		11 47 53.3	
	comp=Z,4.4nm,0.3s						
CHIC	**Chingaza**	**2.74**	**224**	*eP*	**Pb**	**11 47 23.3**	**+1.2**
CHIC				*eS*	**Sb**	**11 47 57.2**	**+1.8**
CHIC				*i*		11 48 04.3	
	comp=Z,2.7nm,0.4s						
BAUV	**El Baul**	**4.41**	**58**	*eP*	**Pn**	**11 47 39.1**	**+0.8**
BAUV				*eS*	**Sn**	**11 48 27.2**	**-1.3**

IDC 23 11:48:04.3±2.2, 6.88S×128.96E, h0km, mb3.8/1, mbtmp3.7/3, ML3.9/2, Error ellipse: s-maj=144.4km s-min=31.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.00**	**159**	Pn	Pn	11 51 23.1	-0.9
	0.6nm,0.3s,baz=340,slow=13,SNR=33						
WRA				Sn	Sn	11 53 48.1	-12
	0.8nm,0.3s,baz=332,slow=22,SNR=8.2						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**17.36**	**165**	P	Pn	11 52 08.8	+0.7
	0.3nm,0.3s,baz=346,slow=8.5,SNR=20						
ASAR				S	Sn	11 55 09.5	-13
	0.6nm,0.8s,baz=351,slow=27,SNR=4.5						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**67.56**	**327**	P	P	11 59 02.6	0.0
	0.5nm,0.5s,baz=114,slow=8.2,SNR=5.7						
	0.5nm,0.5s						

IDC 23 11:53:15.5±999.0, 54.19N×1.38E, h0km, Error ellipse: s-maj=496.0km s-min=167.0km az=108.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**9.35**	**120**	I	I	12 52 00.0	
	baz=308,slow=342,SNR=0.6						
I43RU	**DUBNA INFRASON**	**20.33**	**68**	I	I	14 00 00.0	
	baz=279,slow=331,SNR=0.8						
I31KZ	**AKTYUBINSK INF**	**34.06**	**73**	I	I	15 16 50.0	
	baz=292,slow=329,SNR=1.0						

*NNC **23** 11:55:39.9±1.2, 43.69N×69.71E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=8.3km s-min=6.2km az=99.0, Suspected Mining explosion.*
*SOME **23** 11:55:40.1, 43.41N×69.42E*
ISC 23 11:55:40.5±1.4, 43.72N±0.04×69.80E±0.08, h0km, n16, σ1§55/21, 4C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Boroldoy**	**0.69**	**178**	P	**Pb**	**11 55 56.4**	**+0.9**
	8.0nm,0.2s						
BRLS				S	**Sn**	**11 56 08.0**	**-1.0**
	54nm,0.3s						
KK31	**Karatay Array**	**0.81**	**140**	⇑P	**Pg**	**11 55 55.1**	**-0.9**
	6.8nm,0.5s,baz=136,slow=5.1,SNR=303						
KK31				⇓S	**Sg**	**11 56 07.1**	**+0.7**
	29nm,0.4s,baz=304,slow=30,SNR=17						
DZA	**Taraz**	**1.39**	**126**	P	**Pb**	**11 56 07.8**	**+0.5**
	74nm,0.1s						
DZA				S	**Sn**	**11 56 27.9**	**+1.6**
	208nm,0.1s						
IUG	**Iuzhnay**	**1.59**	**174**	P	**Pn**	**11 56 10.0**	**+0.1**
	50nm,0.2s						
IUG				S	**Sg**	**11 56 31.8**	**+0.4**
	83nm,0.2s						
MRKS	**Merke**	**2.69**	**110**	Pg	**Pb**	**11 56 30.5**	**+1.0**
	7.2nm,0.3s						
MRKS				Lg	Lg	11 57 06.9	
	24nm,0.3s						
BTLS	**Baital**	**3.32**	**65**	Pg	**Pg**	**11 56 43.9**	**-0.1**
	23nm,0.4s						
BTLS				Lg	Lg	11 57 29.7	
	8.8nm,0.3s						
SGDS	**Sogindy**	**3.52**	**93**	Pg	**Pg**	**11 56 47.5**	**-0.4**
	12nm,0.1s						
SGDS				Lg	Lg	11 57 35.9	
	172nm,0.2s						
CHMS	**Chumysh**	**3.68**	**100**	⇓Pg	**Pb**	**11 56 47.5**	**+1.1**
	5.2nm,0.5s						
CHMS				⇑Lg	Lg	11 57 38.9	
	17nm,0.7s						
KRBS	**Karabastau**	**4.26**	**88**	Pg	**Pg**	**11 57 00.6**	**-1.5**
	6.0nm,0.4s						
KRBS				Lg	Lg	11 57 58.6	
	8.9nm,0.2s						
TKM2	**Tokmak 2**	**4.30**	**99**	⇓Pg	**Pb**	**11 56 58.9**	**+1.8**
	3.9nm,0.7s						
TKM2				⇓Lg	Lg	11 57 59.5	
	14nm,0.8s						
DGS	**Degeres**	**4.37**	**94**	Pg	**Pg**	**11 57 02.2**	**-2.1**
	5.5nm,0.6s						
DGS				Lg	Lg	11 58 01.2	
	12nm,0.5s						
KST	**Kastek**	**4.54**	**97**	Pg	**Pg**	**11 57 05.4**	**-2.1**
	4.4nm,0.2s						
KST				Lg	Lg	11 58 06.9	
	13nm,0.3s						
KUU	**Kurty**	**4.74**	**86**	Pg	**Pg**	**11 57 08.8**	**-2.4**
	2.3nm,0.2s						
KUU				Lg	Lg	11 58 12.4	
	15nm,0.3s						
OTUK	**Ortayu**	**4.85**	**20**	⇑Pn	**Pn**	**11 56 55.6**	**+0.9**
	6.5nm,0.5s						
OTUK				⇑Sn	**Sn**	**11 57 50.5**	**-1.2**
	2.4nm,0.5s						
KTBS	**Karatobe**	**4.99**	**88**	Pg	**Pg**	**11 57 13.6**	**-2.4**
	2.0nm,0.3s						
KTBS				Lg	Lg	11 58 20.4	
	20nm,0.3s						
TNSS	**Tian-Shan**	**5.25**	**95**	Pg	**Pg**	**11 57 18.5**	**-2.6**
	1.1nm,0.2s						
TNSS				Lg	Lg	11 58 29.0	
	6.7nm,0.6s						

*IDC **23** 11:56:11.5±0.7, 5.39N×92.86E, h0km, mb4.3/14, mbtmp4.3/16, ML3.9/2, MS3.4/5, Error ellipse: s-maj=32.6km s-min=14.1km az=54.0*
*NEIC **23** 11:56:16.5±1.5, 5.43N±0.08×92.93E±0.09, h28km±5km, mb4.3/37, Error ellipse: s-maj=15.6km s-min=6.7km az=50.0*
ISC 23 11:56:15.4±0.5, 5.37N±0.07×92.91E±0.07, h28km, n90, σ1§12/82, mb4.4/24, MS3.4/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**4.03**	**92**	Pn	**Pn**	**11 57 15.8**	**+0.5**
GSI	**Gunungsitoli**	**6.16**	**131**	Pn	**Pn**	**11 57 43.9**	**-0.8**
PBA	**Port Blair**	**6.25**	**359**	Pn	**Pn**	**11 57 44.1**	**-1.8**
PBA	**Port Blair**	**6.25**	**359**	*eP*	**Pn**	**11 57 44.4**	**-1.5**
PBA				*eS*	**Sn**	**11 59 01.0**	**+4.5**
PBA				IAML		11 59 02.6	
	comp=E,71nm,0.6s						
PBA				IAML		11 59 09.4	
	comp=E,81nm,0.4s						
RPSI	**Rantau Prapat**	**6.56**	**114**	Pn	**Pn**	**11 57 49.3**	**-0.8**
SRIT	**Nakonsritamara**	**7.38**	**64**	Pn	**Pn**	**11 58 00.7**	**-0.7**
KULM	**Kulim**	**7.71**	**90**	Pn	**Pn**	**11 58 05.3**	**-0.6**
DGPR	**DIGLIPUR**	**7.76**	**0**	*eP*	**Pn**	**11 58 04.2**	**-2.4**
DGPR				*eS*	**Sn**	**11 59 36.6**	**+2.9**
DGPR				IAML		11 59 39.2	
	comp=E,30nm,0.5s						
DGPR				IAML		11 59 44.7	
	comp=E,27nm,0.3s						
IPM	**Ipoh**	**8.14**	**96**	Pn	**Pn**	**11 58 11.0**	**-0.8**
PALK	**Pallekele**	**12.28**	**280**	Pn	**Pn**	**11 59 09.3**	**+0.7**
PALK	**Pallekele**	**12.28**	**280**	Pn	**Pn**	**11 59 08.9**	**+0.3**
	comp=E,1.1nm,0.3s,baz=194,slow=15,SNR=5.0						
PALK				Sn	Sn	12 01 13.0	-12
	comp=E,1.8nm,0.3s,baz=97,slow=10,SNR=3.5						
	comp=E,4.9nm,0.6s						
CM31	**Chiang Mai Arr**	**14.29**	**24**	Pn	**Pn**	**11 59 35.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**14.29**	**24**	Pn	**Pn**	**11 59 36.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**14.29**	**24**	Pn	**Pn**	**11 59 35.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=218,slow=14,SNR=19						
	comp=E,2.4nm,0.8s						
CHTO	**Chiang Mai**	**14.61**	**23**	Pn	**Pn**	**11 59 39.1**	**-1.3**
VIS	**Vishakhapatnam**	**15.44**	**323**	*eP*	**Pn**	**11 59 50.9**	**-0.6**
VIS				IAmb	IAmb	11 59 53.6	
	comp=E,17nm,0.5s						
UBPT	**Khong Chiam**	**15.79**	**50**	Pn	**Pn**	**11 59 55.3**	**-0.8**
UBPT				IAmb	IAmb	12 00 01.7	
	comp=E,16nm,1.1s						
CRAI	**Chiangrai**	**16.46**	**26**		**Pn**	**12 00 05.2**	**+0.6**
CRAI				IAmb	IAmb	12 00 17.1	
	comp=E,7.8nm,0.6s						
DLV	**T Lat**	**16.73**	**66**	Pn	**Pn**	**12 00 08.0**	**-0.2**
DLV				IAmb	IAmb	12 00 22.0	
	comp=E,19nm,1.2s						
SAIH	**SAIHA**	**17.02**	**0**	*eP*	**Pn**	**12 00 10.0**	**-1.7**
SAIH				IAmb	IAmb	12 00 18.1	
	comp=E,23nm,0.6s						
AZL	**Aizawl**	**18.27**	**359**	*eP*	**P**	**12 00 27.3**	**+0.2**
IMP	**Imphal**	**19.38**	**3**	*eP*	**P**	**12 00 37.9**	**-1.4**
SHL	**Shillong**	**20.11**	**357**	P	**P**	**12 00 46.6**	**-0.8**
SHL				IAmb	IAmb	12 00 58.0	
	comp=E,14nm,0.7s						
SHL	**Shillong**	**20.11**	**357**	*eP*	**P**	**12 00 45.2**	**-2.2**
SHL				IAmb	IAmb	12 00 58.1	
	comp=E,10nm,0.7s						
KOHI	**KOHIMA**	**20.27**	**3**	*eP*	**P**	**12 00 47.0**	**-2.2**
MOKO	**MOKOCHONG**	**20.90**	**4**	*eP*	**P**	**12 00 54.6**	**-1.2**
MOKO				IAmb	IAmb	12 00 58.2	
	comp=E,13nm,0.8s						

QIZ **Qiongzhong** 21.38 49 P **P** 12 01 01.0 0.0
ZIRO **ZIRO** 22.06 2 *eP* **P** 12 01 06.1 -2.3
LSA **Lhasa** 24.26 356 P **P** 12 01 29.9 -1.0
LSA IAmb IAmb 12 01 58.3
comp=E,9.1nm,1.0s
FITZ **Fitzroy Crossi** 39.83 127 P **P** 12 03 46.9 +0.2
BOOM **Boomskoye usch** 39.92 340 P **P** 12 03 47.8 +0.4
ARSB **Arslanbob** 39.99 336 P **P** 12 03 48.8 +0.8
FAKI **Fak Fak** 40.15 101 P **P** 12 03 49.5 0.0
FAKI IAmb IAmb 12 03 49.9
comp=E,18nm,1.1s
AAK **Ala-Archa** 40.55 339 P **P** 12 03 54.0 +1.4
AAK IAmb IAmb 12 04 01.8
comp=Z,3.5nm,1.1s
MK31 **Makanchi Array** 42.28 349 P **P** 12 04 06.6 +0.1
MKAR **Makanchi Array** 42.28 349 P **P** 12 04 05.9 -0.6
MKAR **Makanchi Array** 42.28 349 P **P** 12 04 06.5 0.0
comp=Z,1.5nm,0.7s,baz=167,slow=8.4,SNR=18
comp=Z,1.5nm,0.7s
KK31 **Karatay Array** 42.48 336 P **P** 12 04 08.8 +0.6
KKAR **Karatay Array** 42.48 336 P **P** 12 04 08.3 0.0
SONM **Songino Array** 43.87 13 P **P** 12 04 19.5 0.0
SONM IAmb IAmb 12 04 20.4
comp=Z,2.5nm,0.9s
SONM **Songino Array** 43.87 13 P **P** 12 04 19.3 -0.2
comp=Z,2.2nm,0.7s,baz=195,slow=8.7,SNR=14
SONM PcP **PcP** 12 06 06.8 +1.3
comp=Z,1.5nm,0.6s,baz=193,slow=4.0,SNR=5.4
comp=Z,2.2nm,0.7s
ULN **Ulaanbaatar** 44.05 14 P **P** 12 04 20.7 -0.3
H01W3 **Cape Leeuwin H** 44.75 155 T T 12 52 16.0
baz=329,slow=74,SNR=5.5
H01W2 **Cape Leeuwin H** 44.77 155 T T 12 52 13.2
baz=329
H01W1 **Cape Leeuwin H** 44.77 155 T T 12 52 13.2
baz=329,slow=74,SNR=6.3
JNU **Nakatsue** 44.83 47 LR LR 12 24 25.1
comp=Z,23nm,19.6s,baz=258,slow=38
KSRS **Korea Array** 45.16 40 LR LR 12 23 52.4
comp=Z,14nm,20.7s,baz=40,slow=37
GEYT **Ailbeck** 45.29 321 P **P** 12 04 31.1 +0.1
comp=Z,4.2nm,0.7s,baz=163,slow=6.2,SNR=7.7
comp=Z,4.2nm,0.7s
GYA0B **ALIBECK ARRAY** 45.29 321 P **P** 12 04 31.4 +0.4
GYA0B IAmb IAmb 12 04 57.0
comp=Z,4.6nm,0.8s
KURBB **Kurchatov Arra** 46.69 347 P **P** 12 04 42.1 +0.4
comp=Z,1.5nm,0.6s,baz=171,slow=6.9,SNR=15
KURBB PcP **PcP** 12 06 16.0 +1.0
comp=Z,0.9nm,0.3s,baz=163,slow=3.1,SNR=9.7
comp=Z,1.5nm,0.6s
KURK **Kurchatov** 46.76 348 P **P** 12 04 42.5 +0.4
KURK IAmb IAmb 12 04 43.5
comp=Z,4.5nm,1.0s
WB0 **Warramunga Arr** 47.84 123 P **P** 12 04 51.2 +0.1
WRA **Warramunga Arr** 47.87 123 P **P** 12 04 52.4 +1.0
WRA **Warramunga Arr** 47.87 123 P **P** 12 04 52.1 +0.7
comp=Z,5.2nm,0.7s,baz=301,slow=9.0,SNR=35
WRA PcP **PcP** 12 06 21.2 +1.3
comp=Z,0.6nm,0.6s,baz=308,slow=2.9,SNR=2.2
comp=Z,5.2nm,0.7s
WRAB **Tennant Creek** 47.88 123 P **P** 12 04 52.3 +0.8
WB2 **Warramunga Arr** 47.88 123 P **P** 12 04 52.4 +0.9
ZAA0 **Zalesovo Array** 48.88 354 P **P** 12 04 59.2 +0.6
ZAA0 IAmb IAmb 12 05 00.8
comp=Z,9.7nm,1.1s
ZALV **Zalesovo Beam** 48.88 354 P **P** 12 04 59.2 +0.6
comp=Z,4.7nm,0.5s,baz=175,slow=6.9,SNR=29
comp=Z,4.7nm,0.5s
AS31 **Alice Springs** 49.31 128 P **P** 12 05 03.4 +0.9
ASAR **Alice Springs** 49.31 128 P **P** 12 05 03.1 +0.7
comp=Z,1.6nm,0.7s,baz=297,slow=7.6,SNR=25
ASAR PcP **PcP** 12 06 26.6 +1.5
comp=Z,1.3nm,0.7s,baz=300,slow=4.1,SNR=7.4
comp=Z,1.6nm,0.7s
BVAR **Borovoye Array** 50.98 343 P **P** 12 05 14.2 -0.4
comp=Z,2.2nm,0.8s,baz=146,slow=11,SNR=6.3
comp=Z,2.2nm,0.8s
BRVK **Borovoye** 51.04 343 P **P** 12 05 15.5 +0.5
BRVK IAmb IAmb 12 05 29.9
comp=Z,3.9nm,0.8s
USRK **Ussuriysk Ar.** 51.65 35 LR LR 12 27 47.5
comp=Z,55nm,19.0s,baz=133,slow=37
MJAR **Matsushiro Arr** 51.75 47 LR LR 12 29 01.5
comp=Z,31nm,19.3s,baz=208,slow=38
ABKAR **Akbulak array** 51.87 333 P **P** 12 05 21.6 +0.4
STKA **Stephens Creek** 59.31 132 P **P** 12 06 16.5 +1.4
STKA IAmb IAmb 12 06 17.2
comp=Z,1.0nm,0.8s
STKA **Stephens Creek** 59.31 132 P **P** 12 06 15.4 +0.4
comp=Z,4.1nm,0.7s,baz=322,slow=8.1,SNR=7.2
comp=Z,4.1nm,0.7s
H04N2 **CROZET ISLANDS** 62.96 211 T T 13 15 06.9
baz=47,slow=75,SNR=730
H04N1 **CROZET ISLANDS** 62.97 211 T T 13 15 08.4
baz=47,slow=75,SNR=743
H04N3 **CROZET ISLANDS** 62.98 211 T T 13 15 07.0
baz=47,slow=75,SNR=889
BRTR **Keskin Array B** 63.16 312 P **P** 12 06 41.3 +0.1
comp=Z,0.5nm,0.4s,baz=111,slow=6.8,SNR=4.0
comp=Z,0.5nm,0.4s
H04S1 **CROZET ISLANDS** 63.36 210 T T 13 15 36.9
baz=47,slow=75,SNR=15
H04S3 **CROZET ISLANDS** 63.37 210 T T 13 15 33.6
baz=47,slow=75,SNR=37
H04S2 **CROZET ISLANDS** 63.38 210 T T 13 15 33.6
baz=47,slow=75,SNR=24
NRIK **Noril'sk** 63.98 358 P **P** 12 06 46.1 +0.2
comp=Z,1.6nm,0.4s,baz=95,slow=4.2,SNR=3.6
comp=Z,1.6nm,0.4s
TIXI **Tiksi** 69.92 11 P **P** 12 07 23.7 +0.1
PEA0B **Petropavlovsk-** 70.75 35 P **P** 12 07 29.1 0.0
FIA1 **FINESS Array S** 74.35 333 P **P** 12 07 50.7 +0.4
FINES **FINESS Array B** 74.35 333 P **P** 12 07 50.4 +0.1
FINES **FINESS Array B** 74.35 333 P **P** 12 07 49.8 -0.6
comp=Z,1.4nm,0.7s,baz=23,slow=10,SNR=4.4
comp=Z,1.4nm,0.7s
GERES **GERESS Array B** 78.88 319 P **P** 12 08 15.9 -0.4
comp=Z,1.8nm,0.7s,baz=82,slow=7.0,SNR=2.3
comp=Z,1.8nm,0.7s
SPITS **Spitsbergen Ar** 82.03 348 P **P** 12 08 31.8 -0.8
comp=Z,23nm,1.1s,baz=79,slow=7.5,SNR=1.9
comp=Z,23nm,1.1s
C18K **Utukok River** 90.77 21 P **P** 12 09 15.7 0.0
C18K IAmb IAmb 12 09 20.8
comp=Z,3.6nm,1.2s
E18K **Tukpahlearik C** 91.34 22 P **P** 12 09 16.9 -1.5
E18K IAmb IAmb 12 09 17.9
comp=Z,5.5nm,1.4s
D19K **Kuna River** 91.89 20 P **P** 12 09 20.9 -0.1
TOLK **Toolik Lake Re** 94.71 19 P **P** 12 09 32.6 -1.4
TOLK IAmb IAmb 12 09 45.7
comp=Z,4.0nm,1.4s
RES **Resolute Bay** 99.94 2 LR LR 12 58 06.5
comp=Z,71nm,18.9s,baz=1.5,slow=37
PDAR **Pinedale Array** 127.93 21 PKP **PKiKP** 12 15 19.6 -0.3
comp=Z,0.5nm,0.8s,baz=316,slow=2.5,SNR=3.0
TXAR **Lajitas Array** 142.00 24 PKP **PKPdf** 12 15 43.6 -2.2
comp=Z,0.1nm,0.4s,baz=236,slow=1.0,SNR=1.7
CPUP **Villa Florida** 144.75 231 PKP **PKPab** 12 15 48.6 -0.7
comp=Z,2.2nm,0.9s,baz=34,slow=4.9,SNR=3.7

*IDC **23** 12:06:22.8±4.3, 3.01S×131.13E, h0km, mb3.2/2, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=297.7km s-min=30.6km az=72.0*
*DJA **23** 12:06:24.8±0.6, 3.3S±4.4°×131.1E±.1°, h32km±7km, M3.0/6, MLv3.0/6*
**ISC 23 12:06:24.5±1.2, 3.29S±0.09×130.5E±0.1, h10km, n6, σ2§24/6, Se

*SOME **23** 12:07:52.5, 43˙.23N× 82˙.65E, h10km*
*NNC **23** 12:07:54.3±0.9, 43˙.33N× 82˙.60E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=7.8km s-min=3.5km az=144.0*
ISC 23 12:07:52.0±2.2, 43˙.11N±0˙.10× 82˙.59E±0˙.07, h3km±13km, n30, σ1§12/41, 9C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.67**	**282**	P		**Pg**	**12 08 24.6**	**+0.5**
	16nm,0.2s							
KTMS				S		**Sg**	**12 08 47.7**	**+2.0**
	134nm,0.3s							
KTMS	**Ketmen**	**1.67**	**282**	*e*P		**Pg**	**12 08 24.6**	**+0.5**
	16nm,0.2s							
KTMS				*e*S		**Sg**	**12 08 47.7**	**+2.0**
	134nm,0.3s							
PDGK	**Podgornoye**	**2.28**	**277**	Pg		**Pg**	**12 08 35.2**	**-0.5**
	9.9nm,0.2s							
PDGK				Lg		Lg	12 09 05.9	
	58nm,0.2s							
PDGK	**Podgornoye**	**2.28**	**277**	⇓Pg		**Pg**	**12 08 34.9**	**-0.7**
	7.5nm,0.3s							
PDGK				⇓Lg		Lg	12 09 07.6	
	265nm,0.9s							
SHLS	**Shalkode**	**2.29**	**272**	Pg		**Pn**	**12 08 31.1**	**+0.3**
	55nm,0.1s							
SHLS				Lg		Lg	12 08 59.1	
	299nm,0.2s							
SHLS	**Shalkode**	**2.29**	**272**	*e*P		**Pn**	**12 08 31.1**	**+0.3**
	55nm,0.1s							
SHLS				*e*S		**Sn**	**12 08 59.1**	**-0.5**
	299nm,0.2s							
DJR	**Jarkent**	**2.37**	**302**	Pg		**Pb**	**12 08 34.9**	**-0.5**
	12nm,0.2s							
DJR				Lg		Lg	12 09 05.3	
	59nm,0.2s							
DJR	**Jarkent**	**2.37**	**302**	*e*P		**Pb**	**12 08 34.9**	**-0.5**
	12nm,0.2s							
DJR				*e*S		**Sb**	**12 09 05.3**	**+0.2**
	59nm,0.2s							
UZB	**Uzynbulak**	**2.61**	**272**	Pg		**Pg**	**12 08 41.5**	**-0.6**
	4.0nm,0.2s							
UZB				Lg		Lg	12 09 16.7	
	48nm,0.5s							
UZB	**Uzynbulak**	**2.61**	**272**	*e*P		**Pg**	**12 08 41.5**	**-0.6**
	4.0nm,0.2s							
UZB				*e*S		**Sg**	**12 09 16.7**	**+0.8**
	48nm,0.5s							
KNOS	**Konyrlen**	**2.77**	**298**	Pg		**Pb**	**12 08 42.7**	**+0.4**
	10nm,0.2s							
KNOS				Lg		Lg	12 09 18.7	
	23nm,0.1s							
KPKS	**Kokpek**	**2.88**	**278**	*e*P		**Pg**	**12 08 46.1**	**-1.0**
	3.5nm,0.1s							
KPKS				*e*S		**Sg**	**12 09 24.3**	**-0.1**
	63nm,0.3s							
SATY	**Saty**	**3.07**	**271**	Pg		**Pg**	**12 08 50.6**	**-0.2**
	2.7nm,0.1s							
SATY				Lg		Lg	12 09 32.2	
	74nm,0.2s							
SATY	**Saty**	**3.07**	**271**	*e*P		**Pg**	**12 08 50.6**	**-0.2**
	2.7nm,0.1s							
SATY				*e*S		**Sg**	**12 09 32.2**	**+1.6**
	74nm,0.2s							
KAPS	**Kapalarasan**	**3.19**	**314**	Pg		**Pb**	**12 08 49.5**	**+0.2**
	3.5nm,0.1s							
KAPS				Lg		Lg	12 09 30.1	
	23nm,0.2s							
KAPS	**Kapalarasan**	**3.19**	**314**	*e*P		**Pb**	**12 08 49.5**	**+0.2**
	3.5nm,0.1s							
KAPS				*e*S		**Sb**	**12 09 30.1**	**+1.6**
	23nm,0.2s							
ARXS	**Arharly**	**3.63**	**289**	Pg		**Pg**	**12 09 00.2**	**-1.4**
	77nm,0.2s							
ARXS				Lg		Lg	12 09 48.7	
	39nm,0.3s							
ARXS	**Arharly**	**3.63**	**289**	*e*P		**Pg**	**12 09 00.2**	**-1.4**
	77nm,0.2s							
ARXS				*e*S		**Sg**	**12 09 48.7**	**+0.1**
	39nm,0.3s							
MK31	**Makanchi Array**	**3.69**	**357**	⇑Pn		**Pn**	**12 08 49.9**	**-0.1**
	0.2nm,0.2s,baz=189,slow=12,SNR=92							
MK31				⇓Pg		**Pb**	**12 08 57.9**	**0.0**
	7.2nm,0.3s,baz=178,slow=15,SNR=6.9							
MK31				⇑Lg		Lg	12 09 44.8	
	7.6nm,0.4s,baz=170,slow=27,SNR=3.3							
MAKZ	**Makanchi**	**3.73**	**353**	⇓Pg		**Pb**	**12 08 58.6**	**+0.1**
	3.3nm,0.3s							
MAKZ				⇑Lg		Lg	12 09 48.2	
	3.3nm,0.4s							
KOTS	**Kotyrbulak**	**4.01**	**274**	*e*P		**Pg**	**12 09 07.5**	**-1.4**
	5.0nm,0.2s							
KOTS				*e*S		**Sg**	**12 10 00.9**	**0.0**
	63nm,0.4s							
MDOK	**Medeo**	**4.06**	**273**	⇑Pg		**Pg**	**12 09 09.8**	**0.0**
	2.4nm,0.5s							
MDOK				⇑Lg		Lg	12 10 05.8	
	17nm,0.7s							
CHKK	**Chushkaly**	**4.15**	**282**	Pg		**Pg**	**12 09 09.4**	**-2.0**
	2.4nm,0.1s							
CHKK				Lg		Lg	12 10 04.6	
	40nm,0.4s							
CHKK	**Chushkaly**	**4.15**	**282**	*e*P		**Pg**	**12 09 09.4**	**-2.0**
	2.4nm,0.1s							
CHKK				*e*S		**Sg**	**12 10 04.6**	**-0.6**
	40nm,0.4s							
ZSN	**Zaisan**	**4.63**	**19**	Pg		**Pb**	**12 09 13.9**	**0.0**
	13nm,0.2s							
ZSN				Lg		Lg	12 10 12.4	
	15nm,0.5s							
ZSN	**Zaisan**	**4.63**	**19**	*e*P		**Pb**	**12 09 13.9**	**0.0**
	13nm,0.2s							
ZSN				*e*S		**Sb**	**12 10 12.4**	**+2.4**
	15nm,0.5s							
TKM2	**Tokmak 2**	**5.13**	**270**	⇑Pg		**Pg**	**12 09 28.5**	**-1.8**
	1.3nm,0.6s							
TKM2				⇑Lg		Lg	12 10 39.7	
	8.6nm,0.6s							
KURBB	**Kurchatov Arra**	**8.02**	**341**	⇓Pn		**Pn**	**12 09 47.2**	**-2.1**
	1.1nm,0.4s							
KURBB				⇓Lg		Lg	12 12 04.8	
	9.2nm,0.7s							
KURK	**Kurchatov**	**8.08**	**342**	⇑Lg		Lg	12 12 06.0	
	4.1nm,0.8s							
OTUK	**Ortayu**	**8.82**	**309**	⇑Lg		Lg	12 12 34.9	
	1.4nm,0.6s							

*IDC **23** 12:11:32.4±1.4, 2˙.29N× 83˙.83W, h0km, mb3.9/8, mbtmp4.0/9, ML4.5/2, MS3.7/27, Error ellipse: s-maj=49.2km s-min=30.0km az=51.0*
*GCMT **23** 12:11:42.6±0.4, 2˙.58N±0˙.02× 84˙.51W±0˙.03, h22km±1km, MW4.7/70, Moment Tensor Solution. s14,c16; s70,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.50±.12; $M_{\theta\theta}$=0.89±.09; $M_{\phi\phi}$-0.39±.09; $M_{r\theta}$-0.10±.13; $M_{\theta\phi}$1.33±.06; $M_{\phi r}$0.04±.13; Best double couple: $M_0$1.48200×10^{16} NP1:ϕs103.00000°, δ86.00000°, λ-6.00000°. NP2: ϕs193.00000°, δ84.00000°, λ-176.00000°. Principal axes: T 1.7260, Plg2.0000°, Azm148.0000°; N -0.4890, Plg83.0000°, Azm251.0000°; P -1.2380, Plg7.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **23** 12:11:43.6±1.8, 2˙.72N×0˙.07× 84˙.23W±0˙.08, h38km±9km, mb4.5/114 Error ellipse: s-maj=11.5km s-min=9.6km az=68.0*
*CATAC **23** 12:11:46.6±0.5, 3˙.16N× 84˙.11W, h10km, MB5.7, mb5.4, ML5.3*
ISC 23 12:11:40.6±0.5, 2˙.67N±0˙.06× 84˙.34W±0˙.07, h26km, n250, σ1§86/231, mb4.4/58, MS3.8/22, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLAN	**Los Planes de**	**6.00**	**6**	*i* P		**Pn**	**12 13 07.6**	**-0.1**
PLAN				IVmB_BB			12 13 08.8	
	comp=Z,9μm,1.0s							
PLAN				IAML			12 13 08.9	
	comp=Z,760nm,1.0s							
CDITO	**Canoas**	**6.04**	**14**	Pn		**Pn**	**12 13 08.4**	**+0.1**
PAC1	**Pacto, Paraso**	**6.04**	**113**	*e*P		**Pn**	**12 13 09.1**	**+0.6**
GR1C	**Gorgona, Isla**	**6.18**	**87**	*e*P		**Pn**	**12 13 11.5**	**+1.3**
BRU2	**Volcan**	**6.30**	**15**	Pn		**Pn**	**12 13 11.4**	**-0.6**
OTAV	**Otavalo**	**6.37**	**112**	Pn		**Pn**	**12 13 14.6**	**+1.4**
OTAV	**Otavalo**	**6.37**	**112**	*e*P		**Pn**	**12 13 14.4**	**+1.2**
PULU	**Pululahua**	**6.41**	**114**			**Pn**	**12 13 15.0**	**+1.3**
IMBA	**Imbabura, San**	**6.59**	**111**	Pn		**Pn**	**12 13 17.3**	**+1.1**
DRK0	**Durika**	**6.64**	**9**			**Pn**	**12 13 16.9**	**+0.2**
PEZE	**Perez Zeledon,**	**6.70**	**6**			**Pn**	**12 13 18.3**	**+0.9**
PEZE	**Perez Zeledon,**	**6.70**	**6**	*i* P		**Pn**	**12 13 17.7**	**+0.3**
PEZE				IAML			12 13 19.0	
	comp=Z,260nm,1.0s							
SLOR	**San Lorenzo -**	**6.75**	**120**	Pn		**Pn**	**12 13 20.3**	**+1.8**
PAYG	**Puerto Ayora**	**6.81**	**241**			**Pn**	**12 13 19.6**	**+0.8**
TULM	**Tulcn-Chalpat**	**6.84**	**106**			**Pn**	**12 13 22.1**	**+2.4**
CDM	**Cerro de Muert**	**6.86**	**5**	*e*P		**Pn**	**12 13 19.6**	**-0.4**
CDM	**Cerro de Muert**	**6.86**	**5**	*i* P		**Pn**	**12 13 20.2**	**+0.2**
CDM				IAML			12 13 21.3	
	comp=Z,190nm,1.0s							
CDM				IAmb	IAmb		12 13 21.4	
	comp=Z,130nm,0.6s							
CHSH	**Refugio Sur-Vo**	**6.86**	**127**			**Pn**	**12 13 22.1**	**+1.9**
CBL1	**Cabuya**	**6.91**	**354**	*e*P		**Pn**	**12 13 19.9**	**-0.3**
JACO	**JACO, Garabito**	**6.95**	**357**			**Pn**	**12 13 19.9**	**-0.9**
JACO	**JACO, Garabito**	**6.95**	**357**	*e*P		**Pn**	**12 13 19.0**	**-1.8**
JACO	**JACO, Garabito**	**6.95**	**357**	*i* P		**Pn**	**12 13 19.6**	**-1.2**
JACO				IVmB_BB			12 13 21.8	
	comp=Z,7μm,1.0s							
JACO				IAML			12 13 21.9	
	comp=Z,540nm,1.0s							
JACO				IAmb	IAmb		12 13 22.0	
	comp=Z,260nm,0.5s							
LCR2	**La Lucha 2**	**7.03**	**3**	Pn		**Pn**	**12 13 23.0**	**+0.9**
LCR2	**La Lucha 2**	**7.03**	**3**	*e*P		**Pn**	**12 13 21.8**	**-0.3**
RIMA	**Rio Macho**	**7.06**	**4**			**Pn**	**12 13 22.8**	**+0.2**
RIMA	**Rio Macho**	**7.06**	**4**	*i* P		**Pn**	**12 13 22.6**	**+0.1**
RIMA				IVmB_BB			12 13 24.6	
	comp=Z,4μm,1.0s							
RIMA				IAML			12 13 24.9	
	comp=Z,270nm,1.0s							
RIMA				IAmb	IAmb		12 13 25.0	
	comp=Z,170nm,0.7s							
RIMA				*i* S		**Sn**	**12 14 41.3**	**-0.9**
RGM0	**Gandoca**	**7.09**	**14**	Pn		**Pn**	**12 13 23.0**	**+0.3**
LAFE	**Finca La Fe, P**	**7.11**	**355**	*e*P		**Pn**	**12 13 21.8**	**-1.2**
LAFE	**Finca La Fe, P**	**7.11**	**355**	*i* P		**Pn**	**12 13 24.1**	**+1.1**
LAFE				IVmB_BB			12 13 25.4	
	comp=Z,37nm,1.0s							
LAFE				IAML			12 13 25.5	
	comp=Z,2.6nm,1.0s							
LAFE				IAmb	IAmb		12 13 25.5	
	comp=Z,1.3nm,0.6s							
LAFE				*i* S		**Sn**	**12 14 37.5**	**-5.5**
BBAC	**Balboa, Cauca**	**7.12**	**95**	*e*P		**Pn**	**12 13 25.3**	**+2.0**
MALC	**Bahia Malaga**	**7.12**	**79**	*e*P		**Pn**	**12 13 26.3**	**+3.1**
GCUF	**Volcan Galeras**	**7.14**	**101**	*e*P		**Pn**	**12 13 27.3**	**+3.4**
BONI	**La Bonita**	**7.16**	**108**	*e*P		**Pn**	**12 13 27.0**	**+3.1**
OCM	**Ochomogo**	**7.18**	**3**	*e*P		**Pn**	**12 13 24.5**	**+0.3**
OCM	**Ochomogo**	**7.18**	**3**	*i* P		**Pn**	**12 13 26.0**	**+1.8**
OCM				IAML			12 13 26.7	
	comp=Z,440nm,1.0s							
OCM				IVmB_BB			12 13 26.8	
	comp=Z,7μm,1.0s							
TRB2	**Turrubares**	**7.20**	**359**	*e*P		**Pn**	**12 13 24.5**	**+0.3**
COHC	**Cochancay**	**7.21**	**135**			**Pn**	**12 13 24.3**	**0.0**
INDI	**Punta indio, G**	**7.24**	**351**	*e*P		**Pn**	**12 13 23.6**	**-1.2**
INDI	**Punta indio, G**	**7.24**	**351**	*i* P		**Pn**	**12 13 24.1**	**-0.7**
INDI				IAML			12 13 25.9	
	comp=Z,290nm,1.0s							
INDI				IVmB_BB			12 13 25.9	
	comp=Z,3μm,1.0s							
INDI				IAmb	IAmb		12 13 26.0	
	comp=Z,180nm,0.7s							
INDI				*i* S		Sn	12 14 38.7	-7.5
VIRE	**VIRE**	**7.26**	**3**	*i* P		**Pn**	**12 13 26.9**	**+1.5**
VIRE				IVmB_BB			12 13 29.8	
	comp=Z,12μm,1.0s							
VIRE				IAML			12 13 29.9	
	comp=Z,650nm,1.0s							
VIRE				IAmb	IAmb		12 13 30.0	
	comp=Z,360nm,0.8s							
ICR3	**Volcano Irazu**	**7.28**	**4**	*e*P		**Pn**	**12 13 26.4**	**+0.7**
HAYA	**Volcan Irazu**	**7.28**	**4**	*i* P		**Pn**	**12 13 26.3**	**+0.6**
HAYA				IAML			12 13 27.7	
	comp=Z,480nm,1.0s							
HAYA				IAmb	IAmb		12 13 27.9	
	comp=Z,260nm,0.5s							
HAYA				IVmB_BB			12 13 28.6	
	comp=Z,6μm,1.0s							
VICA	**Volcano Irazu**	**7.28**	**4**	*e*P		**Pn**	**12 13 26.4**	**+0.7**
HDC	**Heredia**	**7.29**	**2**			**Pn**	**12 13 27.1**	**+1.5**
HDC	**Heredia**	**7.29**	**2**	*e*P		**Pn**	**12 13 26.5**	**+1.0**
HDC3	**Heredia 3**	**7.29**	**2**	*e*P		**Pn**	**12 13 25.8**	**+0.3**
HDC3	**Heredia 3**	**7.29**	**2**	*i* P		**Pn**	**12 13 26.0**	**+0.5**
HDC3				IAML			12 13 28.0	
	comp=Z,500nm,1.0s							
HDC3				IVmB_BB			12 13 28.0	
	comp=Z,6μm,1.0s							
HDC3				IAmb	IAmb		12 13 28.1	
	comp=Z,280nm,0.5s							
HDC3				*i* S		**Sn**	**12 14 47.4**	**-0.1**
VTCV	**VTCV, Calle Va**	**7.29**	**5**	*e*P		**Pn**	**12 13 26.9**	**+1.2**
VTCV	**VTCV, Calle Va**	**7.29**	**5**	*i* P		**Pn**	**12 13 26.4**	**+0.8**
VTCV				IAML			12 13 29.6	
	comp=Z,510nm,1.0s							
VTCV				IVmB_BB			12 13 29.6	
	comp=Z,4μm,1.0s							
VTCV				IAmb	IAmb		12 13 29.7	
	comp=Z,370nm,0.6s							
VTCV				*i* S		**Sn**	**12 14 47.7**	**0.0**
CVTV	**Tajo**	**7.31**	**5**	*e*P		**Pn**	**12 13 26.6**	**+0.6**
CVIMO	**Finca Echandi**	**7.32**	**3**	*e*P		**Pn**	**12 13 26.7**	**+0.7**
CVTR	**Volcan Turrial**	**7.32**	**5**	*e*P		**Pn**	**12 13 26.6**	**+0.3**
VTUN	**Crater Central**	**7.33**	**4**	*i* P		**Pn**	**12 13 28.1**	**+1.8**
VTUN				IVmB_BB			12 13 29.8	
	comp=Z,6μm,1.0s							
VTUN				IAML			12 13 30.1	
	comp=Z,400nm,1.0s							
VTUN				IAmb	IAmb		12 13 32.1	
	comp=Z,150nm,0.5s							
VTUC	**Crater, Volcan**	**7.33**	**5**	*i* P		**Pn**	**12 13 26.7**	**+0.4**
VTUC				IAmb	IAmb		12 13 29.5	
	comp=Z,110nm,0.6s							
VTUC				IVmB_BB			12 13 30.0	
	comp=Z,3μm,1.0s							
VTUC				IAML			12 13 30.1	
	comp=Z,280nm,1.0s							
NYURE	**Nandayure**	**7.33**	**353**	*e*P		**Pn**	**12 13 26.3**	**+0.2**
VTLO	**VTLO**	**7.35**	**5**	*e*P		**Pn**	**12 13 27.4**	**+0.9**
DUNO	**Dulce Nombre,**	**7.45**	**351**	Pn		**Pn**	**12 13 27.3**	**-0.4**
SAJU	**San Juanillo,**	**7.47**	**350**	*i* P		**Pn**	**12 13 26.6**	**-1.3**
SAJU				IAML			12 13 28.4	
	comp=Z,200nm,1.0s							
SAJU				IVmB_BB			12 13 28.4	
	comp=Z,2μm,1.0s							
SAJU				IAmb	IAmb		12 13 28.4	
	comp=Z,110nm,0.7s							
SAJU				*i* S		**Sn**	**12 14 44.5**	**-7.4**
CPMI	**Catarata Coope**	**7.56**	**360**	*e*P		**Pn**	**12 13 30.7**	**+1.3**
CPMI	**Catarata Coope**	**7.56**	**360**	*i* P		**Pn**	**12 13 29.9**	**+0.5**
CPMI				IAML			12 13 33.6	
	comp=Z,190nm,1.0s							
CPMI				IAmb	IAmb		12 13 33.7	
	comp=Z,100nm,0.8s							
JTS	**Las Juntas de**	**7.59**	**355**	Pn		**Pn**	**12 13 30.3**	**+0.6**
	comp=Z,53nm,0.3s,baz=84,slow=12,SNR=65							
JTS				Sn		**Sn**	**12 14 49.5**	**-5.4**
	comp=Z,3.4nm,0.3s,baz=199,slow=9.1,SNR=1.2							
JTS				LR		LR	12 15 56.1	
	comp=Z,874nm,20.7s,baz=158,slow=33							
JTS	**Las Juntas de**	**7.59**	**355**	*e*P		**Pn**	**12 13 30.0**	**+0.4**
RIFO	**Rio Frio, Sara**	**7.61**	**3**	*i* P		**Pn**	**12 13 31.2**	**+1.4**
RIFO				IAmb	IAmb		12 13 34.2	
	comp=Z,100nm,0.8s							
RIFO				IVmB_BB			12 14 04.8	
	comp=Z,6μm,1.0s							
RIFO				IAML			12 14 05.1	
	comp=Z,280nm,1.0s							
SOCE	**Pocosol**	**7.67**	**358**			**Pn**	**12 13 32.2**	**+1.6**
JAMC	**Jamundi, Valle**	**7.68**	**86**	*e*P		**Pn**	**12 13 33.8**	**+2.8**
PLVR	**Palo Verde**	**7.69**	**353**	*e*P		**Pn**	**12 13 30.9**	**-0.3**
ORTG	**Ortega, Santa**	**7.72**	**352**	Pn		**Pn**	**12 13 30.5**	**-0.9**
ORTG	**Ortega, Santa**	**7.72**	**352**	*e*P		**Pn**	**12 13 30.0**	**-1.4**
ORTG	**Ortega, Santa**	**7.72**	**352**	*i* P		**Pn**	**12 13 30.9**	**-0.5**
ORTG				IAML			12 13 32.8	
	comp=Z,320nm,1.0s							
ORTG				IVmB_BB			12 13 32.8	
	comp=Z,4μm,1.0s							
ORTG				IAmb	IAmb		12 13 33.1	
	comp=Z,250nm,0.7s							
ORTG				*i* S		**Sn**	**12 14 52.1**	**-6.0**
ARE1	**Arenal 1**	**7.75**	**357**	Pn		**Pn**	**12 13 32.3**	**+0.5**
ARE1	**Arenal 1**	**7.75**	**357**	*e*P		**Pn**	**12 13 33.8**	**+2.0**
VACR	**Volcan Arenal**	**7.76**	**358**	*e*P		**Pn**	**12 13 33.8**	**+1.9**
ALIBA	**Liberia Airpor**	**7.96**	**351**	*e*P		**Pn**	**12 13 37.0**	**+2.3**
COVE	**Coope Vega, Sa**	**8.00**	**360**			**Pn**	**12 13 38.0**	**+2.8**
COVE	**Coope Vega, Sa**	**8.00**	**360**	*e*P		**Pn**	**12 13 37.0**	**+1.8**
COVE	**Coope Vega, Sa**	**8.00**	**360**	*i* P		**Pn**	**12 13 37.0**	**+1.8**
COVE				IVmB_BB			12 13 38.3	
	comp=Z,12μm,1.0s							
COVE				IAML			12 13 38.4	
	comp=Z,2μm,1.0s							
COVE				IAmb	IAmb		12 13 38.5	
	comp=Z,1μm,0.6s							
HZTE	**Horizontes, Gu**	**8.09**	**351**	Pn		**Pn**	**12 13 36.4**	**0.0**
HZTE	**Horizontes, Gu**	**8.09**	**351**	*e*P		**Pn**	**12 13 36.6**	**+0.2**
HZTE	**Horizontes, Gu**	**8.09**	**351**	*i* P		**Pn**	**12 13 36.5**	**+0.1**
HZTE				IVmB_BB			12 13 38.6	
	comp=Z,4μm,1.0s							
HZTE				IAML			12 13 38.7	
	comp=Z,470nm,1.0s							
HZTE				IAmb	IAmb		12 13 38.7	
	comp=Z,320nm,0.8s							
HZTE				*i* S		**Sn**	**12 15 01.3**	**-5.7**
BOSC	**San Juan Bosco**	**8.22**	**135**	Pn		**Pn**	**12 13 41.3**	**+2.8**
MCRA	**Macar, Loja**	**8.26**	**148**			**Pn**	**12 13 40.7**	**+1.9**
PLMC	**San Jos del P**	**8.34**	**74**	*e*P		**Pn**	**12 13 42.2**	**+2.2**
LCRUZ	**La Cruz**	**8.45**	**351**	*e*P		**Pn**	**12 13 44.2**	**+2.8**
ORTC	**Ortega, Tolima**	**9.17**	**82**	*e*P		**Pn**	**12 13 55.1**	**+3.8**
DBBC	**Dabeiba**	**9.18**	**62**	*e*P		**Pn**	**12 13 56.0**	**+4.5**
ACON	**Acoyapa**	**9.27**	**355**	Pn		**Pn**	**12 13 53.4**	**+0.7**
ACON	**Acoyapa**	**9.27**	**355**	*e*P		**Pn**	**12 13 54.2**	**+1.5**
GUY2C	**Guyana, Caldas**	**9.31**	**74**	*e*P		**Pn**	**12 13 58.5**	**+4.9**
NANN	**Nandasmo**	**9.37**	**349**	*i* P		**Pn**	**12 13 57.1**	**+3.0**
NANN				IVmB_BB			12 13 59.3	
	comp=Z,43μm,1.0s							
NANN				IAmb	IAmb		12 13 59.4	
	comp=Z,2μm,0.8s							
NANN				*i* S		**Sn**	**12 15 41.7**	**+2.9**
HELC	**Santa Helena**	**9.46**	**68**	*e*P		**Pn**	**12 14 00.2**	**+4.6**
ESPN	**Las Esperanzas**	**9.46**	**0**			**Pn**	**12 13 57.4**	**+2.2**
APQ2	**Apoyeque**	**9.66**	**348**	*i* P		**Pn**	**12 14 01.5**	**+3.4**
APQ2				IAmb	IAmb		12 14 02.7	
	comp=Z,280nm,0.9s							
APQ2				IVmB_BB			12 14 05.0	
	comp=Z,3μm,1.0s							
COPN	**Copaltepe**	**9.71**	**347**	*i* P		**Pn**	**12 14 01.0**	**+2.4**
COPN				IVmB_BB			12 14 02.3	
	comp=Z,3μm,1.0s							
COPN				IAmb	IAmb		12 14 02.8	
	comp=Z,220nm,0.9s							
COPN				*i* S		**Sn**	**12 15 48.6**	**+1.7**
BOAB	**BOACO BROADBAN**	**9.80**	**352**	Pn		**Pn**	**12 14 00.1**	**+0.1**
MOMN	**Momotombo**	**9.91**	**347**	*i* P		**Pn**	**12 14 03.8**	**+2.3**
MOMN				IAmb	IAmb		12 14 05.2	
	comp=Z,7.7nm,0.7s							
MOMN				IVmB_BB			12 14 05.9	
	comp=Z,150nm,1.0s							
MOMN				*i* S		**Sn**	**12 15 51.9**	**-0.2**
MOM2	**El Cardon**	**9.93**	**348**	*i* P		**Pn**	**12 14 04.7**	**+3.0**
MOM2				IVmB_BB			12 14 06.6	
	comp=Z,2μm,1.0s							
MOM2				IAmb	IAmb		12 14 07.1	
	comp=Z,190nm,0.8s							
MACN	**El Madrono**	**10.00**	**347**	*i* P		**Pn**	**12 14 05.0**	**+2.3**
MACN				IVmB_BB			12 14 07.1	
	comp=Z,3μm,1.0s							
CNGN	**Cerro Negro**	**10.04**	**347**	Pn		**Pn**	**12 14 04.7**	**+1.5**
PACN	**Al O del Volca**	**10.06**	**346**	*i* P		**Pn**	**12 14 07.2**	**+3.7**
PACN				IVmB_BB			12 14 08.2	
	comp=Z,6μm,1.0s							
ROSC	**El Rosal**	**10.23**	**78**	Pn		**Pn**	**12 14 06.8**	**+0.6**
ROSC	**El Rosal**	**10.23**	**78**	LR		LR	12 17 46.4	
	comp=Z,270nm,18.9s,baz=238,slow=38							
PKGN	**Cerro Pekin**	**10.27**	**345**	*i* P		**Pn**	**12 14 09.3**	**+3.0**
PKGN				IAmb	IAmb		12 14 11.8	
	comp=Z,230nm,0.4s							
PKGN				*i* S		**Sn**	**12 15 59.1**	**-1.6**
MATN	**Matagalpa**	**10.31**	**351**	Pn		**Pn**	**12 14 07.7**	**+0.7**
CRIN	**San Cristobal**	**10.32**	**345**			**Pn**	**12 14 10.2**	**+3.1**
CRIN	**San Cristobal**	**10.32**	**345**	*e*P		**Pn**	**12 14 10.2**	**+3.1**
CRIN	**San Cristobal**	**10.32**	**345**	*i* P		**Pn**	**12 14 10.2**	**+3.1**
CRIN				IAmb	IAmb		12 14 11.6	
	comp=Z,370nm,0.5s							
CRIN				IVmB_BB			12 14 11.7	
	comp=Z,9μm,1.0s							
LIMN	**Finca el Limon**	**10.52**	**349**	*i* P		**Pn**	**12 14 11.6**	**+1.8**
LIMN				IAmb	IAmb		12 14 15.4	
	comp=Z,58nm,0.8s							
CSGN	**Cosiguina Volc**	**10.72**	**343**	*i* P		**Pn**	**12 14 15.6**	**+3.0**
CSGN				IVmB_BB			12 14 17.5	
	comp=Z,18μm,1.0s							
CSGN				IAmb	IAmb		12 14 27.2	
	comp=Z,1μm,0.5s							
CSGN				*i* S		Sn	12 15 58.0	-14
POTN	**Potosi C

FPAL				IAmb	IAmb	12 18 03.6		
	comp=Z,5.9nm,1.1s							
WLAR	**White Oak Lake**	**31.93**	**346**	P	**P**	**12 18 05.2**	**+1.1**	
OXF	**Oxford**	**32.03**	**352**	P	**P**	**12 18 05.1**	**+0.1**	
TX31	**Lajitas Ar. Si**	**32.26**	**327**	P	**P**	**12 18 08.0**	**+0.7**	
TX31				IAmb	IAmb	12 18 08.9		
	comp=Z,6.7nm,1.4s							
TXAR	**Lajitas Array**	**32.26**	**327**	P	**P**	**12 18 07.9**	**+0.6**	
	comp=Z,0.7nm,0.7s,baz=147,slow=9.1,SNR=8.3							
TXAR				PcP	**PcP**	**12 20 52.0**	**-3.5**	
	comp=Z,0.1nm,0.6s,baz=165,slow=3.7,SNR=1.3							
	comp=Z,0.7nm,0.7s							
OZNA	**Ozona**	**32.27**	**332**	P	**P**	**12 18 09.2**	**+1.9**	
KMSC	**Kings Mountain**	**32.43**	**5**	P	**P**	**12 18 09.2**	**+0.6**	
KMSC				IAmb	IAmb	12 18 10.3		
	comp=Z,9.1nm,1.0s							
W57A	**Gilead**	**32.57**	**7**	P	**P**	**12 18 10.2**	**+0.4**	
W57A				IAmb	IAmb	12 18 14.9		
	comp=Z,16nm,1.4s							
CPCT	**Cooper Cave**	**32.61**	**360**	P	**P**	**12 18 11.1**	**+0.9**	
CPCT				IAmb	IAmb	12 18 21.8		
	comp=Z,14nm,1.4s							
PLPT	**Palo Pinto**	**32.72**	**338**	P	**P**	**12 18 11.8**	**+0.6**	
PLPT				IAmb	IAmb	12 18 12.9		
	comp=Z,7.7nm,0.8s							
TKL	**Tuckaleechee C**	**32.83**	**1**	LR	LR	12 29 50.0		
	comp=Z,134nm,20.4s,baz=180,slow=33							
MIAR	**Mount Ida**	**32.86**	**346**	P	**P**	**12 18 12.5**	**+0.2**	
MIAR				IAmb	IAmb	12 18 13.9		
	comp=Z,4.7nm,1.0s							
LPIG	**La Paz**	**32.91**	**313**	LR	LR	12 28 20.8		
	comp=Z,78nm,21.5s,baz=136,slow=30							
V48A	**Smith Brothers**	**32.98**	**356**	P	**P**	**12 18 14.1**	**+0.6**	
V48A				IAmb	IAmb	12 18 14.8		
	comp=Z,6.0nm,0.9s							
SGCY	**Sterling City**	**33.10**	**333**	P	**P**	**12 18 15.3**	**+0.7**	
SGCY				IAmb	IAmb	12 18 16.2		
	comp=Z,4.3nm,0.9s							
GNAR	**Gosnell**	**33.54**	**352**	P	**P**	**12 18 19.2**	**+1.0**	
WTFS	**Witchita Falls**	**33.63**	**338**	P	**P**	**12 18 19.6**	**+0.5**	
LCAR	**Lake Charles**	**33.82**	**350**	P	**P**	**12 18 20.5**	**-0.2**	
LCAR				IAmb	IAmb	12 18 21.6		
	comp=Z,8.2nm,1.0s							
FCAR	**Ozark Folk Cen**	**33.83**	**349**	P	**P**	**12 18 20.5**	**-0.3**	
APMT	**Aspermont**	**33.88**	**336**	P	**P**	**12 18 21.0**	**-0.4**	
APMT				IAmb	IAmb	12 18 23.9		
	comp=Z,5.1nm,1.0s							
VHRN	**Van Horn**	**34.10**	**327**	P	**P**	**12 18 24.2**	**+0.8**	
T47A	**Sharon Grove**	**34.24**	**356**	P	**P**	**12 18 24.6**	**+0.3**	
T47A				IAmb	IAmb	12 18 25.2		
	comp=Z,9.8nm,1.1s							
POST	**Post**	**34.24**	**334**	P	**P**	**12 18 25.2**	**+0.7**	
POST				IAmb	IAmb	12 18 25.8		
	comp=Z,4.0nm,0.8s							
DKNS	**Dickens**	**34.51**	**335**	P	**P**	**12 18 28.2**	**+1.4**	
DKNS				IAmb	IAmb	12 18 28.6		
	comp=Z,9.8nm,1.3s							
S51A	**Beattyville**	**34.80**	**1**	P	**P**	**12 18 29.9**	**+0.7**	
U38A	**Gravette**	**34.86**	**346**	P	**P**	**12 18 29.4**	**-0.3**	
U38A				IAmb	IAmb	12 18 30.5		
	comp=Z,4.3nm,0.9s							
MGMO	**Mountain Grove**	**35.08**	**349**	P	**P**	**12 18 32.2**	**+0.6**	
SMWD	**Samnorwood**	**35.49**	**337**	P	**P**	**12 18 36.2**	**+1.0**	
CCM	**Cathedral Cave**	**35.78**	**351**	P	**P**	**12 18 37.8**	**+0.2**	
S39A	**Bolivar**	**35.81**	**348**	P	**P**	**12 18 38.3**	**+0.4**	
T35A	**Sooner Cattle**	**35.87**	**343**	P	**P**	**12 18 38.7**	**+0.2**	
T35A				IAmb	IAmb	12 18 41.4		
	comp=Z,4.4nm,0.9s							
AMTX	**Amarillo**	**35.88**	**335**	P	**P**	**12 18 39.3**	**+0.7**	
AMTX				IAmb	IAmb	12 18 40.2		
	comp=Z,10.0nm,1.1s							
H03N2	**Juan Fernandez**	**36.28**	**172**	T	T	12 57 15.6		
	baz=351,slow=76,SNR=18							
H03N1	**Juan Fernandez**	**36.28**	**172**	T	T	12 57 15.5		
	baz=351,slow=76,SNR=20							
H03N3	**Juan Fernandez**	**36.30**	**172**	T	T	12 57 11.5		
	baz=351,slow=76,SNR=18							
121A	**Cookes Peak, D**	**36.97**	**326**	P	**P**	**12 18 49.8**	**+1.7**	
121A				IAmb	IAmb	12 18 50.5		
	comp=Z,5.1nm,0.9s							
O49A	**Covington**	**37.34**	**0**	P	**P**	**12 18 52.1**	**+1.2**	
P40A	**Paris**	**37.35**	**350**	P	**P**	**12 18 51.1**	**+0.1**	
P40A				IAmb	IAmb	12 18 51.9		
	comp=Z,9.9nm,0.9s							
RTBA	**Rita Blanca**	**37.65**	**335**	IAmb	IAmb	12 18 55.7		
	comp=Z,4.9nm,0.9s							
ANMO	**Albuquerque**	**38.12**	**330**	P	**P**	**12 18 58.6**	**+0.8**	
ANMO				IAmb	IAmb	12 19 00.8		
	comp=Z,5.4nm,0.9s							
ANMO	**Albuquerque**	**38.12**	**330**	LR	LR	12 34 18.5		
	comp=Z,61nm,18.1s,baz=218,slow=35							
RPN	**Rapa Nui**	**38.19**	**218**	LR	LR	12 28 49.2		
	comp=Z,22nm,20.9s,baz=52,slow=27							
TUC	**Tucson**	**38.55**	**323**	P	**P**	**12 19 02.3**	**+0.9**	
CBKS	**Cedar Bluff**	**38.62**	**341**	IAmb	IAmb	12 19 03.8		
	comp=Z,11nm,0.8s							
M53A	**WI Miller and**	**38.73**	**4**	P	**P**	**12 19 02.8**	**+0.1**	
M53A				IAmb	IAmb	12 19 11.4		
	comp=Z,20nm,1.5s							
CPUP	**Villa Florida**	**38.90**	**140**	LR	LR	12 37 13.1		
	comp=Z,156nm,18.1s,baz=6.5,slow=40							
T25A	**Trinidad**	**38.95**	**334**	IAmb	IAmb	12 19 07.6		
	comp=Z,10nm,1.2s							
KSCO	**Kaye Shedlock'**	**39.83**	**338**	P	**P**	**12 19 13.0**	**+1.1**	
SDCO	**Great Sand Dun**	**39.94**	**334**	P	**P**	**12 19 14.9**	**+1.8**	
SDCO				IAmb	IAmb	12 19 15.6		
	comp=Z,6.8nm,0.9s							
BDFB	**Brasilia**	**40.28**	**118**	LR	LR	12 35 20.1		
	comp=Z,121nm,20.6s,baz=318,slow=36							
MVCO	**Mesa Verde**	**40.92**	**330**	P	**P**	**12 19 22.4**	**+1.2**	
MVCO				IAmb	IAmb	12 19 23.6		
	comp=Z,11nm,1.1s							
Y14A	**Wickenburg**	**41.02**	**323**	P	**P**	**12 19 23.6**	**+1.8**	
Y14A				IAmb	IAmb	12 19 24.2		
	comp=Z,8.1nm,1.1s							
WUAZ	**Wupatki**	**41.18**	**326**	P	**P**	**12 19 25.0**	**+1.8**	
WUAZ				IAmb	IAmb	12 19 25.8		
	comp=Z,7.9nm,1.1s							
SMCO	**Snowmass**	**41.77**	**333**	P	**P**	**12 19 29.8**	**+1.4**	
SMCO				IAmb	IAmb	12 19 30.6		
	comp=Z,9.1nm,0.8s							
SADO	**Sadowa**	**42.17**	**6**	LR	LR	12 36 08.1		
	comp=Z,106nm,21.1s,baz=76,slow=35							
ECSD	**EROS Data Cent**	**42.31**	**347**	P	**P**	**12 19 32.3**	**0.0**	
W13A	**Hualapai Mount**	**42.34**	**323**	P	**P**	**12 19 34.5**	**+1.6**	
HMU	**Henry Mountain**	**42.62**	**329**	IAmb	IAmb	12 19 38.4		
	comp=Z,10nm,1.2s							
PFO	**Pinyon Flats O**	**42.98**	**319**	LR	LR	12 35 52.7		
	comp=Z,114nm,19.2s,baz=201,slow=34							
SPMN	**Marine on St.**	**43.03**	**351**	P	**P**	**12 19 37.9**	**-0.1**	
SPMN				IAmb	IAmb	12 19 38.4		
	comp=Z,9.9nm,0.8s							
V12A	**Nelson**	**43.35**	**323**	P	**P**	**12 19 41.8**	**+1.0**	
SRU	**San Rafael Swe**	**43.40**	**330**	P	**P**	**12 19 42.8**	**+1.4**	
F36A	**Milaca**	**43.76**	**351**	P	**P**	**12 19 43.4**	**-0.5**	
F36A				IAmb	IAmb	12 19 44.3		
	comp=Z,6.3nm,0.9s							
RWWY	**Rawlins**	**43.94**	**335**	P	**P**	**12 19 45.6**	**-0.1**	
RWWY				IAmb	IAmb	12 19 46.7		
	comp=Z,9.7nm,0.9s							
SHPR	**Sheep Range**	**44.06**	**324**	P	**P**	**12 19 48.2**	**+1.6**	
RDMU	**Red Mountain**	**44.08**	**332**	P	**P**	**12 19 47.9**	**+1.0**	
RDMU				IAmb	IAmb	12 19 48.8		
	comp=Z,7.2nm,0.8s							
E38A	**The Farm, Brul**	**44.21**	**353**	P	**P**	**12 19 47.7**	**+0.2**	
E38A				IAmb	IAmb	12 19 48.1		
	comp=Z,6.2nm,1.0s							
F33A	**5 Mile Ranch,**	**44.25**	**348**	P	**P**	**12 19 47.9**	**+0.1**	
F33A				IAmb	IAmb	12 19 48.8		
	comp=Z,5.5nm,0.9s							
RSSD	**Black Hills**	**44.81**	**340**	P	**P**	**12 19 53.6**	**+1.0**	
RSSD				IAmb	IAmb	12 19 54.7		
	comp=Z,5.0nm,0.8s							
WCT	**Wildcat Mounta**	**45.13**	**323**	P	**P**	**12 19 56.2**	**+1.1**	
SPR3	**Spring Creek 3**	**45.31**	**327**	P	**P**	**12 19 57.2**	**+0.4**	
PDAR	**Pinedale Array**	**45.83**	**334**	P	**P**	**12 20 00.8**	**+0.2**	
	comp=Z,2.0nm,0.9s,baz=131,slow=9.7,SNR=13							
PDAR				PcP	**PcP**	**12 21 36.8**	**-1.1**	
	comp=Z,1.1nm,0.9s,baz=152,slow=7.2,SNR=5.7							
PDAR				LR	LR	12 40 43.6		
	comp=Z,129nm,18.1s,baz=142,slow=38							
	comp=Z,2.0nm,0.9s							
HWUT	**Hardware Ranch**	**45.83**	**331**	P	**P**	**12 20 01.4**	**+0.7**	
HWUT				IAmb	IAmb	12 20 02.0		
	comp=Z,6.8nm,0.8s							
TPH	**Tonopah**	**46.33**	**324**	P	**P**	**12 20 06.1**	**+1.4**	
AGMN	**Agassiz Nation**	**46.52**	**349**	P	**P**	**12 20 05.8**	**0.0**	
AGMN				IAmb	IAmb	12 20 06.9		
	comp=Z,7.7nm,1.1s							
REDW	**Red Top Meadow**	**46.87**	**334**	P	**P**	**12 20 08.9**	**0.0**	
TPAW	**Teton Pass**	**47.02**	**334**	IAmb	IAmb	12 20 12.3		
	comp=Z,3.9nm,1.1s							
ELK	**Elko**	**47.05**	**328**	LR	LR	12 39 52.1		
	comp=Z,168nm,18.4s,baz=144,slow=36							
NVAR	**Mina Array Bea**	**47.20**	**323**	P	**P**	**12 20 11.6**	**+0.1**	
	comp=Z,2.3nm,0.7s,baz=131,slow=8.0,SNR=18							
NVAR				PcP	**PcP**	**12 21 42.7**	**-0.1**	
	comp=Z,0.9nm,0.7s,baz=126,slow=4.3,SNR=4.7							
NVAR				LR	LR	12 38 39.6		
	comp=Z,79nm,20.3s,baz=92,slow=34							
	comp=Z,2.3nm,0.7s							
BMN	**Battle Mountai**	**47.91**	**326**	P	**P**	**12 20 17.6**	**+0.6**	
YHL	**Hebgen Lake**	**48.20**	**334**	IAmb	IAmb	12 20 21.6		
	comp=Z,6.7nm,1.2s							
ULM	**Lac du Bonnet**	**48.41**	**350**	P	**P**	**12 20 20.3**	**-0.1**	
ULM				IAmb	IAmb	12 20 22.0		
	comp=Z,6.1nm,1.1s							
ULM	**Lac du Bonnet**	**48.41**	**350**	P	**P**	**12 20 19.3**	**-1.1**	
	comp=Z,5.1nm,1.1s,baz=139,slow=10,SNR=6.4							
ULM				LR	LR	12 43 32.3		
	comp=Z,42nm,18.4s,baz=89,slow=39							
	comp=Z,5.1nm,1.1s							
BOZ	**Bozeman (W)**	**48.98**	**335**	P	**P**	**12 20 25.3**	**+0.2**	
WVOR	**Wild Horse Val**	**50.05**	**327**	P	**P**	**12 20 33.9**	**+0.5**	
BPMT	**Black Pine Rid**	**50.43**	**334**	P	**P**	**12 20 36.7**	**+0.4**	
PLID	**Pearl Lake**	**50.58**	**331**	P	**P**	**12 20 37.3**	**-0.1**	
YBH	**Yreka Blue Hor**	**51.91**	**324**	LR	LR	12 41 26.4		
	comp=Z,90nm,21.1s,baz=158,slow=34							
NEW	**Newport**	**53.44**	**333**	LR	LR	12 47 06.2		
	comp=Z,76nm,18.1s,baz=120,slow=40							
SCHQ	**Schefferville**	**53.92**	**12**	P	**P**	**12 20 60.0**	**-1.8**	
	comp=Z,3.5nm,1.0s,baz=252,slow=16,SNR=2.7							
	comp=Z,3.5nm,1.0s							
EDM	**Edmonton**	**55.78**	**339**	P	**P**	**12 21 15.3**	**0.0**	
EDM				IAmb	IAmb	12 21 16.6		
	comp=Z,9.3nm,1.1s							
FCC	**Fort Churchill**	**56.45**	**354**	P	**P**	**12 21 20.2**	**+0.3**	
FCC				IAmb	IAmb	12 21 20.8		
	comp=Z,4.8nm,1.1s							
TAOE	**Nuku Hiva Isla**	**56.79**	**258**	*e*LR	LR	12 38 00.3		
	comp=Z,30nm,25.4s							
YKA	**Yellowknife Ar**	**63.79**	**345**	P	**P**	**12 22 09.3**	**-0.9**	
	comp=Z,0.6nm,0.8s,baz=139,slow=6.5,SNR=10.0							
YKA				PcP	**PcP**	**12 22 44.9**	**-1.0**	
	comp=Z,0.5nm,0.8s,baz=140,slow=4.2,SNR=3.6							
YKA				LR	LR	12 53 08.1		
	comp=Z,66nm,18.9s,baz=278,slow=39							
	comp=Z,0.6nm,0.8s							
PPT	**Papeete**	**67.34**	**250**	LR	LR	12 45 56.8		
	comp=Z,71nm,19.9s,baz=93,slow=30							
PPT2	**Papeete2**	**67.34**	**250**	*e*LR	LR	12 42 54.2		
	comp=Z,106nm,24.5s							
PPT2				*e*LR	LR	12 42 58.9		
	comp=Z,151nm,26.0s							
F28M	**Old Crow**	**74.97**	**341**	P	**P**	**12 23 19.8**	**+0.6**	
F28M				IAmb	IAmb	12 23 47.4		
	comp=Z,8.9nm,1.5s							
ILAR	**Eielson Array**	**76.16**	**337**	P	**P**	**12 23 26.1**	**0.0**	
ILAR	**Eielson Array**	**76.16**	**337**	P	**P**	**12 23 25.6**	**-0.4**	
	comp=Z,1.8nm,0.9s,baz=130,slow=4.5,SNR=13							
	comp=Z,1.8nm,0.9s							
RAR	**Rarotonga**	**77.42**	**248**	LR	LR	12 49 16.6		
	comp=Z,36nm,21.9s,baz=188,slow=29							
D25K	**Kavik River**	**77.89**	**341**	P	**P**	**12 23 37.0**	**+1.2**	
D25K				IAmb	IAmb	12 23 37.5		
	comp=Z,4.5nm,0.9s							
ESDC	**Sonseca Array**	**80.89**	**50**	P	P	12 23 47.3	-5.5	
	comp=Z,0.1nm,0.3s,baz=271,slow=5.7,SNR=2.3							
ESDC				LR	LR	12 58 10.1		
	comp=Z,58nm,18.5s,baz=260,slow=35							
	comp=Z,0.1nm,0.3s							
VRAC	**Vranov**	**95.11**	**40**	LR	LR	13 08 45.3		
	comp=Z,31nm,18.7s,baz=254,slow=36							
DZM	**Mont Dzumac**	**108.80**	**248**	*e*LR	LR	13 02 05.5		
	comp=Z,45nm,26.1s							
MKAR	**Makanchi Array**	**129.35**	**12**	PKP	**PKPdf**	**12 30 42.4**	**-4.7**	
	comp=Z,0.1nm,0.5s,baz=0.0,slow=2.4,SNR=1.5							
HHC	**Hu-ho-hao-te**	**134.31**	**343**	*e*P	**PKPdf**	**12 30 57.0**	**+0.3**	
ASAR	**Alice Springs**	**137.54**	**237**	PKP	**PKPdf**	**12 30 57.3**	**-5.8**	
	comp=Z,0.1nm,0.6s,baz=126,slow=2.1,SNR=1.2							
WRA	**Waramunga Arr**	**138.53**	**243**	PKP	**PKPdf**	**12 30 59.8**	**-5.2**	
	comp=Z,0.7nm,1.0s,baz=106,slow=1.8,SNR=2.8							
NJ2	**Nanjing**	**139.04**	**329**	*e*P	**PKPdf**	**12 31 06.1**	**+0.5**	
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
PZH	**PanZhiHua**	**150.40**	**349**	PKPbc	**PKPdf**	**12 31 23.6**	**-1.9**	

*SGS **23** 12:15:50.4, 29°.25N×33°.62E, h7km, Ml2.2*
*GII **23** 12:15:51.5±0.7, 29°.841N±0°.002×36°.180E±0°.003, h0km, confirmed*
ISC 23 12:15:52.6±2.1, 29°.85N±0°.05×36°.1E±0°.1, h0km, n26, σ1§13/26, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**0.92**	**282**	P		**Pn**	**12 16 11.0**	**-1.8**
HRFI	**Mount Harif**	**0.92**	**282**	S		**Sn**	**12 16 25.7**	**-1.0**
EIL	**Elat**	**0.99**	**260**	P		**Pn**	**12 16 13.0**	**-0.7**
EIL	**Elat**	**0.99**	**260**	S		**Sn**	**12 16 30.5**	**+2.0**
MBRI	**Mt Berech**	**1.01**	**267**	P		**Pn**	**12 16 13.2**	**-0.8**
MBRI	**Mt Berech**	**1.01**	**267**	S		**Sn**	**12 16 29.7**	**+0.7**
HQLS		**1.04**	**238**	P		**Pn**	**12 16 13.6**	**-0.8**
HQLS		**1.04**	**238**	S		**Sn**	**12 16 30.9**	**+1.2**
ZFRI	**Zfri**	**1.05**	**312**	P		**Pb**	**12 16 13.0**	**-0.6**
ZFRI	**Zfri**	**1.05**	**312**	S		**Sn**	**12 16 29.3**	**-0.5**
PRNI	**Paran**	**1.05**	**299**	P		**Pn**	**12 16 13.3**	**-1.4**
PRNI	**Paran**	**1.05**	**299**	S		**Sn**	**12 16 31.7**	**+1.7**
JMOS	**Jabal al Moall**	**1.08**	**231**	P		**Pn**	**12 16 14.2**	**-0.7**
KRMI	**Paran Flat**	**1.20**	**283**	P		**Pn**	**12 16 16.3**	**-0.3**
KRMI	**Paran Flat**	**1.20**	**283**	S		**Sn**	**12 16 35.0**	**+1.3**
HAQS	**Haql**	**1.28**	**232**	P		**Pn**	**12 16 17.9**	**+0.1**
GHAJ	**Ghor Haditha**	**1.51**	**343**	P		**Pn**	**12 16 19.8**	**-1.2**
GHAJ	**Ghor Haditha**	**1.51**	**343**	S		**Sn**	**12 16 42.5**	**+1.1**
MSBI	**Mazada**	**1.58**	**337**	P		**Pn**	**12 16 21.0**	**-0.8**
MSBI	**Mazada**	**1.58**	**337**	S		**Sg**	**12 16 45.0**	**+1.5**
YTIR	**Yattir**	**1.72**	**332**	P		**Pn**	**12 16 23.0**	**-0.9**
YTIR	**Yattir**	**1.72**	**332**	S		**Sg**	**12 16 48.7**	**+0.9**
KZIT	**Kziot**	**1.79**	**306**	P		**Pg**	**12 16 26.0**	**-0.9**
KZIT	**Kziot**	**1.79**	**306**	S		**Sg**	**12 16 51.0**	**+0.8**
DSI	**Dead Sea**	**1.82**	**341**	P		**Pn**	**12 16 25.5**	**+0.4**
DSI	**Dead Sea**	**1.82**	**341**	S		**Sb**	**12 16 50.9**	**+0.9**

KRSZO 23 12:18:33.7, 47°.23N×18°.28E, h0km, MLv1.6/2, Explosion. GT info : GT2 explosion locality : Iszkaszentgyrgy Hungary description : known quarry blast, Hungary

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CSKK	**Cskako**	**0.13**	**353**	Pg	Pg	Pg	12 18 37.3	+1.0
CSKK				Lg	Lg	Lg	12 18 39.9	
MPLH	**Magyarpolny**	**0.51**	**264**	Pg	Pg	Pb	12 18 44.8	-0.8
MORH	**Mrgy, Hungar**	**1.04**	**166**	Lg	Lg	Lg	12 19 09.1	

VIE 23 12:19:33.5±0.2, 47°.41N×15°.95E, h0km, ml0.8/3, Error ellipse: s-maj=1.7km s-min=0.9km az=144.0, Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARSA	**Arzberg**	**0.33**	**242**	*i* Pg		Pg	12 19 40.0	+0.1
	1.2nm,0.2s							
ARSA				*e*Sg		Sg	12 19 44.5	+0.5
	2.4nm,0.1s							
RONA	**Rosalia, Austr**	**0.38**	**39**	*i* Pg		Pg	12 19 40.7	0.0
	2.3nm,0.1s							
RONA				*i* Sg		Sg	12 19 46.3	+0.6
	1.4nm,0.1s							
CONA	**Conrad Observa**	**0.53**	**354**	*e*Pg		Pg	12 19 43.8	+0.1
	0.4nm,0.2s							

IDC 23 12:23:17.9±552.0, 53°.45N×2°.98E, h0km, Error ellipse: s-maj=233.4km s-min=141.7km az=100.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.16**	**120**	I		I	13 15 00.0	
	baz=308,slow=341,SNR=2.2							
I37NO	**I37NO**	**17.28**	**19**	I		I	14 12 00.0	
	baz=216,slow=335,SNR=1.0							
I43RU	**DUBNA INFRASON**	**19.74**	**67**	I		I	14 21 57.7	
	baz=277,slow=332,SNR=2.3							
I31KZ	**AKTYUBINSK INF**	**33.37**	**72**	I		I	15 42 00.0	
	baz=290,slow=327,SNR=1.5							

*IDC **23** 12:24:19.6±1.6, 13°.66N×88°.38W, h0km, mb3.6/4, mbtmp3.7/6, ML3.4/2, MS2.9/1, Error ellipse: s-maj=60.0km s-min=16.6km az=47.0*
*SNET **23** 12:24:24.7±7.5, 13°.10N×89°.24W, h42km, ML4.4*
*CATAC **23** 12:24:25.0±0.4, 13°.04N×89°.26W, h27km±2km, ML4.4*
*GCG **23** 12:24:26.3±0.6, 13°.02N×89°.27W, h46km±293km, MD4.2*
ISC 23 12:24:25.9±1.2, 13°.08N±0°.07×89°.22W±0°.03, h49km±9km, n66, σ1§05/107, mb3.7/4, 4C-20D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.41**	**347**	⇓*i* P		**Pn**	**12 24 36.0**	**-0.1**
LALI				IAML			12 24 36.4	
	comp=Z,4μm,1.0s							
LALI				*i* S		**Sn**	**12 24 44.6**	**+1.2**
PANCS	**Alcalda de**	**0.53**	**5**	⇓*i* P		**Pn**	**12 24 37.4**	**-0.1**
PANCS				*i* S		**Sn**	**12 24 46.3**	**+0.4**
PANCS				IAML			12 24 46.9	
	comp=Z,75μm,1.0s							
LOMA	**Loma Larga**	**0.56**	**5**	⇓*i* P		**Pn**	**12 24 38.1**	**+0.1**
LOMA				*i* S		**Sn**	**12 24 47.7**	**+1.0**
LOMA				IAML			12 24 48.7	
	comp=Z,32μm,1.0s							
SJTE	**Alcalda de S**	**0.57**	**22**	⇓*i* P		**Pn**	**12 24 37.9**	**-0.2**
SJTE				*i* S		**Sn**	**12 24 47.5**	**+0.7**
SJTE				IAML			12 24 48.8	
	comp=Z,6μm,1.0s							
ITCA	**Escuela Especi**	**0.59**	**355**	*i* P		**Pn**	**12 24 38.1**	**-0.3**
ITCA				*i* S		**Sn**	**12 24 48.0**	**+0.7**
ITCA				IAML			12 24 51.3	
	comp=Z,48μm,1.0s							
SNET	**Serv Nac Est T**	**0.60**	**359**	⇓*i* P		**Pn**	**12 24 38.4**	**-0.1**
SNET				*i* S		**Sn**	**12 24 48.3**	**+0.8**
SNET				IAML			12 24 49.5	
	comp=Z,44μm,1.0s							
JAYA	**Jayaque - finc**	**0.61**	**339**	*e*P		**Pn**	**12 24 38.4**	**-0.3**
JAYA	**Jayaque - finc**	**0.61**	**339**	⇓*i* P		**Pn**	**12 24 38.3**	**-0.3**
JAYA				*i* S		**Sn**	**12 24 47.6**	**-0.2**
JAYA				IAML			12 24 48.6	
	comp=Z,70μm,1.0s							
UTEC	**Universidad Te**	**0.61**	**2**	*i* P		**Pn**	**12 24 38.7**	**+0.1**
UTEC				*i* S		**Sn**	**12 24 48.9**	**+1.1**
UTEC				IAML			12 24 55.5	
	comp=Z,14μm,1.0s							
SEMO	**Seminario San**	**0.62**	**360**	*i* P		**Pn**	**12 24 38.6**	**-0.1**
SEMO				*i* S		**Sn**	**12 24 48.9**	**+1.1**
SEMO				IAML			12 24 49.3	
	comp=Z,56μm,1.0s							
AEIL	**Aeropuerto Ilo**	**0.62**	**10**	*e*P		**Pn**	**12 24 39.0**	**+0.3**
TECO	**Alcaldia de Te**	**0.62**	**44**	⇓*i* P		**Pn**	**12 24 38.5**	**-0.2**
TECO				*i* S		**Sn**	**12 24 48.5**	**+0.6**
TECO				IAML			12 24 51.7	
	comp=Z,4μm,1.0s							
COEG	**Centro de Oper**	**0.63**	**32**	*e*P		**Pn**	**12 24 38.7**	**-0.1**
COEG	**Centro de Oper**	**0.63**	**32**	⇓*i* P		**Pn**	**12 24 38.7**	**-0.1**
COEG				*i* S		**Sn**	**12 24 49.0**	**+0.9**
COEG				IAML			12 24 51.7	
	comp=Z,6μm,1.0s							
IGN	**Direccin Gen**	**0.63**	**5**	*e*P		**Pn**	**12 24 39.0**	**+0.2**
IGN	**Direccin Gen**	**0.63**	**5**	⇓*i* P		**Pn**	**12 24 38.9**	**+0.1**
IGN				*i* S		**Sn**	**12 24 49.2**	**+1.1**
IGN				IAML			12 24 50.4	
	comp=Z,70μm,1.0s							
UEES	**Universidad Ev**	**0.63**	**359**	⇓*i* P		**Pn**	**12 24 38.9**	**0.0**
UEES				*i* S		**Sn**	**12 24 49.2**	**+1.0**
UEES				IAML			12 24 50.9	
	comp=Z,18μm,1.0s							
PMON	**Piamonte**	**0.63**	**352**	⇓*i* P		**Pn**	**12 24 38.8**	**-0.1**
PMON				*i* S		**Sn**	**12 24 49.2**	**+1.0**
PMON				IAML			12 24 52.9	
	comp=Z,32μm,1.0s							
UDBS	**Universidad Do**	**0.63**	**6**	⇓*i* P		**Pn**	**12 24 39.0**	**+0.1**
UDBS	

ESQI				*i* S		**Sn**	**12 25 09.8**	**+1.5**
ESQI				IAML			12 25 11.9	
	comp=Z,4μm,1.0s							
AMPH	**Amapala**	**1.54**	**82**	*e*P		**Pn**	**12 24 51.0**	**+0.1**
AMPH	**Amapala**	**1.54**	**82**⇑	*i*P		**Pn**	**12 24 51.1**	**+0.1**
AMPH				*i* S		**Sn**	**12 25 11.5**	**+1.8**
CSGN	**Cosiguina Volc**	**1.63**	**94**	*i* P		**Pn**	**12 24 52.2**	**0.0**
CSGN				IAML			12 25 29.3	
	comp=Z,5μm,1.0s							
POTN	**Potosi Cosigui**	**1.68**	**93**⇓	*i*P		**Pn**	**12 24 53.3**	**+0.5**
POTN				*i* S		**Sn**	**12 25 14.4**	**+1.3**
POTN				IAML			12 25 18.8	
	comp=Z,450nm,1.0s							
NBG	**Las Nubes**	**1.85**	**324**	*i* P		**Pn**	**12 24 57.3**	**+1.8**
NBG				*i* S		**Sn**	**12 25 21.3**	**+3.4**
GUNB	**GUNB**	**1.86**	**324**⇓	*i*P		**Pn**	**12 24 55.0**	**-0.6**
GUNB				*i* S		**Sn**	**12 25 18.4**	**+0.4**
GUNB				IAML			12 25 23.9	
	comp=Z,1μm,1.0s							
PCG	**Pacaya**	**1.87**	**314**	*i* P		**Pn**	**12 24 56.8**	**+1.1**
PCG				*i* S		**Sn**	**12 25 20.8**	**+2.4**
MRL	**Marmol**	**2.04**	**347**	*i* P		**Pn**	**12 24 59.5**	**+1.5**
FUG	**Fuego 3**	**2.08**	**311**	*i* P		**Pn**	**12 24 59.6**	**+1.1**
FUG				*i* S		**Sn**	**12 25 25.2**	**+1.9**
TGUH	**Tegucigalpa,Un**	**2.13**	**63**	*i* P		**Pn**	**12 24 59.4**	**+0.2**
TGUH				*i* S		**Sn**	**12 25 25.8**	**+1.3**
TGUH				IAML			12 25 48.3	
	comp=Z,830nm,1.0s							
CRIN	**San Cristobal**	**2.15**	**100**	*i* P		**Pn**	**12 25 00.0**	**+0.6**
CRIN				*i* S		**Sn**	**12 25 26.5**	**+1.5**
CRIN				IAML			12 25 35.2	
	comp=Z,3μm,1.0s							
PKGN	**Cerro Pekin**	**2.23**	**100**	*i* P		**Pn**	**12 25 00.6**	**+0.2**
PKGN				*i* S		**Sn**	**12 25 27.3**	**+0.6**
PKGN				IAML			12 25 40.0	
	comp=Z,3μm,1.0s							
HERN	**Volcan Telica**	**2.38**	**101**	*i* P		**Pn**	**12 25 02.4**	**-0.1**
HERN				IAML			12 25 42.5	
	comp=Z,1μm,1.0s							
YUSH	**Yuscaran**	**2.47**	**69**⇑	*i*P		**Pn**	**12 25 04.1**	**+0.3**
STG3	**Santiaguito 3,**	**2.79**	**306**	*i* P		**Pn**	**12 25 09.5**	**+1.2**
STG3				*i* S		**Sn**	**12 25 41.1**	**+0.2**
JTS	**Las Juntas de**	**5.02**	**123**	Pn		Pn	12 25 31.4	-7.3
	comp=Z,1.4nm,0.3s,baz=315,slow=20,SNR=2.1							
JTS				Pg			12 25 47.0	
	comp=Z,7.1nm,0.3s,baz=267,slow=6.8,SNR=31							
JTS				Lg		Lg	12 26 50.6	
	comp=Z,2.1nm,0.3s,baz=311,slow=20,SNR=8.3							
JTS				LR		LR	12 27 51.6	
	comp=Z,131nm,19.5s,baz=307,slow=45							
	comp=Z,2.2nm,0.4s							
CMIG	**Matias Romero**	**6.76**	**307**	Pn		**Pn**	**12 26 05.6**	**+2.9**
	comp=Z,0.9nm,0.3s,baz=194,slow=13,SNR=5.2							
CMIG				Sn		**Sn**	**12 27 18.0**	**-0.4**
	comp=Z,5.3nm,0.3s,baz=83,slow=14,SNR=5.0							
	comp=Z,13nm,0.3s							
TXAR	**Lajitas Array**	**21.01**	**323**	P		**P**	**12 29 05.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=142,slow=8.9,SNR=11							
	comp=Z,0.5nm,0.5s							
PDAR	**Pinedale Array**	**34.41**	**333**	P		**P**	**12 31 08.4**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=141,slow=9.0,SNR=3.7							
	comp=Z,0.4nm,0.7s							
SCHQ	**Schefferville**	**45.20**	**18**	P		P	12 32 32.0	-5.8
	comp=Z,1.6nm,0.6s,baz=210,slow=20,SNR=1.5							
	comp=Z,1.6nm,0.6s							
YKA	**Yellowknife Ar**	**52.56**	**345**	P		**P**	**12 33 31.2**	**-2.9**
	comp=Z,1.2nm,0.8s,baz=144,slow=7.3,SNR=20							
	comp=Z,1.2nm,0.8s							

*IDC **23** 12:42:18.6±1.1,53°.49N×62°.92E, h0km, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=17.6km s-min=10.6km az=4.0*
*NNC **23** 12:42:24.4±1.1,52°.82N×63°.42E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=22.0km s-min=3.7km az=154.0, Suspected Mining explosion.*
ISC 23 12:42:16.7±1.1, 53°.73N±0°.07×62°.63E±0°.05, h0km, n10, σ1§77/9, 4C-3D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARU	**Arti**	**3.58**	**321**	Pn		**Pb**	**12 43 20.5**	**-0.2**
	0.7nm,0.3s,baz=127,slow=5.1,SNR=2.7							
ARU				Lg		Lg	12 44 21.2	
	1.5nm,0.3s,baz=98,slow=18,SNR=3.5							
	1.6nm,0.3s							
AKTO	**Aktyubinsk**	**4.36**	**223**	⇑Pg		**Pg**	**12 43 39.8**	**-0.4**
	0.8nm,0.6s							
AKTO				⇓Lg		Lg	12 44 35.8	
	2.9nm,0.7s							
AKTO	**Aktyubinsk**	**4.36**	**223**	Pn		**Pn**	**12 43 26.6**	**+2.5**
	0.1nm,0.3s,baz=68,slow=5.4,SNR=1.5							
AKTO				Lg		Lg	12 44 33.1	
	0.3nm,0.3s,baz=60,slow=20,SNR=5.9							
	0.5nm,0.5s							
I31KZ	**AKTYUBINSK INF**	**4.37**	**222**	I		I	13 09 00.0	
	baz=43,slow=342,SNR=14							
BRVK	**Borovoye**	**4.63**	**95**	⇑Lg		Lg	12 44 37.7	
	4.8nm,0.6s							
BVA0	**Borovoye Array**	**4.70**	**96**	⇓Pn		**Pn**	**12 43 29.5**	**+0.7**
	2.6nm,1.1s,baz=286,slow=14,SNR=10							
BVA0				⇓Pg		**Pb**	**12 43 41.6**	**+1.7**
	0.7nm,0.4s,baz=286,slow=14,SNR=4.5							
BVA0				Lg		Lg	12 44 39.0	
	3.6nm,0.6s,baz=282,slow=26,SNR=4.5							
BVAR	**Borovoye Array**	**4.70**	**96**	Pn		**Pn**	**12 43 29.1**	**+0.3**
	0.1nm,0.3s,baz=284,slow=14,SNR=11							
BVAR				Sn		**Sn**	**12 44 21.1**	**-2.9**
	0.1nm,0.3s,baz=277,slow=25,SNR=4.8							
BVAR				Lg		Lg	12 44 40.2	
	0.1nm,0.3s,baz=280,slow=32,SNR=6.1							
	0.8nm,0.3s							
AB31	**Akbulak array**	**4.79**	**202**	⇑Pn		**Pn**	**12 43 29.5**	**-0.5**
	0.2nm,0.5s,baz=0.7,slow=12,SNR=8.0							
AB31				⇑Pg		**Pb**	**12 43 41.2**	**-0.2**
	0.2nm,0.2s,baz=33,slow=13,SNR=8.9							
AB31				Lg		Lg	12 44 35.5	
	1.3nm,0.3s,baz=12,slow=23,SNR=5.4							
I46RU	**ZALESOVO INFRA**	**13.10**	**80**	I		I	13 55 17.3	
	0.1nm,1.2s,baz=278,slow=335,SNR=4.2							
I43RU	**DUBNA INFRASON**	**14.77**	**292**	I		I	14 16 50.0	
	baz=91,slow=345,SNR=2.8							

*MDD **23** 13:04:21.4±0.4, 39°.92N×6°.15W, h10km, mb_Lg1.9/8, Error ellipse: s-maj=3.0km s-min=2.5km az=131.0*
*INMG **23** 13:04:22.3±2.6, 39°.94N×6°.10W, h1km±6km, ML1.4, Error ellipse: s-maj=3.8km s-min=2.9km az=80.0*
*SFS **23** 13:04:23.6, 40°.21N×6°.45W, h50km, ML2.0/4, ML2.5/4, MLv1.8/4*
ISC 23 13:04:21.0±0.9, 39°.92N±0°.02×6°.11W±0°.02, h12km±7km, n26, σ1§01/58, 1D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EPLA	**Plasencia**	**0.15**	**10**	Pg		**Pg**	**13 04 24.4**	**-0.2**
EPLA				Sg		**Sg**	**13 04 26.4**	**-0.7**
EPLA				*i* Vmb_Lg			13 04 27.3	
PCBR	**Castelo Branco**	**1.05**	**266**	*e*P		**Pn**	**13 04 41.6**	**0.0**
PCBR				*e*S		**Sn**	**13 04 56.4**	**+0.2**
PCBR				A		A	13 04 57.4	
	5.2nm,0.3s							
PMRV	**Marv??o**	**1.10**	**244**	*e*P		**Pn**	**13 04 42.8**	**+0.5**
PMRV				*e*S		**Sn**	**13 04 57.4**	**-0.1**
PMRV				A		A	13 04 59.5	
	4.3nm,0.6s							
MTE	**Manteigas**	**1.20**	**294**	*e*P		**Pn**	**13 04 44.7**	**+1.0**
MTE				*e*S		**Sn**	**13 05 00.2**	**+0.3**
MTE				A		A	13 05 02.4	
	4.8nm,0.6s							
EBAD	**Badajoz**	**1.36**	**211**	Pn		**Pg**	**13 04 47.6**	**+0.6**
EBAD				Sn		**Sg**	**13 05 05.3**	**+0.7**
EBAD	**Badajoz**	**1.36**	**211**	Pg		**Pg**	**13 04 47.2**	**+0.1**
EBAD				Sg		**Sg**	**13 05 05.4**	**+0.7**
EBAD				*i* Vmb_Lg			13 05 08.0	
PAB	**San Pablo**	**1.41**	**105**	Pg		**Pg**	**13 04 48.9**	**+0.8**
PAB				Sg		**Sg**	**13 05 07.8**	**+1.3**
PAB				*i* Vmb_Lg			13 05 09.7	
MVO	**Moncorvo**	**1.43**	**331**⇓	*e*Pn		**Pg**	**13 04 48.3**	**-0.1**
MVO				*e*Sn		**Sg**	**13 05 06.5**	**-0.4**
MVO				*e*Sg		**Sn**	**13 05 07.3**	**+1.8**
MVO				A		A	13 05 07.7	
	12nm,0.2s							
PESTR	**Estremoz**	**1.56**	**228**	*e*Pn		**Pg**	**13 04 51.2**	**+0.4**
PESTR				*e*Sn		**Sg**	**13 05 11.4**	**+0.4**
PESTR				A		A	13 05 13.6	
	2.9nm,0.6s							
PVIS	**Viseu**	**1.58**	**301**	*e*Pn		**Pg**	**13 04 50.9**	**-0.4**
PVIS				*e*Sn		**Sg**	**13 05 11.2**	**-0.6**
GUD	**Guadarrama**	**1.66**	**64**	Pn		**Pn**	**13 04 50.0**	**-0.1**
GUD				Pg		**Pg**	**13 04 53.3**	**+0.3**
GUD				Sn		**Sn**	**13 05 10.5**	**-0.9**
GUD				Sg		**Sg**	**13 05 15.0**	**+0.4**
GUD				*i* Vmb_Lg			13 05 18.0	
PCAS	**Casmilo, Conde**	**1.84**	**275**	*e*Sg		**Sg**	**13 05 19.4**	**-0.7**
PMTG	**Montargil**	**1.84**	**243**	*e*Pg		**Pg**	**13 04 55.6**	**-0.7**
PMTG				*e*Sg		**Sg**	**13 05 19.8**	**-0.5**
PMTG				A		A	13 05 20.7	
	2.3nm,0.8s							
PBAR	**Barrancos**	**1.89**	**203**	*e*Pn		**Pb**	**13 04 55.1**	**-0.3**
PBAR	**Barrancos**	**1.89**	**203**	*e*Pg		**Pg**	**13 04 57.1**	**-0.1**
PBAR				*e*Sg		**Sg**	**13 05 22.5**	**+0.9**
PBAR				A		A	13 05 24.1	
	2.1nm,0.3s							
PBAR	**Barrancos**	**1.89**	**203**	Pn		**Pb**	**13 04 55.1**	**-0.3**
ECAB	**El Cabril**	**1.92**	**163**	Pn		**Pg**	**13 04 57.9**	**0.0**
ECAB				Sn		**Sg**	**13 05 23.8**	**+1.1**
ECAB	**El Cabril**	**1.92**	**163**	Pn		**Pn**	**13 04 53.3**	**-0.3**
ECAB				Pg		**Pb**	**13 04 56.0**	**0.0**
ECAB				Sn		**Sn**	**13 05 15.6**	**-2.1**
ECAB				Sg		**Sg**	**13 05 23.7**	**+0.9**
ECAB				*i* Vmb_Lg			13 05 26.7	
POLO	**Lamas de Olo**	**1.94**	**319**	*e*Pn		**Pn**	**13 04 54.6**	**+0.8**
POLO				*e*Sn		**Sb**	**13 05 20.8**	**+0.4**
POLO				A		A	13 05 23.5	
	0.9nm,0.3s							
EADA	**Adamuz**	**2.12**	**145**	Sn		**Sg**	**13 05 28.4**	**-0.8**
EADA				Pn		**Pg**	**13 05 01.5**	**-0.1**
EADA	**Adamuz**	**2.12**	**145**	Pn		**Pn**	**13 04 56.2**	**-0.1**
EADA				Pg		**Pg**	**13 05 01.0**	**-0.7**
EADA				Sn		**Sn**	**13 05 20.7**	**-1.9**
EADA				Sg		**Sg**	**13 05 29.3**	**+0.2**
EADA				*i* Vmb_Lg			13 05 31.5	
PSIM	**Granatula de C**	**2.13**	**120**	Pn		**Pn**	**13 04 56.5**	**0.0**
PSIM				Pg		**Pb**	**13 05 00.8**	**+1.2**
PSIM				Sn		**Sn**	**13 05 21.6**	**-1.3**
PSIM				Sg		**Sg**	**13 05 29.5**	**0.0**
ELOB	**Lobios**	**2.44**	**323**	Pn		**Pn**	**13 05 00.5**	**-0.3**
ELOB				Sn		**Sn**	**13 05 27.8**	**-2.9**
ELOB				*i* Vmb_Lg			13 05 41.1	
EGRO	**El Granado**	**2.61**	**205**	Pn		**Pn**	**13 05 02.2**	**-0.9**
EGRO				Sn		**Sn**	**13 05 32.1**	**-2.6**
EGRO				Sg		**Sg**	**13 05 44.6**	**-0.3**
EGRO				*i* Vmb_Lg			13 05 48.9	
PGAV	**Gavieira, Arco**	**2.62**	**322**	*e*Pn		**Pn**	**13 05 04.2**	**+1.0**
PCVE	**Castro Verde**	**2.74**	**214**	*e*Sn		**Sn**	**13 05 40.4**	**+2.6**
PCVE				*e*Sg		**Sg**	**13 05 50.8**	**+1.9**
PCVE				A		A	13 05 54.0	
	1.0nm,1.0s							

*IDC **23** 13:15:26.6±0.9, 54°.63N×154°.12W, h0km, mb3.9/12, mbtmp3.9/15, ML3.4/3, MS3.5/3, Error ellipse: s-maj=24.1km s-min=15.5km az=16.0*
*NEIC **23** 13:15:29.7±1.5, 54°.8N±0°.1×154°.0W±0°.1, h33km±14km, ML3.6/32, ML3.5(AEIC), Error ellipse: s-maj=16.3km s-min=9.0km az=156.0*
*AEIC **23** 13:15:30.5±1.5, 54°.68N±0°.09×153°.9W±0°.1, h12km±8km, Error ellipse: s-maj=14.6km s-min=9.3km az=150.0*
ISC 23 13:15:28.8±0.7, 54°.92N±0°.08×153°.99W±0°.06, h10km, n135, σ1§13/127, mb4.0/12, MS3.2/3, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**2.34**	**9**	Pn		**Pn**	**13 16 07.0**	**-0.3**
OHAK	**Old Harbor**	**2.34**	**9**			**Sn**	**13 16 34.2**	**-1.8**
OHAK	**Old Harbor**	**2.34**	**9**	P		**Pn**	**13 16 07.0**	**-0.3**
CHGN	**Chignik**	**2.87**	**301**	Pn		**Pn**	**13 16 12.8**	**-1.6**
CHGN				IAML			13 16 47.0	
	comp=E,166nm,0.6s							
CHGN				IAML			13 16 47.0	
	comp=N,168nm,0.6s							
KDAK	**Kodiak Island**	**2.97**	**15**	Pn		**Pn**	**13 16 15.8**	**-0.2**
KDAK	**Kodiak Island**	**2.97**	**15**			**Sn**	**13 16 49.2**	**-2.4**
KDAK	**Kodiak Island**	**2.97**	**15**	Pn		**Pn**	**13 16 15.9**	**0.0**
	comp=N,5.8nm,0.3s,baz=206,slow=6.8,SNR=77							
KDAK				Sn		**Sn**	**13 16 48.0**	**-3.6**
	comp=N,5.4nm,0.3s,baz=254,slow=22,SNR=11							
	comp=N,14nm,0.3s							
CNBA	**Chernabura Isl**	**3.24**	**270**	Pn		**Pn**	**13 16 17.0**	**-2.6**
VNKR	**Veniaminof 5**	**3.26**	**292**			**Pn**	**13 16 19.1**	**-0.8**
R16K	**Pilot Point**	**3.32**	**324**			**Pn**	**13 16 21.0**	**+0.3**
R16K						**Sn**	**13 17 00.1**	**-0.1**
ACHA	**Angle Creek He**	**3.38**	**348**			**Pn**	**13 16 22.3**	**+0.6**
ANCK	**Angle Creek**	**3.39**	**346**			**Pn**	**13 16 22.4**	**+0.6**
VNFG	**Fog Glacier, M**	**3.44**	**296**			**Pn**	**13 16 22.2**	**-0.2**
CNTC	**Contact Creek**	**3.51**	**343**			**Pn**	**13 16 23.9**	**+0.4**
SDPT	**Sand Point**	**3.75**	**279**	Pn		**Pn**	**13 16 24.9**	**-1.7**
SDPT				IAML			13 17 22.9	
	comp=N,85nm,2.7s							
SDPT				IAML			13 18 04.0	
	comp=E,92nm,3.4s							
SDPT	**Sand Point**	**3.75**	**279**	P		**Pn**	**13 16 24.9**	**-1.7**
SYI	**Shuyak Island**	**3.80**	**13**	Pn		**Pn**	**13 16 27.2**	**-0.1**
SYI				IAML			13 17 13.6	
	comp=N,89nm,2.4s							
SYI				IAML			13 17 59.5	
	comp=E,66nm,1.9s							
SYI	**Shuyak Island**	**3.80**	**13**			**Sn**	**13 17 11.2**	**-0.9**
Q19K	**Cape Douglas,**	**4.02**	**3**	Pn		**Pn**	**13 16 32.6**	**+2.1**
PS1A	**Pavlof South-1**	**4.47**	**280**			**Pn**	**13 16 34.9**	**-1.7**
P18K	**Big Mountain,**	**4.53**	**352**	Pn		**Pn**	**13 16 37.5**	**+0.1**
PN7A	**Pavlof North-7**	**4.62**	**280**			**Pn**	**13 16 37.0**	**-1.7**
P16K	**Nushagak River**	**4.67**	**334**			**Pn**	**13 16 39.3**	**+0.1**
P19K	**Oil Pt**	**4.76**	**5**	Pn		**Pn**	**13 16 41.6**	**+1.1**
CNPM	**China Poot**	**4.85**	**17**	Pn		**Pn**	**13 16 43.4**	**+1.6**
CNPM				IAML			13 17 38.8	
	comp=E,61nm,2.2s							
CNPM				IAML			13 17 46.5	
	comp=N,60nm,2.1s							
O18K	**Koktuh Hills**	**4.99**	**353**	Pn		**Pn**	**13 16 44.6**	**+1.0**
O18K				IAML			13 17 45.8	
	comp=E,32nm,2.6s							
O18K				IAML			13 18 26.9	
	comp=N,35nm,3.9s							
ILSW	**Iliamna Southw**	**5.09**	**5**	Pn		**Pn**	**13 16 45.4**	**+0.1**
ILSW				IAML			13 17 49.5	
	comp=E,55nm,2.5s							
ILSW				IAML			13 18 32.8	
	comp=N,56nm,1.0s							
BRLK	**Bradley Lake**	**5.14**	**18**	Pn		**Pn**	**13 16 45.6**	**-0.1**
BRLK				IAML			13 18 59.8	
	comp=N,44nm,3.3s							
BRLK				IAML			13 20 11.5	
	comp=E,44nm,3.0s							
BRSE	**Bradley Lake S**	**5.14**	**19**			**Pn**	**13 16 45.1**	**-0.7**
O17K	**Koliganek Bris**	**5.15**	**342**			**Pn**	**13 16 45.7**	**-0.1**
O16K	**Kokwok River B**	**5.19**	**336**			**Pn**	**13 16 45.9**	**-0.5**
O16K	**Kokwok River B**	**5.19**	**336**	IAML			13 19 14.2	
	comp=N,29nm,3.9s							
O16K				IAML			13 19 43.4	
	comp=E,28nm,4.1s							
O20K	**Slope Mountain**	**5.23**	**8**			**Pn**	**13 16 47.1**	**+0.1**
O19K	**Port Alsworth**	**5.29**	**358**			**Pn**	**13 16 48.2**	**+0.4**
O15K	**Ungalikthiuk R**	**5.32**	**326**			**Pn**	**13 16 47.9**	**-0.3**
FALS	**False Pass**	**5.44**	**273**	P		**Pn**	**13 16 48.1**	**-1.8**
RSO	**Redoubt South**	**5.59**	**6**	Pn		**Pn**	**13 16 52.8**	**+0.7**
ISLZ	**Isanotski Laza**	**5.63**	**272**			**Pn**	**13 16 50.5**	**-1.9**
SEW	**Seward**	**5.74**	**23**			**Pn**	**13 16 53.4**	**-0.5**
N18K	**Kilae Creek**	**5.86**	**351**			**Pn**	**13 16 56.2**	**+0.5**
N17K	**Nushagak Hills**	**5.88**	**344**			**Pn**	**13 16 56.3**	**+0.5**
O14K	**Tigyukauivet M**	**5.88**	**321**			**Pn**	**13 16 55.9**	**+0.1**
N19K	**Bonanza Creek**	**5.91**	**358**			**Pn**	**13 16 57.3**	**+0.8**
SLKM	**Skilak Lake**	**5.95**	**18**			**Pn**	**13 16 56.1**	**-0.8**
O22K	**Cooper Landing**	**6.02**	**21**	Pn		**Pn**	**13 16 57.3**	**-0.6**
N16K	**Nishlik Lake**	**6.13**	**337**			**Pn**	**13 16 59.7**	**+0.4**
WESE	**West Dahl East**	**6.16**	**270**			**Pn**	**13 16 58.3**	**-1.5**
N15K	**Kwethluk River**	**6.20**	**331**			**Pn**	**13 17 00.7**	**+0.4**
P23K	**Montague Islan**	**6.20**	**32**			**Pn**	**13 16 59.2**	**-1.1**
SVW2	**Sparrevohn**	**6.25**	**353**	Pn		**Pn**	**13 17 01.7**	**+0.7**
SVW2	**Sparrevohn**	**6.25**	**353**	P		**Pn**	**13 17 01.4**	**+0.4**
N14K	**Kuskokwak Cree**	**6.51**	**323**			**Pn**	**13 17 04.7**	**+0.2**
RC01	**Rabbit Creek A**	**6.58**	**18**	Pn		**Pn**	**13 17 05.2**	**-0.3**
M18K	**Stony River**	**6.66**	**352**			**Pn**	**13 17 07.2**	**+0.6**
M16K	**Timber Creek**	**6.66**	**339**			**Pn**	**13 17 06.9**	**+0.3**
M17K	**Holitna River**	**6.75**	**346**	Pn		**Pn**	**13 17 08.1**	**+0.3**
SUA	**Susitna One**	**6.78**	**13**	Pn		**Pn**	**13 17 08.9**	**+0.6**
M15K	**Kasigluk River**	**6.80**	**331**			**Pn**	**13 17 09.2**	**+0.7**
AKUT	**Akutan**	**6.91**	**268**	Pn		**Pn**	**13 17 08.4**	**-1.5**
M20K	**Styx River**	**7.00**	**3**			**Pn**	**13 17 11.9**	**+0.6**
M19K	**Big River Lodg**	**7.01**	**358**			**Pn**	**13 17 12.0**	**+0.6**
EYAK	**Cordova Ski Ar**	**7.16**	**35**			**Pn**	**13 17 13.0**	**-0.3**
EYAK	**Cordova Ski Ar**	**7.16**	**35**	P		**Pn**	**13 17 15.0**	**+1.6**
SKT	**Skwentna**	**7.19**	**9**	Pn		**Pn**	**13 17 13.9**	**-0.1**
KAIM	**Kayak Island**	**7.20**	**42**	Pn		**Pn**	**13 17 13.4**	**-0.5**
M14K	**Bethel**	**7.22**	**327**			**Pn**	**13 17 14.9**	**+0.6**
L19K	**White Mountain**	**7.29**	**357**			**Pn**	**13 17 15.9**	**+0.5**
L16K	**Owhat River**	**7.39**	**339**	Pn		**Pn**	**13 17 15.8**	**-0.8**
M13K	**Dall Lake**	**7.45**	**321**			**Pn**	**13 17 18.0**	**+0.7**
L18K	**Granite Mounta**	**7.45**	**350**			**Pn**	**13 17 17.9**	**+0.4**
GOAT	**Goat Mountain**	**7.53**	**37**			**Pn**	**13 17 18.1**	**-0.4**
SUCK	**Suckling Hills**	**7.54**	**43**	Pn		**Pn**	**13 17 16.2**	**-2.5**
L17K	**Donlin**	**7.58**	**344**			**Pn**	**13 17 19.6**	**+0.5**
L20K	**Farewell, AK**	**7.58**	**0**			**Pn**	**13 17 20.1**	**+0.8**
MAPS	**Pakushin South**	**7.65**	**267**			**Pn**	**13 17 18.5**	**-1.7**
CUT	**Chulitna**	**7.75**	**13**	Pn		**Pn**	**13 17 23.8**	**+2.3**
L15K	**Ungalak Mounta**	**7.84**	**333**			**Pn**	**13 17 22.7**	**0.0**
KLU	**Klutina**	**7.84**	**30**			**Pn**	**13 17 22.4**	**-0.5**
BMRM	**Bremner River**	**7.85**	**36**			**Pn**	**13 17 22.4**	**-0.5**
L14K	**Kuka Creek**	**7.91**	**328**			**Pn**	**13 17 24.0**	**+0.4**
TTA	**Tatalina**	**8.10**	**353**	Pn		**Pn**	**13 17 27.6**	**+1.2**
TTA	**Tatalina**	**8.10**	**353**	P		**Pn**	**13 17 27.9**	**+1.5**
K17K	**Iditarod**	**8.13**	**346**			**Pn**	**13 17 27.0**	**+0.2**
CRQM	**Cirque**	**8.22**	**40**	Pn		**Pn**	**13 17 27.4**	**-0.8**
ISLE	**Juniper Island**	**8.43**	**43**	Pn		**Pn**	**13 17 32.7**	**+1.7**
GLB	**Gilahina Butte**	**8.46**	**35**	Pn		**Pn**	**13 17 31.4**	**+0.2**
CAST	**Castle Rocks**	**8.58**	**6**	Pn		**Pn**	**13 17 34.0**	**+1.1**
MCARA	**McCarthy VSAT**	**8.68**	**37**	Pn		**Pn**	**13 17 35.6**	**+1.2**
GRNC	**Granite Creek**	**8.74**	**43**	Pn		**Pn**	**13 17 36.4**	**+1.1**
TRF	**Thorofare Moun**	**8.76**	**11**	Pn		**Pn**	**13 17 36.8**	**+1.3**
TABL	**Table Mountain**	**8.82**	**46**	Pn		**Pn**	**13 17 38.1**	**+1.7**
RND	**Reindeer**	**8.90**	**15**	Pn		**Pn**	**13 17 39.1**	**+1.7**
BARN	**Barnard Glacie**	**8.97**	**42**	Pn		**Pn**	**13 17 39.8**	**+1.3**
CTGM	**Chitina Glacie**	**9.04**	**43**	Pn		**Pn**	**13 17 40.2**	**+0.8**
LOGN	**Logan Glacier**	**9.09**	**44**	Pn		**Pn**	**13 17 40.6**	**+0.5**
J19K	**Poorman**	**9.14**	**355**	Pn		**Pn**	**13 17 40.5**	**0.0**
PNL	**Peninsula**	**9.21**	**53**	P		**Pn**	**13 17 42.7**	**+1.1**
J20K	**Nowinta River**	**9.29**	**360**	Pn		**Pn**	**13 17 43.6**	**+1.0**
HDA	**Harding Lake**	**10.15**	**18**	Pn		**Pn**	**13 17 55.1**	**+0.7**
S31K	**Pelican**	**10.29**	**66**	Pn		**Pn**	**13 17 55.0**	**-1.3**
I21K	**Tanana**	**10.34**	**5**	Pn		**Pn**	**13 17 57.9**	**+1.0**
IL31		**10.50**	**17**	Pn		**Pn**	**13 18 00.0**	**+1.0**
ILAR	**Eielson Array**	**10.50**	**17**	Pn		**Pn**	**13 18 00.5**	**+1.4**
ILAR	**Eielson Array**	**10.50**	**17**	Pn		**Pn**	**13 17 57.8**	**-1.4**
	comp=E,0.3nm,0.3s,baz=201,slow=14,SNR=15							
ILAR				Sn		Sn	13 19 46.7	-10
	baz=190,slow=20							
	comp=E,0.8nm,0.4s							
I23K	**Minto, Yukon-K**	**10.51**	**11**	Pn		**Pn**	**13 17 58.5**	**-0.8**
SKAG	**Skagway**	**11.08**	**58**	P		**Pn**	**13 18 10.2**	**+3.1**
ANM	**Nome**	**11.22**	**334**	Pn		**Pn**	**13 18 10.4**	**+1.4**
M30M	**Minto, Yukon**	**11.74**	**42**	Pn		**Pn**	**13 18 16.7**	**+0.6**
P32M	**Atlin**	**11.91**	**59**	Pn		**Pn**	**13 18 19.7**	**+1.2**
P33M	**

DJR	**Jarkent**	**3.66**	**310**	*e*P	**Pg**	**13 23 44.2**	**-0.5**
	1.0nm,0.2s						
DJR				*e*S	**Sg**	**13 24 31.2**	**-0.9**
	12nm,0.3s						
KPKS	**Kokpek**	**3.95**	**293**	*e*P	**Pg**	**13 23 50.0**	**-0.2**
KPKS				*e*S	**Sg**	**13 24 40.9**	**-0.5**
	16nm,0.3s						
SATY	**Saty**	**4.03**	**287**	Pg	**Pg**	**13 23 51.0**	**-0.7**
	1.5nm,0.1s						
SATY				Lg	Lg	13 24 43.2	
	18nm,0.3s						
SATY	**Saty**	**4.03**	**287**	*e*P	**Pg**	**13 23 51.0**	**-0.7**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**13 24 43.2**	**-0.7**
	18nm,0.3s						
KNOS	**Konyrlen**	**4.03**	**307**	Pg	**Pg**	**13 23 52.4**	**+0.6**
	1.8nm,0.1s						
KNOS				Lg	Lg	13 24 45.5	
	8.8nm,0.2s						
ZHN	**Zhinishke**	**4.03**	**288**	Pg	**Pg**	**13 23 51.9**	**+0.1**
	5.0nm,0.1s						
ZHN				Lg	Lg	13 24 44.7	
	22nm,0.1s						
ZHN	**Zhinishke**	**4.03**	**288**	*e*P	**Pg**	**13 23 51.9**	**+0.1**
	5.0nm,0.1s						
ZHN				*e*S	**Sg**	**13 24 44.7**	**+0.7**
	22nm,0.1s						
KAPS	**Kapalarasan**	**4.52**	**318**	Pg	**Pg**	**13 24 00.3**	**-0.9**
	1.2nm,0.1s						
KAPS				Lg	Lg	13 24 59.0	
	5.9nm,0.4s						
KAPS	**Kapalarasan**	**4.52**	**318**	*e*P	**Pg**	**13 24 00.3**	**-0.9**
	1.2nm,0.1s						
KAPS				*e*S	**Sg**	**13 24 59.0**	**-0.7**
	5.9nm,0.4s						
ARXS	**Arharly**	**4.80**	**299**	Pg	**Pg**	**13 24 05.6**	**-1.1**
	16nm,0.4s						
ARXS				Lg	Lg	13 25 07.9	
	10nm,0.3s						
ARXS	**Arharly**	**4.80**	**299**	*e*P	**Pg**	**13 24 05.6**	**-1.1**
	16nm,0.4s						
ARXS				*e*S	**Sg**	**13 25 07.8**	**-1.0**
	10nm,0.3s						
TDK	**Taldyqorghan**	**4.85**	**310**	Pg	**Pg**	**13 24 07.2**	**-0.3**
	12nm,0.1s						
TDK				Lg	Lg	13 25 10.7	
	20nm,0.1s						
TDK	**Taldyqorghan**	**4.85**	**310**	*e*P	**Pg**	**13 24 07.2**	**-0.3**
	12nm,0.1s						
TDK				*e*S	**Sg**	**13 25 10.7**	**+0.4**
	20nm,0.1s						
MK31	**Makanchi Array**	**4.87**	**349**	Pn	**Pb**	**13 23 57.2**	**-2.4**
	0.1nm,0.2s,baz=149,slow=11,SNR=10						
MK31				Pg	**Pg**	**13 24 09.5**	**+1.6**
	3.4nm,0.7s,baz=184,slow=7.2,SNR=26						
MK31				⇑Lg	Lg	13 25 12.0	
	4.2nm,0.4s,baz=161,slow=27,SNR=9.3						
MAKZ	**Makanchi**	**4.94**	**346**	⇑Pg	**Pg**	**13 24 11.0**	**+1.9**
	1.6nm,0.5s						
MAKZ				⇓Lg	Lg	13 25 15.7	
	2.0nm,0.5s						
CHKK	**Chushkaly**	**5.24**	**293**	Pg	**Pg**	**13 24 14.1**	**-0.7**
	1.2nm,0.1s						
CHKK				Lg	Lg	13 25 22.7	
	8.4nm,0.2s						
CHKK	**Chushkaly**	**5.24**	**293**	*e*P	**Pg**	**13 24 14.2**	**-0.7**
	1.2nm,0.1s						
CHKK				*e*S	**Sg**	**13 25 22.7**	**0.0**
	8.4nm,0.2s						
ZSN	**Zaisan**	**5.49**	**9**	Pg	**Pg**	**13 24 19.6**	**-0.2**
	1.4nm,0.1s						
ZSN				Lg	Lg	13 25 32.3	
	11nm,0.4s						
ZSN	**Zaisan**	**5.49**	**9**	*e*P	**Pg**	**13 24 19.6**	**-0.2**
	1.4nm,0.1s						
ZSN				*e*S	**Sg**	**13 25 32.3**	**+1.4**
	11nm,0.4s						

NEIC ***23*** *13:28:41.2±1.0,37.820N±0.010×122.00W±0.01, h9km±4km, Error ellipse: s-maj=1.5km s-min=1.0km az=210.0*

NCEDC 23 13:28:40.5±1.2, 37.826N±0.007×121.979W±0.007, h7km±1km, Mwr 3.3/4, ML 3.1/52(NEIC), **Error ellipse: s-maj=1.0km s-min=0.8km az=199.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C047	**Rutherford Dri**	**0.03**	**276**		Pg	13 28 43.7	+1.8
BGC	**Bolinger Road**	**0.07**	**262**		Pg	13 28 44.5	+2.2
C045	**Hawkins Drive**	**0.08**	**170**		Pg	13 28 43.1	+0.7
CRPB	**Russellman Par**	**0.10**	**33**		Pg	13 28 43.1	+0.2
CLCB	**Lake Chabot**	**0.11**	**218**		Pg	13 28 43.6	+0.6
C010	**Sunflower Cour**	**0.12**	**348**		Pg	13 28 43.8	+0.6
CMOB	**Morgan Territo**	**0.14**	**96**		Pg	13 28 44.3	+0.8
CMOB					Sg	13 28 47.8	+2.3
C021	**Meadowview Dri**	**0.15**	**207**		Pg	13 28 44.3	+0.8
CDOM	**Doolan Road**	**0.15**	**130**		Pg	13 28 44.7	+1.1
CSLM	**San Leandro Hi**	**0.15**	**228**		Pg	13 28 44.4	+0.8
CMCM	**Mills College**	**0.16**	**254**		Pg	13 28 44.5	+0.7
C064	**Brunell Drive**	**0.16**	**263**		Pg	13 28 44.6	+0.7
C064					Sg	13 28 47.8	+1.7
C013	**Ascot Lane Oak**	**0.17**	**269**		Pg	13 28 44.7	+0.8
C013					Sg	13 28 48.4	+2.2
C070	**Dillo Street S**	**0.17**	**225**		Pg	13 28 44.7	+0.7
C018	**Christie Drive**	**0.19**	**325**		Pg	13 28 45.5	+1.2
C071	**Via Corta San**	**0.19**	**220**		Pg	13 28 45.1	+0.8
C069	**Rotal Creek Pl**	**0.19**	**160**		Pg	13 28 46.0	+1.7
C055	**Cottonwood Ave**	**0.20**	**212**		Pg	13 28 45.5	+1.0
C055					Sg	13 28 49.7	+2.6
CVPM	**Vollmer Peak**	**0.20**	**287**		Pg	13 28 45.7	+1.1
CTAM	**Taylor**	**0.20**	**352**		Pg	13 28 46.0	+1.4
C005	**Mandana Bl Oak**	**0.20**	**266**		Pg	13 28 45.3	+0.7
C058	**Eastshore Driv**	**0.21**	**251**		Pg	13 28 45.6	+0.9
BKS	**Berkeley--Byer**	**0.21**	**284**		Pg	13 28 45.7	+1.0
BKS					Sg	13 28 49.9	+2.3
C028	**Eucalyptus Rd**	**0.21**	**277**		Pg	13 28 45.6	+0.8
CNIC	**Niles Canyon**	**0.22**	**177**		Pg	13 28 45.8	+1.0
VAK	**Adit at Lawren**	**0.22**	**284**		Pg	13 28 45.8	+0.9
C044	**Maitland Drive**	**0.22**	**245**		Pg	13 28 45.8	+0.9
CMSB	**University of**	**0.22**	**282**		Pg	13 28 45.9	+1.0
BL67	**Building 67, L**	**0.22**	**283**		Pg	13 28 45.9	+0.9
BL67					Sg	13 28 50.0	+2.0
BL88	**Building 88, L**	**0.22**	**283**		Pg	13 28 45.9	+0.9
BRK	**Berkeley--Havi**	**0.23**	**282**		Pg	13 28 45.9	+0.9
CVLM	**Vallecito**	**0.23**	**150**		Pg	13 28 46.6	+1.6
C007	**Forest Lane Be**	**0.23**	**287**		Pg	13 28 46.3	+1.1
C006	**Lk Pillsbury D**	**0.24**	**195**		Pg	13 28 46.6	+1.3
C049	**Pacific Avenue**	**0.24**	**258**		Pg	13 28 46.1	+0.8
C033	**Glashaus Lp Em**	**0.25**	**275**		Pg	13 28 46.1	+0.7
CBZL	**Buffer Zone**	**0.25**	**123**		Pg	13 28 47.1	+1.7
CPIM	**Pinole Ridge**	**0.25**	**311**		Pg	13 28 46.8	+1.3
C057	**Hedge Avenue B**	**0.26**	**60**		Pg	13 28 45.9	+0.3
C015	**Bright Common**	**0.27**	**182**		Pg	13 28 45.9	+0.1
CSAM	**Sandia**	**0.27**	**125**		Pb	13 28 47.7	+0.1
CBSNC	**Byron Hot Spri**	**0.27**	**92**		Pb	13 28 47.4	-0.3
WENL	**Wente Vineyard**	**0.27**	**139**		Pb	13 28 47.3	-0.4
C002	**Farnham Drive**	**0.27**	**189**		Pg	13 28 46.4	+0.5
RFSB	**Richmond Field**	**0.30**	**288**		Pb	13 28 47.4	-0.8
CYBM	**Yerba Buena Is**	**0.30**	**267**		Pg	13 28 47.2	+0.7
C050	**Festivo Court**	**0.30**	**172**		Pb	13 28 48.0	-0.3
C001	**Firth Court Fr**	**0.31**	**173**		Pb	13 28 48.1	-0.2
C024	**33rd St Richmo**	**0.31**	**293**		Pb	13 28 47.6	-0.7
HMR	**Hamilton Ranch**	**0.36**	**23**		Pb	13 28 49.2	-0.1
CPMM	**Point Molate**	**0.36**	**290**		Pb	13 28 48.5	-0.8
JPRM	**Presidio of Sa**	**0.39**	**266**		Pg	13 28 48.9	+0.8
CALM	**Calaveras Res.**	**0.40**	**159**		Pb	13 28 49.4	-0.5
SAC	**San Andreas**	**0.42**	**235**		Pg	13 28 49.5	+0.8
CSTL	**Corral Hollow**	**0.42**	**116**		Pb	13 28 50.1	-0.2
CSTL	**Corral Hollow**	**0.42**	**116**		Pb	13 28 51.0	+0.6
CMLM	**Mount Lewis**	**0.43**	**143**		Pb	13 28 50.3	-0.3
JMGM	**Milagra Ridge**	**0.43**	**244**		Pg	13 28 49.6	+0.6
JCHM	**Cahill Ridge**	**0.44**	**226**		Pb	13 28 49.9	-0.8
JSFB	**Stanford Teles**	**0.45**	**200**		Pb	13 28 50.3	-0.5
JRSC	**Jasper Ridge**	**0.47**	**206**		Pb	13 28 50.4	-0.7
JFP	**Foothills Park**	**0.49**	**200**		Pb	13 28 51.1	-0.4
JBMM	**Black Mountain**	**0.53**	**195**		Pb	13 28 51.8	-0.4
CMMM	**Mount Mocho**	**0.53**	**134**		Pb	13 28 52.0	-0.3
MHC	**Mount Hamilton**	**0.55**	**151**		Pb	13 28 52.4	-0.2
ARN	**Arnold Ranch**	**0.59**	**143**		Pb	13 28 53.0	-0.3
MTOS	**Mt Oso, Westle**	**0.61**	**122**		Pb	13 28 53.1	-0.4
CCOB	**Coe Ranch Numb**	**0.62**	**157**		Pb	13 28 53.8	+0.2
JJOM	**Saint Joseph's**	**0.62**	**180**		Pb	13 28 53.6	-0.1
NBRB	**Beebe Ranch Br**	**0.63**	**314**		Pb	13 28 53.3	-0.5
NADM	**Allendale**	**0.63**	**1**		Pb	13 28 54.2	+0.3
CVS	**Carmenet Viney**	**0.64**	**324**		Pg	13 28 53.4	+0.5
NOLM	**Olema**	**0.68**	**289**		Pb	13 28 54.3	-0.4
JPSM		**0.69**	**205**		Pb	13 28 54.9	0.0
JLAB	**Laurel Hill**	**0.70**	**164**		Pb	13 28 54.9	-0.1
CMPM	**Mikes Peak**	**0.70**	**131**		Pb	13 28 55.1	-0.1
CADM	**Anderson Res.**	**0.72**	**157**		Pb	13 28 55.6	+0.3
NTYM	**Taylor**	**0.78**	**316**		Pb	13 28 56.1	-0.3
MCCM	**Marconi Confer**	**0.78**	**294**		Pg	13 28 55.8	+0.3
MCCM					Sg	13 29 06.6	-0.6
FARB	**Farallon Islan**	**0.82**	**261**		Pg	13 28 56.7	+0.4
HLPM	**Lions Peak**	**0.83**	**160**		Pb	13 28 57.2	0.0
NPRM	**Point Reyes**	**0.84**	**282**		Pg	13 28 57.0	+0.4
GHS	**Gilroy Hot Spr**	**0.84**	**150**		Pb	13 28 57.3	-0.2
NBPM	**Berryessa Peak**	**0.86**	**349**		Pb	13 28 57.6	-0.1
CDC	**Canada Road**	**0.89**	**154**		Pb	13 28 58.6	+0.3
JELB	**Ellicott, Sant**	**0.91**	**172**		Pn	13 28 59.2	-0.4
HCBM	**Chamberlain**	**0.93**	**164**		Pb	13 28 59.0	0.0
NDHM	**Dunnigan Hills**	**0.94**	**3**		Pb	13 28 59.5	+0.3
HPCM	**Pacheco Lake**	**0.95**	**144**		Pb	13 28 59.0	-0.3
HFEM	**San Felipe**	**0.96**	**151**		Pg	13 28 58.9	0.0
HCOM	**Corn Cob Canyo**	**0.96**	**167**		Pg	13 28 59.2	+0.2
SLD	**San Luis Dam**	**0.96**	**141**		Pb	13 28 59.4	-0.1
SCKWR	**San Luis Creek**	**0.97**	**131**		Pn	13 29 00.9	+0.4
NHSM	**Mount Saint He**	**0.97**	**329**		Pg	13 28 59.0	-0.1
PACP	**Pacheco Peak**	**0.98**	**146**		Pb	13 28 59.7	-0.2
ANZ	**Anzar Road**	**0.99**	**162**		Pg	13 28 59.5	0.0
HBTM	**San Juan Bauti**	**1.03**	**161**		Pn	13 29 01.5	+0.1
HTUM	**Tustin Road**	**1.03**	**165**		Pg	13 28 59.8	-0.5
NMTM	**Middletown**	**1.04**	**340**		Pg	13 29 00.5	-0.1
HERM	**Elkhorn Road**	**1.05**	**168**		Pn	13 29 01.5	-0.1
GCRM	**Castle Rock Sp**	**1.11**	**329**		Pg	13 29 00.9	-0.9
FRP	**Fremont Peak**	**1.14**	**160**		Pg	13 29 01.4	-0.9
SAO	**San Andreas Ge**	**1.14**	**158**	Pg	Pg	13 29 01.7	-0.7
SAO				Sg	Sg	13 29 17.2	0.0
GDXM	**Geysers**	**1.17**	**327**		Pb	13 29 03.2	0.0
GDXM	**Geysers**	**1.17**	**327**	IAML		13 29 26.0	
	comp=E,269nm,0.6s						
GSGM	**Seigler Mounta**	**1.19**	**331**		Pg	13 29 01.1	-2.2
BSRM	**Salinas Radio**	**1.21**	**162**		Pg	13 29 02.3	-1.5
HMOM	**Monterey**	**1.22**	**178**		Pb	13 29 03.3	-0.7
GHCM	**House Creek**	**1.24**	**309**		Pb	13 29 02.8	-1.5
GRTM	**Round Top Moun**	**1.24**	**334**		Pb	13 29 03.3	-0.9
CMB	**Columbia Colle**	**1.28**	**80**		Pn	13 29 03.7	-1.1
BPCNC	**Pine Canyon**	**1.28**	**167**		Pn	13 29 04.1	-0.8
SCZ	**Santa Cruz**	**1.31**	**159**		Pn	13 29 03.8	-1.4
MYLM	**Yosemite Lake**	**1.31**	**109**		Pn	13 29 04.0	-1.2
BJCM	**Johnson Can.**	**1.36**	**160**		Pn	13 29 05.0	-1.0
AFDM	**Forest Hills D**	**1.37**	**35**	Pg	Pn	13 29 04.4	-1.8
AFDM				IAML		13 29 35.8	
	comp=E,201nm,0.7s						
BVL	**Bear Valley**	**1.40**	**153**		Pn	13 29 05.6	-0.9
BPRM	**Ponciano Ridge**	**1.43**	**172**		Pn	13 29 06.0	-0.9
HOPS	**Hopland Field**	**1.45**	**324**		Pn	13 29 06.3	-0.9
HOPS				IAML		13 29 47.6	
	comp=N,215nm,1.4s						
HOPS				IAML		13 29 48.3	
	comp=E,224nm,1.4s						
BBGB	**Big Mountain B**	**1.45**	**149**		Pb	13 29 08.2	+0.2
GHLM	**Highland Sprin**	**1.46**	**326**		Pn	13 29 05.6	-1.9
HAST	**Hastings Reser**	**1.48**	**166**		Pn	13 29 06.7	-0.9
BPIM	**Pinnacles**	**1.48**	**154**		Pn	13 29 06.2	-1.5
BSGM	**Shirttail Gulc**	**1.52**	**157**		Pn	13 29 07.3	-0.9
MBUM	**Mount Bullion**	**1.53**	**99**		Pn	13 29 07.6	-0.8
OHCM	**Honcut**	**1.56**	**14**		Pn	13 29 06.6	-2.0
OWYM	**Wyandotte**	**1.67**	**13**		Pn	13 29 08.4	-1.8
ORV	**Oroville**	**1.77**	**12**		Pn	13 29 11.5	0.0
PCCM	**Crazy Canyon**	**1.85**	**159**		Pn	13 29 12.3	-0.4
PMPB	**Monarch Peak**	**1.86**	**149**		Pn	13 29 12.3	-0.6
EMB	**Emerald Bay**	**1.87**	**52**		Pn	13 29 14.0	+0.8
EMB	**Emerald Bay**	**1.87**	**52**	IAML		13 29 48.5	
	comp=N,324nm,1.2s						
RUBR	**Rubicon Trail**	**1.88**	**49**		Pb	13 29 14.4	-1.0
MPK	**Martis Peak**	**2.12**	**46**		Pn	13 29 17.4	+0.7
KCPM	**Cahto Peak**	**2.24**	**326**		Pn	13 29 18.2	0.0
KCPM				IAML		13 30 31.9	
	comp=E,115nm,1.6s						
PNTR	**Pine Nut**	**2.25**	**55**		Pn	13 29 19.5	+1.1
PNTR				IAML		13 29 59.6	
	comp=N,217nm,1.1s						
PNTR				IAML		13 30 04.3	
	comp=E,200nm,0.8s						
MDPB	**Devils Postpil**	**2.31**	**94**		Pn	13 29 20.5	+1.3
MDPB				IAML		13 29 59.6	
	comp=E,144nm,0.7s						
MDPB				IAML		13 29 59.8	
	comp=N,144nm,0.7s						
MINS	**Minaret Summit**	**2.32**	**93**		Pn	13 29 20.6	+1.2
MDCM	**Deadman Creek**	**2.33**	**92**		Pn	13 29 20.9	+1.4
PEAR	**Peavine Mounta**	**2.38**	**41**		Pn	13 29 21.8	+1.7
YERR	**Yerington**	**2.44**	**61**		Pn	13 29 21.7	+0.7
MGNR	**McGee Canyon**	**2.60**	**89**		Pb	13 29 26.1	-1.5
KMRM	**Mail Ridge**	**2.75**	**331**	Pn	Pn	13 29 24.8	-0.3
KMRM				IAML		13 30 34.5	
	comp=N,72nm,2.2s						
KMRM				IAML		13 30 45.8	
	comp=E,80nm,2.4s						
PAHR	**Pah Rah Range**	**2.76**	**46**		Pn	13 29 26.1	+0.8
PAHR				IAML		13 30 20.1	
	comp=N,53nm,1.1s						
RYN	**Ryan**	**2.84**	**73**		Pn	13 29 26.3	-0.1
RYN				IAML		13 30 18.0	
	comp=N,44nm,1.2s						
RYN				IAML		13 30 29.5	
	comp=E,48nm,0.7s						
NVAR	**Mina Array Bea**	**2.96**	**77**		Pn	13 29 27.6	-0.6
KVN	**Kaiserville**	**3.28**	**67**		Pn	13 29 32.6	0.0
KVN				IAML		13 30 28.4	
	comp=E,33nm,1.3s						
KVN				IAML		13 30 40.0	
	comp=N,48nm,1.0s						
ISA	**Isabella, Lake**	**3.55**	**126**		Pn	13 29 37.2	+1.1
ISA				IAML		13 30 46.8	
	comp=N,26nm,1.1s						
ISA				IAML		13 30 46.8	
	comp=E,34nm,0.9s						
GRAC	**Grapevine Rang**	**3.77**	**101**		Pn	13 29 39.5	+0.4
BMN	**Battle Mountai**	**4.52**	**53**		Pn	13 29 48.6	-1.0

JMA ***23*** *13:41:06.9±0.3,25°N±3°×122°9E±0°.8, h134km±2km, MV2.8/18, NW OFF ISHIGAKIJIMA IS*

TAP ***23*** *13:41:06.7,24°.83N×122°.94E, h128km, ML3.3, D*

ISC 23 13:41:07.4±1.5, 24°.75N±0°.05×122°.92E±0°.03, h128km±8km, n86, σ0°90/155, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.30**	**165**	*i* P	**Pn**	**13 41 25.7**	**+0.3**
	baz=166						
YOJ				*i* S	**Sn**	**13 41 38.6**	**-0.2**
	baz=166						
YOJ	**Yonaguni jima**	**0.30**	**165**	P	**Pn**	**13 41 25.6**	**+0.3**
JYNG	**Yonagunijimaku**	**0.30**	**176**	P	**Pn**	**13 41 25.6**	**+0.3**
JYNG				*e*S	**Sn**	**13 41 40.1**	**+1.3**
EOS2	**EOS2**	**0.71**	**242**	*i* P	**Pn**	**13 41 27.5**	**0.0**
	baz=247						
EOS2				*i* S	**Sn**	**13 41 43.7**	**+1.0**
	baz=247						
EOS3	**EOS3**	**0.72**	**230**	*i* P	**Pn**	**13 41 27.8**	**+0.3**
	baz=236						
EOS3				*i* S	**Sn**	**13 41 44.0**	**+1.2**
	baz=236						
EOS4	**EOS4**	**0.84**	**221**	*i* P	**Pn**	**13 41 28.5**	**+0.2**
	baz=218						
EOS4				*i* S	**Sn**	**13 41 44.7**	**+0.7**
	baz=218						
IRIF	**Iriomote-Funau**	**0.84**	**119**	P	**Pn**	**13 41 29.0**	**+0.2**
IRIF				*e*S	**Sn**	**13 41 44.9**	**+0.1**
TWC	**Suao**	**0.99**	**262**	P	**Pn**	**13 41 29.5**	**-0.5**
	baz=258						
TWC				S	**Sn**	**13 41 46.3**	**-0.8**
	baz=258						
SXI1	**Grass Mountain**	**1.01**	**290**	P	**Pn**	**13 41 29.6**	**-0.7**
	baz=279						
SXI1				S	**Sn**	**13 41 49.0**	**+1.4**
	baz=279						
TIPB	**Shuangxi**	**1.02**	**283**	*e*P	**Pn**	**13 41 30.0**	**-0.3**
	baz=272						
TIPB				*e*S	**Sn**	**13 41 47.1**	**-0.6**
	baz=272						
HATJ	**Hateruma jima**	**1.06**	**131**	P	**Pn**	**13 41 31.6**	**+0.9**
EWUT	**Wuta**	**1.09**	**254**	P	**Pn**	**13 41 30.9**	**-0.1**
	baz=250						
EWUT				S	**Sn**	**13 41 48.5**	**-0.3**
	baz=250						
NDS	**Dongshan**	**1.10**	**264**	P	**Pn**	**13 41 31.0**	**-0.2**
	baz=255						
NDS				S	**Sn**	**13 41 49.5**	**+0.4**
	baz=255						
JKRS	**Kuro-shima**	**1.11**	**117**	P	**Pn**	**13 41 32.0**	**+0.8**
JKRS				S	**Sn**	**13 41 49.8**	**+0.5**
ENA	**Nanau**	**1.12**	**254**	*i* P	**Pn**	**13 41 31.2**	**-0.1**
	baz=250						
ENA				*i* S	**Sn**	**13 41 49.4**	**0.0**
	baz=250						
TWE	**Neicheng**	**1.14**	**269**	*i* P	**Pn**	**13 41 31.5**	**0.0**
	baz=265						
TWE				*i* S	**Sn**	**13 41 49.6**	**-0.2**
	baz=265						
JIJ	**Ishigaki jima**	**1.18**	**109**	P	**Pn**	**13 41 32.0**	**+0.2**
JIJ				S	**Sn**	**13 41 49.7**	**-0.7**
FUSB	**Fushanzhiwuyua**	**1.21**	**271**	*i* P	**Pn**	**13 41 32.0**	**-0.4**
	baz=261						
FUSB				*i* S	**Sn**	**13 41 50.1**	**-1.1**
	baz=261						
ENTT	**Nioudou**	**1.24**	**265**	*i* P	**Pn**	**13 41 32.7**	**+0.2**
	baz=258						
ENTT				*i* S	**Sn**	**13 41 51.7**	**+0.1**
	baz=258						
JISG	**Ishigakijimahi**	**1.27**	**97**	P	**Pn**	**13 41 32.8**	**0.0**
JISG				*e*S	**Sn**	**13 41 51.7**	**-0.5**
LATG	**Datong**	**1.29**	**261**	*i* P	**Pn**	**13 41 32.9**	**-0.3**
	baz=253						
LATG				*i* S	**Sn**	**13 41 52.9**	**+0.2**
	baz=253						
YM01	**YM01**	**1.29**	**288**	*e*P	**Pn**	**13 41 33.1**	**0.0**
	baz=285						
YM01				*e*S	**Sn**	**13 41 52.5**	**-0.2**
	baz=285						
NDT	**Datong Townshi**	**1.29**	**264**	*i* P	**Pn**	**13 41 33.7**	**+0.6**
	baz=257						
NDT				*i* S	**Sn**	**13 41 52.7**	**+0.1**
	baz=257						
NWLT	**Wulai**	**1.29**	**271**	*i* P	**Pn**	**13 41 32.5**	**-0.6**
	baz=263						
NWLT				*i* S	**Sn**	**13 41 51.1**	**-1.6**
	baz=263						
ETL	**Fush Village**	**1.32**	**244**	S	**Sn**	**13 41 53.6**	**+0.3**
	baz=241						
NACB	**Ninganchiao**	**1.34**	**245**	P	**Pn**	**13 41 32.8**	**-0.8**
	baz=242						
NACB				S	**Sn**	**13 41 52.5**	**-1.0**
	baz=242						
TWD	**Chiawan**	**1.38**	**241**	P	**Pn**	**13 41 33.7**	**-0.3**
	baz=234						
TWD				S	**Sn**	**13 41 53.5**	**-0.8**
	baz=234						
YHNB	**Yeheng**	**1.41**	**267**	*i* P	**Pn**	**13 41 34.5**	**0.0**
	baz=264						
YHNB				*i* S	**Sn**	**13 41 54.3**	**-0.7**
	baz=264						
ETLH	**Xiulin Townshi**	**1.42**	**248**	P	**Pn**	**13 41 34.5**	**-0.1**
	baz=245						
ETLH				S	**Sn**	**13 41 54.1**	**-1.1**
	baz=245						
NSK	**Sanguang**	**1.43**	**267**	*i* P	**Pn**	**13 41 34.7**	**+0.1**
	baz=264						
NSK				*i* S	**Sn**	**13 41 54.5**	**-0.8**
	baz=264						
NNSB	**Datong**	**1.44**	**257**	P	**Pn**	**13 41 35.0**	**+0.2**
	baz=255						
NNSB				S	**Sn**	**13 41 55.2**	**-0.4**
	baz=255						
NNS	**Nan Shan**	**1.45**	**258**	P	**Pn**	**13 41 34.8**	**-0.1**
	baz=255						
NNS				S	**Sn**	**13 41 54.9**	**-0.8**
	baz=255						
ETM	**Tongmen**	**1.52**	**239**	P	**Pn**	**13 41 34.8**	**-0.8**
	baz=233						
ETM				S	**Sn**	**13 41 56.1**	**-1.0**
	baz=233						
LXIB	**Xiulin Townshi**	**1.56**	**242**	P	**Pn**	**13 41 35.4**	**-0.8**
	baz=240						
LXIB				S	**Sn**	**13 41 56.3**	**-1.8**
	baz=240						
SHUL	**Shoufeng**	**1.57**	**233**	P	**Pn**	**13 41 35.9**	**-0.3**
	baz=229						
SHUL				S	**Sn**	**13 41 57.4**	**-0.6**
	baz=229						
JTJ	**Tarama**	**1.62**	**94**	P	**Pn**	**13 41 37.1**	**+0.3**
JTJ				S	**Sn**	**13 41 58.4**	**-0.7**
WHF	**Hehuan Shan**	**1.63**	**249**	*e*P	**Pn**	**13 41 35.7**	**-1.6**
	baz=246						
WHF				*e*S	**Sn**	**13 41 59.6**	**-0.3**
	baz=246						
NFF	**Wufeng Townshi**	**1.65**	**266**	*e*P	**Pn**	**13 41 36.6**	**-0.5**
	baz=264						
NFF				*e*S	**Sn**	**13 41 58.1**	**-1.7**
	baz=264						
ESL	**Shilin**	**1.65**	**236**	*e*P	**Pn**	**13 41 36.5**	**-0.6**
	baz=234						
ESL				*e*S	**Sn**	**13 41 57.1**	**-2.7**
	baz=234						
TWT	**Tachien**	**1.67**	**253

TWF1				S		Sn	13 42 07.4 -0.7
	baz=232						
JIRB	**Irabujima**	**2.05**	**87**	*eP*		**Pn**	13 41 41.9 **0.0**
JIRB				*eS*		**Sn**	13 42 07.3 **-0.9**
TYC	**Yuchr**	**2.06**	**246**	P		**Pn**	13 41 42.7 **+0.6**
	baz=248						
TYC				S		**Sn**	13 42 09.2 **+0.6**
	baz=248						
CHKH	**Chenggong**	**2.09**	**222**	S		**Sn**	13 42 07.2 **-1.9**
	baz=217						
JIKM	**Ikemajima**	**2.12**	**85**	*eS*		**Sn**	13 42 09.2 **-0.6**
FULB	**Fuli**	**2.15**	**224**	P		**Pn**	13 41 42.8 **-0.4**
	baz=217						
FULB				S		**Sn**	13 42 10.9 **+0.4**
	baz=217						
WHYT	**Xinyi Township**	**2.16**	**241**	S		**Sn**	13 42 11.3 **+0.4**
	baz=239						
CHKT	**Chengkung**	**2.18**	**221**	S		**Sn**	13 42 09.9 **-1.2**
	baz=214						
JMJ2	**Miyako jima3**	**2.19**	**90**	P		**Pn**	13 41 44.1 **+0.6**
JMJ2				*eS*		**Sn**	13 42 10.9 **-0.4**
WJS	**Zhushan**	**2.21**	**246**	*eS*		**Sn**	13 42 13.1 **+1.3**
	baz=244						
WNT	**Mingjian**	**2.22**	**247**	*eS*		**Sn**	13 42 13.0 **+1.0**
	baz=246						
EHD	**Haiduan**	**2.24**	**225**	*eP*		**Pn**	13 41 44.1 **-0.1**
	baz=231						
EHD				*eS*		**Sn**	13 42 10.8 **-1.7**
	baz=231						
JOGS	**Gusukube**	**2.26**	**89**	*eS*		**Sn**	13 42 12.3 **-0.6**
ALS	**Alishan**	**2.30**	**238**	*eP*		**Pn**	13 41 45.9 **+0.6**
	baz=236						
ALS				*eS*		**Sn**	13 42 15.0 **+0.8**
	baz=236						
ELDTW	**Lidau**	**2.34**	**229**	*eP*		**Pn**	13 41 45.3 **-0.3**
	baz=224						
ELDTW				*eS*		**Sn**	13 42 14.1 **-0.8**
	baz=224						
LDUT	**Ludao**	**2.46**	**213**	*eS*		**Sn**	13 42 16.3 **-1.2**
	baz=210						
WCKO	**Fanlu**	**2.49**	**239**	*eS*		**Sn**	13 42 19.9 **+1.8**
	baz=238						
STYH	**Taoyuan**	**2.52**	**232**	P		**Pn**	13 41 49.0 **+1.3**
	baz=230						
STYH				S		**Sn**	13 42 20.0 **+1.3**
	baz=230						
CHN4	**Tsaushan**	**2.55**	**237**	*eP*		**Pn**	13 41 49.0 **+0.9**
	baz=236						
CHN4				*eS*		**Sn**	13 42 20.4 **+1.0**
	baz=236						
TPUB	**Ta-pu**	**2.55**	**236**	*eP*		**Pn**	13 41 50.0 **+1.9**
	baz=235						
TPUB				*eS*		**Sn**	13 42 20.7 **+1.2**
	baz=235						
TWGBT	**Beinan**	**2.56**	**222**	*eP*		**Pn**	13 41 49.8 **+1.4**
	baz=220						
TWGBT				*eS*		**Sn**	13 42 19.5 **-0.3**
	baz=220						
TWG	**Pinlang**	**2.56**	**222**	*eP*		**Pn**	13 41 50.0 **+1.6**
	baz=220						
TWG				*eS*		**Sn**	13 42 19.7 **-0.1**
	baz=220						
WTP	**Ta-pu**	**2.59**	**235**	*eP*		**Pn**	13 41 49.2 **+0.5**
	baz=234						
WTP				*eS*		**Sn**	13 42 20.1 **-0.4**
	baz=234						
CHN1	**Nanshi**	**2.69**	**235**	*eS*		**Sn**	13 42 23.4 **+0.7**
	baz=234						
SNST	**Tainan City**	**2.69**	**236**	*eP*		**Pn**	13 41 51.0 **+1.0**
	baz=235						
SNST				*eS*		**Sn**	13 42 22.3 **-0.5**
	baz=235						
SLGT	**Liugui**	**2.72**	**230**	*eP*		**Pn**	13 41 51.3 **+0.9**
	baz=238						
SLGT				*eS*		**Sn**	13 42 25.7 **+2.3**
	baz=238						
TSMG	**Majia**	**2.92**	**226**	*eS*		**Sn**	13 42 29.5 **+1.5**
	baz=225						
LAY	**Lan-yu**	**2.98**	**205**	*eS*		**Sn**	13 42 27.5 **-2.0**
	baz=198						
MASBT	**Mashibuluo**	**2.99**	**225**	*eP*		**Pn**	13 41 54.8 **+0.9**
	baz=235						
MASBT				*eS*		**Sn**	13 42 31.0 **+1.3**
	baz=235						
LYUB	**Lan-yu**	**3.00**	**204**	*eP*		**Pn**	13 41 53.2 **-0.8**
	baz=203						
LYUB				*eS*		**Sn**	13 42 27.3 **-2.6**
	baz=203						

IDC 23 13:50:21.2±4.9, 0°53'N×130°15'E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=374.6km s-min=30.7km az=70.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.76**	**169**	P	P	13 55 02.3	-1.5
	0.3nm,0.6s,baz=349,slow=11,SNR=1.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**24.33**	**172**	P	P	13 55 42.0	+1.1
	0.4nm,0.6s,baz=351,slow=9.3,SNR=2.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**62.12**	**325**	P	P	14 00 44.0	-0.1
	0.2nm,0.7s,baz=123,slow=5.3,SNR=1.7						
	0.2nm,0.7s						

IDC 23 14:09:15.2±52.0, 15°87'S×173°30'W, h0km, mb4.4/3, mbtmp4.4/3, Error ellipse: s-maj=999.8km s-min=176.8km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.88**	**240**	P	P	14 17 24.3	+0.6
	3.2nm,0.8s,baz=94,slow=12,SNR=5.4						
	3.2nm,0.8s						
WRA	**Warramunga Arr**	**49.83**	**257**	P	P	14 18 09.9	-0.5
	0.9nm,0.5s,baz=96,slow=7.1,SNR=18						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**50.05**	**252**	P	P	14 18 11.8	-0.3
	11nm,0.6s,baz=90,slow=7.9,SNR=286						
	11nm,0.6s						

MEX 23 14:17:04.3±1.0, 15°.68N×94°.75W, h16km±18km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NILT	**Santiago Nilte**	**0.89**	**8**	*i* P	Pb	14 17 18.8	-2.5
NILT				*i* S	Sb	14 17 30.2	-2.8
CARR	**Arriaga**	**0.98**	**55**	*i* P	Pb	14 17 19.8	-3.1
CARR				*i* S	Sb	14 17 31.0	-4.6
HUIG	**Huatulco**	**1.31**	**274**	*i* P	Pn	14 17 24.4	-3.6
HUIG				*i* S	Sn	14 17 39.3	-5.9
CMIG	**Matias Romero**	**1.41**	**355**	*eP*	Pn	14 17 26.4	-2.9
CMIG				*eS*	Sn	14 17 43.3	-4.3
PCIG		**1.47**	**89**	*eP*	Pn	14 17 26.9	-3.2
PCIG				*eS*	Sn	14 17 43.8	-5.2
NEUV	**Arroyo Zacate**	**2.26**	**334**	*eP*	Pn	14 17 39.4	-1.6

MEX 23 14:17:39.9±0.4, 16°.28N×98°.04W, h7km±3km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.14**	**325**	*i* P	Pg	14 17 42.5	-0.4
PNIG				*i* S	Sg	14 17 44.8	-0.2
YOIG	**Yosondua**	**0.75**	**39**	*i* P	Sg	14 17 53.0	-1.4
YOIG				*i* S	Sg	14 18 03.0	-1.2
YOIG	**Yosondua**	**0.75**	**39**	*i* P	Pg	14 17 53.1	-1.3
YOIG				*i* S	Sg	14 18 03.0	-1.2
TXIG	**Tlaxiaco**	**1.01**	**15**	*i* P	Pg	14 17 57.2	-2.1
TXIG				*i* S	Sg	14 18 10.1	-2.4
TXIG	**Tlaxiaco**	**1.01**	**15**	*eP*	Pg	14 17 57.1	-2.2
TXIG				*eS*	Sg	14 18 10.1	-2.3
CRIG	**Cruz Grande**	**1.14**	**294**	*eP*	Pg	14 17 58.3	-3.5
CRIG				*eS*	Sg	14 18 12.7	-3.9

*NEIC **23** 14:19:52.1±1.1, 55°.8N±0°.1×149°.3W±0°.1, h7km±8km, ML3.5/28, ML3.2(AEIC), Error ellipse: s-maj=16.7km s-min=8.6km az=159.0*
*AEIC **23** 14:19:56.0±1.2, 55°.75N±0°.08×149°.3W±0°.1, h4km±8km, Error ellipse: s-maj=14.5km s-min=7.5km az=136.0*

ISC 23 14:19:54.5±2.3, 55°.9N±0°.1×149°.39W±0°.06, h10km, n86, σ1§02/87, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.53**	**303**		**Pn**	14 20 34.6	**-0.9**
OHAK					**Sn**	14 21 05.0	**-1.4**
OHAK	**Old Harbor**	**2.53**	**303**	P	**Pn**	14 20 34.6	**-0.9**
	baz=122						
OHAK				S	**Sn**	14 21 05.0	**-1.4**
	baz=122						
KDAK	**Kodiak Island**	**2.57**	**318**		**Pn**	14 20 35.8	**-0.3**
KDAK					**Sn**	14 21 06.4	**-1.0**
Q20K	**Shuyak Island**	**3.16**	**330**	P	**Pn**	14 20 44.2	**-0.1**
	baz=148						
Q20K				S	**Sn**	14 21 22.2	**+0.3**
	baz=148						
SYI	**Shuyak Island**	**3.16**	**330**		**Pn**	14 20 44.2	**-0.1**
SYI					**Sn**	14 21 22.2	**+0.3**
CNPM	**China Poot**	**3.76**	**345**		**Pn**	14 20 52.1	**-0.4**
CNPM					**Sn**	14 21 36.2	**-0.5**
CNPM	**China Poot**	**3.76**	**345**	IAML		14 22 11.6	
	comp=N,54nm,2.7s						
CNPM				IAML		14 22 14.1	
	comp=E,53nm,2.6s						
Q19K	**Cape Douglas,**	**3.80**	**324**		**Pn**	14 20 53.0	**-0.1**
Q19K	**Cape Douglas,**	**3.80**	**324**	P	**Pn**	14 20 53.1	**-0.1**
	baz=142						
Q23K	**Middleton Isla**	**3.88**	**24**	Pn	**Pn**	14 20 54.7	**+0.5**
MID	**Middleton Isla**	**3.89**	**24**	Pn	**Pn**	14 20 53.2	**-1.0**
BRSE	**Bradley Lake S**	**3.91**	**350**		**Pn**	14 20 53.8	**-0.8**
BRSE					**Sn**	14 21 38.9	**-1.6**
BRSE	**Bradley Lake S**	**3.91**	**350**	P	**Pn**	14 20 53.8	**-0.8**
	baz=168						
BRSE				S	**Sn**	14 21 38.9	**-1.6**
	baz=168						
BRLK	**Bradley Lake**	**3.94**	**349**		**Pn**	14 20 54.2	**-0.9**
BRLK	**Bradley Lake**	**3.94**	**349**	IAML		14 23 25.5	
	comp=E,39nm,2.9s						
ANCK	**Angle Creek**	**4.05**	**307**		**Pn**	14 20 57.4	**+0.9**
SEW	**Seward**	**4.20**	**360**		**Pn**	14 20 58.4	**-0.2**
SEW	**Seward**	**4.20**	**360**	P	**Pn**	14 20 58.4	**-0.2**
	baz=179						
P23K	**Montague Islan**	**4.23**	**14**		**Pn**	14 20 58.0	**-1.0**
P23K	**Montague Islan**	**4.23**	**14**	P	**Pn**	14 20 58.0	**-1.0**
	baz=194						
CNTC	**Contact Creek**	**4.26**	**306**		**Pn**	14 20 59.4	**-0.1**
Q17K	**Contact Creek**	**4.26**	**306**	P	**Pn**	14 20 59.4	**-0.1**
	baz=122						
P19K	**Oil Pt**	**4.28**	**333**		**Pn**	14 20 59.6	**-0.1**
P19K	**Oil Pt**	**4.28**	**333**	IAML		14 22 14.4	
	comp=E,68nm,2.8s						
P19K				IAML		14 23 41.2	
	comp=N,76nm,2.6s						
P19K	**Oil Pt**	**4.28**	**333**	P	**Pn**	14 20 59.6	**-0.1**
	baz=150						
SLKM	**Skilak Lake**	**4.63**	**355**		**Pn**	14 21 03.4	**-1.1**
P18K	**Big Mountain,**	**4.69**	**320**		**Pn**	14 21 04.9	**-0.5**
P18K	**Big Mountain,**	**4.69**	**320**	IAML		14 22 12.5	
	comp=N,25nm,2.9s						
P18K				IAML		14 22 50.4	
	comp=E,30nm,3.2s						
P18K	**Big Mountain,**	**4.69**	**320**	P	**Pn**	14 21 04.9	**-0.5**
	baz=136						
RSO	**Redoubt South**	**4.90**	**340**	Pn	**Pn**	14 21 08.0	**-0.3**
P17K	**Kvichak River**	**5.03**	**314**		**Pn**	14 21 10.1	**+0.2**
P17K	**Kvichak River**	**5.03**	**314**	P	**Pn**	14 21 10.1	**+0.2**
	baz=129						
O18K	**Koktuh Hills**	**5.03**	**324**		**Pn**	14 21 09.4	**-0.5**
O18K	**Koktuh Hills**	**5.03**	**324**	IAML		14 24 20.5	
	comp=N,32nm,3.4s						
O18K				IAML		14 24 23.5	
	comp=E,34nm,3.3s						
O18K	**Koktuh Hills**	**5.03**	**324**	P	**Pn**	14 21 09.4	**-0.5**
	baz=140						
CHGN	**Chignik**	**5.07**	**278**	Pn	**Pn**	14 21 09.2	**-1.2**
CHGN				IAML		14 22 02.4	
	comp=E,38nm,3.5s						
CHGN				IAML		14 23 60.0	
	comp=N,32nm,3.1s						
FID	**Port Fidalgo**	**5.09**	**16**		**Pn**	14 21 10.1	**-0.6**
FID	**Port Fidalgo**	**5.09**	**16**	IAML		14 22 57.1	
	comp=E,40nm,2.9s						
GLI	**Glacier Island**	**5.12**	**13**		**Pn**	14 21 10.5	**-0.8**
GLI	**Glacier Island**	**5.12**	**13**	IAML		14 21 53.8	
	comp=E,40nm,2.9s						
GLI				IAML		14 23 08.2	
	comp=N,34nm,3.4s						
GLI	**Glacier Island**	**5.12**	**13**	P	**Pn**	14 21 10.5	**-0.8**
	baz=193						
BERG	**Berg Lake**	**5.41**	**31**	Pn	**Pn**	14 21 13.4	**-1.7**
P16K	**Nushagak River**	**5.60**	**308**		**Pn**	14 21 18.2	**+0.5**
P16K	**Nushagak River**	**5.60**	**308**	P	**Pn**	14 21 18.2	**+0.5**
	baz=121						
N19K	**Bonanza Creek**	**5.60**	**333**		**Pn**	14 21 17.0	**-0.9**
N19K	**Bonanza Creek**	**5.60**	**333**	P	**Pn**	14 21 17.0	**-0.9**
	baz=149						
BMRM	**Bremner River**	**5.66**	**24**		**Pn**	14 21 17.8	**-0.8**
BMRM	**Bremner River**	**5.66**	**24**	P	**Pn**	14 21 17.8	**-0.8**
	baz=207						
WAX	**Waxell Ridge**	**5.71**	**35**		**Pb**	14 21 37.2	**+3.0**
CRQM	**Cirque**	**5.87**	**32**	Pn	**Pn**	14 21 19.9	**-1.7**
KLU	**Klutina**	**5.88**	**16**		**Pn**	14 21 20.8	**-0.9**
KLU	**Klutina**	**5.88**	**16**	P	**Pn**	14 21 20.8	**-0.9**
	baz=198						
N18K	**Kilae Creek**	**5.88**	**327**		**Pn**	14 21 21.1	**-0.6**
N18K	**Kilae Creek**	**5.88**	**327**	P	**Pn**	14 21 21.1	**-0.6**
	baz=142						
GHO	**Glory Hole Cre**	**5.88**	**2**	Pn	**Pn**	14 21 20.3	**-1.4**
SML	**Sawmill**	**5.94**	**5**	Pn	**Pn**	14 21 21.7	**-0.7**
O16K	**Kokwok River B**	**5.94**	**312**		**Pn**	14 21 22.8	**+0.3**
O16K	**Kokwok River B**	**5.94**	**312**	P	**Pn**	14 21 22.8	**+0.3**
	baz=125						
TGL	**Tana Glacier**	**5.96**	**33**		**Pn**	14 21 21.6	**-1.2**
BAGL	**Bagley Icefiel**	**5.99**	**37**		**Pn**	14 21 22.0	**-1.1**
ISLE	**Juniper Island**	**5.99**	**35**		**Pn**	14 21 22.2	**-1.1**
SVW2	**Sparrevohn**	**6.13**	**331**	Pn	**Pn**	14 21 23.6	**-1.5**
N17K	**Nushagak Hills**	**6.19**	**322**	Pn	**Pn**	14 21 26.2	**+0.3**
SAMH	**Samovar Hills**	**6.22**	**44**		**Pn**	14 21 25.6	**-0.9**
KIAG	**Kiagna River**	**6.23**	**33**		**Pn**	14 21 25.2	**-1.4**
GRNC	**Granite Creek**	**6.28**	**37**		**Pn**	14 21 26.1	**-1.3**
TABL	**Table Mountain**	**6.29**	**40**		**Pn**	14 21 26.3	**-1.1**
MCARA	**McCarthy VSAT**	**6.41**	**29**	Pn	**Pn**	14 21 27.7	**-1.2**
PCA	**Pinnacle**	**6.41**	**45**		**Pn**	14 21 27.9	**-1.1**
PINM	**Pinnacle**	**6.41**	**45**	P	**Pn**	14 21 27.9	**-1.2**
	baz=232						
O15K	**Ungalikthiuk R**	**6.50**	**305**		**Pn**	14 21 30.5	**+0.4**
O15K	**Ungalikthiuk R**	**6.50**	**305**	P	**Pn**	14 21 30.5	**+0.4**
	baz=117						
M18K	**Stony River**	**6.52**	**332**		**Pn**	14 21 29.5	**-0.9**
M18K	**Stony River**	**6.52**	**332**	P	**Pn**	14 21 29.5	**-0.9**
	baz=146						
BARN	**Barnard Glacie**	**6.56**	**35**		**Pn**	14 21 30.0	**-1.1**
CTGM	**Chitina Glacie**	**6.59**	**37**	Pn	**Pn**	14 21 30.1	**-1.4**
LOGN	**Logan Glacier**	**6.61**	**38**	Pn	**Pn**	14 21 29.5	**-2.3**
M17K	**Holitna River**	**6.92**	**326**	Pn	**Pn**	14 21 35.5	**-0.4**
M16K	**Timber Creek**	**7.17**	**320**	Pn	**Pn**	14 21 38.7	**-0.6**
O29M	**Mount Kennedy**	**7.22**	**48**	Pn	**Pn**	14 21 39.1	**-1.0**
P29M	**Windy Craggy**	**7.26**	**54**	Pn	**Pn**	14 21 38.8	**-1.8**
L18K	**Granite Mounta**	**7.36**	**332**		**Pn**	14 21 39.9	**-1.9**
M27K	**Edge Creek, AK**	**7.53**	**28**	Pn	**Pn**	14 21 45.4	**+0.2**
L16K	**Owhat River**	**7.82**	**322**	Pn	**Pn**	14 21 47.6	**-0.6**
K17K	**Iditarod**	**8.20**	**330**	Pn	**Pn**	14 21 51.3	**-2.1**
M29M	**Somme Creek**	**8.61**	**36**		**Pn**	14 21 58.7	**-0.5**

*FUNV **23** 14:20:41.5, 10°.47N×72°.10W, h15km, MW3.2*
*RSNC **23** 14:20:42.3±0.8, 10°.65N×72°.22W, h21km±4km, ML2.1*

ISC 23 14:20:40.3±1.3, 10°.52N±0°.04×72°.16W±0°.04, h30km±16km, n10, σ1§15/20, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.60**	**218**	*eP*	**Pn**	14 20 52.5	**-0.2**
MCQV				*eS*	**Sn**	14 21 01.1	**-0.4**
CRJC	**Cerrejon, Guaj**	**0.87**	**305**	*eP*	**Pb**	14 20 56.2	**-0.6**
CRJC				*eS*	**Sb**	14 21 08.4	**+0.2**
CRJC				*i*		14 21 09.4	
	comp=Z,61nm,0.4s						
URIC	**Uribia, Colomb**	**1.18**	**8**	*eP*	**Pn**	14 21 00.8	**-0.1**
URIC				*eS*	**Sn**	14 21 15.6	**-0.4**
URIC				*i*		14 21 17.4	
	comp=Z,35nm,0.2s						
LL6C	**La Loma 6 Bece**	**1.34**	**235**	*eP*	**Pb**	14 21 04.9	**0.0**
LL6C				*eS*	**Sb**	14 21 23.2	**+1.5**
SDV	**Santo Domingo**	**2.21**	**137**	*eP*	**Pn**	14 21 15.6	**+0.3**
SDV				*eS*	**Sb**	14 21 45.1	**-1.8**
CURV	**Curarigua**	**2.22**	**103**	*eP*	**Pn**	14 21 16.5	**+1.3**
CURV				*eS*	**Sn**	14 21 41.9	**+0.2**
SIQV	**Siquisique**	**2.31**	**87**	*eP*	**Pn**	14 21 18.2	**+1.7**
SIQV				*eS*	**Sn**	14 21 44.5	**+0.5**
SOCV	**Socops**	**2.57**	**150**	*eP*	**Pn**	14 21 20.9	**+0.9**
SOCV				*eS*	**Sn**	14 21 50.2	**0.0**
SANV	**Sanarito**	**2.78**	**111**	*eP*	**Pn**	14 21 24.0	**+1.1**
SANV				*eS*	**Sn**	14 21 55.0	**-0.5**
BAUV	**El Baul**	**4.35**	**111**	*eP*	**Pn**	14 21 45.0	**+0.5**
BAUV				*eS*	**Sn**	14 22 31.5	**-2.7**

*IDC **23** 14:30:39.7±4.8, 15°.65S×176°.18W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=215.8km s-min=33.9km az=137.0*
*NEIC **23** 14:31:12.0±1.0, 16°.1S±0°.3×176°.1W±0°.2, h305km±19km, mb4.1/16, Error ellipse: s-maj=39.9km s-min=25.4km az=180.0*

ISC 23 14:31:11.4±0.8, 16°.2S±0°.2×176°.1W±0°.1, h300km, n22, σ0§63/22, mb4.0/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.77**	**63**	Pn	**Pn**	14 32 25.7	**-0.8**
WHZ	**Wether Hill Ro**	**32.50**	**201**	P	**P**	14 37 14.8	**+0.3**
CAN	**Canberra**	**36.48**	**232**	P	**P**	14 37 47.6	**-1.2**
COEN	**Coen**	**39.31**	**268**	P	**P**	14 38 12.6	**+0.2**
COEN				IAmb	IAmb	14 38 50.7	
	comp=Z,18nm,1.4s						
TOO	**Toolangi**	**39.95**	**230**	P	**P**	14 38 17.7	**+0.3**
TOO				IAmb	IAmb	14 38 18.9	
	comp=Z,5.4nm,0.8s						
STKA	**Stephens Creek**	**41.38**	**240**	P	**P**	14 38 29.0	**0.0**
STKA	**Stephens Creek**	**41.38**	**240**	P	**P**	14 38 29.7	**+0.6**
	comp=Z,2.0nm,0.7s,baz=78,slow=9.3,SNR=3.4						
	comp=Z,2.0nm,0.7s						
BBOO	**Buckleboo**	**46.15**	**240**	P	**P**	14 39 06.4	**-0.4**
BBOO				IAmb	IAmb	14 39 21.8	
	comp=Z,29nm,1.3s						
WB0	**Warramunga Arr**	**47.06**	**258**	P	**P**	14 39 14.3	**+0.2**
WB0				IAmb	IAmb	14 39 29.6	
	comp=Z,9.4nm,1.4s						
WB2	**Warramunga Arr**	**47.09**	**258**	P	**P**	14 39 13.8	**-0.5**
WB2				IAmb	IAmb	14 39 33.7	
	comp=Z,11nm,1.3s						
WRAB	**Tennant Creek**	**47.09**	**258**	P	**P**	14 39 14.2	**-0.1**
WRAB				IAmb	IAmb	14 39 40.9	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr**	**47.10**	**258**	P	**P**	14 39 13.9	**-0.5**
WRA	**Warramunga Arr**	**47.10**	**258**	P	**P**	14 39 14.1	**-0.2**
	comp=Z,0.5nm,0.3s,baz=89,slow=7.7,SNR=22						
	comp=Z,0.5nm,0.3s						
AS31	**Alice Springs**	**47.37**	**253**	P	**P**	14 39 16.6	**+0.2**
ASAR	**Alice Springs**	**47.37**	**253**	P	**P**	14 39 16.1	**-0.2**
ASAR	**Alice Springs**	**47.37**	**253**	P	**P**	14 39 16.8	**+0.4**
	comp=Z,4.0nm,0.4s,baz=88,slow=7.8,SNR=189						
	comp=Z,4.0nm,0.4s						
FORT	**Forrest**	**52.72**	**243**	P	**P**	14 39 55.3	**-0.8**
FORT				IAmb	IAmb	14 40 00.5	
	comp=Z,16nm,0.9s						
PSA00	**Pilbara Seismi**	**60.46**	**254**	P	**P**	14 40 50.5	**0.0**
MBWA	**Marble Bar**	**60.62**	**255**	P	**P**	14 40 51.6	**0.0**
QSPA	**South Pole Qui**	**73.89**	**180**	P	**P**	14 42 15.1	**+1.4**
QSPA				IAmb	IAmb	14 42 48.4	
	comp=Z,6.5nm,1.4s						
ILAR	**Eielson Array**	**83.72**	**12**	P	**P**	14 43 07.6	**+1.0**
	comp=Z,0.3nm,0.7s,baz=200,slow=5.6,SNR=5.5						
	comp=Z,0.3nm,0.7s						
SNAA	**Sanae**	**92.27**	**178**	P	**P**	14 43 46.9	**-0.5**

*ISK **23** 14:33:06.2, 35°.19N×31°.21E, h18km, ML3.2/22*
*AFAD **23** 14:33:08.7±0.0, 35°.52N×31°.42E, h0km±2km, ML2.8*
*NIC **23** 14:33:08.7, 35°.61N×31°.29E, h32km±25km, MI3.0/8*

ISC 23 14:33:08.9±1.3, 35°.34N±0°.03×31°.26E±0°.03, h23km±15km, n54, σ1§14/72, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.94**	**110**	P	**Pn**	14 33 26.7	**0.0**
AKMS				S	**Sn**	14 33 40.5	**+1.1**
AKMS				AML	AML	14 33 47.7	
	1.5nm,0.5s						
AKMS				AML	AML	14 33 51.6	
	1.4nm,0.4s						
ALFC	**Alefka**	**1.11**	**99**	P	**Pn**	14 33 28.5	**-0.6**
ALFC				S	**Sn**	14 33 44.0	**+0.2**
ALFC				AML	AML	14 33 47.8	
	1.2nm,0.3s						
ALFC				AML	AML	14 33 48.2	
	1.6nm,0.7s						
NATA	**Nata**	**1.21**	**117**	P	**Pb**	14 33 30.6	**-0.6**
NATA				S	**Sb**	14 33 48.7	**+2.4**
NATA				AML	AML	14 33 58.2	
	2.8nm,0.6s						
NATA				AML	AML	14 34 00.5	
	3.5nm,0.6s						
AKUM	**Antalya-Kumluc**	**1.23**	**323**	P	**Pn**	14 33 30.5	**-0.2**
AKUM				S	**Sb**	14 33 50.2	**+3.2**
AKUM				*i* AML	AML	14 33 56.0	
	comp=N,327nm,0.5s						
AKUM				*i* AML	AML	14 33 58.0	
	comp=E,181nm,0.8s						
GAZI	**Gazipasa**	**1.24**	**43**	P	**Pn**	14 33 29.4	**-1.5**
GAZI				S	**Sn**	14 33 43.8	**-3.1**
GAZI				*i* AML	AML	14 33 45.0	
	comp=E,208nm,0.6s						
GAZI				*i* AML	AML	14 33 46.0	
	comp=N,308nm,0.5s						
LEF	**Lefka**	**1.35**	**99**	Pn	**Pn**	14 33 30.8	**-1.6**
LEF				Sn	**Sn**	14 33 48.4	**-1.2**
LEF	**Lefka**	**1.35**	**99**	P	**Pb**	14 33 33.5	**0.0**
TROD	**Troodos**	**1.37**	**106**	P	**Pn**	14 33 32.7	**-0.2**
TROD				S	**Sn**	14 33 50.3	**-0.2**
TROD				AML	AML	14 34 02.4	
	0.4nm,1.1s						
TROD				AML	AML	14 34 05.0	
	0.

GULN	**MERSIN_Gulnar**	**2.04**	**65**	P	**Pn**	**14 33 42.3**	**+0.5**
GULN				S	**Sn**	**14 34 05.7**	**-0.9**
GULN				*i* AML	AML	14 34 17.0	
	comp=N,62nm,0.8s						
GULN				*i* AML	AML	14 34 18.0	
	comp=E,70nm,0.7s						
TEVE	**Tevekalti-Mers**	**2.08**	**58**	Pn	**Pn**	**14 33 42.9**	**+0.4**
SEYD	**Seydisehir-KON**	**2.11**	**13**	Pn	**Pn**	**14 33 43.9**	**+0.9**
TISA	**Tisan-Mersin**	**2.13**	**67**	Pn	**Pn**	**14 33 43.3**	**+0.2**
IKL	**Isikli**	**2.17**	**65**	Pn	**Pn**	**14 33 43.9**	**+0.3**
IKL				Sn	**Sn**	**14 34 11.4**	**+1.7**
FETY	**Fethiye**	**2.19**	**307**	Pn	**Pn**	**14 33 43.4**	**-0.6**
CAME	**Cameli-Denizli**	**2.25**	**316**	Pn	**Pn**	**14 33 44.9**	**-0.1**
KKBE	**Karaman, Kazim**	**2.31**	**35**	P	**Pn**	**14 33 47.5**	**+1.7**
KKBE	**Karaman, Kazim**	**2.31**	**35**	P	**Pn**	**14 33 47.5**	**+1.7**
KKBE				S	**Sb**	**14 34 16.9**	**-1.4**
KKBE				*i* AML	AML	14 34 25.0	
	comp=E,74nm,1.0s						
KKBE				*i* AML	AML	14 34 29.0	
	comp=N,67nm,0.6s						
SILI	**Silifke-Mersin**	**2.39**	**64**	Pn	**Pn**	**14 33 47.1**	**+0.4**
DALY	**Dalyan (Mula)**	**2.58**	**306**	Pn	**Pn**	**14 33 48.9**	**-0.4**
APMY	**Acipayam-Deniz**	**2.65**	**324**	Pn	**Pn**	**14 33 50.9**	**+0.5**
KONT	**Konya--Tatoy**	**2.75**	**18**	Pn	**Pn**	**14 33 53.1**	**+1.4**
KONT	**Konya--Tatoy**	**2.75**	**18**	P	**Pb**	**14 33 54.3**	**-3.1**
LADK	**Ladik-KONYA**	**2.99**	**17**	Pn	**Pn**	**14 33 57.0**	**+1.9**
YESY	**Yesilyurt**	**3.15**	**39**	Pn	**Pn**	**14 33 58.5**	**+1.2**
KARP	**Karpathos**	**3.35**	**275**	P	**Pn**	**14 33 59.4**	**-0.7**
KARP				S	**Sn**	**14 34 38.7**	**-0.5**
KARP	**Karpathos**	**3.35**	**275**	P	**Pn**	**14 33 59.0**	**-1.0**
CHBY	**Cihanbeyli**	**3.49**	**21**	Pn	**Pn**	**14 34 03.4**	**+1.5**
KARA	**Karaisali**	**3.61**	**57**	Pn	**Pn**	**14 34 04.9**	**+1.3**
CMRD	**Camardi-Nigde**	**3.79**	**51**	Pn	**Pn**	**14 34 07.9**	**+1.8**
HNTI	**Hanita**	**3.95**	**124**	P	**Pn**	**14 34 08.1**	**0.0**
MMA0	**Mount Meron ar**	**4.14**	**123**	P	**Pn**	**14 34 11.1**	**+0.2**
GEM	**Giv'at Ha'Em**	**4.22**	**119**	P	**Pn**	**14 34 11.4**	**-0.4**
NATI	**Neve Ativ**	**4.24**	**118**	P	**Pn**	**14 34 12.1**	**-0.1**
QRNJ	**Al-Qirein**	**4.67**	**129**	P	**Pn**	**14 34 18.7**	**+0.6**
HMDT	**Nahal Hemdat**	**4.70**	**130**	P	**Pn**	**14 34 19.5**	**+1.1**
BALJ	**Balqa**	**4.88**	**130**	P	**Pn**	**14 34 21.5**	**+0.5**
SARI	**SarD1z-Kayseri**	**5.14**	**52**	Pn	**Pn**	**14 34 26.4**	**+1.7**
MSBI	**Mazada**	**5.28**	**138**	P	**Pn**	**14 34 26.5**	**+0.1**
PRNI	**Paran**	**5.89**	**147**	P	**Pn**	**14 34 35.1**	**+0.2**
HRFI	**Mount Harif**	**6.17**	**148**	P	**Pn**	**14 34 39.8**	**+1.1**
MBRI	**Mt Berech**	**6.33**	**150**	P	**Pn**	**14 34 41.0**	**0.0**

AFAD 23 14:33:49.5±0.0, 36°35N×35°82E, *h*7km±2km, **ML2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASUZ	**Hatay-Arsuz**	**0.06**	**210**	P	Pg	14 33 51.2	+0.1
ASUZ				*i* AML	AML	14 33 53.0	
	comp=E,1μm,0.3s						
ASUZ				*i* AML	AML	14 33 53.0	
	comp=N,8μm,0.6s						
ASUZ				S	Sg	14 33 53.2	+0.8
YURE	**YUREGIR**	**0.50**	**342**	P	Pg	14 33 59.5	+0.3
YURE				S	Sb	14 34 07.4	-0.9
RHAN	**Hatay/Reyhanl**	**0.64**	**97**	P	Pg	14 34 02.0	+0.3
RHAN				*i* AML	AML	14 34 12.0	
	comp=E,500nm,0.7s						
RHAN				*i* AML	AML	14 34 12.0	
	comp=N,552nm,0.7s						
RHAN				S	Sb	14 34 12.1	+0.1
HASA	**Hatay-Hassa-Ha**	**0.67**	**53**	P	Pg	14 34 02.6	+0.2
HASA				S	Sg	14 34 11.6	+0.4
KAMA	**Osmaniye**	**1.08**	**39**	P	Pg	14 34 09.8	-0.4
KAMA				S	Sg	14 34 24.1	-0.2
AKO	**Adana**	**1.15**	**345**	P	Pg	14 34 10.6	-1.1
AKO				S	Sn	14 34 29.0	+0.8
GULE	**Gulek**	**1.26**	**318**	P	Pg	14 34 02.9	-11
ANDN	**Andirin**	**1.30**	**19**	P	Pg	14 34 15.2	+0.7
ANDN				S	Sb	14 34 30.7	-0.6
ANDN				*i* AML	AML	14 34 37.0	
	comp=N,182nm,0.6s						
ANDN				*i* AML	AML	14 34 42.0	
	comp=E,112nm,0.9s						
KAHM	**Kahramanmaras,**	**1.50**	**38**	P	Pg	14 34 18.1	-0.1
KAHM				S	Sn	14 34 34.1	-2.5
KAHM				*i* AML	AML	14 34 42.0	
	comp=N,67nm,0.4s						
KAHM				*i* AML	AML	14 34 43.0	
	comp=E,103nm,0.5s						
NZIP	**Nizip/Gaziante**	**1.64**	**64**	P	Pn	14 34 18.4	-0.5
NZIP				S	Sn	14 34 38.7	-1.6
NZIP				*i* AML	AML	14 34 46.0	
	comp=N,121nm,0.5s						
NZIP				*i* AML	AML	14 34 49.0	
	comp=E,126nm,0.9s						
GZT	**Gaziantep**	**1.72**	**54**	P	Pg	14 34 23.1	+0.5
GZT				S	Sg	14 34 45.5	+0.5
GZT				*i* AML	AML	14 34 49.0	
	comp=E,101nm,0.6s						
GZT				*i* AML	AML	14 34 50.0	
	comp=N,127nm,0.7s						
SURC	**SANLIURFA_SURC**	**2.31**	**76**	P	Pn	14 34 27.5	-0.4

IDC 23 14:39:51.2±51.0, 16°98S×178°02W, *h*0km, **mb3.8**/3, **mbtmp3.8**/3, **MS3.6**/2, **Error ellipse: s-maj=933.0km s-min=173.9km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**28.21**	**197**	LR	LR	14 54 57.3	
	comp=Z,73nm,18.7s,baz=196,slow=32						
STKA	**Stephens Creek**	**39.40**	**240**	P	P	14 47 22.5	-0.4
	0.6nm,0.4s,baz=83,slow=9.0,SNR=1.9						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**45.17**	**259**	P	P	14 48 09.9	-0.2
	0.2nm,0.3s,baz=91,slow=8.1,SNR=5.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**45.40**	**253**	P	P	14 48 12.1	+0.1
	2.2nm,0.5s,baz=87,slow=8.6,SNR=44						
	2.2nm,0.5s						
NEW	**Newport**	**84.55**	**36**	LR	LR	15 24 21.1	
	comp=Z,36nm,18.4s,baz=78,slow=32						

KRSC 23 14:45:14.6±1.3, 55°25N×166°30E, *h*37km±6km, **Ml3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.19**	**257**	*e*P	Pn	14 45 21.6	-2.5
BKI				*e*S	Sn	14 45 27.0	-6.3
SMKR	**Semkarok**	**3.03**	**298**	*e*P	Pn	14 46 02.0	+2.1
BZGR	**Bezymyannyi-Gr**	**3.25**	**285**	*e*P	Pn	14 46 08.4	+5.3
BZMR	**Bezymyannaya**	**3.37**	**284**	*e*P	Pn	14 46 09.1	+4.5
BZWR	**Bezymyannyi-We**	**3.37**	**285**	*e*P	Pn	14 46 07.9	+3.2
TUMD	**Tumrok D**	**3.38**	**272**	*e*P	Pn	14 46 08.6	+3.9
TUMD				*e*S	Sn	14 46 49.1	+5.6
KIRR	**Kirishev**	**3.45**	**284**	*e*P	Pn	14 46 08.9	+3.0
KMNR	**Kamenistaya**	**3.48**	**281**	*e*P	Pn	14 46 11.0	+4.8
KMNR				*e*S	Sn	14 46 50.3	+4.0
TUMR	**Tumrok**	**3.52**	**273**	*e*P	Pn	14 46 11.7	+4.9
KPT	**Kopyto**	**3.52**	**284**	*e*P	Pn	14 46 10.1	+3.4
SPN	**Mys Shipunski**	**4.27**	**242**	*e*S	Sn	14 47 10.5	+5.1
SMAR	**Somma**	**4.82**	**249**	*e*P	Pn	14 46 29.3	+4.6
KRER	**Koryakskii**	**4.83**	**249**	*e*P	Pn	14 46 29.8	+5.0
UGLR	**Uglovaya**	**4.84**	**248**	*e*P	Pn	14 46 29.5	+4.7
AVH	**Avacha**	**4.86**	**249**	*e*P	Pn	14 46 29.8	+4.7
KRX	**Arik**	**4.86**	**250**	*e*P	Pn	14 46 29.6	+4.4
KOK	**Koryaka**	**4.90**	**250**	*e*P	Pn	14 46 30.3	+4.7
DALK	**Dalny**	**4.96**	**247**	*e*P	Pn	14 46 31.1	+4.7
GNL	**Ganaly**	**5.12**	**256**	*e*P	Pn	14 46 34.0	+5.4
KRMR	**Karymshinskiy**	**5.39**	**247**	*e*P	Pn	14 46 36.3	+4.1
KRMR				*e*S	Sn	14 47 37.5	+4.6
RUS	**Russkaya**	**5.40**	**242**	*e*P	Pn	14 46 36.6	+4.1
MTVR	**Mutnovka**	**5.54**	**243**	*e*P	Pn	14 46 39.3	+4.8
ASAK	**Asacha**	**5.74**	**243**	*e*P	Pn	14 46 42.4	+5.2

IDC ***23*** *14:46:14.1±6.2, 15°66S×174°70W, h230km±57km, mb3.5/10, mbtmp4.1/11, Error ellipse: s-maj=25.9km s-min=17.5km az=140.0*

NEIC ***23*** *14:46:18.2±0.9, 15°7S±0°1×174°7W±0°2, h268km±11km, mb4.3/17, Error ellipse: s-maj=22.3km s-min=20.1km az=124.0*

ISC 23 14:46:16.3±0.5, **15°7S**±0°1×**174°81W**±0°10, **h250**km, **n37,**
σ0**°73**/39, **mb4.1**/19, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.41**	**60**	Pn	**Pn**	**14 47 14.9**	**+1.4**
NIUE	**Niue**	**5.77**	**127**		**Pn**	**14 47 42.3**	**+0.7**
DZM	**Mont Dzumac**	**18.84**	**247**	P	**P**	**14 50 18.8**	**+0.7**
	10nm,1.1s,baz=72,slow=20,SNR=2.4						
ARMA	**Armidale**	**34.05**	**239**	P	**P**	**14 52 37.8**	**+0.5**
CTAO	**Charters Tower**	**37.26**	**257**	P	**P**	**14 53 04.0**	**-0.6**
CTAO				IAmb	IAmb	14 53 19.5	
	comp=Z,25nm,1.4s						
CAN	**Canberra**	**37.80**	**232**	P	**P**	**14 53 10.0**	**+1.1**
COEN	**Coen**	**40.61**	**267**	P	**P**	**14 53 34.0**	**+1.7**
COEN				IAmb	IAmb	14 53 35.0	
	comp=Z,14nm,0.9s						
TOO	**Toolangi**	**41.25**	**230**	P	**P**	**14 53 37.5**	**+0.1**
TOO				IAmb	IAmb	14 53 38.4	
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**42.73**	**240**	P	**P**	**14 53 49.7**	**+0.4**
STKA	**Stephens Creek**	**42.73**	**240**	P	**P**	**14 53 49.8**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=96,slow=12,SNR=12						
	comp=Z,1.9nm,0.3s						
BBOO	**Buckleboo**	**47.51**	**240**	P	**P**	**14 54 26.5**	**-0.2**
BBOO				IAmb	IAmb	14 54 28.3	
	comp=Z,25nm,1.4s						
WB0	**Warramunga Arr**	**48.42**	**257**	P	**P**	**14 54 33.5**	**-0.4**
WB0				IAmb	IAmb	14 54 35.6	
	comp=Z,18nm,1.5s						
WB2	**Warramunga Arr**	**48.45**	**257**	P	**P**	**14 54 34.0**	**-0.1**
WRA	**Warramunga Arr**	**48.46**	**257**	P	**P**	**14 54 33.6**	**-0.6**
WRA	**Warramunga Arr**	**48.46**	**257**	P	**P**	**14 54 34.3**	**+0.1**
	comp=Z,2.1nm,0.3s,baz=93,slow=7.5,SNR=93						
WRA				PcP	**PcP**	**14 55 56.4**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=93,slow=3.6,SNR=3.9						
	comp=Z,2.1nm,0.3s						
AS31	**Alice Springs**	**48.74**	**252**	P	**P**	**14 54 36.4**	**+0.1**
AS31				IAmb	IAmb	14 54 37.2	
	comp=Z,6.5nm,0.7s						
ASAR	**Alice Springs**	**48.74**	**252**	P	**P**	**14 54 36.4**	**+0.1**
	comp=Z,18nm,0.5s,baz=89,slow=7.5,SNR=513						
ASAR				PcP	**PcP**	**14 55 57.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=98,slow=3.3,SNR=4.3						
MTN	**Manton Dam**	**52.35**	**266**	P	**P**	**14 55 03.9**	**+0.6**
FORT	**Forrest**	**54.09**	**243**	P	**P**	**14 55 14.5**	**-1.2**
PSA00	**Pilbara Seismi**	**61.83**	**254**	P	**P**	**14 56 08.8**	**-0.6**
PSA00				IAmb	IAmb	14 56 09.7	
	comp=Z,9.1nm,0.8s						
MBWA	**Marble Bar**	**61.98**	**254**	P	**P**	**14 56 09.8**	**-0.7**
MBWA				IAmb	IAmb	14 56 20.5	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	**74.39**	**180**	P	**P**	**14 57 26.1**	**-0.6**
QSPA				IAmb	IAmb	14 57 27.5	
	comp=Z,3.1nm,0.8s						
QSPA	**South Pole Qui**	**74.39**	**180**	P	**P**	**14 57 26.7**	**0.0**
	comp=Z,2.4nm,0.6s,baz=303,slow=0.3,SNR=20						
	comp=Z,2.4nm,0.6s						
NVAR	**Mina Array Bea**	**75.43**	**43**	P	**P**	**14 57 33.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=227,slow=5.9,SNR=4.8						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**81.89**	**57**	P	**P**	**14 58 08.2**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=197,slow=2.6,SNR=3.8						
	comp=Z,0.6nm,1.0s						
ILAR	**Eielson Array**	**82.97**	**12**	P	**P**	**14 58 12.2**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=220,slow=5.2,SNR=12						
	comp=Z,0.4nm,0.4s						
PD31	**Pinedale Array**	**83.37**	**42**	P	**P**	**14 58 15.1**	**-0.7**
PDAR	**Pinedale Array**	**83.37**	**42**	P	**P**	**14 58 15.1**	**-0.7**
PDAR	**Pinedale Array**	**83.37**	**42**	P	**P**	**14 58 15.3**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=221,slow=3.1,SNR=11						
	comp=Z,1.8nm,0.9s						
YKA	**Yellowknife Ar**	**90.88**	**24**	P	**P**	**14 58 50.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=247,slow=4.9,SNR=3.9						
	comp=Z,0.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**91.41**	**289**	P	**P**	**14 58 56.3**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=96,slow=2.0,SNR=8.8						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**94.13**	**318**	P	**P**	**14 59 05.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=123,slow=5.3,SNR=1.7						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**117.25**	**322**	PKP	**PKPdf**	**15 04 30.4**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=89,slow=0.7,SNR=5.2						
ARCES	**ARCESS Array B**	**124.67**	**351**	PKP	**PKPdf**	**15 04 44.9**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=40,slow=2.1,SNR=5.6						
FINES	**FINESS Array B**	**131.89**	**347**	PKP	**PKPdf**	**15 04 59.1**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=45,slow=1.1,SNR=4.5						
BRTR	**Keskin Array B**	**145.48**	**320**	PKPbc	**PKPab**	**15 05 26.1**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=90,slow=2.5,SNR=18						
MMAI	**Mount Meron Ar**	**147.66**	**308**	PKPbc	**PKPbc**	**15 05 32.6**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=55,slow=7.2,SNR=5.5						

IDC ***23*** *14:56:08.0±0.7, 4°80S×139°43E, h0km, mb4.3/11, mbtmp4.3/15, ML3.9/2, MS3.2/1, Error ellipse: s-maj=33.5km s-min=15.0km az=72.0*

DJA ***23*** *14:56:14.9±0.4, 5°S±3°×13°9E±°, h48km±6km, M4.8/8, mB5.1/2, mb4.6/8, MLv5.0/4, Mw(mB)4.5/2*

NEIC ***23*** *14:56:17.7±2.0, 4°89S±0°08×139°37E±0°09, h71km±7km, mb4.5/47, Error ellipse: s-maj=13.3km s-min=11.7km az=67.0*

ISC 23 14:56:13.4±0.4, **4°90S**±0°04×**139°42E**±0°05, **h38**km, **n114,**
σ1**°90**/119, **mb4.6**/34, **1C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.83**	**101**	P	**Pn**	**14 56 44.7**	**+2.3**
GENI	**Genyem**	**2.41**	**18**	P	**Pn**	**14 56 48.4**	**-2.0**
GENI	**Genyem**	**2.41**	**18**	P	**Pn**	**14 56 48.3**	**-2.1**
GENI				S	**Sn**	**14 57 17.1**	**-1.6**
SMPI	**Sarmi**	**2.98**	**346**	P	**Pn**	**14 56 57.5**	**-0.7**
MMPI	**Merauke**	**3.67**	**165**	P	**Pn**	**14 57 12.4**	**+4.8**
FAKI	**Fak Fak**	**7.42**	**285**		**Pn**	**14 57 59.3**	**+0.1**
FAKI	**Fak Fak**	**7.42**	**285**	P	**Pn**	**14 57 58.5**	**-0.7**
FAKI	**Fak Fak**	**7.42**	**285**	S	**Sn**	**14 59 22.2**	**0.0**
MANU	**Manus Island**	**8.43**	**71**		**Pn**	**14 58 16.6**	**+3.5**
SAUI	**Saumlaki**	**8.63**	**249**	Pn	**Pn**	**14 58 17.6**	**+1.7**
PMG	**Port Moresby**	**8.89**	**121**	Pn	**Pn**	**14 58 20.6**	**+1.3**
PMG	**Port Moresby**	**8.89**	**121**	P	**Pn**	**14 58 20.5**	**+1.2**
PMG	**Port Moresby**	**8.89**	**121**	Pn	**Pn**	**14 58 19.5**	**+0.1**
	4.1nm,0.3s,baz=352,slow=8.2,SNR=9.7						
PMG				Sn	**Sn**	**14 59 50.8**	**-7.5**
	0.7nm,0.3s,baz=282,slow=19,SNR=1.4						
SWI	**Sorong**	**9.08**	**296**	P	**Pn**	**14 58 21.4**	**-0.7**
	54nm,0.6s,523nm						
COEN	**Coen**	**9.73**	**158**	Pn	**Pn**	**14 58 33.1**	**+2.2**
COEN	**Coen**	**9.73**	**158**	P	**Pn**	**14 58 32.6**	**+1.7**
KDU	**Kakadu**	**10.34**	**221**	P	**Pn**	**14 58 39.7**	**+0.5**
DRS	**Darwin Rock St**	**11.26**	**228**	P	**Pn**	**14 58 53.4**	**+1.5**
MTN	**Manton Dam**	**11.37**	**226**	Pn	**Pn**	**14 58 54.0**	**+0.6**
MTN	**Manton Dam**	**11.37**	**226**	P	**Pn**	**14 58 53.4**	**+0.1**
MTSU	**Mount Surprise**	**13.99**	**160**	P	**Pn**	**14 59 30.8**	**+1.5**
WB0	**Warramunga Arr**	**15.56**	**198**	Pn	**Pn**	**14 59 48.6**	**-1.6**
WB0				IAmb	IAmb	15 00 00.5	
	comp=Z,38nm,1.1s						
WRAB	**Tennant Creek**	**15.73**	**198**	P	**P**	**14 59 55.6**	**-0.3**
WRAB				IAmb	IAmb	14 59 59.0	
	comp=Z,33nm,0.8s						
WB2	**Warramunga Arr**	**15.74**	**198**	Pn	**Pn**	**14 59 52.1**	**-0.4**
WB2				IAmb	IAmb	15 00 02.6	
	comp=Z,32nm,0.7s						
WRA	**Warramunga Arr**	**15.74**	**198**	Pn	**Pn**	**14 59 50.2**	**-2.3**
WRA	**Warramunga Arr**	**15.74**	**198**	Pn	**Pn**	**14 59 50.5**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=17,slow=13,SNR=23						
WRA				Sn	**Sn**	**15 02 39.4**	**-6.7**
	comp=Z,1.5nm,0.3s,baz=9.0,slow=22,SNR=4.9						
	comp=Z,1.8nm,0.3s						
SOEI	**Soe**	**15.78**	**251**		**Pn**	**14 59 52.7**	**-0.4**
SOEI				IAmb	IAmb	15 00 19.4	
	comp=Z,43nm,0.7s						
SOEI	**Soe**	**15.78**	**251**	P	**P**	**14 59 54.7**	**-1.9**
SOEI	**Soe**	**15.78**	**251**	P	**P**	**14 59 55.2**	**-1.4**
	comp=Z,58nm,0.9s						
CTA	**Charters Tower**	**16.49**	**157**	Pn	**Pn**	**15 00 02.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=64,slow=8.8,SNR=2.5						
	comp=Z,3.8nm,0.9s						
CTAO	**Charters Tower**	**16.49**	**157**	Pn	**Pn**	**15 00 03.0**	**+0.9**
CTAO	**Charters Tower**	**16.49**	**157**	P	**P**	**15 00 05.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.80**	**225**	P	**Pn**	**15 00 31.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**18.80**	**225**	P	**Pn**	**15 00 32.1**	**+1.6**
AS01	**Alice Springs**	**19.38**	**195**	P	**Pn**	**15 00 39.1**	**+1.5**
AS31	**Alice Springs**	**19.40**	**195**	P	**Pn**	**15 00 39.6**	**+1.9**
AS31				IAmb	IAmb	15 00 48.8	
	comp=Z,8.9nm,0.5s						
ASAR	**Alice Springs**	**19.40**	**195**	P	**Pn**	**15 00 39.3**	**+1.6**
ASAR					**S**	**15 04 09.3**	**-4.5**
ASAR	**Alice Springs**	**19.40**	**195**	P	**Pn**	**15 00 38.2**	**+0.5**
	comp=Z,12nm,0.6s,baz=27,slow=9.1,SNR=225						
ASAR				S	**S**	**15 04 07.5**	**-6.4**
	comp=Z,3.1nm,0.7s,baz=16,slow=28,SNR=4.6						
ASAR				LR	LR	15 08 02.1	
	comp=Z,67nm,19.4s,baz=21,slow=37						
TOLI2	**Tolitoli**	**19.55**	**287**	P	**Pn**	**15 00 39.1**	**-0.6**
TOLI2				IAmb	IAmb	15 00 44.2	
	comp=Z,16nm,0.6s						
TOLI2	**Tolitoli**	**19.55**	**287**	P	**Pn**	**15 00 40.2**	**+0.5**
PLAI	**Plampang**	**21.83**	**259**	P	**P**	**15 01 04.8**	**+2.0**
QLP	**Quilpie**	**22.04**	**168**	P	**P**	**15 01 08.0**	**+3.1**
WRKA	**Warakurna**	**22.69**	**207**	P	**P**	**15 01 13.7**	**+1.8**
INKA	**Innaminka**	**22.75**	**177**	P	**P**	**15 01 15.1**	**+2.7**
OOD	**Oodnadatta**	**23.04**	**188**	P	**P**	**15 01 18.2**	**+2.8**
EIDS	**Eidsvold**	**23.22**	**152**	P	**P**	**15 01 19.1**	**+1.8**
EIDS				IAmb	IAmb	15 01 32.1	
	comp=Z,18nm,1.4s						
EIDS	**Eidsvold**	**23.22**	**152**	P	**P**	**15 01 20.0**	**+2.7**
MBWA	**Marble Bar**	**25.02**	**228**	P	**P**	**15 01 35.9**	**+1.8**
MBWA				IAmb	IAmb	15 01 37.7	
	comp=Z,12nm,0.8s						
MBWA	**Marble Bar**	**25.02**	**228**	P	**P**	**15 01 37.3**	**+3.2**
PSA00	**Pilbara Seismi**	**25.19**	**227**	P	**P**	**15 01 37.5**	**+1.8**
PSA00				IAmb	IAmb	15 01 39.3	
	comp=Z,15nm,0.5s						
PSA00	**Pilbara Seismi**	**25.19**	**227**		**P**	**15 01 37.9**	**+2.3**
PSA00				IAmb	IAmb	15 01 39.7	
	comp=Z,10nm,1.1s						
PSA00	**Pilbara Seismi**	**25.19**	**227**	P	**P**	**15 01 38.6**	**+3.0**
LCRK	**Leigh Creek**	**25.43**	**182**	P	**P**	**15 01 41.3**	**+3.6**
MULG	**Mulgathing**	**25.75**	**191**	P	**P**	**15 01 43.9**	**+3.4**
STKA	**Stephens Creek**	**26.91**	**176**	P	**P**	**15 01 51.6**	**+0.6**
STKA	**Stephens Creek**	**26.91**	**176**	P	**P**	**15 01 51.4**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=335,slow=9.6,SNR=4.6						
	comp=Z,1.2nm,0.5s						
CMSA	**Cobar Meteorol**	**27.14**	**168**	P	**P**	**15 01 56.0**	**+2.9**
FORT	**Forrest**	**27.87**	**201**	P	**P**	**15 01 59.1**	**-0.6**
BBOO	**Buckleboo**	**27.94**	**186**	P	**P**	**15 01 59.9**	**-0.4**
BBOO				IAmb	IAmb	15 02 10.8	
	comp=Z,28nm,1.4s						
MORW	**Morawa**	**32.68**	**220**	P	**P**	**15 02 43.2**	**+1.0**
KSRS	**Korea Array**	**43.48**	**347**	P	**P**	**15 04 13.2**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=158,slow=8.6,SNR=8.6						
	comp=Z,2.3nm,0.7s						
ENH	**Enshi**	**45.22**	**323**	P	**P**	**15 04 26.2**	**-0.9**
ENH				IAmb	IAmb	15 04 27.6	
	comp=Z,5.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**46.16**	**301**	P	**P**	**15 04 34.1**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=121,slow=6.2,SNR=28						
CMAR				PcP	**PcP**	**15 06 11.4**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=180,slow=1.8,SNR=5.1						
	comp=Z,3.3nm,0.8s						
CHTO	**Chiang Mai**	**46.31**	**302**	P	**P**	**15 04 35.0**	**-1.0**
CHTO				IAmb	IAmb	15 04 36.4	
	comp=Z,3.6nm,0.8s						
LYN	**LuoYang**	**46.75**	**329**	||P	**P**	**15 04 39.3**	**+0.2**
LYN				pmax	pmax		
	comp=Z,18nm,0.9s						
TUWZ	**Tuamarina**	**47.68**	**145**	P	**P**	**15 04 46.9**	**+0.6**
PZH	**PanZhiHua**	**48.01**	**313**	P	**P**	**15 04 51.6**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,6.7s						
XAN	**Xi'an**	**48.27**	**326**	P	**P**	**15 04 50.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**49.34**	**353**	P	**P**	**15 04 59.4**	**+0.5**
USA0B				IAmb	IAmb	15 05 23.7	
	comp=Z,7.2nm,0.8s						
USRK	**Ussuriysk Ar.**

DBIC	**Dimbokro**	**144.42 275**	PKP	PKPbc	15 15 45.1	-0.2	
	comp=Z,6.3nm,0.4s,baz=89,slow=3.1,SNR=16						
CPUP	**Villa Florida**	**144.96 153**	PKPbc	**PKPdf**	**15 15 47.6**	**+0.2**	
	comp=Z,2.6nm,0.7s,baz=244,slow=3.8,SNR=7.0						

*IDC **23** 15:47:17.5±42.0, 2°.23S×102°.49E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=774.3km s-min=266.2km az=145.0*
*DJA **23** 15:47:44.6±1.3, 5°.8S×107°.3E±°, h34km±21km, M3.7/5, MLv3.7/5*
ISC 23 15:47:44.1±1.5, 5°.5S±0°.1×103°.3E±0°.1, h35km, n9, σ0s61/8, mb3.6/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.88**	**58**	P	**Pn**	**15 48 00.0**	**-0.2**
LWLI				S	**Sn**	**15 48 12.0**	**+0.2**
MNAI	**Manna**	**1.17**	**343**	P	**Pn**	**15 48 04.3**	**+0.2**
KASI	**Kota Agung**	**1.19**	**92**	P	**Pn**	**15 48 04.6**	**+0.3**
KASI				S	**Sn**	**15 48 19.6**	**+0.4**
WRA	**Warramunga Arr**	**33.42**	**118**	P	**P**	**15 54 18.8**	**-1.1**
	0.7nm,0.8s,baz=300,slow=9.4,SNR=3.2						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**34.56**	**125**	P	**P**	**15 54 29.7**	**-0.1**
	0.6nm,0.9s,baz=297,slow=8.3,SNR=4.2						
	0.6nm,0.9s						
STKA	**Stephens Creek**	**44.39**	**131**	P	**P**	**15 55 51.9**	**+0.4**
	2.1nm,0.7s,baz=317,slow=9.3,SNR=3.9						
	2.1nm,0.7s						
H04N2	**CROZET ISLANDS**	**60.07**	**219**	T	T	17 04 03.1	
	baz=64,slow=75,SNR=22						
H04N1	**CROZET ISLANDS**	**60.08**	**219**	T	T	17 04 03.1	
	baz=64,slow=75,SNR=32						
H04N3	**CROZET ISLANDS**	**60.09**	**219**	T	T	17 04 02.2	
	baz=64,slow=75,SNR=24						

*NEIC **23** 15:49:08.8±1.8, 51°.47N±0°.06×173°.88W±0°.04, h22km±4km, ML3.0(AEIC), Error ellipse: s-maj=8.5km s-min=3.7km az=168.0*
*AEIC **23** 15:49:09.0±1.2, 51°.46N±0°.07×173°.94W±0°.06, h19km±8km, Error ellipse: s-maj=10.4km s-min=4.8km az=162.0*
*IDC **23** 15:49:13.8±2.1, 52°.96N×175°.29W, h0km, mb3.9/9, mbtmp3.9/11, ML3.9/2, Error ellipse: s-maj=58.9km s-min=19.8km az=172.0*
ISC 23 15:49:05.5±0.9, 51°.35N±0°.08×173°.84W±0°.07, h10km, n34, σ1s16/29, mb4.1/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.89**	**346**		**Pg**	**15 49 23.4**	**+0.9**
ATKA	**Atka Island**	**0.89**	**346**		**Sg**	**15 49 33.3**	**-0.8**
KOFP	**Korovin Flat P**	**0.94**	**350**		**Pg**	**15 49 24.9**	**+1.2**
KOSE	**Korovin Southe**	**1.01**	**353**		**Pg**	**15 49 25.8**	**+0.9**
KOSE					**Sb**	**15 49 38.6**	**+0.2**
GSMY	**Great Sitkin M**	**1.55**	**298**		**Pn**	**15 49 33.3**	**+0.2**
GSMY					**Sn**	**15 49 53.5**	**+0.3**
GSTR	**Great Sitkin T**	**1.57**	**299**		**Pn**	**15 49 34.2**	**+0.7**
GSSP	**Great Sitkin S**	**1.64**	**298**		**Pn**	**15 49 35.2**	**+0.9**
ADAG	**Mount Adagdak**	**1.83**	**291**		**Pn**	**15 49 37.8**	**+0.8**
ADK	**Adak**	**1.85**	**288**	Pn	**Pn**	**15 49 37.8**	**+0.5**
ADK	**Adak**	**1.85**	**288**		**Sn**	**15 50 01.0**	**+0.2**
KIWB	**Kanaga Island**	**2.13**	**285**		**Pn**	**15 49 42.2**	**+1.1**
TAFP	**Tanaga Falls P**	**2.64**	**284**		**Pn**	**15 49 50.2**	**+2.0**
TAFP					**Sn**	**15 50 21.4**	**+1.1**
TASE	**Tanaga Southea**	**2.67**	**282**		**Pn**	**15 49 50.6**	**+2.1**
GANE	**Gareloi Northe**	**3.12**	**281**		**Pn**	**15 49 56.8**	**+2.2**
AMKA	**Amchitka**	**4.30**	**273**	Pn	**Pn**	**15 50 11.5**	**+0.7**
CNBA	**Chernabura Isl**	**9.25**	**62**	Pn	**Pn**	**15 51 20.9**	**+2.1**
CHGN	**Chignik**	**10.37**	**55**	Pn	**Pn**	**15 51 34.3**	**+0.2**
KDAK	**Kodiak Island**	**13.88**	**54**	Pn	**P**	**15 52 30.8**	**+0.5**
	1.2nm,0.3s,baz=288,slow=7.7,SNR=16						
	8.3nm,0.8s						
ILAR	**Eielson Array**	**19.38**	**36**	P	**P**	**15 53 30.9**	**-0.3**
	0.2nm,0.3s,baz=236,slow=9.3,SNR=16						
	0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**35.00**	**213**	T	T	16 33 55.9	
	baz=21,slow=76,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**35.01**	**213**	T	T	16 33 54.8	
	baz=21,slow=76,SNR=3.4						
H11N1	**WAKE ISLAND Hy**	**35.02**	**213**	T	T	16 33 55.3	
	baz=21,slow=76,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**36.21**	**212**	T	T	16 35 12.7	
	baz=20,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**36.22**	**212**	T	T	16 35 14.0	
	baz=20,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**36.22**	**212**	T	T	16 35 17.5	
	baz=20,slow=76,SNR=5.1						
USRK	**Ussuriysk Ar.**	**36.37**	**280**	P	**P**	**15 56 08.8**	**-0.7**
	1.5nm,0.6s,baz=63,slow=6.5,SNR=5.5						
	1.5nm,0.6s						
PDAR	**Pinedale Array**	**43.33**	**75**	P	P	15 57 22.0	+14
	0.4nm,0.5s,baz=297,slow=3.4,SNR=4.2						
	0.4nm,0.5s						
SONM	**Songino Array**	**49.41**	**299**	P	**P**	**15 57 54.8**	**-0.5**
	0.3nm,0.5s,baz=58,slow=11,SNR=2.6						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**58.60**	**352**	P	**P**	**15 59 00.7**	**-1.2**
	5.7nm,1.1s,baz=4.1,slow=3.8,SNR=1.4						
	5.7nm,1.1s						
KURBB	**Kurchatov Arra**	**61.35**	**316**	P	**P**	**15 59 19.5**	**-1.5**
	0.7nm,0.2s,baz=41,slow=6.9,SNR=2.1						
	0.7nm,0.2s						
MKAR	**Makanchi Array**	**62.44**	**311**	P	**P**	**15 59 27.0**	**-1.5**
	0.2nm,0.3s,baz=46,slow=6.3,SNR=7.0						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**62.87**	**322**	P	P	15 59 29.0	-2.2
	0.6nm,0.5s,baz=75,slow=5.0,SNR=4.6						
BVAR				PcP	**PcP**	**16 00 09.6**	**+0.2**
	0.9nm,0.6s,baz=52,slow=2.4,SNR=4.9						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**66.44**	**350**	P	P	15 59 52.1	-2.2
	1.3nm,0.9s,baz=10,slow=8.5,SNR=1.4						
	1.3nm,0.9s						
HFS	**Hagfors**	**68.71**	**356**	P	**P**	**16 00 07.7**	**-1.0**
	5.3nm,1.1s,baz=32,slow=6.8,SNR=2.3						
	5.3nm,1.1s						

*DJA **23** 16:09:37.9±0.3, 8°.5S±4°×112°.3E±°, h10km, M4.0/11, mb4.4/2, MLv3.8/11*
*IDC **23** 16:09:52.6±5.8, 7°.75S×124°.74E, h154km±54km, mb3.4/5, mbtmp3.8/7, MS3.0/2, Error ellipse: s-maj=100.9km s-min=12.4km az=63.0*
ISC 23 16:09:41.2±0.8, 8°.25S±0°.07×123°.24E±0°.07, h35km, n25, σ2s01/25, mb3.8/5, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.06**	**249**	P	**Pn**	**16 09 59.1**	**-0.5**
MMRI	**Maumere**	**1.06**	**249**	P	**Pn**	**16 09 58.7**	**-0.9**
EDFI	**Ende, Flores**	**1.61**	**252**	P	**Pn**	**16 10 07.3**	**+0.1**
EDFI				S	**Sn**	**16 10 29.6**	**+2.8**
SOEI	**Soe**	**1.81**	**146**	P	**Pn**	**16 10 12.9**	**+2.9**
SOEI	**Soe**	**1.81**	**146**	P	**Pn**	**16 10 11.2**	**+1.2**
BBSI	**Bau Bau**	**2.82**	**346**	P	**Pn**	**16 10 22.7**	**-1.1**
BASI	**Baing, Sumba**	**3.27**	**233**	P	**Pn**	**16 10 30.6**	**+0.6**
BKSI	**Bulukumba**	**4.25**	**313**	P	**Pn**	**16 10 41.6**	**-1.8**
PLAI	**Plampang**	**5.43**	**264**	P	**Pn**	**16 11 01.0**	**+1.3**
PLAI	**Plampang**	**5.43**	**264**	P	**Pn**	**16 11 00.4**	**+0.7**
	38nm,0.7s,0.1nm						
TWSI	**Taliwang, Sumb**	**6.30**	**265**	P	**Pn**	**16 11 11.2**	**-0.5**
MTN	**Manton Dam**	**9.01**	**121**	P	**Pn**	**16 11 49.9**	**+1.1**
TOLI2	**Tolitoli**	**9.61**	**345**	P	**Pn**	**16 11 59.6**	**+2.4**
FITZ	**Fitzroy Crossi**	**10.07**	**167**	P	**Pn**	**16 12 04.8**	**+1.5**
WRA	**Warramunga Arr**	**15.83**	**138**	P	**Pn**	**16 13 19.5**	**-2.1**
	1.1nm,0.7s,baz=323,slow=13,SNR=8.9						
WRA				S	Sn	16 16 01.6	-14
	0.9nm,0.9s,baz=314,slow=24,SNR=3.0						
WRKA	**Warakurna**	**17.38**	**164**	P	**P**	**16 13 43.0**	**+0.8**
ASAR	**Alice Springs**	**18.43**	**148**	P	**Pn**	**16 13 53.9**	**-0.1**
	1.9nm,0.7s,baz=324,slow=12,SNR=16						
ASAR				S	**Sn**	**16 17 12.6**	**-6.4**
	2.0nm,1.1s,baz=319,slow=21,SNR=6.5						
QIS	**Mount Isa**	**20.00**	**129**	P	**Pn**	**16 14 13.8**	**+0.9**
CTA	**Charters Tower**	**25.19**	**120**	LR	LR	16 25 38.8	
	comp=Z,24nm,19.3s,baz=260,slow=39						
JNU	**Nakatsue**	**41.78**	**10**	LR	LR	16 39 33.2	
	comp=Z,23nm,18.1s,baz=0.5,slow=43						
SONM	**Songino Array**	**57.80**	**347**	P	**P**	**16 19 28.2**	**-0.8**
	0.4nm,0.7s,baz=158,slow=6.7,SNR=2.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**65.79**	**330**	P	**P**	**16 20 22.7**	**-0.1**
	0.6nm,0.7s,baz=126,slow=7.4,SNR=8.6						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**69.91**	**337**	P	**P**	**16 20 46.3**	**-2.3**
	0.4nm,0.4s,baz=135,slow=5.1,SNR=2.6						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**70.23**	**332**	P	**P**	**16 20 50.6**	**0.0**
	0.8nm,0.2s,baz=112,slow=4.3,SNR=2.5						
	0.8nm,0.2s						
QSPA	**South Pole Qui**	**81.74**	**180**	P	**P**	**16 21 57.2**	**+1.1**
	0.9nm,0.9s,baz=323,slow=5.1,SNR=1.4						
	0.9nm,0.9s						

IDC 23 16:12:56.0±2.3, 2°.64N×127°.66E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=161.8km s-min=28.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.38**	**164**	P	P	16 18 06.6	0.0
	0.3nm,0.4s,baz=343,slow=10,SNR=7.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**26.84**	**167**	P	P	16 18 37.9	-0.6
	0.3nm,0.5s,baz=348,slow=7.7,SNR=4.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.97**	**325**	P	P	16 22 58.0	+0.5
	0.1nm,0.4s,baz=107,slow=7.7,SNR=2.5						
	0.1nm,0.4s						

*JMA **23** 16:13:20.3±0.1, 24°.7N±0°.8×122°.5E±0°.3, h13km±1km, MV2.3/13, NW OFF ISHIGAKIJIMA IS*
*TAP **23** 16:13:20.1, 24°.68N×122°.52E, h21km, ML3.3, C*
ISC 23 16:13:20.1±0.9, 24°.67N±0°.03×122°.53E±0°.02, h16km±8km, n57, σ0s44/105, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.37**	**227**	*i* P	**Pb**	**16 13 28.4**	**+0.3**
	baz=224						
EOS2				*i* S	**Sb**	**16 13 34.9**	**+1.2**
	baz=224						
EOS3	**EOS3**	**0.43**	**207**	*i* P	**Pb**	**16 13 29.4**	**+0.2**
	baz=204						
EOS3				S	**Sb**	**16 13 36.2**	**+0.8**
	baz=204						
JYNG	**Yonagunijimaku**	**0.44**	**120**	P	**Pg**	**16 13 28.7**	**-0.2**
JYNG				S	**Sg**	**16 13 34.5**	**-0.3**
YOJ	**Yonaguni jima**	**0.48**	**115**	P	**Pg**	**16 13 29.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.48**	**115**	*e*P	**Pg**	**16 13 29.6**	**-0.2**
	baz=115						
YOJ	**Yonaguni jima**	**0.48**	**115**	P	**Pg**	**16 13 29.5**	**-0.2**
YOJ				S	**Sg**	**16 13 35.9**	**-0.4**
EGS		**0.57**	**288**	*i* P	**Pb**	**16 13 31.6**	**0.0**
	baz=287						
EGS				*i* S	**Sb**	**16 13 40.0**	**+0.5**
	baz=287						
EOS4	**EOS4**	**0.58**	**199**	*e*P	**Pb**	**16 13 32.3**	**+0.6**
	baz=197						
EOS4				*e*S	**Sn**	**16 13 40.9**	**-1.5**
	baz=197						
TWB1	**Santiao Chiao**	**0.60**	**304**	*i* P	**Pg**	**16 13 31.9**	**+0.1**
	baz=304						
TWB1				S	**Sg**	**16 13 40.0**	**+0.2**
	baz=304						
TWC	**Suao**	**0.62**	**264**	*i* P	**Pb**	**16 13 32.6**	**0.0**
	baz=263						
TWC				*i* S	**Sb**	**16 13 41.8**	**+0.7**
	baz=263						
ESAO	**Su ao**	**0.63**	**261**	P	**Pb**	**16 13 33.3**	**+0.6**
	baz=260						
ESAO				S	**Sb**	**16 13 41.6**	**+0.3**
	baz=260						
TIPB	**Shuangxi**	**0.71**	**295**	P	**Pb**	**16 13 34.2**	**+0.2**
	baz=294						
TIPB				S	**Sb**	**16 13 43.9**	**+0.4**
	baz=294						
ILA	**Ilan**	**0.72**	**278**	*i* P	**Pb**	**16 13 34.3**	**+0.1**
	baz=276						
ILA				*i* S	**Sb**	**16 13 44.8**	**+1.0**
	baz=276						
EWUT	**Wuta**	**0.72**	**252**	P	**Pb**	**16 13 34.5**	**+0.3**
	baz=250						
EWUT				S	**Sb**	**16 13 44.4**	**+0.5**
	baz=250						
SXI1	**Grass Mountain**	**0.73**	**305**	P	**Pg**	**16 13 34.5**	**+0.1**
	baz=305						
SXI1				S	**Sb**	**16 13 44.6**	**+0.4**
	baz=305						
NDS	**Dongshan**	**0.74**	**267**	P	**Pg**	**16 13 35.2**	**+0.6**
	baz=266						
NDS				S	**Sb**	**16 13 45.5**	**+0.9**
	baz=266						
ENA	**Nanau**	**0.76**	**252**	*i* P	**Pg**	**16 13 35.1**	**+0.2**
	baz=249						
ENA				*i* S	**Sg**	**16 13 45.4**	**+0.5**
	baz=249						
TWE	**Neicheng**	**0.79**	**274**	*i* P	**Pb**	**16 13 35.1**	**-0.3**
	baz=272						
TWE				*i* S	**Sg**	**16 13 46.2**	**+0.4**
	baz=272						
NWF	**Wu-fen Shan**	**0.79**	**300**	*i* P	**Pg**	**16 13 35.6**	**+0.1**
	baz=300						
NWF				*i* S	**Sb**	**16 13 46.0**	**0.0**
	baz=300						
WFSB	**Wu-fen Shan**	**0.79**	**300**	P	**Pg**	**16 13 35.6**	**+0.1**
	baz=300						
WFSB				S	**Sb**	**16 13 46.0**	**+0.1**
	baz=300						
EAHA	**Aohua**	**0.80**	**245**	P	**Pb**	**16 13 35.6**	**0.0**
	baz=243						
EAHA				*e*S	**Sg**	**16 13 46.4**	**+0.2**
	baz=243						
TNOU	**National Taiwa**	**0.84**	**305**	P	**Pb**	**16 13 36.0**	**-0.2**
	baz=304						
TNOU				S	**Sb**	**16 13 47.1**	**-0.1**
	baz=304						
FUSB	**Fushanzhiwuyua**	**0.86**	**276**	*e*P	**Pb**	**16 13 36.8**	**+0.1**
	baz=275						
FUSB				S	**Sb**	**16 13 48.1**	**+0.1**
	baz=275						
ENTT	**Nioudou**	**0.88**	**268**	*i* P	**Pg**	**16 13 37.4**	**+0.2**
	baz=267						
ENTT				*i* S	**Sg**	**16 13 49.1**	**+0.4**
	baz=267						
TWA	**Mucha**	**0.91**	**290**	*i* P	**Pb**	**16 13 37.6**	**+0.1**
	baz=289						
TWA				*i* S	**Sg**	**16 13 49.7**	**-0.1**
	baz=289						
LATG	**Datong**	**0.92**	**262**	P	**Pg**	**16 13 38.2**	**+0.2**
	baz=260						
LATG				S	**Sg**	**16 13 50.8**	**+0.6**
	baz=260						
NDT	**Datong Townshi**	**0.93**	**266**	P	**Pn**	**16 13 38.4**	**0.0**
	baz=265						
NDT				*e*S	**Sn**	**16 13 51.4**	**-0.1**
	baz=265						
NWLT	**Wulai**	**0.94**	**277**	*e*P	**Pn**	**16 13 38.6**	**0.0**
	baz=275						
NWLT				*e*S	**Sg**	**16 13 50.9**	**+0.2**
	baz=275						
ETL	**Fush Village**	**0.97**	**239**	*e*P	**Pg**	**16 13 38.9**	**0.0**
	baz=237						
ETL				*e*S	**Sg**	**16 13 51.5**	**-0.2**
	baz=237						
NACB	**Ninganchiao**	**0.99**	**240**	P	**Pb**	**16 13 38.8**	**0.0**
NACB	**Ninganchiao**	**0.99**	**240**	*e*P	**Pb**	**16 13 38.7**	**0.0**
	baz=238						
NACB				*e*S	**Sb**	**16 13 51.5**	**0.0**
	baz=238						
YM01	**YM01**	**0.99**	**299**	*e*P	**Pb**	**16 13 38.6**	**-0.3**
	baz=298						
YM01				*e*S	**Sb**	**16 13 51.4**	**-0.4**
	baz=298						
TATO	**Taipei**	**0.99**	**288**	P	**Pn**	**16 13 39.2**	**-0.1**
YM08	**YM08**	**1.00**	**301**	*e*P	**Pb**	**16 13 38.4**	**-0.6**
	baz=300						
YM08				*e*S	**Sb**	**16 13 51.3**	**-0.6**
	baz=300						
TAP	**Taipei**	**1.00**	**292**	*e*P	**Pb**	**16 13 38.2**	**-0.8**
	baz=291						
TAP				*e*S	**Sg**	**16 13 52.4**	**-0.1**
	baz=291						
TWD	**Chiawan**	**1.04**	**236**	*e*P	**Pn**	**16 13 40.0**	**0.0**
	baz=234						
TWD				*e*S	**Sg**	**16 13 53.5**	**-0.2**
	baz=234						
TWY	**Chenhua**	**1.04**	**306**	*e*P	**Pg**	**16 13 40.3**	**+0.2**
	baz=305						
TWY				*e*S	**Sg**	**16 13 53.6**	**-0.2**
	baz=305						
YHNB	**Yeheng**	**1.05**	**270**	P	**Pn**	**16 13 40.1**	**-0.1**
YHNB	**Yeheng**	**1.05**	**270**	*e*P	**Pn**	**16 13 40.1**	**-0.1**
	baz=269						
YHNB				*e*S	**Sb**	**16 13 53.1**	**-0.4**
	baz=269						
ETLH	**Xiulin Townshi**	**1.06**	**244**	*e*P	**Pn**	**16 13 40.3**	**0.0**
	baz=243						
ETLH				*e*S	**Sb**	**16 13 53.8**	**0.0**
	baz=243						
NSK	**Sanguang**	**1.07**	**270**	*e*P	**Pn**	**16 13 40.4**	**0.0**
	baz=269						
NSK				*e*S	**Sg**	**16 13 54.4**	**-0.4**
	baz=269						
NNSB	**Datong**	**1.07**	**257**	*e*P	**Pg**	**16 13 40.8**	**0.0**
	baz=256						
NNSB				*e*S	**Sg**	**16 13 54.5**	**-0.4**
	baz=256						
NNS	**Nan Shan**	**1.08**	**258**	*e*P	**Pg**	**16 13 40.9**	**-0.1**
	baz=256						
NNS				*e*S	**Sg**	**16 13 54.8**	**-0.3**
	baz=256						
IRIF	**Iriomote-Funau**	**1.14**	**107**	P	**Pb**	**16 13 41.8**	**+0.3**
IRIF				*e*S	**Sb**	**16 13 56.2**	**+0.2**
LXIB	**Xiulin Townshi**	**1.21**	**238**	*e*P	**Pg**	**16 13 43.1**	**-0.3**
	baz=236						
LXIB				*e*S	**Sn**	**16 13 58.6**	**+0.1**
	baz=236						
NFF	**Wufeng Townshi**	**1.29**	**269**	*e*P	**Pb**	**16 13 44.0**	**+0.1**
	baz=267						
NFF				*e*S	**Sg**	**16 14 01.6**	**-0.1**
	baz=267						
HATJ	**Hateruma jima**	**1.31**	**118**	*e*S	**Sn**	**16 14 00.1**	**-0.8**
CHGB	**Renai**	**1.38**	**244**	*e*P	**Pg**	**16 13 46.5**	**-0.2**
	baz=243						
CHGB				*e*S	**Sn**	**16 14 02.4**	**-0.5**
	baz=243						
NSTT	**Nanjuang**	**1.39**	**269**	*e*P	**Pb**	**16 13 46.2**	**+0.5**
	baz=267						
NSTT				*e*S	**Sb**	**16 14 03.8**	**+0.6**
	baz=267						
JKRS	**Kuro-shima**	**1.42**	**107**	*e*P	**Pn**	**16 13 45.6**	**+0.5**
JKRS				S	**Sn**	**16 14 03.5**	**+0.1**
WUSB	**Renai**	**1.46**	**243**	*e*P	**Pg**	**16 13 47.5**	**-0.6**
	baz=241						
WUSB				*e*S	**Sb**	**16 14 05.4**	**+0.2**
	baz=241						
WHP	**Taichung City**	**1.50**	**255**	*e*P	**Pg**	**16 13 48.7**	**-0.2**
	baz=254						
WHP				*e*S	**Sb**	**16 14 07.1**	**+0.8**
	baz=254						
JIJ	**Ishigaki jima**	**1.50**	**101**	*e*P	**Pb**	**16 13 47.7**	**+0.2**
JIJ				*e*S	**Sb**	**16 14 06.4**	**0.0**
JISG	**Ishigakijimahi**	**1.62**	**93**	*e*P	**Pn**	**16 13 49.0**	**+1.0**
JISG				*e*S	**Sn**	**16 14 08.5**	**-0.1**
SSLB	**Suanglung**	**1.69**	**239**	P	**Pb**	**16 13 50.4**	**-0.4**
YULB	**Yu-li**	**1.70**	**222**	P	**Pb**	**16 13 50.2**	**-0.8**
TPUB	**Ta-pu**	**2.21**	**232**	P	**Pb**	**16 13 58.5**	**-1.2**

*IDC **23** 16:31:54.5±2.0, 67°.75N×34°.27E, h0km, mbtmp3.6/5, ML2.7/5, Error ellipse: s-maj=21.8km s-min=10.0km az=91.0*
*HEL **23** 16:31:55.1±0.2, 67°.64N×33°.74E, h0km, ML2.1, Explosion KOLA **23** 16:31:55.3, 67°.66N×33°.74E, h0km, ML2.4, Error ellipse: s-maj=3.1km s-min=1.2km az=150.0, Khibiny, mines Kirovsk, Yukspor*
ISC 23 16:31:54.3±0.8, 67°.64N±0°.04×33°.78E±0°.03, h0km, n33, σ1s17/64, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.16**	**244**	P	**Pg**	**16 31 58.1**	**+0.8**
APA				S	**Sg**	**16 32 00.9**	**+1.6**
APA0	**Apatity Array**	**0.30**	**264**	P	**Pg**	**16 32 00.4**	**+0.4**
APA0				S	**Sg**	**16 32 04.4**	**+0.5**
LVZ	**Lovozero**	**0.42**	**51**	P	**Pg**	**16 32 03.0**	**+0.7**
LVZ				S	**Sg**	**16 32 08.8**	**+1.0**
LVZ	**Lovozero**	**0.42**	**51**	PG	**Pg**	**16 32 02.5**	**+0.1**
LVZ				SG	**Sg**	**16 32 09.1**	**+1.3**
VRF	**Varrio**	**1.59**	**276**	PG	**Pn**	**16 32 23.2**	**-0.5**
VRF				MSG		16 32 42.5	
	comp=Z,21nm,0.2s						
VRF				SG	**Sn**	**16 32 43.4**	**-1.6**
TERR	**Teriberka**	**1.65**	**17**	P	**Pn**	**16 32 24.2**	**-0.2**
TERR				S	**Sn**	**16 32 45.4**	**-0.8**
OLKF	**Oulanka, Finla**	**2.17**	**234**	PG	**Pb**	**16 32 33.8**	**-0.6**
OLKF				MSG		16 32 59.1	
	comp=Z,9.0nm,0.2s						
OLKF				SG	**Sb**	**16 33 02.9**	**+1.1**
RAJF	**Raja-Jooseppi**	**2.22**	**295**	PB	**Pn**	**16 32 32.6**	**+0.4**
RAJF				SN	**Sn**	**16 33 00.2**	**+0.1**
KU6	**Riekki**	**2.23**	**225**	PG	**Pn**	**16 32 34.1**	**+1.6**
	baz=45						
KU6				MSG		16 33 00.9	
	comp=Z,8.8nm,0.2s						
KU6				SG	**Sb**	**16 33 04.9**	**+1.3**
MSF	**Maaselka**	**2.56**	**229**	PB	**Pb**	**16 32 39.7**	**-1.3**
MSF				SG	**Sb**	**16 33 14.1**	**+1.2**
SGF	**Sodankyl**	**2.79**	**269**	PN	**Pn**	**16 32 41.0**	**+0.8**
SGF				SB	**Sb**	**16 33 18.6**	**-1.0**
KMNF	**Kaamanen**	**2.93**	**304**	PN	**Pn**	**16 32 42.4**	**+0.3**
KMNF				SN	**Sn**	**16 33 18.4**	**+0.4**
VADS	**Vadso**	**2.96**	**329**	P	**Pn**	**16 32 42.4**	**-0.1**
VADS				S	**Sn**	**16 33 18.3**	**-0.4**
RNF	**Rovaniemi**	**3.20**	**255**	PN	**Pn**	**16 32 46.4**	**+0.6**
	baz=68						
RNF				SN	**Sn**	**16 33 25.6**	**+0.9**
RANF	**Ranua**	**3.21**	**243**	PN	**Pn**	**16 32 47.6**	**+1.7**
	baz=59						
RANF				SG	**Sb**	**16 33 32.4**	**+0.8**
KEV	**Kevo**	**3.26**	**314**	*e*P	**Pn**	**16 32 47.6**	**+1.1**
KEV	**Kevo**	**3.26**	**314**	PN	**Pn**	**16 32 47.4**	**+0.8**
	baz=127						
KEV				SN	**Sn**	**16 33 25.7**	**-0.3**
ARA0	**ARCESS Array S**	**3.58**	**306**	*e*P	**Pn**	**16 32 51.4**	**+0.3**
ARA0	**ARCESS Array S**	**3.58**	**306**	PN	**Pn**	**16 32 51.3**	**+0.3**
	baz=119						
ARA0				SN	**Sn**	**16 33 33.1**	**-0.9**
ARCES	**ARCESS Array B**	**3.58**	**306**	P	**Pn**	**16 32 51.0**	**0.0**
ARCES				S	**Sn**	**16 33

	comp=Z,0.3nm,0.3s,baz=60,slow=21,SNR=1.9							
	comp=Z,1.1nm,0.5s							
SPITS	**Spitsbergen Ar**	**11.67**	**342**	Pn	**Pn**	**16**	**34**	**38.6** **-3.1**
	baz=151,slow=14							
	comp=Z,19nm,1.0s							
NOA	**NORSAR Array B**	**11.74**	**247**	Pn	**Pn**	**16**	**34**	**42.0** **-0.9**
	baz=39,slow=10,SNR=6.2							
NOA				Sn	**Sn**	**16**	**36**	**52.0** **-2.5**
	baz=42,slow=24,SNR=1.8							
NOA				Lg	Lg	16	38	00.4
	baz=74,slow=10,SNR=4.4							
	comp=Z,0.3nm,0.5s							

IDC ***23*** *17:02:00.6±0.7, 23°.47N×126°.05E, h0km, mb3.9/12, mbtmp3.9/16, ML4.1/3, MS3.0/4, Error ellipse: s-maj=24.1km s-min=15.0km az=78.0*
NEIC ***23*** *17:02:01.7±1.8, 23°.49N±0°.09×126°.03E±0°.08, h10km±1km, mb4.2/13, Error ellipse: s-maj=16.6km s-min=12.1km az=157.0*
JMA ***23*** *17:02:05.6±0.2, 24°.2°×12°.6E±°, h119km±4km, MV3.7/23, NEAR MIYAKOJIMA ISLAND*
NIED ***23*** *17:02:05.6, 23°.81N×125°.83E, h119km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-8.45; Mθθ8.49; Mϕϕ-0.03; Mrθ3.98; Mθϕ2.02; Mϕr-0.87; Fault plane solution: M0 9.61000×10¹⁴ NP1: ϕs=268.00000°, δ57.00000°, λ-78.00000°. NP2: ϕs=67.00000°, δ34.00000°, λ-108.00000°.*

ISC 23 17:02:02.0±2.0, 23°.50N±0°.06×126°.03E±0°.04, h13km±12km, n73, σ1s33/93, mb4.1/18, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.37**	**336**	P	**Pg**	**17 02 28.1**	**-0.4**
JOGS				S	**Sb**	**17 02 45.4**	**+0.4**
JMJ2	**Miyako jima3**	**1.39**	**333**	*i* P	**Pb**	**17 02 28.0**	**+0.2**
JMJ2				S	**Sn**	**17 02 44.8**	**-0.4**
JMJ	**Miyako jima 2**	**1.47**	**333**	P	**Pn**	**17 02 28.0**	**-0.1**
JIRB	**Irabujima**	**1.53**	**329**	P	**Pn**	**17 02 29.7**	**+0.7**
JIRB				S	**Sn**	**17 02 48.3**	**-0.5**
JIKM	**Ikemajima**	**1.58**	**333**	P	**Pn**	**17 02 30.6**	**+0.8**
JIKM				*e*S	**Sn**	**17 02 48.9**	**-1.2**
JTJ	**Tarama**	**1.66**	**313**	P	**Pn**	**17 02 31.2**	**+0.4**
JTJ				S	**Sn**	**17 02 50.2**	**-1.7**
JISG	**Ishigakijimahi**	**1.91**	**305**	*i* P	**Pn**	**17 02 34.5**	**+0.3**
JISG				S	**Sn**	**17 02 55.9**	**-2.1**
JISG	**Ishigakijimahi**	**1.91**	**305**	A	A	17 02 34.5	
	comp=E,4.0nm,0.6s,comp=N,4.0nm,0.5s						
JIJ	**Ishigaki jima**	**1.93**	**297**	*i* P	**Pn**	**17 02 34.7**	**+0.2**
JIJ				S	**Sn**	**17 02 55.9**	**-2.6**
JKRS	**Kuro-shima**	**1.99**	**292**	P	**Pn**	**17 02 35.8**	**+0.5**
JKRS				S	**Sn**	**17 02 58.6**	**-1.4**
HATJ	**Hateruma jima**	**2.11**	**286**	P	**Pn**	**17 02 37.5**	**+0.5**
HATJ				S	**Sn**	**17 03 00.7**	**-2.4**
IRIF	**Iriomote-Funau**	**2.26**	**292**	P	**Pn**	**17 02 39.6**	**+0.5**
IRIF				S	**Sn**	**17 03 04.9**	**-1.9**
JKE	**Kume jima 2**	**2.89**	**14**	*i* P	**Pn**	**17 02 47.7**	**-0.1**
JKE				S	**Sn**	**17 03 19.3**	**-3.0**
YOJ	**Yonaguni jima**	**2.92**	**290**	P	**Pn**	**17 02 48.7**	**+0.6**
YOJ	**Yonaguni jima**	**2.92**	**290**	P	**Pn**	**17 02 48.5**	**+0.4**
YOJ				*e*S	**Sn**	**17 03 19.5**	**-3.6**
JYNG	**Yonagunijimaku**	**2.98**	**289**	P	**Pn**	**17 02 49.2**	**+0.3**
JYNG				S	**Sn**	**17 03 20.7**	**-3.7**
JJT3	**Tamagusuku3**	**3.07**	**31**	P	**Pn**	**17 02 50.7**	**+0.5**
JJT3				*e*S	**Sn**	**17 03 25.5**	**-1.3**
JAGN	**Aguni-jima**	**3.26**	**19**	P	**Pn**	**17 02 52.9**	**+0.1**
JAGN				*e*S	**Sn**	**17 03 29.9**	**-1.5**
JNTH	**Nagotoyohara**	**3.50**	**31**	*i* P	**Pn**	**17 02 56.0**	**-0.1**
JNTH				*e*S	**Sn**	**17 03 34.9**	**-2.5**
JOW	**Kunigami**	**3.89**	**31**		**Pn**	**17 03 01.2**	**-0.2**
JOW	**Kunigami**	**3.89**	**31**	P	**Pn**	**17 03 01.7**	**+0.3**
JOW	**Kunigami**	**3.89**	**31**	P	**Pn**	**17 03 01.6**	**+0.1**
JOW				*e*S	**Sn**	**17 03 44.1**	**-2.8**
JOW	**Kunigami**	**3.89**	**31**	Pn	**Pn**	**17 03 01.8**	**+0.3**
	comp=N,38nm,0.3s,baz=123,slow=22,SNR=114						
JOW				Sn	**Sn**	**17 03 43.0**	**-4.0**
	comp=N,17nm,0.3s,baz=118,slow=26,SNR=1.9						
	comp=N,88nm,0.3s						
JIH	**Iheya**	**3.93**	**26**	P	**Pn**	**17 03 02.3**	**+0.4**
JIH				S	**Sn**	**17 03 44.5**	**-3.4**
NACB	**Ninganchiao**	**4.12**	**280**	Pn	**Pn**	**17 03 02.9**	**-1.6**
NACB	**Ninganchiao**	**4.12**	**280**	P	**Pn**	**17 03 03.5**	**-1.1**
YULB	**Yu-li**	**4.35**	**269**		**Pn**	**17 03 06.3**	**-1.4**
YULB	**Yu-li**	**4.35**	**269**	P	**Pn**	**17 03 06.6**	**-1.2**
TATO	**Taipei**	**4.40**	**290**	Pn	**Pn**	**17 03 07.0**	**-1.5**
YHNB	**Yeheng**	**4.41**	**286**		**Pn**	**17 03 09.5**	**+0.9**
YHNB	**Yeheng**	**4.41**	**286**	P	**Pn**	**17 03 09.7**	**+1.0**
TWGBT	**Beinan**	**4.61**	**262**	P	**Pn**	**17 03 10.3**	**-1.0**
TWG	**Pinlang**	**4.61**	**262**	Pn	**Pn**	**17 03 09.8**	**-1.6**
SSLB	**Suanglung**	**4.66**	**274**		**Pn**	**17 03 11.8**	**-0.3**
TPUB	**Ta-pu**	**4.96**	**269**		**Pn**	**17 03 15.9**	**-0.4**
TPUB	**Ta-pu**	**4.96**	**269**	P	**Pn**	**17 03 16.7**	**+0.4**
JMZ	**Minamidaito 2**	**5.26**	**63**	Pn	**Pn**	**17 03 18.2**	**-2.0**
JMZ	**Minamidaito 2**	**5.26**	**63**	P	**Pn**	**17 03 18.6**	**-1.6**
KNMB	**Chin-men Tao**	**7.05**	**279**	Pn	**Pn**	**17 03 44.4**	**-0.5**
JNU	**Nakatsue**	**10.49**	**23**	Pn	**Pn**	**17 04 32.0**	**-0.1**
JNU	**Nakatsue**	**10.49**	**23**	Pn	**Pn**	**17 04 32.6**	**+0.6**
	comp=N,1.8nm,0.3s,baz=216,slow=6.3,SNR=19						
JNU				LR	LR	17 09 08.2	
	comp=N,87nm,18.4s,baz=208,slow=41						
	comp=N,4.1nm,0.3s						
JMN	**Monobe**	**12.29**	**32**	Pn	**Pn**	**17 04 54.9**	**-1.9**
KSRS	**Korea Array**	**14.00**	**6**	Pn	**Pn**	**17 05 20.3**	**+0.3**
	comp=N,0.2nm,0.3s,baz=179,slow=12,SNR=4.5						
KSRS				LR	LR	17 11 14.5	
	comp=N,44nm,18.6s,baz=190,slow=40						
	comp=N,1.2nm,0.7s						
MJAR	**Matsushiro Arr**	**16.71**	**36**	Pn	**Pn**	**17 05 56.6**	**+0.7**
	comp=N,0.9nm,0.6s,baz=209,slow=8.8,SNR=1.4						
USRK	**Ussuriysk Ar.**	**21.22**	**12**	P	**P**	**17 06 46.0**	**-1.4**
JKA	**Kamikawa-asahi**	**24.65**	**30**	P	**P**	**17 07 21.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**25.77**	**264**	P	**P**	**17 07 33.3**	**+0.7**
	comp=N,0.3nm,0.3s,baz=66,slow=8.4,SNR=8.0						
	comp=N,0.3nm,0.3s						
KLR	**Kul'dur**	**26.07**	**9**	LR	LR	17 16 42.9	
	comp=N,31nm,20.9s,baz=130,slow=34						
SONM	**Songino Array**	**28.89**	**332**	P	**P**	**17 08 01.1**	**+0.5**
	comp=N,0.5nm,0.6s,baz=141,slow=11,SNR=3.9						
SONM				LR	LR	17 21 28.6	
	comp=N,32nm,18.8s,baz=104,slow=40						
	comp=N,0.5nm,0.6s						
MK31	**Makanchi Array**	**41.94**	**315**	P	**P**	**17 09 51.2**	**-1.2**
MKAR	**Makanchi Array**	**41.94**	**315**	P	**P**	**17 09 52.2**	**-0.2**
MKAR	**Makanchi Array**	**41.94**	**315**	P	**P**	**17 09 53.9**	**+1.5**
	comp=N,1.2nm,0.7s,baz=103,slow=10,SNR=16						
	comp=N,1.2nm,0.7s						
MAKZ	**Makanchi**	**42.15**	**315**	P	**P**	**17 09 53.4**	**-0.7**
MAKZ				IAmb	IAmb	17 09 56.4	
	comp=Z,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**43.27**	**325**	P	**P**	**17 10 04.0**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=106,slow=6.7,SNR=3.6						
	comp=Z,0.6nm,0.5s						
WB0	**Warramunga Arr**	**43.77**	**169**	P	**P**	**17 10 07.1**	**-0.4**
WRAB	**Tennant Creek**	**43.93**	**169**	P	**P**	**17 10 08.7**	**0.0**
WRA	**Warramunga Arr**	**43.94**	**169**	P	**P**	**17 10 08.9**	**+0.1**
	comp=Z,6.3nm,0.6s,baz=348,slow=9.2,SNR=60						
WRA				PcP	**PcP**	**17 11 54.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=345,slow=3.6,SNR=2.0						
	comp=Z,6.3nm,0.6s						
WB2	**Warramunga Arr**	**43.94**	**169**	P	**P**	**17 10 08.7**	**-0.1**
KURBB	**Kurchatov Arra**	**45.51**	**319**	P	**P**	**17 10 22.6**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=109,slow=7.9,SNR=6.9						
	comp=Z,0.8nm,0.6s						
AS31	**Alice Springs**	**47.51**	**170**	P	**P**	**17 10 37.5**	**+0.5**
ASAR	**Alice Springs**	**47.51**	**170**	P	**P**	**17 10 36.7**	**-0.3**
ASAR				PcP	**PcP**	**17 12 06.8**	**-0.3**
ASAR	**Alice Springs**	**47.51**	**170**	P	**P**	**17 10 37.6**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=354,slow=7.7,SNR=50						
ASAR				PcP	**PcP**	**17 12 07.5**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=352,slow=2.8,SNR=7.3						
	comp=Z,1.0nm,0.5s						
TIXI	**Tiksi**	**48.20**	**1**	P	**P**	**17 10 41.6**	**-0.1**
TIXI				IAmb	IAmb	17 10 56.3	
	comp=Z,6.6nm,1.4s						
BVAR	**Borovoye Array**	**51.02**	**320**	P	**P**	**17 11 04.4**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=96,slow=6.4,SNR=4.2						
	comp=Z,0.7nm,0.5s						
BRVK	**Borovoye**	**51.09**	**320**	P	**P**	**17 11 04.1**	**0.0**
BRVK				IAmb	IAmb	17 11 09.6	
	comp=Z,2.4nm,0.8s						
NRIK	**Noril'sk**	**51.26**	**344**	P	**P**	**17 11 05.2**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=68,slow=5.9,SNR=1.3						
	comp=Z,1.0nm,0.3s						

ABKAR	**Akbulak array**	**57.09**	**314**	P	P	**17**	**11**	**48.6** **+0.8**
ABKAR				IAmb	IAmb	17	12	04.4
	comp=Z,2.0nm,0.9s							
ABKAR	**Akbulak array**	**57.09**	**314**	P	**P**	**17**	**11**	**48.5** **+0.6**
D19K	**Kuna River**	**63.17**	**24**	P	**P**	**17**	**12**	**30.3** **+0.9**
D19K				IAmb	IAmb	17	12	54.0
	comp=Z,2.3nm,0.9s							
E19K	**Redstone River**	**63.44**	**25**	P	**P**	**17**	**12**	**30.2** **-0.9**
E19K				IAmb	IAmb	17	13	05.2
	comp=Z,3.0nm,1.1s							
FINES	**FINESS Array B**	**74.24**	**331**	P	**P**	**17**	**13**	**39.2** **+0.8**
	comp=Z,2.7nm,1.1s,baz=74,slow=6.8,SNR=3.4							
	comp=Z,2.7nm,1.1s							
BRTR	**Keskin Array B**	**77.12**	**308**	P	**P**	**17**	**13**	**56.2** **+0.6**
	comp=Z,1.7nm,1.0s,baz=98,slow=2.5,SNR=6.4							
	comp=Z,1.7nm,1.0s							
YKA	**Yellowknife Ar**	**81.82**	**24**	P	**P**	**17**	**14**	**22.1** **+1.7**
	comp=Z,0.5nm,0.7s,baz=301,slow=5.5,SNR=8.4							
	comp=Z,0.5nm,0.7s							

SDD ***23*** *17:13:01.4±2.2, 19°.02N×71°.90W, h20km±31km, MD3.5, ML2.7, MW3.4*
OSPL ***23*** *17:13:02.8±0.8, 18°.94N×71°.84W, h8km±5km, ML2.3*

ISC 23 17:12:59.8±1.5, 19°.01N±0°.04×71°.88W±0°.06, h10km±11km, n17, σ0s57/34, 8C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIDR	**Jimani**	**0.51**	**177**	*i*P	**Pg**	**17 13 10.6**	**+0.9**
JIDR				⇓*e*Sg	**Sb**	**17 13 18.1**	**-0.3**
JIDR				IAML		17 13 18.9	
	comp=N,644nm,0.3s						
LODA1	**ITESIL, Dajabo**	**0.56**	**17**	*i* P	**Pn**	**17 13 13.6**	**-0.3**
LODA1				*e*S	**Sn**	**17 13 22.4**	**-0.9**
LODA1				IAML		17 13 26.5	
	comp=Z,1μm,4.4s						
SDDR	**Presa de Saban**	**0.56**	**92**	⇓*e*Pg	**Pb**	**17 13 12.4**	**+0.6**
SDDR				⇑*e*Sg	**Sb**	**17 13 19.4**	**-0.5**
SDDR				IAML		17 13 28.3	
	comp=N,206nm,0.3s						
SDDR	**Presa de Saban**	**0.56**	**92**	*i* P	**Pb**	**17 13 12.2**	**+0.4**
SDDR				*e*S	**Sb**	**17 13 19.5**	**-0.5**
SDDR				IAML		17 13 22.9	
	comp=Z,213nm,0.5s						
NEDR	**Neiba UASD**	**0.68**	**140**	*e*Pg	**Pb**	**17 13 13.5**	**-0.3**
NEDR				⇑*e*Sg	**Sb**	**17 13 22.4**	**-0.9**
NEDR				IAML		17 13 26.3	
	comp=N,204nm,0.3s						
MADR	**Mao Valverde**	**0.92**	**53**	*e*Pg	**Pg**	**17 13 17.4**	**-0.2**
MADR				*e*Sg	**Sb**	**17 13 31.3**	**+1.0**
MADR				IAML		17 13 33.1	
	comp=N,353nm,0.3s						
LOPE2	**Hotel El Peder**	**0.98**	**172**	*e*Pg	**Pg**	**17 13 18.4**	**-0.2**
LOPE2				*e*Sg	**Sb**	**17 13 32.4**	**+0.6**
LOPE2	**Hotel El Peder**	**0.98**	**172**	*i* P	**Pb**	**17 13 19.3**	**+0.5**
LOPE2				*e*S	**Sg**	**17 13 30.6**	**-0.7**
LOPE2				IAML		17 13 38.9	
	comp=Z,78nm,0.9s						
PODR	**Polo**	**1.01**	**146**	⇓*e*Pg	**Pg**	**17 13 19.2**	**-0.1**
PODR				*e*Sg	**Sb**	**17 13 32.5**	**-0.5**
PODR				IAML		17 13 40.3	
	comp=N,136nm,0.2s						
PODR	**Polo**	**1.01**	**146**	*i* P	**Pg**	**17 13 19.2**	**-0.1**
PODR				*e*S	**Sg**	**17 13 32.0**	**-0.5**
SC01	**Santiago de lo**	**1.17**	**69**	*i* P	**Pn**	**17 13 23.5**	**+1.2**
SC01				*e*S	**Sb**	**17 13 37.8**	**+0.4**
SC01				IAML		17 13 45.1	
	comp=Z,82nm,0.3s						
LOBA2	**Hotel Casa Bon**	**1.19**	**141**	*e*Pg	**Pb**	**17 13 22.2**	**-0.2**
LOBA2				*e*Sg	**Sb**	**17 13 37.8**	**0.0**
ABDR	**Alto Bandera**	**1.20**	**99**	⇑*e*Pg	**Pb**	**17 13 23.1**	**+0.1**
ABDR				⇑*e*Sg	**Sn**	**17 13 40.2**	**+0.5**
ABDR				IAML		17 13 41.9	
	comp=N,87nm,0.1s						
BANI	**BANI**	**1.57**	**113**	⇑*e*Pg	**Pb**	**17 13 28.9**	**-0.1**
BANI				⇑*e*Sg	**Sg**	**17 13 50.6**	**+0.3**
BANI				IAML		17 14 26.2	
	comp=N,120nm,2.6s						
DR08	**Loma La Naviza**	**1.76**	**91**	⇑*e*Pg	**Pn**	**17 13 30.8**	**+0.3**
DR08				⇓*e*Sg	**Sn**	**17 13 53.1**	**0.0**
HATOM	**Hato Mayor del**	**2.38**	**95**	⇓*e*Pg	**Pb**	**17 13 42.6**	**-0.2**
HATOM				*e*Sg	**Sb**	**17 14 11.2**	**-1.1**
HATOM				IAML		17 14 52.0	
	comp=N,35nm,2.5s						
MIDR	**Miches**	**2.68**	**90**	*e*Pg	**Pb**	**17 13 47.8**	**-0.1**
MIDR				*e*Sg	**Sb**	**17 14 20.9**	**0.0**
MIDR				IAML		17 14 21.3	
	comp=N,48nm,2.9s						

IDC ***23*** *17:41:18.6±2.2, 43°.54N×105°.31W, h0km, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=51.7km s-min=10.2km az=152.0*
NEIC ***23*** *17:41:19.8±2.5, 43°.64N±0°.05×105°.35W±0°.08, h0km±1km, ML2.8/83, Error ellipse: s-maj=10.2km s-min=9.0km az=78.0*

ISC 23 17:41:19.3±1.0, 43°.60N±0°.05×105°.22W±0°.04, h0km, n44, σ1s75/43, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**59**		**Pg**	**17 41 38.7**	**+0.2**
K22A	**Casper**	**1.35**	**225**		**Pg**	**17 41 45.1**	**0.0**
K22A				IAML		17 42 07.9	
	comp=E,159nm,0.2s						
PHWY	**Pilot Hill**	**2.31**	**184**		**Pn**	**17 42 00.4**	**+1.5**
PHWY				IAML		17 42 33.6	
	comp=E,52nm,0.6s						
RWWY	**Rawlins**	**2.41**	**218**		**Pn**	**17 42 01.8**	**+1.6**
N23A	**Red Feather La**	**2.76**	**191**		**Pn**	**17 42 07.2**	**+2.1**
N23A				IAML		17 42 51.0	
	comp=E,31nm,0.7s						
BRIGG	**Briggsdale**	**3.10**	**167**	Pn	**Pn**	**17 42 12.5**	**+3.0**
LAO	**LASA Array**	**3.16**	**347**	Pn	**Pn**	**17 42 10.7**	**+0.3**
RLMT	**Red Lodge**	**3.27**	**299**		**Pn**	**17 42 13.6**	**+1.6**
RLMT				IAML		17 43 09.4	
	comp=E,23nm,0.4s						
PD31	**Pinedale Array**	**3.28**	**257**	Pn	**Pn**	**17 42 12.5**	**+0.4**
PDAR	**Pinedale Array**	**3.28**	**257**		**Pn**	**17 42 12.8**	**+0.7**
PDAR	**Pinedale Array**	**3.28**	**257**	Pn	**Pn**	**17 42 13.4**	**+1.3**
	comp=E,2.4nm,0.3s,baz=78,slow=16,SNR=48						
PDAR				Lg	Lg	17 42 59.0	
	comp=E,6.9nm,0.3s,baz=75,slow=35,SNR=2.2						
	comp=E,2.5nm,0.3s						
OGNE	**Ogallala**	**3.56**	**137**	Pn	**Pn**	**17 42 18.0**	**+2.1**
YMP	**Mirror Lake PI**	**3.73**	**289**		**Pn**	**17 42 20.0**	**+1.6**
ISCO	**Idaho Springs**	**3.81**	**185**		**Pn**	**17 42 21.3**	**+1.7**
LKWY	**Lake**	**3.85**	**286**		**Pn**	**17 42 23.9**	**+3.9**
LKWY				IAML		17 42 53.0	
	comp=E,12nm,1.1s						
LKWY				IAML		17 43 36.6	
	comp=E,11nm,3.9s						
LOHW	**Long Hollow**	**3.91**	**272**	Pn	**Pn**	**17 42 22.9**	**+2.1**
H17A	**Grant Village**	**3.94**	**283**		**Pn**	**17 42 24.4**	**+3.1**
H17A				IAML		17 43 27.9	
	comp=N,12nm,0.3s						
FLWY	**Flagg Ranch**	**3.99**	**279**		**Pn**	**17 42 24.1**	**+2.2**
FLWY				IAML		17 42 59.7	
	comp=N,12nm,4.2s						
FLWY				IAML		17 43 51.5	
	comp=N,14nm,4.8s						
MOOW	**Moose Ponds**	**4.01**	**274**	Pn	**Pn**	**17 42 24.3**	**+2.2**
SNOW	**Snow King Moun**	**4.03**	**270**	Pn	**Pn**	**17 42 24.8**	**+2.3**
REDW	**Red Top Meadow**	**4.10**	**269**		**Pn**	**17 42 25.1**	**+1.7**
O20A	**White River Ci**	**4.13**	**214**	Pn	**Pn**	**17 42 24.1**	**+0.2**
O20A				IAML		17 42 57.3	
	comp=E,15nm,3.9s						
YFT	**Old Faithful**	**4.13**	**284**	Pn	**Pn**	**17 42 24.2**	**+0.3**
YFT				IAML		17 42 58.0	
	comp=E,8.8nm,4.4s						
YFT				IAML		17 43 40.8	
	comp=N,8.4nm,2.2s						
IMW	**Indian Meadow**	**4.15**	**276**	Pn	**Pn**	**17 42 26.2**	**+2.0**
IMW				IAML		17 43 47.2	
	comp=N,13nm,0.6s						
IMW				IAML		17 44 03.5	
	comp=N,9.7nm,3.0s						
TPAW	**Teton Pass**	**4.17**	**270**		**Pn**	**17 42 25.6**	**+1.2**
TPAW				IAML		17 43 39.4	
	comp=N,10.0nm,2.1s						
TPAW				IAML		17 44 19.1	
	comp=N,8.7nm,0.5s						
K30B	**Basset**	**4.21**	**101**	Pn	**Pb**	**17 42 32.9**	**-1.3**

FXWY	**Fox Creek**	**4.21**	**272**		**Pn**	**17**	**42**	**26.5** **+1.5**
YHH	**Holmes Hill**	**4.22**	**288**	Pn	**Pn**	**17**	**42**	**27.0** **+1.9**
E28A	**Huff**	**4.37**	**46**	Pn	**Pn**	**17**	**42**	**27.8** **+0.8**
AHID	**Auburn Hatcher**	**4.38**	**261**		**Pn**	**17**	**42**	**29.0** **+1.8**
AHID				IAML		17	43	41.0
	comp=N,8.2nm,0.4s							
AHID				IAML		17	43	45.3
	comp=N,12nm,0.6s							
RDMU	**Red Mountain**	**4.43**	**228**		**Pn**	**17**	**42**	**29.1** **+1.1**
RDMU				IAML		17	43	50.1
	comp=E,9.0nm,0.8s							
RDMU				IAML		17	43	55.4
	comp=N,8.5nm,2.5s							
YHL	**Hebgen Lake**	**4.46**	**288**		**Pn**	**17**	**42**	**29.7** **+1.3**
YHL				IAML		17	43	07.7
	comp=E,10nm,3.9s							
YHL				IAML		17	43	24.1
	comp=N,9.4nm,4.4s							
Q24A	**Divide**	**4.64**	**179**	Pn	**Pn**	**17**	**42**	**32.4** **+1.5**
DGMT	**Dagmar**	**4.92**	**8**		**Pn**	**17**	**42**	**35.7** **+1.2**
KSCO	**Kaye Shedlock'**	**4.99**	**156**		**Pn**	**17**	**42**	**37.4** **+1.8**
BOZ	**Bozeman (W)**	**4.99**	**296**		**Pn**	**17**	**42**	**36.2** **+0.6**
BOZ				IAML		17	43	56.2
	comp=N,6.4nm,4.4s							
BOZ				IAML		17	44	25.4
	comp=N,5.5nm,4.2s							
HWUT	**Hardware Ranch**	**5.09**	**249**		**Pn**	**17**	**42**	**35.4** **-1.6**
HWUT				IAML		17	44	19.3
	comp=N,6.7nm,0.6s							
BSUT	**Blindstream Ca**	**5.14**	**235**		**Pn**	**17**	**42**	**39.2** **+1.4**
BSUT				IAML		17	44	02.0
	comp=E,6.2nm,4.7s							
BSUT				IAML		17	44	18.7
	comp=N,5.1nm,2.5s							
EGMT	**Eagleton**	**5.44**	**326**		**Pn**	**17**	**42**	**43.3** **+1.6**
P18A	**Preston Nutter**	**5.47**	**225**		**Pn**	**17**	**42**	**44.1** **+1.8**
SRU	**San Rafael Swe**	**6.00**	**223**		**Pn**	**17**	**42**	**50.4** **+0.8**
HMU	**Henry Mountain**	**7.04**	**218**		**Pn**	**17**	**43**	**02.8** **-1.0**
I10CA	**LAC DU BONNET**	**9.12**	**40**	I	I	18	33	40.0
	baz=220,slow=338,SNR=5.1							
ULM	**Lac du Bonnet**	**9.22**	**41**	Pn	**Pn**	**17**	**43**	**31.9** **-1.6**
	comp=N,0.8nm,0.3s,baz=218,slow=12,SNR=5.6							
ULM				Lg	Lg	17	46	05.6
	comp=N,0.3nm,0.3s,baz=140,slow=20,SNR=2.4							
	comp=N,1.6nm,0.3s							

AFAD ***23*** *18:03:17.7±0.0, 38°.89N×26°.47E, h7km±3km, ML2.6*
ISK ***23*** *18:03:17.7, 38°.90N×26°.47E, h10km, ML2.8/9*
THE ***23*** *18:03:18.2, 38°.89N×26°.43E, h9km, ML2.5/9, Error ellipse: s-maj=1.1km s-min=0.4km az=266.0*
ATH ***23*** *18:03:18.2, 38°.90N×26°.46E, h11km±1km, ML2.6/7, Error ellipse: s-maj=1.7km s-min=0.8km az=283.0*

ISC 23 18:03:17.9±0.9, 38°.90N±0°.02×26°.47E±0°.02, h13km±7km, n50, σ0s54/77, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAG3	**Mitilini, Lesv**	**0.20**	**23**	P	**Pg**	**18 03 22.3**	**-0.1**
EAG3				S	**Sg**	**18 03 25.6**	**+0.1**
KARB	**zmir-Karabur**	**0.24**	**190**	P	**Pg**	**18 03 23.0**	**0.0**
FOCM	**Foa**	**0.28**	**131**	Pg	**Pg**	**18 03 23.8**	**+0.1**
IZMD	**zmir-Dikili-**	**0.37**	**76**	P	**Pg**	**18 03 24.5**	**-1.0**
IZMD				P	**Pb**	**18 03 25.6**	**-0.9**
IZMD				S	**Sg**	**18 03 30.4**	**-0.1**
PRK	**Paraskevi**	**0.38**	**337**	P	**Pg**	**18 03 25.6**	**0.0**
PRK				S	**Sg**	**18 03 31.0**	**+0.3**
	938nm,0.3s						
PRK	**Paraskevi**	**0.38**	**337**	P	**Pg**	**18 03 25.6**	**0.0**
PRK				S	**Sg**	**18 03 30.9**	**+0.2**
PRK				AML	AML	18 03 31.6	
	comp=E,2039μm,0.4s						
PRK				AML	AML	18 03 36.5	
	comp=N,1701μm,0.2s						
DKL	**Dikili**	**0.39**	**63**	Pg	**Pg**	**18 03 25.7**	**0.0**
DKL				Sg	**Sg**	**18 03 31.5**	**+0.6**
AYVA	**Ayvalik**	**0.45**	**23**	P	**Pg**	**18 03 26.0**	**-0.8**
EAG2	**Marmaro, Chios**	**0.45**	**218**	P	**Pg**	**18 03 27.1**	**+0.2**
EAG2				S	**Sg**	**18 03 33.3**	**+0.5**
ZEDA	**zmir-Bergama**	**0.48**	**82**	P	**Pg**	**18 03 27.2**	**-0.3**
ZEDA				S

	comp=E,520µm,0.3s						
GELI	**Tayfur-Gelibol**	**1.50**	**0**	Pn	**Pn**	**18 03 45.2**	**+0.6**
SMTH	**Samothraki Isl**	**1.73**	**336**	P	**Pn**	**18 03 47.6**	**-0.2**
SMTH				S	**Sn**	**18 04 09.4**	**-0.3**
	comp=E,55nm,0.6s						
SMTH	**Samothraki Isl**	**1.73**	**336**	P	**Pn**	**18 03 47.6**	**-0.2**
KULA	**Kula-Manisa**	**1.76**	**102**	P	**Pn**	**18 03 48.4**	**+0.2**
ENEZ	**Enez**	**1.85**	**353**	P	**Pn**	**18 03 49.5**	**+0.1**
BODT	**Bodrum**	**1.95**	**160**	P	**Pn**	**18 03 50.7**	**-0.1**
APE	**Apeiranthos**	**1.97**	**202**	P	**Pn**	**18 03 50.4**	**-0.7**
ALN	**Alexandroupoli**	**2.02**	**351**	P	**Pn**	**18 03 51.8**	**0.0**
ALN				S	**Sn**	**18 04 17.6**	**+0.7**
	comp=E,55nm,0.5s						
ALN	**Alexandroupoli**	**2.02**	**351**	P	**Pn**	**18 03 51.7**	**-0.1**
ALN				AML	AML	18 04 22.8	
	comp=E,96µm,0.6s						
ALN				AML	AML	18 04 23.8	
	comp=N,120µm,0.4s						
RDO	**Rodhopi**	**2.36**	**343**	P	**Pn**	**18 03 56.9**	**+0.6**
KAVA	**Kavala**	**2.58**	**325**	P	**Pn**	**18 03 59.3**	**-0.1**

NEIC ***23*** *18:05:36.5±0.9, 19°.98N±0°.04×155°.59W±0°.07, h32km±10km, Error ellipse: s-maj=10.0km s-min=5.3km az=64.0*

HVO 23 18:05:37.9±0.9, 20°.05N±0°.08×155°.56W±0°.07, h27km±8km, ML2.1/6, ML2.4/34(NEIC), Error ellipse: s-maj=14.9km s-min=3.5km az=220.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPAH	**Hawaii Prepara**	**0.13**	**262**		Sb	18 05 46.2	-0.4
HPAH	**Hawaii Prepara**	**0.13**	**262**		Pb	18 05 42.3	-0.9
HPAH	**Hawaii Prepara**	**0.13**	**262**	IAML		18 05 46.3	
	comp=E,502nm,0.3s						
HPAH				IAML		18 05 46.3	
	comp=N,516nm,0.1s						
POHA	**Pohakuloa**	**0.29**	**175**		Sb	18 05 48.8	-1.3
MHA	**Mahukona**	**0.35**	**293**	Pg	Pb	18 05 45.0	-0.8
HUH	**Hualalai**	**0.45**	**216**	Pg	Pb	18 05 46.6	-0.9
HUH				Sg	Sb	18 05 52.2	-1.8
HUH				IAML		18 05 57.2	
	comp=E,230nm,0.6s						
HUH				IAML		18 05 59.9	
	comp=N,275nm,0.2s						
HMH	**Humu'ula Sheep**	**0.45**	**171**	Pg	Pb	18 05 46.5	-1.1
HMH				Sg	Sb	18 05 52.8	-1.4
MLOA	**Mauna Loa Obse**	**0.51**	**182**	Pg	Pb	18 05 47.6	-1.1
MLOA				Sg	Sb	18 05 54.5	-1.5
ALEP	**Alea Permanent**	**0.51**	**189**		Pb	18 05 47.5	-1.2
KHLU	**Kahalu`u**	**0.55**	**215**		Pb	18 05 47.4	-1.8
KHLU				Sg	Sb	18 05 54.5	-2.3
MLH	**Mauna Loa**	**0.57**	**163**		Pb	18 05 48.0	-1.6
MLH				Sg	Sb	18 05 54.0	-3.5
MLH				IAML		18 05 59.4	
	comp=N,123nm,1.2s						
RSD	**Rainshed**	**0.64**	**155**		Pb	18 05 48.4	-2.2
RSD					Sb	18 05 56.7	-2.6
RSD				IAML		18 06 06.6	
	comp=E,112nm,1.4s						
UWE	**Uwekahuna**	**0.67**	**158**		Pb	18 05 48.9	-2.3
UWE				Sg	Sb	18 05 57.4	-2.9
UWB	**Uwekahuna B**	**0.68**	**157**		Pb	18 05 49.2	-2.1
UWB	**Uwekahuna B**	**0.68**	**157**	IAML		18 06 00.2	
	comp=E,113nm,1.3s						
UWB				IAML		18 06 08.4	
	comp=N,158nm,1.1s						
SBLHI	**Steaming Bluff**	**0.68**	**156**		Pb	18 05 49.0	-2.3
SBLHI				IAML		18 06 00.6	
	comp=E,260nm,1.3s						
SBLHI				IAML		18 06 08.1	
	comp=N,210nm,0.8s						
OBL	**Observatory Le**	**0.68**	**157**		Pb	18 05 49.1	-2.1
HATHI	**Halema'uma'u T**	**0.68**	**156**		Pb	18 05 49.2	-2.2
WRMHI	**West Rim**	**0.68**	**159**		Pb	18 05 49.2	-2.2
WRMHI	**West Rim**	**0.68**	**159**	IAML		18 05 56.9	
	comp=E,564nm,1.2s						
WRMHI				IAML		18 06 00.1	
	comp=N,595nm,1.1s						
PUH	**Pauahi**	**0.74**	**154**		Pn	18 05 58.7	+5.9
PUH	**Pauahi**	**0.74**	**154**		Pb	18 05 49.9	-2.5
PUH	**Pauahi**	**0.74**	**154**	IAML		18 06 03.2	
	comp=E,104nm,1.5s						
PUH				IAML		18 06 11.0	
	comp=N,229nm,1.4s						
STCH	**Steam Cracks**	**0.78**	**148**		Sb	18 05 59.2	-3.9
STCH	**Steam Cracks**	**0.78**	**148**		Pb	18 05 50.7	-2.2
STCH	**Steam Cracks**	**0.78**	**148**	IAML		18 06 04.8	
	comp=N,245nm,0.8s						
STCH				IAML		18 06 06.1	
	comp=E,175nm,1.2s						
HLP	**Hilina Pali**	**0.79**	**162**		Pb	18 05 50.5	-2.5
HLP					Sb	18 05 59.9	-3.5
HLP	**Hilina Pali**	**0.79**	**162**	IAML		18 06 07.4	
	comp=N,177nm,1.0s						
HLP				IAML		18 06 16.4	
	comp=E,254nm,1.2s						
KHU	**Kahuku**	**0.80**	**184**		Pb	18 05 50.8	-2.6
KHU	**Kahuku**	**0.80**	**184**	IAML		18 06 09.3	
	comp=E,88nm,1.4s						
KHU				IAML		18 06 10.6	
	comp=N,79nm,1.3s						
JOKA	**Jonika Flow**	**0.81**	**139**		Pn	18 05 60.0	+6.4
HTC	**Hot Caves**	**0.82**	**169**		Pb	18 05 51.1	-2.5

IDC 23 18:10:09.6±4.1, 2°.95S×131°.52E, h0km, mb3.5/3, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=296.4km s-min=26.5km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.11**	**171**	P	Pn	18 14 09.2	-1.3
	0.1nm,0.3s,baz=351,slow=12,SNR=2.0						
WRA				S	Sn	18 17 03.8	-18
	0.7nm,0.9s,baz=356,slow=23,SNR=2.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**20.73**	**174**	P	P	18 14 52.3	+0.4
	1.7nm,0.6s,baz=350,slow=11,SNR=46						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**65.73**	**325**	P	P	18 20 57.1	+0.8
	0.3nm,0.6s,baz=139,slow=7.8,SNR=5.1						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**69.90**	**327**	P	P	18 21 21.5	-1.0
	0.2nm,0.4s,baz=136,slow=6.0,SNR=1.8						
	0.2nm,0.4s						

IDC 23 18:19:43.4±9.5, 2°.09N×100°.34E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=342.8km s-min=31.0km az=66.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.90**	**125**	P	P	18 27 19.1	-0.4
	0.7nm,0.3s,baz=303,slow=9.1,SNR=12						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**41.49**	**130**	P	P	18 27 32.9	+0.2
	0.2nm,0.7s,baz=299,slow=7.7,SNR=8.1						
	0.2nm,0.7s						
SONM	**Songino Array**	**45.86**	**6**	P	P	18 28 07.5	-0.1
	0.3nm,0.5s,baz=189,slow=9.8,SNR=4.5						
	0.3nm,0.5s						

IDC 23 18:24:19.0±2.0, 1°.95N×124°.30E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=203.2km s-min=28.1km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**156**	P	P	18 29 34.3	-0.2
	0.3nm,0.5s,baz=334,slow=11,SNR=6.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**27.12**	**160**	P	P	18 30 04.6	+0.7
	0.2nm,0.7s,baz=342,slow=8.1,SNR=4.8						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**57.67**	**327**	P	P	18 34 10.8	-0.5
	0.1nm,0.4s,baz=116,slow=6.4,SNR=2.4						
	0.1nm,0.4s						

MEX 23 18:27:00.1±2.0, 19°.40N×104°.10W, h28km±21km, MD4.3, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEGR	**Campo Tres**	**0.23**	**91**	*e*P	Pb	18 27 04.3	-2.4
CEGR				*i* S	Sb	18 27 09.7	-1.5
CEGR	**Campo Tres**	**0.23**	**91**	*i* P	Pb	18 27 04.4	-2.2
CEGR				*i* S	Sb	18 27 09.8	-1.3
COIG	**Colima**	**0.45**	**119**	*i* P	Pb	18 27 07.3	-2.4
COIG				*i* S	Sb	18 27 14.6	-1.5
COIG	**Colima**	**0.45**	**119**	*i* P	Pb	18 27 07.4	-2.3
COIG				*i* S	Sb	18 27 14.5	-1.7
CDAR	**Ciudad de Arme**	**0.46**	**169**	*e*P	Pb	18 27 07.5	-2.3
CDAR				*i* S	Sb	18 27 15.1	-1.3
CDAR	**Ciudad de Arme**	**0.46**	**169**	*i* P	Pb	18 27 07.7	-2.1
CDAR				*i* S	Sb	18 27 15.2	-1.3
MNGA	**Volcan de Coli**	**0.46**	**81**	*i* P	Pb	18 27 07.9	-2.1
MNGA				*i* S	Sb	18 27 16.0	-0.8
MNGA	**Volcan de Coli**	**0.46**	**81**	*i* P	Pb	18 27 08.0	-2.1
MNGA				*i* S	Sb	18 27 15.8	-0.9
SOMAC	**Volcano de Col**	**0.47**	**74**	*e*P	Pb	18 27 07.9	-2.2
SOMAC				*i* S	Sb	18 27 15.9	-1.1
SOMAC	**Volcano de Col**	**0.47**	**74**	*i* P	Pb	18 27 08.0	-2.1
SOMAC				*i* S	Sb	18 27 15.6	-1.4
EZ5V		**0.48**	**80**	*e*P	Pb	18 27 08.1	-2.2
EZ5V				*e*S	Sb	18 27 16.7	-0.6
EZ5V		**0.48**	**80**	*i* P	Pb	18 27 08.2	-2.1
EZ5V				*i* S	Sb	18 27 16.5	-0.8
INCO	**Volcan de Coli**	**0.49**	**75**	*e*P	Pb	18 27 08.2	-2.4
INCO				*i* S	Sb	18 27 16.4	-1.2
INCO	**Volcan de Coli**	**0.49**	**75**	*i* P	Pb	18 27 08.4	-2.1
INCO				*i* S	Sb	18 27 16.2	-1.5
JUBC	**Volcan de Coli**	**0.52**	**77**	*i* P	Pb	18 27 08.7	-2.3
JUBC				*i* S	Sb	18 27 17.4	-1.0
JUBC	**Volcan de Coli**	**0.52**	**77**	*i* P	Pb	18 27 08.8	-2.1
JUBC				*i* S	Sb	18 27 17.0	-1.3
CIHU	**Emiliano Zapat**	**0.61**	**258**	*i* P	Pb	18 27 09.5	-2.8
CIHU				*i* S	Sb	18 27 18.7	-1.9
CIHU	**Emiliano Zapat**	**0.61**	**258**	*i* P	Pb	18 27 09.5	-2.8
CIHU				*i* S	Sb	18 27 18.4	-2.2
CJM	**Chamela**	**0.89**	**277**	*e*P	Pn	18 27 13.8	-3.0
CJM				*e*S	Sb	18 27 25.7	-2.9
CJM	**Chamela**	**0.89**	**277**	*i* P	Pn	18 27 13.9	-2.9
CJM				*i* S	Sb	18 27 26.1	-2.4
ESTA	**Talpa de Allen**	**1.21**	**325**	*e*P	Pn	18 27 18.2	-3.1
ESTA				*e*S	Sn	18 27 33.6	-3.4
ESTA	**Talpa de Allen**	**1.21**	**325**	*i* P	Pn	18 27 18.3	-3.1
ESTA				*i* S	Sn	18 27 34.7	-2.2
MMIG	**Aquila**	**1.32**	**147**	*i* P	Pn	18 27 20.6	-2.1
MMIG				*e*S	Sn	18 27 37.2	-2.1
MMIG	**Aquila**	**1.32**	**147**	*i* P	Pn	18 27 20.6	-2.0
MMIG				*i* S	Sn	18 27 38.2	-1.1
ANIG	**Ahuacatlan**	**1.69**	**347**	*i* P	Pn	18 27 27.2	-0.7
ANIG				*i* S	Sn	18 27 49.1	+0.3
ANIG	**Ahuacatlan**	**1.69**	**347**	*i* P	Pn	18 27 27.2	-0.8
ANIG				*i* S	Sn	18 27 49.2	+0.4
MOIG	**Morelia**	**2.76**	**84**	*e*S	Sn	18 28 12.8	-2.6
ARIG	**Puente Sto Nin**	**3.73**	**107**	*e*P	Pn	18 27 56.5	+0.6
ARIG				*i* S	Sn	18 28 37.5	-1.4
ARIG	**Puente Sto Nin**	**3.73**	**107**	*e*P	Pn	18 27 56.4	+0.5
ARIG				*e*S	Sn	18 28 43.5	+4.7
CAIG	**El Cayaco**	**4.33**	**122**	*e*P	Pn	18 28 04.0	-0.1
CAIG				*i* S	Sn	18 28 49.3	-4.4
CAIG	**El Cayaco**	**4.33**	**122**	*e*P	Pn	18 27 58.6	-5.5
CAIG				*e*S	Sn	18 28 55.0	+1.3
PLIG	**Platanillo**	**4.47**	**102**	*e*P	Pn	18 28 09.8	+3.7
PLIG				*i* S	Sn	18 29 02.8	+5.5
PLIG	**Platanillo**	**4.47**	**102**	*e*P	Pn	18 28 07.7	+1.6
PLIG				*e*S	Sb	18 29 07.3	-4.2
MEIG	**Mezcala**	**4.50**	**108**	*e*P	Pn	18 28 08.0	+1.6
MEIG				*i* S	Sn	18 28 53.4	-4.5
MEIG	**Mezcala**	**4.50**	**108**	*e*P	Pn	18 28 09.6	+3.1
MEIG				*e*S	Sn	18 29 03.4	+5.5
DAIG	**Los Arroyos**	**4.85**	**118**	*e*P	Pn	18 28 11.1	-0.2
DAIG				*i* S	Sn	18 29 05.1	-1.4

NEIC ***23*** *18:43:46.5±1.2, 56°.49N±0°.06×149°.40W±0°.07, h23km±9km, ML3.5/56, ML3.2(AEIC), Error ellipse: s-maj=10.0km s-min=1.7km az=147.0*
AEIC ***23*** *18:43:48.9±2.0, 56°.42N±0°.09×149°.3W±0°.1, h11km±7km, Error ellipse: s-maj=13.8km s-min=9.2km az=183.0*

ISC 23 18:43:45.0±1.8, 56°.5N±0°.1×149°.42W±0°.06, h10km, n179, σ0°.94/173, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.13**	**307**		**Pn**	**18 44 21.6**	**+1.0**
KDAK					**Sn**	**18 44 46.2**	**-0.8**
OHAK	**Old Harbor**	**2.23**	**290**		**Pn**	**18 44 22.3**	**+0.3**
OHAK	**Old Harbor**	**2.23**	**290**		**Sn**	**18 44 47.5**	**-2.0**
OHAK	**Old Harbor**	**2.23**	**290**	IAML		18 44 50.5	
	comp=N,34nm,3.2s						
OHAK				IAML		18 45 06.6	
	comp=E,35nm,2.5s						
OHAK	**Old Harbor**	**2.23**	**290**	P	**Pn**	**18 44 22.2**	**+0.3**
	baz=108						
OHAK				S	**Sn**	**18 44 47.4**	**-2.0**
	baz=108						
SYI	**Shuyak Island**	**2.62**	**324**		**Pn**	**18 44 28.1**	**+0.8**
SYI	**Shuyak Island**	**2.62**	**324**		**Sn**	**18 44 59.8**	**+0.6**
Q20K	**Shuyak Island**	**2.62**	**324**	P	**Pn**	**18 44 28.1**	**+0.8**
	baz=141						
Q20K				S	**Sn**	**18 44 59.7**	**+0.6**
	baz=141						
R18K	**Karluk**	**2.94**	**293**		**Pn**	**18 44 32.2**	**+0.6**
R18K	**Karluk**	**2.94**	**293**		**Sn**	**18 45 05.6**	**-1.3**
R18K	**Karluk**	**2.94**	**293**	IAML		18 45 10.5	
	comp=E,50nm,0.5s						
R18K				IAML		18 45 12.8	
	comp=N,47nm,0.7s						
R18K	**Karluk**	**2.94**	**293**	P	**Pn**	**18 44 32.6**	**+1.0**
	baz=110						
R18K				S	**Sn**	**18 45 05.6**	**-1.3**
	baz=110						
CNPM	**China Poot**	**3.15**	**343**		**Pn**	**18 44 35.1**	**+0.5**
CNPM					**Sn**	**18 45 11.4**	**-0.8**
BRSE	**Bradley Lake S**	**3.29**	**348**		**Pn**	**18 44 36.9**	**+0.4**
BRSE					**Sn**	**18 45 14.1**	**-1.6**
BRSE	**Bradley Lake S**	**3.29**	**348**	P	**Pn**	**18 44 36.9**	**+0.4**
	baz=166						
BRSE				S	**Sn**	**18 45 14.1**	**-1.6**
	baz=166						
Q19K	**Cape Douglas,**	**3.30**	**318**		**Pn**	**18 44 37.5**	**+0.8**
Q19K				IAML		18 45 28.5	
	comp=N,183nm,1.9s						
Q19K	**Cape Douglas,**	**3.30**	**318**	P	**Pn**	**18 44 37.9**	**+1.3**
	baz=135						
BRLK	**Bradley Lake**	**3.33**	**347**		**Pn**	**18 44 37.4**	**+0.3**
KAHG	**Katmai Hook Gl**	**3.39**	**307**		**Pn**	**18 44 40.1**	**+2.2**
P23K	**Montague Islan**	**3.63**	**16**		**Pn**	**18 44 41.4**	**+0.2**
P23K	**Montague Islan**	**3.63**	**16**	P	**Pn**	**18 44 41.4**	**+0.2**
	baz=196						
ANCK	**Angle Creek**	**3.69**	**299**		**Pn**	**18 44 43.7**	**+1.7**
P19K	**Oil Pt**	**3.72**	**329**		**Pn**	**18 44 43.5**	**+1.0**
P19K	**Oil Pt**	**3.72**	**329**	IAML		18 45 30.4	
	comp=E,63nm,2.6s						
P19K				IAML		18 45 38.5	
	comp=N,72nm,1.6s						
P19K	**Oil Pt**	**3.72**	**329**	P	**Pn**	**18 44 43.5**	**+1.0**
	baz=145						
CNTC	**Contact Creek**	**3.90**	**299**		**Pn**	**18 44 46.5**	**+1.5**
Q17K	**Contact Creek**	**3.90**	**299**	P	**Pn**	**18 44 46.5**	**+1.5**
	baz=114						
Q20K	**Slope Mountain**	**3.94**	**336**		**Pn**	**18 44 46.4**	**+0.9**
Q20K	**Slope Mountain**	**3.94**	**336**	P	**Pn**	**18 44 46.4**	**+0.9**
	baz=153						
IVE	**Iliamna Volcan**	**3.97**	**333**		**Pn**	**18 44 46.4**	**+0.5**
ILSW	**Iliamna Southw**	**3.98**	**332**	Pn	Pn	18 44 43.5	-2.5
ILSW				IAML		18 47 07.0	
	comp=E,42nm,2.1s						
ILSW				IAML		18 47 07.1	
	comp=N,39nm,3.5s						
SLKM	**Skilak Lake**	**4.00**	**354**		**Pn**	**18 44 46.5**	**+0.2**
P18K	**Big Mountain,**	**4.21**	**315**		**Pn**	**18 44 49.8**	**+0.6**
P18K	**Big Mountain,**	**4.21**	**315**	P	**Pn**	**18 44 49.8**	**+0.6**
	baz=131						
RDSO	**Redoubt South**	**4.30**	**337**		**Pn**	**18 44 50.2**	**-0.3**
KAIM	**Kayak Island**	**4.31**	**36**		**Pn**	**18 44 50.9**	**+0.5**
KAIM	**Kayak Island**	**4.31**	**36**	P	**Pn**	**18 44 50.9**	**+0.5**
	baz=218						
RSO	**Redoubt South**	**4.31**	**337**	Pn	**Pn**	**18 44 50.7**	**0.0**
EYAK	**Cordova Ski Ar**	**4.46**	**24**		**Pn**	**18 44 52.9**	**+0.4**
EYAK	**Cordova Ski Ar**	**4.46**	**24**	P	**Pn**	**18 44 52.9**	**+0.4**
	baz=206						
FID	**Port Fidalgo**	**4.50**	**19**		**Pn**	**18 44 53.0**	**-0.1**
FID	**Port Fidalgo**	**4.50**	**19**	IAML		18 46 01.1	
	comp=E,37nm,3.1s						
FID				IAML		18 47 11.1	
	comp=N,44nm,2.7s						
O18K	**Koktuh Hills**	**4.52**	**320**		**Pn**	**18 44 53.8**	**+0.3**
O18K	**Koktuh Hills**	**4.52**	**320**	IAML		18 47 32.1	
	comp=E,27nm,3.2s						
O18K				IAML		18 47 47.0	
	comp=N,33nm,2.9s						
O18K	**Koktuh Hills**	**4.52**	**320**	P	**Pn**	**18 44 53.7**	**+0.3**
	baz=135						
GLI	**Glacier Island**	**4.52**	**15**		**Pn**	**18 44 53.6**	**+0.2**
GLI	**Glacier Island**	**4.52**	**15**	IAML		18 45 55.2	
	comp=N,44nm,3.5s						
GLI				IAML		18 47 33.5	
	comp=E,37nm,3.4s						
GLI	**Glacier Island**	**4.52**	**15**	P	**Pn**	**18 44 53.6**	**+0.2**
	baz=195						
RC01	**Rabbit Creek A**	**4.57**	**358**		**Pn**	**18 44 54.4**	**+0.3**
RC01	**Rabbit Creek A**	**4.57**	**358**	P	**Pn**	**18 44 54.4**	**+0.3**
	baz=177						
RAGM	**Ragged Mountai**	**4.59**	**31**	Pn	**Pn**	**18 44 56.0**	**+1.6**
RAGM				IAML		18 46 04.2	
	comp=E,92nm,2.2s						
P17K	**Kvichak River**	**4.60**	**308**		**Pn**	**18 44 56.5**	**+2.1**
P17K	**Kvichak River**	**4.60**	**308**	P	**Pn**	**18 44 56.5**	**+2.1**
	baz=123						
SUCK	**Suckling Hills**	**4.63**	**38**	Pn	**Pn**	**18 44 55.2**	**+0.4**
HMT	**Hamilton**	**4.68**	**33**		**Sb**	**18 46 03.7**	**+0.4**
HMT				IAML		18 47 34.6	
	comp=N,90nm,3.0s						
HMT	**Hamilton**	**4.68**	**33**		**Pn**	**18 44 56.3**	**+0.8**
NICHA	**Nichawak Mount**	**4.69**	**35**		**Pn**	**18 44 56.4**	**+0.7**
BGLC	**Bering Glacier**	**4.83**	**39**		**Pn**	**18 44 58.8**	**+1.1**
BGLC	**Bering Glacier**	**4.83**	**39**	P	**Pn**	**18 44 58.8**	**+1.1**
	baz=223						
BERG	**Berg Lake**	**4.89**	**35**	Pn	**Pn**	**18 44 58.9**	**+0.4**
BERG				IAML		18 47 43.6	
	comp=N,68nm,2.9s						
N20K	**Mount Spurr**	**4.89**	**344**	P	**Pn**	**18 44 58.7**	**+0.1**
	baz=161						
SPCR	**Spurr Chakacha**	**4.89**	**344**		**Pn**	**18 44 58.7**	**+0.1**
KNK	**Knik Glacier**	**4.92**	**5**		**Pn**	**18 44 59.1**	**+0.3**
KNK	**Knik Glacier**	**4.92**	**5**	IAML		18 45 59.7	
	comp=E,21nm,3.5s						
KNK				IAML		18 46 22.4	
	comp=N,20nm,2.6s						
KNK	**Knik Glacier**	**4.92**	**5**	P	**Pn**	**18 44 59.1**	**+0.3**
	baz=185						
GRIN	**Grindle Hills**	**4.94**	**38**		**Pn**	**18 44 59.9**	**+0.8**
SUA	**Susitna One**	**4.99**	**353**	Pn	**Pn**	**18 44 59.8**	**-0.1**
SUA				IAML		18 45 56.3	
	comp=N,35nm,3.6s						
SUA				IAML		18 47 41.3	
	comp=E,41nm,3.7s						
CHGN	**Chignik**	**5.00**	**271**	Pn	**Pn**	**18 44 59.5**	**-0.4**
N19K	**Bonanza Creek**	**5.04**	**330**		**Pn**	**18 45 01.1**	**+0.5**
N19K	**Bonanza Creek**	**5.04**	**330**	IAML		18 47 33.0	
	comp=E,27nm,3.9s						
N19K				IAML		18 48 01.3	
	comp=N,22nm,3.6s						
N19K	**Bonanza Creek**	**5.04**	**330**	P	**Pn**	**18 45 01.1**	**+0.5**
	baz=146						
SNH	**Sunshine Point**	**5.04**	**41**	Pn	**Pn**	**18 45 00.7**	**+0.2**
KHIT	**Khitrov Hills**	**5.08**	**37**		**Pn**	**18 45 01.5**	**+0.3**
BMRM	**Bremner River**	**5.10**	**27**		**Pn**	**18 45 02.1**	**+0.7**
BMRM	**Bremner River**	**5.10**	**27**	P	**Pn**	**18 45 02.1**	**+0.7**
	baz=210						
STLK	**Strandline Lak**	**5.13**	**347**		**Pn**	**18 45 02.2**	**+0.4**
O17K	**Koliganek Bris**	**5.20**	**312**		**Pn**	**18 45 03.8**	**+1.1**
O17K	**Koliganek Bris**	**5.20**	**312**	P	**Pn**	**18 45 03.8**	**+1.1**
	baz=126						
P16K	**Nushagak River**	**5.22**	**302**		**Pn**	**18 45 05.0**	**+2.0**
P16K	**Nushagak River**	**5.22**	**302**	P	**Pn**	**18 45 05.0**	**+2.0**
	baz=116						
GHO	**Glory Hole Cre**	**5.26**	**3**		**Pn**	**18 45 04.6**	**+1.0**
GHO	**Glory Hole Cre**	**5.26**	**3**	IAML		18 45 52.3	
	comp=N,19nm,3.4s						
GHO				IAML		18 48 17.6	
	comp=E,22nm,4.1s						
KLU	**Klutina**	**5.29**	**19**		**Pn**	**18 45 04.8**	**+0.8**
KLU				IAML		18 46 37.8	
	comp=N,17nm,2.8s						
KLU				IAML		18 48 13.9	
	comp=E,16nm,3.3s						
KLU	**Klutina**	**5.29**	**19**	P	**Pn**	**18 45 05.0**	**+1.0**
	baz=200						
SML	**Sawmill**	**5.32**	**6**		**Pn**	**18 45 05.3**	**+1.0**
SML	**Sawmill**	**5.32**	**6**	IAML		18 47 18.4	
	comp=N,31nm,3.7s						
SML				IAML		18 48 37.1	
	comp=E,26nm,3.9s						
SML	**Sawmill**	**5.32**	**6**	P	**Pn**	**18 45 05.3**	**+1.0**
	baz=186						
CRQM	**Cirque**	**5.35**	**35**		**Pn**	**18 45 05.6**	**+0.6**
CRQM	**Cirque**	**5.35**	**35**	IAML		18 47 34.5	
	comp=E,39nm,3.3s						
CRQM				IAML		18 48 09.1	
	comp=N,36nm,3.5s						
N18K	**Kilae Creek**	**5.35**	**324**		**Pn**	**18 45 05.3**	**+0.4**
N18K	**Kilae Creek**	**5.35**	**324**	P	**Pn**	**18 45 05.3**	**+0.4**
	baz=138						
CRQE	**Cirque**	**5.36**	**35**	P	**Pn**	**18 45 05.6**	**+0.5**
	baz=219						
MESA	**MESA**	**5.37**	**44**		**Pn**	**18 45 05.3**	**+0.2**
MESA	**MESA**	**5.37**	**44**	P	**Pn**	**18 45 05.3**	**+0.2**
	baz=229						
SCM	**Sheep Creek Mo**	**5.42**	**11**	Pn	**Pn**	**18 45 07.5**	**+1.7**
TGL	**Tana Glacier**	**5.45**	**36**		**Pn**	**18 45 06.8**	**+0.5**
ISLE	**Juniper Island**	**5.51**	**39**		**Pn**	**18 45 07.4**	**+0.4**
BAGL	**

M17K	Holitna River	6.40	323	P		Pn	18 45 20.0 +0.9
	baz=136						
N15K	Kwethluk River	6.69	307			Pn	18 45 24.1 +1.0
N15K	Kwethluk River	6.69	307	P		Pn	18 45 24.1 +1.0
	baz=119						
M16K	Timber Creek	6.69	316			Pn	18 45 24.1 +1.0
M16K	Timber Creek	6.69	316	P		Pn	18 45 24.6 +1.4
	baz=128						
L18K	Granite Mounta	6.80	330	Pn		Pn	18 45 24.9 +0.3
O29M	Mount Kennedy	6.83	52			Pn	18 45 25.9 +0.7
O29M	Mount Kennedy	6.83	52	P		Pn	18 45 25.9 +0.7
	baz=240						
RND	Reindeer	6.90	2	Pn		Pn	18 45 27.7 +1.6
P29M	Windy Craggy	6.93	59			Pn	18 45 26.6 +0.1
P29M	Windy Craggy	6.93	59	P		Pn	18 45 26.6 +0.1
	baz=247						
M27K	Edge Creek, AK	6.99	30	Pn		Pn	18 45 29.1 +1.7
CAST	Castle Rocks	7.03	350	Pn		Pn	18 45 30.0 +2.1
KTH	Kantishna Hill	7.08	355	Pn		Pn	18 45 31.0 +2.5
S31K	Pelican	7.30	73	Pn		Pn	18 45 29.3 -2.2
L16K	Owhat River	7.32	319	Pn		Pn	18 45 32.0 +0.2
BCAR	Beaver Creek A	7.59	27	Pn		Pn	18 45 36.7 +1.1
K17K	Iditarod	7.65	328	Pn		Pn	18 45 35.6 -0.8
J20K	Nowinta River	8.01	345	Pn		Pn	18 45 41.1 -0.2
M29M	Somme Creek	8.13	39	Pn		Pn	18 45 44.4 +1.4
O30N	Mendenhall	8.14	53	Pn		Pn	18 45 43.3 +0.2
S32K	Killisnoo	8.16	77	Pn		Pn	18 45 42.2 -1.1
CCB	Clear Creek Bu	8.18	5	Pn		Pn	18 45 43.8 +0.3
R32K	Eaglecrest	8.23	72	Pn		Pn	18 45 43.3 -1.1
JIS	Juneau Island	8.31	72	Pn		Pn	18 45 44.9 -0.4
K27K	Chicken	8.35	23	Pn		Pn	18 45 46.0 +0.1
IL31		8.36	7	Pn		Pn	18 45 47.6 +1.7
ILAR	Eielson Array	8.36	7	Pn		Pn	18 45 45.9 0.0
L29M	L29M	8.69	36	Pn		Pn	18 45 52.0 +1.3
I21K	Tanana	8.76	353	Pn		Pn	18 45 52.9 +1.4
J16K	Anvik River	8.78	325	Pn		Pn	18 45 51.1 -0.7
M30M	Minto, Yukon	8.81	41	Pn		Pn	18 45 51.4 -0.8
P32M	Atlin	8.87	63	Pn		Pn	18 45 52.6 -0.4
U33K	Whale Pass	9.07	86	Pn		Pn	18 45 52.1 -3.6
H21K	Melozitna Rive	9.29	351	Pn		Pn	18 45 58.4 -0.5
K29M	Barlow Dome	9.41	34	Pn		Pn	18 46 01.1 +0.6
P33M	Teslin, Yukon	9.46	60	Pn		Pn	18 46 01.3 +0.1
J14K	Nanvaranak Lak	9.47	317	Pn		Pn	18 46 02.3 +1.1
Q32M	Nakina River	9.48	68	Pn		Pn	18 46 02.4 +0.7
M31M	Drury Creek, Y	9.53	47	Pn		Pn	18 46 01.9 -0.2

*IDC **23** 18:49:18.3±0.5,34.47S×72.18W,h0km,mb4.5/12, mbtmp4.4/15,ML4.1/3,MS3.8/19,Error ellipse: s-maj=22.0km s-min=15.6km az=88.0*
*NEIC **23** 18:49:21.8±1.3,34.51S±0.02×72.22W±0.05,h23km±4km, mb4.9/174,Error ellipse: s-maj=6.2km s-min=2.2km az=113.0*
*GUC **23** 18:49:22.4±0.9,34.52S×72.24W,h28km±2km,ML4.6*
*VAO **23** 18:49:24.0±1.1,34.15S×72.10W,h10km,mb4.5*
ISC 23 18:49:21.0±1.1,34.50S±0.02×72.33W±0.05,h19km±4km, n325,σ0.99/313,mb4.9/97,MS3.9/16,5C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.30**	**90**	*i*	*P*		**Pb**	**18 49 28.4**	**+0.6**
BO03					*eS*		**Sb**	**18 49 32.4**	**+0.1**
GO05	**Huala**	**0.61**	**148**				**Pb**	**18 49 32.8**	**-0.1**
GO05				Sg			**Sb**	**18 49 40.2**	**-0.9**
GO05	**Huala**	**0.61**	**148**	*i*	*P*		**Pb**	**18 49 32.8**	**-0.1**
GO05					*eS*		**Sb**	**18 49 40.1**	**-0.9**
VA05	**Santo Domingo**	**1.02**	**35**				**Pb**	**18 49 40.0**	**-0.2**
VA05				Sg			**Sb**	**18 49 52.1**	**-1.1**
VA05	**Santo Domingo**	**1.02**	**35**	*i*	*P*		**Pb**	**18 49 40.0**	**-0.2**
VA05					*eS*		**Sb**	**18 49 53.0**	**-0.2**
VA05					IAML			18 49 55.6	
	comp=N,20μm,0.2s								
BO01	**Tunca**	**1.03**	**84**				**Pb**	**18 49 38.8**	**-1.5**
BO01				Sn			**Sb**	**18 49 51.4**	**-2.0**
MT01	**Popeta**	**1.09**	**55**				**Pb**	**18 49 40.1**	**-1.2**
MT01				Sg			**Sb**	**18 49 53.1**	**-2.1**
MT01	**Popeta**	**1.09**	**55**	⇑	*iP*		**Pb**	**18 49 40.1**	**-1.2**
MT01					*eS*		**Sb**	**18 49 53.5**	**-1.6**
BO02	**Sierra Bellavi**	**1.31**	**103**				**Pn**	**18 49 43.6**	**-0.7**
BO02				Sn			**Sn**	**18 49 58.6**	**-2.7**
BO02	**Sierra Bellavi**	**1.31**	**103**	⇑	*iP*		**Pn**	**18 49 43.6**	**-0.7**
BO02					*eS*		**Sn**	**18 49 58.8**	**-2.5**
MT09	**Talagante**	**1.32**	**57**				**Pn**	**18 49 43.8**	**-0.8**
MT09							**Sn**	**18 50 00.4**	**-1.4**
MT09	**Talagante**	**1.32**	**57**	⇑	*iP*		**Pn**	**18 49 43.8**	**-0.8**
MT09					*eS*		**Sn**	**18 50 00.9**	**-0.9**
MT09					IAML			18 50 02.3	
	comp=N,20μm,0.5s								
ML02	**Panimavida**	**1.47**	**150**				**Pn**	**18 49 46.5**	**+0.1**
ML02				Sn			**Sn**	**18 50 04.9**	**-0.3**
ML02	**Panimavida**	**1.47**	**150**	*i*	*P*		**Pn**	**18 49 46.5**	**+0.1**
ML02					*eS*		**Sn**	**18 50 05.2**	**+0.1**
BO04	**La Punta**	**1.51**	**71**				**Pn**	**18 49 46.9**	**-0.2**
BO04				Sn			**Sn**	**18 50 05.6**	**-0.7**
BO04	**La Punta**	**1.51**	**71**	⇑	*iP*		**Pn**	**18 49 46.9**	**-0.2**
BO04					IAML			18 50 08.7	
	comp=N,13μm,0.5s								
VA01	**Torpederas**	**1.57**	**21**				**Pn**	**18 49 47.9**	**-0.1**
VA01	**Torpederas**	**1.57**	**21**	*eP*			**Pn**	**18 49 47.9**	**-0.1**
MT02	**Curacav**	**1.58**	**39**				**Pn**	**18 49 47.7**	**-0.3**
MT02				Sn			**Sn**	**18 50 06.8**	**-1.2**
MT02	**Curacav**	**1.58**	**39**	⇓	*iP*		**Pn**	**18 49 47.8**	**-0.3**
MT02					*eS*		**Sn**	**18 50 06.6**	**-1.5**
MT12	**Pirque**	**1.66**	**63**	*eP*			**Pn**	**18 49 49.2**	**+0.1**
MT12					*eS*		**Sb**	**18 50 11.0**	**-0.6**
MT12					IAML			18 50 16.6	
	comp=N,27μm,0.5s								
MT05	**Renca**	**1.72**	**51**				**Pn**	**18 49 50.2**	**+0.2**
MT05				Sn			**Sn**	**18 50 10.9**	**-0.6**
MT05	**Renca**	**1.72**	**51**	*eP*			**Pn**	**18 49 50.4**	**+0.3**
MT05					*eS*		**Sn**	**18 50 11.0**	**-0.6**
MT05					IAML			18 50 18.6	
	comp=E,15μm,0.8s								
MT15	**Las Vizcachas**	**1.76**	**60**	*eP*			**Pn**	**18 49 51.0**	**+0.4**
MT15					*eS*		**Sn**	**18 50 12.5**	**+0.1**
MT15					IAML			18 50 17.6	
	comp=E,14μm,0.4s								
MT03	**Universidad Ad**	**1.81**	**57**				**Pn**	**18 49 51.2**	**-0.1**
MT03	**Universidad Ad**	**1.81**	**57**	*eP*			**Pn**	**18 49 51.3**	**-0.1**
MT03					*eS*		**Sn**	**18 50 14.7**	**+0.9**
MT03					IAML			18 50 18.4	
	comp=N,11μm,0.3s								
MT16	**CCHEN**	**1.84**	**55**				**Pn**	**18 49 52.0**	**+0.3**
MT16	**CCHEN**	**1.84**	**55**	*eP*			**Pn**	**18 49 52.0**	**+0.3**
MT16					*eS*		**Sn**	**18 50 14.2**	**-0.2**
MT16					IAML			18 50 21.6	
	comp=N,8μm,0.8s								
MT14	**Cerro Cal¡n**	**1.85**	**54**	*eP*			**Pn**	**18 49 52.2**	**+0.4**
MT14					*eS*		**Sn**	**18 50 14.8**	**+0.1**
MT14					IAML			18 50 25.8	
	comp=N,15μm,0.6s								
MT13	**San Alfonso**	**1.85**	**67**				**Pn**	**18 49 52.4**	**+0.5**
MT13	**San Alfonso**	**1.85**	**67**	*eP*			**Pn**	**18 49 52.5**	**+0.6**
MT13					*eS*		**Sn**	**18 50 14.7**	**-0.1**
MT13					IAML			18 50 18.1	
	comp=N,10μm,0.4s								
LMEL	**Las Melosas**	**1.88**	**70**				**Pn**	**18 49 52.9**	**+0.6**
LMEL	**Las Melosas**	**1.88**	**70**	⇑	*iP*		**Pn**	**18 49 52.9**	**+0.6**
LMEL					*eS*		**Sn**	**18 50 15.6**	**+0.1**
LMEL					IAML			18 50 20.9	
	comp=N,14μm,0.1s								
ROCH	**El Roble**	**1.88**	**36**	*eP*			**Pn**	**18 49 52.4**	**0.0**
ROCH					*eS*		**Sb**	**18 50 18.1**	**+0.1**
ROCH					IAML			18 50 26.0	
	comp=N,9μm,0.6s								
PEL	**Peldehue**	**1.92**	**46**				**Pn**	**18 49 53.2**	**+0.4**
PEL	**Peldehue**	**1.92**	**46**	*eP*			**Pn**	**18 49 53.0**	**+0.2**
PEL					*eS*		**Sn**	**18 50 15.8**	**-0.6**
PEL					IAML			18 50 26.4	
	comp=N,5μm,0.4s								
MT10	**Hacienda Santa**	**1.93**	**51**	*eP*			**Pn**	**18 49 53.4**	**+0.4**
MT10					*eS*		**Sn**	**18 50 17.3**	**+0.6**
MT10					IAML			18 50 26.6	
	comp=N,10μm,0.7s								
FCH	**Farellones**	**2.06**	**56**	*eP*			**Pn**	**18 49 55.2**	**+0.3**
FCH					*eS*		**Sn**	**18 50 20.7**	**+0.5**
FCH					IAML			18 50 28.1	
	comp=E,3μm,0.3s								
VA06	**Catapilco**	**2.11**	**24**				**Pn**	**18 49 55.3**	**-0.1**
VA06	**Catapilco**	**2.11**	**24**	*eP*			**Pn**	**18 49 55.3**	**-0.1**
VA06					*eS*		**Sb**	**18 50 25.0**	**+0.4**
VA06					IAML			18 50 33.1	
	comp=N,5μm,0.5s								
MT04	**Ro Olivares**	**2.12**	**60**	*eP*			**Pn**	**18 49 56.0**	**+0.2**
MT04					*eS*		**Sn**	**18 50 22.3**	**+0.7**
MT04					IAML			18 50 31.4	
	comp=E,5μm,0.5s								
VA03	**San Esteban**	**2.28**	**41**				**Pn**	**18 49 58.2**	**+0.5**
VA03	**San Esteban**	**2.28**	**41**	*eP*			**Pn**	**18 49 58.2**	**+0.5**
VA03					*eS*		**Sn**	**18 50 26.2**	**+0.9**
VA03					IAML			18 50 35.1	
	comp=N,6μm,0.5s								
BI02	**San Fabin de**	**2.33**	**159**	⇓	*iP*		**Pn**	**18 49 59.3**	**+0.9**
BI02					*eS*		**Sn**	**18 50 27.2**	**+0.7**
BI02					IAML			18 50 32.3	
	comp=N,4μm,0.3s								
BI05	**Punta Hualpn**	**2.35**	**197**				**Pn**	**18 49 58.6**	**-0.1**
CO02	**Combarbal**	**3.47**	**19**				**Pn**	**18 50 14.1**	**0.0**
CO02	**Combarbal**	**3.47**	**19**	*eP*			**Pn**	**18 50 14.1**	**0.0**
CO06	**Fray Jorge**	**3.86**	**9**				**Pn**	**18 50 18.5**	**-0.9**
CO06	**Fray Jorge**	**3.86**	**9**	*i*	*P*		**Pn**	**18 50 18.5**	**-0.9**
CO03	**El Pedregal**	**3.90**	**21**	Pn			**Pn**	**18 50 20.4**	**+0.3**
CO03	**El Pedregal**	**3.90**	**21**	*eP*			**Pn**	**18 50 20.4**	**+0.3**
BI04	**Isla Mocha**	**4.10**	**197**	*eP*			**Pn**	**18 50 22.0**	**-0.7**
LC02	**Puerto Saavedr**	**4.37**	**191**				**Pn**	**18 50 26.0**	**-0.4**
LC02	**Puerto Saavedr**	**4.37**	**191**	*eP*			**Pn**	**18 50 25.9**	**-0.5**
GO04	**Tololo Observa**	**4.50**	**17**				**Pn**	**18 50 28.2**	**-0.3**
GO04	**Tololo Observa**	**4.50**	**17**	*eP*			**Pn**	**18 50 28.7**	**+0.2**
CO05	**La Serena**	**4.66**	**12**				**Pn**	**18 50 30.1**	**-0.3**
CO05	**La Serena**	**4.66**	**12**	*eP*			**Pn**	**18 50 30.0**	**-0.3**
CO01	**Juntas del Tor**	**4.89**	**23**				**Pn**	**18 50 34.5**	**+0.7**
CO01	**Juntas del Tor**	**4.89**	**23**	*eP*			**Pn**	**18 50 34.8**	**+1.0**
GO06	**Curarrehue**	**5.12**	**173**				**Pn**	**18 50 37.7**	**+0.8**
LR03	**Panguipulli**	**5.12**	**180**				**Pn**	**18 50 37.3**	**+0.5**
LR04	**Coral**	**5.44**	**189**				**Pn**	**18 50 40.4**	**-0.8**
VA04	**Juan Fernndez**	**5.47**	**277**				**Pn**	**18 50 42.8**	**+1.3**
H03S1	**Juan Fernandez**	**5.49**	**275**	T		T		18 56 27.1	
	baz=98,slow=75								
H03S3	**Juan Fernandez**	**5.50**	**275**	T		T		18 56 28.6	
	baz=98,slow=75								
H03S2	**Juan Fernandez**	**5.51**	**275**	T		T		18 56 33.9	
	baz=98,slow=75								
H03N1	**Juan Fernandez**	**5.57**	**279**	T		T		18 56 39.6	
	baz=102,slow=79								
H03N3	**Juan Fernandez**	**5.58**	**279**	T		T		18 56 38.0	
	baz=102,slow=79								
H03N2	**Juan Fernandez**	**5.59**	**279**	T		T		18 56 39.5	
	baz=102,slow=79								
LC0	**Las Campanas**	**5.64**	**15**	Pn			**Pn**	**18 50 43.7**	**-0.5**
LR05	**Currie**	**5.73**	**178**				**Pn**	**18 50 45.5**	**+0.5**
AC05	**El Transito**	**5.91**	**18**	Pn			**Pn**	**18 50 47.8**	**+0.1**
AC04	**Llanos de Chal**	**6.36**	**10**				**Pn**	**18 50 52.6**	**-1.3**
PLCA	**Paso Flores**	**6.38**	**168**				**Pn**	**18 50 55.1**	**+1.0**
PLCA	**Paso Flores**	**6.38**	**168**	Pn			**Pn**	**18 50 55.6**	**+1.5**
	comp=N,1.1nm,0.3s,baz=335,slow=14,SNR=25								
PLCA					Lg		Lg	18 52 31.1	
	comp=N,2.3nm,0.3s,baz=51,slow=0.5,SNR=3.1								
PLCA					LR		LR	18 53 35.0	
	comp=N,842nm,19.2s,baz=350,slow=40								
	comp=N,8.4nm,0.4s								
LL05	**Los Muermos**	**6.96**	**187**	Pn			**Pn**	**18 51 02.8**	**+0.9**
GO03	**Copiap**	**7.11**	**15**				**Pn**	**18 51 03.4**	**-0.8**
LL06	**Loncomilla**	**7.77**	**187**	Pn			**Pn**	**18 51 13.2**	**+0.1**
LL01	**San Ignacio de**	**7.87**	**180**	Pn			**Pn**	**18 51 13.3**	**-1.1**
AC02	**Maricunga**	**8.12**	**21**	Pn			**Pn**	**18 51 16.5**	**-1.8**
LL07	**Hotel Espejo d**	**8.37**	**186**	Pn			**Pn**	**18 51 20.8**	**-0.5**
AC01	**Pan de Azucar**	**8.45**	**11**	Pn			**Pn**	**18 51 19.0**	**-3.5**
LL02	**Futaleuf**	**8.69**	**178**				**Pn**	**18 51 25.8**	**+0.1**
GO02	**Mina Guanaco**	**9.60**	**15**	Pn			**Pn**	**18 51 35.1**	**-3.4**
AY01	**Puyuhuapi**	**9.91**	**181**	Pn			**Pn**	**18 51 42.2**	**-0.2**
PB14	**IPOC Station P**	**9.98**	**10**	Pn			**Pn**	**18 51 41.0**	**-2.7**
PB10	**IPOC Station P**	**11.05**	**9**	Pn			**Pn**	**18 51 55.9**	**-2.3**
LVC	**Limon Verde**	**12.22**	**15**	Pn			**Pn**	**18 52 14.5**	**+0.1**
	comp=N,0.5nm,0.3s,baz=246,slow=3.4,SNR=1.6								
LVC					Sn		**Sn**	**18 54 34.1**	**+3.8**
	comp=N,0.3nm,0.3s,baz=217,slow=15,SNR=1.9								
LVC					LR		LR	18 57 07.2	
	comp=N,391nm,19.4s,baz=202,slow=39								
	comp=N,1.9nm,0.4s								
PSAL	**Palomas, Salto**	**12.84**	**79**	*eP*			**Pn**	**18 52 24.2**	**+1.6**
PB07	**IPOC Station P**	**12.90**	**10**	Pn			**Pn**	**18 52 20.1**	**-3.5**
TBOT	**Tacuaremb**	**14.02**	**83**	*eP*			**Pn**	**18 52 38.3**	**-0.4**
ITQB	**Itaqui**	**14.15**	**74**	Pn			**Pn**	**18 52 39.0**	**-1.4**
ITQB	**Itaqui**	**14.15**	**74**	*eP*			**Pn**	**18 52 41.9**	**+1.4**
PB08	**IPOC Station P**	**14.57**	**12**	Pn			**Pn**	**18 52 43.5**	**-3.2**
PB11	**IPOC Station P**	**14.87**	**10**				**Pn**	**18 52 48.0**	**-2.5**
GO01	**Chusmiza**	**15.03**	**11**				**Pn**	**18 52 50.4**	**-2.6**
RODS	**Rosario do Sul**	**15.04**	**79**	*eP*			**Pn**	**18 52 52.8**	**+0.2**
CPUP	**Villa Florida**	**15.27**	**62**	Pn			**Pn**	**18 52 53.5**	**-2.2**
CPUP	**Villa Florida**	**15.27**	**62**	Pn			**Pn**	**18 52 54.5**	**-1.1**
	comp=N,0.3nm,0.3s,baz=212,slow=13,SNR=3.0								
CPUP					Lg		Lg	18 57 18.8	
	comp=N,0.2nm,0.3s,baz=9.1,slow=19,SNR=1.5								
CPUP					LR		LR	18 59 14.2	
	comp=N,439nm,18.7s,baz=244,slow=39								
	comp=N,1.5nm,0.5s								
CPUP	**Villa Florida**	**15.27**	**62**	*eP*			**Pn**	**18 52 54.0**	**-1.6**
UNIS	**Unistalda (Bra**	**15.63**	**74**	*eP*			**P**	**18 53 02.6**	**-1.8**
PB12	**IPOC Station P**	**15.92**	**7**	P			**Pn**	**18 53 04.3**	**+0.1**
PLTB	**Pedras Altas**	**15.92**	**85**	Pn			**Pn**	**18 53 01.5**	**-2.6**
PB16	**IPOC Station P**	**16.29**	**10**	P			**Pn**	**18 53 09.2**	**-0.2**
GO09	**Cerro Castillo**	**16.77**	**180**				**Pn**	**18 53 14.8**	**+0.2**
ALGR	**Alto Alegre (B**	**17.38**	**76**	*eP*			**P**	**18 53 24.7**	**+0.9**
MURT	**Porto Murtinho**	**18.20**	**49**	*eP*			**Pn**	**18 53 32.2**	**-0.4**
FRBT	**Francisco Belt**	**18.66**	**68**	*eP*			**Pn**	**18 53 39.1**	**+0.7**
ITAB	**Concordia**	**18.77**	**73**	P			**P**	**18 53 37.9**	**-1.1**
ITAB	**Concordia**	**18.77**	**73**	*eP*			**Pn**	**18 53 40.9**	**+1.3**
CNLB	**Canela**	**18.94**	**80**	*eP*			**Pn**	**18 53 42.4**	**+0.7**
ANTJ	**Antonio Joao (**	**18.99**	**53**	*eP*			**P**	**18 53 41.8**	**+0.2**
BDQN	**Bodoquena, MS**	**19.63**	**49**	*eP*			**Pn**	**18 53 49.3**	**-0.7**
BBRB	**Robore, Bolivi**	**19.63**	**38**	*eP*			**P**	**18 53 48.3**	**-0.3**
PTGB	**Pitanga**	**20.10**	**66**	*eP*			**P**	**18 53 53.7**	**-0.1**
BBSD	**Serra de San D**	**20.18**	**34**	*eP*			**P**	**18 53 54.5**	**0.0**
AQDB	**Aquidauana**	**20.27**	**51**				**P**	**18 53 54.2**	**-1.3**
AQDB	**Aquidauana**	**20.27**	**51**	*eP*			**P**	**18 53 55.8**	**+0.2**
TRCB	**Terra Rica**	**20.80**	**61**	P			**P**	**18 53 60.0**	**-1.4**
TRCB					IAmb	IAmb		18 54 05.8	
	comp=Z,29nm,0.6s								
TRCB	**Terra Rica**	**20.80**	**61**	*eP*			Pn	18 54 03.1	-0.8
SIV	**San Ignacio**	**21.02**	**32**	P			**P**	**18 54 03.1**	**-0.7**
	comp=Z,7.7nm,0.9s,baz=208,slow=10,SNR=20								
	comp=Z,7.7nm,0.9s								
LDASE	**Londrina, Braz**	**21.56**	**65**	*eP*			**P**	**18 54 11.2**	**+1.7**
RPRD	**Ribas do Rio P**	**21.58**	**54**	*eP*			**P**	**18 54 10.0**	**+0.3**
PTLB	**Pontes e Lacer**	**22.38**	**35**	P			**P**	**18 54 17.1**	**-1.1**
PTLB	**Pontes e Lacer**	**22.38**	**35**	*eP*			**P**	**18 54 18.7**	**+0.4**
PCMB	**Pacaembu**	**22.54**	**61**	*eP*			**P**	**18 54 24.4**	**+0.4**
FRTB	**Fartura**	**22.76**	**67**	*eP*			**P**	**18 54 23.0**	**+0.6**
NNA	**Nana**	**22.78**	**349**	P			**P**	**18 54 21.4**	**-1.2**
NNA					IAmb	IAmb		18 54 26.6	
	comp=Z,25nm,1.0s								
NNA	**Nana**	**22.78**	**349**	LR		LR		19 01 32.0	
	comp=Z,143nm,19.0s,baz=182,slow=32								
SALV	**Santo Antonio**	**23.80**	**43**	*eP*			**P**	**18 54 32.4**	**-0.4**
PET01	**Itanhaem-SP**	**24.02**	**72**	*eP*			**P**	**18 54 37.6**	**+2.8**
VILB	**Vilhena**	**24.11**	**30**	P			**P**	**18 54 34.4**	**-1.3**
VILB	**Vilhena**	**24.11**	**30**	*eP*			**P**	**18 54 36.2**	**+0.5**
SPB	**Sao Paulo**	**24.26**	**70**	*eP*			**P**	**18 54 37.0**	**-0.1**
BB19B	**Bebedouro**	**24.87**	**64**	*eP*			**P**	**18 54 42.4**	**-0.2**
VAO	**Valinhos**	**24.94**	**69**	*eP*			**P**	**18 54 46.4**	**+3.1**
ETMB	**Extrema**	**25.20**	**14**	P			**P**	**18 54 45.6**	**+0.1**
ETMB					IAmb	IAmb		18 54 49.1	
	comp=Z,32nm,1.0s								
ETMB	**Extrema**	**25.20**	**14**	*eP*			**P**	**18 54 46.4**	**+0.9**
CZSB	**Cruzeiro do Su**	**26.64**	**359**	P			**P**	**18 54 58.8**	**+0.2**
CZSB					IAmb	IAmb		18 55 08.3	
	comp=Z,52nm,1.4s								
CZSB	**Cruzeiro do Su**	**26.64**	**359**	*eP*			**P**	**18 55 00.6**	**+1.9**
SAML	**Samuel**	**26.78**	**20**	P			**P**	**18 54 59.5**	**-0.4**
PDRB	**Porto dos Gac**	**26.85**	**36**	*eP*			**P**	**18 54 60.0**	**-0.6**
ATAH	**Atahualpa**	**27.80**	**347**	LR		LR		19 04 35.6	
	comp=Z,143nm,19.1s,baz=145,slow=33								
CLDB	**Colider**	**27.94**	**37**	*eP*			**P**	**18 55 12.9**	**+2.5**
BDFB	**Brasilia**	**28.81**	**55**	P			**P**	**18 55 18.1**	**-0.1**
BDFB	**Brasilia**	**28.81**	**55**	P			**P**	**18 55 18.1**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=238,slow=17,SNR=3.2								
BDFB					LR		LR	19 07 53.9	
	comp=Z,287nm,20.7s,baz=315,slow=39								
	comp=Z,1.4nm,0.4s								
TBTG	**Tabatinga, AM**	**30.24**	**5**	*eP*			**P**	**18 55 32.5**	**+1.8**
PMSA	**Palmer Station**	**30.72**	**173**	LR		LR		19 07 24.7	
	comp=Z,181nm,19.6s,baz=298,slow=35								
MCRA	**Macar, Loja**	**30.80**	**345**	P			**P**	**18 55 36.0**	**+0.2**
TEFE	**Tefe**	**31.65**	**15**	*eP*			**P**	**18 55 44.0**	**+0.9**
BOSC	**San Juan Bosco**	**31.71**	**348**	P			**P**	**18 55 43.0**	**-0.9**
ORCD	**Orcadas**	**31.71**	**154**	P			**P**	**18 55 42.9**	**-0.4**
COHC	**Cochancay**	**32.52**	**347**	P			**P**	**18 55 52.1**	**+1.4**
ITTB	**Itaituba**	**33.70**	**31**	*eP*			**P**	**18 56 01.4**	**+0.2**
OTAV	**Otavalo**	**35.03**	**349**				**P**	**18 56 13.1**	**0.0**
OTAV					IAmb	IAmb		18 56 17.0	
	comp=Z,24nm,1.6s								
OTAV	**Otavalo**	**35.03**	**349**	*eP*			**P**	**18 56 16.4**	**+3.3**
MALB	**Monte Alegre**	**36.59**	**31**	*eP*			**P**	**18 56 26.0**	**0.0**
BOAV	**Boa Vista**	**38.34**	**19**	P			**P**	**18 56 40.1**	**-0.7**
BOAV	**Boa Vista**	**38.34**	**19**	*eP*			**P**	**18 56 40.6**	**-0.2**
NBPB	**Pedra_Branca-C**	**41.79**	**54**	*eP*			**P**	**18 57 09.2**	**-0.4**
SDV	**Santo Domingo**	**43.17**	**2**	P			**P**	**18 57 20.0**	**-1.0**
SDV					IAmb	IAmb		18 57 48.6	
	comp=Z,8.3nm,0.5s								
SDV	**Santo Domingo**	**43.17**	**2**	*eP*			**P**	**18 57 21.5**	**+0.6**
BAUV	**El Baul**	**43.39**	**6**	P			**P**	**18 57 21.1**	**-1.4**
BAUV					IAmb	IAmb		18 57 23.5	
	comp=Z,32nm,0.9s								
MDP	**Montagnes des**	**43.55**	**29**	LR		LR		19 17 19.4	
	comp=Z,192nm,19.7s,baz=119,slow=39								
BCIP	**Isla Barro Col**	**44.01**	**349**	P			**P**	**18 57 25.2**	**-2.2**
RCBR	**Riachuelo**	**44.11**	**58**	LR		LR		19 16 55.6	
	comp=Z,166nm,19.6s,baz=281,slow=38								
ORTG	**Ortega, Santa**	**46.32**	**342**	P			**P**	**18 57 45.7**	**-0.2**
BELA	**Belgrano 2**	**46.43**	**170**	P			**P**	**18 57 46.8**	**+0.7**
BELA					PcP		**PcP**	**18 59 20.6**	**+0.1**
VNA3	**Neumayer Olymp**	**48.99**	**158**	⇓	*P*		**P**	**18 58 06.3**	**+0.3**
	comp=Z,1.2nm,0.4s								
VNA2	**Neumayer--Watz**	**49.65**	**157**	⇓	*P*		**P**	**18 58 11.5**	**+0.6**
	comp=Z,4.4nm,0.6s,baz=287,slow=7.0								
BIM	**Bigot**	**49.90**	**14**	P			**P**	**18 58 12.7**	**-0.8**
SNAA	**Sanae**	**51.22**	**158**	P			**P**

MAW	Mawson	72.77	164	P	P	19 00 48.0	+0.3
	comp=Z,18nm,0.9s,baz=246,slow=8.9,SNR=2.1						
	comp=Z,18nm,0.9s						
CLN7	Carlsbad 7	72.84	332	P	P	19 00 49.5	+1.0
GDL2	Guadalupe Moun	72.87	332	P	P	19 00 48.7	-0.1
PBMO	Poplar Bluff	72.89	345	P	P	19 00 48.7	+0.1
PBMO				IAmb	IAmb	19 00 49.3	
	comp=Z,7.5nm,0.6s						
DKNS	Dickens	72.92	335	P	P	19 00 48.8	-0.2
DKNS				IAmb	IAmb	19 00 50.5	
	comp=Z,4.9nm,0.7s						
WMOK	Wichita Mounta	73.19	337	P	P	19 00 50.2	-0.3
CGM3	Cape Girardeau	73.23	346	P	P	19 00 50.4	-0.2
HHAR	Hobbs	73.25	342	P	P	19 00 50.7	-0.1
TUL3	Leonard	73.39	340	P	P	19 00 51.8	+0.2
TUL3				IAmb	IAmb	19 00 52.9	
	comp=Z,14nm,1.1s						
SSFO	Shawnee State	73.52	351	P	P	19 00 51.6	-0.7
DEOK	Depew	73.53	340	P	P	19 00 52.0	-0.5
DEOK				IAmb	IAmb	19 01 02.7	
	comp=Z,12nm,1.0s						
S44A	Carbondale	73.53	346	P	P	19 00 52.0	-0.4
S44A				IAmb	IAmb	19 00 53.4	
	comp=Z,10nm,0.9s						
SIUC	Southern Illin	73.54	346	P	P	19 00 52.1	-0.3
SIUC				IAmb	IAmb	19 00 53.5	
	comp=Z,12nm,1.1s						
ADOK	Arcadia Dam	73.61	339	P	P	19 00 52.9	0.0
MGMO	Mountain Grove	73.67	344	P	P	19 00 52.4	-0.8
OK033	Mehan	73.84	339	P	P	19 00 54.4	+0.2
MSTX	Muleshoe	73.85	334	P	P	19 00 54.9	+0.4
MSTX				IAmb	IAmb	19 00 56.3	
	comp=Z,9.9nm,0.8s						
Q51A	Peebles	73.86	351	P	P	19 00 54.3	-0.1
Q51A				IAmb	IAmb	19 00 55.4	
	comp=Z,8.7nm,0.7s						
QUOK	Quay	73.90	340	P	P	19 00 55.0	+0.4
QUOK				IAmb	IAmb	19 00 55.7	
	comp=Z,10.0nm,0.9s						
SMWD	Samnorwood	74.00	336	P	P	19 00 55.2	0.0
SMWD				IAmb	IAmb	19 01 05.6	
	comp=Z,9.2nm,0.6s						
FVM	French Village	74.05	345	P	P	19 00 54.9	-0.6
FVM				IAmb	IAmb	19 00 56.8	
	comp=Z,14nm,1.2s						
OK048	Pawnee Station	74.19	340	P	P	19 00 56.2	-0.1
CCM	Cathedral Cave	74.30	345	P	P	19 00 56.7	-0.2
CCM				IAmb	IAmb	19 00 58.3	
	comp=Z,13nm,0.8s						
S39A	Bolivar	74.43	343	P	P	19 00 57.7	+0.1
121A	Cookes Peak, D	74.54	329	P	P	19 00 58.6	-0.1
121A				IAmb	IAmb	19 01 01.8	
	comp=Z,8.0nm,0.9s						
SUR	Sutherland	74.80	119	LR	LR	19 30 01.6	
	comp=Z,70nm,19.1s,baz=184,slow=33						
KAN13	South Haven SW	74.90	339	P	P	19 01 00.3	-0.1
DBIC	Dimbokro	75.56	71	P	P	19 01 04.2	-0.6
	comp=Z,6.6nm,0.6s,baz=235,slow=4.7,SNR=9.8						
	comp=Z,6.6nm,0.6s						
TUC	Tucson	75.66	327	P	P	19 01 04.7	-0.2
TUC				IAmb	IAmb	19 03 49.1	
	comp=Z,10nm,0.7s						
N49A	Columbus Grove	75.84	351	IAmb	IAmb	19 01 06.2	
	comp=Z,14nm,0.7s						
ANMO	Albuquerque	76.11	332	P	P	19 01 08.0	+0.4
ANMO	Albuquerque	76.11	332	LR	LR	19 29 41.8	
	comp=Z,87nm,19.7s,baz=226,slow=32						
RAR	Rarotonga	76.28	254	LR	LR	19 26 26.8	
	comp=Z,32nm,21.9s,baz=126,slow=29						
L56A	Greenwood	76.41	356	IAmb	IAmb	19 01 10.6	
	comp=Z,22nm,1.1s						
T25A	Trinidad	77.28	334	P	P	19 01 14.7	+0.5
T25A				IAmb	IAmb	19 01 17.2	
	comp=Z,13nm,0.9s						
X16A	Lo Mia Camp, P	77.73	328	IAmb	IAmb	19 01 19.9	
	comp=Z,9.8nm,1.1s						
SDCO	Great Sand Dun	78.21	334	P	P	19 01 20.7	+1.2
SDCO				IAmb	IAmb	19 04 05.2	
	comp=Z,6.2nm,0.9s						
TSUM	Tsumeb	79.31	106	LR	LR	19 33 01.1	
	comp=Z,73nm,18.1s,baz=190,slow=33						
W13A	Hualapai Mount	79.40	326	P	P	19 01 26.9	+0.9
U15A	North Rim	79.79	328	IAmb	IAmb	19 01 31.4	
	comp=Z,7.4nm,0.9s						
BOSA	Boshof	80.05	118	P	P	19 01 29.1	-0.7
	comp=Z,5.6nm,0.9s,baz=241,slow=4.8,SNR=5.5						
BOSA				LR	LR	19 33 33.1	
	comp=Z,34nm,19.0s,baz=205,slow=33						
	comp=Z,5.6nm,0.9s						
ISCO	Idaho Springs	80.07	335	IAmb	IAmb	19 04 28.0	
	comp=Z,8.6nm,0.9s						
V12A	Nelson	80.36	326	IAmb	IAmb	19 01 33.9	
	comp=Z,7.0nm,0.9s						
TRQ	Mont Tremblant	80.37	358	P	P	19 01 30.9	+0.1
TRQ				IAmb	IAmb	19 03 12.1	
	comp=Z,23nm,1.2s						
HMU	Henry Mountain	80.42	330	IAmb	IAmb	19 01 34.9	
	comp=Z,27nm,1.7s						
ECSD	EROS Data Cent	80.95	342	P	P	19 01 33.7	-0.2
ECSD				IAmb	IAmb	19 01 35.4	
	comp=Z,14nm,0.8s						
SZCU	Shurtz Canyon	81.12	328	IAmb	IAmb	19 01 38.4	
	comp=Z,21nm,1.7s						
CCUT	Cedar City	81.20	328	IAmb	IAmb	19 01 39.2	
	comp=Z,6.7nm,1.0s						
E46A	Sault Ste Mari	81.22	352	P	P	19 01 35.1	-0.1
E46A				IAmb	IAmb	19 01 36.3	
	comp=Z,20nm,0.9s						
Q16A	Castle Valley	81.43	330	IAmb	IAmb	19 01 39.7	
	comp=Z,9.5nm,1.1s						
MSU	Marysvale	81.50	329	P	P	19 01 38.5	+1.3
P18A	Preston Nutter	81.66	331	IAmb	IAmb	19 01 40.9	
	comp=Z,8.1nm,1.0s						
WCT	Wildcat Mounta	82.05	326	IAmb	IAmb	19 01 43.5	
	comp=Z,14nm,1.7s						
RDMU	Red Mountain	82.21	332	IAmb	IAmb	19 01 43.1	
	comp=Z,5.4nm,0.8s						
F36A	Milaca	82.25	345	IAmb	IAmb	19 01 41.6	
	comp=Z,11nm,1.1s						
RWWY	Rawlins	82.31	334	P	P	19 01 40.8	-0.7
RWWY				IAmb	IAmb	19 01 42.6	
	comp=Z,14nm,1.2s						
VLDQ	Val d'Or	82.37	357	IAmb	IAmb	19 01 43.2	
	comp=Z,11nm,1.0s						
SPR3	Spring Creek 3	82.83	328	IAmb	IAmb	19 01 46.9	
	comp=Z,8.2nm,1.0s						
K22A	Casper	82.91	335	P	P	19 01 44.7	+0.2
K22A				IAmb	IAmb	19 01 46.8	
	comp=Z,9.9nm,1.1s						
DUG	Dugway, Tooele	83.18	330	IAmb	IAmb	19 01 49.5	
	comp=Z,6.4nm,1.1s						
EYMN	Ely	83.85	347	IAmb	IAmb	19 01 50.0	
	comp=Z,7.8nm,1.1s						
HWUT	Hardware Ranch	83.87	332	IAmb	IAmb	19 01 60.0	
	comp=Z,6.4nm,0.9s						
PDAR	Pinedale Array	84.10	333	P	P	19 01 51.4	+0.7
	comp=Z,1.1nm,0.7s,baz=162,slow=4.7,SNR=13						
	comp=Z,1.1nm,0.7s						
NVAR	Mina Array Bea	84.16	325	P	P	19 01 52.7	+1.6
	comp=Z,2.4nm,0.8s,baz=158,slow=6.2,SNR=13						
	comp=Z,2.4nm,0.8s						
TORD	Torodi Ar. Bea	84.60	70	P	P	19 01 52.9	-0.7
TORD	Torodi Ar. Bea	84.60	70	P	P	19 01 52.9	-0.7
	comp=Z,2.3nm,0.9s,baz=284,slow=6.0,SNR=12						
	comp=Z,2.3nm,0.9s						
ELK	Elko	84.66	329	IAmb	IAmb	19 02 04.9	
	comp=Z,4.4nm,1.0s						
AGMN	Agassiz Nation	85.07	344	P	P	19 01 54.8	-0.3
AGMN				IAmb	IAmb	19 01 56.2	
	comp=Z,6.4nm,0.8s						
IMW	Indian Meadow	85.58	333	IAmb	IAmb	19 02 00.1	
	comp=Z,7.2nm,1.2s						
FLWY	Flagg Ranch	85.66	333	IAmb	IAmb	19 02 00.6	
	comp=Z,7.4nm,0.7s						
RLMT	Red Lodge	86.03	335	IAmb	IAmb	19 02 01.6	
	comp=Z,6.1nm,0.8s						
YHH	Holmes Hill	86.31	334	P	P	19 02 02.5	+0.7
ORV	Oroville	86.57	324	IAmb	IAmb	19 02 05.9	
	comp=Z,12nm,1.2s						
ULM	Lac du Bonnet	86.92	345	P	P	19 02 03.8	-0.3
	comp=Z,5.0nm,0.9s,baz=173,slow=4.2,SNR=10						
	comp=Z,5.0nm,0.9s						
BOZ	Bozeman (W)	87.29	334	P	P	19 02 06.7	+0.4
PLID	Pearl Lake	88.55	331	IAmb	IAmb	19 02 23.7	
	comp=Z,5.5nm,0.9s						
PINE	Pine Mountain	89.62	327	IAmb	IAmb	19 02 32.1	
	comp=Z,8.4nm,1.1s						

MDT	Midelt	92.31	51	LR	LR	19 43 42.5	
	comp=Z,54nm,19.2s,baz=241,slow=35						
FCC	Fort Churchill	94.67	349	P	P	19 02 40.1	-0.1
FCC				IAmb	IAmb	19 02 41.3	
	comp=Z,3.4nm,0.7s						
YKA	Yellowknife Ar	102.45	341	P	Pdif	19 03 14.3	-0.8
	comp=Z,0.3nm,0.6s,baz=142,slow=4.3,SNR=5.4						
ILAR	Eielson Array	114.53	333	PKP	PKPdf	19 07 58.2	-0.7
	comp=Z,0.3nm,0.6s,baz=151,slow=2.1,SNR=1.6						
ASAR	Alice Springs	117.02	207	PKP	PKPdf	19 08 04.3	-0.8
	comp=Z,0.7nm,0.8s,baz=118,slow=1.6,SNR=9.6						
WRA	Warramunga Arr	120.21	209	PKP	PKPdf	19 08 10.7	-0.7
	comp=Z,1.4nm,0.5s,baz=158,slow=1.7,SNR=24						
BRTR	Keskin Array B	122.28	61	PKP	PKPdf	19 08 13.7	-1.1
	comp=Z,0.8nm,0.7s,baz=153,slow=3.5,SNR=4.1						
H11S2	WAKE ISLAND Hyl	25.53	269	T	T	21 26 48.7	
	baz=118,slow=75,SNR=15						
H11S1	WAKE ISLAND Hyl	25.54	269	T	T	21 26 48.3	
	baz=118,slow=75,SNR=16						
H11S3	WAKE ISLAND Hyl	25.54	269	T	T	21 26 50.0	
	baz=118,slow=75,SNR=15						
H11N3	WAKE ISLAND Hyl	25.95	270	T	T	21 27 17.3	
	baz=121,slow=76,SNR=11						
H11N1	WAKE ISLAND Hyl	25.96	270	T	T	21 27 18.7	
	baz=121,slow=76,SNR=16						
H11N2	WAKE ISLAND Hyl	25.97	270	T	T	21 27 20.4	
	baz=121,slow=76,SNR=11						
BVAR	Borovoye Array	147.81	43	PKPbc	PKPbc	19 09 04.8	+0.7
	comp=Z,2.9nm,0.6s,baz=314,slow=2.0,SNR=16						
KURBB	Kurchatov Arra	153.39	44	PKPbc	PKiKP	19 09 17.6	0.0
	comp=Z,1.8nm,0.5s,baz=302,slow=2.8,SNR=23						
ZALV	Zalesovo Beam	154.77	33	PKP	PKPdf	19 09 11.3	-0.4
	comp=Z,0.7nm,0.6s,baz=318,slow=2.0,SNR=4.5						
ZALV				PKPbc	PKiKP	19 09 20.6	+0.2
	comp=Z,3.0nm,0.7s,baz=291,slow=2.8,SNR=16						
MKAR	Makanchi Array	157.27	50	PKP	PKPdf	19 09 16.3	+0.9
	comp=Z,0.2nm,0.6s,baz=264,slow=1.2,SNR=4.0						
MKAR				PKPab	PKPab	19 09 46.0	-0.6
	comp=Z,1.0nm,0.7s,baz=328,slow=1.6,SNR=4.1						
SONM	Songino Array	166.64	4	PKP	PKPdf	19 09 24.6	-0.5
	comp=Z,0.4nm,0.9s,baz=75,slow=1.6,SNR=2.7						
SONM				PKPab	PKPab	19 10 27.9	+0.5
	comp=Z,0.8nm,0.8s,baz=337,slow=5.3,SNR=6.0						

IDC 23 19:06:31.7±1.5, 2°32S×127°71E, h0km, mb3.3/4, mbtmp3.3/5, ML3.7/1, Error ellipse: s-maj=127.0km s-min=23.5km az=69.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.68	160	P	Pn	19 10 53.2	+1.4
	0.3nm,0.3s,baz=340,slow=12,SNR=8.3						
	0.4nm,0.4s						
ASAR	Alice Springs	22.05	165	P	P	19 11 27.0	-1.3
	0.3nm,0.5s,baz=342,slow=12,SNR=3.0						
	0.3nm,0.5s						
SONM	Songino Array	53.31	342	P	P	19 15 53.9	+1.2
	0.3nm,0.7s,baz=150,slow=6.0,SNR=2.7						
	0.3nm,0.7s						
MKAR	Makanchi Array	63.08	327	P	P	19 16 59.9	-1.2
	0.3nm,0.7s,baz=111,slow=7.9,SNR=1.6						
	0.3nm,0.7s						
KURBB	Kurchatov Arra	67.35	329	P	P	19 17 28.6	0.0
	0.4nm,0.7s,baz=127,slow=5.8,SNR=4.5						
	0.4nm,0.7s						

*IDC **23** 19:09:23.5±1.7, 55°23N×157°80W, h0km, mb3.4/5, mbtmp3.4/8, ML3.2/3, MS2.7/1, Error ellipse: s-maj=38.3km s-min=22.4km az=170.0*

*AEIC **23** 19:09:26.1±1.6, 55°27N±0°04×157°25W±0°05, h34km±7km, ML3.3, ML3.5/36(NEIC), Error ellipse: s-maj=5.2km s-min=3.8km az=164.0*

*NEIC **23** 19:09:27.1±1.5, 55°27N±0°07×157°21W±0°09, h35km±14km, Error ellipse: s-maj=11.1km s-min=6.2km az=155.0*

ISC 23 19:09:27.2±2.8, 55°38N±0°09×157°26W±0°04, h22km±21km, n156, σ1=9°05/160, mb3.5/5, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGN	Chignik	1.13	325		Pn	19 09 46.7	-0.8
CHGN				IAML		19 10 02.9	
	comp=E,1μm,0.3s						
CHGN	Chignik	1.13	325		Sn	19 10 02.5	+0.2
CHGN	Chignik	1.13	325	P	Pn	19 09 46.7	-0.8
	baz=147						
CHGN				S	Sn	19 10 02.5	+0.2
	baz=147						
VNKR	Veniaminof 5	1.36	300		Pn	19 09 50.3	-0.5
VNKR					Sn	19 10 08.3	+0.2
CHNA	Chernabura Isl	1.45	249	P	Pn	19 09 49.6	-2.3
	baz=71						
CNBA	Chernabura Isl	1.45	248		Pn	19 09 49.9	-2.1
VNSS	Veniaminof 8	1.50	305		Pn	19 09 52.9	0.0
S14K	Fog Glacier	1.58	306	P	Pn	19 09 53.9	+0.1
	baz=127						
S14K				S	Sb	19 10 15.0	-0.2
	baz=127						
VNFG	Fog Glacier, M	1.58	306		Pn	19 09 53.9	+0.1
VNFG					Sb	19 10 15.0	-0.2
ANNW	Aniakchak Nort	1.68	342		Pn	19 09 56.3	+1.1
SDPT	Sand Point	1.83	270		Pn	19 09 56.1	-1.2
SDPT					Sn	19 10 19.3	-0.5
SDPT	Sand Point	1.83	270	IAML		19 10 24.1	
	comp=N,314nm,0.6s						
SDPT	Sand Point	1.83	270	P	Pn	19 09 56.1	-1.2
	baz=91						
SDPT				S	Sn	19 10 19.3	-0.5
	baz=91						
R16K	Pilot Point	2.20	356		Pn	19 10 02.9	+0.6
R16K				IAML		19 10 41.8	
	comp=E,264nm,2.0s						
R16K				IAML		19 10 56.0	
	comp=N,306nm,2.2s						
R16K	Pilot Point	2.20	356	P	Pn	19 10 03.2	+0.9
	baz=176						
PS1A	Pavlof South-1	2.56	273		Pn	19 10 05.8	-1.4
OHAK	Old Harbor	2.88	49		Pn	19 10 11.9	+0.2
OHAK	Old Harbor	2.88	49		Sn	19 10 45.3	-0.3
OHAK	Old Harbor	2.88	49	P	Pn	19 10 12.1	+0.4
	baz=230						
OHAK				S	Sn	19 10 45.3	-0.3
	baz=230						
Q17K	Contact Creek	2.99	14	P	Pn	19 10 13.8	+0.5
	baz=195						
ANCK	Angle Creek	2.99	18		Pn	19 10 13.9	+0.7
CNTC	Contact Creek	2.99	14		Pn	19 10 13.8	+0.5
ACHA	Angle Creek He	3.03	20		Pn	19 10 14.7	+0.9
KAHG	Katmai Hook Gl	3.46	24		Pn	19 10 21.1	+1.4
KDAK	Kodiak Island	3.53	45		Pn	19 10 20.1	-0.5
KDAK	Kodiak Island	3.53	45	IAML		19 11 54.6	
	comp=N,58nm,2.9s						
KDAK				IAML		19 12 36.9	
	comp=N,62nm,2.9s						
KDAK	Kodiak Island	3.53	45	Pn	Pn	19 10 20.8	+0.2
	comp=N,0.8nm,0.3s,baz=232,slow=5.0,SNR=14						
KDAK				Sn	Sn	19 10 59.8	-1.9
	comp=N,4.3nm,0.3s,baz=254,slow=10,SNR=2.3						
	comp=N,11nm,0.9s						
P16K	Nushagak River	3.68	354		Pn	19 10 23.4	+0.8
P16K	Nushagak River	3.68	354	P	Pn	19 10 23.4	+0.8
	baz=174						
ISLZ	Isanotski Laza	3.77	263		Pn	19 10 22.8	-1.0
P17K	Kvichak River	3.85	6		Pn	19 10 25.9	+0.9
P17K	Kvichak River	3.85	6	P	Pn	19 10 25.9	+0.9
	baz=187						
SSLS	Shishaldin Sou	3.93	263		Pn	19 10 25.6	-0.5
O15K	Ungalikthiuk R	4.05	341		Pn	19 10 27.9	+0.1
O15K	Ungalikthiuk R	4.05	341	P	Pn	19 10 27.9	+0.1
	baz=159						
Q19K	Cape Douglas,	4.07	27	Pn	Pn	19 10 28.7	+0.7
P18K	Big Mountain,	4.17	14		Pn	19 10 29.7	+0.3
P18K	Big Mountain,	4.17	14	P	Pn	19 10 29.7	+0.3
	baz=196						
Q20K	Shuyak Island	4.19	37	P	Pn	19 10 29.9	+0.2
	baz=220						
SYI	Shuyak Island	4.19	37		Pn	19 10 29.5	-0.1
SYI				IAML		19 11 05.1	
	comp=N,68nm,2.2s						
SYI				IAML		19 12 09.2	
	comp=E,76nm,3.7s						
O16K	Kokwok River B	4.25	354		Pn	19 10 30.6	+0.1
O16K	Kokwok River B	4.25	354	P	Pn	19 10 30.6	+0.1
	baz=174						

O17K	Koliganek Bris	4.41	1		Pn	19 10 33.0	+0.4
O17K	Koliganek Bris	4.41	1	P	Pn	19 10 33.0	+0.4
	baz=181						
O14K	Tigyukauivet M	4.45	332		Pn	19 10 32.9	-0.3
O14K	Tigyukauivet M	4.45	332	IAML		19 11 50.5	
	comp=E,47nm,3.9s						
O14K				IAML		19 12 47.1	
	comp=N,59nm,3.3s						
O14K	Tigyukauivet M	4.45	332	P	Pn	19 10 32.9	-0.3
	baz=150						
O18K	Koktuh Hills	4.62	13		Pn	19 10 35.6	0.0
O18K				IAML		19 12 22.9	
	comp=E,35nm,3.8s						
O18K				IAML		19 13 46.0	
	comp=N,35nm,3.0s						
O18K	Koktuh Hills	4.62	13	P	Pn	19 10 36.5	+0.9
	baz=194						
P19K	Oil Pt	4.80	25	Pn	Pn	19 10 39.6	+1.5
N15K	Kwethluk River	5.03	344		Pn	19 10 41.6	+0.4
N15K	Kwethluk River	5.03	344	P	Pn	19 10 42.0	+0.8
	baz=162						
ILSW	Iliamna Southw	5.12	24		Pn	19 10 42.9	+0.4
ILSW				IAML		19 12 07.9	
	comp=N,28nm,3.7s						
ILSW				IAML		19 13 30.7	
	comp=E,31nm,2.8s						
N14K	Kuskokwak Cree	5.14	334		Pn	19 10 43.1	+0.5
N14K	Kuskokwak Cree	5.14	334	P	Pn	19 10 43.1	+0.5
	baz=151						
N17K	Nushagak Hills	5.16	0		Pn	19 10 43.3	+0.3
N17K				IAML		19 12 21.9	
	comp=E,24nm,2.0s						
N17K				IAML		19 13 42.1	
	comp=N,30nm,3.9s						
N17K	Nushagak Hills	5.16	0	P	Pn	19 10 43.8	+0.8
	baz=180						
N16K	Nishlik Lake	5.17	352		Pn	19 10 43.8	+0.7
N16K	Nishlik Lake	5.17	352	P	Pn	19 10 43.8	+0.7
	baz=171						
CNPM	China Poot	5.28	36		Pn	19 10 45.0	+0.4
CNPM	China Poot	5.28	36	IAML		19 14 04.0	
	comp=N,38nm,2.4s						
N18K	Kilae Creek	5.36	7		Pn	19 10 45.9	+0.2
N18K	Kilae Creek	5.36	7	P	Pn	19 10 46.4	+0.6
	baz=188						
BRLK	Bradley Lake	5.57	35	Pn	Pn	19 10 48.4	-0.3
BRSE	Bradley Lake S	5.61	36		Pn	19 10 49.1	+0.1
BRSE	Bradley Lake S	5.61	36	P	Pn	19 10 49.1	+0.1
	baz=221						
M15K	Kasigluk River	5.63	343		Pn	19 10 49.8	+0.4
M15K	Kasigluk River	5.63	343	P	Pn	19 10 49.8	+0.4
	baz=160						
RSO	Redoubt South	5.63	23	Pn	Pn	19 10 47.4	-2.3
N19K	Bonanza Creek	5.64	14	Pn	Pn	19 10 48.7	-1.0
M16K	Timber Creek	5.73	352		Pn	19 10 51.1	+0.4
M16K	Timber Creek	5.73	352	P	Pn	19 10 51.5	+0.8
	baz=170						
SVW2	Sparrevohn	5.80	8	Pn	Pn	19 10 51.8	0.0
M14K	Bethel	5.93	337		Pn	19 10 53.5	0.0
M14K	Bethel	5.93	337	P	Pn	19 10 54.0	+0.5
	baz=154						
M13K	Dall Lake	6.00	330		Pn	19 10 55.0	+0.6
M13K	Dall Lake	6.00	330	P	Pn	19 10 54.9	+0.5
	baz=145						
M17K	Holitna River	6.04	359		Pn	19 10 55.5	+0.5
M17K	Holitna River	6.04	359	P	Pn	19 10 55.7	+0.7
	baz=179						
M18K	Stony River	6.17	6		Pn	19 10 57.7	+0.8
M18K	Stony River	6.17	6	P	Pn	19 10 57.7	+0.8
	baz=188						
L16K	Owhat River	6.45	351	Pn	Pn	19 11 01.3	+0.6
L14K	Kuka Creek	6.62	337		Pn	19 11 03.0	+0.1
L14K	Kuka Creek	6.62	337	P	Pn	19 11 03.1	+0.1
	baz=152						
L15K	Ungalak Mounta	6.69	342		Pn	19 11 04.2	+0.3
L15K	Ungalak Mounta	6.69	342	P	Pn	19 11 04.2	+0.3
	baz=159						
M19K	Big River Lodg	6.71	12		Pn	19 11 04.0	-0.2
L17K	Donlin	6.79	356		Pn	19 11 05.9	+0.5
L17K	Donlin	6.79	356	P	Pn	19 11 05.9	+0.5
	baz=175						
L18K	Granite Mounta	6.87	2	Pn	Pn	19 11 06.3	-0.1
M20K	Styx River	6.87	17		Pn	19 11 07.7	+1.2
L19K	White Mountain	6.94	9		Pn	19 11 08.3	+0.9
L19K	White Mountain	6.94	9	P	Pn	19 11 08.3	+0.9
	baz=191						
RC01	Rabbit Creek A	6.96	32	Pn	Pn	19 11 08.7	+1.0
SUA	Susitna One	6.99	27	Pn	Pn	19 11 08.8	+0.6
SKT	Skwentna	7.26	22	Pn	Pn	19 11 11.9	+0.1
K15K	Wolf Creek Mou	7.28	344	Pn	Pn	19 11 11.4	-0.6
K17K	Iditarod	7.38	356		Pn	19 11 13.4	0.0
K17K	Iditarod	7.38	356	P	Pn	19 11 14.2	+0.8
	baz=175						
TTA	Tatalina	7.60	4	Pn	Pn	19 11 16.4	0.0
KNK	Knik Glacier	7.61	34	Pn	Pn	19 11 15.6	-1.0
GHO	Glory Hole Cre	7.75	31	Pn	Pn	19 11 17.7	-0.8
SML	Sawmill	7.95	32	Pn	Pn	19 11 22.2	+0.9
J14K	Nanvaranak Lak	8.06	339	Pn	Pn	19 11 23.0	+0.3
J16K	Anvik River	8.11	349	Pn	Pn	19 11 24.0	+0.7
J18K	Innoko River	8.12	2		Pn	19 11 23.8	+0.3
K20K	Telida	8.16	10	Pn	Pn	19 11 25.0	+0.9
SCM	Sheep Creek Mo	8.28	35	Pn	Pn	19 11 25.3	-0.6
RAGM	Ragged Mountai	8.37	48	Pn	Pn	19 11 24.4	-2.6
CAST	Castle Rocks	8.48	16	Pn	Pn	19 11 27.9	-0.7
HMT	Hamilton	8.52	49	Pn	Pn	19 11 27.9	-1.2
KLU	Klutina	8.53	39	Pn	Pn	19 11 28.8	-0.4
J19K	Poorman	8.68	5	Pn	Pn	19 11 29.2	-2.0
I17K	Unalakleet	8.71	350	Pn	Pn	19 11 31.1	-0.4
KTH	Kantishna Hill	8.80	19	Pn	Pn	19 11

comp=N,0.3nm,0.7s
MKAR Makanchi Array 66.55 320 P P 19 20 13.7 -1.3
comp=N,0.3nm,0.8s,baz=40,slow=4.7,SNR=3.9
comp=N,0.3nm,0.8s

NEIC ***23*** *19:17:18.8±2.4, 18°.7S±0°.3×177°.2W±0°.2, h423km±27km, mb4.2/13, Error ellipse: s-maj=45.0km s-min=16.7km az=218.0*
IDC ***23*** *19:17:28.7±28.0, 18°.65S×177°.74W, h520km±330km, mb3.3/5, mbtmp4.3/5, Error ellipse: s-maj=118.0km s-min=71.2km az=67.0*
ISC 23 19:17:18.8±1.2, 18°.5S±0°.2×177°.1W±0°.1, h450km, n21, σ1°37/21, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.78**	**96**	P	**P**	**19 19 00.4**	**-0.7**
BFZ	**Birch Farm**	**22.87**	**193**	P	**P**	**19 21 42.7**	**-3.3**
TCW	**Tory Channel**	**23.84**	**196**	P	**P**	**19 21 53.6**	**-1.2**
ARMA	**Armidale**	**30.79**	**241**	P	**P**	**19 22 56.1**	**-0.1**
ARMA				IAmb	IAmb	19 23 33.6	
	comp=Z,21nm,1.4s						
PMG	**Port Moresby**	**35.83**	**280**	P	**P**	**19 23 39.4**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=74,slow=15,SNR=3.5						
	comp=Z,5.7nm,0.8s						
TOO	**Toolangi**	**37.82**	**232**	P	**P**	**19 23 55.9**	**+0.5**
TOO				IAmb	IAmb	19 24 07.0	
	comp=Z,13nm,1.3s						
COEN	**Coen**	**38.40**	**271**	P	**P**	**19 24 00.1**	**-0.4**
COEN				IAmb	IAmb	19 24 10.4	
	comp=Z,25nm,1.5s						
STKA	**Stephens Creek**	**39.50**	**242**	P	**P**	**19 24 09.6**	**+0.5**
STKA	**Stephens Creek**	**39.50**	**242**	P	**P**	**19 24 09.3**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=71,slow=8.3,SNR=5.0						
	comp=Z,2.9nm,0.8s						
BBOO	**Buckleboo**	**44.27**	**242**	P	**P**	**19 24 47.0**	**0.0**
WB0	**Warramunga Arr**	**45.77**	**260**	P	**P**	**19 24 57.5**	**-1.3**
WB0				IAmb	IAmb	19 25 05.3	
	comp=Z,9.7nm,1.5s						
WB2	**Warramunga Arr**	**45.79**	**260**	P	**P**	**19 24 57.9**	**-1.1**
WB2				IAmb	IAmb	19 25 06.6	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**45.80**	**260**	P	**P**	**19 24 57.9**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=98,slow=8.5,SNR=10						
	comp=Z,1.1nm,0.7s						
AS31	**Alice Springs**	**45.88**	**255**	P	**P**	**19 24 59.2**	**-0.5**
ASAR	**Alice Springs**	**45.88**	**255**	P	**P**	**19 24 58.7**	**-1.0**
ASAR	**Alice Springs**	**45.88**	**255**	P	**P**	**19 24 59.5**	**-0.2**
	comp=Z,6.5nm,0.5s,baz=91,slow=8.5,SNR=198						
	comp=Z,6.5nm,0.5s						
MTN	**Manton Dam**	**50.07**	**269**	P	**P**	**19 25 31.4**	**+0.1**
FORT	**Forrest**	**50.93**	**245**	P	**P**	**19 25 37.6**	**+0.2**
FORT				IAmb	IAmb	19 26 16.4	
	comp=Z,19nm,1.0s						
FITZ	**Fitzroy Crossi**	**54.21**	**261**	P	**P**	**19 26 01.5**	**+0.3**
QSPA	**South Pole Qui**	**71.58**	**180**	P	**P**	**19 27 55.7**	**+2.6**
QSPA				IAmb	IAmb	19 28 11.9	
	comp=Z,5.3nm,1.4s						
QSPA	**South Pole Qui**	**71.58**	**180**	P	**P**	**19 27 55.9**	**+2.8**
	comp=Z,1.9nm,0.8s,baz=31,slow=14,SNR=8.3						
	comp=Z,1.9nm,0.8s						

IDC ***23*** *19:32:08.6±3.9, 21°.89S×177°.95W, h354km±34km, mb3.7/7, mbtmp4.4/7, Error ellipse: s-maj=23.6km s-min=22.6km az=62.0*
NEIC ***23*** *19:32:09.3±2.2, 21°.99S±0°.09×177°.7W±0°.1, h370km±8km, mb4.4/40, Error ellipse: s-maj=18.7km s-min=8.9km az=126.0*
ISC 23 19:32:09.4±0.4, 22°.02S±0°.07×177°.76W±0°.07, h373km, n81, σ1°24/84, mb4.4/23, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.21**	**181**	Pn	**P**	**19 33 56.2**	**+0.5**
NIUE	**Niue**	**7.90**	**70**		**Pn**	**19 34 02.5**	**-0.3**
NIUE				Sn	**S**	**19 35 32.5**	**-3.0**
AFI	**Afiamalu**	**9.87**	**36**	P	**P**	**19 34 26.7**	**+0.2**
MARNC	**Mare, Loyalty**	**13.22**	**270**	P	**P**	**19 35 04.2**	**+0.7**
PINNC	**Pines Island,**	**13.71**	**265**	P	**Pn**	**19 35 10.5**	**-0.4**
LIFNC	**LIFOU**	**14.03**	**272**	P	**P**	**19 35 13.0**	**+0.6**
DZM	**Mont Dzumac**	**14.65**	**267**	P	**Pn**	**19 35 20.9**	**-0.8**
	8.6nm,0.9s,baz=104,slow=17,SNR=3.9						
HAZ	**Te Kaha**	**16.15**	**193**	P	**P**	**19 35 35.0**	**-0.3**
RUGZ	**Raukumara Rang**	**16.38**	**193**	P	**P**	**19 35 37.5**	**-0.4**
TWGZ	**Tauwhareparae**	**16.52**	**192**	P	**P**	**19 35 39.8**	**+0.4**
MWZ	**Matawai**	**16.76**	**193**	P	**P**	**19 35 41.7**	**-0.2**
URZ	**Urewera**	**16.78**	**194**	P	**P**	**19 35 38.7**	**-3.3**
	3.7nm,0.5s,baz=309,slow=14,SNR=2.0						
URZ				S	**S**	**19 38 34.7**	**-3.6**
	3.2nm,0.4s,baz=356,slow=15,SNR=1.7						
URZ	**Urewera**	**16.78**	**194**	P	**P**	**19 35 40.4**	**-1.7**
RTZ	**Ruatahuna**	**17.15**	**194**	P	**P**	**19 35 44.1**	**-2.0**
RTZ				IAmb	IAmb	19 36 05.9	
	comp=Z,23nm,1.4s						
ALRZ	**Allen Road**	**17.25**	**196**	P	**P**	**19 35 47.0**	**-0.2**
BKZ	**Black Stump Fm**	**17.79**	**195**	P	**P**	**19 35 52.6**	**-0.3**
TMVZ	**Te Maari**	**17.94**	**197**	P	**P**	**19 35 56.1**	**+1.5**
ETVZ	**East Tongariro**	**17.96**	**197**	P	**P**	**19 35 54.9**	**+0.2**
OTVZ	**Oturere**	**18.00**	**197**	P	**P**	**19 35 54.7**	**-0.5**
SNVZ	**South Ngauruho**	**18.02**	**197**	P	**P**	**19 35 56.7**	**+1.2**
KWHZ	**Kaweka Forest**	**18.05**	**195**	P	**P**	**19 35 55.7**	**0.0**
BHHZ	**Black Hill Sta**	**18.20**	**195**	P	**P**	**19 35 56.5**	**-0.7**
MRZ	**Mangatainoka R**	**19.43**	**195**		**P**	**19 36 07.2**	**-2.8**
MRZ				IAmb	IAmb	19 36 09.9	
	comp=Z,13nm,0.9s						
QRZ	**Quartz Range**	**20.48**	**201**	P	**P**	**19 36 18.8**	**-1.2**
QRZ				IAmb	IAmb	19 36 20.9	
	comp=Z,46nm,1.2s						
THZ	**Tophouse**	**21.20**	**200**	P	**P**	**19 36 25.3**	**-1.3**
THZ				IAmb	IAmb	19 37 05.0	
	comp=Z,13nm,0.9s						
LTZ	**Lake Taylor**	**22.32**	**200**	P	**P**	**19 36 34.7**	**-2.1**
LTZ				IAmb	IAmb	19 36 38.5	
	comp=Z,16nm,0.5s						
OXZ	**Oxford**	**22.89**	**199**		**P**	**19 36 41.2**	**-0.6**
OXZ				IAmb	IAmb	19 36 45.2	
	comp=Z,50nm,1.5s						
WHZ	**Wether Hill Ro**	**26.52**	**203**	P	**P**	**19 37 13.7**	**-0.6**
WHZ				IAmb	IAmb	19 37 35.2	
	comp=Z,39nm,1.3s						
ARMA	**Armidale**	**28.64**	**247**	P	**P**	**19 37 34.1**	**+0.7**
ARMA				IAmb	IAmb	19 37 39.9	
	comp=Z,38nm,1.5s						
EIDS	**Eidsvold**	**28.70**	**257**	P	**P**	**19 37 33.3**	**-0.5**
CAN	**Canberra**	**31.88**	**238**	P	**P**	**19 38 01.6**	**+0.1**
CAN				IAmb	IAmb	19 38 16.4	
	comp=Z,26nm,1.4s						
CTAO	**Charters Tower**	**33.60**	**267**	P	**P**	**19 38 16.0**	**-0.4**
TOO	**Toolangi**	**35.21**	**236**	P	**P**	**19 38 29.6**	**-0.3**
TAU	**Tasmania Unive**	**35.73**	**226**	P	**P**	**19 38 32.6**	**-1.6**
TAU				IAmb	IAmb	19 39 03.2	
	comp=Z,54nm,1.5s						
PMG	**Port Moresby**	**35.93**	**285**	P	**P**	**19 38 35.8**	**-0.4**
PMG				IAmb	IAmb	19 38 37.8	
	comp=Z,18nm,0.8s						
STKA	**Stephens Creek**	**37.36**	**246**	P	**P**	**19 38 47.6**	**-0.4**
STKA	**Stephens Creek**	**37.36**	**246**	P	**P**	**19 38 47.7**	**-0.2**
	comp=Z,2.9nm,0.4s,baz=87,slow=9.1,SNR=15						
	comp=Z,2.9nm,0.4s						
COEN	**Coen**	**37.93**	**275**	P	**P**	**19 38 53.1**	**+0.3**
COEN				IAmb	IAmb	19 38 54.4	
	comp=Z,19nm,1.0s						
BBOO	**Buckleboo**	**42.10**	**245**	P	**P**	**19 39 25.4**	**-1.2**
BBOO				IAmb	IAmb	19 39 28.5	
	comp=Z,20nm,1.1s						
AS31	**Alice Springs**	**44.41**	**258**	P	**P**	**19 39 44.5**	**-0.6**
ASAR	**Alice Springs**	**44.41**	**258**	P	**P**	**19 39 44.2**	**-0.8**
ASAR	**Alice Springs**	**44.41**	**258**	P	**P**	**19 39 44.5**	**-0.6**
	comp=Z,12nm,0.7s,baz=92,slow=8.6,SNR=158						
ASAR				PcP	**PcP**	**19 41 21.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=104,slow=4.0,SNR=1.1						
ASAR				ScP	**ScP**	**19 44 39.3**	**+2.0**
	comp=Z,0.4nm,0.9s,baz=84,slow=3.8,SNR=2.3						
	comp=Z,12nm,0.7s						
WB0	**Warramunga Arr**	**44.62**	**264**	P	**P**	**19 39 45.6**	**-1.1**
WB0				IAmb	IAmb	19 39 46.5	
	comp=Z,9.7nm,0.7s						
WB2	**Warramunga Arr**	**44.62**	**263**	P	**P**	**19 39 45.5**	**-1.2**
WB2				IAmb	IAmb	19 39 47.0	
	comp=Z,25nm,1.2s						
WRAB	**Tennant Creek**	**44.63**	**264**	P	**P**	**19 39 45.7**	**-1.0**
WRA	**Warramunga Arr**	**44.64**	**263**	P	**P**	**19 39 45.3**	**-1.5**
WRA	**Warramunga Arr**	**44.64**	**263**	P	**P**	**19 39 45.8**	**-1.0**
	comp=Z,7.7nm,0.7s,baz=96,slow=8.3,SNR=140						
	comp=Z,7.7nm,0.7s						
BYL	**Byron's Ledge**	**46.68**	**30**	P	**P**	**19 40 01.5**	**-1.1**
FORT	**Forrest**	**48.92**	**248**	P	**P**	**19 40 18.2**	**-1.2**
FORT				IAmb	IAmb	19 40 20.0	
	comp=Z,21nm,0.8s						
MTN	**Manton Dam**	**49.42**	**272**	P	**P**	**19 40 22.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**53.07**	**263**	P	**P**	**19 40 49.4**	**-0.7**
VNDA	**Vanda**	**56.43**	**185**	P	**P**	**19 41 15.3**	**+2.3**
VNDA				IAmb	IAmb	19 41 50.0	
	comp=Z,22nm,1.5s						
VNDA	**Vanda**	**56.43**	**185**	P	**P**	**19 41 15.1**	**+2.1**
	comp=Z,2.1nm,0.9s,baz=20,slow=8.0,SNR=2.0						
	comp=Z,2.1nm,0.9s						
SOEI	**Soe**	**56.79**	**273**	P	**P**	**19 41 17.8**	**+1.2**
SOEI				IAmb	IAmb	19 41 19.0	
	comp=Z,29nm,1.0s						
PSA00	**Pilbara Seismi**	**57.56**	**258**	P	**P**	**19 41 21.4**	**-0.4**
MBWA	**Marble Bar**	**57.76**	**258**	P	**P**	**19 41 22.3**	**-0.8**
MBWA				IAmb	IAmb	19 41 31.1	
	comp=Z,18nm,1.2s						
NWAO	**Narrogin (SRO)**	**57.91**	**244**	P	**P**	**19 41 23.5**	**-0.5**
TOLI2	**Tolitoli**	**64.15**	**283**	P	**P**	**19 42 06.9**	**+1.1**
QSPA	**South Pole Qui**	**68.06**	**180**	P	**P**	**19 42 31.4**	**+1.7**
QSPA	**South Pole Qui**	**68.06**	**180**	P	**P**	**19 42 31.7**	**+2.0**
	comp=Z,2.8nm,1.0s,baz=343,slow=0.5,SNR=7.7						
	comp=Z,2.8nm,1.0s						
TPUB	**Ta-pu**	**74.99**	**303**	P	**P**	**19 43 10.2**	**-1.0**
BELA	**Belgrano 2**	**78.03**	**173**	P	**P**	**19 43 27.9**	**+0.7**
BELA				IAmb	IAmb	19 43 30.3	
	comp=Z,7.6nm,1.5s						
SYI	**Shuyak Island**	**83.03**	**13**	P	**P**	**19 43 53.7**	**+0.2**
N15K	**Kwethluk River**	**83.15**	**9**	P	**P**	**19 43 56.0**	**+1.9**
O18K	**Koktuh Hills**	**83.64**	**11**	P	**P**	**19 43 56.3**	**-0.3**
M16K	**Timber Creek**	**84.13**	**9**	P	**P**	**19 44 01.1**	**+2.1**
K15K	**Wolf Creek Mou**	**85.01**	**8**	P	**P**	**19 44 05.3**	**+2.0**
ILAR	**Eielson Array**	**89.73**	**13**	P	**P**	**19 44 26.2**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=216,slow=5.4,SNR=8.4						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**90.83**	**289**	P	**P**	**19 44 32.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**90.83**	**289**	P	**P**	**19 44 33.6**	**+1.7**
	comp=Z,1.8nm,1.0s,baz=132,slow=3.2,SNR=12						
	comp=Z,1.8nm,1.0s						
BVAR	**Borovoye Array**	**120.38**	**319**	PKP	**PKiKP**	**19 50 16.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=128,slow=2.1,SNR=5.3						
ARCES	**ARCESS Array B**	**130.45**	**349**	PKP	**PKiKP**	**19 50 36.4**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=353,slow=5.0,SNR=6.3						
NOA	**NORSAR Array B**	**140.51**	**353**	PKP	**PKiKP**	**19 50 56.9**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=20,slow=3.3,SNR=1.4						
HFS	**Hagfors**	**141.06**	**351**	PKhKP	PKPpre	19 50 50.3	
	comp=Z,1.3nm,0.5s,baz=67,slow=5.0,SNR=10						
AKASG	**Malin Array Be**	**144.44**	**330**	PKP	PKPbc	19 51 00.4	-0.7
	comp=Z,0.9nm,0.3s,baz=41,slow=4.3,SNR=7.2						
EKA	**Eskdalemuir Ar**	**146.49**	**6**	PKPbc	**PKPbc**	**19 51 07.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=323,slow=2.3,SNR=4.5						
BRTR	**Keskin Array B**	**148.01**	**311**	PKPbc	**PKPbc**	**19 51 11.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=138,slow=3.8,SNR=6.0						
MMAI	**Mount Meron Ar**	**148.74**	**298**	PKPbc	**PKiKP**	**19 51 14.6**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=76,slow=7.0,SNR=13						
CLL	**Collm**	**149.58**	**347**	*i* PKPab	**PKPab**	**19 51 21.7**	**+0.1**
	comp=Z,4.0nm,0.8s						
CLL	**Collm**	**149.58**	**347**	*i* PKPbc	**PKiKP**	**19 51 16.4**	**+0.4**
	comp=Z,8.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**171.16**	**177**	PKP	**PKPdf**	**19 51 33.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=188,slow=1.4,SNR=2.4						
TORD				PKPab	**PKPab**	**19 52 57.4**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=164,slow=3.4,SNR=2.2						

TAP 23 19:35:20.8, 24°.41N×121°.82E, h10km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.06**	**317**	*i* P	Pg	19 35 22.8	0.0
	baz=316						
EWUT				*i* S	Sg	19 35 24.1	-0.2
	baz=316						
ENA	**Nanau**	**0.08**	**288**	*i* P	Pg	19 35 23.1	+0.1
	baz=287						
ENA				*i* S	Sg	19 35 24.6	-0.1
	baz=287						
EAHA	**Aohua**	**0.10**	**224**	*i* P	Pg	19 35 23.4	0.0
	baz=224						
EAHA				*i* S	Sg	19 35 25.4	+0.1
	baz=224						
ESAO	**Su ao**	**0.17**	**7**	*e*P	Pg	19 35 24.4	-0.1
	baz=7.0						
ESAO				*i* S	Sg	19 35 26.8	-0.3
	baz=7.0						
TWC	**Suao**	**0.20**	**7**	*i* P	Pg	19 35 25.1	0.0
	baz=10.0						
TWC				*i* S	Sg	19 35 28.0	0.0
	baz=10.0						
NDS	**Dongshan**	**0.25**	**337**	P	Pg	19 35 26.1	+0.2
	baz=337						
NDS				S	Sg	19 35 29.3	+0.1
	baz=337						
LATG	**Datong**	**0.30**	**296**	*i* P	Pg	19 35 26.9	+0.1
	baz=295						
LATG				*i* S	Sg	19 35 31.2	+0.4
	baz=295						
ETL	**Fush Village**	**0.30**	**216**	*i* P	Pg	19 35 26.8	-0.1
	baz=216						
ETL				*i* S	Sg	19 35 31.4	+0.4
	baz=216						
NACB	**Ninganchiao**	**0.31**	**222**	P	Pg	19 35 27.0	0.0
	baz=221						
NACB				S	Sg	19 35 30.9	-0.2
	baz=221						
ENTT	**Nioudou**	**0.33**	**315**	*i* P	Pg	19 35 27.5	+0.1
	baz=315						
ENTT				S	Sg	19 35 31.6	-0.2
	baz=315						
NDT	**Datong Townshi**	**0.34**	**305**	*i* P	Pg	19 35 27.7	+0.1
	baz=305						
NDT				S	Sg	19 35 32.5	+0.3
	baz=305						
ETLH	**Xiulin Townshi**	**0.37**	**237**	*i* P	Pg	19 35 27.8	-0.2
	baz=237						
ETLH				S	Sg	19 35 33.3	+0.3
	baz=237						
TWD	**Chiawan**	**0.38**	**212**	P	Pg	19 35 28.1	-0.3
	baz=211						
NNSB	**Datong**	**0.40**	**273**	P	Pg	19 35 28.7	0.0
	baz=273						
NNSB				*i* S	Sg	19 35 33.6	-0.4
	baz=273						
NNS	**Nan Shan**	**0.41**	**275**	*i* P	Pg	19 35 29.1	+0.2
	baz=274						
NNS				*i* S	Sg	19 35 34.0	-0.3
	baz=274						
NWLT	**Wulai**	**0.47**	**322**	*e*S	Sb	19 35 37.3	-1.0
	baz=322						
YHNB	**Yeheng**	**0.48**	**303**	*i* P	Pg	19 35 30.6	+0.4
	baz=303						
YHNB				S	Sg	19 35 37.0	+0.4
	baz=303						
LXIB	**Xiulin Townshi**	**0.53**	**224**	*e*P	Pg	19 35 30.8	-0.4
	baz=224						
CHGB	**Renai**	**0.68**	**240**	P	Pg	19 35 33.8	-0.2
	baz=239						

TAP 23 19:35:24.1, 24°.43N×122°.08E, h16km±1km, ML2.0, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.14**	**94**	*i* P	Pb	19 35 28.7	+0.3
	baz=93						
EOS2				*i* S	Sb	19 35 32.1	+0.9
	baz=93						
ESAO	**Su ao**	**0.26**	**305**	*i* P	Pb	19 35 30.4	0.0
	baz=304						
ESAO				*i* S	Sb	19 35 34.6	0.0
	baz=304						
EOS3	**EOS3**	**0.26**	**123**	*i* P	Pb	19 35 30.3	-0.1
	baz=122						
EOS3				*i* S	Sb	19 35 34.8	+0.2
	baz=122						
EWUT	**Wuta**	**0.27**	**273**	*i* P	Pb	19 35 31.1	+0.4
	baz=273						
EWUT				*i* S	Sb	19 35 35.1	+0.1
	baz=273						
TWC	**Suao**	**0.27**	**311**	*i* P	Pb	19 35 30.6	-0.1
	baz=312						
TWC				*i* S	Sb	19 35 34.6	-0.4
	baz=312						
ENA	**Nanau**	**0.30**	**270**	*i* P	Pb	19 35 31.5	+0.3
	baz=269						
ENA				*i* S	Sb	19 35 36.1	+0.2
	baz=269						
EAHA	**Aohua**	**0.32**	**252**	P	Pb	19 35 32.0	+0.5
	baz=252						
EAHA				S	Sb	19 35 37.3	+0.8
	baz=252						
EOS4	**EOS4**	**0.38**	**144**	P	Pb	19 35 32.6	+0.4
	baz=144						
EOS4				*i* S	Sb	19 35 37.9	+0.2
	baz=144						
NDS	**Dongshan**	**0.39**	**302**	*i* P	Pb	19 35 33.1	+0.5
	baz=302						
NDS				*i* S	Sb	19 35 39.2	+0.8
	baz=302						
TWE	**Neicheng**	**0.47**	**308**	P	Pb	19 35 34.5	+0.4
	baz=308						
TWE				*i* S	Sb	19 35 41.0	+0.3
	baz=308						
ETL	**Fush Village**	**0.49**	**237**	*i* S	Sn	19 35 43.5	-1.3
	baz=236						
ENTT	**Nioudou**	**0.51**	**294**	*i* P	Pb	19 35 35.3	+0.6
	baz=294						
ENTT				*i* S	Sb	19 35 42.4	+0.5
	baz=294						
LATG	**Datong**	**0.51**	**282**	*i* P	Pb	19 35 35.4	+0.6
	baz=281						
LATG				*i* S	Sb	19 35 42.7	+0.7
	baz=281						
NDT	**Datong Townshi**	**0.54**	**289**	*i* P	Pb	19 35 36.0	+0.8
	baz=288						
NDT				*i* S	Sb	19 35 43.4	+0.6
	baz=288						
FUSB	**Fushanzhiwuyua**	**0.55**	**307**	*e*P	Pg	19 35 35.2	+0.1
	baz=306						
FUSB				*i* S	Sb	19 35 44.6	+1.4
	baz=306						
ETLH	**Xiulin Townshi**	**0.58**	**248**	*i* S	Sb	19 35 44.7	+0.6
	baz=247						
TIPB	**Shuangxi**	**0.59**	**337**	*i* P	Pb	19 35 36.2	+0.1
	baz=337						
TIPB				*i* S	Sg	19 35 43.7	+0.1
	baz=337						
NWLT	**Wulai**	**0.63**	**304**	P	Pg	19 35 36.4	-0.1
	baz=303						
NWLT				*i* S	Sb	19 35 45.5	+0.2
	baz=303						
NNS	**Nan Shan**	**0.64**	**271**	*i* S	Sb	19 35 45.5	-0.2
	baz=270						
YHNB	**Yeheng**	**0.68**	**291**	*i* S	Sb	19 35 47.8	+0.9
	baz=290						
SXI1	**Grass Mountain**	**0.69**	**345**	*e*S	Sg	19 35 45.6	-1.2
	baz=344						
TWA	**Mucha**	**0.71**	**321**	S	Sb	19 35 48.1	+0.5
	baz=321						
WHF	**Hehuan Shan**	**0.79**	**249**	*i* S	Sg	19 35 50.0	-0.2
	baz=248						
CHGB	**Renai**	**0.90**	**246**	*e*S	Sn	19 35 56.4	+1.2
	baz=245						
WHP	**Taichung City**	**1.04**	**262**	P	Pb	19 35 42.8	-1.0
	baz=261						

TAP 23 19:35:27.2, 23°.96N×121°.65E, h42km±1km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.13**	**336**	*e*P	Pn	19 35 34.2	0.0
	baz=338						
TWD				*e*S	Sn	19 35 39.9	+0.8
	baz=338						
TWD	**Chiawan**	**0.13**	**336**	*e*S	Pn	19 35 34.4	+0.2
	baz=211						
ETM	**Tongmen**	**0.15**	**271**	*i* P	Pn	19 35 34.4	+0.1
	baz=270						
ETM				S	Sn	19 35 40.0	+0.7
	baz=270						
NACB	**Ninganchiao**	**0.22**	**346**	P	Pn	19 35 35.3	+0.5
	baz=239						
NACB				*i* S	Sn	19 35 42.0	+1.9
	baz=239						
NACB	**Ninganchiao**	**0.22**	**346**	*e*P	Pn	19 35 35.2	+0.4
	baz=345						
NACB				*e*S	Sn	19 35 42.0	+1.8
	baz=345						
LXIB	**Xiulin Townshi**	**0.23**	**285**	*e*P	Pn	19 35 34.9	-0.2
	baz=284						
LXIB	**Xiulin Townshi**	**0.23**	**285**	*e*S	Pn	19 35 35.0	-0.1
	baz=224						
ESL	**Shilin**	**0.25**	**234**	*e*P	Pn	19 35 35.4	+0.3
	baz=232						
ESL				*e*S	Sn	19 35 41.8	+1.2
	baz=232						
WARBT	**Fenglin Townsh**	**0.35**	**225**	P	Pn	19 35 35.9	-0.3
	baz=225						
WARBT				*i* S	Sn	19 35 43.2	+0.8
	baz=225						
EGFH	**Guangfu**	**0.36**	**215**	P	Pn	19 35 36.4	+0.1
	baz=215						
EGFH				S	Sn	19 35 43.7	+1.1
	baz=215						
OWD	**Renai**	**0.44**	**269**	*e*P	Pn	19 35 37.8	+0.4
	baz=268						
OWD				*e*S	Sn	19 35 44.8	+0.3
	baz=268						
CHGB	**Renai**	**0.45**	**283**	*e*P	Pn	19 35 37.9	+0.3
	baz=282						
CHGB				*e*S	Sn	19 35 45.9	+1.0
	baz=282						
WUSB	**Renai**	**0.49**	**273**	*e*P	Pn	19 35 38.4	+0.4
	baz=273						
WUSB				*e*S	Sn	19 35 46.6	+0.9
	baz=273						
HGSD	**Ruisui**	**0.51**	**204**	P	Pn	19 35 39.1	+0.9
	baz=204						
HGSD				*e*S	Sn	19 35 47.9	+1.9
	baz=204						
VWDT	**VWDT**	**0.51**	**246**	*i* P	Pn	19 35 38.7	+0.5
	baz=246						
VWDT				*i* S	Sn	19 35 47.1	+1.1
	baz=246						
NNSB	**Datong**	**0.53**	**332**	*i* P	Pn	19 35 37.5	-1.0
	baz=269						
NNSB				*i* S	Sn	19 35 45.6	-0.9
	baz=269						
NNSB	**Datong**	**0.53**	**332**	*e*P	Pn	19 35 37.7	-0.8
	baz=331						
NNSB				*e*S	Sn	19 35 45.4	-1.1
	baz=331						
NNS	**Nan Shan**	**0.54**	**332**	*e*P	Pn	19 35 38.0	-0.7
	baz=332						
NNS				*e*S	Sn

baz=84,slow=75,SNR=3965
H04N3 CROZET ISLANDS 19.65 244 T T 20 02 32.0
baz=84,slow=75,SNR=3188
H04S1 CROZET ISLANDS 19.66 242 T T 20 02 38.5
baz=90
H04S2 CROZET ISLANDS 19.67 242 T T 20 02 39.2
baz=90
H04S3 CROZET ISLANDS 19.68 242 T T 20 02 36.2
baz=90
MAW Mawson 28.44 192 LR LR 19 52 03.1
comp=Z,110nm,19.4s,baz=353,slow=31
H01W2 Cape Leeuwin H 29.26 91 T T 20 13 05.2
baz=248,slow=74,SNR=23
H01W3 Cape Leeuwin H 29.27 91 T T 20 13 05.8
baz=248,slow=74,SNR=23
H01W1 Cape Leeuwin H 29.28 91 T T 20 13 06.5
baz=248,slow=74,SNR=26
LEM Lembang 42.85 47 LR LR 20 02 24.5
comp=Z,114nm,18.4s,baz=239,slow=35
LBTB Lobatse 45.77 273 LR LR 20 01 06.3
comp=Z,26nm,18.9s,baz=206,slow=31
PALK Pallekele 47.53 4 LR LR 20 01 31.5
comp=Z,55nm,21.2s,baz=280,slow=31
ASAR Alice Springs 49.71 88 P P 19 46 02.4 -1.0
0.2nm,0.9s,baz=233,slow=7.7,SNR=2.4
0.2nm,0.9s
QSPA South Pole Qui 49.76 180 P P 19 46 03.2 0.0
1.8nm,1.0s,baz=288,slow=3.2,SNR=2.3
QSPA LR LR 20 05 47.5
comp=Z,105nm,18.1s,baz=253,slow=34
1.8nm,1.0s
STKA Stephens Creek 51.34 102 P P 19 46 16.2 +0.6
0.6nm,0.5s,baz=213,slow=5.6,SNR=2.2
0.6nm,0.5s
WRA Warramunga Arr 52.16 85 P P 19 46 21.9 +0.1
0.7nm,1.0s,baz=230,slow=6.8,SNR=2.0
0.7nm,1.0s
CMAR Chiang Mai Arr 61.83 23 P P 19 47 30.1 0.0
0.2nm,0.6s,baz=203,slow=6.7,SNR=1.8
0.2nm,0.6s

*SJA **23** 19:38:11.0±0.6,24.°00S×66.°83W,h232km±6km,ML3.4, MW3.5*
*GUC **23** 19:38:13.8±0.7,23.°92S×67.°15W,h239km±11km,ML3.6*
ISC 23 19:38:10.7±2.1,23.°96S±0.°05×66.°89W±0.°08, h233km±18km,n29,σ1§41/50,2C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**2.18**	**36**	*eP*	**Pn**	**19 38 54.9**	**+0.8**
FSA	**Cafayete**	**2.29**	**159**	*eP*	**Pn**	**19 38 55.2**	**+0.4**
LVC	**Limon Verde**	**2.30**	**305**	*eP*	**Pn**	**19 38 56.2**	**+1.1**
LVC				*eS*	**S**	**19 39 30.1**	**+0.3**
LVC	**Limon Verde**	**2.30**	**305**	*eP*	**Pn**	**19 38 56.2**	**+1.1**
LVC				*eS*	**S**	**19 39 28.3**	**-1.6**
LVC				IAML		19 39 33.7	
	159nm,0.2s						
PB15	**IPOC Station P**	**2.49**	**287**	*eP*	**Pn**	**19 38 58.3**	**+1.5**
PB15				*eS*	**S**	**19 39 32.6**	**-0.4**
PB15	**IPOC Station P**	**2.49**	**287**	*eP*	**Pn**	**19 38 58.2**	**+1.3**
PB15				*eS*	**S**	**19 39 31.8**	**-1.2**
GO02	**Mina Guanaco**	**2.74**	**244**	*eP*	**Pn**	**19 39 00.5**	**+0.9**
GO02				*eS*	**S**	**19 39 38.0**	**+0.1**
GO02	**Mina Guanaco**	**2.74**	**244**	*i P*	**Pn**	**19 39 01.1**	**+1.5**
GO02				*eS*	**S**	**19 39 37.7**	**-0.2**
PB06	**IPOC Station P**	**2.77**	**296**	*eP*	**Pn**	**19 39 01.0**	**+1.2**
PB06				*eS*	**S**	**19 39 37.5**	**-0.8**
PB06				IAML		19 39 38.8	
	comp=Z,89nm,0.1s						
PB06	**IPOC Station P**	**2.77**	**296**	*i P*	**Pn**	**19 39 01.2**	**+1.4**
PB06				*eS*	**S**	**19 39 36.6**	**-1.6**
PB06				IAML		19 39 38.7	
	comp=E,202nm,0.1s						
PB09	**IPOC Station P**	**3.06**	**314**	*eP*	**Pn**	**19 39 04.6**	**+1.5**
PB09				*eS*	**S**	**19 39 44.2**	**0.0**
PB09				IAML		19 39 45.3	
	comp=Z,36nm,0.5s						
PB09	**IPOC Station P**	**3.06**	**314**	*eP*	**Pn**	**19 39 04.8**	**+1.7**
PB09				*eS*	**S**	**19 39 43.0**	**-1.2**
PB09				IAML		19 39 48.0	
	comp=E,35nm,0.1s						
PB14	**IPOC Station P**	**3.28**	**258**	*eP*	**Pn**	**19 39 06.9**	**+1.3**
PB14				*eS*	**S**	**19 39 48.3**	**-0.5**
PB14				IAML		19 39 49.3	
	comp=Z,70nm,0.2s						
PB14	**IPOC Station P**	**3.28**	**258**	*eP*	**Pn**	**19 39 06.9**	**+1.3**
PB14				*eS*	**S**	**19 39 46.8**	**-2.0**
PB10	**IPOC Station P**	**3.39**	**277**	*eP*	**Pn**	**19 39 08.3**	**+1.7**
PB10				*eS*	**S**	**19 39 49.9**	**-0.7**
PB10				IAML		19 39 53.9	
	comp=Z,33nm,0.3s						
PB10	**IPOC Station P**	**3.39**	**277**	*i P*	**Pn**	**19 39 08.1**	**+1.5**
PB10				*eS*	**S**	**19 39 49.1**	**-1.5**
PB04	**IPOC Station P**	**3.41**	**298**	*eP*	**Pn**	**19 39 08.4**	**+1.3**
PB04				*eS*	**S**	**19 39 49.7**	**-1.7**
PB04				IAML		19 39 55.8	
	comp=Z,84nm,0.2s						
PB04	**IPOC Station P**	**3.41**	**298**	*eP*	**Pn**	**19 39 08.2**	**+1.1**
PB04				*eS*	**S**	**19 39 49.3**	**-2.1**
PB07	**IPOC Station P**	**3.55**	**308**	*eP*	**Pn**	**19 39 09.9**	**+1.2**
PB07				IAML		19 39 59.0	
	comp=Z,52nm,0.3s						
PB07	**IPOC Station P**	**3.55**	**308**	*eP*	**Pn**	**19 39 09.6**	**+1.0**
PB07				*eS*	**S**	**19 39 51.6**	**-2.7**
PB01	**IPOC Station P**	**3.77**	**320**	*eP*	**Pn**	**19 39 12.3**	**+1.1**
PB01				IAML		19 40 01.5	
	comp=Z,31nm,0.1s						
PB01	**IPOC Station P**	**3.77**	**320**	*eP*	**Pn**	**19 39 11.9**	**+0.7**
PB02	**IPOC Station P**	**3.83**	**313**	*eP*	**Pn**	**19 39 13.4**	**+1.6**
PB02				*eS*	**S**	**19 39 58.0**	**-2.1**
PB02				IAML		19 40 00.1	
	comp=Z,81nm,0.2s						
PB02	**IPOC Station P**	**3.83**	**313**	*eP*	**Pn**	**19 39 12.5**	**+0.6**
AC01	**Pan de Azucar**	**4.01**	**236**	*eP*	**Pn**	**19 39 14.7**	**+0.8**
AC01				*eS*	**S**	**19 40 01.2**	**-2.5**
AC01				IAML		19 40 02.6	
	comp=Z,34nm,0.5s						
AC01	**Pan de Azucar**	**4.01**	**236**	*eP*	**Pn**	**19 39 14.6**	**+0.8**
PB08	**IPOC Station P**	**4.35**	**331**	*eP*	**Pn**	**19 39 20.2**	**+1.8**
PB08				*eS*	**S**	**19 40 11.4**	**-0.4**
GO03	**Copiap**	**4.71**	**219**	*eP*	**Pn**	**19 39 23.5**	**+1.1**
PB11	**IPOC Station P**	**4.91**	**328**	*eP*	**Pn**	**19 39 26.2**	**+1.2**
PB11				*eS*	**S**	**19 40 21.4**	**-2.5**
PB11				IAML		19 40 23.8	
	comp=Z,21nm,0.5s						

*SKO **23** 19:47:59.0,42.°71N×20.°99E,h0km,ML2.5*
*BEO **23** 19:47:59.3±0.3,42.°71N×21.°03E,h0km,MB4.2,3/16*
*PDG **23** 19:47:59.9±0.1,42.°72N×20.°84E,h8km,ML2.4/10,Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
ISC 23 19:47:58.0±1.1,42.°70N±0.°02×20.°98E±0.°02,h5km±10km, n54,σ1§42/98,17C-19D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SELS	**Selova**	**0.53**	**11**	*eP*	**Pg**	**19 48 07.7**	**-0.5**
SELS				*eSg*	**Sg**	**19 48 14.7**	**-0.4**
BARS	**Barje**	**0.62**	**79**	*eP*	**Pg**	**19 48 10.1**	**+0.2**
BARS				*eSg*	**Sg**	**19 48 18.8**	**+0.8**
BARS	**Barje**	**0.62**	**79**	*i Pg*	**Pg**	**19 48 09.8**	**-0.1**
BARS				*i Sg*	**Sg**	**19 48 18.8**	**+0.8**
SKO	**Skopje**	**0.80**	**155**	*eP*	**Pg**	**19 48 13.0**	**-0.3**
SKO				*eSg*	**Sg**	**19 48 24.2**	**+0.6**
SKO	**Skopje**	**0.80**	**155**	*i P*	**Pg**	**19 48 12.9**	**-0.3**
SKO				*i Sg*	**Sg**	**19 48 24.3**	**+0.6**
BEY	**Berane**	**0.82**	**283**	*i Pg*	**Pg**	**19 48 13.4**	**-0.3**
IVA	**Berane**	**0.82**	**283**	*ePg*	**Pg**	**19 48 13.0**	**-0.7**
IVA				*i Sg*	**Sg**	**19 48 24.4**	**0.0**
PRVS	**Prvonek**	**0.83**	**103**	*ePg*	**Pg**	**19 48 14.4**	**+0.6**
PRVS				*eSg*	**Sg**	**19 48 25.1**	**+0.5**
IVAS	**Ivanjica**	**1.07**	**326**	*ePg*	**Pg**	**19 48 18.8**	**+0.3**
IVAS				*eSg*	**Sg**	**19 48 32.6**	**+0.3**
BOVS	**Bovan**	**1.08**	**29**	*eP*	**Pg**	**19 48 23.6**	**+3.9**
BOVS				*eS*	**Sg**	**19 48 32.7**	**+0.2**
BOVS	**Bovan**	**1.08**	**29**	*ePg*	**Pb**	**19 48 17.9**	**-1.2**
BOVS				*eSg*	**Sg**	**19 48 32.4**	**-0.1**
KOME	**Kolasin**	**1.09**	**279**	*i Pg*	**Pg**	**19 48 17.9**	**-1.0**
KOME				*i Sg*	**Sg**	**19 48 32.7**	**-0.4**
BOSS	**Bosilegrad**	**1.12**	**100**	*ePg*	**Pb**	**19 48 18.9**	**-1.0**
BOSS				*eSg*	**Sg**	**19 48 33.2**	**-0.8**
GRUS	**Gruza**	**1.21**	**351**	*ePg*	**Pn**	**19 48 21.4**	**-0.2**
GRUS				*eSg*	**Sn**	**19 48 38.9**	**+0.6**
PLE	**Pljevlja**	**1.33**	**299**	*i Pg*	**Pn**	**19 48 22.1**	**-1.3**
PLE				*i Sg*	**Sn**	**19 48 41.1**	**-0.4**
ZAPS	**Zavoj**	**1.34**	**64**	*ePg*	**Pn**	**19 48 22.8**	**-0.6**
ZAPS				*eSg*	**Sb**	**19 48 40.5**	**-0.6**
DRME	**Dracevica, Mon**	**1.43**	**250**	*i Pg*	**Pn**	**19 48 24.1**	**-0.5**
DRME				*i Sg*	**Sg**	**19 48 44.7**	**+0.9**
ZAGS	**Zajecar**	**1.44**	**39**	*ePg*	**Pn**	**19 48 23.4**	**-1.4**
ZAGS				*eSg*	**Sb**	**19 48 44.2**	**+0.2**
ULC	**Ulcinj**	**1.48**	**241**	*ePg*	**Pn**	**19 48 25.2**	**-0.2**
ULC				*i Sg*	**Sg**	**19 48 46.9**	**+1.3**
NKME	**Niksic**	**1.50**	**273**	*i Pg*	**Pn**	**19 48 25.1**	**-0.5**
NKME				*i Sg*	**Sg**	**19 48 46.6**	**+0.5**
CEME	**Cevo**	**1.53**	**265**	*i Pg*	**Pn**	**19 48 25.7**	**-0.4**
CEME				*i Sg*	**Sg**	**19 48 47.8**	**+0.6**
DIVS	**Divibare**	**1.58**	**333**	*ePg*	**Pn**	**19 48 27.2**	**+0.5**
DIVS				*eSg*	**Sg**	**19 48 49.4**	**+0.8**
SVIS	**Svilajnac**	**1.58**	**6**	*ePg*	**Pg**	**19 48 29.1**	**+0.9**
SVIS				*eSg*	**Sg**	**19 48 50.7**	**+2.1**
TRUS	**Trudelj**	**1.58**	**345**	*ePg*	**Pb**	**19 48 27.5**	**-0.2**
TRUS				*eSg*	**Sg**	**19 48 50.9**	**+2.1**
OHR	**Ohrid**	**1.59**	**185**	*i Pn*	**Pn**	**19 48 26.3**	**-0.6**
OHR				*i Sg*	**Sg**	**19 48 49.9**	**+0.9**
OHR				*eLg*	Lg	19 48 50.9	
	comp=N,22nm,0.8s						
OHR				*eLg*	Lg	19 48 50.9	
	comp=E,86nm,0.7s						
BUM	**Brajici-Budva**	**1.60**	**256**	*ePg*	**Pn**	**19 48 27.0**	**0.0**
BUM				*i Sg*	**Sg**	**19 48 49.4**	**+0.2**
BBLS	**Lazići**	**1.64**	**316**	*ePg*	**Pb**	**19 48 28.3**	**-0.5**
BBLS				*eSg*	**Sg**	**19 48 52.2**	**+1.5**
PEHC	**Pehcevo**	**1.69**	**122**	*i Pn*	**Pb**	**19 48 29.7**	**0.0**
PEHC				*i Sg*	**Sg**	**19 48 53.8**	**+1.5**
KUBS	**Kucevo**	**1.79**	**16**	*ePg*	**Pb**	**19 48 32.1**	**+0.9**
KUBS				*eSg*	**Sb**	**19 48 54.0**	**+0.1**
KKB	**Krupnik**	**1.81**	**118**	*i Pn*	**Pb**	**19 48 31.0**	**-0.5**
BRY	**Bratogost**	**1.81**	**277**	*ePn*	**Pn**	**19 48 30.3**	**+0.3**
BRY				*i Sn*	**Sb**	**19 48 54.5**	**-0.3**
HCY	**Herceg Novi**	**1.86**	**263**	*ePn*	**Pn**	**19 48 31.0**	**+0.5**
HCY				*i Sn*	**Sb**	**19 48 55.6**	**-0.3**
FNA	**Florina**	**1.94**	**171**	*i Pn*	**Pb**	**19 48 33.4**	**-0.3**
DBRK	**Dubrovnik**	**2.09**	**270**	*ePn*	**Pb**	**19 48 35.4**	**-1.0**
DBRK				Sn	**Sb**	**19 49 03.0**	**+0.2**
KNT	**Kendrikon**	**2.10**	**136**	*i Pn*	**Pb**	**19 48 36.5**	**0.0**
PUNG	**Punghina**	**2.12**	**41**	*i S*	**Sg**	**19 49 07.0**	**+0.9**
MDVR	**Moldovita**	**2.15**	**14**	*i S*	**Pg**	**19 48 41.9**	**+2.8**
MDVR				*i S*	**Sg**	**19 49 06.3**	**+0.6**
RMGR	**Halanga-Turnu**	**2.32**	**32**	*i S*	**Pg**	**19 49 11.6**	**-0.9**
HERR	**Herculane**	**2.42**	**25**	*i P*	**Pg**	**19 48 44.7**	**+0.4**
HERR				*i S*	**Sb**	**19 49 13.5**	**+1.4**
STON	**Ston**	**2.42**	**275**	*ePn*	**Pn**	**19 48 38.4**	**+0.2**
SRE	**Strehaia**	**2.54**	**39**	*i P*	**Pg**	**19 48 46.2**	**-0.4**
SRE				*i S*	**Sb**	**19 49 16.9**	**+1.3**
FRGS	**Fruska Gora**	**2.60**	**341**	*i S*	**Sb**	**19 49 19.1**	**+1.7**
BANR	**Banloc**	**2.69**	**2**	*i P*	**Pg**	**19 48 48.9**	**-0.5**
BANR				*i S*	**Sb**	**19 49 20.8**	**+1.0**
PLVB	**Pleven**	**2.75**	**74**	*i P*	**Pg**	**19 48 51.4**	**+0.7**
PLVB				*i S*	**Sg**	**19 49 25.3**	**-1.1**
RICI	**Ricice**	**2.93**	**287**	*ePn*	**Pn**	**19 48 46.9**	**+1.6**
RICI				Sn	**Sn**	**19 49 23.4**	**+2.5**
BZS	**Buzias**	**2.95**	**9**	*i P*	**Pb**	**19 48 51.9**	**+0.8**
BZS				*i S*	**Sb**	**19 49 26.8**	**-0.7**
MAKA	**Makarska**	**2.97**	**283**	*ePn*	**Pn**	**19 48 47.5**	**+1.8**
GZR	**Gura Zlata**	**2.99**	**25**	*i P*	**Pb**	**19 48 52.4**	**+0.6**
GZR				*i S*	**Sb**	**19 49 28.4**	**-0.2**
SURR	**Surduc**	**3.16**	**15**	*i P*	**Pb**	**19 48 56.0**	**+1.3**
SURR				*i S*	**Sb**	**19 49 32.5**	**-1.0**
LOT	**Lotru**	**3.40**	**35**	*i S*	**Sb**	**19 49 38.0**	**-2.6**
SIRR	**Siria**	**3.60**	**7**	*i P*	**Pb**	**19 49 00.8**	**-1.3**
SIRR				*i S*	**Sb**	**19 49 43.0**	**-3.2**
ELND	**Elena**	**3.61**	**85**	*i P*	**Pb**	**19 49 02.9**	**+0.6**
ELND				*i S*	**Sb**	**19 49 47.0**	**+0.8**
MARR	**Marisel-Cluj**	**4.26**	**20**	*i P*	**Pb**	**19 49 09.9**	**-3.5**
MARR				*i S*	**Sb**	**19 49 59.5**	**-5.6**
DRGR		**4.27**	**16**	*i P*	**Pb**	**19 49 10.7**	**-2.9**
DRGR				*i S*	**Sb**	**19 50 00.1**	**-5.4**

IDC 23 19:59:55.0±2.0,33.°13S×179.°28W,h0km,mb3.7/3, mbtmp3.7/4,ML3.6/1,Error ellipse: s-maj=49.9km s-min=32.6km az=59.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.90**	**209**	Pn	Pn	20 01 21.8	-1.9
	1.6nm,0.3s,baz=347,slow=5.4,SNR=15						
URZ				Sn	Sn	20 02 23.8	-8.2
	1.8nm,0.3s,baz=347,slow=11,SNR=5.5						
	4.2nm,0.3s						
ASAR	**Alice Springs**	**41.96**	**271**	P	P	20 07 47.7	-0.2
	0.5nm,0.6s,baz=111,slow=7.3,SNR=10.0						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.20**	**276**	P	P	20 07 58.5	+0.5
	0.2nm,0.3s,baz=117,slow=8.0,SNR=7.6						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	**56.99**	**180**	P	P	20 09 42.7	+0.5
	1.4nm,0.7s,baz=13,slow=0.8,SNR=9.2						
	1.4nm,0.7s						
H03N3	**Juan Fernandez**	**80.07**	**123**	T	T	21 40 20.3	
	baz=239,slow=72,SNR=9.3						
H03N2	**Juan Fernandez**	**80.08**	**123**	T	T	21 40 14.5	
	baz=239,slow=72,SNR=7.7						
H03N1	**Juan Fernandez**	**80.09**	**123**	T	T	21 40 16.5	
	baz=239,slow=72,SNR=4.8						
FINES	**FINESS Array B**	**147.29**	**338**	PKPbc	PKPdf	20 19 37.9	+0.6
	1.6nm,0.9s,baz=27,slow=3.4,SNR=4.2						

*IDC **23** 20:02:29.2±1.4,33.°05S×179.°14W,h0km,mb4.0/3, mbtmp4.0/4,ML3.8/1,MS3.5/1,Error ellipse: s-maj=40.5km s-min=31.0km az=66.0*
*WEL **23** 20:02:30.0±0.7,33.°3S±9.°×17.°9W±2.°1,h12km,M4.2/9, mB4.7/4,ML4.3/12,MLv4.2/9,Mw(mB)3.9/4,Error ellipse: s-maj=0.0km s-min=0.0km az=111.2,confirmed*
*NEIC **23** 20:02:36.2±1.5,33.°6S±0.°1×179.°80W±0.°08,h10km±2km, mb4.3/4,Error ellipse: s-maj=23.7km s-min=10.9km az=13.0*
ISC 23 20:02:30.0±1.0,33.°37S±0.°08×179.°1W±0.°2,h10km,n46, σ2§16/55,mb4.1/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.22**	**14**	P	**Pn**	**20 03 34.9**	**+0.4**
GLKZ				S	**Sn**	**20 04 20.7**	**-3.1**
MXZ	**Matakaoa Point**	**4.68**	**206**	Pn	**Pn**	**20 03 41.2**	**+0.5**
MXZ	**Matakaoa Point**	**4.68**	**206**	P	**Pn**	**20 03 42.4**	**+1.7**
MXZ				S	**Sn**	**20 04 33.2**	**-1.8**
MXZ				T		20 07 57.7	
WMGZ	**Waiomatatini S**	**4.87**	**204**	P	**Pn**	**20 03 45.2**	**+1.9**
WMGZ				S	**Sn**	**20 04 39.1**	**-0.7**
HAZ	**Te Kaha**	**5.05**	**209**	P	**Pn**	**20 03 47.8**	**+2.0**
HAZ				S	**Sn**	**20 04 43.9**	**-0.3**
PUZ	**Puketiti**	**5.15**	**204**	P	**Pn**	**20 03 47.9**	**+0.7**
PUZ				S	**Sn**	**20 04 46.3**	**-0.5**
RUGZ	**Raukumara Rang**	**5.27**	**209**	P	**Pn**	**20 03 50.6**	**+1.6**
RUGZ				S	**Sn**	**20 04 49.0**	**-0.9**
TWGZ	**Tauwhareparae**	**5.34**	**205**	P	**Pn**	**20 03 50.6**	**+0.8**
TWGZ				S	**Sn**	**20 04 51.2**	**-0.3**
KUZ	**Kuaotunu**	**5.40**	**230**	P	**Pn**	**20 03 53.4**	**+2.8**
CNGZ	**Carnagh Statio**	**5.54**	**202**	P	**Pn**	**20 03 53.9**	**+1.3**
CNGZ				S	**Sn**	**20 04 56.1**	**-0.2**
TKGZ	**Te Karaka**	**5.62**	**205**	P	Pn	20 03 48.0	-5.7
TKGZ				S	**Sn**	**20 04 59.5**	**+1.2**
MWZ	**Matawai**	**5.65**	**208**	P	**Pn**	**20 03 55.2**	**+1.1**
MWZ				S	**Sn**	**20 04 56.2**	**-2.7**
MWZ				T		20 07 58.3	
URZ	**Urewera**	**5.76**	**211**	Pn	**Pn**	**20 03 57.5**	**+2.0**
	2.4nm,0.3s,baz=339,slow=4.2,SNR=9.8						
URZ				Sn	**Sn**	**20 04 59.2**	**-2.5**
	2.1nm,0.3s,baz=357,slow=18,SNR=2.2						
	7.0nm,0.3s						
URZ	**Urewera**	**5.76**	**211**	P	**Pn**	**20 03 57.5**	**+2.0**
URZ				S	**Sn**	**20 04 58.6**	**-3.0**
RIGZ	**Rimuhau**	**5.89**	**204**	P	**Pn**	**20 03 55.9**	**-1.6**
RIGZ				S	**Sn**	**20 05 02.7**	**-2.4**
PRGZ	**Paritu Road**	**6.05**	**203**	P	**Pn**	**20 03 59.3**	**-0.2**
PRGZ				S	**Sn**	**20 05 03.7**	**-5.1**
RTZ	**Ruatahuna**	**6.11**	**210**	Pn	**Pn**	**20 03 59.7**	**-0.8**
TOZ	**Tahuroa Road**	**6.17**	**224**		**Pn**	**20 04 00.8**	**-0.5**
MHGZ	**Mahia Peninsul**	**6.25**	**202**	P	**Pn**	**20 04 01.7**	**-0.6**
MHGZ				S	**Sn**	**20 05 13.1**	**-0.7**
RAHZ	**Arahi**	**6.33**	**208**	P	**Pn**	**20 04 05.4**	**+2.0**
RAHZ				S	**Sn**	**20 05 15.7**	**0.0**
MRHZ	**Matea Rd**	**6.54**	**212**	P	**Pn**	**20 04 07.2**	**+0.9**
MRHZ				S	**Sn**	**20 05 20.2**	**-0.8**
BKZ	**Black Stump Fm**	**6.78**	**210**	Pn	**Pn**	**20 04 09.3**	**-0.3**
BFZ	**Birch Farm**	**8.18**	**206**	Pn	**Pn**	**20 04 24.9**	**-3.9**
MRZ	**Mangatainoka R**	**8.42**	**209**	Pn	**Pn**	**20 04 27.9**	**-4.2**
PLWZ	**Palliser**	**9.32**	**207**	Pn	**Pn**	**20 04 41.0**	**-3.4**
TCW	**Tory Channel**	**9.43**	**212**	Pn	**Pn**	**20 04 41.6**	**-4.2**
NNZ	**Nelson**	**9.85**	**215**	Pn	**Pn**	**20 04 48.0**	**-3.7**
THZ	**Tophouse**	**10.49**	**215**	Pn	**Pn**	**20 04 57.3**	**-3.2**
KHZ	**Kahutara**	**10.72**	**211**	Pn	**Pn**	**20 05 01.1**	**-2.6**
DZM	**Mont Dzumac**	**17.01**	**308**	LR	LR	20 11 14.7	
	comp=Z,148nm,18.0s,baz=130,slow=31						
ASAR	**Alice Springs**	**42.09**	**271**	P	**P**	**20 10 23.1**	**+0.6**
	1.1nm,0.7s,baz=109,slow=7.3,SNR=20						
	1.1nm,0.7s						
WB2	**Warramunga Arr**	**43.34**	**276**	P	**P**	**20 10 33.7**	**+1.2**
WB2				IAmb	IAmb	20 10 51.8	
	comp=Z,10.0nm,1.4s						
WRA	**Warramunga Arr**	**43.35**	**276**	P	**P**	**20 10 33.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=117,slow=8.1,SNR=7.2						
	comp=Z,1.2nm,0.8s						
WB0	**Warramunga Arr**	**43.39**	**276**	P	**P**	**20 10 34.1**	**+1.1**
WB0				IAmb	IAmb	20 10 57.3	
	comp=Z,5.1nm,1.3s						
KNRA	**Kununurra**	**50.06**	**277**	P	**P**	**20 11 25.7**	**+0.5**
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**20 12 18.2**	**+4.3**
QSPA				IAmb	IAmb	20 12 33.4	
	comp=Z,8.5nm,1.4s						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**20 12 17.5**	**+3.6**
	comp=Z,2.6nm,0.7s,baz=60,slow=1.4,SNR=18						
	comp=Z,2.6nm,0.7s						
H03S2	**Juan Fernandez**	**79.62**	**124**	T	T	21 42 41.1	
	baz=237						
H03S1	**Juan Fernandez**	**79.63**	**124**	T	T	21 42 45.2	
	baz=237						
H03S3	**Juan Fernandez**	**79.64**	**124**	T	T	21 42 44.5	
	baz=237						
H03N3	**Juan Fernandez**	**79.83**	**123**	T	T	21 43 02.1	
	baz=239,slow=72,SNR=56						
H03N2	**Juan Fernandez**	**79.84**	**123**	T	T	21 42 46.6	
	baz=239,slow=72,SNR=27						
H03N1	**Juan Fernandez**	**79.85**	**123**	T	T	21 43 01.5	
	baz=239,slow=72,SNR=61						
KURBB	**Kurchatov Arra**	**122.41**	**313**	PKP	**PKPdf**	**20 21 24.2**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=97,slow=1.7,SNR=4.1						
BVAR	**Borovoye Array**	**127.82**	**314**	PKP	**PKPdf**	**20 21 34.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=90,slow=0.1,SNR=2.5						
FINES	**FINESS Array B**	**147.56**	**338**	PKPbc	**PKPbc**	**20 22 13.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=49,slow=4.2,SNR=5.9						

*IDC **23** 20:09:55.8±0.8,40.°72S×78.°15E,h0km,mb4.1/11, mbtmp4.1/11,MS4.0/43,Error ellipse: s-maj=26.0km s-min=20.8km az=97.0*
*NEIC **23** 20:09:58.2±2.8,40.°65S±0.°09×78.°2E±0.°2,h10km±1km, mb4.6/25,Error ellipse: s-maj=26.5km s-min=15.1km az=271.0*
*GCMT **23** 20:09:59.2±0.3,40.°96S±0.°02×78.°37E±0.°02,h24km±1km, MW5.0/89,Moment Tensor Solution. s22,c26; s89,c119; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.46±.15; Mθθ1.58±.12; Mϕϕ-1.11±.12; Mrθ-1.18±.17; Mϕθ-2.71±.10; Mϕr1.08±.19; Best double couple: Mo3.33600×10¹⁶ NP1:ϕs348.00000°,δ82.00000°,λ21.00000°. NP2: ϕs255.00000°,δ70.00000°,λ172.00000°. Principal axes: T 3.8370, Plg20.0000°, Azm213.0000°; N -0.9960, Plg68.0000°, Azm8.0000°; P -2.8350, Plg9.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 20:09:57.4±0.6,40.°71S±0.°08×78.°2E±0.°1,h10km,n82, σ1§06/42,mb4.5/20,MS4.0/43,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**2.95**	**350**	Pn	**Pn**	**20 10 43.6**	**-0.7**
H04N2	**CROZET ISLANDS**	**19.90**	**245**	T	T	20 35 17.5	
	baz=84,slow=75						
H04S1	**CROZET ISLANDS**	**19.91**	**243**	T	T	20 35 20.2	
	baz=78,slow=75,SNR=9.5						
H04N3	**CROZET ISLANDS**	**19.91**	**245**	T	T	20 35 16.0	
	baz=84,slow=75						
H04N1	**CROZET ISLANDS**	**19.91**	**245**	T	T	20 35 23.7	
	baz=84,slow=75						
H04S2	**CROZET ISLANDS**	**19.93**	**243**	T	T	20 35 20.2	
	baz=78,slow=75,SNR=6.2						
H04S3	**CROZET ISLANDS**	**19.93**	**243**	T	T	20 35 20.9	
	baz=78,slow=75						
MAW	**Mawson**	**28.23**	**192**	LR	LR	20 24 45.2	
	comp=Z,543nm,19.8s,baz=16,slow=32						
H01W2	**

TSUM	**Tsumeb**	**55.62**	**274**	LR	LR	20 40 36.1		
	comp=Z,121nm,18.5s,baz=148,slow=33							
MBAR	**Mbarara**	**58.63**	**300**	LR	LR	20 42 33.6		
	comp=Z,131nm,18.1s,baz=177,slow=33							
CTA	**Charters Tower**	**60.72**	**92**	LR	LR	20 43 00.7		
	comp=Z,74nm,21.1s,baz=254,slow=33							
CMAR	**Chiang Mai Arr**	**61.94**	**22**	P	**P**	**20 20 18.1**	**+0.8**	
	comp=Z,1.2nm,0.9s,baz=217,slow=6.2,SNR=7.9							
CMAR				LR	LR	20 44 30.7		
	comp=Z,49nm,18.3s,baz=210,slow=34							
	comp=Z,1.2nm,0.9s							
DAV	**Davao City (W)**	**64.43**	**54**	LR	LR	20 49 26.2		
	comp=Z,68nm,18.2s,baz=198,slow=37							
RPZ	**Rata Peaks**	**65.15**	**127**	LR	LR	20 42 15.0		
	comp=Z,183nm,20.0s,baz=274,slow=30							
WSAR	**Wadi Sarin**	**66.18**	**340**	LR	LR	20 44 36.8		
	comp=Z,143nm,19.1s,baz=196,slow=32							
DSZ	**Denniston Nort**	**66.71**	**126**	P	**P**	**20 20 49.3**	**+0.7**	
PMG	**Port Moresby**	**67.97**	**83**	LR	LR	20 50 54.4		
	comp=Z,125nm,18.2s,baz=216,slow=36							
PMSA	**Palmer Station**	**70.77**	**196**	LR	LR	20 51 36.1		
	comp=Z,180nm,19.4s,baz=167,slow=35							
LSA	**Lhasa**	**71.07**	**12**	P	**P**	**20 21 15.0**	**-1.1**	
LSA				IAmb	IAmb	20 21 18.4		
	comp=Z,5.6nm,1.5s							
URZ	**Urewera**	**72.05**	**125**	LR	LR	20 47 25.4		
	comp=Z,116nm,18.5s,baz=301,slow=31							
DZM	**Mont Dzumac**	**74.66**	**106**	LR	LR	20 49 42.5		
	comp=Z,110nm,18.9s,baz=230,slow=32							
KBL	**Kabul**	**75.36**	**352**	P	**P**	**20 21 41.9**	**+0.9**	
KBL				IAmb	IAmb	20 21 45.3		
	comp=Z,8.4nm,1.2s							
HNR	**Honiara**	**77.66**	**92**	LR	LR	20 53 51.5		
	comp=Z,687nm,18.1s,baz=144,slow=34							
BTK	**Batken**	**80.67**	**354**	P	**P**	**20 22 11.5**	**+1.2**	
BTK				IAmb	IAmb	20 22 14.4		
	comp=Z,11nm,1.3s							
EIL	**Elat**	**80.69**	**323**	LR	LR	20 52 16.3		
	comp=Z,65nm,20.5s,baz=245,slow=32							
JOW	**Kunigami**	**81.69**	**44**	LR	LR	20 55 18.6		
	comp=Z,27nm,21.7s,baz=167,slow=33							
ARSB	**Arslanbob**	**81.79**	**356**	P	**P**	**20 22 17.7**	**+1.4**	
AAK	**Ala-Archa**	**83.03**	**357**	P	**P**	**20 22 24.2**	**+1.5**	
AAK				IAmb	IAmb	20 22 26.3		
	comp=Z,3.0nm,1.1s							
AAK	**Ala-Archa**	**83.03**	**357**	LR	LR	20 55 46.9		
	comp=Z,172nm,20.7s,baz=177,slow=33							
MMAI	**Mount Meron Ar**	**83.33**	**325**	LR	LR	20 53 25.1		
	comp=Z,62nm,21.9s,baz=124,slow=31							
KK31	**Karatay Array**	**83.72**	**354**	P	**P**	**20 22 28.1**	**+2.0**	
KK31				IAmb	IAmb	20 22 29.6		
	comp=Z,5.6nm,1.2s							
KKAR	**Karatay Array**	**83.72**	**354**	P	**P**	**20 22 28.2**	**+2.1**	
KKAR	**Karatay Array**	**83.72**	**354**	P	**P**	**20 22 28.1**	**+2.1**	
KKAR				IAmb	IAmb	20 22 29.6		
	comp=Z,5.6nm,1.2s							
GNI	**Garni**	**86.06**	**335**	LR	LR	20 57 20.7		
	comp=Z,75nm,20.5s,baz=164,slow=33							
MK31	**Makanchi Array**	**87.20**	**3**	P	**P**	**20 22 44.6**	**+1.3**	
MKAR	**Makanchi Array**	**87.20**	**3**	P	**P**	**20 22 44.5**	**+1.2**	
MKAR	**Makanchi Array**	**87.20**	**3**	P	**P**	**20 22 42.5**	**-0.8**	
	comp=Z,0.7nm,0.8s,baz=197,slow=3.8,SNR=8.7							
MKAR				LR	LR	20 58 50.5		
	comp=Z,79nm,21.4s,baz=230,slow=34							
	comp=Z,0.7nm,0.8s							
JNU	**Nakatsue**	**88.07**	**42**	LR	LR	21 01 50.9		
	comp=Z,33nm,18.9s,baz=206,slow=35							
TORD	**Torodi Ar. Bea**	**88.53**	**289**	P	**P**	**20 22 50.0**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=123,slow=5.3,SNR=1.9							
TORD				LR	LR	21 00 16.3		
	comp=Z,158nm,20.5s,baz=136,slow=34							
	comp=Z,0.3nm,0.6s							
KBZ	**Khabaz**	**89.88**	**335**	LR	LR	21 00 22.3		
	comp=Z,65nm,19.6s,baz=181,slow=34							
KURBB	**Kurchatov Arra**	**90.95**	**0**	P	**P**	**20 23 01.8**	**+0.9**	
	comp=Z,0.4nm,0.8s,baz=192,slow=4.5,SNR=6.4							
KURBB				LR	LR	21 02 20.2		
	comp=Z,78nm,18.4s,baz=171,slow=35							
	comp=Z,0.4nm,0.8s							
SONM	**Songino Array**	**91.64**	**19**	P	**P**	**20 23 05.0**	**+0.6**	
	comp=Z,0.3nm,0.7s,baz=191,slow=3.9,SNR=2.9							
SONM				LR	LR	21 04 16.9		
	comp=Z,63nm,18.4s,baz=196,slow=36							
	comp=Z,0.3nm,0.7s							
AKTO	**Aktyubinsk**	**92.48**	**347**	LR	LR	21 00 41.6		
	comp=Z,58nm,19.3s,baz=79,slow=33							
JHJ	**Hachijo jima 2**	**92.84**	**48**	LR	LR	21 05 35.3		
	comp=Z,24nm,18.2s,baz=132,slow=36							
BVAR	**Borovoye Array**	**93.61**	**355**	LR	LR	21 02 48.6		
	comp=Z,70nm,19.1s,baz=164,slow=34							
ZALV	**Zalesovo Beam**	**94.45**	**4**	LR	LR	21 03 31.6		
	comp=Z,99nm,21.5s,baz=190,slow=34							
MJAR	**Matsushiro Arr**	**94.53**	**44**	LR	LR	21 03 29.9		
	comp=Z,22nm,18.6s,baz=194,slow=31							
USRK	**Ussuriysk Ar.**	**97.36**	**36**	LR	LR	21 04 53.3		
	comp=Z,57nm,21.1s,baz=198,slow=34							
ILAR	**Eielson Array**	**144.78**	**32**	PKP	**PKPab**	**20 29 32.2**	**-0.2**	
	comp=Z,0.9nm,0.9s,baz=291,slow=4.7,SNR=7.2							
YKA	**Yellowknife Ar**	**156.86**	**15**	PKPab	**PKPab**	**20 30 20.2**	**-1.6**	
	comp=Z,0.1nm,0.4s,baz=340,slow=4.3,SNR=2.8							
NVAR	**Mina Array Bea**	**167.04**	**95**	PKPab	**PKPab**	**20 31 07.4**	**-0.1**	
	comp=Z,0.5nm,0.8s,baz=245,slow=5.8,SNR=1.9							

WEL 23 20:13:24.7±0.9, 32°S±16″×177°9E±3°5, h190km±29km, M4.2/6, mB4.7/5, ML4.6/6, MLv4.3/6, Mw(mB)3.9/5, Error ellipse: s-maj=0.0km s-min=0.0km az=113.4, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.55**	**40**	S	Sn	20 15 03.3	-0.8
HAZ	**Te Kaha**	**5.89**	**193**	P	Pn	20 14 51.8	+1.4
HAZ				S	Sn	20 16 01.4	+3.3
RUGZ	**Raukumara Rang**	**6.12**	**193**	P	Pn	20 14 54.3	+0.9
RUGZ				S	Sn	20 16 03.5	0.0
MWZ	**Matawai**	**6.50**	**194**	P	Pn	20 14 59.0	+0.6
MWZ				S	Sn	20 16 15.2	+2.8
URZ	**Urewera**	**6.52**	**197**	P	Pn	20 14 58.9	+0.4
URZ				S	Sn	20 16 13.6	+0.8
MKRZ	**Makatiti**	**6.59**	**201**	P	Pn	20 15 04.4	+4.9
OMRZ	**Omania**	**6.59**	**202**	P	Pn	20 15 01.6	+2.1
OMRZ				S	Sn	20 16 08.3	-6.1
NGRZ	**Ngongotaha**	**6.64**	**203**	P	Pn	20 15 01.5	+1.3
TARZ	**Mount Tarawera**	**6.67**	**201**	P	Pn	20 15 04.7	+4.2
UTU	**Utuhina**	**6.71**	**203**	P	Pn	20 15 02.2	+1.2
MTHZ	**Maungataniwha**	**7.15**	**197**	P	Pn	20 15 05.2	-1.6
MTHZ				S	Sn	20 16 28.6	+0.8
OTVZ	**Oturere**	**7.78**	**202**	P	Pn	20 15 14.4	-0.8
KWHZ	**Kaweka Forest**	**7.80**	**198**	P	Pn	20 15 13.3	-2.0
KWHZ				S	Sn	20 16 41.4	-1.7
BHHZ	**Black Hill Sta**	**7.96**	**199**	P	Pn	20 15 14.4	-3.0
BHHZ				S	Sn	20 16 45.2	-1.7
KAHZ	**Kahuranaki**	**8.04**	**194**	P	Pn	20 15 16.1	-2.4
KAHZ				S	Sn	20 16 49.5	+0.5
PXZ	**Pawanui**	**8.27**	**194**	P	Pn	20 15 18.4	-3.0

TAP ***23*** *20:17:13.9, 24.82N×122.43E, h12km±1km, ML2.5, C*
JMA ***23*** *20:17:13.6±0.2, 24.8N±0.7×122.5E±0.3, h3km±2km,*
MV2.4/11, NW OFF ISHIGAKIJIMA IS

ISC 23 20:17:13.7±1.0, 24.80N±0.02×122.45E±0.02, h8km±9km, n70, σ0.53/119, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.43**	**207**	*i* P	**Pb**	**20 17 23.1**	**-0.3**
	baz=204						
EOS2				*i* S	**Sb**	**20 17 30.1**	**+0.1**
	baz=204						
TWB1	**Santiao Chiao**	**0.47**	**296**	*i* P	**Pg**	**20 17 23.3**	**+0.6**
	baz=296						
TWB1				*i* S	**Sg**	**20 17 29.6**	**+0.8**
	baz=296						
EOS3	**EOS3**	**0.53**	**193**	*i* P	**Pb**	**20 17 24.9**	**-0.2**
	baz=190						
EOS3				S	**Sb**	**20 17 34.1**	**+1.3**
	baz=190						
JYNG	**Yonagunijimaku**	**0.57**	**128**	P	**Pg**	**20 17 24.7**	**-0.1**
JYNG				*e*S	**Sg**	**20 17 32.7**	**+0.5**
TWC	**Suao**	**0.58**	**251**	*i* P	**Pb**	**20 17 25.6**	**-0.4**
	baz=248						
TWC				*i* S	**Sb**	**20 17 34.8**	**+0.4**
	baz=248						
TIPB	**Shuangxi**	**0.59**	**287**	*i* P	**Pg**	**20 17 25.5**	**+0.4**
	baz=285						
TIPB				*i* S	**Sb**	**20 17 34.4**	**-0.4**
	baz=285						
ESAO	**Su ao**	**0.59**	**248**	*i* P	**Pb**	**20 17 25.7**	**-0.6**
	baz=245						
ESAO				*i* S	**Sb**	**20 17 34.0**	**-0.9**
	baz=245						
SXI1	**Grass Mountain**	**0.59**	**299**	*i* P	**Pb**	**20 17 26.2**	**-0.2**
	baz=299						
SXI1				*i* S	**Sb**	**20 17 34.4**	**-0.7**
	baz=299						
YOJ	**Yonaguni jima**	**0.61**	**123**	*i* P	**Pg**	**20 17 25.6**	**+0.1**
	baz=123						
YOJ				*i* S	**Sg**	**20 17 33.3**	**-0.3**
	baz=123						
YOJ	**Yonaguni jima**	**0.61**	**123**	P	**Pg**	**20 17 25.4**	**-0.2**
YOJ				*e*S	**Sg**	**20 17 33.4**	**-0.2**
ILA	**Ilan**	**0.64**	**267**	*e*S	**Sb**	**20 17 36.3**	**+0.2**
	baz=265						
NWF	**Wu-fen Shan**	**0.66**	**294**	P	**Pb**	**20 17 27.4**	**-0.2**
	baz=293						
NWF				S	**Sb**	**20 17 36.3**	**-0.7**
	baz=293						
WFSB	**Wu-fen Shan**	**0.66**	**294**	*i* P	**Pb**	**20 17 27.4**	**-0.1**
	baz=293						
WFSB				*i* S	**Sb**	**20 17 36.3**	**-0.5**
	baz=293						
NDS	**Dongshan**	**0.69**	**256**	*i* P	**Pb**	**20 17 27.8**	**-0.1**
	baz=254						
NDS				*i* S	**Sb**	**20 17 37.8**	**+0.3**
	baz=254						
EOS4	**EOS4**	**0.69**	**190**	*i* P	**Pb**	**20 17 27.9**	**+0.2**
	baz=188						
EOS4				*i* S	**Sb**	**20 17 37.0**	**-0.2**
	baz=188						
TNOU	**National Taiwa**	**0.70**	**300**	P	**Pb**	**20 17 27.8**	**-0.4**
	baz=299						
TNOU				S	**Sg**	**20 17 36.9**	**+0.4**
	baz=299						
EWUT	**Wuta**	**0.70**	**240**	*i* P	**Pb**	**20 17 27.9**	**-0.3**
	baz=238						
EWUT				*i* S	**Sb**	**20 17 37.9**	**-0.2**
	baz=238						
TWE	**Neicheng**	**0.71**	**264**	*i* P	**Pg**	**20 17 27.8**	**+0.3**
	baz=261						
TWE				*i* S	**Sb**	**20 17 38.2**	**-0.2**
	baz=261						
ENA	**Nanau**	**0.74**	**240**	*i* P	**Pg**	**20 17 28.3**	**+0.3**
	baz=237						
ENA				*i* S	**Sb**	**20 17 39.3**	**+0.2**
	baz=237						
FUSB	**Fushanzhiwuyua**	**0.78**	**267**	*i* P	**Pb**	**20 17 29.2**	**-0.4**
	baz=265						
FUSB				*i* S	**Sb**	**20 17 40.0**	**-0.4**
	baz=265						
EAHA	**Aohua**	**0.80**	**234**	*i* P	**Pb**	**20 17 29.4**	**-0.4**
	baz=232						
EAHA				*e*S	**Sg**	**20 17 39.8**	**+0.4**
	baz=232						
ENTT	**Nioudou**	**0.82**	**259**	*i* P	**Pb**	**20 17 30.0**	**-0.1**
	baz=257						
ENTT				*i* S	**Sb**	**20 17 41.6**	**+0.3**
	baz=257						
NHY	**Taipei**	**0.83**	**287**	*e*S	**Sg**	**20 17 39.6**	**-0.9**
	baz=285						
NWLT	**Wulai**	**0.86**	**269**	*i* P	**Pb**	**20 17 30.8**	**-0.1**
	baz=267						
NWLT				*i* S	**Sg**	**20 17 41.6**	**+0.2**
	baz=267						
YM01	**YM01**	**0.87**	**293**	*i* P	**Pg**	**20 17 30.5**	**+0.1**
	baz=292						
YM01				*i* S	**Sg**	**20 17 42.1**	**+0.5**
	baz=292						
YM08	**YM08**	**0.87**	**296**	*i* P	**Pg**	**20 17 29.9**	**-0.5**
	baz=296						
YM08				*i* S	**Sg**	**20 17 42.0**	**+0.3**
	baz=296						
NDT	**Datong Townshi**	**0.87**	**257**	*i* P	**Pb**	**20 17 31.0**	**-0.1**
	baz=255						
NDT				S	**Sb**	**20 17 42.6**	**-0.3**
	baz=255						
LATG	**Datong**	**0.88**	**253**	*i* P	**Pb**	**20 17 30.9**	**-0.4**
	baz=251						
LATG				*i* S	**Sb**	**20 17 43.6**	**+0.4**
	baz=251						
PCYT	**Pengchaiyu**	**0.89**	**338**	P	**Pg**	**20 17 31.2**	**+0.4**
	baz=338						
TWY	**Chenhua**	**0.90**	**302**	*i* P	**Pn**	**20 17 32.2**	**-0.5**
	baz=301						
TWY				*i* S	**Sb**	**20 17 43.8**	**+0.1**
	baz=301						
ANP	**Anpu**	**0.92**	**295**	*i* P	**Pn**	**20 17 32.7**	**-0.4**
	baz=294						
ANP				S	**Sg**	**20 17 43.4**	**-0.1**
	baz=294						
NTST	**Danshui**	**0.97**	**292**	*i* S	**Sb**	**20 17 45.6**	**-0.3**
	baz=291						
YHNB	**Yeheng**	**0.98**	**263**	*i* P	**Pg**	**20 17 32.6**	**0.0**
	baz=261						
YHNB				*i* S	**Sg**	**20 17 45.6**	**+0.2**
	baz=261						
ETL	**Rush Village**	**0.99**	**230**	P	**Pb**	**20 17 32.9**	**-0.1**
	baz=228						
ETL				S	**Sb**	**20 17 46.2**	**-0.1**
	baz=228						
NACB	**Ninganchiao**	**1.00**	**231**	*i* P	**Pg**	**20 17 32.6**	**-0.2**
	baz=229						
NACB				*i* S	**Sg**	**20 17 45.9**	**+0.1**
	baz=229						
NSK	**Sanguang**	**1.00**	**263**	*i* P	**Pb**	**20 17 33.1**	**-0.2**
	baz=261						
NSK				*i* S	**Sg**	**20 17 45.8**	**-0.1**
	baz=261						
NNSB	**Datong**	**1.04**	**249**	*i* P	**Pg**	**20 17 33.4**	**-0.3**
	baz=247						
NNSB				*i* S	**Sb**	**20 17 47.6**	**-0.2**
	baz=247						
NNS	**Nan Shan**	**1.04**	**250**	*i* P	**Pb**	**20 17 33.9**	**-0.1**
	baz=248						
NNS				*i* S	**Sb**	**20 17 48.2**	**+0.3**
	baz=248						
TWD	**Chiawan**	**1.06**	**227**	*i* P	**Pg**	**20 17 33.9**	**-0.1**
	baz=225						
TWD				S	**Sn**	**20 17 49.6**	**-0.1**
	baz=225						
ETLH	**Xiulin Townshi**	**1.06**	**236**	*i* P	**Pb**	**20 17 34.2**	**-0.1**
	baz=234						
ETLH				*i* S	**Sb**	**20 17 48.3**	**-0.1**
	baz=234						
ETM	**Tongmen**	**1.21**	**226**	P	**Pg**	**20 17 36.6**	**-0.2**
	baz=225						
NFF	**Wufeng Townshi**	**1.22**	**262**	*i* P	**Pg**	**20 17 36.2**	**-0.9**
	baz=261						
NFF				*i* S	**Sg**	**20 17 52.8**	**-0.2**
	baz=261						
LXIB	**Xiulin Townshi**	**1.22**	**231**	*i* P	**Pg**	**20 17 36.9**	**-0.3**
	baz=229						
LXIB				*e*S	**Sn**	**20 17 56.4**	**+2.4**
	baz=229						
IRIF	**Iriomote-Funau**	**1.26**	**111**	*e*P	**Pn**	**20 17 37.4**	**-0.1**
WHF	**Hehuan Shan**	**1.26**	**239**	*i* P	**Pg**	**20 17 36.4**	**-1.6**
	baz=237						
SHUL	**Shoufeng**	**1.29**	**219**	P	**Pn**	**20 17 37.3**	**-0.7**
	baz=217						
LIOB	**Emei**	**1.31**	**263**	*i* P	**Pn**	**20 17 38.0**	**-0.3**
	baz=262						
LIOB				*i* S	**Sn**	**20 17 57.1**	**+1.1**
	baz=262						
NSTT	**Nanjuang**	**1.33**	**263**	*i* P	**Pn**	**20 17 38.0**	**-0.5**
	baz=261						
NSTT				S	**Sb**	**20 17 55.4**	**-0.6**
	baz=261						
ESL	**Shilin**	**1.35**	**223**	P	**Pn**	**20 17 38.7**	**-0.1**
	baz=221						
ESL				*e*S	**Sn**	**20 17 58.9**	**+1.9**
	baz=221						
CHGB	**Renai**	**1.38**	**238**	*i* P	**Pg**	**20 17 39.9**	**-0.2**
	baz=236						
CHGB				*i* S	**Sn**	**20 17 58.1**	**+0.2**
	baz=236						
OWD	**Renai**	**1.43**	**234**	*i* P	**Pg**	**20 17 41.3**	**0.0**
	baz=233						
HATJ	**Hateruma jima**	**1.44**	**121**	S	**Sn**	**20 17 58.9**	**-0.4**
WARBT	**Fenglin Townsh**	**1.45**	**222**	*i* P	**Pn**	**20 17 40.0**	**-0.2**
	baz=221						
WARBT				*i* S	**Sg**	**20 18 00.0**	**-0.3**
	baz=221						
WUSB	**Renai**	**1.46**	**237**	*i* P	**Pb**	**20 17 41.1**	**0.0**
	baz=235						
WUSB				S	**Sg**	**20 18 00.1**	**-0.5**
	baz=235						
WHP	**Taichung City**	**1.46**	**249**	*i* P	**Pg**	**20 17 42.2**	**+0.4**
	baz=248						
WHP				*i* S	**Sg**	**20 18 00.9**	**+0.2**
	baz=248						
JKRS	**Kuro-shima**	**1.53**	**111**	P	**Pb**	**20 17 42.3**	**0.0**
VWDT	**VWDT**	**1.58**	**229**	*i* P	**Pn**	**20 17 42.2**	**+0.2**
	baz=227						
VWDT				*e*S	**Sg**	**20 18 03.9**	**-0.7**
	baz=227						
WCS	**Beigang Elemen**	**1.58**	**242**	P	**Pg**	**20 17 44.1**	**+0.1**
	baz=241						
HGSD	**Ruisui**	**1.60**	**216**	*i* P	**Pb**	**20 17 43.3**	**-0.3**
	baz=214						
EHY	**Hungye**	**1.65**	**219**	*i* P	**Pn**	**20 17 42.9**	**-0.1**
	baz=217						
SMLT	**Sun Moon Lake**	**1.68**	**237**	*i* P	**Pg**	**20 17 45.9**	**-0.1**
	baz=236						
SSLB	**Suanglung**	**1.70**	**234**	*i* P	**Pb**	**20 17 44.8**	**-0.3**
	baz=232						
SSLB				*e*S	**Sb**	**20 18 06.5**	**-0.2**
	baz=232						
TYC	**Yuchr**	**1.70**	**239**	*i* P	**Pg**	**20 17 46.4**	**0.0**
	baz=237						
YULB	**Yu-li**	**1.75**	**217**	P	**Pn**	**20 17 44.1**	**-0.3**
	baz=216						
YULB				S	**Sn**	**20 18 06.2**	**-0.7**
	baz=216						
EYUL	**Yuli**	**1.78**	**216**	*i* P	**Pb**	**20 17 46.2**	**-0.3**
	baz=214						
WHYT	**Xinyi Township**	**1.82**	**233**	*i* P	**Pb**	**20 17 47.5**	**+0.1**
	baz=232						
WHYT				*e*S	**Sn**	**20 18 08.5**	**-0.2**
	baz=232						
ALS	**Alishan**	**1.98**	**230**	P	**Pb**	**20 17 49.8**	**-0.3**
	baz=228						
EHD	**Haiduan**	**2.00**	**215**	*e*S	**Sn**	**20 18 14.0**	**+1.0**
	baz=213						
ELDTW	**Lidau**	**2.07**	**219**	*e*P	**Pn**	**20 17 48.2**	**-0.7**
	baz=218						
TPUB	**Ta-pu**	**2.23**	**228**	*e*P	**Pn**	**20 17 52.6**	**+1.5**
	baz=227						

NEIC ***23*** *20:19:25.3±1.1, 37.828N±0.005×121.996W±0.009,*
h5km±1km, Error ellipse: s-maj=1.9km s-min=1.0km
az=49.0

NCEDC 23 20:19:24.8±1.3, 37.829N±0.008×121.98W±0.01, h6km±1km, Mwr3.4/3, ML3.2/100(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=219.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C047	**Rutherford Dri**	**0.03**	**271**		Pg	20 19 27.8	+1.8
BGC	**Bolinger Road**	**0.07**	**259**		Pg	20 19 28.7	+2.3
C045	**Hawkins Drive**	**0.08**	**169**		Pg	20 19 27.4	+0.7
C045					Sg	20 19 29.8	+1.9
SMCB	**Saint Mary's C**	**0.10**	**276**		Pg	20 19 27.4	+0.3
CLCB	**Lake Chabot**	**0.11**	**216**		Pg	20 19 27.9	+0.7
C010	**Sunflower Cour**	**0.12**	**349**		Pg	20 19 28.1	+0.8
CMDB	**Morgan Territo**	**0.14**	**97**		Pg	20 19 28.9	+1.1
C021	**Meadowview Dri**	**0.15**	**206**		Pg	20 19 28.6	+0.8
CDOM	**Doolan Road**	**0.15**	**130**		Pg	20 19 29.0	+1.1
C064	**Brunell Drive**	**0.16**	**262**		Pg	20 19 28.9	+0.8
C013	**Ascot Lane Oak**	**0.16**	**268**		Pg	20 19 29.1	+1.0
CGPM	**Gavin Park**	**0.18**	**187**		Pg	20 19 29.8	+1.3
C018	**Christie Drive**	**0.18**	**325**		Pg	20 19 29.9	+1.4
C071	**Via Corta San**	**0.19**	**219**		Pg	20 19 29.4	+0.8
C069	**Rotal Creek Pl**	**0.19**	**159**		Pg	20 19 30.0	+1.4
CVPM	**Vollmer Peak**	**0.20**	**286**		Pg	20 19 29.9	+1.2
C055	**Cottonwood Ave**	**0.20**	**211**		Pg	20 19 29.5	+0.7
CTAM	**Taylor**	**0.20**	**352**		Pg	20 19 30.4	+1.7
C005	**Mandana Bl Oak**	**0.20**	**265**		Pg	20 19 29.7	+0.9
BKS	**Berkeley--Byer**	**0.21**	**283**		Pg	20 19 29.9	+1.1
C058	**Eastshore Driv**	**0.21**	**250**		Pg	20 19 29.9	+1.0
C028	**Eucalyptus Rd**	**0.21**	**276**		Pg	20 19 29.9	+1.0
VAK	**Adit at Lawren**	**0.22**	**283**		Pg	20 19 30.2	+1.2
BL67	**Building 67, L**	**0.22**	**282**		Pg	20 19 30.0	+0.8
BL88	**Building 88, L**	**0.22**	**283**		Pg	20 19 30.2	+1.0
CNIC	**Niles Canyon**	**0.22**	**176**		Pg	20 19 29.9	+0.7
C056	**Diablo Avenue**	**0.22**	**211**		Pg	20 19 30.4	+1.2
BRK	**Berkeley--Havi**	**0.23**	**282**		Pg	20 19 30.2	+0.9
CVLM	**Vallecito**	**0.23**	**150**		Pg	20 19 30.8	+1.5
C033	**Glashaus Lp Em**	**0.24**	**274**		Pg	20 19 30.4	+0.8
CPIM	**Pinole Ridge**	**0.24**	**311**		Pg	20 19 31.1	+1.5
CSAM	**Sandia**	**0.27**	**125**		Pb	20 19 31.9	-0.2
CBSNC	**Byron Hot Spri**	**0.27**	**92**		Pb	20 19 31.8	-0.3
WENL	**Wente Vineyard**	**0.27**	**139**		Pb	20 19 31.8	-0.3
C067	**Fleetwood El S**	**0.28**	**301**		Pb	20 19 31.7	-0.6
HERB	**Hercules**	**0.29**	**310**		Pb	20 19 31.5	-0.8
CYBM	**Yerba Buena Is**	**0.30**	**267**		Pg	20 19 31.5	+0.8
CPMM	**Point Molate**	**0.36**	**290**		Pb	20 19 32.7	-0.9
JPRM	**Presidio of Sa**	**0.39**	**265**		Pb	20 19 33.3	-0.9
CALM	**Calaveras Res.**	**0.40**	**159**		Pb	20 19 33.7	-0.7
SAC	**San Andreas**	**0.42**	**235**		Pb	20 19 33.8	+0.8
CSTL	**Corral Hollow**	**0.43**	**116**		Pb	20 19 34.5	-0.2
JMGM	**Milagra Ridge**	**0.43**	**244**		Pg	20 19 33.9	+0.7
CMLM	**Mount Lewis**	**0.44**	**143**		Pb	20 19 35.0	0.0
JCHM	**Cahill Ridge**	**0.44**	**225**		Pg	20 19 34.1	+0.8
JSFB	**Stanford Teles**	**0.45**	**200**		Pb	20 19 34.5	-0.7
JRSC	**Jasper Ridge**	**0.47**	**206**		Pg	20 19 34.6	+0.8
NGVM		**0.49**	**338**		Pb	20 19 35.6	-0.2
JFP	**Foothills Park**	**0.50**	**200**		Pb	20 19 35.7	-0.3
JSJM	**St Joseph**	**0.50**	**190**		Pb	20 19 36.0	0.0
JBMM	**Black Mountain**	**0.53**	**195**		Pb	20 19 36.1	-0.4
CMMM	**Mount Mocho**	**0.54**	**134**		Pb	20 19 36.4	-0.2
MHC	**Mount Hamilton**	**0.56**	**151**		Pb	20 19 36

PNTR IAML 20 20 58.3
comp=E,288nm,0.6s
MDPB Devils Postpil 2.31 94 Pn 20 20 02.4 -1.3
MDPB IAML 20 21 09.3
comp=E,231nm,0.9s
YERR Yerington 2.44 61 Pn 20 20 04.4 -1.0
YERR IAML 20 20 59.8
comp=N,220nm,0.7s
MGNR McGee Canyon 2.60 89 Pn 20 20 06.6 -1.1
KMRM Mail Ridge 2.74 331 Pn Pn 20 20 08.2 -1.3
KMRM IAML 20 21 45.8
comp=E,84nm,2.5s
PAHR Pah Rah Range 2.76 46 Pn 20 20 09.0 -0.8
PAHR IAML 20 21 19.2
comp=N,95nm,1.1s
LHV Little Huntoon 2.78 80 Pn 20 20 08.9 -0.9
LHV IAML 20 21 27.2
comp=N,167nm,1.0s
RYN Ryan 2.84 73 Pn 20 20 10.2 -0.6
RYN IAML 20 21 09.9
comp=N,75nm,0.6s
RYN IAML 20 21 16.8
comp=E,78nm,1.0s
NVAR Mina Array Bea 2.96 77 Pn 20 20 12.2 -0.4
KMPM Mount Pierce 3.07 328 Pn Pn 20 20 14.2 +0.2
KMPM IAML 20 20 52.7
comp=N,52nm,2.2s
KMPM IAML 20 21 25.0
comp=E,48nm,1.2s
NV11 Mina Array Sit 3.08 78 Pn 20 20 14.2 +0.1
NV11 IAML 20 21 30.4
comp=N,51nm,1.5s
NV11 IAML 20 21 34.6
comp=E,60nm,1.6s
DSP Deep Springs 3.22 97 Pn 20 20 16.2 +0.4
DSP IAML 20 21 28.6
comp=N,75nm,0.9s
KVN Kaiserville 3.28 67 Pn Pn 20 20 16.4 -0.5
KVN IAML 20 21 34.1
comp=E,55nm,1.3s
KVN IAML 20 21 38.5
comp=N,63nm,1.1s
JCC Jacoby Creek, 3.38 333 Pn Pn 20 20 17.3 -0.8
JCC IAML 20 22 03.1
comp=N,53nm,2.0s
JCC IAML 20 22 16.0
comp=E,40nm,1.9s
LCH Last Change Ra 3.50 98 Pn 20 20 20.5 +0.7
LCH IAML 20 21 37.0
comp=N,50nm,1.1s
LCH IAML 20 21 40.4
comp=E,53nm,0.8s
BCW Bitter Crk WRg 3.55 144 Pn 20 20 18.6 -1.9
ISA Isabella, Lake 3.55 126 Pn 20 20 19.3 -1.2
ISA IAML 20 21 35.9
comp=N,41nm,1.0s
ISA IAML 20 21 45.8
comp=E,61nm,1.0s
MZP Montezuma Peak 3.65 91 Pn 20 20 20.4 -1.6
TEJ El Tejon 3.71 133 Pb 20 20 30.5 -0.3
GRAC Grapevine Rang 3.77 101 Pn 20 20 22.9 -0.6
TPH Tonopah 3.77 85 Pn 20 20 21.8 -1.9
GMN Gold Mountain 3.79 97 Pn Pn 20 20 23.8 -0.2
GMN IAML 20 21 49.2
comp=N,35nm,0.8s
Q09A Carvers 3.91 74 Pn Pn 20 20 24.9 -0.6
YBH Yreka Blue Hor 3.94 352 Pn Pn 20 20 24.6 -1.3
KRMB Red Mountain 3.98 339 Pn Pn 20 20 25.3 -1.1
CCAC Calif City Air 4.16 129 Pn Pn 20 20 28.2 -0.7
KSXB Camp Six Broad 4.25 341 Pn Pn 20 20 29.3 -1.0
KSXB IAML 20 21 37.1
comp=E,25nm,3.2s
L04D Klamath Falls 4.39 357 Pn Pn 20 20 30.9 -1.2
L04D IAML 20 22 22.2
comp=E,26nm,2.9s
L04D IAML 20 22 25.4
comp=N,16nm,2.4s
WCT Wildcat Mounta 4.39 102 Pn 20 20 30.5 -1.6
WCT IAML 20 22 02.8
comp=N,26nm,0.9s
WCT IAML 20 22 09.4
comp=E,28nm,1.1s
QSM Queen of Sheba 4.50 113 Pn 20 20 31.5 -2.0
QSM IAML 20 22 08.2
comp=E,29nm,1.0s
QSM IAML 20 22 30.9
comp=N,38nm,1.1s
BMN Battle Mountai 4.52 53 Pn 20 20 32.7 -1.2
GWY Greenwater Val 4.56 109 Pn 20 20 33.4 -1.1
GWY IAML 20 22 18.2
comp=N,29nm,1.2s
GWY IAML 20 22 42.1
comp=E,32nm,1.4s
HUMO Hull Mountain 4.83 351 Pn Pn 20 20 38.0 0.0
GSC Goldstone, Bar 4.87 120 Pn 20 20 37.3 -1.4
GSC IAML 20 22 19.7
comp=E,31nm,1.1s
GSC IAML 20 22 36.6
comp=N,27nm,2.6s
K05A Summer Lake 4.96 9 Pn Pn 20 20 37.6 -2.4
K05A IAML 20 22 45.6
comp=N,18nm,2.8s
K05A IAML 20 23 32.2
comp=E,17nm,3.6s
K02D Willamette Mer 5.03 346 Pn Pn 20 20 38.5 -2.3
K02D IAML 20 21 16.7
comp=N,18nm,3.4s
K02D IAML 20 22 27.6
comp=E,17nm,4.0s
R11B Troy Canyon, C 5.07 82 Pn Pn 20 20 40.0 -1.6
J05D Fort Rock, OR 5.48 6 Pn Pn 20 20 46.7 -0.4
Q12A Willow Creek R 5.74 76 Pn Pn 20 20 50.7 0.0

*NEIC **23** 20:19:40.3±0.5,37.818N±0.005×121.996W±0.007, h5km±1km, Error ellipse: s-maj=1.8km s-min=1.1km az=70.0*

NCEDC 23 20:19:39.7±0.7,37.826N±0.006×121.985W±0.008, h6km±1km, Mwr3.5/3, ML3.3/48(NEIC), Error ellipse: s-maj=0.9km s-min=0.8km az=220.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
C047	**Rutherford Dri**	**0.03**	**276**		Pg	20 19 42.5	+1.6
BGC	**Bolinger Road**	**0.06**	**261**		Pg	20 19 43.6	+2.3
C045	**Hawkins Drive**	**0.08**	**167**		Pg	20 19 42.3	+0.8
C045					Sg	20 19 44.7	+1.9
SMCB	**Saint Mary's C**	**0.10**	**277**		Pg	20 19 42.6	+0.7
SMCB					Sg	20 19 45.0	+1.6
CRPB	**Russellman Par**	**0.10**	**35**		Pg	20 19 42.3	+0.3
CLCB	**Lake Chabot**	**0.11**	**216**		Pg	20 19 42.7	+0.7
C010	**Sunflower Cour**	**0.12**	**350**		Pg	20 19 42.8	+0.6
C021	**Meadowview Dri**	**0.14**	**206**		Pg	20 19 43.4	+0.8
CMOB	**Morgan Territo**	**0.14**	**96**		Pg	20 19 43.6	+1.0
CSLM	**San Leandro Hi**	**0.15**	**226**		Pg	20 19 43.5	+0.8
CDOM	**Doolan Road**	**0.15**	**129**		Pg	20 19 43.9	+1.1
CMCM	**Mills College**	**0.16**	**254**		Pg	20 19 43.7	+0.8
C064	**Brunell Drive**	**0.16**	**262**		Pg	20 19 43.7	+0.8
C013	**Ascot Lane Oak**	**0.16**	**269**		Pg	20 19 43.9	+1.0
C070	**Dillo Street S**	**0.17**	**223**		Pg	20 19 43.8	+0.7
C018	**Christie Drive**	**0.18**	**326**		Pg	20 19 44.6	+1.2
C071	**Via Corta San**	**0.19**	**219**		Pg	20 19 44.2	+0.8
CSU1	**Sunol Dilatome**	**0.19**	**169**		Pg	20 19 44.4	+1.0
C069	**Rotal Creek Pl**	**0.19**	**158**		Pg	20 19 45.0	+1.5
C055	**Cottonwood Ave**	**0.20**	**211**		Pg	20 19 44.4	+0.9
CVPM	**Vollmer Peak**	**0.20**	**287**		Pg	20 19 44.9	+1.3
C005	**Mandana Bl Oak**	**0.20**	**266**		Pg	20 19 44.4	+0.8
CTAM	**Taylor**	**0.20**	**353**		Pg	20 19 45.4	+1.7
C058	**Eastshore Driv**	**0.20**	**250**		Pg	20 19 44.8	+1.1
BKS	**Berkeley--Byer**	**0.20**	**284**		Pg	20 19 44.8	+1.1
C028	**Eucalyptus Rd**	**0.21**	**277**		Pg	20 19 44.9	+1.1
VAK	**Adit at Lawren**	**0.21**	**284**		Pg	20 19 45.1	+1.1
CMSB	**University of**	**0.22**	**282**		Pg	20 19 45.0	+1.0
C044	**Maitland Drive**	**0.22**	**244**		Pg	20 19 45.0	+1.0
BL67	**Building 67, L**	**0.22**	**283**		Pg	20 19 44.9	+0.9
CNIC	**Niles Canyon**	**0.22**	**176**		Pg	20 19 45.0	+1.0
BL88	**Building 88, L**	**0.22**	**283**		Pg	20 19 45.0	+1.0
C056	**Diablo Avenue**	**0.22**	**211**		Pg	20 19 45.1	+1.1
BRK	**Berkeley--Havi**	**0.22**	**282**		Pg	20 19 45.1	+1.0
C007	**Forest Lane Be**	**0.23**	**288**		Pg	20 19 45.3	+1.1
CVLM	**Vallecito**	**0.23**	**149**		Pg	20 19 45.7	+1.5
C049	**Pacific Avenue**	**0.24**	**258**		Pg	20 19 45.3	+1.0
C006	**Lk Pillsbury D**	**0.24**	**194**		Pg	20 19 45.6	+1.2
C033	**Glashaus Lp Em**	**0.24**	**275**		Pg	20 19 45.3	+0.9
CPIM	**Pinole Ridge**	**0.24**	**312**		Pg	20 19 46.0	+1.5
C048	**Posada Way Fre**	**0.25**	**181**		Pb	20 19 46.1	-0.5
CBZL	**Buffer Zone**	**0.25**	**122**		Pb	20 19 46.3	-0.3
CBZL	**Buffer Zone**	**0.25**	**122**		Pb	20 19 46.0	-0.7
C008	**Spokane Avenue**	**0.25**	**286**		Pb	20 19 45.7	-0.9
C011	**Colusa Avenue,**	**0.26**	**288**		Pb	20 19 45.7	-1.0
C057	**Hedge Avenue B**	**0.26**	**60**		Pb	20 19 46.3	-0.5
C002	**Farnham Drive**	**0.27**	**188**		Pb	20 19 46.1	-0.8
CSAM	**Sandia**	**0.27**	**124**		Pb	20 19 46.7	-0.2
CBSNC	**Byron Hot Spri**	**0.27**	**92**		Pg	20 19 46.7	-0.2
C012	**Glenmawr Avenu**	**0.28**	**291**		Pg	20 19 46.1	+1.0
C067	**Fleetwood El S**	**0.28**	**302**		Pb	20 19 46.5	-0.6
HERB	**Hercules**	**0.29**	**310**		Pb	20 19 46.4	-0.8
RFSB	**Richmond Field**	**0.29**	**288**		Pg	20 19 46.3	+1.0
CYBM	**Yerba Buena Is**	**0.30**	**267**		Pg	20 19 46.4	+0.9
C024	**33rd St Richmo**	**0.30**	**293**		Pb	20 19 46.6	-0.8
C050	**Festivo Court**	**0.30**	**171**		Pb	20 19 46.9	-0.6
CPMM	**Point Molate**	**0.36**	**290**		Pg	20 19 47.5	+0.9
JPRM	**Presidio of Sa**	**0.39**	**266**		Pb	20 19 48.5	-0.4
J061	**Lakeshore Driv**	**0.42**	**257**		Pg	20 19 48.5	+0.8
SAC	**San Andreas**	**0.42**	**235**		Pb	20 19 48.6	-0.8
JMGM	**Milagra Ridge**	**0.43**	**244**		Pg	20 19 48.8	+0.8
CMLM	**Mount Lewis**	**0.44**	**143**		Pb	20 19 49.8	-0.1
JCHM	**Cahill Ridge**	**0.44**	**225**		Pg	20 19 48.7	+0.5
JRSC	**Jasper Ridge**	**0.47**	**206**		Pg	20 19 49.1	+0.4
JFP	**Foothills Park**	**0.49**	**199**		Pb	20 19 50.3	-0.4
JBMM	**Black Mountain**	**0.53**	**195**		Pb	20 19 50.5	-0.8
CMMM	**Mount Mocho**	**0.54**	**133**		Pb	20 19 51.4	-0.1
MHC	**Mount Hamilton**	**0.56**	**151**		Pb	20 19 51.7	-0.1
ARN	**Arnold Ranch**	**0.60**	**143**		Pb	20 19 52.1	-0.4
MCCM	**Marconi Confer**	**0.78**	**294**	Pg	Pg	20 19 53.7	-0.8
SAO	**San Andreas Ge**	**1.14**	**158**	Pg	Pg	20 20 01.3	-0.3
GDXM	**Geysers**	**1.17**	**327**		Pg	20 20 01.0	-1.1
GDXM					Pb	20 20 01.4	-0.9
CMB	**Columbia Colle**	**1.28**	**80**		Pn	20 20 03.2	-1.0
AFDM	**Forest Hills D**	**1.37**	**35**		Pn	20 20 04.8	-0.7
BBGB	**Big Mountain B**	**1.46**	**149**		Pn	20 20 05.9	-0.6
EMB	**Emerald Bay**	**1.87**	**52**	Pn	Pn	20 20 12.4	0.0
KCPM	**Cahto Peak**	**2.24**	**327**	Pn	Pn	20 20 16.4	-1.0
PAHR	**Pah Rah Range**	**2.77**	**46**	Pn	Pn	20 20 23.8	-0.9
NV11	**Mina Array Sit**	**3.08**	**78**	Pn	Pn	20 20 29.5	+0.5
DSP	**Deep Springs**	**3.22**	**97**	Pn	Pn	20 20 31.0	+0.3
KSXB	**Camp Six Broad**	**4.26**	**341**	Pn	Pn	20 20 44.6	-0.5
L04D	**Klamath Falls**	**4.39**	**357**	Pn	Pn	20 20 46.6	-0.4
WCT	**Wildcat Mounta**	**4.39**	**102**	Pn	Pn	20 20 46.5	-0.5
QSM	**Queen of Sheba**	**4.50**	**113**	Pn	Pn	20 20 48.6	+0.2
BMN	**Battle Mountai**	**4.53**	**53**	Pn	Pn	20 20 48.5	-0.3
GWY	**Greenwater Val**	**4.56**	**109**	Pn	Pn	20 20 50.2	+0.9
K04D	**Chiloquin, OR**	**4.80**	**2**	Pn	Pn	20 20 51.4	-1.1
K04D				IAML		20 23 01.6	
	comp=E,38nm,1.6s						
GSC	**Goldstone, Bar**	**4.87**	**120**	Pn	Pn	20 20 53.5	0.0
S11A	**Rachel**	**4.95**	**90**	Pn	Pn	20 20 55.4	+0.8
K05A	**Summer Lake**	**4.96**	**9**	Pn	Pn	20 20 55.1	+0.2
R11B	**Troy Canyon, C**	**5.08**	**82**	Pn	Pn	20 20 56.3	-0.1
DBO	**Dodson Butte**	**5.37**	**350**	Pn	Pn	20 20 59.4	-1.0
DBO				IAML		20 22 20.2	
	comp=N,19nm,4.3s						
DBO				IAML		20 24 36.6	
	comp=E,16nm,2.5s						
J05D	**Fort Rock, OR**	**5.48**	**6**	Pn	Pn	20 21 00.4	-1.5
J01E	**Myrtle Point**	**5.53**	**345**	Pn	Pn	20 21 01.6	-0.9
ELS	**Elsinore Mount**	**5.58**	**137**	Pn	Pn	20 21 03.3	+0.1
Q12A	**Willow Creek R**	**5.75**	**76**	Pn	Pn	20 21 03.3	-2.3
ELK	**Elko**	**5.99**	**59**	Pn	Pn	20 21 07.2	-1.9
PINE	**Pine Mountain**	**6.01**	**7**	Pn	Pn	20 21 07.2	-2.1
I07A	**Izee**	**6.53**	**16**	Pn	Pn	20 21 15.6	-0.7

*IDC **23** 20:25:04.2±30.0, 10.74N×122.84E, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=520.9km s-min=241.0km az=154.0*
*NEIC **23** 20:26:14.6±1.4, 7.29N±0.09×124.5E±0.2, h402km±19km, mb4.1/8, Error ellipse: s-maj=25.4km s-min=10.2km az=68.0*

ISC 23 20:26:13.1±2.0, 7.4N±0.2×124.6E±0.2, h400km, n15, σ0.73/16, mb4.0/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**7.12**	**157**		**Pn**	**20 27 57.2**	**-1.0**
TNTI				Sn	**S**	**20 29 23.9**	**-0.2**
TOLI2	**Tolitoli**	**7.31**	**212**		**P**	**20 28 01.8**	**+0.9**
KKM	**Kota Kinabalu**	**8.45**	**261**		**P**	**20 28 14.2**	**+0.6**
GSI	**Gunungsitoli**	**27.61**	**259**	P	**P**	**20 31 24.9**	**-1.3**
GSI				IAmb	IAmb	20 32 02.6	
	comp=Z,13nm,1.2s						
COEN	**Coen**	**28.09**	**139**	P	**P**	**20 31 30.9**	**+0.6**
COEN				IAmb	IAmb	20 31 43.5	
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**28.65**	**161**	P	**P**	**20 31 34.8**	**-0.4**
WB0				IAmb	IAmb	20 32 07.1	
	comp=Z,9.7nm,1.3s						
WRA	**Warramunga Arr**	**28.80**	**161**	P	**P**	**20 31 35.8**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=339,slow=8.8,SNR=21						
	comp=Z,0.6nm,0.4s						
WB2	**Warramunga Arr**	**28.80**	**161**	P	**P**	**20 31 36.1**	**-0.4**
WB2				IAmb	IAmb	20 31 42.5	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**32.17**	**164**	P	**P**	**20 32 06.4**	**+0.6**
ASAR	**Alice Springs**	**32.17**	**164**	P	**P**	**20 32 05.7**	**-0.2**
ASAR	**Alice Springs**	**32.17**	**164**	P	**P**	**20 32 06.5**	**+0.6**
	comp=Z,2.4nm,0.5s,baz=343,slow=6.9,SNR=90						
	comp=Z,2.4nm,0.5s						
FORT	**Forrest**	**38.09**	**175**	P	**P**	**20 32 55.1**	**-0.5**
BBOO	**Buckleboo**	**41.44**	**165**	P	**P**	**20 33 22.9**	**+0.2**
STKA	**Stephens Creek**	**42.28**	**158**	P	**P**	**20 33 30.2**	**+0.7**
STKA	**Stephens Creek**	**42.28**	**158**	P	**P**	**20 33 30.2**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=331,slow=10,SNR=4.6						
	comp=Z,1.4nm,0.5s						

IDC 23 20:34:47.7±1.9, 40.81S×78.17E, h0km, mb3.7/4, mbtmp3.7/4, MS3.7/13, Error ellipse: s-maj=52.3km s-min=36.9km az=120.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**19.83**	**246**	T	T	21 00 06.8	
	baz=83,slow=75,SNR=4617						
H04N3	**CROZET ISLANDS**	**19.84**	**246**	T	T	21 00 05.6	
	baz=83,slow=75,SNR=4777						
H04N1	**CROZET ISLANDS**	**19.84**	**246**	T	T	21 00 07.7	
	baz=83,slow=75,SNR=4263						
MAW	**Mawson**	**28.13**	**192**	LR	LR	20 49 45.9	
	comp=Z,140nm,19.2s,baz=22,slow=32						
H01W2	**Cape Leeuwin H**	**28.86**	**90**	T	T	21 10 41.2	
	baz=248,slow=74,SNR=31						
H01W3	**Cape Leeuwin H**	**28.87**	**90**	T	T	21 10 41.8	
	baz=248,slow=74,SNR=32						
H01W1	**Cape Leeuwin H**	**28.88**	**90**	T	T	21 10 42.5	
	baz=248,slow=74,SNR=34						
LEM	**Lembang**	**42.84**	**46**	LR	LR	20 59 53.6	
	comp=Z,172nm,18.0s,baz=190,slow=35						
BOSA	**Boshof**	**44.56**	**269**	LR	LR	20 57 34.5	
	comp=Z,54nm,20.9s,baz=178,slow=31						
LBTB	**Lobatse**	**46.19**	**273**	LR	LR	20 59 41.8	
	comp=Z,54nm,19.0s,baz=166,slow=32						
PALK	**Pallekele**	**47.90**	**3**	LR	LR	21 00 18.2	
	comp=Z,77nm,18.6s,baz=294,slow=32						
ASAR	**Alice Springs**	**49.33**	**87**	P	P	20 43 39.0	+0.1
	0.8nm,0.9s,baz=248,slow=4.9,SNR=6.9						
	0.8nm,0.9s						
QSPA	**South Pole Qui**	**49.36**	**180**	P	P	20 43 38.6	0.0
	2.1nm,1.0s,baz=276,slow=0.8,SNR=5.9						
QSPA				LR	LR	21 03 21.4	
	comp=Z,109nm,18.2s,baz=288,slow=35						
	2.1nm,1.0s						
LSZ	**Lusaka**	**50.10**	**286**	LR	LR	21 02 02.3	
	comp=Z,42nm,18.4s,baz=156,slow=33						
STKA	**Stephens Creek**	**50.87**	**101**	LR	LR	21 03 21.5	
	comp=Z,82nm,18.1s,baz=205,slow=34						
WRA	**Warramunga Arr**	**51.80**	**84**	P	P	20 43 57.2	-0.4
	0.7nm,0.6s,baz=231,slow=7.3,SNR=9.9						
	0.7nm,0.6s						
TSUM	**Tsumeb**	**55.59**	**274**	LR	LR	21 05 17.1	
	comp=Z,56nm,18.4s,baz=148,slow=33						
MBAR	**Mbarara**	**58.65**	**300**	LR	LR	21 07 17.9	
	comp=Z,36nm,18.1s,baz=224,slow=33						
DAV	**Davao City (W)**	**64.51**	**54**	LR	LR	21 13 11.4	
	comp=Z,20nm,18.6s,baz=227,slow=36						
RPZ	**Rata Peaks**	**65.13**	**127**	LR	LR	21 07 05.8	
	comp=Z,123nm,19.3s,baz=188,slow=30						
PMSA	**Palmer Station**	**70.67**	**196**	LR	LR	21 15 05.7	
	comp=Z,79nm,20.6s,baz=142,slow=34						
MKAR	**Makanchi Array**	**87.29**	**3**	P	P	20 47 35.8	0.0
	0.3nm,0.6s,baz=163,slow=6.3,SNR=3.7						
	0.3nm,0.6s						

*IDC **23** 20:34:47.1±1.1, 14.75N×147.92E, h0km, mb3.6/9, mbtmp3.6/10, ML4.0/1, Error ellipse: s-maj=35.9km s-min=20.9km az=104.0*

ISC 23 20:34:52.4±1.1, 14.7N±0.2×147.8E±0.1, h35km, n16, σ0.85/11, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.04**	**249**	Pn	**Pn**	**20 35 37.1**	**-1.0**
	18nm,0.3s,baz=119,slow=3.9,SNR=13						
GUMO				Sn	**Sn**	**20 36 13.3**	**0.0**
	21nm,0.3s,baz=337,slow=23,SNR=4.3						
	40nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**18.50**	**76**	T	T	20 57 58.3	
	baz=260,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**18.51**	**76**	T	T	20 58 02.7	
	baz=260,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**18.52**	**76**	T	T	20 58 00.6	
	baz=260,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**18.91**	**72**	T	T	20 58 29.6	
	baz=257,slow=75,SNR=43						
H11N2	**WAKE ISLAND Hy**	**18.92**	**72**	T	T	20 58 33.4	
	baz=257,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	**18.93**	**72**	T	T	20 58 33.6	
	baz=257,slow=75,SNR=41						
WRA	**Warramunga Arr**	**36.89**	**201**	P	**P**	**20 41 58.1**	**+0.3**
	0.6nm,0.9s,baz=31,slow=9.0,SNR=4.5						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**40.48**	**200**	P	**P**	**20 42 28.9**	**+0.9**
	0.2nm,0.4s,baz=21,slow=6.8,SNR=6.7						
	0.2nm,0.4s						
SONM	**Songino Array**	**47.50**	**323**	P	**P**	**20 43 25.0**	**+0.7**
	0.5nm,0.6s,baz=134,slow=7.2,SNR=3.5						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**62.67**	**315**	P	**P**	**20 45 15.1**	**+1.4**
	0.2nm,0.4s,baz=90,slow=8.4,SNR=8.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**65.62**	**319**	P	**P**	**20 45 33.3**	**+0.4**
	0.3nm,0.3s,baz=99,slow=6.4,SNR=5.9						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**66.35**	**25**	P	**P**	**20 45 36.5**	**-0.9**
	0.2nm,0.5s,baz=246,slow=6.8,SNR=4.0						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**70.82**	**321**	P	**P**	**20 46 05.4**	**-0.1**
	0.2nm,0.3s,baz=97,slow=4.6,SNR=2.2						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**80.56**	**28**	P	**P**	**20 47 01.0**	**0.0**
	0.2nm,0.5s,baz=284,slow=5.0,SNR=1.7						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**91.33**	**336**	P	**P**	**20 47 53.4**	**-0.9**
	3.2nm,1.1s,baz=23,slow=10,SNR=4.1						
	3.2nm,1.1s						

*JMA **23** 20:38:14.2±0.2, 23.1N×122.6E±0.7, h46km, MV2.9/19, FAR S OFF ISHIGAKIJIMA*
*TAP **23** 20:38:15.1, 22.81N×122.57E, h54km, ML3.4, D*

ISC 23 20:38:14.6±1.2, 22.80N±0.03×122.62E±0.03, h50km, n160, σ1.47/210, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**1.07**	**264**	*i* P	**Pn**	**20 38 32.5**	**-0.7**
	baz=270						
LDUT				*i* S	**Sn**	**20 38 44.5**	**-2.5**
	baz=270						
CHKH	**Chenggong**	**1.20**	**289**	*i* P	**Pn**	**20 38 34.1**	**-0.8**
	baz=289						
CHKH				*i* S	**Sn**	**20 38 46.6**	**-3.5**
	baz=289						
ECBN	**Changbin**	**1.20**	**296**	*i* P	**Pn**	**20 38 34.0**	**-0.9**
	baz=296						
ECBN				*i* S	**Sn**	**20 38 46.6**	**-3.4**
	baz=296						
CHKT	**Chengkung**	**1.20**	**285**	*i* P	**Pn**	**20 38 34.0**	**-0.9**
	baz=288						
CHKT				*i* S	**Sn**	**20 38 48.0**	**-2.2**
	baz=288						
LYUB	**Lan-yu**	**1.25**	**231**	*i* P	**Pn**	**20 38 35.3**	**-0.3**
	baz=228						
LYUB				*i* S	**Sn**	**20 38 48.9**	**-2.4**
	baz=228						
LAY	**Lan-yu**	**1.25**	**233**	*i* P	**Pn**	**20 38 35.0**	**-0.6**
	baz=237						
LAY				*e*S	**Sn**	**20 38 48.4**	**-3.0**
	baz=237						
FULB	**Fuli**	**1.29**	**288**	*i* P	**Pn**	**20 38 35.3**	**-0.9**
	baz=295						
FULB				*i* S	**Sn**	**20 38 50.0**	**-2.4**
	baz=295						
HGSD	**Ruisui**	**1.30**	**302**	*i* P	**Pn**	**20 38 34.8**	**-1.6**
	baz=303						
HGSD				*i* S	**Sn**	**20 38 49.6**	**-3.0**
	baz=303						
EYUL	**Yuli**	**1.32**	**295**	*i* P	**Pn**	**20 38 36.3**	**-0.3**
	baz=295						
EYUL				S	**Sn**	**20 38 50.4**	**-2.7**
	baz=295						
ECS	**Chishang**	**1.33**	**283**	*i* P	**Pn**	**20 38 36.9**	**+0.1**
	baz=277						
ECS				*i* S	**Sn**	**20 38 52.9**	**-0.4**
	baz=277						
TWF1	**Yuli**	**1.34**	**295**	*i* P	**Pn**	**20 38 36.5**	**-0.4**
	baz=295						
TWF1				*i* S	**Sn**	**20 38 52.3**	**-1.3**
	baz=295						
EOS4	**EOS4**	**1.35**	**348**	*i* P	**Pn**	**20 38 36.4**	**-0.2**
	baz=350						
EOS4				*i* S	**Sn**	**20 38 52.4**	**-0.9**
	baz=350						
TEGC	**Jichi Village**	**1.35**	**313**	S	**Sn**	**20 38 52.4**	**-1.3**
	baz=313						
EHD	**Haiduan**	**1.35**	**285**	*i* P	**Pn**	**20 38 36.6**	**-0.4**
	baz=288						
EHD				*i* S	**Sn**	**20 38 50.3**	**-3.6**
	baz=288						
YULB	**Yu-li**	**1.36**	**296**	*i* P	**Pn**	**20 38 36.7**	**-0.5**
	baz=296						
YULB				S	**Sn**	**20 38 51.5**	**-2.6**
	baz=296						
TTN	**Taitung**	**1.36**	**268**	*i* P	Pn	20 38 39.0	+1.8
	baz=267						
TTN				*i* S	**Sn**	**20 38 53.2**	**-0.9**
	baz=267						
LONT	**Longtian**	**1.38**	**275**	*i* P	**Pn**	**20 38 37.1**	**-0.3**
	baz=269						
LONT				*i* S	**Sn**	**20 38 54.1**	**-0.5**
	baz=269						
SHUL	**Shoufeng**	**1.39**	**316**	*i* P	**Pn**	**20 38 37.0**	**-0.5**
	baz=316						
SHUL				*i* S	**Sn**	**20 38 53.1**	**-1.6**
	baz=316						
EHY	**Hungye**	**1.39**	**301**	*i* P	**Pn**	**20 38 37.0**	**-0.5**
	baz=301						
EHY				*i* S	**Sn**	**20 38 54.5**	**-0.3**
	baz=301						
EGFH	**Guangfu**	**1.40**	**309**	*i* P	**Pn**	**20 38 36.9**	**-0.8**
	ba

EOS3				*i*	S		**Sn**	**20 38 57.1**	**-0.4**
	baz=338								
ELDTW	**Lidau**	**1.53**	**285**	*i*	P		**Pn**	**20 38 39.4**	**-0.2**
	baz=292								
ELDTW				*i*	S		**Sn**	**20 38 55.7**	**-2.7**
	baz=292								
ECL	**Taimali**	**1.55**	**263**	*i*	P		**Pn**	**20 38 39.7**	**-0.1**
	baz=261								
ECL					S		**Sn**	**20 38 57.5**	**-1.3**
	baz=261								
ETM	**Tongmen**	**1.56**	**318**	*i*	P		**Pn**	**20 38 39.8**	**-0.1**
	baz=319								
ETM					S		**Sn**	**20 38 55.0**	**-4.0**
	baz=319								
TWD	**Chiawan**	**1.59**	**324**	*i*	P		**Pn**	**20 38 39.8**	**-0.5**
	baz=333								
TWD				*i*	S		**Sn**	**20 38 57.5**	**-2.1**
	baz=333								
ETL	**Fush Village**	**1.64**	**326**	*i*	P		**Pn**	**20 38 40.6**	**-0.4**
	baz=327								
ETL				*i*	S		**Sn**	**20 38 58.6**	**-2.3**
	baz=327								
LXIB	**Xiulin Townshi**	**1.65**	**318**	*i*	P		**Pn**	**20 38 41.2**	**0.0**
	baz=318								
LXIB				*i*	S		**Sn**	**20 39 00.0**	**-1.4**
	baz=318								
EOS2	**EOS2**	**1.65**	**348**		P		Pn	20 38 43.2	+2.1
	baz=337								
EOS2				*i*	S		**Sn**	**20 39 01.7**	**+0.6**
	baz=337								
TAW	**Tawu**	**1.65**	**255**	*e*	P		Pn	20 38 42.6	+1.4
	baz=263								
TAW					S		**Sn**	**20 39 01.1**	**-0.2**
	baz=263								
HATJ	**Hateruma jima**	**1.66**	**41**		P		**Pn**	**20 38 41.4**	**+0.1**
HATJ					eS		**Sn**	**20 39 00.9**	**-0.5**
VWDT	**VWDT**	**1.66**	**305**	*i*	P		**Pn**	**20 38 41.7**	**+0.4**
	baz=305								
VWDT				*i*	S		**Sn**	**20 39 01.3**	**-0.1**
	baz=305								
NACB	**Ninganchiao**	**1.66**	**326**		P		**Pn**	**20 38 40.9**	**-0.4**
NACB	**Ninganchiao**	**1.66**	**326**	*i*	P		**Pn**	**20 38 40.6**	**-0.8**
	baz=326								
NACB					S		**Sn**	**20 38 59.9**	**-1.6**
	baz=326								
TAWH	**Dawu Township**	**1.67**	**254**	*i*	P		**Pn**	**20 38 42.2**	**+0.9**
	baz=262								
TAWH				*i*	S		**Sn**	**20 39 01.7**	**+0.1**
	baz=262								
JYNG	**Yonaguni jima**	**1.67**	**10**		P		**Pn**	**20 38 42.1**	**+0.7**
JYNG					S		**Sn**	**20 39 02.4**	**+0.6**
EAST	**Anshuo**	**1.69**	**256**	*i*	P		**Pn**	**20 38 42.3**	**+0.6**
	baz=263								
EAST				*i*	S		**Sn**	**20 39 00.7**	**-1.5**
	baz=263								
YOJ	**Yonaguni jima**	**1.69**	**12**		P		**Pn**	**20 38 42.7**	**+1.0**
YOJ	**Yonaguni jima**	**1.69**	**12**	*i*	P		**Pn**	**20 38 42.5**	**+0.7**
	baz=5.0								
YOJ				*i*	S		**Sn**	**20 39 02.0**	**-0.2**
	baz=5.0								
YOJ	**Yonaguni jima**	**1.69**	**12**		P		Pn	20 38 42.9	+1.1
YOJ					S		**Sn**	**20 39 02.6**	**+0.3**
EAHA	**Aohua**	**1.73**	**332**	*i*	P		**Pn**	**20 38 42.3**	**+0.1**
	baz=333								
EAHA					S		**Sn**	**20 39 00.5**	**-2.6**
	baz=333								
STYH	**Taoyuan**	**1.74**	**283**	*i*	P		**Pn**	**20 38 43.2**	**+0.8**
	baz=282								
STYH				*i*	S		**Sn**	**20 39 03.2**	**-0.2**
	baz=282								
ETLH	**Xiulin Townshi**	**1.75**	**323**	*i*	P		**Pn**	**20 38 42.2**	**-0.4**
	baz=331								
ETLH					S		**Sn**	**20 39 02.2**	**-1.6**
	baz=331								
OWD	**Renai**	**1.76**	**311**	*i*	P		**Pn**	**20 38 42.8**	**0.0**
	baz=312								
OWD				*e*	S		**Sn**	**20 39 02.1**	**-2.0**
	baz=312								
SLIU	**Shizi**	**1.78**	**251**	*i*	P		**Pn**	**20 38 43.6**	**+0.6**
	baz=239								
SLIU					S		**Sn**	**20 39 03.2**	**-1.3**
	baz=239								
ENA	**Nanau**	**1.81**	**334**	*i*	P		**Pn**	**20 38 43.6**	**+0.2**
	baz=327								
ENA				*i*	S		**Sn**	**20 39 03.8**	**-1.4**
	baz=327								
EWUT	**Wuta**	**1.81**	**335**	*i*	P		**Pn**	**20 38 43.6**	**+0.2**
	baz=328								
EWUT				*i*	S		**Sn**	**20 39 04.7**	**-0.5**
	baz=328								
ALS	**Alishan**	**1.82**	**293**	*i*	P		Pn	20 38 44.8	+1.1
	baz=299								
ALS					S		**Sn**	**20 39 06.7**	**+1.0**
	baz=299								
SSLB	**Suanglung**	**1.82**	**303**		P		**Pn**	**20 38 44.0**	**+0.4**
SSLB	**Suanglung**	**1.82**	**303**	*i*	P		**Pn**	**20 38 44.0**	**+0.4**
	baz=303								
SSLB					S		**Sn**	**20 39 06.2**	**+0.7**
	baz=303								
WUSB	**Renai**	**1.82**	**311**	*i*	P		**Pn**	**20 38 44.0**	**+0.3**
	baz=311								
WUSB				*i*	S		**Sn**	**20 39 03.6**	**-2.0**
	baz=311								
SMST	**Manzhou Townsh**	**1.82**	**245**		P		Pn	20 38 45.3	+1.8
	baz=244								
SMST				*i*	S		**Sn**	**20 39 05.2**	**-0.2**
	baz=244								
TSEB	**Hengchuen, Pin**	**1.83**	**241**		S		**Sn**	**20 39 07.3**	**+1.8**
	baz=240								
TSMG	**Majia**	**1.83**	**268**	*i*	P		**Pn**	**20 38 44.3**	**+0.7**
	baz=266								
TSMG				*e*	S		**Sn**	**20 39 04.6**	**-1.0**
	baz=266								
CHGB	**Renai**	**1.83**	**314**	*i*	P		**Pn**	**20 38 44.2**	**+0.4**
	baz=322								
CHGB				*i*	S		**Sn**	**20 39 04.1**	**-1.8**
	baz=322								
WHF	**Hehuan Shan**	**1.83**	**317**	*i*	P		**Pn**	**20 38 44.3**	**+0.3**
	baz=318								
WHF					S		**Sn**	**20 39 05.8**	**-0.4**
	baz=318								
SLGT	**Liugui**	**1.83**	**276**	*i*	P		Pn	20 38 44.7	+1.1
	baz=275								
SLGT				*e*	S		**Sn**	**20 39 06.2**	**+0.5**
	baz=275								
IRIF	**Iriomote-Funau**	**1.84**	**33**		P		**Pn**	**20 38 44.1**	**+0.4**
IRIF				*e*	S		**Sn**	**20 39 06.4**	**+0.7**
MASBT	**Mashibuluo**	**1.85**	**265**	*i*	P		**Pn**	**20 38 44.7**	**+0.9**
	baz=263								
MASBT					S		**Sn**	**20 39 07.1**	**+1.1**
	baz=263								
WHYT	**Xinyi Township**	**1.86**	**299**	*i*	P		Pn	20 38 45.3	+1.3
	baz=304								
WHYT					S		**Sn**	**20 39 05.2**	**-1.1**
	baz=304								
TWKBT	**Hengchun**	**1.88**	**243**	*i*	P		**Pn**	**20 38 45.3**	**+1.0**
	baz=242								
TWKBT				*i*	S		**Sn**	**20 39 05.5**	**-1.3**
	baz=242								
TWK1	**Hengchun**	**1.88**	**244**	*i*	S		**Sn**	**20 39 07.2**	**+0.2**
	baz=242								
SCZT	**Fangliau**	**1.90**	**257**	*i*	P		**Pn**	**20 38 45.0**	**+0.5**
	baz=261								
SCZT				*e*	S		**Sn**	**20 39 06.7**	**-0.6**
	baz=261								
SGST	**Jiashian**	**1.90**	**279**	*i*	P		Pn	20 38 45.9	+1.4
	baz=278								
SGST				*i*	S		**Sn**	**20 39 10.2**	**+2.8**
	baz=278								
TPUB	**Ta-pu**	**1.90**	**286**		P		Pn	20 38 46.5	+1.9
TPUB	**Ta-pu**	**1.90**	**286**	*i*	P		Pn	20 38 46.5	+1.9
	baz=292								
TPUB					S		**Sn**	**20 39 09.9**	**+2.5**
	baz=292								
WTP	**Ta-pu**	**1.90**	**284**	*i*	P		Pn	20 38 46.6	+2.0
	baz=291								
WTP				*i*	S		**Sn**	**20 39 10.1**	**+2.6**
	baz=291								
ESAO	**Su ao**	**1.91**	**338**	*i*	P		**Pn**	**20 38 45.3**	**+0.7**
	baz=339								
ESAO				*i*	S		**Sn**	**20 39 07.1**	**-0.4**
	baz=339								
HEN	**Hengchun**	**1.91**	**246**	*i*	P		Pn	20 38 46.9	+2.2
	baz=238								
HEN				*i*	S		**Sn**	**20 39 07.3**	**-0.3**
	baz=238								
JKRS	**Kuro-shima**	**1.92**	**41**		P		**Pn**	**20 38 45.2**	**+0.4**
JKRS					S		**Sn**	**20 39 07.1**	**-0.6**
	baz=291								
WSF				*e*	S		**Sn**	**20 39 21.1**	**+2.4**
	baz=291								
TSCK	**Chigu Township**	**2.36**	**279**	*i*	P		Pn	20 38 53.8	+2.9
	baz=278								
TSCK				*i*	S		**Sn**	**20 39 22.4**	**+3.7**
	baz=278								
TWA	**Mucha**	**2.37**	**337**	*i*	P		Pn	20 38 53.0	+2.0
	baz=338								
TWA				*i*	S		**Sn**	**20 39 19.7**	**+0.8**
	baz=338								
WDJ	**Dajia District**	**2.38**	**311**	S			**Sn**	**20 39 23.1**	**+3.9**
	baz=321								
SXI1	**Grass Mountain**	**2.39**	**344**	*i*	P		**Pn**	**20 38 51.8**	**+0.5**
	baz=356								
SXI1					S		**Sn**	**20 39 18.0**	**-1.4**
	baz=356								
WFSB	**Wu-fen Shan**	**2.39**	**341**		P		Pn	20 38 53.9	+2.6
	baz=354								
WFSB					S		**Sn**	**20 39 18.7**	**-0.7**
	baz=354								
TATO	**Taipei**	**2.40**	**335**		P		Pn	20 38 53.3	+1.9
NMLH	**Miaoli**	**2.41**	**316**		P		Pn	20 38 53.2	+1.6
	baz=328								
NMLH					S		**Sn**	**20 39 22.4**	**+2.5**
	baz=328								
NHY	**Taipei**	**2.43**	**337**		S		**Sn**	**20 39 20.4**	**+0.1**
	baz=347								
TNOU	**National Taiwa**	**2.47**	**342**	*i*	P		Pn	20 38 54.4	+2.1
	baz=354								
TNOU					S		**Sn**	**20 39 22.2**	**+0.9**
	baz=354								
YM01	**YM01**	**2.53**	**338**	*i*	P		Pn	20 38 54.0	+0.8
	baz=349								
YM01					S		**Sn**	**20 39 23.4**	**+0.6**
	baz=349								
NCUH	**Zhongli**	**2.53**	**329**	*i*	P		Pn	20 38 55.1	+2.0
	baz=329								
NCUH				*i*	S		**Sn**	**20 39 24.2**	**+1.4**
	baz=329								
TWS1	**Kuangyinshan**	**2.54**	**335**	*e*	P		Pn	20 38 55.9	+2.5
	baz=335								
TWS1				*e*	S		**Sn**	**20 39 24.7**	**+1.6**
	baz=335								
YM08	**YM08**	**2.56**	**339**		P		Pn	20 38 54.8	+1.2
	baz=339								
YM08				*e*	S		**Sn**	**20 39 23.2**	**-0.3**
	baz=339								
ANP	**Anpu**	**2.58**	**337**	*i*	P		Pn	20 38 55.1	+1.1
	baz=338								
ANP					S		**Sn**	**20 39 25.4**	**+1.2**
	baz=338								
NTST	**Danshui**	**2.59**	**336**		S		**Sn**	**20 39 26.0**	**+1.8**
	baz=347								
JTJ	**Tarama**	**2.65**	**46**		P		**Pn**	**20 38 55.2**	**+0.4**
JTJ					eS		**Sn**	**20 39 25.0**	**-0.6**
WDGT	**Dungji**	**2.77**	**280**		P		Pn	20 38 58.5	+2.1
	baz=279								
WDGT				*e*	S		**Sn**	**20 39 28.2**	**-0.4**
	baz=279								
PHUB	**P'eng-hu**	**2.90**	**285**	*i*	P		Pn	20 39 00.1	+1.9
	baz=284								
PHUB				*i*	S		**Sn**	**20 39 33.1**	**+1.3**
	baz=284								
PNG	**Penghu**	**2.92**	**286**	*i*	P		Pn	20 39 00.5	+1.9
	baz=285								
PNG				*i*	S		**Sn**	**20 39 33.6**	**+1.1**
	baz=285								
VCHM	**Qimei**	**2.97**	**279**	*i*	P		Pn	20 39 01.5	+2.3
	baz=277								
VCHM					S		**Sn**	**20 39 35.4**	**+1.8**
	baz=277								
JIRB	**Irabujima**	**3.09**	**49**		P		**Pn**	**20 39 01.0**	**+0.2**
JIRB					eS		**Sn**	**20 39 36.2**	**-0.4**
JMJ2	**Miyako jima3**	**3.14**	**51**		P		**Pn**	**20 39 02.2**	**+0.6**
JMJ2					eS		**Sn**	**20 39 37.5**	**-0.4**
JIKM	**Ikemajima**	**3.20**	**48**	*e*	P		**Pn**	**20 39 02.8**	**+0.4**
JIKM					eS		**Sn**	**20 39 38.7**	**-0.6**
JOGS	**Gusukube**	**3.21**	**52**	*e*	S		**Sn**	**20 39 40.0**	**+0.5**
VWUC	**VWUC**	**3.63**	**308**	*i*	P		Pn	20 39 09.4	+1.1
	baz=307								
VWUC				*i*	S		**Sn**	**20 39 49.1**	**-0.8**
	baz=307								
PTMZ	**Houxiangcun**	**3.91**	**306**	*i*	P		Pn	20 39 13.6	+1.6
	baz=305								
PTMZ				*i*	S		**Sn**	**20 39 55.8**	**-0.8**
	baz=305								
MATB	**Ma-tsu**	**4.13**	**324**		P		Pn	20 39 16.6	+1.5
	baz=324								
MATB				*i*	S		**Sn**	**20 40 00.5**	**-1.7**
	baz=324								
KNM	**Kinmen**	**4.17**	**294**		P		Pn	20 39 19.6	+4.0
	baz=292								
KNMB	**Chin-men Tao**	**4.22**	**294**	*i*	P		Pn	20 39 17.4	+1.0
	baz=292								
KNMB				*i*	S		**Sn**	**20 40 03.2**	**-1.2**
	baz=292								
LYJJ	**Jianjiangzhen**	**4.55**	**326**	*e*	P		Pn	20 39 22.8	+1.9
	baz=326								
LYJJ					S		**Sn**	**20 40 11.4**	**-1.1**
	baz=326								
ZPLA	**Ao Xicun**	**4.62**	**285**		P		Pn	20 39 23.8	+2.0
	baz=283								
ZPLA				*e*	S		**Sn**	**20 40 14.7**	**+0.6**
	baz=283								
MHZQ	**Yeshan**	**4.64**	**316**	*e*	P		Pn	20 39 24.2	+2.1
	baz=316								
MHZQ				*e*	S		**Sn**	**20 40 13.3**	**-1.4**
	baz=316								
XPSS	**Dashiqiu**	**4.67**	**332**	*i*	P		**Pn**	**20 39 22.8**	**+0.2**
	baz=333								
XPSS				*i*	S		**Sn**	**20 40 13.2**	**-2.2**
	baz=333								
AXDP	**Jialang**	**4.75**	**297**	*i*	P		Pn	20 39 24.7	+1.2
	baz=296								
DSXP	**Dongshan**	**4.86**	**282**	*i*	P		Pn	20 39 27.6	+2.4
	baz=280								
DSXP				*i*	S		**Sn**	**20 40 21.0**	**+0.7**
	baz=280								
SXFK	**Yanhouchang**	**5.78**	**309**	*i*	P		Pn	20 39 39.0	+1.2
	baz=309								
SMLT	**Sun Moon Lake**	**1.92**	**305**	*i*	P		Pn	20 38 45.8	+0.9
	baz=305								
SMLT				*i*	S		**Sn**	**20 39 08.6**	**+0.7**
	baz=305								
TWC	**Suao**	**1.94**	**339**	*i*	P		**Pn**	**20 38 45.6**	**+0.5**
	baz=340								
TWC					S		**Sn**	**20 39 07.3**	**-0.9**
	baz=340								
CHN4	**Tsaushan**	**1.95**	**287**	*i*	P		Pn	20 38 47.4	+2.1
	baz=293								
CHN4					S		**Sn**	**20 39 11.3**	**+2.8**
	baz=293								
TYC	**Yuchr**	**1.96**	**305**	*i*	P		Pn	20 38 46.6	+1.2
	baz=310								
TYC				*e*	S		**Sn**	**20 39 10.4**	**+1.6**
	baz=310								
WCKO	**Fanlu**	**1.96**	**289**	*i*	P		Pn	20 38 47.8	+2.4
	baz=295								
WCKO				*i*	S		**Sn**	**20 39 11.4**	**+2.5**
	baz=295								
SCST	**Cishan**	**1.96**	**273**	*i*	P		Pn	20 38 47.7	+2.3
	baz=272								
SCST					S		Sn	20 39 14.2	+5.3
	baz=272								
TWT	**Tachien**	**1.96**	**318**	*i*	S		**Sn**	**20 39 08.8**	**-0.3**
	baz=318								
CHN1	**Nanshi**	**1.97**	**282**	*i*	P		Pn	20 38 48.2	+2.7
	baz=281								
CHN1				*i*	S		**Sn**	**20 39 12.5**	**+3.5**
	baz=281								
TDCB	**Techi**	**1.98**	**317**	*e*	P		Pn	20 38 48.0	+2.2
	baz=325								
NNSB	**Datong**	**1.98**	**325**	*i*	P		**Pn**	**20 38 46.2**	**+0.4**
	baz=326								
NNSB				*i*	S		**Sn**	**20 39 08.7**	**-0.8**
	baz=326								
NNS	**Nan Shan**	**2.00**	**325**	*i*	P		**Pn**	**20 38 46.4**	**+0.4**
	baz=326								
NNS				*i*	S		**Sn**	**20 39 09.2**	**-0.7**
	baz=326								
LATG	**Datong**	**2.00**	**330**	*i*	P		**Pn**	**20 38 46.3**	**+0.3**
	baz=331								
LATG				*i*	S		**Sn**	**20 39 09.2**	**-0.7**
	baz=331								
SNST	**Tainan City**	**2.00**	**283**	*i*	P		Pn	20 38 48.5	+2.6
	baz=291								
SNST				*i*	S		**Sn**	**20 39 13.2**	**+3.3**
	baz=291								
NDS	**Dongshan**	**2.01**	**336**	*i*	P		Pn	20 38 47.6	+1.6
	baz=337								
NDS				*i*	S		**Sn**	**20 39 10.3**	**+0.4**
	baz=337								
WCS	**Beigang Elemen**	**2.01**	**309**	*i*	P		Pn	20 38 47.1	+1.0
	baz=309								
WJS	**Zhushan**	**2.02**	**301**	*i*	P		Pn	20 38 48.2	+2.1
	baz=305								
WJS				*i*	S		**Sn**	**20 39 12.0**	**+1.8**
	baz=305								
TWK	**Hsinying**	**2.02**	**284**	*i*	P		Pn	20 38 48.7	+2.4
	baz=292								
TWK				*i*	S		**Sn**	**20 39 14.4**	**+4.0**
	baz=292								
TWM1	**Shoushan**	**2.03**	**271**	*i*	P		Pn	20 38 50.0	+3.7
	baz=267								
NDT	**Datong Townshi**	**2.06**	**331**	*i*	P		**Pn**	**20 38 47.4**	**+0.6**
	baz=331								
NDT					S		**Sn**	**20 39 10.8**	**-0.6**
	baz=331								
ENTT	**Nioudou**	**2.07**	**332**	*i*	P		Pn	20 38 47.8	+0.9
	baz=333								
ENTT					S		**Sn**	**20 39 10.9**	**-0.7**
	baz=333								
WNT	**Mingjian**	**2.08**	**302**	*i*	P		Pn	20 38 49.4	+2.3
	baz=301								
WNT				*i*	S		**Sn**	**20 39 14.4**	**+2.7**
	baz=301								
WGK	**Gukeng**	**2.09**	**295**		P		Pn	20 38 50.2	+3.1
	baz=295								
WGK				*e*	S		Sn	20 39 16.5	+4.5
	baz=295								
JIJ	**Ishigaki jima**	**2.09**	**42**		P		**Pn**	**20 38 47.1**	**-0.1**
JIJ				*e*	S		**Sn**	**20 39 10.2**	**-1.8**
CHN3	**Shinhua**	**2.10**	**278**	*e*	S		Sn	20 39 19.0	+6.8
	baz=277								
TWE	**Neicheng**	**2.10**	**336**	*i*	P		Pn	20 38 48.5	+1.2
	baz=337								
TWE				*i*	S		**Sn**	**20 39 12.3**	**0.0**
	baz=337								
SHHT	**Tainan City**	**2.11**	**277**	*i*	P		Pn	20 38 51.8	+4.4
	baz=275								
SHHT				*i*	S		Sn	20 39 18.7	+6.3
	baz=275								
WDLH	**Douliu**	**2.11**	**295**	*e*	P		Pn	20 38 50.3	+2.9
	baz=295								
WDLH				*e*	S		**Sn**	**20 39 16.3**	**+3.8**
	baz=295								
WHP	**Taichung City**	**2.13**	**314**	*i*	P		Pn	20 38 49.5	+1.7
	baz=314								
WHP				*i*	S		**Sn**	**20 39 14.9**	**+1.8**
	baz=314								
FUSB	**Fushanzhiwuyua**	**2.17**	**334**	*i*	P		Pn	20 38 49.4	+1.1
	baz=335								
FUSB				*i*	S		**Sn**	**20 39 13.2**	**-0.9**
	baz=335								
SSHA	**Shanhua**	**2.18**	**279**	*e*	P		Pn	20 38 52.5	+4.2
	baz=279								
WSSB	**Gushan**	**2.19**	**266**		P		Pn	20 38 53.1	+4.6
	baz=265								
WSSB					S		Sn	20 39 20.9	+6.5
	baz=265								
YHNB	**Yeheng**	**2.19**	**329**		P		Pn	20 38 49.8	+1.3
YHNB	**Yeheng**	**2.19**	**329**	*i*	P		Pn	20 38 49.4	+0.8
	baz=329								
YHNB				*i*	S		**Sn**	**20 39 13.7**	**-0.8**
	baz=329								
NSK	**Sanguang**	**2.20**	**328**	*i*	P		Pn	20 38 49.6	+0.9
	baz=329								
NSK				*i*	S		**Sn**	**20 39 13.6**	**-1.2**
	baz=329								
NWLT	**Wulai**	**2.22**	**333**	*i*	P		Pn	20 38 50.2	+1.2
	baz=333								
NWLT					S		**Sn**	**20 39 14.4**	**-0.8**
	baz=333								
ICHU	**Yijhu**	**2.23**	**285**		P		Pn	20 38 51.6	+2.6
	baz=284								
ICHU				*i*	S		**Sn**	**20 39 17.8**	**+2.4**
	baz=284								
TCU	**Taichung**	**2.24**	**307**	*i*	P		Pn	20 38 51.7	+2.5
	baz=307								
TCU				*i*	S		Sn	20 39 20.3	+4.7
	baz=307								
WTK	**Tuku**	**2.24**	**294**		P		**Pn**	**20 38 48.7**	**-0.5**
	baz=303								
TWB1	**Santiao Chiao**	**2.28**	**345**		S		**Sn**	**20 39 15.9**	**-0.6**
	baz=358								
TIPB	**Shuangxi**	**2.28**	**342**	*i*	P		Pn	20 38 51.9	+2.0
	baz=350								
TIPB				*i*	S		**Sn**	**20 39 17.1**	**+0.3**
	baz=350								
WCHH	**Zhanghua**	**2.29**	**304**	*i*	P		Pn	20 38 52.1	+2.3
	baz=304								
CHN8	**Yiju**	**2.29**	**284**	*i*	P		Pn	20 38 52.3	+2.5
	baz=283								
CHN8				*i*	S		**Sn**	**20 39 20.7**	**+3.9**
	baz=283								
NFF	**Wufeng Townshi**	**2.29**	**323**	*i*	P		Pn	20 38 51.5	+1.6
	baz=324								
NFF				*i*	S		**Sn**	**20 39 18.5**	**+1.5**
	baz=324								
TWQ1	**Liyutan**	**2.29**	**313**	*i*	P		Pn	20 38 52.3	+2.3
	baz=319								
TWQ1				*i*	S		**Sn**	**20 39 20.3**	**+3.2**
	baz=319								
WRL	**Guolierlin Hig**	**2.34**	**298**	*i*	P		Pn	20 38 53.1	+2.6
	baz=298								
WRL				*e*	S		**Sn**	**20 39 20.4**	**+2.3**
	baz=298								
NSTT	**Nanjuang**	**2.35**	**321**	*i*	P		Pn	20 38 53.3	+2.5
	baz=329								
NSTT				*i*	S		**Sn**	**20 39 19.7**	**+1.3**
	baz=329								
LIOB	**Emei**	**2.36**	**322**	*i*	P		Pn	20 38 53.4	+2.6
	baz=329								
LIOB				*i*	S		**Sn**	**20 39 20.0**	**+1.5**
	baz=329								
JISG	**Ishigakijimahi**	**2.36**	**41**		P		**Pn**	**20 38 50.7**	**-0.1**
JISG					S		**Sn**	**20 39 17.8**	**-0.8**
WSF	**Szhu**	**2.36**	**291**	*i*	P		Pn	20 38 53.1	+2.2

*IDC **23** 21:07:37.0±1.6, 54°.18N×34°.48W, h0km, mb3.4/6, mbtmp3.4/6, Error ellipse: s-maj=57.5km s-min=24.2km az=41.0*

ISC 23 21:07:39.0±1.4, **54°.2N**±0°.3×**34°.4W**±0°.3, **h10**km, **n7**, σ**1**§**11**/7, **mb3.5**/6, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**25.12**	**113**	P		P		**21 13 04.8**	**+0.9**
	0.9nm,1.0s,baz=319,slow=11,SNR=4.2								
	0.9nm,1.0s								
YKA	**Yellowknife Ar**	**40.25**	**315**	P		P		**21 15 15.9**	**+0.5**
	0.3nm,0.8s,baz=62,slow=9.0,SNR=3.8								
	0.3nm,0.8s								
TORD	**Torodi Ar. Bea**	**49.82**	**131**	P		P		**21 16 31.0**	**-0.9**
	0.9nm,0.8s,baz=349,slow=8.5,SNR=4.7								
	0.9nm,0.8s								
ILAR	**Eielson Array**	**50.59**	**329**	P		P		**21 16 36.3**	**-0.9**
	0.4nm,0.8s,baz=40,slow=7.1,SNR=2.7								
	0.4nm,0.8s								
KURBB	**Kurchatov Arra**

comp=Z,320nm,20.7s,baz=162,slow=33
ROSA Rosais 16.09 160 Pn **Pn 21 16 06.1 -1.0**
DSB Dublin 17.02 81 Pn **Pn 21 16 18.3 -0.5**
DSB IAmb IAmb 21 16 33.0
comp=Z,50nm,1.3s
SCHQ Schefferville 18.35 285 Pn 21 16 34.7 -0.6
SCHQ Schefferville 18.35 285 P **P 21 16 35.4 +0.1**
comp=Z,0.3nm,0.3s,baz=72,slow=12,SNR=3.7
SCHQ LR LR 21 22 27.5
comp=Z,218nm,20.6s,baz=82,slow=33
comp=Z,3.1nm,0.7s
EKB Eskdalemuir 18.42 73 Pn 21 16 36.7 +0.6
EKB IAmb IAmb 21 17 10.6
comp=Z,55nm,1.4s
FRB Frobisher Bay 19.52 313 P **Pn 21 16 49.7 +0.5**
comp=Z,0.1nm,0.3s,baz=103,slow=14,SNR=2.0
comp=Z,2.3nm,1.0s
BATG Bathurst New B 20.62 263 P Pn 21 17 01.4 -0.9
LMN Caledonia Moun 20.66 259 P 21 17 00.2 -0.3
LMN IAmb IAmb 21 17 04.6
comp=Z,31nm,1.5s
D62A Allapoint, All 22.47 266 P **P 21 17 19.9 -0.1**
D62A IAmb IAmb 21 17 27.5
comp=Z,25nm,1.4s
G65A Princeton 22.62 260 P **P 21 17 20.6 -1.0**
G65A IAmb IAmb 21 17 22.4
comp=Z,20nm,1.1s
F64A Sherman 22.71 262 P **P 21 17 22.3 -0.1**
F64A IAmb IAmb 21 17 25.7
comp=Z,28nm,1.5s
EMMW East Machias 22.84 259 P **P 21 17 24.1 +0.2**
EMMW IAmb IAmb 21 17 29.0
comp=Z,30nm,1.2s
LMQ La Malbaie 22.99 268 P **P 21 17 25.0 -0.4**
E62A Clayton Lake 22.99 265 P **P 21 17 26.2 +0.8**
E62A IAmb IAmb 21 17 31.4
comp=Z,18nm,1.2s
MTE Manteigas 23.03 115 P **P 21 17 26.4 +0.4**
MTE IAmb IAmb 21 17 36.7
comp=Z,14nm,1.2s
F63A Nahmakanta, Br 23.23 263 P **P 21 17 27.3 -0.6**
F63A IAmb IAmb 21 17 36.0
comp=Z,22nm,1.4s
LDAQ Lac Daran 23.32 270 P **P 21 17 31.6 +2.7**
LDAQ IAmb IAmb 21 17 36.3
comp=Z,18nm,1.4s
F62A Pittston Farm, 23.63 264 P **P 21 17 32.6 +0.7**
MESJ Messejana 24.58 120 P **P 21 17 41.0 +0.2**
MESJ IAmb IAmb 21 17 46.7
comp=Z,13nm,1.4s
MORF Marmelete 24.77 122 P **P 21 17 43.0 +0.5**
MORF IAmb IAmb 21 17 49.6
comp=Z,20nm,1.4s
NOA NORSAR Array B 25.34 55 P **P 21 17 48.4 +0.9**
comp=Z,2.4nm,1.1s,baz=275,slow=9.8,SNR=3.0
NOA LR LR 21 26 01.7
comp=Z,115nm,20.2s,baz=275,slow=32
comp=Z,2.4nm,1.1s
ESDC Sonseca Array 25.48 112 P **P 21 17 48.6 -0.4**
ESDC Sonseca Array 25.48 112 P **P 21 17 49.4 +0.4**
comp=Z,2.1nm,0.9s,baz=315,slow=8.6,SNR=12
ESDC LR LR 21 26 18.5
comp=Z,248nm,18.0s,baz=316,slow=33
comp=Z,2.1nm,0.9s
LBNH Lisbon 25.71 263 P **P 21 17 51.5 +0.5**
LBNH IAmb IAmb 21 18 21.1
comp=Z,32nm,1.5s
TRQ Mont Tremblant 26.16 269 P **P 21 17 55.9 +0.9**
HRV Adam Dziewonsk 26.55 259 P **P 21 17 58.5 0.0**
HRV IAmb IAmb 21 18 38.9
comp=Z,28nm,1.4s
J61A Chester 26.61 262 P **P 21 17 59.6 +0.5**
J61A IAmb IAmb 21 18 03.0
comp=Z,17nm,1.2s
HFS Hagfors 26.66 57 LR LR 21 27 12.8
comp=Z,171nm,19.2s,baz=292,slow=34
ECH Echery 26.86 85 P **P 21 18 03.2 +1.8**
VLDQ Val d'Or 26.91 275 P **P 21 18 03.8 +2.1**
VLDQ IAmb IAmb 21 18 21.2
comp=Z,16nm,1.4s
BFO Black Forest 27.49 84 P **P 21 18 08.1 +1.1**
BFO IAmb IAmb 21 18 15.0
comp=Z,18nm,1.5s
M63A Gales Ferry 27.53 258 P **P 21 18 09.2 +1.8**
L59A Walton 28.77 262 P **P 21 18 19.9 +1.4**
PAL Palisades 28.86 259 P **P 21 18 20.3 +1.1**
CLL Collm 28.87 76 *e*Px **P 21 18 21.0 +1.8**
CLL AMS AMS 21 30 00.0
comp=Z,100nm,18.6s
DELO Deloro Mine 28.90 268 P **P 21 18 20.3 +0.8**
DELO IAmb IAmb 21 18 28.2
comp=Z,17nm,1.4s
DAVOX Davos/Dischmat 29.18 86 LR LR 21 28 43.3
comp=Z,254nm,21.7s,baz=300,slow=34
ODNJ Ogdensburg 29.21 260 P **P 21 18 23.6 +1.2**
SADO Sadowa 29.65 270 LR LR 21 29 25.6
comp=Z,410nm,18.0s,baz=67,slow=35
GERES GERESS Array B 30.38 80 LR LR 21 29 54.9
comp=Z,147nm,19.4s,baz=308,slow=35
ARCES ARCESS Array B 30.90 37 P **P 21 18 37.1 +0.1**
comp=Z,2.9nm,0.9s,baz=270,slow=7.2,SNR=5.0
comp=Z,2.9nm,0.9s
RES Resolute Bay 30.91 333 P **P 21 18 37.7 +0.7**
comp=Z,1.7nm,1.0s,baz=82,slow=7.1,SNR=4.6
comp=Z,1.7nm,1.0s
TEOL Teolo 30.99 87 P **P 21 18 39.6 +1.5**
M55A Ridgway 31.39 264 P **P 21 18 41.5 -0.1**
M55A IAmb IAmb 21 19 17.4
comp=Z,15nm,1.4s
VRAC Vranov 31.82 77 LR LR 21 31 20.4
comp=Z,167nm,18.1s,baz=298,slow=36
MORC Moravsky Berou 32.14 76 P **P 21 18 48.3 0.0**
MORC IAmb IAmb 21 19 22.5
comp=Z,6.4nm,1.3s
FINES FINESS Array B 32.33 52 P **P 21 18 50.3 +0.6**
comp=Z,1.6nm,0.8s,baz=272,slow=11,SNR=2.0
comp=Z,1.6nm,0.8s
PABE Paberze 33.22 63 P **P 21 18 58.3 +0.9**
KWP Kalwaria Pacla 35.14 73 P **P 21 19 14.0 -0.3**
KWP IAmb IAmb 21 19 27.3
comp=Z,11nm,1.2s
EYMN Ely 35.14 284 P **P 21 19 14.3 0.0**
EYMN IAmb IAmb 21 19 20.6
comp=Z,6.1nm,0.9s
KEST Kesra 35.74 103 LR LR 21 33 05.9
comp=Z,78nm,20.2s,baz=310,slow=35
ULM Lac du Bonnet 36.43 289 LR LR 21 33 09.0
comp=Z,244nm,18.2s,baz=62,slow=34
KMSC Kings Mountain 37.13 258 P **P 21 19 32.0 +0.6**
KMSC IAmb IAmb 21 19 32.8
comp=Z,13nm,1.4s
JFWS Jewell Farm 37.26 276 P **P 21 19 33.6 +1.2**
JFWS IAmb IAmb 21 19 47.6
comp=Z,18nm,1.2s
SPMN Marine on St. 37.39 281 P **P 21 19 33.5 0.0**
SPMN IAmb IAmb 21 19 35.0
comp=Z,10nm,1.2s
BUR08 Bucovina Ar. S 37.59 74 P **P 21 19 36.7 +1.4**
BUR08 IAmb IAmb 21 19 42.9
comp=Z,11nm,1.5s
BURAR Bucovina Array 37.62 74 P **P 21 19 36.2 +0.7**
SCTE Santa Cesarea 38.16 89 P **P 21 19 38.4 -1.7**
TKL Tuckaleechee C 38.18 261 LR LR 21 34 33.7
comp=Z,186nm,18.9s,baz=76,slow=35
AKASG Malin Array Be 38.22 68 LR LR 21 36 29.5
comp=Z,75nm,19.2s,baz=299,slow=38
MLR Muntele Rosu 39.23 77 LR LR 21 34 46.9
comp=Z,121nm,20.6s,baz=322,slow=34
SIUC Southern Illin 39.97 268 P **P 21 19 56.5 +1.3**
SIUC IAmb IAmb 21 20 01.9
comp=Z,12nm,0.8s
S44A Carbondale 40.00 268 P **P 21 19 55.8 +0.3**
S44A IAmb IAmb 21 20 02.5
comp=Z,12nm,0.8s
YKA Yellowknife Ar 40.02 315 P **P 21 19 55.8 +0.4**
comp=Z,0.6nm,0.9s,baz=62,slow=9.3,SNR=3.7
comp=Z,0.6nm,0.9s
ECSD EROS Data Cent 40.48 281 P **P 21 20 00.1 +0.7**
FVM French Village 40.50 270 P **P 21 20 01.1 +1.5**
FVM IAmb IAmb 21 20 06.3
comp=Z,8.4nm,1.1s
CGM3 Cape Girardeau 40.51 268 P **P 21 19 59.9 +0.2**
C36M Paulatuk 40.58 327 P **P 21 20 00.6 +0.7**
CCM Cathedral Cave 40.93 270 P **P 21 20 04.0 +0.8**
PBMO Poplar Bluff 41.31 268 P **P 21 20 07.1 +0.8**
MGMO Mountain Grove 42.14 270 P **P 21 20 13.5 +0.3**

LCAR Lake Charles 42.22 268 P **P 21 20 14.0 +0.3**
250A Grady 42.26 260 P **P 21 20 15.7 +1.7**
250A IAmb IAmb 21 20 21.6
comp=Z,14nm,0.7s
S39A Bolivar 42.40 272 P **P 21 20 15.8 +0.6**
HHAR Hobbs 43.72 271 P **P 21 20 26.8 +0.9**
HHAR IAmb IAmb 21 20 32.9
comp=Z,8.4nm,1.1s
INK Inuvik 44.08 328 LR LR 21 38 07.3
comp=Z,160nm,19.9s,baz=4.0,slow=35
RLO Rose Lookout 44.44 271 P **P 21 20 32.4 +0.7**
RLO IAmb IAmb 21 20 38.0
comp=Z,8.8nm,1.0s
RSSD Black Hills 44.48 286 P **P 21 20 32.6 +0.4**
346A Big Creek Wild 44.55 262 P **P 21 20 32.6 +0.1**
F31M Tsiigehtchic 44.63 327 P **P 21 20 32.5 -0.3**
F31M IAmb IAmb 21 20 39.5
comp=Z,7.6nm,1.0s
MIAR Mount Ida 44.70 269 P **P 21 20 34.3 +0.5**
MIAR IAmb IAmb 21 20 41.2
comp=Z,12nm,1.1s
W35A Tecumseh 46.22 272 P **P 21 20 45.9 +0.1**
BELG Belogornoye 46.84 56 LR LR 21 38 52.7
comp=Z,89nm,19.6s,baz=128,slow=34
BRTR Keskin Array B 47.25 78 P **P 21 20 54.7 +0.7**
comp=Z,1.6nm,0.8s,baz=305,slow=6.6,SNR=7.7
BRTR LR LR 21 40 08.1
comp=Z,67nm,21.9s,baz=0.0,slow=35
comp=Z,1.6nm,0.8s
WMOK Wichita Mounta 47.63 273 P **P 21 20 57.3 +0.4**
WMOK IAmb IAmb 21 21 04.1
comp=Z,4.3nm,1.1s
M31M Drury Creek, Y 47.97 321 P **P 21 20 59.3 +0.1**
N32M Quiet Lake 48.14 320 P **P 21 21 00.6 +0.1**
ISCO Idaho Springs 48.16 283 P **P 21 21 01.5 +0.2**
ISCO IAmb IAmb 21 21 11.8
comp=Z,3.4nm,0.8s
R33M Jennings River 48.41 317 P **P 21 21 02.7 0.0**
PDAR Pinedale Array 48.44 289 P **P 21 21 03.3 0.0**
comp=Z,2.4nm,1.1s,baz=60,slow=8.8,SNR=6.5
PDAR LR LR 21 40 17.4
comp=Z,147nm,18.8s,baz=66,slow=35
comp=Z,2.4nm,1.1s
NEW Newport 48.99 299 LR LR 21 39 59.4
comp=Z,141nm,20.4s,baz=23,slow=34
TORD Torodi Ar. Bea 50.08 130 P **P 21 21 15.2 -0.6**
comp=Z,1.6nm,0.8s,baz=342,slow=8.8,SNR=9.0
comp=Z,1.6nm,0.8s
HWUT Hardware Ranch 50.33 289 P **P 21 21 17.9 +0.2**
HWUT IAmb IAmb 21 21 24.4
comp=Z,5.9nm,0.9s
ILAR Eielson Array 50.45 329 P **P 21 21 19.1 +1.0**
comp=Z,0.5nm,0.9s,baz=42,slow=5.7,SNR=4.0
ILAR LR LR 21 41 00.6
comp=Z,131nm,18.1s,baz=36,slow=34
ILAR PKP2bc 21 52 23.8
comp=Z,0.2nm,0.6s,baz=257,slow=5.0,SNR=5.2
comp=Z,0.5nm,0.9s
ANMO Albuquerque 51.98 279 LR LR 21 43 06.4
comp=Z,369nm,18.3s,baz=132,slow=36
HMU Henry Mountain 52.36 285 P **P 21 21 34.2 +1.1**
HMU IAmb IAmb 21 21 41.8
comp=Z,12nm,1.4s
TEIG Tepich 52.44 251 LR LR 21 44 43.8
comp=Z,533nm,18.1s,baz=164,slow=37
MMAI Mount Meron Ar 52.92 83 P **P 21 21 38.0 +1.0**
comp=Z,0.3nm,0.5s,baz=341,slow=7.9,SNR=1.9
MMAI LR LR 21 44 19.5
comp=Z,45nm,19.8s,baz=262,slow=36
comp=Z,0.3nm,0.5s
ELK Elko 52.95 290 LR LR 21 43 13.0
comp=Z,179nm,18.6s,baz=65,slow=35
AKTO Aktyubinsk 53.09 53 LR LR 21 43 02.3
comp=Z,98nm,18.4s,baz=222,slow=35
HBVL Hebbronville 53.13 266 P **P 21 21 39.2 +0.7**
DBIC Dimbokro 53.25 141 LR LR 21 41 59.1
comp=Z,157nm,18.3s,baz=346,slow=34
PINE Pine Mountain 53.94 297 P **P 21 21 45.2 +0.7**
PINE IAmb IAmb 21 21 50.7
comp=Z,11nm,1.3s
TIXI Tiksi 54.04 6 P **P 21 21 45.2 +0.7**
TXAR Lajitas Array 54.39 272 P **P 21 21 49.4 +1.6**
comp=Z,0.1nm,0.3s,baz=56,slow=4.8,SNR=2.5
TXAR LR LR 21 44 38.6
comp=Z,95nm,18.3s,baz=64,slow=36
comp=Z,0.1nm,0.3s
RSO Redoubt South 55.47 328 P **P 21 21 52.2 -3.2**
NVAR Mina Array Bea 56.26 290 P **P 21 22 04.2 +2.9**
comp=Z,0.3nm,0.6s,baz=40,slow=6.0,SNR=2.3
NVAR LR LR 21 45 27.7
comp=Z,103nm,18.6s,baz=95,slow=35
comp=Z,0.3nm,0.6s
YBH Yreka Blue Hor 56.31 296 LR LR 21 44 21.8
comp=Z,130nm,20.3s,baz=34,slow=34
BVAR Borovoye Array 56.72 44 P **P 21 22 05.4 +1.2**
comp=Z,1.2nm,0.8s,baz=314,slow=5.1,SNR=5.5
comp=Z,1.2nm,0.8s
ROSC El Rosal 58.48 228 LR LR 21 45 28.0
comp=Z,100nm,20.2s,baz=178,slow=34
CMIG Matias Romero 58.67 255 LR LR 21 48 48.2
comp=Z,36nm,18.0s,baz=9.5,slow=37
KURBB Kurchatov Arra 61.81 41 P **P 21 22 40.2 +0.8**
comp=Z,1.2nm,0.9s,baz=324,slow=7.1,SNR=8.8
KURBB LR LR 21 49 10.5
comp=Z,46nm,19.3s,baz=166,slow=36
comp=Z,1.2nm,0.9s
LPIG La Paz 62.22 273 LR LR 21 49 29.2
comp=Z,100nm,18.8s,baz=32,slow=36
MK31 Makanchi Array 66.38 42 P **P 21 23 08.9 -0.6**
MKAR Makanchi Array 66.38 42 P **P 21 23 10.4 +0.9**
comp=Z,0.6nm,0.6s,baz=321,slow=4.4,SNR=9.3
comp=Z,0.6nm,0.6s
NRN Naryn 68.10 49 P **P 21 23 20.8 0.0**
VILB Vilhena 70.11 206 P **P 21 23 32.6 -0.5**
KBL Kabul 70.31 58 P **P 21 23 33.3 -1.2**
KBL IAmb IAmb 21 23 49.3
comp=Z,4.0nm,1.2s
BDFB Brasilia 70.33 193 P **P 21 23 35.3 +0.8**
UOSS Minazif 70.95 74 P **P 21 23 36.7 -1.6**
PETK Petropavlovsk- 72.63 352 P **P 21 23 48.1 +0.2**
PETK Petropavlovsk- 72.63 352 LR LR 21 57 06.9
comp=Z,52nm,18.1s,baz=62,slow=37
SONM Songino Array 73.35 26 P **P 21 23 54.3 +1.8**
comp=Z,0.4nm,0.9s,baz=336,slow=3.2,SNR=1.7
comp=Z,0.4nm,0.9s
ULN Ulaanbaatar 73.49 25 P **P 21 23 53.7 +0.4**
SHEL Horse Pasture 74.17 151 P **P 21 23 57.8 +0.4**
HIA Hailar 74.85 17 P **P 21 24 00.1 -1.0**
HIA IAmb IAmb 21 24 40.8
comp=Z,6.4nm,1.0s
LODK Lodwar 75.88 104 P **P 21 24 07.7 +0.2**
AQDB Aquidauana 76.35 200 P **P 21 24 10.5 +0.8**
AQDB IAmb IAmb 21 24 33.0
comp=Z,6.9nm,1.4s
MBAR Mbarara 76.58 110 LR LR 21 57 12.6
comp=Z,91nm,20.4s,baz=276,slow=35
TSUM Tsumeb 85.83 131 LR LR 22 00 45.4
comp=Z,35nm,19.3s,baz=337,slow=34
LSZ Lusaka 87.51 120 LR LR 22 05 09.2
comp=Z,50nm,18.6s,baz=320,slow=36
CO01 Juntas del Tor 89.02 210 P **P 21 25 14.4 -1.3**
MLOA Mauna Loa Obse 90.72 306 P **P 21 25 22.6 -1.8**
GO05 Huala 94.26 210 P **P 21 25 38.9 -0.8**
HMDM Hanimaadhoo 95.12 71 P **P 21 25 40.3 -3.9**
CMAR Chiang Mai Arr 97.74 43 LR LR 22 14 10.7
comp=Z,11nm,18.0s,baz=335,slow=38
PALK Pallekele 98.81 65 LR LR 22 14 44.5
comp=Z,33nm,18.1s,baz=121,slow=38
ASAR Alice Springs 148.51 19 PKPbc **PKPbc 21 32 07.6 +0.1**
comp=Z,1.0nm,0.6s,baz=352,slow=2.5,SNR=16

*IDC **23** 21:15:49.2±0.8, 83.7°N×6.3°W, h0km, mb3.6/11, mbtmp3.7/13, ML3.3/2, MS3.5/5, Error ellipse: s-maj=22.9km s-min=15.1km az=17.0*
*BER **23** 21:15:53.0±2.2, 82.9°N×6.4°W, h16km±388km, mb(Pn)3.8, Confirmed Earthquake*
ISC 23 21:15:50.0±0.6, **83.00N**±0.07×**6.10W**±0.06, **h14**km, **n29,**
σ2s83/30, mb3.7/11, MS3.4/4, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.95**	**136**	*e*P		**Pn**	**21 17 03.8**	**0.0**
KBS				*e*S		**Sn**	**21 17 56.7**	**-4.0**
KBS				IAML			21 18 09.1	

comp=Z,6.8nm,0.6s

BRBB Barentsburg B 5.90 136 *e*P **Pn 21 17 18.4 +1.6**
BRBA Barentsburg A 5.93 136 *e*P **Pn 21 17 19.2 +2.0**
BRBA *e*S **Sn 21 18 21.2 -3.7**
BRBA IAML 21 18 49.2
comp=Z,11nm,0.8s
SPA0 Spitsbergen Ar 6.02 131 *e*P **Pn 21 17 18.7 +0.3**
SPA0 *e*S **Sn 21 18 22.9 -4.2**
SPA0 IAML 21 18 36.8
comp=Z,4.3nm,0.8s
SPITS Spitsbergen Ar 6.02 131 Pn **Pn 21 17 19.0 +0.5**
baz=5.6,slow=10
SPITS Sn **Sn 21 18 23.2 -3.8**
baz=299,slow=8.5
comp=Z,9.3nm,0.6s
ZFI2 Zemlya Franca- 7.61 78 *e*P **Pn 21 17 38.6 -1.6**
ZFI2 *e*S Sn 21 18 53.2 -13
comp=Z,20nm,2.8s
OMEGA Omega 7.63 78 *e*P **Pn 21 17 38.3 -2.2**
OMEGA *e*S Sn 21 18 53.9 -13
HOPEN Hopen 8.36 124 *e*P **Pn 21 17 49.0 -1.6**
HOPEN *e*S **Sn 21 19 17.0 -7.6**
HOPEN IAML 21 19 49.3
comp=Z,4.0nm,0.6s
NEEM North Greenlan 9.11 258 *i*P **Pn 21 17 58.5 -2.6**
NEEM *e*S Sn 21 19 35.7 -7.6
NEEM IAML 21 19 53.4
comp=Z,12nm,0.8s
SUMG Summit 12.16 230 *i*P **Pn 21 18 43.4 +0.5**
SUMG *i*S **Sn 21 20 54.9 -3.4**
SUMG IAML 21 20 55.5
comp=Z,3.2nm,0.9s
UPNV Upernavik 13.86 252 *i*P Pn 21 19 01.4 -4.3
NUUG Nuugaatsiaq 14.69 247 *e*P Pn 21 19 09.2 -7.7
ARCES ARCESS Array B 15.03 135 Pn **Pn 21 19 23.4 +1.7**
comp=Z,0.1nm,0.3s,baz=350,slow=13,SNR=1.6
ARCES LR LR 21 25 08.5
comp=Z,159nm,18.6s,baz=294,slow=37
comp=Z,1.9nm,0.7s
ICESG Greenland Ices 15.64 227 *i*P **Pn 21 19 26.7 -3.2**
RES Resolute Bay 16.77 293 Pn **Pn 21 19 39.7 -4.3**
comp=Z,0.3nm,0.3s,baz=39,slow=12,SNR=14
NRIK Noril'sk 22.32 69 P **P 21 20 48.6 +1.9**
comp=Z,2.7nm,0.8s,baz=338,slow=12,SNR=4.4
comp=Z,2.7nm,0.8s
NOA NORSAR Array B 22.49 158 P **P 21 20 51.5 +2.9**
comp=Z,1.3nm,0.9s,baz=354,slow=10,SNR=3.3
comp=Z,1.3nm,0.9s
FRB Frobisher Bay 23.92 257 P **P 21 21 04.5 +1.6**
comp=Z,1.5nm,0.7s,baz=36,slow=10,SNR=2.2
comp=Z,1.5nm,0.7s
KIRV Kirov 28.14 114 LR LR 21 37 20.9
comp=Z,78nm,18.4s,baz=307,slow=46
YKA Yellowknife Ar 30.58 300 P **P 21 22 03.2 +0.5**
comp=Z,0.2nm,0.7s,baz=31,slow=10,SNR=5.0
comp=Z,0.2nm,0.7s
ILAR Eielson Array 31.13 328 P **P 21 22 07.9 +0.4**
comp=Z,0.9nm,1.0s,baz=13,slow=6.8,SNR=5.0
comp=Z,0.9nm,1.0s
ARU Arti 31.31 105 LR LR 21 37 25.7
comp=Z,85nm,18.4s,baz=316,slow=41
ZALV Zalesovo Beam 36.93 80 P **P 21 22 59.3 +1.4**
comp=Z,1.4nm,0.8s,baz=357,slow=5.9,SNR=6.1
ZALV LR LR 21 40 32.9
comp=Z,34nm,18.0s,baz=338,slow=40
comp=Z,1.4nm,0.8s
KDAK Kodiak Island 38.44 332 LR LR 21 38 49.8
comp=Z,86nm,20.0s,baz=53,slow=36
KURBB Kurchatov Arra 39.43 87 P **P 21 23 20.7 +1.8**
comp=Z,1.7nm,1.0s,baz=354,slow=7.5,SNR=15
comp=Z,1.7nm,1.0s
ESDC Sonseca Array 43.48 178 P **P 21 23 54.9 +2.5**
comp=Z,0.5nm,0.8s,baz=359,slow=6.7,SNR=4.1
comp=Z,0.5nm,0.8s
MKAR Makanchi Array 43.66 84 P **P 21 23 55.1 +1.5**
comp=Z,1.3nm,0.7s,baz=351,slow=7.7,SNR=12
comp=Z,1.3nm,0.7s
TXAR Lajitas Array 61.99 281 P **P 21 26 10.1 +0.8**
comp=Z,0.5nm,0.8s,baz=36,slow=3.2,SNR=4.7
comp=Z,0.5nm,0.8s
CMAR Chiang Mai Arr 73.61 73 P **P 21 27 22.6 +0.1**
comp=Z,0.5nm,0.5s,baz=354,slow=6.8,SNR=4.7
comp=Z,0.5nm,0.5s

NOU 23 21:39:51.0, 15.69S×167.62E, h6km, MLv3.8/5, Vanuatu Islands, Vanuatu Islands

IDC 23 21:50:39.2±1.1, 18.55N×146.03E, h0km, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=47.9km s-min=23.4km az=101.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
H11S3	**WAKE ISLAND Hy**	**19.59**	**87**	T		T	22 16 06.9	
baz=280								
H11S1	**WAKE ISLAND Hy**	**19.61**	**87**	T		T	22 16 08.6	
baz=280								
H11S2	**WAKE ISLAND Hy**	**19.61**	**87**	T		T	22 16 10.8	
baz=280								
H11N1	**WAKE ISLAND Hy**	**19.75**	**83**	T		T	22 16 15.7	
baz=267								
H11N2	**WAKE ISLAND Hy**	**19.75**	**83**	T		T	22 16 18.5	
baz=267								
H11N3	**WAKE ISLAND Hy**	**19.77**	**83**	T		T	22 16 28.0	
baz=267								
WRA	**Warramunga Arr**	**39.93**	**197**	P		P	21 58 15.1	-0.2
0.3nm,0.3s,baz=16,slow=8.6,SNR=5.4								
0.3nm,0.3s								
ASAR	**Alice Springs**	**43.59**	**196**	P		P	21 58 45.2	-0.1
0.4nm,0.9s,baz=8.3,slow=6.7,SNR=2.1								
0.4nm,0.9s								
KURBB	**Kurchatov Arra**	**61.64**	**318**	P		P	22 00 59.5	+0.7
0.1nm,0.3s,baz=93,slow=7.9,SNR=4.1								
0.1nm,0.3s								
ILAR	**Eielson Array**	**63.64**	**26**	P		P	22 01 11.5	-0.5
0.2nm,0.4s,baz=249,slow=6.5,SNR=5.0								
0.2nm,0.4s								
BVAR	**Borovoye Array**	**66.79**	**320**	P		P	22 01 33.0	+0.4
0.4nm,0.4s,baz=94,slow=7.1,SNR=2.6								
0.4nm,0.4s								
YKA	**Yellowknife Ar**	**77.98**	**28**	P		P	22 02 39.7	+0.5
0.3nm,0.6s,baz=288,slow=5.7,SNR=5.2								
0.3nm,0.6s								
FINES	**FINESS Array B**	**87.15**	**335**	P		P	22 03 25.9	-1.1
0.7nm,0.7s,baz=64,slow=6.3,SNR=5.1								
0.7nm,0.7s								

*IDC **23** 21:53:03.4±0.7, 54.25°S×120.82°W, h0km, mb4.0/6, mbtmp4.0/6, MS4.0/38, Error ellipse: s-maj=36.3km s-min=22.5km az=162.0*
*NEIC **23** 21:53:04.6±1.5, 54.2°S±0.1°×121.0°W±0.2, h10km±1km, mb5.0/60, Error ellipse: s-maj=20.6km s-min=16.2km az=131.0*
*GCMT **23** 21:53:08.6±0.2, 54.46°S±0.02°×120.84°W±0.02, h19km±1km, MW4.9/82, Moment Tensor Solution. s28,c33; s82,c111; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.60±.13; Mθθ2.19±.12; Mϕϕ-1.59±.10; Mrθ-0.34±.21; Mθϕ2.31±.08; Mϕr-0.01±.22; Best double couple: Mo3.00200×10^16 NP1:ϕs290.00000°,δ89.00000°,λ6.00000°. NP2: ϕs200.00000°,δ84.00000°,λ179.00000°. Principal axes: T 3.3100, Plg5.0000°, Azm155.0000°; N -0.6150, Plg84.0000°, Azm296.0000°; P -2.6930, Plg4.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 21:53:04.4±0.4, **54.2S**±0.1×**120.98W**±0.09, **h10**km, **n135,**
σ0s86/87, mb4.9/35, MS4.1/38, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SMAI	**San Martin Ant**	**28.35**	**140**	P		**P**	**21 58 56.1**	**-2.0**
RPN	**Rapa Nui**	**28.38**	**22**	LR		LR	22 07 50.8	
comp=Z,174nm,18.6s,baz=196,slow=31								
MG05	**Puerto Natales**	**28.87**	**105**	P		**P**	**21 59 03.3**	**+0.5**
MG05				IAmb		IAmb	21 59 27.1	
comp=Z,48nm,1.2s								
GO09	**Cerro Castillo**	**29.13**	**104**	P		**P**	**21 59 05.1**	**-0.1**
GO09				IAmb		IAmb	21 59 08.8	
comp=Z,40nm,1.3s								
PMSA	**Palmer Station**	**29.71**	**134**	LR		LR	22 08 20.2	
comp=Z,401nm,18.4s,baz=278,slow=31								
GO08	**Villa O'Higgin**	**30.30**	**99**	P		**P**	**21 59 15.3**	**-0.2**

GO08 IAmb IAmb 21 59 21.6
comp=Z,22nm,1.5s
COYC Coyhaique 32.09 95 P **P** **21 59 31.9 +0.6**
COYC IAmb IAmb 21 59 32.5
comp=Z,20nm,1.3s
AY01 Puyuhuapi 32.40 93 P **P** **21 59 34.4 +0.3**
AY01 IAmb IAmb 21 59 38.6
comp=Z,13nm,1.3s
LL02 Futaleuf 33.59 91 P **P** **21 59 44.4 -0.2**
LL02 IAmb IAmb 21 59 46.1
comp=Z,13nm,1.2s
VNDA Vanda 35.09 202 LR LR 22 09 54.1
comp=Z,116nm,20.9s,baz=88,slow=29
H03S2 Juan Fernandez 35.75 73 T T 22 37 39.1
baz=220,slow=74,SNR=50
H03S1 Juan Fernandez 35.75 73 T T 22 37 45.1
baz=220,slow=74,SNR=71
H03S3 Juan Fernandez 35.77 73 T T 22 37 43.3
baz=220,slow=74,SNR=55
PLCA Paso Flores 35.87 89 P **P** **22 00 05.1 +0.8**
PLCA Paso Flores 35.87 89 P **P** **22 00 02.6 -1.7**
comp=Z,2.7nm,1.1s,baz=224,slow=6.8,SNR=3.9
PLCA LR LR 22 10 22.0
comp=Z,235nm,20.4s,baz=225,slow=29
comp=Z,2.7nm,1.1s
VA04 Juan Fernndez 35.95 72 P **P** **22 00 06.9 +1.9**
QSPA South Pole Qui 35.98 180 P **P** **22 00 06.0 +0.8**
QSPA South Pole Qui 35.98 180 P **P** **22 00 06.3 +1.2**
comp=Z,4.1nm,1.0s,baz=107,slow=5.0,SNR=5.9
QSPA LR LR 22 13 09.4
comp=Z,219nm,19.5s,baz=92,slow=34
comp=Z,4.1nm,1.0s
H03N3 Juan Fernandez 36.03 72 T T 22 37 53.5
baz=223,slow=72,SNR=210
H03N2 Juan Fernandez 36.04 72 T T 22 37 54.9
baz=223,slow=72,SNR=235
H03N1 Juan Fernandez 36.05 72 T T 22 37 53.7
baz=223,slow=72,SNR=198
GO06 Curarrehue 36.06 87 P **P** **22 00 04.8 -1.2**
BI05 Punta Hualpn 36.96 82 P **P** **22 00 14.4 +0.9**
BELA Belgrano 2 36.98 159 P **P** **22 00 15.4 +2.1**
ML02 Panimavida 38.67 82 P **P** **22 00 28.1 0.0**
ML02 IAmb IAmb 22 00 28.9
comp=Z,14nm,0.8s
GO05 Huala 38.90 81 P **P** **22 00 30.0 -0.1**
GO05 IAmb IAmb 22 00 30.8
comp=Z,24nm,1.2s
BO02 Sierra Bellavi 39.72 82 P **P** **22 00 36.8 -0.1**
MT13 San Alfonso 40.76 81 P **P** **22 00 45.4 -0.2**
PEL Peldehue 40.95 80 P **P** **22 00 47.4 +0.2**
PEL IAmb IAmb 22 00 48.5
comp=Z,21nm,1.1s
VA06 Catapilco 41.02 79 P **P** **22 00 47.7 +0.1**
VA06 IAmb IAmb 22 00 48.9
comp=Z,40nm,1.3s
VA03 San Esteban 41.31 80 P **P** **22 00 50.5 +0.4**
VA03 IAmb IAmb 22 00 50.9
comp=Z,17nm,1.0s
CO02 Combarbal 42.19 78 P **P** **22 00 57.3 -0.1**
CO02 IAmb IAmb 22 00 58.8
comp=Z,42nm,1.1s
CO06 Fray Jorge 42.22 77 P **P** **22 00 58.5 +1.0**
CO06 IAmb IAmb 22 00 59.9
comp=Z,40nm,1.4s
CO03 El Pedregal 42.64 78 P **P** **22 01 01.4 +0.4**
CO03 IAmb IAmb 22 01 08.1
comp=Z,20nm,1.3s
PPT Papeete 42.71 318 LR LR 22 13 57.4
comp=Z,320nm,21.7s,baz=176,slow=29
BKZ Black Stump Fm 43.97 263 P **P** **22 01 11.2 -0.3**
RAR Rarotonga 44.08 303 LR LR 22 15 07.1
comp=Z,98nm,21.4s,baz=130,slow=30
RPZ Rata Peaks 44.19 255 LR LR 22 15 18.5
comp=Z,298nm,20.2s,baz=124,slow=30
URZ Urewera 44.21 265 LR LR 22 15 30.7
comp=Z,75nm,20.4s,baz=118,slow=30
MLZ Mavora Lakes 44.81 251 P **P** **22 01 17.9 -0.3**
SNAA Sanae 47.16 158 LR LR 22 21 12.3
comp=Z,355nm,19.1s,baz=191,slow=36
LVC Limon Verde 49.98 72 LR LR 22 17 17.8
comp=Z,122nm,20.5s,baz=220,slow=29
PLTB Pedras Altas 51.95 93 P **P** **22 02 12.6 -0.8**
CPUP Villa Florida 53.77 86 P **P** **22 02 26.6 -0.3**
CPUP Villa Florida 53.77 86 P **P** **22 02 26.0 -0.9**
comp=Z,1.8nm,0.9s,baz=266,slow=8.8,SNR=3.4
CPUP LR LR 22 22 29.2
comp=Z,376nm,18.0s,baz=228,slow=33
comp=Z,1.8nm,0.9s
NNA Nana 54.58 57 LR LR 22 19 38.3
comp=Z,128nm,20.0s,baz=216,slow=29
LPAZ La Paz 55.51 68 P **P** **22 02 39.9 -0.4**
ATAH Atahualpa 58.06 52 LR LR 22 22 08.2
comp=Z,198nm,19.5s,baz=245,slow=30
MAW Mawson 58.48 182 LR LR 22 27 08.5
comp=Z,131nm,18.8s,baz=166,slow=35
SIV San Ignacio 59.68 75 LR LR 22 24 01.0
comp=Z,110nm,21.4s,baz=66,slow=31
MCRA Macar, Loja 59.79 49 P **P** **22 03 09.2 -0.6**
CZSB Cruzeiro do Su 60.29 58 P **P** **22 03 13.1 0.0**
CZSB IAmb IAmb 22 03 14.8
comp=Z,23nm,1.0s
PTLB Pontes e Lacer 61.21 76 P **P** **22 03 19.2 -0.2**
PTLB IAmb IAmb 22 03 20.0
comp=Z,11nm,1.4s
BOSC San Juan Bosco 61.53 50 P **P** **22 03 21.3 -0.5**
COHC Cochancay 61.80 49 P **P** **22 03 24.5 +1.2**
COHC IAmb IAmb 22 03 30.6
comp=Z,3.1nm,0.4s
ETMB Extrema 61.90 66 P **P** **22 03 23.4 -0.6**
ETMB IAmb IAmb 22 03 24.7
comp=Z,7.6nm,0.8s
DZM Mont Dzumac 62.26 270 LR LR 22 26 06.8
comp=Z,75nm,18.8s,baz=198,slow=32
TOO Toolangi 62.44 243 P **P** **22 03 27.1 -0.5**
TOO IAmb IAmb 22 03 28.1
comp=Z,22nm,1.4s
VILB Vilhena 62.62 73 P **P** **22 03 27.6 -1.4**
VILB IAmb IAmb 22 03 44.5
comp=Z,16nm,1.3s
SAML Samuel 64.25 68 P **P** **22 03 38.5 -1.2**
SAML IAmb IAmb 22 03 40.2
comp=Z,4.7nm,0.8s
ARMA Armidale 64.48 253 P **P** **22 03 40.3 -0.9**
ARMA IAmb IAmb 22 03 55.9
comp=Z,20nm,1.4s
BDFB Brasilia 67.50 86 LR LR 22 30 25.5
comp=Z,190nm,18.8s,baz=281,slow=33
STKA Stephens Creek 68.86 245 LR LR 22 29 44.2
comp=Z,114nm,18.5s,baz=199,slow=32
ROSC El Rosal 70.49 50 LR LR 22 31 09.6
comp=Z,156nm,20.1s,baz=234,slow=32
JACO JACO, Garabito 70.62 38 P **P** **22 04 19.2 -0.8**
JACO IAmb IAmb 22 04 23.8
comp=Z,24nm,1.0s
JTS Las Juntas de 71.10 38 LR LR 22 28 07.1
comp=Z,136nm,20.9s,baz=100,slow=30
MTO3 Montecristo 73.45 32 P **P** **22 04 37.5 +0.4**
MTO3 IAmb IAmb 22 04 52.3
comp=Z,28nm,1.3s
CTA Charters Tower 75.54 256 LR LR 22 33 51.7
comp=Z,74nm,18.4s,baz=107,slow=32
SDV Santo Domingo 75.74 52 LR LR 22 34 18.1
comp=Z,104nm,18.3s,baz=86,slow=33
PAF Port-aux-Franc 76.39 188 P **P** **22 04 52.8 -0.6**
LPIG La Paz 78.53 10 LR LR 22 31 48.3
comp=Z,112nm,18.8s,baz=164,slow=30
H01W1 Cape Leeuwin H 79.35 223 T T 23 33 16.3
baz=150,slow=75,SNR=18
H01W2 Cape Leeuwin H 79.36 223 T T 23 33 15.9
baz=150,slow=75,SNR=20
H01W3 Cape Leeuwin H 79.37 223 T T 23 33 16.8
baz=150,slow=75,SNR=18
ASAR Alice Springs 79.48 244 P **P** **22 05 11.2 0.0**
comp=Z,1.5nm,0.9s,baz=149,slow=5.3,SNR=11
ASAR LR LR 22 35 17.9
comp=Z,128nm,19.8s,baz=164,slow=32
comp=Z,1.5nm,0.9s
PCRV Puerto La Cruz 79.72 56 LR LR 22 35 34.1
comp=Z,178nm,18.8s,slow=32
NWAO Narrogin (SRO) 79.77 227 P **P** **22 05 13.0 +0.4**
NWAO Narrogin (SRO) 79.77 227 LR LR 22 32 58.7
comp=Z,71nm,19.4s,baz=163,slow=30
WRA Warramunga Arr 82.28 247 P **P** **22 05 26.5 +0.4**
comp=Z,2.4nm,0.9s,baz=145,slow=4.8,SNR=10
comp=Z,2.4nm,0.9s
PMG Port Moresby 83.54 263 LR LR 22 40 00.0
comp=Z,43nm,19.5s,baz=226,slow=34

GTBY Guantanamo Bay 83.64 43 P **P** **22 05 33.8 +0.9**
TXAR Lajitas Array 84.53 15 P **P** **22 05 38.9 +1.6**
comp=Z,0.3nm,0.8s,baz=173,slow=8.2,SNR=2.4
comp=Z,0.3nm,0.8s
PCDR Punta Cana, DR 85.23 49 P **P** **22 05 41.6 +0.6**
CCX Cicese 85.80 4 P **P** **22 05 42.8 -0.7**
214A Organ Pipe Nat 86.10 7 P **P** **22 05 45.2 +0.2**
PFO Pinyon Flats O 87.54 4 P **P** **22 05 52.3 +0.1**
PFO IAmb IAmb 22 05 57.4
comp=Z,17nm,1.5s
PFO Pinyon Flats O 87.54 4 LR LR 22 36 08.4
comp=Z,119nm,18.3s,baz=221,slow=30
SUR Sutherland 87.67 148 LR LR 22 37 34.5
comp=Z,50nm,20.3s,baz=207,slow=30
PSA00 Pilbara Seismi 88.32 234 P **P** **22 05 56.4 +0.1**
PSA00 IAmb IAmb 22 06 14.2
comp=Z,9.8nm,1.1s
KNRA Kununurra 88.77 245 P **P** **22 05 54.7 -3.7**
APMT Aspermont 89.02 17 P **P** **22 05 59.2 +0.1**
APMT IAmb IAmb 22 06 15.0
comp=Z,9.5nm,1.4s
ANMO Albuquerque 89.67 12 P **P** **22 06 02.6 +0.4**
MTN Manton Dam 89.84 248 P **P** **22 06 01.4 -2.0**
BRAL Brewton 89.94 29 P **P** **22 06 02.1 -1.3**
PMPB Monarch Peak 90.06 0 P **P** **22 06 04.6 +0.7**
PMPB IAmb IAmb 22 06 09.9
comp=Z,23nm,1.2s
U15A North Rim 90.58 7 P **P** **22 06 07.2 +0.6**
X34A Smith Ranch, M 90.68 19 P **P** **22 06 07.8 +1.0**
X34A IAmb IAmb 22 06 22.4
comp=Z,14nm,1.1s
255A Hazlehurst 92.00 32 P **P** **22 06 11.8 -1.1**
NVAR Mina Array Bea 92.29 2 LR LR 22 38 35.1
comp=Z,116nm,20.1s,baz=98,slow=30
BOSA Boshof 92.51 151 LR LR 22 46 50.9
comp=Z,65nm,18.5s,baz=189,slow=35
ELK Elko 94.71 4 LR LR 22 41 59.7
comp=Z,62nm,18.0s,baz=218,slow=31
H11S2 WAKE ISLAND Hy 94.92 295 T T 23 51 58.9
baz=147,slow=76,SNR=115
H11S3 WAKE ISLAND Hy 94.93 295 T T 23 52 15.5
baz=147,slow=76,SNR=73
H11S1 WAKE ISLAND Hy 94.94 295 T T 23 52 15.8
baz=147,slow=76,SNR=66
TKL Tuckaleechee C 95.08 30 LR LR 22 44 17.5
comp=Z,29nm,18.7s,baz=160,slow=32
YBH Yreka Blue Hor 95.58 359 LR LR 22 39 19.7
comp=Z,102nm,21.3s,baz=176,slow=29
H11N3 WAKE ISLAND Hy 95.82 296 T T 23 53 19.9
baz=144,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 95.83 296 T T 23 53 14.6
baz=144,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 95.84 296 T T 23 53 19.0
baz=144,slow=75,SNR=12
LBTB Lobatse 96.00 150 LR LR 22 42 30.7
comp=Z,58nm,21.0s,baz=201,slow=31
PDAR Pinedale Array 97.09 8 LR LR 22 42 43.0
comp=Z,62nm,18.0s,baz=186,slow=31
Q52A Bidwell 98.59 30 P **P** **22 06 42.9 +0.1**
TSUM Tsumeb 98.72 141 LR LR 22 44 12.9
comp=Z,46nm,21.3s,baz=158,slow=31
ILAR Eielson Array 120.31 347 PKP **PKiKP** **22 11 55.6 +1.2**
comp=Z,0.2nm,0.7s,baz=183,slow=3.3,SNR=1.9
CMAR Chiang Mai Arr 133.02 236 PKP **PKiKP** **22 12 21.5 +0.4**
comp=Z,0.3nm,0.3s,baz=207,slow=1.6,SNR=1.1
EKA Eskdalemuir Ar 145.16 62 PKPbc **PKPbc** **22 12 40.4 -0.1**
comp=Z,5.7nm,0.9s,baz=241,slow=2.8,SNR=5.6
TIXI Tiksi 146.27 328 PKPdf **PKPbc** **22 12 44.0 +0.5**
LSA Lhasa 146.28 236 PKPdf **PKPdf** **22 12 44.8 +0.5**
FETA Feichten 149.05 83 *i* PKP **PKPbc** **22 12 52.3 +0.2**
comp=Z,4.9nm,0.9s
SQTA Saint Quirin 149.44 83 *i* PKP **PKPbc** **22 12 53.3 +0.4**
comp=Z,0.9nm,0.4s
MOTA Moosalm 149.44 83 *i* PKP **PKPbc** **22 12 53.0 0.0**
comp=Z,2.2nm,0.6s
WTTA Wattenberg 149.71 84 *i* PKP **PKPbc** **22 12 54.1 +0.4**
comp=Z,2.4nm,0.6s
SONM Songino Array 150.00 277 PKPbc **PKPbc** **22 12 55.0 +0.7**
comp=Z,0.9nm,0.9s,baz=144,slow=3.1,SNR=6.0
LESA Schwarzleotal 150.40 84 *i* PKP **PKPbc** **22 12 55.2 0.0**
comp=Z,2.2nm,0.6s
MYKA Terra Mystica 150.55 86 *i* PKP **PKPbc** **22 12 55.8 +0.2**
comp=Z,2.4nm,0.5s
OBKA Obir 151.02 87 *i* PKP **PKiKP** **22 12 57.3 0.0**
comp=Z,3.2nm,0.6s
BIOA Bad Ischl, Aus 151.09 84 *i* PKP **PKPbc** **22 12 56.7 -0.1**
comp=Z,1.4nm,0.3s
SOKA Soboth 151.39 87 *i* PKP **PKiKP** **22 12 57.8 -0.2**
comp=Z,5.4nm,1.0s
MOA Molln 151.54 84 *i* PKP **PKPbc** **22 12 57.9 +0.1**
comp=Z,1.9nm,0.5s
GERES GERESS Array B 151.69 82 PKPbc **PKiKP** **22 12 58.6 0.0**
comp=Z,2.3nm,0.7s,baz=228,slow=1.6,SNR=4.5
ARSA Arzberg 151.97 86 *i* PKP **PKiKP** **22 12 59.2 +0.1**
comp=Z,1.8nm,0.5s
CONA Conrad Observa 152.51 85 *i* PKP **PKPbc** **22 13 00.0 0.0**
comp=Z,0.8nm,0.5s
MMAI Mount Meron Ar 153.01 132 PKPbc **PKiKP** **22 13 01.9 +0.1**
comp=Z,0.4nm,0.5s,baz=183,slow=3.3,SNR=4.2
BRTR Keskin Array B 157.59 120 PKP **PKPdf** **22 13 00.7 +0.3**
comp=Z,0.8nm,1.0s,baz=222,slow=1.9,SNR=4.3
BRTR PKPab **PKPab** **22 13 32.5 -0.1**
comp=Z,1.4nm,0.8s,baz=193,slow=5.2,SNR=7.6
MKAR Makanchi Array 163.49 253 PKPab **PKPab** **22 13 58.5 +0.5**
comp=Z,0.5nm,0.8s,baz=133,slow=5.3,SNR=5.8

*IDC **23** 22:00:12.7±8.8, 25°.33S×69°.92W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=393.8km s-min=58.9km az=22.0*
*SJA **23** 22:00:19.3±0.7, 24°.92S×70°.34W, h22km±5km, ML3.9, MW3.9*
*GUC **23** 22:00:23.5±0.9, 24°.92S×69°.91W, h58km±4km, ML3.9*
ISC 23 22:00:23.9±0.9, 24°.92S±0°.02×70°.00W±0°.05, h57km±8km, n50, σ2s30/62, 4C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.44**	**123**	*eP*		**Pn**		**22 00 34.0**	**-1.4**
GO02				*eS*		**Sn**		**22 00 44.4**	**+0.7**
GO02				IAML				22 00 45.5	
comp=Z,6μm,0.1s									
GO02	**Mina Guanaco**	**0.44**	**123**	*iP*		**Pn**		**22 00 34.7**	**-0.8**
GO02				*eS*		**Sn**		**22 00 43.4**	**-0.3**
GO02				IAML				22 00 44.3	
comp=E,26μm,0.1s									
PB14	**IPOC Station P**	**0.47**	**309**	*iP*		Pn		22 00 36.6	+0.8
PB14				*eS*		**Sn**		**22 00 46.3**	**+2.0**
AC01	**Pan de Azucar**	**1.33**	**204**	*eP*		Pn		22 00 41.5	-4.8
AC01				*eS*		**Sn**		**22 01 05.6**	**+2.5**
AC01	**Pan de Azucar**	**1.33**	**204**	*iP*		**Pn**		**22 00 47.0**	**+0.6**
AC01				*eS*		**Sn**		**22 01 05.4**	**+2.3**
AC01				IAML				22 01 09.6	
comp=E,2μm,0.2s									
PB10	**IPOC Station P**	**1.49**	**340**	*eP*		**Pn**		**22 00 48.4**	**-0.1**
PB10				*eS*		**Sn**		**22 01 13.1**	**+6.2**
PB10				IAML				22 01 14.4	
comp=Z,808nm,0.2s									
PB10	**IPOC Station P**	**1.49**	**340**	*eP*		**Pn**		**22 00 48.7**	**+0.2**
PB15	**IPOC Station P**	**1.78**	**16**	*eP*		**Pn**		**22 00 52.8**	**+0.2**
PB15				*eS*		**Sn**		**22 01 16.0**	**+1.9**
PB15	**IPOC Station P**	**1.78**	**16**	*iP*		**Pn**		**22 00 52.6**	**+0.1**
PB15				*eS*		**Sn**		**22 01 15.7**	**+1.5**
AC02	**Maricunga**	**2.06**	**158**	*eP*		**Pn**		**22 00 57.4**	**+0.8**
AC02	**Maricunga**	**2.06**	**158**	*eP*		**Pn**		**22 00 57.2**	**+0.5**
AC02				*eS*		**Sn**		**22 01 22.5**	**+1.1**
AC02				IAML				22 01 25.3	
comp=E,981nm,0.4s									
PB06	**IPOC Station P**	**2.24**	**10**	*eP*		**Pn**		**22 00 58.6**	**-0.3**
PB06				*eS*		**Sn**		**22 01 27.9**	**+2.4**
PB06				IAML				22 01 32.3	
comp=Z,636nm,0.6s									
PB06	**IPOC Station P**	**2.24**	**10**	*eP*		**Pn**		**22 00 58.4**	**-0.5**
PB06				*eS*		**Sn**		**22 01 26.4**	**+1.0**
PB06				IAML				22 01 31.6	
comp=E,714nm,0.4s									
LVC	**Limon Verde**	**2.51**	**24**	*eP*		**Pn**		**22 01 02.7**	**0.0**
LVC				*eS*		**Sn**		**22 01 39.0**	**+6.7**
LVC				IAML				22 01 39.8	
comp=Z,286nm,0.2s									
LVC	**Limon Verde**	**2.51**	**24**	*eP*		**Pn**		**22 01 02.5**	**-0.3**
LVC				*eS*		**Sn**		**22 01 33.4**	**+1.0**
PB04	**IPOC Station P**	**2.58**	**357**	*eP*		**Pn**		**22 01 02.9**	**-0.6**
PB04				*eS*		**Sn**		**22 01 33.5**	**-0.3**
PB04				IAML				22 01 41.8	
comp=Z,462nm,0.8s									
PB04	**IPOC Station P**	**2.58**	**357**	*eP*		**Pn**		**22 01 02.9**	**-0.6**
PB04				*eS*		**Sn**		**22 01 39.5**	**+5.7**
PB04				IAML				22 01 45.2	
comp=N,1μm,0.3s									
GO03	**Copiap**	**2.67**	**184**	*eP*		**Pn**		**22 01 04.0**	**-0.5**
GO03				*eS*		**Sn**		**22 01 34.0**	**-1.7**
GO03				*eS*				22 01 40.0	
GO03				IAML				22 01 54.0	
comp=Z,306nm,0.3s									
GO03	**Copiap**	**2.67**	**184**	*eP*		**Pn**		**22 01 04.2**	**-0.4**
GO03				IAML				22 01 53.5	
comp=E,270nm,0.3s									
PB07	**IPOC Station P**	**3.19**	**2**	*eP*		**Pn**		**22 01 10.2**	**-1.6**
PB07				*eS*		**Sn**		**22 01 52.5**	**+3.9**
PB07				IAML				22 02 07.7	
comp=Z,333nm,0.3s									
PB07	**IPOC Station P**	**3.19**	**2**	*eP*		**Pn**		**22 01 10.4**	**-1.3**
PB07				IAML				22 01 59.7	
comp=E,373nm,0.3s									
PB09	**IPOC Station P**	**3.19**	**13**	*eP*		**Pn**		**22 01 12.2**	**+0.4**
PB09				*eS*		**Sn**		**22 01 49.0**	**+0.3**
PB09				IAML				22 02 01.0	
comp=Z,292nm,0.4s									
PB09	**IPOC Station P**	**3.19**	**13**	*eP*		**Pn**		**22 01 12.4**	**+0.5**
PB09				IAML				22 02 09.5	
comp=N,362nm,0.4s									
AC04	**Llanos de Chal**	**3.41**	**196**	*eP*		**Pn**		**22 01 12.8**	**-1.8**
AC04				*eS*		**Sn**		**22 01 58.5**	**+4.8**
AC04				IAML				22 02 10.3	
comp=Z,179nm,0.9s									
AC04	**Llanos de Chal**	**3.41**	**196**	*eP*		**Pn**		**22 01 12.2**	**-2.3**
AC04				IAML				22 02 08.8	
comp=E,181nm,0.1s									
PB02	**IPOC Station P**	**3.59**	**2**	*eP*		**Pn**		**22 01 16.1**	**-1.1**
PB02				*eS*		Sn		22 02 10.9	+12
PB02				IAML				22 02 15.2	
comp=Z,421nm,0.4s									
PB02	**IPOC Station P**	**3.59**	**2**	*eP*		**Pn**		**22 01 15.8**	**-1.5**
PB01	**IPOC Station P**	**3.89**	**7**	*eP*		**Pn**		**22 01 19.9**	**-1.5**
PB01				*eS*		**Sn**		**22 02 08.0**	**+2.1**
PB01				IAML				22 02 19.7	
comp=Z,189nm,0.3s									
PB01	**IPOC Station P**	**3.89**	**7**	*eP*		**Pn**		**22 01 19.8**	**-1.5**
PATCX	**Punta Patache**	**4.09**	**358**	*eP*		**Pn**		**22 01 21.5**	**-2.5**
LCO	**Las Campanas**	**4.12**	**189**	*eP*		**Pn**		**22 01 24.0**	**-0.6**
LCO				*eS*		**Sn**		**22 02 16.0**	**+4.4**
LCO				*eS*				22 02 25.3	
LCO				IAML				22 02 27.5	
comp=Z,779nm,0.5s									
LCO	**Las Campanas**	**4.12**	**189**	*eP*		**Pn**		**22 01 23.3**	**-1.3**
VCA	**Vinchina**	**4.12**	**157**	*eP*		**Pn**		**22 01 26.2**	**+1.6**
VCA				*eS*		**Sn**		**22 02 17.0**	**+5.4**
TA01	**Diego Aracena**	**4.34**	**358**	*eP*		Pn		22 01 32.3	+4.8
HMBC	**Humberstone**	**4.62**	**1**	*eP*		**Pn**		**22 01 29.9**	**-1.5**
PB08	**IPOC Station P**	**4.83**	**10**	*eP*		**Pn**		**22 01 33.3**	**-1.1**
PB08				*eS*		Sn		22 02 39.5	+10
PB08				IAML				22 02 52.5	
comp=Z,73nm,0.7s									
PB08	**IPOC Station P**	**4.83**	**10**	*eP*		**Pn**		**22 01 33.1**	**-1.3**
CYA	**Choya**	**5.14**	**134**	*eP*		**Pn**		**22 01 40.3**	**+1.9**
PB11	**IPOC Station P**	**5.15**	**4**	*eP*		**Pn**		**22 01 36.7**	**-2.0**
PB11				*eS*		Sn		22 02 56.0	+19
PB11				IAML				22 03 11.3	
comp=Z,88nm,0.5s									
H03N1	**Juan Fernandez**	**11.51**	**220**	T		T		22 15 06.8	
baz=43,slow=72,SNR=58									
H03N2	**Juan Fernandez**	**11.52**	**221**	T		T		22 15 05.7	
baz=43,slow=72,SNR=12									
H03N3	**Juan Fernandez**	**11.53**	**220**	T		T		22 15 05.1	
baz=43,slow=72,SNR=36									
PDAR	**Pinedale Array**	**76.59**	**331**	P		**P**		**22 12 07.2**	**-1.3**
comp=Z,0.1nm,0.5s,baz=146,slow=9.8,SNR=1.6									
comp=Z,0.1nm,0.5s									
TORD	**Torodi Ar. Bea**	**79.45**	**70**	P		P		22 12 21.6	-3.1
comp=Z,0.6nm,0.6s,baz=251,slow=6.7,SNR=4.3									
comp=Z,0.6nm,0.6s									
H11S2	**WAKE ISLAND Hy**	**127.23**	**275**	T		T		00 39 13.6	
baz=108,slow=75,SNR=14									
H11S1	**WAKE ISLAND Hy**	**127.25**	**275**	T		T		00 39 12.9	
baz=108,slow=75,SNR=18									
H11S3	**WAKE ISLAND Hy**	**127.25**	**275**	T		T		00 39 14.4	
baz=108,slow=75,SNR=18									
KURBB	**Kurchatov Arra**	**144.72**	**35**	PKPbc		**PKPab**		**22 19 50.3**	**-2.5**
comp=Z,0.1nm,0.4s,baz=313,slow=3.0,SNR=5.5									
ZALV	**Zalesovo Beam**	**145.46**	**26**	PKPbc		**PKPdf**		**22 19 53.0**	**-2.1**
comp=Z,1.1nm,0.6s,baz=321,slow=3.9,SNR=6.6									
MKAR	**Makanchi Array**	**148.96**	**38**	PKPbc		**PKPdf**		**22 20 02.7**	**+1.5**
comp=Z,0.4nm,0.7s,baz=315,slow=3.3,SNR=5.9									

*UCR **23** 22:14:11.8±0.7, 8°.61N×82°.83W, h25km±1km, MW3.6*
*CATAC **23** 22:14:12.2±0.4, 8°.69N×82°.87W, h13km±2km, ML3.1*
*UPA **23** 22:14:12.0±0.5, 8°.63N×82°.80W, h22km±3km, MW3.5*
ISC 23 22:14:11.9±1.0, 8°.64N±0°.03×82°.82W±0°.03, h28km±5km, n41, σ0s83/59, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.08**	**221**	*eP*		**Pb**		**22 14 16.1**	**-0.9**
CDITO	**Canoas**	**0.08**	**221**	*eP*		**Pb**		**22 14 16.1**	**-0.9**
CDITO				*eS*		**Sb**		**22 14 19.8**	**-0.6**
CDITO	**Canoas**	**0.08**	**221**	*iP*		**Pb**		**22 14 16.1**	**-0.9**
CDITO				IAML				22 14 19.1	
comp=Z,4μm,1.0s									
CDITO				*iS*		**Sb**		**22 14 19.7**	**-0.6**
MLIR3	**Monte Lirio, C**	**0.16**	**359**	*eP*		**Pb**		**22 14 17.5**	**-0.2**
BRU2	**Volcan**	**0.20**	**39**	*eP*		**Pb**		**22 14 17.8**	**-0.4**
BRU2				*eS*		**Sb**		**22 14 22.5**	**0.0**
BRU2	**Volcan**	**0.20**	**39**	*eP*		**Pb**		**22 14 17.8**	**-0.4**
BRU2				*eS*		**Sb**		**22 14 22.4**	**0.0**
BRU2	**Volcan**	**0.20**	**39**	*iP*		**Pb**		**22 14 17.8**	**-0.4**
BRU2				IAML				22 14 17.8	
comp=Z,3μm,1.0s									
BRU2				*iS*		**Sb**		**22 14 22.1**	**-0.3**
VITO	**San Vito**	**0.24**	**321**	*eP*		**Pb**		**22 14 18.5**	**0.0**
VITO				*eS*		**Sb**		**22 14 24.0**	**+1.0**
CTCR	**Cotoan**	**0.27**	**13**	*eP*		**Pb**		**22 14 18.5**	**-0.5**
BC3P	**Paso Ancho**	**0.27**	**49**	*eP*		**Pb**		**22 14 18.6**	**-0.6**
BCO2	**Palmira**	**0.30**	**74**	*eP*		**Pb**		**22 14 19.2**	**-0.2**
BCO2				*eS*		**Sb**		**22 14 24.7**	**+0.2**
EDAD	**Golfito**	**0.34**	**273**	*eP*		**Pb**		**22 14 18.7**	**-1.2**
LNBQ3	**Los Naranjos,**	**0.41**	**67**	*eP*		**Pb**		**22 14 20.2**	**-0.7**
DVD	**David**	**0.41**	**118**	*eP*		**Pb**		**22 14 20.4**	**-0.6**
DVD				*eS*		**Sb**		**22 14 26.8**	**-0.3**
PTPM	**Petroterminale**	**0.43**	**188**	*eP*		**Pb**		**22 14 20.8**	**-0.4**
PTPM				*eS*		**Sb**		**22 14 27.9**	**+0.4**
POTG	**Potrero Grande**	**0.51**	**325**	*eP*		**Pb**		**22 14 22.2**	**-0.3**
POTG	**Potrero Grande**	**0.51**	**325**	*iP*		**Pb**		**22 14 22.3**	**-0.3**
POTG				*iS*		**Sb**		**22 14 29.8**	**+0.1**
POTG				IAML				22 14 32.9	
comp=Z,3μm,1.0s									
LIMO3	**Limones**	**0.53**	**185**	*eP*		**Pb**		**22 14 22.4**	**-0.4**
PIRO	**Carate, Puerto**	**0.56**	**246**	*eP*		**Pb**		**22 14 22.1**	**-1.2**
EDBA	**Buenos Aires**	**0.69**	**319**	*eP*		**Pb**		**22 14 25.3**	**-0.2**
CHGR2	**Aguacate**	**0.73**	**66**	*eP*		**Pb**		**22 14 25.0**	**-1.2**
CHGR2				*eS*		**Sb**		**22 14 35.3**	**-0.6**
DRK0	**Durika**	**0.75**	**326**	*eP*		**Pb**		**22 14 25.8**	**-0.9**
SRBA	**San Rafael, Bu**	**0.80**	**318**	*eP*		**Pb**		**22 14 26.1**	**-1.2**
SRBA	**San Rafael, Bu**	**0.80**	**318**	*iP*		**Pb**		**22 14 26.2**	**-1.2**
SRBA				*iS*	

CVTV	**Tajo**	**1.64**	**326**	*e*P		**Pn**	**22 14 40.4**	**+1.2**
VTLA	**Turrialba Volc**	**1.65**	**325**	*e*P		**Pn**	**22 14 40.6**	**+1.2**
VTR0	**Volcan Turrial**	**1.66**	**326**	*e*P		**Pn**	**22 14 40.5**	**+0.9**
CVTR	**Volcan Turrial**	**1.66**	**326**	*e*P		**Pn**	**22 14 40.5**	**+0.9**
VTUC	**Crater, Volcan**	**1.66**	**326**	*i* P		**Pn**	**22 14 40.5**	**+0.9**
VTUC					IAML		22 14 45.2	
	comp=Z,150nm,1.0s							
HAYA	**Volcan Irazu**	**1.68**	**323**	*i* P		**Pn**	**22 14 40.4**	**+0.6**
HAYA				*i* S		**Sn**	**22 15 02.0**	**+1.5**
HAYA					IAML		22 15 04.7	
	comp=Z,400nm,1.0s							
OCM	**Ochomogo**	**1.68**	**318**	*e*P		**Pn**	**22 14 40.1**	**+0.4**
OCM	**Ochomogo**	**1.68**	**318**	*i* P		**Pn**	**22 14 40.0**	**+0.3**
OCM					IAML		22 14 40.2	
	comp=Z,150nm,1.0s							
SOCE	**Pocosol**	**2.48**	**315**	*i* P		**Pn**	**22 14 51.0**	**+0.5**
SOCE					IAML		22 14 57.7	
	comp=Z,110nm,1.0s							
SAJU	**San Juanillo,**	**3.19**	**297**	*i* P		**Pn**	**22 15 01.9**	**+1.7**
SAJU					IAML		22 15 49.8	
	comp=Z,38nm,1.0s							

*SJA **23** 22:33:06.1±0.6,34.°07S×72.°24W,h25km±1km,ML3.6, MW3.8*

*GUC **23** 22:33:08.4±0.9,34.°09S×72.°24W,h26km±11km,ML3.7*

ISC 23 22:33:08.3±1.3,**34.°11S**±0.°03×**72.°20W**±0.°05,**h22**km±12km, **n41**,σ0**°77**/70,**3C-5D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BO03	**Pichilemu**	**0.44**	**153**	*i* P		**Pb**	**22 33 17.4**	**0.0**
BO03				*e*S		**Sb**	**22 33 23.8**	**+0.2**
BO03					IAML		22 33 24.4	
	comp=E,10μm,0.3s							
VA05	**Santo Domingo**	**0.66**	**48**	*e*P		**Pb**	**22 33 21.0**	**-0.2**
VA05				*e*S		**Sb**	**22 33 29.9**	**-0.1**
VA05					IAML		22 33 30.8	
	comp=E,8μm,0.3s							
MT01	**Popeta**	**0.83**	**73**	*e*P		**Pb**	**22 33 22.5**	**-1.5**
MT01				*e*S		**Sb**	**22 33 34.9**	**+0.2**
MT01					IAML		22 33 35.6	
	comp=Z,2μm,0.3s							
MT01	**Popeta**	**0.83**	**73**⇓	*i* P		**Pb**	**22 33 23.3**	**-0.7**
MT01				*e*S		**Sb**	**22 33 34.0**	**-0.8**
MT01					IAML		22 33 34.6	
	comp=N,4μm,0.3s							
GO05	**Huala**	**0.93**	**166**	*e*P		**Pn**	**22 33 25.3**	**-0.8**
GO05				*e*S		**Sn**	**22 33 38.9**	**+0.2**
GO05					IAML		22 33 40.8	
	comp=Z,1μm,0.8s							
GO05	**Huala**	**0.93**	**166**	*i* P		**Pn**	**22 33 25.2**	**-0.9**
GO05				*e*S		**Sb**	**22 33 37.3**	**-0.4**
GO05					IAML		22 33 39.2	
	comp=E,4μm,0.4s							
MT09	**Talagante**	**1.06**	**72**⇓	*i* P		**Pn**	**22 33 26.9**	**-1.1**
MT09				*e*S		**Sn**	**22 33 40.9**	**-1.2**
MT09					IAML		22 33 41.6	
	comp=N,3μm,0.2s							
VA01	**Torpederas**	**1.18**	**23**	*e*P		**Pn**	**22 33 28.2**	**-1.2**
VA01	**Torpederas**	**1.18**	**23**	*e*P		**Pn**	**22 33 28.6**	**-0.8**
MT02	**Curacav**	**1.23**	**47**	*e*P		**Pn**	**22 33 29.4**	**-0.7**
MT02				*e*S		**Sb**	**22 33 46.9**	**+0.7**
MT02					IAML		22 33 53.5	
	comp=Z,586nm,0.3s							
MT02	**Curacav**	**1.23**	**47**⇑	*i* P		**Pn**	**22 33 29.4**	**-0.7**
MT02				*e*S		**Sn**	**22 33 44.9**	**-1.1**
BO04	**La Punta**	**1.33**	**85**⇓	*i* P		**Pn**	**22 33 31.1**	**-0.4**
BO04					IAML		22 33 53.3	
	comp=N,2μm,0.3s							
BO02	**Sierra Bellavi**	**1.36**	**121**	*e*P		**Pn**	**22 33 32.0**	**0.0**
BO02				*e*S		**Sb**	**22 33 51.5**	**+1.4**
BO02					IAML		22 33 52.3	
	comp=Z,2μm,0.2s							
BO02	**Sierra Bellavi**	**1.36**	**121**	*e*P		**Pn**	**22 33 31.4**	**-0.6**
BO02				*e*S		**Sn**	**22 33 50.2**	**+0.8**
MT05	**Renca**	**1.41**	**60**	*e*P		**Pn**	**22 33 32.2**	**-0.6**
MT05				*e*S		**Sb**	**22 33 54.6**	**+3.0**
MT05					IAML		22 33 57.9	
	comp=Z,530nm,0.3s							
MT05	**Renca**	**1.41**	**60**	*e*P		**Pn**	**22 33 32.7**	**0.0**
MT05				*e*S		**Sb**	**22 33 51.8**	**+0.1**
MT05					IAML		22 33 58.1	
	comp=E,3μm,0.3s							
MT12	**Pirque**	**1.42**	**75**⇓	*i* P		**Pn**	**22 33 32.8**	**-0.1**
MT12				*e*S		**Sn**	**22 33 51.4**	**+0.4**
MT12					IAML		22 33 56.8	
	comp=N,3μm,0.5s							
MT15	**Las Vizcachas**	**1.50**	**71**	*e*P		**Pn**	**22 33 33.8**	**-0.2**
MT15				*e*S		**Sn**	**22 33 53.3**	**+0.4**
ROCH	**El Roble**	**1.51**	**42**	*e*P		**Pn**	**22 33 33.8**	**-0.4**
MT03	**Universidad Ad**	**1.54**	**67**	*e*P		**Pn**	**22 33 34.5**	**+0.1**
MT03				*e*S		**Sb**	**22 33 55.2**	**0.0**
MT03					IAML		22 33 59.8	
	comp=Z,1μm,0.4s							
MT03	**Universidad Ad**	**1.54**	**67**⇓	*i* P		**Pn**	**22 33 34.5**	**+0.1**
MT03				*e*S		**Sn**	**22 33 53.4**	**-0.4**
MT03					IAML		22 34 01.0	
	comp=N,2μm,0.4s							
MT16	**CCHEN**	**1.55**	**65**	*e*P		**Pn**	**22 33 34.9**	**+0.2**
MT16				*e*S		**Sn**	**22 33 54.3**	**+0.1**
MT14	**Cerro Cal¡n**	**1.56**	**63**	*i* P		**Pn**	**22 33 35.1**	**+0.4**
MT14				*e*S		**Sn**	**22 33 54.9**	**+0.6**
MT14					IAML		22 34 01.4	
	comp=E,2μm,0.5s							
PEL	**Peldehue**	**1.59**	**53**	*e*P		**Pn**	**22 33 35.3**	**+0.2**
PEL				*e*S		**Sn**	**22 33 55.6**	**+0.6**
PEL					IAML		22 34 04.0	
	comp=E,1μm,0.4s							
MT10	**Hacienda Santa**	**1.62**	**60**	*e*P		**Pn**	**22 33 35.9**	**+0.3**
MT10				*e*S		**Sn**	**22 33 56.9**	**+1.0**
MT10					IAML		22 34 02.3	
	comp=N,2μm,0.2s							
MT13	**San Alfonso**	**1.63**	**78**	*e*P		**Pn**	**22 33 36.3**	**+0.5**
MT13				*e*S		**Sn**	**22 33 57.2**	**+0.9**
MT13					IAML		22 34 02.0	
	comp=E,1μm,0.3s							
LMEL	**Las Melosas**	**1.68**	**82**	*e*P		**Pn**	**22 33 36.7**	**+0.2**
LMEL				*e*S		**Sb**	**22 33 59.2**	**-0.3**
LMEL					IAML		22 34 00.6	
	comp=N,2μm,0.2s							
VA06	**Catapilco**	**1.72**	**26**	*e*P		**Pn**	**22 33 36.1**	**-0.7**
VA06					IAML		22 34 10.9	
	comp=E,1μm,0.3s							
FCH	**Farellones**	**1.77**	**65**⇑	*i* P		**Pn**	**22 33 38.0**	**+0.1**
FCH				*e*S		**Sn**	**22 34 00.4**	**+0.5**
FCH					IAML		22 34 06.1	
	comp=E,1μm,0.2s							
ML02	**Panimavida**	**1.77**	**159**	*e*P		**Pn**	**22 33 38.0**	**+0.4**
ML02					IAML		22 34 08.1	
	comp=E,2μm,0.5s							
MT04	**Ro Olivares**	**1.86**	**68**⇑	*i* P		**Pn**	**22 33 39.2**	**+0.2**
MT04				*e*S		**Sn**	**22 34 02.7**	**+0.8**
MT04					IAML		22 34 08.1	
	comp=N,925nm,0.4s							
VA03	**San Esteban**	**1.92**	**46**	*e*P		**Pn**	**22 33 39.8**	**0.0**
VA03				*e*S		**Sn**	**22 34 02.7**	**-0.6**
VA03					IAML		22 34 12.7	
	comp=Z,625nm,0.6s							
VA03	**San Esteban**	**1.92**	**46**	*i* P		**Pn**	**22 33 40.1**	**+0.3**
VA03					IAML		22 34 14.5	
	comp=N,1μm,0.2s							
BI02	**San Fabin de**	**2.66**	**164**	*e*P		**Pn**	**22 33 50.5**	**+0.6**
BI02					IAML		22 34 34.8	
	comp=E,165nm,0.4s							
CO02	**Combarbal**	**3.07**	**20**	*e*P		**Pn**	**22 33 55.4**	**-0.2**
CO02				*e*S		**Sb**	**22 34 40.7**	**+1.4**
CO02					IAML		22 34 46.4	
	comp=Z,165nm,0.7s							
CO02	**Combarbal**	**3.07**	**20**	*e*P		**Pn**	**22 33 55.2**	**-0.3**
RFA	**San Rafael**	**3.16**	**103**	*e*P		**Pn**	**22 33 55.2**	**-1.5**
RFA				*e*P		Pb	22 33 58.5	-5.3
RFA				*e*S		**Sb**	**22 34 42.7**	**+0.8**
CO03	**El Pedregal**	**3.50**	**22**	*e*P		**Pn**	**22 34 01.7**	**+0.2**
CO03				*e*S		**Sb**	**22 34 53.2**	**+1.5**
CO03					IAML		22 35 00.2	
	comp=Z,126nm,1.1s							
CO03	**El Pedregal**	**3.50**	**22**	*e*P		**Pn**	**22 34 01.4**	**-0.1**
CO03					IAML		22 35 04.8	
	comp=E,151nm,0.2s							
GO04	**Tololo Observa**	**4.10**	**17**	*e*P		**Pn**	**22 34 09.8**	**-0.1**
LCO	**Las Campanas**	**5.24**	**15**	*e*P		Pn	22 34 16.0	-10
LCO				*e*S		**Sn**	**22 35 25.7**	**+0.3**

LCO					IAML		22 36 00.9		
	comp=Z,57nm,0.8s								

*IDC **23** 22:38:51.1±1.9,43.°87N×105.°67W,h0km,mbtmp3.1/2, ML2.9/2,Error ellipse: s-maj=52.2km s-min=10.7km az=148.0*

*NEIC **23** 22:38:51.3±0.6,43.°75N±0.°05×105.°33W±0.°05,h0km±1km, ML2.5/22,Error ellipse: s-maj=9.7km s-min=2.7km az=325.0*

ISC 23 22:38:50.5±0.9,**43.°92N**±0.°06×**105.°51W**±0.°05,**h0**km,**n15**, σ1§**21**/15,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**1.08**	**79**	Pg		**Pg**	**22 39 10.8**	**-0.4**
K22A	**Casper**	**1.47**	**211**	Pg		**Pn**	**22 39 17.9**	**-0.5**
K22A						**Sn**	**22 39 39.5**	**+1.1**
K22A					IAML		22 39 41.0	
	comp=N,78nm,0.4s							
RWWY	**Rawlins**	**2.55**	**210**	Pn		**Pn**	**22 39 34.7**	**+1.2**
RWWY					IAML		22 40 10.6	
	comp=N,23nm,0.5s							
PHWY	**Pilot Hill**	**2.61**	**179**	Pn		**Pn**	**22 39 33.9**	**-0.4**
PHWY					IAML		22 40 09.8	
	comp=N,25nm,0.4s							
LAO	**LASA Array**	**2.82**	**350**			**Pb**	**22 39 41.1**	**-0.6**
RLMT	**Red Lodge**	**2.94**	**295**			**Pb**	**22 39 44.0**	**-0.1**
RLMT					IAML		22 40 37.9	
	comp=N,13nm,2.8s							
RLMT					IAML		22 40 38.0	
	comp=N,11nm,2.1s							
N23A	**Red Feather La**	**3.04**	**186**	Pn		**Pn**	**22 39 40.3**	**+0.2**
N23A					IAML		22 40 23.9	
	comp=E,15nm,0.8s							
PD31	**Pinedale Array**	**3.17**	**250**	Pn		**Pb**	**22 39 47.2**	**-0.6**
PDAR	**Pinedale Array**	**3.17**	**250**			**Pb**	**22 39 48.2**	**+0.4**
PDAR	**Pinedale Array**	**3.17**	**250**	Pn		**Pn**	**22 39 44.5**	**+2.7**
	comp=E,1.0nm,0.3s,baz=74,slow=18,SNR=27							
PDAR					Lg	Lg	22 40 24.6	
	comp=E,0.6nm,0.3s,baz=74,slow=33,SNR=2.2 comp=E,0.9nm,0.4s							
H17A	**Grant Village**	**3.68**	**279**	Pn		**Pg**	**22 40 00.0**	**-1.0**
H17A					IAML		22 41 31.5	
	comp=N,6.4nm,4.4s							
LOHW	**Long Hollow**	**3.70**	**267**			**Pg**	**22 40 00.4**	**-1.1**
LOHW					IAML		22 40 22.3	
	comp=N,6.4nm,4.8s							
LOHW					IAML		22 40 55.1	
	comp=N,7.5nm,4.3s							
IMW	**Indian Meadow**	**3.92**	**272**			**Pg**	**22 40 03.8**	**-2.0**
IMW					IAML		22 40 57.4	
	comp=N,6.2nm,5.0s							
I10CA	**LAC DU BONNET**	**9.02**	**42**	I		I	23 30 30.0	
	baz=222,slow=333,SNR=2.5							
ULM	**Lac du Bonnet**	**9.12**	**43**	Pn		**Pn**	**22 41 03.7**	**+0.3**
	comp=N,0.3nm,0.3s,baz=229,slow=11,SNR=2.3							
ULM					Lg	Lg	22 43 32.4	
	comp=N,0.1nm,0.3s,baz=356,slow=22,SNR=1.5 comp=N,0.9nm,0.4s							

*IDC **23** 22:58:44.4±1.4,23.°52N×125.°49E,h0km,mb3.7/5, mbtmp3.8/7,ML3.7/2,MS3.3/2,Error ellipse: s-maj=36.6km s-min=24.8km az=73.0*

*JMA **23** 22:58:49.1±0.2,23.°7N±0.°8×125.°4E±0.°6,h79km,MV3.4/19, NEAR MIYAKOJIMA ISLAND*

ISC 23 22:58:48.1±2.3,**23.°60N**±0.°09×**125.°47E**±0.°05,**h27**km±15km, **n24**,σ0**°99**/38,**mb3.6**/5,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JMJ2	**Miyako jima3**	**1.15**	**354**	P		**Pb**	**22 59 09.3**	**0.0**
JMJ2				*e*S		**Sb**	**22 59 25.0**	**+1.2**
JOGS	**Gusukube**	**1.16**	**357**	P		**Pb**	**22 59 09.8**	**+0.3**
JOGS				*e*S		**Sb**	**22 59 25.2**	**+1.0**
JTJ	**Tarama**	**1.25**	**326**	P		**Pn**	**22 59 10.5**	**+0.6**
JTJ				S		**Sb**	**22 59 26.3**	**-0.5**
JIRB	**Irabujima**	**1.25**	**348**	P		**Pb**	**22 59 10.7**	**-0.5**
JIRB				*e*S		**Sb**	**22 59 26.9**	**0.0**
JIKM	**Ikemajima**	**1.34**	**351**	P		**Pb**	**22 59 11.8**	**-0.7**
JIKM				*e*S		**Sb**	**22 59 28.4**	**-0.8**
JIJ	**Ishigaki jima**	**1.43**	**302**	P		**Pn**	**22 59 12.6**	**+0.2**
JIJ				S		**Sn**	**22 59 29.2**	**-1.1**
JISG	**Ishigakijimahi**	**1.45**	**313**	P		**Pn**	**22 59 12.8**	**+0.3**
JISG				S		**Sn**	**22 59 30.8**	**+0.1**
JKRS	**Kuro-shima**	**1.48**	**296**	P		**Pn**	**22 59 13.4**	**+0.4**
JKRS				S		**Sn**	**22 59 31.0**	**-0.5**
HATJ	**Hateruma jima**	**1.59**	**287**	P		**Pn**	**22 59 14.5**	**0.0**
HATJ				S		**Sn**	**22 59 32.8**	**-1.4**
IRIF	**Iriomote-Funau**	**1.75**	**295**	*e*P		**Pn**	**22 59 17.1**	**+0.4**
IRIF				S		**Sn**	**22 59 37.5**	**-0.7**
YOJ	**Yonaguni jima**	**2.41**	**291**	P		**Pn**	**22 59 26.1**	**+0.4**
YOJ				S		**Sn**	**22 59 52.2**	**-2.2**
JYNG	**Yonagunijimaku**	**2.46**	**291**	P		**Pn**	**22 59 26.8**	**+0.3**
JYNG				S		**Sn**	**22 59 53.5**	**-2.2**
JKE	**Kume jima 2**	**2.97**	**23**	P		**Pn**	**22 59 33.9**	**+0.4**
JKE				*e*S		**Sn**	**23 00 07.0**	**-1.2**
JJT3	**Tamagusuku3**	**3.29**	**39**	P		**Pn**	**22 59 38.6**	**+0.6**
JJT3				*e*S		**Sn**	**23 00 15.7**	**-0.6**
JAGN	**Aguni-jima**	**3.38**	**28**	P		**Pn**	**22 59 39.4**	**+0.1**
JAGN				*e*S		**Sn**	**23 00 17.3**	**-1.2**
JOW	**Kunigami**	**4.10**	**38**	Pn		**Pn**	**22 59 49.5**	**+0.3**
	10nm,0.3s,baz=169,slow=14,SNR=35							
JOW					Sn	**Sn**	**23 00 33.9**	**-2.4**
	23nm,0.3s,baz=75,slow=26,SNR=28 19nm,0.3s							
JNU	**Nakatsue**	**10.62**	**25**	Pn		**Pn**	**23 01 17.9**	**-0.6**
	0.4nm,0.3s,baz=180,slow=7.1,SNR=1.8 4.7nm,0.7s							
MJAR	**Matsushiro Arr**	**16.95**	**38**	LR		LR	23 09 14.9	
	comp=Z,41nm,18.5s,baz=198,slow=37							
MKAR	**Makanchi Array**	**41.51**	**315**	P		**P**	**23 06 34.2**	**+1.2**
	0.5nm,0.6s,baz=99,slow=9.6,SNR=11 0.5nm,0.6s							
ZALV	**Zalesovo Beam**	**42.91**	**326**	P		**P**	**23 06 44.0**	**-0.3**
	0.5nm,0.4s,baz=131,slow=6.4,SNR=2.5 0.5nm,0.4s							
WRA	**Warramunga Arr**	**44.13**	**168**	P		**P**	**23 06 54.0**	**-0.5**
	0.5nm,0.5s,baz=347,slow=8.9,SNR=6.2 0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**45.10**	**319**	P		**P**	**23 07 02.9**	**+1.0**
	1.4nm,1.0s,baz=107,slow=8.0,SNR=10 1.4nm,1.0s							
BVAR	**Borovoye Array**	**50.62**	**320**	P		**P**	**23 07 46.0**	**+1.3**
	0.6nm,0.6s,baz=105,slow=9.4,SNR=4.2 0.6nm,0.6s							
MBAR	**Mbarara**	**94.58**	**271**	LR		LR	23 57 32.6	
	comp=Z,27nm,18.3s,baz=262,slow=37							

*STR **23** 23:07:00.8±0.7,50.°N±5.°×±.°,h5km,MLv1.8/4,Error ellipse: s-maj=0.0km s-min=0.0km az=60.4,preliminary*

UCC 23 23:07:00.5±0.7,**50.45N**×**4.16E**,**h2**km±1km,**ML0.7,1C-17D, Belgium**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BBOU	**Bougnies**	**0.15**	**244**	*e*P		Pg	23 07 03.7	+0.3
BBOU				*e*S		Sg	23 07 07.8	+2.5
BRQR	**Ronquire**	**0.16**	**16**	*e*P		Pg	23 07 03.6	0.0
BRQR				*e*S		Sg	23 07 06.3	+0.6
BSKQ	**Steenkerk**	**0.20**	**346**	*e*P		Pg	23 07 04.5	+0.1
BSKQ				*e*S		Sg	23 07 07.4	+0.4
	comp=E,20nm,0.1s							
BMRD	**Maredsous**	**0.42**	**111**	*e*P		Pg	23 07 07.8	-0.7
BMRD				*e*S		Sg	23 07 14.3	+0.3
	comp=E,1.6nm,0.1s							
DOU	**Dourbes**	**0.46**	**142**	*e*P		Pg	23 07 09.2	0.0
DOU				*e*S		Sg	23 07 15.3	+0.1
	comp=N,1.9nm,0.2s							
DOU	**Dourbes**	**0.46**	**142**	Pg		Pg	23 07 09.2	0.0
DOU				Sg		Sg	23 07 15.8	+0.7
BCLA	**Clavier**	**0.73**	**92**	*e*P		Pg	23 07 14.2	-0.4
BCLA				*e*S		Sg	23 07 24.9	+0.8
	comp=N,2.3nm,0.3s							
RCHB	**Rochefort**	**0.75**	**113**	*e*P		Pg	23 07 14.7	-0.2
RCHB	**Rochefort**	**0.75**	**113**	Pg		Pg	23 07 15.5	+0.7
BHOU	**Houvegnez**	**1.19**	**94**	*e*S		Sb	23 07 39.1	-0.4

*IDC **23** 23:07:51.7±0.8,12.°17N×43.°82W,h0km,mb4.1/16, mbtmp4.1/17,ML4.4/1,MS3.8/47,Error ellipse: s-maj=24.4km s-min=17.1km az=176.0*

*NEIC **23** 23:07:54.2±1.5,12.°09N±0.°10×43.°86W±0.°10,h10km±1km, mb4.8/87,Error ellipse: s-maj=17.5km s-min=14.7km az=133.0*

*GCMT **23** 23:07:55.2±0.3,12.°08N±0.°02×43.°71W±0.°02,h19km±1km, MW4.7/68,Moment Tensor Solution. s16,c17; s68,c93; Duration: 0 Moment tensor: Scale 10**16Nm; Mrr-0.58±.11; Mθθ-0.33±.07; Mφφ0.90±.08; Mre-0.05±.18; Mθφ-1.35±.08; Mrθ0.35±.15; Best double couple: M0**1.52300×1016 NP1:*θs*191.00000°,δ86.00000°,λ-15.00000°. NP2: φs282.00000°,δ75.00000°,λ-176.00000°. Principal axes: T 1.8180, Plg8.0000°, Azm238.0000°; N -0.5890, Plg74.0000°, Azm356.0000°; P -1.2290, Plg14.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 23:07:53.7±0.5,**12.°04N**±0.°08×**43.°90W**±0.°07,**h14**km,**n160**, σ1§**11**/114,**mb4.8**/59,**MS3.8**/47,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**11.06**	**232**	Pn		**Pn**	**23 10 32.7**	**+1.1**
	2.5nm,0.3s,baz=42,slow=13,SNR=62							
MDP					Sn	**Sn**	**23 12 29.5**	**-5.6**
	0.3nm,0.3s,baz=37,slow=14,SNR=1.4							
MDP					LR	LR	23 14 10.9	
	comp=Z,703nm,21.0s,baz=38,slow=34 45nm,0.8s							
MPOM	**Morne Pois Mar**	**16.68**	**280**	Pn		**Pn**	**23 11 46.3**	**-0.9**
ILAM	**Ilet Lapin Mar**	**16.74**	**281**	P		**P**	**23 11 51.3**	**+1.1**
BIM	**Bigot**	**16.89**	**280**	P		**P**	**23 11 53.6**	**+1.6**
GDHS	**Morne Mazeau,**	**17.83**	**286**			**Pn**	**23 12 02.5**	**+0.9**
GDHS					IAmb	IAmb	23 12 10.6	
	comp=Z,137nm,1.1s							
BOAV	**Boa Vista**	**19.06**	**241**	P		**Pn**	**23 12 16.9**	**+0.3**
PCRV	**Puerto La Cruz**	**20.43**	**267**	LR		LR	23 20 05.2	
	comp=Z,216nm,21.3s,slow=36							
MACA	**Manacapuru-AM**	**22.51**	**229**	P		**P**	**23 12 54.0**	**+0.8**
MACA					IAmb	IAmb	23 13 02.8	
	comp=Z,40nm,1.0s							
CELP	**Cerrillos**	**22.70**	**288**	P		**P**	**23 12 55.2**	**-0.1**
OBIP	**Obispado Ponce**	**22.71**	**288**	P		**P**	**23 12 54.2**	**-1.2**
BAUV	**El Baul**	**23.93**	**265**	P		**P**	**23 13 08.4**	**+0.7**
BAUV					IAmb	IAmb	23 13 23.1	
	comp=Z,69nm,1.8s							
SDV	**Santo Domingo**	**26.47**	**266**	P		**P**	**23 13 31.5**	**+0.5**
SDV	**Santo Domingo**	**26.47**	**266**	LR		LR	23 24 00.5	
	comp=Z,126nm,21.0s,baz=80,slow=36							
BBTS	**Babate**	**26.75**	**81**	LR		LR	23 21 15.6	
	comp=Z,214nm,19.9s,baz=144,slow=30							
BDFB	**Brasilia**	**27.81**	**189**	LR		LR	23 24 04.1	
	comp=Z,268nm,18.1s,baz=18,slow=35							
SAML	**Samuel**	**28.33**	**223**	P		**P**	**23 13 48.2**	**+0.8**
SAML					IAmb	IAmb	23 13 50.0	
	comp=Z,28nm,1.9s							
ROSC	**El Rosal**	**30.91**	**259**	LR		LR	23 26 43.3	
	comp=Z,293nm,20.3s,baz=80,slow=36							
ETMB	**Extrema**	**31.04**	**227**	P		**P**	**23 14 11.2**	**-0.2**
PMOZ	**Porto Moniz, M**	**32.04**	**45**	*i* T		T	23 47 08.0	
FUL	**Funchal**	**32.15**	**46**	*i* T		T	23 47 18.1	
PMAR	**Madeira**	**32.18**	**46**	*i* T		T	23 47 13.4	
SIV	**San Ignacio**	**32.63**	**212**	LR		LR	23 27 06.4	
	comp=Z,235nm,21.9s,baz=72,slow=35							
AQDB	**Aquidauana**	**34.34**	**200**	P		**P**	**23 14 41.3**	**+1.1**
CZSB	**Cruzeiro do Su**	**34.73**	**237**	P		**P**	**23 14 44.1**	**+0.4**
CZSB					IAmb	IAmb	23 14 45.8	
	comp=Z,16nm,0.9s							
H10N3	**ASCENSION HYDR**	**35.28**	**123**	T		T	23 52 02.3	
	baz=304,slow=75,SNR=58							
H10N2	**ASCENSION HYDR**	**35.28**	**123**	T		T	23 52 02.6	
	baz=304,slow=75,SNR=54							
H10N1	**ASCENSION HYDR**	**35.30**	**123**	T		T	23 52 03.8	
	baz=304,slow=75,SNR=53							
H10S3	**ASCENSION HYDR**	**35.77**	**124**	T		T	23 52 42.7	
	baz=301,slow=74,SNR=13							
H10S2	**ASCENSION HYDR**	**35.79**	**124**	T		T	23 52 44.1	
	baz=279,slow=74,SNR=10							
IMBA	**Imbabura, San**	**35.99**	**254**	P		**P**	**23 14 55.2**	**0.0**
OTAV	**Otavalo**	**36.24**	**254**	P		**P**	**23 14 57.6**	**+0.3**
BOSC	**San Juan Bosco**	**37.56**	**248**	P		**P**	**23 15 06.8**	**-1.4**
COHC	**Cochancay**	**37.98**	**250**	P		**P**	**23 15 10.8**	**-0.7**
BRU2	**Volcan**	**38.27**	**269**	P		**P**	**23 15 12.2**	**-2.0**
BRU2					IAmb	IAmb	23 15 14.6	
	comp=Z,39nm,1.2s							
DBIC	**Dimbokro**	**38.86**	**94**	P		**P**	**23 15 18.4**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=241,slow=9.3,SNR=3.8							
DBIC					LR	LR	23 29 26.9	
	comp=Z,101nm,19.3s,baz=266,slow=33 comp=Z,2.9nm,0.6s							
ATAH	**Atahualpa**	**39.24**	**243**	LR		LR	23 32 03.3	
	comp=Z,178nm,20.2s,baz=76,slow=37							
MCRA	**Macar, Loja**	**39.38**	**248**	P		**P**	**23 15 23.6**	**+0.2**
WUPA	**West Chester U**	**39.42**	**320**	P		**P**	**23 15 23.6**	**+0.3**
ESPN	**Las Esperanzas**	**39.48**	**275**	P		**P**	**23 15 23.3**	**-0.8**
ESPN					IAmb	IAmb	23 15 33.4	
	comp=Z,21nm,1.3s							
I62A	**Tamworth**	**39.55**	**328**	P		**P**	**23 15 23

comp=Z,25nm,1.5s
V51A **Loudon** **43.46 310** P **P** **23 15 57.1 +0.5**
V51A IAmb IAmb 23 16 56.0
comp=Z,20nm,1.4s
FPAL **Fort Paine** **43.96 308** P **P** **23 16 01.1 +0.4**
FPAL IAmb IAmb 23 16 05.5
comp=Z,16nm,1.4s
P51A **Williamsport** **44.09 315** P **P** **23 16 01.1 -0.4**
P51A IAmb IAmb 23 17 18.5
comp=Z,17nm,1.4s
PAB **San Pablo** **44.38 45** P **P** **23 16 04.4 +0.4**
SADO **Sadowa** **44.39 324** P **P** **23 16 04.2 +0.3**
SADO IAmb IAmb 23 17 40.6
comp=Z,22nm,1.5s
SWET **Sewanee** **44.44 308** P **P** **23 16 05.4 +0.9**
SWET IAmb IAmb 23 16 42.7
comp=Z,41nm,2.0s
R50A **Paris** **44.44 313** P **P** **23 16 04.1 -0.3**
R50A IAmb IAmb 23 16 04.5
comp=Z,21nm,1.6s
TOA0 **Torodi Ar. Sit** **44.46 83** P **P** **23 16 03.9 -1.0**
TOA0 IAmb IAmb 23 16 06.5
comp=Z,14nm,1.3s
TORD **Torodi Ar. Bea** **44.46 83** P **P** **23 16 04.3 -0.6**
TORD **Torodi Ar. Bea** **44.46 83** P **P** **23 16 03.4 -1.6**
comp=Z,6.6nm,1.1s,baz=293,slow=7.6,SNR=15
TORD LR LR 23 32 18.2
comp=Z,206nm,19.1s,baz=284,slow=33
comp=Z,6.6nm,1.1s
ESDC **Sonseca Array** **44.70 45** P **P** **23 16 06.3 -0.3**
ESDC **Sonseca Array** **44.70 45** P **P** **23 16 05.3 -1.3**
comp=Z,2.0nm,0.9s,baz=248,slow=7.6,SNR=11
ESDC LR LR 23 30 18.1
comp=Z,144nm,21.3s,baz=240,slow=30
comp=Z,2.0nm,0.9s
X48A **Hartselle** **45.04 307** P **P** **23 16 10.5 +1.2**
X48A IAmb IAmb 23 17 21.5
comp=Z,22nm,1.8s
R49A **Shelbyville** **45.05 313** P **P** **23 16 10.1 +0.8**
R49A IAmb IAmb 23 16 13.9
comp=Z,12nm,1.2s
P49A **Miami Univ. Ec** **45.25 315** P **P** **23 16 12.0 +1.1**
P49A IAmb IAmb 23 16 18.6
comp=Z,35nm,1.8s
V48A **Smith Brothers** **45.31 309** P **P** **23 16 11.7 +0.4**
V48A IAmb IAmb 23 16 13.1
comp=Z,27nm,1.9s
VLDQ **Val d'Or** **45.56 329** P **P** **23 16 16.0 +2.9**
VLDQ IAmb IAmb 23 16 18.5
comp=Z,27nm,1.8s
AC01 **Pan de Azucar** **46.00 214** P **P** **23 16 18.9 +2.0**
WVT **Waverly** **46.21 309** P **P** **23 16 19.0 +0.5**
SCHQ **Schefferville** **46.34 342** P **P** **23 16 19.7 +0.4**
comp=Z,2.3nm,0.8s,baz=145,slow=11,SNR=3.4
SCHQ LR LR 23 32 43.5
comp=Z,96nm,18.0s,baz=105,slow=32
comp=Z,2.3nm,0.8s
SFIN **Lafayette** **47.27 315** P **P** **23 16 27.6 +0.9**
OLIL **Olney** **47.34 312** P **P** **23 16 28.4 +1.1**
SIUC **Southern Illin** **47.79 310** P **P** **23 16 31.9 +1.1**
SIUC IAmb IAmb 23 16 34.7
comp=Z,7.4nm,0.8s
S44A **Carbondale** **47.81 310** P **P** **23 16 31.1 +0.1**
S44A IAmb IAmb 23 16 34.8
comp=Z,6.0nm,0.7s
CGM3 **Cape Girardeau** **47.98 310** P **P** **23 16 32.7 +0.4**
CGM3 IAmb IAmb 23 16 35.7
comp=Z,19nm,1.8s
LCO **Las Campanas** **48.33 212** P **P** **23 16 35.0 -0.4**
M44A **Midewin, Midew** **48.34 315** P **P** **23 16 36.3 +1.3**
MGMO **Mountain Grove** **49.92 309** P **P** **23 16 47.7 +0.5**
MGMO IAmb IAmb 23 17 06.3
comp=Z,22nm,1.9s
MIAR **Mount Ida** **50.24 305** P **P** **23 16 50.0 +0.4**
MIAR IAmb IAmb 23 17 05.0
comp=Z,10nm,1.4s
S39A **Bolivar** **50.88 309** P **P** **23 16 55.7 +1.2**
D41A **Chassel** **51.17 322** P **P** **23 16 57.7 +1.2**
D41A IAmb IAmb 23 17 11.6
comp=Z,17nm,1.2s
P38A **Dawn** **51.61 311** P **P** **23 17 00.7 +0.8**
P38A IAmb IAmb 23 17 04.7
comp=Z,18nm,1.6s
X37A **Clayton** **51.69 305** P **P** **23 17 01.0 +0.3**
K38A **Parkersburg** **52.07 315** P **P** **23 17 04.2 +0.9**
WHTX **Lake Whitney,** **52.91 301** P **P** **23 17 10.4 +0.7**
WHTX IAmb IAmb 23 17 14.6
comp=Z,15nm,1.4s
KEST **Kesra** **53.36 54** LR LR 23 36 24.1
comp=Z,166nm,21.5s,baz=328,slow=32
N35A **Tabor** **53.52 312** P **P** **23 17 15.2 +1.1**
F36A **Milaca** **53.76 319** P **P** **23 17 15.7 0.0**
BRDY **Brady** **54.10 300** P **P** **23 17 17.4 -1.1**
FRB **Frobisher Bay** **54.47 347** LR LR 23 39 21.0
comp=Z,42nm,18.7s,baz=204,slow=35
DAVOX **Davos/Dischmat** **56.78 42** LR LR 23 40 20.0
comp=Z,128nm,18.3s,baz=248,slow=34
ULM **Lac du Bonnet** **56.92 323** P **P** **23 17 37.5 -0.9**
comp=Z,2.8nm,0.8s,baz=112,slow=4.3,SNR=5.1
ULM LR LR 23 39 33.7
comp=Z,63nm,19.5s,baz=127,slow=33
comp=Z,2.8nm,0.8s
VAE **Valguarnera** **57.69 53** LR LR 23 42 21.1
comp=Z,137nm,18.1s,baz=234,slow=36
TXAR **Lajitas Array** **57.92 297** P **P** **23 17 46.2 +0.2**
comp=Z,0.7nm,0.8s,baz=114,slow=6.2,SNR=7.8
comp=Z,0.7nm,0.8s
PLCA **Paso Flores** **58.02 204** P **P** **23 17 48.0 +1.8**
comp=Z,2.2nm,0.9s,baz=30,slow=8.1,SNR=4.4
PLCA LR LR 23 43 59.3
comp=Z,100nm,18.3s,baz=36,slow=37
comp=Z,2.2nm,0.9s
FCC **Fort Churchill** **59.78 332** P **P** **23 17 59.0 +0.9**
FCC IAmb IAmb 23 18 00.4
comp=Z,5.5nm,1.1s
TIP **Timpagrande** **59.80 52** P **P** **23 17 58.7 -0.1**
GERES **GERESS Array B** **59.87 40** LR LR 23 41 07.7
comp=Z,64nm,19.7s,baz=6.0,slow=33
CLL **Collm** **60.22 37** *eP* **P** **23 18 01.0 -0.4**
CLL AMS AMS 23 39 00.0
comp=N,100nm,18.8s
CLL AMS AMS 23 39 00.0
comp=E,100nm,19.3s
CLL AMS AMS 23 39 00.0
comp=Z,200nm,19.3s
ISCO **Idaho Springs** **60.71 309** P **P** **23 18 05.7 +0.3**
ANMO **Albuquerque** **60.75 303** LR LR 23 45 03.3
comp=Z,40nm,18.0s,baz=195,slow=37
VRAC **Vranov** **61.83 40** LR LR 23 42 24.1
comp=Z,64nm,20.7s,baz=156,slow=34
NOA **NORSAR Array B** **63.04 27** P **P** **23 18 19.8 -0.5**
comp=Z,0.9nm,0.8s,baz=248,slow=6.3,SNR=3.4
NOA LR LR 23 40 32.6
comp=Z,51nm,20.9s,baz=245,slow=31
comp=Z,0.9nm,0.8s
HFS **Hagfors** **63.78 28** P **P** **23 18 24.5 -0.7**
comp=Z,5.4nm,0.8s,baz=224,slow=6.2,SNR=5.4
HFS LR LR 23 41 35.2
comp=Z,61nm,19.9s,baz=258,slow=32
comp=Z,5.4nm,0.8s
PDAR **Pinedale Array** **64.08 312** P **P** **23 18 27.6 -0.1**
comp=Z,1.2nm,1.1s,baz=107,slow=4.8,SNR=5.4
PDAR LR LR 23 45 56.3
comp=Z,23nm,18.1s,baz=118,slow=36
comp=Z,1.2nm,1.1s
YHL **Hebgen Lake** **65.52 314** P **P** **23 18 41.0 +3.8**
IDI **Anoyia** **65.87 57** LR LR 23 45 25.7
comp=Z,61nm,22.0s,baz=285,slow=34
MLR **Muntele Rosu** **67.39 46** P **P** **23 18 47.9 -1.1**
TSUM **Tsumeb** **68.06 116** LR LR 23 41 51.3
comp=Z,65nm,20.7s,baz=160,slow=30
ELK **Elko** **68.12 309** LR LR 23 46 29.4
comp=Z,29nm,20.4s,baz=98,slow=34
NEW **Newport** **69.95 317** LR LR 23 47 29.6
comp=Z,46nm,19.4s,baz=84,slow=34
FINES **FINESS Array B** **69.95 29** P **P** **23 19 04.0 -0.4**
comp=Z,2.8nm,0.9s,baz=267,slow=15,SNR=2.6
comp=Z,2.8nm,0.9s
ELL **Elmali** **69.96 55** P **P** **23 19 05.2 0.0**
AKASG **Malin Array Be** **70.09 40** P **P** **23 19 04.0 -1.5**
comp=Z,0.4nm,0.5s,baz=269,slow=5.4,SNR=1.5
comp=Z,0.4nm,0.5s
YKA **Yellowknife Ar** **70.51 332** P **P** **23 19 07.0 -0.8**
comp=Z,1.4nm,1.0s,baz=104,slow=6.4,SNR=8.0
comp=Z,1.4nm,1.0s
ARCES **ARCESS Array B** **71.63 20** LR LR 23 44 50.5
comp=Z,33nm,19.9s,baz=318,slow=31
BRTR **Keskin Array B** **72.86 52** P **P** **23 19 22.7 0.0**
BRTR **Keskin Array B** **72.86 52** P **P** **23 19 22.9 +0.3**
comp=Z,1.8nm,1.0s,baz=257,slow=4.9,SNR=6.9
comp=Z,1.8nm,1.0s
RPN **Rapa Nui** **74.43 237** LR LR 23 49 54.5
comp=Z,48nm,18.9s,baz=56,slow=34
MMAI **Mount Meron Ar** **74.63 59** P **P** **23 19 32.9 -0.2**
comp=Z,2.3nm,0.9s,baz=273,slow=5.6,SNR=6.4
comp=Z,2.3nm,0.9s
SUR **Sutherland** **75.93 128** LR LR 23 45 24.4
comp=Z,37nm,21.1s,baz=260,slow=30
A36M **Sachs Harbour** **75.95 342** P **P** **23 19 40.3 +0.5**
A36M IAmb IAmb 23 19 47.8
comp=Z,8.6nm,1.0s
LSZ **Lusaka** **76.34 109** LR LR 23 47 39.8
comp=Z,45nm,18.8s,baz=256,slow=31
BBB **Bella Bella** **77.05 321** LR LR 23 52 16.3
comp=Z,48nm,19.0s,baz=68,slow=35
LBTB **Lobatse** **77.07 119** LR LR 23 47 18.0
comp=Z,74nm,20.2s,baz=279,slow=31
DLBC **Dease Lake** **77.82 328** LR LR 23 50 41.5
comp=Z,73nm,20.9s,baz=113,slow=33
BOSA **Boshof** **78.03 123** LR LR 23 48 04.1
comp=Z,54nm,18.6s,baz=208,slow=31
INK **Inuvik** **78.77 338** LR LR 23 52 12.1
comp=Z,60nm,20.5s,baz=25,slow=34
GURO **Guroymak-BITLI** **79.45 53** P **P** **23 20 00.4 +0.2**
P32M **Atlin** **79.63 329** P **P** **23 20 00.7 +0.1**
M31M **Drury Creek, Y** **79.68 332** P **P** **23 20 02.0 +1.2**
M31M IAmb IAmb 23 22 34.2
comp=Z,21nm,1.6s
BELG **Belogornoye** **81.50 38** LR LR 23 54 03.1
comp=Z,65nm,19.7s,baz=227,slow=34
KIRV **Kirov** **81.55 32** LR LR 23 51 42.9
comp=Z,42nm,21.8s,baz=283,slow=32
ILAR **Eielson Array** **84.66 335** P **P** **23 20 27.2 +0.4**
comp=Z,1.1nm,1.1s,baz=56,slow=4.4,SNR=5.3
ILAR LR LR 23 57 30.9
comp=Z,29nm,18.2s,baz=82,slow=35
comp=Z,1.1nm,1.1s
BVAR **Borovoye Array** **94.46 34** LR LR 00 02 32.7
comp=Z,63nm,19.8s,baz=305,slow=35
PPT2 **Papeete2** **108.33 255** *e*LR LR 23 58 00.8
comp=Z,114nm,34.5s
PPT2 *e*LR LR 23 58 06.3
comp=Z,76nm,34.2s
TBI **Tubuai** **108.84 249** *e*LR LR 23 58 23.6
comp=Z,504nm,27.0s
DZM **Mont Dzumac** **149.38 247** *e*LR LR 00 17 10.9
comp=Z,50nm,22.8s

*IDC **23** 23:18:21.4±1.2,23.°49N×125.°53E, h0km, mb3.5/5, mbtmp3.6/6, ML3.9/1, MS2.9/4, Error ellipse: s-maj=45.4km s-min=21.6km az=69.0*
*JMA **23** 23:18:25.8±0.2,23.°6N±0.°8×125.°4E±0.°6, h73km, MV3.4/18, NEAR MIYAKOJIMA ISLAND*
ISC 23 23:18:24.4±1.0,**23.°58N**±0.°06×**125.°43E**±0.°04,**h27**km,**n29,**
σ1s20/40,mb3.5/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**1.17**	**355**	P		**Pb**		**23 18 45.9**	**0.0**
JMJ2				*e*S		**Sb**		**23 19 00.9**	**+0.3**
JOGS	**Gusukube**	**1.18**	**359**	P		**Pb**		**23 18 46.3**	**+0.1**
JOGS				*e*S		**Sb**		**23 19 01.6**	**+0.5**
JTJ	**Tarama**	**1.25**	**328**	P		**Pb**		**23 18 47.1**	**-0.3**
JTJ				*e*S		**Sb**		**23 19 02.9**	**-0.2**
JIRB	**Irabujima**	**1.27**	**349**	P		**Pb**		**23 18 47.2**	**-0.4**
JIRB				*e*S		**Sb**		**23 19 03.3**	**-0.3**
JIKM	**Ikemajima**	**1.35**	**353**	P		**Pb**		**23 18 48.4**	**-0.7**
JIKM				*e*S		**Sb**		**23 19 05.8**	**-0.2**
JIJ	**Ishigaki jima**	**1.42**	**304**	P		**Pb**		**23 18 49.2**	**-1.0**
JIJ				*e*S		**Sn**		**23 19 05.9**	**-0.3**
JISG	**Ishigakijimahi**	**1.44**	**315**	P		**Pb**		**23 18 49.6**	**-0.9**
JISG				*e*S		**Sb**		**23 19 07.0**	**-1.4**
JKRS	**Kuro-shima**	**1.46**	**297**	P		**Pb**		**23 18 50.0**	**-0.9**
JKRS				S		**Sb**		**23 19 07.4**	**-1.7**
HATJ	**Hateruma jima**	**1.57**	**288**	P		**Pb**		**23 18 51.0**	**-1.7**
HATJ				S		**Sn**		**23 19 09.6**	**-0.2**
IRIF	**Iriomote-Funau**	**1.73**	**296**	P		**Pb**		**23 18 53.6**	**-1.9**
IRIF				S		**Sn**		**23 19 13.9**	**-0.1**
YOJ	**Yonaguni jima**	**2.38**	**292**	P		**Pn**		**23 19 02.5**	**+0.9**
YOJ				S		**Sn**		**23 19 28.9**	**-1.1**
JYNG	**Yonagunijimaku**	**2.44**	**291**	P		**Pn**		**23 19 03.4**	**+0.9**
JYNG				S		**Sn**		**23 19 30.1**	**-1.3**
JKE	**Kume jima 2**	**3.00**	**24**	P		**Pn**		**23 19 10.1**	**0.0**
JKE				*e*S		**Sn**		**23 19 44.0**	**-1.2**
JJT3	**Tamagusuku3**	**3.33**	**39**	S		**Sn**		**23 19 52.1**	**-1.3**
JAGN	**Aguni-jima**	**3.42**	**28**	*e*P		**Pn**		**23 19 14.8**	**-1.1**
JAGN				*e*S		**Sn**		**23 19 53.7**	**-1.9**
NACB	**Ninganchiao**	**3.56**	**280**	P		**Pn**		**23 19 17.5**	**-0.4**
YULB	**Yu-li**	**3.80**	**269**	P		**Pn**		**23 19 20.1**	**-1.1**
YHNB	**Yeheng**	**3.87**	**287**	P		**Pn**		**23 19 23.5**	**+1.4**
JOW	**Kunigami**	**4.14**	**38**	Pn		**Pn**		**23 19 26.1**	**+0.2**
	14nm,0.3s,baz=53,slow=5.3,SNR=49								
JOW				Sn		**Sn**		**23 20 10.5**	**-2.9**
	24nm,0.3s,baz=94,slow=27,SNR=34								
	26nm,0.3s								
TPUB	**Ta-pu**	**4.42**	**267**	P		**Pn**		**23 19 30.2**	**+0.5**
JNU	**Nakatsue**	**10.65**	**26**	LR		LR		23 25 14.1	
	comp=Z,33nm,22.0s,baz=196,slow=39								
KSRS	**Korea Array**	**14.00**	**8**	LR				23 26 32.3	
	comp=Z,23nm,19.4s,baz=155,slow=35								
CMAR	**Chiang Mai Arr**	**25.23**	**263**	LR		LR		23 35 00.9	
	comp=Z,15nm,18.9s,baz=175,slow=40								
MKAR	**Makanchi Array**	**41.50**	**315**	P		**P**		**23 26 11.0**	**+1.8**
	0.3nm,0.5s,baz=103,slow=9.8,SNR=7.2								
	0.3nm,0.5s								
ZALV	**Zalesovo Beam**	**42.91**	**326**	P		**P**		**23 26 23.2**	**+2.7**
	0.4nm,0.4s,baz=115,slow=8.7,SNR=2.0								
	0.4nm,0.4s								
WRA	**Warramunga Arr**	**44.12**	**168**	P		**P**		**23 26 30.5**	**0.0**
	0.7nm,0.8s,baz=350,slow=8.8,SNR=5.5								
	0.7nm,0.8s								
KURBB	**Kurchatov Arra**	**45.10**	**319**	P		**P**		**23 26 39.8**	**+1.7**
	0.7nm,0.7s,baz=108,slow=8.1,SNR=7.3								
	0.7nm,0.7s								
ASAR	**Alice Springs**	**47.67**	**169**	P		**P**		**23 26 59.2**	**+0.6**
	0.2nm,0.4s,baz=351,slow=13,SNR=1.2								
	0.2nm,0.4s								
URZ	**Urewera**	**78.31**	**141**	LR		LR		00 00 55.7	
	comp=Z,57nm,21.9s,baz=123,slow=33								

*IDC **23** 23:21:16.7±1.2,37.°21N×141.°73E, h0km, mb3.5/5, mbtmp3.6/7, ML2.8/2, Error ellipse: s-maj=27.7km s-min=21.3km az=104.0*
*JMA **23** 23:21:20.6±0.2,37.°3N±0.°5×14.°2E±.°, h39km±1km, MV3.7/39, E OFF FUKUSHIMA PREF*
*NIED **23** 23:21:20.6,37.°25N×141.°65E, h39km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr-1.40; Mθθ0.65; Mφφ0.75; Mrθ-0.75; Mrφ0.33; Mθφ-0.79; Fault plane solution: M0 1.63000×10^14^ NP1:φs43.00000°, δ66.00000°, λ-89.00000°. NP2:φs220.00000°, δ24.00000°, λ-93.00000°.*
ISC 23 23:21:20.1±2.1,**37.°26N**±0.°04×**141.°68E**±0.°08,**h24**km±14km,
n23,σ1s04/29,mb3.6/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.65**	**280**	*i*P		**Pn**		**23 21 33.0**	**-0.8**
JFK				S		**Sb**		**23 21 41.7**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.72**	**258**	*i*P		**Pn**		**23 21 33.9**	**-0.8**
ONAJ				S		**Sb**		**23 21 43.6**	**+0.1**
JMST	**Minamisoumatoc**	**0.78**	**307**	*i*P		**Pn**		**23 21 35.0**	**-0.6**
JMST				S		**Sn**		**23 21 45.2**	**-1.3**
JFFD	**Fukushimafurud**	**0.91**	**260**	P		**Pn**		**23 21 36.9**	**-0.4**
JFFD				S		**Sn**		**23 21 48.1**	**-1.5**
JMM	**Marumori**	**0.93**	**311**	*i*P		**Pn**		**23 21 37.2**	**-0.4**
JMM				S		**Sn**		**23 21 49.1**	**-1.1**
JHO	**Hitachi**	**1.10**	**234**	*i*P		**Pn**		**23 21 39.0**	**-0.9**
JHO				S		**Sn**		**23 21 52.2**	**-2.0**
JOTO	**OTAMA OYAMA**	**1.11**	**286**	*i*P		**Pb**		**23 21 40.7**	**+0.1**
JOTO				S		**Sb**		**23 21 55.0**	**+0.3**
JIO	**Ouri**	**1.22**	**348**	*i*P		**Pn**		**23 21 41.1**	**-0.6**
JIO				S		**Sn**		**23 21 55.7**	**-1.7**
JOU	**Okura**	**1.37**	**324**	*i*P		**Pn**		**23 21 44.3**	**+0.6**
JOU				S		**Sb**		**23 22 02.0**	**-0.1**
JFY	**Yanaizu**	**1.58**	**276**	P		**Pn**		**23 21 47.5**	**+0.9**
JFY				S		**Sb**		**23 22 07.5**	**-0.7**
MJAR	**Matsushiro Arr**	**2.87**	**257**	Pn		**Pn**		**23 22 04.7**	**+0.4**
	0.3nm,0.3s,baz=72,slow=15,SNR=9.9								
MJAR				Sn		**Sn**		**23 22 40.7**	**+2.6**
	0.4nm,0.3s,baz=161,slow=16,SNR=4.9								
	1.8nm,0.3s								
JHJ	**Hachijo jima 2**	**4.41**	**201**	Pn		**Pn**		**23 22 25.5**	**+0.1**
	8.0nm,0.3s,baz=290,slow=23,SNR=2.1								
JHJ				Sn		**Sn**		**23 23 14.9**	**-1.1**
	9.9nm,0.3s,baz=106,slow=22,SNR=2.3								
	110nm,0.6s								
H11N2	**WAKE ISLAND Hy 28.08**	**121**		T		T		23 56 36.2	
	baz=314,slow=75,SNR=39								
H11N1	**WAKE ISLAND Hy 28.09**	**122**		T		T		23 56 37.1	
	baz=314,slow=75,SNR=34								
H11N3	**WAKE ISLAND Hy 28.10**	**122**		T		T		23 56 34.1	
	baz=314,slow=75,SNR=30								
H11S1	**WAKE ISLAND Hy 28.80**	**124**		T		T		23 57 22.2	
	baz=316,slow=76,SNR=27								
H11S3	**WAKE ISLAND Hy 28.80**	**124**		T		T		23 57 23.3	
	baz=316,slow=76,SNR=25								
H11S2	**WAKE ISLAND Hy 28.82**	**124**		T		T		23 57 24.5	
	baz=316,slow=76,SNR=30								
MKAR	**Makanchi Array**	**44.18**	**302**	P		**P**		**23 29 27.6**	**+0.7**
	0.2nm,0.6s,baz=88,slow=8.7,SNR=4.4								
	0.2nm,0.6s								
KURBB	**Kurchatov Arra**	**46.03**	**308**	P		**P**		**23 29 41.5**	**+0.1**
	0.5nm,0.4s,baz=85,slow=8.9,SNR=4.2								
	0.5nm,0.4s								
ILAR	**Eielson Array**	**49.19**	**32**	P		**P**		**23 30 06.7**	**+0.8**
	0.5nm,0.8s,baz=252,slow=8.1,SNR=5.6								
	0.5nm,0.8s								
WRA	**Warramunga Arr**	**57.31**	**188**	P		**P**		**23 31 05.5**	**-0.4**
	0.5nm,0.6s,baz=6.8,slow=7.1,SNR=6.5								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**61.04**	**188**	P		**P**		**23 31 32.1**	**+0.4**
	0.2nm,0.5s,baz=21,slow=8.0,SNR=2.4								
	0.2nm,0.5s								

*IDC **23** 23:47:08.8±1.2,15.°44S×167.°82E, h0km, mb4.1/8, mbtmp4.0/9, ML3.9/1, MS3.2/2, Error ellipse: s-maj=39.0km s-min=23.5km az=126.0*
ISC 23 23:47:14.0±1.0,**15.°45S**±0.°10×**167.°8E**±0.°2,**h35**km,**n16,**
σ0s83/9,mb4.0/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.71**	**191**	Pn		**Pn**		**23 48 49.2**	**-1.0**
	2.4nm,0.3s,baz=340,slow=23,SNR=25								
DZM				Sn		**Sn**		**23 50 06.5**	**+1.0**
	2.4nm,0.3s,baz=293,slow=19,SNR=4.1								
DZM				LR		LR		23 51 16.8	
	comp=Z,249nm,18.8s,baz=16,slow=37								
	11nm,0.5s								
WRA	**Warramunga Arr**	**32.16**	**257**	P		**P**		**23 53 38.6**	**-0.1**
	1.3nm,1.0s,baz=85,slow=8.2,SNR=4.9								
	1.3nm,1.0s								
ASAR	**Alice Springs**	**32.91**	**250**	P		**P**		**23 53 45.4**	**+0.1**
	2.9nm,0.9s,baz=78,slow=8.7,SNR=19								
	2.9nm,0.9s								
ASAJ	**Asahikawa**	**63.60**	**340**	LR		LR		00 21 44.6	
	comp=Z,14nm,20.7s,baz=87,slow=33								
CMAR	**Chiang Mai Arr**	**75.72**	**294**	P		**P**		**23 58 57.0**	**+0.5**
	0.4nm,0.3s,baz=105,slow=10,SNR=1.6								
	0.4nm,0.3s								
SONM	**Songino Array**	**83.39**	**323**	P		**P**		**23 59 38.3**	**+0.5**
	1.2nm,1.0s,baz=134,slow=6.3,SNR=6.4								
	1.2nm,1.0s								
ILAR	**Eielson Array**	**87.05**	**18**	P		**P**		**23 59 54.8**	**-0.7**
	0.5nm,0.9s,baz=235,slow=5.6,SNR=5.0								
	0.5nm,0.9s								
NVAR	**Mina Array Bea**	**87.35**	**49**	P		**P**		**23 59 58.7**	**+0.8**
	1.0nm,0.7s,baz=231,slow=5.7,SNR=7.4								
	1.0nm,0.7s								
MKAR	**Makanchi Array**	**98.08**	**316**	P		Pdif		00 00 47.9	+0.8
	0.6nm,0.8s,baz=96,slow=7.4,SNR=7.8								
	0.6nm,0.8s								
ZALV	**Zalesovo Beam**	**98.28**	**324**	P		**P**		**00 00 47.1**	**-0.6**
	0.6nm,0.6s,baz=123,slow=5.3,SNR=2.3								
	0.6nm,0.6s								
H03S2	**Juan Fernandez**	**99.80**	**129**	T		T		01 51 47.7	
	baz=241,slow=74,SNR=9.2								
H03S1	**Juan Fernandez**	**99.81**	**129**	T		T		01 51 48.9	
	baz=241,slow=74,SNR=5.7								
H03S3	**Juan Fernandez**	**99.82**	**129**	T		T		01 51 47.7	
	baz=241,slow=74,SNR=10								
H03N3	**Juan Fernandez**	**99.97**	**129**	T		T		01 52 02.5	
	baz=240,slow=72,SNR=5.5								
H03N2	**Juan Fernandez**	**99.97**	**129**	T		T		01 52 18.3	
	baz=240,slow=72,SNR=5.6								
H03N1	**Juan Fernandez**	**99.99**	**129**	T		T		01 52 09.3	
	baz=240,slow=72,SNR=9.9								

*NNC **24** 00:26:50.3±8.9,38.°75N×70.°03E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=93.8km s-min=39.4km az=169.0*
ISC 24 00:26:49.3±2.9,**38.°5N**±0.°2×**69.°8E**±0.°1,**h27**km,**n10,**
σ0s90/12,4C-1D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.63**	**6**	⇑P		**Pn**		**00 27 57.8**	**+0.3**
	1.1nm,0.3s,baz=193,slow=15,SNR=33								
KK31				⇑S		**Sn**		**00 28 50.9**	**+0.5**
	1.8nm,0.3s,baz=191,slow=30,SNR=4.1								
EKS2	**Erkin-Say**	**5.13**	**35**	P		**Pn**		**00 28 05.3**	**+0.9**
	SNR=6.0								
UCH	**Uchtor**	**5.17**	**42**	P		**Pn**		**00 28 05.5**	**+0.3**
	SNR=10								
AAK	**Ala-Archa**	**5.45**	**39**	P		**Pn**		**00 28 08.6**	**-0.3**
	SNR=11								
KBK	**Karagaybulak**	**5.70**	**42**	P		**Pn**		**00 28 11.9**	**-0.3**
	SNR=7.1								
USP	**Ospenovka**	**5.94**	**35**	P		**Pn**		**00 28 14.8**	**-0.6**
	SNR=6.4								
TKM2	**Tokmak 2**	**6.22**	**43**	P		**Pn**		**00 28 20.3**	**+0.8**
	SNR=6.6								
TKM2	**Tokmak 2**	**6.22**	**43**	⇓P		**Pn**		**00 28 19.6**	**+0.1**
	4.2nm,0.6s								
TKM2				⇑S		**Sn**		**00 29 29.5**	**-0.4**
	3.1nm,0.7s								
AB31	**Akbulak array**	**12.89**	**330**	P		**Pn**		**00 29 48.9**	**-1.7**
	0.4nm,0.4s,baz=139,slow=13,SNR=21								
AKTO	**Aktyubinsk**	**14.59**	**329**	⇑P		**P**		**00 30 21.3**	**+1.3**
	0.9nm,0.7s								

*IDC **24** 00:33:28.0±0.6,13.°70N×120.°94E, h172km±6km, mb3.1/8, mbtmp3.5/8, Error ellipse: s-maj=42.0km s-min=13.5km az=61.0*
ISC 24 00:33:27.3±0.9,**13.°5N**±0.°1×**120.°5E**±0.°1,**h150**km,**n14,**
σ2s34/17,mb3.5/8,1C-3D,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.68**	**34**	P		**Pn**		**00 33 52.0**	**+2.3**
	2µm,0.6s,baz=240,slow=3.7,SNR=42								
TGY				S		**Sn**		**00 34 10.8**	**+3.8**
	633nm,0.4s,baz=120,slow=21,SNR=2.4								
TGY	**Tagaytay City**	**0.68**	**34**	⇓*e*P		**Pn**		**00 33 52.2**	**+2.5**
TGY				*e*S		**Sn**		**00 34 10.5**	**+3.5**
LQP	**Lukban**	**1.13**	**59**	⇑*i*P		**Pn**		**00 33 54.7**	**+1.3**
GQP	**Guinayangan**	**1.89**	**79**	⇓*e*

0.2nm,0.6s,baz=309,slow=4.5,SNR=2.8

*STR **24** 00:55:32.8±0.7, 44°N±4°×±°, h12km±4km, MLv2.8/22, Error ellipse: s-maj=0.0km s-min=0.0km az=158.2, preliminary*
*LDG **24** 00:55:32.9±0.1, 43°98N×8°62E, h10km, MJ2.7/24, Error ellipse: s-maj=2.8km s-min=2.3km az=133.0*
*GEN **24** 00:55:33.4, 44°02N×8°54E, h0km±4km, MJ2.3*
*ROM **24** 00:55:33.1±0.3, 43°984N±0°009×8°581E±0°006, h8km±1km, ML2.4/22, Error ellipse: s-maj=1.0km s-min=0.4km az=352.0*

ISC 24 00:55:33.2±1.0, 43°96N±0°02×8°57E±0°02, h18km±6km, n97, σ1§34/151, 1D, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANO	**Canova, Maglio**	**0.34**	**317**	⇓P	**Pg**	**00 55 40.2**	**-0.3**
CANO				S	**Sg**	**00 55 45.2**	**-0.3**
CANO				AML	AML		
	comp=N,998μm,1.2s						
CANO				AML	AML		
	comp=E,930μm,0.8s						
CANO	**Canova, Maglio**	**0.34**	**317**	Pg	**Pg**	**00 55 40.2**	**-0.3**
CANO	**Canova, Maglio**	**0.34**	**317**	Sg	**Sg**	**00 55 44.9**	**-0.5**
CANO	**Canova, Maglio**	**0.34**	**317**	P	**Pg**	**00 55 40.2**	**-0.3**
CANO				S	**Sg**	**00 55 45.1**	**-0.3**
RORO	**Rocca Rossa**	**0.39**	**293**	P	**Pg**	**00 55 41.4**	**+0.1**
RORO				S	**Sb**	**00 55 47.9**	**+0.5**
RORO				AML	AML		
	comp=E,1620μm,0.1s						
RORO				AML	AML		
	comp=N,1455μm,0.2s						
RORO	**Rocca Rossa**	**0.39**	**293**	Sg	**Sg**	**00 55 46.9**	**+0.1**
RORO	**Rocca Rossa**	**0.39**	**293**	Pg	**Pg**	**00 55 41.3**	**+0.1**
RORO	**Rocca Rossa**	**0.39**	**293**	P	**Pg**	**00 55 41.2**	**0.0**
RORO				S	**Sg**	**00 55 46.8**	**0.0**
IMI	**Imperia**	**0.49**	**265**	P	**Pb**	**00 55 43.6**	**+0.3**
IMI				S	**Sb**	**00 55 51.4**	**+1.2**
IMI				AML	AML		
	comp=N,1690μm,0.8s						
IMI				AML	AML		
	comp=E,1091μm,0.3s						
IMI	**Imperia**	**0.49**	**265**	P	**Pb**	**00 55 43.6**	**+0.3**
IMI				S	**Sb**	**00 55 51.3**	**+1.2**
RNCA	**Ronca, Sant'Ol**	**0.58**	**28**	P	**Pb**	**00 55 44.4**	**-0.4**
RNCA				S	**Sg**	**00 55 52.9**	**+0.3**
RNCA				AML	AML		
	comp=E,131μm,0.3s						
RNCA				AML	AML		
	comp=N,182μm,0.8s						
RNCA	**Ronca, Sant'Ol**	**0.58**	**28**	Pg	**Pb**	**00 55 44.5**	**-0.4**
RNCA	**Ronca, Sant'Ol**	**0.58**	**28**	P	**Pg**	**00 55 44.6**	**-0.2**
RNCA				S	**Sg**	**00 55 52.6**	**0.0**
SAOF	**Saorge**	**0.73**	**273**	AML	AML		
	comp=N,388μm,0.4s						
SAOF				AML	AML		
	comp=E,550μm,0.8s						
SAOF	**Saorge**	**0.73**	**273**	Pg	**Pg**	**00 55 48.2**	**+0.7**
SAOF				Sg	**Sg**	**00 55 58.7**	**+1.5**
SAOF	**Saorge**	**0.73**	**273**	P	**Pg**	**00 55 48.2**	**+0.7**
SAOF				S	**Sg**	**00 55 58.7**	**+1.5**
BURY	**Giardini Botan**	**0.75**	**257**	P	**Pg**	**00 55 48.4**	**+0.6**
BURY				S	**Sg**	**00 55 59.2**	**+1.4**
BURY				AML	AML		
	comp=N,345μm,0.6s						
BURY				AML	AML		
	comp=N,345μm,1.4s						
BURY				AML	AML		
	comp=E,262μm,0.4s						
BURY	**Giardini Botan**	**0.75**	**257**	Pg	**Pn**	**00 55 49.5**	**+0.6**
BURY	**Giardini Botan**	**0.75**	**257**	P	**Pn**	**00 55 49.5**	**+0.6**
BURY				S	**Sn**	**00 56 00.1**	**+0.3**
MSSA	**Maissana**	**0.77**	**62**	P	**Pb**	**00 55 47.7**	**-0.4**
MSSA				S	**Sn**	**00 55 59.1**	**-1.4**
MSSA				AML	AML		
	comp=E,222μm,0.5s						
MSSA				AML	AML		
	comp=N,234μm,0.6s						
MSSA	**Maissana**	**0.77**	**62**	P	**Pb**	**00 55 47.8**	**-0.4**
MSSA				S	**Sn**	**00 55 59.8**	**-0.7**
SBF	**Sospel**	**0.82**	**264**	*e*Pg	**Pb**	**00 55 48.4**	**-0.6**
SBF	**Sospel**	**0.82**	**264**	*e*P	**Pn**	**00 55 50.5**	**+0.5**
SBF				*e*Sg	**Sg**	**00 56 01.2**	**+1.1**
SBF				*e*Sn	**Sn**	**00 56 02.8**	**+1.1**
	comp=N,216nm,0.2s						
GORR	**Gorreto**	**0.83**	**39**	P	**Pg**	**00 55 49.1**	**-0.3**
GORR				S	**Sg**	**00 56 00.0**	**-0.5**
GORR				AML	AML		
	comp=E,440μm,0.5s						
GORR				AML	AML		
	comp=E,440μm,1.5s						
GORR				AML	AML		
	comp=N,326μm,0.7s						
GORR	**Gorreto**	**0.83**	**39**	Pg	**Pb**	**00 55 48.8**	**-0.3**
GORR	**Gorreto**	**0.83**	**39**	Sg	**Sg**	**00 56 00.3**	**-0.1**
GORR	**Gorreto**	**0.83**	**39**	P	**Pg**	**00 55 49.2**	**-0.3**
GORR				S	**Sg**	**00 56 00.2**	**-0.3**
MON	**Monaco**	**0.86**	**255**	Pg	**Pb**	**00 55 49.1**	**-0.4**
MON				Pn	**Pn**	**00 55 51.7**	**+1.4**
ESCA	**l'Escarene**	**0.87**	**262**	Pg	**Pb**	**00 55 48.2**	**-1.6**
ESCA				Pn	**Pg**	**00 55 50.7**	**+0.6**
ESCA				Sn	**Sn**	**00 56 04.9**	**+2.0**
ROTM	**Rocchetta Tana**	**0.90**	**350**	P	**Pb**	**00 55 50.1**	**-0.3**
ROTM				S	**Sn**	**00 56 03.1**	**-0.5**
ROTM				AML	AML		
	comp=E,539μm,1.4s						
ROTM				AML	AML		
	comp=N,770μm,1.4s						
ROTM				AML	AML		
	comp=N,770μm,0.6s						
ROTM				AML	AML		
	comp=E,539μm,0.6s						
ROTM	**Rocchetta Tana**	**0.90**	**350**	Pg	**Pg**	**00 55 50.7**	**0.0**
ROTM	**Rocchetta Tana**	**0.90**	**350**	Sg	**Sn**	**00 56 03.4**	**-0.2**
PLMA	**Palmaria, Port**	**0.93**	**84**	P	**Pb**	**00 55 50.4**	**-0.3**
PLMA				S	**Sg**	**00 56 03.3**	**-0.2**
PLMA				AML	AML		
	comp=N,154μm,1.4s						
PLMA				AML	AML		
	comp=E,148μm,0.8s						
PLMA				AML	AML		
	comp=N,154μm,0.6s						
STV	**Sant Anna di V**	**0.94**	**288**	P	**Pb**	**00 55 51.4**	**+0.5**
STV				S	**Sg**	**00 56 04.1**	**+0.3**
STV				AML	AML		
	comp=N,259μm,1.2s						
STV				AML	AML		
	comp=N,259μm,0.8s						
STV				AML	AML		
	comp=E,215μm,0.8s						
STV	**Sant Anna di V**	**0.94**	**288**	Pg	**Pb**	**00 55 51.5**	**+0.5**
STV	**Sant Anna di V**	**0.94**	**288**	Sg	**Sg**	**00 56 04.0**	**+0.2**
SPIF	**crte de Spivo**	**0.96**	**276**	Pg	**Pg**	**00 55 52.5**	**+0.5**
SPIF				Sg	**Sn**	**00 56 05.9**	**+0.6**
BOB	**Bobbio (Coli)**	**1.03**	**38**	P	**Pb**	**00 55 51.8**	**-0.7**
GROG	**Isola di Gorgo**	**1.10**	**118**	P	**Pg**	**00 55 54.1**	**-0.3**
ISO	**Isola**	**1.12**	**282**	Pg	**Pg**	**00 55 54.9**	**+0.1**
ISO				Sg	**Sg**	**00 56 10.1**	**+0.7**
EQUI	**Equi**	**1.16**	**79**	P	**Pb**	**00 55 54.8**	**0.0**
EQUI				S	**Sn**	**00 56 09.8**	**-0.2**
EQUI				AML	AML		
	comp=E,95μm,1.4s						
EQUI				AML	AML		
	comp=E,95μm,0.6s						
EQUI				AML	AML		
	comp=N,135μm,0.7s						
ENAUX	**Enaux**	**1.30**	**277**	Pg	**Pg**	**00 55 58.4**	**+0.1**
ENAUX				Sg	**Sb**	**00 56 14.9**	**+1.3**
SALSA	**La sagne**	**1.36**	**267**	Pn	**Pn**	**00 55 58.0**	**+0.6**
SALSA				Sn	**Sb**	**00 56 16.1**	**+0.8**
SURF	**Saint Ours**	**1.36**	**293**	Pn	**Pb**	**00 55 58.8**	**+0.5**
SURF				Sn	**Sg**	**00 56 17.8**	**+0.4**
JAUF	**Jausiers**	**1.39**	**290**	Pn	**Pb**	**00 55 59.4**	**+0.7**
JAUF				Sg	**Sg**	**00 56 18.2**	**+0.1**
PGF	**Pioggiola**	**1.44**	**167**	*e*Pn	**Pn**	**00 55 57.7**	**-0.8**
PGF				*e*Sn	**Sn**	**00 56 14.9**	**-2.2**
	comp=N,11nm,0.3s						
PGF	**Pioggiola**	**1.44**	**167**	Pn	**Pn**	**00 55 57.7**	**-0.8**
MBDF	**Montbardon**	**1.50**	**301**	*e*Pn	**Pn**	**00 55 59.5**	**+0.1**
MBDF				*e*Sg	**Sn**	**00 56 18.4**	**-0.2**
	comp=N,64nm,0.6s						
CREF	**Crivoux**	**1.52**	**294**	Pn	**Pb**	**00 56 01.3**	**+0.4**
OGAG	**Argentiere**	**1.54**	**290**	Pn	**Pg**	**00 56 04.2**	**+1.4**
TRIGF	**Trigance**	**1.58**	**263**	Pn	**Pn**	**00 56 00.8**	**+0.5**
TRIGF				Pg	**Pg**	**00 56 03.8**	**+0.3**
RRL	**Rocca Remolon**	**1.59**	**308**	P	**Pb**	**00 56 02.4**	**+0.1**
RRL	**Rocca Remolon**	**1.59**	**308**	Pn	**Pb**	**00 56 02.2**	**-0.1**
LMR	**La Mourre**	**1.62**	**248**	*e*Pn	**Pn**	**00 56 00.3**	**-0.5**
LMR	**La Mourre**	**1.62**	**248**	*e*Pg	**Pb**	**00 56 03.0**	**+0.5**
LMR				*e*Sn	**Sn**	**00 56 20.1**	**-1.1**
	comp=N,19nm,0.2s						
OGDI	**Digne**	**1.64**	**276**	Pg	**Pg**	**00 56 06.5**	**+1.8**
TRAV	**Traversella**	**1.66**	**340**	Pn	**Pn**	**00 56 02.1**	**+0.6**
LSD	**Lago del Serru**	**1.82**	**326**	Pn	**Pn**	**00 56 04.0**	**+0.2**
BLAF	**les Blancs**	**1.82**	**271**	Pn	**Pn**	**00 56 04.5**	**+0.8**
BLAF				Pg	**Pg**	**00 56 08.5**	**+0.4**
OGMO	**Fort Saint-Gob**	**1.84**	**314**	Pn	**Pb**	**00 56 06.7**	**+0.4**
SMPL	**Sampolo**	**1.94**	**164**	Pn	**Pn**	**00 56 05.6**	**+0.3**
SMPL				Sn	**Sn**	**00 56 28.8**	**-0.3**
LPG	**La Plagne**	**2.01**	**321**	*e*Pn	**Pn**	**00 56 05.4**	**-1.1**
LPG	**La Plagne**	**2.01**	**321**	*e*P	**Pn**	**00 56 07.7**	**+1.2**
LPG	**La Plagne**	**2.01**	**321**	*e*Pg	**Pb**	**00 56 09.6**	**+0.2**
LPG				*e*Sg	**Sb**	**00 56 35.0**	**+0.8**
	comp=N,4.5nm,0.3s						
LPL	**La Plagne**	**2.03**	**321**	*e*Pn	**Pn**	**00 56 05.6**	**-1.2**
LPL	**La Plagne**	**2.03**	**321**	*e*Pg	**Pb**	**00 56 10.2**	**+0.5**
LPL				*e*Sg	**Sb**	**00 56 36.7**	**+1.9**
	comp=N,3.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.15**	**297**	*e*Pn	**Pn**	**00 56 07.3**	**-1.0**
ORIF	**Oris-en-Rattie**	**2.15**	**297**	*e*P	**Pn**	**00 56 09.7**	**+1.4**
ORIF	**Oris-en-Rattie**	**2.15**	**297**	*e*Pg	**Pg**	**00 56 13.3**	**-1.2**
ORIF				*e*Sg	**Sb**	**00 56 38.5**	**+0.5**
	comp=N,12nm,0.3s						
SMRF	**Simiane la Rot**	**2.16**	**272**	*e*P	**Pn**	**00 56 09.9**	**+1.6**
SMRF	**Simiane la Rot**	**2.16**	**272**	*e*Pg	**Pb**	**00 56 12.9**	**+1.1**
SMRF				*e*Sg	**Sg**	**00 56 41.3**	**-1.4**
	comp=N,50nm,0.5s						
VIVF	**Saint-Julien-l**	**2.93**	**289**	*e*Pn	**Pn**	**00 56 18.5**	**-0.4**
VIVF				*e*Sn	**Sn**	**00 56 51.9**	**-1.8**
	comp=N,1.3nm,0.2s						
CABF	**La Chapelle**	**3.18**	**327**	*e*P	**Pn**	**00 56 24.5**	**+2.1**
LASF	**Ste Croix**	**3.40**	**274**	*e*Pn	**Pn**	**00 56 24.2**	**-1.1**
LASF	**Ste Croix**	**3.40**	**274**	*e*Pg	**Pg**	**00 56 36.0**	**-2.3**
LASF				*e*Sn	**Sn**	**00 57 04.1**	**-1.1**
LASF				*e*Sg	**Sg**	**00 57 22.0**	**-0.3**
	comp=N,3.5nm,0.5s						
DAVA	**Damuels**	**3.46**	**15**	*e*Sn	**Sn**	**00 57 09.5**	**+2.7**
	comp=N,3.7nm,0.3s						
T1214	**Arquata del Tr**	**3.59**	**108**	AML	AML		
	comp=N,578μm,0.1s						
T1214				AML	AML		
	comp=E,394μm,1.4s						
SQTA	**Sankt Quirin**	**3.75**	**29**	*i* Pn	**Pn**	**00 56 32.9**	**+2.6**
	comp=E,0.7nm,0.2s						
SQTA				*i* Sn	**Sn**	**00 57 16.3**	**+2.2**
	comp=E,1.0nm,0.2s						
MOTA	**Moosalm**	**3.83**	**27**	*i* Pn	**Pn**	**00 56 33.8**	**+2.5**
	comp=E,0.3nm,0.1s						
MOTA				*i* Sn	**Sn**	**00 57 17.5**	**+1.6**
	comp=E,0.8nm,0.2s						
RETA	**Reutte**	**3.85**	**23**	*i* Pn	**Pn**	**00 56 33.9**	**+2.3**
	comp=E,0.5nm,0.1s						
RETA				*i* Sn	**Sn**	**00 57 17.1**	**+0.7**
	comp=E,0.5nm,0.1s						
WTTA	**Wattenberg**	**3.95**	**32**	*i* Pn	**Pn**	**00 56 35.3**	**+2.3**
	comp=E,0.3nm,0.1s						
WTTA				*i* Sn	**Sn**	**00 57 21.1**	**+2.2**
	comp=E,0.8nm,0.3s						
HINF	**Hinteralfeld**	**4.04**	**343**	*e*Pn	**Pn**	**00 56 32.0**	**-2.2**
HINF	**Hinteralfeld**	**4.04**	**343**	*e*P	**Pn**	**00 56 35.6**	**+1.4**
HINF				*e*Sn	**Sn**	**00 57 16.7**	**-4.4**
	comp=E,1.7nm,0.3s						
SMF	**Signal de Mont**	**4.28**	**311**	*e*Pn	**Pn**	**00 56 36.4**	**-1.1**
SMF	**Signal de Mont**	**4.28**	**311**	*e*P	**Pn**	**00 56 39.4**	**+1.9**
SMF				*e*Sn	**Sn**	**00 57 23.8**	**-3.2**
	comp=E,1.9nm,0.3s						
HAU	**Haudompre**	**4.33**	**340**	*e*Pn	**Pn**	**00 56 36.6**	**-1.6**
HAU	**Haudompre**	**4.33**	**340**	*e*P	**Pn**	**00 56 39.7**	**+1.5**
HAU				*e*Sn	**Sn**	**00 57 24.9**	**-3.4**
	comp=E,1.9nm,0.3s						
AVF	**Avril sur Loir**	**4.64**	**309**	*e*Pn	**Pn**	**00 56 40.7**	**-1.6**
AVF	**Avril sur Loir**	**4.64**	**309**	*e*P	**Pn**	**00 56 44.7**	**+2.4**
AVF				*e*Sn	**Sn**	**00 57 33.1**	**-2.6**
	comp=E,1.4nm,0.3s						
MTLF	**Montolieu**	**4.65**	**265**	*e*Pn	**Pn**	**00 56 41.5**	**-1.0**
MTLF				*e*Sn	**Sn**	**00 57 33.7**	**-2.3**
	comp=E,0.7nm,0.2s						
LOR	**Lormes**	**4.68**	**317**	*e*Pn	**Pn**	**00 56 41.5**	**-1.4**
LOR	**Lormes**	**4.68**	**317**	*e*P	**Pn**	**00 56 45.2**	**+2.3**
LOR				*e*Sn	**Sn**	**00 57 33.3**	**-3.4**
	comp=E,1.1nm,0.3s						
SSF	**Saint Saulge**	**4.72**	**313**	*e*P	**Pn**	**00 56 45.8**	**+2.3**
SSF				*e*Sn	**Sn**	**00 57 34.4**	**-3.4**
	comp=E,0.8nm,0.3s						
CAF	**Calviac**	**4.75**	**284**	*e*Pn	**Pn**	**00 56 43.4**	**-0.6**
BGF	**Bois d'Agland**	**4.80**	**305**	*e*Pn	**Pn**	**00 56 44.1**	**-0.5**
BGF				*e*Sn	**Sn**	**00 57 36.3**	**-3.5**
	comp=E,3.2nm,0.4s						
SFTF	**Sexfontaines**	**4.91**	**331**	*e*Pn	**Pn**	**00 56 44.1**	**-1.9**
TCF	**Toulx Ste Croi**	**5.07**	**300**	*e*Sn	**Sn**	**00 57 43.7**	**-2.6**
	comp=E,0.5nm,0.2s						

*JMA **24** 00:58:18.2±0.1, 39°8N±0°2×141°5E±0°3, h79km, MV3.1/40, NORTHERN IWATE PREF*
*IDC **24** 00:58:22.5±5.7, 39°69N×141°16E, h125km±41km, mb3.4/7, mbtmp3.8/9, Error ellipse: s-maj=77.7km s-min=21.3km az=71.0*

ISC 24 00:58:17.4±0.9, 39°79N±0°04×141°54E±0°07, h84km±6km, n27, σ0§80/32, mb3.8/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKZ	**Kuzumaki**	**0.25**	**321**	*i* P	**Pn**	**00 58 30.0**	**0.0**
JKZ				S	**Sn**	**00 58 38.6**	**-0.5**
JTH	**Tanohata**	**0.29**	**59**	*i* P	**Pn**	**00 58 30.5**	**+0.4**
JTH				S	**Sn**	**00 58 39.4**	**0.0**
MIYJ	**Miyakonagasawa**	**0.30**	**134**	*i* P	**Pn**	**00 58 30.7**	**+0.6**
MIYJ				S	**Sn**	**00 58 39.9**	**+0.4**
JOM	**Ohasama**	**0.37**	**211**	*i* P	**Pn**	**00 58 30.4**	**-0.1**
JOM				S	**Sn**	**00 58 39.9**	**-0.3**
JANG	**Nango**	**0.58**	**358**	*i* P	**Pn**	**00 58 32.2**	**0.0**
JANG				S	**Sn**	**00 58 43.1**	**-0.1**
JAH	**Hinai**	**0.80**	**300**	*i* P	**Pn**	**00 58 34.4**	**0.0**
JAH				S	**Sn**	**00 58 46.6**	**-0.5**
JRG	**Rokugo**	**0.80**	**241**	*i* P	**Pn**	**00 58 34.6**	**+0.1**
JRG				S	**Sn**	**00 58 47.3**	**+0.2**
JMK	**Ichinoseki**	**0.87**	**196**	*i* P	**Pn**	**00 58 35.5**	**+0.3**
JMK				S	**Sn**	**00 58 48.5**	**0.0**
JTM	**Tenmabayashi**	**1.06**	**340**	*i* P	**Pn**	**00 58 37.7**	**+0.3**
JTM				S	**Sn**	**00 58 52.2**	**0.0**
JYK	**Kaneyama**	**1.26**	**227**	*i* P	**Pn**	**00 58 40.0**	**+0.1**
JYK				*e*S	**Sn**	**00 58 56.7**	**0.0**
JIO	**Ouri**	**1.34**	**186**	*i* P	**Pn**	**00 58 41.5**	**+0.6**
JIO				S	**Sn**	**00 58 58.5**	**0.0**
JOT	**Ohata**	**1.63**	**347**	*i* P	**Pn**	**00 58 45.2**	**+0.6**
MJAR	**Matsushiro Arr**	**4.17**	**220**	P	**Pn**	**00 59 20.7**	**+2.0**
	4.7nm,0.5s,baz=24,slow=14,SNR=20						
USRK	**Ussuriysk Ar.**	**8.36**	**305**	P	**Pn**	**01 00 18.7**	**+3.0**
	2.9nm,0.7s,baz=125,slow=16,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**29.57**	**125**	T	T	01 35 04.7	
	baz=317,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hy**	**29.57**	**125**	T	T	01 35 05.1	
	baz=317,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**29.58**	**125**	T	T	01 35 05.8	
	baz=317,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy**	**30.36**	**127**	T	T	01 35 55.2	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**30.36**	**127**	T	T	01 36 04.9	
	baz=318,slow=74,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**30.38**	**127**	T	T	01 35 58.5	
	baz=318,slow=74,SNR=5.4						
ZALV	**Zalesovo Beam**	**40.17**	**310**	P	**P**	**01 05 44.8**	**-0.3**
	1.7nm,0.5s,baz=88,slow=8.4,SNR=11						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**01 06 05.1**	**-1.5**
	0.3nm,0.7s,baz=82,slow=10,SNR=4.9						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**44.43**	**306**	P	**P**	**01 06 19.4**	**-0.3**
	1.2nm,0.7s,baz=81,slow=8.6,SNR=11						
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**48.82**	**311**	P	**P**	**01 06 53.6**	**-0.4**
	0.5nm,0.5s,baz=68,slow=8.2,SNR=4.4						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**59.80**	**188**	P	**P**	**01 08 13.8**	**-0.2**
	0.4nm,0.9s,baz=1.4,slow=7.0,SNR=4.7						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**66.43**	**332**	P	**P**	**01 08 57.0**	**-0.3**
	0.7nm,0.7s,baz=32,slow=12,SNR=1.3						
	0.7nm,0.7s						
HFS	**Hagfors**	**71.62**	**335**	P	**P**	**01 09 29.8**	**+0.3**
	4.4nm,1.0s,baz=43,slow=6.5,SNR=5.2						
	4.4nm,1.0s						

*NEIC **24** 01:04:43.6±2.2, 52°82N±0°02×165°54W±0°07, h10km±1km, mb4.3/39, ML3.9/10, ML3.8(AEIC), Error ellipse: s-maj=7.1km s-min=3.7km az=99.0*
*MOS **24** 01:04:43.9±1.0, 53°10N×165°66W, h12km, mb4.4/13, Error ellipse: s-maj=15.6km s-min=9.0km az=102.7*
*IDC **24** 01:04:44.1±1.1, 53°14N×165°61W, h0km, mb4.1/25, mbtmp4.1/27, ML4.0/2, MS3.5/4, Error ellipse: s-maj=28.4km s-min=13.5km az=2.0*
*AEIC **24** 01:04:47.0±2.2, 52°82N±0°06×165°57W±0°03, h22km±6km, Error ellipse: s-maj=8.4km s-min=2.5km az=185.0*

ISC 24 01:04:44.2±1.5, 52°88N±0°06×165°50W±0°04, h11km±8km, n173, σ1§32/173, mb4.2/37, MS3.4/4, 6C-1D, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.14**	**328**		**Pg**	**01 05 05.8**	**-0.3**
UNV	**Unalaska Valle**	**1.14**	**328**		**Sg**	**01 05 21.1**	**+0.1**
MNAT	**Makushin Natee**	**1.23**	**325**		**Pn**	**01 05 07.3**	**0.0**
MNAT					**Sb**	**01 05 23.2**	**-0.2**
MGOD	**Makushin Gods**	**1.23**	**319**		**Pn**	**01 05 07.4**	**-0.1**
AKBBA	**Akutan Broad B**	**1.25**	**348**		**Pg**	**01 05 08.1**	**-0.1**
ZRO	**Akutan Zero**	**1.25**	**347**		**Pg**	**01 05 08.2**	**0.0**
AHB	**Akutan Harbor**	**1.25**	**351**		**Pg**	**01 05 08.5**	**+0.2**
AKUT	**Akutan**	**1.27**	**353**	Pn	**Pg**	**01 05 08.2**	**-0.1**
AKUT				Sn	**Sg**	**01 05 25.3**	**+0.2**
AKUT				IAML		01 05 27.3	
	comp=E,2μm,0.6s						
MAPS	**Pakushin South**	**1.27**	**318**		**Pn**	**01 05 07.9**	**0.0**
MAPS					**Sb**	**01 05 24.2**	**-0.3**
MSW	**Makushin Switc**	**1.29**	**324**		**Pn**	**01 05 08.2**	**0.0**
MSW					**Sb**	**01 05 24.9**	**-0.3**
AKRB	**Akutan Reef Bi**	**1.30**	**345**		**Pg**	**01 05 08.9**	**-0.2**
AKRB					**Sn**	**01 05 26.8**	**+1.1**
AKLV	**Akutan Long Va**	**1.32**	**348**		**Sb**	**01 05 26.5**	**+0.7**
AKGG	**Akutan Green G**	**1.36**	**348**		**Sg**	**01 05 28.5**	**+0.7**
OKER	**Okmok East Rim**	**1.64**	**292**		**Pn**	**01 05 13.2**	**+0.2**
WESE	**West Dahl East**	**1.69**	**18**		**Pb**	**01 05 14.8**	**-0.4**
OKCE	**Okmok Cone E**	**1.70**	**290**		**Pn**	**01 05 14.1**	**+0.3**
WEBT	**Westdahl Beart**	**1.77**	**14**		**Pb**	**01 05 16.1**	**-0.5**
WEBT					**Sb**	**01 05 39.0**	**+0.1**
NIKH	**Nikolski High**	**2.04**	**274**		**Pn**	**01 05 17.8**	**-0.6**
FALS	**False Pass**	**2.33**	**31**		**Pn**	**01 05 23.2**	**+0.7**
CLCO	**Concord Point,**	**2.56**	**270**		**Pn**	**01 05 25.6**	**0.0**
CLES	**Cleveland East**	**2.67**	**271**	Pn	**Pn**	**01 05 26.5**	**-0.6**
CLES				IAML		01 05 43.4	
	comp=E,898nm,2.0s						
CLES				Sn	**Sn**	**01 05 57.1**	**-2.2**
CLES				IAML		01 06 05.4	
	comp=N,937nm,0.4s						
DT1	**Dutton Round H**	**2.93**	**39**		**Pn**	**01 05 32.4**	**+1.8**
PN7A	**Pavlof North-7**	**3.28**	**37**		**Pn**	**01 05 37.6**	**+2.0**
PS1A	**Pavlof South-1**	**3.37**	**39**		**Pn**	**01 05 38.6**	**+1.9**
SDPT	**Sand Point**	**3.85**	**48**	Pn	**Pn**	**01 05 44.7**	**+1.4**
SDPT				Sn	**Sn**	**01 06 27.6**	**-1.0**
SDPT				IAML		01 06 29.8	
	comp=E,155nm,0.6s						
SDPT				IAML		01 07 12.3	
	comp=N,141nm,3.0s						
CNBA	**Chernabura Isl**	**4.00**	**59**	Pn	**Pn**	**01 05 45.9**	**+0.5**
CNBA				Sn	**Sn**	**01 06 30.2**	**-2.0**
CNBA				IAML		01 06 33.6	
	comp=E,96nm,0.6s						
ATKA	**Atka Island**	**5.35**	**266**		**Pn**	**01 06 04.7**	**+0.8**
CHGN	**Chignik**	**5.36**	**47**		**Pn**	**01 06 05.1**	**+1.1**
GSTR	**Great Sitkin T**	**6.50**	**267**	Pn	**Pn**	**01 06 20.4**	**+0.7**
Q14K	**Tigyukauivet M**	**6.81**	**19**	Pn	**Pn**	**01 06 26.1**	**+2.2**
ADK	**Adak**	**6.92**	**266**	Pn	**Pn**	**01 06 26.2**	**+0.8**
ADK	**Adak**	**6.92**	**266**	P	**Pn**	**01 06 26.2**	**+0.8**
P16K	**Nushagak River**	**7.46**	**31**		**Pn**	**01 06 34.0**	**+1.1**
ANCK	**Angle Creek**	**7.78**	**43**		**Pn**	**01 06 38.5**	**+1.2**
M14K	**Bethel**	**8.13**	**12**	Pn	**Pn**	**01 06 43.5**	**+1.5**
OHAK	**Old Harbor**	**8.25**	**53**	Pn	**Pn**	**01 06 43.2**	**-0.4**
P18K	**Big Mountain,**	**8.68**	**37**	Pn	**Pn**	**01 06 51.2**	**+1.6**
KDAK	**Kodiak Island**	**8.85**	**51**	Pn	**Pn**	**01 06 51.4**	**-0.4**
KDAK	**Kodiak Island**	**8.85**	**51**	Pn	**Pn**	**01 06 51.3**	**-0.5**
	comp=E,4.4nm,0.3s,baz=241,slow=6.1,SNR=47						
KDAK				Sn	**Sn**	**01 08 25.4**	**-6.0**
	comp=E,0.3nm,0.3s,baz=342,slow=19,SNR=1.7						
	comp=E,10nm,0.3s						
Q19K	**Cape

N32M Quiet Lake 19.31 52 P **P** 01 09 08.8 -0.2
N32M IAmb IAmb 01 09 16.0
comp=Z,34nm,0.8s
EPYK Eagle Plains 19.60 35 P **P** 01 09 11.7 -0.5
EPYK IAmb IAmb 01 09 13.5
comp=Z,12nm,0.7s
H31M Peel River 20.20 38 P **P** 01 09 18.2 -0.5
H31M IAmb IAmb 01 09 20.4
comp=Z,9.9nm,0.9s
BILL Bilibino 20.31 329 *i* P **P** 01 09 19.6 -0.1
BILL pmax pmax
comp=Z,7.0nm,1.9s
E29M Blow River 20.32 30 P **P** 01 09 19.6 -0.2
E29M IAmb IAmb 01 09 20.4
comp=Z,7.3nm,1.2s
DLBC Dease Lake 20.59 60 P Pn 01 09 24.0 -1.2
DLBC IAmb IAmb 01 09 29.8
comp=Z,8.0nm,1.1s
DLBC Dease Lake 20.59 60 P Pn 01 09 26.6 +1.3
comp=Z,4.2nm,0.8s,baz=236,slow=12,SNR=5.1
G31M Satah River 20.72 35 P **P** 01 09 22.7 -1.5
G31M IAmb IAmb 01 09 23.7
comp=Z,5.2nm,0.9s
INK Inuvik 21.64 32 P **P** 01 09 32.9 -1.1
INK IAmb IAmb 01 09 33.4
comp=Z,6.8nm,0.9s
INK Inuvik 21.64 32 P **P** 01 09 32.9 -1.1
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 21.64 32 P **P** 01 09 32.8 -1.2
comp=Z,3.6nm,0.4s,baz=264,slow=12,SNR=49
INK S **S** 01 13 25.9 -7.3
comp=Z,0.5nm,0.6s,baz=10,slow=29,SNR=1.8
comp=Z,3.6nm,0.4s
PEA0B Petropavlovsk- 22.00 285 P **P** 01 09 37.0 -1.1
PEA0B Petropavlovsk- 22.00 285 *i* P **P** 01 09 37.7 -0.4
PETK Petropavlovsk- 22.00 285 P **P** 01 09 37.5 -0.6
PETK Petropavlovsk- 22.00 285 P **P** 01 09 37.5 -0.6
PETK Petropavlovsk- 22.00 285 P **P** 01 09 37.4 -0.7
comp=Z,6.8nm,0.4s,baz=68,slow=16,SNR=30
comp=Z,6.8nm,0.4s
SEY Seymchan 24.09 311 *ce*P **P** 01 09 57.8 -1.5
SEY pmax pmax
comp=Z,3.0nm,0.4s
MA2 Magadan 24.83 303 P **P** 01 10 05.6 -0.5
MA2 IAmb IAmb 01 10 34.0
comp=Z,24nm,1.5s
MA2 Magadan 24.83 303 *ce*P **P** 01 10 05.8 -0.3
MA2 pmax pmax
comp=Z,10.0nm,0.9s
MA2 Magadan 24.83 303 P **P** 01 10 06.3 +0.2
comp=Z,7.7nm,0.6s,baz=69,slow=11,SNR=6.9
comp=Z,7.7nm,0.6s
YKA Yellowknife Ar 28.12 50 *ce*P **P** 01 10 38.2 +2.5
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 28.12 50 P **P** 01 10 37.4 +1.7
comp=Z,0.8nm,0.7s,baz=270,slow=7.8,SNR=14
YKA LR LR 01 22 15.7
comp=Z,62nm,18.1s,baz=3.0,slow=38
comp=Z,0.8nm,0.7s
TIXI Tiksi 33.53 329 LR LR 01 24 17.9
comp=Z,42nm,18.0s,baz=27,slow=35
YAK Yakutsk 34.61 311 P **P** 01 11 31.0 -1.7
YAK Yakutsk 34.61 311 *i* P **P** 01 11 31.3 -1.4
YAK pmax pmax
comp=Z,9.0nm,0.5s
NVAR Mina Array Bea 35.33 95 P **P** 01 11 41.8 +2.3
comp=Z,0.2nm,0.3s,baz=301,slow=10,SNR=2.7
comp=Z,0.2nm,0.3s
PD31 Pinedale Array 37.99 82 P **P** 01 11 59.7 -2.5
PDAR Pinedale Array 37.99 82 P **P** 01 11 59.9 -2.2
PDAR Pinedale Array 37.99 82 P **P** 01 12 04.1 +2.0
comp=Z,0.3nm,0.6s,baz=298,slow=6.0,SNR=3.6
comp=Z,0.3nm,0.6s
KLR Kul'dur 38.51 291 P **P** 01 12 05.0 -1.1
comp=Z,1.6nm,0.7s,baz=21,slow=9.0,SNR=4.1
comp=Z,1.6nm,0.7s
H11N2 WAKE ISLAND Hy 39.39 223 T T 01 54 15.2
baz=26,slow=76,SNR=15
H11N3 WAKE ISLAND Hy 39.39 223 T T 01 54 28.8
baz=26,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 39.41 223 T T 01 54 14.1
baz=26,slow=76,SNR=9.7
H11S1 WAKE ISLAND Hy 40.56 223 T T 01 55 50.5
baz=25,slow=76,SNR=8.7
H11S2 WAKE ISLAND Hy 40.58 223 T T 01 56 19.9
baz=25,slow=76,SNR=16
H11S3 WAKE ISLAND Hy 40.58 223 T T 01 55 59.9
baz=25,slow=76,SNR=19
NRIK Noril'sk 47.09 332 *ce*P **P** 01 13 14.4 -1.0
NRIK pmax pmax
comp=Z,2.0nm,1.0s
NRIK Noril'sk 47.09 332 P **P** 01 13 15.0 -0.4
comp=Z,1.5nm,0.6s,baz=78,slow=6.1,SNR=4.4
comp=Z,1.5nm,0.6s
FRB Frobisher Bay 47.17 37 LR LR 01 34 42.4
comp=Z,56nm,19.0s,baz=128,slow=38
TXAR Lajitas Array 50.39 92 P **P** 01 13 43.1 +1.7
comp=Z,0.4nm,0.8s,baz=302,slow=6.9,SNR=5.7
TXAR ScP **ScP** 01 18 57.2 +1.8
comp=Z,0.3nm,0.9s,baz=318,slow=2.6,SNR=2.6
comp=Z,0.4nm,0.8s
HHC Hu-ho-hao-te 54.92 293 *e*P **P** 01 14 12.8 -2.0
HHC sP pwP 01 14 19.9 -2.5
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,98nm,4.3s
ARCES ARCESS Array B 57.63 355 P **P** 01 14 33.1 -0.6
comp=Z,0.6nm,0.4s,baz=11,slow=8.1,SNR=9.6
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 58.61 319 P **P** 01 14 40.4 -0.2
comp=Z,0.9nm,0.3s,baz=39,slow=6.6,SNR=8.1
comp=Z,0.9nm,0.3s
DGZ Jazzator, Alta 60.70 315 *i* P **P** 01 14 55.3 -0.1
DGZ pmax pmax
comp=Z,4.0nm,1.4s
KURK Kurchatov 63.53 320 P **P** 01 15 13.6 -0.5
KURK IAmb IAmb 01 15 15.0
comp=Z,2.5nm,1.1s
KURK Kurchatov 63.53 320 P **P** 01 15 14.6 +0.5
KURBB Kurchatov Arra 63.63 320 P **P** 01 15 14.6 -0.2
comp=Z,0.5nm,0.3s,baz=44,slow=8.0,SNR=17
comp=Z,0.5nm,0.3s
BVAR Borovoye Array 64.62 326 P **P** 01 15 21.7 +0.4
comp=Z,7.6nm,0.6s,baz=47,slow=7.3,SNR=45
comp=Z,7.6nm,0.6s
BRVK Borovoye 64.63 326 P **P** 01 15 21.3 0.0
BRVK Borovoye 64.63 326 *ce*P **P** 01 15 21.5 +0.2
BRVK pmax pmax
comp=Z,5.0nm,1.0s
MK31 Makanchi Array 65.13 315 P **P** 01 15 23.9 -0.9
MK31 Makanchi Array 65.13 315 P **P** 01 15 23.9 -0.9
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 65.13 315 P **P** 01 15 23.8 -0.9
MKAR Makanchi Array 65.13 315 *i* P **P** 01 15 24.3 -0.4
MKAR Makanchi Array 65.13 315 P **P** 01 15 23.7 -1.0
comp=Z,0.3nm,0.5s,baz=46,slow=5.6,SNR=12
comp=Z,0.3nm,0.5s
ARU Arti 65.20 335 P **P** 01 15 24.4 -0.6
ARU Arti 65.20 335 *d* P **P** 01 15 24.7 -0.3
ARU S **S** 01 24 10.1 +2.5
ARU SS **SS** 01 28 20.1 +1.1
ARU pmax pmax
comp=Z,5.0nm,0.6s
ARU Arti 65.20 335 P **P** 01 15 25.1 +0.1
comp=Z,4.6nm,0.4s,baz=72,slow=5.2,SNR=11
comp=Z,4.6nm,0.4s
KIRV Kirov 65.34 341 LR LR 01 45 44.9
comp=Z,57nm,18.4s,baz=289,slow=38
FINES FINESS Array B 65.65 354 P **P** 01 15 27.2 -0.6
comp=Z,0.8nm,0.4s,baz=26,slow=7.8,SNR=11
comp=Z,0.8nm,0.4s
NC405 NORSAR Array S 66.34 1 P **P** 01 15 32.1 -0.1
HFS Hagfors 67.34 0 P **P** 01 15 38.6 0.0
comp=Z,1.5nm,0.4s,baz=35,slow=3.6,SNR=15
comp=Z,1.5nm,0.4s
AKTO Aktyubinsk 70.71 332 P **P** 01 16 00.4 +0.7
comp=Z,7.4nm,0.7s,baz=34,slow=4.6,SNR=27
comp=Z,7.4nm,0.7s
EKA Eskdalemuir Ar 71.17 11 P **P** 01 16 03.3 +0.9
comp=Z,0.9nm,0.6s,baz=316,slow=5.0,SNR=3.6
comp=Z,0.9nm,0.6s
ABKAR Akbulak array 71.20 330 P **P** 01 16 03.1 +0.4
ABKAR Akbulak array 71.20 330 P **P** 01 16 03.4 +0.7
ABKAR IAmb IAmb 01 16 03.9
comp=Z,3.8nm,0.8s
AAK Ala-Archa 71.75 318 P **P** 01 16 06.6 +0.2
AAK IAmb IAmb 01 16 12.8
comp=Z,3.0nm,1.4s
AAK Ala-Archa 71.75 318 *ce*P **P** 01 16 07.2 +0.8
AAK pmax pmax
comp=Z,7.0nm,2.2s
KK31 Karatay Array 72.94 321 P **P** 01 16 13.4 +0.1
KK31 Karatay Array 72.94 321 P **P** 01 16 13.4 +0.1
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 72.94 321 P **P** 01 16 13.4 +0.1
KKAR Karatay Array 72.94 321 P **P** 01 16 13.4 +0.1
KSH Kashi 73.73 315 P **P** 01 16 21.5 +3.4
KSH sP pwP 01 16 28.8 +3.0
KSH pmax pmax
comp=Z,2.0nm,0.6s
BTK Batken 75.41 319 P **P** 01 16 28.0 +0.2
BTK Batken 75.41 319 P **P** 01 16 28.0 +0.2
BTK pmax pmax
comp=Z,5.0nm,0.7s
DAVOX Davos/Dischmat 80.64 3 P **P** 01 16 58.3 +1.4
comp=Z,1.6nm,0.6s,baz=349,slow=16,SNR=2.3
comp=Z,1.6nm,0.6s
KBZ Khabaz 80.71 340 P **P** 01 16 58.4 +1.3
comp=Z,1.9nm,0.9s,baz=327,slow=4.8,SNR=3.7
comp=Z,1.9nm,0.9s
GEYT Alibeck 81.96 327 P **P** 01 17 04.8 +0.9
comp=Z,2.0nm,0.8s,baz=42,slow=6.7,SNR=6.1
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 86.29 345 P **P** 01 17 26.9 +0.9
comp=Z,1.0nm,0.7s,baz=21,slow=2.7,SNR=6.8
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 86.44 14 P **P** 01 17 27.4 +0.8
comp=Z,0.4nm,0.8s,baz=338,slow=3.2,SNR=1.8
comp=Z,0.4nm,0.8s
MMAI Mount Meron Ar 92.55 343 P **P** 01 17 56.8 +1.3
comp=Z,0.1nm,0.3s,baz=10,slow=3.2,SNR=1.8
comp=Z,0.1nm,0.3s
H03N2 Juan Fernandez 113.95 114 T T 03 28 38.2
baz=322,slow=77,SNR=4.6
H03N1 Juan Fernandez 113.96 114 T T 03 28 16.8
baz=322,slow=77,SNR=5.9
H03N3 Juan Fernandez 113.96 114 T T 03 28 14.2
baz=322,slow=77,SNR=6.2

*IDC **24** 01:05:17.7±2.7, 22°.77N×94°.60E, h99km±31km, mb3.5/6, mbtmp3.8/8, Error ellipse: s-maj=32.7km s-min=13.7km az=52.0*

ISC 24 01:05:17.7±1.0, 22°.8N±0°.2×94°.61E±0°.09, h100km, n8, σ0s23/9, mb3.7/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**2.74**	**268**	P	**Pn**	**01 05 59.8**	**-0.2**
	64nm,0.3s,baz=89,slow=8.0,SNR=4.0						
BRDH				S	**Sn**	**01 06 32.8**	**+0.2**
	152nm,0.3s,baz=270,slow=20,SNR=13						
CMAR	**Chiang Mai Arr**	**5.91**	**136**	P	**Pn**	**01 06 42.9**	**0.0**
	0.8nm,0.3s,baz=314,slow=15,SNR=1.3						
CMAR				Lg	Lg	01 08 29.4	
	0.8nm,0.3s,baz=310,slow=30,SNR=5.9						
MKAR	**Makanchi Array**	**25.94**	**340**	P	**P**	**01 10 41.1**	**+0.4**
	1.2nm,0.5s,baz=140,slow=10,SNR=27						
	1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**30.50**	**340**	P	**P**	**01 11 21.2**	**+0.1**
	0.8nm,0.5s,baz=149,slow=8.9,SNR=8.8						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**31.99**	**349**	P	**P**	**01 11 34.2**	**0.0**
	0.3nm,0.3s,baz=172,slow=4.3,SNR=3.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**35.39**	**335**	P	**P**	**01 12 03.5**	**-0.2**
	0.4nm,0.4s,baz=145,slow=13,SNR=3.2						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**57.51**	**135**	P	**P**	**01 14 56.7**	**-0.1**
	0.9nm,0.5s,baz=321,slow=7.5,SNR=24						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**59.92**	**138**	P	**P**	**01 15 13.7**	**+0.1**
	0.8nm,0.5s,baz=321,slow=6.8,SNR=16						
	0.8nm,0.5s						

IDC 24 01:10:15.2±1.7, 41°.08N×108°.82E, h0km, mb3.6/2, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=58.4km s-min=22.0km az=69.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**6.98**	**346**	Pn	Pn	01 12 00.0	+1.3
	1.2nm,0.3s,baz=169,slow=15,SNR=38						
SONM				Sn	Sn	01 13 18.1	-0.7
	2.0nm,0.3s,baz=171,slow=21,SNR=7.4						
SONM				Lg	Lg	01 13 55.3	
	3.8nm,0.3s,baz=169,slow=30,SNR=6.5						
	1.5nm,0.3s						
MKAR	**Makanchi Array**	**19.89**	**296**	P	Pn	01 14 49.0	-0.6
	0.1nm,0.3s,baz=94,slow=12,SNR=6.4						
	0.3nm,0.6s						
NOA	**NORSAR Array B**	**58.46**	**326**	P	P	01 20 12.2	-0.3
	0.8nm,0.9s,baz=62,slow=7.0,SNR=2.1						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**68.50**	**155**	P	P	01 21 18.9	-0.3
	0.3nm,0.7s,baz=354,slow=8.5,SNR=3.5						
	0.3nm,0.7s						

NOU 24 01:16:37.9, 15°.55S×167°.99E, h0km, MLv3.9/4, Vanuatu Islands, Vanuatu Islands

*IDC **24** 01:17:09.7±0.6, 2°.29N×98°.74E, h0km, mb4.3/18, mbtmp4.3/18, MS3.3/8, Error ellipse: s-maj=28.6km s-min=13.5km az=54.0*

*NEIC **24** 01:17:11.4±1.0, 2°.30N±0°.04×98°.69E±0°.05, h10km±1km, mb4.5/39, Error ellipse: s-maj=8.7km s-min=4.3km az=121.0*

*DJA **24** 01:17:12.7±0.2, 2°.N±2°×98°.9E±°, h10km, M4.6/12, mb4.8/3, MLv4.5/12*

ISC 24 01:17:11.4±0.4, 2°.35N±0°.04×98°.73E±0°.04, h10km, n106, σ1s34/105, mb4.5/37, MS3.4/6, 9C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPSI	**Rantau Prapat**	**0.40**	**29**	Pg	**Pb**	**01 17 20.6**	**0.0**
RPSI				Sg	**Sb**	**01 17 26.4**	**-0.3**
KCSI	**Kotacane, Aceh**	**1.51**	**321**	P	**Pb**	**01 17 40.7**	**+1.1**
GSI	**Gunungsitoli**	**1.55**	**228**	Pn	**Pn**	**01 17 38.7**	**-0.5**
GSI	**Gunungsitoli**	**1.55**	**228**	P	**Pn**	**01 17 40.7**	**+1.5**
GSI				S	**Sn**	**01 18 01.4**	**+2.0**
SNSI	**Sinabang, Aceh**	**2.41**	**272**	P	**Pn**	**01 17 51.9**	**+1.0**
PBSI	**Pulau Batu**	**2.43**	**191**	P	**Pn**	**01 17 52.7**	**+1.5**
PBSI				S	**Sn**	**01 18 23.6**	**+2.6**
MLSI	**Meulaboh, Aceh**	**3.01**	**309**	P	**Pn**	**01 18 00.4**	**+1.2**
BKNI	**Bangkinang**	**3.06**	**131**	Pn	**Pn**	**01 18 01.7**	**+1.8**
IPM	**Ipoh**	**3.12**	**47**		**Pn**	**01 18 03.1**	**+2.4**
LHMI	**Lhok Sumawe**	**3.37**	**328**		**Pn**	**01 18 04.1**	**-0.1**
LHMI	**Lhok Sumawe**	**3.37**	**328**	P	**Pn**	**01 18 06.0**	**+1.8**
KULM	**Kulim**	**3.49**	**33**	Pn	**Pn**	**01 18 06.7**	**+0.9**
SISI	**Saibi**	**3.67**	**174**	P	**Pn**	**01 18 09.5**	**+1.3**
MYKOM	**Kota Tinggi**	**5.14**	**96**		**Pn**	**01 18 28.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**16.01**	**1**	Pn	**Pn**	**01 20 57.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**16.01**	**1**	Pn	**P**	**01 21 01.7**	**+1.2**
	0.4nm,0.3s,baz=196,slow=12,SNR=16						
CMAR				LR	LR	01 27 21.5	
	comp=Z,73nm,18.7s,baz=95,slow=38						
CHTO	**Chiang Mai**	**16.37**	**1**	Pn	**Pn**	**01 21 01.8**	**+0.4**
CRAI	**Chiangrai**	**17.84**	**5**	P	**Pn**	**01 21 21.0**	**+1.0**
PALK	**Pallekele**	**18.62**	**286**	LR	LR	01 27 49.6	
	comp=Z,110nm,19.9s,baz=221,slow=34						
SLVN	**Son La**	**19.53**	**15**	P	**P**	**01 21 40.1**	**+0.7**
SLVN				IAmb	IAmb	01 21 47.8	
	comp=Z,20nm,1.2s						
TNCH	**TengChong**	**22.55**	**359**	*e*P	**P**	**01 22 13.9**	**+1.8**
TNCH				PP	**PnPn**	**01 22 43.0**	**+7.4**
TNCH				S	**S**	**01 26 16.3**	**-3.3**
TNCH				PcS	**PcS**	**01 29 45.6**	**+0.6**
TNCH				pmax	pmax		
	comp=Z,66nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,210nm,5.5s						
TNCH				LR	LR		
	comp=N,310nm,8.4s						
TNCH				LR	LR		
	comp=E,220nm,6.3s						
TNCH				LR	LR		
	comp=Z,230nm,8.6s						
SHL	**Shillong**	**24.01**	**345**	P	**P**	**01 22 25.9**	**-0.9**
JOW	**Kunigami**	**37.34**	**47**	LR	LR	01 39 01.1	
	comp=Z,23nm,20.5s,baz=174,slow=35						
NIL	**Nilore**	**39.21**	**325**	P	**P**	**01 24 38.5**	**-1.6**
NIL				IAmb	IAmb	01 24 54.5	
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**40.04**	**15**	*e*P	**P**	**01 24 48.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
WB0	**Warramunga Arr**	**41.33**	**124**	P	**P**	**01 24 56.6**	**-1.2**
WB0				IAmb	IAmb	01 24 58.4	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**41.37**	**124**	P	**P**	**01 24 57.0**	**-1.1**
WRA	**Warramunga Arr**	**41.37**	**124**	P	**P**	**01 24 57.2**	**-0.9**
	comp=Z,4.3nm,0.8s,baz=301,slow=9.2,SNR=18						
WRA				PcP	**PcP**	**01 26 56.1**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=311,slow=2.7,SNR=6.4						
	comp=Z,4.3nm,0.8s						
KBL	**Kabul**	**42.31**	**323**	P	**P**	**01 25 05.0**	**-0.9**
KBL				IAmb	IAmb	01 25 08.8	
	comp=Z,3.7nm,0.7s						
KSH	**Kashi**	**42.40**	**334**	P	**P**	**01 25 06.3**	**-0.1**
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WMQ	**Urumqi**	**42.45**	**348**	*e*P	**P**	**01 25 08.3**	**+1.7**
ASAR	**Alice Springs**	**42.89**	**129**	P	**P**	**01 25 09.2**	**-1.3**
ASAR	**Alice Springs**	**42.89**	**129**	P	**P**	**01 25 09.4**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=304,slow=7.7,SNR=18						
ASAR				PcP	**PcP**	**01 27 01.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=274,slow=3.6,SNR=6.1						
	comp=Z,1.5nm,0.7s						
JNU	**Nakatsue**	**42.94**	**41**	LR	LR	01 44 02.6	
	comp=Z,14nm,18.1s,baz=150,slow=38						
FORT	**Forrest**	**43.20**	**142**	P	**P**	**01 25 12.3**	**-0.5**
NRN	**Naryn**	**43.97**	**335**	P	**P**	**01 25 19.2**	**0.0**
NRN				IAmb	IAmb	01 25 34.6	
	comp=Z,5.7nm,1.4s						
SIMJ	**Simiganj**	**45.20**	**327**	P	**P**	**01 25 27.8**	**-1.1**
SIMJ				IAmb	IAmb	01 25 42.2	
	comp=Z,4.4nm,0.7s						
ARSB	**Arslanbob**	**45.20**	**333**	P	**P**	**01 25 28.7**	**-0.3**
BTK	**Batken**	**45.27**	**330**	P	**P**	**01 25 28.8**	**-0.7**
BTK				IAmb	IAmb	01 25 44.6	
	comp=Z,6.2nm,1.1s						
AAK	**Ala-Archa**	**45.59**	**335**	LR	LR	01 47 13.3	
	comp=Z,26nm,22.0s,baz=41,slow=40						
SONM	**Songino Array**	**45.79**	**7**	P	**P**	**01 25 33.8**	**+0.3**
SONM	**Songino Array**	**45.79**	**7**	P	**P**	**01 25 34.2**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=194,slow=12,SNR=13						
SONM				PcP	**PcP**	**01 27 11.3**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=188,slow=2.7,SNR=4.4						
	comp=Z,1.9nm,0.9s						
MK31	**Makanchi Array**	**46.53**	**344**	P	**P**	**01 25 38.5**	**-0.6**
MK31				IAmb	IAmb	01 25 41.1	
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**46.53**	**344**	P	**P**	**01 25 38.2**	**-1.0**
MKAR	**Makanchi Array**	**46.53**	**344**	P	**P**	**01 25 39.6**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=158,slow=7.4,SNR=48						
	comp=Z,3.9nm,0.7s						
MAKZ	**Makanchi**	**46.63**	**344**	P	**P**	**01 25 38.3**	**-1.7**
MAKZ				IAmb	IAmb	01 25 42.1	
	comp=Z,3.2nm,0.8s						
KK31	**Karatay Array**	**47.74**	**332**	P	**P**	**01 25 48.5**	**-0.2**
KK31				IAmb	IAmb	01 26 14.8	
	comp=Z,2.3nm,1.1s						
KKAR	**Karatay Array**	**47.74**	**332**	P	**P**	**01 25 48.2**	**-0.5**
KURBB	**Kurchatov Arra**	**51.05**	**344**	P	**P**	**01 26 13.3**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=165,slow=7.3,SNR=29						
KURBB				PcP	**PcP**	**01 27 30.1**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=149,slow=3.4,SNR=4.1						
	comp=Z,1.6nm,0.7s						
KURK	**Kurchatov**	**51.11**	**344**	P	**P**	**01 26 13.8**	**-0.5**
KURK				IAmb	IAmb	01 26 29.0	
	comp=Z,5.6nm,0.8s						
GEYT	**Alibeck**	**51.34**	**319**	P	**P**	**01 26 16.5**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=119,slow=8.9,SNR=7.3						
	comp=Z,2.2nm,0.5s						
ZAA0	**Zalesovo Array**	**52.69**	**350**	P	**P**	**01 26 24.8**	**-1.2**
ZAA0				IAmb	IAmb	01 26 40.6	
	comp=Z,5.2nm,0.6s						
ZALV	**Zalesovo Beam**	**52.69**	**350**	P	**P**	**01 26 24.9**	**-1.1**
ZALV	**Zalesovo Beam**	**52.69**	**350**	P	**P**	**01 26 25.1**	**-0.9**
	comp=Z,3.9nm,0.6s,baz=170,slow=7.1,SNR=22						
	comp=Z,3.9nm,0.6s						
STKA	**Stephens Creek**	**53.01**	**134**	P	**P**	**01 26 27.6**	**-1.1**
STKA	**Stephens Creek**	**53.01**	**134**	P	**P**	**01 26 27.8**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=309,slow=6.1,SNR=3.9						
	comp=Z,1.9nm,0.5s						
RAYN	**Ar Rayn**	**55.59**	**297**	P	**P**	**01 26 46.6**	**-1.1**
RAYN				IAmb	IAmb	01 26 48.8	
	comp=Z,4.1nm,0.8s						
BVAR	**Borovoye Array**	**55.70**	**340**	P	**P**	**01 26 47.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=149,slow=10,SNR=8.3						
	comp=Z,1.3nm,0.5s						
BRVK	**Borovoye**	**55.76**	**340**	P	**P**	**01 26 48.4**	**0.0**
BRVK				IAmb	IAmb	01 27 03.3	
	comp=Z,3.6nm,0.8s						
ABKAR	**Akbulak array**	**57.25**	**331**	P	**P**	**01 26 57.8**	**-1.2**
ABKAR	**Akbulak array**	**57.25**	**331**	P	**P**	**01 26 57.8**	**-1.2**
GURO	**Guroymak-BITLI**	**62.91**	**313**	P	**P**	**01 27 37.6**	**-0.8**
GURO				IAmb	IAmb	01 27 41.1	
	comp=Z,3.1nm,0.8s						
H04N2	**CROZET ISLANDS**	**63.58**	**215**	T	T	02 35 33.1	
	baz=53,slow=75,SNR=21						
H04N1	**CROZET ISLANDS**	**63.59**	**215**	T	T	02 35 33.7	
	baz=53,slow=75,SNR=24						
H04N3	**CROZET ISLANDS**	**63.60**	**215**	T	T	02 35 32.3	
	baz=53,slow=75,SNR=21						
KBZ	**Khabaz**	**64.23**	**318**	P	**P**	**01 27 46.3**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=142,slow=4.5,SNR=7.2						
	comp=Z,3.9nm,0.9s						
GAZ	**Gaziantep**	**66.11**	**310**	P	**P**	**01 27 57.8**	**-1.5**
MMAI	**Mount Meron Ar**	**66.49**	**305**	P	**P**	**01 28 02.1**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=100,slow=9.4,SNR=6.3						
	comp=Z,1.2nm,0.7s						
MBAR	**Mbarara**	**68.04**	**268**	LR	LR	01 57 12.5	
	comp=Z,35nm,18.0s,baz=288,slow=35						
BR131	**Keskin Array S**	**69.49**	**312**	P	**P**	**01 28 18.9**	**-1.7**
BR131				IAmb	IAmb	01 28 37.9	
	comp=Z,1.9nm,0.8s						
BRTR	**Keskin Array B**	**69.49**	**312**	P	**P**	**01 28 19.1**	**-1.5**
BRTR	**Keskin Array B**	**69.49**	**312**	P	**P**	**01 28 19.4**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=126,slow=7.0,SNR=13						
	comp=Z,1.5nm,0.8s						
ELL	**Elmali**	**71.69**	**308**	P	**P**	**01 28 33.0**	**-1.1**
LSZ	**Lusaka**	**71.91**	**253**	LR	LR	01 56 51.3	
	comp=Z,38nm,18.4s,baz=103,slow=33						
KARP	**Karpathos**	**73.67**	**306**	P	**P**	**01 28 44.9**	**-0.8**
TIRR	**Tirgusor**	**74.38**	**316**	⇑P	**P**	**01 28 49.4**	**-0.2**
SORM	**Soroca**	**75.23**	**319**	⇑P	**P**	**01 28 53.8**	**-0.7**
LOZB	**Loznitsa**	**75.45**	**314**	⇓P	**P**	**01 28 58.8**	**+2.9**
LBTB	**Lobatse**	**75.77**	**244**	P	**P**	**01 28 56.7**	**-1.5**
LBTB				IAmb	IAmb	01 28 59.7	
	comp=Z,4.7nm,0.8s						
LBTB	**Lobatse**	**75.77**	**244**	LR	LR	01 57 16.5	
	comp=Z,48nm,18.6s,baz=184,slow=32						
VRI	**Vrincioaia**	**75.83**	**317**	⇑P	**P**	**01 28 58.4**	**+0.3**
PLOR	**Plostina**	**75.88**	**317**	⇑P	**P**	**01 28 58.6**	**+0.2**
TESR	**Tescani**	**76.01**	**317**	⇑P	**P**	**01 28 59.2**	**+0.1**
MLR	**Muntele Rosu**	**76.30**	**316**	⇓P	**P**	**01 29 01.4**	**+0.5**
MLR	**Muntele Rosu**	**76.30**	**316**	P	**P**	**01 29 00.1**	**-0.8**
MLR				IAmb	IAmb	01 29 01.7	
	comp=Z,7.3nm,1.1s						
MLR	**Muntele Rosu**	**76.30**	**316**	P	**P**	**01 29 00.8**	**0.0**
	comp=Z,2.9nm,0.9s,baz=100,slow=12,SNR=5.0						
	comp=Z,2.9nm,0.9s						
BOSA	**Boshof**	**76.68**	**240**	P	**P**	**01 29 02.2**	**-1.1**
BOS

FINES **FINESS Array B** 79.70 332 P P 01 29 18.6 -0.6
FINES **FINESS Array B** 79.70 332 P P 01 29 19.1 -0.1
comp=Z,2.3nm,0.8s,baz=97,slow=5.7,SNR=11
comp=Z,2.3nm,0.8s
ARCES **ARCESS Array B** 81.98 340 P P 01 29 32.0 +0.7
ARCES **ARCESS Array B** 81.98 340 P P 01 29 31.9 +0.7
comp=Z,1.1nm,0.5s,baz=98,slow=6.5,SNR=11
comp=Z,1.1nm,0.5s
HFS **Hagfors** 85.50 330 P P 01 29 51.2 +1.7
comp=Z,2.4nm,0.5s,baz=108,slow=4.7,SNR=16
comp=Z,2.4nm,0.5s
NC602 **NORSAR Array S** 86.59 331 P P 01 29 54.2 -0.6
NB2 **NORSAR Subarra** 86.76 331 P P 01 29 54.9 -0.8
comp=Z,3.7nm,0.8s,baz=92,slow=5.1
NOA **NORSAR Array B** 86.76 331 P P 01 29 57.2 +1.5
comp=Z,1.9nm,0.8s,baz=92,slow=5.0,SNR=6.4
comp=Z,1.9nm,0.8s
TXAR **Lajitas Array** 141.89 33 PKhKP PKPpre 01 36 41.3
comp=Z,0.2nm,0.7s,baz=259,slow=0.9,SNR=2.5
BDFB **Brasilia** 144.68 246 PKP **PKPab** 01 36 49.2 +0.8
comp=Z,2.9nm,0.7s,baz=90,slow=4.4,SNR=5.1
CPUP **Villa Florida** 146.88 222 PKPbc **PKPdf** 01 36 54.7 +1.6
comp=Z,2.5nm,0.7s,baz=121,slow=2.7,SNR=6.5

CATAC ***24*** *01:50:52.0±0.2, 12.°70N×88.°21W, h35km±3km, MB5.9, mb5.7, ML5.4*

IDC ***24*** *01:50:52.9±0.6, 12.°92N×87.°89W, h66km±3km, mb4.4/25, mbtmp4.7/28, MS3.9/54, Error ellipse: s-maj=16.7km s-min=7.1km az=51.0*

GCMT ***24*** *01:50:52.7±0.3, 12.°63N±0.°02×88.°27W±0.°03, h52km±2km, MW4.9/87, Moment Tensor Solution. s24,c27; s87,c129; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.82±.16; Mθθ-0.20±.11; Mϕϕ2.02±.11; Mrθ1.62±.07; Mθϕ-1.33±.08; Mϕr-1.33±.09; Best double couple: Mω3.11400×10¹⁶ NP1:ϕs314.00000°, δ68.00000°, λ-111.00000°. NP2: ϕs181.00000°, δ30.00000°, λ-48.00000°. Principal axes: T 3.3610, Plg21.0000°, Azm60.0000°; N -0.4900, Plg20.0000°, Azm322.0000°; P -2.8680, Plg61.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***24*** *01:50:53.6±0.9, 12.°72N×88.°11W, h96km, mb4.9/28 Error ellipse: s-maj=12.3km s-min=5.2km az=111.0*

NEIC ***24*** *01:50:53.7±1.6, 12.°74N±0.°06×88.°15W±0.°05, h68km±5km, mb5.0/177, Mwr4.9/28, Error ellipse: s-maj=9.6km s-min=5.4km az=208.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.88; Mθθ0.35; Mϕϕ1.52; Mrθ0.71; Mθϕ-1.51; Mϕr-0.01; Fault plane solution: M0 2.40000×10¹⁶ NP1:ϕs166.68000°, δ43.86000°, λ-58.11000°. NP2:ϕs305.89000°, δ53.96000°, λ-116.92000°. Principal axes: T 2.5985, Plg5.0000°, Azm55.0000°; N -0.4539, Plg21.0000°, Azm323.0000°; P -2.1446, Plg68.0000°, Azm158.0000°;*

NEIC ***24*** *01:50:53.5, 12.°70N×88.°19W, h58km*

GCG ***24*** *01:50:53.4±2.6, 12.°73N×88.°18W, h59km, MD4.7*

SNET ***24*** *01:50:53.8±1.2, 12.°75N×88.°30W, h44km, ML5.3*

ISC ***24*** **01:50:51.7**±0.3, **12.°70N**±0.°03×**88.°21W**±0.°02, **h61**km±2km, **h61**km;**pP-P, n922,** σ1s**22**/1056, **mb5.0**/110, **2C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JUCU	**Jucuarın**	**0.56**	**357**	*eP*		**Pn**	**01 51 04.8**	**+0.3**
JUCU				*eS*		**Sn**	**01 51 14.4**	**+0.6**
JUCU	**Jucuarın**	**0.56**	**357**	*i* P		**Pn**	**01 51 04.4**	**-0.1**
JUCU				*i* S		**Sn**	**01 51 14.6**	**+0.8**
JUCU				IAML			01 51 15.6	
comp=Z,110μm,1.0s								
CNCH	**Conchagua**	**0.69**	**33**	*i* P		**Pn**	**01 51 05.9**	**-0.1**
CNCH				*i* S		**Sn**	**01 51 17.1**	**+0.6**
CNCH				IAML			01 51 22.5	
comp=Z,390μm,1.0s								
LCND	**La Caada**	**0.69**	**27**	*eP*		**Pn**	**01 51 06.9**	**+1.0**
LCND	**La Caada**	**0.69**	**27**	*i* P		**Pn**	**01 51 06.9**	**+1.0**
LCND				*i* S		**Sn**	**01 51 16.6**	**+0.3**
CSGN	**Cosiguina Volc**	**0.70**	**66**	*i* P		**Pn**	**01 51 06.5**	**+0.4**
CSGN				IAML			01 51 22.4	
comp=Z,460μm,1.0s								
ALJI	**Alcalde de J**	**0.72**	**331**	*i* P		Pn	01 50 57.2	-9.1
ALJI				IAML			01 50 57.8	
comp=Z,72μm,1.0s								
ALJI				*i* S		**Sn**	**01 51 08.6**	**-8.3**
LCY	**Lacayo**	**0.73**	**354**	*i* P		**Pn**	**01 51 07.3**	**+0.8**
VSM	**San Miguel**	**0.73**	**355**	*eP*		**Pn**	**01 51 07.6**	**+0.9**
RANC	**El Ranchito**	**0.74**	**354**	*eP*		**Pn**	**01 51 07.6**	**+0.9**
RANC	**El Ranchito**	**0.74**	**354**	*i* P		**Pn**	**01 51 06.8**	**+0.1**
RANC				*i* S		**Sn**	**01 51 17.1**	**-0.5**
RANC				IAML			01 51 21.4	
comp=Z,110μm,1.0s								
BLLM	**Bellamira**	**0.74**	**358**	↑*i* P		**Pn**	**01 51 07.5**	**+0.8**
CNRM	**Centro Naciona**	**0.78**	**3**	*eP*		**Pn**	**01 51 08.0**	**+1.0**
CNRM				*eS*		**Sn**	**01 51 20.2**	**+2.0**
CNRM				*eS*		**Sn**	**01 51 20.7**	**+2.5**
CNRM	**Centro Naciona**	**0.78**	**3**	*i* P		**Pn**	**01 51 08.0**	**+1.0**
CNRM				*i* S		**Sn**	**01 51 17.8**	**-0.4**
CNRM				IAML			01 51 22.8	
comp=Z,1300μm,1.0s								
PACA	**Pacayal**	**0.78**	**352**	*eP*		**Pn**	**01 51 08.1**	**+1.0**
PACA	**Pacayal**	**0.78**	**352**	*i* P		**Pn**	**01 51 06.7**	**-0.4**
PACA				*i* S		**Sn**	**01 51 18.1**	**-0.3**
PACA				IAML			01 51 20.6	
comp=Z,910μm,1.0s								
AMPH	**Amapala**	**0.80**	**43**	↑*i* P		**Pn**	**01 51 08.6**	**+1.4**
AMPH				*eS*		**Sn**	**01 51 21.6**	**+3.0**
TECA	**Tecapa**	**0.84**	**341**	||*i* P		**Pn**	**01 51 08.6**	**+0.6**
PQSS	**Presa 15 de Se**	**0.98**	**340**	*eP*		**Pn**	**01 51 10.7**	**+1.1**
PQSS	**Presa 15 de Se**	**0.98**	**340**	*i* P		**Pn**	**01 51 10.4**	**+0.8**
PQSS				*i* S		**Sn**	**01 51 22.8**	**0.0**
PQSS				IAML			01 51 25.5	
comp=Z,58μm,1.0s								
TECO	**Alcaldia de Te**	**1.00**	**327**	*i* P		**Pn**	**01 51 09.8**	**-0.1**
TECO				*i* S		**Sn**	**01 51 23.3**	**0.0**
TECO				IAML			01 51 27.0	
comp=Z,39nm,1.0s								
UESV	**Universidad de**	**1.09**	**329**	*eP*		**Pn**	**01 51 11.6**	**+0.6**
UESV				*eS*		**Sn**	**01 51 26.6**	**+1.2**
UESV	**Universidad de**	**1.09**	**329**	*i* P		**Pn**	**01 51 11.5**	**+0.5**
UESV				*i* S		**Sn**	**01 51 25.1**	**-0.3**
UESV				IAML			01 51 27.2	
comp=Z,66μm,1.0s								
SNVI	**San Vicente**	**1.09**	**326**	||*i* P		**Pn**	**01 51 11.6**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.12**	**333**	*eP*		**Pn**	**01 51 12.5**	**+1.1**
SCLA				*eS*		**Sn**	**01 51 28.0**	**+1.9**
SCLA	**Alcaldia de Sa**	**1.12**	**333**	*i* P		**Pn**	**01 51 11.4**	**0.0**
SCLA				*i* S		**Sn**	**01 51 26.6**	**+0.5**
SCLA				IAML			01 51 29.6	
comp=Z,43μm,1.0s								
COEG	**Centro de Oper**	**1.12**	**325**	*eP*		**Pn**	**01 51 11.9**	**+0.3**
COEG				*eS*		**Sn**	**01 51 27.0**	**+0.8**
COEG	**Centro de Oper**	**1.12**	**325**	*i* P		**Pn**	**01 51 11.8**	**+0.3**
COEG				*i* S		**Sn**	**01 51 27.1**	**+0.8**
COEG				IAML			01 51 28.1	
comp=Z,52μm,1.0s								
CRIN	**San Cristobal**	**1.14**	**90**			**Pn**	**01 51 12.8**	**+1.1**
CRIN				Sn		**Sn**	**01 51 26.8**	**+0.3**
CRIN	**San Cristobal**	**1.14**	**90**	*i* P		**Pn**	**01 51 12.2**	**+0.5**
CRIN				*i* S		**Sn**	**01 51 25.7**	**-0.8**
CRIN				IAML			01 51 39.3	
comp=Z,200μm,1.0s								
SJTE	**Alcalda de S**	**1.20**	**320**	*eP*		**Pn**	**01 51 13.0**	**+0.5**
SJTE	**Alcalda de S**	**1.20**	**320**	*i* P		**Pn**	**01 51 12.8**	**+0.3**
SJTE				*i* S		**Sn**	**01 51 28.5**	**+0.6**
SJTE				IAML			01 51 30.7	
comp=Z,95μm,1.0s								
PKGN	**Cerro Pekin**	**1.21**	**91**	*i* P		**Pn**	**01 51 13.2**	**+0.7**
PKGN				*i* S		**Sn**	**01 51 28.8**	**+0.7**
PKGN				IAML			01 51 35.6	
comp=Z,190μm,1.0s								
PAVA	**Las Pavas**	**1.23**	**325**	*eP*		**Pn**	**01 51 13.8**	**+0.7**
PAVA	**Las Pavas**	**1.23**	**325**	*i* P		**Pn**	**01 51 13.3**	**+0.3**
PAVA				*i* S		**Sn**	**01 51 29.3**	**+0.4**
PAVA				IAML			01 51 31.2	
comp=Z,160μm,1.0s								
LFRS	**El Faro**	**1.24**	**318**	*eP*		**Pn**	**01 51 13.3**	**+0.3**
PANCS	**Alcalda de**	**1.31**	**314**	*eP*		**Pn**	**01 51 14.0**	**0.0**
PANCS	**Alcalda de**	**1.31**	**314**	*i* P		**Pn**	**01 51 13.6**	**-0.4**
PANCS				*i* S		**Sn**	**01 51 30.5**	**-0.1**
PANCS				IAML			01 51 32.0	
comp=Z,140μm,1.0s								
LBRS	**Las Brisas**	**1.31**	**322**	*eP*		**Pn**	**01 51 15.0**	**+0.9**
LOMA	**Loma Larga**	**1.33**	**315**	*eP*		**Pn**	**01 51 14.5**	**+0.3**
LOMA	**Loma Larga**	**1.33**	**315**	*i* P		**Pn**	**01 51 14.3**	**0.0**
LOMA				*i* S		**Sn**	**01 51 31.3**	**+0.2**
LOMA				IAML			01 51 32.4	
comp=Z,81μm,1.0s								
AEIL	**Aeropuerto Ilo**	**1.33**	**319**	*eP*		**Pn**	**01 51 14.9**	**+0.6**
AEIL				*eS*		**Sn**	**01 51 32.2**	**+1.1**
LALI	**Alcalda de L**	**1.33**	**306**	*eP*		**Pn**	**01 51 13.9**	**-0.3**
LALI	**Alcalda de L**	**1.33**	**306**	*i* P		**Pn**	**01 51 13.9**	**-0.3**
LALI				*i* S		**Sn**	**01 51 30.9**	**-0.2**
LALI				IAML			01 51 36.8	
comp=Z,13μm,1.0s								
TEL3	**Telica 3**	**1.34**	**95**	*i* P		**Pn**	**01 51 14.0**	**-0.4**
TEL3				IAML			01 51 39.7	
comp=Z,110μm,1.0s								
HERN	**Volcan Telica**	**1.35**	**94**	*i* P		**Pn**	**01 51 14.8**	**+0.2**
HERN				IAML			01 51 16.3	
comp=Z,60μm,1.0s								
HERN				*i* S		**Sn**	**01 51 31.9**	**+0.2**
TELN	**Telica**	**1.35**	**94**	*i* P		**Pn**	**01 51 14.4**	**-0.2**
TELN				*i* S		**Sn**	**01 51 31.0**	**-0.7**
TELN				IAML			01 51 40.7	
comp=Z,2μm,1.0s								
HOYN	**Al Sur del Vol**	**1.36**	**94**	*i* P		**Pn**	**01 51 14.9**	**+0.3**
HOYN				*i* S		**Sn**	**01 51 31.6**	**-0.2**
HOYN				IAML			01 51 46.6	
comp=Z,51nm,1.0s								
LFU	**La Fuente**	**1.36**	**320**	*eP*		**Pn**	**01 51 15.4**	**+0.7**
UDBS	**Universidad Do**	**1.37**	**318**	*eP*		**Pn**	**01 51 15.2**	**+0.5**
UDBS	**Universidad Do**	**1.37**	**318**	*i* P		**Pn**	**01 51 15.2**	**+0.5**
UDBS				*i* S		**Sn**	**01 51 32.0**	**0.0**
UDBS				IAML			01 51 34.7	
comp=Z,57μm,1.0s								
POLN	**Al Sur del Vol**	**1.37**	**92**	*i* P		**Pn**	**01 51 14.5**	**-0.2**
POLN				IAML			01 51 16.5	
comp=Z,15nm,1.0s								
POLN				*i* S		**Sn**	**01 51 32.7**	**+0.7**
IGN	**Direccin Gen**	**1.37**	**318**	*eP*		**Pn**	**01 51 15.3**	**+0.5**
IGN	**Direccin Gen**	**1.37**	**318**	*i* P		**Pn**	**01 51 15.4**	**+0.6**
IGN				*i* S		**Sn**	**01 51 33.0**	**+0.8**
IGN				IAML			01 51 36.7	
comp=Z,220μm,1.0s								
UTEC	**Universidad Te**	**1.39**	**316**	*i* P		**Pn**	**01 51 15.5**	**+0.5**
UTEC				*i* S		**Sn**	**01 51 32.9**	**+0.4**
UTEC				IAML			01 51 34.2	
comp=Z,51μm,1.0s								
SNET	**Serv Nac Est T**	**1.40**	**315**			**Pn**	**01 51 15.2**	**+0.1**
SNET					Sn	**Sn**	**01 51 33.1**	**+0.4**
SNET	**Serv Nac Est T**	**1.40**	**315**	*eP*		**Pn**	**01 51 15.4**	**+0.2**
SNET				*eS*		**Sn**	**01 51 33.0**	**+0.2**
SNET	**Serv Nac Est T**	**1.40**	**315**	*i* P		**Pn**	**01 51 15.3**	**+0.1**
SNET				*i* S		**Sn**	**01 51 32.7**	**0.0**
SNET				IAML			01 51 34.2	
comp=Z,120μm,1.0s								
UESS	**Universidad de**	**1.40**	**317**	*eP*		**Pn**	**01 51 15.7**	**+0.5**
UESS				*eS*		**Sn**	**01 51 33.5**	**+0.8**
PACN	**Al O del Volca**	**1.40**	**98**	*i* P		**Pn**	**01 51 15.9**	**+0.8**
PACN				*i* S		**Sn**	**01 51 33.0**	**+0.3**
PACN				IAML			01 51 36.2	
comp=Z,38μm,1.0s								
SEMO	**Seminario San**	**1.40**	**316**	*eP*		**Pn**	**01 51 15.6**	**+0.4**
SEMO	**Seminario San**	**1.40**	**316**	*i* P		**Pn**	**01 51 15.4**	**+0.2**
SEMO				*i* S		**Sn**	**01 51 33.0**	**+0.1**
SEMO				IAML			01 51 39.8	
comp=Z,150μm,1.0s								
ITCA	**Escuela Especi**	**1.42**	**313**	*i* P		**Pn**	**01 51 15.7**	**+0.2**
ITCA				*i* S		**Sn**	**01 51 33.4**	**+0.1**
ITCA				IAML			01 51 38.2	
comp=Z,91μm,1.0s								
UEES	**Universidad Ev**	**1.42**	**316**	*i* P		**Pn**	**01 51 15.9**	**+0.4**
UEES				*i* S		**Sn**	**01 51 34.3**	**+0.9**
UEES				IAML			01 51 38.4	
comp=Z,25μm,1.0s								
MAGS	**Ministerio de**	**1.43**	**313**	*eP*		**Pn**	**01 51 16.0**	**+0.4**
PIC2	**El Picacho**	**1.46**	**316**	*eP*		**Pn**	**01 51 16.9**	**+0.8**
BOQS	**Boqueron**	**1.46**	**315**	||*i* P		**Pn**	**01 51 16.8**	**+0.6**
PMON	**Piamonte**	**1.47**	**313**	*eP*		**Pn**	**01 51 16.6**	**+0.4**
PMON	**Piamonte**	**1.47**	**313**	*i* P		**Pn**	**01 51 16.6**	**+0.4**
PMON				*i* S		**Sn**	**01 51 35.1**	**+0.5**
PMON				IAML			01 51 37.1	
comp=Z,56μm,1.0s								
CNGA	**Al SSO del Vol**	**1.49**	**98**	*i* P		**Pn**	**01 51 16.8**	**+0.4**
CNGA				*i* S		**Sn**	**01 51 35.4**	**+0.5**
CNGA				IAML			01 51 39.2	
comp=Z,25μm,1.0s								
CNGN	**Cerro Negro**	**1.49**	**97**			**Pn**	**01 51 16.6**	**+0.2**
CNGN	**Cerro Negro**	**1.49**	**97**	*i* P		**Pn**	**01 51 17.0**	**+0.6**
CNGN				*i* S		**Sn**	**01 51 34.8**	**-0.2**
CNGN				IAML			01 51 41.1	
comp=Z,50μm,1.0s								
MACN	**El Madrono**	**1.52**	**98**	*i* P		**Pn**	**01 51 17.5**	**+0.7**
MACN				*i* S		**Sn**	**01 51 36.0**	**+0.4**
MACN				IAML			01 51 39.9	
comp=Z,15μm,1.0s								
QUEZ	**Alcaldia de Qu**	**1.53**	**318**	*eP*		**Pn**	**01 51 17.5**	**+0.6**
QUEZ	**Alcaldia de Qu**	**1.53**	**318**	*i* P		**Pn**	**01 51 17.7**	**+0.8**
QUEZ				*i* S		**Sn**	**01 51 37.1**	**+1.2**
QUEZ				IAML			01 51 38.8	
comp=Z,130μm,1.0s								
JAYA	**Jayaque - finc**	**1.53**	**309**	*eP*		**Pn**	**01 51 16.9**	**-0.2**
JAYA	**Jayaque - finc**	**1.53**	**309**	*i* P		**Pn**	**01 51 16.8**	**-0.3**
JAYA				*i* S		**Sn**	**01 51 36.3**	**+0.2**
JAYA				IAML			01 51 41.4	
comp=Z,100μm,1.0s								
LEVN	**Ruinas Leon Vi**	**1.59**	**100**	*i* P		**Pn**	**01 51 17.8**	**+0.2**
LEVN				*i* S		**Sn**	**01 51 38.1**	**+0.9**
LEVN				IAML			01 51 41.1	
comp=Z,31nm,1.0s								
CEDA	**San Andres**	**1.59**	**314**	*eP*		**Pn**	**01 51 18.2**	**+0.5**
CEDA	**San Andres**	**1.59**	**314**	*i* P		**Pn**	**01 51 18.1**	**+0.4**
CEDA				*i* S		**Sn**	**01 51 38.4**	**+1.1**
CEDA				IAML			01 51 45.3	
comp=Z,92nm,1.0s								
TGUH	**Tegucigalpa,Un**	**1.63**	**34**			**Pn**	**01 51 20.1**	**+1.7**
AESN	**El Sauce Leon**	**1.65**	**83**	*i* P		**Pn**	**01 51 18.6**	**+0.2**
AESN				*i* S		**Sn**	**01 51 39.7**	**+1.1**
AESN				IAML			01 51 42.3	
comp=Z,15μm,1.0s								
BC84	**Volcan Momotom**	**1.66**	**100**	*i* P		**Pn**	**01 51 18.7**	**+0.1**
BC84				*i* S		**Sn**	**01 51 38.9**	**-0.1**
BC84				IAML			01 51 42.8	
comp=Z,27nm,1.0s								
COPN	**Copaltepe**	**1.67**	**108**	*i* P		**Pn**	**01 51 19.1**	**+0.4**
COPN				IAML			01 51 42.7	
comp=Z,47μm,1.0s								
BC86	**Nagarote**	**1.67**	**105**	*i* P		**Pn**	**01 51 18.8**	**+0.1**
BC86				*i* S		**Sn**	**01 51 38.8**	**-0.3**
BC86				IAML			01 51 46.1	
comp=Z,31nm,1.0s								
MOM2	**El Cardon**	**1.71**	**98**	*i* P		**Pn**	**01 51 20.1**	**+0.8**
MOM2				*i* S		**Sn**	**01 51 40.7**	**+0.6**
MOM2				IAML			01 51 50.9	
comp=Z,19μm,1.0s								
CEVE	**Cerro Verde**	**1.77**	**310**	*eP*		**Pn**	**01 51 21.0**	**+0.6**
CEVE	**Cerro Verde**	**1.77**	**310**	*i* P		**Pn**	**01 51 21.1**	**+0.6**
CEVE				*i* S		**Sn**	**01 51 42.6**	**+0.5**
CEVE				IAML			01 51 53.2	
comp=Z,42μm,1.0s								
SBLS	**San Blas**	**1.78**	**310**	*eP*		**Pn**	**01 51 21.0**	**+0.5**
SNJE	**San Jose**	**1.79**	**311**	*eP*		**Pn**	**01 51 21.0**	**+0.5**
SNJE				*eP*		**Pn**	**01 51 21.1**	**+0.5**
AMTN	**Mateare**	**1.80**	**105**	*i* P		**Pn**	**01 51 20.9**	**+0.4**
AMTN				*i* S		**Sn**	**01 51 43.3**	**+0.9**
AMTN				IAML			01 51 47.8	
comp=Z,46μm,1.0s								
BRAN	**Las Pilas**	**1.82**	**89**	*i* P		**Pn**	**01 51 21.8**	**+1.0**
BRAN				*i* S		**Sn**	**01 51 44.8**	**+2.0**
BRAN				IAML			01 51 47.6	
comp=Z,13μm,1.0s								
UNIC	**Universidad Ca**	**1.82**	**315**	*i* P		**Pn**	**01 51 21.4**	**+0.5**
UNIC				*i* S		**Sn**	**01 51 43.7**	**+0.7**
UNIC				IAML			01 51 47.5	
comp=Z,10μm,1.0s								
RTR	**El Retiro**	**1.83**	**311**	*eP*		**Pn**	**01 51 22.0**	**+0.8**
LIMN	**Finca el Limon**	**1.84**	**78**	*i* P		**Pn**	**01 51 21.7**	**+0.6**
LIMN				*i* S		**Sn**	**01 51 44.0**	**+0.6**
LIMN				IAML			01 51 50.6	
comp=Z,24μm,1.0s								
MSHP	**Masachapa**	**1.85**	**117**	*i* P		**Pn**	**01 51 22.4**	**+1.2**
MSHP				*i* S		**Sn**	**01 51 43.4**	**-0.2**
MSHP				IAML			01 52 53.8	
comp=Z,140nm,1.0s								
APYN	**Apoyeque**	**1.88**	**104**	*i* P		**Pn**	**01 51 21.8**	**+0.2**
APYN				*i* S		**Sn**	**01 51 43.9**	**-0.4**
APYN				IAML			01 51 51.1	
comp=Z,25μm,1.0s								
BC87	**San Francisco**	**1.89**	**95**	*i* P		**Pn**	**01 51 22.5**	**+0.8**
BC87				*i* S		**Sn**	**01 51 45.6**	**+1.1**
BC87				IAML			01 51 51.0	
comp=Z,17μm,1.0s								
APQ2	**Apoyeque**	**1.91**	**105**	*i* P		**Pn**	**01 51 22.6**	**+0.6**
APQ2				*i* S		**Sn**	**01 51 45.0**	**0.0**
APQ2				IAML			01 51 54.4	
comp=Z,24μm,1.0s								
NUBE	**Las Nubes**	**1.94**	**308**	*i* P		**Pn**	**01 51 23.1**	**+0.6**
NUBE				*i* S		**Sn**	**01 51 46.3**	**+0.4**
NUBE				IAML			01 51 48.1	
comp=Z,55μm,1.0s								
ABCN	**Banco Central**	**1.95**	**107**	*i* P		**Pn**	**01 51 23.1**	**+0.6**
ABCN				*i* S		**Sn**	**01 51 46.4**	**+0.5**
ABCN				IAML			01 51 48.9	
comp=Z,54μm,1.0s								
RE6B4	**Centro civico**	**1.96**	**107**	*i* P		**Pn**	**01 51 23.0**	**+0.3**
RE6B4				IAML			01 51 52.5	
comp=Z,20μm,1.0s								
ALLN	**Telcor Managua**	**1.97**	**106**	*i* P		**Pn**	**01 51 23.3**	**+0.5**
ALLN				*i* S		**Sn**	**01 51 46.8**	**+0.3**
ALLN				IAML			01 51 54.8	
comp=Z,22μm,1.0s								
RB28C	**Hialeah**	**1.98**	**107**	*i* P		**Pn**	**01 51 23.5**	**+0.6**
RB28C				IAML			01 51 49.0	
comp=Z,20μm,1.0s								
USIM	**UNAN**	**1.98**	**107**	*i* P		**Pn**	**01 51 23.5**	**+0.5**
USIM				*i* S		**Sn**	**01 51 46.6**	**-0.2**
USIM				IAML			01 51 52.7	
comp=Z,31nm,1.0s								
UNAN	**Cigeo UNAN**	**1.99**	**107**	*i* P		**Pn**	**01 51 23.4**	**+0.4**
UNAN				*i* S		**Sn**	**01 51 47.4**	**+0.5**
UNAN				IAML			01 51 53.2	
comp=Z,120μm,1.0s								
ENAN	**Enatrel Managu**	**1.99**	**107**	*i* P		**Pn**	**01 51 23.3**	**+0.2**
ENAN				*i* S		**Sn**	**01 51 47.1**	**0.0**
ENAN				IAML			01 51 53.2	
comp=Z,30μm,1.0s								
MGA1	**Managua**	**2.00**	**106**	*i* P		**Pn**	**01 51 23.4**	**+0.2**
MGA1				*i* S		**Sn**	**01 51 47.8**	**+0.7**
MGA1				IAML			01 51 53.2	
comp=Z,20μm,1.0s								
CRUN	**El Crucero**	**2.00**	**111**	*i* P		**Pn**	**01 51 23.4**	**+0.1**
CRUN				IAML			01 52 02.8	
comp=Z,35nm,1.0s								
LOAL	**Lomas de Alarc**	**2.00**	**311**	*eP*		**Pn**	**01 51 24.2**	**+0.9**
LOAL	**Lomas de Alarc**	**2.00**	**311**	*i* P		**Pn**	**01 51 24.2**	**+0.9**
LOAL				*i* S		**Sn**	**01 51 47.3**	**0.0**
LOAL				IAML			01 51 58.1	
comp=Z,34μm,1.0s								
R0529	**La Mascota**	**2.01**	**106**	*i* P		**Pn**	**01 51 23.0**	**-0.4**
R0529				IAML			01 51 53.4	
comp=Z,18μm,1.0s								
MAFN	**Magfor**	**2.02**	**107**	*i* P		**Pn**	**01 51 23.6**	**+0.1**
MAFN				*i* S		**Sn**	**01 51 47.7**	**0.0**
MAFN				IAML			01 51 57.7	
comp=Z,28μm,1.0s								
SLOZ	**Alcaldia de Sa**	**2.02**	**311**	*eP*		**Pn**	**01 51 24.5**	**+1.0**
HUGN	**San Franciso L**	**2.02**	**101**	*i* P		**Pn**	**01 51 23.8**	**+0.3**
HUGN				*i* S		**Sn**	**01 51 47.9**	**+0.2**
HUGN				IAML			01 51 54.9	
comp=Z,16μm,1.0s								
R45A8	**Distro VI**	**2.02**	**106**	*i* P		**Pn**	**01 51 24.1**	**+0.5**
R45A8				IAML			01 51 51.2	
comp=Z,17μm,1.0s								
MTO3	**Montecristo**	**2.03**	**327**			**Pn**	**01 51 24.8**	**+1.0**
MTO3	**Montecristo**	**2.03**	**327**	*i* P		**Pn**	**01 51 24.8**	**+1.0**
MTO3	**Montecristo**	**2.03**	**327**	*i* P		**Pn**	**01 51 24.8**	**+1.0**
MTO3				*i* S		**Sn**	**01 51 48.7**	**+0.5**
MTO3				IAML			01 51 55.1	
comp=Z,8μm,1.0s								
WILN	**Americas 2**	**2.05**	**105**	*i* P		**Pn**	**01 51 24.5**	**+0.6**
WILN				*i* S		**Sn**	**01 51 49.2**	**+0.8**
WILN				IAML			01 52 08.3	
comp=Z,13nm,1.0s								
R1F03	**Distro VII**	**2.05**	**106**	*i* P		**Pn**	**01 51 24.6**	**+0.7**
R1F03				IAML			01 51 58.2	
comp=Z,15μm,1.0s								
AERN	**Aeropuerto Man**	**2.07**	**105**	*i* P		**Pn**	**01 51 23.8**	**-0.4**
AERN				*i* S		**Sn**	**01 51 49.7**	**+0.7**
AERN				IAML			01 52 01.6	
comp=Z,15μm,1.0s								
MAS3	**Al N del Volca**	**2.10**	**108**	*i* P		**Pn**	**01 51 25.1**	**+0.5**
MAS3				*i* S		**Sn**	**01 51 49.7**	**0.0**
MAS3				IAML			01 51

comp=Z,5µm,1.0s
NBG Las Nubes 2.80 312 *e*P **Pn 01 51 36.9 +2.5**
GUNB GUNB 2.80 313 *i* P **Pn 01 51 35.1 +0.6**
GUNB *i* S **Sn 01 52 07.5 +0.2**
GUNB IAML 01 52 13.5
comp=Z,5µm,1.0s
PCG Pacaya 2.87 306 *e*P **Pn 01 51 37.6 +2.3**
GCG4 OSOP 2.94 310 *i* P **Pn 01 51 37.3 +1.2**
GCG4 *i* S **Sn 01 52 10.7 +0.4**
GCG4 IAML 01 52 36.6
comp=Z,7µm,1.0s
GUMI Mixco 3.02 310 *i* P **Pn 01 51 38.1 +0.7**
GUMI *i* S **Sn 01 52 12.9 +0.4**
GUMI IAML 01 52 27.1
comp=Z,7µm,1.0s
IZABA Izabal, Puerto 3.04 353 *i* P **Pn 01 51 38.2 +0.8**
IZABA *i* S **Sn 01 52 13.1 +0.5**
IZABA IAML 01 52 38.4
comp=Z,72nm,1.0s
ACON Acoyapa 3.06 103 Pn 01 51 37.4 -0.3
ACON Acoyapa 3.06 103 *i* P **Pn 01 51 37.7 0.0**
ACON IAML 01 52 04.6
comp=Z,3µm,1.0s
ACON *i* S **Sn 01 52 13.8 +0.7**
FUG Fuego 3 3.09 305 *e*P **Pn 01 51 40.2 +1.9**
HZTE Horizontes, Gu 3.23 127 Pn **Pn 01 51 41.6 +1.5**
HZTE Horizontes, Gu 3.23 127 *i* P **Pn 01 51 41.0 +0.9**
HZTE *i* S **Sn 01 52 18.0 +0.6**
HZTE IAML 01 52 45.0
comp=Z,6µm,1.0s
AVCB Coban 3.48 323 *i* P **Pn 01 51 43.9 +0.3**
AVCB *i* S **Sn 01 52 24.7 +1.0**
AVCB IAML 01 52 41.0
comp=Z,31µm,1.0s
SIUN Universidad Ur 3.50 73 *i* P **Pn 01 51 44.7 +1.0**
SIUN *i* S **Sn 01 52 25.3 +1.3**
SIUN IAML 01 52 45.4
comp=Z,2µm,1.0s
ORTG Ortega, Santa 3.56 130 Pn **Pn 01 51 45.8 +1.2**
ORTG Ortega, Santa 3.56 130 *i* P **Pn 01 51 45.6 +1.0**
ORTG *i* S **Sn 01 52 26.6 +1.1**
ORTG IAML 01 52 51.1
comp=Z,2µm,1.0s
VMAR Armenia, Volca 3.57 121 *i* P **Pn 01 51 45.3 +0.6**
VMAR *i* S **Sn 01 52 26.0 +0.3**
VMAR IAML 01 52 44.0
comp=Z,4µm,1.0s
SAJU San Juanillo, 3.58 137 *i* P **Pn 01 51 45.3 +0.4**
SAJU *i* S **Sn 01 52 26.5 +0.5**
SAJU IAML 01 52 53.9
comp=Z,3µm,1.0s
SULM Suchitepequez, 3.63 297 *e*P **Pn 01 51 46.7 +1.2**
DUNO Dulce Nombre, 3.73 134 Pn 01 51 47.8 +1.0
DUNO Dulce Nombre, 3.73 134 *i* P **Pn 01 51 47.8 +1.0**
DUNO *i* S **Sn 01 52 30.0 +0.5**
DUNO IAML 01 52 51.0
comp=Z,4µm,1.0s
ACAL Aguas Claras 3.73 123 *e*P **Pn 01 51 49.2 +2.2**
STG3 Santiaguito 3, 3.83 302 *e*P **Pn 01 51 50.1 +1.7**
RTAL Retalhuleu 3.84 299 Pn **Pn 01 51 49.9 +1.5**
RTAL Retalhuleu 3.84 299 *i* P **Pn 01 51 49.5 +0.1**
RTAL *i* S **Sn 01 52 33.3 +1.0**
RTAL IAML 01 52 44.6
comp=Z,4µm,1.0s
ESPN Las Esperanzas 3.86 97 Pn **Pn 01 51 49.2 +0.7**
ESPN Las Esperanzas 3.86 97 *i* P **Pn 01 51 49.5 +0.9**
ESPN *i* S **Sn 01 52 34.2 +1.5**
ESPN IAML 01 53 22.3
comp=Z,2µm,1.0s
INDI Punta indio, G 3.87 136 *i* P **Pn 01 51 49.9 +1.1**
INDI *i* S **Sn 01 52 33.5 +0.5**
INDI IAML 01 53 01.8
comp=Z,3µm,1.0s
JTS Las Juntas de 3.99 126 Pn **Pn 01 51 51.4 +0.9**
JTS Las Juntas de 3.99 126 P **Pn 01 51 51.4 +0.9**
JTS Las Juntas de 3.99 126 P **Pn 01 51 51.7 +1.2**
comp=Z,60nm,0.3s,baz=290,slow=12,SNR=38
JTS S **Sn 01 52 36.2 +0.1**
comp=Z,405nm,0.6s,baz=228,slow=16,SNR=4.3
JTS LR LR 01 53 02.5
comp=Z,487nm,18.4s,baz=276,slow=33
CEDE Laguna Cedeo 4.08 122 *e*P **Pn 01 51 54.5 +2.7**
ARE1 Arenal 1 4.08 123 Pn 01 51 53.6 +1.9
ARE1 Arenal 1 4.08 123 *e*P **Pn 01 51 54.2 +2.5**
VACR Volcan Arenal 4.11 122 *e*P **Pn 01 51 55.3 +3.2**
HUEH Huehuetenango 4.12 310 Pn 01 51 54.1 +1.7
HUEH Huehuetenango 4.12 310 *i* P **Pn 01 51 53.3 +0.9**
HUEH *i* S **Sn 01 52 39.7 +0.2**
HUEH IAML 01 52 50.8
comp=Z,3µm,1.0s
SMSP San Marcos 4.14 304 *i* P **Pn 01 51 54.5 +1.8**
SMSP *i* S **Sn 01 52 41.4 +1.4**
SMSP IAML 01 52 54.9
comp=Z,5µm,1.0s
SOCE Pocosol 4.21 123 Pn 01 51 55.6 +2.1
SOCE Pocosol 4.21 123 *e*P **Pn 01 51 56.1 +2.6**
SOCE Pocosol 4.21 123 *i* P **Pn 01 51 54.1 +0.6**
SOCE *i* S **Sn 01 52 41.9 +0.5**
SOCE IAML 01 53 07.2
comp=Z,2µm,1.0s
COVE Coope Vega, Sa 4.22 117 Pn 01 51 55.5 +2.0
COVE Coope Vega, Sa 4.22 117 *e*P **Pn 01 51 55.4 +1.8**
COVE Coope Vega, Sa 4.22 117 *i* P **Pn 01 51 54.1 +0.5**
COVE *i* S **Sn 01 52 42.3 +0.7**
COVE IAML 01 53 32.3
comp=Z,2µm,1.0s
SMCA Catarina 4.32 300 *i* P **Pn 01 51 55.3 +0.3**
SMCA *i* S **Sn 01 52 45.1 +1.0**
SMCA IAML 01 52 46.4
comp=Z,2µm,1.0s
LAFE Finca La Fe, P 4.33 131 *i* P **Pn 01 51 55.3 +0.2**
LAFE *i* S **Sn 01 52 45.0 +0.7**
LAFE IAML 01 53 08.7
comp=Z,47nm,1.0s
BLUN Bluefields 4.39 99 *i* P **Pn 01 51 55.8 -0.1**
BLUN *i* S **Sn 01 52 47.6 +1.8**
BLUN IAML 01 53 29.5
comp=Z,930nm,1.0s
ARZA Esparza 4.40 127 *e*P **Pn 01 52 00.1 +4.1**
CPMI Catarata Coope 4.46 122 *e*P **Pn 01 51 59.6 +2.6**
CPMI Catarata Coope 4.46 122 *i* P **Pn 01 51 57.5 +0.5**
CPMI *i* S **Sn 01 52 48.7 +0.9**
CPMI IAML 01 53 10.8
comp=Z,3µm,1.0s
SRA1 San Ramn 4.49 125 *e*P **Pn 01 52 01.2 +3.8**
PETF Flores 4.49 339 Pn 01 51 59.6 +2.4
PETF Flores 4.49 339 *i* P **Pn 01 51 58.7 +1.4**
PETF *i* S **Sn 01 52 49.4 +1.2**
PETF IAML 01 53 22.8
comp=Z,1µm,1.0s
RAMO San Ramon 4.50 125 *e*P Pn 01 52 02.7 +5.2
ZARE Zarcero 4.50 123 *e*P **Pn 01 51 59.2 +1.5**
JACO JACO, Garabito 4.61 130 Pn **Pn 01 51 59.9 +1.0**
JACO JACO, Garabito 4.61 130 *e*P **Pn 01 52 01.0 +2.1**
JACO JACO, Garabito 4.61 130 *i* P **Pn 01 51 59.9 +1.0**
JACO IAML 01 52 09.0
comp=Z,2µm,1.0s
JACO *i* S **Sn 01 52 51.8 +0.6**
TRB2 Turrubares 4.61 126 *e*P **Pn 01 52 01.6 +2.6**
VPS6 Volcano Poas 4.63 122 *e*P **Pn 01 52 02.6 +3.0**
TCS1 Tacares 4.66 124 *e*P **Pn 01 52 02.4 +2.8**
TCS1 Tacares 4.66 124 *i* P **Pn 01 51 59.3 -0.4**
TCS1 IAML 01 53 24.6
comp=Z,15µm,1.0s
SARA Sarapiqu 4.67 118 *e*P **Pn 01 52 02.9 +3.1**
BELE Belen 4.79 124 *e*P **Pn 01 52 04.8 +3.4**
SANTA Santa Ana 4.81 124 *e*P **Pn 01 52 05.7 +3.9**
RIFO Rio Frio, Sara 4.83 119 *e*P **Pn 01 52 03.5 +1.6**
RIFO Rio Frio, Sara 4.83 119 *i* P **Pn 01 52 02.8 +0.9**
RIFO *i* S **Sn 01 52 57.0 +0.5**
RIFO IAML 01 53 26.2
comp=Z,2µm,1.0s
HDC Heredia 4.83 123 Pn 01 52 03.8 +1.7
HDC Heredia 4.83 123 *e*P **Pn 01 52 06.4 +4.3**
HDC3 Heredia 3 4.83 123 *e*P **Pn 01 52 05.7 +3.6**
HDC3 Heredia 3 4.83 123 *i* P **Pn 01 52 03.1 +1.0**
HDC3 *i* S **Sn 01 52 57.2 +0.3**
HDC3 IAML 01 53 19.8
comp=Z,2µm,1.0s
CENT San Jose 4.90 124 *e*P **Pn 01 52 07.6 +4.6**
ACOS Acosta 4.91 126 *e*P **Pn 01 52 07.2 +4.0**
LUPE Guadalupe 4.91 123 *e*P **Pn 01 52 07.5 +4.3**
SJS Escuela Geolog 4.92 123 *e*P Pn 01 52 08.3 +5.0
SJS3 Mercedes San J 4.92 123 *e*P Pn 01 52 08.4 +5.2
AMPA Desamparados 4.93 124 *e*P **Pn 01 52 06.8 +3.3**
CVIMO Finca Echandi 4.96 122 *e*P **Pn 01 52 06.3 +2.4**
CARI Cariari 4.96 117 *e*P **Pn 01 52 06.6 +2.8**
TRIO Tres Rios 4.98 123 *e*P **Pn 01 52 07.4 +3.2**
OCM Ochomogo 5.01 123 *e*P **Pn 01 52 07.7 +3.1**
OCM Ochomogo 5.01 123 *i* P **Pn 01 52 04.8 +0.1**
OCM IAML 01 52 10.7
comp=Z,2µm,1.0s
OCM IAmb IAmb 01 52 11.7
comp=Z,810nm,0.9s
OCM IVmB_BB 01 52 12.6
comp=Z,18µm,1.0s
OCM *i* S **Sn 01 53 02.8 +1.3**
VIRE VIRE 5.03 122 *i* P **Pn 01 52 05.1 +0.1**
VIRE IAML 01 52 12.1
comp=Z,3µm,1.0s
VIRE IVmB_BB 01 52 12.1
comp=Z,38µm,1.0s
VIRE IAmb IAmb 01 52 13.0
comp=Z,2µm,0.8s
VIRE *i* S **Sn 01 53 03.1 +1.1**
ABE2 San Pablo 5.05 126 *e*P **Pn 01 52 08.5 +3.3**
TAGO Cartago 5.06 123 *e*P **Pn 01 52 09.8 +4.6**
VICA Volcano Irazu 5.06 122 *e*P **Pn 01 52 08.5 +3.0**
LCR2 La Lucha 2 5.07 125 Pn 01 52 06.9 +1.6
LCR2 La Lucha 2 5.07 125 *e*P **Pn 01 52 08.9 +3.5**
LCR2 La Lucha 2 5.07 125 *i* P **Pn 01 52 06.1 +0.7**
LCR2 IVmB_BB 01 52 10.5
comp=Z,14µm,1.0s
LCR2 IAML 01 52 15.3
comp=Z,1µm,1.0s
LCR2 IAmb IAmb 01 52 15.4
comp=Z,1µm,0.8s
LCR2 *i* S **Sn 01 53 02.7 0.0**
ICR3 Volcano Irazu 5.08 122 *e*P **Pn 01 52 08.9 +3.2**
VTRT Volcan Turrial 5.10 121 *e*P **Pn 01 52 10.2 +4.3**
VTRT Volcan Turrial 5.10 121 *i* P **Pn 01 52 07.0 +1.1**
VTRT IVmB_BB 01 52 13.2
comp=Z,9µm,1.0s
VTRT IAmb IAmb 01 52 14.2
comp=Z,910nm,0.7s
VTRT *i* S **Sn 01 53 03.5 -0.1**
VTRT IAML 01 53 22.5
comp=Z,2µm,1.0s
RAZU San Marcos de 5.10 126 *e*P **Pn 01 52 08.8 +2.9**
RAFA San Farael, Vo 5.10 122 *e*P **Pn 01 52 09.4 +3.4**
VTUC Crater, Volcan 5.11 121 *i* P **Pn 01 52 06.2 0.0**
VTUC IVmB_BB 01 52 15.7
comp=Z,6µm,1.0s
VTUC IAmb IAmb 01 52 16.1
comp=Z,570nm,0.8s
VTUC *i* S **Sn 01 53 04.2 +0.1**
VTUC IAML 01 53 35.8
comp=Z,710nm,1.0s
VTUN Crater Central 5.11 121 *i* P **Pn 01 52 06.7 +0.5**
VTUN IVmB_BB 01 52 15.7
comp=Z,7µm,1.0s
VTUN IAmb IAmb 01 52 27.5
comp=Z,570nm,0.7s
VTUN *i* S **Sn 01 53 04.0 -0.1**
VTUN IAML 01 53 24.1
comp=Z,1µm,1.0s
CVTR Volcan Turrial 5.11 121 *e*P **Pn 01 52 08.0 +1.7**
VTR0 Volcan Turrial 5.12 121 *e*P **Pn 01 52 08.5 +2.3**
PCAYA Pacayas 5.13 122 *e*P Pn 01 52 10.9 +4.7
REPA Paraso 5.13 123 *e*P Pn 01 52 11.4 +5.2
VTLO VTLO 5.13 120 *e*P **Pn 01 52 09.6 +3.3**
CVTV Tajo 5.13 121 *e*P **Pn 01 52 09.7 +3.4**
LLNJ Naranjito 5.15 128 *e*P **Pn 01 52 09.1 +2.8**
VTCV VTCV, Calle Va 5.16 121 *e*P **Pn 01 52 09.7 +3.1**
VTCV VTCV, Calle Va 5.16 121 *i* P **Pn 01 52 07.8 +1.1**
VTCV IAmb IAmb 01 52 19.1
comp=Z,2µm,0.8s
VTCV IVmB_BB 01 52 19.9
comp=Z,14µm,1.0s
VTCV *i* S **Sn 01 53 05.3 +0.3**
VTCV IAML 01 53 34.1
comp=Z,2µm,1.0s
RIMA Rio Macho 5.17 124 Pn 01 52 08.3 +1.5
VINA Juan Vinas 5.19 122 *e*P **Pn 01 52 10.2 +3.1**
VERB Verbena 5.21 121 *e*P **Pn 01 52 09.7 +2.5**
CCIG Comitan 5.21 314 Pn **Pn 01 52 09.3 +2.0**
CCIG Comitan 5.21 314 *i* P **Pn 01 52 07.5 +0.2**
CCIG IAmb IAmb 01 52 33.1
comp=Z,330nm,0.7s
CCIG IVmB_BB 01 52 54.5
comp=Z,3µm,1.0s
CCIG *i* S **Sn 01 53 07.4 +1.2**
CCIG IAML 01 54 02.8
comp=Z,840nm,1.0s
RVLA Villa Bonita 5.21 119 *e*P **Pn 01 52 11.2 +4.0**
RVSTA Santa Teresita 5.23 121 *e*P Pn 01 52 12.3 +4.8
TURIB Turrialba 5.24 122 *e*P **Pn 01 52 09.5 +1.9**
LCOCO El Coco 5.25 119 *e*P Pn 01 52 12.5 +4.8
CDM Cerro de Muert 5.37 125 *e*P **Pn 01 52 12.4 +2.7**
CDM Cerro de Muert 5.37 125 *i* P **Pn 01 52 09.9 +0.2**
CDM IVmB_BB 01 52 14.4
comp=Z,16µm,1.0s
CDM *i* S **Sn 01 53 10.6 +0.1**
CDM IAML 01 53 16.9
comp=Z,1µm,1.0s
ZELE Perez Zeledon 5.52 126 *e*P **Pn 01 52 14.7 +3.2**
PEZE Perez Zeledon, 5.54 126 Pn 01 52 13.9 +2.1
PEZE Perez Zeledon, 5.54 126 *e*P **Pn 01 52 14.1 +2.3**
PEZE Perez Zeledon, 5.54 126 *i* P **Pn 01 52 12.1 +0.4**
PEZE IVmB_BB 01 52 17.0
comp=Z,14µm,1.0s
PEZE IAmb IAmb 01 52 17.1
comp=Z,440nm,0.8s
PEZE *i* S **Sn 01 53 14.6 +0.4**
PEZE IAML 01 53 33.0
comp=Z,1µm,1.0s
OCHAL Ojochal 5.74 128 *i* P **Pn 01 52 15.6 +1.2**
OCHAL IVmB_BB 01 52 18.6
comp=Z,330nm,1.0s
OCHAL IAML 01 52 21.8
comp=Z,14nm,1.0s
OCHAL *i* S **Sn 01 53 19.6 +0.7**
BURE Buenos Aires 5.93 126 *e*P **Pn 01 52 20.6 +3.6**
DRK0 Durika 5.95 124 Pn 01 52 19.5 +2.0
PLAN Los Planes de 5.99 131 *i* P **Pn 01 52 18.7 +0.9**
PLAN IVmB_BB 01 52 22.0
comp=Z,43µm,1.0s
PLAN IAML 01 52 22.1
comp=Z,4µm,1.0s
PLAN *i* S **Sn 01 53 25.5 +0.4**
POTG Potrero Grande 6.18 125 *i* P **Pn 01 52 21.4 +0.9**
POTG IVmB_BB 01 52 28.1
comp=Z,16µm,1.0s
POTG IAML 01 52 28.5
comp=Z,2µm,1.0s
POTG IAmb IAmb 01 52 28.6
comp=Z,1µm,0.6s
POTG *i* S **Sn 01 53 30.2 +0.4**
CDITO Canoas 6.66 127 Pn 01 52 28.6 +1.6
CDITO Canoas 6.66 127 *i* P **Pn 01 52 27.8 +0.8**
CDITO IAmb IAmb 01 52 39.5
comp=Z,450nm,0.8s
CDITO IVmB_BB 01 53 04.0
comp=Z,8µm,1.0s
CDITO *i* S **Sn 01 53 43.4 +1.8**
CDITO IAML 01 54 24.7
comp=Z,870nm,1.0s
BRU2 Volcan 6.67 125 Pn 01 52 29.1 +1.8
PRVC Isla de Provid 6.71 83 *e*P **Pn 01 52 29.4 +1.8**
TEIG Tepich 7.49 360 Pn **Pn 01 52 41.2 +2.9**
TEIG Tepich 7.49 360 LR LR 01 56 03.5
comp=Z,11µm,20.7s,baz=340,slow=43
CMIG Matias Romero 7.79 305 P **Pn 01 52 44.4 +1.9**
comp=Z,13nm,0.3s,baz=136,slow=6.6,SNR=30
CMIG S **Sn 01 54 13.6 +4.4**
comp=Z,36nm,0.3s,baz=111,slow=5.1,SNR=4.3
GMAL Guarumal, Vera 8.44 125 *e*P **Pn 01 52 53.9 +2.5**
BCIP Isla Barro Col 8.94 112 Pn 01 52 59.6 +1.3
BCIP Isla Barro Col 8.94 112 P **Pn 01 52 59.6 +1.3**
BCIP Isla Barro Col 8.94 112 *e*P **Pn 01 53 00.5 +2.2**
CACAO El Cacao, Vera 8.98 126 *e*P **Pn 01 53 00.9 +2.1**
AZU Azuero 9.21 121 *e*P **Pn 01 53 04.2 +2.3**
TLIG Tlapa 11.10 297 Pn 01 53 29.7 +1.8
TLIG Tlapa 11.10 297 *i* P **Pn 01 53 29.3 +1.4**
TLIG IAmb IAmb 01 53 43.9
comp=Z,43nm,1.1s
SOR Soroa 11.20 26 Pn 01 53 32.7 +3.6
SOR Soroa 11.20 26 P **Pn 01 53 32.7 +3.6**
APAC Apartado, Choc 12.40 111 *e*P **Pn 01 53 50.4 +4.9**
DBBC Dabeiba 13.10 114 *e*P **Pn 01 53 58.8 +3.6**
UREC San Jos de Ur 13.41 110 *e*P **Pn 01 54 03.0 +3.7**
PAYG Puerto Ayora 13.44 189 Pn 01 54 00.7 +1.0
CBOC Ciudad Bolivar 13.82 118 *e*P **Pn 01 54 06.0 +1.0**
GR1C Gorgona, Isla 13.84 133 *e*P **P 01 54 09.3 -2.2**
HELC Santa Helena 14.08 116 *e*P **P 01 54 13.7 -0.8**
JRQG Juriquilla Cam 14.16 306 Pn 01 54 10.8 +1.2
MOIG Morelia 14.26 301 Pn **Pn 01 54 12.5 +1.7**
GTBY Guantanamo Bay 14.48 59 Pn 01 54 14.7 +1.2
YOTC Yotoco, Valle 14.58 125 *e*P **Pn 01 54 16.0 +1.1**
GUY2C Guyana, Caldas 14.70 119 *e*P **P 01 54 20.1 -1.4**
JAMC Jamundi, Valle 14.80 129 *e*P **Pn 01 54 20.0 +2.1**
PTBC PUERTO BERRIO, 14.88 113 *e*P **Pn 01 54 19.9 +1.3**
NORC Norcasia 14.96 117 *e*P **P 01 54 23.4 -0.6**
CRJC Cerrejon, Guaj 15.10 95 *e*P **P 01 54 25.9 +0.3**
BBAC Balboa, Cauca 15.18 133 *e*P **P 01 54 27.4 +0.7**
POPC Popayan, Colom 15.24 131 *e*P **P 01 54 25.9 -1.5**
OCAC Ocana 15.30 105 *e*P **Pn 01 54 25.4 +1.1**
ORTC Ortega, Tolima 15.51 123 *e*P **Pn 01 54 27.9 +1.0**
CMBC Cumbal 15.57 138 *e*P **P 01 54 37.0 +5.8**
SPBC San Pablo de B 15.61 115 *e*P **P 01 54 31.4 +0.1**
GCUF Volcan Galeras 15.68 136 *e*P **P 01 54 33.2 +0.7**
CUSE Cuicocha Este 15.69 141 *e*P **P 01 54 33.7 +1.1**
CRUC La Cruz 15.71 134 *e*P **P 01 54 35.2 +2.6**
OTAV Otavalo 15.71 141 Pn 01 54 30.5 +0.6
OTAV Otavalo 15.71 141 P **Pn 01 54 30.5 +0.6**
OTAV Otavalo 15.71 141 *e*P **P 01 54 34.5 +1.7**
TULM Tulcn-Chalpat 15.77 138 Pn 01 54 31.8 +1.3
TULM Tulcn-Chalpat 15.77 138 *e*P **P 01 54 36.2 +2.8**
ROSC El Rosal 15.79 118 Pn 01 54 31.8 +1.1
ROSC El Rosal 15.79 118 P **Pn 01 54 31.8 +1.1**
ROSC El Rosal 15.79 118 P **P 01 54 34.6 +1.0**
comp=Z,12nm,0.4s,baz=320,slow=11,SNR=7.2
ROSC El Rosal 15.79 118 *e*P **P 01 54 33.2 -0.3**
IMBA Imbabura, San 15.84 140 Pn **P 01 54 33.2 -1.0**
PULU Pululahua 15.85 142 Pn **P 01 54 33.3 -1.0**
PRAC Prado 15.92 123 *e*P **Pn 01 54 32.1 +0.1**
PAMC Pamplona, Colo 16.18 108 *e*P **P 01 54 37.6 -0.4**
PAPH Port-au-Prince 16.38 67 P 01 54 39.7 0.0
RUSC La Rusia 16.38 113 *e*P **Pn 01 54 38.8 +0.4**
CHIC Chingaza 16.40 118 *e*P **P 01 54 40.4 0.0**
SLOR San Lorenzo - 16.46 143 Pn **P 01 54 40.4 -0.7**
DWPF Disney Wildern 16.59 21 P **P 01 54 42.0 +0.1**
baz=204
FLOC Florencia 16.64 131 *e*P **P 01 54 44.0 +1.4**
CHSH Refugio Sur-Vo 16.88 146 P **P 01 54 45.9 +0.1**
ZAIG Zacatecas 16.93 308 P **P 01 54 46.5 +0.4**
HBVL Hebbronville 17.33 327 P **P 01 54 51.6 +1.4**
656A Willston 17.41 17 P **P 01 54 51.4 +0.4**
SDDR Presa de Saban 17.44 67 P **P 01 54 51.5 +0.1**
COHC Cochancay 17.50 149 P **P 01 54 52.7 +0.7**
SDV Santo Domingo 17.68 101 Pn 01 54 53.4 -0.7
SDV Santo Domingo 17.68 101 P **Pn 01 54 53.6 -0.5**
comp=Z,95nm,1.1s,baz=283,slow=4.5,SNR=28
SDV LR LR 02 02 16.7
comp=Z,176nm,21.4s,baz=278,slow=39
451A Vernon 17.98 7 P **Pn 01 54 59.6 +2.1**
PTAC Puerto Gaitan, 18.00 117 *e*P **P 01 54 57.7 +0.1**
735A Kenedy 18.39 332 P **Pn 01 55 03.3 +0.6**
BRAL Brewton 18.42 3 P **Pn 01 55 03.0 +0.3**
baz=183
BOSC San Juan Bosco 18.47 148 P **Pn 01 55 04.1 +0.4**
441A DeRidder 18.55 346 P **Pn 01 55 05.5 +1.2**
441A IAmb IAmb 01 55 16.8
comp=Z,54nm,0.6s
HKT Hockley 18.57 339 P **Pn 01 55 04.9 +0.4**
HKT Hockley 18.57 339 P **Pn 01 55 04.9 +0.4**
HKT pmax pmax
comp=Z,21nm,1.1s
833A Chaparral WMA, 18.72 328 P **Pn 01 55 06.4 -0.1**
833A IAmb IAmb 01 55 10.1
comp=Z,152nm,1.2s
833A Chaparral WMA, 18.72 328 P **Pn 01 55 06.7 +0.2**
baz=144,SNR=36
MCRA Macar, Loja 18.84 154 P **Pn 01 55 07.9 -0.1**
MLDN Muldoon 18.88 336 P **P 01 55 07.8 +0.6**
TIGA Tifton 19.14 12 P **Pn 01 55 11.0 -0.3**
TIGA Tifton 19.14 12 P **Pn 01 55 11.5 +0.2**
baz=194,SNR=21
VBMS Vicksburg 19.55 354 P **Pn 01 55 16.2 0.0**
VBMS Vicksburg 19.55 354 P **Pn 01 55 16.1 0.0**
baz=179,SNR=14
HNDO Hondo 19.65 330 P **Pn 01 55 16.9 -0.7**
NATX Nacogdoches 19.88 344 P **Pn 01 55 19.7 -0.4**
NATX IAmb IAmb 01 55 36.3
comp=Z,127nm,1.4s
NATX Nacogdoches 19.88 344 P **Pn 01 55 20.1 -0.1**
baz=161
435B Jarrell 19.97 336 P **P 01 55 20.1 +1.0**
435B IAmb IAmb 01 55 34.6
comp=Z,86nm,1.4s
BAUV El Baul 20.16 99 P **P 01 55 19.8 -1.5**
DRIO Del Rio 20.25 327 P **P 01 55 22.4 +0.3**
LRAL Lakeview Retre 20.28 3 P Pn 01 55 23.7 -1.1
LRAL IAmb IAmb 01 55 30.3
comp=Z,93nm,1.6s
LRAL Lakeview Retre 20.28 3 P Pn 01 55 23.9 -0.9
baz=183,SNR=18
JCT Junction City 20.69 331 P **P 01 55 26.9 0.0**
JCT IAmb IAmb 01 55 32.2
comp=Z,38nm,0.7s
JCT Junction City 20.69 331 P **P 01 55 27.6 +0.7**
baz=146,SNR=24
JCT Junction City 20.69 331 P **P 01 55 26.9 0.0**
JCT pmax pmax
comp=Z,38nm,0.7s
Z41A Richland Creek 20.89 349 P **P 01 55 29.6 +0.6**
Z41A IAmb IAmb 01 55 37.0
comp=Z,94nm,0.9s
WHTX Lake Whitney, 21.00 338 P **P 01 55 31.0 +0.8**
WHTX IAmb IAmb 01 55 49.7
comp=Z,54nm,0.7s
WHTX Lake Whitney, 21.00 338 P **P 01 55 31.3 +1.2**
baz=154
GOGA Godfrey 21.07 11 P **P 01 55 31.7 +0.8**
GOGA IAmb IAmb 01 55 52.1
comp=Z,165nm,1.4s
GOGA Godfrey 21.07 11 P **P 01 55 32.5 +1.5**
baz=193,SNR=34
GOGA Godfrey 21.07 11 P **P 01 55 31.7 +0.8**
GOGA pmax pmax
comp=Z,165nm,1.4s
WLAR White Oak Lake 21.37 349 P **P 01 55 35.5 +1.4**
WLAR IAmb IAmb 01 55 58.0
comp=Z,57nm,0.8s
AOPR Arecibo Observ 21.42 72 P **P 01 55 33.9 -0.9**
AOPR IAmb IAmb 01 55 53.8
comp=Z,41nm,0.8s
UUPR Utuado, UPR, P 21.43 72 P **P 01 55 34.5 -0.5**
UUPR IAmb IAmb 01 55 39.5
comp=Z,42nm,0.9s
OBIP Obispado Ponce 21.50 73 P **P 01 55 34.7 -0.9**
OBIP IAmb IAmb 01 55 57.8
comp=Z,72nm,1.1s
CELP Cerrillos 21.53 73 P **P 01 55 35.9 -0.1**
NHSC New Hope 21.61 19 P **P 01 55 37.8 +1.2**
NHSC New Hope 21.61 19 P **P 01 55 37.5 +0.9**
baz=202
HPIG 21.64 313 P **P 01 55 36.4 -0.9**
OXF Oxford 21.75 357 P **P 01 55 39.0 +0.9**
OXF Oxford 21.75 357 P **P 01 55 38.7 +0.5**
baz=177,SNR=13
OXF Oxford 21.75 357 P **P 01 55 39.0 +0.9**
OXF pmax pmax
comp=Z,113nm,1.0s
FPAL Fort Paine 21.88 6 P **P 01 55 40.1 +0.5**
FPAL IAmb IAmb 01 56 00.1
comp=Z,54nm,0.8s
TXAR Lajitas Array 21.91 321 P **P 01 55 41.2 +1.1**
TXAR Lajitas Array 21.91 321 P **P 01 55 41.2 +1.1**
TXAR Lajitas Array 21.91 321 P **P 01 55 41.7 +1.6**
comp=Z,29nm,0.6s,baz=143,slow=10,SNR=313
TXAR PcP **PcP 01 59 39.0 +1.6**
comp=Z,1.1nm,0.6s,baz=136,slow=4.5,SNR=5.7
TXAR ScP **ScP 02 03 11.0 +1.4**
comp=Z,3.6nm,0.7s,baz=147,slow=5.6,SNR=23
comp=Z,29nm,0.6s
TX31 Lajitas Ar. Si 21.92 321 P **P 01 55 41.3 +1.1**
TX31 IAmb IAmb 01 55 43.9
comp=Z,38nm,0.8s
ATAH Atahualpa 21.99 153 P **P 01 55 43.9 +2.6**

comp=Z,16nm,0.8s,baz=338,slow=8.5,SNR=16
ATAH LR LR 02 03 46.8

comp=Z,218nm,21.4s,baz=320,slow=35
comp=Z,16nm,0.8s
PLAL Pickwick Lake 22.19 0 P P 01 55 44.4 +1.5
HUMP Col San Antoni 22.22 73 P P 01 55 43.5 +0.1
HUMP IAmb IAmb 01 55 46.5

comp=Z,41nm,1.1s
MIAR Mount Ida 22.29 348 P P 01 55 45.1 +1.1
MIAR IAmb IAmb 01 56 09.5

comp=Z,66nm,0.9s
MIAR Mount Ida 22.29 348 P P 01 55 44.8 +0.8
baz=166,SNR=29
MIAR Mount Ida 22.29 348 P P 01 55 45.1 +1.1
MIAR pmax pmax

comp=Z,66nm,0.9s
ABTX Abilene, Hawle 22.43 334 P P 01 55 46.1 +0.5
ABTX IAmb IAmb 01 56 04.3

comp=Z,27nm,0.7s
ABTX Abilene, Hawle 22.43 334 P P 01 55 46.4 +0.8
baz=150,SNR=27
X37A Clayton 22.74 345 P 01 55 49.7 +0.9
X37A IAmb IAmb 01 56 16.1

comp=Z,77nm,1.0s
KMSC Kings Mountain 23.20 14 P P 01 55 54.5 +1.1
KMSC IAmb IAmb 01 56 13.4

comp=Z,53nm,0.8s
KMSC Kings Mountain 23.20 14 P P 01 55 53.7 +0.2
baz=197,SNR=19
TKL Tuckaleechee C 23.21 9 P P 01 55 54.0 +0.5
TKL IAmb IAmb 01 56 15.3

comp=Z,62nm,0.9s
TKL Tuckaleechee C 23.21 9 P P 01 55 54.0 +0.5
TKL pmax pmax

comp=Z,62nm,0.9s
TKL Tuckaleechee C 23.21 9 P P 01 55 54.5 +1.0
comp=Z,41nm,0.8s,baz=184,slow=12,SNR=28
TKL ScP **ScP 02 03 12.3 -0.5**

comp=Z,2.8nm,0.7s,baz=208,slow=4.7,SNR=2.5
TKL LR LR 02 04 48.3

comp=Z,174nm,22.0s,baz=192,slow=36
PCRV Puerto La Cruz 23.24 94 P P 01 55 52.9 -1.1
comp=Z,18nm,0.4s,baz=295,slow=4.1,SNR=9.5
PCRV LR LR 02 06 54.2

comp=Z,103nm,19.2s,slow=42
comp=Z,18nm,0.4s
SLBS Sierra La Lagu 23.32 301 P P 01 55 56.8 +2.0
WVT Waverly 23.34 1 P P 01 55 54.0 -0.7
WVT Waverly 23.34 1 P P 01 55 54.5 -0.1
baz=181
WVT Waverly 23.34 1 P P 01 55 54.0 -0.7
WVT pmax pmax

comp=Z,21nm,1.1s
LPIG La Paz 23.80 302 LR LR 02 05 33.3
comp=Z,76nm,20.5s,baz=104,slow=37
WMOK Wichita Mounta 23.95 338 P P 01 56 00.3 0.0
WMOK Wichita Mounta 23.95 338 P P 01 55 60.0 -0.4
baz=154,SNR=18
WMOK Wichita Mounta 23.95 338 P P 01 56 00.4 0.0
WMOK pmax pmax

comp=Z,25nm,1.0s
TUL3 Leonard 24.10 345 P P 01 56 01.8 +0.1
baz=162,SNR=6.7
TZTN Tazewell 24.11 9 P P 01 56 02.3 +0.4
TZTN IAmb IAmb 01 56 22.3

comp=Z,117nm,1.6s
TZTN Tazewell 24.11 9 P P 01 56 02.2 +0.4
baz=191
CNNC Cliffs of the 24.31 21 P P 01 56 04.4 +0.8
CNNC IAmb IAmb 01 56 22.2

comp=Z,39nm,0.8s
CNNC Cliffs of the 24.31 21 P P 01 56 04.0 +0.4
baz=205
MNTX Cornudas Mount 24.64 323 P P 01 56 06.2 -0.5
baz=136,SNR=37
TBTG Tabatinga, AM 24.74 132 P P 01 56 09.3 +1.6
MSTX Muleshoe 24.98 330 P P 01 56 10.3 +0.4
MSTX IAmb IAmb 01 56 11.6

comp=Z,54nm,0.8s
MSTX Muleshoe 24.98 330 P P 01 56 09.8 -0.1
baz=144,SNR=36
AMTX Amarillo 25.24 333 P P 01 56 12.3 +0.2
baz=148
BLA Blacksburg 25.39 15 P P 01 56 14.1 +0.6
BLA IAmb IAmb 01 56 41.0

comp=Z,42nm,0.9s
BLA Blacksburg 25.39 15 P P 01 56 13.4 -0.1
baz=198,SNR=5.8
BLA Blacksburg 25.39 15 P P 01 56 14.1 +0.6
BLA pmax pmax

comp=Z,42nm,0.9s
CCM Cathedral Cave 25.40 354 P P 01 56 13.5 0.0
CCM IAmb IAmb 01 56 34.3

comp=Z,34nm,0.8s
CCM Cathedral Cave 25.40 354 P P 01 56 12.9 -0.5
baz=173
CCM Cathedral Cave 25.40 354 P P 01 56 13.5 0.0
CCM pmax pmax

comp=Z,34nm,0.8s
CZSB Cruzeiro do Su 25.48 142 P P 01 56 15.6 +1.2
CZSB IAmb IAmb 01 56 48.7

comp=Z,43nm,1.0s
WCI Wyandotte Cave 25.49 4 P P 01 56 14.1 -0.1
WCI IAmb IAmb 01 56 36.7

comp=Z,48nm,0.9s
WCI Wyandotte Cave 25.49 4 P P 01 56 13.9 -0.3
baz=184
WCI Wyandotte Cave 25.49 4 P P 01 56 14.1 -0.1
WCI pmax pmax

comp=Z,48nm,1.0s
KAN14 Manchester OK 25.69 342 P 01 56 17.0 +0.8
R55A Marlinton 26.48 14 P P 01 56 23.9 +0.5
R55A IAmb IAmb 01 56 48.6

comp=Z,34nm,0.9s
121A Cookes Peak, D 26.67 321 P P 01 56 26.9 +1.6
121A Cookes Peak, D 26.67 321 P P 01 56 26.5 +1.2
baz=133
SRIG Santa Rosalia 26.79 306 P P 01 56 27.8 +1.7
319A Douglas 26.87 317 P P 01 56 28.2 +1.2
P49A Miami Univ. Ec 26.91 6 P P 01 56 26.1 -1.0
baz=187,SNR=5.6
NNA Nana 27.00 155 P P 01 56 28.2 +0.1
NNA Nana 27.00 155 P P 01 56 28.3 +0.1
NNA pmax pmax

comp=Z,35nm,1.3s
NNA Nana 27.00 155 P P 01 56 29.7 +1.5
comp=Z,6.2nm,0.3s,baz=226,slow=5.2,SNR=3.8
NNA LR LR 02 05 06.4

comp=Z,127nm,20.9s,baz=302,slow=32
comp=Z,6.2nm,0.3s
CBN Corbin Frederi 27.18 19 P P 01 56 30.1 +0.6
CBN IAmb IAmb 01 56 48.8

comp=Z,48nm,0.7s
CBN Corbin Frederi 27.18 19 P P 01 56 29.6 +0.1
baz=204,SNR=5.5
Y22D IRIS PASSCAL I 27.25 324 P P 01 56 30.6 +0.2
Y22D IAmb IAmb 01 56 52.2

comp=Z,56nm,0.9s
Y22D IRIS PASSCAL I 27.25 324 P P 01 56 29.7 -0.7
baz=137
Y22F Passcal Instru 27.25 324 P P 01 56 30.1 -0.3
baz=137
KSU1 Kansas State U 27.33 346 P P 01 56 31.4 +0.5
baz=162
P52A Corning 27.36 10 P P 01 56 31.5 +0.3
baz=193,SNR=8.4
O48B Farmland 27.59 5 P P 01 56 31.9 -1.2
baz=186
SFIN Lafayette 27.59 2 P P 01 56 32.4 -0.8
SFIN Lafayette 27.59 2 P P 01 56 31.7 -1.5
baz=182
O49A Covington 27.60 6 P P 01 56 32.5 -0.8
ANMO Albuquerque 27.64 326 P P 01 56 34.4 +0.5
ANMO Albuquerque 27.64 326 P P 01 56 35.3 +1.4
baz=139
ANMO Albuquerque 27.64 326 P P 01 56 34.4 +0.5
ANMO pmax pmax

comp=Z,4.0nm,0.8s
ANMO Albuquerque 27.64 326 P P 01 56 35.7 +1.7
comp=Z,3.5nm,0.6s,baz=245,slow=9.4,SNR=14
ANMO LR LR 02 09 39.5

comp=Z,97nm,19.5s,baz=216,slow=41
comp=Z,3.5nm,0.6s
HDIL Hopedale 27.77 358 P P 01 56 35.0 +0.2
HDIL Hopedale 27.77 358 P P 01 56 35.5 +0.7
baz=178,SNR=6.3

ACSO Alum Creek Sta 27.81 9 P P 01 56 35.0 -0.1
ACSO IAmb IAmb 01 56 53.8

comp=Z,24nm,0.7s
ACSO Alum Creek Sta 27.81 9 P P 01 56 35.1 -0.1
baz=191,SNR=10.0
MCWV Mont Chateau 27.86 14 P P 01 56 35.5 -0.1
baz=198,SNR=6.6
CBKS Cedar Bluff 27.95 341 P P 01 56 36.9 +0.4
CBKS Cedar Bluff 27.95 341 P P 01 56 36.1 -0.4
baz=155
CBKS Cedar Bluff 27.95 341 P P 01 56 36.9 +0.4
CBKS pmax pmax

comp=Z,19nm,0.9s
O53A New Philadelph 28.13 11 P P 01 56 38.4 +0.4
baz=194
T25A Trinidad 28.34 332 P P 01 56 41.7 +1.5
T25A Trinidad 28.34 332 P P 01 56 40.5 +0.4
baz=145,SNR=12
SDMD Soldier's Deli 28.45 19 P P 01 56 41.4 +0.5
TUC Tucson 28.45 317 P P 01 56 42.2 +1.1
baz=128
BBSR BB Station 29.12 44 P P 01 56 47.7 +0.8
BBSR IAmb IAmb 01 56 49.8

comp=Z,25nm,0.8s
KSCO Kaye Shedlock' 29.16 337 P P 01 56 48.2 +0.9
baz=150,SNR=7.6
BOAV Boa Vista 29.26 108 P P 01 56 46.0 -2.4
SSPA Standing Stone 29.27 16 P P 01 56 48.6 +0.4
SSPA Standing Stone 29.27 16 P P 01 56 48.8 +0.6
baz=201
SDCO Great Sand Dun 29.34 331 P P 01 56 50.5 +1.3
SDCO Great Sand Dun 29.34 331 P P 01 56 49.7 +0.6
baz=144,SNR=23
X18A Snowflake 29.35 321 P P 01 56 50.4 +1.2
L44A Lake County Fo 29.37 0 P P 01 56 48.8 -0.3
baz=180
M53A WI Miller and 29.38 12 P P 01 56 49.6 +0.4
baz=195,SNR=6.1
SCIA State Center 29.43 352 P P 01 56 50.2 +0.7
SCIA IAmb IAmb 01 57 07.1

comp=Z,17nm,0.7s
SCIA State Center 29.43 352 P P 01 56 49.6 +0.1
baz=170
214A Organ Pipe Nat 29.62 314 P P 01 56 51.7 +0.2
baz=125
W18A Petrified Fore 29.62 323 P P 01 56 51.7 +0.1
baz=134
AAM Ann Arbor 29.76 7 P P 01 56 52.3 -0.1
AAM IAmb IAmb 01 56 55.9

comp=Z,26nm,0.5s
AAM Ann Arbor 29.76 7 P P 01 56 52.5 +0.1
baz=189
AAM Ann Arbor 29.76 7 P P 01 56 52.3 -0.1
AAM pmax pmax

comp=Z,26nm,0.5s
JFWS Jewell Farm 30.16 357 P P 01 56 55.5 -0.5
JFWS IAmb IAmb 01 57 29.7

comp=Z,86nm,1.9s
JFWS Jewell Farm 30.16 357 P P 01 56 55.7 -0.3
baz=176
JFWS Jewell Farm 30.16 357 P P 01 56 55.5 -0.5
JFWS pmax pmax

comp=Z,87nm,1.9s
Q24A Divide 30.17 333 P P 01 56 55.4 -1.1
baz=146
ERPA Erie 30.18 12 P P 01 56 55.9 -0.3
baz=196
MVCO Mesa Verde 30.43 327 P P 01 56 58.3 -0.4
baz=138,SNR=7.1
OGNE Ogallala 30.64 339 P P 01 57 00.6 +0.3
baz=153
PAL Palisades 30.86 21 P P 01 57 02.6 +0.4
baz=208,SNR=5.9
WUAZ Wupatki 30.88 321 P P 01 57 04.2 +1.6
baz=132
ISCO Idaho Springs 31.06 333 P P 01 57 04.8 +0.5
ISCO Idaho Springs 31.06 333 P P 01 57 05.4 +1.1
baz=146,SNR=8.4
ISCO Idaho Springs 31.06 333 P P 01 57 04.8 +0.5
ISCO pmax pmax

comp=Z,6.0nm,0.9s
WSPT Westport, CT 31.22 22 P P 01 57 05.2 -0.1
WSPT IAmb IAmb 01 57 23.7

comp=Z,22nm,0.7s
BINY Binghamton 31.26 18 P P 01 57 06.0 +0.2
BINY IAmb IAmb 01 57 32.6

comp=Z,18nm,0.8s
BINY Binghamton 31.26 18 P P 01 57 06.3 +0.5
baz=203
ETMB Extrema 31.27 135 P P 01 57 06.1 0.0
GLA Glamis 31.65 314 P P 01 57 08.3 -1.0
baz=124
ECSD EROS Data Cent 31.76 348 P P 01 57 10.1 0.0
PDMCI Parker Dam,Lak 31.89 317 P P 01 57 10.7 -0.6
baz=126
N23A Red Feather La 32.11 334 P P 01 57 13.3 -0.1
baz=146,SNR=6.8
HMU Henry Mountain 32.18 325 P P 01 57 15.8 +1.7
HMU IAmb IAmb 01 57 19.4

comp=Z,9.9nm,0.7s
BC3 Big Chuckawall 32.42 315 P P 01 57 16.2 +0.1
baz=124
O20A White River Ci 32.53 331 P P 01 57 18.5 +1.4
O20A IAmb IAmb 01 57 36.1

comp=Z,26nm,0.8s
O20A White River Ci 32.53 331 P P 01 57 18.7 +1.6
baz=142,SNR=11
L61B Northampton 32.57 22 P P 01 57 17.2 0.0
baz=209
SPMN Marine on St. 32.65 354 P P 01 57 17.4 -0.5
baz=172,SNR=12
SAML Samuel 32.88 130 P P 01 57 19.4 -0.8
SAML IAmb IAmb 01 57 22.7

comp=Z,18nm,0.7s
SAML PcP **PcP 02 00 03.7 -0.1**
SAML Samuel 32.88 130 P P 01 57 19.5 -0.6
SAML PcP **PcP 02 00 04.5 +0.7**
SAML ScP **ScP 02 03 45.8 +3.0**
SADO Sadowa 32.89 12 P P 01 57 19.6 -0.4
SADO IAmb IAmb 01 57 38.1

comp=Z,15nm,0.7s
SADO Sadowa 32.89 12 P P 01 57 19.4 -0.5
comp=Z,8.7nm,0.4s,baz=210,slow=9.6,SNR=25
SADO pP **pP 01 57 36.0 +1.0**

comp=Z,13nm,0.5s,baz=206,slow=9.3,SNR=7.0
SADO ScP **ScP 02 03 40.4 -2.0**

comp=Z,5.3nm,0.6s,baz=250,slow=2.0,SNR=9.2
SADO LR LR 02 10 44.5

comp=Z,162nm,19.0s,baz=250,slow=36
comp=Z,8.7nm,0.4s
SUSD Miller 32.95 346 P P 01 57 20.5 0.0
baz=160
PFO Pinyon Flats O 33.10 314 *i* P **P 01 57 19.8 -2.3**
PFO pmax pmax

comp=Z,11nm,1.2s
PFO Pinyon Flats O 33.10 314 LR LR 02 11 32.5
comp=Z,151nm,19.5s,baz=122,slow=37
GMRC Granite Mounta 33.19 316 P P 01 57 23.1 +0.2
baz=125
COWI Conover 33.30 359 P P 01 57 22.4 -1.2
COWI IAmb IAmb 01 57 25.0

comp=Z,16nm,0.6s
MURC Murrieta 33.62 313 P P 01 57 26.7 +0.2
baz=121
K22A Casper 33.81 335 P P 01 57 28.4 +0.2
baz=146,SNR=9.8
HNH Hanover 33.81 21 P P 01 57 28.2 +0.2
LONY Lake Ozonia 33.89 18 P P 01 57 28.6 0.0
LONY IAmb IAmb 01 57 46.6

comp=Z,33nm,1.5s
LONY Lake Ozonia 33.89 18 P P 01 57 28.3 -0.4
baz=204
WBO Williamsburg 34.04 16 P P 01 57 29.7 -0.2
WBO pP **pP 01 57 46.3 +1.2**
WBO sP **sP 01 57 55.2 +3.0**
WBO IAmb IAmb 01 57 56.1

comp=Z,13nm,0.9s
RSSD Black Hills 34.14 340 P P 01 57 32.3 +1.2
RSSD IAmb IAmb 01 57 34.1

comp=Z,10nm,0.6s
RSSD Black Hills 34.14 340 P P 01 57 31.6 +0.5
baz=152
RSSD Black Hills 34.14 340 P P 01 57 32.3 +1.2
RSSD pmax pmax

comp=Z,10.0nm,0.6s
RSSD Black Hills 34.14 340 P P 01 57 32.6 +1.5
RSSD pP **pP 01 57 45.3 -0.9**
RSSD sP **sP 01 57 50.5 -2.9**
RSSD ScP **ScP 02 03 48.8 +1.7**
GSC Goldstone, Bar 34.26 316 P P 01 57 32.3 +0.2
baz=124
CIS Catalina Islan 34.39 312 P P 01 57 31.6 -1.7
baz=120
LBNH Lisbon 34.40 21 P P 01 57 32.3 -0.8
baz=209
DUG Dugway, Tooele 34.91 326 P P 01 57 37.5 -0.2
baz=135
LRMC Laurel Mtn Rad 34.95 316 P P 01 57 38.0 -0.2
baz=123
MNTQ Montreal, Queb 34.97 18 P P 01 57 37.7 -0.3
MNTQ IAmb IAmb 01 58 04.5

comp=Z,24nm,1.0s
LPAZ La Paz 34.98 145 P P 01 57 38.1 -1.0
MPMC Manual Prospec 35.14 316 P P 01 57 39.5 -0.4
baz=124
BW06 Boulder Array 35.21 332 P P 01 57 39.9 -0.4
baz=142,SNR=9.0
PDAR Pinedale Array 35.21 332 P P 01 57 40.7 +0.3
PDAR Pinedale Array 35.21 332 P P 01 57 41.0 +0.7
comp=Z,3.7nm,0.5s,baz=128,slow=11,SNR=62
PDAR PcP **PcP 02 00 10.0 -0.3**

comp=Z,0.9nm,0.5s,baz=136,slow=5.8,SNR=4.7
PDAR ScP **ScP 02 03 51.4 +0.4**

comp=Z,0.4nm,0.6s,baz=123,slow=4.1,SNR=4.4
PDAR LR LR 02 15 49.7

comp=Z,148nm,18.4s,baz=127,slow=43
comp=Z,3.7nm,0.5s
EYMN Ely 35.25 356 P P 01 57 38.8 -1.6
EYMN IAmb IAmb 01 57 41.1

comp=Z,11nm,0.6s
EYMN Ely 35.25 356 P P 01 57 39.0 -1.3
baz=174,SNR=16
HWUT Hardware Ranch 35.28 329 P P 01 57 41.7 +0.7
HWUT IAmb IAmb 01 57 59.2

comp=Z,13nm,0.7s
R11B Troy Canyon, C 35.28 321 P P 01 57 42.7 +1.6
R11B Troy Canyon, C 35.28 321 P P 01 57 40.7 -0.3
baz=129
GRAC Grapevine Rang 35.59 318 P P 01 57 43.1 -0.4
baz=125,SNR=8.8
PB12 IPOC Station P 35.76 150 P P 01 57 45.8 +0.6
MDP Montagnes des 35.91 99 ScP ScP 02 03 53.3 -0.4
comp=Z,27nm,1.0s,baz=265,slow=4.6,SNR=4.6
MDP LR LR 02 13 36.9

comp=Z,189nm,19.2s,baz=334,slow=38
AHID Auburn Hatcher 35.92 331 P P 01 57 46.9 +0.5
PB16 IPOC Station P 35.94 149 P P 01 57 48.2 +1.0
PB16 IAmb IAmb 01 57 50.1

comp=Z,24nm,0.8s
AGMN Agassiz Nation 36.06 351 P P 01 57 46.6 -0.7
baz=167,SNR=24
PKME Peaks-Kenny Pk 36.24 23 P P 01 57 48.3 -0.6
baz=212
REDW Red Top Meadow 36.26 332 P P 01 57 50.5 +1.1
MDND Maddock 36.31 347 P P 01 57 49.5 0.0
MDND Maddock 36.31 347 P P 01 57 49.9 +0.4
baz=161,SNR=8.2
ELK Elko 36.63 325 P P 01 57 53.6 +1.0
ELK Elko 36.63 325 P P 01 57 53.6 +1.0
ELK pmax pmax

comp=Z,5.0nm,0.8s
ELK Elko 36.63 325 P P 01 57 55.1 +2.5
comp=Z,2.2nm,0.6s,baz=121,slow=6.6,SNR=9.7
ELK PcP **PcP 02 00 15.7 +1.1**

comp=Z,2.3nm,0.8s,baz=230,slow=3.2,SNR=4.6
ELK ScP **ScP 02 03 56.8 +0.6**

comp=Z,2.4nm,0.8s,baz=145,slow=2.7,SNR=9.4
ELK LR LR 02 15 09.0

comp=Z,82nm,18.9s,baz=133,slow=40
comp=Z,2.2nm,0.6s
H17A Grant Village 36.94 333 P P 01 57 56.2 +1.0
baz=142
RLMT Red Lodge 36.97 335 P P 01 57 55.9 +0.5
baz=144,SNR=12
NVAR Mina Array Bea 37.03 319 P P 01 57 57.0 +1.0
NVAR Mina Array Bea 37.03 319 P P 01 57 58.0 +2.1
comp=Z,1.7nm,0.6s,baz=132,slow=6.9,SNR=12
NVAR PcP **PcP 02 00 17.3 +1.5**

comp=Z,5.1nm,0.5s,baz=127,slow=2.6,SNR=24
NVAR ScP **ScP 02 03 58.5 +0.8**

comp=Z,3.8nm,0.7s,baz=130,slow=3.8,SNR=22
comp=Z,1.7nm,0.6s
PB11 IPOC Station P 37.07 150 P P 01 57 57.2 +0.9
PB11 IAmb IAmb 01 57 58.7

comp=Z,21nm,0.9s
YFT Old Faithful 37.10 333 P P 01 57 57.7 +1.1
YFT IAmb IAmb 01 58 02.2

comp=Z,15nm,0.7s
GO01 Chusmiza 37.22 149 P P 01 57 59.3 +1.3
GO01 IAmb IAmb 01 58 08.0

comp=Z,13nm,0.7s
BMN Battle Mountai 37.58 323 P P 01 58 00.5 0.0
BMN Battle Mountai 37.58 323 P P 01 58 00.5 0.0
BMN pmax pmax

comp=Z,9.0nm,0.8s
PB08 IPOC Station P 37.64 150 P P 01 58 02.5 +1.0
QLMT Earthquake Lak 37.66 333 P P 01 58 02.7 +1.4
VILB Vilhena 37.70 132 P P 01 58 01.3 -0.4
ULM Lac du Bonnet 37.97 352 P P 01 58 01.7 -1.8
ULM IAmb IAmb 01 58 25.9

comp=Z,17nm,1.1s
ULM Lac du Bonnet 37.97 352 *eP* **P 01 58 01.9 -1.6**
ULM pmax pmax

comp=Z,11nm,0.5s
ULM Lac du Bonnet 37.97 352 P P 01 58 02.4 -1.1
comp=Z,10nm,0.5s,baz=165,slow=9.1,SNR=38
ULM ScP **ScP 02 03 58.9 -1.8**

comp=Z,3.6nm,0.6s,baz=176,slow=4.0,SNR=9.3
ULM LR LR 02 14 40.7

comp=Z,286nm,21.8s,baz=156,slow=38
comp=Z,10nm,0.5s
DGMT Dagmar 38.06 343 P P 01 58 04.7 +0.3
DGMT Dagmar 38.06 343 P P 01 58 05.3 +1.0
baz=154,SNR=21
HLID Hailey 38.14 329 P P 01 58 06.0 +0.7
HLID Hailey 38.14 329 P P 01 58 06.3 +1.0
baz=136,SNR=13
PB01 IPOC Station P 38.25 151 P P 01 58 07.0 +0.8
PB01 IAmb IAmb 01 58 08.7

comp=Z,16nm,0.9s
PB02 IPOC Station P 38.29 152 P P 01 58 07.5 +0.9
PB02 IAmb IAmb 01 58 09.3

comp=Z,34nm,1.2s
BOZ Bozeman (W) 38.35 333 P P 01 58 07.7 +0.8
BOZ IAmb IAmb 01 58 10.0

comp=Z,13nm,0.6s
BOZ Bozeman (W) 38.35 333 P P 01 58 08.5 +1.6
baz=141,SNR=27
BOZ Bozeman (W) 38.35 333 P P 01 58 07.7 +0.8
BOZ pmax pmax

comp=Z,13nm,0.6s
PB07 IPOC Station P 38.65 152 P P 01 58 10.3 +0.6
PB07 IAmb IAmb 01 58 12.5

comp=Z,39nm,1.2s
PB09 IPOC Station P 39.01 151 P P 01 58 13.8 +1.1
SIV San Ignacio 39.16 136 LR LR 02 14 20.2
comp=Z,150nm,18.3s,baz=312,slow=36
BATG Bathurst New B 39.16 24 P P 01 58 13.5 0.0
BATG IAmb IAmb 01 58 14.7

comp=Z,13nm,0.7s
EGMT Eagleton 39.54 337 P P 01 58 17.3 +0.5
EGMT Eagleton 39.54 337 P P 01 58 17.8 +1.0
baz=146,SNR=9.9
WVOR Wild Horse Val 39.67 324 P P 01 58 18.5 +0.5
WVOR Wild Horse Val 39.67 324 P P 01 58 18.5 +0.5
WVOR pmax pmax

comp=Z,7.0nm,1.1s
LVC Limon Verde 39.86 152 P P 01 58 21.0 +0.9
LVC IAmb IAmb 01 58 23.2

comp=Z,20nm,0.9s
LVC Limon Verde 39.86 152 P P 01 58 21.0 +0.9
LVC pmax pmax

comp=Z,20nm,1.0s
LVC Limon Verde 39.86 152 LR LR 02 15 07.0
comp=Z,92nm,19.7s,baz=311,slow=36
LVC Limon Verde 39.86 152 P P 01 58 21.9 +1.9
PTLB Pontes e Lacer 40.13 133 P P 01 58 21.5 -0.3
AF01 San Pedro de A 40.50 151 P P 01 58 26.5 +1.3
PB14 IPOC Station P 40.97 155 P P 01 58 29.4 +0.4
PB14 IAmb IAmb 01 58 31.4

comp=Z,28nm,1.0s
I07A Izee 41.20 325 P P 01 58 31.3 +0.7

YBH **Yreka Blue Hor** 41.69 320 P **P** 01 58 35.6 +1.0
YBH **Yreka Blue Hor** 41.69 320 P **P** 01 58 34.0 -0.6
comp=Z,1.3nm,0.5s,baz=120,slow=4.7,SNR=8.5
YBH PcP **PcP** 02 00 30.7 +0.4
comp=Z,1.3nm,0.7s,baz=184,slow=6.7,SNR=3.7
YBH LR LR 02 18 18.4
comp=Z,170nm,18.8s,baz=144,slow=39
comp=Z,1.3nm,0.5s
GO02 Mina Guanaco 41.78 154 P **P** 01 58 36.6 +0.9
GO02 lAmb lAmb 01 58 38.5
comp=Z,20nm,0.9s
PINE Pine Mountain 41.83 324 **P** 01 58 36.8 +1.0
NEW Newport 42.84 332 P **P** 01 58 43.6 -0.2
NEW Newport 42.84 332 P **P** 01 58 43.8 0.0
baz=136
NEW Newport 42.84 332 P **P** 01 58 43.6 -0.2
NEW pmax pmax
comp=Z,5.0nm,0.7s
NEW Newport 42.84 332 P **P** 01 58 43.7 -0.1
comp=Z,4.1nm,0.6s,baz=132,slow=7.9,SNR=16
NEW LR LR 02 21 41.8
comp=Z,119nm,18.2s,baz=128,slow=43
comp=Z,4.1nm,0.6s
FFC Flin Flon 43.30 348 P **P** 01 58 47.6 +0.2
FFC lAmb lAmb 01 58 49.0
comp=Z,14nm,0.6s
FFC Flin Flon 43.30 348 P **P** 01 58 47.6 +0.2
FFC pmax pmax
comp=Z,14nm,0.6s
FFC Flin Flon 43.30 348 P **P** 01 58 47.4 0.0
FFC sP **pP** 01 59 05.7 +2.7
AC02 Maricunga 43.45 155 P **P** 01 58 50.9 +1.4
AC02 lAmb lAmb 01 58 52.6
comp=Z,25nm,1.1s
DRLN Deer Lake 44.38 29 P **P** 01 58 55.2 -0.9
RPN Rapa Nui 44.58 207 LR LR 02 12 43.6
comp=Z,356nm,20.6s,baz=14,slow=29
LCO Las Campanas 44.78 158 P **P** 01 59 01.0 +1.1
AC05 El Transito 44.78 157 P **P** 01 59 00.6 +0.9
AC05 lAmb lAmb 01 59 02.1
comp=Z,18nm,0.9s
EDM Edmonton 45.11 339 P **P** 01 59 01.9 0.0
EDM Edmonton 45.11 339 P **P** 01 59 01.9 0.0
EDM pmax pmax
comp=Z,50nm,0.7s
SCHQ Schefferville 45.26 17 P **P** 01 59 01.9 -1.2
SCHQ lAmb lAmb 01 59 02.8
comp=Z,23nm,0.8s
SCHQ Schefferville 45.26 17 P **P** 01 59 01.9 -1.2
comp=Z,19nm,0.7s,baz=218,slow=7.0,SNR=51
SCHQ LR LR 02 19 03.6
comp=Z,285nm,20.1s,baz=228,slow=38
comp=Z,19nm,0.7s
AQDB Aquidauana 45.92 135 P **P** 01 59 08.3 -0.4
AQDB lAmb lAmb 01 59 11.7
comp=Z,30nm,1.0s
CO06 Fray Jorge 45.97 160 P **P** 01 59 09.5 +0.5
FCC Fort Churchill 46.19 356 P **P** 01 59 09.6 -0.6
FCC lAmb lAmb 01 59 27.2
comp=Z,18nm,0.8s
FCC Fort Churchill 46.19 356 P **P** 01 59 09.6 -0.6
FCC pmax pmax
comp=Z,18nm,0.8s
CO03 El Pedregal 46.45 159 P **P** 01 59 13.5 +0.7
CO03 lAmb lAmb 01 59 14.9
comp=Z,28nm,0.9s
CO02 Combarbal 46.67 160 P **P** 01 59 15.5 +0.9
H03N2 Juan Fernandez 46.72 169 T T 02 49 25.5
baz=347,slow=76,SNR=16
H03N1 Juan Fernandez 46.73 169 T T 02 49 26.0
baz=347,slow=76,SNR=14
H03N3 Juan Fernandez 46.74 169 T T 02 49 24.9
baz=347,slow=76,SNR=18
VA03 San Esteban 48.25 160 P **P** 01 59 27.7 +1.0
BDFB Brasilia 48.73 124 P **P** 01 59 30.1 -0.6
BDFB PcP **PcP** 02 00 56.8 +1.6
BDFB Brasilia 48.73 124 P **P** 01 59 30.1 -0.6
BDFB 02 00 56.8
BDFB pmax pmax
comp=Z,6.0nm,0.9s
BDFB Brasilia 48.73 124 P **P** 01 59 30.3 -0.4
comp=Z,3.9nm,0.4s,baz=293,slow=8.5,SNR=13
BDFB PcP **PcP** 02 00 55.9 +0.8
comp=Z,5.2nm,0.7s,baz=309,slow=2.5,SNR=6.6
BDFB LR LR 02 20 03.3
comp=Z,129nm,20.8s,baz=331,slow=36
comp=Z,3.9nm,0.4s
MT03 Universidad Ad 48.94 160 P **P** 01 59 32.5 +0.5
MT09 Talagante 49.04 161 P **P** 01 59 33.5 +0.7
CPUP Villa Florida 49.06 142 P **P** 01 59 32.4 -0.6
CPUP lAmb lAmb 01 59 35.3
comp=Z,35nm,1.6s
CPUP Villa Florida 49.06 142 P **P** 01 59 32.4 -0.6
CPUP pmax pmax
comp=Z,35nm,1.6s
CPUP Villa Florida 49.06 142 P **P** 01 59 32.4 -0.6
comp=Z,4.1nm,0.6s,baz=335,slow=8.8,SNR=12
CPUP LR LR 02 23 01.1
comp=Z,103nm,18.3s,baz=16,slow=39
comp=Z,4.1nm,0.6s
CPUP Villa Florida 49.06 142 P **P** 01 59 32.3 -0.6
CPUP pP **pP** 01 59 44.4 -4.3
CPUP PcP **PcP** 02 00 56.6 +0.6
MT13 San Alfonso 49.24 160 P **P** 01 59 35.3 +0.9
BO04 La Punta 49.36 161 P **P** 01 59 35.9 +0.7
BO04 lAmb lAmb 01 59 37.1
comp=Z,20nm,1.0s
LMEL Las Melosas 49.36 160 P **P** 01 59 36.2 +0.9
LMEL lAmb lAmb 01 59 37.9
comp=Z,24nm,0.9s
BO01 Tunca 49.58 161 P **P** 01 59 37.4 +0.6
TRCB Terra Rica 49.59 135 P **P** 01 59 36.4 -0.7
GO05 Huala 49.90 162 P **P** 01 59 39.5 +0.3
BBB Bella Bella 50.73 329 LR LR 02 23 46.2
comp=Z,65nm,18.6s,baz=162,slow=39
ML02 Panimavida 50.75 162 P **P** 01 59 45.7 +0.1
ITQB Itaqui 51.98 145 P **P** 01 59 54.7 -0.2
FRB Frobisher Bay 52.82 11 P **P** 01 59 59.0 -1.7
comp=Z,13nm,0.5s,baz=216,slow=8.5,SNR=66
FRB pP **pP** 02 00 16.1 -0.6
comp=Z,9.6nm,0.5s,baz=217,slow=10,SNR=7.0
FRB LR LR 02 22 56.7
comp=Z,225nm,19.3s,baz=193,slow=37
comp=Z,13nm,0.5s
ITAB Concordia 52.93 139 P **P** 02 00 01.6 -0.4
YKA Yellowknife Ar 53.18 345 P **P** 02 00 02.7 -0.6
YKA Yellowknife Ar 53.18 345 eP **P** 02 00 02.9 -0.4
YKA pmax pmax
comp=Z,9.0nm,0.9s
YKA Yellowknife Ar 53.18 345 P **P** 02 00 03.0 -0.4
comp=Z,7.8nm,0.9s,baz=139,slow=7.4,SNR=63
YKA pP **pP** 02 00 20.1 +0.8
comp=Z,14nm,0.8s,baz=140,slow=7.5,SNR=17
YKA PcP **PcP** 02 01 10.5 -0.2
comp=Z,3.0nm,0.8s,baz=135,slow=6.0,SNR=1.8
YKA ScP **ScP** 02 05 01.9 -1.2
comp=Z,1.3nm,0.8s,baz=144,slow=3.9,SNR=9.6
YKA LR LR 02 24 32.1
comp=Z,246nm,21.5s,baz=196,slow=38
comp=Z,7.8nm,0.9s
KOTAN Kotaneelee Air 54.19 339 P **P** 02 00 11.7 +0.9
baz=135
GO06 Curarrehue 54.30 164 P **P** 02 00 12.4 +0.4
GO06 lAmb lAmb 02 00 13.7
comp=Z,14nm,0.8s
T35M Bob Quinn 54.58 333 P **P** 02 00 15.0 +1.3
baz=127
LR05 Currie 54.77 165 P **P** 02 00 15.5 +0.4
RCBR Riachuelo 55.14 106 LR LR 02 25 27.3
comp=Z,195nm,18.3s,baz=322,slow=38
WRAK Wrangell Islan 55.20 332 P **P** 02 00 19.2 +1.1
baz=124
PLTB Pedras Altas 55.27 144 P **P** 02 00 18.7 -0.3
PLTB lAmb lAmb 02 00 19.8
comp=Z,12nm,0.8s
DLBC Dease Lake 55.37 335 P **P** 02 00 20.6 +1.1
DLBC Dease Lake 55.37 335 P **P** 02 00 20.9 +1.4
baz=128,SNR=7.4
DLBC Dease Lake 55.37 335 P **P** 02 00 20.8 +1.4
comp=Z,22nm,0.6s,baz=145,slow=4.2,SNR=52
DLBC pP **pP** 02 00 37.0 +1.5
comp=Z,11nm,0.6s,baz=144,slow=7.2,SNR=6.1
DLBC LR LR 02 26 50.2
comp=Z,173nm,20.3s,baz=102,slow=39
comp=Z,22nm,0.6s
S34M Telegraph Cree 55.52 334 P **P** 02 00 21.6 +1.2
baz=126
PLCA Paso Flores 55.62 164 P **P** 02 00 22.1 +0.7
PLCA Paso Flores 55.62 164 P **P** 02 00 22.2 +0.7
comp=Z,20nm,0.8s,baz=339,slow=8.6,SNR=51
PLCA LR LR 02 19 58.4
comp=Z,99nm,18.5s,baz=26,slow=31
comp=Z,20nm,0.8s
PLCA Paso Flores 55.62 164 P **P** 02 00 22.3 +0.8
PLCA pP **pP** 02 00 35.4 -2.1
PLCA sP **sP** 02 00 41.6 -2.8
TAOE Nuku Hiva Isla 55.86 250 eLR LR 02 16 39.4
comp=Z,354nm,26.1s
WRGLY Wrigley 56.25 342 P **P** 02 00 25.7 +0.2
baz=137,SNR=5.7
LL06 Loncomilla 56.26 167 P **P** 02 00 27.0 +1.1
R33M Jennings River 56.34 335 P **P** 02 00 27.4 +0.9
baz=127
Q32M Nakina River 56.62 334 P **P** 02 00 28.8 +0.3
baz=126
TGTN Hyland Airport 56.66 338 P **P** 02 00 30.6 +2.0
baz=131
LL01 San Ignacio de 56.70 166 P **P** 02 00 29.5 +0.5
R32K Eaglecrest 57.20 333 P **P** 02 00 33.9 +1.5
baz=123
P33M Teslin, Yukon 57.58 335 P **P** 02 00 36.2 +1.1
baz=126
LL02 Futaleuf 57.60 166 P **P** 02 00 36.0 +0.6
N32M Quiet Lake 58.24 336 P **P** 02 00 40.9 +1.2
baz=125
MMPY Sheldon Lake, 58.44 338 P **P** 02 00 41.8 +0.7
baz=128
AY01 Puyuhuapi 58.58 167 P **P** 02 00 42.6 +0.5
O30N Mendenhall 59.23 335 P **P** 02 00 47.1 +0.5
baz=123
P29M Windy Craggy 59.34 333 P **P** 02 00 48.0 +0.6
baz=120
M31M Drury Creek, Y 59.36 337 P **P** 02 00 48.6 +1.1
baz=125
SFJD Kangerlussuaq 59.69 16 LR LR 02 26 00.7
comp=Z,106nm,20.8s,baz=197,slow=36
SFJD Kangerlussuaq 59.69 16 P P 02 00 55.7 +6.2
COYC Coyhaique 59.80 167 P **P** 02 00 51.5 +0.9
COYC Coyhaique 59.80 167 P **P** 02 00 51.6 +1.1
N30M Aishikik Lake 60.01 335 P **P** 02 00 52.8 +0.8
baz=122
YUK6 Outpost Mounta 60.27 334 P **P** 02 00 55.2 +1.2
baz=120
M30M Minto, Yukon 60.50 336 P **P** 02 00 56.4 +1.2
baz=123
YUK4 Talbot Arm 60.60 335 P **P** 02 00 57.5 +1.4
baz=120
YUK8 Steele Glacier 61.03 334 P **P** 02 00 59.3 +0.1
baz=119
M29M Somme Creek 61.08 336 P **P** 02 01 00.1 +0.8
baz=121
AY03 Cochrane 61.29 168 P **P** 02 01 02.4 +1.7
AY03 lAmb lAmb 02 01 03.3
comp=Z,33nm,0.9s
L29M L29M 61.30 337 P **P** 02 01 01.4 +0.7
baz=122
J30M Hart River 61.43 339 P **P** 02 01 02.0 +0.4
J30M lAmb lAmb 02 01 55.1
comp=Z,11nm,1.4s
J30M Hart River 61.43 339 P **P** 02 01 02.8 +1.1
baz=124
K29M Barlow Dome 61.46 338 P **P** 02 01 01.8 0.0
baz=123
CTG Chitna Glacier 61.56 334 P **P** 02 01 02.9 +0.3
baz=117
I30M Mount Dempster 61.81 339 P **P** 02 01 04.7 +0.5
baz=124
BVCY Beaver Creek 62.04 335 P **P** 02 01 06.2 +0.6
baz=118
BGLC Bering Glacier 62.04 332 P **P** 02 01 05.4 -0.2
baz=115
J29N Klondike Camp 62.05 338 P **P** 02 01 06.4 +0.7
baz=122
RES Resolute Bay 62.09 358 P **P** 02 01 04.5 -1.2
RES lAmb lAmb 02 01 23.0
comp=Z,8.5nm,0.7s
RES Resolute Bay 62.09 358 P **P** 02 01 04.5 -1.2
RES pmax pmax
comp=Z,8.0nm,0.7s
RES Resolute Bay 62.09 358 P **P** 02 01 04.6 -1.2
comp=Z,3.9nm,0.5s,baz=177,slow=10.0,SNR=45
RES pP **pP** 02 01 21.9 -0.2
comp=Z,7.1nm,0.6s,baz=192,slow=8.9,SNR=12
RES LR LR 02 28 59.3
comp=Z,117nm,20.5s,baz=184,slow=37
comp=Z,3.9nm,0.5s
G31M Satah River 62.12 341 P **P** 02 01 05.9 -0.1
baz=127,SNR=12
F31M Tsiigehtchic 62.27 342 P **P** 02 01 07.9 +0.8
baz=128
DAWY Dawson 62.28 337 P **P** 02 01 07.7 +0.4
baz=121
BERG Berg Lake 62.35 332 P **P** 02 01 07.9 +0.2
M27K Edge Creek, AK 62.43 335 P **P** 02 01 07.9 -0.4
baz=118
GO08 Villa O'Higgin 62.46 168 P **P** 02 01 09.6 +1.1
GO08 lAmb lAmb 02 01 10.9
comp=Z,15nm,0.8s
MCARA McCarthy VSAT 62.47 334 P **P** 02 01 08.2 -0.3
baz=116
EPYK Eagle Plains 62.58 340 P **P** 02 01 09.9 +0.7
baz=124
BCAR Beaver Creek A 62.72 336 P **P** 02 01 10.2 0.0
L27K Beaver Creek, 62.74 336 P **P** 02 01 10.8 +0.5
baz=118
INK Inuvik 62.75 343 P **P** 02 01 10.0 -0.2
INK lAmb lAmb 02 01 28.6
comp=Z,9.7nm,0.8s
INK Inuvik 62.75 343 P **P** 02 01 10.8 +0.6
baz=129,SNR=6.1
INK Inuvik 62.75 343 P **P** 02 01 10.0 -0.2
INK pmax pmax
comp=Z,10.0nm,0.9s
INK Inuvik 62.75 343 LR LR 02 30 40.3
comp=Z,171nm,20.9s,baz=14,slow=38
G30M tAoh Zraii Nji 62.77 341 P **P** 02 01 10.8 +0.3
baz=125
M26K Nabesna, AK 62.91 335 P **P** 02 01 11.6 +0.1
baz=116
BMRM Bremner River 62.99 333 P **P** 02 01 11.7 -0.4
baz=114
F30M Barrier River 63.00 341 P **P** 02 01 11.3 -0.6
baz=126
H29M Whitestone 63.05 340 P **P** 02 01 12.2 -0.1
baz=123
Q23K Middleton Isla 63.19 331 P **P** 02 01 13.7 +0.5
baz=112
I28M Miner Creek 63.19 338 P **P** 02 01 13.8 +0.5
baz=121
N25K Chitina, Valde 63.25 334 P **P** 02 01 13.3 -0.5
baz=114
A36M Sas Harbour 63.26 348 P **P** 02 01 12.6 -0.9
baz=139
K27K Chicken 63.29 337 P **P** 02 01 14.3 +0.4
baz=118
EGAK Eagle 63.30 337 P **P** 02 01 13.8 -0.2
EGAK lAmb lAmb 02 02 03.2
comp=Z,40nm,2.0s
EGAK Eagle 63.30 337 P **P** 02 01 13.7 -0.2
baz=119
L26K Log Cabin Wild 63.34 335 P **P** 02 01 14.1 -0.2
baz=116
EYAK Cordova Ski Ar 63.34 332 P **P** 02 01 13.3 -1.0
baz=113
KLU Klutina 63.79 333 P **P** 02 01 16.8 -0.5
baz=113
HARP HAARP 63.82 334 P **P** 02 01 16.9 -0.6
baz=114
I27K Kandik River 63.88 338 P **P** 02 01 17.4 -0.4
baz=119
SCRK Sand Creek 64.02 336 P **P** 02 01 18.8 -0.1
SCRK lAmb lAmb 02 03 31.8
comp=Z,28nm,1.9s
SCRK Sand Creek 64.02 336 P **P** 02 01 19.6 +0.7
baz=116
J26L Joseph Creek 64.09 337 P **P** 02 01 20.6 +1.3
baz=117
E29M Blow River 64.10 342 P **P** 02 01 20.0 +0.9
baz=124
M24K Tolsona, Glenn 64.14 334 P **P** 02 01 20.5 +0.9
baz=113
H27K Steamboat Moun 64.15 339 P **P** 02 01 20.8 +1.2
baz=120
PAX Paxson 64.19 335 P **P** 02 01 20.1 +0.2
baz=114
I26K Coal Creek Min 64.30 338 P **P** 02 01 21.1 +0.6
baz=118
F28M Old Crow 64.30 341 P **P** 02 01 21.2 +0.7
F28M lAmb lAmb 02 01 39.9
comp=Z,19nm,0.7s
F28M Old Crow 64.30 341 P **P** 02 01 19.9 -0.7
baz=122,SNR=13
SCM Sheep Creek Mo 64.54 333 P **P** 02 01 21.7 -0.5
baz=112
K24K Donnelly Dome 64.66 336 P **P** 02 01 22.2 -0.8
baz=114
M23K Glacier View 64.70 333 P **P** 02 01 21.8 -1.4
baz=112
J25K Salcha River, 64.84 336 P **P** 02 01 22.7 -1.4
baz=115
D28M Stokes Point 64.88 342 P **P** 02 01 25.1 +0.9
baz=124
KNK Knik Glacier 64.89 333 P **P** 02 01 25.0 +0.5
baz=111
SML Sawmill 64.97 333 P **P** 02 01 24.4 -0.6
baz=111
WAT6 Susitna Watana 65.00 334 P **P** 02 01 24.4 -0.9
baz=112
O22K Cooper Landing 65.15 331 P **P** 02 01 25.0 -1.1
baz=109
GHO Glory Hole Cre 65.22 333 P **P** 02 01 26.5 -0.2
GHO lAmb lAmb 02 01 28.7
comp=Z,17nm,0.8s
PMR Palmer 65.25 333 P **P** 02 01 25.5 -1.2
baz=110
PRP Porcupine Dome 65.28 337 P **P** 02 01 26.7 -0.4
PRP lAmb lAmb 02 01 44.1
comp=Z,37nm,1.9s
PRP Porcupine Dome 65.28 337 P **P** 02 01 26.5 -0.6
baz=115
G26K Porcupine Rive 65.29 339 P **P** 02 01 27.3 +0.4
baz=118
RC01 Rabbit Creek A 65.36 332 P **P** 02 01 27.6 +0.1
baz=109
HDA Harding Lake 65.38 336 P **P** 02 01 27.6 0.0
baz=113
WAT1 Susitna Watana 65.44 334 P **P** 02 01 27.3 -0.7
baz=111
ILAR Eielson Array 65.50 336 P **P** 02 01 28.2 -0.1
ILAR Eielson Array 65.50 336 P **P** 02 01 27.7 -0.6
comp=Z,3.2nm,0.8s,baz=148,slow=4.2,SNR=45
ILAR pP **pP** 02 01 44.6 -0.2
comp=Z,3.6nm,0.5s,baz=165,slow=4.9,SNR=12
ILAR LR LR 02 33 13.0
comp=Z,83nm,20.6s,baz=84,slow=39
comp=Z,3.2nm,0.8s
M22K Willow 65.75 333 P **P** 02 01 29.7 -0.2
baz=109
F26K Sheenjek River 65.76 340 P **P** 02 01 29.4 -0.6
baz=118
KDAK Kodiak Island 65.76 328 LR LR 02 32 18.1
comp=Z,107nm,18.5s,baz=98,slow=38
RND Reindeer 65.77 335 P **P** 02 01 30.4 +0.2
RND lAmb lAmb 02 01 32.5
comp=Z,20nm,0.8s
RND Reindeer 65.77 335 P **P** 02 01 30.4 +0.2
RND pmax pmax
comp=Z,20nm,0.8s
BMAR Burnt Mountain 65.79 339 P **P** 02 01 30.7 +0.5
POKR Poker Plat Res 65.85 337 P **P** 02 01 30.3 -0.3
POKR Poker Plat Res 65.85 337 P **P** 02 01 30.2 -0.4
baz=113
MCK McKinley 65.92 335 P **P** 02 01 30.9 -0.2
baz=111
SUA Susitna One 65.94 332 P **P** 02 01 30.1 -1.3
baz=108
G25K Bearman Lake 66.03 338 P **P** 02 01 31.6 -0.1
baz=115
F25K Christian Rive 66.23 339 P **P** 02 01 33.2 +0.1
baz=116
NEA2 Nenana 66.29 336 P **P** 02 01 33.7 +0.2
baz=111
BWN Browne 66.30 335 P **P** 02 01 33.4 -0.1
H24K Noodor Dome 66.30 337 P **P** 02 01 33.0 -0.6
baz=113
TRF Thorofare Moun 66.39 334 P **P** 02 01 34.7 +0.4
baz=110
SKT Skwentna 66.46 333 P **P** 02 01 34.1 -0.4
SKT Skwentna 66.46 333 P **P** 02 01 34.4 -0.2
baz=108
G24K Hadweenzic Riv 66.50 338 P **P** 02 01 35.1 +0.4
baz=114
N20K Mount Spurr 66.53 332 P **P** 02 01 33.6 -1.5
baz=107
Q19K Cape Douglas, 66.60 329 P **P** 02 01 34.7 -0.8
baz=105
I23K Minto, Yukon-K 66.61 336 P **P** 02 01 34.9 -0.5
baz=111
BPAW Bear Paw Mtn. 66.90 335 P **P** 02 01 36.1 -1.3
baz=109
F24K Squaw Lake 66.98 339 P **P** 02 01 37.4 -0.5
baz=114
C26K Camden Bay 67.05 342 P **P** 02 01 37.4 -0.7
baz=118
MLY Manley 67.12 336 P **P** 02 01 38.4 -0.3
MLY lAmb lAmb 02 01 56.3
comp=Z,7.6nm,0.6s
MLY Manley 67.12 336 P **P** 02 01 38.2 -0.5
baz=110,SNR=6.2
CAST Castle Rocks 67.15 334 P **P** 02 01 38.5 -0.4
baz=108
M20K Styx River 67.15 332 P **P** 02 01 38.1 -1.0
baz=106
D25K Kavik River 67.23 341 P **P** 02 01 38.3 -1.1
baz=116
O19K Port Alsworth 67.25 330 P **P** 02 01 39.1 -0.5
baz=105
CHUM Lake Minchumin 67.39 334 P **P** 02 01 40.7 +0.3
baz=108
G23K Bananza Creek 67.44 338 P **P** 02 01 39.9 -0.8
baz=111
N19K Bonanza Creek 67.49 331 P **P** 02 01 39.8 -1.5
baz=105
O18K Koktuh Hills 67.60 330 P **P** 02 01 41.2 -0.7
baz=104
PPT2 Papeete2 67.63 245 eLR LR 02 22 00.7
comp=Z,391nm,25.8s
PPT2 eLR LR 02 22 02.9
comp=Z,344nm,28.5s
L20K Farewell, AK 67.66 333 P **P** 02 01 40.5 -1.7
baz=106
H22K Ishtalitna Cre 67.66 337 P **P** 02 01 41.5 -0.6
baz=110
I21K Tanana 67.66 336 P **P** 02 01 42.0 -0.1
baz=109
COLD Coldfoot 67.69 338 P **P** 02 01 42.5 +0.3
baz=111,SNR=5.8
E23K Chandalar 67.80 339 P **P** 02 01 43.2 +0.2
baz=112
D24K Happy Valley 67.95 340 P **P** 02 01 44.5 +0.6
baz=113
K20K Telida 67.98 334 P **P** 02 01 44.8 +0.6
baz=106
TOLK Toolik Lake Re 68.00 340 P **P** 02 01 44.5 +0.2
baz=112
L19K White Mountain 68.01 332 P **P** 02 01 44.2 -0.2
baz=105
N18K Kilae Creek 68.13 331 P **P** 02 01 45.1 0.0
baz=103
C24K Franklin Bluff 68.14 341 P **P** 02 01 45.2 +0.2
baz=114,SNR=5.2
H21K Melozitna Rive 68.14 336 P **P** 02 01 45.2 +0.1
baz=108
J20K Nowinta River 68.25 334 P **P** 02 01 43.9 -1.8
baz=106
M18K Stony River 68.29 331 P **P** 02 01 45.8 -0.3
baz=104
R16K Pilot Point 68.33 327 P **P** 02 01 45.1 -1.3
baz=101
D23K Nanushuk River 68.50 340 P **P** 02 01 47.3 0.0
baz=112
O17K Koliganek Bris 68.51 330 P **P** 02 01 47.5 0.0
baz=102
CHGN Chignik 68.56 326 P **P** 02 01 47.0 -0.8
baz=99
I20K Naaghedeneel 68.56 335 P **P** 02 01 46.7 -1.0
baz=106
IMAR Indian Mountai 68.61 336 P **P** 02 01 47.5 -0.5
G21K Allakaket 68.68 337 P **P** 02 01 48.2 -0.2
baz=108
N17K Nushagak Hills 68.72 330 P **P** 02 01 48.9 +0.1

	baz=102							
TTA	**Tatalina**	**68.72**	**333**	P		**P**	02 01 48.5	**-0.4**
	baz=104							
C23K	**Itkillik River**	**68.80**	**341**	P		**P**	02 01 49.4	**+0.3**
	baz=112							
J19K	**Poorman**	**68.82**	**334**	P		**P**	02 01 49.2	**-0.2**
	baz=105							
F21K	**Alatna River**	**68.89**	**338**	P		**P**	02 01 49.2	**-0.6**
	baz=108							
H20K	**Anotleneega Mo**	**68.92**	**336**	P		**P**	02 01 49.0	**-1.0**
	baz=106							
M17K	**Holitna River**	**69.02**	**331**	P		**P**	02 01 49.7	**-1.0**
	baz=102							
D22K	**Ayikyak River**	**69.15**	**340**	P		**P**	02 01 51.6	**+0.2**
	baz=110							
J18K	**Innoko River**	**69.16**	**333**	P		**P**	02 01 51.0	**-0.5**
	baz=104							
BBTS	**Babate**	**69.40**	**79**	LR		LR	02 28 41.7	
	comp=Z,73nm,18.3s,baz=148,slow=33							
N16K	**Nishlik Lake**	**69.47**	**330**	P		**P**	02 01 52.9	**-0.6**
	baz=101							
H19K	**Roundabout Mou**	**69.56**	**336**	P		**P**	02 01 53.5	**-0.3**
	baz=105							
SDPT	**Sand Point**	**69.57**	**325**	P		**P**	02 01 53.5	**-0.7**
	baz=97							
F20K	**Avaraart Lake**	**69.68**	**337**	P		**P**	02 01 55.0	**+0.4**
	baz=106							
TBI	**Tubuai**	**69.80**	**239**	*e*LR		LR	02 23 08.9	
	comp=Z,1μm,27.2s							
C21K	**Knifeblade Rid**	**69.95**	**340**	P		**P**	02 01 56.9	**+0.6**
	baz=108							
G19K	**Purcell Mounta**	**69.97**	**336**	P		**P**	02 01 56.9	**+0.5**
	baz=104							
B21K	**Ikpikpuk River**	**70.04**	**340**	P		**P**	02 01 57.0	**+0.3**
	baz=108							
L16K	**Owhat River**	**70.04**	**331**	P		**P**	02 01 56.1	**-0.8**
	baz=100							
E20K	**Nigu River**	**70.18**	**338**	P		**P**	02 01 58.0	**+0.2**
	baz=106							
H18K	**Honhosa River**	**70.25**	**335**	P		**P**	02 01 58.5	**+0.4**
	baz=103							
E19K	**Redstone River**	**70.35**	**338**	P		**P**	02 01 58.7	**0.0**
	baz=105							
F19K	**Shaleruckik Mo**	**70.40**	**337**	P		**P**	02 01 58.8	**-0.2**
	baz=104							
D20K	**Etivluk River**	**70.46**	**339**	P		**P**	02 01 59.6	**+0.2**
	baz=106							
O14K	**Tigyukauivet M**	**70.52**	**329**	P		**P**	02 01 58.9	**-0.9**
	baz=98							
G18K	**Tagagawik**	**70.53**	**336**	P		**P**	02 01 59.9	**0.0**
	baz=103							
N14K	**Kuskokwak Cree**	**70.82**	**329**	P		**P**	02 02 02.1	**+0.4**
	baz=98							
J16K	**Anvik River**	**70.84**	**333**	P		**P**	02 02 01.3	**-0.5**
	baz=100							
H17K	**Granite Mounta**	**70.85**	**335**	P		**P**	02 02 01.5	**-0.3**
	baz=101							
I17K	**Unalakleet**	**70.98**	**333**	P		**P**	02 02 03.6	**+1.0**
	baz=100							
K15K	**Wolf Creek Mou**	**71.09**	**332**	P		**P**	02 02 03.7	**+0.3**
	baz=99							
G17K	**Kiwalik Mounta**	**71.26**	**335**	P		**P**	02 02 05.0	**+0.7**
	baz=101							
C19K	**Lookout Ridge**	**71.60**	**339**	P		**P**	02 02 07.4	**+1.0**
	baz=103							
E18K	**Tukpahlearik C**	**71.61**	**337**	P		**P**	02 02 06.2	**-0.2**
	baz=101							
F17K	**Baldwin Pennin**	**71.67**	**336**	P		**P**	02 02 07.7	**+1.0**
	baz=100							
M13K	**Dall Lake**	**71.71**	**330**	P		**P**	02 02 08.6	**+1.6**
	baz=96							
H16K	**Elim**	**71.77**	**334**	P		**P**	02 02 07.9	**+0.5**
	baz=99							
G16K	**Koyuk River**	**71.94**	**335**	P		**P**	02 02 09.7	**+1.3**
	baz=99							
E17K	**Hotham Inlet**	**72.02**	**337**	P		**P**	02 02 09.3	**+0.5**
	baz=100							
C18K	**Utukok River**	**72.07**	**338**	P		**P**	02 02 09.6	**+0.4**
	baz=101							
J14K	**Nanvaranak Lak**	**72.09**	**332**	P		**P**	02 02 10.0	**+0.7**
	baz=97							
B18K	**Kokolik River**	**72.43**	**339**	P		**P**	02 02 12.0	**+0.8**
	baz=101							
C17K	**DeLong Mountai**	**72.76**	**338**	P		**P**	02 02 13.8	**+0.6**
	baz=99							
F15K	**North Star Dit**	**72.93**	**335**	P		**P**	02 02 15.3	**+1.0**
	baz=97							
C16K	**Lisburne Hills**	**73.52**	**338**	P		**P**	02 02 18.8	**+1.1**
	baz=97							
F14K	**Arctic Creek**	**73.60**	**335**	P		**P**	02 02 18.9	**+0.7**
	baz=95							
TNA	**Tin City**	**74.27**	**335**	P		**P**	02 02 21.4	**-0.7**
	baz=94							
NIKH	**Nikolski High**	**74.34**	**322**	P		**P**	02 02 23.3	**+0.5**
	baz=90							
P08K	**Saint George I**	**74.74**	**325**	P		**P**	02 02 26.2	**+1.2**
	baz=90							
SPIA	**Saint Paul Isl**	**75.12**	**326**	P		**P**	02 02 27.2	**+0.1**
	baz=90							
GAMB	**Gambell**	**75.83**	**333**	P		**P**	02 02 32.2	**+1.1**
	baz=90							
EKA	**Eskdalemuir Ar**	**76.86**	**36**	P		**P**	02 02 35.1	**-2.0**
	comp=Z,1.2nm,0.6s,baz=268,slow=5.1,SNR=5.3							
EKA				pP		**pP**	02 02 54.1	**+0.1**
	comp=Z,1.2nm,0.5s,baz=277,slow=5.7,SNR=3.2							
	comp=Z,1.2nm,0.6s							
PAB	**San Pablo**	**77.34**	**52**	P		**P**	02 02 37.6	**-2.7**
PAB				IAmb		IAmb	02 03 04.9	
	comp=Z,22nm,1.8s							
PAB	**San Pablo**	**77.34**	**52**	P		**P**	02 02 37.6	**-2.7**
PAB				pmax		pmax		
	comp=Z,22nm,1.8s							
ESDC	**Sonseca Array**	**77.62**	**52**	P		**P**	02 02 40.2	**-1.7**
ESDC	**Sonseca Array**	**77.62**	**52**	P		**P**	02 02 39.1	**-2.7**
	comp=Z,1.1nm,0.6s,baz=282,slow=5.0,SNR=16							
ESDC				pP		**pP**	02 02 58.7	**0.0**
	comp=Z,3.5nm,1.0s,baz=280,slow=6.0,SNR=4.7							
ESDC				LR		LR	02 30 01.3	
	comp=Z,99nm,21.7s,baz=262,slow=30							
	comp=Z,1.1nm,0.6s							
RAR	**Rarotonga**	**77.91**	**245**	LR		LR	02 27 48.7	
	comp=Z,70nm,20.8s,baz=59,slow=28							
MDT	**Midelt**	**77.92**	**59**	LR		LR	02 31 04.8	
	comp=Z,156nm,20.7s,baz=325,slow=31							
SPITS	**Spitsbergen Ar**	**80.62**	**12**	P		**P**	02 02 56.4	**-1.1**
	comp=Z,29nm,1.1s,baz=284,slow=3.4,SNR=1.5							
SPITS				LR		LR	02 39 41.3	
	comp=Z,86nm,18.5s,baz=248,slow=36							
	comp=Z,29nm,1.1s							
DBIC	**Dimbokro**	**82.11**	**85**	LR		LR	02 35 59.1	
	comp=Z,67nm,20.1s,baz=277,slow=33							
NOA	**NORSAR Array B**	**83.51**	**29**	LR		LR	02 36 40.8	
	comp=Z,50nm,21.6s,baz=275,slow=33							
BILL	**Bilibino**	**84.02**	**339**	*i* P		**P**	02 03 15.1	**-0.2**
BILL				pmax		pmax		
	comp=Z,4.0nm,0.7s							
HFS	**Hagfors**	**84.94**	**29**	LR		LR	02 37 10.6	
	comp=Z,42nm,21.6s,baz=288,slow=33							
ARCES	**ARCESS Array B**	**86.19**	**19**	LR		LR	02 41 10.3	
	comp=Z,73nm,18.6s,baz=272,slow=35							
DAVOX	**Davos/Dischmat**	**86.32**	**43**	LR		LR	02 39 15.1	
	comp=Z,111nm,18.4s,baz=265,slow=34							
TOA0	**Torodi Ar. Sit**	**87.08**	**77**	P		**P**	02 03 28.2	**-3.4**
TOA0				IAmb		IAmb	02 05 16.3	
	comp=Z,16nm,1.6s							
TORD	**Torodi Ar. Bea**	**87.08**	**77**	P		**P**	02 03 28.6	**-2.9**
	comp=Z,0.4nm,0.4s,baz=300,slow=5.6,SNR=9.6							
TORD				LR		LR	02 37 24.7	
	comp=Z,81nm,21.6s,baz=312,slow=32							
CLL	**Collm**	**87.09**	**38**	*e*P		**P**	02 03 31.0	**+0.1**
CLL	**Collm**	**87.09**	**38**	*e*P		**P**	02 03 31.0	**+0.1**
GERES	**GERESS Array B**	**88.23**	**40**	LR		LR	02 37 01.3	
	comp=Z,72nm,21.1s,baz=304,slow=32							
KEST	**Kesra**	**88.71**	**54**	P		**P**	02 03 38.1	**-0.9**
	comp=Z,3.2nm,0.7s,baz=308,slow=9.8,SNR=5.0							
KEST				LR		LR	02 38 21.2	
	comp=Z,45nm,18.2s,baz=240,slow=32							
	comp=Z,3.2nm,0.7s							
VRAC	**Vranov**	**89.89**	**39**	LR		LR	02 42 08.9	
	comp=Z,83nm,20.3s,baz=301,slow=34							
VAE	**Valguarnera**	**92.14**	**51**	LR		LR	02 39 55.3	
	comp=Z,173nm,21.0s,baz=320,slow=32							
TIXI	**Tiksi**	**92.26**	**349**	LR		LR	02 50 05.5	
	comp=Z,11nm,20.3s,baz=28,slow=39							
MA2	**Magadan**	**93.90**	**334**	LR		LR	02 52 15.7	
	comp=Z,56nm,18.0s,baz=100,slow=39							
AKASG	**Malin Array Be**	**96.74**	**35**	LR		LR	02 45 12.9	
	comp=Z,82nm,19.0s,baz=298,slow=34							
MLR	**Muntele Rosu**	**97.22**	**40**	LR		LR	02 45 13.8	
	comp=Z,58nm,18.9s,baz=281,slow=34							
NRIK	**Noril'sk**	**98.12**	**2**	LR		LR	02 51 06.2	
	comp=Z,78nm,21.7s,baz=5.0,slow=37							
YAK	**Yakutsk**	**99.81**	**343**	LR		LR	02 58 31.5	
	comp=Z,38nm,18.1s,baz=327,slow=41							
ELIB	**Princess Elisa**	**108.62**	**162**	*d*PKiKP		**PKiKP**	02 09 15.8	**+2.6**
ELIB				dpPKiKP		**pPKiKP**	02 09 33.1	**+2.0**
DZM	**Mont Dzumac**	**108.73**	**251**	*e*LR		LR	02 41 11.8	
	comp=Z,142nm,26.6s							
ZALV	**Zalesovo Beam**	**113.36**	**4**	PKiKP		**PKiKP**	02 09 22.0	**-0.6**
	comp=Z,0.7nm,0.4s,baz=302,slow=2.7,SNR=4.3							
KURBB	**Kurchatov Arra**	**115.89**	**9**	PKP		**PKiKP**	02 09 27.3	**-0.3**
	comp=Z,0.4nm,0.5s,baz=347,slow=1.5,SNR=5.0							
CN2	**Changchun**	**115.94**	**333**	Pdif		**Pdif**	02 05 39.6	**-1.8**
BOSA	**Boshof**	**116.47**	**116**	PKP		**PKiKP**	02 09 30.3	**+0.8**
	comp=Z,3.1nm,0.8s,baz=134,slow=1.4,SNR=5.0							
SONM	**Songino Array**	**118.35**	**349**	PKP		**PKPdf**	02 09 31.9	**-0.7**
	comp=Z,0.7nm,0.7s,baz=308,slow=2.5,SNR=5.1							
SONM				PKKPbc		**PKKPbc**	02 19 50.4	**-1.7**
	comp=Z,0.6nm,0.6s,baz=163,slow=1.7,SNR=5.5							
KSRS	**Korea Array**	**119.67**	**327**	PKP		**PKiKP**	02 09 35.8	**+0.4**
	comp=Z,2.9nm,0.6s,baz=18,slow=1.9,SNR=8.4							
KSRS				SKP		**SKPdf**	02 13 05.8	**+0.2**
	comp=Z,3.0nm,0.7s,baz=359,slow=2.1,SNR=7.5							
MKAR	**Makanchi Array**	**120.17**	**8**	*e*PKiKP		**PKPdf**	02 09 34.2	**-1.8**
MKAR	**Makanchi Array**	**120.17**	**8**	PKP		**PKPdf**	02 09 33.8	**-2.2**
	comp=Z,0.3nm,0.4s,baz=325,slow=2.9,SNR=15							
MKAR				PKKPbc		**PKKPbc**	02 19 43.1	**-2.2**
	comp=Z,0.3nm,0.7s,baz=131,slow=2.8,SNR=5.5							
WMQ	**Urumqi**	**123.63**	**4**	*e*P		**PKiKP**	02 09 44.1	**+1.0**
HHC	**Hu-ho-hao-te**	**123.67**	**342**	*e*P		**PKiKP**	02 09 45.0	**+1.7**
NJ2	**Nanjing**	**128.50**	**330**	*e*P		**PKiKP**	02 09 54.5	**+1.5**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
STKA	**Stephens Creek**	**130.58**	**239**	*e*PKiKP		**PKPdf**	02 09 56.0	**-0.3**
STKA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
STKA	**Stephens Creek**	**130.58**	**239**	PKP		**PKiKP**	02 09 57.0	**-0.1**
	comp=Z,3.4nm,0.7s,baz=80,slow=6.1,SNR=5.8							
WRA	**Warramunga Arr**	**138.62**	**254**	PKhKP		PKPpre	02 10 02.6	
	comp=Z,1.1nm,0.7s,baz=105,slow=2.7,SNR=7.7							
WRA				PKP		**PKPdf**	02 10 12.4	**+0.8**
	comp=Z,3.9nm,0.7s,baz=91,slow=2.0,SNR=15							
WRA				SKPbc		**SKiKP**	02 13 45.0	**+0.1**
	comp=Z,0.9nm,0.6s,baz=87,slow=3.1,SNR=4.6							
ASAR	**Alice Springs**	**138.66**	**249**	PKhKP		PKPpre	02 10 04.2	
	comp=Z,2.1nm,0.7s,baz=100,slow=2.5,SNR=20							
ASAR				PKP		**PKiKP**	02 10 12.9	**-0.9**
	comp=Z,2.4nm,0.6s,baz=106,slow=2.1,SNR=14							
ASAR				SKPbc		**SKiKP**	02 13 45.2	**+0.4**
	comp=Z,2.3nm,0.8s,baz=99,slow=2.9,SNR=11							
PZH	**PanZhiHua**	**139.85**	**346**	PKP		**PKPdf**	02 10 11.3	**-2.6**
HYB	**Hyderabad**	**147.35**	**24**	*e*PKPdf		**PKPdf**	02 10 27.2	**+0.1**
CMAR	**Chiang Mai Arr**	**148.25**	**347**	*e*PKP2		**PKPbc**	02 10 31.3	**-0.6**
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**148.25**	**347**	PKPbc		**PKPbc**	02 10 30.6	**-1.2**
	comp=Z,3.0nm,0.4s,baz=325,slow=3.0,SNR=11							

*IDC **24** 01:56:50.8±2.6, 17.66S×178.20W, h533km±27km, mb3.4/12, mbtmp4.3/13, Error ellipse: s-maj=18.4km s-min=15.9km az=125.0*
*NEIC **24** 01:56:50.8±1.6, 17.6S±0.1×178.1W±0.1, h534km±9km, mb4.6/29, Error ellipse: s-maj=22.1km s-min=17.5km az=147.0*

ISC 24 01:56:51.7±0.4,**17.71S**±0.10×**178.17W**±0.08,**h550**km, **n90**,σ0**973**/89,**mb4.5**/27,**7C-11D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.22**	**59**	P		P	**P**	01 58 40.6	**-1.4**
NIUE	**Niue**	**7.94**	**101**	P		P	**P**	01 58 47.0	**-2.0**
MARNC	**Mare, Loyalty**	**13.53**	**252**	P		P	**P**	01 59 45.1	**-1.0**
LIFNC	**LIFOU**	**14.11**	**255**	P		P	**P**	01 59 51.1	**-0.9**
OUENC	**Ouen Island, N**	**14.84**	**249**	P		P	**P**	01 59 59.3	**-0.2**
DZM	**Mont Dzumac**	**15.11**	**251**	P		P	**P**	02 00 01.8	**-0.6**
DZM				IAmb		IAmb		02 00 06.2	
	comp=Z,14nm,0.9s								
DZM	**Mont Dzumac**	**15.11**	**251**	P		P	**P**	02 00 02.7	**+0.3**
	comp=Z,9.0nm,0.8s,baz=105,slow=10.0,SNR=4.0								
KOUNC	**Koumac, New Ca**	**16.82**	**258**	P		P	**P**	02 00 18.5	**-0.4**
KOUNC				IAmb		IAmb		02 00 22.8	
	comp=Z,22nm,1.0s								
URZ	**Urewera**	**20.89**	**190**	P		P	**P**	02 00 54.3	**-1.3**
	comp=Z,9.5nm,0.8s,baz=115,slow=5.9,SNR=6.9								
	comp=Z,9.5nm,0.8s								
QRZ	**Quartz Range**	**24.39**	**197**	P		P	**P**	02 01 28.6	**+1.7**
THZ	**Tophouse**	**25.16**	**196**	P		P	**P**	02 01 34.1	**+0.3**
THZ				IAmb		IAmb		02 01 39.1	
	comp=Z,20nm,1.2s								
EIDS	**Eidsvold**	**29.55**	**250**	P		P	**P**	02 02 11.9	**-0.4**
EIDS				IAmb		IAmb		02 02 12.9	
	comp=Z,18nm,1.2s								
ARMA	**Armidale**	**30.24**	**240**	P		P	**P**	02 02 18.9	**+0.6**
ARMA				IAmb		IAmb		02 02 20.2	
	comp=Z,8.7nm,0.9s								
CTAO	**Charters Tower**	**33.70**	**260**	P		P	**P**	02 02 47.4	**-0.5**
CTAO				IAmb		IAmb		02 02 48.4	
	comp=Z,12nm,0.9s								
PMG	**Port Moresby**	**34.65**	**279**	P		P	**P**	02 02 56.4	**+0.6**
COEN	**Coen**	**37.33**	**270**	P		P	**P**	02 03 18.3	**+0.3**
TOO	**Toolangi**	**37.47**	**231**	P		P	**P**	02 03 20.1	**+1.2**
STKA	**Stephens Creek**	**38.92**	**241**	P		P	**P**	02 03 31.3	**+0.5**
STKA	**Stephens Creek**	**38.92**	**241**	P		P	**P**	02 03 31.8	**+1.1**
	comp=Z,15nm,0.9s,baz=55,slow=7.7,SNR=21								
	comp=Z,15nm,0.9s								
BBOO	**Buckleboo**	**43.70**	**241**	P		P	**P**	02 04 09.0	**+0.4**
BBOO				IAmb		IAmb		02 04 09.9	
	comp=Z,15nm,0.8s								
WB0	**Warramunga Arr**	**44.86**	**260**	P		P	**P**	02 04 17.0	**-0.6**
WB0				IAmb		IAmb		02 04 18.0	
	comp=Z,28nm,1.0s								
WRA	**Warramunga Arr**	**44.89**	**259**	P		P	**P**	02 04 16.9	**-1.0**
WRA	**Warramunga Arr**	**44.89**	**259**	P		P	**P**	02 04 17.1	**-0.8**
	comp=Z,14nm,0.9s,baz=89,slow=7.3,SNR=101								
WRA				PcP		**PcP**	02 05 47.6	**-0.1**	
	comp=Z,1.6nm,0.8s,baz=89,slow=2.9,SNR=4.9								
	comp=Z,14nm,0.9s								
AS31	**Alice Springs**	**45.06**	**254**	P		P	**P**	02 04 19.1	**-0.1**
AS31				IAmb		IAmb		02 04 20.5	
	comp=Z,20nm,0.8s								
ASAR	**Alice Springs**	**45.06**	**254**	P		P	**P**	02 04 19.2	**0.0**
	comp=Z,62nm,0.7s,baz=85,slow=8.5,SNR=485								
ASAR				PcP		**PcP**	02 05 48.2	**0.0**	
	comp=Z,1.9nm,0.8s,baz=100,slow=3.8,SNR=5.0								
ASAR				ScP		**ScP**	02 08 50.0	**+1.4**	
	comp=Z,0.4nm,0.8s,baz=96,slow=4.8,SNR=2.8								
MTN	**Manton Dam**	**49.03**	**268**	P		P	**P**	02 04 48.6	**-0.5**
FORT	**Forrest**	**50.30**	**244**	P		P	**P**	02 04 57.5	**-0.7**
FORT				IAmb		IAmb		02 04 58.6	
	comp=Z,24nm,0.8s								
FITZ	**Fitzroy Crossi**	**53.28**	**260**	P		P	**P**	02 05 20.1	**+0.3**
PSA00	**Pilbara Seismi**	**58.18**	**255**	P		P	**P**	02 05 53.1	**-0.6**
PSA00				IAmb		IAmb		02 05 54.3	
	comp=Z,17nm,0.8s								
PSA00	**Pilbara Seismi**	**58.18**	**255**	P		P	**P**	02 05 53.3	**-0.5**
PSA00				IAmb		IAmb		02 05 54.3	
	comp=Z,7.5nm,0.9s								
MJAR	**Matsushiro Arr**	**67.88**	**323**	P		P	**P**	02 06 55.0	**-0.7**
	comp=Z,1.2nm,0.4s,baz=140,slow=5.9,SNR=2.9								
	comp=Z,1.2nm,0.4s								
UGM	**Wanagama**	**69.88**	**268**	P		P	**P**	02 07 07.3	**-1.0**
QSPA	**South Pole Qui**	**72.34**	**180**	P		P	**P**	02 07 22.6	**+0.7**
QSPA	**South Pole Qui**	**72.34**	**180**	P		P	**P**	02 07 23.3	**+1.4**
	comp=Z,5.5nm,0.7s,baz=27,slow=1.7,SNR=15								
	comp=Z,5.5nm,0.7s								
KSM	**Kuching**	**72.88**	**277**	P		P	**P**	02 07 26.1	**+0.3**
P18K	**Big Mountain,**	**79.08**	**12**	P		P	**P**	02 07 58.2	**-0.7**
P18K				IAmb		IAmb		02 07 59.4	
	comp=Z,27nm,1.4s								
NVAR	**Mina Array Bea**	**79.12**	**44**	P		P	**P**	02 08 01.1	**+1.2**
	comp=Z,0.3nm,0.6s,baz=221,slow=7.7,SNR=3.8								
	comp=Z,0.3nm,0.6s								
O18K	**Koktuh Hills**	**79.51**	**12**	P		P	**P**	02 08 00.7	**-0.5**
K15K	**Wolf Creek Mou**	**80.82**	**8**	P		P	**P**	02 08 08.6	**+0.6**
K15K				IAmb		IAmb		02 08 35.3	
	comp=Z,45nm,1.5s								
BELA	**Belgrano 2**	**82.33**	**173**	P		P	**P**	02 08 15.6	**-0.1**
GHO	**Glory Hole Cre**	**82.56**	**14**	P		P	**P**	02 08 16.5	**-0.5**
GHO				IAmb		IAmb		02 08 27.4	
	comp=Z,13nm,1.2s								
RPSI	**Rantau Prapat**	**84.06**	**275**	P		P	**P**	02 08 24.6	**-0.9**
RPSI				IAmb		IAmb		02 08 25.9	
	comp=Z,7.6nm,0.7s								
ILAR	**Eielson Array**	**85.64**	**13**	P		P	**P**	02 08 30.9	**-1.0**
	comp=Z,0.5nm,0.4s,baz=222,slow=5.6,SNR=13								
	comp=Z,0.5nm,0.4s								
TXAR	**Lajitas Array**	**85.70**	**58**	P		P	**P**	02 08 35.1	**+2.0**
	comp=Z,0.6nm,0.8s,baz=211,slow=6.6,SNR=6.8								
	comp=Z,0.6nm,0.8s								
PDAR	**Pinedale Array**	**87.05**	**43**	P		P	**P**	02 08 40.1	**+0.7**
	comp=Z,0.2nm,0.4s,baz=235,slow=2.9,SNR=2.0								
	comp=Z,0.2nm,0.4s								
BMAR	**Burnt Mountain**	**88.42**	**12**	P		P	**P**	02 08 45.4	**+0.4**
CMAR	**Chiang Mai Arr**	**89.03**	**290**	P		P	**P**	02 08 50.6	**+1.7**
	comp=Z,1.3nm,0.3s,baz=108,slow=2.9,SNR=1.9								
	comp=Z,1.3nm,0.3s								
TROLL	**Troll, Antarti**	**90.51**	**180**	⇓P		P	**P**	02 08 55.1	**+0.2**
	comp=Z,268nm,0.9s								
SNAA	**Sanae**	**90.79**	**179**	⇓P		P	**P**	02 08 55.8	**-0.3**
	comp=Z,48nm,0.6s								
SNAA	**Sanae**	**90.79**	**179**	P		P	**P**	02 08 56.3	**+0.2**
	comp=Z,2.0nm,0.6s,baz=207,slow=14,SNR=7.4								
	comp=Z,2.0nm,0.6s								
VNA3	**Neumayer Olymp**	**90.92**	**176**	⇓P		P	**P**	02 08 55.7	**-0.9**
	comp=Z,5.7nm,0.6s								
VNA2	**Neumayer--Watz**	**91.36**	**177**	⇓P		P	**P**	02 08 57.4	**-1.4**
	comp=Z,3.4nm,0.6s,baz=189,slow=7.2								
YKA	**Yellowknife Ar**	**94.06**	**25**	P		P	**P**	02 09 11.0	**0.0**
	comp=Z,0.3nm,0.8s,baz=251,slow=3.8,SNR=2.9								
	comp=Z,0.3nm,0.8s								
BVAR	**Borovoye Array**	**116.83**	**321**	PKP		**PKPdf**	02 14 32.8	**-0.9**	
	comp=Z,0.6nm,0.6s,baz=191,slow=4.4,SNR=4.2								
BNN	**Bunyan**	**143.69**	**312**			PKPbc	02 15 23.9	+0.2	
VASR	**Vaslui**	**144.06**	**329**	⇑P		PKPbc	02 15 24.3	-0.1	
VLDR	**Vladesti**	**144.47**	**328**	⇑P		**PKPab**	02 15 26.1	**-0.1**	
BUR08	**Bucovina Ar. S**	**144.53**	**332**			**PKPab**	02 15 26.4	**-0.1**	
BURAR	**Bucovina Array**	**144.54**	**332**	⇑P		**PKPab**	02 15 26.9	**+0.4**	
GHRR		**144.65**	**329**	⇑P		**PKPab**	02 15 27.5	**+0.6**	
TESR	**Tescani**	**144.70**	**330**	⇓P		PKPbc	02 15 26.4	0.0	
BR131	**Keskin Array S**	**144.80**	**315**			**PKPdf**	02 15 26.5	**-0.1**	
BRTR	**Keskin Array B**	**144.80**	**315**	PKP		**PKPdf**	02 15 26.5	**-0.1**	
	comp=Z,3.2nm,0.9s,baz=56,slow=0.5,SNR=15								
TPGR	**Topolog**	**144.96**	**326**	⇓P		**PKPab**	02 15 28.0	**-0.2**	
TURR	**Turia**	**145.34**	**330**	⇓P		**PKPdf**	02 15 27.3	**+0.1**	
DOPR	**Dopca**	**145.70**	**330**	⇑P		**PKPbc**	02 15 30.2	**+0.7**	
MLR	**Muntele Rosu**	**145.78**	**329**	⇑P		**PKPdf**	02 15 28.0	**-0.1**	
MARR	**Marisel-Cluj**	**146.18**	**333**	⇓P		**PKPbc**	02 15 31.0	**+0.1**	
MMAI	**Mount Meron Ar**	**146.22**	**303**	PKPbc		**PKPbc**	02 15 31.8	**+0.4**	
	comp=Z,4.2nm,0.7s,baz=65,slow=4.7,SNR=20								
DRGR		**146.26**	**334**	⇓P		**PKPbc**	02 15 30.9	**-0.1**	
VRAC	**Vranov**	**146.29**	**343**	PKPbc		**PKPbc**	02 15 31.1	**+0.2**	
	comp=Z,1.2nm,0.4s,baz=45,slow=1.4,SNR=3.2								
ARR	**Arges**	**146.50**	**330**	⇓P		**PKPbc**	02 15 32.4	**+0.7**	
KHC	**Kasperske Hory**	**147.24**	**346**	*e*pPKP		pPKPdf	02 17 33.5	-5.2	
GERES	**GERESS Array B**	**147.48**	**345**	PKPbc		**PKPbc**	02 15 34.2	**0.0**	
	comp=Z,2.9nm,0.7s,baz=14,slow=0.4,SNR=5.3								
**BZS

IMMV **Iera Moni Meta** 2.28 307 P Pn 02 03 39.0 +1.3
IMMV S Sn 02 04 06.7 +1.5
SANT Santorini 2.33 345 Pn Pn 02 03 39.1 +0.7
SANT Santorini 2.33 345 Pn 02 03 39.0 +0.5
SANT Santorini 2.33 345 P Pn 02 03 37.7 -0.7
SANT Santorini 2.33 345 P Pn 02 03 39.3 +0.9
THRA Thira 2.38 345 P Pn 02 03 40.3 +1.2
THT2 Imerovigli 2.41 344 P Pn 02 03 39.9 +0.5
CMBO Columbo, Santo 2.44 344 P Pn 02 03 40.6 +0.8
CMBO Columbo, Santo 2.44 344 P Pn 02 03 41.1 +1.2
RODP Rodopos 2.49 306 Pn Pb 02 03 43.5 -1.6
RODP Rodopos 2.49 306 P Pn 02 03 42.5 +2.0
RODP Rodopos 2.49 306 P Pn 02 03 41.8 +1.3
RODP S Sn 02 04 12.2 +1.9
NISR Nisiros 2.60 16 P Pn 02 03 43.6 +1.6
NISR Nisiros 2.60 16 P Pn 02 03 43.7 +1.7
ARG Arkhangelos 2.61 36 Pn Pn 02 03 43.6 +1.4
ARG Arkhangelos 2.61 36 Pb 02 03 45.1 -2.1
ARG Arkhangelos 2.61 36 P Pb 02 03 45.4 -1.8
ARG Arkhangelos 2.61 36 P Pb 02 03 45.1 -2.1
ARG Arkhangelos 2.61 36 P Pn 02 03 44.6 +2.4
SLUM Salum 2.75 198 P Pn 02 03 45.0 +0.9
baz=198
SLUM S Sn 02 04 16.3 -0.5
baz=198
YAZI Mula-Dat§a- 2.75 21 P Pn 02 03 46.2 +2.1
DAT Datca 2.83 23 Pn Pn 02 03 46.5 +1.2
DATC Datca-Mugla 2.89 24 Pn Pn 02 03 47.3 +1.5
DATC Datca-Mugla 2.89 24 P Pn 02 03 46.5 +0.6
ANKY Antikythira Is 2.97 307 P Pn 02 03 49.1 +2.1
ANKY S Sn 02 04 21.0 -1.1
710nm,0.5s
ANKY Antikythira Is 2.97 307 P Pn 02 03 47.9 +0.9
ANKY S Sn 02 04 23.6 +1.5
MHLO Agia Marina, M 2.97 330 P Pn 02 03 48.2 +1.1
APE Apeiranthos 3.00 349 Pn Pn 02 03 48.1 +0.5
APE Apeiranthos 3.00 349 P Pn 02 03 48.0 +0.5
APE Apeiranthos 3.00 349 ⇓ *i* P Pn 02 03 47.9 +0.4
APE Apeiranthos 3.00 349 P Pn 02 03 48.0 +0.4
BODT Bodrum 3.07 16 Pn Pn 02 03 50.4 +1.9
BODT Bodrum 3.07 16 P Pn 02 03 48.2 -0.3
BDRM Kayabasi 3.11 18 P Pn 02 03 48.9 -0.1
YKAV Yalíkavak-Bodr 3.12 16 P Pn 02 03 49.9 +0.7
TURN Turunc 3.13 31 P Pn 02 03 49.3 0.0
DALY Dalyan (Mula) 3.35 36 Pn Pn 02 03 54.2 +1.9
IZZE Mula-Seydike 3.38 46 P Pn 02 03 53.7 +0.9
IZZE S Sn 02 04 29.9 -2.4
IZZE *i* AML AML 02 04 38.0
comp=E,494nm,0.4s
MLSB Milas 3.42 21 Pn Pn 02 03 54.2 +0.9
MLSB Milas 3.42 21 P Pn 02 03 54.3 +1.1
MLSB S Sn 02 04 27.5 -5.7
MLSB *i* AML AML 02 04 39.0
comp=E,41nm,0.4s
KSL Kastellorizon 3.42 53 P Pn 02 03 55.2 +1.9
FETY Fethiye 3.43 42 Pn Pn 02 03 55.5 +2.0
DDIM Aydin, Didim 3.44 14 P Pn 02 03 54.7 +1.2
FETI Fethiye-Mugla 3.48 42 Pn Pn 02 03 56.3 +2.2
FETI Fethiye-Mugla 3.48 42 P Pn 02 03 56.0 -0.1
MULA Mugla, Merkez- 3.57 28 P Pn 02 03 57.7 +2.3
SMG Samos 3.62 8 P Pn 02 03 57.0 +0.9
DB3 El Dabaa 3.64 147 P Pn 02 03 57.4 +1.1
baz=148
DEMR Demre-Antalya 3.69 54 Pn Pn 02 03 58.7 +1.8
DEMR Demre-Antalya 3.69 54 P Pn 02 03 58.7 +1.8
VLI Veliai 3.73 315 P Pn 02 03 57.7 +0.1
VLI S Sn 02 04 39.0 -2.1
328nm,0.4s
CAME Cameli-Denizli 3.78 41 Pn Pn 02 03 59.7 +1.3
KNIK Mula-Seydike 3.86 44 P Pn 02 04 02.8 +3.4
CAEL Denizli, Camel 3.92 39 P Pn 02 04 02.1 +1.8
CAEL S Sn 02 04 46.5 +0.6
CAEL *i* AML AML 02 04 58.0
comp=E,419nm,0.4s
ELL Elmali 4.00 48 Pn Pn 02 04 03.4 +2.1
ELL Elmali 4.00 48 Pn Pn 02 04 04.3 +3.1
ELL Elmali 4.00 48 P Pn 02 04 04.5 +3.2
ELL Elmali 4.00 48 P Pn 02 04 04.4 +3.1
TAVA DENIZLI_Tavas 4.00 32 P Pn 02 04 01.8 +0.5
TAVA S Sn 02 04 44.1 -3.5
TAVA *i* AML AML 02 04 53.0
comp=N,86nm,0.3s
ESEN Aydn-Nazilli 4.06 25 P Pn 02 04 03.1 +1.1
ESEN S Sn 02 04 46.2 -2.9
ESEN *i* AML AML 02 04 51.0
comp=E,44nm,0.6s
ZEYE Izmir, Urla-Ze 4.12 3 P Pn 02 04 01.4 -1.5
GOLH Golhisar 4.13 40 P Pn 02 04 05.2 +2.0
APMY Acipayam-Deniz 4.18 36 Pn Pn 02 04 05.4 +1.6
DNIZ Denizli-Tavas- 4.18 32 P Pn 02 04 06.2 +2.3
VLY Voula,Athens 4.22 333 P Pn 02 04 05.0 +0.8
CHOS Chios island 4.26 358 Pn Pn 02 04 05.7 +0.7
EPID Epidavros 4.30 325 P Pn 02 04 05.8 +0.3
ATHU Athens Univers 4.32 334 P Pn 02 04 06.7 +1.0
KEMT Kemer-ANTALYA 4.33 54 Pn Pn 02 04 08.0 +2.3
ATH Athens Observa 4.35 333 P Pn 02 04 07.1 +1.0
DION Dionisos Attik 4.37 336 P Pn 02 04 08.1 +1.8
KIRA zmir-Kiraz 4.44 23 P Pn 02 04 08.9 +1.5
INCE Denizli-Bozkur 4.50 36 P Pn 02 04 08.6 +0.3
KARB zmir-Karabur 4.54 2 P Pn 02 04 08.2 -0.5
ANTB Antalya 4.56 51 Pn Pn 02 04 11.2 +2.3
VILL Villia 4.66 331 P Pn 02 04 11.2 +0.6
MANT Manisa 4.76 23 P Pn 02 04 10.3 +1.6
KULA Kula-Manisa 4.81 23 Pn Pn 02 04 13.4 +0.9
BCK Bucak 4.87 46 Pn Pn 02 04 15.2 +1.9
ZEDA zmir-Bergama 4.89 8 P Pn 02 04 14.3 +0.8
SWA2 4.90 188 P Pn 02 04 14.2 +0.6
baz=188
SWA2 S Sn 02 05 08.9 -1.0
baz=188
MNVG Manavgat-Antal 5.01 56 Pn Pn 02 04 17.4 +2.3
ISP Isparta 5.08 42 Pn Pn 02 04 17.6 +1.3
ISP Isparta 5.08 42 Pn Pn 02 04 17.7 +1.4
ISP Isparta 5.08 42 *i* P Pn 02 04 18.3 +2.0
ISP Isparta 5.08 42 P Pn 02 04 18.0 +1.7
USAK Uak-Merkez 5.11 25 P Pn 02 04 18.4 +1.6
KOCA Canakkale, Ayv 5.38 359 P Pn 02 04 21.1 +0.9
STEP BALIKESIR_Sava 5.39 12 P Pn 02 04 18.7 -1.6
SEYD Seydisehir-KON 5.62 53 Pn Pn 02 04 25.4 +1.7
SHUT Suhut-Afyon 5.64 37 Pn Pn 02 04 24.9 +1.0
HMYD Mayadein 5.80 137 P Pn 02 04 26.9 +0.9
baz=137
AGG Agios Georgios 5.81 329 Pn 02 04 26.3 +0.1
AGG Agios Georgios 5.81 329 P Pn 02 04 26.5 +0.3
AGG Agios Georgios 5.81 329 P Pn 02 04 26.3 +0.1
CSS Mathiatis 5.93 80 Pn 02 04 28.3 +0.5
CSS Mathiatis 5.93 80 P Pn 02 04 28.2 +0.4
CSS Mathiatis 5.93 80 P Pn 02 04 27.5 -0.3
CSS Mathiatis 5.93 80 S Sn 02 05 33.3 -1.9
KOT Kottamia 6.33 130 P Pn 02 04 32.9 -0.5
baz=131
KOT S Sn 02 05 41.9 -3.3
baz=131
LIT Litokhoron 6.68 335 Pn Pn 02 04 38.0 0.0
LIT Litokhoron 6.68 335 P Pn 02 04 38.1 0.0
ALN Alexandroupoli 6.77 359 Pn Pn 02 04 39.3 0.0
ALN Alexandroupoli 6.77 359 P Pn 02 04 39.3 0.0
RDO Rodhopi 7.04 356 Pn Pn 02 04 43.3 +0.3
SUZ Suez 7.05 125 P Pn 02 04 43.7 +0.5
baz=126
HFRF Wahat Farafira 7.17 165 P Pn 02 04 45.6 +0.7
baz=165
ZNM Zenema 7.38 128 P Pn 02 04 48.1 +0.4
baz=129
OFRI `Ofer 7.48 99 P Pn 02 04 49.8 +0.7
OFRI `Ofer 7.48 99 P Pn 02 04 48.0 -1.1
HNTI Hanita 7.54 95 P Pn 02 04 51.6 +1.7
HNTI Hanita 7.54 95 P Pn 02 04 49.5 -0.4
TAMRE El Minia 7.58 147 P Pn 02 04 51.1 +0.7
baz=147
KEK Kerkira 7.59 319 Pn Pn 02 04 48.3 -2.3
KZIT Kziot 7.61 113 P Pn 02 04 51.4 +0.5
KZIT Kziot 7.61 113 S Sn 02 06 13.3 -3.4
KZIT Kziot 7.61 113 P Pn 02 04 49.9 -1.0
SLIT Sal'it 7.63 102 P Pn 02 04 50.6 -0.5
SLIT Sal'it 7.63 102 P Pn 02 04 50.6 -0.5
FNA Florina 7.69 331 Pn Pn 02 04 51.1 -0.9
FNA Florina 7.69 331 P Pn 02 04 51.1 -0.9
MMA0 Mount Meron ar 7.74 96 P Pn 02 04 53.5 +0.8
MMA0B Mount Meron ar 7.74 96 P Pn 02 04 52.0 -0.8
MMA0B Mount Meron ar 7.74 96 S Sn 02 06 17.2 -2.8

MMAI Mount Meron Ar 7.74 96 Pn Pn 02 04 52.3 -0.5
14nm,0.3s,baz=283,slow=12,SNR=128
MMAI Sn Sn 02 06 18.2 -1.8
22nm,0.3s,baz=275,slow=29,SNR=11
6.1nm,0.3s
BR231 Keskin MP Arra 7.75 41 Pn Pn 02 04 55.3 +2.4
AMAZ Amatzia 7.76 107 P Pn 02 04 52.8 -0.1
AMAZ Amatzia 7.76 107 S Sn 02 06 17.1 -3.2
AMAZ Amatzia 7.76 107 P Pn 02 04 52.4 -0.5
DQRL Deir Qamar 7.78 90 *e*P Pn 02 04 52.7 -0.6
ANTO Ankara 7.78 41 Pn Pn 02 04 55.3 +2.0
ANTO Ankara 7.78 41 P Pn 02 04 55.3 +2.0
KBN Korca 7.80 328 Pn 02 04 53.8 +0.2
KBN Korca 7.80 328 P Pn 02 04 53.8 +0.2
QRWL Qaraoun 7.89 91 *e*Pn Pn 02 04 54.2 -0.6
GEM Giv'at Ha'Em 7.92 94 P Pn 02 04 55.6 +0.4
GEM Giv'at Ha'Em 7.92 94 P Pn 02 04 54.7 -0.4
SHBL Chebaa 7.97 93 *e*P Pn 02 04 55.7 -0.2
NATI Neve Ativ 7.98 93 P Pn 02 04 55.9 0.0
NATI Neve Ativ 7.98 93 P Pn 02 04 55.5 -0.3
YTIR Yattir 7.98 108 P Pn 02 04 56.6 +0.6
YTIR Yattir 7.98 108 P Pn 02 04 54.5 -1.5
YTIR Yattir 7.98 108 S Sn 02 06 22.7 -3.2
HMDT Nahal Hemdat 8.02 101 P Pn 02 04 56.9 +0.4
HMDT Nahal Hemdat 8.02 101 P Pn 02 04 55.9 -0.6
HMDT Nahal Hemdat 8.02 101 S Sn 02 06 23.6 -3.1
RCY Rachaya 8.03 92 *e*P Pn 02 04 56.3 -0.4
ZAHL Zahle 8.03 89 *e*P Pn 02 04 55.7 -1.0
QRNJ Al-Qirein 8.04 100 P Pn 02 04 56.8 +0.1
UJAP Al Uja 8.05 103 P Pn 02 04 56.7 -0.2
UJAP Al Uja 8.05 103 P Pn 02 04 56.8 -0.2
HWQ Hawqa 8.06 86 *e*P Pn 02 04 57.4 +0.2
KSHT Keshet 8.09 95 P Pn 02 04 57.3 -0.2
GRB Gharib 8.10 134 P Pn 02 04 57.3 -0.3
baz=135
SHMJ Saham 8.10 97 P Pn 02 04 57.6 0.0
DSI Dead Sea 8.11 106 P Pn 02 04 57.6 -0.2
DSI Dead Sea 8.11 106 P Pn 02 04 57.4 -0.3
ASUT 8.12 144 P Pn 02 04 58.6 +0.7
baz=144
BALJ Balqa 8.16 102 Pn Pn 02 04 59.4 +1.0
BRTR Keskin Array B 8.16 45 Pn Pn 02 05 00.3 +1.8
0.9nm,0.3s,baz=222,slow=14,SNR=43
BRTR Sn Sn 02 06 29.5 -0.8
0.7nm,0.3s,baz=211,slow=28,SNR=6.1
6.0nm,0.7s
BR131 Keskin Array S 8.16 45 Pn 02 04 60.0 +1.4
BR131 Keskin Array S 8.16 45 P Pn 02 05 00.0 +1.4
MSBI Mazada 8.19 107 P Pn 02 04 59.5 +0.7
MSBI Mazada 8.19 107 P Pn 02 04 58.1 -0.6
KRMI Paran Flat 8.24 117 P Pn 02 04 58.6 -0.9
BEIL Beino 8.25 84 *e*P Pn 02 04 59.6 -0.2
VLO Vlora 8.30 322 Pn Pn 02 04 59.6 -0.7
VLO Vlora 8.30 322 P Pn 02 04 59.6 -0.7
LISJ El Lisan 8.31 108 P Pn 02 05 00.7 +0.2
PRNI Paran 8.33 114 P Pn 02 05 01.9 +1.1
PRNI Paran 8.33 114 S Sn 02 06 30.5 -3.9
PRNI Paran 8.33 114 P Pn 02 05 00.2 -0.6
GHAJ Ghor Haditha 8.36 107 Pn Pn 02 05 01.6 +0.5
GHAJ Ghor Haditha 8.36 107 P Pn 02 05 01.8 +0.7
GHAJ Ghor Haditha 8.36 107 P Pn 02 05 01.2 0.0
ZFRI Zfri 8.37 113 P Pn 02 05 01.9 +0.6
ZFRI Zfri 8.37 113 S Sn 02 06 32.1 -3.1
ZFRI Zfri 8.37 113 P Pn 02 05 00.5 -0.8
FKH Fakeheh 8.44 86 *e*P Pn 02 05 02.9 +0.5
KARJ KARJ 8.50 108 P Pn 02 04 59.0 -4.0
HRFI Mount Harif 8.51 116 S Sn 02 06 35.1 -3.8
HRFI Mount Harif 8.51 116 P Pn 02 05 03.3 0.0
MBRI Mt Berech 8.55 118 P Pn 02 05 04.8 +1.0
MBRI Mt Zerech 8.55 118 P Pn 02 05 02.5 -1.3
HSUJ Al Zarqa 8.60 101 P Pn 02 05 11.4 +6.9
EIL Elat 8.64 118 Pn Pn 02 05 05.3 +0.2
8.5nm,0.3s,baz=307,slow=19,SNR=84
EIL Sn Sn 02 06 37.1 -4.9
2.6nm,0.3s,baz=297,slow=18,SNR=2.0
22nm,0.4s
EIL Elat 8.64 118 P Pn 02 05 06.1 +1.0
EIL Elat 8.64 118 S Sn 02 06 38.4 -3.6
EIL Elat 8.64 118 P Pn 02 05 04.6 -0.5
AQBJ Aqaba 8.68 118 P Pn 02 05 06.9 +1.3
HBST Basata 8.74 122 P Pn 02 05 06.1 -0.3
baz=122
NUB Nuweibaa 8.79 123 P Pn 02 05 06.8 -0.3
baz=124
TIR Tirane 8.80 327 Pn Pn 02 05 05.4 -1.8
TIR Tirane 8.80 327 P Pn 02 05 05.4 -1.8
HDK1 Dakhla 8.98 161 P Pn 02 05 10.6 +0.9
baz=161
BNN Bunyan 9.08 56 Pn Pn 02 05 13.4 +2.3
TIP Timpagrande 9.13 306 Pn 02 05 09.6 -2.1
ASF Jabal al Asfar 9.16 99 Pn Pn 02 05 12.3 +0.1
1.8nm,0.3s,baz=332,slow=3.3,SNR=36
ASF Sn Sn 02 06 53.0 -1.8
1.1nm,0.3s,baz=336,slow=19,SNR=1.7
3.7nm,0.3s
ASF Jabal al Asfar 9.16 99 P Pn 02 05 14.5 +2.3
CEL Celeste 9.31 299 Pn 02 05 13.1 -1.2
PUK Puka 9.35 330 Pn Pn 02 05 12.1 -2.7
GTR Jabal at Tayr 9.37 155 P Pn 02 05 15.5 +0.5
baz=155
GAZ Gaziantep 9.45 68 Pn 02 05 16.7 +0.5
DRME Dracevica, Mon 9.78 328 *e*Pn Pn 02 05 16.9 -3.6
RAFF Raffo Rosso 10.13 291 Pn Pn 02 05 24.2 -1.2
VAE Valguarnera 10.16 293 Pn Pn 02 05 25.2 -0.7
1.4nm,0.3s,baz=141,slow=14,SNR=3.7
VAE Sn Sn 02 07 11.2 -8.2
2.4nm,0.3s,baz=138,slow=16,SNR=5.0
20nm,0.6s
CUC Castrococco 10.17 308 Pn 02 05 24.8 -1.2
HCY Herceg Novi 10.29 326 *e*Pn Pn 02 05 23.1 -4.5
TIRR Tirgusor 10.47 9 Pn Pn 02 05 30.4 +0.4
TIRR Tirgusor 10.47 9 P Pn 02 05 30.4 +0.4
TREB Trebinje 10.57 327 *e*Pn Pn 02 05 27.3 -4.1
DBRK Dubrovnik 10.63 326 *e*Pn Pn 02 05 27.3 -4.9
DBRK Sn Sn 02 07 18.3 -12
BRY Bratogost 10.63 328 *e*Pn Pn 02 05 28.6 -3.8
RUDO Rudo 10.88 333 *e*Pn Pn 02 05 30.2 -5.4
ARPR Arpgir-MALATY 10.93 59 Pn Pn 02 05 37.9 +1.4
STON Ston 10.99 325 *e*Pn Pn 02 05 32.5 -4.7
STON Ston 10.99 325 *e*Pn Pn 02 05 30.6 -6.6
BBLS Lazići 11.08 333 *e*Pn Pn 02 05 33.0 -5.5
HERR Herculane 11.14 346 ⇓ P Pn 02 05 42.1 +2.8
SGRT San Giovanni R 11.24 316 Pn Pn 02 05 37.1 -3.6
LSTV Lastovo 11.31 323 *e*Pn Pn 02 05 35.2 -6.3
MLR Muntele Rosu 11.36 359 Pn Pn 02 05 43.8 +1.4
0.1nm,0.3s,baz=210,slow=6.5,SNR=3.8
MLR LR LR 02 10 17.5
comp=E,84nm,20.0s,baz=188,slow=39
1.7nm,0.8s
HAPS Han Pijesak,BI 11.44 333 *e*Pn Pn 02 05 37.0 -6.4
GZR Gura Zlata 11.57 348 ⇑ P Pn 02 05 48.3 +3.2
GZR Gura Zlata 11.57 348 ⇑ P Pn 02 05 48.3 +3.2
MAKA Makarska 11.63 325 *e*Pn Pn 02 05 41.4 -4.5
RICI Ricice 11.74 326 *e*Pn Pn 02 05 42.8 -4.6
HVAR Hvar 11.83 323 *e*Pn Pn 02 05 44.1 -4.6
BZS Buzias 12.02 344 ⇑ P Pn 02 05 50.6 -0.6
BZS Buzias 12.02 344 ⇑ P Pn 02 05 50.6 -0.6
MGRS Mrkonjic Grad 12.48 328 *e*Pn Pn 02 05 50.5 -7.0
INTR Introdacqua 12.49 313 Pn 02 05 56.8 -1.0
BLY Banja Luka 12.70 329 *e*Pn Pn 02 05 55.3 -5.2
MORI Morici 12.70 323 *e*Pn Pn 02 05 56.0 -4.5
MARR Marisel-Cluj 12.77 350 ⇑ P Pn 02 06 04.8 +3.3
A050A Klekovaca 12.77 327 *e*Pn Pn 02 05 56.8 -4.8
DRGR 12.94 349 ⇑ P Pn 02 06 07.7 +3.8
DRGR 12.94 349 ⇑ P Pn 02 06 07.7 +3.8
A051A Mrakovica 13.03 329 *e*Pn Pn 02 05 59.2 -5.9
ARCR ARCALIA 13.03 354 ⇑ P 02 06 16.6 +1.3
UDBI Udbina 13.16 325 *e*Pn Pn 02 06 02.9 -4.1
VIRC Vir 13.34 323 *e*Pn Pn 02 06 04.8 -4.4
GURO Guroymak-BITLI 13.49 66 Pn 02 06 14.2 +2.7
PLIT Plitvice 13.49 326 *e*Pn Pn 02 06 07.2 -4.2
BURAR Bucovina Array 13.51 357 ⇑ P P 02 06 23.3 +2.6
BURAR Bucovina Array 13.51 357 ⇑ P P 02 06 23.3 +2.6
NVLJ Novalja 13.62 323 *i* Pn Pn 02 06 08.3 -4.8
ANN Anapa 13.73 36 *e*P Pn 02 06 13.9 -0.6
ANN *e*S Sn 02 08 47.8 +1.4
ANN pmax pmax
comp=Z,18nm,0.9s
KEST Kesra 13.94 281 Pn Pn 02 06 18.3 +0.7
comp=Z,4.5nm,1.1s,baz=84,slow=15,SNR=1.5
KEST Sn Sn 02 08 48.6 -3.3
comp=Z,0.1nm,0.3s,baz=121,slow=23,SNR=1.7

KEST LR LR 02 12 18.6
comp=Z,88nm,20.4s,baz=287,slow=40
SOC Sochi 14.12 44 *e*P Pn 02 06 19.7 -0.3
SOC *e* 02 08 58.4
SOC MLR MLR
comp=Z,75nm,16.0s
BOJS Bojanci 14.14 327 *e*Pn Pn 02 06 13.9 -6.3
CRES Cresnjev 14.30 328 *e*Pn Pn 02 06 17.3 -5.1
PSZ Piszkesteto 14.58 343 Pn Pn 02 06 25.5 -0.8
PSZ Piszkesteto 14.58 343 P Pn 02 06 25.5 -0.8
CEY Cerknica 14.70 326 *e*Pn Pn 02 06 22.7 -5.1
OSSC Osservatorio P 14.96 313 Pn Pn 02 06 32.9 +1.5
KOLS Kolonicke sedl 15.09 350 *e*P Pn 02 06 34.2 +1.1
KOLS Kolonicke sedl 15.09 350 *e*PN Pn 02 06 34.2 +1.1
SOKA Soboth 15.15 329 *e*Pn Pn 02 06 29.2 -4.7
comp=Z,2.3nm,0.5s
SOKA *i* P P 02 06 39.2 +0.3
comp=Z,8.1nm,0.5s
OBKA Obir 15.23 328 *i* Pn Pn 02 06 31.9 -3.0
comp=Z,0.9nm,0.2s
OBKA *i* P P 02 06 40.1 +0.3
comp=Z,11nm,0.5s
OBKA Obir 15.23 328 *e*Pn Pn 02 06 30.7 -4.3
ARSA Arzberg 15.41 332 *e*Pn Pn 02 06 34.1 -3.1
comp=Z,1.4nm,0.5s
ARSA *e*P P 02 06 42.1 +0.4
comp=Z,5.5nm,0.7s
RONA Rosalia, Austr 15.49 334 *i* P P 02 06 42.1 -0.5
comp=Z,5.5nm,0.6s
PRED Cave del Predi 15.62 326 Pn Pn 02 06 35.9 -4.3
KWP Kalwaria Pacla 15.72 352 Pn Pn 02 06 42.2 +0.9
KWP Kalwaria Pacla 15.72 352 P Pn 02 06 42.2 +0.9
KWP pmax pmax
comp=Z,11nm,1.2s
MODS Modra-Piesok 15.73 338 *e*P Pn 02 06 35.4 -6.1
MODS Modra-Piesok 15.73 338 *e*PN Pn 02 06 35.3 -6.2
TEOL Teolo 15.83 319 Pn 02 06 39.0 -3.7
TEOL IAmb IAmb 02 06 47.0
comp=Z,25nm,0.5s
CONA Conrad Observa 15.84 334 *i* Pn Pn 02 06 41.6 -1.3
comp=Z,0.7nm,0.5s
LANS Liptovska Anna 15.84 344 *e*P Pn 02 06 37.4 -5.4
LANS Liptovska Anna 15.84 344 *e*PN Pn 02 06 37.4 -5.4
STAL STALIGIAL 15.90 324 Pn 02 06 39.9 -3.8
STAL IAmb IAmb 02 06 49.8
comp=Z,20nm,0.5s
ONI Oni 15.93 53 Pn Pn 02 06 44.4 +0.3
ONI Oni 15.93 53 P Pn 02 06 44.4 +0.3
ONI pmax pmax
comp=Z,10.0nm,1.0s
GNI Garni 15.94 62 Pn Pn 02 06 45.7 +1.4
GNI Garni 15.94 62 P Pn 02 06 45.7 +1.4
GNI pmax pmax
comp=Z,7.0nm,0.8s
GNI Garni 15.94 62 Pn P 02 06 47.2 -0.7
comp=Z,0.6nm,0.3s,baz=271,slow=4.0,SNR=4.8
comp=Z,4.1nm,0.6s
KIV Kislovodsk 16.10 48 ⇑ P P 02 06 52.6 +3.1
KIV Kislovodsk 16.10 48 Pn 02 06 47.7 +1.3
KIV IAmb IAmb 02 06 53.1
comp=Z,19nm,0.7s
KIV Kislovodsk 16.10 48 *e*P P 02 06 48.6 -1.0
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,27nm,13.0s
KVAR Kislovodsk Arr 16.11 48 Pn P 02 06 49.5 -0.2
baz=270,slow=20
comp=Z,5.9nm,0.8s
KBZ Khabaz 16.12 49 *ce*P P 02 06 48.9 -0.7
KBZ pmax pmax
comp=Z,13nm,0.9s
KBZ Khabaz 16.12 49 Pn P 02 06 49.2 -0.4
comp=Z,0.6nm,0.3s,baz=205,slow=8.2,SNR=13
comp=Z,8.7nm,0.8s
KBA Koelnbreinsper 16.20 327 *e*Pn Pn 02 06 45.3 -2.3
comp=Z,3.1nm,0.4s
KBA *e*P P 02 06 51.3 +0.6
comp=Z,8.1nm,0.5s
CTI Castel Tesino 16.29 321 Pn Pn 02 06 45.4 -3.3
CTI IAmb IAmb 02 06 52.6
comp=Z,26nm,0.6s
CTI Castel Tesino 16.29 321 P Pn 02 06 45.4 -3.3
CTI pmax pmax
comp=Z,26nm,0.6s
ABTA Abfaltersbach 16.34 325 *e*Pn Pn 02 06 47.4 -2.0
comp=Z,6.0nm,0.5s,SNR=4.5
ABTA *e*P P 02 06 52.8 +0.6
comp=Z,17nm,0.5s,SNR=5.2
MOA Molln 16.39 330 *i* Pn Pn 02 06 49.1 -0.8
comp=Z,0.9nm,0.4s
MOA *e*P P 02 06 53.6 +0.9
comp=Z,3.1nm,0.4s
NCK Nalchik 16.44 50 *i* P P 02 06 54.0 +0.8
NCK pmax pmax
comp=Z,28nm,0.9s
MAUC Maruska 16.46 340 *e*P Pn 02 06 49.4 -1.4
KRUC Moravsky 16.62 337 *e*PN Pn 02 06 53.5 +0.7
KIEV Kiev 16.71 7 ⇑ P P 02 06 55.8 -0.3
KIEV Kiev 16.71 7 Pn Pn 02 06 53.5 -0.4
KIEV IAmb IAmb 02 06 57.4
comp=Z,32nm,1.2s
KIEV Kiev 16.71 7 ⇑ P P 02 06 55.8 -0.3
AKASG Malin Array Be 16.72 7 Pn 02 06 53.4 -0.7
AKASG IAmb IAmb 02 06 56.7
comp=Z,25nm,1.1s
AKASG Malin Array Be 16.72 7 P Pn 02 06 53.4 -0.7
AKASG pmax pmax
comp=Z,25nm,1.1s
AKASG Malin Array Be 16.72 7 Pn Pn 02 06 53.0 -1.1
comp=Z,1.8nm,0.3s,baz=195,slow=11,SNR=35
AKASG Sn Sn 02 09 55.2 -4.0
comp=Z,0.3nm,0.3s,baz=192,slow=22,SNR=1.6
AKASG LR LR 02 14 55.7
comp=Z,81nm,19.6s,baz=190,slow=43
AKBB Malin Array Si 16.72 7 Pn 02 06 53.4 -0.6
AKBB IAmb IAmb 02 06 57.4
comp=Z,32nm,1.2s
AKBB Malin Array Si 16.72 7 *ce*P Pn 02 06 53.5 -0.6
AKBB pmax pmax
comp=Z,15nm,0.4s
LESA Schwarzleotal 16.76 327 *i* Pn Pn 02 06 52.5 -2.2
comp=Z,1.6nm,0.4s
LESA *i* P P 02 06 57.6 +0.8
comp=Z,7.7nm,0.4s
OJC Ojcow 16.77 346 Pn Pn 02 06 53.1 -1.6
OJC Ojcow 16.77 346 P Pn 02 06 53.1 -1.6
OJC pmax pmax
comp=Z,4.0nm,0.8s
VRAC Vranov 16.77 338 *e*PN Pn 02 06 54.0 -0.8
VRAC Vranov 16.77 338 Pn Pn 02 06 52.8 -2.0
comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=5.1
comp=Z,2.4nm,0.4s
MORC Moravsky Berou 16.91 340 ⇑ P Pn 02 06 55.2 -1.3
MORC Moravsky Berou 16.91 340 Pn Pn 02 06 55.0 -1.5
MORC Moravsky Berou 16.91 340 *e*PN Pn 02 06 55.1 -1.4
MORC Moravsky Berou 16.91 340 ⇑ P Pn 02 06 55.2 -1.3
GOF Gofitskoye 16.92 45 *ce*P P 02 07 01.2 +2.7
WTTA Wattenberg 17.13 324 *i* Pn Pn 02 06 59.0 -0.4
comp=Z,3.0nm,0.4s
WATA Walderalm 17.21 324 *i* Pn P 02 07 02.7 +0.8
comp=Z,6.0nm,0.5s
SQTA Sankt Quirin 17.31 324 *i* Pn Pn 02 07 01.6 0.0
comp=Z,24nm,0.6s,SNR=9.7
FUORN Ofenpass-Fuorn 17.39 321 P Pn 02 07 03.2 +0.5
FUORN IAmb IAmb 02 07 06.8
comp=Z,24nm,0.7s
KRLC Kraliky 17.39 339 *e*P Pn 02 07 03.2 +0.6
KRLC Kraliky 17.39 339 *e*P Pn 02 07 03.2 +0.6
FETA Feichten 17.41 322 *e*Pn Pn 02 07 03.2 +0.3
comp=Z,7.2nm,0.8s,SNR=7.9
GEC2 GERESS Array S 17.42 331 Pn 02 07 02.2 -0.7
GERES GERESS Array B 17.42 331 P Pn 02 07 01.2 -1.7
comp=Z,0.6nm,0.3s,baz=141,slow=13,SNR=6.3
GERES LR LR 02 15 44.8
comp=Z,128nm,18.9s,baz=147,slow=44
comp=Z,2.4nm,0.6s
MOTA Moosalm 17.45 324 *e*Pn Pn 02 07 02.9 -0.5
comp=Z,4.6nm,0.6s,SNR=4.2
KHC Kasperske Hory 17.69 332 Pn 02 07 05.2 -1.1
KHC Kasperske Hory 17.69 332 *e*P Pn 02 07 06.3 0.0
KHC Kasperske Hory 17.69 332 *e*P Pn 02 07 06.3 0.0
ZVC Zvikov 17.71 333 *e*P Pn 02 07 06.9 +0.5
RETA Reutte 17.71 324 *i* Pn Pn 02 07 05.4 -1.2
comp=Z,4.0nm,0.4s,SNR=9.6

DPC Dobruska-Polom 17.77 339 eP Pn 02 07 06.6 -0.7
DPC Dobruska-Polom 17.77 339 eP Pn 02 07 06.6 -0.7
TUE Stuetta 17.79 319 Pn 02 07 06.3 -1.4
WET Wettzell 17.98 331 eP Pn 02 07 10.2 +0.4
comp=Z,3.2nm,0.6s,baz=139,slow=15
WET eL L 02 15 42.8
comp=Z,150nm,19.0s
OSTC Ostas 17.99 339 eP Pn 02 07 07.9 -2.0
OSTC Ostas 17.99 339 eP Pn 02 07 07.9 -2.0
UPC Upice 18.01 339 eP Pn 02 07 09.1 -1.0
UPC Upice 18.01 339 eP Pn 02 07 09.1 -1.0
DAVA Damuels 18.02 322 i Pn Pn 02 07 10.1 -0.3
comp=Z,12nm,0.3s,SNR=16
PRU Pruhonice 18.04 335 eP Pn 02 07 08.5 -2.0
PRU Pruhonice 18.04 335 eP Pn 02 07 08.5 -2.0
CHVC Chvalec 18.07 339 eP Pn 02 07 09.3 -1.5
CHVC Chvalec 18.07 339 eP Pn 02 07 09.3 -1.5
UBR Ueberruh 18.17 323 eP Pn 02 07 11.8 -0.3
comp=Z,22nm,0.6s,baz=139,slow=15
PVCC Panska Ves 18.49 336 eP P 02 07 15.2 -0.6
PVCC Panska Ves 18.49 336 eP P 02 07 15.2 -0.6
BNI Bardonecchia 18.56 312 P P 02 07 15.2 -1.6
BNI Bardonecchia 18.56 312 P P 02 07 15.2 -1.6
BNI pmax pmax
comp=Z,8.0nm,1.1s
SENIN Lac Senin/Sane 18.87 316 P P 02 07 18.9 -1.4
SENIN lAmb lAmb 02 07 28.5
comp=Z,38nm,0.9s
MANZ Manzenberg 18.96 331 eP P 02 07 20.4 -0.6
comp=Z,1.3nm,0.5s,baz=139,slow=15
GRF Grafenberg Arr 19.10 329 eP P 02 07 22.6 +0.1
comp=Z,10nm,0.7s,baz=139,slow=15
GRF eL L 02 17 19.2
comp=Z,78nm,20.3s
TANN Tannenbergstha 19.16 332 eP Pn 02 07 24.3 +0.2
comp=Z,15nm,0.9s,baz=139,slow=15
STU Stuttgart 19.36 324 P P 02 07 24.3 -1.1
STU lAmb lAmb 02 07 26.9
comp=Z,18nm,0.7s
STU Stuttgart 19.36 324 P P 02 07 24.3 -1.1
STU pmax pmax
comp=Z,18nm,0.7s
STU Stuttgart 19.36 324 eP Pn 02 07 26.2 -0.3
comp=Z,43nm,0.7s,baz=139,slow=15
BFO Black Forest 19.50 322 P P 02 07 26.0 -0.9
BFO lAmb lAmb 02 07 28.5
comp=Z,9.0nm,0.6s
BFO Black Forest 19.50 322 P P 02 07 26.0 -0.9
BFO pmax pmax
comp=Z,9.0nm,0.6s
BFO Black Forest 19.50 322 eP P 02 07 26.7 -0.2
comp=Z,9.5nm,0.6s,baz=139,slow=15
VSR Storozhevoye 19.51 25 eP P 02 07 25.7 -1.3
VSR pmax pmax
comp=Z,7.0nm,0.8s
MOX Moxa 19.67 332 eL L 02 16 44.9
comp=Z,69nm,18.7s
CLL Collm 19.68 335 P P 02 07 28.0 -0.8
CLL lAmb lAmb 02 07 35.5
comp=Z,10nm,0.6s
CLL Collm 19.68 335 i P P 02 07 28.2 -0.7
CLL pmax pmax
comp=Z,8.0nm,0.6s
CLL Collm 19.68 335 i P P 02 07 28.2 -0.7
comp=Z,8.0nm,0.6s
CLL i pP pP 02 07 33.2 -0.2
CLL i sP sP 02 07 34.7 -0.6
comp=Z,11nm,0.6s
CLL Collm 19.68 335 eP P 02 07 28.4 -0.4
comp=Z,7.3nm,0.6s,baz=139,slow=15
RAYN Ar Rayn 19.89 117 P Pn 02 07 32.6 -0.5
RAYN Ar Rayn 19.89 117 P Pn 02 07 32.6 -0.5
RAYN pmax pmax
comp=Z,6.0nm,1.0s
VORR Voronezh 19.91 24 P Pn 02 07 32.5 -0.5
VORR pmax pmax
comp=Z,12nm,0.6s
SUW Suwalki 20.01 355 P P 02 07 30.8 -1.6
SUW Suwalki 20.01 355 P P 02 07 30.8 -1.6
SUW pmax pmax
comp=Z,74nm,0.7s
SUW Suwalki 20.01 355 eP P 02 07 32.3 -0.1
ECH Echery 20.03 320 P P 02 07 31.9 -0.8
ECH Echery 20.03 320 P P 02 07 31.9 -0.8
ECH pmax pmax
comp=Z,9.0nm,1.1s
MNK Minsk 20.42 3 i P P 02 07 34.2 -2.6
comp=E,4.0nm,1.1s
MNK i P P 02 07 34.2 -2.6
comp=N,15nm,1.1s
MNK i P P 02 07 34.2 -2.6
comp=Z,10.0nm,0.8s,baz=185
MNK i PP PnPn 02 07 50.0 -4.1
MNK i PPP PPP 02 07 58.2
MNK i S S 02 11 23.3 -1.2
MNK i SS SnSn 02 11 41.5 -1.6
MNK i SSS SSS 02 11 54.9
MNK i LQ LQ 02 13 44.7
MNK i LR LR 02 15 06.4
MNK i LRM MLR 02 16 11.8
comp=Z,88nm,13.2s
MNK i LRM MLR 02 16 25.4
comp=N,78nm,12.2s
MNK i LRM MLR 02 16 41.5
comp=E,27nm,10.8s
MNK Minsk 20.42 3 i P P 02 07 34.1 -2.6
MNK i PPP PPP 02 07 58.2
MNK i S S 02 11 23.3 -1.2
MNK i SSS SSS 02 11 54.8
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK pmax pmax
comp=N,15nm,1.1s
MNK MLR MLR
comp=Z,88nm,13.0s
MNK MLR MLR
comp=N,78nm,12.0s
MNK MLR MLR
comp=E,27nm,11.0s
VRH Novokhopyorsk 20.46 29 eP P 02 07 37.9 +0.6
VRH pmax pmax
comp=Z,39nm,0.8s
LPSR Galich'ya Gora 20.60 22 eP P 02 07 38.8 0.0
LPSR pmax pmax
comp=Z,40nm,0.9s
TNS Taunus Mts 20.71 326 eP Pn 02 07 42.1 -0.4
comp=Z,15nm,0.7s,baz=139,slow=15
NACGM Naroch 20.79 1 eP P 02 07 38.6 -2.2
comp=Z,21nm,1.1s,baz=182
GTTG Gottingen 21.03 331 eP P 02 07 43.2 -0.2
comp=Z,17nm,0.8s,baz=139,slow=15
FLTG Flechtingen 21.15 334 eP P 02 07 43.6 -1.2
comp=Z,6.9nm,0.8s,baz=139,slow=15
ASSE Asse, Remlinge 21.20 333 eP P 02 07 47.6 +2.3
comp=Z,8.5nm,0.9s,baz=139,slow=15
TAM Tamanrasset 21.37 244 P P 02 07 46.4 -1.1
TAM Tamanrasset 21.37 244 P P 02 07 46.4 -1.1
TAM pmax pmax
comp=Z,6.0nm,0.9s
KASTN Kahler Asten 21.42 328 eP P 02 07 47.5 -0.2
comp=Z,8.9nm,0.8s,baz=139,slow=15
PABE Paberze 21.45 356 P P 02 07 46.3 -1.6
PABE Paberze 21.45 356 eP P 02 07 46.5 -1.4
WLF Walferdange 21.45 322 P P 02 07 47.6 -0.4
WLF lAmb lAmb 02 07 49.1
comp=Z,18nm,0.8s
WLF Walferdange 21.45 322 dP P 02 07 48.0 +0.1
comp=Z,15nm,0.9s
WLF Walferdange 21.45 322 P P 02 07 47.6 -0.4
WLF pmax pmax
comp=Z,18nm,0.8s
WLF Walferdange 21.45 322 eP P 02 07 48.1 +0.1
comp=Z,17nm,0.8s,baz=139,slow=15
ISAL Salakas 21.45 360 eP P 02 07 49.7 +1.7
AHRW Bad Neuenahr-A 21.57 325 eP P 02 07 49.7 +0.4
comp=Z,12nm,0.7s,baz=139,slow=15
IZAR Zarasai 21.63 0 eP P 02 07 50.7 +0.8
NRDL Niedersach Rie 21.70 333 eP P 02 07 50.5 -0.1
comp=Z,7.4nm,0.9s,baz=139,slow=15
VSVD Vaisvydziai 21.92 357 eP P 02 07 51.9 -1.1
BTNL Ternell 22.05 324 dP P 02 07 54.4 -0.1
comp=Z,21nm,0.7s
BUG Bochum--Univer 22.10 327 eP P 02 07 55.5 +0.6
comp=Z,16nm,0.9s,baz=139,slow=15
PBUR Paburge 22.11 354 eP P 02 07 53.4 -1.6
MEM Membach 22.13 324 dP P 02 07 55.6 +0.3
comp=Z,33nm,0.7s
OBN Obninsk 22.20 16 P P 02 07 55.2 -0.8
OBN Obninsk 22.20 16 i P P 02 07 52.2 -3.8
OBN i 02 08 19.4
OBN pmax pmax
comp=Z,10.0nm,0.8s
OBN MLR MLR
comp=Z,58nm,15.0s
RCHB Rochefort 22.23 322 dP P 02 07 56.1 -0.2
comp=Z,10nm,0.9s
BSTI Sart Tilman 22.33 324 dP P 02 07 58.1 +0.7
comp=Z,5.1nm,0.7s
BCLA Clavier 22.35 323 dP P 02 07 57.4 -0.3
BSD Bornholm Skovb 22.43 343 i P P 02 07 55.0 -3.4
BGES Gesves 22.44 323 dP P 02 07 58.6 -0.1
DOU Dourbes 22.51 322 dP P 02 07 57.5 -1.9
comp=Z,16nm,0.7s
BMRD Maredsous 22.55 322 dP P 02 07 58.6 -1.2
MOS Moscow 23.02 17 eP P 02 08 01.9 -2.7
MOS eS S 02 12 10.2 -4.0
LUNU Lund 23.27 341 i P P 02 08 04.0 -3.2
BLEU Blekinge 23.32 345 i P P 02 08 02.3 -5.3
BELG Belogornoye 23.86 34 i P P 02 08 12.9 -0.1
BELG pmax pmax
comp=Z,2.0nm,0.5s
DEL Delary 23.91 343 i P P 02 08 10.0 -3.4
VSU Vasula 24.36 1 ceP P 02 08 16.8 -0.7
VSU pmax pmax
comp=Z,17nm,0.8s
VSU Vasula 24.36 1 eP P 02 08 17.0 -0.5
MTSE Matsula 24.66 357 eP P 02 08 20.5 +0.3
FABU Falkenberg 24.67 342 i P P 02 08 19.3 -1.1
ESBB Sonseca Array 24.70 292 P P 02 08 20.2 -0.8
ESBB lAmb lAmb 02 08 26.8
comp=Z,6.9nm,0.9s
ESDC Sonseca Array 24.70 292 P P 02 08 20.4 -0.6
ESDC Sonseca Array 24.70 292 P P 02 08 21.1 +0.1
comp=Z,2.4nm,0.5s,baz=95,slow=9.0,SNR=68
comp=Z,2.4nm,0.5s
PAB San Pablo 24.99 291 P P 02 08 23.1 -0.5
PAB lAmb lAmb 02 08 32.5
comp=Z,4.6nm,1.0s
PAB San Pablo 24.99 291 P P 02 08 23.1 -0.5
PAB pmax pmax
comp=Z,5.0nm,1.0s
MUD Monsted U'grnd 25.22 338 i P P 02 08 25.1 -0.2
MUD lAmb lAmb 02 08 26.9
comp=Z,9.5nm,0.8s
GEYT Alibeck 26.01 72 P P 02 08 34.1 +1.3
comp=Z,8.1nm,0.4s,baz=263,slow=7.8,SNR=16
comp=Z,8.1nm,0.4s
MEF Metsahovi 26.14 358 eP P 02 08 33.2 -0.5
PBRG Braganca 26.98 296 eP P 02 08 40.6 -0.9
comp=Z,21nm,1.7s
RAF Rauma 27.08 355 eP P 02 08 40.5 -1.6
PBAR Barrancos 27.08 288 eP P 02 08 42.8 +0.4
comp=Z,10nm,1.9s
MVO Moncorvo 27.14 295 eP P 02 08 42.8 -0.2
comp=Z,26nm,1.8s
HFS Hagfors 27.29 346 P P 02 08 42.5 -1.6
comp=Z,3.5nm,0.4s,baz=163,slow=10,SNR=31
comp=Z,3.5nm,0.4s
PMRV Marv??o 27.34 291 eP P 02 08 44.5 -0.3
FINES FINESS Array B 27.34 360 P P 02 08 43.2 -1.3
comp=Z,2.8nm,0.3s,baz=187,slow=9.2,SNR=43
FINES LR LR 02 21 33.4
comp=Z,99nm,19.0s,baz=211,slow=41
comp=Z,2.8nm,0.3s
FIA1 FINESS Array S 27.35 360 P P 02 08 43.0 -1.5
SNART Snartemo 27.37 338 eP P 02 08 44.9 +0.1
PCBR Castelo Branco 27.41 292 eP P 02 08 45.4 0.0
comp=Z,16nm,1.6s
PESTR Estremoz 27.50 290 eP P 02 08 46.0 -0.2
UOSS Minazif 27.56 101 P P 02 08 47.7 +0.8
UOSS lAmb lAmb 02 09 09.6
comp=Z,3.2nm,0.8s
PVAQ Vaqueiros 27.65 287 eP P 02 08 47.7 +0.2
comp=Z,15nm,1.9s
PVAQ Vaqueiros 27.65 287 P P 02 08 46.6 -0.9
PVAQ lAmb lAmb 02 09 10.8
comp=Z,6.0nm,1.1s
PVRL Vila Real 27.66 295 eP P 02 08 47.5 -0.2
KONO Kongsberg 27.79 342 P P 02 08 46.5 -2.0
KONO Kongsberg 27.79 342 eP P 02 08 47.3 -1.2
KONO Kongsberg 27.79 342 P P 02 08 46.6 -2.0
KONO pmax pmax
comp=Z,34nm,1.5s
EVO Evora 27.83 289 eP P 02 08 49.7 +0.5
comp=Z,11nm,1.8s
KLMR Klimovskoe 28.11 14 eP P 02 08 48.6 -2.7
KLMR pmax pmax
comp=Z,20nm,1.3s
NC602 NORSAR Array S 28.29 345 eP P 02 08 51.6 -1.4
NC602 lAmb lAmb 02 08 54.4
comp=Z,1.8nm,0.5s
BLS5 Blasjo 28.48 339 eP P 02 08 54.4 -0.4
BLS5 lAmb lAmb 02 09 11.2
comp=Z,96nm,1.6s
NB2 NORSAR Subarra 28.63 345 P P 02 08 54.7 -1.4
comp=Z,0.9nm,0.5s,baz=159,slow=11
NB2 NORSAR Subarra 28.63 345 P P 02 08 54.7 -1.4
baz=159,slow=11
NOA NORSAR Array B 28.63 345 P P 02 08 54.7 -1.4
comp=Z,0.4nm,0.3s,baz=151,slow=8.6,SNR=14
comp=Z,0.4nm,0.3s
KMY Karmoy 28.69 337 eP P 02 08 55.4 -1.1
ODD1 Odda 28.83 339 eP P 02 08 57.5 -0.3
KIRV Kirov 28.95 25 ceP P 02 08 58.2 -0.7
ABKAR Akbulak array 29.09 48 P P 02 09 01.6 +1.4
ABKAR lAmb lAmb 02 09 02.4
comp=Z,5.8nm,0.5s
ABKAR Akbulak array 29.09 48 P P 02 09 01.2 +1.0
EKA Eskdalemuir Ar 29.40 325 P P 02 09 02.3 -0.6
comp=Z,3.6nm,0.5s,baz=129,slow=10,SNR=15
comp=Z,3.6nm,0.5s
ESK Eskdalemuir 29.41 325 P P 02 09 02.4 -0.6
ESK Eskdalemuir 29.41 325 P P 02 09 02.4 -0.6
ESK pmax pmax
comp=Z,36nm,1.3s
HRA Herat 29.68 79 P P 02 09 06.1 +0.2
HRA lAmb lAmb 02 09 08.8
comp=Z,4.6nm,0.7s
DOMB Dombas 30.00 344 eP P 02 09 07.7 -0.5
DOMB lAmb lAmb 02 09 09.2
comp=Z,38nm,1.5s
TOA0 Torodi Ar. Sit 30.52 233 P P 02 09 13.1 -0.1
TOA0 lAmb lAmb 02 09 25.2
comp=Z,6.3nm,1.1s
TORD Torodi Ar. Bea 30.52 233 P P 02 09 13.8 +0.6
comp=Z,0.8nm,0.5s,baz=40,slow=9.8,SNR=16
comp=Z,0.8nm,0.5s
AKN Aaknes 30.62 342 eP P 02 09 13.2 -0.5
FOO Floro 30.66 340 eP P 02 09 12.5 -1.4
ARU Arti 31.39 35 P P 02 09 20.4 -0.1
ARU lAmb lAmb 02 09 22.4
comp=Z,12nm,1.3s
NSS Namsos 31.67 348 eP P 02 09 20.8 -2.0
NSS lAmb lAmb 02 09 28.5
comp=Z,64nm,1.7s
SVE Sverdlovsk 32.58 35 eP P 02 09 32.2 +1.3
MOR8 Moi Rana 32.85 351 eP P 02 09 32.3 -0.8
MOR8 lAmb lAmb 02 09 34.9
comp=Z,19nm,0.8s
KONS Konsvik 33.34 350 eP P 02 09 36.1 -1.3
FAUS Fauske 33.91 352 eP P 02 09 41.3 -1.1
LVZ Lovozero 34.17 6 P P 02 09 44.0 -0.7
LVZ Lovozero 34.17 6 P P 02 09 44.0 -0.7
LVZ pmax pmax
comp=Z,65nm,1.5s
STEI Steigen 34.44 353 eP P 02 09 45.9 -1.1
STEI lAmb lAmb 02 09 46.4
comp=Z,0.7nm,0.2s
KTK1 Kautokeino 34.99 358 eP P 02 09 49.6 -2.1
KTK1 lAmb lAmb 02 09 54.7
comp=Z,44nm,1.6s
KBL Kabul 35.17 77 P P 02 09 55.2 +1.2
KBL lAmb lAmb 02 09 57.3
comp=Z,3.2nm,0.5s
KBL Kabul 35.17 77 P P 02 09 55.2 +1.2
KBL pmax pmax
comp=Z,3.0nm,0.5s
KK31 Karatay Array 35.41 62 P P 02 09 57.4 +1.7
KK31 lAmb lAmb 02 09 58.3
comp=Z,8.2nm,0.9s
KK31 Karatay Array 35.41 62 P P 02 09 57.4 +1.7
KK31 pmax pmax
comp=Z,8.0nm,0.9s
KKAR Karatay Array 35.41 62 P P 02 09 56.8 +1.2
KKAR Karatay Array 35.41 62 P P 02 09 56.8 +1.2
ARA0 ARCESS Array S 35.47 360 eP P 02 09 54.6 -1.3
ARCES ARCESS Array B 35.47 360 P P 02 09 54.4 -1.4
comp=Z,2.2nm,0.4s,baz=178,slow=8.9,SNR=43
comp=Z,2.2nm,0.4s
JETT Jettan, Norway 35.64 356 eP P 02 09 55.9 -1.5
JETT lAmb lAmb 02 09 58.9
comp=Z,47nm,1.4s
KEV Kevo 35.70 0 P P 02 09 56.6 -1.2
KEV Kevo 35.70 0 P P 02 09 56.6 -1.2
KEV pmax pmax
comp=Z,43nm,1.5s
TRO Tromso 35.80 356 eP P 02 09 57.0 -1.6
VADS Vadso 36.10 2 eP P 02 10 00.7 -0.6
VADS lAmb lAmb 02 10 01.6
comp=Z,44nm,1.2s
BRVK Borovoye 36.39 45 P P 02 10 05.2 +1.2
BRVK Borovoye 36.39 45 ceP P 02 10 05.1 +1.2
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 36.45 45 P P 02 10 06.0 +1.5
BVAR Borovoye Array 36.45 45 P P 02 10 06.0 +1.5
comp=Z,7.4nm,0.5s,baz=238,slow=9.6,SNR=43
comp=Z,7.4nm,0.5s
HAMF Hammerfest 36.61 359 eP P 02 10 05.1 -0.4
ARSB Arslanbob 37.31 65 P P 02 10 13.8 +1.6
ARSB Arslanbob 37.31 65 P P 02 10 13.8 +1.6
ARSB pmax pmax
comp=Z,1.0nm,0.6s
AAK Ala-Archa 38.35 63 P P 02 10 21.9 +1.1
AAK lAmb lAmb 02 10 23.5
comp=Z,3.3nm,0.6s
AAK Ala-Archa 38.35 63 ceP P 02 10 23.1 +2.2
AAK pmax pmax
comp=Z,3.0nm,0.8s
NIL Nilore 38.77 77 P P 02 10 26.2 +1.8
NIL Nilore 38.77 77 P P 02 10 26.2 +1.8
NIL pmax pmax
comp=Z,16nm,0.6s
NRN Naryn 39.57 64 P P 02 10 32.5 +1.2
NRN lAmb lAmb 02 10 34.4
comp=Z,7.6nm,0.9s
NRN Naryn 39.57 64 P P 02 10 32.5 +1.2
NRN pmax pmax
comp=Z,8.0nm,0.9s
KSH Kashi 39.78 67 P P 02 10 40.5 +7.6
KSH pmax pmax
comp=Z,7.0nm,0.5s
KURBB Kurchatov Arra 41.11 50 P P 02 10 45.1 +1.6
comp=Z,8.8nm,0.7s,baz=272,slow=8.5,SNR=67
KURBB PcP PcP 02 12 43.2 +0.4
comp=Z,0.7nm,0.6s,baz=274,slow=4.0,SNR=3.7
comp=Z,8.8nm,0.7s
KURK Kurchatov 41.17 50 P P 02 10 45.4 +1.4
KURK lAmb lAmb 02 10 46.5
comp=Z,12nm,1.1s
KURK Kurchatov 41.17 50 ceP P 02 10 45.9 +1.9
KURK pmax pmax
comp=Z,6.0nm,0.7s
HOPEN Hopen 42.49 360 eP P 02 10 52.5 -1.9
HOPEN lAmb lAmb 02 10 59.0
comp=Z,986nm,3.3s
MAKZ Makanchi 43.41 56 P P 02 11 03.7 +1.3
MAKZ lAmb lAmb 02 11 06.2
comp=Z,3.0nm,0.6s
MAKZ Makanchi 43.41 56 P P 02 11 03.7 +1.3
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
MK31 Makanchi Array 43.63 56 ceP P 02 11 05.8 +1.6
MKAR Makanchi Array 43.63 56 ceP P 02 11 05.8 +1.6
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 43.63 56 P P 02 11 05.6 +1.5
comp=Z,5.0nm,0.6s,baz=275,slow=7.3,SNR=52
MKAR PcP PcP 02 12 51.5 +0.2
comp=Z,0.4nm,0.6s,baz=286,slow=2.6,SNR=1.1
comp=Z,5.0nm,0.6s
SPA0 Spitsbergen Ar 44.37 357 eP P 02 11 08.6 -1.0
SPITS Spitsbergen Ar 44.37 357 P P 02 11 09.2 -0.4
comp=Z,26nm,1.1s,baz=164,slow=5.8,SNR=16
comp=Z,26nm,1.1s
ZAA0 Zalesovo Array 45.10 45 P P 02 11 16.7 +0.9
ZALV Zalesovo Beam 45.10 45 P P 02 11 16.4 +0.6
ZALV Zalesovo Beam 45.10 45 P P 02 11 16.7 +0.9
comp=Z,15nm,0.4s,baz=267,slow=8.3,SNR=76
comp=Z,15nm,0.4s
DGZ Jazzator, Alta 46.84 51 ⇓ iP P 02 11 30.9 +1.1
DGZ pmax pmax
comp=Z,4.0nm,0.7s
WMQ Urumqi 47.78 59 eP P 02 11 40.4 +3.3
NRIK Noril'sk 48.46 25 ceP P 02 11 42.3 +0.5
NRIK pmax pmax
comp=Z,2.0nm,0.4s
ZAK Zakamensk 56.78 48 eP P 02 12 45.2 +1.3
ZAK pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 59.47 50 P P 02 13 03.9 +1.2
SONM lAmb lAmb 02 13 05.4
comp=Z,2.6nm,1.1s
SONM Songino Array 59.47 50 P P 02 13 04.4 +1.6
comp=Z,1.6nm,0.5s,baz=285,slow=7.5,SNR=14
comp=Z,1.6nm,0.5s
ULN Ulaanbaatar 59.88 50 P P 02 13 06.7 +1.1
ULN lAmb lAmb 02 13 17.6
comp=Z,1.9nm,0.8s
ULN Ulaanbaatar 59.88 50 P P 02 13 06.7 +1.1
ULN pmax pmax
comp=Z,2.0nm,0.8s
BOD Bodaibo 60.74 38 eP P 02 13 11.6 +0.5
BOD pmax pmax
comp=Z,7.0nm,1.7s
DRLN Deer Lake 61.24 312 P P 02 13 13.9 -0.7
TIXI Tiksi 61.84 21 P P 02 13 18.1 -0.2
TIXI lAmb lAmb 02 13 19.1
comp=Z,2.1nm,0.7s
TIXI Tiksi 61.84 21 P P 02 13 18.1 -0.2
TIXI pmax pmax
comp=Z,2.0nm,0.7s
PZH PanZhiHua 64.30 74 P P 02 13 36.5 +0.9
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,7.1s
SCHQ Schefferville 64.55 320 P P 02 13 37.0 +0.5
comp=Z,9.1nm,0.3s,baz=65,slow=7.8,SNR=18
comp=Z,9.1nm,0.3s
HHC Hu-ho-hao-te 65.49 56 eP P 02 13 44.8 +1.7
HHC sP pwP 02 13 51.9 0.0
HHC PcP PcP 02 14 17.8 +2.9
HHC S S 02 22 28.3 +1.2
HHC sS sS 02 22 37.0 +1.4
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,110nm,5.6s
CMAR Chiang Mai Arr 65.82 83 ceP P 02 13 46.0 +0.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 65.82 83 P P 02 13 46.5 +1.0
comp=Z,1.4nm,0.2s,baz=298,slow=8.9,SNR=5.9
comp=Z,1.4nm,0.2s
BATG Bathurst New B 67.27 312 P P 02 13 55.2 +0.9
D62A Allapoint, All 69.18 313 P P 02 14 06.9 +0.7
ZEA Zeya 69.22 39 eP P 02 14 07.0 +0.7
HEH HeiHe 71.05 42 eP P 02 14 19.1 +1.5
FCC Fort Churchill 75.03 332 P P 02 14 41.5 +0.5
FCC lAmb lAmb 02 14 59.1
comp=Z,4.6nm,1.4s
FCC Fort Churchill 75.03 332 P P 02 14 41.5 +0.5
FCC pmax pmax
comp=Z,5.0nm,1.4s
USRK Ussuriysk Ar. 76.95 45 P P 02 14 52.8 +0.6
comp=Z,3.0nm,0.5s,baz=281,slow=5.2,SNR=15
comp=Z,3.0nm,0.5s
KSRS Korea Array 78.22 53 P P 02 15 00.3 +0.9
comp=Z,2.1nm,0.6s,baz=308,slow=4.5,SNR=5.5
comp=Z,2.1nm,0.6s
YKA Yellowknife Ar 78.71 343 ceP P 02 15 02.0 +0.3
YKA pmax pmax
comp=Z,2.0nm,0.6s

YKA	**Yellowknife Ar**	78.71	343	P	P	02 15 01.9	+0.3
	comp=Z,1.7nm,0.6s,baz=30,slow=5.5,SNR=33						
	comp=Z,1.7nm,0.6s						
ILAR	**Eielson Array**	81.29	357	P	P	02 15 15.8	+0.2
	comp=Z,0.5nm,0.9s,baz=348,slow=4.3,SNR=5.8						
	comp=Z,0.5nm,0.9s						
ULM	**Lac du Bonnet**	81.66	327	P	P	02 15 18.0	+0.2
ULM	**Lac du Bonnet**	81.66	327	P	P	02 15 18.0	+0.2
	comp=Z,1.0nm,0.5s,baz=50,slow=7.1,SNR=3.1						
	comp=Z,1.0nm,0.5s						
MJAR	**Matsushiro Arr**	85.36	49	P	P	02 15 37.6	+0.5
	comp=Z,3.5nm,0.8s,baz=300,slow=4.0,SNR=5.7						
	comp=Z,3.5nm,0.8s						
PDAR	**Pinedale Array**	93.45	329	P	P	02 16 15.3	-0.3
	comp=Z,0.3nm,0.6s,baz=60,slow=5.4,SNR=3.6						
	comp=Z,0.3nm,0.6s						
ANMO	**Albuquerque**	98.26	322	LR	LR	03 00 44.5	
	comp=Z,17nm,18.3s,baz=164,slow=35						
WRA	**Warramunga Arr**	115.59	98	PKP	PKPdf	02 21 42.4	+0.1
	comp=Z,0.2nm,0.5s,baz=317,slow=2.0,SNR=1.6						
ASAR	**Alice Springs**	116.99	101	PKP	PKPdf	02 21 44.8	-0.2
	comp=Z,0.1nm,0.3s,baz=310,slow=3.1,SNR=1.3						
QSPA	**South Pole Qui**	123.97	180	PKP	PKPdf	02 21 57.0	-0.1
	comp=Z,2.2nm,0.9s,baz=223,slow=1.3,SNR=3.3						

DJA 24 02:09:31.7±0.8, 0°N±5°×12°3E±°, h19km±9km, M2.8/6, MLv2.8/6, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	0.40	25	P	Pn	02 09 42.6	+0.1
GTOI				S	Sn	02 09 55.5	+6.0
KMSI	**Cibinong**	1.18	75	P	Pg	02 10 00.3	+5.7
LUWI	**Luwuk**	1.30	183	P	Pn	02 09 54.9	0.0
TTSI	**Tana Toraja**	4.47	222	P	Pn	02 10 38.3	-0.2
ZCP	**Zamboanga City**	6.66	353	*e*P	Pg	02 11 33.8	-5.6

*ISK **24** 02:16:32.5, 38.66°N×26.64°E, h12km, ML3.6/25*
*IDC **24** 02:16:32.4±1.7, 38.61°N×26.75°E, h0km, mb3.4/4, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=39.8km s-min=19.2km az=0.0*
*ATH **24** 02:16:33.2, 38.71°N×26.74°E, h16km±1km, ML3.5/7, Error ellipse: s-maj=2.1km s-min=0.9km az=274.0*
*AFAD **24** 02:16:33.2±0.0, 38.68°N×26.63°E, h7km±2km, MW3.5*
*THE **24** 02:16:33.7, 38.68°N×26.58°E, h6km±1km, ML3.4/9, Error ellipse: s-maj=1.4km s-min=0.4km az=275.0*

ISC 24 02:16:33.4±0.8, 38.68N±0.02×26.65E±0.02, h11km±5km, n92, σ0.979/129, mb3.3/4, 7C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOCM	**Foa**	0.07	65	Pg	**Pg**	02 16 35.5	-0.4
FOCM				Sg	**Sg**	02 16 37.3	-0.3
KARB	**zmir-Karabur**	0.18	264	P	**Pg**	02 16 37.0	-0.4
CAND	**Candarli**	0.30	24	Pg	**Pg**	02 16 39.6	+0.1
CAND				Sg	**Sg**	02 16 44.5	+0.9
URLA	**Izmir**	0.32	187	P	**Pg**	02 16 40.3	+0.3
IZMD	**zmir-Dikili-**	0.38	36	P	**Pg**	02 16 41.0	0.0
IZMD				P	**Pb**	02 16 41.1	-1.1
IZMD				S	**Sg**	02 16 46.3	+0.3
IZMD				*i* AML	AML	02 16 47.0	
	comp=E,2μm,0.9s						
IZMD				*i* AML	AML	02 16 47.0	
	comp=E,2μm,0.9s						
EAG3	**Mitilini, Lesv**	0.41	352	P	**Pg**	02 16 41.4	-0.2
EAG3				S	**Sg**	02 16 47.2	+0.2
EAG3				AML	AML	02 16 48.2	
	comp=N,30388μm,0.4s						
EAG3				AML	AML	02 16 48.6	
	comp=E,55997μm,0.7s						
LESV	**Lesvos island,**	0.43	351	P	**Pg**	02 16 41.7	-0.2
LESV				S	**Sg**	02 16 48.5	+0.8
	comp=E,53μm,0.6s						
DKL	**Dikili**	0.44	28	Pg	**Pg**	02 16 42.2	+0.1
DKL				Sg	**Sg**	02 16 48.5	+0.6
EAG2	**Marmaro, Chios**	0.44	252	P	**Pb**	02 16 42.5	-0.7
EAG2				S	**Sb**	02 16 51.0	+1.2
EAG2				AML	AML	02 16 56.0	
	comp=E,51037μm,0.3s						
EAG2				AML	AML	02 16 56.8	
	comp=N,34210μm,0.3s						
ZEDA	**zmir-Bergama**	0.44	50	P	**Pg**	02 16 42.1	-0.1
ZEYE	**Izmir, Urla-Ze**	0.46	194	P	**Pg**	02 16 42.2	-0.2
CHOS	**Chios island**	0.55	238	Pg	**Pg**	02 16 44.3	+0.1
CHOS				Sg	**Sg**	02 16 51.2	-0.2
CHOS	**Chios island**	0.55	238	P	**Pg**	02 16 44.2	+0.1
CHOS				S	**Sg**	02 16 51.5	+0.1
	comp=N,3μm,0.3s						
CHOS	**Chios island**	0.55	238	P	**Pb**	02 16 44.5	-0.6
CHOS				S	**Sn**	02 16 54.9	-1.5
CHOS				AML	AML	02 16 56.8	
	comp=N,4656μm,0.3s						
CHOS				AML	AML	02 16 58.0	
	comp=E,8229μm,0.3s						
AYVA	**Ayvalik**	0.63	3	P	**Pg**	02 16 45.6	0.0
PRK	**Paraskevi**	0.63	333	P	**Pg**	02 16 45.5	-0.3
PRK				S	**Sg**	02 16 54.6	+0.5
	comp=E,4μm,0.4s						
PRK	**Paraskevi**	0.63	333	P	**Pg**	02 16 45.5	-0.3
PRK				S	**Sg**	02 16 54.6	+0.5
PRK				AML	AML	02 16 55.2	
	comp=N,6811μm,0.6s						
PRK				AML	AML	02 16 58.6	
	comp=E,10776μm,0.3s						
GMLD	**Gumuldur**	0.64	160	Pg	**Pg**	02 16 44.8	-1.1
DGB	**zmir**	0.66	163	P	**Pg**	02 16 45.5	-0.6
DGB				S	**Sb**	02 16 55.7	-0.3
DGB				*i* AML	AML	02 16 56.0	
	comp=E,894nm,0.4s						
DGB				*i* AML	AML	02 16 57.0	
	comp=E,835nm,0.3s						
PSRA	**Psara**	0.86	261	P	**Pb**	02 16 50.5	+0.2
PSRA				S	**Sn**	02 17 03.7	-0.3
GPNR	**Gulpinar-Canak**	0.87	333	Pg	**Pg**	02 16 50.1	-0.1
BUHA	**Balikesir, Bur**	0.89	22	P	**Pb**	02 16 50.8	0.0
KOCA	**Canakkale, Ayv**	0.91	334	P	**Pg**	02 16 49.1	-1.9
KOCA				S	**Sg**	02 17 02.0	-0.8
AKS	**Akhisar**	0.93	77	Pg	**Pg**	02 16 51.3	-0.2
AKHS	**Akhisar**	0.94	77	P	**Pg**	02 16 51.1	-0.4
AKHS				S	**Sb**	02 17 04.3	+0.2
AKHS				*i* AML	AML	02 17 09.0	
	comp=E,2μm,0.4s						
SMG	**Samos**	0.98	171	P	**Pg**	02 16 52.2	-0.2
SMG				S	**Sb**	02 17 05.9	+0.5
	comp=E,4μm,0.5s						
SMG	**Samos**	0.98	171	P	**Pg**	02 16 51.8	-0.6
SMG				S	**Sb**	02 17 05.6	+0.2
SMG				AML	AML	02 17 09.1	
	comp=E,8732μm,0.3s						
SMG				AML	AML	02 17 10.1	
	comp=N,9137μm,0.7s						
GOMA	**Golmarmara-Man**	1.00	88	Pg	**Pg**	02 16 52.5	-0.1
BAYC	**CANAKKALE_Bayr**	1.06	356	P	**Pg**	02 16 51.9	-2.0
BAYC				S	**Sg**	02 17 07.1	-0.6
GCAM	**G?zelcaml?**	1.08	154	P	**Pb**	02 16 54.5	+0.3
STEP	**BALIKESIR_Sava**	1.09	50	P	**Pb**	02 16 54.6	+0.3
STEP				S	**Sg**	02 17 08.3	-0.2
STEP				*i* AML	AML	02 17 19.0	
	comp=N,1μm,0.5s						
IZMR	**zmir-demi**	1.16	117	P	**Pg**	02 16 55.2	-0.6
IZMR				P	**Pb**	02 16 55.3	-0.2
IZMR				S	**Sg**	02 17 09.5	-1.4
IZMR				*i* AML	AML	02 17 17.0	
	comp=N,195nm,0.6s						
EZN	**Ezine**	1.17	348	Pn	**Pg**	02 16 55.3	-0.6
EZN	**Ezine**	1.17	348	P	**Pg**	02 16 55.3	-0.6
EZN				S	**Sb**	02 17 11.3	+0.5
	comp=N,2μm,0.4s						
BOZC	**Bozcaada**	1.25	339	P	**Pn**	02 16 55.8	-0.9
BOZC				P	**Pb**	02 16 56.7	-0.3
BALY	**Balya**	1.30	35	P	**Pn**	02 16 57.6	0.0
DDIM	**Aydin, Didim**	1.31	159	P	**Pg**	02 16 58.2	-0.4
CANM	**Can-anakkale**	1.36	13	Pn	**Pn**	02 16 58.2	-0.2
CNKL	**anakkale-Mer**	1.40	352	P	**Pn**	02 16 59.0	+0.2
CNKL				P	**Pb**	02 16 59.2	-0.3
CNKL				S	**Sb**	02 17 16.2	-1.2
CNKL				*i* AML	AML	02 17 20.0	
	comp=N,813nm,0.6s						
COMU	**Canakkale**	1.42	355	Pn	**Pn**	02 16 59.1	-0.1
BKES	**Balkesir-Mer**	1.45	43	P	**Pn**	02 16 59.0	-0.6
KIRA	**zmir-Kiraz**	1.46	109	P	**Pb**	02 17 00.9	+0.2
MANT	**Manisa**	1.51	97	P	**Pn**	02 17 01.4	+0.7
MANT				S	**Sn**	02 17 20.1	-0.3
MANT				*i* AML	AML	02 17 25.0	
	comp=N,224nm,0.3s						
BLKS	**Balkesir-Sus**	1.57	40	P	**Pn**	02 17 01.8	+0.5
GOAD	**anakkale-G¶**	1.58	339	P	**Pb**	02 17 02.6	-0.1
GONE	**Gonen-Balikesi**	1.58	30	Pn	**Pn**	02 17 01.3	-0.1
KULA	**Kula-Manisa**	1.59	95	Pn	**Pn**	02 17 01.2	-0.4
KULA	**Kula-Manisa**	1.59	95	P	**Pn**	02 17 01.9	+0.3
KULA				S	**Sg**	02 17 24.5	-0.1
GADA	**Gvkgeada**	1.61	339	Pn	**Pn**	02 17 01.9	+0.1
TNSA	**Tinos**	1.63	226	P	**Pn**	02 17 01.2	-0.8
LIA	**Limnos Island**	1.66	317	P	**Pn**	02 17 02.4	-0.1
LIA				S	**Sn**	02 17 22.7	-1.1
	comp=N,892nm,0.8s						
LIA	**Limnos Island**	1.66	317	P	**Pn**	02 17 01.4	-1.1
LIA				S	**Sn**	02 17 22.0	-1.8
LIA				AML	AML	02 17 23.2	
	comp=E,1644μm,0.5s						
LIA				AML	AML	02 17 28.6	
	comp=N,1476μm,0.4s						
LPK	**Lapseki**	1.69	3	Pn	**Pn**	02 17 02.9	0.0
BODT	**Bodrum**	1.70	162	P	**Pn**	02 17 02.8	-0.2
BODT				S	**Sn**	02 17 25.7	+0.9
GELI	**Tayfur-Gelibol**	1.72	356	Pn	**Pn**	02 17 03.3	0.0
KLNA	**Kalymnos**	1.74	171	P	**Pn**	02 17 03.2	-0.4
KRBG	**Karabiga-Canak**	1.78	16	Pn	**Pn**	02 17 03.9	-0.2
DST	**Dursunbey**	1.79	58	Pn	**Pn**	02 17 04.2	-0.1
APE	**Apeiranthos**	1.83	209	P	**Pn**	02 17 03.7	-1.2
APE	**Apeiranthos**	1.83	209	P	**Pn**	02 17 03.8	-1.1
SIMA	**Simav-Kutahya**	1.87	77	Pn	**Pn**	02 17 05.2	-0.2
EDC	**Edincik**	1.91	29	Pn	**Pn**	02 17 05.4	-0.5
SMTH	**Samothraki Isl**	1.98	335	P	**Pn**	02 17 06.6	-0.3
SMTH	**Samothraki Isl**	1.98	335	P	**Pn**	02 17 05.9	-1.1
SMTH				S	**Sn**	02 17 29.3	-2.5
SMTH				AML	AML	02 17 42.5	
	comp=E,440μm,0.6s						
SMTH				AML	AML	02 17 44.0	
	comp=N,518μm,0.4s						
ERIK	**Erikli-Kesan**	1.99	357	Pn	**Pn**	02 17 07.2	+0.2
RKY	**Sarkoy-Tekirda**	2.04	11	Pn	**Pn**	02 17 07.6	-0.2
MRMT	**Marmara Adasi**	2.06	21	Pn	**Pn**	02 17 08.1	+0.1
KCTX	**Karacabey (Bur**	2.06	39	Pn	**Pn**	02 17 07.9	-0.1
DAT	**Datca**	2.08	159	P	**Pn**	02 17 08.2	-0.2
ENEZ	**Enez**	2.09	350	Pn	**Pn**	02 17 08.6	+0.3
ENEZ	**Enez**	2.09	350	P	**Pn**	02 17 08.8	+0.5
ENEZ				S	**Sn**	02 17 35.0	+0.7
	comp=N,840nm,0.5s						
DION	**Dionisos Attik**	2.21	255	P	**Pn**	02 17 10.5	+0.4
ALN	**Alexandroupoli**	2.26	348	P	**Pn**	02 17 10.8	+0.1
RDO	**Rodhopi**	2.60	341	P	**Pn**	02 17 15.8	+0.4
ARG	**Arkhangelos**	2.73	154	P	**Pn**	02 17 17.5	+0.3
ARG				S	**Sn**	02 17 52.3	+2.2
	comp=N,182nm,0.6s						
KAVA	**Kavala**	2.83	325	P	**Pn**	02 17 18.6	0.0
KARP	**Karpathos**	3.16	172	P	**Pn**	02 17 23.0	-0.1
EDRB	**Edirne**	3.16	1	P	**Pn**	02 17 23.2	+0.1
ICOR	**Ion Corvin**	5.50	9	⇑P	**Pn**	02 17 56.0	+0.8
BRTR	**Keskin Array B**	5.53	77	Pn	**Pn**	02 17 57.4	+1.5
	comp=N,0.6nm,0.3s,baz=256,slow=12,SNR=24						
BRTR				Sn	**Sn**	02 18 58.2	-1.3
	comp=N,0.1nm,0.3s,baz=265,slow=17,SNR=1.2						
BRTR				Lg	Lg	02 19 27.6	
	baz=255,slow=22						
	comp=N,1.2nm,0.3s						
MLR	**Muntele Rosu**	6.82	356	⇑P	**Pn**	02 18 15.2	+1.6
VOIR		6.85	351	⇓P	**Pn**	02 18 14.6	+0.7
VLDR	**Vladesti**	7.24	8	⇑P	**Pn**	02 18 20.7	+1.7
GZR	**Gura Zlata**	7.30	338	⇑P	**Pn**	02 18 19.3	-0.6
DOPR	**Dopca**	7.34	353	⇑P	**Pn**	02 18 20.4	-0.1
TURR	**Turia**	7.38	357	⇑P	**Pn**	02 18 22.4	+1.3
BZS	**Buzias**	7.87	333	⇑P	**Pn**	02 18 29.1	+1.4
MMAI	**Mount Meron Ar**	9.08	126	Pn	**Pn**	02 18 44.2	-0.3
	comp=N,1.0nm,0.3s,baz=308,slow=12,SNR=13						
MMAI				Sn	**Sn**	02 20 24.0	-2.7
	comp=N,0.9nm,0.3s,baz=309,slow=28,SNR=2.7						
	comp=N,0.6nm,0.3s						
ESDC	**Sonseca Array**	23.70	282	P	**P**	02 21 47.2	+2.0
	comp=N,0.5nm,0.9s,baz=69,slow=11,SNR=4.9						
	comp=N,0.5nm,0.9s						
KURBB	**Kurchatov Arra**	38.04	54	P	**P**	02 23 52.2	+0.6
	comp=N,0.5nm,0.6s,baz=274,slow=8.8,SNR=5.1						
	comp=N,0.5nm,0.6s						
MKAR	**Makanchi Array**	40.91	60	P	**P**	02 24 16.3	+0.7
	comp=N,0.2nm,0.5s,baz=272,slow=8.5,SNR=2.8						
	comp=N,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	41.75	49	P	**P**	02 24 21.5	-0.8
	comp=N,0.3nm,0.3s,baz=262,slow=10.0,SNR=1.7						
	comp=N,0.3nm,0.3s						

*MOS **24** 02:16:55.8±1.1, 21.32S×179.33W, h603km, mb4.7/24, Error ellipse: s-maj=9.1km s-min=8.6km az=99.8*
*BJI **24** 02:16:56.0±0.0, 20.99S×178.92W, h613km, mb4.9/53, mB5.1/29*
*NEIC **24** 02:16:56.4±1.6, 21.41S±0.09×179.23W±0.09, h600km±5km, mb4.9/141, Error ellipse: s-maj=13.8km s-min=12.5km az=152.0*
*NOU **24** 02:16:57.5, 21.42S×179.24W, h622km, ML4.8/111, Fiji Islands Region*
*IDC **24** 02:16:57.8±0.5, 21.38S×179.37W, h619km±5km, mb4.3/26, mbtmp5.2/28, Error ellipse: s-maj=8.8km s-min=8.3km az=166.0*
*GCMT **24** 02:17:00.4±0.4, 21.41S±0.04×179.35W±0.03, h627km±2km, MW5.3/83, Moment Tensor Solution. s83,c101; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr-0.02±.03; Mθθ-0.34±.06; Mϕϕ0.36±.05; Mrθ-0.48±.05; Mθϕ-0.32±.05; Mϕr-1.12±.04; Best double couple: M0 1.30900×10^17 NP1:ϕs23.00000°, δ89.00000°, λ-69.00000°. NP2:ϕs115.00000°, δ21.00000°, λ-179.00000°. Principal axes: T 1.3120, Plg41.0000°, Azm93.0000°; N -0.0070, Plg21.0000°, Azm203.0000°; P -1.3060, Plg42.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 24 02:16:57.4±0.3, 21.40S±0.04×179.27W±0.04, h620km±3km, h621km:pP-P, n1023, σ1.910/1087, mb4.9/142, 94C-69D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	3.18	8	P	**P**	02 18 20.2	+0.9
TAVE	**Taveuni**	4.71	353	P	**P**	02 18 30.5	+1.1
DGTI	**Dogotuki**	5.16	349	P	**P**	02 18 33.2	+0.3
YSA	**Yasawairara**	5.54	327	P	**P**	02 18 36.4	+0.5
RAO	**Raoul Island**	7.91	171	P	**P**	02 18 55.0	-1.4
RAO	**Raoul Island**	7.91	171	P	**P**	02 18 55.7	-0.8
RAO	**Raoul Island**	7.91	171	P	**P**	02 18 55.4	-1.1
	807nm,0.3s,baz=35,slow=19,SNR=15						
RAO				S	**S**	02 20 32.1	-2.0
	435nm,0.4s,baz=78,slow=23,SNR=8.5						
GLKZ	**Green Lake**	7.92	171	P	**P**	02 18 54.7	-1.9
GLKZ				S	**S**	02 20 31.2	-3.1
NIUE	**Niue**	9.07	77	P	**P**	02 19 06.4	-1.2
	baz=9.0,SNR=10						
NIUE	**Niue**	9.07	77	P	**P**	02 19 05.8	-1.8
AFI	**Afiamalu**	10.32	45	P	**P**	02 19 17.9	-2.0
AFI	**Afiamalu**	10.32	45	P	**P**	02 19 18.2	-1.7
AFI	**Afiamalu**	10.32	45	P	**P**	02 19 17.9	-2.0
MARNC	**Mare, Loyalty**	11.83	267	P	**P**	02 19 34.1	-0.4
MARNC	**Mare, Loyalty**	11.83	267	P	**P**	02 19 35.0	+0.5
PINNC	**Pines Island,**	12.38	262	P	**P**	02 19 39.7	-0.1
PINNC	**Pines Island,**	12.38	262	P	**P**	02 19 39.9	+0.1
LIFNC	**LIFOU**	12.61	270	P	**P**	02 19 41.1	-0.9
OUENC	**Ouen Island, N**	12.93	263	P	**P**	02 19 45.1	-0.1
OUENC	**Ouen Island, N**	12.93	263	P	**P**	02 19 46.3	+1.1
DZM	**Mont Dzumac**	13.29	264	P	**P**	02 19 48.3	-0.6
DZM	**Mont Dzumac**	13.29	264	P	**P**	02 19 48.8	-0.1
DZM	**Mont Dzumac**	13.29	264	P	**P**	02 19 48.7	-0.1
	19nm,0.4s,baz=80,slow=19,SNR=36						
DZM				S	**S**	02 22 09.4	+0.1
	49nm,1.2s,baz=131,slow=20,SNR=7.2						
DZM				ScP	**ScP**	02 27 03.9	+1.8
	16nm,0.9s,baz=100,slow=6.1,SNR=6.5						
OUZ	**Omahuta**	15.13	203	P	**P**	02 20 05.8	+0.1
OUZ	**Omahuta**	15.13	203	P	**P**	02 20 08.1	+2.4
KOUNC	**Koumac, New Ca**	15.38	270		**P**	02 20 09.4	+1.1
KOUNC	**Koumac, New Ca**	15.38	270	P	**P**	02 20 10.1	+1.8
WCZ	**Waipu Caves**	15.53	200	P	**P**	02 20 12.1	+2.8
MXZ	**Matakaoa Point**	16.24	187	P	**P**	02 20 14.4	-1.4
MXZ	**Matakaoa Point**	16.24	187	P	**P**	02 20 14.0	-1.9
WMGZ	**Waiomatatini S**	16.49	186	P	**P**	02 20 17.4	-0.6
HAZ	**Te Kaha**	16.50	188	P	**P**	02 20 15.8	-2.3
HAZ				S	**S**	02 22 56.4	-5.1
PKGZ	**Pakihiroa**	16.59	187	P	**P**	02 20 18.6	-0.5
PKGZ				S	**S**	02 22 57.7	-5.5
RUGZ	**Raukumara Rang**	16.72	188	P	**P**	02 20 18.0	-2.4
RUGZ				S	**S**	02 23 02.0	-3.4
TWGZ	**Tauwhareparae**	16.89	187	P	**P**	02 20 21.9	+0.1
TWGZ				S	**S**	02 23 03.9	-4.2
URZ	**Urewera**	17.09	190	P	**P**	02 20 20.6	-3.0
	15nm,0.2s,baz=352,slow=2.7,SNR=28						
URZ				S	**S**	02 23 05.2	-6.0
	24nm,0.7s,baz=300,slow=20,SNR=9.7						
URZ	**Urewera**	17.09	190	P	**P**	02 20 20.6	-3.0
URZ				S	**S**	02 23 04.4	-6.8
MWZ	**Matawai**	17.10	189	P	**P**	02 20 21.0	-2.7
MWZ				S	**S**	02 23 04.0	-7.5
TKGZ	**Te Karaka**	17.16	188	P	**P**	02 20 24.1	-0.2
CNGZ	**Carnagh Statio**	17.17	187	P	**P**	02 20 24.0	-0.2
RIGZ	**Rimuhau**	17.44	188	P	**P**	02 20 25.0	-1.8
RIGZ				S	**S**	02 23 16.4	-0.5
RTZ	**Ruatahuna**	17.46	190	P	**P**	02 20 25.1	-1.9
RAR	**Rarotonga**	18.17	93	P	**P**	02 20 32.6	-1.1
RAR	**Rarotonga**	18.17	93	P	**P**	02 20 34.6	+0.9
RAR	**Rarotonga**	18.17	93	P	**P**	02 20 34.5	+0.8
	65nm,0.9s,baz=256,slow=7.2,SNR=12						
QRZ	**Quartz Range**	20.58	198	P	**P**	02 20 55.1	-0.1
THZ	**Tophouse**	21.35	196	P	**P**	02 21 00.8	-1.3
KHZ	**Kahutara**	21.81	194	P	**P**	02 21 04.2	-1.9
LHI	**Lord Howe Isla**	21.82	238	P	**P**	02 21 08.1	+1.7
HNR	**Honiara**	23.27	298	P	**P**	02 21 19.1	-0.3
HNR	**Honiara**	23.27	298	P	**P**	02 21 19.1	-0.3
TARA	**Tarawa**	23.87	340	P	**P**	02 21 24.6	-0.2
ODZ	**Otahua Downs**	25.00	197	P	**P**	02 21 35.1	+0.7
EIDS	**Eidsvold**	27.47	256	P	**P**	02 21 56.6	+0.4
	baz=28,SNR=32						
EIDS	**Eidsvold**	27.47	256	P	**P**	02 21 56.7	+0.4
EIDS	**Eidsvold**	27.47	256	P	**P**	02 21 56.6	+0.4
ARMA	**Armidale**	27.61	245	P	**P**	02 21 58.8	+1.2
	baz=28,SNR=50						
ARMA	**Armidale**	27.61	245	P	**P**	02 21 58.7	+1.2
ARMA	**Armidale**	27.61	245	P	**P**	02 21 58.8	+1.2
RK1H	**Rockhampton Ha**	28.00	260	P	**P**	02 22 01.5	+0.6
	39nm,0.7s						
PPT	**Papeete**	28.23	87	P	**P**	02 22 03.6	+0.6
	71nm,0.7s,baz=295,slow=4.4,SNR=8.9						
	71nm,0.7s						
PPTF	**Pamatai, Papee**	28.24	88	P	**P**	02 22 03.3	+0.2
PPTF	**Pamatai, Papee**	28.24	88	P	**P**	02 22 04.1	+1.0
AUPHS	**Peel High Scho**	28.38	244	P	**P**	02 22 00.6	+1.9
MGCD	**Mangrove Creek**	28.73	240	P	**P**	02 22 09.0	+1.9
	baz=29,SNR=9.0						
MGCD	**Mangrove Creek**	28.73	240	P	**P**	02 22 08.1	+1.0
SYDH	**Sydney Hard Ro**	29.18	239	P	**P**	02 22 12.6	+1.6
AULRC	**Lightning Ridg**	30.57	248	P	**P**	02 22 23.2	+0.3
CNB	**Canberra Magne**	30.74	236	P	**P**	02 22 25.7	+1.4
	baz=31,SNR=31						
CNB	**Canberra Magne**	30.74	236	P	**P**	02 22 25.5	+1.1
CAN	**Canberra**	31.03	237	P	**P**	02 22 27.2	+0.4
CAN				IAmb	IAmb	02 22 29.4	
	comp=Z,30nm,0.9s						
CAN	**Canberra**	31.03	237	P	**P**	02 22 27.7	+0.9
CAN	**Canberra**	31.03	237	P	**P**	02 22 27.2	+0.4
CAN				pmax	pmax		
	comp=Z,30nm,0.9s						
CAN	**Canberra**	31.03	237	P	**P**	02 22 27.5	+0.7
CAN				pP	**pP**	02 24 05.8	+2.3
CAN				ScP	**ScP**	02 27 49.3	+1.6
XMAS	**Kiritimati**	31.60	45	P	**P**	02 22 31.6	-0.3
TV1H	**Townsville Har**	31.86	268	P	**P**	02 22 34.2	+0.2
CTA	**Charters Tower**	32.23	266	P	**P**	02 22 37.4	+0.2
CTAO	**Charters Tower**	32.23	266	P	**P**	02 22 37.3	+0.2
CTAO	**Charters Tower**	32.23	266	P	**P**	02 22 37.5	+0.4
CTAO	**Charters Tower**	32.23	266	P	**P**	02 22 37.3	+0.2
CTAO				pmax	pmax		
	comp=Z,80nm,0.6s						
CTAO	**Charters Tower**	32.23	266	P	**P**	02 22 37.5	+0.4
CTAO				PcP	**PcP**	02 25 06.5	+0.3
CTAO				ScP	**ScP**	02 27 54.3	+2.2
RABL	**Rabaul**	32.58	298	P	**P**	02 22 40.8	+0.6
RABL	**Rabaul**	32.58	298	P	**P**	02 22 42.0	+1.8
CMSA	**Cobar Meteorol**	32.83	245	P	**P**	02 22 42.6	+0.6
	baz=33,SNR=60						
CMSA	**Cobar Me

ASAR ScP **ScP** **02 28 35.6 +1.8**
comp=Z,13nm,0.8s,baz=103,slow=4.1,SNR=19
ASAR S **S** **02 29 47.6 -1.3**
comp=Z,6.1nm,0.8s,baz=95,slow=15,SNR=13
ASAR ScS **ScS** **02 32 58.4 +1.4**
comp=Z,5.6nm,0.9s,baz=96,slow=6.9,SNR=16
comp=Z,78nm,0.6s
WB0 Warramunga Arr 43.29 264 P **P** **02 24 06.0 -0.6**
WRA Warramunga Arr 43.31 263 P **P** **02 24 06.0 -0.7**
WRA PcP **PcP** **02 25 42.4 +1.3**
WRA ScP **ScP** **02 28 35.8 +1.4**
WRA Warramunga Arr 43.31 263 P **P** **02 24 06.0 -0.7**
comp=Z,63nm,0.5s,baz=96,slow=7.2,SNR=666
WRA ScP **ScP** **02 28 35.4 +1.0**
comp=Z,8.2nm,0.9s,baz=90,slow=4.2,SNR=10
WRA S **S** **02 29 47.7 -3.3**
comp=Z,3.8nm,0.8s,baz=101,slow=19,SNR=5.5
WRA ScS **ScS** **02 32 58.2 +0.2**
comp=Z,2.2nm,1.1s,baz=100,slow=7.3,SNR=4.9
comp=Z,63nm,0.5s
GENI Genyem 43.65 290 P **P** **02 24 10.7 +1.3**
SMPI Sarmi 45.22 290 P **P** **02 24 20.9 -0.5**
comp=Z,100nm,1.1s
KHLU Kahalu`u 46.72 31 P **P** **02 24 32.4 -0.3**
KDU Kakadu 46.79 273 P **P** **02 24 32.8 -0.4**
baz=47,SNR=60
KDU Kakadu 46.79 273 P **P** **02 24 32.8 -0.4**
MLH Mauna Loa 46.88 32 P **P** **02 24 34.7 +0.7**
FORT Forrest 47.85 247 P **P** **02 24 40.5 -0.4**
baz=48,SNR=61
FORT Forrest 47.85 247 P **P** **02 24 40.4 -0.4**
FORT Forrest 47.85 247 P **P** **02 24 40.5 -0.4**
MTN Manton Dam 47.99 272 P **P** **02 24 41.5 -0.7**
baz=48,SNR=33
MTN Manton Dam 47.99 272 P **P** **02 24 41.5 -0.7**
MTN Manton Dam 47.99 272 P **P** **02 24 41.7 -0.5**
WRKA Warakurna 48.08 255 P **P** **02 24 42.6 -0.2**
baz=48,SNR=472
WRKA Warakurna 48.08 255 P **P** **02 24 42.5 -0.2**
DRS Darwin Rock St 48.33 272 P **P** **02 24 44.9 +0.2**
KNRA Kununurra 49.42 267 P **P** **02 24 52.6 0.0**
KNRA IAmb IAmb 02 24 53.7
comp=Z,24nm,0.6s
GUMO Guam 49.48 311 P **P** **02 24 53.1 +0.1**
GUMO Guam 49.48 311 P **P** **02 24 53.5 +0.4**
comp=Z,101nm,0.6s,baz=138,slow=8.2,SNR=7.6
comp=Z,101nm,0.6s
FAKI Fak Fak 50.56 284 P **P** **02 25 00.7 -0.3**
FAKI IAmb IAmb 02 25 02.1
comp=Z,54nm,0.9s
FAKI Fak Fak 50.56 284 P **P** **02 25 01.6 +0.5**
FAKI Fak Fak 50.56 284 P **P** **02 25 01.5 +0.5**
comp=Z,74nm,1.5s,comp=Z,1µm
FITZ Fitzroy Crossi 51.74 263 P **P** **02 25 09.3 -0.1**
baz=52,SNR=56
FITZ Fitzroy Crossi 51.74 263 P **P** **02 25 09.3 -0.1**
FITZ Fitzroy Crossi 51.74 263 P **P** **02 25 09.6 +0.2**
BNDI Bandanaira 52.03 281 P **P** **02 25 10.6 -0.9**
comp=Z,431nm,0.9s,comp=Z,14µm
SWI Sorong 52.34 286 P **P** **02 25 13.5 -0.3**
comp=Z,608nm,0.8s,comp=Z,5µm
KMBL Kambalda 53.11 246 P **P** **02 25 18.5 -0.5**
baz=53,SNR=5.8
NLAI Namlea 55.10 281 P **P** **02 25 32.8 -0.4**
comp=Z,56nm,0.9s,comp=Z,3µm
SOEI Soe 55.35 273 P **P** **02 25 35.9 +0.9**
SOEI Soe 55.35 273 P **P** **02 25 36.0 +0.9**
SOEI Soe 55.35 273 P **P** **02 25 35.6 +0.6**
LBMI Labuha 55.82 284 P **P** **02 25 38.8 +0.7**
PSA00 Pilbara Seismi 56.31 258 P **P** **02 25 40.6 -0.8**
PSA00 IAmb IAmb 02 25 42.5
comp=Z,71nm,0.8s
PSA00 Pilbara Seismi 56.31 258 P **P** **02 25 40.8 -0.6**
MBWA Marble Bar 56.50 258 P **P** **02 25 42.0 -0.7**
MBWA IAmb IAmb 02 25 43.8
comp=Z,90nm,0.8s
MBWA Marble Bar 56.50 258 P **P** **02 25 42.2 -0.5**
MBWA Marble Bar 56.50 258 P **P** **02 25 42.0 -0.7**
MBWA PcP **PcP** **02 26 30.9 +0.6**
MEEK Meekatharra 56.51 252 P **P** **02 25 41.9 -0.9**
baz=56,SNR=21
MEEK Meekatharra 56.51 252 P **P** **02 25 41.8 -0.9**
TNTI Ternate 56.55 286 P **P** **02 25 42.8 -0.3**
TNTI IAmb IAmb 02 25 45.2
comp=Z,111nm,1.0s
TNTI Ternate 56.55 286 P **P** **02 25 43.8 +0.7**
TNTI Ternate 56.55 286 P **P** **02 25 43.3 +0.2**
comp=Z,128nm,1.0s,comp=Z,1µm
SANI Sanana 56.60 282 P **P** **02 25 43.8 +0.3**
SANI Sanana 56.60 282 P **P** **02 25 42.3 -1.2**
comp=Z,79nm,0.7s,comp=Z,712nm
KLBR Kellerberrin 56.60 246 P **P** **02 25 43.0 -0.3**
baz=57,SNR=30
KLBR Kellerberrin 56.60 246 P **P** **02 25 43.3 +0.1**
SBA Scott Base 56.90 184 P **P** **02 25 47.4 +2.9**
SBA IAmb IAmb 02 27 40.0
comp=Z,214nm,1.7s
SBA Scott Base 56.90 184 P **P** **02 25 47.4 +2.9**
SBA pmax pmax
comp=Z,214nm,1.7s
NWAO Narrogin (SRO) 56.91 244 P **P** **02 25 45.4 +0.1**
baz=57,SNR=9.6
NWAO P **P** **02 25 45.4 +0.1**
baz=57,SNR=9.6
NWAO Narrogin (SRO) 56.91 244 P **P** **02 25 44.8 -0.5**
VNDA Vanda 56.92 185 P **P** **02 25 46.3 +1.8**
VNDA Vanda 56.92 185 P **P** **02 25 46.3 +1.8**
VNDA pmax pmax
comp=Z,58nm,1.8s
VNDA Vanda 56.92 185 P **P** **02 25 45.9 +1.4**
comp=Z,4.8nm,0.8s,baz=14,slow=5.9,SNR=14
comp=Z,4.8nm,0.8s
BLDU Ballidu 57.61 247 P **P** **02 25 49.6 -0.5**
baz=58,SNR=32
BLDU Ballidu 57.61 247 P **P** **02 25 49.4 -0.7**
MMRI Maumere 57.61 273 P **P** **02 25 50.0 -0.3**
MMRI IAmb IAmb 02 25 51.4
comp=Z,122nm,1.0s
MMRI Maumere 57.61 273 P **P** **02 25 51.1 +0.8**
MMRI Maumere 57.61 273 P **P** **02 25 49.6 -0.7**
comp=Z,143nm,0.8s
MUN Mundaring 57.87 245 P **P** **02 25 52.0 +0.2**
baz=58,SNR=7.3
MUN Mundaring 57.87 245 P **P** **02 25 52.1 +0.3**
MORW Morawa 58.39 248 P **P** **02 25 55.1 -0.3**
baz=58,SNR=19
MORW Morawa 58.39 248 P **P** **02 25 54.9 -0.5**
MORW Morawa 58.39 248 P **P** **02 25 54.9 -0.5**
LUWI Luwuk 59.94 282 P **P** **02 26 05.8 -0.1**
LUWI IAmb IAmb 02 26 08.3
comp=Z,107nm,1.0s
LUWI Luwuk 59.94 282 P **P** **02 26 06.6 +0.7**
LUWI Luwuk 59.94 282 P **P** **02 26 05.8 -0.1**
comp=Z,128nm,1.2s,comp=Z,2µm
GTOI Gorontalo 60.42 284 P **P** **02 26 09.7 +0.7**
comp=Z,48nm,0.8s,comp=Z,420nm
BKSI Bulukumba 60.73 276 P **P** **02 26 10.2 -0.9**
comp=Z,58nm,0.8s,comp=Z,580nm
JCJ Chichijima 60.96 321 P **P** **02 26 12.3 0.0**
JCJ Chichijima 60.96 321 P **P** **02 26 08.2 -4.0**
comp=Z,99nm,0.6s,baz=236,slow=4.1,SNR=10.0
GIRL Giralia 61.17 255 P **P** **02 26 14.7 +0.9**
baz=61,SNR=20
GIRL Giralia 61.17 255 P **P** **02 26 14.6 +0.8**
KAPI Kappang 61.19 276 P **P** **02 26 14.0 -0.1**
KAPI IAmb IAmb 02 26 15.3
comp=Z,138nm,1.9s
KAPI Kappang 61.19 276 P **P** **02 26 14.0 -0.1**
KAPI pmax pmax
comp=Z,139nm,2.0s
CCD Concordia, Ant 61.30 194 P **P** **02 26 15.1 +0.9**
PLAI Plampang 61.70 271 P **P** **02 26 17.1 -0.3**
PLAI Plampang 61.70 271 P **P** **02 26 16.7 -0.7**
comp=Z,128nm,0.8s,comp=Z,1µm
TWSI Taliwang, Sumb 62.56 271 P **P** **02 26 21.9 -1.0**
comp=Z,127nm,0.9s,comp=Z,1µm
TOLI2 Tolitoli 62.64 283 P **P** **02 26 22.5 -0.9**
TOLI2 IAmb IAmb 02 26 25.0
comp=Z,48nm,0.9s
TOLI2 Tolitoli 62.64 283 P **P** **02 26 23.2 -0.2**
SRBI Singaraja 64.34 271 P **P** **02 26 32.4 -1.8**
JAGI Jajag, Banyuwa 65.19 270 P **P** **02 26 38.2 -1.4**
JAGI IAmb IAmb 02 26 39.8
comp=Z,75nm,1.0s
JAGI Jajag, Banyuwa 65.19 270 P **P** **02 26 38.7 -0.9**
comp=Z,78nm,0.8s
JAGI Jajag, Banyuwa 65.19 270 P **P** **02 26 37.7 -1.9**
GMJI Gumukmas 65.92 270 P **P** **02 26 43.1 -1.0**
JHJ2 Mitsune 66.81 323 P **P** **02 26 49.8 +0.7**
JHJ Hachijo jima 2 66.83 323 P **P** **02 26 50.1 +0.8**
comp=Z,109nm,0.5s,baz=238,slow=23,SNR=4.5
comp=Z,109nm,0.5s
PWJI Pagerwojo 67.53 270 P **P** **02 26 53.2 -0.8**
comp=Z,95nm,0.7s
QSPA South Pole Qui 68.67 180 P **P** **02 27 00.9 +0.9**
QSPA IAmb IAmb 02 27 02.8
comp=Z,28nm,0.8s
QSPA South Pole Qui 68.67 180 P **P** **02 27 01.0 +0.9**
comp=Z,27nm,0.9s,baz=40,slow=3.8,SNR=52
comp=Z,27nm,0.9s
QSPA South Pole Qui 68.67 180 P **P** **02 27 00.9 +0.9**
QSPA PcP **PcP** **02 27 21.0 +1.3**
QSPA pP **pwP** **02 29 06.8 +1.5**
UGM Wanagama 68.76 270 P **P** **02 27 01.1 -0.4**
UGM Wanagama 68.76 270 P **P** **02 27 01.6 +0.1**
UGM Wanagama 68.76 270 P **P** **02 27 00.7 -0.8**
comp=Z,101nm,0.7s
KKM Kota Kinabalu 68.85 286 P **P** **02 27 00.9 -1.2**
KKM IAmb IAmb 02 27 03.7
comp=Z,31nm,0.6s
JOW Kunigami 69.84 311 P **P** **02 27 07.9 +0.4**
JOW IAmb IAmb 02 27 09.9
comp=Z,44nm,0.8s
JOW Kunigami 69.84 311 P **P** **02 27 07.5 0.0**
comp=Z,38nm,0.7s,baz=137,slow=14,SNR=9.6
comp=Z,38nm,0.7s
JMM Marumori 69.89 327 P **P** **02 27 08.2 +0.6**
JMM IAmb IAmb 02 27 09.2
comp=Z,52nm,1.0s
JMM Marumori 69.89 327 P **P** **02 27 08.5 +0.9**
JGF Kuroka 70.01 323 P **P** **02 27 08.6 +0.2**
JGF IAmb IAmb 02 27 09.8
comp=Z,19nm,0.7s
JGF Kuroka 70.01 323 P **P** **02 27 08.8 +0.4**
MJAR Matsushiro Arr 70.24 325 P **P** **02 27 09.1 -0.6**
comp=Z,20nm,0.6s,baz=155,slow=6.1,SNR=41
comp=Z,20nm,0.6s
MAJO Matsushiro 70.24 325 P **P** **02 27 09.8 +0.1**
MAJO IAmb IAmb 02 27 10.6
comp=Z,26nm,0.7s
MAJO Matsushiro 70.24 325 P **P** **02 27 10.0 +0.3**
MAJO Matsushiro 70.24 325 *i* P **P** **02 27 10.3 +0.6**
MAJO pmax pmax
comp=Z,22nm,0.6s
MJB9 Matsu-Tunnel 70.25 325 P **P** **02 27 10.5 +0.7**
MJB9 IAmb IAmb 02 27 11.6
comp=Z,25nm,0.7s
KPJI Karang Pucung 70.44 270 P **P** **02 27 10.3 -1.1**
comp=Z,61nm,0.7s
JMN Monobe 70.69 320 P **P** **02 27 13.1 +0.6**
JMN IAmb IAmb 02 27 14.7
comp=Z,24nm,0.9s
CMJI Cimerak 70.74 269 P **P** **02 27 12.0 -1.1**
comp=Z,74nm,0.8s
BBJI Bungbulang 71.59 269 P **P** **02 27 17.8 -0.4**
JTM Tenmabayashi 72.02 329 P **P** **02 27 21.0 +1.0**
JTM IAmb IAmb 02 27 21.9
comp=Z,37nm,0.8s
JNU Nakatsue 72.12 318 P **P** **02 27 20.9 +0.1**
JNU IAmb IAmb 02 27 22.9
comp=Z,33nm,0.9s
JNU Nakatsue 72.12 318 P **P** **02 27 21.6 +0.8**
JNU Nakatsue 72.12 318 P **P** **02 27 19.7 -1.0**
comp=Z,24nm,0.9s,baz=112,slow=6.7,SNR=12
comp=Z,24nm,0.9s
YOJ Yonaguni jima 72.29 306 P **P** **02 27 21.5 -0.3**
YOJ Yonaguni jima 72.29 306 P **P** **02 27 21.5 -0.3**
YOJ pmax pmax
comp=Z,123nm,1.1s
KSM Kuching 72.37 279 P **P** **02 27 22.6 +0.1**
KSM IAmb IAmb 02 27 24.5
comp=Z,60nm,0.8s
KSM Kuching 72.37 279 P **P** **02 27 23.7 +1.1**
TWGBT Beinan 72.87 304 P **P** **02 27 24.7 -0.5**
TWG Pinlang 72.88 304 P **P** **02 27 24.4 -0.9**
ADK Adak 73.00 2 P **P** **02 27 25.1 -0.2**
ADK IAmb IAmb 02 27 31.9
comp=Z,110nm,1.2s
ADK Adak 73.00 2 P **P** **02 27 25.1 -0.2**
ADK pmax pmax
comp=Z,110nm,1.2s
YULB Yu-li 73.01 304 P **P** **02 27 25.6 -0.4**
YULB IAmb IAmb 02 27 26.3
comp=Z,30nm,0.6s
YULB Yu-li 73.01 304 P **P** **02 27 25.6 -0.4**
NACB Ninganchiao 73.21 305 P **P** **02 27 26.7 -0.4**
TPUB Ta-pu 73.47 304 P **P** **02 27 28.1 -0.6**
SSLB Suanglung 73.49 304 P **P** **02 27 28.3 -0.4**
SSLB Suanglung 73.49 304 P **P** **02 27 28.5 -0.2**
YHNB Yeheng 73.64 305 P **P** **02 27 30.3 +0.6**
JKA Kamikawa-asahi 73.96 332 P **P** **02 27 32.3 +1.4**
ASAJ Asahikawa 73.96 332 P **P** **02 27 32.3 +1.4**
ASAJ pmax pmax
comp=Z,305nm,2.0s
ASAJ Asahikawa 73.96 332 P **P** **02 27 31.9 +1.0**
comp=Z,35nm,0.8s,baz=135,slow=7.1,SNR=11
comp=Z,35nm,0.8s
NIKH Nikolski High 74.61 7 P **P** **02 27 33.9 -0.4**
baz=190
UNV Unalaska Valle 75.74 8 P **P** **02 27 40.0 -0.5**
baz=192
YSS Yuzh-Sakhalins 76.17 334 *e*P **P** **02 27 44.7 +1.6**
YSS pmax pmax
comp=Z,40nm,0.8s
KSRS Korea Array 76.78 319 P **P** **02 27 47.3 +0.7**
comp=Z,6.7nm,1.0s,baz=135,slow=6.0,SNR=10
comp=Z,6.7nm,1.0s
KSAR Wonju Array Be 76.80 319 P **P** **02 27 47.2 +0.5**
KSAR Wonju Array Be 76.80 319 P **P** **02 27 47.2 +0.5**
PEA0B Petropavlovsk- 76.84 346 P **P** **02 27 47.1 +0.5**
PEA0B IAmb IAmb 02 27 48.1
comp=Z,49nm,0.8s
PEA0B Petropavlovsk- 76.84 346 *ce*P **P** **02 27 46.8 +0.2**
PETK Petropavlovsk- 76.84 346 P **P** **02 27 46.9 +0.3**
PETK Petropavlovsk- 76.84 346 P **P** **02 27 46.9 +0.3**
PETK Petropavlovsk- 76.84 346 P **P** **02 27 46.4 -0.2**
comp=Z,26nm,0.7s,baz=152,slow=3.8,SNR=43
comp=Z,26nm,0.7s
MNAI Manna 77.05 270 P **P** **02 27 48.4 -0.3**
SMAI San Martin Ant 78.19 159 P **P** **02 27 55.1 +1.4**
SMAI IAmb IAmb 02 27 57.2
comp=Z,64nm,0.9s
DLV T Lat 78.25 288 P **P** **02 27 56.2 +0.8**
DLV IAmb IAmb 02 27 57.9
comp=Z,50nm,0.8s
DLV T Lat 78.25 288 P **P** **02 27 56.5 +1.2**
PSTR Posyet 78.60 325 *i* P **P** **02 27 58.3 +2.1**
BELA Belgrano 2 78.82 173 P **P** **02 27 56.6 -0.4**
USA0B Ussuriysk Arra 79.05 327 P **P** **02 28 00.0 +1.4**
USA0B IAmb IAmb 02 28 01.2
comp=Z,31nm,0.9s
USA0B Ussuriysk Arra 79.05 327 ⇑ *i* P **P** **02 27 59.9 +1.3**
USRK Ussuriysk Ar. 79.05 327 P **P** **02 27 59.8 +1.2**
USRK Ussuriysk Ar. 79.05 327 P **P** **02 28 00.0 +1.4**
comp=Z,29nm,0.9s,baz=124,slow=3.1,SNR=40
comp=Z,29nm,0.9s
TYV Tymovskoe 79.38 337 *e*P **P** **02 28 01.2 +1.0**
TYV pmax pmax
comp=Z,100nm,2.9s
TYV pmax pmax
comp=Z,22nm,1.0s
CHGN Chignik 79.38 12 P **P** **02 28 00.5 +0.4**
baz=200
PKM Mcpherson Peak 79.47 46 P **P** **02 27 59.8 -1.5**
baz=235
NJ2 Nanjing 79.55 310 *e*P **P** **02 28 03.1 +1.6**
NJ2 pP **pP** **02 30 10.6 +0.7**
NJ2 sP **sP** **02 31 11.8 -0.4**
NJ2 pmax pmax
comp=Z,29nm,0.7s
NJ2 pmax pmax
comp=Z,190nm,3.6s
HOPS Hopland Field 79.82 41 P **P** **02 28 03.9 +1.1**
HOPS IAmb IAmb 02 30 27.1
comp=Z,96nm,1.6s
KMPM Mount Pierce 80.08 40 P **P** **02 28 05.6 +1.3**
KMPM IAmb IAmb 02 28 06.8
comp=Z,35nm,0.9s
DECC Green Verdugo 80.11 47 P **P** **02 28 04.1 -0.4**
baz=236
109C Camp Elliot, M 80.21 49 P **P** **02 28 05.2 +0.3**
baz=237
ARVC Arvin 80.27 46 P **P** **02 28 05.7 +0.5**
baz=235
MAW Mawson 80.32 200 P **P** **02 28 07.2 +2.3**
comp=Z,37nm,1.2s,baz=184,slow=4.2,SNR=1.5
comp=Z,37nm,1.2s
VES Vestal, Richgr 80.50 46 P **P** **02 28 06.8 +0.4**
baz=235
MURC Murrieta 80.53 48 P **P** **02 28 05.9 -0.8**
baz=236
ESJX Sierra Juarez 80.55 50 P **P** **02 28 07.4 +0.4**
BFSC Mount Baldy Ra 80.57 48 P **P** **02 28 06.6 -0.4**
baz=236
MDJ Mudanjiang 80.58 326 P **P** **02 28 06.8 +0.2**
MDJ pP pP 02 30 15.9 +0.6
MDJ PP **PP** **02 31 21.9 -0.6**
MDJ S **S** **02 37 24.9 +1.1**
MDJ pmax pmax
comp=Z,26nm,1.4s
MDJ pmax pmax
comp=Z,230nm,6.8s
MDJ Mudanjiang 80.58 326 P **P** **02 28 07.8 +1.2**
MDJ IAmb IAmb 02 28 09.1
comp=Z,33nm,1.1s
MDJ Mudanjiang 80.58 326 P **P** **02 28 06.7 +0.2**
MONP2 Monument Peak 80.69 49 P **P** **02 28 08.4 +0.7**
baz=237,SNR=5.3
EDW2 Edwards Air Fo 80.69 47 P **P** **02 28 08.7 +1.1**
baz=236,SNR=5.7
R16K Pilot Point 80.73 12 P **P** **02 28 08.9 +1.9**
baz=200
IKP In-Ko-Pah, Jac 80.78 50 P **P** **02 28 08.6 +0.6**
baz=237
ISA Isabella, Lake 80.81 46 P **P** **02 28 08.5 +0.4**
ISA Isabella, Lake 80.81 46 P **P** **02 28 09.4 +1.2**
baz=235,SNR=9.0
ISA Isabella, Lake 80.81 46 P **P** **02 28 08.5 +0.4**
ISA pmax pmax
comp=Z,12nm,0.8s
CMB Columbia Colle 80.93 43 P **P** **02 28 09.0 +0.4**
CMB Columbia Colle 80.93 43 P **P** **02 28 09.0 +0.4**
CMB pmax pmax
comp=Z,9.0nm,0.9s
PFO Pinyon Flats O 81.06 49 P **P** **02 28 10.1 +0.6**
baz=237
PFO Pinyon Flats O 81.06 49 *i* P **P** **02 28 08.8 -0.7**
TPFO Pinon Flats 81.06 49 P **P** **02 28 10.1 +0.6**
baz=237
ORV Oroville 81.13 41 P **P** **02 28 10.3 +0.7**
ORV Oroville 81.13 41 P **P** **02 28 10.3 +0.7**
ORV pmax pmax
comp=Z,9.0nm,1.0s
SWSC Sam W. Stewart 81.16 50 P **P** **02 28 10.6 +0.7**
baz=237
LRMC Laurel Mtn Rad 81.24 47 P **P** **02 28 11.3 +0.9**
baz=236
OHAK Old Harbor 81.30 14 P **P** **02 28 10.6 +0.6**
OHAK IAmb IAmb 02 31 00.3
comp=Z,97nm,1.8s
OHAK Old Harbor 81.30 14 P **P** **02 28 11.8 +1.9**
baz=204
CWC Cottonwood Cre 81.51 46 P **P** **02 28 12.7 +0.9**
baz=236
BELC Belle Mtn. Jos 81.59 49 P **P** **02 28 12.6 +0.4**
baz=237
MLAC Mammoth, Mammo 81.69 44 P **P** **02 28 13.8 +1.0**
baz=235
MPMC Manual Prospec 81.69 46 P **P** **02 28 13.8 +1.0**
baz=236,SNR=7.6
Q17K Contact Creek 81.71 12 P **P** **02 28 12.7 +0.5**
baz=202
YBH Yreka Blue Hor 81.73 39 P **P** **02 28 13.6 +0.9**
YBH Yreka Blue Hor 81.73 39 P **P** **02 28 13.6 +0.9**
YBH pmax pmax
comp=Z,13nm,0.9s
GSC Goldstone, Bar 81.74 47 P **P** **02 28 13.4 +0.5**
baz=236,SNR=5.1
TIN Tinemaha, Big 81.76 45 P **P** **02 28 14.5 +1.5**
baz=235
BC3 Big Chuckawall 81.79 49 P **P** **02 28 14.2 +1.0**
baz=238
HEC Hector,Ludlow 81.80 48 P **P** **02 28 13.9 +0.6**
baz=237
GLA Glamis 81.91 50 P **P** **02 28 14.1 +0.4**
baz=238
J01E Myrtle Point 81.92 37 P **P** **02 28 14.8 +1.3**
J01E IAmb IAmb 02 30 31.1
comp=Z,149nm,1.9s
Q16K King Salmon 81.95 12 P **P** **02 28 14.1 +0.9**
baz=201
WHN Wuhan 82.03 307 ⇓ P **P** **02 28 16.8 +2.5**
IPM Ipoh 82.07 278 P **P** **02 28 15.3 +0.4**
IPM Ipoh 82.07 278 P **P** **02 28 16.1 +1.1**
HUMO Hull Mountain 82.13 38 P **P** **02 28 15.9 +1.3**
GMRC Granite Mounta 82.25 48 P **P** **02 28 16.1 +0.6**
baz=237
IRM Iron Mountain 82.27 49 P **P** **02 28 16.3 +0.8**
baz=238
CN2 Changchun 82.29 323 *e*P **P** **02 28 15.5 +0.2**
CN2 SKS **SKSac** **02 37 37.3 -0.4**
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,480nm,4.5s
N14K Kuskokwak Cree 82.30 9 P **P** **02 28 16.3 +1.4**
baz=196
GRAC Grapevine Rang 82.30 45 P **P** **02 28 16.2 +0.5**
baz=236
FURC Furnace Creek, 82.34 46 P **P** **02 28 16.4 +0.6**
baz=236
TUQ Turquoise Moun 82.42 47 P **P** **02 28 16.7 +0.3**
baz=237
SHOC Shoshone, Teco 82.43 47 P **P** **02 28 16.5 +0.3**
baz=237
P17K Kvichak River 82.47 12 P **P** **02 28 15.7 -0.1**
baz=201
BNX BinXian 82.48 325 ⇑ P **P** **02 28 16.3 +0.1**
BNX pmax pmax
comp=Z,33nm,0.8s
BNX pmax pmax
comp=Z,100nm,3.9s
NVAR Mina Array Bea 82.49 44 P **P** **02 28 16.9 +0.1**
NVAR Mina Array Bea 82.49 44 P **P** **02 28 17.6 +0.8**
comp=Z,7.6nm,0.7s,baz=225,slow=8.8,SNR=63
NVAR pP **pwP** **02 30 28.4 -1.1**
comp=Z,0.9nm,0.9s,baz=226,slow=3.6,SNR=3.1
comp=Z,7.6nm,0.7s
M13K Dall Lake 82.54 8 P **P** **02 28 17.1 +0.9**
baz=195
O16K Kokwok River B 82.55 11 P **P** **02 28 16.4 +0.2**
baz=200
GULI GuiLin 82.57 301 ⇓ P **P** **02 28 16.8 -0.4**
GULI pmax pmax
comp=Z,40nm,1.3s
NV11 Mina Array Sit 82.59 44 P **P** **02 28 17.6 +0.5**
KLR Kul'dur 82.70 330 *ce*P **P** **02 28 18.0 +0.7**
KLR pmax pmax
comp=Z,14nm,0.8s
KLR Kul'dur 82.70 330 P **P** **02 28 18.1 +0.9**
comp=Z,11nm,0.8s,baz=95,slow=2.8,SNR=36
comp=Z,11nm,0.8s
KULM Kulim 82.72 279 P **P** **02 28 18.7 +0.5**
KULM IAmb IAmb 02 28 20.4
comp=Z,38nm,0.8s
HSIG 82.74 55 P **P** **02 28 18.1 +0.2**
Q20K Shuyak Island 82.76 14 P **P** **02 28 16.7 -0.6**
baz=205
N15K Kwethluk River 82.77 10 P **P** **02 28 17.2 -0.2**
baz=198
Q19K Cape Douglas, 82.78 13 P **P** **02 28 17.1 -0.4**
baz=204
214A Organ Pipe Nat 82.80 52 P **P** **02 28 19.1 +0.9**
214A Organ Pipe Nat 82.80 52 P **P** **02 28 17.3 -1.0**
baz=239
P18K Big Mountain, 82.89 12 P **P** **02 28 18.2 +0.2**
baz=202
O17K Koliganek Bris 82.89 11 P **P** **02 28 18.3 +0.4**
baz=201
PDMCI Parker Dam,Lak 83.05 49 P **P** **02 28 19.4 0.0**
baz=238
M14K Bethel 83.05 8 P **P** **02 28 19.7 +1.0**
M14K IAmb IAmb 02 29 57.0
comp=Z,57nm,1.4s
M14K Bethel 83.05 8 P **P** **02 28 20.3 +1.6**
baz=196
M15K Kasigluk River 83.18 9 P **P** **02 28 20.3 +1.0**

N16K **Nishlik Lake** 83.27 10 P P 02 28 20.2 +0.4
baz=199
O18K **Koktuh Hills** 83.32 12 P P 02 28 19.5 -0.6
O18K IAmb IAmb 02 28 21.2
comp=Z,28nm,0.8s
O18K **Koktuh Hills** 83.32 12 P P 02 28 20.2 +0.1
baz=202,SNR=5.8
RPSI **Rantau Prapat** 83.35 275 P P 02 28 20.9 -0.5
RPSI IAmb IAmb 02 28 23.0
comp=Z,35nm,1.0s
PSI **Prapat** 83.39 276 P P 02 28 21.1 -0.6
PSI **Prapat** 83.39 276 P P 02 28 20.9 -0.8
PSI pmax pmax
comp=Z,35nm,1.0s
K05A **Summer Lake** 83.41 39 P P 02 28 22.2 +1.0
K05A IAmb IAmb 02 28 23.4
comp=Z,21nm,0.9s
MG03 **Isla Dawson** 83.44 146 P P 02 28 21.5 +0.5
MG03 IAmb IAmb 02 28 57.8
comp=Z,90nm,1.4s
SKLT **Songkhla** 83.46 280 P P 02 28 23.1 +1.2
L14K **Kuka Creek** 83.53 8 P P 02 28 21.9 +0.9
baz=196
P19K **Oil Pt** 83.53 13 P P 02 28 21.5 +0.3
baz=204
N17K **Nushagak Hills** 83.58 11 P P 02 28 22.2 +0.8
baz=201
W13A **Hualapai Mount** 83.65 49 P P 02 28 23.1 +0.5
M16K **Timber Creek** 83.76 10 P P 02 28 22.5 +0.3
baz=199
O19K **Port Alsworth** 83.81 12 P P 02 28 21.8 -0.6
baz=203
ILSW **Iliamna Southw** 83.85 13 P P 02 28 22.4 -0.4
ILSW IAmb IAmb 02 28 24.0
comp=Z,28nm,0.8s
HOM **Homer** 83.88 14 P P 02 28 23.0 +0.2
baz=206
L15K **Ungalak Mounta** 84.01 8 P P 02 28 23.7 +0.3
baz=197
O20K **Slope Mountain** 84.05 13 P P 02 28 23.5 -0.2
baz=205
GSI **Gunungsitoli** 84.10 274 P P 02 28 26.0 +1.0
GSI **Gunungsitoli** 84.10 274 P P 02 28 26.3 +1.3
BRSE **Bradley Lake S** 84.16 14 P P 02 28 24.4 +0.2
baz=206
R11B **Troy Canyon, C** 84.22 45 P P 02 28 25.0 -0.3
baz=237
L16K **Owhat River** 84.33 9 P P 02 28 26.2 +1.2
baz=198
MA2 **Magadan** 84.34 345 P P 02 28 25.0 -0.1
MA2 IAmb IAmb 02 28 25.7
comp=Z,126nm,2.0s
MA2 **Magadan** 84.34 345 P P 02 28 25.3 +0.2
MA2 **Magadan** 84.34 345 *ce*P P 02 28 25.9 +0.8
MA2 pmax pmax
comp=Z,32nm,1.7s
N19K **Bonanza Creek** 84.35 12 P P 02 28 25.1 -0.1
baz=203
M17K **Holitna River** 84.36 10 P P 02 28 25.6 +0.5
baz=200
TUC **Tucson** 84.47 52 P P 02 28 27.1 +0.6
TUC **Tucson** 84.47 52 P P 02 28 26.4 -0.1
baz=240
TUC **Tucson** 84.47 52 P P 02 28 27.1 +0.6
TUC pmax pmax
comp=Z,8.0nm,0.8s
WVOR **Wild Horse Val** 84.58 40 P P 02 28 27.2 +0.3
WVOR **Wild Horse Val** 84.58 40 P P 02 28 27.2 +0.3
WVOR pmax pmax
comp=Z,7.0nm,0.9s
K15K **Wolf Creek Mou** 84.60 8 P P 02 28 26.8 +0.5
baz=196
GO08 **Villa O'Higgin** 84.70 140 P P 02 28 28.0 +0.7
M18K **Stony River** 84.73 11 P P 02 28 27.0 +0.1
baz=202
SRIT **Nakonsritamara** 84.94 281 P P 02 28 29.5 +0.4
SRIT **Nakonsritamara** 84.94 281 P P 02 28 29.7 +0.6
N20K **Mount Spurr** 85.15 13 P P 02 28 29.3 +0.2
baz=205
P23K **Montague Islan** 85.17 15 P P 02 28 29.7 +0.6
baz=210
L18K **Granite Mounta** 85.26 10 P P 02 28 29.8 +0.2
L18K IAmb IAmb 02 28 31.5
comp=Z,27nm,1.4s
L18K **Granite Mounta** 85.26 10 P P 02 28 29.7 +0.2
baz=201
HNS **HongShan** 85.28 313 ⇓P P 02 28 30.9 +0.7
HNS pmax pmax
comp=Z,27nm,1.1s
M19K **Big River Lodg** 85.37 12 P P 02 28 30.5 +0.5
baz=203
KNB **Kanab** 85.38 47 P P 02 28 31.2 +0.3
KNB **Kanab** 85.38 47 P P 02 28 31.2 +0.3
KNB pmax pmax
comp=Z,6.0nm,0.8s
LYN **LuoYang** 85.41 310 ⇓P P 02 28 31.8 +0.9
LYN pmax pmax
comp=Z,53nm,0.7s
HEH **HeiHe** 85.46 329 *e*P P 02 28 30.8 +0.1
HEH pmax pmax
comp=Z,31nm,0.6s
K17K **Idltarod** 85.47 10 P P 02 28 31.0 +0.5
baz=200
NONG **Nongkai** 85.48 291 P P 02 28 31.8 +0.3
L19K **White Mountain** 85.54 11 P P 02 28 30.8 -0.1
baz=203
ENH **Enshi** 85.57 305 P P 02 28 31.9 +0.1
ENH **Enshi** 85.57 305 P P 02 28 32.2 +0.4
RC01 **Rabbit Creek A** 85.59 14 P P 02 28 30.6 -0.4
baz=207
NAYO **Nakonayok** 85.59 287 P P 02 28 33.0 +0.9
M20K **Styx River** 85.59 12 P P 02 28 31.1 -0.1
baz=204
ELIB **Princess Elisa** 85.61 187 *d*P P 02 28 31.2 -0.2
comp=Z,8.6nm,0.5s
WUAZ **Wupatki** 85.63 49 P P 02 28 31.4 -0.8
baz=240
J16K **Anvik River** 85.67 8 P P 02 28 30.9 -0.5
baz=197
BJT **Baijiatuau** 85.69 316 P P 02 28 32.2 +0.1
BJT IAmb IAmb 02 28 34.1
comp=Z,15nm,0.8s
BJT **Baijiatuau** 85.69 316 P P 02 28 33.4 +1.3
BJT **Baijiatuau** 85.69 316 P P 02 28 32.2 +0.1
BJT pmax pmax
comp=Z,15nm,0.8s
SUA **Susitna One** 85.70 13 P P 02 28 31.5 -0.2
baz=206,SNR=8.4
BJI **Beijing** 85.70 316 P P 02 28 33.3 +1.2
BJI pmax pmax
comp=Z,10.0nm,0.8s
ELK **Elko** 85.75 43 P P 02 28 32.2 -0.4
ELK **Elko** 85.75 43 P P 02 28 32.3 -0.4
ELK pmax pmax
comp=Z,4.0nm,0.9s
L20K **Farewell, AK** 86.00 12 P P 02 28 33.2 +0.2
baz=204
SKT **Skwentna** 86.00 13 P P 02 28 33.1 +0.1
baz=206
GLI **Glacier Island** 86.02 15 P P 02 28 33.0 -0.1
baz=210
TTA **Tatalina** 86.04 10 P P 02 28 33.9 +0.6
baz=202
EYAK **Cordova Ski Ar** 86.07 16 P P 02 28 33.2 -0.1
baz=211
GYA **Guiyang** 86.07 300 ⇓*i*P P 02 28 36.6 +2.3
GYA pmax pmax
comp=Z,17nm,1.3s
M22K **Willow** 86.09 13 P P 02 28 33.4 0.0
baz=207
KNK **Knik Glacier** 86.16 14 P P 02 28 33.2 -0.6
baz=208
SLVN **Son La** 86.17 295 P P 02 28 35.5 +0.7
PMR **Palmer** 86.17 14 P P 02 28 33.5 -0.3
PMR **Palmer** 86.17 14 P P 02 28 33.8 +0.1
baz=208
COYC **Coyhaique** 86.29 138 P P 02 28 36.1 +1.1
COYC IAmb IAmb 02 28 38.1
comp=Z,34nm,0.9s
ANM **Nome** 86.36 6 P P 02 28 34.9 +0.2
baz=193
GHO **Glory Hole Cre** 86.38 14 P P 02 28 34.6 -0.3
GHO IAmb IAmb 02 28 36.1
comp=Z,24nm,0.7s
HAWA **Hanford** 86.38 37 P P 02 28 35.2 +0.1
HAWA IAmb IAmb 02 28 37.0
comp=Z,14nm,0.8s
SIT **Sitka** 86.40 22 P P 02 28 34.9 0.0
baz=220
J18K **Innoko River** 86.42 10 P P 02 28 35.0 0.0
J18K **Innoko River** 86.42 10 P P 02 28 35.1 +0.1
baz=201
V35K **Ketchikan** 86.50 25 P P 02 28 35.2 -0.3
baz=224
SML **Sawmill** 86.54 14 P P 02 28 35.3 -0.3
baz=209
ZAIG **Zacatecas** 86.66 64 P P 02 28 37.8 +0.4
M23K **Glacier View** 86.67 14 P P 02 28 35.2 -1.0
baz=209
PPLA **Purkeypile** 86.70 12 P P 02 28 36.0 -0.5
baz=205
BMRM **Bremner River** 86.72 16 P P 02 28 36.0 -0.5
baz=212
BMO **Blue Mountains** 86.76 39 P P 02 28 37.4 +0.3
BMO **Blue Mountains** 86.76 39 P P 02 28 37.4 +0.3
BMO pmax pmax
comp=Z,6.0nm,0.9s
H16K **Elim** 86.77 7 P P 02 28 36.4 -0.1
baz=196,SNR=5.1
K20K **Telida** 86.77 11 P P 02 28 36.4 -0.2
K20K **Telida** 86.77 11 P P 02 28 36.9 +0.2
baz=203
MESA **MESA** 86.78 18 P P 02 28 37.1 +0.1
baz=214
SCM **Sheep Creek Mo** 86.79 15 P P 02 28 36.7 -0.1
baz=210
121A **Cookes Peak, D** 86.80 53 P P 02 28 36.1 -1.6
baz=242
TROLL **Troll, Antarti** 86.83 181 ⇑P P 02 28 37.5 +0.4
comp=Z,304nm,0.5s
KLU **Klutina** 86.84 15 P P 02 28 37.6 +0.5
baz=211
G15K **Niukluk** 86.91 6 P P 02 28 38.0 +0.8
baz=194
CRQE **Cirque** 86.94 17 P P 02 28 37.2 -0.5
baz=213
SEY **Seymchan** 86.98 347 *ce*P P 02 28 37.5 -0.1
SEY pmax pmax
comp=Z,36nm,1.1s
DUG **Dugway, Tooele** 87.02 45 P P 02 28 37.8 -0.8
baz=239
J19K **Poorman** 87.09 10 P P 02 28 38.0 -0.1
J19K **Poorman** 87.09 10 P P 02 28 38.3 +0.2
baz=202
TNA **Tin City** 87.12 5 P P 02 28 38.3 +0.1
baz=190
SNAA **Sanae** 87.14 179 P P 02 28 38.0 -0.5
SNAA IAmb IAmb 02 31 50.0
comp=Z,31nm,1.7s
SNAA **Sanae** 87.14 179 ⇑P P 02 28 38.5 0.0
comp=Z,67nm,0.6s
SNAA **Sanae** 87.14 179 P P 02 28 38.5 0.0
comp=Z,2.0nm,0.5s,baz=187,slow=14,SNR=14
comp=Z,2.0nm,0.5s
F14K **Arctic Creek** 87.16 5 P P 02 28 38.6 +0.2
baz=192
CAST **Castle Rocks** 87.19 12 P P 02 28 38.4 -0.2
baz=205,SNR=12
N25K **Chitina, Valde** 87.27 16 P P 02 28 39.0 -0.1
baz=212
M24K **Tolsona, Glenn** 87.31 15 P P 02 28 39.2 0.0
baz=211
VNA3 **Neumayer Olymp** 87.32 177 ⇑P P 02 28 39.4 +0.1
comp=Z,22nm,0.6s
H17K **Granite Mounta** 87.35 8 P P 02 28 39.9 +0.6
baz=198
WAT6 **Susitna Watana** 87.35 14 P P 02 28 39.4 -0.1
baz=209,SNR=7.1
WAT1 **Susitna Watana** 87.39 14 P P 02 28 39.3 -0.3
baz=208
G16K **Koyuk River** 87.48 7 P P 02 28 39.9 0.0
baz=196
MCARA **McCarthy VSAT** 87.48 17 P P 02 28 39.9 -0.1
baz=213
J20K **Nowinta River** 87.51 11 P P 02 28 40.1 0.0
baz=203
LL02 **Futaleuf** 87.52 136 P P 02 28 41.6 +0.8
LL02 IAmb IAmb 02 28 43.7
comp=Z,30nm,1.1s
F15K **North Star Dit** 87.55 6 P P 02 28 40.2 0.0
baz=194
SRDT **SRDT** 87.56 286 P P 02 28 42.9 +1.5
CHUM **Lake Minchumin** 87.57 12 P P 02 28 39.5 -0.9
baz=205
TRF **Thorofare Moun** 87.58 13 P P 02 28 39.6 -1.0
TRF IAmb IAmb 02 28 41.5
comp=Z,21nm,0.7s
TRF **Thorofare Moun** 87.58 13 P P 02 28 40.3 -0.3
baz=207,SNR=12
CTG **Chitna Glacier** 87.60 17 P P 02 28 41.1 +0.4
baz=215
XAN **Xi'an** 87.74 308 P P 02 28 42.6 +0.7
XAN pmax pmax
comp=Z,53nm,0.9s
VNA2 **Neumayer--Watz** 87.75 177 ⇑P P 02 28 41.6 +0.4
comp=Z,10.0nm,0.7s,baz=184,slow=2.3
H18K **Honhosa River** 87.76 9 P P 02 28 40.9 -0.3
baz=199
HLID **Hailey** 87.78 41 P P 02 28 42.5 +0.4
HLID **Hailey** 87.78 41 P P 02 28 41.3 -0.7
baz=238,SNR=14
G17K **Kiwalik Mounta** 87.79 8 P P 02 28 41.3 -0.1
baz=197
HARP **HAARP** 87.80 15 P P 02 28 41.7 +0.3
baz=212
XLT **XiLinHaoTe** 87.83 319 *e*P P 02 28 42.0 -0.2
XLT pmax pmax
comp=Z,11nm,0.7s
XLT pmax pmax
comp=Z,130nm,4.4s
ZEA **Zeya** 87.84 331 *e*P P 02 28 43.2 +1.4
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
DHY **Denali Highway** 87.87 14 P P 02 28 42.1 +0.1
baz=209,SNR=5.1
BPAW **Bear Paw Mtn.** 88.02 12 P P 02 28 42.6 +0.1
baz=206
I20K **Naaghedeneel** 88.03 10 P P 02 28 42.0 -0.4
baz=203
MCK **McKinley** 88.11 13 P P 02 28 42.6 -0.3
baz=208,SNR=5.7
VHRN **Van Horn** 88.14 56 P P 02 28 44.5 +0.5
PAX **Paxson** 88.22 15 P P 02 28 43.7 +0.2
baz=211
P30M **Million Dollar** 88.22 20 P P 02 28 43.9 +0.3
baz=219
MNTX **Cornudas Mount** 88.24 55 P P 02 28 43.4 -0.8
baz=194
YUK8 **Steele Glacier** 88.30 18 P P 02 28 44.2 0.0
baz=216
M26K **Nabesna, AK** 88.34 16 P P 02 28 44.4 +0.3
baz=213
H19K **Roundabout Mou** 88.39 9 P P 02 28 44.7 +0.6
baz=201
G18K **Tagagawik** 88.43 8 P P 02 28 44.8 +0.4
baz=199,SNR=5.2
MVCO **Mesa Verde** 88.48 49 P P 02 28 44.8 -0.8
baz=242
YUK3 **Moose Creek** 88.51 17 P P 02 28 45.3 +0.3
baz=216,SNR=5.5
TX31 **Lajitas Ar. Si** 88.54 58 P P 02 28 46.4 +0.5
TX31 IAmb IAmb 02 28 48.8
comp=Z,13nm,0.9s
TXAR **Lajitas Array** 88.54 58 P P 02 28 46.5 +0.7
TXAR **Lajitas Array** 88.54 58 P P 02 28 47.1 +1.3
comp=Z,12nm,0.8s,baz=219,slow=5.7,SNR=60
TXAR pP pwP 02 31 00.4 -0.9
comp=Z,2.6nm,1.1s,baz=232,slow=5.6,SNR=7.4
TXAR PKKPbc PKKPbc 02 46 24.1 +0.3
comp=Z,0.5nm,0.6s,baz=99,slow=3.0,SNR=7.1
comp=Z,12nm,0.8s
S34M **Telegraph Cree** 88.56 23 P P 02 28 45.7 +0.7
baz=224
M27K **Edge Creek, AK** 88.60 16 P P 02 28 45.5 +0.2
M27K IAmb IAmb 02 28 48.6
comp=Z,31nm,1.3s
M27K **Edge Creek, AK** 88.60 16 P P 02 28 45.1 -0.3
baz=214,SNR=6.9
H20K **Anotleneega Mo** 88.61 10 P P 02 28 45.9 +0.8
baz=203
HYT **Haines Junctio** 88.61 19 P P 02 28 45.2 -0.2
baz=218
F17K **Baldwin Pennin** 88.62 7 P P 02 28 45.9 +0.8
baz=197
YUK4 **Talbot Arm** 88.68 18 P P 02 28 46.7 +0.9
baz=217
KMI **Kunming** 88.70 298 ⇓P P 02 28 48.3 +1.5
KMI pmax pmax
comp=Z,13nm,1.0s
LR05 **Currie** 88.76 133 P P 02 28 47.2 +0.6
LR05 IAmb IAmb 02 28 49.2
comp=Z,19nm,0.8s
L26K **Log Cabin Wild** 88.78 16 P P 02 28 46.7 +0.7
baz=213
NEW **Newport** 88.80 36 P P 02 28 46.5 0.0
baz=235
I21K **Tanana** 88.81 11 P P 02 28 45.3 -0.8
I21K IAmb IAmb 02 28 47.1
comp=Z,11nm,0.8s
I21K **Tanana** 88.81 11 P P 02 28 45.9 -0.2
baz=205,SNR=7.1
K24K **Donnelly Dome** 88.86 14 P P 02 28 45.8 -0.6
baz=211
G19K **Purcell Mounta** 88.88 9 P P 02 28 46.2 -0.2
baz=200,SNR=8.1
ANMO **Albuquerque** 88.89 52 P P 02 28 47.2 -0.3
ANMO **Albuquerque** 88.89 52 P P 02 28 45.7 -1.7
baz=243
ANMO **Albuquerque** 88.89 52 P P 02 28 47.2 -0.3
ANMO pmax pmax
comp=Z,5.0nm,0.9s
MLY **Manley** 88.91 12 P P 02 28 45.4 -1.2
MLY **Manley** 88.91 12 P P 02 28 46.3 -0.3
baz=206
Q32M **Nakina River** 88.91 22 P P 02 28 46.1 -0.8
baz=223
BVCY **Beaver Creek** 88.92 17 P P 02 28 46.3 -0.4
baz=215
WRH **Wood River Hil** 88.94 13 P P 02 28 45.9 -0.8
WRH IAmb IAmb 02 28 47.4
comp=Z,13nm,0.8s
F18K **Selawik** 88.97 8 P P 02 28 47.0 +0.3
baz=198
O30N **Mendenhall** 89.00 20 P P 02 28 47.1 0.0
baz=220
ALPN **Alpine** 89.01 57 P P 02 28 48.3 +0.3
ALPN IAmb IAmb 02 28 50.0
comp=Z,11nm,0.7s
H21K **Melozitna Rive** 89.10 11 P P 02 28 46.6 -0.8
baz=204
HDA **Harding Lake** 89.12 13 P P 02 28 46.7 -0.8
baz=210,SNR=8.7
HHC **Hu-ho-hao-te** 89.14 315 ⇑*i*P P 02 28 50.3 +2.0
HHC pP pP 02 30 57.4 -2.9
HHC *e*S S 02 38 41.6 -4.5
HHC sS sS 02 42 38.5 -4.1
HHC pmax pmax
comp=Z,23nm,0.6s
HHC pmax pmax
comp=Z,140nm,5.1s
CCB **Clear Creek Bu** 89.15 13 P P 02 28 46.5 -1.2
CCB IAmb IAmb 02 28 48.1
comp=Z,9.4nm,0.7s
E17K **Hotham Inlet** 89.17 7 P P 02 28 48.7 +1.0
baz=196,SNR=8.8
L27K **Beaver Creek,** 89.19 16 P P 02 28 48.3 +0.3
baz=214
BCAR **Beaver Creek A** 89.21 16 P P 02 28 48.0 -0.1
IMAR **Indian Mountai** 89.24 10 P P 02 28 47.8 -0.3
I23K **Minto, Yukon-K** 89.28 12 P P 02 28 48.1 -0.1
baz=208
CM31 **Chiang Mai Arr** 89.30 290 P P 02 28 50.2 +0.8
CMAR **Chiang Mai Arr** 89.30 290 P P 02 28 50.1 +0.7
CMAR **Chiang Mai Arr** 89.30 290 *c*P P 02 28 51.2 +1.7
CMAR pmax pmax
comp=Z,28nm,0.9s
CMAR **Chiang Mai Arr** 89.30 290 P P 02 28 50.7 +1.2
comp=Z,24nm,0.8s,baz=119,slow=3.1,SNR=75
CMAR PP PP 02 32 34.4 +2.1
comp=Z,2.2nm,0.3s,baz=111,slow=4.9,SNR=1.8
comp=Z,24nm,0.8s
COLA **College** 89.34 13 P P 02 28 48.0 -0.5
COLA **College** 89.34 13 P P 02 28 49.0 +0.5
baz=209
GO06 **Curarrehue** 89.42 133 P P 02 28 50.2 +0.4
GO06 IAmb IAmb 02 28 52.4
comp=Z,14nm,0.9s
SCRK **Sand Creek** 89.43 15 P P 02 28 49.6 +0.4
baz=212
F19K **Shaleruckik Mo** 89.43 8 P P 02 28 49.6 +0.7
baz=200
CHTO **Chiang Mai** 89.44 290 P P 02 28 50.3 +0.2
CHTO **Chiang Mai** 89.44 290 P P 02 28 51.8 +1.7
CHTO **Chiang Mai** 89.44 290 P P 02 28 50.3 +0.2
CHTO pmax pmax
comp=Z,29nm,0.8s
AHID **Auburn Hatcher** 89.44 43 P P 02 28 50.0 +0.1
AHID IAmb IAmb 02 28 52.4
comp=Z,9.8nm,0.8s
ILAR **Eielson Array** 89.45 13 P P 02 28 48.4 -0.6
ILAR **Eielson Array** 89.45 13 P P 02 28 48.3 -0.8
comp=Z,2.6nm,0.6s,baz=219,slow=5.5,SNR=45
ILAR pP pP 02 31 04.0 +1.8
comp=Z,1.5nm,0.9s,baz=226,slow=4.8,SNR=5.8
comp=Z,2.6nm,0.6s
PLCA **Paso Flores** 89.51 134 P P 02 28 51.2 +1.0
PLCA IAmb IAmb 02 28 52.8
comp=Z,11nm,0.9s
PLCA **Paso Flores** 89.51 134 P P 02 28 51.4 +1.1
comp=Z,7.0nm,0.7s,baz=232,slow=5.0,SNR=23
comp=Z,7.0nm,0.7s
H22K **Ishtalitna Cre** 89.57 11 P P 02 28 50.2 +0.6
baz=206
M29M **Somme Creek** 89.60 18 P P 02 28 50.3 +0.3
baz=217
E18K **Tukpahlearik C** 89.64 7 P P 02 28 50.1 +0.3
baz=197
D17K **Noatak River** 89.64 6 P P 02 28 50.1 +0.3
baz=195
POKR **Poker Plat Res** 89.64 13 P P 02 28 49.5 -0.4
baz=209
J25K **Salcha River,** 89.65 14 P P 02 28 50.4 +0.3
baz=211
R33M **Jennings River** 89.69 22 P P 02 28 50.5 0.0
baz=224
G21K **Allakaket** 89.77 10 P P 02 28 51.1 +0.5
baz=204
BILL **Bilibino** 89.81 355 P P 02 28 51.1 +0.5
BILL IAmb IAmb 02 28 52.2
comp=Z,11nm,0.8s
BILL **Bilibino** 89.81 355 ⇑*e*P P 02 28 51.0 +0.4
BILL pmax pmax
comp=Z,13nm,0.9s
REDW **Red Top Meadow** 89.90 43 P P 02 28 52.5 +0.5
F20K **Avaraart Lake** 89.92 9 P P 02 28 51.2 0.0
F20K **Avaraart Lake** 89.92 9 P P 02 28 51.8 +0.6
baz=202
K27K **Chicken** 89.93 15 P P 02 28 51.1 -0.2
baz=214
J26L **Joseph Creek** 89.97 15 P P 02 28 52.4 +0.8
baz=213
C16K **Lisburne Hills** 90.00 5 P P 02 28 51.8 +0.3
baz=193
O20A **White River Ci** 90.04 46 P P 02 28 52.2 -0.4
baz=242
BTO **Baotou** 90.04 314 *e*P P 02 28 55.0 +2.5
BTO pmax pmax
comp=Z,190nm,7.9s
PZH **PanZhiHua** 90.08 298 P P 02 28 54.1 +1.0
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,100nm,6.1s
E19K **Redstone River** 90.09 8 P P 02 28 52.8 +0.8
baz=200
H24K **Noodor Dome** 90.18 12 P P 02 28 53.4 +0.9
baz=209
M30M **Minto, Yukon** 90.19 18 P P 02 28 53.6 +1.0
baz=219
L29M **L29M** 90.23 17 P P 02 28 53.0 +0.2
L29M IAmb IAmb 02 28 54.8
comp=Z,9.6nm,0.9s
L29M **L29M** 90.23 17 P P 02 28 54.5 +1.7
baz=218
N32M **Quiet Lake** 90.25 20 P P 02 28 54.4 +1.5
baz=222
C17K **DeLong Mountai** 90.39 6 P P 02 28 54.2 +0.9

baz=195
PRP Porcupine Dome 90.39 13 P P 02 28 53.3 -0.3
baz=211
F21K Alatna River 90.42 10 P P 02 28 53.1 -0.4
baz=204
BW06 Boulder Array 90.43 44 P P 02 28 54.5 +0.1
baz=241
PD31 Pinedale Array 90.43 44 P P 02 28 54.1 -0.3
PDAR Pinedale Array 90.43 44 P P 02 28 54.1 -0.3
comp=Z,3.8nm,0.8s,baz=203,slow=2.8,SNR=38
comp=Z,3.8nm,0.8s
BOZ Bozeman (W) 90.54 40 P P 02 28 55.1 +0.3
baz=239
G23K Bananza Creek 90.55 11 P P 02 28 55.2 +1.0
baz=207
H17A Grant Village 90.58 42 P P 02 28 55.3 +0.1
baz=240
DAWY Dawson 90.65 16 P P 02 28 54.3 -0.4
DAWY IAmb IAmb 02 28 55.8
comp=Z,25nm,1.6s
DAWY Dawson 90.65 16 P P 02 28 55.7 +1.0
baz=217
I26K Coal Creek Min 90.74 14 P P 02 28 55.8 +0.8
baz=213
C18K Utukok River 90.75 7 P P 02 28 55.7 +0.6
baz=197
EGAK Eagle 90.78 15 P P 02 28 55.9 +0.7
baz=215
SDCO Great Sand Dun 90.84 50 P P 02 28 57.1 +0.6
SDCO IAmb IAmb 02 28 58.8
comp=Z,20nm,1.9s
SDCO Great Sand Dun 90.84 50 P P 02 28 55.9 -0.7
baz=243
D19K Kuna River 90.96 8 P P 02 28 56.7 +0.7
baz=200
K29M Barlow Dome 90.98 17 P P 02 28 56.9 +0.6
baz=218
COLD Coldfoot 90.98 11 P P 02 28 57.1 +1.1
baz=207
E20K Nigu River 90.99 8 P P 02 28 56.5 +0.3
baz=201
G24K Hadweenzic Riv 91.02 12 P P 02 28 57.0 +0.7
baz=209
MSTX Muleshoe 91.20 54 P P 02 28 58.1 +0.1
baz=245
MAYO Mayo, Yukon 91.24 18 P P 02 28 58.8 +1.4
baz=220
J29N Klondike Camp 91.27 17 P P 02 28 58.7 +1.1
baz=218
I27K Kandik River 91.35 15 P P 02 28 59.6 +1.7
baz=215
T25A Trinidad 91.35 50 P P 02 28 58.3 -0.5
baz=244
D20K Ettivluk River 91.36 8 P P 02 28 58.7 +0.8
baz=201
C19K Lookout Ridge 91.36 7 P P 02 28 58.7 +0.8
baz=198
B18K Kokolik River 91.38 6 P P 02 28 59.1 +1.3
baz=196
833A Chaparral WMA, 91.54 60 P P 02 28 59.3 -0.2
baz=246
I28M Miner Creek 91.63 15 P P 02 29 00.2 +1.0
baz=216
Q24A Divide 91.63 49 P P 02 29 00.3 +0.1
baz=244
F24K Squaw Lake 91.66 12 P P 02 29 00.8 +1.6
baz=209
ISCO Idaho Springs 91.68 48 P P 02 29 00.5 +0.1
ISCO Idaho Springs 91.68 48 P P 02 29 00.6 +0.3
baz=243
ISCO Idaho Springs 91.68 48 P P 02 29 00.5 +0.1
ISCO pmax pmax
comp=Z,3.0nm,0.8s
E23K Chandalar 91.82 11 P P 02 29 00.7 +0.6
baz=207
J30M Hart River 91.88 17 P P 02 29 01.7 +1.2
baz=219
H27K Steamboat Moun 91.89 14 P P 02 29 01.3 +0.9
baz=215
N23A Red Feather La 91.94 47 P P 02 29 01.2 -0.3
baz=243
G26K Porcupine Rive 91.99 13 P P 02 29 02.0 +1.3
baz=213
C21K Knifeblade Rid 92.02 9 P P 02 29 01.0 +0.2
baz=203
JCT Junction City 92.06 58 P P 02 29 02.0 0.0
baz=246
D22K Ayikyak River 92.07 9 P P 02 29 01.3 +0.2
baz=205
BO02 Sierra Bellavi 92.13 129 P P 02 29 02.5 +0.1
BO02 IAmb IAmb 02 29 04.1
comp=Z,11nm,0.7s
F25K Christian Rive 92.15 12 P P 02 29 02.4 +0.8
baz=211
MT01 Popeta 92.22 128 P P 02 29 02.8 0.0
K22A Casper 92.35 45 P P 02 29 03.5 +0.3
baz=243
TOLK Toolik Lake Re 92.35 10 P P 02 29 03.2 +0.7
baz=208
I30M Mount Dempster 92.36 17 P P 02 29 03.2 +0.5
baz=219
LZH Lanzhou 92.38 308 eP P 02 29 04.0 +0.5
LZH pmax pmax
comp=Z,27nm,1.0s
D23K Nanushuk River 92.46 10 P P 02 29 04.0 +1.1
baz=206
YAK Yakutsk 92.50 338 eP P 02 29 02.9 -0.2
YAK e*PP pP 02 31 11.8 -4.1
YAK e 02 32 55.2
YAK ePPP PPP 02 35 02.0
YAK eS SKSac 02 38 38.2 +0.8
YAK e 02 39 16.4
YAK eSS SS 02 45 48.5 +1.6
YAK pmax pmax
comp=Z,20nm,0.7s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK pmax pmax
comp=Z,770nm,7.8s
YAK pmax pmax
comp=N,245nm,3.9s
YAK pmax pmax
comp=E,411nm,7.6s
YAK smax smax
comp=E,382nm,4.2s
YAK smax smax
comp=N,227nm,4.9s
F26K Sheenjek River 92.54 13 P P 02 29 04.5 +1.2
baz=212
E25K Arctic Village 92.62 12 P P 02 29 04.7 +1.1
baz=211
H29M Whitestone 92.63 15 P P 02 29 04.8 +1.0
baz=218
KOTAN Kotaneelee Air 92.75 24 P P 02 29 05.8 +1.4
baz=230
EGMT Eagleton 92.86 39 P P 02 29 05.9 +0.6
baz=241
D24K Happy Valley 92.93 10 P P 02 29 06.0 +1.0
baz=208
ABTX Abilene, Hawle 93.04 56 P P 02 29 06.2 -0.2
baz=246
EPYK Eagle Plains 93.17 16 P P 02 29 07.1 +0.9
baz=219
C23K Itkillik River 93.25 10 P P 02 29 07.6 +1.2
baz=206
F28M Old Crow 93.40 14 P P 02 29 08.4 +1.2
baz=216
KSCO Kaye Shedlock' 93.42 49 P P 02 29 08.9 +0.7
baz=245
C24K Franklin Bluff 93.45 10 P P 02 29 08.1 +0.8
baz=208
G30M tAoh Zraii Nji 93.77 16 P P 02 29 09.8 +0.8
baz=220
G31M Satah River 94.22 16 P P 02 29 11.3 +0.5
baz=221
C26K Camden Bay 94.28 11 P P 02 29 12.1 +1.0
baz=212
LAO LASA Array 94.36 41 P P 02 29 12.0 -0.2
baz=243
RSSD Black Hills 94.62 44 P P 02 29 13.3 -0.3
baz=245
F31M Tsiigehtchic 94.75 16 P P 02 29 13.1 -0.1
baz=222
INK Inuvik 95.45 16 P P 02 29 16.2 -0.2
baz=222
SONM Songino Array 95.65 319 P P 02 29 18.4 +0.4
comp=N,1.6nm,0.9s,baz=118,slow=3.8,SNR=8.6
SONM PP PP 02 33 17.5 -3.3
comp=N,0.5nm,0.6s,baz=113,slow=7.9,SNR=4.4
comp=N,1.6nm,0.9s
GTA Gaotai 96.62 310 eP P 02 29 23.8 +1.2
GTA pmax pmax
comp=N,4.0nm,0.8s
YKA Yellowknife Ar 97.82 25 P Pdif 02 29 26.9 -0.3
comp=N,0.2nm,0.8s,baz=243,slow=4.9,SNR=4.2
YKA PP PP 02 33 33.5 -3.1
comp=N,1.2nm,1.2s,baz=238,slow=9.4,SNR=5.2
comp=N,0.2nm,0.8s
TIXI Tiksi 99.31 345 i P Pdif 02 29 35.9 +2.3
TIXI pmax pmax
comp=Z,2.0nm,1.1s
SIV San Ignacio 108.92 116 PKKPbc PKKPbc 02 45 26.9 -0.6
comp=Z,1.1nm,0.6s,baz=66,slow=2.6,SNR=7.0
ZALV Zalesovo Beam 110.44 321 PKiKP PKiKP 02 34 19.1 -1.0
comp=Z,1.7nm,0.6s,baz=113,slow=1.7,SNR=11
ZALV PP PP 02 35 03.6 -5.1
comp=Z,0.3nm,0.3s,baz=99,slow=6.4,SNR=1.7
NRIK Noril'sk 110.94 338 PP PP 02 35 08.7 -3.2
comp=Z,1.1nm,0.4s,baz=78,slow=4.6,SNR=4.1
MK31 Makanchi Array 110.95 313 c i PKiKP PKiKP 02 34 21.1 -0.2
MKAR Makanchi Array 110.95 313 c i PKiKP PKiKP 02 34 20.0 -1.3
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 110.95 313 Pdiff Pdif 02 30 28.7 +2.7
comp=Z,0.7nm,0.7s,baz=95,slow=6.1,SNR=7.2
MKAR PKiKP PKiKP 02 34 19.8 -1.6
comp=Z,1.6nm,0.6s,baz=93,slow=2.4,SNR=21
MKAR SKP SKPdf 02 36 59.5 +0.6
comp=Z,0.6nm,0.8s,baz=72,slow=1.5,SNR=4.1
MKAR PKKPbc PKKPbc 02 45 20.8 -0.6
comp=Z,1.7nm,0.8s,baz=275,slow=4.0,SNR=16
MKAR PKKPab PKKPab 02 45 32.6 +0.5
comp=Z,0.8nm,0.8s,baz=288,slow=2.9,SNR=5.4
KURK Kurchatov 113.85 317 c i PKiKP PKiKP 02 34 27.0 +0.3
KURK pmax pmax
comp=Z,6.0nm,2.5s
KURBB Kurchatov Arra 113.89 317 PKiKP PKiKP 02 34 25.5 -1.3
comp=Z,1.9nm,0.6s,baz=101,slow=1.8,SNR=26
KURBB PP PP 02 35 26.8 -6.2
comp=Z,0.7nm,0.9s,baz=95,slow=6.0,SNR=4.9
KURBB SKP SKPdf 02 37 04.1 -0.2
comp=Z,1.0nm,0.8s,baz=101,slow=2.2,SNR=6.9
KURBB PKKPbc PKKPbc 02 45 11.1 -0.7
comp=Z,0.8nm,0.7s,baz=274,slow=4.0,SNR=9.4
KURBB PKKPab PKKPab 02 45 19.4 +0.5
comp=Z,1.2nm,0.8s,baz=277,slow=4.9,SNR=8.4
NRN Naryn 114.66 307 PKPdf 02 34 27.8 -1.2
NRN Naryn 114.66 307 PKiKP PKPdf 02 34 27.8 -1.2
AAK Ala-Archa 115.92 308 c i PKiKP PKiKP 02 34 31.9 +0.7
AAK pmax pmax
comp=Z,4.0nm,2.5s
KK31 Karatay Array 118.87 308 PKPdf PKPdf 02 34 35.5 -1.1
KK31 Karatay Array 118.87 308 PKiKP PKPdf 02 34 35.5 -1.1
KKAR Karatay Array 118.87 308 PKPdf PKPdf 02 34 35.5 -1.1
KKAR Karatay Array 118.87 308 PKiKP PKPdf 02 34 35.5 -1.1
BVAR Borovoye Array 119.00 320 PKP PKPdf 02 34 35.2 -1.4
comp=Z,5.3nm,0.4s,baz=90,slow=1.4,SNR=49
BVAR PP PP 02 36 04.1 -3.7
comp=Z,1.5nm,0.8s,baz=86,slow=6.2,SNR=4.6
BVAR SKP SKPdf 02 37 14.2 0.0
comp=Z,2.3nm,0.9s,baz=45,slow=2.2,SNR=4.5
BRVK Borovoye 119.06 320 PKPdf PKPdf 02 34 35.5 -1.1
BRVK Borovoye 119.06 320 c i PKiKP PKiKP 02 34 36.7 0.0
BRVK pmax pmax
comp=Z,4.0nm,1.3s
KBL Kabul 119.28 298 PKPdf PKPdf 02 34 37.2 -0.7
KBL Kabul 119.28 298 PKiKP PKPdf 02 34 37.2 -0.7
ABPO Ambohimpanom 119.30 232 i PKiKP PKPdf 02 34 32.9 -5.5
BDFB Brasilia 119.66 124 PKKPbc PKKPbc 02 44 52.1 +0.2
comp=Z,2.1nm,0.7s,baz=153,slow=4.5,SNR=3.4
SPA0 Spitsbergen Ar 122.68 356 ePKPdf PKPdf 02 34 42.6 -0.4
SPITS Spitsbergen Ar 122.68 356 PKP PKPdf 02 34 42.5 -0.5
comp=Z,16nm,0.8s,baz=85,slow=1.6,SNR=9.7
SVE Sverdlovsk 124.05 325 ePKiKP PKPdf 02 34 46.1 0.0
SVE pmax pmax
comp=Z,10.0nm,0.8s
BOSA Boshof 124.93 206 PKP PKiKP 02 34 49.7 +0.3
comp=Z,7.3nm,1.2s,baz=190,slow=6.1,SNR=2.1
ARU Arti 125.26 325 PKPdf PKPdf 02 34 47.6 -0.9
ARU Arti 125.26 325 i PKiKP PKiKP 02 34 48.8 -0.1
ARU 02 36 51.4
ARU 02 41 03.3
ARU SS SS 02 52 57.6 -2.4
ABKAR Akbulak array 125.91 316 PKPdf 02 34 49.5 -0.4
GEYT Alibeck 128.26 302 PKP PKPdf 02 34 54.8 0.0
comp=Z,4.8nm,0.7s,baz=113,slow=1.9,SNR=10
GEYT PP PP 02 37 06.5 -3.0
comp=Z,3.5nm,1.0s,baz=104,slow=9.6,SNR=6.4
HAMF Hammerfest 128.91 350 ePKPdf PKPdf 02 34 53.7 -1.3
KIRV Kirov 129.14 330 c i PKiKP PKiKP 02 34 56.3 -0.2
ARA0 ARCESS Array S 129.58 349 ePKPdf PKPdf 02 34 56.2 -0.1
ARCES ARCESS Array B 129.58 349 PKhKP PKPpre 02 34 46.5
comp=Z,3.1nm,0.9s,baz=119,slow=1.5,SNR=6.4
ARCES PKP PKPdf 02 34 56.4 0.0
comp=Z,6.6nm,0.7s,baz=45,slow=1.4,SNR=25
ARCES SKPbc SKPab 02 37 22.2 +0.6
comp=Z,14nm,0.8s,baz=29,slow=4.6,SNR=14
ARCES SKP SKPdf 02 37 35.4 +1.6
comp=Z,2.7nm,0.9s,baz=5.7,slow=1.8,SNR=3.7
KTK1 Kautokeino 130.43 350 ePKPdf PKPdf 02 34 58.1 +0.1
TRO Tromso 130.52 352 ePKPdf PKPdf 02 34 58.0 0.0
KLMR Klimovskoe 132.21 336 ePKiKP PKPdf 02 35 01.4 -0.1
KLMR e 02 37 29.6
KLMR pmax pmax
comp=Z,14nm,1.3s
STEI Steigen 132.59 353 ePKPdf PKPdf 02 35 01.6 -0.4
BELG Belogornoye 132.60 323 i PKiKP PKPdf 02 35 02.5 0.0
FINES FINESS Array B 136.28 343 c i PKiKP PKiKP 02 35 10.1 -0.9
FINES pmax pmax
comp=Z,2.0nm,0.3s
FINES FINESS Array B 136.28 343 PKhKP PKPpre 02 34 58.8
comp=Z,1.8nm,0.8s,baz=48,slow=2.1,SNR=7.0
FINES PKP PKPdf 02 35 09.7 +0.6
comp=Z,1.8nm,0.3s,baz=81,slow=2.2,SNR=14
FINES SKPbc SKPbc 02 37 44.3 +0.2
comp=Z,12nm,0.9s,baz=42,slow=3.1,SNR=14
OBN Obninsk 136.96 330 i PKiKP PKPdf 02 35 08.3 -2.2
OBN pmax pmax
comp=Z,7.0nm,0.7s
GNI Garni 138.30 307 c i PKiKP PKiKP 02 35 15.8 -0.2
GNI pmax pmax
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 138.69 282 PKPdf PKPdf 02 35 15.0 +0.3
RAYN Ar Rayn 138.69 282 PKiKP PKiKP 02 35 17.3 +0.2
DOMB Dombas 138.98 354 ePKPdf PKPpre 02 35 07.2
AKN Aaknes 139.02 356 ePKPdf PKPpre 02 35 07.7
NB2 NORSAR Subarra 139.72 352 PKP PKPpre 02 35 08.1
comp=Z,0.5nm,0.5s,baz=16,slow=3.2
NB2 SKPa SKPbc 02 37 53.9 +0.1
comp=Z,1.4nm,0.7s,baz=13,slow=2.9
NB2 NORSAR Subarra 139.72 352 PKP PKPpre 02 35 08.1
baz=16,slow=3.2
NOA NORSAR Array B 139.72 352 PKhKP PKPpre 02 35 07.7
comp=Z,2.7nm,0.7s,baz=16,slow=4.7,SNR=11
NOA PKP PKiKP 02 35 16.9 -1.1
comp=Z,0.9nm,0.7s,baz=18,slow=3.3,SNR=4.8
NOA SKPbc SKPbc 02 37 54.5 +0.7
comp=Z,2.8nm,0.9s,baz=15,slow=4.3,SNR=5.7
NC602 NORSAR Array S 139.97 352 ePKPdf PKPpre 02 35 09.7
HFS Hagfors 140.22 350 PKhKP PKPpre 02 35 09.0
comp=Z,7.1nm,0.6s,baz=17,slow=0.9,SNR=29
HFS PKP PKiKP 02 35 18.4 -0.7
comp=Z,6.3nm,1.0s,baz=45,slow=2.2,SNR=4.8
HFS SKPbc SKPbc 02 37 55.4 +0.4
comp=Z,6.8nm,0.8s,baz=64,slow=3.4,SNR=6.0
ASK Askoy 140.82 357 eP PKPdf 02 35 15.3 -2.1
ISAL Salakas 140.96 337 eP PKPdf 02 35 14.4 -3.4
MNK Minsk 141.10 335 i PKiKP PKiKP 02 35 21.5 +0.5
MNK i 02 38 28.4
MNK i 02 41 32.9
MNK i SS SS 02 56 11.5 +3.7
MNK i SSS SSS 03 01 39.2
MNK pmax pmax
comp=Z,14nm,0.8s
MNK MLR MLR
comp=N,163nm,16.0s
MNK MLR MLR
comp=Z,120nm,17.0s
MNK MLR MLR
comp=E,95nm,18.0s
KONO Kongsberg 141.27 353 eP PKPdf 02 35 13.3 -4.9
ODD1 Odda 141.30 355 eP PKPdf 02 35 13.6 -4.8
VSVD Vaisvydziai 141.39 339 eP PKPdf 02 35 15.0 -3.5
STRU Stroemstad 141.66 351 i P PKPdf 02 35 12.8 -6.1
PABE Paberze 141.76 339 eP PKPdf 02 35 16.2 -3.0
TJOU Tjoern 142.56 350 i P PKPdf 02 35 16.3 -4.2
HOMB Homborsund 142.74 353 eP PKPdf 02 35 18.9 -1.9
HOMB Homborsund 142.74 353 i P PKPdf 02 35 17.9 -2.9
BORU Boraas 142.75 349 i P PKPdf 02 35 16.9 -4.0
SNART Snartemo 142.80 354 eP PKPdf 02 35 18.0 -3.0
SNART Snartemo 142.80 354 i P PKPdf 02 35 18.1 -2.9
ONAU Onsala 143.12 350 i P PKPab 02 35 18.3 -1.3
AKASG Malin Array Be 143.20 330 PKP PKPab 02 35 19.5 -0.7
comp=E,44nm,0.6s,baz=42,slow=4.3,SNR=129
AKASG SKPbc SKiKP 02 38 03.4 -0.3
comp=E,8.6nm,0.8s,baz=42,slow=2.5,SNR=9.1
KIEV Kiev 143.22 330 ||P PKPab 02 35 19.1 -1.2
KIEV Kiev 143.22 330 PKPdf PKPab 02 35 19.3 -0.9
KIEV Kiev 143.22 330 ||PKHKP PKPpre 02 35 19.1
SUW Suwalki 143.24 338 ePKPdf PKPab 02 35 19.9 -0.3
SUW Suwalki 143.24 338 PKPab 02 35 19.8 -0.4
SUW Suwalki 143.24 338 PKIKP PKPab 02 35 19.8 -0.4
SUW Suwalki 143.24 338 eP PKPab 02 35 20.2 -0.1
ARPR Arapgir-MALATY 143.35 307 PKPbc 02 35 21.9 +0.3
FABU Falkenberg 143.36 349 i P PKPab 02 35 18.9 -1.7
BLEU Blekinge 143.39 346 i P PKPab 02 35 18.9 -1.8
MBAR Mbarara 143.43 237 PKPbc 02 35 22.9 +0.3
MBAR Mbarara 143.43 237 c i PKiKP PKPdf 02 35 23.3 -0.4
MBAR pmax pmax
comp=Z,46nm,1.3s
DEL Delary 143.65 348 i P PKPbc 02 35 20.1 -1.6
SIM Simferopol' 143.90 318 ePKIKP PKPbc 02 35 22.9 +0.1
SIM pmax pmax
comp=Z,106nm,0.8s
BJUU Bjuv 144.18 348 i P PKPbc 02 35 22.2 -1.1
MUD Monsted U'grnd 144.44 352 i P PKPdf 02 35 22.8 -1.0
LUNU Lund 144.52 348 i P PKPdf 02 35 23.0 -1.0
DIKM Dikmen 144.64 313 ||P PKPab 02 35 26.9 +0.8
BSD Bornholm Skovb 144.68 346 i P PKPdf 02 35 23.6 -0.7
GAZ Gaziantep 144.76 305 PKPbc 02 35 25.9 0.0
BNN Bunyan 145.27 308 PKPdf PKPbc 02 35 27.1 -0.3
SORM Soroca 145.33 327 ||P PKPbc 02 35 26.5 -0.5
SORM Soroca 145.33 327 ||PKIKP PKPbc 02 35 26.5 -0.5
PURM Purcari 145.52 324 ||P PKPbc 02 35 28.1 +0.5
GKP Gorka Klasztor 145.76 342 ePKPbc PKPbc 02 35 28.5 +0.5
GKP Gorka Klasztor 145.76 342 eP PKPdf 02 35 26.3 +0.1
BEL Belsk 145.85 338 ePKPbc PKPdf 02 35 26.9 +0.4
MILM Milestii Mici 145.86 325 ||P PKPbc 02 35 27.8 -0.8
MILM Milestii Mici 145.86 325 ||PKIKP PKPbc 02 35 27.8 -0.8
EKA Eskdalemuir Ar 145.99 4 PKPbc PKPbc 02 35 28.7 +0.1
comp=Z,9.9nm,0.7s,baz=349,slow=2.9,SNR=21
EKA SKPbc SKPbc 02 38 08.8 -0.2
comp=Z,0.5nm,0.5s,baz=341,slow=3.0,SNR=5.8
LVV L'vov 146.18 333 ePKIKP PKPbc 02 35 28.3 -1.1
LEOM Leova 146.44 325 ||P PKPbc 02 35 30.5 +0.3
LEOM Leova 146.44 325 ||PKP2 PKPbc 02 35 30.5 +0.3
BR131 Keskin Array S 146.54 311 PKPbc 02 35 30.0 -0.9
BR131 Keskin Array S 146.54 311 PKIKP PKPbc 02 35 30.0 -0.9
BRTR Keskin Array B 146.54 311 PKPbc 02 35 30.1 -0.9
BRTR Keskin Array B 146.54 311 PKIKP PKPbc 02 35 30.1 -0.8
BRTR Keskin Array B 146.54 311 PKPbc PKPbc 02 35 30.5 -0.4
comp=Z,14nm,0.7s,baz=102,slow=2.0,SNR=99
BRTR SKPbc SKiKP 02 38 11.1 -0.1
comp=Z,2.3nm,0.9s,baz=117,slow=1.4,SNR=4.0
VASR Vaslui 146.58 325 ⇑P PKPbc 02 35 30.6 0.0
BSEG Bad Segeberg 146.71 350 ePKPbc PKPbc 02 35 30.9 +0.3
baz=20,slow=2.4
KWP Kalwaria Pacla 146.88 334 ePKPbc PKPbc 02 35 31.6 +0.3
KWP ePKPab PKPab 02 35 35.8 +1.1
KWP Kalwaria Pacla 146.88 334 PKPbc 02 35 31.3 0.0
KWP Kalwaria Pacla 146.88 334 PKIKP PKPbc 02 35 31.3 0.0
BIR Birlad 146.91 325 ⇑P PKiKP 02 35 32.6 -0.7
BIR Birlad 146.91 325 ⇑PKP2 PKiKP 02 35 32.6 -0.7
TLCR 146.92 322 ⇑P PKPbc 02 35 32.0 +0.5
TLCR 146.92 322 ⇑PKP2 PKPbc 02 35 32.0 +0.5
VLDR Vladesti 146.93 324 ⇑P PKiKP 02 35 32.6 -0.7
VARL Varlezi 147.02 324 ||P PKPbc 02 35 32.5 +0.7
ANTO Ankara 147.08 311 ⇑P PKPbc 02 35 31.9 -0.2
ANTO Ankara 147.08 311 PKPbc 02 35 31.8 -0.4
ANTO Ankara 147.08 311 ⇑PKIKP PKPbc 02 35 32.0 -0.2
SCTR Scanteiesti 147.08 324 ⇑P PKPbc 02 35 32.4 +0.5
TATR Tatarca 147.10 324 ⇑P PKiKP 02 35 32.9 -0.7
BR231 Keskin MP Arra 147.10 311 PKPbc 02 35 32.1 -0.2
GHRR 147.16 325 ||P PKiKP 02 35 33.4 -0.4
MMAI Mount Meron Ar 147.21 298 PKPbc PKPbc 02 35 32.9 +0.1
comp=Z,23nm,0.6s,baz=68,slow=3.9,SNR=114
MMAI pPKPbc pPKPab 02 37 53.8 +1.6
comp=Z,0.3nm,0.3s,baz=117,slow=1.6,SNR=2.1
BUR08 Bucovina Ar. S 147.22 329 PKPbc 02 35 32.6 +0.2
NEGRR Negrea 147.23 324 ⇑P PKPbc 02 35 32.9 +0.6
BURAR Bucovina Array 147.24 329 ⇑P PKPbc 02 35 33.0 +0.6
BURAR Bucovina Array 147.24 329 PKPbc 02 35 31.7 -0.7
BURAR Bucovina Array 147.24 329 ⇑PKP2 PKPbc 02 35 33.0 +0.6
SLCR Slobozia Conac 147.26 324 ||P PKiKP 02 35 33.2 -0.8
TESR Tescani 147.27 326 ||P PKPbc 02 35 31.5 -0.9
IZVR Izvoarele 147.29 324 ⇑P PKiKP 02 35 33.7 -0.3
CFR Carcaliu 147.31 323 ⇑P PKPbc 02 35 32.7 +0.2
CFR Carcaliu 147.31 323 ⇑PKP2 PKPbc 02 35 32.7 +0.2
TPGR Topolog 147.34 322 ⇑P PKPbc 02 35 32.6 -0.1
RUE Ruedersdorf 147.38 345 eP PKPbc 02 35 33.1 +0.7
RUE Ruedersdorf 147.38 345 ePKPbc PKPbc 02 35 33.1 +0.7
baz=200,slow=2.4
GHAJ Ghor Haditha 147.38 295 PKPbc 02 35 32.9 -0.3
PANC Panciu 147.42 325 ⇑P PKiKP 02 35 33.7 -0.6
ODBI Odobesti 147.54 325 ⇑P PKiKP 02 35 34.6 0.0
OJC Ojcow 147.54 337 ePKPbc PKPbc 02 35 32.9 -0.1
OJC ePKPab PKPab 02 35 38.3 +0.9
OJC Ojcow 147.54 337 PKPbc 02 35 32.3 -0.7
OJC Ojcow 147.54 337 PKIKP PKPbc 02 35 32.3 -0.7
TIRR Tirgusor 147.58 322 ⇑P PKPbc 02 35 33.2 0.0
TIRR Tirgusor 147.58 322 PKPbc 02 35 33.1 -0.1
TIRR Tirgusor 147.58 322 ⇑PKIKP PKPbc 02 35 33.2 0.0
KOLS Kolonicke sedl 147.60 333 ePKP2 PKiKP 02 35 34.1 -0.5
KOLS Kolonicke sedl 147.60 333 ePKP PKiKP 02 35 34.1 -0.5
KOLS e 02 35 37.8
STHS Stebnicka Huta 147.64 335 ePKIKP PKPbc 02 35 33.3 0.0
STHS Stebnicka Huta 147.64 335 ePKP PKPbc 02 35 33.3 0.0
VRI Vrincioaia 147.65 325 ⇑P PKPbc 02 35 33.4 0.0
VRI Vrincioaia 147.65 325 ⇑PKIKP PKPbc 02 35 33.4 0.0
PLOR Plostina 147.70 325 ||P PKPbc 02 35 33.6 0.0
PLOR Plostina 147.70 325 ||PKIKP PKPbc 02 35 33.6 0.0
HARR Harsova 147.72 322 ||P PKPbc 02 35 34.1 +0.5
HARR Harsova 147.72 322 ||PKP2 PKPbc 02 35 34.1 +0.5
MFTR Murfatlar 147.74 321 ⇑P PKPbc 02 35 33.1 -0.6
TLBR Topalu 147.74 322 ||P PKPbc 02 35 34.1 +0.5
MANR Mangalia 147.85 321 ||P PKiKP 02 35 34.8 -0.5
BISRR Bisoca 147.86 325 ||P PKPbc 02 35 34.7 +0.6
TURR Turia 147.90 326 ⇑P PKPbc 02 35 33.9 -0.1
MDUB Mudurnu 147.92 313 PKPbc 02 35 34.5 +0.1
COVR Voineasa-Covas 147.94 326 ⇑P PKPbc 02 35 34.5 +0.3
CRVS Cervenica-Dubn 147.96 334 ePKHKP PKPpre 02 35 34.2
CRVS Cervenica-Dubn 147.96 334 ePKP PKPbc 02 35 34.2 +0.1
OZUR 147.99 326 ⇑P PKPbc 02 35 34.8 +0.5
NIE Niedzica 148.01 336 ePKPbc PKPbc 02 35 34.8 +0.5
ARCR ARCALIA 148.03 329 ⇑P PKiKP 02 35 36.2 +0.6
BOSR Bodos 148.07 326 ||P PKiKP 02 35 35.4 -0.3
FLTG Flechtingen 148.07 348 ePKPbc PKPbc 02 35 34.3 +0.1
baz=20,slow=2.4
FLTG ePKPab PKPab 02 35 38.9 -0.5
baz=20,slow=2.4
AMRR Amara 148.10 323 ||P PKiKP 02 35 35.4 -0.3
AMRR Amara 148.10 323 ||PKP2 PKiKP 02 35 35.4 -0.3
NEHR Nehoiu 148.16 325 ⇑P PKPbc 02 35 35.1 +0.4
KSP Ksiaz 148.18 341 ePKPbc PKPbc 02 35 34.8 +0.2
KSP ePKPab PKPab 02 35 40.9 +1.0
ISR Istrita 148.22 324 ⇑P PKiKP 02 35 36.8 +0.7
ISR Istrita 148.22 324 ⇑PKP2 PKiKP 02 35 36.8 +0.7
DOPR Dopca 148.28 326 ⇑P PKiKP 02 35 35.6 -0.5
MLR Muntele Rosu 148.31 325 ⇑P PKiKP 02 35 36.0 -0.3
MLR Muntele Rosu 148.31 325 ⇑PKHKP PKPpre 02 35 35.0
OKC Ostrava-Krasne 148.45 338 ⇑ePKP PKPbc 02 35 35.7 +0.5
OKC Ostrava-Krasne 148.45 338 ePKHKP PKPpre 02 35 35.7
OSTC Ostas 148.45 341 ⇑ePKP PKiKP 02 35 36.1 -0.2
OSTC ePKPAB PKPab 02 35 42.6 +1.5
OSTC Ostas 148.45 341 ePKP2 PKiKP 02 35 36.1 -0.2
CHVC Chvalec 148.47 341 ⇑ePKP PKiKP 02 35 36.1 -0.3
CHVC Chvalec 148.47 341 ePKP2 PKiKP 02 35 36.1 -0.3
LANS Liptovska Anna 148.54 336 ePKP2 PKiKP 02 35 36.6 0.0
LANS Liptovska Anna 148.54 336 ePKP PKiKP 02 35 36.6 0.0
LANS e 02 35 42.3
UPC Upice 148.56 341 ⇑ePKP PKPbc 02 35 35.9 +0.4
UPC Upice 148.56 341 ePKHKP PKPpre 02 35 35.9
DPC Dobruska-Polom 148.60 341 ⇑ePKP PKiKP 02 35 36.2 -0.5

DPC			*e*PKPAB	**PKPab**	**02 35 42.7**	**+0.9**
DPC	**Doþruska-Polom**	**148.60 341**	*e*PKHKP	PKPpre	02 35 36.2	
DPC			*e*		02 35 42.7	
CBBR	**Cluj-Babes-Bol**	**148.64 329**	⇓P	**PKPdf**	**02 35 33.0**	**+1.8**
CLL	**Collm**	**148.64 345**		**PKPbc**	**02 35 35.3**	**-0.3**
CLL	**Collm**	**148.64 345**	*e*PKHKP	PKPpre	02 35 32.0	
CLL			*i*		02 35 41.8	
CLL			pmax	pmax		
	comp=Z,49nm,1.3s					
CLL			pmax	pmax		
	comp=Z,20nm,0.9s					
CLL	**Collm**	**148.64 345**	*e*PKPdf	**PKPdf**	**02 35 32.0**	**+1.0**
CLL			*i* PKPbc	**PKPbc**	**02 35 35.8**	**+0.1**
	comp=Z,49nm,1.3s					
CLL			*i* PKPab	**PKPab**	**02 35 41.8**	**0.0**
	comp=Z,20nm,0.9s					
CLL			*ex*	x	02 35 48.0	
CLL			*ex*	x	02 38 03.0	
CLL			*i* SKPdf	**SKPdf**	**02 38 08.0**	**+1.0**
CLL			*e*PP	**PP**	**02 39 10.0**	**-1.8**
CLL	**Collm**	**148.64 345**	*e*PKPbc	**PKPbc**	**02 35 35.9**	**+0.3**
	baz=20,slow=2.4					
CLL			*e*PKPab	**PKPab**	**02 35 42.3**	**+0.5**
	baz=20,slow=2.4					
CJR	**Cluj-Napoca**	**148.65 329**	⇓P	**PKiKP**	**02 35 36.5**	**-0.4**
CJR	**Cluj-Napoca**	**148.65 329**	⇓PKHKP	PKPpre	02 35 36.5	
KECS	**Kecovo**	**148.69 334**	*e*PKP2	**PKiKP**	**02 35 37.3**	**+0.4**
KECS	**Kecovo**	**148.69 334**	*e*PKP	**PKiKP**	**02 35 37.3**	**+0.4**
KECS			*e*		02 35 42.4	
KRLC	**Kraliky**	**148.70 340**	⇑*e*PKP	**PKPbc**	**02 35 36.3**	**+0.4**
KRLC			*e*PKPAB	**PKPab**	**02 35 43.0**	**+0.8**
KRLC	**Kraliky**	**148.70 340**	*e*PKHKP	PKPpre	02 35 36.3	
KRLC			*e*		02 35 43.0	
CLZ	**Clausthal**	**148.70 348**	*e*PKPbc	**PKPbc**	**02 35 36.3**	**+0.5**
	baz=20,slow=2.4					
MORC	**Moravsky Berou**	**148.71 339**	⇑P	**PKPbc**	**02 35 36.1**	**+0.2**
MORC	**Moravsky Berou**	**148.71 339**		**PKPbc**	**02 35 36.1**	**+0.2**
MORC	**Moravsky Berou**	**148.71 339**	*e*PKP	**PKPbc**	**02 35 35.7**	**-0.2**
MORC			*e*		02 35 42.8	
MORC	**Moravsky Berou**	**148.71 339**	⇑PKHKP	PKPpre	02 35 36.1	
BRG	**Berggiesshubel**	**148.81 344**	*e*PKP	**PKPbc**	**02 35 36.5**	**+0.4**
BRG			Amp		02 35 37.7	
	comp=Z,12nm,0.7s					
BRG	**Berggiesshubel**	**148.81 344**	P	**PKPab**	**02 35 43.3**	**+0.7**
BRG			Amp		02 35 44.3	
	comp=Z,10nm,0.8s					
BRG			pPKP	**pPKPab**	**02 38 02.3**	**+4.3**
BRG			Amp		02 38 05.5	
	comp=Z,21nm,1.7s					
BRG	**Berggiesshubel**	**148.81 344**	*e*PKHKP	PKPpre	02 35 36.4	
BRG					02 35 43.2	
BRG			pmax	pmax		
	comp=Z,12nm,0.7s					
BRG			pmax	pmax		
	comp=Z,11nm,0.8s					
BRG			pmax	pmax		
	comp=Z,21nm,1.7s					
BRG	**Berggiesshubel**	**148.81 344**	*e*PKPbc	**PKPbc**	**02 35 36.5**	**+0.4**
	baz=20,slow=2.4					
VOIR		**148.81 326**	⇓P	**PKPbc**	**02 35 36.4**	**0.0**
VOIR		**148.81 326**	⇓PKHKP	PKPpre	02 35 36.4	
MARR	**Marisel-Cluj**	**148.91 329**	⇑P	**PKPbc**	**02 35 36.6**	**0.0**
LTVH	**Ltavrtes, Hu**	**148.94 332**	⇑P	**PKiKP**	**02 35 37.2**	**-0.1**
PVCC	**Panska Ves**	**148.95 343**	⇑*e*PKP	**PKiKP**	**02 35 36.9**	**-0.4**
PVCC	**Panska Ves**	**148.95 343**	*e*PKHKP	PKPpre	02 35 36.9	
MAUC	**Maruska**	**148.96 338**	⇑*e*PKP	**PKPbc**	**02 35 36.8**	**+0.2**
DRGR		**149.01 330**	⇑P	**PKPbc**	**02 35 36.8**	**0.0**
DRGR		**149.01 330**	⇑PKHKP	PKPpre	02 35 36.8	
NEUB	**Neuenburg**	**149.02 346**	*e*PKPbc	**PKPbc**	**02 35 37.0**	**+0.4**
	baz=20,slow=2.4					
GTTG	**Gottingen**	**149.06 349**	*e*PKPbc	**PKPbc**	**02 35 37.1**	**+0.4**
	baz=20,slow=2.4					
RICC	**Richard**	**149.07 343**	⇑*e*PKP	**PKPbc**	**02 35 36.9**	**+0.2**
ARR	**Arges**	**149.08 326**	⇓P	**PKiKP**	**02 35 38.4**	**+0.5**
HSKC	**Hora Svate Kat**	**149.18 344**	⇑*e*PKP	**PKPbc**	**02 35 37.2**	**+0.2**
RAZG	**Razgrad**	**149.21 322**	⇓P	**PKPbc**	**02 35 37.1**	**-0.2**
LOZB	**Loznitsa**	**149.28 321**	⇓P	**PKPbc**	**02 35 37.8**	**+0.3**
VYHS	**Vyhne**	**149.32 336**	*e*PKHKP	PKPpre	02 35 37.9	
VYHS			*e*		02 35 45.2	
VYHS	**Vyhne**	**149.32 336**	*e*PKP	**PKPbc**	**02 35 37.8**	**+0.4**
VYHS			*e*		02 35 45.2	
PSZ	**Piszkesteto**	**149.38 334**	⇓P	**PKPbc**	**02 35 37.4**	**-0.3**
PSZ	**Piszkesteto**	**149.38 334**	⇓PKHKP	PKPpre	02 35 37.4	
PRA	**Prague**	**149.41 343**	⇑*e*PKP	**PKPbc**	**02 35 37.7**	**+0.2**
PRA	**Prague**	**149.41 343**	*e*PKHKP	PKPpre	02 35 37.7	
VRAC	**Vranov**	**149.42 339**	*e*PKP	**PKPbc**	**02 35 37.5**	**-0.1**
VRAC			*e*		02 35 45.8	
JAVC	**Velka Javorina**	**149.44 338**	*e*PKP	**PKiKP**	**02 35 38.7**	**+0.2**
JAVC			*e*		02 35 47.4	
GOPC	**GO Pecny, Ondr**	**149.44 342**	⇑*e*PKP	**PKPbc**	**02 35 37.6**	**-0.1**
GOPC			*e*PKPAB	**PKPab**	**02 35 45.8**	**+0.5**
GOPC	**GO Pecny, Ondr**	**149.44 342**	*e*PKHKP	PKPpre	02 35 37.6	
GOPC			*e*		02 35 45.8	
PRU	**Pruhonice**	**149.45 342**	⇑*e*PKP	**PKPbc**	**02 35 37.7**	**+0.1**
PRU	**Pruhonice**	**149.45 342**	*e*PKHKP	PKPpre	02 35 37.7	
HUMR	**Humele**	**149.46 325**	⇑P	**PKPbc**	**02 35 37.5**	**-0.4**
LOT	**Lotru**	**149.46 327**	⇓P	**PKPbc**	**02 35 37.8**	**-0.2**
ISP	**Isparta**	**149.53 309***c*	*i*PKHKP	PKPpre	02 35 38.5	
ISP			pmax	pmax		
	comp=Z,11nm,0.8s					
MOX	**Moxa**	**149.58 346**	*e*PKPbc	**PKPbc**	**02 35 38.1**	**+0.1**
	baz=20,slow=2.4					
BUG	**Bochum--Univer**	**149.58 352**	*e*PKPbc	**PKPbc**	**02 35 38.0**	**+0.2**
	baz=20,slow=2.4					
DEV	**Deva**	**149.59 329**	⇓P	**PKiKP**	**02 35 38.5**	**-0.2**
DEV	**Deva**	**149.59 329**	⇓PKHKP	PKPpre	02 35 38.5	
TANN	**Tannenbergstha**	**149.60 345**	*e*PKPbc	**PKiKP**	**02 35 38.4**	**-0.3**
	baz=20,slow=2.4					
PLN	**Plauen**	**149.61 346**	*e*PKPbc	**PKPbc**	**02 35 38.4**	**+0.3**
	baz=20,slow=2.4					
KASTN	**Kahler Asten**	**149.65 350**	*e*PKPbc	**PKPbc**	**02 35 38.5**	**+0.3**
	baz=20,slow=2.4					
KRUC	**Moravsky**	**149.70 339**	*e*PKP	**PKPbc**	**02 35 38.0**	**-0.3**
KRUC			*e*		02 35 46.9	
UBBA	**Unterbreizbach**	**149.75 348**	*e*PKPbc	**PKiKP**	**02 35 38.5**	**-0.3**
	baz=20,slow=2.4					
NKC	**Novy Kostel**	**149.77 345**	⇑*e*PKP	**PKPbc**	**02 35 38.7**	**+0.3**
NKC	**Novy Kostel**	**149.77 345**	*e*PKHKP	PKPpre	02 35 38.7	
ZIMR		**149.81 323**	⇑P	**PKiKP**	**02 35 39.1**	**-0.2**
ZIMR		**149.81 323**	⇑PKHKP	PKPpre	02 35 39.1	
SIRR	**Siria**	**149.89 330**	⇑P	**PKiKP**	**02 35 39.2**	**-0.2**
ELND	**Elena**	**149.97 321**	⇓P	**PKPbc**	**02 35 38.7**	**-0.4**
MODS	**Modra-Piesok**	**149.99 338**	*e*PKHKP	PKPpre	02 35 39.7	
MODS			*e*		02 35 48.8	
MODS	**Modra-Piesok**	**149.99 338**	*e*PKP	**PKiKP**	**02 35 39.7**	**+0.1**
MODS			*e*		02 35 48.8	
GZR	**Gura Zlata**	**150.00 328**	⇑P	**PKPbc**	**02 35 38.9**	**-0.3**
GZR	**Gura Zlata**	**150.00 328**	⇑PKIKP	**PKPbc**	**02 35 38.9**	**-0.3**
ZVC	**Zvikov**	**150.04 342**	⇑*e*PKP	**PKiKP**	**02 35 39.7**	**+0.1**
SURR	**Surduc**	**150.05 329**	⇑P	**PKPbc**	**02 35 39.0**	**-0.2**
MANZ	**Manzenberg**	**150.09 345**	*e*PKPbc	**PKiKP**	**02 35 39.6**	**-0.1**
	baz=20,slow=2.4					
VLAD	**Vladila**	**150.12 324**	⇓P	**PKiKP**	**02 35 39.9**	**0.0**
ZST	**Bratislava**	**150.20 338**	*e*PKIKP	**PKiKP**	**02 35 40.3**	**+0.3**
ZST			*e*		02 35 49.9	
ZST	**Bratislava**	**150.20 338**	*e*PKP	**PKiKP**	**02 35 40.3**	**+0.3**
ZST			*e*		02 35 49.9	
ROTZ	**Rotzenmuhle**	**150.26 345**	*e*PKPbc	**PKPbc**	**02 35 39.7**	**+0.1**
	baz=20,slow=2.4					
PLVB	**Pleven**	**150.40 323**	⇑P	**PKPbc**	**02 35 40.2**	**+0.1**
BZS	**Buzias**	**150.40 330**	⇓P	**PKPbc**	**02 35 39.8**	**-0.2**
BZS	**Buzias**	**150.40 330**	⇓PKIKP	**PKPbc**	**02 35 39.8**	**-0.2**
BEBN	**Eben Emael**	**150.40 354**	*d*PKPab	**PKPab**	**02 35 49.3**	**+0.1**
ELL	**Elmali**	**150.41 308**		**PKPbc**	**02 35 40.1**	**-0.4**
ELL	**Elmali**	**150.41 308**	PKIKP	**PKPbc**	**02 35 40.1**	**-0.4**
KHC	**Kasperske Hory**	**150.49 343**		**PKPbc**	**02 35 40.3**	**+0.1**
KHC	**Kasperske Hory**	**150.49 343**	⇑*e*PKP	**PKPbc**	**02 35 40.0**	**-0.2**
KHC			*e*PKPAB	**PKPab**	**02 35 50.7**	**+1.0**
KHC	**Kasperske Hory**	**150.49 343***c*	*i*PKIKP	**PKiKP**	**02 35 40.8**	**+0.2**
KHC			pmax	pmax		
	comp=Z,86nm,1.7s					
HERR	**Herculane**	**150.54 328**	⇑P	**PKPbc**	**02 35 40.1**	**-0.2**
MEM	**Membach**	**150.55 353**	*d*PKP	**PKPbc**	**02 35 40.2**	**0.0**
MEM			*d*PKPab	**PKPab**	**02 35 49.7**	**-0.1**
BTNL	**Ternell**	**150.56 353**	*d*PKP	**PKPbc**	**02 35 40.2**	**-0.1**
BTNL			*d*PKPab	**PKPab**	**02 35 49.4**	**-0.5**
CKRC	**Cesky Krumlov**	**150.56 342**	⇑*e*PKP	**PKPbc**	**02 35 40.5**	**+0.2**
CKRC	**Cesky Krumlov**	**150.56 342**	*e*PKIKP	**PKPbc**	**02 35 40.5**	**+0.2**
GRF	**Grafenberg Arr**	**150.56 346**	*e*PKPbc	**PKiKP**	**02 35 41.1**	**+0.4**
	baz=20,slow=2.4					
GRF			*e*PKPab	**PKPab**	**02 35 51.0**	**+1.0**
	baz=20,slow=2.4					
TNS	**Taunus Mts**	**150.60 350**	*e*PKPbc	**PKiKP**	**02 35 40.9**	**+0.1**
	baz=20,slow=2.4					
BSTI	**Sart Tilman**	**150.63 354**	*d*PKP	**PKPbc**	**02 35 40.5**	**+0.2**
BSTI			*d*PKPab	**PKPab**	**02 35 50.0**	**-0.1**
DJES	**Djerdap**	**150.64 327**	⇓P	**PKPbc**	**02 35 40.3**	**-0.3**
DJES	**Djerdap**	**150.64 327**		**PKPbc**	**02 35 40.0**	**-0.6**
WET	**Wettzell**	**150.67 344**	*e*PKPab	**PKPab**	**02 35 51.5**	**+1.1**
	baz=20,slow=2.4					
GEC2	**GERESS Array S**	**150.72 342**		**PKPbc**	**02 35 40.4**	**-0.4**
GEC2	**GERESS Array S**	**150.72 342**	*e*PKPbc	**PKPbc**	**02 35 40.9**	**+0.1**
	baz=20,slow=2.4					
GEC2			*e*PKPab	**PKPab**	**02 35 50.9**	**+0.2**
	baz=20,slow=2.4					
GERES	**GERESS Array B**	**150.72 342**		**PKPbc**	**02 35 40.4**	**-0.4**
GERES	**GERESS Array B**	**150.72 342**	PKIKP	**PKPbc**	**02 35 40.4**	**-0.4**
GERES	**GERESS Array B**	**150.72 342**	PKPbc	**PKPbc**	**02 35 40.7**	**-0.1**
	comp=Z,9.8nm,0.8s,baz=25,slow=3.1,SNR=15					
BANR	**Banloc**	**150.80 330**	⇑P	**PKiKP**	**02 35 42.2**	**+1.0**
BCLA	**Clavier**	**150.81 354**	*d*PKP	**PKPab**	**02 35 50.9**	**0.0**
CONA	**Conrad Observa**	**150.86 339**	*e*PKP	**PKiKP**	**02 35 41.5**	**0.0**
	comp=Z,15nm,0.7s,SNR=18					
CONA			*i* PKP	**PKPab**	**02 35 52.8**	**+1.4**
	comp=Z,19nm,0.7s					
BGES	**Gesves**	**150.87 354**	*d*PKP	**PKPbc**	**02 35 41.0**	**+0.1**
BGES			*d*PKPab	**PKPab**	**02 35 51.1**	**0.0**
RONA	**Rosalia, Austr**	**150.91 338**	*i* PKP	**PKiKP**	**02 35 41.5**	**0.0**
	comp=Z,20nm,0.6s,SNR=15					
RONA			*i* PKP	**PKPab**	**02 35 53.0**	**+1.5**
	comp=Z,21nm,0.9s					
MDVR	**Moldovita**	**150.96 328**	⇑P	**PKPbc**	**02 35 41.3**	**-0.1**
BMRD	**Maredsous**	**150.98 355**	*d*PKP	**PKPbc**	**02 35 41.0**	**-0.2**
BMRD			*d*PKPab	**PKPab**	**02 35 51.7**	**+0.1**
RCHB	**Rochefort**	**151.08 354**	*d*PKP	**PKPbc**	**02 35 41.2**	**-0.2**
DOU	**Dourbes**	**151.20 355**	*d*PKPdf	**PKPdf**	**02 35 35.1**	**+0.1**
DOU			*d*PKP	**PKPbc**	**02 35 41.7**	**0.0**
DOU			*d*PKPab	**PKPab**	**02 35 52.6**	**+0.1**
RDO	**Rodhopi**	**151.24 319**		**PKPbc**	**02 35 41.2**	**-0.8**
MORH	**Mrgy, Hungar**	**151.25 334**	⇓P	**PKPbc**	**02 35 41.0**	**-0.9**
MOA	**Molln**	**151.44 341**	*i* PKP	**PKiKP**	**02 35 42.8**	**+0.1**
	comp=Z,6.3nm,0.7s,SNR=5.3					
MOA			*i* PKP	**PKPab**	**02 35 55.2**	**+1.5**
	comp=Z,20nm,1.4s					
WLF	**Walferdange**	**151.47 353**		**PKiKP**	**02 35 42.7**	**+0.1**
WLF	**Walferdange**	**151.47 353**	*d*PKP	**PKiKP**	**02 35 43.1**	**+0.6**
WLF	**Walferdange**	**151.47 353**	PKIKP	**PKiKP**	**02 35 42.7**	**+0.1**
WLF	**Walferdange**	**151.47 353**	*e*PKPbc	**PKiKP**	**02 35 43.5**	**+0.9**
	baz=20,slow=2.4					
ARSA	**Arzberg**	**151.56 339**	*i* PKP	**PKiKP**	**02 35 42.9**	**0.0**
	comp=Z,5.5nm,1.1s					
ARSA			*i* PKP	**PKPab**	**02 35 55.3**	**+1.0**
	comp=Z,4.9nm,0.6s					
FRGS	**Fruska Gora**	**151.58 331**	⇑P	**PKPbc**	**02 35 42.7**	**-0.1**
BIOA	**Bad Ischl, Aus**	**151.78 341**	*i* PKP	**PKiKP**	**02 35 43.2**	**-0.1**
	comp=Z,8.7nm,0.9s					
BIOA			*i* PKP	**PKPab**	**02 35 56.4**	**+1.2**
	comp=Z,14nm,0.7s					
BOVS	**Bovan**	**151.79 327**	⇓P	**PKPbc**	**02 35 42.8**	**-0.5**
STU	**Stuttgart**	**151.86 348**	*e*PKPbc	**PKiKP**	**02 35 43.6**	**+0.2**
	baz=20,slow=2.4					
STU			*e*PKPab	**PKPab**	**02 35 55.2**	**-0.2**
	baz=20,slow=2.4					
FUR	**Furstenfeldbru**	**151.98 345**	*e*PKPbc	**PKiKP**	**02 35 43.9**	**+0.2**
	baz=20,slow=2.4					
FUR			*e*PKPab	**PKPab**	**02 35 56.9**	**+0.9**
	baz=20,slow=2.4					
SOKA	**Soboth**	**152.23 339**	*i* PKP	**PKPbc**	**02 35 43.5**	**-0.7**
	comp=Z,8.1nm,0.9s,SNR=5.5					
SOKA			*i* PKP	**PKPab**	**02 35 57.8**	**+0.7**
	comp=Z,16nm,1.1s					
LESA	**Schwarzleotal**	**152.30 342**	*i* PKP	**PKiKP**	**02 35 44.4**	**-0.1**
	comp=Z,4.2nm,0.5s					
LESA			*i* PKP	**PKPab**	**02 35 59.4**	**+1.9**
	comp=Z,20nm,1.5s					
KBA	**Koelnbreinsper**	**152.41 341**	*i* PKP	**PKPbc**	**02 35 44.4**	**-0.3**
	comp=Z,12nm,1.0s					
KBA			*i* PKP	**PKPab**	**02 35 59.2**	**+1.2**
	comp=Z,6.1nm,0.6s					
BFO	**Black Forest**	**152.44 349**		**PKiKP**	**02 35 44.6**	**-0.1**
BFO	**Black Forest**	**152.44 349**	PKIKP	**PKiKP**	**02 35 44.6**	**-0.1**
BFO	**Black Forest**	**152.44 349**	*e*PKPbc	**PKiKP**	**02 35 44.6**	**-0.1**
	baz=20,slow=2.4					
BFO			*e*PKPab	**PKPab**	**02 35 58.1**	**+0.1**
	baz=20,slow=2.4					
OBKA	**Obir**	**152.54 339**	*i* PKP	**PKiKP**	**02 35 45.4**	**+0.4**
	comp=Z,14nm,1.3s					
OBKA			*i* PKP	**PKPab**	**02 35 58.8**	**+0.3**
	comp=Z,11nm,0.8s,SNR=5.3					
WATA	**Walderalm**	**152.68 344**	*i* PKP	**PKiKP**	**02 35 45.4**	**+0.1**
	comp=Z,3.7nm,0.5s					
WATA			*i* PKP	**PKPab**	**02 36 00.0**	**+0.8**
	comp=Z,16nm,1.3s					
MYKA	**Terra Mystica**	**152.72 340**	*i* PKP	**PKPbc**	**02 35 44.9**	**-0.4**
	comp=Z,5.4nm,0.6s					
MYKA			*i* PKP	**PKPab**	**02 35 58.7**	**-0.6**
	comp=Z,11nm,0.6s,SNR=4.4					
WTTA	**Wattenberg**	**152.73 344**	*i* PKP	**PKPbc**	**02 35 45.2**	**-0.2**
	comp=Z,15nm,0.9s,SNR=7.0					
WTTA			*i* PKP	**PKPab**	**02 35 59.6**	**+0.3**
	comp=Z,27nm,1.1s					
RETA	**Reutte**	**152.74 345**	*i* PKP	**PKPbc**	**02 35 44.9**	**-0.4**
	comp=Z,5.1nm,0.8s					
RETA			*i* PKP	**PKPab**	**02 35 59.1**	**-0.2**
	comp=Z,16nm,1.1s,SNR=4.8					
MOTA	**Moosalm**	**152.79 344**	*i* PKP	**PKPbc**	**02 35 45.3**	**-0.2**
	comp=Z,14nm,1.0s					
MOTA			*i* PKP	**PKPab**	**02 36 00.3**	**+0.7**
	comp=Z,18nm,1.1s					
SQTA	**Sankt Quirin**	**152.88 344**	*i* PKP	**PKPbc**	**02 35 45.6**	**-0.1**
	comp=Z,5.8nm,0.7s					
SQTA			*i* PKP	**PKPab**	**02 36 00.5**	**+0.6**
	comp=Z,7.7nm,0.8s					
PRED	**Cave del Predi**	**152.92 340**		**PKPab**	**02 35 59.5**	**-0.6**
KARP	**Karpathos**	**152.93 307**		**PKPbc**	**02 35 45.1**	**-0.9**
KARP			PKPab	**PKPab**	**02 36 00.9**	**+0.4**
ABTA	**Abfaltersbach**	**152.96 342**	*i* PKP	**PKPbc**	**02 35 45.6**	**-0.1**
	comp=Z,15nm,1.1s					
ABTA			*i* PKP	**PKPab**	**02 36 00.5**	**+0.2**
	comp=Z,9.4nm,0.6s					
DAVA	**Damuels**	**153.13 346**	*i* PKP	**PKPab**	**02 36 01.7**	**+0.6**
	comp=Z,11nm,0.8s					
FETA	**Feichten**	**153.18 345**	*i* PKP	**PKiKP**	**02 35 46.9**	**+0.5**
	comp=Z,6.6nm,0.8s					
FETA			*i* PKP	**PKPab**	**02 36 00.2**	**-1.1**
	comp=Z,6.1nm,1.1s					
CIMO	**Cimolais**	**153.38 342**		**PKPbc**	**02 35 45.6**	**-1.0**
FUORN	**Ofenpass-Fuorn**	**153.67 345**	PKPab	**PKPab**	**02 36 04.2**	**+0.7**
ESDC	**Sonseca Array**	**161.35 11**	PKPab	**PKPab**	**02 36 36.3**	**-0.5**
ESDC	**Sonseca Array**	**161.35 11**	PKPab	**PKPab**	**02 36 36.6**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=351,slow=3.8,SNR=12					
KEST	**Kesra**	**163.85 334**	PKPab	**PKPab**	**02 36 48.6**	**+0.6**
	comp=Z,11nm,0.8s,baz=332,slow=1.2,SNR=10					
DBIC	**Dimbokro**	**164.39 159**	PKPab	**PKPab**	**02 36 51.6**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=201,slow=8.1,SNR=6.6					
TORD	**Torodi Ar. Bea**	**171.74 187**	PKP	**PKPdf**	**02 35 56.5**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=204,slow=3.2,SNR=2.2					
TORD			PKPab	**PKPab**	**02 37 23.9**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=158,slow=2.8,SNR=6.5					

ISC 24 02:39:20.7±0.8, 36°23N±0°.02×117°40W±0°.02, h10km, n24, σ0°74/43, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPMC	**Manual Prospec**	**0.19**	**204**	P	**Pg**	**02 39 24.7**	**-0.1**
	baz=22,SNR=620						
MPMC				S	**Sg**	**02 39 27.5**	**-0.1**
	baz=22						
FURC	**Furnace Creek,**	**0.49**	**61**	P	**Pg**	**02 39 30.9**	**+0.7**
	baz=241,SNR=31						
FURC				S	**Sg**	**02 39 37.8**	**+1.1**
	baz=241						
CWC	**Cottonwood Cre**	**0.59**	**291**	P	**Pg**	**02 39 32.1**	**-0.1**
	baz=111						
CWC				S	**Sg**	**02 39 40.1**	**+0.1**
	baz=111						
GRAC	**Grapevine Rang**	**0.77**	**2**	P	**Pg**	**02 39 35.6**	**+0.1**
	baz=182,SNR=44						
GRAC				S	**Sb**	**02 39 46.6**	**-0.1**
	baz=182						
LRMC	**Laurel Mtn Rad**	**0.78**	**197**	P	**Pg**	**02 39 35.4**	**-0.5**
	baz=17,SNR=17						
LRMC				S	**Sg**	**02 39 46.0**	**-0.1**
	baz=17						
SHOC	**Shoshone, Teco**	**0.97**	**110**	P	**Pg**	**02 39 39.1**	**-0.2**
	baz=290,SNR=16						
SHOC				S	**Sb**	**02 39 52.6**	**+0.2**
	baz=290						
ISA	**Isabella, Lake**	**1.04**	**237**	Pg	**Pg**	**02 39 40.4**	**-0.4**
	baz=57,SNR=32						
ISA				S	**Sg**	**02 39 53.8**	**-0.5**
	baz=57						
GSC	**Goldstone, Bar**	**1.04**	**152**	P	**Pg**	**02 39 40.6**	**-0.2**
	baz=333,SNR=32						
GSC				S	**Sg**	**02 39 54.6**	**+0.2**
	baz=333						
TIN	**Tinemaha, Big**	**1.06**	**321**	P	**Pg**	**02 39 40.8**	**-0.3**
	baz=141						
TIN				S	**Sg**	**02 39 55.2**	**+0.2**
	baz=141						
RRX	**Edison Barstow**	**1.39**	**166**	S	**Sn**	**02 40 05.0**	**+0.4**
	baz=346						
VES	**Vestal, Richgr**	**1.42**	**255**	Pg	**Pb**	**02 39 47.4**	**+0.1**
	baz=74						
VES				Sg	**Sg**	**02 40 06.4**	**-0.1**
	baz=74						
EDW2	**Edwards Air Fo**	**1.43**	**200**	Pb	**Pn**	**02 39 46.8**	**0.0**
	baz=20,SNR=8.8						
EDW2				Sg	**Sg**	**02 40 07.0**	**+0.3**
	baz=20						
TUQ	**Turquoise Moun**	**1.44**	**123**	Pg	**Pb**	**02 39 48.1**	**+0.5**
	baz=304,SNR=6.5						
TUQ				Sb	**Sg**	**02 40 07.4**	**+0.5**
	baz=304						
ARVC	**Arvin**	**1.60**	**227**	Pg	**Pb**	**02 39 50.8**	**+0.4**
	baz=46						
ARVC				Sg	**Sg**	**02 40 12.7**	**+0.4**
	baz=46						
VOG	**Valley Oaks Go**	**1.61**	**274**	Pg	**Pb**	**02 39 50.8**	**+0.3**
	baz=93						
HEC	**Hector,Ludlow**	**1.64**	**148**	P	**Pn**	**02 39 49.2**	**-0.5**
	baz=328						
HEC				Sb	**Sg**	**02 40 13.4**	**-0.1**
	baz=328						
BFSC	**Mount Baldy Ra**	**2.00**	**186**	Pg	**Pb**	**02 39 58.3**	**+1.0**
	baz=5.9						
BFSC				Sb	**Sg**	**02 40 23.8**	**-1.1**
	baz=5.9						
BBRC	**Big Bear Solar**	**2.00**	**169**	P	**Pn**	**02 39 54.4**	**-0.4**
	baz=349						
BBRC				Sb	**Sg**	**02 40 24.3**	**-0.8**
	baz=349						
GMRC	**Granite Mounta**	**2.02**	**135**	P	**Pn**	**02 39 53.8**	**-1.2**
	baz=316,SNR=12						
GMRC				Sb	**Sg**	**02 40 24.8**	**-0.9**
	baz=316						
SMMC	**Simmler**	**2.30**	**247**	Sb	**Sb**	**02 40 31.3**	**+0.4**
	baz=66						
BELC	**Belle Mtn. Jos**	**2.50**	**152**	P	**Pn**	**02 40 01.2**	**-0.4**
	baz=333						
BELC				S	**Sn**	**02 40 32.0**	**-0.2**
	baz=333						
R11B	**Troy Canyon, C**	**2.56**	**34**	Pb	**Pb**	**02 40 07.1**	**+0.2**
	baz=215						
R11B				Sb	**Sg**	**02 40 41.5**	**-1.6**
	baz=215						
PFO	**Pinyon Flats O**	**2.72**	**163**	Sb	**Sb**	**02 40 45.2**	**+2.1**
	baz=344						
IRM	**Iron Mountain**	**2.77**	**138**	Sb	**Sg**	**02 40 47.4**	**-2.3**
	baz=319						

*IDC **24** 02:43:46.4±0.5, 37°.20N×141°.45E, h0km, mb4.3/28, mbtmp4.2/36, ML3.5/7, MS3.5/11, Error ellipse: s-maj=13.8km s-min=11.8km az=105.0*
*JMA **24** 02:43:47.8±0.2, 37°.2N±0°.3×141°.5E±0°.8, h25km±1km, MD4.5/40, MV4.5/40, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **24** 02:43:47.8, 37°.22N×141°.52E, h25km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=2.30; Mθθ0.15; Mφφ2.15; Mrθ-0.50; Mθφ0.28; Mrφ0.25; Fault plane solution: M0 2.31000×

MAJO **Matsushiro** 2.71 256 Pn Pn 02 44 32.1 0.0
MAJO **Matsushiro** 2.71 256 P Pn 02 44 32.5 +0.3
MAJO **Matsushiro** 2.71 256 *i* P Pn 02 44 32.4 +0.3
MJB9 **Matsu-Tunnel** 2.71 256 Pn 02 44 32.5 +0.2
JTM **Tenmabayashi** 3.55 355 Pn Pn 02 44 43.7 0.0
JTM **Tenmabayashi** 3.55 355 P Pn 02 44 44.0 +0.3
JSG **Sagara** 3.70 227 Pn Pn 02 44 46.6 +0.9
JGF **Kuroka** 3.70 245 Pn 02 44 46.0 +0.1
JGF **Kuroka** 3.70 245 P Pn 02 44 46.7 +0.8
INU **Inuyama** 4.07 244 Pn 02 44 50.8 0.0
INU **Inuyama** 4.07 244 P Pn 02 44 52.3 +1.5
JHJ2 **Mitsune** 4.34 199 Pn Pn 02 44 55.5 +1.0
JHJ2 **Mitsune** 4.34 199 P Pn 02 44 55.2 +0.6
JHJ **Hachijo jima 2** 4.34 199 Pn Pn 02 44 53.9 -0.7
comp=N,28nm,0.3s,baz=65,slow=14,SNR=6.2
JHJ Sn **Sn** 02 45 44.5 +0.1
comp=N,15nm,0.3s,baz=102,slow=23,SNR=1.2
comp=N,158nm,0.8s
ERM **Erimo** 4.94 15 Pn Pn 02 45 01.9 -0.9
ERM **Erimo** 4.94 15 P Pn 02 45 02.1 -0.6
ERM **Erimo** 4.94 15 *i* P Pn 02 45 02.3 -0.4
JEM **Erimo** 4.94 15 P Pn 02 45 02.3 -0.5
ASAJ **Asahikawa** 6.92 7 Pn Pn 02 45 28.5 -1.4
comp=N,2.2nm,0.3s,baz=193,slow=14,SNR=7.6
ASAJ Sn **Sn** 02 46 50.0 +2.3
comp=N,0.7nm,0.3s,baz=56,slow=34,SNR=2.2
comp=N,6.0nm,0.3s
JKA **Kamikawa-asahi** 6.92 7 Pn Pn 02 45 28.6 -1.3
NMR **Nemuro--Hokkai** 6.93 27 *e*P Pn 02 45 26.6 -3.4
NMR *e*S Sn 02 46 42.5 -5.4
JMN **Monobe** 7.12 243 Pn Pn 02 45 31.8 -1.0
YUK **Yuzh-Kuril'sk** 7.56 25 P Pn 02 45 35.9 -2.8
YUK *e*S Sn 02 46 59.6 -3.8
SHO **Shikotan** 7.77 30 P Pn 02 45 37.9 -3.7
SHO S Sn 02 47 01.7 -7.0
JNU **Nakatsue** 9.60 248 Pn Pn 02 46 06.8 0.0
comp=N,0.9nm,0.3s,baz=61,slow=13,SNR=2.1
JNU LR LR 02 50 21.6
comp=N,241nm,18.7s,baz=68,slow=41
comp=N,1.8nm,0.3s
YSS **Yuzh-Sakhalins** 9.75 5 *e*P Pn 02 46 05.8 -2.9
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,600nm,14.0s
USA0B **Ussuriysk Arra** 10.00 317 Pn Pn 02 46 13.7 +1.5
USA0B **Ussuriysk Arra** 10.00 317 P Pn 02 46 13.7 +1.5
USRK **Ussuriysk Ar.** 10.00 317 Pn Pn 02 46 12.9 +0.7
USRK **Ussuriysk Ar.** 10.00 317 Pn Pn 02 46 11.0 -1.2
comp=Z,0.1nm,0.3s,baz=113,slow=14,SNR=2.2
USRK LR LR 02 49 45.5
comp=Z,242nm,19.1s,baz=144,slow=36
comp=Z,2.6nm,1.0s
KSRS **Korea Array** 10.79 275 Pn Pn 02 46 22.9 -0.2
comp=Z,0.7nm,0.6s,baz=83,slow=11,SNR=1.3
KSRS LR LR 02 50 21.2
comp=Z,216nm,20.1s,baz=95,slow=36
MDJ **Mudanjiang** 11.61 313 P Pn 02 46 33.8 -0.4
MDJ pP 02 46 40.8
MDJ sP 02 46 46.4
MDJ S **Sn** 02 48 43.8 +0.9
MDJ SS **SnSn** 02 48 57.3 +2.4
MDJ PcP **PcP** 02 52 23.6 -0.2
MDJ pmax pmax
comp=Z,8.0nm,2.4s
MDJ pmax pmax
comp=Z,150nm,4.9s
MDJ LR LR
comp=N,370nm,8.9s
MDJ LR LR
comp=E,490nm,9.5s
MDJ LR LR
comp=Z,400nm,13.7s
TYV **Tymovskoe** 13.64 3 *e*P Pn 02 47 01.1 -0.8
TYV pmax pmax
comp=Z,100nm,2.9s
TYV pmax pmax
comp=Z,4.0nm,0.9s
CN2 **Changchun** 13.83 303 *e*P Pn 02 47 02.1 -2.4
CN2 *e*PP **P** 02 47 13.3 +0.7
CN2 pmax pmax
comp=Z,10.0nm,1.5s
KLR **Kul'dur** 13.90 333 Pn Pn 02 47 06.4 +0.9
comp=Z,0.1nm,0.3s,baz=131,slow=12,SNR=2.1
comp=Z,0.9nm,0.7s
HEH **HeiHe** 16.46 327 *e*P **P** 02 47 44.5 +2.7
ZEA **Zeya** 19.21 334 *e*P **P** 02 48 12.8 +0.7
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
NJ2 **Nanjing** 19.30 261 *e*P **P** 02 48 14.6 +1.4
NJ2 pP **pP** 02 48 21.9 +1.3
NJ2 sP **sP** 02 48 27.3 +3.3
NJ2 pmax pmax
comp=Z,7.0nm,0.8s
NJ2 pmax pmax
comp=Z,120nm,3.6s
PETK **Petropavlovsk-** 19.48 30 P **P** 02 48 16.1 +1.1
comp=Z,0.1nm,0.3s,baz=221,slow=15,SNR=2.6
comp=Z,4.2nm,0.9s
XLT **XiLinHaoTe** 20.36 297 *e*P **P** 02 48 22.4 -2.4
XLT pP pP 02 48 31.8 -0.3
XLT PP **PnPn** 02 48 43.8 +1.8
XLT pmax pmax
comp=Z,4.0nm,1.2s
XLT pmax pmax
comp=Z,88nm,3.9s
HNS **HongShan** 21.27 279 ⇓P **P** 02 48 39.9 +5.4
HNS pmax pmax
comp=Z,8.0nm,0.6s
HHC **Hu-ho-hao-te** 23.45 288 *e*P **P** 02 48 57.3 -0.3
HHC pP pP 02 49 07.5 +2.2
HHC S **S** 02 53 04.5 -4.9
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,200nm,6.2s
HHC LR LR
comp=N,140nm,12.8s
HHC LR LR
comp=Z,150nm,11.6s
LYN **LuoYang** 23.61 272 *e*P **P** 02 49 02.4 +3.3
LYN pmax pmax
comp=Z,13nm,0.8s
YAK **Yakutsk** 25.88 347 P **P** 02 49 18.4 -1.1
YAK **Yakutsk** 25.88 347 *e*P **P** 02 49 18.9 -0.6
YAK *e**PP **pP** 02 49 28.2 +0.7
YAK *e*S **S** 02 53 46.6 -0.9
YAK pmax pmax
comp=Z,38nm,1.0s
YAK pmax pmax
comp=N,15nm,1.8s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,429nm,5.1s
YAK pmax pmax
comp=N,332nm,6.2s
YAK pmax pmax
comp=E,55nm,3.5s
YAK smax smax
comp=N,409nm,5.4s
YAK smax smax
comp=E,234nm,4.0s
BOD **Bodaibo** 27.38 328 *e*P **P** 02 49 32.2 -0.9
BOD pmax pmax
comp=Z,4.0nm,0.7s
SONM **Songino Array** 27.71 304 P **P** 02 49 34.9 -1.5
SONM **Songino Array** 27.71 304 P **P** 02 49 34.9 -1.5
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM **Songino Array** 27.71 304 P **P** 02 49 36.4 0.0
comp=Z,2.2nm,0.8s,baz=103,slow=9.0,SNR=16
comp=Z,2.2nm,0.8s
H11N2 **WAKE ISLAND Hy** 28.21 121 T T 03 19 07.3
baz=314,slow=75,SNR=736
H11N1 **WAKE ISLAND Hy** 28.22 121 T T 03 19 09.1
baz=314,slow=75,SNR=961
H11N3 **WAKE ISLAND Hy** 28.23 121 T T 03 19 08.7
baz=314,slow=75,SNR=937
H11S1 **WAKE ISLAND Hy** 28.93 123 T T 03 19 57.9
baz=316,slow=76,SNR=529
H11S3 **WAKE ISLAND Hy** 28.93 123 T T 03 19 57.6
baz=316,slow=76,SNR=273
H11S2 **WAKE ISLAND Hy** 28.95 123 T T 03 19 58.8
baz=316,slow=76,SNR=210
LZH **Lanzhou** 30.08 279 *e*P **P** 02 49 55.3 -2.3
LZH pmax pmax
comp=Z,8.0nm,1.0s
GTA **Gaotai** 32.55 287 P **P** 02 50 22.5 +3.2
GTA pP sP 02 50 32.3 +1.7
GTA pmax pmax
comp=Z,3.0nm,0.8s
TIXI **Tiksi** 35.09 353 P **P** 02 50 40.7 -0.1
TIXI **Tiksi** 35.09 353 *ce*P **P** 02 50 41.9 +1.2
TIXI pmax pmax
comp=Z,5.0nm,1.3s
PZH **PanZhiHua** 35.17 264 P **P** 02 50 41.8 -0.4
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.1s
DGZ **Jazzator, Alta** 40.31 306 *i* P **P** 02 51 25.9 +0.5
DGZ pmax pmax
comp=Z,6.0nm,0.8s
TOLI2 **Tolitoli** 40.71 213 P **P** 02 51 28.9 +0.1
TOLI2 IAmb IAmb 02 51 31.2
comp=Z,8.1nm,1.0s
WMQ **Urumqi** 40.79 297 *e*P P 02 51 18.8 -11
WMQ pmax pmax
comp=Z,18nm,0.9s
CHTO **Chiang Mai** 41.39 256 P **P** 02 51 33.9 -0.5
CHTO **Chiang Mai** 41.39 256 P **P** 02 51 33.9 -0.5
CHTO pmax pmax
comp=Z,4.0nm,1.1s
CMAR **Chiang Mai Arr** 41.60 255 P **P** 02 51 36.2 0.0
CMAR **Chiang Mai Arr** 41.60 255 *ce*P **P** 02 51 37.7 +1.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR **Chiang Mai Arr** 41.60 255 P **P** 02 51 36.7 +0.5
comp=Z,1.2nm,0.3s,baz=66,slow=8.5,SNR=4.1
comp=Z,1.2nm,0.3s
ZAA0 **Zalesovo Array** 41.81 312 P **P** 02 51 36.5 -1.0
ZALV **Zalesovo Beam** 41.81 312 P **P** 02 51 36.8 -0.7
ZALV **Zalesovo Beam** 41.81 312 *i* P **P** 02 51 37.2 -0.2
ZALV pmax pmax
comp=Z,5.0nm,0.8s
ZALV **Zalesovo Beam** 41.81 312 P **P** 02 51 37.0 -0.4
comp=Z,5.0nm,0.8s,baz=88,slow=7.4,SNR=20
ZALV PcP **PcP** 02 53 33.3 +0.2
comp=Z,1.2nm,0.7s,baz=96,slow=2.9,SNR=2.5
comp=Z,5.0nm,0.8s
C16K **Lisburne Hills** 42.49 26 P **P** 02 51 43.4 +0.6
C16K IAmb IAmb 02 51 48.6
comp=Z,6.6nm,0.8s
MK31 **Makanchi Array** 44.05 302 P **P** 02 51 55.5 -0.3
MK31 **Makanchi Array** 44.05 302 *i* P **P** 02 51 55.1 -0.6
MKAR **Makanchi Array** 44.05 302 P **P** 02 51 55.1 -0.6
MKAR **Makanchi Array** 44.05 302 P **P** 02 51 55.2 -0.6
MKAR **Makanchi Array** 44.05 302 P **P** 02 51 55.6 -0.1
comp=Z,2.3nm,0.7s,baz=81,slow=9.4,SNR=30
MKAR PcP **PcP** 02 53 41.5 +0.7
comp=Z,0.3nm,0.8s,baz=76,slow=6.1,SNR=1.7
comp=Z,2.3nm,0.7s
C18K **Utukok River** 44.07 26 P **P** 02 51 56.8 +1.2
C18K IAmb IAmb 02 51 57.9
comp=Z,12nm,0.8s
MAKZ **Makanchi** 44.26 302 P **P** 02 51 56.9 -0.5
MAKZ **Makanchi** 44.26 302 P **P** 02 51 56.9 -0.5
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
C19K **Lookout Ridge** 44.75 26 P **P** 02 52 01.9 +0.9
C19K IAmb IAmb 02 52 04.2
comp=Z,11nm,0.9s
H19K **Roundabout Mou** 45.29 31 P **P** 02 52 06.4 +1.2
H19K IAmb IAmb 02 52 12.2
comp=Z,12nm,1.3s
O18K **Koktuh Hills** 45.48 39 P **P** 02 52 08.0 +1.0
O18K IAmb IAmb 02 52 13.2
comp=Z,15nm,1.1s
KURK **Kurchatov** 45.84 308 P **P** 02 52 08.6 -1.3
KURK IAmb IAmb 02 52 10.5
comp=Z,8.6nm,0.8s
KURK **Kurchatov** 45.84 308 P **P** 02 52 08.6 -1.3
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURBB **Kurchatov Arra** 45.91 308 P **P** 02 52 10.1 -0.4
comp=Z,3.6nm,0.6s,baz=82,slow=8.2,SNR=41
comp=Z,3.6nm,0.6s
KDAK **Kodiak Island** 46.91 42 P **P** 02 52 18.6 +0.5
KDAK **Kodiak Island** 46.91 42 P **P** 02 52 18.6 +0.5
KDAK pmax pmax
comp=Z,45nm,1.5s
KDAK **Kodiak Island** 46.91 42 LR LR 03 11 04.1
comp=Z,28nm,21.9s,baz=179,slow=35
C23K **Itkillik River** 47.99 26 P **P** 02 52 27.8 +1.4
TOLK **Toolik Lake Re** 48.26 27 P **P** 02 52 29.9 +1.3
TOLK IAmb IAmb 02 52 31.3
comp=Z,7.4nm,1.1s
D24K **Happy Valley** 48.56 27 P **P** 02 52 32.2 +1.3
D24K IAmb IAmb 02 52 37.4
comp=Z,11nm,1.0s
IL31 49.29 32 P **P** 02 52 36.9 +0.4
IL31 IAmb IAmb 02 53 00.6
comp=Z,2.9nm,0.8s
ILAR **Eielson Array** 49.29 32 P **P** 02 52 36.3 -0.2
ILAR **Eielson Array** 49.29 32 P **P** 02 52 36.3 -0.2
ILAR **Eielson Array** 49.29 32 P **P** 02 52 37.1 +0.7
comp=Z,2.3nm,0.8s,baz=270,slow=5.9,SNR=26
comp=Z,2.3nm,0.8s
BMAR **Burnt Mountain** 50.12 29 P **P** 02 52 44.1 +1.2
AAK **Ala-Archa** 50.43 298 P **P** 02 52 45.8 +0.1
AAK **Ala-Archa** 50.43 298 P **P** 02 52 45.8 +0.1
AAK pmax pmax
comp=Z,2.0nm,1.0s
BVAR **Borovoye Array** 50.47 312 P **P** 02 52 45.6 0.0
comp=Z,2.5nm,0.9s,baz=74,slow=8.7,SNR=6.8
BVAR PcP **PcP** 02 54 03.7 +0.2
comp=Z,1.6nm,0.7s,baz=70,slow=4.9,SNR=4.3
comp=Z,2.5nm,0.9s
BRVK **Borovoye** 50.52 312 *ce*P **P** 02 52 45.8 -0.2
BRVK pmax pmax
comp=Z,1.0nm,0.5s
MTN **Manton Dam** 50.76 193 P **P** 02 52 47.6 -0.5
COEN **Coen** 50.95 178 P **P** 02 52 50.7 +1.2
BCAR **Beaver Creek A** 51.69 34 P **P** 02 52 56.4 +1.7
EGAK **Eagle** 51.73 32 P **P** 02 52 55.3 +0.3
EGAK IAmb IAmb 02 53 00.0
comp=Z,5.3nm,1.1s
KK31 **Karatay Array** 53.06 300 P **P** 02 53 04.6 -0.6
KK31 **Karatay Array** 53.06 300 *i* P **P** 02 53 04.7 -0.4
KKAR **Karatay Array** 53.06 300 P **P** 02 53 04.5 -0.6
KKAR **Karatay Array** 53.06 300 P **P** 02 53 04.5 -0.6
EPYK **Eagle Plains** 53.32 30 P **P** 02 53 08.7 +2.0
GSI **Gunungsitoli** 53.95 239 P **P** 02 53 11.0 -0.9
INK **Inuvik** 54.18 27 P **P** 02 53 14.0 +1.2
INK IAmb IAmb 02 53 15.5
comp=Z,6.0nm,1.0s
INK **Inuvik** 54.18 27 P **P** 02 53 14.0 +1.2
INK pmax pmax
comp=Z,6.0nm,1.0s
SVE **Sverdlovsk** 55.02 319 *e*P **P** 02 53 19.6 +0.4
SVE pmax pmax
comp=Z,16nm,1.3s
SIMJ **Simiganj** 55.73 295 P **P** 02 53 24.3 -0.4
SIMJ IAmb IAmb 02 53 26.1
comp=Z,4.9nm,0.9s
A36M **Sachs Harbour** 56.05 22 P **P** 02 53 27.9 +1.6
A36M IAmb IAmb 02 53 29.2
comp=Z,5.7nm,0.8s
ARU **Arti** 56.24 318 P **P** 02 53 27.3 -0.6
ARU **Arti** 56.24 318 *d* *i* P **P** 02 53 27.6 -0.3
ARU S **S** 03 01 18.9 +3.2
ARU SS **SS** 03 05 01.9 0.0
ARU pmax pmax
comp=Z,12nm,1.0s
FITZ **Fitzroy Crossi** 57.03 198 P **P** 02 53 33.9 0.0
FITZ IAmb IAmb 02 53 49.1
comp=Z,5.7nm,1.4s
WB0 **Warramunga Arr** 57.10 188 P **P** 02 53 33.2 -1.2
WB0 IAmb IAmb 02 54 00.1
comp=Z,12nm,1.2s
WRA **Warramunga Arr** 57.27 188 P **P** 02 53 34.4 -1.2
WRA **Warramunga Arr** 57.27 188 P **P** 02 53 34.5 -1.1
comp=Z,2.1nm,0.6s,baz=4.9,slow=7.2,SNR=27
WRA PcP **PcP** 02 54 30.1 +0.5
comp=Z,0.6nm,0.7s,baz=357,slow=3.8,SNR=4.9
comp=Z,2.1nm,0.6s
KBL **Kabul** 57.39 291 P **P** 02 53 35.0 -1.7
KBL IAmb IAmb 02 53 49.0
comp=Z,3.9nm,1.1s
KBL **Kabul** 57.39 291 P **P** 02 53 35.0 -1.7
KBL pmax pmax
comp=Z,4.0nm,1.1s
AB31 **Akbulak array** 57.84 310 *i* P **P** 02 53 38.3 -1.1
ABKAR **Akbulak array** 57.84 310 P **P** 02 53 39.0 -0.4
ABKAR **Akbulak array** 57.84 310 P **P** 02 53 39.0 -0.4
ABKAR IAmb IAmb 02 53 39.8
comp=Z,4.5nm,0.7s
AKTO **Aktyubinsk** 58.57 312 P **P** 02 53 43.0 -1.5
KIRV **Kirov** 60.11 323 *ce*P **P** 02 53 55.6 +0.7
AS31 **Alice Springs** 61.00 188 P **P** 02 54 01.6 +0.2
ASAR **Alice Springs** 61.00 188 P **P** 02 54 01.2 -0.2
ASAR **Alice Springs** 61.00 188 P **P** 02 54 00.9 -0.5
comp=Z,1.7nm,0.7s,baz=7.4,slow=6.4,SNR=18
comp=Z,1.7nm,0.7s
RES **Resolute Bay** 62.38 14 P **P** 02 54 10.4 +0.4
RES IAmb IAmb 02 54 11.1
comp=Z,3.6nm,0.8s
RES **Resolute Bay** 62.38 14 P **P** 02 54 10.5 +0.4
RES pmax pmax
comp=Z,4.0nm,0.9s
YKA **Yellowknife Ar** 63.60 30 P **P** 02 54 18.6 +0.2
YKA **Yellowknife Ar** 63.60 30 *ce*P **P** 02 54 18.8 +0.4
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA **Yellowknife Ar** 63.60 30 P **P** 02 54 18.9 +0.5
comp=Z,0.9nm,0.7s,baz=303,slow=6.9,SNR=17
comp=Z,0.9nm,0.7s
KLMR **Klimovskoe** 63.60 328 *e*P **P** 02 54 16.9 -1.5
KLMR pmax pmax
comp=Z,15nm,1.8s
GEYT **Alibeck** 63.78 299 P **P** 02 54 20.4 +0.4
comp=Z,4.3nm,0.8s,baz=58,slow=12,SNR=9.4
comp=Z,4.3nm,0.8s
ARCES **ARCESS Array B** 63.82 339 P **P** 02 54 19.9 +0.1
ARCES IAmb IAmb 02 54 33.5
comp=Z,9.8nm,1.4s
ARCES **ARCESS Array B** 63.82 339 P **P** 02 54 19.6 -0.1
comp=Z,4.6nm,0.9s,baz=53,slow=10,SNR=9.5
comp=Z,4.6nm,0.9s
VRH **Novokhopyorsk** 67.46 318 *e*P **P** 02 54 41.5 -1.9
VRH pmax pmax
comp=Z,10.0nm,0.8s
OBN **Obninsk** 67.96 323 *i* P **P** 02 54 43.9 -2.6
OBN *i* 02 54 49.8
OBN *i* 02 55 16.4
OBN pmax pmax
comp=Z,11nm,0.8s
LPSR **Galich'ya Gora** 68.17 320 *e*P **P** 02 54 46.3 -1.6
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VORR **Voronezh** 68.53 319 *e*P **P** 02 54 48.8 -1.4
VORR pmax pmax
comp=Z,30nm,0.4s
FIA1 **FINESS Array S** 68.65 332 P **P** 02 54 50.0 -0.8
FINES **FINESS Array B** 68.65 332 *i* P **P** 02 54 51.2 +0.4
FINES pmax pmax
comp=Z,6.0nm,0.7s
FINES **FINESS Array B** 68.65 332 P **P** 02 54 50.6 -0.2
comp=Z,5.7nm,0.8s,baz=53,slow=7.6,SNR=16
comp=Z,5.7nm,0.8s
STKA **Stephens Creek** 68.76 180 P **P** 02 54 51.8 +0.1
STKA **Stephens Creek** 68.76 180 P **P** 02 54 51.4 -0.3
comp=Z,2.2nm,0.7s,baz=342,slow=12,SNR=4.3
comp=Z,2.2nm,0.7s
VSR **Storozhevoye** 68.81 319 *e*P **P** 02 54 49.8 -2.1
VSR pmax pmax
comp=Z,9.0nm,0.9s
FORT **Forrest** 68.83 192 P **P** 02 54 52.2 +0.1
PINE **Pine Mountain** 70.17 50 P **P** 02 55 02.2 +1.5
PINE IAmb IAmb 02 55 07.8
comp=Z,8.3nm,1.1s
NCK **Nalchik** 70.51 310 *i* P **P** 02 55 02.7 +0.1
NCK pmax pmax
comp=Z,5.0nm,0.8s
KBZ **Khabaz** 70.80 311 *ce*P **P** 02 55 05.1 +0.8
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ **Khabaz** 70.80 311 P **P** 02 55 04.9 +0.6
comp=Z,4.1nm,0.8s,baz=39,slow=3.3,SNR=11
comp=Z,4.1nm,0.8s
KIV **Kislovodsk** 70.81 311 P **P** 02 55 04.3 -0.2
KIV **Kislovodsk** 70.81 311 *e*P **P** 02 55 05.3 +0.8
KIV pmax pmax
comp=Z,12nm,1.1s
WSAR **Wadi Sarin** 70.86 285 LR LR 03 31 07.5
comp=Z,46nm,18.4s,baz=83,slow=40
BMO **Blue Mountains** 71.75 47 P **P** 02 55 11.1 +0.9
BMO **Blue Mountains** 71.75 47 P **P** 02 55 11.1 +0.9
BMO pmax pmax
comp=Z,3.0nm,1.0s
UOSS **Minazif** 71.79 288 P **P** 02 55 10.2 -0.5
UOSS IAmb IAmb 02 55 15.5
comp=Z,6.1nm,1.0s
FCC **Fort Churchill** 73.79 27 P **P** 02 55 21.8 -0.1
FCC IAmb IAmb 02 55 27.1
comp=Z,6.9nm,1.1s
FCC **Fort Churchill** 73.79 27 P **P** 02 55 21.8 -0.1
FCC pmax pmax
comp=Z,7.0nm,1.1s
NC405 **NORSAR Array S** 73.80 337 P **P** 02 55 22.1 +0.1
HFS **Hagfors** 73.92 336 P **P** 02 55 23.4 +0.8
comp=Z,4.6nm,0.9s,baz=75,slow=1.6,SNR=5.8
comp=Z,4.6nm,0.9s
NB2 **NORSAR Subarra** 74.01 337 P **P** 02 55 23.2 0.0
comp=Z,1.1nm,0.8s,baz=39,slow=5.9
NOA **NORSAR Array B** 74.01 337 P **P** 02 55 23.4 +0.2
comp=Z,2.4nm,0.9s,baz=39,slow=5.8,SNR=6.1
NOA LR LR 03 30 35.6
comp=Z,15nm,18.7s,baz=250,slow=38
comp=Z,2.4nm,0.9s
AKASG **Malin Array Be** 74.16 322 P **P** 02 55 23.9 -0.3
comp=Z,3.0nm,0.7s,baz=46,slow=5.5,SNR=7.0
AKASG LR LR 03 28 29.0
comp=Z,44nm,18.4s,baz=10.0,slow=36
comp=Z,3.0nm,0.7s
AKBB **Malin Array Si** 74.16 322 *ce*P **P** 02 55 23.6 -0.6
AKBB pmax pmax
comp=Z,7.0nm,0.9s
KIEV **Kiev** 74.17 322 P **P** 02 55 23.4 -0.9
KIEV IAmb IAmb 02 55 24.8
comp=Z,8.3nm,1.0s
KIEV **Kiev** 74.17 322 P **P** 02 55 23.4 -0.9
KIEV pmax pmax
comp=Z,8.0nm,1.0s
GURO **Guroymak-BITLI** 74.25 307 P **P** 02 55 24.9 -0.3
NVAR **Mina Array Bea** 74.82 53 P **P** 02 55 30.4 +1.8
comp=Z,1.7nm,0.9s,baz=282,slow=5.9,SNR=8.2
comp=Z,1.7nm,0.9s
H17A **Grant Village** 75.89 45 P **P** 02 55 36.4 +1.7
H17A IAmb IAmb 02 55 43.2
comp=Z,7.4nm,1.1s
IMW **Indian Meadow** 75.99 45 P **P** 02 55 36.4 +1.1
IMW IAmb IAmb 02 55 39.9
comp=Z,3.3nm,0.9s
MOOW **Moose Ponds** 76.19 45 P **P** 02 55 37.8 +1.4
ARPR **Arapgir-MALATY** 76.27 309 P **P** 02 55 36.6 -0.2
ARPR IAmb IAmb 02 55 39.3
comp=Z,10nm,1.1s
PDAR **Pinedale Array** 77.48 46 P **P** 02 55 43.8 +0.1
PDAR **Pinedale Array** 77.48 46 P **P** 02 55 44.5 +0.8
comp=Z,0.7nm,0.7s,baz=294,slow=2.5,SNR=7.0
comp=Z,0.7nm,0.7s
KWP **Kalwaria Pacla** 77.99 324 P **P** 02 55 45.9 -0.2
KWP **Kalwaria Pacla** 77.99 324 P **P** 02 55 45.9 -0.2
KWP pmax pmax
comp=Z,17nm,1.1s
BURAR **Bucovina Array** 78.18 322 P **P** 02 55 47.0 -0.3
BURAR IAmb IAmb 02 55 48.9
comp=Z,3.1nm,0.9s
BR131 **Keskin Array S** 78.75 312 *i* P **P** 02 55 50.5 -0.1
BRTR **Keskin Array B** 78.75 312 *ce*P **P** 02 55 50.9 +0.3
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR **Keskin Array B** 78.75 312 P **P** 02 55 50.7 +0.1
comp=Z,0.9nm,0.8s,baz=88,slow=7.0,SNR=6.4
comp=Z,0.9nm,0.8s
PFO **Pinyon Flats O** 78.88 56 LR LR 03 24 38.4
comp=Z,36nm,20.7s,baz=70,slow=31
ULM **Lac du Bonnet** 79.30 33 P **P** 02 55 53.6 +0.4
comp=Z,2.0nm,0.8s,baz=286,slow=5.7,SNR=5.0
comp=Z,2.0nm,0.8s
CLL **Collm** 80.94 330 *e*P **P** 02 56 03.0 +0.9
CLL pmax pmax

	comp=Z,6.0nm,1.1s								
CLL	**Collm**	**80.94**	**330**	*e*P		**P**		**02 56 03.0**	**+0.9**
	comp=Z,6.0nm,1.1s								
VRAC	**Vranov**	**80.97**	**327**	P		**P**		**02 56 03.4**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=60,slow=8.7,SNR=3.7								
	comp=Z,2.0nm,0.8s								
MMAI	**Mount Meron Ar**	**81.88**	**305**	P		**P**		**02 56 08.2**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=56,slow=3.8,SNR=12								
MMAI				LR		LR		03 36 50.2	
	comp=Z,27nm,19.0s,baz=43,slow=39								
	comp=Z,2.3nm,0.7s								
KHC	**Kasperske Hory**	**82.39**	**328**	*e*P		**P**		**02 56 10.3**	**+0.5**
KHC	**Kasperske Hory**	**82.39**	**328**	*e*P		**P**		**02 56 10.3**	**+0.5**
GERES	**GERESS Array B**	**82.56**	**328**	P		**P**		**02 56 11.2**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=56,slow=6.0,SNR=2.1								
	comp=Z,1.2nm,0.7s								
ELL	**Elmali**	**82.91**	**311**	P		**P**		**02 56 12.4**	**-0.5**
ELL	**Elmali**	**82.91**	**311**	P		**P**		**02 56 12.4**	**-0.5**
EKA	**Eskdalemuir Ar**	**82.95**	**341**	P		**P**		**02 56 14.2**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=39,slow=4.6,SNR=1.7								
	comp=Z,1.4nm,0.8s								
PPT	**Papeete**	**84.68**	**117**	LR		LR		03 29 11.7	
	comp=Z,31nm,19.9s,baz=162,slow=32								
SCHQ	**Schefferville**	**85.12**	**16**	P		**P**		**02 56 24.0**	**+0.3**
SCHQ	**Schefferville**	**85.12**	**16**	P		**P**		**02 56 24.5**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=5.2,slow=11,SNR=3.2								
	comp=Z,2.7nm,0.8s								
TXAR	**Lajitas Array**	**89.95**	**52**	P		**P**		**02 56 47.8**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=298,slow=1.9,SNR=9.5								
	comp=Z,0.9nm,0.8s								
QSPA	**South Pole Qui**	**126.99**	**180**	PKP		**PKPdf**		**03 02 50.7**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=315,slow=2.9,SNR=5.6								
H03N2	**Juan Fernandez**	**147.00**	**96**	T		T		05 47 42.6	
	baz=291,slow=76,SNR=21								
H03N3	**Juan Fernandez**	**147.01**	**96**	T		T		05 47 40.3	
	baz=291,slow=76,SNR=22								
H03N1	**Juan Fernandez**	**147.01**	**96**	T		T		05 47 41.4	
	baz=291,slow=76,SNR=18								

*SJA **24** 02:47:21.9±1.8,21°.34S×68°.22W,h100km,ML3.7,MW3.8*
*IDC **24** 02:47:23.9±1.5,21°.39S×68°.07W,h111km±10km,mb4.1/3, mbtmp4.3/6,MS4.6/1,Error ellipse: s-maj=54.8km s-min=13.0km az=131.0*
*NEIC **24** 02:47:24.4±1.0,21°.38S±0°.02×68°.54W±0°.08,h134km±7km, mb4.1/8,Error ellipse: s-maj=10.7km s-min=2.7km az=84.0.*
*GUC **24** 02:47:24.7±0.7,21°.38S×68°.48W,h129km±3km,ML3.9*
ISC 24 02:47:23.4±0.7,21°.37S±0°.03×68°.53W±0°.05,h142km±6km, n77,σ1§21/112,mb4.2/4,9C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB09	**IPOC Station P**	**0.79**	**237**			**Pn**	**02 47 46.1**	**+0.2**
PB09				Sn		**Sn**	**02 48 02.7**	**-0.4**
PB09	**IPOC Station P**	**0.79**	**237**	*e*P		**Pn**	**02 47 46.1**	**+0.2**
PB09				*e*S		**Sn**	**02 48 03.9**	**+0.8**
PB09				IAML			02 48 05.3	
	comp=Z,518nm,0.3s							
PB09	**IPOC Station P**	**0.79**	**237**	⇑*i*P		**Pn**	**02 47 46.1**	**+0.2**
PB09				*i* S		**Sn**	**02 48 02.5**	**-0.6**
PB01	**IPOC Station P**	**0.95**	**290**			**Pn**	**02 47 46.8**	**-0.3**
PB01				Sn		**Sn**	**02 48 03.8**	**-1.4**
PB01	**IPOC Station P**	**0.95**	**290**	*e*P		**Pn**	**02 47 46.9**	**-0.3**
PB01				*e*S		**Sn**	**02 48 05.3**	**+0.1**
PB01				IAML			02 48 05.3	
	comp=Z,1µm,0.2s							
PB01	**IPOC Station P**	**0.95**	**290**	⇑*i*P		**Pn**	**02 47 46.9**	**-0.3**
PB01				*i* S		**Sn**	**02 48 03.9**	**-1.3**
PB01				IAML			02 48 05.1	
	comp=N,2µm,0.2s							
PB02	**IPOC Station P**	**1.28**	**272**			**Pn**	**02 47 50.4**	**+0.2**
PB02				Sn		**Sn**	**02 48 09.9**	**-0.6**
PB02	**IPOC Station P**	**1.28**	**272**	*e*P		**Pn**	**02 47 50.2**	**0.0**
PB02				*e*S		**Sn**	**02 48 10.9**	**+0.4**
PB02				IAML			02 48 13.8	
	comp=Z,2µm,0.4s							
PB02	**IPOC Station P**	**1.28**	**272**	⇑*i*P		**Pn**	**02 47 50.4**	**+0.2**
PB02				*i* S		**Sn**	**02 48 10.0**	**-0.6**
PB02				IAML			02 48 10.8	
	comp=N,3µm,0.6s							
LVC	**Limon Verde**	**1.28**	**196**	Pn		**Pn**	**02 47 50.5**	**0.0**
LVC				Sn		**Sn**	**02 48 10.1**	**-1.2**
LVC	**Limon Verde**	**1.28**	**196**	*e*P		**Pn**	**02 47 50.5**	**0.0**
LVC				*e*S		**Sn**	**02 48 10.1**	**-1.2**
LVC				IAML			02 48 11.1	
	comp=Z,490nm,0.3s							
LVC	**Limon Verde**	**1.28**	**196**	P		**Pn**	**02 47 50.6**	**0.0**
	comp=Z,278nm,0.4s,baz=19,slow=9.0,SNR=625							
LVC				S		**Sn**	**02 48 10.5**	**-0.7**
	comp=Z,456nm,0.3s,baz=38,slow=7.2,SNR=72							
LVC	**Limon Verde**	**1.28**	**196**	⇑*i*P		**Pn**	**02 47 50.5**	**0.0**
LVC				*i* S		**Sn**	**02 48 10.2**	**-1.0**
LVC				IAML			02 48 11.6	
	comp=Z,3µm,0.2s							
PB07	**IPOC Station P**	**1.31**	**254**			**Pn**	**02 47 50.8**	**+0.2**
PB07				Sn		**Sn**	**02 48 10.7**	**-0.7**
PB07	**IPOC Station P**	**1.31**	**254**	*e*P		**Pn**	**02 47 50.8**	**+0.2**
PB07				*e*S		**Sn**	**02 48 11.8**	**+0.4**
PB07				IAML			02 48 12.3	
	comp=Z,574nm,0.1s							
PB07	**IPOC Station P**	**1.31**	**254**	⇑*i*P		**Pn**	**02 47 50.9**	**+0.2**
PB07				*i* S		**Sn**	**02 48 10.6**	**-0.7**
PB07				IAML			02 48 12.7	
	comp=N,1µm,0.1s							
PB08	**IPOC Station P**	**1.35**	**334**			**Pn**	**02 47 51.7**	**+0.5**
PB08				Sn		**Sn**	**02 48 12.1**	**-0.4**
PB08	**IPOC Station P**	**1.35**	**334**	*e*P		**Pn**	**02 47 52.0**	**+0.6**
PB08				*e*S		**Sn**	**02 48 12.4**	**-0.1**
PB08				IAML			02 48 16.4	
	comp=Z,630nm,0.9s							
PB08	**IPOC Station P**	**1.35**	**334**	⇓*i*P		**Pn**	**02 47 51.8**	**+0.5**
PB08				*i* S		**Sn**	**02 48 12.4**	**-0.1**
PB08				IAML			02 48 15.0	
	comp=N,2µm,0.8s							
PX03	**IPOC Station P**	**1.41**	**313**	*e*P		**Pn**	**02 47 50.9**	**-0.7**
PX03				*i* S		**Sn**	**02 48 12.1**	**-1.0**
AF01	**San Pedro de A**	**1.61**	**168**			**Pn**	**02 47 54.6**	**+0.8**
PATCX	**Punta Patache**	**1.61**	**289**			**Pn**	**02 47 54.2**	**+0.5**
PATCX	**Punta Patache**	**1.61**	**289**	⇑*i*P		**Pn**	**02 47 54.2**	**+0.5**
PATCX				⇑*i*S		**Sn**	**02 48 16.5**	**-0.3**
PATCX				IAML			02 48 18.0	
	comp=E,3µm,0.4s							
PB06	**IPOC Station P**	**1.65**	**216**			**Pn**	**02 47 54.4**	**+0.3**
PB06	**IPOC Station P**	**1.65**	**216**	*e*P		**Pn**	**02 47 53.8**	**-0.4**
PB06				*e*S		**Sn**	**02 48 17.8**	**0.0**
PB06				IAML			02 48 19.2	
	comp=Z,950nm,0.3s							
PB06	**IPOC Station P**	**1.65**	**216**	⇑*i*P		**Pn**	**02 47 54.4**	**+0.3**
PB06				*i* S		**Sn**	**02 48 17.3**	**-0.5**
PB06				IAML			02 48 18.4	
	comp=E,2µm,0.3s							
TA01	**Diego Aracena**	**1.74**	**297**	Pn		**Pn**	**02 47 55.1**	**0.0**
TA01	**Diego Aracena**	**1.74**	**297**	*e*P		**Pn**	**02 47 55.0**	**0.0**
TA01				*i* S		**Sn**	**02 48 18.5**	**-0.8**
TA01				IAML			02 48 19.4	
	comp=E,2µm,0.2s							
PB04	**IPOC Station P**	**1.79**	**237**	Pn		**Pn**	**02 47 55.8**	**+0.1**
PB04	**IPOC Station P**	**1.79**	**237**	*e*P		**Pn**	**02 47 55.9**	**+0.1**
PB04				*e*S		**Sn**	**02 48 20.7**	**+0.1**
PB04				IAML			02 48 23.6	
	comp=Z,568nm,0.2s							
PB04	**IPOC Station P**	**1.79**	**237**	⇑*i*P		**Pn**	**02 47 55.9**	**+0.1**
PB04				*i* S		**Sn**	**02 48 19.5**	**-1.1**
PB04				IAML			02 48 21.6	
	comp=N,575nm,0.2s							
GO01	**Chusmiza**	**1.80**	**340**			**Pn**	**02 47 56.7**	**+0.4**
GO01	**Chusmiza**	**1.80**	**340**	*e*P		**Pn**	**02 47 56.8**	**+0.5**
GO01				*e*S		**Sn**	**02 48 23.1**	**+1.7**
GO01				IAML			02 48 25.9	
	comp=Z,467nm,0.3s							
GO01	**Chusmiza**	**1.80**	**340**	*e*P		**Pn**	**02 47 56.8**	**+0.4**
GO01				*i* S		**Sn**	**02 48 21.3**	**-0.2**
GO01				IAML			02 48 24.3	
	comp=N,2µm,0.4s							
TA02	**Huaiquique**	**1.86**	**306**			**Pn**	**02 47 56.3**	**-0.1**
TA02	**Huaiquique**	**1.86**	**306**	*e*P		**Pn**	**02 47 56.4**	**0.0**
TA02				*i* S		**Sn**	**02 48 20.5**	**-1.1**
TA02				IAML			02 48 24.2	
	comp=N,2µm,0.1s							
PB11	**IPOC Station P**	**1.92**	**326**	Pn		**Pn**	**02 47 57.3**	**-0.1**
PB11	**IPOC Station P**	**1.92**	**326**	*e*P		**Pn**	**02 47 57.1**	**-0.2**
PB11				*e*S		**Sn**	**02 48 23.2**	**0.0**
PB11				IAML			02 48 24.4	
	comp=Z,869nm,0.2s							
PB11	**IPOC Station P**	**1.92**	**326**	*e*P		**Pn**	**02 47 57.2**	**-0.1**
PB11				*i* S		**Sn**	**02 48 22.0**	**-1.3**
PB11				IAML			02 48 24.5	
	comp=N,1µm,0.2s							
PB15	**IPOC Station P**	**2.03**	**205**			**Pn**	**02 47 58.9**	**+0.3**
PB15	**IPOC Station P**	**2.03**	**205**	*e*P		**Pn**	**02 47 58.6**	**0.0**
PB15				*e*S		**Sn**	**02 48 26.0**	**+0.3**
PB15	**IPOC Station P**	**2.03**	**205**	*e*P		**Pn**	**02 47 59.0**	**+0.3**
PB15				*i* S		**Sn**	**02 48 25.6**	**0.0**
PB10	**IPOC Station P**	**2.84**	**221**			**Pn**	**02 48 09.0**	**+0.6**
YJA	**Yavi**	**2.91**	**107**	*e*P		**Pn**	**02 48 10.2**	**+0.4**
PB16	**IPOC Station P**	**3.16**	**343**			**Pn**	**02 48 13.9**	**+0.8**
PB16	**IPOC Station P**	**3.16**	**343**	*e*P		**Pn**	**02 48 13.6**	**+0.5**
PB16				*e*S		**Sn**	**02 48 45.0**	**-6.3**
PB16	**IPOC Station P**	**3.16**	**343**	*e*P		**Pn**	**02 48 13.9**	**+0.8**
PB12	**IPOC Station P**	**3.22**	**328**	Pn		**Pn**	**02 48 13.5**	**0.0**
PB12	**IPOC Station P**	**3.22**	**328**	*e*P		**Pn**	**02 48 12.9**	**-0.5**
PB12				*e*S		**Sn**	**02 48 50.8**	**-1.4**
PB12				IAML			02 48 57.8	
	comp=Z,129nm,0.2s							
PB12	**IPOC Station P**	**3.22**	**328**	*e*P		**Pn**	**02 48 12.6**	**-0.8**
PB12				*i* S		**Sn**	**02 48 49.2**	**-2.9**
PB14	**IPOC Station P**	**3.67**	**208**	Pn		**Pn**	**02 48 19.2**	**-0.2**
GO02	**Mina Guanaco**	**3.90**	**194**	Pn		**Pn**	**02 48 22.2**	**-0.2**
GO02	**Mina Guanaco**	**3.90**	**194**	*e*P		**Pn**	**02 48 22.4**	**0.0**
GO02				*e*S		**Sn**	**02 49 06.8**	**-1.4**
GO02				IAML			02 49 10.5	
	comp=Z,199nm,0.1s							
LPAZ	**La Paz**	**5.07**	**4**			**Pn**	**02 48 39.5**	**+1.3**
LPAZ	**La Paz**	**5.07**	**4**	*e*P		**Pn**	**02 48 40.1**	**+1.9**
AC01	**Pan de Azucar**	**5.12**	**201**	*e*P		**Pn**	**02 48 36.9**	**-1.5**
AC01				*e*S		**Sn**	**02 49 32.1**	**-4.6**
AC01				IAML			02 49 48.7	
	comp=Z,34nm,0.8s							
AC02	**Maricunga**	**5.47**	**186**	Pn		**Pn**	**02 48 43.1**	**-0.3**
SIV	**San Ignacio**	**8.86**	**54**	P		**Pn**	**02 49 25.0**	**-3.5**
	comp=Z,3.9nm,0.3s,baz=235,slow=13,SNR=33							
SIV				S		Sn	02 50 57.9	-9.0
	comp=Z,1.1nm,0.5s,baz=119,slow=22,SNR=5.8							
PTLB	**Pontes e Lacer**	**10.68**	**58**	Pn		Pn	02 49 48.8	-3.8
AQDB	**Aquidauana**	**12.02**	**88**	Pn		**Pn**	**02 50 09.6**	**-0.7**
BO01	**Tunca**	**13.17**	**189**	Pn		**P**	**02 50 25.6**	**-4.1**
TRCB	**Terra Rica**	**14.80**	**98**	P		**P**	**02 50 47.8**	**-0.3**
ITAB	**Concordia**	**16.04**	**115**			**P**	**02 51 02.1**	**+0.4**
ITAB				IAmb		IAmb	02 51 20.6	
	comp=Z,19nm,1.3s							
LR05	**Currie**	**19.03**	**188**	P		**Pn**	**02 51 36.1**	**-0.5**
LR05				IAmb		IAmb	02 51 38.0	
	comp=Z,5.5nm,0.7s							
PLCA	**Paso Flores**	**19.38**	**185**	P		**Pn**	**02 51 40.7**	**-0.1**
PLCA	**Paso Flores**	**19.38**	**185**	P		**Pn**	**02 51 40.9**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=4.3,slow=12,SNR=6.2							
BDFB	**Brasilia**	**20.26**	**77**	P		**P**	**02 51 47.8**	**-0.2**
	comp=Z,3.3nm,0.5s,baz=245,slow=9.6,SNR=12							
LL01	**San Ignacio de**	**21.20**	**188**	P		**P**	**02 51 58.9**	**+1.3**
BOAV	**Boa Vista**	**24.88**	**19**	P		**P**	**02 52 34.0**	**+0.8**
BOAV				IAmb		IAmb	02 52 45.9	
	comp=Z,7.9nm,1.4s							
USHA	**Ushuaia**	**33.41**	**180**	LR		LR	03 09 17.2	
	comp=Z,1µm,19.7s,baz=79,slow=39							
DBIC	**Dimbokro**	**68.36**	**73**	P		**P**	**02 58 11.1**	**+1.2**
DBIC	**Dimbokro**	**68.36**	**73**	P		**P**	**02 58 11.3**	**+1.4**
	comp=Z,3.7nm,0.7s,baz=252,slow=6.4,SNR=4.1							
	comp=Z,3.7nm,0.7s							
QSPA	**South Pole Qui**	**68.82**	**180**	P		**P**	**02 58 15.3**	**+3.1**
QSPA				IAmb		IAmb	02 58 20.6	
	comp=Z,5.4nm,1.4s							
QSPA	**South Pole Qui**	**68.82**	**180**	P		P	02 58 16.0	+3.9
	comp=Z,0.6nm,0.4s,baz=203,slow=7.7,SNR=13							
	comp=Z,0.6nm,0.4s							
TOA0	**Torodi Ar. Sit**	**76.98**	**70**	P		**P**	**02 59 02.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**76.98**	**70**	P		**P**	**02 59 02.1**	**+1.3**
	comp=Z,5.1nm,0.3s,baz=258,slow=4.4,SNR=12							
	comp=Z,5.1nm,0.3s							
MKAR	**Makanchi Array**	**145.32**	**36**	PKPbc		**PKiKP**	**03 06 47.5**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=313,slow=3.5,SNR=10							

*KRSC **24** 03:03:45.7±0.6,55°.70N×161°.38E,h100km±8km,Ml4.4*
*MOS **24** 03:03:46.0±0.7,55°.78N×161°.28E,h106km,mb4.1/5,Error ellipse: s-maj=11.6km s-min=4.6km az=76.4*
*IDC **24** 03:03:48.1±2.1,55°.88N×161°.06E,h109km±21km, mb3.4/16,mbtmp3.7/19,Error ellipse: s-maj=17.1km s-min=13.1km az=158.0*
ISC 24 03:03:46.7±0.6,55°.71N±0°.03×161°.37E±0°.03,h97km±5km, n119,σ1§28/149,mb3.7/20,1C,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZLN	**Zelenaya**	**0.44**	**314**	PN		**Pn**	**03 04 02.6**	**+0.8**
ZLN	**Zelenaya**	**0.44**	**314**	*e*P		**Pn**	**03 04 02.6**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**0.44**	**301**	PN		**Pn**	**03 04 02.3**	**+0.5**
BZGR				S		**Sn**	**03 04 13.9**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**0.44**	**301**	*i* P		**Pn**	**03 04 02.3**	**+0.5**
BZGR				*e*S		**Sn**	**03 04 13.9**	**+0.8**
BZP	**Bezymyannyi-Pe**	**0.51**	**294**	*e*P		**Pn**	**03 04 02.5**	**+0.2**
LGNR	**Loginova**	**0.54**	**314**	PN		**Pn**	**03 04 03.5**	**+0.8**
LGNR	**Loginova**	**0.54**	**314**	*e*P		**Pn**	**03 04 03.5**	**+0.8**
BZMR	**Bezymyannaya**	**0.55**	**295**	PN		**Pn**	**03 04 02.7**	**+0.1**
BZMR	**Bezymyannaya**	**0.55**	**295**	*e*P		**Pn**	**03 04 02.7**	**+0.1**
BZWR	**Bezymyannyi-We**	**0.56**	**298**	PN		**Pn**	**03 04 03.3**	**+0.6**
BZWR				S		**Sn**	**03 04 15.9**	**+1.2**
BZWR	**Bezymyannyi-We**	**0.56**	**298**	*e*P		**Pn**	**03 04 03.3**	**+0.6**
BZWR				*e*S		**Sn**	**03 04 15.9**	**+1.2**
KIRR	**Kirishev**	**0.63**	**293**	PN		**Pn**	**03 04 03.2**	**-0.1**
KIRR	**Kirishev**	**0.63**	**293**	*e*P		**Pn**	**03 04 03.2**	**-0.1**
KMNR	**Kamenistaya**	**0.64**	**274**	PN		**Pn**	**03 04 03.5**	**+0.1**
KMNR				S		**Sn**	**03 04 16.8**	**+0.9**
KMNR	**Kamenistaya**	**0.64**	**274**	*e*P		**Pn**	**03 04 03.5**	**+0.1**
KMNR				*e*S		**Sn**	**03 04 16.8**	**+0.9**
KRSR	**Krestovskiy**	**0.68**	**319**	PN		**Pn**	**03 04 04.0**	**+0.3**
KRSR				S		**Sn**	**03 04 16.9**	**+0.5**
KRSR	**Krestovskiy**	**0.68**	**319**	*i* P		**Pn**	**03 04 04.0**	**+0.3**
KRSR				*e*S		**Sn**	**03 04 16.9**	**+0.5**
KPT	**Kopyto**	**0.70**	**292**	PN		**Pn**	**03 04 03.9**	**+0.1**
KPT				S		**Sn**	**03 04 17.0**	**+0.3**
KPT	**Kopyto**	**0.70**	**292**	*i* P		**Pn**	**03 04 03.9**	**+0.1**
KPT				*e*S		**Sn**	**03 04 17.0**	**+0.3**
KLY	**Klyuchi**	**0.73**	**327**	PN		**Pn**	**03 04 04.0**	**0.0**
KLY				S		**Sn**	**03 04 17.2**	**+0.3**
KLY	**Klyuchi**	**0.73**	**327**	*i* P		**Pn**	**03 04 04.0**	**0.0**
KLY				*e*S		**Sn**	**03 04 17.2**	**+0.3**
TUMD	**Tumrok D**	**0.75**	**228**	*i* P		**Pn**	**03 04 04.2**	**-0.1**
TUMD				*e*S		**Sn**	**03 04 17.4**	**-0.1**
TUMR	**Tumrok**	**0.82**	**239**	PN		**Pn**	**03 04 05.5**	**+0.4**
TUMR	**Tumrok**	**0.82**	**239**	*i* P		**Pn**	**03 04 05.5**	**+0.4**
BDR	**Baidarnaya**	**0.86**	**354**	PN		**Pn**	**03 04 06.4**	**+0.9**
BDR	**Baidarnaya**	**0.86**	**354**	*e*P		**Pn**	**03 04 06.4**	**+0.9**
SMKR	**Semkarok**	**0.88**	**4**	PN		**Pn**	**03 04 06.2**	**+0.6**
SMKR				S		**Sn**	**03 04 21.7**	**+2.0**
SMKR	**Semkarok**	**0.88**	**4**	*e*P		**Pn**	**03 04 06.2**	**+0.6**
SMKR				*e*S		**Sn**	**03 04 21.7**	**+2.0**
KOZ	**Kozyrevsk**	**0.91**	**293**	PN		**Pn**	**03 04 06.5**	**+0.6**
KOZ				S		**Sn**	**03 04 21.6**	**+1.3**
KOZ	**Kozyrevsk**	**0.91**	**293**	*i* P		**Pn**	**03 04 06.5**	**+0.6**
KOZ				*e*S		**Sn**	**03 04 21.6**	**+1.3**
KBG	**Krutoberegovo**	**0.93**	**53**	PN		**Pn**	**03 04 06.6**	**+0.6**
KBG				S		**Sn**	**03 04 22.3**	**+1.8**
KBG	**Krutoberegovo**	**0.93**	**53**	*i* P		**Pn**	**03 04 06.6**	**+0.6**
KBG				*e*S		**Sn**	**03 04 22.3**	**+1.8**
SRKR	**Sorokina**	**0.95**	**353**	PN		**Pn**	**03 04 07.3**	**+0.9**
SRKR	**Sorokina**	**0.95**	**353**	*e*P		**Pn**	**03 04 07.3**	**+0.9**
SRDR	**Sredinnyy**	**1.11**	**304**	PN		**Pn**	**03 04 08.6**	**+0.5**
SRDR				S		**Sn**	**03 04 24.6**	**+0.4**
SRDR	**Sredinnyy**	**1.11**	**304**	*i* P		**Pn**	**03 04 08.6**	**+0.5**
SRDR				*e*S		**Sn**	**03 04 24.6**	**+0.4**
ESO	**Esso**	**1.52**	**279**	PN		**Pn**	**03 04 13.3**	**+0.3**
ESO	**Esso**	**1.52**	**279**	*e*P		**Pn**	**03 04 13.3**	**+0.3**
KII	**Karymskiy**	**2.01**	**214**	PN		**Pn**	**03 04 19.6**	**+0.2**
KII	**Karymskiy**	**2.01**	**214**	*e*P		**Pn**	**03 04 19.6**	**+0.2**
TIGL	**Tigil**	**2.54**	**325**	*e*P		**Pn**	**03 04 26.7**	**+0.6**
BKI	**Bering**	**2.67**	**99**	PN		**Pn**	**03 04 28.4**	**+0.5**
BKI				S		**Sn**	**03 04 58.7**	**-0.8**
BKI	**Bering**	**2.67**	**99**	*e*P		**Pn**	**03 04 28.4**	**+0.5**
BKI				*e*S		**Sn**	**03 04 58.7**	**-0.8**
SPN	**Mys Shipunski**	**2.73**	**197**	PN		**Pn**	**03 04 28.9**	**+0.2**
SPN				S		**Sn**	**03 05 01.5**	**+0.4**
SPN	**Mys Shipunski**	**2.73**	**197**	*e*P		**Pn**	**03 04 28.9**	**+0.2**
SPN				*e*S		**Sn**	**03 05 01.5**	**+0.4**
NLC	**Nalytchevo**	**2.81**	**206**	PN		**Pn**	**03 04 30.3**	**+0.6**
NLC				S		**Sn**	**03 05 05.2**	**+2.4**
NLC	**Nalytchevo**	**2.81**	**206**	*e*P		**Pn**	**03 04 30.3**	**+0.6**
NLC				*e*S		**Sn**	**03 05 05.2**	**+2.4**
GNL	**Ganaly**	**2.83**	**226**	PN		**Pn**	**03 04 31.2**	**+1.0**
GNL	**Ganaly**	**2.83**	**226**	*e*P		**Pn**	**03 04 31.2**	**+1.0**
KRX	**Arik**	**2.84**	**215**	PN		**Pn**	**03 04 31.8**	**+1.5**
KRX	**Arik**	**2.84**	**215**	*e*P		**Pn**	**03 04 31.8**	**+1.5**
KRER	**Koryakskii**	**2.86**	**213**	PN		**Pn**	**03 04 32.7**	**+2.1**
KRER	**Koryakskii**	**2.86**	**213**	*e*P		**Pn**	**03 04 32.7**	**+2.1**
SMAR	**Somma**	**2.88**	**212**	PN		**Pn**	**03 04 32.2**	**+1.4**
SMAR	**Somma**	**2.88**	**212**	*e*P		**Pn**	**03 04 32.2**	**+1.4**
AVH	**Avacha**	**2.89**	**213**	PN		**Pn**	**03 04 32.7**	**+1.7**
AVH	**Avacha**	**2.89**	**213**	*e*P		**Pn**	**03 04 32.7**	**+1.7**
KOK	**Koryaka**	**2.90**	**214**	PN		**Pn**	**03 04 32.9**	**+1.8**
KOK	**Koryaka**	**2.90**	**214**	*e*P		**Pn**	**03 04 32.9**	**+1.8**
UGLR	**Uglovaya**	**2.92**	**212**	PN		**Pn**	**03 04 32.9**	**+1.6**
UGLR	**Uglovaya**	**2.92**	**212**	*e*P		**Pn**	**03 04 32.9**	**+1.6**
DALK	**Dalny**	**3.09**	**211**	PN		**Pn**	**03 04 34.5**	**+1.0**
DALK	**Dalny**	**3.09**	**211**	*e*P		**Pn**	**03 04 34.5**	**+1.0**
PET	**Petropavlovsk**	**3.13**	**212**	*e*PN		**Pn**	**03 04 35.9**	**+1.9**
PET				*e*S		**Sn**	**03 05 12.8**	**+2.3**
PET				pmax	pmax			
	comp=Z,165nm,0.7s							
PET				smax	smax			
	comp=E,294nm,0.4s							
PET				smax	smax			
	comp=N,230nm,0.4s							
PET	**Petropavlovsk**	**3.13**	**212**	*e*P		**Pn**	**03 04 35.6**	**+1.7**
PET				*e*S		**Sn**	**03 05 11.4**	**+1.0**
PEA0B	**Petropavlovsk-**	**3.38**	**221**	*i* PN		**Pn**	**03 04 38.1**	**+0.7**
PETK	**Petropavlovsk-**	**3.38**	**221**	P		**Pn**	**03 04 37.6**	**+0.2**
	comp=N,11nm,0.5s,baz=57,slow=15,SNR=17							
PETK				S		**Sn**	**03 05 20.0**	**+3.5**
	comp=N,8.4nm,0.5s,baz=311,slow=9.7,SNR=1.7							
KRMR	**Karymshinskiy**	**3.46**	**215**	PN		**Pn**	**03 04 39.5**	**+1.1**
KRMR	**Karymshinskiy**	**3.46**	**215**	*e*P		**Pn**	**03 04 39.5**	**+1.1**
PALN	**Palana**	**3.47**	**348**	PN		**Pn**	**03 04 40.8**	**+2.3**
PALN	**Palana**	**3.47**	**348**	*e*P		**Pn**	**03 04 40.8**	**+2.3**
OSSR	**Ossora**	**3.66**	**14**	PN		**Pn**	**03 04 42.4**	**+1.3**
OSSR	**Ossora**	**3.66**	**14**	*e*P		**Pn**	**03 04 42.4**	**+1.3**
RUS	**Russkaya**	**3.69**	**208**	PN		**Pn**	**03 04 41.7**	**+0.1**
RUS	**Russkaya**	**3.69**	**208**	*e*P		**Pn**	**03 04 41.7**	**+0.1**
GRL	**Gorelyy**	**3.71**	**213**	PN		**Pn**	**03 04 44.3**	**+2.3**
GRL	**Gorelyy**	**3.71**	**213**	*e*P		**Pn**	**03 04 44.3**	**+2.3**
APC

CAND	**Candarli**	**0.30**	**27**	Pg	**Pg**	**03 08 43.2**	**+0.2**
CAND				Sg	**Sg**	**03 08 48.5**	**+1.4**
IZMD	**zmir-Dikili-**	**0.38**	**38**	P	**Pg**	**03 08 44.1**	**-0.3**
IZMD				P	**Pb**	**03 08 44.3**	**-1.5**
IZMD				S	**Sg**	**03 08 50.4**	**+0.8**
EAG3	**Mitilini, Lesv**	**0.40**	**354**	P	**Pg**	**03 08 44.8**	**0.0**
EAG3				S	**Sg**	**03 08 50.9**	**+0.7**
EAG3				AML	AML	03 08 51.5	
	comp=N,4241μm,0.5s						
EAG3				AML	AML	03 08 52.0	
	comp=E,5906μm,0.5s						
LESV	**Lesvos island,**	**0.43**	**353**	P	**Pg**	**03 08 45.4**	**+0.2**
LESV				S	**Sg**	**03 08 51.4**	**+0.5**
	comp=E,8μm,0.6s						
EAG2	**Marmaro, Chios**	**0.43**	**251**	P	**Pg**	**03 08 45.6**	**+0.4**
EAG2				S	**Sg**	**03 08 51.3**	**+0.4**
EAG2				AML	AML	03 08 52.0	
	comp=N,6858μm,0.3s						
EAG2				AML	AML	03 08 55.0	
	comp=E,6639μm,0.3s						
DKL	**Dikili**	**0.45**	**29**	Pg	**Pg**	**03 08 45.5**	**-0.1**
DKL				Sg	**Sg**	**03 08 52.8**	**+1.3**
ZEDA	**zmir-Bergama**	**0.45**	**51**	P	**Pg**	**03 08 46.2**	**+0.5**
ZEYE	**Izmir, Urla-Ze**	**0.45**	**192**	P	**Pg**	**03 08 45.6**	**-0.1**
ZEYE				S	**Sb**	**03 08 53.3**	**-0.3**
ZEYE				*i* AML	AML	03 08 54.0	
	comp=E,304nm,0.2s						
CHOS	**Chios island**	**0.54**	**237**	Pg	**Pg**	**03 08 47.8**	**+0.5**
CHOS				Sg	**Sg**	**03 08 55.1**	**+0.8**
CHOS	**Chios island**	**0.54**	**237**	P	**Pg**	**03 08 47.7**	**+0.5**
CHOS				S	**Sg**	**03 08 54.9**	**+0.6**
	comp=E,440nm,0.4s						
CHOS	**Chios island**	**0.54**	**237**	P	**Pg**	**03 08 47.7**	**+0.5**
CHOS				S	**Sg**	**03 08 54.3**	**0.0**
CHOS				AML	AML	03 08 58.2	
	comp=E,1172μm,0.2s						
CHOS				AML	AML	03 08 58.3	
	comp=N,975μm,0.3s						
PRK	**Paraskevi**	**0.63**	**334**	P	**Pg**	**03 08 48.9**	**0.0**
PRK				S	**Sb**	**03 08 58.5**	**-0.2**
	comp=N,620nm,0.2s						
PRK	**Paraskevi**	**0.63**	**334**	P	**Pg**	**03 08 49.0**	**0.0**
PRK				S	**Sb**	**03 08 58.4**	**-0.2**
PRK				AML	AML	03 09 01.2	
	comp=N,1080μm,0.3s						
PRK				AML	AML	03 09 02.0	
	comp=E,1387μm,0.2s						
GMLD	**Gumuldur**	**0.65**	**159**	Pg	**Pg**	**03 08 49.1**	**-0.2**
PSRA	**Psara**	**0.84**	**261**	P	**Pg**	**03 08 53.3**	**+0.2**
PSRA				S	**Sg**	**03 09 04.4**	**+0.4**
GPNR	**Gulpinar-Canak**	**0.86**	**334**	Pg	**Pg**	**03 08 53.5**	**+0.1**
BUHA	**Balíkesir, Bur**	**0.89**	**23**	P	**Pg**	**03 08 54.6**	**+0.6**
BUHA				S	**Sb**	**03 09 06.5**	**+0.2**
KOCA	**Canakkale, Ayv**	**0.90**	**335**	P	**Pb**	**03 08 54.7**	**+0.2**
KOCA				S	**Sb**	**03 09 07.4**	**+0.8**
AKS	**Akhisar**	**0.95**	**78**	Pg	**Pg**	**03 08 54.9**	**-0.2**
SMG	**Samos**	**0.99**	**170**	P	**Pg**	**03 08 55.8**	**0.0**
SMG				S	**Sb**	**03 09 10.0**	**+1.0**
	comp=E,595nm,0.3s						
SMG	**Samos**	**0.99**	**170**	P	**Pg**	**03 08 55.7**	**-0.1**
SMG				S	**Sb**	**03 09 10.1**	**+1.0**
SMG				AML	AML	03 09 12.9	
	comp=N,1196μm,0.4s						
SMG				AML	AML	03 09 13.1	
	comp=E,1172μm,0.4s						
GOMA	**Golmarmara-Man**	**1.01**	**88**	Pg	**Pg**	**03 08 56.2**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**1.06**	**357**	P	**Pg**	**03 08 56.3**	**-0.9**
BAYC				S	**Sg**	**03 09 09.5**	**-1.4**
BAYC				*i* AML	AML	03 09 14.0	
	comp=E,156nm,0.3s						
BAYC				*i* AML	AML	03 09 14.0	
	comp=E,192nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.10**	**51**	P	**Pg**	**03 08 57.2**	**-0.8**
EZN	**Ezine**	**1.17**	**349**	Pn	**Pg**	**03 08 58.9**	**-0.3**
EZN	**Ezine**	**1.17**	**349**	P	**Pg**	**03 08 58.4**	**-0.8**
EZN				S	**Sb**	**03 09 14.8**	**+0.7**
	comp=E,270nm,0.4s						
IZMR	**zmir-demi**	**1.18**	**117**	P	**Pb**	**03 08 58.5**	**-0.7**
CANM	**Can-anakkale**	**1.37**	**14**	Pn	**Pn**	**03 09 02.1**	**+0.2**
CNKL	**anakkale-Mer**	**1.39**	**352**	P	**Pn**	**03 09 02.1**	**-0.2**
COMU	**Canakkale**	**1.42**	**355**	Pn	**Pn**	**03 09 02.5**	**-0.2**
GOAD	**anakkale-G¶**	**1.58**	**340**	P	**Pg**	**03 09 07.0**	**0.0**
GONE	**Gonen-Balikesi**	**1.59**	**31**	Pn	**Pn**	**03 09 05.5**	**+0.5**
KULA	**Kula-Manisa**	**1.60**	**95**	Pn	**Pn**	**03 09 05.4**	**+0.2**
KULA	**Kula-Manisa**	**1.60**	**95**	P	**Pn**	**03 09 05.5**	**+0.2**
GADA	**Gvkgeada**	**1.61**	**340**	Pn	**Pb**	**03 09 06.5**	**-0.1**
LIA	**Limnos Island**	**1.65**	**318**	P	**Pn**	**03 09 05.8**	**0.0**
LIA				S	**Sn**	**03 09 25.3**	**-1.7**
LPK	**Lapseki**	**1.69**	**4**	Pn	**Pn**	**03 09 07.2**	**+0.8**
BODT	**Bodrum**	**1.71**	**161**	Pn	**Pn**	**03 09 07.2**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.72**	**356**	Pn	**Pn**	**03 09 07.6**	**+0.9**
KRBG	**Karabiga-Canak**	**1.79**	**17**	Pn	**Pn**	**03 09 08.2**	**+0.5**
APE	**Apeiranthos**	**1.83**	**209**	P	**Pn**	**03 09 07.3**	**-1.0**
SIMA	**Simav-Kutahya**	**1.88**	**77**	Pn	**Pn**	**03 09 10.3**	**+1.2**
EDC	**Edincik**	**1.92**	**30**	Pn	**Pn**	**03 09 09.9**	**+0.4**
SMTH	**Samothraki Isl**	**1.98**	**335**	P	**Pn**	**03 09 10.0**	**-0.3**
ERIK	**Erikli-Kesan**	**1.99**	**358**	Pn	**Pn**	**03 09 10.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.05**	**12**	Pn	**Pn**	**03 09 12.8**	**+1.5**
MRMT	**Marmara Adasi**	**2.06**	**21**	Pn	**Pn**	**03 09 12.1**	**+0.6**
KCTX	**Karacabey (Bur**	**2.07**	**40**	Pn	**Pn**	**03 09 12.8**	**+1.2**
ALN	**Alexandroupoli**	**2.26**	**349**	P	**Pn**	**03 09 14.3**	**+0.2**
TVSB	**Tavsanli**	**2.34**	**70**	Pn	**Pn**	**03 09 16.2**	**+0.8**
UKOP	**Uzunkopru-Edir**	**2.44**	**0**	Pn	**Pn**	**03 09 17.9**	**+1.2**
ARMT	**Armutlu**	**2.55**	**42**	Pn	**Pn**	**03 09 19.6**	**+1.4**
RDO	**Rodhopi**	**2.60**	**342**	P	**Pn**	**03 09 19.0**	**+0.2**

*ISK **24** 03:12:43.2, 38°.67N×26°.64E, h12km, ML3.3/23*
*THE **24** 03:12:43.9, 38°.68N×26°.61E, h3km±1km, ML3.1/8, Error ellipse: s-maj=1.8km s-min=0.4km az=270.0*
*AFAD **24** 03:12:43.8±0.0, 38°.67N×26°.62E, h7km±1km, ML3.1*
*ATH **24** 03:12:44.0, 38°.68N×26°.64E, h11km±2km, ML3.0/5, Error ellipse: s-maj=2.2km s-min=0.9km az=267.0*

ISC 24 03:12:43.8±0.8, 38°.68N±0°.02×26°.63E±0°.02, h11km±6km, n66, σ0s57/93, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.08**	**65**	Pg	**Pg**	**03 12 45.9**	**-0.3**
FOCM				Sg	**Sg**	**03 12 47.8**	**-0.2**
KARB	**zmir-Karabur**	**0.17**	**265**	P	**Pg**	**03 12 47.8**	**+0.2**
CAND	**Candarli**	**0.31**	**26**	Pg	**Pg**	**03 12 50.1**	**+0.2**
CAND				Sg	**Sb**	**03 12 55.5**	**-0.9**
URLA	**Izmir**	**0.32**	**185**	P	**Pg**	**03 12 50.5**	**+0.3**
URLA				S	**Sb**	**03 12 57.1**	**+0.4**
URLA				*i* AML	AML	03 12 58.0	
	comp=N,2μm,0.5s						
IZMD	**zmir-Dikili-**	**0.38**	**37**	P	**Pg**	**03 12 51.6**	**+0.2**
IZMD				P	**Pg**	**03 12 51.6**	**+0.2**
IZMD				S	**Sg**	**03 12 57.0**	**+0.5**
EAG3	**Mitilini, Lesv**	**0.41**	**353**	P	**Pg**	**03 12 51.7**	**-0.2**
EAG3				S	**Sg**	**03 12 58.0**	**+0.7**
EAG2	**Marmaro, Chios**	**0.43**	**252**	P	**Pg**	**03 12 52.6**	**+0.3**
EAG2				S	**Sg**	**03 12 58.5**	**+0.5**
LESV	**Lesvos island,**	**0.43**	**353**	P	**Pg**	**03 12 52.0**	**-0.3**
LESV				S	**Sg**	**03 12 58.6**	**+0.6**
	25μm,0.6s						
DKL	**Dikili**	**0.45**	**28**	Pg	**Pg**	**03 12 52.6**	**+0.1**
DKL				Sg	**Sg**	**03 12 59.4**	**+1.0**
ZEYE	**Izmir, Urla-Ze**	**0.45**	**193**	P	**Pg**	**03 12 52.6**	**0.0**
ZEDA	**zmir-Bergama**	**0.45**	**50**	P	**Pg**	**03 12 53.1**	**+0.5**
CHOS	**Chios island**	**0.54**	**238**	Pg	**Pg**	**03 12 54.3**	**0.0**
CHOS				Sg	**Sg**	**03 13 02.3**	**+0.9**
CHOS	**Chios island**	**0.54**	**238**	P	**Pg**	**03 12 54.7**	**+0.4**
CHOS				S	**Sg**	**03 13 01.9**	**+0.5**
	2μm,0.4s						
CHOS	**Chios island**	**0.54**	**238**	P	**Pg**	**03 12 54.7**	**+0.4**
CHOS				S	**Sg**	**03 13 01.7**	**+0.4**
CHOS				AML	AML	03 13 04.1	
	comp=N,3441μm,0.4s						
CHOS				AML	AML	03 13 05.2	
	comp=E,4814μm,0.4s						
AYVA	**Ayvalik**	**0.63**	**4**	P	**Pg**	**03 12 56.5**	**+0.5**
PRK	**Paraskevi**	**0.63**	**334**	P	**Pg**	**03 12 55.9**	**-0.1**
PRK				S	**Sb**	**03 13 06.0**	**+0.2**
	comp=E,2μm,0.3s						
PRK	**Paraskevi**	**0.63**	**334**	P	**Pg**	**03 12 55.7**	**-0.3**
PRK				S	**Sg**	**03 13 05.2**	**+0.8**
PRK				AML	AML	03 13 08.2	
	comp=N,2472μm,0.3s						
PRK				AML	AML	03 13 08.9	
	comp=E,3739μm,0.3s						
GMLD	**Gumuldur**	**0.64**	**160**	Pg	**Pg**	**03 12 56.0**	**-0.1**
DGB	**zmir**	**0.66**	**162**	P	**Pg**	**03 12 56.7**	**+0.2**
DGB				S	**Sb**	**03 13 05.8**	**-0.5**
DGB				*i* AML	AML	03 13 06.0	
	comp=E,599nm,0.3s						
PSRA	**Psara**	**0.85**	**261**	P	**Pg**	**03 13 00.0**	**-0.1**
PSRA				S	**Sg**	**03 13 11.3**	**+0.1**
GPNR	**Gulpinar-Canak**	**0.87**	**334**	Pg	**Pg**	**03 13 00.4**	**-0.1**
BUHA	**Balíkesir, Bur**	**0.89**	**23**	P	**Pg**	**03 13 01.1**	**+0.1**
BUHA				S	**Sg**	**03 13 12.6**	**0.0**
BUHA				*i* AML	AML	03 13 16.0	
	comp=E,1μm,0.6s						
KOCA	**Canakkale, Ayv**	**0.91**	**335**	P	**Pb**	**03 13 01.9**	**+0.3**
AKS	**Akhisar**	**0.94**	**77**	Pg	**Pg**	**03 13 01.9**	**0.0**
AKHS	**Akhisar**	**0.94**	**77**	P	**Pg**	**03 13 01.8**	**-0.1**
SMG	**Samos**	**0.98**	**171**	P	**Pg**	**03 13 02.6**	**0.0**
SMG				S	**Sn**	**03 13 17.0**	**-0.4**
	comp=E,3μm,0.3s						
SMG	**Samos**	**0.98**	**171**	P	**Pg**	**03 13 02.4**	**-0.2**
SMG				S	**Sb**	**03 13 16.3**	**+0.5**
SMG				AML	AML	03 13 19.6	
	comp=E,5077μm,0.3s						
SMG				AML	AML	03 13 20.4	
	comp=N,5659μm,0.3s						
GOMA	**Golmarmara-Man**	**1.01**	**88**	Pg	**Pg**	**03 13 02.7**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**1.06**	**356**	P	**Pb**	**03 13 04.0**	**-0.2**
BAYC				S	**Sg**	**03 13 17.3**	**-0.8**
BAYC				*i* AML	AML	03 13 18.0	
	comp=N,460nm,0.5s						
BAYC				*i* AML	AML	03 13 21.0	
	comp=N,436nm,0.4s						
GCAM	**G?zelcaml?**	**1.08**	**154**	P	**Pn**	**03 13 04.9**	**0.0**
STEP	**BALIKESIR_Sava**	**1.10**	**50**	P	**Pb**	**03 13 04.8**	**+0.1**
STEP				S	**Sn**	**03 13 21.1**	**+0.7**
STEP				*i* AML	AML	03 13 23.0	
	comp=N,808nm,0.7s						
IZMR	**zmir-demi**	**1.17**	**117**	P	**Pn**	**03 13 06.1**	**0.0**
IZMR				P	**Pn**	**03 13 06.2**	**0.0**
EZN	**Ezine**	**1.17**	**348**	Pn	**Pb**	**03 13 05.6**	**-0.4**
EZN	**Ezine**	**1.17**	**348**	P	**Pb**	**03 13 05.7**	**-0.3**
EZN				S	**Sg**	**03 13 21.7**	**+0.2**
	comp=N,918nm,0.5s						
BOZC	**Bozcaada**	**1.25**	**339**	P	**Pn**	**03 13 06.2**	**-0.9**
BOZC				S	**Sb**	**03 13 21.1**	**-2.4**
CANM	**Can-anakkale**	**1.37**	**14**	Pn	**Pn**	**03 13 06.9**	**-2.0**
COMU	**Canakkale**	**1.43**	**355**	Pn	**Pn**	**03 13 09.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.59**	**31**	Pn	**Pn**	**03 13 11.3**	**-0.6**
KULA	**Kula-Manisa**	**1.60**	**95**	Pn	**Pn**	**03 13 11.8**	**-0.3**
KULA	**Kula-Manisa**	**1.60**	**95**	P	**Pn**	**03 13 12.3**	**+0.2**
KULA				S	**Sg**	**03 13 34.5**	**-0.6**
GADA	**Gvkgeada**	**1.61**	**340**	Pn	**Pn**	**03 13 12.8**	**+0.6**
TNSA	**Tinos**	**1.62**	**226**	P	**Pn**	**03 13 11.4**	**-0.9**
LIA	**Limnos Island**	**1.66**	**318**	P	**Pn**	**03 13 12.7**	**-0.1**
LIA	**Limnos Island**	**1.66**	**318**	P	**Pn**	**03 13 12.6**	**-0.2**
LPK	**Lapseki**	**1.69**	**3**	Pn	**Pn**	**03 13 13.4**	**0.0**
BODT	**Bodrum**	**1.70**	**161**	P	**Pn**	**03 13 13.4**	**0.0**
GELI	**Tayfur-Gelibol**	**1.72**	**356**	Pn	**Pn**	**03 13 13.9**	**+0.2**
KRBG	**Karabiga-Canak**	**1.79**	**16**	Pn	**Pn**	**03 13 14.8**	**+0.2**
APE	**Apeiranthos**	**1.83**	**209**	P	**Pn**	**03 13 14.2**	**-1.0**
APE	**Apeiranthos**	**1.83**	**209**	P	**Pn**	**03 13 14.2**	**-1.0**
SIMA	**Simav-Kutahya**	**1.88**	**77**	Pn	**Pn**	**03 13 16.7**	**+0.8**
EDC	**Edincik**	**1.92**	**29**	Pn	**Pn**	**03 13 16.9**	**+0.5**
SMTH	**Samothraki Isl**	**1.98**	**335**	P	**Pn**	**03 13 17.1**	**-0.2**
SMTH	**Samothraki Isl**	**1.98**	**335**	P	**Pn**	**03 13 17.1**	**-0.2**
SMTH				AML	AML	03 13 54.3	
	comp=N,294μm,0.4s						
SMTH				AML	AML	03 13 54.5	
	comp=E,190μm,0.6s						
ERIK	**Erikli-Kesan**	**1.99**	**357**	Pn	**Pn**	**03 13 17.7**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.05**	**12**	Pn	**Pn**	**03 13 18.1**	**-0.2**
MRMT	**Marmara Adasi**	**2.06**	**21**	Pn	**Pn**	**03 13 18.5**	**0.0**
KCTX	**Karacabey (Bur**	**2.07**	**40**	Pn	**Pn**	**03 13 18.9**	**+0.3**
DAT	**Datca**	**2.08**	**159**	P	**Pn**	**03 13 18.7**	**-0.1**
ENEZ	**Enez**	**2.09**	**350**	P	**Pn**	**03 13 19.2**	**+0.5**
ENEZ				S	**Sn**	**03 13 45.4**	**+0.6**
	comp=E,400nm,0.5s						
ALN	**Alexandroupoli**	**2.26**	**349**	P	**Pn**	**03 13 21.3**	**+0.2**
ALN				S	**Sn**	**03 13 50.4**	**+1.4**
	comp=E,195nm,0.6s						
ALN	**Alexandroupoli**	**2.26**	**349**	P	**Pn**	**03 13 21.0**	**-0.1**
ALN				AML	AML	03 13 57.8	
	comp=E,264μm,0.7s						
ALN				AML	AML	03 13 58.6	
	comp=N,510μm,0.5s						
SANT	**Santorini**	**2.48**	**202**	P	**Pn**	**03 13 23.1**	**-1.1**
RDO	**Rodhopi**	**2.60**	**341**	P	**Pn**	**03 13 26.1**	**+0.3**
RDO	**Rodhopi**	**2.60**	**341**	P	**Pn**	**03 13 26.0**	**+0.1**
EDRB	**Edirne**	**3.17**	**2**	P	**Pn**	**03 13 33.8**	**+0.2**

*IDC **24** 03:51:09.3±0.7, 14°.78S×166°.92E, h0km, mb4.0/12, mbtmp4.0/13, ML3.8/1, MS3.7/3, Error ellipse: s-maj=27.9km s-min=20.2km az=118.0*
*NOU **24** 03:51:11.5, 14°.725×166°.86E, h8km, MLv4.6/9, Vanuatu Islands*
*NEIC **24** 03:51:15.5±0.9, 14°.8S±0°.1×166°.9E±0°.1, h35km±2km, mb4.5/18, Error ellipse: s-maj=23.6km s-min=17.3km az=85.0*

ISC 24 03:51:17.5±0.5, 14°.94S±0°.07×166°.8E±0°.1, h57km, n49, σ0s95/49, mb4.3/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.07**	**203**		**Pn**	**03 52 44.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**6.07**	**203**	P	**Pn**	**03 52 44.4**	**-0.2**
MARNC	**Mare, Loyalty**	**6.61**	**170**	Pn	**Pn**	**03 52 51.1**	**-0.9**
YATNC	**Mamie plateau,**	**7.08**	**179**	P	**Pn**	**03 52 58.6**	**+0.1**
DZM	**Mont Dzumac**	**7.10**	**183**	Pn	**Pn**	**03 52 58.4**	**-0.5**
DZM	**Mont Dzumac**	**7.10**	**183**	P	**Pn**	**03 52 58.8**	**0.0**
DZM	**Mont Dzumac**	**7.10**	**183**	Pn	**Pn**	**03 52 57.6**	**-1.3**
	1.6nm,0.3s,baz=18,slow=20,SNR=20						
DZM				Sn	**Sn**	**03 54 17.1**	**-1.1**
	1.2nm,0.3s,baz=31,slow=19,SNR=1.7						
DZM				LR	LR	03 55 28.8	
	comp=Z,247nm,21.9s,baz=25,slow=36						
	4.3nm,0.3s						
OUENC	**Ouen Island, N**	**7.44**	**180**	Pn	**Pn**	**03 53 02.9**	**-0.5**
OUENC	**Ouen Island, N**	**7.44**	**180**	P	**Pn**	**03 53 04.2**	**+0.8**
PINNC	**Pines Island,**	**7.65**	**175**	Pn	**Pn**	**03 53 06.2**	**-0.2**
HNR	**Honiara**	**8.65**	**309**	LR	LR	03 56 16.0	
	comp=Z,2μm,19.3s,baz=95,slow=36						
PMG	**Port Moresby**	**19.96**	**284**	P	**P**	**03 55 45.1**	**-0.1**
PMG				IAmb	IAmb	03 55 50.2	
	comp=Z,14nm,1.2s						
PMG	**Port Moresby**	**19.96**	**284**	P	**Pn**	**03 55 47.0**	**-0.3**
	comp=Z,4.0nm,0.5s,baz=142,slow=11,SNR=3.3						
CTA	**Charters Tower**	**20.24**	**252**	P	**P**	**03 55 49.3**	**+1.1**
	comp=Z,3.8nm,0.8s,baz=89,slow=6.6,SNR=2.6						
CTA				LR	LR	04 02 53.5	
	comp=Z,104nm,18.6s,baz=83,slow=34						
	comp=Z,3.8nm,0.8s						
CTAO	**Charters Tower**	**20.24**	**252**	P	**P**	**03 55 47.8**	**-0.4**
CTAO				IAmb	IAmb	03 55 56.4	
	comp=Z,16nm,1.1s						
BKZ	**Black Stump Fm**	**25.59**	**162**	P	**P**	**03 56 43.5**	**+2.1**
BKZ				IAmb	IAmb	03 56 46.7	
	comp=Z,8.7nm,0.4s						
BFZ	**Birch Farm**	**26.93**	**164**	P	**P**	**03 56 54.1**	**+0.6**
STKA	**Stephens Creek**	**28.51**	**229**	P	**P**	**03 57 06.8**	**-0.8**
WB0	**Warramunga Arr**	**31.27**	**256**	P	**P**	**03 57 31.6**	**-0.6**
WB0				IAmb	IAmb	03 57 40.2	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**31.33**	**256**	P	**P**	**03 57 31.9**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=87,slow=9.7,SNR=6.2						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**32.17**	**249**	P	**P**	**03 57 39.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=72,slow=9.6,SNR=12						
	comp=Z,0.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**39.53**	**260**	P	**P**	**03 58 42.8**	**-0.3**
VNDA	**Vanda**	**62.64**	**181**	P	**P**	**04 01 36.7**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=1.8,slow=8.0,SNR=1.3						
	comp=Z,3.1nm,0.9s						
KLR	**Kul'dur**	**71.02**	**337**	P	**P**	**04 02 29.6**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=147,slow=7.2,SNR=5.5						
	comp=Z,1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**74.62**	**294**	P	**P**	**04 02 51.8**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=119,slow=5.6,SNR=2.0						
	comp=Z,2.0nm,0.3s						
QSPA	**South Pole Qui**	**75.08**	**180**	P	**P**	**04 02 54.1**	**+0.9**
QSPA				IAmb	IAmb	04 03 04.3	
	comp=Z,5.6nm,1.1s						
QSPA	**South Pole Qui**	**75.08**	**180**	P	**P**	**04 02 53.5**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=37,slow=16,SNR=2.1						
M16K	**Timber Creek**	**80.48**	**16**	P	**P**	**04 03 22.7**	**-0.3**
K15K	**Wolf Creek Mou**	**80.91**	**14**	P	**P**	**04 03 25.3**	**+0.1**
SONM	**Songino Array**	**82.40**	**324**	P	**P**	**04 03 33.5**	**-0.1**
SONM	**Songino Array**	**82.40**	**324**	P	**P**	**04 03 32.4**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=127,slow=9.4,SNR=2.8						
	comp=Z,0.2nm,0.4s						
GTA	**Gaotai**	**82.49**	**314**	*e*P	**P**	**04 03 36.0**	**+1.8**
GTA				pP	PcP	04 03 40.9	+1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	**Bilibino**	**82.75**	**360**	P	**P**	**04 03 34.9**	**+0.2**
BILL				IAmb	IAmb	04 03 35.9	
	comp=Z,4.7nm,0.7s						
G19K	**Purcell Mounta**	**85.21**	**14**	P	**P**	**04 03 47.3**	**-0.1**
G19K				IAmb	IAmb	04 03 49.0	
	comp=Z,5.7nm,1.1s						
F19K	**Shaleruckik Mo**	**85.62**	**13**	P	**P**	**04 03 49.6**	**+0.2**
F19K				IAmb	IAmb	04 03 51.4	
	comp=Z,8.0nm,1.1s						
E19K	**Redstone River**	**86.26**	**13**	P	**P**	**04 03 53.0**	**+0.4**
E19K				IAmb	IAmb	04 03 55.0	
	comp=Z,3.6nm,0.9s						
CCB	**Clear Creek Bu**	**86.50**	**18**	P	**P**	**04 03 52.4**	**-1.3**
IL31		**86.87**	**18**	P	**P**	**04 03 54.2**	**-1.3**
IL31				IAmb	IAmb	04 03 56.0	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**86.87**	**18**	P	**P**	**04 03 53.8**	**-1.7**
ILAR	**Eielson Array**	**86.87**	**18**	P	**P**	**04 03 53.5**	**-2.1**
	comp=Z,1.1nm,0.7s,baz=238,slow=5.2,SNR=18						
	comp=Z,1.1nm,0.7s						
NVAR	**Mina Array Bea**	**87.75**	**49**	P	**P**	**04 03 59.9**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=243,slow=6.0,SNR=1.9						
	comp=Z,0.4nm,0.7s						
BMAR	**Burnt Mountain**	**89.41**	**17**	P	**P**	**04 04 07.2**	**-0.5**
MKAR	**Makanchi Array**	**97.04**	**316**	P	**P**	**04 04 43.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=86,slow=6.2,SNR=8.6						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**97.94**	**27**	P	**P**	**04 04 45.4**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=259,slow=4.7,SNR=6.4						
	comp=Z,0.4nm,0.8s						
ARCES	**ARCESS Array B**	**120.34**	**345**	PKP	**PKPdf**	**04 10 01.3**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=54,slow=0.8,SNR=9.4						
FINES	**FINESS Array B**	**125.75**	**338**	PKP	**PKPdf**	**04 10 11.1**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=48,slow=2.1,SNR=1.9						
NOA	**NORSAR Array B**	**130.71**	**345**	PKP	**PKPdf**	**04 10 22.2**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=41,slow=4.2,SNR=1.9						
KEST	**Kesra**		**151.08 320**	PKPbc	**PKPbc**	**04 11 04.3**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=83,slow=5.2,SNR=7.0						
ESDC	**Sonseca Array**	**154.06**	**344**	PKPbc	**PKiKP**	**04 11 13.3**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=1.0,slow=3.4,SNR=1.8						

FUNV 24 03:57:47.6, 10°.66N×65°.73W, h2km, MW3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**1.08**	**260**	*e*P	Pg	03 58 07.0	-1.3
FUNV				*e*S	Sg	03 58 22.7	+0.3
PCRV	**Puerto La Cruz**	**1.18**	**114**	*e*P	Pb	03 58 10.7	-0.1
PCRV				*e*S	Sb	03 58 27.0	+0.5
TACV	**Tcata**	**1.38**	**248**	*e*P	Pn	03 58 13.2	-0.7
TACV				*e*S	Sg	03 58 32.0	+0.1
BENV	**Beln**	**1.97**	**249**	*e*P	Pn	03 58 21.8	-0.2
BENV				*e*S	Sn	03 58 46.5	-0.8
TURV	**Turiamo**	**2.08**	**264**	*e*P	Pn	03 58 23.2	-0.4
TURV				*e*S	Sn	03 58 49.0	-1.2
CRUV	**Carupano**	**2.45**	**89**	*e*P	Pn	03 58 28.6	0.0
BAUV	**El Baul**	**2.85**	**233**	*e*P	Pn	03 59 33.0	-0.7
BAUV				*e*S	S

	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**41.65**	**339**	P	**P**	**04 07 52.6**	**+0.4**
SONM				IAmb	IAmb	04 08 10.6	
	comp=Z,2.4nm,1.0s						
SONM	**Songino Array**	**41.65**	**339**	P	**P**	**04 07 52.9**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=149,slow=10,SNR=7.5						
SONM				ScP	**ScP**	**04 13 40.2**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=94,slow=4.1,SNR=2.1						
	comp=Z,1.7nm,0.6s						
BBOO	**Buckleboo**	**43.29**	**169**	P	**P**	**04 08 04.8**	**-0.7**
STKA	**Stephens Creek**	**43.79**	**162**	P	**P**	**04 08 09.3**	**-0.2**
STKA	**Stephens Creek**	**43.79**	**162**	P	**P**	**04 08 09.3**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=345,slow=20,SNR=1.7						
	comp=Z,1.8nm,0.8s						
MK31	**Makanchi Array**	**52.76**	**323**	P	**P**	**04 09 18.4**	**-0.3**
MK31				IAmb	IAmb	04 09 36.7	
	comp=Z,2.4nm,1.4s						
MKAR	**Makanchi Array**	**52.76**	**323**	P	**P**	**04 09 18.7**	**0.0**
MKAR	**Makanchi Array**	**52.76**	**323**	P	**P**	**04 09 19.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=120,slow=8.4,SNR=14						
MKAR				PcP	**PcP**	**04 10 28.6**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=107,slow=5.0,SNR=3.7						
MKAR				LR	LR	04 32 46.1	
	comp=Z,35nm,18.1s,baz=61,slow=37						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**55.31**	**331**	P	**P**	**04 09 36.8**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=110,slow=6.3,SNR=5.0						
	comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**56.78**	**325**	P	**P**	**04 09 48.1**	**+0.3**
KURK				IAmb	IAmb	04 09 51.7	
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**56.79**	**325**	P	**P**	**04 09 47.5**	**-0.4**
	comp=Z,1.6nm,0.2s,baz=126,slow=6.9,SNR=3.0						
	comp=Z,1.6nm,0.2s						
KKAR	**Karatay Array**	**59.00**	**315**	P	**P**	**04 10 03.7**	**+0.1**
ABKAR	**Akbulak array**	**67.62**	**319**	P	**P**	**04 10 60.0**	**-0.6**
ARCES	**ARCESS Array B**	**84.82**	**340**	P	**P**	**04 12 38.6**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=88,slow=6.4,SNR=2.0						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**86.57**	**332**	P	**P**	**04 12 46.9**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=46,slow=8.0,SNR=4.8						
	comp=Z,1.3nm,0.7s						
HFS	**Hagfors**	**92.73**	**333**	P	**P**	**04 13 15.9**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=31,slow=7.0,SNR=1.4						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**93.91**	**24**	P	**P**	**04 13 21.8**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=292,slow=3.9,SNR=2.2						
	comp=Z,0.1nm,0.6s						
PLCA	**Paso Flores**	**145.55**	**156**		**PKPab**	**04 19 43.6**	**+0.8**
PLCA	**Paso Flores**	**145.55**	**156**	PKPbc	**PKPab**	**04 19 44.0**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=217,slow=4.2,SNR=8.1						

*IDC **24** 04:00:56.5±1.9, 7°.57S×127°.43E, h0km, mb3.5/2, mbtmp3.5/4, ML3.6/2, MS4.4/1, Error ellipse: s-maj=267.8km s-min=28.5km az=62.0*
*DJA **24** 04:01:13.6±0.7, 8°.5±.5°×12°.8E±°, h105km±34km, M4.0/7, mb3.7/2, MLv4.1/7*
ISC 24 04:01:12.2±1.2, 7°.8S±0°.1×127°.86E±0°.09, h100km, n9, σ2s06/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.42**	**93**	P		P	**Pn**	**04 02 06.5**	**+3.0**
SOEI	**Soe**	**4.03**	**241**	P		P	**Pn**	**04 02 13.2**	**+1.3**
SOEI				S		S	**Sn**	**04 02 59.2**	**+1.0**
EDFI	**Ende, Flores**	**6.17**	**261**	P		P	**Pn**	**04 02 40.8**	**-0.1**
FAKI	**Fak Fak**	**6.55**	**42**	P		P	**Pn**	**04 02 46.0**	**0.0**
WRA	**Warramunga Arr**	**13.58**	**153**	Pn		Pn		04 04 17.1	-3.6
	0.3nm,0.3s,baz=327,slow=13,SNR=16								
WRA				Sn		Sn		04 06 39.9	-10
	0.3nm,0.3s,baz=330,slow=23,SNR=3.0								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**16.78**	**160**	P		P	**Pn**	**04 04 59.7**	**-1.5**
	0.2nm,0.3s,baz=340,slow=12,SNR=15								
ASAR				S		Sn		04 07 57.6	-10
	1.3nm,0.6s,baz=318,slow=17,SNR=6.2								
	0.8nm,0.5s								
STKA	**Stephens Creek**	**27.13**	**154**	P		P	**Pn**	**04 06 44.3**	**-1.7**
	0.6nm,0.4s,baz=315,slow=10.0,SNR=3.9								
	0.6nm,0.4s								
HNR	**Honiara**	**31.76**	**95**	LR		LR		04 20 11.4	
	comp=Z,674nm,21.3s,baz=334,slow=36								
MKAR	**Makanchi Array**	**67.77**	**328**	P		P		04 11 53.6	-5.6
	0.1nm,0.3s,baz=129,slow=8.0,SNR=1.4								
	0.1nm,0.3s								

*CATAC **24** 04:03:47.3±0.4, 9°.82N×84°.15W, h53km±4km, ML3.1*
*UCR **24** 04:03:47.1±0.9, 9°.88N×84°.10W, h70km±3km, MW3.8*
ISC 24 04:03:47.3±1.4, 9°.84N±0°.04×84°.12W±0°.03, h68km±7km, n87, σ0s41/107, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACOS	**Acosta**	**0.06**	**226**	*eP*			**Pn**	**04 03 57.3**	**-0.2**
ACOS				*eS*			**Sn**	**04 04 05.0**	**+0.3**
AMPA	**Desamparados**	**0.08**	**45**	*eP*			**Pn**	**04 03 57.1**	**-0.3**
LUJA	**Lujan**	**0.10**	**28**	*eP*			**Pn**	**04 03 58.4**	**+0.9**
CENT	**San Jose**	**0.10**	**23**	*eP*			**Pn**	**04 03 57.4**	**-0.1**
MEXI	**Barrio Mexico**	**0.11**	**18**	*eP*			**Pn**	**04 03 57.5**	**-0.1**
SANTA	**Santa Ana**	**0.11**	**325**	*eP*			**Pn**	**04 03 57.5**	**0.0**
SJS	**Escuela Geolog**	**0.12**	**33**	*eP*			**Pn**	**04 03 57.5**	**-0.1**
SJS3	**Mercedes San J**	**0.12**	**34**	*eP*			**Pn**	**04 03 57.6**	**0.0**
LUPE	**Guadalupe**	**0.12**	**30**	*eP*			**Pn**	**04 03 57.5**	**0.0**
TRIO	**Tres Rios**	**0.14**	**62**	*eP*			**Pn**	**04 03 57.4**	**-0.2**
DOMI	**Santo Domingo**	**0.14**	**11**	*eP*			**Pn**	**04 03 57.7**	**+0.1**
ABE2	**San Pablo**	**0.15**	**155**	*eP*			**Pn**	**04 03 57.4**	**-0.4**
LCR2	**La Lucha 2**	**0.15**	**131**	*eP*			**Pn**	**04 03 57.5**	**-0.3**
LCR2	**La Lucha 2**	**0.15**	**131**	*iP*			**Pn**	**04 03 57.3**	**-0.4**
LCR2					IAML			04 03 57.7	
	comp=Z,6μm,1.0s								
LCR2				*iS*			**Sn**	**04 04 03.8**	**-1.5**
BELE	**Belen**	**0.15**	**333**	*eP*			**Pn**	**04 03 58.5**	**+0.9**
HDC	**Heredia**	**0.16**	**2**	*eP*			**Pn**	**04 03 57.6**	**-0.1**
HDC3	**Heredia 3**	**0.16**	**3**	*iP*			**Pn**	**04 03 57.6**	**-0.1**
HDC3				*iS*			**Sn**	**04 04 05.1**	**-0.2**
HDC3					IAML			04 04 15.4	
	comp=Z,1μm,1.0s								
OCM	**Ochomogo**	**0.17**	**70**	*eP*			**Pn**	**04 03 57.5**	**-0.3**
OCM	**Ochomogo**	**0.17**	**70**	*iP*			**Pn**	**04 03 57.3**	**-0.5**
OCM					IAML			04 03 57.7	
	comp=Z,6μm,1.0s								
OCM				*iS*			**Sn**	**04 04 05.7**	**+0.3**
CORON	**Coronado**	**0.17**	**41**	*eP*			**Pn**	**04 03 58.9**	**+1.1**
TAGO	**Cartago**	**0.19**	**82**	*eP*			**Pn**	**04 03 57.9**	**0.0**
RAZU	**San Marcos de**	**0.20**	**152**	*eP*			**Pn**	**04 03 57.5**	**-0.4**
REPA	**Paraso**	**0.25**	**93**	*eP*			**Pn**	**04 03 59.0**	**+0.9**
CVIMO	**Finca Echandi**	**0.25**	**43**	*eP*			**Pn**	**04 03 58.2**	**0.0**
VIRE	**VIRE**	**0.25**	**60**	*iP*			**Pn**	**04 03 58.1**	**-0.3**
VIRE				*iS*			**Sn**	**04 04 06.8**	**+0.3**
VIRE					IAML			04 04 10.3	
	comp=Z,4μm,1.0s								
TCS1	**Tacares**	**0.27**	**318**	*eP*			**Pn**	**04 03 58.4**	**+0.2**
TCS1	**Tacares**	**0.27**	**318**	*iP*			**Pn**	**04 03 58.6**	**+0.4**
TCS1					IAML			04 04 12.0	
	comp=Z,22μm,1.0s								
VICA	**Volcano Irazu**	**0.31**	**62**	*eP*			**Pn**	**04 03 58.9**	**+0.1**
PCAYA	**Pacayas**	**0.31**	**76**	*eP*			**Pn**	**04 03 58.6**	**-0.1**
ICR3	**Volcano Irazu**	**0.31**	**64**	*eP*			**Pn**	**04 03 58.8**	**0.0**
RAFA	**San Farael, Vo**	**0.33**	**69**	*eP*			**Pn**	**04 03 58.9**	**+0.1**
TRB2	**Turrubares**	**0.33**	**283**	*eP*			**Pn**	**04 03 58.7**	**+0.2**
SARCI	**Sarchi**	**0.34**	**318**	*eP*			**Pn**	**04 03 58.8**	**+0.1**
VTRT	**Volcan Turrial**	**0.36**	**63**	*iP*			**Pn**	**04 03 59.5**	**+0.4**
VTRT				*iS*			**Sn**	**04 04 08.7**	**+1.0**
VTRT					IAML			04 04 14.5	
	comp=Z,1μm,1.0s								
LLNJ	**Naranjito**	**0.36**	**177**	*eP*			**Pn**	**04 03 58.9**	**+0.2**
VPS6	**Volcano Poas**	**0.37**	**342**	*eP*			**Pn**	**04 03 58.8**	**-0.3**
VINA	**Juan Vinas**	**0.37**	**81**	*eP*			**Pn**	**04 03 58.8**	**-0.2**
VTUN	**Crater Central**	**0.39**	**62**	*iP*			**Pn**	**04 03 59.7**	**+0.2**
VTUN				*iS*			**Sn**	**04 04 08.2**	**-0.1**
VTUN					IAML			04 04 15.8	
	comp=Z,980nm,1.0s								
VTUC	**Crater, Volcan**	**0.40**	**62**	*iP*			**Pn**	**04 03 59.7**	**+0.2**
VTUC				*iS*			**Sn**	**04 04 09.2**	**+0.9**
VTUC					IAML			04 04 21.3	
	comp=Z,580nm,1.0s								
CVTR	**Volcan Turrial**	**0.40**	**63**	*eP*			**Pn**	**04 03 59.6**	**+0.2**
CVTV	**Tajo**	**0.40**	**66**	*eP*			**Pn**	**04 03 59.5**	**+0.1**
SVQ2	**Quepos**	**0.41**	**187**	*eP*			**Pn**	**04 03 59.2**	**+0.1**
VTCV	**VTCV, Calle Va**	**0.41**	**70**	*eP*			**Pn**	**04 03 59.2**	**-0.2**
VTCV	**VTCV, Calle Va**	**0.41**	**70**	*iP*			**Pn**	**04 03 59.1**	**-0.3**
VTCV				*iS*			**Sn**	**04 04 08.2**	**0.0**
					IAML			04 04 09.8	
	comp=Z,2μm,1.0s								
VERB	**Verbena**	**0.43**	**76**	*eP*			**Pn**	**04 03 59.4**	**-0.1**
SRA1	**San Ramn**	**0.43**	**304**	*eP*			**Pn**	**04 03 59.3**	**-0.1**
ZARE	**Zarcero**	**0.43**	**322**	*eP*			**Pn**	**04 03 59.7**	**+0.1**
VTLO	**VTLO**	**0.44**	**62**	*eP*			**Pn**	**04 03 59.6**	**-0.1**
CDM	**Cerro de Muert**	**0.45**	**129**	*eP*			**Pn**	**04 03 59.5**	**-0.5**
CDM	**Cerro de Muert**	**0.45**	**129**	*iP*			**Pn**	**04 03 59.5**	**-0.5**
CDM				*iS*			**Sn**	**04 04 09.1**	**-0.1**
CDM					IAML			04 04 10.7	
	comp=Z,3μm,1.0s								
RVSTA	**Santa Teresita**	**0.48**	**74**	*eP*			**Pn**	**04 03 59.8**	**-0.1**
CPMI	**Catarata Coope**	**0.51**	**330**	*eP*			**Pn**	**04 04 00.2**	**-0.1**
CPMI	**Catarata Coope**	**0.51**	**330**	*iP*			**Pn**	**04 04 00.4**	**+0.1**
CPMI				*iS*			**Sn**	**04 04 09.9**	**+0.1**
CPMI					IAML			04 04 16.3	
	comp=Z,800nm,1.0s								
RIFO	**Rio Frio, Sara**	**0.51**	**22**	*eP*			**Pn**	**04 03 59.5**	**-0.6**
RIFO	**Rio Frio, Sara**	**0.51**	**22**	*iP*			**Pn**	**04 03 59.7**	**-0.4**
RIFO				*iS*			**Sn**	**04 04 09.3**	**-0.1**
RIFO					IAML			04 04 11.2	
	comp=Z,720nm,1.0s								
JACO	**JACO, Garabito**	**0.56**	**252**	*eP*			**Pn**	**04 04 00.7**	**+0.1**
JACO	**JACO, Garabito**	**0.56**	**252**	*iP*			**Pn**	**04 04 01.0**	**+0.5**
JACO					IAML			04 04 01.2	
	comp=Z,640nm,1.0s								
JACO				*iS*			**Sn**	**04 04 09.5**	**-0.8**
ARZA	**Esparza**	**0.56**	**286**	*eP*			**Pn**	**04 04 01.7**	**+1.1**
LCOCO	**El Coco**	**0.60**	**66**	*eP*			**Pn**	**04 04 01.2**	**+0.2**
ZELE	**Perez Zeledon**	**0.62**	**139**	*eP*			**Pn**	**04 04 01.5**	**+0.3**
ITAL	**Pital**	**0.63**	**346**	*eP*			**Pn**	**04 04 01.1**	**-0.2**
PEZE	**Perez Zeledon,**	**0.63**	**136**	*eP*			**Pn**	**04 04 01.2**	**-0.2**
PEZE	**Perez Zeledon,**	**0.63**	**136**	*iP*			**Pn**	**04 04 00.9**	**-0.5**
PEZE				*iS*			**Sn**	**04 04 11.7**	**0.0**
PEZE					IAML			04 04 15.6	
	comp=Z,2μm,1.0s								
SOCE	**Pocosol**	**0.73**	**318**	*eP*			**Pn**	**04 04 02.6**	**+0.1**
SOCE				*eS*			**Sn**	**04 04 14.4**	**+0.8**
SOCE	**Pocosol**	**0.73**	**318**	*iP*			**Pn**	**04 04 02.4**	**-0.1**
SOCE				*iS*			**Sn**	**04 04 13.9**	**+0.3**
SOCE					IAML			04 04 15.3	
	comp=Z,6μm,1.0s								
LAFE	**Finca La Fe, P**	**0.78**	**268**	*eP*			**Pn**	**04 04 03.8**	**+0.8**
LAFE	**Finca La Fe, P**	**0.78**	**268**	*iP*			**Pn**	**04 04 03.3**	**+0.3**
LAFE					IAML			04 04 04.3	
	comp=Z,12nm,1.0s								
LAFE				*iS*			**Sn**	**04 04 14.0**	**-0.6**
VACR	**Volcan Arenal**	**0.84**	**319**	*eP*			**Pn**	**04 04 03.8**	**+0.1**
ARE1	**Arenal 1**	**0.85**	**316**	*eP*			**Pn**	**04 04 04.2**	**+0.3**
CEDE	**Laguna Cedeo**	**0.86**	**318**	*eP*			**Pn**	**04 04 04.1**	**0.0**
OCHAL	**Ojochal**	**0.87**	**148**	*iP*			**Pn**	**04 04 04.4**	**+0.3**
OCHAL				*iS*			**Sn**	**04 04 16.3**	**-0.3**
OCHAL					IAML			04 04 19.7	
	comp=Z,43nm,1.0s								
COVE	**Coope Vega, Sa**	**0.92**	**342**	*eP*			**Pn**	**04 04 03.9**	**-0.8**
COVE	**Coope Vega, Sa**	**0.92**	**342**	*iP*			**Pn**	**04 04 04.1**	**-0.6**
COVE				*iS*			**Sn**	**04 04 17.1**	**-0.5**
COVE					IAML			04 04 19.0	
	comp=Z,650nm,1.0s								
JTS	**Las Juntas de**	**0.94**	**299**	*eP*			**Pn**	**04 04 05.0**	**+0.1**
CBL1	**Cabuya**	**0.99**	**256**	*eP*			**Pn**	**04 04 05.3**	**-0.3**
BURE	**Buenos Aires**	**1.02**	**131**	*eP*			**Pn**	**04 04 06.3**	**+0.4**
NYURE	**Nandayure**	**1.13**	**278**	*eP*			**Pn**	**04 04 07.2**	**-0.1**
ACAL	**Aguas Claras**	**1.20**	**311**	*eP*			**Pn**	**04 04 08.5**	**+0.2**
PLAN	**Los Planes de**	**1.24**	**160**	*iP*			**Pn**	**04 04 08.6**	**-0.2**
PLAN				*iS*			**Sn**	**04 04 24.9**	**+0.1**
PLAN					IAML			04 04 32.0	
	comp=Z,1μm,1.0s								
POTG	**Potrero Grande**	**1.26**	**128**	*eP*			**Pn**	**04 04 09.3**	**+0.2**
CMARA	**Lajas Hojancha**	**1.30**	**278**	*eP*			**Pn**	**04 04 09.2**	**-0.4**
CUI	**Cuipilapa**	**1.31**	**308**	*eP*			**Pn**	**04 04 10.0**	**+0.2**
PLVR	**Palo Verde**	**1.31**	**293**	*eP*			**Pn**	**04 04 09.9**	**0.0**
COLC	**Colonia**	**1.35**	**308**	*eP*			**Pn**	**04 04 10.2**	**0.0**
ORTG	**Ortega, Santa**	**1.42**	**292**	*eP*			**Pn**	**04 04 11.4**	**+0.2**
JUD3	**Juan Diaz 3**	**1.44**	**283**	*eP*			**Pn**	**04 04 11.3**	**-0.1**
BRU2	**Volcan**	**1.75**	**126**	*eP*			**Pn**	**04 04 16.2**	**+0.5**

*IDC **24** 04:04:40.7±0.9, 31°.14S×179°.50W, h224km±11km, mb3.6/4, mbtmp4.2/6, Error ellipse: s-maj=20.4km s-min=14.5km az=109.0*
*WEL **24** 04:04:42.0±0.8, 32°.5±12°×17°.8W±3°.2, h0km, M4.8/10, mB4.8/3, ML5.1/10, MLv4.9/10, Mw(mB)4.0/3, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1, confirmed*
ISC 24 04:04:41.0±0.9, 31°.27S±0°.08×179°.2W±0°.2, h250km, n22, σ2s76/36, mb3.8/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.29**	**29**	P		P	**Pn**	**04 05 24.8**	**-1.4**
GLKZ				S		S	**S**	**04 05 59.0**	**-2.9**
RAO	**Raoul Island**	**2.30**	**29**	P		P	**Pn**	**04 05 25.3**	**-1.0**
	450nm,0.3s,baz=90,slow=16,SNR=16								
RAO				S		S	**S**	**04 05 58.8**	**-3.3**
	297nm,0.3s,baz=89,slow=23,SNR=2.4								
MXZ	**Matakaoa Point**	**6.60**	**197**	P		P	**Pn**	**04 06 16.4**	**-0.2**
MXZ				S		S	**S**	**04 07 32.8**	**-0.4**
HAZ	**Te Kaha**	**6.93**	**200**	P		P	**Pn**	**04 06 19.3**	**-1.4**
HAZ				S		S	**S**	**04 07 41.8**	**+1.1**
PKGZ	**Pakihiroa**	**6.97**	**198**	P		P	**Pn**	**04 06 20.7**	**-0.6**
PKGZ				S		S	**S**	**04 07 36.6**	**-5.2**
PUZ	**Puketiti**	**7.10**	**196**	P		P	**Pn**	**04 06 23.9**	**+1.1**
PUZ				S		S	**S**	**04 07 41.5**	**-3.1**
RUGZ	**Raukumara Rang**	**7.16**	**200**	P		P	**Pn**	**04 06 22.4**	**-1.2**
RUGZ				S		S	**S**	**04 07 43.1**	**-2.9**
TWGZ	**Tauwhareparae**	**7.27**	**198**	P		P	**Pn**	**04 06 28.9**	**+3.9**
TWGZ				S		S	**S**	**04 07 47.8**	**-0.8**
WHRZ	**Whale Island**	**7.28**	**205**	P		P	**S**	**04 07 52.0**	**+3.1**
MWZ	**Matawai**	**7.54**	**200**	P		P	**Pn**	**04 06 26.4**	**-2.0**
MWZ				S		S	**S**	**04 07 50.5**	**-4.3**
TKGZ	**Te Karaka**	**7.55**	**198**	P		P	**Pn**	**04 06 30.1**	**+1.6**
TKGZ				S		S	**S**	**04 07 52.1**	**-2.8**
URZ	**Urewera**	**7.60**	**202**	P		P	**Pn**	**04 06 28.7**	**-0.4**
	3.9nm,0.3s,baz=9.2,slow=5.3,SNR=1.9								
URZ				S		S	**S**	**04 07 51.1**	**-5.0**
	24nm,0.3s,baz=340,slow=7.9,SNR=16								
URZ	**Urewera**	**7.60**	**202**	P		P	**Pn**	**04 06 27.9**	**-1.3**
URZ				S		S	**S**	**04 07 51.7**	**-4.4**
RIGZ	**Rimuhau**	**7.82**	**198**	P		P	**Pn**	**04 06 31.2**	**-0.8**
RIGZ				S		S	**S**	**04 07 58.1**	**-3.2**
PRGZ	**Paritu Road**	**8.00**	**197**	P		P	**S**	**04 08 00.1**	**-5.3**
MHGZ	**Mahia Peninsul**	**8.21**	**196**	P		P	**Pn**	**04 06 39.8**	**+2.9**
MHGZ				S		S	**S**	**04 08 09.6**	**-0.7**
STKA	**Stephens Creek**	**33.28**	**258**	P		P	**P**	**04 10 56.9**	**+1.7**
	3.9nm,0.5s,baz=92,slow=12,SNR=9.1								
	3.9nm,0.5s								
ASAR	**Alice Springs**	**42.03**	**268**	P		P	**P**	**04 12 08.2**	**-0.3**
	0.4nm,0.3s,baz=107,slow=7.2,SNR=7.4								
	0.4nm,0.3s								
WRA	**Warramunga Arr**	**43.10**	**274**	P		P	**P**	**04 12 16.9**	**-0.1**
	0.7nm,0.4s,baz=111,slow=8.0,SNR=19								
	0.7nm,0.4s								
QSPA	**South Pole Qui**	**58.84**	**180**	P		P	**P**	**04 14 17.8**	**+4.5**
	2.9nm,0.5s,baz=62,slow=2.2,SNR=54								
	2.9nm,0.5s								
FINES	**FINESS Array B**	**145.59**	**339**	PKPbc			**PKPab**	**04 23 48.9**	**-1.2**
	1.0nm,0.5s,baz=57,slow=5.1,SNR=9.7								
TORD	**Torodi Ar. Bea**	**161.94**	**183**	PKPab			**PKPab**	**04 25 01.1**	**+1.0**
	0.3nm,0.4s,baz=168,slow=5.2,SNR=4.5								

DJA 24 04:25:11.6±0.3, 7°.5±.4°×12°.9E±°, h62km±55km, M4.4/7, mb4.4/6, mB5.2/4, MLv4.3/7, Mw(mB)4.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.01**	**112**	P		P	Pn	04 25 43.2	-0.1
FAKI	**Fak Fak**	**5.14**	**34**	P		P	Pn	04 26 25.4	-0.7
	11nm,1.1s,0.2nm								
KMPI	**Kaimana, Papua**	**5.56**	**50**	S		Sn		04 27 35.2	+0.8
SOEI	**Soe**	**5.67**	**243**	P		P	Pn	04 26 33.8	+0.4
	60nm,1.2s,1μm0.2nm								
LBMI	**Labuha**	**6.83**	**344**	P		P	Pn	04 26 48.5	-0.7
	104nm,0.8s,0.3nm								
EDFI	**Ende, Flores**	**7.79**	**258**	P		P	Pn	04 27 02.6	+0.1
	7.9nm,1.4s,0.1nm								
BASI	**Baing, Sumba**	**9.22**	**251**	P		P	Pn	04 27 22.1	+0.2

*IDC **24** 04:43:07.8±1.2, 6°.60S×147°.98E, h0km, mb3.8/7, mbtmp3.8/9, ML3.0/2, MS3.3/2, Error ellipse: s-maj=50.5km s-min=19.1km az=100.0*

*NEIC **24** 04:43:13.8±1.8, 6°.63S±0°.10×147°.8E±0°.1, h35km±1km, mb4.2/13, Error ellipse: s-maj=19.6km s-min=16.5km az=283.0*
ISC 24 04:43:15.0±0.7, 6°.65S±0°.08×147°.8E±0°.1, h51km, n32, σ0s96/33, mb3.9/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.81**	**193**	Pn		Pn	**Pn**	**04 43 56.5**	**-0.9**
	26nm,0.3s,baz=18,slow=5.5,SNR=74								
PMG				Sn		Sn	**Sn**	**04 44 31.0**	**+0.9**
	20nm,0.3s,baz=0.5,slow=9.7,SNR=4.7								
	164nm,0.6s								
COEN	**Coen**	**8.57**	**212**	Pn		Pn	**Pn**	**04 45 15.5**	**-1.1**
CTA	**Charters Tower**	**13.44**	**186**	Pn		Pn	**Pn**	**04 46 24.6**	**+1.5**
	0.1nm,0.3s,baz=16,slow=17,SNR=2.1								
CTAO	**Charters Tower**	**13.44**	**186**	Pn		Pn	**Pn**	**04 46 21.9**	**-1.2**
WB0	**Warramunga Arr**	**18.43**	**224**	P		P	**P**	**04 47 25.8**	**-0.6**
WRAB	**Tennant Creek**	**18.57**	**223**	P		P	**P**	**04 47 27.0**	**-0.9**
WRAB					IAmb	IAmb		04 47 28.9	
	comp=Z,14nm,1.3s								
WRA	**Warramunga Arr**	**18.59**	**223**	P		P	**P**	**04 47 28.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=49,slow=11,SNR=3.5								
	comp=Z,0.9nm,0.6s								
EIDS	**Eidsvold**	**18.87**	**171**	Pn		Pn	**Pn**	**04 47 32.7**	**+0.5**
EIDS					IAmb	IAmb		04 47 42.1	
	comp=Z,18nm,1.5s								
AS31	**Alice Springs**	**21.56**	**217**	P		P	**P**	**04 47 59.8**	**-0.5**
ASAR	**Alice Springs**	**21.56**	**217**			P	**P**	**04 47 59.6**	**-0.8**
ASAR	**Alice Springs**	**21.56**	**217**	P		P	**P**	**04 48 00.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=52,slow=8.9,SNR=20								
ASAR				LR		LR		04 57 12.5	
	comp=Z,56nm,19.6s,baz=86,slow=39								
	comp=Z,1.4nm,0.6s								
FITZ	**Fitzroy Crossi**	**24.42**	**240**	P		P	**P**	**04 48 29.3**	**+0.3**
FITZ					IAmb	IAmb		04 48 54.7	
	comp=Z,4.0nm,1.3s								
MARNC	**Mare, Loyalty**	**24.49**	**129**	P		P	**P**	**04 48 28.0**	**-1.6**
BBOO	**Buckleboo**	**28.23**	**201**	P		P	**P**	**04 49 04.0**	**+0.8**
BBOO					IAmb	IAmb		04 49 33.0	
	comp=Z,14nm,1.2s								
MBWA	**Marble Bar**	**30.75**	**239**	P		P	**P**	**04 49 25.4**	**-0.3**
BKZ	**Black Stump Fm**	**41.42**	**146**	P		P	**P**	**04 50 56.9**	**+0.2**
BKZ					IAmb	IAmb		04 51 23.6	
	comp=Z,15nm,1.3s								
VNDA	**Vanda**	**71.22**	**177**	P		P	**P**	**04 54 28.8**	**+0.6**
MK31	**Makanchi Array**	**78.51**	**320**	P		P	**P**	**04 55 11.6**	**+0.7**
MK31					IAmb	IAmb		04 55 30.0	
	comp=Z,2.8nm,1.5s								
MKAR	**Makanchi Array**	**78.51**	**320**	P		P	**P**	**04 55 11.9**	**+1.0**
MKAR	**Makanch

CCUM					S		Sn	05 17 16.7	-0.9
CCUM					*i* Vmb_Lg			05 17 19.3	
CTAD	**Las Tabladas,**	**1.82**	**197**		P		**Pn**	**05 16 57.2**	**+1.3**
CTAD					S		**Sn**	**05 17 17.1**	**-0.7**
CTAD					*i* Vmb_Lg			05 17 18.3	
CJUL	**El Julan, El H**	**1.84**	**197**		P		**Pn**	**05 16 57.4**	**+1.2**
CJUL					S		**Sn**	**05 17 17.3**	**-1.2**
CJUL					*i* Vmb_Lg			05 17 20.0	
CMCL	**Mercadel, El H**	**1.84**	**195**		⇑P		**Pn**	**05 16 57.8**	**+1.6**
CMCL					S		**Sn**	**05 17 18.1**	**-0.4**
CCAL	**Punta Orchilla**	**1.87**	**198**		P		**Pn**	**05 16 58.1**	**+1.5**
CCAL					S		**Sn**	**05 17 18.2**	**-0.9**
CCAL					*i* Vmb_Lg			05 17 19.6	
CNAO	**La Restinga, E**	**1.89**	**193**		P		**Pn**	**05 16 58.6**	**+1.7**
CNAO					S		**Sn**	**05 17 19.4**	**-0.3**
CNAO					*i* Vmb_Lg			05 17 20.6	
GGC	**Guia, Gran Can**	**2.13**	**130**		P		**Pn**	**05 17 02.1**	**+1.9**
GGC					S		**Sn**	**05 17 24.0**	**-1.6**
GGC					*i* Vmb_Lg			05 17 24.4	
EOSO	**Osorio**	**2.22**	**129**		P		**Pn**	**05 17 02.9**	**+1.4**
EOSO					S		**Sn**	**05 17 25.7**	**-2.1**
FUL	**Funchal**	**3.18**	**9**	*eS*	S		**Sn**	**05 17 49.1**	**-2.4**
FUL					A		A	05 17 52.3	
	120nm,0.3s								
CFUE	**Fuerteventura**	**3.23**	**104**		P		**Pn**	**05 17 17.9**	**+2.6**
CFUE					S		**Sn**	**05 17 49.8**	**-2.8**
CFUE					*i* Vmb_Lg			05 17 53.5	
PMAR	**Madeira**	**3.25**	**9**	*eP*	P		**Pn**	**05 17 17.4**	**+1.6**
PMAR				*eS*	S		**Sn**	**05 17 50.8**	**-2.8**
PMAR					A		A	05 17 55.8	
	209nm,0.3s								
PMAR	**Madeira**	**3.25**	**9**		P		**Pn**	**05 17 17.5**	**+1.7**
PMAR	**Madeira**	**3.25**	**9**		S		Sn	05 17 48.2	-5.4
CGIN	**Giniginamar, F**	**3.26**	**112**		P		**Pn**	**05 17 18.5**	**+2.8**
CGIN					S		**Sn**	**05 17 50.7**	**-2.7**
CGIN					*i* Vmb_Lg			05 17 55.6	
PMOZ	**Porto Moniz, M**	**3.33**	**4**	*eP*	P		**Pn**	**05 17 18.3**	**+1.6**
PMOZ				*eS*	S		**Sn**	**05 17 52.9**	**-2.3**
PMOZ					A		A	05 18 00.1	
	523nm,0.3s								
PMOZ	**Porto Moniz, M**	**3.33**	**4**		P		**Pn**	**05 17 18.3**	**+1.6**
PMOZ					S		**Sn**	**05 17 53.0**	**-2.2**
PMOZ	**Porto Moniz, M**	**3.33**	**4**		P		Pn	**05 17 18.2**	**+1.6**
PMOZ	**Porto Moniz, M**	**3.33**	**4**		S		Sn	05 17 49.4	-5.8
EFAM	**Famara**	**3.48**	**95**		P		Pn	05 17 24.8	+6.0
EFAM					S		**Sn**	**05 17 56.3**	**-2.6**
PMPS	**Porto Santo**	**3.69**	**15**	*eP*	P		**Pn**	**05 17 22.9**	**+1.4**
PMPS				*eS*	S		**Sn**	**05 18 00.2**	**-3.7**
PMPS					A		A	05 18 08.5	
	51nm,0.8s								
PMPST	**Porto Santo, M**	**3.71**	**15**	*eP*	P		**Pn**	**05 17 23.9**	**+2.0**
PMPST				*eS*	S		**Sn**	**05 18 02.3**	**-2.1**
PMPST					A		A	05 18 10.7	
	78nm,0.3s								
TTIG	**Tnine Tigouga,**	**7.92**	**80**		P		**Pn**	**05 18 22.2**	**+2.3**
TTIG	**Tnine Tigouga,**	**7.92**	**80**		S		**Sn**	**05 19 45.9**	**-2.5**
SRHM	**Skhour des Reh**	**8.75**	**68**		P		**Pn**	**05 18 35.3**	**+4.0**
SRHM	**Skhour des Reh**	**8.75**	**68**		S		Sn	05 19 59.4	-10
TIO	**Tiouine**	**8.97**	**78**		S		**Sn**	**05 20 13.2**	**-1.1**
TIO					P		**Pn**	**05 18 38.0**	**+3.7**
TIO	**Tiouine**	**8.97**	**78**		P		**Pn**	**05 18 37.6**	**+3.3**
TIO	**Tiouine**	**8.97**	**78**		S		**Sn**	**05 20 13.5**	**-0.8**
OUZM	**OUZ**	**9.39**	**79**		P		**Pn**	**05 18 43.1**	**+3.0**
AVE	**Averroes**	**9.41**	**64**		S		**Sn**	**05 20 23.1**	**-1.8**
AVE					P		**Pn**	**05 18 43.8**	**+3.6**
TISM	**Timmit**	**9.78**	**74**		P		**Pn**	**05 18 48.5**	**+3.2**
TISM	**Timmit**	**9.78**	**74**		S		**Sn**	**05 20 32.6**	**-1.3**
VPORT	**Vila do Porto,**	**9.82**	**321**		P		**Pn**	**05 18 47.5**	**+1.6**
VPORT					S		Sn	05 20 30.2	-4.9
ZHG	**ZHG**	**10.07**	**64**		P		**Pn**	**05 18 51.8**	**+2.6**
ZHG	**ZHG**	**10.07**	**64**		S		Sn	05 20 32.2	-8.9
ZGR	**Zagora**	**10.33**	**84**		P		**Pn**	**05 18 57.5**	**+4.6**
ZGR	**Zagora**	**10.33**	**84**		S		**Sn**	**05 20 46.1**	**-1.6**
PFVI	**Vila Bisbo**	**10.51**	**41**	*eS*	Sn		Sn	05 20 45.1	-6.7
PFVI					A		A	05 20 50.8	
	4.6nm,0.6s								
PFVI	**Vila Bisbo**	**10.51**	**41**		P		**Pn**	**05 18 54.8**	**-0.4**
PFVI	**Vila Bisbo**	**10.51**	**41**		S		Sn	05 20 42.8	-9.0
MORF	**Marmelete**	**10.73**	**41**	*eS*	Sn		Sn	05 20 50.6	-6.7
MORF					A		A	05 20 54.8	
	4.4nm,0.3s								
PBDV	**Barranco-do-Ve**	**11.11**	**43**	*eP*	P		**Pn**	**05 19 06.1**	**+2.6**
PBDV				*eS*	Sn		Sn	05 21 00.1	-6.5
PBDV					A		A	05 21 10.3	
	1.9nm,0.3s								
IFR	**Ifrane**	**11.29**	**66**		S		**Sn**	**05 21 08.6**	**-2.6**
IFR					P		**Pn**	**05 19 08.5**	**+2.4**
PCVE	**Castro Verde**	**11.31**	**42**	*eS*	Sn		Sn	05 21 05.9	-5.5
PCVE					A		A	05 21 07.8	
	2.1nm,0.4s								
PVAQ	**Vaqueiros**	**11.35**	**43**	*eP*	P		**Pn**	**05 19 08.7**	**+2.1**
PVAQ				*eS*	Sn		Sn	05 21 05.5	-6.8
PVAQ					A		A	05 21 09.3	
	2.7nm,0.3s								
PVAQ	**Vaqueiros**	**11.35**	**43**		P		Pn	**05 19 07.4**	**+0.8**
PVAQ	**Vaqueiros**	**11.35**	**43**		S		Sn	05 21 02.0	-10
MESJ	**Messejana**	**11.35**	**40**	*eS*	Sn		**Sn**	**05 21 08.9**	**-3.5**
MESJ					A		A	05 21 19.9	
	2.5nm,1.1s								
PNCL	**Nicolau / Gran**	**11.37**	**39**	*eS*	Sn		Sn	05 21 06.0	-6.9
PNCL					A		A	05 21 18.3	
	1.5nm,0.4s								
MD31	**MD31**	**11.41**	**70**		P		**Pn**	**05 19 11.3**	**+3.6**
MD31	**MD31**	**11.41**	**70**		S		**Sn**	**05 21 10.2**	**-3.9**
MDT	**Midelt**	**11.52**	**70**		P		**Pn**	**05 19 13.6**	**+4.4**
MDT	**Midelt**	**11.52**	**70**		S		**Sn**	**05 21 12.6**	**-4.2**
PBEJ	**Beja**	**11.68**	**41**	*eS*	Sn		Sn	05 21 14.8	-5.7
PBEJ					A		A	05 21 18.0	
	1.9nm,0.4s								
PMTG	**Montargil**	**12.23**	**36**	*eS*	Sn		Sn	05 21 28.4	-5.7
PBAR	**Barrancos**	**12.26**	**42**	*eS*	Sn		Sn	05 21 28.0	-6.6
PBAR					A		A	05 21 35.9	
	2.2nm,0.6s								
AKLM	**AKL**	**12.60**	**63**		P		**Pn**	**05 19 25.6**	**+1.7**
AKLM	**AKL**	**12.60**	**63**		S		Sn	05 21 35.3	-7.9
PMRV	**Marv??o**	**12.94**	**37**	*eS*	Sn		Sn	05 21 45.3	-5.9
PMRV					A		A	05 21 47.2	
	1.6nm,0.6s								
PAB	**San Pablo**	**14.74**	**44**		P		**Pn**	**05 19 52.7**	**-0.4**

*KRSC **24** 05:23:19.4±1.3,55.°51N×165.°71E, h40km±14km, Ml3.9*
*IDC **24** 05:23:22.0±1.8,55.°42N×165.°74E, h0km, mb3.5/6, mbtmp3.4/7, ML2.4/1, Error ellipse: s-maj=57.4km s-min=20.8km az=168.0*

ISC 24 05:23:24.1±0.8,55.°46N±0.°07×165.°65E±0.°07, h19km, n35, σ1s95/37, mb3.5/6, Komandorskiy Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.31**	**144**	*eP*	**Pg**	**05 23 28.2**	**-2.7**
BKI				*eS*	**Sg**	**05 23 35.5**	**0.0**
BZGR	**Bezymyannyi-Gr**	**2.85**	**282**	*eP*	**Pn**	**05 24 05.9**	**-2.7**
BZMR	**Bezymyannaya**	**2.96**	**281**	*eP*	**Pn**	**05 24 06.1**	**-4.1**
BZWR	**Bezymyannyi-We**	**2.96**	**282**	*eP*	**Pn**	**05 24 06.8**	**-3.4**
TUMD	**Tumrok D**	**3.01**	**267**	*eP*	**Pn**	**05 24 09.2**	**-1.6**
TUMD				*eS*	**Sn**	**05 24 46.2**	**-0.1**
KIRR	**Kirishev**	**3.05**	**282**	*eP*	**Pn**	**05 24 08.3**	**-3.1**
KMNR	**Kamenistaya**	**3.09**	**278**	*eP*	**Pn**	**05 24 09.7**	**-2.2**
KPT	**Kopyto**	**3.12**	**282**	*eP*	**Pn**	**05 24 09.6**	**-2.7**
TUMR	**Tumrok**	**3.15**	**269**	*eP*	**Pn**	**05 24 11.1**	**-1.6**
TUMR				*eS*	**Sn**	**05 24 47.6**	**-2.1**
KOZ	**Kozyrevsk**	**3.32**	**283**	*eP*	**Pn**	**05 24 13.0**	**-2.0**
SRDR	**Sredinnyy**	**3.45**	**287**	*eP*	**Pn**	**05 24 14.7**	**-2.2**
SPN	**Mys Shipunski**	**4.06**	**237**	*eS*	**Sn**	**05 25 11.1**	**-0.9**
SMAR	**Somma**	**4.57**	**244**	*eP*	**Pn**	**05 24 31.7**	**-0.7**
KRER	**Koryakskii**	**4.58**	**245**	*eP*	**Pn**	**05 24 32.0**	**-0.4**
UGLR	**Uglovaya**	**4.59**	**243**	*eP*	**Pn**	**05 24 31.8**	**-0.7**
KRX	**Arik**	**4.60**	**246**	*eP*	**Pn**	**05 24 32.0**	**-0.7**
AVH	**Avacha**	**4.60**	**244**	*eP*	**Pn**	**05 24 32.5**	**-0.2**
KOK	**Koryaka**	**4.64**	**245**	*eP*	**Pn**	**05 24 32.8**	**-0.4**
GNL	**Ganaly**	**4.82**	**252**	*eP*	**Pn**	**05 24 36.2**	**+0.4**
KRMR	**Karymshinskiy**	**5.15**	**242**	*eP*	**Pn**	**05 24 39.4**	**-0.6**
KRMR				*eS*	**Sn**	**05 25 37.5**	**-1.4**
RUS	**Russkaya**	**5.19**	**237**	*eP*	**Pn**	**05 24 38.5**	**-2.2**
PETK	**Petropavlovsk-**	**5.22**	**246**	Pn	**Pn**	**05 24 40.2**	**-0.8**
	0.6nm,0.3s,baz=65,slow=16,SNR=14						
PETK				Sn	**Sn**	**05 25 44.5**	**+3.8**
	0.8nm,0.3s,baz=64,slow=9.8,SNR=5.1						
	1.9nm,0.7s						
MTVR	**Mutnovka**	**5.32**	**239**	*eP*	**Pn**	**05 24 41.6**	**-1.0**
GRL	**Gorelyy**	**5.33**	**240**	*eP*	**Pn**	**05 24 42.4**	**-0.3**
ASAK	**Asacha**	**5.52**	**239**	*eP*	**Pn**	**05 24 44.1**	**-1.1**
KDTR	**Khodutka, Kamc**	**5.80**	**234**	*eS*	**Sn**	**05 25 52.7**	**-2.3**
ILAR	**Eielson Array**	**24.82**	**49**	P	**P**	**05 28 43.9**	**-0.7**
	0.4nm,0.8s,baz=252,slow=8.5,SNR=4.8						
	0.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**35.68**	**178**	T	T	06 08 04.8	
	baz=359,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**35.69**	**178**	T	T	06 08 06.2	
	baz=359,slow=76,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**35.70**	**178**	T	T	06 08 00.9	
	baz=359,slow=76,SNR=12						
SONM	**Songino Array**	**36.53**	**283**	P	**P**	**05 30 30.3**	**+2.0**
	0.4nm,0.5s,baz=66,slow=8.1,SNR=2.3						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**49.32**	**303**	P	**P**	**05 32 12.7**	**+1.1**
	0.9nm,0.6s,baz=54,slow=7.7,SNR=7.8						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**50.03**	**297**	P	**P**	**05 32 17.6**	**+0.6**
	0.3nm,0.6s,baz=47,slow=7.0,SNR=5.4						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**51.43**	**310**	P	**P**	**05 32 29.7**	**+2.2**
	0.5nm,0.5s,baz=45,slow=8.4,SNR=2.3						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**66.75**	**72**	P	**P**	**05 34 15.9**	**+1.8**
	0.3nm,0.7s,baz=329,slow=3.2,SNR=3.9						
	0.3nm,0.7s						

NOU 24 05:25:29.1,19.°22S×169.°13E, h91km, MLv4.0/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**2.36**	**229**	P	Pn	05 26 05.8	-0.3
MARNC	**Mare, Loyalty**	**2.48**	**204**	P	Pn	05 26 07.3	-0.3
YATNC	**Mamie plateau,**	**3.52**	**216**	P	Pn	05 26 20.2	-1.4
PINNC	**Pines Island,**	**3.73**	**205**	P	Pn	05 26 25.0	+0.6
DZM	**Mont Dzumac**	**3.79**	**221**	P	Pn	05 26 25.3	-0.1
OUENC	**Ouen Island, N**	**3.83**	**214**	P	Pn	05 26 26.3	+0.4
ONTNC	**Ouen Toro**	**3.96**	**219**	P	Pn	05 26 27.9	+0.2
KOUNC	**Koumac, New Ca**	**4.75**	**253**	P	Pn	05 26 38.5	+0.2

*IDC **24** 05:36:27.8±0.9,24.°50N×127.°86E, h0km, mb3.9/11, mbtmp3.9/13, ML3.6/2, MS3.0/5, Error ellipse: s-maj=30.0km s-min=16.5km az=76.0*
*NEIC **24** 05:36:29.4±1.6,24.°44N±0.°08×127.°73E±0.°05, h10km±1km, mb4.4/20, Error ellipse: s-maj=14.4km s-min=6.2km az=165.0*
*JMA **24** 05:36:31.3±0.2,24.°6N±0.°9×127.°6E±0.°9, h77km, MV3.8/32, FAR S OFF OKINAWAJIMA*
*NIED **24** 05:36:31.3,24.°58N×127.°63E, h77km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=7.03; Mθθ=4.30; Mφφ=2.73; Mrθ=0.60; Mθφ=2.95; Mφr=1.24; Fault plane solution: M0 6.93000×10^14^ NP1:φs=48.00000°, δ=50.00000°, λ=-96.00000°. NP2:φs=237.00000°, δ=40.00000°, λ=-83.00000°.*

ISC 24 05:36:28.4±0.6,24.°44N±0.°05×127.°76E±0.°04, h10km, n77, σ2s38/98, mb4.2/20, MS3.2/5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**1.70**	**1**	P	**Pn**	**05 36 57.9**	**-0.3**
JJT3				S	**Sn**	**05 37 17.4**	**-2.6**
JKE	**Kume jima 2**	**2.07**	**335**	*i* P	**Pn**	**05 37 03.0**	**-0.3**
JKE				S	**Sn**	**05 37 25.6**	**-3.7**
JNTH	**Nagotoyohara**	**2.08**	**7**	P	**Pn**	**05 37 03.0**	**-0.4**
JNTH				*eS*	**Sn**	**05 37 26.4**	**-3.1**
JOGS	**Gusukube**	**2.16**	**279**	*eP*	**Pn**	**05 37 03.8**	**-0.7**
JOGS				S	**Sn**	**05 37 28.6**	**-2.8**
JAGN	**Aguni-jima**	**2.19**	**348**	S	**Sn**	**05 37 28.9**	**-3.2**
JMJ2	**Miyako jima3**	**2.23**	**278**	P	Pn	**05 37 05.7**	**+0.2**
JMJ2				S	**Sn**	**05 37 30.5**	**-2.7**
JIKM	**Ikemajima**	**2.33**	**282**	*eP*	**Pn**	**05 37 06.2**	**-0.7**
JIKM				S	**Sn**	**05 37 32.1**	**-3.5**
JIRB	**Irabujima**	**2.38**	**280**	*eP*	**Pn**	**05 37 07.0**	**-0.6**
JIRB				*eS*	**Sn**	**05 37 33.2**	**-3.7**
JOW	**Kunigami**	**2.43**	**11**		**Pn**	**05 37 07.5**	**-0.7**
JOW	**Kunigami**	**2.43**	**11**	P	**Pn**	**05 37 07.8**	**-0.4**
JOW				*eS*	**Sn**	**05 37 34.9**	**-3.1**
JOW	**Kunigami**	**2.43**	**11**	Pn	**Pn**	**05 37 07.8**	**-0.4**
	16nm,0.3s,baz=153,slow=16,SNR=69						
JOW				Sn	**Sn**	**05 37 31.8**	**-6.2**
	24nm,0.3s,baz=93,slow=28,SNR=22						
	38nm,0.2s						
JIH	**Iheya**	**2.59**	**4**	P	**Pn**	**05 37 10.4**	**0.0**
JIH				S	**Sn**	**05 37 38.9**	**-3.1**
JYRO	**Yoronjima**	**2.65**	**13**	P	**Pn**	**05 37 11.5**	**+0.2**
JYRO				*eS*	**Sn**	**05 37 40.7**	**-2.8**
JTJ	**Tarama**	**2.79**	**275**	P	**Pn**	**05 37 12.8**	**-0.4**
JTJ				S	**Sn**	**05 37 42.6**	**-4.3**
JOKE	**Okinoerabujima**	**3.00**	**14**	P	**Pn**	**05 37 16.1**	**0.0**
JOKE				*eS*	**Sn**	**05 37 49.6**	**-2.5**
JISG	**Ishigakijimahi**	**3.14**	**273**	P	**Pn**	**05 37 17.7**	**-0.3**
JISG				*eS*	**Sn**	**05 37 50.3**	**-5.3**
JIJ	**Ishigaki jima**	**3.30**	**269**	P	**Pn**	**05 37 19.6**	**-0.6**
JIJ				S	**Sn**	**05 37 54.0**	**-5.5**
JKRS	**Kuro-shima**	**3.42**	**267**	P	**Pn**	**05 37 21.6**	**-0.3**
JKRS				S	**Sn**	**05 37 57.9**	**-4.7**
JMZ	**Minamidaito 2**	**3.43**	**66**	Pn	**Pn**	**05 37 20.9**	**-1.0**
JMZ	**Minamidaito 2**	**3.43**	**66**	P	**Pn**	**05 37 20.7**	**-1.2**
JMZ				*eS*	**Sn**	**05 37 59.0**	**-3.7**
JTK	**Tokunoshima**	**3.50**	**18**	P	**Pn**	**05 37 23.3**	**+0.3**
JTK				S	**Sn**	**05 37 59.4**	**-5.1**
JKDJ	**Kitadaitoujima**	**3.54**	**64**	P	**Pn**	**05 37 22.2**	**-1.3**
JKDJ				S	**Sn**	**05 38 01.6**	**-3.9**
HATJ	**Hateruma jima**	**3.63**	**265**	P	**Pn**	**05 37 24.4**	**-0.3**
HATJ				*eS*	**Sn**	**05 38 02.3**	**-5.3**
JAMN	**Amaminishikomi**	**4.00**	**18**	P	**Pn**	**05 37 30.1**	**+0.3**
JAMN				*eS*	**Sn**	**05 38 12.9**	**-3.8**
JAM	**Amami Oshima**	**4.29**	**22**	P	**Pn**	**05 37 34.0**	**+0.2**
YOJ	**Yonaguni jima**	**4.33**	**271**	P	**Pn**	**05 37 33.6**	**-0.7**
YOJ				S	**Sn**	**05 38 17.9**	**-7.0**
JZK	**Kikaishima**	**4.34**	**27**	P	**Pn**	**05 37 35.3**	**+0.8**
JYNG	**Yonagunijimaku**	**4.39**	**271**	P	**Pn**	**05 37 35.3**	**+0.1**
JYNG				*eS*	**Sn**	**05 38 20.2**	**-6.1**
JTAJ	**Takarajima**	**4.87**	**15**	P	**Pn**	**05 37 42.0**	**+0.2**
JTAJ				*eS*	**Sn**	**05 38 33.7**	**-4.4**
NACB	**Ninganchiao**	**5.63**	**269**		**Pn**	**05 37 51.0**	**-1.2**
YHNB	**Yeheng**	**5.82**	**274**	Pn	**Pn**	**05 37 54.8**	**0.0**
YULB	**Yu-li**	**6.00**	**261**		**Pn**	**05 37 55.1**	**-2.3**
SSLB	**Suanglung**	**6.25**	**265**	Pn	**Pn**	**05 37 59.3**	**-1.5**
JNU	**Nakatsue**	**9.07**	**17**	Pn	**Pn**	**05 38 41.2**	**+1.6**
JNU	**Nakatsue**	**9.07**	**17**	Pn	**Pn**	**05 38 40.3**	**+0.8**
	1.0nm,0.3s,baz=252,slow=20,SNR=4.9						
JNU				Sn	**Sn**	**05 40 17.4**	**-4.4**
	0.3nm,0.3s,baz=172,slow=15,SNR=1.3						
	3.7nm,0.4s						
KSRS	**Korea Array**	**12.97**	**1**	LR	LR	05 45 04.5	
	comp=Z,16nm,18.4s,baz=200,slow=40						
JCJ	**Chichijima**	**13.27**	**75**	Pn	**Pn**	**05 39 34.9**	**-2.1**
MAJO	**Matsushiro**	**15.04**	**34**	Pn	**Pn**	**05 40 01.9**	**+0.8**
MAJO				IAmb	IAmb	05 40 32.9	
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**27.44**	**263**	P	**P**	**05 42 17.6**	**+2.9**
	comp=Z,0.5nm,0.3s,baz=66,slow=9.0,SNR=1.1						
CMAR				LR	LR	05 53 56.8	
	comp=Z,17nm,18.5s,baz=180,slow=38						
	comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**28.85**	**329**	P	**P**	**05 42 27.0**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=131,slow=9.2,SNR=1.9						
SONM				LR	LR	05 55 44.9	
	comp=Z,41nm,18.1s,baz=100,slow=40						
	comp=Z,0.2nm,0.5s						
SHL	**Shillong**	**32.47**	**280**	P	**P**	**05 42 59.5**	**0.0**
PMG	**Port Moresby**	**38.60**	**148**	LR	LR	05 56 27.6	
	comp=Z,40nm,21.6s,baz=350,slow=31						
COEN	**Coen**	**41.03**	**157**	P	**P**	**05 44 10.9**	**-1.2**
COEN				IAmb	IAmb	05 44 36.4	
	comp=Z,10.0nm,1.2s						
MK31	**Makanchi Array**	**42.43**	**313**	P	**P**	**05 44 23.1**	**-0.2**
MKAR	**Makanchi Array**	**42.43**	**313**	P	**P**	**05 44 23.1**	**-0.2**
MKAR	**Makanchi Array**	**42.43**	**313**	P	**P**	**05 44 24.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=100,slow=9.8,SNR=25						
	comp=Z,1.3nm,0.6s						
ZAA0	**Zalesovo Array**	**43.42**	**324**	P	**P**	**05 44 30.5**	**-0.8**
ZALV	**Zalesovo Beam**	**43.42**	**324**	P	**P**	**05 44 31.1**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=124,slow=8.6,SNR=7.9						
	comp=Z,1.6nm,0.6s						
WB0	**Warramunga Arr**	**44.41**	**171**	P	**P**	**05 44 39.9**	**+0.3**
WB0				IAmb	IAmb	05 44 44.3	
	comp=Z,8.1nm,1.3s						
WRA	**Warramunga Arr**	**44.58**	**171**	P	**P**	**05 44 41.1**	**+0.2**
WRA	**Warramunga Arr**	**44.58**	**171**	P	**P**	**05 44 41.6**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=348,slow=8.8,SNR=13						
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**45.84**	**318**	P	**P**	**05 44 51.0**	**+0.4**
KURK				IAmb	IAmb	05 44 53.2	
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**45.87**	**318**	P	**P**	**05 44 51.5**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=107,slow=8.0,SNR=19						
	comp=Z,2.5nm,0.8s						
NRN	**Naryn**	**45.94**	**305**	P	**P**	**05 44 51.5**	**-0.4**
NRN				IAmb	IAmb	05 44 54.6	
	comp=Z,3.3nm,1.0s						
ASAR	**Alice Springs**	**48.19**	**172**	P	**P**	**05 45 09.9**	**+0.6**
ASAR	**Alice Springs**	**48.19**	**172**	P	**P**	**05 45 10.2**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=359,slow=9.2,SNR=12						
	comp=Z,0.7nm,0.7s						
KK31	**Karatay Array**	**50.11**	**307**	P	**P**	**05 45 23.0**	**-0.9**
KK31				IAmb	IAmb	05 45 27.1	
	comp=Z,7.2nm,1.3s						
KKAR	**Karatay Array**	**50.11**	**307**	P	**P**	**05 45 24.5**	**+0.6**
SIMJ	**Simiganj**	**51.23**	**301**	P	**P**	**05 45 32.3**	**-0.3**
SIMJ				IAmb	IAmb	05 45 35.4	
	comp=Z,2.3nm,0.8s						
BVAR	**Borovoye Array**	**51.34**	**319**	P	**P**	**05 45 34.0**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=100,slow=8.3,SNR=13						
	comp=Z,2.2nm,0.6s						
BRVK	**Borovoye**	**51.40**	**319**	P	**P**	**05 45 34.1**	**+0.7**
BRVK				IAmb	IAmb	05 45 35.5	
	comp=Z,7.5nm,1.0s						
ABKAR	**Akbulak array**	**57.57**	**314**	P	**P**	**05 46 19.6**	**+1.3**
ABKAR				IAmb	IAmb	05 46 20.3	
	comp=Z,2.1nm,0.7s						
GEYT	**Alibeck**	**59.83**	**301**	P	**P**	**05 46 36.7**	**+2.4**
	comp=Z,1.6nm,0.7s,baz=108,slow=4.7,SNR=2.4						
	comp=Z,1.6nm,0.7s						
F17K	**Baldwin Pennin**	**60.26**	**26**	P	**P**	**05 46 37.5**	**+0.9**
G18K	**Tagagawik**	**61.26**	**27**	P	**P**	**05 46 44.5**	**+0.9**
D19K	**Kuna River**	**61.68**	**24**	P	**P**	**05 46 47.8**	**+1.4**
N19K	**Bonanza Creek**	**63.04**	**33**	P	**P**	**05 46 55.5**	**-0.2**
J20K	**Nowinta River**	**63.11**	**29**	P	**P**	**05 46 57.3**	**+1.4**
IMAR	**Indian Mountai**	**63.27**	**27**	P	**P**	**05 46 58.1**	**+1.1**
H21K	**Melozitna Rive**	**63.66**	**27**	P	**P**	**05 47 01.2**	**+1.6**
H21K				IAmb	IAmb	05 47 11.0	
	comp=Z,3.2nm,1.2s						
F24K	**Squaw Lake**	**65.53**	**25**	P	**P**	**05 47 13.6**	**+1.8**
BMAR	**Burnt Mountain**	**66.80**	**25**	P	**P**	**05 47 20.8**	**+0.8**
BRTR	**Keskin Array B**	**77.80**	**308**	P	**P**	**05 48 27.4**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=86,slow=5.9,SNR=4.4						
	comp=Z,0.9nm,0.8s						
YKA	**Yellowknife Ar**	**80.32**	**25**	P	**P**	**05 48 40.6**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=296,slow=5.6,SNR=4.6						
	comp=Z,0.3nm,0.7s						
NOA	**NORSAR Array B**	**80.72**	**334**	LR	LR	06 30 20.0	
	comp=Z,17nm,19.7s,baz=300,slow=40						
CLL	**Collm**	**85.37**	**325**	*eP*	**P**	**05 49 07.0**	**+1.1**

ULGR				Sg	**Sg**	**06 03 40.8**	**-3.7**
SATY	**Saty**	**5.20**	**237**	Pg	**Pb**	**06 02 32.7**	**+3.5**
	1.1nm,0.1s						
SATY				Lg	Lg	06 03 40.2	
	4.8nm,0.3s						
SATY	**Saty**	**5.20**	**237**	*e*P	**Pb**	**06 02 33.5**	**+4.3**
	0.9nm,0.1s						
SATY				*e*S	**Sg**	**06 03 41.8**	**-3.2**
	5.3nm,0.2s						
ELDR	**Elanda**	**5.32**	**12**	Pn	**Pn**	**06 02 19.5**	**+1.9**
ELDR				Pg	**Pg**	**06 02 37.4**	**-2.6**
ELDR				Sg	**Sb**	**06 03 41.8**	**+6.8**
KURBB	**Kurchatov Arra**	**6.04**	**322**	⇑Lg	Lg	06 04 08.3	
	13nm,0.8s						
KURK	**Kurchatov**	**6.07**	**323**	⇑Lg	Lg	06 04 06.5	
	2.2nm,0.5s						
KURK	**Kurchatov**	**6.07**	**323**	Pn	**Pn**	**06 02 26.3**	**-1.5**
KURK				Pg	**Pb**	**06 02 45.5**	**+1.6**
KURK				Sg	**Sg**	**06 04 04.5**	**-8.3**

*ATH **24** 06:08:46.0,38˚.68N×26˚.66E,h9km±3km,ML2.6/5,Error ellipse: s-maj=3.9km s-min=1.0km az=261.0*
*AFAD **24** 06:08:45.6±0.0,38˚.68N×26˚.63E,h2km±1km,ML2.4*
*THE **24** 06:08:46.4,38˚.67N×26˚.57E,h11km±2km,ML2.4/5,Error ellipse: s-maj=2.7km s-min=0.8km az=263.0*
ISC 24 06:08:45.5±0.9,38˚67N±0˚.02×26˚.64E±0˚.02,h14km±7km, n39,σ0°54/76,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARB	**zmir-Karabur**	**0.18**	**270**	P	**Pg**	**06 08 49.6**	**-0.1**
KARB				*i* AML	AML	06 08 52.0	
	comp=E,710nm,0.2s						
KARB				S	**Sg**	**06 08 52.5**	**0.0**
URLA	**Izmir**	**0.31**	**186**	P	**Pb**	**06 08 52.9**	**0.0**
URLA				S	**Sb**	**06 08 58.2**	**+0.4**
URLA				*i* AML	AML	06 09 00.0	
	comp=E,377nm,0.2s						
IZMD	**zmir-Dikili-**	**0.39**	**35**	P	**Pg**	**06 08 53.2**	**-0.2**
IZMD				S	**Sg**	**06 08 58.9**	**+0.1**
EAG3	**Mitilini, Lesv**	**0.42**	**353**	P	**Pg**	**06 08 53.9**	**-0.1**
EAG3				S	**Sg**	**06 08 59.8**	**+0.1**
EAG3				AML	AML	06 09 00.9	
	comp=E,4684µm,0.7s						
EAG3				AML	AML	06 09 06.6	
	comp=N,3239µm,0.7s						
EAG2	**Marmaro, Chios**	**0.43**	**254**	P	**Pb**	**06 08 54.6**	**-0.3**
EAG2				S	**Sb**	**06 09 00.8**	**-0.6**
EAG2				AML	AML	06 09 03.7	
	comp=E,3848µm,0.3s						
EAG2				AML	AML	06 09 07.7	
	comp=N,4363µm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.44**	**194**	P	**Pg**	**06 08 54.4**	**+0.2**
ZEYE				S	**Sb**	**06 09 02.7**	**+1.2**
ZEYE				*i* AML	AML	06 09 03.0	
	comp=N,356nm,0.4s						
ZEYE				*i* AML	AML	06 09 04.0	
	comp=N,325nm,0.3s						
ZEDA	**zmir-Bergama**	**0.46**	**49**	P	**Pg**	**06 08 54.0**	**-0.6**
ZEDA				S	**Sb**	**06 09 01.5**	**-0.5**
CHOS	**Chios island**	**0.54**	**239**	P	**Pb**	**06 08 56.7**	**-0.1**
CHOS				S	**Sg**	**06 09 03.3**	**+0.1**
	comp=N,352nm,0.3s						
CHOS	**Chios island**	**0.54**	**239**	P	**Pb**	**06 08 56.7**	**-0.1**
CHOS				S	**Sb**	**06 09 03.7**	**-0.7**
CHOS				AML	AML	06 09 04.6	
	comp=N,584µm,0.3s						
CHOS				AML	AML	06 09 07.3	
	comp=E,878µm,0.3s						
DGB	**zmir**	**0.64**	**162**	P	**Pg**	**06 08 57.6**	**-0.4**
DGB				S	**Sb**	**06 09 07.8**	**+0.5**
DGB				*i* AML	AML	06 09 12.0	
	comp=E,109nm,0.4s						
AYVA	**Ayvalik**	**0.64**	**4**	P	**Pg**	**06 08 58.0**	**-0.1**
AYVA				S	**Sg**	**06 09 07.0**	**+0.4**
AYVA				*i* AML	AML	06 09 09.0	
	comp=E,272nm,0.3s						
PRK	**Paraskevi**	**0.65**	**334**	P	**Pg**	**06 08 58.0**	**-0.2**
PRK				S	**Sb**	**06 09 08.4**	**+0.9**
	comp=E,450nm,0.3s						
PRK	**Paraskevi**	**0.65**	**334**	P	**Pg**	**06 08 57.9**	**-0.3**
PRK				S	**Sg**	**06 09 07.2**	**+0.5**
PRK				AML	AML	06 09 10.5	
	comp=N,687µm,0.2s						
PRK				AML	AML	06 09 11.0	
	comp=E,1127µm,0.4s						
PSRA	**Psara**	**0.85**	**262**	P	**Pn**	**06 09 03.1**	**0.0**
PSRA				S	**Sb**	**06 09 14.0**	**+0.6**
BUHA	**Balikesir, Bur**	**0.90**	**22**	P	**Pg**	**06 09 02.9**	**-0.1**
BUHA				S	**Sn**	**06 09 16.3**	**-0.4**
BUHA				*i* AML	AML	06 09 18.0	
	comp=E,177nm,0.5s						
BUHA				*i* AML	AML	06 09 20.0	
	comp=E,117nm,0.4s						
GCAM	**G?zelcaml?**	**1.07**	**154**	P	**Pn**	**06 09 06.5**	**+0.4**
GCAM				S	**Sn**	**06 09 20.2**	**-0.6**
GCAM				*i* AML	AML	06 09 25.0	
	comp=E,111nm,0.4s						
GCAM				*i* AML	AML	06 09 27.0	
	comp=E,53nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**1.08**	**356**	P	**Pb**	**06 09 06.1**	**+0.1**
BAYC				S	**Sb**	**06 09 18.9**	**-1.1**
BAYC				*i* AML	AML	06 09 21.0	
	comp=E,128nm,0.2s						
BAYC				*i* AML	AML	06 09 23.0	
	comp=E,119nm,0.5s						
STEP	**BALIKESIR_Sava**	**1.10**	**49**	P	**Pg**	**06 09 06.9**	**+0.2**
STEP				S	**Sn**	**06 09 22.3**	**+0.6**
STEP				*i* AML	AML	06 09 25.0	
	comp=E,122nm,0.4s						
STEP				*i* AML	AML	06 09 32.0	
	comp=E,98nm,0.7s						
IZMR	**zmir-demi**	**1.16**	**117**	P	**Pg**	**06 09 07.5**	**-0.4**
IZMR				S	**Sb**	**06 09 22.1**	**-0.2**
EZN	**Ezine**	**1.18**	**348**	P	**Pn**	**06 09 07.7**	**0.0**
EZN				S	**Sg**	**06 09 23.7**	**-0.1**
	comp=E,165nm,0.4s						
BOZC	**Bozcaada**	**1.26**	**339**	P	**Pb**	**06 09 09.5**	**+0.4**
BOZC				S	**Sb**	**06 09 25.1**	**-0.1**
BOZC				*i* AML	AML	06 09 32.0	
	comp=E,61nm,0.5s						
BOZC				*i* AML	AML	06 09 32.0	
	comp=E,87nm,0.3s						
BALY	**Balya**	**1.32**	**35**	P	**Pb**	**06 09 10.1**	**0.0**
BALY				S	**Sg**	**06 09 28.9**	**+0.8**
BALY				*i* AML	AML	06 09 30.0	
	comp=E,126nm,0.6s						
BALY				*i* AML	AML	06 09 32.0	
	comp=E,86nm,0.4s						
CNKL	**anakkale-Mer**	**1.41**	**352**	P	**Pn**	**06 09 10.5**	**-0.4**
CNKL				S	**Sg**	**06 09 30.9**	**-0.2**
CNKL				*i* AML	AML	06 09 32.0	
	comp=E,70nm,0.5s						
CNKL				*i* AML	AML	06 09 33.0	
	comp=E,58nm,0.5s						
KIRA	**zmir-Kiraz**	**1.46**	**108**	P	**Pb**	**06 09 12.6**	**0.0**
KIRA				S	**Sg**	**06 09 33.5**	**+0.9**
BKES	**Balkesir-Mer**	**1.46**	**43**	P	**Pb**	**06 09 12.3**	**-0.3**
BKES				S	**Sb**	**06 09 31.5**	**+0.4**
BKES				*i* AML	AML	06 09 36.0	
	comp=E,52nm,0.8s						
BKES				*i* AML	AML	06 09 41.0	
	comp=E,36nm,0.6s						
MANT	**Manisa**	**1.52**	**96**	P	**Pg**	**06 09 14.0**	**-0.7**
MANT				S	**Sb**	**06 09 33.2**	**+0.5**
BLKS	**Balkesir-Sus**	**1.59**	**40**	P	**Pb**	**06 09 15.0**	**+0.3**
BLKS				S	**Sb**	**06 09 35.2**	**+0.5**
GOAD	**anakkale-G¶**	**1.60**	**340**	P	**Pn**	**06 09 13.0**	**-0.4**
GOAD				S	**Sn**	**06 09 33.2**	**-0.7**
GOAD				*i* AML	AML	06 09 38.0	
	comp=E,66nm,0.6s						
DEMI	**Demirci**	**1.67**	**76**	P	**Pn**	**06 09 15.1**	**+0.7**
DEMI				S	**Sg**	**06 09 39.0**	**-0.1**
DEMI				*i* AML	AML	06 09 43.0	
	comp=E,35nm,0.4s						
DURS	**Dursunbey**	**1.71**	**56**	P	**Pb**	**06 09 16.6**	**-0.2**
DURS				S	**Sb**	**06 09 37.6**	**-0.5**
DURS				*i* AML	AML	06 09 42.0	
	comp=E,25nm,0.2s						
DURS				*i* AML	AML	06 09 43.0	
	comp=E,27nm,0.5s						
USAK	**Uak-Merkez**	**1.86**	**88**	P	**Pn**	**06 09 16.9**	**-0.2**
USAK				*i* AML	AML	06 09 39.0	
	comp=E,31nm,1.2s						
USAK				S	**Sn**	**06 09 41.2**	**+0.7**
USAK				*i* AML	AML	06 10 28.0	
	comp=E,24nm,2.2s						
SMTH	**Samothraki Isl**	**2.00**	**335**	P	**Pn**	**06 09 19.2**	**+0.3**
BAND	**Balkesir-Ban**	**2.03**	**33**	P	**Sn**	**06 09 44.8**	**+0.2**
BAND				S	**Sg**	**06 09 52.8**	**+1.9**
GDZ	**Gediz**	**2.26**	**78**	P	**Pb**	**06 09 24.7**	**-1.5**
GDZ				S	**Sg**	**06 09 58.7**	**+0.5**
ALN	**Alexandroupoli**	**2.28**	**349**	P	**Pn**	**06 09 23.0**	**+0.3**

*WEL **24** 06:13:19.6±0.3,45˚.5×21˚.×16˚.9E±˚,h5km,M3.8/13, ML4.0/13,MLv3.8/13,Error ellipse: s-maj=0.0km s-min=0.0km az=98.5,confirmed*
*WEL **24** 06:13:19.7,44˚.95S×169˚.22E,h5km,ML3.8,Mw3.5, Moment Tensor Solution. s3 Moment tensor: Mrr5.64; Mθθ11.55; Mϕϕ-17.20; Mrθ-3.69; Mθϕ11.79; Mϕr-9.11; Fault plane solution: NP1:φ±243.00000°,δ59.00000°, λ170.00000°. NP2:φ±338.00000°,δ81.00000°,λ31.00000°. Principal axes: T -23.3400, Plg28.0000°, Azm205.0000°; N 19.2600, Plg57.0000°, Azm352.0000°; P 4.0800, Plg15.0000°, Azm107.0000°; SOUTH ISLAND*
*NOU **24** 06:13:20.3,44˚.94S×169˚.26E,h8km,MLv4.0/6,South Island, New Zealand*
ISC 24 06:13:19.9±1.0,44˚95S±0˚.02×169˚23E±0˚.03,h9km±9km, n46,σ0°67/55,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WKZ	**Wanaka**	**0.20**	**309**	P	**Pg**	**06 13 24.3**	**+0.4**
WKZ				S	**Sg**	**06 13 27.3**	**+0.7**
WNPS	**Wanaka Nationa**	**0.26**	**346**	P	**Pg**	**06 13 24.2**	**-0.9**
WNPS				S	**Sg**	**06 13 28.2**	**-0.5**
EAZ	**Earnscleugh**	**0.29**	**169**	P	**Pg**	**06 13 25.9**	**+0.3**
EAZ				S	**Sg**	**06 13 29.6**	**+0.1**
MECS	**Makarora Emerg**	**0.72**	**0**	P	**Pg**	**06 13 33.4**	**-0.3**
LBZ	**Lake Benmore**	**0.88**	**51**	P	**Pg**	**06 13 34.8**	**0.0**
MLZ	**Mavora Lakes**	**0.89**	**242**	P	**Pg**	**06 13 36.3**	**0.0**
TWAS	**Twizel Area Sc**	**0.93**	**42**	P	**Pg**	**06 13 37.8**	**+0.1**
TWAS				S	**Sg**	**06 13 49.8**	**-0.1**
JCZ	**Jackson Bay**	**0.93**	**340**	P	**Pb**	**06 13 38.1**	**-0.2**
JCZ	**Jackson Bay**	**0.93**	**340**	P	**Pg**	**06 13 37.5**	**-0.3**
MSZ	**Milford Sound**	**0.97**	**286**	P	**Pg**	**06 13 37.9**	**-0.5**
MOSS	**Mossburn Schoo**	**1.00**	**224**	P	**Pg**	**06 13 38.6**	**-0.5**
MOSS				S	**Sg**	**06 13 51.9**	**-0.3**
ODZ	**Otahua Downs**	**1.01**	**96**	P	**Pg**	**06 13 39.3**	**+0.1**
ODZ	**Otahua Downs**	**1.01**	**96**	P	**Pg**	**06 13 38.8**	**-0.4**
ODZ				S	**Sb**	**06 13 53.9**	**+1.0**
NSBS	**Neils Beach**	**1.04**	**337**	P	**Pg**	**06 13 39.4**	**-0.3**
TUZ	**Tuapeka**	**1.04**	**164**	P	**Pg**	**06 13 39.2**	**-0.7**
WHZ	**Wether Hill Ro**	**1.31**	**223**	P	**Pn**	**06 13 43.7**	**-0.6**
HHSZ	**Highcliff Hill**	**1.34**	**135**	P	**Pn**	**06 13 44.8**	**-0.1**
HHSZ				S	**Sn**	**06 14 03.6**	**+0.7**
TMZ	**Timaru**	**1.39**	**67**	P	**Pn**	**06 13 45.3**	**-0.2**
TMZ				S	**Sb**	**06 14 03.6**	**-0.3**
FOZ	**Fox Glacier**	**1.48**	**17**	P	**Pn**	**06 13 46.6**	**-0.1**
DCZ	**Deep Cove**	**1.56**	**250**	P	**Pn**	**06 13 48.4**	**+0.6**
SYZ	**Scrubby Hill**	**1.59**	**182**	P	**Pn**	**06 13 48.2**	**0.0**
SYZ	**Scrubby Hill**	**1.59**	**182**	P	**Pn**	**06 13 48.3**	**0.0**
SYZ				S	**Sn**	**06 14 08.7**	**-0.2**
ARCZ	**Arundel**	**1.72**	**55**	P	**Pn**	**06 13 49.6**	**-0.4**
RPZ	**Rata Peaks**	**1.80**	**47**	P	**Pn**	**06 13 50.8**	**-0.4**
RPZ	**Rata Peaks**	**1.80**	**47**	P	**Pn**	**06 13 50.7**	**-0.4**
GCSZ	**Gaunt Creek Bo**	**1.81**	**26**	P	**Pn**	**06 13 52.0**	**+0.7**
APZ	**The Paps**	**2.07**	**204**	P	**Pn**	**06 13 54.9**	**-0.1**
WACZ	**Wakanui South**	**2.12**	**63**	P	**Pn**	**06 13 55.8**	**+0.3**
PYZ	**Puysegur Point**	**2.17**	**235**	P	**Pn**	**06 13 57.0**	**+0.8**
PYZ	**Puysegur Point**	**2.17**	**235**	P	**Pn**	**06 13 56.9**	**+0.8**
WVZ	**Waitaha Valley**	**2.17**	**31**	P	**Pn**	**06 13 56.9**	**+0.7**
MHCZ	**Mount Hutt**	**2.20**	**51**	P	**Pn**	**06 13 56.2**	**-0.5**
RACZ	**Rakaia**	**2.42**	**61**	P	**Pn**	**06 13 59.7**	**+0.1**
OXZ	**Oxford**	**2.59**	**52**	P	**Pn**	**06 14 00.8**	**-1.2**
INZ	**Inchbonnie**	**2.74**	**37**	P	**Pn**	**06 14 04.2**	**+0.1**
MQZ	**McQueen's Vall**	**2.75**	**64**	P	**Pn**	**06 14 03.7**	**-0.5**
AKCZ	**Akaroa Harbour**	**2.85**	**69**	P	**Pn**	**06 14 05.8**	**+0.2**
LTZ	**Lake Taylor**	**3.09**	**46**	P	**Pn**	**06 14 08.3**	**-0.6**
DSZ	**Denniston Nort**	**3.71**	**31**	P	**Pn**	**06 14 16.8**	**-0.7**
KHZ	**Kahutara**	**4.02**	**52**	P	**Pn**	**06 14 21.5**	**-0.2**
THZ	**Tophouse**	**4.16**	**41**	P	**Pn**	**06 14 23.8**	**+0.2**
MRNZ	**Matariki Terra**	**4.39**	**37**	P	**Pn**	**06 14 27.5**	**+0.8**
QRZ	**Quartz Range**	**4.78**	**32**	P	**Pn**	**06 14 32.3**	**+0.2**
QRZ	**Quartz Range**	**4.78**	**32**	P	**Pn**	**06 14 31.5**	**-0.6**
DUWZ	**D'Urville Isla**	**5.39**	**41**	P	**Pn**	**06 14 43.5**	**+3.0**
MRZ	**Mangatainoka R**	**6.34**	**50**	P	**Pn**	**06 14 52.3**	**-1.2**

OTT 24 06:26:56.9±0.3,44˚.53N×56˚.40W,h18km,ML3.6/18, 291km south from Grand Bank, NI Laurentian Slope Seismic Zone.,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**3.73**	**285**	PN	Pn	06 27 53.4	-0.3
GBN				SN	Sn	06 28 35.1	-2.0
GBN				Trac		06 28 39.3	
	comp=Z,26nm,0.1s						
CHEG	**Cheticamp, Nov**	**3.76**	**309**	PN	Pn	06 27 53.5	-0.5
CHEG				SN	Sn	06 28 35.4	-2.5
CHEG				Trac		06 28 43.2	
	comp=Z,14nm,0.0s						
DRLN	**Deer Lake**	**4.79**	**351**	PN	Pn	06 28 06.5	-1.5
DRLN				SN	Sn	06 28 58.8	-4.2
DRLN				Trac		06 29 01.3	
	comp=Z,20nm,0.1s						
HAL	**Halifax**	**5.14**	**274**	PN	Pn	06 28 12.9	0.0
HAL				SN	Sn	06 29 07.4	-4.4
HAL				Trac		06 29 12.3	
	comp=Z,20nm,0.0s						
LMN	**Caledonia Moun**	**6.09**	**285**	PN	Pn	06 28 25.7	-0.2
LMN				SN	Sn	06 29 31.2	-4.0
LMN				SN	Sn	06 29 31.2	-4.0
LMN				Trac		06 29 36.4	
	comp=Z,1.8nm,0.0s						
SVNB	**Stilesville Qu**	**6.19**	**288**	PN	Pn	06 28 27.1	-0.4
SVNB				SN	Sn	06 29 33.4	-4.3
SVNB				Trac		06 29 35.9	
	comp=Z,14nm,0.1s						
ELNB	**Elgin, New Bru**	**6.33**	**285**	PN	Pn	06 28 29.0	-0.2
ELNB				SN	Sn	06 29 36.5	-4.4
ELNB				Trac		06 29 39.8	
	comp=Z,1.7nm,0.1s						
HKNB	**Havelock Quarr**	**6.50**	**286**	PN	Pn	06 28 31.1	-0.6
HKNB				SN	Sn	06 29 40.6	-4.7
HKNB				Trac		06 29 46.2	
	comp=Z,7.7nm,0.1s						
GAAQ	**Galiote**	**6.67**	**318**	PN	Pn	06 28 33.4	-0.5
GAAQ				SN	Sn	06 29 45.1	-4.3
GAAQ				Trac		06 29 49.4	
	comp=Z,6.8nm,0.1s						
BJBQ	**Baie Johan-Bee**	**7.21**	**325**	PN	Pn	06 28 40.6	-0.7
BJBQ				SN	Sn	06 29 57.9	-4.9
BJBQ				Trac		06 30 00.8	
	comp=Z,5.0nm,0.1s						
HSNB	**Heath Steele M**	**7.28**	**296**	PN	Pn	06 28 41.2	-1.1
HSNB				SN	Sn	06 29 58.8	-5.7
HSNB				Trac		06 30 03.1	
	comp=Z,11nm,0.1s						
GGN	**Saint George**	**7.45**	**278**	PN	Pn	06 28 43.9	-0.8
GGN				SN	Sn	06 30 02.4	-6.2
GGN				Trac		06 30 06.0	
	comp=Z,7.5nm,0.1s						
MCNB	**McAdam**	**7.81**	**282**	PN	Pn	06 28 48.7	-0.9
MCNB				SN	Sn	06 30 11.3	-6.1
MCNB				Trac		06 30 14.6	
	comp=Z,0.8nm,0.0s						
GSQ	**Grosses Roches**	**8.56**	**305**	PN	Pn	06 28 58.9	-1.0
GSQ				SN	Sn	06 30 29.9	-6.1
GSQ				Trac		06 30 37.5	
	comp=Z,1.8nm,0.1s						
SMQ	**Clarke City**	**9.01**	**313**	PN	Pn	06 29 03.8	-2.3
SMQ				SN	Sn	06 30 40.1	-6.9
SMQ				Trac		06 30 43.3	
	comp=Z,3.9nm,0.1s						
PKME	**Peaks-Kenny Pk**	**9.18**	**279**	PN	Pn	06 29 07.0	-1.4
PKME				SN	Sn	06 30 43.5	-7.8
PKME				Trac		06 31 01.7	
	comp=Z,16nm,0.5s						
BACQ	**Baie-Comeau**	**9.35**	**305**	PN	Pn	06 29 09.7	-1.0
BACQ				SN	Sn	06 30 48.3	-7.0
BACQ				Trac		06 30 57.1	
	comp=Z,1.8nm,0.1s						
FORQ	**Forestville**	**9.71**	**300**	PN	Pn	06 29 13.3	-2.3
FORQ				Trac		06 31 01.1	
	comp=Z,2.6nm,0.1s						
LESQ	**Les-Escoumins**	**9.75**	**297**	PN	Pn	06 29 14.5	-1.7
LESQ				SN	Sn	06 30 57.5	-7.6
LESQ				Trac		06 31 02.2	
	comp=Z,1.1nm,0.1s						
A21	**Saint Andre**	**9.76**	**294**	PN	Pn	06 29 14.5	-1.8
A21				SN	Sn	06 30 57.8	-7.6
A21				Trac		06 31 05.9	
	comp=Z,5.3nm,0.2s						

*IDC **24** 06:36:22.7±3.4,29˚.13N×142˚.91E,h0km,mb3.3/3, mbtmp3.7/6,ML3.6/3,Error ellipse: s-maj=99.5km s-min=18.7km az=85.0*
*JMA **24** 06:36:28.0±0.3,29˚.3N±0˚.5×14˚3E±˚,h53km,MV4.5/30, NEAR TORISHIMA IS*
ISC 24 06:36:26.5±1.5,29˚32N±0˚.06×143˚2E±0˚2,h35km,n18, σ1°80/30,mb3.2/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.38**	**202**	P	**Pn**	**06 37 04.3**	**+1.2**
CBIJ				S	**Sn**	**06 37 30.4**	**-0.6**
JCJ	**Chichijima**	**2.38**	**202**	Pn	**Pn**	**06 37 00.1**	**-3.0**
	11nm,0.3s,baz=356,slow=22,SNR=38						
JCJ				Sn	**Sn**	**06 37 26.6**	**-4.4**
	55nm,0.3s,baz=84,slow=23,SNR=15 40nm,0.3s						
JHH2	**Haha-jima-NKT2**	**2.82**	**198**	S	**Sn**	**06 37 42.4**	**+0.6**
JHJ2	**Mitsune**	**4.75**	**324**	*e*P	**Pn**	**06 37 37.1**	**+1.6**
JHJ	**Hachijo jima 2**	**4.77**	**323**	Pn	**Pn**	**06 37 35.8**	**-0.1**
	15nm,0.3s,baz=111,slow=21,SNR=7.8						
JHJ				Sn	**Sn**	**06 38 28.3**	**-1.6**
	9.8nm,0.3s,baz=73,slow=21,SNR=1.6 144nm,0.9s						
BSO1	**Boso 1**	**5.63**	**341**	S	**Sn**	**06 38 50.6**	**+0.1**
BSO3	**Boso 3**	**5.91**	**338**	*e*P	**Pn**	**06 37 52.8**	**+1.4**
BSO3				*e*S	**Sn**	**06 38 57.2**	**-0.5**
BSO4	**Boso 4**	**6.14**	**338**	*e*P	**Pn**	**06 37 56.4**	**+1.7**
BSO4				*e*S	**Sn**	**06 39 03.6**	**0.0**
JOD2	**Odawara 2**	**6.86**	**331**	P	**Pn**	**06 38 05.9**	**+1.3**
JOD2				S	**Sn**	**06 39 19.6**	**-1.8**
JHU	**Hanno**	**7.29**	**334**	P	**Pn**	**06 38 12.0**	**+1.5**
JHU				S	**Sn**	**06 39 30.1**	**-2.0**
JYT	**Yasato**	**7.33**	**341**	*e*P	**Pn**	**06 38 11.5**	**+0.5**
JYT				*e*S	**Sn**	**06 39 31.7**	**-1.3**
JRY	**Ryogami san**	**7.58**	**333**	P	**Pn**	**06 38 15.8**	**+1.2**
JRY				*e*S	**Sn**	**06 39 38.5**	**-0.7**
JHO	**Hitachi**	**7.59**	**344**	P	**Pn**	**06 38 13.3**	**-1.4**
JHO				S	**Sn**	**06 39 34.8**	**-4.6**
JAG	**Ashikaga**	**7.74**	**337**	P	**Pn**	**06 38 17.2**	**+0.5**
JAG				*e*S	**Sn**	**06 39 41.2**	**-1.9**
MJAR	**Matsushiro Arr**	**8.32**	**331**	Pn	**Pn**	**06 38 26.1**	**+1.4**
	0.6nm,0.3s,baz=157,slow=11,SNR=27						
MJAR				Sn	**Sn**	**06 39 57.4**	**+0.1**
	0.1nm,0.3s,baz=190,slow=12,SNR=2.1 3.1nm,0.3s						
KLR	**Kul'dur**	**21.71**	**339**	P	**P**	**06 41 15.9**	**+1.5**
	0.6nm,0.6s,baz=156,slow=8.6,SNR=1.9 0.6nm,0.6s						
SONM	**Songino Array**	**33.76**	**313**	P	**P**	**06 43 05.7**	**+0.7**
	0.2nm,0.6s,baz=106,slow=11,SNR=2.0 0.2nm,0.6s						
WRA	**Warramunga Arr**	**49.71**	**191**	P	**P**	**06 45 14.7**	**-0.7**
	0.2nm,0.4s,baz=11,slow=8.5,SNR=1.6 0.2nm,0.4s						

*SKO **24** 06:41:53.4,42˚.00N×19˚.75E,h143km,ML3.2*
*TIR **24** 06:42:00.5,41˚.96N×20˚.23E,h11km,Md2.8,Ml3.1*
*RHSSO **24** 06:42:01.3±0.6,41˚.95N×20˚.23E,h4km±4km,ML2.8/8*
*PDG **24** 06:42:01.7±0.5,41˚.91N×20˚.13E,h1km±1km,ML2.9/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*BEO **24** 06:42:01.8±0.5,41˚.95N×20˚.12E,h0km,ML2.5/8*
*THE **24** 06:42:02.2,41˚.99N×20˚.36E,h3km±1km,ML2.8/2,Error ellipse: s-maj=4.7km s-min=2.0km az=274.0*
ISC 24 06:42:01.7±1.0,41˚95N±0˚.02×20˚19E±0˚.02,h5km±9km, n69,σ0°88/120,7C-7D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.24**	**293**	P	**Pg**	**06 42 06.0**	**-0.4**
	baz=289						
PUK				S	**Sg**	**06 42 10.7**	**+1.0**
	baz=289						
PUK				AMP			
	comp=N,24nm,0.4s,baz=289						
PHP	**Peshkopia**	**0.32**	**145**	P	**Pg**	**06 42 07.0**	**-0.9**
	baz=150						
PHP				S	**Sg**	**06 42 12.4**	**+0.3**
	baz=150						
PHP				AMP			
	comp=N,17nm,0.2s,baz=150						
PHP	**Peshkopia**	**0.32**	**145**	P	**Pg**	**06 42 07.5**	**-0.4**
PHP				S	**Sg**	**06 42 13.2**	**+1.1**
BCI	**Bajram Curri**	**0.43**	**348**	P	**Pg**	**06 42 09.7**	**-0.3**
	baz=344						
BCI				S	**Sb**	**06 42 17.3**	**-1.3**
	baz=344						
BCI				AMP			
	comp=N,3.6nm,0.7s,baz=344						
PVY	**Plav**	**0.67**	**345**	⇓*i*Pg	**Pg**	**06 42 14.4**	**-0.2**
PVY				*i* Sg	**Sb**	**06 42 25.8**	**+0.2**
ULC	**Ulcinj**	**0.71**	**272**	⇑*i*Pg	**Pg**	**06 42 13.8**	**-1.4**
ULC				*i* Sg	**Sg**	**06 42 24.5**	**+0.1**
ULC	**Ulcinj**	**0.71**	**272**	*i* Pg	**Pg**	**06 42 14.2**	**-1.0**
DRME	**Dracevica, Mon**	**0.79**	**288**	⇓*i*Pg	**Pg**	**06 42 15.3**	**-1.5**
DRME				*i* Sg	**Sg**	**06 42 28.1**	**+1.1**
DRME	**Dracevica, Mon**	**0.79**	**288**	⇑*i*Pg	**Pg**	**06 42 15.3**	**-1.5**
DRME				*e*Sg	**Sg**	**06 42 27.6**	**+0.6**
SKO	**Skopje**	**0.93**	**88**	*e*Pg	**Pn**	**06 42 20.9**	**-0.5**
SKO				*e*Sg	**Sb**	**06 42 32.3**	**

SELS				*e*Sg		**Sn**	06 42 49.5	+1.6
FNA	**Florina**	**1.47**	**142**	P		**Pn**	06 42 27.9	-0.8
	baz=143							
FNA				S		**Sg**	06 42 48.8	+0.1
	baz=143							
FNA				AMP				
	comp=N,0.8nm,0.4s,baz=143							
FNA	**Florina**	**1.47**	**142**	P		**Pn**	06 42 27.8	-1.0
FNA				S		**Sb**	06 42 47.8	-0.6
	comp=N,502nm,0.4s							
FNA	**Florina**	**1.47**	**142**	*i* Pg		**Pn**	06 42 28.0	-0.8
FNA				*i* Sg		**Sb**	06 42 48.0	-0.4
BARS	**Barje**	**1.48**	**54**	*e*Pg		**Pg**	06 42 30.1	0.0
BARS				*e*Sg		**Sg**	06 42 48.9	-0.4
BARS	**Barje**	**1.48**	**54**	*i* Pg		**Pg**	06 42 29.9	-0.3
BARS				*i* Sg		**Sg**	06 42 48.4	-1.0
PLE	**Pljevlja**	**1.50**	**337**	⇓*i* Pg		**Pn**	06 42 28.9	-0.5
PLE				*i* Sg		**Sg**	06 42 52.2	+2.2
PRVS	**Prvonek**	**1.51**	**68**	*e*Pg		**Pn**	06 42 29.1	-0.3
PRVS				*e*Sg		**Sg**	06 42 51.9	+1.8
BRY	**Bratogost**	**1.55**	**308**	⇓*i* Pg		**Pn**	06 42 29.2	-0.8
BRY				*i* Sg		**Sg**	06 42 53.1	+1.6
BRY	**Bratogost**	**1.55**	**308**	*e*Pn		**Pn**	06 42 29.3	-0.8
BRY				*e*Sn		**Sn**	06 42 50.8	+0.1
TREB	**Trebinje**	**1.57**	**300**	*e*Pn		**Pn**	06 42 29.9	-0.3
TREB				*e*Sn		**Sn**	06 42 51.2	+0.3
UPM	**Unac-Piva**	**1.57**	**323**	⇑*i* Pn		**Pn**	06 42 30.4	-0.1
UPM				*i* Sn		**Sg**	06 42 54.1	+1.8
UPM	**Unac-Piva**	**1.57**	**323**	*e*Pn		**Pn**	06 42 30.1	-0.4
UPM				*e*Sn		**Sn**	06 42 51.6	+0.3
IVAS	**Ivanjica**	**1.63**	**359**	*e*Pg		**Pn**	06 42 30.7	-0.4
IVAS				*e*Sg		**Sg**	06 42 54.0	0.0
NEST	**Nestorio**	**1.66**	**157**	P		**Pn**	06 42 31.2	-0.4
DBRK	**Dubrovnik**	**1.68**	**296**	*e*Pn		**Pn**	06 42 31.8	0.0
KLINJ	**Klinje**	**1.70**	**316**	*e*Pn		**Pn**	06 42 31.8	-0.3
KLINJ				*e*Sn		**Sn**	06 42 54.3	-0.1
RUDO	**Rudo**	**1.78**	**340**	*e*Pn		**Pn**	06 42 32.4	-0.7
RUDO				*e*Sn		**Sn**	06 42 55.7	-0.4
LSK	**Leskovik**	**1.82**	**170**	P		**Pb**	06 42 36.0	+0.4
	baz=171							
LSK				S		**Sg**	06 43 00.9	+0.7
	baz=171							
LSK				AMP				
	comp=E,0.6nm,0.5s,baz=171							
LSK	**Leskovik**	**1.82**	**170**	P		**Pn**	06 42 34.6	+0.9
GRG	**Griva**	**1.93**	**120**	P		**Pn**	06 42 34.6	-0.6
GRG	**Griva**	**1.93**	**120**	*i* Pn		**Pn**	06 42 35.9	+0.6
GRUS	**Gruza**	**1.98**	**11**	*e*Pg		**Pn**	06 42 36.7	+0.9
GRUS				*e*Sg		**Sb**	06 43 03.5	+0.4
BBLS	**Lazići**	**2.00**	**343**	*e*Pg		**Pn**	06 42 36.5	+0.2
BBLS				*e*Sg		**Sg**	06 43 06.0	0.0
BBLS	**Lazići**	**2.00**	**343**	*e*Pn		**Pn**	06 42 36.4	+0.2
BBLS				*e*Sn		**Sn**	06 43 01.3	-0.4
PEHC	**Pehcevo**	**2.03**	**94**	*i* Pn		**Pg**	06 42 40.2	-0.4
NEVS	**Nevesinje**	**2.05**	**312**	*e*Pn		**Pn**	06 42 37.0	+0.1
NEVS				*e*Sn		**Sn**	06 43 03.3	+0.4
STON	**Ston**	**2.06**	**297**	*e*Pn		**Pn**	06 42 36.7	-0.3
STON	**Ston**	**2.06**	**297**	*e*Pn		**Pn**	06 42 37.5	+0.5
STON				*e*Sn		**Sn**	06 43 03.1	0.0
SRN	**Sarande**	**2.07**	**184**	P		**Pn**	06 42 38.2	+1.2
	baz=185							
SRN				S		**Sg**	06 43 07.9	-0.3
	baz=185							
DIVS	**Divibare**	**2.15**	**356**	*e*Pg		**Pn**	06 42 39.2	+0.9
DIVS				*e*Sg		**Sg**	06 43 10.4	-0.5
KNT	**Kendrikon**	**2.18**	**110**	P		**Pn**	06 42 37.5	-1.1
KNT	**Kendrikon**	**2.18**	**110**	*i* Pn		**Pb**	06 42 42.0	+0.5
TRUS	**Trudelj**	**2.28**	**4**	*e*Pg		**Pn**	06 42 43.3	0.0
TRUS				*e*Sg		**Sg**	06 43 13.9	-1.0
HAPS	**Han Pijesak,BI**	**2.32**	**337**	*e*Pn		**Pn**	06 42 40.7	0.0
HAPS				*e*Sn		**Sn**	06 43 09.6	-0.1
LSTV	**Lastovo**	**2.58**	**290**	*e*Pn		**Pn**	06 42 44.2	+0.1
MAKA	**Makarska**	**2.70**	**301**	*e*Pn		**Pn**	06 42 47.0	+1.3
RICI	**Ricice**	**2.73**	**305**	*e*Pn		**Pn**	06 42 47.1	+0.8
RICI				Sn		**Sb**	06 43 26.4	+1.6
FRGS	**Fruska Gora**	**3.22**	**355**	*e*Pn		**Pn**	06 42 52.3	-0.6
FRGS				*e*Sn		**Sn**	06 43 30.8	-0.9
KIJV	**Kijevo**	**3.46**	**308**	*e*Pn		**Pn**	06 42 57.2	+1.1
BLY	**Banja Luka**	**3.56**	**323**	*e*Pn		**Pn**	06 42 58.4	+0.9
BLY				*e*Sn		**Sn**	06 43 39.7	-0.2
A050A	**Klekovaca**	**3.69**	**315**	*e*Pn		**Pn**	06 42 59.8	+0.4
A050A				*e*Sn		**Sn**	06 43 42.2	-1.0
MORI	**Morici**	**3.81**	**302**	*e*Pn		**Pn**	06 43 01.5	+0.5
A051A	**Mrakovica**	**3.89**	**323**	*e*Pn		**Pn**	06 43 02.3	+0.2
A051A				*e*Sn		**Sn**	06 43 48.0	-0.2
UDBI	**Udbina**	**4.14**	**310**	*e*Pn		**Pn**	06 43 07.3	+1.7
CRES	**Cresnjev**	**5.17**	**320**	*e*Pn		**Pn**	06 43 19.0	-0.7
CEY	**Cerknica**	**5.63**	**314**	*e*Pn		**Pn**	06 43 25.3	-0.8

IDC ***24*** *06:51:12.5±0.5,3.˙13S±.86.˙47E,h0km,mb4.6/35, mbtmp4.6/36,ML4.3/1,MS3.6/33,Error ellipse: s-maj=15.7km s-min=11.6km az=47.0*

BJI ***24*** *06:51:12.6±0.0,3.˙60S±.86.˙52E,h31km,mb4.7/51, mB5.1/23,Ms4.7/5,Ms7 4.2/6*

NEIC ***24*** *06:51:15.1±2.1,3.˙1S±0.˙1×86.˙58E±0.˙08,h10km±1km, mb4.7/48,Error ellipse: s-maj=17.7km s-min=13.5km az=179.0*

ISC 24 06:51:14.3±0.3,3.˙11S±0.˙07×86.˙50E±0.˙05,h10km,n179, σ0s88/168,mb4.7/82,MS3.7/32,12C-14D,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**11.25**	**61**	P	**Pn**	06 53 56.4	+1.1
	104nm,0.6s						
PALK	**Pallekele**	**11.83**	**331**	Pn	**Pn**	06 54 01.3	-1.9
PALK	**Pallekele**	**11.83**	**331**	Pn	**Pn**	06 54 00.9	-2.3
	2.0nm,0.3s,baz=254,slow=11,SNR=12						
PALK				Sn	Sn	06 56 00.1	-15
	4.0nm,0.3s,baz=335,slow=8.4,SNR=3.1						
PALK				LR	LR	06 57 50.0	
	comp=Z,579nm,21.6s,baz=254,slow=34						
	5.4nm,0.3s						
GSI	**Gunungsitoli**	**11.91**	**69**	Pn	**Pn**	06 54 00.6	-3.7
KCSI	**Kotacane, Aceh**	**13.05**	**60**	P	**Pn**	06 54 18.3	-1.6
	30nm,0.8s						
LHMI	**Lhok Sumawe**	**13.33**	**52**	Pn	**Pn**	06 54 22.1	-1.5
LHMI	**Lhok Sumawe**	**13.33**	**52**	P	**Pn**	06 54 23.0	-0.7
	103nm,0.5s						
KAAM	**Kaadhehdhoo**	**13.96**	**285**	Pn	**Pn**	06 54 30.6	-1.8
DGAR	**Diego Garcia**	**14.62**	**252**	Pn	**Pn**	06 54 39.7	-1.7
KULM	**Kulim**	**16.42**	**59**	P	**P**	06 55 06.8	-0.9
HMDM	**Hanimaadhoo**	**16.53**	**306**	Pn	**Pn**	06 55 05.8	-0.6
MNCI	**Minicoy**	**17.54**	**310**	Pn	**Pn**	06 55 18.9	-0.2
MNCI				IAmb	IAmb	06 55 54.9	
	comp=Z,130nm,1.3s						
PPBI	**Pangkal Pinang**	**19.64**	**88**	P	**Pn**	06 55 44.6	-0.1
TNG	**Tangerang**	**20.31**	**99**	P	Pn	06 55 52.7	+0.1
	comp=Z,596nm,0.5s						
LEM	**Lembang**	**21.36**	**101**	P	**P**	06 56 03.0	+0.8
	comp=Z,12nm,0.4s,baz=203,slow=12,SNR=5.5						
	comp=Z,12nm,0.4s						
KPJI	**Karang Pucung**	**22.72**	**102**	P	**P**	06 56 16.6	0.0
	comp=Z,38nm,1.4s						
CM31	**Chiang Mai Arr**	**24.69**	**29**	P	**P**	06 56 36.5	+0.8
CM31				IAmb	IAmb	06 56 40.5	
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.69**	**29**	P	**P**	06 56 36.2	+0.5
CMAR	**Chiang Mai Arr**	**24.69**	**29**	P	**P**	06 56 37.0	+1.2
	comp=Z,12nm,0.8s,baz=223,slow=9.1,SNR=45						
CMAR				PcP	**PcP**	07 00 12.8	-0.3
	comp=Z,1.7nm,0.3s,baz=236,slow=4.5,SNR=6.9						
CMAR				LR	LR	07 05 37.5	
	comp=Z,87nm,19.9s,baz=215,slow=35						
	comp=Z,12nm,0.8s						
CHTO	**Chiang Mai**	**25.00**	**29**	P	**P**	06 56 39.3	+0.8
CHTO				IAmb	IAmb	06 56 41.3	
	comp=Z,22nm,1.3s						
SBUM	**Sibu**	**26.30**	**78**	P	**P**	06 56 50.4	+0.1
SBUM				IAmb	IAmb	06 56 51.9	
	comp=Z,16nm,0.9s						
SHL	**Shillong**	**28.98**	**10**		**P**	06 57 15.3	+0.8
SHL				IAmb	IAmb	06 57 25.6	
	comp=Z,29nm,1.2s						
SRBI	**Singaraja**	**28.99**	**101**	P	**P**	06 57 14.6	+0.1
	comp=Z,33nm,0.5s						
PZH	**PanZhiHua**	**32.93**	**26**	P	**P**	06 57 50.4	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,150nm,6.0s						

CD2	**Chengdu**	**37.62**	**25**	P		**P**	06 58 29.5	0.0
CD2				pmax	pmax			
	comp=Z,20nm,0.7s							
WSAR	**Wadi Sarin**	**37.74**	**315**	LR		LR	07 12 31.1	
	comp=Z,65nm,19.3s,baz=154,slow=34							
GOMU	**GeErMu**	**39.87**	**11**	P		**P**	06 58 49.9	+1.2
GOMU				pmax	pmax			
	comp=Z,11nm,0.9s							
DAV	**Davao City (W)**	**40.30**	**75**	LR		LR	07 16 25.6	
	comp=Z,45nm,18.3s,baz=256,slow=38							
UOSS	**Minazif**	**40.53**	**315**	P		**P**	06 58 55.6	+1.7
FITZ	**Fitzroy Crossi**	**41.12**	**114**	P		**P**	06 58 59.8	+0.8
	baz=41							
NWAO	**Narrogin (SRO)**	**41.32**	**139**	LR		LR	07 16 16.3	
	comp=Z,43nm,18.8s,baz=157,slow=36							
ABPO	**Ambohimpanom**	**41.51**	**245**	P		**P**	06 59 03.0	+0.7
ABPO				IAmb	IAmb		06 59 03.9	
	comp=Z,13nm,0.8s							
LZH	**Lanzhou**	**42.23**	**21**	*e*P		**P**	06 59 08.3	+0.4
LZH				pP	pwP		06 59 14.9	-1.0
LZH				pmax	pmax			
	comp=Z,14nm,1.1s							
XAN	**Xi'an**	**42.57**	**28**	⇑P		**P**	06 59 10.0	-0.6
XAN				pmax	pmax			
	comp=Z,35nm,0.8s							
WHN	**Wuhan**	**42.74**	**36**	P		**P**	06 59 13.1	+1.2
KSH	**Kashi**	**43.51**	**348**	P		**P**	06 59 17.3	-0.9
KSH				sP	pwP		06 59 26.4	+0.2
KSH				pmax	pmax			
	comp=Z,5.0nm,0.6s							
GTA	**Gaotai**	**44.05**	**15**	P		**P**	06 59 23.6	+1.0
GTA				pP	pwP		06 59 31.9	+1.3
GTA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
SIMJ	**Simiganj**	**44.59**	**340**	P		**P**	06 59 26.5	-0.4
SIMJ				IAmb	IAmb		06 59 27.9	
	comp=Z,11nm,0.9s							
LYN	**LuoYang**	**44.72**	**31**	*e*P		**P**	06 59 28.1	+0.3
LYN				pmax	pmax			
	comp=Z,20nm,0.9s							
NRN	**Naryn**	**45.36**	**349**	P		**P**	06 59 34.1	+0.9
ARSB	**Arslanbob**	**45.91**	**346**	P		**P**	06 59 38.3	+0.9
KDU	**Kakadu**	**46.45**	**104**	P		**P**	06 59 41.7	-0.1
	baz=47							
NJ2	**Nanjing**	**46.54**	**39**	*e*P		**P**	06 59 43.3	+1.0
NJ2				pmax	pmax			
	comp=Z,11nm,0.6s							
WMQ	**Urumqi**	**46.73**	**1**	*e*P		**P**	06 59 45.4	+1.7
WMQ				pmax	pmax			
	comp=Z,22nm,0.9s							
AAK	**Ala-Archa**	**46.82**	**348**	P		**P**	06 59 45.9	+1.5
AAK				IAmb	IAmb		06 59 47.2	
	comp=Z,4.9nm,1.1s							
AAK	**Ala-Archa**	**46.82**	**348**	LR		LR	07 19 45.3	
	comp=Z,60nm,19.4s,baz=194,slow=37							
RAYN	**Ar Rayn**	**47.91**	**306**	P		**P**	06 59 53.0	-0.1
RAYN				IAmb	IAmb		06 59 54.3	
	comp=Z,10nm,1.1s							
HNS	**HongShan**	**48.08**	**30**	⇓P		**P**	06 59 55.3	+1.2
HNS				pmax	pmax			
	comp=Z,7.0nm,1.3s							
KK31	**Karatay Array**	**48.22**	**344**	P		**P**	06 59 55.7	+0.6
KK31				IAmb	IAmb		06 59 57.0	
	comp=Z,4.6nm,0.8s							
KKAR	**Karatay Array**	**48.22**	**344**	P		**P**	06 59 56.0	+0.8
KKAR				IAmb	IAmb		06 59 57.0	
	comp=Z,4.5nm,0.8s							
BTO	**Baotou**	**48.54**	**24**	*e*P		**P**	06 59 58.8	+1.0
BTO				pP		**pwP**	07 00 03.5	-2.3
BTO				PP		**PP**	07 01 51.9	+1.1
BTO				pmax	pmax			
	comp=Z,31nm,1.0s							
BTO				pmax	pmax			
	comp=Z,300nm,8.0s							
GEYT	**Alibeck**	**48.57**	**330**	P		**P**	06 59 58.3	+0.3
GEYT	**Alibeck**	**48.57**	**330**	P		**P**	06 59 59.1	+1.1
	comp=Z,19nm,0.7s,baz=160,slow=9.0,SNR=45							
GEYT				LR		LR	07 21 57.5	
	comp=Z,102nm,18.4s,baz=156,slow=38							
	comp=Z,19nm,0.7s							
GYA0B	**ALIBECK ARRAY**	**48.57**	**330**	P		**P**	06 59 58.6	+0.6
WRA	**Warramunga Arr**	**49.55**	**114**	P		**P**	07 00 06.0	+0.2
WRA	**Warramunga Arr**	**49.55**	**114**	P		**P**	07 00 05.8	0.0
	comp=Z,4.4nm,1.0s,baz=286,slow=8.3,SNR=8.6							
WRA				PcP		**PcP**	07 01 26.3	-1.4
	comp=Z,1.3nm,0.8s,baz=300,slow=2.8,SNR=2.8							
	comp=Z,4.4nm,1.0s							
WB2	**Warramunga Arr**	**49.56**	**114**	P		**P**	07 00 06.2	+0.3
	baz=50							
MK31	**Makanchi Array**	**49.83**	**356**	P		**P**	07 00 07.9	+0.4
MKAR	**Makanchi Array**	**49.83**	**356**	P		**P**	07 00 07.7	+0.1
MKAR	**Makanchi Array**	**49.83**	**356**	P		**P**	07 00 07.8	+0.3
	comp=Z,1.6nm,0.7s,baz=168,slow=8.1,SNR=22							
MKAR				PcP		**PcP**	07 01 26.8	-1.3
	comp=Z,1.4nm,0.7s,baz=178,slow=5.0,SNR=5.2							
MKAR				LR		LR	07 23 41.6	
	comp=Z,69nm,18.2s,baz=237,slow=39							
	comp=Z,1.6nm,0.7s							
MAKZ	**Makanchi**	**49.87**	**356**	P		**P**	07 00 08.3	+0.6
MAKZ				IAmb	IAmb		07 00 09.4	
	comp=Z,10.0nm,1.2s							
ASAR	**Alice Springs**	**50.12**	**118**	P		**P**	07 00 10.7	+0.5
	comp=Z,1.8nm,0.7s,baz=294,slow=6.8,SNR=30							
ASAR				PcP		**PcP**	07 01 27.8	-2.0
	comp=Z,1.1nm,0.8s,baz=292,slow=3.8,SNR=4.6							
	comp=Z,1.8nm,0.7s							
AS31	**Alice Springs**	**50.12**	**118**	P		**P**	07 00 10.1	-0.1
BJI	**Beijing**	**50.84**	**29**	P		**P**	07 00 16.1	+0.9
BJI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
LODK	**Lodwar**	**51.52**	**277**	P		**P**	07 00 22.0	+1.1
H04N2	**CROZET ISLANDS**	**52.46**	**210**	T		T	07 56 48.6	
	baz=46,slow=75,SNR=3.3							
H04N1	**CROZET ISLANDS**	**52.47**	**210**	T		T	07 56 48.7	
	baz=46,slow=75,SNR=3.8							
H04N3	**CROZET ISLANDS**	**52.48**	**210**	T		T	07 56 47.3	
	baz=46,slow=75,SNR=4.5							
SONM	**Songino Array**	**53.65**	**17**	P		**P**	07 00 36.4	+0.2
	comp=Z,5.3nm,0.7s,baz=197,slow=8.3,SNR=41							
SONM				LR		LR	07 25 08.6	
	comp=Z,84nm,19.5s,baz=60,slow=38							
	comp=Z,5.3nm,0.7s							
XLT	**XiLinHaoTe**	**53.81**	**26**	*e*P		**P**	07 00 37.9	+0.6
XLT				pmax	pmax			
	comp=Z,9.0nm,1.0s							
XLT				pmax	pmax			
	comp=Z,110nm,4.4s							
KURBB	**Kurchatov Arra**	**53.96**	**354**	P		**P**	07 00 38.6	+0.4
	comp=Z,3.9nm,0.9s,baz=179,slow=7.0,SNR=31							
KURBB				PcP		**PcP**	07 01 43.1	-0.3
	comp=Z,2.1nm,0.8s,baz=192,slow=3.9,SNR=6.4							
KURBB				LR		LR	07 23 25.6	
	comp=Z,114nm,22.0s,baz=162,slow=36							
	comp=Z,3.9nm,0.9s							
KURK	**Kurchatov**	**54.04**	**354**	P		**P**	07 00 38.6	-0.2
KURK				IAmb	IAmb		07 00 40.4	
	comp=Z,7.3nm,1.0s							
QIS	**Mount Isa**	**54.51**	**113**	P		**P**	07 00 43.8	+1.0
	baz=55,SNR=4.9							
JNU	**Nakatsue**	**55.28**	**46**	P		**P**	07 00 48.3	+0.1
JNU	**Nakatsue**	**55.28**	**46**	LR		LR	07 24 37.5	
	comp=Z,32nm,19.2s,baz=238,slow=36							
KSAR	**Wonju Array Be**	**55.69**	**40**	P		**P**	07 00 51.5	+0.6
KSRS	**Korea Array**	**55.72**	**40**	P		**P**	07 00 50.8	-0.4
	comp=Z,5.1nm,0.9s,baz=218,slow=5.7,SNR=10							
KSRS				LR		LR	07 26 15.3	
	comp=Z,29nm,18.4s,baz=260,slow=38							
	comp=Z,5.1nm,0.9s							
MBAR	**Mbarara**	**55.78**	**271**	LR		LR	07 20 40.0	
	comp=Z,51nm,19.4s,baz=104,slow=32							
ZAAO	**Zalesovo Array**	**56.87**	**359**	P		**P**	07 00 59.1	0.0
ZALV	**Zalesovo Beam**	**56.87**	**359**	P		**P**	07 00 59.2	+0.1
ZALV	**Zalesovo Beam**	**56.87**	**359**	P		**P**	07 00 59.0	-0.1
	comp=Z,12nm,0.8s,baz=188,slow=6.0,SNR=39							
ZALV				PcP		**PcP**	07 01 53.5	-1.1
	comp=Z,1.2nm,0.5s,baz=190,slow=5.9,SNR=1.0							
ZALV				LR		LR	07 26 11.1	
	comp=Z,31nm,20.5s,baz=180,slow=37							
	comp=Z,12nm,0.8s							
ABKAR	**Akbulak array**	**57.01**	**340**	P		**P**	07 01 00.3	+0.2
ABKAR				IAmb	IAmb		07 01 03.1	
	comp=Z,3.6nm,0.8s							
BVAR	**Borovoye Array**	**57.55**	**349**	P		**P**	07 01 03.2	-0.8
	comp=Z,1.0nm,0.5s,baz=179,slow=6.9,SNR=5.7							
BVAR				LR		LR	07 25 18.3	
	comp=Z,83nm,21.1s,baz=173,slow=36							
	comp=Z,1.0nm,0.5s							

GNI	**Garni**	**57.57**	**323**	P		**P**	07 01 04.5	0.0
GNI	**Garni**	**57.57**	**323**	LR		LR	07 26 23.5	
	comp=Z,25nm,19.5s,baz=100,slow=37							
MTSU	**Mount Surprise**	**58.50**	**109**	P		**P**	07 01 12.7	+1.3
	baz=59,SNR=4.0							
LSZ	**Lusaka**	**58.64**	**254**	P		**P**	07 01 12.4	0.0
LSZ				IAmb		IAmb	07 01 13.9	
	comp=Z,7.9nm,1.0s							
LSZ	**Lusaka**	**58.64**	**254**	LR		LR	07 23 15.9	
	comp=Z,68nm,18.1s,baz=254,slow=33							
AKTO	**Aktyubinsk**	**58.68**	**339**	LR		LR	07 27 43.2	
	comp=Z,49nm,18.9s,baz=39,slow=37							
STKA	**Stephens Creek**	**59.04**	**126**	P		**P**	07 01 15.1	+0.3
	baz=59,SNR=4.6							
STKA	**Stephens Creek**	**59.04**	**126**	P		**P**	07 01 14.5	-0.3
STKA	**Stephens Creek**	**59.04**	**126**	P		**P**	07 01 14.2	-0.6
	comp=Z,4.1nm,0.7s,baz=315,slow=8.7,SNR=6.6							
	comp=Z,4.1nm,0.7s							
EIL	**Elat**	**59.08**	**307**	LR		LR	07 24 41.2	
	comp=Z,58nm,18.9s,baz=165,slow=34							
ONI	**Oni**	**59.83**	**324**	P		**P**	07 01 20.6	+0.5
ONI				IAmb		IAmb	07 01 21.9	
	comp=Z,4.6nm,0.9s							
MMAI	**Mount Meron Ar**	**60.16**	**311**	LR		LR	07 27 11.1	
	comp=Z,53nm,18.3s,baz=92,slow=36							
PMG	**Port Moresby**	**60.56**	**99**	P		**P**	07 01 25.8	+0.3
	comp=Z,9.6nm,0.7s,baz=264,slow=3.7,SNR=5.6							
	comp=Z,9.6nm,0.7s							
CTA	**Charters Tower**	**60.58**	**111**	P		**P**	07 01 26.5	+0.9
	baz=61							
CTA	**Charters Tower**	**60.58**	**111**	P		**P**	07 01 26.4	+0.9
	comp=Z,6.1nm,0.7s,baz=271,slow=9.7,SNR=3.8							
	comp=Z,6.1nm,0.7s							
BNX	**BinXian**	**60.66**	**32**	⇑P		**P**	07 01 25.8	+0.2
BNX				pmax	pmax			
	comp=Z,10.0nm,0.8s							
BNX				pmax	pmax			
	comp=Z,240nm,4.2s							
KBZ	**Khabaz**	**60.85**	**325**	P		**P**	07 01 27.6	+0.6
	comp=Z,3.0nm,0.7s,baz=129,slow=11,SNR=7.6							
KBZ				PcP		**PcP**	07 02 08.9	-1.7
	comp=Z,2.1nm,0.7s,baz=111,slow=4.9,SNR=4.1							
KBZ				LR		LR	07 32 29.4	
	comp=Z,25nm,18.1s,baz=86,slow=41							
	comp=Z,3.0nm,0.7s							
ARPR	**Arapgir-MALATY**	**61.02**	**318**	P		**P**	07 01 29.2	+0.7
ARPR				IAmb		IAmb	07 01 32.2	
	comp=Z,6.4nm,0.9s							
MDJ	**Mudanjiang**	**61.12**	**34**	P		**P**	07 01 30.3	+1.5
MDJ				pmax	pmax			
	comp=Z,11nm,1.9s							
MDJ				pmax	pmax			
	comp=Z,290nm,5.2s							
MJAR	**Matsushiro Arr**	**62.20**	**46**	P		**P**	07 01 36.4	+0.1
	comp=Z,4.2nm,0.9s,baz=232,slow=7.8,SNR=5.9							
	comp=Z,4.2nm,0.9s							
CMSA	**Cobar Meteorol**	**62.31**	**124**	P		**P**	07 01 37.6	+0.5
	baz=62,SNR=7.9							
LBTB	**Lobatse**	**62.40**	**243**	LR		LR	07 25 24.6	
	comp=Z,52nm,18.1s,baz=152,slow=33							
BOSA	**Boshof**	**63.38**	**240**	P		**P**	07 01 43.6	-0.8
	comp=Z,5.4nm,0.9s,baz=86,slow=4.4,SNR=7.9							
	comp=Z,5.4nm,0.9s							
ARU	**Arti**	**63.56**	**343**	LR		LR	07 31 05.2	
	comp=Z,59nm,19.1s,baz=168,slow=38							
HEH	**HeiHe**	**63.70**	**28**	*e*P		**P**	07 01 45.4	-0.5
BELG	**Belogornoye**	**64.29**	**335**	LR		LR	07 33 52.4	
	comp=Z,54nm,18.4s,baz=120,slow=40							
BR131	**Keskin Array S**	**64.49**	**317**	P		**P**	07 01 50.9	-0.7
BRTR	**Keskin Array B**	**64.49**	**317**	P		**P**	07 01 51.1	-0.5
	comp=Z,3.4nm,0.7s,baz=138,slow=7.5,SNR=18							
	comp=Z,3.4nm,0.7s							
KLR	**Kul'dur**	**65.16**	**31**	P		**P**	07 01 54.8	-0.7
	comp=Z,7.4nm,0.8s,baz=259,slow=6.5,SNR=26							
KLR				LR		LR	07 30 10.2	
	comp=Z,48nm,21.5s,baz=253,slow=36

comp=Z,5.0nm,0.9s
SENIN Lac Senin/Sane 84.80 317 P P 07 03 49.7 +0.4
NB2 NORSAR Subarra 85.62 332 P P 07 03 52.6 -0.3
comp=Z,8.7nm,1.1s,baz=104,slow=5.1
NOA NORSAR Array B 85.62 332 P P 07 03 52.3 -0.7
comp=Z,2.5nm,0.9s,baz=99,slow=5.8,SNR=5.0
NOA LR LR 07 46 31.9
comp=Z,32nm,18.2s,baz=290,slow=39
comp=Z,2.5nm,0.9s
TOA0 Torodi Ar. Sit 85.65 283 P P 07 03 53.7 -0.3
TOA0 IAmb IAmb 07 03 55.1
comp=Z,9.3nm,1.0s
TORD Torodi Ar. Bea 85.65 283 P P 07 03 53.8 -0.2
TORD IAmb IAmb 07 03 55.0
comp=Z,6.9nm,0.9s
TORD Torodi Ar. Bea 85.65 283 P P 07 03 54.0 0.0
comp=Z,7.5nm,0.9s,baz=73,slow=6.7,SNR=28
comp=Z,7.5nm,0.9s
SNAA Sanae 86.86 198 P P 07 03 59.4 +0.5
comp=Z,3.0nm,1.1s,baz=218,slow=1.4,SNR=2.0
comp=Z,3.0nm,1.1s
QSPA South Pole Qui 86.87 180 P P 07 03 58.9 -0.2
comp=Z,2.9nm,0.8s,baz=267,slow=1.8,SNR=12
QSPA LR LR 07 35 23.6
comp=Z,64nm,20.5s,baz=236,slow=30
comp=Z,2.9nm,0.8s
SPITS Spitsbergen Ar 89.01 349 P P 07 04 09.1 +0.1
comp=Z,11nm,0.9s,baz=169,slow=1.5,SNR=1.6
comp=Z,11nm,0.9s
DBIC Dimbokro 91.70 277 P P 07 04 23.8 +1.0
comp=Z,4.2nm,0.8s,baz=99,slow=5.8,SNR=3.4
comp=Z,4.2nm,0.8s
ESDC Sonseca Array 92.32 309 P P 07 04 25.1 -0.2
comp=Z,1.5nm,0.8s,baz=65,slow=4.3,SNR=12
ESDC PP PP 07 08 05.8 -0.1
comp=Z,0.8nm,0.8s,baz=82,slow=8.1,SNR=5.0
comp=Z,1.5nm,0.8s
EKA Eskdalemuir Ar 92.34 325 P P 07 04 25.1 +0.2
comp=Z,4.6nm,0.9s,baz=106,slow=5.3,SNR=4.9
comp=Z,4.6nm,0.9s
YKA Yellowknife Ar 118.70 11 PKP PKPdf 07 10 00.5 -1.9
comp=Z,0.6nm,0.8s,baz=341,slow=2.0,SNR=8.6
PPT2 Papeete2 121.02 113 *e*LR LR 07 47 14.9
comp=Z,96nm,32.8s
PPT2 *e*LR LR 07 47 20.5
comp=Z,42nm,23.0s
PDAR Pinedale Array 138.00 18 PKP PKPdf 07 10 37.6 -2.4
comp=Z,0.8nm,0.7s,baz=270,slow=0.9,SNR=8.2
NVAR Mina Array Bea 138.19 30 PKP PKPdf 07 10 41.0 +0.5
comp=Z,2.1nm,0.8s,baz=254,slow=1.6,SNR=13
TXAR Lajitas Array 152.19 19 PKP PKPdf 07 11 04.7 +0.3
comp=Z,1.2nm,1.0s,baz=151,slow=2.9,SNR=7.9
TXAR PKPbc **PKiKP 07 11 11.2 -0.3**
comp=Z,5.5nm,0.6s,baz=109,slow=0.7,SNR=70

IDC 24 07:04:01.2±9.8, 18°.10S×178°.62W, h608km±118km, mb3.2/5, mbtmp4.2/5, Error ellipse: s-maj=49.8km s-min=47.2km az=7.0, Figi Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.36**	**241**	P	P	07 10 32.4	+0.3
	1.4nm,0.5s,baz=94,slow=13,SNR=4.1						
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**44.40**	**260**	P	P	07 11 19.3	-0.4
	1.7nm,0.5s,baz=96,slow=7.2,SNR=26						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**44.55**	**254**	P	P	07 11 20.9	+0.1
	8.4nm,0.6s,baz=87,slow=8.6,SNR=165						
ASAR				PcP	PcP	07 12 50.2	-0.2
	0.4nm,0.5s,baz=102,slow=3.7,SNR=3.0						
	8.4nm,0.6s						
QSPA	**South Pole Qui**	**71.96**	**180**	P	P	07 14 24.1	-0.1
	2.0nm,1.0s,baz=31,slow=5.4,SNR=3.0						
	2.0nm,1.0s						
TXAR	**Lajitas Array**	**86.27**	**58**	P	P	07 15 40.2	+0.1
	0.5nm,1.0s,baz=202,slow=6.8,SNR=2.9						
	0.5nm,1.0s						

*IDC **24** 07:46:53.5±1.8, 27°.21N×60°.98E, h0km, mb3.9/10, mbtmp3.9/11, ML3.2/1, MS3.2/1, Error ellipse: s-maj=36.2km s-min=22.9km az=151.0*
*TEH **24** 07:46:56.4, 27°.00N×61°.10E, h28km±188km, ML3.6*
*OMAN **24** 07:47:06.1±1.0, 26°.54N×60°.63E, h10km, mb4.6/1, ml3.4/18, Error ellipse: s-maj=9.5km s-min=6.6km az=36.0*
ISC 24 07:46:54.7±0.7, 27°.00N±0°.04×61°.09E±0°.04, h10km, n41, σ2s64/59, mb4.0/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRVN	**Saravan**	**1.24**	**71**	Pg	**Pg**	**07 47 21.7**	**+3.3**
CHBR	**Chabahar**	**1.50**	**201**	Pg	**Pg**	**07 47 25.9**	**+2.5**
NGCH	**Negor - Chabah**	**1.63**	**178**	Pg	**Pg**	**07 47 27.6**	**+1.7**
NGCH	**Negor - Chabah**	**1.63**	**178**	P	**Pg**	**07 47 27.7**	**+1.7**
	SNR=87						
NGCH				S	**Sg**	**07 47 49.2**	**+2.0**
ZHDN	**Zahedan**	**2.41**	**354**	Pn	**Pn**	**07 47 36.1**	**+1.8**
JASK	**Jask - Hormozg**	**3.10**	**249**	Pn	**Pn**	**07 47 46.8**	**+3.2**
JASK	**Jask - Hormozg**	**3.10**	**249**	P	**Pn**	**07 47 47.9**	**+4.3**
JASK				S	**Sn**	**07 48 22.1**	**+1.4**
KHNJ	**Kahnooj**	**3.15**	**288**	Pn	**Pn**	**07 47 47.5**	**+3.1**
KBAM	**BAM**	**3.15**	**313**	Pn	**Pn**	**07 47 46.5**	**+2.0**
WSAR	**Wadi Sarin**	**4.35**	**211**	Pn	**Pn**	**07 48 02.5**	**+1.5**
	1.3nm,0.3s,baz=52,slow=13,SNR=20						
WSAR				Sn	**Sn**	**07 48 48.9**	**-2.9**
	9.4nm,0.3s,baz=156,slow=20,SNR=23						
	2.7nm,0.3s						
WSAR	**Wadi Sarin**	**4.35**	**211**	P	**Pn**	**07 48 03.4**	**+2.4**
WSAR				S	**Sn**	**07 48 48.8**	**-2.9**
BIDO	**Bidbid**	**4.38**	**218**	P	**Pn**	**07 48 04.5**	**+3.3**
BIDO				S	**Sn**	**07 48 50.7**	**-1.6**
BANOM	**Banah**	**4.42**	**257**	P	**Pn**	**07 48 05.8**	**+3.9**
BANOM				S	**Sn**	**07 48 53.1**	**-0.3**
SHME	**Shamm**	**4.53**	**259**	P	**Pn**	**07 48 07.6**	**+4.3**
	SNR=5.7						
SHME				S	**Sn**	**07 48 56.5**	**+0.5**
MDH	**Madha**	**4.62**	**250**	P	**Pn**	**07 48 07.5**	**+2.9**
	SNR=11						
MDH				S	**Sn**	**07 48 57.4**	**-0.9**
MASF	**Masafi**	**4.71**	**251**	P	**Pn**	**07 48 08.9**	**+3.1**
	SNR=5.6						
MASF				S	**Sn**	**07 48 59.5**	**-1.1**
WBK	**Wadi Bani Khal**	**4.77**	**204**	P	**Pn**	**07 48 08.1**	**+1.4**
	SNR=34						
WBK				S	**Sn**	**07 48 59.5**	**-2.5**
SMDO	**Samad**	**4.79**	**216**	P	**Pn**	**07 48 11.1**	**+4.0**
	SNR=6.9						
SMDO				S	**Sn**	**07 48 59.9**	**-2.7**
	SNR=5.2						
HOQ	**Hoqain**	**4.82**	**226**	P	**Pn**	**07 48 11.5**	**+4.1**
HOQ				S	**Sn**	**07 49 00.0**	**-3.2**
UOSS	**Minazif**	**4.84**	**246**	P	**Pn**	**07 48 10.1**	**+2.4**
UOSS				S	**Sn**	**07 48 59.8**	**-4.1**
HATD	**Hatta, Dubai**	**4.96**	**245**	P	**Pn**	**07 48 12.0**	**+2.8**
HATD				S	**Sn**	**07 49 02.8**	**-3.9**
SOHO	**SOHO**	**5.00**	**236**	P	**Pn**	**07 48 12.5**	**+2.7**
SOHO				S	**Sn**	**07 49 03.2**	**-4.5**
JLN	**Jalan Bani Buh**	**5.06**	**198**	P	**Pn**	**07 48 11.7**	**+1.1**
	SNR=20						
JLN				S	**Sn**	**07 49 07.0**	**-2.2**
ASHO	**Ashiyiah**	**5.08**	**244**	P	**Pn**	**07 48 13.9**	**+3.0**
	SNR=15						
ASHO				S	**Sn**	**07 49 08.7**	**-1.1**
JMDO	**Jabal Madar**	**5.34**	**211**	P	**Pn**	**07 48 18.3**	**+3.8**
	SNR=25						
JMDO				S	**Sn**	**07 49 16.1**	**-0.1**
FAQ	**Al Faqa, Dubai**	**5.43**	**247**	P	Pn	07 48 21.0	+5.3
	SNR=5.4						
FAQ				S	**Sn**	**07 49 19.0**	**+0.6**
	SNR=10						
ARQ	**Araqi**	**5.51**	**230**	P	Pn	07 48 22.1	+5.2
	SNR=14						
ARQ				S	**Sn**	**07 49 20.9**	**+0.6**
BSY	**Bisya**	**5.51**	**221**	P	**Pn**	**07 48 21.4**	**+4.6**
BSY				S	**Sn**	**07 49 21.2**	**+0.9**
ASUD	**Al Ashush, Dub**	**5.70**	**247**	P	Pn	07 48 24.6	+5.2
ASUD				S	**Sn**	**07 49 26.2**	**+1.2**
AJN	**Ajban**	**6.01**	**248**	P	**Pn**	**07 48 28.0**	**+4.4**
ASF	**Jabal al Asfar**	**21.64**	**290**	P	**P**	**07 51 44.7**	**-0.6**
	2.6nm,0.6s,baz=149,slow=3.9,SNR=4.3						
	2.6nm,0.6s						
EIL	**Elat**	**23.14**	**283**	LR	LR	08 02 45.7	
	comp=Z,56nm,19.7s,baz=252,slow=41						
MKAR	**Makanchi Array**	**25.89**	**35**	P	**P**	**07 52 26.2**	**-0.6**
	0.2nm,0.3s,baz=217,slow=8.2,SNR=3.6						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**26.91**	**12**	P	**P**	**07 52 34.8**	**-1.0**
	0.9nm,0.5s,baz=200,slow=9.8,SNR=5.9						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**27.09**	**25**	P	**P**	**07 52 36.4**	**-1.1**
	1.0nm,0.2s,baz=226,slow=7.2,SNR=6.4						
	1.0nm,0.2s						
ZALV	**Zalesovo Beam**	**32.11**	**27**	P	**P**	**07 53 20.4**	**-1.5**
	0.7nm,0.4s,baz=232,slow=10,SNR=4.6						
	0.7nm,0.4s						
AKASG	**Malin Array Be**	**33.86**	**323**	P	**P**	**07 53 35.7**	**-1.5**
	1.0nm,0.4s,baz=121,slow=8.5,SNR=6.5						
	1.0nm,0.4s						
SONM	**Songino Array**	**40.85**	**47**	P	**P**	**07 54 37.2**	**+0.5**
	0.4nm,0.6s,baz=265,slow=8.5,SNR=2.4						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**41.66**	**335**	P	**P**	**07 54 41.1**	**-1.8**
	1.4nm,0.3s,baz=134,slow=8.6,SNR=20						
	1.4nm,0.3s						
HFS	**Hagfors**	**46.11**	**329**	P	**P**	**07 55 17.4**	**-1.5**
	2.1nm,1.0s,baz=110,slow=12,SNR=1.5						
	2.1nm,1.0s						
ARCES	**ARCESS Array B**	**47.32**	**344**	P	**P**	**07 55 26.3**	**-1.9**
	1.2nm,0.7s,baz=138,slow=8.5,SNR=12						
	1.2nm,0.7s						

*MOS **24** 07:51:41.4±1.1, 36°.24N×22°.11E, h17km, mb4.5/22, Error ellipse: s-maj=7.9km s-min=4.2km az=72.8*
*IDC **24** 07:51:41.0±0.7, 36°.35N×22°.24E, h0km, mb4.2/21, mbtmp4.2/27, ML3.8/6, MS3.4/20, Error ellipse: s-maj=16.6km s-min=12.9km az=177.0*
*MED_RC **24** 07:51:42.0±0.6, 36°.06N×22°.04E, h24km±1km, MW4.3/14, Moment Tensor Solution. Mantle waves: s14,c15; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.68±.67; $M_{\theta\theta}$-0.63±.53; $M_{\phi\phi}$2.31±.41; $M_{r\theta}$-0.97±.49; $M_{\theta\phi}$2.80±.35; $M_{r\phi}$-0.0 1±.42; Best double couple: $M_0$3.47000×10^{15} NP1:φs70.00000°, δ70.00000°, λ-30.00000°. NP2:φs171.00000°, δ62.00000°, λ-157.00000°. Principal axes: T 4.0500, Plg5.0000°, Azm122.0000°; N -1.1500, Plg55.0000°, Azm219.0000°; P -2.8900, Plg35.0000°, Azm228.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **24** 07:51:42.6±2.9, 36°.25N×0°.07×22°.07E×0°.07, h10km±1km, mb4.3/17 Error ellipse: s-maj=13.5km s-min=8.4km az=211.0*
*THE **24** 07:51:44.7, 36°.33N×22°.09E, h0km±2km, ML4.0/8, Error ellipse: s-maj=2.6km s-min=0.8km az=221.0*
*PDG **24** 07:51:44.4±0.6, 36°.19N×21°.99E, h25km±3km, ML4.4/11, Error ellipse: s-maj=1.4km s-min=1.2km az=90.0*
*ATH **24** 07:51:45.3, 36°.31N×22°.12E, h2km, Mw4.2, Moment Tensor Solution. s9 Moment tensor: M_{rr}-0.62; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$0.68; $M_{r\theta}$-0.79; $M_{\theta\phi}$0.91; $M_{r\phi}$1.99; Fault plane solution: NP1:φs64.00000°, δ26.00000°, λ-16.00000°. NP2:φs169.00000°, δ83.00000°, λ-115.00000°.*
*AFAD **24** 07:51:49.1±0.0, 36°.25N×22°.81E, h6km±5km, MW3.9*
*NAO **24** 07:52:21.5, 40°.12N×22°.45E, h33km, mb3.4*
ISC 24 07:51:42.9±0.9, 36°.24N±0°.03×22°.08E±0°.03, h17km±5km, n341, σ1s99/383, mb4.3/47, MS3.3/14, 24C-10D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.71**	**338**	P	**Pg**	**07 51 56.0**	**-0.8**
PYL				S	**Sg**	**07 52 05.7**	**-0.5**
	15μm,0.5s						
PYL	**PYLOS**	**0.71**	**338**	P	**Pg**	**07 51 56.1**	**-0.7**
PYL				S	**Sb**	**07 52 06.4**	**+0.2**
KLMT	**Kalamata**	**0.82**	**359**	P	**Pb**	**07 51 58.5**	**-0.2**
KLMT				S	**Sb**	**07 52 09.8**	**+0.4**
	16μm,0.6s						
VLI	**Veliai**	**0.84**	**55**	P	**Pb**	**07 51 59.4**	**+0.4**
VLI				S	**Sb**	**07 52 10.7**	**+0.7**
	9μm,0.7s						
VLI	**Veliai**	**0.84**	**55**	P	**Pb**	**07 51 59.7**	**+0.7**
VLI				S	**Sg**	**07 52 10.0**	**-0.4**
MNVA	**Monemvasia**	**0.89**	**60**	P	**Pn**	**07 52 01.5**	**+0.9**
ANKY	**Antikythira Is**	**1.06**	**110**	P	**Pn**	**07 52 04.6**	**+1.7**
ANKY				S	**Sn**	**07 52 21.0**	**+3.8**
	17μm,0.9s						
ANKY	**Antikythira Is**	**1.06**	**110**	P	**Pn**	**07 52 04.8**	**+1.9**
ANKY				S	**Sn**	**07 52 18.8**	**+1.6**
KRND	**KRANIDI**	**1.43**	**37**	P	**Pg**	**07 52 09.8**	**-0.6**
KRND				S	**Sg**	**07 52 30.2**	**+1.2**
	4μm,0.6s						
KRND	**KRANIDI**	**1.43**	**37**	P	**Pg**	**07 52 09.9**	**-0.4**
RODP	**Rodopos**	**1.52**	**116**	P	**Pg**	**07 52 28.4**	**-0.6**
RODP	**Rodopos**	**1.52**	**116**	P	**Pg**	**07 52 13.0**	**+0.8**
EPID	**Epidavros**	**1.60**	**31**	P	**Pg**	**07 52 13.4**	**+1.2**
EPID	**Epidavros**	**1.60**	**31**	P	**Pg**	**07 52 13.2**	**-0.6**
EPID				P	**Pg**	**07 52 12.7**	**+0.6**
EPID				S	**Sg**	**07 52 34.6**	**-0.1**
GUR	**Goura**	**1.71**	**7**	P	**Pb**	**07 52 13.9**	**0.0**
GUR	**Goura**	**1.71**	**7**	P	**Pg**	**07 52 14.7**	**-1.0**
IMMV	**Iera Moni Meta**	**1.73**	**116**	P	**Pg**	**07 52 15.6**	**-0.5**
IMMV	**Iera Moni Meta**	**1.73**	**116**	P	**Pg**	**07 52 16.4**	**+0.3**
IMMV	**Iera Moni Meta**	**1.73**	**116**	P	**Pg**	**07 52 16.1**	**0.0**
DRO	**Drossia**	**1.73**	**350**	P	**Pb**	**07 52 14.9**	**+0.6**
DRO				S	**Sg**	**07 52 37.4**	**-1.4**
	7μm,0.7s						
DRO	**Drossia**	**1.73**	**350**	P	**Pg**	**07 52 15.2**	**-1.0**
CHAN	**Chania**	**1.75**	**114**	P	**Pg**	**07 52 16.6**	**+0.1**
LTHK	**Lithakia**	**1.77**	**326**	P	**Pn**	**07 52 14.0**	**+1.3**
LTHK	**Lithakia**	**1.77**	**326**	P	**Pb**	**07 52 15.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.80**	**2**	P	**Pb**	**07 52 15.5**	**0.0**
KLV				S	**Sb**	**07 52 38.4**	**+0.6**
	2μm,0.9s						
KLV	**Kalavryta, Ach**	**1.80**	**2**	P	**Pb**	**07 52 15.7**	**+0.3**
KLV				S	**Sb**	**07 52 37.6**	**-0.1**
THAL	**Thalero**	**1.85**	**14**	P	**Pb**	**07 52 16.3**	**0.0**
THAL	**Thalero**	**1.85**	**14**	P	**Pb**	**07 52 16.6**	**+0.3**
RLS	**Riolos of Patr**	**1.88**	**345**	P	**Pb**	**07 52 17.1**	**+0.4**
LTK	**Loutraki**	**1.92**	**21**	P	**Pb**	**07 52 17.7**	**+0.4**
MHLO	**Agia Marina, M**	**1.93**	**76**	P	**Pb**	**07 52 17.1**	**-0.5**
VLY	**Voula,Athens**	**2.11**	**40**	P	**Pn**	**07 52 19.4**	**+1.9**
VLY				S	**Sb**	**07 52 46.8**	**+0.1**
	2μm,0.7s						
VLY	**Voula,Athens**	**2.11**	**40**	P	**Pb**	**07 52 20.5**	**-0.3**
GVDS	**Gavdos**	**2.15**	**130**	P	**Pg**	**07 52 23.8**	**-0.4**
VILL	**Villia**	**2.16**	**27**	P	**Pn**	**07 52 19.4**	**+1.3**
ATH	**Athens Observa**	**2.17**	**37**	P	**Pn**	**07 52 19.7**	**+1.5**
ATH				S	**Sb**	**07 52 48.2**	**0.0**
ATH	**Athens Observa**	**2.17**	**37**	P	**Pb**	**07 52 20.5**	**-1.2**
VIL2	**Platees**	**2.18**	**25**	P	**Pn**	**07 52 19.7**	**+1.3**
EFP	**Efpalio**	**2.19**	**356**	P	**Pb**	**07 52 22.8**	**+0.8**
ATHU	**Athens Univers**	**2.20**	**38**	P	**Pn**	**07 52 19.9**	**+1.3**
VLS	**Valsamata**	**2.27**	**329**	P	**Pb**	**07 52 21.9**	**-1.6**
PTL	**Penteli**	**2.30**	**38**	P	**Pb**	**07 52 22.7**	**-1.2**
PTL	**Penteli**	**2.30**	**38**	P	**Pb**	**07 52 22.4**	**-1.5**
ANX	**Ano Chora**	**2.35**	**357**	P	**Pb**	**07 52 23.8**	**-1.1**
DION	**Dionisos Attik**	**2.36**	**38**	P	**Pb**	**07 52 23.5**	**-1.4**
DION	**Dionisos Attik**	**2.36**	**38**	P	**Pn**	**07 52 22.8**	**+1.9**
IDI	**Anoyia**	**2.48**	**112**	*e*P	**Pn**	**07 52 24.9**	**+2.4**
IDI	**Anoyia**	**2.48**	**112**	Pn	**Pn**	**07 52 24.5**	**+2.0**
IDI	**Anoyia**	**2.48**	**112**	P	**Pn**	**07 52 25.2**	**+2.7**
IDI	**Anoyia**	**2.48**	**112**	P	**Pn**	**07 52 25.4**	**+2.9**
SANT	**Santorini**	**2.73**	**86**	⇑P	**Pn**	**07 52 28.6**	**+2.5**
SANT	**Santorini**	**2.73**	**86**	*e*P	**Pn**	**07 52 27.3**	**+1.3**
SANT	**Santorini**	**2.73**	**86**		**Pn**	**07 52 28.5**	**+2.5**
AGG	**Agios Georgios**	**2.78**	**4**	Pn	**Pn**	**07 52 29.1**	**+2.5**
AGG	**Agios Georgios**	**2.78**	**4**	P	**Pn**	**07 52 29.2**	**+2.5**
AGG	**Agios Georgios**	**2.78**	**4**	P	**Pn**	**07 52 29.6**	**+2.9**
KYMI	**Kymi, Euboea I**	**2.88**	**33**	P	**Pn**	**07 52 29.2**	**+1.2**
KYMI	**Kymi, Euboea I**	**2.88**	**33**	P	**Pn**	**07 52 29.1**	**+1.2**
APE	**Apeiranthos**	**2.90**	**72**	⇑P	**Pn**	**07 52 30.7**	**+2.4**
APE				⇓S	**Sb**	**07 53 10.0**	**+0.7**
APE	**Apeiranthos**	**2.90**	**72**	*e*P	**Pn**	**07 52 30.7**	**+2.4**
APE	**Apeiranthos**	**2.90**	**72**	*i* P	**Pn**	**07 52 28.7**	**+0.5**
ZKR	**Zakros**	**3.55**	**107**	*e*P	**Pn**	**07 52 39.5**	**+2.3**
LIT	**Litokhoron**	**3.87**	**5**	Pn	**Pn**	**07 52 41.8**	**+0.2**
LIT	**Litokhoron**	**3.87**	**5**	P	**Pn**	**07 52 41.8**	**+0.2**
KEK	**Kerkira**	**3.91**	**333**	Pn	**Pn**	**07 52 40.8**	**-1.4**
ZEYE	**Izmir, Urla-Ze**	**4.05**	**59**	P	**Pn**	**07 52 47.0**	**+2.9**
URLA	**Izmir**	**4.18**	**58**	P	**Pn**	**07 52 47.9**	**+2.1**
URLA				S	**Sn**	**07 53 35.3**	**+1.1**
KARP	**Karpathos**	**4.18**	**98**	*e*P	**Pn**	**07 52 47.7**	**+1.8**
KARP	**Karpathos**	**4.18**	**98**	Pn	**Pn**	**07 52 48.3**	**+2.4**
KARP	**Karpathos**	**4.18**	**98**	P	**Pn**	**07 52 48.0**	**+2.1**
YAZI	**Mula-Dat§a-**	**4.35**	**83**	P	Pb	07 52 54.2	-4.7
YAZI				S	Sn	07 53 23.9	-15
BDRM	**Kayabasi**	**4.39**	**78**	P	**Pn**	**07 52 52.1**	**+3.4**
BDRM				S	**Sn**	**07 53 33.5**	**-6.0**
DAT	**Datca**	**4.46**	**82**	P	**Pn**	**07 52 50.8**	**+1.1**
DAT				S	Pg	07 53 12.3	+4.1
DAT				*i* AML	AML	07 54 07.0	
	comp=N,25nm,1.1s						
DAT				*i* AML	AML	07 54 10.0	
	comp=E,26nm,0.7s						
KBN	**Korca**	**4.49**	**347**	Pn	**Pn**	**07 52 53.5**	**+3.3**
KBN	**Korca**	**4.49**	**347**	P	**Pn**	**07 52 53.5**	**+3.3**
FNA	**Florina**	**4.57**	**353**	Pn	**Pn**	**07 52 52.5**	**+1.2**
FNA	**Florina**	**4.57**	**353**	P	**Pn**	**07 52 52.5**	**+1.2**
ARG	**Arkhangelos**	**4.89**	**89**		**Pn**	**07 52 58.8**	**+3.2**
ARG	**Arkhangelos**	**4.89**	**89**	P	**Pn**	**07 52 58.8**	**+3.2**
OHR	**Ohrid**	**4.97**	**349**	*i* Pn	**Pg**	**07 53 20.0**	**+2.1**
TURN	**Turunc**	**4.99**	**82**	P	**Pn**	**07 53 00.3**	**+3.2**
TURN				S	**Sn**	**07 53 52.2**	**-2.2**
TIP	**Timpagrande**	**5.14**	**306**	⇑P	**Pn**	**07 52 59.2**	**+0.1**
TIP	**Timpagrande**	**5.14**	**306**	Pn	**Pn**	**07 52 59.8**	**+0.7**
ESEN	**Aydn-Nazilli**	**5.25**	**71**	P	**Pn**	**07 53 04.0**	**+3.4**
CEL	**Celeste**	**5.33**	**294**		**Pn**	**07 53 02.4**	**+0.6**
TIR	**Tirane**	**5.38**	**342**	⇑P	**Pn**	**07 53 04.6**	**+2.2**
TIR	**Tirane**	**5.38**	**342**	P	**Pn**	**07 53 04.6**	**+2.2**
SABU	**Mula-Dalaman**	**5.58**	**82**	P	Pn	07 53 10.6	+5.5
ALN	**Alexandroupoli**	**5.59**	**33**	Pn	**Pn**	**07 53 07.8**	**+2.6**
ALN	**Alexandroupoli**	**5.59**	**33**	P	**Pn**	**07 53 07.8**	**+2.6**
RDO	**Rodhopi**	**5.59**	**28**		**Pn**	**07 53 08.3**	**+3.0**
TAVA	**DENIZLI_Tavas**	**5.61**	**75**	P	**Pn**	**07 53 09.4**	**+3.8**
FETY	**Fethiye**	**5.66**	**84**	P	Pn	07 53 13.7	+7.5
DNZT	**Denizli-Tavas-**	**5.67**	**77**	P	Pn	07 53 12.1	+5.6
IZZE	**Mula-Seydike**	**5.77**	**86**	P	**Pn**	**07 53 11.7**	**+4.0**
PUK	**Puka**	**6.04**	**344**		**Pn**	**07 53 12.4**	**+1.0**
AKAS	**Kas**	**6.08**	**88**	P	**Pn**	**07 53 14.2**	**+2.0**
GOLH	**Golhisar**	**6.09**	**78**	P	**Pn**	**07 53 16.8**	**+4.6**
MATE	**Matera**	**6.10**	**318**	⇓P	**Pn**	**07 53 12.6**	**+0.5**
ULC	**Ulcinj**	**6.12**	**340**	⇓*i* Pn	**Pn**	**07 53 14.0**	**+1.4**
ULC				*i* Sn	**Sn**	**07 54 22.6**	**+0.3**
WDD	**Wied Dalam**	**6.13**	**268**	Pn	**Pn**	**07 53 13.8**	**+1.1**
CUC	**Castrocucco**	**6.20**	**309**	Pn	**Pn**	**07 53 15.9**	**+2.3**
VAE	**Valguarnera**	**6.27**	**284**	Pn	**Pn**	**07 53 18.1**	**+3.5**
	2.2nm,0.3s,baz=97,slow=19,SNR=7.3						
VAE				Sn	**Sn**	**07 54 26.1**	**+0.1**
	4.0nm,0.3s,baz=109,slow=19,SNR=2.1						
VAE				LR	LR	07 56 05.4	
	comp=Z,186nm,18.8s,baz=334,slow=41						
	30nm,0.8s						
RAFF	**Raffo Rosso**	**6.28**	**281**	Pn	**Pn**	**07 53 15.4**	**+0.8**
ELL	**Elmali**	**6.33**	**83**	Pn	**Pn**	**07 53 17.3**	**+1.8**
ELL	**Elmali**	**6.33**	**83**	P	**Pn**	**07 53 17.3**	**+1.8**
DRME	**Dracevica, Mon**	**6.35**	**340**	⇑*i* Pn	**Pn**	**07 53 16.4**	**+0.8**
DRME				*i* Sn	**Sn**	**07 54 28.3**	**+0.6**
DRME	**Dracevica, Mon**	**6.35**	**340**	*e*Pn	**Pn**	**07 53 15.7**	**+0.1**
BUM	**Brajici-Budva**	**6.54**	**339**	⇓*i* Pn	**Pn**	**07 53 17.8**	**+0.5**
BUM				*i* Sn	**Sn**	**07 54 32.4**	**-0.1**
PVY	**Plav**	**6.55**	**346**	⇓*i* Pn	**Pn**	**07 53 20.5**	**+1.9**
PVY				*i* Sn	**Sn**	**07 54 32.7**	**-0.3**
CEME	**Cevo**	**6.76**	**340**	⇑*i* Pn	**Pn**	**07 53 20.8**	**-0.5**
CEME				*i* Sn	**Sn**	**07 54 37.7**	**-0.2**
HCY	**Herceg Novi**	**6.79**	**337**	⇓*i* Pn	**Pn**	**07 53 21.3**	**-0.4**
HCY				*i* Sn	**Sn**	**07 54 39.6**	**+0.9**
HCY	**Herceg Novi**	**6.79**	**337**	*e*Pn	**Pn**	**07 53 20.5**	**-1.2**
IVA	**Berane**	**6.83**	**346**	⇑*i* Pn	**Pn**	**07 53 24.5**	**+2.1**
IVA				*i* Sn	**Sn**	**07 54 39.6**	**-0.2**
KOME	**Kolasin**	**6.89**	**344**	⇑*i* Pn	**Pn**	**07 53 25.1**	**+1.9**
KOME				*i* Sn	**Sn**	**07 54 41.1**	**-0.1**
NKME	**Niksic**	**6.95**	**341**	⇑*i* Pn	**Pn**	**07 53 26.5**	**+2.5**
NKME				*i* Sn	**Sn**	**07 54 42.4**	**-0.2**
TREB	**Trebinje**	**7.08**	**337**	*e*Pn	**Pn**	**07 53 24.4**	**-1.3**
DBRK	**Dubrovnik**	**7.10**	**336**	*e*Pn	**Pn**	**07 53 25.7**	**-0.3**
BRY	**Bratogost**	**7.19**	**339**	⇓*i* Pn	**Pn**	**07 53 29.3**	**+1.9**
BRY				*i* Sn	**Sn**	**07 54 46.7**	**-2.0**
BRY	**Bratogost**	**7.19**	**339**	*e*Pn	**Pn**	**07 53 27.7**	**+0.3**
PLE	**Pljevlja**	**7.

GHAJ Ghor Haditha 12.25 110 Pn Pn 07 54 36.6 +0.1
PRNI Paran 12.30 115 P Pn 07 54 38.1 +0.8
ZFRI Zfri 12.32 114 P Pn 07 54 41.2 +3.7
CIMO Cimolais 12.39 327 Pn Pn 07 54 38.3 -0.1
VYHS Vyhne 12.48 350 *e*P**n Pn 07 54 40.9 +1.3**
VYHS *e* 07 56 55.9
VYHS Vyhne 12.48 350 *e*PN **Pn 07 54 40.9 +1.3**
VYHS Vyhne 12.48 350 *e*SN **Sn 07 56 55.9 -2.2**
HRFI Mount Harif 12.49 116 P Pn 07 54 36.5 -3.4
MBRI Mt Berech 12.54 117 P Pn 07 54 37.7 -2.9
CONA Conrad Observa 12.55 340 *i* Sn **Sn 07 56 56.9 -3.2**
2.1nm,0.6s
EIL Elat 12.63 118 Pn **Pn 07 54 41.0 -0.9**
0.7nm,0.3s,baz=232,slow=17,SNR=2.4
EIL Sn Sn 07 56 53.0 -9.1
0.8nm,0.3s,baz=292,slow=19,SNR=3.5
2.2nm,0.4s
EIL Elat 12.63 118 P **Pn 07 54 40.0 -1.8**
KBA Koelnbreinsper 12.63 332 *i* Sn **Sn 07 56 57.7 -4.6**
2.5nm,0.5s
ABTA Abfaltersbach 12.70 329 *e*Pn **Pn 07 54 43.2 +0.5**
3.4nm,0.5s
ABTA *e*Sn **Sn 07 56 56.5 -7.2**
12nm,0.8s
MOA Molln 12.96 336 *e*Pn **Pn 07 54 46.2 0.0**
1.8nm,0.3s
MOA *i* Sn **Sn 07 57 03.7 -6.3**
1.8nm,0.3s
BIOA Bad Ischl, Aus 13.04 334 *i* Pn **Pn 07 54 47.4 0.0**
1.0nm,0.3s
BIOA *i* Sn **Sn 07 57 10.7 -1.3**
3.5nm,0.4s
LESA Schwarzleotal 13.18 331 *i* Pn **Pn 07 54 52.0 +2.7**
3.0nm,0.5s
LESA *e*Sn **Sn 07 57 08.6 -6.8**
3.9nm,0.4s
ARPR Arapgir-MALATY 13.19 73 Pn 07 54 52.3 +2.8
WTTA Wattenberg 13.48 328 *i* Pn **Pn 07 54 55.7 +2.3**
1.7nm,0.4s
WTTA *e*Sn **Sn 07 57 19.2 -3.6**
13nm,0.6s
WATA Walderalm 13.56 328 *i* Pn **Pn 07 54 55.9 +1.4**
5.7nm,0.8s
WATA *i* Sn **Sn 07 57 20.0 -4.8**
9.5nm,0.7s
FUORN Ofenpass-Fuorn 13.63 323 Pn Pn 07 54 54.0 -1.5
SQTA Sankt Quirin 13.63 327 *i* Pn **Pn 07 54 57.8 +2.3**
2.0nm,0.3s
SQTA *i* Sn **Sn 07 57 23.0 -3.5**
5.4nm,0.5s
FETA Feichten 13.70 325 *i* Sn **Sn 07 57 24.5 -3.7**
2.8nm,0.6s
MOTA Moosalm 13.77 327 *i* Pn **Pn 07 54 59.3 +1.9**
4.6nm,0.7s
MOTA *e*Sn **Sn 07 57 26.0 -4.0**
14nm,0.9s
CKRC Cesky Krumlov 13.80 338 *e*P **P 07 55 02.9 -3.2**
CKRC Cesky Krumlov 13.80 338 *e*P **P 07 55 02.9 -3.2**
DAVOX Davos/Dischmat 13.93 323 LR LR 08 01 44.6
comp=Z,208nm,18.6s,baz=96,slow=43
TUE Stuetta 13.98 321 Pn Pn 07 55 00.9 +0.6
GERES GERESS Array B 14.02 337 LR LR 08 01 35.5
comp=Z,211nm,18.8s,baz=138,slow=43
RETA Reutte 14.03 327 *e*Pn **Pn 07 55 02.4 +1.5**
1.9nm,0.6s
RETA *e*Sn **Sn 07 57 31.6 -4.6**
4.8nm,0.9s
OJC Ojcow 14.07 354 Pn Pn 07 55 01.9 +0.6
OJC Ojcow 14.07 354 P Pn 07 55 01.9 +0.6
DAVA Damuels 14.29 324 *e*Sn **Sn 07 57 39.0 -3.6**
4.8nm,0.4s
KHC Kasperske Hory 14.31 337 Pn Pn 07 55 04.4 -0.2
KHC Kasperske Hory 14.31 337 *e*P **Pn 07 55 06.3 +1.7**
KHC Kasperske Hory 14.31 337 *i* P **Pn 07 55 04.4 -0.2**
KHC pmax pmax
comp=Z,4.0nm,0.6s
KRLC Kraliky 14.35 346 *e*P **P 07 55 13.9 +1.7**
KRLC Kraliky 14.35 346 *e*P **P 07 55 13.9 +1.7**
ZVC Zvikov 14.39 339 *e*P **P 07 55 11.9 -0.7**
DPC Dobruska-Polom 14.71 345 *e*P **P 07 55 17.1 +1.0**
DPC Dobruska-Polom 14.71 345 *e*P **P 07 55 17.1 +1.0**
UPC Upice 14.92 345 *e*P **P 07 55 19.8 +1.3**
UPC Upice 14.92 345 *e*P **P 07 55 19.8 +1.3**
CHVC Chvalec 14.99 345 *e*P **P 07 55 20.3 +1.1**
CHVC Chvalec 14.99 345 *e*P **P 07 55 20.3 +1.1**
AKASG Malin Array Be 15.35 17 Pn **Pn 07 55 16.6 -1.9**
comp=Z,0.5nm,0.3s,baz=262,slow=0.6,SNR=1.8
AKASG LR LR 08 01 20.3
comp=Z,66nm,19.9s,baz=209,slow=38
comp=Z,0.2nm,0.3s
AKBB Malin Array Si 15.35 17 *i* P **Pn 07 55 19.0 +0.5**
AKBB pmax pmax
comp=Z,2.0nm,0.3s
SOC Sochi 15.38 56 *e*P **Pn 07 55 17.9 -1.1**
SOC *e* 07 58 10.1
SOC MLR MLR
comp=Z,73nm,15.0s
CLL Collm 16.41 339 *e*P **P 07 55 36.0 +1.1**
CLL Collm 16.41 339 *es*P **P 07 55 36.0 +1.1**
CLL *i* PP **pwP 07 55 40.7 -1.6**
comp=Z,14nm,1.4s
CLL *i* x x 07 55 47.6
KIV Kislovodsk 17.52 58 *e*P **Pn 07 55 46.8 +0.4**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,38nm,14.0s
KBZ Khabaz 17.59 58 *i* P **Pn 07 55 47.7 +0.6**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 17.59 58 P **Pn 07 55 43.8 -3.3**
comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=1.8
comp=Z,0.5nm,0.4s
NCK Nalchik 18.01 60 *i* P **Pn 07 55 52.4 +0.1**
NCK pmax pmax
comp=Z,6.0nm,0.8s
GNI Garni 18.22 71 *i* P **Pn 07 55 55.1 0.0**
GNI pmax pmax
comp=Z,9.0nm,0.7s
GNI Garni 18.22 71 LR LR 08 03 36.4
comp=Z,80nm,21.1s,baz=289,slow=40
MNK Minsk 18.70 11 *i* P **P 07 55 57.8 -2.4**
comp=E,7.0nm,0.9s
MNK *i* P **P 07 55 57.8 -2.4**
comp=N,11nm,1.0s
MNK *i* P **P 07 55 57.8 -2.4**
comp=Z,10.0nm,0.9s,baz=195
MNK *i* PP **PnPn 07 56 10.4 -2.2**
MNK *i* PPP PPP 07 56 18.3
MNK *i* S **Sn 07 59 28.5 -0.7**
MNK *i* SS **SnSn 07 59 43.8 +0.6**
MNK *i* SSS SSS 07 59 57.0
MNK *i* LQ LQ 08 01 35.7
MNK *i* LR LR 08 02 44.6
MNK *i* LRM MLR 08 04 09.3
comp=Z,187nm,13.3s
MNK *i* LRM MLR 08 04 40.0
comp=N,159nm,13.5s
MNK *i* LRM MLR 08 05 05.0
MNK Minsk 18.70 11 *i* P **P 07 55 57.7 -2.4**
MNK *i* S **Sn 07 59 28.5 -0.7**
MNK pmax pmax
comp=N,11nm,1.0s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK MLR MLR
comp=Z,187nm,13.0s
MNK MLR MLR
comp=N,159nm,14.0s
VORD Divnogorie 19.22 35 *e*P **Pn 07 56 09.8 +2.9**
VORD pmax pmax
comp=Z,7.0nm,0.5s
PABE Paberze 19.31 3 P 07 56 06.4 -0.5
PABE Paberze 19.31 3 *e*P **P 07 56 07.6 +0.7**
VSR Storozhevoye 19.33 34 *e*P **P 07 56 05.1 -2.1**
VSR pmax pmax
comp=Z,9.0nm,0.4s
VORR Voronezh 19.67 33 P **P 07 56 06.9 -4.0**
VORR pmax pmax
comp=Z,9.0nm,0.5s
VSVD Vaisvydziai 19.79 3 *e*P **P 07 56 13.3 +1.2**
PBUR Paburge 19.79 360 *e*P **P 07 56 12.6 +0.5**
LPSR Galich'ya Gora 20.22 31 *e*P **P 07 56 13.5 -3.4**

LPSR pmax pmax
comp=Z,30nm,0.5s
VRH Novokhopyorsk 20.52 37 *e*P **P 07 56 19.4 -0.7**
VRH pmax pmax
comp=Z,15nm,0.9s
ESDC Sonseca Array 20.80 287 P **P 07 56 24.5 +1.2**
comp=Z,3.1nm,1.0s,baz=85,slow=9.1,SNR=19
ESDC LR LR 08 04 55.8
comp=Z,78nm,18.0s,baz=85,slow=38
comp=Z,3.1nm,1.0s
OBN Obninsk 21.34 23 *i* P **P 07 56 27.9 -1.0**
OBN *i* S S 08 00 14.9 -10
OBN pmax pmax
comp=Z,6.0nm,0.6s
OBN MLR MLR
comp=Z,89nm,19.0s
OBN Obninsk 21.34 23 P **P 07 56 26.2 -2.6**
comp=Z,29nm,0.4s,baz=25,slow=13,SNR=1.8
comp=Z,29nm,0.4s
SLIT Slitere, Latvi 21.40 0 *e*P **P 07 56 32.2 +2.7**
MDT Midelt 22.23 269 P **P 07 56 40.7 +1.9**
comp=Z,3.1nm,0.9s,baz=90,slow=9.1,SNR=5.9
MDT LR LR 08 06 55.8
comp=Z,96nm,18.5s,baz=94,slow=41
comp=Z,3.1nm,0.9s
VSU Vasula 22.44 6*ce*P **P 07 56 38.6 -2.1**
VSU pmax pmax
comp=Z,40nm,2.5s
VSU Vasula 22.44 6 *e*P **P 07 56 39.4 -1.4**
MTSE Matsula 22.52 2⇑*e*P **P 07 56 41.1 -0.4**
MVO Moncorvo 23.19 291 *e*P **P 07 56 49.7 +0.9**
comp=Z,17nm,2.1s
PBAR Barrancos 23.23 284 *e*P **P 07 56 51.9 +2.7**
comp=Z,24nm,1.5s
PMRV Marv??o 23.45 287 *e*P **P 07 56 52.4 +1.1**
comp=Z,15nm,1.4s
MTE Manteigas 23.55 289 *e*P **P 07 56 54.6 +2.2**
PESTR Estremoz 23.62 285 *e*P **P 07 56 53.8 +0.7**
PVIS Viseu 23.83 290 *e*P **P 07 56 57.5 +2.4**
MEF Metsahovi 24.04 3 *e*P **P 07 56 56.7 0.0**
PMTG Montargil 24.11 286 *e*P **P 07 56 59.5 +1.9**
comp=Z,12nm,1.6s
MESJ Messejana 24.19 283 *e*P **P 07 57 00.6 +2.2**
comp=Z,13nm,1.4s
MESJ Messejana 24.19 283 P **P 07 56 56.4 -2.1**
MESJ Messejana 24.19 283 *e*P **P 07 56 59.6 +1.2**
MESJ IAmb IAmb 07 57 01.9
comp=Z,16nm,1.3s
MESJ Messejana 24.19 283 *e*P **P 07 56 59.6 +1.2**
BELG Belogornoye 24.20 40 *i* P **P 07 56 57.9 -0.4**
BELG pmax pmax
comp=Z,5.0nm,0.6s
HFS Hagfors 24.51 350 P **P 07 57 00.5 -0.7**
comp=Z,1.9nm,0.4s,baz=163,slow=10,SNR=15
comp=Z,1.9nm,0.4s
PFVI Vila Bisbo 24.75 281 *e*P **P 07 57 06.9 +3.4**
RAF Rauma 24.80 360 *e*P **P 07 57 03.4 -0.3**
FINES FINESS Array B 25.35 4 P **P 07 57 08.1 -0.6**
comp=Z,5.3nm,0.6s,baz=182,slow=7.9,SNR=32
FINES PcP **PcP 08 00 41.7 +0.9**
comp=Z,1.3nm,0.7s,baz=197,slow=2.9,SNR=2.1
FINES LR LR 08 08 14.3
comp=Z,165nm,19.2s,baz=212,slow=39
comp=Z,5.3nm,0.6s
EKA Eskdalemuir Ar 25.73 326 P **P 07 57 12.5 +0.3**
comp=Z,1.7nm,0.6s,baz=118,slow=12,SNR=3.8
comp=Z,1.7nm,0.6s
VALR Valaam 25.75 10 *i* P **P 07 57 12.3 0.0**
VALR pmax pmax
comp=Z,14nm,0.8s
NB2 NORSAR Subarra 25.77 348 P **P 07 57 13.0 +0.5**
comp=Z,1.1nm,0.5s,baz=157,slow=11
NOA NORSAR Array B 25.77 348 P **P 07 57 12.8 +0.3**
comp=Z,1.7nm,0.9s,baz=154,slow=10,SNR=8.1
NOA LR LR 08 09 11.4
comp=Z,61nm,19.0s,baz=170,slow=41
comp=Z,1.7nm,0.9s
KLMR Klimovskoe 27.02 19 *e*P **P 07 57 21.7 -2.1**
KLMR pmax pmax
comp=Z,24nm,1.5s
KIRV Kirov 28.65 30*ce*P **P 07 57 37.2 -1.2**
KIRV Kirov 28.65 30 LR LR 08 10 08.3
comp=Z,101nm,19.9s,baz=260,slow=39
GEYT Alibeck 28.69 76 P **P 07 57 38.2 -0.8**
GEYT IAmb IAmb 07 57 40.4
comp=Z,3.3nm,0.7s
GEYT Alibeck 28.69 76 P **P 07 57 39.3 +0.2**
comp=Z,3.0nm,0.6s,baz=278,slow=10.0,SNR=9.6
GEYT LR LR 08 12 13.8
comp=Z,62nm,18.4s,baz=360,slow=43
comp=Z,3.0nm,0.6s
TORD Torodi Ar. Bea 29.40 224 P **P 07 57 47.8 +2.4**
comp=Z,1.4nm,0.7s,baz=32,slow=11,SNR=6.2
comp=Z,1.4nm,0.7s
ABKAR Akbulak array 30.36 53 P **P 07 57 52.6 -1.1**
ARU Arti 31.73 39*c i*P **P 07 58 05.3 -0.3**
ARU 07 59 09.0
ARU S **S 08 03 17.0 +2.5**
ARU SS **SnSn 08 05 05.1 +3.6**
ARU pmax pmax
comp=Z,8.0nm,1.5s
ARU Arti 31.73 39 LR LR 08 12 03.4
comp=Z,55nm,19.6s,baz=178,slow=39
ARCES ARCESS Array B 33.40 2 P **P 07 58 19.6 -0.6**
comp=Z,3.3nm,0.6s,baz=187,slow=8.6,SNR=19
ARCES LR LR 08 13 23.1
comp=Z,101nm,18.2s,baz=200,slow=39
comp=Z,3.3nm,0.6s
SIMJ Simiganj 37.02 72 P **P 07 58 51.2 -0.6**
SIMJ IAmb IAmb 07 58 52.9
comp=Z,6.6nm,1.0s
BRVK Borovoye 37.39 48 P **P 07 58 54.3 -0.3**
BRVK Borovoye 37.39 48 *i* P **P 07 58 54.4 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 37.45 48 P **P 07 58 54.8 -0.4**
comp=Z,3.0nm,0.6s,baz=267,slow=5.9,SNR=15
comp=Z,3.0nm,0.6s
KK31 Karatay Array 37.48 64 P **P 07 58 55.0 -0.5**
KK31 IAmb IAmb 07 58 56.3
comp=Z,4.0nm,0.6s
KK31 Karatay Array 37.48 64 P **P 07 58 55.0 -0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 37.48 64 P **P 07 58 55.5 0.0**
KKAR Karatay Array 37.48 64 P **P 07 58 55.1 -0.4**
KKAR IAmb IAmb 07 58 56.3
comp=Z,3.9nm,0.6s
KKAR Karatay Array 37.48 64 P **P 07 58 55.1 -0.4**
KKAR pmax pmax
comp=Z,4.0nm,0.6s
MBAR Mbarara 37.53 166 LR LR 08 15 04.5
comp=Z,50nm,18.0s,baz=298,slow=37
ARSB Arslanbob 39.54 67 P **P 07 59 13.5 +0.5**
ARSB Arslanbob 39.54 67 P **P 07 59 13.5 +0.5**
ARSB pmax pmax
comp=Z,2.0nm,1.1s
AAK Ala-Archa 40.44 64 P **P 07 59 20.7 +0.2**
AAK Ala-Archa 40.44 64*ce*P **P 07 59 20.9 +0.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 40.44 64 LR LR 08 16 50.5
comp=Z,43nm,20.2s,baz=286,slow=38
BOOM Boomskoye usch 41.52 64 P **P 07 59 30.1 +0.7**
BOOM IAmb IAmb 07 59 31.6
comp=Z,3.8nm,0.7s
BOOM Boomskoye usch 41.52 64 P **P 07 59 30.1 +0.7**
BOOM pmax pmax
comp=Z,4.0nm,0.7s
NRN Naryn 41.75 66 P **P 07 59 31.3 -0.2**
NRN IAmb IAmb 07 59 33.0
comp=Z,4.8nm,0.9s
NRN Naryn 41.75 66 P **P 07 59 31.3 -0.2**
NRN pmax pmax
comp=Z,5.0nm,0.9s
SPITS Spitsbergen Ar 42.11 358 P **P 07 59 34.8 +1.2**
comp=Z,20nm,1.1s,baz=163,slow=10,SNR=2.0
comp=Z,20nm,1.1s
KURBB Kurchatov Arra 42.41 52 P **P 07 59 35.6 -0.7**
comp=Z,3.1nm,0.5s,baz=279,slow=8.7,SNR=40
comp=Z,3.1nm,0.5s
KURK Kurchatov 42.46 52 P **P 07 59 35.1 -1.7**
KURK IAmb IAmb 07 59 36.5
comp=Z,3.4nm,0.6s
KURK Kurchatov 42.46 52*ce*P **P 07 59 35.8 -1.0**
KURK pmax pmax
comp=Z,3.0nm,1.0s

MK31 Makanchi Array 45.28 57 P **P 07 59 58.8 -0.8**
MK31 Makanchi Array 45.28 57*ce*P **P 07 59 58.1 -1.4**
MKAR Makanchi Array 45.28 57 P **P 07 59 58.2 -1.3**
MKAR Makanchi Array 45.28 57*ce*P **P 07 59 58.7 -0.8**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 45.28 57 P **P 07 59 59.0 -0.5**
comp=Z,5.4nm,0.5s,baz=270,slow=7.6,SNR=118
MKAR PcP **PcP 08 01 39.4 +0.3**
comp=Z,0.5nm,0.6s,baz=274,slow=4.8,SNR=1.3
comp=Z,5.4nm,0.5s
ZAA0 Zalesovo Array 46.08 47 P **P 08 00 04.6 -1.1**
ZALV Zalesovo Beam 46.08 47 P **P 08 00 04.5 -1.1**
ZALV Zalesovo Beam 46.08 47 *i* P **P 08 00 04.6 -1.1**
ZALV pmax pmax
comp=Z,8.0nm,0.5s
ZALV Zalesovo Beam 46.08 47 P **P 08 00 04.7 -1.0**
comp=Z,8.5nm,0.5s,baz=266,slow=9.3,SNR=33
comp=Z,8.5nm,0.5s
NRIK Noril'sk 47.98 26*ce*P **P 08 00 20.4 +0.1**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
DGZ Jazzator, Alta 48.20 52 *i* P **P 08 00 21.4 -1.1**
DGZ pmax pmax
comp=Z,2.0nm,0.5s
WMQ Urumqi 49.63 60 *e*P **P 08 00 36.3 +2.8**
SCHQ Schefferville 60.73 318 P **P 08 01 53.8 +0.5**
comp=Z,2.0nm,0.7s,baz=54,slow=8.6,SNR=5.4
comp=Z,2.0nm,0.7s
SONM Songino Array 60.73 50 P **P 08 01 53.3 -0.3**
comp=Z,1.2nm,0.7s,baz=283,slow=8.3,SNR=9.0
comp=Z,1.2nm,0.7s
LBTB Lobatse 61.02 176 LR LR 08 29 53.5
comp=Z,51nm,20.1s,baz=278,slow=38
BOSA Boshof 64.58 177 LR LR 08 32 12.9
comp=Z,64nm,18.0s,baz=298,slow=38
PZH PanZhiHua 66.97 73 P **P 08 02 36.9 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,130nm,5.7s
HHC Hu-ho-hao-te 67.11 55 *e*P **P 08 02 35.8 +0.2**
HHC sP pwP 08 02 46.0 +2.4
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,65nm,6.4s
SUR Sutherland 68.27 181 LR LR 08 37 04.8
comp=Z,74nm,19.4s,baz=360,slow=40
CMAR Chiang Mai Arr 68.92 82 P **P 08 02 47.0 -0.2**
comp=Z,1.0nm,0.3s,baz=301,slow=8.3,SNR=9.4
comp=Z,1.0nm,0.3s
BILL Bilibino 72.62 13 *i* P **P 08 03 08.2 -0.7**
BILL pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 73.49 21 *i* P **P 08 03 13.8 -0.3**
SEY pmax pmax
comp=Z,4.0nm,0.8s
KLR Kul'dur 74.57 40 *i* P **P 08 03 19.2 -1.5**
KLR pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 75.63 341 P **P 08 03 27.1 +0.5**
comp=Z,0.5nm,0.7s,baz=34,slow=5.3,SNR=12
comp=Z,0.5nm,0.7s
ILAR Eielson Array 78.95 355 P **P 08 03 45.5 +0.4**
comp=Z,0.5nm,0.8s,baz=348,slow=3.6,SNR=5.8
comp=Z,0.5nm,0.8s
KSRS Korea Array 79.58 51 P **P 08 03 49.2 +0.1**
comp=Z,1.4nm,0.6s,baz=308,slow=4.9,SNR=5.8
comp=Z,1.4nm,0.6s
ERM Erimo 85.32 40 *i* P **P 08 04 20.3 +1.3**
ERM pmax pmax
comp=Z,30nm,1.1s
ASAR Alice Springs 120.70 98 PKP **PKPdf 08 10 34.2 0.0**
comp=Z,0.3nm,0.4s,baz=301,slow=1.8,SNR=6.5
QSPA South Pole Qui 126.10 180 PKP **PKiKP 08 10 44.5 +0.8**
comp=Z,1.1nm,0.6s,baz=256,slow=1.7,SNR=13

ROM 24 07:52:06.6±0.1**, 43.007N**±0.005**×13.023E**±0.007**,**
h9km, ML1.7/4, 1C, Error ellipse: s-maj=0.6km
s-min=0.4km az=96.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.09**	**269**	⇑P	Pg	07 52 09.3	+0.3
CESI				S	Sg	07 52 11.1	+0.5
CESI				AML	AML		
	comp=E,781μm,0.4s						
CESI				AML	AML		
	comp=N,1130μm,1.5s						
CESI				AML	AML		
	comp=N,1130μm,0.5s						
MC2	**Monte Cornacci**	**0.15**	**127**	P	Pg	07 52 10.4	+0.4
MC2				S	Sg	07 52 13.9	+1.4
NRCA	**Norcia**	**0.19**	**159**	P	Pg	07 52 10.8	+0.3
NRCA				S	Sg	07 52 14.3	+1.2
NRCA				AML	AML		
	comp=E,258μm,1.5s						
NRCA				AML	AML		
	comp=N,290μm,0.1s						
PF6	**Pievefavera**	**0.19**	**41**	P	Pg	07 52 10.9	+0.4
PF6				S	Sg	07 52 14.4	+1.2
T1221	**Campello sul C**	**0.20**	**221**	P	Pg	07 52 11.3	+0.7
T1221				S	Sg	07 52 15.0	+1.6
SNTG	**Esanatoglia**	**0.26**	**346**	P	Pg	07 52 12.1	+0.3
SNTG				S	Sb	07 52 17.2	-0.8
EL6	**Elcito**	**0.33**	**10**	P	Pg	07 52 13.7	+0.6
EL6				S	Sb	07 52 19.4	-0.7
ARVD	**Arcevia**	**0.49**	**353**	P	Pg	07 52 16.6	+0.4
ARVD				S	Sb	07 52 25.3	+0.4

*IDC **24** 08:06:49.1±4.6, 21.00S×177.93W, h452km±51km, mb3.0/7, mbtmp3.9/8, Error ellipse: s-maj=24.9km s-min=19.5km az=111.0*

ISC 24 08:06:48.8±0.8**, 21.0S**±0.1×**178.0W**±0.2**, h450km, n10,**
σ1°93/10, mb3.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.73**	**193**	P	**P**	**08 10 27.4**	**-1.2**
	1.9nm,0.3s,baz=48,slow=14,SNR=5.5						
URZ				S	**S**	**08 13 29.3**	**-0.1**
	4.2nm,0.8s,baz=204,slow=16,SNR=2.2						
ASAR	**Alice Springs**	**44.43**	**257**	P	**P**	**08 14 19.4**	**+0.9**
	0.5nm,0.6s,baz=94,slow=8.1,SNR=13						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.56**	**263**	P	**P**	**08 14 20.0**	**+0.4**
	0.5nm,0.3s,baz=96,slow=7.8,SNR=4.7						
	0.5nm,0.3s						
QSPA	**South Pole Qui**	**69.08**	**180**	P	**P**	**08 17 09.1**	**+0.8**
	2.6nm,1.0s,baz=338,slow=5.4,SNR=6.9						
	2.6nm,1.0s						
NVAR	**Mina Array Bea**	**81.36**	**43**	P	**P**	**08 18 18.4**	**+0.8**
	0.7nm,0.6s,baz=217,slow=8.0,SNR=5.8						
	0.7nm,0.6s						
TXAR	**Lajitas Array**	**87.30**	**57**	P	**P**	**08 18 47.9**	**+0.8**
	0.3nm,0.8s,baz=206,slow=6.0,SNR=3.1						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**88.78**	**13**	P	**P**	**08 18 51.9**	**-1.2**
	0.2nm,0.4s,baz=221,slow=5.4,SNR=5.8						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**89.30**	**43**	P	**P**	**08 18 56.1**	**-0.2**
	0.5nm,0.8s,baz=223,slow=3.0,SNR=5.2						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**119.47**	**320**	PKP	**PKPdf**	**08 24 44.8**	**-1.3**
	0.6nm,0.4s,baz=85,slow=1.7,SNR=2.8						
AKASG	**Malin Array Be**	**143.45**	**331**	PKP	PKPbc	08 25 29.6	+0.3
	1.3nm,0.5s,baz=44,slow=5.4,SNR=6.4						

NNC 24 08:09:29.7±14.0**, 37.19N×69.47E, h0km, mb3.6, mpv3.2,**
3C, Error ellipse: s-maj=135.7km s-min=81.9km
az=170.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.96**	**7**	P	Pn	08 10 58.9	-0.2
	0.8nm,0.3s,baz=186,slow=14,SNR=13						
KK31				⇑S	Sn	08 12 09.2	+1.1
	4.4nm,0.3s,baz=189,slow=25,SNR=6.5						
AB31	**Akbulak array**	**13.90**	**333**	⇑P	P	08 12 52.6	-3.7
	0.2nm,0.3s,baz=157,slow=11,SNR=5.4						
AKTO	**Aktyubinsk**	**15.58**	**332**	⇑P	Pn	08 13 07.6	-2.9
	1.1nm,0.6s						

IDC 24 08:22:21.2±3.6, 53.62N×90.82E, h0km, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=33.1km s-min=25.7km az=32.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.58**	**278**	I		I	08 45 00.0	
	0.1nm,0.9s,baz=90,slow=332,SNR=6.9							
ZALV	**Zalesovo Beam**	**3.58**	**278**	Pn		Pn	08 23 19.6	+1.8
	0.5nm,0.3s,baz=98,slow=15,SNR=6.9							
ZALV				Lg		Lg	08 24 13.7	
	0.5nm,0.3s,baz=91,slow=28,SNR=8.3							
	0.8nm,0.4s							
KURBB	**Kurchatov Arra**	**8.14**	**253**	Pn		Pn	08 24 20.3	-0.2
	baz=67,slow=15,SNR=4.6							
KURBB				Sn		Sn	08 25 51.5	-1.7
	baz=66,slow=24							
KURBB				Lg		Lg	08 26 40.4	
	baz=65,slow=33,SNR=6.9							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**8.75**	**222**	Pn		Pn	08 24 29.5	+0.5
	baz=37,slow=14,SNR=4.2							
MKAR				Lg		Lg	08 26 58.4	
	baz=39,slow=23,SNR=2.3							
	0.3nm,0.7s							
SONM	**Songino Array**	**11.43**	**114**	Lg		Lg	08 28 19.3	
	0.2nm,0.3s,baz=292,slow=32,SNR=5.9							
I34MN	**SONGINO INFRAS**	**11.46**	**114**	I		I	09 29 10.0	
	baz=308,slow=315,SNR=1.8							

MOS ***24*** *08:35:40.5±0.8, 34.51N×141.73E, h10km, mb5.1/53, MS4.1/6, Error ellipse: s-maj=8.7km s-min=4.4km az=121.8*

IDC ***24*** *08:35:40.9±0.5, 34.50N×141.77E, h0km, mb4.6/32, mbtmp4.6/36, ML3.7/4, MS3.8/42, Error ellipse: s-maj=13.1km s-min=11.1km az=99.0*

JMA ***24*** *08:35:41.7±0.3, 35°N±1.1×14.2E±0.1°, h40km±3km, MD4.9/40, MW4.5/40, FAR SE OFF BOSO PEN*

NIED ***24*** *08:35:41.7, 34.50N×142.00E, h40km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr7.17; Mθθ-1.97; Mφφ-5.20; Mrθ2.24; Mθφ2.31; Mφr-0.20; Fault plane solution: M0 7.11000×10^15 NP1: φs140.00000°, δ52.00000°, λ74.00000°. NP2: φs344.00000°, δ41.00000°, λ109.00000°.*

NEIC ***24*** *08:35:42.9±1.6, 34.58N±0.05×141.74E±0.09, h8km±4km, mb5.0/70 Error ellipse: s-maj=10.8km s-min=7.3km az=112.0*

BJI ***24*** *08:35:42.2±0.0, 34.67N×141.73E, h23km, mb4.7/72, mB4.9/43, Ms4.5/66, Ms7 4.3/63*

ISC 24 08:35:41.4±0.6, 34.57N±0.03×141.77E±0.04, h4km±3km, h4km: pP-P, n642, σ1.42/658, mb4.9/123, MS4.0/60, 26C-10D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BSO1	**Boso 1**	**0.66**	**277**	P		**Pn**	**08 35 57.3**	**+0.3**
BSO2	**Boso 2**	**0.85**	**282**	*e*S		**Sn**	**08 36 15.3**	**+2.6**
BSO3	**Boso 3**	**1.06**	**283**	P		**Pn**	**08 36 04.0**	**+1.2**
BSO4	**Boso 4**	**1.25**	**290**	*i* P		**Pn**	**08 36 07.1**	**+1.5**
BSO4				*e*S		**Sn**	**08 36 25.0**	**+2.2**
KTR	**Katsuura**	**1.32**	**296**	P		**Pg**	**08 36 07.5**	**+0.7**
KTR				*e*S		**Sn**	**08 36 26.4**	**+1.6**
JKUC	**kamogawauchiur**	**1.42**	**295**	P		**Pg**	**08 36 08.8**	**+0.2**
JKUC				*e*S		**Sn**	**08 36 27.6**	**+0.6**
JKUC	**kamogawauchiur**	**1.42**	**295**	A		A	08 36 08.8	
	comp=E,18nm,3.7s,comp=N,15nm,7.2s							
JSMT	**Sammumatsuo**	**1.52**	**315**	P		**Pg**	**08 36 10.9**	**+0.3**
JSMT				S		**Sg**	**08 36 32.1**	**+1.8**
JSMT	**Sammumatsuo**	**1.52**	**315**	A		A	08 36 10.9	
	comp=E,51nm,4.9s,comp=N,57nm,7.4s							
JCN	**Nagara**	**1.54**	**304**	A		A	08 36 10.3	
	comp=E,47nm,5.4s,comp=N,41nm,7.5s							
TATJ	**Tateyama 2**	**1.61**	**287**	A		A	08 36 11.5	
	comp=E,29nm,5.5s,comp=N,35nm,3.8s							
JYO	**Yokosk**	**1.85**	**291**	A		A	08 36 14.8	
	comp=E,24nm,6.9s,comp=N,20nm,5.6s							
JMYK	**Miyake Tsubota**	**1.91**	**255**	P		**Pn**	**08 36 14.8**	**+0.1**
JMYK				S		**Sn**	**08 36 38.1**	**-1.0**
JMYK	**Miyake Tsubota**	**1.91**	**255**	A		A	08 36 14.8	
	comp=E,31nm,4.4s,comp=N,19nm,9.6s							
JMKN	**Mikurajimanish**	**1.93**	**250**	P		**Pn**	**08 36 15.1**	**+0.1**
JMKN				S		**Sn**	**08 36 38.5**	**-1.1**
JMKN	**Mikurajimanish**	**1.93**	**250**	A		A	08 36 15.1	
	comp=E,20nm,7.5s,comp=N,14nm,5.3s							
JIM2	**Oshima 3**	**1.93**	**275**	P		**Pn**	**08 36 15.2**	**+0.2**
JIM2				*e*S		**Sn**	**08 36 39.2**	**-0.7**
JIM2	**Oshima 3**	**1.93**	**275**	A		A	08 36 15.2	
	comp=E,14nm,3.5s,comp=N,16nm,2.6s							
TOK	**Tokyo**	**1.99**	**305**	A		A	08 36 16.8	
	comp=E,41nm,5.7s,comp=N,32nm,4.0s							
JNIO	**Niijimaoohara**	**2.07**	**265**	A		A	08 36 17.8	
	comp=E,23nm,2.3s,comp=N,26nm,3.0s							
JHJ2	**Mitsune**	**2.18**	**229**	Pn		**Pn**	**08 36 18.9**	**+0.4**
JHJ2	**Mitsune**	**2.18**	**229**	*e*P		**Pn**	**08 36 18.5**	**0.0**
JHJ2				*e*S		**Sn**	**08 36 45.0**	**-0.9**
JHJ2	**Mitsune**	**2.18**	**229**	A		A	08 36 18.5	
	comp=E,15nm,4.0s,comp=N,11nm,6.0s							
JHJ	**Hachijo jima 2**	**2.20**	**229**	Pn		**Pn**	**08 36 18.7**	**0.0**
	comp=N,227nm,0.3s,baz=257,slow=21,SNR=92							
JHJ				Sn		**Sn**	**08 36 45.4**	**-0.9**
	comp=N,521nm,0.3s,baz=65,slow=23,SNR=17							
	comp=N,436nm,0.3s							
JHCJ	**Hachijojimakas**	**2.22**	**228**	A		A	08 36 18.7	
	comp=E,9.0nm,9.8s,comp=N,8.0nm,6.2s							
JHTM	**Izuhatsuma**	**2.30**	**280**	A		A	08 36 21.3	
	comp=E,12nm,0.6s,comp=N,10.0nm,1.1s							
JOD2	**Odawara 2**	**2.31**	**288**	*i* P		**Pn**	**08 36 20.5**	**+0.3**
JOD2				*e*S		**Sn**	**08 36 47.6**	**-1.5**
JIZS	**Izushimoda**	**2.39**	**274**	P		**Pn**	**08 36 21.9**	**+0.6**
JIZS				S		**Sn**	**08 36 52.0**	**+1.0**
JFNN	**Fujinakano**	**2.61**	**285**	*e*P		**Pn**	**08 36 25.8**	**+1.4**
JFNN				*e*S		**Sn**	**08 36 57.1**	**+0.7**
JAG	**Ashikaga**	**2.64**	**315**	*i* P		**Pn**	**08 36 25.9**	**+1.1**
JAG				*e*S		**Sn**	**08 36 57.1**	**-0.3**
JAOM	**Aogashimamukai**	**2.69**	**219**	*e*P		**Pn**	**08 36 25.7**	**+0.2**
JAOM				*e*S		**Sn**	**08 36 59.0**	**+0.5**
JRY	**Ryogami san**	**2.75**	**302**	P		**Pn**	**08 36 27.4**	**+1.0**
JRY				S		**Sb**	**08 37 03.9**	**-1.4**
JSB	**Shiboa**	**2.82**	**328**	A		A	08 36 28.2	
	comp=E,10.0nm,4.5s,comp=N,10.0nm,5.8s							
JFK	**Kawauchi**	**2.88**	**346**	*i* P		**Pn**	**08 36 27.2**	**-1.0**
JFK				*e*S		**Sn**	**08 37 00.2**	**-3.1**
JSG	**Sagara**	**2.96**	**273**			**Pn**	**08 36 30.1**	**+1.0**
JOTO	**OTAMA OYAMA**	**3.20**	**339**	A		A	08 36 33.1	
	comp=E,15nm,1.1s,comp=N,10.0nm,1.2s							
JMM	**Marumori**	**3.38**	**347**			**Pn**	**08 36 34.1**	**-0.8**
MJAR	**Matsushiro Arr**	**3.50**	**305**	Pn		**Pn**	**08 36 37.9**	**+1.2**
	comp=N,3.7nm,0.3s,baz=110,slow=8.5,SNR=61							
MJAR				Sn		**Sn**	**08 37 20.4**	**+1.8**
	comp=N,3.5nm,0.3s,baz=172,slow=22,SNR=4.1							
	comp=N,23nm,0.4s							
MAJO	**Matsushiro**	**3.51**	**305**			**Pn**	**08 36 37.9**	**+1.2**
MAJO	**Matsushiro**	**3.51**	**305**	*i* P		**Pn**	**08 36 38.1**	**+1.4**
MJB9	**Matsu-Tunnel**	**3.51**	**305**	Pn		**Pn**	**08 36 38.9**	**+2.1**
JGF	**Kuroka**	**3.76**	**287**			**Pn**	**08 36 42.2**	**+2.0**
INU	**Inuyama**	**3.98**	**283**	Pn		**Pn**	**08 36 44.8**	**+1.7**
JSD	**Sado**	**4.47**	**322**			**Pn**	**08 36 50.1**	**+0.1**
JTM	**Tenmabayashi**	**6.23**	**355**	Pn		**Pn**	**08 37 13.3**	**-0.8**
JMN	**Monobe**	**6.59**	**265**	Pn		**Pn**	**08 37 20.6**	**+1.4**
JCJ	**Chichijima**	**7.46**	**177**	Pn		**Pn**	**08 37 29.4**	**-1.7**
JCJ	**Chichijima**	**7.46**	**177**	Pn		Pn	08 37 25.6	-5.5
	comp=N,31nm,0.3s,baz=73,slow=16,SNR=35							
JCJ				Sn		Sn	08 38 42.5	-14
	comp=N,51nm,0.3s,baz=291,slow=22,SNR=6.9							
ERM	**Erimo**	**7.51**	**8**	Pn		**Pn**	**08 37 28.7**	**-2.9**
ERM	**Erimo**	**7.51**	**8**	*ce*P		**Pn**	**08 37 28.8**	**-2.9**
ERM					pmax	pmax		
	comp=E,41nm,0.7s							
JNU	**Nakatsue**	**9.17**	**264**	Pn		**Pn**	**08 37 56.2**	**+1.7**
JNU	**Nakatsue**	**9.17**	**264**	Pn		**Pn**	**08 37 57.3**	**+2.8**
	comp=E,0.9nm,0.3s,baz=81,slow=9.2,SNR=15							
NMR	**Nemuro--Hokkai**	**9.31**	**18**	*e*P		**Pn**	**08 37 52.5**	**-3.8**
ASAJ	**Asahikawa**	**9.55**	**4**	P		**Pn**	**08 37 57.1**	**-2.6**
ASAJ	**Asahikawa**	**9.55**	**4**	Pn		**Pn**	**08 37 57.3**	**-2.4**
	comp=E,7.3nm,0.3s,baz=211,slow=9.6,SNR=41							
JKA	**Kamikawa-asahi**	**9.55**	**4**	Pn		**Pn**	**08 37 57.1**	**-2.6**
RUSJ	**Misakicho**	**9.89**	**15**	*e*P		**Pn**	**08 38 01.2**	**-3.1**
YUK	**Yuzh-Kuril'sk**	**9.97**	**17**	*e*P		**Pn**	**08 38 03.5**	**-1.8**
YUK					pmax	pmax		
	comp=E,54nm,0.2s							
YUK					pmax	pmax		
	comp=E,21nm,0.1s							
SHO	**Shikotan**	**10.08**	**21**	*e*P		**Pn**	**08 38 03.6**	**-3.3**
SHO					pmax	pmax		
	comp=Z,10.0nm,0.3s							
KSRS	**Korea Array**	**11.57**	**288**	Pn		**Pn**	**08 38 30.9**	**+3.6**
	comp=Z,0.1nm,0.3s,baz=101,slow=14,SNR=14							
KSRS					LR	LR	08 42 59.9	
	comp=Z,144nm,18.4s,baz=90,slow=38							
KUR	**Kuril'sk**	**11.63**	**22**	P		**Pn**	**08 38 31.7**	**+3.6**
PSTR	**Posyet**	**11.76**	**317**	*i* P		**Pn**	**08 38 31.4**	**+1.4**
TJN	**Taejon**	**11.88**	**283**	*i* P		**Pn**	**08 38 33.0**	**+1.4**
USA0B	**Ussuriysk Arra**	**12.22**	**325**	*i* P		**Pn**	**08 38 36.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**12.22**	**325**	Pn		**Pn**	**08 38 36.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=131,slow=12,SNR=15							
USRK					LR	LR	08 43 38.9	
	comp=Z,720nm,18.2s,baz=134,slow=39							
	comp=Z,16nm,0.8s							
YSS	**Yuzh-Sakhalins**	**12.39**	**3**	Pn		**Pn**	**08 38 36.7**	**-1.9**
YSS	**Yuzh-Sakhalins**	**12.39**	**3**	*e*P		**Pn**	**08 38 36.2**	**-2.3**
YSS					pmax	pmax		
	comp=Z,130nm,0.8s							
YSS					pmax	pmax		
	comp=N,90nm,0.9s							
YSS					MLR	MLR		
	comp=Z,1μm,13.0s							
YSS					MLR	MLR		
	comp=N,1μm,16.0s							
YSS					MLR	MLR		
	comp=E,700nm,16.0s							
MDJ	**Mudanjiang**	**13.72**	**321**	P		**Pn**	**08 38 57.8**	**+1.1**
MDJ				sP		P	08 39 04.3	-1.3
MDJ				PP		**PnPn**	**08 39 05.8**	**+1.2**
MDJ				S		**Sn**	**08 41 25.4**	**-4.2**
MDJ				sS		S	08 41 35.6	-17
MDJ				PcP		**PcP**	**08 44 26.5**	**+5.3**
MDJ					pmax	pmax		
	comp=E,16nm,1.0s							
MDJ					pmax	pmax		
	comp=E,140nm,3.9s							
MDJ					LR	LR		
	comp=E,1μm,15.5s							
MDJ					LR	LR		
	comp=E,800nm,18.2s							
MDJ					LR	LR		
	comp=E,1μm,15.8s							
BNX	**BinXian**	**15.62**	**320**	⇓P		**Pn**	**08 39 20.0**	**-2.4**
BNX				S		**Sn**	**08 42 09.8**	**-6.1**
BNX					pmax	pmax		
	comp=E,9.0nm,1.1s							
BNX					pmax	pmax		
	comp=E,260nm,5.0s							
BNX					LR	LR		
	comp=E,920nm,12.2s							
BNX					LR	LR		
	comp=E,900nm,12.0s							
BNX					LR	LR		
	comp=E,530nm,11.9s							
CN2	**Changchun**	**15.63**	**311**	*e*P		**Pn**	**08 39 20.5**	**-2.0**
CN2				*e*PP		**pwP**	**08 39 33.3**	**-0.6**
CN2				*e*S		**Sn**	**08 42 13.6**	**-2.5**
CN2					pmax	pmax		
	comp=E,10.0nm,1.0s							
CN2					LR	LR		
	comp=E,690nm,12.0s							
CN2					LR	LR		
	comp=E,500nm,12.0s							
CN2					LR	LR		
	comp=E,540nm,12.0s							
SNY	**Shenyang**	**16.01**	**302**	⇓P		**Pn**	**08 39 25.9**	**-1.5**
SNY					pmax	pmax		
	comp=E,17nm,0.8s							
SNY					pmax	pmax		
	comp=E,200nm,4.3s							
SNY					LR	LR		
	comp=E,800nm,11.6s							
SNY					LR	LR		
	comp=E,500nm,13.2s							
SNY					LR	LR		
	comp=E,780nm,14.9s							
TYV	**Tymovskoe**	**16.30**	**2**	*e*P		**Pn**	**08 39 29.8**	**-1.2**
TYV				*e*S		**Sn**	**08 42 28.5**	**-3.6**
TYV					pmax	pmax		
	comp=Z,100nm,2.9s							
TYV					pmax	pmax		
	comp=Z,23nm,0.8s							
TYV					smax	smax		
	comp=N,200nm,5.0s							
TYV					smax	smax		
	comp=E,100nm,5.0s							
KLR	**Kul'dur**	**16.41**	**336**	*ce*P		**Pn**	**08 39 32.1**	**-0.4**
KLR					pmax	pmax		
	comp=Z,18nm,2.5s							
KLR	**Kul'dur**	**16.41**	**336**	Pn		**Pn**	**08 39 31.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=136,slow=12,SNR=8.3							
KLR					LR	LR	08 45 43.8	
	comp=Z,230nm,18.4s,baz=150,slow=37							
	comp=Z,3.4nm,0.6s							
GRNR	**Gornyy**	**16.65**	**348**	⇑*i* P		**P**	**08 39 40.4**	**+2.4**
GRNR					pmax	pmax		
	comp=E,10.0nm,0.9s							
GRNR					pmax	pmax		
	comp=Z,7.0nm,0.7s							
GRNR					MLR	MLR		
	comp=N,390nm,16.0s							
GRNR					MLR	MLR		
	comp=E,380nm,16.0s							
GRNR					MLR	MLR		
	comp=Z,610nm,18.0s							
HEH	**HeiHe**	**18.86**	**331**	*e*P		**P**	**08 39 58.9**	**-3.5**
HEH				sP		**pwP**	**08 40 09.3**	**-1.2**
HEH					pmax	pmax		
	comp=Z,6.0nm,0.9s							
HEH					LR	LR		
	comp=Z,500nm,13.7s							
HEH					LR	LR		
	comp=Z,940nm,16.9s							
HEH					LR	LR		
	comp=Z,1μm,14.5s							
NJ2	**Nanjing**	**19.31**	**269**	*e*P		**Pn**	**08 40 08.9**	**+0.4**
NJ2				pP		**pwP**	**08 40 15.4**	**+0.4**
NJ2				S		**S**	**08 43 46.8**	**+0.3**
NJ2					pmax	pmax		
	comp=Z,5.0nm,0.5s							
NJ2					pmax	pmax		
	comp=Z,78nm,5.7s							
NJ2					LR	LR		
	comp=Z,490nm,13.3s							
NJ2					LR	LR		
	comp=Z,860nm,15.2s							
NJ2					LR	LR		
	comp=Z,1μm,14.2s							
BJI	**Beijing**	**21.04**	**293**	P		**P**	**08 40 25.9**	**-0.4**
BJI				pP		**pwP**	**08 40 32.5**	**-1.3**
BJI				S		**S**	**08 44 13.6**	**-7.4**
BJI					pmax	pmax		
	comp=Z,79nm,5.8s							
BJI					LR	LR		
	comp=Z,260nm,12.2s							
BJI					LR	LR		
	comp=Z,120nm,10.8s							
BJI					LR	LR		
	comp=Z,170nm,12.2s							
YULB	**Yu-li**	**21.05**	**243**	P		**P**	**08 40 26.5**	**+0.1**
TPUB	**Ta-pu**	**21.60**	**244**	P		**P**	**08 40 33.2**	**+0.9**
PETK	**Petropavlovsk-**	**21.71**	**27**	P		**P**	**08 40 34.4**	**+1.0**
PETK	**Petropavlovsk-**	**21.71**	**27**	P		**P**	**08 40 34.4**	**+1.0**
PETK	**Petropavlovsk-**	**21.71**	**27**	P		**P**	**08 40 34.7**	**+1.4**
	comp=Z,17nm,1.2s,baz=190,slow=5.7,SNR=5.6							
	comp=Z,17nm,1.2s							
ZEA	**Zeya**	**21.73**	**336**	*e*P		**P**	**08 40 31.8**	**-1.7**
ZEA				*e*			08 40 34.3	
ZEA					pmax	pmax		
	comp=Z,200nm,2.0s							
ZEA					pmax	pmax		
	comp=N,90nm,0.8s							
ZEA					pmax	pmax		
	comp=E,40nm,0.9s							
ZEA					pmax	pmax		
	comp=Z,140nm,0.9s							
ZEA					MLR	MLR		
	comp=N,400nm,15.0s							
ZEA					MLR	MLR		
	comp=Z,400nm,14.0s							
XLT	**XiLinHaoTe**	**21.90**	**303**	*e*P		**P**	**08 40 31.3**	**-4.2**
XLT					PP	**PnPn**	**08 40 57.1**	**+0.4**
XLT					pmax	pmax		
	comp=E,8.0nm,0.8s							
XLT					pmax	pmax		
	comp=Z,170nm,5.3s							
XLT					LR	LR		
	comp=Z,76nm,13.3s							
XLT					LR	LR		
	comp=Z,570nm,13.0s							
XLT					LR	LR		
	comp=Z,510nm,18.4s							
HNS	**HongShan**	**22.05**	**285**	⇑P		**P**	**08 40 34.9**	**-2.2**
HNS					pmax	pmax		
	comp=Z,12nm,0.7s							
HNS					LR	LR		
	comp=Z,540nm,13.5s							
HNS					LR	LR		
	comp=Z,720nm,13.5s							
HNS					LR	LR		
	comp=Z,770nm,13.9s							
WHN	**Wuhan**	**23.43**	**268**	⇓P		**P**	**08 40 51.8**	**+0.2**
WHN				pP		**pwP**	**08 40 57.0**	**-2.1**
WHN					pmax	pmax		
	comp=Z,50nm,0.7s							
WHN					LR	LR		
	comp=Z,800nm,10.5s							
WHN					LR	LR		
	comp=Z,2μm,11.5s							
WHN					LR	LR		
	comp=Z,2μm,15.1s							
LYN	**LuoYang**	**24.09**	**278**	⇑P		**P**	**08 40 57.4**	**-0.7**
LYN				S		**S**	**08 45 14.0**	**-2.2**
LYN				sS		pS	08 45 25.4	+10
LYN					pmax	pmax		
	comp=Z,19nm,0.6s							
LYN					pmax	pmax		
	comp=Z,170nm,6.2s							
LYN					LR	LR		
	comp=Z,790nm,15.7s							
LYN					LR	LR		
	comp=Z,880nm,18.6s							
LYN					LR	LR		
	comp=Z,1μm,15.5s							
HHC	**Hu-ho-hao-te**	**24.63**	**294**	⇑P		**P**	**08 41 03.3**	**+0.3**
HHC				pP		pwP	08 41 11.5	+1.0
HHC				*e*S		**S**	**08 45 20.3**	**-4.6**
HHC				sS		sS	08 45 30.4	+6.4
HHC					pmax	pmax		
	comp=Z,11nm,0.9s							
HHC					pmax	pmax		
	comp=Z,120nm,3.9s							
HHC					LR	LR		
	comp=Z,260nm,11.3s							
HHC					LR	LR		
	comp=Z,320nm,13.2s							
HHC					LR	LR		
	comp=Z,460nm,12.0s							
MA2	**Magadan**	**25.71**	**11**	P		**P**	**08 41 12.5**	**+0.1**
MA2	**Magadan**	**25.71**	**11**	*ce*P		**P**	**08 41 13.8**	**+1.3**
MA2					pmax	pmax		
	comp=Z,54nm,1.0s							
MA2	**Magadan**	**25.71**	**11**	P		**P**	**08 41 13.2**	**+0.8**
	comp=Z,34nm,0.8s,baz=196,slow=10,SNR=26							
MA2					LR	LR	08 52 43.8	
	comp=Z,77nm,18.8s,baz=208,slow=40							
	comp=Z,34nm,0.8s							
BTO	**Baotou**	**25.78**	**293**	*e*P		**P**	**08 41 15.3**	**+1.8**
BTO				pP		**pwP**	**08 41 24.4**	**+3.4**
BTO				PP		**PnPn**	**08 41 55.8**	**+5.9**
BTO				S		**S**	**08 45 45.1**	**+1.8**
BTO				sS		sS	08 45 56.3	+14
BTO				SS		**SnSn**	**08 46 46.4**	**+8.5**
BTO					pmax	pmax		
	comp=Z,32nm,0.8s							
BTO					pmax	pmax		
	comp=Z,440nm,4.5s							
BTO					LR	LR		
	comp=Z,1μm,16.2s							
BTO					LR	LR		
	comp=Z,930nm,16.8s							
BTO					LR	LR		
	comp=Z,880nm,15.8s							
H11N2	**WAKE ISLAND Hy**	**26.71**	**117**	T		T	09 09 24.9	
	baz=309,slow=75,SNR=21							
H11N1	**WAKE ISLAND Hy**	**26.71**	**117**	T		T	09 09 19.3	
	baz=309,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**26.72**	**117**	T		T	09 09 26.8	
	baz=309,slow=75,SNR=20							
XAN	**Xi'an**	**27.07**	**278**	⇑P		**P**	**08 41 24.6**	**-0.6**
XAN					pmax	pmax		
	comp=Z,21nm,1.3s							
XAN					LR	LR		
	comp=Z,730nm,15.9s							
XAN					LR	LR		
	comp=Z,940nm,14.0s							
XAN					LR	LR		
	comp=Z,1μm,14.3s							
H11S1	**WAKE ISLAND Hy**	**27.34**	**119**	T		T	09 10 12.4	
	baz=312							
H11S3	**WAKE ISLAND Hy**	**27.34**	**119**	T		T	09 10 15.4	
	baz=312							
H11S2	**WAKE ISLAND Hy**	**27.36**	**119**	T		T	09 10 24.1	
	baz=312							
YAK	**Yakutsk**	**28.53**	**348**	*e*P		**P**	**08 41 38.2**	**+0.4**
YAK				*e*			08 42 28.7	
YAK				*e*S		**S**	**08 46 25.2**	**-0.8**
YAK				*e*SS		**SnSn**	**08 47 47.7**	**+3.2**
YAK					pmax	pmax		
	comp=Z,37nm,1.5s							
YAK					pmax	pmax		
	comp=N,16nm,1.8s							
YAK					pmax	pmax		
	comp=E,7.0nm,1.5s							
YAK					pmax	pmax		
	comp=Z,474nm,10.1s							
YAK					pmax	pmax		
	comp=N,573nm,8.3s							
YAK					pmax	pmax		
	comp=E,255nm,6.9s							
YAK					smax	smax		
	comp=E,242nm,4.8s							
YAK					smax	smax		
	comp=N,223nm,6.9s							
YAK	**Yakutsk**	**28.53**	**348**	LR		LR	08 52 40.3	
	comp=N,52nm,19.2s,baz=177,slow=36							
GULI	**GuiLin**	**28.65**	**260**	⇑P		**P**	**08 41 36.9**	**-2.3**
GULI					pmax	pmax		
	comp=N,10.0nm,0.8s							
GULI					LR	LR		
	comp=N,170nm,15.2s							
GULI					LR	LR		
	comp=N,480nm,13.0s							
GULI					LR	LR		
	comp=N,740nm,13.0s							
ULN	**Ulaanbaatar**	**29.03**	**308**	P		**P**	**08 41 43.0**	**+0.3**
ULN					IAmb	IAmb	08 41 45.3	
	comp=Z,24nm,1.1s							
ULN	**Ulaanbaatar**	**29.03**	**308**	P		**P**	**08 41 43.0**	**+0.3**
ULN					pmax	pmax		
	comp=Z,24nm,1.1s							
ULN	**Ulaanbaatar**	**29.03**	**308**	P		**P**	**08 41 44.0**	**+1.4**
SEY	**Seymchan**	**29.15**	**10**	*ce*P		**P**	**08 41 43.9**	**+0.6**
SEY					pmax	pmax		
	comp=Z,23nm,1.7s							
SEY	**Seymchan**	**29.15**	**10**	P		**P**	**08 41 44.6**	**+1.3**
	comp=Z,3.8nm,0.8s,baz=179,slow=5.8,SNR=8.7							
SEY					LR	LR	08 54 47.2	
	comp=Z,94nm,19.4s,baz=166,slow=39							
	comp=Z,3.8nm,0.8s							
SHEM	**Shemya Is, Ala**	**29.26**	**42**	LR		LR	08 50 25.7	
	comp=Z,165nm,21.6s,baz=192,slow=30							
SONM	**Songino Array**	**29.45**	**308**	P		**P**	**08 41 47.4**	**+1.0**
SONM					IAmb	IAmb	08 41 49.0

LZH LR LR
comp=Z,460nm,13.1s
LZH LR LR
comp=Z,880nm,13.1s
LZH LR LR
comp=Z,1μm,15.5s
CD2 Chengdu 32.05 274 P **P** **08 42 07.6 -1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 LR LR
comp=Z,480nm,14.1s
CD2 LR LR
comp=Z,480nm,14.5s
CD2 LR LR
comp=Z,690nm,16.1s
ZAK Zakamensk 32.06 311 *e*P **P** **08 42 10.0 +0.7**
ZAK pmax pmax
comp=Z,17nm,1.1s
QIZ Qiongzhong 32.26 250 P **P** **08 42 13.0 +1.8**
QIZ S **S** **08 47 26.3 +1.0**
QIZ LR LR
comp=Z,340nm,15.1s
QIZ LR LR
comp=Z,350nm,12.2s
QIZ LR LR
comp=Z,250nm,13.5s
GTA Gaotai 33.63 291 P **P** **08 42 23.3 +0.1**
GTA sP pwP 08 42 34.8 +4.1
GTA pmax pmax
comp=Z,14nm,0.9s
GTA LR LR
comp=Z,210nm,8.4s
GTA LR LR
comp=Z,220nm,12.7s
GTA LR LR
comp=Z,290nm,14.7s
MOY Mondy 33.78 313 *e*P **P** **08 42 25.0 +0.6**
MOY pmax pmax
comp=Z,33nm,3.2s
PZH PanZhiHua 35.22 268 P **P** **08 42 35.4 -1.7**
PZH S **S** **08 48 08.9 -2.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,150nm,5.9s
PZH LR LR
comp=Z,380nm,14.1s
PZH LR LR
comp=Z,270nm,14.5s
PZH LR LR
comp=Z,320nm,14.3s
SLVN Son La 35.74 258 P **P** **08 42 41.0 -0.5**
BILL Bilibino 36.31 15 P **P** **08 42 45.8 0.0**
BILL IAmb IAmb 08 42 47.8
comp=Z,23nm,1.4s
BILL Bilibino 36.31 15[1] *e*P **P** **08 42 46.8 +1.0**
BILL pmax pmax
comp=Z,20nm,1.7s
TIXI Tiksi 37.76 353 P **P** **08 42 57.6 -0.4**
TIXI Tiksi 37.76 353 *ce*P **P** **08 42 58.4 +0.3**
TIXI pmax pmax
comp=Z,23nm,2.5s
TIXI Tiksi 37.76 353 LR LR 08 59 49.4
comp=Z,186nm,18.4s,baz=198,slow=38
GOMU GeErMu 38.02 286 P **P** **08 43 00.8 -0.4**
GOMU pP pP 08 43 04.0 +3.4
GOMU sP pwP 08 43 08.6 -0.1
GOMU pmax pmax
comp=Z,9.0nm,1.2s
GOMU LR LR
comp=Z,170nm,14.9s
GOMU LR LR
comp=Z,250nm,14.2s
GOMU LR LR
comp=Z,450nm,14.6s
TNCH TengChong 38.47 268 P **P** **08 43 05.5 +0.7**
TNCH pP pwP 08 43 14.4 +2.1
TNCH S **S** **08 48 58.3 -2.7**
TNCH pmax pmax
comp=Z,22nm,0.4s
TNCH pmax pmax
comp=Z,120nm,3.9s
TNCH LR LR
comp=Z,370nm,10.3s
TNCH LR LR
comp=Z,280nm,11.2s
TNCH LR LR
comp=Z,460nm,15.2s
CRAI Chiangrai 39.15 260 P **P** **08 43 10.0 -0.4**
SPIA Saint Paul Isl 39.24 40 P **P** **08 43 11.3 +0.7**
baz=256
SANI Sanana 39.33 205 P **P** **08 43 08.8 -3.0**
comp=Z,23nm,0.8s
CHTO Chiang Mai 41.03 259 P **P** **08 43 24.5 -1.5**
CHTO Chiang Mai 41.03 259 P **P** **08 43 24.5 -1.5**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 41.22 258 P **P** **08 43 27.5 0.0**
CMAR Chiang Mai Arr 41.22 258 P **P** **08 43 26.9 -0.7**
comp=Z,3.1nm,0.7s,baz=48,slow=7.9,SNR=16
CMAR LR LR 09 01 38.4
comp=Z,68nm,18.6s,baz=55,slow=38
comp=Z,3.1nm,0.7s
DGZ Jazzator, Alta 42.10 308 *i* P **P** **08 43 34.7 +0.1**
DGZ pmax pmax
comp=Z,53nm,0.8s
WMQ Urumqi 42.25 299 *e*P **P** **08 43 37.9 +2.1**
WMQ S **S** **08 50 01.8 +4.9**
WMQ pmax pmax
comp=Z,32nm,1.9s
WMQ pmax pmax
comp=Z,220nm,3.8s
WMQ LR LR
comp=Z,540nm,10.7s
TNA Tin City 42.87 28 P **P** **08 43 41.6 +1.2**
baz=249
F14K Arctic Creek 43.46 29 P **P** **08 43 46.8 +1.5**
baz=251
ANM Nome 43.56 30 P **P** **08 43 46.7 +0.6**
ANM IAmb IAmb 08 43 49.3
comp=Z,21nm,1.0s
ANM Nome 43.56 30 P **P** **08 43 48.0 +1.9**
baz=253
ANM Nome 43.56 30 P **P** **08 43 46.7 +0.6**
ANM pmax pmax
comp=Z,21nm,1.0s
SHL Shillong 43.72 272 P **P** **08 43 45.9 -2.2**
SHL Shillong 43.72 272 P **P** **08 43 45.9 -2.2**
SHL pmax pmax
comp=Z,6.0nm,0.5s
ZAA0 Zalesovo Array 43.81 314 P **P** **08 43 48.1 -0.1**
ZALV Zalesovo Beam 43.81 314 P **P** **08 43 47.9 -0.3**
ZALV Zalesovo Beam 43.81 314 P **P** **08 43 48.6 +0.4**
comp=Z,12nm,0.7s,baz=92,slow=6.7,SNR=53
ZALV PcP **PcP** **08 45 34.5 -0.2**
comp=Z,6.7nm,0.8s,baz=94,slow=3.5,SNR=5.5
comp=Z,12nm,0.7s
ZSN Zaisan 43.89 305 *e*P **P** **08 43 50.0 +1.0**
comp=Z,9.7nm,0.6s,baz=305
ZSN Zaisan 43.89 305 *e*P **P** **08 43 50.0 +1.0**
ZSN pmax pmax
comp=Z,10.0nm,0.6s
PMG Port Moresby 44.03 172 *ce*P **P** **08 43 49.1 -1.2**
PMG pmax pmax
comp=Z,8.0nm,1.0s
PMG Port Moresby 44.03 172 P **P** **08 43 49.4 -0.9**
comp=Z,4.8nm,0.6s,baz=323,slow=11,SNR=4.8
comp=Z,4.8nm,0.6s
N14K Kuskokwak Cree 44.19 37 P **P** **08 43 52.9 +1.8**
baz=261
M14K Bethel 44.19 36 P **P** **08 43 52.4 +1.3**
baz=260
F15K North Star Dit 44.20 29 P **P** **08 43 52.7 +1.5**
baz=252
G15K Niukluk 44.23 30 P **P** **08 43 53.5 +2.1**
baz=254
L15K Ungalak Mounta 44.58 35 P **P** **08 43 55.4 +1.2**
baz=260
BKSI Bulukumba 44.63 212 P **P** **08 43 52.3 -2.8**
comp=Z,26nm,1.7s
K15K Wolf Creek Mou 44.67 34 P **P** **08 43 56.2 +1.2**
baz=259
M15K Kasigluk River 44.80 36 P **P** **08 43 57.1 +1.1**
baz=261
C16K Lisburne Hills 44.80 25 P **P** **08 43 57.2 +1.3**
baz=249
H16K Elim 44.88 30 P **P** **08 43 57.9 +1.2**
baz=256
S14K Fog Glacier 44.92 42 P **P** **08 43 57.9 +0.7**
baz=267
N15K Kwethluk River 45.01 37 P **P** **08 43 58.8 +1.0**
baz=262
O15K Ungalikthiuk R 45.02 38 P **P** **08 43 59.2 +1.3**
baz=264
J16K Anvik River 45.29 32 P **P** **08 44 01.5 +1.6**
baz=259
I17K Unalakleet 45.37 32 P **P** **08 44 01.5 +1.0**
I17K IAmb IAmb 08 44 03.2
comp=Z,15nm,1.1s
I17K Unalakleet 45.37 32 P **P** **08 44 02.3 +1.8**
baz=258
D17K Noatak River 45.41 26 P **P** **08 44 02.7 +1.9**
baz=252,SNR=11
L16K Owhat River 45.53 35 P **P** **08 44 03.8 +1.9**
baz=261
C17K DeLong Mountai 45.62 25 P **P** **08 44 04.6 +2.1**
baz=251,SNR=5.1
NRIK Noril'sk 45.62 336 P **P** **08 44 03.0 +0.5**
NRIK IAmb IAmb 08 44 04.7
comp=Z,19nm,0.9s
NRIK Noril'sk 45.62 336 *i* P **P** **08 44 03.1 +0.6**
NRIK pmax pmax
comp=Z,21nm,1.0s
NRIK Noril'sk 45.62 336 P **P** **08 44 02.8 +0.3**
comp=Z,13nm,0.8s,baz=100,slow=8.9,SNR=4.7
comp=Z,13nm,0.8s
E17K Hotham Inlet 45.69 27 P **P** **08 44 05.2 +2.2**
baz=254,SNR=7.5
MK31 Makanchi Array 45.70 304 P **P** **08 44 03.1 -0.4**
MK31 IAmb IAmb 08 44 19.6
comp=Z,7.9nm,0.7s
MK31 Makanchi Array 45.70 304 *ce*P **P** **08 44 04.0 +0.5**
MKAR Makanchi Array 45.70 304 P **P** **08 44 03.6 +0.1**
MKAR Makanchi Array 45.70 304 P **P** **08 44 03.9 +0.4**
comp=Z,5.4nm,0.7s,baz=91,slow=9.9,SNR=75
MKAR LR LR 09 03 16.6
comp=Z,87nm,19.1s,baz=67,slow=36
comp=Z,5.4nm,0.7s
N16K Nishlik Lake 45.70 37 P **P** **08 44 04.6 +1.3**
baz=263
F17K Baldwin Pennin 45.74 28 P **P** **08 44 05.4 +2.1**
baz=255,SNR=6.7
G17K Kiwalik Mounta 45.74 29 P **P** **08 44 05.3 +1.8**
baz=257
MAKZ Makanchi 45.91 304 P **P** **08 44 05.3 +0.1**
MAKZ Makanchi 45.91 304 P **P** **08 44 05.3 +0.1**
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
H17K Granite Mounta 45.92 30 P **P** **08 44 06.7 +1.8**
baz=258
P16K Nushagak River 45.95 39 P **P** **08 44 06.7 +1.6**
baz=265
L17K Donlin 46.14 34 P **P** **08 44 07.4 +0.8**
baz=262
K17K Iditarod 46.22 34 P **P** **08 44 08.4 +1.1**
baz=262
E18K Tukpahlearik C 46.24 27 P **P** **08 44 08.8 +1.4**
baz=255
C18K Utukok River 46.37 25 P **P** **08 44 10.0 +1.5**
baz=253
B18K Kokolik River 46.38 24 P **P** **08 44 09.6 +1.2**
baz=252
F18K Selawik 46.40 28 P **P** **08 44 10.4 +1.8**
baz=256,SNR=6.8
M17K Holitna River 46.46 35 P **P** **08 44 10.4 +1.2**
baz=264
H18K Honhosa River 46.61 30 P **P** **08 44 11.6 +1.3**
H18K Honhosa River 46.61 30 P **P** **08 44 11.2 +0.9**
baz=259,SNR=5.2
Q16K King Salmon 46.62 39 P **P** **08 44 11.5 +1.1**
baz=267
G18K Tagagawik 46.64 29 P **P** **08 44 12.0 +1.5**
baz=258,SNR=11
SEM Semipalatinsk 46.69 309 *e*P **P** **08 44 11.0 -0.5**
comp=Z,7.9nm,1.0s,baz=309
SEM Semipalatinsk 46.69 309 *e*P **P** **08 44 11.0 -0.5**
SEM pmax pmax
comp=Z,8.0nm,1.0s
L18K Granite Mounta 46.90 34 P **P** **08 44 14.5 +1.9**
baz=264
J18K Innoko River 47.05 33 P **P** **08 44 15.2 +1.5**
baz=262
C19K Lookout Ridge 47.05 25 P **P** **08 44 15.9 +2.1**
baz=254,SNR=14
SOEI Soe 47.10 204 P **P** **08 44 14.6 -0.2**
N18K Kilae Creek 47.14 36 P **P** **08 44 16.0 +1.4**
baz=266
GCSA Galena City Sc 47.16 31 P **P** **08 44 16.1 +1.6**
baz=261
F19K Shaleruckik Mo 47.18 28 P **P** **08 44 16.5 +1.8**
baz=258
M18K Stony River 47.24 35 P **P** **08 44 16.9 +1.7**
baz=265
TTA Tatalina 47.30 33 P **P** **08 44 16.5 +0.7**
TTA IAmb IAmb 08 44 18.4
comp=Z,25nm,1.5s
TTA Tatalina 47.30 33 P **P** **08 44 17.2 +1.4**
baz=264
TTA Tatalina 47.30 33 P **P** **08 44 16.5 +0.7**
TTA pmax pmax
comp=Z,25nm,1.5s
G19K Purcell Mounta 47.31 29 P **P** **08 44 17.1 +1.3**
baz=260
P18K Big Mountain, 47.39 38 P **P** **08 44 18.0 +1.4**
baz=268
D19K Kuna River 47.42 26 P **P** **08 44 18.0 +1.3**
D19K Kuna River 47.42 26 P **P** **08 44 18.2 +1.6**
baz=256,SNR=5.4
O18K Koktuh Hills 47.42 38 P **P** **08 44 18.6 +1.8**
baz=267
H19K Roundabout Mou 47.47 30 P **P** **08 44 19.1 +2.2**
baz=261
E19K Redstone River 47.51 27 P **P** **08 44 19.5 +2.2**
baz=258
J19K Poorman 47.60 32 P **P** **08 44 19.7 +1.7**
baz=263
KURK Kurchatov 47.70 310 P **P** **08 44 19.4 +0.3**
KURK Kurchatov 47.70 310 *ce*P **P** **08 44 19.3 +0.3**
KURK pmax pmax
comp=Z,39nm,0.8s
KURK Kurchatov 47.70 310 P **P** **08 44 19.3 +0.3**
KURK P **P** **08 44 19.3 +0.3**
L19K White Mountain 47.75 35 P **P** **08 44 20.4 +1.1**
baz=265
KURBB Kurchatov Arra 47.77 310 P **P** **08 44 19.6 0.0**
comp=Z,23nm,0.9s,baz=85,slow=7.8,SNR=159
KURBB LR LR 09 04 51.1
comp=Z,63nm,21.4s,baz=170,slow=37
comp=Z,23nm,0.9s
N19K Bonanza Creek 47.84 36 P **P** **08 44 22.4 +2.3**
baz=267
M19K Big River Lodg 47.95 35 P **P** **08 44 22.9 +2.0**
baz=266
D20K Etivluk River 48.00 26 P **P** **08 44 23.2 +2.0**
baz=258,SNR=10
F20K Avaraart Lake 48.01 28 P **P** **08 44 22.0 +0.8**
baz=260
E20K Nigu River 48.06 26 P **P** **08 44 22.7 +1.1**
baz=258
H20K Anotteneega Mo 48.11 30 P **P** **08 44 23.5 +1.5**
baz=262
I20K Naaghedeneel 48.19 31 P **P** **08 44 23.3 +0.8**
baz=263
K20K Telida 48.22 33 P **P** **08 44 23.7 +0.8**
baz=265
PDGK Podgornoye 48.22 300 P **P** **08 44 22.9 -0.4**
MTN Manton Dam 48.22 194 P **P** **08 44 22.9 -0.4**
L20K Farewell, AK 48.23 34 P **P** **08 44 24.4 +1.4**
baz=266
J20K Nowinta River 48.26 32 P **P** **08 44 25.1 +1.9**
baz=264
SHLS Shalkode 48.27 300 *e*P **P** **08 44 21.6 -2.1**
baz=300
SHLS Shalkode 48.27 300 *e*P **P** **08 44 21.6 -2.1**
COEN Coen 48.28 178 P **P** **08 44 24.5 +0.7**
M20K Styx River 48.54 35 P **P** **08 44 27.2 +1.7**
baz=267
UZB Uzynbulak 48.59 300 *e*P **P** **08 44 26.4 +0.2**
comp=Z,8.7nm,1.0s,baz=300
UZB Uzynbulak 48.59 300 *e*P **P** **08 44 26.4 +0.2**
UZB pmax pmax
comp=Z,9.0nm,1.0s
A21K Barrow 48.61 22 P **P** **08 44 26.9 +1.1**
baz=255,SNR=15
IMAR Indian Mountai 48.63 29 P **P** **08 44 26.4 +0.3**
TDK Taldyqorghan 48.66 302 *e*P **P** **08 44 27.2 +0.6**
baz=302
TDK Taldyqorghan 48.66 302 *e*P **P** **08 44 27.1 +0.6**
C21K Knifeblade Rid 48.74 25 P **P** **08 44 28.4 +1.6**
baz=259
KDAK Kodiak Island 48.76 40 P **P** **08 44 28.3 +1.2**
baz=271
KDAK Kodiak Island 48.76 40 LR LR 09 03 49.6
comp=Z,87nm,20.7s,baz=267,slow=35
PLAI Plampang 48.78 212 P **P** **08 44 25.2 -2.5**
comp=Z,27nm,0.8s
G21K Allakaket 48.80 29 P **P** **08 44 28.7 +1.4**
baz=263
Q20K Shuyak Island 48.85 39 P **P** **08 44 29.3 +1.6**
baz=271
F21K Alatna River 48.90 28 P **P** **08 44 30.0 +1.9**
baz=262
N20K Mount Spurr 48.96 36 P **P** **08 44 30.2 +1.5**
baz=268,SNR=5.7
H21K Melozitna Rive 48.98 30 P **P** **08 44 30.6 +1.9**
baz=264
ZHN Zhinishke 49.00 300 *e*P **P** **08 44 29.5 +0.2**
baz=300
ZHN Zhinishke 49.00 300 *e*P **P** **08 44 29.5 +0.2**
PPLA Purkeypile 49.03 34 P **P** **08 44 30.8 +1.5**
baz=267
CHUM Lake Minchumin 49.04 32 P **P** **08 44 30.4 +1.3**
baz=266
SATY Saty 49.05 300 *e*P **P** **08 44 30.2 +0.5**
baz=300
SATY Saty 49.05 300 *e*P **P** **08 44 30.1 +0.4**
CAST Castle Rocks 49.11 33 P **P** **08 44 31.3 +1.5**
CAST IAmb IAmb 08 44 32.5
comp=Z,18nm,1.4s
CAST Castle Rocks 49.11 33 P **P** **08 44 31.6 +1.8**
baz=267
ARXS Arharly 49.22 301 *e*P **P** **08 44 31.3 +0.4**
I21K Tanana 49.28 31 P **P** **08 44 31.9 +1.0**
baz=265,SNR=5.4
SKT Skwentna 49.30 35 P **P** **08 44 31.9 +0.7**
SKT IAmb IAmb 08 44 51.6
comp=Z,34nm,1.7s
SKT Skwentna 49.30 35 P **P** **08 44 32.0 +0.8**
baz=268
D22K Ayikyak River 49.44 26 P **P** **08 44 33.4 +1.2**
baz=261
CAPN Captain Cook N 49.47 36 P **P** **08 44 34.3 +1.9**
baz=270
H22K Ishtalitna Cre 49.59 30 P **P** **08 44 35.6 +2.2**
baz=265,SNR=9.0
BPAW Bear Paw Mtn. 49.64 32 P **P** **08 44 34.9 +1.2**
baz=267
SUA Susitna One 49.67 36 P **P** **08 44 34.5 +0.4**
SUA IAmb IAmb 08 45 00.1
comp=Z,13nm,1.1s
SUA Susitna One 49.67 36 P **P** **08 44 34.5 +0.4**
baz=270
BRSE Bradley Lake S 49.68 38 P **P** **08 44 34.4 +0.3**
baz=271
MLY Manley 49.80 31 P **P** **08 44 36.2 +1.2**
MLY IAmb IAmb 08 44 37.8
comp=Z,30nm,1.4s
MLY Manley 49.80 31 P **P** **08 44 35.9 +0.9**
baz=267,SNR=9.4
CHKK Chushkaly 49.88 301 *e*P **P** **08 44 36.4 +0.5**
baz=301
CHKK Chushkaly 49.88 301 *e*P **P** **08 44 36.4 +0.5**
MDOK Medeo 49.99 300 *e*P **P** **08 44 37.4 +0.4**
baz=300
MDOK Medeo 49.99 300 *e*P **P** **08 44 37.3 +0.4**
AAA Alma-Ata 50.08 300 *e*P **P** **08 44 38.7 +1.2**
baz=300
AAA Alma-Ata 50.08 300 *e*P **P** **08 44 38.6 +1.2**
TNSS Tian-Shan 50.09 300 *e*P **P** **08 44 39.1 +1.0**
baz=300
TNSS Tian-Shan 50.09 300 *e*P **P** **08 44 39.0 +1.0**
RC01 Rabbit Creek A 50.16 36 P **P** **08 44 38.1 +0.3**
baz=271
D23K Nanushuk River 50.17 26 P **P** **08 44 38.7 +1.0**
baz=263
COLD Coldfoot 50.17 28 P **P** **08 44 38.0 +0.2**
baz=265
G23K Bananza Creek 50.20 29 P **P** **08 44 39.4 +1.4**
baz=266
C23K Itkillik River 50.30 25 P **P** **08 44 39.4 +0.8**
baz=263,SNR=17
SEW Seward 50.32 37 P **P** **08 44 39.3 +0.4**
baz=272
KUU Kurty 50.33 301 *e*P **P** **08 44 39.4 0.0**
comp=Z,16nm,1.1s,baz=301
KUU Kurty 50.33 301 *e*P **P** **08 44 39.3 0.0**
KUU pmax pmax
comp=Z,16nm,1.1s
I23K Minto, Yukon-K 50.38 31 P **P** **08 44 40.0 +0.7**
I23K IAmb IAmb 08 44 42.0
comp=Z,20nm,1.4s
I23K Minto, Yukon-K 50.38 31 P **P** **08 44 40.1 +0.7**
baz=268,SNR=5.4
PMR Palmer 50.44 35 P **P** **08 44 40.6 +0.8**
baz=271
E23K Chandalar 50.47 27 P **P** **08 44 40.9 +0.8**
baz=265,SNR=14
NEA2 Nenana 50.49 32 P **P** **08 44 40.9 +0.7**
baz=268,SNR=8.4
MCK McKinley 50.53 33 P **P** **08 44 41.1 +0.5**
baz=269
TOLK Toolik Lake Re 50.54 26 P **P** **08 44 41.1 +0.5**
baz=265,SNR=7.5
RND Reindeer 50.56 33 P **P** **08 44 40.8 -0.1**
RND IAmb IAmb 08 44 43.7
comp=Z,13nm,1.1s
RND Reindeer 50.56 33 P **P** **08 44 40.8 -0.1**
RND pmax pmax
comp=Z,13nm,1.1s
WAT1 Susitna Watana 50.70 34 P **P** **08 44 42.2 +0.3**
baz=270
KNK Knik Glacier 50.77 36 P **P** **08 44 42.2 -0.1**
baz=272
SML Sawmill 50.82 35 P **P** **08 44 43.4 +0.7**
baz=271
D24K Happy Valley 50.85 26 P **P** **08 44 43.5 +0.6**
baz=265
MDM Murphy Dome 50.86 31 P **P** **08 44 43.7 +0.7**
MDM IAmb IAmb 08 44 45.5
comp=Z,22nm,1.0s
BOOM Boomskoye usch 50.94 300 P **P** **08 44 45.1 +0.9**
BOOM Boomskoye usch 50.94 300 P **P** **08 44 45.1 +0.9**
BOOM pmax pmax
comp=Z,8.0nm,1.0s
C24K Franklin Bluff 50.95 25 P **P** **08 44 44.2 +0.6**
baz=265
PWJI Pagerwojo 50.97 220 P **P** **08 44 42.4 -2.0**
comp=Z,48nm,0.8s
COLA College 51.02 31 P **P** **08 44 44.6 +0.4**
baz=269
H24K Noodor Dome 51.02 30 P **P** **08 44 45.1 +0.8**
baz=268
CCB Clear Creek Bu 51.03 31 P **P** **08 44 44.5 +0.2**
CCB IAmb IAmb 08 45 08.2
comp=Z,28nm,2.0s
WAT6 Susitna Watana 51.08 34 P **P** **08 44 45.0 +0.2**
baz=271
TKM2 Tokmak 2 51.09 300 P **P** **08 44 46.9 +1.6**
SNR=14
TKM2 Tokmak 2 51.09 300 P **P** **08 44 45.5 +0.2**
F24K Squaw Lake 51.09 28 P **P** **08 44 45.1 +0.4**
baz=267
M23K Glacier View 51.11 35 P **P** **08 44 45.5 +0.6**
baz=272
POKR Poker Plat Res 51.20 31 P **P** **08 44 45.9 +0.4**
baz=270,SNR=6.2
G24K Hadweenzic Riv 51.21 29 P **P** **08 44 46.3 +0.7**
baz=268
DHY Denali Highway 51.23 33 P **P** **08 44 47.0 +1.0**
baz=271
SCM Sheep Creek Mo 51.30 35 P **P** **08 44 47.4 +1.0**
baz=272
P23K Montague Islan 51.35 37 P **P** **08 44 46.9 +0.1**
baz=274
HDA Harding Lake 51.41 32 P **P** **08 44 47.3 +0.2**
HDA Harding Lake 51.41 32 P **P** **08 44 47.2 +0.1**
baz=270
ILAR Eielson Array 51.43 31 P **P** **08 44 47.3 0.0**
ILAR Eielson Array 51.43 31 P **P** **08 44 47.6 +0.3**
comp=Z,5.5nm,0.8s,baz=268,slow=6.2,SNR=50
ILAR LR LR 09 10 37.3

comp=Z,46nm,19.2s,baz=266,slow=41
comp=Z,5.5nm,0.8s
BRZS Berezniki 51.57 310 *e*P **P 08 44 48.3 -0.3**
baz=310
BRZS Berezniki 51.57 310 *e*P **P 08 44 48.2 -0.3**
KBK Karagaybulak 51.61 300 P **P 08 44 50.3 +1.1**
SNR=11
BTLS Baital 51.67 303 *e*P **P 08 44 49.5 +0.1**
comp=Z,14nm,1.4s,baz=303
BTLS Baital 51.67 303 *e*P **P 08 44 49.4 +0.1**
BTLS pmax pmax
comp=Z,14nm,1.4s
KSH Kashi 51.71 296 P **P 08 44 54.1 +4.2**
KSH pmax pmax
comp=Z,12nm,0.9s
D25K Kavik River 51.74 25 P **P 08 44 50.1 +0.5**
baz=267
G25K Bearman Lake 51.76 29 P **P 08 44 51.2 +1.5**
baz=269,SNR=6.5
USP Ospenovka 51.78 301 P **P 08 44 50.8 +0.5**
SNR=9.2
M24K Tolsona, Glenn 51.83 35 P **P 08 44 50.4 +0.1**
M24K Tolsona, Glenn 51.83 35 P **P 08 44 51.2 +0.8**
baz=273
K24K Donnelly Dome 51.93 33 P **P 08 44 51.1 +0.1**
baz=272
AAK Ala-Archa 51.94 300 P **P 08 44 52.5 +0.8**
SNR=6.0
AAK Ala-Archa 51.94 300 *ce*P **P 08 44 52.1 +0.5**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 51.94 300 LR LR 09 07 30.8
comp=Z,128nm,18.0s,baz=90,slow=37
AAK Ala-Archa 51.94 300 P **P 08 44 52.3 +0.7**
F25K Christian Rive 51.95 28 P **P 08 44 51.8 +0.6**
baz=269
KPJI Karang Pucung 51.97 223 P **P 08 44 51.4 -0.4**
comp=Z,32nm,1.1s
KLU Klutina 51.98 35 P **P 08 44 53.2 +1.6**
baz=274
E25K Arctic Village 51.99 27 P **P 08 44 53.1 +1.7**
E25K IAmb IAmb 08 44 54.9
comp=Z,31nm,1.3s
E25K Arctic Village 51.99 27 P **P 08 44 53.8 +2.4**
baz=269,SNR=17
PRP Porcupine Dome 52.00 30 P **P 08 44 52.7 +1.0**
PRP Porcupine Dome 52.00 30 P **P 08 44 52.9 +1.2**
baz=271
UCH Uchtor 52.03 300 P **P 08 44 53.9 +1.2**
SNR=6.0
J25K Salcha River, 52.09 31 P **P 08 44 53.0 +0.8**
baz=272
PAX Paxson 52.11 34 P **P 08 44 53.2 +0.7**
baz=273
OTUK Ortayu 52.13 308 P **P 08 44 52.1 -0.6**
EYAK Cordova Ski Ar 52.13 37 P **P 08 44 53.0 +0.5**
baz=275
C26K Camden Bay 52.27 25 P **P 08 44 54.2 +0.7**
baz=268
HARP HAARP 52.28 34 P **P 08 44 53.8 +0.1**
baz=274
LEM Lembang 52.31 225 LR LR 09 07 15.2
comp=Z,68nm,20.0s,baz=30,slow=36
BMAR Burnt Mountain 52.36 28 P **P 08 44 55.7 +1.5**
EKS2 Erkin-Say 52.45 300 P **P 08 44 56.4 +1.1**
SNR=5.4
BVA0 Borovoye Array 52.46 314 *i* P **P 08 44 55.1 0.0**
BVAR Borovoye Array 52.46 314 P **P 08 44 55.4 +0.3**
comp=Z,13nm,0.9s,baz=91,slow=7.4,SNR=43
BVAR PcP **PcP 08 46 05.7 -0.1**
comp=Z,7.4nm,0.8s,baz=66,slow=3.7,SNR=5.3
comp=Z,13nm,0.9s
BRVK Borovoye 52.52 314 *ce*P **P 08 44 56.2 +0.7**
BRVK pmax pmax
comp=Z,22nm,1.3s
BRVK Borovoye 52.52 314 P **P 08 44 56.0 +0.4**
F26K Sheenjek River 52.52 28 P **P 08 44 56.9 +1.5**
baz=270
N25K Chitina, Valde 52.61 35 P **P 08 44 56.7 +0.6**
baz=275
BMRM Bremner River 52.66 36 P **P 08 44 57.6 +1.1**
baz=275
G26K Porcupine Rive 52.67 28 P **P 08 44 57.4 +0.9**
baz=271
SCRK Sand Creek 52.72 32 P **P 08 44 57.0 0.0**
SCRK IAmb IAmb 08 44 58.8
comp=Z,12nm,1.0s
SCRK Sand Creek 52.72 32 P **P 08 44 57.5 +0.5**
baz=274,SNR=11
KAIM Kayak Island 52.85 37 P **P 08 44 58.8 +0.9**
baz=276
J26L Joseph Creek 52.87 32 P **P 08 44 58.7 +0.6**
baz=274,SNR=6.8
MENT Mentasta 52.91 34 P **P 08 45 00.4 +2.1**
MENT IAmb IAmb 08 45 01.7
comp=Z,51nm,1.9s
L26K Log Cabin Wild 53.07 33 P **P 08 45 00.2 +0.6**
baz=275
MCARA McCarthy VSAT 53.38 35 P **P 08 45 02.9 +1.1**
baz=276
CRQE Cirque 53.42 36 P **P 08 45 03.0 +0.8**
baz=277
K27K Chicken 53.55 32 P **P 08 45 03.1 +0.1**
baz=275,SNR=7.6
H27K Steamboat Moun 53.61 29 P **P 08 45 04.4 +1.0**
baz=274
I27K Kandik River 53.62 30 P **P 08 45 04.1 +0.5**
baz=274
L27K Beaver Creek, 53.76 33 P **P 08 45 05.1 +0.5**
baz=276
BCAR Beaver Creek A 53.78 33 P **P 08 45 05.5 +0.7**
M27K Edge Creek, AK 53.81 34 P **P 08 45 05.8 +0.7**
baz=276
EGAK Eagle 53.88 31 P **P 08 45 06.1 +0.7**
baz=275
MESA MESA 54.05 37 P **P 08 45 07.2 +0.3**
baz=278
F28M Old Crow 54.16 28 P **P 08 45 07.6 +0.2**
baz=274,SNR=8.3
CTG Chitna Glacier 54.24 36 P **P 08 45 08.0 -0.2**
baz=278
BVCY Beaver Creek 54.27 34 P **P 08 45 08.8 +0.5**
baz=277
I28M Miner Creek 54.33 30 P **P 08 45 09.6 +0.8**
baz=276
CTA Charters Tower 54.52 175 LR LR 09 11 47.9
comp=Z,31nm,18.0s,baz=274,slow=40
KK31 Karatay Array 54.63 302 *i* P **P 08 45 11.7 +0.4**
KKAR Karatay Array 54.63 302 P **P 08 45 12.1 +0.8**
KKAR Karatay Array 54.63 302 P **P 08 45 11.4 +0.2**
KKAR IAmb IAmb 08 45 13.5
comp=Z,35nm,1.1s
KKAR Karatay Array 54.63 302 P **P 08 45 12.1 +0.8**
WB2 Warramunga Arr 54.67 189 P **P 08 45 10.4 -1.2**
WRA Warramunga Arr 54.67 189 P **P 08 45 10.9 -0.7**
WRA Warramunga Arr 54.67 189 P **P 08 45 11.1 -0.5**
comp=Z,16nm,0.9s,baz=7.3,slow=7.7,SNR=43
WRA PcP **PcP 08 46 13.8 -0.6**
comp=Z,7.1nm,0.8s,baz=5.3,slow=7.6,SNR=4.8
comp=Z,16nm,0.9s
DAWY Dawson 54.72 32 P **P 08 45 12.3 +0.7**
baz=277
E29M Blow River 54.83 27 P **P 08 45 13.0 +0.7**
baz=276
H29M Whitestone 54.88 29 P **P 08 45 13.2 +0.5**
baz=277
BRLS Borolday 55.13 302 *e*P **P 08 45 16.6 +1.7**
comp=Z,8.2nm,0.9s,baz=302
BRLS Borolday 55.13 302 *e*P **P 08 45 16.5 +1.7**
BRLS pmax pmax
comp=Z,8.0nm,0.9s
J29N Klondike Camp 55.18 31 P **P 08 45 15.4 +0.4**
baz=278
IUG luzhnay 55.25 301 *e*P **P 08 45 16.9 +1.0**
baz=301
IUG luzhnay 55.25 301 *e*P **P 08 45 16.8 +1.0**
M29M Somme Creek 55.37 34 P **P 08 45 17.1 +0.7**
baz=279
L29M L29M 55.42 33 P **P 08 45 17.4 +0.8**
baz=279
YUK4 Talbot Arm 55.47 35 P **P 08 45 17.8 +0.6**
baz=280
EPYK Eagle Plains 55.53 29 P **P 08 45 18.9 +1.5**
EPYK IAmb IAmb 08 45 19.6
comp=Z,15nm,0.9s
EPYK Eagle Plains 55.53 29 P **P 08 45 16.6 -0.8**
baz=278,SNR=6.5

K29M Barlow Dome 55.57 32 P **P 08 45 17.9 0.0**
baz=279
G30M tAoh Zraii Nji 55.64 28 P **P 08 45 18.9 +0.7**
baz=278
F30M Barrier River 55.71 27 P **P 08 45 20.0 +1.3**
baz=278
I30M Mount Dempster 55.84 30 P **P 08 45 20.2 +0.5**
baz=279
J30M Hart River 55.97 31 P **P 08 45 21.3 +0.7**
baz=280
HYT Haines Junctio 56.11 36 P **P 08 45 22.4 +0.6**
baz=281
M30M Minto, Yukon 56.11 33 P **P 08 45 22.3 +0.7**
baz=281
P29M Windy Craggy 56.24 37 P **P 08 45 22.3 -0.3**
baz=282
MAYO Mayo, Yukon 56.33 32 P **P 08 45 23.8 +0.7**
baz=281
G31M Satah River 56.40 28 P **P 08 45 24.3 +0.8**
G31M IAmb IAmb 08 45 26.5
comp=Z,32nm,1.6s
G31M Satah River 56.40 28 P **P 08 45 24.8 +1.3**
baz=280,SNR=8.1
INK Inuvik 56.45 26 P **P 08 45 25.1 +1.3**
baz=280,SNR=7.4
INK Inuvik 56.45 26 LR LR 09 09 58.9
comp=Z,52nm,21.8s,baz=190,slow=36
F31M Tsiigehtchic 56.52 27 P **P 08 45 25.0 +0.7**
F31M Tsiigehtchic 56.52 27 P **P 08 45 25.1 +0.8**
baz=280,SNR=6.0
P30M Million Dollar 56.52 36 P **P 08 45 25.7 +1.1**
baz=282
H31M Peel River 56.57 29 P **P 08 45 25.4 +0.6**
baz=281
O30N Mendenhall 56.80 36 P **P 08 45 27.0 +0.4**
baz=282
SVE Sverdlovsk 57.19 320 *e*P **P 08 45 30.1 +0.8**
SVE pmax pmax
comp=Z,21nm,1.1s
M31M Drury Creek, Y 57.29 34 P **P 08 45 31.1 +1.2**
M31M IAmb IAmb 08 45 32.6
comp=Z,15nm,1.1s
M31M Drury Creek, Y 57.29 34 P **P 08 45 30.9 +1.0**
baz=283
WHY Whitehorse 57.41 35 P **P 08 45 28.8 -2.1**
baz=283
FARO Faro, Yukon 57.76 33 P **P 08 45 32.8 -0.5**
baz=284
N32M Quiet Lake 58.14 35 P **P 08 45 35.9 -0.1**
baz=285
P32M Atlin 58.24 37 P **P 08 45 36.4 -0.3**
baz=285
S32K Killisnoo 58.36 39 P **P 08 45 36.6 -0.9**
baz=286
AS31 Alice Springs 58.40 188 P **P 08 45 38.6 +0.4**
ASAR Alice Springs 58.40 188 P **P 08 45 37.9 -0.2**
ASAR Alice Springs 58.40 188 P **P 08 45 37.9 -0.2**
ASAR Alice Springs 58.40 188 P **P 08 45 37.7 -0.4**
comp=Z,5.1nm,0.8s,baz=12,slow=7.7,SNR=40
comp=Z,5.1nm,0.8s
ARU Arti 58.41 320 P **P 08 45 38.3 +0.4**
ARU Arti 58.41 320 *d i* P **P 08 45 37.6 -0.3**
ARU S **S 08 53 40.6 -0.6**
ARU pmax pmax
comp=Z,30nm,1.0s
ARU Arti 58.41 320 LR LR 09 11 24.5
comp=Z,47nm,18.3s,baz=146,slow=37
A36M Sachs Harbour 58.44 21 P **P 08 45 38.0 +0.2**
baz=285
HYB Hyderabad 58.46 270 *e*P **P 08 45 39.2 +0.3**
P33M Teslin, Yukon 58.51 36 P **P 08 45 39.7 +1.1**
P33M Teslin, Yukon 58.51 36 P **P 08 45 39.4 +0.8**
baz=285
KBL Kabul 58.59 293 P **P 08 45 40.1 +0.3**
MBWA Marble Bar 59.25 204 P **P 08 45 44.3 +0.2**
U33K Whale Pass 59.51 40 P **P 08 45 46.5 +1.0**
baz=288
C36M Paulatuk 59.55 24 P **P 08 45 46.1 +0.5**
C36M IAmb IAmb 08 45 47.4
comp=Z,16nm,0.9s
C36M Paulatuk 59.55 24 P **P 08 45 45.7 +0.2**
baz=287,SNR=18
R33M Jennings River 59.64 36 P **P 08 45 48.4 +1.8**
baz=287
AB31 Akbulak array 59.76 311 *i* P **P 08 45 46.9 -0.5**
ABKAR Akbulak array 59.76 311 P **P 08 45 47.4 0.0**
ABKAR IAmb IAmb 08 45 48.2
comp=Z,13nm,0.9s
TGTN Hyland Airport 60.26 33 P **P 08 45 52.0 +1.3**
baz=288,SNR=5.2
DLBC Dease Lake 60.40 37 P **P 08 45 53.2 +1.5**
baz=288
WTLY Watson Lake, Y 60.46 35 P **P 08 45 53.6 +1.5**
baz=288
AKTO Aktyubinsk 60.55 313 P **P 08 45 51.8 -1.0**
DZM Mont Dzumac 61.02 154 LR LR 09 11 04.5
comp=Z,130nm,19.9s,baz=22,slow=35
U35K Hyder 61.23 40 P **P 08 45 58.5 +1.3**
baz=290
WRGLY Wrigley 61.80 31 P **P 08 46 02.4 +1.3**
baz=291
PALK Pallekele 62.15 259 LR LR 09 15 34.0
comp=Z,62nm,18.0s,baz=170,slow=38
KIRV Kirov 62.39 324 *ce*P **P 08 46 06.0 +1.0**
KIRV Kirov 62.39 324 LR LR 09 16 45.8
comp=Z,76nm,18.6s,baz=56,slow=40
KOTAN Kotaneelee Air 62.68 34 P **P 08 46 07.7 +0.7**
baz=292
SPITS Spitsbergen Ar 62.99 349 P **P 08 46 09.7 +0.9**
comp=Z,8.4nm,0.8s,baz=54,slow=7.3,SNR=6.3
SPITS LR LR 09 15 02.4
comp=Z,94nm,18.1s,baz=198,slow=37
comp=Z,8.4nm,0.8s
BBB Bella Bella 63.64 43 LR LR 09 14 09.1
comp=Z,29nm,18.1s,baz=280,slow=36
RES Resolute Bay 64.91 14 P **P 08 46 21.6 +0.2**
RES Resolute Bay 64.91 14 P **P 08 46 21.6 +0.2**
RES pmax pmax
comp=Z,28nm,1.1s
RES Resolute Bay 64.91 14 LR LR 09 18 57.7
comp=Z,58nm,18.1s,baz=354,slow=40
APA Apatity 65.05 336 *‖ i* P P 08 46 30.7 +8.3
APA pmax pmax
comp=Z,7.0nm,1.1s
GEYT Alibeck 65.30 300 P **P 08 46 25.2 +0.6**
comp=Z,6.6nm,0.8s,baz=58,slow=5.4,SNR=14
comp=Z,6.6nm,0.8s
YKA Yellowknife Ar 65.79 30 P **P 08 46 27.5 +0.2**
comp=Z,1.7nm,0.8s,baz=299,slow=6.5,SNR=28
comp=Z,1.7nm,0.8s
KLMR Klimovskoe 65.99 328 *e*P **P 08 46 25.9 -2.8**
KLMR *e* 08 48 49.7
KLMR pmax pmax
comp=Z,13nm,1.1s
STKA Stephens Creek 66.10 180 *i* P **P 08 46 28.4 -1.2**
STKA Stephens Creek 66.10 180 P **P 08 46 29.6 0.0**
comp=Z,2.4nm,0.9s,baz=315,slow=11,SNR=3.9
comp=Z,2.4nm,0.9s
ARCES ARCESS Array B 66.40 340 P **P 08 46 31.7 +0.5**
comp=Z,2.8nm,0.8s,baz=42,slow=5.6,SNR=3.7
ARCES LR LR 09 21 52.8
comp=Z,115nm,19.0s,baz=24,slow=42
comp=Z,2.8nm,0.8s
VALR Valaam 69.31 331 *i* P **P 08 46 50.0 +0.4**
VALR pmax pmax
comp=Z,19nm,0.9s
VRH Novokhopyorsk 69.60 319 *e*P **P 08 46 48.9 -2.7**
VRH pmax pmax
comp=Z,10.0nm,0.8s
OBN Obninsk 70.24 324 *ce*P **P 08 46 55.4 0.0**
OBN *i* 08 47 24.6
OBN pmax pmax
comp=Z,13nm,0.5s
OBN MLR MLR
comp=Z,176nm,16.0s
LPSR Galich'ya Gora 70.38 321 *e*P **P 08 46 53.6 -2.7**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 70.72 320 *e*P **P 08 46 56.3 -2.1**
VORR pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 70.98 320 *e*P **P 08 46 56.8 -3.2**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 71.04 319 *e*P **P 08 46 57.1 -3.3**
VORD pmax pmax
comp=Z,6.0nm,0.6s

FINES FINESS Array B 71.13 333 P **P 08 47 01.0 +0.3**
comp=Z,8.5nm,0.9s,baz=64,slow=8.7,SNR=21
comp=Z,8.5nm,0.9s
YBH Yreka Blue Hor 71.63 52 LR LR 09 09 42.9
comp=Z,76nm,21.8s,baz=332,slow=28
NEW Newport 71.70 44 P **P 08 47 04.3 -0.2**
baz=302,SNR=6.2
PINE Pine Mountain 71.72 49 P **P 08 47 06.0 +1.1**
PINE IAmb IAmb 08 47 07.8
comp=Z,16nm,1.1s
JLN Jalan Bani Buh 71.73 285 P **P 08 47 05.6 +0.5**
JLN P **P 08 47 05.6 +0.5**
WSAR Wadi Sarin 71.80 286 P **P 08 47 06.4 +1.0**
WBK Wadi Bani Khal 71.85 285 P **P 08 47 06.8 +1.0**
BIDO Bidbid 72.06 286 P **P 08 47 08.3 +1.3**
SHME Shamm 72.34 290 P **P 08 47 09.8 +1.1**
SNR=5.4
SHME P **P 08 47 09.8 +1.1**
SNR=5.4
SMDO Samad 72.35 286 P **P 08 47 09.6 +0.7**
SMDO P **P 08 47 09.6 +0.7**
NCK Nalchik 72.42 311 *i* P **P 08 47 08.9 0.0**
NCK pmax pmax
comp=Z,5.0nm,0.8s
JMDO Jabal Madar 72.66 285 P **P 08 47 11.0 +0.3**
MASF Masafi 72.67 289 P **P 08 47 11.5 +0.8**
MASF P **P 08 47 11.5 +0.8**
VSU Vasula 72.72 330 *ce*P **P 08 47 10.7 +0.4**
VSU pmax pmax
comp=Z,32nm,1.3s
VSU Vasula 72.72 330 *e*P **P 08 47 10.9 +0.5**
KBZ Khabaz 72.73 311 *ce*P **P 08 47 10.3 -0.4**
KBZ pmax pmax
comp=Z,14nm,1.1s
KBZ Khabaz 72.73 311 P **P 08 47 11.7 +1.0**
comp=Z,8.7nm,0.9s,baz=105,slow=2.2,SNR=9.9
comp=Z,8.7nm,0.9s
KIV Kislovodsk 72.74 312 *e*P **P 08 47 11.8 +0.9**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,46nm,18.0s
UOSS Minazif 72.85 289 P **P 08 47 11.7 0.0**
UOSS IAmb IAmb 08 47 12.6
comp=Z,13nm,1.0s
UOSS Minazif 72.85 289 P **P 08 47 12.3 +0.6**
UOSS P **P 08 47 12.3 +0.6**
HATD Hatta, Dubai 72.97 289 P **P 08 47 13.4 +0.9**
SNR=5.2
RAF Rauma 73.00 334 *e*P **P 08 47 12.2 +0.3**
SOHO SOHO 73.00 288 P **P 08 47 12.7 0.0**
SOHO P **P 08 47 12.7 0.0**
ASHO Ashiyiah 73.10 289 P **P 08 47 13.5 +0.2**
BSY Bisya 73.19 286 P **P 08 47 14.4 +0.6**
SNR=6.8
BSY P **P 08 47 14.4 +0.6**
SNR=6.8
GNI Garni 73.42 307 *ce*P **P 08 47 15.4 +0.4**
GNI pmax pmax
comp=Z,14nm,1.3s
ARQ Araqi 73.42 287 P **P 08 47 15.8 +0.7**
ARQ P **P 08 47 15.8 +0.7**
FAQ Al Faqa, Dubai 73.43 289 P **P 08 47 15.2 0.0**
MHTO MHTO 73.48 284 P **P 08 47 16.1 +0.6**
SNR=7.2
ALNE Al Ain 73.66 288 P **P 08 47 16.8 +0.3**
ASUD Al Ashush, Dub 73.70 289 P **P 08 47 17.4 +0.7**
MTSE Matsula 73.74 331 *e*P **P 08 47 16.6 +0.3**
MNK Minsk 74.69 326 *i* P **P 08 47 19.7 -2.3**
MNK *i* 08 50 05.1
MNK *i* PPP PPP 08 51 51.8
MNK *i* S **S 08 56 54.7 -3.9**
MNK *i* SS **SS 09 01 41.1 -3.7**
MNK *i* SSS SSS 09 05 03.8
MNK pmax pmax
comp=E,11nm,1.0s
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=N,35nm,0.9s
MNK MLR MLR
comp=Z,205nm,17.0s
MNK MLR MLR
comp=E,206nm,15.0s
MNK MLR MLR
comp=N,574nm,17.0s
UMZA Um Al Zommool 74.81 287 P **P 08 47 23.2 0.0**
ANN Anapa 75.45 315 *e*P **P 08 47 22.8 -3.7**
ANN *e**PP **pwP 08 47 33.3 -1.7**
ANN *e*S **SKiKP 08 56 58.2 +8.7**
ANN pmax pmax
comp=Z,46nm,1.4s
PABE Paberze 75.78 329 *e*P **P 08 47 29.0 +0.8**
HLID Hailey 75.84 47 P **P 08 47 28.3 -0.8**
baz=304,SNR=5.8
EGMT Eagleton 75.93 41 P **P 08 47 28.5 -0.9**
baz=306,SNR=5.2
NVAR Mina Array Bea 76.24 53 P **P 08 47 32.8 +1.3**
comp=Z,3.9nm,0.7s,baz=289,slow=5.8,SNR=37
NVAR LR LR 09 18 23.1
comp=Z,70nm,19.1s,baz=314,slow=34
comp=Z,3.9nm,0.7s
BOZ Bozeman (W) 76.31 44 P **P 08 47 29.7 -2.0**
baz=306
AKASG Malin Array Be 76.42 323 *ce*P **P 08 47 31.7 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 76.42 323 P **P 08 47 31.9 0.0**
comp=Z,6.4nm,0.8s,baz=46,slow=6.0,SNR=11
AKASG LR LR 09 23 58.9
comp=Z,132nm,19.0s,baz=46,slow=38
comp=Z,6.4nm,0.8s
AKBB Malin Array Si 76.42 323 *ce*P **P 08 47 31.5 -0.5**
AKBB pmax pmax
comp=Z,10.0nm,1.0s
HFS Hagfors 76.45 336 P **P 08 47 32.0 0.0**
HFS Hagfors 76.45 336 P **P 08 47 32.0 0.0**
comp=Z,6.1nm,0.8s,baz=116,slow=6.6,SNR=12
HFS LR LR 09 23 14.0
comp=Z,105nm,18.6s,baz=360,slow=37
comp=Z,6.1nm,0.8s
NC204 NORSAR Array S 76.52 338 P **P 08 47 32.8 +0.3**
NC204 IAmb IAmb 08 47 33.4
comp=Z,16nm,0.8s
NB2 NORSAR Subarra 76.56 338 P **P 08 47 32.5 -0.2**
comp=Z,4.2nm,0.8s,baz=40,slow=5.6
NOA NORSAR Array B 76.56 338 P **P 08 47 32.9 +0.2**
comp=Z,7.0nm,0.8s,baz=39,slow=5.7,SNR=21
NOA LR LR 09 25 10.2
comp=Z,161nm,18.3s,baz=275,slow=39
comp=Z,7.0nm,0.8s
H17A Grant Village 77.62 44 P **P 08 47 38.6 -0.6**
baz=306,SNR=5.6
GRAC Grapevine Rang 77.65 54 P **P 08 47 40.1 +0.9**
baz=304
DOK Doka 77.79 284 P **P 08 47 40.1 -0.1**
R11B Troy Canyon, C 78.06 52 P **P 08 47 41.6 -0.1**
baz=305,SNR=8.0
MPMC Manual Prospec 78.09 54 P **P 08 47 42.0 +0.1**
baz=304
SNCC San Nicolas Is 78.26 58 P **P 08 47 43.4 +0.8**
baz=304
FURC Furnace Creek, 78.28 54 P **P 08 47 43.2 +0.5**
baz=304
LRMC Laurel Mtn Rad 78.28 55 P **P 08 47 43.8 +0.9**
baz=304
EDW2 Edwards Air Fo 78.41 56 P **P 08 47 44.4 +0.9**
baz=304
WHFO Wadi Hawf 78.45 284 P **P 08 47 43.2 -0.8**
DGMT Dagmar 78.58 38 P **P 08 47 43.2 -1.0**
baz=310
LAO LASA Array 78.65 41 P **P 08 47 45.2 +0.5**
baz=309
DUG Dugway, Tooele 78.75 49 P **P 08 47 46.1 +0.7**
DUG IAmb IAmb 08 47 48.0
comp=Z,11nm,1.1s
DUG Dugway, Tooele 78.75 49 P **P 08 47 45.6 +0.1**
baz=306,SNR=9.3
DUG Dugway, Tooele 78.75 49 P **P 08 47 46.1 +0.7**
DUG pmax pmax
comp=Z,11nm,1.1s
GSC Goldstone, Bar 78.97 55 P **P 08 47 46.4 -0.3**
baz=305
FRB Frobisher Bay 79.10 13 LR LR 09 26 49.0
comp=Z,74nm,18.0s,baz=356,slow=39
ABTO Aybut 79.14 284 P **P 08 47 47.6 -0.2**

BW06	Boulder Array	79.19	45	P	P	08 47 46.5	-1.4
	baz=307						
PDAR	Pinedale Array	79.19	45	P	P	08 47 48.8	+0.9
	comp=Z,1.8nm,0.9s,baz=272,slow=2.6,SNR=15						
	comp=Z,1.8nm,0.9s						
TUQ	Turquoise Moun	79.49	54	P	P	08 47 49.6	+0.1
	baz=305						
HEC	Hector,Ludlow	79.56	55	P	P	08 47 49.3	-0.5
	baz=305						
MURC	Murrieta	79.67	56	P	P	08 47 50.3	-0.2
	baz=305						
GMRC	Granite Mounta	80.04	55	P	P	08 47 51.8	-0.7
	baz=305						
109C	Camp Elliot, M	80.14	57	P	P	08 47 53.0	+0.1
	baz=305						
PFO	Pinyon Flats O	80.17	56	P	P	08 47 52.5	-0.7
	baz=305						
PFO	Pinyon Flats O	80.17	56	LR	LR	09 20 13.5	
	comp=Z,149nm,19.1s,baz=290,slow=33						
TPFO	Pinon Flats	80.18	56	P	P	08 47 52.4	-0.9
	baz=305						
RDMU	Red Mountain	80.51	47	P	P	08 47 55.9	+0.8
MONP2	Monument Peak	80.61	57	P	P	08 47 53.9	-1.9
	baz=305						
KNB	Kanab	80.61	51	P	P	08 47 56.8	+1.2
KNB				lAmb	lAmb	08 47 59.2	
	comp=Z,32nm,1.4s						
KNB	Kanab	80.61	51	P	P	08 47 56.8	+1.2
KNB				pmax	pmax		
	comp=Z,32nm,1.4s						
P18A	Preston Nutter	80.67	48	P	P	08 47 56.7	+0.6
P18A				lAmb	lAmb	08 47 58.8	
	comp=Z,33nm,1.7s						
BR131	Keskin Array S	80.70	312	*i* P	P	08 47 55.7	-0.3
BRTR	Keskin Array B	80.70	312	*ce*P	P	08 47 56.7	+0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	80.70	312	P	P	08 47 57.2	+1.2
	comp=Z,2.1nm,0.7s,baz=80,slow=2.5,SNR=11						
	comp=Z,2.1nm,0.7s						
SRU	San Rafael Swe	80.82	49	P	P	08 47 57.2	+0.5
SRU				lAmb	lAmb	08 47 58.9	
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	80.82	49	P	P	08 47 57.2	+0.5
SRU				pmax	pmax		
	comp=Z,16nm,0.8s						
BC3	Big Chuckawall	80.83	55	P	P	08 47 56.9	+0.1
	baz=306						
SWSC	Sam W. Stewart	81.00	56	P	P	08 47 57.0	-0.5
	baz=306						
K22A	Casper	81.02	44	P	P	08 47 56.4	-1.3
	baz=309						
PDMCI	Parker Dam,Lak	81.34	54	P	P	08 47 59.4	+0.1
	baz=306						
ULM	Lac du Bonnet	81.40	33	P	P	08 47 59.2	-0.1
	comp=Z,3.1nm,0.9s,baz=294,slow=8.3,SNR=5.1						
	comp=Z,3.1nm,0.9s						
MLR	Muntele Rosu	81.45	320	LR	LR	09 27 38.8	
	comp=Z,172nm,18.1s,baz=40,slow=38						
RSSD	Black Hills	81.47	42	P	P	08 48 00.6	+0.5
	baz=311						
O20A	White River Ci	81.58	47	P	P	08 48 00.1	-0.7
	baz=308,SNR=7.7						
RAYN	Ar Rayn	81.86	293	P	P	08 48 03.1	+0.7
WUAZ	Wupatki	82.45	52	P	P	08 48 04.7	-0.7
	baz=307						
N23A	Red Feather La	82.47	45	P	P	08 48 05.1	-0.4
	baz=310,SNR=16						
AGMN	Agassiz Nation	82.79	35	P	P	08 48 06.4	-0.3
	baz=316						
MVCO	Mesa Verde	83.24	49	P	P	08 48 09.9	+0.4
	baz=309,SNR=7.9						
ISCO	Idaho Springs	83.36	46	P	P	08 48 10.5	+0.3
	baz=310,SNR=7.4						
CLL	Collm	83.37	330	*i* P	P	08 48 08.9	-0.7
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CLL	Collm	83.37	330	*i* P	P	08 48 09.4	-0.2
	comp=Z,8.0nm,1.2s						
CLL				*ex*	x	08 48 35.0	
CLL				*e*PP	PP	08 51 20.0	-0.6
214A	Organ Pipe Nat	83.63	56	P	P	08 48 10.9	-0.5
	baz=307						
MMAI	Mount Meron Ar	83.63	306	P	P	08 48 12.4	+1.0
	comp=Z,8.9nm,0.8s,baz=42,slow=6.8,SNR=21						
MMAI				LR	LR	09 30 26.0	
	comp=Z,45nm,18.4s,baz=16,slow=39						
	comp=Z,8.9nm,0.8s						
Q24A	Divide	84.17	46	P	P	08 48 13.1	-1.3
	baz=310,SNR=6.4						
ZVC	Zvikov	84.29	329	*e*P	P	08 48 15.0	+0.6
OGNE	Ogallala	84.68	43	P	P	08 48 16.4	-0.2
	baz=312						
CKRC	Cesky Krumlov	84.71	328	*e*P	P	08 48 17.0	+0.5
CKRC	Cesky Krumlov	84.71	328	*e*P	P	08 48 17.0	+0.5
SDCO	Great Sand Dun	84.75	47	P	P	08 48 16.4	-0.9
	baz=310,SNR=12						
TUC	Tucson	84.78	54	P	P	08 48 16.1	-1.2
	baz=308						
KHC	Kasperske Hory	84.79	329	*e*P	P	08 48 17.5	+0.5
KHC	Kasperske Hory	84.79	329	*e*P	P	08 48 17.5	+0.5
GERES	GERESS Array B	84.95	329	P	P	08 48 17.6	-0.3
	comp=Z,2.8nm,0.8s,baz=44,slow=7.1,SNR=3.8						
GERES				LR	LR	09 32 04.6	
	comp=Z,78nm,18.3s,baz=351,slow=40						
	comp=Z,2.8nm,0.8s						
EYMN	Ely	85.05	33	P	P	08 48 18.0	-0.2
EYMN				lAmb	lAmb	08 48 19.4	
	comp=Z,7.2nm,1.1s						
EYMN	Ely	85.05	33	P	P	08 48 17.5	-0.7
	baz=318						
KSCO	Kaye Shedlock'	85.62	45	P	P	08 48 20.7	-0.7
	baz=312						
T25A	Trinidad	85.80	47	P	P	08 48 21.6	-0.8
	baz=311,SNR=6.0						
ANMO	Albuquerque	85.95	50	P	P	08 48 22.4	-0.8
	baz=310						
ANMO	Albuquerque	85.95	50	LR	LR	09 28 05.0	
	comp=Z,82nm,18.2s,baz=61,slow=37						
SPMN	Marine on St.	86.47	35	P	P	08 48 25.2	-0.1
	baz=318						
BGNE	Belgrade	86.50	41	P	P	08 48 25.0	-0.6
	baz=314						
BTNL	Ternell	86.61	333	*d*PcP	PcP	08 48 28.3	0.0
121A	Cookes Peak, D	86.63	52	P	P	08 48 25.2	-1.4
	baz=309						
BCLA	Clavier	87.05	334	*d*PcP	P	08 48 28.3	+0.3
RTBA	Rita Blanca	87.27	47	P	P	08 48 29.8	+0.2
RTBA				lAmb	lAmb	08 48 32.4	
	comp=Z,15nm,1.4s						
BMRD	Maredsous	87.34	334	*d*PcP	P	08 48 30.0	+0.5
WLF	Walferdange	87.35	333	*d*PcP	PcP	08 48 30.7	-0.9
CBKS	Cedar Bluff	87.42	43	P	P	08 48 29.6	-0.5
	baz=314						
DOU	Dourbes	87.57	334	*d*PcP	P	08 48 31.1	+0.6
SCHQ	Schefferville	87.62	16	P	P	08 48 31.1	+0.4
	comp=Z,4.4nm,0.7s,baz=347,slow=4.9,SNR=8.8						
	comp=Z,4.4nm,0.7s						
DAVOX	Davos/Dischmat	88.18	329	LR	LR	09 31 32.2	
	comp=Z,115nm,19.1s,baz=70,slow=38						
SCIA	State Center	88.72	38	P	P	08 48 35.7	-0.5
	baz=318						
MNTX	Cornudas Mount	88.73	52	P	P	08 48 36.2	-0.2
	baz=311						
AMTX	Amarillo	88.95	47	P	P	08 48 37.3	-0.2
	baz=313						
KSU1	Kansas State U	88.96	42	P	P	08 48 37.5	+0.1
	baz=316						
JFWS	Jewell Farm	89.42	35	P	P	08 48 39.3	-0.2
	baz=320						
LPIG	La Paz	90.16	60	LR	LR	09 29 35.1	
	comp=Z,40nm,18.6s,baz=317,slow=36						
GLMI	Grayling	90.47	31	P	P	08 48 44.0	-0.4
	baz=322						
WMOK	Wichita Mounta	90.79	46	P	P	08 48 45.9	-0.2
	baz=314						
L44A	Lake County Fo	91.09	35	P	P	08 48 46.8	-0.5
	baz=321						
TXAR	Lajitas Array	91.39	53	P	P	08 48 49.6	+0.5
TXAR	Lajitas Array	91.39	53	P	P	08 48 49.6	+0.5
TXAR	Lajitas Array	91.39	53	P	P	08 48 49.7	+0.7
	comp=Z,1.8nm,0.8s,baz=294,slow=3.3,SNR=24						
TXAR				LR	LR	09 28 27.1	
	comp=Z,62nm,18.0s,baz=328,slow=35						
	comp=Z,1.8nm,0.8s						
HDIL	Hopedale	91.68	36	P	P	08 48 50.3	+0.2
	baz=320						
TUL3	Leonard	91.69	43	P	P	08 48 50.0	-0.2
	baz=316						
ABTX	Abilene, Hawle	91.73	48	P	P	08 48 49.6	-0.9
	baz=314						
CCM	Cathedral Cave	92.59	39	P	P	08 48 53.9	-0.4
CCM	Cathedral Cave	92.59	39	P	P	08 48 53.3	-1.0
	baz=319						
CCM	Cathedral Cave	92.59	39	P	P	08 48 53.9	-0.4
CCM				pmax	pmax		
	comp=Z,13nm,1.2s						
SADO	Sadowa	92.74	28	LR	LR	09 32 44.5	
	comp=Z,43nm,20.3s,baz=7.5,slow=37						
SFIN	Lafayette	92.88	35	P	P	08 48 55.8	+0.2
	baz=322						
JCT	Junction City	93.10	49	P	P	08 48 56.7	-0.1
	baz=314						
MIAR	Mount Ida	93.93	43	P	P	08 49 00.4	-0.1
	baz=317						
P49A	Miami Univ. Ec	94.66	34	P	P	08 49 03.9	+0.1
	baz=323						
LBNH	Lisbon	95.78	24	P	P	08 49 07.4	-1.5
	baz=333						
KEST	Kesra	97.15	323	LR	LR	09 38 03.0	
	comp=Z,53nm,19.3s,baz=326,slow=38						
TZTN	Tazewell	97.61	35	P	P	08 49 16.4	-0.9
	baz=324						
BLA	Blacksburg	98.51	33	P	P	08 49 20.6	-0.8
	baz=326						
TORD	Torodi Ar. Bea	119.26	314	PKP	PKPdf	08 54 31.8	-0.7
	comp=Z,1.3nm,0.8s,baz=15,slow=2.3,SNR=4.8						
QSPA	South Pole Qui	124.32	180	PKP	PKPdf	08 54 39.9	-0.8
	comp=Z,4.8nm,0.9s,baz=250,slow=1.5,SNR=11						

TAP ***24*** *08:38:02.5,24.89N×122.57E,h35km±1km,ML2.6,D*
JMA ***24*** *08:38:03.7±0.1,24.8N±0.8×122.5E±0.3,h10km,MV2.3/6,*
NW OFF ISHIGAKIJIMA IS

ISC 24 08:38:02.1±1.3, 24.92N±0.05×122.54E±0.03, h22km±6km, n33, σ65/64, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.51	281	*i* P	Pn	08 38 13.4	-0.6
TWB1	baz=283			*i* S	Sn	08 38 20.6	-1.5
EOS2	baz=283 EOS2	0.57	210	*e*P	Pb	08 38 13.3	0.0
EOS2	baz=210			*e*S	Sb	08 38 19.7	-1.2
JYNG	baz=210 Yonagunijimaku	0.59	141	P	Pb	08 38 14.0	+0.2
JYNG				S	Sb	08 38 21.4	-0.4
YOJ	Yonaguni jima	0.62	136	P	Pb	08 38 14.7	+0.4
YOJ	baz=131			S	Sb	08 38 22.4	-0.2
YOJ	baz=131 Yonaguni jima	0.62	136	P	Pb	08 38 14.8	+0.5
YOJ				S	Sb	08 38 22.4	-0.2
SXI1	Grass Mountain	0.63	287	*i* P	Pn	08 38 16.1	+0.3
SXI1	baz=288			*e*S	Sb	08 38 23.3	+0.4
TIPB	baz=288 Shuangxi	0.65	275	P	Pn	08 38 15.9	-0.2
TIPB	baz=277			S	Sn	08 38 24.5	-1.2
EOS3	baz=277 EOS3	0.66	198	*e*P	Pb	08 38 14.5	-0.3
EOS3	baz=207			*e*S	Sn	08 38 24.3	-1.3
TWC	baz=207 Suao	0.70	244	*e*P	Pb	08 38 14.9	-0.7
TWC	baz=246			*e*S	Sn	08 38 25.2	-1.5
NWF	baz=246 Wu-fen Shan	0.71	283	*i* P	Pb	08 38 15.7	0.0
NWF	baz=284			*i* S	Sn	08 38 27.1	0.0
WFSB	baz=284 Wu-fen Shan	0.71	283	S	Sn	08 38 27.1	+0.2
NDS	baz=284 Dongshan	0.80	250	P	Pn	08 38 17.7	-0.4
NDS	baz=252			S	Sn	08 38 29.5	+0.2
EOS4	baz=252 EOS4	0.82	194	*e*P	Pb	08 38 17.4	+0.1
EOS4	baz=191			*e*S	Sb	08 38 27.3	-0.5
TWE	baz=191 Neicheng	0.82	256	*i* P	Pb	08 38 17.5	0.0
TWE	baz=258			*i* S	Sn	08 38 29.2	-0.5
EWUT	baz=258 Wuta	0.84	236	P	Pb	08 38 17.5	-0.4
EWUT	baz=238			S	Sb	08 38 28.8	+0.1
ENA	baz=238 Nanau	0.87	236	*i* P	Pb	08 38 18.3	-0.3
ENA	baz=238			*i* S	Sb	08 38 29.4	-0.4
FUSB	baz=238 Fushanzhiwuyua	0.88	260	*e*P	Pn	08 38 19.1	-0.1
FUSB	baz=269			*e*S	Sn	08 38 31.2	-0.1
ENTT	baz=269 Nioudou	0.93	253	*e*P	Pn	08 38 20.7	+0.8
NWLT	baz=254 Wulai	0.95	262	P	Pn	08 38 20.5	+0.3
NWLT	baz=263			S	Sn	08 38 32.8	-0.3
NDT	baz=263 Datong Townshi	0.98	252	*e*P	Pn	08 38 21.5	+0.9
NDT	baz=253			*e*S	Sn	08 38 34.4	+0.5
LATG	baz=253 Datong	1.00	248	*e*P	Pn	08 38 21.0	+0.1
LATG	baz=250			*e*S	Sb	08 38 33.2	-0.3
YHNB	baz=250 Yeheng	1.09	257	*e*P	Pn	08 38 22.7	+0.6
YHNB	baz=249			*e*S	Sn	08 38 36.3	-0.1
NSK	baz=249 Sanguang	1.10	258	*e*P	Pn	08 38 22.8	+0.6
NSK	baz=250			*e*S	Sn	08 38 36.4	-0.4
NACB	baz=250 Ninganchiao	1.13	230	*e*P	Pn	08 38 22.6	-0.1
NACB	baz=238			*e*S	Sb	08 38 35.9	-1.4
NNSB	baz=238 Datong	1.16	246	*e*P	Pb	08 38 23.8	+0.3
NNSB	baz=247			*e*S	Sn	08 38 38.9	+0.5
NNS	baz=247 Nan Shan	1.16	246	*e*P	Pb	08 38 23.8	+0.3
NNS	baz=247			*e*S	Sn	08 38 38.7	+0.3
ETLH	baz=247 Xiulin Townshi	1.19	234	*e*P	Pb	08 38 23.8	-0.3
ETLH	baz=242			*e*S	Sn	08 38 40.5	+1.3
NFF	baz=242 Wufeng Townshi	1.32	258	*e*P	Pb	08 38 26.4	+0.1
NFF	baz=259			*e*S	Sb	08 38 42.6	-0.2
FUSS	baz=259 Fushou	1.35	241	*e*P	Pb	08 38 27.3	+0.4
FUSS	baz=249			*e*S	Sb	08 38 44.3	+0.5
LXIB	baz=249 Xiulin Townshi	1.36	229	*e*P	Pb	08 38 26.9	-0.1
LXIB	baz=219			*e*S	Sb	08 38 45.5	+1.6
SHUL	baz=219 Shoufeng	1.43	219	*e*P	Pb	08 38 28.5	+0.4
SHUL	baz=209			*e*S	Sb	08 38 46.7	+0.8
CHGB	baz=209 Renai	1.51	236	*e*P	Pb	08 38 30.0	+0.5
CHGB	baz=222			*e*S	Sb	08 38 49.7	+1.4
WARBT	baz=222 Fenglin Townsh	1.59	222	*e*P	Pn	08 38 29.1	+0.1
WARBT	baz=223			*e*S	Sn	08 38 48.9	+0.1
	baz=223						

AFAD ***24*** *08:43:55.7±0.0,38.11N×27.33E,h7km±7km,ML1.9*

ISK 24 08:43:56.9, 35.63N×26.36E, h13km, ML2.7/10, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.53	192	Pg	Pb	08 44 08.1	0.0
ZKR				Sg	Sb	08 44 15.2	-0.4
KARP	Karpathos	0.66	97	Pg	Pb	08 44 10.3	-0.1
SANT	Santorini	1.04	316	Pg	Pn	08 44 17.2	0.0
SANT				Sg	Sn	08 44 32.0	+0.4
YAZI	Mula-Dat§a-	1.37	40	P	Pb	08 44 22.1	-0.3
YAZI				S	Sn	08 44 37.6	-2.3
YAZI				*i* AML	AML	08 44 39.0	
	comp=E,16nm,0.4s						
YAZI				*i* AML	AML	08 44 43.0	
	comp=N,11nm,0.2s						
DAT	Datca	1.48	42	Pn	Pb	08 44 24.0	-0.3
DAT	Datca	1.48	42	P	Pn	08 44 22.8	-0.5
DAT				S	Sn	08 44 42.5	-0.1
DAT				*i* AML	AML	08 44 50.0	
	comp=E,28nm,0.5s						
ARG	Arkhangelos	1.55	67	Pn	Pn	08 44 24.4	+0.2
APE	Apeiranthos	1.58	335	Pn	Pb	08 44 25.7	-0.4
TURN	Turunc	1.91	53	P	Pn	08 44 29.9	+0.8
TURN				S	Sn	08 44 51.4	-1.6
TURN				*i* AML	AML	08 44 55.0	
	comp=E,38nm,0.3s						
DALY	Dalyan (Mula)	2.20	57	Pn	Pn	08 44 34.4	+1.2
FETY	Fethiye	2.42	65	Pn	Pn	08 44 37.4	+1.1
FETY	Fethiye	2.42	65	P	Pn	08 44 37.3	+1.0
IZZE	Mula-Seydike	2.46	70	P	Pn	08 44 37.2	+0.4
DNZT	Denizli-Tavas-	2.71	52	P	Pn	08 44 23.7	-17
DNZT				S	Sn	08 44 40.3	-33
CAME	Cameli-Denizli	2.72	60	Pn	Pn	08 44 41.7	+1.3
TAVA	DENIZLI_Tavas	2.75	48	P	Pn	08 44 23.7	-17
TAVA				S	Sn	08 44 42.4	-32
APMY	Acipayam-Deniz	3.00	51	Pn	Pn	08 44 45.7	+1.4

CATAC ***24*** *08:51:18.7±0.4,13.52N×91.72W,h12km±6km,ML3.6*
GCG ***24*** *08:51:27.9±0.7,14.06N×91.47W,h59km±19km,MD3.7*

ISC 24 08:51:18.9±2.2, 13.54N±0.08×91.72W±0.09, h12km±12km, n43, σ77/83, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SULM	Suchitepequez,	0.78	11	*e*P	Pn	08 51 37.6	+1.8
RTAL	Retalhuleu	0.98	1	*i* P	Pb	08 51 37.7	-0.3
RTAL				*i* S	Sb	08 51 51.3	+0.4
RTAL				IAML		08 52 06.4	
	comp=Z,600nm,1.0s						
STG3	Santiaguito 3,	1.18	7	*e*P	Pg	08 51 42.3	+0.7
STG3				*e*S	Sb	08 51 53.4	-3.2
FUG	Fuego 3	1.24	43	*e*P	Pg	08 51 43.4	+0.5
FUG				*e*S	Sb	08 51 58.2	-0.3
PCG	Pacaya	1.37	52	*e*P	Pg	08 51 45.2	-0.2
SMSP	San Marcos	1.43	357	*i* P	Pn	08 51 44.8	-0.2
SMSP				*i* S	Sn	08 52 03.5	-0.5
SMSP				IAML		08 52 10.5	
	comp=Z,900nm,1.0s						
GCG4	OSOP	1.55	48	*i* P	Pn	08 51 46.3	-0.3
GCG4				*i* S	Sn	08 52 07.0	+0.2
GCG4				IAML		08 52 09.9	
	comp=Z,730nm,1.0s						
NBG	Las Nubes	1.69	52	*e*P	Pn	08 51 47.3	-1.3
GUNB	GUNB	1.70	51	*i* P	Pn	08 51 48.9	+0.2
GUNB				*i* S	Sn	08 52 11.1	+0.5
GUNB				IAML		08 52 17.2	
	comp=Z,270nm,1.0s						
HUEH	Huehuetenango	1.78	7	*i* P	Pn	08 51 49.4	-0.4
HUEH				*i* S	Sn	08 52 13.2	+0.6
HUEH				IAML		08 52 23.6	
	comp=Z,340nm,1.0s						
NUBE	Las Nubes	1.92	79	*i* P	Pn	08 51 51.0	-0.6
NUBE				*i* S	Sn	08 52 16.5	+0.7
NUBE				IAML		08 52 20.1	
	comp=Z,100nm,1.0s						
LOAL	Lomas de Alarc	1.94	76	*i* P	Pn	08 51 51.8	0.0
LOAL				IAML		08 51 58.8	
	comp=Z,2μm,1.0s						
LOAL				*i* S	Sn	08 52 16.4	+0.3
CEVE	Cerro Verde	2.05	82	*i* P	Pn	08 51 53.2	-0.4
CEVE				*i* S	Sn	08 52 20.4	+1.1
CEVE				IAML		08 52 32.0	
	comp=Z,310nm,1.0s						
JUAM	Asuncion Mita	2.11	68	*i* P	Pn	08 51 54.4	+0.3
JUAM				*i* S	Sn	08 52 21.5	+1.2
JUAM				IAML		08 53 04.5	
	comp=Z,630nm,1.0s						
UNIC	Universidad Ca	2.15	78	*i* P	Pn	08 51 54.4	-0.4
UNIC				*i* S	Sn	08 52 22.6	+1.1
UNIC				IAML		08 52 29.2	
	comp=Z,210nm,1.0s						
JAYA	Jayaque - finc	2.21	87	*i* P	Pn	08 51 55.3	-0.3
JAYA				*i* S	Sn	08 52 23.3	+0.3
JAYA				IAML		08 52 28.6	
	comp=Z,340nm,1.0s						
AVCB	Coban	2.30	33	*i* P	Pn	08 51 56.8	-0.1
AVCB				IAML		08 52 00.2	
	comp=Z,2μm,1.0s						
AVCB				*i* S	Sn	08 52 26.5	+1.2
LALI	Alcalda de L	2.33	91	*i* P	Pn	08 51 56.3	-0.9
LALI				*i* S	Sn	08 52 26.4	+0.6
LALI				IAML		08 52 45.3	
	comp=Z,120nm,1.0s						
PMON	Piamonte	2.34	85	*i* P	Pn	08 51 57.6	+0.2
PMON				*i* S	Sn	08 52 26.5	+0.3
PMON				IAML		08 52 41.8	
	comp=Z,210nm,1.0s						
ITCA	Escuela Especi	2.38	86	*i* P	Pn	08 51 57.5	-0.4
ITCA				*i* S	Sn	08 52 27.0	0.0
ITCA				IAML		08 53 29.0	
	comp=Z,1μm,1.0s						
QUEZ	Alcaldia de Qu	2.39	83	*i* P	Pn	08 51 57.4	-0.7
QUEZ				*i* S	Sn	08 52 28.4	+1.0
QUEZ				IAML		08 52 33.9	
	comp=Z,1μm,1.0s						
UEES	Universidad Ev	2.42	85	*i* P	Pn	08 51 57.4	-1.0
UEES				*i* S	Sn	08 52 28.4	+0.4
UEES				IAML		08 52 37.2	
	comp=Z,100nm,1.0s						
SNET	Serv Nac Est T	2.42	86	*i* P	Pn	08 51 57.9	-0.6
SNET				*i* S	Sn	08 52 29.0	+0.9
SNET				IAML		08 52 50.4	
	comp=Z,960nm,1.0s						
SEMO	Seminario San	2.43	86	*i* P	Pn	08 51 58.1	-0.5
SEMO				*i* S	Sn	08 52 28.8	+0.5
SEMO				IAML		08 53 55.4	
	comp=Z,2μm,1.0s						
UTEC	Universidad Te	2.45	86	*i* P	Pn	08 51 59.4	+0.5
UTEC				*i* S	Sn	08 52 29.1	+0.2
UTEC				IAML		08 52 33.3	
	comp=Z,340nm,1.0s						
PANCS	Alcalda de	2.47	88	*i* P	Pn	08 51 58.1	-1.0
PANCS				*i* S	Sn	08 52 29.2	-0.1
PANCS				IAML		08 53 52.5	
	comp=Z,1μm,1.0s						
LOMA	Loma Larga	2.48	87	*i* P	Pn	08 51 58.9	-0.4
LOMA				*i* S	Sn	08 52 30.7	+1.1
LOMA				IAML		08 52 41.5	
	comp=Z,110nm,1.0s						
IGN	Direccin Gen	2.48	86	IAML		08 51 56.6	
	comp=Z,3μm,1.0s						
IGN				*i* P	Pn	08 51 59.3	0.0
IGN				*i* S	Sn	08 52 29.5	-0.1
UDBS	Universidad Do	2.50	86	*i* P	Pn	08 51 59.6	+0.1
UDBS				IAML		08 52 05.2	
	comp=Z,350nm,1.0s						
UDBS				*i* S	Sn	08 52 31.4	+1.4
ESQI	Esquipulas	2.52	66	*i* P	Pn	08 52 00.1	+0.2
ESQI				*i* S	Sn	08 52 31.9	+1.3
ESQI				IAML		08 52 50.0	
	comp=Z,93nm,1.0s						
SJTE	Alcalda de S	2.64	88	*i* P	Pn	08 52 01.4	-0.1
SJTE				IAML		08 52 20.3	
	comp=Z,96nm,1.0s						
SJTE				*i* S	Sn	08 52 33.7	+0.2
PAVA	Las Pavas	2.71	86	*i* P	Pn	08 52 01.9	-0.6
PAVA				*i* S	Sn	08 52 35.5	+0.2
PAVA				IAML		08 52 54.4	
	comp=Z,120nm,1.0s						
COEG	Centro de Oper	2.76	88	*i* P	Pn	08 52 02.6	-0.5
COEG				IAML		08 52 10.3	

comp=Z,61nm,1.0s
COEG *i* S **Sn** **08 52 36.9 +0.4**
UESV Universidad de 2.85 88 *i* P **Pn** **08 52 03.9 -0.5**
UESV *i* S **Sn** **08 52 39.1 +0.4**
UESV IAML 08 53 34.4
comp=Z,320nm,1.0s
TECO Alcaldia de Te 2.85 90 *i* P **Pn** **08 52 04.3 -0.1**
TECO *i* S **Sn** **08 52 39.9 +1.1**
TECO IAML 08 53 09.3
comp=Z,130nm,1.0s
SCLA Alcaldia de Sa 2.91 86 *i* P **Pn** **08 52 04.3 -0.9**
SCLA *i* S **Sn** **08 52 40.2 0.0**
SCLA IAML 08 53 35.2
comp=Z,37nm,1.0s
ALJI Alcalda de J 3.07 94 *i* P **Pn** **08 52 06.7 -0.6**
ALJI *i* S **Sn** **08 52 44.6 +0.6**
ALJI IAML 08 53 46.7
comp=Z,160nm,1.0s
PACA Pacayal 3.30 91 *i* P **Pn** **08 52 11.3 +0.7**
PACA *i* S **Sn** **08 52 50.6 +0.6**
PACA IAML 08 53 06.9
comp=Z,240nm,1.0s
JUCU Jucuarɲn 3.39 94 *i* P **Pn** **08 52 12.4 +0.6**
JUCU *i* S **Sn** **08 52 53.3 +1.3**
JUCU IAML 08 53 03.3
comp=Z,39nm,1.0s
LCND La Caada 3.73 93 *i* P **Pn** **08 52 16.6 +0.2**
LCND *i* S **Sn** **08 53 00.9 +0.5**
LCND IAML 08 53 08.1
comp=Z,35nm,1.0s
IZABA Izabal, Puerto 3.73 54 *i* P **Pn** **08 52 15.9 -0.6**
IZABA *i* S **Sn** **08 53 01.0 +0.6**
IZABA IAML 08 54 40.8
comp=Z,4.8nm,1.0s
CNCH Conchagua 3.79 93 *i* P **Pn** **08 52 17.6 +0.3**
CNCH *i* S **Sn** **08 53 02.1 +0.2**
CNCH IAML 08 53 42.0
comp=Z,120nm,1.0s
PETF Flores 3.81 28 *i* P **Pn** **08 52 16.9 -0.6**
PETF *i* S **Sn** **08 53 03.4 +1.2**
PETF IAML 08 53 24.5
comp=Z,35nm,1.0s

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*NNC **24** 08:51:37.4±2.7,51˚.71N×75˚.46E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=32.2km s-min=15.2km az=12.0, Suspected Mining explosion.*
*IDC **24** 08:51:39.7±1.1,51˚.73N×75˚.78E, h0km, mbtmp2.7/3, ML1.8/3, Error ellipse: s-maj=25.0km s-min=8.6km az=29.0*
ISC 24 08:51:39.6±1.1, 51˚.6N±0˚.1×75˚.65E±0˚.05, h0km, n10, σ0 90/8, 4C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.08**	**118**	⇑Pg			**Pg**	**08 52 18.8**	**-0.6**
	3.9nm,0.3s								
KURBB				⇑Lg			Lg	08 52 47.5	
	30nm,0.6s								
KURBB	**Kurchatov Arra**	**2.08**	**118**	Pg			**Pn**	**08 52 16.2**	**+0.6**
	0.2nm,0.3s,baz=305,slow=19,SNR=6.0								
KURBB				Lg			Lg	08 52 46.1	
	0.4nm,0.3s,baz=306,slow=32,SNR=20								
KURK	**Kurchatov**	**2.08**	**115**	⇑Pg			**Pb**	**08 52 18.3**	**+0.1**
	3.3nm,0.7s								
KURK				⇓Lg			Lg	08 52 45.9	
	14nm,0.7s								
BVA0	**Borovoye Array**	**3.52**	**295**	⇓Lg			Lg	08 53 21.8	
	4.6nm,0.7s,baz=120,slow=27,SNR=6.3								
BVAR	**Borovoye Array**	**3.52**	**295**	Pn			**Pn**	**08 52 34.8**	**-0.6**
	baz=115,slow=17,SNR=4.5								
BVAR				Sn			**Sn**	**08 53 18.9**	**+1.2**
	0.1nm,0.3s,baz=115,slow=25,SNR=8.6								
	1.4nm,0.6s								
OTUK	**Ortayu**	**4.02**	**213**	⇓Lg			Lg	08 53 45.4	
	2.2nm,0.6s								
I46RU	**ZALESOVO INFRA**	**6.02**	**64**	I			I	09 24 50.0	
	baz=249,slow=329,SNR=4.0								
ZALV	**Zalesovo Beam**	**6.02**	**64**	Pn			**Pn**	**08 53 10.5**	**+0.7**
	0.2nm,0.3s,baz=252,slow=14,SNR=4.4								
ZALV				Sn			**Sn**	**08 54 18.8**	**-0.7**
	0.1nm,0.3s,baz=246,slow=25,SNR=2.1								
	0.7nm,0.5s								
MK31	**Makanchi Array**	**6.51**	**136**	⇑Lg			Lg	08 55 05.6	
	0.9nm,0.5s,baz=324,slow=31,SNR=6.2								
MKAR	**Makanchi Array**	**6.51**	**136**	Pn			**Pn**	**08 53 17.4**	**+0.8**
	baz=320,slow=9.9,SNR=3.6								
MKAR				Lg			Lg	08 55 06.5	
	0.2nm,0.3s,baz=318,slow=21,SNR=7.2								
	0.4nm,0.8s								

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*AEIC **24** 08:54:32.1±1.3,51˚.29N±0˚.06×177˚.93W±0˚.06, h40km±7km, Error ellipse: s-maj=8.5km s-min=5.1km az=169.0*
*NEIC **24** 08:54:32.7±1.2,51˚.28N±0˚.05×177˚.93W±0˚.05, h40km±13km, mb3.7/21, ML3.0(AEIC), Error ellipse: s-maj=7.7km s-min=4.9km az=176.0*
*IDC **24** 08:54:43.0±17.0,52˚.24N×175˚.38W, h0km, mb3.1/3, mbtmp3.1/4, ML2.9/1, Error ellipse: s-maj=343.8km s-min=70.0km az=84.0*
ISC 24 08:54:32.6±1.7, 51˚.3N±0˚.1×177˚.93W±0˚.04, h41km±17km, n45, σ0 63/51, mb3.3/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TAFL	**Tanaga Flats**	**0.48**	**3**				**Pn**	**08 54 42.5**	**-0.6**
TAPA	**Tanaga Point A**	**0.54**	**8**				**Pn**	**08 54 43.5**	**-0.5**
TASE	**Tanaga Southea**	**0.56**	**353**				**Pn**	**08 54 44.0**	**-0.2**
TAFP	**Tanaga Falls P**	**0.62**	**357**				**Pn**	**08 54 44.6**	**-0.4**
TAFP							**Sn**	**08 54 54.3**	**+0.4**
TANO	**Tanaga North**	**0.65**	**350**				**Pn**	**08 54 45.5**	**+0.1**
GALAA	**Gareloi Lava P**	**0.71**	**313**				**Pn**	**08 54 46.2**	**-0.1**
GAEA	**Gareloi East**	**0.72**	**315**				**Pn**	**08 54 46.1**	**-0.1**
GAEA							**Sn**	**08 54 56.8**	**+0.7**
KIWB	**Kanaga Island**	**0.76**	**40**				**Pn**	**08 54 46.4**	**-0.3**
KIKV	**Kanaga Island**	**0.77**	**38**				**Pn**	**08 54 46.6**	**-0.4**
KIKV							**Sn**	**08 54 57.8**	**+0.4**
GANO	**Gareloi North**	**0.77**	**315**				**Pn**	**08 54 46.6**	**-0.4**
ADK	**Adak**	**0.99**	**52**				**Pn**	**08 54 49.3**	**-0.7**
ADK							**Sn**	**08 55 03.0**	**+0.3**
GSCK	**Great Sitkin C**	**1.33**	**56**				**Pn**	**08 54 54.6**	**0.0**
GSCK							**Sn**	**08 55 11.4**	**+0.3**
GSMY	**Great Sitkin M**	**1.40**	**56**				**Pn**	**08 54 55.9**	**+0.3**
GSTR	**Great Sitkin T**	**1.42**	**54**				**Pn**	**08 54 55.6**	**-0.4**
CEPE	**Semis' Perret**	**1.66**	**295**				**Pn**	**08 54 59.1**	**0.0**
AMKA	**Amchitka**	**1.74**	**274**				**Pn**	**08 54 59.7**	**-0.5**
AMKA							**Sn**	**08 55 21.9**	**+0.8**
ATKA	**Atka Island**	**2.50**	**67**				**Pn**	**08 55 10.2**	**-0.5**
ATKA							**Sn**	**08 55 40.5**	**+0.6**
KOWE	**Korovin West**	**2.53**	**63**				**Sn**	**08 55 43.2**	**+2.4**
F15K	**North Star Dit**	**15.99**	**20**	Pn			**Pn**	**08 58 13.9**	**-0.3**
KDAK	**Kodiak Island**	**16.03**	**56**	Pn			**Pn**	**08 58 14.1**	**-0.6**
TTA	**Tatalina**	**16.56**	**37**	P			**P**	**08 58 23.9**	**+0.3**
TTA				IAmb			IAmb	08 58 24.4	
	comp=Z,8.0nm,1.4s								
BRLK	**Bradley Lake**	**17.40**	**50**	P			**Pn**	**08 58 31.3**	**-0.7**
SKT	**Skwentna**	**17.90**	**43**	P			**P**	**08 58 39.5**	**+1.1**
SKT				IAmb			IAmb	08 58 46.3	
	comp=Z,8.1nm,1.3s								
J20K	**Nowinta River**	**17.96**	**35**	P			**P**	**08 58 39.5**	**+0.5**
SUA	**Susitna One**	**18.04**	**45**	P			**P**	**08 58 40.2**	**+0.2**
SUA				IAmb			IAmb	08 59 09.0	
	comp=Z,11nm,1.4s								
CAST	**Castle Rocks**	**18.33**	**39**	P			**Pn**	**08 58 43.7**	**+0.3**
F19K	**Shaleruckik Mo**	**18.57**	**25**	P			**P**	**08 58 45.7**	**+0.1**
F19K				IAmb			IAmb	08 59 01.7	
	comp=Z,4.3nm,1.5s								
KTH	**Kantishna Hill**	**18.86**	**39**	P			**P**	**08 58 49.0**	**+0.1**
KTH				IAmb			IAmb	08 59 03.5	
	comp=Z,13nm,1.5s								
TRF	**Thorofare Moun**	**19.06**	**40**	P			**P**	**08 58 51.3**	**+0.1**
TRF				IAmb			IAmb	08 58 57.7	
	comp=Z,6.0nm,1.0s								
E19K	**Redstone River**	**19.18**	**25**	P			**P**	**08 58 52.2**	**-0.1**
IMAR	**Indian Mountai**	**19.18**	**31**	P			**P**	**08 58 52.4**	**0.0**
G21K	**Allakaket**	**19.59**	**30**	P			**P**	**08 58 56.9**	**0.0**
G21K				IAmb			IAmb	08 59 01.0	
	comp=Z,2.0nm,0.8s								
MLY	**Manley**	**19.66**	**35**	P			**P**	**08 58 57.3**	**-0.3**
MLY				IAmb			IAmb	08 59 01.7	
	comp=Z,2.2nm,0.7s								
D19K	**Kuna River**	**19.75**	**22**	P			**P**	**08 58 58.8**	**+0.2**
D19K				IAmb			IAmb	08 59 18.5	
	comp=Z,6.6nm,1.5s								
I23K	**Minto, Yukon-K**	**20.23**	**36**	P			**P**	**08 59 04.0**	**+0.4**
M24K	**Tolsona, Glenn**	**20.30**	**46**	P			**P**	**08 59 05.3**	**+0.7**
G23K	**Bananza Creek**	**20.82**	**32**	P			**P**	**08 59 10.7**	**+0.5**
ILAR	**Eielson Array**	**20.98**	**38**	P			**P**	**08 59 10.4**	**-1.5**
	baz=238,slow=9.0,SNR=5.6								
	comp=Z,0.3nm,0.8s								
F24K	**Squaw Lake**	**21.97**	**31**	P			**P**	**08 59 23.4**	**+0.9**
F24K				IAmb			IAmb	08 59 27.2	
	comp=Z,4.0nm,1.2s								
BMAR	**Burnt Mountain**	**23.02**	**33**	P			**P**	**08 59 33.5**	**-0.1**
K29M	**Barlow Dome**	**24.57**	**44**	P			**P**	**08 59 47.7**	**-0.5**
I30M	**Mount Dempster**	**25.35**	**41**	P			**P**	**08 59 55.0**	**-0.4**
I30M				IAmb			IAmb	09 00 07.0	
	comp=Z,1.6nm,1.1s								
YKA	**Yellowknife Ar**	**34.91**	**46**	P			**P**	**09 01 18.9**	**-0.8**
	comp=Z,0.1nm,0.6s,baz=285,slow=8.3,SNR=2.3								
	comp=Z,0.1nm,0.6s								
PDAR	**Pinedale Array**	**45.82**	**73**	P			**P**	**09 02 51.0**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=321,slow=3.2,SNR=6.1								
	comp=Z,0.2nm,0.5s								
TXAR	**Lajitas Array**	**58.13**	**82**	P			P	09 04 28.0	+6.0
	comp=Z,0.1nm,0.4s,baz=325,slow=7.7,SNR=1.6								
	comp=Z,0.1nm,0.4s								

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*SKHL **24** 08:57:01.9±0.6, 46˚.90N×154˚.20E, h44km±6km, mb4.9/6*
*MOS **24** 08:57:01.7±1.4, 46˚.95N×154˚.04E, h38km, mb4.1/11, Error ellipse: s-maj=8.7km s-min=7.0km az=75.1*
*NEIC **24** 08:57:06.7±1.6, 47˚.3N±0˚.1×153˚.6E±0˚.2, h53km±9km, mb4.2/15, Error ellipse: s-maj=24.0km s-min=11.0km az=138.0*
*IDC **24** 08:57:06.0±3.0, 47˚.16N×153˚.65E, h54km±27km, mb3.5/15, mbtmp3.9/17, ML3.3/2, MS3.3/8, Error ellipse: s-maj=20.4km s-min=15.1km az=142.0*
ISC 24 08:57:02.5±0.6, 46˚.95N±0˚.07×154˚.03E±0˚.06, h27km, n115, σ1 66/111, mb4.0/37, MS3.6/5, 3C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.99**	**20**	*e*PN			**Pn**	**08 58 01.3**	**-0.5**
SKR					pmax	pmax			
	comp=Z,170nm,0.5s								
SKR					MLR	MLR			
	comp=Z,400nm,12.0s								
SKR	**Severo-Kuril's**	**3.99**	**20**	*e*P			**Pn**	**08 58 01.5**	**-0.3**
SKR					AMB	AMB		08 58 03.8	
	comp=Z,170nm,0.5s								
SKR					*e*S		**Sn**	**08 58 45.2**	**-2.4**
SKR					A	A		08 58 54.2	
	comp=Z,400nm,0.8s								
SKR					A	A		08 58 54.2	
	comp=Z,250nm,0.8s								
KUR	**Kuril'sk**	**4.62**	**250**	⇑*i*PN			**Pn**	**08 58 11.3**	**+0.9**
KUR					pmax	pmax			
	comp=Z,114nm,0.7s								
KUR					pmax	pmax			
	comp=E,31nm,0.6s								
KUR					pmax	pmax			
	comp=N,35nm,0.7s								
KUR	**Kuril'sk**	**4.62**	**250**	*i* P			**Pn**	**08 58 11.1**	**+0.7**
KUR					AMB	AMB		08 58 13.1	
	comp=N,110nm,0.7s								
KUR					*i* S		**Sn**	**08 59 02.6**	**-0.5**
KUR					A	A		08 59 10.0	
	comp=N,340nm,0.6s								
KUR					A	A		08 59 10.0	
	comp=N,150nm,0.6s								
PAU	**Pauzhetka**	**4.88**	**21**	*e*P			**Pn**	**08 58 14.6**	**+0.5**
PAU					AMB	AMB		08 58 17.5	
	comp=N,50nm,0.6s								
PAU					*e*S		**Sn**	**08 59 07.8**	**-1.8**
PAU					A	A		08 59 10.6	
	comp=N,200nm,0.3s								
PAU					A	A		08 59 10.6	
	comp=N,150nm,0.3s								
SHO	**Shikotan**	**5.93**	**241**	*e*PN			**Pn**	**08 58 27.8**	**-0.7**
SHO					pmax	pmax			
	comp=Z,33nm,0.3s								
SHO	**Shikotan**	**5.93**	**241**	*e*P			**Pn**	**08 58 27.8**	**-0.7**
SHO					AMB	AMB		08 58 29.1	
	comp=Z,30nm,0.3s								
SHO					*e*S		**Sn**	**08 59 28.6**	**-6.8**
SHO					A	A		08 59 32.7	
	comp=Z,30nm,0.5s								
SHO					A	A		08 59 32.7	
	comp=Z,80nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**6.43**	**246**	*c i*PN			**Pn**	**08 58 35.7**	**+0.3**
YUK					pmax	pmax			
	comp=N,17nm,0.2s								
YUK					pmax	pmax			
	comp=E,36nm,0.2s								
YUK					pmax	pmax			
	comp=Z,88nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**6.43**	**246**	*i* P			**Pn**	**08 58 35.7**	**+0.3**
YUK					AMB	AMB		08 58 40.0	
	comp=Z,90nm,0.5s								
YUK					*e*S		**Sn**	**08 59 46.0**	**-1.9**
YUK					A	A		08 59 53.3	
	comp=Z,160nm,0.7s								
YUK					A	A		08 59 53.3	
	comp=Z,210nm,0.7s								
PEA0B	**Petropavlovsk-**	**6.61**	**20**	Pn			**Pn**	**08 58 37.5**	**-0.2**
PEA0B	**Petropavlovsk-**	**6.61**	**20**	*i* PN			**Pn**	**08 58 37.6**	**-0.2**
PETK	**Petropavlovsk-**	**6.61**	**20**	Pn			**Pn**	**08 58 37.0**	**-0.8**
PETK	**Petropavlovsk-**	**6.61**	**20**	P			**Pn**	**08 58 37.6**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=179,slow=12,SNR=32								
	comp=Z,5.3nm,0.6s								
PET	**Petropavlovsk**	**6.77**	**24**	*e*S			**Sn**	**08 59 53.1**	**-3.1**
PET					A	A		08 59 54.4	
	comp=Z,70nm,0.6s								
PET					A	A		08 59 54.4	
	comp=Z,50nm,0.6s								
RUSJ	**Misakicho**	**6.79**	**248**	*e*PN			**Pn**	**08 58 42.6**	**+2.3**
NMR	**Nemuro--Hokkai**	**6.87**	**242**	*e*PN			**Pn**	**08 58 38.9**	**-2.5**
NMR	**Nemuro--Hokkai**	**6.87**	**242**	*e*P			**Pn**	**08 58 39.9**	**-1.5**
AKK	**Akkeshi**	**7.60**	**242**	*e*P			**Pn**	**08 58 51.7**	**+0.2**
YSS	**Yuzh-Sakhalins**	**7.71**	**274**	*e*PN			**Pn**	**08 58 57.1**	**+4.1**
YSS					pmax	pmax			
	comp=Z,20nm,0.9s								
YSS	**Yuzh-Sakhalins**	**7.71**	**274**	*e*S			**Sn**	**09 00 19.0**	**-0.4**
YSS					*e*P		**Pn**	**08 58 56.1**	**+3.1**
YSS					AMB	AMB		08 59 02.8	
	comp=Z,20nm,0.9s								
YSS					A	A		09 00 25.2	
	comp=Z,10.0nm,0.5s								
YSS					A	A		09 00 25.2	
	comp=Z,20nm,0.5s								
TYV	**Tymovskoe**	**8.45**	**302**	*e*PN			**Pn**	**08 59 05.3**	**+2.2**
TYV					pmax	pmax			
	comp=Z,5.0nm,1.0s								
TYV					pmax	pmax			
	comp=Z,100nm,3.5s								
TYV	**Tymovskoe**	**8.45**	**302**	*e*S			**Sn**	**09 00 35.9**	**-1.6**
TYV					*e*P		**Pn**	**08 59 04.9**	**+1.8**
TYV					AMB	AMB		08 59 06.1	
TYV					AMB	AMB		08 59 09.4	
	comp=Z,100nm,4.0s								
TYV					A	A		09 00 37.5	
	comp=Z,100nm,5.0s								
TYV					A	A		09 00 37.5	
	comp=Z,200nm,5.0s								
TYV					A	A		09 00 38.0	
	comp=Z,10.0nm,0.6s								
TYV					A	A		09 00 38.0	
	comp=Z,10.0nm,0.6s								
JKA	**Kamikawa-asahi**	**8.51**	**255**				**Pn**	**08 59 06.4**	**+2.5**
JKA	**Kamikawa-asahi**	**8.51**	**255**	*e*P			**Pn**	**08 59 06.4**	**+2.5**
ASAJ	**Asahikawa**	**8.51**	**255**	PN			**Pn**	**08 59 06.4**	**+2.5**
ASAJ	**Asahikawa**	**8.51**	**255**	P			**Pn**	**08 59 05.7**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=72,slow=10,SNR=6.9								
	comp=Z,24nm,1.0s								
ERM	**Erimo**	**9.20**	**242**	Pn			**Pn**	**08 59 13.9**	**+0.5**
ERM	**Erimo**	**9.20**	**242**	*i* PN			**Pn**	**08 59 14.4**	**+1.0**
MA2	**Magadan**	**12.80**	**352**	LR			LR	09 04 13.6	
	comp=Z,98nm,19.4s,baz=118,slow=34								
KLR	**Kul'dur**	**15.05**	**287**	*i* P			**Pn**	**09 00 35.1**	**+1.9**
KLR					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KLR	**Kul'dur**	**15.05**	**287**	LR			LR	09 06 17.2	
	comp=Z,79nm,19.0s,baz=89,slow=37								
KLR	**Kul'dur**	**15.05**	**287**	*e*P			**Pn**	**09 00 31.0**	**-2.2**
USA0B	**Ussuriysk Arra**	**15.67**	**268**	*i* P			**Pn**	**09 00 42.9**	**+1.6**
USRK	**Ussuriysk Ar.**	**15.67**	**268**	LR			LR	09 06 22.3	
	comp=Z,118nm,20.1s,baz=232,slow=36								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SEY	**Seymchan**	**16.05**	**357**	*i* P			**Pn**	**09 00 46.4**	**+0.3**
SEY					pmax	pmax			
	comp=Z,1.0nm,1.0s								
HEH	**HeiHe**	**17.87**	**290**	*e*P			**P**	**09 01 09.9**	**+0.4**
HEH					pmax	pmax			
	comp=Z,11nm,1.2s								
ZEA	**Zeya**	**18.32**	**302**	*e*P			**Pn**	**09 01 16.6**	**+2.2**
ZEA	**Zeya**	**18.32**	**302**	*e*P			**Pn**	**09 01 15.7**	**+1.3**
YAK	**Yakutsk**	**20.50**	**326**	*i* P			**P**	**09 01 36.3**	**-1.8**
YAK					pmax	pmax			
	comp=Z,7.0nm,0.6s								
KSRS	**Korea Array**	**21.45**	**253**	*e*P			**P**	**09 01 50.2**	**+1.6**
KSRS					pmax	pmax			
	comp=Z,2.0nm,0.9s								
KSRS	**Korea Array**	**21.45**	**253**	P			**P**	**09 01 48.9**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=60,slow=9.8,SNR=4.6								
KSRS					LR		LR	09 08 56.8	
	comp=Z,38nm,18.8s,baz=75,slow=33								
	comp=Z,2.3nm,0.9s								
KSRS	**Korea Array**	**21.45**	**253**	*e*P			**P**	**09 01 50.2**	**+1.6**
BILL	**Bilibino**	**22.06**	**12**	*i* P			**P**	**09 01 56.1**	**+1.2**
BILL					pmax	pmax			
	comp=Z,2.0nm,1.1s								
BILL	**Bilibino**	**22.06**	**12**	*e*P			**P**	**09 01 56.1**	**+1.2**
XLT	**XiLinHaoTe**	**26.63**	**277**	*e*P			**P**	**09 02 40.8**	**+2.0**
XLT					pmax	pmax			
	comp=Z,6.0nm,0.6s								
XLT					pmax	pmax			
	comp=Z,64nm,4.5s								
H11N2	**WAKE ISLAND Hy**	**29.12**	**154**	T			T	09 34 43.7	
	baz=341,slow=76,SNR=148								
H11N1	**WAKE ISLAND Hy**	**29.13**	**154**	T			T	09 35 09.6	
	baz=341,slow=76,SNR=180								
H11N3	**WAKE ISLAND Hy**	**29.13**	**154**	T			T	09 35 03.1	
	baz=341,slow=76,SNR=98								
H11S1	**WAKE ISLAND Hy**	**30.22**	**156**	T			T	09 36 23.1	
	baz=342,slow=76								
H11S3	**WAKE ISLAND Hy**	**30.23**	**156**	T			T	09 35 38.7	
	baz=342,SNR=281								
H11S2	**WAKE ISLAND Hy**	**30.24**	**156**	T			T	09 36 11.5	
	baz=342,slow=76								
K17K	**Iditarod**	**30.79**	**42**	P			**P**	**09 03 16.0**	**+0.5**
H18K	**Honhosa River**	**31.20**	**37**	P			**P**	**09 03 18.9**	**-0.2**
H18K				IAmb			IAmb	09 03 37.3	
	comp=Z,10nm,1.4s								
G18K	**Tagagawik**	**31.25**	**36**	P			**P**	**09 03 20.4**	**+0.9**
L18K	**Granite Mounta**	**31.47**	**43**	P			**P**	**09 03 23.0**	**+1.5**
TTA	**Tatalina**	**31.86**	**42**	P			**P**	**09 03 25.2**	**+0.2**
TTA				IAmb			IAmb	09 03 40.6	
	comp=Z,4.9nm,1.2s								
TTA	**Tatalina**	**31.86**	**42**	P			**P**	**09 03 25.2**	**+0.2**
TTA					pmax	pmax			
	comp=Z,5.0nm,1.2s								
P18K	**Big Mountain,**	**32.04**	**48**	P			**P**	**09 03 29.1**	**+2.5**
H19K	**Roundabout Mou**	**32.06**	**37**	P			**P**	**09 03 27.8**	**+1.2**
H19K				IAmb			IAmb	09 03 28.4	
	comp=Z,2.4nm,0.7s								
J19K	**Poorman**	**32.16**	**40**	P			**P**	**09 03 27.8**	**+0.2**
J19K				IAmb			IAmb	09 03 45.0	
	comp=Z,9.1nm,1.5s								
IMAR	**Indian Mountai**	**33.24**	**36**	P			**P**	**09 03 36.7**	**-0.3**
G21K	**Allakaket**	**33.42**	**35**	P			**P**	**09 03 39.3**	**+0.8**
H21K	**Melozitna Rive**	**33.58**	**37**	P			**P**	**09 03 40.5**	**+0.6**
H21K				IAmb			IAmb	09 03 52.1	
	comp=Z,3.2nm,1.2s								
TOLK	**Toolik Lake Re**	**35.25**	**32**	P			**P**	**09 03 54.6**	**+0.3**
TOLK				IAmb			IAmb	09 04 06.7	
	comp=Z,5.8nm,1.4s								
WRH	**Wood River Hil**	**35.48**	**39**	P			**P**	**09 03 56.7**	**+0.3**
WRH				IAmb			IAmb	09 03 57.2	
	comp=Z,8.0nm,1.4s								
CCB	**Clear Creek Bu**	**35.61**	**39**	P			**P**	**09 03 57.9**	**+0.5**
CCB				IAmb			IAmb	09 04 04.3	
	comp=Z,4.0nm,1.3s								
ILAR	**Eielson Array**	**36.00**	**39**	P			**P**	**09 04 01.2**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=247,slow=7.2,SNR=8.7								
	comp=Z,0.5nm,0.9s								
NRIK	**Noril'sk**	**38.91**	**329**	*i* P			**P**	**09 04 24.4**	**-1.0**
NRIK					pmax	pmax			
	comp=Z,1.0nm,0.9s								
ZALV	**Zalesovo Beam**	**43.00**	**306**	P			**P**	**09 04 55.9**	**-3.3**
	comp=Z,0.3nm,0.4s,baz=68,slow=6.2,SNR=1.9								
ZALV					LR		LR	09 25 25.5	
	comp=Z,32nm,19.3s,baz=45,slow=40								
	comp=Z,0.3nm,0.4s								
DGZ	**Jazzator, Alta**	**43.05**	**299**	*i* P			**P**	**09 04 59.2**	**-0.7**
DGZ					pmax	pmax			
	comp=Z,1.0nm,1.1s								
MK31	**Makanchi Array**	**47.41**	**298**	P			**P**	**09 05 31.0**	**-3.3**
MK31	**Makanchi Array**	**47.41**	**298**	P			**P**	**09 05 31.0**	**-3.3**
MK31					pmax	pmax			
	comp=Z,1.0nm,1.0s								
MKAR	**Makanchi Array**	**47.41**	**298**	P			**P**	**09 05 31.0**	**-3.3**
MKAR	**Makanchi Array**	**47.41**	**298**	*e*P			**P**	**09 05 33.7**	**-0.6**
MKAR	**Makanchi Array**	**47.41**	**298**	P			**P**	**09 05 31.3**	**-3.0**
	comp=Z,0.4nm,0.7s,baz=75,slow=6.4,SNR=3.9								
MKAR					PcP		**PcP**	**09 07 02.7**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=57,slow=5.3,SNR=2.0								
MKAR					LR		LR	09 28 28.5	
	comp=Z,62nm,18.3s,baz=54,slow=40								
	comp=Z,0.4nm,0.7s								
MKAR	**Makanchi Array**	**47.41**	**298**	*e*P			**P**	**09 05 33.7**	**-0.6**
KURK	**Kurchatov**	**47.77**	**304**	*i* P			**P**	**09 05 35.6**	**-1.5**
KURK					pmax	pmax		

CLL					e*PP	sP	09 09 00.0	-0.2
CLL					pmax	pmax		
	comp=Z,7.0nm,1.2s							
CLL	**Collm**	**76.54**	**336**	*i* P		**P**	**09 08 50.3**	**+0.4**
	comp=Z,7.0nm,1.2s							
TX31	**Lajitas Ar. Si**	**76.85**	**61**	P		**P**	**09 08 53.2**	**+1.1**
TX31				IAmb		IAmb	09 08 54.1	
	comp=Z,2.1nm,0.9s							
TXAR	**Lajitas Array**	**76.85**	**61**	P		**P**	**09 08 53.0**	**+0.8**
TXAR	**Lajitas Array**	**76.85**	**61**	P		**P**	**09 08 53.0**	**+0.8**
TXAR	**Lajitas Array**	**76.85**	**61**	P		**P**	**09 08 53.2**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=298,slow=4.3,SNR=17							
	comp=Z,1.1nm,0.8s							
BRTR	**Keskin Array B**	**78.67**	**317**	P		**P**	**09 09 01.4**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=40,slow=2.5,SNR=2.5							
	comp=Z,0.4nm,0.4s							
MMAI	**Mount Meron Ar**	**83.15**	**312**	P		**P**	**09 09 25.3**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=46,slow=6.2,SNR=4.1							
	comp=Z,1.0nm,0.4s							
H03N2	**Juan Fernandez**	**138.13**	**91**	T		T	11 50 15.3	
	baz=309,slow=77							
H03N1	**Juan Fernandez**	**138.14**	**91**	T		T	11 50 16.3	
	baz=309,slow=77							
H03N3	**Juan Fernandez**	**138.14**	**91**	T		T	11 50 14.2	
	baz=309,slow=77							
PLCA	**Paso Flores**	**147.60**	**95**	PKPbc		**PKPbc**	**09 16 44.2**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=278,slow=6.2,SNR=7.1							

*JMA **24** 09:44:59.3±0.1,24°N±1°×123°0E±0°.4,h50km±4km, MV2.5/14,NEAR ISHIGAKIJIMA ISLAND*
*TAP **24** 09:44:59.6,23°.77N×122°.99E,h51km,ML3.2,D*
ISC 24 09:44:56.2±1.1,23°.71N±0°.03×122°.96E±0°.02,h12km±9km, n94,σ0s97/156,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS4	**EOS4**	**0.72**	**305**	*e*P		**Pn**	**09 45 13.5**	**+1.7**
	baz=295							
EOS4				S		**Sn**	**09 45 23.9**	**+1.3**
	baz=295							
JYNG	**Yonagunijimaku**	**0.74**	**359**	P		**Pn**	**09 45 13.4**	**+1.0**
JYNG				*e*S		**Sn**	**09 45 23.3**	**-0.4**
YOJ	**Yonaguni jima**	**0.75**	**3**	P		**Pn**	**09 45 13.7**	**+1.1**
YOJ	**Yonaguni jima**	**0.75**	**3**	P		**Pn**	**09 45 13.7**	**+1.1**
	baz=1.0							
YOJ				S		**Sn**	**09 45 23.6**	**-0.3**
	baz=1.0							
YOJ	**Yonaguni jima**	**0.75**	**3**	P		**Pn**	**09 45 13.7**	**+1.1**
YOJ				*e*S		**Sn**	**09 45 23.4**	**-0.6**
EOS3	**EOS3**	**0.82**	**315**	*e*P		**Pn**	**09 45 15.5**	**+2.1**
	baz=316							
EOS3				*e*S		**Sn**	**09 45 27.6**	**+2.1**
	baz=316							
HATJ	**Hateruma jima**	**0.85**	**66**	P		**Pn**	**09 45 15.1**	**+1.2**
HATJ				*e*S		**Sn**	**09 45 26.9**	**+0.6**
EOS2	**EOS2**	**0.97**	**317**	*e*P		**Pg**	**09 45 17.9**	**+2.9**
	baz=318							
EOS2				*e*S		**Sn**	**09 45 31.4**	**+2.2**
	baz=318							
JKRS	**Kuro-shima**	**1.09**	**61**	P		**Pg**	**09 45 18.9**	**+1.6**
JIJ	**Ishigaki jima**	**1.26**	**59**	P		**Pg**	**09 45 20.9**	**+0.4**
JIJ				S		**Sg**	**09 45 36.7**	**-0.3**
SHUL	**Shoufeng**	**1.28**	**274**	*e*P		**Pg**	**09 45 21.1**	**+0.2**
	baz=270							
SHUL				*e*S		**Sn**	**09 45 36.3**	**-0.8**
	baz=270							
TEGC	**Jichi Village**	**1.30**	**270**	*e*S		**Sb**	**09 45 37.7**	**+0.5**
	baz=267							
TWD	**Chiawan**	**1.30**	**287**	P		**Pb**	**09 45 20.8**	**+0.2**
	baz=284							
TWD				S		**Sn**	**09 45 36.6**	**-0.9**
	baz=284							
ETL	**Fush Village**	**1.30**	**290**	*e*P		**Pg**	**09 45 21.4**	**+0.1**
	baz=277							
ETL				*e*S		**Sb**	**09 45 37.3**	**-0.1**
	baz=277							
EWUT	**Wuta**	**1.31**	**304**	*e*P		**Pg**	**09 45 21.8**	**+0.4**
	baz=301							
EWUT				*e*S		**Sg**	**09 45 38.4**	**+0.1**
	baz=301							
NACB	**Ninganchiao**	**1.33**	**291**	P		**Pg**	**09 45 23.1**	**+1.3**
NACB	**Ninganchiao**	**1.33**	**291**	P		**Pb**	**09 45 21.6**	**+0.4**
	baz=277							
NACB				*i* S		**Sn**	**09 45 37.4**	**-0.9**
	baz=277							
TWC	**Suao**	**1.36**	**312**	*e*P		**Pg**	**09 45 22.3**	**0.0**
	baz=309							
TWC				*e*S		**Sg**	**09 45 39.1**	**-0.8**
	baz=309							
ETM	**Tongmen**	**1.37**	**281**	*e*S		**Sn**	**09 45 38.1**	**-1.0**
	baz=271							
ESL	**Shilin**	**1.40**	**275**	*e*P		**Pb**	**09 45 22.2**	**-0.1**
	baz=263							
ESL				*e*S		**Sn**	**09 45 38.6**	**-1.4**
	baz=263							
HGSD	**Ruisui**	**1.43**	**262**	*e*P		**Pn**	**09 45 22.5**	**+0.6**
	baz=259							
HGSD				*e*S		**Sn**	**09 45 40.1**	**-0.5**
	baz=259							
ECBN	**Changbin**	**1.44**	**255**	*e*S		**Sn**	**09 45 40.1**	**-0.7**
	baz=252							
ETLH	**Xiulin Townshi**	**1.44**	**290**	*i* P		**Pb**	**09 45 23.2**	**+0.2**
	baz=278							
ETLH				S		**Sn**	**09 45 40.5**	**-0.6**
	baz=278							
WARBT	**Fenglin Townsh**	**1.44**	**271**	P		**Pb**	**09 45 22.7**	**-0.3**
	baz=260							
WARBT				*e*S		**Sn**	**09 45 39.6**	**-1.4**
	baz=260							
LXIB	**Xiulin Townshi**	**1.45**	**283**	*i* P		**Pb**	**09 45 23.3**	**+0.1**
	baz=274							
LXIB				*e*S		**Sb**	**09 45 41.4**	**-0.3**
	baz=274							
JISG	**Ishigakijimahi**	**1.51**	**54**	P		**Pg**	**09 45 23.9**	**-1.3**
JISG				S		**Sg**	**09 45 43.0**	**-1.9**
EHY	**Hungye**	**1.52**	**263**	P		**Pb**	**09 45 24.3**	**+0.1**
	baz=260							
EHY				S		**Sn**	**09 45 42.4**	**-0.5**
	baz=260							
CHKH	**Chenggong**	**1.53**	**251**	*e*S		**Sn**	**09 45 41.6**	**-1.4**
	baz=248							
EYUL	**Yuli**	**1.55**	**257**	*e*P		**Pn**	**09 45 24.4**	**+0.8**
	baz=247							
EYUL				*e*S		**Sn**	**09 45 43.8**	**+0.1**
	baz=247							
LATG	**Datong**	**1.55**	**302**	*e*P		**Pg**	**09 45 25.9**	**-0.1**
	baz=300							
LATG				*e*S		**Sg**	**09 45 45.2**	**-0.8**
	baz=300							
TWE	**Neicheng**	**1.55**	**311**	*e*P		**Pg**	**09 45 25.7**	**-0.3**
	baz=308							
TWE				*e*S		**Sb**	**09 45 44.6**	**+0.1**
	baz=308							
YULB	**Yu-li**	**1.56**	**259**	P		**Pb**	**09 45 25.2**	**+0.2**
YULB	**Yu-li**	**1.56**	**259**	P		**Pb**	**09 45 24.6**	**-0.4**
	baz=248							
YULB				*e*S		**Sn**	**09 45 42.8**	**-1.1**
	baz=248							
TWF1	**Yuli**	**1.57**	**257**	P		**Pb**	**09 45 24.8**	**-0.3**
	baz=254							
TWF1				S		**Sn**	**09 45 44.2**	**+0.2**
	baz=254							
ENTT	**Nioudou**	**1.58**	**306**	*e*P		**Pg**	**09 45 26.1**	**-0.4**
	baz=304							
ENTT				*e*S		**Sb**	**09 45 45.2**	**0.0**
	baz=304							
CHKT	**Chengkung**	**1.59**	**248**	*e*S		**Sn**	**09 45 42.8**	**-1.7**
	baz=237							
NDT	**Datong Townshi**	**1.60**	**304**	*e*P		**Pg**	**09 45 26.4**	**-0.4**
	baz=291							
NDT				*e*S		**Sb**	**09 45 45.6**	**-0.1**
	baz=291							
FULB	**Fuli**	**1.61**	**252**	*e*S		**Sn**	**09 45 44.9**	**-0.3**
	baz=240							
NNSB	**Datong**	**1.61**	**297**	P		**Pb**	**09 45 26.5**	**+0.5**
	baz=285							
NNSB				S		**Sb**	**09 45 45.2**	**-1.1**
	baz=285							
WHF	**Hehuan Shan**	**1.61**	**286**	*i* P		**Pb**	**09 45 26.1**	**0.0**
	baz=283							
WHF				*i* S		**Sn**	**09 45 45.0**	**-0.7**
	baz=283							
NNS	**Nan Shan**	**1.62**	**297**	*e*S		**Sb**	**09 45 45.7**	**-1.0**
	baz=285							
TIPB	**Shuangxi**	**1.63**	**321**	*e*P		**Pb**	**09 45 26.2**	**0.0**
	baz=319							
TIPB				*e*S		**Sb**	**09 45 45.2**	**-1.6**
	baz=319							
FUSB	**Fushanzhiwuyua**	**1.64**	**310**	P		**Pg**	**09 45 27.4**	**-0.2**
	baz=308							
FUSB				S		**Sg**	**09 45 47.6**	**-1.2**
	baz=308							
OWD	**Renai**	**1.65**	**279**	*e*S		**Sn**	**09 45 46.1**	**-0.3**
	baz=276							
FUSS	**Fushou**	**1.66**	**289**	*e*S		**Sb**	**09 45 46.9**	**-0.9**
	baz=286							
VWDT	**VWDT**	**1.67**	**272**	*i* P		**Pb**	**09 45 26.6**	**-0.2**
	baz=269							
VWDT				*i* S		**Sn**	**09 45 46.4**	**-0.1**
	baz=269							
CHGB	**Renai**	**1.67**	**283**	*i* P		**Pb**	**09 45 26.8**	**-0.3**
	baz=280							
CHGB				*i* S		**Sn**	**09 45 46.8**	**-0.2**
	baz=280							
SXI1	**Grass Mountain**	**1.70**	**325**	*e*P		**Pb**	**09 45 26.9**	**-0.5**
	baz=323							
EHD	**Haiduan**	**1.71**	**251**	*e*P		**Pn**	**09 45 26.4**	**+0.7**
	baz=241							
EHD				*e*S		**Sn**	**09 45 46.6**	**-0.9**
	baz=241							
NWLT	**Wulai**	**1.71**	**309**	*e*P		**Pg**	**09 45 28.2**	**-0.7**
	baz=306							
NWLT				S		**Sb**	**09 45 48.1**	**-0.8**
	baz=306							
WUSB	**Renai**	**1.71**	**280**	P		**Pb**	**09 45 27.4**	**-0.3**
	baz=277							
WUSB				*e*S		**Sn**	**09 45 47.4**	**-0.4**
	baz=277							
LDUT	**Ludao**	**1.71**	**233**	*e*P		**Pb**	**09 45 27.4**	**-0.2**
	baz=239							
LDUT				*e*S		**Sn**	**09 45 47.1**	**-0.6**
	baz=239							
TWT	**Tachien**	**1.72**	**289**	*e*S		**Sb**	**09 45 48.4**	**-1.2**
	baz=286							
NWF	**Wu-fen Shan**	**1.73**	**322**	*e*S		**Sb**	**09 45 48.0**	**-1.7**
	baz=320							
TDCB	**Techi**	**1.74**	**289**	*e*S		**Sn**	**09 45 47.8**	**-0.7**
	baz=277							
YHNB	**Yeheng**	**1.74**	**304**	P		**Pg**	**09 45 28.7**	**-0.8**
YHNB	**Yeheng**	**1.74**	**304**	P		**Pb**	**09 45 28.4**	**+0.4**
	baz=290							
YHNB				S		**Sb**	**09 45 48.8**	**-1.0**
	baz=290							
NSK	**Sanguang**	**1.75**	**304**	*e*P		**Pb**	**09 45 28.4**	**0.0**
	baz=290							
NSK				*e*S		**Sb**	**09 45 48.8**	**-1.5**
	baz=290							
SSLB	**Suanglung**	**1.84**	**273**	P		**Pb**	**09 45 29.9**	**+0.1**
SSLB	**Suanglung**	**1.84**	**273**	*e*P		**Pb**	**09 45 28.9**	**-0.9**
	baz=270							
SSLB				*e*S		**Sn**	**09 45 50.2**	**-0.7**
	baz=270							
JTJ	**Tarama**	**1.84**	**59**	*e*P		**Pb**	**09 45 29.7**	**-0.1**
ELDTW	**Lidau**	**1.86**	**254**	*e*P		**Pn**	**09 45 29.2**	**+1.3**
	baz=252							
ELDTW				*e*S		**Sn**	**09 45 49.9**	**-1.5**
	baz=252							
LONT	**Longtian**	**1.86**	**245**	*e*P		**Pn**	**09 45 29.1**	**+1.2**
	baz=236							
LONT				*e*S		**Sn**	**09 45 50.9**	**-0.5**
	baz=236							
SMLT	**Sun Moon Lake**	**1.90**	**276**	*e*S		**Sn**	**09 45 52.2**	**-0.2**
	baz=273							
WCS	**Beigang Elemen**	**1.91**	**281**	*e*P		**Pb**	**09 45 30.4**	**-0.5**
	baz=272							
WCS				*e*S		**Sn**	**09 45 52.8**	**+0.3**
	baz=272							
YM01	**YM01**	**1.91**	**319**	*e*S		**Sn**	**09 45 52.3**	**-0.4**
	baz=317							
NFF	**Wufeng Townshi**	**1.92**	**299**	*e*P		**Pb**	**09 45 31.3**	**+0.2**
	baz=297							
NFF				*e*S		**Sb**	**09 45 53.9**	**-1.2**
	baz=297							
WHP	**Taichung City**	**1.93**	**288**	*e*P		**Pb**	**09 45 31.8**	**+0.4**
	baz=285							
WHP				*e*S		**Sb**	**09 45 53.9**	**-1.5**
	baz=285							
WHYT	**Xinyi Township**	**1.93**	**270**	*e*P		**Pb**	**09 45 31.1**	**-0.3**
	baz=267							
WHYT				*e*S		**Sn**	**09 45 53.5**	**+0.4**
	baz=267							
TWGBT	**Beinan**	**1.94**	**243**	P		**Pn**	**09 45 30.6**	**+1.6**
TWGBT	**Beinan**	**1.94**	**243**	P		**Pn**	**09 45 29.9**	**+0.9**
	baz=234							
TWGBT				*i* S		**Sn**	**09 45 52.8**	**-0.6**
	baz=234							
TWG	**Pinlang**	**1.95**	**243**	P		**Pn**	**09 45 30.5**	**+1.4**
	baz=234							
TWG				S		**Sn**	**09 45 52.8**	**-0.7**
	baz=234							
ANP	**Anpu**	**1.97**	**319**	*e*S		**Sn**	**09 45 53.3**	**-1.0**
	baz=317							
ALS	**Alishan**	**1.99**	**265**	P		**Pb**	**09 45 32.3**	**-0.2**
	baz=262							
ALS				*e*S		**Sn**	**09 45 55.2**	**+0.4**
	baz=262							
LIOB	**Emei**	**2.01**	**298**	*e*P		**Pb**	**09 45 32.6**	**0.0**
	baz=287							
LIOB				*e*S		**Sb**	**09 45 56.2**	**-1.4**
	baz=287							
NSTT	**Nanjuang**	**2.01**	**298**	*e*P		**Pb**	**09 45 32.4**	**-0.3**
	baz=286							
NSTT				*e*S		**Sb**	**09 45 56.2**	**-1.6**
	baz=286							
WJS	**Zhushan**	**2.05**	**274**	*e*P		**Pb**	**09 45 33.6**	**+0.3**
	baz=264							
WJS				*e*S		**Sb**	**09 45 58.7**	**-0.1**
	baz=264							
STYH	**Taoyuan**	**2.08**	**256**	*e*S		**Sn**	**09 45 57.4**	**+0.8**
	baz=246							
LAY	**Lan-yu**	**2.11**	**218**	*e*S		**Sn**	**09 45 57.6**	**+0.1**
	baz=224							
LYUB	**Lan-yu**	**2.12**	**217**	*e*S		**Sn**	**09 45 57.4**	**-0.2**
	baz=224							
NSY	**Sanyi**	**2.13**	**290**	*e*S		**Sb**	**09 46 00.0**	**-1.2**
	baz=287							
ECL	**Taimali**	**2.15**	**240**	*e*P		**Pn**	**09 45 33.1**	**+1.3**
	baz=247							
ECL				*e*S		**Sn**	**09 45 58.2**	**-0.3**
	baz=247							
TPUB	**Ta-pu**	**2.18**	**260**	P		**Pb**	**09 45 35.6**	**+0.1**
TPUB	**Ta-pu**	**2.18**	**260**	*e*P		**Pb**	**09 45 34.6**	**-0.9**
	baz=257							
TPUB				*e*S		**Sn**	**09 46 00.3**	**+1.2**
	baz=257							
WCKO	**Fanlu**	**2.18**	**263**	*e*S		**Sn**	**09 46 01.1**	**+1.9**
	baz=261							
CHN4	**Tsaushan**	**2.20**	**261**	*e*P		**Pb**	**09 45 35.5**	**-0.5**
	baz=254							
CHN4				*e*S		**Sb**	**09 46 01.8**	**-1.4**
	baz=254							
WTP	**Ta-pu**	**2.20**	**258**	*e*P		**Pb**	**09 45 35.3**	**-0.7**
	baz=256							
WTP				*e*S		**Sn**	**09 46 01.5**	**+1.6**
	baz=256							
SLGT	**Liugui**	**2.24**	**252**	*e*P		**Pb**	**09 45 35.8**	**-0.8**
	baz=245							
SLGT				*e*S		**Sn**	**09 46 02.2**	**+1.4**
	baz=245							
CHN1	**Nanshi**	**2.29**	**257**	*e*P		**Pb**	**09 45 37.2**	**-0.3**
	baz=255							
CHN1				*e*S		**Sb**	**09 46 04.5**	**-1.3**
	baz=255							
TWK	**Hsinying**	**2.31**	**260**	*e*P		**Pb**	**09 45 37.5**	**-0.3**
	baz=257							
TWK				*e*S		**Sn**	**09 46 04.7**	**+2.1**
	baz=257							
TSMG	**Majia**	**2.35**	**245**	*e*P		**Pn**	**09 45 36.8**	**+2.2**
	baz=237							
MASBT	**Mashibuluo**	**2.40**	**244**	P		**Pn**	**09 45 37.2**	**+1.8**
	baz=241							
MASBT				*e*S		**Sn**	**09 46 05.1**	**+0.4**
	baz=241							
TWM1	**Shoushan**	**2.50**	**250**	*e*P		**Pb**	**09 45 41.5**	**+0.5**
	baz=241							
SCZT	**Fangliau**	**2.53**	**239**	*e*P		**Pn**	**09 45 39.2**	**+2.1**
	baz=240							
SCZT				*e*S		**Sn**	**09 46 08.3**	**+0.4**
	baz=240							

*IDC **24** 09:55:33.8±1.0,30°.41N×101°.51E,h0km,mb4.0/9, mbtmp4.0/10,ML3.6/1,MS3.1/3,Error ellipse: s-maj=37.0km s-min=16.8km az=56.0*
ISC 24 09:55:35.5±1.2,30°.5N±0°.2×101°.6E±0°.2,h10km,n13, σ0s37/11,mb3.9/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.17**	**192**			Pn	Pn	09 58 34.2	+5.2
	baz=6.9,slow=11							
CMAR				LR		LR	10 03 41.3	
	comp=Z,85nm,21.0s,baz=15,slow=40							
SONM	**Songino Array**	**17.76**	**11**	P		**P**	**09 59 43.3**	**-0.3**
	0.2nm,0.3s,baz=196,slow=12,SNR=17							
	2.5nm,0.7s							
MKAR	**Makanchi Array**	**22.11**	**323**	P		**P**	**10 00 30.9**	**-0.1**
	5.0nm,0.9s,baz=132,slow=13,SNR=28							
MKAR				LR		LR	10 08 54.1	
	comp=Z,47nm,21.6s,baz=243,slow=36							
	5.0nm,0.9s							
KSRS	**Korea Array**	**22.91**	**65**	P		**P**	**10 00 39.2**	**-0.2**
	2.7nm,0.9s,baz=246,slow=9.6,SNR=6.9							
	2.7nm,0.9s							
ZALV	**Zalesovo Beam**	**26.43**	**338**	P		**P**	**10 01 11.9**	**-0.3**
	4.2nm,0.7s,baz=143,slow=9.6,SNR=19							
ZALV				LR		LR	10 12 53.9	
	comp=Z,53nm,20.0s,baz=348,slow=39							
	4.2nm,0.7s							
KURBB	**Kurchatov Arra**	**26.50**	**326**	P		**P**	**10 01 12.7**	**-0.2**
	2.0nm,0.7s,baz=130,slow=11,SNR=17							
	2.0nm,0.7s							
BVAR	**Borovoye Array**	**31.99**	**324**	P		**P**	**10 02 01.4**	**-0.3**
	0.8nm,0.8s,baz=78,slow=9.4,SNR=2.6							
	0.8nm,0.8s							
NRIK	**Noril'sk**	**39.76**	**352**	P		**P**	**10 03 08.1**	**+0.1**
NRIK	**Noril'sk**	**39.76**	**352**	P		**P**	**10 03 08.1**	**+0.1**
	3.5nm,0.4s,baz=144,slow=5.9,SNR=6.6							
	3.5nm,0.4s							
WRA	**Warramunga Arr**	**59.19**	**144**	P		**P**	**10 05 36.7**	**-0.2**
	4.1nm,0.9s,baz=334,slow=7.8,SNR=13							
	4.1nm,0.9s							
ASAR	**Alice Springs**	**62.11**	**146**	P		**P**	**10 05 56.6**	**-0.1**
	0.6nm,0.8s,baz=326,slow=6.5,SNR=4.6							
	0.6nm,0.8s							
ILAR	**Eielson Array**	**71.36**	**25**	P		P	10 07 00.6	+5.3
	0.2nm,0.9s,baz=280,slow=5.4,SNR=4.1							
YKA	**Yellowknife Ar**	**82.94**	**16**	P		**P**	**10 08 01.1**	**+0.8**
	0.2nm,0.7s,baz=327,slow=5.0,SNR=2.7							
	0.2nm,0.7s							

*MOS **24** 09:55:45.8±1.0,42°.61N×143°.86E,h113km,mb4.2/1,Error ellipse: s-maj=18.5km s-min=10.1km az=63.7*
*IDC **24** 09:55:46.9±2.5,42°.69N×143°.91E,h99km±16km,mb3.3/7, mbtmp3.6/9,MS2.8/2,Error ellipse: s-maj=24.8km s-min=20.7km az=132.0*
*JMA **24** 09:55:47.0±0.1,42°.7N±0°.4×143°.7E±0°.6,h97km±1km, MV3.4/40,TOKACHI REGION*
*SKHL **24** 09:55:47.4±0.0,42°.60N×143°.80E,h101km±4km,mb4.7/3, msha5.5/3*
ISC 24 09:55:46.7±0.8,42°.63N±0°.05×143°.80E±0°.03,h95km±6km, n52,σ1s01/68,mb3.3/7,2C-2D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOB	**Onbets**	**0.28**	**6**	P		**Pn**	**09 56 01.4**	**+0.7**
JOB				*e*S		**Sn**	**09 56 12.0**	**+1.0**
JCH	**Churui**	**0.32**	**268**	P		**Pn**	**09 56 01.0**	**+0.2**
JCH				*e*S		**Sn**	**09 56 10.9**	**-0.5**
JTHR	**Tokachihiroo**	**0.50**	**228**	*i* P		**Pn**	**09 56 02.4**	**+0.4**
JTHR				S		**Sn**	**09 56 13.4**	**+0.1**
JAR	**Ashorobuto**	**0.67**	**358**	P		**Pn**	**09 56 03.6**	**+0.2**
JAR				*e*S		**Sn**	**09 56 16.1**	**+0.2**
JAK	**Akkeshi**	**0.76**	**61**	P		**Pn**	**09 56 04.7**	**+0.5**
JAK				*e*S		**Sn**	**09 56 17.8**	**+0.5**
JEM	**Erimo**	**0.77**	**218**	*e*P		**Pn**	**09 56 05.0**	**+0.6**
JNBK	**Urakawa-nobuka**	**0.85**	**246**	P		**Pn**	**09 56 05.3**	**+0.2**
JNBK				*e*S		**Sn**	**09 56 18.6**	**-0.3**
AKK	**Akkeshi**	**0.86**	**63**	*e*P		**Pn**	**09 56 05.8**	**+0.5**
AKK				*e*S		**Sn**	**09 56 19.6**	**+0.4**
JFR	**Furan**	**1.03**	**302**	*e*P		**Pn**	**09 56 06.5**	**-0.7**
JFR				*e*S		**Sn**	**09 56 21.2**	**-1.4**
JBT2	**Biratori 2**	**1.07**	**279**	*e*P		**Pn**	**09 56 07.2**	**-0.3**
JKHN	**Kushirohamanak**	**1.10**	**65**	*e*P		**Pn**	**09 56 08.6**	**+0.7**
JNK	**Nakash**	**1.17**	**35**	*e*P		**Pn**	**09 56 08.7**	**-0.1**
JNK				*e*S		**Sn**	**09 56 24.7**	**-0.6**
JTKR	**Abashiri--Toko**	**1.34**	**3**	*e*P		**Pn**	**09 56 10.8**	**0.0**
JTKR				*e*S		**Sn**	**09 56 28.5**	**-0.4**
JIAM	**Iburiatsuma**	**1.38**	**270**	*e*P		**Pn**	**09 56 11.4**	**+0.2**
JMP	**Maruseppu**	**1.41**	**347**	*e*P		**Pn**	**09 56 11.4**	**-0.3**
JMP				*e*S		**Sn**	**09 56 29.6**	**-1.0**
JAB	**Ashibetsu**	**1.45**	**308**	*e*P		**Pn**	**09 56 12.4**	**+0.3**
JKK2	**Kamakawa 2**	**1.46**	**329**	*e*P		**Pn**	**09 56 12.1**	**-0.2**
NMR	**Nemuro--Hokkai**	**1.60**	**62**	*i* PN		**Pn**	**09 56 13.7**	**-0.2**
NMR				*i* S		**Sn**	**09 56 33.2**	**-1.4**
NMR	**Nemuro--Hokkai**	**1.60**	**62**	*i* P		**Pn**	**09 56 13.8**	**-0.2**
NMR				*i* S		**Sn**	**09 56 33.2**	**-1.4**
NEM2	**Nemuro 2**	**1.61**	**62**	*e*P		**Pn**	**09 56 13.7**	**-0.3**
NEM2				*e*S		**Sn**	**09 56 33.1**	**-1.6**
JRA	**Rausu**	**1.63**	**36**	*e*P		**Pn**	**09 56 14.8**	**+0.5**
JRA				*e*S		**Sn**	**09 56 36.2**	**+1.0**
JKA	**Kamikawa-asahi**	**1.72**	**330**	*i* P		**Pn**	**09 56 16.1**	**+0.6**
ASAJ	**Asahikawa**	**1.73**	**330**	P		**Pn**	**09 56 16.1**	**+0.5**
	21nm,0.4s,baz=180,slow=9.4,SNR=80							
ASAJ				S		**Sn**	**09 56 38.2**	**+0.8**
	26nm,0.4s,baz=21,slow=33,SNR=8.9							
JEW	**Eniwo**	**1.74**	**278**	*e*P		**Pn**	**09 56 16.2**	**+0.4**
JEW				*e*S		**Sn**	**09 56 37.8**	**0.0**
RUSJ	**Misakicho**	**1.82**	**35**	*i* PN		**Pn**	**09 56 17.5**	**+0.8**
RUSJ				*e*S		**Sn**	**09 56 42.0**	**+2.5**
JHR	**Hokuryu**	**1.88**	**307**	*e*P		**Pn**	**09 56 18.2**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**2.06**	**46**	*c* PN		**Pn**	**09 56 20.7**	**+0.8**
YUK				*i* S		**Sn**	**09 56 44.9**	**-0.3**
YUK				pmax		pmax		
	comp=Z,137nm,0.2s							
YUK				pmax		pmax		
	comp=N,24nm,0.1s							
YUK				pmax		pmax		
	comp=E,68nm,0.1s							
YUK				smax		smax		
	comp=E,557nm,0.5s							
YUK				smax		smax		
	comp=N,814nm,0.4s							
YUK	**Yu

JCJ	**Chichijima**	**15.55**	**185**	LR	LR	10 11 45.2		
	comp=E,18nm,18.1s,baz=105,slow=61							
MA2	**Magadan**	**17.51**	**12**	LR	LR	10 06 38.2		
	comp=E,45nm,20.6s,baz=99,slow=37							
SEY	**Seymchan**	**20.95**	**11**	P	**P**	**10 00 19.1**	**-2.6**	
	comp=E,2.4nm,0.7s,baz=204,slow=11,SNR=11							
	comp=E,2.4nm,0.7s							
SONM	**Songino Array**	**26.66**	**294**	P	**P**	**10 01 16.7**	**+0.1**	
	comp=E,0.5nm,0.8s,baz=92,slow=10,SNR=2.4							
	comp=E,0.5nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**30.01**	**132**	T	T	10 33 15.6		
	baz=327,slow=75,SNR=33							
H11N1	**WAKE ISLAND Hy**	**30.02**	**132**	T	T	10 33 15.6		
	baz=327,slow=75,SNR=28							
H11N3	**WAKE ISLAND Hy**	**30.03**	**132**	T	T	10 33 17.6		
	baz=327,slow=75,SNR=24							
H11S1	**WAKE ISLAND Hy**	**30.91**	**134**	T	T	10 34 23.3		
	baz=327,slow=76,SNR=47							
H11S3	**WAKE ISLAND Hy**	**30.91**	**134**	T	T	10 34 29.0		
	baz=327,slow=76,SNR=37							
H11S2	**WAKE ISLAND Hy**	**30.92**	**134**	T	T	10 34 29.6		
	baz=327,slow=76,SNR=28							
MKAR	**Makanchi Array**	**42.93**	**298**	P	**P**	**10 03 36.1**	**+0.2**	
	comp=E,0.2nm,0.6s,baz=66,slow=7.1,SNR=2.2							
	comp=E,0.2nm,0.6s							
ILAR	**Eielson Array**	**43.83**	**35**	P	**P**	**10 03 42.8**	**-0.1**	
	comp=E,0.3nm,0.7s,baz=262,slow=5.4,SNR=7.0							
	comp=E,0.3nm,0.7s							
KURK	**Kurchatov**	**44.12**	**304**	P	**P**	**10 03 46.1**	**+0.8**	
KURK	**Kurchatov**	**44.12**	**304**	*eP*	**P**	**10 03 46.1**	**+0.8**	
KURBB	**Kurchatov Arra**	**44.20**	**304**	P	**P**	**10 03 46.1**	**+0.1**	
	comp=E,0.6nm,0.4s,baz=71,slow=8.8,SNR=6.0							
	comp=E,0.6nm,0.4s							
BVAR	**Borovoye Array**	**48.31**	**309**	P	**P**	**10 04 18.8**	**+0.6**	
	comp=E,1.1nm,0.4s,baz=76,slow=6.6,SNR=5.7							
	comp=E,1.1nm,0.4s							
YKA	**Yellowknife Ar**	**58.08**	**32**	P	**P**	**10 05 32.4**	**+2.9**	
	comp=E,0.2nm,0.6s,baz=304,slow=6.5,SNR=2.8							
FINES	**FINESS Array B**	**64.73**	**332**	P	**P**	**10 06 13.2**	**-1.2**	
	comp=E,2.5nm,1.1s,baz=40,slow=9.4,SNR=2.1							
	comp=E,2.5nm,1.1s							

*BEO **24** 09:59:50.2±0.7, 45°.49N×27°.32E, h0km, ML3.6/7*
*MOLD **24** 09:59:53.6, 44°.79N×26°.66E, h110km, MB3.2, Mb2.5*
*IDC **24** 09:59:55.3±0.9, 45°.06N×26°.79E, h0km, mb3.4/5, mbtmp3.4/8, ML3.0/3, MS2.9/1, Error ellipse: s-maj=16.7km s-min=7.9km az=32.0*
*SOF **24** 09:59:57.1, 45°.31N±0°.02×26°.86E±0°.03, h100km±1km, MD3.6/2*
*CFUSG **24** 09:59:58.4, 45°.16N×26°.95E, h10km, mb3.4/3, Romania Magtype MSH 3.6 from 3 stations*
*BUC **24** 09:59:58.6±0.1, 45°.11N×26°.83E, h16km±1km, ml3.5/70, Error ellipse: s-maj=0.8km s-min=0.8km az=149.0*
ISC 24 09:59:58.0±0.9, 45°.12N±0°.01×26°.84E±0°.01, h16km±6km, n122, σ1$07/178, mb3.4/5, 73C-50D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ISR	**Istrita**	**0.21**	**271**	↑	P		**Pg**	**10 00 02.7**	**-0.1**
ISR				↓	S		**Sb**	**10 00 07.9**	**+0.8**
PGOR	**Pogoanele**	**0.23**	**153**	↑	P		**Pg**	**10 00 02.8**	**-0.4**
PGOR				↑	S		**Sb**	**10 00 08.0**	**+0.3**
GRER		**0.28**	**20**	↑	P		**Pb**	**10 00 05.4**	**+0.8**
GRER				↑	S		**Sb**	**10 00 09.3**	**+0.1**
NEHR	**Nehoiu**	**0.49**	**309**	↓	P		**Pb**	**10 00 08.6**	**+0.3**
NEHR				↓	S		**Sg**	**10 00 15.0**	**+0.6**
SULR		**0.60**	**223**	↑	P		**Pg**	**10 00 09.5**	**-0.3**
AMRR	**Amara**	**0.62**	**145**	↓	P		**Pg**	**10 00 10.2**	**+0.1**
AMRR				↓	S		**Sb**	**10 00 20.1**	**+1.3**
SPBR	**Spulber**	**0.64**	**355**	↑	P		**Pn**	**10 00 12.1**	**-0.2**
SPBR				↓	S		**Sb**	**10 00 21.0**	**+1.6**
ODBI	**Odobesti**	**0.67**	**13**	↓	S		**Sb**	**10 00 21.5**	**+1.4**
MLR	**Muntele Rosu**	**0.73**	**301**	↑	P		**Pb**	**10 00 13.0**	**+0.6**
MLR				↑	S		**Sb**	**10 00 23.4**	**+1.2**
MLR	**Muntele Rosu**	**0.73**	**301**		Pg		**Pb**	**10 00 12.9**	**+0.6**
	40nm,0.3s,baz=111,slow=5.0,SNR=320								
MLR					Lg		Lg	10 00 17.3	
	65nm,0.3s,baz=76,slow=4.2,SNR=32								
MLR					LR		LR	10 00 23.4	
	comp=Z,72nm,21.4s,baz=27,slow=38								
PLOR	**Plostina**	**0.75**	**350**	↑	P		**Pn**	**10 00 13.7**	**-0.2**
VRI	**Vrincioaia**	**0.75**	**354**	↓	P		**Pn**	**10 00 13.9**	**0.0**
VRI				↓	S		**Sb**	**10 00 24.1**	**+1.3**
TUDR		**0.76**	**51**	↓	P		**Pg**	**10 00 12.8**	**+0.1**
IZVR	**Izvoarele**	**0.78**	**57**	↓	P		**Pg**	**10 00 13.1**	**-0.1**
IZVR				↓	S		**Sn**	**10 00 25.6**	**-0.1**
PANC	**Panciu**	**0.79**	**16**	↑	P		**Pn**	**10 00 15.0**	**+0.6**
PANC				↑	S		**Sb**	**10 00 24.8**	**+1.2**
SCHLR	**Schela**	**0.79**	**63**	↑	P		**Pg**	**10 00 13.2**	**-0.1**
SLCR	**Slobozia Conac**	**0.81**	**54**	↓	P		**Pg**	**10 00 13.8**	**0.0**
NEGRR	**Negrea**	**0.85**	**60**	↓	P		**Pb**	**10 00 14.3**	**0.0**
NEGRR				↓	S		**Sn**	**10 00 27.4**	**+0.1**
HARR	**Harsova**	**0.89**	**118**	↓	P		**Pb**	**10 00 14.2**	**-0.8**
GISR	**Galati**	**0.92**	**69**	↑	P		**Pb**	**10 00 15.3**	**-0.2**
CFR	**Carcaliu**	**0.92**	**86**	↓	P		**Pb**	**10 00 15.1**	**-0.4**
CFR				↑	S		**Sg**	**10 00 28.6**	**+0.6**
CIOR	**Ciorogarla**	**0.95**	**226**	↓	P		**Pb**	**10 00 16.1**	**0.0**
BUC1	**Bucharest**	**0.96**	**217**	↑	P		**Pb**	**10 00 16.8**	**+0.6**
BUC1				↑	S		**Sg**	**10 00 29.9**	**+0.7**
TATR	**Tatarca**	**0.98**	**60**	↓	P		**Pb**	**10 00 16.5**	**-0.1**
TATR				↓	S		**Sn**	**10 00 31.5**	**+0.9**
SCTR	**Scanteiesti**	**0.99**	**55**	↓	P		**Pb**	**10 00 17.0**	**+0.3**
GHRR		**1.03**	**23**	↑	P		**Pn**	**10 00 18.3**	**+0.7**
GHRR				↓	S		**Sn**	**10 00 32.6**	**+0.9**
TLBR	**Topalu**	**1.03**	**123**	↑	P		**Pb**	**10 00 18.1**	**+0.6**
TLBR				↑	S		**Sn**	**10 00 33.2**	**+1.3**
GIUM	**Giurgiulesti**	**1.04**	**69**	↓	P		**Pb**	**10 00 17.3**	**-0.2**
GIUM				↓	S		**Sn**	**10 00 31.1**	**+1.1**
VARL	**Varlezi**	**1.06**	**42**	↑	P		**Pb**	**10 00 17.9**	**0.0**
VARL				↑	S		**Sn**	**10 00 34.2**	**+1.7**
SGRR	**Singureni**	**1.08**	**215**	↑	P		**Pb**	**10 00 17.8**	**-0.5**
SGRR				↓	S		**Sg**	**10 00 33.4**	**+0.4**
TURR	**Turia**	**1.10**	**329**	↑	P		**Pg**	**10 00 20.4**	**+1.1**
TURR				↑	S		**Sn**	**10 00 34.4**	**+0.7**
VLDR	**Vladesti**	**1.14**	**50**	↓	P		**Pb**	**10 00 19.1**	**-0.1**
VLDR				↓	S		**Sg**	**10 00 36.2**	**+1.3**
TPGR	**Topolog**	**1.15**	**102**	↑	P		**Pn**	**10 00 19.0**	**-0.4**
TPGR				↑	S		**Sn**	**10 00 35.3**	**+0.4**
CVDA	**Cernavoda**	**1.16**	**132**	↑	P		**Pb**	**10 00 20.1**	**+0.5**
CVDA				↑	S		**Sg**	**10 00 36.8**	**+1.3**
ICOR	**Ion Corvin**	**1.22**	**145**	↓	P		**Pn**	**10 00 20.2**	**-0.1**
ICOR				↑	S		**Sg**	**10 00 38.0**	**+0.8**
OZUR		**1.23**	**323**	↑	P		**Pg**	**10 00 21.6**	**0.0**
OZUR				↑	S		**Sg**	**10 00 37.9**	**+0.3**
BOSR	**Bodos**	**1.26**	**320**	↑	P		**Pb**	**10 00 22.1**	**+0.7**
BOSR				↑	S		**Sg**	**10 00 38.8**	**-0.1**
BIR	**Birlad**	**1.28**	**25**	↓	P		**Pb**	**10 00 21.8**	**+0.2**
BIR				↓	S		**Sg**	**10 00 39.2**	**0.0**
VOIR		**1.30**	**285**	↑	P		**Pb**	**10 00 22.6**	**+0.5**
VOIR				↑	S		**Sn**	**10 00 39.3**	**+0.7**
TIRR	**Tirgusor**	**1.30**	**120**	↓	P		**Pn**	**10 00 21.3**	**-0.2**
TIRR				↓	S		**Sn**	**10 00 39.2**	**+0.7**
DOPR	**Dopca**	**1.33**	**310**	↓	P		**Pb**	**10 00 23.0**	**+0.5**
DOPR				↑	S		**Sg**	**10 00 40.3**	**-0.5**
STFAR	**Stefanesti-Arg**	**1.35**	**260**	↓	P		**Pb**	**10 00 23.3**	**+0.4**
STFAR				↑	S		**Sb**	**10 00 40.6**	**+0.5**
TESR	**Tescani**	**1.40**	**355**	↓	P		**Pb**	**10 00 24.4**	**+0.7**
TLCR		**1.40**	**86**	↑	P		**Pn**	**10 00 23.4**	**+0.6**
TLCR				↑	S		**Sg**	**10 00 43.0**	**-0.2**
HUMR	**Humele**	**1.45**	**247**	↑	P		**Pn**	**10 00 24.0**	**+0.6**
HUMR				↓	S		**Sn**	**10 00 42.7**	**+0.6**
MFTR	**Murfatlar**	**1.47**	**129**	↑	P		**Pn**	**10 00 24.6**	**+0.9**
MFTR				↑	S		**Sb**	**10 00 44.0**	**+0.6**
COPA	**Copaceanca**	**1.52**	**230**	↓	P		**Pn**	**10 00 24.8**	**+0.4**
COPA				↑	S		**Sn**	**10 00 44.6**	**+0.8**
RAZG	**Razgrad**	**1.57**	**189**	↓	P		**Pn**	**10 00 25.5**	**+0.4**
RAZG				↓	S		**Sb**	**10 00 46.5**	**+0.4**
ARR	**Arges**	**1.58**	**280**	↑	P		**Pb**	**10 00 26.5**	**-0.3**
TSCT	**Constanta Port**	**1.61**	**126**	↑	P		**Pb**	**10 00 27.1**	**-0.2**
TSCT				↑	S		**Sb**	**10 00 48.0**	**+0.5**
EFOR	**EFORIE**	**1.65**	**128**	↓	P		**Pn**	**10 00 27.3**	**+1.1**
EFOR				↑	S		**Sb**	**10 00 48.9**	**+0.4**
VASR	**Vaslui**	**1.66**	**23**	↑	P		**Pn**	**10 00 27.5**	**+1.0**
VASR				↓	S		**Sb**	**10 00 49.4**	**+0.5**
LEOM	**Leova**	**1.68**	**36**	↑	P		**Pn**	**10 00 27.6**	**+1.0**
LEOM				↓	S		**Sb**	**10 00 49.9**	**+0.6**
PSN	**Preselentsi**	**1.75**	**147**		P		**Pb**	**10 00 29.4**	**-0.2**
PSN					S		**Sb**	**10 00 51.6**	**+0.3**
LOZB	**Loznitsa**	**1.75**	**186**	↓	S		**Sn**	**10 00 50.5**	**+0.8**
ZIMR		**1.80**	**216**	↓	P		**Pn**	**10 00 28.7**	**+0.4**
ZIMR				↓	S		**Sn**	**10 00 51.8**	**+1.0**
MANR	**Mangalia**	**1.81**	**135**	↓	P		**Pn**	**10 00 29.5**	**+1.2**
MANR				↓	S		**Sb**	**10 00 52.7**	**-0.3**
GIRR	**Girov**	**1.85**	**353**	↑	P		**Pn**	**10 00 30.2**	**+1.1**
NEF	**NEVSHA**	**1.88**	**170**	P			**Pn**	**10 00 31.1**	**+1.7**
NEF				S			**Sb**	**10 00 55.9**	**+0.8**
BIZ	**Bicaz**	**1.89**	**345**	↓	S		**Sn**	**10 00 54.1**	**+1.0**
SZH	**Strazhitsa**	**1.95**	**199**	P			**Pn**	**10 00 32.2**	**+1.8**
SZH				S			**Sb**	**10 00 57.6**	**+0.4**
PRD	**Provadia**	**2.00**	**168**	P			**Pb**	**10 00 33.1**	**-0.8**
PRD				S			**Sb**	**10 00 59.4**	**+0.9**
MDB	**Medias**	**2.00**	**302**	↑	P		**Pb**	**10 00 33.0**	**-1.0**
ROIA	**ROIAK**	**2.06**	**169**	*eP*			**Pn**	**10 00 33.9**	**+2.0**
ROIA				S			**Sb**	**10 01 01.6**	**+1.3**
VLAD	**Vladila**	**2.07**	**238**	↑	P		**Pn**	**10 00 33.7**	**+1.7**
VLAD				↑	S		**Sn**	**10 00 58.2**	**+0.8**
AVR	**AVREN**	**2.08**	**163**	P			**Pn**	**10 00 34.3**	**+2.1**
LOT	**Lotru**	**2.19**	**280**	↑	P		**Pn**	**10 00 34.9**	**+1.1**
MILM	**Milestii Mici**	**2.27**	**37**	*eP*			**Pn**	**10 00 34.3**	**-0.4**
	480nm,0.3s								
MILM				S			**Sn**	**10 01 03.6**	**+1.3**
	4μm,0.3s								
ELND	**Elena**	**2.29**	**198**	↓	P		**Pn**	**10 00 36.2**	**+1.0**
ELND				↓	S		**Sn**	**10 01 04.1**	**+1.1**
PVL	**Pavlikeni**	**2.33**	**212**	*eP*			**Pn**	**10 00 36.3**	**+0.8**
PLVB	**Pleven**	**2.35**	**223**	↓	P		**Pn**	**10 00 36.7**	**+0.9**
PLVB				↓	S		**Sn**	**10 01 05.3**	**+0.9**
PURM	**Purcari**	**2.55**	**55**	↑	P		**Pn**	**10 00 39.8**	**+1.2**
ARCR	**ARCALIA**	**2.62**	**320**	↓	P		**Pn**	**10 00 40.8**	**+1.2**
SRE	**Strehaia**	**2.62**	**261**	↑	P		**Pn**	**10 00 40.0**	**+0.4**
JMB	**Yambol**	**2.63**	**185**	*eP*			**Pn**	**10 00 41.1**	**+1.3**
BURAR	**Bucovina Array**	**2.74**	**336**	↓	P		**Pn**	**10 00 43.3**	**+1.9**
BURAR				↑	S		**Sn**	**10 01 16.1**	**+2.0**
VALD	**Valchedram**	**2.82**	**241**	P			**Pn**	**10 00 42.3**	**-0.1**
MPEP	**Malo Peshtene**	**2.84**	**233**	P			**Pn**	**10 00 42.5**	**-0.1**
PUNG	**Punghina**	**2.91**	**255**	↑	P		**Pn**	**10 00 43.5**	**0.0**
MARR	**Marisel-Cluj**	**3.03**	**302**	↑	P		**Pn**	**10 00 46.5**	**+1.2**
HERR	**Herculane**	**3.14**	**267**	↓	P		**Pn**	**10 00 47.7**	**+0.9**
SORM	**Soroca**	**3.19**	**19**	*i*	P		**Pn**	**10 00 47.2**	**-0.3**
SORM				S			**Sn**	**10 01 25.3**	**+0.1**
	13μm,0.1s								
DRGR		**3.33**	**302**	↑	P		**Pn**	**10 00 50.0**	**+0.6**
DRGR		**3.33**	**302**	*ePn*			**Pn**	**10 00 47.2**	**-2.2**
BLKB	**Belogradchik**	**3.34**	**245**	↑	P		**Pn**	**10 00 50.0**	**+0.5**
SURR	**Surduc**	**3.38**	**283**	↑	P		**Pn**	**10 00 51.2**	**+1.2**
ZAGS	**Zajecar**	**3.54**	**250**	*ePn*			**Pn**	**10 00 51.2**	**-1.1**
VTS	**Vitosha**	**3.61**	**227**	P			**Pn**	**10 00 53.8**	**+0.5**
VTS	**Vitosha**	**3.61**	**227**	*ePn*			**Pn**	**10 00 54.5**	**+1.2**
VTS				*eSg*			Sg	10 02 03.7	+10
MDVR	**Moldovita**	**3.65**	**267**	*ePn*			**Pn**	**10 00 53.0**	**-0.8**
BZS	**Buzias**	**3.71**	**280**	↓	P		**Pn**	**10 00 54.9**	**+0.3**
BZS	**Buzias**	**3.71**	**280**	*ePn*			**Pn**	**10 00 52.9**	**-1.7**
BZS				*eSg*			**Sg**	**10 01 56.5**	**-0.6**
KUBS	**Kucevo**	**3.74**	**261**	*ePn*			**Pn**	**10 00 53.3**	**-1.7**
SIRR	**Siria**	**3.81**	**289**	↑	P		**Pn**	**10 00 56.5**	**+0.6**
SIRR	**Siria**	**3.81**	**289**	*ePn*			**Pn**	**10 00 54.5**	**-1.4**
TARU	**Tarkhankut**	**4.03**	**84**	*i*	S		**Sn**	**10 01 48.1**	**+2.3**
TARU	**Tarkhankut**	**4.03**	**84**	Sm				23 18 51.6	
	comp=E,76nm,0.5s								
TARU				Sm				23 18 51.6	
	comp=N,24nm,0.5s								
KKB	**Krupnik**	**4.24**	**221**	P			**Pn**	**10 01 03.1**	**+1.2**
BARS	**Barje**	**4.29**	**239**	*ePn*			**Pn**	**10 01 03.1**	**+0.5**
PRVS	**Prvonek**	**4.32**	**235**	*ePn*			**Pn**	**10 01 03.2**	**+0.2**
PEHC	**Pehcevo**	**4.40**	**222**	*ePn*			**Pn**	**10 01 04.3**	**+0.1**
SELS	**Selova**	**4.53**	**247**	*ePn*			**Pn**	**10 01 05.1**	**-0.8**
GRUS	**Gruza**	**4.55**	**256**	*ePn*			**Pn**	**10 01 05.7**	**-0.4**
TRUS	**Trudelj**	**4.67**	**261**	*ePn*			**Pn**	**10 01 06.8**	**-1.0**
SEV	**Sevastopol'**	**4.89**	**94**	↓	*i* P		**Pn**	**10 01 11.3**	**+0.5**
SEV				Pm				10 01 12.2	
	comp=Z,19nm,0.3s								
SEV				*i*	S		**Sn**	**10 02 07.6**	**+0.5**
SEV				Sm				10 02 11.5	
	comp=N,15nm,0.5s								
SEV				Sm				10 02 11.5	
	comp=E,18nm,0.5s								
VAY	**Valandovo**	**4.91**	**221**	*i*	Pn		**Pn**	**10 01 11.3**	**+0.3**
DIVS	**Divibare**	**4.99**	**261**	*ePn*			**Pn**	**10 01 11.4**	**-0.9**
IVAS	**Ivanjica**	**5.04**	**255**	*ePn*			**Pn**	**10 01 11.6**	**-1.2**
ALU	**Alushta**	**5.39**	**92**	*i*	P		**Pn**	**10 01 17.2**	**-0.5**
ALU				Pm				10 01 18.6	
	comp=Z,11nm,0.3s								
ALU				*i*	S		**Sn**	**10 02 20.2**	**+0.8**
ALU				Sm				10 02 21.9	
	comp=N,53nm,0.3s								
ALU				Sm				10 02 21.9	
	comp=E,22nm,0.3s								
BBLS	**Lazići**	**5.46**	**259**	*ePn*			**Pn**	**10 01 17.8**	**-0.9**
PSZ	**Piszkesteto**	**5.55**	**303**	↑	P		**Pn**	**10 01 20.2**	**+0.3**
SUDU	**Sudak**	**5.79**	**89**	↑	*i* P		**Pn**	**10 01 23.0**	**-0.2**
SUDU				Pm				10 01 24.0	
	comp=Z,49nm,0.3s								
SUDU				*i*	S		**Sn**	**10 02 29.1**	**-0.2**
SUDU				Sm				10 02 34.3	
	comp=N,51nm,0.5s								
SUDU				Sm				10 02 34.3	
	comp=E,18nm,0.4s								
AKASG	**Malin Array Be**	**5.81**	**15**	Pn			**Pn**	**10 01 22.7**	**-0.7**
	comp=E,2.2nm,0.3s,baz=206,slow=20,SNR=6.3								
AKASG				Sn			**Sn**	**10 02 26.6**	**-3.1**
	comp=E,6.5nm,0.3s,baz=168,slow=22,SNR=8.0								
AKASG				Lg			Lg	10 03 07.7	
	comp=E,5.1nm,0.3s,baz=194,slow=30,SNR=4.9								
	comp=E,1.1nm,0.5s								
BRTR	**Keskin Array B**	**7.37**	**135**	Pn			**Pn**	**10 01 44.9**	**-0.1**
	comp=E,0.8nm,0.3s,baz=320,slow=12,SNR=6.9								
	comp=E,0.6nm,0.4s								
VRAC	**Vranov**	**8.13**	**305**	LR			LR	10 05 17.0	
	comp=E,84nm,21.3s,baz=200,slow=40								
NACGM	**Naroch**	**9.80**	**360**	*eP*			**Pn**	**10 02 22.5**	**+4.5**
FINES	**FINESS Array B**	**16.36**	**359**	Pn			**Pn**	**10 03 40.9**	**-5.9**
	comp=E,0.1nm,0.3s,baz=186,slow=11,SNR=2.2								
	comp=E,1.2nm,0.8s								
AKTO	**Aktyubinsk**	**21.52**	**64**	P			**P**	**10 04 45.9**	**-0.2**
	comp=E,2.3nm,0.6s,baz=276,slow=9.1,SNR=7.4								
	comp=E,2.3nm,0.6s								
ESDC	**Sonseca Array**	**23.30**	**267**	P			**P**	**10 05 02.5**	**-2.5**
	comp=E,0.6nm,0.7s,baz=61,slow=9.8,SNR=5.6								
	comp=E,0.6nm,0.7s								
MKAR	**Makanchi Array**	**37.91**	**67**	P			**P**	**10 07 15.3**	**+1.0**
	comp=E,0.4nm,0.6s,baz=288,slow=7.6,SNR=6.5								
	comp=E,0.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**38.37**	**222**	P			**P**	**10 07 18.3**	**-0.1**
	comp=E,0.2nm,0.4s,baz=31,slow=10,SNR=2.8								
	comp=E,0.2nm,0.4s								
SONM	**Songino Array**	**52.53**	**57**	P			**P**	**10 09 10.5**	**+0.1**
	comp=E,0.3nm,0.6s,baz=290,slow=9.1,SNR=2.8								
	comp=E,0.3nm,0.6s								

*BJI **24** 10:02:29.1±0.0, 1°.69N×98°.83E, h10km, mb4.6/63, mB5.0/36, Ms5.0/56, Ms7 4.6/54*
*IDC **24** 10:02:30.9±0.5, 2°.02N×99°.04E, h0km, mb4.8/33, mbtmp4.8/33, MS4.4/58, Error ellipse: s-maj=18.4km s-min=12.1km az=48.0*
*MOS **24** 10:02:31.7±1.0, 2°.00N×98°.93E, h17km, mb5.2/57, MS4.4/8, Error ellipse: s-maj=8.5km s-min=3.8km az=114.2*
*NEIC **24** 10:02:33.5, 2°.06N×98°.87E, h20km*
*NEIC **24** 10:02:33.5, 1°.86N×98°.77E, h20km, Moment Tensor Solution. Duration: 1$5 Moment tensor: Scale 10^16^Nm; Mrr-0.23; Mθθ-2.95; Mϕϕ3.19; Mrθ-1.02; Mϕ1.95; Mϕr-0.16; Fault plane solution: M0 3.78000×10^16^ NP1:ϕ0 60.36000°, δ84.03000°, λ-15.14000°. NP2:ϕ0 151.98000°, δ74.95000°, λ-173.81000°. Principal axes: T 3.8011, Plg6.0000°, Azm107.0000°; N -0.0329, Plg74.0000°, Azm219.0000°; P -3.7682, Plg15.0000°, Azm15.0000°;*
*GCMT **24** 10:02:34.4±0.2, 2°.02N±0°.01×98°.95E±0°.01, h19km±1km, MW5.0/112, Moment Tensor Solution. s61,c82; s112,c181; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.76±.11; Mθθ-3.39±.09; Mϕϕ4.15±.11; Mrθ-1.65±.23; Mϕ2.13±.09; Mϕr0.20±.21; Best double couple: M0 4.68400×10^16^ NP1:ϕ0 57.00000°, δ76.00000°, λ-18.00000°. NP2:ϕ0 152.00000°, δ72.00000°, λ-165.00000°. Principal axes: T 4.7200, Plg3.0000°, Azm105.0000°; N -0.0710, Plg67.0000°, Azm201.0000°; P -4.6480, Plg23.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 10:02:34.4±2.0, 2°.07N±0°.06×98°.86E±0°.05, h17km±3km, mb5.1/104, Ms_20 4.6/35, Mww5.0/26 Error ellipse: s-maj=8.1km s-min=7.4km az=182.0*
*DJA **24** 10:02:34.3±0.1, 2°.N±1°×9°9E±°, h10km, M4.9/40, mb5.0/40, mB5.4/18, MLv5.2/18, Mw5.0/18, Mw(mB)4.8/18, MwMwp5.3/2, Mwp5.5/2*
*BGR **24** 10:02:35.5, 2°.17N×99°.65E, h33km, mb4.9, Ms4.5*
ISC 24 10:02:34.2±0.5, 2°.02N±0°.03×98°.90E±0°.03, h17km±2km, h17km:pP-P, n527, σ1$48/495, mb5.0/161, MS4.5/98, 38C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
RPSI	**Rantau Prapat**	**0.67**	**2**				**Pg**	**10 02 45.9**	**-1.5**
PSI	**Prapat**	**0.77**	**2**	P			**Pb**	**10 02 45.9**	**-3.4**
GSI	**Gunungsitoli**	**1.50**	**242**	Pn			**Pn**	**10 03 00.3**	**-0.2**
GSI	**Gunungsitoli**	**1.50**	**242**	P			**Pb**	**10 03 01.6**	**-0.1**
GSI				S			**Sg**	**10 03 22.3**	**-0.6**
KCSI	**Kotacane, Aceh**	**1.87**	**323**	P			**Pn**	**10 03 06.4**	**+1.0**
KCSI				S			**Sb**	**10 03 31.5**	**+0.5**
PBSI	**Pulau Batu**	**2.16**	**197**	P			**Pn**	**10 03 08.5**	**-0.9**
SNSI	**Sinabang, Aceh**	**2.60**	**279**	P			**Pn**	**10 03 17.5**	**+2.0**
BKNI	**Bangkinang**	**2.72**	**128**				**Pn**	**10 03 17.7**	**+0.5**
BKNI	**Bangkinang**	**2.72**	**128**	P			**Pn**	**10 03 18.0**	**+0.8**
SISI	**Saibi**	**3.33**	**177**	P			**Pn**	**10 03 25.5**	**-0.1**
MLSI	**Meulaboh, Aceh**	**3.34**	**312**	P			**Pn**	**10 03 28.1**	**+2.4**
KULM	**Kulim**	**3.68**	**28**	Pn			**Pn**	**10 03 30.5**	**0.0**
LHMI	**Lhok Sumawe**	**3.73**	**329**	Pn			**Pn**	**10 03 30.3**	**-0.8**
LHMI	**Lhok Sumawe**	**3.73**	**329**	P			**Pn**	**10 03 33.1**	**+2.0**
KRJI	**Kerinci**	**4.82**	**148**	P			**Pn**	**10 03 49.3**	**+3.1**
PPSI	**Pulau Pagai**	**4.88**	**167**	P			**Pn**	**10 03 46.9**	**0.0**
MYKOM	**Kota Tinggi**	**4.95**	**93**	Pn			**Pn**	**10 03 47.1**	**-0.8**
TPRI	**Tanjung Pinang**	**5.73**	**101**	P			**Pn**	**10 03 59.7**	**+1.1**
	297nm,1.1s,6μm2.1nm								
JMBI	**JAMBI**	**5.97**	**127**	P			**Pn**	**10 04 02.0**	**+0.1**
	262nm,1.4s,4μm1.9nm								
DSRI	**Dabo**	**6.20**	**114**	P			**Pb**	**10 04 23.4**	**+1.6**
MNAI	**Manna**	**7.53**	**147**	Pn			**Pn**	**10 04 24.7**	**+1.4**
PPBI	**Pangkal Pinang**	**8.34**	**120**	P			Pn	10 04 42.7	+8.2
LWLI	**Liwa**	**8.69**	**144**	P			**Pn**	**10 04 41.3**	**+2.0**
	99nm,1.0s								

comp=Z,220nm,3.8s
KMI LR LR
comp=Z,700nm,10.6s
KMI LR LR
comp=Z,1μm,15.0s
KMI LR LR
comp=Z,2μm,12.9s
KOHI KOHIMA 24.01 349 *eP* **P 10 07 47.4 -1.0**
KOHI IAmb IAmb 10 08 03.0
comp=Z,46nm,1.1s
LUWI Luwuk 24.06 97 P **P 10 07 49.4 +0.5**
LUWI Luwuk 24.06 97 P **P 10 07 50.2 +1.3**
comp=Z,220nm,1.2s,comp=Z,3μm
GTOI Gorontalo 24.14 93 P **P 10 07 48.5 -1.2**
comp=Z,17nm,1.1s,comp=Z,226nm
SHL Shillong 24.36 344 P **P 10 07 49.5 -2.3**
SHL IAmb IAmb 10 07 54.6
comp=Z,45nm,1.1s
SHL Shillong 24.36 344 P **P 10 07 49.5 -2.3**
SHL pmax pmax
comp=Z,45nm,1.1s
SHL Shillong 24.36 344 *eP* **P 10 07 51.0 -0.8**
SHL IAmb IAmb 10 07 54.8
comp=Z,38nm,1.1s
SHL Shillong 24.36 344 P **P 10 07 52.4 +0.6**
SNR=17
PZH PanZhiHua 24.49 6 P **P 10 07 53.3 +0.4**
PZH S **S 10 12 13.1 +0.4**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,190nm,8.4s
PZH LR LR
comp=Z,720nm,16.7s
PZH LR LR
comp=Z,2μm,16.3s
PZH LR LR
comp=Z,970nm,16.1s
MOKO MOKOCHONG 24.52 350 *eP* **P 10 07 53.0 -0.2**
MOKO IAmb IAmb 10 07 55.2
comp=Z,73nm,1.2s
HKPS Hong Kong Po S 25.00 35 IAMs_20 IAMs_20 10 18 28.3
comp=Z,1μm,18.0s
TEZP TEZPUR 25.14 347 *eP* **P 10 07 59.0 +0.5**
MMRI Maumere 25.56 115 IAMs_20 IAMs_20 10 19 58.0
comp=Z,3μm,20.0s
DIBR DIBRUGARH 25.59 352 *eP* **P 10 08 00.6 -2.0**
GULI GuiLin 25.64 25 *eP* P 10 08 12.8 +10
GULI S **S 10 12 34.8 +4.0**
DAV Davao City (W) 27.05 78 LR LR 10 20 13.3
comp=Z,461nm,18.5s,baz=254,slow=40
SOEI Soe 27.84 115 P **P 10 08 20.3 -3.0**
SOEI IAmb IAmb 10 08 35.6
comp=Z,37nm,0.9s
SOEI IAMs_20 IAMs_20 10 21 29.5
comp=Z,2μm,20.0s
SOEI Soe 27.84 115 P **P 10 08 24.3 +1.0**
comp=Z,41nm,1.0s
LSA Lhasa 28.49 346 P **P 10 08 27.2 -2.1**
LSA Lhasa 28.49 346 P **P 10 08 27.2 -2.1**
LSA pmax pmax
comp=Z,9.0nm,0.9s
LSA MLR MLR
comp=Z,500nm,19.0s
LSA Lhasa 28.49 346 P **P 10 08 32.3 +3.0**
NLAI Namlea 28.67 100 P **P 10 08 33.5 +3.0**
comp=Z,20nm,0.8s,comp=Z,3μm
CD2 Chengdu 29.10 9 P **P 10 08 33.8 -0.4**
CD2 S **S 10 13 27.5 +2.1**
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 LR LR
comp=Z,510nm,7.7s
CD2 LR LR
comp=Z,2μm,11.2s
CD2 LR LR
comp=Z,1μm,12.9s
ENH Enshi 29.84 19 P **P 10 08 40.0 -0.7**
ENH IAmb IAmb 10 08 49.2
comp=Z,21nm,0.9s
ENH IAMs_20 IAMs_20 10 21 50.8
comp=Z,1μm,21.0s
TWG Pinlang 29.84 44 IAMs_20 IAMs_20 10 20 30.2
comp=Z,875nm,20.0s
TPUB Ta-pu 29.85 43 IAMs_20 IAMs_20 10 21 42.3
comp=Z,1μm,18.0s
YULB Yu-li 30.37 44 IAMs_20 IAMs_20 10 21 34.1
comp=Z,1μm,19.0s
NACB Ninganchiao 31.09 43 IAMs_20 IAMs_20 10 21 41.1
comp=Z,910nm,18.0s
YHNB Yeheng 31.27 42 IAMs_20 IAMs_20 10 21 20.9
comp=Z,1μm,19.0s
TATO Taipei 31.55 42 IAMs_20 IAMs_20 10 23 05.5
comp=Z,1μm,19.0s
WHN Wuhan 31.92 26 ⇓P **P 10 09 02.8 +3.8**
WHN S **S 10 14 15.6 +6.1**
WHN LR LR
comp=Z,2μm,9.9s
WHN LR LR
comp=Z,3μm,15.0s
WHN LR LR
comp=Z,4μm,13.5s
BHV Bhavnagar 32.59 309 *eP* **P 10 09 07.4 +2.3**
PTH Pithoragarh 32.63 329 *eP* **P 10 09 06.8 +1.2**
XAN Xi'an 33.20 15 ⇑P **P 10 09 10.8 +0.5**
XAN pmax pmax
comp=Z,27nm,0.9s
XAN LR LR
comp=Z,3μm,11.7s
XAN LR LR
comp=Z,2μm,12.1s
XAN LR LR
comp=Z,3μm,12.7s
XAN Xi'an 33.20 15 P **P 10 09 09.7 -0.6**
XAN IAmb IAmb 10 09 11.5
comp=Z,23nm,1.1s
XAN Xi'an 33.20 15 P **P 10 09 09.7 -0.6**
XAN pmax pmax
comp=Z,23nm,1.1s
FAKI Fak Fak 33.70 98 P **P 10 09 12.4 -2.5**
FAKI IAmb IAmb 10 09 15.2
comp=Z,26nm,1.2s
LZH Lanzhou 34.20 7 *eP* **P 10 09 19.3 +0.2**
LZH pP pP 10 09 25.5 +0.7
LZH pmax pmax
comp=Z,34nm,1.2s
LZH LR LR
comp=Z,760nm,12.0s
LZH LR LR
comp=Z,2μm,13.6s
LZH LR LR
comp=Z,1μm,17.5s
MEEK Meekatharra 34.27 148 P **P 10 09 19.7 +0.1**
baz=34,SNR=5.9
LYN LuoYang 34.75 20 *eP* **P 10 09 24.3 +0.6**
LYN S S 10 15 03.3 +10
LYN pmax pmax
comp=Z,36nm,1.1s
LYN pmax pmax
comp=Z,250nm,4.7s
LYN LR LR
comp=Z,1μm,13.9s
LYN LR LR
comp=Z,2μm,14.2s
LYN LR LR
comp=Z,2μm,12.4s
MORW Morawa 35.01 153 P **P 10 09 26.4 +0.4**
baz=35,SNR=4.8
MORW Morawa 35.01 153 P **P 10 09 26.4 +0.4**
MORW IAmb IAmb 10 09 29.7
comp=Z,24nm,1.1s
MTN Manton Dam 35.24 116 P **P 10 09 26.8 -1.4**
baz=35
MTN Manton Dam 35.24 116 P **P 10 09 27.0 -1.2**
MTN IAmb IAmb 10 09 30.1
comp=Z,20nm,1.0s
NJ2 Nanjing 35.29 30 *eP* **P 10 09 30.5 +2.1**
NJ2 pP **pP 10 09 33.6 -0.4**
NJ2 sP **sP 10 09 34.6 -1.6**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,100nm,6.6s
NJ2 LR LR
comp=Z,2μm,12.3s
NJ2 LR LR
comp=Z,1μm,11.4s
NJ2 LR LR
comp=Z,2μm,14.2s
SMLA Simla 35.50 327 *eP* **P 10 09 30.5 +0.3**
SMLA IAmb IAmb 10 09 36.0
comp=Z,13nm,0.9s
KDU Kakadu 36.39 115 P **P 10 09 36.4 -1.7**
baz=36,SNR=6.2
GTA Gaotai 37.22 1 P **P 10 09 45.3 +0.3**
GTA pP pP 10 09 49.8 -0.8
GTA PcP **PcP 10 12 05.9 +1.2**
GTA pmax pmax
comp=Z,13nm,1.2s
GTA LR LR
comp=Z,460nm,15.9s
GTA LR LR
comp=Z,750nm,13.9s
GTA LR LR
comp=Z,510nm,15.9s
JOW Kunigami 37.45 46 LR LR 10 26 22.9
comp=Z,290nm,18.6s,baz=200,slow=38
MUN Mundaring 37.59 156 P **P 10 09 48.1 +0.1**
baz=38,SNR=5.9
KLBR Kellerberrin 37.93 153 P **P 10 09 50.8 -0.1**
baz=38
HNS HongShan 38.09 21 ⇓P **P 10 09 53.0 +0.8**
HNS pmax pmax
comp=Z,11nm,1.0s
NWAO Narrogin (SRO) 38.84 155 P **P 10 09 59.2 +0.6**
NWAO IAmb IAmb 10 10 00.6
comp=Z,63nm,1.4s
NWAO Narrogin (SRO) 38.84 155 P **P 10 09 59.2 +0.6**
NWAO pmax pmax
comp=Z,63nm,1.4s
NWAO MLR MLR
comp=Z,2μm,20.0s
NWAO Narrogin (SRO) 38.84 155 LR LR 10 24 05.5
comp=Z,2μm,21.8s,baz=321,slow=33
NWAO Narrogin (SRO) 38.84 155 P **P 10 09 55.9 -2.7**
NIL Nilore 39.57 325 P **P 10 10 03.7 -1.0**
NIL IAmb IAmb 10 10 07.1
comp=Z,46nm,1.0s
NIL Nilore 39.57 325 P **P 10 10 03.7 -1.0**
NIL pmax pmax
comp=Z,46nm,1.0s
KMBL Kambalda 39.75 149 P **P 10 10 05.1 -1.2**
baz=40
HHC Hu-ho-hao-te 40.31 15 *eP* **P 10 10 11.1 +0.2**
HHC pP pP 10 10 17.0 +0.5
HHC S **S 10 16 15.6 -2.3**
HHC sS sS 10 16 29.3 +2.1
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,110nm,4.4s
HHC LR LR
comp=Z,1μm,18.6s
HHC LR LR
comp=Z,630nm,16.2s
HHC LR LR
comp=Z,1μm,15.7s
BJT Baijiatuan 40.94 20 IAMs_20 IAMs_20 10 30 25.8
comp=Z,784nm,18.0s
BJI Beijing 40.97 20 P **P 10 10 16.8 +0.7**
BJI sP **sP 10 10 23.8 -0.2**
BJI S **S 10 16 27.9 +0.5**
BJI pmax pmax
comp=Z,3.0nm,0.9s
BJI pmax pmax
comp=Z,74nm,7.2s
BJI LR LR
comp=Z,390nm,16.2s
BJI LR LR
comp=Z,450nm,12.8s
BJI LR LR
comp=Z,590nm,14.6s
WB0 Warramunga Arr 41.02 124 P **P 10 10 14.8 -2.1**
WB0 IAmb IAmb 10 10 17.3
comp=Z,30nm,0.8s
WRA Warramunga Arr 41.05 124 P **P 10 10 15.5 -1.7**
WRA Warramunga Arr 41.05 124 P **P 10 10 15.5 -1.7**
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRA Warramunga Arr 41.05 124 P **P 10 10 14.8 -2.4**
comp=Z,38nm,0.9s,baz=300,slow=9.0,SNR=117
WRA PcP **PcP 10 12 15.9 -1.1**
comp=Z,1.0nm,0.8s,baz=301,slow=2.6,SNR=4.6
WRA LR LR 10 29 05.4
comp=Z,830nm,21.7s,baz=312,slow=39
comp=Z,38nm,0.9s
WRAB Tennant Creek 41.06 124 P **P 10 10 15.8 -1.4**
WRAB IAmb IAmb 10 10 17.9
comp=Z,44nm,0.9s
WRAB Tennant Creek 41.06 124 P **P 10 10 15.8 -1.4**
WRAB pmax pmax
comp=Z,44nm,0.9s
WB2 Warramunga Arr 41.06 124 P **P 10 10 15.4 -1.9**
baz=41
WB2 Warramunga Arr 41.06 124 P **P 10 10 15.5 -1.8**
WB2 IAmb IAmb 10 10 17.9
comp=Z,43nm,0.9s
AS31 Alice Springs 42.56 129 P **P 10 10 27.2 -2.3**
ASAR Alice Springs 42.56 129 P **P 10 10 27.7 -1.8**
ASAR Alice Springs 42.56 129 P **P 10 10 27.7 -1.8**
ASAR Alice Springs 42.56 129 P **P 10 10 27.2 -2.3**
comp=Z,4.7nm,1.1s,baz=303,slow=7.2,SNR=19
ASAR PcP **PcP 10 12 21.1 -0.8**
comp=Z,1.7nm,0.9s,baz=306,slow=3.6,SNR=5.5
ASAR LR LR 10 28 06.5
comp=Z,354nm,21.8s,baz=294,slow=36
comp=Z,4.7nm,1.1s
KBL Kabul 42.67 323 P **P 10 10 29.8 -0.6**
KBL Kabul 42.67 323 P **P 10 10 29.8 -0.6**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 42.67 323 P **P 10 10 32.8 +2.3**
SNR=7.4
KSH Kashi 42.76 334 P **P 10 10 31.1 +0.1**
KSH pmax pmax
comp=Z,4.0nm,0.6s
KSH LR LR
comp=Z,370nm,14.4s
KSH LR LR
comp=Z,400nm,11.7s
KSH LR LR
comp=Z,620nm,18.5s
WMQ Urumqi 42.80 348 *eP* **P 10 10 33.8 +2.7**
WMQ PP **PP 10 12 09.6 -1.0**
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ LR LR
comp=Z,430nm,24.0s
WMQ LR LR
comp=Z,170nm,22.5s
FORT Forrest 42.84 142 P **P 10 10 30.1 -1.5**
FORT IAmb IAmb 10 11 18.4
comp=Z,32nm,0.9s
JNU Nakatsue 43.07 41 LR LR 10 30 39.4
comp=Z,699nm,18.1s,baz=232,slow=39
JLN Jalan Bani Buh 43.27 301 P **P 10 10 37.8 +2.6**
INCN Inchon 43.54 33 IAMs_20 IAMs_20 10 30 24.9
comp=Z,902nm,18.0s
WBK Wadi Bani Khal 43.82 301 P **P 10 10 42.8 +3.1**
MHTO MHTO 44.11 298 P **P 10 10 44.3 +2.3**
KSAR Wonju Array Be 44.19 34 P **P 10 10 41.5 -0.9**
KSAR Wonju Array Be 44.19 34 P **P 10 10 41.5 -0.9**
KSRS Korea Array 44.22 34 P **P 10 10 40.5 -2.1**
comp=Z,2.9nm,0.9s,baz=223,slow=10,SNR=7.0
KSRS PcP **PP 10 12 26.5 +0.6**
comp=Z,2.5nm,1.0s,baz=191,slow=2.6,SNR=4.5
KSRS LR LR 10 30 41.8
comp=Z,581nm,18.0s,baz=205,slow=38
comp=Z,2.9nm,0.9s
NRN Naryn 44.33 335 P **P 10 10 43.0 -0.8**
NRN IAmb IAmb 10 10 46.8
comp=Z,23nm,1.0s
NRN Naryn 44.33 335 P **P 10 10 43.0 -0.8**
NRN pmax pmax
comp=Z,23nm,1.0s
WSAR Wadi Sarin 44.34 302 LR LR 10 30 42.3
comp=Z,157nm,18.1s,baz=119,slow=38
WSAR Wadi Sarin 44.34 302 P **P 10 10 46.3 +2.4**
XLT XiLinHaoTe 44.40 18 *eP* **P 10 10 47.6 +3.5**
XLT pmax pmax
comp=Z,10.0nm,0.9s
XLT pmax pmax
comp=Z,200nm,5.2s
XLT LR LR
comp=Z,710nm,12.5s
XLT LR LR
comp=Z,450nm,15.0s
JMDO Jabal Madar 44.47 300 P **P 10 10 47.8 +2.8**
SHLS Shalkode 44.48 340 *eP* **P 10 10 43.7 -1.1**
baz=340
SHLS Shalkode 44.48 340 *eP* **P 10 10 43.6 -1.1**
PDGK Podgornoye 44.62 340 P **P 10 10 46.1 +0.2**
UZB Uzynbulak 44.62 339 *eP* **P 10 10 46.2 +0.2**
baz=339
UZB Uzynbulak 44.62 339 *eP* **P 10 10 46.2 +0.2**
SATY Saty 44.77 339 *eP* **P 10 10 46.9 -0.2**
comp=Z,12nm,1.2s,baz=339
SATY Saty 44.77 339 *eP* **P 10 10 46.9 -0.2**
SATY pmax pmax
comp=Z,12nm,1.2s
ZHN Zhinishke 44.85 339 *eP* **P 10 10 48.0 +0.2**
baz=339
ZHN Zhinishke 44.85 339 *eP* **P 10 10 47.9 +0.2**
BIDO Bidbid 44.88 302 P **P 10 10 50.8 +2.6**
ULHL Ulahol 44.91 336 P **P 10 10 48.9 +0.6**
SNR=8.1
BOOM Boomskoye usch 45.23 336 P **P 10 10 50.8 -0.1**
BOOM Boomskoye usch 45.23 336 P **P 10 10 50.8 -0.1**
BOOM pmax pmax
comp=Z,14nm,1.1s
TNSS Tian-Shan 45.30 337 *eP* **P 10 10 51.6 -0.1**
baz=337
TNSS Tian-Shan 45.30 337 *eP* **P 10 10 51.5 -0.1**
MDOK Medeo 45.36 337 *eP* **P 10 10 51.7 -0.2**
baz=338
MDOK Medeo 45.36 337 P **P 10 10 51.6 -0.2**
SIMJ Simiganj 45.56 327 P **P 10 10 52.4 -1.1**
SIMJ IAmb IAmb 10 10 55.0
comp=Z,24nm,0.9s
HOQ Hoqain 45.60 302 P **P 10 10 56.5 +2.6**
UCH Uchtor 45.61 335 P **P 10 10 55.7 +1.5**
SNR=31
BTK Batken 45.63 330 IAmb IAmb 10 10 57.1
comp=Z,24nm,0.9s
TKM2 Tokmak 2 45.73 336 P **P 10 10 56.9 +2.0**
SNR=16
TKM2 Tokmak 2 45.73 336 P **P 10 10 54.5 -0.4**
QIS Mount Isa 45.76 121 P **P 10 10 54.6 -0.5**
baz=46,SNR=5.1
KBK Karagaybulak 45.78 335 P **P 10 10 57.3 +2.1**
SNR=20
AAK Ala-Archa 45.95 335 P **P 10 10 58.6 +2.0**
SNR=11
AAK Ala-Archa 45.95 335 P **P 10 10 56.4 -0.2**
AAK IAmb IAmb 10 11 04.5
comp=Z,16nm,1.0s
AAK Ala-Archa 45.95 335 *ce*P **P 10 10 57.0 +0.4**
AAK pmax pmax
comp=Z,17nm,1.3s
AAK Ala-Archa 45.95 335 LR LR 10 33 23.6
comp=Z,470nm,19.0s,baz=156,slow=40
AAK Ala-Archa 45.95 335 P **P 10 10 58.3 +1.7**
CHKK Chushkaly 45.98 338 *eP* **P 10 10 56.9 +0.3**
baz=338
CHKK Chushkaly 45.98 338 *eP* **P 10 10 56.8 +0.3**
SONM Songino Array 46.09 7 P **P 10 10 57.2 -0.3**
SONM IAmb IAmb 10 10 59.9
comp=Z,18nm,1.0s
SONM Songino Array 46.09 7 P **P 10 10 57.2 -0.3**
SONM pmax pmax
comp=Z,18nm,1.0s
SONM Songino Array 46.09 7 P **P 10 10 57.1 -0.4**
comp=Z,17nm,1.0s,baz=191,slow=7.6,SNR=50
SONM PcP **PcP 10 12 33.1 -0.5**
comp=Z,3.2nm,0.9s,baz=184,slow=3.2,SNR=4.3
comp=Z,17nm,1.0s
CHMS Chumysh 46.14 335 P **P 10 10 59.1 +1.2**
SNR=7.3
ULN Ulaanbaatar 46.21 8 P **P 10 10 58.1 -0.3**
ULN IAmb IAmb 10 11 00.8
comp=Z,15nm,1.1s
ULN Ulaanbaatar 46.21 8 IAMs_20 IAMs_20 10 32 07.3
comp=Z,852nm,18.0s
ULN Ulaanbaatar 46.21 8 *i*P **P 10 10 57.9 -0.5**
ULN pmax pmax
comp=Z,13nm,1.0s
KUU Kurty 46.26 337 *eP* **P 10 10 59.1 +0.3**
baz=337
KUU Kurty 46.26 337 *eP* **P 10 10 59.0 +0.3**
EKS2 Erkin-Say 46.28 334 P **P 10 11 00.7 +1.6**
SNR=24
SOHO SOHO 46.46 302 P **P 10 11 03.1 +2.4**
TDK Taldyqorghan 46.46 340 *eP* **P 10 11 00.9 +0.5**
baz=340
TDK Taldyqorghan 46.46 340 *eP* **P 10 11 00.8 +0.5**
USP Ospenovka 46.47 335 P **P 10 11 02.1 +1.6**
SNR=38
SGDS Sogindy 46.57 336 *eP* **P 10 11 01.6 +0.3**
comp=Z,5.0nm,0.6s,baz=336
SGDS Sogindy 46.57 336 *eP* **P 10 11 01.6 +0.3**
SGDS pmax pmax
comp=Z,5.0nm,0.6s
DOK Doka 46.85 294 P **P 10 11 04.9 +1.1**
ZSN Zaisan 46.86 347 *eP* **P 10 11 04.1 +0.6**
comp=Z,10nm,1.3s,baz=347
ZSN Zaisan 46.86 347 *eP* **P 10 11 04.0 +0.6**
ZSN pmax pmax
comp=Z,11nm,1.3s
GUMO Guam 46.87 73 P **P 10 11 03.9 -0.1**
GUMO Guam 46.87 73 P **P 10 11 03.9 -0.1**
GUMO pmax pmax
comp=Z,365nm,1.3s
MK31 Makanchi Array 46.88 344 P **P 10 11 03.5 -0.2**
MK31 Makanchi Array 46.88 344 *ce*P **P 10 11 04.9 +1.3**
MKAR Makanchi Array 46.88 344 P **P 10 11 02.6 -1.0**
MKAR Makanchi Array 46.88 344 *ce*P **P 10 11 03.5 -0.1**
MKAR pmax pmax
comp=Z,10.0nm,0.9s
MKAR Makanchi Array 46.88 344 P **P 10 11 03.9 +0.2**
comp=Z,9.4nm,0.8s,baz=155,slow=6.8,SNR=61
MKAR PcP **PcP 10 12 36.6 +0.3**
comp=Z,2.2nm,0.9s,baz=148,slow=4.8,SNR=1.9
MKAR LR LR 10 36 17.1
comp=Z,216nm,18.1s,baz=163,slow=43
comp=Z,9.4nm,0.8s
MAKZ Makanchi 46.98 344 P **P 10 11 03.4 -1.0**
MAKZ Makanchi 46.98 344 P **P 10 11 04.4 0.0**
WHFO Wadi Hawf 47.00 293 P **P 10 11 06.6 +1.6**
HATD Hatta, Dubai 47.06 303 P **P 10 11 07.6 +2.2**
ASHO Ashiyiah 47.07 302 P **P 10 11 07.2 +1.7**
ALNE Al Ain 47.10 301 P **P 10 11 08.7 +3.0**
SNR=6.4
MASF Masafi 47.24 303 P **P 10 11 09.2 +2.4**
ABTO Aybut 47.30 292 P **P 10 11 10.0 +2.6**
FAQ Al Faqa, Dubai 47.48 302 P **P 10 11 10.6 +2.0**
DZA Taraz 47.56 333 *eP* **P 10 11 08.9 -0.1**
baz=332
DZA Taraz 47.56 333 *eP* **P 10 11 08.8 -0.2**
IUG Iuzhnay 47.60 331 *eP* **P 10 11 09.7 +0.2**
baz=331
IUG Iuzhnay 47.60 331 *eP* **P 10 11 09.6 +0.2**
ASUD Al Ashush, Dub 47.66 302 P **P 10 11 12.3 +2.3**
SNR=8.5
CN2 Changchun 47.82 26 *eP* **P 10 11 11.3 +0.4**
CN2 PcP **PcP 10 12 40.0 +0.4**
CN2 *eS* **S 10 18 05.0 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=Z,230nm,13.0s
CN2 LR LR
comp=Z,720nm,13.0s
CHM Chimkent 47.94 331 *eP* **P 10 11 12.3 +0.4**
baz=331
CHM Chimkent 47.94 331 *eP* **P 10 11 12.3 +0.4**
KK31 Karatay Array 48.10 332 P **P 10 11 12.9 -0.2**
KK31 Karatay Array 48.10 332 *i*P **P 10 11 13.3 +0.1**
KKAR Karatay Array 48.10 332 P **P 10 11 12.5 -0.6**
KKAR Karatay Array 48.10 332 P **P 10 11 13.2 0.0**
KKAR IAmb IAmb 10 11 18.4
comp=Z,11nm,1.0s
KKAR Karatay Array 48.10 332 P **P 10 11 13.2 0.0**
KKAR pmax pmax
comp=Z,11nm,1.0s
BTLS Baital 48.11 336 *eP* **P 10 11 12.9 -0.3**
comp=Z,5.6nm,0.8s,baz=336
BTLS Baital 48.11 336 *eP* **P 10 11 12.9 -0.3**

BTLS pmax pmax
comp=Z,6.0nm,0.8s
ZAK Zakamensk 48.33 4 *e*P **P 10 11 13.4 -1.5**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
BRLS Borolday 48.36 332 *e*P **P 10 11 14.7 -0.6**
baz=331
BRLS Borolday 48.36 332 *e*P **P 10 11 14.6 -0.6**
DGZ Jazzator, Alta 48.50 350 *i*P **P 10 11 16.2 -0.1**
DGZ pmax pmax
comp=Z,9.0nm,1.0s
MTSU Mount Surprise 48.98 116 P **P 10 11 19.9 -0.5**
baz=49,SNR=5.6
PMG Port Moresby 49.40 104 P **P 10 11 21.9 -1.6**
PMG Port Moresby 49.40 104 *i*P **P 10 11 22.5 -1.0**
PMG pmax pmax
comp=Z,6.0nm,1.0s
PMG Port Moresby 49.40 104 LR LR 10 35 47.4
comp=Z,246nm,19.1s,baz=266,slow=40
MJAR Matsushiro Arr 49.94 42 LR LR 10 34 43.3
comp=Z,416nm,18.6s,baz=231,slow=39
BNX BinXian 50.20 26 ⇑P **P 10 11 29.3 +0.1**
BNX pmax pmax
comp=Z,10.0nm,1.1s
BNX pmax pmax
comp=Z,190nm,4.0s
HIA Hailar 50.33 18 IAMs_20 IAMs_20 10 36 57.2
comp=Z,653nm,18.0s
HIA Hailar 50.33 18 *i*P **P 10 11 30.6 +0.5**
HIA pmax pmax
comp=Z,7.0nm,0.9s
MDJ Mudanjiang 50.33 28 P **P 10 11 31.6 +1.4**
MDJ sP pP 10 11 36.4 +0.5
MDJ PcP **PcP 10 12 49.3 +0.5**
MDJ PP **PP 10 13 27.5 +1.7**
MDJ S **S 10 18 46.3 +3.9**
MDJ sS sS 10 18 51.8 0.0
MDJ ScS **ScS 10 21 21.8 +1.0**
MDJ SS **SS 10 22 18.3 +2.0**
MDJ pmax pmax
comp=Z,10.0nm,1.4s
MDJ pmax pmax
comp=Z,290nm,4.6s
MDJ LR LR
comp=Z,2μm,16.1s
MDJ LR LR
comp=Z,880nm,17.9s
MDJ LR LR
comp=Z,2μm,17.5s
SEM Semipalatinsk 50.74 345 *e*P **P 10 11 33.3 -0.2**
baz=345
SEM Semipalatinsk 50.74 345 *e*P **P 10 11 33.2 -0.2**
USA0B Ussuriysk Arra 51.20 30 *i*P **P 10 11 37.3 +0.6**
USRK Ussuriysk Ar. 51.20 30 P **P 10 11 36.9 +0.2**
USRK Ussuriysk Ar. 51.20 30 P **P 10 11 36.7 0.0**
comp=Z,9.7nm,1.0s,baz=225,slow=8.2,SNR=6.3
USRK LR LR 10 34 41.4
comp=Z,437nm,18.9s,baz=216,slow=38
comp=Z,9.7nm,1.0s
CTAO Charters Tower 51.36 118 P **P 10 11 37.3 -1.1**
CTAO IAmb IAmb 10 11 45.0
comp=Z,58nm,1.6s
CTAO Charters Tower 51.36 118 P **P 10 11 37.3 -1.1**
CTAO pmax pmax
comp=Z,58nm,1.6s
KURBB Kurchatov Arra 51.41 344 P **P 10 11 38.4 +0.2**
comp=Z,11nm,0.9s,baz=164,slow=6.9,SNR=76
KURBB PcP **PcP 10 12 53.2 +0.6**
comp=Z,3.1nm,0.9s,baz=158,slow=3.0,SNR=7.8
comp=Z,11nm,0.9s
OTUK Ortayu 51.42 338 P **P 10 11 38.3 -0.1**
KURK Kurchatov 51.46 344 P **P 10 11 38.0 -0.5**
KURK IAmb IAmb 10 11 40.7
comp=Z,23nm,0.9s
KURK Kurchatov 51.46 344*ce*P **P 10 11 38.9 +0.3**
KURK pmax pmax
comp=Z,33nm,1.3s
KURK Kurchatov 51.46 344 P **P 10 11 39.6 +1.1**
GEYT Alibeck 51.70 319 P **P 10 11 39.9 -0.7**
GEYT IAmb IAmb 10 11 43.3
comp=Z,28nm,0.9s
GEYT Alibeck 51.70 319 P **P 10 11 41.2 +0.6**
comp=Z,24nm,0.9s,baz=146,slow=8.2,SNR=42
GEYT LR LR 10 36 23.0
comp=Z,216nm,19.7s,baz=144,slow=39
comp=Z,24nm,0.9s
GYA0B ALIBECK ARRAY 51.70 319 P **P 10 11 40.0 -0.6**
GYA0B IAmb IAmb 10 11 43.3
comp=Z,26nm,0.9s
STKA Stephens Creek 52.66 133 P **P 10 11 46.1 -1.7**
baz=53,SNR=6.3
STKA Stephens Creek 52.66 133 *i*P **P 10 11 45.2 -2.7**
STKA Stephens Creek 52.66 133 P **P 10 11 45.6 -2.2**
comp=Z,7.6nm,0.9s,baz=310,slow=6.9,SNR=9.9
STKA LR LR 10 36 00.8
comp=Z,552nm,19.9s,baz=296,slow=38
comp=Z,7.6nm,0.9s
BRZS Berezniki 52.73 339 ⇑*i*P **P 10 11 48.5 +0.4**
baz=339
BRZS Berezniki 52.73 339*c i*P **P 10 11 48.4 +0.4**
ZAA0 Zalesovo Array 53.04 350 P **P 10 11 49.2 -1.0**
ZAA0 IAmb IAmb 10 11 51.9
comp=Z,26nm,0.8s
ZALV Zalesovo Beam 53.04 350 P **P 10 11 49.3 -0.9**
ZALV Zalesovo Beam 53.04 350 *i*P **P 10 11 49.0 -1.2**
ZALV pmax pmax
comp=Z,41nm,1.0s
ZALV Zalesovo Beam 53.04 350 P **P 10 11 49.1 -1.1**
comp=Z,41nm,1.0s,baz=169,slow=6.5,SNR=48
comp=Z,41nm,1.0s
KLR Kul'dur 54.77 26*ce*P **P 10 12 03.6 +0.6**
KLR pmax pmax
comp=Z,16nm,1.0s
KLR Kul'dur 54.77 26 P **P 10 12 03.1 +0.2**
comp=Z,15nm,0.9s,baz=263,slow=6.4,SNR=32
KLR LR LR 10 38 17.8
comp=Z,741nm,18.3s,baz=210,slow=39
comp=Z,15nm,0.9s
OPO Ambohidratompo 54.81 246 LR LR 10 33 33.7
comp=Z,78nm,18.0s,baz=211,slow=34
ABPO Ambohimpanom 54.90 245 P **P 10 12 03.0 -1.7**
ABPO Ambohimpanom 54.90 245 P **P 10 12 03.0 -1.7**
ABPO pmax pmax
comp=Z,17nm,1.5s
CMSA Cobar Meteorol 55.53 131 P **P 10 12 07.8 -1.0**
baz=56,SNR=9.1
RAYN Ar Rayn 55.88 297 P **P 10 12 09.5 -2.0**
RAYN IAmb IAmb 10 12 14.2
comp=Z,12nm,0.9s
RAYN Ar Rayn 55.88 297 P **P 10 12 09.5 -2.0**
RAYN pmax pmax
comp=Z,12nm,0.9s
RAYN Ar Rayn 55.88 297 P **P 10 12 12.0 +0.4**
BVA0 Borovoye Array 56.05 340 *i*P **P 10 12 11.1 -1.1**
BVAR Borovoye Array 56.05 340 P **P 10 12 10.9 -1.3**
comp=Z,28nm,0.8s,baz=138,slow=9.0,SNR=70
BVAR LR LR 10 39 54.8
comp=Z,423nm,19.1s,baz=147,slow=40
comp=Z,28nm,0.8s
BRVK Borovoye 56.12 340 P **P 10 12 11.2 -1.4**
BRVK IAmb IAmb 10 12 14.0
comp=Z,25nm,0.9s
BRVK Borovoye 56.12 340*ce*P **P 10 12 11.7 -0.9**
BRVK pmax pmax
comp=Z,30nm,1.0s
BRVK Borovoye 56.12 340 P **P 10 12 12.4 -0.2**
ZEA Zeya 56.58 20 *e*P **P 10 12 16.9 +1.0**
ZEA pmax pmax
comp=N,10.0nm,1.3s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=N,500nm,17.0s
ZEA MLR MLR
comp=Z,300nm,16.0s
BOD Bodaibo 56.91 10 *e*P **P 10 12 18.2 +0.1**
BOD pmax pmax
comp=Z,16nm,1.1s
ASAJ Asahikawa 56.99 36 LR LR 10 36 59.1
comp=Z,383nm,19.7s,baz=216,slow=36
AB31 Akbulak array 57.61 331 *i*P **P 10 12 22.2 -1.1**
ABKAR Akbulak array 57.61 331 P **P 10 12 22.3 -1.0**
AKTO Aktyubinsk 59.33 331 P **P 10 12 34.3 -1.0**
AKTO Aktyubinsk 59.33 331 P **P 10 12 33.9 -1.4**
comp=Z,9.9nm,0.9s,baz=134,slow=5.8,SNR=22
AKTO LR LR 10 40 18.5
comp=Z,256nm,21.8s,baz=219,slow=38
comp=Z,9.9nm,0.9s
HNR Honiara 61.86 102 P **P 10 12 51.7 -1.5**
HNR pmax pmax
comp=Z,64nm,0.9s
HNR Honiara 61.86 102 LR LR 10 42 52.6
comp=Z,2μm,19.8s,baz=233,slow=39
GNI Garni 61.90 315*ce*P **P 10 12 53.0 -0.2**
GNI pmax pmax
comp=Z,25nm,1.3s
GNI Garni 61.90 315 P **P 10 12 52.9 -0.3**
comp=Z,6.9nm,0.5s,baz=276,slow=12,SNR=3.4
GNI LR LR 10 43 06.5
comp=Z,101nm,19.0s,baz=108,slow=39
comp=Z,6.9nm,0.5s
SVE Sverdlovsk 62.57 337 *e*P **P 10 12 56.9 -0.3**
SVE pmax pmax
comp=Z,43nm,1.1s
SVE MLR MLR
comp=Z,697nm,22.0s
ARU Arti 63.10 336 P **P 10 12 59.4 -1.3**
ARU IAmb IAmb 10 13 03.3
comp=Z,15nm,0.9s
ARU Arti 63.10 336*c i*P **P 10 12 59.1 -1.6**
ARU S **S 10 21 30.0 -0.9**
ARU pmax pmax
comp=Z,20nm,1.0s
ARU MLR MLR
comp=Z,596nm,21.0s
ARU Arti 63.10 336 LR LR 10 42 53.8
comp=Z,527nm,20.4s,baz=136,slow=38
H04N2 CROZET ISLANDS 63.41 215 T T 11 20 13.6
baz=54,slow=75,SNR=9.7
H04N1 CROZET ISLANDS 63.42 215 T T 11 20 14.1
baz=54,slow=75,SNR=21
H04N3 CROZET ISLANDS 63.43 215 T T 11 20 13.0
baz=54,slow=75,SNR=11
LODK Lodwar 63.47 273 IAMs_20 IAMs_20 10 36 33.2
comp=Z,241nm,21.0s
NCK Nalchik 64.02 318 *i*P **P 10 13 06.4 -0.7**
NCK pmax pmax
comp=Z,12nm,1.0s
YAK Yakutsk 64.17 16 P **P 10 13 07.0 -0.6**
YAK Yakutsk 64.17 16 *e*P **P 10 13 06.5 -1.1**
YAK *e**PP **sP 10 13 16.5 +0.9**
YAK *e* 10 13 38.1
YAK *e* 10 15 25.4
YAK *e*S **S 10 21 42.3 -1.6**
YAK *e**SS **sS 10 21 58.6 +5.1**
YAK *e* 10 22 56.0
YAK *e*SS **SS 10 25 48.1 -5.2**
YAK pmax pmax
comp=Z,33nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=Z,290nm,7.4s
YAK pmax pmax
comp=N,555nm,6.1s
YAK pmax pmax
comp=E,224nm,8.6s
YAK smax smax
comp=E,298nm,7.2s
YAK smax smax
comp=N,183nm,6.6s
YAK MLR MLR
comp=Z,258nm,26.0s
YAK MLR MLR
comp=N,271nm,17.0s
YAK MLR MLR
comp=E,208nm,14.0s
YAK Yakutsk 64.17 16 P **P 10 13 06.2 -1.4**
comp=E,22nm,0.8s,baz=279,slow=1.7,SNR=9.2
YAK LR LR 10 44 14.4
comp=E,314nm,18.8s,baz=227,slow=39
comp=E,22nm,0.8s
KBZ Khabaz 64.58 318*ce*P **P 10 13 09.8 -0.9**
KBZ pmax pmax
comp=Z,20nm,0.9s
KBZ Khabaz 64.58 318 P **P 10 13 11.4 +0.7**
comp=Z,19nm,0.9s,baz=133,slow=5.4,SNR=45
KBZ LR LR 10 44 47.5
comp=Z,139nm,20.9s,baz=108,slow=39
comp=Z,19nm,0.9s
KIV Kislovodsk 64.81 318 P **P 10 13 10.6 -1.8**
KIV Kislovodsk 64.81 318 *e*P **P 10 13 11.6 -0.7**
KIV pmax pmax
comp=Z,23nm,1.1s
KIV MLR MLR
comp=Z,86nm,17.0s
ASF Jabal al Asfar 65.39 305 P **P 10 13 17.4 +1.0**
comp=Z,6.9nm,1.0s,baz=339,slow=5.5,SNR=6.1
comp=Z,6.9nm,1.0s
BELG Belogornoye 65.74 328 *i*P **P 10 13 18.3 +0.3**
BELG pmax pmax
comp=Z,5.0nm,1.0s
BELG Belogornoye 65.74 328 P **P 10 13 16.4 -1.7**
comp=Z,16nm,0.8s,baz=350,slow=0.3,SNR=11
BELG LR LR 10 45 01.0
comp=Z,224nm,20.3s,baz=123,slow=39
comp=Z,16nm,0.8s
ARPR Arapgir-MALATY 66.16 312 IAmb IAmb 10 13 24.2
comp=Z,21nm,1.0s
GHAJ Ghor Haditha 66.29 303 IAMs_20 IAMs_20 10 44 39.9
comp=Z,387nm,18.0s
VSLR Vesyoloye 66.41 317 *i*P **P 10 13 22.6 +0.1**
VSLR pmax pmax
comp=Z,25nm,1.0s
GAZ Gaziantep 66.44 310 P **P 10 13 22.4 -0.6**
EIL Elat 66.47 301 P **P 10 13 23.9 +0.7**
comp=Z,6.7nm,0.9s,baz=30,slow=8.9,SNR=5.5
EIL LR LR 10 43 23.5
comp=Z,218nm,18.0s,baz=70,slow=37
comp=Z,6.7nm,0.9s
SOC Sochi 66.66 317 *e*P **P 10 13 22.9 -1.3**
SOC *e* 10 15 47.0
SOC *e*PPP PPP 10 17 22.8
SOC *e*S **S 10 22 16.1 +0.9**
SOC *e*SS **SS 10 26 32.8 -0.1**
SOC pmax pmax
comp=Z,28nm,0.5s
MMAI Mount Meron Ar 66.81 305 P **P 10 13 26.8 +1.4**
comp=Z,10nm,0.9s,baz=106,slow=7.9,SNR=16
MMAI LR LR 10 44 41.0
comp=Z,100nm,19.4s,baz=73,slow=38
comp=Z,10nm,0.9s
NRIK Noril'sk 67.63 356 P **P 10 13 29.6 -0.2**
NRIK Noril'sk 67.63 356*ce*P **P 10 13 28.4 -1.4**
NRIK pmax pmax
comp=Z,10.0nm,1.0s
NRIK Noril'sk 67.63 356 P **P 10 13 29.6 -0.2**
comp=Z,8.5nm,1.0s,baz=164,slow=6.9,SNR=11
NRIK LR LR 10 45 13.6
comp=Z,297nm,19.1s,baz=190,slow=38
comp=Z,8.5nm,1.0s
KIRV Kirov 68.29 335 P **P 10 13 33.6 -0.5**
comp=Z,29nm,0.9s,baz=56,slow=0.7,SNR=11
KIRV LR LR 10 47 40.9
comp=Z,259nm,18.9s,baz=133,slow=40
comp=Z,29nm,0.9s
VRH Novokhopyorsk 68.41 325 *e*P **P 10 13 34.5 -0.5**
VRH pmax pmax
comp=Z,68nm,0.9s
ANN Anapa 68.62 318 *e*P **P 10 13 34.3 -2.2**
ANN *e**PP **pP 10 13 37.9 -4.5**
ANN *e* 10 16 06.5
ANN *e*S **S 10 22 37.6 -1.0**
ANN pmax pmax
comp=Z,15nm,1.1s
CSS Mathiatis 68.93 307 P **P 10 13 37.7 -1.0**
CSS IAmb IAmb 10 13 40.9
comp=Z,17nm,0.9s
CSS IAMs_20 IAMs_20 10 48 12.6
comp=Z,296nm,18.0s
VORD Divnogorie 69.70 324 *e*P **P 10 13 41.6 -1.5**
VORD pmax pmax
comp=Z,20nm,0.5s
BR131 Keskin Array S 69.83 312 P **P 10 13 43.1 -1.2**
BR131 IAmb IAmb 10 13 45.3
comp=Z,16nm,0.9s
BR131 Keskin Array S 69.83 312 P **P 10 13 43.1 -1.2**
BR131 pmax pmax
comp=Z,16nm,0.9s
BR131 Keskin Array S 69.83 312 P **P 10 13 43.9 -0.4**
SNR=6.9
BRTR Keskin Array B 69.83 312 P **P 10 13 43.5 -0.8**
BRTR Keskin Array B 69.83 312*ce*P **P 10 13 43.9 -0.4**
BRTR pmax pmax
comp=Z,11nm,0.8s
BRTR Keskin Array B 69.83 312 P **P 10 13 44.0 -0.3**
comp=Z,11nm,0.8s,baz=129,slow=6.7,SNR=46
BRTR LR LR 10 47 23.9
comp=Z,166nm,19.0s,baz=181,slow=38
comp=Z,11nm,0.8s
MA2 Magadan 69.86 25*ce*P **P 10 13 45.2 +1.3**
MA2 pmax pmax
comp=Z,20nm,1.3s
MA2 Magadan 69.86 25 LR LR 10 46 19.6
comp=Z,416nm,18.7s,baz=248,slow=38
VSR Storozhevoye 69.88 325 *e*P **P 10 13 41.9 -2.2**
VSR pmax pmax
comp=Z,30nm,0.7s
VORR Voronezh 70.03 325 P **P 10 13 44.3 -0.8**
VORR pmax pmax
comp=Z,60nm,0.9s
DZM Mont Dzumac 70.06 114 *e*S **S 10 22 53.9 -2.7**
comp=Z,72nm,31.9s
DZM *e*SS **SS 10 27 31.6 +5.1**
comp=Z,137nm,27.4s
DZM *e*LR LR 10 34 56.3
comp=Z,463nm,27.7s
DZM Mont Dzumac 70.06 114 LR LR 10 47 47.1
comp=Z,207nm,18.3s,baz=254,slow=39
PETK Petropavlovsk- 70.12 33 LR LR 10 45 09.7
comp=Z,254nm,19.7s,baz=228,slow=36
LPSR Galich'ya Gora 70.56 326 *e*P **P 10 13 46.6 -1.7**
LPSR pmax pmax
comp=Z,50nm,0.9s
SIM Simferopol' 70.91 317 *e*P **P 10 13 50.2 -0.4**
SIM pmax pmax
comp=Z,40nm,0.8s
TIXI Tiksi 72.09 10 P **P 10 13 56.2 -1.0**
TIXI Tiksi 72.09 10 IAMs_20 IAMs_20 10 49 38.5
comp=Z,547nm,19.0s
TIXI Tiksi 72.09 10*ce*P **P 10 13 56.0 -1.2**
TIXI pmax pmax
comp=Z,65nm,1.3s
TIXI Tiksi 72.09 10 LR LR 10 50 00.6
comp=Z,319nm,18.3s,baz=212,slow=40
SEY Seymchan 72.35 23*ce*P **P 10 13 59.3 +0.4**
SEY pmax pmax
comp=Z,32nm,1.3s
SEY Seymchan 72.35 23 LR LR 10 50 09.5
comp=Z,473nm,18.3s,baz=262,slow=40
MOS Moscow 72.51 329 *e*P **P 10 13 58.1 -1.9**
MOS pmax pmax
comp=Z,59nm,0.8s
OBN Obninsk 72.82 328 P **P 10 14 01.2 -0.7**
OBN Obninsk 72.82 328*ce*P **P 10 14 01.6 -0.3**
OBN *i* 10 14 17.8
OBN *i* 10 16 42.3
OBN *i*S **S 10 23 27.5 +0.4**
OBN pmax pmax
comp=Z,50nm,1.3s
KLMR Klimovskoe 73.75 334 *e*P **P 10 14 06.0 -1.3**
KLMR pmax pmax
comp=Z,22nm,1.5s
MAW Mawson 73.90 194 LR LR 10 40 39.1
comp=Z,196nm,18.8s,baz=30,slow=31
TIRR Tirgusor 74.72 316 ⇑P **P 10 14 13.8 +0.5**
TIRR Tirgusor 74.72 316 P **P 10 14 13.7 +0.5**
MILM Milestii Mici 75.00 318 ⇑*i*P **P 10 14 14.7 -0.1**
comp=Z,270nm,4.2s
MILM Milestii Mici 75.00 318*c i*P **P 10 14 14.7 -0.1**
MILM pmax pmax
comp=Z,270nm,4.2s
HARR Harsova 75.11 316 ⇑P **P 10 14 16.5 +1.0**
HARR Harsova 75.11 316 P **P 10 14 16.5 +1.0**
SORM Soroca 75.58 319 ⇓P **P 10 14 17.5 -0.6**
SORM Soroca 75.58 319 P **P 10 14 17.5 -0.6**
AKASG Malin Array Be 75.65 322 P **P 10 14 17.0 -1.5**
AKASG Malin Array Be 75.65 322 P **P 10 14 16.9 -1.5**
comp=Z,5.9nm,0.8s,baz=88,slow=4.7,SNR=14
comp=Z,5.9nm,0.8s
AKBB Malin Array Si 75.65 322 IAmb IAmb 10 14 19.2
comp=Z,16nm,1.0s
AKBB Malin Array Si 75.65 322*ce*P **P 10 14 18.0 -0.5**
AKBB pmax pmax
comp=Z,15nm,1.1s
KIEV Kiev 75.66 322 ⇑P **P 10 14 17.7 -0.8**
KIEV Kiev 75.66 322 P **P 10 14 17.7 -0.8**
KIEV IAmb IAmb 10 14 19.2
comp=Z,14nm,1.0s
KIEV Kiev 75.66 322 P **P 10 14 17.7 -0.8**
KIEV pmax pmax
comp=Z,14nm,1.0s
LBTB Lobatse 75.77 244 LR LR 10 45 24.9
comp=Z,174nm,18.0s,baz=80,slow=34
VRI Vrincioaia 76.18 317 ⇑P **P 10 14 22.0 +0.4**
VRI Vrincioaia 76.18 317 P **P 10 14 22.0 +0.4**
ELND Elena 76.23 314 ⇓P **P 10 14 21.6 -0.3**
PLOR Plostina 76.23 317 ⇑P **P 10 14 22.5 +0.5**
PLOR Plostina 76.23 317 P **P 10 14 22.4 +0.5**
TESR Tescani 76.36 317 ⇓P **P 10 14 23.8 +1.2**
MLR Muntele Rosu 76.64 316 ⇓P **P 10 14 24.9 +0.5**
MLR Muntele Rosu 76.64 316 P **P 10 14 24.2 -0.2**
MLR IAmb IAmb 10 14 26.6
comp=Z,22nm,1.0s
MLR Muntele Rosu 76.64 316 P **P 10 14 24.2 -0.2**
MLR pmax pmax
comp=Z,22nm,1.0s
MLR Muntele Rosu 76.64 316 LR LR 10 54 19.7
comp=Z,91nm,19.9s,baz=72,slow=40
BOSA Boshof 76.66 240 P **P 10 14 25.9 +1.0**
comp=Z,4.0nm,0.9s,baz=89,slow=6.5,SNR=4.3
comp=Z,4.0nm,0.9s
MNK Minsk 77.40 326 *i*P **P 10 14 27.6 -0.7**
comp=E,10.0nm,0.9s
MNK *i*P **P 10 14 27.6 -0.7**
comp=N,20nm,0.9s
MNK *i*P **P 10 14 27.6 -0.7**
comp=Z,34nm,0.9s,baz=104
MNK *i*PP **PP 10 17 22.4 -0.5**
MNK *i*PPP PPP 10 19 08.5
MNK *i*S **S 10 24 18.8 +0.6**
MNK *i*SS **SS 10 29 18.1 +1.2**
MNK *i*SSS SSS 10 32 42.4
MNK *i*LQ LQ 10 43 09.1
MNK *i*LR LR 10 48 45.1
MNK *i*LRM MLR 10 52 32.0
comp=Z,158nm,16.4s
MNK *i*LRM MLR 10 53 52.8
comp=E,115nm,15.5s
MNK *i*LRM MLR 10 54 06.5
comp=N,267nm,14.2s
MNK Minsk 77.40 326 *i*P **P 10 14 27.6 -0.7**
MNK *i* 10 17 22.3
MNK *i*PPP PPP 10 19 08.4
MNK *i*S **S 10 24 18.7 +0.6**
MNK *i*SS **SS 10 29 18.0 +1.2**
MNK *i*SSS SSS 10 32 42.3
MNK pmax pmax
comp=N,20nm,0.9s
MNK pmax pmax
comp=Z,34nm,0.9s
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK MLR MLR
comp=Z,158nm,16.0s
ARR Arges 77.53 316 ⇑P **P 10 14 29.4 0.0**
BURAR Bucovina Array 77.54 318 ⇓P **P 10 14 30.1 +0.7**
BURAR Bucovina Array 77.54 318 P **P 10 14 29.7 +0.3**
BURAR IAmb IAmb 10 14 32.2
comp=Z,20nm,0.8s
BURAR Bucovina Array 77.54 318 P **P 10 14 30.1 +0.7**
BUR08 Bucovina Ar. S 77.56 318 IAmb IAmb 10 14 32.5
comp=Z,18nm,0.8s
ARCR ARCALIA 78.02 318 ⇑P **P 10 14 33.1 +1.1**
NACGM Naroch 78.12 326 *e*P **P 10 14 32.7 +0.4**
RPZ Rata Peaks 78.58 135 LR LR 10 49 30.3
comp=Z,659nm,19.9s,baz=276,slow=36
ISAL Salakas 78.64 326 *e*P **P 10 14 35.2 0.0**
LVV L'vov 78.72 320 *e*P **P 10 14 36.3 +0.6**
MARR Marisel-Cluj 78.79 317 ⇑P **P 10 14 37.8 +1.4**
VSU Vasula 79.00 329*ce*P **P 10 14 37.0 -0.1**
VSU pmax pmax
comp=Z,35nm,2.5s
VSU Vasula 79.00 329 *e*P **P 10 14 37.4 +0.3**
HERR Herculane 79.01 315 ⇓P **P 10 14 37.8 +0.3**
SURR Surduc 79.33 316 ⇓P **P 10 14 40.6 +1.4**

BOVS Bovan 79.34 314 ⇑P **P 10 14 38.9 -0.4**
SHEM Shemya Is, Ala 79.45 37 LR LR 10 52 42.5
comp=Z,73nm,19.2s,baz=305,slow=38
MDVR Moldovita 79.49 315 ⇑P **P 10 14 40.8 +0.7**
BZS Buzias 79.67 316 ⇑P **P 10 14 40.8 -0.2**
BZS Buzias 79.67 316 P **P 10 14 40.8 -0.2**
KOLS Kolonicke sedl 79.70 319 *eP* **P 10 14 42.8 +1.6**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 79.70 319 *eP* **P 10 14 42.8 +1.6**
BILL Bilibino 79.80 21 *i* P **P 10 14 41.9 +0.6**
BILL pmax pmax
comp=Z,4.0nm,1.0s
PABE Paberze 79.83 326 P **P 10 14 41.3 -0.3**
PABE Paberze 79.83 326 *eP* **P 10 14 41.7 0.0**
VSVD Vaisvydziai 79.94 327 *eP* **P 10 14 42.1 -0.1**
SUW Suwałki 79.99 324 P **P 10 14 41.0 -1.6**
SUW Suwalki 79.99 324 P **P 10 14 41.0 -1.6**
SUW pmax pmax
comp=Z,82nm,1.2s
SUW Suwalki 79.99 324 *eP* **P 10 14 42.8 +0.2**
FIA1 FINESS Array S 80.06 332 P **P 10 14 42.1 -0.7**
FINES FINESS Array B 80.06 332 *ceP* **P 10 14 42.7 -0.1**
FINES pmax pmax
comp=Z,13nm,0.8s
FINES FINESS Array B 80.06 332 P **P 10 14 42.4 -0.4**
comp=Z,12nm,0.8s,baz=102,slow=5.8,SNR=30
FINES LR LR 10 55 17.5
comp=Z,126nm,19.0s,baz=106,slow=40
comp=Z,12nm,0.8s
STHS Stebnicka Huta 80.44 320 *eP* **P 10 14 45.0 -0.2**
STHS pmax pmax
comp=Z,11nm,0.8s
STHS Stebnicka Huta 80.44 320 *eP* **P 10 14 45.0 -0.2**
MTSE Matsula 80.55 329 *eP* **P 10 14 46.1 +0.7**
MEF Metsahovi 80.58 331 *eP* **P 10 14 46.4 +0.8**
VYHS Vyhne 81.90 319 *eP* **P 10 14 53.5 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 81.90 319 *eP* **P 10 14 53.5 +0.6**
RTZ Ruatahuna 81.96 129 P **P 10 14 52.5 -1.0**
RTZ IAmb IAmb 10 14 53.3
comp=Z,28nm,1.0s
RAF Rauma 82.01 331 *eP* **P 10 14 53.2 0.0**
ARCES ARCESS Array B 82.34 340 P **P 10 14 54.2 -0.6**
comp=Z,7.9nm,0.9s,baz=96,slow=4.9,SNR=10
ARCES LR LR 10 54 33.0
comp=Z,371nm,21.5s,baz=111,slow=38
comp=Z,7.9nm,0.9s
JAVC Velka Javorina 82.71 319 *eP* **P 10 14 57.7 +0.5**
MORC Moravsky Berou 82.87 320 ⇑P **P 10 14 58.7 +0.7**
MORC Moravsky Berou 82.87 320 *eP* **P 10 14 58.1 +0.1**
MORC Moravsky Berou 82.87 320 P **P 10 14 58.7 +0.7**
DPC Dobruska-Polom 83.71 320 *eP* **P 10 15 03.6 +1.3**
DPC Dobruska-Polom 83.71 320 *eP* **P 10 15 03.6 +1.3**
OSTC Ostas 83.79 320 *eP* **P 10 15 03.9 +1.2**
OSTC Ostas 83.79 320 *eP* **P 10 15 03.9 +1.2**
SOKA Soboth 84.32 317 *eP* **P 10 15 06.5 +0.9**
comp=Z,13nm,1.0s
CKRC Cesky Krumlov 84.92 319 *eP* **P 10 15 09.3 +0.8**
CKRC Cesky Krumlov 84.92 319 *eP* **P 10 15 09.3 +0.8**
RAO Raoul Island 85.03 119 LR LR 10 56 09.1
comp=Z,168nm,18.5s,baz=122,slow=38
GEC2 GERESS Array S 85.32 319 *eP* **P 10 15 11.5 +0.9**
baz=90,slow=4.8
GERES GERESS Array B 85.32 319 P **P 10 15 11.2 +0.6**
comp=Z,1.6nm,0.6s,baz=72,slow=10.0,SNR=5.3
GERES LR LR 10 59 06.6
comp=Z,95nm,18.1s,baz=92,slow=40
comp=Z,1.6nm,0.6s
PRED Cave del Predi 85.32 316 IAmb IAmb 10 15 12.3
comp=Z,18nm,1.0s
KHC Kasperske Hory 85.41 319 *eP* **P 10 15 11.5 +0.5**
KHC Kasperske Hory 85.41 319 *eP* **P 10 15 11.5 +0.5**
RUE Ruedersdorf 85.43 322 *eP* **P 10 15 11.5 +0.7**
comp=Z,22nm,0.8s,baz=90,slow=4.8
CLL Collm 85.86 321 *eP* **P 10 15 14.0 +0.9**
CLL Collm 85.86 321 *eP* **P 10 15 14.0 +0.9**
CLL eSSSS 10 38 30.0
HFS Hagfors 85.86 330 P **P 10 15 13.0 +0.1**
comp=Z,16nm,0.9s,baz=114,slow=3.7,SNR=18
HFS LR LR 10 58 30.7
comp=Z,241nm,18.4s,baz=98,slow=39
comp=Z,16nm,0.9s
LESA Schwarzleotal 85.96 317 *eP* **P 10 15 13.6 -0.2**
comp=Z,5.3nm,1.1s
CIMO Cimolais 86.10 316 IAmb IAmb 10 15 16.1
comp=Z,18nm,1.0s
VNDA Vanda 86.30 169 LR LR 10 52 51.7
comp=Z,131nm,18.1s,baz=320,slow=35
ROTZ Rotzenmuhle 86.33 320 *eP* **P 10 15 16.1 +0.6**
comp=Z,1.3nm,1.0s,baz=90,slow=4.8
MANZ Manzenberg 86.39 320 *eP* **P 10 15 17.5 +1.7**
comp=Z,1.9nm,0.9s,baz=90,slow=4.8
SPITS Spitsbergen Ar 86.50 348 P **P 10 15 15.3 -0.4**
comp=Z,13nm,0.9s,baz=122,slow=7.0,SNR=4.6
SPITS LR LR 11 01 35.4
comp=Z,251nm,18.1s,baz=85,slow=41
comp=Z,13nm,0.9s
WTTA Wattenberg 86.67 317 *i* P **P 10 15 16.6 -0.8**
comp=Z,11nm,0.9s
WATA Walderalm 86.71 317 *i* P **P 10 15 17.3 -0.2**
comp=Z,4.3nm,0.7s
MOX Moxa 86.72 320 *eL* L 10 58 12.6
comp=Z,176nm,19.5s
SQTA Sankt Quirin 86.96 317 *eP* **P 10 15 18.8 0.0**
comp=Z,7.9nm,1.2s
MOTA Moosalm 87.03 317 *eP* **P 10 15 19.1 -0.1**
comp=Z,12nm,1.0s
NB2 NORSAR Subarra 87.12 331 P **P 10 15 18.6 -0.5**
comp=Z,2.5nm,0.8s,baz=91,slow=4.8
NOA NORSAR Array B 87.12 331 P **P 10 15 18.4 -0.7**
comp=Z,4.5nm,0.8s,baz=91,slow=5.0,SNR=16
NOA LR LR 10 59 53.8
comp=Z,132nm,18.4s,baz=110,slow=40
comp=Z,4.5nm,0.8s
RETA Reutte 87.26 317 *i* P **P 10 15 20.5 +0.4**
comp=Z,8.3nm,1.1s
FETA Feichten 87.28 317 *eP* **P 10 15 20.9 +0.5**
comp=Z,7.5nm,1.2s
ASSE Asse, Remlinge 87.33 322 *eL* L 10 58 30.1
comp=Z,160nm,18.9s
ELIB Princess Elisa 87.45 198 *dP* **P 10 15 22.7 +2.1**
CLZ Clausthal 87.51 322 *eP* **P 10 15 20.8 -0.4**
comp=Z,8.1nm,0.9s,baz=90,slow=4.8
BSEG Bad Segeberg 87.54 324 *eP* **P 10 15 22.1 +0.9**
comp=Z,14nm,0.8s,baz=90,slow=4.8
NRDL Niedersach Rie 87.67 322 *eP* **P 10 15 23.1 +1.3**
comp=Z,17nm,1.0s,baz=90,slow=4.8
DAVOX Davos/Dischmat 87.87 317 LR LR 11 03 53.5
comp=Z,61nm,19.1s,baz=67,slow=42
KEST Kesra 88.47 306 IAmb IAmb 10 15 32.9
comp=Z,16nm,1.0s
KEST Kesra 88.47 306 P **P 10 15 26.6 +0.4**
comp=Z,12nm,0.9s,baz=335,slow=7.0,SNR=8.7
KEST LR LR 11 01 43.0
comp=Z,41nm,19.0s,baz=273,slow=40
comp=Z,12nm,0.9s
KEST Kesra 88.47 306 P **P 10 15 27.6 +1.4**
KASTN Kahler Asten 88.74 321 *eP* **P 10 15 28.2 +1.2**
comp=Z,7.0nm,0.9s,baz=90,slow=4.8
TNS Taunus Mts 88.75 320 *eP* **P 10 15 27.2 0.0**
comp=Z,13nm,0.9s,baz=90,slow=4.8
AHRW Bad Neuenahr-A 89.62 320 *eP* **P 10 15 32.3 +1.2**
comp=Z,11nm,0.9s,baz=90,slow=4.8
QSPA South Pole Qui 91.96 180 LR LR 10 52 18.8
comp=Z,180nm,19.6s,baz=292,slow=32
JMIC Jan Mayen 93.72 342 LR LR 11 04 56.3
comp=Z,118nm,18.1s,baz=75,slow=40
F21K Alatna River 94.90 22 IAmb IAmb 10 16 01.5
comp=Z,13nm,1.6s
J19K Poorman 94.94 25 IAmb IAmb 10 15 57.8
comp=Z,7.3nm,1.0s
C23K Itkillik River 95.07 19 IAmb IAmb 10 16 00.5
comp=Z,10nm,1.2s
G21K Allakaket 95.10 23 IAmb IAmb 10 16 01.8
comp=Z,14nm,1.3s
SNAA Sanae 95.60 198 LR LR 10 54 50.0
comp=Z,180nm,18.1s,baz=9.0,slow=33
TORD Torodi Ar. Bea 96.56 283 P **P 10 16 03.5 -0.3**
comp=Z,0.7nm,0.8s,baz=69,slow=7.2,SNR=3.9
TORD LR LR 10 59 02.8
comp=Z,123nm,18.6s,baz=95,slow=35
comp=Z,0.7nm,0.8s
CART Cartagena 96.62 308 IAMs_20 IAMs_20 10 53 46.4
comp=Z,330nm,21.0s
BPAW Bear Paw Mtn. 96.86 25 P **P 10 16 03.4 -0.9**

ILAR Eielson Array 98.28 23 PKKPbc PKKPbc 10 32 42.0 -2.7
comp=Z,0.6nm,0.9s,baz=193,slow=1.5,SNR=6.8
ILAR LR LR 11 05 54.9
comp=Z,171nm,18.4s,baz=298,slow=39
ESDC Sonseca Array 98.59 310 LR LR 11 06 58.6
comp=Z,74nm,18.2s,baz=1.0,slow=39
YKA Yellowknife Ar 110.84 16 *i* PKIKP **PKiKP 10 21 07.1 +0.9**
YKA Yellowknife Ar 110.84 16 PKIKP **PKiKP 10 21 05.2 -0.9**
comp=Z,0.2nm,0.8s,baz=308,slow=2.6,SNR=4.1
PPT2 Papeete2 111.12 108 *e*SS SS 10 37 25.2 +5.8
comp=Z,53nm,25.5s
PPT2 Papeete2 111.12 108 *e*LR LR 10 53 59.7
comp=Z,186nm,23.8s
PPT2 *e*LR LR 10 54 12.3
comp=Z,246nm,24.0s
TAOE Nuku Hiva Isla 120.88 99 *e*LR LR 10 58 36.5
comp=Z,200nm,24.8s
SCHQ Schefferville 122.12 350 PKP **PKPdf 10 21 27.2 -0.8**
comp=Z,4.0nm,1.0s,baz=28,slow=2.9,SNR=4.2
PLID Pearl Lake 123.77 29 PKPdf **PKPdf 10 21 31.5 -0.3**
ULM Lac du Bonnet 126.40 12 PKPdf **PKPdf 10 21 35.5 -0.9**
ULM Lac du Bonnet 126.40 12 PKP **PKPdf 10 21 35.0 -1.4**
comp=Z,3.6nm,0.8s,baz=352,slow=3.3,SNR=12
NVAR Mina Array Bea 127.12 37 PKP **PKiKP 10 21 39.4 +0.4**
comp=Z,2.6nm,0.9s,baz=248,slow=1.9,SNR=16
ELK Elko 127.28 32 **PKiKP 10 21 39.4 +0.2**
ELK Elko 127.28 32 PKiKP **PKiKP 10 21 39.4 +0.2**
PDAR Pinedale Array 128.56 27 PKP **PKPdf 10 21 40.9 -0.2**
comp=Z,1.1nm,0.9s,baz=294,slow=1.5,SNR=5.7
R11B Troy Canyon, C 128.76 35 PKPdf **PKiKP 10 21 42.0 -0.1**
ECSD EROS Data Cent 132.37 15 PKPdf **PKPdf 10 21 47.6 -0.3**
PLCA Paso Flores 140.30 193 PKhKP PKPpre 10 21 54.8
comp=Z,1.0nm,0.8s,baz=180,slow=2.0,SNR=3.5
TXAR Lajitas Array 142.07 33 PKPdf **PKPdf 10 22 03.4 -3.0**
TXAR Lajitas Array 142.07 33 PKiKP **PKPdf 10 22 03.4 -3.0**
TXAR Lajitas Array 142.07 33 PKhKP PKPpre 10 22 02.7
comp=Z,1.4nm,0.8s,baz=268,slow=1.2,SNR=12
JCT Junction City 143.08 27 PKPdf PKPbc 10 22 06.1 +1.3
JCT Junction City 143.08 27 PKiKP PKPbc 10 22 06.1 +1.3
DRIO Del Rio 143.57 29 PKPdf PKPbc 10 22 07.0 +0.8
BDFB Brasilia 144.70 246 PKP **PKPab 10 22 08.5 -1.5**
comp=Z,2.9nm,0.6s,baz=53,slow=4.6,SNR=3.1
CPUP Villa Florida 146.75 221 PKPbc **PKPbc 10 22 15.8 -0.3**
comp=Z,7.6nm,0.9s,baz=125,slow=2.5,SNR=20

*UPA **24** 10:26:48.1±2.9,9.`05N×83.`98W,h10km±15km,MW4.2,*
Fault plane solution: NP1:φ=20.00000°,δ88.00000°,
λ=-168.00000°.
*CATAC **24** 10:26:48.1±0.3,8.`98N×83.`97W,h16km±2km,mb5.6,*
MB5.5,ML4.7
*IDC **24** 10:26:49.0±1.1,9.`85N×83.`54W,h0km,mb3.6/10,*
mbtmp3.7/12,ML3.3/2,MS3.6/7,Error ellipse:
s-maj=27.6km s-min=17.0km az=19.0
*UCR **24** 10:26:49.2±1.0,8.`99N×83.`96W,h32km±1km,MW4.6*
ISC 24 10:26:49.9±0.8, 9.03N±0.03×83.91W±0.02, h31km±6km,
n219, σ1§42/280, mb3.9/10, **MS3.5**/3, **12C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.27**	**75**	*i* P	P	Pb	**10 26 56.3**	**-0.7**
OCHAL				IAML			10 26 56.8	
	comp=Z,2μm,1.0s							
OCHAL				*i* S	S	Sn	**10 27 02.4**	**-0.3**
PLAN	**Los Planes de**	**0.42**	**148**	*i* P	P	Pb	**10 26 57.8**	**-1.3**
PLAN				*i* S	S	Sb	**10 27 05.7**	**+0.3**
PLAN				IAML			10 27 06.8	
	comp=Z,460μm,1.0s							
PEZE	**Perez Zeledon,**	**0.42**	**32**	*eP*	P	Pb	**10 26 59.0**	**-0.2**
PEZE	**Perez Zeledon,**	**0.42**	**32**	*i* P	P	Pb	**10 26 59.0**	**-0.2**
PEZE				*i* S	S	Sn	**10 27 06.5**	**-0.2**
PEZE				IAML			10 27 07.7	
	comp=Z,62μm,1.0s							
EDPN	**Palmar Norte**	**0.45**	**98**	*eP*	P	Pb	**10 26 59.1**	**-0.4**
EDPN				*eS*	S	Sn	**10 27 07.2**	**0.0**
SVQ2	**Quepos**	**0.48**	**327**	*eP*	P	Pb	**10 26 59.0**	**-1.0**
SVQ2				*eS*	S	Sb	**10 27 07.0**	**+0.1**
LLNJ	**Naranjito**	**0.48**	**337**	*eP*	P	Pb	**10 26 59.5**	**-0.6**
CDM	**Cerro de Muert**	**0.54**	**15**	*eP*	P	Pb	**10 27 00.6**	**-0.7**
CDM	**Cerro de Muert**	**0.54**	**15**	*i* P	P	Pb	**10 27 00.5**	**-0.8**
CDM				*i* S	S	Sn	**10 27 09.8**	**-0.4**
CDM				IAML			10 27 10.6	
	comp=Z,38μm,1.0s							
BURE	**Buenos Aires**	**0.58**	**75**	*eP*	P	Pb	**10 27 01.5**	**-0.1**
EDBA	**Buenos Aires**	**0.64**	**78**	*eP*	P	Pb	**10 27 01.5**	**-1.1**
RAZU	**San Marcos de**	**0.64**	**350**	*eP*	P	Pb	**10 27 01.9**	**-0.9**
RITA	**Parrita**	**0.65**	**319**	*eP*	P	Pb	**10 27 02.5**	**-0.2**
ABE2	**San Pablo**	**0.69**	**348**	*eP*	P	Pb	**10 27 02.8**	**-0.8**
DRK0	**Durika**	**0.69**	**70**	*eP*	P	Pb	**10 27 02.9**	**-0.8**
LCR2	**La Lucha 2**	**0.72**	**352**	*eP*	P	Pb	**10 27 03.1**	**-1.0**
LCR2				*eS*	S	Sb	**10 27 13.8**	**+0.1**
LCR2	**La Lucha 2**	**0.72**	**352**	*i* P	P	Pb	**10 27 02.5**	**-1.6**
LCR2				*i* S	S	Sb	**10 27 13.0**	**-0.7**
LCR2				IAML			10 27 16.0	
	comp=Z,16μm,1.0s							
RIMA	**Rio Macho**	**0.74**	**3**	*eP*	P	Pn	**10 27 03.3**	**-1.1**
RIMA	**Rio Macho**	**0.74**	**3**	*i* P	P	Pn	**10 27 03.5**	**-0.9**
RIMA				*i* S	S	Sb	**10 27 14.3**	**0.0**
RIMA				IAML			10 27 17.3	
	comp=Z,15μm,1.0s							
JIME	**Puerto Jimenez**	**0.75**	**130**	*eP*	P	Pn	**10 27 03.9**	**-0.5**
JIME				*eS*	S	Sn	**10 27 16.1**	**+1.3**
PTJ1	**Puerto Jimnez**	**0.77**	**129**	*eP*	P	Pn	**10 27 03.9**	**-0.7**
POTG	**Potrero Grande**	**0.78**	**88**	*eP*	P	Pn	**10 27 04.3**	**-0.5**
POTG	**Potrero Grande**	**0.78**	**88**	*i* P	P	Pn	**10 27 04.8**	**0.0**
POTG				*i* S	S	Sn	**10 27 15.9**	**+0.4**
POTG				IAML			10 27 17.6	
	comp=Z,99μm,1.0s							
REPA	**Paraso**	**0.80**	**3**	*eP*	P	Pb	**10 27 05.6**	**+0.2**
ACOS	**Acosta**	**0.81**	**342**	*eP*	P	Pn	**10 27 04.2**	**-1.0**
EDAD	**Golfito**	**0.82**	**117**	*eP*	P	Pn	**10 27 04.1**	**-1.3**
TAGO	**Cartago**	**0.83**	**359**	*eP*	P	Pn	**10 27 05.2**	**-0.5**
PIRO	**Carate, Puerto**	**0.84**	**138**	*eP*	P	Pn	**10 27 04.6**	**-0.9**
FITO	**Golfito**	**0.84**	**118**	*eP*	P	Pn	**10 27 04.2**	**-1.4**
OCM	**Ochomogo**	**0.86**	**356**	*eP*	P	Pn	**10 27 05.3**	**-0.8**
OCM	**Ochomogo**	**0.86**	**356**	*i* P	P	Pn	**10 27 05.5**	**-0.6**
OCM				*i* S	S	Sn	**10 27 17.3**	**-0.5**
OCM				IAML			10 27 18.4	
	comp=Z,19μm,1.0s							
AMPA	**Desamparados**	**0.88**	**350**	*eP*	P	Pn	**10 27 05.4**	**-0.9**
TRIO	**Tres Ríos**	**0.88**	**354**	*eP*	P	Pn	**10 27 05.3**	**-0.9**
PCAYA	**Pacayas**	**0.89**	**6**	*eP*	P	Pn	**10 27 06.1**	**-0.4**
TURIB	**Turrialba**	**0.90**	**14**	*eP*	P	Pn	**10 27 06.1**	**-0.4**
LUJA	**Lujan**	**0.91**	**350**	*eP*	P	Pb	**10 27 07.0**	**-0.2**
CENT	**San Jose**	**0.92**	**349**	*eP*	P	Pn	**10 27 06.2**	**-0.6**
SJS3	**Mercedes San J**	**0.92**	**351**	*eP*	P	Pn	**10 27 06.4**	**-0.4**
SJS	**Escuela Geolog**	**0.92**	**351**	*eP*	P	Pn	**10 27 06.1**	**-0.7**
MEXI	**Barrio Mexico**	**0.93**	**349**	*eP*	P	Pn	**10 27 06.3**	**-0.6**
LUPE	**Guadalupe**	**0.93**	**351**	*eP*	P	Pn	**10 27 06.5**	**-0.4**
RAFA	**San Farael, Vo**	**0.93**	**6**	*eP*	P	Pn	**10 27 06.7**	**-0.5**
VIRE	**VIRE**	**0.93**	**0**	*i* P	P	Pn	**10 27 07.1**	**-0.1**
VIRE				*i* S	S	Sb	**10 27 20.3**	**+0.3**
VIRE				IAML			10 27 22.9	
	comp=Z,53μm,1.0s							
VERB	**Verbena**	**0.94**	**13**	*eP*	P	Pn	**10 27 06.8**	**-0.3**
SANTA	**Santa Ana**	**0.94**	**343**	*eP*	P	Pn	**10 27 06.4**	**-0.7**
TIBA	**Tibas**	**0.94**	**350**	*eP*	P	Pn	**10 27 06.9**	**-0.2**
CORON	**Coronado**	**0.94**	**354**	*eP*	P	Pb	**10 27 08.1**	**+0.2**
ICR3	**Volcano Irazu**	**0.95**	**4**	*eP*	P	Pn	**10 27 07.2**	**-0.3**
VICA	**Volcano Irazu**	**0.95**	**4**	*eP*	P	Pn	**10 27 07.4**	**-0.2**
VTCV	**VTCV, Calle Va**	**0.97**	**11**	*eP*	P	Pn	**10 27 07.5**	**-0.1**
VTCV	**VTCV, Calle Va**	**0.97**	**11**	*i* P	P	Pn	**10 27 07.4**	**-0.1**
VTCV				*i* S	S	Sb	**10 27 21.4**	**+0.6**
VTCV				IAML			10 27 24.8	
	comp=Z,45μm,1.0s							
DOMI	**Santo Domingo**	**0.97**	**349**	*eP*	P	Pn	**10 27 07.2**	**-0.3**
DOMI				*eS*	S	Sb	**10 27 21.2**	**+0.5**
VTRT	**Volcan Turrial**	**0.97**	**7**	*i* P	P	Pn	**10 27 07.8**	**0.0**
VTRT				*i* S	S	Sb	**10 27 22.2**	**+1.0**
VTRT				IAML			10 27 27.2	
	comp=Z,39μm,1.0s							
JACO	**JACO, Garabito**	**0.98**	**310**	*eP*	P	Pn	**10 27 06.0**	**-1.5**
JACO	**JACO, Garabito**	**0.98**	**310**	*i* P	P	Pn	**10 27 05.8**	**-1.7**
JACO				IAML			10 27 06.3	
	comp=Z,11μm,1.0s							
JACO				*i* S	S	Sn	**10 27 19.0**	**-1.3**
RVSTA	**Santa Teresita**	**0.98**	**15**	*eP*	P	Pn	**10 27 07.5**	**0.0**
BELE	**Belen**	**0.98**	**344**	*eP*	P	Pn	**10 27 08.0**	**+0.3**
HDC	**Heredia**	**0.99**	**348**	*eP*	P	Pn	**10 27 07.5**	**-0.3**
HDC3	**Heredia 3**	**0.99**	**348**	*eP*	P	Pn	**10 27 07.5**	**-0.2**
HDC3	**Heredia 3**	**0.99**	**348**	*i* P	P	Pn	**10 27 07.6**	**-0.2**
HDC3				*i* S	S	Sb	**10 27 21.7**	**+0.3**
HDC3				IAML			10 27 23.8	
	comp=Z,25μm,1.0s							
CVTR	**Volcan Turrial**	**1.00**	**8**	*eP*	P	Pn	**10 27 08.0**	**-0.1**
VTUN	**Crater Central**	**1.00**	**8**	*i* P	P	Pn	**10 27 08.0**	**-0.2**
VTUN				*i* S	S	Sb	**10 27 22.4**	**+0.5**
VTUN				IAML			10 27 23.7	
	comp=Z,28μm,1.0s							
VTUC	**Crater, Volcan**	**1.00**	**8**	*i* P	P	Pn	**10 27 08.2**	**0.0**
VTUC				*i* S	S	Sb	**10 27 22.4**	**+0.4**
VTUC				IAML			10 27 25.8	
	comp=Z,28μm,1.0s							
VTLO	**VTLO**	**1.03**	**10**	*eP*	P	Pn	**10 27 08.4**	**-0.1**
TRB2	**Turrubares**	**1.03**	**329**	*eP*	P	Pn	**10 27 07.1**	**-1.1**
TCS1	**Tacares**	**1.08**	**339**	*eP*	P	Pn	**10 27 08.8**	**-0.3**
TCS1	**Tacares**	**1.08**	**339**	*i* P	P	Pn	**10 27 09.4**	**+0.4**
TCS1				IAML			10 27 25.5	
	comp=Z,320μm,1.0s							
MLIR3	**Monte Lirio, C**	**1.09**	**102**	*eP*	P	Pn	**10 27 09.6**	**+0.4**
MLIR3				*eS*	S	Sb	**10 27 27.4**	**+3.1**
LCOCO	**El Coco**	**1.10**	**18**	*eP*	P	Pn	**10 27 09.5**	**+0.2**
GREC	**Grecia**	**1.11**	**339**	*eP*	P	Pn	**10 27 09.7**	**+0.2**
CDITO	**Canoas**	**1.12**	**114**	⇑*i* P	P	Pn	**10 27 09.1**	**-0.3**
CDITO				*eS*	S	Sb	**10 27 25.6**	**+0.8**
CDITO	**Canoas**	**1.12**	**114**	*eP*	P	Pn	**10 27 09.1**	**-0.3**
CDITO	**Canoas**	**1.12**	**114**	*i* P	P	Pn	**10 27 09.1**	**-0.3**
CDITO				*i* S	S	Sb	**10 27 24.9**	**+0.1**
CDITO				IAML			10 27 29.0	
	comp=Z,19μm,1.0s							
RVLA	**Villa Bonita**	**1.12**	**16**	*eP*	P	Pn	**10 27 09.3**	**-0.2**
SARCI	**Sarchi**	**1.14**	**338**	*eP*	P	Pn	**10 27 09.7**	**-0.2**
NARAN	**Naranjo de Ala**	**1.16**	**336**	*eP*	P	Pn	**10 27 09.9**	**-0.3**
TAAN	**Batan**	**1.19**	**28**	*eP*	P	Pb	**10 27 11.4**	**-0.5**
RAMO	**San Ramon**	**1.19**	**332**	*eP*	P	Pn	**10 27 11.1**	**+0.5**
SRA1	**San Ramn**	**1.19**	**332**	*eP*	P	Pn	**10 27 10.0**	**-0.6**
ARZA	**Esparza**	**1.22**	**322**	*eP*	P	Pn	**10 27 10.6**	**-0.2**
BRU2	**Volcan**	**1.22**	**101**	⇑*i* P	P	Pn	**10 27 10.9**	**-0.1**
BRU2				*eS*	S	Sb	**10 27 28.0**	**0.0**
BRU2	**Volcan**	**1.22**	**101**	*eP*	P	Pn	**10 27 10.6**	**-0.4**
BRU2	**Volcan**	**1.22**	**101**	*i* P	P	Pn	**10 27 10.9**	**-0.1**
BRU2				*i* S	S	Sb	**10 27 27.8**	**-0.2**
BRU2				IAML			10 27 31.5	
	comp=Z,26μm,1.0s							
LAFE	**Finca La Fe, P**	**1.26**	**308**	*eP*	P	Pn	**10 27 09.9**	**-1.5**
LAFE	**Finca La Fe, P**	**1.26**	**308**	*i* P	P	Pn	**10 27 10.1**	**-1.3**
LAFE				*i* S	S	Sn	**10 27 27.7**	**+0.4**
LAFE				IAML			10 27 34.3	
	comp=Z,30nm,1.0s							
RIFO	**Rio Frio, Sara**	**1.28**	**359**	*eP*	P	Pn	**10 27 12.3**	**+0.6**
BC3P	**Paso Ancho**	**1.30**	**99**	⇓*i* P	P	Pn	**10 27 11.9**	**-0.1**
BC3P				*eS*	S	Sn	**10 27 29.3**	**+0.8**
CBL1	**Cabuya**	**1.30**	**296**	*eP*	P	Pn	**10 27 09.9**	**-1.9**
PTPM	**Petroterminale**	**1.30**	**129**	⇑*i* P	P	Pn	**10 27 11.8**	**-0.2**
PTPM				*eS*	S	Sb	**10 27 30.4**	**+0.2**
CPMI	**Catarata Coope**	**1.33**	**339**	*eP*	P	Pn	**10 27 12.3**	**-0.3**
CPMI	**Catarata Coope**	**1.33**	**339**	*i* P	P	Pn	**10 27 12.4**	**-0.2**
CPMI				*i* S	S	Sb	**10 27 30.7**	**-0.5**
CPMI				IAML			10 27 32.6	
	comp=Z,14μm,1.0s							
CARI	**Cariari**	**1.34**	**7**	*eP*	P	Pb	**10 27 14.3**	**-0.1**
BCO2	**Palmira**	**1.40**	**103**	⇑*i* P	P	Pn	**10 27 13.3**	**-0.1**
BCO2				*eS*	S	Sb	**10 27 32.0**	**-0.9**
RGM0	**Gandoca**	**1.40**	**66**	*i* P	P	Pn	**10 27 14.1**	**+0.8**
RGM0				*i* S	S	Sb	**10 27 33.3**	**+0.4**
RGM0				IAML			10 27 50.4	
	comp=Z,10μm,1.0s							
SARA	**Sarapiqu**	**1.42**	**355**	*eP*	P	Pn	**10 27 14.0**	**+0.4**
PTAR3	**Potrerillos Ar**	**1.43**	**103**	⇑*i* P	P	Pn	**10 27 13.8**	**-0.1**
LNBQ3	**Los Naranjos,**	**1.47**	**99**	⇓*i* P	P	Pn	**10 27 14.2**	**-0.1**
LNBQ3				*eS*	S	Sn	**10 27 33.3**	**+0.7**
CNI2	**El Empalme, Bo**	**1.47**	**74**	⇓*i* P	P	Pn	**10 27 14.6**	**+0.4**
CNI2				*eS*	S	Sb	**10 27 34.2**	**-0.7**
SOCE	**Pocosol**	**1.52**	**333**	*eP*	P	Pn	**10 27 15.0**	**0.0**
SOCE	**Pocosol**	**1.52**	**333**	*i* P	P	Pn	**10 27 15.1**	**+0.1**
SOCE				*i* S	S	Sb	**10 27 35.3**	**-1.1**
SOCE				IAML			10 27 41.1	
	comp=Z,21μm,1.0s							
DVD	**David**	**1.55**	**112**	⇑*i* P	P	Pn	**10 27 16.0**	**+0.6**
DVD				*eS*	S	Sb	**10 27 38.4**	**+1.1**
LOCO3	**Loma Colorada,**	**1.59**	**113**	⇑*i* P	P	Pn	**10 27 16.6**	**+0.7**
LOCO3				*eS*	S	Sb	**10 27 38.8**	**+0.4**
PEDE3	**Pedregal, Chir**	**1.60**	**113**	⇑*i* P	P	Pn	**10 27 16.4**	**+0.3**
PEDE3				*eS*	S	Sn	**10 27 30.3**	**-5.3**
TUNA	**La Fortuna**	**1.61**	**333**	*eP*	P	Pn	**10 27 17.5**	**+1.3**
JTS	**Las Juntas de**	**1.63**	**321**	⇑*i* P	P	Pn	**10 27 15.6**	**-0.9**
JTS				*eS*	S	Sn	**10 27 35.1**	**-1.3**
JTS	**Las Juntas de**	**1.63**	**321**	Pn	Pn	Pn	**10 27 15.7**	**-0.8**
	comp=Z,180nm,0.3s,baz=83,slow=9.5,SNR=1718							
JTS				Sn	Sn	Sn	**10 27 35.9**	**-0.5**
	comp=Z,190nm,0.3s,baz=328,slow=19,SNR=10							
JTS	**Las Juntas de**	**1.63**	**321**	*eP*	P	Pn	**10 27 15.5**	**-0.9**
VACR	**Volcan Arenal**	**1.63**	**332**	*eP*	P	Pn	**10 27 16.7**	**+0.2**
ARE1	**Arenal 1**	**1.64**	**331**	*eP*	P	Pn	**10 27 16.9**	**+0.3**
CHGR2	**Aguacate**	**1.74**	**93**	⇓*i* P	P	Pn	**10 27 18.5**	**+0.4**
CHGR2				*eS*	S	Sn	**10 27 40.1**	**+0.9**
COVE	**Coope Vega, Sa**	**1.75**	**344**	*i* P	P	Pn	**10 27 19.0**	**+0.8**
COVE				*i* S	S	Sb	**10 27 41.9**	**-1.1**
COV

CONN				*i* S		**Sn**	**10 28 12.3 +1.1**	
CONN	**Concepcion**	**3.04**	**326**	*i* P		**Pn**	**10 27 32.2 -3.7**	
CONN				IAML			10 27 59.4	
	comp=Z,8μm,1.0s							
CALO3	**Calobre, Verag**	**3.11**	**103**	*eP*		**Pn**	**10 27 39.2 +2.3**	
CALO3				*eS*		**Sb**	**10 28 20.0 -2.0**	
ESPN	**Las Esperanzas**	**3.17**	**353**	*i* P		**Pn**	**10 27 37.4 -0.3**	
ESPN				*i* S		**Sn**	**10 28 16.7 +2.2**	
ESPN				IAML			10 28 31.8	
	comp=Z,2μm,1.0s							
ACON	**Acoyapa**	**3.18**	**337**	*i* P		**Pn**	**10 27 37.7 -0.1**	
ACON				IAML			10 27 47.0	
	comp=Z,760nm,1.0s							
ACON				*i* S		**Sn**	**10 28 15.9 +1.2**	
CACAO	**El Cacao, Vera**	**3.45**	**119**	*eP*		**Pn**	**10 27 41.5 +0.1**	
CACAO				*eS*		**Sb**	**10 28 28.2 -3.5**	
CACAO	**El Cacao, Vera**	**3.45**	**119**	*eP*		Pb	10 27 59.6 +9.3	
CHIT3	**Chitre**	**3.61**	**107**	*eP*		**Pn**	**10 27 47.2 +3.5**	
CHIT3				*eS*		**Sb**	**10 28 40.3 +3.9**	
NANN	**Nandasmo**	**3.62**	**323**	*i* P		**Pn**	**10 27 43.9 0.0**	
NANN				IAML			10 28 12.0	
	comp=Z,4μm,1.0s							
NANN				*i* S		**Sn**	**10 28 27.1 +1.4**	
NANN	**Nandasmo**	**3.62**	**323**	*i* P		**Pn**	**10 27 46.4 +2.5**	
NANN				IAML			10 28 12.0	
	comp=Z,4μm,1.0s							
RB213	**Mirador 2 Volc**	**3.69**	**323**	*i* P		**Pn**	**10 27 46.0 +1.2**	
RB213				IAML			10 29 06.0	
	comp=Z,1μm,1.0s							
AZU	**Azuero**	**3.80**	**109⇑**	*i* P		**Pn**	**10 27 47.7 +1.4**	
AZU				*eS*		**Sn**	**10 28 32.6 +2.7**	
AZU	**Azuero**	**3.80**	**109**	*eP*		**Pb**	**10 27 59.9 +3.7**	
BOAB	**BOACO BROADBAN**	**3.82**	**333**	*i* P		**Pn**	**10 27 46.1 -0.5**	
BOAB				*i* S		**Sn**	**10 28 32.4 +2.0**	
BOAB				IAML			10 29 02.4	
	comp=Z,490nm,1.0s							
WILN	**Americas 2**	**3.84**	**324**	*i* P		**Pn**	**10 27 46.5 -0.4**	
WILN				IAML			10 29 26.9	
	comp=Z,190nm,1.0s							
UNAN	**Cigeo UNAN**	**3.85**	**323**	*i* P		**Pn**	**10 27 46.4 -0.6**	
UNAN				IAML			10 29 05.6	
	comp=Z,2μm,1.0s							
R4DEC	**Barrio San Lui**	**3.86**	**324**	*i* P		**Pn**	**10 27 47.0 -0.2**	
R4DEC				IAML			10 28 41.3	
	comp=Z,980nm,1.0s							
APQ2	**Apoyeque**	**3.95**	**323**	*i* P		**Pn**	**10 27 46.6 -1.8**	
APQ2				IAML			10 29 01.0	
	comp=Z,270nm,1.0s							
BCIP	**Isla Barro Col**	**4.02**	**88**	*eP*		**Pn**	**10 27 50.3 +1.0**	
BCIP				*eS*		Sb	10 28 58.4 +10	
COPN	**Copaltepe**	**4.10**	**320**	*i* P		**Pn**	**10 27 49.9 -0.5**	
COPN				IAML			10 28 37.5	
	comp=Z,280nm,1.0s							
COPN	**Copaltepe**	**4.10**	**320**	*i* P		**Pn**	**10 27 46.9 -3.5**	
COPN				IAML			10 28 37.5	
	comp=Z,280nm,1.0s							
MOM2	**El Cardon**	**4.23**	**323**	*i* P		**Pn**	**10 27 51.8 -0.5**	
MOM2				IAML			10 28 17.6	
	comp=Z,210nm,1.0s							
LEVN	**Ruinas Leon Vi**	**4.28**	**322**	*i* P		**Pn**	**10 27 50.7 -2.3**	
LEVN				IAML			10 28 21.4	
	comp=Z,240nm,1.0s							
UPA	**Univ. de Panam**	**4.32**	**90⇑**	*i* P		**Pn**	**10 27 54.8 +1.3**	
MATN	**Matagalpa**	**4.36**	**333**	*i* P		**Pn**	**10 27 53.5 -0.6**	
MATN				*i* S		**Sn**	**10 28 45.3 +1.4**	
MATN				IAML			10 29 16.7	
	comp=Z,260nm,1.0s							
MACN	**El Madrono**	**4.37**	**322**	*i* P		**Pn**	**10 27 53.7 -0.5**	
MACN				IAML			10 28 05.0	
	comp=Z,140nm,1.0s							
MACN				*i* S		**Sn**	**10 28 44.7 +0.6**	
MACN	**El Madrono**	**4.37**	**322**	*i* P		**Pn**	**10 27 56.2 +2.0**	
MACN				IAML			10 28 04.9	
	comp=Z,140nm,1.0s							
CNGA	**Al SSO del Vol**	**4.41**	**322**	*i* P		**Pn**	**10 27 52.8 -1.9**	
CNGA				IAML			10 28 06.3	
	comp=Z,170nm,1.0s							
CNGN	**Cerro Negro**	**4.41**	**322**	*i* P		**Pn**	**10 27 53.8 -1.0**	
CNGN				IAML			10 28 26.4	
	comp=Z,170nm,1.0s							
ROCN	**Rota Cerro Neg**	**4.45**	**321**	*i* P		**Pn**	**10 27 54.8 -0.5**	
ROCN				*i* S		**Sn**	**10 28 47.8 +1.6**	
ROCN				IAML			10 29 23.9	
	comp=Z,110nm,1.0s							
ROCN	**Rota Cerro Neg**	**4.45**	**321**	*i* P		**Pn**	**10 27 53.7 -1.6**	
ROCN				IAML			10 29 23.9	
	comp=Z,110nm,1.0s							
PACN	**Al O del Volca**	**4.47**	**321**	*i* P		**Pn**	**10 27 54.7 -0.8**	
PACN				IAML			10 28 08.7	
	comp=Z,170nm,1.0s							
PACN				*i* S		**Sn**	**10 28 48.1 +1.6**	
PACN	**Al O del Volca**	**4.47**	**321**	*i* P		**Pn**	**10 27 54.7 -0.8**	
PACN				*i* S		**Pb**	**10 28 05.1 -2.6**	
PACN				IAML			10 28 08.7	
	comp=Z,170nm,1.0s							
LIMN	**Finca el Limon**	**4.68**	**329**	*i* P		**Pn**	**10 27 58.5 -0.1**	
LIMN				*i* S		**Sn**	**10 28 53.5 +1.6**	
LIMN				IAML			10 29 40.7	
	comp=Z,220nm,1.0s							
PKGN	**Cerro Pekin**	**4.71**	**320**	*i* P		**Pn**	**10 27 57.8 -1.1**	
PKGN				IAML			10 28 15.4	
	comp=Z,390nm,1.0s							
PKGN				*i* S		**Sn**	**10 28 52.7 +0.2**	
PKGN	**Cerro Pekin**	**4.71**	**320**	*i* P		**Pn**	**10 27 58.0 -0.9**	
PKGN				IAML			10 28 15.4	
	comp=Z,390nm,1.0s							
SIUN	**Universidad Ur**	**4.74**	**350**	*i* S		**Sn**	**10 28 51.4 -1.8**	
CRIN	**San Cristobal**	**4.78**	**320**	*i* P		Pn	10 27 48.6 -11	
CRIN				IAML			10 28 24.1	
	comp=Z,300nm,1.0s							
CSGN	**Cosiguina Volc**	**5.32**	**318**	*i* P		**Pn**	**10 28 07.5 +0.2**	
CSGN				IAML			10 28 10.3	
	comp=Z,600nm,1.0s							
CSGN				IVmB_BB			10 28 10.3	
	comp=Z,5μm,1.0s							
CSGN				IAmb		IAmb	10 28 10.6	
	comp=Z,380nm,0.5s							
CSGN	**Cosiguina Volc**	**5.32**	**318**	*i* P		**Pn**	**10 28 09.0 +1.7**	
CSGN				IAML			10 28 10.3	
	comp=Z,600nm,1.0s							
AMPH	**Amapala**	**5.61**	**319**	*i* P		**Pn**	**10 28 12.5 +1.3**	
YUSH	**Yuscaran**	**5.68**	**330**	*i* P		**Pn**	**10 28 16.0 +3.7**	
LCND	**La Caada**	**5.78**	**318**	*i* P		**Pn**	**10 28 15.2 +1.6**	
JUCU	**Jucuar¡n**	**5.98**	**315**	*i* P		**Pn**	**10 28 17.9 +1.5**	
RANC	**El Ranchito**	**6.14**	**316**	*i* P		**Pn**	**10 28 20.6 +2.0**	
PACA	**Pacayal**	**6.19**	**316**	*i* P		**Pn**	**10 28 21.2 +1.9**	
TECO	**Alcaldia de Te**	**6.55**	**314**	*i* P		**Pn**	**10 28 26.8 +2.6**	
SCLA	**Alcaldia de Sa**	**6.63**	**315**	*i* P		**Pn**	**10 28 27.6 +2.3**	
SJTE	**Alcalda de S**	**6.77**	**313**	*i* P		**Pn**	**10 28 28.7 +1.5**	
PMON	**Piamonte**	**7.06**	**312**	*i* P		**Pn**	**10 28 33.4 +2.2**	
JAYA	**Jayaque - finc**	**7.12**	**311**	*i* P		**Pn**	**10 28 34.1 +2.0**	
NUBE	**Las Nubes**	**7.52**	**311**	*i* P		**Pn**	**10 28 39.7 +2.0**	
ESQI	**Esquipulas**	**7.65**	**316**	*i* P		**Pn**	**10 28 40.6 +1.2**	
DBBC	**Dabeiba**	**7.88**	**104**	*eP*		**Pn**	**10 28 44.6 +2.1**	
GR1C	**Gorgona, Isla**	**8.27**	**136**	*eP*		**Pn**	**10 28 49.7 +1.9**	
UREC	**San Jos de Ur**	**8.38**	**98**	*eP*		**Pn**	**10 28 50.7 +1.4**	
PLMC	**San Jos del P**	**8.60**	**118**	*eP*		**Pn**	**10 28 49.4 -3.0**	
SJCC	**San Jacinto, C**	**8.65**	**84**	*eP*		**Pn**	**10 28 54.9 +1.8**	
YOTC	**Yotoco, Valle**	**9.03**	**123**	*eP*		**Pn**	**10 28 57.9 -0.4**	
GUY2C	**Guyana, Caldas**	**9.28**	**113**	*eP*		**Pn**	**10 29 02.4 +0.3**	
NORC	**Norcasia**	**9.60**	**110**	*eP*		**Pn**	**10 29 01.7 -4.4**	
BBAC	**Balboa, Cauca**	**9.61**	**136**	*eP*		**Pn**	**10 29 08.0 +1.6**	
POPC	**Popayan, Colom**	**9.65**	**131**	*eP*		**Pn**	**10 29 08.3 +1.3**	
SMRC	**Santa Marta, M**	**9.77**	**77**	*eP*		**Pn**	**10 29 07.7 -0.6**	
ORTC	**Ortega, Tolima**	**9.99**	**120**	*eP*		**Pn**	**10 29 10.3 -1.1**	
GCUF	**Volcan Galeras**	**10.13**	**140**	*eP*		**Pn**	**10 29 16.9 +3.1**	
ROSC	**El Rosal**	**10.38**	**113**	LR		LR	10 33 39.8	
	comp=Z,180nm,20.7s,baz=240,slow=40							
CHIC	**Chingaza**	**11.00**	**113**	*eP*		Pn	10 29 34.3 +8.6	
RUSC	**La Rusia**	**11.17**	**105**	*eP*		**Pn**	**10 29 31.8 +3.8**	
PAMC	**Pamplona, Colo**	**11.22**	**98**	*eP*		**Pn**	**10 29 31.7 +3.1**	
PIAT	**Ana Tenorio**	**11.44**	**150**	*eP*		**Pn**	**10 29 35.9 +4.4**	
TEIG	**Tepich**	**11.91**	**340**	LR		LR	10 34 16.2	
	comp=Z,606nm,19.8s,baz=145,slow=40							
SDV	**Santo Domingo**	**13.11**	**90**	Pn		**Pn**	**10 29 50.2 -4.1**	
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=1.2							
SDV				Sn		**Sn**	**10 32 16.4 -2.9**	
	comp=Z,0.3nm,0.3s,baz=49,slow=19,SNR=1.9							
SDV				LR		LR	10 35 36.5	
	comp=Z,142nm,20.9s,baz=240,slow=41							
	comp=Z,0.8nm,0.5s							
CMIG	**Matias Romero**	**13.36**	**308**	Pn		**Pn**	**10 29 56.6 -0.9**	
	comp=Z,1.3nm,0.3s,baz=143,slow=9.3,SNR=14							
	comp=Z,3.7nm,0.3s							

PCRV	**Puerto La Cruz**	**19.03**	**85**	LR		LR	10 40 47.2	
	comp=Z,142nm,18.5s,slow=45							
TXAR	**Lajitas Array**	**27.42**	**320**	P		**P**	**10 32 35.2 +2.2**	
	comp=Z,0.1nm,0.5s,baz=140,slow=13,SNR=1.8							
	comp=Z,0.1nm,0.5s							
MDP	**Montagnes des**	**31.26**	**95**	LR		LR	10 46 41.1	
	comp=Z,110nm,20.8s,baz=357,slow=38							
ULM	**Lac du Bonnet**	**42.28**	**349**	P		**P**	**10 34 38.8 -1.7**	
	comp=Z,1.5nm,0.8s,baz=140,slow=7.9,SNR=2.9							
	comp=Z,1.5nm,0.8s							
NVAR	**Mina Array Bea**	**42.56**	**319**	P		**P**	**10 34 43.9 +0.7**	
	comp=Z,0.2nm,0.5s,baz=127,slow=5.8,SNR=3.5							
	comp=Z,0.2nm,0.5s							
RPN	**Rapa Nui**	**43.58**	**214**	LR		LR	10 48 55.3	
	comp=Z,46nm,18.8s,baz=58,slow=30							
SCHQ	**Schefferville**	**47.67**	**13**	P		**P**	**10 35 20.7 -2.6**	
	comp=Z,0.7nm,0.5s,baz=248,slow=6.6,SNR=3.5							
	comp=Z,0.7nm,0.5s							
PLCA	**Paso Flores**	**51.02**	**167**	P		P	10 35 59.0 +10	
	comp=Z,1.2nm,0.7s,baz=335,slow=8.8,SNR=4.9							
	comp=Z,1.2nm,0.7s							
FRB	**Frobisher Bay**	**55.72**	**8**	P		**P**	**10 36 20.6 -2.6**	
	comp=Z,1.1nm,0.6s,baz=220,slow=9.1,SNR=4.6							
	comp=Z,1.1nm,0.6s							
YKA	**Yellowknife Ar**	**57.83**	**344**	P		**P**	**10 36 37.3 -1.0**	
	comp=Z,0.2nm,0.8s,baz=123,slow=9.0,SNR=3.4							
	comp=Z,0.2nm,0.8s							
RES	**Resolute Bay**	**65.92**	**357**	LR		LR	11 06 35.2	
	comp=Z,146nm,18.5s,baz=328,slow=37							
ILAR	**Eielson Array**	**70.54**	**336**	P		**P**	**10 38 02.0 +0.4**	
	comp=Z,0.2nm,0.7s,baz=119,slow=7.3,SNR=2.1							
	comp=Z,0.2nm,0.7s							
ESDC	**Sonseca Array**	**76.57**	**51**	P		**P**	**10 38 37.0 -0.6**	
	comp=Z,1.1nm,0.7s,baz=284,slow=6.2,SNR=8.2							
	comp=Z,1.1nm,0.7s							
HFS	**Hagfors**	**86.01**	**30**	P		**P**	**10 39 25.6 -1.7**	
	comp=Z,1.1nm,0.7s,baz=238,slow=8.3,SNR=4.4							
	comp=Z,1.1nm,0.7s							
ASAR	**Alice Springs**	**141.06**	**243**	PKP		**PKiKP**	**10 46 22.5 +1.8**	
	comp=Z,0.2nm,0.7s,baz=99,slow=3.1,SNR=1.7							
WRA	**Warramunga Arr**	**141.51**	**249**	PKP		**PKiKP**	**10 46 23.9 +2.2**	
	comp=Z,0.3nm,0.7s,baz=107,slow=2.1,SNR=1.6							

IDC 24 10:49:53.2±1.9, 1°.85S×128°.67E, *h*0km, *mb*3.4/3, *mbtmp*3.3/4, *ML*3.2/1, Error ellipse: s-maj=122.3km s-min=26.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.82**	**163**	P			Pn	10 54 14.9	-0.2
	0.1nm,0.3s,baz=342,slow=12,SNR=1.4								
	0.2nm,0.6s								
ASAR	**Alice Springs**	**22.28**	**167**	P			P	10 54 53.3	+1.1
	0.4nm,0.4s,baz=348,slow=11,SNR=8.7								
	0.4nm,0.4s								
STKA	**Stephens Creek**	**32.26**	**159**	P			P	10 56 21.9	-1.7
	1.4nm,0.8s,baz=342,slow=9.6,SNR=4.3								
	1.4nm,0.8s								
MKAR	**Makanchi Array**	**63.22**	**326**	P			P	11 00 23.9	+0.5
	0.1nm,0.4s,baz=116,slow=7.1,SNR=1.5								
	0.1nm,0.4s								

JMA 24 10:51:43.3±0.2, 37°.4N±0°.8×14°.4E±°, *h*55km, *MV*3.6/33, FAR E OFF FUKUSHIMA PREF, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.00**	**297**	P			Pn	10 52 15.6	+0.9
JIKH				S			Sn	10 52 39.3	+0.8
JIO	**Ouri**	**2.15**	**299**	P			Pn	10 52 17.7	+1.0
JIO				S			Sn	10 52 42.6	+0.5
JKMT	**Kesennumamotoy**	**2.26**	**308**	P			Pn	10 52 18.8	+0.7
JKMT				S			Sn	10 52 44.9	+0.1
JMST	**Minamisoumatoc**	**2.29**	**278**	S			Sn	10 52 46.5	+1.0
JMK	**Ichinoseki**	**2.50**	**308**	P			Pn	10 52 22.7	+1.2
JMK				S			Sn	10 52 51.5	+0.8
JOTO	**OTAMA OYAMA**	**2.71**	**274**	P			Pn	10 52 26.5	+2.1
JOTO				S			Sn	10 52 58.9	+2.9
JOM	**Ohasama**	**2.80**	**317**	P			Pn	10 52 26.9	+1.3
JOM				S			Sn	10 52 58.9	+0.8
JYK	**Kaneyama**	**3.05**	**300**	P			Pn	10 52 30.9	+1.9
JYK				*eS*			Sn	10 53 06.8	+2.6
JANG	**Nango**	**3.41**	**330**	*eP*			Pn	10 52 35.0	+1.1
JANG				S			Sn	10 53 12.9	-0.3
BSO1	**Boso 1**	**3.56**	**220**	*eP*			Pn	10 52 35.7	+0.2
JAG	**Ashikaga**	**3.58**	**255**	P			Pn	10 52 37.6	+1.4
JRY	**Ryogami san**	**4.13**	**251**	P			Pn	10 52 44.9	+1.0
JRY				S			Sn	10 53 30.6	-0.4
JOD2	**Odawara 2**	**4.33**	**241**	*eP*			Pn	10 52 47.4	+0.8
JOD2				*eS*			Sn	10 53 35.4	-0.5
JOT	**Ohata**	**4.46**	**333**	P			Pn	10 52 49.2	+0.9
JCH	**Churui**	**5.18**	**357**	P			Pn	10 52 56.9	-1.3
JCH				*eS*			Sn	10 53 52.1	-4.5
NEM2	**Nemuro 2**	**6.12**	**14**	*eP*			Pn	10 53 07.6	-3.5
NEM2				*eS*			Sn	10 54 11.2	-8.4
JHR	**Hokuryu**	**6.49**	**347**	P			Pn	10 53 17.2	+1.1
JHR				*eS*			Sn	10 54 28.7	0.0
JTKR	**Abashiri--Toko**	**6.53**	**1**	P			Pn	10 53 15.2	-1.5
JTKR				*eS*			Sn	10 54 24.1	-5.7

*UCR **24** 10:53:16.2±0.7, 10°.94N×86°.54W, h7km±35km, MW3.6*
*CATAC **24** 10:53:17.4±0.5, 10°.90N×86°.47W, h10km±3km, ML3.1*
ISC 24 10:53:16.4±1.5, 10°.91N±0°.04×86°.50W±0°.06, *h*8km±10km, n33, σ8°50/50, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCRUZ	**La Cruz**	**0.87**	**79**	*eP*			**Pb**	**10 53 34.4**	**+0.6**
LCRUZ				*eS*			**Sn**	**10 53 47.8**	**-0.2**
HZTE	**Horizontes, Gu**	**0.91**	**102**	*eP*			**Pg**	**10 53 34.2**	**+0.3**
HZTE	**Horizontes, Gu**	**0.91**	**102**	*i* P			**Pg**	**10 53 34.0**	**+0.1**
HZTE				*i* S			**Sb**	**10 53 46.9**	**+0.1**
HZTE				IAML				10 53 53.0	
	comp=Z,1μm,1.0s								
ALIBA	**Liberia Airpor**	**0.99**	**108**	*eP*			**Pn**	**10 53 37.1**	**+0.4**
JAPN	**Al SSO del Vol**	**1.01**	**53**	*i* P			**Pn**	**10 53 37.2**	**+0.2**
JAPN				IAML				10 53 37.9	
	comp=Z,700nm,1.0s								
JAPN				*i* S			**Sb**	**10 53 49.8**	**0.0**
DELF	**Filadelfia**	**1.04**	**116**	*eP*			**Pg**	**10 53 36.7**	**+0.3**
OMEN	**Al SSO del Vol**	**1.04**	**55**	*i* P			**Pg**	**10 53 36.6**	**+0.1**
OMEN				IAML				10 53 55.1	
	comp=Z,690nm,1.0s								
MORN	**Al O del Volca**	**1.05**	**53**	*i* P			**Pn**	**10 53 37.4**	**-0.2**
MORN				IAML				10 53 37.9	
	comp=Z,1μm,1.0s								
CONN	**Concepcion**	**1.08**	**53**	*i* P			**Pg**	**10 53 37.2**	**0.0**
CONN				IAML				10 53 38.0	
	comp=Z,3μm,1.0s								
CONN				*i* S			**Sb**	**10 53 52.0**	**+0.3**
GB1A	**Borinquen Arri**	**1.09**	**95**	*eP*			**Pg**	**10 53 37.3**	**-0.1**
NANN	**Nandasmo**	**1.09**	**20**	*i* P			**Pn**	**10 53 38.3**	**+0.2**
NANN				*i* S			**Sn**	**10 53 53.2**	**-0.3**
NANN				IAML				10 54 00.0	
	comp=Z,6μm,1.0s								
VRLE	**La Escondida,**	**1.12**	**96**	*eP*			**Pg**	**10 53 37.8**	**-0.2**
GPS3	**Bodega del ICE**	**1.12**	**98**	*eP*			**Pb**	**10 53 38.6**	**+0.3**
SAJU	**San Juanillo,**	**1.14**	**137**	*i* P			**Pb**	**10 53 38.3**	**-0.2**
SAJU				*i* S			**Sg**	**10 53 53.6**	**+0.4**
SAJU				IAML				10 54 01.3	
	comp=Z,200nm,1.0s								
ORTG	**Ortega, Santa**	**1.16**	**118**	*eP*			**Pb**	**10 53 38.3**	**-0.5**
ORTG	**Ortega, Santa**	**1.16**	**118**	*i* P			**Pb**	**10 53 37.7**	**-1.1**
ORTG				*i* S			**Sg**	**10 53 53.7**	**-0.1**
ORTG				IAML				10 53 56.4	
	comp=Z,190nm,1.0s								
PLVR	**Palo Verde**	**1.26**	**116**	*eP*			**Pn**	**10 53 40.2**	**-0.3**
COPN	**Copaltepe**	**1.27**	**356**	*i* P			**Pn**	**10 53 40.4**	**-0.2**
COPN				IAML				10 54 02.5	
	comp=Z,550nm,1.0s								
DUNO	**Dulce Nombre,**	**1.29**	**130**	*i* P			**Pn**	**10 53 39.6**	**-1.2**
DUNO				*i* S			**Sb**	**10 53 57.5**	**-0.2**
DUNO				IAML				10 54 09.6	
	comp=Z,320nm,1.0s								
COLC	**Colonia**	**1.30**	**101**	*eP*			**Pn**	**10 53 40.0**	**-0.9**
CUI	**Cuipilapa**	**1.34**	**101**	*eP*			**Pn**	**10 53 40.8**	**-0.7**
VMAR	**Armenia, Volca**	**1.36**	**94**	*eP*			**Pn**	**10 53 41.6**	**-0.3**
VMAR	**Armenia, Volca**	**1.36**	**94**	*i* P			**Pn**	**10 53 41.0**	**-0.9**
VMAR				*i* S			**Sb**	**10 53 59.9**	**-0.1**
VMAR				IAML				10 54 13.6	
	comp=Z,360nm,1.0s								

INDI	**Punta indio, G**	**1.43**	**136**	*i* P		**Pn**	**10 53 42.7**	**0.0**
INDI				*i* S		**Sn**	**10 54 01.9**	**+0.2**
INDI				IAML			10 54 20.6	
	comp=Z,97nm,1.0s							
ACAL	**Aguas Claras**	**1.47**	**101**	*eP*		**Pn**	**10 53 43.6**	**+0.3**
MACN	**El Madrono**	**1.56**	**354**	*i* P		**Pb**	**10 53 45.3**	**-0.3**
MACN				*i* S		**Sg**	**10 54 06.4**	**-0.2**
MACN				IAML			10 54 12.0	
	comp=Z,76nm,1.0s							
ROCN	**Rota Cerro Neg**	**1.62**	**352**	*i* P		**Pn**	**10 53 45.9**	**+0.5**
ROCN				*i* S		**Sb**	**10 54 07.2**	**-0.1**
ROCN				IAML			10 54 19.9	
	comp=Z,64nm,1.0s							
JTS	**Las Juntas de**	**1.64**	**112**	*eP*		**Pn**	**10 53 45.5**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.74**	**28**	*i* P		**Pn**	**10 53 46.6**	**-0.4**
BOAB				*i* S		**Sb**	**10 54 10.1**	**-0.5**
BOAB				IAML			10 54 11.9	
	comp=Z,72nm,1.0s							
SOCE	**Pocosol**	**1.92**	**106**	*i* P		**Pn**	**10 53 49.9**	**+0.3**
SOCE				*i* S		**Sn**	**10 54 14.5**	**+0.5**
SOCE				IAML			10 54 29.2	
	comp=Z,82nm,1.0s							
LIMN	**Finca el Limon**	**2.15**	**3**	*i* P		**Pn**	**10 53 52.8**	**+0.1**
LIMN				*i* S		**Sn**	**10 54 20.3**	**+0.7**
LIMN				IAML			10 54 36.5	
	comp=Z,56nm,1.0s							
JACO	**JACO, Garabito**	**2.19**	**124**	*i* P		**Pn**	**10 53 54.3**	**+1.0**
JACO				*i* S		**Sn**	**10 54 21.6**	**+0.9**
JACO				IAML			10 54 35.6	
	comp=Z,57nm,1.0s							
RIMA	**Rio Macho**	**2.83**	**113**	*i* P		**Pn**	**10 54 02.8**	**+0.6**
RIMA				*i* S		**Sn**	**10 54 36.0**	**-0.7**
RIMA				IAML			10 54 50.5	
	comp=Z,45nm,1.0s							

*BJI **24** 11:02:18.6±0.0, 19°.70N×120°.50E, h10km, mb4.7/81, mB5.1/58, ML4.6/3, Ms5.0/94, Ms7 4.9/89*
*IDC **24** 11:02:20.1±0.5, 19°.66N×120°.47E, h0km, mb4.7/32, mbtmp4.7/35, ML4.4/3, MS4.3/68, Error ellipse: s-maj=15.7km s-min=11.7km az=63.0*
*MOS **24** 11:02:20.1±0.9, 19°.68N×120°.43E, h13km, mb5.3/69, MS4.7/10, Error ellipse: s-maj=6.9km s-min=4.0km az=113.9*
*GCMT **24** 11:02:21.6±0.1, 19°.69N±0°.01×120°.34E±0°.01, h13km, MW5.2/145, Moment Tensor Solution. s93,c148; s145,c257; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.79±.02; Mθθ0.63±.01; Mϕϕ0.16±.01; Mrθ0.23±.03; Mθϕ0.27±.01; Mϕr0.28±.03; Best double couple: M0:0.84900×10^17 NP1:ϕs236.00000°, δ57.00000°, λ-100.00000°. NP2:ϕs74.00000°, δ34.00000°, λ-75.00000°. Principal axes: T 0.8160, Plg12.0000°, Azm333.0000°; N 0.0660, Plg9.0000°, Azm241.0000°; P -0.8830, Plg75.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MAN **24** 11:02:21.7, 19°.71N×120°.34E, h29km, mb5.8, ML4.8, MS5.3*
*DJA **24** 11:02:22.5±1.6, 20°.N±3°.×12°.1E±°, h21km±13km, M4.9/34, mb5.0/34, mB5.5/26, MLv5.0/4, Mw(mB)4.9/26, MwMwp5.0/9, Mwp5.3/9*
*NEIC **24** 11:02:22.6±2.0, 19°.77N±0°.07×120°.35E±0°.08, h10km±1km, mb5.3/148, Mww5.2/43, Error ellipse: s-maj=12.3km s-min=10.7km az=117.0*
*NEIC **24** 11:02:22.6, 19°.78N×120°.25E, h16km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^16 Nm; Mrr-8.44; Mθθ6.13; Mϕϕ2.31; Mrθ-0.19; Mθϕ2.50; Mϕr3.47; Fault plane solution: M0:8.51000×10^16 NP1: ϕs226.32000°, δ52.57000°, λ-110.85000°. NP2: ϕs78.39000°, δ42.09000°, λ-65.06000°. Principal axes: T 7.5000, Plg5.0000°, Azm331.0000°; N 2.0165, Plg16.0000°, Azm239.0000°; P -9.5165,

PLP	**Palo**	**9.54**	**152**	⇑	*e*P		Pn	11 04 36.3	-3.0
QIZ	**Qiongzhong**	**10.01**	**268**		P		**Pn**	**11 04 44.1**	**-1.6**
QIZ					S		**Sn**	**11 06 38.4**	**+0.6**
QIZ					pmax	pmax			
	comp=Z,230nm,5.1s								
QIZ					LR	LR			
	comp=N,2μm,11.2s								
QIZ					LR	LR			
	comp=E,4μm,12.1s								
QIZ					LR	LR			
	comp=Z,5μm,12.3s								
QIZ	**Qiongzhong**	**10.01**	**268**				**Pn**	**11 04 43.5**	**-2.1**
CNOP	**Candoni, Negro**	**10.03**	**167**	⇑	*e*P		**Pn**	**11 04 47.1**	**+1.1**
JOW	**Kunigami**	**10.14**	**44**		Pn		**Pn**	**11 04 48.6**	**+1.2**
JOW	**Kunigami**	**10.14**	**44**		Pn		**Pn**	**11 04 46.2**	**-1.2**
	11nm,0.3s,baz=203,slow=16,SNR=26								
JOW					Sn		**Sn**	**11 06 35.5**	**-5.4**
	1.2nm,0.3s,baz=14,slow=19,SNR=2.0								
	20nm,0.3s								
GULI	**GuiLin**	**10.84**	**303**		*e*P		**Pn**	**11 04 52.8**	**-4.3**
GULI					S		Sn	11 06 48.4	-10
GULI					pmax	pmax			
	comp=Z,10.0nm,1.4s								
GULI					LR	LR			
	comp=N,3μm,12.2s								
GULI					LR	LR			
	comp=E,4μm,13.5s								
GULI					LR	LR			
	comp=Z,6μm,12.9s								
CNSH	**ChangSha**	**10.88**	**322**	⇑	P		**Pn**	**11 04 54.5**	**-3.1**
CNSH					S		**Sn**	**11 06 52.3**	**-6.9**
CNSH					pmax	pmax			
	comp=Z,6.0nm,0.7s								
CNSH					smax	smax			
	comp=Z,140nm,1.3s								
CNSH					smax	smax			
	comp=Z,83nm,1.1s								
SSE	**Sheshan**	**11.39**	**3**		P		**Pn**	**11 05 05.3**	**+0.8**
SSE					S		**Sn**	**11 07 13.6**	**+2.0**
SSE					pmax	pmax			
	comp=Z,9.0nm,0.7s								
SSE					pmax	pmax			
	comp=Z,78nm,3.5s								
SSE					LR	LR			
	comp=Z,990nm,13.6s								
SSE					LR	LR			
	comp=Z,520nm,13.8s								
PAGZ	**Pagadian**	**12.11**	**166**	⇑	*e*P		**Pn**	**11 05 15.1**	**+0.6**
WHN	**Wuhan**	**12.13**	**334**	⇑	P		**Pn**	**11 05 12.9**	**-1.8**
WHN					sP		Pn	11 05 20.6	+5.9
WHN					PP		**PnPn**	**11 05 22.0**	**-0.7**
WHN					S		**Sn**	**11 07 31.0**	**+1.3**
WHN					LR	LR			
	comp=Z,13μm,10.8s								
WHN					LR	LR			
	comp=Z,10μm,10.6s								
WHN					LR	LR			
	comp=Z,19μm,10.6s								
NJ2	**Nanjing**	**12.40**	**354**	⇑	*i*P		**Pn**	**11 05 18.0**	**-0.4**
NJ2					pmax	pmax			
	comp=Z,21nm,0.6s								
NJ2					LR	LR			
	comp=Z,6μm,11.4s								
NJ2					LR	LR			
	comp=Z,3μm,11.8s								
NJ2					LR	LR			
	comp=Z,5μm,13.3s								
DAV	**Davao City (W)**	**13.50**	**158**		LR	LR	11 11 49.5		
	comp=Z,4μm,18.7s,baz=45,slow=42								
SKMP	**Bagumbayan, Su**	**13.68**	**162**	⇓	*e*P		**Pn**	**11 05 38.9**	**+2.9**
MATI	**Mati**	**13.87**	**155**	⇓	*e*P		**Pn**	**11 05 37.6**	**-1.0**
KKM	**Kota Kinabalu**	**14.16**	**197**				**Pn**	**11 05 42.1**	**-0.4**
GYA	**Guiyang**	**14.34**	**301**	⇓	P		**P**	**11 05 49.3**	**-2.8**
GYA					S		**Sn**	**11 08 25.5**	**+1.5**
GYA					pmax	pmax			
	comp=Z,9.0nm,1.7s								
GYA					pmax	pmax			
	comp=Z,260nm,8.9s								
GYA					LR	LR			
	comp=Z,5μm,12.1s								
GYA					LR	LR			
	comp=Z,4μm,12.9s								
GYA					LR	LR			
	comp=Z,7μm,12.5s								
DDMP	**Don Marcelino,**	**14.44**	**158**	⇑	*e*P		**Pn**	**11 05 47.6**	**+1.2**
ENH	**Enshi**	**14.46**	**319**		Pn		**Pn**	**11 05 45.7**	**-0.9**
ENH	**Enshi**	**14.46**	**319**		P		**Pn**	**11 05 48.1**	**+1.5**
SLVN	**Son La**	**15.56**	**279**				**Pn**	**11 06 00.8**	**-0.7**
JNU	**Nakatsue**	**16.32**	**33**		Pn		**Pn**	**11 06 11.0**	**-0.1**
JNU	**Nakatsue**	**16.32**	**33**		P		**Pn**	**11 06 12.4**	**+1.3**
JNU	**Nakatsue**	**16.32**	**33**		Pn		**Pn**	**11 06 11.0**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=182,slow=6.8,SNR=12								
JNU					LR	LR	11 13 21.1		
	comp=Z,406nm,18.5s,baz=216,slow=40								
	comp=Z,35nm,0.9s								
LYN	**LuoYang**	**16.41**	**336**		*e*P		**Pn**	**11 06 13.1**	**+1.0**
LYN					pP		sP	11 06 16.8	-2.5
LYN					sP		pwP	11 06 21.6	-1.6
LYN					PP		**PnPn**	**11 06 26.4**	**+5.1**
LYN					S		**S**	**11 09 20.9**	**-5.3**
LYN					pmax	pmax			
	comp=Z,150nm,1.3s								
LYN					pmax	pmax			
	comp=Z,570nm,4.4s								
LYN					LR	LR			
	comp=Z,4μm,11.3s								
LYN					LR	LR			
	comp=Z,3μm,12.4s								
LYN					LR	LR			
	comp=Z,6μm,11.0s								
NONG	**Nongkai**	**16.43**	**267**		P		**P**	**11 06 16.2**	**+1.0**
TIA	**Tai'an**	**16.72**	**351**		P		**Pn**	**11 06 16.3**	**+0.2**
TIA					pmax	pmax			
	comp=Z,13nm,2.1s								
TIA					pmax	pmax			
	comp=Z,320nm,3.8s								
TIA					LR	LR			
	comp=Z,1μm,10.3s								
TIA					LR	LR			
	comp=Z,1μm,11.1s								
TIA					LR	LR			
	comp=Z,2μm,12.9s								
KMI	**Kunming**	**17.22**	**292**	⇑	P		**Pn**	**11 06 22.3**	**-0.4**
KMI					S		**S**	**11 09 38.3**	**-5.0**
KMI					pmax	pmax			
	comp=Z,19nm,1.3s								
KMI					pmax	pmax			
	comp=Z,450nm,5.7s								
KMI					LR	LR			
	comp=Z,2μm,14.3s								
KMI					LR	LR			
	comp=Z,4μm,13.2s								
KMI					LR	LR			
	comp=Z,4μm,11.9s								
XAN	**Xi'an**	**17.58**	**327**	⇑	P		**Pn**	**11 06 26.4**	**-0.5**
XAN					S		**S**	**11 09 45.3**	**-4.9**
XAN					pmax	pmax			
	comp=Z,46nm,1.7s								
XAN					pmax	pmax			
	comp=Z,980nm,9.8s								
XAN					LR	LR			
	comp=Z,5μm,11.7s								
XAN					LR	LR			
	comp=Z,5μm,13.0s								
XAN					LR	LR			
	comp=Z,7μm,12.4s								
TJN	**Taejon**	**17.72**	**19**		P		**Pn**	**11 06 29.1**	**+0.6**
TJN	**Taejon**	**17.72**	**19**	*ce*	P		**Pn**	**11 06 28.6**	**+0.1**
HNS	**HongShan**	**18.35**	**345**	⇓	P		**P**	**11 06 38.5**	**+2.2**
HNS					pmax	pmax			
	comp=Z,81nm,1.3s								
HNS					pmax	pmax			
	comp=Z,1μm,4.1s								
HNS					LR	LR			
	comp=Z,4μm,11.8s								
HNS					LR	LR			
	comp=Z,3μm,9.6s								
HNS					LR	LR			
	comp=Z,4μm,11.8s								
JMN	**Monobe**	**18.42**	**38**		P		**P**	**11 06 38.9**	**+1.7**
TOLI2	**Tolitoli**	**18.46**	**179**		P		**P**	**11 06 38.5**	**+0.8**
TOLI2	**Tolitoli**	**18.46**	**179**		P		**P**	**11 06 39.3**	**+1.6**
PZH	**PanZhiHua**	**18.47**	**295**		P		**P**	**11 06 38.6**	**+0.7**
PZH					sP		**pwP**	**11 06 44.4**	**-1.9**
PZH					S		**S**	**11 10 06.0**	**-2.5**
PZH					pmax	pmax			
	comp=Z,20nm,1.5s								
PZH					pmax	pmax			
	comp=Z,370nm,6.7s								
PZH					LR	LR			
	comp=Z,3μm,14.0s								
PZH					LR	LR			
	comp=Z,1μm,12.8s								
PZH					LR	LR			
	comp=Z,2μm,12.2s								
CD2	**Chengdu**	**18.74**	**310**		P		**P**	**11 06 40.5**	**-0.2**
CD2					S		**Sn**	**11 10 10.6**	**0.0**
CD2					pmax	pmax			
	comp=Z,30nm,0.9s								
CD2					pmax	pmax			
	comp=Z,640nm,8.6s								
CD2					LR	LR			
	comp=Z,3μm,12.0s								
CD2					LR	LR			
	comp=Z,3μm,11.0s								
CD2					LR	LR			
	comp=Z,5μm,13.3s								
CRAI	**Chiangrai**	**18.86**	**275**		P		**Pn**	**11 06 43.0**	**+0.4**
KSAR	**Wonju Array Be**	**18.86**	**19**		P		**P**	**11 06 42.0**	**+0.1**
KSAR	**Wonju Array Be**	**18.86**	**19**		P		**P**	**11 06 42.0**	**+0.1**
KSRS	**Korea Array**	**18.88**	**19**		P		**P**	**11 06 42.0**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=203,slow=12,SNR=29								
KSRS					LR	LR	11 14 37.6		
	comp=Z,638nm,19.3s,baz=210,slow=39								
	comp=Z,10nm,0.8s								
SBUM	**Sibu**	**18.91**	**206**				**P**	**11 06 43.6**	**+1.0**
KS19	**Wonju Array Si**	**18.91**	**19**		P		**P**	**11 06 41.5**	**-0.9**
KS19					IAmb	IAmb	11 06 43.5		
	comp=Z,238nm,1.9s								
NAYO	**Nakonayok**	**19.02**	**257**		P		**Pn**	**11 06 47.4**	**+2.7**
GTOI	**Gorontalo**	**19.09**	**172**		P		**P**	**11 06 42.3**	**-2.4**
	comp=Z,19nm,0.8s,comp=Z,364nm								
MRSI	**Marisa**	**19.14**	**175**		P		**P**	**11 06 45.7**	**+0.5**
	comp=Z,104nm,0.9s,comp=Z,954nmcomp=Z,2μm								
DL2	**Dalian**	**19.19**	**3**		P		**Pn**	**11 06 48.1**	**+1.6**
DL2					pmax	pmax			
	comp=Z,57nm,1.1s								
DL2					pmax	pmax			
	comp=Z,300nm,5.5s								
DL2					LR	LR			
	comp=Z,2μm,14.5s								
DL2					LR	LR			
	comp=Z,890nm,11.5s								
DL2					LR	LR			
	comp=Z,2μm,13.7s								
MPSI	**Mapaga**	**19.23**	**182**		P		**P**	**11 06 47.6**	**+1.5**
	comp=Z,20nm,1.1s,comp=Z,882nm								
TIY	**Taiyuan**	**19.27**	**340**	⇓	P		**Pn**	**11 06 48.9**	**+1.3**
TIY					PP		**PnPn**	**11 07 01.8**	**+1.2**
TIY					S		**Sn**	**11 10 21.5**	**-1.9**
TIY					pmax	pmax			
	comp=Z,23nm,0.7s								
TIY					pmax	pmax			
	comp=Z,580nm,4.3s								
TIY					LR	LR			
	comp=Z,4μm,11.8s								
TIY					LR	LR			
	comp=Z,1μm,15.0s								
TIY					LR	LR			
	comp=Z,3μm,13.7s								
KMSI	**Cibinong**	**19.30**	**169**		P		**P**	**11 06 49.5**	**+2.5**
	comp=Z,207nm,0.8s,comp=Z,4μmcomp=Z,2μm								
TNTI	**Ternate**	**19.98**	**159**		P		**P**	**11 06 55.0**	**+0.6**
	comp=Z,26nm,0.9s								
CHTO	**Chiang Mai**	**20.30**	**271**				**P**	**11 06 58.8**	**+1.0**
CHTO	**Chiang Mai**	**20.30**	**271**		P		Pn	11 06 59.2	-0.7
CHTO	**Chiang Mai**	**20.30**	**271**		P		**P**	**11 06 58.8**	**+1.0**
CHTO					pmax	pmax			
	comp=Z,53nm,1.4s								
CHTO	**Chiang Mai**	**20.30**	**271**		P		Pn	11 06 59.4	-0.4
CM31	**Chiang Mai Arr**	**20.34**	**270**		P		**Pn**	**11 06 58.8**	**+0.6**
CM31	**Chiang Mai Arr**	**20.34**	**270**		P		Pn	11 07 00.0	-0.3
CMAR	**Chiang Mai Arr**	**20.34**	**270**		P		**P**	**11 06 59.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.34**	**270**		P		Pn	11 06 59.8	-0.6
	comp=Z,8.9nm,1.1s,baz=71,slow=8.8,SNR=30								
CMAR					PcP		**PcP**	**11 11 12.2**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=46,slow=1.1,SNR=7.3								
CMAR					LR	LR	11 14 20.0		
	comp=Z,275nm,20.6s,baz=80,slow=35								
	comp=Z,8.9nm,1.1s								
BJT	**Baijiatuan**	**20.60**	**351**				**P**	**11 07 01.8**	**+0.9**
BJT	**Baijiatuan**	**20.60**	**351**		P		Pn	11 07 02.4	-0.8
BJT	**Baijiatuan**	**20.60**	**351**		P		**P**	**11 07 01.8**	**+0.9**
BJT					pmax	pmax			
	comp=Z,65nm,1.0s								
BJI	**Beijing**	**20.62**	**351**		P		**P**	**11 07 01.5**	**+0.4**
BJI					pP		**sP**	**11 07 05.6**	**+0.1**
BJI					S		**S**	**11 10 45.8**	**-5.3**
BJI					pmax	pmax			
	comp=Z,28nm,1.1s								
BJI					pmax	pmax			
	comp=Z,260nm,6.7s								
BJI					LR	LR			
	comp=Z,1μm,12.9s								
BJI					LR	LR			
	comp=Z,700nm,14.1s								
BJI					LR	LR			
	comp=Z,1μm,13.3s								
KSM	**Kuching**	**20.62**	**210**		P		**P**	**11 07 01.0**	**-0.3**
KSM	**Kuching**	**20.62**	**210**		P		**P**	**11 07 03.7**	**+2.3**
LUWI	**Luwuk**	**20.72**	**173**		P		**P**	**11 07 03.1**	**+0.8**
LUWI					IAmb	IAmb	11 07 08.1		
	comp=Z,256nm,1.4s								
LUWI	**Luwuk**	**20.72**	**173**		P		**P**	**11 07 02.7**	**+0.3**
LUWI	**Luwuk**	**20.72**	**173**		P		**P**	**11 07 02.6**	**+0.2**
	comp=Z,154nm,1.2s								
TNCH	**TengChong**	**20.93**	**289**		P		Pn	11 07 09.8	+2.3
TNCH					pP		pwP	11 07 12.6	-0.7
TNCH					PP		**PnPn**	**11 07 32.4**	**+8.8**
TNCH					S		**S**	**11 10 57.1**	**-1.0**
TNCH					SS		**SnSn**	**11 11 30.9**	**+12**
TNCH					pmax	pmax			
	comp=Z,66nm,1.2s								
TNCH					pmax	pmax			
	comp=Z,590nm,3.4s								
TNCH					LR	LR			
	comp=Z,2μm,12.2s								
TNCH					LR	LR			
	comp=Z,2μm,11.9s								
TNCH					LR	LR			
	comp=Z,3μm,13.7s								
SRDT	**SRDT**	**21.04**	**259**		P		**P**	**11 07 07.3**	**+1.4**
BKB	**Balikpapan**	**21.09**	**190**		P		**P**	**11 07 08.0**	**+1.6**
BKB	**Balikpapan**	**21.09**	**190**		P		**P**	**11 07 05.5**	**-0.9**
MTKI	**Muara Teweh, K**	**21.20**	**195**		P		P	11 07 23.4	+16
JCJ	**Chichijima**	**21.28**	**66**		P		**P**	**11 07 04.3**	**-4.0**
	comp=Z,100nm,1.0s,baz=269,slow=18,SNR=1.9								
JCJ					LR	LR	11 14 33.0		
	comp=Z,366nm,21.2s,baz=311,slow=34								
INU	**Inuyama**	**21.40**	**40**		P		**P**	**11 07 09.2**	**-0.5**
INU					IAmb	IAmb	11 07 12.4		
	comp=Z,263nm,1.8s								
INU	**Inuyama**	**21.40**	**40**		P		**P**	**11 07 10.1**	**+0.5**
JGF	**Kuroka**	**21.78**	**40**		P		**P**	**11 07 12.9**	**-0.8**
JGF	**Kuroka**	**21.78**	**40**		P		**P**	**11 07 14.1**	**+0.4**
LZH	**Lanzhou**	**21.90**	**322**	⇑	*i*P		**P**	**11 07 16.8**	**+1.7**
LZH					sP		pwP	11 07 25.1	+1.7
LZH					S		**S**	**11 11 18.3**	**+1.5**
LZH					pmax	pmax			
	comp=Z,120nm,1.4s								
LZH					LR	LR			
	comp=Z,4μm,12.0s								
LZH					LR	LR			
	comp=Z,4μm,10.6s								
LZH					LR	LR			
	comp=Z,4μm,11.0s								
SNY	**Shenyang**	**22.24**	**6**	⇑	P		**P**	**11 07 18.1**	**-0.4**
SNY					S		**S**	**11 11 16.5**	**-6.4**
SNY					pmax	pmax			
	comp=Z,26nm,0.9s								
SNY					pmax	pmax			
	comp=Z,390nm,4.5s								
SNY					LR	LR			
	comp=Z,990nm,12.4s								
SNY					LR	LR			
	comp=Z,1μm,10.3s								
SNY					LR	LR			
	comp=Z,1μm,14.0s								
SANI	**Sanana**	**22.27**	**165**		P		P	11 07 13.3	-5.8
	comp=Z,57nm,0.9s,comp=Z,730nm								
HHC	**Hu-ho-hao-te**	**22.42**	**342**	⇑	*i*P		**P**	**11 07 21.9**	**+1.3**
HHC					sP		pwP	11 07 32.9	+3.9
HHC					PP		**PnPn**	**11 07 46.8**	**+3.1**
HHC					pmax	pmax			
	comp=Z,26nm,0.7s								
HHC					LR	LR			
	comp=Z,4μm,10.6s								
HHC					LR	LR			
	comp=Z,2μm,12.2s								
HHC					LR	LR			
	comp=Z,4μm,12.7s								
TTSI	**Tana Toraja**	**22.59**	**182**		P		**P**	**11 07 22.5**	**0.0**
	comp=Z,66nm,1.0s,comp=Z,2μm								
SURA	**Surathani**	**22.66**	**245**		P		**P**	**11 07 24.8**	**+1.5**
BTO	**Baotou**	**22.68**	**339**		*e*P		**P**	**11 07 25.6**	**+2.2**
BTO					pP		**pwP**	**11 07 30.0**	**-1.8**
BTO					sP		**sP**	**11 07 32.8**	**+5.0**
BTO					PP		**PnPn**	**11 07 55.1**	**+7.8**
BTO					sS		Sn	11 11 39.1	-6.2
BTO					pmax	pmax			
	comp=Z,28nm,1.3s								
BTO					pmax	pmax			
	comp=Z,680nm,8.9s								
BTO					LR	LR			
	comp=Z,3μm,13.3s								
BTO					LR	LR			
	comp=Z,4μm,13.9s								
BTO					LR	LR			
	comp=Z,2μm,17.3s								
MND	**Mandalay**	**22.83**	**280**		P		**P**	**11 07 27.9**	**+2.9**
MAJO	**Matsushiro**	**22.92**	**39**		P		**P**	**11 07 26.4**	**+0.5**
MAJO	**Matsushiro**	**22.92**	**39**		*i*P		**P**	**11 07 26.4**	**+0.5**
MJAR	**Matsushiro Arr**	**22.92**	**39**		P		**P**	**11 07 27.0**	**+1.1**
MJAR	**Matsushiro Arr**	**22.92**	**39**		P		**P**	**11 07 26.9**	**+1.1**
	comp=Z,20nm,1.0s,baz=249,slow=10.0,SNR=18								
	comp=Z,20nm,1.0s								
SWI	**Sorong**	**23.02**	**151**		P		**P**	**11 07 24.2**	**-2.8**
	comp=Z,37nm,0.7s,comp=Z,1μm								
NLAI	**Namlea**	**23.70**	**163**		P		**P**	**11 07 32.0**	**-1.8**
	comp=Z,87nm,0.9s								
KULM	**Kulim**	**23.98**	**236**		P		**P**	**11 07 36.1**	**-0.4**
GUMO	**Guam**	**24.18**	**101**		LR	LR	11 16 32.7		
	comp=Z,390nm,20.4s,baz=296,slow=35								
CN2	**Changchun**	**24.42**	**9**		*e*P		**P**	**11 07 39.8**	**-0.5**
CN2					*e*pP		sP	11 07 43.9	-1.4
CN2					*e*S		**S**	**11 11 56.1**	**-3.5**
CN2					ScS		**ScS**	**11 18 43.1**	**-1.9**
CN2					pmax	pmax			
	comp=Z,20nm,1.2s								
CN2					LR	LR			
	comp=Z,1μm,12.0s								
CN2					LR	LR			
	comp=Z,360nm,12.0s								
CN2					LR	LR			
	comp=Z,1μm,12.0s								
XLT	**XiLinHaoTe**	**24.42**	**352**		*e*P		**P**	**11 07 40.9**	**+0.5**
XLT					sS		S	11 12 00.9	+1.1
XLT					pmax	pmax			
	comp=Z,27nm,1.5s								
XLT					pmax	pmax			
	comp=Z,390nm,4.0s								
XLT					LR	LR			
	comp=Z,2μm,13.3s								
XLT					LR	LR			
	comp=Z,2μm,13.8s								
PSTR	**Posyet**	**24.52**	**19**		*i*P		**P**	**11 07 41.9**	**+0.7**
KAPI	**Kappang**	**24.55**	**182**		P		**P**	**11 07 41.8**	**+0.1**
KAPI	**Kappang**	**24.55**	**182**		P		**P**	**11 07 41.8**	**+0.1**
KAPI					pmax	pmax			
	comp=Z,363nm,1.7s								
BKSI	**Bulukumba**	**24.85**	**181**		P		**P**	**11 07 42.6**	**-1.8**
	comp=Z,36nm,1.3s,comp=Z,773nm								
FAKI	**Fak Fak**	**25.29**	**151**		P		**P**	**11 07 47.9**	**-0.5**
FAKI					IAmb	IAmb	11 07 49.4		
	comp=Z,36nm,1.1s								
FAKI	**Fak Fak**	**25.29**	**151**		P		**P**	**11 07 47.6**	**-0.8**
FAKI	**Fak Fak**	**25.29**	**151**		P		**P**	**11 07 48.0**	**-0.4**
	comp=Z,35nm,1.0s								
PPBI	**Pangkal Pinang**	**25.84**	**214**		P		**P**	**11 07 54.6**	**+1.1**
MDJ	**Mudanjiang**	**26.01**	**15**		P		**P**	**11 07 55.4**	**+0.7**
MDJ					pP		sP	11 07 57.8	-1.9
MDJ					PP		**PnPn**	**11 08 33.3**	**+0.6**
MDJ					S		**S**	**11 12 27.9**	**+2.9**
MDJ					SS		**SnSn**	**11 13 22.8**	**+0.1**
MDJ					ScS		**ScS**	**11 18 52.8**	**+1.3**
MDJ					pmax	pmax			
	comp=Z,50nm,1.2s								
MDJ					pmax	pmax			
	comp=Z,330nm,6.5s								
MDJ					LR	LR			
	comp=Z,780nm,22.3s								
MDJ					LR	LR			
	comp=Z,1μm,19.2s								
MDJ					LR	LR			
	comp=Z,1μm,18.6s								
MDJ	**Mudanjiang**	**26.01**	**15**		P		**P**	**11 07 54.8**	**0.0**
MDJ					IAmb	IAmb	11 07 56.3		
	comp=Z,50nm,1.1s								
MDJ	**Mudanjiang**	**26.01**	**15**		P		**P**	**11 07 55.7**	**+1.0**
USA0B	**Ussuriysk Arra**	**26.29**	**19**		*i*P		**P**	**11 07 57.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**26.29**	**19**		P		**P**	**11 07 56.8**	**-0.4**
USRK	**Ussuriysk Ar.**	**26.29**	**19**		P		**P**	**11 07 58.0**	**+0.8**
	comp=Z,5.9nm,0.8s,baz=205,slow=9.1,SNR=6.9								
USRK					LR	LR	11 19 36.1		
	comp=Z,307nm,19.0s,baz=191,slow=39								
	comp=Z,5.9nm,0.8s								
GTA	**Gaotai**	**26.50**	**322**		P		**P**	**11 07 59.6**	**+0.3**
GTA					pP		pwP	11 08 04.3	-3.3
GTA					S		**S**	**11 12 35.1**	**+2.0**
GTA					pmax	pmax			
	comp=Z,5.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,220nm,8.4s								
GTA					LR	LR			
	comp=Z,2μm,11.9s								
GTA					LR	LR			
	comp=Z,2μm,13.1s								
GTA					LR	LR			
	comp=Z,2μm,10.4s								
BNX	**BinXian**	**26.62**	**11**	⇑	P		**P**	**11 07 59.8**	**-0.4**
BNX					pP		**pP**	**11 08 02.5**	**-1.3**
BNX					sP		**sP**	**11 08 03.8**	**-1.4**
BNX					PcP		**PcP**	**11 11 26.5**	**+2.4**
BNX					S		**S**	**11 12 37.0**	**+2.4**
BNX					sS		**sS**	**11 12 44.1**	**+4.0**
BNX					pmax	pmax			
	comp=Z,26nm,1.2s								
BNX					pmax	pmax			
	comp=Z,330nm,5.3s								
BNX					LR	LR			
	comp=Z,470nm,12.9s								
BNX					LR	LR			
	comp=Z,430nm,12.1s								
BNX					LR	LR			
	comp=Z,650nm,10.4s								
SHL	**Shillong**	**26.95**	**288**		P		**P**	**11 08 02.8**	**-0.9**
SHL	**Shillong**	**26.95**	**288**		P		**P**	**11 08 02.8**	**-0.9**
SHL					pmax	pmax			
	comp=Z,28nm,1.1s								
SHL	**Shillong**	**26.95**	**288**		P		**P**	**11 08 03.8**	**+0.1**
GOMU	**GeErMu**	**27.85**	**312**		P		**P**	**11 08 13.3**	**+1.5**
GOMU					pP		pwP	11 08 16.9	-3.2
GOMU					sP		sP	11 08 21.1	+4.5
GOMU					S		**S**	**11 12 58.8**	**+3.8**
GOMU					pmax	pmax			
	comp=Z,9.0nm,1.3s								
GOMU					LR	LR			
	comp=Z,2μm,12.1s								
GOMU					LR	LR			
	comp=Z,2μm,11.8s								
GOMU					LR	LR			
	com

LHSI Lahat 28.66 217 P P 11 08 13.1 -5.7
PWJI Pagerwojo 28.81 198 P **P** **11 08 19.2 -0.8**
comp=Z,50nm,0.9s,comp=Z,3µm
GSI Gunungsitoli 28.87 234 P **P** **11 08 20.2 -0.5**
GSI IAmb IAmb 11 08 21.5
comp=Z,24nm,0.8s
TNG Tangerang 29.05 209 P **P** **11 08 25.1 +2.9**
KPJI Karang Pucung 29.13 204 P **P** **11 08 23.7 +0.8**
HIA Hailar 29.52 359 P **P** **11 08 28.2 +2.0**
ULN Ulaanbaatar 30.14 342 P **P** **11 08 31.0 -0.8**
ULN IAmb IAmb 11 08 44.0
comp=Z,44nm,1.5s
ULN Ulaanbaatar 30.14 342 *i* P **P** **11 08 30.6 -1.2**
ULN pmax pmax
comp=Z,19nm,1.2s
ULN Ulaanbaatar 30.14 342 P **P** **11 08 32.5 +0.7**
SONM Songino Array 30.31 341 P **P** **11 08 33.5 +0.2**
SONM Songino Array 30.31 341 P **P** **11 08 33.9 +0.7**
comp=Z,3.6nm,0.7s,baz=162,slow=10.0,SNR=28
SONM LR LR 11 21 23.8
comp=Z,1µm,20.4s,baz=146,slow=38
comp=Z,3.6nm,0.7s
KLR Kul'dur 30.85 15 *ce*P **P** **11 08 36.6 -1.3**
KLR pmax pmax
comp=Z,34nm,1.3s
KLR Kul'dur 30.85 15 LR LR 11 22 15.3
comp=Z,795nm,20.4s,baz=205,slow=39
HEH HeiHe 31.01 9 *e*P **P** **11 08 40.4 +1.2**
HEH PcP **PcP** **11 11 34.8 -0.2**
HEH S **S** **11 13 47.3 +3.8**
HEH pmax pmax
comp=Z,11nm,1.0s
HEH pmax pmax
comp=Z,290nm,5.2s
HEH LR LR
comp=Z,980nm,13.9s
HEH LR LR
comp=Z,890nm,14.5s
HEH LR LR
comp=Z,2µm,12.7s
TABU Tabubil 32.15 138 P **P** **11 08 49.8 +0.1**
YSS Yuzh-Sakhalins 32.76 29 *e*P **P** **11 08 55.2 +0.6**
YSS *e**SP **pwP** **11 09 05.5 +3.1**
YSS *e*S **S** **11 14 11.7 +0.8**
YSS *e*SSS SSS 11 16 11.6
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=Z,1µm,13.0s
YSS MLR MLR
comp=N,500nm,12.0s
ZAK Zakamensk 33.53 340 *e*P **P** **11 09 00.2 -1.3**
ZAK pmax pmax
comp=Z,12nm,1.3s
MTN Manton Dam 34.00 161 P **P** **11 09 04.1 -1.6**
ZEA Zeya 34.40 7 *e*P **P** **11 09 09.6 +0.7**
ZEA *e* 11 10 28.0
ZEA *e*S **S** **11 14 34.0 -2.2**
ZEA *e* 11 19 29.5
ZEA pmax pmax
comp=Z,20nm,0.8s
ZEA pmax pmax
comp=Z,200nm,4.9s
ZEA smax smax
comp=N,300nm,5.8s
ZEA MLR MLR
comp=E,200nm,10.0s
ZEA MLR MLR
comp=N,800nm,12.0s
ZEA MLR MLR
comp=Z,800nm,12.0s
MOY Mondy 35.38 339 *e*P **P** **11 09 18.2 +0.7**
MOY pmax pmax
comp=Z,29nm,1.8s
TYV Tymovskoe 35.74 24 *e*P **P** **11 09 22.2 +1.8**
TYV pmax pmax
comp=Z,6.0nm,1.2s
TYV pmax pmax
comp=Z,100nm,2.6s
WMQ Urumqi 36.41 319 *e*P **P** **11 09 24.6 -1.8**
WMQ pP sP 11 09 31.3 +0.1
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ LR LR
comp=Z,1µm,9.5s
WMQ LR LR
comp=Z,1µm,10.3s
WMQ LR LR
comp=Z,520nm,12.9s
FITZ Fitzroy Crossi 37.89 172 P **P** **11 09 38.7 -0.3**
FITZ Fitzroy Crossi 37.89 172 P **P** **11 09 37.9 -1.1**
BOD Bodaibo 38.38 354 *e*P **P** **11 09 42.0 -0.8**
BOD pmax pmax
comp=Z,9.0nm,1.6s
PMG Port Moresby 39.10 135 P **P** **11 09 48.4 -1.0**
PMG Port Moresby 39.10 135 P **P** **11 09 49.4 +0.1**
PMG Port Moresby 39.10 135 *ce*P **P** **11 09 47.6 -1.7**
PMG pmax pmax
comp=Z,14nm,0.9s
PMG Port Moresby 39.10 135 LR LR 11 25 22.9
comp=Z,143nm,20.4s,baz=306,slow=35
RABL Rabaul 39.20 124 P **P** **11 09 50.8 +0.6**
HYB Hyderabad 39.69 274 *e*P **P** **11 09 55.1 +0.8**
DGZ Jazzator, Alta 39.84 327 *i* P **P** **11 09 54.3 -1.1**
DGZ pmax pmax
comp=Z,7.0nm,1.1s
COEN Coen 40.23 144 P **P** **11 09 57.2 -1.6**
COEN Coen 40.23 144 P **P** **11 09 56.5 -2.2**
PALK Pallekele 40.44 258 LR LR 11 28 11.0
comp=Z,252nm,18.3s,baz=166,slow=38
MBWA Marble Bar 40.59 181 P **P** **11 10 01.6 0.0**
MBWA IAmb IAmb 11 10 03.7
comp=Z,41nm,1.2s
MBWA Marble Bar 40.59 181 P **P** **11 10 00.3 -1.3**
PSA00 Pilbara Seismi 41.00 181 P **P** **11 10 04.6 -0.4**
PSA00 IAmb IAmb 11 10 07.2
comp=Z,70nm,1.3s
PSA00 Pilbara Seismi 41.00 181 P **P** **11 10 04.8 -0.2**
PSA00 IAmb IAmb 11 10 07.2
comp=Z,33nm,1.2s
PSA00 Pilbara Seismi 41.00 181 P **P** **11 10 04.5 -0.4**
MK31 Makanchi Array 41.19 320 P **P** **11 10 06.7 +0.3**
MK31 Makanchi Array 41.19 320 *ce*P **P** **11 10 06.1 -0.3**
MKAR Makanchi Array 41.19 320 P **P** **11 10 06.9 +0.5**
MKAR Makanchi Array 41.19 320 *ce*P **P** **11 10 07.4 +1.0**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 41.19 320 P **P** **11 10 07.7 +1.3**
comp=Z,6.1nm,0.7s,baz=116,slow=9.6,SNR=59
MKAR LR LR 11 27 18.5
comp=Z,597nm,20.2s,baz=121,slow=36
comp=Z,6.1nm,0.7s
MAKZ Makanchi 41.39 320 P **P** **11 10 09.0 +1.0**
MAKZ IAmb IAmb 11 10 10.4
comp=Z,59nm,1.6s
MAKZ Makanchi 41.39 320 P **P** **11 10 09.0 +1.0**
SHLS Shalkode 41.51 314 *e*P **P** **11 10 06.7 -2.5**
baz=314
SHLS Shalkode 41.51 314 *e*P **P** **11 10 06.6 -2.5**
WB0 Warramunga Arr 41.52 160 P **P** **11 10 07.3 -2.0**
WB0 IAmb IAmb 11 10 08.9
comp=Z,94nm,1.5s
WRAB Tennant Creek 41.67 160 P **P** **11 10 08.9 -1.6**
WRAB IAmb IAmb 11 10 10.9
comp=Z,38nm,0.9s
WRAB Tennant Creek 41.67 160 P **P** **11 10 08.9 -1.6**
WRAB pmax pmax
comp=Z,38nm,0.9s
WRA Warramunga Arr 41.67 160 P **P** **11 10 08.3 -2.3**
WRA Warramunga Arr 41.67 160 P **P** **11 10 09.2 -1.4**
comp=Z,17nm,0.7s,baz=342,slow=9.0,SNR=76
WRA PcP **PcP** **11 12 07.2 -0.1**
comp=Z,6.4nm,0.7s,baz=340,slow=3.5,SNR=8.6
WRA S S 11 16 19.9 -7.1
comp=Z,17nm,1.1s,baz=342,slow=15,SNR=16
comp=Z,17nm,0.7s
WB2 Warramunga Arr 41.68 160 P **P** **11 10 08.8 -1.8**
WB2 IAmb IAmb 11 10 10.2
comp=Z,108nm,1.4s
UZB Uzynbulak 41.80 313 *e*P **P** **11 10 11.6 0.0**
baz=313
UZB Uzynbulak 41.80 313 *e*P **P** **11 10 11.6 0.0**
TARG Taragay, Kyrgy 42.18 311 P **P** **11 10 15.5 +0.4**
TARG Taragay, Kyrgy 42.18 311 P **P** **11 10 15.5 +0.4**
TARG pmax pmax
comp=Z,15nm,1.2s
SATY Saty 42.20 313 *e*P **P** **11 10 14.4 -0.5**
baz=313
SATY Saty 42.20 313 *e*P **P** **11 10 14.3 -0.5**
ZHN Zhinishke 42.21 313 *e*P **P** **11 10 14.9 0.0**
baz=313
ZHN Zhinishke 42.21 313 *e*P **P** **11 10 14.9 0.0**
YAK Yakutsk 42.80 6 *e*P **P** **11 10 18.3 -1.0**
YAK *e**PP **sP** **11 10 22.7 -1.6**
YAK *e* 11 11 56.8
YAK *e* 11 12 09.5
YAK *e*PPP PPP 11 12 29.0
YAK *e*S **S** **11 16 43.0 +0.3**
YAK *e* 11 20 19.5
YAK pmax pmax
comp=Z,24nm,1.5s
YAK pmax pmax
comp=N,5.0nm,1.3s
YAK pmax pmax
comp=E,1.0nm,0.8s
YAK pmax pmax
comp=Z,362nm,7.2s
YAK pmax pmax
comp=N,248nm,6.3s
YAK pmax pmax
comp=E,244nm,6.9s
YAK smax smax
comp=N,192nm,4.0s
YAK smax smax
comp=E,68nm,2.4s
YAK MLR MLR
comp=Z,531nm,16.0s
YAK MLR MLR
comp=N,350nm,20.0s
YAK MLR MLR
comp=E,179nm,21.0s
YAK Yakutsk 42.80 6 LR LR 11 29 26.4
comp=E,441nm,19.1s,baz=198,slow=38
TDK Taldyqorghan 42.90 316 *e*P **P** **11 10 20.6 +0.2**
baz=316
TDK Taldyqorghan 42.90 316 *e*P **P** **11 10 20.5 +0.2**
KSH Kashi 42.90 307 P **P** **11 10 24.4 +3.8**
KSH pP pwP 11 10 29.6 +0.6
KSH sP sP 11 10 34.8 +9.4
KSH sS sS 11 16 55.0 +4.4
KSH pmax pmax
comp=E,13nm,1.4s
KSH LR LR
comp=E,980nm,17.2s
KSH LR LR
comp=E,900nm,15.8s
KSH LR LR
comp=E,1µm,19.2s
MDOK Medeo 43.17 313 *e*P **P** **11 10 22.7 -0.1**
baz=313
MDOK Medeo 43.17 313 *e*P **P** **11 10 22.6 -0.1**
NRN Naryn 43.39 310 P **P** **11 10 25.5 +0.8**
NRN Naryn 43.39 310 P **P** **11 10 25.5 +0.8**
NRN pmax pmax
comp=Z,21nm,0.9s
CHKK Chushkaly 43.44 314 *e*P **P** **11 10 24.7 -0.1**
baz=314
CHKK Chushkaly 43.44 314 *e*P **P** **11 10 24.6 -0.1**
H11S3 WAKE ISLAND Hy 43.63 84 T T 11 55 59.7
baz=276,slow=75,SNR=29
H11N1 WAKE ISLAND Hy 43.64 82 T T 11 56 20.3
baz=277,slow=75,SNR=30
H11N2 WAKE ISLAND Hy 43.64 82 T T 11 56 05.8
baz=277,slow=75,SNR=19
H11S1 WAKE ISLAND Hy 43.65 84 T T 11 55 58.6
baz=276,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 43.65 84 T T 11 55 57.4
baz=276,slow=75,SNR=17
H11N3 WAKE ISLAND Hy 43.66 82 T T 11 56 06.3
baz=277,slow=75,SNR=25
ZAA0 Zalesovo Array 43.71 330 P **P** **11 10 26.1 -0.6**
ZALV Zalesovo Beam 43.71 330 P **P** **11 10 26.6 -0.1**
ZALV Zalesovo Beam 43.71 330 P **P** **11 10 26.8 +0.1**
comp=Z,7.7nm,0.7s,baz=119,slow=7.8,SNR=37
ZALV LR LR 11 29 30.1
comp=Z,737nm,21.2s,baz=131,slow=37
comp=Z,7.7nm,0.7s
BOOM Boomskoye usch 43.73 311 P **P** **11 10 27.7 +0.3**
BOOM Boomskoye usch 43.73 311 P **P** **11 10 27.7 +0.3**
BOOM pmax pmax
comp=Z,5.0nm,0.8s
KUU Kurty 43.89 313 *e*P **P** **11 10 27.9 -0.6**
comp=Z,32nm,1.6s,baz=314
KUU Kurty 43.89 313 *e*P **P** **11 10 27.8 -0.6**
KUU pmax pmax
comp=Z,32nm,1.6s
PETK Petropavlovsk- 44.02 32 P **P** **11 10 29.6 +0.4**
comp=Z,4.2nm,0.9s,baz=192,slow=2.2,SNR=6.2
PETK LR LR 11 29 22.9
comp=Z,197nm,21.2s,baz=225,slow=37
comp=Z,4.2nm,0.9s
NIL Nilore 44.03 298 P **P** **11 10 29.4 -0.3**
NIL IAmb IAmb 11 10 41.4
comp=Z,45nm,0.9s
NIL Nilore 44.03 298 P **P** **11 10 29.4 -0.3**
NIL pmax pmax
comp=Z,45nm,1.0s
NIL Nilore 44.03 298 P **P** **11 10 30.1 +0.4**
SEM Semipalatinsk 44.11 324 *e*P **P** **11 10 29.1 -1.3**
comp=Z,37nm,1.5s,baz=324
SEM Semipalatinsk 44.11 324 *e*P **P** **11 10 29.0 -1.3**
SEM pmax pmax
comp=Z,37nm,1.5s
QIS Mount Isa 44.18 154 P **P** **11 10 29.8 -1.1**
MTSU Mount Surprise 44.30 147 P **P** **11 10 32.1 +0.2**
PET Petropavlovsk 44.45 32 *i* P **P** **11 10 33.0 +0.4**
PET pmax pmax
comp=Z,37nm,1.2s
AAK Ala-Archa 44.80 311 P **P** **11 10 36.0 +0.1**
AAK Ala-Archa 44.80 311 *ce*P **P** **11 10 35.4 -0.5**
AAK pmax pmax
comp=Z,7.0nm,1.7s
AAK Ala-Archa 44.80 311 LR LR 11 31 44.7
comp=Z,827nm,18.6s,baz=104,slow=39
AAK Ala-Archa 44.80 311 P **P** **11 10 36.2 +0.4**
AS31 Alice Springs 45.04 162 P **P** **11 10 37.5 -0.3**
ASAR Alice Springs 45.05 162 P **P** **11 10 37.0 -0.7**
ASAR Alice Springs 45.05 162 P **P** **11 10 37.2 -0.6**
comp=Z,27nm,0.7s,baz=347,slow=7.1,SNR=232
ASAR S **S** **11 17 12.8 -3.5**
comp=Z,1.6nm,0.9s,baz=351,slow=23,SNR=8.0
ASAR LR LR 11 30 55.2
comp=Z,156nm,20.6s,baz=4.0,slow=38
comp=Z,27nm,0.7s
AS01 Alice Springs 45.06 162 P **P** **11 10 37.4 -0.5**
WRKA Warakurna 45.10 170 P **P** **11 10 38.1 -0.1**
KURK Kurchatov 45.17 323 P **P** **11 10 38.7 +0.2**
KURK Kurchatov 45.17 323 *ce*P **P** **11 10 38.7 +0.2**
KURK pmax pmax
comp=Z,61nm,1.3s
KURK Kurchatov 45.17 323 P **P** **11 10 39.1 +0.6**
KURBB Kurchatov Arra 45.18 323 P **P** **11 10 39.5 +1.0**
comp=Z,19nm,0.7s,baz=122,slow=7.7,SNR=180
KURBB LR LR 11 30 11.9
comp=Z,554nm,20.3s,baz=150,slow=37
comp=Z,19nm,0.7s
MA2 Magadan 45.41 21 P **P** **11 10 39.6 -0.6**
MA2 Magadan 45.41 21 *ce*P **P** **11 10 39.3 -0.9**
MA2 pmax pmax
comp=Z,36nm,1.7s
MA2 Magadan 45.41 21 LR LR 11 29 50.9
comp=Z,394nm,21.4s,baz=220,slow=36
BTLS Baital 45.81 314 *e*P **P** **11 10 43.1 -0.6**
baz=314
BTLS Baital 45.81 314 *e*P **P** **11 10 43.1 -0.6**
MEEK Meekatharra 46.08 182 P **P** **11 10 44.6 -1.3**
BTK Batken 46.90 307 P **P** **11 10 53.1 +0.7**
BTK IAmb IAmb 11 10 54.9
comp=Z,30nm,1.5s
BTK Batken 46.90 307 P **P** **11 10 53.1 +0.7**
BTK pmax pmax
comp=Z,30nm,1.5s
CTA Charters Tower 46.93 146 P **P** **11 10 53.0 +0.3**
CTA Charters Tower 46.93 146 LR LR 11 29 32.2
comp=Z,442nm,21.8s,baz=316,slow=35
CTAO Charters Tower 46.93 146 P **P** **11 10 52.8 +0.1**
CTAO IAmb IAmb 11 10 54.2
comp=Z,33nm,1.2s
CTAO Charters Tower 46.93 146 P **P** **11 10 53.0 +0.3**
CTAO Charters Tower 46.93 146 P **P** **11 10 52.8 +0.1**
CTAO pmax pmax
comp=Z,33nm,1.2s
AUAYR Ayr State High 47.14 144 P **P** **11 10 55.4 +1.1**
KBL Kabul 47.59 299 P **P** **11 10 58.3 +0.3**
KBL IAmb IAmb 11 11 13.6
comp=Z,14nm,0.8s
KBL Kabul 47.59 299 P **P** **11 10 58.3 +0.3**
KBL pmax pmax
comp=Z,14nm,0.8s
KBL Kabul 47.59 299 P **P** **11 10 58.9 +0.9**
SNR=13
KBL P **P** **11 10 58.9 +0.9**
SNR=13
KK31 Karatay Array 47.75 311 P **P** **11 10 59.7 +0.8**
KK31 Karatay Array 47.75 311 P **P** **11 10 59.7 +0.8**
KK31 pmax pmax
comp=Z,14nm,1.1s
KKAR Karatay Array 47.75 311 P **P** **11 11 00.1 +1.2**
KKAR Karatay Array 47.75 311 P **P** **11 10 59.5 +0.6**
KKAR Karatay Array 47.75 311 P **P** **11 10 59.5 +0.6**
IUG Iuzhnay 47.89 309 *e*P **P** **11 10 59.9 -0.3**
baz=309
IUG Iuzhnay 47.89 309 *e*P **P** **11 10 59.8 -0.3**
SIMJ Simiganj 48.06 305 P **P** **11 11 01.7 +0.2**
BRZS Berezniki 48.34 320 *e*P **P** **11 11 02.8 -0.5**
comp=Z,17nm,1.8s,baz=320
BRZS Berezniki 48.34 320 *e*P **P** **11 11 02.8 -0.5**
BRZS pmax pmax
comp=Z,17nm,1.8s
SEY Seymchan 48.44 19 *ce*P **P** **11 11 02.5 -1.4**
SEY pmax pmax
comp=Z,36nm,1.3s
SEY Seymchan 48.44 19 LR LR 11 33 15.3
comp=Z,206nm,18.2s,baz=264,slow=38
HNR Honiara 48.50 123 LR LR 11 28 15.6
comp=Z,6µm,21.6s,baz=300,slow=32
MORW Morawa 48.65 185 P **P** **11 11 05.2 -0.6**
MORW IAmb IAmb 11 11 06.5
comp=Z,39nm,0.9s
MORW Morawa 48.65 185 P **P** **11 11 05.7 -0.1**
OOD Oodnadatta 49.45 162 P **P** **11 11 12.1 +0.1**
FORT Forrest 50.70 172 P **P** **11 11 21.1 -0.3**
FORT Forrest 50.70 172 P **P** **11 11 21.7 +0.3**
BVAR Borovoye Array 50.77 323 P **P** **11 11 22.6 +0.8**
comp=Z,5.8nm,0.7s,baz=99,slow=9.3,SNR=25
BVAR PcP **PcP** **11 12 38.0 -0.7**
comp=Z,2.4nm,0.6s,baz=106,slow=5.1,SNR=2.0
BVAR LR LR 11 33 45.9
comp=Z,504nm,18.6s,baz=111,slow=37
comp=Z,5.8nm,0.7s
KMBL Kambalda 50.77 178 P **P** **11 11 21.2 -0.8**
BRVK Borovoye 50.84 323 P **P** **11 11 23.2 +0.9**
BRVK IAmb IAmb 11 11 34.3
comp=Z,21nm,0.9s
BRVK Borovoye 50.84 323 *ce*P **P** **11 11 21.6 -0.8**
BRVK pmax pmax
comp=Z,30nm,1.3s
BRVK Borovoye 50.84 323 P **P** **11 11 23.3 +0.9**
KLBR Kellerberrin 51.04 183 P **P** **11 11 23.0 -1.0**
INKA Innaminka 51.08 157 P **P** **11 11 25.4 +1.0**
MULG Mulgathing 51.38 165 P **P** **11 11 26.5 0.0**
QLP Quilpie 51.47 152 P **P** **11 11 27.4 +0.1**
RK1H Rockhampton Ha 51.89 144 P **P** **11 11 30.9 +0.4**
TIXI Tiksi 52.21 3 P **P** **11 11 31.5 -0.8**
TIXI IAmb IAmb 11 11 44.3
comp=Z,17nm,0.8s
TIXI Tiksi 52.21 3 *ce*P **P** **11 11 30.3 -2.0**
TIXI pmax pmax
comp=Z,33nm,1.3s
TIXI Tiksi 52.21 3 LR LR 11 36 23.4
comp=Z,484nm,18.9s,baz=201,slow=39
NWAO Narrogin (SRO) 52.40 183 LR LR 11 37 19.3
comp=Z,118nm,19.1s,baz=208,slow=40
LCRK Leigh Creek 52.70 161 P **P** **11 11 36.8 +0.4**
SHEM Shemya Is, Ala 52.76 38 LR LR 11 33 03.9
comp=Z,56nm,21.5s,baz=308,slow=35
NRIK Noril'sk 53.57 346 P **P** **11 11 42.6 +0.3**
NRIK IAmb IAmb 11 11 54.3
comp=Z,37nm,0.8s
NRIK Noril'sk 53.57 346 *ce*P **P** **11 11 41.8 -0.5**
NRIK pmax pmax
comp=Z,40nm,1.0s
NRIK Noril'sk 53.57 346 P **P** **11 11 42.7 +0.3**
comp=Z,20nm,1.1s,baz=129,slow=7.2,SNR=27
NRIK LR LR 11 36 11.6
comp=Z,874nm,20.1s,baz=151,slow=38
comp=Z,20nm,1.1s
EIDS Eidsvold 53.80 145 P **P** **11 11 45.0 +0.4**
EIDS IAmb IAmb 11 11 45.6
comp=Z,25nm,1.0s
EIDS Eidsvold 53.80 145 P **P** **11 11 45.0 +0.4**
BBOO Buckleboo 54.29 164 P **P** **11 11 48.3 +0.2**
BBOO Buckleboo 54.29 164 P **P** **11 11 48.5 +0.4**
STKA Stephens Creek 55.14 158 P **P** **11 11 54.3 +0.1**
STKA Stephens Creek 55.14 158 P **P** **11 11 54.1 -0.1**
STKA Stephens Creek 55.14 158 *i* P **P** **11 11 54.5 +0.3**
STKA Stephens Creek 55.14 158 P **P** **11 11 54.6 +0.5**
comp=Z,14nm,1.1s,baz=338,slow=7.7,SNR=16
STKA LR LR 11 37 29.6
comp=Z,188nm,21.0s,baz=354,slow=38
comp=Z,14nm,1.1s
AULRC Lightning Ridg 55.59 151 P **P** **11 11 58.5 +1.0**
HTT Hallett 55.69 161 P **P** **11 11 59.3 +1.1**
ABKAR Akbulak array 56.14 317 P **P** **11 12 01.7 +0.4**
ABKAR Akbulak array 56.14 317 P **P** **11 12 01.2 -0.1**
ABKAR IAmb IAmb 11 12 13.0
comp=Z,12nm,1.1s
BILL Bilibino 56.15 19 P **P** **11 12 01.0 -0.1**
BILL IAmb IAmb 11 12 12.9
comp=Z,48nm,1.3s
BILL Bilibino 56.15 19 *ce*P **P** **11 12 01.2 +0.2**
BILL pmax pmax
comp=Z,41nm,1.3s
CMSA Cobar Meteorol 56.40 154 P **P** **11 12 04.2 +0.9**
GEYT Alibeck 56.55 303 P **P** **11 12 05.5 +1.0**
GEYT IAmb IAmb 11 12 17.2
comp=Z,18nm,1.0s
GEYT Alibeck 56.55 303 P **P** **11 12 05.5 +1.0**
GEYT pmax pmax
comp=Z,18nm,1.0s
GEYT Alibeck 56.55 303 P **P** **11 12 06.0 +1.6**
comp=Z,4.7nm,0.8s,baz=89,slow=9.6,SNR=14
GEYT LR LR 11 39 52.3
comp=Z,564nm,18.4s,baz=106,slow=40
comp=Z,4.7nm,0.8s
GYA0B ALIBECK ARRAY 56.55 303 P **P** **11 12 05.0 +0.6**
GYA0B IAmb IAmb 11 12 23.2
comp=Z,15nm,1.0s
JLN Jalan Bani Buh 56.71 284 P **P** **11 12 06.1 +0.3**
JLN P **P** **11 12 06.1 +0.3**
WBK Wadi Bani Khal 57.04 285 P **P** **11 12 09.2 +1.0**
WBK P **P** **11 12 09.2 +1.0**
WSAR Wadi Sarin 57.25 285 LR LR 11 37 54.2
comp=Z,159nm,21.5s,baz=104,slow=37
WSAR Wadi Sarin 57.25 285 P **P** **11 12 11.0 +1.4**
SVE Sverdlovsk 57.29 326 *e*P **P** **11 12 09.9 +0.5**
SVE pmax pmax
comp=Z,57nm,1.3s
JASK Jask - Hormozg 57.55 289 P **P** **11 12 14.0 +2.3**
SNR=6.7
AKTO Aktyubinsk 57.55 318 LR LR 11 38 25.0
comp=Z,538nm,19.1s,baz=169,slow=38
BIDO Bidbid 57.66 286 P **P** **11 12 13.7 +1.3**
SMDO Samad 57.80 285 P **P** **11 12 14.6 +0.9**
SMDO P **P** **11 12 14.6 +0.9**
JMDO Jabal Madar 57.87 285 P **P** **11 12 13.9 -0.1**
ARMA Armidale 58.16 148 P **P** **11 12 16.6 +0.7**
ARMA IAmb IAmb 11 12 21.3
comp=Z,46nm,1.2s
ARMA Armidale 58.16 148 P **P** **11 12 17.3 +1.4**
ARU Arti 58.32 325 P **P** **11 12 15.9 -0.7**
ARU Arti 58.32 325 *d* *i*P **P** **11 12 16.5 0.0**
ARU 11 13 07.4
ARU S **S** **11 20 21.3 +3.0**
ARU SS **SS** **11 24 12.3 +2.2**
ARU pmax pmax
comp=Z,22nm,1.0s
ARU Arti 58.32 325 LR LR 11 39 02.7
comp=Z,397nm,20.1s,baz=94,slow=38
AUPHS Peel High Scho 58.36 149 P **P** **11 12 18.8 +1.7**
HOQ Hoqain 58.39 286 P **P** **11 12 18.4 +0.7**
SNR=5.1
HOQ P **P** **11 12 18.4 +0.7**
SNR=5.1
KOUNC Koumac, New Ca 58.68 131 P **P** **11 12 21.0 +1.4**
KOUNC IAmb IAmb 11 12 22.8

	comp=Z,29nm,1.0s								
SOHO	**SOHO**	**59.00**	**287**		P	**P**	**11 12 21.9**	**0.0**
SHME	**Shamm**	**59.06**	**289**		P	**P**	**11 12 23.1**	**+0.8**
SHME					P	**P**	**11 12 23.1**	**+0.8**
ARQ	**Araqi**	**59.14**	**286**		P	**P**	**11 12 23.5**	**+0.6**
ARQ					P	**P**	**11 12 23.5**	**+0.6**
MASF	**Masafi**	**59.15**	**288**		P	**P**	**11 12 23.7**	**+0.8**
MASF					P	**P**	**11 12 23.7**	**+0.8**
UOSS	**Minazif**	**59.17**	**288**		P	**P**	**11 12 22.0**	**-1.1**
UOSS					P	**P**	**11 12 22.0**	**-1.1**
HATD	**Hatta, Dubai**	**59.25**	**288**		P	**P**	**11 12 24.8**	**+1.2**
	SNR=6.8								
ASHO	**Ashiyiah**	**59.34**	**288**		P	**P**	**11 12 26.0**	**+1.7**
	SNR=9.8								
ASHO					P	**P**	**11 12 26.0**	**+1.7**
	SNR=9.8								
UMQ	**Umm Al-Quwin**	**59.57**	**289**		P	**P**	**11 12 28.0**	**+2.2**
NAZ	**Nazwa, Dubai**	**59.65**	**288**		P	**P**	**11 12 26.4**	**0.0**
NAZ					P	**P**	**11 12 26.4**	**0.0**
ARPS	**Mount Arapiles**	**59.68**	**160**		P	**P**	**11 12 27.4**	**+1.3**
ALNE	**Al Ain**	**59.72**	**287**		P	**P**	**11 12 27.6**	**+0.7**
	SNR=12								
ALNE					P	**P**	**11 12 27.6**	**+0.7**
	SNR=12								
FAQ	**Al Faqa, Dubai**	**59.75**	**288**		P	**P**	**11 12 27.6**	**+0.5**
FAQ					P	**P**	**11 12 27.6**	**+0.5**
ASUD	**Al Ashush, Dub**	**60.01**	**288**		P	**P**	**11 12 29.7**	**+0.9**
ASUD					P	**P**	**11 12 29.7**	**+0.9**
AJN	**Ajban**	**60.33**	**288**		P	**P**	**11 12 30.3**	**-0.7**
AJN					P	**P**	**11 12 30.3**	**-0.7**
UMZA	**Um Al Zommool**	**60.49**	**285**		P	**P**	**11 12 31.9**	**-0.2**
DZM	**Mont Dzumac**	**61.19**	**130**		LR	LR	11 35 23.2	
	comp=Z,384nm,21.6s,baz=278,slow=32								
CNB	**Canberra Magne**	**61.20**	**153**		P	**P**	**11 12 38.3**	**+1.6**
WHFO	**Wadi Hawf**	**62.75**	**280**		P	**P**	**11 12 46.4**	**-1.1**
ABTO	**Aybut**	**63.32**	**280**		P	**P**	**11 12 50.4**	**-0.9**
ABTO					P	**P**	**11 12 50.4**	**-0.9**
KIRV	**Kirov**	**63.52**	**326**	*ce*	P	**P**	**11 12 52.1**	**+0.2**
KIRV	**Kirov**	**63.52**	**326**		P	**P**	**11 12 52.3**	**+0.4**
	comp=Z,7.3nm,0.5s,baz=102,slow=9.0,SNR=9.0								
KIRV					LR	LR	11 42 17.0		
	comp=Z,652nm,20.1s,baz=100,slow=38								
	comp=Z,7.3nm,0.5s								
TRNA	**Turayna**	**63.68**	**288**		P	**P**	**11 12 53.6**	**0.0**
BELG	**Belogornoye**	**64.19**	**319**	*i*	P	**P**	**11 12 56.1**	**-0.3**
BELG					pmax	pmax			
	comp=Z,4.0nm,0.9s								
BELG	**Belogornoye**	**64.19**	**319**		P	**P**	**11 12 55.8**	**-0.7**
	comp=Z,16nm,0.8s,baz=279,slow=7.9,SNR=4.6								
BELG					LR	LR	11 44 13.7		
	comp=Z,228nm,21.1s,baz=132,slow=39								
	comp=Z,16nm,0.8s								
MAK	**Makhachkala**	**64.50**	**309**	*e*	P	**P**	**11 12 55.5**	**-3.1**
MAK				*e*	S	**S**	**11 21 34.1**	**-3.2**
MAK					pmax	pmax			
	comp=Z,122nm,1.0s								
MAK					MLR	MLR			
	comp=Z,204nm,12.0s								
TNA	**Tin City**	**64.67**	**26**		P	**P**	**11 12 60.0**	**+0.7**
	baz=262								
M11K	**Mekoryuk**	**64.89**	**32**		P	**P**	**11 13 01.5**	**+0.8**
	baz=266								
F14K	**Arctic Creek**	**65.32**	**26**		P	**P**	**11 13 04.5**	**+1.0**
	baz=263								
ANM	**Nome**	**65.63**	**27**		P	**P**	**11 13 06.1**	**+0.5**
ANM					IAmb	IAmb	11 13 08.2		
	comp=Z,30nm,1.1s								
ANM	**Nome**	**65.63**	**27**		P	**P**	**11 13 06.9**	**+1.4**
	baz=265,SNR=9.9								
ANM	**Nome**	**65.63**	**27**		P	**P**	**11 13 06.1**	**+0.5**
ANM					pmax	pmax			
	comp=Z,30nm,1.1s								
F15K	**North Star Dit**	**66.04**	**26**		P	**P**	**11 13 08.8**	**+0.5**
F15K	**North Star Dit**	**66.04**	**26**		P	**P**	**11 13 09.3**	**+1.1**
	baz=265,SNR=11								
C16K	**Lisburne Hills**	**66.05**	**23**		P	**P**	**11 13 09.1**	**+0.9**
C16K	**Lisburne Hills**	**66.05**	**23**		P	**P**	**11 13 09.3**	**+1.1**
	baz=263								
FALS	**False Pass**	**66.21**	**38**		P	**P**	**11 13 10.4**	**+0.9**
	baz=271								
G15K	**Niukluk**	**66.23**	**27**		P	**P**	**11 13 10.3**	**+0.8**
	baz=266								
M13K	**Dall Lake**	**66.30**	**32**		P	**P**	**11 13 10.7**	**+0.8**
	baz=268								
J14K	**Nanvaranak Lak**	**66.30**	**29**		P	**P**	**11 13 10.3**	**+0.5**
J14K	**Nanvaranak Lak**	**66.30**	**29**		P	**P**	**11 13 10.8**	**+0.9**
	baz=267								
L14K	**Kuka Creek**	**66.65**	**31**		P	**P**	**11 13 13.1**	**+0.9**
L14K	**Kuka Creek**	**66.65**	**31**		P	**P**	**11 13 13.5**	**+1.3**
	baz=268								
GNI	**Garni**	**66.82**	**306**		P	**P**	**11 13 15.0**	**+1.1**
GNI	**Garni**	**66.82**	**306**	*ce*	P	**P**	**11 13 14.9**	**+1.1**
GNI					pmax	pmax			
	comp=Z,64nm,1.3s								
GNI	**Garni**	**66.82**	**306**		LR	LR	11 46 30.3		
	comp=Z,257nm,20.4s,baz=86,slow=40								
GNI	**Garni**	**66.82**	**306**		P	**P**	**11 13 15.5**	**+1.6**
GNI					P	**P**	**11 13 15.5**	**+1.6**
D17K	**Noatak River**	**66.83**	**24**		P	**P**	**11 13 14.9**	**+1.7**
	baz=265,SNR=60								
C17K	**DeLong Mountai**	**66.86**	**23**		P	**P**	**11 13 14.8**	**+1.4**
	baz=265								
G16K	**Koyuk River**	**66.97**	**26**		P	**P**	**11 13 15.2**	**+1.1**
G16K	**Koyuk River**	**66.97**	**26**		P	**P**	**11 13 15.2**	**+1.1**
	baz=267								
H16K	**Elim**	**66.98**	**27**		P	**P**	**11 13 14.8**	**+0.5**
	baz=268,SNR=13								
M14K	**Bethel**	**66.99**	**31**		P	**P**	**11 13 14.9**	**+0.6**
	baz=269								
N14K	**Kuskokwak Cree**	**67.12**	**32**		P	**P**	**11 13 15.7**	**+0.5**
	baz=270								
K15K	**Wolf Creek Mou**	**67.22**	**30**		P	**P**	**11 13 16.7**	**+0.9**
K15K	**Wolf Creek Mou**	**67.22**	**30**		P	**P**	**11 13 16.7**	**+0.9**
	baz=269								
L15K	**Ungalak Mounta**	**67.23**	**30**		P	**P**	**11 13 17.1**	**+1.2**
	baz=269								
E17K	**Hotham Inlet**	**67.28**	**25**		P	**P**	**11 13 17.5**	**+1.4**
	baz=267,SNR=28								
NCK	**Nalchik**	**67.30**	**310**	*i*	P	**P**	**11 13 16.2**	**-0.5**
NCK					pmax	pmax			
	comp=Z,9.0nm,0.9s								
O14K	**Tigyukauivet M**	**67.34**	**33**		P	**P**	**11 13 17.7**	**+1.1**
	baz=271								
B18K	**Kokolik River**	**67.43**	**22**		P	**P**	**11 13 18.2**	**+1.2**
	baz=266								
F17K	**Baldwin Pennin**	**67.47**	**25**		P	**P**	**11 13 18.6**	**+1.4**
F17K	**Baldwin Pennin**	**67.47**	**25**		P	**P**	**11 13 18.4**	**+1.1**
	baz=268								
ONI	**Oni**	**67.50**	**309**		P	**P**	**11 13 19.5**	**+1.4**
ONI	**Oni**	**67.50**	**309**		P	**P**	**11 13 19.5**	**+1.4**
ONI					pmax	pmax			
	comp=Z,113nm,1.5s								
C18K	**Utukok River**	**67.61**	**23**		P	**P**	**11 13 19.0**	**+0.8**
C18K	**Utukok River**	**67.61**	**23**		P	**P**	**11 13 19.2**	**+0.9**
	baz=267								
AKH	**Akhalkalaki**	**67.61**	**308**		P	**P**	**11 13 20.0**	**+1.1**
AKH	**Akhalkalaki**	**67.61**	**308**		P	**P**	**11 13 20.0**	**+1.1**
AKH					pmax	pmax			
	comp=Z,178nm,1.1s								
M15K	**Kasigluk River**	**67.62**	**31**		P	**P**	**11 13 19.1**	**+0.8**
	baz=270								
I17K	**Unalakleet**	**67.63**	**28**		P	**P**	**11 13 18.7**	**+0.4**
I17K	**Unalakleet**	**67.63**	**28**		P	**P**	**11 13 19.3**	**+1.0**
	baz=269,SNR=8.9								
J16K	**Anvik River**	**67.66**	**29**		P	**P**	**11 13 19.8**	**+1.2**
	baz=270								
G17K	**Kiwalik Mounta**	**67.68**	**26**		P	**P**	**11 13 19.4**	**+0.8**
	baz=269,SNR=17								
E18K	**Tukpahlearik C**	**67.77**	**24**		P	**P**	**11 13 19.6**	**+0.4**
E18K					IAmb	IAmb	11 13 21.9		
	comp=Z,43nm,1.4s								
E18K	**Tukpahlearik C**	**67.77**	**24**		P	**P**	**11 13 20.3**	**+1.1**
	baz=268								
KBZ	**Khabaz**	**67.78**	**310**	*ce*	P	**P**	**11 13 17.0**	**-2.7**
KBZ					pmax	pmax			
	comp=Z,25nm,1.3s								
KBZ	**Khabaz**	**67.78**	**310**		P	**P**	**11 13 20.9**	**+1.2**
	comp=Z,14nm,1.0s,baz=77,slow=5.8,SNR=25								
KBZ					LR	LR	11 45 58.1		
	comp=Z,296nm,20.2s,baz=82,slow=39								
	comp=Z,14nm,1.0s								
SDPT	**Sand Point**	**67.88**	**37**		P	**P**	**11 13 20.6**	**+0.5**
	baz=273								
VRH	**Novokhopyorsk**	**67.89**	**318**	*e*	P	**P**	**11 13 20.3**	**+0.1**
VRH					pmax	pmax			
	comp=Z,40nm,1.0s								

KIV	**Kislovodsk**	**67.91**	**310**		P	**P**	**11 13 22.3**	**+1.7**
KIV	**Kislovodsk**	**67.91**	**310**		P	**P**	**11 13 20.9**	**+0.3**
KIV	**Kislovodsk**	**67.91**	**310**	*e*	P	**P**	**11 13 21.2**	**+0.6**
KIV				*e*	S	**S**	**11 22 20.6**	**+1.6**
KIV				*e*	SS	**SS**	**11 26 42.7**	**+2.2**
KIV					pmax	pmax			
	comp=Z,49nm,1.1s								
KIV					pmax	pmax			
	comp=Z,82nm,4.1s								
KIV					MLR	MLR			
	comp=Z,186nm,17.0s								
KIV	**Kislovodsk**	**67.91**	**310**		P	**P**	**11 13 21.1**	**+0.4**
N15K	**Kwethluk River**	**67.92**	**32**		P	**P**	**11 13 20.9**	**+0.6**
	baz=271								
H17K	**Granite Mounta**	**67.98**	**27**		P	**P**	**11 13 21.8**	**+1.2**
H17K	**Granite Mounta**	**67.98**	**27**		P	**P**	**11 13 20.7**	**+0.1**
	baz=270								
KARS	**Kars**	**68.02**	**307**		P	**P**	**11 13 20.8**	**-0.7**
KARS	**Kars**	**68.02**	**307**		P	**P**	**11 13 20.8**	**-0.7**
KARS					pmax	pmax			
	comp=Z,105nm,1.1s								
O15K	**Ungalikthiuk R**	**68.08**	**33**		P	**P**	**11 13 21.7**	**+0.4**
	baz=272								
F18K	**Selawik**	**68.12**	**25**		P	**P**	**11 13 22.3**	**+1.0**
	baz=269,SNR=41								
L16K	**Owhat River**	**68.19**	**30**		P	**P**	**11 13 22.1**	**+0.2**
L16K					IAmb	IAmb	11 13 24.0		
	comp=Z,36nm,1.2s								
L16K	**Owhat River**	**68.19**	**30**		P	**P**	**11 13 23.0**	**+1.0**
	baz=271,SNR=5.4								
C19K	**Lookout Ridge**	**68.21**	**22**		P	**P**	**11 13 23.2**	**+1.2**
C19K	**Lookout Ridge**	**68.21**	**22**		P	**P**	**11 13 23.1**	**+1.1**
	baz=268								
S14K	**Fog Glacier**	**68.35**	**36**		P	**P**	**11 13 23.7**	**+0.5**
	baz=273								
CHNA	**Chernabura Isl**	**68.42**	**38**		P	**P**	**11 13 24.1**	**+0.6**
	baz=274								
M16K	**Timber Creek**	**68.46**	**31**		P	**P**	**11 13 24.2**	**+0.5**
	baz=272								
G18K	**Tagagawik**	**68.51**	**26**		P	**P**	**11 13 24.9**	**+1.0**
	baz=270								
N16K	**Nishlik Lake**	**68.57**	**32**		P	**P**	**11 13 25.1**	**+0.7**
	baz=272								
KLMR	**Klimovskoe**	**68.60**	**329**	*e*	P	**P**	**11 13 22.9**	**-1.6**
KLMR				*e*			11 15 56.3		
KLMR					pmax	pmax			
	comp=Z,36nm,1.1s								
KLMR					MLR	MLR			
	comp=Z,659nm,17.0s								
H18K	**Honhosa River**	**68.64**	**27**		P	**P**	**11 13 25.3**	**+0.6**
	baz=271								
K17K	**Iditarod**	**68.72**	**29**		P	**P**	**11 13 26.3**	**+1.0**
	baz=272								
D19K	**Kuna River**	**68.73**	**23**		P	**P**	**11 13 26.2**	**+0.9**
	baz=270								
L17K	**Donlin**	**68.74**	**30**		P	**P**	**11 13 26.7**	**+1.3**
	baz=272								
F19K	**Shaleruckik Mo**	**68.86**	**25**		P	**P**	**11 13 27.1**	**+1.1**
	baz=271								
O16K	**Kokwok River B**	**68.95**	**33**		P	**P**	**11 13 27.5**	**+0.8**
	baz=273								
RAYN	**Ar Rayn**	**69.03**	**288**		P	**P**	**11 13 27.6**	**-0.4**
RAYN					IAmb	IAmb	11 13 39.0		
	comp=Z,26nm,1.1s								
RAYN	**Ar Rayn**	**69.03**	**288**		P	**P**	**11 13 27.6**	**-0.4**
RAYN					pmax	pmax			
	comp=Z,26nm,1.2s								
RAYN	**Ar Rayn**	**69.03**	**288**		P	**P**	**11 13 28.0**	**+0.1**
P16K	**Nushagak River**	**69.03**	**33**		P	**P**	**11 13 27.2**	**0.0**
	baz=274								
E19K	**Redstone River**	**69.07**	**24**		P	**P**	**11 13 28.1**	**+0.8**
	baz=271								
GURO	**Guroymak-BITLI**	**69.12**	**305**		P	**P**	**11 13 29.0**	**+0.7**
G19K	**Purcell Mounta**	**69.15**	**26**		P	**P**	**11 13 28.8**	**+0.9**
	baz=272								
M17K	**Holitna River**	**69.18**	**31**		P	**P**	**11 13 29.2**	**+1.1**
	baz=273								
LABN	**Labinsk**	**69.22**	**311**	*e*	P	**P**	**11 13 25.6**	**-3.1**
LABN				*e*	*PP	**pP**	**11 13 28.6**	**-3.6**
LABN				*e*	S	**S**	**11 22 31.7**	**-2.7**
LABN					pmax	pmax			
	comp=Z,23nm,0.6s								
ERBR	**Yeremizino-Bor**	**69.26**	**312**	*e*	P	**P**	**11 13 25.8**	**-3.1**
ERBR				*e*	*PP	**pP**	**11 13 30.4**	**-2.0**
ERBR				*e*			11 16 00.7		
ERBR				*e*	S	**S**	**11 22 32.5**	**-2.3**
ERBR					pmax	pmax			
	comp=Z,113nm,1.4s								
A21K	**Barrow**	**69.26**	**20**		P	**P**	**11 13 29.6**	**+1.2**
	baz=270,SNR=15								
D20K	**Etivluk River**	**69.28**	**23**		P	**P**	**11 13 30.0**	**+1.4**
	baz=271								
GCSA	**Galena City Sc**	**69.28**	**27**		P	**P**	**11 13 29.5**	**+0.8**
	baz=272,SNR=20								
J18K	**Innoko River**	**69.41**	**28**		P	**P**	**11 13 30.5**	**+1.0**
	baz=273								
VORR	**Voronezh**	**69.42**	**319**	*e*	P	**P**	**11 13 30.1**	**+0.4**
VORR					pmax	pmax			
	comp=Z,50nm,1.0s								
H19K	**Roundabout Mou**	**69.43**	**26**		P	**P**	**11 13 31.0**	**+1.4**
	baz=272								
VORD	**Divnogorie**	**69.44**	**318**	*e*	P	**P**	**11 13 27.8**	**-2.1**
VORD					pmax	pmax			
	comp=Z,10.0nm,1.0s								
O17K	**Koliganek Bris**	**69.44**	**32**		P	**P**	**11 13 30.4**	**+0.6**
	baz=274								
E20K	**Nigu River**	**69.45**	**23**		P	**P**	**11 13 30.7**	**+1.0**
	baz=272								
L18K	**Granite Mounta**	**69.49**	**30**		P	**P**	**11 13 31.1**	**+1.1**
	baz=273								
VSR	**Storozhevoye**	**69.49**	**318**	*e*	P	**P**	**11 13 28.5**	**-1.7**
VSR					pmax	pmax			
	comp=Z,10.0nm,1.1s								
LPSR	**Galich'ya Gora**	**69.50**	**320**	*e*	P	**P**	**11 13 28.4**	**-1.8**
LPSR					pmax	pmax			
	comp=Z,20nm,1.0s								
F20K	**Avaraart Lake**	**69.67**	**25**		P	**P**	**11 13 32.2**	**+1.3**
	baz=272								
Q16K	**King Salmon**	**69.75**	**34**		P	**P**	**11 13 31.5**	**-0.1**
	baz=275								
TTA	**Tatalina**	**69.76**	**29**		P	**P**	**11 13 32.5**	**+0.7**
TTA					IAmb	IAmb	11 13 33.8		
	comp=Z,22nm,1.1s								
TTA	**Tatalina**	**69.76**	**29**		P	**P**	**11 13 32.5**	**+0.7**
TTA	**Tatalina**	**69.76**	**29**		P	**P**	**11 13 32.6**	**+0.9**
	baz=274,SNR=7.5								
TTA	**Tatalina**	**69.76**	**29**		P	**P**	**11 13 32.5**	**+0.7**
TTA					pmax	pmax			
	comp=Z,22nm,1.1s								
P17K	**Kvichak River**	**69.82**	**33**		P	**P**	**11 13 33.2**	**+1.1**
	baz=275,SNR=5.9								
J19K	**Poorman**	**69.87**	**28**		P	**P**	**11 13 33.2**	**+0.8**
	baz=274,SNR=8.1								
VSLR	**Vesyoloye**	**69.88**	**310**	*i*	P	**P**	**11 13 32.4**	**-0.4**
VSLR					pmax	pmax			
	comp=Z,62nm,1.2s								
C21K	**Knifeblade Rid**	**69.93**	**22**		P	**P**	**11 13 34.2**	**+1.6**
	baz=272								
M18K	**Stony River**	**69.95**	**31**		P	**P**	**11 13 34.2**	**+1.3**
	baz=274								
MOS	**Moscow**	**69.95**	**323**	*e*	P	**P**	**11 13 30.3**	**-2.6**
MOS				*e*			11 16 09.0		
MOS					pmax	pmax			
	comp=Z,59nm,1.3s								
N18K	**Kilae Creek**	**69.98**	**31**		P	**P**	**11 13 34.1**	**+1.0**
	baz=275								
H20K	**Anotleneega Mo**	**70.09**	**26**		P	**P**	**11 13 34.8**	**+1.1**
	baz=274,SNR=13								
SOC	**Sochi**	**70.09**	**310**	*e*	P	**P**	**11 13 30.5**	**-3.6**
SOC				*e*	PPP	PPP	11 17 48.2		
SOC				*e*	S	**S**	**11 22 40.7**	**-3.9**
SOC				*e*	SS	**SS**	**11 27 13.9**	**-0.1**
SOC				*e*	SSS	SSS	11 30 22.9		
SOC					pmax	pmax			
	comp=Z,34nm,1.2s								
SOC					MLR	MLR			
	comp=Z,302nm,20.0s								
SVW2	**Sparrevohn**	**70.09**	**31**		P	**P**	**11 13 33.6**	**-0.2**
SVW2					IAmb	IAmb	11 13 36.1		
	comp=Z,35nm,1.2s								
SVW2	**Sparrevohn**	**70.09**	**31**		P	**P**	**11 13 34.7**	**+0.9**
Q17K	**Contact Creek**	**70.19**	**34**		P	**P**	**11 13 34.8**	**+0.2**
	baz=276								
E21K	**Killik River**	**70.26**	**23**		P	**P**	**11 13 35.7**	**+0.9**
	baz=274								
I20K	**Naaghedeneel**	**70.31**	**27**		P	**P**	**11 13 36.5**	**+1.5**

	baz=274								
L19K	**White Mountain**	**70.35**	**30**		P	**P**	**11 13 36.3**	**+1.0**
L19K	**White Mountain**	**70.35**	**30**		P	**P**	**11 13 36.5**	**+1.1**
	baz=275,SNR=12								
O18K	**Koktuh Hills**	**70.39**	**32**		P	**P**	**11 13 36.2**	**+0.5**
O18K	**Koktuh Hills**	**70.39**	**32**		P	**P**	**11 13 36.4**	**+0.8**
	baz=276,SNR=13								
P18K	**Big Mountain,**	**70.42**	**33**		P	**P**	**11 13 36.2**	**+0.4**
	baz=276								
J20K	**Nowinta River**	**70.50**	**28**		P	**P**	**11 13 37.5**	**+1.3**
	baz=275								
IMAR	**Indian Mountai**	**70.52**	**26**		P	**P**	**11 13 37.0**	**+0.7**
F21K	**Alatna River**	**70.53**	**24**		P	**P**	**11 13 37.0**	**+0.6**
	baz=274								
G21K	**Allakaket**	**70.58**	**25**		P	**P**	**11 13 37.0**	**+0.4**
G21K	**Allakaket**	**70.58**	**25**		P	**P**	**11 13 37.3**	**+0.6**
	baz=275,SNR=29								
M19K	**Big River Lodg**	**70.59**	**30**		P	**P**	**11 13 37.8**	**+1.0**
M19K					IAmb	IAmb	11 13 39.4		
	comp=Z,46nm,1.2s								
M19K	**Big River Lodg**	**70.59**	**30**		P	**P**	**11 13 37.8**	**+1.0**
	baz=276,SNR=7.7								
K20K	**Telida**	**70.61**	**28**		P	**P**	**11 13 38.0**	**+1.1**
K20K					IAmb	IAmb	11 13 39.5		
	comp=Z,47nm,1.4s								
K20K	**Telida**	**70.61**	**28**		P	**P**	**11 13 37.9**	**+1.1**
	baz=275								
OBN	**Obninsk**	**70.61**	**323**	*i*	P	**P**	**11 13 36.3**	**-0.7**
OBN				*i*			11 13 46.3		
OBN				*i*			11 13 53.1		
OBN					pmax	pmax			
	comp=Z,53nm,1.3s								
OBN	**Obninsk**	**70.61**	**323**		P	**P**	**11 13 37.1**	**+0.1**
	comp=Z,13nm,0.4s,baz=284,slow=1.6,SNR=9.0								
	comp=Z,13nm,0.4s								
N19K	**Bonanza Creek**	**70.65**	**31**		P	**P**	**11 13 38.2**	**+0.9**
	baz=276								
D22K	**Ayikyak River**	**70.70**	**23**		P	**P**	**11 13 38.9**	**+1.5**
	baz=275								
L20K	**Farewell, AK**	**70.78**	**29**		P	**P**	**11 13 38.4**	**+0.4**
	baz=276								
O19K	**Port Alsworth**	**70.80**	**32**		P	**P**	**11 13 38.6**	**+0.6**
	baz=276								
APA	**Apatity**	**70.86**	**336**	*i*	P	P	11 13 30.0	-8.3
APA					pmax	pmax			
	comp=Z,8.0nm,1.2s								
APA					MLR	MLR			
	comp=Z,1μm,18.0s								
H21K	**Melozitna Rive**	**70.94**	**26**		P	**P**	**11 13 40.1**	**+1.3**
	baz=276								
M20K	**Styx River**	**71.19**	**30**		P	**P**	**11 13 41.5**	**+1.0**
	baz=277								
Q19K	**Cape Douglas,**	**71.28**	**33**		P	**P**	**11 13 41.7**	**+0.6**
	baz=277								
G22K	**Bettles**	**71.33**	**25**		P	**P**	**11 13 42.0**	**+0.8**
	baz=276								
I21K	**Tanana**	**71.33**	**26**		P	**P**	**11 13 42.6**	**+1.4**
	baz=276,SNR=13								
CHUM	**Lake Minchumin**	**71.33**	**28**		P	**P**	**11 13 42.2**	**+1.0**
	baz=277,SNR=7.5								
C23K	**Itkillik River**	**71.34**	**21**		P	**P**	**11 13 42.6**	**+1.4**
	baz=276								
P19K	**Oil Pt**	**71.41**	**32**		P	**P**	**11 13 42.7**	**+0.9**
	baz=277								
D23K	**Nanushuk River**	**71.41**	**22**		P	**P**	**11 13 42.9**	**+1.3**
	baz=276								
CAST	**Castle Rocks**	**71.49**	**28**		P	**P**	**11 13 43.1**	**+0.9**
CAST	**Castle Rocks**	**71.49**	**28**		P	**P**	**11 13 42.8**	**+0.5**
	baz=277,SNR=24								
H22K	**Ishtalitna Cre**	**71.50**	**26**		P	**P**	**11 13 43.9**	**+1.6**
	baz=277,SNR=23								
PPLA	**Purkeypile**	**71.50**	**29**		P	**P**	**11 13 43.2**	**+0.7**
	baz=277,SNR=6.4								
ANN	**Anapa**	**71.52**	**312**	*e*	P	**P**	**11 13 39.2**	**-3.5**
ANN				*e*	*PP	**pP**	**11 13 43.4**	**-2.9**
ANN				*e*			11 16 19.1		
ANN				*e*	S	**S**	**11 22 57.4**	**-3.8**
ANN					pmax	pmax			
	comp=Z,25nm,1.3s								
O20K	**Slope Mountain**	**71.65**	**32**		P	**P**	**11 13 43.2**	**-0.1**
	baz=278								
OHAK	**Old Harbor**	**71.70**	**35**		P	**P**	**11 13 43.3**	**-0.2**
	baz=278								
N20K	**Mount Spurr**	**71.71**	**31**		P	**P**	**11 13 43.9**	**+0.2**
	baz=278,SNR=7.6								
COLD	**Coldfoot**	**71.80**	**24**		P	**P**	**11 13 44.9**	**+0.9**
	baz=277,SNR=15								
TOLK	**Toolik Lake Re**	**71.85**	**23**		P	**P**	**11 13 45.3**	**+0.9**
TOLK					IAmb	IAmb	11 13 46.5		
	comp=Z,45nm,1.3s								
TOLK	**Toolik Lake Re**	**71.85**	**23**		P	**P**	**11 13 45.4**	**+0.9**
	baz=278,SNR=11								
MLY	**Manley**	**71.87**	**27**		P	**P**	**11 13 45.5**	**+1.0**
MLY					IAmb	IAmb	11 13 56.5		
	comp=Z,34nm,1.0s								
MLY	**Manley**	**71.87**	**27**		P	**P**	**11 13 45.6**	**+1.0**
	baz=278,SNR=21								
ARPR	**Arapgir-MALATY**	**71.87**	**306**		P	**P**	**11 13 45.9**	**+0.7**
ARPR					IAmb	IAmb	11 13 57.5		
	comp=Z,29nm,1.1s								
BPAW	**Bear Paw Mtn.**	**71.89**	**28**		P	**P**	**11 13 45.4**	**+0.8**
	baz=278,SNR=15								
E23K	**Chandalar**	**71.91**	**23**		P	**

G24K Hadweenzic Riv 72.94 25 P P 11 13 51.3 +0.5
baz=280
O22K Cooper Landing 73.02 31 P P 11 13 51.8 +0.5
baz=280
COLA College 73.11 26 P P 11 13 51.8 0.0
COLA IAmb IAmb 11 14 04.1
comp=Z,16nm,0.8s
COLA College 73.11 26 P P 11 13 52.2 +0.4
COLA College 73.11 26 P P 11 13 52.0 +0.2
baz=280
COLA College 73.11 26 P P 11 13 51.8 0.0
COLA pmax pmax
comp=Z,16nm,0.9s
PMR Palmer 73.11 30 P P 11 13 51.4 -0.5
PMR IAmb IAmb 11 14 02.4
comp=Z,32nm,1.1s
PMR Palmer 73.11 30 P P 11 13 51.5 -0.5
PMR Palmer 73.11 30 P P 11 13 51.6 -0.3
baz=280,SNR=8.4
PMR Palmer 73.11 30 P P 11 13 51.4 -0.5
PMR pmax pmax
comp=Z,32nm,1.1s
WAT1 Susitna Watana 73.16 29 P P 11 13 51.8 -0.5
baz=280
SEW Seward 73.22 32 P P 11 13 52.1 -0.4
baz=280
POKR Poker Plat Res 73.24 26 P P 11 13 53.0 +0.4
POKR IAmb IAmb 11 14 05.0
comp=Z,36nm,1.1s
POKR Poker Plat Res 73.24 26 P P 11 13 53.1 +0.4
baz=281,SNR=9.3
C26K Camden Bay 73.28 21 P P 11 13 53.6 +0.8
baz=281
E25K Arctic Village 73.40 23 P P 11 13 54.1 +0.5
baz=281,SNR=14
ARCES ARCESS Array B 73.44 339 P P 11 13 53.8 0.0
comp=Z,7.2nm,1.1s,baz=46,slow=3.5,SNR=7.7
ARCES LR LR 11 49 27.3
comp=Z,164nm,21.3s,baz=92,slow=38
comp=Z,7.2nm,1.1s
SML Sawmill 73.45 30 P P 11 13 54.0 0.0
baz=281,SNR=9.9
KNK Knik Glacier 73.46 30 P P 11 13 54.2 +0.2
baz=281,SNR=12
G25K Bearman Lake 73.46 24 P P 11 13 55.1 +1.2
baz=281
F25K Christian Rive 73.48 24 P P 11 13 55.4 +1.3
baz=281
IL31 73.53 27 P P 11 13 53.5 -0.8
ILAR Eielson Array 73.53 27 P P 11 13 53.3 -1.1
ILAR Eielson Array 73.53 27 P P 11 13 53.3 -1.1
ILAR Eielson Array 73.53 27 P P 11 13 53.1 -1.2
comp=Z,2.7nm,0.7s,baz=269,slow=4.9,SNR=31
ILAR PKPPKP **P'P'df** 11 41 30.5 -4.9
comp=Z,0.6nm,1.1s,baz=174,slow=1.8,SNR=4.3
ILAR LR LR 11 49 02.9
comp=Z,86nm,18.6s,baz=296,slow=38
comp=Z,7.7nm,0.7s
HDA Harding Lake 73.58 27 P P 11 13 54.1 -0.5
baz=281,SNR=11
WAT6 Susitna Watana 73.58 29 P P 11 13 54.7 -0.2
baz=281,SNR=14
DHY Denali Highway 73.65 28 P P 11 13 55.5 +0.3
baz=281
SPITS Spitsbergen Ar 73.72 348 P P 11 13 55.8 +0.5
comp=Z,3.9nm,0.7s,baz=89,slow=10,SNR=4.2
SPITS LR LR 11 50 52.9
comp=Z,444nm,18.2s,baz=31,slow=40
comp=Z,3.9nm,0.7s
M23K Glacier View 73.73 30 P P 11 13 55.5 -0.2
baz=281
SIM Simferopol' 73.81 312 *e*P P 11 13 56.4 0.0
SIM pmax pmax
comp=Z,111nm,1.4s
BMAR Burnt Mountain 73.91 24 P P 11 13 57.8 +1.2
SCM Sheep Creek Mo 73.91 30 P P 11 13 57.1 +0.4
baz=282,SNR=10
PRP Porcupine Dome 73.95 26 P P 11 13 57.6 +0.6
baz=282,SNR=7.6
F26K Sheenjek River 74.02 23 P P 11 13 58.1 +0.9
baz=283
K24K Donnelly Dome 74.20 27 P P 11 13 58.2 -0.1
baz=282,SNR=17
J25K Salcha River, 74.20 27 P P 11 13 58.2 -0.2
baz=282,SNR=7.5
GLI Glacier Island 74.22 31 P P 11 13 58.5 0.0
baz=282
P23K Montague Islan 74.25 31 P P 11 13 59.0 +0.3
baz=282
G26K Porcupine Rive 74.32 24 P P 11 13 60.0 +1.1
baz=283
M24K Tolsona, Glenn 74.39 29 P P 11 14 00.3 +0.8
baz=282,SNR=7.3
PAX Paxson 74.52 28 P P 11 14 00.4 +0.1
baz=283,SNR=8.2
KLU Klutina 74.64 30 P P 11 14 01.5 +0.5
baz=283,SNR=6.1
HARP HAARP 74.79 29 P P 11 14 02.6 +0.9
baz=283
Q23K Middleton Isla 74.89 32 P P 11 14 03.1 +0.8
baz=283
EYAK Cordova Ski Ar 74.93 31 P P 11 14 03.2 +0.6
EYAK Cordova Ski Ar 74.93 31 P P 11 14 03.0 +0.4
baz=283
SCRK Sand Creek 74.94 27 P P 11 14 02.6 -0.1
baz=284,SNR=8.6
I26K Coal Creek Min 74.96 26 P P 11 14 02.9 +0.2
baz=284
FIA1 FINESS Array S 74.97 330 P P 11 14 01.7 -1.1
FIA1 IAmb IAmb 11 14 14.0
comp=Z,50nm,1.1s
FINES FINESS Array B 74.97 330 P P 11 14 02.5 -0.3
FINES FINESS Array B 74.97 330 *ce*P P 11 14 03.0 +0.2
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 74.97 330 P P 11 14 02.6 -0.1
comp=Z,4.6nm,0.7s,baz=100,slow=6.4,SNR=13
FINES LR LR 11 49 22.2
comp=Z,317nm,18.5s,baz=50,slow=38
comp=Z,4.6nm,0.7s
J26L Joseph Creek 74.99 26 P P 11 14 02.9 -0.1
baz=284
N25K Chitina, Valde 75.23 30 P P 11 14 04.5 +0.1
N25K IAmb IAmb 11 14 06.3
comp=Z,31nm,1.2s
N25K Chitina, Valde 75.23 30 P P 11 14 04.8 +0.3
baz=284,SNR=9.0
BR131 Keskin Array S 75.29 307 P P 11 14 04.7 -0.6
BR131 Keskin Array S 75.29 307 *i* P P 11 14 04.7 -0.6
BR131 Keskin Array S 75.29 307 P P 11 14 05.6 +0.3
SNR=6.4
BRTR Keskin Array B 75.29 307 P P 11 14 04.5 -0.8
BRTR Keskin Array B 75.29 307 *ce*P P 11 14 05.5 +0.3
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 75.29 307 P P 11 14 05.6 +0.3
comp=Z,2.3nm,0.9s,baz=112,slow=3.3,SNR=13
BRTR LR LR 11 52 12.5
comp=Z,183nm,20.0s,baz=172,slow=40
comp=Z,2.3nm,0.9s
MENT Mentasta 75.30 28 P P 11 14 04.5 -0.3
MENT IAmb IAmb 11 14 06.7
comp=Z,32nm,1.2s
MENT Mentasta 75.30 28 P P 11 14 05.4 +0.6
VSU Vasula 75.35 327 *ce*P P 11 14 04.0 -1.0
VSU pmax pmax
comp=Z,61nm,1.3s
VSU Vasula 75.35 327 *e*P P 11 14 05.5 +0.5
H27K Steamboat Moun 75.37 25 P P 11 14 06.1 +1.0
baz=286
BMRM Bremner River 75.38 30 P P 11 14 05.4 +0.1
baz=284,SNR=5.2
L26K Log Cabin Wild 75.45 28 P P 11 14 05.5 -0.1
L26K IAmb IAmb 11 14 07.5
comp=Z,20nm,1.1s
L26K Log Cabin Wild 75.45 28 P P 11 14 06.2 +0.6
baz=285,SNR=6.9
I27K Kandik River 75.50 25 P P 11 14 06.9 +1.0
baz=286,SNR=14
MMAI Mount Meron Ar 75.51 300 P P 11 14 07.3 +0.7
comp=Z,0.8nm,0.2s,baz=52,slow=5.4,SNR=7.7
MMAI LR LR 11 51 54.3
comp=Z,138nm,21.3s,baz=44,slow=39
comp=Z,0.8nm,0.2s
F28M Old Crow 75.62 23 P P 11 14 07.0 +0.6
F28M IAmb IAmb 11 14 18.1
comp=Z,42nm,1.1s
F28M Old Crow 75.62 23 P P 11 14 07.1 +0.6
baz=287,SNR=24
MNK Minsk 75.67 323 *i* P P 11 14 05.7 -1.2
MNK *i* 11 16 55.3
MNK *i* PPP PPP 11 18 41.3
MNK *i* S S 11 23 47.5 -0.2
MNK *i* SS SS 11 28 40.2 +1.6
MNK pmax pmax
comp=Z,58nm,0.9s
MNK pmax pmax
comp=E,21nm,1.1s
MNK pmax pmax
comp=N,24nm,1.0s
MNK MLR MLR
comp=E,188nm,16.0s
MNK MLR MLR
comp=Z,281nm,13.0s
KAIM Kayak Island 75.73 31 P P 11 14 08.0 +0.8
baz=285
K27K Chicken 75.74 27 P P 11 14 08.3 +1.1
baz=286
AKASG Malin Array Be 75.77 319 P P 11 14 07.3 -0.2
AKASG IAmb IAmb 11 14 18.4
comp=Z,24nm,1.1s
AKASG Malin Array Be 75.77 319 P P 11 14 07.4 -0.2
AKASG pmax pmax
comp=Z,24nm,1.2s
AKASG Malin Array Be 75.77 319 P P 11 14 07.3 -0.2
comp=Z,5.2nm,0.7s,baz=63,slow=5.2,SNR=30
AKASG LR LR 11 51 01.8
comp=Z,143nm,19.0s,baz=66,slow=38
comp=Z,5.2nm,0.7s
AKBB Malin Array Si 75.77 319 P P 11 14 07.0 -0.5
AKBB IAmb IAmb 11 14 18.1
comp=Z,30nm,1.0s
AKBB Malin Array Si 75.77 319 *ce*P P 11 14 06.2 -1.4
AKBB pmax pmax
comp=Z,8.0nm,0.7s
KIEV Kiev 75.78 319 ⇓P P 11 14 07.0 -0.6
KIEV Kiev 75.78 319 P P 11 14 07.0 -0.6
KIEV IAmb IAmb 11 14 18.1
comp=Z,29nm,1.1s
KIEV Kiev 75.78 319 ⇓P P 11 14 07.0 -0.6
ANTO Ankara 75.89 308 P P 11 14 09.1 +0.4
ANTO P P 11 14 09.1 +0.4
EGAK Eagle 75.92 26 P P 11 14 08.2 0.0
EGAK IAmb IAmb 11 14 19.2
comp=Z,20nm,0.8s
EGAK Eagle 75.92 26 P P 11 14 08.3 +0.2
baz=286,SNR=13
MCARA McCarthy VSAT 76.02 30 P P 11 14 09.2 +0.4
baz=285
MEF Metsahovi 76.07 329 *e*P P 11 14 09.2 +0.1
E29M Blow River 76.10 22 P P 11 14 09.4 +0.3
baz=288
L27K Beaver Creek, 76.11 28 P P 11 14 10.2 +0.9
baz=286
BCAR Beaver Creek A 76.12 28 P P 11 14 10.5 +1.0
CRQE Cirque 76.15 30 P P 11 14 10.4 +0.6
baz=286
I28M Miner Creek 76.22 25 P P 11 14 10.4 +0.4
I28M IAmb IAmb 11 14 21.9
comp=Z,26nm,0.9s
I28M Miner Creek 76.22 25 P P 11 14 10.9 +0.9
baz=287
M27K Edge Creek, AK 76.28 28 P P 11 14 10.9 +0.5
baz=286
ISAL Salakas 76.38 324 *e*P P 11 14 11.6 +0.6
H29M Whitestone 76.60 24 P P 11 14 12.7 +0.7
baz=288
CSS Mathiatis 76.69 303 P P 11 14 12.4 -0.8
CSS IAmb IAmb 11 14 14.6
comp=Z,68nm,1.6s
BVCY Beaver Creek 76.72 28 P P 11 14 13.4 +0.6
baz=287
EIL Elat 76.72 297 LR LR 11 51 31.0
comp=Z,210nm,20.0s,baz=70,slow=38
MTSE Matsula 76.76 328 *e*P P 11 14 13.0 0.0
RAO Raoul Island 76.81 128 LR LR 11 41 25.4
comp=Z,219nm,19.5s,baz=88,slow=31
MESA MESA 76.85 31 P P 11 14 14.3 +0.5
baz=287
DAWY Dawson 76.86 26 P P 11 14 14.1 +0.5
DAWY IAmb IAmb 11 14 15.2
comp=Z,41nm,1.3s
DAWY Dawson 76.86 26 P P 11 14 14.1 +0.5
baz=288,SNR=18
CTG Chitna Glacier 76.92 30 P P 11 14 14.8 +0.7
baz=287,SNR=8.8
SORM Soroca 76.95 317 ⇑P P 11 14 14.1 -0.3
SORM Soroca 76.95 317 ⇑P P 11 14 14.1 -0.3
YUK3 Moose Creek 77.08 29 P P 11 14 15.5 +0.3
baz=288,SNR=8.2
RAF Rauma 77.10 330 *e*P P 11 14 14.9 +0.1
F30M Barrier River 77.11 22 P P 11 14 15.4 +0.5
baz=290,SNR=15
G30M tAoh Zraii Nji 77.16 23 P P 11 14 15.0 -0.3
baz=290
EPYK Eagle Plains 77.18 24 P P 11 14 15.3 0.0
baz=290,SNR=9.0
J29N Klondike Camp 77.22 26 P P 11 14 16.7 +1.1
J29N IAmb IAmb 11 14 27.6
comp=Z,31nm,0.8s
J29N Klondike Camp 77.22 26 P P 11 14 16.8 +1.1
baz=289,SNR=14
VSVD Vaisvydziai 77.47 325 *e*P P 11 14 17.4 +0.4
YUK8 Steele Glacier 77.55 29 P P 11 14 18.6 +0.7
baz=288,SNR=8.1
PABE Paberze 77.58 325 P P 11 14 17.5 -0.2
PABE Paberze 77.58 325 *e*P P 11 14 18.1 +0.4
INK Inuvik 77.65 21 P P 11 14 17.8 -0.1
INK IAmb IAmb 11 14 28.8
comp=Z,32nm,1.2s
INK Inuvik 77.65 21 P P 11 14 17.8 -0.1
baz=292,SNR=18
INK Inuvik 77.65 21 P P 11 14 17.8 -0.1
INK pmax pmax
comp=Z,32nm,1.2s
INK Inuvik 77.65 21 LR LR 11 53 02.6
comp=Z,176nm,18.0s,baz=332,slow=39
PINM Pinnacle 77.69 30 P P 11 14 19.0 +0.7
baz=288
L29M L29M 77.70 27 P P 11 14 19.1 +0.8
baz=289,SNR=15
I30M Mount Dempster 77.71 25 P P 11 14 18.5 +0.1
I30M IAmb IAmb 11 14 29.6
comp=Z,20nm,0.9s
I30M Mount Dempster 77.71 25 P P 11 14 18.5 +0.1
baz=290,SNR=16
K29M Barlow Dome 77.71 26 P P 11 14 19.3 +0.8
baz=290
TPGR Topolog 77.77 313 ⇑P P 11 14 19.7 +0.7
M29M Somme Creek 77.77 28 P P 11 14 19.9 +1.1
baz=289
CFR Carcaliu 77.87 314 ⇑P P 11 14 19.9 +0.3
CFR Carcaliu 77.87 314 ⇑P P 11 14 19.9 +0.3
F31M Tsiigehtchic 77.90 22 P P 11 14 18.2 -1.0
F31M IAmb IAmb 11 14 20.3
comp=Z,36nm,1.1s
F31M Tsiigehtchic 77.90 22 P P 11 14 19.0 -0.3
baz=292,SNR=17
G31M Satah River 77.90 23 P P 11 14 19.2 -0.1
baz=292,SNR=6.1
J30M Hart River 77.95 25 P P 11 14 20.3 +0.4
baz=290,SNR=5.7
YUK4 Talbot Arm 78.04 29 P P 11 14 21.5 +1.0
baz=289
ISP Isparta 78.13 306 *ce*P P 11 14 21.0 -0.3
ISP pmax pmax
comp=Z,17nm,0.6s
PNL Peninsula 78.23 31 P P 11 14 21.8 +0.4
baz=289
H31M Peel River 78.29 24 P P 11 14 21.5 0.0
baz=292
RPZ Rata Peaks 78.30 145 LR LR 11 48 23.2
comp=Z,106nm,20.1s,baz=279,slow=35
YUK6 Outpost Mounta 78.31 29 P P 11 14 22.9 +0.9
baz=289,SNR=5.4
O29M Mount Kennedy 78.42 30 P P 11 14 23.5 +1.0
baz=289
M30M Minto, Yukon 78.45 27 P P 11 14 23.6 +1.1
M30M Minto, Yukon 78.45 27 P P 11 14 23.7 +1.1
baz=290,SNR=14
SUW Suwalki 78.45 323 *e*P P 11 14 22.4 -0.2
SUW Suwalki 78.45 323 *e*P P 11 14 23.3 +0.7
MAYO Mayo, Yukon 78.48 26 P P 11 14 23.6 +1.0
baz=291
TESR Tescani 78.51 315 ⇑P P 11 14 23.6 +0.5
A36M Sachs Harbour 78.62 17 P P 11 14 23.0 -0.2
A36M IAmb IAmb 11 14 34.2
comp=Z,42nm,1.1s
A36M Sachs Harbour 78.62 17 P P 11 14 23.1 -0.2
baz=299,SNR=12
VRI Vrincioaia 78.64 315 ⇑P P 11 14 24.9 +1.1
VRI Vrincioaia 78.64 315 ⇑P P 11 14 24.9 +1.1
PLOR Plostina 78.69 315 ⇓P P 11 14 25.6 +1.4
PLOR Plostina 78.69 315 ⇓P P 11 14 25.6 +1.4
HYT Haines Junctio 78.74 29 P P 11 14 25.3 +1.1
HYT IAmb IAmb 11 14 26.5
comp=Z,41nm,1.2s
HYT Haines Junctio 78.74 29 P P 11 14 25.1 +0.8
baz=290,SNR=10
P29M Windy Craggy 79.04 30 P P 11 14 26.3 +0.5
baz=290
TURR Turia 79.06 315 ⇑P P 11 14 27.3 +1.2
BURAR Bucovina Array 79.12 317 ⇑P P 11 14 27.0 +0.4
BURAR Bucovina Array 79.12 317 P P 11 14 26.9 +0.3
BURAR IAmb IAmb 11 14 38.4
comp=Z,18nm,1.1s
BURAR Bucovina Array 79.12 317 ⇑P P 11 14 27.0 +0.4
BUR08 Bucovina Ar. S 79.13 317 P P 11 14 26.6 0.0
BUR08 IAmb IAmb 11 14 38.1
comp=Z,25nm,1.1s
LVV L'vov 79.22 319 *e*P P 11 14 26.9 0.0
P30M Million Dollar 79.24 30 P P 11 14 27.6 +0.7
baz=291
MLR Muntele Rosu 79.27 314 ⇓P P 11 14 28.6 +1.1
MLR Muntele Rosu 79.27 314 P P 11 14 26.8 -0.6
MLR IAmb IAmb 11 14 39.0
comp=Z,36nm,1.2s
MLR Muntele Rosu 79.27 314 ⇓P P 11 14 28.6 +1.1
MLR Muntele Rosu 79.27 314 P P 11 14 27.9 +0.4
comp=Z,5.5nm,0.7s,baz=342,slow=4.5,SNR=10
MLR LR LR 11 54 44.0
comp=Z,183nm,20.9s,baz=67,slow=40
comp=Z,5.5nm,0.7s
O30N Mendenhall 79.41 29 P P 11 14 28.3 +0.5
baz=291,SNR=5.6
DOPR Dopca 79.50 315 ⇑P P 11 14 29.3 +0.7
M31M Drury Creek, Y 79.63 27 P P 11 14 29.4 +0.4
baz=292,SNR=5.9
WHY Whitehorse 80.00 29 P P 11 14 32.3 +1.2
WHY IAmb IAmb 11 14 33.3
comp=Z,29nm,1.1s
WHY Whitehorse 80.00 29 P P 11 14 31.6 +0.5
baz=292,SNR=5.4
FARO Faro, Yukon 80.07 27 P P 11 14 31.6 +0.3
baz=293,SNR=16
KWP Kalwaria Pacla 80.09 319 *e*P P 11 14 32.6 +0.9
KWP *e*PcP PcP 11 14 43.1 +4.0
ARR Arges 80.19 315 ⇑P P 11 14 33.0 +0.6
HUMR Humele 80.21 314 ⇑P P 11 14 32.6 +0.2
SKAG Skagway 80.25 30 P P 11 14 33.5 +1.2
SKAG Skagway 80.25 30 P P 11 14 32.7 +0.5
baz=292
C36M Paulatuk 80.27 19 P P 11 14 31.7 -0.5
baz=300,SNR=22
S31K Pelican 80.37 32 P P 11 14 33.6 +0.6
baz=292
R31K City Hall, Gus 80.44 31 P P 11 14 33.4 +0.1
baz=292
CJR Cluj-Napoca 80.45 316 ⇓P P 11 14 35.0 +1.3
CJR Cluj-Napoca 80.45 316 ⇓P P 11 14 35.0 +1.3
BEL Belsk 80.52 322 *e*P P 11 14 34.3 +0.4
N32M Quiet Lake 80.62 28 P P 11 14 34.8 +0.4
baz=294
MARR Marisel-Cluj 80.78 316 ⇓P P 11 14 36.1 +0.6
P32M Atlin 80.96 30 P P 11 14 36.9 +0.8
baz=294
R32K Eaglecrest 81.09 31 P P 11 14 37.5 +0.7
baz=293
P33M Teslin, Yukon 81.12 29 P P 11 14 37.6 +0.5
baz=294,SNR=6.9
HFS Hagfors 81.14 331 P P 11 14 36.6 -0.4
comp=Z,6.8nm,0.7s,baz=101,slow=15,SNR=10.0
HFS LR LR 11 52 60.0
comp=Z,448nm,18.3s,baz=61,slow=37
comp=Z,6.8nm,0.7s
SIT Sitka 81.16 32 P P 11 14 37.6 +0.4
baz=293
S32K Killisnoo 81.38 32 P P 11 14 39.1 +0.8
baz=293
GZR Gura Zlata 81.42 315 ⇑P P 11 14 39.5 +0.6
GZR Gura Zlata 81.42 315 ⇑P P 11 14 39.5 +0.6
NIE Niedzica 81.64 319 *e*P P 11 14 40.9 +0.9
OJC Ojcow 81.67 320 *e*P P 11 14 40.1 +0.1
OJC Ojcow 81.67 320 P P 11 14 39.9 -0.2
OJC IAmb IAmb 11 14 51.5
comp=Z,26nm,0.9s
OJC Ojcow 81.67 320 P P 11 14 39.9 -0.2
OJC pmax pmax
comp=Z,26nm,0.9s
SURR Surduc 81.73 316 ⇑P P 11 14 40.9 +0.4
NB2 NORSAR Subarra 81.86 332 P P 11 14 40.1 -0.8
comp=Z,1.7nm,0.7s,baz=64,slow=5.3
NOA NORSAR Array B 81.86 332 P P 11 14 40.5 -0.5
comp=Z,3.7nm,0.7s,baz=65,slow=5.3,SNR=11
NOA LR LR 11 53 43.0
comp=Z,633nm,21.2s,baz=65,slow=38
comp=Z,3.7nm,0.7s
Q32M Nakina River 81.89 30 P P 11 14 42.1 +0.7
baz=295
R33M Jennings River 82.31 29 P P 11 14 44.4 +0.9
baz=296
T33K Petersburg 82.45 32 P P 11 14 44.3 +0.3
baz=294
TGTN Hyland Airport 82.55 27 P P 11 14 44.9 +0.4
baz=298,SNR=6.9
VYHS Vyhne 82.87 319 *e*P P 11 14 46.9 +0.4
VYHS pmax pmax
comp=Z,46nm,1.7s
VYHS Vyhne 82.87 319 *e*P P 11 14 46.9 +0.4
S34M Telegraph Cree 82.88 31 P P 11 14 47.2 +0.9
baz=296
CRAG Craig 82.92 33 P P 11 14 47.2 +0.7
baz=295
WRAK Wrangell Islan 82.92 32 P P 11 14 46.8 +0.3
baz=295
VOI Vohitsoka 82.97 244 P P 11 14 47.3 -0.1
VOI IAmb IAmb 11 14 48.6
comp=Z,41nm,1.5s
VOI Vohitsoka 82.97 244 P P 11 14 58.3 +11
VOI Vohitsoka 82.97 244 P P 11 14 47.1 -0.4
WTLY Watson Lake, Y 82.97 28 P P 11 14 47.3 +0.5
baz=298,SNR=5.1
JMIC Jan Mayen 82.98 345 LR LR 11 56 27.7
comp=Z,296nm,18.6s,baz=74,slow=39
DLBC Dease Lake 83.17 30 P P 11 14 48.8 +0.9
baz=297
DLBC Dease Lake 83.17 30 LR LR 11 55 34.5
comp=Z,91nm,18.0s,baz=316,slow=38
MORC Moravsky Berou 83.18 320 P P 11 14 47.9 -0.2
MORC IAmb IAmb 11 14 49.9
comp=Z,41nm,1.7s
MORC Moravsky Berou 83.18 320 *e*P P 11 14 48.5 +0.4
MORC Moravsky Berou 83.18 320 P P 11 14 47.9 -0.2
MORC pmax pmax
comp=Z,41nm,1.7s
RES Resolute Bay 83.20 9 P P 11 14 47.6 0.0
RES IAmb IAmb 11 14 58.8
comp=Z,27nm,1.1s
RES Resolute Bay 83.20 9 P P 11 14 47.6 0.0
RES pmax pmax
comp=Z,27nm,1.1s
RES Resolute Bay 83.20 9 LR LR 11 54 51.0
comp=Z,140nm,20.7s,baz=338,slow=38
IDI Anoyia 83.21 305 LR LR 11 57 04.7
comp=Z,83nm,21.6s,baz=86,slow=39
JAVC Velka Javorina 83.45 320 *e*P P 11 14 51.2 +1.7
FRGS Fruska Gora 83.47 316 ⇑P P 11 14 49.9 +0.3
KSP Ksiaz 83.51 322 *e*P P 11 14 50.1 +0.4
KRLC Kraliky 83.52 321 *e*P P 11 14 51.7 +1.9
KRLC Kraliky 83.52 321 *e*P P 11 14 51.7 +1.9
KIBK Kibwezi 83.61 265 P P 11 14 50.5 -0.4
KIBK Kibwezi 83.61 265 P P 11 14 51.5 +0.6
WRGLY Wrigley 83.65 24 P P 11 14 50.7 +0.6
baz=302,SNR=7.3
T35M Bob Quinn 83.72 31 P P 11 14 51.5 +0.8
baz=297
V35K Ketchikan 83.76 33 P P 11 14 51.3 +0.5
baz=296
MORH Mrgy, Hungar 83.84 317 ⇑P P 11 14 51.8 +0.3

MODS	Modra-Piesok	83.88	319	*e*P		P		11 14 51.7	0.0	
MODS					pmax	pmax				
	comp=Z,115nm,2.0s									
MODS	Modra-Piesok	83.88	319	*e*P		P		11 14 51.7	0.0	
VRAC	Vranov	83.93	320	⇑P		P		11 14 52.9	+1.0	
VRAC	Vranov	83.93	320	*e*P		P		11 14 52.8	+1.0	
VRAC	Vranov	83.93	320	⇑P		P		11 14 52.9	+1.0	
VRAC	Vranov	83.93	320	LR		LR		11 56 18.0		
	comp=Z,285nm,20.4s,baz=80,slow=39									
KMBO	Kilima Mbogo	83.94	267	P		P		11 14 52.2	-0.7	
KMBO					IAmb	IAmb		11 14 54.2		
	comp=Z,17nm,1.6s									
KMBO	Kilima Mbogo	83.94	267	P		P		11 14 52.2	-0.7	
KMBO					pmax	pmax				
	comp=Z,17nm,1.6s									
KMBO	Kilima Mbogo	83.94	267	P		P		11 14 54.0	+1.1	
KMBO				P		P		11 14 54.0	+1.1	
KRUC	Moravsky	84.15	320	*e*P		P		11 14 53.7	+0.7	
LODK	Lodwar	84.21	272	P		P		11 14 55.5	+1.4	
RUE	Ruedersdorf	84.27	324	*e*P		P		11 14 55.3	+1.9	
RONA	Rosalia, Austr	84.75	319	*i* P		P		11 14 56.6	+0.4	
	comp=Z,11nm,1.7s									
BRG	Berggiesshubel	84.86	322	*i* P		P		11 14 57.0	+0.4	
BRG					Amp			11 14 59.7		
	comp=Z,33nm,1.5s									
BRG	Berggiesshubel	84.86	322	*i* P		P		11 14 56.9	+0.4	
BRG					pmax	pmax				
	comp=Z,33nm,1.5s									
BRG					pmax	pmax				
	comp=Z,22nm,1.1s									
BRG					MLR	MLR				
	comp=Z,349nm,19.4s									
CONA	Conrad Observa	84.93	319	*e*P		P		11 14 57.9	+0.8	
	comp=Z,22nm,1.8s									
KOTAN	Kotaneelee Air	85.03	27	P		P		11 14 58.0	+0.8	
	baz=302									
CLL	Collm	85.21	323	*i* P		P		11 14 58.0	-0.3	
CLL				*i*				11 15 08.1		
CLL					pmax	pmax				
	comp=Z,34nm,1.5s									
CLL	Collm	85.21	323	*i* P		P		11 14 58.0	-0.3	
	comp=Z,34nm,1.5s									
CLL				*i* x		x		11 15 08.1		
	comp=Z,21nm,1.2s									
FLDN	Fort Liard	85.22	27	P		P		11 14 59.0	+0.8	
	baz=302									
ZVC	Zvikov	85.31	321	*e*P		P		11 14 59.3	+0.4	
ARSA	Arzberg	85.41	319	*e*P		P		11 14 59.8	+0.4	
	comp=Z,7.8nm,1.3s									
CKRC	Cesky Krumlov	85.50	320	*e*P		P		11 15 00.4	+0.6	
CKRC				*ex*		x		11 15 10.4		
CKRC	Cesky Krumlov	85.50	320	*e*P		P		11 15 00.4	+0.6	
CKRC				*e*				11 15 10.4		
KHC	Kasperske Hory	85.81	321	*e*P		P		11 15 02.3	+0.9	
KHC				*ex*		x		11 15 11.7		
KHC	Kasperske Hory	85.81	321	*ce*P		P		11 15 01.5	+0.1	
KHC					pmax	pmax				
	comp=Z,12nm,1.3s									
GERES	GERESS Array B	85.86	321	P		P		11 15 00.2	-1.5	
GERES	GERESS Array B	85.86	321	P		P		11 15 01.1	-0.7	
	comp=Z,2.7nm,0.7s,baz=37,slow=9.0,SNR=7.6									
GERES					LR	LR		11 56 13.7		
	comp=Z,272nm,20.0s,baz=95,slow=38									
	comp=Z,2.7nm,0.7s									
MOA	Molln	85.94	320	*e*P		P		11 15 02.6	+0.6	
	comp=Z,25nm,1.7s									
BIOA	Bad Ischl, Aus	86.39	320	*e*P		P		11 15 04.8	+0.5	
	comp=Z,6.9nm,1.2s									
KBA	Koelnbreinsper	86.83	319	*i* P		P		11 15 06.0	-0.6	
	comp=Z,6.6nm,1.1s									
LESA	Schwarzleotal	87.09	320	*e*P		P		11 15 07.7	-0.1	
	comp=Z,13nm,1.6s									
YKA	Yellowknife Ar	87.38	22	P		P		11 15 08.4	-0.3	
YKA	Yellowknife Ar	87.38	22	*ce*P		P		11 15 08.6	-0.1	
YKA					pmax	pmax				
	comp=Z,15nm,1.1s									
YKA	Yellowknife Ar	87.38	22	P		P		11 15 09.0	+0.3	
	comp=Z,14nm,1.1s,baz=313,slow=4.7,SNR=103									
YKA					LR	LR		12 00 48.7		
	comp=Z,55nm,18.8s,baz=286,slow=40									
	comp=Z,14nm,1.1s									
ABTA	Abfaltersbach	87.49	319	*e*P		P		11 15 08.6	-1.1	
	comp=Z,11nm,1.6s									
WTTA	Wattenberg	87.80	320	*e*P		P		11 15 11.0	-0.3	
	comp=Z,18nm,1.5s									
RAR	Rarotonga	87.98	113	LR		LR		11 48 07.9		
	comp=Z,56nm,20.6s,baz=300,slow=31									
SQTA	Sankt Quirin	88.08	320	*e*P		P		11 15 12.2	-0.4	
	comp=Z,15nm,1.5s									
MOTA	Moosalm	88.08	320	*e*P		P		11 15 12.0	-0.6	
	comp=Z,11nm,1.6s									
FETA	Feichten	88.46	320	*e*P		P		11 15 14.2	-0.2	
	comp=Z,9.1nm,1.3s									
HILA	High Level	88.90	26	P		P		11 15 15.9	-0.1	
DAVOX	Davos/Dischmat	89.09	320	P		P		11 15 19.5	+2.1	
	comp=Z,2.3nm,0.6s,baz=56,slow=8.2,SNR=4.5									
DAVOX					LR	LR		11 59 08.5		
	comp=Z,320nm,18.8s,baz=67,slow=38									
	comp=Z,2.3nm,0.6s									
MBAR	Mbarara	89.90	269	LR		LR		11 55 26.5		
	comp=Z,48nm,19.6s,baz=162,slow=35									
VAE	Valguarnera	90.22	310	LR		LR		12 01 33.1		
	comp=Z,95nm,21.1s,baz=117,slow=39									
BORG	Borgarnes	90.86	345	LR		LR		11 59 46.5		
	comp=Z,254nm,19.5s,baz=28,slow=38									
NEW	Newport	95.10	34	P		P		11 15 45.3	+0.2	
	baz=307									
YBH	Yreka Blue Hor	95.55	42	P		P		11 15 48.1	+0.8	
	comp=Z,3.0nm,1.0s,baz=257,slow=6.6,SNR=4.2									
	comp=Z,3.0nm,1.0s									
PPT	Papeete	95.77	107	LR		LR		11 49 33.3		
	comp=Z,74nm,20.9s,baz=262,slow=30									
PPT2	Papeete2	95.77	107	*e*SS		SS		11 33 29.7	-6.8	
	comp=Z,133nm,32.0s									
PPT2	Papeete2	95.77	107	*e*LR		LR		11 46 44.1		
	comp=Z,236nm,34.0s									
PPT2				*e*LR		LR		11 46 44.6		
	comp=Z,424nm,32.2s									
FRB	Frobisher Bay	96.55	4	LR		LR		12 03 34.9		
	comp=Z,124nm,20.6s,baz=356,slow=38									
MAW	Mawson	96.63	199	LR		LR		11 55 36.4		
	comp=Z,53nm,19.4s,baz=56,slow=33									
LSZ	Lusaka	97.07	256	LR		LR		11 58 56.6		
	comp=Z,74nm,18.3s,baz=97,slow=35									
TBI	Tubuai	97.68	112	*e*LR		LR		11 47 28.9		
	comp=Z,864nm,34.0s									
TBI				*e*LR		LR		11 47 45.5		
	comp=Z,3μm,42.5s									
VNDA	Vanda	99.97	172	LR		LR		12 05 22.1		
	comp=Z,81nm,18.1s,baz=336,slow=38									
NVAR	Mina Array Bea	100.19	43	P		Pdif		11 16 09.4	+1.0	
	comp=Z,1.8nm,1.0s,baz=281,slow=5.4,SNR=10.0									
PDAR	Pinedale Array	102.69	35	PKKP		PKKPbc		11 32 16.0	-3.4	
	comp=Z,0.3nm,0.8s,baz=132,slow=1.3,SNR=3.8									
TORD	Torodi Ar. Bea	111.44	293	PKKPab		PKKPab		11 32 01.2	-0.8	
	comp=Z,0.8nm,1.1s,baz=298,slow=3.1,SNR=3.6									
CCM	Cathedral Cave	115.32	27	P		PKiKP		11 21 04.5	+0.7	
	baz=327									
TXAR	Lajitas Array	115.33	42	PKP		PKiKP		11 21 04.2	+0.1	
	comp=Z,0.8nm,0.8s,baz=261,slow=1.0,SNR=8.1									
ABTX	Abilene, Hawle	115.40	37	P		PKiKP		11 21 04.5	+0.3	
	baz=318									
ACSO	Alum Creek Sta	116.53	20	P		PKiKP		11 21 06.0	0.0	
	baz=336									
P49A	Miami Univ. Ec	116.58	22	P		PKPdf		11 21 06.1	0.0	
	baz=334									
BINY	Binghamton	116.59	14	P		PKiKP		11 21 06.2	+0.1	
	baz=343									
JCT	Junction City	116.88	39			PKPdf		11 21 06.4	-0.7	
JCT	Junction City	116.88	39	P		PKPdf		11 21 07.2	+0.1	
	baz=317									
JCT	Junction City	116.88	39	PKIKP		PKPdf		11 21 06.4	-0.7	
O53A	New Philadelph	117.06	18	P		PKPdf		11 21 06.8	-0.3	
	baz=337									
MIAR	Mount Ida	117.12	31	P		PKPdf		11 21 07.0	-0.3	
	baz=324									
WCI	Wyandotte Cave	117.17	23	P		PKPdf		11 21 07.5	+0.2	
	baz=332									
P52A	Corning	117.34	19	P		PKPdf		11 21 07.4	-0.2	
	baz=336									
SSPA	Standing Stone	117.62	16	P		PKPdf		11 21 08.5	+0.3	
	baz=341									
WVT	Waverly	118.39	26			PKPdf		11 21 08.4	-1.3	
WVT	Waverly	118.39	26	P		PKPdf		11 21 10.2	+0.4	
	baz=330									
WVT	Waverly	118.39	26	PKIKP		PKPdf		11 21 08.5	-1.3	
833A	Chaparral WMA,	118.69	40	P		PKPdf		11 21 10.7	+0.2	
	baz=317									
OXF	Oxford	119.09	28	P		PKPdf		11 21 11.3	+0.2	
	baz=328									
TZTN	Tazewell	119.67	22	P		PKPdf		11 21 12.6	+0.3	
	baz=334									
BLA	Blacksburg	120.10	19	P		PKPdf		11 21 13.4	+0.3	
	baz=337									
VBMS	Vicksburg	120.50	30	P		PKPdf		11 21 14.2	+0.3	
	baz=326									
LRAL	Lakeview Retre	121.40	27	P		PKPdf		11 21 15.9	+0.3	
	baz=330									
KMSC	Kings Mountain	121.70	21	P		PKPdf		11 21 16.4	+0.3	
	baz=336									
PAULI	Pauline	121.83	21			PKPdf		11 21 15.6	-0.8	
GOGA	Godfrey	122.49	24	P		PKPdf		11 21 18.0	+0.3	
	baz=333									
CNNC	Cliffs of the	122.68	18	P		PKPdf		11 21 18.3	+0.3	
	baz=340									
BRAL	Brewton	122.97	28	P		PKPdf		11 21 19.0	+0.3	
	baz=329									
NHSC	New Hope	123.94	21	P		PKPdf		11 21 20.8	+0.3	
	baz=337									
TIGA	Tifton	124.19	25	P		PKPdf		11 21 21.4	+0.4	
	baz=333									
DWPF	Disney Wildern	128.00	25	P		PKPdf		11 21 29.1	+0.7	
	baz=334									
GMAL	Guarumal, Vera	145.38	40	*e*P		PKPbc		11 21 53.0	-7.6	
GO10	Punta Arenas	145.43	168			PKPdf		11 22 00.3	+0.7	
MG02	Cerro Sombrero	146.12	169			PKPdf		11 22 01.9	+1.2	
SJCC	San Jacinto, C	146.84	29	*e*P		PKPdf		11 22 04.2	+0.9	
URCC	San Jos de Ur	148.54	31	*e*P		PKPdf		11 22 05.0	-1.0	
DBBC	Dabeiba	148.82	33	*e*P		PKPbc		11 22 10.0	-0.5	
OCAC	Ocana	149.13	27	*e*P		PKPbc		11 22 11.7	+0.3	
SDV	Santo Domingo	149.60	22			PKPdf		11 22 06.4	-1.5	
SDV					PKPbc	sPKPdf		11 22 11.8	-1.5	
SDV	Santo Domingo	149.60	22	*e*P		PKPdf		11 22 07.6	-0.4	
PTBC	PUERTO BERRIO	150.11	31	*e*P		PKPdf		11 22 07.6	-1.0	
PAMC	Pamplona, Colo	150.20	27	*e*P		PKPdf		11 22 12.5	+3.1	
BAUV	El Baul	150.36	17			PKPdf		11 22 07.4	-1.5	
BAUV					PKPbc	sPKPdf		11 22 13.4	-0.8	
BAUV					PKPab	pPKPab		11 22 22.9	-1.3	
BARC	Barichara	150.66	28	*e*P		PKPbc		11 22 14.2	-1.0	
MALC	Bahia Malaga	150.69	38	*e*P		PKPbc		11 22 16.0	+1.0	
NORC	Norcasia	150.75	32	*e*P		PKPdf		11 22 13.3	+3.6	
GUY2C	Guyana, Caldas	150.78	34	*e*P		PKPbc		11 22 15.0	-0.8	
SPBC	San Pablo de B	151.07	31	*e*P		PKPbc		11 22 15.1	-0.9	
YOTC	Yotoco, Valle	151.28	37	*e*P		PKPdf		11 22 14.0	+3.5	
RUSC	La Rusia	151.32	29	*e*P		PKPbc		11 22 15.5	-1.5	
ANIL	Santa Ana	151.38	35	*e*P		PKPbc		11 22 15.7	-1.2	
ROSC	El Rosal	151.65	32	PKPbc		PKPbc		11 22 18.6	+0.9	
	comp=Z,17nm,0.5s,baz=346,slow=4.2,SNR=16									
ROSC	El Rosal	151.65	32	*e*P		PKPbc		11 22 18.9	+1.2	
JAMC	Jamundi, Valle	151.72	38	*e*P		PKPbc		11 22 17.4	-0.2	
ORTC	Ortega, Tolima	151.95	35	*e*P		PKPbc		11 22 17.7	-0.2	
CHIC	Chingaza	152.12	31	*e*P		PKPdf		11 22 12.2	0.0	
COYC	Coyhaique	152.18	161	PKPdf		PKPdf		11 22 10.1	-0.7	
COYC						PKPbc		11 22 18.1	+0.7	
COYC					PKPab	PKPab		11 22 28.1	+1.1	
POPC	Popayan, Colom	152.26	39	*e*P		PKPbc		11 22 17.3	-1.5	
PRAC	Prado	152.31	35	*e*P		PKPbc		11 22 18.5	-0.2	
BBAC	Balboa, Cauca	152.32	41	*e*P		PKPbc		11 22 17.7	-1.3	
VILC	Villavicencio,	152.58	32	*e*P		PKPbc		11 22 17.2	-2.3	
PAC1	Pacto, Paraso	152.66	46	*e*P		PKPbc		11 22 19.4	-0.3	
BETC	Betania	152.86	37	*e*P		PKPbc		11 22 18.9	-1.1	
GCUF	Volcan Galeras	152.88	42	*e*P		PKPdf		11 22 16.5	+3.1	
PIAT	Ana Tenorio	153.94	47	*e*P		PKPdf		11 22 19.8	+5.0	
LL02	Futaleuf	154.39	159			PKPdf		11 22 14.1	+0.1	
LL02						PKPbc		11 22 22.3	-0.1	
LL02					PKPab	PKPab		11 22 37.3	+0.9	
MCRA	Macar, Loja	154.98	55	PKPdf		PKPdf		11 22 13.9	-1.9	
MCRA						PKPab		11 22 39.5	-0.4	
PLCA	Paso Flores	157.01	158	PKPdf		PKPdf		11 22 16.3	-1.4	
PLCA						PKPab		11 22 48.6	+0.7	
PLCA	Paso Flores	157.01	158	PKIKP		PKPdf		11 22 16.3	-1.4	
PLCA	Paso Flores	157.01	158	PKPab		PKPab		11 22 48.4	+0.6	
	comp=Z,6.3nm,1.1s,baz=197,slow=3.5,SNR=5.5									
GO06	Curarrehue	157.67	155	PKPdf		PKPdf		11 22 18.7	0.0	
GO06						PKPab		11 22 51.3	+0.5	
BOAV	Boa Vista	158.04	3	PKPdf		PKPdf		11 22 19.7	-0.1	
BOAV						PKPab		11 22 52.1	-0.7	
CPUP	Villa Florida	173.06	197	PKP		PKPdf		11 22 30.6	-1.1	
	comp=Z,1.4nm,0.7s,baz=226,slow=3.1,SNR=3.5									
PTLB	Pontes e Lacer	175.77	354	PKPdf		PKPdf		11 22 32.5	-0.2	
PTLB						PKPab		11 24 10.8	+0.1	

IDC ***24*** *11:15:48.2±1.1, 14°.51N×146°.98E, h0km, mb3.8/10, mbtmp3.8/11, ML3.7/1, Error ellipse: s-maj=30.7km s-min=20.5km az=110.0*
NEIC ***24*** *11:15:48.7±1.4, 14°.29N±0°.07×147°.10E±0°.09, h10km±1km, mb4.6/7, Error ellipse: s-maj=17.4km s-min=8.1km az=55.0*

ISC 24 11:15:51.9±0.7, 14°.27N±0°.10×147°.06E±0°.09, h33km, n22, σ1°29/23, mb3.9/15, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.23	253		Pn	11 16 26.0	-0.6
GUMO	Guam	2.23	253	Pn	Pn	11 16 25.3	-1.3
	20nm,0.3s,baz=139,slow=7.3,SNR=9.4						
GUMO				Sn	Sn	11 16 52.3	-0.8
	18nm,0.3s,baz=43,slow=8.2,SNR=3.8						
	38nm,0.3s						
PATS	Pohnpei	13.30	123	Pn	Pn	11 18 57.1	-1.4
PMG	Port Moresby	23.52	180	P	P	11 21 00.4	+1.1
PMG				IAmb	IAmb	11 21 17.9	
	comp=Z,13nm,1.1s						
WB2	Warramunga Arr	36.22	200	P	P	11 22 51.0	-1.0
WB2				IAmb	IAmb	11 23 09.2	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	36.23	201	P	P	11 22 54.0	+2.0
	comp=Z,1.3nm,1.1s,baz=17,slow=9.6,SNR=3.4						
	comp=Z,1.3nm,1.1s						
EIDS	Eidsvold	39.59	174	P	P	11 23 19.0	-1.3
EIDS				IAmb	IAmb	11 23 20.2	
	comp=Z,24nm,1.5s						
ASAR	Alice Springs	39.84	199	P	P	11 23 25.9	+3.5
	comp=Z,0.3nm,0.9s,baz=29,slow=8.5,SNR=4.3						
	comp=Z,0.3nm,0.9s						
CMAR	Chiang Mai Arr	46.25	282	P	P	11 24 14.8	+0.2
CMAR	Chiang Mai Arr	46.25	282	P	P	11 24 15.8	+1.3
	comp=Z,0.4nm,0.3s,baz=70,slow=6.3,SNR=5.1						
	comp=Z,0.4nm,0.3s						
SONM	Sonino Array	47.43	323	P	P	11 24 23.7	+0.2
	comp=Z,0.6nm,0.6s,baz=127,slow=6.2,SNR=3.2						
	comp=Z,0.6nm,0.6s						
BBOO	Buckleboo	47.98	192	P	P	11 24 28.0	+0.4
ZALV	Zalesovo Beam	62.32	324	P	P	11 26 09.8	-1.1
	comp=Z,0.4nm,0.4s,baz=153,slow=9.7,SNR=1.6						
	comp=Z,0.4nm,0.4s						
MK31	Makanchi Array	62.49	316	P	P	11 26 12.2	-0.1
MKAR	Makanchi Array	62.49	316	P	P	11 26 11.4	-0.8
MKAR	Makanchi Array	62.49	316	P	P	11 26 12.2	0.0
	comp=Z,0.5nm,0.5s,baz=91,slow=7.9,SNR=7.3						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	65.44	319	P	P	11 26 29.9	-1.6
KURK				IAmb	IAmb	11 26 32.4	
	comp=Z,6.2nm,1.0s						
KURBB	Kurchatov Arra	65.49	319	P	P	11 26 31.0	-0.8
	comp=Z,4.4nm,0.9s,baz=99,slow=6.7,SNR=28						
	comp=Z,4.4nm,0.9s						
ILAR	Eielson Array	67.05	25	P	P	11 26 41.5	-0.1
	comp=Z,0.6nm,0.9s,baz=254,slow=6.0,SNR=5.2						
	comp=Z,0.6nm,0.9s						
BVAR	Borovoye Array	70.72	321	P	P	11 27 05.0	+0.4
	comp=Z,3.6nm,0.9s,baz=95,slow=7.4,SNR=12						
	comp=Z,3.6nm,0.9s						
BRVK	Borovoye	70.78	322	P	P	11 27 04.7	-0.3
BRVK				IAmb	IAmb	11 27 06.6	
	comp=Z,3.7nm,1.0s						
YKA	Yellowknife Ar	81.28	28	P	P	11 28 05.4	+0.9
	comp=Z,0.5nm,0.8s,baz=286,slow=5.3,SNR=7.4						
	comp=Z,0.5nm,0.8s						

KRSC 24 11:24:01.3±0.9, 48°.71N×156°.44E, h50km±22km, Ml3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.99	354	*e*P	Pn	11 24 34.4	+2.0
SKR				*e*S	Sn	11 24 58.5	+2.4
PAU	Pauzhetka	2.77	5	*e*S	Sn	11 25 20.2	+4.9
KDTR	Khodutka, Kamc	3.28	18	*e*P	Pn	11 24 53.7	+3.6
KDTR				*e*S	Sn	11 25 31.6	+3.9
ASAK	Asacha	3.79	14	*e*P	Pn	11 25 01.5	+4.2
MTVR	Mutnovka	3.94	16	*e*P	Pn	11 25 03.4	+4.1
MTVR				*e*S	Sn	11 25 48.7	+4.4
RUS	Russkaya	3.96	19	*e*P	Pn	11 25 03.2	+3.9
RUS				*e*S	Sn	11 25 48.4	+4.0
GRL	Gorelyy	3.98	14	*e*P	Pn	11 25 02.9	+3.0
AVH	Avacha	4.79	17	*e*P	Pn	11 25 14.5	+3.6

IDC ***24*** *11:29:38.0±1.5, 54°.75N×159°.88W, h0km, mb3.7/12, mbtmp3.7/14, ML3.7/2, Error ellipse: s-maj=37.1km s-min=19.7km az=172.0*
NEIC ***24*** *11:29:41.5±1.7, 54°.59N±0°.07×159°.69W±0°.10, h23km±10km, mb3.8/8, ML3.7/18, ML3.5(AEIC), Error ellipse: s-maj=10.8km s-min=7.2km az=149.0*
AEIC ***24*** *11:29:43.0±1.8, 54°.67N±0°.07×159°.66W±0°.09, h22km±7km, Error ellipse: s-maj=10.7km s-min=7.1km az=152.0*

ISC 24 11:29:39.2±0.8, 54°.56N±0°.07×159°.73W±0°.05, h10km, n144, σ1s16/135, mb3.9/13, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNBA	Chernabura Isl	0.28	18	Pg	Pg	11 29 47.3	+2.6
CNBA				Sg	Sg	11 29 52.4	+3.9
CNBA				IAML		11 29 52.5	
	comp=E,8μm,0.4s						
CNBA				IAML		11 29 52.5	
	comp=N,8μm,0.4s						
SDPT	Sand Point	0.90	332		Pg	11 29 56.5	-0.1
SDPT	Sand Point	0.90	332		Sg	11 30 07.9	-0.4
SDPT	Sand Point	0.90	332	IAML		11 30 09.3	
	comp=E,2μm,0.5s						
SDPT				IAML		11 30 14.2	
	comp=N,1μm,0.6s						
SDPT	Sand Point	0.90	332	P	Pg	11 29 56.7	+0.2
PVV	Pavlof Volcano	1.44	306		Pn	11 30 05.5	+0.2
PVV					Sn	11 30 23.6	-0.7
PS1A	Pavlof South-1	1.45	308		Pn	11 30 05.7	+0.4
PS1A					Sn	11 30 24.3	-0.1
PS4A	Pavlof South-4	1.46	304		Pn	11 30 05.9	+0.3
PN7A	Pavlof North-7	1.57	305		Pn	11 30 08.3	+1.1
DT1	Dutton Round H	1.57	292		Pn	11 30 07.5	+0.4
VNWF	Veniaminof 8	1.60	3		Pn	11 30 07.9	+0.2
VNHG	Veniaminof 1	1.70	11		Pn	11 30 09.1	+0.2
VNFG	Fog Glacier, M	1.74	3		Pn	11 30 09.7	+0.3
CHGN	Chignik	1.90	23		Pn	11 30 10.6	-1.0
CHGN	Chignik	1.90	23	IAML		11 30 40.8	
	comp=E,828nm,0.7s						
FALS	False Pass	2.16	280		Pn	11 30 16.5	+1.4
FALS	False Pass	2.16	280	P	Pn	11 30 16.7	+1.6
ISLZ	Isanotski Laza	2.32	276		Pn	11 30 19.1	+1.8
ISNN	Isanotski Nort	2.36	278		Pn	11 30 20.2	+2.3
ANNW	Aniakchak Nort	2.56	19		Pn	11 30 21.3	+0.5
WECS	Westdahl Cape	2.94	272		Pn	11 30 27.9	+1.9
R16K	Pilot Point	3.25	21		Pn	11 30 31.0	+0.8
AKSA	Akutan Strait	3.52	266		Pn	11 30 36.3	+2.5
AKUT	Akutan	3.56	266	Pn	Pn	11 30 30.3	-4.1
AKUT				IAML		11 31 22.5	
	comp=N,128nm,3.4s						
AKUT				IAML		11 32 20.4	
	comp=E,151nm,2.7s						
UNV	Unalaska Valle	4.04	263		Pn	11 30 42.7	+1.7
UNV	Unalaska Valle	4.04	263	P	Pn	11 30 42.6	+1.6
CNTC	Contact Creek	4.29	28		Pn	11 30 44.6	+0.1
MAPS	Pakushin South	4.30	263		Pn	11 30 46.0	+1.4
ANCK	Angle Creek	4.35	31		Pn	11 30 45.7	+0.4
P16K	Nushagak River	4.59	11		Pn	11 30 48.8	+0.3
O15K	Ungaliktkiuk R	4.63	359		Pn	11 30 49.5	+0.4
O14K	Tigyukauivet M	4.78	351		Pn	11 30 51.5	+0.3
O14K	Tigyukauivet M	4.78	351	IAML		11 32 26.1	
	comp=E,60nm,4.0s						
O14K				IAML		11 32 45.8	
	comp=N,67nm,4.2s						
O16K	Kokwok River B	5.13	9		Pn	11 30 56.0	+0.1
O16K	Kokwok River B	5.13	9	IAML		11 33 07.6	
	comp=N,37nm,4.1s						
KDAK	Kodiak Island	5.14	48	Pn	Pn	11 30 56.2	+

O29M	**Mount Kennedy**	**12.74**	**55**	Pn	**Pn**	**11 32 42.0**	**+1.8**
I26K	**Coal Creek Min**	**13.55**	**31**	Pn	**Pn**	**11 32 49.2**	**-2.0**
K29M	**Barlow Dome**	**14.61**	**42**	P	**P**	**11 33 14.6**	**+2.3**
J29N	**Klondike Camp**	**14.67**	**39**	P	**P**	**11 33 15.1**	**+2.3**
BMAR	**Burnt Mountain**	**14.79**	**23**	P	**P**	**11 33 15.1**	**+0.9**
TOLK	**Toolik Lake Re**	**14.90**	**15**	P	**P**	**11 33 14.9**	**-0.4**
C23K	**Itkillik River**	**15.88**	**12**	P	**Pn**	**11 33 23.1**	**+0.6**
EPYK	**Eagle Plains**	**16.26**	**34**		**P**	**11 33 31.2**	**+0.7**
H31M	**Peel River**	**16.77**	**38**	P	**Pn**	**11 33 33.6**	**-0.2**
H31M				IAmb	IAmb	11 33 41.3	
	comp=Z,6.9nm,1.0s						
G30M	**tAoh Zrail Nji**	**16.79**	**33**		**Pn**	**11 33 35.7**	**+1.6**
G30M				IAmb	IAmb	11 33 38.0	
	comp=Z,8.2nm,1.1s						
G31M	**Satah River**	**17.38**	**35**	P	**Pn**	**11 33 39.9**	**-1.5**
G31M				IAmb	IAmb	11 33 55.1	
	comp=Z,7.7nm,1.3s						
F31M	**Tsiigehtchic**	**17.84**	**33**		**Pn**	**11 33 44.8**	**-2.3**
INK	**Inuvik**	**18.40**	**31**	P	**Pn**	**11 33 52.3**	**-1.7**
INK	**Inuvik**	**18.40**	**31**	P	**Pn**	**11 33 53.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=193,slow=13,SNR=12						
	comp=Z,1.1nm,0.4s						
C36M	**Paulatuk**	**21.90**	**34**	P	**P**	**11 34 30.6**	**-1.3**
C36M				IAmb	IAmb	11 34 33.8	
	comp=Z,4.5nm,1.0s						
YKA	**Yellowknife Ar**	**24.39**	**53**	P	**P**	**11 34 57.2**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=266,slow=7.9,SNR=5.7						
	comp=Z,0.4nm,0.9s						
PETK	**Petropavlovsk-**	**24.89**	**284**	P	**P**	**11 35 02.2**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=80,slow=13,SNR=34						
	comp=Z,2.7nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**43.03**	**229**	T	T	12 23 31.9	
	baz=28,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**43.03**	**229**	T	T	12 23 31.5	
	baz=28,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**43.04**	**229**	T	T	12 23 36.4	
	baz=28,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**44.19**	**229**	T	T	12 25 00.3	
	baz=29,slow=74,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**44.20**	**229**	T	T	12 25 02.6	
	baz=29,slow=74,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**44.21**	**229**	T	T	12 25 02.0	
	baz=29						
NRIK	**Noril'sk**	**47.15**	**333**	P	**P**	**11 38 09.2**	**-1.7**
	comp=Z,1.6nm,0.5s,baz=93,slow=4.8,SNR=4.0						
	comp=Z,1.6nm,0.5s						
TXAR	**Lajitas Array**	**47.15**	**99**	P	**P**	**11 38 13.5**	**+1.8**
	comp=Z,0.2nm,0.9s,baz=308,slow=7.4,SNR=1.7						
	comp=Z,0.2nm,0.9s						
SONM	**Songino Array**	**54.96**	**305**	P	**P**	**11 39 09.2**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=88,slow=7.4,SNR=4.1						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**56.16**	**358**	P	**P**	**11 39 17.3**	**-1.1**
	comp=Z,3.0nm,1.0s,baz=19,slow=8.6,SNR=1.4						
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**64.25**	**357**	P	**P**	**11 40 12.6**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=14,slow=8.6,SNR=1.4						
	comp=Z,1.1nm,0.9s						
NOA	**NORSAR Array B**	**64.53**	**5**	P	**P**	**11 40 15.2**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=354,slow=9.4,SNR=2.4						
	comp=Z,0.5nm,0.8s						
BVAR	**Borovoye Array**	**65.03**	**329**	P	**P**	**11 40 18.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=24,slow=11,SNR=2.8						
	comp=Z,0.4nm,0.5s						
HFS	**Hagfors**	**65.54**	**4**	P	**P**	**11 40 21.3**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=46,slow=6.4,SNR=6.8						
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**66.24**	**318**	P	**P**	**11 40 25.7**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=60,slow=6.2,SNR=2.5						
	comp=Z,0.3nm,0.8s						
AKASG	**Malin Array Be**	**74.85**	**354**	P	**P**	**11 41 18.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=5.3,slow=5.0,SNR=3.2						
	comp=Z,0.3nm,0.3s						
QSPA	**South Pole Qui**	**144.33**	**180**	PKP	**PKPab**	**11 49 11.9**	**-0.2**
	comp=Z,1.8nm,1.1s,baz=180,slow=1.0,SNR=1.9						

*IDC **24** 11:43:34.7±5.6,4.4°S×125.98°E,h472^{km}±81^{km},mb3.1/4, mbtmp4.0/5,Error ellipse: s-maj=183.2km s-min=24.8km az=67.0*

ISC 24 11:43:33.3±1.0,4.6S±0.1°×125.5E±0.2,h450^{km},n18, σ0.78/16,mb3.6/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**2.57**	**11**	P	**P**	**11 44 36.6**	**-0.7**
SOEI	**Soe**	**5.27**	**193**	P	P	11 44 59.7	-0.7
FAKI	**Fak Fak**	**6.95**	**76**	P	**P**	**11 45 17.2**	**-0.4**
PLAI	**Plampang**	**8.73**	**241**	P	P	11 45 35.7	-1.0
DRS	**Darwin Rock St**	**9.46**	**146**	P	**P**	**11 45 45.2**	**+0.7**
MTN	**Manton Dam**	**9.92**	**146**	P	**P**	**11 45 49.4**	**-0.2**
KDU	**Kakadu**	**10.61**	**140**	P	**P**	**11 45 56.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**13.43**	**179**	P	**P**	**11 46 26.8**	**-0.8**
WRA	**Warramunga Arr**	**17.53**	**151**	P	**P**	**11 47 09.2**	**-2.1**
	7.1nm,0.6s,baz=333,slow=9.9,SNR=50						
PSA00	**Pilbara Seismi**	**17.75**	**197**	P	**P**	**11 47 13.0**	**-0.5**
WRKA	**Warakurna**	**20.51**	**173**	P	**P**	**11 47 39.8**	**+0.4**
ASAR	**Alice Springs**	**20.64**	**158**	P	**P**	**11 47 40.7**	**+0.2**
	3.0nm,0.5s,baz=333,slow=8.3,SNR=112						
	3.0nm,0.5s						
QIS	**Mount Isa**	**20.99**	**140**	P	**P**	**11 47 44.2**	**+0.4**
MEEK	**Meekatharra**	**22.89**	**196**	P	**P**	**11 48 00.3**	**-0.6**
OOD	**Oodnadatta**	**25.04**	**158**	P	**P**	**11 48 19.7**	**-0.4**
STKA	**Stephens Creek**	**31.07**	**153**	P	**P**	**11 49 12.9**	**0.0**
	1.9nm,0.5s,baz=320,slow=9.3,SNR=7.3						
	1.9nm,0.5s						
MKAR	**Makanchi Array**	**63.79**	**328**	P	**P**	**11 53 20.7**	**+0.7**
	0.2nm,0.4s,baz=140,slow=5.2,SNR=5.0						
	0.2nm,0.4s						
QSPA	**South Pole Qui**	**85.37**	**180**	P	**P**	**11 55 21.6**	**-0.1**
	0.6nm,0.4s,baz=176,slow=1.2,SNR=8.7						
	0.6nm,0.4s						

IDC 24 11:48:16.1±3.0,6.72S×117.66E,h0^{km},mb3.1/3, mbtmp3.2/3,MS3.0/1,Error ellipse: s-maj=282.8km s-min=28.5km az=52.0,Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.85**	**131**	P	P	11 52 58.9	-0.9
	0.3nm,0.6s,baz=302,slow=13,SNR=3.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**22.97**	**139**	P	P	11 53 23.0	+0.5
	1.0nm,0.8s,baz=315,slow=9.1,SNR=9.2						
	1.0nm,0.8s						
JHJ	**Hachijo jima 2**	**44.85**	**27**	LR	LR	12 17 42.9	
	comp=Z,16nm,18.8s,baz=111,slow=39						
MKAR	**Makanchi Array**	**61.84**	**333**	P	P	11 58 37.1	0.0
	0.2nm,0.7s,baz=125,slow=7.6,SNR=1.9						
	0.2nm,0.7s						

*IDC **24** 11:55:43.3±2.6,37.05N×97.48W,h0^{km},mb3.2/1, mbtmp3.0/3,ML3.7/2,Error ellipse: s-maj=36.2km s-min=16.1km az=88.0*

*TUL **24** 11:55:45.3±0.3,36.91N±0.01°×97.65W±0.01,h8^{km}±1^{km}, ML3.6,mb_Lg3.1/131(NEIC),ML3.4/38(NEIC),Error ellipse: s-maj=1.5km s-min=1.3km az=181.0*

*NEIC **24** 11:55:45.1±0.3,36.905N±0.005×97.66W±0.01,h5^{km}±5^{km}, Error ellipse: s-maj=1.5km s-min=0.7km az=101.0*

ISC 24 11:55:45.3±0.9,36.90N±0.03×97.65W±0.03,h10^{km}±7^{km}, n97,σ0.44/33,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.17**	**255**	Pg	**Pg**	**11 55 49.0**	**-0.1**
GC02				Sg	**Sg**	**11 55 51.6**	**+0.1**
KAN17	**Caldwell West**	**0.17**	**329**	Pg	**Pg**	**11 55 49.0**	**-0.1**
KAN17				Sg	**Sg**	**11 55 51.5**	**-0.1**
KAN17				IAML		11 55 51.8	
	comp=E,10μm,0.4s						
KAN17				IAML		11 55 52.2	
	comp=N,8μm,0.3s						
KAN13	**South Haven SW**	**0.18**	**51**	Pg	**Pg**	**11 55 49.2**	**0.0**
KAN13				Sg	**Sg**	**11 55 51.8**	**-0.1**
KAN13				IAML		11 55 54.9	
	comp=E,8μm,0.3s						
KAN09	**Caldwell North**	**0.24**	**7**	Pg	**Pg**	**11 55 50.2**	**0.0**
KAN09				IAML		11 55 54.4	
	comp=N,6μm,0.2s						
KAN14	**Manchester OK**	**0.26**	**284**	Pg	**Pg**	**11 55 50.6**	**+0.1**
KAN14				IAML		11 55 54.3	
	comp=E,6μm,0.2s						
KAN01	**Argonia South**	**0.27**	**342**	Pg	**Pg**	**11 55 50.7**	**-0.1**
KAN05	**Bluff City Nor**	**0.27**	**321**		**Pg**	**11 55 50.9**	**0.0**
KAN06	**Argonia West S**	**0.39**	**335**		**Pg**	**11 55 53.0**	**0.0**
KS21	**Milan North St**	**0.39**	**359**	Pg	**Pg**	**11 55 53.0**	**0.0**
KAN08	**Anthony NE Sta**	**0.42**	**323**	Pg	**Pg**	**11 55 53.5**	**+0.1**
KAN08				IAML		11 56 01.1	
	comp=N,3μm,0.4s						
KAN08				IAML		11 56 01.3	
	comp=E,4μm,0.3s						
KAN10	**Anthony SW Sta**	**0.42**	**303**	Pg	**Pg**	**11 55 53.7**	**+0.1**
KAN10				IAML		11 56 01.2	
	comp=N,3μm,0.3s						
KAN10				IAML		11 56 04.9	
	comp=E,3μm,0.7s						
CROK	**Carrier**	**0.47**	**214**	Pg	**Pg**	**11 55 54.8**	**+0.2**
KAN12	**Harper NE Stat**	**0.48**	**326**		**Pg**	**11 55 54.8**	**0.0**
KAN12				IAML		11 56 03.5	
	comp=N,4μm,0.4s						
KAN12				IAML		11 56 12.1	
	comp=E,4μm,0.4s						
OK048	**Pawnee Station**	**0.75**	**130**	Pg	**Pg**	**11 55 59.7**	**0.0**
OK048				IAML		11 56 11.8	
	comp=E,1μm,0.4s						
OK048				IAML		11 56 18.3	
	comp=E,1μm,0.7s						
OK051	**E0350 and S346**	**0.77**	**120**		**Pg**	**11 56 00.0**	**0.0**
OK051				IAML		11 56 12.8	
	comp=E,2μm,0.2s						
OK051				IAML		11 56 16.8	
	comp=E,2μm,0.2s						
T35A	**Sooner Cattle**	**0.92**	**88**		**Pg**	**11 56 02.8**	**-0.2**
T35A				IAML		11 56 15.1	
	comp=E,996nm,0.3s						
T35A				IAML		11 56 15.3	
	comp=N,1μm,0.3s						
OK033	**Mehan**	**1.03**	**146**		**Pg**	**11 56 04.9**	**-0.1**
OK033				IAML		11 56 20.5	
	comp=N,739nm,0.3s						
OK033				IAML		11 56 24.5	
	comp=N,957nm,0.2s						
QUOK	**Quay**	**1.05**	**133**		**Pg**	**11 56 05.3**	**-0.2**
U32A	**Winter Ranch,**	**1.20**	**245**		**Pg**	**11 56 07.7**	**-0.7**
ADOK	**Arcadia Dam**	**1.26**	**169**		**Pg**	**11 56 09.2**	**-0.4**
DEOK	**Depew**	**1.41**	**138**	Pg	**Pn**	**11 56 11.2**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**1.50**	**173**		**Pn**	**11 56 13.1**	**+0.9**
ELIS	**Ellis County**	**1.65**	**240**		**Pb**	**11 56 15.6**	**-0.2**
R32A	**Long Quarter,**	**1.74**	**331**		**Pb**	**11 56 16.8**	**-0.5**
TUL3	**Leonard**	**1.80**	**123**		**Pn**	**11 56 17.5**	**+1.1**
TUL3				IAmb_Lg		11 56 45.9	
	comp=Z,145nm,1.1s						
X34A	**Smith Ranch, M**	**2.29**	**184**	IAmb_Lg		11 57 01.8	
	comp=Z,73nm,0.8s						
WMOK	**Wichita Mounta**	**2.34**	**203**	Pn	**Pn**	**11 56 24.9**	**+1.0**
KSU1	**Kansas State U**	**2.35**	**20**		**Pn**	**11 56 25.1**	**+1.1**
X37A	**Clayton**	**2.96**	**140**	IAmb_Lg		11 57 24.5	
	comp=Z,92nm,0.8s						
S39A	**Bolivar**	**3.54**	**76**	IAmb_Lg		11 57 42.4	
	comp=Z,48nm,0.7s						
AMTX	**Amarillo**	**3.84**	**240**	IAmb_Lg		11 57 55.5	
	comp=Z,76nm,1.0s						
FW06	**Azle**	**3.92**	**179**	IAmb_Lg		11 57 52.7	
	comp=Z,31nm,0.8s						
MIAR	**Mount Ida**	**4.06**	**124**	IAmb_Lg		11 57 58.1	
	comp=Z,77nm,0.9s						
RTBA	**Rita Blanca**	**4.11**	**265**	IAmb_Lg		11 58 01.2	
	comp=Z,32nm,0.9s						
DKNS	**Dickens**	**4.19**	**221**	IAmb_Lg		11 58 04.5	
	comp=Z,29nm,0.8s						
P38A	**Dawn**	**4.24**	**49**	IAmb_Lg		11 58 06.4	
	comp=Z,48nm,0.7s						
MGMO	**Mountain Grove**	**4.32**	**85**	IAmb_Lg		11 58 00.2	
	comp=Z,58nm,0.7s						
TREL	**Terrell**	**4.35**	**162**	IAmb_Lg		11 58 14.0	
	comp=Z,33nm,1.1s						
KSCO	**Kaye Shedlock'**	**4.46**	**300**	IAmb_Lg		11 58 17.9	
	comp=Z,59nm,1.1s						
R40A	**Maddies Statio**	**4.50**	**70**	IAmb_Lg		11 58 15.4	
	comp=Z,23nm,0.8s						
ABTX	**Abilene, Hawle**	**4.57**	**202**	IAmb_Lg		11 58 07.1	
	comp=Z,23nm,1.0s						
FCAR	**Ozark Folk Cen**	**4.57**	**101**	IAmb_Lg		11 58 10.7	
	comp=Z,64nm,0.8s						
X40A	**Basin Creek Fa**	**4.60**	**120**	IAmb_Lg		11 58 21.2	
	comp=Z,29nm,0.9s						
UALR	**University of**	**4.81**	**115**	IAmb_Lg		11 58 24.1	
	comp=Z,55nm,1.1s						
SN05	**Snyder 5**	**4.81**	**214**	IAmb_Lg		11 58 24.0	
	comp=Z,26nm,0.8s						
WLAR	**White Oak Lake**	**4.90**	**129**	IAmb_Lg		11 58 28.1	
	comp=Z,37nm,0.7s						
237A	**Washetta, Mont**	**5.12**	**162**	IAmb_Lg		11 58 38.5	
	comp=Z,19nm,0.7s						
P40A	**Paris**	**5.14**	**58**	IAmb_Lg		11 58 36.8	
	comp=Z,28nm,0.8s						
N38A	**Joes South For**	**5.20**	**40**	IAmb_Lg		11 58 44.4	
	comp=Z,54nm,0.7s						
CCM	**Cathedral Cave**	**5.23**	**75**	IAmb_Lg		11 58 36.9	
	comp=Z,35nm,0.8s						
T42A	**Van Buren**	**5.26**	**87**	IAmb_Lg		11 58 43.9	
	comp=Z,22nm,0.7s						
OGNE	**Ogallala**	**5.29**	**321**	IAmb_Lg		11 58 44.7	
	comp=Z,46nm,0.9s						
LCAR	**Charles**	**5.30**	**97**	IAmb_Lg		11 58 35.3	
	comp=Z,25nm,0.7s						
Z41A	**Richland Creek**	**5.38**	**131**	IAmb_Lg		11 58 47.0	
	comp=Z,39nm,0.8s						
T25A	**Trinidad**	**5.41**	**275**	IAmb_Lg		11 58 40.1	
	comp=Z,25nm,0.7s						
BRDY	**Brady**	**5.71**	**192**	IAmb_Lg		11 58 53.2	
	comp=Z,20nm,0.8s						
SGCY	**Sterling City**	**5.74**	**211**	IAmb_Lg		11 59 01.6	
	comp=Z,49nm,1.1s						
PBMO	**Poplar Bluff**	**5.80**	**89**	IAmb_Lg		11 58 47.2	
	comp=Z,25nm,0.7s						
FVM	**French Village**	**5.85**	**77**	IAmb_Lg		11 59 01.2	
	comp=Z,32nm,0.8s						
SCIA	**State Center**	**6.07**	**33**	IAmb_Lg		11 59 05.0	
	comp=Z,46nm,0.7s						
SLM	**Saint Louis**	**6.13**	**71**	IAmb_Lg		11 58 57.1	
	comp=Z,26nm,0.8s						
Q24A	**Divide**	**6.27**	**291**	IAmb_Lg		11 59 08.1	
	comp=Z,30nm,0.7s						
143A	**Socs Landing,**	**6.63**	**127**	IAmb_Lg		11 59 32.2	
	comp=Z,23nm,0.7s						
JCT	**Junction City**	**6.65**	**196**	IAmb_Lg		11 59 17.6	
	comp=Z,31nm,0.9s						
ECSD	**EROS Data Cent**	**6.88**	**6**	IAmb_Lg		11 59 24.3	
	comp=Z,13nm,0.8s						
ISCO	**Idaho Springs**	**6.89**	**297**	IAmb_Lg		11 59 35.5	
	comp=Z,14nm,0.7s						
MNHN	**Monahans**	**6.97**	**219**	IAmb_Lg		11 59 29.1	
	comp=Z,13nm,1.0s						
MLDN	**Muldoon**	**7.11**	**176**	IAmb_Lg		11 59 28.1	
	comp=Z,19nm,0.8s						
OXF	**Oxford**	**7.12**	**107**	IAmb_Lg		11 59 42.8	
	comp=Z,27nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.12**	**71**	IAmb_Lg		11 59 43.6	
	comp=Z,39nm,1.0s						
L40A	**Anamosa**	**7.17**	**42**	IAmb_Lg		11 59 45.6	
	comp=Z,28nm,0.7s						
Y45A	**Yeager Farm, C**	**7.28**	**112**	IAmb_Lg		11 59 47.0	
	comp=Z,37nm,0.7s						
ANMO	**Albuquerque**	**7.40**	**257**	IAmb_Lg		11 59 41.9	
	comp=Z,8.0nm,1.0s						
ANMO	**Albuquerque**	**7.40**	**257**	Pg	Pg	11 58 01.5	-5.5
	comp=Z,0.9nm,0.3s,baz=171,slow=18,SNR=13						
ANMO				Lg	Lg	11 59 33.2	
	comp=Z,0.6nm,0.3s,baz=138,slow=14,SNR=4.1						
HNDO	**Hondo**	**7.47**	**191**	IAmb_Lg		11 59 56.1	
	comp=Z,22nm,0.9s						
PHWY	**Pilot Hill**	**7.49**	**308**	IAmb_Lg		11 59 41.1	
	comp=Z,19nm,0.7s						
N23A	**Red Feather La**	**7.60**	**304**	IAmb_Lg		11 59 48.1	
	comp=Z,26nm,0.7s						
SUSD	**Miller**	**7.60**	**353**	IAmb_Lg		12 00 00.3	
	comp=Z,19nm,0.7s						
I37A	**Lemond, Waseca**	**7.81**	**23**	IAmb_Lg		12 00 02.6	
	comp=Z,19nm,0.8s						
SAND	**Sanderson**	**7.87**	**210**	IAmb_Lg		12 00 04.7	
	comp=Z,22nm,1.1s						
O44A	**Mansfield**	**7.90**	**63**	IAmb_Lg		12 00 03.2	
	comp=Z,26nm,0.8s						
WVT	**Waverly**	**7.95**	**93**	IAmb_Lg		12 00 04.7	
	comp=Z,13nm,0.8s						
PLAL	**Pickwick Lake**	**8.00**	**101**	IAmb_Lg		12 00 05.6	
	comp=Z,28nm,1.1s						
L42A	**Oliver, Polo**	**8.01**	**48**	IAmb_Lg		12 00 12.6	
	comp=Z,30nm,0.9s						
Y22D	**IRIS PASSCAL I**	**8.07**	**252**	IAmb_Lg		12 00 16.2	
	comp=Z,26nm,0.8s						
ALPN	**Alpine**	**8.20**	**219**	IAmb_Lg		12 00 17.7	
	comp=Z,12nm,1.1s						
JFWS	**Jewell Farm**	**8.28**	**41**	IAmb_Lg		12 00 15.5	
	comp=Z,20nm,0.7s						
Z47A	**Carrollton**	**8.68**	**112**	IAmb_Lg		12 00 41.0	
	comp=Z,16nm,1.0s						
I40A	**Norwalk**	**8.81**	**35**	IAmb_Lg		12 00 37.4	
	comp=Z,12nm,0.7s						
RWWY	**Rawlins**	**8.82**	**306**	IAmb_Lg		12 00 29.3	
	comp=Z,18nm,1.0s						
K22A	**Casper**	**8.92**	**313**	IAmb_Lg		12 00 44.1	
	comp=Z,22nm,1.1s						
TXAR	**Lajitas Array**	**9.07**	**215**	Pn	**Pn**	**11 57 56.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=42,slow=12,SNR=12						
TXAR				Lg	Lg	12 00 30.6	
	comp=Z,0.7nm,0.3s,baz=37,slow=30,SNR=7.0						
	comp=Z,0.2nm,0.3s						
I42A	**Draeger Farm,**	**9.65**	**41**	IAmb_Lg		12 00 52.0	
	comp=Z,15nm,0.8s						
E28A	**Huff**	**9.93**	**348**	IAmb_Lg		12 01 21.7	
	comp=Z,17nm,1.0s						
PDAR	**Pinedale Array**	**10.87**	**306**	Pn	**Pn**	**11 58 20.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=124,slow=14,SNR=3.0						
PDAR				Lg	Lg	12 01 23.9	
	comp=Z,0.3nm,0.3s,baz=116,slow=32,SNR=3.4						
	comp=Z,0.2nm,0.4s						
TKL	**Tuckaleechee C**	**11.27**	**92**	Lg	Lg	12 01 32.1	
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=2.7						
ILAR	**Eielson Array**	**40.14**	**330**	P	**P**	**12 03 20.8**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=106,slow=7.6,SNR=4.1						
	comp=Z,0.2nm,0.5s						

*RSPR **24** 11:56:18.0,19.06N×68.68W,h10^{km}±2^{km},MD2.7/11*
*OSPL **24** 11:56:17.4±2.9,19.09N×68.69W,h4^{km}±16^{km},ML2.5*
*NEIC **24** 11:56:17.0±1.9,19.09N±0.05×68.63W±0.05,h9^{km}±7^{km}, ML2.7/26,Md2.7/11(RSPR),Error ellipse: s-maj=8.9km s-min=4.6km az=49.0*
*SDD **24** 11:56:18.0±2.5,19.03N×68.60W,h15^{km}±50^{km},MD2.8, ML2.5,MW3.0*

ISC 24 11:56:15.5±1.5,19.10N±0.07×68.61W±0.03,h6^{km}±11^{km}, n44,σ0.70/51,7C-8D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIDR	**Miches**	**0.43**	**255**	*e*Pg	**Pb**	**11 56 25.3**	**-0.2**
MIDR				↑*e*Sg	**Sb**	**11 56 31.6**	**-0.7**
MIDR				IAML		11 56 31.8	
	comp=N,232nm,0.2s						
PCDR	**Punta Cana, DR**	**0.62**	**160**	↑*e*P	**Pb**	**11 56 28.8**	**+0.1**
PCDR	**Punta Cana, DR**	**0.62**	**160**		**Pb**	**11 56 28.8**	**+0.1**
PCDR					**Sb**	**11 56 37.1**	**-0.5**
PCDR	**Punta Cana, DR**	**0.62**	**160**	IAML		11 56 38.4	
	comp=N,319nm,0.3s						
PCDR	**Punta Cana, DR**	**0.62**	**160**	↑*e*Pg	**Pb**	**11 56 28.6**	**-0.1**
PCDR				↓*e*Sg	**Sg**	**11 56 36.5**	**+1.0**
PCDR				IAML		11 56 38.4	
	comp=N,297nm,0.2s						
PCDR	**Punta Cana, DR**	**0.62**	**160**	*i* P	**Pb**	**11 56 28.8**	**+0.1**
PCDR				*e*S	**Sb**	**11 56 37.2**	**-0.5**
PCDR				IAML		11 56 38.2	
	comp=Z,189nm,0.2s						
HATOM	**Hato Mayor del**	**0.79**	**247**	↓*e*Pg	**Pg**	**11 56 30.8**	**-0.1**
HATOM				↑*e*Sg	**Sg**	**11 56 40.9**	**-0.2**
HATOM				IAML		11 56 41.3	
	comp=N,60nm,0.2s						
NADR	**Nagua**	**1.21**	**282**	↓*e*Sg	**Sn**	**11 56 57.0**	**+1.4**
NADR				IAML		11 56 57.2	
	comp=N,322nm,1.4s						
AGPR	**Aguadilla, PR**	**1.55**	**114**	↓*e*P	**Pn**	**11 56 43.1**	**-0.6**
AGPR	**Aguadilla, PR**	**1.55**	**114**	*e*S	**Sn**	**11 57 03.1**	**-0.9**
AGPR	**Aguadilla, PR**	**1.55**	**114**		**Pn**	**11 56 43.1**	**-0.6**
AGPR	**Aguadilla, PR**	**1.55**	**114**		**Sn**	**11 57 03.1**	**-0.9**
AGPR	**Aguadilla, PR**	**1.55**	**114**	IAML		11 56 54.3	
	comp=N,170nm,3.5s						
AGPR	**Aguadilla, PR**	**1.55**	**114**	IAML		11 57 04.4	
	comp=E,141nm,2.7s						
AGPR	**Aguadilla, PR**	**1.55**	**114**	*i* P	**Pn**	**11 56 43.1**	**-0.6**
AGPR				*e*S	**Sb**	**11 57 04.7**	**+0.2**
AGPR				IAML		11 57 09.7	
	comp=Z,60nm,1.1s						
LSP	**Las Mesas**	**1.71**	**122**	↑*e*P	**Pn**	**11 56 46.5**	**+0.7**
LSP	**Las Mesas**	**1.71**	**122**	*e*S	**Sg**	**11 57 11.3**	**+0.8**
LSP	**Las Mesas**	**1.71**	**122**		**Pn**	**11 56 46.5**	**+0.7**
LSP					**Sg**	**11 57 11.3**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.79**	**127**	↑*e*P	**Pn**	**11 56 46.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.79**	**127**		**Pn**	**11 56 46.7**	**-0.2**
CRPR					**Sb**	**11 57 11.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.79**	**127**	*i* P	**Pb**	**11 56 48.3**	**-0.4**
CRPR				*e*S	**Sb**	**11 57

DZM				S		Sn	12 08 00.8	-1.7
	21nm,0.5s,baz=319,slow=20,SNR=1.7							
DZM				LR		LR	12 08 45.1	
	comp=Z,54nm,18.2s,baz=72,slow=32							
ONTNC	Ouen Toro	7.22	188	P		Pn	12 06 48.4	+0.9
OUENC	Ouen Island, N	7.29	185	P		Pn	12 06 49.7	+1.3
PINNC	Pines Island,	7.46	180	P		Pn	12 06 52.2	+1.5
OUZ	Omahuta	20.76	166	P		P	12 09 39.7	+2.4
OUZ	Omahuta	20.76	166	P		P	12 09 39.9	+2.6
WCZ	Waipu Caves	21.63	165	P		P	12 09 48.9	+2.2
WIAZ	Waiheke Island	22.64	164	P		P	12 09 58.5	+1.3
KUZ	Kuaotunu	22.76	163	P		P	12 09 59.6	+1.2
KUZ	Kuaotunu	22.76	163	P		P	12 10 00.1	+1.7
MKAZ	Moumakai	22.94	164	P		P	12 10 02.1	+1.9
TOZ	Tahuroa Road	23.62	164	P		P	12 10 08.2	+1.7
HIZ	Hauiti	24.20	166	P		P	12 10 13.9	+2.2
HIZ	Hauiti	24.20	166	P		P	12 10 14.0	+2.2
MXZ	Matakaoa Point	24.33	159	P		P	12 10 14.2	+1.3
MXZ	Matakaoa Point	24.33	159	P		P	12 10 11.7	-1.3
RUGZ	Raukumara Rang	24.48	160	P		P	12 10 14.9	+0.5
PKGZ	Pakihiroa	24.55	160	P		P	12 10 15.8	+0.8
URZ	Urewera	24.57	162	P		P	12 10 15.6	+0.6
URZ	Urewera	24.57	162	P		P	12 10 15.7	+0.6
	9.1nm,0.5s,baz=16,slow=5.1,SNR=14							
	9.1nm,0.5s							
URZ	Urewera	24.57	162	P		P	12 10 15.9	+0.8
MWZ	Matawai	24.77	161	P		P	12 10 17.5	+0.6
PUZ	Puketiti	24.77	159	P		P	12 10 16.9	0.0
TMVZ	Te Maari	24.98	165	P		P	12 10 23.0	+4.0
ETVZ	East Tongariro	25.00	165	P		P	12 10 21.6	+2.5
MTHZ	Maungataniwha	25.04	163	P		P	12 10 20.5	+1.0
CNGZ	Carnagh Statio	25.13	160	P		P	12 10 22.1	+1.9
WNVZ	Wahianoa	25.15	165	P		P	12 10 23.5	+2.9
RAHZ	Arahi	25.17	162	P		P	12 10 21.5	+0.9
RIGZ	Rimuhau	25.19	161	P		P	12 10 21.1	+0.3
BKZ	Black Stump Fm	25.23	163	P		P	12 10 22.2	+1.0
BKZ	Black Stump Fm	25.23	163	P		P	12 10 22.3	+1.0
NMHZ	Naumai	25.26	163	P		P	12 10 23.2	+1.7
BHHZ	Black Hill Sta	25.42	164	P		P	12 10 24.0	+1.1
KWHZ	Kaweka Forest	25.46	164	P		P	12 10 24.4	+1.2
KRHZ	Kereru	25.65	164	P		P	12 10 25.5	+0.6
KAHZ	Kahuranaki	25.93	163	P		P	12 10 27.8	+0.3
PXZ	Pawanui	26.14	164	P		P	12 10 29.4	+0.1
CAW	Cannon Point	26.73	167	P		P	12 10 34.8	+0.2
TUWZ	Tuamarina	26.81	169	P		P	12 10 35.6	+0.3
STKA	Stephens Creek	28.91	230	P		P	12 10 55.0	+0.8
STKA	Stephens Creek	28.91	230	P		P	12 10 54.9	+0.8
	1.4nm,0.4s,baz=52,slow=8.6,SNR=8.1							
	1.4nm,0.4s							
WRA	Warramunga Arr	31.94	257	P		P	12 11 20.0	-1.1
	0.2nm,0.3s,baz=89,slow=9.0,SNR=1.7							
	0.2nm,0.3s							
AS01	Alice Springs	32.70	250	P		P	12 11 26.4	-1.3
ASAR	Alice Springs	32.74	250	P		P	12 11 26.9	-1.2
	1.3nm,0.4s,baz=79,slow=9.0,SNR=54							
	1.3nm,0.4s							
BBOO	Buckleboo	33.52	233	P		P	12 11 35.2	+0.5
MULG	Mulgathing	34.19	238	P		P	12 11 40.4	-0.1
WRKA	Warakurna	38.00	249	P		P	12 12 12.5	-0.6
VNDA	Vanda	62.49	181	P		P	12 15 15.7	-1.2
	2.5nm,0.8s,baz=352,slow=8.3,SNR=7.4							
	2.5nm,0.8s							
QSPA	South Pole Qui	74.92	180	P		P	12 16 34.2	-0.2
	3.5nm,0.7s,baz=268,slow=1.2,SNR=24							
	3.5nm,0.7s							
SONM	Songino Array	82.93	324	P		P	12 17 19.0	+0.6
	0.4nm,0.6s,baz=152,slow=6.5,SNR=2.9							
	0.4nm,0.6s							
ARCES	ARCESS Array B	120.67	345	PKP		PKPdf	12 23 43.5	-0.6
	2.2nm,0.8s,baz=72,slow=2.9,SNR=6.1							

*IDC **24** 12:25:06.3±1.2,0.°03N×120.°54E,h0km,mb3.7/7, mbtmp3.7/7,Error ellipse: s-maj=84.2km s-min=18.3km az=67.0*
*DJA **24** 12:25:18.8±0.7,0.°N±5.°×12.°1E±.°,h74km±13km,M3.8/7, MLv3.8/7*
ISC 24 12:25:17.3±0.8,**0.°01N**±0.°08×**120.°54E**±0.°06,**h85**km,**n12, σ1°57/14, mb3.9/7, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MPSI	Mapaga	0.72	297	P		Pn	12 25 35.2	+1.7
MPSI				S		Sn	12 25 47.6	+2.0
MRSI	Marisa	1.47	72	P		Pn	12 25 43.8	+1.3
MRSI				S		Sn	12 26 03.4	+1.9
LUWI	Luwuk	2.47	115	P		Pn	12 25 57.7	+2.2
GTOI	Gorontalo	2.55	76	P		Pn	12 25 57.4	+0.8
TTSI	Tana Toraja	3.12	193	P		Pn	12 26 05.7	+1.3
WRA	Warramunga Arr	24.00	147	P		P	12 30 22.8	-1.5
	0.3nm,0.5s,baz=325,slow=10,SNR=2.1							
	0.3nm,0.5s							
ASAR	Alice Springs	26.88	152	P		P	12 30 49.1	-1.2
	0.2nm,0.4s,baz=338,slow=10,SNR=6.0							
	0.2nm,0.4s							
STKA	Stephens Creek	37.45	150	P		P	12 32 22.1	-0.5
	1.0nm,0.4s,baz=342,slow=8.9,SNR=3.0							
	1.0nm,0.4s							
USRK	Ussuriysk Ar.	45.16	12	P		P	12 33 24.4	-1.1
	2.5nm,0.7s,baz=221,slow=9.8,SNR=5.9							
	2.5nm,0.7s							
SONM	Songino Array	49.19	347	P		P	12 33 57.0	0.0
	0.8nm,0.6s,baz=165,slow=9.0,SNR=5.6							
	0.8nm,0.6s							
MKAR	Makanchi Array	57.33	330	P		P	12 34 56.7	+0.1
	0.4nm,0.6s,baz=125,slow=8.2,SNR=4.7							
	0.4nm,0.6s							
ZALV	Zalesovo Beam	61.31	337	P		P	12 35 22.1	-1.7
	0.6nm,0.6s,baz=119,slow=7.5,SNR=4.7							
	0.6nm,0.6s							

*IDC **24** 12:39:33.8±1.8,6.°83S×129.°56E,h0km,mb4.0/2, mbtmp3.8/4,ML3.9/2,Error ellipse: s-maj=111.1km s-min=29.8km az=69.0*
*DJA **24** 12:39:45.4±0.4,7.°5S±3.°×13.°0E±.°,h171km±13km,M4.2/9, mb4.0/6,mB4.9/2,MLv4.3/9,Mw(mB)4.1/2*
ISC 24 12:39:45.9±0.8,**6.°89S**±0.°06×**130.°07E**±0.°08,**h150**km,**n19, σ2°45/21, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAUI	Saumlaki	1.63	132	P		Pn	12 40 17.6	+0.7
BNDI	Bandanaira	2.35	356	P		Pn	12 40 26.7	+1.4
FAKI	Fak Fak	4.50	29	P		Pn	12 40 52.9	+0.1
FAKI	Fak Fak	4.50	29	P		Pn	12 40 53.1	+0.3
FAKI				S		Sn	12 41 42.7	-2.1
KMPI	Kaimana, Papua	4.83	49	P		Pn	12 40 58.0	+0.9
KMPI				S		Sn	12 41 50.7	-2.0
DRS	Darwin Rock St	5.57	172	P		Pn	12 41 06.8	-0.1
MTN	Manton Dam	6.01	170	P		Pn	12 41 12.5	-0.3
SWI	Sorong	6.10	11	P		Pn	12 41 13.8	-0.2
	11nm,1.1s,0.1nm							
KDU	Kakadu	6.23	158	P		Pn	12 41 15.2	-0.5
SOEI	Soe	6.41	243	P		Pn	12 41 18.1	-0.1
	37nm,0.6s,0.2nm							
FITZ	Fitzroy Crossi	11.95	201	P		Pn	12 42 29.9	-1.7
TOLI2	Tolitoli	12.21	310	P		Pn	12 42 32.4	-2.6
WRA	Warramunga Arr	13.62	163	Pn		Pn	12 42 50.9	-2.2
	0.8nm,0.3s,baz=339,slow=13,SNR=20							
WRA				Sn		Sn	12 45 12.3	-12
	0.4nm,0.3s,baz=334,slow=22,SNR=3.8							
	0.8nm,0.3s							
COEN	Coen	14.67	120	P		P	12 43 11.0	+2.4
ASAR	Alice Springs	17.09	168	P		Pn	12 43 36.8	+0.8
	0.3nm,0.3s,baz=345,slow=9.1,SNR=15							
ASAR				S		S	12 46 39.8	-6.0
	0.3nm,0.5s,baz=350,slow=27,SNR=2.3							
	0.6nm,0.4s							
AS01	Alice Springs	17.09	168	P		Pn	12 43 40.3	+4.3
WRKA	Warakurna	18.13	185	P		Pn	12 43 51.7	+3.4
MKAR	Makanchi Array	68.17	327	P		P	12 50 34.9	+4.9
	1.4nm,0.4s,baz=119,slow=7.5,SNR=26							
	1.4nm,0.4s							
ZALV	Zalesovo Beam	71.51	334	P		P	12 50 53.2	+3.0
	0.2nm,0.3s,baz=120,slow=8.5,SNR=1.5							
	0.2nm,0.3s							

*AFAD **24** 12:41:09.6±0.0,38.°68N×26.°63E,h4km±1km,ML2.9*
*ISK **24** 12:41:09.4,38.°72N×26.°66E,h9km,ML2.8/25*
*ATH **24** 12:41:10.1,38.°69N×26.°62E,h13km±1km,ML2.8/6,Error ellipse: s-maj=2.0km s-min=0.8km az=279.0*

*THE **24** 12:41:10.0,38.°69N×26.°61E,h10km±1km,ML2.8/8,Error ellipse: s-maj=1.6km s-min=0.6km az=264.0*
ISC 24 12:41:09.6±0.8,**38.°69N**±0.°01×**26.°63E**±0.°02,**h11**km±5km, **n82, σ0°64/138, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FOCM	Foa	0.08	75	Pg		Pg	12 41 11.6	-0.5
FOCM				Sg		Sg	12 41 13.1	-0.8
KARB	zmir-Karabur	0.17	260	P		Pg	12 41 13.5	+0.1
KARB				*i*	AML	AML	12 41 16.0	
	comp=E,2μm,0.1s							
KARB				S		Sg	12 41 16.5	+0.5
CAND	Candarli	0.29	27	Pg		Pg	12 41 15.0	-0.6
URLA	Izmir	0.33	184	P		Pg	12 41 16.3	0.0
URLA				S		Sb	12 41 22.5	-0.5
IZMD	zmir-Dikili-	0.37	39	P		Pg	12 41 17.2	0.0
IZMD				S		Sg	12 41 22.9	+0.8
EAG3	Mitilini, Lesv	0.40	353	P		Pg	12 41 17.5	0.0
EAG3				S		Sg	12 41 23.4	+0.7
LESV	Lesvos island,	0.42	353	P		Pg	12 41 17.4	-0.5
LESV				S		Sb	12 41 24.9	-0.5
	11μm,0.6s							
EAG2	Marmaro, Chios	0.43	250	P		Pg	12 41 18.2	0.0
EAG2				S		Sg	12 41 24.7	+0.8
DKL	Dikili	0.44	30	Pg		Pg	12 41 17.9	-0.3
DKL				Sg		Sg	12 41 24.0	0.0
ZEDA	zmir-Bergama	0.45	52	P		Pg	12 41 19.2	+0.8
ZEDA				S		Sg	12 41 25.5	+1.2
ZEYE	Izmir, Urla-Ze	0.46	192	P		Pg	12 41 18.6	-0.1
ZEYE				S		Sb	12 41 26.5	-0.2
ZEYE				*i*	AML	AML	12 41 27.0	
	comp=E,1μm,0.3s							
ZEYE				*i*	AML	AML	12 41 32.0	
	comp=N,827nm,0.4s							
CHOS	Chios island	0.54	236	P		Pg	12 41 20.5	+0.3
CHOS				S		Sg	12 41 28.3	+0.8
	988nm,0.2s							
CHOS	Chios island	0.54	236	P		Pg	12 41 20.6	+0.3
CHOS					AML	AML	12 41 28.1	
	comp=N,1587μm,0.2s							
CHOS				S		Sg	12 41 28.3	+0.8
CHOS					AML	AML	12 41 28.8	
	comp=E,2374μm,0.2s							
AYVA	Ayvalik	0.62	4	P		Pg	12 41 22.0	+0.3
AYVA				S		Sb	12 41 31.0	-0.2
AYVA				*i*	AML	AML	12 41 33.0	
	comp=E,663nm,0.3s							
PRK	Paraskevi	0.62	333	P		Pg	12 41 21.7	0.0
PRK				S		Sb	12 41 31.1	-0.1
	comp=E,1μm,0.3s							
PRK	Paraskevi	0.62	333	P		Pg	12 41 21.7	0.0
PRK				S		Sg	12 41 30.7	+0.9
PRK					AML	AML	12 41 34.4	
	comp=N,1744μm,0.2s							
PRK					AML	AML	12 41 34.5	
	comp=E,2267μm,0.2s							
GMLD	Gumuldur	0.66	160	Pg		Pb	12 41 23.6	+0.5
GMLD				Sg		Sb	12 41 32.1	-0.1
DGB	zmir	0.67	163	P		Pg	12 41 22.4	-0.2
DGB				S		Sg	12 41 31.7	+0.3
SIGR	SIGRI	0.80	311	Pg		Pg	12 41 25.3	+0.3
SIGR				Sg		Sb	12 41 36.8	+0.5
SIGR	SIGRI	0.80	311	P		Pg	12 41 25.1	+0.1
SIGR				S		Sg	12 41 36.0	+0.6
	comp=E,580nm,0.4s							
SIGR	SIGRI	0.80	311	P		Pg	12 41 25.1	+0.1
SIGR				S		Sg	12 41 35.7	+0.3
SIGR					AML	AML	12 41 38.1	
	comp=E,959μm,0.4s							
SIGR					AML	AML	12 41 39.3	
	comp=N,1375μm,0.5s							
PSRA	Psara	0.85	260	P		Pg	12 41 26.4	+0.4
PSRA				S		Sg	12 41 36.8	-0.2
PSRA					AML	AML	12 41 42.2	
	comp=N,1193μm,0.2s							
PSRA					AML	AML	12 41 42.7	
	comp=E,1375μm,0.2s							
GPNR	Gulpinar-Canak	0.85	333	Pg		Pg	12 41 25.9	-0.2
BUHA	Balikesir, Bur	0.88	23	P		Pg	12 41 26.8	+0.2
BUHA				S		Sb	12 41 39.9	+1.2
BUHA				*i*	AML	AML	12 41 42.0	
	comp=E,429nm,0.3s							
BUHA				*i*	AML	AML	12 41 44.0	
	comp=E,308nm,0.4s							
KOCA	Canakkale, Ayv	0.89	335	P		Pb	12 41 28.1	+0.9
KOCA				S		Sn	12 41 41.0	-0.2
AKS	Akhisar	0.94	78	Pg		Pg	12 41 27.2	-0.6
AKHS	Akhisar	0.94	78	P		Pg	12 41 27.7	-0.1
AKHS				S		Sg	12 41 40.6	+0.5
AKHS				*i*	AML	AML	12 41 46.0	
	comp=E,240nm,0.4s							
SMG	Samos	1.00	170	P		Pg	12 41 28.6	-0.2
SMG				S		Sb	12 41 42.8	+0.7
	comp=E,972nm,0.5s							
SMG	Samos	1.00	170	P		Pg	12 41 28.5	-0.3
SMG				S		Sb	12 41 42.7	+0.7
SMG					AML	AML	12 41 45.3	
	comp=E,1506μm,0.3s							
SMG					AML	AML	12 41 46.3	
	comp=N,2379μm,0.6s							
GOMA	Golmarmara-Man	1.01	89	Pg		Pg	12 41 28.9	-0.1
BAYC	CANAKKALE_Bayr	1.05	357	P		Pg	12 41 29.5	-0.4
BAYC				S		Sg	12 41 43.8	+0.3
BAYC				*i*	AML	AML	12 41 45.0	
	comp=N,299nm,0.2s							
BAYC				*i*	AML	AML	12 41 46.0	
	comp=N,294nm,0.5s							
STEP	BALIKESIR_Sava	1.09	51	P		Pg	12 41 30.6	0.0
STEP				S		Sn	12 41 45.9	-0.2
STEP				*i*	AML	AML	12 41 49.0	
	comp=N,287nm,0.4s							
STEP				*i*	AML	AML	12 41 49.0	
	comp=N,324nm,1.0s							
GCAM	G?zelcaml?	1.10	154	P		Pg	12 41 29.9	-0.9
GCAM				S		Sg	12 41 45.4	+0.3
GCAM				*i*	AML	AML	12 41 47.0	
	comp=N,238nm,0.4s							
GCAM				*i*	AML	AML	12 41 49.0	
	comp=N,282nm,0.5s							
EZN	Ezine	1.16	348	Pn		Pb	12 41 31.7	0.0
EZN	Ezine	1.16	348	P		Pb	12 41 31.3	-0.4
EZN				S		Sb	12 41 46.8	+0.1
	comp=N,438nm,0.5s							
IZMR	zmir-demi	1.18	118	P		Pb	12 41 31.6	-0.4
IZMR				S		Sb	12 41 47.1	-0.2
BOZC	Bozcaada	1.23	339	P		Pn	12 41 32.4	-0.4
BOZC				S		Sb	12 41 48.3	-0.6
BOZC				*i*	AML	AML	12 41 50.0	
	comp=N,216nm,0.3s							
BOZC				*i*	AML	AML	12 41 53.0	
	comp=N,193nm,0.3s							
BALY	Balya	1.30	36	P		Pn	12 41 33.7	-0.1
BALY				S		Sn	12 41 51.6	+0.4
BALY				*i*	AML	AML	12 41 54.0	
	comp=N,314nm,0.5s							
BALY				*i*	AML	AML	12 41 56.0	
	comp=N,219nm,0.4s							
DDIM	Aydin, Didim	1.32	158	P		Pn	12 41 34.3	+0.2
DDIM				S		Sb	12 41 51.3	-0.3
DDIM				*i*	AML	AML	12 42 10.0	
	comp=N,207nm,1.7s							
CANM	Can-anakkale	1.36	14	Pn		Pn	12 41 34.5	-0.1
CNKL	anakkale-Mer	1.39	352	P		Pn	12 41 34.0	-0.9
CNKL				S		Sg	12 41 54.9	+0.7
CNKL				*i*	AML	AML	12 41 58.0	
	comp=N,109nm,0.3s							
ECEA	Canakkale, Ece	1.40	346	P		Pn	12 41 35.8	+0.7
ECEA				S		Sb	12 41 53.1	-0.5
ECEA				*i*	AML	AML	12 41 58.0	
	comp=N,296nm,0.4s							
ECEA				*i*	AML	AML	12 42 04.0	
	comp=N,321nm,0.5s							
COMU	Canakkale	1.41	355	Pn		Pn	12 41 35.5	+0.2
BKES	Balkesir-Mer	1.45	44	P		Pn	12 41 35.7	-0.2
BKES				S		Sn	12 41 54.5	-0.4
BKES				*i*	AML	AML	12 42 00.0	
	comp=N,133nm,0.6s							
KIRA	zmir-Kiraz	1.48	109	P		Pn	12 41 35.0	-1.3
KIRA				S		Sg	12 41 57.3	+0.1
MANT	Manisa	1.52	97	P		Pn	12 41 37.5	+0.4
MANT				S		Sn	12 41 57.6	+0.5
GOAD	anakkale-G¶	1.57	339	P		Pn	12 41 37.1	-0.4
GOAD				S		Sn	12 41 57.0	-0.9
GOAD				*i*	AML	AML	12 42 04.0	
	comp=N,145nm,0.3s							
BLKS	Balkesir-Sus	1.57	41	P		Pn	12 41 36.9	-0.6
BLKS				S		Sn	12 41 57.8	-0.2
GONE	Gonen-Balikesi	1.58	31	Pn		Pn	12 41 37.7	0.0
GADA	Gvkgeada	1.60	340	Pn		Pn	12 41 38.1	+0.2
KULA	Kula-Manisa	1.60	96	Pn		Pn	12 41 38.2	+0.2
ESEN	Aydn-Nazilli	1.62	123	P		Pn	12 41 38.3	+0.1
ESEN				S		Sn	12 41 58.4	-0.7
LIA	Limnos Island	1.65	317	P		Pn	12 41 38.2	-0.4
LIA				S		Sn	12 41 57.6	-2.1
DEMI	Demirci	1.67	77	P		Pb	12 41 41.0	+0.5
DEMI				S		Sb	12 42 01.8	+0.3
LPK	Lapseki	1.68	3	Pn		Pn	12 41 39.6	+0.6
DURS	Dursunbey	1.70	57	P		Pn	12 41 40.0	+0.6
DURS				S		Sn	12 42 01.5	+0.4
GELI	Tayfur-Gelibol	1.71	356	Pn		Pn	12 41 39.9	+0.5
BODT	Bodrum	1.71	161	Pn		Pb	12 41 41.2	0.0
KNL	Balıkesir	1.72	23	P		Pn	12 41 38.4	-1.2
KNL				S		Sn	12 41 59.0	-2.6
KNL				*i*	AML	AML	12 42 30.0	
	comp=N,214nm,0.1s							
KRBG	Karabiga-Canak	1.78	17	Pn		Pn	12 41 40.2	-0.1
APE	Apeiranthos	1.84	209	P		Pn	12 41 40.0	-1.2
USAK	Uak-Merkez	1.87	89	P		Pn	12 41 42.6	+0.9
USAK				S		Sn	12 42 05.7	+0.4
SIMA	Simav-Kutahya	1.88	77	Pn		Pn	12 41 42.3	+0.5
EDC	Edincik	1.91	30	Pn		Pn	12 41 42.3	+0.1
SMTH	Samothraki Isl	1.97	335	P		Pn	12 41 43.0	0.0
SMTH				S		Sn	12 42 07.1	-0.6
SMTH	Samothraki Isl	1.97	335	P		Pn	12 41 42.5	-0.5
SMTH				S		Sn	12 42 06.1	-1.7
ERIK	Erikli-Kesan	1.98	357	Pn		Pn	12 41 43.6	+0.5
BAND	Balkesir-Ban	2.01	34	P		Pn	12 41 43.8	+0.2
BAND				S		Sn	12 42 08.9	+0.1
RKY	Sarkoy-Tekirda	2.04	12	Pn		Pn	12 41 44.6	+0.6
MRMT	Marmara Adasi	2.05	21	Pn		Pn	12 41 44.3	+0.1
KCTX	Karacabey (Bur	2.06	40	Pn		Pn	12 41 44.4	+0.1
ENEZ	Enez	2.07	350	Pn		Pn	12 41 44.8	+0.4
TAVA	DENIZLI_Tavas	2.18	123	P		Pn	12 41 46.1	+0.2
TAVA				S		Sn	12 42 13.0	-0.1
ALN	Alexandroupoli	2.25	349	Pn		Pn	12 41 47.0	+0.2
ALN	Alexandroupoli	2.25	349	P		Pn	12 41 47.0	+0.2
ALN				S		Sn	12 42 15.0	+0.4
	comp=N,95nm,0.6s							
ALN	Alexandroupoli	2.25	349	P		Pn	12 41 46.6	-0.2
ALN				S		Sn	12 42 13.0	-1.6
ALN					AML	AML	12 42 23.7	
	comp=E,133μm,0.7s							
ALN					AML	AML	12 42 24.4	
	comp=N,250μm,0.6s							
GDZ	Gediz	2.26	79	P		Pb	12 41 51.3	+0.7
GDZ				S		Sg	12 42 21.5	-0.8
TVSB	Tavsanli	2.33	70	Pn		Pn	12 41 48.6	+0.5
ULDT	Uludag	2.42	53	P		Pb	12 41 54.0	+0.6
ULDT				S		Sg	12 42 27.6	0.0
ULDT				*i*	AML	AML	12 42 34.0	
	comp=N,31nm,0.6s							
RDO	Rodhopi	2.59	341	P		Pn	12 41 52.1	+0.6
KIRK	Kırklareli	3.11	6	P		Pn	12 41 59.5	+0.9
KIRK				S		Sg	12 42 47.5	-1.9
NVR	Nevrokopi	3.40	322	P		Pn	12 42 03.4	+0.7

*ISN **24** 12:43:46.2±1.2,34.°70N×46.°20E,h9km±14km,ML2.6*
*TEH **24** 12:43:47.5,34.°70N×46.°20E,h10km±49km,ML2.5*
ISC 24 12:43:47.3±1.1,**34.°68N**±0.°05×**46.°19E**±0.°05,**h14**km±10km, **n6, σ0°45/9, Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IDHR	Dehrash	0.16	83	Pg		Pg	12 43 51.6	+0.1
IDHR				Sg		Sg	12 43 54.3	0.0
IGHG	Ghaleghazi	0.47	139	Pg		Pb	12 43 57.1	-0.3
ILIN	Lien	0.68	69	Pg		Pb	12 44 00.6	-0.4
ILBA	Ilam Banvizeh	1.05	179	Pg		Pn	12 44 08.3	+0.5
IBDR	Badra	1.58	188	*e*Pn		Pb	12 44 16.0	-0.3
	baz=8.0							
IBDR				*e*Sn		Sg	12 44 38.0	-0.3
IBDR					AML	AML	12 44 43.5	
	comp=N,33nm,0.4s							
IBDR					AML	AML	12 44 44.1	
	comp=E,126nm,0.4s							
IKRK	Kirkuk	1.68	296	*e*Pn		Pb	12 44 18.0	0.0
IKRK				*e*Sn		Sg	12 44 41.0	-0.5
IKRK					AML	AML	12 44 47.0	
	comp=E,88nm,0.5s							
IKRK					AML	AML	12 44 47.2	
	comp=N,90nm,0.1s							

*SNET **24** 12:56:11.2±0.9,13.°52N×90.°26W,h65km±28km,ML3.1*
*GCG **24** 12:56:12.5±0.7,13.°48N×90.°39W,h27km±6km,MD3.5*
*CATAC **24** 12:56:12.4±0.7,13.°57N×90.°24W,h31km±4km,ML3.2*
ISC 24 12:56:12.2±1.6,**13.°49N**±0.°07×**90.°24W**±0.°05,**h30**km±12km, **n38, σ0°99/56, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NUBE	Las Nubes	0.60	47	IAML			12 56 25.1	
	comp=Z,442nm,0.1s							
NUBE				*e*S		Sn	12 56 35.2	+1.4
NUBE				IAML			12 56 39.7	
	comp=Z,161nm,0.3s							
NUBE	Las Nubes	0.60	47	*e*S		Sn	12 56 35.1	+1.4
NUBE	Las Nubes	0.60	47	*i* P		Pn	12 56 24.7	-0.2
NUBE				IAML			12 56 25.1	
	comp=Z,1μm,1.0s							
NUBE				*i* S		Sn	12 56 34.3	+0.6
N

PANCS				*i* S		**Sn**	**12 56 44.0**	**-0.2**
PANCS				IAML			12 56 46.2	
	comp=Z,2μm,1.0s							
LOMA	**Loma Larga**	**1.05**	**81**	*eP*		**Pn**	**12 56 30.7**	**-0.2**
LOMA				*eS*		**Sb**	**12 56 46.0**	**+0.7**
LOMA				IAML			12 56 47.8	
	comp=Z,586nm,0.2s							
LOMA	**Loma Larga**	**1.05**	**81**	IAML			12 56 47.5	
	comp=Z,536nm,0.2s							
LOMA	**Loma Larga**	**1.05**	**81**	*i* P		**Pn**	**12 56 30.6**	**-0.4**
LOMA				*i* S		**Sb**	**12 56 45.2**	**-0.1**
LOMA				IAML			12 56 47.7	
	comp=Z,630nm,1.0s							
LOMA	**Loma Larga**	**1.05**	**81**	*eP*		**Pn**	**12 56 30.8**	**-0.2**
NBG	**Las Nubes**	**1.10**	**354**	*eP*		**Pb**	**12 56 32.6**	**-0.2**
NBG				*eS*		**Sb**	**12 56 49.3**	**+2.4**
GUNB	**GUNB**	**1.10**	**355**	*i* P		**Pn**	**12 56 31.0**	**-0.9**
GUNB				*i* S		**Sb**	**12 56 45.6**	**-1.5**
GUNB				IAML			12 56 49.5	
	comp=Z,370nm,1.0s							
FUG	**Fuego 3**	**1.12**	**328**	*eP*		**Pb**	**12 56 32.0**	**-1.1**
FUG				*eS*		**Sb**	**12 56 47.2**	**-0.3**
SJTE	**Alcalda de S**	**1.20**	**84**	*i* P		**Pn**	**12 56 33.1**	**+0.1**
SJTE				*i* S		**Sb**	**12 56 49.3**	**-0.4**
SJTE				IAML			12 56 53.5	
	comp=Z,460nm,1.0s							
MTO3	**Montecristo**	**1.24**	**43**	*eP*		**Pn**	**12 56 32.9**	**-0.9**
ESQI	**Esquipulas**	**1.37**	**39**	*i* P		**Pn**	**12 56 34.9**	**-0.5**
ESQI				*i* S		**Sn**	**12 56 50.8**	**-1.9**
ESQI				IAML			12 56 54.7	
	comp=Z,170nm,1.0s							
SCLA	**Alcaldia de Sa**	**1.48**	**82**	*i* P		**Pn**	**12 56 36.9**	**0.0**
SCLA				*i* S		**Sb**	**12 56 56.6**	**-1.0**
SCLA				IAML			12 57 01.0	
	comp=Z,61nm,1.0s							
STG3	**Santiaguito 3,**	**1.77**	**313**	*eP*		**Pn**	**12 56 41.3**	**+0.3**
STG3				*eS*		**Sn**	**12 57 02.7**	**0.0**

MEX 24 14:07:54.1±0.3, **16°46N**×**97°91W**, **h10**km, **MD2.5**, **2C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.22**	**252**	⇑*i* P	Pg	14 07 58.3	-0.4
	baz=72,slow=8.6						
PNIG				*i* S	Sg	14 08 01.5	-0.2
PNIG	**Pinotepa**	**0.22**	**252**	⇑*i* P	Pg	14 07 58.3	-0.4
	baz=298,slow=11						
PNIG				*eS*	Sg	14 08 01.6	-0.2

*JMA **24** 14:13:36.3±0.2,25°N±1°×122°5E±0°5,h10km±3km, MV2.4/10,NW OFF ISHIGAKIJIMA IS*
*TAP **24** 14:13:36.5,24°82N×122°49E,h9km±1km,ML2.6,D*
ISC 24 14:13:35.9±1.0, **24°81N**±0°03×**122°49E**±0°02, **h10**km±9km, **n63,σ0s56**/111, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.46**	**211**	*i* P	**Pb**	**14 13 45.5**	**-0.4**
	baz=210						
EOS2				*i* S	**Sb**	**14 13 52.5**	**-0.3**
	baz=210						
TWB1	**Santiao Chiao**	**0.49**	**294**	*i* P	**Pg**	**14 13 45.9**	**+0.4**
	baz=292						
TWB1				*i* S	**Sg**	**14 13 52.6**	**+0.6**
	baz=292						
EGS		**0.51**	**274**	P	**Pg**	**14 13 46.2**	**+0.5**
	baz=272						
EGS				*eS*	**Sg**	**14 13 53.3**	**+0.9**
	baz=272						
EOS3	**EOS3**	**0.55**	**197**	*i* P	**Pb**	**14 13 47.1**	**-0.4**
	baz=196						
EOS3				*i* S	**Sb**	**14 13 55.4**	**+0.1**
	baz=196						
JYNG	**Yonagunijimaku**	**0.55**	**131**	P	**Pg**	**14 13 46.8**	**+0.2**
JYNG				S	**Sg**	**14 13 54.1**	**+0.3**
YOJ	**Yonaguni jima**	**0.59**	**126**	*i* P	**Pg**	**14 13 47.4**	**+0.1**
	baz=126						
YOJ				*i* S	**Sg**	**14 13 55.3**	**+0.2**
	baz=126						
YOJ	**Yonaguni jima**	**0.59**	**126**	P	**Pg**	**14 13 47.6**	**+0.3**
YOJ				S	**Sg**	**14 13 55.2**	**+0.2**
TWC	**Suao**	**0.61**	**251**	*i* P	**Pg**	**14 13 48.0**	**+0.2**
	baz=250						
TWC				*i* S	**Sb**	**14 13 57.8**	**+0.3**
	baz=250						
TIPB	**Shuangxi**	**0.62**	**285**	*i* P	**Pg**	**14 13 48.5**	**+0.5**
	baz=284						
TIPB				*i* S	**Sb**	**14 13 57.2**	**-0.6**
	baz=284						
SXI1	**Grass Mountain**	**0.62**	**297**	*i* P	**Pg**	**14 13 48.7**	**+0.7**
	baz=296						
SXI1				*i* S	**Sb**	**14 13 57.4**	**-0.4**
	baz=296						
ESAO	**Su ao**	**0.63**	**248**	P	**Pg**	**14 13 48.4**	**+0.3**
	baz=247						
NWF	**Wu-fen Shan**	**0.69**	**292**	*eP*	**Pg**	**14 13 47.6**	**-1.7**
	baz=291						
NWF				S	**Sb**	**14 13 59.4**	**-0.4**
	baz=291						
WFSB	**Wu-fen Shan**	**0.69**	**292**	*i* P	**Pg**	**14 13 48.0**	**-1.3**
	baz=291						
WFSB				*i* S	**Sb**	**14 13 59.6**	**-0.1**
	baz=291						
EOS4	**EOS4**	**0.70**	**193**	P	**Pn**	**14 13 50.8**	**-0.8**
	baz=192						
EOS4				S	**Sb**	**14 13 59.8**	**+0.1**
	baz=192						
NDS	**Dongshan**	**0.72**	**256**	*i* P	**Pb**	**14 13 50.3**	**-0.3**
	baz=255						
NDS				*i* S	**Sb**	**14 14 01.3**	**+0.7**
	baz=255						
EWUT	**Wuta**	**0.74**	**241**	*i* P	**Pg**	**14 13 50.2**	**0.0**
	baz=240						
EWUT				*i* S	**Sg**	**14 14 00.1**	**+0.2**
	baz=240						
TWE	**Neicheng**	**0.75**	**263**	*i* P	**Pg**	**14 13 50.2**	**-0.2**
	baz=262						
TWE				*i* S	**Sg**	**14 14 00.6**	**+0.4**
	baz=262						
ENA	**Nanau**	**0.78**	**241**	*i* P	**Pg**	**14 13 50.8**	**-0.1**
	baz=240						
ENA				*i* S	**Sb**	**14 14 01.5**	**-0.7**
	baz=240						
FUSB	**Fushanzhiwuyua**	**0.82**	**267**	*i* P	**Pg**	**14 13 51.7**	**-0.1**
	baz=266						
FUSB				*i* S	**Sb**	**14 14 03.2**	**-0.3**
	baz=266						
EAHA	**Aohua**	**0.83**	**235**	*i* P	**Pg**	**14 13 51.7**	**-0.3**
	baz=234						
EAHA				*i* S	**Sg**	**14 14 02.6**	**-0.3**
	baz=234						
TWA	**Mucha**	**0.84**	**282**	*eS*	**Sg**	**14 14 03.3**	**+0.3**
	baz=281						
ENTT	**Nioudou**	**0.86**	**259**	*i* P	**Pg**	**14 13 52.4**	**0.0**
	baz=257						
ENTT				S	**Sb**	**14 14 04.7**	**+0.2**
	baz=257						
NHDH	**Xindian Distri**	**0.89**	**280**	*eP*	**Pg**	**14 13 53.3**	**+0.3**
	baz=279						
NHDH				*i* S	**Sg**	**14 14 04.7**	**+0.1**
	baz=279						
NWLT	**Wulai**	**0.90**	**268**	P	**Pg**	**14 13 53.0**	**-0.1**
	baz=267						
NWLT				S	**Sb**	**14 14 05.2**	**-0.4**
	baz=267						
PCYT	**Pengchaiyu**	**0.90**	**335**	*i* P	**Pn**	**14 13 54.5**	**-0.1**
	baz=335						
YM01	**YM01**	**0.90**	**292**	P	**Pg**	**14 13 53.6**	**+0.4**
	baz=291						
YM01				S	**Sg**	**14 14 04.9**	**0.0**
	baz=291						
YM08	**YM08**	**0.90**	**295**	*i* P	**Pb**	**14 13 53.9**	**+0.3**
	baz=294						
YM08				S	**Sg**	**14 14 03.9**	**-1.0**
	baz=294						
NDT	**Datong Townshi**	**0.91**	**257**	*i* P	**Pg**	**14 13 53.4**	**-0.1**
	baz=256						
NDT				*i* S	**Sb**	**14 14 05.9**	**-0.1**
	baz=256						
LATG	**Datong**	**0.92**	**253**	*i* P	**Pg**	**14 13 53.7**	**+0.2**
	baz=252						
LATG				*i* S	**Sg**	**14 14 05.7**	**+0.1**
	baz=252						
TWY	**Chenhua**	**0.93**	**300**	*i* P	**Pn**	**14 13 55.0**	**0.0**
	baz=299						
TWY				S	**Sb**	**14 14 06.5**	**0.0**
	baz=299						
NTST	**Danshui**	**1.01**	**291**	*e*S	**Sg**	**14 14 08.5**	**+0.2**
	baz=290						
YHNB	**Yeheng**	**1.02**	**262**	*i* P	**Pg**	**14 13 55.4**	**-0.2**
	baz=261						
YHNB				*i* S	**Sg**	**14 14 08.0**	**-0.8**
	baz=261						
NACB	**Ninganchiao**	**1.03**	**232**	*i* P	**Pg**	**14 13 55.1**	**-0.6**
	baz=231						
NACB				*i* S	**Sg**	**14 14 08.3**	**-0.8**
	baz=231						
NSK	**Sanguang**	**1.04**	**263**	*i* P	**Pg**	**14 13 55.6**	**-0.2**
	baz=262						
NSK				*i* S	**Sg**	**14 14 08.6**	**-0.8**
	baz=262						
NNSB	**Datong**	**1.08**	**249**	*i* P	**Pg**	**14 13 56.4**	**-0.2**
	baz=249						
NNSB				*i* S	**Sb**	**14 14 10.9**	**+0.1**
	baz=249						
NNS	**Nan Shan**	**1.08**	**250**	*i* P	**Pg**	**14 13 56.6**	**-0.1**
	baz=249						
NNS				*i* S	**Sb**	**14 14 11.3**	**+0.3**
	baz=249						
TWD	**Chiawan**	**1.09**	**228**	P	**Pb**	**14 13 56.4**	**-0.5**
	baz=227						
TWD				*e*S	**Sb**	**14 14 11.0**	**-0.2**
	baz=227						
ETLH	**Xiulin Townshi**	**1.10**	**237**	*i* P	**Pb**	**14 13 56.6**	**-0.4**
	baz=236						
ETLH				*e*S	**Sg**	**14 14 10.9**	**-0.4**
	baz=236						
ETM	**Tongmen**	**1.24**	**227**	*eP*	**Pg**	**14 14 01.1**	**+1.4**
	baz=227						
ETM				*e*S	**Sn**	**14 14 18.0**	**+2.0**
	baz=227						
LXIB	**Xiulin Townshi**	**1.26**	**231**	P	**Pn**	**14 13 59.1**	**-0.6**
	baz=231						
LXIB				*e*S	**Sn**	**14 14 17.8**	**+1.1**
	baz=231						
NFF	**Wufeng Townshi**	**1.26**	**262**	*i* P	**Pn**	**14 13 59.0**	**-0.6**
	baz=261						
NFF				*e*S	**Sb**	**14 14 15.9**	**-0.2**
	baz=261						
FUSS	**Fushou**	**1.26**	**244**	*i* P	**Pb**	**14 13 59.9**	**-0.1**
	baz=243						
FUSS				*i* S	**Sn**	**14 14 17.3**	**+0.2**
	baz=243						
WHF	**Hehuan Shan**	**1.30**	**240**	*i* P	**Pn**	**14 14 00.4**	**-0.1**
	baz=238						
WHF				*i* S	**Sb**	**14 14 16.9**	**-0.7**
	baz=238						
LIOB	**Emei**	**1.35**	**263**	P	**Pn**	**14 14 00.2**	**-0.7**
	baz=262						
LIOB				S	**Sg**	**14 14 20.3**	**+0.9**
	baz=262						
NSTT	**Nanjuang**	**1.36**	**263**	*eP*	**Pg**	**14 14 02.2**	**+0.1**
	baz=262						
NSTT				*e*S	**Sg**	**14 14 20.1**	**+0.2**
	baz=262						
CHGB	**Renai**	**1.41**	**238**	P	**Pb**	**14 14 02.5**	**0.0**
	baz=237						
CHGB				S	**Sg**	**14 14 20.8**	**-0.6**
	baz=237						
HATJ	**Hateruma jima**	**1.42**	**122**	P	**Pg**	**14 14 03.0**	**0.0**
HATJ				S	**Sg**	**14 14 21.3**	**-0.2**
OWD	**Renai**	**1.47**	**235**	P	**Pb**	**14 14 03.6**	**+0.2**
	baz=234						
WARBT	**Fenglin Townsh**	**1.48**	**223**	*i* P	**Pn**	**14 14 02.4**	**-0.3**
	baz=222						
WARBT				*e*S	**Sb**	**14 14 22.3**	**-0.2**
	baz=222						
WUSB	**Renai**	**1.49**	**237**	*i* P	**Pb**	**14 14 03.8**	**-0.1**
	baz=236						
WUSB				*i* S	**Sg**	**14 14 25.6**	**+1.7**
	baz=236						
JKRS	**Kuro-shima**	**1.50**	**112**	*eP*	**Pn**	**14 14 02.7**	**-0.2**
WHP	**Taichung City**	**1.50**	**250**	P	**Pg**	**14 14 05.8**	**+1.1**
	baz=249						
WHP				*i* S	**Sg**	**14 14 25.3**	**+1.1**
	baz=249						
JIJ	**Ishigaki jima**	**1.57**	**106**	*e*S	**Sn**	**14 14 24.7**	**+0.4**
VWDT	**VWDT**	**1.62**	**230**	*eP*	**Pn**	**14 14 04.6**	**+0.1**
	baz=229						
WCS	**Beigang Elemen**	**1.62**	**243**	*eP*	**Pg**	**14 14 06.7**	**-0.3**
	baz=242						
HGSD	**Ruisui**	**1.63**	**217**	*eP*	**Pn**	**14 14 04.6**	**-0.1**
	baz=216						
EHY	**Hungye**	**1.68**	**220**	*eP*	**Pg**	**14 14 08.9**	**+0.7**
	baz=219						
SMLT	**Sun Moon Lake**	**1.72**	**238**	*eP*	**Pg**	**14 14 08.5**	**-0.4**
	baz=237						
SSLB	**Suanglung**	**1.73**	**234**	*i* P	**Pg**	**14 14 08.5**	**-0.6**
	baz=233						
SSLB				*i* S	**Sg**	**14 14 31.9**	**+0.3**
	baz=233						
TYC	**Yuchr**	**1.74**	**239**	*eP*	**Pg**	**14 14 08.7**	**-0.6**
	baz=238						
YULB	**Yu-li**	**1.78**	**218**	*eP*	**Pn**	**14 14 06.7**	**-0.1**
	baz=217						
WHYT	**Xinyi Township**	**1.86**	**234**	*eP*	**Pb**	**14 14 09.9**	**-0.1**
	baz=233						
FULB	**Fuli**	**1.94**	**214**	*eP*	**Pn**	**14 14 08.2**	**-0.8**
	baz=214						
FULB				*e*S	**Sn**	**14 14 33.1**	**-0.4**
	baz=214						

*DJA **24** 14:25:33.9±0.4, 11°S±4°×10°9E±°, h10km, M4.5/14, mb4.7/7,mB5.3/3,MLv4.4/14,Mw(mB)4.7/3*
*IDC **24** 14:25:36.4±2.1, 10°76S×109°70E,h0km, mb3.7/6, mbtmp3.7/7,ML4.0/1,Error ellipse: s-maj=104.4km s-min=18.9km az=50.0*
ISC 24 14:25:36.5±1.2, **11°0S**±0°1×**109°31E**±0°09, **h10**km, **n23, σ1s13**/26, **mb3.7/6, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**3.29**	**22**	P	**Pn**	**14 26 28.3**	**+0.2**
UGM				S	**Sn**	**14 27 05.3**	**-2.0**
CMJI	**Cimerak**	**3.30**	**345**	P	**Pn**	**14 26 27.5**	**-0.8**
YOGI	**Yogyakarta**	**3.30**	**17**	P	**Pn**	**14 26 28.3**	**0.0**
KPJI	**Karang Pucung**	**3.66**	**354**	P	**Pn**	**14 26 33.3**	**+0.1**
PWJI	**Pagerwojo**	**3.84**	**40**	P	**Pn**	**14 26 35.6**	**-0.2**
SMRI	**Semarang**	**4.08**	**16**	P	**Pn**	**14 26 40.8**	**+1.8**
CNJI	**Cibinong**	**4.25**	**329**	P	**Pn**	**14 26 40.6**	**-0.7**
LEM	**Lembang**	**4.46**	**338**	Pn	**Pn**	**14 26 44.7**	**+0.2**
	7.0nm,0.3s,baz=353,slow=13,SNR=7.3						
LEM				Sn	**Sn**	**14 27 37.0**	**+0.5**
	5.2nm,0.3s,baz=342,slow=20,SNR=7.1 30nm,0.5s						
SKJI	**Sukabumi**	**4.80**	**325**	P	**Pn**	**14 26 46.8**	**-2.2**
GMJI	**Gumukmas**	**4.89**	**57**	P	**Pn**	**14 26 50.2**	**0.0**
GRJI	**Gresik**	**5.12**	**38**	P	**Pn**	**14 26 54.2**	**+0.9**
	129nm,1.9s,0.6nm						
BLJI	**Banyuglugur**	**5.32**	**53**	P	**Pn**	**14 26 57.7**	**+1.6**
JAGI	**Jajag, Banyuwa**	**5.39**	**63**	P	**Pn**	**14 26 57.3**	**+0.2**
SRBI	**Singaraja**	**6.50**	**64**	P	**Pn**	**14 27 11.9**	**-0.4**
	48nm,0.7s,0.2nm						
TWSI	**Taliwang, Sumb**	**7.79**	**74**	P	**Pn**	**14 27 29.3**	**-0.8**
	30nm,0.6s,3μm0.2nm						
PLAI	**Plampang**	**8.62**	**76**	P	**Pn**	**14 27 40.5**	**-0.9**
	20nm,0.9s						
MNAI	**Manna**	**9.11**	**316**	P	**Pn**	**14 27 46.1**	**-2.1**
	196nm,1.1s						
WRA	**Warramunga Arr**	**25.68**	**113**	P	**P**	**14 31 05.1**	**-1.9**
	0.6nm,0.8s,baz=285,slow=12,SNR=3.0 0.6nm,0.8s						
ASAR	**Alice Springs**	**26.59**	**122**	P	**P**	**14 31 15.3**	**+0.1**
	0.6nm,0.7s,baz=295,slow=8.5,SNR=8.8						
ASAR				PcP	**PcP**	**14 34 40.4**	**+0.7**
	0.4nm,1.0s,baz=298,slow=1.9,SNR=5.1 0.6nm,0.7s						
SONM	**Songino Array**	**58.62**	**358**	P	**P**	**14 35 34.6**	**+0.8**
	0.2nm,0.6s,baz=191,slow=5.4,SNR=2.4 0.2nm,0.6s						
MKAR	**Makanchi Array**	**62.40**	**339**	P	**P**	**14 36 00.4**	**+0.8**
	0.6nm,0.6s,baz=140,slow=7.5,SNR=10 0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**66.96**	**339**	P	**P**	**14 36 30.3**	**+1.0**
	0.7nm,0.3s,baz=151,slow=6.5,SNR=2.1 0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**67.95**	**345**	P	**P**	**14 36 35.6**	**+0.2**
	0.4nm,0.3s,baz=150,slow=3.2,SNR=2.5 0.4nm,0.3s						

*SJA **24** 14:46:57.5±0.7,21°06S×68°98W,h124km±3km, ML3.5, MW3.6*
*GUC **24** 14:46:59.2±0.5,21°06S×68°90W,h112km±2km,ML3.5*
ISC 24 14:46:59.0±1.4, **21°07S**±0°03×**69°01W**±0°06, **h118**km±9km, **n34,σ0s60**/67, **10C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.45**	**273**	*eP*	**Pn**	**14 47 15.9**	**-0.6**
PB01				*eS*	**Sn**	**14 47 29.4**	**-0.4**
PB01				IAML		14 47 29.5	
	comp=Z,3μm,0.4s						
PB01	**IPOC Station P**	**0.45**	**273**	*i* P	**Pn**	**14 47 15.9**	**-0.6**
PB01				*i* S	**Sn**	**14 47 29.1**	**-0.7**
PB09	**IPOC Station P**	**0.76**	**197**	*eP*	**Pn**	**14 47 18.6**	**-0.2**
PB09				*eS*	**Sn**	**14 47 35.0**	**+1.1**
PB09				IAML		14 47 38.0	
	comp=Z,858nm,0.5s						
PB09	**IPOC Station P**	**0.76**	**197**	⇑*i* P	**Pn**	**14 47 18.5**	**-0.3**
PB09				*i* S	**Sn**	**14 47 34.2**	**+0.3**
PB09				IAML		14 47 36.4	
	comp=E,1μm,0.4s						
PB02	**IPOC Station P**	**0.87**	**253**	*eP*	**Pn**	**14 47 19.7**	**-0.1**
PB02				*eS*	**Sn**	**14 47 36.2**	**+0.8**
PB02	**IPOC Station P**	**0.87**	**253**	⇑*i* P	**Pn**	**14 47 19.9**	**+0.2**
PB02				*i* S	**Sn**	**14 47 35.6**	**+0.2**
PB08	**IPOC Station P**	**0.93**	**351**	*eP*	**Pn**	**14 47 20.3**	**-0.3**
PB08				*eS*	**Sn**	**14 47 37.2**	**+0.3**
PB08				IAML		14 47 37.3	
	comp=Z,311nm,0.3s						
PB08	**IPOC Station P**	**0.93**	**351**	⇑*i* P	**Pn**	**14 47 20.3**	**-0.3**
PB08				*i* S	**Sn**	**14 47 36.4**	**-0.5**
PB08				IAML		14 47 37.5	
	comp=E,940nm,0.3s						
PB07	**IPOC Station P**	**1.05**	**231**	*eP*	**Pn**	**14 47 21.5**	**-0.1**
PB07				*eS*	**Sn**	**14 47 39.4**	**+0.7**
PB07				IAML		14 47 41.0	
	comp=Z,832nm,0.4s						
PB07	**IPOC Station P**	**1.05**	**231**	⇑*i* P	**Pn**	**14 47 21.5**	**-0.1**
PB07				*i* S	**Sn**	**14 47 38.8**	**+0.1**
PB07				IAML		14 47 41.8	
	comp=E,970nm,0.3s						
PATCX	**Punta Patache**	**1.10**	**283**	⇑*i* P	**Pn**	**14 47 22.3**	**+0.3**
PATCX				*i* S	**Sn**	**14 47 40.0**	**+0.6**
PATCX				IAML		14 47 42.2	
	comp=N,2μm,0.2s						
HMBC	**Humberstone**	**1.14**	**313**	⇑*i* P	**Pn**	**14 47 22.2**	**-0.2**
HMBC				*i* S	**Sn**	**14 47 40.0**	**-0.1**
HMBC				IAML		14 47 40.6	
	comp=N,2μm,0.3s						
TA01	**Diego Aracena**	**1.21**	**294**	*eP*	**Pn**	**14 47 23.0**	**0.0**
TA01				*eS*	**Sn**	**14 47 41.7**	**+0.6**
TA01				IAML		14 47 44.2	
	comp=Z,426nm,0.4s						
TA01	**Diego Aracena**	**1.21**	**294**	*i* P	**Pn**	**14 47 23.0**	**0.0**
TA01				*i* S	**Sn**	**14 47 41.3**	**+0.1**
TA01				IAML		14 47 42.5	
	comp=E,2μm,0.3s						
TA02	**Huaiquique**	**1.32**	**307**	*eP*	**Pn**	**14 47 23.7**	**-0.5**
TA02				*eS*	**Sn**	**14 47 43.8**	**+0.5**
TA02				IAML		14 47 49.0	
	comp=Z,1μm,0.1s						
TA02	**Huaiquique**	**1.32**	**307**	*i* P	**Pn**	**14 47 24.2**	**0.0**
TA02				*i* S	**Sn**	**14 47 43.3**	**-0.1**
GO01	**Chusmiza**	**1.40**	**353**	*eP*	**Pn**	**14 47 25.5**	**-0.2**
GO01				*eS*	**Sn**	**14 47 47.1**	**+1.3**
GO01				IAML		14 47 47.5	
	comp=Z,344nm,0.3s						
GO01	**Chusmiza**	**1.40**	**353**	*i* P	**Pn**	**14 47 25.3**	**-0.4**
GO01				*i* S	**Sn**	**14 47 45.8**	**-0.1**
PB11	**IPOC Station P**	**1.43**	**335**	*eP*	**Pn**	**14 47 25.2**	**-0.5**
PB11				*eS*	**Sn**	**14 47 46.4**	**+0.4**
PB11				IAML		14 47 47.0	
	comp=Z,484nm,0.1s						
PB11	**IPOC Station P**	**1.43**	**335**	⇑*i* P	**Pn**	**14 47 25.3**	**-0.5**
PB11				*i* S	**Sn**	**14 47 46.0**	**+0.1**
PB11				IAML		14 47 48.1	
	comp=E,912nm,0.2s						
LVC	**Limon Verde**	**1.54**	**177**	*eP*	**Pn**	**14 47 26.9**	**-0.2**
LVC				*eS*	**Sn**	**14 47 48.9**	**+0.3**
LVC				IAML		14 47 52.0	
	comp=Z,250nm,0.5s						
LVC	**Limon Verde**	**1.54**	**177**	⇑*i* P	**Pn**	**14 47 27.0**	**-0.2**
LVC				*i* S	**Sn**	**14 47 48.3**	**-0.3**
PB04	**IPOC Station P**	**1.65**	**220**	*eP*	**Pn**	**14 47 28.2**	**-0.1**
PB04				*eS*	**Sn**	**14 47 52.2**	**+1.7**
PB04				IAML		14 48 00.2	
	comp=Z,323nm,0.4s						
PB04	**IPOC Station P**	**1.65**	**220**	⇑*i* P	**Pn**	**14 47 28.2**	**-0.1**
PB04				*i* S	**Sn**	**14 47 50.5**	**0.0**
PB04				IAML		14 48 01.2	
	comp=N,374nm,0.4s						
PB06	**IPOC Station P**	**1.72**	**198**	*eP*	**Pn**	**14 47 29.0**	**0.0**
PB06				*eS*	**Sn**	**14 47 53.0**	**+1.0**
PB06				IAML		14 48 01.0	
	comp=Z,351nm,0.4s						
PB06	**IPOC Station P**	**1.72**	**198**	⇑*i* P	**Pn**	**14 47 29.0**	**0.0**
PB06				*i* S	**Sn**	**14 47 51.9**	**0.0**
PB06				IAML		14 47 54.7	
	comp=E,599nm,0.3s						
PB15	**IPOC Station P**	**2.18**	**191**	*eP*	**Pn**	**14 47 34.5**	**-0.3**
PB15				*eP*	**Pn**	**14 47 35.0**	**+0.2**
PB15				*eS*	**Sn**	**14 48 02.5**	**+0.3**
PB15				IAML		14 48 06.7	
	comp=Z,744nm,0.3s						
PB15	**IPOC Station P**	**2.18**	**191**	*i* P	**Pn**	**14 47 34.7**	**-0.1**
PB15				*i* S	**Sn**	**14 48 02.4**	**+0.3**
PB12	**IPOC Station P**	**2.74**	**333**	*eP*	**Pn**	**14 47 40.6**	**-1.4**
PB12				*eS*	**Sn**	**14 48 14.8**	**-0.1**
PB12				IAML		14 48 20.1	
	comp=Z,68nm,0.3s						
PB12	**IPOC Station P**	**2.74**	**333**	*i* P	**Pn**	**14 47 40.6**	**-1.4**
PB16	**IPOC Station P**	**2.76**	**350**	*eP*	**Pn**	**14 47 42.7**	**0.0**
PB16				*eS*	**Sn**	**14 48 18.0**	**+2.0**
PB16	**IPOC Station P**	**2.76**	**350**	*i* P	**Pn**	**14 47 43.2**	**+0.6**
PB16				*i* S	**Sn**	**14 48 16.5**	**+0.4**
YJA	**Yavi**	**3.43**	**109**	*eP*	**Pn**	**14 47 51.6**	**+0.3**
GO02	**Mina Guanaco**	**4.11**	**187**	*eP*	**Pn**	**14 47 59.2**	**-1.1**
GO02				*eS*	**Sn**	**14 48 46.9**	**-1.0**
GO02				IAML		14 49 23.7	
	comp=Z,79nm,0.6s						

*NEIC **24** 14:51:06.9±2.0,56°46N±0°08×148°6W±0°1,h20km±8km, mb4.0/3,MS3.7/70,ML3.5(AEIC),Error ellipse: s-maj=11.9km s-min=8.2km az=176.0*
*IDC **24** 14:51:07.2±0.9,56°56N×148°71W,h0km,mb3.9/12, mbtmp3.9/16,ML3.4/4,MS3.2/12,Error ellipse: s-maj=23.7km s-min=15.9km az=23.0*
*MOS **24** 14:51:08.9±1.5,56°71N×148°18W,h29km,mb4.5/14, Error ellipse: s-maj=22.3km s-min=7.2km az=98.4*
*AEIC **24** 14:51:11.0±1.9,56°61N±0°07×148°53W±0°10,h5km±4km, Error ellipse: s-maj=10.9km s-min=7.4km az=163.0*
ISC 24 14:51:07.1±0.5, **56°54N**±0°06

MID	**Middleton Isla**	**3.12**	**21**	Pn	**Pn**	**14 51 55.0**	**-1.2**
MID				IAML		14 53 08.0	
	comp=N,144nm,1.2s						
MID				IAML		14 53 14.3	
	comp=E,161nm,1.2s						
MID	**Middleton Isla**	**3.12**	**21**	P	**Pn**	**14 51 59.4**	**+3.2**
MID	**Middleton Isla**	**3.12**	**21**	P	**Pn**	**14 51 55.0**	**-1.2**
Q23K	**Middleton Isla**	**3.12**	**21**	Pn	**Pn**	**14 51 55.0**	**-1.2**
Q23K				IAML		14 52 36.0	
	comp=E,175nm,1.4s						
Q23K				IAML		14 53 07.3	
	comp=N,143nm,1.4s						
Q23K	**Middleton Isla**	**3.12**	**21**	P	**Pn**	**14 51 54.9**	**-1.3**
	baz=203						
CNPM	**China Poot**	**3.33**	**335**		**Pn**	**14 51 58.0**	**-1.2**
CNPM	**China Poot**	**3.33**	**335**		**Sn**	**14 52 34.6**	**-4.1**
BRSE	**Bradley Lake S**	**3.42**	**341**		**Pn**	**14 51 59.1**	**-1.3**
BRSE					**Sn**	**14 52 36.9**	**-4.1**
BRSE	**Bradley Lake S**	**3.42**	**341**	P	**Pn**	**14 51 59.1**	**-1.3**
	baz=159						
BRSE				S	**Sn**	**14 52 36.9**	**-4.1**
	baz=159						
BRLK	**Bradley Lake**	**3.47**	**340**	Pn	**Pn**	**14 51 59.6**	**-1.5**
BRLK	**Bradley Lake**	**3.47**	**340**		**Sn**	**14 52 38.6**	**-3.7**
BRLK	**Bradley Lake**	**3.47**	**340**	IAML		14 52 42.8	
	comp=E,84nm,0.5s						
BRLK				IAML		14 52 44.0	
	comp=N,88nm,0.7s						
P23K	**Montague Islan**	**3.52**	**9**		**Pn**	**14 52 00.3**	**-1.4**
P23K	**Montague Islan**	**3.52**	**9**	P	**Pn**	**14 52 00.3**	**-1.4**
	baz=190						
HOM	**Homer**	**3.54**	**333**		**Pn**	**14 52 01.0**	**-1.0**
SEW	**Seward**	**3.61**	**352**		**Pn**	**14 52 01.4**	**-1.6**
SEW	**Seward**	**3.61**	**352**	P	**Pn**	**14 52 01.4**	**-1.6**
	baz=172						
Q19K	**Cape Douglas,**	**3.65**	**313**	Pn	**Pn**	**14 52 04.2**	**+0.6**
P19K	**Oil Pt**	**4.00**	**323**	Pn	**Pn**	**14 52 07.9**	**-0.6**
P19K	**Oil Pt**	**4.00**	**323**	P	**Pn**	**14 52 07.2**	**-1.3**
	baz=139						
P19K				S	**Sn**	**14 52 52.9**	**-2.5**
	baz=139						
O22K	**Cooper Landing**	**4.00**	**351**	Pn	**Pn**	**14 52 08.1**	**-0.3**
O22K	**Cooper Landing**	**4.00**	**351**		**Sn**	**14 52 51.3**	**-4.0**
O22K	**Cooper Landing**	**4.00**	**351**	S	**Sn**	**14 52 51.3**	**-4.0**
	baz=170						
HIN	**Hinchinbrook I**	**4.01**	**14**	Pn	**Pn**	**14 52 07.6**	**-0.9**
HIN				IAML		14 53 00.2	
	comp=E,139nm,0.9s						
KAIM	**Kayak Island**	**4.02**	**31**		**Pn**	**14 52 07.8**	**-0.9**
KAIM	**Kayak Island**	**4.02**	**31**	IAML		14 52 55.4	
	comp=N,140nm,1.1s						
KAIM				IAML		14 53 07.0	
	comp=E,144nm,1.4s						
KAIM	**Kayak Island**	**4.02**	**31**	P	**Pn**	**14 52 07.8**	**-0.9**
	baz=215						
SLKM	**Skilak Lake**	**4.08**	**348**		**Pn**	**14 52 08.2**	**-1.2**
O20K	**Slope Mountain**	**4.16**	**330**		**Pn**	**14 52 09.2**	**-1.4**
O20K	**Slope Mountain**	**4.16**	**330**	P	**Pn**	**14 52 09.2**	**-1.4**
	baz=146						
IVE	**Iliamna Volcan**	**4.22**	**328**		**Pn**	**14 52 10.0**	**-1.5**
ILSW	**Iliamna Southw**	**4.23**	**327**		**Sn**	**14 52 58.1**	**-3.0**
EYAK	**Cordova Ski Ar**	**4.27**	**19**		**Pn**	**14 52 11.0**	**-1.1**
EYAK	**Cordova Ski Ar**	**4.27**	**19**	P	**Pn**	**14 52 11.0**	**-1.1**
	baz=201						
SUCK	**Suckling Hills**	**4.33**	**33**	Pn	**Pn**	**14 52 11.8**	**-1.1**
SUCK				IAML		14 53 13.3	
	comp=N,114nm,1.4s						
SUCK				IAML		14 53 39.0	
	comp=E,88nm,1.5s						
CNTC	**Contact Creek**	**4.35**	**296**		**Pn**	**14 52 13.6**	**+0.3**
Q17K	**Contact Creek**	**4.35**	**296**	P	**Pn**	**14 52 13.5**	**+0.3**
	baz=110						
RAGM	**Ragged Mountai**	**4.35**	**26**		**Pn**	**14 52 12.4**	**-0.8**
FID	**Port Fidalgo**	**4.35**	**13**	Pn	**Pn**	**14 52 11.7**	**-1.5**
FID				IAML		14 53 05.4	
	comp=E,54nm,0.7s						
NICHA	**Nichawak Mount**	**4.41**	**31**		**Pn**	**14 52 13.1**	**-0.9**
GLI	**Glacier Island**	**4.41**	**9**	Pn	**Pn**	**14 52 13.2**	**-0.8**
GLI				IAML		14 53 01.6	
	comp=E,66nm,0.7s						
GLI	**Glacier Island**	**4.41**	**9**	P	**Pn**	**14 52 12.7**	**-1.3**
	baz=190						
CAPN	**Captain Cook N**	**4.46**	**343**	Pn	**Pn**	**14 52 13.2**	**-1.4**
GOAT	**Goat Mountain**	**4.51**	**24**		**Pn**	**14 52 14.9**	**-0.5**
RDSO	**Redoubt South**	**4.51**	**332**		**Pn**	**14 52 14.0**	**-1.5**
RSO	**Redoubt South**	**4.52**	**332**		**Pn**	**14 52 14.5**	**-1.2**
RDWB	**Redoubt West**	**4.56**	**332**		**Pn**	**14 52 14.5**	**-1.7**
RC01	**Rabbit Creek A**	**4.61**	**353**	Pn	**Pn**	**14 52 16.1**	**-0.6**
RC01				IAML		14 53 06.9	
	comp=N,70nm,0.5s						
RC01				IAML		14 53 08.4	
	comp=E,76nm,0.5s						
RC01	**Rabbit Creek A**	**4.61**	**353**	P	**Pn**	**14 52 15.9**	**-0.8**
	baz=172						
BERG	**Berg Lake**	**4.61**	**31**	IAML		14 53 09.1	
	comp=N,109nm,0.3s						
GRIN	**Grindle Hills**	**4.64**	**34**		**Pn**	**14 52 16.4**	**-0.8**
SNH	**Sunshine Point**	**4.71**	**37**	Pn	**Pn**	**14 52 17.9**	**-0.3**
SNH				IAML		14 53 24.7	
	comp=N,76nm,1.2s						
SNH				IAML		14 53 34.0	
	comp=E,64nm,1.5s						
O19K	**Port Alsworth**	**4.77**	**323**		**Pn**	**14 52 17.7**	**-1.3**
KHIT	**Khitrov Hills**	**4.79**	**33**		**Pn**	**14 52 18.2**	**-1.0**
O18K	**Koktuh Hills**	**4.86**	**316**	Pn	**Pn**	**14 52 20.3**	**+0.1**
BMRM	**Bremner River**	**4.88**	**23**		**Pn**	**14 52 19.9**	**-0.6**
BMRM	**Bremner River**	**4.88**	**23**	P	**Pn**	**14 52 19.9**	**-0.6**
	baz=207						
KNK	**Knik Glacier**	**4.89**	**0**		**Pn**	**14 52 20.0**	**-0.6**
KNK	**Knik Glacier**	**4.89**	**0**	IAML		14 53 15.1	
	comp=E,35nm,1.5s						
KNK	**Knik Glacier**	**4.89**	**0**	P	**Pn**	**14 52 20.0**	**-0.6**
	baz=180						
WAX	**Waxell Ridge**	**4.91**	**35**		**Pn**	**14 52 20.4**	**-0.6**
WAX				IAML		14 53 15.5	
	comp=E,90nm,0.4s						
MESA	**MESA**	**5.02**	**41**	Pn	**Pn**	**14 52 21.9**	**-0.6**
MESA				IAML		14 53 41.8	
	comp=E,70nm,1.2s						
MESA				IAML		14 53 42.5	
	comp=N,78nm,0.3s						
CRQM	**Cirque**	**5.07**	**31**		**Pn**	**14 52 22.6**	**-0.6**
CRQM	**Cirque**	**5.07**	**31**	IAML		14 53 24.5	
	comp=E,51nm,0.9s						
CRQM				IAML		14 53 31.1	
	comp=N,58nm,0.9s						
SUA	**Susitna One**	**5.07**	**348**		**Pn**	**14 52 22.1**	**-1.1**
SUA				IAML		14 53 23.6	
	comp=E,36nm,1.3s						
SUA	**Susitna One**	**5.07**	**348**	P	**Pn**	**14 52 21.9**	**-1.3**
	baz=166						
PMR	**Palmer**	**5.08**	**357**	Pn	**Pn**	**14 52 20.9**	**-2.2**
PMR				IAML		14 53 24.1	
	comp=N,35nm,1.0s						
PMR				IAML		14 53 25.9	
	comp=E,30nm,0.8s						
PMR	**Palmer**	**5.08**	**357**	P	**Pn**	**14 52 22.7**	**-0.4**
PMR	**Palmer**	**5.08**	**357**	P	**Pn**	**14 52 20.9**	**-2.2**
CRQE	**Cirque**	**5.08**	**32**	P	**Pn**	**14 52 22.6**	**-0.7**
	baz=217						
KLU	**Klutina**	**5.14**	**14**		**Pn**	**14 52 23.5**	**-0.6**
KLU				IAML		14 53 27.5	
	comp=E,44nm,0.7s						
KLU				IAML		14 53 38.5	
	comp=N,34nm,0.7s						
KLU	**Klutina**	**5.14**	**14**	P	**Pn**	**14 52 23.6**	**-0.5**
	baz=196						
TGL	**Tana Glacier**	**5.16**	**33**		**Pn**	**14 52 23.9**	**-0.5**
TGL				IAML		14 53 21.8	
	comp=N,37nm,1.5s						
TGL				IAML		14 53 23.9	
	comp=E,54nm,0.7s						
BAGL	**Bagley Icefiel**	**5.19**	**38**		**Pn**	**14 52 24.2**	**-0.5**
ISLE	**Juniper Island**	**5.20**	**36**		**Pn**	**14 52 22.4**	**-2.5**
ISLE				IAML		14 53 38.0	
	comp=E,48nm,1.3s						
ISLE				IAML		14 53 39.3	
	comp=N,42nm,1.3s						
GHO	**Glory Hole Cre**	**5.25**	**358**		**Pn**	**14 52 23.7**	**-1.9**
GHO				IAML		14 53 27.7	
	comp=E,67nm,0.5s						
GHO				IAML		14 53 27.9	
	comp=N,60nm,0.7s						
STLK	**Strandline Lak**	**5.26**	**342**		**Pn**	**14 52 24.0**	**-1.7**
M23K	**Glacier View**	**5.28**	**4**		**Pn**	**14 52 24.2**	**-1.8**
	baz=185						
SML	**Sawmill**	**5.28**	**1**		**Pn**	**14 52 24.7**	**-1.3**
SML				IAML		14 53 27.9	
	comp=E,47nm,1.0s						
SML				IAML		14 53 42.7	
	comp=N,43nm,1.1s						
N19K	**Bonanza Creek**	**5.30**	**326**	Pn	**Pn**	**14 52 24.2**	**-2.0**
N19K				IAML		14 53 35.3	
	comp=E,27nm,1.0s						
N19K	**Bonanza Creek**	**5.30**	**326**	P	**Pn**	**14 52 24.6**	**-1.7**
	baz=141						
SCM	**Sheep Creek Mo**	**5.34**	**6**		**Pn**	**14 52 26.4**	**-0.4**
SCM	**Sheep Creek Mo**	**5.34**	**6**	P	**Pn**	**14 52 26.5**	**-0.4**
VRDI	**Verde Repeater**	**5.38**	**27**	Pn	**Pn**	**14 52 27.1**	**-0.4**
KIAG	**Kiagna River**	**5.44**	**34**		**Pn**	**14 52 27.6**	**-0.7**
N25K	**Chitina, Valde**	**5.46**	**20**		**Pn**	**14 52 28.6**	**+0.1**
N25K	**Chitina, Valde**	**5.46**	**20**	P	**Pn**	**14 52 28.1**	**-0.4**
	baz=204						
GLB	**Gilahina Butte**	**5.48**	**24**		**Pn**	**14 52 28.2**	**-0.6**
TABL	**Table Mountain**	**5.49**	**42**		**Pn**	**14 52 28.8**	**-0.2**
CHGN	**Chignik**	**5.51**	**272**	Pn	**Pn**	**14 52 27.3**	**-1.7**
PTPK	**Patty Peak**	**5.61**	**31**		**Pn**	**14 52 30.3**	**-0.4**
PCA	**Pinnacle**	**5.62**	**47**		**Pn**	**14 52 30.0**	**-0.6**
PINM	**Pinnacle**	**5.62**	**47**	P	**Pn**	**14 52 30.0**	**-0.7**
	baz=235						
MCARA	**McCarthy VSAT**	**5.62**	**28**		**Pn**	**14 52 30.2**	**-0.4**
MCARA	**McCarthy VSAT**	**5.62**	**28**	P	**Pn**	**14 52 29.8**	**-0.8**
	baz=213						
N18K	**Kilae Creek**	**5.67**	**320**	Pn	**Pn**	**14 52 30.7**	**-0.5**
SKT	**Skwentna**	**5.67**	**345**		**Pn**	**14 52 31.1**	**-0.2**
M24K	**Tolsona, Glenn**	**5.71**	**11**		**Pn**	**14 52 32.3**	**+0.4**
PNL	**Peninsula**	**5.76**	**53**		**Pn**	**14 52 32.2**	**-0.3**
PNL	**Peninsula**	**5.76**	**53**	P	**Pn**	**14 52 33.0**	**+0.5**
PNL	**Peninsula**	**5.76**	**53**	P	**Pn**	**14 52 32.2**	**-0.3**
	baz=242						
BARN	**Barnard Glacie**	**5.76**	**35**		**Pn**	**14 52 32.7**	**0.0**
CTG	**Chitna Glacier**	**5.79**	**37**	P	**Pn**	**14 52 32.3**	**-0.8**
	baz=224						
CTGM	**Chitina Glacie**	**5.80**	**37**		**Pn**	**14 52 32.7**	**-0.5**
BCPM	**Bancas Point**	**5.80**	**50**		**Pn**	**14 52 33.4**	**+0.3**
LOGN	**Logan Glacier**	**5.81**	**39**		**Pn**	**14 52 33.0**	**-0.4**
M20K	**Styx River**	**5.86**	**338**	Pn	**Pn**	**14 52 33.0**	**-1.0**
SVW2	**Sparrevohn**	**5.86**	**324**	Pn	**Pn**	**14 52 32.1**	**-1.9**
SVW2	**Sparrevohn**	**5.86**	**324**	P	**Pn**	**14 52 32.4**	**-1.5**
O16K	**Kokwok River B**	**5.94**	**305**	Pn	**Pn**	**14 52 35.0**	**+0.1**
N17K	**Nushagak Hills**	**6.05**	**315**		**Pn**	**14 52 35.3**	**-1.2**
N17K	**Nushagak Hills**	**6.05**	**315**	P	**Pn**	**14 52 35.3**	**-1.2**
	baz=127						
M19K	**Big River Lodg**	**6.17**	**333**		**Pn**	**14 52 36.4**	**-1.7**
M19K	**Big River Lodg**	**6.17**	**333**	P	**Pn**	**14 52 36.4**	**-1.7**
	baz=148						
M18K	**Stony River**	**6.24**	**326**		**Pn**	**14 52 37.5**	**-1.6**
M18K	**Stony River**	**6.24**	**326**	P	**Pn**	**14 52 37.5**	**-1.6**
	baz=139						
O29M	**Mount Kennedy**	**6.43**	**50**	Pn	**Pn**	**14 52 42.6**	**+0.8**
O29M	**Mount Kennedy**	**6.43**	**50**	P	**Pn**	**14 52 42.3**	**+0.4**
	baz=239						
P29M	**Windy Craggy**	**6.49**	**57**		**Pn**	**14 52 42.5**	**-0.2**
P29M	**Windy Craggy**	**6.49**	**57**	P	**Pn**	**14 52 42.5**	**-0.2**
	baz=247						
L19K	**White Mountain**	**6.52**	**333**		**Pn**	**14 52 41.3**	**-1.7**
L19K	**White Mountain**	**6.52**	**333**	P	**Pn**	**14 52 41.3**	**-1.7**
	baz=147						
DHY	**Denali Highway**	**6.58**	**4**		**Pn**	**14 52 44.7**	**+0.8**
M17K	**Holitna River**	**6.71**	**320**		**Pn**	**14 52 44.4**	**-1.1**
M17K	**Holitna River**	**6.71**	**320**	P	**Pn**	**14 52 44.4**	**-1.1**
	baz=132						
M27K	**Edge Creek, AK**	**6.74**	**27**	Pn	**Pn**	**14 52 45.3**	**-0.8**
S31K	**Pelican**	**6.81**	**73**		**Pn**	**14 52 46.0**	**-0.9**
S31K	**Pelican**	**6.81**	**73**	P	**Pn**	**14 52 45.7**	**-1.2**
	baz=264						
RND	**Reindeer**	**6.89**	**359**	Pn	**Pn**	**14 52 48.3**	**+0.2**
RND	**Reindeer**	**6.89**	**359**	P	**Pn**	**14 52 48.3**	**+0.2**
TRF	**Thorofare Moun**	**6.99**	**353**	Pn	**Pn**	**14 52 49.4**	**-0.1**
M16K	**Timber Creek**	**7.05**	**314**	Pn	**Pn**	**14 52 49.7**	**-0.4**
M16K	**Timber Creek**	**7.05**	**314**	P	**Pn**	**14 52 48.8**	**-1.4**
	baz=125						
L18K	**Granite Mounta**	**7.06**	**327**	Pn	**Pn**	**14 52 49.0**	**-1.3**
N15K	**Kwethluk River**	**7.10**	**306**	Pn	**Pn**	**14 52 51.5**	**+0.6**
CAST	**Castle Rocks**	**7.13**	**347**		**Pn**	**14 52 51.0**	**-0.3**
KTH	**Kantishna Hill**	**7.14**	**351**	Pn	**Pn**	**14 52 51.1**	**-0.3**
HYT	**Haines Junctio**	**7.16**	**49**	Pn	**Pn**	**14 52 52.8**	**+0.9**
SIT	**Sitka**	**7.26**	**80**	Pn	**Pn**	**14 52 50.6**	**-2.5**
SIT	**Sitka**	**7.26**	**80**	P	**Pn**	**14 52 50.7**	**-2.3**
SIT	**Sitka**	**7.26**	**80**	P	**Pn**	**14 52 50.9**	**-2.2**
	baz=272						
SIT	**Sitka**	**7.26**	**80**	P	**Pn**	**14 52 50.6**	**-2.5**
L27K	**Beaver Creek,**	**7.35**	**24**	Pn	**Pn**	**14 52 53.1**	**-1.3**
BCAR	**Beaver Creek A**	**7.37**	**25**	Pn	**Pn**	**14 52 55.4**	**+0.8**
K20K	**Telida**	**7.38**	**340**	Pn	**Pn**	**14 52 52.6**	**-2.2**
TTA	**Tatalina**	**7.44**	**333**	Pn	**Pn**	**14 52 53.8**	**-1.8**
TTA	**Tatalina**	**7.44**	**333**	P	**Pn**	**14 52 54.1**	**-1.6**
TTA	**Tatalina**	**7.44**	**333**	P	**Pn**	**14 52 53.8**	**-1.8**
SKAG	**Skagway**	**7.59**	**62**		**Pn**	**14 52 58.1**	**+0.6**
SKAG	**Skagway**	**7.59**	**62**	P	**Pn**	**14 52 58.9**	**+1.4**
L16K	**Owhat River**	**7.66**	**317**	Pn	**Pn**	**14 52 58.1**	**-0.4**
S32K	**Killisnoo**	**7.66**	**77**	Pn	**Pn**	**14 52 57.8**	**-0.8**
S32K	**Killisnoo**	**7.66**	**77**	P	**Pn**	**14 52 57.0**	**-1.5**
	baz=269						
BPAW	**Bear Paw Mtn.**	**7.68**	**352**	Pn	**Pn**	**14 52 57.3**	**-1.6**
O30N	**Mendenhall**	**7.73**	**52**	Pn	**Pn**	**14 53 00.2**	**+0.5**
R32K	**Eaglecrest**	**7.75**	**71**		**Pn**	**14 52 57.7**	**-2.1**
M29M	**Somme Creek**	**7.81**	**37**		**Pn**	**14 53 00.7**	**-0.1**
M29M	**Somme Creek**	**7.81**	**37**	P	**Pn**	**14 53 00.7**	**-0.1**
	baz=226						
JIS	**Juneau Island**	**7.82**	**71**		**Pn**	**14 52 59.2**	**-1.5**
JIS	**Juneau Island**	**7.82**	**71**	P	**Pn**	**14 53 00.8**	**0.0**
K17K	**Iditarod**	**7.93**	**325**		**Pn**	**14 53 00.8**	**-1.5**
K17K	**Iditarod**	**7.93**	**325**	P	**Pn**	**14 53 00.8**	**-1.5**
	baz=137						
CCB	**Clear Creek Bu**	**8.14**	**2**	Pn	**Pn**	**14 53 05.2**	**+0.1**
J20K	**Nowinta River**	**8.15**	**342**		**Pn**	**14 53 04.7**	**-0.6**
J20K	**Nowinta River**	**8.15**	**342**	P	**Pn**	**14 53 04.7**	**-0.6**
	baz=157						
WHY	**Whitehorse**	**8.22**	**54**		**Pn**	**14 53 07.0**	**+0.6**
J25K	**Salcha River,**	**8.24**	**9**		**Pn**	**14 53 06.2**	**-0.4**
J19K	**Poorman**	**8.27**	**338**	Pn	**Pn**	**14 53 06.1**	**-0.8**
ILAR	**Eielson Array**	**8.30**	**5**	Pn	**Pn**	**14 53 06.2**	**-1.0**
	comp=E,0.1nm,0.3s,baz=320,slow=33,SNR=2.8						
ILAR					**Sn**	**14 54 36.6**	**-4.3**
	comp=E,0.3nm,0.3s,baz=190,slow=23,SNR=9.5						
	comp=E,0.3nm,0.3s						
J26L	**Joseph Creek**	**8.35**	**15**		**Pn**	**14 53 07.9**	**-0.1**
L29M	**L29M**	**8.40**	**34**		**Pn**	**14 53 08.5**	**-0.3**
L29M	**L29M**	**8.40**	**34**	P	**Pn**	**14 53 08.5**	**-0.3**
	baz=223						
P32M	**Atlin**	**8.41**	**63**	Pn	**Pn**	**14 53 09.1**	**+0.1**
P32M	**Atlin**	**8.41**	**63**	P	**Pn**	**14 53 08.1**	**-0.8**
	baz=256						
M30M	**Minto, Yukon**	**8.47**	**40**	Pn	**Pn**	**14 53 09.8**	**0.0**
U33K	**Whale Pass**	**8.56**	**86**	Pn	**Pn**	**14 53 08.2**	**-2.7**
U33K	**Whale Pass**	**8.56**	**86**	P	**Pn**	**14 53 08.6**	**-2.3**
	baz=280						
MLY	**Manley**	**8.59**	**354**	Pn	**Pn**	**14 53 12.3**	**+1.0**
I23K	**Minto, Yukon-K**	**8.65**	**358**	Pn	**Pn**	**14 53 11.8**	**-0.3**
CRAG	**Craig**	**8.69**	**91**		**Pn**	**14 53 10.9**	**-1.7**
CRAG	**Craig**	**8.69**	**91**	P	**Pn**	**14 53 10.6**	**-2.0**
CRAG	**Craig**	**8.69**	**91**	P	**Pn**	**14 53 10.9**	**-1.7**
	baz=284						
L14K	**Kuka Creek**	**8.76**	**309**	Pn	**Pn**	**14 53 12.6**	**-1.0**
K15K	**Wolf Creek Mou**	**8.79**	**316**	Pn	**Pn**	**14 53 11.8**	**-2.1**
DAWY	**Dawson**	**8.79**	**27**	Pn	**Pn**	**14 53 13.2**	**-0.9**
I21K	**Tanana**	**8.83**	**350**	Pn	**Pn**	**14 53 14.8**	**+0.2**
P33M	**Teslin, Yukon**	**9.02**	**59**		**Pn**	**14 53 17.6**	**+0.4**
J16K	**Anvik River**	**9.08**	**323**		**Pn**	**14 53 16.7**	**-1.3**
J16K	**Anvik River**	**9.08**	**323**	P	**Pn**	**14 53 16.7**	**-1.3**
	baz=132						
K29M	**Barlow Dome**	**9.13**	**32**		**Pn**	**14 53 19.5**	**+0.7**
M31M	**Drury Creek, Y**	**9.16**	**46**	Pn	**Pn**	**14 53 19.9**	**+0.8**
H21K	**Melozitna Rive**	**9.38**	**349**		**Pn**	**14 53 20.9**	**-1.2**
H21K	**Melozitna Rive**	**9.38**	**349**	P	**Pn**	**14 53 21.0**	**-1.2**
	baz=165						
V35K	**Ketchikan**	**9.56**	**90**	Pn	**Pn**	**14 53 23.1**	**-1.4**
FARO	**Faro, Yukon**	**9.59**	**47**	Pn	**Pn**	**14 53 24.7**	**-0.4**
R33M	**Jennings River**	**9.74**	**66**	Pn	**Pn**	**14 53 27.5**	**+0.2**
IMAR	**Indian Mountai**	**9.80**	**347**	Pn	**Pn**	**14 53 27.0**	**-0.9**
H18K	**Honhosa River**	**9.87**	**335**	Pn	**Pn**	**14 53 27.5**	**-1.4**
J30M	**Hart River**	**10.02**	**32**	Pn	**Pn**	**14 53 31.8**	**+0.8**
T35M	**Bob Quinn**	**10.03**	**80**	Pn	**Pn**	**14 53 32.0**	**+0.9**
DLBC	**Dease Lake**	**10.12**	**72**	Pn	**Pn**	**14 53 33.7**	**+1.3**
	comp=E,0.8nm,0.3s,baz=268,slow=4.5,SNR=15						
DLBC					**Sn**	**14 55 22.9**	**-3.0**
	comp=E,0.2nm,0.3s,baz=127,slow=20,SNR=1.3						
	comp=E,1.9nm,0.3s						
G24K	**Hadweenzic Riv**	**10.21**	**2**	Pn	**Pn**	**14 53 33.3**	**-0.2**
F20K	**Avaraart Lake**	**11.07**	**345**	Pn	**Pn**	**14 53 45.4**	**+0.1**
F17K	**Baldwin Pennin**	**11.62**	**334**	Pn	**Pn**	**14 53 52.6**	**-0.1**
E19K	**Redstone River**	**11.68**	**343**	Pn	**Pn**	**14 53 52.9**	**-0.7**
BBB	**Bella Bella**	**12.65**	**102**	LR	LR	14 57 30.8	
	comp=E,85nm,19.1s,baz=303,slow=30						
INK	**Inuvik**	**13.63**	**24**	Pn	**P**	**14 54 28.2**	**-0.9**
	comp=E,0.2nm,0.3s,baz=220,slow=8.8,SNR=6.7						
C36M	**Paulatuk**	**16.80**	**31**	P	**P**	**14 55 04.4**	**+0.2**
C36M				IAmb	IAmb	14 55 20.1	
	comp=Z,5.8nm,1.1s						
YKA	**Yellowknife Ar**	**18.04**	**57**	P	**P**	**14 55 20.7**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=266,slow=11,SNR=10						
	comp=Z,1.1nm,0.9s						
AMKA	**Amchitka**	**19.52**	**268**	P	**P**	**14 55 32.0**	**-2.2**
G05A	**Wamic**	**20.39**	**112**	P	**P**	**14 55 41.7**	**-2.2**
G05A				IAmb	IAmb	14 55 51.2	
	comp=Z,6.7nm,0.9s						
I03D	**Drain, OR**	**20.48**	**118**	P	**P**	**14 55 41.6**	**-3.1**
I03D				IAmb	IAmb	14 56 01.3	
	comp=Z,26nm,1.2s						
NEW	**Newport**	**20.71**	**100**	LR	LR	15 02 35.3	
	comp=Z,42nm,20.4s,baz=299,slow=33						
SHEM	**Shemya Is, Ala**	**21.79**	**276**	LR	LR	15 03 46.4	
	comp=Z,41nm,21.6s,baz=306,slow=35						
BILL	**Bilibino**	**23.34**	**318**	*eP*	**P**	**14 56 16.6**	**+1.6**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ELK	**Elko**	**26.72**	**112**	LR	LR	15 05 41.5	
	comp=Z,56nm,18.4s,baz=351,slow=33						
NVAR	**Mina Array Bea**	**26.96**	**119**	P	**P**	**14 56 52.8**	**+4.0**
	comp=Z,0.5nm,0.8s,baz=303,slow=9.7,SNR=3.8						
	comp=Z,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**31.33**	**79**	P	**P**	**14 57 31.6**	**+4.4**
	comp=Z,0.8nm,0.6s,baz=270,slow=4.0,SNR=2.9						
ULM				LR	LR	15 09 24.1	
	comp=Z,90nm,18.1s,baz=298,slow=35						
	comp=Z,0.8nm,0.6s						
PFO	**Pinyon Flats O**	**31.73**	**123**	*i* P	**P**	**14 57 29.6**	**-1.5**
PFO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PFO	**Pinyon Flats O**	**31.73**	**123**	LR	LR	15 07 33.0	
	comp=Z,62nm,18.1s,baz=350,slow=31						
ANMO	**Albuquerque**	**35.64**	**109**	LR	LR	15 10 44.7	
	comp=Z,38nm,18.5s,baz=91,slow=33						
YAK	**Yakutsk**	**39.52**	**313**	*eP*	**P**	**14 58 38.7**	**+1.3**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.9s						
TXAR	**Lajitas Array**	**41.52**	**112**	LR	LR	15 14 34.7	
	comp=E,24nm,19.8s,baz=9.0,slow=34						
HKT	**Hockley**	**45.16**	**103**	*i* P	**P**	**14 59 19.1**	**-4.6**
HKT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLR	**Kul'dur**	**46.10**	**296**	*ce*P	**P**	**14 59 30.4**	**-0.6**
KLR				pmax	pmax		
	comp=Z,11nm,2.5s						
TKL	**Tuckaleechee C**	**47.49**	**88**	LR	LR	15 18 26.3	
	comp=Z,46nm,18.0s,baz=301,slow=34						
NRIK	**Noril'sk**	**48.04**	**337**	*i* P	**P**	**14 59 46.5**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**49.39**	**241**	T	T	15 53 15.9	
	baz=30,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**49.39**	**241**	T	T	15 53 13.7	

*UCR **24** 14:54:37.6±1.2,9.86N×84.36W, h6km±9km, MW4.1*
*CATAC **24** 14:54:37.8±0.2,9.86N×84.34W, h4km±1km, ML3.6*
ISC 24 14:54:37.6±0.9, 9.84N±0.02×84.37W±0.02, h9km±8km, n58, σ0.079/82, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANTA	**Santa Ana**	**0.20**	**62**	*eP*	**Pg**	**14 54 41.7**	**-0.2**
SANTA				*eS*	**Sg**	**14 54 44.7**	**-0.1**
TCS1	**Tacares**	**0.21**	**18**	*i P*	**Pg**	**14 54 42.2**	**+0.1**
TCS1				IAML		14 54 46.6	
	comp=Z,100μm,1.0s						
SRA1	**San Ramn**	**0.27**	**336**	*eP*	**Pg**	**14 54 42.8**	**-0.4**
SRA1				*eS*	**Sg**	**14 54 46.8**	**0.0**
HDC	**Heredia**	**0.30**	**57**	*eP*	**Pg**	**14 54 43.7**	**0.0**
HDC				*eS*	**Sg**	**14 54 48.3**	**+0.6**
HDC3	**Heredia 3**	**0.30**	**57**	*i P*	**Pg**	**14 54 43.7**	**0.0**
HDC3				*i S*	**Sg**	**14 54 48.4**	**+0.6**
HDC3				IAML		14 54 52.7	
	comp=Z,8μm,1.0s						
AMPA	**Desamparados**	**0.31**	**79**	*eP*	**Pg**	**14 54 43.5**	**-0.3**
SJS3	**Mercedes San J**	**0.33**	**72**	*eP*	**Pg**	**14 54 44.2**	**0.0**
ARZA	**Esparza**	**0.33**	**297**	*eP*	**Pb**	**14 54 45.4**	**-0.4**
ABE2	**San Pablo**	**0.34**	**113**	*eP*	**Pg**	**14 54 44.2**	**-0.2**
JACO	**JACO, Garabito**	**0.34**	**239**	*eP*	**Pg**	**14 54 44.7**	**+0.4**
JACO	**JACO, Garabito**	**0.34**	**239**	*i P*	**Pg**	**14 54 44.5**	**+0.1**
JACO				*i S*	**Sg**	**14 54 50.3**	**+1.5**
JACO				IAML		14 54 51.0	
	comp=Z,5μm,1.0s						
LCR2	**La Lucha 2**	**0.37**	**105**	*eP*	**Pg**	**14 54 44.7**	**-0.4**
LCR2	**La Lucha 2**	**0.37**	**105**	*i P*	**Pg**	**14 54 44.6**	**-0.4**
LCR2				*i S*	**Sg**	**14 54 49.9**	**0.0**
LCR2				IAML		14 54 50.2	
	comp=Z,3μm,1.0s						
CORON	**Coronado**	**0.38**	**69**	*eP*	**Pb**	**14 54 46.4**	**-0.3**
OCM	**Ochomogo**	**0.40**	**82**	*i P*	**Pg**	**14 54 45.0**	**-0.7**
OCM				IAML		14 54 45.3	
	comp=Z,4μm,1.0s						
CPMI	**Catarata Coope**	**0.44**	**358**	*i P*	**Pg**	**14 54 46.1**	**-0.3**
CPMI				IAML		14 54 46.4	
	comp=Z,3μm,1.0s						
CPMI				*i S*	**Sg**	**14 54 52.6**	**+0.4**
VIRE	**VIRE**	**0.48**	**74**	*i P*	**Pg**	**14 54 46.9**	**-0.2**
VIRE				IAML		14 54 47.1	
	comp=Z,11μm,1.0s						
VIRE				*i S*	**Sg**	**14 54 53.8**	**+0.3**
REPA	**Paraso**	**0.49**	**91**	*eP*	**Pb**	**14 54 47.9**	**-0.7**
RIMA	**Rio Macho**	**0.50**	**98**	*eP*	**Pg**	**14 54 46.8**	**-0.6**
HAYA	**Volcan Irazu**	**0.54**	**75**	*i P*	**Pg**	**14 54 47.7**	**-0.5**
HAYA				IAML		14 54 48.0	
	comp=Z,3μm,1.0s						
VICA	**Volcano Irazu**	**0.54**	**74**	*eP*	**Pg**	**14 54 47.9**	**-0.3**
LAFE	**Finca La Fe, P**	**0.54**	**267**	*i P*	Pn	14 54 57.5	+6.0
LAFE				IAML		14 55 02.4	
	comp=Z,10.0nm,1.0s						
RAFA	**San Farael, Vo**	**0.56**	**78**	*eP*	**Pg**	**14 54 47.8**	**-0.8**
VTRT	**Volcan Turrial**	**0.59**	**74**	*i P*	**Pg**	**14 54 48.9**	**-0.3**
VTRT				IAML		14 54 51.0	
	comp=Z,4μm,1.0s						
VTRT				*i S*	**Sg**	**14 54 54.4**	**-2.6**
SOCE	**Pocosol**	**0.59**	**335**	*eP*	**Pg**	**14 54 49.1**	**-0.1**
SOCE	**Pocosol**	**0.59**	**335**	*i P*	**Pg**	**14 54 49.2**	**-0.1**
SOCE				*i S*	**Sg**	**14 54 57.8**	**+0.7**
SOCE				IAML		14 54 58.5	
	comp=Z,6μm,1.0s						
VTUN	**Crater Central**	**0.62**	**73**	*i P*	**Pg**	**14 54 49.6**	**-0.2**
VTUN				IAML		14 54 51.4	
	comp=Z,4μm,1.0s						
VTR0	**Volcan Turrial**	**0.62**	**73**	*eP*	**Pg**	**14 54 49.7**	**-0.2**
VTUC	**Crater, Volcan**	**0.62**	**73**	*i P*	**Pg**	**14 54 49.7**	**-0.1**
VTUC				IAML		14 54 51.4	
	comp=Z,3μm,1.0s						
RIFO	**Rio Frio, Sara**	**0.65**	**43**	*i P*	**Pg**	**14 54 50.1**	**-0.1**
RIFO				*i S*	**Sg**	**14 54 58.6**	**-0.1**
RIFO				IAML		14 55 07.1	
	comp=Z,3μm,1.0s						
VTCV	**VTCV, Calle Va**	**0.65**	**77**	*i P*	**Pg**	**14 54 49.9**	**-0.3**
VTCV				*i S*	**Sg**	**14 54 58.6**	**-0.1**
VTCV				IAML		14 55 13.4	
	comp=Z,2μm,1.0s						
CDM	**Cerro de Muert**	**0.66**	**115**	*i P*	**Pg**	**14 54 49.9**	**-0.6**
CDM				*i S*	**Sg**	**14 54 58.9**	**-0.3**
CDM				IAML		14 54 59.7	
	comp=Z,2μm,1.0s						
VERB	**Verbena**	**0.67**	**81**	*eP*	**Pg**	**14 54 50.3**	**-0.3**
JTS	**Las Juntas de**	**0.73**	**308**	*eP*	**Pg**	**14 54 51.4**	**-0.4**
CBL1	**Cabuya**	**0.76**	**251**	*eP*	**Pg**	**14 54 50.3**	**-2.0**
PEZE	**Perez Zeledon,**	**0.82**	**124**	*eP*	**Pg**	**14 54 52.7**	**-0.7**
PEZE	**Perez Zeledon,**	**0.82**	**124**	*i P*	**Pg**	**14 54 52.7**	**-0.7**
PEZE				*i S*	**Sg**	**14 55 04.5**	**+0.4**
PEZE				IAML		14 55 12.3	
	comp=Z,950nm,1.0s						
LCOCO	**El Coco**	**0.83**	**73**	*eP*	**Pg**	**14 54 53.5**	**-0.2**
COVE	**Coope Vega, Sa**	**0.88**	**358**	*eP*	**Pg**	**14 54 53.5**	**-1.1**
COVE	**Coope Vega, Sa**	**0.88**	**358**	*i P*	**Pg**	**14 54 53.7**	**-0.9**
COVE				*i S*	**Sb**	**14 55 06.1**	**-0.8**
COVE				IAML		14 55 07.4	
	comp=Z,2μm,1.0s						
OCHAL	**Ojochal**	**1.02**	**136**	*i P*	**Pg**	**14 54 56.7**	**-0.7**
OCHAL				*i S*	**Sg**	**14 55 11.1**	**+0.4**
OCHAL				IAML		14 55 18.2	
	comp=Z,7.9nm,1.0s						
INDI	**Punta indio, G**	**1.12**	**272**	*eP*	**Pg**	**14 54 58.0**	**-1.2**
INDI	**Punta indio, G**	**1.12**	**272**	*i P*	**Pg**	**14 54 58.0**	**-1.2**
INDI				IAML		14 54 58.2	
	comp=Z,560nm,1.0s						
INDI				*i S*	**Sb**	**14 55 15.2**	**+1.4**
DUNO	**Dulce Nombre,**	**1.14**	**282**	*i P*	**Pg**	**14 54 58.4**	**-1.1**
DUNO				*i S*	**Sg**	**14 55 15.0**	**+0.7**
DUNO				IAML		14 55 19.4	
	comp=Z,2μm,1.0s						
SRBA	**San Rafael, Bu**	**1.16**	**121**	*i P*	**Pg**	**14 54 58.6**	**-1.4**
SRBA				*i S*	**Sg**	**14 55 14.9**	**-0.2**
SRBA				IAML		14 55 19.1	
	comp=Z,640nm,1.0s						
ORTG	**Ortega, Santa**	**1.20**	**296**	*eP*	**Pg**	**14 54 59.1**	**-1.5**
ORTG	**Ortega, Santa**	**1.20**	**296**	*i P*	**Pg**	**14 54 59.1**	**-1.5**
ORTG				IAML		14 55 00.7	
	comp=Z,730nm,1.0s						
ORTG				*i S*	**Sg**	**14 55 16.4**	**+0.2**
VMAR	**Armenia, Volca**	**1.22**	**323**	*eP*	**Pg**	**14 55 00.2**	**-0.8**
VMAR	**Armenia, Volca**	**1.22**	**323**	*i P*	**Pg**	**14 55 00.4**	**-0.6**
VMAR				*i S*	**Sn**	**14 55 18.4**	**+0.9**
VMAR				IAML		14 55 26.1	
	comp=Z,3μm,1.0s						
PLAN	**Los Planes de**	**1.34**	**150**	*i P*	**Pn**	**14 55 02.7**	**+0.1**
PLAN				*i S*	**Sn**	**14 55 23.3**	**+2.8**
PLAN				IAML		14 55 24.2	
	comp=Z,3μm,1.0s						
SAJU	**San Juanillo,**	**1.34**	**280**	*i P*	**Pn**	**14 55 01.8**	**-0.8**
SAJU				IAML		14 55 02.0	
	comp=Z,530nm,1.0s						
SAJU				*i S*	**Sb**	**14 55 20.4**	**+0.1**
POTG	**Potrero Grande**	**1.46**	**122**	*i P*	**Pn**	**14 55 03.9**	**-0.3**
POTG				*i S*	**Sb**	**14 55 24.0**	**+0.3**
POTG				IAML		14 55 25.1	
	comp=Z,2μm,1.0s						
HZTE	**Horizontes, Gu**	**1.49**	**306**	*eP*	**Pn**	**14 55 04.4**	**-0.1**
HZTE	**Horizontes, Gu**	**1.49**	**306**	*i P*	**Pn**	**14 55 04.5**	**-0.1**
HZTE				*i S*	**Sn**	**14 55 24.9**	**+0.7**
HZTE				IAML		14 55 29.1	
	comp=Z,960nm,1.0s						
MORN	**Al O del Volca**	**2.11**	**324**	*i P*	**Pn**	**14 55 14.4**	**+1.2**
MORN				IAML		14 55 54.7	
	comp=Z,570nm,1.0s						
CONN	**Concepcion**	**2.12**	**324**	*i P*	**Pb**	**14 55 15.4**	**-0.8**
CONN				IAML		14 55 16.6	
	comp=Z,3μm,1.0s						
JAPN	**Al SSO del Vol**	**2.12**	**323**	*i P*	**Pb**	**14 55 15.8**	**-0.4**
JAPN				IAML		14 55 20.7	
	comp=Z,400nm,1.0s						
ACON	**Acoyapa**	**2.26**	**340**	*i P*	**Pn**	**14 55 15.2**	**0.0**
ACON				IAML		14 55 48.4	
	comp=Z,260nm,1.0s						

*GCG **24** 15:11:46.2±3.1, 16.03N×95.09W, h10km, MD4.8*
*IDC **24** 15:11:47.9±3.0, 16.18N×95.12W, h66km±22km, mb3.2/3, mbtmp3.8/4, MS3.5/2, Error ellipse: s-maj=46.8km s-min=24.8km az=60.0*
*NEIC **24** 15:11:47.0±2.8, 16.03N±0.05×95.08W±0.04, h69km±9km, mb4.2/18, Md4.4/21(MEX), Error ellipse: s-maj=7.5km*

s-min=5.3km az=156.0
*MEX **24** 15:11:47.8±0.5, 16.06N×95.08W, h69km±7km, MD4.4*
*CATAC **24** 15:11:49.2±1.0, 16.11N×94.99W, h30km±15km, MB5.4, mb5.0, ML4.8*
ISC 24 15:11:46.5±0.7, 16.08N±0.04×95.09W±0.03, h64km±7km, n94, σ1s55/112, mb4.0/5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NILT	**Santiago Nilte**	**0.67**	**43**	*eP*	**Pn**	**15 12 01.0**	**+0.4**
NILT				*eS*	**Sn**	**15 12 11.1**	**+0.1**
HUIG	**Huatulco**	**1.02**	**253**		**Pn**	**15 12 05.0**	**0.0**
HUIG					**Sn**	**15 12 19.0**	**+0.2**
HUIG	**Huatulco**	**1.02**	**253**	*eP*	**Pn**	**15 12 05.0**	**0.0**
HUIG				*eS*	**Sn**	**15 12 19.0**	**+0.2**
CMIG	**Matias Romero**	**1.03**	**11**		**Pn**	**15 12 05.5**	**+0.5**
CMIG					**Sn**	**15 12 19.2**	**+0.3**
CMIG	**Matias Romero**	**1.03**	**11**	P	**Pn**	**15 12 05.3**	**+0.3**
	1μm,0.3s,baz=195,slow=11,SNR=6602						
CMIG				S	**Sn**	**15 12 18.9**	**0.0**
	1μm,0.3s,baz=292,slow=20,SNR=25						
CMIG	**Matias Romero**	**1.03**	**11**	*eP*	**Pn**	**15 12 05.5**	**+0.5**
CMIG				*eS*	**Sn**	**15 12 19.2**	**+0.3**
CARR	**Arriaga**	**1.15**	**81**	*eP*	**Pn**	**15 12 06.0**	**-0.5**
CARR				*i S*	**Sn**	**15 12 20.3**	**-1.3**
PANG	**Puerto Angel**	**1.39**	**253**		**Pn**	**15 12 09.2**	**-0.6**
PANG					**Sn**	**15 12 26.8**	**-0.5**
PANG	**Puerto Angel**	**1.39**	**253**	*eP*	**Pn**	**15 12 09.2**	**-0.6**
PANG				*i S*	**Sn**	**15 12 26.8**	**-0.5**
PCIG		**1.84**	**101**		**Pn**	**15 12 16.0**	**+0.1**
PCIG					**Sn**	**15 12 37.6**	**-0.6**
PCIG		**1.84**	**101**	*eP*	**Pn**	**15 12 16.0**	**+0.1**
PCIG				*eS*	**Sn**	**15 12 37.6**	**-0.6**
OXBJ	**Oaxaca**	**1.85**	**302**		**Pn**	**15 12 18.5**	**+2.4**
OXBJ					**Sn**	**15 12 41.3**	**+2.7**
OXBJ	**Oaxaca**	**1.85**	**302**	*eP*	**Pn**	**15 12 18.5**	**+2.4**
OXBJ				*i S*	**Sn**	**15 12 41.3**	**+2.7**
OXIG	**Oaxaca**	**1.86**	**302**		**Pn**	**15 12 18.8**	**+2.5**
VHO	**Vista Hermosa**	**1.86**	**302**	*i P*	**Pn**	**15 12 18.8**	**+2.5**
PEIG	**Puerto Escondi**	**1.98**	**268**		**Pn**	**15 12 17.9**	**+0.2**
PEIG					**Sn**	**15 12 39.7**	**-1.7**
PEIG	**Puerto Escondi**	**1.98**	**268**	*i P*	**Pn**	**15 12 17.9**	**+0.2**
PEIG				*eS*	**Sn**	**15 12 39.7**	**-1.7**
PMUV	**Sontecomapan**	**2.45**	**359**	*i P*	**Pn**	**15 12 23.9**	**-0.3**
YOIG	**Yosondua**	**2.48**	**289**		**Pn**	**15 12 26.6**	**+1.9**
YOIG	**Yosondua**	**2.48**	**289**	*eP*	**Pn**	**15 12 26.6**	**+1.9**
CCIG	**Comitan**	**2.85**	**85**	Pn	**Pn**	**15 12 29.5**	**-0.2**
CCIG	**Comitan**	**2.85**	**85**	*eP*	**Pn**	**15 12 30.0**	**+0.3**
CCIG	**Comitan**	**2.85**	**85**	*i P*	**Pn**	**15 12 31.8**	**+2.1**
CCIG				*i S*	**Sn**	**15 13 04.8**	**+1.8**
CCIG				IAML		15 13 20.5	
	comp=Z,1μm,1.0s						
PNIG	**Pinotepa**	**2.93**	**277**		**Pn**	**15 12 31.4**	**+0.7**
PNIG	**Pinotepa**	**2.93**	**277**	*i P*	**Pn**	**15 12 31.4**	**+0.7**
SMSP	**San Marcos**	**3.38**	**109**	*i P*	**Pn**	**15 12 38.4**	**+1.4**
SMSP				IAML		15 15 08.2	
	comp=Z,4μm,1.0s						
HUEH	**Huehuetenango**	**3.54**	**102**		**Pn**	**15 12 39.7**	**+0.5**
RTAL	**Retalhuleu**	**3.62**	**115**	Pn	**Pn**	**15 12 40.5**	**+0.3**
RTAL	**Retalhuleu**	**3.62**	**115**	*i P*	**Pn**	**15 12 40.9**	**+0.7**
RTAL				IAML		15 12 43.8	
	comp=Z,700nm,1.0s						
TLIG	**Tlapa**	**3.64**	**294**	Pn	**Pn**	**15 12 41.9**	**+1.4**
TLIG	**Tlapa**	**3.64**	**294**	*i P*	**Pn**	**15 12 43.7**	**+3.2**
TLIG				IAML		15 13 57.3	
	comp=Z,470nm,1.0s						
STG3	**Santiaguito 3,**	**3.66**	**111**	*eP*	**Pn**	**15 12 42.7**	**+1.9**
SULM	**Suchitepequez,**	**3.84**	**117**	*eP*	**Pn**	**15 12 45.3**	**+2.3**
FUG	**Fuego 3**	**4.41**	**111**	*eP*	**Pn**	**15 12 54.4**	**+3.3**
AVCB	**Coban**	**4.55**	**97**	*i P*	**Pn**	**15 12 54.2**	**+1.2**
AVCB				IAML		15 14 17.4	
	comp=Z,10μm,1.0s						
GUNB	**GUNB**	**4.81**	**107**	*i P*	**Pn**	**15 12 59.4**	**+2.7**
GUNB				IAML		15 13 03.7	
	comp=Z,310nm,1.0s						
GUNB				*i S*	**Sn**	**15 13 52.8**	**+1.5**
PETF	**Flores**	**5.08**	**80**		**Pn**	**15 12 59.7**	**-0.4**
PETF	**Flores**	**5.08**	**80**	*i P*	**Pn**	**15 13 00.6**	**+0.5**
PETF				IAML		15 13 01.6	
	comp=Z,620nm,1.0s						
MRL	**Marmol**	**5.31**	**100**	*eP*	**Pn**	**15 13 04.8**	**+1.4**
NUBE	**Las Nubes**	**5.57**	**112**	*i P*	**Pn**	**15 13 09.7**	**+2.7**
NUBE				IAML		15 13 17.1	
	comp=Z,150nm,1.0s						
NUBE				IAmb	IAmb	15 13 17.2	
	comp=Z,120nm,1.1s						
NUBE				*i S*	**Sn**	**15 14 11.4**	**+1.6**
CEVE	**Cerro Verde**	**5.74**	**112**	*i P*	**Pn**	**15 13 12.4**	**+3.0**
CEVE				IAML		15 13 14.9	
	comp=Z,210nm,1.0s						
CEVE				IVmB_BB		15 13 21.0	
	comp=Z,3μm,1.0s						
CEVE				IAmb	IAmb	15 13 21.6	
	comp=Z,120nm,0.4s						
CEVE				*i S*	**Sn**	**15 14 16.8**	**+2.8**
ESQI	**Esquipulas**	**5.75**	**104**	Pn	**Pn**	**15 13 10.1**	**+0.7**
ESQI	**Esquipulas**	**5.75**	**104**	*i P*	**Pn**	**15 13 10.6**	**+1.2**
ESQI				IAmb	IAmb	15 13 32.2	
	comp=Z,100nm,0.7s						
ESQI				IAML		15 15 08.2	
	comp=Z,190nm,1.0s						
MTO3	**Montecristo**	**5.78**	**106**		**Pn**	**15 13 09.8**	**-0.1**
MTO3	**Montecristo**	**5.78**	**106**	*i P*	**Pn**	**15 13 10.3**	**+0.4**
MTO3				IVmB_BB		15 13 12.3	
	comp=Z,730nm,1.0s						
MTO3				IAmb	IAmb	15 13 27.9	
	comp=Z,34nm,0.8s						
MTO3				IAML		15 15 08.3	
	comp=Z,62nm,1.0s						
JAYA	**Jayaque - finc**	**5.97**	**113**	*i P*	**Pn**	**15 13 14.5**	**+2.1**
JAYA				IVmB_BB		15 13 33.0	
	comp=Z,8μm,1.0s						
JAYA				IAML		15 13 33.9	
	comp=Z,350nm,1.0s						
JAYA				*i S*	**Sn**	**15 14 20.9**	**+1.4**
PMON	**Piamonte**	**6.06**	**112**	*i P*	**Pn**	**15 13 15.6**	**+2.0**
PMON				IAML		15 13 20.8	
	comp=Z,210nm,1.0s						
PMON				IVmB_BB		15 13 20.8	
	comp=Z,2μm,1.0s						
PMON				IAmb	IAmb	15 13 24.3	
	comp=Z,110nm,0.4s						
SJTE	**Alcalda de S**	**6.38**	**112**	*i P*	**Pn**	**15 13 20.7**	**+2.8**
SJTE				IAML		15 13 24.1	
	comp=Z,120nm,1.0s						
SJTE				IAmb	IAmb	15 13 24.2	
	comp=Z,86nm,0.7s						
PAVA	**Las Pavas**	**6.40**	**111**	*i P*	**Pn**	**15 13 20.7**	**+2.4**
PAVA				IAML		15 13 25.3	
	comp=Z,280nm,1.0s						
PAVA				IAmb	IAmb	15 13 25.4	
	comp=Z,170nm,0.7s						
COEG	**Centro de Oper**	**6.49**	**111**	*i P*	**Pn**	**15 13 23.3**	**+3.9**
COEG				IAML		15 13 25.7	
	comp=Z,150nm,1.0s						
COEG				IAmb	IAmb	15 13 28.2	
	comp=Z,110nm,0.5s						
MOIG	**Morelia**	**6.82**	**303**	Pn	**Pn**	**15 13 25.6**	**+1.5**
MOIG	**Morelia**	**6.82**	**303**	*i P*	Pn	15 13 29.3	+5.2
MOIG				IAML		15 13 29.6	
	comp=Z,330nm,1.0s						
MOIG				IVmB_BB		15 13 29.6	
	comp=Z,3μm,1.0s						
MOIG				IAmb	IAmb	15 13 30.0	
	comp=Z,240nm,0.6s						
RANC	**El Ranchito**	**7.09**	**111**	*i P*	**Pn**	**15 13 29.5**	**+1.8**
RANC				IVmB_BB		15 13 35.2	
	comp=Z,2μm,1.0s						
RANC				IAmb	IAmb	15 13 37.2	
	comp=Z,52nm,0.5s						
RANC				IAML		15 15 22.2	
	comp=Z,150nm,1.0s						
TEIG	**Tepich**	**7.68**	**56**	Pn	**Pn**	**15 13 35.1**	**-0.6**
TEIG	**Tepich**	**7.68**	**56**	LR	LR	15 16 50.1	
	comp=Z,468nm,21.6s,baz=182,slow=40						
CRIN	**San Cristobal**	**8.49**	**112**	Pn	**Pn**	**15 13 47.6**	**+0.8**
BOAB	**BOACO BROADBAN**	**8.82**	**110**	Pn	**Pn**	**15 14 06.0**	**+0.9**
CONN	**Concepcion**	**10.23**	**115**	*i P*	Pn	15 14 26.8	+16
HZTE	**Horizontes, Gu**	**10.67**	**119**	Pn	**Pn**	**15 14 18.4**	**+1.9**
ORTG	**Ortega, Santa**	**10.96**	**120**	Pn	**Pn**	**15 14 20.3**	**-0.4**
JTS	**Las Juntas de**	**11.43**	**119**	Pn	**Pn**	**15 14 27.6**	**+0.6**
JTS	**Las Juntas de**	**11.43**	**119**	P	**Pn**	**15 14 29.6**	**+2.6**
	comp=Z,7.6nm,0.3s,baz=310,slow=14,SNR=7.4						
JACO	**JACO, Garabito**	**12.00**	**121**	Pn	**Pn**	**15 14 35.5**	**+0.7**
LCR2	**La Lucha 2**	**12.51**	**119**	Pn	**Pn**	**15 14 40.4**	**-1.5**
RIMA	**Rio Macho**	**12.61**	**118**		**Pn**	**15 14 42.0**	**-1.4**
833A	**Chaparral WMA,**	**12.82**	**343**	Pn	**P**	**15 14 50.0**	**-4.5**
SOR	**Soroa**	**13.21**	**58**	Pn	**Pn**	**15 14 49.6**	**-1.6**
SRBA	**San Rafael, Bu**	**13.31**	**119**		**Pn**	**15 14 53.3**	**+0.6**
DRK0	**Durika**	**13.39**	**119**	Pn	**Pn**	**15 14 55.8**	**+1.9**
HNDO	**Hondo**	**13.93**	**345**		**Pn**	**15 15 01.9**	**+1.1**
435B	**Jarrell**	**14.81**	**352**	Pn	**P**	**15 15 14.3**	**-2.4**
TXAR	**Lajitas Array**	**15.37**	**331**	P	**P**	**15 15 22.4**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=155,slow=14,SNR=4.9						
BRDY	**Brady**	**15.55**	**347**		**P**	**15 15 24.2**	**-0.7**
BRDY				IAmb	IAmb	15 15 35.2	
	comp=Z,11nm,0.8s						
OZNA	**Ozona**	**15.77**	**341**		**P**	**15 15 27.7**	**+0.2**
OZNA				IAmb	IAmb	15 15 33.5	
	comp=Z,18nm,0.7s						
WHTX	**Lake Whitney,**	**15.99**	**353**	P	**P**	**15 15 30.2**	**+0.5**
PLPT	**Palo Pinto**	**16.92**	**351**		**Pn**	**15 15 37.9**	**-1.1**
PLPT				IAmb	IAmb	15 15 55.9	
	comp=Z,14nm,0.6s						
ABTX	**Abilene, Hawle**	**16.98**	**347**		**P**	**15 15 41.7**	**+0.9**
ABTX				IAmb	IAmb	15 15 48.0	
	comp=Z,17nm,0.9s						
APMT	**Aspermont**	**17.77**	**346**		**P**	**15 15 50.9**	**+1.5**
APMT				IAmb	IAmb	15 16 16.7	
	comp=Z,11nm,0.6s						
MIAR	**Mount Ida**	**18.44**	**4**	P	**P**	**15 15 55.9**	**-0.9**
FCAR	**Ozark Folk Cen**	**19.91**	**7**	P	**P**	**15 16 13.4**	**+0.6**
U38A	**Gravette**	**20.29**	**2**		**P**	**15 16 16.5**	**-0.5**
CROK	**Carrier**	**20.51**	**353**	P	**P**	**15 16 18.9**	**-0.4**
CROK				IAmb	IAmb	15 16 42.2	
	comp=Z,13nm,0.6s						
T35A	**Sooner Cattle**	**20.79**	**357**	P	**P**	**15 16 23.4**	**+0.9**
T35A				IAmb	IAmb	15 16 37.5	
	comp=Z,11nm,0.8s						
RTBA	**Rita Blanca**	**21.39**	**343**	P	**P**	**15 16 30.5**	**+1.6**
N38A	**Joes South For**	**24.68**	**3**	P	**P**	**15 16 59.4**	**-2.0**
NVAR	**Mina Array Bea**	**30.20**	**322**	P	**P**	**15 17 51.7**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=128,slow=8.1,SNR=2.2						
	comp=Z,0.3nm,0.7s						
BOZ	**Bozeman (W)**	**32.54**	**338**	P	**P**	**15 18 09.9**	**-1.5**
BOZ				IAmb	IAmb	15 18 37.1	
	comp=Z,4.1nm,0.8s						
ULM	**Lac du Bonnet**	**34.09**	**359**	P	**P**	**15 18 24.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=159,slow=8.6,SNR=2.2						
ULM				pP	**pP**	**15 18 39.8**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=184,slow=10,SNR=3.1						
	comp=Z,0.8nm,0.6s						
LVC	**Limon Verde**	**46.21**	**146**	LR	LR	15 36 48.5	
	comp=Z,50nm,20.9s,baz=242,slow=32						
YKA	**Yellowknife Ar**	**48.36**	**348**	P	**P**	**15 20 22.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=154,slow=7.4,SNR=4.0						
YKA				pP	**pP**	**15 20 38.4**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=155,slow=7.3,SNR=10						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**59.77**	**337**	P	**P**	**15 21 43.3**	**-1.2**
BMAR	**Burnt Mountain**	**60.33**	**340**	P	**P**	**15 21 47.9**	**-0.5**
C23K	**Itkillik River**	**63.46**	**341**	P	**P**	**15 22 10.1**	**+0.8**
C23K				IAmb	IAmb	15 22 29.7	
	comp=Z,2.3nm,1.1s						
M16K	**Timber Creek**	**63.47**	**331**	P	**P**	**15 22 08.7**	**-0.8**

*IDC **24** 15:15:22.8±1.5, 3.41S×129.38E, h0km, mb4.0/5, mbtmp4.0/6, ML4.4/1, Error ellipse: s-maj=96.6km s-min=19.7km az=65.0*
*DJA **24** 15:15:35.8±0.5, 4°S±5'×12°9E±°, h88km±7km, M4.2/13, mb4.1/5, mB4.8/1, MLv4.2/13, Mw(mB)4.1/1*
*NEIC **24** 15:15:35.5±1.5, 3.7S±0.1×129.0E±0.1, h129km±6km, mb4.2/14, Error ellipse: s-maj=16.4km s-min=14.8km az=68.0*
ISC 24 15:15:33.7±0.6, 3.68S±0.07×129.00E±0.08, h100km, n38, σ1s50/35, mb4.0/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.23**	**133**	P	**Pn**	**15 15 59.3**	**+2.6**
NLAI	**Namlea**	**1.95**	**283**	P	**Pn**	**15 16 07.0**	**+1.4**
FAKI	**Fak Fak**	**3.33**	**77**		**Pn**	**15 16 25.5**	**+1.6**
FAKI	**Fak Fak**	**3.33**	**77**	P	**Pn**	**15 16 26.2**	**+2.3**
LBMI	**Labuha**	**3.37**	**334**	P	**Pn**	**15 16 26.2**	**+1.7**
SANI	**Sanana**	**3.42**	**298**	P	**Pn**	**15 16 25.0**	**-0.1**
SWI	**Sorong**	**3.60**	**39**	P	**Pn**	**15 16 28.5**	**+1.0**
KMPI	**Kaimana, Papua**	**4.69**	**90**	P	**Pn**	**15 16 44.4**	**+2.1**
TNTI	**Ternate**	**4.71**	**340**	P

KTR	**Katsuura**	**0.55**	**322**	P		**Pn**	**15 52 16.4**	**-0.6**
KTR				*e*S		**Sn**	**15 52 25.9**	**+0.1**
JKUC	**kamogawauchiur**	**0.62**	**316**	*i* P		**Pn**	**15 52 17.1**	**-0.7**
JKUC				*e*S		**Sn**	**15 52 27.3**	**0.0**
TATJ	**Tateyama 2**	**0.76**	**295**	P		**Pn**	**15 52 19.4**	**-0.1**
TATJ				*e*S		**Sn**	**15 52 31.5**	**+1.2**
JSMT	**Sammumatsuo**	**0.96**	**346**	*e*P		**Pn**	**15 52 20.8**	**-1.3**
JSMT				*e*S		**Sn**	**15 52 35.5**	**+0.8**
JIM2	**Oshima 3**	**1.07**	**271**	P		**Pn**	**15 52 22.5**	**-1.1**
JMYK	**Miyake Tsubota**	**1.17**	**237**	*e*P		**Pn**	**15 52 24.8**	**-0.1**
JMYK				*e*S		**Sn**	**15 52 40.0**	**+0.1**
JTHY	**Toshimahigashi**	**1.20**	**261**	*e*P		**Pn**	**15 52 24.7**	**-0.6**
JOD2	**Odawara 2**	**1.45**	**293**	P		**Pn**	**15 52 27.6**	**-1.1**
JOD2				*e*S		**Sn**	**15 52 45.5**	**-1.3**
MJAR	**Matsushiro Arr**	**2.75**	**312**	Pn		**Pn**	**15 52 46.3**	**0.0**
	0.4nm,0.3s,baz=170,slow=14,SNR=30							
MJAR				Sn		**Sn**	**15 53 20.1**	**+1.7**
	0.4nm,0.3s,baz=241,slow=5.1,SNR=9.8							
	3.0nm,0.3s							
WRA	**Warramunga Arr**	**54.69**	**187**	P		**P**	**16 01 27.6**	**-0.7**
	0.5nm,0.6s,baz=3.5,slow=7.9,SNR=4.7							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**58.42**	**187**	P		**P**	**16 01 56.0**	**+1.2**
	0.4nm,1.0s,baz=5.8,slow=6.8,SNR=2.4							
	0.4nm,1.0s							

IDC 24 15:58:47.3±8.0, 26°13S×28°61E, h0km, mbtmp2.5/1, ML2.3/1, Error ellipse: s-maj=72.7km s-min=54.6km az=140.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**3.87**	**230**	Pn	Pn	15 59 49.5	+1.3
	0.1nm,0.3s,baz=58,slow=12,SNR=1.5						
BOSA				Pg	Pb	15 59 56.6	0.0
	0.3nm,0.3s,baz=51,slow=17,SNR=5.5						
BOSA				Lg	Lg	16 00 50.1	
	0.7nm,0.3s,baz=326,slow=21,SNR=9.7						
	0.6nm,0.4s						
I47ZA	**BOSHOF INFRASO**	**3.89**	**230**	I	I	16 25 30.0	
	0.1nm,0.7s,baz=51,slow=316,SNR=4.7						
I35NA	**TSUMEB INFRASO**	**12.30**	**302**	I	I	17 12 40.0	
	baz=125,slow=320,SNR=1.5						

*SKHL **24** 16:05:44.5±0.3, 49°00N×151°50E, h327km±6km, mb5.0/9, msha5.4/7*
*MOS **24** 16:05:44.8±1.0, 49°13N×151°37E, h322km, mb4.1/15, Error ellipse: s-maj=8.3km s-min=3.8km az=64.5*
*NEIC **24** 16:05:45.9±1.7, 49°3N±0°1×151°3E±0°2, h307km±7km, mb4.4/191, Error ellipse: s-maj=20.5km s-min=11.0km az=140.0*
*KRSC **24** 16:05:47.0±1.7, 48°94N×152°51E, h353km±20km, Ml4.5*
*IDC **24** 16:05:46.5±1.1, 49°33N×151°16E, h309km±10km, mb3.7/31, mbtmp4.4/38, Error ellipse: s-maj=10.4km s-min=7.5km az=152.0*
ISC 24 16:05:44.6±0.3, 49°18N±0°05×151°40E±0°04, h300km, n615, σ1°39/608, mb4.3/135, 10C-4D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.40**	**62**	*i* PN	**Pn**	**16 06 46.0**	**+1.7**
SKR				*e*S	**S**	**16 07 33.1**	**+1.1**
SKR				pmax	pmax		
	comp=Z,1μm,0.7s						
SKR				smax	smax		
	comp=N,119nm,0.8s						
SKR				MLR	MLR		
	comp=Z,200nm,12.0s						
SKR	**Severo-Kuril's**	**3.40**	**62**	*e*P	**Pn**	**16 06 45.9**	**+1.6**
SKR				*e*S	**S**	**16 07 33.9**	**+1.9**
SKR	**Severo-Kuril's**	**3.40**	**62**	*i* P	**Pn**	**16 06 46.0**	**+1.7**
SKR				AMB	AMB	16 06 46.6	
	comp=Z,500nm,0.5s						
SKR				*e*S	**S**	**16 07 34.1**	**+2.1**
SKR				A	A	16 07 34.3	
	comp=Z,120nm,0.6s						
SKR				A	A	16 07 34.3	
	comp=Z,90nm,0.6s						
PAU	**Pauzhetka**	**4.16**	**55**	PN	**Pn**	**16 06 54.7**	**+2.3**
PAU	**Pauzhetka**	**4.16**	**55**	*e*P	**Pn**	**16 06 54.7**	**+2.3**
PAU	**Pauzhetka**	**4.16**	**55**	*e*P	**Pn**	**16 06 54.9**	**+2.5**
PAU				AMB	AMB	16 06 55.9	
	comp=Z,830nm,0.9s						
PAU				*e*S	**S**	**16 07 50.4**	**+3.7**
PAU				A	A	16 07 55.5	
	comp=Z,40nm,0.1s						
PAU				A	A	16 07 55.5	
	comp=Z,60nm,0.1s						
KUR	**Kuril'sk**	**4.62**	**213**	*i* PN	**Pn**	**16 07 00.1**	**+2.3**
KUR				*e*S	**S**	**16 08 02.7**	**+6.1**
KUR				pmax	pmax		
	comp=Z,54nm,0.9s						
KUR				smax	smax		
	comp=N,84nm,0.8s						
KUR				smax	smax		
	comp=E,46nm,0.7s						
KUR	**Kuril'sk**	**4.62**	**213**	*e*P	**Pn**	**16 06 58.9**	**+1.1**
KUR				AMB	AMB	16 07 03.4	
	comp=E,50nm,0.6s						
KUR				*e*S	**S**	**16 07 56.7**	**+0.1**
KUR				A	A	16 08 09.6	
	comp=E,80nm,0.6s						
KUR				A	A	16 08 09.6	
	comp=E,110nm,0.6s						
KDTR	**Khodutka, Kamc**	**5.01**	**56**	PN	**Pn**	**16 07 02.5**	**+0.4**
KDTR	**Khodutka, Kamc**	**5.01**	**56**	*e*P	**Pn**	**16 07 02.5**	**+0.4**
KDTR				*e*S	**S**	**16 08 00.6**	**-3.7**
APC	**Apacha**	**5.22**	**42**	PN	**Pn**	**16 07 06.1**	**+1.6**
APC				S	**S**	**16 08 08.3**	**-0.4**
APC	**Apacha**	**5.22**	**42**	*e*P	**Pn**	**16 07 06.1**	**+1.6**
APC				*e*S	**S**	**16 08 08.3**	**-0.4**
ASAK	**Asacha**	**5.22**	**50**	PN	**Pn**	**16 07 06.3**	**+1.6**
ASAK	**Asacha**	**5.22**	**50**	*e*P	**Pn**	**16 07 06.3**	**+1.6**
GRL	**Gorelyy**	**5.41**	**49**	PN	**Pn**	**16 07 08.8**	**+1.9**
GRL	**Gorelyy**	**5.41**	**49**	*e*P	**Pn**	**16 07 08.8**	**+1.9**
MTVR	**Mutnovka**	**5.42**	**50**	PN	**Pn**	**16 07 08.7**	**+1.6**
MTVR	**Mutnovka**	**5.42**	**50**	*e*P	**Pn**	**16 07 08.7**	**+1.6**
RUS	**Russkaya**	**5.56**	**52**	PN	**Pn**	**16 07 09.6**	**+1.0**
RUS				S	**S**	**16 08 12.8**	**-3.3**
RUS	**Russkaya**	**5.56**	**52**	*e*P	**Pn**	**16 07 09.6**	**+1.0**
RUS				*e*S	**S**	**16 08 12.8**	**-3.3**
PEA0B	**Petropavlovsk-**	**5.58**	**43**		**Pn**	**16 07 10.5**	**+1.6**
PEA0B	**Petropavlovsk-**	**5.58**	**43**	*de*PN	**Pn**	**16 07 10.4**	**+1.6**
PETK	**Petropavlovsk-**	**5.58**	**43**	P	**Pn**	**16 07 09.6**	**+0.8**
	comp=E,21nm,0.6s,baz=225,slow=7.3,SNR=87						
KRMR	**Karymshinskiy**	**5.60**	**47**	PN	**Pn**	**16 07 10.5**	**+1.5**
KRMR	**Karymshinskiy**	**5.60**	**47**	*e*P	**Pn**	**16 07 10.5**	**+1.5**
TYV	**Tymovskoe**	**5.88**	**290**	*e*PN	**Pn**	**16 07 14.7**	**+2.4**
TYV				*e*S	**S**	**16 08 23.3**	**+0.3**
TYV				pmax	pmax		
	comp=Z,14nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV				smax	smax		
	comp=N,6.0nm,2.3s						
TYV				smax	smax		
	comp=E,10.0nm,2.3s						
TYV				smax	smax		
	comp=N,200nm,3.9s						
TYV				smax	smax		
	comp=E,200nm,3.9s						
TYV	**Tymovskoe**	**5.88**	**290**	*e*P	**Pn**	**16 07 14.7**	**+2.4**
TYV				AMB	AMB	16 07 15.6	
	comp=E,10.0nm,0.7s						
TYV				AMB	AMB	16 07 16.5	
	comp=E,200nm,4.0s						
TYV				*e*S	**S**	**16 08 25.0**	**+2.0**
TYV				A	A	16 08 26.1	
	comp=E,200nm,4.0s						
TYV				A	A	16 08 26.1	
	comp=E,200nm,4.0s						
TYV				A	A	16 08 27.0	
PET	**Petropavlovsk**	**5.97**	**47**		**Pn**	**16 07 15.0**	**+1.6**
PET	**Petropavlovsk**	**5.97**	**47**	*e*PN	**Pn**	**16 07 14.4**	**+1.0**
PET				*e*S	**S**	**16 08 23.5**	**-1.5**
PET				pmax	pmax		
	comp=Z,35nm,0.9s						
PET				smax	smax		
	comp=E,58nm,0.7s						
PET				smax	smax		
	comp=N,50nm,0.6s						
PET	**Petropavlovsk**	**5.97**	**47**	*e*P	**Pn**	**16 07 14.7**	**+1.3**
PET				*e*S	**S**	**16 08 23.9**	**-1.1**
PET	**Petropavlovsk**	**5.97**	**47**	*e*P	**Pn**	**16 07 14.3**	**+0.9**
PET				AMB	AMB	16 07 15.9	
	comp=N,50nm,0.6s						
PET				*e*S	**S**	**16 08 24.0**	**-1.0**
PET				A	A	16 08 25.9	
	comp=N,50nm,0.6s						
PET				A	A	16 08 25.9	
	comp=N,60nm,0.6s						
DALK	**Dalny**	**6.03**	**47**	PN	**Pn**	**16 07 15.2**	**+1.2**
DALK				S	**S**	**16 08 23.8**	**-2.3**
DALK	**Dalny**	**6.03**	**47**	*e*P	**Pn**	**16 07 15.2**	**+1.2**
DALK				*e*S	**S**	**16 08 23.8**	**-2.3**
GNL	**Ganaly**	**6.09**	**40**	PN	**Pn**	**16 07 16.7**	**+1.7**
GNL	**Ganaly**	**6.09**	**40**	*e*P	**Pn**	**16 07 16.7**	**+1.7**
KOK	**Koryaka**	**6.13**	**45**	PN	**Pn**	**16 07 17.8**	**+2.4**
KOK	**Koryaka**	**6.13**	**45**	*e*P	**Pn**	**16 07 17.8**	**+2.4**
KOK	**Koryaka**	**6.13**	**45**	*e*P	**Pn**	**16 07 17.8**	**+2.4**
AVH	**Avacha**	**6.16**	**46**	PN	**Pn**	**16 07 18.5**	**+2.7**
AVH	**Avacha**	**6.16**	**46**	*e*P	**Pn**	**16 07 18.5**	**+2.7**
AVH	**Avacha**	**6.16**	**46**	*e*P	**Pn**	**16 07 18.5**	**+2.7**
UGLR	**Uglovaya**	**6.17**	**46**	PN	**Pn**	**16 07 18.2**	**+2.3**
UGLR				S	**S**	**16 08 28.2**	**-1.2**
UGLR	**Uglovaya**	**6.17**	**46**	*e*P	**Pn**	**16 07 18.2**	**+2.3**
UGLR				*e*S	**S**	**16 08 28.2**	**-1.2**
SHO	**Shikotan**	**6.18**	**212**	ǁ *i* PN	**Pn**	**16 07 14.0**	**-2.0**
SHO				pmax	pmax		
	comp=Z,89nm,0.2s						
SHO	**Shikotan**	**6.18**	**212**	*i* P	**Pn**	**16 07 14.0**	**-2.0**
SHO				AMB	AMB	16 07 14.9	
	comp=Z,90nm,0.2s						
SHO				*i* S	S	16 08 21.9	-7.8
SHO				A	A	16 08 25.7	
	comp=Z,80nm,0.2s						
SHO				A	A	16 08 25.7	
	comp=Z,200nm,0.2s						
KRX	**Arik**	**6.18**	**45**	PN	**Pn**	**16 07 18.0**	**+2.0**
KRX	**Arik**	**6.18**	**45**	*e*P	**Pn**	**16 07 18.0**	**+2.0**
SMAR	**Somma**	**6.19**	**46**	PN	**Pn**	**16 07 18.7**	**+2.5**
SMAR	**Somma**	**6.19**	**46**	*e*P	**Pn**	**16 07 18.7**	**+2.5**
KRER	**Koryakskii**	**6.19**	**45**	PN	**Pn**	**16 07 18.3**	**+2.1**
KRER	**Koryakskii**	**6.19**	**45**	*e*P	**Pn**	**16 07 18.3**	**+2.1**
YSS	**Yuzh-Sakhalins**	**6.21**	**252**		**Pn**	**16 07 18.6**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.21**	**252**	*e*PN	**Pn**	**16 07 18.1**	**+1.8**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.21**	**252**	*e*P	**Pn**	**16 07 17.7**	**+1.4**
YSS				AMB	AMB	16 07 19.4	
YUK	**Yuzh-Kuril'sk**	**6.41**	**219**	*c i* PN	**Pn**	**16 07 18.6**	**-0.2**
YUK				*i* S	S	**16 08 30.5**	**-4.3**
YUK				pmax	pmax		
	comp=N,20nm,0.2s						
YUK				pmax	pmax		
	comp=E,16nm,0.2s						
YUK				pmax	pmax		
	comp=Z,118nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.41**	**219**	*i* P	**Pn**	**16 07 18.6**	**-0.2**
YUK				AMB	AMB	16 07 19.9	
	comp=Z,120nm,0.2s						
YUK				*i* S	**S**	**16 08 32.5**	**-2.3**
YUK				A	A	16 08 34.4	
	comp=Z,210nm,0.7s						
YUK				A	A	16 08 34.4	
	comp=Z,110nm,0.7s						
RUSJ	**Misakicho**	**6.61**	**222**	*e*PN	**Pn**	**16 07 20.8**	**-0.4**
SPN	**Mys Shipunski**	**6.69**	**51**	PN	**Pn**	**16 07 22.6**	**+0.5**
SPN	**Mys Shipunski**	**6.69**	**51**	*e*P	**Pn**	**16 07 22.6**	**+0.5**
SPN				*e*S	**S**	**16 08 35.0**	**-5.8**
KII	**Karymskiy**	**6.98**	**43**	PN	**Pn**	**16 07 27.6**	**+1.9**
KII	**Karymskiy**	**6.98**	**43**	*e*P	**Pn**	**16 07 27.6**	**+1.9**
NMR	**Nemuro--Hokkai**	**7.01**	**216**	*e*PN	**Pn**	**16 07 22.9**	**-3.2**
NMR	**Nemuro--Hokkai**	**7.01**	**216**	*e*P	**Pn**	**16 07 23.2**	**-2.9**
JKA	**Kamikawa-asahi**	**7.89**	**233**		**Pn**	**16 07 39.2**	**+2.4**
ASAJ	**Asahikawa**	**7.89**	**233**	P	**Pn**	**16 07 39.3**	**+2.4**
	comp=Z,76nm,0.8s,baz=63,slow=10,SNR=42						
TUMR	**Tumrok**	**8.13**	**38**	PN	**Pn**	**16 07 42.2**	**+2.5**
TUMR	**Tumrok**	**8.13**	**38**	*e*P	**Pn**	**16 07 42.2**	**+2.5**
TUMD	**Tumrok D**	**8.18**	**39**	*e*P	**Pn**	**16 07 41.7**	**+1.5**
KMNR	**Kamenistaya**	**8.51**	**36**	PN	**Pn**	**16 07 47.7**	**+3.4**
KMNR	**Kamenistaya**	**8.51**	**36**	*e*P	**Pn**	**16 07 47.7**	**+3.4**
KOZ	**Kozyrevsk**	**8.60**	**34**	PN	**Pn**	**16 07 48.3**	**+3.0**
KOZ	**Kozyrevsk**	**8.60**	**34**	*e*P	**Pn**	**16 07 48.3**	**+3.0**
KOZ	**Kozyrevsk**	**8.60**	**34**	*e*P	**Pn**	**16 07 48.3**	**+3.0**
KPT	**Kopyto**	**8.66**	**35**	PN	**Pn**	**16 07 48.5**	**+2.4**
KPT	**Kopyto**	**8.66**	**35**	*e*P	**Pn**	**16 07 48.5**	**+2.4**
KIRR	**Kirishev**	**8.69**	**35**	PN	**Pn**	**16 07 48.3**	**+1.7**
KIRR	**Kirishev**	**8.69**	**35**	*e*P	**Pn**	**16 07 48.3**	**+1.7**
BZMR	**Bezymyannaya**	**8.74**	**36**	PN	**Pn**	**16 07 50.0**	**+2.9**
BZMR	**Bezymyannaya**	**8.74**	**36**	*e*P	**Pn**	**16 07 50.0**	**+2.9**
BZPI	**Bezymyannyi-Pe**	**8.74**	**36**	*e*P	**Pn**	**16 07 49.5**	**+2.3**
SRDR	**Sredinnyy**	**8.74**	**32**	PN	**P**	**16 07 51.4**	**-0.8**
SRDR	**Sredinnyy**	**8.74**	**32**	*e*P	**P**	**16 07 51.4**	**-0.8**
BZWR	**Bezymyannyi-We**	**8.76**	**36**	PN	**Pn**	**16 07 51.3**	**+3.8**
BZWR	**Bezymyannyi-We**	**8.76**	**36**	*e*P	**Pn**	**16 07 51.3**	**+3.8**
BZGR	**Bezymyannyi-Gr**	**8.82**	**36**	PN	**Pn**	**16 07 50.3**	**+2.2**
BZGR	**Bezymyannyi-Gr**	**8.82**	**36**	*e*P	**Pn**	**16 07 50.3**	**+2.2**
KLY	**Klyuchi**	**9.08**	**35**	PN	**P**	**16 07 54.8**	**-1.0**
KLY	**Klyuchi**	**9.08**	**35**	*e*P	**P**	**16 07 54.8**	**-1.0**
ERM	**Erimo**	**9.20**	**222**	Pn	**Pn**	**16 07 52.4**	**-0.5**
ERM	**Erimo**	**9.20**	**222**	*i* PN	**Pn**	**16 07 52.6**	**-0.3**
TIGL	**Tigil**	**9.62**	**24**	*e*P	**P**	**16 08 01.0**	**-0.9**
GRNR	**Gornyy**	**9.78**	**285**	ǁ *i* PN	**P**	**16 08 02.2**	**-1.5**
GRNR				*e*S	**S**	**16 09 51.2**	**+0.9**
GRNR				pmax	pmax		
	comp=E,30nm,0.8s						
GRNR				pmax	pmax		
	comp=N,6.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,110nm,14.0s						
GRNR				MLR	MLR		
	comp=E,90nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,20.0s						
GRNR	**Gornyy**	**9.78**	**285**	*e*P	**P**	**16 08 02.2**	**-1.5**
GRNR				AMB	AMB	16 08 02.6	
	comp=Z,40nm,0.9s						
KBG	**Krutoberegovo**	**9.85**	**40**	PN	**Pn**	**16 08 00.9**	**+0.3**
KBG	**Krutoberegovo**	**9.85**	**40**	*e*P	**Pn**	**16 08 00.9**	**+0.3**
KBG				*e*S	**S**	**16 09 44.8**	**-6.8**
KBG	**Krutoberegovo**	**9.85**	**40**	*e*P	**Pn**	**16 08 00.9**	**+0.3**
MA2	**Magadan**	**10.42**	**358**	P	**Pn**	**16 08 08.2**	**+0.6**
	comp=Z,7.1nm,0.6s,baz=192,slow=8.5,SNR=6.2						
JTM	**Tennabayashi**	**11.12**	**225**	Pn	Pn	16 08 11.9	-4.5
KLR	**Kul'dur**	**12.85**	**278**	*de*PN	**P**	**16 08 40.0**	**+2.2**
KLR				pmax	pmax		
	comp=Z,28nm,0.6s						
KLR	**Kul'dur**	**12.85**	**278**	P	**P**	**16 08 39.9**	**+2.1**
	comp=Z,38nm,0.6s,baz=80,slow=11,SNR=154						
KLR	**Kul'dur**	**12.85**	**278**	*e*P	**P**	**16 08 38.2**	**+0.4**
JMM	**Marumori**	**13.66**	**218**	P	**P**	**16 08 46.5**	**-0.4**
SEY	**Seymchan**	**13.79**	**2**	*ce*P	**Pn**	**16 08 50.7**	**+2.3**
SEY				pmax	pmax		
	comp=Z,39nm,1.3s						
SEY	**Seymchan**	**13.79**	**2**	P	**Pn**	**16 08 49.6**	**+1.2**
	comp=Z,11nm,0.8s,baz=176,slow=9.6,SNR=46						
SEY	**Seymchan**	**13.79**	**2**	*e*P	**Pn**	**16 08 50.7**	**+2.3**
TILK	**Tilichiki**	**14.09**	**31**	P	**Pn**	**16 08 54.7**	**+2.9**
TILK	**Tilichiki**	**14.09**	**31**	*e*P	**Pn**	**16 08 54.7**	**+2.9**
USA0B	**Ussuriysk Arra**	**14.21**	**257**	P	**Pn**	**16 08 53.7**	**+0.2**
USA0B	**Ussuriysk Arra**	**14.21**	**257**	P	**Pn**	**16 08 53.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**14.21**	**257**		**P**	**16 08 52.8**	**0.0**
USRK	**Ussuriysk Ar.**	**14.21**	**257**	P	**P**	**16 08 53.5**	**+0.6**
	comp=Z,9.1nm,0.7s,baz=55,slow=14,SNR=16						
HEH	**HeiHe**	**15.54**	**283**	*e*P	**Pn**	**16 09 08.3**	**-0.8**
HEH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ	**Mudanjiang**	**15.57**	**261**	P	**P**	**16 09 07.7**	**-0.1**
KMSK	**Kamenskaya**	**15.64**	**26**	P	**Pn**	**16 09 10.4**	**+0.3**
KMSK	**Kamenskaya**	**15.64**	**26**	*e*P	**Pn**	**16 09 10.4**	**+0.3**
ZEA	**Zeya**	**15.69**	**296**	*e*P	**P**	**16 09 09.9**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	**Zeya**	**15.69**	**296**	*e*P	**P**	**16 09 09.4**	**+0.4**
ZEA				AMB	AMB	16 09 11.1	
	comp=Z,10.0nm,0.7s						
PSTR	**Posyet**	**15.72**	**253**	*i* P	**P**	**16 09 09.4**	**-0.1**
PSTR	**Posyet**	**15.72**	**253**	*e*P	**P**	**16 09 09.4**	**-0.1**
MJB9	**Matsu-Tunnel**	**15.88**	**222**		**P**	**16 09 10.6**	**-0.6**
MAJO	**Matsushiro**	**15.88**	**222**	P	**P**	**16 09 11.9**	**+0.6**
MAJO	**Matsushiro**	**15.88**	**222**	*i* P	**P**	**16 09 10.9**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,18nm,0.5s						
MJAR	**Matsushiro Arr**	**15.88**	**222**	P	**P**	**16 09 11.6**	**+0.3**
	comp=Z,12nm,0.6s,baz=17,slow=12,SNR=83						
BNX	**BinXian**	**16.57**	**267**	ǁ P	**P**	**16 09 17.9**	**-0.7**
BNX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,110nm,5.8s						
JGF	**Kuroka**	**17.04**	**222**	P	**P**	**16 09 23.8**	**-0.2**
JGF				IAmb	IAmb	16 09 29.9	
	comp=Z,8.6nm,0.6s						
INU	**Inuyama**	**17.40**	**223**	P	**P**	**16 09 27.6**	**-0.2**
INU				IAmb	IAmb	16 09 28.9	
	comp=Z,23nm,0.9s						
YAK	**Yakutsk**	**17.66**	**325**	*e*P	**P**	**16 09 30.8**	**+0.6**
YAK				*e*S	**S**	**16 12 38.5**	**+1.1**
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.8s						
YAK				smax	smax		
	comp=E,403nm,6.3s						
YAK				smax	smax		
	comp=N,125nm,3.0s						
YAK	**Yakutsk**	**17.66**	**325**	P	**P**	**16 09 30.3**	**+0.1**
	comp=N,9.2nm,0.4s,baz=304,slow=10.0,SNR=7.5						
YAK	**Yakutsk**	**17.66**	**325**	*e*P	**P**	**16 09 31.0**	**+0.8**
BILL	**Bilibino**	**20.32**	**16**	P	**P**	**16 09 56.1**	**-2.3**
BILL	**Bilibino**	**20.32**	**16**	*i* P	**P**	**16 09 58.5**	**+0.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL	**Bilibino**	**20.32**	**16**	*e*P	**P**	**16 09 58.5**	**+0.1**
KSRS	**Korea Array**	**20.62**	**244**	P	**P**	**16 10 02.1**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=45,slow=9.7,SNR=23						
	comp=Z,6.2nm,0.6s						
KS19	**Wonju Array Si**	**20.62**	**244**	P	**P**	**16 10 02.8**	**+1.1**
KS19				IAmb	IAmb	16 10 33.0	
	comp=Z,35nm,1.4s						
KSAR	**Wonju Array Be**	**20.65**	**244**	P	**P**	**16 10 02.4**	**+0.4**
KSAR	**Wonju Array Be**	**20.65**	**244**	P	**P**	**16 10 02.4**	**+0.4**
TJN	**Taejon**	**21.68**	**243**	P	**P**	**16 10 12.7**	**+1.1**
TJN	**Taejon**	**21.68**	**243**	P	**P**	**16 10 12.7**	**+1.1**
TJN				pmax	pmax		
	comp=Z,133nm,1.4s						
JNU	**Nakatsue**	**22.16**	**231**	P	**P**	**16 10 16.1**	**+0.1**
JNU				IAmb	IAmb	16 10 21.2	
	comp=Z,12nm,0.8s						
JNU	**Nakatsue**	**22.16**	**231**	P	**P**	**16 10 16.7**	**+0.6**
	comp=Z,12nm,0.7s,baz=1.7,slow=1.7,SNR=10						
	comp=Z,12nm,0.7s						
XLT	**XiLinHaoTe**	**24.71**	**271**	ǁ *i* P	**P**	**16 10 38.6**	**-0.4**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,95nm,5.0s						
TIXI	**Tiksi**	**24.80**	**343**	P	**P**	**16 10 38.8**	**-0.6**
TIXI	**Tiksi**	**24.80**	**343**	*ce*P	**P**	**16 10 37.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TIXI	**Tiksi**	**24.80**	**343**	*e*P	**P**	**16 10 37.9**	**-1.5**
M11K	**Mekoryuk**	**26.41**	**49**	P	**P**	**16 10 56.1**	**+2.1**
	baz=264						
TNA	**Tin City**	**26.72**	**37**	P	**P**	**16 10 57.7**	**+1.1**
	baz=252						
F14K	**Arctic Creek**	**27.33**	**38**	P	**P**	**16 11 03.7**	**+1.7**
	baz=254						
ANM	**Nome**	**27.49**	**40**	P	**P**	**16 11 04.9**	**+1.4**
ANM				IAmb	IAmb	16 11 34.1	
	comp=Z,14nm,1.2s						
ANM	**Nome**	**27.49**	**40**	P	**P**	**16 11 05.0**	**+1.4**
	baz=257						
ANM	**Nome**	**27.49**	**40**	P	**P**	**16 11 04.9**	**+1.4**
ANM				pmax	pmax		
	comp=Z,14nm,1.2s						
M13K	**Dall Lake**	**27.83**	**49**	P	**P**	**16 11 08.0**	**+1.6**
	baz=267						
J14K	**Nanvaranak Lak**	**27.96**	**44**	P	**P**	**16 11 09.2**	**+1.7**
	baz=262						
FALS	**False Pass**	**27.98**	**61**	P	**P**	**16 11 09.1**	**+1.2**
	baz=278						
F15K	**North Star Dit**	**28.06**	**38**	P	**P**	**16 11 09.2**	**+0.7**
	baz=256						
G15K	**Niukluk**	**28.14**	**39**	P	**P**	**16 11 09.6**	**+0.4**
	baz=258						
L14K	**Kuka Creek**	**28.21**	**47**	P	**P**	**16 11 09.4**	**-0.4**
M14K	**Bethel**	**28.53**	**48**	P	**P**	**16 11 11.3**	**-1.4**
C16K	**Lisburne Hills**	**28.57**	**32**	P	**P**	**16 11 13.2**	**+0.3**
C16K				IAmb	IAmb	16 11 14.9	
	comp=Z,12nm,0.8s						
C16K	**Lisburne Hills**	**28.57**	**32**	P	**P**	**16 11 12.7**	**-0.2**
	baz=250						
H16K	**Elim**	**28.83**	**40**	P	**P**	**16 11 16.2**	**+0.9**
	baz=260						
M15K	**Kasigluk River**	**

	comp=Z,13nm,0.9s							
H18K	**Honhosa River**	**30.54**	**40**	P	**P**	**16 11 31.2 +0.9**		
	baz=263							
M17K	**Holitna River**	**30.74**	**47**	P	**P**	**16 11 33.3 +1.2**		
M17K	**Holitna River**	**30.74**	**47**	P	**P**	**16 11 33.7 +1.6**		
	baz=270							
C19K	**Lookout Ridge**	**30.82**	**32**	P	**P**	**16 11 33.6 +0.8**		
C19K				IAmb	IAmb	16 11 34.4		
	comp=Z,9.9nm,0.8s							
C19K	**Lookout Ridge**	**30.82**	**32**	P	**P**	**16 11 32.9 +0.2**		
	baz=255							
N17K	**Nushagak Hills**	**30.88**	**49**	P	**P**	**16 11 33.4 +0.1**		
N17K				IAmb	IAmb	16 11 46.0		
	comp=Z,21nm,1.2s							
F19K	**Shaleruckik Mo**	**31.02**	**37**	P	**P**	**16 11 35.4 +0.9**		
F19K				IAmb	IAmb	16 11 39.2		
	comp=Z,9.1nm,0.7s							
F19K	**Shaleruckik Mo**	**31.02**	**37**	P	**P**	**16 11 35.0 +0.6**		
	baz=261							
L18K	**Granite Mounta**	**31.10**	**46**	P	**P**	**16 11 36.6 +1.4**		
L18K	**Granite Mounta**	**31.10**	**46**	P	**P**	**16 11 36.6 +1.4**		
	baz=270							
J18K	**Innoko River**	**31.12**	**43**	P	**P**	**16 11 36.3 +0.9**		
J18K				IAmb	IAmb	16 11 38.7		
	comp=Z,18nm,1.5s							
GCSA	**Galena City Sc**	**31.13**	**41**	P	**P**	**16 11 36.6 +1.3**		
	baz=265							
G19K	**Purcell Mounta**	**31.19**	**38**	IAmb	IAmb	16 11 40.8		
	comp=Z,8.5nm,0.7s							
G19K	**Purcell Mounta**	**31.19**	**38**	P	**P**	**16 11 36.6 +0.7**		
	baz=263							
D19K	**Kuna River**	**31.20**	**33**	IAmb	IAmb	16 11 38.0		
	comp=Z,15nm,0.8s							
D19K	**Kuna River**	**31.20**	**33**	P	**P**	**16 11 36.0 0.0**		
	baz=258							
E19K	**Redstone River**	**31.33**	**35**	IAmb	IAmb	16 11 42.2		
	comp=Z,15nm,0.7s							
E19K	**Redstone River**	**31.33**	**35**	P	**P**	**16 11 37.5 +0.4**		
	baz=261,SNR=20							
P17K	**Kvichak River**	**31.33**	**51**	P	**P**	**16 11 39.3 +2.1**		
	baz=275							
H19K	**Roundabout Mou**	**31.38**	**39**	P	**P**	**16 11 39.0 +1.4**		
	baz=264							
TTA	**Tatalina**	**31.42**	**44**	P	**P**	**16 11 39.2 +1.1**		
TTA				IAmb	IAmb	16 11 40.2		
	comp=Z,9.3nm,1.1s							
TTA	**Tatalina**	**31.42**	**44**	P	**P**	**16 11 38.9 +0.8**		
	baz=269							
TTA	**Tatalina**	**31.42**	**44**	P	**P**	**16 11 39.2 +1.1**		
TTA				pmax	pmax			
	comp=Z,9.0nm,1.1s							
N18K	**Kilae Creek**	**31.51**	**49**	P	**P**	**16 11 40.1 +1.2**		
	baz=273							
M18K	**Stony River**	**31.51**	**47**	P	**P**	**16 11 39.7 +0.9**		
	baz=272							
J19K	**Poorman**	**31.63**	**42**	P	**P**	**16 11 40.5 +0.7**		
J19K	**Poorman**	**31.63**	**42**	P	**P**	**16 11 40.6 +0.8**		
	baz=268							
Q17K	**Contact Creek**	**31.71**	**53**	P	**P**	**16 11 42.8 +2.0**		
	baz=277							
D20K	**Etivluk River**	**31.78**	**33**	P	**P**	**16 11 41.4 +0.2**		
	baz=259							
F20K	**Avaraart Lake**	**31.85**	**36**	P	**P**	**16 11 42.5 +0.9**		
	baz=263							
E20K	**Nigu River**	**31.85**	**34**	P	**P**	**16 11 42.2 +0.4**		
	baz=260							
H20K	**Anotleneega Mo**	**32.03**	**39**	P	**P**	**16 11 44.2 +0.9**		
	baz=266							
M19K	**Big River Lodg**	**32.18**	**46**	P	**P**	**16 11 45.4 +0.7**		
M19K				IAmb	IAmb	16 12 21.7		
	comp=Z,19nm,1.5s							
M19K	**Big River Lodg**	**32.18**	**46**	P	**P**	**16 11 46.6 +1.9**		
	baz=272							
N19K	**Bonanza Creek**	**32.19**	**48**	P	**P**	**16 11 45.3 +0.5**		
N19K				IAmb	IAmb	16 12 12.0		
	comp=Z,28nm,1.4s							
J20K	**Nowinta River**	**32.28**	**42**	P	**P**	**16 11 47.1 +1.7**		
J20K	**Nowinta River**	**32.28**	**42**	P	**P**	**16 11 46.9 +1.5**		
	baz=269							
K20K	**Telida**	**32.30**	**43**	P	**P**	**16 11 47.0 +1.3**		
K20K				IAmb	IAmb	16 11 52.7		
	comp=Z,13nm,1.3s							
K20K	**Telida**	**32.30**	**43**	P	**P**	**16 11 47.3 +1.7**		
	baz=270							
O19K	**Port Alsworth**	**32.32**	**49**	P	**P**	**16 11 48.1 +2.3**		
	baz=275							
A21K	**Barrow**	**32.37**	**28**	P	**P**	**16 11 46.5 +0.4**		
	baz=255,SNR=10.0							
C21K	**Knifeblade Rid**	**32.51**	**33**	P	**P**	**16 11 48.2 +0.8**		
	baz=260,SNR=12							
IMAR	**Indian Mountai**	**32.53**	**38**	P	**P**	**16 11 48.6 +1.1**		
E21K	**Killik River**	**32.70**	**34**	P	**P**	**16 11 49.5 +0.5**		
	baz=262							
F21K	**Alatna River**	**32.74**	**36**	P	**P**	**16 11 50.3 +0.9**		
M20K	**Styx River**	**32.78**	**46**	P	**P**	**16 11 51.5 +1.7**		
M20K				IAmb	IAmb	16 12 09.9		
	comp=Z,16nm,1.4s							
M20K	**Styx River**	**32.78**	**46**	P	**P**	**16 11 51.6 +1.7**		
	baz=273							
Q19K	**Cape Douglas,**	**32.80**	**52**	P	**P**	**16 11 49.2 -0.8**		
H21K	**Melozitna River**	**32.90**	**39**	P	**P**	**16 11 51.8 +1.0**		
H21K				IAmb	IAmb	16 11 53.1		
	comp=Z,6.8nm,0.9s							
H21K	**Melozitna Rive**	**32.90**	**39**	P	**P**	**16 11 52.0 +1.2**		
	baz=268							
CHUM	**Lake Minchumin**	**33.09**	**42**	P	**P**	**16 11 54.0 +1.6**		
	baz=271							
PPLA	**Purkeypile**	**33.17**	**44**	P	**P**	**16 11 55.1 +1.9**		
	baz=273							
O20K	**Slope Mountain**	**33.18**	**49**	P	**P**	**16 11 55.0 +1.7**		
	baz=277							
CAST	**Castle Rocks**	**33.20**	**43**	P	**P**	**16 11 55.2 +1.8**		
CAST	**Castle Rocks**	**33.20**	**43**	P	**P**	**16 11 55.0 +1.6**		
	baz=272							
D22K	**Ayikyak River**	**33.22**	**33**	P	**P**	**16 11 54.9 +1.3**		
D22K				IAmb	IAmb	16 11 55.8		
	comp=Z,15nm,0.8s							
D22K	**Ayikyak River**	**33.22**	**33**	P	**P**	**16 11 54.4 +0.9**		
	baz=263							
I21K	**Tanana**	**33.23**	**40**	P	**P**	**16 11 55.4 +1.8**		
I21K	**Tanana**	**33.23**	**40**	P	**P**	**16 11 54.8 +1.2**		
	baz=269							
N20K	**Mount Spurr**	**33.27**	**47**	P	**P**	**16 11 56.1 +2.0**		
	baz=275							
G22K	**Bettles**	**33.49**	**37**	P	**P**	**16 11 56.8 +1.0**		
	baz=267							
H22K	**Ishtalitna Cre**	**33.50**	**39**	P	**P**	**16 11 57.1 +1.2**		
	baz=269,SNR=12							
SKT	**Skwentna**	**33.53**	**46**	P	**P**	**16 11 56.2 -0.1**		
SKT				IAmb	IAmb	16 11 59.6		
	comp=Z,14nm,1.3s							
SKT	**Skwentna**	**33.53**	**46**	P	**P**	**16 11 57.9 +1.6**		
	baz=275							
BPAW	**Bear Paw Mtn.**	**33.66**	**42**	P	**P**	**16 11 58.4 +1.0**		
	baz=272							
KTH	**Kantishna Hill**	**33.71**	**43**	P	**P**	**16 11 59.0 +1.1**		
KTH				IAmb	IAmb	16 12 00.8		
	comp=Z,15nm,1.0s							
HOM	**Homer**	**33.72**	**50**	P	**P**	**16 11 59.3 +1.5**		
	baz=278							
MLY	**Manley**	**33.76**	**40**	P	**P**	**16 11 59.2 +1.1**		
	baz=271							
CAPN	**Captain Cook N**	**33.83**	**48**	P	**P**	**16 12 00.1 +1.4**		
	baz=277							
SUA	**Susitna One**	**33.95**	**47**	P	**P**	**16 12 00.7 +0.7**		
SUA				IAmb	IAmb	16 12 23.0		
	comp=Z,13nm,1.4s							
SUA	**Susitna One**	**33.95**	**47**	P	**P**	**16 12 00.4 +0.4**		
	baz=276							
D23K	**Nanushuk River**	**33.95**	**33**	P	**P**	**16 12 00.6 +0.8**		
	baz=265							
TRF	**Thorofare Moun**	**34.00**	**43**	P	**P**	**16 12 01.2 +0.8**		
TRF				IAmb	IAmb	16 12 19.9		
	comp=Z,25nm,1.4s							
TRF	**Thorofare Moun**	**34.00**	**43**	P	**P**	**16 12 00.7 +0.3**		
	baz=273							
COLD	**Coldfoot**	**34.01**	**36**	P	**P**	**16 12 01.7 +1.4**		
	baz=268,SNR=13							
G23K	**Bananza Creek**	**34.06**	**37**	P	**P**	**16 12 01.7 +0.9**		
G23K				IAmb	IAmb	16 12 06.5		
	comp=Z,13nm,1.1s							
G23K	**Bananza Creek**	**34.06**	**37**	P	**P**	**16 12 01.3 +0.5**		
	baz=269							
C23K	**Itkillik River**	**34.06**	**32**	P	**P**	**16 12 01.9 +1.2**		
C23K	**Itkillik River**	**34.06**	**32**	P	**P**	**16 12 01.4 +0.7**		
	baz=264							
CUT	**Chulitna**	**34.09**	**45**	P	**P**	**16 12 01.5 +0.6**		
	baz=275							
BRLK	**Bradley Lake**	**34.09**	**50**	P	**P**	**16 12 01.1 +0.1**		
BRLK				IAmb	IAmb	16 12 02.7		
	comp=Z,24nm,1.1s							
E23K	**Chandalar**	**34.27**	**35**	P	**P**	**16 12 02.9 +0.2**		
	baz=267,SNR=18							
I23K	**Minto, Yukon-K**	**34.34**	**40**	IAmb	IAmb	16 12 09.2		
	comp=Z,9.7nm,0.7s							
I23K	**Minto, Yukon-K**	**34.34**	**40**	P	**P**	**16 12 03.9 +0.8**		
	baz=272							
RC01	**Rabbit Creek A**	**34.47**	**47**	P	**P**	**16 12 04.3 0.0**		
RC01				IAmb	IAmb	16 12 15.4		
	comp=Z,17nm,1.4s							
NEA2	**Nenana**	**34.48**	**41**	P	**P**	**16 12 05.4 +1.1**		
	baz=273							
MCK	**McKinley**	**34.59**	**43**	P	**P**	**16 12 06.4 +1.1**		
	baz=274							
D24K	**Happy Valley**	**34.63**	**33**	P	**P**	**16 12 05.8 +0.3**		
	baz=266							
RND	**Reindeer**	**34.65**	**43**	IAmb	IAmb	16 12 07.5		
	comp=Z,7.9nm,0.8s							
XAN	**Xi'an**	**34.68**	**260**	P	P	16 12 00.6 -5.9		
XAN				pmax	pmax			
	comp=Z,6.0nm,0.7s							
PMR	**Palmer**	**34.70**	**46**	P	**P**	**16 12 07.6 +1.4**		
	baz=277							
C24K	**Franklin Bluff**	**34.72**	**32**	P	**P**	**16 12 06.6 +0.4**		
	baz=266,SNR=27							
SEW	**Seward**	**34.75**	**49**	P	**P**	**16 12 07.6 +1.0**		
	baz=279							
GHO	**Glory Hole Cre**	**34.78**	**46**	P	**P**	**16 12 07.4 +0.4**		
MDM	**Murphy Dome**	**34.82**	**40**	IAmb	IAmb	16 12 13.2		
	comp=Z,7.0nm,0.6s							
SSLB	**Suanglung**	**34.83**	**234**	P	**P**	**16 12 08.9 +1.2**		
SSLB				IAmb	IAmb	16 12 45.6		
	comp=Z,9.5nm,1.2s							
WAT1	**Susitna Watana**	**34.84**	**44**	P	**P**	**16 12 08.5 +1.0**		
	baz=276							
WRH	**Wood River Hil**	**34.91**	**41**	P	**P**	**16 12 09.3 +1.3**		
F24K	**Squaw Lake**	**34.91**	**36**	P	**P**	**16 12 08.0 -0.1**		
	baz=270							
H24K	**Noodor Dome**	**34.94**	**39**	IAmb	IAmb	16 12 11.1		
	comp=Z,8.8nm,0.9s							
H24K	**Noodor Dome**	**34.94**	**39**	P	**P**	**16 12 09.0 +0.8**		
	baz=272							
COLA	**College**	**34.99**	**41**	P	**P**	**16 12 10.3 +1.7**		
COLA	**College**	**34.99**	**41**	P	**P**	**16 12 09.3 +0.7**		
	baz=273							
COLA	**College**	**34.99**	**41**	P	**P**	**16 12 10.3 +1.7**		
COLA				pmax	pmax			
	comp=Z,25nm,0.5s							
CCB	**Clear Creek Bu**	**35.02**	**41**	P	**P**	**16 12 09.5 +0.6**		
CCB				IAmb	IAmb	16 12 12.6		
	comp=Z,16nm,1.3s							
KNK	**Knik Glacier**	**35.05**	**47**	P	**P**	**16 12 09.9 +0.7**		
KNK				IAmb	IAmb	16 12 11.3		
	comp=Z,15nm,0.7s							
KNK	**Knik Glacier**	**35.05**	**47**	P	**P**	**16 12 10.1 +1.0**		
	baz=278							
SML	**Sawmill**	**35.05**	**46**	P	**P**	**16 12 10.1 +0.8**		
	baz=277,SNR=7.1							
G24K	**Hadweenzic Riv**	**35.08**	**37**	IAmb	IAmb	16 12 12.2		
	comp=Z,11nm,0.9s							
G24K	**Hadweenzic Riv**	**35.08**	**37**	P	**P**	**16 12 10.5 +1.1**		
	baz=271							
POKR	**Poker Plat Res**	**35.15**	**40**	P	**P**	**16 12 11.1 +1.0**		
	baz=273,SNR=16							
WAT6	**Susitna Watana**	**35.24**	**44**	P	**P**	**16 12 12.2 +1.3**		
	baz=277							
M23K	**Glacier View**	**35.34**	**46**	P	**P**	**16 12 12.8 +1.2**		
	baz=278							
DHY	**Denali Highway**	**35.35**	**44**	IAmb	IAmb	16 12 18.3		
	comp=Z,6.6nm,0.8s							
DHY	**Denali Highway**	**35.35**	**44**	P	**P**	**16 12 13.1 +1.2**		
	baz=276							
TPUB	**Ta-pu**	**35.40**	**234**	P	**P**	**16 12 11.1 -1.5**		
IL31		**35.41**	**41**	IAmb	IAmb	16 12 14.2		
	comp=Z,8.1nm,0.9s							
ILAR	**Eielson Array**	**35.41**	**41**	P	**P**	**16 12 13.0 +0.8**		
ILAR	**Eielson Array**	**35.41**	**41**	P	**P**	**16 12 12.9 +0.8**		
	comp=Z,5.2nm,0.8s,baz=261,slow=5.5,SNR=58							
	comp=Z,5.2nm,0.8s							
HDA	**Harding Lake**	**35.41**	**41**	IAmb	IAmb	16 12 17.7		
	comp=Z,6.5nm,0.7s							
HDA	**Harding Lake**	**35.41**	**41**	P	**P**	**16 12 13.4 +1.2**		
	baz=275							
D25K	**Kavik River**	**35.51**	**33**	P	**P**	**16 12 14.0 +0.9**		
	baz=268							
SCM	**Sheep Creek Mo**	**35.52**	**46**	P	**P**	**16 12 13.7 +0.4**		
SCM				IAmb	IAmb	16 12 16.1		
	comp=Z,17nm,1.0s							
SCM	**Sheep Creek Mo**	**35.52**	**46**	P	**P**	**16 12 14.5 +1.2**		
	baz=278							
SCM	**Sheep Creek Mo**	**35.52**	**46**	P	**P**	**16 12 13.7 +0.4**		
SCM				pmax	pmax			
	comp=Z,17nm,1.0s							
G25K	**Bearman Lake**	**35.62**	**37**	P	**P**	**16 12 14.5 +0.6**		
	baz=272							
F25K	**Christian Rive**	**35.77**	**36**	P	**P**	**16 12 15.8 +0.5**		
	baz=272,SNR=5.8							
GLI	**Glacier Island**	**35.78**	**47**	P	**P**	**16 12 16.8 +1.5**		
	baz=280							
P23K	**Montague Islan**	**35.78**	**49**	P	**P**	**16 12 16.6 +1.2**		
	baz=281							
E25K	**Arctic Village**	**35.79**	**35**	IAmb	IAmb	16 12 18.3		
	comp=Z,14nm,1.4s							
E25K	**Arctic Village**	**35.79**	**35**	P	**P**	**16 12 15.5 +0.1**		
	baz=271,SNR=7.8							
PRP	**Porcupine Dome**	**35.93**	**39**	IAmb	IAmb	16 12 23.0		
	comp=Z,17nm,0.9s							
PRP	**Porcupine Dome**	**35.93**	**39**	P	**P**	**16 12 17.5 +0.8**		
	baz=274,SNR=17							
K24K	**Donnelly Dome**	**35.98**	**42**	P	**P**	**16 12 17.9 +0.8**		
	baz=277							
M24K	**Tolsona, Glenn**	**36.02**	**45**	P	**P**	**16 12 18.9 +1.4**		
M24K				IAmb	IAmb	16 12 28.4		
	comp=Z,32nm,1.4s							
M24K	**Tolsona, Glenn**	**36.02**	**45**	P	**P**	**16 12 18.2 +0.7**		
	baz=279							
J25K	**Salcha River,**	**36.07**	**41**	P	**P**	**16 12 18.5 +0.6**		
	baz=276							
NRIK	**Noril'sk**	**36.08**	**327**	P	**P**	**16 12 16.6 -1.2**		
	comp=Z,2.1nm,0.4s,baz=164,slow=5.5,SNR=2.9							
	comp=Z,2.1nm,0.4s							
HIN	**Hinchinbrook I**	**36.15**	**48**	P	**P**	**16 12 19.1 +0.6**		
BMAR	**Burnt Mountain**	**36.19**	**36**	P	**P**	**16 12 20.6 +1.8**		
PAX	**Paxson**	**36.22**	**44**	P	**P**	**16 12 19.8 +0.6**		
	baz=278							
KLU	**Klutina**	**36.24**	**46**	P	**P**	**16 12 19.8 +0.5**		
KLU				IAmb	IAmb	16 12 32.8		
	comp=Z,12nm,1.1s							
KLU	**Klutina**	**36.24**	**46**	P	**P**	**16 12 20.2 +0.8**		
	baz=280							
F26K	**Sheenjek River**	**36.34**	**36**	P	**P**	**16 12 20.7 +0.6**		
	baz=273							
HARP	**HAARP**	**36.45**	**45**	P	**P**	**16 12 22.2 +1.2**		
	baz=279							
EYAK	**Cordova Ski Ar**	**36.49**	**48**	P	**P**	**16 12 21.9 +0.6**		
	baz=281							
G26K	**Porcupine Rive**	**36.53**	**37**	P	**P**	**16 12 22.1 +0.5**		
	baz=274							
SCRK	**Sand Creek**	**36.74**	**42**	P	**P**	**16 12 24.2 +0.6**		
SCRK				IAmb	IAmb	16 12 29.0		
	comp=Z,12nm,0.6s							
SCRK	**Sand Creek**	**36.74**	**42**	P	**P**	**16 12 23.5 -0.1**		
	baz=278,SNR=12							
N25K	**Chitina, Valde**	**36.84**	**46**	P	**P**	**16 12 25.1 +0.7**		
N25K				IAmb	IAmb	16 13 00.7		
	comp=Z,16nm,1.4s							
N25K	**Chitina, Valde**	**36.84**	**46**	P	**P**	**16 12 24.9 +0.5**		
	baz=281							
J26L	**Joseph Creek**	**36.86**	**41**	P	**P**	**16 12 25.1 +0.5**		
J26L	**Joseph Creek**	**36.86**	**41**	P	**P**	**16 12 24.9 +0.4**		
	baz=278							
I26K	**Coal Creek Min**	**36.93**	**39**	P	**P**	**16 12 25.2 +0.2**		
I26K	**Coal Creek Min**	**36.93**	**39**	P	**P**	**16 12 25.7 +0.6**		
	baz=277							
BMRM	**Bremner River**	**36.96**	**47**	P	**P**	**16 12 26.0 +0.7**		
	baz=281							
L26K	**Log Cabin Wild**	**37.17**	**43**	P	**P**	**16 12 28.1 +1.1**		
	baz=280							
VRDI	**Verde Repeater**	**37.46**	**46**	P	**P**	**16 12 29.5 -0.2**		
VRDI				IAmb	IAmb	16 12 50.5		
	comp=Z,22nm,1.4s							
H27K	**Steamboat Moun**	**37.49**	**38**	P	**P**	**16 12 30.1 +0.4**		
	baz=277							
I27K	**Kandik River**	**37.53**	**39**	P	**P**	**16 12 30.7 +0.6**		
	baz=278							
K27K	**Chicken**	**37.57**	**41**	IAmb	IAmb	16 12 36.8		
	comp=Z,14nm,1.1s							
K27K	**Chicken**	**37.57**	**41**	P	**P**	**16 12 31.2 +0.9**		
	baz=279							
MCARA	**McCarthy VSAT**	**37.63**	**46**	P	**P**	**16 12 31.8 +0.9**		
	baz=282							
CRQM	**Cirque**	**37.70**	**47**	IAmb	IAmb	16 12 34.7		
	comp=Z,22nm,0.8s							
CRQE	**Cirque**	**37.73**	**47**	P	**P**	**16 12 33.1 +1.3**		
	baz=283							
EGAK	**Eagle**	**37.84**	**40**	IAmb	IAmb	16 12 35.0		
	comp=Z,11nm,1.0s							
EGAK	**Eagle**	**37.84**	**40**	P	**P**	**16 12 33.5 +0.9**		
	baz=279,SNR=6.9							
L27K	**Beaver Creek,**	**37.85**	**43**	IAmb	IAmb	16 12 36.0		
	comp=Z,16nm,0.8s							
L27K	**Beaver Creek,**	**37.85**	**43**	P	**P**	**16 12 33.8 +1.1**		
	baz=281							
TGL	**Tana Glacier**	**37.85**	**47**	P	**P**	**16 12 33.8 +0.9**		
TGL				IAmb	IAmb	16 12 40.5		
	comp=Z,21nm,1.2s							
WAX	**Waxell Ridge**	**37.91**	**47**	P	**P**	**16 12 34.7 +1.4**		
WAX				IAmb	IAmb	16 12 36.3		
	comp=Z,16nm,0.7s							
M27K	**Edge Creek, AK**	**37.96**	**44**	P	**P**	**16 12 36.0 +2.2**		
M27K				IAmb	IAmb	16 12 37.1		
	comp=Z,15nm,0.7s							
M27K	**Edge Creek, AK**	**37.96**	**44**	P	**P**	**16 12 35.0 +1.2**		
	baz=282							
F28M	**Old Crow**	**37.98**	**35**	IAmb	IAmb	16 12 36.9		
	comp=Z,14nm,1.5s							
F28M	**Old Crow**	**37.98**	**35**	P	**P**	**16 12 34.8 +1.1**		
	baz=277							
ISLE	**Juniper Island**	**38.12**	**47**	P	**P**	**16 12 35.1 0.0**		
ISLE				IAmb	IAmb	16 13 00.6		
	comp=Z,29nm,1.3s							
I28M	**Miner Creek**	**38.25**	**39**	IAmb	IAmb	16 12 38.7		
	comp=Z,9.8nm,0.7s							
I28M	**Miner Creek**	**38.25**	**39**	P	**P**	**16 12 36.8 +0.8**		
	baz=279							
BARN	**Barnard Glacie**	**38.34**	**46**	P	**P**	**16 12 37.6 +0.6**		
BARN				IAmb	IAmb	16 12 39.7		
	comp=Z,9.2nm,0.7s							
BVCY	**Beaver Creek**	**38.41**	**44**	P	**P**	**16 12 39.3 +1.9**		
	baz=282,SNR=11							
MESA	**MESA**	**38.41**	**48**	P	**P**	**16 12 38.9 +1.3**		
MESA	**MESA**	**38.41**	**48**	P	**P**	**16 12 38.5 +0.8**		
	baz=284							
CTG	**Chitna Glacier**	**38.52**	**46**	P	**P**	**16 12 39.6 +1.2**		
	baz=284							
CTGM	**Chitina Glacie**	**38.52**	**46**	IAmb	IAmb	16 12 41.4		
	comp=Z,19nm,1.0s							
E29M	**Blow River**	**38.63**	**34**	IAmb	IAmb	16 12 41.9		
	comp=Z,11nm,0.9s							
E29M	**Blow River**	**38.63**	**34**	P	**P**	**16 12 40.0 +1.0**		
	baz=277							
LOGN	**Logan Glacier**	**38.71**	**46**	P	**P**	**16 12 40.2 +0.2**		
LOGN				IAmb	IAmb	16 13 14.7		
	comp=Z,22nm,1.3s							
DAWY	**Dawson**	**38.73**	**41**	P	**P**	**16 12 41.2 +1.2**		
DAWY	**Dawson**	**38.73**	**41**	P	**P**	**16 12 41.3 +1.2**		
	baz=282							
TABL	**Table Mountain**	**38.74**	**47**	P	**P**	**16 12 41.1 +0.8**		
TABL				IAmb	IAmb	16 12 50.9		
	comp=Z,21nm,1.0s							
YUK3	**Moose Creek**	**38.74**	**45**	P	**P**	**16 12 41.6 +1.3**		
	baz=284							
H29M	**Whitestone**	**38.76**	**38**	P	**P**	**16 12 42.1 +1.9**		
H29M	**Whitestone**	**38.76**	**38**	P	**P**	**16 12 41.3 +1.1**		
	baz=280							
J29N	**Klondike Camp**	**39.15**	**40**	P	**P**	**16 12 44.5 +1.0**		
	baz=282							
YUK8	**Steele Glacier**	**39.18**	**45**	P	**P**	**16 12 44.9 +0.9**		
	baz=285							
PINM	**Pinnacle**	**39.25**	**47**	P	**P**	**16 12 46.1 +1.7**		
	baz=286							
EPYK	**Eagle Plains**	**39.39**	**37**	P	**P**	**16 12 46.4 +1.0**		
	baz=281,SNR=5.2							
G30M	**tAoh Zraii Nji**	**39.47**	**36**	P	**P**	**16 12 46.6 +0.6**		
	baz=280							
L29M	**L29M**	**39.48**	**42**	IAmb	IAmb	16 12 49.8		
	comp=Z,18nm,0.8s							
L29M	**L29M**	**39.48**	**42**	P	**P**	**16 12 46.9 +0.7**		
	baz=284,SNR=13							
M29M	**Somme Creek**	**39.49**	**43**	P	**P**	**16 12 47.5 +1.1**		
M29M	**Somme Creek**	**39.49**	**43**	P	**P**	**16 12 47.0 +0.6**		
	baz=284							
F30M	**Barrier River**	**39.53**	**35**	P	**P**	**16 12 46.7 +0.2**		
	baz=280,SNR=10							
K29M	**Barlow Dome**	**39.58**	**41**	P	**P**	**16 12 48.0 +0.9**		
K29M	**Barlow Dome**	**39.58**	**41**	P	**P**	**16 12 47.9 +0.8**		
	baz=283							
YUK4	**Talbot Arm**	**39.69**	**45**	P	**P**	**16 12 48.5 +0.4**		
	baz=285							
I30M	**Mount Dempster**	**39.76**	**39**	IAmb	IAmb	16 12 51.1		
	comp=Z,12nm,0.8s							
I30M	**Mount Dempster**	**39.76**	**39**	P	**P**	**16 12 48.4 -0.1**		
	baz=282,SNR=15							
J30M	**Hart River**	**39.92**	**40**	P	**P**	**16 12 49.6 -0.3**		
	baz=283,SNR=5.7							
YUK6	**Outpost Mounta**	**39.93**	**46**	P	**P**	**16 12 50.4 +0.3**		
	baz=286							
M30M	**Minto, Yukon**	**40.21**	**43**	P	**P**	**16 12 53.2 +1.0**		
	baz=285							
G31M	**Satah River**	**40.24**	**36**	P	**P**	**16 12 53.5 +1.2**		
G31M	**Satah River**	**40.24**	**36**	P	**P**	**16 12 53.0 +0.8**		
	baz=282							
INK	**Inuvik**	**40.24**	**34**	IAmb	IAmb	16 12 54.6		
	comp=Z,12nm,0.5s							
INK	**Inuvik**	**40.24**	**34**	P	**P**	**16 12 52.2 0.0**		
	baz=281,SNR=14							
ZALV	**Zalesovo Beam**	**40.28**	**303**	*i* P	**P**	**16 12 52.2

PZH	**PanZhiHua**	**44.31**	**258**	P	**P**	**16 13 25.8**	**+0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,120nm,6.1s						
TGTN	**Hyland Airport**	**44.35**	**43**	P	**P**	**16 13 26.5**	**+1.2**
	baz=292						
S34M	**Telegraph Cree**	**44.43**	**48**	P	**P**	**16 13 27.7**	**+1.8**
	baz=294						
WTLY	**Watson Lake, Y**	**44.66**	**45**	P	**P**	**16 13 28.9**	**+1.2**
	baz=293						
DLBC	**Dease Lake**	**44.75**	**47**	P	**P**	**16 13 31.3**	**+2.8**
DLBC				IAmb	IAmb	16 13 32.4	
	comp=Z,12nm,1.1s						
DLBC	**Dease Lake**	**44.75**	**47**	P	**P**	**16 13 30.3**	**+1.8**
	baz=294						
MK31	**Makanchi Array**	**44.84**	**294**	*ce*P	**P**	**16 13 28.8**	**-0.5**
MKAR	**Makanchi Array**	**44.84**	**294**	*i* P	**P**	**16 13 29.1**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**44.84**	**294**	P	**P**	**16 13 29.2**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=63,slow=7.7,SNR=26						
MKAR				PcP	**sP**	**16 15 04.8**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=74,slow=3.6,SNR=9.8						
MKAR				ScP	**ScP**	**16 18 27.1**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=58,slow=3.0,SNR=6.8						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**44.84**	**294**	*e*P	**P**	**16 13 29.0**	**-0.3**
MAKZ	**Makanchi**	**45.02**	**295**	P	**P**	**16 13 29.7**	**-1.1**
MAKZ	**Makanchi**	**45.02**	**295**	P	**P**	**16 13 29.7**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KURK	**Kurchatov**	**45.09**	**301**	P	**P**	**16 13 30.6**	**-0.6**
KURK	**Kurchatov**	**45.09**	**301**	*ce*P	**P**	**16 13 31.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	**Kurchatov**	**45.09**	**301**	*e*P	**P**	**16 13 31.1**	**0.0**
KURBB	**Kurchatov Arra**	**45.18**	**301**	P	**P**	**16 13 31.8**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=68,slow=8.4,SNR=43						
KURBB				PcP	**sP**	**16 15 05.9**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=68,slow=3.3,SNR=6.0						
KURBB				ScP	**ScP**	**16 18 28.0**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=68,slow=3.4,SNR=8.5						
	comp=Z,4.9nm,0.6s						
T35M	**Bob Quinn**	**45.25**	**49**	P	**P**	**16 13 34.0**	**+1.6**
	baz=295						
WRGLY	**Wrigley**	**45.74**	**39**	P	**P**	**16 13 37.1**	**+1.1**
	baz=294						
KOTAN	**Kotaneelee Air**	**46.81**	**43**	P	**P**	**16 13 45.5**	**+1.2**
	baz=297						
BVAR	**Borovoye Array**	**48.44**	**307**	P	**P**	**16 13 57.1**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=56,slow=8.3,SNR=34						
BVAR				PcP	**PcP**	**16 15 17.9**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=80,slow=1.9,SNR=5.6						
BVAR				ScP	**ScP**	**16 18 42.0**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=57,slow=5.5,SNR=6.9						
	comp=Z,5.2nm,0.6s						
BRVK	**Borovoye**	**48.48**	**307**	P	**P**	**16 13 57.3**	**+0.1**
BRVK	**Borovoye**	**48.48**	**307**	*ce*P	**P**	**16 13 56.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,19nm,2.5s						
BRVK	**Borovoye**	**48.48**	**307**	*e*P	**P**	**16 13 56.5**	**-0.7**
YKA	**Yellowknife Ar**	**49.68**	**37**	P	**P**	**16 14 05.9**	**-0.2**
YKA	**Yellowknife Ar**	**49.68**	**37**	*i* P	**P**	**16 14 07.1**	**+1.0**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	**Yellowknife Ar**	**49.68**	**37**	P	**P**	**16 14 07.2**	**+1.2**
	comp=Z,5.9nm,0.8s,baz=301,slow=7.4,SNR=67						
YKA				PcP	**PcP**	**16 15 23.3**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=307,slow=4.0,SNR=8.0						
	comp=Z,5.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**50.01**	**349**	P	**P**	**16 14 06.5**	**-1.8**
	comp=Z,15nm,0.9s,baz=46,slow=7.1,SNR=10						
SPITS				PcP	**PcP**	**16 15 23.3**	**0.0**
	comp=Z,16nm,1.0s,baz=258,slow=4.3,SNR=1.9						
	comp=Z,15nm,0.9s						
SPB2	**Spitsbergen Ar**	**50.01**	**349**	P	**P**	**16 14 06.6**	**-1.8**
SVE	**Sverdlovsk**	**51.27**	**315**	*e*P	**P**	**16 14 18.5**	**+0.5**
SVE				pmax	pmax		
	comp=Z,14nm,0.7s						
SVE	**Sverdlovsk**	**51.27**	**315**	*e*P	**P**	**16 14 18.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**51.90**	**253**	*i* P	**P**	**16 14 23.7**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.90**	**253**	P	**P**	**16 14 23.5**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=33,slow=7.4,SNR=5.1						
	comp=Z,0.5nm,0.6s						
ARU	**Arti**	**52.45**	**316**	P	**P**	**16 14 26.2**	**-0.5**
ARU	**Arti**	**52.45**	**316**	*c i* P	**P**	**16 14 25.8**	**-0.9**
ARU				pmax	pmax		
	comp=Z,16nm,0.5s						
ARU	**Arti**	**52.45**	**316**	*e*P	**P**	**16 14 25.8**	**-0.9**
KIRV	**Kirov**	**55.15**	**321**	P	**P**	**16 14 45.4**	**-0.5**
	comp=Z,9.7nm,0.6s,baz=158,slow=0.9,SNR=4.5						
	comp=Z,9.7nm,0.6s						
ARCES	**ARCESS Array B**	**55.17**	**340**	P	**P**	**16 14 45.2**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=36,slow=7.5,SNR=7.6						
	comp=Z,2.0nm,0.6s						
EDM	**Edmonton**	**55.47**	**47**	IAmb	IAmb	16 14 50.7	
	comp=Z,16nm,0.7s						
NEW	**Newport**	**56.63**	**53**	P	**P**	**16 14 58.3**	**+1.7**
	baz=308						
PLID	**Pearl Lake**	**59.24**	**55**	IAmb	IAmb	16 15 17.7	
	comp=Z,11nm,0.8s						
FFC	**Flin Flon**	**59.62**	**40**	P	**P**	**16 15 18.4**	**+1.3**
FFC				IAmb	IAmb	16 15 19.3	
	comp=Z,13nm,0.7s						
FFC	**Flin Flon**	**59.62**	**40**	P	**P**	**16 15 18.4**	**+1.3**
FFC				pmax	pmax		
	comp=Z,13nm,0.7s						
BPMT	**Black Pine Rid**	**59.72**	**53**	P	**P**	**16 15 18.6**	**+0.3**
FCC	**Fort Churchill**	**59.86**	**33**	P	**P**	**16 15 18.2**	**-0.4**
FCC				IAmb	IAmb	16 15 19.5	
	comp=Z,6.6nm,0.6s						
FCC	**Fort Churchill**	**59.86**	**33**	P	**P**	**16 15 18.2**	**-0.4**
FCC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BELG	**Belogornoye**	**59.96**	**317**	P	**P**	**16 15 19.2**	**-0.2**
	comp=Z,11nm,0.5s,baz=246,slow=0.6,SNR=11						
	comp=Z,11nm,0.5s						
HLID	**Hailey**	**61.09**	**56**	P	**P**	**16 15 28.7**	**+1.3**
	baz=312						
BOZ	**Bozeman (W)**	**61.22**	**53**	IAmb	IAmb	16 15 31.1	
	comp=Z,5.1nm,0.8s						
BOZ	**Bozeman (W)**	**61.22**	**53**	P	**P**	**16 15 29.6**	**+1.3**
	baz=312,SNR=8.7						
FINES	**FINESS Array B**	**61.35**	**333**	*i* P	**P**	**16 15 27.5**	**-1.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**61.35**	**333**	P	**P**	**16 15 27.7**	**-0.9**
	comp=Z,2.3nm,0.5s,baz=35,slow=7.6,SNR=27						
FINES				PcP	**PcP**	**16 16 09.1**	**+1.4**
	comp=Z,1.9nm,1.0s,baz=53,slow=4.7,SNR=4.6						
	comp=Z,2.3nm,0.5s						
KVN	**Kaiserville**	**62.03**	**62**	IAmb	IAmb	16 15 36.8	
	comp=Z,6.0nm,0.9s						
NVAR	**Mina Array Bea**	**62.33**	**62**	P	**P**	**16 15 37.8**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=292,slow=7.1,SNR=25						
	comp=Z,3.2nm,0.8s						
LHV	**Little Huntoon**	**62.33**	**63**	IAmb	IAmb	16 15 39.2	
	comp=Z,5.8nm,0.9s						
MLAC	**Mammoth, Mammo**	**62.55**	**63**	P	**P**	**16 15 38.8**	**+1.5**
	baz=313						
H17A	**Grant Village**	**62.59**	**53**	P	**P**	**16 15 38.8**	**+1.4**
	baz=313						
OBN	**Obninsk**	**62.66**	**324**	*i* P	**P**	**16 15 37.1**	**-0.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	**Obninsk**	**62.66**	**324**	*e*P	**P**	**16 15 37.1**	**-0.2**
RLMT	**Red Lodge**	**62.77**	**52**	P	**P**	**16 15 40.0**	**+1.5**
	baz=314						
DGMT	**Dagmar**	**62.96**	**46**	P	**P**	**16 15 41.2**	**+1.7**
	baz=315						
LAO	**LASA Array**	**63.22**	**49**	P	**P**	**16 15 42.6**	**+1.3**
	baz=314						
CWC	**Cottonwood Cre**	**63.80**	**64**	P	**P**	**16 15 47.0**	**+1.6**
	baz=313						
PKM	**Mcpherson Peak**	**63.83**	**66**	P	**P**	**16 15 46.6**	**+1.1**
	baz=313						
GRAC	**Grapevine Rang**	**63.84**	**63**	P	**P**	**16 15 46.8**	**+1.3**
	baz=313						
R11B	**Troy Canyon, C**	**63.95**	**61**	P	**P**	**16 15 48.0**	**+1.6**
	baz=313						
HWUT	**Hardware Ranch**	**63.97**	**56**	P	**P**	**16 15 47.6**	**+1.2**
BW06	**Boulder Array**	**64.24**	**54**	P	**P**	**16 15 50.0**	**+1.8**
	baz=314,SNR=5.5						
PD31	**Pinedale Array**	**64.24**	**54**	P	**P**	**16 15 49.2**	**+1.0**
PD31				IAmb	IAmb	16 15 50.7	
	comp=Z,6.3nm,1.1s						
PDAR	**Pinedale Array**	**64.24**	**54**	P	**P**	**16 15 49.6**	**+1.4**
PDAR	**Pinedale Array**	**64.24**	**54**	P	**P**	**16 15 50.0**	**+1.8**
	comp=Z,3.3nm,0.8s,baz=322,slow=1.9,SNR=20						
	comp=Z,3.3nm,0.8s						
DUG	**Dugway, Tooele**	**64.25**	**58**	P	**P**	**16 15 49.3**	**+1.1**
	baz=314,SNR=5.2						
MPMC	**Manual Prospec**	**64.41**	**64**	P	**P**	**16 15 49.8**	**+0.4**
	baz=314						
FURC	**Furnace Creek,**	**64.50**	**63**	P	**P**	**16 15 50.1**	**+0.5**
	baz=314						
LRMC	**Laurel Mtn Rad**	**64.70**	**65**	P	**P**	**16 15 51.9**	**+0.8**
	baz=314						
GWY	**Greenwater Val**	**64.81**	**63**	IAmb	IAmb	16 15 54.4	
	comp=Z,3.8nm,0.7s						
EDW2	**Edwards Air Fo**	**64.92**	**65**	P	**P**	**16 15 53.6**	**+1.1**
	baz=314						
SNCC	**San Nicolas Is**	**65.13**	**67**	P	**P**	**16 15 54.8**	**+1.1**
	baz=314						
ULM	**Lac du Bonnet**	**65.43**	**41**	IAmb	IAmb	16 15 56.6	
	comp=Z,5.1nm,0.8s						
ULM	**Lac du Bonnet**	**65.43**	**41**	P	**P**	**16 15 55.7**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=319,slow=7.1,SNR=11						
	comp=Z,4.0nm,0.7s						
NB2	**NORSAR Subarra**	**65.55**	**340**	P	**P**	**16 15 55.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**65.55**	**340**	P	**P**	**16 15 55.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=30,slow=5.9,SNR=6.2						
	comp=Z,1.1nm,0.7s						
MDND	**Maddock**	**65.55**	**44**	P	**P**	**16 15 56.9**	**+0.7**
	baz=317						
MVU	**Marysvale**	**65.76**	**59**	P	**P**	**16 15 58.3**	**+0.3**
MVU				IAmb	IAmb	16 16 01.2	
	comp=Z,9.2nm,0.9s						
TUQ	**Turquoise Moun**	**65.76**	**63**	P	**P**	**16 15 58.6**	**+0.7**
	baz=314						
HFS	**Hagfors**	**65.77**	**338**	P	**P**	**16 15 56.2**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=56,slow=6.3,SNR=15						
	comp=Z,2.2nm,0.5s						
P17A	**Butcher Ranch,**	**65.90**	**57**	IAmb	IAmb	16 16 01.8	
	comp=Z,13nm,1.5s						
HEC	**Hector,Ludlow**	**65.94**	**64**	P	**P**	**16 15 60.0**	**+1.0**
	baz=314						
MTPU	**Mount Pierson**	**66.10**	**59**	P	**P**	**16 15 59.4**	**-0.9**
MTPU				IAmb	IAmb	16 16 03.6	
	comp=Z,4.4nm,0.8s						
RSSD	**Black Hills**	**66.13**	**50**	P	**P**	**16 15 59.5**	**-0.7**
RSSD				IAmb	IAmb	16 16 02.3	
	comp=Z,6.7nm,0.8s						
RSSD	**Black Hills**	**66.13**	**50**	P	**P**	**16 16 01.2**	**+1.0**
	baz=316						
RSSD	**Black Hills**	**66.13**	**50**	P	**P**	**16 15 59.5**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SRU	**San Rafael Swe**	**66.28**	**57**	IAmb	IAmb	16 16 03.9	
	comp=Z,7.1nm,0.8s						
GMRC	**Granite Mounta**	**66.37**	**64**	P	**P**	**16 16 03.2**	**+1.4**
	baz=315						
PFO	**Pinyon Flats O**	**66.72**	**65**	P	**P**	**16 16 05.1**	**+1.1**
	baz=315						
AGMN	**Agassiz Nation**	**66.90**	**42**	P	**P**	**16 16 05.3**	**+0.7**
	baz=319						
HMU	**Henry Mountain**	**66.98**	**58**	IAmb	IAmb	16 16 08.4	
	comp=Z,8.9nm,0.8s						
IRM	**Iron Mountain**	**67.11**	**64**	P	**P**	**16 16 07.2**	**+0.9**
	baz=315						
BC3	**Big Chuckawall**	**67.28**	**65**	P	**P**	**16 16 08.5**	**+1.0**
	baz=315						
N23A	**Red Feather La**	**67.47**	**53**	P	**P**	**16 16 09.0**	**+0.3**
	baz=316						
PDMCI	**Parker Dam,Lak**	**67.60**	**63**	P	**P**	**16 16 11.2**	**+1.9**
	baz=315						
B35A	**Bob, Littlefor**	**67.78**	**41**	IAmb	IAmb	16 16 11.2	
	comp=Z,7.9nm,0.8s						
KIV	**Kislovodsk**	**68.29**	**313**	*e*P	**P**	**16 16 13.5**	**0.0**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**68.29**	**313**	*e*P	**P**	**16 16 13.5**	**0.0**
SUW	**Suwalki**	**68.31**	**330**	P	**P**	**16 16 11.2**	**-2.1**
SUW	**Suwalki**	**68.31**	**330**	P	**P**	**16 16 11.2**	**-2.1**
SUW				pmax	pmax		
	comp=Z,47nm,0.6s						
WUAZ	**Wupatki**	**68.34**	**61**	P	**P**	**16 16 15.1**	**+1.1**
	baz=316						
KBZ	**Khabaz**	**68.35**	**312**	P	**P**	**16 16 14.0**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=65,slow=4.1,SNR=18						
	comp=Z,5.4nm,0.8s						
SUSD	**Miller**	**68.38**	**47**	P	**P**	**16 16 14.9**	**+1.0**
	baz=319						
ISCO	**Idaho Springs**	**68.44**	**54**	P	**P**	**16 16 15.9**	**+1.1**
	baz=317						
MVCO	**Mesa Verde**	**68.75**	**57**	P	**P**	**16 16 17.3**	**+0.7**
	baz=316						
AKASG	**Malin Array Be**	**68.89**	**325**	P	**P**	**16 16 15.3**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=32,slow=5.9,SNR=4.0						
	comp=Z,1.0nm,0.5s						
EYMN	**Ely**	**69.05**	**40**	P	**P**	**16 16 16.9**	**-1.1**
EYMN	**Ely**	**69.05**	**40**	P	**P**	**16 16 18.4**	**+0.4**
	baz=322,SNR=10.0						
Q24A	**Divide**	**69.29**	**54**	P	**P**	**16 16 20.7**	**+0.6**
	baz=317						
OGNE	**Ogallala**	**69.46**	**51**	P	**P**	**16 16 20.5**	**-0.2**
	baz=318						
WRA	**Warramunga Arr**	**70.47**	**197**	P	**P**	**16 16 27.4**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=16,slow=6.3,SNR=1.5						
WRA				pP	**pP**	**16 17 35.0**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=7.8,slow=6.7,SNR=3.0						
	comp=Z,0.5nm,0.8s						
SPMN	**Marine on St.**	**70.61**	**42**	P	**P**	**16 16 27.2**	**-0.2**
	baz=321						
D41A	**Chassel**	**70.97**	**39**	IAmb	IAmb	16 16 30.4	
	comp=Z,8.1nm,0.7s						
TUC	**Tucson**	**70.98**	**63**	P	**P**	**16 16 30.2**	**+0.2**
	baz=317						
T25A	**Trinidad**	**71.03**	**55**	P	**P**	**16 16 29.6**	**-0.8**
	baz=318						
BGNE	**Belgrade**	**71.05**	**48**	P	**P**	**16 16 29.8**	**-0.5**
	baz=320						
COWI	**Conner**	**71.50**	**40**	IAmb	IAmb	16 16 33.8	
	comp=Z,8.2nm,0.9s						
SCHQ	**Schefferville**	**71.50**	**22**	P	**P**	**16 16 32.5**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=1.5,slow=6.0,SNR=11						
	comp=Z,5.7nm,0.9s						
ANMO	**Albuquerque**	**71.53**	**58**	P	**P**	**16 16 33.7**	**+0.4**
	baz=318						
G40A	**Rib Lake**	**71.71**	**41**	IAmb	IAmb	16 16 34.8	
	comp=Z,5.2nm,0.7s						
121A	**Cookes Peak, D**	**72.55**	**60**	P	**P**	**16 16 39.4**	**-0.1**
	baz=318						
SCIA	**State Center**	**73.01**	**45**	P	**P**	**16 16 41.7**	**0.0**
	baz=322						
JFWS	**Jewell Farm**	**73.56**	**42**	P	**P**	**16 16 44.9**	**0.0**
	baz=323						
KSU1	**Kansas State U**	**73.57**	**49**	P	**P**	**16 16 45.3**	**+0.2**
	baz=321						
EKA	**Eskdalemuir Ar**	**73.69**	**345**	P	**P**	**16 16 44.5**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=32,slow=5.8,SNR=4.3						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**74.18**	**197**	P	**P**	**16 16 50.1**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=9.6,slow=5.7,SNR=26						
ASAR				pP	**pP**	**16 17 58.9**	**+2.8**
	comp=Z,1.3nm,0.8s,baz=7.1,slow=7.3,SNR=5.2						
	comp=Z,0.8nm,0.5s						
VLDQ	**Val d'Or**	**74.29**	**32**	P	**P**	**16 16 47.5**	**-1.5**
MLR	**Mundele Rosu**	**74.42**	**323**	P	**P**	**16 16 50.2**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=349,slow=6.7,SNR=5.8						
	comp=Z,1.9nm,0.5s						
MNTX	**Cornudas Mount**	**74.53**	**59**	P	**P**	**16 16 50.6**	**-0.1**
	baz=319						
P40A	**Paris**	**75.43**	**46**	P	**P**	**16 16 54.6**	**-1.1**
WMOK	**Wichita Mounta**	**75.83**	**53**	P	**P**	**16 16 58.4**	**+0.4**
	baz=321						
BRTR	**Keskin Array B**	**75.84**	**315**	*i* P	**P**	**16 16 59.0**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**75.84**	**315**	P	**P**	**16 16 58.1**	**0.0**
	comp=Z,2.0nm,0.8s,baz=56,slow=4.9,SNR=11						
	comp=Z,2.0nm,0.8s						
HDIL	**Hopedale**	**75.88**	**43**	P	**P**	**16 16 57.8**	**-0.3**
	baz=324						
R40A	**Maddies Statio**	**76.31**	**47**	IAmb	IAmb	16 17 01.8	
	comp=Z,6.2nm,0.8s						
TUL3	**Leonard**	**76.46**	**50**	P	**P**	**16 17 01.5**	**0.0**
	baz=322						
TRQ	**Mont Tremblant**	**76.92**	**31**	P	**P**	**16 17 03.7**	**-0.2**
CCM	**Cathedral Cave**	**76.99**	**46**	P	**P**	**16 17 04.0**	**-0.4**
	baz=324						
SFIN	**Lafayette**	**77.00**	**42**	P	**P**	**16 17 03.5**	**-0.9**
	baz=325						
TXAR	**Lajitas Array**	**77.28**	**60**	P	**P**	**16 17 08.1**	**+1.7**
	comp=Z,4.2nm,0.8s,baz=298,slow=4.5,SNR=38						
	comp=Z,4.2nm,0.8s						
O48B	**Farmland**	**77.94**	**41**	P	**P**	**16 17 09.1**	**-0.5**
	baz=326						
LONY	**Lake Ozonia**	**78.31**	**32**	P	**P**	**16 17 11.3**	**-0.2**
	baz=331						
PBMO	**Poplar Bluff**	**78.40**	**46**	IAmb	IAmb	16 17 13.7	
	comp=Z,6.6nm,0.6s						
ERPA	**Erie**	**78.49**	**36**	P	**P**	**16 17 12.8**	**+0.2**
	baz=329						
JCT	**Junction City**	**78.56**	**56**	P	**P**	**16 17 14.3**	**+1.0**
	baz=321						
MIAR	**Mount Ida**	**78.65**	**50**	P	**P**	**16 17 14.3**	**+0.7**
	baz=323						
WHTX	**Lake Whitney,**	**78.66**	**54**	P	**P**	**16 17 14.3**	**+0.7**
	baz=322						
P49A	**Miami Univ. Ec**	**78.73**	**41**	P	**P**	**16 17 14.8**	**+0.9**
	baz=326						
M53A	**WI Miller and**	**78.80**	**37**	P	**P**	**16 17 14.3**	**+0.1**
	baz=328						
ACSO	**Alum Creek Sta**	**78.88**	**39**	P	**P**	**16 17 15.3**	**+0.6**
	baz=327						
WCI	**Wyandotte Cave**	**79.12**	**43**	P	**P**	**16 17 16.1**	**0.0**
	baz=326						
PKME	**Peaks-Kenny Pk**	**79.46**	**28**	P	**P**	**16 17 17.4**	**-0.3**
	baz=334						
O53A	**New Philadelph**	**79.59**	**38**	P	**P**	**16 17 18.0**	**-0.6**
	baz=328,SNR=5.1						
P52A	**Corning**	**79.73**	**39**	P	**P**	**16 17 19.0**	**-0.3**
	baz=328						
BINY	**Binghamton**	**79.93**	**34**	P	**P**	**16 17 19.7**	**-0.7**
	baz=331						
WVT	**Waverly**	**80.14**	**45**	P	**P**	**16 17 21.8**	**+0.2**
	baz=325						
NATX	**Nacogdoches**	**80.30**	**52**	P	**P**	**16 17 23.4**	**+0.9**
	baz=323						
MMAI	**Mount Meron Ar**	**80.35**	**310**	P	**P**	**16 17 23.1**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=66,slow=4.7,SNR=6.4						
	comp=Z,0.8nm,0.4s						
SSPA	**Standing Stone**	**80.57**	**36**	P	**P**	**16 17 23.9**	**+0.2**
	baz=330						
CLTN	**Cedars of Leba**	**80.86**	**44**	IAmb	IAmb	16 17 26.9	
	comp=Z,6.8nm,0.8s						
HRV	**Adam Dziewonsk**	**81.20**	**31**	P	**P**	**16 17 27.0**	**0.0**
	baz=333						
TZTN	**Tazewell**	**81.73**	**42**	P	**P**	**16 17 30.3**	**+0.4**
	baz=327						
VBMS	**Vicksburg**	**82.04**	**49**	P	**P**	**16 17 32.6**	**+1.1**
	baz=324						
BLA	**Blacksburg**	**82.50**	**39**	P	**P**	**16 17 34.5**	**+0.6**
	baz=329						
LRAL	**Lakeview Retre**	**83.08**	**46**	P	**P**	**16 17 37.4**	**+0.5**
	baz=326						
KMSC	**Kings Mountain**	**83.87**	**41**	P	**P**	**16 17 41.1**	**+0.2**
	baz=329						
QSPA	**South Pole Qui**	**138.92**	**180**	PKP	**PKPdf**	**16 24 33.5**	**-0.5**
	comp=Z,2.3nm,1.2s,baz=204,slow=1.4,SNR=7.0						
BDFB	**Brasilia**	**142.98**	**32**		**PKPdf**	**16 24 41.1**	**-1.8**
BDFB	**Brasilia**	**142.98**	**32**	PKIKP	**PKPdf**	**16 24 41.1**	**-1.8**
BDFB	**Brasilia**	**142.98**	**32**	PKiKP	PKPpre	16 24 40.1	
	comp=Z,1.7nm,0.4s,baz=183,slow=3.6,SNR=6.2						
CPUP	**Villa Florida**	**148.14**	**55**		**PKPbc**	**16 24 55.2**	**+0.3**
CPUP	**Villa Florida**	**148.14**	**55**	PKP2	**PKPbc**	**16 24 55.2**	**+0.3**
CPUP	**Villa Florida**	**148.14**	**55**	PKPbc	**PKPbc**	**16 24 55.5**	**+0.6**
	comp=Z,2.7nm,0.5s,baz=310,slow=2.8,SNR=9.5						
PLCA	**Paso Flores**	**149.47**	**90**		**PKPbc**	**16 24 59.2**	**+1.2**
PLCA	**Paso Flores**	**149.47**	**90**	PKPbc	**PKPbc**	**16 24 58.5**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=270,slow=3.2,SNR=11						

MOS ***24*** *16:26:32.5±1.7,33°.86N×44°.99E,h12km,mb4.3/15,Error ellipse: s-maj=8.6km s-min=4.2km az=92.9*
IDC ***24*** *16:26:32.2±1.1,33°.99N×45°.12E,h0km,mb4.0/13, mbtmp4.0/20,ML4.0/6,MS3.7/29,Error ellipse: s-maj=23.8km s-min=14.9km az=172.0*
GII ***24*** *16:26:33.7±0.8,33°.80N×45°.05E,h10km,Mws4.3, confirmed*
NEIC ***24*** *16:26:34.1±2.8,33°.85N±0°.07×45°.18E±0°.10,h10km±2km, mb4.0/16,Error ellipse: s-maj=14.4km s-min=10.9km az=118.0*
ISN ***24*** *16:26:34.9±0.6,34°.01N×45°.00E,h15km±3km,ML4.4*
TEH ***24*** *16:26:35.8,34°.02N×45°.07E,h18km±43km,ML4.1*
ISC 24 16:26:34.7±1.1**,33°.91N**±0°.03×**45°.03E**±0°.03**,h9km**±8km**,**
n210,σ1°89/184**,mb4.0**/30**,MS3.5**/22**,18C-9D,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.76**	**38**	Pg	**Pg**	**16 26 48.7**	**-0.5**
BHD	**Baghdad**	**0.84**	**220**	*e*Pg	**Pg**	**16 26 52.0**	**+1.2**
BHD				*e*Sg	**Sb**	**16 27 04.0**	**+1.3**
BHD				AML	AML	16 27 33.2	
	comp=E,6μm,0.4s

comp=Z,0.5nm,0.3s,baz=241,slow=19,SNR=1.4
KLNJ Kolanjah 6.26 116 Pn **Pn** **16 28 08.9 +1.4**
KOPR Koprukoy-ERZUR 6.58 338 *e*P **Pn** **16 28 13.0 +1.2**
PTK Pertek 6.73 319 *e*P **Pn** **16 28 13.1 -0.8**
GANJ Ganja 6.80 8 P **Pn** **16 28 15.0 +0.3**
ASF Jabal al Asfar 7.04 258 Pn **Pn** **16 28 18.6 +0.6**
comp=Z,0.8nm,0.3s,baz=333,slow=8.2,SNR=6.0
ASF Lg Lg 16 30 14.8
comp=Z,1.4nm,0.3s,baz=332,slow=17,SNR=2.1
comp=Z,2.1nm,0.4s
ASF Jabal al Asfar 7.04 258 P **Pg** 16 28 56.9 +7.4
MNGR Mingechevir, A 7.04 13 P **Pn** **16 28 18.1 +0.2**
GAZ Gaziantep 7.15 299 Pn **Pn** **16 28 22.4 +2.9**
ARPR Arapgir-MALATY 7.47 316 **Pn** **16 28 24.1 +0.2**
SEKA Sheki 7.49 13 P **Pn** **16 28 24.5 +0.4**
HSUJ Al Zarqa 7.63 259 P Pg 16 29 07.0 +6.1
KSHT Keshet 7.76 266 S **Sn** **16 29 56.4 +0.5**
KSHT Keshet 7.76 266 P **Pn** **16 28 26.6 -1.3**
NATI Neve Ativ 7.78 268 S **Sn** **16 29 57.1 +0.8**
NATI Neve Ativ 7.78 268 P **Pn** **16 28 27.5 -0.6**
SHMJ Saham 7.84 264 P Pg 16 29 12.9 +8.1
GEM Giv'at Ha'Em 7.85 267 P **Pg** **16 29 06.2 +1.3**
QRNJ Al-Qirein 8.08 261 P **Pg** **16 29 11.5 +2.1**
MMA0B Mount Meron ar 8.09 266 S **Sn** **16 30 04.1 0.0**
MMA0B Mount Meron ar 8.09 266 P **Pn** **16 28 30.4 -2.0**
MMAI Mount Meron Ar 8.09 266 Pn **Pn** **16 28 33.5 +1.0**
comp=Z,0.9nm,0.3s,baz=48,slow=16,SNR=5.3
MMAI Lg Lg 16 30 40.5
comp=Z,2.0nm,0.3s,baz=84,slow=13,SNR=2.0
MMAI LR LR 16 31 57.0
comp=Z,429nm,20.6s,baz=49,slow=40
comp=Z,0.4nm,0.2s
BALJ Balqa 8.09 260 P Pg 16 29 15.2 +5.6
HMDT Nahal Hemdat 8.14 261 P **Pg** **16 29 11.2 +0.6**
HNTI Hanita 8.27 267 P Pg 16 29 19.7 +6.7
UJAP Al Uja 8.27 259 P Pg 16 29 20.6 +7.6
KARJ KARJ 8.39 253 P **Pg** **16 29 16.6 +1.3**
GHAJ Ghor Haditha 8.39 255 P **Pn** **16 28 36.2 -0.3**
OFRI `Ofer 8.51 264 P **Pg** **16 29 18.6 +1.1**
SLTI Sal'it 8.54 262 P **Pg** **16 29 18.9 +0.6**
MSBI Mazada 8.56 255 P Pg 16 29 26.5 +8.0
YTIR Yattir 8.73 256 P Pg 16 29 30.7 +8.8
ONI Oni 8.75 352 Pn **Pn** **16 28 42.9 +1.4**
ONI Oni 8.75 352 P **Pn** **16 28 42.9 +1.4**
ZFRI Zfri 8.99 251 P **Pn** **16 28 43.7 -0.9**
MAK Makhachkala 9.24 11 *e*P **Pn** **16 28 46.5 -1.6**
MAK *e*S **Sn** **16 30 32.5 +0.3**
MAK pmax pmax
comp=Z,103nm,1.7s
MAK MLR MLR
comp=Z,555nm,18.0s
EIL Elat 9.56 246 Pn **Pn** **16 28 53.4 +0.9**
comp=Z,0.3nm,0.3s,baz=19,slow=10,SNR=2.4
EIL Lg Lg 16 31 43.4
comp=Z,0.6nm,0.3s,baz=296,slow=18,SNR=2.3
EIL LR LR 16 33 05.3
comp=Z,498nm,19.2s,baz=66,slow=41
comp=Z,1.2nm,0.4s
NCK Nalchik 9.63 354 *i*P **Pn** **16 28 56.4 +2.9**
NCK pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 9.94 351 *i*P **Pn** **16 29 01.3 +3.6**
KBZ pmax pmax
comp=Z,5.0nm,0.3s
KBZ Khabaz 9.94 351 LR LR 16 32 55.5
comp=Z,306nm,19.1s,baz=157,slow=39
KVAR Kislovodsk Arr 10.19 350 LR LR 16 33 01.0
comp=Z,1um,21.7s,baz=68,slow=38
KIV Kislovodsk 10.19 350 **Pn** **16 29 01.8 +0.6**
KIV Kislovodsk 10.19 350 *e*P **Pn** **16 29 04.0 +2.8**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,106nm,12.0s
RAYN Ar Rayn 10.36 178 Pn **Pn** **16 29 02.0 -1.6**
RAYN Ar Rayn 10.36 178 P **Pn** **16 29 02.0 -1.6**
SOC Sochi 10.51 338 *e*P **Pn** **16 29 04.5 -0.9**
SOC *e* 16 31 04.6
SOC MLR MLR
comp=Z,174nm,13.0s
BRTR Keskin Array B 10.81 306 Pn **Pn** **16 29 11.3 +1.5**
comp=Z,0.9nm,0.8s,baz=133,slow=11,SNR=2.4
BRTR Lg Lg 16 32 11.5
comp=Z,0.1nm,0.3s,baz=106,slow=11,SNR=3.7
comp=Z,439nm,19.7s,baz=266,slow=41
GEYT Alibeck 11.35 66 LR LR 16 34 11.8
ANN Anapa 12.35 334 *e*P **Pn** **16 29 31.8 +1.1**
ANN *e*S **Sn** **16 31 53.7 +5.3**
ANN pmax pmax
comp=Z,9.0nm,0.8s
WSAR Wadi Sarin 15.98 128 Pn **Pn** **16 30 16.9 -2.8**
comp=Z,0.3nm,0.3s,baz=15,slow=7.5,SNR=2.1
comp=Z,5.2nm,1.0s
TIRR Tirgusor 16.61 314 ⇑P **P** **16 30 29.8 -0.3**
TIRR Tirgusor 16.61 314 ⇑P **P** **16 30 29.8 -0.3**
TPGR Topolog 16.83 315 ⇑P **P** **16 30 33.5 +0.9**
TLBR Topalu 16.87 314 ⇓P **P** **16 30 34.1 +1.0**
VRH Novokhopyorsk 17.45 353 P **Pn** **16 30 37.4 -0.8**
VRH S **Sn** **16 33 50.3 -2.1**
VRH pmax pmax
comp=Z,17nm,1.6s
VSR Storozhevoye 17.82 348 *e*P **Pn** **16 30 40.8 -1.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 18.25 348 P **Pn** **16 30 46.1 -1.9**
VORR S **Sn** **16 34 07.0 -4.7**
VORR pmax pmax
comp=Z,27nm,1.6s
BELG Belogornoye 18.57 5 P **P** **16 30 48.6 -3.1**
comp=Z,1.4nm,0.3s,baz=194,slow=8.3,SNR=5.1
BELG LR LR 16 40 09.2
comp=Z,226nm,19.4s,baz=149,slow=44
comp=Z,24nm,0.8s
MLR Muntele Rosu 18.64 314 ⇑P **Pn** **16 30 57.9 +4.9**
MLR Muntele Rosu 18.64 314 ⇑P **Pn** **16 30 57.9 +4.9**
MLR Muntele Rosu 18.64 314 P **Pn** **16 30 52.9 -0.1**
comp=Z,0.2nm,0.3s,baz=220,slow=5.0,SNR=3.0
comp=Z,1.2nm,0.5s
TURR Turia 18.90 316 ⇓P **Pn** **16 30 57.5 +1.4**
SORM Soroca 18.92 324 ⇑P **P** **16 30 53.9 -1.8**
SORM Soroca 18.92 324 ⇑P **P** **16 30 53.9 -1.8**
AKTO Aktyubinsk 19.07 26 LR LR 16 40 40.7
comp=Z,106nm,19.1s,baz=94,slow=45
VOIR 19.15 313 ⇑P **Pn** **16 30 59.8 +0.6**
VOIR 19.15 313 ⇑P **Pn** **16 30 59.8 +0.6**
LPSR Galich'ya Gora 19.19 349 *e*P **P** **16 30 56.2 -2.3**
LPSR pmax pmax
comp=Z,80nm,0.7s
DOPR Dopca 19.22 315 ⇓P **P** **16 30 59.1 +0.1**
ARR Arges 19.37 312 ⇓P **Pn** **16 31 02.5 +0.7**
SIMJ Simiganj 19.89 69 P **P** **16 31 04.4 -2.1**
BURAR Bucovina Array 20.23 318 ⇓P Pn 16 31 11.7 -0.4
BURAR Bucovina Array 20.23 318 P **P** **16 31 09.2 -0.9**
BURAR IAmb IAmb 16 31 14.3
comp=Z,5.3nm,0.6s
BURAR Bucovina Array 20.23 318 ⇓P Pn 16 31 11.7 -0.4
BUR08 Bucovina Ar. S 20.26 319 P **P** **16 31 07.2 -3.2**
BUR08 IAmb IAmb 16 31 24.3
comp=Z,12nm,1.4s
AKASG Malin Array Be 20.38 330 P **P** **16 31 06.6 -4.9**
AKASG Malin Array Be 20.38 330 P **P** **16 31 09.9 -1.6**
comp=Z,3.2nm,0.5s,baz=142,slow=10,SNR=9.7
AKASG LR LR 16 41 30.8
comp=Z,60nm,19.5s,baz=70,slow=44
comp=Z,3.2nm,0.5s
AKBB Malin Array Si 20.38 330 P P 16 31 04.1 -7.4
AKBB Malin Array Si 20.38 330 *i*P Pn 16 31 13.4 -0.2
AKBB pmax pmax
comp=Z,7.0nm,0.4s
KIEV Kiev 20.38 330 ⇓P **P** **16 31 10.6 -0.9**
KIEV Kiev 20.38 330 ⇓P P 16 31 04.1 -7.4
KIEV Kiev 20.38 330 ⇓P **P** **16 31 10.6 -0.9**
ARCR ARCALIA 20.42 316 ⇑P **P** **16 31 12.7 +0.6**
GZR Gura Zlata 20.54 311 ⇓P Pn 16 31 14.8 -0.9
MARR Marisel-Cluj 20.93 314 ⇑P **P** **16 31 16.8 -1.0**
DRGR 21.24 314 ⇑P **P** **16 31 21.1 +0.2**
DRGR 21.24 314 ⇑P **P** **16 31 21.1 +0.2**
BTK Batken 21.46 66 P **P** **16 31 23.8 +0.4**
BTK IAmb IAmb 16 31 39.4
comp=Z,3.8nm,0.8s
BTK Batken 21.46 66 P **P** **16 31 23.8 +0.4**
BTK pmax pmax
comp=Z,4.0nm,0.8s
KK31 Karatay Array 21.89 58 P **P** **16 31 26.3 -1.6**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 21.89 58 P **P** **16 31 26.9 -1.1**
KKAR Karatay Array 21.89 58 P **P** **16 31 26.8 -1.1**
KKAR IAmb IAmb 16 32 02.8
comp=Z,2.6nm,0.8s
KKAR Karatay Array 21.89 58 P **P** **16 31 26.8 -1.1**
KKAR pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 22.01 347 *i*P **P** **16 31 27.6 -1.4**
OBN pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 24.37 18 P **P** **16 31 56.0 +3.1**
ARU 16 32 24.6
ARU SS **SnSn** **16 37 04.5 +9.2**
ARU Arti 24.37 18 LR LR 16 43 53.2
comp=Z,168nm,19.2s,baz=213,slow=43
AAK Ala-Archa 24.62 61 *i*P **P** **16 31 57.3 +1.7**
AAK Ala-Archa 24.62 61 LR LR 16 43 17.3
comp=Z,127nm,19.1s,baz=271,slow=41
OJC Ojcow 24.65 319 P **P** **16 31 52.8 -2.8**
OJC IAmb IAmb 16 31 55.6
comp=Z,4.2nm,1.0s
OJC Ojcow 24.65 319 P **P** **16 31 52.8 -2.8**
OJC pmax pmax
comp=Z,4.0nm,1.0s
KIRV Kirov 24.86 5 P **P** **16 31 56.5 -0.7**
comp=Z,8.2nm,0.6s,baz=292,slow=2.1,SNR=4.1
KIRV LR LR 16 43 44.6
comp=Z,180nm,20.7s,baz=192,slow=42
comp=Z,8.2nm,0.6s
SUW Suwalki 25.33 329 P **P** **16 31 58.9 -2.7**
SUW Suwalki 25.33 329 P **P** **16 31 58.9 -2.7**
SUW pmax pmax
comp=Z,24nm,1.0s
KSH Kashi 25.36 68 P **P** **16 31 58.9 -3.3**
KSH pmax pmax
comp=Z,2.0nm,1.0s
NRN Naryn 25.54 64 P **P** **16 32 00.1 -4.0**
NRN IAmb IAmb 16 32 09.7
comp=Z,4.3nm,0.8s
NRN Naryn 25.54 64 P **P** **16 32 00.1 -4.0**
NRN pmax pmax
comp=Z,4.0nm,0.8s
VRAC Vranov 26.04 315 LR LR 16 44 44.8
comp=Z,118nm,18.4s,baz=160,slow=42
BRVK Borovoye 26.27 36 *i*P **P** **16 32 11.2 +1.1**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 26.30 36 P **P** **16 32 09.6 -0.9**
comp=Z,2.1nm,0.8s
BVAR LR LR 16 45 08.6
comp=Z,129nm,18.1s,baz=241,slow=43
comp=Z,2.1nm,0.8s
KLMR Klimovskoe 27.19 354 *e*P **P** **16 32 17.7 -0.7**
KLMR pmax pmax
comp=Z,18nm,1.2s
VSU Vasula 27.44 339 *i*P **P** **16 32 22.1 +1.5**
VSU pmax pmax
comp=Z,8.0nm,0.6s
KURBB Kurchatov Arra 29.56 45 P **P** **16 32 39.5 -0.2**
comp=Z,2.0nm,0.7s,baz=253,slow=9.2,SNR=11
KURBB LR LR 16 47 01.7
comp=Z,161nm,19.0s,baz=158,slow=42
comp=Z,2.0nm,0.7s
KURK Kurchatov 29.65 45 P **P** **16 32 40.9 +0.6**
KURK IAmb IAmb 16 32 43.1
comp=Z,3.6nm,1.1s
KURK Kurchatov 29.65 45*ce*P **P** **16 32 41.0 +0.6**
KURK pmax pmax
comp=Z,4.0nm,1.3s
FINES FINESS Array B 30.12 342 P **P** **16 32 42.9 -1.5**
FINES FINESS Array B 30.12 342 *i*P **P** **16 32 48.5 +4.1**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 30.12 342 P **P** **16 32 42.5 -1.9**
comp=Z,1.1nm,0.5s,baz=151,slow=12,SNR=2.3
comp=Z,1.1nm,0.5s
MK31 Makanchi Array 30.88 54 P **P** **16 32 50.0 -1.4**
MK31 IAmb IAmb 16 32 54.4
comp=Z,1.4nm,0.9s
MK31 Makanchi Array 30.88 54*ce*P **P** **16 32 52.5 +1.1**
MKAR Makanchi Array 30.88 54 P **P** **16 32 50.5 -0.9**
MKAR Makanchi Array 30.88 54*ce*P **P** **16 32 50.9 -0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 30.88 54 P **P** **16 32 47.4 -4.0**
comp=Z,0.8nm,0.8s,baz=257,slow=8.5,SNR=9.1
MKAR LR LR 16 46 59.4
comp=Z,94nm,18.1s,baz=245,slow=40
comp=Z,0.8nm,0.8s
HFS Hagfors 33.25 332 P **P** **16 33 09.2 -2.8**
comp=Z,3.5nm,0.7s,baz=127,slow=9.5,SNR=10
HFS LR LR 16 49 39.3
comp=Z,101nm,19.3s,baz=144,slow=42
comp=Z,3.5nm,0.7s
WMQ Urumqi 34.33 60 *e*P **P** **16 33 22.5 +0.8**
ZAA0 Zalesovo Array 34.35 42 P **P** **16 33 19.7 -1.8**
ZALV Zalesovo Beam 34.35 42 P **P** **16 33 19.2 -2.4**
ZALV Zalesovo Beam 34.35 42 *i*P **P** **16 33 20.3 -1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 34.35 42 P **P** **16 33 18.6 -3.0**
comp=Z,0.5nm,0.3s,baz=255,slow=11,SNR=5.5
ZALV LR LR 16 47 43.6
comp=Z,104nm,19.5s,baz=242,slow=37
comp=Z,0.5nm,0.3s
NOA NORSAR Array B 34.77 332 LR LR 16 48 24.1
comp=Z,71nm,18.1s,baz=125,slow=38
DGZ Jazzator, Alta 34.81 50 *i*P **P** **16 33 27.7 +1.9**
DGZ pmax pmax
comp=Z,8.0nm,2.2s
MBAR Mbarara 36.86 204 LR LR 16 47 53.3
comp=Z,88nm,19.8s,baz=22,slow=35
ARCES ARCESS Array B 37.30 349 LR LR 16 48 51.4
comp=Z,86nm,18.7s,baz=178,slow=36
ESDC Sonseca Array 39.26 293 LR LR 16 53 04.3
comp=Z,44nm,18.3s,baz=138,slow=40
EKA Eskdalemuir Ar 39.42 318 P **P** **16 34 02.8 -1.8**
comp=Z,2.6nm,0.7s,baz=104,slow=8.8,SNR=5.1
comp=Z,2.6nm,0.7s
MDT Midelt 41.14 283 LR LR 16 54 30.3
comp=Z,50nm,19.2s,baz=3.5,slow=41
NRIK Noril'sk 42.55 21 *i*P **P** **16 34 32.8 +2.5**
NRIK pmax pmax
comp=Z,11nm,3.8s
TORD Torodi Ar. Bea 44.37 253 P **P** **16 34 44.7 -1.0**
comp=Z,0.6nm,0.7s,baz=39,slow=9.3,SNR=3.5
comp=Z,0.6nm,0.7s
BORG Borgarnes 49.85 329 LR LR 16 59 28.0
comp=Z,152nm,19.0s,baz=184,slow=40
CMAR Chiang Mai Arr 50.23 94 P **P** **16 35 29.9 -1.5**
comp=Z,0.3nm,0.3s,baz=296,slow=6.7,SNR=4.4
comp=Z,0.3nm,0.3s
LSZ Lusaka 51.48 201 LR LR 16 58 36.7
comp=Z,64nm,21.7s,baz=48,slow=37
HHC Hu-ho-hao-te 52.19 62 *e*P **P** **16 35 46.5 +0.5**
HHC pP sP 16 35 51.8 +2.0
HHC pmax pmax
comp=Z,8.0nm,0.5s
HHC pmax pmax
comp=Z,100nm,5.3s
DBIC Dimbokro 53.39 251 LR LR 17 01 26.2
comp=Z,88nm,18.6s,baz=35,slow=39
YAK Yakutsk 58.25 34 *i*P **P** **16 36 29.4 +0.3**
YAK pmax pmax
comp=Z,3.0nm,1.1s
LBTB Lobatse 61.44 200 LR LR 17 03 58.9
comp=Z,75nm,18.1s,baz=18,slow=36
KLR Kul'dur 63.22 47*ce*P **P** **16 37 02.8 -0.5**
KLR pmax pmax
comp=Z,7.0nm,2.5s
BOSA Boshof 64.94 199 LR LR 17 08 17.9
comp=Z,83nm,18.4s,baz=14,slow=38
BILL Bilibino 69.37 20 *i*P **P** **16 37 44.9 +2.5**
BILL pmax pmax
comp=Z,20nm,3.6s
FRB Frobisher Bay 69.55 334 LR LR 17 08 07.4
comp=Z,81nm,18.6s,baz=34,slow=36
SUR Sutherland 69.77 202 LR LR 17 08 27.8
comp=Z,72nm,20.1s,baz=17,slow=36
SCHQ Schefferville 74.11 326 P **P** **16 38 10.1 -1.0**
comp=Z,3.1nm,0.6s,baz=51,slow=8.3,SNR=5.4
comp=Z,3.1nm,0.6s
PET Petropavlovsk 76.04 35*ce*P **P** **16 38 23.1 +0.9**
PET pmax pmax
comp=Z,35nm,1.7s
ILAR Eielson Array 81.20 5 P **P** **16 38 50.0 -0.5**
ILAR Eielson Array 81.20 5 P **P** **16 38 50.0 -0.5**
comp=Z,0.5nm,0.8s,baz=313,slow=4.0,SNR=6.1
comp=Z,0.5nm,0.8s

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*IDC **24** 16:27:09.6±0.9, 46°.18N×53°.36E, h0km, mb3.5/3, mbtmp3.6/10, ML3.1/7, Error ellipse: s-maj=18.6km s-min=7.3km az=149.0*
ISC 24 16:27:09.2±0.7, 46°.10N±0°.06×53°.37E±0°.05, h10km, n14, σ2s09/22, mb3.5/3, 1C-2D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
AKTO	**Aktyubinsk**	**5.34**	**34**	⇑Pn	**Pn**	**16 28 30.3**	**+1.3**
	1.3nm,0.6s						
AKTO				⇓Sn	**Sn**	**16 29 29.8**	**-0.6**
	2.6nm,0.5s						
AKTO	**Aktyubinsk**	**5.34**	**34**	Pn	**Pn**	**16 28 29.9**	**+1.0**
	0.8nm,0.3s,baz=203,slow=11,SNR=12						
AKTO				Sn	**Sn**	**16 29 29.9**	**-0.5**
	1.7nm,0.3s,baz=180,slow=21,SNR=6.0						
	2.2nm,0.4s						
AB31	**Akbulak array**	**5.45**	**52**	Pn	**Pn**	**16 28 32.0**	**+1.5**
	0.8nm,0.3s,baz=238,slow=17,SNR=66						
AB31				⇓Sn	**Sn**	**16 29 34.5**	**+1.3**
	1.6nm,0.3s,baz=240,slow=22,SNR=3.3						
BELG	**Belogornoye**	**7.34**	**331**	Pn	**Pn**	**16 28 56.8**	**+0.5**
	0.8nm,0.3s,baz=186,slow=9.2,SNR=2.1						
BELG				Sn	**Sn**	**16 30 17.6**	**-1.9**
	3.1nm,0.3s,baz=145,slow=19,SNR=16						
	4.0nm,0.5s						
KBZ	**Khabaz**	**7.80**	**256**	Pn	**Pn**	**16 29 04.7**	**+2.0**
	2.4nm,0.3s,baz=42,slow=14,SNR=102						
KBZ				Sn	**Sn**	**16 30 30.3**	**-0.7**
	2.3nm,0.3s,baz=289,slow=22,SNR=9.3						
KVAR	**Kislovodsk Arr**	**7.86**	**258**	Pn	**Pn**	**16 29 04.9**	**+1.3**
	baz=258,slow=19						
KVAR				Sn	**Sn**	**16 30 31.4**	**-1.3**
	baz=8.1,slow=7.1						
	1.4nm,0.2s						
GEYT	**Alibeck**	**8.89**	**155**	Pn	**Pn**	**16 29 17.2**	**-0.5**
	0.5nm,0.3s,baz=329,slow=8.4,SNR=6.0						
GEYT				Sn	**Sn**	**16 30 53.7**	**-4.3**
	1.0nm,0.3s,baz=292,slow=23,SNR=2.5						
ARU	**Arti**	**10.84**	**16**	Pn	**Pn**	**16 29 43.2**	**-1.1**
	baz=279,slow=19,SNR=2.3						
ARU				Sn	**Sn**	**16 31 40.0**	**-5.6**
	baz=253,slow=19,SNR=2.7						
	2.5nm,0.3s						
AAK	**Ala-Archa**	**15.49**	**95**	Pn	**Pn**	**16 30 46.7**	**-1.1**
	3.9nm,0.4s,baz=331,slow=5.1,SNR=15						
KURBB	**Kurchatov Arra**	**17.29**	**66**	P	**P**	**16 31 12.8**	**+0.8**
	0.1nm,0.3s,baz=273,slow=12,SNR=5.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**19.90**	**77**	P	**P**	**16 31 41.2**	**+0.5**
	0.1nm,0.3s,baz=279,slow=9.3,SNR=4.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**21.54**	**57**	P	**P**	**16 32 00.9**	**+2.5**
	0.4nm,0.5s,baz=264,slow=10,SNR=3.0						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**22.03**	**324**	P	**P**	**16 32 03.6**	**+0.1**
	1.4nm,0.3s,baz=132,slow=12,SNR=38						
	1.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**54.36**	**250**	P	**P**	**16 36 38.0**	**+1.8**
	0.2nm,0.4s,baz=34,slow=6.4,SNR=2.0						
	0.2nm,0.4s						

WEL 24 16:32:32.8±0.9, 38°S±9°×178°0W±°, h33km, M3.2/14, ML3.5/19, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=7.6, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
WMGZ	**Waiomatatini S**	**1.54**	**261**	P	Pn	16 32 58.0	0.0
WMGZ				S	Sn	16 33 17.8	+0.9
MXZ	**Matakaoa Point**	**1.61**	**270**	P	Pn	16 32 58.8	-0.1
MXZ				S	Sn	16 33 18.7	+0.2
PUZ	**Puketiti**	**1.72**	**253**	P	Pn	16 33 00.3	-0.1
PUZ				S	Sn	16 33 21.9	+0.6
PKGZ	**Pakihiroa**	**1.82**	**260**	P	Pn	16 33 01.5	-0.3
PKGZ				S	Sn	16 33 24.0	+0.2
CNGZ	**Carnagh Statio**	**1.91**	**241**	P	Pn	16 33 03.3	+0.3
TWGZ	**Tauwhareparae**	**1.96**	**252**	P	Pn	16 33 02.8	-0.9
TWGZ				S	Sn	16 33 28.5	+1.3
HAZ	**Te Kaha**	**2.04**	**264**	P	Pn	16 33 05.1	+0.4
RUGZ	**Raukumara Rang**	**2.14**	**259**	P	Pn	16 33 06.5	+0.2
TKGZ	**Te Karaka**	**2.15**	**246**	P	Pn	16 33 06.2	0.0
TKGZ				S	Sn	16 33 32.8	+1.1
RIGZ	**Rimuhau**	**2.32**	**240**	P	Pn	16 33 08.8	+0.2
RIGZ				S	Sn	16 33 37.0	+0.9
MWZ	**Matawai**	**2.34**	**250**	P	Pn	16 33 08.7	-0.3
MWZ				S	Sn	16 33 36.1	-0.5
PRGZ	**Paritu Road**	**2.35**	**235**	P	Pn	16 33 08.8	-0.3
MHGZ	**Mahia Peninsul**	**2.47**	**230**	P	Pn	16 33 10.1	-0.6
URZ	**Urewera**	**2.64**	**254**	P	Pn	16 33 13.7	+0.7
RTZ	**Ruatahuna**	**2.84**	**248**	P	Pn	16 33 16.7	+0.8
MUGZ	**Murupara**	**2.96**	**251**	P	Pn	16 33 18.6	+1.2
MTHZ	**Maungataniwha**	**3.03**	**244**	P	Pn	16 33 18.6	+0.1
ARHZ	**Aropaoanui**	**3.12**	**236**	P	Pn	16 33 20.3	+0.7
MRHZ	**Matea Rd**	**3.33**	**247**	P	Pn	16 33 23.1	+0.5
MCHZ	**McNeill Hill**	**3.41**	**236**	P	Pn	16 33 23.6	0.0
BKZ	**Black Stump Fm**	**3.41**	**241**	P	Pn	16 33 24.3	+0.7
KUZ	**Kuaotunu**	**3.78**	**281**	P	Pn	16 33 28.6	-0.1
BHHZ	**Black Hill Sta**	**3.86**	**239**	P	Pn	16 33 29.4	-0.4
MKAZ	**Moumakai**	**4.15**	**275**	P	Pn	16 33 33.9	+0.1
TSZ	**Takapari Road**	**4.22**	**233**	P	Pn	16 33 33.2	-1.6
CTZ	**Chatham Island**	**6.57**	**160**	P	Pn	16 34 07.0	0.0

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*IDC **24** 16:34:56.4±2.3, 31°.14N×50°.08E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=48.2km s-min=26.1km az=164.0*
*TEH **24** 16:34:57.4, 31°.19N×50°.26E, h6km±89km, ML3.2*
ISC 24 16:35:00.1±0.8, 31°.02N±0°.05×50°.22E±0°.05, h30km, n33, σ1s30/34, mb3.7/8, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
ABEH	**Behbahan**	**0.42**	**176**	Pg	**Pn**	**16 35 09.7**	**-0.3**
KLNJ	**Kolanjah**	**1.18**	**90**	Pg	**Pn**	**16 35 19.6**	**-1.2**
ZNGN	**Zangian**	**1.22**	**26**	Pg	**Pn**	**16 35 18.9**	**-2.5**
JHBN	**Jahan bin**	**1.27**	**17**	Pg	**Pn**	**16 35 19.7**	**-2.4**
AHWZ	**Ahwaz**	**1.39**	**283**	Pg	**Pb**	**16 35 24.1**	**-1.3**
AHWZ				Sg	**Sb**	**16 35 45.1**	**+2.4**
IPIR	**Pirpir**	**1.76**	**19**	Pg	**Pn**	**16 35 28.3**	**-0.5**
IRAM	**Ramesheh**	**2.01**	**66**	Pn	**Pn**	**16 35 34.3**	**+2.1**
IGAR	**Gharneh**	**2.08**	**48**	Pn	**Pn**	**16 35 34.4**	**+1.3**
IKLH	**Kolahrood**	**2.57**	**26**	Pn	**Pn**	**16 35 40.7**	**+0.9**
IZEF	**Zefreh**	**2.59**	**43**	Pn	**Pn**	**16 35 41.1**	**+0.9**
DSBU	**Dashti - Bushe**	**2.80**	**161**	Pn	**Pb**	**16 35 48.1**	**-1.2**
QAMS	**Qamsar**	**2.89**	**20**	Pn	**Pn**	**16 35 45.5**	**+1.3**
IKFM	**Kafar-mosalman**	**3.21**	**322**	Pn	**Pn**	**16 35 50.1**	**+1.6**
KRSH	**Karshahi**	**3.36**	**28**	Pn	**Pn**	**16 35 51.6**	**+0.9**
ANAR	**Anarak**	**3.68**	**53**	Pn	**Pn**	**16 35 56.5**	**+1.5**
ISFB	**Sefidab**	**3.73**	**27**	Pn	**Pn**	**16 35 56.2**	**+0.4**
IQOM	**Qom**	**3.88**	**10**	Pn	**Pn**	**16 35 58.1**	**+0.2**
IVRN	**Varamin**	**4.16**	**17**	Pn	**Pn**	**16 36 01.8**	**+0.2**
IBAF	**Bafgh**	**4.61**	**82**	Pn	**Pn**	**16 36 10.2**	**+2.3**
IDMV	**Damavand**	**4.79**	**18**	Pn	**Pn**	**16 36 10.5**	**0.0**
IDHR	**Dehrash**	**4.89**	**320**	Pn	**Pn**	**16 36 13.1**	**+1.3**
ILAS	**Lasjerd**	**4.92**	**27**	Pn	**Pn**	**16 36 12.8**	**+0.6**
IFIR	**Firoozkooh**	**5.07**	**24**	Pn	**Pn**	**16 36 15.0**	**+0.7**
KLST	**Kelardasht - M**	**5.53**	**7**	Pn	**Pn**	**16 36 21.4**	**+0.7**
TNSJ	**Nastanj**	**6.14**	**60**	Pn	**Pn**	**16 36 30.0**	**+1.1**
BELG	**Belogornoye**	**21.44**	**356**	P	**P**	**16 39 45.8**	**+0.2**
	4.0nm,0.7s,baz=315,slow=2.9,SNR=4.0						
	4.0nm,0.7s						
AKASG	**Malin Array Be**	**25.12**	**328**	P	**P**	**16 40 22.0**	**-0.1**
	0.3nm,0.4s,baz=136,slow=9.7,SNR=2.2						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**28.75**	**39**	P	**P**	**16 40 55.4**	**+0.6**
	0.6nm,0.7s,baz=241,slow=9.7,SNR=6.6						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**29.26**	**48**	P	**P**	**16 41 00.2**	**+0.8**
	0.3nm,0.7s,baz=240,slow=7.3,SNR=4.6						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**33.76**	**37**	P	**P**	**16 41 39.2**	**+0.3**
	0.6nm,0.5s,baz=244,slow=10,SNR=4.3						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**34.30**	**340**	P	**P**	**16 41 42.0**	**-1.4**
	0.3nm,0.3s,baz=129,slow=11,SNR=7.0						
	0.3nm,0.3s						

HFS	**Hagfors**	**37.89**	**331**	P		**P**	**16 42 12.8**	**-1.4**
	2.5nm,1.0s,baz=133,slow=10,SNR=4.8								
	2.5nm,1.0s								
TORD	**Torodi Ar. Bea**	**47.95**	**259**	P		**P**	**16 43 36.4**	**+0.2**
	0.5nm,0.7s,baz=65,slow=8.1,SNR=2.8								
	0.5nm,0.7s								

SOME ***24*** *16:51:35.7, 44˚.28N×84˚.92E, h20km*
NNC ***24*** *16:51:44.5±7.3, 44˚.37N×84˚.39E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=71.0km s-min=35.1km az=101.0*
ISC 24 16:51:39.4±2.2, 44˚.39N±0˚.09×84˚.7E±0˚.1, h10km, n9, σ2s 71/15, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.93**	**326**	⇑Pg		**Pb**	**16 52 33.1**	**+1.4**
	0.3nm,0.3s,baz=146,slow=16,SNR=25							
MK31				⇑Lg		Lg	16 53 16.6	
	0.6nm,0.2s,baz=145,slow=28,SNR=10							
ZSN	**Zaisan**	**3.06**	**2**	*e*P		**Pb**	**16 52 33.9**	**-0.2**
	2.9nm,0.3s							
ZSN				*e*S		**Sg**	**16 53 14.8**	**-2.9**
	4.9nm,0.4s							
MAKZ	**Makanchi**	**3.07**	**323**	⇑Pn		**Pb**	**16 52 33.5**	**-0.6**
	0.3nm,0.3s							
MAKZ				⇑Lg		Lg	16 53 21.9	
	1.3nm,0.5s							
KTMS	**Ketmen**	**3.26**	**255**	*e*P		**Pb**	**16 52 35.6**	**-1.9**
	0.7nm,2.1s							
KTMS				*e*S		**Sb**	**16 53 17.9**	**+0.6**
	4.4nm,0.3s							
DJR	**Jarkent**	**3.50**	**271**	*e*P		**Pb**	**16 52 42.9**	**+1.4**
	2.6nm,0.2s							
DJR				*e*S		**Sg**	**16 53 30.5**	**-1.4**
	12nm,0.3s							
KAPS	**Kapalarasan**	**3.89**	**285**	*e*P		**Pg**	**16 52 51.3**	**-2.6**
	1.3nm,0.1s							
KAPS				*e*S		**Sg**	**16 53 44.9**	**+0.7**
	5.3nm,0.5s							
PDGK	**Podgornoye**	**3.90**	**256**	⇑Pn		**Pb**	**16 52 44.7**	**-3.6**
	0.8nm,0.4s							
PDGK				⇓Lg		Lg	16 53 38.1	
	4.7nm,0.6s							
SHLS	**Shalkode**	**3.97**	**254**	*e*P		**Pn**	**16 52 43.4**	**+2.9**
	3.9nm,0.2s							
SHLS				*e*S		**Sn**	**16 53 31.4**	**+4.2**
	9.7nm,0.5s							
SATY	**Saty**	**4.74**	**256**	*e*P		**Pb**	**16 53 04.1**	**+1.5**
	1.3nm,0.2s							
SATY				*e*S		**Sg**	**16 54 06.8**	**-4.6**
	4.6nm,0.3s							

NEIC ***24*** *16:59:30.3±2.6, 23˚.16N±0˚.05×125˚.66E±0˚.06, h10km±1km, mb4.9/53, Error ellipse: s-maj=10.2km s-min=8.4km az=70.0*
BJI ***24*** *16:59:30.9±0.0, 23˚.53N×125˚.64E, h6km, mb4.6/78, mB4.9/54, Ms4.7/83, Ms7 4.5/77*
IDC ***24*** *16:59:33.6±0.5, 23˚.58N×125˚.53E, h0km, mb4.6/29, mbtmp4.6/34, ML4.4/4, MS4.1/67, Error ellipse: s-maj=15.4km s-min=12.4km az=77.0*
MOS ***24*** *16:59:33.4±1.0, 23˚.53N×125˚.41E, h16km, mb5.1/46, MS4.3/9, Error ellipse: s-maj=7.8km s-min=4.4km az=109.0*
JMA ***24*** *16:59:36.9±0.2, 23˚.6N±1˚.0×125˚.4E±0˚.8, h80km, MD4.9/17, MW4.9/17, NEAR MIYAKOJIMA ISLAND*
GCMT ***24*** *16:59:36.3±0.2, 23˚.47N±0˚.01×125˚.45E±0˚.01, h18km±1km, MW4.9/98, Moment Tensor Solution. s44,c56; s98,c148; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.97±.12; Mθθ=3.35±.10; Mϕϕ=-2.37±.08; Mrθ=0.83±.21; Mθϕ=0.69±.07; Mϕr=0.17±.24; Best double couple: M=3.03700×10^16 NP1: ϕs=308.00000°, δ=90.00000°, λ=-15.00000°. NP2: ϕs=38.00000°, δ=75.00000°, λ=-180.00000°. Principal axes: T 3.5740, Plg=10.0000°, Azm=354.0000°; N -1.0670, Plg=75.0000°, Azm=127.0000°; P -2.5000, Plg=10.0000°, Azm=262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NIED ***24*** *16:59:36.9, 23˚.63N×125˚.39E, h80km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr=1.37; Mθθ=2.76; Mϕϕ=-1.39; Mrθ=0.25; Mθϕ=0.50; Mϕr=0.28; Fault plane solution: M=2.26000×10^16 NP1: ϕs=228.00000°, δ=65.00000°, λ=-145.00000°. NP2: ϕs=121.00000°, δ=59.00000°, λ=-30.00000°.*
ISC 24 16:59:34.8±0.5, 23˚.47N±0˚.03×125˚.50E±0˚.03, h18km, s2km, h20km; pP-P, n393, σ2s 29/376, mb4.8/111, MS4.2/83, 46C-17D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**1.28**	**353**	P		**Pn**	**16 59 57.4**	**-0.3**
JMJ2				*e*S		**Sb**	**17 00 12.8**	**-1.6**
JMJ2	**Miyako jima3**	**1.28**	**353**	A		A	16 59 57.4	
	comp=E,49nm,1.5s,comp=N,96nm,1.5s							
JOGS	**Gusukube**	**1.29**	**356**	P		**Pn**	**16 59 57.8**	**-0.1**
JOGS				*e*S		**Sn**	**17 00 13.5**	**-1.2**
JOGS	**Gusukube**	**1.29**	**356**	A		A	16 59 57.8	
	comp=E,63nm,1.3s,comp=N,65nm,2.0s							
JMJ	**Miyako jima 2**	**1.35**	**352**	P		**Pn**	**16 59 57.6**	**-1.2**
JTJ	**Tarama**	**1.38**	**328**	P		**Pn**	**16 59 58.6**	**-0.5**
JTJ				S		**Sn**	**17 00 15.0**	**-1.9**
JTJ	**Tarama**	**1.38**	**328**	A		A	16 59 58.6	
	comp=E,82nm,2.9s,comp=N,70nm,1.7s							
JIRB	**Irabujima**	**1.39**	**348**	P		**Pn**	**16 59 58.5**	**-0.7**
JIRB				S		**Sn**	**17 00 15.4**	**-1.8**
JIRB	**Irabujima**	**1.39**	**348**	A		A	16 59 58.5	
	comp=E,36nm,3.2s,comp=N,36nm,2.8s							
JIKM	**Ikemajima**	**1.47**	**351**	P		**Pn**	**16 59 60.0**	**-0.4**
JIKM				S		**Sn**	**17 00 17.3**	**-1.8**
JIKM	**Ikemajima**	**1.47**	**351**	A		A	16 59 60.0	
	comp=E,46nm,1.5s,comp=N,52nm,2.5s							
JIJ	**Ishigaki jima**	**1.53**	**306**	*i* P		**Pn**	**17 00 00.7**	**-0.5**
JIJ				S		**Sn**	**17 00 17.6**	**-3.0**
JIJ	**Ishigaki jima**	**1.53**	**306**	A		A	17 00 00.7	
	comp=E,20nm,1.4s,comp=N,18nm,3.6s							
JISG	**Ishigakijimahi**	**1.56**	**316**	*i* P		**Pn**	**17 00 01.0**	**-0.6**
JISG				S		**Sn**	**17 00 19.1**	**-2.2**
JISG	**Ishigakijimahi**	**1.56**	**316**	A		A	17 00 01.0	
	comp=E,58nm,0.6s,comp=N,31nm,1.7s							
JKRS	**Kuro-shima**	**1.57**	**300**	*i* P		**Pn**	**17 00 01.7**	**0.0**
JKRS				S		**Sn**	**17 00 20.1**	**-1.5**
JKRS	**Kuro-shima**	**1.57**	**300**	A		A	17 00 01.7	
	comp=E,60nm,2.4s,comp=N,64nm,3.3s							
HATJ	**Hateruma jima**	**1.66**	**291**	P		**Pn**	**17 00 02.6**	**-0.4**
HATJ				S		**Sn**	**17 00 21.2**	**-2.7**
HATJ	**Hateruma jima**	**1.66**	**291**	A		A	17 00 02.6	
	comp=E,37nm,5.1s,comp=N,45nm,6.3s							
YOJ	**Yonaguni jima**	**2.48**	**294**	Pn		**Pn**	**17 00 14.1**	**-0.2**
YOJ				Sn		**Sn**	**17 00 40.3**	**-3.9**
YOJ	**Yonaguni jima**	**2.48**	**294**	P		**Pn**	**17 00 14.5**	**+0.1**
YOJ	**Yonaguni jima**	**2.48**	**294**	P		**Pn**	**17 00 14.4**	**+0.1**
YOJ				S		**Sn**	**17 00 40.5**	**-3.6**
YOJ	**Yonaguni jima**	**2.48**	**294**	A		A	17 00 14.4	
	comp=E,11nm,3.5s,comp=N,16nm,6.6s							
JYNG	**Yonagunijimaku**	**2.54**	**293**	*i* P		**Pn**	**17 00 15.0**	**-0.1**
JYNG				S		**Sn**	**17 00 41.6**	**-3.8**
JYNG	**Yonagunijimaku**	**2.54**	**293**	A		A	17 00 15.0	
	comp=E,12nm,2.5s,comp=N,17nm,6.8s							
JKE	**Kume jima 2**	**3.08**	**22**	*i* P		**Pn**	**17 00 21.6**	**-0.9**
JKE				*e*S		**Sn**	**17 00 55.6**	**-3.2**
JKE	**Kume jima 2**	**3.08**	**22**	A		A	17 00 21.6	
	comp=E,9.0nm,3.2s,comp=N,6.0nm,3.9s							
JJT3	**Tamagusuku3**	**3.38**	**37**	P		**Pn**	**17 00 26.7**	**+0.1**
JJT3				S		**Sn**	**17 01 03.7**	**-2.5**
JJT3	**Tamagusuku3**	**3.38**	**37**	A		A	17 00 26.7	
	comp=E,20nm,4.9s,comp=N,26nm,3.2s							
JAGN	**Aguni-jima**	**3.48**	**27**	P		**Pn**	**17 00 27.4**	**-0.7**
JAGN				*e*S		**Sn**	**17 01 04.5**	**-4.5**
JAGN	**Aguni-jima**	**3.48**	**27**	A		A	17 00 27.4	
	comp=E,9.0nm,3.2s,comp=N,12nm,5.0s							
NACB	**Ninganchiao**	**3.65**	**282**	Pn		**Pn**	**17 00 29.1**	**-1.2**
JNTH	**Nagotoyohara**	**3.80**	**36**	A		A	17 00 33.4	
	comp=E,8.0nm,0.9s,comp=N,5.0nm,7.9s							
YULB	**Yu-li**	**3.86**	**270**	Pn		**Pn**	**17 00 31.4**	**-2.0**
YULB				Sn		**Sn**	**17 01 13.3**	**-5.0**
YULB	**Yu-li**	**3.86**	**270**	P		**Pn**	**17 00 31.8**	**-1.5**
YHNB	**Yeheng**	**3.96**	**288**	Pn		**Pn**	**17 00 35.1**	**+0.4**
YHNB	**Yeheng**	**3.96**	**288**	P		**Pn**	**17 00 35.2**	**+0.5**
TATO	**Taipei**	**3.96**	**293**			**Pn**	**17 00 35.2**	**+0.6**
TATO	**Taipei**	**3.96**	**293**	P		**Pn**	**17 00 35.7**	**+1.1**
TWGBT	**Beinan**	**4.12**	**262**	P		**Pn**	**17 00 35.0**	**-1.9**
TWG	**Pinlang**	**4.13**	**262**			**Pn**	**17 00 34.1**	**-2.8**
SSLB	**Suanglung**	**4.18**	**275**			**Pn**	**17 00 36.6**	**-1.1**
SSLB	**Suanglung**	**4.18**	**275**	P		**Pn**	**17 00 37.0**	**-0.8**
JOW	**Kunigami**	**4.19**	**36**	Pn		**Pn**	**17 00 37.6**	**-0.2**
JOW	**Kunigami**	**4.19**	**36**	P		**Pn**	**17 00 37.8**	**0.0**
JOW	**Kunigami**	**4.19**	**36**	A		A	17 00 38.8	
	comp=E,8.0nm,0.8s,comp=N,6.0nm,10.9s							
JOW	**Kunigami**	**4.19**	**36**	Pn		**Pn**	**17 00 37.7**	**-0.1**
	comp=N,114nm,0.3s,baz=152,slow=14,SNR=123							
JOW				Sn		**Sn**	**17 01 21.8**	**-4.5**
	comp=N,257nm,0.3s,baz=99,slow=28,SNR=50							
	comp=N,229nm,0.3s							
JIH	**Iheya**	**4.19**	**32**	A		A	17 00 38.7	
	comp=E,5.0nm,6.9s,comp=N,4.0nm,5.8s							
BBP	**Basco**	**4.46**	**228**	⇑*e*P		**Pn**	**17 00 40.2**	**-1.3**
BBP				*e*S		**Sn**	**17 01 24.6**	**-8.3**
TPUB	**Ta-pu**	**4.48**	**269**	Pn		**Pn**	**17 00 41.7**	**-0.1**
TPUB	**Ta-pu**	**4.48**	**269**	P		**Pn**	**17 00 42.0**	**+0.2**
JMZ	**Minamidaito 2**	**5.71**	**65**	Pn		**Pn**	**17 00 56.2**	**-2.5**
JMZ	**Minamidaito 2**	**5.71**	**65**	P		**Pn**	**17 00 56.9**	**-1.8**
QZH	**Quanzhou**	**6.48**	**284**	Pn		**Pn**	**17 01 07.8**	**-1.4**
QZH				LR		LR		
	comp=N,5μm,12.6s							
QZH				LR		LR		
	comp=N,5μm,10.8s							
QZH				LR		LR		
	comp=N,5μm,11.2s							
KNMB	**Chin-men Tao**	**6.58**	**280**	Pn		**Pn**	**17 01 09.2**	**-1.5**
PIP	**Pasuquin**	**6.86**	**223**	⇑*e*P		**Pn**	**17 01 12.2**	**-2.3**
SSE	**Sheshan**	**8.51**	**334**	P		**Pn**	**17 01 37.4**	**+0.3**
SSE				S		**Sn**	**17 03 17.6**	**+4.9**
SSE				pmax	pmax			
	comp=N,27nm,0.6s							
SSE				LR	LR			
	comp=N,1μm,19.5s							
SSE				LR	LR			
	comp=N,2μm,19.7s							
PCPS	**Palayan City**	**9.72**	**206**	⇑*e*P		Pn	17 01 43.8	-10
LQP	**Lukban**	**10.03**	**203**	⇑*e*P		**Pn**	**17 01 58.4**	**+0.1**
TGY	**Tagaytay City**	**10.27**	**206**	Pn		**Pn**	**17 02 03.8**	**+2.4**
	comp=N,118nm,0.3s,baz=25,slow=5.6,SNR=18							
TGY				Sn		**Sn**	**17 03 55.2**	**-0.9**
	comp=N,15nm,0.3s,baz=131,slow=20,SNR=1.4							
TGY				LR	LR		17 06 37.1	
	comp=N,709nm,18.1s,baz=262,slow=41							
TGY	**Tagaytay City**	**10.27**	**206**	⇓*e*P		**Pn**	**17 02 04.6**	**+3.2**
NJ2	**Nanjing**	**10.38**	**327**	*e*P		**Pn**	**17 02 04.8**	**+2.1**
NJ2				pmax	pmax			
	comp=N,11nm,0.8s							
NJ2				pmax	pmax			
	comp=N,270nm,4.5s							
NJ2				LR	LR			
	comp=N,3μm,16.6s							
NJ2				LR	LR			
	comp=N,4μm,14.7s							
NJ2				LR	LR			
	comp=N,3μm,12.8s							
JNU	**Nakatsue**	**10.72**	**25**	Pn		**Pn**	**17 02 06.9**	**-0.5**
JNU	**Nakatsue**	**10.72**	**25**	P		**Pn**	**17 02 07.1**	**-0.4**
JNU	**Nakatsue**	**10.72**	**25**	Pn		**Pn**	**17 02 06.8**	**-0.7**
	comp=N,1.4nm,0.3s,baz=196,slow=5.8,SNR=24							
JNU				Sn		**Sn**	**17 04 00.1**	**-6.9**
	baz=174,slow=19							
JNU				LR	LR		17 06 49.9	
	comp=N,1μm,18.9s,baz=204,slow=41							
	comp=N,37nm,0.9s							
WHN	**Wuhan**	**12.18**	**308**	⇓P		**Pn**	**17 02 28.8**	**+1.4**
WHN				sP		P	17 02 33.4	-6.5
WHN				pmax	pmax			
	comp=N,28nm,0.5s							
WHN				LR	LR			
	comp=N,7μm,11.2s							
WHN				LR	LR			
	comp=N,5μm,13.7s							
WHN				LR	LR			
	comp=N,6μm,15.4s							
PLP	**Palo**	**12.25**	**182**	⇑*e*P		**Pn**	**17 02 27.8**	**-0.6**
CNSH	**ChangSha**	**12.25**	**295**	⇑P		**Pn**	**17 02 31.8**	**+3.3**
CNSH				S		Sn	17 04 57.6	+13
CNSH				LR	LR			
	comp=N,1μm,13.3s							
CNSH				LR	LR			
	comp=N,2μm,14.6s							
JMN	**Monobe**	**12.59**	**34**	Pn		**Pn**	**17 02 30.0**	**-3.0**
JMN	**Monobe**	**12.59**	**34**	P		**Pn**	**17 02 30.5**	**-2.6**
TJN	**Taejon**	**12.97**	**7**	Pn		**Pn**	**17 02 38.3**	**+0.2**
TJN	**Taejon**	**12.97**	**7**	*ce*P		**Pn**	**17 02 39.6**	**+1.5**
GULI	**GuiLin**	**13.91**	**281**	*e*P		**Pn**	**17 02 51.3**	**+0.2**
GULI				pmax	pmax			
	comp=N,10.0nm,1.2s							
KSAR	**Wonju Array Be**	**14.08**	**8**	Pn		**Pn**	**17 02 53.3**	**0.0**
KSAR	**Wonju Array Be**	**14.08**	**8**	P		**Pn**	**17 02 53.3**	**0.0**
KSRS	**Korea Array**	**14.10**	**8**	Pn		**Pn**	**17 02 53.5**	**0.0**
	comp=N,0.6nm,0.3s,baz=187,slow=13,SNR=58							
KSRS				LR	LR		17 07 57.0	
	comp=N,383nm,21.9s,baz=205,slow=36							
	comp=N,23nm,0.8s							
KS19	**Wonju Array Si**	**14.13**	**8**			**Pn**	**17 02 53.6**	**-0.5**
TIA	**Tai'an**	**14.62**	**332**	P		**Pn**	**17 03 02.6**	**+1.8**
TIA				pmax	pmax			
	comp=N,4.0nm,0.8s							
TIA				pmax	pmax			
	comp=N,250nm,6.2s							
TIA				LR	LR			
	comp=N,990nm,13.3s							
TIA				LR	LR			
	comp=N,990nm,10.5s							
TIA				LR	LR			
	comp=N,1μm,14.3s							
QIZ	**Qiongzhong**	**15.25**	**256**	P		**Pn**	**17 03 04.8**	**-4.5**
QIZ				S		**Sn**	**17 05 55.4**	**-2.4**
QIZ				LR	LR			
	comp=N,920nm,13.8s							
QIZ				LR	LR			
	comp=E,720nm,15.7s							
QIZ				LR	LR			
	comp=Z,680nm,15.3s							
INU	**Inuyama**	**15.50**	**38**	Pn		**Pn**	**17 03 09.0**	**-3.5**
JCJ	**Chichijima**	**15.52**	**73**	Pn		**Pn**	**17 03 11.1**	**-1.7**
	comp=Z,2.2nm,0.3s,baz=280,slow=17,SNR=2.4							
JCJ				LR	LR		17 07 58.9	
	comp=Z,552nm,21.2s,baz=254,slow=33							
	comp=Z,348nm,1.2s							
ENH	**Enshi**	**15.81**	**299**	P		**P**	**17 03 20.6**	**+0.3**
JHJ	**Hachijo jima 2**	**15.82**	**49**	LR		LR	17 08 56.6	
	comp=Z,544nm,18.1s,baz=237,slow=36							
LYN	**LuoYang**	**15.85**	**317**	*e*P		**Pn**	**17 03 17.8**	**+0.7**
LYN				pP		P	17 03 22.0	+1.3
LYN				sP		sP	17 03 26.4	+0.7
LYN				PP		**pwP**	**17 03 31.4**	**-0.2**
LYN				S		**Sn**	**17 06 18.8**	**+6.4**
LYN				pmax	pmax			
	comp=Z,79nm,1.2s							
LYN				pmax	pmax			
	comp=Z,360nm,5.3s							
LYN				LR	LR			
	comp=Z,3μm,18.0s							
LYN				LR	LR			
	comp=Z,3μm,17.2s							
LYN				LR	LR			
	comp=Z,2μm,15.3s							
JGF	**Kuroka**	**15.88**	**38**	Pn		**Pn**	**17 03 14.9**	**-2.5**
DAV	**Davao City (W)**	**16.30**	**180**	LR		LR	17 09 51.8	
	comp=Z,283nm,20.4s,baz=12,slow=38							
HNS	**HongShan**	**16.70**	**329**	⇑P		**Pn**	**17 03 28.4**	**+0.6**
HNS				pmax	pmax			
	comp=Z,540nm,9.6s							
HNS				LR	LR			
	comp=Z,860nm,15.1s							
HNS				LR	LR			
	comp=Z,2μm,13.3s							
HNS				LR	LR			
	comp=Z,2μm,13.5s							
MAJO	**Matsushiro**	**17.03**	**37**	Pn		**Pn**	**17 03 28.6**	**-3.5**
MAJO	**Matsushiro**	**17.03**	**37**	*i* P		**Pn**	**17 03 32.7**	**+0.6**
MJAR	**Matsushiro Arr**	**17.03**	**37**	Pn		**P**	**17 03 33.1**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=214,slow=8.9,SNR=4.9							
GYA	**Guiyang**	**17.34**	**284**	⇑P		**P**	**17 03 37.0**	**-0.4**
GYA				pmax	pmax			
	comp=Z,8.0nm,1.9s							
XAN	**Xi'an**	**17.93**	**310**	⇑P		**P**	**17 03 44.3**	**+0.5**
XAN				S		**Sn**	**17 07 05.3**	**+2.5**
XAN				pmax	pmax			
	comp=Z,28nm,1.2s							
XAN				pmax	pmax			
	comp=Z,530nm,10.2s							
XAN				LR	LR			
	comp=Z,3μm,16.5s							
XAN				LR	LR			
	comp=Z,2μm,15.6s							
XAN				LR	LR			
	comp=Z,3μm,13.0s							
TIY	**Taiyuan**	**18.09**	**325**	⇓P		**P**	**17 03 47.4**	**+1.9**
TIY				pP		**pwP**	**17 03 55.1**	**-1.1**
TIY				S		**S**	**17 07 11.0**	**-1.2**
TIY				sS		**sS**	**17 07 14.3**	**-4.7**
TIY				pmax	pmax			
	comp=Z,22nm,0.5s							
TIY				pmax	pmax			
	comp=Z,440nm,5.1s							
TIY				LR	LR			
	comp=Z,2μm,19.9s							
TIY				LR	LR			
	comp=Z,2μm,18.6s							
TIY				LR	LR			
	comp=Z,1μm,16.0s							
BJT	**Baijiatuao**	**18.29**	**337**	P		**Pn**	**17 03 47.0**	**-0.5**
BJT	**Baijiatuao**	**18.29**	**337**	P		**Pn**	**17 03 47.1**	**-0.5**
BJT				pmax	pmax			
	comp=Z,20nm,0.9s							
BJI	**Beijing**	**18.31**	**337**	P		**Pn**	**17 03 47.1**	**-0.7**
BJI				pP		**pP**	**17 03 51.4**	**+0.1**
BJI				sP		**pwP**	**17 03 56.1**	**-2.6**
BJI				S		**Sn**	**17 07 09.9**	**-1.9**
BJI				pmax	pmax			
	comp=Z,13nm,1.0s							
BJI				LR	LR			
	comp=Z,530nm,17.4s							
BJI				LR	LR			
	comp=Z,930nm,15.0s							
BJI				LR	LR			
	comp=Z,750nm,14.9s							
SNY	**Shenyang**	**18.38**	**355**	⇑P		**P**	**17 03 48.3**	**-0.3**
SNY				S		**S**	**17 07 18.5**	**+0.6**
SNY				pmax	pmax			
	comp=Z,28nm,0.9s							
SNY				pmax	pmax			
	comp=Z,190nm,4.5s							
SNY				LR	LR			
	comp=Z,700nm,13.9s							
SNY				LR	LR			
	comp=Z,1μm,13.7s							
SNY				LR	LR			
	comp=Z,870nm,15.5s							
JMM	**Marumori**	**19.43**	**39**	P		**P**	**17 03 58.3**	**-1.9**
JMM				IAmb		IAmb	17 04 10.1	
	comp=Z,105nm,1.4s							
PSTR	**Posyet**	**19.63**	**12**	*i* P		**Pn**	**17 04 03.7**	**0.0**
CN2	**Changchun**	**20.28**	**360**	*e*P		**P**	**17 04 08.1**	**-1.3**
CN2				*e*PP		**PnPn**	**17 04 28.8**	**+2.4**
CN2				*e*S		**S**	**17 07 50.6**	**-5.5**
CN2				*e*SS		**SnSn**	**17 08 20.6**	**+6.4**
CN2				pmax	pmax			
	comp=Z,30nm,1.2s							
CN2				LR	LR			
	comp=Z,430nm,12.0s							
CN2				LR	LR			
	comp=Z,280nm,12.0s							
CN2				LR	LR			
	comp=Z,390nm,14.0s							
CD2	**Chengdu**	**20.69**	**296**	P		**P**	**17 04 15.1**	**+1.0**
CD2				S		**S**	**17 08 06.3**	**+1.7**
CD2				pmax	pmax			
	comp=Z,20nm,0.8s							
CD2				pmax	pmax			
	comp=Z,170nm,5.9s							
CD2				LR	LR			
	comp=Z,720nm,12.8s							
CD2				LR	LR			
	comp=Z,860nm,12.0s							
CD2				LR	LR			
	comp=Z,2μm,12.4s							
GUMO	**Guam**	**20.80**	**115**	P		Pn	17 04 18.0	+0.2
GUMO	**Guam**	**20.80**	**115**	P		Pn	17 04 18.0	+0.2
	comp=Z,210nm,0.9s,baz=218,slow=19,SNR=3.0							
GUMO				LR	LR		17 12 17.5	
	comp=Z,282nm,18.4s,baz=310,slow=37							
	comp=Z,210nm,0.9s							
KMI	**Kunming**	**20.81**	**279**	⇑P		Pn	17 04 19.0	+1.0
KMI				S		**S**	**17 08 07.8**	**+0.5**
KMI				pmax	pmax			
	comp=Z,20nm,1.0s							
KMI				pmax	pmax			
	comp=Z,380nm,8.0s							
KMI				LR	LR			
	comp=Z,2μm,12.6s							
KMI				LR	LR			
	comp=Z,620nm,20.0s							
KMI				LR	LR			
	comp=Z,2μm,15.5s							
HHC	**Hu-ho-hao-te**	**20.92**	**329**	⇑P		**P**	**17 04 16.4**	**-0.1**
HHC				pP		sP	17 04 21.8	+0.3
HHC				sP		pwP	17 04 25.9	-1.4
HHC				S		Sn	17 08 14.3	-0.6
HHC				pmax	pmax			
	comp=Z,28nm,0.8s							
HHC				LR	LR			
	comp=Z,2μm,13.3s							
HHC				LR	LR			
	comp=Z,510nm,12.7s							
HHC				LR	LR			
	comp=Z,2μm,13.7s							
USA0B	**Ussuriysk Arra**	**21.36**	**13**	P		**P**	**17 04 18.0**	**-3.0**
USA0B	**Ussuriysk Arra**	**21.36**	**13**	*i* P		**P**	**17 04 22.3**	**+1.3**
USRK	**Ussuriysk Ar.**	**21.36**	**13**	P		**P**	**17 04 16.5**	**-4.5**
USRK	**Ussuriysk Ar.**	**21.36**	**13**	P		**P**	**17 04 22.3**	**+1.3**
	comp=Z,16nm,0.8s,baz=198,slow=9.5,SNR=19							
	comp=Z,16nm,0.8s							
MDJ	**Mudanjiang**	**21.36**	**8**	P		**P**	**17 04 21.1**	**0.0**
MDJ				pP		pP	17 04 24.3	-0.3
MDJ				PP		**PnPn**	**17 04 42.4**	**+1.2**
MDJ				SS		**SnSn**	**17 08 48.4**	**+7.8**
MDJ				ScS		**ScS**	**17 15 42.0**	**-2.8**
MDJ				pmax	pmax			
	comp=Z,8.0nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,150nm,8.8s							
MDJ				LR	LR			
	comp=Z,440nm,22.9s							
MDJ				LR	LR			
	comp=Z,1μm,21.3s							
MDJ				LR	LR			
	comp=Z,680nm,22.0s							
MDJ	**Mudanjiang**	**21.36**	**8**	P		**P**	**17 04 19.5**	**-1.6**
BTO	**Baotou**	**21.49**	**326**	*e*P		**P**	**17 04 24.0**	**+1.4**
BTO				pP		**sP**	**17 04 29.5

BNX pP **pP** **17 04 34.6 +0.3**
BNX sP **sP** **17 04 38.3 +2.4**
BNX S **S** **17 08 34.8 -0.3**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,190nm,4.7s
BNX LR LR
comp=Z,600nm,11.3s
BNX LR LR
comp=Z,510nm,11.0s
BNX LR LR
comp=Z,920nm,12.7s
LZH Lanzhou 22.56 309 ⇑P **P** **17 04 34.0 -0.2**
LZH pP sP 17 04 40.8 +1.6
LZH S **S** **17 08 40.3 -0.6**
LZH SS **SnSn** **17 09 19.1 +8.9**
LZH pmax pmax
comp=Z,45nm,1.1s
LZH LR LR
comp=Z,2μm,15.1s
LZH LR LR
comp=Z,870nm,15.3s
LZH LR LR
comp=Z,2μm,15.1s
TNTI Ternate 22.63 175 P **P** **17 04 37.1 +2.2**
comp=Z,79nm,1.4s,comp=Z,1μm
GTOI Gorontalo 22.82 186 P **P** **17 04 35.9 -1.0**
MRSI Marisa 23.11 189 P **P** **17 04 41.5 +1.6**
comp=Z,107nm,1.2s,comp=Z,1μm
CRAI Chiangrai 23.54 267 P **P** **17 04 45.8 +1.5**
CRAI lAmb lAmb 17 05 00.2
comp=Z,85nm,1.6s
MPSI Mapaga 23.63 194 P **P** **17 04 47.0 +1.9**
comp=Z,29nm,1.1s
ERM Erimo 23.64 34 *i*P **P** **17 04 45.0 +0.1**
ERM pmax pmax
comp=Z,17nm,0.7s
LBMI Labuha 24.04 175 P **P** **17 04 50.4 +1.4**
comp=Z,108nm,1.6s,comp=Z,2μm
LUWI Luwuk 24.51 187 P **P** **17 04 56.7 +3.4**
comp=Z,58nm,1.0s,comp=Z,755nm
SBUM Sibu 24.54 214 P **P** **17 04 47.0 -6.6**
SBUM lAmb lAmb 17 05 14.4
comp=Z,41nm,1.3s
TNCH TengChong 24.64 279 P **P** **17 04 57.9 +3.2**
TNCH pP sP 17 05 02.8 +3.1
TNCH S **S** **17 09 16.1 +0.6**
TNCH sS sS 17 09 26.0 +4.6
TNCH pmax pmax
comp=Z,35nm,1.2s
TNCH pmax pmax
comp=Z,160nm,3.3s
TNCH LR LR
comp=Z,370nm,16.9s
TNCH LR LR
comp=Z,990nm,13.4s
TNCH LR LR
comp=Z,1μm,14.2s
SWI Sorong 24.82 166 P **P** **17 04 58.5 +2.4**
comp=Z,27nm,1.6s
ASAJ Asahikawa 24.93 30 P **P** **17 04 54.4 -2.4**
ASAJ pmax pmax
comp=Z,53nm,1.0s
ASAJ Asahikawa 24.93 30 LR LR 17 15 40.5
comp=Z,488nm,19.2s,baz=154,slow=39
JKA Kamikawa-asahi 24.93 30 P **P** **17 04 54.4 -2.4**
CMAR Chiang Mai Arr 25.28 264 P **P** **17 04 58.9 -1.4**
CMAR Chiang Mai Arr 25.28 264 P **P** **17 04 58.9 -1.4**
CMAR Chiang Mai Arr 25.28 264 P **P** **17 05 02.5 +2.2**
comp=Z,8.7nm,0.9s,baz=58,slow=8.1,SNR=40
CMAR PcP **PcP** **17 08 35.5 +2.1**
comp=Z,0.7nm,0.6s,baz=48,slow=1.3,SNR=2.4
CMAR LR LR 17 16 21.3
comp=Z,687nm,18.3s,baz=75,slow=40
comp=Z,8.7nm,0.9s
SANI Sanana 25.37 179 P **P** **17 05 00.8 -0.3**
HIA Hailar 26.15 351 P **P** **17 05 07.1 -0.8**
HIA lAmb lAmb 17 05 23.2
comp=Z,19nm,1.1s
HIA Hailar 26.15 351 *i*P **P** **17 05 08.4 +0.5**
HIA pmax pmax
comp=Z,14nm,1.1s
KLR Kul'dur 26.18 9 *ce*P **P** **17 05 08.8 +0.6**
KLR pmax pmax
comp=Z,48nm,1.3s
KLR Kul'dur 26.18 9 LR LR 17 16 26.1
comp=Z,215nm,18.6s,baz=188,slow=39
HEH HeiHe 26.78 3 *eP* **P** **17 05 12.4 -1.1**
HEH sP **sP** **17 05 20.4 +1.7**
HEH S **S** **17 09 49.8 +1.2**
HEH pmax pmax
comp=Z,10.0nm,0.7s
HEH pmax pmax
comp=Z,260nm,5.8s
HEH LR LR
comp=Z,330nm,14.1s
HEH LR LR
comp=Z,990nm,13.9s
HEH LR LR
comp=Z,690nm,13.3s
TTSI Tana Toraja 26.93 193 P **P** **17 05 18.1 +2.9**
comp=Z,29nm,1.0s
GTA Gaotai 26.94 312 P **P** **17 05 14.9 -0.4**
GTA pP pwP 17 05 25.0 -0.9
GTA pmax pmax
comp=Z,10.0nm,1.5s
GTA LR LR
comp=Z,1μm,20.3s
GTA LR LR
comp=Z,640nm,18.7s
GTA LR LR
comp=Z,870nm,13.1s
STKI Sintang 26.96 212 P **P** **17 05 17.4 +1.9**
FAKI Fak Fak 27.04 165 P **P** **17 05 20.0 +3.8**
comp=Z,26nm,1.0s
YSS Yuzh-Sakhalins 27.23 26 *eP* **P** **17 05 19.5 +1.9**
YSS *eS* **S** **17 09 58.6 +2.9**
YSS pmax pmax
comp=Z,70nm,0.8s
YSS MLR MLR
comp=Z,1μm,19.0s
YSS MLR MLR
comp=N,800nm,18.0s
YSS MLR MLR
comp=E,1μm,17.0s
ULN Ulaanbaatar 28.44 333 P **P** **17 05 27.4 -1.3**
ULN lAmb lAmb 17 05 44.0
comp=Z,13nm,1.1s
ULN Ulaanbaatar 28.44 333 *i*P **P** **17 05 29.5 +0.8**
ULN pmax pmax
comp=Z,7.0nm,0.9s
GRNR Gornyy 28.55 15 ⇓*i*P **P** **17 05 29.8 +0.4**
GRNR pmax pmax
comp=N,7.0nm,1.0s
GRNR pmax pmax
comp=Z,9.0nm,0.9s
GRNR MLR MLR
comp=E,350nm,13.0s
GRNR MLR MLR
comp=N,270nm,18.0s
GRNR MLR MLR
comp=Z,350nm,19.0s
SONM Songino Array 28.69 333 P **P** **17 05 29.9 -0.9**
SONM Songino Array 28.69 333 P **P** **17 05 30.0 -0.9**
comp=Z,3.3nm,0.8s,baz=147,slow=9.4,SNR=17
SONM LR LR 17 18 12.5
comp=Z,607nm,19.6s,baz=133,slow=39
comp=Z,3.3nm,0.8s
GOMU GeErMu 29.36 303 P **P** **17 05 38.4 +1.2**
GOMU pP pP 17 05 41.6 +0.3
GOMU sP pwP 17 05 46.3 -1.3
GOMU pmax pmax
comp=Z,12nm,0.9s
GOMU LR LR
comp=Z,1μm,17.6s
GOMU LR LR
comp=Z,470nm,17.8s
GOMU LR LR
comp=Z,680nm,17.2s
ZEA Zeya 30.25 2 *eP* **P** **17 05 44.8 +0.3**
ZEA MLR MLR
comp=N,400nm,13.0s
ZEA MLR MLR
comp=Z,300nm,12.0s
TYV Tymovskoe 30.42 22 *eP* P 17 05 54.0 +8.1
TYV pmax pmax
comp=Z,100nm,2.4s
TYV pmax pmax
comp=Z,22nm,1.3s
LSA Lhasa 31.26 289 P **P** **17 05 50.1 -4.2**
LSA lAmb lAmb 17 06 13.4
comp=Z,9.4nm,0.8s
LSA Lhasa 31.26 289 P **P** **17 05 50.1 -4.2**
LSA pmax pmax
comp=Z,9.0nm,0.8s
PSI Prapat 32.91 235 P **P** **17 06 04.9 -3.5**
PSI pmax pmax
comp=Z,6.0nm,0.8s
RPSI Rantau Prapat 32.98 235 P **P** **17 06 04.9 -4.0**
MOY Mondy 33.88 332 *eP* **P** **17 06 15.2 -1.3**
MOY pmax pmax
comp=Z,20nm,2.1s
UGM Wanagama 34.46 207 P P 17 06 14.8 -6.9
LEM Lembang 34.81 212 LR LR 17 20 35.3
comp=Z,97nm,21.0s,baz=38,slow=36
WMQ Urumqi 37.03 313 *eP* **P** **17 06 44.1 +0.5**
WMQ sP pwP 17 06 53.3 -0.9
WMQ pmax pmax
comp=Z,20nm,1.5s
WMQ LR LR
comp=Z,650nm,16.3s
WMQ LR LR
comp=Z,260nm,22.5s
PEA0B Petropavlovsk- 38.34 31 *i*P **P** **17 06 56.8 +2.4**
PETK Petropavlovsk- 38.34 31 P **P** **17 06 50.9 -3.6**
PETK Petropavlovsk- 38.34 31 P **P** **17 06 54.5 +0.1**
comp=Z,8.1nm,1.0s,baz=194,slow=5.5,SNR=7.0
PETK LR LR 17 23 37.1
comp=Z,256nm,20.4s,baz=226,slow=38
comp=Z,8.1nm,1.0s
YAK Yakutsk 38.65 3 P **P** **17 06 53.0 -3.9**
YAK Yakutsk 38.65 3 *eP* **P** **17 06 55.3 -1.6**
YAK *e**PP **pP** **17 07 00.0 -0.8**
YAK *eS* **S** **17 12 50.7 -1.7**
YAK *eSS* **SnSn** **17 15 35.7 -5.1**
YAK *e* 17 17 04.5
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,1.0nm,1.0s
YAK pmax pmax
comp=Z,312nm,11.5s
YAK pmax pmax
comp=N,166nm,5.9s
YAK pmax pmax
comp=E,248nm,7.5s
YAK smax smax
comp=E,226nm,6.3s
YAK smax smax
comp=N,208nm,6.3s
YAK MLR MLR
comp=Z,221nm,20.0s
YAK MLR MLR
comp=N,185nm,18.0s
YAK MLR MLR
comp=E,127nm,16.0s
YAK Yakutsk 38.65 3 LR LR 17 23 54.3
comp=E,196nm,20.5s,baz=165,slow=38
PET Petropavlovsk 38.74 32 *i*P **P** **17 06 59.7 +1.9**
PET pmax pmax
comp=Z,37nm,1.0s
PMG Port Moresby 38.94 145 LR LR 17 20 37.9
comp=Z,132nm,20.2s,baz=316,slow=32
DGZ Jazzator, Alta 39.60 321 *i*P **P** **17 07 05.5 +0.2**
DGZ pmax pmax
comp=Z,10.0nm,1.9s
ZSN Zaisan 40.20 317 *eP* **P** **17 07 10.6 +0.4**
baz=317
ZSN Zaisan 40.20 317 *eP* **P** **17 07 10.6 +0.4**
MA2 Magadan 40.23 20 P **P** **17 07 06.7 -3.5**
MA2 lAmb lAmb 17 07 23.4
comp=Z,19nm,0.9s
MA2 Magadan 40.23 20 *ce*P **P** **17 07 10.5 +0.4**
MA2 pmax pmax
comp=Z,25nm,1.7s
MA2 Magadan 40.23 20 LR LR 17 24 26.1
comp=Z,273nm,18.5s,baz=276,slow=37
MK31 Makanchi Array 41.62 315 P **P** **17 07 19.3 -2.6**
MK31 lAmb lAmb 17 07 23.5
comp=Z,16nm,0.9s
MK31 Makanchi Array 41.62 315 *ce*P **P** **17 07 22.2 +0.3**
MKAR Makanchi Array 41.62 315 P **P** **17 07 20.0 -1.9**
MKAR Makanchi Array 41.62 315 P **P** **17 07 22.7 +0.8**
comp=Z,16nm,0.8s,baz=103,slow=10.0,SNR=158
comp=Z,16nm,0.8s
MAKZ Makanchi 41.83 315 P **P** **17 07 22.2 -1.3**
MAKZ lAmb lAmb 17 07 25.3
comp=Z,27nm,0.8s
MAKZ Makanchi 41.83 315 P **P** **17 07 23.4 -0.2**
SHLS Shalkode 42.58 309 *eP* **P** **17 07 27.5 -2.4**
comp=Z,10nm,0.6s,baz=309
SHLS Shalkode 42.58 309 *eP* **P** **17 07 27.5 -2.4**
SHLS pmax pmax
comp=Z,10.0nm,0.6s
PDGK Podgornoye 42.60 309 P **P** **17 07 30.2 +0.2**
UZB Uzynbulak 42.89 309 *eP* **P** **17 07 32.8 +0.4**
comp=Z,17nm,1.2s,baz=309
UZB Uzynbulak 42.89 309 *eP* **P** **17 07 32.8 +0.4**
UZB pmax pmax
comp=Z,17nm,1.2s
ZAA0 Zalesovo Array 43.03 326 P **P** **17 07 32.3 -0.8**
ZAA0 lAmb lAmb 17 07 36.7
comp=Z,9.3nm,0.6s
ZALV Zalesovo Beam 43.03 326 P **P** **17 07 32.6 -0.6**
ZALV Zalesovo Beam 43.03 326 P **P** **17 07 33.7 +0.5**
comp=Z,9.5nm,0.5s,baz=112,slow=8.5,SNR=28
ZALV LR LR 17 24 53.9
comp=Z,234nm,21.6s,baz=119,slow=35
comp=Z,9.5nm,0.5s
SATY Saty 43.32 309 *eP* **P** **17 07 36.3 +0.5**
comp=Z,14nm,1.1s,baz=308
SATY Saty 43.32 309 *eP* **P** **17 07 36.3 +0.5**
SATY pmax pmax
comp=Z,14nm,1.1s
ZHN Zhinishke 43.32 309 *eP* **P** **17 07 36.5 +0.6**
comp=Z,17nm,1.3s,baz=309
ZHN Zhinishke 43.32 309 *eP* **P** **17 07 36.4 +0.6**
ZHN pmax pmax
comp=Z,17nm,1.3s
SEY Seymchan 43.38 18 *ce*P **P** **17 07 37.3 +1.4**
SEY pmax pmax
comp=Z,25nm,1.0s
SEY Seymchan 43.38 18 LR LR 17 26 51.5
comp=Z,188nm,18.8s,baz=224,slow=38
TDK Taldyqorghan 43.73 311 *eP* **P** **17 07 40.0 +0.9**
baz=311
TDK Taldyqorghan 43.73 311 *eP* **P** **17 07 39.9 +0.9**
WRA Warramunga Arr 44.00 168 P P 17 07 34.8 -6.6
WRA Warramunga Arr 44.00 168 P P 17 07 34.8 -6.5
WRA pmax pmax
comp=Z,3.0nm,0.9s
WRA Warramunga Arr 44.00 168 P **P** **17 07 42.8 +1.5**
comp=Z,24nm,1.0s,baz=347,slow=8.9,SNR=27
comp=Z,24nm,1.0s
SEM Semipalatinsk 44.11 319 *eP* **P** **17 07 41.7 -0.6**
comp=Z,18nm,0.9s,baz=319
SEM Semipalatinsk 44.11 319 *eP* **P** **17 07 41.6 -0.6**
SEM pmax pmax
comp=Z,18nm,0.9s
MDOK Medeo 44.31 308 *eP* **P** **17 07 44.6 +0.7**
baz=308
MDOK Medeo 44.31 308 P **P** **17 07 44.5 +0.7**
CHKK Chushkaly 44.48 309 *eP* **P** **17 07 45.2 +0.1**
baz=309
CHKK Chushkaly 44.48 309 *eP* **P** **17 07 45.1 +0.1**
KSH Kashi 44.60 303 P **P** **17 07 50.3 +4.1**
KSH sP pwP 17 07 55.3 -1.4
KSH pmax pmax
comp=Z,6.0nm,0.8s
KSH LR LR
comp=Z,400nm,15.8s
KSH LR LR
comp=Z,400nm,17.9s
KSH LR LR
comp=Z,640nm,17.2s
ULHL Ulahol 44.75 307 P **P** **17 07 49.0 +1.6**
SNR=17
KUU Kurty 44.95 309 *eP* **P** **17 07 49.3 +0.5**
comp=Z,200nm,0.9s,baz=309
KUU Kurty 44.95 309 *eP* **P** **17 07 49.3 +0.5**
KUU pmax pmax
comp=Z,20nm,0.9s
PSA00 Pilbara Seismi 45.11 187 P P 17 07 43.3 -6.8
PSA00 lAmb lAmb 17 08 03.7
comp=Z,12nm,0.9s
KURK Kurchatov 45.20 319 P **P** **17 07 49.8 -0.8**
KURK Kurchatov 45.20 319 *ce*P **P** **17 07 51.1 +0.5**
KURK pmax pmax
comp=Z,69nm,1.7s
KURBB Kurchatov Arra 45.22 319 P **P** **17 07 51.5 +0.7**
comp=Z,22nm,0.9s,baz=108,slow=8.1,SNR=146
KURBB LR LR 17 29 07.9
comp=Z,105nm,20.1s,baz=170,slow=39
comp=Z,22nm,0.9s
TKM2 Tokmak 2 45.32 308 P **P** **17 07 53.6 +1.5**
SNR=16
TKM2 Tokmak 2 45.32 308 P **P** **17 07 52.5 +0.5**
KBK Karagaybulak 45.75 307 P **P** **17 07 57.4 +2.0**
SNR=8.5
PALK Pallekele 45.88 257 LR LR 17 29 02.1
comp=Z,254nm,18.3s,baz=159,slow=38
CHMS Chumysh 45.95 308 P **P** **17 07 58.3 +1.6**
SNR=6.7
UCH Uchtor 46.02 307 P **P** **17 08 00.1 +2.3**
SNR=12
AAK Ala-Archa 46.08 307 P **P** **17 07 57.6 -0.4**
AAK lAmb lAmb 17 08 16.7
comp=Z,8.0nm,0.8s
AAK Ala-Archa 46.08 307 *ce*P **P** **17 07 57.9 -0.1**
AAK pmax pmax
comp=Z,10.0nm,2.5s
AAK Ala-Archa 46.08 307 LR LR 17 27 49.6
comp=Z,523nm,19.3s,baz=96,slow=37
USP Ospenovka 46.17 308 P **P** **17 07 59.7 +1.2**
SNR=8.1
NIL Nilore 46.58 295 P **P** **17 08 02.2 +0.3**
NIL lAmb lAmb 17 08 18.7
comp=Z,12nm,0.7s
NIL Nilore 46.58 295 P **P** **17 08 02.2 +0.3**
NIL pmax pmax
comp=Z,12nm,0.7s
BTLS Baital 46.77 310 *eP* **P** **17 08 03.4 +0.2**
baz=310
BTLS Baital 46.77 310 *eP* **P** **17 08 03.3 +0.2**
SHEM Shemya Is, Ala 46.87 39 LR LR 17 28 34.2
comp=Z,49nm,20.8s,baz=46,slow=37
HNR Honiara 46.95 130 LR LR 17 26 33.3
comp=Z,1μm,20.2s,baz=279,slow=34
AS31 Alice Springs 47.56 170 P P 17 08 02.9 -6.5
ASAR Alice Springs 47.56 170 P P 17 08 01.8 -7.7
ASAR Alice Springs 47.56 170 P P 17 08 01.8 -7.7
ASAR Alice Springs 47.56 170 P **P** **17 08 11.5 +2.0**
comp=Z,3.6nm,0.8s,baz=354,slow=13,SNR=43
ASAR LR LR 17 29 00.8
comp=Z,90nm,19.7s,baz=352,slow=37
comp=Z,3.6nm,0.8s
CTA Charters Tower 47.79 153 LR LR 17 27 54.0
comp=Z,166nm,19.6s,baz=337,slow=36
TIXI Tiksi 48.24 1 P **P** **17 08 13.7 -0.5**
TIXI lAmb lAmb 17 08 14.8
comp=Z,19nm,0.9s
TIXI Tiksi 48.24 1 *ce*P **P** **17 08 13.2 -0.9**
TIXI pmax pmax
comp=Z,39nm,1.7s
TIXI Tiksi 48.24 1 LR LR 17 29 21.0
comp=Z,316nm,21.8s,baz=198,slow=37
OTUK Ortayu 48.51 314 P **P** **17 08 17.3 +0.7**
BTK Batken 48.60 303 P **P** **17 08 14.2 -3.3**
BTK lAmb lAmb 17 09 17.5
comp=Z,12nm,0.6s
BTK Batken 48.60 303 P **P** **17 08 14.3 -3.3**
BTK pmax pmax
comp=Z,12nm,0.6s
BRZS Berezniki 48.65 317 *eP* **P** **17 08 17.9 +0.2**
comp=Z,12nm,1.0s,baz=317
BRZS Berezniki 48.65 317 *eP* **P** **17 08 17.9 +0.2**
BRZS pmax pmax
comp=Z,12nm,1.0s
KK31 Karatay Array 49.05 307 P **P** **17 08 20.8 0.0**
KK31 Karatay Array 49.05 307 P **P** **17 08 20.8 0.0**
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 49.05 307 **P** **17 08 18.2 -2.6**
KKAR Karatay Array 49.05 307 P **P** **17 08 18.2 -2.6**
IUG luzhnay 49.32 306 *eP* **P** **17 08 23.8 +0.8**
baz=306
IUG luzhnay 49.32 306 *eP* **P** **17 08 23.8 +0.8**
BRLS Borolday 49.53 307 *eP* **P** **17 08 25.3 +0.8**
baz=307
BRLS Boroldav 49.53 307 *eP* **P** **17 08 25.3 +0.8**
CHM Chimkent 49.65 306 *eP* **P** **17 08 26.0 +0.5**
baz=306
CHM Chimkent 49.65 306 *eP* **P** **17 08 25.9 +0.5**
SIMJ Simiganj 49.97 302 P **P** **17 08 26.0 -2.1**
SIMJ lAmb lAmb 17 08 42.4
comp=Z,12nm,0.9s
BVAR Borovoye Array 50.74 320 P **P** **17 08 34.4 +0.8**
comp=Z,4.0nm,0.6s
comp=Z,4.0nm,0.6s
BRVK Borovoye 50.81 320 P **P** **17 08 32.3 -1.7**
BRVK lAmb lAmb 17 08 35.9
comp=Z,25nm,0.9s
BRVK Borovoye 50.81 320 *ce*P **P** **17 08 35.0 +1.0**
BRVK pmax pmax
comp=Z,38nm,1.3s
BILL Bilibino 51.06 18 ⇑*eP* **P** **17 08 38.1 +2.4**
BILL pmax pmax
comp=Z,26nm,1.7s
NRIK Noril'sk 51.16 344 P **P** **17 08 33.9 -2.5**
NRIK lAmb lAmb 17 08 48.7
comp=Z,9.9nm,0.8s
NRIK Noril'sk 51.16 344 *ce*P **P** **17 08 35.2 -1.2**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
NRIK Noril'sk 51.16 344 P **P** **17 08 36.7 +0.4**
comp=Z,4.7nm,0.7s,baz=148,slow=8.0,SNR=8.3
NRIK LR LR 17 32 27.6
comp=Z,375nm,18.0s,baz=138,slow=39
comp=Z,4.7nm,0.7s
NWAO Narrogin (SRO) 56.63 188 LR LR 17 35 57.9
comp=Z,44nm,19.5s,baz=25,slow=38
AB31 Akbulak array 56.76 315 *i*P **P** **17 09 18.2 +0.5**
ABKAR Akbulak array 56.76 315 P **P** **17 09 17.7 0.0**
SVE Sverdlovsk 56.96 324 *eP* **P** **17 09 20.2 +1.3**
SVE pmax pmax
comp=Z,51nm,1.1s
STKA Stephens Creek 57.15 164 P **P** **17 09 22.4 +2.0**
comp=Z,2.7nm,0.7s,baz=338,slow=11,SNR=5.6
STKA LR LR 17 35 18.9
comp=Z,51nm,19.3s,baz=5.7,slow=38
comp=Z,2.7nm,0.7s
AKTO Aktyubinsk 58.04 316 P **P** **17 09 26.2 -0.5**
ARU Arti 58.06 323 P **P** **17 09 27.0 +0.3**
ARU Arti 58.06 323 *c i*P **P** **17 09 26.9 +0.3**
ARU 17 10 21.8
ARU 17 11 31.0
ARU S **S** **17 17 29.2 +2.7**
ARU SS **SS** **17 21 12.1 -5.4**
ARU pmax pmax
comp=Z,39nm,1.7s
ARU Arti 58.06 323 LR LR 17 35 34.6
comp=Z,230nm,19.2s,baz=92,slow=37
GEYT Alibeck 58.56 301 P **P** **17 09 29.5 -1.0**
GEYT Alibeck 58.56 301 P **P** **17 09 32.7 +2.1**
comp=Z,8.6nm,0.7s,baz=85,slow=5.1,SNR=12
GEYT LR LR 17 39 06.8
comp=Z,235nm,18.1s,baz=112,slow=41
comp=Z,8.6nm,0.7s
DZM Mont Dzumac 60.30 136 LR LR 17 31 47.3
comp=Z,91nm,20.8s,baz=336,slow=32
F15K North Star Dit 60.57 26 P **P** **17 09 43.1 -0.8**
C16K Lisburne Hills 60.71 24 P **P** **17 09 44.6 -0.2**
C16K lAmb lAmb 17 09 59.6
comp=Z,20nm,1.2s
WSAR Wadi Sarin 60.85 284 LR LR 17 40 13.2
comp=Z,110nm,19.4s,baz=86,slow=40
KIRV Kirov 63.06 325 *ce*P **P** **17 10 01.9 +1.2**
KIRV Kirov 63.06 325 LR LR 17 39 55.0
comp=Z,381nm,18.9s,baz=96,slow=38
G19K Purcell Mounta 63.69 26 P **P** **17 10 03.4 -1.5**
BELG Belogornoye 64.46 318 *i*P **P** **17 10 08.4 -1.7**
BELG pmax pmax
comp=Z,3.0nm,1.0s
BELG Belogornoye 64.46 318 LR LR 17 38 16.5
comp=Z,183nm,19.7s,baz=107,slow=36

IMAR	**Indian Mountai**	**65.06**	**26**	P		**P**		**17 10 13.9**	**+0.2**
KDAK	**Kodiak Island**	**66.20**	**35**	P		**P**		**17 10 17.2**	**-4.0**
KDAK	**Kodiak Island**	**66.20**	**35**	P		**P**		**17 10 17.2**	**-4.0**
KDAK				pmax		pmax			
	comp=Z,264nm,1.9s								
SUA	**Susitna One**	**66.71**	**31**	P		**P**		**17 10 22.0**	**-2.7**
KLMR	**Klimovskoe**	**67.86**	**328**	*e*P		**P**		**17 10 31.2**	**-0.6**
KLMR				pmax		pmax			
	comp=Z,20nm,1.2s								
KLMR				MLR		MLR			
	comp=Z,587nm,17.0s								
ILAR	**Eielson Array**	**68.03**	**28**	P		**P**		**17 10 32.3**	**-0.5**
ILAR	**Eielson Array**	**68.03**	**28**	P		**P**		**17 10 32.3**	**-0.5**
ILAR	**Eielson Array**	**68.03**	**28**	P		**P**		**17 10 33.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=278,slow=6.6,SNR=8.1								
ILAR				LR		LR		17 42 13.3	
	comp=Z,81nm,18.1s,baz=260,slow=38								
	comp=Z,0.8nm,0.7s								
VRH	**Novokhopyorsk**	**68.26**	**318**	*e*P		**P**		**17 10 33.5**	**-0.9**
VRH				pmax		pmax			
	comp=Z,20nm,1.0s								
GNI	**Garni**	**68.45**	**306**	LR		LR		17 44 33.7	
	comp=Z,123nm,18.2s,baz=74,slow=40								
BMAR	**Burnt Mountain**	**68.54**	**25**	P		**P**		**17 10 34.4**	**-1.6**
GOF	**Gofitskoye**	**68.61**	**311**	*ce*P		P		17 10 43.2	+6.4
KBZ	**Khabaz**	**68.99**	**310**	*ce*P		**P**		**17 10 37.5**	**-1.7**
KBZ				pmax		pmax			
	comp=Z,10.0nm,0.9s								
KBZ	**Khabaz**	**68.99**	**310**	P		**P**		**17 10 40.8**	**+1.6**
	comp=Z,7.5nm,0.9s,baz=99,slow=3.7,SNR=18								
KBZ				LR		LR		17 44 04.4	
	comp=Z,141nm,18.1s,baz=68,slow=39								
	comp=Z,7.5nm,0.9s								
KIV	**Kislovodsk**	**69.09**	**310**	⇓P		**P**		**17 10 44.0**	**+4.0**
KIV	**Kislovodsk**	**69.09**	**310**	*e*P		**P**		**17 10 39.4**	**-0.5**
KIV				pmax		pmax			
	comp=Z,12nm,1.1s								
KIV				MLR		MLR			
	comp=Z,160nm,17.0s								
LPSR	**Galich'ya Gora**	**69.68**	**320**	*e*P		**P**		**17 10 41.3**	**-1.9**
LPSR				pmax		pmax			
	comp=Z,20nm,0.9s								
VORR	**Voronezh**	**69.71**	**319**	*e*P		**P**		**17 10 42.0**	**-1.4**
VORR				pmax		pmax			
	comp=Z,20nm,0.9s								
MOS	**Moscow**	**69.77**	**323**	*e*P		**P**		**17 10 43.3**	**-0.4**
MOS				pmax		pmax			
	comp=Z,27nm,0.9s								
VORD	**Divnogorie**	**69.81**	**318**	*e*P		**P**		**17 10 44.8**	**+0.7**
VORD				pmax		pmax			
	comp=Z,9.0nm,1.0s								
VSR	**Storozhevoye**	**69.83**	**318**	*e*P		**P**		**17 10 45.1**	**+0.9**
VSR				pmax		pmax			
	comp=Z,9.0nm,1.0s								
F28M	**Old Crow**	**70.28**	**24**	P		**P**		**17 10 44.0**	**-2.7**
F28M				IAmb		IAmb		17 11 00.6	
	comp=Z,14nm,0.8s								
OBN	**Obninsk**	**70.49**	**322**	*i* P		**P**		**17 10 47.7**	**-0.5**
OBN				*i*				17 11 11.0	
OBN				pmax		pmax			
	comp=Z,13nm,1.0s								
OBN				MLR		MLR			
	comp=Z,168nm,17.0s								
OBN	**Obninsk**	**70.49**	**322**	LR		LR		17 45 11.9	
	comp=Z,244nm,18.8s,baz=354,slow=39								
SPITS	**Spitsbergen Ar**	**71.01**	**348**	P		**P**		**17 10 50.7**	**-0.3**
	comp=Z,11nm,0.9s,baz=84,slow=7.6,SNR=5.3								
SPITS				LR		LR		17 47 58.5	
	comp=Z,96nm,18.6s,baz=35,slow=41								
	comp=Z,11nm,0.9s								
ARCES	**ARCESS Array B**	**71.66**	**339**	P		**P**		**17 10 56.0**	**+1.0**
	comp=Z,3.6nm,0.9s,baz=82,slow=6.5,SNR=2.4								
ARCES				LR		LR		17 47 16.0	
	comp=Z,239nm,18.0s,baz=71,slow=40								
	comp=Z,3.6nm,0.9s								
EPYK	**Eagle Plains**	**71.80**	**25**	P		**P**		**17 10 55.4**	**-0.6**
VALR	**Valaam**	**71.86**	**330**	*i* P		**P**		**17 10 57.1**	**+0.8**
VALR				pmax		pmax			
	comp=Z,17nm,1.0s								
M29M	**Somme Creek**	**72.20**	**29**	P		**P**		**17 10 58.1**	**-0.5**
M29M				IAmb		IAmb		17 11 14.5	
	comp=Z,10.0nm,1.0s								
I30M	**Mount Dempster**	**72.28**	**26**	P		**P**		**17 10 57.3**	**-1.6**
I30M				IAmb		IAmb		17 11 12.3	
	comp=Z,10nm,0.9s								
RAYN	**Ar Rayn**	**72.33**	**288**	⇑P		**P**		**17 11 00.2**	**+0.2**
INK	**Inuvik**	**72.39**	**23**	P		**P**		**17 10 58.0**	**-1.4**
INK				IAmb		IAmb		17 11 16.8	
	comp=Z,18nm,1.3s								
INK	**Inuvik**	**72.39**	**23**	P		**P**		**17 10 58.0**	**-1.4**
INK				pmax		pmax			
	comp=Z,18nm,1.3s								
INK	**Inuvik**	**72.39**	**23**	LR		LR		17 46 37.8	
	comp=Z,129nm,18.0s,baz=358,slow=39								
J30M	**Hart River**	**72.49**	**27**	P		**P**		**17 10 56.6**	**-3.7**
J30M				IAmb		IAmb		17 11 13.8	
	comp=Z,9.8nm,0.9s								
G31M	**Satah River**	**72.56**	**24**	P		**P**		**17 10 57.2**	**-3.2**
G31M				IAmb		IAmb		17 11 12.9	
	comp=Z,7.0nm,0.8s								
FIA1	**FINESS Array S**	**74.03**	**330**	P		**P**		**17 11 06.2**	**-3.0**
FINES	**FINESS Array B**	**74.04**	**330**	*ce*P		**P**		**17 11 10.3**	**+1.1**
FINES				pmax		pmax			
	comp=Z,4.0nm,0.7s								
FINES	**FINESS Array B**	**74.04**	**330**	P		**P**		**17 11 10.6**	**+1.4**
	comp=Z,7.4nm,0.7s,baz=72,slow=5.2,SNR=18								
FINES				LR		LR		17 45 47.8	
	comp=Z,151nm,18.7s,baz=77,slow=38								
	comp=Z,7.4nm,0.7s								
FARO	**Faro, Yukon**	**74.53**	**28**	P		**P**		**17 11 10.1**	**-2.1**
VSU	**Vasula**	**74.73**	**327**	*i* P		**P**		**17 11 14.4**	**+1.1**
VSU				pmax		pmax			
	comp=Z,18nm,1.0s								
VSU	**Vasula**	**74.73**	**327**	*e*P		**P**		**17 11 12.4**	**-0.9**
SIM	**Simferopol'**	**74.75**	**313**	P		P		17 11 25.8	+12
SIM				pmax		pmax			
	comp=Z,28nm,0.8s								
MNK	**Minsk**	**75.48**	**323**	*i* P		**P**		**17 11 16.6**	**-1.2**
MNK				*i*				17 14 04.3	
MNK				*i* PPP		PPP		17 15 51.8	
MNK				*i* S		**S**		**17 20 55.7**	**-1.5**
MNK				*i* SS		**SS**		**17 25 47.3**	**+0.1**
MNK				*i* SSS		SSS		17 29 09.6	
MNK				pmax		pmax			
	comp=Z,15nm,0.9s								
MNK				pmax		pmax			
	comp=N,9.0nm,0.8s								
MNK				pmax		pmax			
	comp=E,5.0nm,0.9s								
MNK				MLR		MLR			
	comp=N,184nm,17.0s								
MNK				MLR		MLR			
	comp=Z,135nm,12.0s								
MNK				MLR		MLR			
	comp=E,94nm,17.0s								
AKASG	**Malin Array Be**	**76.01**	**319**	P		**P**		**17 11 21.8**	**+0.9**
	comp=E,1.2nm,0.5s,baz=57,slow=6.3,SNR=8.4								
AKASG				LR		LR		17 46 19.7	
	comp=E,152nm,21.0s,baz=60,slow=37								
	comp=E,1.2nm,0.5s								
AKBB	**Malin Array Si**	**76.01**	**319**	*i* P		**P**		**17 11 20.6**	**-0.2**
AKBB				pmax		pmax			
	comp=Z,10.0nm,1.1s								
KIEV	**Kiev**	**76.02**	**319**	⇑P		**P**		**17 11 25.1**	**+4.2**
KIEV	**Kiev**	**76.02**	**319**	⇑P		**P**		**17 11 25.1**	**+4.2**
ISAL	**Salakas**	**76.06**	**325**	*e*P		**P**		**17 11 21.7**	**+0.7**
MTSE	**Matsula**	**76.07**	**328**	*e*P		**P**		**17 11 20.4**	**-0.6**
BR131	**Keskin Array S**	**76.76**	**308**	*i* P		**P**		**17 11 24.6**	**-0.9**
BRTR	**Keskin Array B**	**76.76**	**308**	P		**P**		**17 11 27.0**	**+1.4**
BRTR	**Keskin Array B**	**76.76**	**308**	P		**P**		**17 11 26.9**	**+1.4**
	comp=Z,3.5nm,0.9s,baz=114,slow=3.2,SNR=13								
	comp=Z,3.5nm,0.9s								
VSVD	**Vaisvydziai**	**77.06**	**326**	*e*P		**P**		**17 11 27.8**	**+1.2**
PABE	**Paberze**	**77.22**	**325**	*e*P		**P**		**17 11 27.2**	**-0.3**
SORM	**Soroca**	**77.44**	**317**	⇑P		**P**		**17 11 30.1**	**+1.1**
SORM	**Soroca**	**77.44**	**317**	⇑P		**P**		**17 11 30.1**	**+1.1**
DLBC	**Dease Lake**	**77.52**	**31**	LR		LR		17 48 13.7	
	comp=Z,51nm,18.0s,baz=313,slow=38								
MMAI	**Mount Meron Ar**	**77.68**	**301**	P		**P**		**17 11 33.1**	**+2.4**
	comp=Z,2.3nm,0.9s,baz=98,slow=10,SNR=1.9								
MMAI				LR		LR		17 50 13.2	
	comp=Z,98nm,18.5s,baz=26,slow=39								
	comp=Z,2.3nm,0.9s								
SUW	**Suwalki**	**78.23**	**324**	*e*P		**P**		**17 11 34.1**	**+0.8**
TPGR	**Topolog**	**78.59**	**314**	⇑P		**P**		**17 11 38.9**	**+3.4**
RES	**Resolute Bay**	**78.70**	**10**	LR		LR		17 49 49.5	
	comp=Z,41nm,18.2s,baz=2.5,slow=38								
TESR	**Tescani**	**79.12**	**316**	⇓P		**P**		**17 11 42.4**	**+4.1**
EIL	**Elat**	**79.20**	**298**	LR		LR		17 48 55.9	
	comp=Z,108nm,20.7s,baz=62,slow=37								
NEEM	**North Greenlan**	**79.29**	**359**	*i* P		**P**		**17 11 41.0**	**+1.9**
NEEM				IAmb		IAmb		17 11 52.4	
	comp=Z,24nm,0.9s								
VRI	**Vrincioaia**	**79.31**	**315**	⇑P		P		17 11 46.8	+7.4
VRI	**Vrincioaia**	**79.31**	**315**	⇑P		P		17 11 46.8	+7.4
BURAR	**Bucovina Array**	**79.59**	**317**	⇓P		**P**		**17 11 44.0**	**+3.0**
BURAR	**Bucovina Array**	**79.59**	**317**	⇓P		**P**		**17 11 44.0**	**+3.0**
TURR	**Turia**	**79.70**	**316**	⇑P		**P**		**17 11 43.6**	**+2.0**
MLR	**Muntele Rosu**	**79.97**	**315**	⇓P		P		17 11 48.4	+5.2
MLR	**Muntele Rosu**	**79.97**	**315**	⇓P		P		17 11 48.4	+5.3
MLR	**Muntele Rosu**	**79.97**	**315**	LR		LR		17 50 26.9	
	comp=Z,259nm,19.1s,baz=52,slow=38								
HFS	**Hagfors**	**80.09**	**332**	P		**P**		**17 11 45.0**	**+1.7**
	comp=Z,4.9nm,0.7s,baz=53,slow=5.7,SNR=10.0								
HFS				LR		LR		17 51 43.8	
	comp=Z,283nm,19.0s,baz=64,slow=39								
	comp=Z,4.9nm,0.7s								
DOPR	**Dopca**	**80.14**	**316**	⇓P		**P**		**17 11 47.2**	**+3.3**
JMIC	**Jan Mayen**	**80.50**	**346**	LR		LR		17 51 35.5	
	comp=Z,85nm,19.8s,baz=296,slow=39								
VOIR		**80.56**	**315**	⇓P		**P**		**17 11 50.9**	**+4.6**
VOIR		**80.56**	**315**	⇓P		**P**		**17 11 50.9**	**+4.6**
NB2	**NORSAR Subarra**	**80.67**	**333**	P		**P**		**17 11 47.5**	**+1.0**
	comp=Z,11nm,1.1s,baz=61,slow=5.3								
NOA	**NORSAR Array B**	**80.67**	**333**	P		**P**		**17 11 48.1**	**+1.6**
	comp=Z,3.5nm,0.7s,baz=57,slow=5.4,SNR=8.8								
NOA				LR		LR		17 48 47.2	
	comp=Z,265nm,18.7s,baz=35,slow=37								
	comp=Z,3.5nm,0.7s								
ARR	**Arges**	**80.86**	**315**	⇑P		**P**		**17 11 50.7**	**+2.8**
HUMR	**Humele**	**80.98**	**315**	⇑P		P		17 11 53.6	+5.2
DEV	**Deva**	**81.75**	**316**	⇑P		**P**		**17 11 50.4**	**-2.1**
DEV	**Deva**	**81.75**	**316**	⇑P		**P**		**17 11 50.4**	**-2.1**
YKA	**Yellowknife Ar**	**82.05**	**24**	*ce*P		**P**		**17 11 55.0**	**+1.3**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
YKA	**Yellowknife Ar**	**82.05**	**24**	P		**P**		**17 11 55.4**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=304,slow=5.5,SNR=14								
YKA				LR		LR		17 53 28.2	
	comp=Z,86nm,18.5s,baz=290,slow=39								
	comp=Z,0.9nm,0.7s								
MDVR	**Moldovita**	**82.98**	**316**	⇑P		**P**		**17 12 02.3**	**+3.3**
VYHS	**Vyhne**	**83.08**	**320**	*e*P		**P**		**17 12 02.4**	**+3.0**
VYHS	**Vyhne**	**83.08**	**320**	*e*P		**P**		**17 12 02.4**	**+3.0**
VRAC	**Vranov**	**83.99**	**321**	⇓P		P		17 12 09.3	+5.2
VRAC	**Vranov**	**83.99**	**321**	⇓P		P		17 12 09.3	+5.2
VRAC	**Vranov**	**83.99**	**321**	P		**P**		**17 12 06.1**	**+2.1**
	comp=Z,2.8nm,0.8s,baz=44,slow=4.5,SNR=4.6								
VRAC				LR		LR		17 51 28.2	
	comp=Z,225nm,20.5s,baz=60,slow=37								
	comp=Z,2.8nm,0.8s								
MORH	**Mrgy, Hungar**	**84.26**	**318**	⇑P		P		17 12 12.0	+6.6
CLL	**Collm**	**84.97**	**324**	*e*P		P		17 12 15.0	+6.1
CLL				MLR		MLR			
	comp=Z,400nm,18.9s								
CLL	**Collm**	**84.97**	**324**	*e*Px		Px		17 12 12.0	
CLL				*ex*		x		17 12 15.0	
	comp=Z,10.0nm,1.2s								
CLL				*e*PP		**PP**		**17 15 24.0**	**-1.2**
CLL				AMS		AMS		17 55 00.0	
	comp=Z,400nm,18.9s								
RAR	**Rarotonga**	**85.22**	**115**	LR		LR		17 46 24.7	
	comp=Z,49nm,18.3s,baz=298,slow=33								
GERES	**GERESS Array B**	**85.87**	**322**	P		**P**		**17 12 16.6**	**+2.9**
	comp=Z,1.3nm,0.6s,baz=99,slow=16,SNR=3.7								
GERES				LR		LR		17 52 56.2	
	comp=Z,320nm,18.9s,baz=80,slow=37								
	comp=Z,1.3nm,0.6s								
BORG	**Borgarnes**	**88.39**	**346**	LR		LR		17 54 12.4	
	comp=Z,121nm,19.5s,baz=42,slow=37								
DAVOX	**Davos/Dischmat**	**89.15**	**322**	P		**P**		**17 12 32.3**	**+2.7**
	comp=Z,3.7nm,0.8s,baz=53,slow=5.8,SNR=6.7								
DAVOX				LR		LR		17 56 37.6	
	comp=Z,334nm,19.5s,baz=40,slow=38								
	comp=Z,3.7nm,0.8s								
NEW	**Newport**	**89.28**	**36**	LR		LR		17 57 04.1	
	comp=Z,31nm,18.1s,baz=314,slow=39								
VAE	**Valguarnera**	**91.31**	**312**	LR		LR		18 01 37.6	
	comp=Z,55nm,18.9s,baz=98,slow=41								
PPT	**Papeete**	**92.37**	**108**	LR		LR		17 45 03.9	
	comp=Z,39nm,21.9s,baz=275,slow=30								
PPT2	**Papeete2**	**92.37**	**108**	*e*LR		LR		17 42 13.8	
	comp=Z,110nm,26.0s								
PPT2				*e*LR		LR		17 42 22.9	
	comp=Z,97nm,24.2s								
FRB	**Frobisher Bay**	**92.38**	**6**	LR		LR		17 55 45.6	
	comp=Z,153nm,21.3s,baz=0.0,slow=36								
NVAR	**Mina Array Bea**	**94.20**	**45**	P		**P**		**17 12 55.5**	**+2.2**
	comp=Z,1.1nm,0.9s,baz=285,slow=4.3,SNR=4.8								
NVAR				LR		LR		17 47 17.3	
	comp=Z,54nm,21.5s,baz=334,slow=30								
	comp=Z,1.1nm,0.9s								
TBI	**Tubuai**	**94.77**	**113**	*e*LR		LR		17 43 23.8	
	comp=Z,657nm,34.2s								
ELK	**Elko**	**94.79**	**42**	LR		LR		17 49 01.3	
	comp=Z,47nm,21.5s,baz=331,slow=31								
KEST	**Kesra**	**95.69**	**313**	LR		LR		18 00 43.8	
	comp=Z,90nm,19.2s,baz=272,slow=38								
ULM	**Lac du Bonnet**	**97.97**	**25**	LR		LR		18 01 33.1	
	comp=Z,47nm,18.8s,baz=302,slow=38								
PFO	**Pinyon Flats O**	**98.17**	**48**	LR		LR		17 48 46.2	
	comp=Z,61nm,21.7s,baz=272,slow=30								
ESDC	**Sonseca Array**	**101.46**	**323**	PP		**PP**		**17 17 31.7**	**-3.0**
	comp=Z,0.6nm,0.8s,baz=27,slow=8.8,SNR=5.0								
VNA3	**Neumayer Olymp**	**125.83**	**196**	⇓P		**Pdif**		**17 15 22.1**	**+8.9**
	comp=Z,0.2nm,0.1s								
BAUV	**El Baul**	**145.17**	**24**			**PKPdf**		**17 19 12.6**	**+0.4**

TAP 24 16:59:56.1, 24.00N×121.59E, h8km, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**147**	*i* P		Pg	16 59 58.0	+0.4
	baz=138							
HWA				*i* S		Sg	16 59 59.6	+0.9
	baz=138							
TWD	**Chiawan**	**0.08**	**5**	*i* P		Pg	16 59 59.1	+0.9
	baz=10.0							
TWD				*i* S		Sg	17 00 00.9	+1.2
	baz=10.0							
ETM	**Tongmen**	**0.09**	**249**	*i* P		Pg	16 59 58.9	+0.5
	baz=248							
ETM				*i* S		Sg	17 00 00.4	+0.4
	baz=248							
ETL	**Fush Village**	**0.16**	**11**	P		Pg	17 00 00.5	+0.9
	baz=11							
ETL				S		Sg	17 00 03.2	+1.3
	baz=11							
LXIB	**Xiulin Townshi**	**0.16**	**277**	P		Pg	17 00 00.4	+0.8
	baz=277							
LXIB				S		Sg	17 00 03.6	+1.5
	baz=277							
NACB	**Ninganchiao**	**0.17**	**2**	*i* P		Pg	17 00 00.6	+0.9
	baz=1.0							
NACB				*i* S		Sg	17 00 03.5	+1.3
	baz=1.0							
SHUL	**Shoufeng**	**0.21**	**186**	P		Pg	17 00 01.7	+1.3
	baz=186							
SHUL				S		Sg	17 00 05.7	+2.4
	baz=186							
ETLH	**Xiulin Townshi**	**0.23**	**335**	P		Pg	17 00 01.9	+1.1
	baz=334							
ETLH				S		Sg	17 00 05.3	+1.4
	baz=334							
TEGC	**Jichi Village**	**0.29**	**189**	P		Pb	17 00 03.1	-0.5
	baz=187							
TEGC				*e*S		Sb	17 00 08.6	0.0
	baz=187							
WHF	**Hehuan Shan**	**0.33**	**296**	*i* P		Pb	17 00 03.8	-0.7
	baz=296							
WHF				*i* S		Sb	17 00 08.8	-1.3
	baz=296							
WARBT	**Fenglin Townsh**	**0.34**	**214**	P		Pg	17 00 02.7	0.0
	baz=213							
WARBT				S		Sb	17 00 09.4	-0.5
	baz=213							
EAHA	**Aohua**	**0.35**	**23**	*e*S		Sb	17 00 09.5	-0.9
	baz=22							
EGFH	**Guangfu**	**0.36**	**204**	P		Pg	17 00 03.5	+0.3
	baz=204							
EGFH				S		Sb	17 00 09.8	-0.7
	baz=204							
OWD	**Renai**	**0.38**	**263**	P		Pb	17 00 04.5	-0.7
	baz=263							
OWD				*e*S		Sg	17 00 09.9	+1.2
	baz=263							
CHGB	**Renai**	**0.38**	**279**	P		Pb	17 00 04.8	-0.5
	baz=278							
CHGB				S		Sb	17 00 10.9	-0.6
	baz=278							
FUSS	**Fushou**	**0.40**	**308**	*i* P		Pb	17 00 05.4	-0.2
	baz=307							
FUSS				S		Sb	17 00 11.4	-0.6
	baz=307							
WUSB	**Renai**	**0.43**	**269**	P		Pb	17 00 05.7	-0.4
	baz=268							
WUSB				S		Sb	17 00 12.7	-0.1
	baz=268							
ENA	**Nanau**	**0.45**	**18**	*i* P		Pb	17 00 05.8	-0.5
	baz=19							
ENA				S		Sb	17 00 12.3	-0.8
	baz=19							
TWT	**Tachien**	**0.45**	**304**	*i* P		Pb	17 00 06.8	+0.3
	baz=302							
TWT				*i* S		Sb	17 00 13.2	-0.2
	baz=302							
NNSB	**Datong**	**0.47**	**336**	P		Pb	17 00 06.6	-0.1
	baz=336							
NNSB				S		Sb	17 00 13.0	-0.8
	baz=336							
EWUT	**Wuta**	**0.48**	**21**	P		Pb	17 00 06.2	-0.5
	baz=21							
EWUT				S		Sb	17 00 13.2	-0.7
	baz=21							
VWDT	**VWDT**	**0.48**	**239**	P		Pb	17 00 06.4	-0.3
	baz=239							
VWDT				S		Sb	17 00 13.1	-0.8
	baz=239							
NNS	**Nan Shan**	**0.48**	**336**	*i* P		Pb	17 00 07.0	+0.1
	baz=336							
NNS				*i* S		Sb	17 00 14.2	0.0
	baz=336							
HGSD	**Ruisui**	**0.53**	**197**	*e*P		Pb	17 00 08.1	+0.5
	baz=196							
HGSD				*e*S		Sb	17 00 15.7	+0.3
	baz=196							
LATG	**Datong**	**0.54**	**354**	P		Pb	17 00 07.6	-0.3
	baz=353							
LATG				*e*S		Sb	17 00 15.6	-0.1
	baz=353							
NDT	**Datong Townshi**	**0.60**	**353**	*e*P		Pb	17 00 09.2	+0.3
	baz=353							
NDT				*e*S		Sb	17 00 17.6	0.0
	baz=353							
SSLB	**Suanglung**	**0.62**	**250**	*e*P		Pb	17 00 08.8	-0.3
	baz=249							
SSLB				*e*S		Sg	17 00 16.2	0.0
	baz=249							
WCS	**Beigang Elemen**	**0.62**	**275**	*e*P		Pb	17 00 09.5	+0.3
	baz=275							
WCS				*e*S		Sb	17 00 19.1	+1.0
	baz=275							
ENTT	**Nioudou**	**0.64**	**358**	*e*P		Pb	17 00 09.8	+0.3
	baz=358							
ENTT				*e*S		Sb	17 00 18.9	+0.3
	baz=358							
SMLT	**Sun Moon Lake**	**0.64**	**260**	*e*P		Pb	17 00 09.6	0.0
	baz=259							
SMLT				*e*S		Sb	17 00 19.0	+0.2
	baz=259							
WHP	**Taichung City**	**0.65**	**295**	*e*P		Pb	17 00 10.1	+0.3
	baz=295							
WHP				*e*S		Sn	17 00 21.3	-0.9
	baz=295							
TWC	**Suao**	**0.65**	**21**	*e*P		Pb	17 00 09.4	-0.3
	baz=22							
TWC				*e*S		Sb	17 00 19.5	+0.5
	baz=22							
YULB	**Yu-li**	**0.66**	**204**	*e*P		Pg	17 00 09.1	+0.2
	baz=203							
YULB				*e*S		Sb	17 00 18.6	-0.7
	baz=203							
YHNB	**Yeheng**	**0.69**	**344**	*e*P		Pb	17 00 11.3	+0.7
	baz=343							
YHNB				*e*S		Sb	17 00 20.6	+0.4
	baz=343							
NSK	**Sanguang**	**0.70**	**343**	*e*P		Pb	17 00 11.4	+0.7
	baz=343							
NSK				*e*S		Sb	17 00 21.1	+0.5
	baz=343							
TWE	**Neicheng**	**0.72**	**6**	*e*P		Pb	17 00 11.3	+0.3
	baz=6.0							
TWE				*e*S		Sb	17 00 21.5	+0.5
	baz=6.0							
FUSB	**Fushanzhiwuyua**	**0.76**	**360**	*e*P		Pb	17 00 12.2	+0.6
	baz=359							
FUSB				*e*S		Sb	17 00 22.3	+0.2
	baz=359							
NSTT	**Nanjuang**	**0.83**	**320**	*e*P		Pn	17 00 14.2	+0.1
	baz=319							
NSTT				*e*S		Sn	17 00 25.6	-0.8
	baz=319							
LIOB	**Emei**	**0.83**	**321**	*e*P		Pn	17 00 13.9	-0.2
	baz=320							
LIOB				*e*S		Sb	17 00 25.2	+1.1
	baz=320							

IDC 24 17:09:28.9±7.8, 19.33S×178.63W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=322.1km s-min=70.9km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.19**	**261**	P		P	17 17 39.9	-0.1
	0.3nm,0.3s

0.6nm,0.3s,baz=98,slow=8.2,SNR=14
0.6nm,0.3s
FINES FINESS Array B 133.62 337 PKP PKPdf 17 39 06.2 -0.2
0.5nm,0.4s,baz=58,slow=3.6,SNR=5.2

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*IDC **24** 17:25:09.8±1.8,2.61S×128.29E, h0km, mb3.5/3, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=138.6km s-min=24.1km az=68.0*
*DJA **24** 17:25:12.3±0.3,3.5S×12.7E±*, h10km, M3.8/12, mb3.9/3, MLv3.7/12*
ISC 24 17:25:15.2±1.1, 3.12S±0.08×127.40E±0.06, h35km, n11, σ1s35/11, mb3.5/3, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.32**	**248**	P	**Pn**	**17 25 21.5**	**-1.8**
SANI	**Sanana**	**1.76**	**307**	P	**Pn**	**17 25 41.7**	**-1.5**
LBMI	**Labuha**	**2.47**	**2**	P	**Pn**	**17 25 52.3**	**-0.6**
BNDI	**Bandanaira**	**2.87**	**119**	P	**Pn**	**17 25 57.6**	**-0.8**
SWI	**Sorong**	**4.47**	**60**	P	**Pn**	**17 26 18.9**	**-1.5**
FAKI	**Fak Fak**	**4.85**	**88**	P	**Pn**	**17 26 24.2**	**-1.5**
LUWI	**Luwuk**	**5.06**	**294**	P	**Pn**	**17 26 29.1**	**+0.5**
	18nm,1.3s,0.1nm						
WRA	**Warramunga Arr**	**18.04**	**158**	P	**P**	**17 29 24.1**	**+0.7**
	0.6nm,0.3s,baz=340,slow=11,SNR=27						
	3.8nm,0.6s						
ASAR	**Alice Springs**	**21.37**	**163**	P	**P**	**17 30 01.1**	**+1.3**
	3.5nm,0.7s,baz=343,slow=11,SNR=41						
	3.5nm,0.7s						
MKAR	**Makanchi Array**	**63.58**	**327**	P	**P**	**17 35 43.2**	**+0.8**
	0.3nm,0.8s,baz=128,slow=8.0,SNR=4.0						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**67.87**	**329**	P	**P**	**17 36 10.4**	**+0.5**
	0.2nm,0.5s,baz=127,slow=6.1,SNR=2.7						
	0.2nm,0.5s						

IDC 24 17:28:57.0±1.6, 6.75S×129.59E, h0km, mb3.8/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=84.2km s-min=29.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**161**	Pn	Pn	17 32 15.2	-0.2
	0.4nm,0.3s,baz=341,slow=14,SNR=13						
WRA				Sn	Sn	17 34 36.9	-14
	0.8nm,0.3s,baz=329,slow=24,SNR=11						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**17.33**	**167**	P	Pn	17 33 00.6	+0.2
	0.1nm,0.3s,baz=341,slow=9.0,SNR=4.8						
ASAR				S	Sn	17 35 60.0	-14
	0.3nm,0.3s,baz=348,slow=27,SNR=5.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**67.79**	**327**	P	P	17 39 56.7	0.0
	0.4nm,0.4s,baz=120,slow=8.2,SNR=16						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**72.08**	**329**	P	P	17 40 23.1	+0.1
	0.5nm,0.5s,baz=130,slow=5.2,SNR=8.9						
	0.5nm,0.5s						

IDC 24 17:59:43.8±2.2, 6.59S×128.82E, h0km, mb3.0/1, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=117.7km s-min=32.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.31**	**159**	Pn	Pn	18 03 07.9	0.0
	0.1nm,0.3s,baz=337,slow=12,SNR=8.5						
WRA				Sn	Sn	18 05 32.7	-15
	0.2nm,0.3s,baz=337,slow=22,SNR=9.2						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**17.66**	**164**	P	Pn	18 03 51.5	0.0
	0.2nm,0.3s,baz=339,slow=10,SNR=34						
ASAR				S	Sn	18 06 57.0	-12
	0.2nm,0.7s,baz=355,slow=22,SNR=1.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**67.25**	**327**	P	P	18 10 40.2	0.0
	0.1nm,0.5s,baz=111,slow=7.9,SNR=1.2						
	0.1nm,0.5s						

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*NEIC **24** 18:10:39.6±0.8,36.86N±0.01×97.44W±0.01, h3km±1km, Error ellipse: s-maj=1.9km s-min=1.1km az=218.0*
TUL 24 18:10:40.5±0.7, 36.87N±0.01×97.44W±0.01, h8km±8km, ML2.6, mb_Lg2.3/12(NEIC), ML2.6/56(NEIC), Error ellipse: s-maj=2.2km s-min=0.8km az=46.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.14**	**349**	Pg	Pg	18 10 43.4	-0.2
KAN13				Sg	Sg	18 10 45.8	+0.1
KAN13				IAML		18 10 46.0	
	comp=N,1μm,0.3s						
BLOK	**Blackwell**	**0.21**	**121**	Pg	Pg	18 10 44.6	-0.3
BLOK				Sg	Sg	18 10 47.7	-0.1
BLOK				IAML		18 10 49.5	
	comp=E,2μm,0.2s						
BLOK				IAML		18 10 49.8	
	comp=N,2μm,0.2s						
KAN09	**Caldwell North**	**0.30**	**332**	Pg	Pg	18 10 46.2	-0.2
KAN09				Sg	Sg	18 10 50.5	0.0
KAN09				IAML		18 10 53.6	
	comp=N,1μm,0.2s						
KAN17	**Caldwell West**	**0.31**	**304**	Pg	Pg	18 10 46.3	-0.3
KAN17				Sg	Sg	18 10 50.7	-0.1
KAN17				IAML		18 10 50.9	
	comp=E,702nm,0.3s						
GC02	**Grant County #**	**0.33**	**267**	Pg	Pg	18 10 46.6	-0.5
GC02				Sg	Sg	18 10 51.4	-0.1
KAN01	**Argonia South**	**0.38**	**318**	Pg	Pg	18 10 47.6	-0.3
KAN01				Sg	Sg	18 10 52.9	-0.1
KAN01				IAML		18 10 53.3	
	comp=E,777nm,0.2s						
KAN01				IAML		18 10 53.3	
	comp=N,543nm,0.2s						
KAN05	**Bluff City Nor**	**0.42**	**305**		Pg	18 10 48.2	-0.4
KAN05				Sg	Sg	18 10 54.0	-0.1
KAN05				IAML		18 10 56.0	
	comp=N,696nm,0.2s						
KAN05				IAML		18 10 56.6	
	comp=E,581nm,0.2s						
KAN14	**Manchester OK**	**0.42**	**282**	Pg	Pg	18 10 48.3	-0.5
KAN14				Sg	Sg	18 10 54.1	-0.3
KS21	**Milan North St**	**0.45**	**337**	IAML		18 10 55.7	
	comp=E,445nm,0.3s						
KS21	**Milan North St**	**0.45**	**337**	Pg	Pg	18 10 49.0	-0.3
KS21				Sg	Sg	18 10 54.9	-0.3
KAN06	**Argonia West S**	**0.50**	**319**	Pg	Pg	18 10 49.8	-0.4
KAN06				Sg	Sg	18 10 56.8	0.0
KAN06				IAML		18 10 57.2	
	comp=E,443nm,0.1s						
KAN06				IAML		18 10 58.8	
	comp=N,392nm,0.2s						
KAN08	**Anthony NE Sta**	**0.55**	**310**	Pg	Pg	18 10 50.8	-0.3
KAN08				Sg	Sg	18 10 58.4	0.0
KAN08				IAML		18 11 00.1	
	comp=E,449nm,0.3s						
CROK	**Carrier**	**0.57**	**230**		Pg	18 10 50.8	-0.6
CROK				IAML		18 11 09.0	
	comp=E,506nm,0.3s						
KAN10	**Anthony SW Sta**	**0.58**	**296**	Pg	Pg	18 10 51.2	-0.5
KAN10				IAML		18 11 01.1	
	comp=N,257nm,0.1s						
OK048	**Pawnee Station**	**0.61**	**138**	Pg	Pg	18 10 51.5	-0.8
OK048				IAML		18 11 00.1	
	comp=N,196nm,0.4s						
OK051	**E0350 and S346**	**0.61**	**127**	Pg	Pg	18 10 52.0	-0.3
OK051				IAML		18 11 05.1	
	comp=N,226nm,0.1s						
OK051				IAML		18 11 08.0	
	comp=N,246nm,0.2s						
KAN12	**Harper NE Stat**	**0.61**	**314**	Pg	Pg	18 10 52.0	-0.4
KAN12				Sg	Sg	18 11 00.2	-0.2
OK032	**Salt Plains WL**	**0.62**	**264**	Pg	Pg	18 10 50.8	-1.7
T35A	**Sooner Cattle**	**0.75**	**86**		Pg	18 10 54.1	-0.8
QUOK	**Quay**	**0.92**	**139**		Pg	18 10 57.3	-0.8
QUOK				Sg	Sg	18 11 09.2	-0.8
QUOK				IAML		18 11 15.9	
	comp=N,188nm,0.2s						
QUOK				IAML		18 11 16.4	
	comp=E,176nm,0.2s						
OK033	**Mehan**	**0.92**	**154**	Pg	Pg	18 10 57.4	-0.8
OK052	**Battle Ridge R**	**1.02**	**149**	Pg	Pg	18 10 58.5	-1.6
OK052				Sg	Sg	18 11 12.2	-1.0
	comp=E,146nm,0.2s						
OK035	**E0210 Rd and N**	**1.03**	**261**	Pg	Pg	18 10 58.7	-1.5
OK035				IAML		18 11 24.6	
	comp=E,124nm,0.3s						
OK035				IAML		18 11 25.2	
	comp=E,95nm,0.3s						
OK029	**Liberty Lake**	**1.07**	**180**		Pg	18 11 00.1	-1.1
OK029				Sg	Sb	18 11 15.6	+0.1
OK038	**West end E0370**	**1.11**	**250**		Pg	18 11 00.8	-1.1
OK038				Sg	Sg	18 11 16.0	-0.4
ADOK	**Arcadia Dam**	**1.22**	**177**	Pg	Pb	18 11 02.5	-1.3
ADOK				Sg	Sb	18 11 18.8	-0.9
DEOK	**Depew**	**1.28**	**143**		Pn	18 11 03.4	-1.3
DEOK				Sg	Sb	18 11 20.8	-0.6
DEOK				IAML		18 11 25.4	
	comp=N,104nm,0.4s						
U32A	**Winter Ranch,**	**1.35**	**249**		Pn	18 11 04.9	-0.7
U32A				Sg	Sb	18 11 22.7	-0.7
U32A				IAML		18 11 25.0	
	comp=E,92nm,0.1s						
OKCSW	**OKLAHOMA CITY**	**1.46**	**180**		Pn	18 11 07.1	-0.1
OKCSW					Sg	18 11 27.2	-0.3
CSTR	**Hydro, Custer**	**1.58**	**220**		Pn	18 11 08.7	-0.2
CSTR					Sb	18 11 30.5	+0.2
FNO	**Franklin**	**1.61**	**179**		Pn	18 11 09.0	-0.3
FNO					Sb	18 11 31.6	+0.6
TUL3	**Leonard**	**1.64**	**125**	Pg	Pn	18 11 09.8	+0.1
TUL3					Sb	18 11 31.9	0.0
TUL3				IAmb_Lg		18 11 32.5	
	comp=Z,12nm,0.9s						
W35A	**Tecumseh**	**1.78**	**165**		Pn	18 11 11.9	+0.4
ELIS	**Ellis County**	**1.78**	**244**		Pn	18 11 11.5	-0.2
ELIS					Sb	18 11 35.8	-0.2
R32A	**Long Quarter,**	**1.85**	**327**		Pb	18 11 13.6	-1.0
RLO	**Rose Lookout**	**2.07**	**109**		Pn	18 11 16.7	+1.0
X34A	**Smith Ranch, M**	**2.29**	**188**		Pn	18 11 17.8	-0.8
KSU1	**Kansas State U**	**2.32**	**16**	Pn	Pn	18 11 18.4	-0.6
WMOK	**Wichita Mounta**	**2.39**	**207**	Pn	Pn	18 11 18.9	-1.1
U38A	**Gravette**	**2.50**	**99**		Pn	18 11 21.1	-0.4
CBKS	**Cedar Bluff**	**2.66**	**318**	Pn	Pn	18 11 22.6	-1.0
X37A	**Clayton**	**2.83**	**143**	IAmb_Lg		18 12 13.5	
	comp=Z,9.8nm,0.7s						
SMWD	**Samnorwood**	**2.87**	**233**	Pn	Pn	18 11 26.6	-0.1
HHAR	**Hobbs**	**2.88**	**101**	Pn	Pn	18 11 26.5	-0.2
LOOK	**Love County**	**2.88**	**176**	Pn	Pn	18 11 25.8	-0.9
WTFS	**Witchita Falls**	**3.21**	**195**		Pn	18 11 29.9	-1.3
S39A	**Bolivar**	**3.39**	**75**		Pn	18 11 33.4	-0.3
Z35A	**Perchaven, San**	**3.54**	**177**	Pn	Pn	18 11 34.9	-0.8
PLPT	**Palo Pinto**	**4.11**	**190**	Pn	Pn	18 11 42.0	-1.6
P38A	**Dawn**	**4.13**	**47**	Pn	Pn	18 11 42.5	-1.3
P38A				IAmb_Lg		18 12 51.9	
	comp=Z,10.0nm,0.7s						
N35A	**Tabor**	**4.22**	**19**	Pn	Pn	18 11 42.4	-2.8
RTBA	**Rita Blanca**	**4.28**	**266**	Pn	Pn	18 11 43.9	-2.2
R40A	**Maddies Statio**	**4.35**	**69**	Pn	Pn	18 11 46.7	-0.1
R40A				IAmb_Lg		18 13 00.0	
	comp=Z,7.3nm,1.1s						
FCAR	**Ozark Folk Cen**	**4.40**	**101**	Pn	Pn	18 11 45.5	-2.2
X40A	**Basin Creek Fa**	**4.44**	**121**	Pn	Pn	18 11 45.4	-2.8
WHAR	**Wooly Hollow**	**4.46**	**109**	Pn	Pn	18 11 46.9	-1.6
BGNE	**Belgrade**	**4.56**	**353**	Pn	Pn	18 11 48.6	-1.3
P40A	**Paris**	**5.01**	**56**	Pn	Pn	18 11 53.7	-2.2
CCM	**Cathedral Cave**	**5.07**	**75**	Pn	Pn	18 11 54.8	-2.0
CCM				IAmb_Lg		18 13 29.2	
	comp=Z,5.8nm,0.9s						
N38A	**Joes South For**	**5.11**	**39**	Pn	Pn	18 11 55.7	-1.6
PBMO	**Poplar Bluff**	**5.63**	**89**	Pn	Pn	18 12 02.0	-2.5
BRDY	**Brady**	**5.72**	**193**	Pn	Pn	18 12 03.3	-2.5

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*NEIC **24** 18:11:25.5±1.5,56.37N±0.04×148.86W±0.10, h26km±9km, ML3.5/70,ML3.2(AEIC), Error ellipse: s-maj=8.2km s-min=5.3km az=71.0*
*AEIC **24** 18:11:29.1±1.1,56.48N±0.09×148.9W±0.1, h5km±7km, Error ellipse: s-maj=12.9km s-min=8.7km az=166.0*
ISC 24 18:11:23.6±1.7, 56.48N±0.09×148.89W±0.06, h10km, n172, σ1s45/174, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.40**	**304**		**Pn**	**18 12 04.1**	**+1.2**
KDAK					**Sn**	**18 12 30.6**	**-1.6**
OHAK	**Old Harbor**	**2.52**	**289**		**Pn**	**18 12 05.4**	**+0.8**
OHAK					**Sn**	**18 12 33.9**	**-1.5**
OHAK	**Old Harbor**	**2.52**	**289**	P	**Pn**	**18 12 05.4**	**+0.8**
	baz=105						
OHAK				S	**Sn**	**18 12 33.9**	**-1.5**
	baz=105						
SYI	**Shuyak Island**	**2.85**	**320**		**Pn**	**18 12 10.7**	**+1.6**
SYI					**Sn**	**18 12 43.8**	**+0.5**
SYI	**Shuyak Island**	**2.85**	**320**	IAML		18 12 44.8	
	comp=E,110nm,1.8s						
Q20K	**Shuyak Island**	**2.85**	**320**	P	**Pn**	**18 12 10.7**	**+1.6**
	baz=137						
Q20K				S	**Sn**	**18 12 43.8**	**+0.4**
	baz=137						
Q23K	**Middleton Isla**	**3.25**	**24**		**Pn**	**18 12 15.5**	**+1.0**
Q23K	**Middleton Isla**	**3.25**	**24**	P	**Pn**	**18 12 15.7**	**+1.1**
	baz=206						
MID	**Middleton Isla**	**3.25**	**24**	Pn	**Pn**	**18 12 15.4**	**+0.8**
CNPM	**China Poot**	**3.30**	**339**		**Pn**	**18 12 16.6**	**+1.4**
BRSE	**Bradley Lake S**	**3.41**	**344**		**Pn**	**18 12 18.1**	**+1.3**
BRSE					**Sn**	**18 12 56.5**	**-0.9**
BRSE	**Bradley Lake S**	**3.41**	**344**	P	**Pn**	**18 12 18.1**	**+1.3**
	baz=163						
BRSE				S	**Sn**	**18 12 56.5**	**-0.9**
	baz=163						
BRLK	**Bradley Lake**	**3.46**	**343**		**Pn**	**18 12 18.4**	**+0.9**
HOM	**Homer**	**3.50**	**337**	Pn	**Pn**	**18 12 20.2**	**+2.2**
HOM				IAML		18 13 33.2	
	comp=E,176nm,2.0s						
Q19K	**Cape Douglas,**	**3.54**	**316**		**Pn**	**18 12 20.5**	**+2.0**
Q19K				IAML		18 14 09.0	
	comp=N,180nm,1.9s						
Q19K	**Cape Douglas,**	**3.54**	**316**	P	**Pn**	**18 12 20.0**	**+1.4**
	baz=132						
P23K	**Montague Islan**	**3.61**	**12**		**Pn**	**18 12 20.8**	**+1.2**
P23K					**Sn**	**18 13 00.1**	**-2.1**
P23K	**Montague Islan**	**3.61**	**12**	P	**Pn**	**18 12 20.8**	**+1.2**
	baz=193						
P23K				S	**Sn**	**18 13 00.1**	**-2.1**
	baz=193						
SEW	**Seward**	**3.65**	**356**		**Sn**	**18 13 01.3**	**-1.6**
SEW	**Seward**	**3.65**	**356**	S	**Sn**	**18 13 01.3**	**-1.6**
	baz=175						
P19K	**Oil Pt**	**3.93**	**326**	Pn	**Pn**	**18 12 26.2**	**+2.3**
P19K				IAML		18 13 14.0	
	comp=E,81nm,1.0s						
P19K				IAML		18 13 15.3	
	comp=N,94nm,0.4s						
O22K	**Cooper Landing**	**4.04**	**354**	Pn	**Pn**	**18 12 26.4**	**+1.0**
O22K				IAML		18 13 14.9	
	comp=E,76nm,2.0s						
O22K				IAML		18 13 18.0	
	comp=N,86nm,1.4s						
SLKM	**Skilak Lake**	**4.10**	**351**		**Pn**	**18 12 27.5**	**+1.2**
SLKM					**Sn**	**18 13 12.8**	**-1.4**
O20K	**Slope Mountain**	**4.11**	**333**		**Pn**	**18 12 28.0**	**+1.5**
O20K	**Slope Mountain**	**4.11**	**333**	P	**Pn**	**18 12 28.0**	**+1.5**
	baz=150						
HIN	**Hinchinbrook I**	**4.12**	**17**		**Pn**	**18 12 27.9**	**+1.3**
HIN	**Hinchinbrook I**	**4.12**	**17**	IAML		18 14 43.5	
	comp=N,82nm,2.0s						
HIN				IAML		18 15 10.3	
	comp=E,55nm,1.5s						
IVE	**Iliamna Volcan**	**4.16**	**330**		**Sn**	**18 13 14.5**	**-1.4**
ILSW	**Iliamna Southw**	**4.17**	**329**	Pn	**Pn**	**18 12 27.5**	**+0.2**
ILSW				IAML		18 13 18.2	
	comp=N,30nm,0.5s						
KAIM	**Kayak Island**	**4.19**	**33**		**Pn**	**18 12 28.7**	**+1.2**
KAIM	**Kayak Island**	**4.19**	**33**	P	**Pn**	**18 12 29.0**	**+1.6**
	baz=216						
EYAK	**Cordova Ski Ar**	**4.40**	**21**		**Pn**	**18 12 31.9**	**+1.5**
EYAK	**Cordova Ski Ar**	**4.40**	**21**	P	**Pn**	**18 12 31.8**	**+1.5**
	baz=203						
CAPN	**Captain Cook N**	**4.46**	**346**	Pn	**Pn**	**18 12 31.7**	**+0.6**
CAPN				IAML		18 13 36.7	
	comp=E,91nm,1.7s						
P18K	**Big Mountain,**	**4.46**	**313**		**Pn**	**18 12 32.4**	**+1.1**
P18K	**Big Mountain,**	**4.46**	**313**	P	**Pn**	**18 12 32.4**	**+1.1**
	baz=128						
FID	**Port Fidalgo**	**4.46**	**15**		**Pn**	**18 12 32.4**	**+1.2**
	comp=E,26nm,1.9s						
FID				IAML		18 15 02.2	
	comp=N,25nm,1.9s						
RSO	**Redoubt South**	**4.48**	**335**	Pn	**Pn**	**18 12 32.7**	**+1.1**
RAGM	**Ragged Mountai**	**4.50**	**28**	Pn	**Pn**	**18 12 33.2**	**+1.4**
RAGM				IAML		18 13 26.9	
	comp=E,69nm,1.5s						
SUCK	**Suckling Hills**	**4.50**	**35**	Pn	**Pn**	**18 12 33.6**	**+1.9**
SUCK				IAML		18 13 14.1	
	comp=N,46nm,1.7s						
SUCK				IAML		18 15 39.1	
	comp=E,64nm,1.2s						
GLI	**Glacier Island**	**4.51**	**11**		Pn	**18 12 33.1**	**+1.2**
GLI				IAML		18 13 09.3	
	comp=N,25nm,2.0s						
GLI				IAML		18 13 46.1	
	comp=E,24nm,2.0s						
GLI	**Glacier Island**	**4.51**	**11**	P	**Pn**	**18 12 33.3**	**+1.4**
	baz=193						
HMT	**Hamilton**	**4.57**	**30**		**Pn**	**18 12 34.3**	**+1.6**
HMT	**Hamilton**	**4.57**	**30**	IAML		18 13 26.5	
	comp=E,83nm,1.3s						
HMT				IAML		18 13 27.9	
	comp=N,82nm,1.3s						
RC01	**Rabbit Creek A**	**4.64**	**355**	Pn	**Pn**	**18 12 34.7**	**+1.0**
RC01				IAML		18 13 49.1	
	comp=E,22nm,1.9s						
GOAT	**Goat Mountain**	**4.65**	**26**		**Pn**	**18 12 35.7**	**+1.8**
FIS	**Fire Island**	**4.73**	**352**	Pn	**Pn**	**18 12 37.1**	**+2.3**
FIS				IAML		18 13 53.2	
	comp=E,58nm,1.9s						
FIS				IAML		18 14 50.5	
	comp=N,68nm,1.9s						
O18K	**Koktuh Hills**	**4.75**	**318**	Pn	**Pn**	**18 12 36.2**	**+0.9**
O18K				IAML		18 13 33.5	
	comp=N,19nm,1.9s						
O18K				IAML		18 14 03.7	
	comp=E,18nm,1.9s						
BERG	**Berg Lake**	**4.78**	**33**			**18 12 37.0**	**+1.4**
BERG	**Berg Lake**	**4.78**	**33**	IAML		18 15 38.2	
	comp=E,63nm,0.4s						
BERG				IAML		18 15 39.5	
	comp=N,66nm,0.4s						
SNH	**Sunshine Point**	**4.89**	**38**	Pn	**Pn**	**18 12 38.8**	**+1.6**
SNH				IAML		18 15 28.3	
	comp=E,58nm,1.4s						
KNK	**Knik Glacier**	**4.95**	**2**	Pn	**Pn**	**18 12 39.2**	**+1.3**
KHIT	**Khitrov Hills**	**4.96**	**34**		**Pn**	**18 12 39.1**	**+1.1**
BMRM	**Bremner River**	**5.02**	**25**		**Pn**	**18 12 40.0**	**+1.0**
BMRM	**Bremner River**	**5.02**	**25**	P	**Pn**	**18 12 40.0**	**+1.0**
	baz=208						
WAX	**Waxell Ridge**	**5.09**	**36**		**Pn**	**18 12 41.4**	**+1.5**
SUA	**Susitna One**	**5.09**	**350**	Pn	**Pn**	**18 12 41.0**	**+1.1**
SUA				IAML		18 14 10.6	
	comp=E,20nm,2.0s						
PMR	**Palmer**	**5.13**	**359**	Pn	**Pn**	**18 12 41.5**	**+1.1**
PMR				IAML		18 15 54.8	
	comp=N,14nm,1.9s						
MESA	**MESA**	**5.21**	**42**	Pn	**Pn**	**18 12 42.9**	**+1.3**
N19K	**Bonanza Creek**	**5.23**	**328**	Pn	**Pn**	**18 12 43.0**	**+1.1**
N19K				IAML		18 13 27.8	
	comp=N,14nm,1.8s						
N19K				IAML		18 14 39.8	
	comp=E,12nm,1.9s						
CRQM	**Cirque**	**5.24**	**33**		**Pn**	**18 12 43.3**	**+1.3**
CRQM	**Cirque**	**5.24**	**33**	IAML		18 15 33.6	
	comp=E,36nm,0.8s						
CRQM				IAML		18 15 37.5	
	comp=N,44nm,1.0s						
CRQE	**Cirque**	**5.25**	**33**	P	**Pn**	**18 12 43.3**	**+1.2**
	baz=218						
KLU	**Klutina**	**5.25**	**16**		**Pn**	**18 12 43.7**	**+1.5**
KLU	**Klutina**	**5.25**	**16**	IAML		18 13 44.6	
	comp=E,19nm,1.5s						
KLU				IAML		18 16 20.9	
	comp=N,19nm,1.7s						
KLU	**Klutina**	**5.25**	**16**	P	**Pn**	**18 12 43.7**	**+1.5**
	baz=198						
CHGN	**Chignik**	**5.29**	**272**	Pn	**Pn**	**18 12 42.9**	**+0.3**
GHO	**Glory Hole Cre**	**5.31**	**360**		**Pn**	**18 12 45.2**	**+2.3**
M22K	**Willow**	**5.33**	**354**	Pn	**Pn**	**18 12 44.5**	**+1.4**
SML	**Sawmill**	**5.35**	**3**		**Pn**	**18 12 44.7**	**+1.2**
SML	**Sawmill**	**5.35**	**3**	P	**Pn**	**18 12 45.6**	**+2.1**
	baz=183						
M23K	**Glacier View**	**5.36**	**6**		**Pn**	**18 12 45.5**	**+2.0**
M23K	**Glacier View**	**5.36**	**6**	P	**Pn**	**18 12 45.6**	**+2.0**
	baz=187						
ISLE	**Juniper Island**	**5.37**	**37**	Pn	**Pn**	**18 12 45.2**	**+1.4**
SCM	**Sheep Creek Mo**	**5.43**	**8**	Pn	**Pn**	**18 12 46.5**	**+1.9**
VRDI	**Verde Repeater**	**5.53**	**28**		**Pn**	**18 12 47.5**	**+1.4**
N18K	**Kilae Creek**	**5.58**	**322**	Pn	**Pn**	**18 12 47.4**	**+0.8**
N25K	**Chitina, Valde**	**5.60**	**22**	Pn	**Pn**	**18 12 48.7**	**+1.8**
KIAG	**Kiagna River**	**5.61**	**35**		**Pn**	**18 12 48.6**	**+1.5**
GLB	**Gilahina Butte**	**5.63**	**26**	Pn	**Pn**	**18 12 49.1**	**+1.8**
SKT	**Skwentna**	**5.68**	**347**	Pn	**Pn**	**18 12 49.1**	**+1.2**
TABL	**Table Mountain**	**5.68**	**42**	Pn	**Pn**	**18 12 49.5**	**+1.3**
YKUT	**Yakutat**	**5.77**	**54**	Pn	**Pn**	**18 12 50.7**	**+1.6**
SVW2	**Sparrevohn**	**5.79**	**326**	Pn	**Pn**	**18 12 50.7**	**+1.3**
O16K	**Kokwok River B**	**5.80**	**306**	Pn	**Pn**	**18 12 51.1**	**+1.6**
M24K	**Tolsona, Glenn**	**5.81**	**13**	Pn	**Pn**	**18 12 52.0**	**+2.2**
PCA	**Pinnacle**	**5.82**	**48**		**Pn**	**18 12 51.5**	**+1.6**
PINM	**Pinnacle**	**5.82**	**48**	P	**Pn**	**18 12 52.0**	**+2.1**
	baz=235						
M20K	**Styx River**	**5.84**	**340**	Pn	**Pn**	**18 12 50.6**	**+0.4**
BARN	**Barnard Glacie**	**5.93**	**36**	Pn	**Pn**	**18 12 53.0**	**+1.4**
N17K	**Nushagak Hills**	**5.94**	**316**	Pn	**Pn**	**18 12 51.9**	**+0.4**
PNL	**Peninsula**	**5.96**	**54**		**Pn**	**18 12 53.8**	**+1.9**
PNL	**Peninsula**	**5.96**	**54**	P	**Pn**	**18 12 53.8**	**+1.9**
	baz=242						
CTG	**Chitna Glacier**	**5.97**	**38**	P	**Pn**	**18 12 53.8**	**+1.7**
	baz=224						
CTGM	**Chitina Glacie**	**5.97**	**38**		**Pn**	**18 12 53.3**	**+1.2**
CUT	**Chulitna**	**5.98**	**354**	Pn	**Pn**	**18 12 53.1**	**+1.1**
LOGN	**Logan Glacier**	**5.99**	**40**	Pn

IL31		**8.38**	**6**	Pn	**Pn**	**18 13 26.6**	**+1.8**
ILAR	**Eielson Array**	**8.38**	**6**	Pn	**Pn**	**18 13 26.5**	**+1.6**
J26L	**Joseph Creek**	**8.46**	**16**	Pn	**Pn**	**18 13 27.5**	**+1.4**
MDM	**Murphy Dome**	**8.51**	**2**	Pn	**Pn**	**18 13 28.8**	**+2.0**
L29M	**L29M**	**8.57**	**35**	Pn	**Pn**	**18 13 29.3**	**+1.7**
MLY	**Manley**	**8.62**	**355**	Pn	**Pn**	**18 13 30.0**	**+1.7**
P32M	**Atlin**	**8.63**	**63**	Pn	**Pn**	**18 13 29.9**	**+1.4**
M30M	**Minto, Yukon**	**8.66**	**40**	Pn	**Pn**	**18 13 31.3**	**+2.5**
I23K	**Minto, Yukon-K**	**8.70**	**359**	Pn	**Pn**	**18 13 31.5**	**+2.2**
U33K	**Whale Pass**	**8.78**	**86**	Pn	**Pn**	**18 13 29.1**	**-1.3**
I21K	**Tanana**	**8.86**	**352**	Pn	**Pn**	**18 13 33.1**	**+1.6**
CRAG	**Craig**	**8.90**	**90**	Pn	**Pn**	**18 13 30.5**	**-1.6**
PRP	**Porcupine Dome**	**9.21**	**9**	Pn	**Pn**	**18 13 37.7**	**+1.2**
Q32M	**Nakina River**	**9.23**	**68**	Pn	**Pn**	**18 13 38.5**	**+1.7**
P33M	**Teslin, Yukon**	**9.23**	**59**	Pn	**Pn**	**18 13 38.3**	**+1.5**
I26K	**Coal Creek Min**	**9.28**	**15**	Pn	**Pn**	**18 13 38.8**	**+1.5**
K29M	**Barlow Dome**	**9.29**	**33**	Pn	**Pn**	**18 13 39.0**	**+1.4**
M31M	**Drury Creek, Y**	**9.36**	**46**	Pn	**Pn**	**18 13 40.9**	**+2.6**
H21K	**Melozitna Rive**	**9.40**	**350**	Pn	**Pn**	**18 13 39.6**	**+0.7**
H24K	**Noodor Dome**	**9.40**	**3**	Pn	**Pn**	**18 13 41.2**	**+2.2**
N32M	**Quiet Lake**	**9.43**	**54**	Pn	**Pn**	**18 13 38.6**	**-0.9**
IMAR	**Indian Mountai**	**9.81**	**348**	Pn	**Pn**	**18 13 44.7**	**+0.1**
R33M	**Jennings River**	**9.96**	**66**	Pn	**Pn**	**18 13 47.5**	**+0.7**
J30M	**Hart River**	**10.19**	**32**	Pn	**Pn**	**18 13 51.1**	**+1.3**
FYU	**Fort Yukon**	**10.27**	**8**	Pn	**Pn**	**18 13 51.7**	**+0.9**
DLBC	**Dease Lake**	**10.35**	**71**	Pn	**Pn**	**18 13 53.0**	**+1.0**
MMPY	**Sheldon Lake,**	**10.83**	**48**	Pn	**Pn**	**18 14 00.9**	**+2.3**
BMAR	**Burnt Mountain**	**11.17**	**9**	Pn	**Pn**	**18 14 04.3**	**+1.1**

FUNV 24 18:13:07.0, 10.72N×65.75W, h9km, MW3.6, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNV	**FUNVISIS**	**1.07**	**257**	*eP*	Pg	18 13 25.9	-1.7
FUNV				*eS*	Sg	18 13 40.9	-0.7
PCRV	**Puerto La Cruz**	**1.22**	**116**	*eP*	Pb	18 13 29.7	-0.7
PCRV				*eS*	Sn	18 13 46.9	-0.1
TACV	**Tcata**	**1.38**	**245**	*eP*	Pn	18 13 31.9	-0.7
TACV				*eS*	Sb	18 13 50.8	0.0
MERV	**Las Mercedes**	**1.56**	**200**	*eP*	Pn	18 13 35.0	+0.1
MERV				*eS*	Sn	18 13 55.1	-0.1
BENV	**Beln**	**1.97**	**248**	*eP*	Pn	18 13 40.6	0.0
BENV				*eS*	Sn	18 14 04.3	-1.2
TURV	**Turiamo**	**2.07**	**263**	*eP*	Pn	18 13 41.3	-0.7
TURV				*eS*	Sn	18 14 06.8	-1.1
BAUV	**El Baul**	**2.87**	**232**	*eP*	Pn	18 13 52.4	-0.6
BAUV				*eS*	Sn	18 14 25.1	-2.5
CACV	**CAICARA DEL OR**	**3.23**	**194**	*eP*	Pn	18 13 57.0	-0.9
CACV				*eS*	Sn	18 14 32.6	-3.9
TEPV	**Terepaima**	**3.47**	**258**	*eP*	Pn	18 14 00.1	-1.2
TEPV				*eS*	Sn	18 14 39.3	-3.2
CURV	**Curarigua**	**4.20**	**261**	*eP*	Pn	18 14 09.9	-1.5
CURV				*eS*	Sn	18 14 56.7	-4.0
SOCV	**Socops**	**5.59**	**245**	*eP*	Pn	18 14 28.4	-2.0
SOCV				*eS*	Sn	18 15 27.9	-6.9

*IDC **24** 18:22:32.6±58.0, 14.93S×176.12W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=1083.0km s-min=178.3km az=76.0*

*NEIC **24** 18:22:34.5±1.7, 15.4S±0.1×176.0W±0.1, h10km±2km, mb4.7/8, Error ellipse: s-maj=20.6km s-min=17.4km az=345.0*

ISC 24 18:22:33.9±0.8, 15.4S±0.1×175.93W±0.08, h10km, n14, σ1§28/17, mb4.6/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.29**	**70**	Pn	**Pn**	**18 23 40.3**	**+0.8**
AFI				Sn	**Sn**	**18 24 29.3**	**-0.4**
NIUE	**Niue**	**6.79**	**123**	Pn	**Pn**	**18 24 15.5**	**+1.8**
NIUE				Sn	**Sn**	**18 25 28.5**	**-2.6**
STKA	**Stephens Creek**	**41.92**	**239**	P	**P**	**18 30 25.8**	**+0.9**
STKA	**Stephens Creek** 1.0nm,0.6s,baz=90,slow=12,SNR=2.9 1.0nm,0.6s	**41.92**	**239**	P	**P**	**18 30 26.7**	**+1.8**
BBOO	**Buckleboo**	**46.70**	**239**	P	**P**	**18 31 02.3**	**-0.9**
WB0	**Warramunga Arr** comp=Z,9.6nm,1.4s	**47.42**	**257**	P	**P**	**18 31 08.1**	**-1.0**
WB0				IAmb	IAmb	18 31 27.4	
WB2	**Warramunga Arr** comp=Z,15nm,1.5s	**47.45**	**257**	P	**P**	**18 31 08.7**	**-0.6**
WB2				IAmb	IAmb	18 31 52.2	
WRA	**Warramunga Arr** comp=Z,0.6nm,0.6s,baz=92,slow=8.2,SNR=12 comp=Z,0.6nm,0.6s	**47.46**	**257**	P	**P**	**18 31 08.8**	**-0.6**
AS31	**Alice Springs**	**47.78**	**252**	P	**P**	**18 31 11.4**	**-0.4**
AS31	comp=Z,1.7nm,0.6s			IAmb	IAmb	18 31 12.8	
AS31				PcP	**PcP**	**18 32 39.2**	**-1.7**
ASAR	**Alice Springs**	**47.78**	**252**	P	**P**	**18 31 11.0**	**-0.8**
ASAR	**Alice Springs** comp=Z,5.5nm,0.5s,baz=89,slow=7.8,SNR=192 comp=Z,5.5nm,0.5s	**47.78**	**252**	P	**P**	**18 31 11.4**	**-0.4**
MTN	**Manton Dam**	**51.30**	**266**	P	**P**	**18 31 37.9**	**-0.8**
MTN	comp=Z,8.0nm,1.2s			IAmb	IAmb	18 31 39.8	
MBWA	**Marble Bar**	**61.01**	**254**	P	**P**	**18 32 48.3**	**+0.1**
MBWA	comp=Z,7.7nm,1.0s			IAmb	IAmb	18 32 48.5	
CASY	**Casey**	**69.37**	**204**	P	**P**	**18 33 42.7**	**+1.1**

*NEIC **24** 18:23:23.6±1.7, 55.90N±0.09×149.9W±0.1, h10km±7km, ML3.7/50, ML3.5(AEIC), Error ellipse: s-maj=12.7km s-min=9.0km az=175.0*

*AEIC **24** 18:23:29.0±1.7, 55.90N±0.07×150.0W±0.1, h11km±7km, Error ellipse: s-maj=10.8km s-min=9.7km az=189.0*

*IDC **24** 18:23:31.9±3.3, 56.18N×148.93W, h0km, mb3.3/1, mbtmp3.3/3, ML3.2/1, MS2.7/1, Error ellipse: s-maj=53.5km s-min=38.2km az=132.0*

ISC 24 18:23:24.0±1.5, 56.0N±0.1×149.88W±0.06, h10km, n203, σ1§14/207, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.27**	**305**		**Pn**	**18 24 01.4**	**0.0**
OHAK					**Sn**	**18 24 26.9**	**-2.5**
OHAK	**Old Harbor** baz=125	**2.27**	**305**	P	**Pn**	**18 24 01.4**	**0.0**
OHAK	baz=125			S	**Sn**	**18 24 26.9**	**-2.5**
KDAK	**Kodiak Island**	**2.35**	**322**		**Pn**	**18 24 03.0**	**+0.4**
KDAK	**Kodiak Island**	**2.35**	**322**		**Sn**	**18 24 30.0**	**-1.4**
KDAK	**Kodiak Island** comp=Z,140nm,20.5s,baz=258,slow=28	**2.35**	**322**	LR	LR	18 24 43.2	
Q20K	**Shuyak Island** baz=153	**2.98**	**334**	P	**Pn**	**18 24 12.0**	**+0.8**
Q20K	baz=153			S	**Sn**	**18 24 47.0**	**0.0**
SYI	**Shuyak Island**	**2.98**	**334**		**Pn**	**18 24 11.9**	**+0.7**
SYI					**Sn**	**18 24 46.5**	**-0.5**
R18K	**Karluk**	**2.98**	**304**		**Pn**	**18 24 11.6**	**+0.4**
R18K	**Karluk** comp=N,177nm,0.4s	**2.98**	**304**	IAML		18 24 48.3	
R18K	comp=E,147nm,0.5s			IAML		18 24 57.6	
R18K	**Karluk** baz=122	**2.98**	**304**	P	**Pn**	**18 24 11.6**	**+0.4**
Q19K	**Cape Douglas,**	**3.60**	**327**		**Pn**	**18 24 20.1**	**+0.3**
Q19K					**Sn**	**18 25 01.7**	**-0.7**
Q19K	**Cape Douglas,** baz=145	**3.60**	**327**	P	**Pn**	**18 24 20.4**	**+0.6**
CNPM	**China Poot**	**3.64**	**349**		**Pn**	**18 24 20.6**	**+0.2**
CNPM					**Sn**	**18 25 02.7**	**-0.7**
CNPM	**China Poot** comp=E,69nm,0.7s	**3.64**	**349**	IAML		18 25 04.7	
BRSE	**Bradley Lake S**	**3.81**	**353**		**Pn**	**18 24 22.6**	**-0.1**
BRSE					**Sn**	**18 25 06.4**	**-1.2**
BRSE	**Bradley Lake S** baz=174	**3.81**	**353**	P	**Pn**	**18 24 22.7**	**-0.1**
BRSE	baz=174			S	**Sn**	**18 25 06.4**	**-1.2**
HOM	**Homer**	**3.82**	**346**	Pn	**Pn**	**18 24 22.9**	**+0.1**
HOM	comp=N,196nm,0.5s			IAML		18 25 11.0	
HOM	comp=E,166nm,1.1s			IAML		18 25 31.6	
BRLK	**Bradley Lake**	**3.85**	**352**		**Pn**	**18 24 23.1**	**-0.1**
BRLK					**Sn**	**18 25 07.3**	**-1.2**
Q23K	**Middleton Isla**	**3.96**	**27**	Pn	**Pn**	**18 24 24.8**	**+0.2**
Q23K	comp=E,146nm,1.1s			IAML		18 25 31.9	
MID	**Middleton Isla**	**3.96**	**27**	Pn	**Pn**	**18 24 24.7**	**+0.1**
MID	comp=N,170nm,1.1s			IAML		18 25 13.5	
MID	comp=E,165nm,1.2s			IAML		18 26 19.9	
CNTC	**Contact Creek**	**4.00**	**308**		**Pn**	**18 24 26.1**	**+0.7**
Q17K	**Contact Creek** baz=124	**4.00**	**308**	P	**Pn**	**18 24 26.1**	**+0.7**
P19K	**Oil Pt**	**4.11**	**336**	Pn	**Pn**	**18 24 26.8**	**0.0**
P19K	comp=E,154nm,0.4s			IAML		18 25 20.6	
P19K	comp=N,122nm,0.8s			IAML		18 25 25.3	
SEW	**Seward**	**4.16**	**3**		**Pn**	**18 24 27.1**	**-0.3**
SEW	**Seward** baz=184	**4.16**	**3**	P	**Pn**	**18 24 27.3**	**-0.1**
P23K	**Montague Islan**	**4.25**	**17**		**Pn**	**18 24 29.4**	**+0.7**
P23K					**Sn**	**18 25 16.4**	**-1.9**
P23K	**Montague Islan** baz=200	**4.25**	**17**	P	**Pn**	**18 24 29.4**	**+0.7**
P23K	baz=200			S	**Sn**	**18 25 16.4**	**-1.9**
ILSW	**Iliamna Southw**	**4.39**	**338**	Pn	**Pn**	**18 24 31.1**	**+0.4**
ILSW	comp=N,47nm,0.7s			IAML		18 25 24.8	
IVE	**Iliamna Volcan**	**4.39**	**339**		**Pn**	**18 24 31.4**	**+0.7**
P18K	**Big Mountain,**	**4.48**	**322**		**Pn**	**18 24 32.0**	**+0.2**
P18K	**Big Mountain,** baz=139	**4.48**	**322**	P	**Pn**	**18 24 32.3**	**+0.5**
O22K	**Cooper Landing**	**4.53**	**1**	Pn	**Pn**	**18 24 35.0**	**+2.6**
SLKM	**Skilak Lake**	**4.56**	**358**		**Sn**	**18 25 23.6**	**-2.3**
RSO	**Redoubt South**	**4.76**	**343**	Pn	**Pn**	**18 24 36.7**	**+0.9**
CHGN	**Chignik**	**4.79**	**278**	Pn	**Pn**	**18 24 36.2**	**+0.2**
HIN	**Hinchinbrook I**	**4.79**	**21**		**Pn**	**18 24 37.0**	**+0.8**
HIN	**Hinchinbrook I** comp=N,76nm,0.7s	**4.79**	**21**	IAML		18 25 32.0	
HIN	comp=E,84nm,0.8s			IAML		18 25 37.2	
O18K	**Koktuh Hills**	**4.82**	**326**		**Pn**	**18 24 36.7**	**+0.1**
O18K	**Koktuh Hills** comp=N,41nm,0.8s	**4.82**	**326**	IAML		18 25 34.4	
O18K	comp=E,41nm,0.8s			IAML		18 25 47.6	
O18K	**Koktuh Hills** baz=143	**4.82**	**326**	P	**Pn**	**18 24 36.7**	**+0.1**
CAPN	**Captain Cook N**	**4.86**	**353**	Pn	**Pn**	**18 24 38.1**	**+1.1**
CAPN	comp=E,89nm,0.8s			IAML		18 25 53.0	
KAIM	**Kayak Island**	**4.92**	**34**		**Pn**	**18 24 38.7**	**+0.8**
KAIM	**Kayak Island** comp=E,99nm,1.0s	**4.92**	**34**	IAML		18 25 49.0	
KAIM	**Kayak Island** baz=219	**4.92**	**34**	P	**Pn**	**18 24 38.7**	**+0.8**
EYAK	**Cordova Ski Ar**	**5.09**	**24**		**Pn**	**18 24 40.8**	**+0.7**
EYAK	**Cordova Ski Ar** baz=207	**5.09**	**24**	P	**Pn**	**18 24 40.8**	**+0.7**
FID	**Port Fidalgo**	**5.12**	**19**		**Pn**	**18 24 40.5**	**-0.1**
FID	comp=E,52nm,0.4s			IAML		18 25 38.7	
FID	comp=N,45nm,0.4s			IAML		18 25 39.3	
RC01	**Rabbit Creek A**	**5.14**	**1**	Pn	**Pn**	**18 24 41.4**	**+0.5**
RC01	comp=N,31nm,0.6s			IAML		18 25 42.0	
RC01	comp=E,46nm,0.4s			IAML		18 25 43.8	
GLI	**Glacier Island**	**5.14**	**15**	Pn	**Pn**	**18 24 41.9**	**+1.0**
GLI	comp=E,46nm,0.6s			IAML		18 25 42.8	
GLI	comp=N,28nm,1.0s			IAML		18 25 43.7	
RAGM	**Ragged Mountai**	**5.22**	**30**	Pn	**Pn**	**18 24 42.7**	**+0.7**
RAGM	comp=E,60nm,1.1s			IAML		18 26 00.7	
SUCK	**Suckling Hills**	**5.24**	**36**		**Pn**	**18 24 42.6**	**+0.3**
SUCK	**Suckling Hills**	**5.24**	**36**		**Pn**	**18 24 42.9**	**+0.6**
SUCK	comp=E,36nm,1.0s			IAML		18 25 25.5	
SUCK	comp=N,69nm,1.1s			IAML		18 25 45.9	
HMT	**Hamilton**	**5.30**	**32**		**Pn**	**18 24 43.8**	**+0.7**
N19K	**Bonanza Creek**	**5.43**	**335**		**Pn**	**18 24 45.2**	**+0.2**
N19K	**Bonanza Creek** baz=152	**5.43**	**335**	P	**Pn**	**18 24 45.2**	**+0.2**
BERG	**Berg Lake**	**5.51**	**34**		**Pn**	**18 24 46.7**	**+0.7**
KNK	**Knik Glacier**	**5.51**	**7**	Pn	**Pn**	**18 24 47.0**	**+1.0**
SUA	**Susitna One**	**5.53**	**356**	Pn	**Pn**	**18 24 46.5**	**+0.1**
GRIN	**Grindle Hills**	**5.55**	**36**		**Pn**	**18 24 47.6**	**+1.1**
SNH	**Sunshine Point**	**5.64**	**39**		**Pn**	**18 24 46.8**	**-1.0**
CNBA	**Chernabura Isl**	**5.65**	**262**	Pn	**Pn**	**18 24 46.9**	**-1.0**
PMR	**Palmer**	**5.66**	**4**	Pn	**Pn**	**18 24 47.9**	**-0.1**
N18K	**Kilae Creek**	**5.69**	**329**	Pn	**Pn**	**18 24 48.7**	**+0.2**
KHIT	**Khitrov Hills**	**5.70**	**35**		**Pn**	**18 24 49.3**	**+0.7**
O16K	**Kokwok River B**	**5.70**	**313**	Pn	**Pn**	**18 24 48.6**	**0.0**
BMRM	**Bremner River**	**5.73**	**27**		**Pn**	**18 24 49.5**	**+0.4**
BMRM	**Bremner River** baz=211	**5.73**	**27**	P	**Pn**	**18 24 49.5**	**+0.4**
WAX	**Waxell Ridge**	**5.83**	**37**		**Pn**	**18 24 50.8**	**+0.3**
GHO	**Glory Hole Cre**	**5.85**	**4**		**Pn**	**18 24 51.1**	**+0.5**
KLU	**Klutina**	**5.91**	**19**		**Pn**	**18 24 51.4**	**-0.2**
SML	**Sawmill**	**5.91**	**7**		**Pn**	**18 24 52.0**	**+0.4**
SML	**Sawmill** baz=189	**5.91**	**7**	P	**Pn**	**18 24 51.9**	**+0.4**
BARK	**Barkley Ridge**	**5.92**	**38**		**Pn**	**18 24 52.5**	**+0.8**
SVW2	**Sparrevohn**	**5.95**	**332**	Pn	**Pn**	**18 24 51.9**	**-0.1**
MESA	**MESA**	**5.96**	**42**	Pn	**Pn**	**18 24 52.1**	**-0.2**
CRQM	**Cirque**	**5.97**	**34**		**Pn**	**18 24 51.5**	**-1.0**
N17K	**Nushagak Hills**	**5.98**	**323**	Pn	**Pn**	**18 24 52.6**	**+0.2**
CRQE	**Cirque** baz=220	**5.98**	**34**	P	**Pn**	**18 24 53.2**	**+0.6**
SDPT	**Sand Point**	**6.03**	**269**	Pn	**Pn**	**18 24 51.6**	**-1.5**
SCM	**Sheep Creek Mo**	**6.03**	**12**	Pn	**Pn**	**18 24 52.6**	**-0.6**
SKT	**Skwentna**	**6.09**	**353**	Pn	**Pn**	**18 24 52.6**	**-1.3**
ISLE	**Juniper Island**	**6.12**	**37**		**Pn**	**18 24 55.2**	**+0.8**
BAGL	**Bagley Icefiel**	**6.12**	**39**		**Pn**	**18 24 55.2**	**+0.9**
M20K	**Styx River**	**6.17**	**346**	Pn	**Pn**	**18 24 54.6**	**-0.5**
VRDI	**Verde Repeater**	**6.25**	**30**	Pn	**Pn**	**18 24 56.6**	**+0.2**
N25K	**Chitina, Valde**	**6.29**	**24**		**Pn**	**18 24 57.1**	**+0.4**
GLB	**Gilahina Butte**	**6.34**	**27**	Pn	**Pn**	**18 24 57.3**	**-0.1**
KIAG	**Kiagna River**	**6.35**	**35**		**Pn**	**18 24 58.3**	**+0.7**
M19K	**Big River Lodg**	**6.40**	**340**	Pn	**Pn**	**18 24 57.8**	**-0.3**
TABL	**Table Mountain**	**6.44**	**42**		**Pn**	**18 24 59.9**	**+1.0**
M24K	**Tolsona, Glenn**	**6.45**	**16**	Pn	**Pn**	**18 25 01.0**	**+2.1**
PTPK	**Patty Peak**	**6.51**	**33**		**Pn**	**18 25 01.1**	**+1.2**
PCA	**Pinnacle**	**6.58**	**47**		**Pn**	**18 25 01.6**	**+0.9**
PINM	**Pinnacle** baz=235	**6.58**	**47**	P	**Pn**	**18 25 01.6**	**+0.9**
BARN	**Barnard Glacie**	**6.68**	**37**		**Pn**	**18 25 02.6**	**+0.5**
PNL	**Peninsula**	**6.72**	**52**		**Pn**	**18 25 03.2**	**+0.6**
PNL	**Peninsula** baz=241	**6.72**	**52**	P	**Pn**	**18 25 03.2**	**+0.6**
M17K	**Holitna River**	**6.72**	**327**		**Pn**	**18 25 03.6**	**+1.0**
M17K	**Holitna River** baz=142	**6.72**	**327**	P	**Pn**	**18 25 03.6**	**+1.0**
CTGM	**Chitina Glacie**	**6.72**	**38**	Pn	**Pn**	**18 25 03.1**	**+0.4**
L19K	**White Mountain**	**6.74**	**340**	Pn	**Pn**	**18 25 02.8**	**-0.1**
LOGN	**Logan Glacier**	**6.74**	**40**	Pn	**Pn**	**18 25 03.8**	**+0.7**
BCPM	**Bancas Point**	**6.76**	**50**		**Pn**	**18 25 04.1**	**+1.0**
N15K	**Kwethluk River**	**6.86**	**312**		**Pn**	**18 25 05.9**	**+1.4**
HARP	**HAARP**	**6.89**	**19**		**Pn**	**18 25 06.8**	**+1.9**
HARP	**HAARP** baz=203	**6.89**	**19**	P	**Pn**	**18 25 06.8**	**+1.9**
O14K	**Tigyukauivet M**	**6.95**	**303**	Pn	**Pn**	**18 25 06.5**	**+0.8**
M16K	**Timber Creek**	**6.95**	**321**	Pn	**Pn**	**18 25 06.4**	**+0.7**
L18K	**Granite Mounta**	**7.18**	**334**	Pn	**Pn**	**18 25 08.8**	**-0.1**
DHY	**Denali Highway**	**7.25**	**9**	Pn	**Pn**	**18 25 10.8**	**+0.9**
M26K	**Nabesna, AK**	**7.36**	**26**	Pn	**Pn**	**18 25 11.9**	**+0.6**
O29M	**Mount Kennedy**	**7.39**	**49**		**Pn**	**18 25 13.1**	**+1.2**
O29M	**Mount Kennedy** baz=239	**7.39**	**49**	P	**Pn**	**18 25 13.1**	**+1.2**
P29M	**Windy Craggy**	**7.45**	**55**		**Pn**	**18 25 13.3**	**+0.6**
P29M	**Windy Craggy** baz=246	**7.45**	**55**	P	**Pn**	**18 25 13.3**	**+0.6**
RND	**Reindeer**	**7.48**	**4**	Pn	**Pn**	**18 25 14.4**	**+1.3**
TRF	**Thorofare Moun**	**7.51**	**359**	Pn	**Pn**	**18 25 14.7**	**+1.1**
CAST	**Castle Rocks**	**7.56**	**352**	Pn	**Pn**	**18 25 15.1**	**+1.0**
L16K	**Owhat River**	**7.61**	**323**	Pn	**Pn**	**18 25 14.8**	**+0.1**
M27K	**Edge Creek, AK**	**7.61**	**29**	Pn	**Pn**	**18 25 15.8**	**+0.8**
KTH	**Kantishna Hill**	**7.63**	**356**	Pn	**Pn**	**18 25 16.0**	**+0.8**
TTA	**Tatalina**	**7.65**	**338**	Pn	**Pn**	**18 25 13.1**	**-2.3**
MENT	**Mentasta**	**7.66**	**22**	Pn	**Pn**	**18 25 13.4**	**-2.2**
K20K	**Telida**	**7.71**	**346**	Pn	**Pn**	**18 25 14.4**	**-1.7**
S31K	**Pelican**	**7.72**	**69**		**Pn**	**18 25 14.0**	**-2.3**
S31K	**Pelican** baz=260	**7.72**	**69**	P	**Pn**	**18 25 15.7**	**-0.6**
M14K	**Bethel**	**7.95**	**312**	Pn	**Pn**	**18 25 16.8**	**-2.6**
K17K	**Iditarod**	**8.02**	**331**	Pn	**Pn**	**18 25 20.8**	**+0.5**
HYT	**Haines Junctio**	**8.12**	**48**	Pn	**Pn**	**18 25 21.9**	**0.0**
SIT	**Sitka**	**8.13**	**76**	Pn	**Pn**	**18 25 19.6**	**-2.2**
BPAW	**Bear Paw Mtn.**	**8.18**	**357**	Pn	**Pn**	**18 25 22.4**	**-0.2**
L27K	**Beaver Creek,**	**8.21**	**27**	Pn	**Pn**	**18 25 24.0**	**+1.1**
BCAR	**Beaver Creek A**	**8.22**	**27**	Pn	**Pn**	**18 25 23.4**	**+0.2**
BWN	**Browne**	**8.24**	**1**	Pn	**Pn**	**18 25 24.1**	**+0.8**
J18K	**Innoko River**	**8.27**	**338**	Pn	**Pn**	**18 25 22.6**	**-1.3**
M13K	**Dall Lake**	**8.39**	**308**	Pn	**Pn**	**18 25 24.0**	**-1.5**
J20K	**Nowinta River**	**8.51**	**347**	Pn	**Pn**	**18 25 26.7**	**-0.3**
SKAG	**Skagway**	**8.54**	**60**	Pn	**Pn**	**18 25 28.6**	**+1.1**
J19K	**Poorman**	**8.55**	**343**	Pn	**Pn**	**18 25 27.8**	**+0.1**
S32K	**Killisnoo**	**8.55**	**74**	Pn	**Pn**	**18 25 26.8**	**-0.9**
SCRK	**Sand Creek**	**8.56**	**18**	Pn	**Pn**	**18 25 27.6**	**-0.3**
L14K	**Kuka Creek**	**8.57**	**314**	Pn	**Pn**	**18 25 28.4**	**+0.5**
WRH	**Wood River Hil**	**8.58**	**5**	Pn	**Pn**	**18 25 27.6**	**-0.4**
HDA	**Harding Lake**	**8.60**	**9**		**Pn**	**18 25 28.4**	**+0.2**
N30M	**Aishikik Lake**	**8.63**	**45**	Pn	**Pn**	**18 25 28.5**	**-0.3**
O30N	**Mendenhall**	**8.70**	**51**	Pn	**Pn**	**18 25 29.7**	**0.0**
K15K	**Wolf Creek Mou**	**8.71**	**321**	Pn	**Pn**	**18 25 30.1**	**+0.2**
M29M	**Somme Creek**	**8.74**	**37**		**Pn**	**18 25 31.8**	**+1.5**
M29M	**Somme Creek** baz=227	**8.74**	**37**	P	**Pn**	**18 25 31.8**	**+1.5**
JIS	**Juneau Island**	**8.74**	**68**	Pn	**Pn**	**18 25 29.7**	**-0.5**
CCB	**Clear Creek Bu**	**8.77**	**6**		**Pn**	**18 25 30.5**	**-0.2**
IL31		**8.96**	**8**		**Pn**	**18 25 32.9**	**-0.2**
ILAR	**Eielson Array**	**8.96**	**8**	Pn	**Pn**	**18 25 34.6**	**+1.4**
ILAR	**Eielson Array** comp=N,0.3nm,0.3s,baz=188,slow=14,SNR=14	**8.96**	**8**	Pn	**Pn**	**18 25 35.1**	**+1.9**
ILAR	comp=N,0.4nm,0.3s,baz=196,slow=18,SNR=5.8 comp=N,0.6nm,0.4s			Sn	**Sn**	**18 27 10.3**	**-3.8**
J25K	**Salcha River,**	**8.96**	**13**	Pn	**Pn**	**18 25 33.4**	**+0.1**
K27K	**Chicken**	**8.98**	**23**	Pn	**Pn**	**18 25 32.1**	**-1.4**
MDM	**Murphy Dome**	**9.06**	**4**	Pn	**Pn**	**18 25 33.8**	**-0.9**
MLY	**Manley**	**9.11**	**358**	Pn	**Pn**	**18 25 35.3**	**0.0**
J26L	**Joseph Creek**	**9.12**	**17**	Pn	**Pn**	**18 25 36.5**	**+1.0**
J16K	**Anvik River**	**9.12**	**328**	Pn	**Pn**	**18 25 34.8**	**-0.6**
WHY	**Whitehorse**	**9.18**	**53**	Pn	**Pn**	**18 25 37.5**	**+1.0**
I23K	**Minto, Yukon-K**	**9.22**	**1**	Pn	**Pn**	**18 25 37.2**	**+0.5**
POKR	**Poker Plat Res**	**9.26**	**6**	Pn	**Pn**	**18 25 36.4**	**-1.0**
I21K	**Tanana**	**9.30**	**355**	Pn	**Pn**	**18 25 38.3**	**+0.3**
L29M	**L29M**	**9.31**	**35**	Pn	**Pn**	**18 25 38.0**	**-0.1**
P32M	**Atlin**	**9.36**	**61**	Pn	**Pn**	**18 25 38.8**	**0.0**
M30M	**Minto, Yukon**	**9.41**	**40**	Pn	**Pn**	**18 25 39.6**	**+0.2**
J14K	**Nanvaranak Lak**	**9.73**	**320**	Pn	Pn	18 25 38.4	-5.4
PRP	**Porcupine Dome**	**9.82**	**11**	Pn	**Pn**	**18 25 45.5**	**+0.4**
EGAK	**Eagle**	**9.83**	**22**	Pn	**Pn**	**18 25 44.9**	**-0.3**
H21K	**Melozitna Rive**	**9.83**	**353**	Pn	**Pn**	**18 25 44.6**	**-0.5**
I26K	**Coal Creek Min**	**9.93**	**17**	Pn	**Pn**	**18 25 48.9**	**+2.4**
H24K	**Noodor Dome**	**9.95**	**5**	Pn	**Pn**	**18 25 49.5**	**+2.6**
P33M	**Teslin, Yukon**	**9.98**	**58**	Pn	**Pn**	**18 25 47.9**	**+0.6**
K29M	**Barlow Dome**	**10.03**	**33**	Pn	**Pn**	**18 25 49.3**	**+1.3**
H18K	**Honhosa River**	**10.11**	**339**	Pn	**Pn**	**18 25 48.8**	**-0.1**
H19K	**Roundabout Mou**	**10.11**	**344**	Pn	**Pn**	**18 25 49.4**	**+0.5**
IMAR	**Indian Mountai**	**10.22**	**351**	Pn	**Pn**	**18 25 51.0**	**+0.5**
H17K	**Granite Mounta**	**10.26**	**335**	Pn	**Pn**	**18 25 50.0**	**-1.0**
I28M	**Miner Creek**	**10.67**	**23**	Pn	**Pn**	**18 25 59.2**	**+2.4**
R33M	**Jennings River**	**10.68**	**63**	Pn	**Pn**	**18 25 56.9**	**-0.1**
G23K	**Bananza Creek**	**10.78**	**360**	Pn	**Pn**	**18 25 58.3**	**+0.1**
G24K	**Hadweenzic Riv**	**10.83**	**5**	Pn	**Pn**	**18 25 59.1**	**+0.2**
FYU	**Fort Yukon**	**10.87**	**10**	Pn	**Pn**	**18 26 02.2**	**+2.9**
J30M	**Hart River**	**10.92**	**32**	Pn	**Pn**	**18 26 01.4**	**+1.2**
U35K	**Hyder**	**11.13**	**82**	Pn	**Pn**	**18 25 59.9**	**-3.1**
I30M	**Mount Dempster**	**11.38**	**30

PRK				S	Sb	18 34 56.2	-0.6	
	comp=E,4µm,0.3s							
PRK	**Paraskevi**	**0.62**	**334**	P	Pg	**18 34 47.0**	**-0.1**	
PRK				S	Sb	**18 34 56.3**	**-0.6**	
PRK				AML	AML	18 34 59.3		
	comp=N,6976µm,0.3s							
PRK				AML	AML	18 35 00.0		
	comp=E,9345µm,0.3s							
GMLD	**Gumuldur**	**0.65**	**159**	Pg	Pg	**18 34 47.2**	**-0.3**	
GMLD				Sg	Sg	**18 34 55.5**	**-0.5**	
DGB	**zmir**	**0.66**	**162**	P	Sg	**18 34 47.8**	**0.0**	
DGB				S	Sg	**18 34 56.9**	**+0.4**	
DGB				*i* AML	AML	18 34 58.0		
	comp=E,567nm,0.2s							
DGB				*i* AML	AML	18 35 01.0		
	comp=E,966nm,0.4s							
DGB				*i* AML	AML	18 35 02.0		
	comp=E,2µm,0.4s							
SIGR	**SIGRI**	**0.80**	**312**	Pg	Pg	**18 34 50.5**	**+0.1**	
SIGR				Sg	Sb	**18 35 01.5**	**-0.3**	
SIGR	**SIGRI**	**0.80**	**312**	P	Pg	**18 34 50.4**	**+0.1**	
SIGR				S	Sb	**18 35 01.6**	**-0.3**	
	comp=E,2µm,0.6s							
SIGR	**SIGRI**	**0.80**	**312**	P	Pg	**18 34 50.3**	**-0.1**	
SIGR				S	Sb	**18 35 01.4**	**-0.3**	
SIGR				AML	AML	18 35 03.8		
	comp=E,2988µm,0.4s							
SIGR				AML	AML	18 35 04.1		
	comp=N,3225µm,0.6s							
PSRA	**Psara**	**0.84**	**261**	P	Pg	**18 34 51.3**	**+0.1**	
PSRA				S	Sg	**18 35 02.3**	**+0.3**	
PSRA				AML	AML	18 35 05.6		
	comp=E,8880µm,0.2s							
PSRA				AML	AML	18 35 07.0		
	comp=N,6083µm,0.2s							
BUHA	**Balikesir, Bur**	**0.89**	**23**	P	Pg	**18 34 51.0**	**-1.1**	
BUHA				S	Sg	**18 35 03.8**	**+0.1**	
BUHA				*i* AML	AML	18 35 07.0		
	comp=N,2µm,0.5s							
BUHA				*i* AML	AML	18 35 09.0		
	comp=N,1µm,0.4s							
BUHA				*i* AML	AML	18 35 10.0		
	comp=N,593nm,0.3s							
KOCA	**Canakkale, Ayv**	**0.90**	**336**	P	Pg	**18 34 52.0**	**-0.3**	
KOCA				S	Sb	**18 35 04.6**	**-0.2**	
AKS	**Akhisar**	**0.95**	**78**	Pg	Pg	**18 34 53.2**	**-0.1**	
SMG	**Samos**	**0.99**	**170**	P	Pg	**18 34 53.8**	**-0.2**	
SMG				S	Sn	**18 35 08.4**	**-0.7**	
	comp=N,5µm,0.5s							
SMG	**Samos**	**0.99**	**170**	P	Pg	**18 34 53.4**	**-0.5**	
SMG				S	Sb	**18 35 07.3**	**0.0**	
SMG				AML	AML	18 35 11.3		
	comp=E,8723µm,0.4s							
SMG				AML	AML	18 35 11.7		
	comp=N,11045µm,0.6s							
GOMA	**Golmarmara-Man**	**1.01**	**88**	Pg	Pg	**18 34 54.5**	**0.0**	
BAYC	**CANAKKALE_Bayr**	**1.06**	**357**	P	Pb	**18 34 54.6**	**-0.9**	
BAYC				S	Sg	**18 35 08.9**	**-0.2**	
BAYC				*i* AML	AML	18 35 10.0		
	comp=N,1µm,0.3s							
BAYC				*i* AML	AML	18 35 11.0		
	comp=N,1µm,0.4s							
BAYC				*i* AML	AML	18 35 12.0		
	comp=N,472nm,0.7s							
STEP	**BALIKESIR_Sava**	**1.10**	**51**	P	Pb	**18 34 56.0**	**-0.2**	
STEP				S	Sn	**18 35 11.8**	**-0.1**	
STEP				*i* AML	AML	18 35 14.0		
	comp=N,798nm,0.4s							
STEP				*i* AML	AML	18 35 14.0		
	comp=N,2µm,0.7s							
STEP				*i* AML	AML	18 35 14.0		
	comp=N,2µm,0.3s							
EZN	**Ezine**	**1.16**	**349**	Pn	Pb	**18 34 56.7**	**-0.5**	
EZN	**Ezine**	**1.16**	**349**	P	Pb	**18 34 56.5**	**-0.7**	
EZN				S	Sb	**18 35 11.6**	**-0.8**	
	comp=N,2µm,0.4s							
DDIM	**Aydin, Didim**	**1.32**	**158**	P	Pg	**18 35 00.2**	**-0.1**	
DDIM				S	Sb	**18 35 16.7**	**-0.2**	
DDIM				*i* AML	AML	18 35 23.0		
	comp=N,429nm,0.5s							
DDIM				*i* AML	AML	18 35 24.0		
	comp=N,457nm,0.6s							
DDIM				*i* AML	AML	18 35 34.0		
	comp=N,201nm,0.5s							
DIDI	**Didim-Aydin**	**1.39**	**159**	Pn	Pn	**18 35 00.1**	**-0.4**	
ECEA	**Canakkale, Ece**	**1.40**	**346**	P	Pb	**18 35 01.1**	**-0.2**	
ECEA				S	Sn	**18 35 19.2**	**-0.1**	
ECEA				*i* AML	AML	18 35 23.0		
	comp=N,1µm,0.5s							
ECEA				*i* AML	AML	18 35 23.0		
	comp=N,1µm,0.5s							
ECEA				*i* AML	AML	18 35 25.0		
	comp=N,502nm,0.4s							
COMU	**Canakkale**	**1.42**	**355**	Pn	Pn	**18 35 01.2**	**+0.3**	
BKES	**Balkesir-Mer**	**1.46**	**44**	P	Pn	**18 35 01.0**	**-0.5**	
BKES				S	Sn	**18 35 20.6**	**-0.1**	
BKES				*i* AML	AML	18 35 25.0		
	comp=N,608nm,0.8s							
BKES				*i* AML	AML	18 35 26.0		
	comp=N,321nm,0.7s							
BKES				*i* AML	AML	18 35 26.0		
	comp=N,528nm,0.4s							
KIRA	**zmir-Kiraz**	**1.48**	**109**	P	Pn	**18 35 02.0**	**+0.1**	
KIRA				S	Sg	**18 35 22.7**	**+0.1**	
KIRA				*i* AML	AML	18 35 26.0		
	comp=N,239nm,0.2s							
KIRA				*i* AML	AML	18 35 27.0		
	comp=N,183nm,0.3s							
KIRA				*i* AML	AML	18 35 29.0		
	comp=N,264nm,0.9s							
MANT	**Manisa**	**1.53**	**97**	P	Pn	**18 35 02.2**	**-0.5**	
MANT				S	Sb	**18 35 23.5**	**+0.3**	
MANT				*i* AML	AML	18 35 24.0		
	comp=N,172nm,0.4s							
MANT				*i* AML	AML	18 35 25.0		
	comp=N,118nm,0.5s							
MANT				*i* AML	AML	18 35 25.0		
	comp=N,202nm,0.4s							
GOAD	**anakkale-G¶**	**1.57**	**340**	P	Pn	**18 35 02.5**	**-0.6**	
GOAD				S	Sn	**18 35 22.5**	**-1.1**	
GOAD				*i* AML	AML	18 35 26.0		
	comp=N,512nm,0.4s							
GOAD				*i* AML	AML	18 35 30.0		
	comp=N,475nm,0.5s							
GOAD				*i* AML	AML	18 35 34.0		
	comp=N,190nm,0.5s							
GONE	**Gonen-Balikesi**	**1.59**	**31**	Pn	Pn	**18 35 03.5**	**+0.2**	
GADA	**Gvkgeada**	**1.60**	**340**	Pn	Pn	**18 35 03.5**	**0.0**	
KULA	**Kula-Manisa**	**1.61**	**95**	Pn	Pn	**18 35 03.3**	**-0.3**	
KULA	**Kula-Manisa**	**1.61**	**95**	P	Pn	**18 35 03.5**	**-0.1**	
KULA				S	Sb	**18 35 24.7**	**+0.4**	
TNSA	**Tinos**	**1.62**	**226**	P	Pn	**18 35 02.6**	**-1.1**	
TNSA				AML	AML	18 35 29.4		
	comp=N,843µm,0.4s							
TNSA				AML	AML	18 35 29.7		
	comp=E,698µm,0.3s							
ESEN	**Aydn-Nazilli**	**1.62**	**122**	P	Pn	**18 35 03.5**	**-0.2**	
ESEN				S	Sn	**18 35 24.5**	**-0.2**	
ESEN				*i* AML	AML	18 35 33.0		
	comp=E,34nm,0.4s							
ESEN				*i* AML	AML	18 35 33.0		
	comp=E,61nm,0.4s							
ESEN				*i* AML	AML	18 35 35.0		
	comp=E,94nm,0.6s							
YKAV	**Yalikavak-Bodr**	**1.64**	**161**	Pn	Pn	**18 35 03.9**	**-0.1**	
LIA	**Limnos Island**	**1.65**	**318**	P	Pn	**18 35 03.7**	**-0.3**	
LIA				S	Sn	**18 35 23.3**	**-2.0**	
	comp=E,530nm,0.5s							
LIA	**Limnos Island**	**1.65**	**318**	P	Pn	**18 35 03.5**	**-0.5**	
LIA				S	Sn	**18 35 23.6**	**-1.7**	
LIA				AML	AML	18 35 37.2		
	comp=N,1089µm,0.6s							
LIA				AML	AML	18 35 39.2		
	comp=E,1089µm,0.4s							
MLSB	**Milas**	**1.66**	**146**	Pn	Pn	**18 35 04.5**	**+0.2**	
LPK	**Lapseki**	**1.69**	**4**	Pn	Pn	**18 35 04.7**	**0.0**	
BODT	**Bodrum**	**1.71**	**161**	Pn	Pn	**18 35 04.5**	**-0.4**	
BODT	**Bodrum**	**1.71**	**161**	P	Pn	**18 35 04.3**	**-0.6**	
BODT				S	Sb	**18 35 27.9**	**-0.2**	
GELI	**Tayfur-Gelibol**	**1.72**	**356**	Pn	Pn	**18 35 04.7**	**-0.3**	
KNL	**Balıkesir**	**1.73**	**24**	P	Pn	**18 35 03.8**	**-1.5**	
KNL				S	Sn	**18 35 25.8**	**-1.6**	
KRBG	**Karabiga-Canak**	**1.79**	**17**	Pn	Pn	**18 35 05.2**	**-0.8**	
DST	**Dursunbey**	**1.81**	**59**	Pn	Pn	**18 35 06.4**	**+0.1**	
APE	**Apeiranthos**	**1.83**	**208**	Pn	Pn	**18 35 05.5**	**-1.1**	
APE	**Apeiranthos**	**1.83**	**208**	P	Pn	**18 35 05.3**	**-1.3**	
APE				S	Sn	**18 35 29.4**	**-0.5**	
APE	**Apeiranthos**	**1.83**	**208**	P	Pn	**18 35 05.3**	**-1.3**	
APE				AML	AML	18 35 39.7		
	comp=E,441µm,0.2s							
APE				AML	AML	18 35 40.7		
	comp=N,459µm,0.3s							
SIMA	**Simav-Kutahya**	**1.89**	**77**	Pn	Pn	**18 35 07.9**	**+0.5**	
EDC	**Edincik**	**1.92**	**30**	Pn	Pn	**18 35 08.0**	**+0.2**	
SMTH	**Samothraki Isl**	**1.97**	**335**	P	Pn	**18 35 08.2**	**-0.4**	
SMTH	**Samothraki Isl**	**1.97**	**335**	P	Pn	**18 35 08.1**	**-0.4**	
SMTH				AML	AML	18 35 41.8		
	comp=E,320µm,0.5s							
SMTH				AML	AML	18 35 42.7		
	comp=N,356µm,0.3s							
KYMI	**Kymi, Euboea I**	**1.97**	**269**	P	Pn	**18 35 07.0**	**-1.6**	
ERIK	**Erikli-Kesan**	**1.99**	**358**	Pn	Pn	**18 35 08.5**	**-0.2**	
RKY	**Sarkoy-Tekirda**	**2.05**	**12**	Pn	Pn	**18 35 09.9**	**+0.3**	
MRMT	**Marmara Adasi**	**2.06**	**21**	Pn	Pn	**18 35 09.9**	**+0.1**	
KCTX	**Karacabey (Bur**	**2.07**	**40**	Pn	Pn	**18 35 09.9**	**-0.1**	
ENEZ	**Enez**	**2.08**	**350**	Pn	Pn	**18 35 09.8**	**-0.2**	
ENEZ	**Enez**	**2.08**	**350**	P	Pn	**18 35 10.2**	**+0.2**	
ENEZ				S	Sn	**18 35 35.6**	**-0.4**	
	comp=N,662nm,0.6s							
DAT	**Datca**	**2.09**	**158**	Pn	Pn	**18 35 09.6**	**-0.7**	
DAT	**Datca**	**2.09**	**158**	P	Pn	**18 35 09.8**	**-0.5**	
DION	**Dionisos Attik**	**2.20**	**255**	P	Pn	**18 35 11.3**	**-0.4**	
GEDZ	**Gediz**	**2.21**	**80**	Pn	Pn	**18 35 12.5**	**+0.7**	
ORLT	**Orhaneli**	**2.23**	**52**	Pn	Pn	**18 35 12.8**	**+0.7**	
ALN	**Alexandroupoli**	**2.25**	**349**	Pn	Pn	**18 35 12.2**	**-0.2**	
ALN	**Alexandroupoli**	**2.25**	**349**	P	Pn	**18 35 12.1**	**-0.3**	
ALN				S	Sn	**18 35 38.9**	**-1.4**	
	comp=N,270nm,0.6s							
ALN	**Alexandroupoli**	**2.25**	**349**	P	Pn	**18 35 11.9**	**-0.5**	
ALN				AML	AML	18 35 48.9		
	comp=E,402µm,0.7s							
ALN				AML	AML	18 35 49.6		
	comp=N,682µm,0.5s							
TVSB	**Tavsanli**	**2.34**	**70**	Pn	Pn	**18 35 13.6**	**-0.1**	
VLY	**Voula,Athens**	**2.37**	**250**	P	Pn	**18 35 13.2**	**-0.9**	
RDO	**Rodhopi**	**2.60**	**342**	P	Pn	**18 35 17.0**	**-0.1**	
RDO				S	Sn	**18 35 47.6**	**-1.1**	
RDO	**Rodhopi**	**2.60**	**342**	P	Pn	**18 35 17.0**	**-0.1**	
MHLO	**Agia Marina, M**	**2.66**	**222**	P	Pn	**18 35 16.4**	**-1.5**	
VIL2	**Platees**	**2.67**	**261**	P	Pn	**18 35 17.0**	**-1.2**	
ARG	**Arkhangelos**	**2.74**	**154**	P	Pn	**18 35 18.8**	**-0.3**	
KAVA	**Kavala**	**2.82**	**326**	P	Pn	**18 35 19.7**	**-0.5**	
ZKR	**Zakros**	**3.58**	**185**	P	Pn	**18 35 30.1**	**-0.5**	
ELND	**Elena**	**4.28**	**353**	⇓P	Pn	**18 35 41.0**	**+0.8**	
BRTR	**Keskin Array B**	**5.55**	**77**	Pn	Pn	**18 35 59.0**	**+1.2**	
	comp=N,0.3nm,0.3s,baz=255,slow=14,SNR=14							
BRTR				Pg	Pg	**18 36 19.5**	**-1.8**	
	comp=N,0.3nm,0.3s,baz=264,slow=17,SNR=14							
	comp=N,1.3nm,0.5s							
MLR	**Muntele Rosu**	**6.82**	**356**	Pn	Pn	**18 36 17.8**	**+2.6**	
	comp=N,0.2nm,0.3s,baz=170,slow=11,SNR=4.3							
	comp=N,2.3nm,0.6s							
VOIR		**6.85**	**351**	⇓P	Pn	**18 36 15.7**	**+0.1**	
COVR	**Voineasa-Covas**	**7.16**	**358**	⇑P	Pn	**18 36 23.1**	**+3.3**	
VRI	**Vrincioaia**	**7.18**	**1**	⇓P	Pn	**18 36 24.0**	**+3.9**	
GZR	**Gura Zlata**	**7.29**	**338**	⇑P	Pn	**18 36 22.0**	**+0.4**	
TURR	**Turia**	**7.38**	**357**	⇑P	Pn	**18 36 24.6**	**+1.7**	
MARR	**Marisel-Cluj**	**8.39**	**343**	⇑P	Pn	**18 36 38.3**	**+1.6**	
BURAR	**Bucovina Array**	**8.98**	**354**	⇑P	Pn	**18 36 47.5**	**+2.6**	
MMAI	**Mount Meron Ar**	**9.10**	**126**	Pn	Pn	**18 36 45.8**	**-0.7**	
	comp=N,1.2nm,0.3s,baz=306,slow=12,SNR=8.2							
	comp=N,0.6nm,0.3s							
ESDC	**Sonseca Array**	**23.68**	**282**	P	P	**18 39 49.5**	**+2.7**	
	comp=N,0.3nm,0.6s,baz=90,slow=8.8,SNR=2.6							
	comp=N,0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**38.06**	**54**	P	P	**18 41 53.9**	**+0.3**	
	comp=N,0.3nm,0.4s,baz=276,slow=8.9,SNR=2.8							
	comp=N,0.3nm,0.4s							
MKAR	**Makanchi Array**	**40.93**	**60**	P	P	**18 42 17.2**	**-0.3**	
	comp=N,0.3nm,0.8s,baz=270,slow=8.2,SNR=4.1							
	comp=N,0.3nm,0.8s							
ZALV	**Zalesovo Beam**	**41.77**	**49**	P	P	**18 42 24.2**	**-0.1**	
	comp=N,0.4nm,0.6s,baz=278,slow=9.9,SNR=2.8							
	comp=N,0.4nm,0.6s							

*IDC **24** 18:37:34.1±1.8,54˚68N×157˚24W, h0km, mb3.6/5, mbtmp3.6/8, ML3.3/3, MS3.2/1, Error ellipse: s-maj=36.4km s-min=22.4km az=154.0*
*NEIC **24** 18:37:37.2±2.1,54˚74N±0˚09×156˚9W±0˚1, h36km±17km, Error ellipse: s-maj=13.3km s-min=7.7km az=159.0*
*AEIC **24** 18:37:38±2.5,54˚6N±0˚1×156˚78W±0˚07, h9km±7km, ML3.4, mb3.7/9(NEIC), ML3.7/28(NEIC), Error ellipse: s-maj=15.2km s-min=5.3km az=175.0*

ISC 24 18:37:37.4±1.0,54˚95N±0˚10×156˚99W±0˚05, h24km, n128,σ1§43/131, mb3.6/5, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.51**	**266**			Pn		**18 38 01.4**	**-1.5**
CHGN	**Chignik**	**1.58**	**330**			Pn		**18 38 05.3**	**+1.4**
VNHG	**Veniaminof 1**	**1.78**	**317**			Pb		**18 38 09.0**	**-0.4**
VNWF	**Veniaminof 8**	**1.90**	**311**			Pn		**18 38 10.4**	**+2.1**
VNFG	**Fog Glacier, M**	**1.98**	**314**			Pn		**18 38 10.5**	**+1.0**
VNFG				IAML				18 38 55.0	
	comp=N,575nm,1.9s								
VNFG				IAML				18 39 02.2	
	comp=E,512nm,1.0s								
SDPT	**Sand Point**	**2.04**	**283**			Pn		**18 38 09.9**	**-0.3**
SDPT				IAML				18 39 06.8	
	comp=E,237nm,2.4s								
PS1A	**Pavlof South-1**	**2.77**	**282**			Pn		**18 38 20.4**	**+0.1**
PS1A						Sn		**18 38 53.3**	**+0.5**
PVV	**Pavlof Volcano**	**2.79**	**281**			Pn		**18 38 20.5**	**0.0**
PVV						Sn		**18 38 55.1**	**+1.7**
PN7A	**Pavlof North-7**	**2.91**	**282**			Pn		**18 38 22.8**	**+0.5**
OHAK	**Old Harbor**	**3.08**	**41**			Pn		**18 38 24.9**	**+0.3**
OHAK	**Old Harbor**	**3.08**	**41**			Sn		**18 39 00.1**	**-0.4**
ANCK	**Angle Creek**	**3.36**	**14**			Pn		**18 38 29.9**	**+1.5**
KDAK	**Kodiak Island**	**3.75**	**39**			Pn		**18 38 33.4**	**-0.4**
KDAK						Sn		**18 39 16.5**	**-0.6**
KDAK	**Kodiak Island**	**3.75**	**39**	IAML				18 39 56.1	
	comp=E,83nm,3.1s								
KDAK				IAML				18 40 31.6	
	comp=E,76nm,2.9s								
KDAK	**Kodiak Island**	**3.75**	**39**	Pn		Pn		**18 38 34.2**	**+0.5**
	comp=E,1.0nm,0.3s,baz=235,slow=7.7,SNR=8.8								
KDAK						Sn		**18 39 17.0**	**-0.1**
	comp=E,1.3nm,0.3s,baz=252,slow=9.6,SNR=2.9								
	comp=E,4.2nm,0.3s								
ISLZ	**Isanotski Laza**	**3.90**	**269**			Pn		**18 38 35.3**	**-0.5**
ISLZ						Sn		**18 39 19.2**	**-1.5**
SSLS	**Shishaldin Sou**	**4.06**	**270**			Pn		**18 38 37.7**	**-0.4**
Q19K	**Cape Douglas,**	**4.39**	**23**			Pn		**18 38 43.0**	**+0.5**
SYI	**Shuyak Island**	**4.46**	**33**			Pn		**18 38 43.6**	**+0.2**
SYI				IAML				18 39 24.4	
	comp=N,94nm,2.9s								
P18K	**Big Mountain,**	**4.56**	**11**	Pn		Pn		**18 38 46.2**	**+1.3**
P18K				IAML				18 39 48.0	
	comp=E,39nm,3.6s								
P18K				IAML				18 40 08.6	
	comp=N,38nm,3.0s								
O16K	**Kokwok River B**	**4.70**	**353**	Pn		Pn		**18 38 48.4**	**+1.7**
O16K				IAML				18 40 33.3	
	comp=E,28nm,4.8s								
O16K				IAML				18 41 16.0	
	comp=N,30nm,4.2s								
O14K	**Tigyukauivet M**	**4.91**	**333**	Pn		Pn		**18 38 50.3**	**+0.7**
O14K				IAML				18 40 34.3	
	comp=N,62nm,3.4s								
O14K				IAML				18 41 09.1	
	comp=E,70nm,4.2s								
O18K	**Koktuh Hills**	**5.01**	**10**	Pn		Pn		**18 38 50.5**	**-0.6**
O18K				IAML				18 40 24.1	
	comp=E,37nm,3.8s								
O18K				IAML				18 41 42.6	
	comp=N,38nm,3.5s								
P19K	**Oil Pt**	**5.14**	**22**	Pn		Pn		**18 38 52.1**	**-0.7**
AKUT	**Akutan**	**5.18**	**265**	Pn		Pn		**18 38 50.0**	**-3.4**
ILSW	**Iliamna Southw**	**5.46**	**21**	Pn		Pn		**18 38 56.7**	**-0.6**
N15K	**Kwethluk River**	**5.50**	**344**	Pn		Pn		**18 38 58.9**	**+1.2**
HOM	**Homer**	**5.54**	**29**	Pn		Pn		**18 38 58.1**	**-0.1**
CNPM	**China Poot**	**5.55**	**32**	Pn		Pn		**18 38 57.0**	**-1.5**
N17K	**Nushagak Hills**	**5.60**	**359**	Pn		Pn		**18 39 00.2**	**+1.1**
O20K	**Slope Mountain**	**5.66**	**23**			Pn		**18 39 01.5**	**+1.5**
N18K	**Kilae Creek**	**5.78**	**5**	Pn		Pn		**18 39 02.1**	**+0.5**
BRLK	**Bradley Lake**	**5.85**	**32**			Pn		**18 39 01.2**	**-1.3**
BRSE	**Bradley Lake S**	**5.88**	**33**			Pn		**18 39 03.6**	**+0.7**
RSO	**Redoubt South**	**5.98**	**21**	Pn		Pn		**18 39 05.1**	**+0.6**
N19K	**Bonanza Creek**	**6.03**	**12**	Pn		Pn		**18 39 06.7**	**+1.6**
M16K	**Timber Creek**	**6.18**	**351**	Pn		Pn		**18 39 09.0**	**+1.9**
SVW2	**Sparrevohn**	**6.21**	**6**	Pn		Pn		**18 39 08.7**	**+1.1**
M14K	**Bethel**	**6.40**	**338**	Pn		Pn		**18 39 11.4**	**+1.4**
M17K	**Holitna River**	**6.48**	**358**	Pn		Pn		**18 39 13.4**	**+2.3**
L14K	**Kuka Creek**	**7.08**	**337**	Pn		Pn		**18 39 21.7**	**+2.3**
M19K	**Big River Lodg**	**7.11**	**10**	Pn		Pn		**18 39 20.8**	**+0.9**
M20K	**Styx River**	**7.24**	**15**	Pn		Pn		**18 39 24.2**	**+2.4**
RC01	**Rabbit Creek A**	**7.26**	**29**	Pn		Pn		**18 39 23.1**	**+1.2**
L18K	**Granite Mounta**	**7.30**	**1**	Pn		Pn		**18 39 24.9**	**+2.5**
SUA	**Susitna One**	**7.32**	**24**	Pn		Pn		**18 39 24.1**	**+1.4**
L19K	**White Mountain**	**7.34**	**8**	Pn		Pn		**18 39 25.3**	**+2.2**
SKT	**Skwentna**	**7.61**	**20**	Pn		Pn		**18 39 27.6**	**+0.9**
K15K	**Wolf Creek Mou**	**7.74**	**344**	Pn		Pn		**18 39 31.8**	**+3.3**
K17K	**Iditarod**	**7.82**	**356**	Pn		Pn		**18 39 32.1**	**+2.5**
HIN	**Hinchinbrook I**	**7.83**	**42**	Pn		Pn		**18 39 30.7**	**+1.0**
PMR	**Palmer**	**7.84**	**29**	Pn		Pn		**18 39 30.3**	**+0.5**
KNK	**Knik Glacier**	**7.89**	**31**	Pn		Pn		**18 39 31.9**	**+1.3**
GLI	**Glacier Island**	**7.94**	**37**	Pn		Pn		**18 39 31.1**	**-0.1**
TTA	**Tatalina**	**8.02**	**3**	Pn		Pn		**18 39 34.3**	**+1.9**
GHO	**Glory Hole Cre**	**8.04**	**28**	Pn		Pn		**18 39 34.0**	**+1.3**
FID	**Port Fidalgo**	**8.07**	**40**	Pn		Pn		**18 39 33.3**	**+0.2**
SML	**Sawmill**	**8.24**	**30**	Pn		Pn		**18 39 36.0**	**+0.6**
KAIM	**Kayak Island**	**8.41**	**49**	Pn		Pn		**18 39 38.5**	**+0.8**
J14K	**Nanvaranak Lak**	**8.53**	**339**	Pn		Pn		**18 39 41.6**	**+2.4**
J18K	**Innoko River**	**8.55**	**1**	Pn		Pn		**18 39 42.0**	**+2.5**
RAGM	**Ragged Mountai**	**8.55**	**45**	Pn		Pn		**18 39 40.9**	**+1.2**
SCM	**Sheep Creek Mo**	**8.56**	**32**	Pn		Pn		**18 39 41.8**	**+2.0**
J16K	**Anvik River**	**8.57**	**349**	Pn		Pn		**18 39 42.0**	**+2.2**
K20K	**Telida**	**8.57**	**9**	Pn		Pn		**18 39 41.8**	**+2.0**
HMT	**Hamilton**	**8.70**	**46**	Pn		Pn		**18 39 43.0**	**+1.4**
SUCK	**Suckling Hills**	**8.76**	**49**	Pn		Pn		**18 39 41.7**	**-0.8**
KLU	**Klutina**	**8.77**	**37**	Pn		Pn		**18 39 43.7**	**+1.0**
CAST	**Castle Rocks**	**8.86**	**14**	Pn		Pn		**18 39 45.5**	**+1.7**
BERG	**Berg Lake**	**8.96**	**47**	Pn		Pn		**18 39 46.0**	**+0.8**
J19K	**Poorman**	**9.10**	**4**	Pn		Pn		**18 39 48.0**	**+0.9**
N25K	**Chitina, Valde**	**9.32**	**39**	Pn		Pn		**18 39 51.2**	**+1.0**
WAX	**Waxell Ridge**	**9.35**	**48**	Pn		Pn		**18 39 51.7**	**+1.0**
J20K	**Nowinta River**	**9.37**	**8**	Pn		Pn		**18 39 51.6**	**+0.8**
CRQM	**Cirque**	**9.39**	**46**	Pn		Pn		**18 39 52.4**	**+1.2**
GLB	**Gilahina Butte**	**9.51**	**42**	Pn		Pn		**18 39 52.8**	**-0.1**
VRDI	**Verde Repeater**	**9.53**	**43**	Pn		Pn		**18 39 53.1**	**0.0**
DHY	**Denali Highway**	**9.53**	**27**	Pn		Pn		**18 39 54.5**	**+1.4**
ISLE	**Juniper Island**	**9.65**	**48**	Pn		Pn		**18 39 56.0**	**+1.3**
TABL	**Table Mountain**	**10.10**	**51**	Pn		Pn		**18 40 02.6**	**+1.6**
BARN	**Barnard Glacie**	**10.17**	**47**	Pn		Pn		**18 40 02.6**	**+0.8**
H18K	**Honhosa River**	**10.26**	**357**	Pn		Pn		**18 40 05.2**	**+2.2**
LOGN	**Logan Glacier**	**10.33**	**49**	Pn		Pn		**18 40 01.5**	**-2.6**
I21K	**Tanana**	**10.56**	**12**	Pn		Pn		**18 40 07.5**	**+0.5**
H19K	**Roundabout Mou**	**10.62**	**1**	Pn		Pn		**18 40 09.2**	**+1.3**
HDA	**Harding Lake**	**10.74**	**24**	Pn		Pn		**18 40 10.2**	**+0.6**
H21K	**Melozitna Rive**	**10.94**	**9**	Pn		Pn		**18 40 13.2**	**+0.9**
IL31		**11.07**	**23**	Pn		Pn		**18 40 13.8**	**-0.1**
ILAR	**Eielson Array**	**11.07**	**23**	Pn		Pn		**18 40 13.4**	**-0.6**
ILAR	**Eielson Array**	**11.07**	**23**	Pn		Pn		**18 40 12.8**	**-1.1**
	comp=N,0.2nm,0.3s,baz=217,slow=13,SNR=11								
ILAR						Sn		**18 42 12.9**	**-3.8**
	baz=183,slow=13,SNR=1.8								
	comp=N,0.5nm,0.4s								
IMAR	**Indian Mountai**	**11.19**	**7**	Pn		Pn		**18 40 16.1**	**+0.5**
O29M	**Mount Kennedy**	**11.21**	**54**	Pn		Pn		**18 40 17.3**	**+1.2**
L27K	**Beaver Creek,**	**11.25**	**38**	Pn		Pn		**18 40 15.8**	**-0.8**
BCAR	**Beaver Creek A**	**11.27**	**38**	Pn		Pn		**18 40 16.6**	**-0.2**
J25K	**Salcha River,**	**11.30**	**26**	Pn		Pn		**18 40 17.5**	**+0.3**
P29M

comp=N,1665µm,0.2s
MRGE AML AML
comp=E,1649µm,0.1s
MRGE AML AML
comp=N,1644µm,0.1s
MRGE Morge 0.10 168 P **Pg** 19 42 10.3 -0.3
MRGE S **Sg** 19 42 12.3 -0.5
SEMOS Emosson Stauma 0.21 341 ⇑Pg **Pg** 19 42 11.4 -0.8
SEMOS Sg **Sg** 19 42 14.0 -1.4
SEMOS Emosson Stauma 0.21 341 ⇑Pg **Pg** 19 42 11.4 -0.8
SEMOS Sg **Sg** 19 42 14.0 -1.4
SMAO Martigny, Rue 0.23 8 ⇑Pg **Pg** 19 42 11.9 -0.6
SMAO Martigny, Rue 0.23 8 ⇑Pg **Pg** 19 42 11.9 -0.6
SALAN Lac Salanfe 0.28 352 ⇑Pg **Pg** 19 42 12.7 -0.7
SALAN Sg **Sg** 19 42 16.1 -1.2
SALAN Lac Salanfe 0.28 352 ⇑Pg **Pg** 19 42 12.7 -0.7
SALAN Sg **Sg** 19 42 16.1 -1.2
DIX Grande Dixence 0.34 51 ⇑Pg **Pg** 19 42 14.0 -0.4
DIX Sg **Sg** 19 42 18.6 -0.5
DIX Grande Dixence 0.34 51 ⇑P **Pg** 19 42 14.0 -0.4
DIX S **Sg** 19 42 18.8 -0.3
DIX AML AML
comp=E,896µm,0.4s
DIX AML AML
comp=N,718µm,0.8s
DIX AML AML
comp=N,718µm,1.2s
DIX AML AML
comp=N,670µm,0.2s
DIX AML AML
comp=E,803µm,0.1s
DIX Grande Dixence 0.34 51 Pg **Pg** 19 42 14.0 -0.4
DIX Sg **Sg** 19 42 18.8 -0.3
DIX Grande Dixence 0.34 51 P **Pg** 19 42 14.0 -0.4
DIX S **Sg** 19 42 18.8 -0.3
RSL Roselend 0.34 237 P **Pg** 19 42 14.0 -0.3
RSL S **Sg** 19 42 18.2 -0.8
GRYON Gryon 0.39 8 ⇑Pg **Pg** 19 42 14.7 -0.6
GRYON Gryon 0.39 8 ⇑Pg **Pg** 19 42 14.7 -0.6
SHER Hrmence, R 0.41 39 ⇑Pg **Pg** 19 42 15.2 -0.4
SHER Hrmence, R 0.41 39 ⇑Pg **Pg** 19 42 15.2 -0.4
LPL La Plagne 0.41 211 *e*Pg **Pg** 19 42 15.1 -0.6
LPL *e*Sg **Sg** 19 42 20.2 -1.1
comp=E,9.4nm,0.3s
LSD Lago del Serru 0.42 170 ⇑Pg **Pg** 19 42 15.9 0.0
LSD Sg **Sg** 19 42 21.4 0.0
LSD Lago del Serru 0.42 170 ⇑Pg **Pg** 19 42 15.9 0.0
LSD Sg **Sg** 19 42 21.4 0.0
LSD Lago del Serru 0.42 170 P **Pg** 19 42 15.9 0.0
LSD S **Sg** 19 42 21.5 0.0
LSD AML AML
comp=N,170µm,0.8s
LSD AML AML
comp=E,367µm,0.1s
LSD AML AML
comp=N,170µm,1.2s
LSD AML AML
comp=E,367µm,0.1s
LSD AML AML
comp=N,141µm,0.1s
LSD Lago del Serru 0.42 170 P **Pg** 19 42 15.9 0.0
LSD S **Sg** 19 42 21.5 0.0
LPG La Plagne 0.42 208 *e*Pg **Pg** 19 42 15.5 -0.4
LPG *e*Sg **Sg** 19 42 20.5 -1.1
comp=N,14nm,0.2s
SIOV Sion-Valere 0.43 32 ⇑Pg **Pg** 19 42 15.6 -0.5
CIRO Champorcher 0.46 125 ⇓Pg **Pg** 19 42 16.5 -0.2
CIRO Sg **Sg** 19 42 22.7 -0.2
CIRO Champorcher 0.46 125 P **Pg** 19 42 16.5 -0.2
CIRO S **Sg** 19 42 22.7 -0.2
CIRO AML AML
comp=E,40µm,0.1s
CIRO AML AML
comp=N,70µm,0.2s
CIRO Champorcher 0.46 125 P **Pg** 19 42 16.5 -0.2
CIRO S **Sg** 19 42 22.8 -0.2
SAYF2 Ayent-Fortunoz 0.50 33 ⇑Pg **Pg** 19 42 16.8 -0.5
VANNI Vissoie, Val d 0.52 49 Pg **Pg** 19 42 17.3 -0.4
VANNI Sg **Sg** 19 42 23.7 -1.0
VANNI Vissoie, Val d 0.52 49 P **Pg** 19 42 17.4 -0.4
VANNI S **Sg** 19 42 23.9 -0.8
SENIN Lac Senin/Sane 0.53 21 ⇑Pg **Pg** 19 42 17.2 -0.6
SENIN Lac Senin/Sane 0.53 21 ⇑Pg **Pg** 19 42 17.2 -0.6
SENIN Lac Senin/Sane 0.53 21 P **Pg** 19 42 17.3 -0.6
SENIN S **Sg** 19 42 25.0 0.0
TRAV Traversella 0.62 125 ⇓Pg **Pg** 19 42 19.3 -0.2
TRAV Traversella 0.62 125 ⇓Pg **Pg** 19 42 19.3 -0.2
TRAV Traversella 0.62 125 P **Pg** 19 42 19.3 -0.2
TRAV S **Sg** 19 42 27.4 -0.3
TRAV AML AML
comp=E,69µm,1.5s
TRAV AML AML
comp=N,90µm,1.4s
TRAV AML AML
comp=E,69µm,0.5s
TRAV AML AML
comp=N,90µm,0.6s
TRAV AML AML
comp=E,60µm,0.1s
TRAV AML AML
comp=N,67µm,0.1s
TRAV Traversella 0.62 125 P **Pg** 19 42 19.4 -0.2
EMBD Embd, Matterta 0.66 58 Pg **Pg** 19 42 19.6 -0.7
EMBD Sg **Sg** 19 42 27.7 -1.3
EMBD Embd, Matterta 0.66 58 Pg **Pg** 19 42 19.6 -0.7
EMBD Sg **Sg** 19 42 27.7 -1.3
EMBD Embd, Matterta 0.66 58 Pg **Pg** 19 42 19.4 -0.9
EMBD Embd, Matterta 0.66 58 P **Pg** 19 42 19.6 -0.7
EMBD S **Sg** 19 42 28.1 -0.9
LKBD2 Leukerbad 2 0.66 40 ⇑Pg **Pg** 19 42 19.7 -0.7
LKBD2 Leukerbad 2 0.66 40 ⇑Pg **Pg** 19 42 19.7 -0.7
MMK Mattmark 0.68 74 P **Pg** 19 42 20.1 -0.6
MMK S **Sg** 19 42 29.0 -0.6
MMK AML AML
comp=E,40µm,1.6s
MMK AML AML
comp=N,43µm,1.5s
MMK AML AML
comp=N,43µm,0.5s
MMK AML AML
comp=E,40µm,0.4s
MMK AML AML
comp=N,36µm,0.3s
MMK AML AML
comp=E,30µm,0.2s
MMK Mattmark 0.68 74 P **Pg** 19 42 20.1 -0.6
MMK S **Sg** 19 42 27.8 -1.8
LAUCH Lauchernalp 0.75 43 ⇑Pg **Pg** 19 42 21.3 -0.8
LAUCH Lauchernalp 0.75 43 ⇑Pg **Pg** 19 42 21.3 -0.8
LAUCH Lauchernalp 0.75 43 P **Pg** 19 42 21.5 -0.6
SIMPL Simplonpass 0.78 61 Pg **Pg** 19 42 21.7 -0.9
SIMPL Sg **Sg** 19 42 31.9 -1.0
SIMPL Simplonpass 0.78 61 Pg **Pg** 19 42 21.7 -0.9
SIMPL Sg **Sg** 19 42 31.9 -1.0
SIMPL Simplonpass 0.78 61 P **Pg** 19 42 21.8 -0.9
SIMPL S **Sg** 19 42 32.0 -0.9
GIMEL St. Georges / 0.85 322 P **Pg** 19 42 23.7 -0.3
GIMEL S **Sg** 19 42 35.3 +0.2
BNI Bardonecchia 0.85 197 Pg **Pg** 19 42 23.5 -0.5
BNI Bardonecchia 0.85 197 P **Pg** 19 42 23.5 -0.5
BNI S **Sg** 19 42 34.9 -0.3
BNI Bardonecchia 0.85 197 P **Pg** 19 42 23.6 -0.4
TORNY Torny/Romont 0.91 357 Sn **Sn** 19 42 41.1 +2.1
TORNY Torny/Romont 0.91 357 Sg **Sg** 19 42 36.9 +0.1
TORNY Torny/Romont 0.91 357 Pg **Pg** 19 42 24.8 -0.2
RRL Rocca Remolon 0.96 190 P **Pg** 19 42 25.6 -0.5
RRL S **Sg** 19 42 38.7 0.0
CABF La Chapelle 0.99 319 *e*Pn **Pg** 19 42 26.1 -0.5
CABF La Chapelle 0.99 319 *e*P **Pn** 19 42 28.1 +0.9
CABF *e*Sn **Sg** 19 42 38.9 -0.6
comp=E,8.0nm,0.3s
MBDF Montbardon 1.16 189 *e*Pg **Pg** 19 42 28.8 -1.0
MBDF *e*Sg **Sg** 19 42 43.2 -1.6
comp=E,2.5nm,0.3s
RIVEL MONT RIVEL 1.18 320 Pg **Pg** 19 42 29.3 -0.8
RIVEL Sg **Sg** 19 42 43.9 -1.5
ORIF Oris-en-Rattie 1.25 221 *e*Pg **Pg** 19 42 30.3 -1.2
ORIF *e*Sg **Sg** 19 42 45.2 -2.6
comp=E,6.1nm,0.3s
ORIF Oris-en-Rattie 1.25 221 P **Pg** 19 42 30.5 -1.0
FUSIO Fusio 1.28 62 P **Pg** 19 42 30.8 -1.3
A215A Commelle, 3812 1.34 251 Pg **Pg** 19 42 33.8 +0.7
A215A Sg **Sg** 19 42 50.7 +0.2

BNALP Bannalp 1.39 43 P **Pn** 19 42 33.1 +0.3
CHMF Charmoille 1.40 349 Pg **Pb** 19 42 34.1 +0.4
CHMF Sg **Sn** 19 42 52.8 +1.4
OGAG Argentiere 1.46 194 P Pn 19 42 29.1 -4.6
BOUC Bouclans 1.48 339 Pg **Pb** 19 42 35.6 +0.7
BOUC Sg **Sb** 19 42 54.6 +1.0
A164A Fourg, 25253, 1.49 326 Pn **Pn** 19 42 34.1 +0.1
A164A Sn **Sb** 19 42 55.3 +1.3
A194A Meolans-Revel, 1.52 194 Pg **Pb** 19 42 36.2 +0.5
BOURR Bourrignon 1.53 5 Sn **Sg** 19 42 57.1 +0.4
BOURR Bourrignon 1.53 5 Pg **Pg** 19 42 36.7 -0.2
BALST Balsthal 1.54 17 Pg **Pg** 19 42 36.9 0.0
BALST Balsthal 1.54 17 Sg **Sg** 19 42 57.9 +1.0
EUCT Pavia 1.62 114 AML AML
comp=E,542µm,1.6s
EUCT AML AML
comp=E,542µm,0.4s
EUCT AML AML
comp=N,944µm,1.6s
SULZ Cheisacher 1.82 24 Pg **Pg** 19 42 41.7 -0.6
SULZ Cheisacher 1.82 24 Sg **Sg** 19 43 05.9 -0.1
ILLF Illfurth 1.82 5 Pg **Pb** 19 42 41.3 +0.6
ILLF Sg **Sg** 19 43 05.6 -0.4
RONF Ronchamp 1.86 352 Pg **Pb** 19 42 42.4 +1.1
ENDD Endenburg 1.91 14 Pg **Pb** 19 42 42.9 +0.7
PLYF Puligny Montra 1.92 305 Pg **Pb** 19 42 43.3 +1.0
VIVF Saint-Julien-l 1.95 239 *e*Pg **Pb** 19 42 43.0 +0.1
VIVF *e*Sn **Sn** 19 43 01.4 -3.3
VIVF *e*Sg **Sb** 19 43 07.4 +0.3
comp=N,9.6nm,0.2s
HINF Hinteralfeld 1.95 356 *e*Pg **Pb** 19 42 43.6 +0.7
HINF *e*Sn **Sn** 19 43 02.9 -1.9
HINF *e*Sg **Sb** 19 43 08.1 +0.9
comp=N,3.8nm,0.2s
SBF Sospel 2.03 172 *e*Pg **Pb** 19 42 44.6 +0.4
SBF *e*Sg **Sb** 19 43 10.7 +1.3
comp=N,28nm,0.6s
A184A Saint Michel d 2.06 243 Pg **Pb** 19 42 45.9 +1.0
A184A Sg **Sg** 19 43 12.9 -0.9
SLE Schleitheim 2.15 27 Pg **Pb** 19 42 47.8 -0.8
SMRF Simiane la Rot 2.16 209 *e*Pg **Pb** 19 42 46.9 +0.4
SMRF *e*Sg **Sb** 19 43 13.8 +0.7
comp=N,2.1nm,0.5s
KIZ Kirchzarten 2.17 16 Pg **Pb** 19 42 47.8 +1.1
HAU Haudompre 2.19 348 *e*Pg **Pb** 19 42 48.2 +1.3
HAU *e*Sg **Sb** 19 43 15.2 +1.2
comp=N,6.2nm,0.3s
SMF Signal de Mont 2.34 290 *e*P **Pn** 19 42 46.6 +0.8
SMF Signal de Mont 2.34 290 *e*Pg **Pb** 19 42 51.3 +1.7
SMF *e*Sg **Sb** 19 43 21.0 +2.5
comp=N,2.7nm,0.2s
COLF Collangettes 2.36 263 Pg **Pg** 19 42 52.7 -0.1
CDF Champ du Feu 2.55 4 *e*Pn **Pn** 19 42 47.3 -1.4
CDF *e*Sn **Sn** 19 43 17.5 -2.1
CDF *e*Sg **Sg** 19 43 27.7 -1.7
comp=N,1.0nm,0.2s
LMR La Mourre 2.56 189 *e*Pg **Pb** 19 42 54.1 +0.8
LMR *e*Sg **Sb** 19 43 27.4 +2.7
comp=N,2.2nm,0.3s
LOR Lormes 2.60 304 *e*Pn **Pn** 19 42 47.6 -1.6
baz=120
LOR Lormes 2.60 304 *e*P **Pn** 19 42 49.8 +0.6
LOR Lormes 2.60 304 *e*Pg **Pb** 19 42 55.2 +1.3
LOR *e*Sg **Sb** 19 43 28.3 +2.5
comp=N,0.8nm,0.2s
GUT Gutenstein 2.62 32 Pg **Pg** 19 42 56.4 -1.3
AVF Avril sur Loir 2.71 291 *e*P **Pn** 19 42 51.6 +0.8
AVF Avril sur Loir 2.71 291 *e*Pg **Pb** 19 42 57.8 +2.0
AVF *e*Sn **Sn** 19 43 19.8 -3.6
AVF *e*Sg **Sb** 19 43 31.0 +2.0
comp=N,1.7nm,0.3s
SSF Saint Saulge 2.71 297 *e*P **Pn** 19 42 51.8 +1.0
SSF Saint Saulge 2.71 297 *e*Pg **Pb** 19 42 57.2 +1.3
SSF *e*Sg **Sb** 19 43 32.4 +3.4
comp=N,1.7nm,0.3s
LBL Lubilhac 2.73 258 Pg **Pg** 19 42 59.0 -0.9
LBL Sg **Sb** 19 43 31.9 +2.1
LASF Ste Croix 2.88 233 *e*Pg **Pb** 19 43 00.1 +1.4
LASF *e*Sn **Sn** 19 43 22.8 -4.9
LASF *e*Sg **Sb** 19 43 36.4 +2.5
comp=N,1.7nm,0.2s
BGF Bois d'Agland 2.98 285 *e*P **Pn** 19 42 55.4 +0.8
BGF Bois d'Agland 2.98 285 *e*Pg **Pg** 19 43 03.5 -1.2
BGF *e*Sg **Sb** 19 43 40.6 +3.7
comp=N,4.4nm,0.4s
HYF Humbligny 3.34 296 *e*P **Pn** 19 43 00.6 +1.2
HYF Humbligny 3.34 296 *e*Pg **Pb** 19 43 08.1 +1.6
HYF *e*Sn **Sn** 19 43 34.5 -4.4
TCF Toulx Ste Croi 3.38 279 *e*Pg **Pg** 19 43 10.8 -1.4
TCF *e*Sg **Sg** 19 43 53.3 -2.7
comp=N,0.7nm,0.2s
RJF Les Rejaudoux 3.91 264 *e*Sg **Sb** 19 44 09.1 +5.5
comp=N,1.8nm,0.4s

*IDC **24** 19:44:29.9±1.6, 6.°07N×93.°63E, h0km, mb3.7/7, mbtmp3.7/8, ML3.9/1, Error ellipse: s-maj=72.3km s-min=18.9km az=57.0*
ISC 24 19:44:31.2±1.5, **6.°0N**±0.°2×**93.°5E**±0.°3, **h10**km, **n8**, σ0.°92/8, **mb3.7/7, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.47**	**23**	Pn	**Pn**	**19 47 43.0**	**+0.4**
	0.2nm,0.3s,baz=214,slow=14,SNR=9.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**41.80**	**348**	P	**P**	**19 52 20.0**	**-1.0**
	0.4nm,0.4s,baz=154,slow=9.6,SNR=15						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**46.23**	**347**	P	**P**	**19 52 55.8**	**-0.6**
	0.6nm,0.6s,baz=166,slow=6.7,SNR=6.3						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**47.69**	**124**	P	**P**	**19 53 08.0**	**-0.4**
	0.5nm,0.7s,baz=304,slow=9.0,SNR=11						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**48.34**	**353**	P	**P**	**19 53 11.6**	**-1.3**
	0.6nm,0.3s,baz=168,slow=6.8,SNR=6.6						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**49.20**	**128**	P	**P**	**19 53 20.3**	**+0.3**
	0.4nm,0.5s,baz=300,slow=8.1,SNR=11						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**50.58**	**342**	P	**P**	**19 53 30.4**	**+0.3**
	0.2nm,0.3s,baz=143,slow=10,SNR=5.0						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**74.09**	**333**	P	**P**	**19 56 08.2**	**+0.9**
	0.6nm,0.4s,baz=91,slow=4.5,SNR=12						
	0.6nm,0.4s						

*IDC **24** 19:46:57.4±0.9, 32.°96S×178.°54W, h0km, mb4.4/4, mbtmp4.4/5, ML4.3/1, MS3.4/5, Error ellipse: s-maj=34.7km s-min=28.4km az=110.0*
*WEL **24** 19:46:58.0±0.9, 33.°S×7.°×17.°8W±1.°7, h33km, M4.4/13, mB5.0/7, ML4.7/13, MLv4.6/13, Mw(mB)4.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.4, confirmed*
*NEIC **24** 19:47:00.2±0.8, 32.°8S±0.°1×178.°7W±0.°2, h10km±1km, mb4.4/12, Error ellipse: s-maj=27.6km s-min=21.0km az=85.0*
ISC 24 19:47:00.7±0.8, **33.°10S**±0.°07×**178.°4W**±0.°1, **h32**km, **n53**, σ1.°5**57**/60, **mb4.4/8, MS3.3**/4, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.84**	**6**	P	**Pn**	**19 47 54.9**	**-2.7**
GLKZ				S	**Sn**	**19 48 39.8**	**-1.9**
RAO	**Raoul Island**	**3.85**	**6**	Pn	**Pn**	**19 47 55.5**	**-2.2**
MXZ	**Matakaoa Point**	**5.21**	**210**	Pn	**Pn**	**19 48 14.7**	**-1.7**
MXZ	**Matakaoa Point**	**5.21**	**210**	P	**Pn**	**19 48 13.9**	**-2.5**
MXZ				S	**Sn**	**19 49 13.6**	**-1.8**
WMGZ	**Waiomatatini S**	**5.39**	**208**	P	**Pn**	**19 48 17.9**	**-0.9**
WMGZ				S	**Sn**	**19 49 20.1**	**+0.4**
PKGZ	**Pakihiroa**	**5.59**	**210**	P	**Pn**	**19 48 19.6**	**-2.0**
PKGZ				S	**Sn**	**19 49 24.1**	**-0.6**
HAZ	**Te Kaha**	**5.61**	**213**	P	**Pn**	**19 48 20.3**	**-1.4**
HAZ				S	**Sn**	**19 49 26.7**	**+1.6**
PUZ	**Puketiti**	**5.67**	**208**	P	**Pn**	**19 48 20.3**	**-2.4**
PUZ				S	**Sn**	**19 49 26.4**	**-0.3**
RUGZ	**Raukumara Rang**	**5.82**	**212**	P	**Pn**	**19 48 23.6**	**-1.3**
RUGZ				S	**Sn**	**19 49 30.6**	**0.0**
TWGZ	**Tauwhareparae**	**5.87**	**209**	P	**Pn**	**19 48 24.3**	**-1.2**
TWGZ				S	**Sn**	**19 49 31.4**	**-0.2**
CNGZ	**Carnagh Statio**	**6.05**	**206**	P	**Pn**	**19 48 25.2**	**-2.7**
WHRZ	**Whale Island**	**6.07**	**217**	P	**Pn**	**19 48 29.7**	**+1.4**

MWZ Matawai 6.20 211 P **Pn** 19 48 28.1 -1.8
MWZ S **Sn** 19 49 38.5 -1.1
URZ Urewera 6.32 214 Pn **Pn** 19 48 30.2 -1.4
6.1nm,0.3s,baz=21,slow=2.2,SNR=38
URZ Sn **Sn** 19 49 40.0 -2.7
9.4nm,0.3s,baz=275,slow=18,SNR=9.8
13nm,0.3s
URZ Urewera 6.32 214 P **Pn** 19 48 28.8 -2.8
URZ S **Sn** 19 49 40.0 -2.7
RIGZ Rimuhau 6.41 208 P **Pn** 19 48 32.7 -0.2
SNGZ Shannon Statio 6.65 210 P **Pn** 19 48 36.2 0.0
SNGZ S **Sn** 19 49 49.5 -1.4
RTZ Ruatahuna 6.67 213 **Pn** 19 48 35.1 -1.3
OUZ Omahuta 6.98 250 P **Pn** 19 48 43.6 +2.9
DZM Mont Dzumac 17.35 305 LR LR 19 56 36.9
comp=Z,249nm,18.7s,baz=236,slow=34
KOUNC Koumac, New Ca 19.85 305 P **P** 19 51 27.0 -2.0
KOUNC IAmb IAmb 19 51 49.4
comp=Z,19nm,1.2s
RAR Rarotonga 20.32 59 LR LR 19 59 41.4
comp=Z,31nm,18.1s,baz=118,slow=38
EIDS Eidsvold 27.67 278 P **P** 19 52 45.0 -0.8
EIDS IAmb IAmb 19 52 48.8
comp=Z,6.7nm,1.1s
PPT Papeete 30.15 66 LR LR 20 05 20.6
comp=Z,44nm,18.6s,baz=199,slow=36
STKA Stephens Creek 33.65 261 LR LR 20 06 19.0
comp=Z,83nm,18.6s,baz=39,slow=35
CTAO Charters Tower 34.01 283 P **P** 19 53 42.6 +0.8
PMG Port Moresby 39.54 299 LR LR 20 09 56.9
comp=Z,51nm,18.3s,baz=144,slow=35
COEN Coen 39.78 289 P **P** 19 54 30.2 -0.6
COEN IAmb IAmb 19 54 57.1
comp=Z,5.3nm,1.1s
AS31 Alice Springs 42.71 270 P **P** 19 54 55.0 0.0
ASAR Alice Springs 42.72 270 P **P** 19 54 54.3 -0.7
ASAR Alice Springs 42.72 270 P **P** 19 54 55.5 +0.6
comp=Z,4.9nm,0.7s,baz=110,slow=7.5,SNR=74
comp=Z,4.9nm,0.7s
WRA Warramunga Arr 43.95 275 P **P** 19 55 04.8 -0.1
WRA Warramunga Arr 43.95 275 P **P** 19 55 05.2 +0.3
comp=Z,5.1nm,0.7s,baz=114,slow=7.9,SNR=32
comp=Z,5.1nm,0.7s
WB0 Warramunga Arr 43.98 275 P **P** 19 55 05.4 +0.2
WB0 IAmb IAmb 19 55 07.2
comp=Z,8.3nm,0.8s
FORT Forrest 45.10 258 P **P** 19 55 13.3 -0.7
MTN Manton Dam 50.14 281 P **P** 19 55 52.6 -0.6
MTN IAmb IAmb 19 55 58.4
comp=Z,9.0nm,1.1s
FITZ Fitzroy Crossi 52.09 272 P **P** 19 56 07.9 +0.1
QSPA South Pole Qui 57.02 180 P **P** 19 56 46.4 +3.2
QSPA IAmb IAmb 19 56 52.4
comp=Z,7.2nm,1.2s
QSPA South Pole Qui 57.02 180 P **P** 19 56 46.5 +3.3
comp=Z,3.4nm,0.9s,baz=11,slow=2.4,SNR=7.4
comp=Z,3.4nm,0.9s
KSM Kuching 75.23 282 P **P** 19 58 38.9 -1.7
PETK Petropavlovsk- 88.34 346 P **P** 19 59 50.3 +1.7
comp=Z,3.1nm,0.9s,baz=116,slow=6.4,SNR=4.7
comp=Z,3.1nm,0.9s
BVAR Borovoye Array 128.08 314 PKP **PKiKP** 20 06 04.1 +0.6
comp=Z,0.4nm,0.4s,baz=141,slow=2.7,SNR=4.1
KBZ Khabaz 146.27 301 PKPbc **PKPab** 20 06 38.7 +0.1
comp=Z,1.3nm,0.9s,baz=177,slow=4.1,SNR=2.8
FINES FINESS Array B 147.54 338 PKPbc **PKPbc** 20 06 41.5 +0.7
comp=Z,3.1nm,0.6s,baz=47,slow=3.4,SNR=22
NC303 NORSAR Array S 151.16 350 PKPbc **PKiKP** 20 06 51.1 +0.7
NB2 NORSAR Subarra 151.35 350 PKP **PKiKP** 20 06 52.0 +1.2
comp=Z,3.2nm,0.8s,baz=23,slow=3.1
NOA NORSAR Array B 151.35 350 PKPbc **PKPbc** 20 06 51.2 +0.8
comp=Z,0.6nm,0.8s,baz=17,slow=4.6,SNR=3.7
MMAI Mount Meron Ar 151.75 279 PKPbc **PKiKP** 20 06 54.1 +1.5
comp=Z,5.5nm,0.7s,baz=66,slow=4.1,SNR=12
HFS Hagfors 151.81 347 PKPbc **PKiKP** 20 06 52.2 +0.4
comp=Z,0.7nm,0.4s,baz=158,slow=4.3,SNR=8.2
AKASG Malin Array Be 153.19 319 PKPbc **PKiKP** 20 06 56.0 +1.1
comp=Z,1.1nm,0.5s,baz=75,slow=0.7,SNR=2.1
BR131 Keskin Array S 153.49 294 PKPbc **PKiKP** 20 06 56.6 +0.6
BRTR Keskin Array B 153.49 294 PKPbc **PKPbc** 20 06 56.2 +0.2
BRTR Keskin Array B 153.49 294 PKPbc **PKiKP** 20 06 56.9 +0.8
comp=Z,1.1nm,0.6s,baz=131,slow=3.1,SNR=10.0

*NIED **24** 19:56:04.8, 24.°75N×121.°81E, h81km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}6.93; $M_{\theta\theta}$-5.12; $M_{\phi\phi}$-1.81; $M_{r\theta}$-3.00; $M_{\theta\phi}$-2.42; $M_{\phi r}$-2.16; Fault plane solution: $M_0$7.62000×10^{14} NP1: ϕ_s239.00000°, δ59.00000°, λ87.00000°. NP2:ϕ_s65.00000°, δ31.00000°, λ96.00000°.*
*JMA **24** 19:56:04.8±0.2, 24.°8N±0.°7×121.°8E±0.°7, h81km±2km, MV3.5/18, TAIWAN REGION*
*TAP **24** 19:56:05.1, 24.°79N×121.°80E, h77km, ML4.3, B*
*ASIES **24** 19:56:05.1, 24.°79N×121.°80E, h77km, ML4.3, Mw3.8, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}3.72; $M_{\theta\theta}$-4.17; $M_{\phi\phi}$-4.56; $M_{r\theta}$-2.38; $M_{\theta\phi}$-3.29; $M_{\phi r}$-2.04; Fault plane solution: $M_0$6.83561×10^{21} NP1: ϕ_s226.58000°, δ59.44000°, λ93.57000°. NP2:ϕ_s39.59000°, δ30.74000°, λ83.99000°. Principal axes: T Plg75.2850°, Azm146.5360°; N Plg3.0680°, Azm44.7610°; P Plg14.3770°, Azm313.9730°.*
*IDC **24** 19:56:13.5±5.2, 24.°70N×121.°73E, h164km±51km, mb3.3/9, mbtmp3.8/10 Error ellipse: s-maj=29.3km s-min=13.1km az=70.0*
ISC 24 19:56:05.2±0.7, **24.°80N**±0.°02×**121.°80E**±0.°02, **h81**km±3km, **n209**, σ0.°69/324, **mb3.7**/9, **42C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILA	**Ilan**	**0.06**	**231**	*i* P	**Pn**	**19 56 17.0**	**+0.3**
	baz=238						
ILA				*i* S	**Sn**	**19 56 26.2**	**+1.0**
	baz=238						
NTC	**Toucheng**	**0.06**	**29**	P	**Pn**	**19 56 16.6**	**-0.2**
	baz=36						
NTC				S	**Sn**	**19 56 25.1**	**-0.1**
	baz=36						
EGS		**0.13**	**71**	⇑*i* P	**Pn**	**19 56 16.8**	**0.0**
	baz=75						
TWE	**Neicheng**	**0.14**	**236**	⇑*i* P	**Pn**	**19 56 17.0**	**+0.2**
	baz=237						
TWE				S	**Sn**	**19 56 25.9**	**+0.4**
	baz=237						
TIPB	**Shuangxi**	**0.17**	**8**	⇑*i* P	**Pn**	**19 56 16.9**	**-0.2**
	baz=357						
TIPB				*e*S	**Sn**	**19 56 25.6**	**-0.2**
	baz=357						
NDS	**Dongshan**	**0.18**	**204**	⇑*i* P	**Pn**	**19 56 17.4**	**+0.4**
	baz=206						
NDS				*i* S	**Sn**	**19 56 26.4**	**+0.6**
	baz=206						
FUSB	**Fushanzhiwuyua**	**0.20**	**258**	⇑*i* P	**Pn**	**19 56 17.1**	**0.0**
	baz=274						
FUSB				*i* S	**Sn**	**19 56 25.1**	**-0.9**
	baz=274						
TWC	**Suao**	**0.20**	**166**	⇑*i* P	**Pn**	**19 56 17.2**	**+0.1**
	baz=163						
TWC				*i* S	**Sn**	**19 56 26.1**	**+0.3**
	baz=163						
ESAO	**Su ao**	**0.23**	**169**	⇑*i* P	**Pn**	**19 56 17.5**	**+0.3**
	baz=169						
ESAO				S	**Sn**	**19 56 26.4**	**+0.3**
	baz=169						
TWA	**Mucha**	**0.26**	**312**	⇑*i* P	**Pn**	**19 56 17.4**	**0.0**
	baz=320						
TWA				*i* S	**Sn**	**19 56 26.2**	**-0.3**
	baz=320						
ENTT	**Nioudou**	**0.27**	**233**	⇑*i* P	**Pn**	**19 56 17.6**	**+0.2**
	baz=245						
ENTT				S	**Sn**	**19 56 26.3**	**-0.1**
	baz=245						
NWF	**Wu-fen Shan**	**0.27**	**357**	⇑*i* P	**Pn**	**19 56 17.4**	**-0.1**
	baz=356						
NWF				*i* S	**Sn**	**19 56 26.3**	**-0.4**
	baz=356						
TWB1	**Santiao Chiao**	**0.27**	**40**	⇑*i* P	**Pn**	**19 56 17.2**	**-0.2**
	baz=48						
TWB1				*i* S	**Sn**	**19 56 25.8**	**-0.6**
	baz=48						
WFSB	**Wu-fen Shan**	**0.27**	**357**	⇑*i* P	**Pn**	**19 56 17.3**	**-0.1**
	baz=356						
WFSB				*i* S	**Sn**	**19 56 25.9**	**-0.6**
	baz=356						
NWLT	**Wulai**	**0.27**	**265**	⇑*i* P	**Pn**	**19 56 17.3**	**-0.2**

	baz=268							
NWLT			*i* S		Sn	19 56 25.8	-0.7	
	baz=268							
NHDH	**Xindian Distri**	**0.29**	**303**	⇑*i* P	Pn	19 56 17.6	0.0	
	baz=297							
NHDH				S	Sn	19 56 26.4	-0.3	
	baz=297							
SXI1	**Grass Mountain**	**0.30**	**14**	⇑*i* P	Pn	19 56 17.3	-0.4	
	baz=14							
SXI1				*e*S	Sn	19 56 25.4	-1.5	
	baz=14							
NHY	**Taipei**	**0.31**	**319**	⇑P	Pn	19 56 17.8	+0.2	
	baz=327							
NHY				S	Sn	19 56 26.8	-0.1	
	baz=327							
NDT	**Datong Townshi**	**0.33**	**233**	⇑*i* P	Pn	19 56 17.9	+0.1	
	baz=245							
NDT				S	Sn	19 56 26.8	-0.2	
	baz=245							
TATO	**Taipei**	**0.33**	**302**	P	Pn	19 56 17.7	0.0	
TATO	**Taipei**	**0.33**	**302**	⇑*i* P	Pn	19 56 17.7	-0.1	
	baz=299							
TATO				*i* S	Sn	19 56 26.3	-0.8	
	baz=299							
TNOU	**National Taiwa**	**0.35**	**356**	⇑*i* P	Pn	19 56 17.7	-0.1	
	baz=3.0							
TNOU				S	Sn	19 56 26.6	-0.6	
	baz=3.0							
TAP	**Taipei**	**0.35**	**312**	⇑*i* P	Pn	19 56 18.0	+0.1	
	baz=320							
TAP				S	Sn	19 56 26.9	-0.5	
	baz=320							
EWUT	**Wuta**	**0.36**	**183**	⇑*i* P	Pn	19 56 18.1	+0.2	
	baz=183							
EWUT				S	Sn	19 56 28.0	+0.7	
	baz=183							
LATG	**Datong**	**0.36**	**223**	⇑*i* P	Pn	19 56 18.3	+0.2	
	baz=233							
LATG				*i* S	Sn	19 56 27.8	+0.2	
	baz=233							
ENA	**Nanau**	**0.38**	**188**	⇑P	Pn	19 56 18.1	0.0	
	baz=191							
ENA				S	Sn	19 56 28.3	+0.7	
	baz=191							
BACT	**New Taipei Cit**	**0.38**	**301**	P	Pn	19 56 18.0	0.0	
	baz=299							
BACT				S	Sn	19 56 28.0	+0.4	
	baz=299							
YM01	**YM01**	**0.40**	**329**	*i* P	Pn	19 56 18.4	+0.1	
	baz=321							
YHNB	**Yeheng**	**0.41**	**251**	P	Pn	19 56 18.1	-0.3	
YHNB	**Yeheng**	**0.41**	**251**	⇑*i* P	Pn	19 56 18.2	-0.2	
	baz=253							
YHNB				S	Sn	19 56 27.2	-0.9	
	baz=253							
NWRT	**Kuosheng**	**0.42**	**343**	*e*P	Pn	19 56 18.2	-0.1	
	baz=346							
NWRT				*e*S	Sn	19 56 27.7	-0.4	
	baz=346							
NSK	**Sanguang**	**0.42**	**253**	⇑*i* P	Pn	19 56 18.2	-0.2	
	baz=254							
NSK				S	Sn	19 56 27.3	-1.0	
	baz=254							
YM08	**YM08**	**0.43**	**334**	⇑*i* P	Pn	19 56 18.1	-0.3	
	baz=338							
YM08				S	Sn	19 56 27.2	-1.1	
	baz=338							
TWS1	**Kuangyinshan**	**0.46**	**311**	⇑*i* P	Pn	19 56 19.0	+0.3	
	baz=301							
TWS1				S	Sn	19 56 28.4	-0.2	
	baz=301							
ANP	**Anpu**	**0.46**	**327**	⇑*i* P	Pn	19 56 18.5	-0.3	
	baz=328							
ANP				*e*S	Sn	19 56 28.0	-0.9	
	baz=328							
EAHA	**Aohua**	**0.47**	**186**	*e*P	Pn	19 56 18.7	-0.1	
	baz=194							
EAHA				*e*S	Sn	19 56 30.0	+1.1	
	baz=194							
NTST	**Danshui**	**0.48**	**319**	⇑P	Pn	19 56 19.2	+0.3	
	baz=325							
NTST				*e*S	Sn	19 56 29.2	+0.3	
	baz=325							
NTY	**Taoyuan**	**0.49**	**293**	⇑P	Pn	19 56 19.2	+0.2	
	baz=304							
NTY				S	Sn	19 56 29.7	+0.5	
	baz=304							
TWY	**Chenhua**	**0.50**	**339**	⇑*i* P	Pn	19 56 19.3	+0.3	
	baz=341							
TWY				S	Sn	19 56 29.6	+0.3	
	baz=341							
NSM	**Shimen**	**0.52**	**339**	P	Pn	19 56 19.3	+0.1	
	baz=339							
NSM				*i* S	Sn	19 56 30.3	+0.7	
	baz=339							
NNS	**Nan Shan**	**0.53**	**227**	⇑*i* P	Pn	19 56 19.5	+0.1	
	baz=232							
NNS				S	Sn	19 56 29.9	-0.1	
	baz=232							
NNSB	**Datong**	**0.53**	**225**	⇑*i* P	Pn	19 56 19.5	+0.1	
	baz=228							
NNSB				S	Sn	19 56 29.5	-0.5	
	baz=228							
NNSH	**Datong**	**0.53**	**225**	⇑P	Pn	19 56 19.5	+0.1	
	baz=231							
NNSH				S	Sn	19 56 29.5	-0.5	
	baz=231							
EOS2	**EOS2**	**0.55**	**134**	*e*P	Pn	19 56 19.7	+0.4	
	baz=129							
EOS2				*e*S	Sn	19 56 31.1	+1.3	
	baz=129							
NCU	**National Centr**	**0.58**	**287**	P	Pn	19 56 19.9	+0.2	
	baz=279							
NCU				S	Sn	19 56 30.7	+0.2	
	baz=279							
NCUH	**Zhongli**	**0.58**	**287**	P	Pn	19 56 19.9	+0.2	
	baz=279							
NCUH				S	Sn	19 56 30.8	+0.2	
	baz=279							
NFF	**Wufeng Townshi**	**0.64**	**255**	P	Pn	19 56 20.3	-0.1	
	baz=256							
NFF				S	Sn	19 56 31.2	-0.5	
	baz=256							
NJD	**Zhudong**	**0.65**	**264**	P	Pn	19 56 20.9	+0.5	
	baz=265							
NJD				S	Sn	19 56 32.2	+0.5	
	baz=265							
NACB	**Ninganchiao**	**0.65**	**197**	P	Pn	19 56 20.1	-0.4	
NACB	**Ninganchiao**	**0.65**	**197**	*e*P	Pn	19 56 19.6	-0.9	
	baz=203							
NACB				*e*S	Sn	19 56 30.7	-1.1	
	baz=203							
ETLH	**Xiulin Townshi**	**0.66**	**206**	⇑*e*P	Pn	19 56 20.3	-0.3	
	baz=213							
ETLH				*e*S	Sn	19 56 31.2	-0.8	
	baz=213							
ETL	**Fush Village**	**0.66**	**194**	*e*P	Pn	19 56 19.7	-0.9	
	baz=204							
EOS3	**EOS3**	**0.70**	**137**	⇓*e*P	Pn	19 56 21.2	+0.4	
	baz=132							
EOS3				*e*S	Sn	19 56 33.1	+0.8	
	baz=132							
HSN1	**Hsinchu**	**0.71**	**268**	P	Pn	19 56 21.1	+0.1	
	baz=269							
HSN1				S	Sn	19 56 32.9	+0.1	
	baz=269							
NHW	**Xinwu Township**	**0.71**	**287**	*e*P	Pn	19 56 21.1	+0.1	
	baz=287							
NHW				*e*S	Sn	19 56 33.3	+0.4	
	baz=287							
LIOB	**Emei**	**0.73**	**258**	P	Pn	19 56 21.4	+0.2	
	baz=258							
LIOB				*e*S	Sn	19 56 32.7	-0.5	
	baz=258							
SBCB	**Hsinchu**	**0.74**	**269**	⇓P	Pn	19 56 21.7	+0.4	
	baz=270							
SBCB				S	Sn	19 56 33.1	-0.3	
	baz=270							
TWD	**Chiawan**	**0.74**	**194**	⇑P	Pn	19 56 20.5	-0.9	
	baz=202							
TWD				*e*S	Sn	19 56 32.3	-1.1	
	baz=202							
NSTT	**Nanjuang**	**0.74**	**257**	⇓*e*P	Pn	19 56 21.4	0.0	
	baz=257							
NSTT				*i* S	Sn	19 56 33.1	-0.4	
	baz=257							
FUSS	**Fushou**	**0.75**	**223**	⇑*i* P	Pn	19 56 22.3	+0.6	
	baz=222							
FUSS				S	Sn	19 56 34.2	+0.3	
	baz=222							
HSN	**Hsinchu**	**0.75**	**270**	⇓P	Pn	19 56 21.4	-0.1	
	baz=273							
HSN				*i* S	Sn	19 56 33.2	-0.3	
	baz=273							
TWT	**Tachien**	**0.79**	**226**	*e*P	Pn	19 56 22.8	+0.8	
	baz=221							
TWT				S	Sn	19 56 35.1	+0.5	
	baz=221							
TDCB	**Techi**	**0.80**	**227**	P	Pn	19 56 22.8	+0.6	
	baz=221							
TDCB				*i* S	Sn	19 56 34.8	0.0	
	baz=221							
WHF	**Hehuan Shan**	**0.81**	**217**	P	Pn	19 56 23.0	+0.4	
	baz=208							
WHF				*i* S	Sn	19 56 35.4	-0.1	
	baz=208							
EOS4	**EOS4**	**0.83**	**145**	⇓P	Pn	19 56 21.6	-0.3	
	baz=135							
HWA	**Hwalien**	**0.84**	**192**	*e*P	Pn	19 56 22.0	-0.4	
	baz=200							
HWA				S	Sn	19 56 35.7	+0.4	
	baz=200							
NJN	**Zhunan**	**0.85**	**262**	P	Pn	19 56 22.9	+0.4	
	baz=258							
NJN				S	Sn	19 56 35.9	+0.4	
	baz=258							
LXIB	**Xiulin Townshi**	**0.85**	**204**	⇓P	Pn	19 56 21.9	-0.9	
	baz=203							
LXIB				*e*S	Sn	19 56 35.5	-0.4	
	baz=203							
PCYT	**Pengchaiyu**	**0.86**	**17**	⇑*i* P	Pn	19 56 22.8	+0.1	
	baz=11							
ETM	**Tongmen**	**0.88**	**199**	*e*P	Pn	19 56 21.7	-1.1	
	baz=199							
CHGB	**Renai**	**0.93**	**218**	⇑P	Pn	19 56 24.3	+0.6	
	baz=217							
CHGB				S	Sn	19 56 37.6	0.0	
	baz=217							
WHP	**Taichung City**	**0.94**	**236**	*e*P	Pn	19 56 24.3	+0.7	
	baz=244							
WHP				S	Sn	19 56 37.4	0.0	
	baz=244							
NMLH	**Miaoli**	**0.95**	**254**	*e*P	Pn	19 56 23.9	+0.2	
	baz=255							
NMLH				*e*S	Sn	19 56 37.9	+0.3	
	baz=255							
OWD	**Renai**	**1.02**	**214**	*e*P	Pn	19 56 24.8	+0.1	
	baz=218							
OWD				*e*S	Sn	19 56 38.7	-0.4	
	baz=218							
WUSB	**Renai**	**1.02**	**218**	⇓*i* P	Pn	19 56 25.2	+0.6	
	baz=217							
WUSB				*e*S	Sn	19 56 38.8	-0.4	
	baz=217							
NSY	**Sanyi**	**1.02**	**248**	⇓*i* P	Pn	19 56 25.0	+0.5	
	baz=257							
NSY				*i* S	Sn	19 56 39.3	+0.3	
	baz=257							
SHUL	**Shoufeng**	**1.03**	**192**	*e*P	Pn	19 56 24.3	-0.4	
	baz=198							
SHUL				*e*S	Sn	19 56 39.7	+0.5	
	baz=198							
TWQ1	**Liyutan**	**1.04**	**244**	P	Pn	19 56 25.0	+0.3	
	baz=254							
TWQ1				S	Sn	19 56 39.3	-0.1	
	baz=254							
ESL	**Shilin**	**1.04**	**199**	*e*P	Pn	19 56 23.2	-1.6	
	baz=192							
WCS	**Beigang Elemen**	**1.10**	**228**	*e*P	Pn	19 56 26.2	+0.8	
	baz=237							
WPL	**Puli Township**	**1.10**	**224**	*e*P	Pn	19 56 26.7	+1.2	
	baz=234							
JYNG	**Yonagunijimaku**	**1.10**	**108**	P	Pn	19 56 25.0	-0.5	
JYNG				S	Sn	19 56 40.0	-0.7	
DPDB	**Guoxing**	**1.10**	**226**	*e*P	Pn	19 56 26.4	+0.8	
	baz=236							
TEGC	**Jichi Village**	**1.11**	**192**	*e*P	Pn	19 56 25.9	+0.2	
	baz=199							
WARBT	**Fenglin Townsh**	**1.14**	**199**	*e*P	Pn	19 56 24.5	-1.5	
	baz=194							
WDJ	**Dajia District**	**1.15**	**247**	*e*P	Pn	19 56 26.5	+0.4	
	baz=255							
WDJ				*i* S	Sn	19 56 42.1	+0.4	
	baz=255							
YOJ	**Yonaguni jima**	**1.16**	**107**	P	Pn	19 56 25.5	-0.6	
YOJ	**Yonaguni jima**	**1.16**	**107**	⇓*i* P	Pn	19 56 25.6	-0.5	
	baz=101							
YOJ				S	Sn	19 56 41.0	-0.9	
	baz=101							
YOJ	**Yonaguni jima**	**1.16**	**107**	P	Pn	19 56 25.7	-0.5	
YOJ				*e*S	Sn	19 56 41.1	-0.8	
EGFH	**Guangfu**	**1.18**	**197**	*e*P	Pn	19 56 25.8	-0.7	
	baz=196							
VWDT	**VWDT**	**1.20**	**210**	⇓P	Pn	19 56 27.2	+0.4	
	baz=218							
VWDT				S	Sn	19 56 43.3	+0.3	
	baz=218							
TCU	**Taichung**	**1.21**	**238**	*e*P	Pn	19 56 27.5	+0.7	
	baz=238							
SMLT	**Sun Moon Lake**	**1.23**	**222**	P	Pn	19 56 27.9	+0.7	
	baz=221							
SMLT				S	Sn	19 56 44.2	+0.5	
	baz=221							
TYC	**Yuchr**	**1.24**	**224**	⇓*e*P	Pn	19 56 27.8	+0.6	
	baz=223							
TYC				S	Sn	19 56 44.1	+0.4	
	baz=223							
WWF	**Wufeng**	**1.26**	**233**	*e*P	Pn	19 56 27.9	+0.5	
	baz=233							
WWF				S	Sn	19 56 44.7	+0.5	
	baz=233							
SSLB	**Suanglung**	**1.27**	**217**	P	Pn	19 56 28.4	+0.8	
SSLB	**Suanglung**	**1.27**	**217**	⇓P	Pn	19 56 28.2	+0.5	
	baz=228							
SSLB				S	Sn	19 56 45.5	+0.9	
	baz=228							
WCHH	**Zhanghua**	**1.34**	**238**	*e*P	Pn	19 56 28.9	+0.4	
	baz=238							
WCHH				*e*S	Sn	19 56 46.5	+0.5	
	baz=238							
HGSD	**Ruisui**	**1.35**	**195**	⇓P	Pn	19 56 28.6	0.0	
	baz=200							
HGSD				S	Sn	19 56 46.8	+0.6	
	baz=200							
WNT1	**Nantou City**	**1.35**	**229**	P	Pn	19 56 29.3	+0.6	
	baz=238							
WNT1				S	Sn	19 56 46.5	+0.2	
	baz=238							
EHY	**Hungye**	**1.36**	**199**	*e*P	Pn	19 56 27.4	-1.4	
	baz=192							
WNT	**Mingjian**	**1.37**	**228**	P	Pn	19 56 29.5	+0.7	
	baz=239							
WNT				S	Sn	19 56 47.0	+0.2	
	baz=239							
WJS	**Zhushan**	**1.38**	**225**	P	Pn	19 56 29.9	+0.9	
	baz=235							
WJS				S	Sn	19 56 47.5	+0.6	
	baz=235							
WYL	**Yuanlin Townsh**	**1.39**	**233**	P	Pn	19 56 29.2	+0.1	
	baz=244							
WYL				S	Sn	19 56 47.1	0.0	
	baz=244							
WHYT	**Xinyi Township**	**1.40**	**218**	*e*P	Pn	19 56 30.3	+1.0	
	baz=227							
WHYT				S	Sn	19 56 49.4	+1.9	
	baz=227							
YULB	**Yu-li**	**1.48**	**198**	P	Pn	19 56 29.5	-0.8	
YULB	**Yu-li**	**1.48**	**198**	*e*P	Pn	19 56 29.3	-0.9	
	baz=192							
YULB				*e*S	Sn	19 56 48.7	-0.5	
	baz=192							
ECBN	**Changbin**	**1.51**	**192**	*e*P	Pn	19 56 30.4	-0.3	
	baz=197							
ECBN				*e*S	Sn	19 56 49.3	-0.7	
	baz=197							
EYUL	**Yuli**	**1.51**	**197**	*e*P	Pn	19 56 31.2	+0.5	
	baz=196							
TWF1	**Yuli**	**1.52**	**198**	*e*P	Pn	19 56 29.4	-1.3	
	baz=197							
ALS	**Alishan**	**1.57**	**215**	⇑*e*P	Pn	19 56 32.5	+0.7	
	baz=225							
ALS				S	Sn	19 56 53.0	+1.1	
	baz=225							
WRL	**Guolierlin Hig**	**1.58**	**236**	*e*P	Pn	19 56 31.6	+0.1	
	baz=237							
WRL				*e*S	Sn	19 56 51.4	-0.1	
	baz=237							
CHN5	**Tsauling**	**1.58**	**221**	⇑P	Pn	19 56 32.1	+0.5	
	baz=220							
CHN5				S	Sn	19 56 52.5	+0.9	
	baz=220							
WGK	**Gukeng**	**1.58**	**226**	P	Pn	19 56 32.5	+0.9	
	baz=236							
WGK				*e*S	Sn	19 56 52.3	+0.7	
	baz=236							
RLNB	**Erlin**	**1.59**	**236**	*e*P	Pn	19 56 32.1	+0.3	
	baz=237							
RLNB				*e*S	Sn	19 56 52.1	+0.2	
	baz=237							
WDLH	**Douliu**	**1.60**	**226**	*e*P	Pn	19 56 32.5	+0.7	
	baz=227							
CHKH	**Chenggong**	**1.65**	**193**	*e*P	Pn	19 56 32.2	-0.2	
	baz=192							
FULB	**Fuli**	**1.66**	**196**	*e*P	Pn	19 56 32.5	-0.2	
	baz=196							
WTCT	**Ta-ch'eng**	**1.67**	**236**	*e*P	Pn	19 56 33.1	+0.3	
	baz=237							
WTCT				*e*S	Sn	19 56 53.4	-0.2	
	baz=237							
WTK	**Tuku**	**1.70**	**230**	*e*P	Pn	19 56 33.6	+0.5	
	baz=230							
WTK				S	Sn	19 56 54.9	+0.6	
	baz=230							
EHD	**Haiduan**	**1.73**	**198**	*e*P	Pn	19 56 33.7	+0.1	
	baz=193							
CHKT	**Chengkung**	**1.74**	**193**	*e*P	Pn	19 56 32.8	-0.9	
	baz=183							
WCKO	**Fanlu**	**1.74**	**219**	*e*P	Pn	19 56 34.3	+0.6	
	baz=231							
WCKO				*e*S	Sn	19 56 55.9	+0.5	
	baz=231							
CHN2	**Minshiung**	**1.75**	**224**	*e*P	Pn	19 56 34.3	+0.6	
	baz=234							
CHN2				*e*S	Sn	19 56 57.1	+1.6	
	baz=234							
ELDTW	**Lidau**	**1.76**	**204**	*e*P	Pn	19 56 33.5	-0.5	
	baz=196							
ELDTW				*e*S	Sn	19 56 56.7	+0.8	
	baz=196							
ECS	**Chishang**	**1.78**	**197**	*e*P	Pn	19 56 34.6	+0.4	
	baz=189							
CHN4	**Tsaushan**	**1.82**	**218**	*e*P	Pn	19 56 35.0	+0.3	
	baz=218							
TPUB	**Ta-pu**	**1.84**	**216**	P	Pn	19 56 35.7	+0.7	
TPUB	**Ta-pu**	**1.84**	**216**	*e*P	Pn	19 56 35.4	+0.4	
	baz=215							
TPUB				*e*S	Sn	19 56 58.6	+1.0	
	baz=215							
WSF	**Szhu**	**1.85**	**231**	P	Pn	19 56 35.4	+0.4	
	baz=233							
WSF				*e*S	Sn	19 56 58.1	+0.4	
	baz=233							
STYH	**Taoyuan**	**1.87**	**210**	*e*P	Pn	19 56 36.4	+1.0	
	baz=221							
EDH	**Donghe**	**1.88**	**194**	*e*P	Pn	19 56 34.7	-0.8	
	baz=193							
STYT	**Tauyuan**	**1.89**	**210**	*e*P	Pn	19 56 36.5	+0.8	
	baz=221							
STYT				*e*S	Sn	19 56 59.6	+0.7	
	baz=221							
WTP	**Ta-pu**	**1.89**	**215**	*e*P	Pn	19 56 36.2	+0.5	
	baz=225							
WSL	**Shuilin Townsh**	**1.92**	**229**	*e*P	Pn	19 56 36.4	+0.4	
	baz=230							
TWK	**Hsinying**	**1.94**	**218**	*e*P	Pn	19 56 36.5	+0.1	
	baz=219							
HATJ	**Hateruma jima**	**1.97**	**112**	P	Pn	19 56 36.9	+0.2	
HATJ				*e*S	Sn	19 57 00.3	-0.5	
SNST	**Tainan City**	**1.97**	**217**	*e*P	Pn	19 56 37.6	+0.9	
	baz=218							
LONT	**Longtian**	**1.98**	**198**	*e*P	Pn	19 56 36.1	-0.8	
	baz=189							
CHN1	**Nanshi**	**1.98**	**216**	*e*P	Pn	19 56 37.1	+0.2	
	baz=216							
ICHU	**Yijhu**	**2.00**	**224**	*e*P	Pn	19 56 37.8	+0.8	
	baz=225							
SGST	**Jiashian**	**2.04**	**213**	*e*P	Pn	19 56 37.4	-0.3	
	baz=224							
CHN8	**Yiju**	**2.05**	**225**	*e*P	Pn	19 56 38.0	+0.3	
	baz=236							
CHN8				*e*S	Sn	19 57 03.3	+0.7	
	baz=236							
TWG	**Pinlang**	**2.08**	**199**	*e*P	Pn	19 56 36.9	-1.3	
	baz=189							
TWGBT	**Beinan**	**2.08**	**199**	P	Pn	19 56 37.3	-0.9	
TWGBT	**Beinan**	**2.08**	**199**	*e*P	Pn	19 56 36.6	-1.6	
	baz=189							
SLGT	**Liugui**	**2.09**	**211**	*e*P	Pn	19 56 39.1	+0.8	
	baz=210							
JKRS	**Kuro-shima**	**2.09**	**105**	P	Pn	19 56 38.2	0.0	
JKRS				S	Sn	19 57 03.1	-0.5	
TTN	**Taitung**	**2.12**	**196**	*e*P	Pn	19 56 39.7	+0.9	
	baz=188							
LDUT	**Ludao**	**2.14**	**188**	*e*P	Pn	19 56 37.4	-1.5	
	baz=181							
VWUC	**VWUC**	**2.14**	**276**	⇓*e*P	Pn	19 56 38.5	-0.4	
	baz=275							
MATB	**Ma-tsu**	**2.15**	**309**	⇓*e*P	Pn	19 56 38.6	-0.5	
	baz=306							
SSHA	**Shanhua**	**2.16**	**220**	*e*P	Pn	19 56 39.8	+0.5	
	baz=231							
CHN3	**Shinhua**	**2.16**	**218**	*e*P	Pn	19 56 39.4	+0.1	
	baz=218							
MSUT	**Lienchiang**	**2.17**	**309**	*e*P	Pn	19 56 38.9	-0.5	
	baz=306							
MSUT				*e*S	Sn	19 57 04.2	-1.4	
	baz=306							
JIJ	**Ishigaki jima**	**2.18**	**101**	P	Pn	19 56 38.8	-0.7	
JIJ				S	Sn	19 57 04.8	-0.9	
SCLT	**Jiali**	**2.19**	**222**	*e*P	Pn	19 56 40.1	+0.6	
	baz=223							
SCLT				*e*S	Sn	19 57 06.4	+0.6	
	baz=223							
SHHT	**Tainan City**	**2.21**	**217**	*e*P	Pn	19 56 40.8	+0.9	
	baz=218							
SCST	**Cishan**	**2.25**	**212**	*e*P	Pn	19 56 41.6	+1.1	
	baz=223							
TSCK	**Chigu Township**	**2.27**	**224**	*e*P	Pn	19 56 40.9	+0.1	
	baz=235							
JISG	**Ishigakijimahi**	**2.30**	**95**	P	Pn	19 56 40.7	-0.3	
JISG				*e*S	Sn	19 57 09.3	+0.8	
SSD	**Sandimen**	**2.31**	**208**	*e*P	Pn	19 56 42.1	+0.9	
	baz=218							
ECL	**Taimali**	**2.33**	**200**	*e*P	Pn	19 56 41.0	-0.5	
	baz=189							
ECL				*e*S	Sn	19 57 08.8	-0.4	
	baz=189							
TWM1	**Shoushan**	**2.34**	**213**	*e*P	Pn	19 56 42.0	+0.3	
	baz=222							
TSMG	**Majia**	**2.34**	**207**	*e*P	Pn	19 56 42.6	+0.9	
	baz=219							
PNG	**Penghu**	**2.39**	**239**	*e*P	Pn	19 56 41.6	-0.6	
	baz=240							
PNG				*e*S	Sn	19 57 09.9	-0.8	
	baz=240							
SGLT	**Jiouru**	**2.39**	**210**	*e*P	Pn	19 56 42.1	-0.2	
	baz=221							
PHUB	**P'eng-hu**	**2.40**	**238**	*e*P	Pn	19 56 41.9	-0.6	
	baz=239							
PHUB				S	Sn	19 57 08.9	-2.2	
	baz=239							
MASBT	**Mashibuluo**	**2.43**	**206**	*e*P	Pn	19 56 43.8	+1.0	
	baz=218							
PTMZ	**Houxiangcun**	**2.44**	**276**	⇓*e*P	Pn	19 56 42.7	-0.3	
	baz=275							
WDGT	**Dungji**	**2.49**	**232**	*e*P	Pn	19 56 43.6	0.0	
	baz=233							
LYJJ	**Jianjiangzhen**	**2.53**	**314**	⇓*e*P	Pn	19 56 43.9	-0.3	
	baz=311							
EAST	**Anshuo**	**2.56**	**200**	*e*P	Pn	19 56 44.4	-0.3	
	baz=190							
XPSS	**Dashiqiu**	**2.57**	**326**	*e*P	Pn	19 56 44.4	-0.3	
	baz=323							
TAW	**Tawu**	**2.57**	**199**	*e*P	Pn	19 56 45.6	+0.9	
	baz=191							
WSSB	**Gushan**	**2.57**	**214**	*e*P	Pn	19 56 44.6	-0.2	
	baz=214							
TAWH	**Dawu Township**	**2.59**	**199**	*e*P	Pn	19 56 46.1	+1.1	
	baz=191							
JTJ	**Tarama**	**2.65**	**93**	P	Pn	19 56 46.4	+0.6	
SCZT	**Fangliau**	**2.65**	**204**	*e*P	Pn	19 56 46.9	+1.1	
	baz=203							
VCHM	**Qimei**	**2.69**	**234**	*e*P

VCHM				S		Sn	19 57 16.3	-1.6
	baz=236							
SLIU	**Shizi**	**2.73**	**200**	*eP*		**Pn**	**19 56 47.5**	**+0.5**
	baz=198							
LAY	**Lan-yu**	**2.76**	**185**	*eP*		**Pn**	**19 56 45.5**	**-1.9**
	baz=178							
LYUB	**Lan-yu**	**2.79**	**184**	*eP*		**Pn**	**19 56 45.5**	**-2.3**
	baz=178							
MHZQ	**Yeshan**	**2.82**	**298**	*eP*		**Pn**	**19 56 47.5**	**-0.5**
	baz=295							
HEN	**Hengchun**	**2.95**	**199**	*eP*		**Pn**	**19 56 50.7**	**+0.8**
	baz=209							
TWK1	**Hengchun**	**2.99**	**198**	*eP*		**Pn**	**19 56 50.7**	**+0.3**
	baz=196							
TWKBT	**Hengchun**	**2.99**	**198**	*eP*		**Pn**	**19 56 50.7**	**+0.3**
	baz=197							
JIRB	**Irabujima**	**3.07**	**89**	P		**Pn**	**19 56 52.4**	**+1.0**
JIRB				*eS*		**Sn**	**19 57 27.6**	**+0.5**
KNM	**Kinmen**	**3.09**	**264⇓**	*eP*		**Pn**	**19 56 52.8**	**+1.1**
	baz=263							
KNMB	**Chin-men Tao**	**3.12**	**265⇓**	*eP*		**Pn**	**19 56 51.3**	**-0.9**
	baz=264							
JIKM	**Ikemajima**	**3.14**	**87**	*eS*		**Sn**	**19 57 29.8**	**+1.0**
JMJ	**Miyako jima 2**	**3.18**	**89**	*eP*		**Pn**	**19 56 54.2**	**+1.3**
	baz=91							
JMJ2	**Miyako jima3**	**3.21**	**90**	*eP*		**Pn**	**19 56 54.4**	**+1.1**
JMJ2				*eS*		**Sn**	**19 57 31.5**	**+0.9**
JOGS	**Gusukube**	**3.28**	**90**	S		**Sn**	**19 57 33.2**	**+0.9**
AXDP	**Jialang**	**3.48**	**272⇓**	*eP*		**Pn**	**19 56 57.0**	**0.0**
	baz=271							
ZPLA	**Ao Xicun**	**3.79**	**258**	*eP*		**Pn**	**19 57 00.6**	**-0.6**
	baz=256							
SXFK	**Yanhouchang**	**4.07**	**294**	*eP*		**Pn**	**19 57 04.7**	**-0.4**
	baz=291							
DSXP	**Dongshan**	**4.14**	**256**	*eP*		**Pn**	**19 57 05.9**	**-0.1**
	baz=254							
BBP	**Basco**	**4.34**	**178⇑**	*eP*		**Pn**	**19 57 07.4**	**-1.4**
KSRS	**Korea Array**	**13.65**	**21**	P		**P**	**19 59 23.1**	**+1.9**
	4.0nm,0.7s,baz=206,slow=12,SNR=11							
KLR	**Kul'dur**	**25.60**	**15**	P		**P**	**20 01 28.4**	**+1.7**
	1.0nm,0.6s,baz=176,slow=15,SNR=3.6							
	1.0nm,0.6s							
SONM	**Songino Array**	**26.02**	**336**	P		**P**	**20 01 31.8**	**+1.1**
	1.5nm,0.9s,baz=152,slow=10,SNR=8.2							
	1.5nm,0.9s							
MKAR	**Makanchi Array**	**38.29**	**315**	P		**P**	**20 03 18.2**	**+0.5**
	0.6nm,0.6s,baz=104,slow=10.0,SNR=11							
	0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**40.04**	**326**	P		**P**	**20 03 31.7**	**-0.4**
	1.0nm,0.6s,baz=125,slow=7.5,SNR=5.5							
	1.0nm,0.6s							
WRA	**Warramunga Arr**	**46.12**	**164**	P		**P**	**20 04 20.1**	**-1.4**
	2.0nm,0.8s,baz=346,slow=8.8,SNR=17							
WRA				PcP		**PcP**	**20 05 54.9**	**-1.5**
	0.3nm,0.6s,baz=352,slow=3.6,SNR=5.1							
	2.0nm,0.8s							
BVAR	**Borovoye Array**	**47.55**	**320**	P		**P**	**20 04 32.8**	**+0.4**
	1.0nm,0.6s,baz=107,slow=8.4,SNR=7.7							
BVAR				PcP		**PcP**	**20 06 00.3**	**-0.8**
	0.3nm,0.4s,baz=101,slow=1.5,SNR=2.6							
	1.0nm,0.6s							
ASAR	**Alice Springs**	**49.59**	**165**	P		**P**	**20 04 47.8**	**-0.6**
	1.1nm,0.6s,baz=342,slow=7.2,SNR=17							
	1.1nm,0.6s							
ILAR	**Eielson Array**	**68.41**	**27**	P		**P**	**20 06 57.6**	**-0.4**
	0.2nm,0.5s,baz=290,slow=7.2,SNR=4.4							
	0.2nm,0.5s							
YKA	**Yellowknife Ar**	**82.18**	**23**	P		**P**	**20 08 16.2**	**-0.8**
	0.2nm,0.6s,baz=305,slow=4.9,SNR=2.8							
	0.2nm,0.6s							

IDC ***24*** *19:56:43.1±1.4,79.˚50N×2.˚50E, h0km, mb3.6/5, mbtmp3.7/10, ML3.2/4, MS3.0/2, Error ellipse: s-maj=28.1km s-min=22.4km az=37.0*
BER ***24*** *19:56:46.0±1.8, 79.˚52N×4.˚09E, h10km, mb(Pn)4.1, ML3.2(NAO), Confirmed Earthquake*
FCIAR ***24*** *19:56:47.0, 79.˚36N×4.˚40E, h10km, station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*
KOLA ***24*** *19:56:48.3, 79.˚41N×5.˚68E, h0km, ML2.6, Error ellipse: s-maj=44.3km s-min=24.7km az=40.0, Greenland sea,Knipovich ridge, north*
NAO ***24*** *19:56:48.0±5.5, 79.˚36N×5.˚29E, h10km±30km, MS3.2*
ISC 24 19:56:44.9±1.0, 79°51N±0.˚07×4°48E±0.˚09, h10km, n44, σ2°21/60, mb3.7/5, 1C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.52**	**109**	Pg	**Pn**	**19 57 12.0**	**0.0**
KBS				Lg	Lg	19 57 31.2	
KBS	**Kingsbay**	**1.52**	**109**	P	**Pn**	**19 57 11.7**	**-0.3**
KBS				S	**Sn**	**19 57 27.9**	**-4.0**
KBS	**Kingsbay**	**1.52**	**109**	*eP*	**Pn**	**19 57 12.0**	**0.0**
KBS				*eS*	**Sn**	**19 57 31.1**	**-0.7**
KBS				IAML		19 57 41.6	
	comp=Z,141nm,0.2s						
KBS	**Kingsbay**	**1.52**	**109**	*eP*	**Pn**	**19 57 11.8**	**-0.3**
KBS				*eS*	**Sn**	**19 57 30.0**	**-1.9**
BRBB	**Barentsburg B**	**2.37**	**122**	Pn	**Pn**	**19 57 24.1**	**+0.3**
BRBB				Sn	**Sn**	**19 57 52.1**	**-0.7**
BRBB	**Barentsburg B**	**2.37**	**122**	P	**Pn**	**19 57 23.8**	**+0.1**
BRBB				S	**Sn**	**19 57 52.0**	**-0.8**
BRBB	**Barentsburg B**	**2.37**	**122**	*eP*	**Pn**	**19 57 24.0**	**+0.3**
BRBB				*eS*	**Sn**	**19 57 51.5**	**-1.3**
BRBA	**Barentsburg A**	**2.40**	**123**	Pn	**Pn**	**19 57 24.2**	**+0.2**
BRBA				Sn	**Sn**	**19 57 52.5**	**-0.9**
BRBA	**Barentsburg A**	**2.40**	**123**	*eP*	**Pn**	**19 57 24.5**	**+0.5**
BRBA				*eS*	**Sn**	**19 57 52.3**	**-1.1**
BRBA				IAML		19 58 00.0	
	comp=Z,83nm,0.4s						
SPA0	**Spitsbergen Ar**	**2.67**	**114**	Pn	**Pn**	**19 57 28.8**	**+1.0**
	baz=304,slow=6.5						
SPA0				Sn	**Sn**	**19 58 00.3**	**+0.1**
	baz=315,slow=12						
SPA0	**Spitsbergen Ar**	**2.67**	**114**	Pn	**Pn**	**19 57 28.8**	**+1.0**
	baz=304,slow=6.5						
SPA0				Sn	**Sn**	**19 58 00.3**	**+0.1**
	baz=315,slow=12						
SPA0				IAML		19 58 08.3	
	comp=Z,91nm,0.5s						
SPA0	**Spitsbergen Ar**	**2.67**	**114⇑**	*iP*	**Pn**	**19 57 28.7**	**+0.9**
SPA0				*iS*	**Sn**	**19 57 59.7**	**-0.4**
SPITS	**Spitsbergen Ar**	**2.67**	**114**	P	**Pn**	**19 57 28.4**	**+0.6**
SPITS				S	**Sn**	**19 57 58.9**	**-1.3**
SPITS	**Spitsbergen Ar**	**2.67**	**114**	Pn	**Pn**	**19 57 28.7**	**+0.9**
	comp=Z,30nm,0.3s,baz=295,slow=8.2,SNR=1244						
SPITS				Sn	**Sn**	**19 58 00.5**	**+0.4**
	baz=333,slow=11						
HSPB	**Hornsund (broa**	**3.38**	**133**	Pn	**Pn**	**19 57 37.5**	**-0.1**
HSPB				Sn	**Sn**	**19 58 15.4**	**-2.2**
HSPB	**Hornsund (broa**	**3.38**	**133**	P	**Pn**	**19 57 39.2**	**+1.6**
HSPB				S	**Sn**	**19 58 15.4**	**-2.2**
HSPB	**Hornsund (broa**	**3.38**	**133**	*eP*	**Pn**	**19 57 37.4**	**-0.1**
HSPB				*eS*	**Sn**	**19 58 15.6**	**-2.0**
HSPB				IAML		19 58 17.6	
	comp=Z,43nm,0.4s						
HOPEN	**Hopen**	**5.20**	**115**	Pn	**Pn**	**19 58 02.8**	**+0.2**
HOPEN				Sn	**Sn**	**19 59 00.6**	**-1.9**
HOPEN	**Hopen**	**5.20**	**115**	*eP*	**Pn**	**19 58 02.8**	**+0.2**
HOPEN				*eS*	**Sn**	**19 59 00.6**	**-1.9**
HOPEN				IAML		19 59 05.8	
	comp=Z,22nm,0.2s						
HOPEN	**Hopen**	**5.20**	**115**	*eP*	**Pn**	**19 58 02.5**	**0.0**
HOPEN				*eS*	**Sn**	**19 58 59.3**	**-3.1**
BJO1	**Bjornoya**	**5.98**	**140**	Pn	**Pn**	**19 58 14.4**	**+1.2**
ZFI2	**Zemlya Franca-**	**7.36**	**59**	*eP*	**Pn**	**19 58 32.6**	**+0.5**
ZFI2				*eS*	**Sn**	**19 59 50.5**	**-5.0**
	comp=Z,14nm,2.6s						
OMEGA	**Omega**	**7.38**	**59**	*eP*	**Pn**	**19 58 32.8**	**+0.5**
OMEGA				*eS*	**Sn**	**19 59 50.5**	**-5.3**
	comp=Z,14nm,1.8s						
NEEM	**North Greenlan**	**10.91**	**288**	*i* P	Pn	19 59 12.1	-8.9
NEEM				*i* S	Sn	20 01 03.8	-19
NEEM				IAML		20 01 06.2	
	comp=Z,8.0nm,0.6s						
VADS	**Vadso**	**11.30**	**133**	P	**Pn**	**19 59 26.1**	**+0.1**
VADS				S	**Sn**	**20 01 25.0**	**-7.1**
ARA0	**ARCESS Array S**	**11.36**	**140**	Pn	**Pn**	**19 59 26.9**	**0.0**
	baz=351,slow=12						
ARA0	**ARCESS Array S**	**11.36**	**140**	Pn	**Pn**	**19 59 26.9**	**0.0**
	baz=351,slow=12						
ARCES	**ARCESS Array B**	**11.36**	**140**	P	**Pn**	**19 59 27.0**	**+0.1**
ARCES				S	**Sn**	**20 01 27.9**	**-5.8**
ARCES	**ARCESS Array B**	**11.36**	**140**	Pn	**Pn**	**19 59 27.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=16						
ARCES				Sn	Sn	20 01 24.9	-8.7
	comp=Z,0.1nm,0.3s,baz=357,slow=17,SNR=1.1						
	comp=Z,1.9nm,0.5s						
SUMG	**Summit**	**12.09**	**258**	*i* P	Pn	19 59 30.0	-7.2
SUMG				*eS*	Sn	20 01 32.4	-20
SUMG				IAML		20 01 42.8	
	comp=Z,4.8nm,0.7s						
UPNV	**Upernavik**	**15.15**	**277**	*i* P	Pn	20 00 07.2	-11
UPNV				*i* S	Sn	20 02 41.1	-25
UPNV				IAML		20 02 43.3	
	comp=Z,6.4nm,0.5s						
ICESG	**Greenland Ices**	**15.26**	**252**	*i* P	Pn	20 00 11.7	-8.6
NUUG	**Nuugaatsiaq**	**15.62**	**271**	*i* P	Pn	20 00 13.2	-11
UMMG	**Uummannaq**	**16.14**	**268**	*i* P	Pn	20 00 19.9	-11
LSH	**Leshukonskoye**	**18.59**	**118**	*eP*	**P**	**20 00 58.4**	**-3.2**
	comp=Z,31nm,2.6s						
FINES	**FINESS Array B**	**19.26**	**148**	P	**Pn**	**20 01 10.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=1.9,slow=12,SNR=1.9						
FINES				LR	LR	20 08 22.8	
	comp=Z,35nm,21.6s,baz=298,slow=36						
	comp=Z,1.3nm,0.8s						
HFS	**Hagfors**	**19.68**	**166**	P	**P**	**20 01 14.3**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=355,slow=14,SNR=2.2						
	comp=Z,2.7nm,1.0s						
RES	**Resolute Bay**	**19.98**	**310**	P	**P**	**20 01 12.2**	**-4.6**
	comp=Z,0.3nm,0.3s,baz=29,slow=15,SNR=8.1						
	comp=Z,1.5nm,0.5s						
BVAR	**Borovoye Array**	**34.04**	**100**	P	**P**	**20 03 33.0**	**+4.5**
	comp=Z,0.9nm,0.8s,baz=339,slow=7.9,SNR=4.1						
	comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**37.82**	**93**	P	**P**	**20 04 04.2**	**+3.3**
	comp=Z,0.6nm,0.3s,baz=340,slow=7.9,SNR=7.5						
	comp=Z,0.6nm,0.3s						
KBZ	**Khabaz**	**38.63**	**134**	LR	LR	20 20 01.3	
	comp=Z,22nm,18.0s,baz=342,slow=36						
ESDC	**Sonseca Array**	**40.09**	**190**	P	**P**	**20 04 20.1**	**0.0**
	comp=Z,0.3nm,0.7s,baz=354,slow=8.8,SNR=1.9						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**42.19**	**91**	P	**P**	**20 04 40.4**	**+3.1**
	comp=Z,0.8nm,0.6s,baz=338,slow=7.2,SNR=13						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**72.79**	**82**	P	**P**	**20 08 14.8**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=344,slow=7.3,SNR=4.7						
	comp=Z,0.3nm,0.5s						

JMA ***24*** *20:01:19.4±0.2,30.˚N±1.˚×14.˚0E±.˚, h431km, MV3.5/14, NEAR TORISHIMA IS*
IDC ***24*** *20:01:21.5±1.1,29.˚89N×139.˚14E, h409km±11km, mb3.2/24, mbtmp3.9/29, Error ellipse: s-maj=13.6km s-min=9.5km az=83.0*
ISC 24 20:01:20.3±0.5, 29°.85N±0.˚05×139°.33E±0.˚07, h400km, n54, σ1°51/67, mb3.5/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.28**	**7**	P	**Pn**	**20 02 28.9**	**+3.2**
JHJ2	**Mitsune**	**3.28**	**7**	*eP*	**Pn**	**20 02 27.2**	**+1.5**
JHJ	**Hachijo jima 2**	**3.28**	**7**	P	**Pn**	**20 02 25.8**	**0.0**
	50nm,0.3s,baz=73,slow=19,SNR=1.4						
JHJ				S	**S**	**20 03 15.8**	**-3.0**
	80nm,0.4s,baz=32,slow=9.5,SNR=1.3						
CBIJ	**Chichi jima**	**3.72**	**137**	P	**Pn**	**20 02 30.8**	**+1.0**
CBIJ				S	**S**	**20 03 25.4**	**-0.7**
JCJ	**Chichijima**	**3.72**	**137**	P	**Pn**	**20 02 30.7**	**+0.9**
JCJ	**Chichijima**	**3.72**	**137**	P	**Pn**	**20 02 26.0**	**-3.8**
	42nm,0.4s,baz=11,slow=19,SNR=40						
JCJ				S	**S**	**20 03 21.2**	**-5.0**
	378nm,0.3s,baz=105,slow=22,SNR=42						
BSO1	**Boso 1**	**4.99**	**16**	*eP*	**Pn**	**20 02 42.3**	**+0.9**
BSO1				*eS*	**S**	**20 03 47.3**	**-0.3**
JIE	**Ise**	**5.04**	**335**	*eP*	**Pn**	**20 02 44.8**	**+2.2**
JOD2	**Odawara 2**	**5.40**	**358**	*eP*	**Pn**	**20 02 46.4**	**0.0**
JOD2				*eS*	**S**	**20 03 54.8**	**-1.7**
INU	**Inuyama**	**5.82**	**341**	P	**Pn**	**20 02 52.6**	**+1.8**
JMN	**Monobe**	**6.04**	**311**	P	**Pn**	**20 02 55.2**	**+2.0**
JRY	**Ryogami san**	**6.16**	**357**	*eP*	**Pn**	**20 02 55.1**	**+0.6**
JRY				*eS*	**S**	**20 04 08.6**	**-2.9**
MJAR	**Matsushiro Arr**	**6.74**	**352**	P	**P**	**20 03 00.4**	**-1.1**
	1.3nm,0.5s,baz=170,slow=11,SNR=12						
MJAR				S	**S**	**20 04 21.3**	**-1.8**
	1.2nm,0.6s,baz=194,slow=27,SNR=4.6						
MAJO	**Matsushiro**	**6.74**	**352**	P	**P**	**20 03 00.8**	**-0.7**
JHS	**Saijyo**	**7.34**	**316**	*eP*	**P**	**20 03 09.3**	**+1.1**
JNU	**Nakatsue**	**7.92**	**296**	P	**P**	**20 03 16.0**	**+1.3**
JNU	**Nakatsue**	**7.92**	**296**	P	**P**	**20 03 15.7**	**+1.0**
	8.9nm,0.7s,baz=165,slow=4.0,SNR=10						
JMM	**Marumori**	**8.09**	**8**	P	**P**	**20 03 16.3**	**-0.1**
JSJ	**Shimokoshiki**	**8.47**	**285**	*eP*	**P**	**20 03 21.8**	**+1.0**
JOW	**Kunigami**	**10.19**	**256**	P	**Pn**	**20 03 42.8**	**+2.2**
	24nm,0.7s,baz=68,slow=8.7,SNR=3.7						
KSRS	**Korea Array**	**12.15**	**312**	P	**Pn**	**20 04 02.5**	**-0.5**
	3.8nm,0.7s,baz=124,slow=10,SNR=14						
USRK	**Usurijysk Ar.**	**15.46**	**340**	P	**P**	**20 04 38.0**	**+0.5**
	1.1nm,0.4s,baz=146,slow=10.0,SNR=8.8						
YHNB	**Yeheng**	**16.77**	**256**	P	**P**	**20 04 50.3**	**-1.6**
NACB	**Ninganchiao**	**16.78**	**255**	P	**P**	**20 04 51.0**	**-0.9**
GUMO	**Guam**	**16.98**	**161**	P	**P**	**20 04 55.9**	**+1.9**
	51nm,0.3s,baz=316,slow=23,SNR=14						
YULB	**Yu-li**	**17.35**	**252**	P	**P**	**20 04 56.7**	**-1.3**
SSLB	**Suanglung**	**17.47**	**254**	P	**P**	**20 04 58.4**	**-0.9**
TPUB	**Ta-pu**	**17.94**	**253**	P	**P**	**20 05 03.9**	**-0.4**
KLR	**Kul'dur**	**20.20**	**346**	P	**P**	**20 05 27.0**	**+0.8**
	1.4nm,0.3s,baz=153,slow=9.8,SNR=11						
	1.4nm,0.3s						
PETK	**Petropavlovsk-**	**26.85**	**25**	P	**P**	**20 06 27.9**	**+1.8**
	3.5nm,1.0s,baz=217,slow=1.4,SNR=2.0						
	3.5nm,1.0s						
SONM	**Songino Array**	**30.99**	**315**	P	**P**	**20 07 00.6**	**-2.0**
	0.3nm,0.4s,baz=112,slow=6.2,SNR=3.5						
	0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.37**	**262**	P	**P**	**20 08 04.9**	**-0.3**
	0.5nm,0.5s,baz=70,slow=5.8,SNR=6.8						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**45.77**	**318**	P	**P**	**20 09 02.9**	**-0.7**
	0.3nm,0.4s,baz=89,slow=8.3,SNR=2.9						
ZALV				PcP	**PcP**	**20 10 32.9**	**-0.5**
	0.6nm,0.5s,baz=131,slow=5.8,SNR=2.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**46.80**	**308**	P	**P**	**20 09 10.6**	**-1.1**
	0.2nm,0.6s,baz=86,slow=8.8,SNR=2.9						
MKAR				PcP	**PcP**	**20 10 37.2**	**-0.1**
	0.4nm,0.5s,baz=78,slow=11,SNR=7.1						
MKAR				ScP	**ScP**	**20 13 49.7**	**-2.3**
	0.4nm,0.7s,baz=82,slow=5.0,SNR=5.5						
	0.2nm,0.6s						
NRIK	**Noril'sk**	**49.17**	**338**	P	**P**	**20 09 29.1**	**0.0**
	2.6nm,0.4s,baz=98,slow=7.8,SNR=4.3						
	2.6nm,0.4s						
KURBB	**Kurchatov Arra**	**49.33**	**313**	P	**P**	**20 09 29.7**	**-0.9**
	0.5nm,0.6s,baz=94,slow=7.8,SNR=2.5						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**49.74**	**186**	P	**P**	**20 09 34.4**	**+0.4**
	0.8nm,0.5s,baz=1.2,slow=7.7,SNR=20						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**53.47**	**186**	P	**P**	**20 10 01.8**	**+0.5**
	0.4nm,0.5s,baz=20,slow=11,SNR=4.6						
	0.4nm,0.5s						
BVAR	**Borovoye Array**	**54.32**	**316**	P	**P**	**20 10 06.5**	**-0.4**
	1.0nm,0.4s,baz=98,slow=7.5,SNR=14						
BVAR				PcP	**PcP**	**20 11 04.9**	**-0.3**
	0.7nm,0.6s,baz=91,slow=5.9,SNR=3.7						
BVAR				ScP	**ScP**	**20 14 22.4**	**-1.8**
	0.5nm,0.6s,baz=72,slow=4.7,SNR=3.8						
	1.0nm,0.4s						
ILAR	**Eielson Array**	**56.54**	**30**	P	**P**	**20 10 22.4**	**+0.1**
	0.7nm,0.6s,baz=259,slow=4.8,SNR=14						
ILAR				PcP	**PcP**	**20 11 13.7**	**+0.1**
	1.3nm,1.3s,baz=237,slow=3.3,SNR=1.8						
	0.7nm,0.6s						
STKA	**Stephens Creek**	**61.43**	**178**	P	**P**	**20 10 56.5**	**+0.7**
	0.9nm,0.6s,baz=349,slow=9.8,SNR=2.9						
	0.9nm,0.6s						
SPITS	**Spitsbergen Ar**	**67.22**	**349**	P	**P**	**20 11 32.5**	**+0.1**
	22nm,1.2s,baz=91,slow=10,SNR=1.9						
RES	**Resolute Bay**	**69.97**	**13**	P	**P**	**20 11 50.3**	**+1.1**
	1.2nm,0.8s,baz=345,slow=7.7,SNR=4.5						
	1.2nm,0.8s						
ARCES	**ARCESS Array B**	**70.11**	**340**	P	**P**	**20 11 50.2**	**+0.1**
	2.3nm,0.5s,baz=73,slow=8.1,SNR=16						
	2.3nm,0.5s						
YKA	**Yellowknife Ar**	**70.92**	**28**	P	**P**	**20 11 55.5**	**+0.5**
	0.6nm,0.6s,baz=298,slow=6.0,SNR=13						
	0.6nm,0.6s						
KBZ	**Khabaz**	**74.30**	**312**	P	**P**	**20 12 14.7**	**-0.4**
	1.1nm,0.8s,baz=135,slow=1.4,SNR=2.6						
	1.1nm,0.8s						
FINES	**FINESS Array B**	**74.36**	**333**	P	**P**	**20 12 14.6**	**-0.5**
	1.8nm,0.5s,baz=69,slow=5.1,SNR=28						
	1.8nm,0.5s						
AKASG	**Malin Array Be**	**78.91**	**323**	P	**P**	**20 12 39.4**	**-1.0**
	0.3nm,0.3s,baz=72,slow=1.1,SNR=1.4						
	0.3nm,0.3s						
HFS	**Hagfors**	**79.90**	**336**	P	**P**	**20 12 44.8**	**-0.7**
	2.7nm,0.6s,baz=94,slow=4.5,SNR=18						
	2.7nm,0.6s						
NB2	**NORSAR Subarra**	**80.12**	**337**	P	**P**	**20 12 45.9**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=43,slow=5.3						
NOA	**NORSAR Array B**	**80.12**	**337**	P	**P**	**20 12 46.5**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=64,slow=9.1,SNR=6.4						
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**80.77**	**51**	P	**P**	**20 12 52.6**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=285,slow=6.1,SNR=7.5						
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**82.29**	**311**	P	**P**	**20 12 57.7**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=107,slow=4.1,SNR=5.3						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**95.92**	**51**	P	**P**	**20 14 05.6**	**+2.5**
	comp=Z,0.4nm,0.6s,baz=318,slow=1.7,SNR=4.6						
	comp=Z,0.4nm,0.6s						

TAP ***24*** *20:07:46.7,24.˚20N×121.˚71E, h8km, ML3.6, C*
ASIES ***24*** *20:07:46.7,24.˚20N×121.˚71E, h8km, ML3.6, Mw3.4, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr-0.44; Mθθ-0.20; Mφφ-0.24; Mrθ0.13; Mrφ1.45; Mθφ0.11; Fault plane solution: M₀1.50785×10²¹ NP1:φ₁90.59000°, δ86.35000°, λ4.38000°. NP2:φ₂0.31000°, δ85.62000°, λ176.34000°. Principal axes: T Plg5.6820°, Azm315.4760°; N Plg84.2940°, Azm130.2590°; P Plg0.5150°, Azm225.4240°;*
JMA ***24*** *20:07:47.3±0.1, 24.˚2N±0.˚3×121.˚7E±0.˚7, h9km±1km, MV3.1/12, TAIWAN REGION*
ISC 24 20:07:46.8±0.8, 24°19N±0.˚01×121°72E±0.˚01, h7km±5km, n184, σ0°83/358, 10C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**249**	**⇓**P	**Pg**	**20 07 49.3**	**+0.2**
	baz=238						
ETL				S	**Sg**	**20 07 50.9**	**+0.3**
	baz=238						
NACB	**Ninganchiao**	**0.12**	**260**	P	**Pg**	**20 07 49.5**	**+0.1**
NACB	**Ninganchiao**	**0.12**	**260**	**⇓**P	**Pg**	**20 07 49.5**	**+0.1**
	baz=253						
NACB				S	**Sg**	**20 07 51.2**	**+0.1**
	baz=253						
EHP	**Heping Village**	**0.12**	**10**	**⇓**P	**Pg**	**20 07 49.7**	**+0.3**
	baz=22						
EHP				S	**Sg**	**20 07 51.7**	**+0.5**
	baz=22						
EAHA	**Aohua**	**0.14**	**8**	**⇓**P	**Pg**	**20 07 50.0**	**+0.2**
	baz=23						
EAHA				S	**Sg**	**20 07 52.1**	**+0.4**
	baz=23						
TWD	**Chiawan**	**0.16**	**225**	**⇓***i*P	**Pg**	**20 07 50.4**	**+0.3**
	baz=217						
TWD				*i* S	**Sg**	**20 07 52.7**	**+0.4**
	baz=217						
ETLH	**Xiulin Townshi**	**0.22**	**274**	P	**Pg**	**20 07 51.3**	**+0.1**
	baz=271						
ETLH				S	**Sg**	**20 07 54.1**	**-0.1**
	baz=271						
ENA	**Nanau**	**0.23**	**5⇓**	*i*P	**Pg**	**20 07 51.8**	**+0.2**
	baz=10.0						
ENA				*i* S	**Sg**	**20 07 54.9**	**+0.2**
	baz=10.0						
HWA	**Hwalien**	**0.24**	**206⇓**	*i*P	**Pg**	**20 07 52.3**	**+0.8**
	baz=199						
HWA				*eS*	**Sg**	**20 07 55.2**	**+0.5**
	baz=199						
EWUT	**Wuta**	**0.26**	**12**	**⇓**P	**Pg**	**20 07 52.2**	**+0.3**
	baz=16						
EWUT				S	**Sg**	**20 07 55.5**	**+0.1**
	baz=16						
ETM	**Tongmen**	**0.31**	**222**	**⇓**P	**Pg**	**20 07 53.0**	**+0.1**
	baz=210						
ETM				S	**Sg**	**20 07 57.0**	**+0.1**
	baz=210						
LXIB	**Xiulin Townshi**	**0.33**	**239**	**⇓**P	**Pg**	**20 07 53.2**	**-0.1**
	baz=236	

	baz=243									baz=284										baz=186			
EOS3	EOS3	0.55	80	*e*P	Pb	20 07 59.4	+0.6	ECBN	Changbin	0.91	196	*e*P	Pg	20 08 04.2	-0.1	EDH	Donghe	1.27	197	P	Pn	20 08 09.0	-2.0
	baz=70								baz=186								baz=186						
EOS3				*e*S	Sn	20 08 09.2	-1.1	ECBN				*e*S	Sn	20 08 18.4	-0.9	EDH				*e*S	Sn	20 08 28.3	0.0
	baz=70								baz=186								baz=186						
WARBT	Fenglin Townsh	0.56	213	⇓P	Pg	20 07 57.5	-0.2	SXI1	Grass Mountain	0.91	9	P	Pb	20 08 04.7	-0.3	RLNB	Erlin	1.28	257	P	Pg	20 08 12.0	+0.7
	baz=210								baz=360								baz=256						
WARBT				*e*S	Sb	20 08 06.9	-0.3	SXI1				S	Sg	20 08 16.0	-0.1	RLNB				S	Sn	20 08 29.8	+1.3
	baz=210								baz=360								baz=256						
YHNB	Yeheng	0.57	327	P	Pb	20 07 58.4	-0.8	NCUH	Zhongli	0.91	328	P	Pn	20 08 05.6	-0.4	CHN2	Minshiung	1.31	240	*i* P	Pg	20 08 12.7	+0.6
YHNB	Yeheng	0.57	327	⇑P	Pb	20 07 58.4	-0.8		baz=328								baz=239						
	baz=328							NCUH				*e*S	Sn	20 08 18.6	-0.9	CHN2				S	Sn	20 08 32.4	+3.0
YHNB				S	Sg	20 08 05.8	+0.5		baz=328								baz=239						
	baz=328							HSN	Hsinchu	0.91	312	*i* P	Pn	20 08 05.5	-0.6	WTK	Tuku	1.32	248	P	Pg	20 08 12.3	+0.2
ILA	Ilan	0.57	3	*i* P	Pb	20 07 58.7	-0.5		baz=315								baz=233						
	baz=5.0							HSN				S	Sn	20 08 18.9	-0.6	WTK				S	Sn	20 08 30.6	+1.2
ILA				*i* S	Sb	20 08 06.4	-1.1		baz=315								baz=233						
	baz=5.0							NCU	National Centr	0.91	328	P	Pn	20 08 05.5	-0.6	CHN4	Tsaushan	1.33	231	*i* P	Pg	20 08 12.7	+0.3
FUSB	Fushanzhiwuyua	0.58	348	⇑P	Pb	20 07 58.5	-0.8		baz=329								baz=230						
	baz=349							NCU				S	Sn	20 08 19.2	-0.3	CHN4				*i* S	Sg	20 08 33.2	+3.6
FUSB				S	Sg	20 08 05.8	+0.3		baz=329								baz=230						
	baz=349							NMLH	Miaoli	0.91	292	P	Pn	20 08 05.7	-0.4	STYH	Taoyuan	1.34	221	P	Pn	20 08 11.6	-0.3
NSK	Sanguang	0.58	326	⇑*i* P	Pb	20 07 58.6	-0.8		baz=292								baz=219						
	baz=327							NMLH				S	Sb	20 08 17.7	+0.4	STYH				S	Sg	20 08 30.2	+0.4
NSK				*i* S	Sg	20 08 06.3	+0.5		baz=292								baz=219						
	baz=327							NJN	Zhunan	0.92	302	*e*P	Pn	20 08 05.4	-0.7	TPUB	Ta-pu	1.34	229	P	Pg	20 08 12.6	+0.1
WUSB	Renai	0.58	250	⇓P	Pg	20 07 58.4	+0.2		baz=303								baz=215						
	baz=240							NJN				*e*S	Sb	20 08 17.2	-0.2	TPUB				S	Sg	20 08 30.7	+0.9
WUSB				S	Sg	20 08 05.8	0.0		baz=303								baz=215						
	baz=240							EYUL	Yuli	0.92	204	P	Pg	20 08 04.5	0.0	STYT	Tauyuan	1.35	221	*i* P	Pg	20 08 12.8	0.0
EGFH	Guangfu	0.59	207	⇓P	Pg	20 07 58.2	0.0		baz=214								baz=220						
	baz=213							EYUL				*e*S	Sb	20 08 17.4	-0.1	STYT				*i* S	Sg	20 08 31.7	+1.3
EGFH				*e*S	Sb	20 08 07.4	-0.6		baz=214								baz=220						
	baz=213							TWF1	Yuli	0.92	205	*i* P	Pg	20 08 04.3	-0.3	WTCT	Ta-ch'eng	1.35	256	P	Pg	20 08 12.7	-0.1
NWLT	Wulai	0.61	341	⇑P	Pb	20 07 59.2	-0.8		baz=213								baz=256						
	baz=342							TWF1				*e*S	Sg	20 08 16.5	-0.1	WTCT				S	Sg	20 08 32.1	+1.7
NWLT				S	Sg	20 08 06.9	+0.2		baz=213								baz=256						
	baz=342							WHYT	Xinyi Township	0.93	238	P	Pb	20 08 05.0	-0.4	WTP	Ta-pu	1.38	227	*i* P	Pg	20 08 13.5	+0.1
NTC	Toucheng	0.67	9	*e*P	Pb	20 08 00.1	-0.7		baz=245								baz=213						
	baz=10.0							WHYT				*e*S	Sn	20 08 18.7	-1.4	WTP				S	Sg	20 08 33.4	+2.0
NTC				S	Sb	20 08 09.5	-0.8		baz=245								baz=213						
	baz=10.0							TWS1	Kuangyinshan	0.94	343	*i* P	Pn	20 08 06.3	-0.2	LONT	Longtian	1.39	203	P	Pn	20 08 11.6	-1.1
EGS		0.68	17	*i* P	Pb	20 08 00.4	-0.6		baz=354								baz=202						
	baz=28							TWS1				*i* S	Sn	20 08 19.4	-0.8	LONT				*e*S	Sb	20 08 30.6	-0.5
EGS				*i* S	Sb	20 08 10.3	-0.2		baz=354								baz=202						
	baz=28							WWF	Wufeng	0.94	261	P	Pn	20 08 06.5	0.0	TWK	Hsinying	1.46	231	*i* P	Pg	20 08 14.9	+0.1
VWDT	VWDT	0.69	231	⇓P	Pg	20 08 00.0	0.0		baz=253								baz=230						
	baz=229							WWF				*e*S	Sn	20 08 20.1	-0.2	TWK				S	Sg	20 08 34.9	+1.2
VWDT				*e*S	Sb	20 08 10.9	+0.1		baz=253								baz=230						
	baz=229							TCU	Taichung	0.95	267	*i* P	Pn	20 08 07.0	+0.4	PCYT	Pengchaiyu	1.47	13	*i* P	Pb	20 08 13.8	-0.6
NFF	Wufeng Townshi	0.70	309	P	Pb	20 08 00.8	-0.6		baz=267								baz=13						
	baz=318							TCU				*i* S	Sn	20 08 20.8	+0.3	PCYT				S	Sg	20 08 36.1	+2.1
NFF				*e*S	Sb	20 08 10.7	-0.7		baz=267								baz=13						
	baz=318							TNOU	National Taiwa	0.95	3	P	Pb	20 08 05.5	-0.2	WSF	Szhu	1.48	248	*i* P	Pg	20 08 15.1	-0.1
WHP	Taichung City	0.71	277	P	Pb	20 08 01.2	-0.4		baz=4.0								baz=235						
	baz=276							TNOU				S	Sg	20 08 17.5	-0.1	WSF				*i* S	Sg	20 08 36.0	+1.6
WHP				S	Sb	20 08 10.5	-1.1		baz=4.0								baz=235						
	baz=276							YM01	YM01	0.96	352	P	Pn	20 08 06.1	-0.7	SNST	Tainan City	1.48	229	P	Pg	20 08 14.9	-0.4
WPL	Puli Township	0.72	256	P	Pb	20 08 01.3	-0.4		baz=3.0								baz=229						
	baz=244							YM01				S	Sg	20 08 17.9	+0.1	SNST				*e*S	Sg	20 08 35.9	+1.5
WPL				S	Sg	20 08 10.6	+0.5		baz=3.0								baz=229						
	baz=244							WJS	Zhushan	0.98	248	P	Pn	20 08 06.8	-0.2	CHN1	Nanshi	1.48	228	*i* P	Pg	20 08 15.0	-0.3
DPDB	Guoxing	0.74	258	P	Pb	20 08 01.6	-0.5		baz=240								baz=227						
	baz=257							WJS				S	Sn	20 08 20.5	-0.6	CHN1				S	Sg	20 08 36.1	+1.6
DPDB				S	Sg	20 08 10.8	0.0		baz=240								baz=227						
	baz=257							WNT1	Nantou City	0.99	254	P	Pn	20 08 07.3	+0.2	TWG	Pinlang	1.49	204	*i* P	Pn	20 08 11.2	-2.8
HGSD	Ruisui	0.75	201	P	Pb	20 08 01.9	-0.2		baz=247								baz=191						
	baz=213							WNT1				S	Sn	20 08 21.6	+0.2	TWGBT	Beinan	1.49	203	P	Pn	20 08 13.3	-0.7
HGSD				*e*S	Sn	20 08 13.8	-1.6		baz=247							TWGBT	Beinan	1.49	203	P	Pn	20 08 11.1	-2.9
	baz=213							WDJ	Dajia District	1.00	279	P	Pn	20 08 07.8	+0.6		baz=191						
WCS	Beigang Elemen	0.75	260	P	Pb	20 08 01.8	-0.4		baz=279							SGST	Jiashian	1.52	224	*i* P	Pb	20 08 15.1	-0.3
	baz=259							WDJ				S	Sn	20 08 21.7	+0.2		baz=222						
WCS				S	Sg	20 08 11.1	+0.1		baz=279							SGST				*i* S	Sg	20 08 38.0	+2.3
	baz=259							WNT	Mingjian	1.00	252	*i* P	Pn	20 08 07.3	+0.1		baz=222						
EHY	Hungye	0.78	208	⇓*i* P	Pg	20 08 01.4	-0.3		baz=245							WSL	Shuilin Townsh	1.52	244	P	Pg	20 08 15.9	-0.1
	baz=214							WNT				*i* S	Sn	20 08 21.0	-0.5		baz=244						
EHY				*e*S	Sg	20 08 12.2	+0.3		baz=245							WSL				S	Sg	20 08 38.3	+2.6
	baz=214							YM08	YM08	1.00	353	P	Pb	20 08 06.4	0.0		baz=244						
TIPB	Shuangxi	0.78	7	P	Pb	20 08 02.2	-0.6		baz=354							LDUT	Ludao	1.53	189	P	Pn	20 08 12.5	-2.1
	baz=358							YM08				*e*S	Sn	20 08 21.1	-0.6		baz=179						
TIPB				S	Sg	20 08 11.8	-0.3		baz=354							LDUT				S	Sn	20 08 32.8	-1.9
	baz=358							NTST	Danshui	1.00	346	P	Pn	20 08 07.2	0.0		baz=179						
LIOB	Emei	0.78	305	P	Pb	20 08 02.7	-0.1		baz=357							SLGT	Liugui	1.55	220	P	Pb	20 08 16.0	+0.2
	baz=305							NTST				S	Sn	20 08 21.6	+0.1		baz=219						
LIOB				*e*S	Sb	20 08 13.3	-0.3		baz=357							SLGT				S	Sg	20 08 38.5	+1.9
	baz=305							ANP	Anpu	1.00	350	*i* P	Pn	20 08 07.0	-0.5		baz=219						
NHDH	Xindian Distri	0.79	347	*i* P	Pb	20 08 02.4	-0.4		baz=351							ICHU	Yijhu	1.56	238	P	Pg	20 08 16.7	0.0
	baz=348							ANP				*i* S	Sn	20 08 20.8	-1.1		baz=221						
NHDH				*i* S	Sg	20 08 12.5	+0.2		baz=351							ICHU				S	Sg	20 08 38.4	+1.5
	baz=348							NWRT	Kuosheng	1.01	357	*e*P	Pn	20 08 07.4	0.0		baz=221						
NSTT	Nanjuang	0.79	304	*i* P	Pb	20 08 02.6	-0.3		baz=358							CHN8	Yiju	1.62	239	*i* P	Pg	20 08 17.3	-0.6
	baz=304							NWRT				*e*S	Sb	20 08 19.5	-0.5		baz=222						
NSTT				S	Sb	20 08 13.7	0.0		baz=358							CHN8				S	Sg	20 08 41.0	+2.1
	baz=304							NHW	Xinwu Township	1.01	323	*e*P	Pn	20 08 07.4	0.0		baz=222						
NJD	Zhudong	0.79	313	P	Pn	20 08 03.5	-0.9		baz=323							CHN3	Shinhua	1.67	228	*i* P	Pg	20 08 19.0	+0.2
	baz=320							NHW				*e*S	Sn	20 08 21.8	-0.2		baz=230						
NJD				*e*S	Sb	20 08 13.8	0.0		baz=323							CHN3				*e*S	Sg	20 08 42.0	+1.5
	baz=320							CHKH	Chenggong	1.04	197	P	Pg	20 08 06.6	-0.2		baz=230						
TWA	Mucha	0.79	351	*i* P	Pb	20 08 02.7	-0.3		baz=213							SHHT	Tainan City	1.71	227	P	Pg	20 08 20.3	+0.6
	baz=353							CHKH				S	Sn	20 08 23.2	+0.7		baz=229						
TWA				*i* S	Sg	20 08 12.5	0.0		baz=213							SHHT				*e*S	Sg	20 08 43.2	+1.2
	baz=353							FULB	Fuli	1.06	202	P	Pb	20 08 07.5	-0.1		baz=229						
TATO	Taipei	0.81	345	P	Pb	20 08 03.2	0.0		baz=216							SCST	Cishan	1.72	221	P	Pb	20 08 18.9	+0.2
TATO	Taipei	0.81	345	P	Pb	20 08 03.0	-0.2	FULB				*e*S	Sn	20 08 23.0	-0.3		baz=222						
	baz=346								baz=216							SCST				S	Sg	20 08 44.5	+2.3
TATO				S	Sg	20 08 12.7	-0.1	WCHH	Zhanghua	1.07	264	P	Pn	20 08 09.1	+1.0		baz=222						
	baz=346							WCHH				S	Sn	20 08 24.8	+1.5	SCLT	Jiali	1.73	234	P	Pg	20 08 19.9	-0.1
SSLB	Suanglung	0.81	240	P	Pg	20 08 02.3	-0.1		baz=263								baz=235						
SSLB	Suanglung	0.81	240	⇓P	Pg	20 08 02.2	-0.1	WYL	Yuanlin Townsh	1.07	258	P	Pn	20 08 08.7	+0.5	SCLT				*i* S	Sg	20 08 43.7	+1.3
	baz=239								baz=257								baz=235						
SSLB				S	Sg	20 08 12.9	0.0	WYL				S	Sn	20 08 24.2	+0.9	ECL	Taimali	1.74	204	P	Pn	20 08 16.6	-0.9
	baz=239								baz=257								baz=193						
SMLT	Sun Moon Lake	0.81	248	⇓*i* P	Pg	20 08 02.5	+0.1	ALS	Alishan	1.08	231	⇓*i* P	Pg	20 08 07.5	0.0	ECL				*e*S	Sn	20 08 39.1	-0.7
	baz=236								baz=218								baz=193						
SMLT				*i* S	Sg	20 08 13.2	+0.2	ALS				*i* S	Sn	20 08 23.5	-0.4	TSMG	Majia	1.78	214	P	Pb	20 08 19.8	0.0
	baz=236								baz=218								baz=213						
TYC	Yuchr	0.84	250	⇓*i* P	Pg	20 08 02.9	0.0	TWY	Chenhua	1.08	354	*i* P	Pn	20 08 08.9	+0.5	TSMG				S	Sg	20 08 44.3	+0.2
	baz=239								baz=355								baz=213						
TYC				S	Sg	20 08 14.1	+0.2	TWY				*i* S	Sn	20 08 23.5	-0.2	TWM1	Shoushan	1.81	221	*i* P	Pg	20 08 21.8	+0.3
	baz=239								baz=355								baz=221						
BACT	New Taipei Cit	0.84	343	P	Pn	20 08 04.6	-0.5	NSM	Shimen	1.10	354	*e*P	Pn	20 08 08.3	-0.3	TWM1				S	Sg	20 08 46.2	+1.2
	baz=343								baz=343								baz=221						
BACT				S	Sb	20 08 15.3	+0.1	NSM				*e*S	Sn	20 08 23.2	-0.8	TSCK	Chigu Township	1.82	236	P	Pb	20 08 19.6	-0.9
	baz=343								baz=343								baz=220						
TWB1	Santiao Chiao	0.85	17	*i* P	Pg	20 08 03.1	-0.1	CHN5	Tsauling	1.12	238	*i* P	Pn	20 08 09.1	0.0	TSCK				S	Sg	20 08 45.1	-0.4
	baz=9.0								baz=237								baz=220						
TWB1				*i* S	Sg	20 08 13.9	-0.3	CHN5				*i* S	Sn	20 08 25.3	+0.5	MASBT	Mashibuluo	1.86	213	P	Pn	20 08 19.6	+0.5
	baz=9.0								baz=237								baz=215						
NHY	Taipei	0.85	351	P	Pb	20 08 04.0	0.0	CHKT	Chengkung	1.14	197	*i* P	Pg	20 08 08.2	-0.5	MASBT				S	Sg	20 08 47.3	+0.6
	baz=352								baz=211								baz=215						
NHY				S	Sb	20 08 15.2	-0.4	CHKT				*i* S	Sn	20 08 26.2	+1.2	EAST	Anshuo	1.97	204	*i* P	Pn	20 08 19.7	-1.0
	baz=352								baz=211								baz=195						
HSN1	Hsinchu	0.86	312	P	Pn	20 08 04.8	-0.7	EHD	Haiduan	1.14	204	P	Pg	20 08 08.1	-0.6	EAST				*e*S	Sn	20 08 46.2	+0.6
	baz=313								baz=212								baz=195						
HSN1				*e*S	Sb	20 08 16.3	+0.4	EHD				S	Sb	20 08 23.9	-0.1	TAW	Tawu	1.98	203	*i* P	Pb	20 08 22.3	-0.9
	baz=313								baz=212								baz=194						
TAP	Taipei	0.86	347	P	Pn	20 08 04.5	-0.9	JYNG	Yonagunijimaku	1.15	77	P	Pn	20 08 09.4	+0.1	TAW				*e*S	Sn	20 08 45.5	-0.2
	baz=348							JYNG				*e*S	Sn	20 08 26.5	+1.3		baz=194						
TAP				S	Sb	20 08 15.4	-0.6	WGK	Gukeng	1.17	245	*i* P	Pn	20 08 10.2	+0.5	TAWH	Dawu Township	2.00	203	P	Pn	20 08 20.5	-0.5
	baz=348								baz=244								baz=194						
NWF	Wu-fen Shan	0.88	4	*i* P	Pb	20 08 04.5	+0.1	WGK				*i* S	Sn	20 08 27.5	+1.7	TAWH				*e*S	Sn	20 08 45.6	-0.6
	baz=356								baz=244								baz=194						
NWF				*i* S	Sg	20 08 14.9	-0.2	ECS	Chishang	1.19	203	P	Pb	20 08 09.3	-0.3	WSSB	Gushan	2.04	221	*e*P	Pb	20 08 23.9	-0.4
	baz=356								baz=214								baz=224						
WFSB	Wu-fen Shan	0.88	4	P	Pb	20 08 04.5	+0.1	ELDTW	Lidau	1.19	213	*i* P	Pg	20 08 08.5	-1.1	WSSB				*e*S	Sg	20 08 52.2	-0.3
	baz=356								baz=222								baz=224						
WFSB				S	Sg	20 08 14.9	-0.1	ELDTW				*e*S	Sn	20 08 26.0	-0.4	SCZT	Fangliau	2.08	209	P	Pb	20 08 23.7	-1.2
	baz=356								baz=222								baz=212						
TWQ1	Liyutan	0.88	280	*i* P	Pb	20 08 04.7	+0.3	WDLH	Douliu	1.19	245	P	Pn	20 08 10.8	+0.9	SCZT				*e*S	Sb	20 08 50.1	-0.7
	baz=280								baz=245								baz=212						
TWQ1				*e*S	Sb	20 08 16.2	-0.2	WDLH				S	Sn	20 08 27.3	+1.0	PNG	Penghu	2.08	253	*i* P	Pn	20 08 22.4	+0.3
	baz=280								baz=245								baz=253						
YULB	Yu-li	0.89	206	P	Pg	20 08 03.4	-0.4	YOJ	Yonaguni jima	1.21	77	P	Pg	20 08 10.7	+0.7	PNG				*i* S	Sb	20 08 49.6	-1.2
YULB	Yu-li	0.89	206	P	Pg	20 08 03.5	-0.4	YOJ	Yonaguni jima	1.21	77	P	Pg	20 08 10.2	+0.2	PHUB	P'eng-hu	2.08	251	P	Pn	20 08 22.4	+0.3
	baz=215								baz=65								baz=251						
YULB				*e*S	Sb	20 08 16.8	+0.2	YOJ				*e*S	Sn	20 08 28.2	+1.5	PHUB				S	Sb	20 08 49.7	-1.2
	baz=215								baz=65								baz=251						
NTY	Taoyuan	0.89	335	P	Pn	20 08 05.5	-0.3	YOJ	Yonaguni jima	1.21	77	P	Pg	20 08 10.3	+0.3	JKRS	Kuro-shima	2.09	88	P	Pn	20 08 23.3	+1.0
	baz=336							YOJ				*e*S	Sn	20 08 28.4	+1.6	JKRS				*e*S	Sb	20 08 50.4	-0.9
NTY				S	Sn	20 08 18.0	-0.9	WRL	Guolierlin Hig	1.26	257	P	Pg	20 08 11.5	+0.5	WDGT	Dungji	2.10	244	*i* P	Pn	20 08 23.2	+0.7
	baz=336								baz=275								baz=229						
SBCB	Hsinchu	0.90	312	P	Pn	20 08 05.4	-0.4	WRL				S	Sn	20 08 28.7	+0.6	WDGT				*i* S	Sb	20 08 50.4	-1.2
	baz=312								baz=275								baz=229						
SBCB				*e*S	Sn	20 08 17.7	-1.4	WCKO	Fanlu	1.27	234	P	Pg	20 08 11.8	+0.7	SLIU	Shizi	2.14	203	P	Pn	20 08 23.9	+0.9
	baz=312								baz=233								baz=196						
NSY	Sanyi	0.90	284	*i* P	Pn	20 08 05.5	-0.4	WCKO				S	Sn	20 08 30.1	+1.8	SLIU				*e*S	Sn	20 08 50.4	+0.6
	baz=284								baz=233								baz=196						
NSY				*e*S	Sb	20 08 16.7	-0.4									LAY	Lan-yu	2.15	184	P	Pn	20 08 21.5	-1.6

baz=189
LAY eS Sn 20 08 48.5 -1.6
baz=189
LYUB Lan-yu 2.19 183 P Pn 20 08 21.2 -2.3
baz=188
LYUB eS Sn 20 08 49.8 -1.0
baz=188
VWUC VWUC 2.21 291 P Pn 20 08 23.6 -0.4
baz=291
VWUC eS Sn 20 08 51.4 -0.2
baz=291
JIJ Ishigaki jima 2.22 85 P Pn 20 08 24.3 +0.3
JIJ S Sn 20 08 51.7 0.0
VCHM Qimei 2.32 245 P Pn 20 08 26.1 +0.8
baz=231
VCHM S Sn 20 08 55.3 +1.2
baz=231
HEN Hengchun 2.36 203 P Pn 20 08 27.0 +1.1
baz=192
HEN eS Sb 20 08 58.0 -0.9
baz=192
TWK1 Hengchun 2.39 201 eP Pn 20 08 27.8 +1.3
baz=196
TWK1 eS Sb 20 08 58.0 -1.9
baz=196
TWKBT Hengchun 2.39 201 P Pn 20 08 26.9 +0.5
baz=196
TWKBT eS Sb 20 08 58.2 -1.8
baz=196
JISG Ishigakijimahi 2.40 80 eP Pn 20 08 27.0 +0.5
JISG eS Sn 20 08 57.5 +1.4
PTMZ Houxiangcun 2.51 290 P Pn 20 08 28.1 0.0
baz=290
PTMZ eS Sn 20 08 58.7 -0.2
baz=290
MATB Ma-tsu 2.53 321 P Pn 20 08 29.0 +0.7
baz=320
MATB eS Sn 20 08 59.4 0.0
baz=320
LYJJ Jianjiangzhen 2.94 323 eP Pn 20 08 34.5 +0.5
baz=322
LYJJ eS Sn 20 09 09.9 +0.4
baz=322
KNM Kinmen 3.01 275 *i* P Pn 20 08 36.8 +1.9
baz=274
KNM eS Sb 20 09 15.7 -1.9
baz=274
KNMB Chin-men Tao 3.05 276 P Pn 20 08 35.2 -0.2
baz=275
KNMB eS Sn 20 09 12.3 +0.1
baz=275
XPSS Dashiqiu 3.06 333 P Pn 20 08 34.8 -0.8
baz=332
XPSS eS Sn 20 09 12.9 +0.5
baz=332
MHZQ Yeshan 3.09 308 P Pn 20 08 36.2 +0.2
baz=308
MHZQ eS Sn 20 09 13.2 0.0
baz=308
AXDP Jialang 3.49 282 P Pn 20 08 41.3 -0.1
baz=282
AXDP eS Sn 20 09 24.2 +1.2
baz=282
ZPLA Ao Xicun 3.64 267 P Pn 20 08 43.9 +0.3
baz=266
ZPLA eS Sn 20 09 28.0 +1.3
baz=266
DSXP Dongshan 3.96 264 eP Pn 20 08 48.0 +0.1
baz=263
DSXP eS Sn 20 09 35.5 +0.9
baz=263

IDC 24 20:15:04.6±6.5, 31°.56S×179°.27W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=274.1km s-min=57.1km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.98**	**269**	P	P	20 22 56.9	-0.7
	0.3nm,0.7s,baz=118,slow=7.6,SNR=4.6						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**43.07**	**274**	P	P	20 23 06.8	+0.3
	0.3nm,0.3s,baz=114,slow=8.1,SNR=7.8						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**145.84**	**339**	PKPbc	PKPdf	20 34 44.2	-0.3
	0.7nm,0.5s,baz=26,slow=3.5,SNR=8.4						

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*IDC **24** 20:25:58.0±1.2, 2°.55N×132°.87E, h0km, mb3.8/6, mbtmp3.9/7, MS2.9/7, Error ellipse: s-maj=67.8km s-min=17.6km az=68.0*

ISC 24 20:26:03.1±1.2, 2°.5N±0°.2×132°.9E±0°.4, h35km, n19, σ0°.56/7, mb3.8/6, MS2.8/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**8.59**	**302**	LR	LR	20 31 43.3	
	comp=Z,31nm,18.4s,baz=58,slow=40						
PMG	**Port Moresby**	**18.49**	**130**	P	**P**	**20 30 16.5**	**+0.1**
	7.2nm,0.8s,baz=320,slow=12,SNR=6.3						
PMG				LR	LR	20 37 36.8	
	comp=Z,70nm,18.3s,baz=271,slow=38						
WRA	**Warramunga Arr**	**22.35**	**176**	P	**P**	**20 30 58.1**	**-0.1**
	2.0nm,0.9s,baz=355,slow=11,SNR=13						
	2.0nm,0.9s						
CTA	**Charters Tower**	**26.00**	**150**	LR	LR	20 41 34.0	
	comp=Z,35nm,19.9s,baz=282,slow=36						
ASAR	**Alice Springs**	**26.03**	**178**	P	**P**	**20 31 34.2**	**+1.0**
	0.7nm,0.7s,baz=6.7,slow=12,SNR=12						
	0.7nm,0.7s						
JNU	**Nakatsue**	**30.52**	**357**	LR	LR	20 44 21.7	
	comp=Z,21nm,20.2s,baz=168,slow=36						
KSRS	**Korea Array**	**35.08**	**353**	LR	LR	20 48 28.7	
	comp=Z,12nm,18.9s,baz=305,slow=39						
STKA	**Stephens Creek**	**35.17**	**167**	P	**P**	**20 32 53.4**	**-0.5**
	2.7nm,0.9s,baz=345,slow=15,SNR=3.3						
	2.7nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**36.72**	**62**	T	T	21 11 48.2	
	baz=248,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**36.73**	**62**	T	T	21 11 46.8	
	baz=248,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**36.73**	**62**	T	T	21 11 45.2	
	baz=248,slow=75,SNR=11						
CMAR	**Chiang Mai Arr**	**36.85**	**298**	LR	LR	20 49 16.4	
	comp=Z,13nm,18.5s,baz=200,slow=38						
H11N1	**WAKE ISLAND Hy**	**37.36**	**60**	T	T	21 12 34.9	
	baz=246,slow=75,SNR=64						
H11N2	**WAKE ISLAND Hy**	**37.37**	**60**	T	T	21 12 37.1	
	baz=246,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy**	**37.37**	**60**	T	T	21 12 36.3	
	baz=246,slow=75,SNR=82						
MKAR	**Makanchi Array**	**62.15**	**323**	P	**P**	**20 36 20.9**	**0.0**
	0.4nm,0.7s,baz=118,slow=7.0,SNR=5.0						
	0.4nm,0.7s						
AAK	**Ala-Archa**	**65.45**	**316**	LR	LR	21 08 01.2	
	comp=Z,12nm,18.5s,baz=41,slow=39						
KURBB	**Kurchatov Arra**	**66.16**	**326**	P	**P**	**20 36 47.1**	**0.0**
	1.3nm,0.8s,baz=121,slow=5.4,SNR=7.1						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**71.75**	**326**	P	**P**	**20 37 21.8**	**0.0**
	1.3nm,0.6s,baz=125,slow=7.4,SNR=9.7						
	1.3nm,0.6s						

IDC 24 20:46:39.6±4.2, 4°.93S×151°.32E, h0km, mb3.0/2, mbtmp3.1/2, MS2.5/1, Error ellipse: s-maj=174.0km s-min=53.3km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.27**	**226**	P	P	20 51 39.1	+0.6
	0.2nm,0.6s,baz=52,slow=10,SNR=2.3						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**25.07**	**220**	P	P	20 52 05.6	-0.5
	0.4nm,0.7s,baz=51,slow=9.1,SNR=4.5						
	0.4nm,0.7s						
JCJ	**Chichijima**	**33.05**	**345**	LR	LR	21 07 06.2	
	comp=Z,8.0nm,18.9s,baz=114,slow=37						
TORD	**Torodi Ar. Bea**	**148.94**	**287**	PKPbc	PKPbc	21 06 30.2	-0.5
	0.2nm,0.4s,baz=91,slow=2.8,SNR=4.3						

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*NEIC **24** 21:02:18.7±0.9, 37°.31N±0°.02×117°.89W±0°.02, h14km±7km, Error ellipse: s-maj=2.4km s-min=1.9km az=179.0*
*ANF **24** 21:02:18.7±0.3, 37°.32N×117°.90W, h3km±2km, ML3.4/29, Error ellipse: s-maj=2.5km s-min=1.9km az=4.0*

*NCEDC **24** 21:02:19.2±1.8, 37°.34N±0°.02×117°.91W±0°.01, h6km±4km, ML3.5/38, ML3.3/108(NEIC), Mwr3.7(REN), Error ellipse: s-maj=2.2km s-min=1.5km az=178.0*

ISC 24 21:02:18.9±0.8, 37°.31N±0°.01×117°.94W±0°.02, h11km±6km, n173, σ0°.88/199, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSP	**Deep Springs**	**0.06**	**335**	Pg	**Pg**	**21 02 21.2**	**0.0**
DSP				Sg	**Sg**	**21 02 22.8**	**-0.1**
DSP				IAML		21 02 23.1	
	comp=N,34μm,0.6s						
LCH	**Last Change Ra**	**0.24**	**109**		**Pg**	**21 02 23.7**	**-0.4**
LCH				Sg	**Sg**	**21 02 27.2**	**-0.3**
LCH				IAML		21 02 28.5	
	comp=E,7μm,0.2s						
LCH				IAML		21 02 30.5	
	comp=N,6μm,0.4s						
POCCA	**Poleta Canyon**	**0.28**	**280**		**Pb**	**21 02 25.2**	**-0.9**
TIN	**Tinemaha, Big**	**0.35**	**223**		**Pb**	**21 02 26.8**	**-0.4**
TIN					**Sb**	**21 02 32.6**	**-0.1**
TIN	**Tinemaha, Big**	**0.35**	**223**	P	**Pb**	**21 02 26.7**	**-0.4**
	baz=42,SNR=743						
TIN				S	**Sb**	**21 02 32.4**	**-0.3**
	baz=42						
MFBM	**Five Bridges**	**0.41**	**287**		**Pb**	**21 02 27.9**	**-0.4**
MLNR	**Milner Canyon**	**0.43**	**311**		**Pb**	**21 02 27.5**	**-1.1**
BHPR	**Bishop**	**0.44**	**269**		**Pb**	**21 02 28.4**	**-0.5**
MCDM	**Chidago Canyon**	**0.47**	**300**		**Pb**	**21 02 28.8**	**-0.4**
MTUM	**Tungsten Hills**	**0.50**	**275**		**Pb**	**21 02 29.5**	**-0.3**
BCKR	**Birch Creek**	**0.52**	**318**		**Pb**	**21 02 29.2**	**-0.9**
GMN	**Gold Mountain**	**0.54**	**91**		**Pg**	**21 02 29.2**	**-0.3**
GMN				Sg	**Sg**	**21 02 36.3**	**-0.4**
GMN				IAML		21 02 36.8	
	comp=N,3μm,0.5s						
GMN				IAML		21 02 38.2	
	comp=E,2μm,0.4s						
GRAC	**Grapevine Rang**	**0.55**	**125**		**Pg**	**21 02 29.8**	**+0.1**
GRAC	**Grapevine Rang**	**0.55**	**125**	P	**Pb**	**21 02 29.9**	**-0.7**
	baz=309,SNR=789						
GRAC				S	**Sg**	**21 02 36.5**	**-0.5**
	baz=309						
CASR	**Casa Diablo Mo**	**0.56**	**298**		**Pb**	**21 02 30.2**	**-0.6**
MRCM	**Red Rock Canyo**	**0.58**	**309**		**Pb**	**21 02 30.5**	**-0.7**
MZP	**Montezuma Peak**	**0.59**	**48**		**Pg**	**21 02 29.8**	**-0.6**
MZP				Sg	**Sg**	**21 02 37.2**	**-1.0**
MZP				IAML		21 02 37.6	
	comp=E,1μm,0.4s						
SCHCA	**Scheelite**	**0.60**	**275**		**Pb**	**21 02 31.2**	**-0.4**
BENR	**Benton**	**0.65**	**309**		**Pb**	**21 02 31.7**	**-0.7**
ORC	**Owens River**	**0.66**	**300**		**Pb**	**21 02 31.9**	**-0.6**
BONR	**Boundary Peak**	**0.70**	**336**		**Pb**	**21 02 32.8**	**-0.6**
MCVM	**Convict Lake**	**0.76**	**292**		**Pb**	**21 02 33.8**	**-0.6**
CGO	**Cerro Gordo**	**0.77**	**172**		**Pb**	**21 02 33.7**	**-0.7**
MLAC	**Mammoth, Mammo**	**0.78**	**294**		**Pb**	**21 02 34.4**	**-0.3**
MLAC	**Mammoth, Mammo**	**0.78**	**294**	P	**Pb**	**21 02 34.5**	**-0.3**
	baz=111,SNR=54						
MLAC				S	**Sb**	**21 02 45.8**	**+0.4**
	baz=111						
MDRNC	**Doe Ridge**	**0.79**	**295**		**Pb**	**21 02 34.5**	**-0.2**
MLHM	**Little Hot Cre**	**0.79**	**298**		**Pb**	**21 02 34.6**	**-0.2**
SGV	**South Grapevin**	**0.79**	**114**		**Pg**	**21 02 33.9**	**-0.4**
SGV					**Sg**	**21 02 45.1**	**+0.4**
MCBM	**Casa Benchmark**	**0.83**	**294**		**Pb**	**21 02 35.4**	**-0.1**
MLCM	**Laurel Creek C**	**0.83**	**291**		**Pb**	**21 02 35.2**	**-0.4**
MCSM	**Casa Diablo Ho**	**0.84**	**294**		**Pb**	**21 02 35.6**	**-0.2**
MEMM	**East Mammoth H**	**0.87**	**294**		**Pb**	**21 02 36.1**	**-0.1**
CWC	**Cottonwood Cre**	**0.88**	**188**		**Pb**	**21 02 35.6**	**-0.6**
CWC	**Cottonwood Cre**	**0.88**	**188**		**Sb**	**21 02 48.2**	**+0.1**
CWC	**Cottonwood Cre**	**0.88**	**188**	P	**Pb**	**21 02 35.6**	**-0.6**
	baz=8.7						
CWC				S	**Sb**	**21 02 48.0**	**0.0**
	baz=8.7						
MMLB	**Mammoth Lakes**	**0.90**	**293**		**Pb**	**21 02 36.5**	**-0.2**
MMPM	**Mammoth Pass**	**0.92**	**289**		**Pb**	**21 02 36.7**	**-0.4**
MLIM	**Lincoln Peak**	**0.92**	**291**		**Pb**	**21 02 37.1**	**+0.1**
HCK	**Huntoon Valley**	**0.92**	**326**		**Pb**	**21 02 36.9**	**0.0**
MDYM	**Dry Creek**	**0.92**	**292**		**Pb**	**21 02 37.0**	**-0.1**
MRDM	**Red Cones**	**0.94**	**288**		**Pb**	**21 02 37.0**	**-0.3**
TPH	**Tonopah**	**0.95**	**36**		**Pg**	**21 02 36.6**	**-0.6**
TPH					**Sg**	**21 02 48.0**	**-1.6**
MINS	**Minaret Summit**	**0.96**	**291**		**Pb**	**21 02 37.3**	**-0.4**
MDCM	**Deadman Creek**	**0.96**	**295**		**Pb**	**21 02 37.6**	**-0.2**
MDPB	**Devils Postpil**	**0.96**	**290**		**Pb**	**21 02 37.4**	**-0.4**
LHV	**Little Huntoon**	**1.04**	**335**		**Pb**	**21 02 38.9**	**0.0**
LHV					**Sb**	**21 02 52.7**	**+0.2**
KCC	**Kaiser Creek**	**1.10**	**271**		**Pn**	**21 02 40.0**	**-0.3**
NV08	**Mina Array Sit**	**1.13**	**345**		**Pb**	**21 02 40.2**	**-0.3**
NV11	**Mina Array Sit**	**1.13**	**351**		**Pg**	**21 02 40.1**	**-0.6**
NV11					**Sb**	**21 02 55.5**	**+0.2**
NV11				IAML		21 02 57.0	
	comp=N,471nm,0.7s						
NV11				IAML		21 02 58.3	
	comp=E,475nm,0.6s						
NVAR	**Mina Array Bea**	**1.15**	**345**		**Pg**	**21 02 40.6**	**-0.5**
NV09	**Mina Array Sit**	**1.17**	**344**		**Pb**	**21 02 40.9**	**-0.3**
WCT	**Wildcat Mounta**	**1.17**	**116**		**Pg**	**21 02 40.6**	**-0.8**
WCT	**Wildcat Mounta**	**1.17**	**116**		**Pg**	**21 02 40.5**	**-0.8**
WCT				IAML		21 02 59.7	
	comp=N,823nm,0.6s						
WCT				IAML		21 03 00.2	
	comp=E,1μm,0.4s						
FURC	**Furnace Creek,**	**1.20**	**134**		**Pb**	**21 02 41.6**	**0.0**
FURC	**Furnace Creek,**	**1.20**	**134**	P	**Pg**	**21 02 41.4**	**-0.6**
	baz=316,SNR=157						
FURC				S	**Sn**	**21 02 58.9**	**+1.0**
	baz=316						
WCSM	**Coso Springs S**	**1.29**	**174**		**Pn**	**21 02 43.4**	**+0.5**
SPG2	**Springville 2**	**1.29**	**211**		**Pn**	**21 02 43.4**	**+0.5**
MPMC	**Manual Prospec**	**1.30**	**164**	P	**Pn**	**21 02 43.5**	**+0.3**
	baz=345,SNR=199						
MPMC				S	**Sb**	**21 03 00.5**	**+0.2**
	baz=345						
MRHM	**Rocky Hill**	**1.38**	**222**		**Pb**	**21 02 44.9**	**+0.2**
RYN	**Ryan**	**1.39**	**341**		**Pg**	**21 02 44.9**	**-0.8**
RYN				IAML		21 03 06.8	
	comp=N,693nm,0.3s						
RYN				IAML		21 03 07.8	
	comp=E,698nm,0.4s						
MMIM	**Miami Mountain**	**1.45**	**275**		**Pb**	**21 02 46.2**	**+0.3**
FRI	**Friant**	**1.45**	**258**		**Pg**	**21 02 46.2**	**-0.5**
WNMM	**Nine Mile Cany**	**1.47**	**179**		**Pg**	**21 02 46.9**	**-0.2**
NSP	**Numbskull Pass**	**1.50**	**112**		**Pn**	**21 02 46.1**	**+0.3**
GWY	**Greenwater Val**	**1.52**	**137**		**Pn**	**21 02 45.9**	**-0.2**
GWY				IAML		21 03 10.1	
	comp=E,384nm,0.6s						
GWY				IAML		21 03 11.8	
	comp=N,373nm,0.4s						
VOG	**Valley Oaks Go**	**1.52**	**230**		**Pg**	**21 02 48.0**	**-0.2**
VOG	**Valley Oaks Go**	**1.52**	**230**	Pb	**Pg**	**21 02 48.0**	**-0.2**
	baz=49,SNR=21						
VOG				S	**Sg**	**21 03 09.0**	**+1.0**
	baz=49						
CPY	**CP-1**	**1.55**	**104**		**Pn**	**21 02 46.5**	**0.0**
MHDM	**Hidden Dam**	**1.58**	**264**		**Pg**	**21 02 48.3**	**-0.8**
AMDNV	**Amargosa**	**1.58**	**122**		**Pn**	**21 02 47.2**	**+0.4**
QSM	**Queen of Sheba**	**1.59**	**147**		**Pn**	**21 02 46.9**	**-0.1**
QSM				IAML		21 03 13.2	
	comp=E,533nm,0.6s						
QSM				IAML		21 03 13.7	
	comp=N,307nm,0.7s						
Q09A	**Carvers**	**1.63**	**21**		**Pn**	**21 02 48.0**	**+0.3**
WORM	**Onyx Ranch**	**1.63**	**189**		**Pg**	**21 02 49.4**	**-0.8**
WASM	**Alta Sierra Ca**	**1.65**	**198**		**Pg**	**21 02 49.8**	**-0.7**
ISA	**Isabella, Lake**	**1.70**	**195**		**Pg**	**21 02 50.2**	**-1.3**
ISA	**Isabella, Lake**	**1.70**	**195**	Pb	**Pg**	**21 02 50.5**	**-1.1**
	baz=15,SNR=27						
ISA				S	**Sg**	**21 03 13.2**	**-0.5**
	baz=15						
MCY	**Mercury**	**1.71**	**112**		**Pn**	**21 02 49.2**	**+0.5**
MBUM	**Mount Bullion**	**1.72**	**279**		**Pg**	**21 02 50.8**	**-1.1**
VES	**Vestal, Richgr**	**1.73**	**213**		**Pg**	**21 02 51.4**	**-0.7**
VES	**Vestal, Richgr**	**1.73**	**213**	Pb	**Pg**	**21 02 51.5**	**-0.7**
	baz=32,SNR=44						
VES				S	**Sg**	**21 03 13.9**	**-0.8**
	baz=32						
KVN	**Kaiserville**	**1.74**	**356**		**Pn**	**21 02 49.5**	**+0.3**
KVN				IAML		21 03 15.8	
	comp=N,316nm,0.5s						
KVN				IAML		21 03 15.8	
	comp=E,514nm,0.5s						
S11A	**Rachel**	**1.77**	**79**		**Pb**	**21 02 51.5**	**0.0**
LRMC	**Laurel Mtn Rad**	**1.84**	**174**	Pb	**Pg**	**21 02 53.5**	**-0.7**
	baz=354						
LRMC				Sb	**Sg**	**21 03 18.5**	**+0.4**
	baz=354						
CCCA	**Chr Cany lake**	**1.84**	**165**		**Pg**	**21 02 54.2**	**0.0**
SHOC	**Shoshone, Teco**	**1.94**	**136**		**Pg**	**21 02 55.2**	**-0.9**
SHOC	**Shoshone, Teco**	**1.94**	**136**	Pb	**Pb**	**21 02 54.8**	**+0.5**
	baz=318						
SHOC				Sb	**Sg**	**21 03 21.0**	**-0.3**
	baz=318						
YERR	**Yerington**	**1.96**	**329**		**Pn**	**21 02 53.1**	**+0.9**
YERR				IAML		21 03 25.1	
	comp=N,307nm,0.6s						
YERR				IAML		21 03 29.5	
	comp=E,333nm,0.5s						
MYLM	**Yosemite Lake**	**1.98**	**273**		**Pg**	**21 02 55.7**	**-1.2**
PWMM	**Westland Maint**	**2.02**	**245**		**Pg**	**21 02 57.0**	**-0.7**
CMB	**Columbia Colle**	**2.07**	**291**	Pn	**Pn**	**21 02 54.7**	**+1.0**
CMB				IAML		21 03 29.8	
	comp=N,140nm,0.4s						
R11B	**Troy Canyon, C**	**2.13**	**60**		**Pn**	**21 02 54.6**	**0.0**
R11B				IAML		21 03 27.3	
	comp=N,201nm,0.2s						
R11B	**Troy Canyon, C**	**2.13**	**60**	P	**Pn**	**21 02 54.6**	**0.0**
	baz=242,SNR=107						
R11B				Sb	**Sb**	**21 03 25.4**	**+1.3**
	baz=242						
PKEM	**Kettleman Hill**	**2.15**	**235**		**Pg**	**21 02 58.4**	**-1.7**
CCAC	**Calif City Air**	**2.16**	**182**		**Pn**	**21 02 56.3**	**+1.5**
CCAC				IAML		21 03 29.9	
	comp=E,173nm,1.2s						
CCAC				IAML		21 03 41.2	
	comp=N,139nm,1.1s						
BAKC	**Calstate**	**2.18**	**206**		**Pg**	**21 02 59.6**	**-1.1**
PDRM	**Domengine Ranc**	**2.18**	**244**		**Pg**	**21 02 59.0**	**-1.7**
GSC	**Goldstone, Bar**	**2.20**	**155**	Pn	**Pn**	**21 02 55.9**	**+0.4**
GSC				IAML		21 03 33.2	
	comp=E,152nm,0.7s						
GSC	**Goldstone, Bar**	**2.20**	**155**	P	**Pn**	**21 02 55.9**	**+0.4**
	baz=337,SNR=56						
GSC				Sb	**Sg**	**21 03 29.8**	**0.0**
	baz=337						
PNTR	**Pine Nut**	**2.21**	**324**		**Pn**	**21 02 56.5**	**+0.8**
PNTR				IAML		21 03 34.2	
	comp=E,299nm,0.7s						
PNTR				IAML		21 03 37.1	
	comp=N,220nm,0.9s						
MCUB	**Copperopolis B**	**2.23**	**288**		**Pn**	**21 02 57.2**	**+1.4**
ARVC	**Arvin**	**2.30**	**199**	Pb	**Pg**	**21 03 01.4**	**-1.5**
	baz=18						
ARVC				Sb	**Sg**	**21 03 32.9**	**+0.2**
	baz=18						
PRN	**Pahroc Range**	**2.30**	**87**		**Pn**	**21 02 57.0**	**+0.2**
SHPR	**Sheep Range**	**2.37**	**109**		**Pn**	**21 02 58.8**	**+1.0**
CTM	**Castle Mountai**	**2.37**	**235**		**Pb**	**21 03 01.7**	**0.0**
PSRM	**Scobie Ranch**	**2.38**	**233**		**Pb**	**21 03 01.6**	**-0.2**
EMB	**Emerald Bay**	**2.38**	**315**		**Pn**	**21 02 59.0**	**+0.9**
EMB				IAML		21 03 35.9	
	comp=N,150nm,0.5s						
EMB				IAML		21 03 39.6	
	comp=E,126nm,1.0s						
PJUM	**Juniper Ridge**	**2.39**	**244**		**Pb**	**21 03 01.7**	**-0.3**
PMRM	**Maxey Ranch**	**2.40**	**231**		**Pn**	**21 03 01.7**	**-0.4**
EDW2	**Edwards Air Fo**	**2.43**	**181**	P	**Pn**	**21 02 59.4**	**+0.9**
	baz=1.6						
EDW2				Sb	**Sg**	**21 03 35.4**	**-1.5**
	baz=1.6						
PSNM	**Stone Corral**	**2.43**	**232**		**Pb**	**21 03 01.8**	**-0.9**
GHC	**Gold Hill**	**2.44**	**234**		**Pb**	**21 03 01.9**	**-1.0**
PBPM	**Bitterwater Pu**	**2.44**	**226**		**Pb**	**21 03 02.6**	**-0.3**
PHFM	**Heflinger Ranc**	**2.44**	**235**		**Pb**	**21 03 01.9**	**-1.0**
RUBR	**Rubicon Trail**	**2.46**	**315**		**Pg**	**21 03 05.1**	**-1.1**
PKLM	**Kerr Lake**	**2.47**	**232**		**Pb**	**21 03 02.5**	**-0.8**
PSMM	**Smith Mountain**	**2.47**	**241**		**Pb**	**21 03 02.6**	**-0.8**
TUQ	**Turquoise Moun**	**2.48**	**138**		**Pn**	**21 02 59.2**	**-0.1**
TUQ	**Turquoise Moun**	**2.48**	**138**	P	**Pn**	**21 02 59.2**	**-0.1**
	baz=321,SNR=80						
TUQ				Sb	**Sg**	**21 03 37.2**	**-1.3**
	baz=321						
TRAY	**Twisselman Ran**	**2.49**	**226**		**Pb**	**21 03 03.7**	**0.0**
PKD	**Bear Valley Ra**	**2.50**	**238**		**Pb**	**21 03 02.5**	**-1.3**
SCKWR	**San Luis Creek**	**2.50**	**268**		**Pb**	**21 03 04.1**	**+0.3**
CRGC	**Crocker Grade**	**2.52**	**216**		**Pb**	**21 03 04.3**	**+0.1**
CARC	**Carrizo Plain**	**2.53**	**218**		**Pb**	**21 03 04.4**	**+0.1**
PMPB	**Monarch Peak**	**2.55**	**245**		**Pn**	**21 03 02.0**	**+1.8**
MPK	**Martis Peak**	**2.58**	**321**		**Pn**	**21 03 01.6**	**+0.8**
MPK				IAML		21 03 42.3	
	comp=N,154nm,0.5s						
MPK				IAML		21 03 57.1	
	comp=E,148nm,1.1s						
BBGB	**Big Mountain B**	**2.59**	**255**		**Pn**	**21 03 02.7**	**+1.9**
PPO	**Portuguese Can**	**2.59**	**237**		**Pb**	**21 03 04.0**	**-1.4**
SMMC	**Simmler**	**2.60**	**220**	P	**Pn**	**21 03 02.6**	**+1.8**
	baz=39						
SMMC				Sb	**Sg**	**21 03 40.7**	**-1.6**
	baz=39						
WTNK	**Soaring Height**	**2.60**	**115**		**Pn**	**21 03 01.6**	**+0.6**
PAHR	**Pah Rah Range**	**2.65**	**335**		**Pn**	**21 03 02.8**	**+1.2**
PAHR				IAML		21 03 43.9	
	comp=N,110nm,0.3s						
PAHR				IAML		21 03 52.4	
	comp=E,94nm,0.9s						
BCW	**Bitter Crk WRg**	**2.65**	**207**		**Pn**	**21 03 03.3**	**+1.6**
DONR	**Donner Summit**	**2.77**	**318**		**Pb**	**21 03 08.5**	**0.0**
PEAR	**Peavine Mounta**	**2.79**	**326**		**Pb**	**21 03 08.8**	**-0.1**
HEC	**Hector,Ludlow**	**2.80**	**152**	P	**Pn**	**21 03 04.0**	**+0.4**
	baz=334,SNR=7.2						
PKM	**Mcpherson Peak**	**2.86**	**213**	Pb	**Pb**	**21 03 10.4**	**+0.4**
	baz=32						
SAO	**San Andreas Ge**	**2.86**	**260**		**Pn**	**21 03 06.5**	**+2.0**
AFDM	**Forest Hills D**	**2.90**	**305**		**Pn**	**21 03 06.4**	**+1.5**
AFDM				IAML		21 03 53.5	
	comp=E,78nm,0.5s						
V12A	**Nelson**	**2.94**	**122**		**Pn**	**21 03 06.5**	**+0.8**
LOY	**Loyalton**	**2.96**	**323**		**Pb**	**21 03 13.1**	**+1.4**
Q12A	**Willow Creek R**	**2.99**	**54**		**Pn**	**21 03 06.9**	**+0.5**
WENL	**Wente Vineyard**	**3.06**	**277**		**Pn**	**21 03 09.0**	**+1.9**
GMRC	**Granite Mounta**	**3.12**	**143**		**Pn**	**21 03 08.1**	**-0.1**
GMRC	**Granite Mounta**	**3.12**	**143**	P	**Pn**	**21 03 07.8**	**-0.4**
	baz=325,SNR=17						
BMN	**Battle Mountai**	**3.16**	**10**		**Pn**	**21 03 09.1**	**+0.3**
BMN				IAML		21 03 58.8	
	comp=E,62nm,0.5s						
BMN				IAML		21 04 02.9	
	comp=N,54nm,0.5s						
BEKR	**Beckworth**	**3.18**	**324**		**Pn**	**21 03 10.4**	**+1.4**
CCUT	**Cedar City**	**3.65**	**85**		**Pn**	**21 03 15.9**	**+0.5**
CCUT				IAML		21 04 17.9	
	comp=N,72nm,0.6s						
CCUT				IAML		21 04 21.8	
	comp=E,49nm,0.7s						
BELC	**Belle Mtn. Jos**	**3.66**	**154**	P	**Pn**	**21 03 16.2**	**+0

IKP	**In-Ko-Pah, Jac** baz=343	**4.89**	**162**	Pg	**Pg**	**21 03 50.4**	**-2.1**
DUG	**Dugway, Tooele** baz=236	**4.93**	**53**	Pg	**Pg**	**21 03 51.4**	**-2.0**
YUH	**Yuha Desert**	**4.94**	**160**	Pn	**Pn**	**21 03 33.1**	**+0.1**
ESJX	**Sierra Juarez**	**5.54**	**162**		**Pn**	**21 03 42.3**	**+0.8**
WUAZ	**Wupatki** baz=291	**5.59**	**107**	Pb	**Pb**	**21 03 58.0**	**+1.5**
HLID	**Hailey**	**6.80**	**22**		**Pn**	**21 03 59.4**	**+0.8**
HLID	**Hailey** baz=204	**6.80**	**22**	Pb	**Pb**	**21 04 18.0**	**+0.9**
W18A	**Petrified Fore** baz=291	**6.98**	**106**	Pg	**Pg**	**21 04 29.0**	**-3.5**
MVCO	**Mesa Verde** baz=274	**7.53**	**88**	Pg	**Pg**	**21 04 42.1**	**-0.9**

*NEIC **24** 21:06:51.0±0.8, 36°.45N±0°.03×98°.77W±0°.02, h15km±7km, Error ellipse: s-maj=4.8km s-min=1.1km az=153.0*

TUL 24 21:06:51.3±1.4, 36°.45N±0°.02×98°.77W±0°.01, h8km±8km, ML3.3, mb_Lg2.9/81(NEIC), ML3.4/14(NEIC), Error ellipse: s-maj=2.2km s-min=1.5km az=191.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.04**	**41**		Pg	21 06 53.1	+0.2
OK038				Sg	Sg	21 06 54.7	+0.6
U32A	**Winter Ranch,**	**0.20**	**249**	Pg	Pg	21 06 55.4	0.0
U32A				Sg	Sg	21 06 59.0	+0.8
U32A	comp=N,14μm,0.2s			IAML		21 06 59.2	
OK035	**E0210 Rd and N**	**0.26**	**11**		Pg	21 06 56.9	+0.3
OK035				Sg	Sg	21 07 00.9	+0.9
OK035	comp=N,4μm,0.2s			IAML		21 07 01.2	
OK032	**Salt Plains WL**	**0.57**	**52**	Pg	Pg	21 07 01.8	-0.5
OK032				Sg	Sg	21 07 10.1	+0.3
OK032	comp=N,2μm,0.2s			IAML		21 07 10.4	
OK032	comp=N,2μm,0.2s			IAML		21 07 12.9	
CROK	**Carrier**	**0.64**	**85**		Pg	21 07 03.4	-0.2
CROK				Sg	Sg	21 07 12.2	+0.3
CROK	comp=E,2μm,0.2s			IAML		21 07 14.6	
ELIS	**Ellis County**	**0.65**	**234**		Pg	21 07 03.8	-0.1
ELIS				Sg	Sg	21 07 13.1	+0.8
ELIS	comp=E,1μm,0.3s			IAML		21 07 13.6	
ELIS	comp=N,2μm,0.3s			IAML		21 07 19.8	
CSTR	**Hydro, Custer**	**0.81**	**175**		Pg	21 07 06.7	-0.1
KAN14	**Manchester OK**	**0.82**	**52**		Pg	21 07 06.8	-0.3
GC02	**Grant County #**	**0.83**	**61**		Pg	21 07 07.1	-0.3
KAN10	**Anthony SW Sta**	**0.86**	**39**	Pg	Pg	21 07 07.3	-0.5
KAN05	**Bluff City Nor**	**0.97**	**47**	Pg	Pg	21 07 09.6	-0.5
KAN17	**Caldwell West**	**1.00**	**54**		Pg	21 07 09.9	-0.7
KAN08	**Anthony NE Sta**	**1.00**	**39**	Pg	Pg	21 07 10.0	-0.6
KAN12	**Harper NE Stat**	**1.05**	**36**	Pg	Pg	21 07 10.8	-0.6
KAN01	**Argonia South**	**1.07**	**49**	Pg	Pg	21 07 11.3	-0.6
KAN06	**Argonia West S**	**1.08**	**42**	Pg	Pg	21 07 11.4	-0.7
KAN09	**Caldwell North**	**1.15**	**53**	Pg	Pg	21 07 12.5	-0.9
KAN13	**South Haven SW**	**1.18**	**61**		Pb	21 07 13.1	-0.9
KS21	**Milan North St**	**1.22**	**47**	Pg	Pb	21 07 13.8	-0.8
OK029	**Liberty Lake**	**1.25**	**121**		Pn	21 07 14.0	-1.0
BLOK	**Blackwell**	**1.29**	**76**		Pn	21 07 14.9	-0.7
ADOK	**Arcadia Dam**	**1.39**	**125**		Pn	21 07 16.4	-0.5
OK048	**Pawnee Station**	**1.47**	**91**		Pn	21 07 17.9	-0.2
OKCSW	**OKLAHOMA CITY**	**1.50**	**134**		Pn	21 07 18.4	-0.1
OK033	**Mehan**	**1.54**	**105**		Pn	21 07 18.8	-0.2
OK051	**E0350 and S346**	**1.56**	**87**		Pn	21 07 19.4	+0.1
FNO	**Franklin**	**1.63**	**137**		Pn	21 07 20.4	+0.1
OK052	**Battle Ridge R**	**1.66**	**105**		Pn	21 07 20.6	0.0
QUOK	**Quay**	**1.69**	**99**		Pn	21 07 21.2	+0.1
WMOK	**Wichita Mounta**	**1.71**	**180**		Pn	21 07 21.0	-0.5
SMWD	**Samnorwood**	**1.80**	**222**	Pn	Pn	21 07 23.0	+0.3
T35A	**Sooner Cattle**	**1.87**	**75**		Pn	21 07 23.9	+0.2
DEOK	**Depew**	**1.94**	**108**		Pn	21 07 24.6	0.0
R32A	**Long Quarter,**	**1.97**	**1**		Pn	21 07 25.4	+0.4
X34A	**Smith Ranch, M**	**2.00**	**157**		Pn	21 07 25.2	-0.2
X34A	comp=Z,58nm,0.7s			IAmb_Lg		21 07 54.0	
W35A	**Tecumseh**	**2.01**	**130**		Pn	21 07 25.7	+0.2
TUL3	**Leonard**	**2.47**	**102**		Pn	21 07 31.5	-0.4
TUL3	comp=Z,32nm,1.0s			IAmb_Lg		21 08 08.1	
CBKS	**Cedar Bluff**	**2.48**	**342**		Pn	21 07 31.1	-0.9
CBKS	comp=Z,41nm,0.7s			IAmb_Lg		21 08 11.6	
WTFS	**Witchita Falls**	**2.69**	**175**		Pn	21 07 35.6	+0.8
LOOK	**Love County** comp=Z,46nm,0.9s	**2.78**	**152**	IAmb_Lg		21 08 21.0	
RLO	**Rose Lookout**	**3.04**	**94**		Pn	21 07 39.3	-0.4
RTBA	**Rita Blanca**	**3.20**	**271**		Pn	21 07 42.9	+0.9
DKNS	**Dickens**	**3.29**	**213**		Pn	21 07 44.5	+1.3
X37A	**Clayton**	**3.34**	**123**		Pn	21 07 43.9	+0.1
X37A	comp=Z,47nm,0.8s			IAmb_Lg		21 08 45.3	
Z35A	**Perchaven, San**	**3.35**	**158**	Pn	Pn	21 07 44.0	0.0
U38A	**Gravette**	**3.54**	**89**		Pn	21 07 46.9	+0.4
FW06	**Azle** comp=Z,19nm,0.8s	**3.61**	**164**	IAmb_Lg		21 08 50.8	
PLPT	**Palo Pinto**	**3.65**	**174**		Pn	21 07 48.6	+0.5
ABTX	**Abilene, Hawle**	**3.89**	**191**		Pn	21 07 50.9	-0.4
SN05	**Snyder 5** comp=Z,24nm,0.7s	**3.97**	**207**	IAmb_Lg		21 08 57.7	
KSCO	**Kaye Shedlock'** comp=Z,34nm,0.8s	**3.98**	**311**	IAmb_Lg		21 09 05.0	
POST	**Post** comp=Z,18nm,0.7s	**4.06**	**214**	IAmb_Lg		21 09 07.3	
FW16	**Waxahatchie** comp=Z,44nm,1.0s	**4.25**	**158**	IAmb_Lg		21 09 18.4	
TREL	**Terrell** comp=Z,29nm,0.9s	**4.32**	**148**	IAmb_Lg		21 09 09.3	
N33A	**J Bar K, Exete**	**4.40**	**13**	Pn	Pn	21 07 58.0	-0.4
Z38A	**Mt. Pleasant** comp=Z,19nm,0.7s	**4.45**	**135**	IAmb_Lg		21 09 22.7	
S39A	**Bolivar**	**4.53**	**73**		Pn	21 07 60.0	-0.2
S39A	comp=Z,33nm,0.9s			IAmb_Lg		21 09 22.3	
T25A	**Trinidad**	**4.58**	**280**		Pn	21 08 01.6	+0.6
T25A	comp=Z,22nm,0.9s			IAmb_Lg		21 09 21.8	
WHTX	**Lake Whitney,**	**4.58**	**166**	Pn	Pn	21 08 01.1	+0.3
MIAR	**Mount Ida**	**4.64**	**113**		Pn	21 08 01.8	+0.1
MIAR	comp=Z,23nm,1.3s			IAmb_Lg		21 09 30.8	
SGCY	**Sterling City** comp=Z,15nm,0.8s	**4.93**	**204**	IAmb_Lg		21 09 40.6	
BGNE	**Belgrade**	**4.97**	**5**		Pn	21 08 06.2	0.0
237A	**Washetta, Mont** comp=Z,28nm,0.9s	**5.07**	**150**	IAmb_Lg		21 09 36.8	
P38A	**Dawn**	**5.21**	**51**		Pn	21 08 09.4	-0.1
P38A	comp=Z,19nm,0.8s			IAmb_Lg		21 09 50.6	
MGMO	**Mountain Grove** comp=Z,24nm,0.9s	**5.26**	**80**	IAmb_Lg		21 09 41.4	
WHAR	**Wooly Hollow**	**5.39**	**101**		Pn	21 08 11.6	-0.4
FCAR	**Ozark Folk Cen** comp=Z,19nm,0.8s	**5.41**	**94**	IAmb_Lg		21 09 41.4	
R40A	**Maddies Statio** comp=Z,25nm,0.8s	**5.50**	**69**	IAmb_Lg		21 09 46.4	
UALR	**University of** comp=Z,13nm,0.7s	**5.50**	**106**	IAmb_Lg		21 09 59.4	
Q24A	**Divide** comp=Z,12nm,0.7s	**5.64**	**298**	IAmb_Lg		21 09 53.5	
435B	**Jarrell** comp=Z,19nm,0.7s	**5.74**	**170**	IAmb_Lg		21 10 04.6	
Z41A	**Richland Creek** comp=Z,30nm,1.2s	**5.85**	**121**	IAmb_Lg		21 10 01.4	
OZNA	**Ozona** comp=Z,13nm,0.9s	**5.85**	**200**	IAmb_Lg		21 10 04.6	
BRIGG	**Briggsdale** comp=Z,31nm,0.9s	**5.99**	**315**	IAmb_Lg		21 10 18.3	
JCT	**Junction City** comp=Z,20nm,0.8s	**6.02**	**189**	IAmb_Lg		21 10 09.0	
LCAR	**Lake Charles** comp=Z,16nm,0.8s	**6.17**	**91**	IAmb_Lg		21 10 04.6	
ISCO	**Idaho Springs** comp=Z,13nm,1.0s	**6.34**	**304**	IAmb_Lg		21 10 15.5	
ANMO	**Albuquerque** comp=Z,7.6nm,0.9s	**6.43**	**259**	IAmb_Lg		21 10 20.1	
PBMO	**Poplar Bluff** comp=Z,24nm,0.8s	**6.72**	**85**	IAmb_Lg		21 10 30.5	
FVM	**French Village** comp=Z,21nm,0.9s	**6.83**	**75**	IAmb_Lg		21 10 27.9	
SCIA	**State Center** comp=Z,25nm,0.8s	**6.95**	**37**	IAmb_Lg		21 10 31.0	
SLM	**Saint Louis** comp=Z,20nm,0.8s	**7.12**	**70**	IAmb_Lg		21 10 37.1	
N23A	**Red Feather La** comp=Z,18nm,0.8s	**7.15**	**311**	IAmb_Lg		21 10 39.7	
CGM3	**Cape Girardeau** comp=Z,13nm,0.8s	**7.35**	**81**	IAmb_Lg		21 10 50.1	
SUSD	**Miller** comp=Z,16nm,0.7s	**7.98**	**359**	IAmb_Lg		21 11 18.3	
JFWS	**Jewell Farm** comp=Z,13nm,0.7s	**9.21**	**43**	IAmb_Lg		21 11 48.6	

IDC 24 21:07:09.1±2.0, 57°.17N×111°.04W, h0km, mbtmp3.4/3, ML2.8/3, Error ellipse: s-maj=43.2km s-min=10.3km az=53.0, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar** 0.6nm,0.3s,baz=162,slow=13,SNR=32	**5.64**	**343**	Pn	Pn	21 08 32.7	-1.3
YKA	1.4nm,0.3s,baz=155,slow=22,SNR=14			Sn	Sn	21 09 37.3	-2.1
YKA	2.1nm,0.7s			Lg	Lg	21 10 03.0	
I10CA	**LAC DU BONNET** baz=313,slow=338,SNR=2.2	**11.29**	**122**	I	I	22 16 20.0	
ULM	**Lac du Bonnet** 0.4nm,0.3s,baz=315,slow=12,SNR=7.6	**11.33**	**121**	Pn	Pn	21 09 48.6	-3.4
ULM	0.1nm,0.3s,baz=240,slow=22,SNR=3.3 1.6nm,0.3s			Lg	Lg	21 12 58.8	
ILAR	**Eielson Array** baz=102,slow=10,SNR=3.2 0.3nm,0.8s	**18.75**	**309**	P	P	21 11 29.1	-0.1
I18DK	**QAANAAQ INFRAS** baz=234,slow=343,SNR=1.4	**24.90**	**20**	I	I	23 44 20.1	

IDC 24 21:08:54.2±2.2, 4°.98N×126°.95E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=160.1km s-min=26.5km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.9nm,0.9s,baz=344,slow=10,SNR=10 0.9nm,0.9s	**25.81**	**164**	P	P	21 14 27.3	0.0
ASAR	**Alice Springs** 0.2nm,0.6s,baz=359,slow=8.3,SNR=2.1 0.2nm,0.6s	**29.27**	**167**	P	P	21 14 58.4	0.0
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=110,slow=7.3,SNR=6.8 0.1nm,0.3s	**56.66**	**325**	P	P	21 18 39.4	-0.1

*IDC **24** 21:18:51.5±5.8, 20°.17S×178°.77W, h626km±59km, mb3.3/7, mbtmp4.3/9, Error ellipse: s-maj=50.9km s-min=20.8km az=56.0*

*NOU **24** 21:18:53.9, 20°.17S×178°.61W, h698km, mb4.3/18, Fiji Islands Region*

ISC 24 21:18:54.7±1.0, 20°.3S±0°.1×179°.0W±0°.2, h650km, n32, σ1§19/31, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.09**	**4**	P	**P**	**21 20 16.7**	**+2.6**
TAVE	**Taveuni**	**3.71**	**346**	P	**P**	**21 20 24.8**	**+2.6**
DGTI	**Dogotuki**	**4.20**	**343**	P	**P**	**21 20 27.2**	**+1.9**
DZM	**Mont Dzumac** 6.6nm,0.6s,baz=118,slow=21,SNR=11	**13.73**	**260**	P	**P**	**21 21 51.1**	**+1.6**
URZ	**Urewera**	**18.19**	**190**	P	**P**	**21 22 30.0**	**+0.2**
URZ	**Urewera** 3.1nm,0.3s,baz=27,slow=2.8,SNR=3.6	**18.19**	**190**	P	**P**	**21 22 27.5**	**-2.3**
QRZ	**Quartz Range**	**21.68**	**198**	P	**P**	**21 23 02.8**	**+1.7**
CTA	**Charters Tower**	**32.62**	**264**	P	**P**	**21 24 36.4**	**+0.2**
CTAO	**Charters Tower**	**32.62**	**264**	P	**P**	**21 24 36.1**	**-0.1**
CMSA	**Cobar Meteorol**	**33.56**	**243**	P	**P**	**21 24 44.4**	**+0.5**
PMG	**Port Moresby** 9.9nm,0.8s,baz=125,slow=12,SNR=4.3 9.9nm,0.8s	**34.44**	**283**	P	**P**	**21 24 51.5**	**+0.1**
MTSU	**Mount Surprise**	**34.71**	**267**	P	**P**	**21 24 53.7**	**+0.1**
COEN	**Coen**	**36.68**	**274**	P	**P**	**21 25 10.0**	**+0.2**
STKA	**Stephens Creek** 2.3nm,0.7s,baz=104,slow=8.5,SNR=4.7 2.3nm,0.7s	**37.06**	**244**	P	**P**	**21 25 12.8**	**+0.2**
INKA	**Innaminka**	**37.41**	**251**	P	**P**	**21 25 16.5**	**+0.9**
QIS	**Mount Isa**	**38.76**	**262**	P	**P**	**21 25 25.9**	**-0.6**
HTT	**Hallett**	**39.52**	**242**	P	**P**	**21 25 32.9**	**+0.5**
LCRK	**Leigh Creek**	**39.78**	**247**	P	**P**	**21 25 34.7**	**+0.2**
BBOO	**Buckleboo**	**41.83**	**243**	P	**P**	**21 25 50.5**	**-0.1**
OOD	**Oodnadatta**	**41.90**	**251**	P	**P**	**21 25 51.9**	**+0.7**
MULG	**Mulgathing**	**43.36**	**247**	P	**P**	**21 26 02.2**	**-0.3**
ASAR	**Alice Springs** 3.8nm,0.3s,baz=87,slow=8.7,SNR=135	**43.69**	**257**	P	**P**	**21 26 05.0**	**-0.2**
ASAR	0.6nm,0.5s,baz=107,slow=3.8,SNR=4.4 3.8nm,0.3s			PcP	**PcP**	**21 27 36.3**	**-0.8**
WRA	**Warramunga Arr** 3.9nm,0.3s,baz=98,slow=7.0,SNR=179 3.9nm,0.3s	**43.74**	**262**	P	**P**	**21 26 04.7**	**-0.9**
KDU	**Kakadu**	**47.05**	**271**	P	**P**	**21 26 29.8**	**-0.8**
MJAR	**Matsushiro Arr** 0.8nm,0.6s,baz=153,slow=5.7,SNR=1.9 0.8nm,0.6s	**69.55**	**324**	P	**P**	**21 28 59.1**	**-1.5**
QSPA	**South Pole Qui** 0.7nm,0.6s,baz=260,slow=0.6,SNR=9.9 0.7nm,0.6s	**69.74**	**180**	P	**P**	**21 29 02.0**	**+0.6**
CMAR	**Chiang Mai Arr** 0.5nm,0.6s,baz=98,slow=3.1,SNR=5.5 0.5nm,0.6s	**89.22**	**290**	P	**P**	**21 30 43.0**	**-0.9**
BVAR	**Borovoye Array** 0.6nm,0.3s,baz=130,slow=1.7,SNR=8.0	**118.38**	**320**	PKP	**PKPdf**	**21 36 28.1**	**-1.7**
HFS	**Hagfors** 0.6nm,0.5s,baz=70,slow=1.7,SNR=7.6	**139.23**	**350**	PKhKP	PKPpre	21 36 59.7	
AKASG	**Malin Array Be** 1.1nm,0.3s,baz=42,slow=4.1,SNR=5.2	**142.43**	**330**	PKhKP	PKPpre	21 37 10.5	
BRTR	**Keskin Array B** 0.5nm,0.5s,baz=135,slow=4.7,SNR=3.1	**146.06**	**312**	PKPbc	**PKPdf**	**21 37 21.1**	**-0.8**
MMAI	**Mount Meron Ar** 1.0nm,0.4s,baz=74,slow=6.2,SNR=11	**146.96**	**300**	PKPbc	**PKPbc**	**21 37 26.1**	**-0.6**

*IDC **24** 21:21:56.2±1.8, 8°.92N×126°.71E, h0km, mb3.5/3, mbtmp3.6/4, ML4.3/1, MS4.0/1, Error ellipse: s-maj=58.2km s-min=24.5km az=93.0*

ISC 24 21:21:56.7±2.1, 8°.80N±0°.04×126°.6E±0°.1, h7km±12km, n13, σ1§47/17, mb3.2/3, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.66**	**204**	↓*e*P	**Pb**	**21 22 09.8**	**-0.9**
BIPH				*e*S	**Sg**	**21 22 16.4**	**-1.9**
SCPH	**Surigao**	**1.50**	**311**	↑*e*P	Pg	21 22 30.4	+5.0
SCPH				*e*S	**Sg**	**21 22 44.0**	**-0.9**
CGP	**Cagayan de Oro**	**1.94**	**260**	↑*e*P	**Pg**	**21 22 35.1**	**+1.0**
CGP				*e*S	**Sg**	**21 23 01.1**	**+1.8**
DAV	**Davao City (W)** 89nm,0.3s,baz=346,slow=6.3,SNR=4.3	**2.01**	**211**	Pn	**Pb**	**21 22 33.4**	**-0.2**
DAV	37nm,0.3s,baz=242,slow=23,SNR=5.4			Sn	**Sg**	**21 23 01.0**	**-0.3**
DAV	comp=Z,130nm,20.0s,baz=356,slow=49 188nm,0.4s			LR	LR	21 23 42.4	
KCP	**Kidapawan**	**2.34**	**221**	↑*i*P	**Pb**	**21 22 37.7**	**-1.6**
KCP				*e*S	**Sn**	**21 23 03.2**	**-1.5**
PLP	**Palo**	**2.86**	**325**	↑*e*P	**Pg**	**21 22 52.1**	**+0.5**
PLP				*e*S	**Sn**	**21 23 16.0**	**-1.5**
LLP	**Lapu-Lapu**	**3.03**	**300**	↓*i*P	**Pg**	**21 22 55.0**	**+0.1**
LLP				*i*S	**Sg**	**21 23 36.1**	**+1.8**
SNPH	**Sibulan**	**3.40**	**279**	*e*P	Pn	21 22 42.2	-8.0
RCP	**Roxas**	**4.71**	**306**	↑*e*P	**Pb**	**21 23 17.7**	**-2.0**
ASAR	**Alice Springs** 0.1nm,0.4s,baz=0.0,slow=7.4,SNR=1.5 0.1nm,0.4s	**33.04**	**168**	P	**P**	**21 28 34.7**	**+1.8**
NWAO	**Narrogin (SRO)** comp=Z,206nm,20.3s,baz=8.5,slow=38	**42.44**	**192**	LR	LR	21 48 51.0	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=109,slow=8.6,SNR=4.4 0.1nm,0.3s	**53.41**	**323**	P	**P**	**21 31 18.0**	**+0.8**
FINES	**FINESS Array B** 1.8nm,1.0s,baz=57,slow=5.1,SNR=5.8 1.8nm,1.0s	**87.35**	**332**	P	**P**	**21 34 44.0**	**-0.3**

*IDC **24** 21:25:36.8±0.6, 3°.16S×130°.85E, h0km, mb4.4/16, mbtmp4.4/17, ML2.8/1, MS3.9/33, Error ellipse: s-maj=29.0km s-min=14.6km az=72.0*

*NEIC **24** 21:25:38.5±1.2, 3°.27S±0°.06×130°.71E±0°.04, h11km±4km, mb4.7/74, Error ellipse: s-maj=9.2km s-min=5.3km az=165.0*

*DJA **24** 21:25:39.5±0.5, 3°S±2°×13°1E±°, h16km±4km, M4.6/24, mb4.9/24, mB5.1/12, MLv4.7/13, Mw(mB)4.5/12, MwMwp4.7/1, Mwp5.0/1*

*GCMT **24** 21:25:41.5±0.3, 3°.09S±0°.03×130°.74E±0°.03, h19km±1km, MW4.9/61, Moment Tensor Solution. s28,c31; s61,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.00±.16; $M_{\theta\theta}$-0.74±.09; $M_{\phi\phi}$-1.25±.10; $M_{r\theta}$-0.49±.20; $M_{\theta\phi}$0.92±.06; $M_{\phi r}$1.46±.21; Best double couple: M_o2.50400×10^{16} NP1:ϕ_s334.00000°, δ64.00000°, λ100.00000°. NP2: ϕ_s133.00000°, δ28.00000°, λ71.00000°. Principal axes: T 2.5650, Plg69.0000°, Azm263.0000°; N -0.1160, Plg9.0000°, Azm150.0000°; P -2.4430, Plg19.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 21:25:38.3±0.3, 3°.23S±0°.04×130°.72E±0°.04, h10km, n216, σ1§17/198, mb4.7/58, MS4.0/36, 3C-1D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.52**	**212**	P	**Pg**	**21 26 08.3**	**+0.8**
FAKI	**Fak Fak**	**1.56**	**79**	Pn	**Pn**	**21 26 06.8**	**+0.7**
FAKI				Sn	**Sn**	**21 26 25.5**	**-0.9**
FAKI	**Fak Fak**	**1.56**	**79**	P	**Pb**	**21 26 07.9**	**+0.6**
FAKI	**Fak Fak**	**1.56**	**79**	P	**Pn**	**21 26 06.9**	**+0.8**
SWI	**Sorong**	**2.41**	**13**	P	**Pn**	**21 26 16.8**	**-1.0**
KMPI	**Kaimana, Papua**	**3.01**	**98**	P	**Pn**	**21 26 27.6**	**+1.5**
NLAI	**Namlea**	**3.61**	**270**	P	**Pn**	**21 26 36.5**	**+2.2**
LBMI	**Labuha**	**4.12**	**309**	P	**Pn**	**21 26 41.0**	**-0.3**
LBMI				S	**Sn**	**21 27 28.4**	**-1.2**
SAUI	**Saumlaki**	**4.76**	**173**	Pn	**Pn**	**21 26 48.8**	**-1.3**
SAUI	**Saumlaki**	**4.76**	**173**	P	**Pn**	**21 26 52.8**	**+2.7**
SAUI	**Saumlaki**	**4.76**	**173**	P	**Pn**	**21 26 52.2**	**+2.1**
SANI	**Sanana**	**4.87**	**284**	P	**Pn**	**21 26 51.2**	**-0.4**
SANI	**Sanana**	**4.87**	**284**	P	**Pn**	**21 26 50.7**	**-0.9**
TNTI	**Ternate**	**5.20**	**320**	Pn	**Pn**	**21 26 55.8**	**-0.3**
TNTI	**Ternate**	**5.20**	**320**	P	**Pn**	**21 26 57.7**	**+1.5**
TNTI	**Ternate**	**5.20**	**320**	P	**Pn**	**21 26 56.5**	**+0.3**
KMSI	**Cibinong** 344nm,0.6s,3μm1.2nm	**7.72**	**299**	P	**Pn**	**21 27 30.8**	**0.0**
SMPI	**Sarmi** 42nm,0.7s	**8.08**	**81**	P	**Pn**	**21 27 35.5**	**-0.3**
LUWI	**Luwuk**	**8.23**	**285**		**Pn**	**21 27 37.6**	**-0.2**
LUWI	**Luwuk**	**8.23**	**285**	P	**Pn**	**21 27 37.9**	**0.0**
LUWI	**Luwuk** 108nm,0.8s,2μm	**8.23**	**285**	P	**Pn**	**21 27 37.3**	**-0.6**
SOEI	**Soe**	**9.11**	**224**	P	Pn	21 27 58.6	+8.5
DRS	**Darwin Rock St**	**9.14**	**179**	P	**Pn**	**21 27 51.4**	**+1.0**
MRSI	**Marisa** 53nm,0.5s,757nm	**9.51**	**293**	P	**Pn**	**21 27 54.8**	**-0.7**
KDU	**Kakadu**	**9.56**	**170**	P	**Pn**	**21 27 55.3**	**-0.7**
MTN	**Manton Dam**	**9.56**	**178**	Pn	**Pn**	**21 27 55.6**	**-0.5**
MTN	**Manton Dam**	**9.56**	**178**	P	**Pn**	**21 27 56.9**	**+0.8**
MMRI	**Maumere** 75nm,1.0s,1μm2μm	**10.00**	**237**	P	**Pn**	**21 28 04.0**	**+1.9**
EDFI	**Ende, Flores**	**10.52**	**238**	P	Pn	21 28 14.2	+4.9
BKSI	**Bulukumba**	**10.77**	**259**	P	**Pn**	**21 28 16.2**	**+3.5**
TOLI2	**Tolitoli**	**10.83**	**293**	Pn	**Pn**	**21 28 12.9**	**-0.6**
TOLI2	**Tolitoli**	**10.83**	**293**	P	**Pn**	**21 28 14.2**	**+0.7**
TTSI	**Tana Toraja** 24nm,0.9s	**10.88**	**271**	P	**Pn**	**21 28 16.5**	**+2.3**
MPSI	**Mapaga** 24nm,0.8s	**11.38**	**288**	P	**Pn**	**21 28 21.6**	**+0.6**
DAV	**Davao City (W)** comp=Z,1μm,21.5s,baz=121,slow=42	**11.44**	**333**	LR	LR	21 33 30.9	
KNRA	**Kununurra**	**12.52**	**189**	Pn	**Pn**	**21 28 35.2**	**-1.4**
PLAI	**Plampang** 89nm,0.9s,1μm	**14.02**	**246**	P	**Pn**	**21 28 58.7**	**+1.6**
TWSI	**Taliwang, Sumb** 55nm,0.7s,840nm	**14.80**	**248**	P	**Pn**	**21 29 09.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**15.59**	**198**	Pn	**Pn**	**21 29 15.6**	**-2.7**
MTKI	**Muara Teweh, K** 100nm,1.1s	**15.97**	**278**	P	**Pn**	**21 29 24.8**	**+1.5**
SRBI	**Singaraja** 32nm,1.2s	**16.16**	**252**	P	**Pn**	**21 29 25.3**	**-0.4**
COEN	**Coen**	**16.28**	**132**	Pn	**Pn**	**21 29 26.1**	**-1.0**
MANU	**Manus Island** comp=Z,47nm,0.9s	**16.67**	**86**	Pn	**Pn**	**21 29 32.6**	**+0.4**
MANU				IAmb	IAmb	21 29 46.6	
WB0	**Warramunga Arr**	**16.82**	**168**	Pn	**Pn**	**21 29 32.7**	**-1.4**
WRAB	**Tennant Creek**	**16.98**	**168**		**Pn**	**21 29 34.2**	**-1.8**
WRA	**Warramunga Arr**	**16.98**	**168**	Pn	**Pn**	**21 29 34.3**	**-1.9**
WRA	**Warramunga Arr** comp=Z,6.7nm,0.6s,baz=345,slow=14,SNR=34	**16.98**	**168**	P	**Pn**	**21 29 32.2**	**-4.0**
WRA	comp=Z,3.3nm,0.6s,baz=354,slow=23,SNR=3.8			S	Sn	21 32 33.2	-12
WB2	**Warramunga Arr**	**16.99**	**168**	Pn	**Pn**	**21 29 34.4**	**-1.8**
KKM	**Kota Kinabalu**	**17.16**	**302**		**Pn**	**21 29 39.2**	**+0.7**
JAGI	**Jajag, Banyuwa** comp=Z,63nm,1.3s	**17.28**	**252**	P	**Pn**	**21 29 40.5**	**+0.7**
JAGI				IAmb	IAmb	21 29 48.8	
JAGI	**Jajag, Banyuwa**	**17.28**	**252**	P	**P**	**21 29 41.8**	**+0.5**
JAGI	**Jajag, Banyuwa** comp=Z,140nm,0.9s,comp=Z,1μm	**17.28**	**252**	P	**P**	**21 29 41.2**	**-0.1**
PMG	**Port Moresby**	**17.45**	**111**		**Pn**	**21 29 42.1**	**+0.1**
PMG	**Port Moresby**	**17.45**	**111**	P	**P**	**21 29 43.7**	**+0.5**
PMG	**Port Moresby**	**17.45**	**111**	P	**P**	**21 29 43.9**	**+0.7**
PMG	**Port Moresby** comp=Z,1.0nm,0.3s,baz=282,slow=20,SNR=4.5 comp=Z,2.8nm,0.2s	**17.45**	**111**	P	**Pn**	**21 29 40.4**	**-1.6**
BLJI	**Banyuglugur** comp=Z,90nm,0.8s	**17.62**	**255**	P	**Pn**	**21 29 44.4**	**+0.3**
GMJI	**Gumukmas**	**17.90**	**253**	P	**P**	**21 29 48.2**	**0.0**
SBUM	**Sibu**	**19.33**	**287**		**P**	**21 30 04.4**	**+0.5

BBOO Buckleboo 29.85 171 P **P** **21 31 46.6 +0.7**
BKNI Bangkinang 29.87 276 P **P** **21 31 45.9 -0.5**
JOW Kunigami 29.98 356 LR LR 21 43 18.6
comp=Z,581nm,20.5s,baz=139,slow=36
QIZ Qiongzhong 30.18 318 P **P** **21 31 50.6 +1.6**
QIZ S **S** **21 36 50.3 +1.9**
QIZ LR LR
comp=Z,250nm,15.8s
QIZ LR LR
comp=Z,250nm,14.1s
QIZ LR LR
comp=Z,230nm,15.9s
STKA Stephens Creek 30.28 161 P **P** **21 31 49.2 -0.5**
STKA Stephens Creek 30.28 161 P **P** **21 31 50.6 +0.9**
STKA Stephens Creek 30.28 161 P **P** **21 31 50.5 +0.8**
comp=Z,3.9nm,0.5s,baz=333,slow=8.7,SNR=11
comp=Z,3.9nm,0.5s
BLDU Ballidu 30.29 204 P **P** **21 31 49.4 -0.4**
IPM Ipoh 30.64 284 P **P** **21 31 52.1 -1.0**
KLBR Kellerberrin 30.74 202 P **P** **21 31 53.1 -0.7**
HTT Hallett 31.01 167 P **P** **21 31 57.6 +1.4**
KULM Kulim 31.20 286 P **P** **21 31 57.4 -0.8**
CMSA Cobar Meteorol 31.49 155 P **P** **21 32 01.5 +1.1**
MUN Mundaring 31.69 204 P **P** **21 32 01.9 -0.2**
JCJ Chichijima 32.12 19 LR LR 21 43 27.8
comp=Z,307nm,20.2s,baz=194,slow=34
NWAO Narrogin (SRO) 32.13 202 P **P** **21 32 06.4 +0.4**
NWAO Narrogin (SRO) 32.13 202 P **P** **21 32 06.5 +0.4**
RPSI Rantau Prapat 32.32 280 P **P** **21 32 06.5 -1.4**
RPSI IAmb IAmb 21 32 08.7
comp=Z,13nm,0.9s
GSI Gunungsitoli 33.43 277 P **P** **21 32 16.6 -1.1**
ARPS Mount Arapiles 34.91 164 P **P** **21 32 32.8 +2.6**
SLVN Son La 35.85 314 P **P** **21 32 37.9 -0.7**
CAN Canberra 36.15 154 P **P** **21 32 39.9 -1.1**
CAN IAmb IAmb 21 32 49.5
comp=Z,19nm,0.9s
CAN Canberra 36.15 154 P **P** **21 32 42.7 +1.7**
JNU Nakatsue 36.15 0 LR LR 21 48 25.1
comp=Z,149nm,18.6s,baz=182,slow=38
TOO Toolangi 36.77 160 **P** **21 32 46.6 +0.5**
TOO IAmb IAmb 21 33 09.7
comp=Z,30nm,1.4s
NJ2 Nanjing 36.85 343 *e*P **P** **21 32 49.1 +2.2**
NJ2 pP **sP** **21 32 52.0 +0.9**
NJ2 sP **pP** **21 32 53.9 +4.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
NJ2 pmax pmax
comp=Z,140nm,5.7s
WHN Wuhan 37.04 336 ⇑P P 21 32 56.3 +7.8
WHN pmax pmax
comp=Z,44nm,1.0s
JHJ Hachijo jima 2 37.16 13 LR LR 21 45 16.6
comp=Z,400nm,21.9s,baz=180,slow=32
CM31 Chiang Mai Arr 37.99 306 P **P** **21 32 56.9 +0.1**
CMAR Chiang Mai Arr 37.99 306 P **P** **21 32 56.8 0.0**
CMAR Chiang Mai Arr 37.99 306 P **P** **21 32 57.6 +0.8**
comp=Z,2.2nm,0.9s,baz=133,slow=7.5,SNR=16
CMAR PcP **PcP** **21 35 14.4 +1.8**
comp=Z,0.7nm,0.7s,baz=151,slow=2.1,SNR=2.7
CMAR ScP **ScP** **21 38 59.3 -1.2**
comp=Z,0.3nm,0.5s,baz=150,slow=3.8,SNR=4.2
comp=Z,2.2nm,0.9s
CHTO Chiang Mai 38.18 306 P **P** **21 32 57.1 -1.2**
ENH Enshi 39.01 330 P **P** **21 33 04.3 -0.9**
ENH IAmb IAmb 21 33 12.7
comp=Z,12nm,1.0s
KMI Kunming 39.13 318 ⇑P **P** **21 33 07.0 +0.4**
KMI pmax pmax
comp=Z,8.0nm,1.0s
KMI LR LR
comp=Z,210nm,22.9s
KMI LR LR
comp=Z,190nm,22.4s
KMI LR LR
comp=Z,230nm,25.1s
DZM Mont Dzumac 39.40 121 *e*S **S** **21 39 10.1 -0.5**
comp=Z,60nm,28.4s
DZM *e*SS **SnSn** **21 42 05.1 -0.3**
comp=Z,60nm,22.4s
DZM *e*LR LR 21 43 49.6
comp=Z,213nm,24.9s
MAJO Matsushiro 40.18 9 P **P** **21 33 13.7 -1.1**
MAJO IAmb IAmb 21 33 44.3
comp=Z,25nm,1.5s
MJAR Matsushiro Arr 40.18 9 P **P** **21 33 12.3 -2.5**
comp=Z,1.3nm,0.7s,baz=192,slow=9.0,SNR=3.5
MJAR LR LR 21 48 38.5
comp=Z,276nm,20.8s,baz=188,slow=34
comp=Z,1.3nm,0.7s
KSRS Korea Array 40.56 357 P **P** **21 33 18.0 +0.1**
comp=Z,1.9nm,0.6s,baz=175,slow=9.7,SNR=9.9
KSRS LR LR 21 49 38.3
comp=Z,203nm,20.7s,baz=175,slow=36
comp=Z,1.9nm,0.6s
INCN Inchon 40.68 355 P **P** **21 33 17.5 -1.5**
INCN IAmb IAmb 21 33 20.5
comp=Z,14nm,0.7s
PZH PanZhiHua 40.72 318 P **P** **21 33 19.3 -0.3**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,6.5s
LYN LuoYang 41.32 337 *e*P P 21 33 30.4 +6.2
LYN pmax pmax
comp=Z,12nm,0.6s
XAN Xi'an 42.38 333 ⇑P **P** **21 33 31.9 -1.1**
XAN pP sP 21 33 38.6 +1.3
XAN pmax pmax
comp=Z,6.0nm,0.8s
LZH Lanzhou 46.48 330 *e*P **P** **21 34 06.6 +0.6**
LZH sP sP 21 34 12.3 +2.0
LZH pmax pmax
comp=Z,8.0nm,1.1s
LZH LR LR
comp=Z,200nm,16.1s
LZH LR LR
comp=Z,210nm,17.9s
LZH LR LR
comp=Z,180nm,18.3s
CN2 Changchun 47.06 355 *e*P **P** **21 34 10.3 +0.2**
CN2 *ep*P sP 21 34 14.8 +0.4
CN2 *e*S **S** **21 41 00.5 -1.5**
USRK Ussuriysk Ar. 47.23 1 P **P** **21 34 10.7 -0.7**
USRK Ussuriysk Ar. 47.23 1 P **P** **21 34 11.8 +0.4**
comp=Z,2.3nm,0.7s,baz=189,slow=7.5,SNR=7.0
USRK LR LR 21 53 17.3
comp=Z,115nm,19.9s,baz=180,slow=35
comp=Z,2.3nm,0.7s
HHC Hu-ho-hao-te 47.23 340 *e*P **P** **21 34 12.0 +0.3**
HHC sP sP 21 34 21.4 +5.4
HHC S **S** **21 41 04.5 -0.4**
HHC sS sS 21 41 14.1 +4.3
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC LR LR
comp=Z,180nm,14.3s
HHC LR LR
comp=Z,170nm,14.9s
HHC LR LR
comp=Z,140nm,14.6s
SHL Shillong 47.28 310 P **P** **21 34 11.0 -1.3**
SHL IAmb IAmb 21 34 19.6
comp=Z,8.7nm,0.8s
ASAJ Asahikawa 48.32 11 LR LR 21 53 38.1
comp=Z,141nm,21.9s,baz=170,slow=35
LSA Lhasa 50.05 314 P **P** **21 34 33.6 -0.4**
LSA IAmb IAmb 21 34 36.0
comp=Z,4.4nm,0.7s
PALK Pallekele 50.99 282 LR LR 21 58 52.7
comp=Z,207nm,18.3s,baz=210,slow=39
GTA Gaotai 51.08 329 P **P** **21 34 41.3 +0.1**
GTA pP sP 21 34 47.0 +1.5
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA LR LR
comp=Z,120nm,13.1s
GTA LR LR
comp=Z,130nm,14.7s
GTA LR LR
comp=Z,140nm,22.3s
KLR Kul'dur 52.26 1 LR LR 21 56 14.0
comp=Z,80nm,20.5s,baz=168,slow=35
HEH HeiHe 53.35 357 *e*P **P** **21 34 59.6 +1.9**
TUWZ Tuamarina 54.27 141 P **P** **21 35 05.0 +0.3**

ULN Ulaanbaatar 54.94 341 P **P** **21 35 09.1 -0.5**
SONM Songino Array 55.14 340 P **P** **21 35 11.1 +0.1**
SONM IAmb IAmb 21 35 20.0
comp=Z,9.5nm,1.1s
SONM Songino Array 55.14 340 P **P** **21 35 11.6 +0.6**
comp=Z,0.9nm,0.4s,baz=157,slow=8.1,SNR=9.1
SONM LR LR 22 01 41.6
comp=Z,91nm,20.0s,baz=168,slow=39
comp=Z,0.9nm,0.4s
PETK Petropavlovsk- 60.54 18 P **P** **21 35 49.3 +0.6**
PETK Petropavlovsk- 60.54 18 P **P** **21 35 49.0 +0.4**
comp=Z,2.9nm,0.8s,baz=163,slow=5.7,SNR=4.3
PETK LR LR 21 59 34.1
comp=Z,121nm,21.9s,baz=199,slow=34
comp=Z,2.9nm,0.8s
WMQ Urumqi 60.68 325 *e*P **P** **21 35 50.3 +0.4**
WMQ pP sP 21 35 57.4 +3.1
WMQ pmax pmax
comp=Z,10.0nm,0.7s
MA2 Magadan 64.58 11 LR LR 22 02 30.1
comp=Z,72nm,21.9s,baz=250,slow=34
YAK Yakutsk 65.08 359 P **P** **21 36 19.2 +0.4**
YAK Yakutsk 65.08 359 LR LR 22 04 55.5
comp=Z,70nm,20.5s,baz=118,slow=36
NIL Nilore 65.35 309 P **P** **21 36 20.2 -1.0**
NIL IAmb IAmb 21 36 28.1
comp=Z,5.1nm,0.7s
MK31 Makanchi Array 65.51 326 P **P** **21 36 21.7 -0.2**
MK31 IAmb IAmb 21 36 30.1
comp=Z,6.1nm,0.8s
MKAR Makanchi Array 65.51 326 P **P** **21 36 21.8 -0.1**
MKAR Makanchi Array 65.51 326 P **P** **21 36 22.0 +0.1**
comp=Z,6.3nm,0.8s,baz=122,slow=8.0,SNR=79
MKAR LR LR 22 06 35.7
comp=Z,67nm,20.3s,baz=90,slow=38
comp=Z,6.3nm,0.8s
PRZ Przheval'sk 65.56 320 P **P** **21 36 22.3 -0.2**
PRZ IAmb IAmb 21 36 31.2
comp=Z,8.5nm,0.9s
MAKZ Makanchi 65.69 325 P **P** **21 36 22.6 -0.5**
KSH Kashi 65.77 316 P **P** **21 36 24.8 +0.9**
KSH sP sP 21 36 31.8 +3.5
KSH pmax pmax
comp=Z,4.0nm,0.8s
NRN Naryn 66.62 318 P **P** **21 36 29.1 -0.5**
NRN IAmb IAmb 21 36 37.5
comp=Z,3.2nm,0.8s
AAK Ala-Archa 68.17 319 **P** **21 36 38.6 -0.5**
AAK IAmb IAmb 21 36 56.2
comp=Z,3.6nm,1.0s
AAK Ala-Archa 68.17 319 LR LR 22 08 53.2
comp=Z,81nm,21.6s,baz=104,slow=38
ZAA0 Zalesovo Array 68.56 333 **P** **21 36 40.2 -0.9**
ZAA0 IAmb IAmb 21 36 48.6
comp=Z,8.9nm,1.1s
ZALV Zalesovo Beam 68.56 333 P **P** **21 36 40.3 -0.8**
ZALV Zalesovo Beam 68.56 333 P **P** **21 36 40.5 -0.6**
comp=Z,1.2nm,0.3s,baz=130,slow=5.2,SNR=12
comp=Z,1.2nm,0.3s
ARSB Arslanbob 68.61 317 P **P** **21 36 41.8 -0.2**
KBL Kabul 68.93 309 P **P** **21 36 43.1 -1.0**
KBL IAmb IAmb 21 36 51.0
comp=Z,5.2nm,1.0s
BTK Batken 69.61 315 P **P** **21 36 47.7 -0.3**
BTK IAmb IAmb 21 36 51.6
comp=Z,4.9nm,0.9s
KURBB Kurchatov Arra 69.71 328 P **P** **21 36 48.3 0.0**
comp=Z,4.5nm,0.7s,baz=127,slow=5.5,SNR=41
comp=Z,4.5nm,0.7s
KURK Kurchatov 69.71 328 P **P** **21 36 47.9 -0.5**
SIMJ Simiganj 70.39 313 P **P** **21 36 52.0 -0.9**
SIMJ IAmb IAmb 21 37 00.1
comp=Z,5.0nm,0.9s
KK31 Karatay Array 71.02 318 **P** **21 36 55.9 -0.6**
KK31 IAmb IAmb 21 37 04.6
comp=Z,4.3nm,0.9s
KKAR Karatay Array 71.02 318 P **P** **21 36 55.9 -0.7**
HRA Herat 74.25 307 P **P** **21 37 15.7 -0.5**
TIXI Tiksi 74.75 359 P **P** **21 37 18.2 +0.2**
TIXI Tiksi 74.75 359 LR LR 22 08 59.2
comp=Z,86nm,21.6s,baz=198,slow=35
BVAR Borovoye Array 75.29 327 P **P** **21 37 21.5 0.0**
comp=Z,4.5nm,0.7s,baz=127,slow=8.9,SNR=33
BVAR LR LR 22 11 10.7
comp=Z,60nm,20.6s,baz=106,slow=36
comp=Z,4.5nm,0.7s
BRVK Borovoye 75.36 327 P **P** **21 37 21.7 -0.2**
BRVK IAmb IAmb 21 37 30.2
comp=Z,10nm,0.8s
VNDA Vanda 76.08 173 LR LR 22 10 15.9
comp=Z,110nm,21.1s,baz=348,slow=35
NRIK Noril'sk 78.10 346 P **P** **21 37 36.6 -0.5**
NRIK IAmb IAmb 21 37 49.4
comp=Z,11nm,1.1s
NRIK Noril'sk 78.10 346 P **P** **21 37 36.9 -0.2**
comp=Z,2.2nm,0.4s,baz=147,slow=5.3,SNR=5.0
comp=Z,2.2nm,0.4s
GEYT Alibeck 78.36 310 P **P** **21 37 39.0 -0.3**
GEYT IAmb IAmb 21 37 47.6
comp=Z,9.6nm,0.9s
GEYT Alibeck 78.36 310 P **P** **21 37 40.2 +0.9**
comp=Z,6.2nm,0.7s,baz=158,slow=4.3,SNR=19
GEYT LR LR 22 16 54.3
comp=Z,27nm,18.2s,baz=80,slow=39
comp=Z,6.2nm,0.7s
GYA0B ALIBECK ARRAY 78.36 310 P **P** **21 37 39.0 -0.2**
GYA0B IAmb IAmb 21 37 40.9
comp=Z,7.2nm,0.7s
MAW Mawson 78.70 201 LR LR 22 11 04.1
comp=Z,73nm,19.1s,baz=58,slow=35
PPT2 Papeete2 79.22 107 *e*LR LR 22 02 15.8
comp=Z,104nm,23.0s
ABKAR Akbulak array 80.03 321 P **P** **21 37 47.8 -0.3**
ABKAR IAmb IAmb 21 37 58.7
comp=Z,5.1nm,0.8s
ABKAR Akbulak array 80.03 321 P **P** **21 37 47.5 -0.5**
AKTO Aktyubinsk 81.56 322 LR LR 22 17 14.5
comp=Z,88nm,19.8s,baz=82,slow=38
ARU Arti 82.91 328 P **P** **21 38 03.0 -0.2**
ARU IAmb IAmb 21 38 14.3
comp=Z,4.1nm,0.8s
VOI Vohitsoka 83.17 248 P **P** **21 38 05.2 -0.3**
C16K Lisburne Hills 83.61 20 P **P** **21 38 06.7 +0.2**
KDAK Kodiak Island 85.65 32 LR LR 22 12 25.5
comp=Z,68nm,21.2s,baz=268,slow=33
C19K Lookout Ridge 85.87 20 P **P** **21 38 18.2 +0.2**
C19K IAmb IAmb 21 38 27.1
comp=Z,13nm,1.4s
K20K Telida 86.28 26 P **P** **21 38 20.8 +0.7**
QSPA South Pole Qui 86.72 180 P **P** **21 38 22.5 +0.1**
QSPA South Pole Qui 86.72 180 P **P** **21 38 22.2 -0.2**
comp=Z,2.9nm,0.6s,baz=296,slow=1.3,SNR=36
comp=Z,2.9nm,0.6s
RAYN Ar Rayn 86.89 294 P **P** **21 38 24.1 0.0**
IMAR Indian Mountai 87.08 23 P **P** **21 38 24.2 +0.3**
CAST Castle Rocks 87.16 26 P **P** **21 38 25.4 +0.9**
CAST IAmb IAmb 21 39 04.3
comp=Z,9.6nm,1.4s
MLY Manley 88.08 25 P **P** **21 38 28.7 -0.1**
MLY IAmb IAmb 21 38 32.9
comp=Z,6.1nm,1.1s
TAOE Nuku Hiva Isla 88.66 99 *e*LR LR 22 06 37.4
comp=Z,149nm,26.6s
ILAR Eielson Array 89.65 25 P **P** **21 38 36.0 -0.2**
ILAR Eielson Array 89.65 25 P **P** **21 38 35.0 -1.2**
comp=Z,0.9nm,0.7s,baz=259,slow=4.2,SNR=11
ILAR LR LR 22 11 46.1
comp=Z,98nm,21.0s,baz=248,slow=31
comp=Z,0.9nm,0.7s
KBZ Khabaz 90.63 314 LR LR 22 24 29.9
comp=Z,31nm,19.4s,baz=110,slow=39
GURO Guroymak-BITLI 90.96 308 P **P** **21 38 42.6 -0.4**
GURO IAmb IAmb 21 38 52.2
comp=Z,5.2nm,0.9s
ELIB Princess Elisa 92.28 197 *d*P **P** **21 38 49.7 +1.2**
SPITS Spitsbergen Ar 98.03 349 LR LR 22 25 10.7
comp=Z,59nm,21.1s,baz=14,slow=36
ARCES ARCESS Array B 98.31 340 P **P** **21 39 14.3 -1.5**
comp=Z,2.9nm,0.9s,baz=79,slow=5.7,SNR=1.6
ARCES LR LR 22 29 49.2
comp=Z,40nm,20.1s,baz=36,slow=39
comp=Z,2.9nm,0.9s
SNAA Sanae 99.47 193 LR LR 22 24 42.7
comp=Z,159nm,19.0s,baz=134,slow=36
FINES FINESS Array B 99.81 332 LR LR 22 30 03.4
comp=Z,62nm,18.0s,baz=78,slow=39

TORD Torodi Ar. Bea 128.68 284 PKP **PKPdf** **21 44 46.9 -0.1**
comp=Z,1.2nm,0.6s,baz=82,slow=1.8,SNR=13
CPUP Villa Florida 149.60 166 PKPbc **PKiKP** **21 45 29.9 -0.1**
comp=Z,2.4nm,0.7s,baz=150,slow=2.1,SNR=3.3

IDC 24 21:29:17.1±6.6, 50.20N×114.31W, h0km, mbtmp3.1/1, ML3.4/1, Error ellipse: s-maj=89.9km s-min=52.1km az=61.0, Alberta

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I56US	**NEWPORT INFRAS**	**2.67**	**225**	I	I	21 48 40.0	
	0.2nm,1.9s,baz=41,slow=316,SNR=2.8						
I10CA	**LAC DU BONNET**	**11.72**	**83**	I	I	22 41 50.0	
	baz=275,slow=327,SNR=2.0						
YKA	**Yellowknife Ar**	**12.33**	**359**	Pn	Pn	21 32 09.6	-4.0
	0.3nm,0.3s,baz=182,slow=13,SNR=11						
YKA				Lg	Lg	21 35 39.6	
	baz=177,slow=27						
	0.2nm,0.4s						

SCB 24 22:22:39.1±1.3, 21.47S×66.83W, h208km±9km, ML3.4/3, MW3.5, Error ellipse: s-maj=4.8km s-min=4.2km az=2.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.13**	**79**	Pg	Pn	22 23 11.6	+0.5
MOCB				Sg	S	22 23 35.7	0.0
MOCB				IAML		22 23 36.2	
	260nm,0.4s						
LVC	**Limon Verde**	**2.24**	**239**	Pg	Pn	22 23 21.6	+0.5
PB09	**IPOC Station P**	**2.27**	**261**	Pg	Pn	22 23 22.5	+1.3
PB01	**IPOC Station P**	**2.52**	**279**	Pg	Pn	22 23 24.4	+0.6
PB01				Sg	S	22 23 58.5	+0.4
PB01				IAML		22 23 59.4	
	63nm,0.2s						
PB08	**IPOC Station P**	**2.54**	**301**	Pg	Pn	22 23 25.2	+0.8
PB06	**IPOC Station P**	**2.83**	**244**	Pg	Pn	22 23 28.8	+1.5
GO01	**Chusmiza**	**2.85**	**309**	Pg	Pn	22 23 28.5	+0.5
PB07	**IPOC Station P**	**2.86**	**264**	Pg	Pn	22 23 28.0	+0.3
PB02	**IPOC Station P**	**2.86**	**272**	Pg	Pn	22 23 27.9	+0.2
PB15	**IPOC Station P**	**3.00**	**234**	Pg	Pn	22 23 29.9	+0.6
PB11	**IPOC Station P**	**3.15**	**302**	Pg	Pn	22 23 30.8	-0.3
PB11				Sg	S	22 24 10.6	-0.6
PB11				IAML		22 24 12.1	
	96nm,0.2s						
SOET	**ToroToro**	**3.47**	**16**	Pg	Pn	22 23 35.0	-0.1
PB16	**IPOC Station P**	**4.01**	**321**	Pg	Pn	22 23 42.6	+0.7
GO02	**Mina Guanaco**	**4.47**	**214**	Pg	Pn	22 23 47.3	0.0
SOEJ	**Jacaque**	**4.65**	**344**	Pg	Pn	22 23 51.0	+1.1
BBOE	**La Paz, Chanca**	**4.76**	**347**	Pg	Pn	22 23 52.5	+1.2
LPAZ	**La Paz**	**5.30**	**346**	Pg	Pn	22 23 58.6	+0.4

IDC 24 22:23:14.6±6.3, 2.71S×132.43E, h0km, mb3.6/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=401.6km s-min=30.8km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.23**	**174**	P	Pn	22 27 15.0	-1.8
	0.1nm,0.3s,baz=355,slow=13,SNR=1.3						
WRA				S	Sn	22 30 15.7	-13
	0.3nm,0.6s,baz=354,slow=23,SNR=2.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**20.88**	**176**	P	P	22 27 59.3	+0.8
	3.3nm,0.4s,baz=352,slow=10,SNR=95						
	3.3nm,0.4s						
MKAR	**Makanchi Array**	**66.07**	**325**	P	P	22 34 03.4	-0.1
	0.1nm,0.3s,baz=115,slow=6.8,SNR=2.1						
	0.1nm,0.3s						

*GUC **24** 22:34:12.2±0.8, 29.76S×71.54W, h45km±3km, ML3.7*
*NEIC **24** 22:34:12.6±1.6, 29.74S±0.03×71.71W±0.05, h38km±9km, mb4.0/5, Error ellipse: s-maj=6.1km s-min=4.5km az=120.0*
*IDC **24** 22:34:14.5±4.4, 29.76S×71.50W, h50km±38km, mb3.7/5, mbtmp3.8/7, ML3.5/2, MS3.3/4, Error ellipse: s-maj=42.3km s-min=21.9km az=109.0*

ISC 24 22:34:09.8±0.8, 29.71S±0.03×71.75W±0.05, h20km±6km, n68, σ1°21/83, mb4.0/6, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.49**	**115**		**Pn**	**22 34 21.7**	**0.0**
CO05				Sn	**Sn**	**22 34 28.1**	**-1.5**
CO05	**La Serena**	**0.49**	**115**	⇓*i*P	**Pn**	**22 34 21.7**	**0.0**
CO05				*i* S	**Sn**	**22 34 28.3**	**-1.3**
CO05				IAML		22 34 29.2	
	comp=E,14μm,0.6s						
GO04	**Tololo Observa**	**0.94**	**119**		**Pn**	**22 34 28.5**	**+0.3**
GO04				Sn	**Sb**	**22 34 40.3**	**+0.4**
GO04	**Tololo Observa**	**0.94**	**119**	*i* P	**Pn**	**22 34 28.5**	**+0.3**
GO04				*i* S	**Sn**	**22 34 40.4**	**-0.8**
CO06	**Fray Jorge**	**0.97**	**174**		**Pn**	**22 34 28.8**	**+0.6**
CO06				Sn	**Sb**	**22 34 40.9**	**+0.6**
CO06	**Fray Jorge**	**0.97**	**174**	*i* P	**Pn**	**22 34 28.6**	**+0.3**
CO06				*i* S	**Sb**	**22 34 40.6**	**+0.4**
CO06				IAML		22 34 42.8	
	comp=E,4μm,0.2s						
LCO	**Las Campanas**	**1.15**	**53**	Pn	**Pb**	**22 34 32.4**	**+1.2**
LCO				Sn	**Sn**	**22 34 46.7**	**+0.4**
LCO	**Las Campanas**	**1.15**	**53**	⇑*i*P	**Pb**	**22 34 32.4**	**+1.2**
LCO				*i* S	**Sn**	**22 34 47.6**	**+1.3**
CO03	**El Pedregal**	**1.45**	**141**		**Pn**	**22 34 35.5**	**+0.5**
CO03				Sn	**Sn**	**22 34 52.3**	**-1.2**
CO03	**El Pedregal**	**1.45**	**141**	⇓*i*P	**Pn**	**22 34 35.5**	**+0.5**
CO03				*i* S	**Sn**	**22 34 52.5**	**-1.0**
CO03				IAML		22 34 54.0	
	comp=N,2μm,0.2s						
CO01	**Juntas del Tor**	**1.46**	**101**		**Pb**	**22 34 36.4**	**-0.1**
CO01				Sn	**Sn**	**22 34 53.5**	**-0.5**
CO01	**Juntas del Tor**	**1.46**	**101**	⇓*i*P	**Pb**	**22 34 36.4**	**-0.1**
CO01				*i* S	**Sb**	**22 34 54.0**	**-0.8**
CO01				IAML		22 34 54.5	
	comp=N,3μm,0.3s						
AC05	**El Transito**	**1.56**	**56**	Pn	**Pb**	**22 34 38.3**	**+0.3**
AC05				Sn	**Sb**	**22 34 57.5**	**+0.2**
AC05	**El Transito**	**1.56**	**56**	⇑*i*P	**Pb**	**22 34 38.4**	**+0.3**
AC05				*i* S	**Sb**	**22 34 57.9**	**+0.5**
AC05				IAML		22 35 00.5	
	comp=N,2μm,0.6s						
AC04	**Llanos de Chal**	**1.61**	**22**	Pn	**Pb**	**22 34 38.8**	**-0.1**
AC04				Sn	**Sb**	**22 34 57.6**	**-1.2**
AC04	**Llanos de Chal**	**1.61**	**22**	*i* P	**Pb**	**22 34 38.9**	**-0.1**
CO02	**Combarbal**	**1.62**	**157**		**Pn**	**22 34 38.5**	**+1.1**
CO02				Sn	**Sn**	**22 34 57.8**	**0.0**
CO02	**Combarbal**	**1.62**	**157**	⇓*i*P	**Pn**	**22 34 38.5**	**+1.1**
CO02				*i* S	**Sn**	**22 34 57.9**	**+0.1**
GO03	**Copiap**	**2.49**	**33**		**Pb**	**22 34 51.1**	**-2.8**
GO03	**Copiap**	**2.49**	**33**	*e*P	**Pb**	**22 34 51.2**	**-2.8**
VA06	**Catapilco**	**2.87**	**172**		**Pn**	**22 34 54.9**	**+0.5**
VA03	**San Esteban**	**3.21**	**162**		**Pn**	**22 35 01.4**	**+2.2**
VA03	**San Esteban**	**3.21**	**162**	*i* P	**Pn**	**22 35 01.5**	**+2.2**
PEL	**Peldehue**	**3.54**	**165**		**Pn**	**22 35 05.3**	**+1.5**
MT02	**Curacav**	**3.58**	**172**		**Pn**	**22 35 05.2**	**+1.0**
AC02	**Maricunga**	**3.68**	**40**	Pn	**Pn**	**22 35 08.2**	**+2.2**
AC02	**Maricunga**	**3.68**	**40**	*i* P	**Pn**	**22 35 08.1**	**+2.1**
AC02				*i* S	**Sn**	**22 35 50.7**	**+1.6**
AC01	**Pan de Azucar**	**3.69**	**16**	Pn	**Pn**	**22 35 06.0**	**+0.2**
MT10	**Hacienda Santa**	**3.70**	**164**	*e*P	**Pn**	**22 35 07.7**	**+1.7**
MT05	**Renca**	**3.77**	**167**		**Pn**	**22 35 08.3**	**+1.4**
MT16	**CCHEN**	**3.85**	**165**		**Pn**	**22 35 11.4**	**+3.4**
MT03	**Universidad Ad**	**3.92**	**165**		**Pn**	**22 35 10.8**	**+1.8**
VA05	**Santo Domingo**	**3.94**	**178**		**Pn**	**22 35 09.7**	**+0.6**
MT09	**Talagante**	**4.11**	**171**		**Pn**	**22 35 12.7**	**+1.2**
MT01	**Popeta**	**4.16**	**174**		**Pn**	**22 35 12.9**	**+0.7**
MT13	**San Alfonso**	**4.21**	**163**		**Pn**	**22 35 15.7**	**+2.7**
LMEL	**Las Melosas**	**4.33**	**163**		**Pn**	**22 35 16.6**	**+2.0**
BO04	**La Punta**	**4.38**	**167**		**Pn**	**22 35 16.2**	**+1.0**
BO04	**La Punta**	**4.38**	**167**	*e*P	**Pn**	**22 35 16.7**	**+1.5**
BO04				*i* S	**Sn**	**22 36 05.1**	**-0.5**
BO01	**Tunca**	**4.70**	**173**	Pn	**Pn**	**22 35 20.2**	**+0.6**
GO02	**Mina Guanaco**	**4.92**	**23**	Pn	**Pn**	**22 35 23.5**	**+0.5**
BO02	**Sierra Bellavi**	**5.13**	**171**		**Pn**	**22 35 26.4**	**+0.8**
PB14	**IPOC Station P**	**5.20**	**14**	Pn	**Pn**	**22 35 26.4**	**-0.5**
GO05	**Huala**	**5.29**	**182**		**Pn**	**22 35 27.1**	**-0.6**
H03N1	**Juan Fernandez**	**7.15**	**237**	T	T	22 43 32.9	

	baz=59,slow=72,SNR=3067							
H03N2	**Juan Fernandez**	**7.17**	**237**	T		T	22 43 35.5	
	baz=59,slow=72,SNR=1706							
H03N3	**Juan Fernandez**	**7.17**	**237**	T		T	22 43 32.1	
	baz=59,slow=72,SNR=1557							
LVC	**Limon Verde**	**7.52**	**20**	LR		LR	22 39 11.5	
	comp=N,130nm,20.6s,baz=226,slow=40							
PLCA	**Paso Flores**	**11.04**	**175**	Pn		**Pn**	**22 36 48.3**	**+1.6**
PLCA	**Paso Flores**	**11.04**	**175**	P		**Pn**	**22 36 49.2**	**+2.6**
	comp=N,0.1nm,0.3s,baz=351,slow=14,SNR=1.1							
PLCA				LR		LR	22 41 12.7	
	comp=N,160nm,19.8s,baz=144,slow=38							
	comp=N,0.3nm,0.4s							
LPAZ	**La Paz**	**13.77**	**15**	Pn		**Pn**	**22 37 25.1**	**+0.6**
PLTB	**Pedras Altas**	**15.74**	**102**	Pn		**Pn**	**22 37 49.9**	**-0.5**
SIV	**San Ignacio**	**16.81**	**38**	P		**P**	**22 38 05.6**	**-0.6**
	baz=222,slow=17,SNR=1.9							
SIV				LR		LR	22 45 33.5	
	comp=N,88nm,20.1s,baz=240,slow=41							
	comp=N,1.0nm,0.5s							
BDFB	**Brasilia**	**25.92**	**63**	P		**P**	**22 39 39.6**	**-1.4**
BDFB				IAmb		IAmb	22 39 42.3	
	comp=Z,4.5nm,1.2s							
BDFB	**Brasilia**	**25.92**	**63**	P		**P**	**22 39 40.2**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=226,slow=9.1,SNR=4.3							
	comp=Z,2.2nm,0.7s							
SNAA	**Sanae**	**55.47**	**159**	P		**P**	**22 43 42.6**	**-0.2**
SNAA	**Sanae**	**55.47**	**159**	P		**P**	**22 43 43.1**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=315,slow=16,SNR=1.7							
	comp=Z,1.1nm,0.7s							
QSPA	**South Pole Qui**	**60.51**	**180**	P		**P**	**22 44 18.7**	**+0.4**
QSPA				IAmb		IAmb	22 44 46.6	
	comp=Z,1.0nm,0.9s							
QSPA	**South Pole Qui**	**60.51**	**180**	P		**P**	**22 44 19.0**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=172,slow=2.3,SNR=9.4							
	comp=Z,1.3nm,0.7s							
PDAR	**Pinedale Array**	**80.06**	**333**	P		**P**	**22 46 19.6**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=131,slow=6.7,SNR=4.8							
PDAR				LR		LR	23 20 03.4	
	comp=Z,34nm,18.9s,baz=40,slow=34							
	comp=Z,0.5nm,0.6s							
BOSA	**Boshof**	**81.86**	**118**	P		**P**	**22 46 27.6**	**-0.6**
TOA0	**Torodi Ar. Sit**	**82.53**	**70**	P		**P**	**22 46 31.4**	**-0.2**
TOA0				IAmb		IAmb	22 46 37.5	
	comp=Z,2.4nm,1.1s							
TORD	**Torodi Ar. Bea**	**82.53**	**70**	P		**P**	**22 46 31.2**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=285,slow=6.2,SNR=12							
	comp=Z,0.7nm,0.7s							
WRA	**Warramunga Arr**	**124.60**	**210**	PKP		**PKPdf**	**22 53 08.1**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=154,slow=1.5,SNR=17							
BVAR	**Borovoye Array**	**143.89**	**39**	PKP		**PKPdf**	**22 53 42.3**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=319,slow=5.7,SNR=5.7							
KURBB	**Kurchatov Arra**	**149.47**	**38**	PKPbc		**PKiKP**	**22 53 58.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=303,slow=3.0,SNR=8.4							
ZALV	**Zalesovo Beam**	**150.41**	**28**	PKPbc		**PKiKP**	**22 54 00.1**	**0.0**
	comp=Z,3.9nm,0.5s,baz=302,slow=3.1,SNR=26							
MKAR	**Makanchi Array**	**153.60**	**43**	PKPbc		**PKiKP**	**22 54 07.0**	**0.0**
	comp=Z,0.2nm,0.7s,baz=274,slow=2.2,SNR=2.0							

JMA ***24*** *22:40:48.6±0.5,35°N±1°×14°2E±°, h33km, MV3.4/34, FAR E OFF CENTRAL HONSHU*

IDC ***24*** *22:40:57.0±2.4,33°47N×138°65E, h0km, mb3.4/3, mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=90.2km s-min=26.4km az=76.0*

ISC 24 22:40:48.2±2.5,34°58N±0°07×142°3E±0°1,h23km±16km, n17,σ1°52/25,mb3.4/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.08**	**274**	P	**Pb**	**22 41 07.8**	**0.0**
BSO3	**Boso 3**	**1.48**	**279**	P	**Pb**	**22 41 14.7**	**0.0**
BSO4	**Boso 4**	**1.65**	**285**	P	**Pb**	**22 41 17.2**	**-0.7**
JKUC	**kamogawauchiur**	**1.81**	**289**	P	**Pn**	**22 41 19.1**	**+1.2**
JKUC				*e*S	**Sn**	**22 41 41.2**	**+1.1**
JMYK	**Miyake Tsubota**	**2.32**	**258**	P	**Pn**	**22 41 25.3**	**+0.4**
JMYK				S	**Sn**	**22 41 51.9**	**-0.8**
JMKN	**Mikurajimanish**	**2.33**	**254**	P	**Pn**	**22 41 25.5**	**+0.4**
JMKN				*e*S	**Sn**	**22 41 51.3**	**-1.7**
JIM2	**Oshima 3**	**2.35**	**274**	P	**Pn**	**22 41 25.8**	**+0.3**
JIM2				*e*S	**Sn**	**22 41 54.3**	**+0.7**
JHJ2	**Mitsune**	**2.52**	**235**	P	**Pn**	**22 41 28.6**	**+1.0**
JOD2	**Odawara 2**	**2.71**	**286**	P	**Pn**	**22 41 31.1**	**+0.7**
JOD2				S	**Sn**	**22 42 01.7**	**-0.7**
JAG	**Ashikaga**	**2.95**	**309**	P	**Pn**	**22 41 34.6**	**+1.0**
JRY	**Ryogami san**	**3.12**	**298**	P	**Pn**	**22 41 37.2**	**+1.3**
JYN	**Shimob**	**3.20**	**288**	P	**Pn**	**22 41 38.1**	**+1.0**
JYN				*e*S	**Sn**	**22 42 14.8**	**+0.2**
JOTO	**OTAMA OYAMA**	**3.37**	**333**	P	**Pn**	**22 41 40.2**	**+0.9**
JOTO				S	**Sn**	**22 42 16.8**	**-1.8**
MJAR	**Matsushiro Arr**	**3.85**	**302**	Pn	**Pn**	**22 41 47.1**	**+1.1**
	0.3nm,0.3s,baz=158,slow=12,SNR=18						
MJAR				Sn	**Sn**	**22 42 33.4**	**+2.7**
	0.3nm,0.3s,baz=33,slow=12,SNR=6.6						
	1.2nm,0.3s						
SONM	**Songino Array**	**29.79**	**307**	P	**P**	**22 46 49.0**	**-4.2**
	0.2nm,0.3s,baz=122,slow=10,SNR=1.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**48.09**	**310**	P	**P**	**22 49 27.2**	**+1.4**
	0.1nm,0.3s,baz=90,slow=9.7,SNR=1.4						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**54.74**	**189**	P	**P**	**22 50 17.5**	**+1.7**
	0.6nm,0.7s,baz=7.0,slow=7.6,SNR=7.9						
	0.6nm,0.7s						

IDC ***24*** *22:41:12.9±7.0,20°07S×178°82W, h615km±89km, mb2.7/5, mbtmp3.7/6, Error ellipse: s-maj=130.9km s-min=36.4km az=158.0*

ISC 24 22:41:16.7±2.2,20°1S±0°8×178°9W±0°4,h665km,n7, σ0°50/7,mb3.2/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.80**	**259**	P	**P**	**22 44 11.8**	**0.0**
	2.8nm,0.5s,baz=79,slow=19,SNR=2.1						
ASAR	**Alice Springs**	**43.77**	**256**	P	**P**	**22 48 26.9**	**0.0**
	0.6nm,0.8s,baz=92,slow=7.6,SNR=7.8						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**43.80**	**262**	P	**P**	**22 48 26.7**	**-0.4**
	0.4nm,0.4s,baz=96,slow=7.7,SNR=16						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**87.58**	**58**	P	**P**	**22 52 56.7**	**-0.2**
	0.4nm,0.7s,baz=228,slow=1.1,SNR=3.7						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**88.14**	**13**	P	**P**	**22 52 58.4**	**-0.2**
	0.2nm,0.4s,baz=215,slow=5.0,SNR=4.5						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**89.28**	**44**	P	**P**	**22 53 04.8**	**+0.1**
	0.3nm,0.6s,baz=172,slow=1.8,SNR=3.0						
	0.3nm,0.6s						
BRTR	**Keskin Array B**	**145.95**	**312**	PKPbc	**PKPbc**	**22 59 45.3**	**+0.9**
	0.4nm,0.7s,baz=110,slow=4.8,SNR=2.0						

IDC ***24*** *22:55:36.2±1.8,15°54S×128°27E, h0km, mb3.2/2, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=60.5km s-min=20.3km az=51.0*

NOU ***24*** *22:55:36.6,15°30S×128°53E, h0km, mb4.0/14, Western Australia*

AUST ***24*** *22:55:37.4±1.2,15°21S×128°51E, h10km, Error ellipse: s-maj=15.2km s-min=8.6km az=98.0*

ISC 24 22:55:37.3±0.8,15°30S±0°05×128°58E±0°07,h10km,n32, σ1°60/36,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNRA	**Kununurra**	**0.41**	**155**	P	**Pb**	**22 55 48.5**	**+1.7**
	baz=0.5						
KNRA				S	**Sb**	**22 55 55.4**	**+2.2**
	baz=0.5						
MTN	**Manton Dam**	**3.48**	**46**	P	**Pn**	**22 56 32.0**	**+0.5**
	baz=3.5,SNR=45						
MTN				S	**Sn**	**22 57 13.8**	**+1.0**
	baz=3.5						
MTN	**Manton Dam**	**3.48**	**46**	P	**Pn**	**22 56 32.2**	**+0.7**
DRS	**Darwin Rock St**	**3.63**	**39**	P	**Pn**	**22 56 35.2**	**+1.5**
FITZ	**Fitzroy Crossi**	**3.96**	**225**	P	**Pn**	**22 56 38.6**	**+0.4**
	baz=4.0,SNR=12						
KDU	**Kakadu**	**4.58**	**56**	P	**Pn**	**22 56 47.5**	**+0.8**
	baz=4.6,SNR=32						
KDU	**Kakadu**	**4.58**	**56**	P	**Pn**	**22 56 47.6**	**+0.8**
SOEI	**Soe**	**6.94**	**322**	P	**Pn**	**22 57 18.0**	**-1.2**
	baz=6.8						
WRA	**Warramunga Arr**	**7.17**	**131**	Pn	**Pn**	**22 57 22.6**	**+0.2**
	0.4nm,0.3s,baz=305,slow=14,SNR=7.2						
WRA				Sn	**Sn**	**22 58 39.7**	**-4.3**
	3.7nm,0.3s,baz=303,slow=25,SNR=11						
WRA				Lg	Lg	22 59 24.6	
	3.7nm,0.3s,baz=305,slow=28,SNR=6.4						
	0.5nm,0.4s						
WB2	**Warramunga Arr**	**7.18**	**131**	P	**Pn**	**22 57 23.4**	**+0.9**
	baz=7.3						
WRKA	**Warakurna**	**9.69**	**182**	P	**Pn**	**22 57 58.7**	**+1.8**
	baz=9.8,SNR=8.2						
WRKA	**Warakurna**	**9.69**	**182**	P	**Pn**	**22 57 58.8**	**+1.8**
ASPA	**Alice Springs**	**9.72**	**150**	P	**Pn**	**22 57 58.7**	**+1.4**
	baz=9.9						
ASAR	**Alice Springs**	**9.72**	**150**	Pn	**Pn**	**22 57 58.4**	**+1.1**
	0.5nm,0.3s,baz=319,slow=11,SNR=21						
ASAR				Sn	**Sn**	**22 59 42.2**	**-4.5**
	0.5nm,0.3s,baz=327,slow=25,SNR=5.0						
ASAR				Lg	Lg	23 00 44.3	
	1.2nm,0.3s,baz=326,slow=29,SNR=6.2						
	1.1nm,0.5s						
AS01	**Alice Springs**	**9.74**	**150**	P	**Pn**	**22 57 58.6**	**+1.0**
MBWA	**Marble Bar**	**10.23**	**234**	P	**Pn**	**22 58 04.2**	**-0.1**
QIS	**Mount Isa**	**11.72**	**118**	P	**Pn**	**22 58 24.9**	**+0.2**
	baz=12						
QIS	**Mount Isa**	**11.72**	**118**	P	**Pn**	**22 58 27.4**	**+2.6**
FAKI	**Fak Fak**	**12.82**	**17**	P	**Pn**	**22 58 38.7**	**-1.1**
	baz=13						
OOD	**Oodnadatta**	**14.08**	**153**	P	**Pn**	**22 58 56.4**	**-0.5**
	baz=14						
OOD	**Oodnadatta**	**14.08**	**153**	P	**Pn**	**22 58 56.3**	**-0.5**
COEN	**Coen**	**14.19**	**86**	P	**Pn**	**22 58 57.0**	**-1.5**
	baz=14						
COEN	**Coen**	**14.19**	**86**	P	**Pn**	**22 58 58.6**	**+0.1**
GIRL	**Giralia**	**15.40**	**240**	P	**Pn**	**22 59 14.3**	**-0.6**
FORT	**Forrest**	**15.42**	**182**	P	**Pn**	**22 59 13.1**	**-1.9**
	baz=16						
FORT	**Forrest**	**15.42**	**182**	P	**Pn**	**22 59 14.6**	**-0.4**
MULG	**Mulgathing**	**15.74**	**162**	P	**Pn**	**22 59 17.8**	**-1.4**
	baz=16						
INKA	**Innaminka**	**16.76**	**140**	P	**Pn**	**22 59 32.4**	**+0.2**
LCRK	**Leigh Creek**	**17.48**	**151**	P	**Pn**	**22 59 42.3**	**+1.0**
BBOO	**Buckleboo**	**18.71**	**160**	P	**P**	**22 59 56.4**	**+0.4**
STKA	**Stephens Creek**	**20.33**	**147**	P	**P**	**23 00 14.0**	**+0.2**
	0.8nm,0.4s,baz=322,slow=13,SNR=3.7						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**74.48**	**329**	P	**P**	**23 07 16.6**	**+0.7**
	0.1nm,0.3s,baz=130,slow=4.5,SNR=4.2						
	0.1nm,0.3s						

IDC ***24*** *23:00:32.2±3.5,6°96N×126°78E, h0km, mb3.4/3, mbtmp3.4/3, MS3.7/1, Error ellipse: s-maj=304.1km s-min=26.4km az=66.0*

ISC 24 23:00:47.1±1.3,6°27N±0°09×126°2E±0°1,h100km,n9, σ2°18/10,mb3.3/3,2C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.97**	**325**	LR	LR	23 01 04.4	
	comp=Z,42nm,20.9s,baz=284,slow=27						
KCP	**Kidapawan**	**1.28**	**305**	P	**Pn**	**23 01 13.1**	**+2.3**
KCP				*i* S	**Sn**	**23 01 30.4**	**+1.7**
BIPH	**Bislig**	**1.91**	**6**	*e*P	**Pn**	**23 01 20.2**	**+1.6**
BIPH				*e*S	**Sn**	**23 01 44.1**	**+1.6**
CGP	**Cagayan de Oro**	**2.60**	**326**	*e*P	**Pn**	**23 01 27.8**	**+0.2**
CGP				*e*S	**Sn**	**23 01 59.0**	**+0.3**
PLP	**Palo**	**5.00**	**347**	*e*P	**Pn**	**23 02 00.7**	**+0.8**
WRA	**Warramunga Arr**	**27.27**	**163**	P	**P**	**23 06 22.1**	**-0.1**
	0.2nm,0.5s,baz=346,slow=10,SNR=1.6						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**30.71**	**166**	P	**P**	**23 06 54.0**	**+1.3**
	0.2nm,0.3s,baz=337,slow=6.9,SNR=6.5						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.15**	**325**	P	**P**	**23 10 05.2**	**-4.1**
	0.2nm,0.3s,baz=117,slow=7.1,SNR=9.4						
	0.2nm,0.3s						
RPZ	**Rata Peaks**	**64.17**	**145**	LR	LR	23 37 38.8	
	comp=Z,56nm,21.8s,baz=260,slow=35						

TRN ***24*** *23:13:53.1,18°98N×64°70W, h3km, MD0.0, North of the Virgin Islands.*

NEIC ***24*** *23:13:55.7±1.1,19°1N±0°1×64°4W±0°1, h35km±2km, ML3.3/20, Md3.7/9(RSPR), Error ellipse: s-maj=23.1km s-min=15.0km az=157.0*

RSPR ***24*** *23:13:56.8,18°98N×64°36W, h51km±12km, MD3.7/9*

ISC 24 23:13:51.3±2.3,19°0N±0°2×64°38W±0°05,h0km±13km,n33, σ1°15/40,8C-3D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.62**	**240**	*e*P	**Pg**	**23 14 23.6**	**+1.2**
HUMP	**Col San Antoni**	**1.62**	**240**	*e*S	**Sn**	**23 14 42.4**	**-0.4**
HUMP	**Col San Antoni**	**1.62**	**240**		**Pg**	**23 14 23.1**	**+0.7**
HUMP					**Sn**	**23 14 42.6**	**-0.2**
HUMP				IAML		23 14 44.7	
	comp=E,476nm,0.2s						
HUMP				IAML		23 14 45.0	
	comp=N,527nm,0.3s						
GCPR	**Guaynabo City**	**1.75**	**248**	*e*P	**Pb**	**23 14 23.8**	**-0.4**
GCPR	**Guaynabo City**	**1.75**	**248**	*e*S	**Sn**	**23 14 45.3**	**-0.5**
GCPR	**Guaynabo City**	**1.75**	**248**		**Pb**	**23 14 23.6**	**-0.6**
GCPR					**Sn**	**23 14 44.8**	**-1.0**
EMPR	**Esperanza - Ma**	**2.10**	**257**	*e*P	**Pn**	**23 14 29.0**	**+1.3**
EMPR	**Esperanza - Ma**	**2.10**	**257**	*e*S	**Sn**	**23 14 54.2**	**-0.3**
EMPR	**Esperanza - Ma**	**2.10**	**257**		**Pn**	**23 14 28.6**	**+1.0**
EMPR					**Sn**	**23 14 53.8**	**-0.7**
EMPR				IAML		23 15 09.1	
	comp=N,318nm,0.8s						
CELP	**Cerrillos**	**2.27**	**247**	*e*P	**Pb**	**23 14 32.0**	**-1.2**
CELP	**Cerrillos**	**2.27**	**247**	*e*S	**Sn**	**23 14 58.4**	**-0.4**
CELP	**Cerrillos**	**2.27**	**247**		**Pn**	**23 14 31.5**	**+1.5**
CELP					**Sn**	**23 14 57.9**	**-0.9**
CELP				IAML		23 15 00.5	
	comp=E,118nm,0.6s						
CELP				IAML		23 15 07.9	
	comp=N,120nm,0.5s						
OBIP	**Obispado Ponce**	**2.31**	**247**	*e*P	**Pn**	**23 14 31.6**	**+1.0**
OBIP	**Obispado Ponce**	**2.31**	**247**		**Pn**	**23 14 31.3**	**+0.7**
OBIP				IAML		23 15 06.4	
	comp=E,148nm,0.7s						
OBIP				IAML		23 15 10.1	
	comp=N,162nm,0.5s						
UUPR	**Utuado, UPR, P**	**2.34**	**253**	*e*P	**Pn**	**23 14 32.2**	**+1.3**
UUPR	**Utuado, UPR, P**	**2.34**	**253**		**Pn**	**23 14 31.7**	**+0.8**
AOPR	**Arecibo Observ**	**2.34**	**255**	*e*P	**Pn**	**23 14 32.2**	**+1.3**
AOPR	**Arecibo Observ**	**2.34**	**255**	*e*S	**Sn**	**23 14 59.6**	**-0.8**
AOPR	**Arecibo Observ**	**2.34**	**255**		**Pn**	**23 14 31.8**	**+0.8**
AOPR					**Sn**	**23 15 01.4**	**+1.0**
AOPR	**Arecibo Observ**	**2.34**	**255**	*e*P	**Pn**	**23 14 31.8**	**+0.8**
AOPR				*e*S	**Sn**	**23 14 57.9**	**-2.6**
AGPR	**Aguadilla, PR**	**2.64**	**260**	*e*P	**Pn**	**23 14 36.6**	**+1.5**
AGPR	**Aguadilla, PR**	**2.64**	**260**		**Pn**	**23 14 35.1**	**0.0**
AGPR				IAML		23 15 32.9	
	comp=E,206nm,2.5s						
AGPR				IAML		23 15 42.2	
	comp=N,148nm,2.8s						
LSP	**Las Mesas**	**2.69**	**253**	*e*P	**Pn**	**23 14 37.3**	**+1.5**
LSP	**Las Mesas**	**2.69**	**253**		**Pn**	**23 14 37.3**	**+1.5**
MLPR	**Magueyes Islan**	**2.72**	**249**	*e*P	**Pn**	**23 14 37.3**	**+1.1**
MLPR	**Magueyes Islan**	**2.72**	**249**		**Pn**	**23 14 37.0**	**+0.8**
MLPR				IAML		23 15 18.3	
	comp=E,78nm,0.6s						
CRPR	**Cabo Rojo, PR**	**2.77**	**250**	*e*P	**Pn**	**23 14 38.5**	**+1.7**
CRPR	**Cabo Rojo, PR**	**2.77**	**250**		**Pn**	**23 14 38.4**	**+1.5**
MBFL	**Flemmings, Mon**	**3.02**	**137**	*e*P	**Pg**	**23 14 49.4**	**+0.2**
ANBD	**Bethesda, Anti**	**3.13**	**127**	*e*P	**Pb**	**23 14 48.4**	**+0.6**
ANBD				*e*S	**Sg**	**23 15 29.5**	**-2.5**
CBE	**Ff, Capester**	**3.91**	**137**	*e*S	**Sb**	**23 15 49.5**	**+0.5**
SDDR	**Presa de Saban**	**6.54**	**271**	Pn	**Pn**	**23 15 29.2**	**+0.4**
SDDR	**Presa de Saban**	**6.54**	**271**	*e*P	**Pn**	**23 15 28.7**	**-0.2**

TEH ***24*** *23:29:53.4,34°90N×45°86E, h10km±814km, ML2.5*

ISN ***24*** *23:29:54.9±1.9,34°92N×45°95E, h10km, ML2.7*

ISC 24 23:29:54.4±1.3,34°86N±0°07×45°88E±0°05,h10km,n6, σ1°12/8,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.42**	**214**	Pg	**Pg**	**23 30 01.9**	**-0.8**
KGS1				Sg	**Sg**	**23 30 10.0**	**+1.7**
IDHR	**Dehrash**	**0.45**	**110**	Pg	**Pg**	**23 30 02.8**	**-0.4**
IGHG	**Ghaleghazi**	**0.77**	**133**	Pg	**Pg**	**23 30 09.4**	**0.0**
ILIN	**Lien**	**0.89**	**86**	Pg	**Pg**	**23 30 11.7**	**0.0**
KCHF	**Cheshme Sefid,**	**1.12**	**121**	Pg	**Pg**	**23 30 15.5**	**-0.5**
IKRK	**Kirkuk**	**1.37**	**294**	*e*Pg	**Pn**	**23 30 19.0**	**-0.7**
	baz=110						
IKRK				*e*Sg	**Sg**	**23 30 40.0**	**+1.4**
IKRK				AML	AML	23 30 40.9	
	comp=N,165nm,0.4s						
IKRK				AML	AML	23 30 41.9	
	comp=E,118nm,0.4s						

IDC 24 23:40:38.1±2.4,2°15S×127°74E,h0km,mb3.3/2, mbtmp3.2/3,ML2.9/1,Error ellipse: s-maj=193.6km s-min=27.8km az=67.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.83**	**160**	P	P	23 44 59.5	-0.1
	baz=343,slow=12,SNR=2.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**22.21**	**165**	P	P	23 45 36.6	+0.3
	0.7nm,0.7s,baz=340,slow=7.9,SNR=7.8						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**62.96**	**327**	P	P	23 51 06.4	-0.2
	0.2nm,0.6s,baz=114,slow=8.4,SNR=4.1						
	0.2nm,0.6s						

GCMT 24 23:41:59.0±0.3,28°87S±0°02×12°33W±0°02,h17km±1km, MW4.9/102,Moment Tensor Solution. s31,c37; s102,c130; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.06±.10; $M_{\theta\theta}$-1.16±.11; $M_{\phi\phi}$1.22±.10; $M_{r\theta}$-0.88±.26; $M_{\theta\phi}$2.00±.07; $M_{\phi r}$-0.57±.24; **Best double couple:** $M_0$2.54400×10^{16} **NP1:**ϕ_s255.00000°,δ86.00000°, λ23.00000°. **NP2:**ϕ_s163.00000°,δ67.00000°,λ175.00000°. **Principal axes:** T 2.6830, Plg19.0000°, Azm122.0000°; N -0.2750, Plg67.0000°, Azm266.0000°; P -2.4060, Plg13.0000°, Azm27.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

ISK ***24*** *23:51:34.6,38°95N×26°26E, h10km, ML3.0/25*

AFAD ***24*** *23:51:34.2±0.0,38°93N×26°19E, h25km±1km, ML3.0*

ATH ***24*** *23:51:35.6,38°96N×26°28E, h10km±1km, ML2.9/6, Error ellipse: s-maj=1.8km s-min=0.9km az=113.0*

THE ***24*** *23:51:35.6,38°98N×26°27E, h1km±1km, ML2.9/10, Error ellipse: s-maj=1.3km s-min=0.5km az=238.0*

ISC 24 23:51:35.4±0.9,38°96N±0°02×26°27E±0°02,h12km±7km, n70,σ0°79/104,5C-4D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EAG3	**Mitilini, Lesv**	**0.27**	**61**	P	**Pg**	**23 51 40.9**	**0.0**
EAG3				S	**Sg**	**23 51 44.5**	**-0.2**
LESV	**Lesvos island,**	**0.27**	**56**	P	**Pg**	**23 51 40.9**	**-0.2**
LESV				S	**Sg**	**23 51 44.8**	**0.0**
	27µm,0.2s						
PRK	**Paraskevi**	**0.29**	**0**	P	**Pg**	**23 51 41.0**	**-0.4**
PRK				S	**Sg**	**23 51 45.9**	**+0.5**
	3µm,0.4s						
PRK	**Paraskevi**	**0.29**	**0**	P	**Pg**	**23 51 41.1**	**-0.4**
PRK				S	**Sg**	**23 51 45.2**	**-0.1**
PRK				AML	AML	23 51 46.9	
	comp=E,5854µm,0.4s						
PRK				AML	AML	23 51 50.1	
	comp=N,7760µm,0.4s						
SIGR	**SIGRI**	**0.41**	**309**	Pg	**Pg**	**23 51 43.4**	**-0.2**
SIGR				Sg	**Sg**	**23 51 49.5**	**+0.3**
SIGR	**SIGRI**	**0.41**	**309**	P	**Pg**	**23 51 43.5**	**-0.2**
SIGR				S	**Sg**	**23 51 49.4**	**+0.3**
	comp=N,2µm,0.3s						
SIGR	**SIGRI**	**0.41**	**309**	P	**Pg**	**23 51 43.5**	**-0.1**
SIGR				S	**Sg**	**23 51 49.0**	**-0.1**
SIGR				AML	AML	23 51 50.0	
	comp=E,3811µm,0.3s						
SIGR				AML	AML	23 51 52.6	
	comp=N,2335µm,0.3s						
CAND	**Candarli**	**0.41**	**90**	Pg	**Pg**	**23 51 43.8**	**+0.1**
CAND				Sg	**Sb**	**23 51 50.4**	**-0.6**
EAG2	**Marmaro, Chios**	**0.43**	**197**	P	**Pg**	**23 51 43.1**	**-0.8**
EAG2				S	**Sg**	**23 51 50.3**	**+0.7**
FOCM	**Foa**	**0.43**	**124**	Pg	**Pg**	**23 51 43.6**	**-0.4**
FOCM				Sg	**Sg**	**23 51 50.1**	**+0.4**
DKL	**Dikili**	**0.51**	**77**	Pg	**Pg**	**23 51 45.7**	**+0.3**
DKL				Sg	**Sg**	**23 51 52.6**	**+0.5**
GPNR	**Gulpinar-Canak**	**0.51**	**348**	Pg	**Pg**	**23 51 44.7**	**-0.8**
GPNR				Sg	**Sg**	**23 51 52.5**	**+0.2**
KOCA	**Canakkale, Ayv**	**0.56**	**349**	P	**Pg**	**23 51 45.8**	**-0.5**
KOCA				S	**Sg**	**23 51 54.4**	**+0.7**
CHOS	**Chios island**	**0.59**	**197**	P	**Pg**	**23 51 46.9**	**-0.1**
CHOS				S	**Sb**	**23 51 57.7**	**+1.5**
	comp=N,1µm,0.3s						
CHOS	**Chios island**	**0.59**	**197**	P	**Pg**	**23 51 46.9**	**-0.1**
CHOS				S	**Sb**	**23 51 56.0**	**-0.2**
CHOS				AML	AML	23 51 59.0	
	comp=E,3142µm,0.4s					

ENEZ	**Enez**	**1.78**	**357**	Pn	**Pn**	**23 52 06.2**	**+0.1**
ENEZ	**Enez**	**1.78**	**357**	P	**Pn**	**23 52 06.4**	**+0.3**
ENEZ				S	**Sb**	**23 52 30.1**	**-0.3**
	comp=E,358nm,0.6s						
KIRA	**zmir-Kiraz**	**1.83**	**114**	P	**Pn**	**23 52 07.2**	**+0.3**
KIRA				S	**Sg**	**23 52 33.4**	**-1.0**
MANT	**Manisa**	**1.85**	**104**	P	**Pn**	**23 52 07.1**	**-0.1**
MANT				S	**Sg**	**23 52 34.0**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.87**	**22**	Pn	**Pn**	**23 52 07.5**	**+0.2**
KULA	**Kula-Manisa**	**1.92**	**102**	P	**Pn**	**23 52 08.3**	**+0.2**
KULA				S	**Sb**	**23 52 34.4**	**0.0**
ALN	**Alexandroupoli**	**1.95**	**355**	Pn	**Pn**	**23 52 08.6**	**+0.2**
ALN	**Alexandroupoli**	**1.95**	**355**	P	**Pn**	**23 52 08.4**	**0.0**
ALN				S	**Sn**	**23 52 33.2**	**+0.4**
	comp=E,105nm,0.7s						
ALN	**Alexandroupoli**	**1.95**	**355**	P	**Pn**	**23 52 08.3**	**0.0**
ALN				S	**Sn**	**23 52 31.7**	**-1.0**
ALN				AML	AML	23 52 38.4	
	comp=N,221μm,0.8s						
ALN				AML	AML	23 52 38.7	
	comp=E,199μm,0.7s						
APE	**Apeiranthos**	**1.97**	**197**	P	**Pn**	**23 52 07.6**	**-1.2**
ESEN	**Aydn-Nazilli**	**2.00**	**125**	P	**Pn**	**23 52 08.9**	**-0.1**
ESEN				S	**Sb**	**23 52 36.8**	**+0.2**
UKOP	**Uzunkopru-Edir**	**2.19**	**7**	Pn	**Pn**	**23 52 12.2**	**+0.5**
PAIG	**Paliouri**	**2.23**	**297**	Pn	**Pn**	**23 52 12.1**	**-0.1**
PAIG	**Paliouri**	**2.23**	**297**	P	**Pn**	**23 52 11.8**	**-0.4**
OUR	**Ouranopolis**	**2.24**	**309**	Pn	**Pn**	**23 52 12.3**	**-0.1**
OUR	**Ouranopolis**	**2.24**	**309**	P	**Pn**	**23 52 12.6**	**+0.2**
RDO	**Rodhopi**	**2.26**	**346**	Pn	**Pn**	**23 52 13.1**	**+0.4**
RDO	**Rodhopi**	**2.26**	**346**	P	**Pn**	**23 52 13.0**	**+0.4**
RDO	**Rodhopi**	**2.26**	**346**	P	**Pn**	**23 52 12.8**	**+0.2**
KAVA	**Kavala**	**2.45**	**327**	P	**Pn**	**23 52 15.1**	**-0.1**
HORT	**Hortiatis**	**2.94**	**305**	Pn	**Pn**	**23 52 22.2**	**+0.1**
ELND	**Elena**	**3.98**	**356**	⇑P	**Pn**	**23 52 36.8**	**+0.4**
PLVB	**Pleven**	**4.60**	**345**	⇑P	**Pn**	**23 52 46.0**	**+1.2**
BLKB	**Belogradchik**	**5.39**	**331**	⇑P	**Pn**	**23 52 57.2**	**+1.4**
MLR	**Muntele Rosu**	**6.54**	**358**	⇓P	**Pn**	**23 53 13.2**	**+1.6**
MDVR	**Moldovita**	**6.74**	**331**	⇓P	**Pn**	**23 53 12.6**	**-1.6**
PLOR	**Plostina**	**6.90**	**2**	⇑P	**Pn**	**23 53 14.2**	**-2.2**
VRI	**Vrincioaia**	**6.92**	**3**	⇑P	**Pn**	**23 53 17.7**	**+1.1**
GZR	**Gura Zlata**	**6.94**	**339**	⇓P	**Pn**	**23 53 18.6**	**+1.7**
SURR	**Surduc**	**7.46**	**337**	⇓P	**Pn**	**23 53 28.3**	**+4.3**

IDC ***25*** *00:11:25.1±1.0, 18°.94N×147°.31E, h0km, mb3.8/12, mbtmp3.9/13, ML4.1/1, MS3.6/4, Error ellipse: s-maj=31.1km s-min=18.1km az=96.0*
NEIC ***25*** *00:11:27.8±0.9, 18°.87N±0°.07×147°.2E±0°.2, h10km±2km, mb4.2/10, Error ellipse: s-maj=33.0km s-min=4.5km az=110.0*
ISC 25 00:11:27.3±0.9, 18°.97N±0°.09×147°.3E±0°.2, h10km, n31, σ0s68/28, mb4.1/17, MS3.6/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.82**	**204**	Pn	**Pn**	**00 12 52.8**	**-0.9**
GUMO	**Guam**	**5.82**	**204**	Pn	**Pn**	**00 12 54.8**	**+1.1**
	5.2nm,0.3s,baz=225,slow=2.9,SNR=1.4						
GUMO				Sn	**Sn**	**00 14 01.7**	**+1.1**
	4.3nm,0.3s,baz=29,slow=19,SNR=1.4 42nm,0.7s						
JGF	**Kuroka**	**18.74**	**334**	P	**P**	**00 15 47.0**	**+0.7**
KSRS	**Korea Array**	**25.00**	**321**	P	**P**	**00 16 51.7**	**+0.4**
	2.6nm,0.7s,baz=146,slow=9.0,SNR=7.9 2.6nm,0.7s						
WRA	**Warramunga Arr**	**40.70**	**199**	P	**P**	**00 19 07.3**	**-0.9**
	0.7nm,0.8s,baz=20,slow=8.7,SNR=3.4 0.7nm,0.8s						
SONM	**Songino Array**	**43.87**	**320**	P	**P**	**00 19 34.3**	**+0.3**
SONM				IAmb	IAmb	00 19 35.3	
	comp=Z,2.3nm,1.1s						
SONM	**Songino Array**	**43.87**	**320**	P	**P**	**00 19 34.0**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=134,slow=9.7,SNR=7.3 comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**44.34**	**198**	P	P	00 19 35.9	-1.9
	comp=Z,0.3nm,0.7s,baz=24,slow=9.4,SNR=2.7 comp=Z,0.3nm,0.7s						
LEM	**Lembang**	**46.73**	**240**	LR	LR	00 38 49.6	
	comp=Z,62nm,21.0s,baz=182,slow=35						
C16K	**Lisburne Hills**	**57.42**	**19**	P	**P**	**00 21 16.8**	**+1.1**
ZALV	**Zalesovo Beam**	**58.71**	**322**	P	**P**	**00 21 24.8**	**-0.2**
ZALV	**Zalesovo Beam**	**58.71**	**322**	P	**P**	**00 21 24.6**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=110,slow=6.8,SNR=4.8 comp=Z,0.7nm,0.7s						
G19K	**Purcell Mounta**	**59.18**	**23**	P	**P**	**00 21 28.9**	**+0.8**
MKAR	**Makanchi Array**	**59.34**	**314**	P	**P**	**00 21 29.8**	**+0.1**
MKAR	**Makanchi Array**	**59.34**	**314**	P	**P**	**00 21 29.1**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=94,slow=9.9,SNR=9.0						
MKAR				LR	LR	00 48 29.0	
	comp=Z,36nm,18.1s,baz=244,slow=37 comp=Z,0.7nm,0.8s						
MAKZ	**Makanchi**	**59.56**	**314**	P	**P**	**00 21 31.1**	**0.0**
MAKZ				IAmb	IAmb	00 21 32.6	
	comp=Z,3.0nm,1.1s						
CAST	**Castle Rocks**	**60.18**	**27**	P	**P**	**00 21 35.7**	**+0.6**
CAST				IAmb	IAmb	00 21 47.7	
	comp=Z,5.4nm,1.4s						
BPAW	**Bear Paw Mtn.**	**60.85**	**26**	P	**P**	**00 21 41.1**	**+1.4**
NRIK	**Noril'sk**	**61.87**	**340**	P	**P**	**00 21 46.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=85,slow=7.5,SNR=3.9 comp=Z,0.5nm,0.3s						
KURK	**Kurchatov**	**62.06**	**318**	P	**P**	**00 21 48.7**	**+0.7**
KURK				IAmb	IAmb	00 21 54.8	
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**62.11**	**318**	P	**P**	**00 21 48.2**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=95,slow=7.4,SNR=26 comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	**62.75**	**26**	P	**P**	**00 21 52.0**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=261,slow=5.1,SNR=11 comp=Z,1.1nm,0.9s						
BVAR	**Borovoye Array**	**67.21**	**320**	P	**P**	**00 22 21.6**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=84,slow=7.6,SNR=12 comp=Z,2.2nm,0.7s						
KK31	**Karatay Array**	**67.74**	**310**	P	**P**	**00 22 24.4**	**-0.8**
KK31				IAmb	IAmb	00 22 26.5	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	**67.74**	**310**	P	**P**	**00 22 25.2**	**0.0**
DLBC	**Dease Lake**	**70.25**	**34**	LR	LR	00 49 51.8	
	comp=Z,45nm,21.7s,baz=94,slow=33						
BBB	**Bella Bella**	**71.99**	**40**	LR	LR	00 46 22.3	
	comp=Z,49nm,21.7s,baz=272,slow=29						
ABKAR	**Akbulak array**	**74.15**	**317**	P	**P**	**00 23 03.8**	**-0.2**
ABKAR	**Akbulak array**	**74.15**	**317**	P	**P**	**00 23 03.9**	**-0.1**
ABKAR				IAmb	IAmb	00 23 12.4	
	comp=Z,2.6nm,1.4s						
YKA	**Yellowknife Ar**	**77.05**	**28**	P	**P**	**00 23 20.3**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=288,slow=5.4,SNR=8.3 comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**87.25**	**336**	P	**P**	**00 24 13.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=45,slow=4.1,SNR=1.4 comp=Z,0.9nm,0.8s						

NOU ***25*** *00:13:03.2, 37°.34S×179°.48E, h0km, MLv3.9/6, Off E. Coast of N. Island, N.Z.*
WEL ***25*** *00:13:11.2±0.9, 37°.5±.5°×179°.9E±°, h21km±5km, M3.3/17, ML3.5/19, MLv3.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=53.9, confirmed*
ISC 25 00:13:10.2±2.7, 37°.35S±0°.08×179°.0E±0°.1, h27km±13km, n67, σ1s02/80, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.55**	**248**	P	**Pn**	**00 13 21.5**	**-0.8**
MXZ	**Matakaoa Point**	**0.55**	**248**	P	**Pn**	**00 13 21.4**	**-0.8**
MXZ				S	**Sb**	**00 13 28.5**	**-0.3**
WMGZ	**Waiomatatini S**	**0.63**	**222**	P	**Pn**	**00 13 24.2**	**+0.8**
WMGZ				S	**Sn**	**00 13 33.0**	**+0.5**
PKGZ	**Pakihiroa**	**0.87**	**232**	P	**Pb**	**00 13 27.2**	**+0.4**
PKGZ				S	**Sb**	**00 13 38.4**	**+0.3**
PUZ	**Puketiti**	**0.90**	**217**	P	**Pb**	**00 13 27.9**	**+0.7**
PUZ				S	**Sn**	**00 13 40.6**	**+1.2**
HAZ	**Te Kaha**	**1.01**	**246**	P	**Pb**	**00 13 28.5**	**-0.5**
HAZ				S	**Sn**	**00 13 41.7**	**-0.2**
TWGZ	**Tauwhareparae**	**1.12**	**223**	P	**Pb**	**00 13 31.0**	**0.0**
TWGZ				S	**Sn**	**00 13 45.4**	**+0.6**
RUGZ	**Raukumara Rang**	**1.18**	**238**	P	**Pb**	**00 13 32.0**	**0.0**
RUGZ				S	**Sn**	**00 13 46.8**	**+0.5**
CNGZ	**Carnagh Statio**	**1.27**	**207**	P	**Pb**	**00 13 33.5**	**0.0**
TKGZ	**Te Karaka**	**1.39**	**218**	P	**Pb**	**00 13 34.2**	**-1.2**
WIZ	**White Island**	**1.41**	**262**	P	**Pn**	**00 13 33.9**	**-0.2**
WIZ				S	**Sn**	**00 13 51.8**	**+0.1**
MWZ	**Matawai**	**1.49**	**228**	P	**Pb**	**00 13 35.7**	**-1.5**
MWZ				S	**Sb**	**00 13 57.8**	**+2.0**
RIGZ	**Rimuhau**	**1.64**	**214**	P	**Pn**	**00 13 37.5**	**+0.1**
RIGZ				S	**Sn**	**00 13 56.7**	**-0.9**
WHRZ	**Whale Island**	**1.65**	**252**	P	**Pb**	**00 13 38.4**	**-1.4**
WHRZ				S	**Sn**	**00 13 58.1**	**+0.4**
RAGZ	**Rawiri**	**1.66**	**226**	P	**Pb**	**00 13 38.6**	**-1.6**
URZ	**Urewera**	**1.71**	**238**	P	**Pb**	**00 13 39.3**	**-1.7**
URZ	**Urewera**	**1.71**	**238**	P	**Pb**	**00 13 39.1**	**-1.9**
URZ				S	**Sn**	**00 13 59.8**	**+0.6**
PRGZ	**Paritu Road**	**1.78**	**208**	P	**Pn**	**00 13 39.4**	**+0.2**
EDRZ	**Edgecumbe**	**1.91**	**246**	P	**Pb**	**00 13 42.8**	**-1.5**
EDRZ				S	**Sn**	**00 14 04.4**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.98**	**204**	P	**Pn**	**00 13 42.2**	**+0.3**
RTZ	**Ruatahuna**	**2.00**	**230**	P	**Pn**	**00 13 43.2**	**+0.9**
TARZ	**Mount Tarawera**	**2.12**	**245**	P	**Pn**	**00 13 45.2**	**+1.2**
RRRZ	**Republican Roa**	**2.16**	**242**	P	**Pb**	**00 13 45.9**	**-2.7**
TGRZ	**Tauranga**	**2.17**	**259**	P	**Pn**	**00 13 45.1**	**+0.5**
MTHZ	**Maungataniwha**	**2.24**	**227**	P	**Pn**	**00 13 46.3**	**+0.8**
NMHZ	**Naumai**	**2.42**	**223**	P	**Pn**	**00 13 49.1**	**+1.0**
ARHZ	**Aropaoanui**	**2.45**	**218**	P	**Pn**	**00 13 48.5**	**+0.1**
MRHZ	**Matea Rd**	**2.48**	**233**	P	**Pn**	**00 13 49.5**	**+0.6**
BKZ	**Black Stump Fm**	**2.65**	**226**	P	**Pn**	**00 13 51.1**	**-0.1**
BKZ	**Black Stump Fm**	**2.65**	**226**	P	**Pn**	**00 13 51.3**	**+0.1**
MCHZ	**McNeill Hill**	**2.74**	**220**	P	**Pn**	**00 13 52.2**	**-0.1**
TOZ	**Tahuroa Road**	**2.76**	**261**	P	**Pn**	**00 13 52.9**	**+0.2**
KWHZ	**Kaweka Forest**	**2.87**	**223**	P	**Pn**	**00 13 53.8**	**-0.4**
KAHZ	**Kahuranaki**	**2.93**	**213**	P	**Pn**	**00 13 54.0**	**-1.0**
GRZ	**Great Barrier**	**3.01**	**290**	P	**Pn**	**00 13 56.1**	**0.0**
MKAZ	**Moumakai**	**3.03**	**274**	P	**Pn**	**00 13 56.4**	**0.0**
KRHZ	**Kereru**	**3.05**	**221**	P	**Pn**	**00 13 55.5**	**-1.2**
WIAZ	**Waiheke Island**	**3.10**	**279**	P	**Pn**	**00 13 57.4**	**0.0**
TMVZ	**Te Maari**	**3.10**	**234**	P	**Pn**	**00 13 57.6**	**-1.0**
ETVZ	**East Tongariro**	**3.11**	**234**	P	**Pn**	**00 13 57.7**	**+0.1**
NTVZ	**North Tongarir**	**3.11**	**235**	P	**Pn**	**00 13 57.9**	**+0.3**
BHHZ	**Black Hill Sta**	**3.11**	**226**	P	**Pn**	**00 13 57.5**	**-0.1**
PXZ	**Pawanui**	**3.13**	**211**	P	**Pn**	**00 13 56.0**	**-1.8**
NNVZ	**North Ngauruho**	**3.17**	**235**	P	**Pn**	**00 13 59.0**	**+0.5**
WTVZ	**West Tongariro**	**3.17**	**235**	P	**Pn**	**00 13 59.0**	**+0.5**
SNVZ	**South Ngauruho**	**3.18**	**234**	P	**Pn**	**00 13 58.7**	**0.0**
NGZ	**Ngauruhoe**	**3.20**	**234**	P	**Pn**	**00 13 59.0**	**+0.1**
ETAZ	**East Tamaki Re**	**3.24**	**276**	P	**Pn**	**00 13 59.6**	**+0.4**
MOVZ	**Moawhango**	**3.24**	**230**	P	**Pn**	**00 13 59.3**	**-0.1**
FWVZ	**Far West T-bar**	**3.28**	**234**	P	**Pn**	**00 13 60.0**	**0.0**
WNVZ	**Wahianoa**	**3.29**	**232**	P	**Pn**	**00 13 59.7**	**-0.4**
MBAZ	**Motutapu North**	**3.29**	**279**	P	**Pn**	**00 14 01.0**	**+1.1**
PNHZ	**Pukenui**	**3.34**	**219**	P	**Pn**	**00 13 59.4**	**-1.3**
HIZ	**Hauiti**	**3.44**	**249**	P	**Pn**	**00 14 03.4**	**+1.5**
HIZ	**Hauiti**	**3.44**	**249**	P	**Pn**	**00 14 03.4**	**+1.5**
AWAZ	**Awhitu Peninsu**	**3.45**	**274**	P	**Pn**	**00 14 03.3**	**+1.1**
RVAZ	**Riverhead Bore**	**3.54**	**278**	P	**Pn**	**00 14 04.8**	**+1.4**
TSZ	**Takapari Road**	**3.57**	**220**	P	**Pn**	**00 14 02.2**	**-1.7**
WAZ	**Wanganui**	**3.92**	**231**	P	**Pn**	**00 14 08.2**	**-0.5**
WCZ	**Waipu Caves**	**3.96**	**289**	P	**Pn**	**00 14 09.8**	**+0.6**
KHEZ	**Kahui Hut**	**4.34**	**242**	P	**Pn**	**00 14 16.0**	**+1.6**
KHEZ	**Kahui Hut**	**4.34**	**242**	P	**Pn**	**00 14 16.8**	**+2.4**
TRWZ	**Traveller**	**4.76**	**211**	P	**Pn**	**00 14 20.8**	**+0.6**
OUZ	**Omahuta**	**4.82**	**295**	P	**Pn**	**00 14 22.1**	**+1.2**
OUZ	**Omahuta**	**4.82**	**295**	P	**Pn**	**00 14 22.2**	**+1.2**
QRZ	**Quartz Range**	**6.08**	**233**	P	**Pn**	**00 14 36.4**	**-1.9**
CTZ	**Chatham Island**	**7.21**	**153**	P	**Pn**	**00 14 55.7**	**+1.9**

SJA ***25*** *00:21:50.1±0.7, 31°.59S×71°.77W, h16km±2km, ML4.0, MW3.8*
NEIC ***25*** *00:21:54.9±1.6, 31°.56S±0°.04×71°.5W±0°.1, h52km±7km, mb4.3/7, Mwr3.9/19, Error ellipse: s-maj=13.7km s-min=5.6km az=98.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}7.54; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-7.28; $M_{r\theta}$1.55; $M_{\theta\phi}$1.94; $M_{\phi r}$-5.02; Fault plane solution: $M_0$9.29000×10^{14} NP1:ϕ_s164.01000°, δ62.23000°, λ88.50000°. NP2:ϕ_s347.23000°, δ27.81000°, λ92.84000°. Principal axes: T 9.1683, Plg73.0000°, Azm70.0000°; N 0.2396, Plg1.0000°, Azm165.0000°; P -9.4079, Plg17.0000°, Azm255.0000°;*
GUC ***25*** *00:21:54.4±0.8, 31°.59S×71°.46W, h50km±3km, ML4.0*
NEIC ***25*** *00:21:54.8, 31°.55S×71°.53W, h52km*
IDC ***25*** *00:21:55.5±3.2, 31°.64S×71°.35W, h52km±25km, mb3.8/5, mbtmp3.9/9, ML3.5/4, Error ellipse: s-maj=45.1km s-min=17.4km az=104.0*
ISC 25 00:21:53.6±0.8, 31°.56S±0°.03×71°.64W±0°.05, h43km±8km, n118, σ2s09/144, mb4.3/7, 9C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.65**	**57**		**Pn**	**00 22 06.5**	**-0.1**
CO02					**Sn**	**00 22 14.9**	**-1.0**
CO02	**Combarbal**	**0.65**	**57**	*eP*	**Pn**	**00 22 05.5**	**-1.1**
CO02				*eS*	**Sn**	**00 22 15.6**	**-0.3**
CO02				IAML		00 22 15.7	
	comp=Z,20μm,0.1s						
CO02	**Combarbal**	**0.65**	**57**	⇓*iP*	**Pn**	**00 22 06.5**	**-0.1**
CO02				*i* S	**Sn**	**00 22 14.9**	**-1.0**
CO06	**Fray Jorge**	**0.89**	**0**		**Pn**	**00 22 11.1**	**+1.4**
CO06	**Fray Jorge**	**0.89**	**0**	⇑*iP*	**Pn**	**00 22 11.2**	**+1.5**
VA06	**Catapilco**	**1.03**	**164**		**Pn**	**00 22 11.7**	**0.0**
VA06	**Catapilco**	**1.03**	**164**	⇑*iP*	**Pn**	**00 22 11.9**	**+0.2**
VA06				IAML		00 22 27.2	
	comp=E,7μm,0.2s						
CO03	**El Pedregal**	**1.09**	**49**		**Pn**	**00 22 12.6**	**+0.1**
CO03				Sn	**Sn**	**00 22 25.7**	**-0.7**
CO03	**El Pedregal**	**1.09**	**49**	*eP*	**Pn**	**00 22 12.6**	**+0.1**
CO03				*eS*	**Sn**	**00 22 26.8**	**+0.4**
CO03				IAML		00 22 27.2	
	comp=Z,2μm,0.3s						
CO03	**El Pedregal**	**1.09**	**49**	⇓*iP*	**Pn**	**00 22 12.6**	**+0.1**
CO03				*i* S	**Sn**	**00 22 25.8**	**-0.6**
CO03				IAML		00 22 28.3	
	comp=E,6μm,0.4s						
VA01	**Torpederas**	**1.45**	**180**		**Pn**	**00 22 18.4**	**+1.0**
VA01	**Torpederas**	**1.45**	**180**	*eP*	**Pn**	**00 22 18.6**	**+1.2**
VA01				*eP*		00 22 18.7	
VA01				*eS*	**Sn**	**00 22 39.4**	**+4.1**
VA01	**Torpederas**	**1.45**	**180**	⇑*eP*	**Pn**	**00 22 18.5**	**+1.0**
ROCH	**El Roble**	**1.50**	**160**	*eP*	**Pn**	**00 22 18.9**	**+0.6**
ROCH				*i* S	**Sn**	**00 22 37.5**	**+0.8**
ROCH				IAML		00 22 40.5	
	comp=N,4μm,0.5s						
VA03	**San Esteban**	**1.51**	**143**		**Pn**	**00 22 18.4**	**+0.1**
VA03	**San Esteban**	**1.51**	**143**	*eP*	**Pn**	**00 22 18.7**	**+0.4**
VA03				*eS*	**Sn**	**00 22 37.2**	**+0.4**
VA03				*eS*		00 22 38.3	
VA03				IAML		00 22 40.6	
	comp=Z,2μm,0.5s						
VA03	**San Esteban**	**1.51**	**143**	⇓*iP*	**Pn**	**00 22 18.4**	**+0.1**
VA03				*i* S	**Sn**	**00 22 36.6**	**-0.2**
VA03				IAML		00 22 38.7	
	comp=E,6μm,0.2s						
GO04	**Tololo Observa**	**1.56**	**28**		**Pn**	**00 22 20.3**	**+1.2**
GO04	**Tololo Observa**	**1.56**	**28**	*eP*	**Pn**	**00 22 15.7**	**-3.4**
GO04				*eP*		00 22 20.6	
GO04				*eS*	**Sn**	**00 22 40.8**	**+2.5**
GO04				*eS*		00 22 41.8	
GO04				IAML		00 22 43.6	
	comp=Z,3μm,0.3s						
GO04	**Tololo Observa**	**1.56**	**28**	*eP*	**Pn**	**00 22 20.5**	**+1.3**
GO04				*i* S	**Sn**	**00 22 39.6**	**+1.3**
CO05	**La Serena**	**1.68**	**12**		**Pn**	**00 22 22.0**	**+1.5**
CO05	**La Serena**	**1.68**	**12**	*eP*	**Pn**	**00 22 22.4**	**+1.9**
MT02	**Curacav**	**1.74**	**166**		**Pn**	**00 22 22.2**	**+0.8**
MT02	**Curacav**	**1.74**	**166**	*eP*	**Pn**	**00 22 22.2**	**+0.8**
MT02				*eS*	**Sn**	**00 22 45.5**	**+3.1**
MT02	**Curacav**	**1.74**	**166**	⇑*eP*	**Pn**	**00 22 22.2**	**+0.8**
PEL	**Peldehue**	**1.77**	**153**		**Pn**	**00 22 22.5**	**+0.7**
PEL	**Peldehue**	**1.77**	**153**	⇑*eP*	**Pn**	**00 22 22.5**	**+0.7**
PEL				*i* S	**Sn**	**00 22 44.1**	**+0.9**
PEL				IAML		00 22 46.2	
	comp=E,2μm,0.3s						
MT10	**Hacienda Santa**	**1.94**	**152**	*eP*	**Pn**	**00 22 24.9**	**+0.6**
MT10				*i* S	**Sn**	**00 22 48.1**	**+0.6**
MT10				IAML		00 22 50.2	
	comp=E,3μm,0.3s						
MT05	**Renca**	**1.97**	**158**		**Pn**	**00 22 25.7**	**+1.0**
MT05	**Renca**	**1.97**	**158**	*eP*	**Pn**	**00 22 25.3**	**+0.7**
MT05				*eS*	**Sn**	**00 22 51.5**	**+3.3**
MT05				IAML		00 22 56.6	
	comp=Z,1μm,0.3s						
MT05	**Renca**	**1.97**	**158**	⇑*eP*	**Pn**	**00 22 25.9**	**+1.2**
MT05				*i* S	**Sn**	**00 22 49.0**	**+0.8**
MT05				IAML		00 22 52.2	
	comp=E,3μm,0.5s						
MT05				IAML		00 22 56.5	
	comp=N,2μm,0.2s						
RTLS	**Leoncito**	**2.01**	**97**	*eP*	**Pn**	**00 22 26.8**	**+1.5**
RTLS				*eP*		00 22 27.0	
RTLS				*eS*	**Sn**	**00 22 53.6**	**+4.3**
RTLS				*eS*		00 22 54.6	
RTLS				IAML		00 22 55.0	
	comp=Z,949nm,0.3s						
MT14	**Cerro Cal¡n**	**2.05**	**153**	*eP*	**Pn**	**00 22 26.8**	**+1.1**
MT14				*i* S	**Sn**	**00 22 50.2**	**+0.1**
MT14				IAML		00 22 55.9	
	comp=E,2μm,0.6s						
CO01	**Juntas del Tor**	**2.06**	**40**		**Pn**	**00 22 28.0**	**+1.9**
CO01	**Juntas del Tor**	**2.06**	**40**	*eP*	**Pn**	**00 22 27.9**	**+1.9**
CO01				*eS*	**Sn**	**00 22 53.6**	**+2.9**
CO01				IAML		00 22 56.6	
	comp=Z,1μm,0.5s						
CO01	**Juntas del Tor**	**2.06**	**40**	⇓*iP*	**Pn**	**00 22 27.9**	**+1.9**
CO01				*i* S	**Sn**	**00 22 52.0**	**+1.3**
CO01				IAML		00 22 54.7	
	comp=E,2μm,0.5s						
MT16	**CCHEN**	**2.08**	**153**		**Pn**	**00 22 27.0**	**+0.9**
VA05	**Santo Domingo**	**2.09**	**180**		**Pn**	**00 22 27.4**	**+1.3**
VA05	**Santo Domingo**	**2.09**	**180**	*eP*	**Pn**	**00 22 27.1**	**+1.0**
VA05				IAML		00 23 01.3	
	comp=E,2μm,0.3s						
FCH	**Farellones**	**2.09**	**147**	⇑*eP*	**Pn**	**00 22 27.1**	**+0.6**
MT03	**Universidad Ad**	**2.15**	**154**		**Pn**	**00 22 28.0**	**+0.9**
MT03	**Universidad Ad**	**2.15**	**154**	*eP*	**Pn**	**00 22 27.9**	**+0.9**
MT03				*eS*	**Sn**	**00 22 56.1**	**+3.6**
MT03				IAML		00 23 08.8	
	comp=Z,796nm,0.1s						
MT04	**Ro Olivares**	**2.23**	**146**	*eP*	**Pn**	**00 22 29.8**	**+1.5**
MT15	**Las Vizcachas**	**2.24**	**155**	*eP*	**Pn**	**00 22 29.7**	**+1.3**
DOCA	**Reserva Natura**	**2.27**	**75**	*eP*	Pn	00 22 12.7	-16
DOCA				*eP*		00 22 30.4	
DOCA				*eS*	**Sn**	**00 23 02.3**	**+6.4**
DOCA				IAML		00 23 05.5	
	comp=Z,339nm,0.3s						
MT09	**Talagante**	**2.27**	**166**		**Pn**	**00 22 30.1**	**+1.3**
MT09	**Talagante**	**2.27**	**166**	*eP*	**Pn**	**00 22 30.3**	**+1.5**
MT09				*i* S	**Sn**	**00 22 56.7**	**+1.0**
MT09				IAML		00 23 04.2	
	comp=N,965nm,0.4s						
MT01	**Popeta**	**2.32**	**172**		**Pn**	**00 22 30.6**	**+1.3**
MT01	**Popeta**	**2.32**	**172**	*eP*	**Pn**	**00 22 30.0**	**+0.7**
MT01				*eS*	**Sn**	**00 22 59.5**	**+2.9**
MT01				IAML		00 23 08.3	
	comp=Z,663nm,0.5s						
MT01	**Popeta**	**2.32**	**172**	*eP*	**Pn**	**00 22 30.5**	**+1.2**
AROD	**Rodeo**	**2.32**	**54**	*eP*	**Pn**	**00 22 32.7**	**+3.0**
AROD				*eS*	**Sn**	**00 23 03.3**	**+6.1**
MT12	**Pirque**	**2.35**	**157**	*eP*	**Pn**	**00 22 31.1**	**+1.3**
ACCO	**Cerro Coronel**	**2.41**	**67**	*eP*	**Pn**	**00 22 33.9**	**+3.0**
ACCO				*eS*	Sn	00 23 07.4	+8.0
MT13	**San Alfonso**	**2.45**	**153**		**Pn**	**00 22 32.3**	**+1.0**
MT13	**San Alfonso**	**2.45**	**153**	*eP*	**Pn**	**00 22 33.0**	**+1.7**
MT13				*i* S	**Sn**	**00 23 01.4**	**+1.2**
BO04	**La Punta**	**2.57**	**161**		**Pn**	**00 22 33.0**	**+0.2**
BO04	**La Punta**	**2.57**	**161**	*eP*	**Pn**	**00 22 34.1**	**+1.4**
BO04				*i* S	**Sn**	**00 23 03.8**	**+1.0**
BO04				IAML		00 23 11.3	
	comp=E,592nm,0.1s						
LMEL	**Las Melosas

comp=Z,2.8nm,0.7s,baz=240,slow=14,SNR=3.7
comp=Z,2.8nm,0.7s
TOA0 Torodi Ar. Sit 83.06 70 P **P** **00 34 14.6 -0.4**
TOA0 IAmb IAmb 00 34 15.7
comp=Z,3.7nm,0.9s
TORD Torodi Ar. Bea 83.06 70 P **P** **00 34 14.8 -0.2**
TORD IAmb IAmb 00 34 15.7
comp=Z,1.7nm,0.8s
TORD Torodi Ar. Bea 83.06 70 P **P** **00 34 14.7 -0.4**
comp=Z,1.3nm,0.8s,baz=273,slow=5.3,SNR=6.6
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 123.05 209 PKP **PKPdf** **00 40 45.7 -0.3**
comp=Z,0.2nm,0.6s,baz=169,slow=1.6,SNR=7.9
H11S2 WAKE ISLAND Hyl 26.11 271 T T 02 59 51.0
baz=117,slow=75
H11S1 WAKE ISLAND Hyl 26.13 271 T T 02 59 50.1
baz=117,slow=75
H11S3 WAKE ISLAND Hyl 26.13 271 T T 02 59 52.7
baz=117,slow=75
H11N3 WAKE ISLAND Hyl 26.47 272 T T 03 00 14.5
baz=116,slow=74
H11N1 WAKE ISLAND Hyl 26.48 272 T T 03 00 16.1
baz=116
H11N2 WAKE ISLAND Hyl 26.48 272 T T 03 00 09.1
baz=116,slow=74
BVAR Borovoye Array 145.24 41 PKPbc **PKPdf** **00 41 27.1 +0.9**
comp=Z,2.8nm,0.5s,baz=297,slow=2.1,SNR=25
KURBB Kurchatov Arra 150.84 41 PKPbc **PKPbc** **00 41 41.0 0.0**
comp=Z,0.3nm,0.2s,baz=306,slow=3.5,SNR=7.8
ZALV Zalesovo Beam 151.97 30 PKPbc **PKiKP** **00 41 43.9 +0.1**
comp=Z,2.8nm,0.5s,baz=313,slow=2.9,SNR=24
MKAR Makanchi Array 154.86 45 PKPbc **PKiKP** **00 41 50.2 +0.1**
comp=Z,0.3nm,0.8s,baz=328,slow=1.9,SNR=3.0
MKAR PKPab **pPKPbc** **00 42 06.0 +2.6**
comp=Z,0.5nm,0.7s,baz=282,slow=4.4,SNR=6.9

NOU 25 00:22:11.2, 15°.58S × 167°.76E, h0km, MLv3.6/4, Vanuatu Islands, Vanuatu Islands

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IDC 25 00:26:49.6±2.5, 7°.50S × 114°.28E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=142.3km s-min=21.3km az=55.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.05**	**124**	P	P	00 31 56.7	0.0
	0.6nm,0.3s,baz=301,slow=12,SNR=19						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**24.76**	**133**	P	P	00 32 13.2	0.0
	0.4nm,0.4s,baz=303,slow=7.7,SNR=8.8						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**35.15**	**137**	P	P	00 33 45.4	+0.1
	0.9nm,0.4s,baz=329,slow=12,SNR=1.9						
	0.9nm,0.4s						
SONM	**Songino Array**	**55.54**	**354**	P	P	00 36 26.2	-0.5
	0.4nm,0.5s,baz=164,slow=5.8,SNR=4.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**61.08**	**335**	P	P	00 37 05.7	+0.3
	0.2nm,0.6s,baz=139,slow=6.3,SNR=4.8						
	0.2nm,0.6s						

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*UCR **25** 00:27:04.6±0.4, 8°.98N × 83°.90W, h0km±4km, MW3.6*
*UPA **25** 00:27:05.3±2.5, 8°.96N × 83°.84W, h0km±11km, MW3.0*
*CATAC **25** 00:27:05.7±0.3, 9°.00N × 83°.88W, h6km±2km, ML3.0*
ISC 25 00:27:05.2±1.2, 8°.98N±0°.03 × 83°.88W±0°.03, h5km±11km, n42, σ0°.87/68, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCHAL	**Ojochal**	**0.26**	**63**	*i* P	**Pb**	**00 27 11.6**	**-0.8**
OCHAL				IAML		00 27 11.6	
	comp=Z,54nm,1.0s						
OCHAL				*i* S	**Sb**	**00 27 16.2**	**-1.0**
PLAN	**Los Planes de**	**0.36**	**147**	*i* P	**Pb**	**00 27 13.8**	**-0.3**
PLAN				*i* S	**Sb**	**00 27 20.4**	**+0.3**
PLAN				IAML		00 27 21.9	
	comp=Z,16μm,1.0s						
EDPN	**Palmar Norte**	**0.42**	**92**	*eP*	**Pg**	**00 27 14.1**	**+0.9**
EDPN				*eS*	**Sb**	**00 27 21.4**	**-0.4**
PEZE	**Perez Zeledon,**	**0.45**	**26**	*i* P	**Pg**	**00 27 14.5**	**+0.6**
PEZE				IAML		00 27 14.9	
	comp=Z,740nm,1.0s						
CDM	**Cerro de Muert**	**0.58**	**11**	*i* P	**Pg**	**00 27 16.8**	**+0.3**
CDM				*i* S	**Sg**	**00 27 24.4**	**+0.3**
CDM				IAML		00 27 30.8	
	comp=Z,270nm,1.0s						
ABE2	**San Pablo**	**0.74**	**347**	*eP*	**Pg**	**00 27 19.7**	**+0.2**
POTG	**Potrero Grande**	**0.76**	**84**	*i* P	**Pg**	**00 27 20.3**	**+0.6**
POTG				*i* S	**Sb**	**00 27 31.3**	**-0.2**
POTG				IAML		00 27 35.5	
	comp=Z,660nm,1.0s						
LCR2	**La Lucha 2**	**0.77**	**351**	*eP*	**Pg**	**00 27 19.8**	**-0.2**
LCR2	**La Lucha 2**	**0.77**	**351**	*i* P	**Pg**	**00 27 19.8**	**-0.2**
LCR2				*i* S	**Sg**	**00 27 30.8**	**+0.8**
LCR2				IAML		00 27 31.6	
	comp=Z,310nm,1.0s						
OCM	**Ochomogo**	**0.91**	**355**	*i* P	**Pg**	**00 27 22.3**	**-0.5**
OCM				*i* S	**Sg**	**00 27 34.7**	**0.0**
OCM				IAML		00 27 35.9	
	comp=Z,200nm,1.0s						
RAFA	**San Farael, Vo**	**0.98**	**4**	*eP*	**Pg**	**00 27 24.0**	**0.0**
VIRE	**VIRE**	**0.98**	**359**	*i* P	**Pg**	**00 27 23.7**	**-0.4**
VIRE				*i* S	**Sb**	**00 27 38.0**	**-0.4**
VIRE				IAML		00 27 41.4	
	comp=Z,550nm,1.0s						
HAYA	**Volcan Irazu**	**1.00**	**2**	*i* P	**Pg**	**00 27 24.2**	**-0.2**
HAYA				IAML		00 27 41.8	
	comp=Z,650nm,1.0s						
VICA	**Volcano Irazu**	**1.00**	**2**	*eP*	**Pg**	**00 27 24.2**	**-0.3**
VTCV	**VTCV, Calle Va**	**1.01**	**9**	*i* P	**Pg**	**00 27 24.6**	**0.0**
VTCV				*i* S	**Sb**	**00 27 38.8**	**-0.2**
VTCV				IAML		00 27 43.4	
	comp=Z,420nm,1.0s						
VTRT	**Volcan Turrial**	**1.02**	**5**	*i* P	**Pg**	**00 27 24.4**	**-0.4**
VTRT				*i* S	**Sg**	**00 27 38.3**	**+0.2**
VTRT				IAML		00 27 45.6	
	comp=Z,470nm,1.0s						
JACO	**JACO, Garabito**	**1.03**	**312**	*eP*	**Pg**	**00 27 24.0**	**-0.9**
JACO	**JACO, Garabito**	**1.03**	**312**	*i* P	**Pg**	**00 27 24.7**	**-0.2**
JACO				*i* S	**Sg**	**00 27 39.0**	**+0.8**
JACO				IAML		00 27 42.0	
	comp=Z,150nm,1.0s						
VTR0	**Volcan Turrial**	**1.04**	**7**	*eP*	**Pg**	**00 27 25.0**	**-0.1**
HDC3	**Heredia 3**	**1.04**	**347**	*i* P	**Pg**	**00 27 24.9**	**-0.3**
HDC3				*i* S	**Sb**	**00 27 39.9**	**0.0**
HDC3				IAML		00 27 42.8	
	comp=Z,310nm,1.0s						
VTUN	**Crater Central**	**1.04**	**6**	*i* P	**Pg**	**00 27 25.3**	**0.0**
VTUN				IAML		00 27 25.4	
	comp=Z,320nm,1.0s						
VTUN				*i* S	**Sg**	**00 27 39.6**	**+0.7**
VTUC	**Crater, Volcan**	**1.05**	**6**	*i* P	**Pg**	**00 27 25.1**	**-0.2**
VTUC				IAML		00 27 25.3	
	comp=Z,250nm,1.0s						
VTUC				*i* S	**Sb**	**00 27 40.3**	**+0.1**
CDITO	**Canoas**	**1.07**	**112**	*eS*	**Sb**	**00 27 40.9**	**+0.3**
CDITO	**Canoas**	**1.07**	**112**	*i* P	**Pg**	**00 27 25.4**	**-0.4**
CDITO				*i* S	**Sb**	**00 27 41.8**	**+1.2**
CDITO				IAML		00 27 51.3	
	comp=Z,290nm,1.0s						
TCS1	**Tacares**	**1.14**	**339**	*i* P	**Pg**	**00 27 27.3**	**+0.3**
TCS1				IAML		00 27 46.1	
	comp=Z,3μm,1.0s						
BRU2	**Volcan**	**1.19**	**99**	*i*↑P	**Pg**	**00 27 26.7**	**-1.2**
BRU2				*eS*	**Sg**	**00 27 43.4**	**0.0**
BRU2	**Volcan**	**1.19**	**99**	*i* P	**Pg**	**00 27 26.8**	**-1.2**
BRU2				*i* S	**Sb**	**00 27 44.5**	**+0.4**
BRU2				IAML		00 27 51.6	
	comp=Z,340nm,1.0s						
SRA1	**San Ramn**	**1.25**	**332**	*eP*	**Pg**	**00 27 28.1**	**-1.1**
PTPM	**Petroterminale**	**1.25**	**128**	*eP*	**Pg**	**00 27 29.1**	**-0.1**
PTPM				*eS*	**Sb**	**00 27 47.0**	**+1.2**
LAFE	**Finca La Fe, P**	**1.31**	**309**	*i* P	**Pg**	**00 27 29.6**	**-0.7**
LAFE				*i* S	**Sn**	**00 27 48.8**	**+0.8**
LAFE				IAML		00 27 54.2	
	comp=Z,0.8nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.33**	**358**	*i* P	**Pg**	**00 27 29.8**	**-0.9**
RIFO				*i* S	**Sb**	**00 27 48.9**	**+0.8**
RIFO				IAML		00 27 54.1	
	comp=Z,300nm,1.0s						
BCO2	**Palmira**	**1.36**	**101**	*eP*	**Pg**	**00 27 29.6**	**-1.7**
BCO2				*eS*	**Sg**	**00 27 48.8**	**-0.2**
CPMI	**Catarata Coope**	**1.39**	**339**	*i* P	**Pg**	**00 27 30.2**	**-1.6**
CPMI				*i* S	**Sg**	**00 27 49.2**	**-0.6**
CPMI				IAML		00 27 50.1	
	comp=Z,150nm,1.0s						
CNI2	**El Empalme, Bo**	**1.46**	**72**	*eP*	**Pn**	**00 27 31.1**	**-1.1**
CNI2				*eS*	**Sg**	**00 27 51.9**	**-0.2**
DVD	**David**	**1.51**	**111**	*eS*	**Sg**	**00 27 52.3**	**-1.6**
SOCE	**Pocosol**	**1.57**	**333**	*eP*	**Pn**	**00 27 33.8**	**0.0**
SOCE	**Pocosol**	**1.57**	**333**	*i* P	**Pn**	**00 27 33.8**	**0.0**
SOCE				*i* S	**Sn**	**00 27 55.3**	**+0.6**
SOCE				IAML		00 27 58.2	
	comp=Z,300nm,1.0s						
JTS	**Las Juntas de**	**1.68**	**321**	*eP*	**Pn**	**00 27 35.5**	**+0.2**
JTS				*eS*	**Sg**	**00 27 59.1**	**-0.1**
JTS	**Las Juntas de**	**1.68**	**321**	*eP*	**Pn**	**00 27 34.1**	**-1.1**
VMAR	**Armenia, Volca**	**2.19**	**326**	*i* P	**Pn**	**00 27 41.6**	**-0.8**
VMAR				IAML		00 28 35.0	
	comp=Z,100nm,1.0s						
CACAO	**El Cacao, Vera**	**3.40**	**118**	*eP*	**Pb**	**00 28 08.4**	**+2.4**
AZU	**Azuero**	**3.76**	**108**	*eP*	**Pn**	**00 28 05.2**	**+1.3**
AZU				*eS*	**Sb**	**00 28 54.6**	**-3.4**

IDC 25 00:28:36.9±3.3, 4°.45S × 136°.01E, h0km, mb3.2/1, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=130.4km s-min=34.1km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.48**	**186**	Pn	Pn	00 32 15.7	-1.1
	0.1nm,0.3s,baz=7.8,slow=12,SNR=2.5						
WRA				Sn	Sn	00 35 06.7	-2.3
	baz=11,slow=23,SNR=1.1						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**19.21**	**186**	P	P	00 33 03.0	+0.4
	0.1nm,0.3s,baz=14,slow=11,SNR=7.8						
ASAR				S	Sn	00 36 26.8	-13
	0.3nm,0.9s,baz=320,slow=45,SNR=1.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**69.55**	**324**	P	P	00 39 47.7	0.0
	0.1nm,0.5s,baz=110,slow=7.6,SNR=1.8						
	0.1nm,0.5s						

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*CATAC **25** 00:36:11.7±0.5, 9°.18N × 85°.52W, h3km±2km, MB5.0, mb4.9, ML4.0*
*UCR **25** 00:36:12.2±0.9, 9°.17N × 85°.61W, h25km±7km, MW3.7*
ISC 25 00:36:13.9±1.7, 9°.31N±0°.06 × 85°.44W±0°.04, h13km±10km, n76, σ0°.89/103, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBL1	**Cabuya**	**0.44**	**51**	*eP*	**Pn**	**00 36 24.8**	**-1.2**
INDI	**Punta indio, G**	**0.56**	**353**	*eP*	**Pb**	**00 36 25.6**	**+0.1**
INDI				*eS*	**Sn**	**00 36 34.9**	**-1.9**
INDI	**Punta indio, G**	**0.56**	**353**	*i* P	**Pb**	**00 36 25.7**	**+0.1**
INDI				IAML		00 36 33.0	
	comp=Z,2μm,1.0s						
INDI				*i* S	**Sn**	**00 36 35.2**	**-1.6**
LAFE	**Finca La Fe, P**	**0.72**	**46**	*eP*	**Pb**	**00 36 28.3**	**0.0**
LAFE	**Finca La Fe, P**	**0.72**	**46**	*i* P	**Pb**	**00 36 28.2**	**-0.1**
LAFE				IAML		00 36 29.8	
	comp=Z,17nm,1.0s						
LAFE				*i* S	**Sn**	**00 36 39.3**	**-1.4**
DUNO	**Dulce Nombre,**	**0.77**	**356**	*eP*	**Pb**	**00 36 28.8**	**-0.3**
DUNO	**Dulce Nombre,**	**0.77**	**356**	*i* P	**Pb**	**00 36 28.8**	**-0.3**
DUNO				*i* S	**Sn**	**00 36 40.8**	**-1.2**
DUNO				IAML		00 36 41.5	
	comp=Z,8μm,1.0s						
SAJU	**San Juanillo,**	**0.80**	**340**	*i* P	**Pg**	**00 36 28.6**	**-0.8**
SAJU				*i* S	**Sb**	**00 36 40.3**	**-0.2**
SAJU				IAML		00 36 41.4	
	comp=Z,930nm,1.0s						
JACO	**JACO, Garabito**	**0.84**	**65**	*eP*	**Pb**	**00 36 30.6**	**+0.2**
JACO	**JACO, Garabito**	**0.84**	**65**	*i* P	**Pb**	**00 36 30.9**	**+0.4**
JACO				*i* S	**Sn**	**00 36 44.3**	**+0.4**
JACO				IAML		00 36 45.0	
	comp=Z,2μm,1.0s						
ORTG	**Ortega, Santa**	**1.04**	**359**	*eP*	**Pb**	**00 36 33.0**	**-1.0**
ORTG	**Ortega, Santa**	**1.04**	**359**	*i* P	**Pb**	**00 36 33.0**	**-1.0**
ORTG				*i* S	**Sn**	**00 36 50.9**	**+1.9**
ORTG				IAML		00 36 56.2	
	comp=Z,560nm,1.0s						
JTS	**Las Juntas de**	**1.08**	**26**	*eP*	**Pb**	**00 36 34.0**	**-0.7**
LLNJ	**Naranjito**	**1.33**	**83**	*eP*	**Pn**	**00 36 37.9**	**-0.4**
TCS1	**Tacares**	**1.34**	**57**	*i* P	**Pg**	**00 36 39.7**	**0.0**
TCS1				IAML		00 37 02.0	
	comp=Z,10μm,1.0s						
SOCE	**Pocosol**	**1.34**	**37**	*eP*	**Pb**	**00 36 38.5**	**-0.4**
SOCE	**Pocosol**	**1.34**	**37**	*i* P	**Pb**	**00 36 38.5**	**-0.4**
SOCE				IAML		00 36 39.1	
	comp=Z,4μm,1.0s						
SOCE				*i* S	**Sg**	**00 37 00.7**	**+3.6**
HZTE	**Horizontes, Gu**	**1.40**	**354**	*eP*	**Pn**	**00 36 38.7**	**-0.5**
HZTE	**Horizontes, Gu**	**1.40**	**354**	*i* P	**Pn**	**00 36 38.8**	**-0.5**
HZTE				IAML		00 36 39.0	
	comp=Z,940nm,1.0s						
HZTE				*i* S	**Sg**	**00 37 00.4**	**+1.2**
CPMI	**Catarata Coope**	**1.42**	**47**	*i* P	**Pb**	**00 36 40.2**	**-0.2**
CPMI				*i* S	**Sg**	**00 37 01.5**	**+1.8**
CPMI				IAML		00 37 03.3	
	comp=Z,1μm,1.0s						
ABE2	**San Pablo**	**1.42**	**74**	*eP*	**Pn**	**00 36 39.6**	**-0.1**
LCR2	**La Lucha 2**	**1.48**	**73**	*eP*	**Pn**	**00 36 40.3**	**-0.1**
LCR2	**La Lucha 2**	**1.48**	**73**	*i* P	**Pn**	**00 36 40.0**	**-0.5**
LCR2				*i* S	**Sg**	**00 37 01.0**	**-0.5**
LCR2				IAML		00 37 01.8	
	comp=Z,470nm,1.0s						
HDC3	**Heredia 3**	**1.48**	**62**	*i* P	**Pb**	**00 36 41.1**	**-0.3**
HDC3				IAML		00 37 11.1	
	comp=Z,960nm,1.0s						
VMAR	**Armenia, Volca**	**1.53**	**12**	*eP*	**Pb**	**00 36 41.2**	**-0.9**
VMAR	**Armenia, Volca**	**1.53**	**12**	*i* P	**Pn**	**00 36 40.8**	**-0.2**
VMAR				IAML		00 37 14.4	
	comp=Z,860nm,1.0s						
OCM	**Ochomogo**	**1.57**	**68**	*i* P	**Pn**	**00 36 41.8**	**+0.1**
OCM				*i* S	**Sg**	**00 37 03.4**	**-1.1**
OCM				IAML		00 37 06.3	
	comp=Z,560nm,1.0s						
VIRE	**VIRE**	**1.65**	**67**	*i* P	**Pn**	**00 36 43.4**	**+0.4**
VIRE				IAML		00 37 13.7	
	comp=Z,1μm,1.0s						
CDM	**Cerro de Muert**	**1.67**	**82**	*i* P	**Pn**	**00 36 43.5**	**+0.2**
CDM				IAML		00 36 43.8	
	comp=Z,1μm,1.0s						
CDM				*i* S	**Sb**	**00 37 05.5**	**-0.5**
HAYA	**Volcan Irazu**	**1.71**	**67**	*i* P	**Pn**	**00 36 44.5**	**+0.7**
HAYA				IAML		00 37 11.6	
	comp=Z,1μm,1.0s						
VICA	**Volcano Irazu**	**1.71**	**67**	*eP*	**Pn**	**00 36 44.4**	**+0.6**
RAFA	**San Farael, Vo**	**1.73**	**68**	*eP*	**Pn**	**00 36 44.9**	**+0.8**
COVE	**Coope Vega, Sa**	**1.73**	**36**	*eP*	**Pb**	**00 36 44.3**	**-1.4**
COVE	**Coope Vega, Sa**	**1.73**	**36**	*i* P	**Pb**	**00 36 44.3**	**-1.4**
COVE				IAML		00 36 53.1	
	comp=Z,800nm,1.0s						
COVE				*i* S	**Sg**	**00 37 10.8**	**+1.1**
PEZE	**Perez Zeledon,**	**1.74**	**88**	*eP*	**Pn**	**00 36 43.4**	**-0.5**
PEZE	**Perez Zeledon,**	**1.74**	**88**	*i* P	**Pn**	**00 36 43.8**	**-0.2**
PEZE				IAML		00 36 44.5	
	comp=Z,860nm,1.0s						
PEZE				*i* S	**Sn**	**00 37 06.6**	**+0.5**
VTRT	**Volcan Turrial**	**1.76**	**67**	*i* P	**Pb**	**00 36 46.5**	**+0.2**
VTRT				IAML		00 37 17.6	
	comp=Z,500nm,1.0s						
LCRUZ	**La Cruz**	**1.77**	**354**	*eP*	**Pb**	**00 36 45.5**	**-0.8**
OCHAL	**Ojochal**	**1.78**	**97**	*i* P	**Pn**	**00 36 44.0**	**-0.5**
OCHAL				IAML		00 36 44.4	
	comp=Z,13nm,1.0s						
OCHAL				*i* S	**Sn**	**00 37 07.2**	**+0.2**
VTUN	**Crater Central**	**1.80**	**67**	*i* P	**Pb**	**00 36 46.7**	**-0.3**
VTUN				*i* S	**Sg**	**00 37 11.0**	**-0.8**
VTUN				IAML		00 37 18.0	
	comp=Z,370nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.80**	**56**	*i* P	**Pb**	**00 36 46.8**	**0.0**
RIFO				*i* S	**Sg**	**00 37 11.8**	**0.0**
RIFO				IAML		00 37 15.1	
	comp=Z,1μm,1.0s						
VTUC	**Crater, Volcan**	**1.80**	**67**	*i* P	**Pb**	**00 36 46.7**	**-0.3**
VTUC				IAML		00 37 18.3	
	comp=Z,280nm,1.0s						
VTCV	**VTCV, Calle Va**	**1.81**	**68**	*i* P	**Pb**	**00 36 46.8**	**-0.4**
VTCV				*i* S	**Sg**	**00 37 11.8**	**-0.6**
VTCV				IAML		00 37 15.6	
	comp=Z,700nm,1.0s						
VERB	**Verbena**	**1.83**	**70**	*eP*	**Pn**	**00 36 46.3**	**+1.1**
PLAN	**Los Planes de**	**1.85**	**110**	*i* P	**Pn**	**00 36 44.3**	**-1.1**
PLAN				IAML		00 36 45.5	
	comp=Z,1μm,1.0s						
OMEN	**Al SSO del Vol**	**2.19**	**355**	*i* P	**Pn**	**00 36 50.9**	**+0.7**
OMEN				IAML		00 38 04.6	
	comp=Z,380nm,1.0s						
JAPN	**Al SSO del Vol**	**2.21**	**354**	*i* P	**Pn**	**00 36 51.5**	**+1.1**
JAPN				IAML		00 36 52.4	
	comp=Z,250nm,1.0s						
MORN	**Al O del Volca**	**2.23**	**355**	*i* P	**Pn**	**00 36 51.3**	**+0.6**
MORN				IAML		00 37 20.8	
	comp=Z,560nm,1.0s						
CONN	**Concepcion**	**2.25**	**355**	*i* P	**Pn**	**00 36 50.7**	**-0.2**
CONN				IAML		00 37 06.3	
	comp=Z,3μm,1.0s						
POTG	**Potrero Grande**	**2.30**	**96**	*i* P	**Pn**	**00 36 51.7**	**0.0**
POTG				*i* S	**Sn**	**00 37 20.5**	**+0.5**
POTG				IAML		00 37 24.8	
	comp=Z,2μm,1.0s						
NADN	**Granada**	**2.49**	**346**	*i* P	**Pn**	**00 36 54.6**	**+0.3**
NADN				*i* S	**Sn**	**00 37 24.7**	**+0.1**
NADN				IAML		00 38 59.9	
	comp=Z,600nm,1.0s						
CDITO	**Canoas**	**2.64**	**106**	*i* P	**Pn**	**00 36 56.5**	**+0.2**
CDITO				*i* S	**Sn**	**00 37 29.2**	**+1.0**
CDITO				IAML		00 37 39.2	
	comp=Z,480nm,1.0s						
ACON	**Acoyapa**	**2.65**	**6**	*i* P	**Pn**	**00 36 56.6**	**+0.1**
ACON				*i* S	**Sb**	**00 37 33.7**	**-0.2**
ACON				IAML		00 37 55.3	
	comp=Z,220nm,1.0s						
NANN	**Nandasmo**	**2.70**	**346**	*i* P	**Pn**	**00 36 58.5**	**+1.4**
NANN				IAML		00 37 33.1	
	comp=Z,5μm,1.0s						
BRU2	**Volcan**	**2.76**	**100**	*i* P	**Pn**	**00 36 58.5**	**+0.4**
BRU2				*i* S	**Sn**	**00 37 33.1**	**+1.6**
BRU2				IAML		00 37 47.7	
	comp=Z,440nm,1.0s						
WILN	**Americas 2**	**2.93**	**345**	*i* P	**Pn**	**00 37 00.6**	**+0.4**
WILN				IAML		00 37 38.8	
	comp=Z,160nm,1.0s						
APQ2	**Apoyeque**	**3.00**	**343**	*i* P	**Pn**	**00 37 02.2**	**+1.0**
APQ2				*i* S	**Sn**	**00 37 37.7**	**+0.6**
APQ2				IAML		00 37 40.2	
	comp=Z,440nm,1.0s						
APYN	**Apoyeque**	**3.04**	**343**	*i* P	**Pn**	**00 37 02.5**	**+0.7**
APYN				IAML		00 37 46.7	
	comp=Z,360nm,1.0s						
COPN	**Copaltepe**	**3.07**	**338**	*i* P	**Pn**	**00 37 02.4**	**+0.2**
COPN				IAML		00 37 40.4	
	comp=Z,450nm,1.0s						
ESPN	**Las Esperanzas**	**3.08**	**21**	*i* P	**Pn**	**00 37 02.9**	**+0.6**
ESPN				IAML		00 38 03.5	
	comp=Z,120nm,1.0s						
BOAB	**BOACO BROADBAN**	**3.13**	**356**	*i* P	**Pn**	**00 37 02.3**	**-0.7**
BOAB				IAML		00 37 43.6	
	comp=Z,65nm,1.0s						
BLUN	**Bluefields**	**3.14**	**31**	*i* P	**Pn**	**00 37 02.7**	**-0.4**
BLUN				IAML		00 37 02.7	
	comp=Z,210nm,1.0s						
MACN	**El Madrono**	**3.36**	**339**	*i* P	**Pn**	**00 37 06.7**	**+0.4**
MACN				IAML		00 37 07.2	
	comp=Z,200nm,1.0s						
CNGA	**Al SSO del Vol**	**3.40**	**339**	*i* P	**Pn**	**00 37 07.5**	**+0.7**
CNGA				IAML		00 37 07.6	
	comp=Z,350nm,1.0s						
CNGN	**Cerro Negro**	**3.40**	**339**	*i* P	**Pn**	**00 37 07.1**	**+0.2**
CNGN				*i* S	**Sn**	**00 37 49.1**	**+1.9**
CNGN				IAML		00 37 50.6	
	comp=Z,270nm,1.0s						
PACN	**Al O del Volca**	**3.44**	**337**	*i* P	**Pn**	**00 37 07.9**	**+0.6**
PACN				IAML		00 39 23.7	
	comp=Z,1μm,1.0s						
ILCN	**San Idelfonso**	**3.48**	**339**	*i* P	**Pn**	**00 37 05.5**	**-2.3**
ILCN				IAML		00 37 05.7	
	comp=Z,160nm,1.0s						
PLRN	**Geotermica Pol**	**3.51**	**338**	*i* P	**Pn**	**00 37 08.6**	**+0.4**
PLRN				IAML		00 37 09.9	
	comp=Z,310nm,1.0s						
PLRN				*i* S	**Sn**	**00 37 49.9**	**+0.2**
HERN	**Volcan Telica**	**3.55**	**337**	*i* P	**Pn**	**00 37 07.9**	**-1.0**
HERN				IAML		00 38 54.7	
	comp=Z,540nm,1.0s						
MATN	**Matagalpa**	**3.63**	**352**	*i* P	**Pn**	**00 37 10.3**	**+0.3**
MATN				IAML		00 38 02.4	
	comp=Z,30nm,1.0s						
PKGN	**Cerro Pekin**	**3.66**	**336**	*i* P	**Pn**	**00 37 11.3**	**+0.9**
PKGN				IAML		00 39 36.1	
	comp=Z,2μm,1.0s						
CRIN	**San Cristobal**	**3.72**	**335**	*i* P	**Pn**	**00 37 12.0**	**+0.7**
CRIN				IAML		00 38 00.0	
	comp=Z,420nm,1.0s						
LIMN	**Finca el Limon**	**3.84**	**346**	*i* P	**Pn**	**00 37 13.5**	**+0.6**
LIMN				IAML		00 37 14.1	
	comp=Z,64nm,1.0s						
CSGN	**Cosiguina Volc**	**4.20**	**330**	*i* P	**Pn**	**00 37 18.0**	**+0.2**
CSGN				IAML		00 38 12.3	
	comp=Z,680nm,1.0s						
RCPN	**Sur Rio San Ju**	**4.24**	**351**	*i* P	**Pn**	**00 37 19.6**	**+1.2**
RCPN				IAML		00 37 20.7	
	comp=Z,0.4nm,1.0s						
RANC	**El Ranchito**	**4.96**	**326**	*i* P	**Pn**	**00 37 29.0**	**+0.6**
RANC				IAML		00 37 53.1	
	comp=Z,140nm,1.0s						
RANC				IAmb	IAmb	00 37 53.2	
	comp=Z,90nm,0.6s						
RANC				IVmB_BB		00 37 54.5	
	comp=Z,2μm,1.0s						

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*IDC **25** 00:38:06.0±0.7, 6°.54N × 73°.41W, h132km±7km, mb3.6/16, mbtmp4.1/18, Error ellipse: s-maj=16.3km s-min=7.6km az=134.0*
*NEIC **25** 00:38:05.8±2.1, 6°.51N±0°.06 × 73°.40W±0°.08, h132km±7km, mb4.4/30, Error ellipse: s-maj=12.1

comp=Z,2µm,0.6s
CHIC Chingaza 1.97 188 eP Pn 00 38 38.8 +0.3
CHIC eS Sn 00 39 04.7 +0.6
CHIC i 00 39 09.7
comp=Z,502nm,0.2s
CVER Cruz Verde, Cu 2.15 197 eP Pn 00 38 42.5 +1.8
CVER eS Sn 00 39 09.4 +1.3
CVER i 00 39 18.0
comp=Z,889nm,0.5s
GUY2C Guyana, Caldas 2.33 234 eP Pn 00 38 43.5 +0.5
GUY2C eS Sn 00 39 14.3 +2.0
GUY2C i 00 39 18.6
comp=Z,1µm,0.4s
UREC San Jos de Ur 2.36 299 eP Pn 00 38 42.4 -0.6
UREC eS Sn 00 39 10.6 -1.6
UREC i 00 39 13.7
comp=Z,2µm,0.3s
VILC Villavicencio, 2.47 185 eP Pn 00 38 45.4 +0.8
VILC eS Sn 00 39 15.9 +0.8
VILC i 00 39 19.8
comp=Z,954nm,0.4s
NIZA Niza - Manizal 2.51 233 eP Pn 00 38 48.3 +3.1
NIZA eS Sn 00 39 19.4 +3.2
CBOC Ciudad Bolivar 2.64 254 eP Pn 00 38 47.3 +0.6
CBOC eS Sn 00 39 18.4 -0.4
CBOC i 00 39 21.9
comp=Z,367nm,0.3s
PTGC Puerto Gaitan, 2.72 151 eP Pn 00 38 47.7 +0.1
PTGC eS Sn 00 39 19.7 -0.8
PTGC i 00 39 25.5
comp=Z,624nm,0.5s
DBBC Dabeiba 2.76 279 eP Pn 00 38 48.0 -0.2
DBBC eS Sn 00 39 21.1 -0.5
DBBC i 00 39 25.4
comp=Z,506nm,0.2s
LL6C La Loma 6 Bece 3.13 3 eP Pn 00 38 54.0 +1.1
LL6C eS Sn 00 39 35.2 +5.1
LL6C i 00 39 41.8
comp=Z,418nm,0.4s
PRAC Prado 3.19 206 eP Pn 00 38 53.8 -0.1
PRAC eS Sn 00 39 32.1 +0.4
PRAC i 00 39 36.7
comp=Z,787nm,0.3s
ORTC Ortega, Tolima 3.20 214 eP Pn 00 38 54.5 +0.5
ORTC eS Sn 00 39 32.5 +0.7
ORTC i 00 39 38.4
comp=Z,447nm,0.4s
PLMC San Jos del P 3.27 239 eP Pn 00 38 55.3 +0.4
PLMC eS Sn 00 39 32.8 -0.7
PLMC i 00 39 37.1
comp=Z,475nm,0.3s
ARGC Ariguani, Magd 3.34 347 eP Pn 00 38 58.1 +2.4
ARGC eS Sn 00 39 40.0 +5.0
ARGC i 00 39 50.6
comp=Z,262nm,0.5s
APAC Apartado, Choc 3.36 293 iP Pn 00 38 56.4 +0.4
APAC eS Sn 00 39 34.5 -0.9
APAC i 00 39 38.1
comp=Z,437nm,0.4s
SDV Santo Domingo 3.61 51 Pn Pn 00 39 01.0 +1.5
SDV Sn Sn 00 39 41.5 -0.2
SDV Santo Domingo 3.61 51 P Pn 00 39 01.0 +1.5
comp=Z,434nm,0.4s,baz=208,slow=5.2,SNR=739
SDV S Sn 00 39 43.5 +1.7
comp=Z,652nm,0.4s,baz=281,slow=18,SNR=30
SDV Santo Domingo 3.61 51 eP Pn 00 39 00.6 +1.1
SDV Santo Domingo 3.61 51 iP Pn 00 39 01.0 +1.5
SDV eS Sn 00 39 41.3 -0.4
SDV i 00 39 46.0
comp=Z,584nm,0.4s
SJCC San Jacinto, C 3.70 333 eP Pn 00 39 00.1 -0.5
SJCC eS Sn 00 39 41.6 -2.0
SJCC i 00 39 53.4
comp=Z,263nm,0.5s
YOTC Yotoco, Valle 3.87 228 iP Pn 00 39 02.5 -0.4
YOTC eS Sn 00 39 48.8 +1.0
SOLC Bahia Solano 3.94 265 eP Pn 00 39 03.5 -0.1
SOLC eS Sn 00 39 48.4 -0.9
PIZC Pizarro, Choco 4.20 248 eP Pn 00 39 08.2 +1.0
PIZC eS Sn 00 39 56.5 +0.9
PIZC i 00 40 08.0
comp=Z,136nm,0.3s
PTAC Punta Ardita, 4.35 278 eP Pn 00 39 08.1 -1.1
BETC Betania 4.36 207 eP Pn 00 39 08.9 -0.4
BETC eS Sn 00 39 56.8 -2.5
BETC i 00 40 07.0
comp=Z,103nm,0.4s
CAPC Capurgana 4.36 298 eP Pn 00 39 08.1 -1.2
CRJC Cerrejon, Guaj 4.44 7 eP Pn 00 39 11.0 +0.6
CRJC eS Sn 00 40 02.4 +1.1
CRJC i 00 40 05.0
comp=Z,542nm,0.4s
SMRC Santa Marta, M 4.61 351 eP Pn 00 39 13.9 +1.3
SMRC eS Sn 00 40 05.1 -0.1
SMRC i 00 40 12.9
comp=Z,194nm,0.5s
MALC Bahia Malaga 4.63 237 eP Pn 00 39 14.2 +1.3
MALC eS Sn 00 40 07.3 +1.5
MALC i 00 40 20.6
comp=Z,64nm,0.3s
JAMC Jamundi, Valle 4.64 224 eP Pn 00 39 12.8 -0.4
JAMC eS Sn 00 40 03.8 -2.5
JAMC i 00 40 13.7
comp=Z,55nm,0.3s
GARC Garzon, Huila 4.82 205 eP Pn 00 39 15.4 -0.3
GARC eS Sn 00 40 08.5 -2.3
GARC i 00 40 17.4
comp=Z,339nm,0.2s
UPD2 Meteti 4.92 294 eP Pn 00 39 15.5 -1.3
UPD2 eS Sn 00 40 10.4 -2.3
UPD2 i 00 40 14.7
comp=Z,155nm,0.4s
POPC Popayan, Colom 5.14 219 eP Pn 00 39 20.3 +0.2
POPC eS Sn 00 40 17.4 -1.2
FLOC Florencia 5.43 204 eP Pn 00 39 23.8 +0.1
FLOC eS Sn 00 40 24.0 -1.3
FLOC i 00 40 32.3
comp=Z,37nm,0.5s
BAUV El Baul 5.86 66 Pn 00 39 28.4 -1.0
BBAC Balboa, Cauca 5.90 220 eP Pn 00 39 31.0 +0.8
BBAC eS Sn 00 40 35.0 -1.8
CRUC La Cruz 6.08 215 eP Pn 00 39 36.7 +3.9
CRUC eS Sn 00 40 44.8 +3.4
PTLC Puerto Leguiza 6.51 192 eP Pn 00 39 41.8 +3.4
GCUF Volcan Galeras 6.59 216 eP Pn 00 39 41.1 +1.3
GCUF eS Sn 00 40 53.4 -0.5
GCUF i 00 40 56.4
comp=Z,16nm,0.6s
AUA1 Aruba 6.79 30 Pn Pn 00 39 41.8 -0.2
BCIP Isla Barro Col 6.82 292 Pn Pn 00 39 41.0 -1.4
AZU Azuero 6.87 280 eP Pn 00 39 42.3 -0.7
TULM Tulcn-Chalpat 7.26 217 Pn 00 39 48.0 -0.9
IMBA Imbabura, San 7.86 217 Pn Pn 00 39 58.5 +1.6
OTAV Otavalo 8.04 218 Pn Pn 00 39 59.0 -0.4
OTAV Otavalo 8.04 218 eP Pn 00 40 01.6 +2.2
OTAV Otavalo 8.04 218 eP Pn 00 39 59.2 -0.2
OTAV eS Sn 00 41 27.2 -1.8
PULU Pululahua 8.24 218 Pn Pn 00 40 02.3 +0.3
SLOR San Lorenzo - 8.84 215 Pn Pn 00 40 10.0 -0.1
PIAT Ana Tenorio 8.93 213 eP Pn 00 40 12.6 +1.2
BRU2 Volcan 9.41 284 Pn Pn 00 40 17.6 +0.1
PCRV Puerto La Cruz 9.43 67 P Pn 00 40 17.8 +0.1
comp=Z,52nm,0.5s,baz=5.7,slow=1.7,SNR=44
PCRV S Sn 00 41 57.3 -4.7
comp=Z,12nm,0.5s,baz=342,slow=20,SNR=1.3
DRK0 Durika 10.05 286 Pn Pn 00 40 25.9 -0.3
RIMA Rio Macho 10.77 288 Pn Pn 00 40 36.1 +0.1
LCR2 La Lucha 2 10.90 287 Pn Pn 00 40 37.9 +0.2
SDDR Presa de Saban 12.50 10 Pn Pn 00 40 58.9 +0.3
MCRA Macar, Loja 12.67 211 Pn Pn 00 40 58.2 -2.8
GRGR Grenville 12.88 64 Pn Pn 00 41 02.1 -1.5
CELP Cerrillos 13.24 30 Pn Pn 00 41 06.7 -1.5
GTBY Guantanamo Bay 13.35 353 Pn Pn 00 41 10.6 +1.0
BOAV Boa Vista 13.55 107 Pn Pn 00 41 10.0 -2.3
BOAV Boa Vista 13.55 107 eP Pn 00 41 09.1 -3.2
BOAV Boa Vista 13.55 107 eP Pn 00 41 10.6 -1.7
GCPR Guaynabo City 13.69 31 Pn Pn 00 41 13.1 -0.9
CZSB Cruzeiro do Su 14.25 177 eP Pn 00 41 21.5 +0.4
MTO3 Montecristo 17.44 298 P P 00 42 00.5 +0.1
ETMB Extrema 17.83 156 P 00 42 03.0 -1.4
SAML Samuel 18.53 146 P P 00 42 10.3 -1.7
SAML IAmb IAmb 00 42 38.5
comp=Z,7.7nm,0.7s

SAML Samuel 18.53 146 eP Pn 00 42 12.2 -1.5
ITTB Itaituba 20.78 121 eP Pn 00 42 37.6 -2.5
MALB Monte Alegre 20.92 113 eP Pn 00 42 38.8 -3.0
MCPB Macapa, AP 22.45 107 eP P 00 42 55.7 +1.7
NPGB Novo Progresso 22.57 127 eP P 00 42 55.9 +0.6
VILB Vilhena 23.46 146 P P 00 43 02.2 -1.4
VILB IAmb IAmb 00 43 06.1
comp=Z,6.6nm,0.6s
VILB Vilhena 23.46 146 eP P 00 43 05.1 +1.4
PDRB Porto dos Gac 24.58 137 eP P 00 43 13.8 +0.1
GO01 Chusmiza 26.43 171 P P 00 43 28.9 -2.0
GO01 IAmb IAmb 00 43 37.4
comp=Z,12nm,1.5s
GOGA Godfrey 28.26 342 P P 00 43 48.4 +1.8
GOGA IAmb IAmb 00 44 15.8
comp=Z,11nm,1.4s
Z47A Carrollton 29.75 335 P P 00 44 01.5 +1.7
CPCT Cooper Cave 30.47 342 P P 00 44 08.2 +2.1
CPCT IAmb IAmb 00 44 09.4
comp=Z,3.2nm,0.8s
HBVL Hebbronville 31.45 313 P P 00 44 15.6 +0.7
HBVL IAmb IAmb 00 44 34.9
comp=Z,18nm,1.2s
WVT Waverly 32.22 338 P P 00 44 22.0 +0.6
WVT IAmb IAmb 00 44 24.0
comp=Z,8.3nm,0.9s
FVM French Village 34.84 336 P P 00 44 45.4 +1.2
CCM Cathedral Cave 35.24 335 P P 00 44 48.8 +1.2
NBPB Pedra_Branca-C 35.90 109 eP P 00 44 53.7 +0.1
TXAR Lajitas Array 36.36 312 P P 00 44 58.1 +0.6
TXAR Lajitas Array 36.36 312 P P 00 44 57.8 +0.2
comp=Z,0.4nm,0.5s,baz=125,slow=9.9,SNR=8.1
TXAR PcP PcP 00 47 20.4 +0.9
comp=Z,0.6nm,0.7s,baz=116,slow=4.1,SNR=4.6
comp=Z,0.4nm,0.5s
WMOK Wichita Mounta 36.46 324 P P 00 44 58.3 +0.1
WMOK IAmb IAmb 00 44 59.0
comp=Z,3.2nm,0.8s
AMTX Amarillo 38.32 321 P P 00 45 14.6 +0.7
AMTX IAmb IAmb 00 45 15.7
comp=Z,8.7nm,0.8s
SCIA State Center 39.30 337 P P 00 45 22.1 +0.2
ECSD EROS Data Cent 42.21 335 P P 00 45 45.7 -0.1
ECSD IAmb IAmb 00 45 46.6
comp=Z,3.5nm,0.6s
SDCO Great Sand Dun 42.52 322 P P 00 45 49.1 +0.4
K30B Basset 42.72 331 P P 00 45 49.2 -0.7
F36A Milaca 42.80 339 P P 00 45 50.5 0.0
F33A 5 Mile Ranch, 43.81 337 P P 00 45 58.9 +0.2
F33A IAmb IAmb 00 46 00.1
comp=Z,3.6nm,0.6s
ISCO Idaho Springs 43.89 324 P P 00 46 00.6 +0.9
MVU Marysvale 47.27 318 P P 00 46 27.2 +1.0
MVU IAmb IAmb 00 46 28.8
comp=Z,9.1nm,0.7s
ULM Lac du Bonnet 47.39 341 P P 00 46 26.6 0.0
ULM IAmb IAmb 00 46 27.7
comp=Z,4.3nm,0.6s
ULM Lac du Bonnet 47.39 341 P P 00 46 26.6 0.0
comp=Z,2.9nm,0.4s,baz=152,slow=5.9,SNR=15
comp=Z,2.9nm,0.4s
PDAR Pinedale Array 48.07 324 P P 00 46 32.5 +0.1
comp=Z,0.7nm,0.6s,baz=122,slow=10.0,SNR=7.6
PDAR PcP PcP 00 47 58.5 +0.1
comp=Z,0.3nm,0.5s,baz=127,slow=7.4,SNR=3.9
comp=Z,0.7nm,0.6s
SCHQ Schefferville 48.40 5 P P 00 46 35.2 +0.8
comp=Z,3.7nm,0.6s,baz=196,slow=7.5,SNR=16
comp=Z,3.7nm,0.6s
DUG Dugway, Tooele 48.57 320 P P 00 46 36.8 +0.7
BGU Big Grassy Mou 49.10 320 P P 00 46 41.2 +0.9
BGU IAmb IAmb 00 46 42.0
comp=Z,4.1nm,0.8s
MOOW Moose Ponds 49.35 325 P P 00 46 42.5 +0.4
NVAR Mina Array Bea 51.40 315 P P 00 46 58.1 +0.4
comp=Z,0.7nm,0.6s,baz=121,slow=7.0,SNR=6.5
NVAR PcP PcP 00 48 10.6 0.0
comp=Z,1.0nm,0.7s,baz=125,slow=4.4,SNR=5.8
comp=Z,0.7nm,0.6s
DY2G Dye2 62.67 12 iP P 00 48 17.2 +0.7
YKA Yellowknife Ar 63.36 340 P P 00 48 21.3 +0.5
YKA Yellowknife Ar 63.36 340 P P 00 48 21.4 +0.6
comp=Z,4.0nm,0.6s,baz=130,slow=6.7,SNR=94
comp=Z,4.0nm,0.6s
ICESG Greenland Ices 66.25 13 iP P 00 48 40.7 +0.8
DBIC Dimbokro 68.09 85 P P 00 48 50.9 -1.2
DBIC Dimbokro 68.09 85 P P 00 48 51.8 -0.4
comp=Z,1.4nm,0.5s,baz=275,slow=8.4,SNR=5.4
comp=Z,1.4nm,0.5s
SUMG Summit 69.28 11 P P 00 48 59.4 +0.5
SUMG IAmb IAmb 00 49 00.4
comp=Z,5.9nm,0.6s
SUMG Summit 69.28 11 iP P 00 48 59.0 +0.1
ESDC Sonseca Array 70.06 50 P P 00 49 04.9 +0.9
comp=Z,0.3nm,0.8s,baz=279,slow=2.5,SNR=2.3
comp=Z,0.3nm,0.8s
NEEM North Greenlan 71.81 5 iP P 00 49 15.0 +0.9
NEEM IAmb IAmb 00 49 16.2
comp=Z,9.5nm,0.6s
EKA Eskdalemuir Ar 73.45 34 P P 00 49 24.1 +0.3
comp=Z,1.7nm,0.8s,baz=280,slow=5.0,SNR=3.7
comp=Z,1.7nm,0.8s
TORD Torodi Ar. Bea 74.11 78 P P 00 49 27.4 -1.1
comp=Z,0.2nm,0.4s,baz=277,slow=5.9,SNR=4.6
comp=Z,0.2nm,0.4s
ILAR Eielson Array 77.03 335 P P 00 49 44.6 +0.5
comp=Z,0.8nm,0.7s,baz=103,slow=3.9,SNR=12
comp=Z,0.8nm,0.7s
N18K Kilae Creek 80.58 330 P P 00 50 03.6 0.0
N18K IAmb IAmb 00 50 27.7
comp=Z,20nm,1.3s
NB2 NORSAR Subarra 81.69 29 P P 00 50 11.2 +1.6
comp=Z,0.5nm,0.5s,baz=268,slow=5.3
NOA NORSAR Array B 81.69 29 P P 00 50 10.0 +0.5
comp=Z,0.9nm,0.7s,baz=268,slow=5.3,SNR=4.8
comp=Z,0.9nm,0.7s
HFS Hagfors 82.91 30 P P 00 50 15.8 -0.1
comp=Z,2.8nm,0.9s,baz=134,slow=10,SNR=5.8
comp=Z,2.8nm,0.9s
GERES GERESS Array B 83.22 42 P P 00 50 18.1 +0.3
comp=Z,0.2nm,0.3s,baz=30,slow=25,SNR=0.9
comp=Z,0.2nm,0.3s
ARCES ARCESS Array B 87.00 20 P P 00 50 36.8 +0.6
comp=Z,1.7nm,0.6s,baz=270,slow=3.3,SNR=15
comp=Z,1.7nm,0.6s
FINES FINESS Array B 88.80 28 P P 00 50 45.6 +0.8
comp=Z,0.7nm,0.6s,baz=289,slow=5.8,SNR=6.4
comp=Z,0.7nm,0.6s
KURBB Kurchatov Arra 118.09 20 PKP PKiKP 00 56 37.4 -0.1
comp=Z,1.3nm,0.2s,baz=355,slow=2.3,SNR=4.3
MKAR Makanchi Array 122.65 20 PKP PKiKP 00 56 46.4 -0.3
comp=Z,0.4nm,0.4s,baz=298,slow=2.8,SNR=15
ASAR Alice Springs 148.70 234 PKPbc PKPbc 00 57 37.1 -1.7
comp=Z,2.1nm,0.5s,baz=121,slow=3.6,SNR=37
WRA Warramunga Arr 149.93 241 PKPbc PKPbc 00 57 41.2 -0.6
comp=Z,2.6nm,0.5s,baz=109,slow=2.5,SNR=37

*IDC **25** 00:38:21.2±1.2, 55°.57S×25°.22W, h0km, mb4.2/2, mbtmp4.0/3, ML3.3/1, Error ellipse: s-maj=71.8km s-min=26.1km az=92.0*
*NEIC **25** 00:38:22.5±1.5, 55°.62S±0°.06×25°.5W±0°.3, h10km±2km, mb4.3/6, Error ellipse: s-maj=25.9km s-min=10.4km az=91.0*
ISC 25 00:38:22.4±1.0, 55°.6S±0°.1×25°.5W±0°.1, h10km, n16, σ0s80/17, mb4.3/4, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	6.48	277	Pn		Pn	Pn	00 39 58.2	+0.5
HOPE				Sn		Sn	Sn	00 41 11.0	-0.6
VNA1	Neumayer--Stat	16.87	160	⇑P		Pn		00 42 18.1	-0.1
	comp=Z,0.9nm,0.2s								
VNA3	Neumayer Olymp	17.11	163	⇑P		Pn		00 42 21.3	0.0
	comp=Z,0.9nm,0.2s								
VNA2	Neumayer--Watz	17.26	160	⇑P		Pn		00 42 22.8	-0.3
	comp=Z,0.2nm,0.1s,baz=326,slow=15								
SNAA	Sanae	18.77	158	P		P	P	00 42 40.5	-0.8
SNAA	Sanae	18.77	158	⇑P		Pn		00 42 43.4	+1.6
	comp=Z,9.1nm,0.2s								
SNAA	Sanae	18.77	158	P		Pn		00 42 42.7	+0.9
	comp=Z,0.1nm,0.3s,baz=21,slow=12,SNR=9.4								
	comp=Z,0.6nm,0.4s								
BELA	Belgrano 2	22.60	185	P		P	P	00 43 21.7	-0.9
BELA				IAmb		IAmb	IAmb	00 43 36.5	
	comp=Z,3.1nm,0.8s								

QSPA South Pole Qui 34.65 180 P P 00 45 12.8 +1.3
QSPA IAmb IAmb 00 45 18.5
comp=Z,5.8nm,1.3s
QSPA South Pole Qui 34.65 180 P P 00 45 11.8 +0.3
comp=Z,1.0nm,0.6s,baz=227,slow=1.0,SNR=11
comp=Z,1.0nm,0.6s
VNDA Vanda 47.06 182 P P 00 46 53.3 -0.1
TOA0 Torodi Ar. Sit 72.20 28 P P 00 49 47.5 +0.2
TOA0 IAmb IAmb 00 49 48.2
comp=Z,3.3nm,0.7s
TORD Torodi Ar. Bea 72.20 28 P P 00 49 47.5 +0.2
TORD IAmb IAmb 00 49 48.2
comp=Z,2.4nm,0.7s
TORD Torodi Ar. Bea 72.20 28 P P 00 49 47.4 +0.1
comp=Z,3.4nm,0.6s,baz=199,slow=5.8,SNR=28
comp=Z,3.4nm,0.6s
SONM Songino Array 149.73 84 PKPbc PKPbc 00 58 10.3 -1.2
comp=Z,0.3nm,0.3s,baz=252,slow=0.5,SNR=2.9
ILAR Eielson Array 150.54 312 PKPbc PKiKP 00 58 13.6 +0.1
comp=Z,1.6nm,1.0s,baz=111,slow=2.1,SNR=14

*IDC **25** 01:04:04.1±1.1, 5°.44S×150°.87E, h0km, mb3.6/7, mbtmp3.7/7, MS3.2/1, Error ellipse: s-maj=49.4km s-min=23.9km az=106.0*
ISC 25 01:04:11.8±1.2, 5°.5S±0°.2×150°.8E±0°.3, h50km, n9, σ1s20/9, mb3.7/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.50	227	P		P	P	01 08 56.0	-0.6
	1.2nm,0.4s,baz=52,slow=11,SNR=19								
WRA				PcP		PcP	PcP	01 12 57.2	-0.9
	0.2nm,0.9s,baz=40,slow=1.9,SNR=5.8								
	1.2nm,0.4s								
ASAR	Alice Springs	24.31	220	P		P	P	01 09 24.3	-0.6
	0.2nm,0.4s,baz=54,slow=9.4,SNR=6.4								
	0.2nm,0.4s								
NWAO	Narrogin (SRO)	41.48	225	LR		LR	LR	01 30 15.3	
	comp=Z,26nm,18.2s,baz=262,slow=38								
SONM	Songino Array	65.83	329	P		P	P	01 14 53.0	+0.8
	0.4nm,0.4s,baz=126,slow=7.3,SNR=3.6								
	0.4nm,0.4s								
MKAR	Makanchi Array	79.51	319	P		P	P	01 16 13.4	0.0
	0.2nm,0.6s,baz=102,slow=4.7,SNR=2.6								
	0.2nm,0.6s								
ZALV	Zalesovo Beam	80.60	327	P		P	P	01 16 17.9	-1.0
	0.3nm,0.4s,baz=60,slow=3.5,SNR=2.3								
	0.3nm,0.4s								
ILAR	Eielson Array	83.55	22	P		P	P	01 16 33.4	-0.9
	0.5nm,0.6s,baz=248,slow=5.0,SNR=8.1								
	0.5nm,0.6s								
QSPA	South Pole Qui	84.49	180	P		P	P	01 16 39.8	+0.6
	0.9nm,0.6s,baz=286,slow=0.6,SNR=8.7								
	0.9nm,0.6s								
TORD	Torodi Ar. Bea	148.57	286	PKPbc		PKPdf	PKPdf	01 23 52.7	+2.1
	0.3nm,0.3s,baz=71,slow=2.7,SNR=8.0								

*NEIC **25** 01:22:34.7±1.6, 18°.88N±0°.08×147°.4E±0°.2, h10km±1km, mb4.4/26, Error ellipse: s-maj=27.7km s-min=13.0km az=96.0*
*IDC **25** 01:22:39.2±3.8, 18°.90N×147°.34E, h59km×36km, mb3.5/13, mbtmp3.8/14, ML3.6/2, Error ellipse: s-maj=26.4km s-min=15.8km az=82.0*
ISC 25 01:22:34.0±0.7, 18°.93N±0°.08×147°.4E±0°.2, h10km, n51, σ1s14/43, mb4.3/27, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.85	205	Pn		Pn	Pn	01 24 02.4	+1.5
GUMO	Guam	5.85	205	P		Pn	Pn	01 24 02.9	+2.0
	12nm,0.3s,baz=113,slow=7.4,SNR=6.7								
GUMO				S		Sn	Sn	01 25 08.8	+0.7
	31nm,0.3s,baz=348,slow=16,SNR=2.1								
H11S3	WAKE ISLAND Hy	18.25	88	T		T	T	01 45 52.2	
	baz=275,slow=74,SNR=25								
H11S1	WAKE ISLAND Hy	18.27	88	T		T	T	01 45 55.6	
	baz=275,slow=74,SNR=15								
H11S2	WAKE ISLAND Hy	18.27	88	T		T	T	01 45 53.1	
	baz=275,slow=74,SNR=10								
JGF	Kuroka	18.84	334	P		P	P	01 26 55.6	+1.4
MJAR	Matsushiro Arr	19.33	337	P		P	P	01 26 59.5	0.0
	baz=290,slow=18,SNR=2.7								
	0.9nm,0.6s								
MAJO	Matsushiro	19.33	337	Pn		P		01 27 02.9	+3.4
SSLB	Suanglung	25.10	286	P		P	P	01 27 58.6	-0.5
SSLB				IAmb		IAmb	IAmb	01 28 29.4	
	comp=Z,11nm,0.9s								
KSRS	Korea Array	25.13	321	P		P	P	01 27 59.0	-0.2
	comp=Z,4.3nm,0.9s,baz=146,slow=9.1,SNR=17								
	comp=Z,4.3nm,0.9s								
KSAR	Wonju Array Be	25.14	321				P	01 27 58.8	-0.5
KS19	Wonju Array Si	25.20	321	P		P	P	01 27 59.3	-0.5
USRK	Ussuriysk Ar.	28.32	336	P		P	P	01 28 28.8	+0.9
WB0	Warramunga Arr	40.52	199	P		P	P	01 30 12.1	-1.5
WB0				IAmb		IAmb	IAmb	01 30 41.1	
	comp=Z,11nm,1.5s								
WB2	Warramunga Arr	40.70	199	P		P	P	01 30 13.4	-1.6
WB2				IAmb		IAmb	IAmb	01 30 15.8	
	comp=Z,8.4nm,1.4s								
WRA	Warramunga Arr	40.71	199	P		P	P	01 30 14.4	-0.6
WRA	Warramunga Arr	40.71	199	P		P	P	01 30 13.2	-1.9
	comp=Z,0.4nm,0.5s,baz=22,slow=8.2,SNR=12								
WRA				PcP		PcP	PcP	01 32 15.8	-0.9
	comp=Z,0.2nm,0.4s,baz=15,slow=3.4,SNR=2.2								
	comp=Z,0.4nm,0.5s								
SONM	Songino Array	44.00	320	P		P	P	01 30 41.1	-0.7
SONM	Songino Array	44.00	320	P		P	P	01 30 39.7	-2.1
	comp=Z,0.7nm,0.4s,baz=130,slow=6.7,SNR=8.2								
	comp=Z,0.7nm,0.4s								
ASAR	Alice Springs	44.34	198	P		P	P	01 30 43.0	-1.7
	comp=Z,0.5nm,0.8s,baz=20,slow=15,SNR=2.9								
	comp=Z,0.5nm,0.8s								
BBOO	Buckleboo	52.58	192	P		P	P	01 31 46.3	-1.7
ZALV	Zalesovo Beam	58.83	322	P		P	P	01 32 31.2	-1.4
ZALV	Zalesovo Beam	58.83	322	P		P	P	01 32 30.9	-1.7
	comp=Z,0.9nm,0.6s,baz=113,slow=9.6,SNR=5.2								
	comp=Z,0.9nm,0.6s								
C18K	Utukok River	58.91	20	P		P	P	01 32 32.9	-0.2
C18K				IAmb		IAmb	IAmb	01 33 09.0	
	comp=Z,1.8nm,1.1s								
H19K	Roundabout Mou	59.14	24	P		P	P	01 32 35.2	+0.6
H19K				IAmb		IAmb	IAmb	01 32 54.8	
	comp=Z,4.1nm,1.1s								
G19K	Purcell Mounta	59.16	23	P		P	P	01 32 36.0	+1.3
K20K	Telida	59.28	27	P		P	P	01 32 37.1	+1.4
MK31	Makanchi Array	59.48	314	P		P	P	01 32 36.6	-0.8
MKAR	Makanchi Array	59.48	314	P		P	P	01 32 36.6	-0.7
MKAR	Makanchi Array	59.48	314	P		P	P	01 32 36.0	-1.4
	comp=Z,1.1nm,0.8s,baz=95,slow=7.8,SNR=11								
	comp=Z,1.1nm,0.8s								
J20K	Nowinta River	59.54	26	P		P	P	01 32 38.3	+0.9
J20K				IAmb		IAmb	IAmb	01 33 13.8	
	comp=Z,6.4nm,1.3s								
MAKZ	Makanchi	59.70	314	P		P	P	01 32 38.5	-0.4
MAKZ				IAmb		IAmb	IAmb	01 32 39.0	
	comp=Z,3.0nm,1.1s								
D19K	Kuna River	59.83	20	P		P	P	01 32 40.1	+0.7
D19K				IAmb		IAmb	IAmb	01 32 46.4	
	comp=Z,1.9nm,1.0s								
CAST	Castle Rocks	60.15	27	P		P	P	01 32 42.8	+1.1
IMAR	Indian Mountai	60.35	24	P		P	P	01 32 43.9	+1.0
H21K	Melozitna Rive	60.59	24	P		P	P	01 32 45.8	+1.1
H21K				IAmb		IAmb	IAmb	01 33 27.9	
	comp=Z,7.2nm,1.4s								
I21K	Tanana	60.76	25	P		P	P	01 32 46.9	+1.2
BPAW	Bear Paw Mtn.	60.82	26	P		P	P	01 32 47.3	+1.0
BPAW				IAmb		IAmb	IAmb	01 32 54.2	
	comp=Z,5.9nm,1.2s								
MLY	Manley	61.21	25	P		P	P	01 32 50.0	+1.1
MLY				IAmb		IAmb	IAmb	01 33 31.4	
	comp=Z,5.3nm,1.4s								
SCM	Sheep Creek Mo	61.84	29	P		P	P	01 32 54.1	+0.9
WRH	Wood River Hil	62.14	26	P		P	P	01 32 54.6	-0.5
WRH				IAmb		IAmb	IAmb	01 33 00.8	
	comp=Z,3.1nm,1.3s								
MDM	Murphy Dome	62.21	26	P		P	P	01 32 56.6	+1.0
MDM				IAmb		IAmb	IAmb	01 33 33.8	
	comp=Z,3.6nm,1.2s								
KURBB	Kurchatov Arra	62.24	318	P		P	P	01 32 54.9	-1.1
	comp=Z,2.1nm,0.7s,baz=95,slow=7.3,SNR=21								
	comp=Z,2.1nm,0.7s								
H24K	Noodor Dome	62.59	25	P		P	P	01 32 58.6	+0.5
H24K				IAmb		IAmb	IAmb	01 33 35.0	
	comp=Z,5.1nm,1.4s								

ILAR Eielson Array 62.72 26 P P 01 32 57.2 -1.8
comp=Z,0.7nm,0.8s,baz=255,slow=6.0,SNR=7.7
comp=Z,0.7nm,0.8s
J25K Salcha River, 63.32 26 P P 01 33 03.3 +0.2
BVAR Borovoye Array 67.34 320 P P 01 33 28.4 -0.8
comp=Z,2.7nm,0.7s,baz=79,slow=7.7,SNR=15
comp=Z,2.7nm,0.7s
YKA Yellowknife Ar 77.02 28 P P 01 34 26.7 -0.2
comp=Z,0.4nm,0.7s,baz=289,slow=5.5,SNR=5.3
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 81.71 52 P P 01 34 52.6 -0.7
comp=Z,0.3nm,0.3s,baz=242,slow=1.9,SNR=2.1
comp=Z,0.3nm,0.3s
PDAR Pinedale Array 86.50 46 P P 01 35 17.0 -0.6
comp=Z,0.2nm,0.6s,baz=272,slow=4.2,SNR=2.2
comp=Z,0.2nm,0.6s
FINES FINESS Array B 87.35 336 P P 01 35 18.5 -2.6
comp=Z,0.7nm,0.7s,baz=39,slow=13,SNR=6.0
comp=Z,0.7nm,0.7s

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*IDC **25** 01:29:49.0±4.0, 14°.29N×147°.69E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=157.5km s-min=31.6km az=86.0*
ISC 25 01:29:50.2±3.9, 14°.3N±0°.2×14°8E±°, h10km, n6, σ0s32/6, mb3.9/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.49**	**202**	P	**P**	**01 36 55.8**	**0.0**
	0.6nm,0.8s,baz=25,slow=9.3,SNR=4.5						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**62.76**	**324**	P	**P**	**01 40 15.2**	**-0.3**
	0.3nm,0.4s,baz=90,slow=8.6,SNR=2.0						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**63.01**	**315**	P	**P**	**01 40 17.5**	**0.0**
	0.4nm,0.5s,baz=79,slow=8.6,SNR=4.2						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**65.97**	**319**	P	**P**	**01 40 36.2**	**-0.4**
	1.1nm,0.2s,baz=97,slow=6.7,SNR=5.7						
	1.1nm,0.2s						
BVAR	**Borovoye Array**	**71.18**	**321**	P	**P**	**01 41 09.2**	**0.0**
	0.5nm,0.5s,baz=100,slow=7.6,SNR=3.6						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**91.74**	**336**	P	**P**	**01 42 58.0**	**+0.1**
	2.6nm,1.0s,baz=35,slow=5.1,SNR=4.7						
	2.6nm,1.0s						

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*IDC **25** 01:37:30.0±5.6, 15°.51S×174°.96W, h234km±52km, mb3.8/17, mbtmp4.3/18, Error ellipse: s-maj=16.5km s-min=14.1km az=125.0*
*NEIC **25** 01:37:33.5±1.2, 15°.66S±0°.10×175°.06W±0°.09, h254km±11km, mb4.7/36, Error ellipse: s-maj=18.6km s-min=3.9km az=221.0*
ISC 25 01:37:33.0±0.4, 15°.57S±0°.07×175°.04W±0°.06, h262km, n82, σ0s86/86, mb4.5/38, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.56**	**63**	Pn	**Pn**	**01 38 32.7**	**+0.2**
AFI				Sn	**S**	**01 39 20.3**	**+0.5**
NIUE	**Niue**	**6.00**	**126**	Pn	**Pn**	**01 39 01.8**	**+0.4**
NIUE				Sn	**S**	**01 40 11.2**	**-1.0**
MARNC	**Mare, Loyalty**	**17.09**	**247**	P	**P**	**01 41 15.3**	**+0.3**
PINNC	**Pines Island,**	**17.96**	**244**	P	**P**	**01 41 25.5**	**+1.0**
DZM	**Mont Dzumac**	**18.67**	**247**	P	**P**	**01 41 32.7**	**+0.4**
DZM				IAmb	IAmb	01 41 54.5	
	comp=Z,25nm,1.5s						
DZM	**Mont Dzumac**	**18.67**	**247**	*e*S	S	01 44 40.7	-10
	comp=Z,56nm,22.6s						
DZM	**Mont Dzumac**	**18.67**	**247**	P	**P**	**01 41 32.9**	**+0.6**
	comp=Z,7.9nm,0.8s,baz=66,slow=19,SNR=3.5						
KOUNC	**Koumac, New Ca**	**20.26**	**253**	P	**P**	**01 41 48.4**	**-0.8**
KOUNC				IAmb	IAmb	01 41 52.9	
	comp=Z,40nm,1.4s						
PPT2	**Papeete2**	**24.48**	**98**	*e*sS	sS	01 47 52.4	-5.2
	comp=Z,75nm,26.2s						
QRZ	**Quartz Range**	**27.38**	**201**	P	**P**	**01 42 54.4**	**0.0**
TKNZ	**Takaka Hill**	**27.42**	**200**	P	**P**	**01 42 53.7**	**-1.1**
NNZ	**Nelson**	**27.45**	**199**	P	**P**	**01 42 54.4**	**-0.6**
THZ	**Tophouse**	**28.10**	**199**	P	**P**	**01 43 00.6**	**-0.3**
THZ				IAmb	IAmb	01 43 11.6	
	comp=Z,36nm,1.5s						
DSZ	**Denniston Nort**	**28.45**	**201**	P	**P**	**01 43 03.2**	**-0.7**
KHZ	**Kahutara**	**28.50**	**198**	P	**P**	**01 43 03.4**	**-0.9**
KHZ				IAmb	IAmb	01 43 18.0	
	comp=Z,19nm,1.1s						
MLZ	**Mavora Lakes**	**32.92**	**202**	P	**P**	**01 43 43.4**	**+0.4**
MLZ				IAmb	IAmb	01 43 52.8	
	comp=Z,44nm,1.3s						
EIDS	**Eidsvold**	**33.12**	**247**	P	**P**	**01 43 44.1**	**-0.8**
EIDS				IAmb	IAmb	01 44 04.5	
	comp=Z,20nm,1.5s						
WHZ	**Wether Hill Ro**	**33.43**	**202**	P	**P**	**01 43 48.3**	**+1.0**
CTAO	**Charters Tower**	**37.06**	**257**	P	**P**	**01 44 18.3**	**-0.3**
PMG	**Port Moresby**	**37.37**	**275**	P	**P**	**01 44 21.7**	**+0.5**
PMG				IAmb	IAmb	01 44 23.8	
	comp=Z,16nm,0.8s						
CAN	**Canberra**	**37.68**	**232**	P	**P**	**01 44 23.5**	**-0.1**
CAN				IAmb	IAmb	01 44 40.8	
	comp=Z,60nm,1.5s						
COEN	**Coen**	**40.39**	**267**	P	**P**	**01 44 47.3**	**+1.1**
COEN				IAmb	IAmb	01 44 49.0	
	comp=Z,33nm,0.8s						
TOO	**Toolangi**	**41.14**	**230**	P	**P**	**01 44 51.7**	**-0.3**
TOO				IAmb	IAmb	01 44 52.5	
	comp=Z,24nm,1.1s						
STKA	**Stephens Creek**	**42.58**	**240**	P	**P**	**01 45 03.6**	**-0.1**
STKA	**Stephens Creek**	**42.58**	**240**	P	**P**	**01 45 03.4**	**-0.3**
	comp=Z,6.2nm,0.5s,baz=85,slow=9.0,SNR=18						
	comp=Z,6.2nm,0.5s						
PTCN	**Pitcairn Islan**	**43.03**	**110**	P	**P**	**01 45 07.5**	**+0.1**
BBOO	**Buckleboo**	**47.36**	**240**	P	**P**	**01 45 40.7**	**-0.5**
WB0	**Warramunga Arr**	**48.22**	**257**	P	**P**	**01 45 47.5**	**-0.5**
WB0				IAmb	IAmb	01 45 48.6	
	comp=Z,26nm,0.8s						
WB2	**Warramunga Arr**	**48.25**	**257**	P	**P**	**01 45 48.1**	**-0.1**
WB2				IAmb	IAmb	01 45 49.3	
	comp=Z,24nm,0.7s						
WRAB	**Tennant Creek**	**48.25**	**257**	P	**P**	**01 45 48.0**	**-0.2**
WRAB				IAmb	IAmb	01 45 49.3	
	comp=Z,21nm,0.7s						
WRA	**Warramunga Arr**	**48.26**	**257**	P	**P**	**01 45 47.8**	**-0.5**
WRA	**Warramunga Arr**	**48.26**	**257**	P	**P**	**01 45 47.6**	**-0.7**
	comp=Z,21nm,0.7s,baz=91,slow=7.2,SNR=298						
WRA				PcP	**PcP**	**01 47 11.0**	**0.0**
	comp=Z,0.8nm,0.4s,baz=96,slow=3.7,SNR=1.8						
WRA				S	**S**	**01 52 24.4**	**-3.4**
	comp=Z,0.3nm,0.7s,baz=86,slow=12,SNR=1.9						
	comp=Z,21nm,0.7s						
AS31	**Alice Springs**	**48.55**	**252**	P	**P**	**01 45 50.5**	**+0.1**
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**01 45 51.0**	**+0.5**
ASAR	**Alice Springs**	**48.55**	**252**	P	**P**	**01 45 50.5**	**0.0**
	comp=Z,121nm,0.6s,baz=89,slow=6.1,SNR=678						
ASAR				PcP	**PcP**	**01 47 11.7**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=99,slow=4.8,SNR=1.5						
ASAR				S	**S**	**01 52 30.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=82,slow=15,SNR=2.4						
MTN	**Manton Dam**	**52.14**	**266**	P	**P**	**01 46 17.3**	**0.0**
FORT	**Forrest**	**53.93**	**243**	P	**P**	**01 46 29.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**56.62**	**258**	P	**P**	**01 46 50.1**	**+0.7**
PSA00	**Pilbara Seismi**	**61.64**	**254**	P	**P**	**01 47 23.6**	**-0.2**
MBWA	**Marble Bar**	**61.79**	**254**	P	**P**	**01 47 24.6**	**-0.1**
MBWA				IAmb	IAmb	01 47 25.2	
	comp=Z,9.3nm,0.9s						
SBA	**Scott Base**	**62.96**	**184**	P	**P**	**01 47 33.4**	**+2.0**
SBA				IAmb	IAmb	01 48 16.2	
	comp=Z,39nm,1.4s						
VNDA	**Vanda**	**63.05**	**185**	P	**P**	**01 47 32.7**	**+0.6**
VNDA				IAmb	IAmb	01 47 38.5	
	comp=Z,16nm,1.5s						
VNDA	**Vanda**	**63.05**	**185**	P	**P**	**01 47 32.8**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=30,slow=9.9,SNR=3.8						
	comp=Z,3.6nm,0.9s						
MORW	**Morawa**	**64.38**	**245**	P	**P**	**01 47 42.3**	**+0.7**
MORW				IAmb	IAmb	01 47 50.7	
	comp=Z,23nm,1.4s						
TOLI2	**Tolitoli**	**65.51**	**279**	P	**P**	**01 47 49.8**	**+0.8**
TOLI2				IAmb	IAmb	01 47 52.7	
	comp=Z,4.8nm,0.6s						
GIRL	**Giralia**	**66.67**	**252**	P	**P**	**01 47 56.8**	**+0.5**
MJAR	**Matsushiro Arr**	**68.06**	**321**	P	**P**	**01 48 03.9**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=144,slow=7.9,SNR=4.8						
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**72.32**	**343**	P	**P**	**01 48 29.9**	**-0.2**
	comp=Z,4.5nm,0.7s,baz=116,slow=9.2,SNR=7.0						
	comp=Z,4.5nm,0.7s						
QSPA	**South Pole Qui**	**74.47**	**180**	P	**P**	**01 48 43.2**	**+0.6**
QSPA	**South Pole Qui**	**74.47**	**180**	P	**P**	**01 48 43.3**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=345,slow=1.0,SNR=20						
	comp=Z,3.2nm,0.7s						
KSRS	**Korea Array**	**75.18**	**316**	P	**P**	**01 48 47.9**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=121,slow=5.1,SNR=4.2						
	comp=Z,1.9nm,0.9s						
NVAR	**Mina Array Bea**	**75.52**	**43**	P	**P**	**01 48 48.8**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=227,slow=8.2,SNR=15						
	comp=Z,4.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**76.58**	**324**	P	**P**	**01 48 54.9**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=155,slow=7.5,SNR=3.1						
	comp=Z,1.3nm,0.7s						
NJ2	**Nanjing**	**79.01**	**308**	*e*P	P	**01 49 10.6**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TXAR	**Lajitas Array**	**82.02**	**57**	P	**P**	**01 49 24.4**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=216,slow=6.2,SNR=11						
	comp=Z,1.4nm,0.9s						
ANMO	**Albuquerque**	**82.13**	**51**	P	**P**	**01 49 24.9**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=316,slow=7.6,SNR=7.0						
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**82.92**	**12**	P	**P**	**01 49 27.1**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=208,slow=5.5,SNR=18						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**83.45**	**42**	P	**P**	**01 49 31.2**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=212,slow=3.3,SNR=34						
	comp=Z,3.2nm,0.7s						
XAN	**Xi'an**	**87.45**	**306**	⇑P	**P**	**01 49 52.5**	**+1.2**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	**Hu-ho-hao-te**	**87.99**	**313**	*e*P	**P**	**01 49 54.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,64nm,5.3s						
PLCA	**Paso Flores**	**90.56**	**133**	P	**P**	**01 50 06.3**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=239,slow=7.9,SNR=4.4						
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	**90.89**	**24**	P	**P**	**01 50 06.3**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=242,slow=4.9,SNR=4.9						
	comp=Z,0.3nm,0.8s						
PZH	**PanZhiHua**	**90.94**	**297**	P	**P**	**01 50 09.1**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.2s						
CMAR	**Chiang Mai Arr**	**91.17**	**289**	P	**P**	**01 50 09.1**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=99,slow=2.8,SNR=6.2						
	comp=Z,1.0nm,0.3s						
LZH	**Lanzhou**	**92.06**	**307**	*e*P	**P**	**01 50 14.5**	**+1.6**
LZH				pP	pwP	01 51 23.1	+5.2
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	**Songino Array**	**93.92**	**319**	P	**P**	**01 50 20.8**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=126,slow=2.5,SNR=2.0						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**117.04**	**322**	PKP	**PKPdf**	**01 55 45.0**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=109,slow=0.9,SNR=4.7						
ARCES	**ARCESS Array B**	**124.55**	**351**	PKP	**PKPdf**	**01 55 59.4**	**-1.1**
	comp=Z,3.6nm,0.9s,baz=29,slow=2.8,SNR=8.1						
FINES	**FINESS Array B**	**131.75**	**347**	PKP	**PKPdf**	**01 56 14.2**	**-0.3**
	comp=Z,2.7nm,1.0s,baz=46,slow=4.0,SNR=5.1						
BRTR	**Keskin Array B**	**145.28**	**319**	PKPbc	**PKPdf**	**01 56 40.2**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=68,slow=2.6,SNR=16						
GERES	**GERESS Array B**	**146.05**	**350**	PKPbc	**PKPbc**	**01 56 42.2**	**0.0**
	comp=Z,1.0nm,0.7s,baz=326,slow=11,SNR=3.5						
MOA	**Molln**	**146.91**	**348**	*i* PKP	**PKPbc**	**01 56 44.6**	**0.0**
	comp=Z,0.6nm,0.4s						
BIOA	**Bad Ischl, Aus**	**147.18**	**349**	*i* PKP	**PKPbc**	**01 56 45.1**	**-0.3**
	comp=Z,1.0nm,0.3s						
MMAI	**Mount Meron Ar**	**147.43**	**308**	PKPbc	**PKPbc**	**01 56 47.0**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=31,slow=2.1,SNR=4.8						
RETA	**Reutte**	**147.81**	**353**	*e*PKP	**PKPbc**	**01 56 46.9**	**-0.2**
	comp=Z,0.8nm,0.5s						
MOTA	**Moosalm**	**147.91**	**352**	*e*PKP	**PKPbc**	**01 56 47.6**	**+0.1**
	comp=Z,0.7nm,0.4s						
WTTA	**Wattenberg**	**147.92**	**351**	*i* PKP	**PKPbc**	**01 56 47.4**	**-0.1**
	comp=Z,2.6nm,0.5s						
SQTA	**Sankt Quirin**	**148.02**	**352**	*i* PKP	**PKPbc**	**01 56 47.4**	**-0.4**
	comp=Z,1.9nm,0.7s						
MYKA	**Terra Mystica**	**148.20**	**349**	*e*PKP	**PKPbc**	**01 56 47.2**	**-1.0**
	comp=Z,1.9nm,0.4s						
ABTA	**Abfaltersbach**	**148.28**	**350**	*i* PKP	**PKPbc**	**01 56 47.7**	**-0.7**
	comp=Z,0.6nm,0.3s						
ESDC	**Sonseca Array**	**154.75**	**16**	PKPab	**PKPab**	**01 57 17.5**	**-2.0**
	comp=Z,0.7nm,1.0s,baz=323,slow=4.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**176.02**	**127**	PKPab	**PKPab**	**01 58 52.5**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=253,slow=2.7,SNR=4.3						

IDC 25 01:51:48.8±9.5, 11°.25S×165°.14E, h0km, mb3.6/3, mbtmp3.5/3, MS3.6/2, Error ellipse: s-maj=286.5km s-min=58.8km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.42**	**289**	LR	LR	01 55 41.3	
	comp=Z,1μm,19.0s,baz=328,slow=43						
STKA	**Stephens Creek**	**29.88**	**223**	LR	LR	02 09 51.5	
	comp=Z,39nm,18.8s,baz=205,slow=36						
WRA	**Warramunga Arr**	**30.86**	**250**	P	P	01 58 07.9	+0.8
	0.3nm,0.7s,baz=80,slow=9.2,SNR=2.1						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**32.17**	**243**	P	P	01 58 18.0	-0.7
	0.7nm,0.8s,baz=70,slow=9.8,SNR=7.2						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**93.27**	**317**	P	P	02 05 05.5	-0.1
	0.2nm,0.7s,baz=97,slow=4.6,SNR=2.7						
	0.2nm,0.7s						

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*NEIC **25** 02:02:17.0±1.2, 29°.11S±0°.02×72°.89W±0°.07, h10km±2km, mb4.4/5, Error ellipse: s-maj=10.7km s-min=2.9km az=285.0*
*SJA **25** 02:02:17.7±1.2, 29°.15S×72°.58W, h10km, ML3.8, MW3.9*
*IDC **25** 02:02:19.1±0.7, 29°.18S×72°.57W, h0km, mb4.2/7, mbtmp4.1/11, ML3.9/4, MS3.1/5, Error ellipse: s-maj=27.2km s-min=18.2km az=95.0*
*GUC **25** 02:02:22.2±0.6, 29°.22S×72°.53W, h45km±4km, ML3.5*
ISC 25 02:02:18.2±0.9, 29°.17S±0°.03×72°.63W±0°.05, h5km±5km, n107, σ1s69/136, mb4.4/7, 4C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**1.43**	**122**		**Pg**	**02 02 45.5**	**0.0**
CO05				Sn	**Sg**	**02 03 03.5**	**-0.5**
CO05	**La Serena**	**1.43**	**122**	*e*P	**Pn**	**02 02 44.8**	**0.0**
CO05				*i* S	**Sb**	**02 03 02.3**	**-1.5**
CO05				IAML		02 03 05.2	
	comp=E,2μm,0.6s						
AC04	**Llanos de Chal**	**1.67**	**55**	Pn	**Pn**	**02 02 47.5**	**-0.7**
AC04				Sn	**Sn**	**02 03 07.7**	**-2.2**
AC04	**Llanos de Chal**	**1.67**	**55**	*e*P	**Pn**	**02 02 47.6**	**-0.5**
AC04				*e*S	Sn	02 02 58.8	-11
AC04	**Llanos de Chal**	**1.67**	**55**	⇓*i*P	**Pn**	**02 02 47.5**	**-0.7**
AC04				*i* S	**Sn**	**02 03 07.2**	**-2.7**
LCO	**Las Campanas**	**1.70**	**85**		**Pb**	**02 02 49.7**	**-0.4**
LCO				Sn	**Sb**	**02 03 11.2**	**-0.6**
LCO	**Las Campanas**	**1.70**	**85**	*e*P	**Pb**	**02 02 49.7**	**-0.4**
LCO				*e*S	**Sb**	**02 03 11.2**	**-0.6**
LCO				IAML		02 03 11.5	
	comp=Z,1μm,0.6s						
LCO	**Las Campanas**	**1.70**	**85**	*e*P	**Pb**	**02 02 49.6**	**-0.4**
LCO				*i* S	**Sb**	**02 03 10.5**	**-1.3**
CO06	**Fray Jorge**	**1.73**	**150**		**Pn**	**02 02 48.7**	**-0.2**
CO06				Sn	**Sn**	**02 03 08.5**	**-2.9**
CO06	**Fray Jorge**	**1.73**	**150**	⇑*e*P	**Pn**	**02 02 48.7**	**-0.2**
CO06				IAML		02 03 12.5	
	comp=E,609nm,0.3s						
GO04	**Tololo Observa**	**1.88**	**123**		**Pb**	**02 02 52.5**	**-0.7**
GO04				Sn	**Sn**	**02 03 15.2**	**-0.3**
GO04	**Tololo Observa**	**1.88**	**123**	*e*P	**Pb**	**02 02 52.1**	**-1.1**
GO04				*e*S	**Sb**	**02 03 15.5**	**-1.6**
GO04				IAML		02 03 18.1	
	comp=Z,2μm,0.5s						
GO04	**Tololo Observa**	**1.88**	**123**	*e*P	**Pb**	**02 02 52.5**	**-0.7**
GO04				*e*S	**Sn**	**02 03 14.7**	**-0.8**
AC05	**El Transito**	**2.09**	**81**		**Pb**	**02 02 55.4**	**-1.3**
AC05	**El Transito**	**2.09**	**81**	*e*P	**Pb**	**02 02 55.0**	**-1.7**
AC05				*e*S	**Sb**	**02 03 21.7**	**-1.4**
AC05				IAML		02 03 29.9	
	comp=Z,264nm,0.6s						
AC05	**El Transito**	**2.09**	**81**	⇑*e*P	**Pb**	**02 02 55.0**	**-1.7**
AC05				*i* S	**Sn**	**02 03 20.3**	**-0.2**
AC05				IAML		02 03 23.6	
	comp=N,488nm,0.3s						
CO01	**Juntas del Tor**	**2.35**	**111**		**Pb**	**02 02 59.9**	**-1.3**
CO01	**Juntas del Tor**	**2.35**	**111**	*e*P	**Pb**	**02 02 59.4**	**-1.8**
CO01				*e*S	**Sb**	**02 03 28.7**	**-2.0**
CO01				IAML		02 03 29.4	
	comp=Z,370nm,0.4s						
CO01	**Juntas del Tor**	**2.35**	**111**	*e*P	**Pb**	**02 03 00.1**	**-1.1**
CO01				IAML		02 03 29.7	
	comp=N,385nm,0.4s						
CO03	**El Pedregal**	**2.37**	**135**	Pn	**Pn**	**02 02 59.1**	**+1.3**
CO03	**El Pedregal**	**2.37**	**135**	*e*P	**Pn**	**02 02 59.3**	**+1.5**
CO03				*e*S	**Sb**	**02 03 28.7**	**-2.3**
CO03				IAML		02 03 30.0	
	comp=Z,444nm,0.7s						
CO03	**El Pedregal**	**2.37**	**135**	*e*P	**Pn**	**02 02 58.9**	**+1.1**
CO03				*i* S	**Sn**	**02 03 25.6**	**-1.7**
CO03				IAML		02 03 30.0	
	comp=E,922nm,0.3s						
CO02	**Combarbal**	**2.47**	**146**		**Pn**	**02 03 00.3**	**+1.1**
CO02	**Combarbal**	**2.47**	**146**	*e*P	**Pn**	**02 03 00.5**	**+1.3**
CO02				*e*S	**Sn**	**02 03 29.4**	**-0.5**
CO02				IAML		02 03 30.6	
	comp=Z,644nm,0.8s						
CO02	**Combarbal**	**2.47**	**146**	*e*P	**Pn**	**02 03 00.3**	**+1.1**
CO02				*i* S	**Sn**	**02 03 28.6**	**-1.3**
GO03	**Copiap**	**2.63**	**54**		**Pn**	**02 03 02.1**	**+0.7**
GO03	**Copiap**	**2.63**	**54**	*e*P	**Pn**	**02 03 02.0**	**+0.7**
GO03				*e*P	**Pb**	**02 03 02.8**	**-3.1**
GO03				*e*S	**Sn**	**02 03 34.0**	**+0.2**
GO03				IAML		02 03 35.1	
	comp=Z,262nm,0.5s						
GO03	**Copiap**	**2.63**	**54**	⇑*e*P	**Pn**	**02 03 02.3**	**+0.9**
GO03				*i* S	**Sn**	**02 03 32.9**	**-0.8**
AROD	**Rodeo**	**2.92**	**111**	*e*P	**Pb**	**02 03 09.7**	**-1.3**
AROD				*e*S	**Sn**	**02 03 40.3**	**-1.1**
ACCO	**Cerro Coronel**	**3.41**	**115**	*e*P	**Pb**	**02 03 17.0**	**-2.2**
ACCO				*e*S	**Sb**	**02 03 56.3**	**-4.8**
AC01	**Pan de Azucar**	**3.51**	**31**	Pn	**Pn**	**02 03 12.4**	**-1.0**
AC01	**Pan de Azucar**	**3.51**	**31**	*e*P	**Pn**	**02 03 12.4**	**-1.0**
AC01				*e*S	**Sn**	**02 03 54.0**	**-1.4**
AC01	**Pan de Azucar**	**3.51**	**31**	⇓*i*P	**Pn**	**02 03 12.2**	**-1.2**
DOCA	**Reserva Natura**	**3.55**	**121**	*e*P	Pn	02 03 02.7	-12
DOCA				*e*S	**Sn**	**02 03 58.8**	**+1.9**
DOCA				IAML		02 04 15.2	
	comp=Z,136nm,0.9s						
VA06	**Catapilco**	**3.57**	**162**	Pn	**Pn**	**02 03 14.3**	**0.0**
VA06	**Catapilco**	**3.57**	**162**	⇓*e*P	**Pn**	**02 03 14.4**	**+0.2**
VA06				*i* S	**Sn**	**02 03 53.1**	**-3.7**
AC02	**Maricunga**	**3.87**	**54**	Pn	**Pn**	**02 03 20.5**	**+1.6**
AC02	**Maricunga**	**3.87**	**54**	*e*P	**Pn**	**02 03 20.3**	**+1.4**
AC02				*e*S	**Sn**	**02 04 06.4**	**+1.4**
AC02	**Maricunga**	**3.87**	**54**	*e*P	**Pn**	**02 03 20.7**	**+1.8**
RTLS	**Leoncito**	**3.89**	**133**	*e*P	**Pb**	**02 03 23.8**	**-3.8**
RTLS				*e*S	**Sn**	**02 04 07.8**	**+2.5**
RTLS				IAML		02 04 25.9	
	comp=Z,353nm,0.7s						
VCA	**Vinchina**	**3.90**	**85**	*e*P	**Pb**	**02 03 24.7**	**-2.9**
VCA				*e*S	**Sn**	**02 04 07.8**	**+2.5**
VCA				IAML		02 04 26.4	
	comp=Z,133nm,0.6s						
VA01	**Torpederas**	**3.93**	**168**	Pn	**Pn**	**02 03 18.6**	**-0.6**
VA03	**San Esteban**	**4.00**	**154**		**Pn**	**02 03 21.2**	**+0.9**
VA03	**San Esteban**	**4.00**	**154**	*e*P	**Pn**	**02 03 21.9**	**+1.6**
VA03				*e*S	**Sn**	**02 04 02.8**	**-4.9**
VA03				IAML		02 04 24.7	
	comp=Z,164nm,0.6s						
MT02	**Curacav**	**4.27**	**163**		**Pn**	**02 03 23.5**	**-0.4**
MT02	**Curacav**	**4.27**	**163**	*e*P	**Pn**	**02 03 24.4**	**+0.4**
MT02				*e*S	**Sn**	**02 04 14.1**	**-0.1**
MT02				IAML		02 04 27.0	
	comp=Z,51nm,0.4s						
PEL	**Peldehue**	**4.30**	**158**		**Pn**	**02 03 24.4**	**+0.1**
MT05	**Renca**	**4.51**	**159**	Pn	**Pn**	**02 03 26.3**	**-0.9**
MT05	**Renca**	**4.51**	**159**	*e*P	**Pn**	**02 03 28.8**	**+1.6**
MT05				*e*S	**Sn**	**02 04 18.3**	**-1.9**
MT05				IAML		02 04 39.9	
	comp=Z,96nm,0.8s						
VA05	**Santo Domingo**	**4.56**	**169**	Pn	**Pn**	**02 03 27.2**	**-0.5**
MT16	**CCHEN**	**4.61**	**158**		**Pn**	**02 03 28.9**	**+0.3**
MT03	**Universidad Ad**	**4.68**	**158**		**Pn**	**02 03 30.9**	**+1.4**
MT09	**Talagante**	**4.80**	**163**		**Pn**	**02 03 31.8**	**+0.5**
GO02

comp=Z,2.0nm,0.8s,baz=157,slow=7.9,SNR=5.0
comp=Z,2.0nm,0.8s
BOSA Boshof 82.79 119 LR LR 02 50 14.2
comp=Z,34nm,18.2s,baz=190,slow=35
TORD Torodi Ar. Bea 83.08 71 P **P 02 14 46.4 +1.1**
comp=Z,1.9nm,0.7s,baz=269,slow=3.3,SNR=11
comp=Z,1.9nm,0.7s
LBTB Lobatse 84.82 116 LR LR 02 49 21.9
comp=Z,30nm,19.9s,baz=190,slow=33
WRA Warramunga Arr 124.67 211 PKP **PKiKP 02 21 20.5 +0.6**
comp=Z,1.2nm,1.1s,baz=197,slow=2.2,SNR=4.8
BVAR Borovoye Array 143.94 38 PKP **PKPdf 02 21 54.2 -0.1**
comp=Z,0.6nm,0.6s,baz=292,slow=0.8,SNR=4.5
KURBB **Kurchatov Arra 149.52 37** PKPbc **PKiKP 02 22 10.1 +0.7**
comp=Z,1.9nm,0.7s,baz=302,slow=3.2,SNR=23
ZALV Zalesovo Beam 150.29 27 PKP **PKPdf 02 22 06.7 +1.8**
comp=Z,1.2nm,0.7s,baz=289,slow=4.5,SNR=7.6
ZALV PKPbc **pPKPbc 02 22 11.8 +1.8**
comp=Z,7.3nm,0.7s,baz=304,slow=3.3,SNR=32
ZALV PKPab **sPKPab 02 22 18.3 +2.0**
comp=Z,5.7nm,0.7s,baz=298,slow=3.2,SNR=10
MKAR Makanchi Array 153.71 41 PKPbc **PKiKP 02 22 19.5 +1.3**
comp=Z,1.1nm,0.8s,baz=328,slow=2.2,SNR=12
SONM Songino Array 161.35 2 PKPab **PKPab 02 23 06.0 +2.2**
comp=Z,0.2nm,0.4s,baz=286,slow=5.4,SNR=3.5

TAP ***25*** *02:03:34.8,23.83N×121.57E,h22km,ML3.6,B*
ASIES ***25*** *02:03:34.8,23.83N×121.57E,h22km,ML3.6,Mw3.1, Moment Tensor Solution. Moment tensor: Scale 10^20Nm; Mrr2.36; Mθθ-2.57; Mφφ0.21; Mrθ-2.55; Mθφ-4.09; Mφr2.05; Fault plane solution: M0 5.79258×10^20 NP1: φs271.59000°,δ67.65000°,λ142.72000°. NP2: φs17.73000°,δ55.93000°,λ27.33000°. Principal axes: T Plg41.6860°, Azm230.4680°; N Plg47.3830°, Azm65.0380°; P Plg7.3080°, Azm327.0260°;*
ISC 25 02:03:34.7±0.8, 23.82N±0.01×121.61E±0.02, h19km±1km, n157, σ0.81/306, 4C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
SHUL	**Shoufeng**	**0.05**	**236**	⇑P		**Pg 02 03 39.1**	**+1.0**
SHUL	baz=170			S		**Sg 02 03 42.6**	**+2.1**
TEGC	**Jichi Village**	**0.12**	**210**	P		**Pg 02 03 39.7**	**+0.9**
TEGC	baz=178			S		**Sg 02 03 44.0**	**+2.6**
ESL	**Shilin**	**0.16**	**269**	⇓*i*P		**Pg 02 03 39.4**	**+0.1**
ESL	baz=271			*i* S		**Sg 02 03 42.5**	**+0.2**
HWA	**Hwalien**	**0.16**	**359**	*i* P		**Pg 02 03 40.0**	**+0.7**
HWA	baz=27			S		**Sg 02 03 44.8**	**+2.5**
ETM	**Tongmen**	**0.18**	**325**	⇓P		**Pg 02 03 39.8**	**+0.2**
ETM	baz=326			S		**Sg 02 03 43.2**	**+0.4**
EGFH	**Guangfu**	**0.22**	**229**	*e*P		**Pb 02 03 40.4**	**+0.7**
WARBT	baz=224 **Fenglin Townsh**	**0.23**	**244**	⇓P		**Pb 02 03 40.1**	**+0.2**
WARBT	baz=243			S		**Sb 02 03 43.8**	**+0.7**
TWD	**Chiawan**	**0.26**	**358**	*i* P		**Pb 02 03 41.1**	**+0.3**
TWD	baz=359			*i* S		**Sg 02 03 45.9**	**+1.0**
LXIB	**Xiulin Townshi**	**0.27**	**319**	⇓P		**Pb 02 03 40.6**	**-0.4**
LXIB	baz=317			S		**Sb 02 03 45.1**	**-0.1**
ETL	**Fush Village**	**0.34**	**2**	P		**Pg 02 03 42.2**	**+0.1**
ETL	baz=3.0			S		**Sb 02 03 47.6**	**+0.2**
NACB	**Ninganchiao**	**0.36**	**358**	P		**Pg 02 03 42.3**	**0.0**
NACB	**Ninganchiao**	**0.36**	**358**	*e*P		**Pg 02 03 42.3**	**0.0**
NACB	baz=358			*i* S		**Sg 02 03 47.8**	**+0.3**
EHYH	**Wanrong**	**0.40**	**217**	P		**Pg 02 03 42.7**	**-0.4**
EHYH	baz=220			S		**Sg 02 03 49.1**	**+0.4**
ETLH	**Xiulin Townshi**	**0.41**	**344**	*e*P		**Pg 02 03 42.9**	**-0.4**
OWD	baz=341 **Renai**	**0.42**	**289**	⇓P		**Pg 02 03 43.0**	**-0.4**
OWD	baz=297			*i* S		**Sg 02 03 48.7**	**-0.7**
VWDT	**VWDT**	**0.43**	**262**	*e*P		**Pg 02 03 43.6**	**0.0**
VWDT	baz=260			S		**Sg 02 03 49.6**	**0.0**
WHF	**Hehuan Shan**	**0.45**	**316**	*e*P		**Pg 02 03 43.6**	**-0.6**
WHF	baz=319			*i* S		**Sg 02 03 50.1**	**-0.5**
CHGB	**Renai**	**0.47**	**302**	*e*P		**Pg 02 03 44.0**	**-0.4**
CHGB	baz=309			*i* S		**Sg 02 03 50.5**	**-0.4**
WUSB	**Renai**	**0.48**	**291**	⇓P		**Pg 02 03 44.3**	**-0.3**
WUSB	baz=298			S		**Sg 02 03 50.8**	**-0.4**
EHP	**Heping Village**	**0.51**	**14**	*e*P		**Pg 02 03 45.0**	**0.0**
EHP	baz=28			*e*S		**Sb 02 03 53.2**	**+1.1**
YULB	**Yu-li**	**0.51**	**214**	P		**Pb 02 03 44.7**	**-0.4**
YULB	**Yu-li**	**0.51**	**214**	⇑P		**Pb 02 03 44.2**	**-0.9**
YULB	baz=218			*e*S		**Sg 02 03 52.3**	**+0.4**
ECBN	**Changbin**	**0.52**	**196**	P		**Pg 02 03 45.9**	**+0.7**
ECBN	baz=190			S		**Sn 02 03 55.4**	**-0.1**
EAHA	**Aohua**	**0.53**	**13**	P		**Pb 02 03 45.2**	**-0.2**
EAHA	baz=26			S		**Sb 02 03 53.0**	**+0.5**
EYUL	**Yuli**	**0.54**	**210**	P		**Pb 02 03 45.8**	**+0.3**
EYUL	baz=215			*e*S		**Sg 02 03 53.5**	**+0.7**
TWF1	**Yuli**	**0.54**	**212**	⇑*i*P		**Pb 02 03 44.8**	**-0.8**
TWF1	baz=217			S		**Sg 02 03 54.5**	**+1.5**
FUSS	**Fushou**	**0.54**	**322**	⇓P		**Pb 02 03 45.4**	**-0.4**
FUSS	baz=325			S		**Sb 02 03 52.8**	**-0.4**
TWT	**Tachien**	**0.59**	**318**	*i* P		**Pb 02 03 46.2**	**-0.2**
TWT	baz=319			*i* S		**Sb 02 03 54.1**	**-0.3**
SSLB	**Suanglung**	**0.60**	**267**	P		**Pb 02 03 46.5**	**-0.1**
SSLB	**Suanglung**	**0.60**	**267**	P		**Pb 02 03 46.0**	**-0.6**
SSLB	baz=266			S		**Sb 02 03 54.0**	**-0.6**
TDCB	**Techi**	**0.60**	**317**	⇓P		**Pb 02 03 46.3**	**-0.4**
TDCB	baz=319			S		**Sb 02 03 54.1**	**-0.6**
ENA	**Nanau**	**0.62**	**11**	*i* P		**Pb 02 03 46.7**	**-0.3**
ENA	baz=8.0			*i* S		**Sg 02 03 55.7**	**+0.2**
WPL	**Puli Township**	**0.63**	**288**	P		**Pb 02 03 46.6**	**-0.4**
WPL	baz=289			S		**Sb 02 03 54.6**	**-0.8**
NNSB	**Datong**	**0.64**	**341**	P		**Pb 02 03 47.0**	**-0.4**
NNSB	baz=345			S		**Sb 02 03 55.0**	**-1.0**
NNSH	**Datong**	**0.64**	**341**	P		**Pb 02 03 47.0**	**-0.4**
NNSH	baz=344			S		**Sb 02 03 55.1**	**-0.9**
EWUT	**Wuta**	**0.65**	**14**	P		**Pb 02 03 47.1**	**-0.2**
EWUT	baz=10.0			S		**Sb 02 03 56.0**	**+0.1**
CHKH	**Chenggong**	**0.65**	**197**	P		**Pb 02 03 47.8**	**+0.3**
CHKH	baz=205			S		**Sn 02 03 58.3**	**-0.5**
SMLT	**Sun Moon Lake**	**0.65**	**276**	⇓*i*P		**Pb 02 03 47.1**	**-0.4**
SMLT	baz=275			*i* S		**Sb 02 03 56.1**	**-0.1**
NNS	**Nan Shan**	**0.66**	**341**	*e*P		**Pb 02 03 47.3**	**-0.4**
NNS	baz=345			S		**Sb 02 03 55.6**	**-0.8**
DPDB	**Guoxing**	**0.66**	**289**	P		**Pb 02 03 47.2**	**-0.4**
DPDB	baz=290			S		**Sb 02 03 55.7**	**-0.8**
FULB	**Fuli**	**0.68**	**205**	P		**Pg 02 03 48.5**	**+0.3**
FULB	baz=212			S		**Sg 02 03 58.7**	**+1.5**
WCS	**Beigang Elemen**	**0.68**	**291**	⇓P		**Pb 02 03 47.6**	**-0.4**
WCS	baz=291			S		**Sb 02 03 56.8**	**-0.2**
TYC	**Yuchr**	**0.69**	**277**	P		**Pb 02 03 47.5**	**-0.7**
TYC	baz=282			S		**Sb 02 03 57.0**	**-0.4**
WHYT	**Xinyi Township**	**0.70**	**260**	P		**Pb 02 03 48.4**	**+0.1**
WHYT	baz=254			S		**Sb 02 03 57.5**	**-0.1**
EOS4	**EOS4**	**0.72**	**65**	P		**Pn 02 03 49.6**	**0.0**
EOS4	baz=82			S		**Sn 02 03 59.7**	**-0.2**
LATG	**Datong**	**0.72**	**354**	P		**Pb 02 03 48.1**	**-0.7**
LATG	baz=350			S		**Sb 02 03 57.2**	**-1.1**
CHKT	**Chengkung**	**0.75**	**197**	*i* P		**Pb 02 03 49.1**	**0.0**
CHKT	baz=205			*i* S		**Sn 02 04 01.6**	**+0.5**
EHD	**Haiduan**	**0.76**	**209**	P		**Pb 02 03 48.2**	**-1.2**
EHD	baz=212			S		**Sg 02 04 00.2**	**+0.4**
WHP	**Taichung City**	**0.76**	**307**	P		**Pb 02 03 49.3**	**-0.1**
WHP	baz=308			S		**Sb 02 03 59.2**	**-0.2**
ESAO	**Su ao**	**0.79**	**16**	P		**Pb 02 03 50.0**	**+0.1**
ESAO	baz=13			S		**Sg 02 04 01.1**	**+0.4**
NDT	**Datong Townshi**	**0.79**	**354**	P		**Pb 02 03 49.7**	**-0.2**
NDT	baz=352			S		**Sb 02 03 59.8**	**-0.4**
ALS	**Alishan**	**0.80**	**248**	⇑*i*P		**Pb 02 03 50.0**	**-0.1**
ALS	baz=245			*i* S		**Sb 02 04 00.4**	**-0.2**
ECS	**Chishang**	**0.80**	**207**	P		**Pb 02 03 49.4**	**-0.6**
ECS	baz=214			*e*S		**Sg 02 04 01.5**	**+0.4**
WJS	**Zhushan**	**0.81**	**271**	P		**Pb 02 03 50.7**	**+0.5**
WJS	baz=271			S		**Sg 02 04 02.4**	**+1.1**
NDS	**Dongshan**	**0.82**	**7**	P		**Pb 02 03 50.3**	**-0.2**
NDS	baz=4.0			S		**Sb 02 04 01.1**	**0.0**
TWC	**Suao**	**0.82**	**16**	*i* P		**Pb 02 03 50.2**	**-0.3**
TWC	baz=14			S		**Sb 02 04 01.5**	**+0.4**
ENTT	**Nioudou**	**0.82**	**357**	*i* P		**Pb 02 03 49.9**	**-0.6**
ENTT	baz=2.0			*i* S		**Sb 02 04 00.3**	**-0.9**
ELDTW	**Lidau**	**0.83**	**221**	*i* P		**Pb 02 03 49.4**	**-1.2**
ELDTW	baz=208			*e*S		**Sb 02 04 00.9**	**-0.5**
WNT	**Mingjian**	**0.85**	**274**	*i* P		**Pb 02 03 51.4**	**+0.5**
WNT	baz=274			*i* S		**Sg 02 04 03.4**	**+0.8**
WNT1	**Nantou City**	**0.85**	**276**	P		**Pb 02 03 51.6**	**+0.6**
WNT1	baz=276			S		**Sn 02 04 04.3**	**+0.5**
WWF	**Wufeng**	**0.86**	**285**	P		**Pg 02 03 52.0**	**+0.4**
WWF	baz=288			*e*S		**Sg 02 04 03.7**	**+0.6**
YHNB	**Yeheng**	**0.88**	**346**	P		**Pb 02 03 50.7**	**-0.7**
YHNB	**Yeheng**	**0.88**	**346**	P		**Pb 02 03 50.8**	**-0.7**
YHNB	baz=349			S		**Sb 02 04 02.4**	**-0.4**
CHN5	**Tsauling**	**0.88**	**256**	*i* P		**Pb 02 03 51.8**	**+0.3**
CHN5	baz=244			S		**Sg 02 04 04.0**	**+0.3**
EDH	**Donghe**	**0.88**	**198**	P		**Pb 02 03 51.0**	**-0.5**
EDH	baz=208			S		**Sn 02 04 04.8**	**+0.3**
NSK	**Sanguang**	**0.89**	**345**	*i* P		**Pb 02 03 51.2**	**-0.4**
NSK	baz=348			*i* S		**Sb 02 04 02.1**	**-1.0**
TWE	**Neicheng**	**0.90**	**3**	*i* P		**Pb 02 03 51.2**	**-0.6**
TWE	baz=2.0			S		**Sb 02 04 03.0**	**-0.5**
TCU	**Taichung**	**0.91**	**291**	*i* P		**Pn 02 03 53.0**	**+0.4**
TCU	baz=292			S		**Sn 02 04 06.1**	**+0.8**
NFF	**Wufeng Townshi**	**0.93**	**331**	P		**Pb 02 03 52.5**	**+0.2**
NFF	baz=333			S		**Sb 02 04 03.7**	**-0.6**
TWQ1	**Liyutan**	**0.93**	**305**	*i* P		**Pb 02 03 53.0**	**+0.7**
TWQ1	baz=305			*i* S		**Sg 02 04 05.3**	**+0.1**
FUSB	**Fushanzhiwuyua**	**0.94**	**359**	P		**Pb 02 03 52.0**	**-0.5**
FUSB	baz=351			S		**Sb 02 04 05.1**	**+0.5**
ILA	**Ilan**	**0.95**	**8**	*e*P		**Pb 02 03 53.1**	**+0.4**
ILA	baz=2.0			*e*S		**Sg 02 04 06.3**	**+0.3**
NWLT	**Wulai**	**0.96**	**354**	P		**Pb 02 03 52.4**	**-0.4**
NWLT	baz=358			S		**Sb 02 04 04.3**	**-0.9**
WGK	**Gukeng**	**0.97**	**263**	*i* P		**Pb 02 03 53.4**	**+0.5**
WGK	baz=261			S		**Sn 02 04 07.2**	**+0.6**
NSY	**Sanyi**	**0.98**	**308**	*i* P		**Pn 02 03 54.0**	**+0.5**
NSY	baz=308			S		**Sn 02 04 07.3**	**+0.4**
NSTT	**Nanjuang**	**0.98**	**326**	*i* P		**Pb 02 03 53.3**	**+0.1**
NSTT	baz=320			*i* S		**Sb 02 04 05.8**	**0.0**
LIOB	**Emei**	**0.99**	**327**	P		**Pb 02 03 53.6**	**+0.3**
LIOB	baz=320			S		**Sb 02 04 06.5**	**+0.6**
WDLH	**Douliu**	**0.99**	**263**	P		**Pb 02 03 53.6**	**+0.3**
WDLH	baz=262			S		**Sn 02 04 07.5**	**+0.5**
WCKO	**Fanlu**	**0.99**	**248**	P		**Pn 02 03 54.1**	**+0.4**
WCKO	baz=247			S		**Sn 02 04 07.7**	**+0.5**
WCHH	**Zhanghua**	**0.99**	**286**	P		**Pn 02 03 54.0**	**+0.3**
WCHH	baz=285			S		**Sg 02 04 08.4**	**+1.1**
STYH	**Taoyuan**	**1.00**	**230**	P		**Pb 02 03 53.1**	**-0.3**
STYH	baz=219			S		**Sb 02 04 06.6**	**+0.4**
LONT	**Longtian**	**1.01**	**206**	P		**Pb 02 03 51.9**	**-1.6**
LONT	baz=202			*e*S		**Sb 02 04 07.2**	**+0.8**
NJD	**Zhudong**	**1.03**	**333**	*e*P		**Pg 02 03 55.8**	**+0.9**
NJD	baz=344			*e*S		**Sn 02 04 08.7**	**+0.5**
WDJ	**Dajia District**	**1.03**	**301**	P		**Pn 02 03 54.8**	**+0.5**
WDJ	baz=301			S		**Sg 02 04 09.5**	**+1.1**
TPUB	**Ta-pu**	**1.03**	**240**	P		**Pb 02 03 54.3**	**+0.2**
TPUB	**Ta-pu**	**1.03**	**240**	P		**Pb 02 03 54.1**	**+0.1**
TPUB	baz=239			S		**Sg 02 04 09.3**	**+0.9**
NMLH	**Miaoli**	**1.03**	**314**	P		**Pn 02 03 54.9**	**+0.6**
NMLH	baz=314			S		**Sg 02 04 09.1**	**+0.6**
CHN4	**Tsaushan**	**1.04**	**244**	*i* P		**Pb 02 03 54.4**	**+0.2**
CHN4	baz=233			*i* S		**Sg 02 04 09.9**	**+1.2**
EGS		**1.07**	**16**	P		**Pn 02 03 55.2**	**+0.5**
EGS	baz=4.0			*e*S		**Sg 02 04 10.4**	**+0.9**
WTP	**Ta-pu**	**1.07**	**238**	*i* P		**Pb 02 03 54.8**	**0.0**
WTP	baz=236			*i* S		**Sn 02 04 09.7**	**+0.4**
NJN	**Zhunan**	**1.09**	**322**	*e*P		**Pn 02 03 55.4**	**+0.3**
NJN	baz=323			S		**Sg 02 04 11.0**	**+0.6**
HSN1	**Hsinchu**	**1.10**	**331**	P		**Pg 02 03 56.3**	**+0.2**
HSN1	baz=339			S		**Sg 02 04 11.1**	**+0.6**
TWGBT	**Beinan**	**1.10**	**206**	P		**Pn 02 03 53.0**	**-2.2**
TWGBT	**Beinan**	**1.10**	**206**	P		**Pn 02 03 52.8**	**-2.4**
TWGBT	baz=202			*e*S		**Sb 02 04 09.3**	**0.0**
TWG	**Pinlang**	**1.11**	**207**	*i* P		**Pn 02 03 52.9**	**-2.3**
TWG	baz=202			*e*S		**Sb 02 04 09.1**	**-0.3**
WTK	**Tuku**	**1.12**	**264**	P		**Pn 02 03 54.3**	**-1.2**
WTK	baz=263			S		**Sn 02 04 11.2**	**+0.7**
SBCB	**Hsinchu**	**1.13**	**330**	P		**Pg 02 03 56.9**	**+0.3**
SBCB	baz=314			S		**Sg 02 04 12.3**	**+0.9**
CHY	**Chiayi**	**1.13**	**254**	*e*P		**Pb 02 03 56.4**	**+0.7**
CHY	baz=253			S		**Sg 02 04 11.7**	**+0.1**
WRL	**Guolierlin Hig**	**1.13**	**275**	P		**Pn 02 03 55.6**	**0.0**
WRL	baz=274			S		**Sb 02 04 10.7**	**+0.7**
HSN	**Hsinchu**	**1.14**	**329**	*i* P		**Pg 02 03 58.1**	**+1.2**
HSN	baz=316			*i* S		**Sg 02 04 13.2**	**+1.3**
LDUT	**Ludao**	**1.14**	**186**	P		**Pn 02 03 53.0**	**-2.8**
LDUT	baz=171			*e*S		**Sb 02 04 09.9**	**-0.5**
NHDH	**Xindian Distri**	**1.15**	**356**	P		**Pn 02 03 55.9**	**+0.2**
NHDH	baz=358			S		**Sn 02 04 11.7**	**+0.8**
TWK	**Hsinying**	**1.16**	**242**	*i* P		**Pn 02 03 56.4**	**+0.3**
TWK	baz=240			*i* S		**Sg 02 04 13.2**	**+0.6**
TIPB	**Shuangxi**	**1.17**	**10**	P		**Pn 02 03 56.5**	**+0.4**
TIPB	baz=360			*e*S		**Sb 02 04 11.2**	**0.0**
CHN1	**Nanshi**	**1.17**	**238**	*i* P		**Pn 02 03 56.7**	**+0.5**
CHN1	baz=236			*i* S		**Sg 02 04 13.8**	**+0.9**
SNST	**Tainan City**	**1.18**	**240**	P		**Pn 02 03 56.7**	**+0.5**
SNST	baz=239			S		**Sn 02 04 12.9**	**+1.1**
SGST	**Jiashian**	**1.19**	**232**	*i* P		**Pn 02 03 56.0**	**-0.4**
SGST	baz=230			*i* S		**Sg 02 04 13.4**	**-0.1**
SLGT	**Liugui**	**1.20**	**227**	P		**Pn 02 03 56.7**	**+0.1**
SLGT	baz=214			S		**Sn 02 04 13.4**	**+1.0**
NCUH	**Zhongli**	**1.21**	**342**	P		**Pb 02 03 57.3**	**+0.2**
NCUH	baz=342			S		**Sg 02 04 15.4**	**+1.3**
NTY	**Taoyuan**	**1.21**	**347**	*e*P		**Pg 02 03 58.4**	**+0.2**
NTY	baz=349			S		**Sg 02 04 14.4**	**+0.3**
WTCT	**Ta-ch'eng**	**1.22**	**273**	*e*P		**Pb 02 03 57.8**	**+0.6**
WTCT	baz=272			S		**Sn 02 04 13.8**	**+1.1**
TWB1	**Santiao Chiao**	**1.24**	**16**	*i* P		**Pb 02 03 58.1**	**+0.6**
TWB1	baz=4.0			S		**Sg 02 04 15.0**	**+0.1**
NWF	**Wu-fen Shan**	**1.26**	**7**	*i* P		**Pg 02 03 59.0**	**-0.2**
NWF	baz=10.0			S		**Sn 02 04 14.4**	**+0.5**
WFSB	**Wu-fen Shan**	**1.26**	**7**	P		**Pb 02 03 58.4**	**+0.5**
WFSB	baz=10.0			S		**Sn 02 04 14.6**	**+0.8**
WSF	**Szhu**	**1.28**	**262**	*i* P		**Pb 02 03 58.6**	**+0.4**
WSF	baz=261			*i* S		**Sg 02 04 16.1**	**-0.2**
TWS1	**Kuangyinshan**	**1.29**	**352**	P		**Pg 02 03 59.5**	**-0.3**
TWS1	baz=9.0			*i* S		**Sb 02 04 15.7**	**+1.0**
SXI1	**Grass Mountain**	**1.30**	**11**	P		**Pn 02 03 58.0**	**0.0**
SXI1	baz=358			S		**Sg 02 04 17.6**	**+0.7**
WSL	**Shuilin Townsh**	**1.30**	**257**	P		**Pb 02 03 58.8**	**+0.2**
WSL	baz=256			S		**Sg 02 04 16.8**	**0.0**
ICHU	**Yijhu**	**1.30**	**250**	P		**Pn 02 03 58.6**	**+0.7**
ICHU	baz=248			S		**Sg 02 04 16.9**	**0.0**
TNOU	**National Taiwa**	**1.34**	**6**	*e*P		**Pn 02 03 58.8**	**+0.4**
TNOU	baz=9.0			*e*S		**Sn 02 04 15.8**	**+0.1**
NTST	**Danshui**	**1.35**	**354**	*e*P		**Pb 02 03 59.9**	**+0.4**
NTST	baz=9.0			S		**Sb 02 04 17.1**	**+0.8**

ECL	**Taimali**	**1.35**	**206**	P		**Pn**	**02 03 57.5**	**-1.1**
	baz=190							
ECL				*e*S		**Sn**	**02 04 14.6**	**-1.5**
	baz=190							
CHN8	**Yiju**	**1.36**	**250**	*e*P		**Pb**	**02 03 59.7**	**0.0**
	baz=249							
CHN8				*i* S		**Sg**	**02 04 18.7**	**-0.2**
	baz=249							
ANP	**Anpu**	**1.37**	**357**	*i* P		**Pn**	**02 03 59.7**	**+0.7**
	baz=359							
ANP				*e*S		**Sn**	**02 04 15.9**	**-0.7**
	baz=359							
SCST	**Cishan**	**1.38**	**228**	P		**Pb**	**02 04 00.3**	**+0.3**
	baz=241							
SCST				S		**Sg**	**02 04 20.1**	**+0.7**
	baz=241							
SHHT	**Tainan City**	**1.40**	**236**	P		**Pb**	**02 04 01.3**	**+1.0**
	baz=234							
SHHT				S		**Sg**	**02 04 20.5**	**+0.4**
	baz=234							
TSMG	**Majia**	**1.42**	**219**	P		**Pn**	**02 03 59.9**	**+0.4**
	baz=217							
TSMG				S		**Sg**	**02 04 20.2**	**-0.4**
	baz=217							
YOJ	**Yonaguni jima**	**1.43**	**63**	P		**Pn**	**02 03 59.9**	**+0.1**
	baz=65							
YOJ				S		**Sb**	**02 04 19.1**	**+0.3**
	baz=65							
TWY	**Chenhua**	**1.45**	**360**	*e*P		**Pb**	**02 04 01.5**	**+0.3**
	baz=1.0							
TWY				*e*S		**Sn**	**02 04 18.8**	**+0.2**
	baz=1.0							
TWM1	**Shoushan**	**1.47**	**228**	P		**Pb**	**02 04 02.2**	**+0.7**
	baz=239							
TWM1				*e*S		**Sg**	**02 04 22.9**	**+0.6**
	baz=239							
MASBT	**Mashibuluo**	**1.50**	**217**	P		**Pn**	**02 04 00.1**	**-0.5**
	baz=215							
MASBT				*e*S		**Sb**	**02 04 22.2**	**+1.7**
	baz=215							
TSCK	**Chigu Township**	**1.55**	**245**	P		**Pn**	**02 04 00.8**	**-0.5**
	baz=243							
TSCK				S		**Sb**	**02 04 22.9**	**+0.9**
	baz=243							
EAST	**Anshuo**	**1.59**	**206**	*i* P		**Pn**	**02 04 01.0**	**-1.0**
	baz=193							
EAST				*e*S		**Sn**	**02 04 21.7**	**-0.2**
	baz=193							
TAWH	**Dawu Township**	**1.61**	**204**	P		**Pn**	**02 04 02.4**	**+0.2**
	baz=189							
TAWH				*e*S		**Sn**	**02 04 21.0**	**-1.5**
	baz=189							
SCZT	**Fangliau**	**1.70**	**213**	P		**Pn**	**02 04 03.1**	**-0.3**
	baz=212							
SCZT				*e*S		**Sg**	**02 04 28.9**	**-0.8**
	baz=212							
SLIU	**Shizi**	**1.76**	**205**	P		**Pn**	**02 04 05.1**	**+0.9**
	baz=192							
SLIU				*e*S		**Sn**	**02 04 27.1**	**+1.0**
	baz=192							
LAY	**Lan-yu**	**1.77**	**182**	*i* P		**Pn**	**02 04 02.6**	**-1.8**
	baz=170							
LAY				*e*S		**Sn**	**02 04 26.6**	**+0.2**
	baz=170							
LYUB	**Lan-yu**	**1.81**	**181**	P		**Pn**	**02 04 01.5**	**-3.4**
	baz=169							
LYUB				*e*S		**Sn**	**02 04 26.4**	**-0.8**
	baz=169							
PCYT	**Pengchaiyu**	**1.85**	**13**	P		**Pb**	**02 04 07.4**	**-0.7**
	baz=357							
PCYT				*e*S		**Sn**	**02 04 29.9**	**+1.4**
	baz=357							
WDGT	**Dungji**	**1.87**	**253**	*i* P		**Pn**	**02 04 05.4**	**-0.4**
	baz=252							
WDGT				*e*S		**Sn**	**02 04 29.5**	**+0.7**
	baz=252							
PHUB	**P'eng-hu**	**1.89**	**261**	P		**Pn**	**02 04 06.1**	**+0.1**
	baz=245							
PHUB				S		**Sn**	**02 04 29.2**	**-0.1**
	baz=245							
PNG	**Penghu**	**1.90**	**263**	*i* P		**Pn**	**02 04 06.2**	**+0.1**
	baz=262							
PNG				S		**Sn**	**02 04 30.0**	**+0.5**
	baz=262							
HEN	**Hengchun**	**1.97**	**204**	*e*P		**Pn**	**02 04 07.3**	**+0.1**
	baz=189							
HEN				*e*S		**Sb**	**02 04 33.8**	**-0.4**
	baz=189							
TWK1	**Hengchun**	**2.00**	**202**	*i* P		**Pn**	**02 04 08.2**	**+0.6**
	baz=190							
TWK1				*e*S		**Sn**	**02 04 33.2**	**+1.0**
	baz=190							
TWKBT	**Hengchun**	**2.00**	**202**	P		**Pn**	**02 04 07.8**	**+0.2**
	baz=190							
TWKBT				*e*S		**Sn**	**02 04 32.6**	**+0.4**
	baz=190							
VCHM	**Qimei**	**2.09**	**254**	P		**Pn**	**02 04 08.5**	**-0.2**
	baz=254							
VCHM				S		**Sn**	**02 04 35.3**	**+1.0**
	baz=254							
VWUC	**VWUC**	**2.29**	**301**	P		**Pn**	**02 04 10.5**	**-1.0**
	baz=299							
VWUC				S		**Sn**	**02 04 36.8**	**-2.4**
	baz=299							
PTMZ	**Houxiangcun**	**2.57**	**299**	P		**Pn**	**02 04 15.3**	**-0.1**
	baz=297							
PTMZ				S		**Sn**	**02 04 44.2**	**-2.0**
	baz=297							
MATB	**Ma-tsu**	**2.77**	**327**	P		**Pn**	**02 04 17.3**	**-0.8**
	baz=324							
MATB				S		**Sn**	**02 04 49.6**	**-1.5**
	baz=324							
MSUT	**Lienchiang**	**2.80**	**327**	*e*P		**Pn**	**02 04 15.8**	**-2.7**
	baz=325							
MSUT				*e*S		**Sn**	**02 04 51.5**	**-0.3**
	baz=325							
KNM	**Kinmen**	**2.96**	**282**	*i* P		**Pn**	**02 04 21.7**	**+1.0**
	baz=280							
KNM				*i* S		**Sn**	**02 04 58.0**	**+2.2**
	baz=280							
KNMB	**Chin-men Tao**	**3.01**	**283**	P		**Pn**	**02 04 20.1**	**-1.3**
	baz=281							
KNMB				*e*S		**Sn**	**02 04 56.0**	**-1.0**
	baz=281							
LYJJ	**Jianjiangzhen**	**3.20**	**329**	P		**Pn**	**02 04 24.1**	**+0.1**
	baz=326							
LYJJ				*e*S		**Sn**	**02 05 00.8**	**-0.8**
	baz=326							
MHZQ	**Yeshan**	**3.26**	**315**	P		**Pn**	**02 04 24.3**	**-0.6**
	baz=312							
MHZQ				S		**Sn**	**02 05 02.3**	**-0.9**
	baz=312							
XPSS	**Dashiqiu**	**3.36**	**338**	P		**Pn**	**02 04 25.2**	**-1.0**
	baz=323							
XPSS				S		**Sn**	**02 05 03.8**	**-1.8**
	baz=323							
AXDP	**Jialang**	**3.49**	**289**	P		**Pn**	**02 04 27.8**	**-0.2**
	baz=287							
AXDP				*e*S		**Sn**	**02 05 07.5**	**-1.3**
	baz=287							
SXFK	**Yanhouchang**	**4.42**	**306**	P		**Pn**	**02 04 40.6**	**-0.3**
	baz=304							
SXFK				S		**Sn**	**02 05 29.6**	**-2.2**
	baz=304							

IDC ***25*** *02:06:04.0±2.3,56˚07N×148˚84W,h0km,mb3.7/7, mbtmp3.7/12,ML3.4/5,MS3.1/3,Error ellipse: s-maj=48.3km s-min=23.6km az=177.0*

NEIC ***25*** *02:06:11.2±1.4,56˚55N±0˚08×148˚97W±0˚09,h24km±8km, mb3.7/3,ML4.0/76,ML3.7(AEIC),Error ellipse: s-maj=12.3km s-min=7.4km az=170.0*

AEIC ***25*** *02:06:13.4±1.5,56˚53N±0˚08×148˚9W±0˚1,h7km±7km, Error ellipse: s-maj=12.0km s-min=8.0km az=172.0*

ISC 25 02:06:08.8±0.8,56˚60N±0˚08×148˚91W±0˚05,h10km, n287,σ1§51/288,mb3.9/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.33**	**302**	Pn		**Pn**	**02 06 47.5**	**+0.4**
KDAK						**Sn**	**02 07 14.2**	**-1.5**
KDAK	**Kodiak Island**	**2.33**	**302**	Pn		**Pn**	**02 06 47.7**	**+0.7**
	3.8nm,0.3s,baz=122,slow=7.9,SNR=45							
KDAK						**Sn**	**02 07 13.6**	**-2.0**
	13nm,0.3s,baz=236,slow=22,SNR=6.8							
	12nm,0.4s							
OHAK	**Old Harbor**	**2.48**	**286**	Pn		**Pn**	**02 06 49.1**	**0.0**
OHAK						**Sn**	**02 07 16.9**	**-2.5**
	baz=104							
OHAK	**Old Harbor**	**2.48**	**286**	P		**Pn**	**02 06 49.1**	**0.0**
	baz=104							
OHAK				S		**Sn**	**02 07 16.6**	**-2.8**
	baz=104							
SYI	**Shuyak Island**	**2.75**	**319**	Pn		**Pn**	**02 06 53.5**	**+0.6**
SYI				Sn		**Sn**	**02 07 26.2**	**0.0**
SYI				IAML			02 07 27.5	
	comp=N,304nm,0.3s							
SYI				IAML			02 07 27.5	
	comp=E,359nm,0.3s							
Q20K	**Shuyak Island**	**2.75**	**319**	P		**Pn**	**02 06 54.1**	**+1.2**
	baz=137							
Q20K				S		**Sn**	**02 07 26.3**	**+0.1**
	baz=137							
MID	**Middleton Isla**	**3.15**	**25**	Pn		**Pn**	**02 06 59.2**	**+0.8**
MID				IAML			02 07 35.8	
	comp=N,266nm,0.6s							
MID				IAML			02 07 38.6	
	comp=E,238nm,1.0s							
MID	**Middleton Isla**	**3.15**	**25**	P		**Pn**	**02 06 59.1**	**+0.7**
Q23K	**Middleton Isla**	**3.15**	**25**	Pn		**Pn**	**02 06 59.1**	**+0.8**
Q23K				IAML			02 07 35.6	
	comp=N,236nm,1.0s							
Q23K				IAML			02 07 38.6	
	comp=E,276nm,0.9s							
Q23K	**Middleton Isla**	**3.15**	**25**			**Sn**	**02 07 34.9**	**-1.1**
Q23K	**Middleton Isla**	**3.15**	**25**	P		**Pn**	**02 06 59.0**	**+0.6**
	baz=206							
Q23K				S		**Sn**	**02 07 34.9**	**-1.1**
	baz=206							
CNPM	**China Poot**	**3.19**	**338**			**Pn**	**02 06 59.7**	**+0.8**
CNPM				Sn		**Sn**	**02 07 36.5**	**-0.4**
BRSE	**Bradley Lake S**	**3.30**	**344**			**Pn**	**02 07 01.1**	**+0.6**
BRSE						**Sn**	**02 07 38.1**	**-1.6**
BRSE	**Bradley Lake S**	**3.30**	**344**	P		**Pn**	**02 07 01.0**	**+0.6**
	baz=163							
BRSE				S		**Sn**	**02 07 38.1**	**-1.6**
	baz=163							
BRLK	**Bradley Lake**	**3.34**	**343**			**Pn**	**02 07 01.6**	**+0.6**
BRLK	**Bradley Lake**	**3.34**	**343**			**Sn**	**02 07 39.7**	**-1.1**
BRLK	**Bradley Lake**	**3.34**	**343**	IAML			02 07 43.1	
	comp=N,87nm,0.3s							
BRLK				IAML			02 07 43.5	
	comp=E,116nm,0.5s							
HOM	**Homer**	**3.39**	**336**	Pn		**Pn**	**02 07 02.9**	**+1.2**
HOM				IAML			02 07 38.6	
	comp=N,287nm,1.4s							
HOM	**Homer**	**3.39**	**336**			**Sn**	**02 07 42.1**	**+0.1**
HOM	**Homer**	**3.39**	**336**	IAML			02 07 48.1	
	comp=E,338nm,0.9s							
HOM	**Homer**	**3.39**	**336**	P		**Pn**	**02 07 03.1**	**+1.4**
	baz=154							
HOM				S		**Sn**	**02 07 42.1**	**+0.1**
	baz=154							
Q19K	**Cape Douglas,**	**3.45**	**315**			**Pn**	**02 07 04.1**	**+1.6**
Q19K				IAML			02 07 50.2	
	comp=E,429nm,0.9s							
Q19K				IAML			02 07 50.8	
	comp=N,446nm,0.9s							
Q19K	**Cape Douglas,**	**3.45**	**315**	P		**Pn**	**02 07 03.8**	**+1.3**
	baz=132							
P23K	**Montague Islan**	**3.50**	**13**	P		**Pn**	**02 07 04.1**	**+0.9**
	baz=194							
SEW	**Seward**	**3.53**	**356**	Pn		**Pn**	**02 07 03.9**	**+0.3**
SEW	**Seward**	**3.53**	**356**	P		**Pn**	**02 07 04.2**	**+0.7**
	baz=175							
P19K	**Oil Pt**	**3.83**	**325**			**Pn**	**02 07 09.4**	**+1.7**
P19K				IAML			02 07 56.5	
	comp=E,304nm,0.5s							
P19K	**Oil Pt**	**3.83**	**325**	P		**Pn**	**02 07 09.3**	**+1.6**
	baz=142							
KAHC	**Katmai Hardscr**	**3.87**	**305**			**Pn**	**02 07 09.9**	**+1.5**
KAHC	**Katmai Hardscr**	**3.87**	**305**	P		**Pn**	**02 07 09.9**	**+1.5**
	baz=120							
O22K	**Cooper Landing**	**3.92**	**354**			**Pn**	**02 07 09.9**	**+0.9**
SLKM	**Skilak Lake**	**3.98**	**351**			**Pn**	**02 07 10.3**	**+0.4**
O20K	**Slope Mountain**	**4.00**	**332**			**Pn**	**02 07 11.1**	**+0.9**
O20K	**Slope Mountain**	**4.00**	**332**	P		**Pn**	**02 07 11.3**	**+1.2**
	baz=150							
HIN	**Hinchinbrook I**	**4.01**	**17**	Pn		**Pn**	**02 07 10.9**	**+0.6**
HIN				IAML			02 07 56.8	
	comp=E,258nm,0.8s							
IVE	**Iliamna Volcan**	**4.05**	**329**			**Pn**	**02 07 11.2**	**+0.3**
ILSW	**Iliamna Southw**	**4.06**	**328**			**Pn**	**02 07 11.8**	**+0.8**
ILSW				IAML			02 08 00.7	
	comp=N,104nm,0.4s							
ILSW				IAML			02 08 02.3	
	comp=E,162nm,0.7s							
KAIM	**Kayak Island**	**4.10**	**34**	Pn		**Pn**	**02 07 12.8**	**+1.4**
KAIM	**Kayak Island**	**4.10**	**34**	P		**Pn**	**02 07 12.5**	**+1.1**
	baz=217							
CNTC	**Contact Creek**	**4.12**	**297**			**Pn**	**02 07 13.1**	**+1.3**
Q17K	**Contact Creek**	**4.12**	**297**	P		**Pn**	**02 07 12.1**	**+0.3**
	baz=112							
EYAK	**Cordova Ski Ar**	**4.29**	**21**			**Pn**	**02 07 15.1**	**+1.1**
EYAK	**Cordova Ski Ar**	**4.29**	**21**	P		**Pn**	**02 07 15.3**	**+1.2**
EYAK	**Cordova Ski Ar**	**4.29**	**21**	P		**Pn**	**02 07 15.5**	**+1.4**
	baz=204							
FID	**Port Fidalgo**	**4.35**	**16**			**Pn**	**02 07 15.6**	**+0.6**
FID				IAML			02 08 05.7	
	comp=E,172nm,0.4s							
FID				IAML			02 08 07.3	
	comp=N,132nm,0.5s							
RDSO	**Redoubt South**	**4.36**	**334**			**Pn**	**02 07 15.4**	**+0.3**
RSO	**Redoubt South**	**4.37**	**334**			**Pn**	**02 07 16.2**	**+0.9**
P18K	**Big Mountain,**	**4.38**	**312**	Pn		**Pn**	**02 07 15.9**	**+0.7**
P18K	**Big Mountain,**	**4.38**	**312**	P		**Pn**	**02 07 15.9**	**+0.7**
	baz=128							
GLI	**Glacier Island**	**4.40**	**12**	Pn		**Pn**	**02 07 16.7**	**+1.2**
GLI				IAML			02 08 07.1	
	comp=E,122nm,0.4s							
GLI				IAML			02 08 07.9	
	comp=N,106nm,0.5s							
GLI	**Glacier Island**	**4.40**	**12**	P		**Pn**	**02 07 16.4**	**+0.9**
	baz=193							
RAGM	**Ragged Mountai**	**4.40**	**29**			**Pn**	**02 07 16.9**	**+1.3**
RDWB	**Redoubt West**	**4.41**	**334**			**Pn**	**02 07 16.0**	**+0.2**
SUCK	**Suckling Hills**	**4.41**	**36**	Pn		**Pn**	**02 07 17.1**	**+1.4**
SUCK				IAML			02 08 15.3	
	comp=E,146nm,1.3s							
DFR	**Drift River**	**4.47**	**335**			**Pn**	**02 07 16.7**	**+0.2**
HMT	**Hamilton**	**4.47**	**31**	Pn		**Pn**	**02 07 18.4**	**+1.8**
NICHA	**Nichawak Mount**	**4.48**	**33**			**Pn**	**02 07 18.1**	**+1.4**
RC01	**Rabbit Creek A**	**4.53**	**355**			**Pn**	**02 07 18.3**	**+1.0**
RC01				IAML			02 08 10.1	
	comp=E,110nm,0.3s							
RC01				IAML			02 08 12.4	
	comp=N,89nm,0.5s							
RC01	**Rabbit Creek A**	**4.53**	**355**	P		**Pn**	**02 07 18.3**	**+1.0**
	baz=174							
GOAT	**Goat Mountain**	**4.55**	**27**			**Pn**	**02 07 19.3**	**+1.5**
BGLC	**Bering Glacier**	**4.61**	**38**			**Pn**	**02 07 20.1**	**+1.7**
BGLC	**Bering Glacier**	**4.61**	**38**	P		**Pn**	**02 07 20.3**	**+1.9**
	baz=222							
FIS	**Fire Island**	**4.61**	**352**			**Pn**	**02 07 19.7**	**+1.3**
FIS				IAML			02 08 15.5	
	comp=N,111nm,1.3s							
FIS				IAML			02 08 16.6	
	comp=E,130nm,0.6s							
O18K	**Koktuh Hills**	**4.66**	**317**			**Pn**	**02 07 19.9**	**+0.7**
O18K	**Koktuh Hills**	**4.66**	**317**	P		**Pn**	**02 07 19.2**	**0.0**
	baz=132							
BERG	**Berg Lake**	**4.69**	**34**			**Pn**	**02 07 20.6**	**+1.1**
SNH	**Sunshine Point**	**4.81**	**39**	Pn		**Pn**	**02 07 22.7**	**+1.5**
SNH				IAML			02 08 21.2	
	comp=N,94nm,1.4s							
SNH				IAML			02 08 21.5	
	comp=E,128nm,1.3s							
DIV	**Divide**	**4.83**	**18**			**Pn**	**02 07 22.4**	**+0.9**
KNK	**Knik Glacier**	**4.84**	**3**	Pn		**Pn**	**02 07 22.4**	**+0.9**
KNK				IAML			02 08 25.4	
	comp=E,49nm,1.3s							
KNK	**Knik Glacier**	**4.84**	**3**	P		**Pn**	**02 07 22.6**	**+1.1**
	baz=183							
KHIT	**Khitrov Hills**	**4.87**	**35**			**Pn**	**02 07 23.2**	**+1.1**
BMRM	**Bremner River**	**4.92**	**25**	P		**Pn**	**02 07 24.0**	**+1.2**
	baz=209							
N20K	**Mount Spurr**	**4.92**	**341**	P		**Pn**	**02 07 23.2**	**+0.4**
	baz=159							
SUA	**Susitna One**	**4.97**	**350**			**Pn**	**02 07 23.8**	**+0.3**
SUA	**Susitna One**	**4.97**	**350**	P		**Pn**	**02 07 24.1**	**+0.6**
	baz=168							
SPCP	**Crater Peak Br**	**4.97**	**342**			**Pn**	**02 07 24.3**	**+0.7**
SPCG	**Spurr Capps Gl**	**4.98**	**342**			**Pn**	**02 07 24.1**	**+0.6**

WAX	**Waxell Ridge**	**5.00**	**37**			**Pn**	**02 07 25.5**	**+1.7**
PMR	**Palmer**	**5.01**	**359**			**Pn**	**02 07 25.1**	**+1.2**
PMR	**Palmer**	**5.01**	**359**	P		**Pn**	**02 07 25.2**	**+1.3**
BARK	**Barkley Ridge**	**5.09**	**39**			**Pn**	**02 07 26.4**	**+1.4**
MESA	**MESA**	**5.13**	**43**	Pn		**Pn**	**02 07 27.0**	**+1.3**
MESA				IAML			02 08 27.2	
	comp=E,82nm,1.4s							
MESA				IAML			02 08 28.1	
	comp=N,102nm,1.0s							
MESA	**MESA**	**5.13**	**43**	P		**Pn**	**02 07 27.0**	**+1.3**
	baz=228							
N19K	**Bonanza Creek**	**5.13**	**328**	Pn		**Pn**	**02 07 26.0**	**+0.4**
N19K	**Bonanza Creek**	**5.13**	**328**	P		**Pn**	**02 07 26.0**	**+0.4**
	baz=144							
STLK	**Strandline Lak**	**5.14**	**344**			**Pn**	**02 07 26.8**	**+1.0**
CRQM	**Cirque**	**5.14**	**33**			**Pn**	**02 07 27.0**	**+1.1**
CRQM	**Cirque**	**5.14**	**33**	IAML			02 08 25.7	
	comp=E,121nm,0.5s							
KLU	**Klutina**	**5.15**	**16**			**Pn**	**02 07 27.2**	**+1.3**
KLU	**Klutina**	**5.15**	**16**	IAML			02 08 27.3	
	comp=E,89nm,0.5s							
KLU				IAML			02 08 27.6	
	comp=N,120nm,0.5s							
KLU	**Klutina**	**5.15**	**16**	P		**Pn**	**02 07 27.2**	**+1.3**
	baz=199							
GHO	**Glory Hole Cre**	**5.19**	**360**			**Pn**	**02 07 28.2**	**+1.7**
GHO				IAML			02 08 29.1	
	comp=E,103nm,0.5s							
GHO				IAML			02 08 32.6	
	comp=N,77nm,0.8s							
SML	**Sawmill**	**5.24**	**3**			**Pn**	**02 07 28.9**	**+1.8**
SML				IAML			02 08 32.0	
	comp=N,56nm,0.6s							
SML				IAML			02 08 32.1	
	comp=E,56nm,0.5s							
SML	**Sawmill**	**5.24**	**3**	P		**Pn**	**02 07 28.7**	**+1.7**
	baz=184							
TGL	**Tana Glacier**	**5.24**	**35**			**Pn**	**02 07 28.4**	**+1.3**
M23K	**Glacier View**	**5.25**	**6**			**Pn**	**02 07 28.9**	**+1.7**
M23K	**Glacier View**	**5.25**	**6**	P		**Pn**	**02 07 29.0**	**+1.8**
	baz=187							
ISLE	**Juniper Island**	**5.29**	**38**			**Pn**	**02 07 29.1**	**+1.3**
ISLE	**Juniper Island**	**5.29**	**38**	IAML			02 08 31.2	
	comp=N,88nm,1.3s							
ISLE				IAML			02 08 32.8	
	comp=E,57nm,1.1s							
SCM	**Sheep Creek Mo**	**5.32**	**8**			**Pn**	**02 07 30.1**	**+2.0**
SCM				IAML			02 08 31.6	
	comp=N,69nm,0.6s							
SCM	**Sheep Creek Mo**	**5.32**	**8**	P		**Pn**	**02 07 29.5**	**+1.3**
	baz=190							
O17K	**Koliganek Bris**	**5.37**	**310**			**Pn**	**02 07 29.9**	**+1.0**
VRDI	**Verde Repeater**	**5.44**	**29**			**Pn**	**02 07 31.3**	**+1.3**
N18K	**Kilae Creek**	**5.48**	**321**	Pn		**Pn**	**02 07 30.7**	**+0.4**
N18K	**Kilae Creek**	**5.48**	**321**	P		**Pn**	**02 07 30.8**	**+0.4**
	baz=136							
N25K	**Chitina, Valde**	**5.49**	**22**	P		**Pn**	**02 07 32.1**	**+1.4**
	baz=206							
KIAG	**Kiagna River**	**5.52**	**35**			**Pn**	**02 07 32.1**	**+1.0**
GLB	**Gilahina Butte**	**5.53**	**26**			**Pn**	**02 07 32.3**	**+1.2**
SAMH	**Samovar Hills**	**5.55**	**47**			**Pn**	**02 07 33.1**	**+1.7**
SKT	**Skwentna**	**5.56**	**347**	P		**Pn**	**02 07 32.3**	**+0.8**
	baz=165							
GRNC	**Granite Creek**	**5.58**	**39**			**Pn**	**02 07 33.2**	**+1.2**
TABL	**Table Mountain**	**5.60**	**43**			**Pn**	**02 07 33.9**	**+1.6**
MCARA	**McCarthy VSAT**	**5.68**	**30**			**Pn**	**02 07 34.7**	**+1.5**
MCARA	**McCarthy VSAT**	**5.68**	**30**	P		**Pn**	**02 07 34.7**	**+1.5**
	baz=215							
M24K	**Tolsona, Glenn**	**5.70**	**13**			**Pn**	**02 07 35.4**	**+1.9**
M24K	**Tolsona, Glenn**	**5.70**	**13**	P		**Pn**	**02 07 35.4**	**+1.9**
	baz=195							
O16K	**Kokwok River B**	**5.72**	**305**			**Pn**	**02 07 34.6**	**+1.0**
M20K	**Styx River**	**5.73**	**340**			**Pn**	**02 07 34.4**	**+0.6**
PCA	**Pinnacle**	**5.75**	**49**			**Pn**	**02 07 35.4**	**+1.2**
PINM	**Pinnacle**	**5.75**	**49**	P		**Pn**	**02 07 35.7**	**+1.5**
	baz=236							
N17K	**Nushagak Hills**	**5.85**	**316**			**Pn**	**02 07 36.4**	**+0.9**
CUT	**Chulitna**	**5.87**	**354**	Pn		**Pn**	**02 07 37.8**	**+2.1**
CTG	**Chitna Glacier**	**5.89**	**39**	P		**Pn**	**02 07 37.5**	**+1.5**
	baz=225							
PNL	**Peninsula**	**5.91**	**55**			**Pn**	**02 07 37.6**	**+1.4**
PNL	**Peninsula**	**5.91**	**55**	P		**Pn**	**02 07 37.7**	**+1.5**
PNL	**Peninsula**	**5.91**	**55**	P		**Pn**	**02 07 37.6**	**+1.4**
	baz=242							
LOGN	**Logan Glacier**	**5.91**	**41**			**Pn**	**02 07 38.0**	**+1.6**
BCPM	**Bancas Point**	**5.94**	**52**	Pn		**Pn**	**02 07 38.5**	**+1.8**
M19K	**Big River Lodg**	**6.02**	**334**			**Pn**	**02 07 38.1**	**+0.3**
WAT6	**Susitna Watana**	**6.03**	**5**			**Pn**	**02 07 39.5**	**+1.4**
WAT6	**Susitna Watana**	**6.03**	**5**	P		**Pn**	**02 07 39.5**	**+1.4**
	baz=186							
M18K	**Stony River**	**6.07**	**327**	P		**Pn**	**02 07 38.7**	**+0.3**
	baz=142							
HARP	**HAARP**	**6.12**	**17**			**Pn**	**02 07 40.9**	**+1.7**
HARP	**HAARP**	**6.12**	**17**	P		**Pn**	**02 07 40.9**	**+1.7**
	baz=200							
WAT1	**Susitna Watana**	**6.25**	**2**			**Pn**	**02 07 42.9**	**+1.9**
WAT1	**Susitna Watana**	**6.25**	**2**	P		**Pn**	**02 07 43.0**	**+1.9**
	baz=182							
O15K	**Ungalikthiuk R**	**6.37**	**298**			**Pn**	**02 07 44.1**	**+1.6**
L19K	**White Mountain**	**6.37**	**334**			**Pn**	**02 07 42.8**	**+0.3**
L19K	**White Mountain**	**6.37**	**334**	P		**Pn**	**02 07 42.8**	**+0.3**
	baz=149							
L20K	**Farewell, AK**	**6.42**	**339**			**Pn**	**02 07 43.2**	**0.0**
N16K	**Nishlik Lake**	**6.46**	**311**			**Pn**	**02 07 45.0**	**+1.2**
M17K	**Holitna River**	**6.52**	**321**			**Pn**	**02 07 45.5**	**+0.8**
M17K	**Holitna River**	**6.52**	**321**	P		**Pn**	**02 07 45.2**	**+0.5**
	baz=134							
PPLA	**Purkeypile**	**6.53**	**347**	Pn		**Pn**	**02 07 47.1**	**+2.2**
DHY	**Denali Highway**	**6.54**	**6**			**Pn**	**02 07 46.9**	**+1.7**
DHY	**Denali Highway**	**6.54**	**6**	P		**Pn**	**02 07 46.9**	**+1.7**
	baz=188							
O29M	**Mount Kennedy**	**6.57**	**

K17K	**Iditarod**	**7.76**	**326**	P		**Pn**	**02 08 01.9 +0.4**
	baz=138						
SKAG	**Skagway**	**7.76**	**63**	Pn		**Pn**	**02 08 03.6 +2.0**
SKAG	**Skagway**	**7.76**	**63**	P		**Pn**	**02 08 04.3 +2.7**
SCRK	**Sand Creek**	**7.79**	**16**	Pn		**Pn**	**02 08 04.0 +1.8**
N30M	**Aishikik Lake**	**7.80**	**46**			**Pn**	**02 08 04.0 +1.7**
N30M	**Aishikik Lake**	**7.80**	**46**	P		**Pn**	**02 08 04.0 +1.7**
	baz=236						
S32K	**Killisnoo**	**7.87**	**78**	Pn		**Pn**	**02 08 03.6 +0.4**
O30N	**Mendenhall**	**7.88**	**53**	Pn		**Pn**	**02 08 05.2 +2.0**
O30N	**Mendenhall**	**7.88**	**53**	P		**Pn**	**02 08 05.1 +1.8**
	baz=243						
HDA	**Harding Lake**	**7.90**	**6**			**Pn**	**02 08 05.5 +1.9**
M29M	**Somme Creek**	**7.90**	**38**			**Pn**	**02 08 05.6 +1.9**
WRH	**Wood River Hil**	**7.91**	**3**	Pn		**Pn**	**02 08 05.4 +1.7**
M14K	**Bethel**	**7.97**	**307**	Pn		**Pn**	**02 08 06.2 +1.8**
JIS	**Juneau Island**	**8.02**	**72**	Pn		**Pn**	**02 08 05.8 +0.6**
JIS	**Juneau Island**	**8.02**	**72**	P		**Pn**	**02 08 05.6 +0.5**
NEA2	**Nenana**	**8.02**	**360**	Pn		**Pn**	**02 08 06.5 +1.3**
J20K	**Nowinta River**	**8.03**	**343**			**Pn**	**02 08 06.1 +0.7**
CCB	**Clear Creek Bu**	**8.10**	**3**			**Pn**	**02 08 08.0 +1.8**
J19K	**Poorman**	**8.13**	**339**	Pn		**Pn**	**02 08 07.0 +0.4**
J25K	**Salcha River,**	**8.23**	**11**	Pn		**Pn**	**02 08 09.2 +1.1**
IL31		**8.26**	**6**			**Pn**	**02 08 09.8 +1.4**
ILAR	**Eielson Array**	**8.26**	**6**	Pn		**Pn**	**02 08 09.9 +1.4**
	comp=N,0.4nm,0.3s,baz=188,slow=14,SNR=18						
ILAR				Sn		**Sn**	**02 09 37.8 -3.9**
	comp=N,0.8nm,0.3s,baz=184,slow=23,SNR=11						
ILAR				LR		LR	02 11 05.7
	comp=N,54nm,20.2s,baz=292,slow=34						
	comp=N,1.0nm,0.4s						
COLA	**College**	**8.32**	**3**	P		**Pn**	**02 08 12.4 +3.1**
J26L	**Joseph Creek**	**8.35**	**16**			**Pn**	**02 08 11.4 +1.6**
WHY	**Whitehorse**	**8.37**	**55**	Pn		**Pn**	**02 08 12.3 +2.2**
MDM	**Murphy Dome**	**8.40**	**2**			**Pn**	**02 08 11.8 +1.4**
L29M	**L29M**	**8.48**	**35**			**Pn**	**02 08 13.6 +2.0**
L29M	**L29M**	**8.48**	**35**	P		**Pn**	**02 08 13.2 +1.7**
	baz=224						
MLY	**Manley**	**8.51**	**355**			**Pn**	**02 08 13.1 +1.2**
M30M	**Minto, Yukon**	**8.58**	**41**	Pn		**Pn**	**02 08 14.6 +1.7**
I23K	**Minto, Yukon-K**	**8.58**	**359**			**Pn**	**02 08 14.4 +1.5**
P32M	**Atlin**	**8.59**	**63**			**Pn**	**02 08 14.1 +1.0**
U33K	**Whale Pass**	**8.78**	**87**	Pn		**Pn**	**02 08 15.0 -0.6**
DAWY	**Dawson**	**8.85**	**28**	Pn		**Pn**	**02 08 17.9 +1.3**
EGAK	**Eagle**	**9.04**	**22**	Pn		**Pn**	**02 08 21.4 +2.3**
PRP	**Porcupine Dome**	**9.10**	**9**	Pn		**Pn**	**02 08 21.8 +1.7**
P33M	**Teslin, Yukon**	**9.19**	**60**			**Pn**	**02 08 22.6 +1.3**
K29M	**Barlow Dome**	**9.20**	**33**			**Pn**	**02 08 23.2 +1.7**
H21K	**Melozitna Rive**	**9.28**	**350**			**Pn**	**02 08 22.9 +0.4**
M31M	**Drury Creek, Y**	**9.28**	**47**			**Pn**	**02 08 24.8 +2.3**
H24K	**Noodor Dome**	**9.29**	**3**	Pn		**Pn**	**02 08 24.8 +2.2**
N32M	**Quiet Lake**	**9.37**	**54**	Pn		**Pn**	**02 08 25.5 +1.8**
J14K	**Nanvaranak Lak**	**9.62**	**316**	Pn		**Pn**	**02 08 28.1 +1.0**
H19K	**Roundabout Mou**	**9.67**	**341**	Pn		**Pn**	**02 08 29.0 +1.3**
IMAR	**Indian Mountai**	**9.70**	**348**	Pn		**Pn**	**02 08 28.9 +0.7**
FARO	**Faro, Yukon**	**9.72**	**48**			**Pn**	**02 08 30.8 +2.3**
S34M	**Telegraph Cree**	**9.72**	**75**	Pn		**Pn**	**02 08 29.0 +0.5**
H18K	**Honhosa River**	**9.73**	**336**	Pn		**Pn**	**02 08 28.9 +0.3**
I28M	**Miner Creek**	**9.88**	**22**	Pn		**Pn**	**02 08 33.8 +3.1**
R33M	**Jennings River**	**9.93**	**66**	Pn		**Pn**	**02 08 32.9 +1.5**
H17K	**Granite Mounta**	**9.93**	**332**	Pn		**Pn**	**02 08 31.6 +0.3**
J30M	**Hart River**	**10.09**	**32**			**Pn**	**02 08 36.0 +2.3**
FYU	**Fort Yukon**	**10.15**	**8**	Pn		**Pn**	**02 08 35.9 +1.5**
G24K	**Hadweenzic Riv**	**10.16**	**3**	Pn		**Pn**	**02 08 36.0 +1.5**
G23K	**Bananza Creek**	**10.16**	**357**	Pn		**Pn**	**02 08 36.2 +1.7**
T35M	**Bob Quinn**	**10.24**	**80**	Pn		**Pn**	**02 08 37.5 +1.8**
DLBC	**Dease Lake**	**10.32**	**72**	Pn		**Pn**	**02 08 38.6 +1.8**
DLBC	**Dease Lake**	**10.32**	**72**	Pn		**Pn**	**02 08 36.5 -0.2**
	comp=N,0.4nm,0.3s,baz=255,slow=7.5,SNR=9.0						
DLBC				Sn		**Sn**	**02 10 28.1 -4.4**
	comp=N,0.3nm,0.3s,baz=195,slow=12,SNR=2.9						
	comp=N,1.7nm,0.4s						
G19K	**Purcell Mounta**	**10.34**	**341**	Pn		**Pn**	**02 08 38.4 +1.5**
G18K	**Tagagawik**	**10.43**	**337**	Pn		**Pn**	**02 08 40.2 +2.1**
I30M	**Mount Dempster**	**10.56**	**30**	Pn		**Pn**	**02 08 43.5 +3.4**
MMPY	**Sheldon Lake,**	**10.76**	**49**	Pn		**Pn**	**02 08 45.1 +2.3**
F21K	**Alatna River**	**10.87**	**351**	Pn		**Pn**	**02 08 45.2 +0.9**
H29M	**Whitestone**	**10.87**	**23**	Pn		**Pn**	**02 08 46.3 +2.1**
G16K	**Koyuk River**	**10.95**	**329**	Pn		**Pn**	**02 08 45.2 +0.1**
F24K	**Squaw Lake**	**10.97**	**2**	Pn		**Pn**	**02 08 48.3 +2.7**
BMAR	**Burnt Mountain**	**11.06**	**9**			**Pn**	**02 08 48.6 +1.8**
ANM	**Nome**	**11.34**	**321**	Pn		**Pn**	**02 08 51.5 +0.9**
F17K	**Baldwin Pennin**	**11.47**	**334**	Pn		**Pn**	**02 08 51.9 -0.4**
E19K	**Redstone River**	**11.56**	**344**	Pn		**Pn**	**02 08 55.0 +1.4**
E25K	**Arctic Village**	**11.67**	**6**	Pn		**Pn**	**02 08 57.8 +2.7**
F28M	**Old Crow**	**11.82**	**17**	Pn		**Pn**	**02 08 58.7 +1.6**
G30M	**tAoh Zraii Nji**	**11.99**	**25**	Pn		**Pn**	**02 09 02.4 +2.9**
E18K	**Tukpahlearik C**	**12.14**	**338**	Pn		**Pn**	**02 09 03.1 +1.6**
G31M	**Satah River**	**12.42**	**28**	Pn		**Pn**	**02 09 07.6 +2.3**
D19K	**Kuna River**	**12.65**	**344**	Pn		**Pn**	**02 09 10.4 +1.9**
C23K	**Itkillik River**	**13.31**	**357**	Pn		**Pn**	**02 09 19.7 +2.2**
INK	**Inuvik**	**13.67**	**25**			**Pn**	**02 09 24.4 +2.1**
INK	**Inuvik**	**13.67**	**25**	Pn		**Pn**	**02 09 24.7 +2.3**
	comp=N,0.1nm,0.3s,baz=205,slow=15,SNR=7.0						
INK				LR		LR	02 14 59.5
	comp=N,32nm,20.5s,baz=179,slow=38						
	comp=N,3.1nm,1.0s						
C16K	**Lisburne Hills**	**13.90**	**334**	Pn		**Pn**	**02 09 26.6 +1.2**
CLRS	**Cowichan Lake**	**16.84**	**107**	P		**P**	**02 10 08.2 +1.7**
CLRS				IAmb		IAmb	02 10 44.7
	comp=Z,31nm,1.4s						
C36M	**Paulatuk**	**16.86**	**31**			**Pn**	**02 10 04.3 -0.3**
C36M				IAmb		IAmb	02 10 36.6
	comp=Z,7.4nm,1.4s						
YKA	**Yellowknife Ar**	**18.20**	**57**	P		**Pn**	**02 10 21.3 +0.2**
	baz=269,slow=10,SNR=8.6						
	comp=Z,0.8nm,0.9s						
A36M	**Sachs Harbour**	**18.31**	**23**	P		**P**	**02 10 24.1 +1.6**
A36M				IAmb		IAmb	02 10 33.9
	comp=Z,4.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**49.22**	**240**	T		T	03 07 55.8
	baz=30,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**49.22**	**240**	T		T	03 08 08.1
	baz=30,slow=76,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**49.24**	**240**	T		T	03 08 07.9
	baz=30,slow=76,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**50.36**	**240**	T		T	03 09 19.1
	baz=30,slow=76,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	**50.38**	**240**	T		T	03 09 13.5
	baz=30,slow=76,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**50.38**	**240**	T		T	03 09 19.3
	baz=30,slow=76,SNR=6.6						
SONM	**Songino Array**	**58.59**	**310**	P		**P**	**02 16 06.2 +0.7**
	comp=Z,0.7nm,0.7s,baz=62,slow=6.7,SNR=4.4						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**61.41**	**327**	P		**P**	**02 16 23.8 -0.8**
	comp=Z,0.5nm,0.5s,baz=36,slow=7.6,SNR=2.3						
	comp=Z,0.5nm,0.5s						
FINES	**FINESS Array B**	**62.23**	**3**	P		**P**	**02 16 29.6 -0.4**
	comp=Z,0.8nm,0.7s,baz=8.9,slow=9.8,SNR=4.3						
	comp=Z,0.8nm,0.7s						
BVAR	**Borovoye Array**	**66.08**	**335**	P		**P**	**02 16 55.3 -0.1**
	comp=Z,0.7nm,0.8s,baz=46,slow=8.3,SNR=2.6						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**68.45**	**325**	P		**P**	**02 17 10.1 -0.5**
	comp=Z,0.1nm,0.4s,baz=29,slow=3.3,SNR=2.5						
	comp=Z,0.1nm,0.4s						
AKASG	**Malin Array Be**	**73.06**	**1**	P		**P**	**02 17 36.7 -1.8**
	comp=Z,0.6nm,0.4s,baz=355,slow=6.2,SNR=2.5						
	comp=Z,0.6nm,0.4s						
PCRV	**Puerto La Cruz**	**78.43**	**89**	LR		LR	02 52 16.0
	comp=Z,46nm,19.0s,slow=35						
ESDC	**Sonseca Array**	**79.61**	**27**	P		**P**	**02 18 15.8 -0.1**
	comp=Z,0.7nm,0.8s,baz=352,slow=5.4,SNR=6.9						
	comp=Z,0.7nm,0.8s						

*IDC **25** 02:11:24.3±1.9, 36°.19N×140°.41E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=48.6km s-min=18.9km az=21.0*

*JMA **25** 02:11:33.9±0.1, 36°.1N±0°.3×139°.8E±0°.3, h45km, MV3.0/37, SW IBARAKI PREF*

JMA Felt I J1 at SW IBARAKI PREF .

ISC 25 02:11:33.4±1.1, 36°.09N±0°.06×139°.80E±0°.06, h51km±9km, n13, σ0°.58/18, mb3.1/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYT	**Yasato**	**0.34**	**67**	*i* P		**Pn**	**02 11 43.2 +0.2**
JYT				S		**Sn**	**02 11 49.9 0.0**
JAG	**Ashikaga**	**0.43**	**320**	*i* P		**Pn**	**02 11 44.2 +0.1**
JAG				S		**Sn**	**02 11 51.3 -0.3**
JRY	**Ryogami san**	**0.73**	**264**	*i* P		**Pn**	**02 11 47.5 -0.1**
JRY				S		**Sn**	**02 11 57.8 -0.2**
JKT	**Katashina**	**0.81**	**327**	*i* P		**Pn**	**02 11 48.7 0.0**
JKT				S		**Sn**	**02 12 00.0 +0.2**
JOD2	**Odawara 2**	**1.01**	**215**	P		**Pn**	**02 11 51.9 +0.6**
JUN	**Shimob**	**1.18**	**240**	P		**Pn**	**02 11 54.8 +1.1**
JUON	**Uonuma**	**1.27**	**332**	*i* P		**Pn**	**02 11 55.1 +0.3**
JUON				S		**Sn**	**02 12 11.2 +0.6**
JFY	**Yanaizu**	**1.31**	**357**	*i* P		**Pn**	**02 11 56.1 +0.7**
MJAR	**Matsushiro Arr**	**1.36**	**290**	Pg		**Pn**	**02 11 55.6 -0.5**
	2.8nm,0.3s,baz=116,slow=2.8,SNR=165						
MJAR				Lg			02 12 21.8
	1.0nm,0.3s,baz=112,slow=22,SNR=4.7						
MAT	**Matsushiro**	**1.36**	**290**	P		**Pn**	**02 11 56.6 +0.5**
MKAR	**Makanchi Array**	**43.53**	**303**	P		**P**	**02 19 32.5 +0.5**
	0.1nm,0.5s,baz=89,slow=12,SNR=1.7						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**45.56**	**309**	P		**P**	**02 19 48.3 +0.2**
	0.1nm,0.4s,baz=88,slow=7.7,SNR=4.2						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**55.97**	**186**	P		**P**	**02 21 05.6 -1.1**
	0.5nm,0.9s,baz=1.0,slow=7.4,SNR=3.2						
	0.5nm,0.9s						

IDC 25 02:12:46.5±1.9, 0°.70N×126°.86E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=172.1km s-min=24.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.78**	**161**	P		P	02 17 40.1	-0.1
	0.5nm,0.7s,baz=340,slow=11,SNR=5.8							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**25.17**	**165**	P		P	02 18 13.8	0.0
	0.3nm,0.5s,baz=344,slow=10,SNR=2.6							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**60.12**	**326**	P		P	02 22 55.5	-0.4
	0.1nm,0.4s,baz=111,slow=8.9,SNR=1.4							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**64.36**	**328**	P		P	02 23 24.4	+0.3
	0.2nm,0.5s,baz=126,slow=6.3,SNR=2.0							
	0.2nm,0.5s							

*AEIC **25** 02:40:26.3±1.3, 53°.99N±0°.04×163°.08W±0°.03, h15km±5km, Error ellipse: s-maj=6.5km s-min=1.2km az=155.0*

*NEIC **25** 02:40:27.6±1.7, 53°.95N±0°.03×163°.07W±0°.06, h35km±2km, ML3.4/8, ML3.1(AEIC), Error ellipse: s-maj=5.9km s-min=4.2km az=248.0*

*IDC **25** 02:40:27.2±4.9, 54°.06N×162°.77W, h40km±41km, mb3.3/8, mbtmp3.5/10, ML3.0/2, Error ellipse: s-maj=39.4km s-min=20.4km az=6.0*

ISC 25 02:40:26.8±1.6, 53°.93N±0°.09×162°.98W±0°.04, h43km±15km, n62, σ1°29/63, mb3.5/8, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BRPK	**Brown Peak**	**0.84**	**328**			**Pn**	**02 40 41.0**	**-1.2**
ISLZ	**Isanotski Laza**	**0.91**	**332**			**Pn**	**02 40 42.0**	**-1.1**
ISLZ						**Sn**	**02 40 53.1**	**-2.0**
FALS	**False Pass**	**0.96**	**345**			**Pn**	**02 40 42.7**	**-1.1**
FALS	**False Pass**	**0.96**	**345**			**Sn**	**02 40 56.1**	**-0.2**
ISNN	**Isanotski Nort**	**1.02**	**333**			**Pn**	**02 40 44.5**	**-0.1**
ISNN						**Sn**	**02 40 58.0**	**+0.3**
WESE	**West Dahl East**	**1.09**	**301**			**Pn**	**02 40 45.1**	**-0.6**
WECS	**Westdahl Cape**	**1.22**	**300**			**Pn**	**02 40 46.8**	**-0.5**
WECS						**Sn**	**02 41 03.6**	**+1.0**
WEBT	**Westdahl Beart**	**1.23**	**303**			**Pn**	**02 40 47.3**	**-0.3**
WEBT						**Sn**	**02 41 03.7**	**+0.7**
DT1	**Dutton Round H**	**1.25**	**19**			**Pn**	**02 40 47.8**	**+0.1**
PVV	**Pavlof Volcano**	**1.60**	**25**			**Pn**	**02 40 53.1**	**+0.5**
PN7A	**Pavlof North-7**	**1.61**	**20**			**Pn**	**02 40 53.4**	**+0.6**
AKSA	**Akutan Strait**	**1.62**	**278**			**Pn**	**02 40 52.9**	**+0.1**
AKSA						**Sn**	**02 41 13.0**	**+0.6**
PS1A	**Pavlof South-1**	**1.66**	**25**			**Pn**	**02 40 54.0**	**+0.7**
AKUT	**Akutan**	**1.66**	**278**	Pn		**Pn**	**02 40 53.2**	**-0.2**
AKUT						**Sn**	**02 41 11.8**	**-1.6**
AKUT				IAML			02 41 16.2	
	comp=N,247nm,1.0s							
AKUT				IAML			02 41 27.4	
	comp=E,215nm,0.7s							
AHB	**Akutan Harbor**	**1.68**	**277**			**Pn**	**02 40 53.5**	**-0.2**
AKBBA	**Akutan Broad B**	**1.75**	**277**			**Pn**	**02 40 55.3**	**+0.7**
SDPT	**Sand Point**	**2.03**	**45**			**Pn**	**02 40 59.0**	**+0.5**
SDPT						**Sn**	**02 41 24.4**	**+1.8**
UNV	**Unalaska Valle**	**2.09**	**269**			**Pn**	**02 40 59.2**	**0.0**
CNBA	**Chernabura Isl**	**2.17**	**64**	Pn		**Pn**	**02 41 01.6**	**+1.2**
MAPS	**Pakushin South**	**2.35**	**269**			**Pn**	**02 41 03.5**	**+0.6**
CHGN	**Chignik**	**3.54**	**46**	Pn		**Pn**	**02 41 20.4**	**+1.3**
CHGN				IAML			02 42 13.5	
	comp=E,129nm,0.7s							
CHGN				IAML			02 42 23.3	
	comp=N,110nm,0.9s							
O14K	**Tigyukauivet M**	**5.42**	**9**	Pn		**Pn**	**02 41 46.5**	**+1.5**
O16K	**Kokwok River B**	**6.28**	**23**	Pn		**Pn**	**02 41 57.5**	**+0.8**
N15K	**Kwethluk River**	**6.45**	**13**	Pn		**Pn**	**02 42 00.8**	**+1.7**
M13K	**Dall Lake**	**6.50**	**358**	Pn		**Pn**	**02 42 01.3**	**+1.5**
M14K	**Bethel**	**6.86**	**4**	Pn		**Pn**	**02 42 05.5**	**+0.8**
KDAK	**Kodiak Island**	**7.01**	**52**	Pn		**Pn**	**02 42 08.1**	**+1.3**
KDAK	**Kodiak Island**	**7.01**	**52**	P		**Pn**	**02 42 05.3**	**-1.4**
	comp=N,0.7nm,0.3s,baz=260,slow=12,SNR=1.5							
KDAK				S		**Sn**	**02 43 20.4**	**-4.5**
	comp=N,6.6nm,0.6s,baz=288,slow=20,SNR=1.7							
	comp=N,3.9nm,0.4s							
Q19K	**Cape Douglas,**	**7.20**	**42**	Pn		**Pn**	**02 42 10.4**	**+1.0**
O18K	**Koktuh Hills**	**7.30**	**32**	Pn		**Pn**	**02 42 12.2**	**+1.5**
N17K	**Nushagak Hills**	**7.32**	**23**	Pn		**Pn**	**02 42 11.9**	**+0.9**
M16K	**Timber Creek**	**7.43**	**15**	Pn		**Pn**	**02 42 13.8**	**+1.3**
L14K	**Kuka Creek**	**7.43**	**1**	Pn		**Pn**	**02 42 12.7**	**+0.2**
SYI	**Shuyak Island**	**7.53**	**47**	Pn		**Pn**	**02 42 13.3**	**-0.5**
N18K	**Kilae Creek**	**7.78**	**27**	Pn		**Pn**	**02 42 18.0**	**+0.7**
L16K	**Lowhat River**	**8.02**	**12**	Pn		**Pn**	**02 42 22.1**	**+1.5**
M17K	**Holitna River**	**8.05**	**19**	Pn		**Pn**	**02 42 21.6**	**+0.6**
N19K	**Bonanza Creek**	**8.28**	**30**	Pn		**Pn**	**02 42 26.1**	**+1.8**
K15K	**Wolf Creek Mou**	**8.42**	**5**	Pn		**Pn**	**02 42 27.4**	**+1.3**
J14K	**Nanvaranak Lak**	**8.85**	**358**	Pn		**Pn**	**02 42 33.0**	**+1.1**
L18K	**Granite Mounta**	**8.95**	**19**	Pn		**Pn**	**02 42 33.9**	**+0.6**
K17K	**Iditarod**	**9.14**	**14**	Pn		**Pn**	**02 42 36.6**	**+0.7**
M19K	**Big River Lodg**	**9.20**	**26**	Pn		**Pn**	**02 42 38.3**	**+1.5**
L19K	**White Mountain**	**9.32**	**24**	Pn		**Pn**	**02 42 39.7**	**+1.3**
J16K	**Anvik River**	**9.46**	**7**	Pn		**Pn**	**02 42 41.5**	**+1.2**
M20K	**Styx River**	**9.53**	**29**	Pn		**Pn**	**02 42 44.1**	**+2.8**
WAX	**Waxell Ridge**	**12.68**	**51**			P	02 43 30.5	-4.2
ILAR	**Eielson Array**	**13.56**	**30**	P		**Pn**	**02 43 35.6**	**-0.7**
	baz=214,slow=13,SNR=1.5							
	comp=N,0.3nm,0.8s							
PETK	**Petropavlovsk-**	**23.19**	**284**	P		**P**	**02 45 30.0**	**+0.5**
	comp=N,1.8nm,0.7s,baz=93,slow=12,SNR=1.8							
	comp=N,1.8nm,0.7s							
YKA	**Yellowknife Ar**	**26.28**	**52**	P		**P**	**02 45 57.0**	**-0.7**
	comp=N,0.3nm,0.8s,baz=270,slow=15,SNR=4.8							
	comp=N,0.3nm,0.8s							
NVAR	**Mina Array Bea**	**33.96**	**99**	P		**P**	**02 47 04.1**	**-2.0**
	comp=N,0.2nm,0.3s,baz=257,slow=3.5,SNR=2.3							
	comp=N,0.2nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**41.20**	**226**	T		T	03 32 16.3	
	baz=26,slow=76,SNR=37							
H11N3	**WAKE ISLAND Hy**	**41.20**	**226**	T		T	03 32 21.6	
	baz=26,slow=76,SNR=34							
H11N1	**WAKE ISLAND Hy**	**41.22**	**226**	T		T	03 32 18.6	
	baz=26,slow=76,SNR=21							
H11S1	**WAKE ISLAND Hy**	**42.37**	**225**	T		T	03 33 44.6	
	baz=26,slow=76,SNR=41							
H11S2	**WAKE ISLAND Hy**	**42.38**	**225**	T		T	03 33 45.6	
	baz=26,slow=76,SNR=27							
H11S3	**WAKE ISLAND Hy**	**42.39**	**225**	T		T	03 33 51.5	
	baz=26,slow=76,SNR=17							
TXAR	**Lajitas Array**	**48.96**	**95**	P		**P**	**02 49 10.3**	**+1.5**
	comp=N,0.3nm,0.8s,baz=298,slow=6.1,SNR=3.9							
	comp=N,0.3nm,0.8s							
SONM	**Songino Array**	**53.73**	**303**	P		**P**	**02 49 45.2**	**+0.8**
	comp=N,0.3nm,0.5s,baz=91,slow=5.8,SNR=1.7							
	comp=N,0.3nm,0.5s							
BVAR	**Borovoye Array**	**64.56**	**328**	P		**P**	**02 51 00.3**	**+1.3**
	comp=N,0.5nm,0.6s,baz=72,slow=4.7,SNR=2.4							
	comp=N,0.5nm,0.6s							
HFS	**Hagfors**	**66.25**	**2**	P		**P**	**02 51 09.8**	**0.0**
	comp=N,1.5nm,0.8s,baz=95,slow=3.6,SNR=5.1							
	comp=N,1.5nm,0.8s							
ESDC	**Sonseca Array**	**85.03**	**16**	P		**P**	**02 52 55.7**	**-1.9**
	comp=N,0.3nm,0.9s,baz=2.9,slow=5.1,SNR=1.4							
	comp=N,0.3nm,0.9s							

KRSC 25 03:18:51.5±2.2, 48°.53N×156°.48E, h6km±39km, MI3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.17**	**354**	*eP*		Pn	03 19 28.2	+0.2
KDTR	**Khodutka, Kamc**	**3.44**	**17**	*eP*		Pn	03 19 48.2	+2.6
KDTR				*eS*		Sb	03 20 32.2	-2.6
ASAK	**Asacha**	**3.97**	**13**	*eP*		Pn	03 19 56.4	+3.6
MTVR	**Mutnovka**	**4.11**	**15**	*eP*		Pn	03 19 58.4	+3.6
RUS	**Russkaya**	**4.12**	**18**	*eP*		Pn	03 19 57.5	+2.7
RUS				*eS*		Sb	03 20 49.3	-5.0
GRL	**Gorelyy**	**4.16**	**14**	*eP*		Pn	03 19 59.2	+3.8
AVH	**Avacha**	**4.96**	**16**	*eP*		Pn	03 20 11.9	+5.5
KOK	**Koryaka**	**4.96**	**15**	*eP*		Pn	03 20 11.5	+5.0
SMAR	**Somma**	**4.97**	**16**	*eP*		Pn	03 20 12.3	+5.6
KRX	**Arik**	**5.03**	**15**	*eP*		Pn	03 20 12.0	+4.5

*IDC **25** 03:27:01.0±1.3, 3°.34S×101°.49E, h0km, mb4.0/10, mbtmp4.0/10, Error ellipse: s-maj=53.1km s-min=17.8km az=50.0*

*DJA **25** 03:27:09.6±0.8, 3°.5S±0°.5×101°.2E±°, h36km±18km, M4.2/9, mb4.5/1, MLv4.1/9*

*NEIC **25** 03:27:09.5±0.6, 3°.1S±0°.2×101°.9E±0°.2, h53km±11km, mb4.1/13, Error ellipse: s-maj=46.0km s-min=8.8km az=45.0*

ISC 25 03:27:08.0±0.7, 3°.3S±0°.1×101°.60E±0°.09, h50km, n45, σ1°09/41, mb4.0/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.22**	**354**	P		**Pn**	**03 27 30.6**	**+1.7**
PPSI	**Pulau Pagai**	**1.68**	**289**	P		**Pn**	**03 27 36.4**	**+1.4**
MNAI	**Manna**	**1.71**	**128**			**Pn**	**03 27 36.3**	**+0.9**
MNAI				Sn		**Sn**	**03 27 56.9**	**+0.9**
MNAI	**Manna**	**1.71**	**128**	P		**Pn**	**03 27 36.5**	**+1.1**
MNAI				S		**Sn**	**03 27 57.0**	**+1.0**
LWLI	**Liwa**	**2.98**	**125**	P		**Pn**	**03 27 56.4**	**+3.5**
SISI	**Saibi**	**3.19**	**308**	P		**Pn**	**03 27 57.1**	**+1.4**
KASI	**Kota Agung**	**3.63**	**127**	P		**Pn**	**03 28 03.7**	**+2.0**
PBSI	**Pulau Batu**	**4.64**	**314**	P		**Pn**	**03 28 17.2**	**+1.6**
GSI	**Gunungsitoli**	**6.10**	**319**			**Pn**	**03 28 36.9**	**+1.2**
GSI	**Gunungsitoli**	**6.10**	**319**	P		**Pn**	**03 28 37.2**	**+1.5**
UGM	**Wanagama**	**9.98**	**118**	Pn		**Pn**	**03 29 28.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**27.76**	**124**	P		**P**	**03 32 51.8**	**-0.5**
WB0	**Warramunga Arr**	**35.93**	**120**	P		**P**	**03 34 03.4**	**-0.6**
WB0				IAmb		IAmb	03 34 23.1	
	comp=Z,9.2nm,1.4s							
WRA	**Warramunga Arr**	**35.95**	**120**	P		**P**	**03 34 04.2**	**0.0**
WRA	**Warramunga Arr**	**35.95**	**120**	P		**P**	**03 34 04.5**	**+0.

CNGZ Carnagh Statio 9.09 207 P **Pn** **03 29 35.9 -1.4**
CNGZ S **Sn** **03 31 13.0 -5.4**
TKGZ Te Karaka 9.20 209 P **Pn** **03 29 37.5 -1.2**
TKGZ S **Sn** **03 31 20.2 -0.8**
MWZ Matawai 9.25 210 P **Pn** **03 29 37.5 -2.0**
MWZ S **Sn** **03 31 23.2 +0.9**
URZ Urewera 9.38 212 P **Pn** **03 29 39.5 -1.6**
6.0nm,0.3s,baz=296,slow=1.5,SNR=16
URZ S **Sn** **03 31 24.0 -1.3**
180nm,0.4s,baz=282,slow=18,SNR=17
URZ LR LR 03 34 15.2
comp=Z,300nm,19.2s,baz=121,slow=42
RTZ Ruatahuna 9.72 212 Pn **Pn** **03 29 43.5 -2.5**
RTZ Sn **Sn** **03 31 31.3 -2.7**
TOZ Tahuroa Road 9.80 220 **Pn** **03 29 45.6 -1.4**
HIZ Hauiti 10.71 219 Pn **Pn** **03 29 57.9 -1.5**
BFZ Birch Farm 11.76 208 Pn **Pn** **03 30 11.7 -2.0**
BFZ Birch Farm 11.76 208 P **Pn** **03 30 12.8 -0.9**
BFZ S **Sn** **03 32 18.0 -5.6**
DUWZ D'Urville Isla 12.90 214 S **Sn** **03 32 45.8 -5.7**
BHW Baring Head 12.94 210 Pn **Pn** **03 30 27.8 -2.1**
TCW Tory Channel 13.04 212 P **Pn** **03 30 30.1 -1.2**
TCW S Sn 03 32 46.0 -9.1
CTZ Chatham Island 13.23 180 Pn **Pn** **03 30 33.1 -0.8**
TUWZ Tuamarina 13.37 213 P Pn 03 30 30.3 -5.5
TUWZ S Sn 03 32 51.8 -11
BWRS Waikakaho Road 13.40 213 S Sn 03 32 53.6 -10
NNZ Nelson 13.48 215 P **Pn** **03 30 38.3 +1.1**
NNZ S Sn 03 32 56.1 -10
TKNZ Takaka Hill 13.55 216 P **Pn** **03 30 37.7 -0.5**
TKNZ S Sn 03 32 59.2 -8.3
BSWZ Blackbirch Sta 13.63 212 P **Pn** **03 30 39.0 -0.3**
BSWZ S Sn 03 32 59.7 -10
MRNZ Matariki Terra 13.92 216 P **Pn** **03 30 42.2 -1.1**
MRNZ S Sn 03 33 07.1 -10
THZ Tophouse 14.12 214 P **Pn** **03 30 45.9 -0.2**
KHZ Kahutara 14.34 211 P **Pn** **03 30 45.8 -3.2**
KHZ S Sn 03 33 14.8 -12
GVZ Greta Valley S 15.00 211 P **Pn** **03 30 57.1 -0.8**
GVZ S Sn 03 33 31.7 -11
LTZ Lake Taylor 15.21 213 P **Pn** **03 31 00.3 -0.3**
LTZ S Sn 03 33 37.1 -11
INZ Inchbonnie 15.56 215 P **Pn** **03 31 03.9 -1.3**
INZ S Sn 03 33 42.3 -14
OXZ Oxford 15.73 212 S **Pn** **03 31 05.4 -2.0**
OXZ S Sn 03 33 47.6 -13
MQZ McQueen's Vall 15.76 210 P **Pn** **03 31 05.5 -2.2**
MQZ S Sn 03 33 46.8 -14
PINNC Pines Island, 16.34 295 P **P** **03 31 17.7 -0.1**
RPZ Rata Peaks 16.49 213 P **Pn** **03 31 16.9 -0.2**
16nm,0.4s,baz=102,slow=8.4,SNR=3.9
RPZ S Sn 03 34 04.6 -14
14nm,0.5s,baz=35,slow=12,SNR=2.8
OUENC Ouen Island, N 16.91 294 P **P** **03 31 23.5 -0.8**
DZM Mont Dzumac 17.41 295 P **P** **03 31 31.8 +1.9**
15nm,0.7s,baz=118,slow=15,SNR=20
DZM LR LR 03 36 27.5
comp=Z,428nm,21.3s,baz=120,slow=31
LBZ Lake Benmore 17.41 213 P **Pn** **03 31 28.5 -0.1**
LBZ IAmb IAmb 03 31 44.0
comp=Z,93nm,1.5s
RAR Rarotonga 17.65 62 LR LR 03 36 31.0
comp=Z,208nm,20.5s,baz=249,slow=30
ODZ Otahua Downs 17.70 211 **Pn** **03 31 31.3 -0.9**
KOUNC Koumac, New Ca 19.92 295 P **P** **03 31 56.7 -0.6**
KOUNC IAmb IAmb 03 32 03.3
comp=Z,34nm,0.9s
PPT Papeete 27.68 69 LR LR 03 42 34.6
comp=Z,99nm,18.4s,baz=236,slow=33
EIDS Eidsvold 29.02 272 P **P** **03 33 25.9 +0.7**
HNR Honiara 30.33 309 LR LR 03 44 36.1
comp=Z,1μm,18.2s,baz=148,slow=34
CTA Charters Tower 35.08 278 P **P** **03 34 19.7 +1.2**
comp=Z,4.1nm,0.6s,baz=104,slow=7.9,SNR=7.7
CTA LR LR 03 46 41.7
comp=Z,154nm,21.0s,baz=88,slow=33
comp=Z,4.1nm,0.6s
CTAO Charters Tower 35.08 278 P **P** **03 34 18.9 +0.4**
STKA Stephens Creek 35.71 257 P **P** **03 34 25.0 +1.2**
comp=Z,1.6nm,0.5s,baz=93,slow=11,SNR=4.7
STKA LR LR 03 48 33.5
comp=Z,98nm,18.4s,baz=35,slow=35
comp=Z,1.6nm,0.5s
PMG Port Moresby 39.80 294 LR LR 03 48 55.2
comp=Z,74nm,19.0s,baz=174,slow=32
BBOO Buckleboo 40.18 254 P **P** **03 35 01.8 +0.2**
BBOO IAmb IAmb 03 35 16.6
comp=Z,33nm,1.4s
AS31 Alice Springs 44.38 266 P **P** **03 35 35.8 -0.1**
ASAR Alice Springs 44.38 266 P **P** **03 35 35.6 -0.3**
comp=Z,2.0nm,0.7s,baz=101,slow=7.3,SNR=23
ASAR LR LR 03 54 25.2
comp=Z,98nm,18.4s,baz=121,slow=36
comp=Z,2.0nm,0.7s
WB2 Warramunga Arr 45.37 271 P **P** **03 35 43.6 -0.1**
WB2 IAmb IAmb 03 35 44.6
comp=Z,8.4nm,0.8s
WRA Warramunga Arr 45.38 271 P **P** **03 35 43.5 -0.3**
WRA Warramunga Arr 45.38 271 P **P** **03 35 42.3 -1.6**
comp=Z,6.7nm,0.7s,baz=112,slow=7.5,SNR=43
WRA PcP **PcP** **03 37 22.8 -0.1**
comp=Z,1.0nm,0.8s,baz=107,slow=4.2,SNR=1.1
comp=Z,6.7nm,0.7s
WB0 Warramunga Arr 45.40 272 P **P** **03 35 43.5 -0.5**
WB0 IAmb IAmb 03 35 44.8
comp=Z,7.1nm,0.8s
FORT Forrest 47.26 255 P **P** **03 35 58.0 -0.5**
VNDA Vanda 48.15 186 P **P** **03 36 08.9 +4.2**
comp=Z,4.3nm,1.1s,baz=22,slow=5.4,SNR=2.7
comp=Z,4.3nm,1.1s
FITZ Fitzroy Crossi 53.64 269 P **P** **03 36 46.2 -0.6**
NWAO Narrogin (SRO) 55.56 249 LR LR 03 57 23.5
comp=Z,36nm,21.0s,baz=228,slow=32
GUMO Guam 57.45 314 LR LR 03 58 24.1
comp=Z,42nm,20.9s,baz=104,slow=32
QSPA South Pole Qui 59.63 180 P **P** **03 37 31.2 +2.2**
QSPA IAmb IAmb 03 37 34.3
comp=Z,12nm,1.1s
QSPA South Pole Qui 59.63 180 P **P** **03 37 31.3 +2.4**
comp=Z,7.5nm,1.0s,baz=44,slow=2.5,SNR=14
comp=Z,7.5nm,1.0s
LEM Lembang 74.40 271 LR LR 04 13 35.5
comp=Z,43nm,18.2s,baz=174,slow=37
TROLL Troll, Antarti 77.79 180 ⇑pP **P** **03 39 23.6 +1.7**
comp=Z,210nm,0.7s
SNAA Sanae 78.04 178 ⇑pP **P** **03 39 24.3 +1.1**
comp=Z,92nm,0.9s
SNAA Sanae 78.04 178 P **P** **03 39 24.2 +1.1**
comp=Z,4.6nm,1.0s,baz=185,slow=6.9,SNR=5.0
comp=Z,4.6nm,1.0s
VNA3 Neumayer Olymp 78.14 176 ⇑pP **P** **03 39 24.7 +1.0**
comp=Z,16nm,0.7s
VNA2 Neumayer--Watz 78.59 176 ⇑pP **P** **03 39 27.7 +1.6**
comp=Z,11nm,0.7s,baz=162,slow=4.8
MJAR Matsushiro Arr 79.04 324 P **P** **03 39 28.0 -1.0**
comp=Z,1.0nm,0.6s,baz=152,slow=3.1,SNR=3.3
MJAR LR LR 04 12 55.2
comp=Z,17nm,18.9s,baz=100,slow=34
comp=Z,1.0nm,0.6s
H03S2 Juan Fernandez 79.35 123 T T 05 09 16.1
baz=238,slow=74,SNR=22
H03S1 Juan Fernandez 79.36 123 T T 05 09 25.7
baz=238,slow=74,SNR=24
H03S3 Juan Fernandez 79.37 123 T T 05 09 24.6
baz=238,slow=74,SNR=23
JNU Nakatsue 80.47 317 LR LR 04 10 35.7
comp=Z,19nm,21.0s,baz=111,slow=32
PLCA Paso Flores 81.51 132 P **P** **03 39 43.1 +0.5**
PLCA IAmb IAmb 03 39 45.4
comp=Z,12nm,1.1s
PLCA Paso Flores 81.51 132 P **P** **03 39 44.5 +1.9**
comp=Z,5.9nm,1.0s,baz=220,slow=8.4,SNR=9.2
PLCA LR LR 04 07 05.4
comp=Z,60nm,19.8s,baz=212,slow=29
comp=Z,5.9nm,1.0s
GO06 Curarrehue 81.54 131 P **P** **03 39 41.0 -1.9**
GO06 IAmb IAmb 03 39 45.4
comp=Z,9.9nm,1.2s
KIWB Kanaga Island 81.98 360 P **P** **03 39 40.8 -3.6**
SHEM Shemya Is, Ala 83.26 354 LR LR 04 13 44.1
comp=Z,51nm,20.4s,baz=134,slow=33
LPIG La Paz 83.49 57 LR LR 04 10 55.1
comp=Z,86nm,18.1s,baz=218,slow=31
BO02 Sierra Bellavi 84.61 127 P **P** **03 39 59.9 +1.1**
MT01 Popeta 84.79 126 P **P** **03 40 00.3 +0.7**

KSRS Korea Array 85.24 319 LR LR 04 17 18.6
comp=Z,11nm,18.0s,baz=135,slow=35
PFO Pinyon Flats O 85.32 47 LR LR 04 11 27.9
comp=Z,36nm,18.2s,baz=158,slow=31
PEL Peldehue 85.58 126 P **P** **03 40 04.5 +0.9**
KMPM Mount Pierce 85.63 37 P **P** **03 40 04.4 +1.0**
CMB Columbia Colle 85.97 41 P **P** **03 40 04.9 -0.3**
PETK Petropavlovsk- 86.22 345 P **P** **03 40 06.7 +0.8**
AFDM Forest Hills D 86.28 40 P **P** **03 40 07.7 +1.0**
ORV Oroville 86.41 39 P **P** **03 40 07.3 0.0**
CO02 Combarbal 86.43 124 P **P** **03 40 08.3 +0.4**
MDPB Devils Postpil 86.44 42 P **P** **03 40 07.6 -0.2**
113A Mohawk Valley, 86.49 49 P **P** **03 40 08.2 +0.5**
214A Organ Pipe Nat 86.60 50 P **P** **03 40 07.9 -0.5**
214A IAmb IAmb 03 40 09.6
comp=Z,4.8nm,1.0s
QSM Queen of Sheba 86.63 45 P **P** **03 40 08.2 -0.2**
QSM IAmb IAmb 03 40 09.9
comp=Z,6.8nm,1.0s
BLYC Blythe 86.64 47 P **P** **03 40 09.1 +0.6**
BLYC IAmb IAmb 03 40 09.7
comp=Z,5.2nm,1.1s
CO03 El Pedregal 86.85 124 P **P** **03 40 10.5 +0.5**
GWY Greenwater Val 86.90 44 P **P** **03 40 10.5 +0.6**
DSP Deep Springs 86.91 43 P **P** **03 40 09.6 -0.1**
LCH Last Change Ra 87.01 43 P **P** **03 40 11.0 +0.6**
GRAC Grapevine Rang 87.02 43 P **P** **03 40 09.7 -0.6**
GRAC IAmb IAmb 03 40 12.2
comp=Z,10nm,0.9s
PNTR Pine Nut 87.15 41 P **P** **03 40 11.1 0.0**
LHV Little Huntoon 87.20 42 P **P** **03 40 11.1 +0.1**
LHV IAmb IAmb 03 40 12.3
comp=Z,5.6nm,0.9s
NJ2 Nanjing 87.27 310 *e*P **P** **03 40 12.6 +1.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
YERR Yerington 87.28 41 P **P** **03 40 11.5 -0.2**
YERR IAmb IAmb 03 40 13.0
comp=Z,5.0nm,1.0s
GMN Gold Mountain 87.28 43 P **P** **03 40 12.3 +0.4**
GMN IAmb IAmb 03 40 18.9
comp=Z,4.2nm,0.9s
WCT Wildcat Mounta 87.33 44 P **P** **03 40 12.2 +0.3**
WCT IAmb IAmb 03 40 13.3
comp=Z,5.0nm,1.1s
NVAR Mina Array Bea 87.43 42 P **P** **03 40 12.3 -0.2**
comp=Z,3.9nm,0.8s,baz=216,slow=7.9,SNR=17
NVAR LR LR 04 13 59.4
comp=Z,48nm,18.1s,baz=259,slow=32
comp=Z,3.9nm,0.8s
NV11 Mina Array Sit 87.52 42 P **P** **03 40 13.1 +0.3**
NV11 IAmb IAmb 03 40 14.1
comp=Z,5.7nm,1.1s
PAHR Pah Rah Range 87.69 40 P **P** **03 40 13.9 +0.3**
PAHR IAmb IAmb 03 40 14.7
comp=Z,4.6nm,0.9s
V12A Nelson 87.71 46 P **P** **03 40 13.7 0.0**
Y14A Wickenburg 87.73 48 P **P** **03 40 14.1 +0.3**
Y14A IAmb IAmb 03 40 15.8
comp=Z,8.1nm,1.2s
TPH Tonopah 87.82 43 P **P** **03 40 14.3 -0.1**
W13A Hualapai Mount 87.91 47 P **P** **03 40 14.7 -0.2**
W13A IAmb IAmb 03 40 16.8
comp=Z,6.2nm,1.1s
WTNK Soaring Height 87.91 45 P **P** **03 40 15.0 +0.4**
USA0B Ussuriysk Arra 87.94 326 P **P** **03 40 14.3 -0.2**
KVN Kaiserville 87.97 42 P **P** **03 40 14.4 -0.6**
KVN IAmb IAmb 03 40 16.1
comp=Z,5.2nm,0.9s
SHPR Sheep Range 88.02 45 P **P** **03 40 15.4 +0.1**
TUC Tucson 88.17 51 P **P** **03 40 16.9 +0.9**
TUC IAmb IAmb 03 40 18.1
comp=Z,4.8nm,1.1s
319A Douglas 88.61 52 P **P** **03 40 17.9 -0.3**
319A IAmb IAmb 03 40 20.1
comp=Z,8.1nm,0.9s
HOPE Hope Point 88.81 158 P **P** **03 40 18.8 +0.1**
X16A Lo Mia Camp, P 89.04 49 P **P** **03 40 21.3 +1.1**
X16A IAmb IAmb 03 40 21.9
comp=Z,4.5nm,0.9s
BMN Battle Mountai 89.40 41 P **P** **03 40 21.4 -0.3**
BMN IAmb IAmb 03 40 22.4
comp=Z,3.8nm,0.9s
DUN6 Lazy B Ranch 89.45 51 P **P** **03 40 22.7 +0.6**
PINE Pine Mountain 89.69 37 P **P** **03 40 22.6 -0.4**
U15A North Rim 89.75 47 P **P** **03 40 23.6 +0.1**
WUAZ Wupatki 89.76 48 P **P** **03 40 23.8 +0.3**
WUAZ IAmb IAmb 03 40 25.6
comp=Z,8.0nm,0.9s
KNB Kanab 89.79 46 **P** **03 40 23.8 +0.2**
KNB IAmb IAmb 03 40 25.8
comp=Z,9.2nm,0.9s
CCUT Cedar City 89.80 45 P **P** **03 40 22.7 -1.0**
SZCU Shurtz Canyon 89.99 45 P **P** **03 40 24.9 +0.3**
SZCU IAmb IAmb 03 40 26.6
comp=Z,4.6nm,1.0s
X18A Snowflake 90.08 49 P **P** **03 40 24.9 -0.2**
X18A IAmb IAmb 03 40 27.2
comp=Z,4.0nm,0.8s
121A Cookes Peak, D 90.32 52 P **P** **03 40 26.1 -0.1**
PKCU Pink Cliffs 90.38 46 P **P** **03 40 26.7 +0.1**
W18A Petrified Fore 90.57 49 P **P** **03 40 27.5 +0.1**
W18A IAmb IAmb 03 40 29.3
comp=Z,8.7nm,1.1s
J08A Circle Bar Ran 90.69 38 P **P** **03 40 27.4 -0.1**
J08A IAmb IAmb 03 40 28.9
comp=Z,13nm,1.4s
ELK Elko 90.74 42 P **P** **03 40 28.2 +0.1**
comp=Z,1.0nm,0.8s,baz=227,slow=5.5,SNR=5.2
ELK LR LR 04 15 25.3
comp=Z,38nm,19.4s,baz=237,slow=32
comp=Z,1.0nm,0.8s
MTPU Mount Pierson 90.83 45 P **P** **03 40 29.5 +0.8**
MTPU IAmb IAmb 03 40 31.2
comp=Z,6.6nm,0.9s
G06A Carlson Farm, 90.86 36 P **P** **03 40 29.1 +0.8**
MVU Marysvale 91.10 45 P **P** **03 40 30.5 +0.7**
MSU Marysvale 91.13 45 P **P** **03 40 30.2 +0.3**
VHRN Van Horn 91.24 55 P **P** **03 40 29.7 -0.8**
TX31 Lajitas Ar. Si 91.36 57 P **P** **03 40 30.7 -0.3**
TX31 IAmb IAmb 03 40 32.6
comp=Z,4.5nm,1.1s
TXAR Lajitas Array 91.36 57 P **P** **03 40 30.8 -0.2**
TXAR Lajitas Array 91.36 57 P **P** **03 40 31.5 +0.5**
comp=Z,2.6nm,1.0s,baz=222,slow=6.7,SNR=13
comp=Z,2.6nm,1.0s
CMIG Matias Romero 91.56 71 LR LR 04 11 07.3
comp=Z,19nm,21.8s,baz=202,slow=28
D05A Enumclaw 91.57 34 P **P** **03 40 32.5 +1.1**
HMU Henry Mountain 91.66 46 P **P** **03 40 32.1 -0.3**
HMU IAmb IAmb 03 40 37.5
comp=Z,4.9nm,1.1s
G08A Pilot Rock 91.75 37 P **P** **03 40 32.6 +0.2**
KLR Kul'dur 91.75 329 LR LR 04 17 37.5
comp=Z,20nm,18.7s,baz=160,slow=33
ALPN Alpine 91.96 56 P **P** **03 40 34.0 +0.2**
ALPN IAmb IAmb 03 40 34.9
comp=Z,6.0nm,1.1s
BNM Barren Site 92.05 51 P **P** **03 40 33.6 -0.7**
MFID Camas Ranch 92.16 39 P **P** **03 40 34.5 +0.1**
MFID IAmb IAmb 03 40 35.7
comp=Z,5.3nm,0.9s
NNA Nana 92.17 105 LR LR 04 11 52.1
comp=Z,31nm,20.6s,baz=232,slow=29
E07A Sunnyside 92.17 35 P **P** **03 40 33.8 -0.5**
BMO Blue Mountains 92.32 38 P **P** **03 40 33.9 -1.2**
SRU San Rafael Swe 92.51 45 P **P** **03 40 36.3 +0.1**
SRU IAmb IAmb 03 40 37.5
comp=Z,6.0nm,1.0s
P17A Butcher Ranch, 92.60 45 P **P** **03 40 36.2 -0.5**
P17A IAmb IAmb 03 40 38.1
comp=Z,5.2nm,1.2s
ANMO Albuquerque 92.63 51 P **P** **03 40 37.2 +0.3**
comp=Z,2.2nm,0.9s,baz=294,slow=2.6,SNR=6.2
comp=Z,2.2nm,0.9s
MVCO Mesa Verde 92.63 48 P **P** **03 40 36.0 -0.9**
MVCO IAmb IAmb 03 40 39.6
comp=Z,3.7nm,1.2s
LVC Limon Verde 92.78 118 P **P** **03 40 35.8 -2.4**
LVC IAmb IAmb 03 40 52.3
comp=Z,6.5nm,1.0s
LVC Limon Verde 92.78 118 LR LR 04 13 52.1
comp=Z,43nm,20.1s,baz=226,slow=30
HVU Hansel Valley 92.83 42 P **P** **03 40 36.6 -1.0**
HVU IAmb IAmb 03 40 38.8
comp=Z,5.0nm,1.0s
D08A Wollman Farm, 92.98 35 P **P** **03 40 37.8 -0.2**
D08A IAmb IAmb 03 40 39.4
comp=Z,6.6nm,0.9s
PV18 Skein Mesa, Pa 92.99 47 P **P** **03 40 38.1 -0.4**
PV18 IAmb IAmb 03 40 39.0
comp=Z,7.9nm,1.2s
P18A Preston Nutter 93.00 45 P **P** **03 40 37.7 -0.9**
E09A Wood Farm, Sta 93.00 36 P **P** **03 40 37.6 -0.5**
E09A IAmb IAmb 03 40 39.1
comp=Z,7.9nm,1.1s
HLID Hailey 93.03 40 P **P** **03 40 38.7 +0.2**
HLID IAmb IAmb 03 40 40.0
comp=Z,3.2nm,0.8s
PV03 Paradox Valley 93.03 47 P **P** **03 40 37.7 -1.0**
PV03 IAmb IAmb 03 40 53.4
comp=Z,5.5nm,1.5s
F10A Beach Ranch, E 93.11 37 P **P** **03 40 37.8 -0.9**
PV01 Paradox Valley 93.14 47 P **P** **03 40 38.5 -0.7**
PV01 IAmb IAmb 03 40 40.0
comp=Z,3.0nm,0.9s
PLID Pearl Lake 93.17 38 P **P** **03 40 38.2 -1.0**
PLID IAmb IAmb 03 40 40.0
comp=Z,6.9nm,1.0s
BSUT Blindstream Ca 93.24 44 P **P** **03 40 38.8 -1.0**
BSUT IAmb IAmb 03 40 41.0
comp=Z,7.6nm,1.4s
MCRA Macar, Loja 93.45 97 P **P** **03 40 40.8 -0.2**
DRIO Del Rio 93.62 58 P **P** **03 40 40.4 -0.9**
DRIO IAmb IAmb 03 40 42.0
comp=Z,7.3nm,1.4s
V35K Ketchikan 93.71 24 P **P** **03 40 40.6 -0.5**
MA2 Magadan 93.71 344 LR LR 04 18 54.8
comp=Z,25nm,20.5s,baz=112,slow=33
CMAR Chiang Mai Arr 94.64 289 LR LR 04 25 41.7
comp=Z,9.3nm,18.0s,baz=140,slow=37
NEW Newport 94.69 35 LR LR 04 14 57.2
comp=Z,43nm,19.7s,baz=234,slow=30
MTO3 Montecristo 94.77 76 P **P** **03 40 46.3 -1.0**
MTO3 IAmb IAmb 03 40 54.3
comp=Z,6.4nm,1.3s
PDAR Pinedale Array 95.31 43 P **P** **03 40 48.7 -0.4**
comp=Z,1.1nm,0.9s,baz=191,slow=4.5,SNR=6.3
PDAR LR LR 04 14 12.8
comp=Z,38nm,20.8s,baz=291,slow=29
comp=Z,1.1nm,0.9s
FLWY Flagg Ranch 95.45 41 P **P** **03 40 50.2 +0.5**
YHL Hebgen Lake 95.65 41 P **P** **03 40 50.6 -0.1**
YHL IAmb IAmb 03 40 53.3
comp=Z,7.8nm,1.3s
BOZ Bozeman (W) 95.86 40 P **P** **03 40 50.9 -0.5**
BOZ IAmb IAmb 03 40 52.6
comp=Z,5.1nm,1.1s
ORTG Ortega, Santa 96.08 82 P **P** **03 40 52.5 -0.6**
RWWY Rawlins 96.08 45 **P** **03 40 53.0 +0.3**
JTS Las Juntas de 96.48 82 LR LR 04 15 54.2
comp=Z,51nm,19.8s,baz=197,slow=30
PZH PanZhiHua 96.48 297 P **P** **03 40 56.1 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,130nm,4.2s
HHC Hu-ho-hao-te 97.21 313 *e*P Pdif 03 40 58.8 +1.1
HHC pP pP 03 41 03.4 -2.2
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,140nm,5.0s
ILAR Eielson Array 97.72 12 P **P** **03 40 58.3 -0.9**
comp=Z,0.6nm,0.8s,baz=225,slow=5.8,SNR=10
comp=Z,0.6nm,0.8s
CPUP Villa Florida 98.93 128 LR LR 04 17 03.2
comp=Z,51nm,19.9s,baz=232,slow=30
RSSD Black Hills 99.38 44 P **Pdif** **03 41 06.5 -0.9**
RSSD IAmb IAmb 03 41 08.1
comp=Z,4.2nm,1.1s
MKAR Makanchi Array 118.80 310 PKP **PKPdf** **03 46 11.9 -1.0**
comp=Z,0.2nm,0.5s,baz=74,slow=1.1,SNR=4.5
KURBB Kurchatov Arra 122.07 313 PKP **PKPdf** **03 46 17.9 -1.1**
comp=Z,0.9nm,0.7s,baz=110,slow=2.0,SNR=13
BVAR Borovoye Array 127.35 316 PKP **PKPdf** **03 46 29.0 0.0**
comp=Z,2.0nm,0.8s,baz=197,slow=1.5,SNR=8.3
H10S3 ASCENSION HYDR 137.10 153 T T 06 22 07.5
baz=15,slow=74,SNR=2.9
H10S2 ASCENSION HYDR 138.17 153 T T 06 21 56.1
baz=205,slow=74,SNR=3.2
H10N3 ASCENSION HYDR 138.17 153 T T 06 23 11.7
baz=203,slow=74,SNR=8.3
H10N1 ASCENSION HYDR 138.18 153 T T 06 23 08.9
baz=203,slow=74,SNR=9.4
H10N2 ASCENSION HYDR 138.19 153 T T 06 23 13.1
baz=203,slow=74,SNR=9.8
FINES FINESS Array B 145.65 341 PKPbc **PKPdf** **03 47 02.4 0.0**
comp=Z,4.8nm,0.7s,baz=5.7,slow=2.8,SNR=22
OBN Obninsk 145.96 326 PKPbc **PKPbc** **03 47 03.6 -0.3**
comp=Z,16nm,0.5s,baz=268,slow=18,SNR=3.7
KBZ Khabaz 146.22 304 PKPbc **PKPbc** **03 47 04.7 -0.4**
comp=Z,1.4nm,0.8s,baz=354,slow=2.7,SNR=3.4
NB2 NORSAR Subarra 149.00 353 PKP **PKPbc** **03 47 11.9 -0.3**
comp=Z,2.0nm,0.7s,baz=10,slow=2.9
NOA NORSAR Array B 149.00 353 PKPbc **PKPbc** **03 47 11.8 -0.3**
comp=Z,3.1nm,0.8s,baz=14,slow=4.3,SNR=11
HFS Hagfors 149.56 350 PKPbc **PKPbc** **03 47 13.3 -0.3**
comp=Z,6.3nm,0.8s,baz=60,slow=3.9,SNR=9.2
AKASG Malin Array Be 152.13 324 PKPbc **PKPbc** **03 47 19.4 -0.4**
comp=Z,3.2nm,0.7s,baz=46,slow=2.5,SNR=7.1
MMAI Mount Meron Ar 152.79 284 PKPbc **PKiKP** **03 47 23.2 +0.9**
comp=Z,6.3nm,1.0s,baz=75,slow=6.1,SNR=3.6
TORD Torodi Ar. Bea 162.67 174 PKPab **PKPab** **03 48 16.9 +1.1**
comp=Z,1.5nm,0.8s,baz=182,slow=2.5,SNR=8.5
ESDC Sonseca Array 168.99 32 PKP **PKPdf** **03 47 32.0 0.0**
comp=Z,0.2nm,0.3s,baz=331,slow=1.2,SNR=2.7
ESDC PKPab **PKPab** **03 48 43.3 +0.1**
comp=Z,0.6nm,0.9s,baz=318,slow=4.7,SNR=5.2

RSNC 25 03:29:11.7±0.8, 6°36'N×74°03'W, h0km±9km, ML1.4, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PTBC	**PUERTO BERRIO,**	**0.46**	**293**	*e*P	P	Pg	03 29 21.4	+0.7
PTBC				*e*S	S	Sb	03 29 30.8	+0.6
PTBC				*i*			03 29 36.1	
comp=Z,5.0nm,0.2s								
BARC	**Barichara**	**0.87**	**74**	*e*P	P	Pg	03 29 25.2	-3.2
RUSC	**La Rusia**	**1.04**	**116**	*e*P	P	Pg	03 29 26.3	-5.5
RUSC				*e*S	S	Sg	03 29 38.4	-7.0
RUSC				*i*			03 29 40.2	
comp=Z,1.8nm,0.2s								
NORC	**Norcasia**	**1.15**	**227**	*e*P	P	Pg	03 29 31.5	-2.2
NORC				*e*S	S	Sg	03 29 48.1	-0.6
NORC				*i*			03 29 49.0	
comp=Z,12nm,0.2s								
HELC	**Santa Helena**	**1.50**	**264**	*e*P	P	Pn	03 29 38.5	-1.7
HELC				*e*S	S	Sg	03 30 00.0	0.0
PAMC	**Pamplona, Colo**	**1.64**	**53**	*e*P	P	Pn	03 29 40.2	-2.1
PAMC				*e*S	S	Sg	03 30 04.5	0.0
CHIC	**Chingaza**	**1.74**	**170**	*i*		Sn	03 30 09.6	+2.9
comp=Z,2.3nm,0.6s								
CHIC	**Chingaza**	**1.74**	**170**	*e*P	P	Pn	03 29 42.1	-1.4
CHIC				*e*S	S	Sn	03 30 06.7	+0.1
CHIC				*i*			03 30 09.6	
comp=Z,2.3nm,0.6s								
GUY2C	**Guyana, Caldas**	**1.74**	**230**	*e*P	P	Pn	03 29 42.1	-1.6
GUY2C				*e*S	S	Sn	03 30 06.2	-0.6
GUY2C				*i*			03 30 10.3	
comp=Z,3.9nm,0.3s								
OCAC	**Ocana**	**2.00**	**21**	*e*S	S	Sb	03 30 14.4	-0.2

IDC 25 03:35:43.9±3.6, 6°42S×154°56E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=131.2km s-min=40.0km az=118.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.80**	**234**	P	P	P	03 40 59.0	+0.5
0.4nm,0.4s,baz=56,slow=9.5,SNR=6.1								
0.4nm,0.4s								
ASAR	**Alice Springs**	**26.24**	**227**	P	P	P	03 41 20.3	-0.6
0.2nm,0.6s,baz=57,slow=9.1,SNR=1.7								
0.2nm,0.6s								
H11S3	**WAKE ISLAND Hy**	**27.50**	**26**	T	T	T	04 10 08.0	
baz=203								

H11S2	**WAKE ISLAND Hy**	**27.50**	**26**	T	T	04 10 10.5			
	baz=203								
H11S1	**WAKE ISLAND Hy**	**27.52**	**26**	T	T	04 10 04.0			
	baz=203								
MKAR	**Makanchi Array**	**82.69**	**319**	P	P	03 48 10.9			+1.3
	0.2nm,0.6s,baz=98,slow=4.7,SNR=1.7								
	0.2nm,0.6s								
TORD	**Torodi Ar. Bea**	**152.46**	**286**	PKPbc	PKPbc	03 55 42.1			-1.2
	0.3nm,0.7s,baz=90,slow=2.4,SNR=4.8								

HEL 25 04:08:47.3±1.2, 69°56N×30°59E, h0km, ML0.8, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
KEV	**Kevo**	**1.27**	**281**	PG	Pg	04 09 10.2		-1.3
	baz=92							
KEV				MSG		04 09 25.7		
	comp=Z,0.7nm,0.2s							
KEV				SG	Sg	04 09 26.8		-1.2
KMNF	**Kaamanen**	**1.34**	**254**	PN	Pg	04 09 12.3		-0.6
KMNF				SG	Sg	04 09 27.4		-2.8
RAJF	**Raja-Jooseppi**	**1.36**	**218**	PG	Pg	04 09 11.6		-1.7
RAJF				SG	Sg	04 09 29.5		-1.5
ARA0	**ARCESS Array S**	**1.79**	**272**	PG	Pn	04 09 18.6		-0.8
	baz=91							
TRO	**Tromso**	**4.08**	**277**	PG	Pb	04 10 02.1		+2.1

HEL 25 04:09:27.4±0.2, 67°71N×33°66E, h0km, ML1.4, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
LVZ	**Lovozero**	**0.42**	**63**	PG	Pg	04 09 35.0		-0.6
LVZ				SG	Sg	04 09 40.9		-0.1
VRF	**Varrio**	**1.54**	**273**	PG	Pn	04 09 55.9		-0.2
	baz=89							
VRF				SG	Sn	04 10 12.3		-4.5
VRF				MSG		04 10 13.5		
	comp=Z,3.3nm,0.2s							
RAJF	**Raja-Jooseppi**	**2.15**	**294**	PG	Pn	04 10 05.4		+1.0
RAJF				SG	Sn	04 10 32.9		+1.2
OLKF	**Oulanka, Finla**	**2.17**	**232**	PG	Pn	04 10 05.8		+1.0
OLKF				MSG		04 10 31.9		
	comp=Z,1.4nm,0.2s							
OLKF				SG	Sb	04 10 34.8		-0.2
KU6	**Riekki**	**2.25**	**223**	PB	Pn	04 10 06.5		+0.7
	baz=42							
KU6				MSG		04 10 34.0		
	comp=Z,1.0nm,0.2s							
KU6				SG	Sb	04 10 36.5		-0.7
MSF	**Maaselka**	**2.57**	**228**	PB	Pn	04 10 12.0		+1.9
SGF	**Sodankyl**	**2.75**	**268**	PG	Pb	04 10 16.2		-1.1
SGF				SG	Sb	04 10 51.2		-0.3
KMNF	**Kaamanen**	**2.85**	**304**	PB	Pb	04 10 18.1		-1.1
KMNF				SG	Sb	04 10 55.0		+0.5
KEV	**Kevo**	**3.18**	**313**	PN	Pn	04 10 19.8		+1.3
RNF	**Rovaniemi**	**3.18**	**253**	PN	Pn	04 10 18.3		-0.2
	baz=68							
RNF				SN	Sn	04 10 58.1		+1.0
RANF	**Ranua**	**3.20**	**241**	PB	Pb	04 10 22.4		-2.6
ARA0	**ARCESS Array S**	**3.50**	**305**	PB	Pn	04 10 26.5		+3.5
ARA0				SN	Sn	04 11 04.6		-0.5
KLF	**Kolari**	**3.76**	**267**	SG	Sg	04 11 25.5		-2.6
HEF	**Hetta**	**3.82**	**285**	PG	Pb	04 10 37.0		+1.5
HEF				SN	Sn	04 11 12.8		0.0
TOF	**Tornio**	**4.02**	**250**	SN	Pb	04 10 40.3		+1.3
TOF	**Tornio**	**4.02**	**250**	PG	Pb	04 10 40.3		+1.3
KTK1	**Kautokeino**	**4.08**	**294**	SG	Sg	04 11 34.1		-4.0
LANU	**Lannavaara**	**4.42**	**280**	SG	Sg	04 11 45.5		-3.8

*IDC **25** 04:10:27.0±1.8, 5°.46N×125°.69E, h72km±15km, mb3.6/12, mbtmp3.9/12, Error ellipse: s-maj=39.5km s-min=12.5km az=78.0*
*DJA **25** 04:10:29.9±0.5, 5°N±4°×12°6E±°, h101km±10km, M4.4/9, mb4.6/6, mB4.8/6, MLv4.5/9, Mw(mB)4.1/6*
*NEIC **25** 04:10:29.4±1.2, 5°.48N±0°.05×125°.6E±0°.2, h88km±8km, mb4.2/20, Error ellipse: s-maj=24.2km s-min=4.2km az=103.0*

ISC 25 04:10:29.5±0.5, 5°39N±0°.05×125°70E±0°.09, h100km, n52, σ1s37/51, mb4.1/22, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
DAV	**Davao City (W)**	**1.68**	**356**	Pn	**Pn**	**04 10 55.6**		**-2.4**
DAV	**Davao City (W)**	**1.68**	**356**	P	**Pn**	**04 10 54.8**		**-3.2**
	145nm,0.4s,baz=100,slow=15,SNR=1.2							
DAV				S	Sn	04 11 12.8		-6.9
	335nm,0.3s,baz=242,slow=17,SNR=3.7							
SGSI	**Sangihe**	**1.70**	**186**	P	**Pn**	**04 10 56.9**		**-1.4**
SGSI				S	**Sn**	**04 11 19.6**		**-0.6**
GTOI	**Gorontalo**	**5.43**	**210**	P	**Pn**	**04 11 47.5**		**-0.7**
	51nm,0.5s,614nm0.2nm							
GTOI				S	**Sn**	**04 12 45.5**		**-3.9**
	51nm,0.5s,614nm0.2nm							
MRSI	**Marisa**	**6.16**	**218**	P	**Pn**	**04 11 58.8**		**+0.8**
	124nm,0.6s,2µm0.5nm							
LBMI	**Labuha**	**6.25**	**163**	P	**Pn**	**04 11 58.5**		**-0.8**
	47nm,0.7s,1µm0.2nm							
TOLI2	**Tolitoli**	**6.49**	**229**	Pn	**Pn**	**04 12 01.6**		**-1.0**
LUWI	**Luwuk**	**7.03**	**205**	Pn	**Pn**	**04 12 11.5**		**+1.7**
LUWI	**Luwuk**	**7.03**	**205**	P	**Pn**	**04 12 11.5**		**+1.7**
	49nm,0.6s,1µm0.7nm							
SANI	**Sanana**	**7.39**	**178**	P	**Pn**	**04 12 12.1**		**-2.7**
	21nm,0.8s,715nm0.1nm							
MPSI	**Mapaga**	**7.67**	**229**	P	**Pn**	**04 12 19.2**		**+0.7**
	7.9nm,1.1s,0.1nm							
NLAI	**Namlea**	**8.68**	**171**	P	**Pn**	**04 12 29.9**		**-2.5**
TWG	**Pinlang**	**17.90**	**346**	P	**P**	**04 14 30.5**		**-0.9**
TWG				IAmb	IAmb	04 15 13.6		
	comp=Z,25nm,1.4s							
FITZ	**Fitzroy Crossi**	**23.34**	**180**	P	**P**	**04 15 29.7**		**+0.6**
COEN	**Coen**	**25.89**	**138**	P	**P**	**04 15 52.0**		**-0.3**
COEN				IAmb	IAmb	04 16 25.1		
	comp=Z,22nm,1.5s							
WB0	**Warramunga Arr**	**26.42**	**161**	P	**P**	**04 15 59.3**		**+2.3**
WB0				IAmb	IAmb	04 16 00.2		
	comp=Z,7.3nm,0.5s							
WRA	**Warramunga Arr**	**26.57**	**162**	P	**P**	**04 15 58.7**		**+0.3**
WRA	**Warramunga Arr**	**26.57**	**162**	P	**P**	**04 15 58.6**		**+0.3**
	comp=Z,1.8nm,0.6s,baz=342,slow=10,SNR=23							
	comp=Z,1.8nm,0.6s							
WB2	**Warramunga Arr**	**26.57**	**162**	P	**P**	**04 15 59.0**		**+0.6**
WB2				IAmb	IAmb	04 16 19.1		
	comp=Z,5.6nm,0.8s							
AS31	**Alice Springs**	**29.96**	**165**	P	**P**	**04 16 29.3**		**+0.7**
ASAR	**Alice Springs**	**29.97**	**165**	P	**P**	**04 16 29.4**		**+0.8**
	comp=Z,1.9nm,0.6s,baz=344,slow=7.3,SNR=24							
	comp=Z,1.9nm,0.6s							
KSRS	**Korea Array**	**31.98**	**3**	P	**P**	**04 16 46.6**		**+0.5**
	comp=Z,1.1nm,0.7s,baz=182,slow=8.9,SNR=4.2							
	comp=Z,1.1nm,0.7s							
MJAR	**Matsushiro Arr**	**33.06**	**19**	P	**P**	**04 16 55.1**		**-0.5**
	comp=Z,1.3nm,0.9s,baz=187,slow=8.8,SNR=3.1							
	comp=Z,1.3nm,0.9s							
MORW	**Morawa**	**35.49**	**195**	P	**P**	**04 17 17.0**		**+0.3**
FORT	**Forrest**	**36.03**	**177**	P	**P**	**04 17 22.3**		**+1.1**
NWAO	**Narrogin (SRO)**	**38.94**	**191**	P	**P**	**04 17 46.7**		**+0.8**
USRK	**Ussuriysk Ar.**	**39.05**	**7**	P	**P**	**04 17 46.0**		**-0.6**
USRK	**Ussuriysk Ar.**	**39.05**	**7**	P	**P**	**04 17 46.1**		**-0.4**
	comp=Z,1.7nm,0.6s,baz=186,slow=7.2,SNR=6.0							
	comp=Z,1.7nm,0.6s							
BBOO	**Buckleboo**	**39.24**	**166**	P	**P**	**04 17 49.6**		**+1.3**
STKA	**Stephens Creek**	**40.03**	**159**	P	**P**	**04 17 55.9**		**+1.0**
STKA	**Stephens Creek**	**40.03**	**159**	P	**P**	**04 17 55.9**		**+1.0**
	comp=Z,1.6nm,0.5s,baz=332,slow=8.1,SNR=4.0							
	comp=Z,1.6nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**42.51**	**67**	T	T	05 04 22.0		
	baz=268,slow=75							
H11N2	**WAKE ISLAND Hy**	**42.52**	**67**	T	T	05 04 23.9		
	baz=268							
H11N3	**WAKE ISLAND Hy**	**42.53**	**67**	T	T	05 04 17.8		
	baz=268,slow=75							
SONM	**Songino Array**	**45.41**	**342**	P	**P**	**04 18 38.1**		**-0.3**
	comp=Z,0.3nm,0.8s,baz=134,slow=6.2,SNR=2.1							
	comp=Z,0.3nm,0.8s							
PETK	**Petropavlovsk-**	**54.30**	**23**	P	**P**	**04 19 45.2**		**-0.2**
	comp=Z,0.9nm,0.5s,baz=198,slow=8.4,SNR=4.1							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**55.62**	**325**	P	**P**	**04 19 54.3**		**-0.8**
MKAR	**Makanchi Array**	**55.62**	**325**	P	**P**	**04 19 54.8**		**-0.3**
	comp=Z,0.4nm,0.5s,baz=125,slow=7.6,SNR=6.2							
	comp=Z,0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**59.80**	**327**	P	**P**	**04 20 24.2**		**0.0**
	comp=Z,1.3nm,0.2s,baz=126,slow=4.7,SNR=7.4							
	comp=Z,1.3nm,0.2s							
F17K	**Baldwin Pennin**	**78.34**	**23**	P	**P**	**04 22 20.1**		**+1.6**
F17K				IAmb	IAmb	04 22 25.8		
	comp=Z,5.8nm,1.4s							
C18K	**Utukok River**	**78.89**	**21**	P	**P**	**04 22 22.6**		**+1.0**
C18K				IAmb	IAmb	04 22 43.5		
	comp=Z,2.8nm,1.1s							
G19K	**Purcell Mounta**	**79.93**	**24**	P	**P**	**04 22 28.6**		**+1.4**
G19K				IAmb	IAmb	04 22 30.7		
	comp=Z,2.1nm,1.1s							
D19K	**Kuna River**	**79.96**	**21**	P	**P**	**04 22 28.4**		**+1.0**
H19K	**Roundabout Mou**	**80.09**	**24**	P	**P**	**04 22 29.4**		**+1.3**
H19K				IAmb	IAmb	04 22 51.2		
	comp=Z,2.9nm,1.1s							
IMAR	**Indian Mountai**	**81.26**	**24**	P	**P**	**04 22 35.2**		**+0.9**
CAST	**Castle Rocks**	**81.72**	**27**	P	**P**	**04 22 37.7**		**+0.9**
CAST				IAmb	IAmb	04 22 59.4		
	comp=Z,3.7nm,1.1s							
BPAW	**Bear Paw Mtn.**	**82.26**	**26**	P	**P**	**04 22 41.6**		**+1.9**
BPAW				IAmb	IAmb	04 22 42.8		
	comp=Z,8.4nm,1.3s							
ILAR	**Eielson Array**	**84.06**	**25**	P	**P**	**04 22 48.8**		**0.0**
	comp=Z,0.2nm,0.6s,baz=249,slow=5.1,SNR=8.4							
	comp=Z,0.2nm,0.6s							
KLU	**Klutina**	**84.53**	**29**	P	**P**	**04 22 52.6**		**+1.2**
BMAR	**Burnt Mountain**	**84.95**	**23**	P	**P**	**04 22 55.4**		**+2.0**
SPITS	**Spitsbergen Ar**	**88.67**	**349**	P	**P**	**04 23 11.7**		**+0.6**
	comp=Z,11nm,1.0s,baz=146,slow=3.7,SNR=1.4							
FINES	**FINESS Array B**	**89.90**	**332**	P	**P**	**04 23 17.0**		**-0.2**
	comp=Z,0.8nm,0.7s,baz=190,slow=9.7,SNR=4.8							
	comp=Z,0.8nm,0.7s							

*ISN **25** 04:32:42.9±0.8, 32°.58N×47°.59E, h7km±3km, ML3.1*
*TEH **25** 04:32:44.5, 32°.65N×47°.58E, h8km±43km, ML3.2*

ISC 25 04:32:46.3±1.1, 32°62N±0°.05×47°51E±0°.04, h10km, n22, σ0s98/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
IKFM	**Kafar-mosalman**	**0.95**	**17**	Pg	**Pg**	**04 33 02.4**		**-2.2**
IDOB	**Doab**	**1.29**	**25**	Pg	**Pn**	**04 33 09.5**		**-1.2**
IBDR	**Badra**	**1.42**	**291**	*e*Pg	**Pn**	**04 33 12.0**		**-0.1**
IBDR				*e*Sg	**Sg**	**04 33 32.0**		**+0.1**
IBDR				AML	AML	04 33 38.7		
	comp=N,268nm,0.5s							
IBDR				AML	AML	04 33 39.1		
	comp=E,299nm,0.9s							
RAFI	**Al-Rafai**	**1.48**	**233**	*e*Pn	**Pn**	**04 33 12.0**		**-1.0**
RAFI				*e*Sn	**Sb**	**04 33 34.0**		**+1.2**
ILBA	**Ilam Banvizeh**	**1.48**	**313**	Pg	**Pn**	**04 33 14.0**		**+0.9**
KCHF	**Cheshme Sefid,**	**1.70**	**347**	Pg	**Pn**	**04 33 16.8**		**+0.6**
IBZA	**Bozab**	**1.87**	**9**	Pn	**Pn**	**04 33 19.8**		**+1.1**
IGHG	**Ghaleghazi**	**1.88**	**336**	Pn	**Pn**	**04 33 20.2**		**+1.4**
IDHR	**Dehrash**	**2.28**	**336**	Pn	**Pn**	**04 33 25.5**		**+1.3**
HAGD	**Aghdareh**	**2.59**	**31**	Pn	**Pn**	**04 33 29.2**		**+0.8**
JHBN	**Jahan bin**	**2.70**	**97**	Pn	**Pn**	**04 33 30.9**		**+0.8**
BHD	**Baghdad**	**2.71**	**285**	*e*Pn	**Pn**	**04 33 30.0**		**+0.1**
BHD				*e*Sn	**Sn**	**04 34 04.0**		**+1.2**
IPIR	**Pirpir**	**2.85**	**88**	Pn	**Pn**	**04 33 33.0**		**+0.8**
ZNGN	**Zangian**	**2.87**	**99**	Pn	**Pn**	**04 33 33.0**		**+0.6**
IBRJ	**Brojen**	**3.25**	**102**	Pn	**Pn**	**04 33 38.1**		**+0.5**
QAMS	**Qamsar**	**3.45**	**70**	Pn	**Pn**	**04 33 41.2**		**+1.0**
IKLH	**Kolahrood**	**3.49**	**77**	Pn	**Pn**	**04 33 41.7**		**+0.8**
IKRK	**Kirkuk**	**3.83**	**317**	*e*Pn	**Pn**	**04 33 45.0**		**-0.3**
IKRK				*e*Sn	**Sn**	**04 34 31.0**		**+0.7**
IZEF	**Zefreh**	**4.07**	**85**	Pn	**Pn**	**04 33 49.6**		**+0.7**
KRSH	**Karshahi**	**4.10**	**70**	Pn	**Pn**	**04 33 49.8**		**+0.5**
IVRN	**Varamin**	**4.24**	**55**	Pn	**Pn**	**04 33 51.7**		**+0.7**
IDMV	**Damavand**	**4.78**	**51**	Pn	**Pn**	**04 33 58.4**		**-0.2**

*IDC **25** 04:35:18.2±8.2, 37°.55N×71°.84E, h150km±57km, mb3.3/4, mbtmp3.5/10, Error ellipse: s-maj=73.4km s-min=46.5km az=171.0*
*NNC **25** 04:35:20.2±3.8, 37°.80N×71°.56E, h182km±49km, mb2.6, mpv3.5, Error ellipse: s-maj=35.2km s-min=20.8km az=20.0*

ISC 25 04:35:20.4±1.9, 37°8N±0°.1×71°49E±0°.10, h150km, n15, σ1s71/21, mb3.6/4, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
KK31	**Karatay Array**	**5.34**	**352**	⇓P	**Pn**	**04 36 39.1**		**+0.8**
	4.6nm,0.3s,baz=178,slow=12,SNR=178							
KK31				⇑S	**Sn**	**04 37 41.3**		**+2.0**
	7.6nm,0.4s,baz=169,slow=20,SNR=21							
AAK	**Ala-Archa**	**5.35**	**25**	P	**Pn**	**04 36 38.5**		**-0.1**
	2.8nm,0.3s,baz=170,slow=5.3,SNR=9.1							
AAK				S	**Sn**	**04 37 41.3**		**+1.8**
	5.7nm,0.6s,baz=333,slow=20,SNR=16							
CHMS	**Chumysh**	**5.75**	**25**	⇓P	**Pn**	**04 36 43.3**		**-0.5**
	1.6nm,0.5s							
CHMS				⇑S	**Sn**	**04 37 49.9**		**+0.8**
	4.4nm,0.7s							
TKM2	**Tokmak 2**	**6.00**	**30**	⇑P	**Pn**	**04 36 45.7**		**-1.6**
	2.0nm,0.5s							
TKM2				⇑S	**Sn**	**04 37 56.8**		**+1.7**
	2.4nm,0.8s							
MKAR	**Makanchi Array**	**12.02**	**38**	P	**Pn**	**04 38 05.0**		**-1.8**
	0.2nm,0.8s,baz=225,slow=13,SNR=2.3							
KURBB	**Kurchatov Arra**	**13.77**	**19**	P	**Pn**	**04 38 28.1**		**-1.0**
	0.2nm,0.4s,baz=207,slow=11,SNR=1.1							
AB31	**Akbulak array**	**14.16**	**328**	⇓P	**Pn**	**04 38 34.2**		**+0.1**
	0.6nm,0.3s,baz=135,slow=12,SNR=42							
AB31				⇑S	**Sn**	**04 41 10.6**		**-0.4**
	1.1nm,0.6s,baz=155,slow=23,SNR=5.8							
BVAR	**Borovoye Array**	**15.24**	**357**	P	**Pn**	**04 38 48.2**		**+0.6**
	0.3nm,0.3s,baz=175,slow=12,SNR=4.1							
AKTO	**Aktyubinsk**	**15.87**	**327**	⇑P	**Pn**	**04 38 57.4**		**+2.0**
	0.4nm,0.4s							
AKTO				⇓S	**S**	**04 41 47.7**		**-4.8**
	0.6nm,0.7s							
AKTO	**Aktyubinsk**	**15.87**	**327**	P	**Pn**	**04 38 56.3**		**+0.9**
	0.8nm,0.3s,baz=145,slow=12,SNR=4.1							
ZALV	**Zalesovo Beam**	**18.57**	**25**	P	**P**	**04 39 24.0**		**-1.6**
	0.8nm,0.4s,baz=229,slow=11,SNR=6.2							
FINES	**FINESS Array B**	**36.63**	**325**	P	**P**	**04 42 12.9**		**+1.0**
	0.4nm,0.3s,baz=114,slow=9.2,SNR=6.7							
	0.4nm,0.3s							
ARCES	**ARCESS Array B**	**40.09**	**337**	P	**P**	**04 42 41.7**		**+0.9**
	1.1nm,0.7s,baz=116,slow=7.1,SNR=1.0							
	1.1nm,0.7s							
HFS	**Hagfors**	**42.29**	**321**	P	**P**	**04 42 59.7**		**+0.9**
	1.2nm,0.6s,baz=113,slow=9.7,SNR=6.5							
	1.2nm,0.6s							
NOA	**NOESAR Array B**	**43.58**	**322**	P	**P**	**04 43 09.6**		**+0.3**
	0.4nm,0.6s,baz=93,slow=8.9,SNR=1.4							
	0.4nm,0.6s							

IDC 25 04:39:57.7±0.9, 30°36S×179°62W, h246km±14km, mb3.1/3, mbtmp3.8/4, Error ellipse: s-maj=25.4km s-min=18.8km az=96.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
RAO	**Raoul Island**	**1.84**	**54**	P	Pn	04 40 38.6		+0.1
	367nm,0.3s,baz=137,slow=20,SNR=16							
RAO				S	S	04 41 10.9		+0.3
	137nm,0.3s,baz=253,slow=20,SNR=1.8							
URZ	**Urewera**	**8.33**	**198**	P	Pn	04 41 55.0		0.0
	2.7nm,0.3s,baz=14,slow=4.2,SNR=2.1							
URZ				S	S	04 43 28.1		-1.6
	9.3nm,0.3s,baz=18,slow=20,SNR=19							
ASAR	**Alice Springs**	**41.72**	**268**	P	P	04 47 21.0		-1.9
	0.2nm,0.4s,baz=108,slow=8.2,SNR=1.8							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**42.70**	**273**	P	P	04 47 32.2		+1.3
	0.5nm,0.4s,baz=112,slow=7.9,SNR=11							
	0.5nm,0.4s							
QSPA	**South Pole Qui**	**59.75**	**180**	P	P	04 49 36.7		+0.1
	1.2nm,0.5s,baz=18,slow=6.4,SNR=13							
	1.2nm,0.5s							
FINES	**FINESS Array B**	**144.62**	**339**	PKP	PKPab	04 59 01.3		-2.2
	0.9nm,0.8s,baz=46,slow=4.0,SNR=4.0							

*IDC **25** 04:42:51.7±10.0, 3°.25N×128°.12E, h131km±98km, mb3.5/9, mbtmp3.9/9, Error ellipse: s-maj=72.9km s-min=15.6km az=71.0*
*DJA **25** 04:42:53.4±1.2, 3°N±6°×12°8E±°, h24km±11km, M4.3/8, mb4.5/4, mB4.8/4, MLv4.2/8, Mw(mB)4.1/4*

ISC 25 04:42:53.5±0.8, 3°21N±0°.07×128°01E±0°.10, h150km, n15, σ0s87/18, mb3.9/9, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
TNTI	**Ternate**	**2.51**	**195**	P	**Pn**	**04 43 34.0**		**-0.8**
TNTI				S	**Sn**	**04 44 06.3**		**-0.3**
SGSI	**Sangihe**	**2.52**	**281**	P	**Pn**	**04 43 34.5**		**-0.4**
SGSI				S	**Sn**	**04 44 05.7**		**-1.1**
LBMI	**Labuha**	**3.86**	**188**	P	**Pn**	**04 43 52.5**		**+0.5**
KMSI	**Cibinong**	**4.80**	**237**	S	**Sn**	**04 45 00.6**		**+1.0**
SANI	**Sanana**	**5.61**	**201**	P	**Pn**	**04 44 13.8**		**-1.2**
	25nm,0.7s,2µm0.2nm							
GTOI	**Gorontalo**	**5.61**	**243**	P	**Pn**	**04 44 15.4**		**+0.3**
	59nm,0.6s,730nm0.3nm							
WRA	**Warramunga Arr**	**23.84**	**165**	P	**P**	**04 47 52.1**		**-0.9**
	2.7nm,0.7s,baz=345,slow=10,SNR=36							
	2.7nm,0.7s							
ASAR	**Alice Springs**	**27.33**	**168**	P	**P**	**04 48 26.3**		**+1.8**
	0.2nm,0.4s,baz=351,slow=8.4,SNR=2.0							
ASAR				PcP	**PcP**	**04 51 40.5**		**+0.2**
	0.4nm,0.5s,baz=355,slow=2.7,SNR=5.7							
	0.2nm,0.4s							
STKA	**Stephens Creek**	**37.21**	**161**	P	**P**	**04 49 50.1**		**-0.3**
	2.0nm,0.4s,baz=346,slow=8.3,SNR=6.1							
	2.0nm,0.4s							
KLR	**Kul'dur**	**45.96**	**3**	P	**P**	**04 51 01.3**		**-0.1**
	0.4nm,0.4s,baz=200,slow=7.6,SNR=3.9							
	0.4nm,0.4s							
SONM	**Songino Array**	**48.20**	**341**	P	**P**	**04 51 19.2**		**+0.2**
	0.7nm,0.7s,baz=142,slow=7.3,SNR=5.2							
	0.7nm,0.7s							
MKAR	**Makanchi Array**	**58.71**	**325**	P	**P**	**04 52 36.7**		**+1.2**
	1.3nm,0.5s,baz=119,slow=8.4,SNR=26							
	1.3nm,0.5s							
ZALV	**Zalesovo Beam**	**61.63**	**333**	P	**P**	**04 52 55.3**		**+0.1**
	0.4nm,0.5s,baz=111,slow=8.0,SNR=2.3							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**62.86**	**327**	P	**P**	**04 53 03.7**		**+0.2**
	2.1nm,0.7s,baz=125,slow=6.1,SNR=19							
	2.1nm,0.7s							
BVAR	**Borovoye Array**	**68.45**	**327**	P	**P**	**04 53 38.5**		**-0.8**
	1.9nm,0.7s,baz=101,slow=7.6,SNR=7.9							
	1.9nm,0.7s							

IDC 25 04:53:07.4±2.4, 6°61S×128°99E, h0km, mb3.1/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=162.4km s-min=33.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
WRA	**Warramunga Arr**	**14.23**	**159**	Pn	Pn	04 56 29.9		-0.5
	0.1nm,0.3s,baz=341,slow=13,SNR=1.8							
WRA				Sn	Sn	04 58 52.1		-17
	0.1nm,0.3s,baz=344,slow=26,SNR=9.7							
	0.2nm,0.7s							
ASAR	**Alice Springs**	**17.60**	**165**	P	Pn	04 57 14.7		+0.3
	0.2nm,0.3s,baz=341,slow=9.7,SNR=11							
	0.7nm,0.5s							
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	05 04 04.5		0.0
	0.1nm,0.5s,baz=127,slow=6.2,SNR=1.5							
	0.1nm,0.5s							

*SOME **25** 04:54:22.5, 42°.45N×78°.47E, h20km*
*NNC **25** 04:54:22.7±0.8, 42°.53N×78°.47E, h0km, mb3.5, mpv2.9, Error ellipse: s-maj=5.7km s-min=2.6km az=169.0*

ISC 25 04:54:24.5±1.3, 42°61N±0°.07×78°39E±0°.03, h10km, n26, σ1s38/47, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s		Res ISC
SATY	**Saty**	**0.45**	**1**	P	**Pb**	**04 54 33.4**		**-1.2**
	1.7nm,0.1s							
SATY				S	**Sb**	**04 54 40.6**		**-0.8**
	7.4nm,0.2s							
SATY	**Saty**	**0.45**	**1**	*e*P	**Pb**	**04 54 33.4**		**-1.2**
	1.7nm,0.1s							
SATY				*e*S	**Sb**	**04 54 41.4**		**0.0**
	7.4nm,0.2s							
UZB	**Uzunbulak**	**0.71**	**41**	P	**Pg**	**04 54 37.2**		**-1.0**
	1.7nm,0.1s							
UZB				S	**Sb**	**04 54 47.4**		**-1.5**
	4.1nm,0.1s							
UZB	**Uzunbulak**	**0.71**	**41**	*e*P	**Pg**	**04 54 36.9**		**-1.3**
	1.7nm,0.1s							
UZB				*e*S	**Sb**	**04 54 47.4**		**-1.5**
	4.1nm,0.1s							
KPKS	**Kokpek**	**0.88**	**14**	P	**Pb**	**04 54 41.1**		**-0.9**
	3.8nm,0.1s							
KPKS				S	**Sb**	**04 54 53.8**		**0.0**
	4.1nm,0.2s							
KPKS	**Kokpek**	**0.88**	**14**	*e*

DGS **Degeres** **2.02 289** *eP* **Pb** **04 55 01.6 +0.1**
0.6nm,0.1s
DGS *eS* **Sg** **04 55 29.7 +0.1**
2.3nm,0.2s
KRBS **Karabastau** **2.27 300** Pg **Pb** **04 55 05.4 -0.1**
1.0nm,0.3s
KRBS Lg Lg 04 55 36.2
2.7nm,0.3s
KRBS **Karabastau** **2.27 300** *eP* **Pb** **04 55 05.5 -0.1**
1.0nm,0.3s
KRBS *eS* **Sg** **04 55 36.2 -1.0**
2.7nm,0.3s

*PGC **25** 05:03:36.0±23.0, 50°.03N×130°.26W, h10km, MLSn3.2/11, Mw3.8/11, 215km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*
*IDC **25** 05:03:40.5±1.7, 50°.33N×129°.80W, h0km, mb3.7/3, mbtmp3.6/9, ML3.4/6, MS3.1/3, Error ellipse: s-maj=25.7km s-min=15.7km az=75.0*
ISC 25 05:03:41.0±1.2, 50°.29N±0°.08×129°.73W±0°.07, h10km, n34, σ1s70/30, mb3.8/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.08**	**71**	Pn	**Pg**	**05 04 00.0**	**-1.7**
PHC	**Port Hardy**	**1.52**	**73**	Pn	**Pn**	**05 04 06.5**	**-1.7**
PHC				Sn	**Sb**	**05 04 28.8**	**+0.1**
MAYB	**Maynard**	**1.64**	**85**	Pn	**Pn**	**05 04 07.5**	**-2.6**
WOSB	**Woss**	**2.03**	**93**	Pn	**Pn**	**05 04 13.5**	**-1.9**
BBB	**Bella Bella**	**2.15**	**28**	Pn	**Pn**	**05 04 15.8**	**-1.0**
	25nm,0.3s,baz=213,slow=6.0,SNR=321						
BBB				Sn	**Sn**	**05 04 43.6**	**+0.1**
	11nm,0.3s,baz=204,slow=9.3,SNR=6.8						
	66nm,0.3s						
BBB	**Bella Bella**	**2.15**	**28**	Pn	**Pn**	**05 04 15.7**	**-1.2**
NCSB	**Newcastle Ridg**	**2.36**	**86**	Pn	**Pn**	**05 04 18.7**	**-1.2**
CBB	**Campbell River**	**2.82**	**94**	Sn	**Sn**	**05 04 60.0**	**-0.1**
BUTB	**Butedale**	**2.88**	**15**	Pn	**Pn**	**05 04 25.8**	**-1.3**
OZB	**Mount Ozzard**	**3.06**	**114**	Sn	**Sn**	**05 05 04.4**	**-1.8**
GRIB	**Gribbell Islan**	**3.07**	**7**	Sn	**Pn**	**05 04 27.2**	**-2.3**
HWKB	**Hawksbury Isla**	**3.33**	**6**	Pn	**Pn**	**05 04 30.6**	**-2.6**
GRNB	**Grenville Isla**	**3.56**	**358**	Pn	**Pn**	**05 04 32.9**	**-3.4**
KITB	**Kitimat**	**3.85**	**10**	Pn	**Pn**	**05 04 38.8**	**-1.4**
RUBB	**Prince Rupert**	**4.05**	**356**	Pn	**Pn**	**05 04 40.1**	**-2.9**
FSJB	**Fort St James**	**5.34**	**36**	Pn	**Pn**	**05 05 01.3**	**+0.6**
T35M	**Bob Quinn**	**6.71**	**358**	Pn	**Pn**	**05 05 18.8**	**-0.7**
NBC4	**NorthernBC 4**	**7.69**	**42**	P	**Pn**	**05 05 34.4**	**+1.4**
BDMTA	**Bald Mountain**	**7.99**	**51**	P	**Pn**	**05 05 39.6**	**+2.4**
DLBC	**Dease Lake**	**8.16**	**359**	Pn	**Pn**	**05 05 39.7**	**+0.2**
	0.2nm,0.3s,baz=188,slow=14,SNR=6.9						
	2.2nm,0.7s						
NBC5	**NorthernBC 5**	**8.35**	**27**	P	**Pn**	**05 05 43.0**	**+0.9**
NEW	**Newport**	**8.49**	**99**	LR	LR	05 08 55.4	
	comp=Z,90nm,20.1s,baz=286,slow=37						
YBH	**Yreka Blue Hor**	**9.85**	**148**	LR	LR	05 09 33.2	
	comp=Z,75nm,18.5s,baz=342,slow=36						
YKA	**Yellowknife Ar**	**14.76**	**28**	Pn	**Pn**	**05 07 07.5**	**-2.1**
	0.1nm,0.3s,baz=218,slow=12,SNR=11						
	1.7nm,1.0s						
PDAR	**Pinedale Array**	**15.76**	**111**	Pn	**P**	**05 07 27.2**	**+0.1**
	0.1nm,0.3s,baz=306,slow=12,SNR=6.3						
	1.1nm,1.0s						
ILAR	**Eielson Array**	**17.09**	**335**	P	**Pn**	**05 07 40.6**	**+0.9**
	baz=140,slow=13,SNR=3.2						
	0.7nm,1.1s						
INK	**Inuvik**	**18.17**	**355**	P	**P**	**05 07 54.0**	**+0.7**
	baz=169,slow=10,SNR=2.0						
	0.9nm,1.0s						
ULM	**Lac du Bonnet**	**21.54**	**77**	P	**P**	**05 08 30.2**	**+0.1**
	4.2nm,0.8s,baz=296,slow=8.5,SNR=4.1						
	4.2nm,0.8s						
TXAR	**Lajitas Array**	**28.71**	**127**	P	**P**	**05 09 40.2**	**+1.8**
	0.5nm,0.8s,baz=316,slow=7.7,SNR=4.6						
	0.5nm,0.8s						
TKL	**Tuckaleechee C**	**36.06**	**96**	LR	LR	05 26 10.5	
	comp=Z,69nm,18.6s,baz=294,slow=37						
H11N2	**WAKE ISLAND Hy**	**58.11**	**263**	T	T	06 16 10.3	
	baz=42,slow=75,SNR=78						
H11N3	**WAKE ISLAND Hy**	**58.11**	**263**	T	T	06 16 07.2	
	baz=42,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy**	**58.13**	**263**	T	T	06 16 16.1	
	baz=42,slow=75,SNR=34						
ZALV	**Zalesovo Beam**	**72.15**	**339**	P	**P**	**05 15 06.3**	**+1.0**
	0.3nm,0.4s,baz=39,slow=9.3,SNR=2.3						
	0.3nm,0.4s						

ANF 25 05:09:11.2±0.3, 63°.47N×127°.85W, h30km, ML3.6/9, Error ellipse: s-maj=4.5km s-min=2.1km az=73.0, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGTN	**Hyland Airport**	**1.96**	**186**	P	Pn	05 09 42.8	+0.3
	baz=5.6						
M31M	**Drury Creek, Y**	**3.26**	**250**	P	Pn	05 10 00.6	+0.4
	baz=64,SNR=12						
M31M				S	Sn	05 10 38.7	+0.6
	baz=64						
N32M	**Quiet Lake**	**3.38**	**229**	P	Pn	05 10 02.0	+0.1
	baz=44,SNR=20						
WTLY	**Watson Lake, Y**	**3.40**	**188**	P	Pn	05 10 01.8	-0.5
	baz=7.2						
KOTAN	**Kotaneelee Air**	**3.81**	**150**	P	Pn	05 10 07.6	-0.2
	baz=334						
P33M	**Teslin, Yukon**	**4.03**	**218**	P	Pn	05 10 10.7	-0.2
	baz=34,SNR=122						
P33M				S	Sn	05 10 57.1	0.0
	baz=34						
M30M	**Minto, Yukon**	**4.17**	**262**	P	Pn	05 10 12.8	-0.1
	baz=74,SNR=9.4						
WHY	**Whitehorse**	**4.35**	**233**	P	Pn	05 10 14.7	-0.6
	baz=46,SNR=27						
WHY				S	Sn	05 11 06.5	+1.5
	baz=46						
R33M	**Jennings River**	**4.36**	**202**	P	Pn	05 10 15.7	+0.2
	baz=19						
R33M				S	Sn	05 11 05.0	-0.2
	baz=19						
G31M	**Satah River**	**4.39**	**325**	P	Pn	05 10 15.1	-0.6
	baz=139						
G31M				S	Sn	05 11 06.6	+0.7
	baz=139						
L29M	**L29M**	**4.66**	**270**	P	Pn	05 10 19.6	+0.1
	baz=81						
J29N	**Klondike Camp**	**4.68**	**287**	P	Pn	05 10 20.0	+0.2
	baz=98						
F31M	**Tsiigehtchic**	**4.68**	**331**	P	Pn	05 10 18.5	-1.2
	baz=146						
F31M				S	Sn	05 11 13.4	+0.5
	baz=146						
O30N	**Mendenhall**	**4.72**	**239**	P	Pn	05 10 20.0	-0.4
	baz=51,SNR=45						
O30N				S	Sn	05 11 14.4	+0.3
	baz=51						
EPYK	**Eagle Plains**	**4.76**	**312**	P	Pn	05 10 21.2	+0.3
	baz=124						
P32M	**Atlin**	**4.80**	**218**	P	Pn	05 10 20.6	-0.9
	baz=33,SNR=24						
P32M				S	Sn	05 11 16.5	+0.5
	baz=33						
M29M	**Somme Creek**	**4.96**	**263**	P	Pn	05 10 23.6	-0.1
	baz=73						
G30M	**tAoh Zraii Nji**	**4.98**	**319**	P	Pn	05 10 24.4	+0.5
	baz=131						
G30M				S	Sn	05 11 20.6	+0.3
	baz=131						
Q32M	**Nakina River**	**5.01**	**207**	P	Pn	05 10 24.3	-0.1
	baz=23						
Q32M				S	Sn	05 11 19.7	-1.6
	baz=23						
DLBC	**Dease Lake**	**5.16**	**193**	P	Pn	05 10 26.5	+0.1
	baz=11						
HYT	**Haines Junctio**	**5.25**	**244**	P	Pn	05 10 27.5	-0.1
	baz=55,SNR=29						
H29M	**Whitestone**	**5.27**	**306**	S	Sn	05 11 28.4	+1.0
	baz=117						
F30M	**Barrier River**	**5.30**	**325**	P	Pn	05 10 28.3	0.0
	baz=138						
F30M				S	Sn	05 11 28.5	+0.2
	baz=138						
INK	**Inuvik**	**5.38**	**337**	P	Pn	05 10 29.8	+0.5
	baz=152						
INK				S	Sn	05 11 29.1	-1.0
	baz=152						
SKAG	**Skagway**	**5.39**	**225**	P	Pn	05 10 29.0	-0.5
	baz=38,SNR=21						
SKAG				S	Sn	05 11 29.8	-0.6
	baz=38						
YUK4	**Talbot Arm**	**5.46**	**252**	P	Pn	05 10 29.3	-1.3
	baz=63,SNR=15						
P30M	**Million Dollar**	**5.47**	**236**	P	Pn	05 10 30.3	-0.4
	baz=48						
YUK6	**Outpost Mounta**	**5.54**	**247**	P	Pn	05 10 31.5	-0.2
	baz=58,SNR=12						
I28M	**Miner Creek**	**5.59**	**296**	S	Sn	05 11 37.2	+1.6
	baz=105						
S34M	**Telegraph Cree**	**5.81**	**198**	S	Sn	05 11 38.5	-2.2
	baz=15						
BVCY	**Beaver Creek**	**6.04**	**266**	P	Pn	05 10 37.8	-0.6
	baz=74						
BVCY				S	Sn	05 11 46.0	-0.3
	baz=74						
C36M	**Paulatuk**	**6.09**	**13**	P	Pn	05 10 39.9	+0.9
	baz=196						
C36M				S	Sn	05 11 45.8	-1.8
	baz=196						
E29M	**Blow River**	**6.42**	**325**	P	Pn	05 10 45.7	+2.1
	baz=136						
F28M	**Old Crow**	**6.49**	**315**	P	Pn	05 10 45.8	+1.2
	baz=124						
F26K	**Sheenjek River**	**7.96**	**309**	P	Pn	05 11 05.7	+1.0
	baz=114						
F25K	**Christian Rive**	**8.45**	**307**	P	Pn	05 11 10.3	-1.1
	baz=111						
A36M	**Sachs Harbour**	**8.61**	**5**	P	Pn	05 11 14.1	+0.6
	baz=188						
E25K	**Arctic Village**	**8.62**	**310**	P	Pn	05 11 14.7	+0.8
	baz=114						

*IDC **25** 05:21:27.0±0.8, 1°.97S×140°.94E, h0km, mb4.0/12, mbtmp4.0/14, ML4.3/2, MS3.1/8, Error ellipse: s-maj=46.8km s-min=14.7km az=83.0*
*NEIC **25** 05:21:29.5±1.0, 1°.98S±0°.04×140°.44E±0°.08, h10km±1km, mb4.3/15, Error ellipse: s-maj=14.2km s-min=6.9km az=289.0*
ISC 25 05:21:29.3±0.7, 2°.05S±0°.09×140°.48E±0°.09, h10km, n40, σ0s80/35, mb4.2/16, MS3.2/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**6.88**	**90**	Pn	**Pn**	**05 23 09.9**	**-0.4**
FAKI	**Fak Fak**	**8.27**	**264**	Pn	**Pn**	**05 23 28.6**	**-0.9**
PMG	**Port Moresby**	**9.88**	**138**	Pn	**Pn**	**05 23 51.2**	**-0.2**
SAUI	**Saumlaki**	**10.88**	**237**	Pn	**Pn**	**05 24 05.3**	**+0.1**
MTN	**Manton Dam**	**14.17**	**220**	Pn	**Pn**	**05 24 50.5**	**+0.3**
GUMO	**Guam**	**16.14**	**16**	LR	LR	05 31 05.6	
	comp=Z,44nm,19.5s,baz=108,slow=36						
DAV	**Davao City (W)**	**17.41**	**301**	LR	LR	05 33 47.3	
	comp=Z,24nm,18.2s,baz=132,slow=42						
SOEI	**Soe**	**17.84**	**244**	P	**Pn**	**05 25 36.5**	**-1.6**
SOEI				IAmb	IAmb	05 25 53.4	
	comp=Z,39nm,0.8s						
WB0	**Warramunga Arr**	**18.59**	**198**	P	**P**	**05 25 46.4**	**-0.4**
WB0				IAmb	IAmb	05 25 50.5	
	comp=Z,7.4nm,1.0s						
WRAB	**Tennant Creek**	**18.76**	**198**	P	**P**	**05 25 49.1**	**+0.4**
WRAB				IAmb	IAmb	05 26 13.2	
	comp=Z,19nm,0.7s						
WB2	**Warramunga Arr**	**18.77**	**198**	P	**P**	**05 25 49.2**	**+0.4**
WB2				IAmb	IAmb	05 25 50.6	
	comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**18.77**	**198**	P	**P**	**05 25 49.2**	**+0.4**
WRA	**Warramunga Arr**	**18.77**	**198**	P	**P**	**05 25 49.6**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=23,slow=12,SNR=47						
	comp=Z,6.9nm,0.6s						
CTA	**Charters Tower**	**18.80**	**163**	P	**P**	**05 25 49.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=354,slow=12,SNR=2.3						
CTA				LR	LR	05 32 13.9	
	comp=Z,71nm,19.9s,baz=79,slow=34						
	comp=Z,2.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.60**	**221**	P	**P**	**05 26 20.0**	**+0.4**
AS31	**Alice Springs**	**22.41**	**196**	P	**P**	**05 26 28.9**	**+0.6**
AS31				IAmb	IAmb	05 26 30.6	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**22.41**	**196**	P	**P**	**05 26 28.7**	**+0.4**
ASAR	**Alice Springs**	**22.41**	**196**	P	**P**	**05 26 29.1**	**+0.8**
	comp=Z,6.0nm,0.7s,baz=28,slow=11,SNR=90						
ASAR				LR	LR	05 35 47.2	
	comp=Z,78nm,18.4s,baz=16,slow=38						
	comp=Z,6.0nm,0.7s						
EIDS	**Eidsvold**	**25.34**	**157**	P	**P**	**05 26 56.9**	**+0.4**
STKA	**Stephens Creek**	**29.69**	**178**	P	**P**	**05 27 35.8**	**+0.3**
STKA	**Stephens Creek**	**29.69**	**178**	P	**P**	**05 27 35.1**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=351,slow=11,SNR=6.4						
STKA				LR	LR	05 40 13.6	
	comp=Z,57nm,19.9s,baz=21,slow=38						
	comp=Z,4.0nm,0.8s						
ARMA	**Armidale**	**30.13**	**161**	P	**P**	**05 27 39.6**	**+0.1**
ARMA				IAmb	IAmb	05 27 57.7	
	comp=Z,6.4nm,1.1s						
BBOO	**Buckleboo**	**30.88**	**187**	P	**P**	**05 27 46.0**	**0.0**
FORT	**Forrest**	**30.90**	**201**	P	**P**	**05 27 45.4**	**-0.8**
DZM	**Mont Dzumac**	**32.14**	**130**	P	**P**	**05 27 57.0**	**-0.4**
DZM				IAmb	IAmb	05 28 13.4	
	comp=Z,6.9nm,1.0s						
JHJ	**Hachijo jima 2**	**34.98**	**359**	LR	LR	05 39 33.4	
	comp=Z,50nm,19.5s,baz=94,slow=31						
MORW	**Morawa**	**35.55**	**219**	P	**P**	**05 28 26.2**	**-0.6**
MORW				IAmb	IAmb	05 28 43.5	
	comp=Z,6.6nm,1.1s						
MJAR	**Matsushiro Arr**	**38.45**	**357**	P	P	05 28 49.3	-2.1
	comp=Z,0.8nm,0.7s,baz=167,slow=8.5,SNR=4.0						
	comp=Z,0.8nm,0.7s						
KSRS	**Korea Array**	**40.99**	**345**	P	**P**	**05 29 11.2**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=161,slow=10,SNR=2.6						
KSRS				LR	LR	05 43 55.6	
	comp=Z,12nm,21.1s,baz=200,slow=33						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**70.36**	**322**	P	**P**	**05 32 44.7**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=109,slow=6.6,SNR=6.3						
	comp=Z,0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**72.27**	**329**	P	**P**	**05 32 55.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=123,slow=7.1,SNR=1.9						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**74.22**	**324**	P	**P**	**05 33 07.3**	**+0.9**
	comp=Z,0.6nm,0.2s,baz=106,slow=5.9,SNR=1.4						
	comp=Z,0.6nm,0.2s						
VNDA	**Vanda**	**76.28**	**175**	P	**P**	**05 33 18.5**	**+0.7**
VNDA				IAmb	IAmb	05 33 19.4	
	comp=Z,4.1nm,0.8s						
VNDA	**Vanda**	**76.28**	**175**	P	**P**	**05 33 17.1**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=338,slow=6.5,SNR=11						
	comp=Z,3.3nm,0.7s						
BVAR	**Borovoye Array**	**79.79**	**325**	P	**P**	**05 33 39.1**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=48,slow=2.1,SNR=4.0						
	comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array**	**84.50**	**24**	P	P	05 33 59.5	-2.7
	comp=Z,0.3nm,0.7s,baz=273,slow=5.0,SNR=4.3						
ILAR				LR	LR	06 10 33.8	
	comp=Z,22nm,19.9s,baz=202,slow=35						
	comp=Z,0.3nm,0.7s						
GEYT	**Alibeck**	**85.22**	**308**	P	**P**	**05 34 07.5**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=79,slow=3.1,SNR=1.9						
	comp=Z,0.8nm,0.3s						
QSPA	**South Pole Qui**	**87.89**	**180**	P	**P**	**05 34 19.1**	**0.0**
QSPA	**South Pole Qui**	**87.89**	**180**	P	**P**	**05 34 17.9**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=358,slow=2.3,SNR=7.2						
	comp=Z,1.8nm,0.8s						
CPUP	**Villa Florida**	**146.95**	**150**	PKPbc	**PKPdf**	**05 41 12.8**	**+1.8**
	comp=Z,2.9nm,1.0s,baz=207,slow=5.0,SNR=5.7						

IDC 25 05:38:14.1±9.3, 45°.37N×153°.88E, h0km, mb3.6/2, mbtmp3.6/3, ML1.8/1, MS2.4/2, Error ellipse: s-maj=201.8km s-min=42.6km az=132.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**8.14**	**16**	Pn	Pn	05 40 15.4	+2.0
	0.1nm,0.3s,baz=177,slow=12,SNR=0.9						
PETK				Sn	Sn	05 41 45.4	-0.7
	0.1nm,0.3s,baz=129,slow=25,SNR=1.5						
	2.7nm,1.0s						
KLR	**Kul'dur**	**15.49**	**292**	LR	LR	05 49 40.8	
	comp=Z,22nm,18.6s,baz=254,slow=44						
JHJ	**Hachijo jima 2**	**16.37**	**227**	LR	LR	05 49 43.0	
	comp=Z,8.6nm,18.9s,baz=114,slow=42						
MKAR	**Makanchi Array**	**48.06**	**299**	P	P	05 46 55.6	+0.5
	0.2nm,0.4s,baz=69,slow=9.0,SNR=3.7						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**65.52**	**335**	P	P	05 48 58.1	-0.6
	1.5nm,0.9s,baz=24,slow=7.6,SNR=7.6						
	1.5nm,0.9s						

IDC 25 05:49:10.0±11.0, 20°.50S×178°.58W, h572km±134km, mb2.9/4, mbtmp3.8/4, Error ellipse: s-maj=57.1km s-min=40.2km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.99**	**257**	P	P	05 56 27.8	0.0
	1.1nm,0.5s,baz=95,slow=7.6,SNR=29						
ASAR				PcP	PcP	05 58 00.0	-0.7
	0.2nm,0.9s,baz=116,slow=3.4,SNR=4.5						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**44.06**	**262**	P	P	05 56 28.1	-0.2
	0.8nm,0.4s,baz=97,slow=7.7,SNR=24						
	0.8nm,0.4s						
QSPA	**South Pole Qui**	**69.57**	**180**	P	P	05 59 22.1	0.0
	1.1nm,0.9s,baz=56,slow=3.6,SNR=1.8						
	1.1nm,0.9s						
ILAR	**Eielson Array**	**88.44**	**13**	P	P	06 01 01.4	0.0
	0.2nm,0.5s,baz=216,slow=4.8,SNR=4.7						
	0.2nm,0.5s						

*DJA **25** 06:00:23.7±0.4, 3°.5S±5°×107°.2E±°, h176km±5km, M4.0/11, mb4.0/3, mB4.3/1, MLv4.0/11, Mw(mB)3.4/1*
*IDC **25** 06:00:26.0±17.0, 2°.67S×102°.21E, h175km±154km, mb2.8/5, mbtmp3.3/5, Error ellipse: s-maj=153.3km s-min=19.9km az=58.0*
ISC 25 06:00:24.1±0.8, 2°.6S±0°.1×102°.33E±0°.09, h150km, n13, σ1s58/17, mb3.1/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.02**	**301**	P	**Pn**	**06 00 52.2**	**+3.1**
MNAI	**Manna**	**1.84**	**160**	P	**Pn**	**06 00 59.2**	**+1.8**
MNAI				S	Sn	06 01 24.7	+1.7
PPSI	**Pulau Pagai**	**2.33**	**266**	P	**Pn**	**06 01 04.9**	**+1.8**
PPSI				S	Sn	06 01 32.6	-0.5
SISI	**Saibi**	**3.49**	**292**	P	**Pn**	**06 01 18.9**	**+1.2**
SISI				S	Sn	06 01 58.0	-1.2
KASI	**Kota Agung**	**3.60**	**143**	P	**Pn**	**06 01 19.3**	**+0.1**
PBSI	**Pulau Batu**	**4.79**	**302**	P	**Pn**	**06 01 35.7**	**+1.0**
GSI	**Gunungsitoli**	**6.15**	**309**	P	**Pn**	**06 01 52.2**	**-0.6**
	73nm,0.6s,0.4nm						
CNJI	**Cibinong**	**6.67**	**134**	P	**Pn**	**06 01 57.2**	**-2.6**
	8.1nm,1.4s,449nm0.1nm						
WRA	**Warramunga Arr**	**35.68**	**121**	P	**P**	**06 07 07.9**	**-0.3**
	0.2nm,0.8s,baz=298,slow=12,SNR=1.9						
WRA				PcP	**PcP**	**06 09 32.2**	**-1.3**
	0.2nm,0.4s,baz=315,slow=2.0,SNR=2.2						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**37.01**	**127**	P	**P**	**06 07 19.9**	**+0.4**
	0.3nm,0.5s,baz=298,slow=7.8,SNR=7.0						
	0.3nm,0.5s						
SONM	**Songino Array**	**50.37**	**4**	P	**P**	**06 09 06.7**	**+0.7**
	0.2nm,0.5s,baz=188,slow=8.7,SNR=1.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**52.28**	**343**	P	**P**	**06 09 19.2**	**-0.9**
	0.1nm,0.3s,baz=157,slow=9.2,SNR=5.0						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**58.23**	**348**	P	**P**	**06 10 01.3**	**-1.2**
	0.3nm,0.3s,baz=165,slow=6.0,SNR=1.9						
	0.3nm,0.3s						

*NOU **25** 06:03:19.9, 32°.81S×179°.36W, h300km, mb4.5/28, South of Kermadec Islands*
*IDC **25** 06:03:21.8±1.0, 32°.55S×179°.71E, h268km±9km, mb4.1/6, mbtmp4.8/10, Error ellipse: s-maj=14.4km s-min=11.0km az=106.0*
*NEIC **25** 06:03:22.4±1.2, 32°.74S±0°.07×179°.9E±0°.1, h275km±10km, mb4.2/20, Error ellipse: s-maj=15.6km s-min=10.3km az=75.0*
*WEL **25** 06:03:24.0±0.9, 33°.5S±7°×17°.9W±1°.8, h249km±14km, M4.7/15, mB5.2/12, ML5.0/7, MLv5.1/15, Mw(mB)4.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=110.3, confirmed*
ISC 25 06:03:21.3±0.5, 32°.64S±0°.05×179°.62E±0°.07, h250km, n117, σ2s06/122, mb4.3/18, 4C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.97**	**33**	P	**Pn**	**06 04 25.1**	**+0.2**
GLKZ				S	**S**	**06 05 14.5**	**-0.7**
RAO	**Raoul Island**	**3.98**	**33**	Pn	**Pn**	**06 04 25.8**	**+0.8**
RAO				Sn	**S**	**06 05 18.9**	**+3.4**
RAO	**Raoul Island**	**3.98**	**33**	P	**Pn**	**06 04 25.3**	**+0.4**
	360nm,0.2s,baz=210,slow=20,SNR=9.6						
RAO				S	**S**	**06 05 15.8**	**+0.4**
	338nm,0.3s,baz=233,slow=20,SNR=2.3						
RIZ	**Raoul Island**	**3.98**	**33**	P	Pn	**06 04 27.2**	**+2.2**
RIZ				S	**S**	**06 05 18.9**	**+3.4**
GRZ	**Great Barrier**	**4.98**	**223**	P	Pn	06 04 44.7	+7.9
MXZ	**Matakaoa Point**	**5.03**	**192**		**Pn**	**06 04 38.6**	**+1.3**
MXZ	**Matakaoa Point**	**5.03**	**192**	P	**Pn**	**06 04 40.0**	**+2.7**
MXZ	**Matakaoa Point**	**5.03**	**192**	P	**Pn**	**06 04 40.1**	**+2.7**
MXZ				S	**S**	**06 05 40.5**	**+2.4**
WMGZ	**Waiomatatini S**	**5.26**	**190**	P	**Pn**	**06 04 43.6**	**+3.3**
WMGZ				S	**S**	**06 05 45.9**	**+2.7**
WIZ	**White Island**	**5.27**	**202**	P	Pn	06 04 47.3	+7.0
HAZ	**Te Kaha**	**5.32**	**196**	P	**Pn**	**06 04 43.2**	**+2.3**
HAZ				S	**S**	**06 05 49.1**	**+4.5**
PKGZ	**Pakihiroa**	**5.39**	**193**	P	**Pn**	**06 04 44.5**	**+2.6**
PKGZ				S	**S**	**06 05 48.4**	**+2.2**
PUZ	**Puketiti**	**5.54**	**191**	P	**Pn**	**06 04 45.9**	**+2.3**
PUZ				S	**S**	**06 05 49.7**	**+0.3**
RUGZ	**Raukumara Rang**	**5.55**	**196**	P	**Pn**	**06 04 46.8**	**+2.9**
RUGZ				S	**S**	**06 05 51.6**	**+1.8**
WIAZ	**Waiheke Island**	**5.55**	**220**	P	Pn	06 04 52.0	+8.2
OUZ	**Omahuta**	**5.63**	**241**	P	Pn	06 04 52.1	+7.3
TWGZ	**Tauwhareparae**	**5.69**	**193**	P	**Pn**	**06 04 48.0**	**+2.4**
TWGZ				S	**S**	**06 05 56.0**	**+3.2**
MKAZ	**Moumakai**	**5.77**	**218**	P	Pn	06 04 54.7	+8.2
MWZ	**Matawai**	**5.94**	**196**	P	**Pn**	**06 04 50.5**	**+1.9**
CNGZ	**Carnagh Statio**	**5.95**	**191**	P	**Pn**	**06 04 50.9**	**+2.2**
CNGZ				S	**S**	**06 05 55.7**	**-2.8

RPZ				S	S	06 08 30.1	-10		
	22nm,0.4s,baz=126,slow=24,SNR=9.3								
ODZ	**Otahua Downs**	**14.21 207**		P	**Pn**	**06 06 32.6**	**+0.7**		
ODZ	**Otahua Downs**	**14.21 207**		P	**Pn**	**06 06 30.6**	**-1.3**		
PINNC	**Pines Island,**	**14.69 310**		P	**Pn**	**06 06 39.0**	**+1.1**		
MARNC	**Mare, Loyalty**	**15.15 314**		P	**Pn**	**06 06 44.3**	**+0.9**		
OUENC	**Ouen Island, N**	**15.22 309**		P	**Pn**	**06 06 45.7**	**+1.5**		
OUENC	**Ouen Island, N**	**15.22 309**		P	**Pn**	**06 06 49.4**	**+5.1**		
YATNC	**Mamie plateau,**	**15.44 310**		P	**Pn**	**06 06 50.8**	**+3.9**		
DZM	**Mont Dzumac**	**15.73 309**		P	**Pn**	**06 06 51.7**	**+1.3**		
DZM	**Mont Dzumac**	**15.73 309**		P	**Pn**	**06 06 53.2**	**+2.8**		
DZM	**Mont Dzumac**	**15.73 309**		P	**P**	**06 06 49.5**	**+0.2**		
	12nm,0.9s,baz=140,slow=20,SNR=11								
SYZ	**Scrubby Hill**	**16.04 207**		P	**P**	**06 06 50.9**	**-1.5**		
ARMA	**Armidale**	**23.94 268**		P	**P**	**06 08 14.7**	**+1.6**		
ARMA				IAmb	IAmb	06 08 17.1			
	comp=Z,7.3nm,0.9s								
MCQ	**Macquarie Isla**	**26.30 208**		P	**P**	**06 08 31.5**	**-2.4**		
CMSA	**Cobar Meteorol**	**28.70 263**		P	**P**	**06 08 57.6**	**+2.1**		
STKA	**Stephens Creek**	**32.05 261**		P	**P**	**06 09 25.2**	**+0.2**		
STKA	**Stephens Creek**	**32.05 261**		P	**P**	**06 09 24.8**	**-0.2**		
	comp=Z,2.8nm,0.8s,baz=100,slow=12,SNR=5.1								
	comp=Z,2.8nm,0.8s								
CTA	**Charters Tower**	**32.27 284**		P	**P**	**06 09 28.7**	**+1.9**		
CTAO	**Charters Tower**	**32.27 284**		P	**P**	**06 09 27.2**	**+0.4**		
CTAO				IAmb	IAmb	06 09 29.6			
	comp=Z,6.7nm,0.7s								
CTAO	**Charters Tower**	**32.27 284**		P	**P**	**06 09 28.8**	**+1.9**		
HTT	**Hallett**	**33.98 257**		P	**P**	**06 09 42.9**	**+1.3**		
LCRK	**Leigh Creek**	**35.20 262**		P	**P**	**06 09 53.4**	**+1.4**		
BBOO	**Buckleboo**	**36.45 258**		P	**P**	**06 10 02.2**	**-0.4**		
BBOO				IAmb	IAmb	06 10 03.8			
	comp=Z,13nm,1.1s								
BBOO	**Buckleboo**	**36.45 258**		P	**P**	**06 10 02.5**	**-0.1**		
COEN	**Coen**	**38.04 291**		P	**P**	**06 10 16.1**	**+0.1**		
COEN				IAmb	IAmb	06 10 41.0			
	comp=Z,7.3nm,1.1s								
OOD	**Oodnadatta**	**38.07 265**		P	**P**	**06 10 18.0**	**+1.8**		
MULG	**Mulgathing**	**38.71 261**		P	**P**	**06 10 22.1**	**+0.6**		
AS01	**Alice Springs**	**40.99 271**		P	**P**	**06 10 41.1**	**+0.8**		
AS31	**Alice Springs**	**41.03 271**		P	**P**	**06 10 40.7**	**0.0**		
ASAR	**Alice Springs**	**41.03 271**		P	**P**	**06 10 40.8**	**+0.2**		
	comp=Z,4.9nm,0.7s,baz=109,slow=7.7,SNR=41								
ASAR				S	**S**	**06 16 28.8**	**-5.3**		
	comp=Z,0.5nm,0.8s,baz=118,slow=16,SNR=4.6								
	comp=Z,4.9nm,0.7s								
WB2	**Warramunga Arr**	**42.22 276**		P	**P**	**06 10 50.3**	**+0.1**		
WB2				IAmb	IAmb	06 10 50.8			
	comp=Z,6.2nm,0.6s								
WRA	**Warramunga Arr**	**42.23 276**		P	**P**	**06 10 50.1**	**-0.1**		
WRA	**Warramunga Arr**	**42.23 276**		P	**P**	**06 10 50.2**	**-0.1**		
	comp=Z,6.9nm,0.5s,baz=114,slow=8.4,SNR=96								
WRA				S	**S**	**06 16 45.9**	**-5.7**		
	comp=Z,0.4nm,0.8s,baz=116,slow=17,SNR=3.3								
	comp=Z,6.9nm,0.5s								
WB0	**Warramunga Arr**	**42.26 276**		P	**P**	**06 10 50.6**	**0.0**		
WB0				IAmb	IAmb	06 10 51.1			
	comp=Z,8.3nm,0.7s								
FORT	**Forrest**	**43.55 258**		P	**P**	**06 11 00.5**	**-0.3**		
FORT				IAmb	IAmb	06 11 03.1			
	comp=Z,16nm,0.7s								
FORT	**Forrest**	**43.55 258**		P	**P**	**06 11 01.2**	**+0.4**		
WRKA	**Warakurna**	**45.24 266**		P	**P**	**06 11 14.6**	**+0.4**		
VNDA	**Vanda**	**45.68 185**		P	P	06 11 12.9	-4.0		
VNDA				IAmb	IAmb	06 11 34.6			
	comp=Z,5.5nm,1.1s								
MTN	**Manton Dam**	**48.40 282**		P	**P**	**06 11 38.3**	**-0.4**		
MTN				IAmb	IAmb	06 11 39.2			
	comp=Z,6.7nm,1.1s								
FITZ	**Fitzroy Crossi**	**50.38 273**		P	**P**	**06 11 53.6**	**0.0**		
FAKI	**Fak Fak**	**53.29 294**		P	**P**	**06 12 13.2**	**-1.8**		
FAKI				IAmb	IAmb	06 12 14.8			
	comp=Z,12nm,0.8s								
QSPA	**South Pole Qui**	**57.48 180**		P	**P**	**06 12 44.2**	**0.0**		
QSPA	**South Pole Qui**	**57.48 180**		P	**P**	**06 12 44.7**	**+0.5**		
	comp=Z,26nm,0.8s,baz=38,slow=3.9,SNR=103								
	comp=Z,26nm,0.8s								
BELA	**Belgrano 2**	**67.84 173**		P	**P**	**06 13 51.5**	**-0.6**		
TROLL	**Troll, Antarti**	**75.62 181**	⇑	P	**P**	**06 14 37.8**	**-0.8**		
	comp=Z,161nm,0.3s								
SNAA	**Sanae**	**75.97 179**	⇑	P	**P**	**06 14 39.5**	**-0.9**		
	comp=Z,109nm,0.3s								
SNAA	**Sanae**	**75.97 179**		P	**P**	**06 14 39.2**	**-1.1**		
	comp=Z,6.5nm,0.5s,baz=222,slow=3.2,SNR=37								
	comp=Z,6.5nm,0.5s								
VNA3	**Neumayer Olymp**	**76.20 177**	⇑	P	**P**	**06 14 40.8**	**-0.9**		
	comp=Z,60nm,0.7s								
VNA2	**Neumayer--Watz**	**76.61 178**	⇑	P	**P**	**06 14 43.4**	**-0.6**		
	comp=Z,41nm,0.7s,baz=184,slow=5.3								
H03S2	**Juan Fernandez**	**80.91 124**		T	T	07 44 38.7			
	baz=235,slow=74,SNR=5.4								
H03S1	**Juan Fernandez**	**80.92 124**		T	T	07 44 45.0			
	baz=235,slow=74,SNR=4.7								
H03S3	**Juan Fernandez**	**80.92 124**		T	T	07 44 45.9			
	baz=235,slow=74,SNR=6.2								
H03N3	**Juan Fernandez**	**81.11 124**		T	T	07 44 48.2			
	baz=240,slow=72,SNR=13								
H03N2	**Juan Fernandez**	**81.12 124**		T	T	07 44 48.6			
	baz=240,slow=72,SNR=9.5								
H03N1	**Juan Fernandez**	**81.13 124**		T	T	07 44 49.4			
	baz=240,slow=72,SNR=23								
PLCA	**Paso Flores**	**82.45 134**		P	**P**	**06 15 15.8**	**-0.1**		
	comp=Z,2.9nm,0.5s,baz=239,slow=5.3,SNR=32								
	comp=Z,2.9nm,0.5s								
ARCES	**ARCESS Array B**	**140.30 346**		PKhKP	PKPpre	06 22 11.1			
	baz=46,slow=2.6,SNR=1.1								
ARCES				PKP	**PKPdf**	**06 22 17.5**	**-1.9**		
	comp=Z,2.3nm,1.0s,baz=90,slow=0.9,SNR=1.1								
FINES	**FINESS Array B**	**146.48 337**		PKPbc	**PKPdf**	**06 22 29.1**	**-1.3**		
	comp=Z,1.8nm,0.5s,baz=38,slow=4.7,SNR=24								
NB2	**NORSAR Subarra**	**150.59 349**		PKP	**PKPbc**	**06 22 40.9**	**-2.0**		
	comp=Z,0.5nm,0.5s,baz=15,slow=2.8								
NOA	**NORSAR Array B**	**150.59 349**		PKPbc	**PKPbc**	**06 22 40.7**	**-2.1**		
	comp=Z,0.7nm,0.9s,baz=315,slow=12,SNR=3.8								
HFS	**Hagfors**	**150.96 345**		PKPbc	**PKPdf**	**06 22 40.6**	**+2.9**		
	comp=Z,1.2nm,0.4s,baz=126,slow=2.5,SNR=12								
AKASG	**Malin Array Be**	**151.73 318**		PKPbc	**PKPbc**	**06 22 43.6**	**-2.1**		
	comp=Z,0.6nm,0.5s,baz=45,slow=0.3,SNR=1.5								
BRTR	**Keskin Array B**	**151.77 294**		PKPbc	**PKPdf**	**06 22 42.3**	**+2.5**		
	comp=Z,0.6nm,0.6s,baz=68,slow=2.5,SNR=2.2								
DBIC	**Dimbokro**	**153.83 170**		PKPbc	**PKPdf**	**06 22 47.9**	**+4.5**		
	comp=Z,2.5nm,0.5s,baz=196,slow=2.0,SNR=6.6								
DBIC				PKPab	**PKPab**	**06 23 04.5**	**-0.9**		
	comp=Z,4.7nm,0.7s,baz=194,slow=5.5,SNR=6.0								
TORD	**Torodi Ar. Bea**	**160.51 186**		PKPab	**PKPab**	**06 23 32.2**	**-1.9**		
	comp=Z,2.4nm,0.6s,baz=179,slow=2.5,SNR=21								

*SJA **25** 06:19:01.3±1.7,29.°11S×72.°62W,h10km,ML3.9,MW4.0*
*NEIC **25** 06:19:01.9±1.4,29.°10S±0.°05×72.°88W±0.°08,h10km±1km, mb4.3/8,Error ellipse: s-maj=12.4km s-min=7.7km az=298.0*
*IDC **25** 06:19:03.6±0.6,29.°20S×72.°52W,h0km,mb4.2/11, mbtmp4.1/15,ML3.9/4,MS3.0/5,Error ellipse: s-maj=23.5km s-min=16.7km az=92.0*
*GUC **25** 06:19:07.3±0.6,29.°24S×72.°49W,h38km±3km,ML3.6*
ISC 25 06:19:02.8±1.1,**29.°17S**±0.°03×**72.°54W**±0.°04,**h3**km±6km, **n105,σ1§82/132,mb4.5/14,4C-10D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO05	**La Serena**	**1.36**	**123**			**Pb**	**06 19 29.6**	**+0.7**
CO05				Sn		**Sb**	**06 19 46.8**	**+0.1**
CO05	**La Serena**	**1.36**	**123**	⇑*iP*		**Pg**	**06 19 29.8**	**+0.9**
CO05				*i* S		**Sb**	**06 19 46.9**	**+0.3**
CO05				IAML			06 19 49.5	
	comp=E,3µm,0.5s							
AC04	**Llanos de Chal**	**1.61**	**54**			**Pn**	**06 19 31.7**	**-0.5**
AC04				Sn		**Sn**	**06 19 51.7**	**-1.6**
AC04	**Llanos de Chal**	**1.61**	**54**	*eP*		**Pn**	**06 19 31.9**	**-0.2**
AC04				*eS*		**Sb**	**06 19 52.1**	**-1.8**
AC04	**Llanos de Chal**	**1.61**	**54**	⇓*iP*		**Pn**	**06 19 31.9**	**-0.2**
AC04				*i* S		**Sn**	**06 19 51.8**	**-1.6**
LCO	**Las Campanas**	**1.62**	**85**	Pn		**Pg**	**06 19 34.3**	**+0.4**
LCO				Sn		**Sg**	**06 19 54.8**	**-0.2**
LCO	**Las Campanas**	**1.62**	**85**	*eP*		**Pg**	**06 19 34.0**	**+0.1**
LCO				*eS*		**Sg**	**06 19 55.9**	**+0.9**
LCO	**Las Campanas**	**1.62**	**85**	⇑*eP*		**Pg**	**06 19 34.1**	**+0.2**
LCO				*i* S		**Sg**	**06 19 54.6**	**-0.3**
CO06	**Fray Jorge**	**1.69**	**152**			**Pn**	**06 19 33.3**	**+0.1**
CO06	**Fray Jorge**	**1.69**	**152**	⇓*iP*		**Pn**	**06 19 33.1**	**-0.1**
CO06				*i* S		**Sn**	**06 19 53.0**	**-2.4**
CO06				IAML			06 19 57.0	
	comp=E,606nm,0.2s							
GO04	**Tololo Observa**	**1.82**	**124**			**Pb**	**06 19 37.1**	**+0.3**
GO04	**Tololo Observa**	**1.82**	**124**	*eP*		**Pb**	**06 19 36.4**	**-0.4**
GO04				*eS*		**Sb**	**06 20 00.3**	**+0.2**
GO04				IAML			06 20 02.8	
	comp=Z,3µm,0.5s							
GO04	**Tololo Observa**	**1.82**	**124**	*eP*		**Pb**	**06 19 37.0**	**+0.1**
GO04				*i* S		**Sn**	**06 19 59.4**	**+0.6**
AC05	**El Transito**	**2.02**	**81**			**Pb**	**06 19 40.1**	**-0.1**
AC05	**El Transito**	**2.02**	**81**	*eP*		**Pb**	**06 19 39.4**	**-0.8**
AC05				*eS*		**Sg**	**06 20 06.2**	**-1.5**
AC05	**El Transito**	**2.02**	**81**	⇑*iP*		**Pb**	**06 19 40.1**	**-0.1**
AC05				*i* S		**Sb**	**06 20 05.1**	**-0.6**
AC05				IAML			06 20 12.3	
	comp=E,602nm,0.4s							
CO01	**Juntas del Tor**	**2.28**	**111**			**Pb**	**06 19 44.4**	**-0.3**
CO01	**Juntas del Tor**	**2.28**	**111**	*eP*		**Pb**	**06 19 44.4**	**-0.3**
CO01				*eS*		**Sb**	**06 20 12.3**	**-1.1**
CO01				IAML			06 20 13.9	
	comp=Z,499nm,0.5s							
CO01	**Juntas del Tor**	**2.28**	**111**	⇓*iP*		**Pb**	**06 19 44.4**	**-0.3**
CO01				*i* S		**Sb**	**06 20 12.3**	**-1.1**
CO01				IAML			06 20 14.4	
	comp=N,656nm,0.3s							
CO03	**El Pedregal**	**2.31**	**136**	Pn		**Pn**	**06 19 43.4**	**+1.6**
CO03	**El Pedregal**	**2.31**	**136**	*eP*		**Pn**	**06 19 43.5**	**+1.6**
CO03				*eS*		**Sb**	**06 20 13.5**	**-0.7**
CO03				IAML			06 20 14.5	
	comp=Z,575nm,0.5s							
CO03	**El Pedregal**	**2.31**	**136**	⇓*iP*		**Pn**	**06 19 43.5**	**+1.6**
CO03				IAML			06 20 14.3	
	comp=E,1µm,0.3s							
CO02	**Combarbal**	**2.43**	**147**			**Pn**	**06 19 44.9**	**+1.4**
CO02	**Combarbal**	**2.43**	**147**	*eP*		**Pn**	**06 19 44.9**	**+1.4**
CO02				*eS*		**Sn**	**06 20 13.8**	**+0.1**
CO02				IAML			06 20 18.7	
	comp=Z,700nm,0.4s							
CO02	**Combarbal**	**2.43**	**147**	⇓*iP*		**Pn**	**06 19 44.9**	**+1.4**
GO03	**Copiap**	**2.57**	**53**			**Pn**	**06 19 46.6**	**+1.2**
GO03	**Copiap**	**2.57**	**53**	*eP*		**Pn**	**06 19 46.4**	**+1.0**
GO03				*eS*		**Sb**	**06 20 18.7**	**-2.9**
GO03				IAML			06 20 19.6	
	comp=Z,367nm,0.4s							
GO03	**Copiap**	**2.57**	**53**	⇓*iP*		**Pn**	**06 19 46.8**	**+1.4**
GO03				*i* S		**Sn**	**06 20 17.5**	**+0.3**
GO03				IAML			06 20 18.8	
	comp=N,495nm,0.5s							
AROD	**Rodeo**	**2.85**	**111**	*eP*		**Pb**	**06 19 54.1**	**-0.4**
AROD				*eS*		**Sb**	**06 20 29.7**	**-0.2**
ACDV	**Cuesta del Vie**	**3.14**	**109**	*eP*		**Pn**	**06 19 53.5**	**+0.1**
ACDV				*eS*		**Sn**	**06 20 34.0**	**+2.6**
ACDV				IAML			06 20 39.6	
	comp=Z,213nm,0.5s							
ACCO	**Cerro Coronel**	**3.33**	**116**	*eP*		**Pb**	**06 20 01.3**	**-1.5**
ACCO				*eS*		**Sb**	**06 20 41.0**	**-2.9**
ACCO				*eS*		**Sg**	**06 20 43.8**	**-6.2**
AC01	**Pan de Azucar**	**3.47**	**30**	Pn		**Pn**	**06 19 56.6**	**-1.2**
AC01	**Pan de Azucar**	**3.47**	**30**	*eP*		Pn	06 19 38.4	-19
AC01				*eS*		**Sn**	**06 20 38.4**	**-1.0**
AC01	**Pan de Azucar**	**3.47**	**30**	IAML			06 20 38.3	
	comp=E,78nm,0.7s							
DOCA	**Reserva Natura**	**3.48**	**121**	*eP*		**Pn**	**06 19 59.0**	**+0.8**
DOCA				*eS*		**Sn**	**06 20 41.0**	**+0.8**
DOCA				*eS*		**Sb**	**06 20 45.6**	**-2.6**
DOCA				IAML			06 20 59.7	
	comp=Z,144nm,1.0s							
VA06	**Catapilco**	**3.54**	**163**	Pn		**Pn**	**06 19 58.9**	**+0.2**
AC02	**Maricunga**	**3.81**	**53**			**Pn**	**06 20 05.3**	**+2.4**
AC02	**Maricunga**	**3.81**	**53**	*eP*		**Pn**	**06 20 04.7**	**+1.9**
AC02				IAML			06 21 39.1	
	comp=Z,412nm,1.6s							
AC02	**Maricunga**	**3.81**	**53**	⇑*iP*		**Pn**	**06 20 05.3**	**+2.4**
VCA	**Vinchina**	**3.83**	**85**	*eP*		**Pn**	**06 20 05.0**	**+2.2**
VCA				*eS*		**Sn**	**06 20 51.5**	**+3.2**
VCA				*eS*		**Sb**	**06 20 52.0**	**-5.9**
VCA				*eS*		Sg	06 20 54.5	-11
VCA				IAML			06 21 06.1	
	comp=Z,209nm,0.4s							
RTLS	**Leoncito**	**3.83**	**134**	*eP*		**Pn**	**06 20 03.0**	**0.0**
RTLS				*eS*		**Sn**	**06 20 51.5**	**+2.8**
RTLS				*eS*		**Sb**	**06 20 52.0**	**-6.3**
RTLS				IAML			06 21 10.3	
	comp=Z,385nm,0.6s							
VA03	**San Esteban**	**3.97**	**155**			**Pn**	**06 20 06.4**	**+1.8**
VA03	**San Esteban**	**3.97**	**155**	*eP*		**Pn**	**06 20 06.6**	**+1.9**
VA03				*eS*		**Sn**	**06 20 52.9**	**+1.1**
VA03				IAML			06 21 09.2	
	comp=Z,183nm,0.6s							
MT02	**Curacav**	**4.25**	**164**	Pn		**Pn**	**06 20 08.6**	**+0.1**
MT02	**Curacav**	**4.25**	**164**	*eP*		**Pn**	**06 20 08.7**	**+0.3**
MT02				*eS*		**Sn**	**06 20 54.5**	**-4.0**
MT02				IAML			06 21 01.5	
	comp=Z,62nm,0.8s							
PEL	**Peldehue**	**4.27**	**159**			**Pn**	**06 20 09.9**	**+1.2**
MT05	**Renca**	**4.48**	**160**	Pn		**Pn**	**06 20 12.6**	**+0.9**
MT05	**Renca**	**4.48**	**160**	*eP*		**Pn**	**06 20 12.9**	**+1.3**
MT05				*eS*		**Sn**	**06 21 02.8**	**-1.5**
MT05				IAML			06 21 24.4	
	comp=Z,117nm,0.8s							
VA05	**Santo Domingo**	**4.54**	**170**			**Pn**	**06 20 11.6**	**-0.8**
MT16	**CCHEN**	**4.58**	**158**			**Pn**	**06 20 14.8**	**+1.8**
MT03	**Universidad Ad**	**4.65**	**159**	*eP*		**Pn**	**06 20 15.4**	**+1.4**
MT03				*eS*		**Sn**	**06 21 06.1**	**-1.9**
MT03				*eS*		Sb	06 21 06.8	-15
MT03				IAML			06 21 23.3	
	comp=Z,81nm,0.4s							
ASAL	**Salagasta**	**4.67**	**138**	*eP*		Pn	06 20 20.1	+5.9
ASAL				*eS*		**Sb**	**06 21 16.4**	**-5.6**
ASAL				IAML			06 21 22.6	
	comp=Z,43nm,0.6s							
GO02	**Mina Guanaco**	**4.78**	**34**	Pn		**Pn**	**06 20 16.2**	**+0.2**
GO02	**Mina Guanaco**	**4.78**	**34**	*eP*		**Pn**	**06 20 16.3**	**+0.2**
GO02				*eS*		**Sn**	**06 21 13.2**	**+1.1**
GO02				IAML			06 21 14.3	
	comp=Z,48nm,0.3s							
MT01	**Popeta**	**4.81**	**167**			**Pn**	**06 20 16.1**	**0.0**
MT01	**Popeta**	**4.81**	**167**	*eP*		**Pn**	**06 20 15.5**	**-0.6**
MT01				*eS*		**Sn**	**06 21 06.8**	**-5.5**
MT01				IAML			06 21 11.4	
	comp=Z,69nm,0.6s							
ACLC	**CERRO LA CRUZ**	**4.89**	**94**	*eS*		**Sn**	**06 21 15.0**	**+0.4**
PB14	**IPOC Station P**	**4.92**	**23**	Pn		**Pn**	**06 20 16.1**	**-1.8**
BO01	**Tunca**	**5.35**	**167**	Pn		**Pn**	**06 20 23.7**	**+0.1**
BO02	**Sierra Bellavi**	**5.80**	**165**			**Pn**	**06 20 30.3**	**+0.5**
GO05	**Huala**	**5.84**	**175**	Pn		**Pn**	**06 20 29.6**	**-0.8**
H03N1	**Juan Fernandez**	**6.93**	**230**	T		T	06 27 41.4	
	baz=50,slow=71,SNR=40							
H03N2	**Juan Fernandez**	**6.93**	**230**	T		T	06 27 37.8	
	baz=50,slow=71,SNR=33							
H03N3	**Juan Fernandez**	**6.93**	**230**	T		T	06 27 36.5	
	baz=50,slow=71,SNR=42							
VA04	**Juan Fernndez**	**6.98**	**229**			Pn	06 20 41.2	-4.8
LVC	**Limon Verde**	**7.31**	**27**	Pn		**Pn**	**06 20 50.2**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=211,slow=6.0,SNR=9.6							
LVC				Sn		**Sn**	**06 22 12.4**	**-2.1**
	baz=288,slow=9.4							
LVC				LR		LR	06 23 57.6	
	comp=Z,58nm,19.6s,baz=226,slow=40							
	comp=Z,2.7nm,0.3s							
GO01	**Chusmiza**	**9.94**	**19**	Pn		**Pn**	**06 21 25.4**	**-1.7**
GO06	**Curarrehue**	**10.42**	**175**	Pn		**Pn**	**06 21 33.8**	**+0.6**
PLCA	**Paso Flores**	**11.65**	**172**	Pn		**Pn**	**06 21 50.6**	**+0.6**
PLCA	**Paso Flores**	**11.65**	**172**	Pn		**Pn**	**06 21 49.6**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=336,slow=11,SNR=35							
PLCA				Sn		**Sn**	**06 24 03.1**	**+2.5**
	baz=263,slow=12,SNR=1.0							
PLCA				LR		LR	06 26 45.1	
	comp=Z,50nm,18.5s,baz=348,slow=40							
	comp=Z,1.9nm,0.5s							
LPAZ	**La Paz**	**13.45**	**19**	Pn		**Pn**	**06 22 15.0**	**-0.2**
CPUP	**Villa Florida**	**13.77**	**82**	Pn		**Pn**	**06 22 19.0**	**+0.1**
CPUP	**Villa Florida**	**13.77**	**82**	Pn		**Pn**	**06 22 20.2**	**+1.3**
	baz=36,slow=18,SNR=2.2							
CPUP				LR		LR	06 28 06.2	
	comp=Z,77nm,21.3s,baz=242,slow=40							
	comp=Z,1.8nm,1.1s							
ITQB	**Itaqui**	**13.89**	**96**	Pn		**Pn**	**06 22 21.7**	**+1.2**
SIV	**San Ignacio**	**16.84**	**41**	Pn		**P**	**06 23 01.5**	**-0.4**
	baz=222,slow=10.0,SNR=39							
	comp=Z,18nm,1.0s							
NNA	**Nana**	**17.56**	**346**	LR		LR	06 28 04.1	
	comp=Z,54nm,20.2s,baz=158,slow=31							
ITAB	**Concordia**	**18.10**	**89**	P		**P**	**06 23 15.4**	**-0.3**
VILB	**Vilhena**	**19.80**	**38**	P		**P**	**06 23 33.4**	**-1.1**
VILB				IAmb		IAmb	06 23 44.5	
	comp=Z,11nm,0.8s							
CZSB	**Cruzeiro do Su**	**21.33**	**360**			**P**	**06 23 47.8**	**-3.3**
CZSB				IAmb		IAmb	06 23 58.0	
	comp=Z,20nm,0.9s							
SAML	**Samuel**	**21.96**	**25**			**P**	**06 23 55.6**	**-2.2**
SAML				IAmb		IAmb	06 24 12.2	
	comp=Z,8.2nm,1.0s							
BDFB	**Brasilia**	**26.30**	**65**	P		**P**	**06 24 40.6**	**+0.7**
BDFB				IAmb		IAmb	06 24 50.6	
	comp=Z,7.1nm,1.0s							
BDFB	**Brasilia**	**26.30**	**65**	P		**P**	**06 24 41.4**	**+1.5**
	comp=Z,5.3nm,0.8s,baz=238,slow=11,SNR=11							
	comp=Z,5.3nm,0.8s							
OTAV	**Otavalo**	**29.79**	**348**	P		**P**	**06 25 07.3**	**-4.1**
VNA3	**Neumayer Olymp**	**53.99**	**159**	⇓pP		pP	06 28 29.5	+2.3
	comp=Z,5.2nm,0.7s							
VNA2	**Neumayer--Watz**	**54.63**	**159**	⇓pP		pP	06 28 33.6	+1.8
	comp=Z,8.0nm,0.6s,baz=289,slow=6.8							
SNAA	**Sanae**	**56.22**	**159**	P		**P**	**06 28 42.8**	**-1.0**
SNAA	**Sanae**	**56.22**	**159**	⇓pP		pP	06 28 45.0	+1.7
	comp=Z,83nm,0.5s							
SNAA	**Sanae**	**56.22**	**159**	P		**P**	**06 28 44.7**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=276,slow=8.9,SNR=14							
	comp=Z,5.2nm,0.8s							
TROLL	**Troll, Antarti**	**57.93**	**159**	⇓pP		**P**	**06 28 56.9**	**+0.8**
	comp=Z,132nm,0.7s							
QSPA	**South Pole Qui**	**61.05**	**180**	P		**P**	**06 29 15.8**	**-1.9**
QSPA	**South Pole Qui**	**61.05**	**180**	P		**P**	**06 29 19.0**	**+1.3**
	comp=Z,3.6nm,0.7s,baz=154,slow=2.0,SNR=22							
	comp=Z,3.6nm,0.7s							
TXAR	**Lajitas Array**	**65.33**	**330**	P		**P**	**06 29 48.0**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=145,slow=4.6,SNR=4.7							
	comp=Z,0.6nm,0.8s							
VNDA	**Vanda**	**68.74**	**191**	P		**P**	**06 30 09.3**	**+1.9**
	comp=Z,4.4nm,1.2s,baz=126,slow=8.6,SNR=1.9							
	comp=Z,4.4nm,1.2s							
DBIC	**Dimbokro**	**74.11**	**73**	P		**P**	**06 30 41.3**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=154,slow=2.0,SNR=4.4							
	comp=Z,3.7nm,0.8s							
PDAR	**Pinedale Array**	**79.27**	**333**	P		**P**	**06 31 10.7**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=132,slow=6.6,SNR=6.8							
	comp=Z,0.6nm,0.6s							
NVAR	**Mina Array Bea**	**79.69**	**325**	P		**P**	**06 31 13.7**	**+1.7**
	comp=Z,1.3nm,0.9s,baz=157,slow=7.3,SNR=4.1							
	comp=Z,1.3nm,0.9s							
TSUM	**Tsumeb**	**80.98**	**107**	LR		LR	07 05 31.2	
	comp=Z,25nm,19.3s,baz=152,slow=34							
ULM	**Lac du Bonnet**	**81.74**	**345**	P		**P**	**06 31 25.0**	**+2.7**
	comp=Z,1.8nm,0.7s,baz=109,slow=0.5,SNR=4.1							
	comp=Z,1.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.00**	**71**	P		**P**	**06 31 31.5**	**+1.7**
	comp=Z,2.4nm,0.7s,baz=264,slow=4.3,SNR=13						

1.1nm,0.9s
MJAR Matsushiro Arr 38.97 15 P **P** **06 48 18.0 -1.7**
2.0nm,1.1s,baz=189,slow=6.9,SNR=1.7
2.0nm,1.1s
SONM Songino Array 52.00 343 P **P** **06 50 02.5 -0.3**
0.3nm,0.7s,baz=132,slow=4.1,SNR=1.8
0.3nm,0.7s
PETK Petropavlovsk- 59.89 21 P P 06 50 55.9 -3.3
1.0nm,0.7s,baz=234,slow=8.8,SNR=1.2
1.0nm,0.7s
MKAR Makanchi Array 61.71 327 P **P** **06 51 10.5 -1.2**
0.2nm,0.3s,baz=117,slow=7.8,SNR=10
0.2nm,0.3s
ZALV Zalesovo Beam 65.05 334 P **P** **06 51 33.5 -0.1**
0.2nm,0.4s,baz=115,slow=2.1,SNR=1.3
0.2nm,0.4s
KURBB Kurchatov Arra 65.98 329 P **P** **06 51 38.5 -1.2**
0.4nm,0.6s,baz=127,slow=6.1,SNR=9.0
0.4nm,0.6s
BVAR Borovoye Array 71.54 328 P **P** **06 52 14.8 +0.4**
0.6nm,0.7s,baz=128,slow=9.3,SNR=2.9
0.6nm,0.7s
QSPA South Pole Qui 88.76 180 P **P** **06 53 46.7 -0.3**
1.1nm,1.0s,baz=315,slow=2.9,SNR=1.7
1.1nm,1.0s

UPA ***25*** *06:46:21.8±0.4,6.°90N×78.°74W, h10km±769km, MW2.5*
RSNC ***25*** *06:46:22.7±0.6,7.°42N×78.°34W, h17km±4km, ML2.1*
ISC 25 06:46:17.3±2.0, 7.°28N±0.°08×78.°45W±0.°04, h13km±15km, n8, σ0±81/13, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.65**	**101**	*eP*	**Pn**	**06 46 33.4**	**+1.1**
PTAC				*eS*	**Sn**	**06 46 42.1**	**-0.3**
PTAC				*i*		06 46 43.4	
	comp=Z,107nm,0.2s						
UPD2	**Meteti**	**1.33**	**19**	*eP*	**Pg**	**06 46 42.8**	**-0.2**
UPD2				*eS*	**Sb**	**06 46 59.1**	**-0.1**
UPD2				*i*		06 47 06.2	
	comp=Z,47nm,0.4s						
CAPC	**Capurgana**	**1.73**	**39**	*eP*	**Pb**	**06 46 49.3**	**+0.3**
CAPC				*eS*	**Sn**	**06 47 08.3**	**-0.8**
AZU	**Azuero**	**1.88**	**286**	*eP*	**Pb**	**06 46 51.6**	**+0.2**
AZU				*eS*	**Sb**	**06 47 14.1**	**-0.7**
APAC	**Apartado, Choc**	**1.96**	**71**	*eP*	**Pb**	**06 46 52.2**	**-0.6**
APAC				*i*		06 47 28.9	
	comp=Z,7.6nm,0.4s						
CHIT3	**Chitre**	**2.06**	**289**	*eP*	**Pb**	**06 46 54.4**	**-0.1**
CHIT3				*eS*	**Sn**	**06 47 18.2**	**+1.0**
DBBC	**Dabeiba**	**2.24**	**96**	*eP*	**Pb**	**06 46 57.4**	**-0.3**
CACAO	**El Cacao, Vera**	**2.39**	**272**	*eS*	**Sn**	**06 47 24.0**	**-1.3**

NEIC ***25*** *06:51:17.7±1.4, 37.°24N±0.°03×104.°82W±0.°03, h5km±1km, mb_Lg3.5/152, ML3.2/16, Mwr3.5/31, Error ellipse: s-maj=5.8km s-min=3.1km az=321.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.78; $M_{\theta\theta}$1.77; $M_{\phi\phi}$0.01; $M_{r\theta}$-0.20; $M_{\theta\phi}$0.86; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.99000×10^{14} NP1:$\phi_0$238.03000°, δ44.25000°, λ-104.17000°. NP2:$\phi_0$77.45000°, δ47.42000°, λ-76.59000°. Principal axes: T 2.1200, Plg2.0000°, Azm158.0000°; N -0.2923, Plg10.0000°, Azm248.0000°; P -1.8276, Plg80.0000°, Azm59.0000°;*
IDC ***25*** *06:51:18.2±1.1, 37.°23N×104.°92W, h0km, mb2.8/1, mbtmp3.2/6, ML3.3/5, MS2.9/7 Error ellipse: s-maj=18.7km s-min=9.3km az=71.0*
NEIC ***25*** *06:51:18.5, 37.°21N×104.°83W, h5km*
ANF ***25*** *06:51:19.0±0.3, 37.°22N×104.°85W, h5km, Error ellipse: s-maj=4.1km s-min=2.8km az=35.0*
ISC 25 06:51:19.7±0.7, 37.°27N±0.°03×104.°79W±0.°02, h10km, n110, σ1±75/95, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.33**	**113**	Pg	**Pg**	**06 51 25.5**	**-0.8**
T25A				Sg	**Sg**	**06 51 29.6**	**-1.1**
T25A				IAML		06 51 32.4	
	comp=E,3μm,0.8s						
T25A				IAML		06 51 33.3	
	comp=N,2μm,0.8s						
T25A	**Trinidad**	**0.33**	**113**	P	**Pg**	**06 51 25.5**	**-0.8**
	baz=281						
T25A				S	**Sg**	**06 51 29.7**	**-0.9**
	baz=281						
SDCO	**Great Sand Dun**	**0.74**	**310**		**Pg**	**06 51 33.5**	**-0.6**
SDCO	**Great Sand Dun**	**0.74**	**310**	P	**Pg**	**06 51 33.4**	**-0.7**
	baz=135,SNR=151						
SDCO				S	**Sg**	**06 51 41.8**	**-2.0**
	baz=135						
Q24A	**Divide**	**1.72**	**351**		**Pg**	**06 51 51.7**	**-0.9**
Q24A	**Divide**	**1.72**	**351**	P	**Pg**	**06 51 51.8**	**-0.9**
	baz=172,SNR=142						
Q24A				S	**Sg**	**06 52 14.4**	**-0.6**
	baz=172						
RTBA	**Rita Blanca**	**1.84**	**116**		**Pb**	**06 51 52.6**	**-0.9**
KSCO	**Kaye Shedlock'**	**2.44**	**44**		**Pn**	**06 52 00.4**	**+0.7**
KSCO	**Kaye Shedlock'**	**2.44**	**44**	P	**Pb**	**06 52 02.5**	**-1.1**
	baz=224,SNR=34						
KSCO				S	**Sb**	**06 52 33.8**	**0.0**
	baz=224						
SMCO	**Snowmass**	**2.57**	**319**		**Pn**	**06 52 01.2**	**-0.6**
ISCO	**Idaho Springs**	**2.61**	**346**		**Pn**	**06 52 02.0**	**-0.3**
ISCO	**Idaho Springs**	**2.61**	**346**	Pb	**Pb**	**06 52 05.6**	**-1.2**
	baz=166,SNR=91						
ISCO				Sb	**Sg**	**06 52 41.6**	**-2.0**
	baz=166						
ANMO	**Albuquerque**	**2.68**	**211**		**Pn**	**06 52 03.7**	**+0.6**
ANMO				IAML		06 52 41.3	
	comp=N,76nm,0.4s						
ANMO				IAML		06 52 43.6	
	comp=N,55nm,0.4s						
ANMO				IAmb_Lg		06 52 45.6	
	comp=Z,41nm,0.8s						
ANMO				IAmb_Lg		06 52 46.3	
	comp=Z,54nm,0.8s						
ANMO	**Albuquerque**	**2.68**	**211**		**Pn**	**06 52 01.3**	**-1.8**
ANMO				IAML		06 52 41.4	
	comp=Z,69nm,0.4s						
ANMO				IAML		06 52 43.7	
	comp=Z,70nm,0.5s						
ANMO	**Albuquerque**	**2.68**	**211**	P	**Pn**	**06 52 03.4**	**+0.4**
	baz=30						
ANMO				Sb	**Sb**	**06 52 39.7**	**-1.2**
	baz=30						
ANMO	**Albuquerque**	**2.68**	**211**	Pn	**Pn**	**06 52 03.2**	**+0.1**
	comp=Z,2.1nm,0.3s,baz=15,slow=17,SNR=62						
ANMO				Lg	Lg	06 52 39.3	
	comp=Z,18nm,0.3s,baz=358,slow=21,SNR=13						
ANMO				LR	LR	06 53 17.4	
	comp=Z,109nm,19.8s,baz=134,slow=46						
	comp=Z,15nm,0.6s						
MVCO	**Mesa Verde**	**2.96**	**270**		**Pn**	**06 52 05.7**	**-1.3**
MVCO	**Mesa Verde**	**2.96**	**270**	Pb	**Pb**	**06 52 10.8**	**-1.9**
	baz=89,SNR=158						
MVCO				Sb	**Sb**	**06 52 50.4**	**+1.4**
	baz=89						
PV15	**Paradox Valley**	**3.12**	**291**	Pn	**Pn**	**06 52 08.3**	**-0.8**
AMTX	**Amarillo**	**3.46**	**132**	IAmb_Lg		06 53 14.0	
	comp=Z,164nm,0.8s						
AMTX	**Amarillo**	**3.46**	**132**	Pb	**Pb**	**06 52 21.1**	**0.0**
	baz=313						
AMTX				Sb	**Sb**	**06 53 04.5**	**+1.2**
	baz=313						
PV19	**Morning Glory**	**3.48**	**289**	Pn	**Pn**	**06 52 13.8**	**-0.4**
Y22F	**Passcal Instru**	**3.63**	**209**	Pb	**Pb**	**06 52 23.5**	**-0.5**
	baz=28,SNR=16						
Y22F				Sb	**Sb**	**06 53 09.0**	**+0.9**
	baz=28						
Y22D	**IRIS PASSCAL I**	**3.63**	**209**	Pb	**Pb**	**06 52 23.3**	**-0.7**
	baz=28,SNR=16						
Y22D				Sb	**Sb**	**06 53 09.9**	**+1.8**
	baz=28						
MSTX	**Muleshoe**	**3.67**	**153**	IAmb_Lg		06 53 19.2	
	comp=Z,127nm,1.0s						
MSTX	**Muleshoe**	**3.67**	**153**	Pb	**Pb**	**06 52 25.3**	**+0.5**
	baz=333						
MSTX				Sb	**Sb**	**06 53 11.1**	**+1.7**
	baz=333						
N23A	**Red Feather La**	**3.73**	**346**		**Pn**	**06 52 19.8**	**+2.2**
N23A	**Red Feather La**	**3.73**	**346**	P	**Pn**	**06 52 19.3**	**+1.7**
	baz=166,SNR=27						
O20A	**White River Ci**	**3.94**	**318**		**Pn**	**06 52 23.3**	**+2.9**
O20A	**White River Ci**	**3.94**	**318**	P	**Pn**	**06 52 21.2**	**+0.8**
	baz=137,SNR=7.9						
PHWY	**Pilot Hill**	**4.06**	**353**		**Pn**	**06 52 22.2**	**0.0**
OGNE	**Ogallala**	**4.25**	**29**	P	**Pn**	**06 52 27.4**	**+2.8**
	baz=211,SNR=9.8						
OGNE				Sb	**Sb**	**06 53 29.2**	**+3.2**
	baz=211						
SMWD	**Samnorwood**	**4.26**	**119**	IAmb_Lg		06 53 35.4	
	comp=Z,130nm,0.7s						
CBKS	**Cedar Bluff**	**4.28**	**67**		**Pn**	**06 52 25.0**	**+0.1**
CBKS				IAmb_Lg		06 53 39.2	
	comp=Z,116nm,0.8s						
CBKS	**Cedar Bluff**	**4.28**	**67**	P	**Pn**	**06 52 26.2**	**+1.3**
	baz=250						
CBKS				Sb	**Sg**	**06 53 33.6**	**-3.4**
	baz=250						
ELIS	**Ellis County**	**4.48**	**104**		**Pn**	**06 52 28.5**	**+0.8**
ELIS				IAmb_Lg		06 53 45.3	
	comp=Z,137nm,1.1s						
W18A	**Petrified Fore**	**4.54**	**243**	Pb	**Pb**	**06 52 39.1**	**-0.5**
	baz=61,SNR=11						
W18A				Sb	**Sb**	**06 53 37.3**	**+2.8**
	baz=61						
U32A	**Winter Ranch,**	**4.72**	**99**		**Pn**	**06 52 32.4**	**+1.4**
U32A				IAmb_Lg		06 53 58.4	
	comp=Z,96nm,1.1s						
DKNS	**Dickens**	**4.78**	**138**		**Pn**	**06 52 32.2**	**+0.4**
DKNS				IAmb_Lg		06 53 54.0	
	comp=Z,111nm,0.7s						
RWWY	**Rawlins**	**4.80**	**338**		**Pn**	**06 52 32.0**	**-0.2**
SRU	**San Rafael Swe**	**4.88**	**294**		**Pn**	**06 52 32.9**	**-0.4**
P18A	**Preston Nutter**	**4.89**	**300**		**Pn**	**06 52 35.7**	**+2.1**
OK038	**West end E0370**	**4.91**	**97**	IAmb_Lg		06 53 58.1	
	comp=Z,83nm,1.0s						
R32A	**Long Quarter,**	**4.95**	**75**	Pn	**Pn**	**06 52 34.9**	**+0.9**
R32A				IAmb_Lg		06 53 59.6	
	comp=Z,87nm,0.9s						
POST	**Post**	**4.98**	**146**		**Pn**	**06 52 35.1**	**+0.5**
POST				IAmb_Lg		06 53 56.3	
	comp=Z,72nm,0.7s						
CSTR	**Hydro, Custer**	**5.17**	**106**	Pn	**Pn**	**06 52 36.2**	**-1.0**
OK032	**Salt Plains WL**	**5.28**	**93**	Pn	**Pn**	**06 52 39.7**	**+1.0**
OK032				IAmb_Lg		06 54 20.6	
	comp=Z,91nm,1.0s						
121A	**Cookes Peak, D**	**5.33**	**208**		**Pn**	**06 52 40.0**	**+0.5**
121A	**Cookes Peak, D**	**5.33**	**208**	P	**Pn**	**06 52 39.5**	**0.0**
	baz=27						
121A				Sb	**Sb**	**06 54 00.5**	**+3.4**
	baz=27						
KAN10	**Anthony SW Sta**	**5.34**	**90**	IAmb_Lg		06 54 14.9	
	comp=Z,87nm,1.1s						
KAN12	**Harper NE Stat**	**5.41**	**88**	IAmb_Lg		06 54 18.0	
	comp=Z,87nm,1.0s						
SN05	**Snyder 5**	**5.42**	**143**	IAmb_Lg		06 54 08.4	
	comp=Z,98nm,0.9s						
KAN08	**Anthony NE Sta**	**5.44**	**88**	IAmb_Lg		06 54 20.8	
	comp=Z,87nm,1.2s						
ODSA	**Odessa**	**5.45**	**160**	IAmb_Lg		06 54 10.6	
	comp=Z,64nm,1.0s						
KAN14	**Manchester OK**	**5.46**	**91**		**Pn**	**06 52 41.9**	**+0.8**
KAN14				IAmb_Lg		06 54 19.7	
	comp=Z,107nm,1.3s						
WMOK	**Wichita Mounta**	**5.48**	**116**	Pb	**Pb**	**06 52 56.3**	**+0.8**
	baz=298,SNR=22						
WMOK				Sb	**Sg**	**06 54 08.9**	**-6.8**
	baz=298						
GC02	**Grant County #**	**5.56**	**92**	Pn	**Pn**	**06 52 42.9**	**+0.5**
MNTX	**Cornudas Mount**	**5.58**	**185**	Pb	**Pb**	**06 52 57.4**	**+0.3**
	baz=4.6,SNR=39						
MNTX				Sb	**Sb**	**06 54 08.9**	**+4.9**
	baz=4.6						
WUAZ	**Wupatki**	**5.59**	**254**	P	**Pn**	**06 52 40.8**	**-2.3**
	baz=70,SNR=7.6						
KAN01	**Argonia South**	**5.61**	**89**	Pn	**Pn**	**06 52 42.2**	**-1.0**
KAN01				IAmb_Lg		06 54 22.5	
	comp=Z,88nm,1.1s						
KAN17	**Caldwell West**	**5.61**	**90**		**Pn**	**06 52 43.6**	**+0.4**
KAN17				IAmb_Lg		06 54 22.3	
	comp=Z,71nm,1.1s						
KAN13	**South Haven SW**	**5.84**	**90**	Pn	**Pn**	**06 52 46.1**	**-0.3**
KAN13				IAmb_Lg		06 54 32.8	
	comp=Z,91nm,1.2s						
PECS	**Pecos**	**5.93**	**172**	IAmb_Lg		06 54 32.2	
	comp=Z,100nm,1.0s						
OKCSW	**OKLAHOMA CITY**	**6.21**	**105**	IAmb_Lg		06 54 47.2	
	comp=Z,85nm,0.7s						
ABTX	**Abilene, Hawle**	**6.27**	**136**	IAmb_Lg		06 54 46.6	
	comp=Z,87nm,0.9s						
ABTX	**Abilene, Hawle**	**6.27**	**136**	P	**Pn**	**06 52 53.5**	**+1.3**
ABTX	baz=319,SNR=13						
				Sb	**Sb**	**06 54 31.0**	**+7.1**
	baz=319						
FNO	**Franklin**	**6.29**	**106**	IAmb_Lg		06 54 44.7	
	comp=Z,91nm,0.9s						
OK048	**Pawnee Station**	**6.35**	**95**	IAmb_Lg		06 54 49.2	
	comp=Z,63nm,1.2s						
OK051	**E0350 and S346**	**6.42**	**94**	IAmb_Lg		06 54 53.9	
	comp=Z,66nm,1.1s						
QUOK	**Quay**	**6.58**	**97**	Pn	**Pn**	**06 52 56.5**	**0.0**
BGNE	**Belgrade**	**6.60**	**49**		**Pn**	**06 52 58.4**	**+1.6**
BGNE				IAmb_Lg		06 55 00.6	
	comp=Z,80nm,0.8s						
BGNE	**Belgrade**	**6.60**	**49**	P	**Pn**	**06 52 58.6**	**+1.8**
	baz=233						
BW06	**Boulder Array**	**6.60**	**328**	Pb	**Pb**	**06 53 16.5**	**+1.8**
	baz=145						
PDAR	**Pinedale Array**	**6.60**	**328**	Pn	**Pn**	**06 52 58.3**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=7.2						
PDAR				Pg	**Pb**	**06 53 18.6**	**+3.9**
	comp=Z,0.6nm,0.3s,baz=139,slow=16,SNR=15						
PDAR				Lg	Lg	06 54 48.1	
	comp=Z,0.2nm,0.3s,baz=140,slow=20,SNR=2.9						
PDAR				LR	LR	06 55 56.1	
	comp=Z,124nm,19.4s,baz=124,slow=42						
	comp=Z,0.5nm,0.5s						
T35A	**Sooner Cattle**	**6.62**	**91**		**Pn**	**06 52 57.0**	**0.0**
T35A				IAmb_Lg		06 54 53.0	
	comp=Z,55nm,0.8s						
W35A	**Tecumseh**	**6.74**	**106**	IAmb_Lg		06 55 07.4	
	comp=Z,60nm,1.1s						
RSSD	**Black Hills**	**6.87**	**5**	IAmb_Lg		06 55 11.3	
	comp=Z,76nm,1.3s						
PLPT	**Palo Pinto**	**6.92**	**128**	IAmb_Lg		06 55 02.1	
	comp=Z,48nm,0.9s						
LOOK	**Love County**	**7.00**	**116**	IAmb_Lg		06 55 13.1	
	comp=Z,71nm,0.9s						
FW06	**Azle**	**7.31**	**124**	IAmb_Lg		06 55 17.2	
	comp=Z,43nm,1.0s						
FW07	**Weatherford**	**7.33**	**126**	IAmb_Lg		06 55 27.6	
	comp=Z,42nm,0.9s						
TUL3	**Leonard**	**7.36**	**98**	IAmb_Lg		06 55 18.4	
	comp=Z,50nm,0.8s						
BRDY	**Brady**	**7.65**	**140**	IAmb_Lg		06 55 22.7	
	comp=Z,55nm,0.7s						
REDW	**Red Top Meadow**	**7.65**	**325**	Pn	**Pn**	**06 53 11.1**	**-0.2**
FW13	**Cleburne**	**7.78**	**127**	IAmb_Lg		06 55 37.8	
	comp=Z,48nm,0.8s						
FW14	**Alvarado**	**7.91**	**126**	IAmb_Lg		06 55 38.9	
	comp=Z,54nm,0.7s						
RLO	**Rose Lookout**	**7.92**	**95**	IAmb_Lg		06 55 40.6	
	comp=Z,34nm,0.9s						
JCT	**Junction City**	**7.94**	**147**	IAmb_Lg		06 55 41.7	
	comp=Z,57nm,0.7s						
TXAR	**Lajitas Array**	**7.97**	**173**	Pn	**Pn**	**06 53 16.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=2.3,slow=11,SNR=31						
TXAR				Pg	**Pb**	**06 53 37.7**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=0.1,slow=12,SNR=6.2						
TXAR				Lg	Lg	06 55 22.3	
	comp=Z,1.8nm,0.3s,baz=359,slow=28,SNR=1.7						
TXAR				LR	LR	06 56 16.9	
	comp=Z,53nm,18.2s,baz=347,slow=38						
	comp=Z,0.6nm,0.4s						
N35A	**Tabor**	**7.97**	**60**	IAmb_Lg		06 55 42.9	
	comp=Z,71nm,0.8s						
WHTX	**Lake Whitney,**	**8.01**	**129**	Pn	**Pn**	**06 53 15.3**	**-0.8**
WHTX				IAmb_Lg		06 55 47.6	
	comp=Z,44nm,0.9s						
SUSD	**Miller**	**8.42**	**30**	IAmb_Lg		06 55 59.1	
	comp=Z,35nm,0.8s						
TREL	**Terrell**	**8.45**	**120**	IAmb_Lg		06 55 57.0	
	comp=Z,56nm,0.8s						
HHAR	**Hobbs**	**8.76**	**93**		**Pn**	**06 53 26.2**	**-0.2**
ELK	**Elko**	**8.85**	**296**	Pn	**Pn**	**06 53 28.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=135,slow=20,SNR=1.5						
ELK				Lg	Lg	06 55 52.7	
	comp=Z,0.1nm,0.3s,baz=183,slow=11,SNR=1.2						
ELK				LR	LR	06 57 14.9	
	comp=Z,84nm,20.7s,baz=107,slow=41						
	comp=Z,0.2nm,0.3s						
ECSD	**EROS Data Cent**	**8.97**	**41**		**Pn**	**06 53 30.4**	**+1.1**
S39A	**Bolivar**	**9.12**	**84**	Pn	**Pn**	**06 53 30.9**	**-0.5**
P38A	**Dawn**	**9.14**	**72**	Pn	**Pn**	**06 53 30.7**	**-0.9**
MIAR	**Mount Ida**	**9.49**	**103**		**Pn**	**06 53 36.3**	**-0.1**
EF01	**Eagle Ford 01**	**9.73**	**145**	IAmb_Lg		06 56 33.1	
	comp=Z,42nm,0.9s						
R40A	**Maddies Statio**	**9.96**	**80**	Pn	**Pn**	**06 53 42.2**	**-0.7**
MGMO	**Mountain Grove**	**9.99**	**87**	Pn	**Pn**	**06 53 42.8**	**-0.4**
833A	**Chaparral WMA,**	**10.00**	**152**	IAmb_Lg		06 56 44.5	
	comp=Z,33nm,0.9s						
P40A	**Paris**	**10.25**	**73**	Pn	**Pn**	**06 53 45.8**	**-1.0**
NVAR	**Mina Array Bea**	**10.75**	**280**	Pg	Pn	06 54 39.0	+45
	comp=Z,0.1nm,0.3s,baz=96,slow=15,SNR=2.9						
NVAR				LR	LR	06 57 43.9	
	comp=Z,73nm,19.8s,baz=216,slow=37						
NEW	**Newport**	**14.22**	**324**	LR	LR	06 59 45.8	
	comp=Z,69nm,18.3s,baz=199,slow=36						
ULM	**Lac du Bonnet**	**14.47**	**23**	Lg	Lg	06 58 50.0	
	comp=Z,0.1nm,0.3s,baz=213,slow=12,SNR=1.6						
YBH	**Yreka Blue Hor**	**14.54**	**293**	LR	LR	07 00 34.8	
	comp=Z,66nm,20.3s,baz=260,slow=38						
TKL	**Tuckaleechee C**	**16.98**	**89**	P	**Pn**	**06 55 17.3**	**0.0**
	baz=280,slow=12,SNR=2.7						
TKL				Lg	Lg	07 00 06.7	
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=2.4						
	comp=Z,2.1nm,0.8s						
YKA	**Yellowknife Ar**	**25.97**	**350**	P	**P**	**06 56 53.4**	**+1.3**
	comp=Z,0.1nm,0.7s,baz=143,slow=7.3,SNR=1.9						
	comp=Z,0.1nm,0.7s						

AUST 25 06:59:02.2±5.8, 32.°68S×116.°45E, h2km±32km, Error ellipse: s-maj=70.4km s-min=12.0km az=47.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**0.71**	**111**	P	Pg	06 59 15.6	-0.2
	baz=0.7,SNR=16						
NWAO				P	Pg	06 59 15.6	-0.2
	baz=0.7,SNR=16						
NWAO				S	Sg	06 59 26.0	+1.0
	baz=0.7						
NWAO				S	Sg	06 59 26.0	+1.0
	baz=0.7						
MUN	**Mundaring**	**0.73**	**344**	P	Pg	06 59 16.6	+0.5
	baz=0.7,SNR=10						
MUN				S	Sg	06 59 26.0	+0.5
	baz=0.7						
KLBR	**Kellerberrin**	**1.55**	**46**	P	Pn	06 59 30.7	-0.1
	baz=1.6,SNR=16						
KLBR				S	Sg	06 59 52.5	+0.4
	baz=1.6						
KLBR				S	Sb	06 59 54.2	+2.5
	baz=1.6,SNR=7.2						
RKGY	**Rocky Gully**	**1.98**	**167**	P	Pn	06 59 36.5	-0.1
	baz=1.9,SNR=14						
RKGY				S	Sn	07 00 00.9	-1.0
	baz=1.9						
BLDU	**Ballidu**	**2.07**	**6**	P	Pn	06 59 38.6	+0.7
	baz=2.1						
BLDU				S	Sb	07 00 07.4	+0.7
	baz=2.1,SNR=5.3						
BLDU				S	Sg	07 00 08.0	-0.7
	baz=2.1						
MORW	**Morawa**	**3.62**	**354**	P	Pn	07 00 00.3	+1.1
	baz=3.7						
MORW				S	Sn	07 00 44.6	+2.1
	baz=3.7						

NNC ***25*** *07:08:06.9±0.8, 50.°00N×78.°69E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=16.4km s-min=4.3km az=79.0, Suspected Mining explosion.*
IDC ***25*** *07:08:08.3±1.0, 50.°06N×78.°79E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=15.4km s-min=6.2km az=64.0*
ISC 25 07:08:04.4±1.1, 49.°99N±0.°04×78.°05E±0.°07, h0km, n9, σ1±01/13, 2C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.70**	**26**	⇓P	**Pb**	**07 08 19.3**	**-0.2**
	7.6nm,0.3s						
KURBB				⇓S	**Sb**	**07 08 28.4**	**-1.3**
	18nm,0.6s						
KURBB	**Kurchatov Arra**	**0.70**	**26**	Pg	**Pb**	**07 08 19.4**	**-0.1**
	1.0nm,0.3s,baz=166,slow=19,SNR=87						
KURBB				Lg	Lg	07 08 28.4	
	1.0nm,0.3s,baz=160,slow=33,SNR=12						
KURK	**Kurchatov**	**0.81**	**26**	⇑P	**Pg**	**07 08 20.3**	**+0.3**
	2.9nm,0.4s						
KURK				⇓S	**Sg**	**07 08 31.1**	**+0.6**
	6.0nm,0.7s						
MAKZ	**Makanchi**	**4.12**	**139**	⇓Pg	**Pb**	**07 09 19.2**	**+1.4**
	0.7nm,0.5s						
MAKZ				⇓Lg	Lg	07 10 06.9	
	5.1nm,0.7s						
OTUK	**Ortayu**	**4.14**	**247**	⇓Pn	**Pb**	**07 09 17.7**	**-0.3**
	0.4nm,0.3s						
OTUK				⇓Lg	Lg	07 10 28.5	
	1.8nm,0.8s						
MK31	**Makanchi Array**	**4.27**	**137**	⇓Pn	**Pn**	**07 09 11.4**	**+0.8**
	0.1nm,0.2s,baz=80,slow=16,SNR=22						
MK31				⇓Pg	**Pb**	**07 09 19.7**	**-0.6**
	0.2nm,0.4s,baz=320,slow=14,SNR=11						
MK31				⇑Lg	Lg	07 10 14.5	
	5.9nm,0.7s,baz=318,slow=25,SNR=14						
MKAR	**Makanchi Array**	**4.27**	**137**	Pn	**Pn**	**07 09 11.3**	**+0.7**
	0.1nm,0.3s,baz=321,slow=10,SNR=25						
MKAR				Pg	**Pb**	**07 09 18.5**	**-1.7**
	0.2nm,0.3s,baz=323,slow=14,SNR=6.0						
MKAR				Sn	**Sn**	**07 10 00.1**	**-1.0**
	0.1nm,0.3s,baz=330,slow=23,SNR=1.6						
MKAR				Lg	Lg	07 10 13.7	
	0.5nm,0.3s,baz=329,slow=26,SNR=12						
	0.1nm,0.2s						
I46RU	**ZALESOVO INFRA**	**5.76**	**44**	I	I	07 38 40.0	
	baz=225,slow=339,SNR=5.6						
ZALV	**Zalesovo Beam**	**5.76**	**44**	Pn	**Pn**	**07 09 31.6**	**+0.6**
	0.2nm,0.3s,baz=230,slow=14,SNR=4.1						
	0.6nm,0.2s						

CATAC ***25*** *07:10:55.7±0.2, 9.°28N×83.°65W, h16km±2km, ML3.1*
UCR ***25*** *07:10:56.3±1.2, 9.°24N×83.°72W, h30km±4km, MW3.5*
ISC 25 07:10:56.1±0.9, 9.°25N±0.°03×83.°69W±0.°04, h30km±5km, n45, σ0±65/72, Costa Rica

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POTG	**Potrero Grande**	**0.60**	**109**	*i* P	**Pb**	**07 11 07.5**	**-0.7**
POTG				*i* SA		07 11 16.4	
POTG				IAML		07 11 18.2	
	comp=Z,1μm,1.0s						
REPA	**Paraso**	**0.60**	**343**	*e*P	**Pn**	**07 11 08.8**	**-0.1**
REPA				*e*S	**Sn**	**07 11 17.7**	**0.0**
VERB	**Verbena**	**0.69**	**360**	*e*P	**Pb**	**07 11 09.3**	**-0.5**
VERB				*e*S	**Sn**	**07 11 20.1**	**+0.1**
OCM	**Ochomogo**	**0.70**	**338**	*i* P	**Pb**	**07 11 09.0**	**-0.9**
OCM				*i* SA		07 11 19.0	
OCM				IAML		07 11 19.8	
	comp=Z,1μm,1.0s						
VTCV	**VTCV, Calle Va**	**0.73**	**357**	*i* P	**Pb**	**07 11 10.0**	**-0.5**
VTCV				*i* SA		07 11 20.9	
VTCV				IAML		07 11 21.3	
	comp=Z,2μm,1.0s						
AMPA	**Desamparados**	**0.74**	**331**	*e*P	**Pb**	**07 11 09.7**	**-1.0**
AMPA				*e*S	**Sb**	**07 11 19.9**	**-0.6**
HAYA	**Volcan Irazu**	**0.74**	**348**	*i* P	**Pb**	**07 11 10.1**	**-0.8**
HAYA				*i* S	**Sn**	**07 11 21.2**	**-0.4**
HAYA				IAML		07 11 21.6	
	comp=Z,2μm,1.0s						
VIRE	**VIRE**	**0.74**	**344**	*i* P	**Pb**	**07 11 10.1**	**-0.7**
VIRE				IAML		07 11 10.4	
	comp=Z,1μm,1.0s						
VIRE				*i* S	**Sb**	**07 11 20.7**	**-0.1**
VICA	**Volcano Irazu**	**0.75**	**348**	*e*P	**Pb**	**07 11 10.3**	**-0.6**
VICA				*e*S	**Sn**	**07 11 21.7**	**0.0**
VTRT	**Volcan Turrial**	**0.76**	**352**	*i* P	**Pb**	**07 11 10.5**	**-0.5**
VTRT				*i* S	**Sb**	**07 11 21.3**	**+0.1**
VTRT				IAML		07 11 25.3	
	comp=Z,840nm,1.0s						
VTR0	**Volcan Turrial**	**0.77**	**355**	*e*P	**Pb**	**07 11 10.7**	**-0.6**
VTR0				*e*S	**Sn**	**07 11 22.1**	**-0.1**
VTUN	**Crater Central**	**0.78**	**355**	*i* P	**Pb**	**07 11 10.9**	**-0.5**
VTUN				*i* S	**Sn**	**07 11 22.0**	**-0.3**
VTUN				IAML		07 11 24.4	
	comp=Z,670nm,1.0s						
VTUC	**Crater, Volcan**	**0.78**	**355**	*i* P	**Pb**	**07 11 10.8**	**-0.6**
VTUC				*i* S	**Sn**	**07 11 22.1**	**-0.2**
VTUC				IAML		07 11 23.5	
	comp=Z,620nm,1.0s						
CORON	**Coronado**	**0.79**	**337**	*e*P	**Pn**	**07 11 11.9**	**+0.6**
CORON				*e*S	**Sn**	**07 11 23.7**	**+1.5**
LCOCO	**El Coco**	**0.84**	**9**	*e*P	**Pb**	**07 11 12.0**	**-0.3**
LCOCO				*e*S	**Sn**	**07 11 24.8**	**+1.4**
HDC3	**Heredia 3**	**0.86**	**331**	*i* P	**Pb**	**07 11 11.9**	**-0.7**
HDC3				*i* SA		07 11 23.9	
HDC3				IAML		07 11 26.7	
	comp=Z,470nm,1.0s						
HDC	**Heredia**	**0.86**	**331**	*e*P	**Pb**	**07 11 11.9**	**-0.7**
HDC				*e*S	**Sb**	**07 11 23.9**	**0.0**
HDC	**Heredia**	**0.86**	**331**	*i* P	**Pb**	**07 11 11.5**	**-1.1**
HDC				*i* S	**Sb**	**07 11 23.8**	**0.0**
HDC				IAML		07 11 26.7	
	comp=Z,440nm,1.0s						
TCS1	**Tacares**	**0.99**	**323**	*i* P	**Pb**	**07 11 14.5**	**-0.3**
JACO	**JACO, Garabito**	**1.04**	**293**	*i* P	**Pn**	**07 11 15.2**	**+0.5**
JACO				IAML		07 11 30.1	
	comp=Z,250nm,1.0s						
BRU2	**Volcan**	**1.09**	**114**	*i* P	**Pn**	**07 11 15.1**	**-0.4**
BRU2				*i* SA		07 11 29.8	
BRU2				IAML		07 11 32.3	
	comp=Z,320nm,1.0s						
RIFO	**Rio Frio, Sara**	**1.09**	**348**	*i* P	**Pn**	**07 11 15.4**	**0.0**
RIFO				*i* S	**Sn**	**07 11 30.6**	**+1.1**
RIFO				IAML		07 11 38.2	
	comp=Z,230nm,1.0s						
CARI	**Cariari**	**1.11**	**358**	*e*P	**Pb**	**07 11 17.1**	**+0.3**
CPMI	**Catarata Coope**	**1.23**	**327**	*i* P	**Pb**	**07 11 18.9**	**-0.1**
CPMI				*i* S	**Sb**	**07 11 34.4**	**-0.2**
CPMI				IAML		07 11 36.4	
	comp=Z,240nm,1.0s						
SARA	**Sarapiqu**	**1.24**	**345**	*e*P	**Pn**	**07 11 18.0**	**+0.5**
LAFE	**Finca La Fe, P**	**1.32**	**295**	*i* P	**Pn**	**07 11 19.5**	**+0.9**
LAFE				*i* SA		07 11 39.3	
LAFE				IAML		07 11 42.1	
	comp=Z,1.0nm,1.0s						
CBL1	**Cabuya**	**1.42**	**284**	*e*P	**Pn**	**07 11 19.6**	**-0.4**
SOCE	**Pocosol**	**1.45**	**321**	*i* P	**Pn**	**07 11 21.5**	**+1.1**
SOCE				*i* SA		07 11 40.6	
SOCE				IAML		07 11 43.9	
	comp=Z,450nm,1.0s						
JTS	**Las Juntas de**	**1.62**	**310**	*e*P	**Pn**	**07 11 24.0**	**+1.3**
COVE	**Coope Vega, Sa**	**1.62**	**335**	*e*P	**Pn**	**07 11 23.8**	**+1.0**
COVE	**Coope Vega, Sa**	**1.62**	**335**	*i* P	**Pn**	**07 11 23.9**	**+1.2**
COVE				*i* S	**Sb**	**07 11 45.3**	**-0.2**
COVE				IAML		07 11 57.3	
	comp=Z,160nm,1.0s						
ORTG	**Ortega, Santa**	**2.06**	**303**	*i* P	**Pn**	**07 11 29.4**	**+0.5**
ORTG				IAML		07 13 41.9	
	comp=Z,100nm,1.0s						
SAJU	**San Juanillo,**	**2.15**	**292**	*i* P	**Pb**	**07 11 33.1**	**-1.3**
SAJU				*i* S	**Sn**	**07 11 55.5**	**-0.2**
SAJU				IAML		07 12 08.8	
	comp=Z,38nm,1.0s						

*SNET **25** 07:43:29.7±0.7, 12°.92N×88°.74W, h36^{km}±63^{km}, ML3.3*
*CATAC **25** 07:43:29.2±0.5, 12°.89N×88°.71W, h38^{km}±6^{km}, ML3.6*
ISC 25 07:43:28.9±1.8, 12°.84N±0°.06×88°.74W±0°.04, h34^{km}±3^{km}, n58, σ0°.52/68, 1C-10D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.51**	**19**	*e*P	Pb	07 43 31.0	-8.7
ALJI				*e*S	Sb	07 43 39.3	-7.9
JUCU	**Jucuar¡n**	**0.63**	**49**	*e*P	**Pb**	**07 43 41.5**	**-0.2**
JUCU				*e*S	**Sb**	**07 43 50.8**	**+0.3**
JUCU				IAML		07 43 57.0	
	comp=Z,2μm,0.3s						
TECA	**Tecapa**	**0.69**	**20**	*e*P	**Pn**	**07 43 42.6**	**+0.1**
TECO	**Alcaldia de Te**	**0.70**	**357**	*e*P	**Pn**	**07 43 42.2**	**-0.1**
TECO	**Alcaldia de Te**	**0.70**	**357**	*i* S	**Sb**	**07 43 51.5**	**-0.7**
LCY	**Lacayo**	**0.73**	**37**	*e*P	**Pn**	**07 43 42.9**	**0.0**
RANC	**El Ranchito**	**0.74**	**37**	*i* S	**Sb**	**07 43 53.7**	**+0.2**
PACA	**Pacayal**	**0.75**	**33**	*e*P	**Pn**	**07 43 43.3**	**+0.1**
PACA	**Pacayal**	**0.75**	**33**	*i* S	**Sb**	**07 43 54.2**	**+0.5**
BLLM	**Bellamira**	**0.78**	**39**	*e*P	**Pn**	**07 43 43.5**	**0.0**
COEG	**Centro de Oper**	**0.79**	**350**	*e*P	**Pn**	**07 43 43.4**	**-0.3**
COEG				IAML		07 44 00.9	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**0.79**	**350**	*i* S	**Sn**	**07 43 54.4**	**+0.1**
UESV	**Universidad de**	**0.80**	**357**	*i* S	**Sn**	**07 43 54.6**	**+0.2**
PQSS	**Presa 15 de Se**	**0.80**	**13**	*e*P	**Pn**	**07 43 43.8**	**0.0**
PQSS	**Presa 15 de Se**	**0.80**	**13**	*i* S	**Sn**	**07 43 55.1**	**+0.6**
SJTE	**Alcalda de S**	**0.81**	**342**	*e*P	**Pn**	**07 43 43.8**	**-0.3**
SJTE	**Alcalda de S**	**0.81**	**342**	*i* S	**Sn**	**07 43 54.3**	**-0.7**
LFRS	**El Faro**	**0.84**	**338**	*e*P	**Pn**	**07 43 43.3**	**-0.1**
LFRS				*e*S	**Sn**	**07 43 55.3**	**-0.4**
CNRM	**Centro Naciona**	**0.84**	**41**	*i* S	**Sn**	**07 43 56.4**	**+0.9**
SCLA	**Alcaldia de Sa**	**0.86**	**1**	*e*P	**Pn**	**07 43 44.8**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.86**	**1**	*i* S	**Sn**	**07 43 56.5**	**+0.5**
PANCS	**Alcalda de**	**0.88**	**331**	*i* P	**Pn**	**07 43 44.8**	**-0.1**
PANCS				*i* S	**Sn**	**07 43 55.6**	**-1.0**
PANCS				IAML		07 43 59.0	
	comp=Z,2μm,1.0s						
PAVA	**Las Pavas**	**0.89**	**348**	*e*P	**Pn**	**07 43 45.1**	**-0.1**
PAVA	**Las Pavas**	**0.89**	**348**	*i* S	**Sn**	**07 43 57.0**	**+0.1**
LOMA	**Loma Larga**	**0.91**	**332**	*e*P	**Pn**	**07 43 45.4**	**+0.1**
LOMA				*e*S	**Sn**	**07 43 57.1**	**-0.2**
LCND	**La Caada**	**0.95**	**60**	*e*P	**Pn**	**07 43 45.9**	**0.0**
LCND				*e*S	**Sn**	**07 43 58.5**	**+0.2**
LCND				IAML		07 44 01.0	
	comp=Z,1μm,0.3s						
UDBS	**Universidad Do**	**0.96**	**335**	*i* S	**Sn**	**07 43 58.4**	**-0.2**
IGN	**Direccin Gen**	**0.97**	**334**	*i* P	**Pn**	**07 43 46.3**	**+0.2**
IGN				*i* S	**Sn**	**07 43 58.2**	**-0.5**
IGN				IAML		07 44 00.6	
	comp=Z,4μm,1.0s						
SNET	**Serv Nac Est T**	**0.97**	**331**	*i* P	**Pn**	**07 43 47.0**	**+0.8**
SNET				*i* S	**Sn**	**07 43 58.5**	**-0.3**
SNET				IAML		07 43 59.2	
	comp=Z,2μm,1.0s						
SEMO	**Seminario San**	**0.98**	**331**	*i* P	**Pn**	**07 43 47.0**	**+0.7**
SEMO				IAML		07 44 07.0	
	comp=Z,2μm,1.0s						
UEES	**Universidad Ev**	**1.00**	**331**	*i* S	**Sn**	**07 43 59.6**	**0.0**
PIC2	**El Picacho**	**1.03**	**331**	*e*P	**Pn**	**07 43 47.5**	**+0.3**
PMON	**Piamonte**	**1.03**	**327**	*i* P	**Pn**	**07 43 47.1**	**0.0**
PMON				IAML		07 44 04.1	
	comp=Z,910nm,1.0s						
JAYA	**Jayaque - finc**	**1.06**	**320**	*e*P	**Pn**	**07 43 47.5**	**-0.1**
JAYA				IAML		07 44 02.9	
	comp=Z,501nm,0.1s						
JAYA	**Jayaque - finc**	**1.06**	**320**	*i* S	**Sn**	**07 44 01.0**	**-0.3**
QUEZ	**Alcaldia de Qu**	**1.12**	**333**	*i* P	**Pn**	**07 43 48.2**	**0.0**
QUEZ				*i* S	**Sn**	**07 44 02.4**	**0.0**
QUEZ				IAML		07 44 11.3	
	comp=Z,2μm,1.0s						
AMPH	**Amapala**	**1.15**	**67**	*e*P	**Pn**	**07 43 48.5**	**0.0**
AMPH	**Amapala**	**1.15**	**67**	*i* P	**Pn**	**07 43 48.6**	**+0.1**
AMPH				*i* S	**Sn**	**07 44 03.8**	**+0.8**
CEDA	**San Andres**	**1.15**	**327**	*i* P	**Pn**	**07 43 48.8**	**+0.2**
CEDA				*i* S	**Sn**	**07 44 03.2**	**-0.1**
CEDA				IAML		07 44 20.9	
	comp=Z,850nm,1.0s						
CSGN	**Cosiguina Volc**	**1.16**	**83**	*i* P	**Pn**	**07 43 49.1**	**+0.3**
CSGN				IAML		07 44 16.9	
	comp=Z,2μm,1.0s						
POTN	**Potosi Cosigui**	**1.22**	**82**	*i* S	**Sn**	**07 44 03.9**	**-0.8**
CEVE	**Cerro Verde**	**1.31**	**319**	*e*P	**Pn**	**07 43 51.5**	**+0.5**
CEVE	**Cerro Verde**	**1.31**	**319**	*i* P	**Pn**	**07 43 53.5**	**+2.5**
UNIC	**Universidad Ca**	**1.38**	**325**	*i* S	**Sn**	**07 44 09.1**	**+0.1**
NUBE	**Las Nubes**	**1.46**	**316**	*e*P	**Pn**	**07 43 53.1**	**0.0**
NUBE	**Las Nubes**	**1.46**	**316**	*i* S	**Sn**	**07 44 10.7**	**-0.4**
INTHN	**La Esperanza I**	**1.59**	**23**	*i* P	**Pn**	**07 43 54.5**	**-0.4**
CRIN	**San Cristobal**	**1.66**	**95**	*i* P	**Pn**	**07 43 56.5**	**+0.9**
CRIN				IAML		07 44 22.6	
	comp=Z,1μm,1.0s						
PKGN	**Cerro Pekin**	**1.73**	**95**	*i* S	**Sn**	**07 44 17.9**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.87**	**49**	*i* P	**Pn**	**07 43 58.6**	**-0.1**
TGUH				IAML		07 44 05.8	
	comp=Z,210nm,1.0s						
HERN	**Volcan Telica**	**1.88**	**97**	*i* S	**Sn**	**07 44 20.3**	**-0.9**
PLRN	**Geotermica Pol**	**1.94**	**97**	*i* P	**Pn**	**07 43 59.4**	**-0.1**
PLRN				IAML		07 44 26.2	
	comp=Z,270nm,1.0s						
MACN	**El Madrono**	**2.05**	**100**	*i* S	**Sn**	**07 44 24.6**	**-0.8**
COPN	**Copaltepe**	**2.20**	**107**	*i* P	**Pn**	**07 44 03.1**	**+0.1**
COPN				IAML		07 44 37.8	
	comp=Z,180nm,1.0s						
LIMN	**Finca el Limon**	**2.33**	**84**	*i* S	**Sn**	**07 44 31.9**	**-0.4**
SAPS	**Ciudad Sandino**	**2.38**	**106**	*i* P	**Pn**	**07 44 06.0**	**+0.5**
SAPS				*i* S	**Sn**	**07 44 33.1**	**-0.3**
SAPS				IAML		07 44 39.2	
	comp=Z,300nm,1.0s						
MATN	**Matagalpa**	**2.75**	**88**	*i* P	**Pn**	**07 44 10.6**	**0.0**
MATN				IAML		07 44 10.8	
	comp=Z,48nm,1.0s						
BOAB	**BOACO BROADBAN**	**3.03**	**97**	*i* P	**Pn**	**07 44 14.2**	**-0.2**
BOAB				IAML		07 45 06.8	
	comp=Z,25nm,1.0s						

*SJA **25** 07:46:09.9±0.7, 22°.05S×68°.76W, h120^{km}±3^{km}, ML4.2, MW3.9*
*IDC **25** 07:46:12.0±0.7, 22°.12S×68°.72W, h103^{km}±5^{km}, mb3.4/4, mbtmp3.8/5, Error ellipse: s-maj=30.2km s-min=14.3km az=94.0*
*GUC **25** 07:46:12.3±0.7, 22°.01S×68°.80W, h111^{km}±3^{km}, ML4.0*
ISC 25 07:46:11.2±0.7, 22°.01S±0°.03×68°.71W±0°.05, h112^{km}±5^{km}, n40, σ1°.55/73, mb3.8/4, 2C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.53**	**293**	*e*P	**Pn**	**07 46 29.0**	**+0.2**
PB09				*e*S	**Sn**	**07 46 42.6**	**+0.7**
PB09	**IPOC Station P**	**0.53**	**293**	*i*P	**Pn**	**07 46 29.0**	**+0.2**
PB09				*e*S	**Sn**	**07 46 41.0**	**-0.9**
PB09				IAML		07 46 42.2	
	comp=N,3μm,0.4s						
LVC	**Limon Verde**	**0.63**	**197**	*e*P	**Pn**	**07 46 29.5**	**-0.2**
LVC				*e*S	**Sn**	**07 46 43.5**	**0.0**
LVC	**Limon Verde**	**0.63**	**197**	P	**Pn**	**07 46 29.6**	**0.0**
	comp=N,436nm,0.4s,baz=27,slow=7.4,SNR=1060						
LVC				S	**Sn**	**07 46 42.7**	**-0.9**
	comp=N,736nm,0.5s,baz=198,slow=19,SNR=150						
LVC	**Limon Verde**	**0.63**	**197**	*e*P	**Pn**	**07 46 29.4**	**-0.2**
LVC				*e*S	**Sn**	**07 46 41.9**	**-1.6**
LVC				IAML		07 46 43.6	
	comp=N,7μm,0.6s						
PB06	**IPOC Station P**	**1.06**	**229**	*e*P	**Pn**	**07 46 32.9**	**-0.5**
PB06				*e*S	**Sn**	**07 46 50.7**	**+0.7**
PB06	**IPOC Station P**	**1.06**	**229**	*i*P	**Pn**	**07 46 33.5**	**+0.2**
PB06				*e*S	**Sn**	**07 46 49.5**	**-0.6**
PB06				IAML		07 46 50.7	
	comp=N,2μm,0.6s						
AF01	**San Pedro de A**	**1.06**	**152**	*i*P	**Pn**	**07 46 34.6**	**+1.0**
AF01				*e*S	**Sn**	**07 46 51.7**	**+1.2**
AF01				IAML		07 46 54.8	
	comp=E,4μm,0.6s						
PB07	**IPOC Station P**	**1.12**	**284**	*e*P	**Pn**	**07 46 33.5**	**-0.6**
PB07				*e*S	**Sn**	**07 46 51.5**	**+0.2**
PB07				IAML		07 46 52.6	
	comp=Z,3μm,0.3s						
PB07	**IPOC Station P**	**1.12**	**284**	*i*P	**Pn**	**07 46 34.2**	**+0.1**
PB07				*e*S	**Sn**	**07 46 50.6**	**-0.8**
PB07				IAML		07 46 51.8	
	comp=E,7μm,0.3s						
PB01	**IPOC Station P**	**1.20**	**323**	*e*P	**Pn**	**07 46 35.0**	**+0.1**
PB01				*e*S	**Sn**	**07 46 53.5**	**+0.9**
PB01				IAML		07 46 54.7	
	comp=Z,3μm,0.2s						
PB01	**IPOC Station P**	**1.20**	**323**	*i*P	**Pn**	**07 46 35.0**	**+0.1**
PB01				*e*S	**Sn**	**07 46 52.5**	**-0.2**
PB01				IAML		07 46 54.0	
	comp=E,4μm,0.2s						
PB02	**IPOC Station P**	**1.29**	**302**	*e*P	**Pn**	**07 46 35.9**	**0.0**
PB02				*e*S	**Sn**	**07 46 54.5**	**-0.1**
PB02				IAML		07 46 57.1	
	comp=Z,6μm,0.3s						
PB02	**IPOC Station P**	**1.29**	**302**	*i*P	**Pn**	**07 46 35.9**	**0.0**
PB02				*e*S	**Sn**	**07 46 53.9**	**-0.7**
PB02				IAML		07 46 55.5	
	comp=N,6μm,0.4s						
PB04	**IPOC Station P**	**1.37**	**256**	*e*P	**Pn**	**07 46 36.1**	**-0.7**
PB04				*e*S	**Sn**	**07 46 56.0**	**-0.3**
PB04				IAML		07 46 58.9	
	comp=Z,1μm,0.3s						
PB04	**IPOC Station P**	**1.37**	**256**	*i*P	**Pn**	**07 46 36.7**	**-0.2**
PB04				*e*S	**Sn**	**07 46 55.1**	**-1.1**
PB04				IAML		07 47 00.4	
	comp=E,2μm,0.8s						
PB15	**IPOC Station P**	**1.39**	**210**	*e*P	**Pn**	**07 46 37.1**	**0.0**
PB15				*e*S	**Sn**	**07 46 57.4**	**+0.7**
PB15				IAML		07 47 03.5	
	comp=Z,3μm,0.3s						
PB15	**IPOC Station P**	**1.39**	**210**	*e*P	**Pn**	**07 46 37.5**	**+0.4**
PB15				*e*S	**Sn**	**07 46 56.9**	**+0.3**
PATCX	**Punta Patache**	**1.79**	**311**	*e*P	**Pn**	**07 46 41.8**	**+0.1**
PATCX				*e*S	**Sn**	**07 47 04.9**	**-0.1**
PATCX				IAML		07 47 07.0	
	comp=E,3μm,0.2s						
PB08	**IPOC Station P**	**1.90**	**347**	*e*P	**Pn**	**07 46 44.1**	**+0.6**
PB08				*e*S	**Sn**	**07 47 10.4**	**+2.3**
PB08	**IPOC Station P**	**1.90**	**347**	*i*P	**Pn**	**07 46 44.8**	**+1.3**
PB08				*e*S	**Sn**	**07 47 09.7**	**+1.7**
PB08				IAML		07 47 11.5	
	comp=N,1μm,0.3s						
TA01	**Diego Aracena**	**1.98**	**316**	*e*P	**Pn**	**07 46 44.0**	**-0.2**
TA01				*e*S	**Sn**	**07 47 09.8**	**+0.7**
TA01				IAML		07 47 10.3	
	comp=Z,2μm,0.3s						
TA01	**Diego Aracena**	**1.98**	**316**	*e*P	**Pn**	**07 46 43.9**	**-0.2**
TA01				*e*S	**Sn**	**07 47 08.8**	**-0.4**
TA02	**Huaiquique**	**2.18**	**322**	*e*P	**Pn**	**07 46 46.7**	**+0.1**
TA02				*e*S	**Sn**	**07 47 14.0**	**+0.4**
TA02				IAML		07 47 16.4	
	comp=Z,2μm,0.1s						
GO01	**Chusmiza**	**2.37**	**349**	*e*P	**Pn**	**07 46 49.9**	**+0.4**
GO01				*e*S	**Sn**	**07 47 21.2**	**+2.4**
PB11	**IPOC Station P**	**2.40**	**338**	*e*P	**Pn**	**07 46 49.6**	**-0.1**
PB11				*e*S	**Sn**	**07 47 19.8**	**+0.7**
PB11				IAML		07 47 23.0	
	comp=Z,944nm,0.2s						
YJA	**Yavi**	**2.97**	**94**	*e*P	**Pn**	**07 47 00.5**	**+3.2**
GO02	**Mina Guanaco**	**3.24**	**194**	*e*P	**Pn**	**07 47 00.2**	**-0.6**
GO02				*e*S	**Sn**	**07 47 40.1**	**+1.1**
PB12	**IPOC Station P**	**3.70**	**336**	*e*P	**Pn**	**07 47 05.3**	**-1.5**
PB12				*e*S	**Sn**	**07 47 47.5**	**-2.2**
PB12				IAML		07 47 51.2	
	comp=Z,206nm,0.3s						
PB16	**IPOC Station P**	**3.73**	**348**	*e*P	**Pn**	**07 47 07.9**	**+0.4**
PB16				*e*S	**Sn**	**07 47 49.6**	**-1.5**

PB16				*e*S		07 47 50.1	
AC01	**Pan de Azucar**	**4.47**	**202**	*e*P	**Pn**	**07 47 15.0**	**-2.0**
AC01				*e*S	**Sn**	**07 48 04.2**	**-3.8**
AC02	**Maricunga**	**4.82**	**184**	*e*P	Pn	07 47 01.6	-21
SIV	**San Ignacio**	**9.38**	**52**	P	**Pn**	**07 48 21.9**	**-1.7**
	comp=Z,2.1nm,0.5s,baz=240,slow=8.3,SNR=25						
SIV				S	**Sn**	**07 49 59.1**	**-8.2**
	comp=Z,0.7nm,0.6s,baz=292,slow=22,SNR=1.4						
CPUP	**Villa Florida**	**11.25**	**115**	P	**Pn**	**07 48 45.7**	**-3.0**
	comp=Z,0.8nm,0.8s,baz=313,slow=18,SNR=2.0						
PLCA	**Paso Flores**	**18.73**	**184**	P	**Pn**	**07 50 21.6**	**-1.4**
	comp=Z,2.9nm,1.0s,baz=345,slow=9.6,SNR=7.9						
TXAR	**Lajitas Array**	**61.15**	**325**	P	**P**	**07 56 15.6**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=153,slow=6.1,SNR=1.9						
TXAR				pP	**pP**	**07 56 41.9**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=128,slow=8.2,SNR=2.0						
	comp=Z,0.2nm,0.5s						
QSPA	**South Pole Qui**	**68.19**	**180**	P	**P**	**07 57 01.6**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=219,slow=6.5,SNR=9.8						
	comp=Z,1.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.35**	**70**	P	**P**	**07 57 54.5**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=253,slow=5.6,SNR=1.1						
	comp=Z,1.4nm,0.5s						
YKA	**Yellowknife Ar**	**91.72**	**341**	P	**P**	**07 59 07.2**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=129,slow=4.9,SNR=3.2						
YKA				pP	**pP**	**07 59 34.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=130,slow=4.7,SNR=5.4						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**145.93**	**36**	PKPbc	**PKiKP**	**08 05 39.6**	**-1.5**
	comp=Z,0.1nm,0.4s,baz=323,slow=2.9,SNR=2.0						
MKAR				pPKPbc	**pPKPdf**	**08 06 08.8**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=274,slow=2.3,SNR=4.1						

*NEIC **25** 08:04:52.1±0.2, 36°.76N±0°.01×97°.53W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=2.2km az=188.0*
TUL 25 08:04:52.2±0.3, 36°.756N±0°.008×97°.53W±0°.01, h8^{km}±10^{km}, ML3.0, mb_Lg2.7/63(NEIC), ML2.9/46(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=94.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLOK	**Blackwell**	**0.25**	**89**	Pg	Pg	08 04 57.5	+0.3
BLOK				Sg	Sg	08 05 01.1	+0.6
BLOK				IAML		08 05 06.4	
	comp=N,2μm,0.2s						
KAN13	**South Haven SW**	**0.26**	**8**	Pg	Pg	08 04 57.8	+0.4
KAN13				Sg	Sg	08 05 01.8	+0.9
KAN13				IAML		08 05 05.0	
	comp=N,2μm,0.2s						
KAN13				IAML		08 05 05.8	
	comp=E,2μm,0.3s						
GC02	**Grant County #**	**0.28**	**290**	Pg	Pg	08 04 58.1	+0.2
GC02				Sg	Sg	08 05 02.2	+0.5
KAN17	**Caldwell West**	**0.35**	**326**	Pg	Pg	08 04 59.3	+0.3
KAN17				Sg	Sg	08 05 04.2	+0.6
KAN17				IAML		08 05 04.4	
	comp=E,2μm,0.3s						
KAN17				IAML		08 05 04.4	
	comp=N,2μm,0.3s						
KAN09	**Caldwell North**	**0.39**	**349**	Pg	Pg	08 05 00.1	+0.3
KAN09				Sg	Sg	08 05 05.6	+0.7
KAN09				IAML		08 05 08.2	
	comp=N,1μm,0.2s						
KAN09				IAML		08 05 13.2	
	comp=E,1μm,0.2s						
KAN14	**Manchester OK**	**0.41**	**300**	Pg	Pg	08 05 00.3	+0.2
KAN14				IAML		08 05 06.0	
	comp=N,1μm,0.2s						
KAN01	**Argonia South**	**0.44**	**335**	Pg	Pg	08 05 01.0	+0.3
KAN01				IAML		08 05 10.8	
	comp=E,817nm,0.1s						
KAN05	**Bluff City Nor**	**0.45**	**322**	Pg		08 05 01.2	+0.2
KAN05				IAML		08 05 08.6	
	comp=E,1μm,0.2s						
KAN05				IAML		08 05 09.3	
	comp=N,1μm,0.2s						
KS21	**Milan North St**	**0.54**	**348**	Pg	Pg	08 05 02.9	+0.2
OK032	**Salt Plains WL**	**0.55**	**275**	Pg	Pg	08 05 02.9	0.0
OK032				IAML		08 05 14.5	
	comp=N,847nm,0.2s						
KAN06	**Argonia West S**	**0.56**	**332**		Pg	08 05 03.2	+0.1
KAN06				IAML		08 05 12.4	
	comp=E,596nm,0.1s						
KAN06				IAML		08 05 14.4	
	comp=N,840nm,0.1s						
OK048	**Pawnee

comp=Z,12nm,0.9s
POST Post 4.92 223 IAmb_Lg 08 07 38.7
comp=Z,11nm,0.7s
237A Washetta, Mont 4.95 163 IAmb_Lg 08 07 41.1
comp=Z,12nm,1.0s
P40A Paris 5.13 56 IAmb_Lg 08 07 47.4
comp=Z,14nm,0.7s
CCM Cathedral Cave 5.17 74 IAmb_Lg 08 07 38.4
comp=Z,13nm,0.8s
LCAR Lake Charles 5.18 96 IAmb_Lg 08 07 42.0
comp=Z,16nm,1.2s
Z41A Richland Creek 5.21 131 IAmb_Lg 08 07 47.5
comp=Z,12nm,1.0s
NATX Nacogdoches 5.52 154 IAmb_Lg 08 08 00.8
comp=Z,16nm,1.2s
T25A Trinidad 5.53 276 IAmb_Lg 08 07 56.4
comp=Z,11nm,0.8s
SGCY Sterling City 5.67 213 IAmb_Lg 08 08 06.1
comp=Z,15nm,0.9s
PBMO Poplar Bluff 5.70 88 IAmb_Lg 08 07 59.2
comp=Z,13nm,0.7s
FVM French Village 5.79 76 IAmb_Lg 08 07 56.2
comp=Z,12nm,0.8s
435B Jarrell 5.96 180 IAmb_Lg 08 08 02.0
comp=Z,8.1nm,0.8s
CGM3 Cape Girardeau 6.32 83 IAmb_Lg 08 08 11.8
comp=Z,7.0nm,0.7s
JCT Junction City 6.54 198 IAmb_Lg 08 08 26.7
comp=Z,12nm,1.0s
HNDO Hondo 7.36 192 IAmb_Lg 08 08 54.4
comp=Z,6.2nm,0.8s
N23A Red Feather La 7.76 305 IAmb_Lg 08 09 10.0
comp=Z,9.0nm,0.9s
ALPN Alpine 8.15 220 IAmb_Lg 08 09 32.9
comp=Z,5.7nm,0.7s

IDC ***25*** *08:16:28.0±1.2, 46˚.20N×12˚.64E, h0km, mb3.4/7, mbtmp3.4/13, ML3.6/6, MS3.0/2, Error ellipse: s-maj=16.1km s-min=10.8km az=180.0*
ROM ***25*** *08:16:29.3±0.0, 46˚.376N±0˚.002×12˚.594E±0˚.003, h8km, ML3.8/246, Error ellipse: s-maj=0.2km s-min=0.1km az=339.0*
VIE ***25*** *08:16:29.9±0.1, 46˚.37N×12˚.59E, h4km, mb3.6/22, ml4.1/21, Error ellipse: s-maj=1.0km s-min=0.8km az=3.0*
BEO ***25*** *08:16:30.8±0.9, 46˚.39N×12˚.55E, h8km±4km, ML3.7/6*
LDG ***25*** *08:16:30.1±0.3, 46˚.39N×12˚.59E, h2km, Ml3.9/41, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
RHSSO ***25*** *08:16:31.0±0.6, 46˚.32N×12˚.60E, h8km±3km, ML3.9/11*
PRU ***25*** *08:16:31.4, 46˚.43N×12˚.66E, h1km*
BGR ***25*** *08:16:33.8±0.3, 46˚.48N×12˚.60E, h10km, ML4.0/6, Error ellipse: s-maj=7.8km s-min=4.4km az=3.0*
BNS ***25*** *08:16:34.1±0.3, 46˚.38N×12˚.51E, h10km, ML3.8*
ISC 25 08:16:30.3±0.7, 46˚.38N±0˚.01×12˚.58E±0˚.01, h13km±4km, n293, σ1§65/456, mb3.4/7, 36C-34D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CIMO	**Cimolais**	**0.12**	**235**	⇑*i*	Pg	**Pg**		**08 16 32.6**	**-1.0**
CIMO				*i*	Sg	**Sg**		**08 16 34.5**	**-1.3**
CIMO	**Cimolais**	**0.12**	**235**	P		**Pg**		**08 16 32.5**	**-1.0**
CIMO				S		**Sg**		**08 16 34.5**	**-1.3**
CIMO	comp=N,67750μm,0.3s			AML	AML				
CIMO	comp=E,24150μm,0.9s			AML	AML				
CIMO	comp=E,23850μm,0.9s			AML	AML				
CIMO	comp=E,24150μm,1.1s			AML	AML				
CIMO	comp=N,68450μm,0.3s			AML	AML				
CSMI	**Casera Mimoias**	**0.15**	**21**	⇓*e*Pg		**Pg**		**08 16 33.4**	**-0.7**
CSMI				*e*Sg		**Sg**		**08 16 35.9**	**-0.8**
STAL	**STALIGIAL**	**0.15**	**141**	⇓P		**Pg**		**08 16 33.0**	**-1.0**
STAL				S		**Sg**		**08 16 35.5**	**-1.1**
STAL	comp=E,88250μm,0.7s			AML	AML				
STAL	comp=E,66600μm,0.2s			AML	AML				
STAL	comp=E,23850μm,1.1s			AML	AML				
CLUD	**Cludinico**	**0.23**	**69**	⇑*e*Pg		**Pg**		**08 16 34.4**	**-0.8**
CLUD				*e*Sg		**Sg**		**08 16 38.1**	**-0.6**
CLUD	**Cludinico**	**0.23**	**69**	P		**Pg**		**08 16 34.4**	**-0.8**
CLUD				S		**Sg**		**08 16 38.0**	**-0.6**
CLUD	comp=E,26750μm,0.4s			AML	AML				
CLUD	comp=N,34000μm,0.6s			AML	AML				
CLUD	comp=E,27350μm,0.4s			AML	AML				
CLUD	comp=N,33850μm,0.6s			AML	AML				
FVI	**Forni Avoltri**	**0.26**	**33**	P		**Pg**		**08 16 35.2**	**-0.7**
FVI				S		**Sg**		**08 16 39.2**	**-0.5**
FVI	comp=E,58700μm,0.9s			AML	AML				
FVI	comp=N,60050μm,0.3s			AML	AML				
APGO	**Alpago**	**0.27**	**213**	⇓*e*Pg		**Pg**		**08 16 35.4**	**-0.6**
APGO				*e*Sg		**Sg**		**08 16 39.5**	**-0.3**
FUSE	**Fusea**	**0.30**	**82**	⇑*e*Pg		**Pg**		**08 16 35.6**	**-0.9**
FUSE				*e*Sg		**Sg**		**08 16 40.2**	**-0.4**
MPRI	**Monte Prat**	**0.32**	**115**	⇓*e*Pg		**Pg**		**08 16 35.9**	**-0.9**
ZOU	**Zoufplan**	**0.33**	**56**	⇑*e*Pg		**Pg**		**08 16 36.4**	**-0.7**
ZOU				*e*Sg		**Sg**		**08 16 41.3**	**-0.4**
ZOU	**Zoufplan**	**0.33**	**56**	P		**Pg**		**08 16 36.5**	**-0.7**
ZOU				S		**Sg**		**08 16 41.6**	**-0.1**
ZOU	comp=E,16700μm,1.2s			AML	AML				
ZOU	comp=N,17350μm,1.0s			AML	AML				
ZOU	comp=N,17350μm,1.0s			AML	AML				
ZOU	comp=E,16600μm,1.2s			AML	AML				
ZOU	comp=N,17350μm,1.0s			AML	AML				
ZOU	comp=N,17350μm,1.0s			AML	AML				
ZOU	comp=E,16700μm,0.8s			AML	AML				
ZOU	comp=E,16600μm,0.8s			AML	AML				
POLC	**Polcenigo**	**0.35**	**189**	P		**Pg**		**08 16 37.1**	**-0.3**
POLC				S		**Sg**		**08 16 43.5**	**+1.2**
POLC	comp=N,24000μm,0.6s			AML	AML				
POLC	comp=E,34950μm,1.1s			AML	AML				
BOO	**Bordano**	**0.37**	**99**	⇓*e*Pg		**Pg**		**08 16 36.8**	**-0.9**
BOO				*e*Sg		**Sg**		**08 16 42.4**	**-0.3**
ABTA	**Abfaltersbach**	**0.37**	**353**	*i* Pg		**Pg**		**08 16 37.6**	**-0.3**
ABTA	comp=E,397nm,0.2s,SNR=871			*e*Sg		**Sg**		**08 16 42.9**	**-0.1**
AGOR	**Agordo**	**0.38**	**256**	⇓*e*Pg		**Pg**		**08 16 37.2**	**-0.7**
AGOR				*e*Sg		**Sg**		**08 16 43.4**	**+0.3**
AGOR	**Agordo**	**0.38**	**256**	P		**Pg**		**08 16 38.0**	**+0.1**
AGOR				S		**Sg**		**08 16 43.7**	**+0.6**
FRE8	**Fregona**	**0.39**	**203**	⇑P		**Pg**		**08 16 37.3**	**-0.9**
FRE8				S		**Sg**		**08 16 44.2**	**+0.7**
GEPF	**Gemona**	**0.40**	**104**	⇓P		**Pg**		**08 16 37.5**	**-0.8**
GEPF				S		**Sg**		**08 16 44.0**	**+0.2**
GEPF	comp=E,51850μm,0.4s			AML	AML				
GEPF	comp=N,40300μm,0.2s			AML	AML				
BUA	**Buia**	**0.41**	**112**	⇑*e*Pg		**Pg**		**08 16 37.9**	**-0.6**
BUA				*e*Sg		**Sg**		**08 16 44.2**	**+0.2**
PLRO	**Paularo**	**0.43**	**66**	⇑*e*Pg		**Pg**		**08 16 38.2**	**-0.8**
PLRO				*e*Sg		**Sg**		**08 16 44.6**	**-0.2**
FAU	**Forcella Aurin**	**0.44**	**251**	⇑*e*Pg		**Pg**		**08 16 38.2**	**-0.9**
FAU				*e*Sg		**Sg**		**08 16 45.3**	**+0.4**
BAD	**Bernadia**	**0.48**	**107**	⇓*e*Pg		**Pg**		**08 16 38.9**	**-0.9**
BAD				*e*Sg		**Sg**		**08 16 46.1**	**-0.2**
VINO	**Villanova**	**0.50**	**103**	P		**Pg**		**08 16 39.2**	**-1.0**
VINO				S		**Sg**		**08 16 47.0**	**+0.1**
PTCC	**Patocco-Chiusa**	**0.54**	**87**	P		**Pg**		**08 16 40.1**	**-0.8**
PTCC				S		**Sg**		**08 16 48.1**	**0.0**
PTCC	comp=N,12150μm,0.5s			AML	AML				
PTCC	comp=E,10900μm,0.5s			AML	AML				
TLI	**Talmassons**	**0.58**	**141**	⇑*e*Pg		**Pg**		**08 16 40.9**	**-0.8**
COLI	**Coloredo**	**0.61**	**113**	⇓*e*Pg		**Pg**		**08 16 41.2**	**-1.0**
COLI				*e*Sg		**Sg**		**08 16 50.7**	**+0.5**
CRND	**Cornuda**	**0.64**	**213**	P		**Pg**		**08 16 42.3**	**-0.5**
CRND				S		**Sg**		**08 16 52.5**	**+1.2**
ROBS	**Robic**	**0.66**	**101**	*i* Pg		**Pg**		**08 16 41.6**	**-1.6**
ROBS				*i* Sg		**Sg**		**08 16 52.0**	**+0.1**
ROBS	comp=Z,415nm,0.2s			IAML				08 16 56.5	
BRES	**Bressanone**	**0.67**	**299**	P		**Pg**		**08 16 42.9**	**-0.4**
BRES				S		**Sg**		**08 16 52.3**	**+0.2**
BRES	comp=E,6480μm,0.3s			AML	AML				
BRES	comp=N,8065μm,1.0s			AML	AML				
LSR	**Lussari**	**0.67**	**81**	⇑*e*Pg		**Pg**		**08 16 42.3**	**-1.1**
LSR				*e*Sg		**Sg**		**08 16 52.4**	**+0.2**
ACOM	**Acomizza, Ital**	**0.67**	**75**	⇑*e*Pg		**Pg**		**08 16 42.5**	**-0.9**
ACOM				*e*Sg		**Sg**		**08 16 52.4**	**+0.1**
ACOM	**Acomizza, Ital**	**0.67**	**75**	⇑P		**Pg**		**08 16 42.6**	**-0.9**
ACOM				S		**Sg**		**08 16 52.4**	**+0.1**
ACOM	comp=E,18300μm,0.5s			AML	AML				
ACOM	comp=E,18250μm,0.3s			AML	AML				
ACOM	comp=N,26450μm,0.4s			AML	AML				
ACOM	comp=N,27200μm,0.4s			AML	AML				
PRED	**Cave del Predi**	**0.69**	**84**	⇑*e*Pg		**Pg**		**08 16 42.6**	**-1.1**
PRED				*e*Sg		**Sg**		**08 16 52.7**	**-0.1**
ZIAN	**Ziano**	**0.71**	**262**	⇓*e*Pg		**Pg**		**08 16 43.8**	**-0.3**
ZIAN	**Ziano**	**0.71**	**262**	P		**Pg**		**08 16 43.9**	**-0.2**
ZIAN				S		**Sg**		**08 16 53.8**	**+0.3**
ZIAN	comp=E,8950μm,0.6s			AML	AML				
ZIAN	comp=N,8495μm,0.6s			AML	AML				
ZIAN	comp=E,8955μm,0.6s			AML	AML				
ZIAN	comp=N,8125μm,1.0s			AML	AML				
ZIAN	comp=E,8310μm,1.0s			AML	AML				
CTI	**Castel Tesino**	**0.72**	**243**	P		**Pg**		**08 16 43.5**	**-0.9**
CTI				S		**Sg**		**08 16 54.4**	**+0.5**
CTI	comp=E,15900μm,0.2s			AML	AML				
CTI	comp=N,16650μm,1.0s			AML	AML				
CTI	comp=N,16650μm,1.0s			AML	AML				
ASOL	**Asolo**	**0.74**	**219**	P		**Pg**		**08 16 44.5**	**-0.2**
DRE	**Drenchia**	**0.77**	**105**	⇑*e*Pg		**Pg**		**08 16 43.9**	**-1.4**
DRE				*e*Sg		**Sg**		**08 16 56.0**	**+0.7**
MYKA	**Terra Mystica**	**0.78**	**71**	*e*Pg		**Pg**		**08 16 44.3**	**-1.2**
MYKA	comp=N,155nm,0.2s,SNR=157			*e*Sg		**Sg**		**08 16 55.2**	**-0.5**
MYKA	comp=N,166nm,0.1s			AML	AML				
SABO	**M.te Sabotino**	**0.81**	**119**	⇓*e*Pg		**Pg**		**08 16 45.2**	**-0.8**
SABO	**M.te Sabotino**	**0.81**	**119**	P		**Pg**		**08 16 45.4**	**-0.7**
SABO	comp=E,44300μm,0.6s			AML	AML				
SABO	comp=E,9970μm,0.6s			AML	AML				
SABO	comp=N,11970μm,0.3s			AML	AML				
SABO	comp=E,9970μm,1.4s			AML	AML				
SABO	comp=E,44300μm,1.4s			AML	AML				
SABO	comp=N,42350μm,0.8s			AML	AML				
CADS	**Cadrg**	**0.82**	**100**	*i* Pg		**Pg**		**08 16 44.3**	**-1.9**
CADS				*i* Sg		**Sg**		**08 16 57.0**	**+0.1**
CADS	comp=Z,1μm,0.3s			IAML				08 17 00.5	
BOSI	**Bolzano**	**0.88**	**278**	⇑P		**Pg**		**08 16 47.2**	**-0.1**
BOSI	comp=N,10750μm,1.3s			AML	AML				
BOSI	comp=E,9795μm,0.5s			AML	AML				
BOSI	comp=N,10750μm,0.7s			AML	AML				
KBA	**Koelnbreinsper**	**0.88**	**37**	*e*Pg		**Pg**		**08 16 46.6**	**-0.8**
KBA	comp=N,245nm,0.3s,SNR=71			*e*Sg		**Sg**		**08 16 58.1**	**-0.8**
KBA	comp=N,419nm,0.3s			AML	AML				
KBA	**Koelnbreinsper**	**0.88**	**37**	*e*Pg		**Pg**		**08 16 46.7**	**-0.6**
KBA				*e*Sg		**Sg**		**08 16 58.3**	**-0.6**
PANI	**Panarotta**	**0.92**	**250**	*e*P		**Pg**		**08 16 48.0**	**-0.2**
PANI	**Panarotta**	**0.92**	**250**	⇓*e*Pg		**Pg**		**08 16 48.0**	**-0.2**
PANI	**Panarotta**	**0.92**	**250**	⇑P		**Pg**		**08 16 48.0**	**-0.2**
PANI	comp=E,4890μm,0.3s			AML	AML				
PANI	comp=E,4890μm,1.7s			AML	AML				
PANI	comp=N,7215μm,0.6s			AML	AML				
VENL	**Venezia Lido**	**0.97**	**188**	⇑P		**Pb**		**08 16 50.2**	**+1.2**
VENL	comp=E,17550μm,1.1s			AML	AML				
VENL	comp=N,9330μm,0.3s			AML	AML				
VENL	comp=E,17550μm,0.9s			AML	AML				
VOJS	**Vojsko**	**0.97**	**110**	*i* Pg		**Pg**		**08 16 47.4**	**-1.7**
VOJS				*e*Sg		**Sb**		**08 17 02.3**	**+0.5**
VOJS	comp=Z,2μm,0.3s			IAML				08 17 06.7	
ROSI	**Rosskopf**	**0.97**	**305**	P		**Pg**		**08 16 48.8**	**-0.3**
ROSI	comp=E,4340μm,0.3s			AML	AML				
ROSI	comp=N,4765μm,0.3s			AML	AML				
GORS	**Gorjuse**	**0.98**	**93**	*i* Pg		**Pg**		**08 16 47.5**	**-1.9**
GORS	comp=Z,608nm,0.3s			IAML				08 17 07.8	
SANR	**Sandrigo**	**1.00**	**223**	P		**Pg**		**08 16 49.8**	**+0.3**
LESA	**Schwarzleotal**	**1.05**	**4**	*e*Pg		**Pg**		**08 16 49.8**	**-0.8**
LESA	comp=Z,196nm,0.1s			Sg		**Sg**		**08 17 03.8**	**-0.5**
WTTA	**Wattenberg**	**1.10**	**324**	*e*Pg		**Pg**		**08 16 51.2**	**-0.2**
WTTA	comp=Z,308nm,0.2s,SNR=173			*e*Sg		**Sg**		**08 17 05.8**	**-0.1**
WTTA	comp=Z,274nm,0.1s			AML	AML				
WTTA	**Wattenberg**	**1.10**	**324**	P		**Pg**		**08 16 51.2**	**-0.2**
WTTA				S		**Sg**		**08 17 05.7**	**-0.1**
WTTA	comp=E,4005μm,0.7s			AML	AML				
WTTA	comp=N,3330μm,0.3s			AML	AML				
WTTA	**Wattenberg**	**1.10**	**324**	*e*Pg		**Pg**		**08 16 51.3**	**-0.2**
WTTA				*e*Sg		**Sg**		**08 17 05.8**	**-0.1**
JAVS	**Javornik**	**1.14**	**114**	*e*Pg		**Pg**		**08 16 50.5**	**-1.8**
JAVS	comp=Z,1μm,0.3s			IAML				08 17 11.0	
WATA	**Walderalm**	**1.18**	**325**	*e*Pg		**Pg**		**08 16 52.7**	**-0.3**
WATA	comp=Z,276nm,0.2s,SNR=206			*e*Sg		**Sg**		**08 17 08.3**	**-0.1**
WATA	comp=Z,545nm,0.2s			AML	AML				
CRNS	**Crni Vrh**	**1.21**	**104**	*e*Pg		**Pg**		**08 16 51.2**	**-2.3**
CRNS				IAML				08 17 15.1	
SQTA	**Sankt Quirin**	**1.26**	**312**	*e*Pg		**Pn**		**08 16 54.1**	**+0.3**
SQTA	comp=Z,285nm,0.3s,SNR=217			Sg		**Sb**		**08 17 10.6**	**+0.4**
SQTA	comp=Z,233nm,0.2s			AML	AML				
SKDS	**Skadanscina**	**1.30**	**129**	*e*Pg		**Pn**		**08 16 54.5**	**+0.3**
SKDS				*e*Sg		**Sn**		**08 17 13.4**	**+2.0**
OBKA	**Obir**	**1.37**	**84**	*e*Pn		**Pn**		**08 16 54.9**	**-0.3**
OBKA	comp=Z,182nm,0.3s,SNR=49			Sg		**Sg**		**08 17 16.6**	**+2.1**
OBKA	**Obir**	**1.37**	**84**	*e*Pn		**Pn**		**08 16 54.7**	**-0.5**
OBKA				*e*Sg		**Sg**		**08 17 17.2**	**+2.7**
OBKA	**Obir**	**1.37**	**84**	⇑*i*Pg		**Pn**		**08 16 54.9**	**-0.3**
OBKA				*e*Sg		**Sn**		**08 17 14.4**	**+1.1**
LJU	**Ljubljana**	**1.40**	**103**	*e*Pg		**Pn**		**08 16 56.3**	**+0.8**
LJU				*e*Sg		**Sg**		**08 17 15.6**	**+0.4**
LJU	**Ljubljana**	**1.40**	**103**	P		**Pn**		**08 16 56.4**	**+1.0**
LJU	comp=N,43650μm,1.4s			AML	AML				
LJU	comp=E,41050μm,1.1s			AML	AML				
LJU	comp=N,43650μm,0.6s			AML	AML				
MOTA	**Moosalm**	**1.40**	**314**	*e*Pn		**Pn**		**08 16 56.4**	**+0.8**
MOTA	comp=N,125nm,0.4s,SNR=80			*e*Sg		**Sg**		**08 17 16.4**	**+0.9**
RONC	**Roncone**	**1.41**	**254**	AML	AML				
RONC	comp=E,11350μm,0.5s			AML	AML				
RONC	comp=N,12700μm,0.3s			AML	AML				
RONC	comp=N,9205μm,1.1s			AML	AML				
RONC	comp=E,8565μm,1.4s			AML	AML				
RONC	comp=E,8565μm,0.6s			AML	AML				
RONC	comp=N,9205μm,0.9s			AML	AML				
RONC	comp=N,12750μm,0.3s			AML	AML				
FETA	**Feichten**	**1.43**	**298**	*e*Pn		**Pn**		**08 16 56.9**	**+0.9**
FETA	comp=N,307nm,0.3s,SNR=159			Sn		**Sb**		**08 17 15.7**	**+0.8**
FETA	comp=N,193nm,0.3s			*e*Pg		**Pn**		**08 16 56.9**	**+0.8**
CEY	**Cerknica**	**1.44**	**116**	*e*Sg		**Sg**		**08 17 16.8**	**+0.2**
CEY				⇓*i*Pg		**Pn**		**08 16 55.5**	**-0.6**
CEY	**Cerknica**	**1.44**	**116**	*e*Sg		**Sb**		**08 17 15.8**	**+0.7**
CEY				*e*Pn		**Pn**		**08 16 58.0**	**+1.0**
BIOA	**Bad Ischl, Aus**	**1.50**	**29**	Sn		**Sb**		**08 17 18.1**	**+1.1**
BIOA	comp=N,136nm,0.4s,SNR=95			*e*Pg		**Pn**		**08 17 00.9**	**+1.7**
RETA	**Reutte**	**1.67**	**312**	Sg		**Sg**		**08 17 25.7**	**+1.7**
RETA	comp=N,146nm,0.3s,SNR=181			*e*Pn		**Pn**		**08 17 00.1**	**+0.7**
BRJN	**Brijuni**	**1.69**	**150**	P		**Pn**		**08 17 00.6**	**+1.2**
BRJN	**Brijuni**	**1.69**	**150**	*e*Pn		**Pn**		**08 17 00.3**	**+0.7**
RIY	**Rijeka**	**1.70**	**128**	*e*Pn		**Pn**		**08 17 00.1**	**+0.6**
RIY	**Rijeka**	**1.70**	**128**	*e*Pg		**Pn**		**08 17 01.1**	**+1.1**
SOKA	**Soboth**	**1.72**	**79**	Sg		**Sg**		**08 17 25.3**	**-0.4**
SOKA	comp=N,64nm,0.2s,SNR=39			*e*Pn		**Pn**		**08 17 01.0**	**+0.9**
SMRN	**Sveta Marina**	**1.74**	**140**	Sn		**Sb**		**08 17 24.7**	**+1.0**
SMRN	comp=N,205nm,0.6s			*e*Pn		**Pb**		**08 17 04.5**	**+0.2**
MOA	**Molln**	**1.87**	**37**	Sg		**Sg**		**08 17 30.9**	**+0.4**
MOA	comp=N,108nm,0.2s,SNR=68			*e*Pg		**Pb**		**08 17 04.6**	**+0.2**
MOA	**Molln**	**1.87**	**37**	*e*Sg		**Sg**		**08 17 30.4**	**-0.1**
MOA	comp=N,358nm,0.4s			*e*Pn		**Pb**		**08 17 04.6**	**+0.2**
MOA	**Molln**	**1.87**	**37**	*e*Pn		**Pb**		**08 17 05.4**	**+1.0**
OBER	**Oberstdorf**	**1.88**	**304**	*e*Sg		**Sg**		**08 17 32.5**	**+1.9**
OBER				Pg		**Pb**		**08 17 05.4**	**+0.4**
DAVOX	**Davos/Dischmat**	**1.90**	**283**	Lg	Lg			08 17 29.5	
DAVOX	comp=N,57nm,0.3s,baz=98,slow=4.8,SNR=326 comp=N,124nm,0.3s,baz=218,slow=20,SNR=13								
FUR	**Furstenfeldbru**	**2.00**	**334**	*e*Pn		**Pb**		**08 17 06.4**	**-0.1**
FUR				*e*Sg		**Sg**		**08 17 35.5**	**+1.0**
BOJS	**Bojanci**	**2.06**	**114**	*e*Sn		**Sn**		**08 17 32.3**	**+2.2**
BOJS	**Bojanci**	**2.06**	**114**	P		**Pn**		**08 17 05.9**	**+1.3**
BOJS	comp=N,10895μm,0.4s			AML	AML				
BOJS	comp=E,8735μm,0.5s			AML	AML				
BOJS	**Bojanci**	**2.06**	**114**	⇓*i*Pn		**Pn**		**08 17 05.5**	**+0.9**
BOJS				*e*Sn		**Sn**		**08 17 31.0**	**+0.9**
DAVA	**Damuels**	**2.06**	**297**	*e*Pg		**Pb**		**08 17 08.2**	**+0.5**
DAVA	comp=E,241nm,0.2s,SNR=93			*e*Sg		**Sg**		**08 17 37.4**	**+0.7**
DAVA	comp=E,204nm,0.3s			*e*Pn		**Pb**		**08 17 08.5**	**+0.8**
DAVA	**Damuels**	**2.06**	**297**	*e*Pn		**Pb**		**08 17 05.6**	**+0.7**
CRES	**Cresnjev**	**2.08**	**104**	*e*Pn		**Pn**		**08 17 31.3**	**+0.7**
CRES				*e*Sn		**Sn**		**08 17 08.8**	**0.0**
UBR	**Ueberruh**	**2.13**	**309**	*e*Pn		**Pb**		**08 17 06.7**	**+0.8**
OZLJ	**Ozalj**	**2.15**	**110**	*e*Pn		**Pn**		**08 17 08.0**	**+1.4**
ARSA	**Arzberg**	**2.21**	**66**	*i* Pn		**Pn**		**08 17 11.3**	**+1.3**
ARSA	comp=E,38nm,0.3s,SNR=62 comp=E,84nm,0.3s			*e*Pg		**Pb**		**08 17 08.0**	**+1.4**
ARSA	**Arzberg**	**2.21**	**66**	*e*Pn		**Pn**		**08 17 08.0**	**+1.4**
ARSA	**Arzberg**	**2.21**	**66**	*e*Pn		**Pn**		**08 17 07.9**	**+1.4**
ARSA	**Arzberg**	**2.21**	**66**	⇑*i*Pn		**Pn**		**08 17 36.0**	**+2.3**
ARSA				*e*Sn		**Sn**		**08 17 07.8**	**+0.7**
RABC	**Rab**	**2.25**	**136**	*e*Pn		**Pn**		**08 17 08.8**	**0.0**
PLONS	**Plons/SG**	**2.30**	**288**	*e*Pn		**Pb**		**08 17 11.7**	**-0.1**
PTJ	**Puntijarka**	**2.40**	**100**	*e*Pn		**Pn**		**08 17 09.7**	**+0.3**
NVLJ	**Novalja**	**2.43**	**137**	*e*Pn		**Pn**		**08 17 10.1**	**+0.5**
MUGIO	**Muggio**	**2.50**	**261**	⇓P		**Pb**		**08 17 16.3**	**+1.3**
GEC2	**GERESS Array S**	**2.58**	**17**	*e*Pn		**Pn**		**08 17 13.3**	**+1.4**
GEC2				*e*Sg		**Sb**		**08 17 51.5**	**+3.2**
GERES	**GERESS Array B**	**2.58**	**17**	Pn		**Pn**		**08 17 13.3**	**+1.4**
GERES	comp=E,6.7nm,0.3s,baz=188,slow=12,SNR=85 comp=E,26nm,0.3s,baz=192,slow=16,SNR=28 comp=E,123nm,0.3s,baz=195,slow=26,SNR=6.4 comp=E,9.9nm,0.3s			Pg		**Pg**		**08 17 19.6**	**-0.3**
GERES				Lg	Lg			08 17 50.8	
PLIT	**Plitvice**	**2.61**	**124**	*e*Pn		**Pn**		**08 17 13.1**	**+0.9**
NORI	**Noerdlinger Ri**	**2.69**	**331**	*e*Pn		**Pn**		**08 17 15.0**	**+1.7**
NORI				*e*Sg		**Sg**		**08 17 55.8**	**-1.0**
KALN	**Kalnik**	**2.70**	**94**	*e*Pn		**Pn**		**08 17 13.3**	**-0.1**
CKRC	**Cesky Krumlov**	**2.71**	**25**	*e*PN		**Pn**		**08 17 15.5**	**+1.9**
WILA	**Wila**	**2.72**	**294**	*e*Pn		**Pn**		**08 17 16.7**	**+3.0**
CONA	**Conrad Observa**	**2.73**	**54**	*e*Pn		**Pn**		**08 17 15.4**	**+1.6**
WALHA	**Wallhausen, DE**	**2.73**	**302**	*e*Pn		**Pn**		**08 17 17.0**	**+3.2**
WET	**Wettzell**	**2.78**	**4**	*e*Pn		**Pn**		**08 17 15.9**	**+1.4**
WET				*e*Sn		**Sn**		**08 17 50.1**	**+2.3**
WET				*e*Sg		**Sg**		**08 17 59.4**	**-0.1**
KHC	**Kasperske Hory**	**2.84**	**13**	*e*PN		**Pn**		**08 17 16.6**	**+1.3**
KHC				*e*PG		**Pb**		**08 17 22.0**	**+1.2**
KHC				*e*SN		**Sn**		**08 17 51.1**	**+1.7**
KHC	comp=E,302nm,0.5s			*e*SG		**Sg**		**08 17 59.5**	**-2.0**
RONA	**Rosalia, Austr**	**2.87**	**61**	*e*Pn		**Pn**		**08 17 17.1**	**+1.3**
RONA	comp=E,34nm,0.2s,SNR=15 comp=E,115nm,0.4s			*e*Pg		**Pg**		**08 17 24.2**	**-1.1**
BNALP	**Bannalp**	**2.90**	**281**	⇑P		**Pb**		**08 17 22.5**	**+0.5**
BEHE	**Becsehely**	**2.91**	**87**	⇑*i*Pn		**Pn**		**08 17 17.1**	**+0.9**
BEHE				*e*Sn		**Sn**		**08 17 52.0**	**+1.0**
DUGI	**Dugi Otok**	**2.96**	**143**	*i* Pn		**Pn**		**08 17 17.3**	**+0.3**
EMING	**Emmingen-Lipti**	**2.97**	**302**	*e*Pn		**Pn**		**08 17 19.7**	**+2.6**
EMING				*e*Sg		**Sg**		**08 18 05.0**	**-0.6**
MOSL	**Moslavina**	**3.01**	**103**	*e*Pn		**Pn**		**08 17 17.9**	**+0.2**
EL6	**Elcito**	**3.07**	**173**	AML	AML				
EL6	comp=E,803μm,1.0s			AML	AML				
EL6	comp=N,868μm,1.4s			AML	AML				
EL6	comp=N,868μm,0.6s			AML	AML				
SLE	**Schleitheim**	**3.12**	**298**	*e*Pn		**Pn**		**08 17 21.5**	**+2.4**
PRIJ	**Prijedor**	**3.22**	**114**	*e*Sn		**Sn**		**08 17 59.5**	**+0.8**
METMA	**Mettma DE**	**3.24**	**296**	*e*Pn		**Pn**		**08 17 23.2**	**+2.3**
SULZ	**Cheisacher**	**3.27**	**292**	*e*Pn		**Pn**		**08 17 23.8**	**+2.6**
STU	**Stuttgart**	**3.31**	**318**	*e*Pn		**Pn**		**08 17 24

KRUC				*e*SN		**Sn**	**08 18 12.2 +1.1**	
MGRS	**Mrkonjic Grad**	**3.73**	**120**	*e*Pn		**Pn**	**08 17 28.3 +0.7**	
MGRS				*e*Sn		**Sn**	**08 18 11.0 -0.4**	
MODS	**Modra-Piesok**	**3.77**	**56**	*e*PN		**Pn**	**08 17 29.0 +0.9**	
MODS				*e*PG		**Pb**	**08 17 39.6 +2.9**	
MODS				*e*SG		**Sg**	**08 18 31.6 +0.3**	
MODS				*e*LG	Lg		08 18 37.7	
GOPC	**GO Pecny, Ondr**	**3.84**	**22**	*e*PN		**Pn**	**08 17 30.6 +1.6**	
GOPC				*e*SG		**Sg**	**08 18 29.6 -3.9**	
	comp=N,168nm,0.7s							
PRU	**Pruhonice**	**3.85**	**19**	*e*PN		**Pn**	**08 17 30.5 +1.4**	
PRU				*e*SG		**Sg**	**08 18 31.8 -2.0**	
	comp=N,162nm,0.4s							
NKC	**Novy Kostel**	**3.86**	**359**	*e*PN		**Pn**	**08 17 31.6 +2.2**	
NKC				*e*SG		**Sg**	**08 18 32.6 -1.6**	
	comp=N,218nm,0.6s							
VRAC	**Vranov**	**3.99**	**41**	⇓P		**Pn**	**08 17 31.7 +0.6**	
VRAC				⇓S		**Sn**	**08 18 18.3 +0.6**	
VRAC	**Vranov**	**3.99**	**41**	*e*PN		**Pn**	**08 17 31.6 +0.5**	
VRAC				*e*SN		**Sn**	**08 18 20.1 +2.4**	
VRAC	**Vranov**	**3.99**	**41**	Pn		**Pn**	**08 17 31.8 +0.6**	
	comp=N,1.9nm,0.3s,baz=234,slow=14,SNR=9.6							
VRAC				Pg		**Pb**	**08 17 41.3 +0.9**	
	comp=N,5.2nm,0.3s,baz=232,slow=14,SNR=25							
VRAC				Lg	Lg		08 18 33.7	
	comp=N,7.4nm,0.3s,baz=310,slow=17,SNR=4.5							
	comp=N,4.7nm,0.3s							
TANN	**Tannenbergstha**	**4.04**	**359**	*e*Pn		**Pn**	**08 17 33.5 +1.6**	
MILB	**Miltenberg**	**4.10**	**329**	*e*Pn		**Pn**	**08 17 34.4 +1.8**	
LDE	**Landau**	**4.10**	**315**	*e*Pn		**Pn**	**08 17 36.1 +3.5**	
CDF	**Champ du Feu**	**4.14**	**301**	*e*Pn		**Pn**	**08 17 35.3 +2.1**	
CDF	**Champ du Feu**	**4.14**	**301**	*e*Pg		**Pg**	**08 17 48.5 -1.0**	
CDF				*e*Sn		**Sn**	**08 18 21.9 +0.5**	
CDF				*e*Sg		**Sg**	**08 18 43.6 +0.5**	
	comp=N,97nm,0.5s							
LPG	**La Plagne**	**4.16**	**260**	*e*P		**Pn**	**08 17 36.6 +2.9**	
LPG				*e*Sn		**Sn**	**08 18 20.8 -1.5**	
	comp=N,96nm,0.7s							
HINF	**Hinteralfeld**	**4.17**	**292**	*e*P		**Pn**	**08 17 35.7 +2.1**	
HINF				*e*Sn		**Sn**	**08 18 22.6 +0.5**	
	comp=N,64nm,0.2s							
LPL	**La Plagne**	**4.17**	**260**	*e*P		**Pn**	**08 17 37.2 +3.5**	
LPL				*e*Sn		**Sn**	**08 18 20.9 -1.5**	
	comp=N,53nm,0.5s							
MORH	**Mrgy, Hungar**	**4.21**	**90**	⇓P		**Pn**	**08 17 33.4 -0.7**	
MORH				⇑S		**Sn**	**08 18 21.8 -1.3**	
MORH	**Mrgy, Hungar**	**4.21**	**90**	*e*Sn		**Sn**	**08 18 22.7 -0.4**	
HVAR	**Hvar**	**4.22**	**138**	*e*Pn		**Pn**	**08 17 34.9 +0.6**	
JAVC	**Velka Javorina**	**4.25**	**52**	*e*PN		**Pn**	**08 17 36.3 +1.6**	
HSKC	**Hora Svate Kat**	**4.27**	**7**	*e*PN		**Pn**	**08 17 35.8 +0.8**	
MOX	**Moxa**	**4.32**	**352**	*e*Pn		**Pn**	**08 17 36.3 +0.6**	
RICI	**Ricice**	**4.33**	**130**	*e*Pn		**Pn**	**08 17 36.5 +0.7**	
PVCC	**Panska Ves**	**4.36**	**17**	*e*PN		**Pn**	**08 17 37.5 +1.3**	
MBDF	**Montbardon**	**4.40**	**250**	*e*Pn		**Pn**	**08 17 37.3 +0.4**	
MBDF				*e*Sn		**Sn**	**08 18 25.9 -2.1**	
	comp=N,50nm,0.5s							
MAKA	**Makarska**	**4.42**	**133**	*e*Pn		**Pn**	**08 17 37.4 +0.4**	
SBF	**Sospel**	**4.42**	**237**	*e*P		**Pn**	**08 17 38.4 +1.3**	
SBF				*e*Sn		**Sn**	**08 18 26.9 -1.6**	
	comp=N,102nm,0.4s							
CABF	**La Chapelle**	**4.49**	**275**	*e*P		**Pn**	**08 17 40.4 +2.4**	
CABF	**La Chapelle**	**4.49**	**275**	*e*Pg		**Pg**	**08 17 56.2 0.0**	
CABF				*e*Sg		**Sg**	**08 18 53.0 -1.3**	
	comp=N,88nm,0.6s							
HAU	**Haudompre**	**4.55**	**293**	*e*P		**Pn**	**08 17 41.0 +2.2**	
HAU				*e*Sn		**Sn**	**08 18 32.0 +0.5**	
	comp=N,253nm,0.5s							
HAU				*e*Sg		**Sg**	**08 18 55.7 -0.6**	
BRG	**Berggiesshubel**	**4.59**	**11**	*i* Pn		**Pn**	**08 17 40.9 +1.6**	
BRG				Amp			08 17 42.6	
	comp=Z,4.2nm,0.3s							
BRG	**Berggiesshubel**	**4.59**	**11**	Pg		**Pg**	**08 17 56.5 -1.7**	
BRG				Sn		**Sn**	**08 18 32.7 +0.2**	
BRG				Sg		**Sg**	**08 18 55.0 -2.6**	
BRG				Amp			08 19 05.6	
	comp=Z,152nm,0.9s							
PGF	**Pioggiola**	**4.60**	**215**	*e*P		**Pn**	**08 17 40.0 +0.3**	
PGF				*e*Sn		**Sn**	**08 18 31.4 -1.6**	
	comp=Z,21nm,0.3s							
MAUC	**Maruska**	**4.63**	**48**	*e*PN		**Pn**	**08 17 42.1 +2.2**	
KRLC	**Kraliky**	**4.65**	**36**	*e*PN		**Pn**	**08 17 41.4 +1.2**	
DPC	**Dobruska-Polom**	**4.70**	**31**	*e*PN		**Pn**	**08 17 41.1 +0.3**	
UPC	**Upice**	**4.72**	**28**	*e*PN		**Pn**	**08 17 42.0 +0.8**	
UPC				*e*SG		**Sg**	**08 18 59.0 -2.9**	
	comp=Z,363nm,1.0s							
TNS	**Taunus Mts**	**4.73**	**326**	*e*Pn		**Pn**	**08 17 44.0 +2.7**	
LSTV	**Lastovo**	**4.74**	**138**	*e*Pn		**Pn**	**08 17 41.4 0.0**	
VYHS	**Vyhne**	**4.75**	**61**	*e*PN		**Pn**	**08 17 41.4 -0.1**	
VYHS				*e*PG		**Pg**	**08 17 59.1 -2.1**	
MORC	**Moravsky Berou**	**4.76**	**43**	⇑P		**Pn**	**08 17 43.2 +1.4**	
MORC				⇓S		**Sn**	**08 18 37.4 +0.6**	
MORC	**Moravsky Berou**	**4.76**	**43**	*e*PN		**Pn**	**08 17 42.2 +0.5**	
UBBA	**Unterbreizbach**	**4.76**	**340**	*e*Pn		**Pn**	**08 17 44.4 +2.8**	
CHVC	**Chvalec**	**4.81**	**27**	*e*PN		**Pn**	**08 17 42.7 +0.3**	
CHVC				*e*SN		**Sn**	**08 18 36.8 -1.1**	
OSTC	**Ostas**	**4.83**	**29**	*e*PN		**Pn**	**08 17 43.2 +0.5**	
ORIF	**Oris-en-Rattie**	**4.92**	**255**	*e*P		**Pn**	**08 17 46.8 +2.9**	
ORIF				*e*Sn		**Sn**	**08 18 39.7 -1.0**	
	comp=Z,80nm,0.5s							
CLL	**Collm**	**4.94**	**3**	*e*Pn		**Pn**	**08 17 45.0 +0.8**	
CLL				*ex*		x	08 17 55.0	
CLL				*ex*		x	08 18 43.0	
CLL				*e*Sg		**Sg**	**08 19 05.0 -3.9**	
	comp=Z,301nm,1.3s							
CLL	**Collm**	**4.94**	**3**	*e*Pn		**Pn**	**08 17 45.3 +1.1**	
NAST	**IGS Nastaetten**	**4.95**	**322**	*e*Pn		**Pn**	**08 17 46.8 +2.5**	
HAPS	**Han Pijesak,BI**	**5.05**	**115**	*e*Pn		**Pn**	**08 17 47.1 +1.3**	
HAPS	**Han Pijesak,BI**	**5.05**	**115**	⇓*i*Pn		**Pn**	**08 17 46.4 +0.6**	
HAPS				*e*Sn		**Sn**	**08 18 43.0 -1.0**	
STON	**Ston**	**5.06**	**132**	*e*Pn		**Pn**	**08 17 46.4 +0.6**	
STON	**Ston**	**5.06**	**132**	*e*Pn		**Pn**	**08 17 46.2 +0.3**	
STON	**Ston**	**5.06**	**132**	*e*Pn		**Pn**	**08 17 45.9 +0.1**	
STON				*e*Sn		**Sn**	**08 18 42.3 -1.8**	
KSP	**Ksiaz**	**5.10**	**28**	*e*P		**Pn**	**08 17 46.9 +0.5**	
PAGF	**Fort de Pagny**	**5.13**	**298**	*e*P		**Pn**	**08 17 49.4 +2.6**	
PAGF	**Fort de Pagny**	**5.13**	**298**	*e*Pg		**Pg**	**08 18 05.9 -2.6**	
PAGF				*e*Sn		**Sn**	**08 18 44.9 -1.0**	
PAGF				*e*Sg		**Sg**	**08 19 13.9 -1.1**	
	comp=Z,78nm,0.6s							
KOE	**Koeppel**	**5.18**	**323**	*e*Pn		**Pn**	**08 17 50.2 +2.7**	
BGG	**Burgeitz**	**5.19**	**320**	*e*Pn		**Pn**	**08 17 50.0 +2.5**	
FRGS	**Fruska Gora**	**5.21**	**101**	⇑P		**Pn**	**08 17 48.1 +0.3**	
FRGS	**Fruska Gora**	**5.21**	**101**	*e*Pn		**Pn**	**08 17 48.1 +0.3**	
FRGS	**Fruska Gora**	**5.21**	**101**	⇓*i*Pn		**Pn**	**08 17 48.0 +0.2**	
FRGS				*e*Sn		**Sn**	**08 18 46.4 -1.3**	
PSZ	**Piszkesteto**	**5.23**	**70**	⇓P		**Pn**	**08 17 49.3 +1.2**	
LMR	**La Mourre**	**5.28**	**237**	*e*P		**Pn**	**08 17 48.9 +0.1**	
LMR				*e*Sn		**Sn**	**08 18 47.0 -2.4**	
	comp=Z,31nm,0.5s							
WLF	**Walferdange**	**5.42**	**310**	*e*Pn		**Pn**	**08 17 54.5 +3.7**	
DBRK	**Dubrovnik**	**5.44**	**131**	*e*Pn		**Pn**	**08 17 50.5 -0.6**	
BBLS	**Lazići**	**5.45**	**115**	*e*Pn		**Pn**	**08 17 52.4 +1.2**	
BBLS	**Lazići**	**5.45**	**115**	⇑*i*Pn		**Pn**	**08 17 51.9 +0.7**	
BBLS				*e*Sn		**Sn**	**08 18 51.5 -2.2**	
SFTF	**Sexfontaines**	**5.45**	**292**	*e*P		**Pn**	**08 17 53.4 +2.3**	
SFTF	**Sexfontaines**	**5.45**	**292**	*e*Pg		**Pg**	**08 18 13.6 -0.9**	
SFTF				*e*Sn		**Sn**	**08 18 52.1 -1.5**	
	comp=Z,99nm,0.7s							
SFTF				*e*Sg		**Sg**	**08 19 23.3 -1.7**	
BRY	**Bratogost**	**5.49**	**127**	*e*Pn		**Pn**	**08 17 52.1 +0.2**	
BRY				*e*Sn		**Sn**	**08 18 52.8 -2.1**	
SMRF	**Simiane la Rot**	**5.50**	**247**	*e*P		**Pn**	**08 17 53.7 +1.8**	
SMRF				*e*Sn		**Sn**	**08 18 52.3 -2.7**	
	comp=Z,18nm,0.4s							
TREB	**Trebinje**	**5.51**	**129**	*e*Pn		**Pn**	**08 17 52.4 +0.3**	
TREB				*e*Sn		**Sn**	**08 18 52.8 -2.5**	
SAVF	**Savonnieres en**	**5.53**	**297**	*e*P		**Pn**	**08 17 54.5 +2.3**	
SAVF	**Savonnieres en**	**5.53**	**297**	*e*Pg		**Pg**	**08 18 13.3 -2.7**	
SAVF				*e*Sn		**Sn**	**08 18 54.6 -0.9**	
SAVF				*e*Sg		**Sg**	**08 19 25.3 -2.3**	
	comp=Z,41nm,0.8s							
MEZF	**Maizieres J`vi**	**5.53**	**295**	*e*P		**Pn**	**08 17 54.1 +1.8**	
MEZF	**Maizieres J`vi**	**5.53**	**295**	*e*Pg		**Pg**	**08 18 13.9 -2.2**	
MEZF				*e*Sn		**Sn**	**08 18 55.3 -0.3**	
MEZF				*e*Sg		**Sg**	**08 19 26.1 -1.6**	
	comp=Z,31nm,0.4s							
HILG	**Hillesheim**	**5.55**	**317**	*e*Pn		**Pn**	**08 17 55.2 +2.6**	
RUDO	**Rudo**	**5.55**	**117**	*e*Pn		**Pn**	**08 17 53.0 +0.4**	
RUDO	**Rudo**	**5.55**	**117**	*e*Pn		**Pn**	**08 17 52.7 +0.1**	
RUDO				*e*Sn		**Sn**	**08 18 53.8 -2.4**	
STB	**Steinbach**	**5.69**	**320**	*e*Pn		**Pn**	**08 17 56.9 +2.5**	
STB				*e*Sn		**Sn**	**08 18 59.8 +0.3**	
	comp=Z,61nm,0.8s							
DIVS	**Divibare**	**5.71**	**111**	*e*Pn		**Pn**	**08 17 55.7 +0.9**	
VIVF	**Saint-Julien-l**	**5.75**	**258**	*e*P		**Pn**	**08 17 56.5 +1.2**	
VIVF				*e*Sn		**Sn**	**08 18 58.3 -2.8**	
	comp=Z,23nm,0.4s							
KECS	**Kecovo**	**5.77**	**66**	*e*PN		**Pn**	**08 17 56.4 +0.9**	
KECS				*e*PG		**Pg**	**08 18 18.7 -2.0**	
HOBG	**Hohbusch**	**5.77**	**325**	*e*Pn		**Pn**	**08 17 58.1 +2.5**	
HCV	**Herceg Novi**	**5.78**	**131**	*e*Pn		**Pn**	**08 17 55.6 -0.1**	
TRUS	**Trudelj**	**5.93**	**108**	*e*Pn		**Pn**	**08 17 58.6 +0.9**	
DREG	**Dreilaegerbach**	**6.01**	**318**	*e*Pn		**Pn**	**08 18 01.2 +2.3**	
NIE	**Niedzica**	**6.02**	**57**	*e*P		**Pn**	**08 18 01.1 +2.1**	
SMF	**Signal de Mont**	**6.04**	**276**	*e*Pn		**Pn**	**08 18 00.4 +1.2**	
SMF				*e*Sn		**Sn**	**08 19 05.9 -2.2**	
	comp=Z,50nm,0.6s							
LOR	**Lormes**	**6.05**	**282**	*e*Pn		**Pn**	**08 18 00.6 +1.2**	
LOR				*e*Sn		**Sn**	**08 19 07.6 -0.9**	
	comp=Z,42nm,0.5s							
LOR				*e*Sg		**Sg**	**08 19 42.1 -2.3**	
	comp=Z,34nm,0.7s							
IVAS	**Ivanjica**	**6.06**	**115**	*e*Pn		**Pn**	**08 18 00.3 +0.7**	
OJC	**Ojcow**	**6.16**	**49**	*e*P		Pn	08 18 07.4 +6.4	
LAUG	**Laupendahl**	**6.21**	**325**	*e*Pn		**Pn**	**08 18 03.6 +2.0**	
GRUS	**Gruza**	**6.27**	**110**	*e*Pn		**Pn**	**08 18 03.8 +1.4**	
SSF	**Saint Saulge**	**6.28**	**280**	*e*P		**Pn**	**08 18 04.0 +1.5**	
SSF				*e*Sn		**Sn**	**08 19 11.2 -2.8**	
	comp=Z,29nm,0.6s							
SSF				*e*Sg		**Sg**	**08 19 47.8 -3.8**	
DRME	**Dracevica, Mon**	**6.33**	**129**	⇑*i*Pn		**Pn**	**08 18 03.4 +0.2**	
DRME				*e*Sn		**Sn**	**08 19 12.7 -2.6**	
BZS	**Buzias**	**6.34**	**94**	⇓P		**Pn**	**08 18 03.7 +0.3**	
AVF	**Avril sur Loir**	**6.37**	**277**	*e*P		**Pn**	**08 18 05.5 +1.7**	
AVF				*e*Sn		**Sn**	**08 19 14.9 -1.5**	
	comp=Z,17nm,0.5s							
AVF				*e*Sg		**Sg**	**08 19 52.7 -2.0**	
GIVF	**Givet**	**6.38**	**309**	*e*P		**Pn**	**08 18 07.3 +3.4**	
GIVF	**Givet**	**6.38**	**309**	*e*Pg		**Pg**	**08 18 30.6 -1.8**	
GIVF				*e*Sn		**Sn**	**08 19 14.8 -1.8**	
	comp=Z,34nm,0.4s							
MATE	**Matera**	**6.46**	**151**	⇓P		**Pn**	**08 18 07.2 +2.1**	
MATE				⇓S		**Sn**	**08 19 15.5 -3.1**	
CRVS	**Cervenica-Dubn**	**6.51**	**64**	*e*PN		**Pn**	**08 18 06.7 +0.9**	
LASF	**Ste Croix**	**6.57**	**253**	*e*P		**Pn**	**08 18 07.1 +0.5**	
LASF				*e*Sn		**Sn**	**08 19 17.0 -4.4**	
	comp=Z,17nm,0.5s							
STHS	**Stebnicka Huta**	**6.57**	**59**	*e*PN		**Pn**	**08 18 07.9 +1.3**	
MDVR	**Moldovita**	**6.61**	**101**	⇓P		**Pn**	**08 18 07.6 +0.5**	
MDVR				⇓S		**Sn**	**08 19 19.9 -2.4**	
SURR	**Surduc**	**6.67**	**92**	⇓P		**Pn**	**08 18 08.1 +0.1**	
BAIF	**Baives**	**6.70**	**306**	*e*P		**Pn**	**08 18 11.4 +3.2**	
BAIF				*e*Sn		**Sn**	**08 19 22.6 -1.7**	
	comp=Z,27nm,0.5s							
KUBS	**Kucevo**	**6.70**	**104**	*e*Pn		**Pn**	**08 18 08.4 0.0**	
BGF	**Bois d'Agland**	**6.72**	**275**	*e*P		**Pn**	**08 18 10.9 +2.2**	
BGF				*e*Sn		**Sn**	**08 19 22.6 -2.5**	
	comp=Z,76nm,0.5s							
SELS	**Selova**	**6.85**	**114**	*e*Pn		**Pn**	**08 18 11.6 +1.2**	
HYF	**Humbligny**	**6.88**	**281**	*e*P		**Pn**	**08 18 14.1 +3.3**	
HYF				*e*Sn		**Sn**	**08 19 27.1 -1.7**	
	comp=Z,184nm,0.6s							
DRGR		**7.00**	**83**	⇓P		**Pn**	**08 18 13.0 +0.5**	
DRGR				⇑S		**Sn**	**08 19 30.8 -1.1**	
BOVS	**Bovan**	**7.03**	**110**	⇑P		**Pn**	**08 18 14.0 +1.2**	
KOLS	**Kolonicke sedl**	**7.03**	**65**	*e*PN		**Pn**	**08 18 13.8 +0.9**	
KOLS				*e*PG		**Pg**	**08 18 43.6 -1.2**	
HERR	**Herculane**	**7.06**	**99**	⇓P		**Pn**	**08 18 14.3 +1.0**	
HERR				⇑S		**Sn**	**08 19 30.8 -2.5**	
TCF	**Toulx Ste Croi**	**7.18**	**273**	*e*Sn		**Sn**	**08 19 34.0 -2.3**	
	comp=Z,25nm,0.5s							
GZR	**Gura Zlata**	**7.19**	**94**	⇑P		**Pn**	**08 18 15.9 +0.8**	
GZR				⇓S		**Sn**	**08 19 35.2 -1.4**	
MARR	**Marisel-Cluj**	**7.28**	**84**	⇓P		**Pn**	**08 18 16.8 +0.4**	
MARR				⇓S		**Sn**	**08 19 37.3 -1.6**	
ZAGS	**Zajecar**	**7.30**	**107**	*e*Pn		**Pn**	**08 18 17.1 +0.6**	
BARS	**Barje**	**7.49**	**115**	*e*Pn		**Pn**	**08 18 19.8 +0.6**	
CAF	**Calviac**	**7.51**	**263**	*e*P		**Pn**	**08 18 21.9 +2.4**	
CAF				*e*Sn		**Sn**	**08 19 41.0 -3.4**	
	comp=Z,13nm,0.6s							
BLKB	**Belogradchik**	**7.67**	**107**	⇑P		**Pn**	**08 18 23.0 +1.3**	
BLKB				⇑S		**Sn**	**08 19 45.7 -2.7**	
RJF	**Les Rejaudoux**	**7.80**	**266**	*e*P		**Pn**	**08 18 25.5 +2.1**	
RJF				*e*Sn		**Sn**	**08 19 47.3 -4.2**	
	comp=Z,9.1nm,0.6s							
PRVS	**Prvonek**	**7.82**	**116**	*e*Pn		**Pn**	**08 18 24.8 +1.1**	
MTLF	**Montolieu**	**7.96**	**251**	*e*P		**Pn**	**08 18 26.1 +0.5**	
MTLF				*e*Sn		**Sn**	**08 19 51.1 -4.4**	
	comp=Z,12nm,0.7s							
LFF	**La Frestale**	**8.42**	**264**	*e*P		**Pn**	**08 18 34.7 +2.8**	
LFF				*e*Sn		**Sn**	**08 20 02.8 -3.9**	
	comp=Z,5.8nm,0.4s							
ARR	**Arges**	**8.48**	**92**	⇑P		**Pn**	**08 18 37.5 +4.7**	
BURAR	**Bucovina Array**	**8.73**	**77**	⇓P		**Pn**	**08 18 38.9 +2.6**	
MFF	**Saint Martin d**	**8.78**	**276**	*e*Pn		**Pn**	**08 18 40.1 +3.2**	
MFF				*e*Sn		**Sn**	**08 20 11.8 -3.9**	
	comp=Z,6.7nm,0.4s							
LDF	**La Druitiere**	**8.88**	**289**	*e*P		**Pn**	**08 18 40.7 +2.5**	
LDF				*e*Sn		**Sn**	**08 20 13.6 -4.5**	
	comp=Z,8.6nm,0.6s							
FLN	**La Foliniere**	**9.15**	**290**	*e*P		**Pn**	**08 18 44.4 +2.5**	
FLN				*e*Sn		**Sn**	**08 20 20.7 -3.9**	
	comp=Z,6.4nm,0.4s							
EPF	**Esparros**	**9.33**	**253**	*e*Pn		**Pn**	**08 18 44.7 +0.2**	
GRR	**Gorron**	**9.34**	**287**	*e*P		**Pn**	**08 18 48.2 +3.8**	
GRR				*e*Sn		**Sn**	**08 20 26.4 -2.8**	
	comp=Z,8.2nm,0.4s							
MLR	**Muntele Rosu**	**9.36**	**91**	Pn		**Pn**	**08 18 46.3 +1.4**	
	comp=Z,0.1nm,0.3s,baz=298,slow=18,SNR=1.4							
	comp=Z,1.3nm,0.7s							
ETSF	**Etsaut**	**9.99**	**254**	*e*Pn		**Pn**	**08 18 53.6 +0.1**	
ETSF				*e*Sn		**Sn**	**08 20 40.3 -5.1**	
	comp=Z,2.3nm,0.5s							
SJPF	**Ste Jean**	**10.35**	**257**	*e*Pn		**Pn**	**08 19 00.2 +1.9**	
SJPF				*e*Sn		**Sn**	**08 20 48.4 -5.7**	
SGMF	**Saint Gilles**	**10.45**	**286**	*e*P		**Pn**	**08 19 01.9 +2.2**	
SGMF				*e*Sn		**Sn**	**08 20 51.5 -5.0**	
	comp=Z,9.0nm,0.5s							
QUIF	**Quistinic**	**10.84**	**284**	*e*P		**Pn**	**08 19 07.0 +2.0**	
QUIF				*e*Sn		**Sn**	**08 21 01.0 -5.0**	
	comp=Z,7.7nm,0.5s							
ROSF	**Rostrenen**	**10.93**	**286**	*e*P		**Pn**	**08 19 09.1 +2.8**	
ROSF				*e*Sn		**Sn**	**08 21 04.0 -4.4**	
	comp=Z,11nm,0.6s							
EKA	**Eskdalemuir Ar**	**13.36**	**318**	Pn		**Pn**	**08 19 41.3 +1.9**	
	baz=127,slow=13							
	comp=Z,0.7nm,0.2s							
ESDC	**Sonseca Array**	**13.82**	**247**	Pn		**Pn**	**08 19 45.2 -0.6**	
	comp=Z,0.1nm,0.3s,baz=57,slow=15,SNR=1.9							
	comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**17.00**	**23**	P		**Pn**	**08 20 29.4 +1.9**	
	comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=6.9							
	comp=Z,0.8nm,0.5s							
KBZ	**Khabaz**	**21.52**	**86**	P		**P**	**08 21 18.2 -0.7**	
	comp=Z,1.1nm,0.7s,baz=263,slow=11,SNR=3.5							
	comp=Z,1.1nm,0.7s							
ARCES	**ARCESS Array B**	**24.11**	**11**	P		**P**	**08 21 46.2 +0.9**	
	comp=Z,4.1nm,0.9s,baz=195,slow=9.8,SNR=2.5							
	comp=Z,4.1nm,0.9s							
GNI	**Garni**	**24.12**	**93**	LR		LR	08 34 02.0	
	comp=Z,20nm,19.2s,baz=314,slow=44							
ARU	**Arti**	**29.86**	**53**	LR		LR	08 34 58.5	
	comp=Z,54nm,20.2s,baz=303,slow=37							
KURBB	**Kurchatov Arra**	**42.61**	**59**	P		**P**	**08 24 25.2 -0.7**	
	comp=Z,0.1nm,0.4s,baz=282,slow=9.6,SNR=2.7							
	comp=Z,0.1nm,0.4s							
ZALV	**Zalesovo Beam**	**45.02**	**53**	P		**P**	**08 24 44.8 -0.4**	
	comp=Z,0.4nm,0.4s,baz=304,slow=8.4,SNR=2.2							
	comp=Z,0.4nm,0.4s							
MKAR	**Manchi Array**	**46.43**	**63**	P		**P**	**08 24 55.8 -0.7**	
	comp=Z,0.1nm,0.3s,baz=268,slow=6.9,SNR=3.1							
	comp=Z,0.1nm,0.3s							
SONM	**Songino Array**	**59.86**	**51**	P		**P**	**08 26 36.0 +0.5**	
	comp=Z,0.1nm,0.3s,baz=290,slow=9.1,SNR=2.2							
	comp=Z,0.1nm,0.3s							
YKA	**Yellowknife Ar**	**63.59**	**336**	P		**P**	**08 27 02.4 +2.2**	
	comp=Z,0.1nm,0.5s,baz=35,slow=6.0,SNR=2.5							
	comp=Z,0.1nm,0.5s							

NEIC ***25*** *08:29:38.5±1.1,56°.23N±0°.09×150°.08W±0°.09,h10km±2km, ML3.7/56,ML3.5(AEIC),Error ellipse: s-maj=14.6km s-min=8.7km az=183.0*

AEIC ***25*** *08:29:42.7±1.3,56°.20N±0°.09×150°.0W±0°.1,h11km±7km, Error ellipse: s-maj=13.6km s-min=8.8km az=173.0*

ISC 25 08:29:38.4±1.3,56°.27N±0°.09×150°.11W±0°.06,h10km,

n185,σ0s80/191,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.99**	**300**	Pn		**Pn**	**08 30 12.6**	**+0.4**
OHAK						**Sn**	**08 30 35.8**	**-1.3**
OHAK	**Old Harbor**	**1.99**	**300**	P		**Pn**	**08 30 12.5**	**+0.4**
	baz=118							
OHAK				S		**Sn**	**08 30 36.0**	**-1.2**
	baz=118							
KDAK	**Kodiak Island**	**2.03**	**319**	Pn		**Pn**	**08 30 13.4**	**+0.7**
KDAK	**Kodiak Island**	**2.03**	**319**	P		**Pn**	**08 30 13.4**	**+0.7**
	baz=137							
SII	**Sitkinak Islan**	**2.28**	**279**			**Pn**	**08 30 16.2**	**+0.1**
SII	**Sitkinak Islan**	**2.28**	**279**	P		**Pn**	**08 30 16.4**	**+0.2**
	baz=96							
SII				S		**Sn**	**08 30 42.9**	**-1.4**
	baz=96							
Q20K	**Shuyak Island**	**2.65**	**333**	P		**Pn**	**08 30 21.7**	**+0.6**
	baz=151							
Q20K				S		**Sn**	**08 30 53.3**	**0.0**
	baz=151							
SYI	**Shuyak Island**	**2.65**	**333**	Pn		**Pn**	**08 30 21.8**	**+0.7**
Q19K	**Cape Douglas,**	**3.27**	**326**			**Pn**	**08 30 30.9**	**+1.1**
Q19K				IAML			08 31 17.9	
	comp=E,305nm,0.7s							
Q19K				IAML			08 31 23.8	
	comp=N,186nm,1.2s							
CNPM	**China Poot**	**3.32**	**350**	Pn		**Pn**	**08 30 30.4**	**+0.1**
CNPM				IAML			08 31 10.4	
	comp=E,192nm,0.3s							
CNPM				IAML			08 31 10.6	
	comp=N,96nm,0.3s							
ACHA	**Angle Creek He**	**3.44**	**307**			**Pn**	**08 30 33.2**	**+1.2**
HOM	**Homer**	**3.49**	**347**	Pn		**Pn**	**08 30 31.3**	**-1.4**
BRSE	**Bradley Lake S**	**3.50**	**355**			**Pn**	**08 30 32.4**	**-0.4**
BRSE						**Sn**	**08 31 12.5**	**-1.7**
BRSE	**Bradley Lake S**	**3.50**	**355**	P		**Pn**	**08 30 32.6**	**-0.2**
	baz=174							
BRSE				S		**Sn**	**08 31 12.5**	**-1.7**
	baz=174							
ANCK	**Angle Creek**	**3.51**	**306**			**

	baz=190						
KLU	Klutina	5.67	21		Pn	08 31 03.1	+0.4
KLU	Klutina baz=204	5.67	21	P	Pn	08 31 03.0	+0.4
WAX	Waxell Ridge	5.67	39	Pn	Pn	08 31 02.6	0.0
SCM	Sheep Creek Mo	5.76	13	Pn	Pn	08 31 04.5	+0.6
SCM	Sheep Creek Mo baz=195	5.76	13	P	Pn	08 31 04.7	+0.8
BARK	Barkley Ridge	5.76	41		Pn	08 31 04.1	+0.1
CRQM	Cirque	5.79	36		Pn	08 31 04.7	+0.3
MESA	MESA	5.82	44	Pn	Pn	08 31 04.6	-0.2
MESA	MESA baz=231	5.82	44	P	Pn	08 31 04.8	-0.1
TGL	Tana Glacier	5.89	37		Pn	08 31 06.0	+0.3
SDPT	Sand Point	5.92	265	Pn	Pn	08 31 06.4	+0.4
SDPT	Sand Point	5.92	265	P	Pn	08 31 06.2	+0.1
ISLE	Juniper Island	5.95	40		Pn	08 31 06.8	+0.1
BAGL	Bagley Icefiel	5.97	42		Pn	08 31 06.9	+0.2
VRDI	Verde Repeater	6.05	32	Pn	Pn	08 31 08.3	+0.2
N25K	Chitina, Valde	6.06	26		Pn	08 31 08.6	+0.6
N25K	Chitina, Valde baz=210	6.06	26	P	Pn	08 31 08.7	+0.6
GLB	Gilahina Butte	6.12	30	Pn	Pn	08 31 09.4	+0.4
KIAG	Kiagna River	6.17	38		Pn	08 31 09.8	+0.1
M24K	Tolsona, Glenn	6.19	17		Pn	08 31 10.8	+1.0
M24K	Tolsona, Glenn baz=200	6.19	17	P	Pn	08 31 10.9	+1.0
GRNC	Granite Creek	6.25	41		Pn	08 31 10.8	-0.1
TABL	Table Mountain	6.30	45		Pn	08 31 11.7	+0.2
MCARA	McCarthy VSAT	6.30	33	Pn	Pn	08 31 12.2	+0.8
MCARA	McCarthy VSAT baz=218	6.30	33	P	Pn	08 31 11.7	+0.4
PTPK	Patty Peak	6.33	36		Pn	08 31 12.5	+0.6
M17K	Holitna River	6.39	327	Pn	Pn	08 31 13.6	+1.1
WAT6	Susitna Watana	6.44	10		Pn	08 31 13.6	+0.2
WAT6	Susitna Watana baz=191	6.44	10	P	Pn	08 31 13.5	+0.2
WACK	Wrangell Chich	6.45	25		Pn	08 31 14.2	+0.6
PCA	Pinnacle	6.46	50		Pn	08 31 13.7	+0.1
PINM	Pinnacle baz=237	6.47	50	P	Pn	08 31 13.5	-0.1
BARN	Barnard Glacie	6.51	39		Pn	08 31 14.8	+0.4
CTG	Chitna Glacier baz=228	6.56	41	P	Pn	08 31 15.0	0.0
CTGM	Chitina Glacie	6.56	41		Pn	08 31 15.2	+0.2
LOGN	Logan Glacier	6.59	42		Pn	08 31 15.7	+0.2
PNL	Peninsula	6.63	55		Pn	08 31 16.1	+0.3
PNL	Peninsula	6.63	55	P	Pn	08 31 16.2	+0.3
PNL	Peninsula baz=243	6.63	55	P	Pn	08 31 16.1	+0.3
HARP	HAARP	6.64	20		Pn	08 31 17.0	+1.0
HARP	HAARP baz=204	6.64	20	P	Pn	08 31 17.0	+1.0
BCPM	Bancas Point	6.66	52		Pn	08 31 16.5	+0.3
PN7A	Pavlof North-7	6.75	268		Pn	08 31 18.0	+0.5
PAX	Paxson	7.12	17		Pn	08 31 23.2	+0.6
PAX	Paxson baz=201	7.12	17	P	Pn	08 31 23.1	+0.6
RND	Reindeer	7.18	5	Pn	Pn	08 31 24.2	+0.7
CAST	Castle Rocks	7.24	353	Pn	Pn	08 31 25.1	+0.9
O29M	Mount Kennedy	7.29	52		Pn	08 31 25.5	+0.4
YUK2	White River	7.30	37		Pn	08 31 25.8	+0.7
YUK8	Steele Glacier	7.35	43		Pn	08 31 26.9	+1.0
YUK8	Steele Glacier baz=231	7.35	43	P	Pn	08 31 26.9	+1.0
P29M	Windy Craggy	7.39	58		Pn	08 31 26.3	0.0
M27K	Edge Creek, AK	7.41	31		Pn	08 31 28.0	+1.4
M27K	Edge Creek, AK baz=218	7.41	31	P	Pn	08 31 27.7	+1.0
YUK3	Moose Creek	7.42	38		Pn	08 31 28.0	+1.1
YUK3	Moose Creek baz=226	7.42	38	P	Pn	08 31 28.0	+1.1
YUK7	Dusty Glacier	7.59	51		Pn	08 31 29.7	+0.5
FALS	False Pass	7.68	265		Pn	08 31 30.2	0.0
FALS	False Pass	7.68	265	P	Pn	08 31 30.2	0.0
FALS	False Pass baz=74	7.68	265	P	Pn	08 31 30.5	+0.3
K17K	Iditarod	7.69	331	Pn	Pn	08 31 30.9	+0.7
YUK6	Outpost Mounta	7.71	48		Pn	08 31 32.0	+1.2
YUK6	Outpost Mounta baz=237	7.71	48	P	Pn	08 31 32.0	+1.2
S31K	Pelican	7.74	72	Pn	Pn	08 31 29.2	-1.8
BVCY	Beaver Creek	7.76	34		Pn	08 31 32.4	+1.1
BVCY	Beaver Creek baz=221	7.76	34	P	Pn	08 31 32.4	+1.1
YUK4	Talbot Arm baz=234	7.82	45	P	Pn	08 31 34.8	+2.5
BPAW	Bear Paw Mtn.	7.87	357	Pn	Pn	08 31 33.3	+0.5
L27K	Beaver Creek,	7.99	28	Pn	Pn	08 31 35.4	+0.9
BCAR	Beaver Creek A	8.00	28	Pn	Pn	08 31 35.3	+0.6
HYT	Haines Junctio	8.01	50	Pn	Pn	08 31 35.4	+0.6
J20K	Nowinta River	8.18	347	Pn	Pn	08 31 37.3	+0.3
SCRK	Sand Creek	8.31	19	Pn	Pn	08 31 38.8	-0.1
CCB	Clear Creek Bu	8.48	7		Pn	08 31 42.6	+1.6
SKAG	Skagway	8.50	62	Pn	Pn	08 31 41.4	0.0
SKAG	Skagway	8.50	62	P	Pn	08 31 41.1	-0.3
BESE	Bessie Mountai	8.55	68		Pn	08 31 41.4	-0.7
M29M	Somme Creek	8.57	39	Pn	Pn	08 31 43.8	+1.2
S32K	Killisnoo	8.59	76	Pn	Pn	08 31 40.9	-1.8
O30N	Mendenhall	8.60	53	Pn	Pn	08 31 43.2	+0.3
IL31		8.67	9		Pn	08 31 44.9	+1.2
R32K	Eaglecrest	8.68	70	Pn	Pn	08 31 42.8	-1.1
COLA	College	8.70	6	P	Pn	08 31 46.0	+1.9
K27K	Chicken	8.74	24	Pn	Pn	08 31 45.3	+0.6
JIS	Juneau Island	8.75	70	Pn	Pn	08 31 44.1	-0.8
JIS	Juneau Island	8.75	70	P	Pn	08 31 44.0	-0.8
MDM	Murphy Dome	8.76	5	Pn	Pn	08 31 45.6	+0.6
I23K	Minto, Yukon-K	8.91	2	Pn	Pn	08 31 47.8	+0.7
I21K	Tanana	8.98	355	Pn	Pn	08 31 49.6	+1.6
WHY	Whitehorse	9.10	55	Pn	Pn	08 31 50.3	+0.5
L29M	L29M	9.13	36		Pn	08 31 51.4	+1.2
M30M	Minto, Yukon	9.26	42	Pn	Pn	08 31 52.5	+0.7
P32M	Atlin	9.33	62	Pn	Pn	08 31 52.2	-0.6
DAWY	Dawson	9.45	30	Pn	Pn	08 31 55.0	+0.5
H21K	Melozitna River	9.51	353	Pn	Pn	08 31 56.2	+1.0
I26K	Coal Creek Min	9.67	18	Pn	Pn	08 31 58.9	+1.5
UNV	Unalaska Valle	9.72	262	P	Pn	08 31 57.5	-0.6
P33M	Teslin, Yukon	9.92	59	Pn	Pn	08 32 00.9	-0.1
Q32M	Nakina River	9.94	67	Pn	Pn	08 32 01.4	+0.1
M31M	Drury Creek, Y	9.99	47	Pn	Pn	08 32 03.1	+1.3
FARO	Faro, Yukon	10.43	48	Pn	Pn	08 32 09.0	+1.1
G23K	Bananza Creek	10.48	0	Pn	Pn	08 32 09.4	+0.9
R33M	Jennings River	10.66	65	Pn	Pn	08 32 10.8	-0.4
J30M	Hart River	10.73	34	Pn	Pn	08 32 13.2	+1.2
DLBC	Dease Lake	11.05	70	Pn	Pn	08 32 16.4	-0.1
BMAR	Burnt Mountain	11.49	11	Pn	Pn	08 32 23.0	+0.6
E19K	Redstone River	11.70	346	Pn	Pn	08 32 26.3	+1.0
E25K	Arctic Village	12.07	8	Pn	Pn	08 32 30.3	0.0
G31M	Satah River	13.02	29	Pn	Pn	08 32 44.3	+1.2
INK	Inuvik	14.25	26	Pn	Pn	08 33 01.5	+1.6

*IDC **25** 08:35:56.6±0.5, 12°.40S×14°.83W, h0km, mb4.3/21, mbtmp4.3/21, MS3.7/37, Error ellipse: s-maj=23.5km s-min=14.6km az=119.0*

*NEIC **25** 08:35:59.4±0.9, 12°.17S±0°.09×14°.78W±0°.09, h10km±1km, mb4.8/37, Error ellipse: s-maj=15.6km s-min=13.9km az=234.0*

ISC 25 08:35:58.6±0.4, 12°.29S±0°.08×14°.76W±0°.06, h10km, n129, σ0.93/98, mb4.5/38, MS3.7/37, 3C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR baz=0.8,slow=74,SNR=91	3.31	2	T	T	08 40 22.1	
H10S3	ASCENSION HYDR baz=219,slow=74,SNR=178	3.32	2	T	T	08 40 22.4	
ASCN	Ascension	4.35	5	Pn	Pn	08 37 04.3	-0.5
H10N1	ASCENSION HYDR baz=190,slow=79,SNR=32	4.42	4	T	T	08 41 48.4	
H10N3	ASCENSION HYDR baz=190,slow=79,SNR=105	4.43	3	T	T	08 41 44.0	
H10N2	ASCENSION HYDR baz=190,slow=79,SNR=40	4.44	4	T	T	08 41 50.3	
SHEL	Horse Pasture	9.48	114	Pn	Pn	08 38 16.5	+1.2
LIC	Lamto 33nm,0.8s	20.78	28	↑eP	Pn	08 40 45.2	+2.7
KIC	Kosan Boka 20nm,0.8s	21.04	29	↑eP	P	08 40 43.9	+1.0
TIC	Toumodi 53nm,0.8s	21.16	28	↑eP	P	08 40 45.2	+1.0
DBIC	Dimbokro	21.26	28	P	P	08 40 45.0	-0.2
DBIC	Dimbokro 7.1nm,0.8s,baz=221,slow=13,SNR=6.1	21.26	28	P	P	08 40 45.9	+0.7
DBIC	comp=Z,310nm,21.9s,baz=194,slow=31 7.1nm,0.8s			LR	LR	08 46 58.6	
RCBR	Riachuelo	21.83	285	P	P	08 40 51.8	+0.4
RCBR	comp=Z,25nm,1.2s			IAmb	IAmb	08 40 58.6	
RCBR	Riachuelo comp=Z,119nm,21.7s,baz=82,slow=32	21.83	285	LR	LR	08 47 24.0	
GUA01	Guaratinga, BA	24.61	257	eP	P	08 41 19.0	-0.5
SJMB	Sao Joao De Ma	26.23	253	eP	P	08 41 35.6	+1.6
TOA0	Torodi Ar. Sit	30.09	33	P	P	08 42 07.8	-0.6
TORD	Torodi Ar. Bea	30.09	33	P	P	08 42 06.9	-1.6
TORD	Torodi Ar. Bea comp=Z,1.8nm,0.3s,baz=221,slow=6.3,SNR=1.2	30.09	33	P	P	08 42 07.6	-0.9
TORD	comp=Z,214nm,21.0s,baz=210,slow=32 comp=Z,1.8nm,0.3s			LR	LR	08 52 13.8	
TSUM	Tsumeb	31.84	107	P	P	08 42 24.8	+0.5
TSUM	comp=Z,24nm,1.5s			IAmb	IAmb	08 42 25.3	
BDFB	Brasilia	32.42	260	P	P	08 42 29.0	-0.2
BDFB	comp=Z,9.0nm,1.0s			IAmb	IAmb	08 42 36.6	
BDFB	Brasilia comp=Z,2.9nm,0.8s,baz=70,slow=6.6,SNR=6.0	32.42	260	P	P	08 42 27.3	-1.9
BDFB	comp=Z,167nm,20.0s,baz=147,slow=32 comp=Z,2.9nm,0.8s			LR	LR	08 52 59.7	
SPB	Sao Paulo	32.97	246	P	P	08 42 33.8	-0.1
BB19B	Bebedouro	33.44	250	eP	P	08 42 37.6	-0.5
TMAB	Tom-Au,PA,Br	34.45	284	eP	P	08 42 48.2	+1.4
FRTB	Fartura	34.82	247	eP	P	08 42 49.5	-0.5
ITRB	Iturama	34.95	253	eP	P	08 42 50.4	-0.7
PCMB	Pacaembu	36.04	250	eP	P	08 43 00.3	-0.3
LDASE	Londrina, Braz	36.23	247	eP	P	08 43 01.7	-0.5
PTGB	Pitanga	37.34	245	eP	P	08 43 11.8	+0.1
TRCB	Terra Rica	37.49	249	P	P	08 43 13.2	+0.3
TRCB	comp=Z,33nm,1.4s			IAmb	IAmb	08 43 21.2	
ITAB	Concordia	38.01	241	P	P	08 43 18.0	+0.8
ITAB	comp=Z,21nm,1.3s			IAmb	IAmb	08 43 19.2	
ITAB	Concordia	38.01	241	eP	P	08 43 16.8	-0.4
SUR	Sutherland	38.25	127	P	P	08 43 20.2	+0.8
SUR	comp=Z,32nm,1.4s			IAmb	IAmb	08 43 36.2	
SUR	Sutherland comp=Z,62nm,18.6s,baz=186,slow=33	38.25	127	LR	LR	08 57 02.3	
MCPB	Macapa, AP	38.84	285	eP	P	08 43 26.3	+1.9
CRSM	Crissiumal (Br	39.72	242	eP	P	08 43 31.8	+0.3
AQDB	Aquidauana	40.02	253	P	P	08 43 34.2	+0.1
AQDB	Aquiana	40.02	253	eP	P	08 43 33.9	-0.3
CPSB	Cacapava Do Su	40.03	237	eP	P	08 43 34.3	+0.2
LBTB	Lobatse	40.13	114	P	P	08 43 36.1	+1.0
LBTB	Lobatse comp=Z,75nm,20.5s,baz=262,slow=32	40.13	114	LR	LR	08 57 32.0	
ANTJ	Antonio Joao (	40.46	251	eP	P	08 43 38.0	+0.1
MALB	Monte Alegre	40.49	282	eP	P	08 43 38.2	+0.1
BOSA	Boshof	40.64	120	P	P	08 43 39.2	-0.1
BOSA	comp=Z,27nm,1.5s			IAmb	IAmb	08 43 41.5	
BOSA	Boshof comp=Z,5.9nm,1.0s,baz=302,slow=9.5,SNR=5.6	40.64	120	P	P	08 43 38.1	-1.2
BOSA	comp=Z,73nm,18.8s,baz=248,slow=31 comp=Z,5.9nm,1.0s			LR	LR	08 57 07.5	
BDQN	Bodoquena, MS	41.00	253	eP	P	08 43 42.5	+0.3
UNIS	Unistalda (Bra	41.00	240	eP	P	08 43 42.2	0.0
PDRB	Porto dos Gac	41.03	266	eP	P	08 43 43.0	+0.4
MDP	Montagnes des comp=Z,54nm,19.6s,baz=72,slow=32	41.43	292	LR	LR	08 57 39.8	
LSZ	Lusaka	41.77	99	P	P	08 43 49.1	+0.3
LSZ	Lusaka comp=Z,97nm,21.1s,baz=297,slow=32	41.77	99	LR	LR	08 58 26.7	
MURT	Porto Murtinho	41.91	251	eP	P	08 43 49.8	+0.1
SOE	Somerset East	42.10	126	P	P	08 43 51.6	+0.4
CPUP	Villa Florida	42.33	244	P	P	08 43 53.1	+0.1
CPUP	Villa Florida comp=Z,5.5nm,0.8s,baz=93,slow=8.3,SNR=12	42.33	244	P	P	08 43 52.0	-1.0
CPUP	comp=Z,115nm,21.2s,baz=82,slow=32 comp=Z,5.5nm,0.8s			LR	LR	08 58 40.6	
ITQB	Itaqui	42.47	239	P	P	08 43 54.3	+0.2
ITQB	comp=Z,12nm,0.9s			IAmb	IAmb	08 43 56.7	
ITQB	Itaqui	42.47	239	eP	P	08 43 56.8	+2.7
ESFA	Espinillo Form	43.12	247	eP	P	08 44 00.3	+0.8
BBSD	Serra de San D	44.53	258	eP	P	08 44 12.9	+1.9
SIV	San Ignacio comp=Z,73nm,18.7s,baz=99,slow=34	44.99	260	LR	LR	09 01 11.4	
MDT	Midelt comp=Z,64nm,18.2s,baz=263,slow=34	45.89	12	LR	LR	09 02 23.0	
MBAR	Mbarara comp=Z,82nm,19.0s,baz=176,slow=34	46.59	79	LR	LR	09 02 37.5	
TEFE	Tefe	50.09	276	eP	P	08 44 55.0	+0.6
LVC	Liron Verde comp=Z,60nm,18.2s,baz=106,slow=36	52.42	251	LR	LR	09 07 19.6	
ESDC	Sonseca Array comp=Z,0.7nm,0.8s,baz=201,slow=6.9,SNR=5.1	52.66	10	P	P	08 45 12.8	-0.4
ESDC	comp=Z,0.4nm,0.8s,baz=191,slow=3.9,SNR=2.5 comp=Z,0.7nm,0.8s			PcP	PcP	08 46 24.5	+1.4
AC02	Maricunga	52.86	246	P	P	08 45 15.7	+0.1
AC02	comp=Z,12nm,1.1s			IAmb	IAmb	08 45 17.5	
KEST	Kesra	52.92	25	P	P	08 45 15.9	+0.6
KEST	comp=Z,9.2nm,0.9s,baz=188,slow=5.6,SNR=6.2			LR	LR	09 07 36.3	
LCO	comp=Z,148nm,19.0s,baz=331,slow=36 comp=Z,9.2nm,0.9s Las Campanas	54.44	243	P	P	08 45 26.4	-0.4
VA03	San Esteban	54.77	239	P	P	08 45 29.4	+0.5
VA03	comp=Z,14nm,1.2s			IAmb	IAmb	08 45 37.2	
PEL	Peldehue	54.93	238	P	P	08 45 30.6	+0.5
CO02	Combarbal	54.94	240	P	P	08 45 29.3	-1.0
BO04	La Punta	55.00	237	P	P	08 45 29.9	-0.7
BO04	comp=Z,12nm,0.9s			IAmb	IAmb	08 45 37.1	
BO02	Sierra Bellavi	55.27	236	P	P	08 45 32.8	+0.3
BO02	comp=Z,7.8nm,0.9s			IAmb	IAmb	08 45 34.0	
MT09	Talagante	55.28	237	P	P	08 45 32.6	-0.1
BO01	Tunca	55.45	237	P	P	08 45 34.0	+0.3
ML02	Panimavida	55.94	235	P	P	08 45 37.8	+0.6
PLCA	Paso Flores comp=Z,58nm,21.1s,baz=112,slow=32	56.28	229	LR	LR	09 06 10.1	
VAE	Valguarnera comp=Z,140nm,18.6s,baz=146,slow=36	56.58	28	LR	LR	09 09 28.3	
BAUV	El Baul	56.99	289	P	P	08 45 44.4	-0.7
BAUV	comp=Z,11nm,1.0s			IAmb	IAmb	08 45 51.0	
CZSB	Cruzeiro do Su	57.15	269	P	P	08 45 45.1	-1.1
CZSB	comp=Z,6.9nm,0.9s			IAmb	IAmb	08 45 51.1	
SDV	Santo Domingo comp=Z,22nm,19.3s,baz=99,slow=36	59.37	288	LR	LR	09 11 04.7	
SDV	Santo Domingo	59.37	288	eP	P	08 46 03.0	+1.1
SNAA	Sanae comp=Z,2.6nm,0.9s,baz=318,slow=9.1,SNR=3.6	59.79	176	P	P	08 46 02.8	-1.0
SNAA	comp=Z,191nm,19.9s,baz=23,slow=30 comp=Z,2.6nm,0.9s			LR	LR	09 06 16.2	
NNA	Nana comp=Z,98nm,20.1s,baz=116,slow=35	60.56	263	LR	LR	09 10 56.6	
ROSC	El Rosal comp=Z,52nm,18.1s,baz=280,slow=36	61.59	282	LR	LR	09 13 17.2	
ATAH	Atahualpa comp=Z,50nm,18.1s,baz=112,slow=37	62.81	268	LR	LR	09 14 10.0	
DAVOX	Davos/Dischmat comp=Z,110nm,18.6s,baz=250,slow=36	62.81	19	LR	LR	09 13 20.0	
EIL	Elat comp=Z,54nm,19.5s,baz=248,slow=35	63.52	48	LR	LR	09 13 18.4	
COHC	Cochancay	64.56	273	P	P	08 46 36.4	-0.3
MCRA	Macar, Loja	64.85	271	P	P	08 46 36.4	-2.3
MMAI	Mount Meron Ar comp=Z,30nm,18.0s,baz=196,slow=35	65.71	45	LR	LR	09 14 34.6	
GERES	GERESS Array B comp=Z,1.0nm,0.7s,baz=216,slow=4.8,SNR=2.3	65.87	20	P	P	08 46 44.2	-0.3
GERES	comp=Z,47nm,18.2s,baz=154,slow=35 comp=Z,1.0nm,0.7s			LR	LR	09 14 14.6	
VRAC	Vranov	67.27	22	LR	LR	09 16 05.4	
MLR	Muntele Rosu comp=Z,95nm,18.0s,baz=204,slow=36	68.23	30	P	P	08 46 58.9	-0.8
MLR	Muntele Rosu comp=Z,59nm,20.4s,baz=274,slow=35	68.23	30	LR	LR	09 15 44.2	
BR131	Keskin Array S	68.54	38	P	P	08 47 01.5	-0.3
BR131	comp=Z,8.0nm,1.2s			IAmb	IAmb	08 47 11.0	
BRTR	Keskin Array B comp=Z,1.7nm,0.8s,baz=224,slow=5.2,SNR=5.3	68.54	38	P	P	08 47 02.0	+0.3
BRTR	comp=Z,1.4nm,0.8s,baz=204,slow=3.4,SNR=4.1 comp=Z,1.7nm,0.8s			PcP	PcP	08 47 27.8	+0.9
JTS	Las Juntas de comp=Z,24nm,20.4s,baz=109,slow=36	73.23	285	LR	LR	09 19 41.7	
KIEV	Kiev	73.49	27	P	P	08 47 31.1	-0.3
KIEV	comp=Z,11nm,1.1s			IAmb	IAmb	08 47 40.4	
AKASG	Malin Array Be comp=Z,1.9nm,0.6s,baz=231,slow=5.5,SNR=8.1	73.50	27	P	P	08 47 31.9	+0.4
AKASG	comp=Z,20nm,20.3s,baz=248,slow=36 comp=Z,1.9nm,0.6s			LR	LR	09 19 37.3	
AKBB	Malin Array Si	73.50	27	P	P	08 47 30.7	-0.7
AKBB	comp=Z,13nm,1.2s			IAmb	IAmb	08 47 40.3	
GEVA	Gevas	73.81	44	P	P	08 47 32.0	-1.7
GEVA	comp=Z,6.3nm,1.1s			IAmb	IAmb	08 47 38.1	
GNI	Garni comp=Z,35nm,20.1s,baz=273,slow=36	75.86	43	LR	LR	09 21 35.5	
NOA	NORSAR Array B comp=Z,1.4nm,0.8s,baz=204,slow=6.1,SNR=4.6 comp=Z,1.4nm,0.8s	75.94	13	P	P	08 47 44.0	-1.4
KBZ	Khabaz comp=Z,3.5nm,1.0s,baz=239,slow=4.2,SNR=7.5 comp=Z,3.5nm,1.0s	76.51	39	P	P	08 47 50.1	+1.2
QSPA	South Pole Qui comp=Z,3.3nm,0.8s,baz=193,slow=1.1,SNR=13 comp=Z,3.3nm,0.8s	77.86	180	P	P	08 47 55.7	-0.7
SCHQ	Schefferville comp=Z,1.7nm,0.8s,baz=98,slow=7.1,SNR=2.0 comp=Z,1.7nm,0.8s	79.92	332	P	P	08 48 08.1	+0.5
WSAR	Wadi Sarin baz=42nm,20.2s,baz=258,slow=34	79.98	64	LR	LR	09 21 29.3	
FINES	FINESS Array B comp=Z,2.9nm,0.7s,baz=180,slow=1.9,SNR=8.6 comp=Z,2.9nm,0.7s	80.22	19	P	P	08 48 10.2	+1.1
BELG	Belogornoye comp=Z,65nm,18.1s,baz=140,slow=38	83.66	33	LR	LR	09 29 13.2	
GEYT	Alibeck comp=Z,1.0nm,0.5s,baz=243,slow=0.7,SNR=4.3	84.37	49	P	P	08 48 32.3	+0.8
GEYT	comp=Z,55nm,19.1s,baz=330,slow=36 comp=Z,1.0nm,0.5s			LR	LR	09 26 29.5	
KIRV	Kirov comp=Z,41nm,20.9s,baz=293,slow=35	87.55	28	LR	LR	09 27 20.7	
AKTO	Aktyubinsk comp=Z,2.8nm,0.7s,baz=242,slow=5.5,SNR=9.2 comp=Z,2.8nm,0.7s	88.71	38	P	P	08 48 53.3	+1.0
ABKAR	Akbulak array	89.48	39	P	P	08 48 56.0	0.0
VNDA	Vanda comp=Z,2.7nm,1.1s,baz=293,slow=14,SNR=2.0 comp=Z,2.7nm,1.1s	90.33	179	P	P	08 48 58.6	-1.0
ARU	Arti comp=Z,7.1nm,1.1s	91.15	32	P	P	08 49 03.3	-0.3
ARU	comp=Z,1.1nm,0.3s,baz=11,slow=3.6,SNR=5.7 comp=Z,1.1nm,0.3s			IAmb	IAmb	08 49 05.9	
ARU	Arti comp=Z,1.1nm,0.3s,baz=134,slow=6.5,SNR=1.8 comp=Z,0.5nm,0.9s	91.15	32	P	P	08 49 05.1	+1.5
TXAR	Lajitas Array comp=Z,0.5nm,0.9s,baz=13,slow=1.5,SNR=4.1	94.98	299	P	P	08 49 21.5	-0.6
PALK	Pallekele comp=Z,27nm,18.3s,baz=305,slow=34	96.83	84	LR	LR	09 31 08.0	
AAK	Ala-Archa comp=Z,33nm,18.7s,baz=314,slow=38	97.67	48	LR	LR	09 37 28.0	
CMAR	Chiang Mai Arr comp=Z,1.0nm,0.3s,baz=276,slow=1.7,SNR=4.1	116.08	75	PKP	PKPdf	08 54 42.4	-0.6
ILAR	Eielson Array comp=Z,0.5nm,0.8s,baz=13,slow=1.5,SNR=4.1	118.17	339	PKP	PKPdf	08 54 45.2	-0.4
SONM	Songino Array comp=Z,0.4nm,0.7s,baz=298,slow=3.2,SNR=3.7	119.80	42	PKP	PKPdf	08 54 49.1	-0.4
SEY	Seymchan comp=Z,0.6nm,0.5s,baz=242,slow=6.4,SNR=4.8	128.61	7	PKP	PKPdf	08 55 04.9	-0.8
ASAR	Alice Springs comp=Z,0.2nm,0.6s,baz=222,slow=1.7,SNR=4.7	132.93	139	PKP	PKPdf	08 55 14.2	-1.0
KLR	Kul'dur comp=Z,1.3nm,0.9s,baz=303,slow=4.1,SNR=4.3	133.95	30	PKP	PKPdf	08 55 15.2	-1.0
WRA	Warrumunga Arr comp=Z,0.8nm,1.0s,baz=241,slow=1.8,SNR=5.4	135.83	136	PKP	PKPdf	08 55 17.6	-3.1
MJAR	Matsushiro Arr comp=Z,2.4nm,1.0s,baz=268,slow=1.5,SNR=6.8	145.74	41	PKPbc	PKPdf	08 55 38.1	+0.2

*NNC **25** 09:14:18.2±0.6, 50°.81N×73°.66E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=6.3km s-min=4.6km az=35.0, Suspected Mining explosion.*

*IDC **25** 09:14:22.8±4.0, 50°.99N×73°.89E, h0km, mbtmp2.6/3, ML2.1/3, Error ellipse: s-maj=40.6km s-min=29.0km az=129.0*

ISC 25 09:14:21.4±1.2, 50°.92N±0°.10×73°.80E±0°.08, h0km, n16, σ1.48/11, 10C-8D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	Ortayu 2.3nm,0.3s	2.84	200	⇓Pg	Pn	09 15 06.9	-1.0
OTUK	21nm,0.6s			⇓Lg	Lg	09 15 44.8	
BVA0	Borovoye Array 1.1nm,0.5s,baz=136,slow=15,SNR=8.6	2.99	316	⇑Pg	Pb	09 15 14.1	-1.3
BVA0	12nm,0.8s,baz=130,slow=28,SNR=12			⇑Lg	Lg	09 15 52.0	
BVAR	Borovoye Array 0.2nm,0.3s,baz=130,slow=29,SNR=1.8	2.99	316	Lg	Lg	09 15 49.0	
KURBB	Kurchatov Arra 3.7nm,0.3s	3.02	94

*NAO **25** 09:34:18.5±1.4, 73.˙98N×9.˙75E, ML3.3*
*BER **25** 09:34:21.7±2.0, 73.˙95N×9.˙24E, h24km±21km, mb(Pn)3.9, ML3.3(NAO), Confirmed Earthquake*
*KOLA **25** 09:34:28.0, 73.˙47N× 10.˙86E, h0km, ML2.0, Error ellipse: s-maj=20.9km s-min=13.2km az=140.0, Norwegian sea*
ISC 25 09:34:17.8±0.9, **73.˙87N**±0.˙05×**9.˙58E**±0.˙08, **h10**km, **n53**, σ2$ **89**/75, **mb3.4**/4, **MS3.1**/7, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.66**	**72**	Pn	**Pn**	**09 35 02.3**	**+1.7**
BJO1	**Bjornoya**	**2.66**	**72**	*eP*	**Pn**	**09 35 02.3**	**+1.7**
BJO1				*eS*	**Sn**	**09 35 32.1**	**-0.7**
BJO1				IAML		09 35 33.5	
	comp=Z,16nm,0.5s						
HSPB	**Hornsund (broa**	**3.49**	**23**	Pn	**Pn**	**09 35 12.1**	**0.0**
HSPB	**Hornsund (broa**	**3.49**	**23**	*eP*	**Pn**	**09 35 12.2**	**+0.1**
HSPB				IAML		09 35 56.2	
	comp=Z,4.2nm,0.7s						
BRBA	**Barentsburg A**	**4.37**	**13**	Pn	**Pn**	**09 35 23.6**	**-0.4**
BRBA	**Barentsburg A**	**4.37**	**13**	*eP*	**Pn**	**09 35 23.6**	**-0.4**
BRBA				*eS*	**Sn**	**09 36 07.7**	**-7.2**
BRBA				IAML		09 36 21.6	
	comp=Z,4.4nm,0.7s						
BRBB	**Barentsburg B**	**4.40**	**13**	Pn	**Pn**	**09 35 23.9**	**-0.6**
BRBB	**Barentsburg B**	**4.40**	**13**	*eP*	**Pn**	**09 35 24.1**	**-0.4**
BRBB				*eS*	**Sn**	**09 36 10.5**	**-5.1**
SPA0	**Spitsbergen Ar**	**4.63**	**18**	Pn	**Pn**	**09 35 28.2**	**+0.5**
	baz=204,slow=14						
SPA0	**Spitsbergen Ar**	**4.63**	**18**	Pn	**Pn**	**09 35 28.2**	**+0.5**
	baz=204,slow=14						
SPITS	**Spitsbergen Ar**	**4.63**	**18**	Pn	**Pn**	**09 35 28.6**	**+0.8**
	comp=Z,9.5nm,0.3s,baz=187,slow=14,SNR=301						
SPITS				Sn	**Sn**	**09 36 20.4**	**-1.1**
	baz=140,slow=15						
HOPEN	**Hopen**	**4.76**	**49**	Pn	**Pn**	**09 35 30.6**	**+1.2**
HOPEN				Sn	**Sn**	**09 36 23.4**	**-1.1**
HOPEN	**Hopen**	**4.76**	**49**	*eP*	**Pn**	**09 35 30.3**	**+0.9**
HOPEN				*eS*	**Sn**	**09 36 21.3**	**-3.2**
HOPEN				IAML		09 36 27.0	
	comp=Z,3.7nm,0.5s						
KBS	**Kingsbay**	**5.12**	**5**	Pn	**Pn**	**09 35 33.3**	**-1.1**
KBS				Sn	**Sn**	**09 36 31.3**	**-2.1**
KBS	**Kingsbay**	**5.12**	**5**	*eP*	**Pn**	**09 35 33.1**	**-1.3**
KBS				*eS*	**Sn**	**09 36 30.0**	**-3.5**
KBS				IAML		09 36 36.9	
	comp=Z,5.0nm,1.3s						
TRO	**Tromso**	**5.16**	**141**	*eP*	**Pn**	**09 35 37.3**	**+2.3**
TRO				*eS*	**Sn**	**09 36 30.8**	**-3.8**
TRO				IAML		09 36 38.8	
	comp=Z,6.4nm,0.4s						
HAMF	**Hammerfest**	**5.38**	**120**	Pn	**Pn**	**09 35 39.7**	**+1.7**
HAMF				Sn	**Sn**	**09 36 37.4**	**-2.6**
HAMF	**Hammerfest**	**5.38**	**120**	*eP*	**Pn**	**09 35 39.8**	**+1.7**
HAMF				*eS*	**Sn**	**09 36 37.1**	**-2.8**
HAMF				IAML		09 36 41.0	
	comp=Z,4.4nm,0.8s						
JETT	**Jettan, Norway**	**5.50**	**136**	Pn	**Pn**	**09 35 43.0**	**+3.2**
JETT				Sn	**Sn**	**09 36 42.5**	**-0.4**
JETT	**Jettan, Norway**	**5.50**	**136**	Pn	**Pn**	**09 35 43.0**	**+3.2**
JETT				Sn	**Sn**	**09 36 42.5**	**-0.4**
LOF	**Lofoten**	**5.91**	**165**	*eP*	**Pn**	**09 35 46.5**	**+1.3**
LOF				*eS*	**Sn**	**09 36 47.6**	**-5.2**
LOF				IAML		09 36 50.7	
	comp=Z,4.4nm,1.3s						
KIF	**Kilpisjarvi**	**6.05**	**138**	Pn	**Pn**	**09 35 49.6**	**+2.5**
KIF				Sn	**Sn**	**09 36 54.7**	**-1.5**
KIF	**Kilpisjarvi**	**6.05**	**138**	*eP*	**Pn**	**09 35 48.6**	**+1.5**
KIF				*eS*	**Sn**	**09 36 55.1**	**-1.1**
STEI	**Steigen**	**6.24**	**160**	*eP*	**Pn**	**09 35 51.7**	**+1.8**
STEI				*eS*	**Sn**	**09 36 55.9**	**-5.3**
STEI				IAML		09 37 04.3	
	comp=Z,1.7nm,0.9s						
KTK1	**Kautokeino**	**6.52**	**131**	*eP*	**Pn**	**09 35 55.3**	**+1.6**
KTK1				*eS*	**Sn**	**09 37 02.1**	**-5.9**
KTK1				IAML		09 37 06.2	
	comp=Z,1.4nm,0.9s						
ARA0	**ARCESS Array S**	**6.62**	**123**	Pn	**Pn**	**09 35 57.8**	**+2.8**
	baz=318,slow=12						
ARA0				Sn	**Sn**	**09 37 07.9**	**-2.4**
	baz=317,slow=22						
ARA0	**ARCESS Array S**	**6.62**	**123**	*eP*	**Pn**	**09 35 57.6**	**+2.6**
ARA0				*eS*	**Sn**	**09 37 06.4**	**-3.9**
ARA0				IAML		09 37 25.8	
	comp=Z,2.4nm,0.6s						
ARCES	**ARCESS Array B**	**6.62**	**123**	P	**Pn**	**09 35 58.0**	**+3.0**
ARCES				S	**Sn**	**09 37 04.3**	**-6.1**
ARCES	**ARCESS Array B**	**6.62**	**123**	Pn	**Pn**	**09 35 57.9**	**+3.0**
	comp=Z,0.5nm,0.3s,baz=322,slow=12,SNR=37						
ARCES				Sn	**Sn**	**09 37 07.8**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=321,slow=19,SNR=5.8						
ARCES				LR	LR	09 38 30.2	
	comp=Z,142nm,18.5s,baz=257,slow=37						
	comp=Z,1.2nm,0.4s						
FAUS	**Fauske**	**6.78**	**161**	P	**Pn**	**09 35 59.7**	**+2.5**
FAUS				S	**Sn**	**09 37 09.8**	**-4.5**
FAUS	**Fauske**	**6.78**	**161**	*eP*	**Pn**	**09 35 58.4**	**+1.2**
FAUS				*eS*	**Sn**	**09 37 09.5**	**-4.9**
FAUS				IAML		09 37 19.4	
	comp=Z,1.8nm,0.8s						
KEV	**Kevo**	**6.82**	**119**	Pn	**Pn**	**09 36 00.6**	**+3.0**
KEV				Sn	**Sn**	**09 37 11.0**	**-4.1**
KEV	**Kevo**	**6.82**	**119**	*eP*	**Pn**	**09 36 00.0**	**+2.3**
KEV				*eS*	**Sn**	**09 37 11.4**	**-3.8**
HEF	**Hetta**	**7.11**	**133**	*eP*	**Pn**	**09 36 03.6**	**+1.8**
HEF				*eS*	**Sn**	**09 37 19.0**	**-3.5**
VADS	**Vadso**	**7.16**	**112**	*eP*	**Pn**	**09 36 04.0**	**+1.6**
VADS				*eS*	**Sn**	**09 37 18.7**	**-5.0**
VADS				IAML		09 37 32.2	
	comp=Z,7.2nm,1.0s						
VADS	**Vadso**	**7.16**	**112**	P	**Pn**	**09 36 05.1**	**+2.7**
VADS				S	**Sn**	**09 37 18.8**	**-4.9**
KONS	**Konsvik**	**7.50**	**169**	*eP*	**Pn**	**09 36 07.1**	**+0.1**
KONS				*eS*	Sn	09 37 25.8	-6.2
KONS				IAML		09 37 53.7	
	comp=Z,3.0nm,0.6s						
APA0	**Apatity Array**	**9.88**	**118**	Pn	**Pn**	**09 36 41.3**	**+1.6**
	baz=323,slow=11						
APA0	**Apatity Array**	**9.88**	**118**	Pn	**Pn**	**09 36 41.3**	**+1.6**
	baz=323,slow=11						
SCO	**Scoresbysund**	**10.14**	**266**	*i P*	Pn	09 36 37.0	-6.2
ZFI2	**Zemlya Franca-**	**10.58**	**33**	*eP*	**Pn**	**09 36 50.2**	**+1.1**
OMEGA	**Omega**	**10.58**	**33**	*eP*	**Pn**	**09 36 49.6**	**+0.4**
FINES	**FINESS Array B**	**13.87**	**145**	Pn	**Pn**	**09 37 35.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=6.2,slow=14,SNR=3.5						
	comp=Z,1.3nm,0.8s						
SFJD	**Kangerlussuaq**	**20.37**	**282**	LR	LR	09 45 17.2	
	comp=Z,51nm,19.1s,baz=358,slow=33						
KIRV	**Kirov**	**21.51**	**114**	LR	LR	09 47 55.6	
	comp=Z,69nm,18.9s,baz=334,slow=38						
AKASG	**Malin Array Be**	**24.71**	**149**	LR	LR	09 49 20.2	
	comp=Z,58nm,18.3s,baz=318,slow=36						
FRB	**Frobisher Bay**	**27.68**	**290**	LR	LR	09 51 24.9	
	comp=Z,28nm,18.9s,baz=162,slow=38						
BVAR	**Borovoye Array**	**32.05**	**96**	P	**P**	**09 40 48.4**	**+4.2**
	comp=Z,0.4nm,0.6s,baz=340,slow=7.7,SNR=2.2						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**36.48**	**90**	P	**P**	**09 41 26.1**	**+3.6**
	comp=Z,1.3nm,0.2s,baz=337,slow=7.4,SNR=1.8						
KURBB				LR	LR	09 59 37.2	
	comp=Z,36nm,18.1s,baz=182,slow=41						
	comp=Z,1.3nm,0.2s						
GNI	**Garni**	**37.64**	**134**	LR	LR	09 58 26.9	
	comp=Z,38nm,18.5s,baz=328,slow=38						
YKA	**Yellowknife Ar**	**38.98**	**322**	P	**P**	**09 41 42.2**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=34,slow=10,SNR=3.3						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**40.75**	**345**	P	**P**	**09 41 59.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=9.2,slow=5.8,SNR=5.5						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**41.00**	**89**	LR	LR	10 02 22.2	
	comp=Z,49nm,18.2s,baz=312,slow=41						

RSNC 25 09:37:00.2±1.2, **6.˙84N**×**73.˙15W, h144**km±4km, **ML3.2, Mw3.6, 4C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**187**	⇑*iP*	Pn	09 37 20.1	-0.2
BARC				*eS*	Sn	09 37 34.6	-0.9
BARC				*i*		09 37 36.5	
	comp=Z,373nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**42**	⇑*iP*	Pn	09 37 22.7	+0.2
PAMC				*eS*	Sn	09 37 39.6	+0.2
PAMC				*i*		09 37 41.8	
	comp=Z,345nm,0.5s						
RUSC	**La Rusia**	**0.95**	**176**	*eP*	Pn	09 37 24.1	-0.4
RUSC				*eS*	Sn	09 37 42.6	-0.5
RUSC				*i*		09 37 44.2	
	comp=Z,173nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.33**	**257**	*eP*	Pn	09 37 26.8	-0.8
PTBC				*eS*	Sn	09 37 47.9	-0.6
PTBC				*i*		09 37 55.8	
	comp=Z,210nm,0.4s						
OCAC	**Ocana**	**1.40**	**353**	⇑*iP*	Pn	09 37 27.9	-0.6
OCAC				*eS*	Sn	09 37 49.7	-0.4
TAMC	**Tame, Arauca**	**1.41**	**107**	⇓*iP*	Pn	09 37 28.4	0.0
TAMC				*eS*	Sn	09 37 49.9	-0.1
TAMC				*i*		09 37 50.7	
	comp=Z,138nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**218**	*eP*	Pn	09 37 29.0	-0.4
SPBC				*eS*	Sn	09 37 50.3	-1.5
SPBC				*i*		09 37 56.6	
	comp=Z,213nm,0.5s						
NORC	**Norcasia**	**2.13**	**233**	*eP*	Pn	09 37 36.1	-0.5
NORC				*eS*	Sn	09 38 04.0	-0.5
NORC				*i*		09 38 09.2	
	comp=Z,127nm,0.4s						
CHIC	**Chingaza**	**2.27**	**195**	*eP*	Pn	09 37 38.3	-0.4
CHIC				*eS*	Sn	09 38 07.8	-0.5
CHIC				*i*		09 38 16.6	
	comp=Z,75nm,0.5s						
ROSC	**El Rosal**	**2.30**	**210**	*eP*	Pn	09 37 40.1	+1.1
ROSC				*eS*	Sn	09 38 10.2	+1.4
HELC	**Santa Helena**	**2.45**	**255**	*eP*	Pn	09 37 41.5	+0.7
HELC				*eS*	Sn	09 38 12.4	+0.4
HELC				*i*		09 38 19.7	
	comp=Z,128nm,0.3s						
CVER	**Cruz Verde, Cu**	**2.48**	**202**	⇑*iP*	Pn	09 37 41.8	+0.5
CVER				*eS*	Sn	09 38 13.5	+0.6
CVER				*i*		09 38 22.9	
	comp=Z,87nm,0.5s						
UREC	**San Jos de Ur**	**2.53**	**291**	*eP*	Pn	09 37 40.0	-1.4
UREC				*eS*	Sn	09 38 16.7	+3.5
UREC				*i*		09 38 22.2	
	comp=Z,154nm,0.5s						
VILC	**Villavicencio,**	**2.77**	**191**	*eP*	Pn	09 37 44.1	-0.4
VILC				*eS*	Sn	09 38 18.2	-0.5
VILC				*i*		09 38 29.0	
	comp=Z,240nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**	⇓*iP*	Pn	09 37 43.3	-1.7
PTGC				*eS*	Sn	09 38 16.7	-2.9
PTGC				*i*		09 38 25.2	
	comp=Z,65nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.88**	**358**	*eP*	Pn	09 37 44.4	-1.4
LL6C				*eS*	Sn	09 38 20.6	-0.4
LL6C				*i*		09 38 26.7	
	comp=Z,34nm,0.4s						
DBBC	**Dabeiba**	**3.04**	**273**	*eP*	Pn	09 37 47.8	-0.2
DBBC				*eS*	Sn	09 38 24.1	-0.7
DBBC				*i*		09 38 27.2	
	comp=Z,48nm,0.3s						
ARGC	**Ariguani, Magd**	**3.19**	**340**	*eP*	Pn	09 37 50.3	+0.5
ARGC				*eS*	Sn	09 38 28.1	0.0
ARGC				*i*		09 38 35.7	
	comp=Z,46nm,0.4s						
SDV	**Santo Domingo**	**3.22**	**51**	*eP*	Pn	09 37 49.3	-1.1
SDV				*eS*	Sn	09 38 26.8	-2.3
SDV				*i*		09 38 28.8	
	comp=Z,41nm,0.4s						
PRAC	**Prado**	**3.56**	**209**	*eP*	Pn	09 37 54.2	-0.4
PRAC				*eS*	Sn	09 38 35.8	-1.0
PRAC				*i*		09 38 42.7	
	comp=Z,141nm,0.2s						
APAC	**Apartado, Choc**	**3.56**	**287**	⇓*iP*	Pn	09 37 54.0	-0.5
APAC				*eS*	Sn	09 38 37.1	+0.5
APAC				*i*		09 38 41.2	
	comp=Z,41nm,0.4s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	*eP*	Pn	09 37 54.6	-0.3
ORTC				*eS*	Sn	09 38 37.7	+0.3
ORTC				*i*		09 38 41.9	
	comp=Z,76nm,0.4s						
SJCC	**San Jacinto, C**	**3.64**	**327**	*eP*	Pn	09 37 53.8	-1.8
SJCC				*eS*	Sn	09 38 34.3	-4.3
SJCC				*i*		09 38 39.4	
	comp=Z,68nm,0.5s						
PLMC	**San Jos del P**	**3.66**	**238**	*eP*	Pn	09 37 55.8	-0.2
PLMC				*eS*	Sn	09 38 37.0	-2.2
PLMC				*i*		09 38 43.5	
	comp=Z,33nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.16**	**4**	*eP*	Pn	09 38 00.1	-2.4
CRJC				*eS*	Sn	09 38 46.8	-4.2
CRJC				*i*		09 38 49.6	
	comp=Z,31nm,0.6s						
YOTC	**Yotoco, Valle**	**4.26**	**228**	*eP*	Pn	09 38 02.1	-1.8
YOTC				*eS*	Sn	09 38 49.7	-3.7
SMRC	**Santa Marta, M**	**4.42**	**346**	*eP*	Pn	09 38 04.1	-1.8
SMRC				*eS*	Sn	09 38 52.6	-4.4
SMRC				*i*		09 38 55.9	
	comp=Z,21nm,0.3s						
CAPC	**Capurgana**	**4.53**	**293**	*eP*	Pn	09 38 08.5	+1.2
CAPC				*eS*	Sn	09 38 57.3	-2.2
CAPC				*i*		09 39 03.0	
	comp=Z,32nm,0.8s						
PTAC	**Punta Ardita,**	**4.63**	**274**	*eP*	Pn	09 38 07.5	-1.2
PTAC				*i*		09 38 51.9	
	comp=Z,11nm,0.4s						
BETC	**Betania**	**4.72**	**209**	*eP*	Pn	09 38 12.8	+2.9
BETC				*eS*	Sn	09 39 02.0	-2.3
BETC				*i*		09 39 10.5	
	comp=Z,13nm,0.6s						
JAMC	**Jamundi, Valle**	**5.03**	**224**	*eP*	Pn	09 38 14.7	+0.5
JAMC				*eS*	Sn	09 39 11.3	-0.4
JAMC				*i*		09 39 18.0	
	comp=Z,5.2nm,0.6s						
UPD2	**Meteti**	**5.11**	**290**	*eP*	Pn	09 38 13.2	-1.8
UPD2				*eS*	Sn	09 39 11.9	-1.4
UPD2				*i*		09 39 16.3	
	comp=Z,16nm,0.7s						
POPC	**Popayan, Colom**	**5.53**	**220**	*eP*	Pn	09 38 20.4	-0.5
POPC				*eS*	Sn	09 39 23.1	-0.7
FLOC	**Florencia**	**5.79**	**206**	*eP*	Pn	09 38 22.9	-1.2
FLOC				*eS*	Sn	09 39 28.1	-1.6
FLOC				*i*		09 39 34.7	
	comp=Z,4.2nm,0.6s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*eP*	Pn	09 38 31.2	+0.1
BBAC				*eS*	Sn	09 39 37.2	-4.8
BBAC				*i*		09 39 46.0	
	comp=Z,4.7nm,0.3s						
GCUF	**Volcan Galeras**	**6.97**	**217**	*eP*	Pn	09 38 41.7	+1.3

*IDC **25** 09:52:20.1±10.0, 6.˙61S×129.˙78E, h114km±104km, mb3.9/4, mbtmp4.3/6, ML4.2/2, MS3.2/1, Error ellipse: s-maj=75.6km s-min=34.4km az=57.0*
*NEIC **25** 09:52:25.9±1.3, 6.˙62S±0.˙07×129.˙8E±0.˙1, h167km±8km, mb4.3/12, Error ellipse: s-maj=16.7km s-min=10.3km az=90.0*
*DJA **25** 09:52:25.1±0.2, 7.˚S±3.˚×13.˚0E±.˚, h176km±7km, M4.5/13, mb4.2/12, mB5.0/3, MLv4.6/13, Mw(mB)4.4/3*
ISC 25 09:52:23.6±0.6, **6.˙68S**±0.˙06×**129.˙89E**±0.˙06, **h146**km, **n68**, σ1$ **92**/69, **mb4.2**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.91**	**133**		**Pn**	**09 53 01.6**	**+4.1**
SAUI	**Saumlaki**	**1.91**	**133**	P	**Pn**	**09 52 59.3**	**+1.9**
SAUI	**Saumlaki**	**1.91**	**133**	P	**Pn**	**09 53 02.1**	**+4.7**
BNDI	**Bandanaira**	**2.14**	**0**	P	**Pn**	**09 53 04.3**	**+4.1**
NLAI	**Namlea**	**4.40**	**321**	P	Pn	09 53 34.0	+5.0
FAKI	**Fak Fak**	**4.41**	**32**		**Pn**	**09 53 30.4**	**+1.2**
FAKI	**Fak Fak**	**4.41**	**32**	P	**Pn**	**09 53 30.3**	**+1.1**
FAKI	**Fak Fak**	**4.41**	**32**	P	**Pn**	**09 53 29.9**	**+0.7**
FAKI				S	**Sn**	**09 54 16.7**	**-3.6**
KMPI	**Kaimana, Papua**	**4.84**	**52**	P	**Pn**	**09 53 36.9**	**+2.0**
KMPI				S	**Sn**	**09 54 29.6**	**-0.8**
DRS	**Darwin Rock St**	**5.80**	**170**	P	**Pn**	**09 53 49.5**	**+1.8**
SWI	**Sorong**	**5.94**	**13**	P	**Pn**	**09 53 49.8**	**+0.4**
	22nm,0.4s,2μm0.7nm						
SANI	**Sanana**	**6.02**	**320**	P	**Pn**	**09 53 52.6**	**+2.0**
	26nm,0.8s,0.1nm						
MTN	**Manton Dam**	**6.25**	**169**		**Pn**	**09 53 54.9**	**+1.3**
MTN	**Manton Dam**	**6.25**	**169**	P	**Pn**	**09 53 55.2**	**+1.6**
SOEI	**Soe**	**6.35**	**241**	Pn	**Pn**	**09 53 56.8**	**+1.8**
SOEI	**Soe**	**6.35**	**241**	P	**Pn**	**09 53 57.1**	**+2.1**
	35nm,0.5s,0.3nm						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**6.45**	**338**	P	**Pn**	**09 53 57.9**	**+1.5**
	128nm,0.9s,0.4nm						
KDU	**Kakadu**	**6.49**	**157**	P	**Pn**	**09 53 58.1**	**+1.2**
EDFI	**Ende, Flores**	**8.38**	**255**	P	**Pn**	**09 54 23.3**	**+1.1**
	13nm,0.9s						
KNRA	**Kununurra**	**9.01**	**187**	Pn	**Pn**	**09 54 30.2**	**-0.3**
KMSI	**Cibinong**	**9.31**	**320**	P	**Pn**	**09 54 36.2**	**+1.7**
	100nm,0.5s						
FITZ	**Fitzroy Crossi**	**12.08**	**200**	Pn	**Pn**	**09 55 10.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**12.08**	**200**	P	**Pn**	**09 55 12.1**	**+1.0**
PLAI	**Plampang**	**12.19**	**259**	P	**Pn**	**09 55 12.2**	**-0.3**
PLAI	**Plampang**	**12.19**	**259**	P	**Pn**	**09 55 11.2**	**-1.3**
	44nm,1.3s						
TWSI	**Taliwang, Sumb**	**13.05**	**260**	P	**Pn**	**09 55 24.0**	**+0.4**
	18nm,1.2s						
WB0	**Warramunga Arr**	**13.73**	**162**		**Pn**	**09 55 30.1**	**-2.2**
WRAB	**Tennant Creek**	**13.87**	**162**		**Pn**	**09 55 32.1**	**-2.1**
WRA	**Warramunga Arr**	**13.88**	**162**		**Pn**	**09 55 31.8**	**-2.4**
WRA	**Warramunga Arr**	**13.88**	**162**	P	**Pn**	**09 55 31.6**	**-2.6**
	1.0nm,0.3s,baz=346,slow=13,SNR=34						
WRA				S	Sn	09 57 57.3	-11
	2.7nm,0.5s,baz=349,slow=19,SNR=7.7						
	3.3nm,0.8s						
WB2	**Warramunga Arr**	**13.88**	**162**		**Pn**	**09 55 32.4**	**-1.9**
COEN	**Coen**	**14.94**	**120**		**P**	**09 55 51.4**	**+1.9**
COEN				IAmb	IAmb	09 55 52.1	
	comp=Z,12nm,0.9s						
COEN	**Coen**	**14.94**	**120**	P	**Pn**	**09 55 49.5**	**+2.0**
QIS	**Mount Isa**	**16.71**	**147**	P	**Pn**	**09 56 10.4**	**+1.1**
AS31	**Alice Springs**	**17.33**	**168**	P	**P**	**09 56 16.6**	**+0.8**
ASAR	**Alice Springs**	**17.33**	**168**	P	**P**	**09 56 17.2**	**+1.3**
ASAR	**Alice Springs**	**17.33**	**168**	P	**Pn**	**09 56 17.3**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=347,slow=10.0,SNR=108						
ASAR				S	**S**	**09 59 21.4**	**-7.7**
	comp=Z,0.6nm,0.5s,baz=191,slow=18,SNR=1.6						
	comp=Z,8.1nm,0.7s						
AS01	**Alice Springs**	**17.34**	**167**	P	**P**	**09 56 17.3**	**+1.3**
PSA00	**Pilbara Seismi**	**17.71**	**212**	P	**P**	**09 56 20.4**	**+0.4**
PSA00				IAmb	IAmb	09 56 21.5	
	comp=Z,8.8nm,0.5s						
PSA00	**Pilbara Seismi**	**17.71**	**212**	P	**Pn**	**09 56 20.9**	**-0.3**
MTSU	**Mount Surprise**	**18.10**	**130**	P	**Pn**	**09 56 26.6**	**+0.6**
WRKA	**Warakurna**	**18.32**	**185**	P	**P**	**09 56 28.1**	**+1.4**
TV1H	**Townsville Har**	**20.66**	**129**	P	**P**	**09 56 53.6**	**+1.6**
CTA	**Charters Tower**	**20.74**	**132**	P	**P**	**09 56 54.0**	**+1.1**
	comp=Z,3.1nm,0.5s,baz=312,slow=13,SNR=3.9						
	comp=Z,3.1nm,0.5s						
CTAO	**Charters Tower**	**20.74**	**132**	P	**P**	**09 56 54.7**	**+1.8**
CTAO				IAmb	IAmb	09 57 11.9	
	comp=Z,21nm,1.4s						
CTAO	**Charters Tower**	**20.74**	**132**	P	**P**	**09 56 54.5**	**+1.6**
INKA	**Innaminka**	**23.35**	**155**	P	**P**	**09 57 20.1**	**+1.2**
MULG	**Mulgathing**	**23.81**	**171**	P	**P**	**09 57 24.3**	**+1.2**
FORT	**Forrest**	**24.04**	**184**	P	**P**	**09 57 26.1**	**+1.0**
FORT	**Forrest**	**24.04**	**184**	P	**P**	**09 57 26.2**	**+1.0**
QLP	**Quilpie**	**24.05**	**147**	P	**P**	**09 57 26.8**	**+1.4**
LCRK	**Leigh Creek**	**24.91**	**163**	P	**P**	**09 57 34.5**	**+1.4**
BBOO	**Buckleboo**	**26.63**	**168**	P	**P**	**09 57 48.6**	**0.0**
BBOO	**Buckleboo**	**26.63**	**168**	P	**P**	**09 57 49.9**	**+1.3**
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**09 57 54.9**	**-0.2**
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**09 57 55.7**	**+0.6**
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**09 57 54.9**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=319,slow=6.0,SNR=7.1						
	comp=Z,1.9nm,0.3s						
CMSA	**Cobar Meteorol**	**28.81**	**151**	P	**P**	**09 58 09.3**	**+1.3**
ARPS	**Mount Arapiles**	**31.88**	**162**	P	**P**	**09 58 36.3**	**+1.3**
CAN	**Canberra**	**33.49**	**151**	P	**P**	**09 58 50.2**	**+1.1**
CAN	**Canberra**	**33.49**	**151**	P	**P**	**09 58 49.9**	**+0.8**
KLR	**Kul'dur**	**55.70**	**1**	LR	LR	10 26 39.4	
	comp=Z,20nm,18.9s,baz=102,slow=37						
MK31	**Makanchi Array**	**67.89**	**327**	P	**P**	**10 03 06.0**	**-0.4**
MKAR	**Makanchi Array**	**67.89**	**327**	P	**P**	**10 03 05.6**	**-0.8**
MKAR	**Makanchi Array**	**67.89**	**327**	P	**P**	**10 03 06.1**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=118,slow=7.4,SNR=48						
	comp=Z,3.1nm,0.5s						
MAKZ	**Makanchi**	**68.08**	**327**	P	**P**	**10 03 06.7**	**-0.8**
MAKZ				IAmb	IAmb	10 03 07.7	
	comp=Z,2.8nm,0.7s						
KURBB	**Kurchatov Arra**	**72.18**	**328**	P	**P**	**10 03 31.2**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=137,slow=4.8,SNR=7.2						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**83

ARGC				*e*S		**Sn**	**10 15 36.8**	**+0.9**
ARGC				*i*			10 15 44.7	
	comp=Z,19nm,0.3s							
SDV	**Santo Domingo**	**3.17**	**51**	*e*P		**Pn**	**10 14 58.6**	**+1.0**
SDV				*e*S		**Sn**	**10 15 36.5**	**+0.4**
SDV				*i*			10 15 41.2	
	comp=Z,13nm,0.7s							
APAC	**Apartado, Choc**	**3.58**	**287**	*e*P		**Pn**	**10 15 03.2**	**+0.4**
APAC				*e*S		**Sn**	**10 15 44.3**	**-1.0**
APAC				*i*			10 15 51.4	
	comp=Z,16nm,0.4s							
PRAC	**Prado**	**3.60**	**209**	*e*P		**Pn**	**10 15 02.9**	**-0.2**
PRAC				*e*S		**Sn**	**10 15 46.4**	**+0.5**
PRAC				*i*			10 15 54.1	
	comp=Z,53nm,0.4s							
ORTC	**Ortega, Tolima**	**3.63**	**216**	*e*P		**Pn**	**10 15 03.7**	**+0.3**
ORTC				*e*S		**Sn**	**10 15 49.0**	**+2.4**
ORTC				*i*			10 15 54.6	
	comp=Z,35nm,0.4s							
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P		**Pn**	**10 15 03.0**	**-0.4**
SJCC				*e*S		**Sn**	**10 15 44.5**	**-2.1**
SJCC				*i*			10 15 48.8	
	comp=Z,27nm,0.5s							
PLMC	**San Jos del P**	**3.71**	**238**	*e*P		**Pn**	**10 15 04.9**	**+0.4**
PLMC				*e*S		**Sn**	**10 15 46.4**	**-1.9**
PLMC				*i*			10 15 52.1	
	comp=Z,13nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	*e*P		**Pn**	**10 15 09.6**	**-0.3**
CRJC				*e*S		**Sn**	**10 15 56.3**	**-1.8**
CRJC				*i*			10 16 00.2	
	comp=Z,14nm,0.4s							
YOTC	**Yotoco, Valle**	**4.31**	**228**	*e*P		**Pn**	**10 15 11.9**	**-0.5**
YOTC				*e*S		**Sn**	**10 16 01.9**	**-0.7**
SMRC	**Santa Marta, M**	**4.40**	**346**	*e*P		**Pn**	**10 15 14.8**	**+1.4**
SMRC				*e*S		**Sn**	**10 16 02.3**	**-2.2**
MALC	**Bahia Malaga**	**5.07**	**236**	*e*P		**Pn**	**10 15 23.8**	**+1.5**
MALC				*e*S		**Sn**	**10 16 26.0**	**+5.6**
JAMC	**Jamundi, Valle**	**5.08**	**224**	*e*P		**Pn**	**10 15 21.7**	**-0.9**
JAMC				*e*S		**Sn**	**10 16 22.2**	**+1.3**
BBAC	**Balboa, Cauca**	**6.34**	**221**	*e*P		**Pn**	**10 15 40.5**	**+1.1**
BBAC				*e*S		**Sn**	**10 16 48.6**	**-2.4**
BBAC				*i*			10 16 57.0	
	comp=Z,2.2nm,0.4s							
YKA	**Yellowknife Ar**	**63.22**	**340**	P		**P**	**10 24 19.8**	**0.0**
	comp=Z,0.2nm,0.6s,baz=118,slow=7.8,SNR=2.6							
	comp=Z,0.2nm,0.6s							
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc		**PKPbc**	**10 33 41.7**	**-0.7**
	comp=Z,0.3nm,1.0s,baz=104,slow=2.6,SNR=2.0							

*IDC **25** 10:16:45.6±0.9, 13°.13N×93°.06E, h0km, mb3.8/7, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=29.5km s-min=18.8km az=63.0*

ISC 25 10:16:50.0±0.8, 13°.1N±0°.1×93°.1E±0°.1, h32km, n12, σ1s38/10, mb3.8/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.74**	**46**	Pn	**Pn**	**10 18 39.5**	**-1.1**
	0.5nm,0.3s,baz=240,slow=15,SNR=15						
CMAR				Sn	Sn	10 19 47.6	-20
	0.6nm,0.3s,baz=237,slow=30,SNR=4.6						
	1.8nm,0.7s						
PALK	**Pallekele**	**13.49**	**246**	Pn	**Pn**	**10 19 58.2**	**-1.2**
	0.6nm,0.3s,baz=301,slow=15,SNR=1.2						
	4.1nm,0.8s						
MKAR	**Makanchi Array**	**34.76**	**347**	P	**P**	**10 23 37.6**	**+0.2**
	0.5nm,0.4s,baz=172,slow=7.8,SNR=8.3						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**39.23**	**345**	P	**P**	**10 24 15.5**	**+0.3**
	0.7nm,0.6s,baz=160,slow=8.2,SNR=6.7						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**41.24**	**353**	P	**P**	**10 24 30.3**	**-1.5**
	0.3nm,0.4s,baz=165,slow=9.2,SNR=2.0						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**52.24**	**128**	P	**P**	**10 25 59.0**	**+0.5**
	0.6nm,0.7s,baz=300,slow=9.8,SNR=7.2						
WRA				PcP	**PcP**	**10 27 08.5**	**-1.2**
	0.2nm,0.5s,baz=322,slow=3.5,SNR=1.7						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**54.14**	**132**	P	**P**	**10 26 13.7**	**+1.3**
	0.7nm,0.4s,baz=306,slow=6.7,SNR=22						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**67.61**	**331**	P	**P**	**10 27 45.6**	**+2.3**
	0.9nm,0.7s,baz=123,slow=7.0,SNR=4.8						
	0.9nm,0.7s						
H04N2	**CROZET ISLANDS**	**69.72**	**209**	T	T	11 44 49.8	
	baz=44,slow=75,SNR=8.7						
H04N1	**CROZET ISLANDS**	**69.73**	**209**	T	T	11 44 58.2	
	baz=44,slow=75,SNR=9.7						
H04N3	**CROZET ISLANDS**	**69.74**	**209**	T	T	11 45 01.6	
	baz=44,slow=75,SNR=11						
BOSA	**Boshof**	**77.54**	**236**	P	**P**	**10 28 43.2**	**0.0**
	4.7nm,1.1s,baz=75,slow=6.0,SNR=3.6						
	4.7nm,1.1s						

IDC 25 10:33:29.9±2.0, 14°.28S×179°.62W, h0km, mb3.6/6, mbtmp3.6/6, MS3.4/15, Error ellipse: s-maj=104.9km s-min=33.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**14.99**	**174**	LR	LR	10 41 40.3	
	comp=Z,130nm,21.9s,baz=316,slow=33						
DZM	**Mont Dzumac**	**15.33**	**238**	LR	LR	10 41 59.7	
	comp=Z,161nm,19.7s,baz=45,slow=33						
RAR	**Rarotonga**	**20.11**	**113**	LR	LR	10 44 07.4	
	comp=Z,72nm,19.3s,baz=342,slow=32						
STKA	**Stephens Creek**	**39.49**	**237**	LR	LR	10 55 34.9	
	comp=Z,64nm,18.5s,baz=26,slow=34						
GUMO	**Guam**	**44.75**	**307**	LR	LR	10 57 47.5	
	comp=Z,23nm,21.5s,baz=59,slow=33						
ASAR	**Alice Springs**	**44.76**	**251**	P	P	10 41 45.2	-0.4
	0.3nm,0.9s,baz=78,slow=8.7,SNR=2.2						
	0.3nm,0.9s						
MJAR	**Matsushiro Arr**	**64.31**	**323**	LR	LR	11 05 58.2	
	comp=Z,22nm,21.1s,baz=142,slow=30						
JNU	**Nakatsue**	**66.72**	**316**	LR	LR	11 08 46.6	
	comp=Z,16nm,18.8s,baz=29,slow=32						
ASAJ	**Asahikawa**	**67.55**	**331**	LR	LR	11 07 19.6	
	comp=Z,38nm,21.2s,baz=60,slow=30						
PETK	**Petropavlovsk-**	**69.89**	**346**	LR	LR	11 08 32.4	
	comp=Z,26nm,20.1s,baz=114,slow=30						
KSRS	**Korea Array**	**71.23**	**318**	LR	LR	11 10 08.0	
	comp=Z,19nm,21.8s,baz=330,slow=31						
KLR	**Kul'dur**	**76.41**	**330**	LR	LR	11 14 36.9	
	comp=Z,18nm,20.9s,baz=54,slow=32						
MA2	**Magadan**	**77.40**	**345**	LR	LR	11 12 33.9	
	comp=Z,30nm,21.0s,baz=133,slow=30						
NVAR	**Mina Array Bea**	**77.66**	**45**	P	P	10 45 27.4	-1.3
	0.3nm,0.7s,baz=240,slow=7.2,SNR=2.1						
	0.3nm,0.7s						
LPIG	**La Paz**	**77.68**	**61**	LR	LR	11 15 20.3	
	comp=Z,32nm,18.2s,baz=216,slow=32						
ELK	**Elko**	**80.84**	**44**	LR	LR	11 14 39.6	
	comp=Z,39nm,19.2s,baz=262,slow=30						
ILAR	**Eielson Array**	**82.64**	**14**	P	P	10 45 54.8	0.0
	0.7nm,1.0s,baz=238,slow=6.0,SNR=4.0						
	0.7nm,1.0s						
TXAR	**Lajitas Array**	**85.07**	**58**	P	P	10 46 09.1	+1.0
	0.3nm,0.9s,baz=24,slow=39,SNR=2.6						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**85.55**	**44**	P	P	10 46 10.8	+0.4
	0.6nm,0.9s,baz=224,slow=4.1,SNR=3.5						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**86.56**	**290**	LR	LR	11 22 24.4	
	comp=Z,12nm,19.9s,baz=210,slow=34						
SONM	**Songino Array**	**90.05**	**320**	P	P	10 46 32.2	+0.4
	0.2nm,0.3s,baz=134,slow=4.2,SNR=1.9						
	0.2nm,0.3s						

*IDC **25** 10:34:16.6±7.9, 26°.07S×28°.96E, h0km, mbtmp2.8/1, ML2.7/1, Error ellipse: s-maj=76.3km s-min=53.6km az=142.0*

ISC 25 10:34:10.8±2.0, 26°.07S±0°.09×29°.4E±0°.2, h10km, n9, σ1s76/11, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUSN	**Musina, Limpop**	**3.79**	**7**	*i* P	**Pb**	**10 35 19.1**	**+1.2**
MUSN				*i* S	**Sb**	**10 36 03.4**	**-0.6**
MUSN	**Musina, Limpop**	**3.79**	**7**	*i* P	**Pb**	**10 35 19.1**	**+1.2**
MUSN				*i* S	**Sb**	**10 36 03.4**	**-0.6**
BOSA	**Boshof**	**4.45**	**234**	Pn	**Pn**	**10 35 21.0**	**+2.5**
	0.3nm,0.3s,baz=55,slow=11,SNR=9.4						

BOSA				Pg		**Pg**	**10 35 33.8**	**-2.3**
	2.6nm,0.3s,baz=55,slow=13,SNR=25							
BOSA				Sn		**Sn**	**10 36 10.2**	**-0.2**
	1.2nm,0.3s,baz=120,slow=21,SNR=3.6							
BOSA				Lg		Lg	10 36 29.0	
	12nm,0.3s,baz=326,slow=22,SNR=20							
	0.8nm,0.3s							
I47ZA	**BOSHOF INFRASO**	**4.47**	**234**	I		I	11 01 10.0	
	0.1nm,1.4s,baz=52,slow=322,SNR=4.2							
BLWY	**Bulawayo**	**5.94**	**353**	*i* P		Pn	10 35 44.6	+5.5
BLWY				*i* S		**Sn**	**10 36 49.5**	**+2.1**
BLWY	**Bulawayo**	**5.94**	**353**	*i* P		Pn	10 35 44.6	+5.5
BLWY				*i* S		**Sn**	**10 36 49.5**	**+2.1**
KRI	**Karoi**	**9.20**	**1**	*i* P		**Pn**	**10 36 23.4**	**-0.4**
KRI				*i* S		Sn	10 37 55.1	-12
KRI	**Karoi**	**9.20**	**1**	*i* P		**Pn**	**10 36 23.4**	**-0.4**
KRI				*i* S		Sn	10 37 55.1	-12
I35NA	**TSUMEB INFRASO**	**12.86**	**300**	I		I	11 50 50.0	
	baz=127,slow=319,SNR=2.2							

*IDC **25** 10:38:01.8±3.3, 5°.48S×147°.52E, h182km±29km, mb3.3/5, mbtmp3.9/7, Error ellipse: s-maj=45.9km s-min=26.2km az=106.0*

ISC 25 10:38:00.7±1.1, 5°.4S±0°.1×147°.4E±0°.3, h170km, n9, σ1s27/10, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.96**	**184**	P	**Pn**	**10 39 01.9**	**+0.9**
	33nm,0.3s,baz=341,slow=6.3,SNR=40						
PMG				S	**Sn**	**10 39 46.2**	**-2.0**
	67nm,0.5s,baz=208,slow=22,SNR=8.7						
CTA	**Charters Tower**	**14.62**	**184**	P	**P**	**10 41 23.2**	**+1.8**
	4.3nm,0.6s,baz=2.5,slow=12,SNR=7.6						
WRA	**Warramunga Arr**	**19.25**	**220**	P	**P**	**10 42 12.0**	**-0.3**
	2.0nm,0.3s,baz=48,slow=12,SNR=87						
ASAR	**Alice Springs**	**22.33**	**214**	P	**P**	**10 42 45.7**	**+1.0**
	3.2nm,0.5s,baz=51,slow=8.9,SNR=94						
	3.2nm,0.5s						
STKA	**Stephens Creek**	**26.88**	**191**	P	**P**	**10 43 24.9**	**-0.8**
	1.3nm,0.6s,baz=9.5,slow=12,SNR=3.8						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**77.33**	**320**	P	**P**	**10 49 36.8**	**+0.1**
	0.1nm,0.4s,baz=139,slow=6.8,SNR=2.0						
	0.1nm,0.4s						
QSPA	**South Pole Qui**	**84.54**	**180**	P	**P**	**10 50 13.9**	**-0.7**
	1.0nm,0.6s,baz=255,slow=0.6,SNR=5.9						
	1.0nm,0.6s						
ILAR	**Eielson Array**	**84.79**	**23**	P	**P**	**10 50 15.6**	**-0.1**
	0.7nm,1.1s,baz=235,slow=4.3,SNR=3.3						
	0.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**145.36**	**285**	PKPbc	**PKPdf**	**10 57 18.4**	**-1.0**
	0.2nm,0.5s,baz=116,slow=1.8,SNR=2.0						

KRSC 25 10:43:59.0±1.5, 49°.74N×156°.99E, h16km±22km, Ml3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.09**	**330**	*e*P	Pb	10 44 18.0	-1.5
SKR				*e*S	Sb	10 44 31.5	-2.1
PAU	**Pauzhetka**	**1.73**	**356**	*e*P	Pb	10 44 30.5	+0.2
PAU				*e*S	Sb	10 44 52.5	+0.7
KDTR	**Khodutka, Kamc**	**2.18**	**18**	*e*P	Pn	10 44 35.8	+1.2
KDTR				*e*S	Sb	10 45 03.8	-1.0
ASAK	**Asacha**	**2.71**	**12**	*e*P	Pb	10 44 44.6	-2.5
MTVR	**Mutnovka**	**2.84**	**15**	*e*P	Pb	10 44 46.2	+2.3
MTVR				*e*S	Sn	10 45 20.8	+3.0
RUS	**Russkaya**	**2.86**	**19**	*e*P	Pn	10 44 45.7	+1.8
RUS				*e*S	Sn	10 45 20.9	+2.9
GRL	**Gorelyy**	**2.89**	**13**	*e*P	Pn	10 44 47.1	+2.5
GRL				*e*S	Sb	10 45 23.1	-2.5
KRMR	**Karymshinskiy**	**3.17**	**13**	*e*P	Pn	10 44 51.0	+2.8
PET	**Petropavlovsk**	**3.45**	**17**	*e*S	Sb	10 45 37.1	-4.1
DALK	**Dalny**	**3.47**	**18**	*e*P	Pn	10 44 54.6	+2.3
UGLR	**Uglovaya**	**3.66**	**18**	*e*P	Pn	10 44 58.8	+3.8
AVH	**Avacha**	**3.69**	**17**	*e*P	Pn	10 44 59.5	+4.0
KOK	**Koryaka**	**3.70**	**16**	*e*P	Pn	10 44 59.4	+3.8
SMAR	**Somma**	**3.70**	**17**	*e*P	Pn	10 44 59.9	+4.1
KRER	**Koryakskii**	**3.73**	**16**	*e*P	Pn	10 44 59.9	+3.8
KRX	**Arik**	**3.77**	**15**	*e*P	Pn	10 45 00.1	+3.6
SPN	**Mys Shipunski**	**3.86**	**28**	*e*P	Pn	10 45 01.1	+3.4
GNL	**Ganaly**	**4.00**	**8**	*e*P	Pb	10 45 04.8	-4.4

*IDC **25** 10:52:35.2±1.4, 33°.21S×178°.67W, h0km, mb4.2/3, mbtmp4.2/4, ML4.0/1, MS3.2/2, Error ellipse: s-maj=40.7km s-min=35.4km az=103.0*
*WEL **25** 10:52:37.1±1.0, 33°.5±7°.×17°.8W±1°.8, h115km±45km, M4.1/12, mB4.6/6, ML4.4/6, MLv4.3/12, Mw(mB)3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=111.2, confirmed*

ISC 25 10:52:38.2±1.0, 33°.23S±0°.08×178°.5W±0°.1, h32km, n29, σ1s76/47, mb4.1/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.99**	**7**	P	**Pn**	**10 53 34.8**	**-2.3**
GLKZ				S	**Sn**	**10 54 21.0**	**-1.7**
MXZ	**Matakaoa Point**	**5.06**	**210**	P	**Pn**	**10 53 50.3**	**-1.5**
MXZ				S	**Sn**	**10 54 49.0**	**-0.1**
WMGZ	**Waiomatatini S**	**5.23**	**208**	P	**Pn**	**10 53 54.3**	**+0.1**
WMGZ				S	**Sn**	**10 54 56.1**	**+2.7**
PKGZ	**Pakihiroa**	**5.43**	**210**	P	**Pn**	**10 53 55.5**	**-1.4**
PKGZ				S	**Sn**	**10 54 57.0**	**-1.4**
HAZ	**Te Kaha**	**5.45**	**213**	P	**Pn**	**10 53 56.9**	**-0.2**
HAZ				S	**Sn**	**10 55 00.6**	**+1.8**
PUZ	**Puketiti**	**5.51**	**208**	P	**Pn**	**10 53 57.4**	**-0.6**
PUZ				S	**Sn**	**10 54 59.8**	**-0.5**
RUGZ	**Raukumara Rang**	**5.67**	**213**	P	**Pn**	**10 54 00.1**	**-0.2**
RUGZ				S	**Sn**	**10 55 05.1**	**+0.8**
TWGZ	**Tauwhareparae**	**5.71**	**209**	P	**Pn**	**10 54 01.1**	**+0.2**
TWGZ				S	**Sn**	**10 55 05.7**	**+0.3**
CNGZ	**Carnagh Statio**	**5.89**	**206**	P	**Pn**	**10 54 01.0**	**-2.2**
CNGZ				S	**Sn**	**10 55 06.7**	**-2.9**
KUZ	**Kuaotunu**	**5.92**	**232**	P	**Pn**	**10 54 04.8**	**+1.2**
TKGZ	**Te Karaka**	**5.99**	**209**	P	**Pn**	**10 54 03.4**	**-1.2**
TKGZ				S	**Sn**	**10 55 10.6**	**-1.5**
MWZ	**Matawai**	**6.04**	**211**	P	**Pn**	**10 54 03.4**	**-1.9**
MWZ				S	**Sn**	**10 55 12.7**	**-0.7**
URZ	**Urewera**	**6.17**	**214**	Pn	**Pn**	**10 54 05.3**	**-1.8**
	3.7nm,0.3s,baz=341,slow=2.8,SNR=15						
URZ				Sn	**Sn**	**10 55 14.7**	**-1.7**
	5.8nm,0.3s,baz=247,slow=22,SNR=9.6						
	7.7nm,0.3s						
URZ	**Urewera**	**6.17**	**214**	P	**Pn**	**10 54 06.7**	**-0.4**
URZ				S	**Sn**	**10 55 14.7**	**-1.7**
TGRZ	**Tauranga**	**6.21**	**222**	P	**Pn**	**10 54 09.0**	**+1.4**
RIGZ	**Rimuhau**	**6.26**	**208**	P	**Pn**	**10 54 05.0**	**-3.3**
RIGZ				S	**Sn**	**10 55 16.2**	**-2.5**
SNGZ	**Shannon Statio**	**6.49**	**210**	P	**Pn**	**10 54 10.5**	**-1.0**
SNGZ				S	**Sn**	**10 55 24.0**	**-0.5**
WCZ	**Waipu Caves**	**6.51**	**244**	P	**Pn**	**10 54 10.3**	**-1.4**
MHGZ	**Mahia Peninsul**	**6.59**	**205**	P	**Pn**	**10 54 10.6**	**-2.2**
MHGZ				S	**Sn**	**10 55 25.3**	**-1.6**
MTHZ	**Maungataniwha**	**6.77**	**213**	P	**Pn**	**10 54 15.6**	**+0.3**
MTHZ				S	**Sn**	**10 55 30.6**	**-0.8**
BKZ	**Black Stump Fm**	**7.18**	**213**	P	**Pn**	**10 54 21.1**	**0.0**
BKZ				S	**Sn**	**10 55 38.4**	**-3.2**
BHHZ	**Black Hill Sta**	**7.64**	**214**	P	**Pn**	**10 54 26.6**	**-0.7**
BHHZ				S	**Sn**	**10 55 48.5**	**-4.3**
DZM	**Mont Dzumac**	**17.36**	**306**	LR	LR	11 01 01.0	
	comp=Z,61nm,18.1s,baz=274,slow=29						
ASAR	**Alice Springs**	**42.64**	**270**	P	**P**	**11 00 33.2**	**+1.3**
	3.4nm,0.7s,baz=111,slow=7.6,SNR=36						
ASAR				LR	LR	11 16 34.5	
	comp=Z,26nm,18.2s,baz=140,slow=34						
	3.4nm,0.7s						
WRA	**Warramunga Arr**	**43.88**	**275**	P	**P**	**11 00 41.3**	**-0.6**
	1.9nm,0.6s,baz=118,slow=8.2,SNR=2.5						
	1.9nm,0.6s						
QSPA	**South Pole Qui**	**56.88**	**180**	P	**P**	**11 02 22.4**	**+2.7**
	2.0nm,1.1s,baz=27,slow=2.3,SNR=2.5						
	2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**122.73**	**312**	PKP	**PKiKP**	**11 11 30.5**	**+0.1**
	0.2nm,0.5s,baz=112,slow=2.0,SNR=1.6						
FINES	**FINESS Array B**	**147.64**	**338**	PKPbc	**PKPbc**	**11 12 19.4**	**+0.9**
	1.2nm,0.7s,baz=33,slow=5.4,SNR=12						
HFS	**Hagfors**	**151.92**	**347**	PKPbc	**PKiKP**	**11 12 32.3**	**+2.8**
	2.3nm,0.9s,baz=64,slow=3.4,SNR=2.4						

*IDC **25** 10:54:01.5±4.7, 7°.31S×129°.53E, h135km±32km, mb3.7/1, mbtmp3.8/3, Error ellipse: s-maj=276.9km s-min=27.3km az=67.0*

ISC 25 10:54:03.5±1.5, 7°.4S±0°.1×129°.5E±0°.2, h150km, n9, σ3s29/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRS	**Darwin Rock St**	**5.17**	**165**	P	**Pn**	**10 55 21.4**	**+2.2**
MTN	**Manton Dam**	**5.63**	**164**	P	**Pn**	**10 55 26.8**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.27**	**199**	P	**Pn**	**10 56 41.4**	**+1.1**
PLAI	**Plampang**	**11.70**	**262**	P	**P**	**10 56 50.3**	**-2.9**
WRA	**Warramunga Arr**	**13.31**	**160**	P	**Pn**	**10 57 04.8**	**-1.9**
	0.8nm,0.5s,baz=333,slow=13,SNR=31						
WRA				S	**Sn**	**10 59 26.9**	**-7.2**
	3.2nm,0.5s,baz=326,slow=24,SNR=12						
ASAR	**Alice Springs**	**16.70**	**166**	P	**Pn**	**10 57 50.2**	**+1.3**
	0.5nm,0.4s,baz=351,slow=9.6,SNR=9.2						
ASAR				ScP	**ScP**	**11 05 50.6**	**+0.7**
	0.2nm,0.4s,baz=359,slow=2.0,SNR=4.3						
AS01	**Alice Springs**	**16.71**	**166**	P	**Pn**	**10 57 50.9**	**+1.9**
OOD	**Oodnadatta**	**21.10**	**165**	P	**P**	**10 58 39.2**	**+2.9**
MKAR	**Makanchi Array**	**68.30**	**327**	P	**P**	**11 04 47.7**	**-0.8**
	0.9nm,0.4s,baz=124,slow=7.8,SNR=10						
	0.9nm,0.4s						

*JMA **25** 11:07:01.9±0.1, 24°.01N×0°.3×121°.8E±0°.6, h0km, TAIWAN REGION*
*TAP **25** 11:07:01.9, 24°.01N×121°.75E, h2km, ML3.2, D*

ISC 25 11:07:03.2±0.9, 24°.01N±0°.02×121°.75E±0°.02, h12km±6km, n86, σ1s90/141, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.14**	**257**	P	**Pg**	**11 07 06.5**	**-0.2**
	baz=255						
TWD	**Chiawan**	**0.16**	**296**	*i* P	**Pg**	**11 07 06.5**	**-0.5**
	baz=298						
TWD				*i* S	**Sg**	**11 07 09.8**	**+0.2**
	baz=298						
ETL	**Fush Village**	**0.19**	**321**	*i* P	**Pg**	**11 07 07.0**	**-0.5**
	baz=322						
ETL				S	**Sg**	**11 07 11.1**	**+0.6**
	baz=322						
NACB	**Ninganchiao**	**0.22**	**319**	P	**Pg**	**11 07 07.3**	**-0.7**
NACB	**Ninganchiao**	**0.22**	**319**	*i* P	**Pg**	**11 07 07.4**	**-0.6**
	baz=319						
NACB				*i* S	**Sg**	**11 07 11.6**	**+0.4**
	baz=319						
ETM	**Tongmen**	**0.24**	**260**	*i* P	**Pg**	**11 07 07.8**	**-0.6**
	baz=259						
ETM				*i* S	**Sg**	**11 07 12.7**	**+0.8**
	baz=259						
SHUL	**Shoufeng**	**0.28**	**218**	P	**Pb**	**11 07 09.3**	**-0.9**
	baz=217						
SHUL				S	**Sb**	**11 07 15.2**	**+0.3**
	baz=217						
LXIB	**Xiulin Townshi**	**0.31**	**272**	P	**Pg**	**11 07 09.0**	**-0.7**
	baz=272						
LXIB				*e*S	**Sb**	**11 07 15.5**	**-0.4**
	baz=272						
ETLH	**Xiulin Townshi**	**0.32**	**308**	*i* P	**Pb**	**11 07 09.3**	**-1.6**
	baz=309						
ETLH				S	**Sb**	**11 07 15.1**	**-0.9**
	baz=309						
EAHA	**Aohua**	**0.32**	**358**	*e*P	**Pb**	**11 07 09.8**	**-1.0**
	baz=358						
EAHA				*e*S	**Sb**	**11 07 15.8**	**-0.1**
	baz=358						
ESL	**Shilin**	**0.35**	**236**	P	**Pg**	**11 07 09.5**	**-0.9**
	baz=235						
TEGC	**Jichi Village**	**0.36**	**213**	P	**Pb**	**11 07 11.6**	**+0.1**
	baz=211						
TEGC				*e*S	**Sb**	**11 07 17.3**	**+0.2**
	baz=211						
ENA	**Nanau**	**0.42**	**358**	P	**Pb**	**11 07 11.4**	**-1.1**
	baz=359						
ENA				*e*S	**Sb**	**11 07 19.1**	**+0.2**
	baz=359						
EWUT	**Wuta**	**0.43**	**3**	P	**Pb**	**11 07 11.9**	**-0.9**
	baz=3.0						
EWUT				*e*S	**Sb**	**11 07 19.4**	**+0.1**
	baz=3.0						
WARBT	**Fenglin Townsh**	**0.44**	**229**	*e*P	**Pg**	**11 07 11.3**	**-0.8**
	baz=229						
EGFH	**Guangfu**	**0.45**	**221**	*e*P	**Pb**	**11 07 12.4**	**-0.7**
	baz=221						
WHF	**Hehuan Shan**	**0.47**	**287**	P	**Pb**	**11 07 12.2**	**-1.4**
	baz=287						
WHF				*e*S	**Sb**	**11 07 20.0**	**-0.7**
	baz=287						
FUSS	**Fushou**	**0.52**	**297**	P	**Pb**	**11 07 13.5**	**-1.0**
	baz=297						
FUSS				*e*S	**Sb**	**11 07 22.3**	**+0.2**
	baz=297						
OWD	**Renai**	**0.53**	**264**	P	**Pb**	**11 07 13.4**	**-1.2**
	baz=264						
OWD				S	**Sb**	**11 07 21.7**	**-0.5**
	baz=264						
CHGB	**Renai**	**0.53**	**276**	P	**Pb**	**11 07 13.6**	**-1.0**
	baz=275						
CHGB				*e*S	**Sb**	**11 07 22.4**	**+0

FUSB				S		Sn	11 07 30.6	-0.7
	baz=348							
SSLB	**Suanglung**	**0.76**	**253**	P		**Pb**	**11 07 17.2**	**-1.3**
SSLB	**Suanglung**	**0.76**	**253**	P		**Pb**	**11 07 17.6**	**-0.9**
	baz=253							
SSLB				*e*S		**Sb**	**11 07 28.1**	**-0.8**
	baz=253							
WCS	**Beigang Elemen**	**0.77**	**274**	*e*P		**Pb**	**11 07 18.0**	**-0.5**
	baz=273							
TWF1	**Yuli**	**0.78**	**213**	*e*S		**Sb**	**11 07 30.1**	**+1.0**
	baz=211							
WHP	**Taichung City**	**0.78**	**290**	P		**Pn**	**11 07 19.3**	**-0.9**
	baz=290							
WHP				*e*S		**Sn**	**11 07 31.4**	**-0.5**
	baz=290							
SMLT	**Sun Moon Lake**	**0.79**	**261**	*e*P		**Pb**	**11 07 18.3**	**-0.7**
	baz=260							
SMLT				S		**Sb**	**11 07 29.8**	**+0.1**
	baz=260							
NWLT	**Wulai**	**0.80**	**343**	*e*P		**Pb**	**11 07 19.1**	**0.0**
	baz=343							
NWLT				*e*S		**Sb**	**11 07 30.6**	**+0.7**
	baz=343							
TYC	**Yuchr**	**0.83**	**263**	P		**Pb**	**11 07 18.8**	**-0.7**
	baz=262							
TYC				S		**Sb**	**11 07 30.9**	**+0.3**
	baz=262							
NFF	**Wufeng Townshi**	**0.85**	**317**	*e*P		**Pb**	**11 07 20.1**	**+0.1**
	baz=317							
NFF				*e*S		**Sb**	**11 07 32.5**	**+1.2**
	baz=317							
CHKH	**Chenggong**	**0.88**	**202**	*e*P		**Pb**	**11 07 19.2**	**-1.1**
	baz=201							
CHKH				*e*S		**Sb**	**11 07 32.5**	**+0.5**
	baz=201							
WHYT	**Xinyi Township**	**0.88**	**249**	*e*P		**Pb**	**11 07 19.9**	**-0.6**
	baz=249							
FULB	**Fuli**	**0.91**	**208**	*e*P		**Pb**	**11 07 20.3**	**-0.7**
	baz=207							
LIOB	**Emei**	**0.92**	**313**	P		**Pn**	**11 07 21.8**	**-0.2**
	baz=313							
LIOB				*e*S		**Sn**	**11 07 34.7**	**-0.5**
	baz=313							
NSTT	**Nanjuang**	**0.92**	**312**	*e*P		**Pb**	**11 07 21.2**	**0.0**
	baz=312							
NSTT				*e*S		**Sn**	**11 07 34.6**	**-0.6**
	baz=312							
TWQ1	**Liyutan**	**0.96**	**291**	*e*P		**Pn**	**11 07 23.0**	**+0.5**
	baz=290							
WJS	**Zhushan**	**0.96**	**259**	*e*P		**Pn**	**11 07 22.3**	**-0.1**
	baz=258							
WJS				*e*S		**Sn**	**11 07 37.4**	**+1.4**
	baz=258							
TIPB	**Shuangxi**	**0.96**	**4**	*e*P		**Pn**	**11 07 22.0**	**-0.5**
	baz=4.0							
CHKT	**Chengkung**	**0.97**	**202**	*e*P		**Pb**	**11 07 21.3**	**-0.8**
	baz=200							
CHKT				*e*S		**Sb**	**11 07 35.3**	**+0.5**
	baz=200							
WNT	**Mingjian**	**0.99**	**263**	P		**Pn**	**11 07 22.8**	**-0.1**
	baz=262							
WNT				S		**Sn**	**11 07 38.0**	**+1.2**
	baz=262							
TATO	**Taipei**	**0.99**	**346**	P		**Pn**	**11 07 22.7**	**-0.3**
NSY	**Sanyi**	**0.99**	**294**	*e*P		**Pn**	**11 07 23.6**	**+0.6**
	baz=294							
EHD	**Haiduan**	**0.99**	**210**	*e*S		**Sn**	**11 07 36.4**	**-0.5**
	baz=210							
TCU	**Taichung**	**0.99**	**278**	*e*P		**Pn**	**11 07 23.5**	**+0.5**
	baz=278							
ALS	**Alishan**	**1.00**	**240**	*e*P		**Pb**	**11 07 22.0**	**-0.7**
	baz=239							
NMLH	**Miaoli**	**1.02**	**301**	*e*P		**Pn**	**11 07 24.3**	**+0.9**
	baz=301							
ECS	**Chishang**	**1.03**	**208**	*e*P		**Pb**	**11 07 22.9**	**-0.2**
	baz=208							
ELDTW	**Lidau**	**1.06**	**220**	*e*P		**Pg**	**11 07 22.1**	**-1.6**
	baz=219							
STYH	**Taoyuan**	**1.23**	**227**	*e*P		**Pb**	**11 07 25.5**	**-0.8**
	baz=227							
STYH				*e*S		**Sb**	**11 07 42.4**	**+0.4**
	baz=227							
CHN4	**Tsaushan**	**1.25**	**239**	*e*P		**Pn**	**11 07 26.8**	**+0.3**
	baz=238							
CHN4				*e*S		**Sn**	**11 07 46.2**	**+2.9**
	baz=238							
TPUB	**Ta-pu**	**1.25**	**236**	P		**Pn**	**11 07 26.3**	**-0.2**
TPUB	**Ta-pu**	**1.25**	**236**	P		**Pn**	**11 07 26.3**	**-0.2**
	baz=235							
TPUB				*e*S		**Sn**	**11 07 46.2**	**+2.9**
	baz=235							
WRL	**Guolierlin Hig**	**1.26**	**265**	*e*P		**Pn**	**11 07 27.1**	**+0.4**
	baz=265							
WRL				*e*S		**Sn**	**11 07 45.9**	**+2.3**
	baz=265							
WTP	**Ta-pu**	**1.29**	**234**	*e*P		**Pn**	**11 07 27.1**	**0.0**
	baz=233							
WTP				*e*S		**Sn**	**11 07 47.2**	**+2.9**
	baz=233							
TWGBT	**Beinan**	**1.34**	**208**	*e*P		**Pb**	**11 07 27.6**	**-0.6**
	baz=207							
TWK	**Hsinying**	**1.38**	**238**	*e*P		**Pb**	**11 07 28.6**	**-0.3**
	baz=237							
CHN1	**Nanshi**	**1.39**	**234**	*e*P		**Pb**	**11 07 28.9**	**-0.3**
	baz=233							
CHN1				*e*S		**Sn**	**11 07 50.3**	**+3.5**
	baz=233							
SGST	**Jiashian**	**1.42**	**230**	*e*S		**Sn**	**11 07 50.1**	**+2.7**
	baz=229							
SLGT	**Liugui**	**1.43**	**225**	*e*P		**Pg**	**11 07 29.4**	**-1.5**
	baz=225							
SLGT				*e*S		**Sn**	**11 07 51.3**	**+3.5**
	baz=225							
SCST	**Cishan**	**1.61**	**226**	*e*P		**Pg**	**11 07 32.5**	**-1.6**
	baz=225							
TSMG	**Majia**	**1.65**	**218**	P		**Pb**	**11 07 32.9**	**-0.7**
	baz=218							
TSMG				S		**Sg**	**11 07 55.9**	**-0.5**
	baz=218							
MASBT	**Mashibuluo**	**1.73**	**217**	*e*P		**Pn**	**11 07 32.4**	**-0.7**
	baz=216							
MASBT				*e*S		**Sb**	**11 07 56.6**	**-0.1**
	baz=216							
IRIF	**Iriomote-Funau**	**1.83**	**79**	*e*P		**Pn**	**11 07 34.5**	**-0.1**
IRIF				*e*S		**Sn**	**11 07 57.9**	**+0.2**
HATJ	**Hateruma jima**	**1.88**	**88**	*e*S		**Sn**	**11 07 58.8**	**+0.1**
JKRS	**Kuro-shima**	**2.07**	**83**	*e*P		**Pn**	**11 07 37.7**	**-0.2**
JKRS				*e*S		**Sn**	**11 08 04.7**	**+1.1**
JIJ	**Ishigaki jima**	**2.21**	**80**	*e*S		**Sn**	**11 08 06.6**	**-0.4**
JISG	**Ishigakijimahi**	**2.40**	**76**	P		**Pn**	**11 07 41.6**	**-0.7**
JISG				*e*S		**Sn**	**11 08 11.3**	**-0.4**
JTJ	**Tarama**	**2.76**	**76**	*e*P		**Pn**	**11 07 48.5**	**+1.2**
JTJ				*e*S		**Sn**	**11 08 23.1**	**+2.5**

IDC ***25*** *11:18:51.9±0.6,31°.50S×67°.83W,h0km,mb4.1/7, mbtmp4.0/10,ML3.8/3,MS3.3/8,Error ellipse: s-maj=24.6km s-min=18.3km az=90.0*

SJA ***25*** *11:18:53.9±0.6,31°.41S×67°.74W,h7km±5km,ML4.1, MW3.7*

NEIC ***25*** *11:18:59.7±1.3,31°.48S±0°.02×67°.64W±0°.09,h53km±9km, mb4.5/10,Error ellipse: s-maj=11.6km s-min=1.4km az=77.0*

ISC 25 11:18:54.3±1.2,31°.42S±0°.02×67°.76W±0°.04,h12km±8km, n85,σ1§78/98,mb4.3/13,MS3.4/5,2D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.62**	**278**	*e*P		**Pb**		**11 19 06.9**	**-0.2**
RTLL				IAML				11 19 21.9	
	comp=Z,5μm,0.3s								
SJA	**San Juan**	**0.69**	**261**	*e*P		**Pb**		**11 19 08.8**	**+0.4**
SJA				*e*S		**Sb**		**11 19 19.0**	**+1.1**
SJA				IAML				11 19 19.4	
	comp=Z,7μm,0.2s								
DOCA	**Reserva Natura**	**1.23**	**292**	*e*P		**Pn**		**11 19 18.0**	**+0.4**
DOCA				*e*S		**Sb**		**11 19 34.6**	**+1.0**
DOCA				IAML				11 19 36.9	
	comp=Z,4μm,0.6s								
RTLS	**Leoncito**	**1.37**	**253**	*e*P		**Pn**		**11 19 20.1**	**+0.6**
RTLS				IAML				11 19 43.7	
	comp=Z,4μm,0.6s								
ACCO	**Cerro Coronel**	**1.40**	**306**	*e*P		**Pg**		**11 19 21.3**	**+0.1**
ACCO				IAML				11 19 44.3	
	comp=Z,1μm,3.5s								
ASAL	**Salagasta**	**1.48**	**218**	*e*P		**Pg**		**11 19 22.8**	**-0.1**
ASAL				IAML				11 19 47.2	
	comp=Z,1μm,0.6s								
ACDV	**Cuesta del Vie**	**1.71**	**316**	*e*P		**Pg**		**11 19 26.7**	**-0.4**
ARCO	**CERRO ARCO**	**1.73**	**215**	*e*P		**Pg**		**11 19 27.1**	**-0.5**
ARCO				IAML				11 19 55.1	
	comp=Z,3μm,0.3s								
AAGR	**Agrelo**	**1.89**	**208**	*e*P		**Pb**		**11 19 29.2**	**+0.3**
AAGR				*e*S		**Sg**		**11 19 55.6**	**+0.4**
AAGR				IAML				11 19 59.1	
	comp=Z,1μm,0.4s								
AROD	**Rodeo**	**1.93**	**310**	*e*P		**Pg**		**11 19 30.6**	**-0.8**
ACLC	**CERRO LA CRUZ**	**2.10**	**20**	*e*P		**Pg**		**11 19 33.6**	**-1.1**
ACLC				*e*S		**Sg**		**11 20 04.0**	**+2.0**
ACLC				IAML				11 20 04.2	
	comp=Z,2μm,0.7s								
AVIZ	**Vizcacheras**	**2.15**	**197**	*e*P		**Pb**		**11 19 32.6**	**-0.6**
CO01	**Juntas del Tor**	**2.47**	**305**			**Pb**		**11 19 39.3**	**+0.4**
CO01					Sn	**Sb**		**11 20 10.7**	**+1.3**
CO01	**Juntas del Tor**	**2.47**	**305**	*e*P		**Pb**		**11 19 39.2**	**+0.4**
CO01				*e*S		**Sb**		**11 20 11.4**	**+2.0**
CO01				IAML				11 20 14.2	
	comp=Z,873nm,0.8s								
CO03	**El Pedregal**	**2.58**	**282**			**Pb**		**11 19 40.5**	**-0.1**
CO03					Sn	**Sb**		**11 20 14.1**	**+1.8**
CO03	**El Pedregal**	**2.58**	**282**	*e*P		**Pb**		**11 19 40.3**	**-0.2**
CO03				*e*S		**Sb**		**11 20 13.6**	**+1.3**
CO03				IAML				11 20 15.4	
	comp=Z,3μm,0.6s								
VCA	**Vinchina**	**2.70**	**352**	*e*P		**Pb**		**11 19 42.2**	**-0.5**
VCA				*e*S		**Sg**		**11 20 19.4**	**-1.7**
VCA				IAML				11 20 21.8	
	comp=Z,1μm,0.7s								
VA03	**San Esteban**	**2.72**	**240**			**Pb**		**11 19 42.1**	**-1.0**
VA03					Sn	**Sb**		**11 20 17.7**	**+1.2**
VA03	**San Esteban**	**2.72**	**240**	*e*P		**Pb**		**11 19 42.0**	**-1.0**
VA03				IAML				11 20 26.0	
	comp=Z,908nm,0.8s								
CO02	**Combarbal**	**2.78**	**274**	*e*P		**Pb**		**11 19 43.0**	**-1.1**
CO02				IAML				11 20 24.8	
	comp=Z,2μm,0.5s								
GO04	**Tololo Observa**	**2.90**	**295**			**Pb**		**11 19 44.8**	**-1.3**
GO04	**Tololo Observa**	**2.90**	**295**	*e*P		**Pb**		**11 19 45.0**	**-1.1**
PEL	**Peldehue**	**3.02**	**234**			**Pn**		**11 19 45.3**	**+3.3**
PEL	**Peldehue**	**3.02**	**234**	*e*P		**Pb**		**11 19 45.5**	**-2.6**
MT16	**CCHEN**	**3.08**	**229**			**Pb**		**11 19 46.9**	**-2.1**
MT03	**Universidad Ad**	**3.11**	**228**			**Pb**		**11 19 47.5**	**-2.2**
MT03	**Universidad Ad**	**3.11**	**228**	*e*P		**Pb**		**11 19 47.8**	**-1.9**
MT03				IAML				11 20 38.1	
	comp=Z,532nm,0.5s								
ROC1	**El Roble**	**3.17**	**240**	*e*P		**Pn**		**11 19 47.0**	**+2.8**
LMEL	**Las Melosas**	**3.18**	**220**			**Pn**		**11 19 48.0**	**+3.6**
MT05	**Renca**	**3.20**	**231**	*e*P		**Pb**		**11 19 48.4**	**-2.7**
MT05				IAML				11 20 38.1	
	comp=Z,414nm,0.4s								
VA06	**Catapilco**	**3.22**	**248**			**Pn**		**11 19 46.6**	**+1.9**
TINO	**Tinogasta**	**3.35**	**3**	*e*P		**Pb**		**11 19 52.4**	**-1.3**
AC05	**El Transito**	**3.37**	**319**	Pn		**Pb**		**11 19 51.8**	**-2.4**
AC05	**El Transito**	**3.37**	**319**	*e*P		**Pb**		**11 19 51.7**	**-2.4**
AC05				IAML				11 20 46.0	
	comp=Z,357nm,0.7s								
RFA	**San Rafael**	**3.40**	**190**	*e*P		**Pn**		**11 19 48.4**	**+1.2**
RFA				*e*S		**Sg**		**11 20 42.4**	**-1.0**
RFA				IAML				11 20 50.1	
	comp=Z,533nm,0.4s								
MT02	**Curacav**	**3.40**	**236**	*e*P		**Pn**		**11 19 49.9**	**+2.7**
MT02				IAML				11 20 48.1	
	comp=Z,427nm,0.9s								
LCO	**Las Campanas**	**3.50**	**313**			**Pn**		**11 19 52.8**	**+4.0**
LCO	**Las Campanas**	**3.50**	**313**	*e*P		**Pb**		**11 19 53.0**	**-3.3**
LCO				IAML				11 20 46.4	
	comp=Z,605nm,0.3s								
BO04	**La Punta**	**3.52**	**222**			**Pn**		**11 19 51.3**	**+2.4**
MT09	**Talagante**	**3.60**	**228**			**Pn**		**11 19 52.6**	**+2.6**
VA01	**Torpederas**	**3.67**	**243**			**Pn**		**11 19 51.9**	**+1.1**
VA01	**Torpederas**	**3.67**	**243**	*e*P		**Pn**		**11 19 53.1**	**+2.3**
VA01				IAML				11 21 03.3	
	comp=Z,206nm,0.7s								
MT01	**Popeta**	**3.83**	**229**	*e*P		**Pn**		**11 19 55.3**	**+2.3**
MT01				*e*S		**Sn**		**11 20 39.9**	**+1.9**
MT01				IAML				11 20 41.2	
	comp=Z,243nm,0.4s								
BO01	**Tunca**	**4.08**	**222**	Pn		**Pn**		**11 19 58.8**	**+2.2**
BO01	**Tunca**	**4.08**	**222**	*e*P		**Pn**		**11 19 59.3**	**+2.8**
BO01				IAML				11 21 08.0	
	comp=Z,118nm,0.5s								
BO02	**Sierra Bellavi**	**4.21**	**216**			**Pn**		**11 20 01.9**	**+3.5**
BO02	**Sierra Bellavi**	**4.21**	**216**	*e*P		**Pn**		**11 20 02.2**	**+3.7**
BO02				IAML				11 21 21.1	
	comp=Z,112nm,0.7s								
AC04	**Llanos de Chal**	**4.31**	**317**	*e*S		**Sg**		**11 21 08.2**	**-4.4**
AC04				IAML				11 21 14.9	
	comp=Z,230nm,0.9s								
PB14	**IPOC Station P**	**7.16**	**340**	Pn		**Pn**		**11 20 41.5**	**+2.4**
LVC	**Limon Verde**	**8.83**	**353**	Pn		**Pn**		**11 21 03.9**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=170,slow=11,SNR=1.9								
LVC					Sn	**Sn**		**11 22 41.7**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=0.8,slow=23,SNR=0.9								
LVC					Lg	Lg		11 23 20.9	
	comp=Z,1.3nm,0.3s,baz=85,slow=8.6,SNR=2.7								
LVC					LR	LR		11 25 01.6	
	comp=Z,242nm,19.8s,baz=196,slow=42								
	comp=Z,1.2nm,0.3s								
PLCA	**Paso Flores**	**9.56**	**193**	Pn		**Pn**		**11 21 14.8**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=10,slow=13,SNR=21								
PLCA					Sn	**Sn**		**11 22 57.4**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=58,slow=15,SNR=1.3								
PLCA					Lg	Lg		11 23 49.9	
	comp=Z,0.4nm,0.3s,baz=360,slow=12,SNR=3.1								
PLCA					LR	LR		11 25 22.4	
	comp=Z,119nm,20.0s,baz=358,slow=41								
ITQB	**Itaqui**	**9.76**	**83**			**Pn**		**11 21 15.9**	**+1.5**
CPUP	**Villa Florida**	**10.45**	**64**			**Pn**		**11 21 26.1**	**+2.1**
CPUP	**Villa Florida**	**10.45**	**64**	Pn		**Pn**		**11 21 25.4**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=242,slow=15,SNR=16								
CPUP					Lg	Lg		11 24 28.6	
	comp=Z,1.3nm,0.3s,baz=144,slow=15,SNR=2.9								
CPUP					LR	LR		11 26 10.8	
	comp=Z,107nm,21.6s,baz=233,slow=42								
	comp=Z,2.9nm,0.5s								
PLTB	**Pedras Altas**	**12.07**	**95**			**Pn**		**11 21 45.6**	**-0.6**
SIV	**San Ignacio**	**16.52**	**23**	Pn		**Pn**		**11 22 46.6**	**+0.6**
	baz=207,slow=15,SNR=2.0								
	comp=Z,0.5nm,0.6s								
NNA	**Nana**	**21.08**	**335**	LR		LR		11 30 42.6	
	comp=Z,38nm,20.9s,baz=175,slow=34								
ETMB	**Extrema**	**21.54**	**4**	P		**P**		**11 23 44.0**	**+0.5**
BDFB	**Brasilia**	**23.90**	**53**	P		**P**		**11 24 11.8**	**+3.6**
	comp=Z,1.4nm,0.5s,baz=229,slow=10,SNR=5.8								
BDFB					LR	LR		11 35 27.2	
	comp=Z,66nm,18.1s,baz=165,slow=42								
CZSB	**Cruzeiro do Su**	**24.02**	**348**	P		**P**		**11 24 09.5**	**+0.4**
CZSB				IAmb		IAmb		11 24 11.0	
	comp=Z,9.5nm,0.8s								
BOAV	**Boa Vista**	**34.32**	**13**	P		**P**		**11 25 41.4**	**+0.5**
BOAV				IAmb		IAmb		11 26 00.8	
	comp=Z,12nm,1.4s								
SMAI	**San Martin Ant**	**36.75**	**180**	P		**P**		**11 26 00.1**	**-1.1**
SDV	**Santo Domingo**	**40.17**	**356**	LR		LR		11 44 42.0	
	comp=Z,55nm,20.4s,baz=52,slow=38								
VNA2	**Neumayer--Watz**	**51.03**	**158**	⇓P		**P**		**11 27 55.9**	**0.0**
	comp=Z,0.6nm,0.4s,baz=286,slow=7.1								
SNAA	**Sanae**	**52.65**	**159**	P		**P**		**11 28 07.4**	**-0.5**
SNAA				IAmb		IAmb		11 28 14.4	
	comp=Z,4.1nm,1.0s								
SNAA	**Sanae**	**52.65**	**159**	⇓P		**P**		**11 28 07.8**	**-0.2**
	comp=Z,6.4nm,0.2s								
SNAA	**Sanae**	**52.65**	**159**	P		**P**		**11 28 07.6**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=282,slow=8.4,SNR=13								
	comp=Z,1.3nm,0.4s								
QSPA	**South Pole Qui**	**58.81**	**180**	P		**P**		**11 28 52.0**	**-0.4**
QSPA				IAmb		IAmb		11 29 02.5	
	comp=Z,8.5nm,1.4s								
QSPA	**South Pole Qui**	**58.81**	**180**	P		**P**		**11 28 51.7**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=170,slow=2.7,SNR=14								
QSPA					PcP	**PcP**		**11 29 41.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=265,slow=0.6,SNR=5.6								
	comp=Z,1.2nm,0.6s								
VNDA	**Vanda**	**67.31**	**190**	P		**P**		**11 29 47.1**	**-1.3**
TXAR	**Lajitas Array**	**69.40**	**327**	P		**P**		**11 30 02.6**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=150,slow=9.2,SNR=10								
TXAR					LR	LR		11 55 44.7	
	comp=Z,19nm,18.0s,baz=40,slow=32								
	comp=Z,0.6nm,0.7s								
X16A	**Lo Mia Camp, P**	**77.33**	**324**	P		**P**		**11 30 49.4**	**+0.3**
BOSA	**Boshof**	**78.02**	**116**	P		**P**		**11 30 53.0**	**-0.2**
	comp=Z,8.8nm,1.2s,baz=186,slow=14,SNR=2.1								
	comp=Z,8.8nm,1.2s								
TOA0	**Torodi Ar. Sit**	**79.92**	**68**	P		**P**		**11 31 01.8**	**-1.7**
TOA0				IAmb		IAmb		11 31 04.4	
	comp=Z,2.9nm,0.9s								
TORD	**Torodi Ar. Bea**	**79.92**	**68**	P		**P**		**11 31 02.9**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=268,slow=4.3,SNR=8.7								
	comp=Z,1.6nm,0.3s								
LBTB	**Lobatse**	**80.05**	**113**	P		**P**		**11 31 02.9**	**-1.4**
LBTB				IAmb		IAmb		11 31 25.7	
	comp=Z,16nm,1.4s								
LBTB	**Lobatse**	**80.05**	**113**	LR		LR		12 05 01.4	
	comp=Z,32nm,18.1s,baz=191,slow=35								
PDAR	**Pinedale Array**	**83.20**	**330**	P		**P**		**11 31 19.4**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=147,slow=5.2,SNR=3.0								
	comp=Z,0.3nm,0.8s								
NVAR	**Mina Array Bea**	**83.94**	**322**	P		**P**		**11 31 24.7**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=150,slow=6.0,SNR=4.0								
	comp=Z,0.5nm,0.8s								
ASAR	**Alice Springs**	**121.43**	**203**	PKP		**PKPdf**		**11 37 46.5**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=135,slow=1.4,SNR=8.4								
WRA	**Warramunga Arr**	**124.70**	**205**	PKP		**PKPdf**		**11 37 53.0**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=166,slow=1.6,SNR=23								
KURBB	**Kurchatov Arra**	**148.53**	**43**	PKPbc		**PKPbc**		**11 38 40.8**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=297,slow=3.2,SNR=23								
ZALV	**Zalesovo Beam**	**150.11**	**33**	PKPbc		**PKPbc**		**11 38 44.5**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=323,slow=2.8,SNR=14								
MKAR	**Makanchi Array**	**152.36**	**48**	PKPbc		**PKPbc**		**11 38 49.8**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=280,slow=2.6,SNR=21								
MKAR				PKPab		**PKPab**		**11 38 57.7**	**-2.4**
	comp=Z,1.2nm,0.7s,baz=322,slow=1.9,SNR=9.6								
SONM	**Songino Array**	**163.01**	**14**	PKPab		**PKPab**		**11 39 45.2**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=336,slow=3.2,SNR=3.2								

IDC ***25*** *11:29:58.6±1.8,28°.90N×141°.88E,h0km,mb3.7/7, mbtmp3.7/8,ML2.9/1,MS3.0/4,Error ellipse: s-maj=66.3km s-min=16.8km az=74.0*

ISC 25 11:29:59.9±1.6,28°.8N±0°.1×141°.9E±0°.4,h10km,n15, σ1§36/10,mb3.6/7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.72**	**171**	Pn		**Pn**		**11 30 29.0**	**-0.8**
	7.2nm,0.3s,baz=117,slow=18,SNR=9.5								
JCJ					Sn	**Sn**		**11 30 50.9**	**-1.0**
	35nm,0.3s,baz=285,slow=21,SNR=9.2								
MJAR	**Matsushiro Arr**	**8.32**	**339**	Pn		Pn		11 31 57.1	-3.5
	0.2nm,0.3s,baz=155,slow=10,SNR=17								
MJAR					LR	LR		11 35 07.8	
	comp=Z,30nm,18.4s,baz=32,slow=38								
	2.4nm,0.5s								
KSRS	**Korea Array**	**14.53**	**310**	LR		LR		11 38 40.7	
	comp=Z,21nm,18.9s,baz=70,slow=36								
KLR	**Kul'dur**	**21.83**	**342**	P		**P**		**11 34 51.1**	**-1.1**
	0.8nm,0.6s,baz=150,slow=8.1,SNR=4.6								
	0.8nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**24.48**	**106**	T		T		12 01 02.4	
	baz=295								
H11N1	**WAKE ISLAND Hy**	**24.48**	**106**	T		T		12 00 56.9	
	baz=295								
H11N3	**WAKE ISLAND Hy**	**24.50**	**106**	T		T		12 00 58.5	
	baz=295								
SONM	**Songino Array**	**33.32**	**315**	P		**P**		**11 36 37.9**	**-0.1**
	0.4nm,0.7s,baz=119,slow=7.2,SNR=4.1								
SONM					ScP	**ScP**		**11 43 06.1**	**+1.8**
	0.2nm,0.4s,baz=115,slow=5.4,SNR=1.5								
	0.4nm,0.7s								
CMAR	**Chiang Mai Arr**	**40.48**	**265**	P		**P**		**11 37 38.7**	**-0.3**
	0.4nm,0.3s,baz=86,slow=4.6,SNR=1.5								
	0.4nm,0.3s								
WRA	**Warramunga Arr**	**49.00**	**189**	P		**P**		**11 38 48.8**	**+1.9**
	1.1nm,0.7s,baz=7.7,slow=8.1,SNR=10.0								
	1.1nm,0.7s								
KURBB	**Kurchatov Arra**	**51.67**	**313**	P		**P**		**11 39 05.8**	**-1.1**
	1.6nm,0.6s,baz=90,slow=7.4,SNR=13								
	1.6nm,0.6s								
ASAR	**Alice Springs**	**52.73**	**189**	P		**P**		**11 39 16.1**	**+1.2**
	0.1nm,0.5s,baz=14,slow=7.8,SNR=1.8								
	0.1nm,0.5s								
DZM	**Mont Dzumac**	**55.84**	**152**	LR		LR		12 00 19.8	
	comp=Z,35nm,20.6s,baz=354,slow=33								
BVAR	**Borovoye Array**	**56.62**	**317**	P		**P**		**11 39 43.5**	**+0.6**
	1.3nm,

BPAW IAML 11 33 32.5
comp=E,3µm,0.8s
BPAW Bear Paw Mtn. 0.88 350 Sn 11 33 31.3 -1.2
BPAW Bear Paw Mtn. 0.88 350 P **Pn 11 33 15.5 0.0**
baz=169
BPAW S **Sn 11 33 31.4 -1.0**
baz=169
MCK McKinley 0.91 56 Pn 11 33 15.8 0.0
MCK **Sn 11 33 32.4 -0.5**
MCK McKinley 0.91 56 P **Pn 11 33 15.9 0.0**
baz=236
MCK S **Sn 11 33 32.0 -0.9**
baz=236
MCK McKinley 0.91 56 P **Pn 11 33 15.8 0.0**
11 33 32.4
MCK
WAT7 Susitna Watana 0.91 116 Pn 11 33 15.5 -0.4
WAT7 **Sn 11 33 32.3 -0.8**
CHUM Lake Minchumin 0.99 312 Pn 11 33 16.6 +0.2
CHUM **Sn 11 33 33.6 -0.5**
CHUM Lake Minchumin 0.99 312 P **Pn 11 33 16.6 +0.2**
baz=130
CHUM S **Sn 11 33 33.1 -1.0**
baz=130
WAT1 Susitna Watana 1.04 112 Pn 11 33 16.6 -0.3
WAT1 **Sn 11 33 33.9 -1.0**
WAT1 Susitna Watana 1.04 112 P **Pn 11 33 16.7 -0.3**
baz=294
WAT1 S **Sn 11 33 33.7 -1.2**
baz=294
BWN Browne 1.07 29 Pn **Pn 11 33 17.4 +0.2**
BWN IAML 11 33 37.1
comp=N,3µm,1.2s
BWN IAML 11 33 45.7
comp=E,2µm,1.0s
BWN Browne 1.07 29 Sn 11 33 35.4 -0.1
SKT Skwentna 1.33 198 Pn 11 33 19.6 -0.2
SKT **Sn 11 33 39.4 -0.6**
SKT Skwentna 1.33 198 P **Pn 11 33 19.7 -0.2**
baz=19
SKT S **Sn 11 33 39.2 -0.8**
baz=19
WAT6 Susitna Watana 1.48 115 Pn 11 33 20.9 -0.7
WAT6 **Sn 11 33 41.9 -1.4**
WAT6 Susitna Watana 1.48 115 P **Pn 11 33 21.0 -0.7**
baz=297
WAT6 S **Sn 11 33 41.4 -1.8**
baz=297
DHY Denali Highway 1.49 95 Pn 11 33 21.5 -0.2
DHY Denali Highway 1.49 95 P **Pn 11 33 21.5 -0.2**
baz=277
DHY S **Sn 11 33 42.2 -1.2**
baz=277
M22K Willow 1.51 171 Pn 11 33 21.5 -0.2
M22K Willow 1.51 171 Sn 11 33 43.0 -0.4
M22K Willow 1.51 171 P **Pn 11 33 21.5 -0.2**
baz=352
M22K S **Sn 11 33 42.7 -0.7**
baz=352
NEA2 Nenana 1.53 26 Pn 11 33 21.6 -0.3
NEA2 IAML 11 33 44.0
comp=N,995nm,0.9s
NEA2 Nenana 1.53 26 Sn 11 33 42.2 -1.6
NEA2 Nenana 1.53 26 P **Pn 11 33 21.6 -0.3**
baz=207
NEA2 S **Sn 11 33 42.0 -1.8**
baz=207
K20K Telida 1.55 276 Pn 11 33 22.3 +0.1
K20K Telida 1.55 276 P **Pn 11 33 22.3 +0.1**
baz=94
K20K S **Sn 11 33 43.3 -1.1**
baz=94
L20K Farewell, AK 1.67 244 Pn 11 33 23.5 -0.1
L20K **Sn 11 33 46.0 -0.7**
L20K Farewell, AK 1.67 244 P **Pn 11 33 23.5 -0.1**
baz=62
L20K S **Sn 11 33 46.0 -0.7**
baz=62
GHO Glory Hole Cre 1.67 151 Pn 11 33 23.2 -0.5
WRH Wood River Hil 1.68 41 Pn **Pn 11 33 23.5 -0.1**
WRH IAML 11 33 47.1
comp=N,713nm,0.9s
SUA Susitna One 1.78 182 Pn 11 33 24.8 -0.2
SUA Susitna One 1.78 182 IAML 11 33 52.5
comp=E,2µm,0.9s
SUA IAML 11 33 56.1
comp=N,2µm,0.7s
SUA Susitna One 1.78 182 P **Pn 11 33 24.7 -0.3**
baz=2.3
SUA S **Sn 11 33 48.2 -1.0**
baz=2.3
M20K Styx River 1.78 221 Pn 11 33 24.5 -0.4
M20K Styx River 1.78 221 IAML 11 33 50.7
comp=N,946nm,0.9s
M20K IAML 11 33 53.7
comp=E,1µm,0.3s
M20K Styx River 1.78 221 P **Pn 11 33 24.5 -0.4**
baz=40
M20K S **Sn 11 33 48.6 -0.6**
baz=40
SML Sawmill 1.79 142 Pn **Pn 11 33 24.3 -0.7**
SML IAML 11 33 50.0
comp=N,2µm,1.0s
SML IAML 11 33 50.6
comp=E,2µm,0.8s
SML Sawmill 1.79 142 P **Pn 11 33 24.3 -0.7**
baz=324
SML S **Sn 11 33 48.5 -0.8**
baz=324
PMR Palmer 1.79 156 Pn **Pn 11 33 24.3 -0.7**
PMR IAML 11 33 49.1
comp=N,1µm,0.2s
PMR IAML 11 33 53.5
comp=E,1µm,0.3s
PMR Palmer 1.79 156 P **Pn 11 33 24.2 -0.7**
PMR Palmer 1.79 156 P **Pn 11 33 24.2 -0.7**
baz=338
PMR S **Sn 11 33 47.8 -1.4**
baz=338
PMR Palmer 1.79 156 P **Pn 11 33 24.3 -0.7**
PMR 11 33 47.9
MLY Manley 1.80 359 Pn **Pn 11 33 25.1 0.0**
MLY Manley 1.80 359 P **Pn 11 33 25.1 0.0**
baz=178
MLY S **Sn 11 33 47.8 -1.7**
baz=178
J20K Nowinta River 1.82 303 Pn 11 33 25.4 +0.1
J20K Nowinta River 1.82 303 IAML 11 33 51.0
comp=N,510nm,0.9s
J20K Nowinta River 1.82 303 P **Pn 11 33 25.5 +0.1**
baz=120
J20K S **Sn 11 33 49.1 -0.7**
baz=120
STLK Strandline Lak 1.83 198 Pn 11 33 25.0 -0.5
STLK **Sn 11 33 49.2 -1.0**
CCB Clear Creek Bu 1.89 40 Pn 11 33 25.9 -0.1
CCB IAML 11 33 51.7
comp=E,701nm,0.7s
M23K Glacier View 1.98 136 Pn 11 33 26.2 -1.0
M23K **Sn 11 33 52.8 -0.5**
M23K Glacier View 1.98 136 P **Pn 11 33 26.3 -0.9**
baz=318
M23K S **Sn 11 33 52.4 -0.9**
baz=318
I23K Minto, Yukon-K 2.00 16 Pn 11 33 26.6 -0.8
I23K IAML 11 33 54.2
comp=N,480nm,1.0s
I23K Minto, Yukon-K 2.00 16 P **Pn 11 33 27.5 +0.1**
baz=196
I23K S **Sn 11 33 52.4 -1.1**
baz=196
HDA Harding Lake 2.02 53 Pn 11 33 27.3 -0.3
HDA IAML 11 33 57.5
comp=E,733nm,0.3s
HDA IAML 11 33 57.5
comp=N,1µm,0.7s
HDA Harding Lake 2.02 53 P **Pn 11 33 27.3 -0.3**
baz=235
HDA S **Sn 11 33 52.2 -1.8**
baz=235
HDA S **Sn 11 33 52.2 -1.8**
baz=235
MDM Murphy Dome 2.03 30 Pn 11 33 27.8 0.0
I21K Tanana 2.04 344 Pn 11 33 27.4 -0.4
I21K IAML 11 33 56.2
comp=N,444nm,0.8s
I21K Tanana 2.04 344 P **Pn 11 33 28.0 +0.2**
baz=162
I21K S **Sn 11 33 53.9 -0.4**
baz=162
COLA College 2.05 36 Pn 11 33 28.0 0.0
COLA IAML 11 33 55.3
comp=N,847nm,0.7s
COLA IAML 11 33 57.7
comp=N,752nm,0.6s
COLA College 2.05 36 P **Pn 11 33 28.0 0.0**
COLA College 2.05 36 P **Pn 11 33 28.0 0.0**
baz=217
COLA S **Sn 11 33 53.2 -1.4**
baz=217
COLA College 2.05 36 P **Pn 11 33 28.0 0.0**
COLA 11 33 53.8
SPCG Spurr Capps Gl 2.06 199 Pn 11 33 27.9 -0.3
SCM Sheep Creek Mo 2.08 131 Pn 11 33 27.8 -0.8
SCM IAML 11 33 57.1
comp=E,2µm,1.0s
SCM IAML 11 33 58.0
comp=N,2µm,0.8s
SCM Sheep Creek Mo 2.08 131 P **Pn 11 33 27.7 -0.8**
baz=314
SCM S **Sn 11 33 54.6 -0.9**
baz=314
SCM Sheep Creek Mo 2.08 131 P **Pn 11 33 27.8 -0.8**
KNK Knik Glacier 2.10 150 Pn 11 33 28.1 -0.6
KNK IAML 11 33 58.6
comp=N,1µm,0.7s
KNK Knik Glacier 2.10 150 P **Pn 11 33 28.1 -0.6**
baz=332
KNK S **Sn 11 33 55.3 -0.4**
baz=332
SPCP Crater Peak Br 2.10 200 Pn 11 33 28.6 -0.2
SPNN North Nagishla 2.11 208 Pn 11 33 28.9 0.0
FIS Fire Island 2.11 174 Pn **Pn 11 33 28.9 +0.2**
SPCN Chakachatna No 2.15 200 Pn 11 33 29.2 -0.1
N20K Mount Spurr 2.17 200 P **Pn 11 33 29.2 -0.5**
baz=20
N20K S **Sn 11 33 56.2 -1.3**
baz=20
SPCR Spurr Chakacha 2.17 200 Pn 11 33 29.2 -0.4
M19K Big River Lodg 2.19 234 Pn 11 33 29.2 -0.6
M19K Big River Lodg 2.19 234 P **Pn 11 33 29.3 -0.5**
baz=52
M19K S **Sn 11 33 57.3 -0.5**
baz=52
RC01 Rabbit Creek A 2.20 168 Pn **Pn 11 33 28.9 -1.0**
RC01 IAML 11 33 57.8
comp=N,2µm,0.2s
RC01 IAML 11 33 59.0
comp=E,2µm,0.3s
RC01 Rabbit Creek A 2.20 168 P **Pn 11 33 29.0 -0.8**
baz=350
RC01 S **Sn 11 33 56.3 -1.6**
baz=350
L19K White Mountain 2.21 243 Pn 11 33 29.9 -0.2
L19K White Mountain 2.21 243 P **Pn 11 33 29.9 -0.2**
baz=60
L19K S **Sn 11 33 58.1 -0.2**
baz=60
K24K Donnelly Dome 2.25 73 Pn 11 33 30.6 0.0
K24K Donnelly Dome 2.25 73 P **Pn 11 33 30.5 0.0**
baz=257
K24K S **Sn 11 33 58.3 -0.9**
baz=257
IL31 2.26 45 Pn 11 33 30.3 -0.2
ILAR Eielson Array 2.26 45 P **Pn 11 33 30.1 -0.5**
ILAR Eielson Array 2.26 45 P **Pn 11 33 30.2 -0.4**
comp=E,131nm,0.7s,baz=226,slow=12,SNR=1638
ILAR S **Sn 11 33 57.4 -1.9**
comp=E,122nm,0.9s,baz=230,slow=14,SNR=18
I20K Naaghedeneel 2.30 315 Pn 11 33 31.2 +0.1
I20K Naaghedeneel 2.30 315 IAML 11 34 00.8
comp=E,1µm,1.0s
I20K IAML 11 35 03.7
comp=N,822nm,1.1s
I20K Naaghedeneel 2.30 315 P **Pn 11 33 31.1 +0.1**
baz=131
I20K S **Sn 11 33 59.7 -0.4**
baz=131
J19K Poorman 2.35 291 Pn 11 33 31.9 +0.2
J19K Poorman 2.35 291 IAML 11 34 02.1
comp=N,453nm,0.9s
J19K Poorman 2.35 291 P **Pn 11 33 31.9 +0.2**
baz=107
J19K S **Sn 11 34 01.2 -0.1**
baz=107
M24K Tolsona, Glenn 2.35 117 Pn 11 33 31.2 -0.7
M24K Tolsona, Glenn 2.35 117 P **Pn 11 33 31.8 -0.1**
baz=301
M24K S **Sn 11 34 00.9 -0.5**
baz=301
POKR Poker Plat Res 2.35 35 Pn 11 33 31.9 +0.1
POKR Poker Plat Res 2.35 35 P **Pn 11 33 31.9 +0.1**
baz=217
POKR S **Sn 11 33 59.7 -1.7**
baz=217
PAX Paxson 2.37 94 Pn 11 33 32.0 0.0
PAX Paxson 2.37 94 P **Pn 11 33 32.0 0.0**
baz=278
PAX S **Sn 11 34 00.7 -1.1**
baz=278
PAX Paxson 2.37 94 P **Pn 11 33 32.0 0.0**
TTA Tatalina 2.46 265 Pn **Pn 11 33 32.8 -0.4**
TTA IAML 11 34 04.2
comp=N,356nm,1.1s
TTA Tatalina 2.46 265 P **Pn 11 33 32.9 -0.4**
TTA Tatalina 2.46 265 P **Pn 11 33 33.0 -0.2**
baz=81
TTA S **Sn 11 34 02.6 -1.3**
baz=81
TTA Tatalina 2.46 265 P **Pn 11 33 32.8 -0.4**
CAPN Captain Cook N 2.49 186 Pn 11 33 35.1 +1.6
CAPN Captain Cook N 2.49 186 P **Pn 11 33 34.9 +1.4**
baz=5.9
H21K Melozitna Rive 2.60 340 Pn 11 33 34.9 0.0
H21K Melozitna Rive 2.60 340 IAML 11 34 07.5
comp=N,379nm,1.0s
H21K Melozitna Rive 2.60 340 P **Pn 11 33 35.0 0.0**
baz=158
H21K S **Sn 11 34 05.4 -1.6**
baz=158
HARP HAARP 2.66 106 Pn 11 33 35.4 -0.1
HARP HAARP 2.66 106 P **Pn 11 33 35.4 -0.1**
baz=291
H22K Ishtalitna Cre 2.69 354 Pn 11 33 36.2 +0.3
H22K Ishtalitna Cre 2.69 354 P **Pn 11 33 36.2 +0.3**
baz=172
H22K S **Sn 11 34 07.7 -1.1**
baz=172
J25K Salcha River, 2.71 57 Pn 11 33 35.9 -0.3
J25K Salcha River, 2.71 57 IAML 11 34 08.6
comp=E,552nm,0.8s
J25K IAML 11 34 13.1
comp=N,690nm,0.8s
J25K Salcha River, 2.71 57 P **Pn 11 33 36.0 -0.3**
baz=241
J25K S **Sn 11 34 07.3 -2.1**
baz=241
SLKM Skilak Lake 2.75 176 Pn 11 33 36.2 -0.5
J18K Innoko River 2.75 277 Pn 11 33 36.8 +0.1
J18K Innoko River 2.75 277 IAML 11 34 10.9
comp=E,483nm,1.3s
J18K Innoko River 2.75 277 P **Pn 11 33 36.9 +0.1**
baz=92
J18K S **Sn 11 34 09.4 -0.9**
baz=92
O22K Cooper Landing 2.80 171 Pn 11 33 36.9 -0.4
O22K Cooper Landing 2.80 171 P **Pn 11 33 37.0 -0.4**
baz=352
O22K S **Sn 11 34 09.5 -1.9**
baz=352
KLU Klutina 2.81 126 Pn 11 33 36.5 -1.1
KLU IAML 11 34 11.0
comp=N,1µm,0.7s
KLU IAML 11 34 13.3
comp=E,1µm,0.5s
KLU Klutina 2.81 126 P **Pn 11 33 36.5 -1.1**
baz=311
KLU S **Sn 11 34 09.6 -2.2**
baz=311
DFR Drift River 2.83 201 Pn 11 33 37.6 -0.3
RDJH Redoubt Jeurge 2.85 202 Pn 11 33 38.2 +0.1
H24K Noodor Dome 2.87 23 Pn 11 33 37.8 -0.5
H24K Noodor Dome 2.87 23 P **Pn 11 33 38.3 0.0**
baz=205
H24K S **Sn 11 34 12.5 -0.6**
baz=205
GLI Glacier Island 2.90 143 Pn 11 33 37.5 -1.1
GLI Glacier Island 2.90 143 P **Pn 11 33 37.5 -1.1**
baz=326
GLI S **Sn 11 34 12.2 -1.4**
baz=326
NCT North Crescent 2.90 203 Pn 11 33 39.1 +0.3
H20K Anotleneega Mo 2.92 323 Pn 11 33 38.8 -0.1
H20K Anotleneega Mo 2.92 323 P **Pn 11 33 38.8 -0.1**
baz=139
H20K S **Sn 11 34 13.2 -1.0**
baz=139
RDWB Redoubt West 2.95 202 Pn 11 33 39.3 -0.2
RSO Redoubt South 2.96 201 Pn 11 33 39.8 +0.1
L18K Granite Mounta 2.97 253 Pn 11 33 39.6 +0.1
L18K Granite Mounta 2.97 253 P **Pn 11 33 39.6 +0.1**
baz=68
L18K S **Sn 11 34 14.2 -1.0**
baz=68
M18K Stony River 2.98 236 Pn 11 33 39.4 -0.4
M18K Stony River 2.98 236 P **Pn 11 33 39.4 -0.4**
baz=52
M18K S **Sn 11 34 14.9 -0.7**
baz=52
RED Redoubt Volcan 3.00 201 Pn 11 33 40.5 +0.4
N19K Bonanza Creek 3.03 218 Pn 11 33 40.4 -0.1
N19K Bonanza Creek 3.03 218 IAML 11 34 42.7
comp=N,278nm,0.8s
N19K Bonanza Creek 3.03 218 P **Pn 11 33 40.4 -0.1**
baz=36
SCRK Sand Creek 3.06 73 Pn 11 33 40.7 -0.2
SCRK Sand Creek 3.06 73 IAML 11 34 21.6
comp=N,599nm,0.8s
SCRK IAML 11 34 21.7
comp=E,676nm,0.7s
SCRK Sand Creek 3.06 73 P **Pn 11 33 40.5 -0.4**
baz=258,SNR=174
SCRK S **Sn 11 34 15.0 -2.7**
baz=258
IMAR Indian Mountai 3.06 335 Pn 11 33 40.3 -0.5
DIV Divide 3.11 131 Pn 11 33 40.0 -1.5
GCSA Galena City Sc 3.14 302 Pn 11 33 41.8 +0.1
GCSA Galena City Sc 3.14 302 P **Pn 11 33 41.8 +0.1**
baz=116,SNR=47
SVW2 Sparrevohn 3.16 229 Pn **Pn 11 33 41.5 -0.5**
SVW2 Sparrevohn 3.16 229 P **Pn 11 33 41.9 -0.2**
MENT Mentasta 3.16 92 Pn 11 33 41.7 -0.4
MENT Mentasta 3.16 92 IAML 11 34 36.5
comp=E,957nm,0.7s
MENT IAML 11 34 37.0
comp=N,778nm,0.9s
FID Port Fidalgo 3.18 140 Pn 11 33 41.3 -1.0
WACK Wrangell Chich 3.18 110 Pn 11 33 42.0 -0.5
PRP Porcupine Dome 3.19 42 Pn **Pn 11 33 42.2 -0.3**
PRP Porcupine Dome 3.19 42 P **Pn 11 33 42.2 -0.3**
baz=226,SNR=107
SEW Seward 3.19 169 Pn 11 33 41.6 -0.9
SEW Seward 3.19 169 P **Pn 11 33 41.7 -0.9**
baz=351,SNR=15
N25K Chitina, Valde 3.25 118 Pn 11 33 42.8 -0.6
N25K IAML 11 34 24.4
comp=E,815nm,0.8s
N25K Chitina, Valde 3.25 118 P **Pn 11 33 42.8 -0.6**
baz=303,SNR=41
O20K Slope Mountain 3.31 198 Pn 11 33 43.6 -0.5
O20K Slope Mountain 3.31 198 P **Pn 11 33 44.2 +0.2**
baz=16
L26K Log Cabin Wild 3.32 90 Pn 11 33 43.8 -0.3
L26K Log Cabin Wild 3.32 90 IAML 11 34 30.5
comp=E,668nm,0.8s
L26K IAML 11 34 30.5
comp=N,810nm,1.0s
L26K Log Cabin Wild 3.32 90 P **Pn 11 33 43.8 -0.3**
baz=276,SNR=150
J26L Joseph Creek 3.38 65 Pn 11 33 45.2 +0.3
J26L Joseph Creek 3.38 65 IAML 11 34 28.5
comp=N,743nm,0.7s
J26L IAML 11 34 29.5
comp=E,580nm,0.9s
J26L Joseph Creek 3.38 65 P **Pn 11 33 45.0 0.0**
baz=251,SNR=232
H19K Roundabout Mou 3.41 315 Pn 11 33 45.1 -0.2
H19K Roundabout Mou 3.41 315 P **Pn 11 33 45.1 -0.2**
baz=130
IVE Iliamna Volcan 3.42 200 Pn 11 33 45.1 -0.5
HIN Hinchinbrook I 3.46 144 Pn 11 33 45.0 -1.0
ILSW Iliamna Southw 3.48 201 Pn 11 33 45.1 -1.2
ILSW IAML 11 34 37.7
comp=N,170nm,0.8s
ILSW IAML 11 35 06.1
comp=E,212nm,0.9s
BRLK Bradley Lake 3.49 182 Pn **Pn 11 33 46.1 -0.3**
BRLK IAML 11 34 27.9
comp=E,589nm,0.3s
G23K Bananza Creek 3.50 4 Pn **Pn 11 33 46.3 -0.1**
G23K Bananza Creek 3.50 4 P **Pn 11 33 46.8 +0.4**
baz=184,SNR=132
BRSE Bradley Lake S 3.51 181 Pn 11 33 46.1 -0.5
BRSE Bradley Lake S 3.51 181 P **Pn 11 33 46.2 -0.5**
baz=1.1,SNR=14
O19K Port Alsworth 3.52 211 Pn 11 33 46.5 -0.2
O19K IAML 11 34 28.9
comp=E,330nm,0.9s
O19K IAML 11 34 54.1
comp=N,258nm,0.5s
O19K Port Alsworth 3.52 211 P **Pn 11 33 46.7 0.0**
baz=29,SNR=17
K17K Iditarod 3.54 265 Pn 11 33 47.0 +0.1
K17K Iditarod 3.54 265 IAML 11 34 29.3
comp=E,191nm,1.4s
K17K IAML 11 35 18.4
comp=N,146nm,1.3s
K17K Iditarod 3.54 265 P **Pn 11 33 47.1 +0.2**
baz=78,SNR=40
EYAK Cordova Ski Ar 3.56 137 Pn 11 33 46.5 -0.6
EYAK Cordova Ski Ar 3.56 137 P **Pn 11 33 46.6 -0.6**
EYAK Cordova Ski Ar 3.56 137 P **Pn 11 33 46.5 -0.6**
baz=322,SNR=12
N18K Kilae Creek 3.57 226 Pn 11 33 47.0 -0.3
N18K Kilae Creek 3.57 226 IAML 11 34 48.4
comp=N,150nm,0.9s
N18K Kilae Creek 3.57 226 P **Pn 11 33 47.1 -0.3**
baz=42
P23K Montague Islan 3.60 153 Pn 11 33 46.5 -1.2
P23K Montague Islan 3.60 153 P **Pn 11 33 47.0 -0.8**
baz=336,SNR=6.8
HOM Homer 3.62 188 Pn **Pn 11 33 48.6 +0.4**
HOM Homer 3.62 188 P **Pn 11 33 48.5 +0.4**
baz=7.7
BMRM Bremner River 3.64 126 Pn 11 33 47.0 -1.4
BMRM Bremner River 3.64 126 P **Pn 11 33 47.0 -1.4**
baz=311,SNR=17
GLB Gilahina Butte 3.66 116 Pn **Pn 11 33 48.3 -0.4**
M17K Holitna River 3.67 243 Pn **Pn 11 33 48.1 -0.5**
M17K IAML 11 34 50.8
comp=N,224nm,0.8s
M17K IAML 11 34 59.8
comp=E,273nm,1.0s
M17K Holitna River 3.67 243 P **Pn 11 33 48.1 -0.5**
baz=57,SNR=15
L17K Donlin 3.70 256 Pn 11 33 48.9 -0.2
L17K Donlin 3.70 256 P **Pn 11 33 49.1 0.0**
baz=70,SNR=86
G22K Bettles 3.72 355 Pn 11 33 49.4 +0.2
G22K Bettles 3.72 355 P **Pn 11 33 49.5 +0.2**
baz=174
G24K Hadweenzic Riv 3.73 20 Pn **Pn 11 33 49.1 -0.3**
G24K IAML 11 34 34.5
comp=N,130nm,0.8s
G24K Hadweenzic Riv 3.73 20 P **Pn 11 33 49.5 +0.1**
baz=202,SNR=47
CNPM China Poot 3.74 185 Pn **Pn 11 33 48.9 -0.7**
P19K Oil Pt 3.81 200 Pn **Pn 11 33 50.9 +0.3**
P19K IAML 11 34 36.0
comp=N,391nm,0.7s
P19K IAML 11 34 53.1
comp=E,382nm,0.7s
P19K Oil Pt 3.81 200 P **Pn 11 33 50.7 +0.2**
baz=18
GOAT Goat Mountain 3.86 131 Pn 11 33 50.1 -1.2
I26K Coal Creek Min 3.87 54 Pn 11 33 51.0 -0.3
I26K Coal Creek Min 3.87 54 IAML 11 34 38.0
comp=E,232nm,0.8s
I26K IAML 11 35 05.2

comp=N,209nm,0.9s
I26K Coal Creek Min 3.87 54 P Pn 11 33 51.0 -0.3
baz=240
H18K Honhosa River 3.88 303 Pn 11 33 51.7 +0.2
H18K Honhosa River 3.88 303 IAML 11 34 39.8
comp=N,113nm,1.6s
H18K IAML 11 34 39.9
comp=E,127nm,1.8s
H18K Honhosa River 3.88 303 P Pn 11 33 51.7 +0.2
baz=116,SNR=66
K27K Chicken 3.90 74 Pn 11 33 51.4 -0.3
K27K Chicken 3.90 74 IAML 11 34 39.3
comp=E,255nm,0.8s
K27K IAML 11 34 41.2
comp=N,567nm,0.8s
K27K Chicken 3.90 74 P Pn 11 33 51.5 -0.3
baz=262
VRDI Verde Repeater 3.92 118 Pn 11 33 51.3 -0.9
L27K Beaver Creek, 4.00 89 Pn 11 33 52.2 -0.8
L27K IAML 11 34 39.1
comp=E,148nm,0.8s
L27K IAML 11 34 58.2
comp=N,129nm,1.5s
L27K Beaver Creek, 4.00 89 P Pn 11 33 52.4 -0.8
baz=276,SNR=50
COLD Coldfoot 4.01 2 Pn 11 33 53.4 +0.3
COLD Coldfoot 4.01 2 P Pn 11 33 53.5 +0.3
baz=182,SNR=42
MCARA McCarthy VSAT 4.01 114 Pn Pn 11 33 53.1 -0.1
MCARA McCarthy VSAT 4.01 114 P Pn 11 33 52.8 -0.5
baz=301,SNR=12
G19K Purcell Mounta 4.02 319 Pn 11 33 52.6 -0.6
G19K Purcell Mounta 4.02 319 P Pn 11 33 52.7 -0.6
baz=134,SNR=20
BCAR Beaver Creek A 4.02 89 Pn Pn 11 33 52.3 -1.0
G25K Bearman Lake 4.03 27 Pn 11 33 53.6 +0.2
G25K Bearman Lake 4.03 27 P Pn 11 33 53.7 +0.3
baz=210,SNR=69
O18K Koktuh Hills 4.04 215 Pn Pn 11 33 53.4 -0.1
O18K IAML 11 35 13.5
comp=N,135nm,1.0s
O18K Koktuh Hills 4.04 215 P Pn 11 33 53.3 -0.3
baz=31,SNR=12
FYU Fort Yukon 4.06 32 Pn Pn 11 33 53.5 -0.2
FYU IAML 11 35 16.8
comp=E,115nm,1.8s
FYU IAML 11 36 10.1
comp=N,120nm,4.3s
M27K Edge Creek, AK 4.12 98 Pn 11 33 54.7 -0.1
M27K IAML 11 34 43.6
comp=E,194nm,1.0s
M27K IAML 11 35 06.5
comp=N,397nm,1.1s
M27K Edge Creek, AK 4.12 98 P Pn 11 33 55.0 +0.3
baz=286,SNR=19
N17K Nushagak Hills 4.12 232 Pn 11 33 54.5 -0.2
N17K Nushagak Hills 4.12 232 P Pn 11 33 54.5 -0.2
baz=46
F21K Alatna River 4.18 345 Pn 11 33 55.9 +0.6
F21K Alatna River 4.18 345 IAML 11 34 44.7
comp=E,88nm,1.0s
F21K Alatna River 4.18 345 P Pn 11 33 56.1 +0.7
baz=162
HMT Hamilton 4.20 131 Pn 11 33 54.6 -1.1
CRQM Cirque 4.33 122 Pn 11 33 56.7 -0.8
Q23K Middleton Isla 4.34 150 Pn 11 33 57.0 -0.6
Q23K Middleton Isla 4.34 150 IAML 11 35 46.3
comp=N,384nm,1.8s
Q23K Middleton Isla 4.34 150 P Pn 11 33 57.5 0.0
baz=334
CRQE Cirque 4.34 122 P Pn 11 33 56.7 -1.0
baz=308
PTPK Patty Peak 4.34 115 Pn 11 33 57.5 -0.3
MID Middleton Isla 4.35 150 P Pn 11 33 57.9 +0.3
BERG Berg Lake 4.36 128 Pn 11 33 56.6 -1.1
G18K Tagagawik 4.36 311 Pn 11 33 57.9 +0.1
G18K Tagagawik 4.36 311 IAML 11 34 51.0
comp=E,74nm,1.5s
G18K Tagagawik 4.36 311 P Pn 11 33 57.9 +0.1
baz=124,SNR=31
NICHA Nichawak Mount 4.37 131 Pn 11 33 57.1 -0.9
L16K Owhat River 4.38 253 Pn 11 33 57.3 -0.7
L16K IAML 11 34 49.0
comp=N,105nm,1.1s
L16K Owhat River 4.38 253 P Pn 11 33 58.1 +0.1
baz=66,SNR=88
F20K Avaraart Lake 4.39 333 Pn 11 33 58.4 +0.3
F20K Avaraart Lake 4.39 333 IAML 11 34 48.6
comp=E,76nm,1.4s
F20K IAML 11 34 48.7
comp=N,82nm,1.1s
F20K Avaraart Lake 4.39 333 P Pn 11 33 58.7 +0.6
baz=148
H17K Granite Mounta 4.41 297 Pn 11 33 58.8 +0.3
H17K Granite Mounta 4.41 297 IAML 11 34 52.4
comp=E,124nm,1.3s
H17K IAML 11 34 53.1
comp=N,76nm,1.7s
H17K Granite Mounta 4.41 297 P Pn 11 33 58.9 +0.5
baz=109,SNR=33
TGL Tana Glacier 4.45 121 Pn 11 33 57.9 -1.1
P18K Big Mountain, 4.45 212 Pn 11 33 58.8 -0.2
P18K IAML 11 35 30.8
comp=E,77nm,1.0s
P18K Big Mountain, 4.45 212 P Pn 11 33 58.7 -0.2
baz=28,SNR=5.4
EGAK Eagle 4.45 65 Pn 11 33 58.2 -0.8
EGAK IAML 11 35 05.7
comp=E,344nm,0.8s
EGAK Eagle 4.45 65 P Pn 11 33 58.5 -0.5
baz=254,SNR=116
F24K Squaw Lake 4.45 14 Pn 11 33 59.1 +0.1
F24K Squaw Lake 4.45 14 P Pn 11 33 59.3 +0.3
baz=196
KAIM Kayak Island 4.46 135 Pn Pn 11 33 57.5 -1.5
KAIM IAML 11 36 20.4
comp=N,317nm,3.3s
KAIM Kayak Island 4.46 135 P Pn 11 33 57.6 -1.5
baz=321
KHIT Khitrov Hills 4.49 125 Pn 11 33 58.5 -1.0
M16K Timber Creek 4.49 244 Pn 11 33 59.3 -0.2
M16K Timber Creek 4.49 244 IAML 11 34 53.3
comp=N,96nm,0.9s
M16K Timber Creek 4.49 244 P Pn 11 33 59.4 -0.2
baz=57
J16K Anvik River 4.50 275 Pn 11 33 59.8 +0.2
J16K Anvik River 4.50 275 IAML 11 34 52.1
comp=N,79nm,1.1s
J16K IAML 11 34 53.4
comp=E,85nm,1.6s
J16K Anvik River 4.50 275 P Pn 11 33 59.9 +0.2
baz=86
KIAG Kiagna River 4.53 117 Pn 11 33 59.1 -1.2
I17K Unalakleet 4.54 283 Pn Pn 11 34 00.8 +0.6
I17K IAML 11 34 55.2
comp=E,109nm,1.4s
I17K Unalakleet 4.54 283 P Pn 11 34 00.8 +0.6
baz=94,SNR=52
SUCK Suckling Hills 4.56 131 Pn 11 33 59.3 -1.2
SUCK Suckling Hills 4.56 131 IAML 11 35 23.2
comp=E,315nm,1.1s
BVCY Beaver Creek 4.56 96 Pn 11 34 00.0 -0.5
BVCY Beaver Creek 4.56 96 P Pn 11 34 00.5 0.0
baz=284,SNR=12
Q19K Cape Douglas, 4.56 200 Pn 11 34 00.1 -0.4
Q19K Cape Douglas, 4.56 200 P Pn 11 34 00.1 -0.4
baz=18,SNR=16
GRIN Grindle Hills 4.57 127 Pn 11 34 00.0 -0.6
I27K Kandik River 4.58 55 Pn 11 33 59.9 -0.8
I27K Kandik River 4.58 55 P Pn 11 34 00.1 -0.6
baz=242
WAX Waxell Ridge 4.63 124 Pn 11 34 00.7 -0.8
O17K Koliganek Bris 4.65 225 Pn 11 34 01.6 0.0
O17K Koliganek Bris 4.65 225 P Pn 11 34 01.3 -0.4
baz=39,SNR=9.6
BGLC Bering Glacier 4.70 128 Pn 11 34 02.2 0.0
BGLC Bering Glacier 4.70 128 P Pn 11 34 01.7 -0.6
baz=315
F19K Shaleruckik Mo 4.71 323 Pn Pn 11 34 02.1 -0.2
F19K Shaleruckik Mo 4.71 323 P Pn 11 34 02.1 -0.2
baz=137,SNR=22
F19K S Sn 11 34 53.9 -2.1
baz=137
G26K Porcupine Rive 4.72 35 Pn 11 34 01.8 -0.7
G26K Porcupine Rive 4.72 35 P Pn 11 34 01.9 -0.7
baz=221,SNR=30
Q20K Shuyak Island 4.72 191 P Pn 11 34 01.7 -0.9
baz=10.0
Q20K S Sn 11 34 53.3 -3.3
baz=10.0
SYI Shuyak Island 4.72 191 Pn 11 34 02.2 -0.4
SYI Shuyak Island 4.72 191 IAML 11 34 54.7
comp=N,250nm,1.0s
SYI IAML 11 34 55.3
comp=E,238nm,0.9s
ISLE Juniper Island 4.73 120 Pn 11 34 01.5 -1.3
N16K Nishlik Lake 4.74 238 Pn 11 34 02.6 -0.3
N16K Nishlik Lake 4.74 238 P Pn 11 34 02.7 -0.3
baz=51
YUK2 White River 4.77 103 Pn 11 34 03.3 0.0
BARK Barkley Ridge 4.80 123 Pn 11 34 03.3 -0.4
SNH Sunshine Point 4.81 126 Pn 11 34 03.6 -0.3
SNH IAML 11 35 21.5
comp=N,266nm,1.1s
F25K Christian Rive 4.84 23 Pn 11 34 04.3 0.0
F25K Christian Rive 4.84 23 P Pn 11 34 04.5 +0.2
baz=207
E23K Chandalar 4.86 5 Pn 11 34 04.9 +0.4
E23K Chandalar 4.86 5 P Pn 11 34 04.8 +0.4
baz=185
GRNC Granite Creek 4.89 117 Pn 11 34 04.0 -1.0
GRNC Granite Creek 4.89 117 IAML 11 35 07.9
comp=N,188nm,0.7s
GRNC IAML 11 35 22.7
comp=E,145nm,0.8s
BAGL Bagley Icefiel 4.90 120 Pn 11 34 04.1 -0.8
G17K Kiwalik Mounta 4.90 302 Pn 11 34 05.3 +0.3
G17K Kiwalik Mounta 4.90 302 P Pn 11 34 05.1 +0.1
baz=113,SNR=24
G17K S Sn 11 35 02.5 +1.6
baz=113
BMAR Burnt Mountain 4.91 28 Pn Pn 11 34 04.9 -0.3
H27K Steamboat Moun 4.92 48 Pn 11 34 04.3 -1.1
H27K Steamboat Moun 4.92 48 P Pn 11 34 04.2 -1.1
baz=236,SNR=28
CTG Chitna Glacier 4.93 113 P Pn 11 34 05.5 0.0
baz=302
CTG S Sn 11 35 00.3 -1.4
baz=302
P17K Kvichak River 4.93 217 Pn 11 34 05.5 +0.2
P17K Kvichak River 4.93 217 P Pn 11 34 05.4 +0.1
baz=32
CTGM Chitina Glacie 4.93 113 Pn 11 34 05.4 -0.2
CTGM Chitina Glacie 4.93 113 IAML 11 35 09.2
comp=E,104nm,0.8s
CTGM IAML 11 35 12.2
comp=N,130nm,1.1s
YUK3 Moose Creek 4.94 103 Pn 11 34 06.0 +0.2
YUK3 Moose Creek 4.94 103 P Pn 11 34 05.9 +0.2
baz=292
YUK3 S Sn 11 35 01.6 -0.5
baz=292
E19K Redstone River 5.05 330 Pn 11 34 07.5 +0.5
E19K Redstone River 5.05 330 IAML 11 35 26.6
comp=N,51nm,1.1s
E19K Redstone River 5.05 330 P Pn 11 34 07.5 +0.5
baz=144,SNR=41
DAWY Dawson 5.08 76 Pn 11 34 07.0 -0.4
DAWY Dawson 5.08 76 P Pn 11 34 07.0 -0.4
baz=265,SNR=173
K15K Wolf Creek Mou 5.09 264 Pn 11 34 07.9 +0.4
K15K Wolf Creek Mou 5.09 264 P Pn 11 34 07.9 +0.4
baz=75,SNR=21
F18K Selawik 5.11 315 Pn 11 34 07.7 0.0
F18K Selawik 5.11 315 P Pn 11 34 07.8 +0.2
baz=127,SNR=18
O16K Kokwok River B 5.11 228 Pn 11 34 07.5 -0.4
O16K Kokwok River B 5.11 228 IAML 11 35 55.5
comp=E,56nm,1.8s
O16K IAML 11 35 58.6
comp=N,45nm,2.0s
O16K Kokwok River B 5.11 228 P Pn 11 34 07.4 -0.4
baz=42
LOGN Logan Glacier 5.14 114 Pn 11 34 07.9 -0.4
LOGN Logan Glacier 5.14 114 IAML 11 35 10.1
comp=N,116nm,1.0s
LOGN IAML 11 35 20.6
comp=E,168nm,1.1s
MESA MESA 5.15 123 Pn 11 34 07.7 -0.8
MESA MESA 5.15 123 P Pn 11 34 08.0 -0.5
baz=310
MESA S Sn 11 35 04.7 -2.3
baz=310
I28M Miner Creek 5.15 60 Pn Pn 11 34 07.0 -1.4
I28M IAML 11 35 27.4
comp=N,102nm,1.0s
I28M IAML 11 35 40.2
comp=E,101nm,0.9s
I28M Miner Creek 5.15 60 P Pn 11 34 08.0 -0.4
baz=249,SNR=51
F26K Sheenjek River 5.23 28 Pn 11 34 09.0 -0.4
F26K Sheenjek River 5.23 28 P Pn 11 34 08.8 -0.5
baz=214,SNR=74
L15K Ungalak Mounta 5.27 258 Pn 11 34 09.4 -0.5
L15K Ungalak Mounta 5.27 258 P Pn 11 34 09.6 -0.4
baz=68,SNR=22
TABL Table Mountain 5.30 118 Pn 11 34 09.4 -1.2
TABL Table Mountain 5.30 118 IAML 11 35 16.6
comp=N,119nm,1.0s
TABL IAML 11 35 29.6
comp=E,139nm,1.1s
H16K Elim 5.30 291 Pn 11 34 10.4 +0.1
H16K Elim 5.30 291 P Pn 11 34 10.6 +0.2
baz=100,SNR=10
E25K Arctic Village 5.33 21 Pn 11 34 11.1 +0.4
E25K Arctic Village 5.33 21 P Pn 11 34 11.0 +0.3
baz=205,SNR=82
KVTA Katmai Vly 10 5.38 207 Pn 11 34 11.7 +0.3
M15K Kasigluk River 5.38 246 Pn 11 34 12.1 +0.8
M15K Kasigluk River 5.38 246 P Pn 11 34 12.2 +0.8
baz=58,SNR=23
M15K S Sn 11 35 12.5 +0.2
baz=58
Q16K King Salmon 5.43 215 P Pn 11 34 12.7 +0.6
baz=30
YUK8 Steele Glacier 5.45 106 Pn 11 34 12.6 0.0
YUK8 Steele Glacier 5.45 106 P Pn 11 34 12.4 -0.1
baz=296,SNR=6.4
N15K Kwethluk River 5.45 240 Pn 11 34 11.9 -0.4
N15K Kwethluk River 5.45 240 P Pn 11 34 12.1 -0.2
baz=52
P16K Nushagak River 5.52 223 Pn 11 34 13.4 +0.2
P16K Nushagak River 5.52 223 P Pn 11 34 13.6 +0.3
baz=37,SNR=5.6
E20K Nigu River 5.53 338 Pn 11 34 14.8 +1.4
E20K Nigu River 5.53 338 P Pn 11 34 14.5 +1.1
baz=153,SNR=62
E20K S Sn 11 35 16.1 +0.1
baz=153
G16K Koyuk River 5.53 298 Pn 11 34 13.9 +0.5
G16K Koyuk River 5.53 298 P Pn 11 34 14.1 +0.7
baz=108
G16K S Sn 11 35 15.6 -0.3
baz=108
ACHA Angle Creek He 5.54 207 Pn 11 34 13.8 +0.2
F17K Baldwin Pennin 5.55 310 Pn 11 34 14.0 +0.5
F17K Baldwin Pennin 5.55 310 P Pn 11 34 14.4 +0.9
baz=120,SNR=10
KDAK Kodiak Island 5.56 191 P Pn 11 34 12.3 -1.4
baz=9.4
KDAK S Sn 11 35 12.0 -4.5
baz=9.4
KDAK Kodiak Island 5.56 191 P Pn 11 34 12.2 -1.5
comp=E,21nm,0.2s,baz=343,slow=14,SNR=103
KDAK S Sn 11 35 11.2 -5.4
comp=E,43nm,0.3s,baz=197,slow=15,SNR=12
ANCK Angle Creek 5.59 207 Pn 11 34 13.9 -0.4
CNTC Contact Creek 5.61 210 Pn 11 34 15.2 +0.5
Q17K Contact Creek 5.61 210 P Pn 11 34 14.8 +0.2
baz=25
J29N Klondike Camp 5.63 72 Pn 11 34 14.6 -0.2
J29N Klondike Camp 5.63 72 P Pn 11 34 14.6 -0.2
baz=263,SNR=67
SAMH Samovar Hills 5.63 119 Pn 11 34 15.2 +0.3
M29M Somme Creek 5.64 93 Pn 11 34 14.7 -0.2
M29M Somme Creek 5.64 93 P Pn 11 34 14.7 -0.2
baz=283
L29M L29M 5.67 86 Pn 11 34 14.9 -0.4
L29M L29M 5.67 86 P Pn 11 34 15.0 -0.3
baz=277
D22K Ayikyak River 5.73 353 Pn Pn 11 34 17.0 +1.0
D22K Ayikyak River 5.73 353 P Pn 11 34 17.5 +1.5
baz=170,SNR=5.8
D23K Nanushuk River 5.75 360 Pn 11 34 17.9 +1.5
D23K Nanushuk River 5.75 360 P Pn 11 34 17.8 +1.5
baz=180
PCA Pinnacle 5.86 118 Pn 11 34 17.2 -0.7
PINM Pinnacle 5.86 118 P Pn 11 34 17.6 -0.3
baz=307,SNR=7.0
PINM S Sn 11 35 20.5 -3.6
baz=307
M14K Bethel 5.89 250 Pn Pn 11 34 19.1 +1.0
M14K Bethel 5.89 250 P Pn 11 34 18.8 +0.7
baz=60,SNR=20
K29M Barlow Dome 5.90 78 Pn Pn 11 34 17.9 -0.6
K29M Barlow Dome 5.90 78 P Pn 11 34 17.7 -0.7
baz=270,SNR=19
J14K Nanvaranak Lak 5.91 271 Pn 11 34 18.7 +0.4
J14K Nanvaranak Lak 5.91 271 P Pn 11 34 18.9 +0.5
baz=80,SNR=9.2
YUK4 Talbot Arm 5.91 103 P Pn 11 34 18.6 0.0
baz=293
E18K Tukpahlearik C 5.92 320 Pn 11 34 19.0 +0.5
E18K Tukpahlearik C 5.92 320 P Pn 11 34 19.1 +0.6
baz=130,SNR=25
E18K S Sn 11 35 24.2 -0.8
baz=130
L14K Kuka Creek 5.93 257 Pn 11 34 19.7 +1.0
L14K Kuka Creek 5.93 257 P Pn 11 34 19.7 +1.0
baz=66
D24K Happy Valley 5.99 6 Pn 11 34 21.2 +1.8
D24K Happy Valley 5.99 6 P Pn 11 34 20.7 +1.3
baz=188
D20K Etivluk River 6.01 339 Pn 11 34 20.3 +0.5
D20K Etivluk River 6.01 339 P Pn 11 34 20.3 +0.5
baz=153,SNR=19
D20K S Sn 11 35 27.8 +0.4
baz=153
O15K Ungalikthiuk R 6.02 232 Pn 11 34 20.4 +0.5
O15K Ungalikthiuk R 6.02 232 P Pn 11 34 20.3 +0.3
baz=44
H29M Whitestone 6.04 55 Pn 11 34 19.3 -1.0
H29M Whitestone 6.04 55 P Pn 11 34 20.1 -0.1
baz=246
E17K Hotham Inlet 6.09 314 Pn 11 34 20.9 +0.2
E17K Hotham Inlet 6.09 314 P Pn 11 34 21.0 +0.2
baz=124,SNR=29
D19K Kuna River 6.10 333 Pn 11 34 21.5 +0.5
D19K Kuna River 6.10 333 P Pn 11 34 21.9 +0.9
baz=146,SNR=22
D19K S Sn 11 35 30.8 +1.3
baz=146
G15K Niukluk 6.13 293 Pn 11 34 21.9 +0.6
G15K Niukluk 6.13 293 P Pn 11 34 22.0 +0.7
baz=101,SNR=26
C21K Knifeblade Rid 6.17 346 Pn 11 34 23.1 +1.1
C21K Knifeblade Rid 6.17 346 P Pn 11 34 23.2 +1.2
baz=162
C21K S Sn 11 35 32.9 +1.6
baz=162
OHAK Old Harbor 6.18 193 P Pn 11 34 20.8 -1.3
OHAK Old Harbor 6.18 193 P Pn 11 34 20.1 -1.9
baz=11
BCPM Bancas Point 6.20 117 Pn 11 34 20.4 -2.0
YUK6 Outpost Mounta 6.21 106 Pn 11 34 22.1 -0.6
YUK6 Outpost Mounta 6.21 106 P Pn 11 34 22.4 -0.3
baz=297
N14K Kuskokwak Cree 6.23 243 Pn 11 34 22.9 +0.2
N14K Kuskokwak Cree 6.23 243 P Pn 11 34 22.8 0.0
baz=53
F28M Old Crow 6.28 41 Pn Pn 11 34 22.4 -1.0
F28M Old Crow 6.28 41 P Pn 11 34 22.7 -0.7
baz=230,SNR=14
D25K Kavik River 6.35 14 Pn 11 34 25.6 +1.3
D25K Kavik River 6.35 14 P Pn 11 34 25.3 +1.0
baz=198
M30M Minto, Yukon 6.36 90 Pn 11 34 23.5 -1.1
M30M Minto, Yukon 6.36 90 P Pn 11 34 23.6 -1.1
baz=282
O29M Mount Kennedy 6.44 112 Pn 11 34 24.6 -1.0
O29M Mount Kennedy 6.44 112 P Pn 11 34 25.2 -0.5
baz=302
J30M Hart River 6.46 72 Pn 11 34 25.9 0.0
J30M Hart River 6.46 72 P Pn 11 34 25.8 -0.1
baz=264
PNL Peninsula 6.47 119 Pn 11 34 25.1 -0.9
PNL Peninsula 6.47 119 P Pn 11 34 25.7 -0.3
PNL Peninsula 6.47 119 P Pn 11 34 25.0 -0.9
baz=308
O14K Tigyukauivet M 6.50 237 Pn 11 34 26.3 0.0
I30M Mount Dempster 6.53 66 Pn 11 34 25.8 -1.1
I30M Mount Dempster 6.53 66 P Pn 11 34 26.0 -0.9
baz=258
F15K North Star Dit 6.54 298 Pn 11 34 27.5 +0.6
F15K North Star Dit 6.54 298 P Pn 11 34 27.3 +0.5
baz=106
C24K Franklin Bluff 6.56 6 Pn 11 34 28.4 +1.4
C24K Franklin Bluff 6.56 6 P Pn 11 34 28.3 +1.2
baz=188,SNR=23
MAYO Mayo, Yukon 6.63 80 Pn 11 34 28.6 +0.4
MAYO Mayo, Yukon 6.63 80 P Pn 11 34 28.2 +0.1
baz=273,SNR=7.8
ANM Nome 6.63 288 Pn 11 34 28.9 +0.7
ANM Nome 6.63 288 P Pn 11 34 29.2 +1.1
baz=95,SNR=9.2
ANM Nome 6.63 288 P Pn 11 34 28.9 +0.7
HYT Haines Junctio 6.63 105 Pn 11 34 27.8 -0.5
HYT Haines Junctio 6.63 105 P Pn 11 34 27.9 -0.5
baz=297
M13K Dall Lake 6.65 251 Pn 11 34 29.6 +1.3
M13K Dall Lake 6.65 251 P Pn 11 34 29.5 +1.2
baz=60
EPYK Eagle Plains 6.72 56 Pn 11 34 28.3 -1.1
EPYK Eagle Plains 6.72 56 P Pn 11 34 28.2 -1.1
baz=248,SNR=32
D17K Noatak River 6.84 316 Pn 11 34 31.7 +0.9
D17K Noatak River 6.84 316 P Pn 11 34 31.4 +0.6
baz=125,SNR=7.4
C19K Lookout Ridge 6.91 332 Pn 11 34 32.4 +0.6
C19K Lookout Ridge 6.91 332 P Pn 11 34 32.4 +0.6
baz=144
C18K Utukok River 6.93 326 Pn 11 34 32.5 +0.4
C18K Utukok River 6.93 326 P Pn 11 34 32.5 +0.4
baz=136
SII Sitkinak Islan 6.93 196 P Pn 11 34 32.9 +0.6
baz=14
G30M tAoh Zraii Nji 7.14 52 Pn 11 34 33.3 -1.8
G30M tAoh Zraii Nji 7.14 52 P Pn 11 34 33.2 -1.8
baz=245
P29M Windy Craggy 7.16 114 Pn 11 34 35.2 -0.2
P29M Windy Craggy 7.16 114 P Pn 11 34 35.2 -0.2
baz=306
F14K Arctic Creek 7.16 295 Pn 11 34 36.0 +0.8
F14K Arctic Creek 7.16 295 P Pn 11 34 36.0 +0.8
baz=101
P30M Million Dollar 7.22 109 Pn 11 34 35.6 -0.4
P30M Million Dollar 7.22 109 P Pn 11 34 35.4 -0.6
baz=301
O30N Mendenhall 7.28 103 Pn 11 34 35.6 -1.2
O30N Mendenhall 7.28 103 P Pn 11 34 35.7 -1.2
baz=296
C17K DeLong Mountai 7.34 321 Pn 11 34 38.1 +0.5
C17K DeLong Mountai 7.34 321 P Pn 11 34 38.1 +0.5
baz=130,SNR=12
E29M Blow River 7.34 40 Pn 11 34 36.1 -1.6
E29M Blow River 7.34 40 P Pn 11 34 36.7 -0.9
baz=231
H31M Peel River 7.48 63 Pn 11 34 37.6 -1.9
H31M Peel River 7.48 63 P Pn 11 34 38.1 -1.4
baz=257
M31M Drury Creek, Y 7.54 91 Pn 11 34 40.3 0.0
M31M Drury Creek, Y 7.54 91 P Pn 11 34 40.4 0.0
baz=285
F30M Barrier River 7.58 48 Pn 11 34 38.4 -2.4
F30M Barrier River 7.58 48 P Pn 11 34 39.4 -1.4
baz=241
B18K Kokolik River 7.61 329 P Pn 11 34 41.4 +0.2
baz=138
G31M Satah River 7.83 55 Pn 11 34 42.1 -2.1
G31M Satah River 7.83 55 P Pn 11 34 42.2 -1.9
baz=249,SNR=8.6
TNA Tin City 7.83 295 Pn 11 34 45.4 +1.2
TNA Tin City 7.83 295 P Pn 11 34 45.2 +1.0
baz=99,SNR=7.0
WHY Whitehorse 7.86 102 Pn Pn 11 34 45.2 +0.4
WHY Whitehorse 7.86 102 P Pn 11 34 44.7 -0.1
baz=296

C16K **Lisburne Hills** 7.87 316 Pn 11 34 44.7 +0.1
C16K **Lisburne Hills** 7.87 316 P Pn 11 34 44.9 +0.2
baz=123
M11K **Mekoryuk** 7.90 256 Pn 11 34 45.9 +0.8
M11K **Mekoryuk** 7.90 256 P Pn 11 34 45.5 +0.4
baz=62
FARO **Faro, Yukon** 8.00 89 Pn Pn 11 34 47.3 +0.7
FARO **Faro, Yukon** 8.00 89 P Pn 11 34 46.7 +0.1
baz=285,SNR=8.1
F31M **Tsiigehtchic** 8.21 52 Pn Pn 11 34 47.1 -2.2
F31M **Tsiigehtchic** 8.21 52 P Pn 11 34 47.3 -2.0
baz=247
SKAG **Skagway** 8.27 110 P Pn 11 34 49.9 -0.2
SKAG **Skagway** 8.27 110 P Pn 11 34 50.0 -0.2
baz=304
N32M **Quiet Lake** 8.47 96 Pn 11 34 53.5 +0.6
N32M **Quiet Lake** 8.47 96 P Pn 11 34 52.5 -0.3
baz=292
INK **Inuvik** 8.66 47 Pn 11 34 54.4 -0.9
INK **Inuvik** 8.66 47 P Pn 11 34 54.6 -0.7
baz=242,SNR=7.5
INK **Inuvik** 8.66 47 P Pn 11 34 54.4 -0.9
INK **Inuvik** 8.66 47 P Pn 11 34 53.7 -1.6
comp=E,5.4nm,0.8s,baz=231,slow=13,SNR=25
INK S Sn 11 36 30.9 -0.2
comp=E,6.4nm,0.9s,baz=335,slow=20,SNR=2.0
INK LR LR 11 38 02.5
comp=E,67nm,18.7s,baz=12,slow=36
S31K **Pelican** 8.83 120 Pn 11 34 57.6 0.0
S31K **Pelican** 8.83 120 P Pn 11 34 57.7 0.0
baz=313
P33M **Teslin, Yukon** 8.98 102 P Pn 11 34 59.5 -0.2
baz=297
JIS **Juneau Island** 9.37 115 P Pn 11 35 04.5 -0.3
SIT **Sitka** 9.81 122 P Pn 11 35 11.2 +0.4
SIT **Sitka** 9.81 122 P Pn 11 35 10.7 -0.2
baz=316
S32K **Killisnoo** 9.82 119 P Pn 11 35 10.6 -0.3
baz=313
Q32M **Nakina River** 9.86 107 P Pn 11 35 11.1 -0.5
baz=304
R33M **Jennings River** 10.19 103 P Pn 11 35 16.0 0.0
baz=300
TGTN **Hyland Airport** 10.51 89 P Pn 11 35 19.9 -0.2
baz=289
FALS **False Pass** 10.65 224 P Pn 11 35 23.0 +1.0
baz=33
WTLY **Watson Lake, Y** 10.82 97 P Pn 11 35 24.4 +0.1
baz=296
T33K **Petersburg** 10.91 118 P Pn 11 35 25.5 0.0
baz=313
S34M **Telegraph Cree** 10.95 110 P Pn 11 35 26.2 +0.2
baz=307
DLBC **Dease Lake** 11.12 106 P Pn 11 35 28.5 +0.2
comp=E,2.7nm,0.8s,baz=318,slow=11,SNR=4.6
WRAK **Wrangell Islan** 11.43 118 P Pn 11 35 31.7 -0.5
baz=314
P08K **Saint George I** 11.55 244 P Pn 11 35 33.1 -0.8
baz=47
WRGLY **Wrigley** 12.22 78 Pn 11 35 41.8 -0.7
WRGLY **Wrigley** 12.22 78 P Pn 11 35 43.5 +1.0
baz=282
C36M **Paulatuk** 12.23 49 Pn Pn 11 35 39.1 -3.5
C36M **Paulatuk** 12.23 49 P Pn 11 35 38.3 -4.4
baz=253,SNR=10
V35K **Ketchikan** 12.50 121 P Pn 11 35 43.9 -2.4
baz=317
A36M **Sachs Harbour** 12.93 37 Pn Pn 11 35 50.1 -1.6
A36M **Sachs Harbour** 12.93 37 P Pn 11 35 50.2 -1.5
baz=240,SNR=7.9
KOTAN **Kotaneelee Air** 12.95 92 P Pn 11 35 52.0 -0.1
baz=295,SNR=8.8
FLDN **Fort Liard** 13.17 91 P Pn 11 35 54.4 -0.4
baz=295,SNR=6.0
YKA **Yellowknife Ar** 16.32 76 Pn 11 36 33.7 -0.6
YKA **Yellowknife Ar** 16.32 76 *ce*P Pn 11 36 33.7 -0.6
YKA pmax pmax
comp=Z,4.0nm,0.6s
YKA **Yellowknife Ar** 16.32 76 P Pn 11 36 33.4 -0.9
comp=Z,4.1nm,0.9s,baz=284,slow=10,SNR=44
YKA ScP ScP 11 44 40.3 +0.1
comp=Z,0.3nm,0.7s,baz=295,slow=2.1,SNR=5.4
HILA **High Level** 16.88 91 P Pn 11 36 41.4 +0.3
BILL **Bilibino** 18.10 304 *i* P P 11 36 53.5 -0.7
CLRS **Cowichan Lake** 20.46 122 P P 11 37 20.8 +0.8
EDM **Edmonton** 21.72 100 P P 11 37 34.7 +1.3
EDM **Edmonton** 21.72 100 P P 11 37 34.7 +1.3
EDM pmax pmax
comp=Z,44nm,0.9s
RES **Resolute Bay** 21.98 36 P P 11 37 36.4 +0.6
RES **Resolute Bay** 21.98 36 P P 11 37 36.4 +0.6
RES pmax pmax
comp=Z,4.0nm,0.6s
RES **Resolute Bay** 21.98 36 P P 11 37 35.8 -0.1
comp=Z,2.9nm,0.4s,baz=260,slow=13,SNR=18
RES S S 11 41 26.6 -2.3
comp=Z,1.3nm,0.9s,baz=158,slow=22,SNR=2.9
comp=Z,2.9nm,0.4s
D05A **Enumclaw** 22.63 122 P P 11 37 45.0 +2.5
D05A IAmb IAmb 11 38 04.6
comp=Z,44nm,1.4s
LTY **Liberty** 23.08 120 P P 11 37 48.5 +1.5
LTY IAmb IAmb 11 37 49.5
comp=Z,26nm,1.4s
NEW **Newport** 23.71 113 P P 11 37 54.1 +1.5
NEW IAmb IAmb 11 37 57.0
comp=Z,13nm,1.0s
NEW **Newport** 23.71 113 P P 11 37 53.4 +0.8
baz=322
NEW **Newport** 23.71 113 P P 11 37 54.1 +1.5
NEW pmax pmax
comp=Z,13nm,1.0s
MXC **Moxie City** 23.79 120 P P 11 37 54.7 +1.4
MXC IAmb IAmb 11 37 55.6
comp=Z,8.1nm,0.6s
D08A **Wollman Farm,** 23.94 118 P P 11 37 55.7 +1.1
D08A IAmb IAmb 11 37 56.6
comp=Z,9.0nm,0.7s
E07A **Sunnyside** 23.98 120 P P 11 37 55.4 +0.4
E07A IAmb IAmb 11 38 26.2
comp=Z,10nm,0.9s
H04D **Lebanon** 24.59 126 P P 11 38 01.0 +0.4
H04A **Detroit Lake** 24.66 125 P P 11 38 02.2 +1.0
H04A IAmb IAmb 11 38 09.6
comp=Z,28nm,1.5s
SEY **Seymchan** 25.07 295 *i* P P 11 38 03.5 -1.2
SEY pmax pmax
comp=Z,10.0nm,0.6s
SEY **Seymchan** 25.07 295 P P 11 38 04.5 -0.2
comp=Z,10nm,0.6s,baz=86,slow=8.9,SNR=28
comp=Z,10nm,0.6s
FFC **Flin Flon** 25.87 86 P P 11 38 12.5 +0.4
FFC IAmb IAmb 11 38 17.0
comp=Z,7.2nm,1.1s
FFC **Flin Flon** 25.87 86 P P 11 38 12.5 +0.4
FFC pmax pmax
comp=Z,7.0nm,1.2s
HUMO **Hull Mountain** 26.18 129 P P 11 38 17.5 +2.5
HUMO IAmb IAmb 11 38 49.5
comp=Z,25nm,1.5s
BMO **Blue Mountains** 26.39 118 P P 11 38 17.6 +0.7
BMO **Blue Mountains** 26.39 118 P P 11 38 17.6 +0.7
BMO pmax pmax
comp=Z,4.0nm,0.9s
PLID **Pearl Lake** 26.72 116 P P 11 38 20.3 +0.3
FCC **Fort Churchill** 27.00 73 P P 11 38 22.8 +0.8
FCC IAmb IAmb 11 38 23.6
comp=Z,9.7nm,1.2s
FCC **Fort Churchill** 27.00 73 P P 11 38 22.8 +0.8
FCC pmax pmax
comp=Z,10.0nm,1.3s
YBH **Yreka Blue Hor** 27.04 130 P P 11 38 23.7 +0.9
YBH **Yreka Blue Hor** 27.04 130 P P 11 38 23.7 +0.9
YBH pmax pmax
comp=Z,6.0nm,1.1s
EGMT **Eagleton** 27.05 105 P P 11 38 22.9 +0.2
EGMT IAmb IAmb 11 38 24.7
comp=Z,6.9nm,0.8s
EGMT **Eagleton** 27.05 105 P P 11 38 23.6 +0.8
baz=319
MA2 **Magadan** 27.43 289 *ce*P P 11 38 25.8 -0.1
MA2 pmax pmax
comp=Z,12nm,2.5s
MA2 **Magadan** 27.43 289 P P 11 38 26.5 +0.6
comp=Z,3.1nm,0.4s,baz=80,slow=14,SNR=4.6
comp=Z,3.1nm,0.4s

TULEG **Thule** 28.12 29 *i* P P 11 38 36.9 +5.0
TULEG IAmb IAmb 11 38 40.3
comp=Z,17nm,0.9s
BOZ **Bozeman (W)** 28.13 110 P P 11 38 33.0 +0.6
baz=323
PETK **Petropavlovsk-** 28.27 273 P P 11 38 33.5 +0.1
comp=Z,2.2nm,0.7s,baz=72,slow=9.5,SNR=4.0
comp=Z,2.2nm,0.7s
HLID **Hailey** 28.62 116 P P 11 38 37.9 +1.0
baz=326
DGMT **Dagmar** 29.18 98 P P 11 38 42.3 +0.7
baz=318
RLMT **Red Lodge** 29.51 108 P P 11 38 45.7 +0.9
baz=323,SNR=9.5
H17A **Grant Village** 29.54 111 P P 11 38 46.1 +1.1
baz=324
TIXI **Tiksi** 29.61 321 *ce*P P 11 38 43.5 -1.6
TIXI pmax pmax
comp=Z,7.0nm,2.5s
TIXI **Tiksi** 29.61 321 LR LR 11 52 39.4
comp=Z,34nm,19.4s,baz=20,slow=40
LAO **LASA Array** 29.62 103 P P 11 38 46.4 +0.8
baz=320
BW06 **Boulder Array** 31.29 111 P P 11 39 01.8 +1.3
baz=325,SNR=11
PDAR **Pinedale Array** 31.29 111 P P 11 39 02.4 +1.9
comp=Z,5.9nm,0.9s,baz=322,slow=4.5,SNR=41
PDAR PP PnPn 11 40 05.8 -2.6
comp=Z,1.0nm,0.6s,baz=334,slow=5.1,SNR=3.6
comp=Z,5.9nm,0.9s
NEEM **North Greenlan** 31.40 24 *i* P P 11 39 00.5 -0.6
NVAR **Mina Array Bea** 31.53 127 P P 11 39 04.5 +1.8
comp=Z,3.4nm,0.7s,baz=320,slow=8.3,SNR=32
comp=Z,3.4nm,0.7s
ULM **Lac du Bonnet** 31.64 88 P P 11 39 04.1 +0.9
comp=Z,4.4nm,0.7s,baz=316,slow=11,SNR=11
comp=Z,4.4nm,0.7s
MDND **Maddock** 31.70 95 P P 11 39 05.6 +1.8
baz=318
MLAC **Mammoth, Mammo** 32.05 128 P P 11 39 09.0 +1.8
baz=333
DUG **Dugway, Tooele** 32.10 118 P P 11 39 09.3 +1.8
baz=329
RSSD **Black Hills** 32.58 104 P P 11 39 13.3 +1.5
baz=322
R11B **Troy Canyon, C** 32.61 123 P P 11 39 13.9 +1.9
baz=331,SNR=8.2
K22A **Casper** 32.68 108 P P 11 39 14.6 +2.1
baz=324
AGMN **Agassiz Nation** 33.06 91 P P 11 39 16.8 +1.2
baz=317
CWC **Cottonwood Cre** 33.38 128 P P 11 39 20.4 +1.7
baz=334
VES **Vesal, Richgr** 33.57 130 P P 11 39 21.4 +1.3
baz=335
SMMC **Simmler** 33.73 131 P P 11 39 23.7 +2.1
baz=336
FURC **Furnace Creek,** 33.80 126 P P 11 39 24.2 +2.2
baz=333
MPMC **Manual Prospec** 33.94 127 P P 11 39 25.8 +2.2
baz=334
ISA **Isabella, Lake** 33.94 129 P P 11 39 25.6 +2.2
baz=334
O20A **White River Ci** 34.02 113 P P 11 39 25.9 +1.6
baz=327
PKM **Mcpherson Peak** 34.18 131 P P 11 39 26.8 +1.1
baz=336
LRMC **Laurel Mtn Rad** 34.39 128 P P 11 39 29.5 +2.1
baz=334,SNR=5.3
YAK **Yakutsk** 34.45 305 *e*P P 11 39 27.1 -0.3
YAK pmax pmax
comp=Z,8.0nm,0.7s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,1.0nm,0.9s
YAK **Yakutsk** 34.45 305 P P 11 39 26.9 -0.5
comp=E,15nm,0.3s,baz=289,slow=0.9,SNR=2.9
comp=E,15nm,0.3s
GSC **Goldstone, Bar** 34.86 127 P P 11 39 33.6 +2.2
baz=334
RRX **Edison Barstow** 35.17 128 P P 11 39 34.4 +0.5
baz=334
DECC **Green Verdugo** 35.26 130 P P 11 39 36.7 +1.9
baz=335
EYMN **Ely** 35.30 87 P P 11 39 35.3 +0.4
baz=318
ISCO **Idaho Springs** 35.41 110 P P 11 39 37.1 +0.8
baz=326
BFSC **Mount Baldy Ra** 35.51 129 P P 11 39 38.7 +1.7
baz=335
GMRC **Granite Mounta** 35.74 126 P P 11 39 40.5 +1.6
baz=334
Q24A **Divide** 36.31 110 P P 11 39 45.3 +1.4
baz=327,SNR=5.6
BELC **Belle Mtn. Jos** 36.32 127 P P 11 39 45.3 +1.4
baz=334
MVCO **Mesa Verde** 36.40 115 P P 11 39 46.2 +1.5
baz=329
IRM **Iron Mountain** 36.49 126 P P 11 39 46.8 +1.6
baz=334
PFO **Pinyon Flats O** 36.50 128 P P 11 39 47.6 +2.1
baz=335
TPFO **Pinon Flats** 36.51 128 P P 11 39 47.6 +2.1
baz=335
WUAZ **Wupatki** 36.72 120 P P 11 39 49.1 +1.8
baz=331,SNR=6.7
PDMCI **Parker Dam,Lak** 36.73 125 P P 11 39 49.1 +1.9
baz=333
SPMN **Marine on St.** 36.76 91 P P 11 39 49.1 +1.8
baz=320
BC3 **Big Chuckawall** 36.83 127 P P 11 39 50.0 +1.9
baz=334
SUMG **Summit** 36.99 28 *i* P P 11 39 50.0 +0.6
MONP2 **Monument Peak** 37.17 128 P P 11 39 53.3 +2.2
baz=335
SDCO **Great Sand Dun** 37.19 112 P P 11 39 53.5 +2.1
baz=328,SNR=9.6
SWSC **Sam W. Stewart** 37.34 128 P P 11 39 54.8 +2.4
baz=335
KSCO **Kaye Shedlock'** 37.35 107 P P 11 39 53.6 +1.1
baz=326
BGNE **Belgrade** 37.36 100 P P 11 39 52.6 +0.2
baz=324
IKP **In-Ko-Pah, Jac** 37.50 128 P P 11 39 56.1 +2.3
baz=335
GLA **Glamis** 37.60 126 P P 11 39 56.3 +1.8
baz=334
SFJD **Kangerlussuaq** 37.91 39 *i* P P 11 39 58.1 +1.3
T25A **Trinidad** 38.16 111 P P 11 39 59.6 +0.1
baz=328
SPITS **Spitsbergen Ar** 38.60 4 P P 11 40 02.4 -0.1
comp=E,6.5nm,0.6s,baz=12,slow=7.4,SNR=17
comp=E,6.5nm,0.6s
CBKS **Cedar Bluff** 38.77 104 P P 11 40 06.2 +1.9
baz=326
ANMO **Albuquerque** 39.18 115 P P 11 40 09.5 +1.5
baz=330
214A **Organ Pipe Nat** 39.32 125 P P 11 40 10.8 +1.8
baz=334
YSS **Yuzh-Sakhalins** 39.40 278 *e*P P 11 40 09.5 +0.1
YSS pmax pmax
comp=Z,10.0nm,1.0s
JFWS **Jewell Farm** 39.71 91 P P 11 40 12.9 +0.8
baz=322
TUC **Tucson** 39.77 122 P P 11 40 13.6 +0.8
baz=333
KSU1 **Kansas State U** 39.92 101 P P 11 40 14.7 +0.9
baz=325,SNR=6.0
121A **Cookes Peak, D** 40.75 118 P P 11 40 22.7 +1.7
baz=332
SCHQ **Schefferville** 40.93 61 P P 11 40 22.5 +0.6
comp=Z,1.6nm,0.7s,baz=270,slow=8.1,SNR=1.8
comp=Z,1.6nm,0.7s
ZEA **Zeya** 41.05 296 *e*P P 11 40 22.7 -0.2
ZEA pmax pmax
comp=Z,10.0nm,0.9s
AMTX **Amarillo** 41.23 110 P P 11 40 26.7 +1.9
baz=329
NRIK **Noril'sk** 41.50 333 *ce*P P 11 40 26.6 +0.2
NRIK pmax pmax
comp=Z,12nm,0.9s
NRIK **Noril'sk** 41.50 333 P P 11 40 26.9 +0.6
comp=Z,8.4nm,0.6s,baz=49,slow=7.2,SNR=17
comp=Z,8.4nm,0.6s
MSTX **Muleshoe** 41.56 112 P P 11 40 29.0 +1.6
baz=330,SNR=11
HDIL **Hopedale** 42.02 93 P P 11 40 32.1 +1.1
baz=324
MNTX **Cornudas Mount** 42.45 116 P P 11 40 36.5 +1.9
baz=332
KLR **Kul'dur** 42.52 289 *ce*P P 11 40 34.1 -0.8
KLR pmax pmax
comp=Z,2.0nm,1.0s
KLR **Kul'dur** 42.52 289 P P 11 40 34.5 -0.4
comp=Z,2.3nm,0.7s,baz=61,slow=11,SNR=9.4
comp=Z,2.3nm,0.7s
WMOK **Wichita Mounta** 42.60 107 P P 11 40 37.3 +1.5
baz=328,SNR=12
TUL3 **Leonard** 42.92 103 P P 11 40 39.4 +1.0
baz=327
BOD **Bodaibo** 43.06 309 *e*P P 11 40 38.6 -0.5
BOD pmax pmax
comp=Z,9.0nm,0.9s
SFIN **Lafayette** 43.16 91 P P 11 40 40.9 +0.8
baz=324
CCM **Cathedral Cave** 43.17 97 P P 11 40 40.4 +0.1
baz=325
ABTX **Abilene, Hawle** 44.04 109 P P 11 40 47.4 0.0
baz=330
O48B **Farmland** 44.13 89 P P 11 40 48.1 +0.2
baz=324
ERPA **Erie** 44.98 83 P P 11 40 54.8 +0.2
baz=323
MIAR **Mount Ida** 45.05 102 P P 11 40 56.1 +0.8
baz=328,SNR=6.9
ACSO **Alum Creek Sta** 45.14 87 P P 11 40 56.6 +0.7
baz=324
M53A **WI Miller and** 45.21 84 P P 11 40 57.4 +0.9
baz=323
TXAR **Lajitas Array** 45.23 116 P P 11 40 58.6 +1.8
comp=Z,3.1nm,0.7s,baz=328,slow=6.2,SNR=56
TXAR PcP PcP 11 42 35.5 +1.0
comp=Z,0.6nm,0.9s,baz=343,slow=1.9,SNR=2.2
comp=Z,3.1nm,0.7s
WCI **Wyandotte Cave** 45.27 92 P P 11 40 56.7 -0.2
baz=325
LONY **Lake Ozonia** 45.41 77 P P 11 40 58.3 +0.2
baz=322
WHTX **Lake Whitney,** 45.52 108 P P 11 40 59.6 +0.6
baz=330
JCT **Junction City** 45.83 111 P P 11 41 02.6 +1.1
baz=331,SNR=9.8
WVT **Waverly** 46.30 95 P P 11 41 06.3 +1.2
baz=326
435B **Jarrell** 46.51 109 P P 11 41 07.9 +1.1
baz=330
NATX **Nacogdoches** 46.94 105 P P 11 41 11.1 +1.1
baz=329
OXF **Oxford** 46.94 98 P P 11 41 10.9 +0.9
baz=327,SNR=6.2
MCWV **Mont Chateau** 47.02 85 P P 11 41 10.6 0.0
baz=324
SSPA **Standing Stone** 47.11 83 P P 11 41 12.0 +0.7
baz=324
ARCES **ARCESS Array B** 47.48 2 P P 11 41 13.5 -0.3
comp=Z,2.7nm,0.7s,baz=6.8,slow=8.4,SNR=23
comp=Z,2.7nm,0.7s
HIA **Hailar** 47.49 297 *i* P P 11 41 14.0 -0.2
HIA pmax pmax
comp=Z,9.0nm,0.7s
TZTN **Tazewell** 47.89 91 P P 11 41 17.3 -0.2
baz=326
VBMS **Vicksburg** 48.38 101 P P 11 41 22.6 +1.5
baz=328
BLA **Blacksburg** 48.76 88 P P 11 41 24.0 -0.1
baz=326
LVZ **Lovozero** 49.10 357 *ce*P P 11 41 23.3 -3.0
LVZ pmax pmax
comp=Z,63nm,2.5s
LRAL **Lakeview Retre** 49.26 97 P P 11 41 28.6 +0.7
baz=328
CBN **Corbin Frederi** 49.32 84 P P 11 41 29.3 +1.0
baz=325
MJAR **Matsushiro Arr** 49.73 273 P P 11 41 31.6 +0.2
comp=Z,1.1nm,0.8s,baz=3.7,slow=9.5,SNR=7.4
comp=Z,1.1nm,0.8s
GOGA **Godfrey** 50.54 93 P P 11 41 38.4 +0.8
baz=327
BRAL **Brewton** 50.82 98 P P 11 41 40.9 +1.3
baz=329
ULN **Ulaanbaatar** 53.54 305 *i* P P 11 42 00.2 +0.4
ULN pmax pmax
comp=Z,6.0nm,0.6s
KSRS **Korea Array** 53.59 282 P P 11 42 00.9 +0.9
comp=Z,2.0nm,0.8s,baz=25,slow=6.9,SNR=6.7
comp=Z,2.0nm,0.8s
SONM **Songino Array** 53.81 306 P P 11 42 03.0 +1.3
comp=Z,6.1nm,0.8s,baz=22,slow=6.4,SNR=56
comp=Z,6.1nm,0.8s
NOA **NORSAR Array B** 55.28 11 P P 11 42 11.7 -0.2
comp=Z,1.4nm,0.6s,baz=351,slow=7.2,SNR=8.9
comp=Z,1.4nm,0.6s
ZALV **Zalesovo Beam** 55.42 324 P P 11 42 12.7 -0.4
comp=Z,7.4nm,0.5s,baz=28,slow=6.9,SNR=38
comp=Z,7.4nm,0.5s
FINES **FINESS Array B** 55.61 2 *ce*P P 11 42 13.0 -1.2
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES **FINESS Array B** 55.61 2 P P 11 42 14.1 -0.2
comp=Z,2.9nm,0.7s,baz=346,slow=10,SNR=9.3
comp=Z,2.9nm,0.7s
KLMR **Klimovskoe** 55.99 354 *e*P P 11 42 15.8 -1.1
KLMR pmax pmax
comp=Z,18nm,1.4s
HFS **Hagfors** 56.37 9 P P 11 42 18.9 -0.9
comp=Z,1.6nm,0.6s,baz=38,slow=5.6,SNR=7.8
comp=Z,1.6nm,0.6s
KIRV **Kirov** 57.53 348 *ce*P P 11 42 27.5 -0.3
SVE **Sverdlovsk** 57.85 340 *e*P P 11 42 30.4 +0.3
SVE pmax pmax
comp=Z,18nm,0.9s
DGZ **Jazzator, Alta** 58.49 320 *i* P P 11 42 34.8 -0.1
DGZ pmax pmax
comp=Z,6.0nm,1.0s
ARU **Arti** 58.54 341 *c i* P P 11 42 34.9 0.0
ARU 11 43 20.7
ARU 11 44 46.4
ARU S S 11 50 29.5 +1.9
ARU SS SS 11 54 18.7 -2.5
ARU pmax pmax
comp=Z,14nm,0.7s
EKA **Eskdalemuir Ar** 59.09 21 P P 11 42 39.0 +0.2
comp=Z,0.9nm,0.5s,baz=338,slow=5.4,SNR=11
comp=Z,0.9nm,0.5s
BRVK **Borovoye** 59.70 333 *ce*P P 11 42 41.6 -1.4
BRVK pmax pmax
comp=Z,13nm,1.7s
BVAR **Borovoye Array** 59.71 333 P P 11 42 42.6 -0.4
comp=Z,7.9nm,0.6s,baz=38,slow=8.0,SNR=40
BVAR PcP PcP 11 43 28.5 0.0
comp=Z,1.2nm,0.5s,baz=350,slow=3.5,SNR=2.6
comp=Z,7.9nm,0.6s
KURK **Kurchatov** 59.97 326 *ce*P P 11 42 43.8 -1.0
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURBB **Kurchatov Arra** 60.08 326 P P 11 42 44.8 -0.8
comp=Z,3.5nm,0.5s,baz=25,slow=7.0,SNR=21
KURBB PcP sP 11 43 30.9 -1.3
comp=Z,1.1nm,0.5s,baz=28,slow=4.1,SNR=6.0
comp=Z,3.5nm,0.5s
OBN **Obninsk** 61.85 355 *e*P P 11 42 55.9 -1.5
OBN pmax pmax
comp=Z,10.0nm,0.5s
MK31 **Makanchi Array** 62.59 322 *ce*P P 11 43 01.5 -1.1
MKAR **Makanchi Array** 62.59 322 P P 11 43 01.6 -0.9
comp=Z,3.7nm,0.5s,baz=44,slow=6.2,SNR=63
comp=Z,3.7nm,0.5s
BELG **Belogornoye** 63.82 348 *c i* P P 11 43 09.9 -0.6
BELG pmax pmax
comp=Z,5.0nm,0.9s
AKASG **Malin Array Be** 66.41 0 P P 11 43 26.9 -0.4
comp=Z,3.5nm,0.6s,baz=0.7,slow=6.3,SNR=14
comp=Z,3.5nm,0.6s
AAK **Ala-Archa** 68.52 326 *ce*P P 11 43 39.4 -1.5
AAK pmax pmax
comp=Z,10.0nm,1.7s
KIV **Kislovodsk** 72.63 350 *e*P P 11 44 05.7 +0.1
KIV pmax pmax
comp=Z,8.0nm,1.1s
KBZ **Khabaz** 72.83 350 *ce*P P 11 44 06.0 -0.7
KBZ pmax pmax
comp=Z,7.0nm,1.4s
KBZ **Khabaz** 72.83 350 P P 11 44 06.2 -0.5
comp=Z,2.8nm,0.7s,baz=187,slow=3.4,SNR=7.9
comp=Z,2.8nm,0.7s

NCK	**Nalchik**	**73.01**	**349**	*i* P		**P**	**11 44 06.8**	**-1.0**
NCK				pmax	pmax				
	comp=Z,8.0nm,0.9s								
SOC	**Sochi**	**73.21**	**352**	*e*P		P	11 44 03.9	-5.0
SOC				*e*			11 46 52.2		
SOC				*e*PPP		PPP	11 48 34.6		
SOC				*e*S		**S**	**11 53 17.9**	**-7.7**
SOC				*e*SS		**SS**	**11 58 09.9**	**+1.5**
ESDC	**Sonseca Array**	**74.04**	**26**	P		**P**	**11 44 15.7**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=350,slow=5.2,SNR=4.3								
	comp=Z,0.7nm,0.8s								
BR131	**Keskin Array S**	**77.32**	**357**	*i* P		**P**	**11 44 32.4**	**-0.3**
BRTR	**Keskin Array B**	**77.32**	**357**	P		**P**	**11 44 33.5**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=335,slow=2.8,SNR=5.1								
	comp=Z,0.9nm,0.6s								
CMAR	**Chiang Mai Arr**	**82.49**	**296**	*ce*P		**P**	**11 45 00.8**	**+0.2**
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**82.49**	**296**	P		**P**	**11 45 00.5**	**-0.2**
	comp=Z,1nm,0.8s,baz=8.8,slow=6.1,SNR=16								
	comp=Z,2.1nm,0.8s								
BOSA	**Boshof**	**145.27**	**6**	PKPbc		**PKPab**	**11 52 16.0**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=7.4,slow=4.1,SNR=5.3								
QSPA	**South Pole Qui**	**153.05**	**180**	PKPbc		**PKiKP**	**11 52 35.5**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=107,slow=11,SNR=7.9								

IDC ***25*** *11:47:34.7±1.7, 1°.95N×98°.75E, h0km, mb3.7/9, mbtmp3.7/10, MS2.9/6, Error ellipse: s-maj=71.3km s-min=19.5km az=56.0*

DJA ***25*** *11:47:38.0±0.4, 2°.1N±2°×9°.9E±°, h10km, M4.1/7, mb4.6/1, MLv3.9/7*

ISC 25 11:47:37.4±0.8, 2°.02N±0°.06×99°.02E±0°.08, h10km, n21, σ1°36/18, mb3.8/9, MS3.0/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.61**	**244**	P		**Pn**	**11 48 06.1**	**+0.2**
GSI				S		**Sb**	**11 48 28.1**	**+0.5**
KCSI	**Kotacane, Aceh**	**1.95**	**320**	P		**Pn**	**11 48 11.9**	**+1.3**
KCSI				S		**Sg**	**11 48 40.6**	**+0.5**
PBSI	**Pulau Batu**	**2.18**	**200**	P		**Pn**	**11 48 13.9**	**+0.1**
SNSI	**Sinabang, Aceh**	**2.72**	**278**	P		**Pn**	**11 48 22.3**	**+1.1**
SISI	**Saibi**	**3.32**	**179**	P		**Pn**	**11 48 32.0**	**+2.5**
MLSI	**Meulaboh, Aceh**	**3.44**	**311**	P		**Pn**	**11 48 33.0**	**+1.9**
LEM	**Lembang**	**12.28**	**136**	LR		LR	11 56 30.9	
	comp=Z,103nm,19.2s,baz=208,slow=43								
CMAR	**Chiang Mai Arr**	**16.34**	**360**	P		Pn	**11 51 28.8**	**+1.7**
	0.4nm,0.3s,baz=192,slow=11,SNR=7.9								
CMAR				LR		LR	11 58 02.0		
	comp=Z,24nm,18.9s,baz=200,slow=38								
PALK	**Pallekele**	**18.98**	**287**	LR		LR	11 59 13.3		
	comp=Z,41nm,19.1s,baz=273,slow=37								
NWAO	**Narrogin (SRO)**	**38.78**	**155**	LR		LR	12 10 43.7		
	comp=Z,22nm,20.4s,baz=232,slow=36								
WRA	**Warramunga Arr**	**40.95**	**124**	P		**P**	**11 55 20.6**	**0.0**
	1.1nm,0.6s,baz=302,slow=9.2,SNR=18								
	1.1nm,0.6s								
ASAR	**Alice Springs**	**42.46**	**129**	P		**P**	**11 55 33.9**	**+0.9**
	0.2nm,0.8s,baz=305,slow=7.6,SNR=2.4								
	0.2nm,0.8s								
KSRS	**Korea Array**	**44.16**	**34**	LR		LR	12 14 14.0		
	comp=Z,9.9nm,19.0s,baz=335,slow=36								
AAK	**Ala-Archa**	**46.01**	**335**	LR		LR	12 17 18.8		
	comp=Z,18nm,18.1s,baz=322,slow=39								
SONM	**Songino Array**	**46.09**	**7**	P		**P**	**11 56 01.4**	**-0.4**
	0.8nm,0.9s,baz=189,slow=9.4,SNR=5.7								
	0.8nm,0.9s								
MKAR	**Makanchi Array**	**46.92**	**344**	P		**P**	**11 56 07.8**	**-0.5**
	0.5nm,0.8s,baz=140,slow=7.1,SNR=4.9								
	0.5nm,0.8s								
KURBB	**Kurchatov Arra**	**51.45**	**343**	P		**P**	**11 56 41.6**	**-1.1**
	0.3nm,0.6s,baz=155,slow=6.8,SNR=4.1								
	0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**53.07**	**350**	P		**P**	**11 56 52.8**	**-2.0**
	0.6nm,0.5s,baz=180,slow=7.2,SNR=4.6								
	0.6nm,0.5s								
BVAR	**Borovoye Array**	**56.10**	**340**	P		**P**	**11 57 14.9**	**-1.9**
	1.2nm,0.7s,baz=141,slow=9.3,SNR=6.8								
	1.2nm,0.7s								
PETK	**Petropavlovsk-**	**70.06**	**33**	P		**P**	**11 58 49.2**	**-0.4**
	3.9nm,1.1s,baz=232,slow=7.1,SNR=2.0								
	3.9nm,1.1s								
FINES	**FINESS Array B**	**80.12**	**332**	P		**P**	**11 59 46.4**	**-1.1**
	1.6nm,1.0s,baz=123,slow=6.8,SNR=4.5								
	1.6nm,1.0s								

IDC 25 11:48:35.5±9.2, 55°.58S×128°.33W, h0km, mb3.7/2, mbtmp3.7/2, MS3.6/2, Error ellipse: s-maj=682.4km s-min=68.1km az=143.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
QSPA	**South Pole Qui**	**34.59**	**180**	LR		LR	12 08 08.1	
	comp=Z,80nm,18.5s,baz=190,slow=34							
H03S2	**Juan Fernandez**	**40.20**	**78**	T		T	12 39 13.5	
	baz=221,slow=74,SNR=63							
H03S1	**Juan Fernandez**	**40.21**	**78**	T		T	12 39 15.1	
	baz=221,slow=74,SNR=71							
H03S3	**Juan Fernandez**	**40.22**	**78**	T		T	12 39 14.2	
	baz=221,slow=74,SNR=69							
H03N3	**Juan Fernandez**	**40.49**	**78**	T		T	12 39 30.0	
	baz=224,slow=72,SNR=290							
H03N2	**Juan Fernandez**	**40.50**	**78**	T		T	12 39 30.0	
	baz=224,slow=72,SNR=451							
H03N1	**Juan Fernandez**	**40.51**	**78**	T		T	12 39 28.7	
	baz=224,slow=72,SNR=642							
ASAR	**Alice Springs**	**75.03**	**250**	P		P	12 00 19.2	+0.4
	0.6nm,0.8s,baz=138,slow=5.6,SNR=3.2							
	0.6nm,0.8s							
H01W1	**Cape Leeuwin H**	**75.33**	**229**	T		T	13 23 48.6	
	baz=147,slow=76,SNR=18							
H01W2	**Cape Leeuwin H**	**75.34**	**229**	T		T	13 23 53.9	
	baz=147,slow=76,SNR=19							
H01W3	**Cape Leeuwin H**	**75.35**	**229**	T		T	13 23 54.7	
	baz=147,slow=76,SNR=33							
WRA	**Warramunga Arr**	**77.82**	**253**	P		P	12 00 34.2	-0.5
	0.4nm,0.6s,baz=142,slow=5.1,SNR=4.9							
	0.4nm,0.6s							
RCBR	**Riachuelo**	**86.61**	**95**	LR		LR	12 37 22.3	
	comp=Z,39nm,18.4s,baz=109,slow=34							
ILAR	**Eielson Array**	**120.87**	**351**	PKP		PKPdf	12 07 27.5	-0.5
	0.6nm,0.6s,baz=169,slow=1.8,SNR=4.8							
SONM	**Songino Array**	**146.02**	**280**	PKPbc		PKPbc	12 08 16.0	-0.4
	1.1nm,0.7s,baz=125,slow=2.4,SNR=8.3							

IDC 25 12:00:41.8±7.2, 20°.98N×143°.48E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=295.6km s-min=29.6km az=78.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.65**	**193**	P		P	12 08 31.9	-0.2
	0.2nm,0.4s,baz=13,slow=8.4,SNR=5.4							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**54.94**	**322**	P		P	12 10 14.0	-0.3
	0.3nm,0.3s,baz=111,slow=9.0,SNR=1.8							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**55.38**	**313**	P		P	12 10 17.7	-0.1
	0.2nm,0.6s,baz=88,slow=8.8,SNR=1.6							
	0.2nm,0.6s							
KURBB	**Kurchatov Arra**	**58.23**	**317**	P		P	12 10 38.6	+0.8
	0.5nm,0.5s,baz=99,slow=7.4,SNR=4.6							
	0.5nm,0.5s							
BVAR	**Borovoye Array**	**63.39**	**320**	P		P	12 11 12.6	-0.4
	0.6nm,0.4s,baz=93,slow=7.5,SNR=6.9							
	0.6nm,0.4s							

WEL 25 12:18:52.4±0.7, 32°S±9°×18°0E±2°1, h33km, M4.1/6, mB4.6/6, ML4.5/14, MLv4.3/6, Mw(mB)3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=111.8, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.63**	**34**	P		Pn	12 19 44.3	-2.0
GLKZ				S		Sn	12 20 28.7	+0.7
MXZ	**Matakaoa Point**	**5.37**	**193**	P		Pn	12 20 14.0	+3.8
MXZ				S		Sn	12 21 10.7	-0.2
WMGZ	**Waiomatatini S**	**5.60**	**191**	P		Pn	12 20 16.1	+2.7
WMGZ				S		Sn	12 21 13.9	-2.6
HAZ	**Te Kaha**	**5.67**	**196**	P		Pn	12 20 15.7	+1.4
HAZ				S		Sn	12 21 17.8	-0.4
PKGZ	**Pakihiroa**	**5.73**	**194**	P		Pn	12 20 17.2	+2.0
PKGZ				S		Sn	12 21 20.5	+0.7
PUZ	**Puketiti**	**5.88**	**192**	P		Pn	12 20 18.3	+1.1
PUZ				S		Sn	12 21 23.2	-0.1
RUGZ	**Raukumara Rang**	**5.89**	**196**	P		Pn	12 20 19.3	+1.8
RUGZ				S		Sn	12 21 23.2	-0.7
TWGZ	**Tauwhareparae**	**6.03**	**194**	P		Pn	12 20 23.0	+3.8
TWGZ				S		Sn	12 21 31.4	+4.3
MWZ	**Matawai**	**6.28**	**196**	P		Pn	12 20 23.1	+0.4
MWZ				S		Sn	12 21 35.2	+1.9
CNGZ	**Carnagh Statio**	**6.29**	**191**	P		Pn	12 20 23.7	+0.9
CNGZ				S		Sn	12 21 30.3	-3.1
TKGZ	**Te Karaka**	**6.31**	**194**	P		Pn	12 20 25.0	+2.0
TKGZ				S		Sn	12 21 35.8	+1.8
URZ	**Urewera**	**6.32**	**200**	P		Pn	12 20 25.0	+1.8
URZ				S		Sn	12 21 36.8	+2.7
ARHZ	**Aropaoanui**	**7.29**	**197**	P		Pn	12 20 36.9	+0.3
ARHZ				S		Sn	12 21 57.6	-0.5
HIZ	**Hauiti**	**7.37**	**212**	P		Pn	12 20 41.1	+3.4
BHHZ	**Black Hill Sta**	**7.77**	**202**	P		Pn	12 20 41.0	-2.1
WNVZ	**Wahianoa**	**7.78**	**205**	P		Pn	12 20 43.4	+0.1
KRHZ	**Kereru**	**7.81**	**200**	P		Pn	12 20 41.2	-2.5
PNHZ	**Pukenui**	**8.11**	**200**	P		Pn	12 20 46.1	-1.7
TSZ	**Takapari Road**	**8.32**	**201**	P		Pn	12 20 46.4	-4.3
HOWZ	**Holdsworth Sta**	**9.22**	**201**	P		Pn	12 20 57.2	-5.8
TMWZ	**Te Maipa**	**9.31**	**198**	P		Pn	12 21 00.3	-4.0

IDC ***25*** *12:51:31.1±0.7, 15°.41N×94°.25W, h0km, mb4.6/19, mbtmp4.6/20, ML4.5/1, MS3.9/41, Error ellipse: s-maj=28.8km s-min=10.7km az=63.0*

GCMT ***25*** *12:51:37.8±0.5, 15°.51N±0°.03×94°.49W±0°.03, h40km±2km, MW4.8/61, Moment Tensor Solution. s20,c22; s61,c81; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~1.39±.16; Mθθ0.65±.10; Mφφ0.73±.10; Mrθ0.26±.07; Mrφ-0.86±.07; Mθφ~1.58±.11; Best double couple: Mo2.17800×10^16 NP1:φs340.00000°, δ70.00000°, λ-71.00000°. NP2: φs116.00000°, δ27.00000°, λ-131.00000°. Principal axes: T 2.1130, Plg23.0000°, Azm56.0000°; N 0.1260, Plg17.0000°, Azm153.0000°; P -2.2420, Plg61.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***25*** *12:51:37.0±1.1, 15°.26N×94°.58W, h16km±7km, MD4.9*

NEIC ***25*** *12:51:38.8±2.3, 15°.44N±0°.06×94°.46W±0°.05, h49km±7km, mb4.7/115, Md4.9/19(MEX), Error ellipse: s-maj=10.0km s-min=6.2km az=208.0*

GCG ***25*** *12:51:40.1±0.6, 15°.56N×94°.30W, h33km±659km, MD4.8*

CATAC ***25*** *12:51:40.3±0.4, 15°.48N×94°.37W, h60km, MB5.3, mb5.2, ML5.4*

BGR ***25*** *12:51:45.4, 16°.12N×92°.58W, h33km, mb5.1, Ms4.3*

ISC 25 12:51:37.4±0.5, 15°.32N±0°.04×94°.56W±0°.03, h48km±5km, h48km:pP-P, n688, σ1°65/723, mb4.8/80, MS4.0/39, 16D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CARR	**Arriaga**	**1.11**	**34**	*e*P		**Pn**	**12 51 54.6**	**-2.0**
CARR				*i* S		**Sn**	**12 52 08.8**	**-2.0**
NILT	**Santiago Nilte**	**1.24**	**357**	*e*P		**Pn**	**12 51 56.7**	**-1.7**
NILT				*i* S		**Sn**	**12 52 10.7**	**-3.0**
PCIG		**1.35**	**73**			**Pn**	**12 51 58.2**	**-1.5**
PCIG						**Sn**	**12 52 14.2**	**-2.4**
PCIG		**1.35**	**73**	*e*P		**Pn**	**12 51 58.2**	**-1.5**
PCIG				*e*S		**Sn**	**12 52 14.2**	**-2.4**
HUIG	**Huatulco**	**1.56**	**287**			**Pn**	**12 52 00.9**	**-1.8**
HUIG						**Sn**	**12 52 18.0**	**-3.8**
HUIG	**Huatulco**	**1.56**	**287**	*i* P		**Pn**	**12 52 00.9**	**-1.8**
HUIG				*i* S		**Sn**	**12 52 18.0**	**-3.8**
CMIG	**Matias Romero**	**1.79**	**350**	Pg		**Pn**	**12 52 04.8**	**-1.1**
	369nm,0.3s,baz=175,slow=11,SNR=1550							
CMIG				Lg		Lg	12 52 26.0	
	513nm,0.3s,baz=169,slow=11,SNR=22							
CMIG				LR		LR	12 52 44.7	
	comp=Z,572nm,18.1s,baz=166,slow=41							
CMIG	**Matias Romero**	**1.79**	**350**	*e*P		**Pn**	**12 52 04.8**	**-1.1**
CMIG				*i* S		**Sn**	**12 52 26.0**	**-1.5**
PANG	**Puerto Angel**	**1.88**	**281**	*e*P		**Pn**	**12 52 05.2**	**-1.9**
PANG				*e*S		**Sn**	**12 52 25.2**	**-4.4**
TGIG		**2.00**	**43**			**Pn**	**12 52 08.5**	**-0.4**
TGIG						**Sn**	**12 52 32.0**	**-0.8**
TGIG		**2.00**	**43**	*e*P		**Pn**	**12 52 08.5**	**-0.4**
TGIG				*e*S		**Sn**	**12 52 32.0**	**-0.8**
TGBT	**Tuxtla Gutierr**	**2.02**	**44**	*i* P		**Pn**	**12 52 08.6**	**-0.5**
TGBT				*i* S		**Sn**	**12 52 33.7**	**+0.5**
THIG		**2.25**	**100**	*e*P		**Pn**	**12 52 10.4**	**-1.8**
THIG				*e*S		**Sn**	**12 52 35.1**	**-3.7**
PATR	**El Naranjo**	**2.25**	**95**	*e*P		**Pn**	**12 52 10.9**	**-1.5**
PATR				*i* S		**Sn**	**12 52 37.0**	**-2.1**
PAVE	**Pavencul**	**2.30**	**93**	*e*P		**Pn**	**12 52 12.0**	**-1.0**
PAVE				*i* S		**Sn**	**12 52 38.5**	**-1.8**
CHUJ	**Union Juarez**	**2.38**	**95**	*i* P		**Pn**	**12 52 12.7**	**-1.4**
CHUJ				*i* S		**Sn**	**12 52 39.8**	**-2.4**
CCIG	**Comitan**	**2.52**	**67**			**Pn**	**12 52 16.3**	**+0.3**
CCIG				Sn		**Sn**	**12 52 40.5**	**-5.2**
CCIG	**Comitan**	**2.52**	**67**	*e*P		**Pn**	**12 52 16.1**	**0.0**
CCIG				*e*S		**Sn**	**12 52 44.0**	**-1.7**
CCIG	**Comitan**	**2.52**	**67**	*i* P		**Pn**	**12 52 16.7**	**+0.7**
CCIG				IAML			12 52 54.8	
	comp=Z,13μm,1.0s							
PEIG	**Puerto Escondi**	**2.58**	**286**	*i* P		**Pn**	**12 52 15.4**	**-1.3**
PEIG				*e*S		**Sn**	**12 52 41.4**	**-5.6**
NEUV	**Arroyo Zacate**	**2.66**	**334**	*e*P		**Pn**	**12 52 16.9**	**-0.9**
SMSP	**San Marcos**	**2.70**	**97**	*e*P		**Pn**	**12 52 18.6**	**-0.1**
SMSP				*e*S		**Sn**	**12 52 47.5**	**-2.8**
SMSP	**San Marcos**	**2.70**	**97**	*i* P		**Pn**	**12 52 18.8**	**+0.2**
SMSP				*i* S		**Sn**	**12 52 50.4**	**+0.1**
SMSP				IAML			12 52 57.7	
	comp=Z,13μm,1.0s							
TUIG	**Tuzandepetl**	**2.71**	**3**	*e*P		**Pn**	**12 52 18.2**	**-0.2**
TUIG				*e*S		**Sn**	**12 52 48.1**	**-1.8**
OXBJ	**Oaxaca**	**2.71**	**310**	*e*P		**Pn**	**12 52 18.7**	**0.0**
OXBJ				*e*S		**Sn**	**12 52 49.2**	**-1.3**
VHO	**Vista Hermosa**	**2.72**	**310**	*e*P		**Pn**	**12 52 19.8**	**+0.9**
VHO				*e*S		**Sn**	**12 52 49.2**	**-1.5**
RTAL	**Retalhuleu**	**2.88**	**106**	Pn		**Pn**	**12 52 20.1**	**-0.6**
RTAL				Sn		**Sn**	**12 52 52.0**	**-2.2**
RTAL	**Retalhuleu**	**2.88**	**106**	*e*P		**Pn**	**12 52 19.6**	**-1.2**
RTAL				*e*S		**Sn**	**12 52 50.6**	**-3.6**
RTAL	**Retalhuleu**	**2.88**	**106**	*i* P		**Pn**	**12 52 20.2**	**-0.6**
RTAL				*i* S		**Sn**	**12 52 52.5**	**-1.7**
RTAL				IAML			12 53 18.7	
	comp=Z,4μm,1.0s							
HUEH	**Huehuetenango**	**2.95**	**90**			**Pn**	**12 52 23.1**	**+1.2**
HUEH				Sn		**Sn**	**12 52 51.4**	**-4.8**
HUEH	**Huehuetenango**	**2.95**	**90**	*e*P		**Pn**	**12 52 22.3**	**+0.3**
HUEH				*e*S		**Sn**	**12 52 58.3**	**+2.1**
HUEH	**Huehuetenango**	**2.95**	**90**	*i* P		**Pn**	**12 52 23.2**	**+1.2**
HUEH				*i* S		**Sn**	**12 52 58.8**	**+2.6**
HUEH				IAML			12 53 19.2	
	comp=Z,23μm,1.0s							
STG3	**Santiaguito 3,**	**2.95**	**101**	*e*P		**Pn**	**12 52 21.9**	**0.0**
SULM	**Suchitepequez,**	**3.06**	**109**	*e*P		**Pn**	**12 52 24.5**	**+1.1**
VHSA	**Villahermosa**	**3.07**	**30**	*i* P		**Pn**	**12 52 23.6**	**+0.2**
VHSA				*i* S		**Sn**	**12 52 01.1**	**+2.2**
PMUV	**Sontecomapan**	**3.25**	**351**	*e*P		**Pn**	**12 52 24.1**	**-2.0**
PMUV				*e*S		**Sn**	**12 52 57.9**	**-5.7**
YOIG	**Yosondua**	**3.25**	**298**	*e*P		**Pn**	**12 52 26.1**	**-0.2**
YOIG				*e*S		**Sn**	**12 53 01.0**	**-2.8**
PNIG	**Pinotepa**	**3.60**	**288**	*e*P		**Pn**	**12 52 30.2**	**-0.5**
PNIG				*e*S		**Sn**	**12 53 06.1**	**-5.9**
TXIG	**Tlaxiaco**	**3.63**	**302**	*i* P		**Pn**	**12 52 32.5**	**+1.1**
TXIG				*e*S		**Sn**	**12 53 09.6**	**-3.7**
TOIG	**Toxpalan**	**3.66**	**319**	*e*P		**Pn**	**12 52 33.5**	**+1.8**
TOIG				*e*S		**Sn**	**12 53 12.9**	**-0.7**
FUG	**Fuego 3**	**3.69**	**103**	*e*P		**Pn**	**12 52 33.3**	**+1.1**
PCG	**Pacaya**	**3.93**	**103**	*e*P		**Pn**	**12 52 37.4**	**+2.0**
PCG				*e*S		**Sn**	**12 53 21.4**	**+0.9**
HLIG	**Huajuapan de L**	**3.99**	**309**	*e*P		**Pn**	**12 52 37.7**	**+1.4**
HLIG				*e*S		**Sn**	**12 53 19.0**	**-2.9**
NBG	**Las Nubes**	**4.13**	**100**	*e*P		**Pn**	**12 52 42.1**	**+3.8**
FTIG	**Fresnillo de T**	**4.29**	**307**	*e*P		**Pn**	**12 52 42.0**	**+1.7**
FTIG				*e*S		**Sn**	**12 53 26.9**	**-2.1**
TLIG	**Tlapa**	**4.45**	**301**	Pn		**Pn**	**12 52 44.2**	**+1.8**
TLIG	**Tlapa**	**4.45**	**301**	*e*P		**Pn**	**12 52 43.0**	**+0.5**
TLIG				*e*S		**Sn**	**12 53 29.8**	**-3.3**
TLIG	**Tlapa**	**4.45**	**301**	*i* P		**Pn**	**12 52 44.2**	**+1.8**
TLIG				*i* S		**Sn**	**12 53 30.8**	**-2.3**
TLIG				IAML			12 53 49.2	
	comp=Z,2μm,1.0s							
JAUV	**Jalcomulco**	**4.56**	**332**	*e*P		**Pn**	**12 52 42.2**	**-1.8**
JAUV				*i* S		**Sn**	**12 53 32.5**	**-3.2**
CRIG	**Cruz Grande**	**4.62**	**288**	*i* P		**Pn**	**12 52 44.5**	**-0.2**
CRIG				*e*S		**Sn**	**12 53 30.2**	**-6.9**
MRL	**Marmol**	**4.71**	**92**	*e*P		**Pn**	**12 52 47.0**	**+0.8**
LVIG	**Laguna Verde**	**4.73**	**338**	*i* P		**Pn**	**12 52 45.7**	**-0.5**
LVIG				*e*S		**Sn**	**12 53 32.9**	**-6.8**
PETF	**Flores**	**4.78**	**70**			**Pn**	**12 52 46.6**	**-0.3**
PETF	**Flores**	**4.78**	**70**	*e*P		**Pn**	**12 52 46.1**	**-0.8**
PETF				*e*S		**Sn**	**12 53 37.9**	**-3.1**
PETF	**Flores**	**4.78**	**70**	*i* P		**Pn**	**12 52 46.9**	**0.0**
PETF				IAML			12 52 49.4	
	comp=Z,3μm,1.0s							
PETF				*i* S		**Sn**	**12 53 39.6**	**-1.5**
NUBE	**Las Nubes**	**4.83**	**106**	*i* P		**Pn**	**12 52 47.9**	**+0.1**
NUBE				*i* S		**Sn**	**12 53 41.6**	**-1.0**
NUBE				IAML			12 54 05.1	
	comp=Z,870nm,1.0s							
SCIG	**Sabancuy**	**4.85**	**41**	*e*P		**Pn**	**12 52 47.0**	**-0.9**
CEVE	**Cerro Verde**	**5.00**	**107**	*i* P		**Pn**	**12 52 51.1**	**+0.9**
CEVE				*i* S		**Sn**	**12 53 45.5**	**-1.4**
CEVE				IAML			12 54 11.5	
	comp=Z,1μm,1.0s							
ESQI	**Esquipulas**	**5.10**	**98**	Pn		**Pn**	**12 52 51.6**	**+0.2**
MTO3	**Montecristo**	**5.11**	**100**			**Pn**	**12 52 51.6**	**0.0**
DAIG	**Los Arroyos**	**5.18**	**290**	*e*P		**Pn**	**12 52 52.6**	**+0.2**
DAIG				*e*S		**Sn**	**12 53 44.0**	**-6.9**
JAYA	**Jayaque - finc**	**5.22**	**108**	*i* P		**Pn**	**12 52 52.4**	**-0.7**
JAYA				IAmb		IAmb	12 53 13.4	
	comp=Z,760nm,0.7s							
JAYA				IVmB_BB			12 53 13.7	
	comp=Z,7μm,1.0s							
JAYA				*i* S		**Sn**	**12 53 47.6**	**-4.5**
JAYA				IAML			12 54 12.4	
	comp=Z,1μm,1.0s							
PMON	**Piamonte**	**5.32**	**107**	*i* P		**Pn**	**12 52 55.7**	**+1.2**
PMON				IVmB_BB			12 53 22.4	
	comp=Z,4μm,1.0s							
PMON				IAmb		IAmb	12 53 22.5	
	comp=Z,440nm,0.7s							
PMON				*i* S		**Sn**	**12 53 54.3**	**-0.3**
PMON				IAML			12 54 08.0	
	comp=Z,800nm,1.0s							
ACP2	**Acapulco**	**5.35**	**288**	*i* S		**Sn**	**12 53 49.4**	**-5.7**
SNET	**Serv Nac Est T**	**5.41**	**107**	Pn		**Pn**	**12 52 54.4**	**-1.2**
MEIG	**Mezcala**	**5.50**	**299**	*e*P		**Pn**	**12 52 58.8**	**+1.9**
MEIG				*e*S		**Sn**	**12 53 55.0**	**-4.0**
AMVM	**AMECAMECA**	**5.54**	**314**	*e*P		**Pn**	**12 53 00.3**	**+2.6**
AMVM				*i* S		**Sn**	**12 53 57.7**	**-2.5**
YAIG	**Yautepec**	**5.57**	**310**	*e*P		**Pn**	**12 53 00.0**	**+2.1**
YAIG				*e*S		**Sn**	**12 53 57.0**	**-3.8**
PLIG	**Platanillo**	**5.64**	**304**	*e*P		**Pn**	**12 53 00.5**	**+1.8**
PLIG				*e*S		**Sn**	**12 53 58.6**	**-3.7**
MPVM	**San Francisco**	**5.75**	**313**	*e*P		**Pn**	**12 53 02.9**	**+2.5**
MPVM				*e*S		**Sn**	**12 53 59.8**	**-5.4**
IZABA	**Izabal, Puerto**	**5.77**	**85**	*i* P		**Pn**	**12 52 59.3**	**-1.2**
IZABA				*i* S		**Sn**	**12 54 02.1**	**-3.4**
THVM	**De Xico**	**5.79**	**314**	*e*P		**Pn**	**12 53 00.7**	**-0.4**
THVM				*e*S		**Sn**	**12 54 04.4**	**-2.0**
TXVM	**Universitario**	**5.84**	**315**	*e*P		Pn	12 53 06.4	+4.8
TXVM				*e*S		**Sn**	**12 54 08.6**	**+1.1**
TLVM	**San Miguel Top**	**5.85**	**312**	*e*P		**Pn**	**12 53 04.7**	**+2.7**
TLVM				*e*S		**Sn**	**12 54 06.3**	**-1.7**
XCVM	**Xochimilco**	**5.86**	**313**	*e*P		**Pn**	**12 53 01.2**	**-0.8**
XCVM				*e*S		**Sn**	**12 54 07.5**	**-0.4**
CNCY	**Coyoacan**	**5.94**	**313**	*i* P		Pn	12 53 08.8	+5.8
COVM	**Coyoacan**	**5.95**	**313**	*e*S		**Sn**	**12 54 09.7**	**-0.5**
UNM	**Universidad Na**	**5.95**

comp=Z,8µm,1.0s
VMAR Armenia, Volca 10.23 115 *i* P **Pn 12 54 02.5 +0.8**
VMAR IVmB_BB 12 54 30.1
comp=Z,1µm,1.0s
VMAR IAmb IAmb 12 54 30.5
comp=Z,92nm,0.9s
DUNO Dulce Nombre, 10.26 119 Pn 12 54 04.5 +2.4
DUNO Dulce Nombre, 10.26 119 *i* P **Pn 12 54 04.9 +2.8**
DUNO IAmb IAmb 12 54 22.3
comp=Z,44nm,1.1s
DUNO IVmB_BB 12 54 48.4
comp=Z,3µm,1.0s
INDI Punta indio, G 10.37 120 *i* P Pn 12 54 10.4 +6.9
ESPN Las Esperanzas 10.44 106 Pn 12 54 05.0 +0.5
LNIG Linares 10.59 335 *e*P **Pn 12 54 07.5 +1.0**
LNIG *e*S **Sn 12 56 03.3 -0.4**
ZAIG Zacatecas 10.59 316 Pn **Pn 12 54 10.1 +3.2**
JTS Las Juntas de 10.62 117 Pn **Pn 12 54 08.8 +1.9**
JTS Las Juntas de 10.62 117 Pn **Pn 12 54 08.2 +1.3**
comp=Z,3.7nm,0.3s,baz=285,slow=14,SNR=12
ARE1 Arenal 1 10.74 116 Pn 12 54 10.2 +1.6
CJM Chamela 10.84 294 *e*P **Pn 12 54 12.4 +2.4**
CJM *e*S **Sn 12 56 07.7 -2.2**
SOCE Pocosol 10.86 116 Pn **Pn 12 54 10.2 -0.1**
LAFE Finca La Fe, P 10.89 119 *i* P **Pn 12 54 12.4 +1.7**
LAFE IVmB_BB 12 54 20.8
comp=Z,15nm,1.0s
LAFE IAmb IAmb 12 54 21.1
comp=Z,1.6nm,0.7s
COVE Coope Vega, Sa 10.90 114 Pn 12 54 10.7 -0.1
JACO JACO, Garabito 11.18 119 Pn 12 54 15.7 +1.1
JACO JACO, Garabito 11.18 119 *i* P **Pn 12 54 17.6 +3.0**
JACO IAmb IAmb 12 54 28.3
comp=Z,120nm,0.7s
LCR2 La Lucha 2 11.70 117 Pn **Pn 12 54 23.5 +1.6**
LCR2 La Lucha 2 11.70 117 *i* P **Pn 12 54 24.3 +2.4**
LCR2 IVmB_BB 12 54 32.6
comp=Z,1µm,1.0s
LCR2 IAmb IAmb 12 54 33.0
comp=Z,130nm,0.8s
RIMA Rio Macho 11.80 117 Pn 12 54 24.4 +1.0
RIMA Rio Macho 11.80 117 *i* P **Pn 12 54 25.2 +1.8**
RIMA IVmB_BB 12 54 27.5
comp=Z,980nm,1.0s
RIMA IAmb IAmb 12 54 48.7
comp=Z,50nm,0.7s
CDM Cerro de Muert 11.99 117 *i* P **Pn 12 54 27.6 +1.4**
CDM IVmB_BB 12 54 31.6
comp=Z,1µm,1.0s
CDM IAmb IAmb 12 54 38.2
comp=Z,87nm,0.8s
PEZE Perez Zeledon, 12.15 118 Pn 12 54 28.8 +0.7
HBVL Hebbronville 12.30 343 Pn 12 54 28.8 -1.1
SRBA San Rafael, Bu 12.50 118 Pn 12 54 33.5 +0.7
SRBA San Rafael, Bu 12.50 118 *i* P **Pn 12 54 29.2 -3.6**
PLAN Los Planes de 12.52 121 *i* P Pn 12 54 37.8 +4.8
PLAN IAmb IAmb 12 54 45.2
comp=Z,90nm,0.8s
DRK0 Durika 12.58 117 Pn **Pn 12 54 33.8 -0.2**
SOR Soroa 13.21 54 Pn 12 54 38.8 -3.5
CDITO Canoas 13.25 119 Pn 12 54 41.4 -1.5
CCOL Caracol de Cor 13.25 120 *i* P P 12 54 56.7 +5.1
833A Chaparral WMA, 13.70 342 Pn **Pn 12 54 50.9 +1.9**
833A Chaparral WMA, 13.70 342 P **Pn 12 54 50.2 +1.2**
baz=160,SNR=23
735A Kenedy 13.80 348 Pn 12 54 50.3 -0.2
PDIG Papasquiaro 14.03 315 *e*P **Pn 12 54 56.7 +2.9**
MCIG Muzquiz 14.05 334 *e*P **Pn 12 54 54.3 +0.4**
HNDO Hondo 14.80 344 Pn 12 55 04.0 +0.2
DRIO Del Rio 15.11 339 Pn 12 55 07.8 -0.1
HPIG 15.51 320 Pn **Pn 12 55 13.5 +0.3**
435B Jarrell 15.64 350 P 12 55 16.6 -1.5
435B Jarrell 15.64 350 P **Pn 12 55 15.6 +0.9**
baz=169
JCT Junction City 15.84 343 P **P 12 55 18.6 -1.7**
baz=161,SNR=22
SAND Sanderson 16.15 336 Pn 12 55 21.8 +0.6
TXAR Lajitas Array 16.29 330 P **P 12 55 24.3 -1.0**
TXAR Lajitas Array 16.29 330 Pn **P 12 55 24.6 -0.8**
comp=Z,0.4nm,0.3s,baz=156,slow=14,SNR=41
TXAR LR LR 13 01 43.4
comp=Z,53nm,18.5s,baz=148,slow=37
comp=Z,14nm,1.0s
TX31 Lajitas Ar. Si 16.29 330 P **P 12 55 24.6 -0.7**
NATX Nacogdoches 16.37 360 Pn 12 55 23.3 -0.6
BRDY Brady 16.41 346 P **Pn 12 55 25.2 +0.7**
237A Washetta, Mont 16.65 356 Pn 12 55 25.6 -1.8
237A IAmb IAmb 12 55 32.3
comp=Z,45nm,1.1s
OZNA Ozona 16.66 340 Pn 12 55 27.6 -0.1
OZNA IAmb IAmb 12 55 36.9
comp=Z,60nm,1.0s
WHTX Lake Whitney, 16.81 351 P **P 12 55 30.1 -0.9**
baz=170,SNR=19
ALPN Alpine 17.15 332 P **P 12 55 34.6 -0.3**
FW13 Cleburne 17.16 352 Pn 12 55 32.6 -1.2
FW13 IAmb IAmb 12 55 41.0
comp=Z,39nm,0.7s
LPIG La Paz 17.20 303 LR LR 13 01 36.6
comp=Z,382nm,20.9s,baz=137,slow=35
LPIG La Paz 17.20 303 *e*P **Pn 12 55 34.9 +0.5**
BRAL Brewton 17.21 22 P **Pn 12 55 33.2 -1.2**
baz=205
FW16 Waxahatchie 17.22 353 Pn 12 55 33.2 -1.3
FW16 IAmb IAmb 12 55 44.6
comp=Z,58nm,0.9s
VBMS Vicksburg 17.22 12 P **Pn 12 55 32.4 -2.2**
baz=193
CSIG Choix 17.23 314 *e*P **P 12 55 37.9 +2.2**
143A Socs Landing, 17.55 9 P **Pn 12 55 38.0 -0.5**
FW07 Weatherford 17.55 351 P **P 12 55 39.0 -0.3**
FW07 IAmb IAmb 12 55 55.6
comp=Z,74nm,1.1s
SGCY Sterling City 17.57 341 P **Pn 12 55 38.7 -0.3**
SGCY IAmb IAmb 12 55 47.4
comp=Z,42nm,0.8s
DWPF Disney Wildern 17.61 42 P **Pn 12 55 37.6 -1.7**
DWPF IAmb IAmb 12 55 39.1
comp=Z,62nm,0.7s
DWPF Disney Wildern 17.61 42 P **Pn 12 55 37.1 -2.3**
baz=226
MNHN Monahans 17.63 336 P **P 12 55 40.1 0.0**
MNHN IAmb IAmb 12 55 48.2
comp=Z,39nm,0.9s
PLPT Palo Pinto 17.75 350 P **P 12 55 41.2 -0.2**
PLPT IAmb IAmb 12 56 04.7
comp=Z,30nm,0.7s
FW06 Azle 17.79 352 P **P 12 55 41.5 -0.3**
FW06 IAmb IAmb 12 55 58.9
comp=Z,78nm,1.1s
ABTX Abilene, Hawle 17.84 346 P **P 12 55 43.4 +1.0**
ABTX IAmb IAmb 12 55 50.6
comp=Z,28nm,0.7s
ABTX Abilene, Hawle 17.84 346 P **P 12 55 42.4 0.0**
baz=164,SNR=19
656A Willston 17.85 36 P **Pn 12 55 39.6 -2.6**
656A IAmb IAmb 12 55 54.6
comp=Z,77nm,1.1s
FW03 Perrin-Whitt E 17.93 350 P **P 12 55 43.5 +0.2**
146A Union 17.95 15 P **Pn 12 55 42.6 -0.9**
PECS Pecos 18.11 334 P **Pn 12 55 46.0 +0.5**
VHRN Van Horn 18.12 330 P **Pn 12 55 46.5 +0.7**
250A Grady 18.23 23 P **P 12 55 45.5 -1.2**
ODSA Odessa 18.24 338 P **Pn 12 55 48.3 +1.1**
ODSA IAmb IAmb 12 55 53.5
comp=Z,63nm,1.0s
352A Blakely 18.34 27 P **Pn 12 55 47.7 -0.5**
SN05 Snyder 5 18.40 343 P **P 12 55 48.4 -0.2**
APMT Aspermont 18.62 345 P **Pn 12 55 51.6 -0.1**
CCAR Cane Creek 18.69 7 P **Pn 12 55 53.5 +1.0**
CCAR IAmb IAmb 12 55 59.3
comp=Z,59nm,1.2s
Z47A Carrollton 18.75 17 P **P 12 55 50.9 -1.5**
Z47A IAmb IAmb 12 56 00.2
comp=Z,40nm,0.7s
TIGA Tifton 18.92 30 P **P 12 55 52.8 -1.5**
baz=214,SNR=5.8
LRAL Lakeview Retre 18.93 20 P **P 12 55 53.6 -0.7**
baz=203,SNR=11
MNTX Cornudas Mount 19.07 331 P **Pn 12 55 57.7 +0.6**
baz=146,SNR=14
MIAR Mount Ida 19.17 2 P **P 12 55 56.1 -0.8**
MIAR Mount Ida 19.17 2 P **P 12 55 56.0 -0.9**
baz=183,SNR=13

CGIG 19.39 323 *e*P **Pn 12 56 03.0 +1.9**
OXF Oxford 19.67 13 P **P 12 56 00.3 -2.0**
baz=195
WMOK Wichita Mounta 19.71 350 P **Pn 12 56 04.0 -0.7**
baz=168,SNR=18
DBBC Dabeiba 19.79 113 *e*P **P 12 56 04.6 +0.6**
W35A Tecumseh 19.86 354 P **P 12 56 03.7 -0.8**
W35A IAmb IAmb 12 56 45.4
comp=Z,31nm,0.8s
255A Hazlehurst 19.87 32 P **P 12 56 03.5 -1.1**
WHAR Wooly Hollow 19.99 5 P **P 12 56 04.5 -1.4**
WHAR IAmb IAmb 12 56 12.9
comp=Z,37nm,1.3s
MSTX Muleshoe 20.00 340 P **P 12 56 07.0 +0.8**
baz=156,SNR=9.8
GR1C Gorgona, Isla 20.26 126 *e*P **P 12 56 10.8 +1.7**
HSIG 20.37 315 P **P 12 56 11.4 +1.3**
HSIG IAmb IAmb 12 56 13.6
comp=Z,30nm,0.9s
HSIG 20.37 315 *e*P Pn 12 56 12.8 +0.3
CBOC Ciudad Bolivar 20.49 115 *e*P **P 12 56 12.9 +1.2**
AMTX Amarillo 20.51 343 P Pn 12 56 13.0 -1.3
baz=160
TUL3 Leonard 20.54 357 P Pn 12 56 12.8 -1.7
baz=176,SNR=5.2
GOGA Godfrey 20.63 27 P **P 12 56 12.0 -0.8**
baz=212
PLMC San Jos del P 20.73 118 *e*P **P 12 56 14.6 +0.4**
HELC Santa Helena 20.76 114 *e*P **P 12 56 15.5 +0.7**
HHAR Hobbs 20.89 1 P **P 12 56 15.6 0.0**
HHAR IAmb IAmb 12 56 18.2
comp=Z,20nm,0.5s
319A Douglas 20.90 322 P Pn 12 56 17.6 -1.3
319A IAmb IAmb 12 56 19.5
comp=Z,43nm,1.0s
121A Cookes Peak, D 20.94 327 P Pn 12 56 19.0 -0.4
121A IAmb IAmb 12 56 20.1
comp=Z,50nm,0.9s
121A Cookes Peak, D 20.94 327 P Pn 12 56 19.1 -0.3
baz=142,SNR=29
JAMC Jamundi, Valle 21.33 123 *e*P **P 12 56 21.8 +1.0**
GUY2C Guyana, Caldas 21.36 116 *e*P **P 12 56 22.7 +1.3**
WVT Waverly 21.58 15 P **P 12 56 21.5 -1.5**
WVT Waverly 21.58 15 P **P 12 56 22.0 -1.0**
baz=198
T35A Sooner Cattle 21.58 356 P **P 12 56 21.7 -1.4**
T35A IAmb IAmb 12 56 52.8
comp=Z,21nm,0.8s
BBAC Balboa, Cauca 21.59 126 *e*P **P 12 56 25.2 +1.6**
NORC Norcasia 21.63 115 *e*P **P 12 56 24.6 +0.8**
DUN6 Lazy B Ranch 21.66 325 P **P 12 56 25.2 +1.2**
POPC Popayan, Colom 21.72 124 *e*P **P 12 56 26.3 +1.3**
Y22D IRIS PASSCAL I 21.76 331 P **P 12 56 26.3 +1.2**
baz=146
Y22F Passcal Instru 21.76 331 P **P 12 56 25.7 +0.6**
baz=146
OTAV Otavalo 21.86 132 *e*P **P 12 56 26.6 -0.1**
NHSC New Hope 21.99 34 P **P 12 56 26.1 -1.4**
baz=220
IMBA Imbabura, San 22.01 131 P **P 12 56 30.5 +2.2**
ORTC Ortega, Tolima 22.13 119 *e*P **P 12 56 30.1 +0.9**
ANMO Albuquerque 22.28 333 P **P 12 56 31.2 +0.4**
ANMO Albuquerque 22.28 333 P **P 12 56 31.4 +0.6**
baz=148
ANMO Albuquerque 22.28 333 LR LR 13 06 18.8
comp=Z,144nm,20.6s,baz=252,slow=40
TKL Tuckaleechee C 22.44 24 P **P 12 56 30.1 -2.2**
TKL IAmb IAmb 12 56 49.3
comp=Z,41nm,1.1s
TKL Tuckaleechee C 22.44 24 LR LR 13 07 16.3
comp=Z,230nm,18.4s,baz=206,slow=42
TUC Tucson 22.45 322 P **P 12 56 34.1 +1.5**
TUC Tucson 22.45 322 P **P 12 56 33.8 +1.2**
baz=135
ROSC El Rosal 22.46 116 P **P 12 56 34.8 +1.8**
ROSC El Rosal 22.46 116 P **P 12 56 35.5 +2.4**
comp=Z,60nm,0.6s,baz=337,slow=15,SNR=38
ROSC LR LR 13 04 53.8
comp=Z,131nm,19.6s,baz=266,slow=36
BARC Barichara 22.69 110 *e*P **P 12 56 35.8 +0.4**
CVER Cruz Verde, Cu 22.82 116 *e*P **P 12 56 38.7 +1.7**
PAMC Pamplona, Colo 22.83 108 *e*P **P 12 56 36.3 -0.9**
CCM Cathedral Cave 22.84 7 P **P 12 56 35.4 -1.1**
baz=188
KMSC Kings Mountain 23.04 29 P **P 12 56 36.8 -1.7**
baz=214,SNR=5.6
TZTN Tazewell 23.31 23 P **P 12 56 38.6 -2.6**
baz=208,SNR=6.5
T25A Trinidad 23.43 340 P **P 12 56 43.4 +0.8**
baz=155,SNR=15
214A Organ Pipe Nat 23.48 318 P **P 12 56 44.3 +1.4**
baz=130
X18A Snowflake 23.62 327 P **P 12 56 46.2 +1.8**
KSU1 Kansas State U 23.76 356 P **P 12 56 44.5 -0.9**
baz=175
CBKS Cedar Bluff 23.85 350 P **P 12 56 46.3 0.0**
baz=167,SNR=8.6
WCI Wyandotte Cave 23.96 16 P **P 12 56 45.3 -2.0**
WCI Wyandotte Cave 23.96 16 P **P 12 56 45.5 -1.8**
baz=200
W18A Petrified Fore 23.97 328 P **P 12 56 49.1 +1.5**
baz=141,SNR=6.9
SDV Santo Domingo 24.24 103 LR LR 13 07 09.5
comp=Z,306nm,21.5s,baz=276,slow=39
SDCO Great Sand Dun 24.35 339 P **P 12 56 52.5 +1.3**
baz=153,SNR=9.8
X16A Lo Mia Camp, P 24.35 324 P **P 12 56 53.5 +2.4**
X16A IAmb IAmb 12 56 55.6
comp=Z,33nm,0.9s
KSCO Kaye Shedlock' 24.65 345 P **P 12 56 54.6 +0.9**
baz=161
BLO Bloomington 24.79 15 P **P 12 56 52.6 -2.2**
Y14A Wickenburg 24.92 321 P **P 12 56 57.2 +1.1**
Y14A IAmb IAmb 12 57 00.9
comp=Z,32nm,1.1s
MVCO Mesa Verde 25.07 333 P **P 12 56 58.2 +0.4**
baz=146,SNR=8.4
WUAZ Wupatki 25.13 326 P **P 12 56 59.1 +0.9**
baz=139,SNR=22
BLA Blacksburg 25.16 27 P **P 12 56 56.2 -2.0**
baz=214
Q24A Divide 25.33 340 P **P 12 57 01.1 +1.0**
baz=155
GLA Glamis 25.48 317 P **P 12 57 01.7 +0.4**
baz=129
HDIL Hopedale 25.56 9 P **P 12 56 59.4 -2.4**
baz=192
P49A Miami Univ. Ec 25.62 18 P **P 12 56 59.9 -2.5**
baz=202
SFIN Lafayette 25.80 13 P **P 12 56 59.5 -4.5**
baz=196
PDMCI Parker Dam,Lak 25.86 320 P **P 12 57 05.8 +1.2**
baz=132
Q52A Bidwell 25.92 22 P **P 12 57 02.6 -2.4**
Q52A IAmb IAmb 12 57 04.0
comp=Z,34nm,0.8s
SWSC Sam W. Stewart 26.06 316 P **P 12 57 07.3 +0.9**
baz=127
IKP In-Ko-Pah, Jac 26.09 315 P **P 12 57 07.3 +0.4**
baz=126
O48B Farmland 26.17 16 P **P 12 57 05.1 -2.2**
baz=201
BGNE Belgrade 26.18 354 P **P 12 57 07.2 -0.3**
baz=172
ISCO Idaho Springs 26.24 340 P **P 12 57 09.2 +0.8**
baz=155,SNR=5.7
BC3 Big Chuckawall 26.27 318 P **P 12 57 09.4 +0.9**
baz=129
U15A North Rim 26.30 326 P **P 12 57 09.8 +0.8**
OGNE Ogallala 26.35 347 P **P 12 57 09.2 +0.1**
baz=163
IRM Iron Mountain 26.39 319 P **P 12 57 10.7 +1.2**
baz=130,SNR=7.3
MONP2 Monument Peak 26.45 315 P **P 12 57 11.2 +1.0**
baz=126
NEE2 Needles Airpor 26.46 321 P **P 12 57 12.1 +2.0**
baz=132
SCIA State Center 26.52 2 P **P 12 57 09.6 -0.8**
baz=183
P52A Corning 26.56 22 P **P 12 57 08.8 -2.0**
baz=208,SNR=5.7
BAUV El Baul 26.67 101 P **P 12 57 09.2 -2.9**
BAUV IAmb IAmb 12 57 40.9
comp=Z,16nm,0.8s
ACSO Alum Creek Sta 26.80 20 P **P 12 57 11.3 -1.7**
baz=205

TPFO Pinon Flats 26.90 317 P **P 12 57 15.3 +1.1**
baz=127
PFO Pinyon Flats O 26.90 317 P **P 12 57 15.8 +1.6**
baz=127
PFO Pinyon Flats O 26.90 317 LR LR 13 08 55.8
comp=Z,208nm,18.5s,baz=106,slow=39
109C Camp Elliot, M 26.91 315 P **P 12 57 16.3 +2.1**
baz=125
O52A Adamsville 27.09 22 P **P 12 57 13.1 -2.6**
GMRC Granite Mounta 27.12 319 P **P 12 57 17.1 +1.0**
baz=130,SNR=5.4
N23A Red Feather La 27.34 341 P **P 12 57 17.8 -0.4**
baz=155
CBN Corbin Frederi 27.39 30 P **P 12 57 17.5 -0.8**
baz=218
MURC Murrieta 27.39 316 P **P 12 57 19.1 +0.7**
baz=126
O53A New Philadelph 27.43 23 P **P 12 57 16.4 -2.3**
baz=209
MCWV Mont Chateau 27.46 25 P **P 12 57 18.2 -0.8**
baz=212
O20A White River Ci 27.46 337 P **P 12 57 19.2 0.0**
O20A White River Ci 27.46 337 P **P 12 57 19.6 +0.4**
baz=150
ATAH Atahualpa 27.46 143 LR LR 13 06 39.3
comp=Z,109nm,21.0s,baz=335,slow=33
HEC Hector,Ludlow 27.58 319 P **P 12 57 20.9 +0.7**
baz=129
BBRC Big Bear Solar 27.60 317 P **P 12 57 20.9 +0.3**
baz=127
TUQ Turquoise Moun 27.71 320 P **P 12 57 22.5 +1.0**
baz=131
JFWS Jewell Farm 27.75 7 P **P 12 57 20.4 -1.1**
baz=189
SCI2 San Clemente I 27.97 313 P **P 12 57 24.3 +0.7**
baz=123
RRX Edison Barstow 28.03 318 P **P 12 57 24.7 +0.5**
baz=128
ECSD EROS Data Cent 28.38 357 P **P 12 57 26.6 -0.5**
ECSD IAmb IAmb 12 57 27.4
comp=Z,7.9nm,0.6s
AAM Ann Arbor 28.48 17 P **P 12 57 26.3 -1.7**
baz=202
DECC Green Verdugo 28.54 316 P **P 12 57 30.3 +1.6**
baz=125
M53A WI Miller and 28.67 22 P **P 12 57 27.7 -2.0**
baz=209
LRMC Laurel Mtn Rad 28.84 318 P **P 12 57 32.5 +1.0**
baz=128
FURC Furnace Creek, 28.96 321 P **P 12 57 34.5 +2.2**
baz=131
OSI Osito Audit: C 29.01 316 P **P 12 57 34.8 +1.9**
baz=125
MPMC Manual Prospec 29.08 319 P **P 12 57 35.7 +2.0**
baz=129,SNR=5.5
K22A Casper 29.12 342 P **P 12 57 35.0 +1.1**
baz=156
ARVC Arvin 29.38 317 P **P 12 57 38.5 +2.4**
baz=126
DUG Dugway, Tooele 29.46 331 P **P 12 57 38.4 +1.4**
baz=142
ISA Isabella, Lake 29.46 318 P **P 12 57 38.1 +1.2**
baz=127
R11B Troy Canyon, C 29.50 325 P **P 12 57 39.5 +2.1**
baz=135
SBC Santa Barbara 29.58 315 P **P 12 57 39.1 +1.2**
baz=124
GRAC Grapevine Rang 29.61 321 P **P 12 57 39.0 +0.8**
baz=131
PCRV Puerto La Cruz 29.61 96 LR LR 13 11 49.8
comp=Z,116nm,18.4s,slow=42
CWC Cottonwood Cre 29.69 319 P **P 12 57 40.1 +1.0**
baz=129
SPMN Marine on St. 29.85 2 P **P 12 57 38.8 -1.4**
SPMN Marine on St. 29.85 2 P **P 12 57 38.7 -1.4**
baz=183,SNR=11
PKM Mcpherson Peak 29.90 315 P **P 12 57 41.8 +0.8**
baz=124
VES Vestal, Richgr 29.97 318 P **P 12 57 43.1 +1.8**
baz=126,SNR=5.6
BW06 Boulder Array 30.24 338 P **P 12 57 45.2 +1.4**
baz=150
PDAR Pinedale Array 30.24 338 P **P 12 57 44.6 +0.7**
PDAR Pinedale Array 30.24 338 P **P 12 57 44.7 +0.8**
comp=Z,1.5nm,0.8s,baz=142,slow=9.0,SNR=12
PDAR PcP **PcP 13 00 43.5 -0.3**
comp=Z,0.4nm,0.7s,baz=127,slow=5.7,SNR=2.6
PDAR LR LR 13 12 31.7
comp=Z,124nm,18.3s,baz=151,slow=42
comp=Z,1.5nm,0.8s
SMMC Simmler 30.27 316 P **P 12 57 45.1 +1.1**
baz=124
F36A Milaca 30.46 1 P **P 12 57 43.9 -1.7**
F36A IAmb IAmb 12 57 44.2
comp=Z,9.0nm,0.7s
NV11 Mina Array Sit 31.02 322 P **P 12 57 52.5 +1.7**
NV11 IAmb IAmb 12 57 54.5
comp=Z,12nm,1.0s
ELK Elko 31.07 329 LR LR 13 12 21.8
comp=Z,581nm,18.5s,baz=153,slow=40
NVAR Mina Array Bea 31.11 322 P **P 12 57 54.2 +2.6**
comp=Z,9.2nm,0.8s,baz=141,slow=8.7,SNR=63
NVAR PcP **PcP 13 00 46.6 +0.5**
comp=Z,1.1nm,0.8s,baz=113,slow=2.3,SNR=5.2
NVAR LR LR 13 12 08.9
comp=Z,476nm,18.6s,baz=138,slow=40
comp=Z,9.2nm,0.8s
REDW Red Top Meadow 31.23 337 P **P 12 57 54.0 +1.4**
PAL Palisades 31.25 31 P **P 12 57 52.0 -0.5**
baz=221
CZSB Cruzeiro do Su 31.52 135 *e*P **P 12 57 58.1 +2.9**
BMN Battle Mountai 31.87 326 P **P 12 57 58.3 +0.1**
H17A Grant Village 32.02 338 P **P 12 58 00.3 +0.7**
baz=150
YERR Yerington 32.03 322 P **P 12 58 00.6 +0.9**
YERR IAmb IAmb 12 58 02.6
comp=Z,8.0nm,0.9s
CMB Columbia Colle 32.12 320 P **P 12 58 01.0 +0.7**
SADO Sadowa 32.13 21 LR LR 13 13 00.4
comp=Z,152nm,18.1s,baz=288,slow=40
RLMT Red Lodge 32.20 340 P **P 12 58 02.6 +1.5**
baz=152,SNR=6.6
NNA Nana 32.30 146 LR LR 13 08 14.6
comp=Z,108nm,21.5s,baz=317,slow=31
EYMN Ely 32.63 4 P **P 12 58 02.5 -2.1**
baz=185,SNR=7.1
HLID Hailey 32.86 333 P **P 12 58 07.8 +0.9**
baz=143,SNR=10
AGMN Agassiz Nation 32.91 358 P **P 12 58 05.3 -1.7**
AGMN Agassiz Nation 32.91 358 P **P 12 58 05.7 -1.3**
baz=178,SNR=20
B35A Bob, Littlefor 32.96 1 P **P 12 58 05.6 -1.8**
DGMT Dagmar 34.00 349 P **P 12 58 16.7 +0.2**
baz=163
J08A Circle Bar Ran 34.62 329 P **P 12 58 23.0 +0.9**
PLID Pearl Lake 34.76 333 P **P 12 58 23.0 -0.4**
PLID IAmb IAmb 12 58 25.6
comp=Z,13nm,0.8s
ULM Lac du Bonnet 34.86 359 P **P 12 58 22.0 -1.9**
ULM Lac du Bonnet 34.86 359 P **P 12 58 21.9 -2.0**
comp=Z,9.5nm,0.9s,baz=175,slow=10,SNR=15
ULM LR LR 13 17 20.7
comp=Z,56nm,18.1s,baz=130,slow=45
comp=Z,9.5nm,0.9s
TEFE Tefe 35.04 120 *e*P **P 12 58 25.9 0.0**
BMO Blue Mountains 35.17 331 P **P 12 58 26.4 -0.4**
YBH Yreka Blue Hor 35.82 323 LR LR 13 14 38.2
comp=Z,354nm,19.3s,baz=147,slow=39
BOAV Boa Vista 35.92 108 *e*P **P 12 58 31.9 -1.6**
F10A Beach Ranch, E 35.99 333 P **P 12 58 34.7 +0.8**
PKME Peaks-Kenny Pk 36.67 30 P **P 12 58 38.8 -0.7**
baz=224
ETMB Extrema 37.58 130 P **P 12 58 46.8 -0.8**
ETMB IAmb IAmb 12 58 48.2
comp=Z,20nm,1.3s
NEW Newport 37.75 335 LR LR 13 17 00.3
comp=Z,271nm,19.1s,baz=158,slow=40
SAML Samuel 39.34 126 P **P 12 59 00.6 -1.8**
SAML IAmb IAmb 12 59 05.1
comp=Z,7.1nm,0.8s
FFC Flin Flon 39.75 353 P **P 12 59 04.3 -0.9**
FFC IAmb IAmb 12 59 06.0
comp=Z,9.8nm,0.6s
MDP Montagnes des 42.40 99 LR LR 13 17 57.9
comp=Z,246nm,20.7s,baz=270,slow=38
ITTB Itaituba 43.13 114 *e*P **P 12 59 32.0 -1.6**
FCC Fort Churchill 43.37 0 P **P 12 59 33.7 -1.1**

FCC IAmb IAmb 12 59 34.7
comp=Z,11nm,0.8s
VILB Vilhena 44.10 128 P **P** **12 59 41.3 -0.1**
VILB Vilhena 44.10 128 *e*P **P** **12 59 42.4 +1.1**
RPN Rapa Nui 44.56 199 LR LR 13 13 54.7
comp=Z,55nm,18.6s,baz=16,slow=30
MCPB Macapa, AP 44.78 106 *e*P **P** **12 59 45.6 -1.3**
SCHQ Schefferville 44.90 22 P **P** **12 59 45.1 -2.1**
comp=Z,2.2nm,0.5s,baz=221,slow=5.4,SNR=12
SCHQ LR LR 13 21 00.8
comp=Z,245nm,19.8s,baz=235,slow=40
comp=Z,2.2nm,0.5s
LVC Limon Verde 45.30 146 LR LR 13 16 06.4
comp=Z,44nm,18.2s,baz=304,slow=33
PDRB Porto dos Gac 46.03 123 *e*P **P** **12 59 57.9 +1.2**
CLDB Colider 46.38 122 *e*P **P** **13 00 01.0 +1.6**
PTLB Pontes e Lacer 46.47 130 P **P** **12 59 58.8 -1.2**
PTLB IAmb IAmb 13 00 04.1
comp=Z,6.3nm,0.9s
YKA Yellowknife Ar 49.20 348 P **P** **13 00 21.0 +0.4**
YKA Yellowknife Ar 49.20 348 P **P** **13 00 20.6 0.0**
comp=Z,1.3nm,0.6s,baz=153,slow=7.3,SNR=27
comp=Z,1.3nm,0.6s
TMAB Tom-Au,PA,Br 49.21 107 *e*P **P** **13 00 22.0 +0.7**
KOTAN Kotaneelee Air 49.63 341 P **P** **13 00 24.6 +0.7**
baz=141
DLBC Dease Lake 50.46 337 P **P** **13 00 30.6 +0.3**
baz=133
SNDB Serra Nova Dou 50.69 120 *e*P **P** **13 00 32.0 -0.6**
WTLY Watson Lake, Y 51.19 339 P **P** **13 00 36.3 +0.5**
baz=136
BDQN Bodoquena, MS 51.41 133 *e*P **P** **13 00 42.1 +4.3**
R33M Jennings River 51.47 337 P **P** **13 00 38.2 +0.2**
baz=133
FRB Frobisher Bay 51.63 14 LR LR 13 25 18.3
comp=Z,163nm,18.2s,baz=200,slow=39
WRGLY Wrigley 51.93 344 P **P** **13 00 42.5 +1.3**
baz=144
TGTN Hyland Airport 52.04 340 P **P** **13 00 43.4 +1.3**
baz=137
R32K Eaglecrest 52.14 335 P **P** **13 00 42.1 -0.8**
baz=128
AQDB Aquidauana 52.18 132 *e*P **P** **13 00 46.2 +2.7**
SMTB Santa Maria do 52.37 114 *e*P **P** **13 00 44.5 -0.7**
N32M Quiet Lake 53.44 338 P **P** **13 00 51.9 -0.5**
baz=131
P30M Million Dollar 54.27 335 P **P** **13 01 00.7 +2.2**
baz=127
O30N Mendenhall 54.32 336 P **P** **13 01 00.2 +1.3**
baz=128
HYT Haines Junctio 54.91 336 P **P** **13 01 04.3 +1.1**
baz=126
CPUP Villa Florida 54.99 138 P **P** **13 01 03.4 -0.7**
comp=Z,1.2nm,0.6s,baz=312,slow=10,SNR=4.0
comp=Z,1.2nm,0.6s
PNL Peninsula 55.01 334 P **P** **13 01 04.7 +0.9**
baz=124
O29M Mount Kennedy 55.03 335 P **P** **13 01 05.1 +1.0**
baz=125
BDFB Brasilia 55.31 122 P **P** **13 01 08.4 +1.7**
BDFB Brasilia 55.31 122 P **P** **13 01 06.2 -0.6**
comp=Z,18nm,0.7s,baz=293,slow=8.8,SNR=25
comp=Z,18nm,0.7s
YUK6 Outpost Mounta 55.31 336 P **P** **13 01 06.9 +0.6**
baz=126
ITRB Iturama 55.68 127 *e*P **P** **13 01 12.9 +3.7**
YUK8 Steele Glacier 56.07 336 P **P** **13 01 12.5 +0.8**
baz=124
PCMB Pacaembu 56.12 130 *e*P **P** **13 01 16.1 +3.7**
M29M Somme Creek 56.24 337 P **P** **13 01 13.2 +0.5**
M29M IAmb IAmb 13 01 16.9
comp=Z,16nm,1.2s
M29M Somme Creek 56.24 337 P **P** **13 01 13.7 +0.9**
baz=126
SDBA SAO DESIDERIO 56.34 117 *e*P **P** **13 01 13.6 -0.5**
IPMB Ipameri, GO 56.40 124 *e*P **P** **13 01 17.5 +3.1**
L29M L29M 56.52 338 P **P** **13 01 16.2 +1.6**
baz=127
CTG Chitna Glacier 56.53 335 P **P** **13 01 15.7 +0.8**
baz=122
YUK3 Moose Creek 56.62 336 P **P** **13 01 16.0 +0.4**
baz=124
K29M Barlow Dome 56.75 339 P **P** **13 01 16.3 0.0**
baz=128
J30M Hart River 56.81 340 P **P** **13 01 17.0 +0.2**
baz=130
NUUK Nuuk 56.91 21 *i* P **P** **13 01 15.6 -1.7**
NUUK IAmb IAmb 13 01 18.3
comp=Z,18nm,0.9s
I30M Mount Dempster 57.24 340 P **P** **13 01 20.7 +0.9**
baz=130
LDASE Londrina, Braz 57.31 131 *e*P **P** **13 01 25.2 +4.4**
J29N Klondike Camp 57.37 339 P **P** **13 01 20.7 +0.1**
baz=128
MCARA McCarthy VSAT 57.45 335 P **P** **13 01 21.7 +0.5**
baz=121
PTGB Pitanga 57.46 133 *e*P **P** **13 01 26.5 +4.7**
DAWY Dawson 57.54 338 P **P** **13 01 21.9 +0.1**
baz=126
FRBT Francisco Belt 57.57 135 *e*P P 13 01 27.9 +5.3
G31M Satah River 57.73 343 P **P** **13 01 22.6 -0.4**
G31M Satah River 57.73 343 P **P** **13 01 22.9 -0.1**
baz=133
L27K Beaver Creek, 57.87 337 P **P** **13 01 24.1 0.0**
baz=123
BB19B Bebedouro 57.87 127 *e*P **P** **13 01 28.6 +3.8**
BMRM Bremner River 57.90 334 P **P** **13 01 24.1 -0.3**
baz=119
F31M Tsiigehtchic 57.94 343 P **P** **13 01 24.3 -0.2**
baz=134
JANB Januaria 58.10 119 *e*P **P** **13 01 26.9 +0.4**
PMNB Patos De Minas 58.12 124 *e*P **P** **13 01 30.1 +3.5**
EYAK Cordova Ski Ar 58.19 333 P **P** **13 01 26.6 +0.2**
baz=118
N25K Chitina, Valde 58.21 334 P **P** **13 01 26.7 +0.1**
baz=119
NBPB Pedra_Branca-C 58.26 107 *e*P **P** **13 01 28.6 +0.9**
L26K Log Cabin Wild 58.43 336 P **P** **13 01 28.4 +0.4**
baz=122
INK Inuvik 58.49 344 P **P** **13 01 28.1 -0.2**
INK IAmb IAmb 13 01 48.9
comp=Z,5.0nm,0.9s
INK Inuvik 58.49 344 P **P** **13 01 28.4 +0.1**
baz=134
INK Inuvik 58.49 344 LR LR 13 31 01.9
comp=Z,204nm,18.1s,baz=34,slow=40
K27K Chicken 58.49 338 P **P** **13 01 27.9 -0.5**
baz=123
H29M Whitestone 58.51 341 P **P** **13 01 28.0 -0.6**
baz=128
I28M Miner Creek 58.55 340 P **P** **13 01 29.2 +0.3**
baz=126
EGAK Eagle 58.58 339 P **P** **13 01 29.3 +0.3**
baz=125
F30M Barrier River 58.63 343 P **P** **13 01 29.6 +0.2**
baz=132
P23K Montague Islan 58.68 332 P **P** **13 01 29.9 +0.1**
baz=116
KLU Klutina 58.71 334 P **P** **13 01 30.4 +0.3**
baz=118
HARP HAARP 58.83 335 P **P** **13 01 31.2 +0.4**
baz=119
SFJD Kangerlussuaq 59.04 19 LR LR 13 30 48.0
comp=Z,76nm,18.1s,baz=191,slow=40
M24K Tolsona, Glenn 59.11 335 P **P** **13 01 33.4 +0.6**
baz=118
SCRK Sand Creek 59.17 337 P **P** **13 01 33.7 +0.3**
baz=121
I27K Kandik River 59.21 339 P **P** **13 01 34.1 +0.6**
baz=125
PAX Paxson 59.24 336 P **P** **13 01 34.7 +1.0**
baz=119
J26L Joseph Creek 59.29 338 P **P** **13 01 35.0 +0.9**
baz=122
RCLB Rio Claro- Sao 59.40 128 *e*P **P** **13 01 39.7 +4.3**
ALGR Alto Alegre (B 59.46 137 *e*P P 13 01 41.4 +5.7
SCM Sheep Creek Mo 59.46 334 P **P** **13 01 34.7 -0.6**
baz=117
A36M Sachs Harbour 59.49 349 P **P** **13 01 36.1 +0.9**
baz=145
H27K Steamboat Moun 59.54 340 P **P** **13 01 36.9 +1.2**
baz=125
I26K Coal Creek Min 59.58 339 P **P** **13 01 36.5 +0.6**
baz=123
M23K Glacier View 59.61 334 P **P** **13 01 37.6 +1.3**
baz=116
E29M Blow River 59.75 343 P **P** **13 01 38.3 +1.2**
baz=130
KNK Knik Glacier 59.76 333 P **P** **13 01 37.4 +0.2**
baz=115
K24K Donnelly Dome 59.77 336 P **P** **13 01 37.5 +0.2**
baz=119
F28M Old Crow 59.84 342 P **P** **13 01 37.7 0.0**
F28M IAmb IAmb 13 01 43.0
comp=Z,4.7nm,0.8s
F28M Old Crow 59.84 342 P **P** **13 01 38.0 +0.3**
baz=127
WAT6 Susitna Watana 59.97 335 P **P** **13 01 39.0 +0.1**
baz=117
J25K Salcha River, 60.02 337 P **P** **13 01 38.3 -0.7**
baz=120
PLCA Paso Flores 60.05 159 P **P** **13 01 40.4 +0.8**
comp=Z,4.5nm,0.9s,baz=333,slow=11,SNR=8.2
comp=Z,4.5nm,0.9s
BRSE Bradley Lake S 60.11 331 P **P** **13 01 40.0 +0.3**
baz=112
DY2G Dye2 60.12 20 *i* P **P** **13 01 35.5 -4.4**
DY2G IAmb IAmb 13 01 39.8
comp=Z,9.8nm,0.8s
PMR Palmer 60.13 333 P **P** **13 01 40.1 +0.3**
baz=115
VAO Valinhos 60.16 128 *e*P **P** **13 01 45.1 +4.5**
RC01 Rabbit Creek A 60.19 333 P **P** **13 01 39.8 -0.4**
baz=114
WAT1 Susitna Watana 60.42 335 P **P** **13 01 41.9 +0.1**
baz=116
Q20K Shuyak Island 60.49 329 P **P** **13 01 43.1 +0.8**
baz=110
HOM Homer 60.50 331 P **P** **13 01 43.2 +0.8**
baz=111
HDA Harding Lake 60.51 337 P **P** **13 01 42.5 +0.2**
baz=118
IL31 60.66 337 P **P** **13 01 43.7 +0.4**
IL31 IAmb IAmb 13 01 44.9
comp=Z,6.5nm,0.9s
ILAR Eielson Array 60.66 337 P **P** **13 01 43.8 +0.4**
comp=Z,3.5nm,0.9s,baz=133,slow=4.6,SNR=28
ILAR LR LR 13 28 53.9
comp=Z,201nm,18.2s,baz=105,slow=37
comp=Z,3.5nm,0.9s
BSCB Bom Sucesso 60.75 125 *e*P **P** **13 01 48.4 +3.7**
SUA Susitna One 60.78 333 P **P** **13 01 45.7 +1.3**
SUA Susitna One 60.78 333 P **P** **13 01 45.3 +1.0**
baz=113
RND Reindeer 60.80 335 P **P** **13 01 45.8 +1.4**
CUT Chulitna 60.96 334 P **P** **13 01 45.8 +0.4**
baz=114
MCK McKinley 60.98 336 P **P** **13 01 45.9 +0.4**
baz=116
UMMG Uummannaq 61.01 15 *i* P **P** **13 01 43.5 -2.1**
UMMG IAmb IAmb 13 01 46.7
comp=Z,11nm,0.8s
PLTB Pedras Altas 61.10 140 *e*P P 13 01 53.8 +7.0
BMAR Burnt Mountain 61.22 340 P **P** **13 01 47.8 +0.6**
F26K Sheenjek River 61.22 341 P **P** **13 01 47.5 +0.4**
baz=123
CNLB Canela 61.23 136 *e*P P 13 01 53.3 +5.5
RSO Redoubt South 61.31 331 P **P** **13 01 48.7 +0.6**
SKT Skwentna 61.33 333 P **P** **13 01 48.9 +1.0**
SKT Skwentna 61.33 333 P **P** **13 01 48.5 +0.5**
baz=113
N20K Mount Spurr 61.33 332 P **P** **13 01 48.6 +0.6**
baz=112
NUUG Nuugaatsiaq 61.34 14 *i* P **P** **13 01 46.5 -1.3**
PARB Paraibuna 61.37 128 *e*P **P** **13 01 52.0 +3.2**
G25K Bearman Lake 61.38 339 P **P** **13 01 47.9 -0.3**
baz=120
NBLV Livramento - P 61.39 107 *e*P **P** **13 01 49.4 +0.2**
TRF Thorofare Moun 61.40 335 P **P** **13 01 49.0 +0.4**
TRF Thorofare Moun 61.40 335 P **P** **13 01 48.2 -0.4**
baz=115
NEA2 Nenana 61.41 336 P **P** **13 01 48.8 +0.4**
baz=116
H24K Noodor Dome 61.54 338 P **P** **13 01 49.5 +0.1**
H24K IAmb IAmb 13 01 50.9
comp=Z,7.2nm,0.9s
H24K Noodor Dome 61.54 338 P **P** **13 01 49.5 +0.1**
baz=118
UPNV Upernavik 61.59 12 *i* P **P** **13 01 48.5 -1.0**
UPNV IAmb IAmb 13 01 52.1
comp=Z,10.0nm,0.9s
F25K Christian Rive 61.65 340 P **P** **13 01 50.6 +0.5**
baz=121
I23K Minto, Yukon-K 61.77 337 P **P** **13 01 51.8 +1.0**
I23K IAmb IAmb 13 01 52.0
comp=Z,7.3nm,0.8s
I23K Minto, Yukon-K 61.77 337 P **P** **13 01 51.4 +0.6**
baz=116,SNR=5.9
RCBR Riachuelo 61.78 105 *e*P **P** **13 01 51.2 -0.5**
G24K Hadweenzic Riv 61.82 339 P **P** **13 01 51.1 -0.1**
baz=119
E25K Arctic Village 61.91 341 P **P** **13 01 51.4 -0.3**
baz=122
BPAW Bear Paw Mtn. 61.95 336 P **P** **13 01 52.7 +0.6**
baz=114
PPLA Purkeypile 61.97 334 P **P** **13 01 52.1 -0.3**
baz=112
M20K Styx River 62.00 333 P **P** **13 01 52.6 +0.1**
baz=111
CAST Castle Rocks 62.13 335 P **P** **13 01 52.8 -0.5**
CAST IAmb IAmb 13 01 54.2
comp=Z,8.6nm,1.0s
CAST Castle Rocks 62.13 335 P **P** **13 01 52.6 -0.7**
baz=113
MLY Manley 62.25 337 P **P** **13 01 54.4 +0.3**
MLY Manley 62.25 337 P **P** **13 01 54.9 +0.8**
baz=115,SNR=7.8
O18K Koktuh Hills 62.27 330 P **P** **13 01 54.2 -0.1**
baz=108
F24K Squaw Lake 62.36 340 P **P** **13 01 55.2 +0.4**
baz=119
L20K Farewell, AK 62.54 333 P **P** **13 01 56.0 -0.1**
baz=111
M19K Big River Lodg 62.56 333 P **P** **13 01 55.3 -0.9**
baz=110
Q16K King Salmon 62.63 329 P **P** **13 01 57.2 +0.5**
baz=106
GUA01 Guaratinga, BA 62.64 118 *e*P **P** **13 01 59.0 +1.5**
P17K Kvichak River 62.67 329 P **P** **13 01 58.0 +1.0**
baz=106
G23K Bananza Creek 62.72 338 P **P** **13 01 58.4 +1.2**
baz=116
I21K Tanana 62.79 336 P **P** **13 01 57.6 -0.1**
I21K IAmb IAmb 13 02 00.8
comp=Z,4.2nm,1.1s
I21K Tana 62.79 336 P **P** **13 01 58.0 +0.4**
baz=114
N18K Kilae Creek 62.85 331 P **P** **13 01 58.3 +0.1**
baz=108
H22K Ishtalitna Cre 62.85 337 P **P** **13 01 58.7 +0.6**
baz=115
L19K White Mountain 62.86 333 P **P** **13 01 58.8 +0.6**
baz=110
K20K Telida 62.93 334 P **P** **13 01 59.0 +0.4**
K20K IAmb IAmb 13 01 59.2
comp=Z,8.5nm,0.8s
K20K Telida 62.93 334 P **P** **13 01 58.3 -0.3**
baz=111
COLD Coldfoot 63.01 339 P **P** **13 01 59.7 +0.5**
baz=116
M18K Stony River 63.07 332 P **P** **13 02 00.2 +0.7**
baz=108
O17K Koliganek Bris 63.16 330 P **P** **13 02 00.5 +0.3**
baz=106
E23K Chandalar 63.19 340 P **P** **13 02 01.3 +0.9**
baz=118
J20K Nowinta River 63.26 335 P **P** **13 02 00.8 0.0**
J20K IAmb IAmb 13 02 30.0
comp=Z,8.4nm,1.1s
J20K Nowinta River 63.26 335 P **P** **13 02 00.8 0.0**
baz=111
CHNA Chernabura Isl 63.27 324 P **P** **13 02 01.5 +0.5**
baz=102
H21K Melozitna Rive 63.30 337 P **P** **13 02 00.9 -0.1**
baz=113
PPT Papeete 63.32 241 LR LR 13 21 38.7
comp=Z,107nm,21.8s,baz=48,slow=28
G22K Bettles 63.34 338 P **P** **13 02 01.6 +0.4**
baz=115
RIB01 Linhares ES 63.43 121 *e*P **P** **13 02 05.5 +2.9**
O16K Kokwok River B 63.59 329 P **P** **13 02 02.8 -0.2**
baz=105
TTA Tatalina 63.62 333 P **P** **13 02 03.7 +0.4**
baz=109
ICESG Greenland Ices 63.63 19 *i* P **P** **13 02 01.5 -2.1**
L18K Granite Mounta 63.69 332 P **P** **13 02 03.6 -0.1**
baz=108
C24K Franklin Bluff 63.70 342 P **P** **13 02 04.8 +1.2**
baz=119
M17K Holitna River 63.78 331 P **P** **13 02 04.0 -0.3**
baz=107
J19K Poorman 63.80 335 P **P** **13 02 04.3 -0.1**
J19K IAmb IAmb 13 02 05.2
comp=Z,9.3nm,0.8s
J19K Poorman 63.80 335 P **P** **13 02 04.3 -0.1**
baz=110
SDPT Sand Point 63.87 324 P **P** **13 02 06.4 +1.4**
baz=101
D23K Nanushuk River 63.96 341 P **P** **13 02 06.1 +0.7**
baz=117
H20K Anotleneega Mo 64.03 336 P **P** **13 02 06.0 +0.1**
baz=111
J18K Innoko River 64.09 334 P **P** **13 02 06.2 -0.1**
baz=108
F21K Alatna River 64.17 338 P **P** **13 02 07.9 +1.1**
F21K Alatna River 64.17 338 P **P** **13 02 07.5 +0.7**
baz=113
GCSA Galena City Sc 64.57 335 P **P** **13 02 10.0 +0.6**
baz=109
H19K Roundabout Mou 64.66 336 P **P** **13 02 10.3 +0.4**
baz=110
L16K Owhat River 64.81 332 P **P** **13 02 11.4 +0.4**
baz=105
F20K Avaraart Lake 64.91 338 P **P** **13 02 12.1 +0.5**
F20K IAmb IAmb 13 02 13.2
comp=Z,7.0nm,0.9s
F20K Avaraart Lake 64.91 338 P **P** **13 02 11.9 +0.4**
baz=111
G19K Purcell Mounta 65.11 337 P **P** **13 02 13.1 +0.2**
G19K IAmb IAmb 13 02 13.7
comp=Z,6.3nm,0.9s
G19K Purcell Mounta 65.11 337 P **P** **13 02 13.9 +1.0**
baz=109
M15K Kasigluk River 65.12 330 P **P** **13 02 12.7 -0.4**
baz=103
H18K Honhosa River 65.30 335 P **P** **13 02 15.0 +0.9**
baz=108
C21K Knifeblade Rid 65.38 340 P **P** **13 02 15.8 +1.2**
baz=113
FALS False Pass 65.45 324 P **P** **13 02 15.3 0.0**
baz=98
E20K Nigu River 65.52 339 P **P** **13 02 16.0 +0.5**
baz=111
F19K Shaleruckik Mo 65.60 337 P **P** **13 02 15.8 -0.2**
F19K IAmb IAmb 13 02 17.4
comp=Z,9.7nm,1.3s
F19K Shaleruckik Mo 65.60 337 P **P** **13 02 16.6 +0.6**
baz=109
E19K Redstone River 65.61 338 P **P** **13 02 16.6 +0.5**
baz=110
G18K Tagagawik 65.64 336 P **P** **13 02 17.5 +1.2**
baz=108
SUMG Summit 65.64 16 P **P** **13 02 16.1 -0.6**
SUMG IAmb IAmb 13 02 18.2
comp=Z,7.7nm,0.6s
SUMG Summit 65.64 16 *i* P **P** **13 02 16.0 -0.7**
SUMG IAmb IAmb 13 02 18.3
comp=Z,6.7nm,0.7s
J16K Anvik River 65.72 333 P **P** **13 02 17.9 +1.0**
baz=104
L15K Ungalak Mounta 65.73 331 P **P** **13 02 17.4 +0.5**
baz=103
M14K Bethel 65.75 330 P **P** **13 02 18.4 +1.3**
baz=102
D20K Etivluk River 65.83 339 P **P** **13 02 18.0 +0.5**
baz=111
NEEM North Greenlan 65.84 9 *i* P **P** **13 02 16.4 -1.4**
NEEM IAmb IAmb 13 02 19.4
comp=Z,19nm,1.1s
H17K Granite Mounta 65.86 335 P **P** **13 02 18.2 +0.4**
baz=106
K15K Wolf Creek Mou 65.89 332 P **P** **13 02 18.9 +0.9**
baz=103
I17K Unalakleet 65.91 334 P **P** **13 02 19.6 +1.5**
baz=105
F18K Selawik 66.24 337 P **P** **13 02 21.4 +1.3**
baz=107
D19K Kuna River 66.27 339 P **P** **13 02 20.1 -0.3**
D19K Kuna River 66.27 339 P **P** **13 02 20.4 0.0**
baz=109
G17K Kiwalik Mounta 66.32 335 P **P** **13 02 21.7 +1.0**
baz=106
M13K Dall Lake 66.35 330 P **P** **13 02 21.6 +0.7**
baz=101
H16K Elim 66.75 334 P **P** **13 02 24.7 +1.3**
baz=104
F17K Baldwin Pennin 66.81 336 P **P** **13 02 24.8 +1.0**
baz=105
E18K Tukpahlearik C 66.83 337 P **P** **13 02 24.7 +0.8**
baz=106
J14K Nanvaranak Lak 66.91 332 P **P** **13 02 26.0 +1.5**
baz=102
C19K Lookout Ridge 66.97 339 P **P** **13 02 25.5 +0.7**
baz=108
G16K Koyuk River 66.98 335 P **P** **13 02 25.7 +0.8**
baz=104
E17K Hotham Inlet 67.20 337 P **P** **13 02 26.9 +0.7**
baz=105,SNR=12
C18K Utukok River 67.39 339 P **P** **13 02 28.0 +0.4**
baz=106
G15K Niukluk 67.58 334 P **P** **13 02 29.9 +1.2**
baz=102
B18K Kokolik River 67.80 339 P **P** **13 02 31.0 +1.0**
baz=106
D17K Noatak River 67.82 337 P **P** **13 02 30.7 +0.5**
baz=104
F15K North Star Dit 67.98 335 P **P** **13 02 32.0 +0.8**
F15K IAmb IAmb 13 02 33.2
comp=Z,5.6nm,0.8s
F15K North Star Dit 67.98 335 P **P** **13 02 32.3 +1.1**
baz=102
C17K DeLong Mountai 68.05 338 P **P** **13 02 32.8 +1.1**
baz=104
ANM Nome 68.06 334 P **P** **13 02 32.7 +1.0**
baz=101
NIKH Nikolski High 68.47 321 P **P** **13 02 35.2 +0.7**
baz=93
F14K Arctic Creek 68.62 335 P **P** **13 02 35.4 +0.2**
baz=100
C16K Lisburne Hills 68.78 338 P **P** **13 02 36.8 +0.6**
baz=102
BORG Borgarnes 69.11 26 LR LR 13 31 39.9
comp=Z,69nm,19.5s,baz=201,slow=35
TNA Tin City 69.29 335 P **P** **13 02 40.2 +0.9**
baz=99
JMIC Jan Mayen 74.35 20 LR LR 13 37 19.0
comp=Z,82nm,18.0s,baz=218,slow=37
ESK Eskdalemuir 78.32 36 P **P** **13 03 32.1 -0.4**
EKA Eskdalemuir Ar 78.35 36 P **P** **13 03 31.7 -0.9**
comp=Z,24nm,0.8s,baz=266,slow=4.9,SNR=38
comp=Z,24nm,0.8s
SPA0 Spitsbergen Ar 79.29 11 *e*P **P** **13 03 38.9 +1.5**
SPITS Spitsbergen Ar 79.29 11 P **P** **13 03 38.0 +0.6**
comp=Z,30nm,1.1s,baz=318,slow=1.9,SNR=11
SPITS LR LR 13 43 02.8
comp=Z,84nm,18.7s,baz=237,slow=39
comp=Z,30nm,1.1s
PAB San Pablo 80.58 52 P **P** **13 03 45.6 +0.5**
PAB IAmb IAmb 13 03 45.8
comp=Z,9.6nm,1.1s
ESDC Sonseca Array 80.84 51 P **P** **13 03 45.2 -1.3**
comp=Z,5.9nm,1.0s,baz=290,slow=5.6,SNR=23
ESDC LR LR 13 34 23.6
comp=Z,101nm,21.1s,baz=262,slow=32
comp=Z,5.9nm,1.0s
MDT Midelt 81.82 58 LR LR 13 38 49.1
comp=Z,67nm,18.4s,baz=300,slow=35
AKN Aaknes 81.89 28 *e*P **P** **13 03 52.8 +1.2**
ODD1 Odda 82.39 30 *e*P **P** **13 03 54.7 +0.4**
BLS5 Blasjo 82.45 30 *e*P **P** **13 03 55.0 +0.5**
DOMB Dombas 82.85 27 *e*P **P** **13 03 56.5 -0.1**
SKAR Skarslia 82.95 29 *e*P **P** **13 03 57.6 +0.4**
STEI Steigen 83.14 21 *e*P **P** **13 03 59.8 +1.9**
MOR8 Moi Rana 83.56 23 *e*P **P** **13 03 59.7 -0.5**
JETT Jettan, Norway 84.11 19 *e*P **P** **13 04 04.3 +1.3**
DOU Dourbes 84.15 40 *d*P **P** **13 04 01.4 -2.1**
DOU *d*pP **pP** **13 04 16.5 -1.0**
NB2 NORSAR Subarra 84.16 28 P **P** **13 04 03.5 +0.1**
comp=Z,2.5nm,0.6s,baz=292,slow=5.3
NB2 NORSAR Subarra 84.16 28 P **P** **13 04 03.5 +0.1**
baz=292,slow=5.3

NOA	**NORSAR Array B**	**84.16**	**28**	P	**P**	**13 04 03.9**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=292,slow=5.0,SNR=20						
NOA				LR	LR	13 39 55.1	
	comp=Z,49nm,21.4s,baz=295,slow=35						
	comp=Z,4.5nm,0.8s						
BMRD	**Maredsous**	**84.19**	**39**	*d*P	**P**	**13 04 03.7**	**0.0**
BMRD				*d*pP	**pP**	**13 04 17.3**	**-0.3**
NB201	**NORSAR Array S**	**84.20**	**28**	P	**P**	**13 04 04.5**	**+0.9**
OSL	**Oslo**	**84.33**	**29**	*e*P	**P**	**13 04 05.1**	**+1.0**
BGES	**Gesves**	**84.36**	**39**	*d*P	**P**	**13 04 04.5**	**-0.1**
BGES				*d*pP	**pP**	**13 04 17.7**	**-0.8**
NC602	**NORSAR Array S**	**84.42**	**28**	*e*P	**P**	**13 04 04.0**	**-0.6**
BCLA	**Clavier**	**84.49**	**39**	*d*P	**P**	**13 04 04.8**	**-0.4**
	comp=Z,11nm,1.0s						
BCLA				*d*pP	**pP**	**13 04 18.8**	**-0.4**
RCHB	**Rochefort**	**84.52**	**40**	*d*P	**P**	**13 04 05.1**	**-0.3**
RCHB				*d*pP	**pP**	**13 04 18.8**	**-0.5**
BSTI	**Sart Tilman**	**84.60**	**39**	*d*P	**P**	**13 04 06.6**	**+0.8**
BSTI				*d*pP	**pP**	**13 04 19.5**	**-0.2**
BEBN	**Eben Emael**	**84.60**	**39**	*d*P	**P**	**13 04 06.1**	**+0.4**
MEM	**Membach**	**84.86**	**39**	*d*P	**P**	**13 04 04.6**	**-2.4**
	comp=Z,10nm,1.0s						
MEM				*d*pP	**pP**	**13 04 20.7**	**-0.3**
WLF	**Walferdange**	**85.24**	**40**	*d*P	**P**	**13 04 09.4**	**+0.4**
WLF	**Walferdange**	**85.24**	**40**	*e*P	**P**	**13 04 09.4**	**+0.4**
	comp=Z,17nm,0.8s,baz=291,slow=4.9						
KTK1	**Kautokeino**	**85.25**	**19**	*e*P	**P**	**13 04 07.4**	**-1.2**
HFS	**Hagfors**	**85.64**	**28**	P	**P**	**13 04 11.1**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=336,slow=3.2,SNR=9.2						
HFS				LR	LR	13 41 19.2	
	comp=Z,53nm,18.5s,baz=287,slow=35						
	comp=Z,3.1nm,0.7s						
ARA0	**ARCESS Array S**	**85.66**	**18**	*e*P	**P**	**13 04 10.8**	**+0.1**
ARCES	**ARCESS Array B**	**85.66**	**18**	P	**P**	**13 04 11.0**	**+0.3**
ARCES	**ARCESS Array B**	**85.66**	**18**	P	**P**	**13 04 10.5**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=308,slow=3.3,SNR=16						
ARCES				LR	LR	13 43 20.6	
	comp=Z,106nm,18.0s,baz=297,slow=36						
	comp=Z,3.2nm,0.6s						
KASTN	**Kahler Asten**	**86.11**	**38**	*e*P	**P**	**13 04 13.4**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=291,slow=4.9						
RETH	**Rethem/Aller,**	**86.14**	**36**	*e*P	**P**	**13 04 14.4**	**+1.1**
	comp=Z,16nm,0.8s,baz=291,slow=4.9						
BSEG	**Bad Segeberg**	**86.26**	**35**	*e*P	**P**	**13 04 14.6**	**+0.6**
	comp=Z,26nm,1.0s,baz=291,slow=4.9						
TNS	**Taunus Mts**	**86.46**	**39**	*e*P	**P**	**13 04 15.3**	**+0.2**
	comp=Z,17nm,0.7s,baz=291,slow=4.9						
NRDL	**Niedersach Rie**	**86.65**	**36**	*e*P	**P**	**13 04 16.8**	**+1.0**
	comp=Z,12nm,0.8s,baz=291,slow=4.9						
GTTG	**Gottingen**	**86.91**	**37**	*e*P	**P**	**13 04 18.1**	**+1.0**
	comp=Z,12nm,0.8s,baz=291,slow=4.9						
CLZ	**Clausthal**	**87.04**	**37**	*e*P	**P**	**13 04 18.8**	**+0.9**
	comp=Z,7.0nm,0.7s,baz=291,slow=4.9						
ASSE	**Asse, Remlinge**	**87.11**	**37**	*e*P	**P**	**13 04 19.0**	**+1.0**
	comp=Z,8.6nm,0.9s,baz=291,slow=4.9						
FLTG	**Flechtingen**	**87.36**	**36**	*e*P	**P**	**13 04 19.9**	**+0.5**
	comp=Z,8.3nm,1.0s,baz=291,slow=4.9						
STU	**Stuttgart**	**87.42**	**40**	*e*P	**P**	**13 04 20.0**	**+0.3**
	comp=Z,31nm,0.5s,baz=291,slow=4.9						
DBIC	**Dimbokro**	**87.98**	**84**	P	**P**	**13 04 22.2**	**-0.8**
	comp=Z,7.1nm,0.8s,baz=270,slow=5.8,SNR=8.3						
	comp=Z,7.1nm,0.8s						
MOX	**Moxa**	**88.21**	**38**	*e*L	L	13 37 19.5	
	comp=Z,112nm,18.1s						
GRF	**Grafenberg Arr**	**88.33**	**39**	*e*L	L	13 36 55.1	
	comp=Z,113nm,19.6s						
TIXI	**Tiksi**	**88.45**	**347**	LR	LR	13 52 13.7	
	comp=Z,31nm,18.6s,baz=26,slow=41						
CLL	**Collm**	**88.76**	**37**	*e*P	**P**	**13 04 26.0**	**0.0**
CLL				*e*pP	**pP**	**13 04 41.0**	**+0.9**
FETA	**Feichten**	**89.00**	**41**	*e*PcP	**P**	**13 04 27.9**	**+0.4**
	comp=Z,2.5nm,0.6s						
MOTA	**Moosalm**	**89.12**	**41**	*e*PcP	**P**	**13 04 28.6**	**+0.6**
	comp=Z,0.9nm,0.3s						
WET	**Wettzell**	**89.53**	**39**	*e*P	**P**	**13 04 30.3**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=291,slow=4.9						
WET				*e*L	L	13 36 56.5	
	comp=Z,122nm,19.9s						
GEC2	**GERESS Array S**	**90.15**	**39**	*e*P	**P**	**13 04 32.6**	**-0.2**
	comp=Z,4.6nm,1.1s,baz=291,slow=4.9						
GERES	**GERESS Array B**	**90.15**	**39**	P	**P**	**13 04 33.1**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=347,slow=4.0,SNR=6.6						
GERES				LR	LR	13 41 47.3	
	comp=Z,81nm,21.1s,baz=308,slow=34						
	comp=Z,3.8nm,0.9s						
ABTA	**Abfaltersbach**	**90.24**	**41**	*e*PcP	**P**	**13 04 33.2**	**0.0**
	comp=Z,3.2nm,0.8s						
FINES	**FINESS Array B**	**90.35**	**24**	P	**P**	**13 04 34.1**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=340,slow=2.1,SNR=8.6						
FINES				LR	LR	13 44 40.1	
	comp=Z,104nm,18.5s,baz=262,slow=35						
	comp=Z,1.3nm,0.5s						
KBA	**Koelnbreinsper**	**90.64**	**41**	*e*PcP	**P**	**13 04 35.7**	**+0.5**
	comp=Z,3.4nm,0.8s						
MOA	**Molln**	**90.90**	**40**	*e*PcP	**P**	**13 04 36.3**	**+0.2**
	comp=Z,4.1nm,0.7s						
VRAC	**Vranov**	**91.69**	**38**	LR	LR	13 46 33.9	
	comp=Z,39nm,18.9s,baz=314,slow=36						
CONA	**Conrad Observa**	**91.84**	**39**	*i* PcP	**P**	**13 04 41.5**	**+0.9**
	comp=Z,0.9nm,0.5s						
SOKA	**Soboth**	**91.86**	**40**	*e*PcP	**P**	**13 04 41.2**	**+0.5**
	comp=Z,1.4nm,0.5s						
KEST	**Kesra**	**92.06**	**52**	LR	LR	13 44 13.8	
	comp=Z,81nm,18.6s,baz=273,slow=34						
RONA	**Rosalia, Austr**	**92.20**	**39**	*i* PcP	**P**	**13 04 42.6**	**+0.4**
	comp=Z,2.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**92.47**	**76**	P	**P**	**13 04 41.6**	**-2.4**
	comp=Z,3.8nm,0.7s,baz=303,slow=5.3,SNR=4.4						
	comp=Z,3.8nm,0.7s						
YAK	**Yakutsk**	**95.42**	**341**	LR	LR	13 52 21.6	
	comp=Z,39nm,18.4s,baz=43,slow=38						
AKASG	**Malin Array Be**	**97.97**	**32**	LR	LR	13 48 52.5	
	comp=Z,46nm,21.1s,baz=260,slow=35						
MKAR	**Makanchi Array**	**118.11**	**2**	PKP	**PKPdf**	**13 10 18.2**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=256,slow=1.5,SNR=2.0						
HHC	**Hu-ho-hao-te**	**119.09**	**338**	*e*P	**PKiKP**	**13 10 23.5**	**+2.0**
NJ2	**Nanjing**	**123.05**	**326**	*e*P	**PKPdf**	**13 10 29.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WRA	**Warramunga Arr**	**133.30**	**257**	PKP	**PKPdf**	**13 10 48.6**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=45,slow=1.0,SNR=14						
ASAR	**Alice Springs**	**133.75**	**252**	PKP	**PKPdf**	**13 10 49.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=75,slow=2.1,SNR=13						
PZH	**PanZhiHua**	**135.51**	**339**	PKP	**PKPdf**	**13 10 53.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**143.90**	**338**	PKP	PKPbc	13 11 07.0	+0.8
	comp=Z,0.9nm,0.5s,baz=334,slow=2.3,SNR=10						

*IDC **25** 13:01:13.6±4.0,27.°04N×127.°11E,h100km±61km,mb3.1/5, mbtmp3.4/5,Error ellipse: s-maj=126.4km s-min=18.4km az=62.0*
*JMA **25** 13:01:14.8±0.3,27.°1N±1.°×12.°7E±.°,h101km±2km,MV2.9/13, NW OFF OKINAWAJIMA IS*

ISC 25 13:01:14.0±0.9,27.°05N±0.°08×127.°14E±0.°08,h105km±9km, n16,σ0°70/27,mb3.3/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JAGN	**Aguni-jima**	**0.47**	**169**	P		**Pn**	**13 01 30.6**	**+0.4**
JAGN				*i* S		**Sn**	**13 01 42.2**	**-0.1**
JIH	**Iheya**	**0.74**	**91**	*i* P		**Pn**	**13 01 32.8**	**+0.5**
JIH				S		**Sn**	**13 01 45.9**	**-0.1**
JKE	**Kume jima 2**	**0.79**	**204**	*i* P		**Pn**	**13 01 33.0**	**+0.2**
JKE				S		**Sn**	**13 01 46.5**	**-0.4**
JNTH	**Nagotoyohara**	**0.95**	**124**	*i* P		**Pn**	**13 01 34.7**	**+0.4**
JNTH				S		**Sn**	**13 01 49.2**	**-0.5**
JOW	**Kunigami**	**1.04**	**102**	*i* P		**Pn**	**13 01 35.5**	**+0.3**
JOW				S		**Sn**	**13 01 50.7**	**-0.5**
JOW	**Kunigami**	**1.04**	**102**	P		**Pn**	**13 01 35.5**	**+0.3**
	138nm,0.2s,baz=125,slow=26,SNR=190							
JOW				S		**Sn**	**13 01 50.7**	**-0.5**
	344nm,0.2s,baz=115,slow=24,SNR=35							
JJT3	**Tamagusuku3**	**1.07**	**147**	*i* P		**Pn**	**13 01 36.6**	**+1.0**
JJT3				*e*S		**Sn**	**13 01 52.5**	**+0.5**
JYRO	**Yoronjima**	**1.17**	**91**	*i* P		**Pn**	**13 01 36.9**	**+0.2**
JYRO				S		**Sn**	**13 01 53.0**	**-0.8**
JOKE	**Okinoerabujima**	**1.31**	**76**	P		**Pn**	**13 01 38.5**	**+0.2**
JOKE				S		**Sn**	**13 01 55.8**	**-1.0**
JTK	**Tokunoshima**	**1.77**	**65**	P		**Pn**	**13 01 44.3**	**+0.4**
JTK				S		**Sn**	**13 02 06.1**	**-0.5**
JAMN	**Amaminishikomi**	**2.16**	**56**	P		**Pn**	**13 01 49.5**	**+0.7**
JAMN				*e*S		**Sn**	**13 02 16.5**	**+1.0**
SONM	**Songino Array**	**26.34**	**327**	P		**P**	**13 06 41.6**	**+1.4**
	0.3nm,0.4s,baz=144,slow=11,SNR=5.1							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**40.26**	**311**	P		**P**	**13 08 40.0**	**-0.6**
	0.1nm,0.3s,baz=90,slow=9.6,SNR=7.6							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**43.59**	**316**	P		**P**	**13 09 06.2**	**-1.3**
	0.3nm,0.6s,baz=99,slow=8.7,SNR=2.7							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**47.23**	**171**	P		**P**	**13 09 35.9**	**-0.7**
	0.7nm,0.8s,baz=352,slow=8.4,SNR=4.7							
	0.7nm,0.8s							
ASAR	**Alice Springs**	**50.84**	**172**	P		**P**	**13 10 04.7**	**+0.6**
	0.3nm,0.8s,baz=360,slow=15,SNR=6.2							
	0.3nm,0.8s							

*AFAD **25** 13:02:22.1±0.0,39.°90N×45.°32E,h10km±2km,ML3.0*
*AZER **25** 13:02:24.4,39.°69N×45.°06E,h5km,ml3.3*
*NSSP **25** 13:02:24.3,39.°80N×45.°08E,h10km,Ms3.2*
*TIF **25** 13:02:25.9,39.°87N×45.°02E,h6km±1km*
*TEH **25** 13:02:25.3,39.°80N×45.°11E,h6km±168km,ML3.5*
*ISK **25** 13:02:27.4,39.°85N×44.°91E,h5km,ML2.9/11*

ISC 25 13:02:25.6±1.0,39.°83N±0.°01×45.°11E±0.°01,h9km±9km, n84,σ1°32/145,7C-7D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
HYR	**Heyderabad**	**0.22**	**241**	P		**Pg**	**13 02 30.1**	**-0.1**
HYR				S		**Sg**	**13 02 34.1**	**+0.8**
NRKZ	**NAREK**	**0.38**	**297**	⇓*i* P		**Pg**	**13 02 33.2**	**0.0**
NRKZ				⇓*i* S		**Sb**	**13 02 39.5**	**-1.3**
GNI	**Garni**	**0.43**	**319**	Pg		**Pg**	**13 02 34.5**	**+0.5**
GNI				Sg		**Sb**	**13 02 41.1**	**-1.0**
GNI	**Garni**	**0.43**	**319**	⇓*i* P		**Pg**	**13 02 34.0**	**0.0**
GNI				⇓*i* S		**Sb**	**13 02 41.3**	**-0.7**
GNI	**Garni**	**0.43**	**319**	Pg		**Pg**	**13 02 34.0**	**0.0**
SBZ	**Shahbuz**	**0.55**	**141**	P		**Pg**	**13 02 36.4**	**+0.1**
SBZ				S		**Sb**	**13 02 45.0**	**-0.6**
MAKU	**Maku**	**0.57**	**215**	Pg		**Pg**	**13 02 36.2**	**-0.5**
MAKU				Sg		**Sg**	**13 02 43.7**	**-0.6**
KAPZ	**Kaputan**	**0.58**	**328**	⇑*i* P		**Pg**	**13 02 37.2**	**+0.2**
KAPZ				⇑*i* S		**Sb**	**13 02 47.0**	**+0.3**
TASB	**TASBURUN-IGDIR**	**0.69**	**283**	Pg		**Pg**	**13 02 38.5**	**-0.3**
TASB				Sg		**Sg**	**13 02 47.5**	**-0.3**
NAX	**Nakhchivan**	**0.72**	**155**	P		**Pg**	**13 02 39.5**	**0.0**
NAX				S		**Sb**	**13 02 50.5**	**+0.2**
IGDI	**IGDIR**	**0.79**	**273**	P		**Pg**	**13 02 39.7**	**-1.1**
IGDI				S		**Sg**	**13 02 50.7**	**-0.5**
IGDI				*i* AML	AML	13 02 56.0		
	comp=N,522nm,0.6s							
METS	**Metsamor**	**0.85**	**293**	*e*P		**Pg**	**13 02 40.9**	**-1.1**
METS				*e*S		**Sg**	**13 02 52.7**	**-0.4**
METS	**Metsamor**	**0.85**	**293**	P		**Pg**	**13 02 40.9**	**-1.1**
AMBZ	**Amberd**	**0.86**	**311**	⇑*i* P		**Pg**	**13 02 42.0**	**-0.1**
AMBZ				⇑*i* S		**Sb**	**13 02 55.2**	**+0.6**
ARUZ	**Aruch**	**0.90**	**301**	⇑*i* P		**Pg**	**13 02 42.9**	**-0.1**
ARUZ				⇑*i* S		**Sn**	**13 02 56.7**	**-1.1**
GDB	**GEDABAY**	**1.02**	**29**	P		**Pg**	**13 02 44.5**	**-0.7**
GDB				S		**Sg**	**13 02 58.2**	**-0.4**
VNNZ	**Vanand**	**1.02**	**286**	⇑*i* P		**Pg**	**13 02 44.8**	**-0.5**
VNNZ				⇑*i* S		**Sb**	**13 02 59.4**	**+0.2**
DYDN	**Diyadin**	**1.13**	**256**	P		**Pb**	**13 02 47.1**	**-0.4**
DYDN				S		**Sn**	**13 03 07.2**	**+3.7**
DYDN				*i* AML	AML	13 03 08.0		
	comp=E,188nm,0.5s							
ORD	**Ordubad**	**1.13**	**142**	P		**Pb**	**13 02 46.8**	**-0.6**
ORD				S		**Sg**	**13 03 02.4**	**+0.3**
IMRD	**Marand**	**1.21**	**157**	Pg		**Pb**	**13 02 47.8**	**-0.9**
IMRD				Sg		**Sg**	**13 03 04.3**	**-0.1**
GANJ	**Ganja**	**1.24**	**48**	Pg		**Pn**	**13 02 48.3**	**-0.8**
GANJ				Sg		**Sb**	**13 03 04.9**	**-0.4**
QZX	**Qazax, Azerbai**	**1.25**	**9**	Pg		**Pn**	**13 02 48.9**	**-0.4**
QZX				Sg		**Sg**	**13 03 06.1**	**+0.4**
STEZ	**Stepenevan**	**1.29**	**335**	⇓*i* P		**Pn**	**13 02 49.3**	**-0.7**
STEZ				⇓S		**Sg**	**13 03 07.3**	**+0.2**
EAK	**Akyaka**	**1.43**	**307**	P		**Pb**	**13 02 52.2**	**-0.4**
EAK				S		**Sg**	**13 03 13.1**	**+1.4**
EAK				*i* AML	AML	13 03 22.0		
	comp=N,294nm,0.9s							
OZAP	**Van, Ozalp-Mer**	**1.45**	**217**	P		**Pg**	**13 02 53.3**	**-0.2**
OZAP				S		**Sg**	**13 03 15.9**	**+3.7**
OZAP				*i* AML	AML	13 03 22.0		
	comp=E,205nm,1.1s							
DIGO	**Kars**	**1.45**	**294**	P		**Pn**	**13 02 51.4**	**-0.9**
DIGO				S		**Sg**	**13 03 14.0**	**+1.7**
DIGO				*i* AML	AML	13 03 17.0		
	comp=N,741nm,0.7s							
VMUR	**Van-Muradiye**	**1.45**	**235**	P		**Pb**	**13 02 52.5**	**-0.5**
VMUR				S		**Sg**	**13 03 15.0**	**+2.7**
VMUR				*i* AML	AML	13 03 19.0		
	comp=N,131nm,0.7s							
KOTA	**Agri, Merkez-K**	**1.46**	**270**	P		**Pn**	**13 02 52.0**	**-0.4**
KOTA				S		**Sg**	**13 03 15.9**	**+3.2**
AGDM	**Agdam**	**1.56**	**79**	Pn		**Pb**	**13 02 55.1**	**+0.3**
AGDM				Sn		**Sg**	**13 03 17.5**	**+1.6**
ISHB	**Shabestar**	**1.59**	**165**	Pg		**Pn**	**13 02 53.7**	**-0.5**
KZRT	**Kazreti**	**1.65**	**341**	P		**Pb**	**13 02 55.4**	**-0.8**
KZRT				S		**Sb**	**13 03 17.0**	**-0.1**
AGRB	**Hanur-Agry**	**1.65**	**262**	Pn		**Pb**	**13 02 56.0**	**-0.3**
AGRB				Sn		**Sg**	**13 03 17.8**	**+0.5**
BRDA	**Brd**	**1.65**	**74**	Pn		**Pg**	**13 02 57.8**	**+0.5**
BRDA				Sn		**Sg**	**13 03 22.2**	**+3.5**
DMNI	**Dmanisi**	**1.65**	**335**	P		**Pb**	**13 02 56.0**	**-0.4**
DMNI				S		**Sb**	**13 03 17.8**	**+0.4**
DMNI	**Dmanisi**	**1.65**	**335**	P		**Pb**	**13 02 56.7**	**+0.4**
VSHL	**Vashlovani**	**1.71**	**35**	P		**Pg**	**13 02 58.6**	**+0.2**
VSHL				S		**Sg**	**13 03 24.2**	**+3.5**
KARS	**Kars**	**1.75**	**298**	Pn		**Pb**	**13 02 57.8**	**-0.1**
QRD	**Qoradiz**	**1.75**	**101**	Pn		**Pb**	**13 02 57.9**	**+0.1**
QRD				Sn		**Sg**	**13 03 23.3**	**+1.5**
MNGR	**Mingechevir, A**	**1.78**	**57**	Pn		**Pg**	**13 02 59.9**	**+0.1**
MNGR				Sn		**Sg**	**13 03 25.4**	**+2.5**
ITBZ	**Tabriz**	**1.79**	**153**	Pg		**Pn**	**13 02 56.8**	**0.0**
BOZK	**Kars-Merkez-Bo**	**1.80**	**296**	P		**Pb**	**13 02 57.8**	**-1.0**
BOZK				S		**Sg**	**13 03 24.7**	**+1.2**
VANB	**Van**	**1.81**	**228**	Pn		**Pg**	**13 03 00.3**	**-0.1**
BGD	**Bogdanovka**	**1.84**	**322**	P		**Pg**	**13 03 00.3**	**-0.6**
BGD				S		**Sg**	**13 03 24.4**	**-0.3**
DORK	**Agr/Tutak/Do**	**1.85**	**257**	P		**Pb**	**13 02 59.6**	**-0.1**
DORK				S		**Sg**	**13 03 26.5**	**+1.5**
DORK				*i* AML	AML	13 03 30.0		
	comp=N,124nm,0.8s							
TRLG	**Trialeti**	**1.87**	**336**	P		**Pb**	**13 02 59.7**	**-0.4**
TRLG				S		**Sb**	**13 03 24.0**	**+0.3**
BLQ	**Beylaqan**	**1.89**	**92**	Pn		**Pb**	**13 03 00.4**	**0.0**
BLQ				Sn		**Sg**	**13 03 27.0**	**+0.5**
SEAG	**Tbilisi Sea**	**1.95**	**353**	P		**Pn**	**13 02 59.1**	**+0.1**
SEAG				S		**Sb**	**13 03 26.4**	**+0.6**
AKH	**Akhalkalaki**	**2.00**	**323**	Pn		**Pb**	**13 03 01.9**	**-0.4**
AKH	**Akhalkalaki**	**2.00**	**323**	P		**Pb**	**13 03 02.4**	**+0.1**
AKH				S		**Sg**	**13 03 28.6**	**-1.4**
EATA	**Eleskirt**	**2.01**	**272**	P		**Pg**	**13 03 03.4**	**-0.8**
EATA				S		**Sg**	**13 03 37.4**	**+7.6**
ZRD	**Zardab**	**2.03**	**76**	Pn		**Pg**	**13 03 03.9**	**-0.6**
ZRD				Sn		**Sg**	**13 03 31.7**	**+0.9**
MLAZ	**Malazgirt-MUS**	**2.09**	**252**	Pn		**Pb**	**13 03 03.4**	**-0.5**
SEKA	**Sheki**	**2.11**	**48**	Pn		**Pb**	**13 03 04.0**	**0.0**
SEKA				Sn		**Sg**	**13 03 34.0**	**+0.6**
IHRS	**Heris**	**2.13**	**134**	Pn		**Pb**	**13 03 04.2**	**-0.3**
ZKTA	**Zakatala**	**2.14**	**32**	Pn		**Pb**	**13 03 04.7**	**+0.1**
ZKTA				Sn		**Sg**	**13 03 34.9**	**+0.3**
LGD	**Lagodekhi**	**2.18**	**23**	P		**Pb**	**13 03 05.5**	**+0.2**
LGD				S		**Sg**	**13 03 35.9**	**+0.1**
LGD	**Lagodekhi**	**2.18**	**23**	P		**Pg**	**13 03 06.7**	**-0.7**
AKDM	**Akdamar-Van**	**2.23**	**229**	Pn		**Pb**	**13 03 05.8**	**-0.4**
SENK	**Senkaya-Erzuru**	**2.23**	**290**	Pn		**Pb**	**13 03 04.9**	**-1.4**
IAZR	**Azarshahr**	**2.25**	**162**	Pn		**Pb**	**13 03 05.5**	**-1.1**
QBL	**Gabala**	**2.37**	**61**	Pn		**Pb**	**13 03 08.0**	**-0.4**
QBL				Sn		**Sg**	**13 03 41.3**	**-0.4**
GRMI	**Germi**	**2.39**	**114**	Pn		**Pb**	**13 03 07.6**	**-1.3**
KDMR	**Kurdemir**	**2.42**	**76**	Pn		**Pb**	**13 03 08.0**	**-1.4**
CHRG	**Chargali**	**2.50**	**357**	P		**Pb**	**13 03 10.2**	**-0.6**
CHRG				S		**Sb**	**13 03 43.7**	**+1.9**
KOPR	**Koprukoy-ERZUR**	**2.51**	**275**	Pn		**Pb**	**13 03 08.9**	**-2.0**
ALIG	**Mtskhetisjvari**	**2.53**	**335**	P		**Pb**	**13 03 11.2**	**0.0**
ALIG				S		**Sb**	**13 03 44.3**	**+1.8**
IML	**Ismayilli**	**2.54**	**67**	Pg		**Pb**	**13 03 11.1**	**-0.3**
IML				Sg		**Sg**	**13 03 47.4**	**+0.1**
YRD	**Yardimli**	**2.59**	**110**	Pg		**Pb**	**13 03 12.0**	**-0.5**
YRD				Sg		**Sg**	**13 03 46.7**	**-2.2**
GLBA	**Clilabad**	**2.61**	**102**	Pg		**Pb**	**13 03 13.2**	**+0.7**
GLBA				Sg		**Sg**	**13 03 47.9**	**-1.4**
XNQ	**Khinaliq**	**2.67**	**59**	Pg		**Pb**	**13 03 13.1**	**-0.7**
XNQ				Sn		**Sb**	**13 03 48.8**	**+2.0**
GUDG	**Gudauri**	**2.68**	**350**	P		**Pb**	**13 03 12.3**	**-1.5**
GUDG				S		**Sb**	**13 03 45.7**	**-1.2**
LRK	**Lerik**	**2.78**	**114**	Pg		**Pb**	**13 03 15.3**	**-0.2**
LRK				Sg		**Sg**	**13 03 52.8**	**-2.0**
SHTL	**Shatili**	**2.83**	**1**	P		**Pb**	**13 03 15.9**	**-0.4**
SHTL				S		**Sb**	**13 03 52.1**	**+1.0**
CUKT	**Cukurca**	**2.83**	**205**	Pn		**Pb**	**13 03 14.9**	**-1.5**
PQL	**Pirkuli**	**2.83**	**69**	Pg		**Pb**	**13 03 16.2**	**-0.3**
PQL				Sg		**Sg**	**13 03 56.7**	**0.0**
MTEO	**Meteo**	**2.88**	**352**	P		**Pb**	**13 03 17.8**	**+0.3**
MTEO				S		**Sg**	**13 03 55.8**	**-2.4**
QSAR	**Qusar**	**2.93**	**54**	Pg		**Pb**	**13 03 17.9**	**-0.2**
QSAR				Sg		**Sg**	**13 04 01.6**	**+1.8**
QUBA	**Quba, Azerbaij**	**3.00**	**58**	Pg		**Pb**	**13 03 20.7**	**+1.5**
GBS	**Qobustan**	**3.02**	**75**	Pg		**Pb**	**13 03 20.4**	**+0.8**
ONI	**Oni**	**3.03**	**336**	Pn		**Pb**	**13 03 17.4**	**-2.3**
ONI	**Oni**	**3.03**	**336**	P		**Pb**	**13 03 19.4**	**-0.3**
ONI				S		**Sg**	**13 03 59.8**	**-3.1**
LKRN	**Lenkeran, Azer**	**3.06**	**110**	Sg		**Sg**	**13 04 01.7**	**-2.2**
ASTR	**Astara**	**3.13**	**113**	Pg		**Pb**	**13 03 21.2**	**-0.2**
ASTR				Sg		**Sg**	**13 04 03.9**	**-2.3**
SIZA	**Siyzn**	**3.15**	**65**	Pg		**Pb**	**13 03 21.4**	**-0.4**

*IDC **25** 13:13:31.8±0.7,23.°95N×142.°09E,h0km,mb3.8/11, mbtmp3.9/12,ML4.0/1,MS2.3/3,Error ellipse: s-maj=32.4km s-min=15.3km az=90.0*
*NEIC **25** 13:13:42.4±0.7,23.°9N±0.°1×142.°0E±0.°2,h76km±8km, mb4.3/12,Error ellipse: s-maj=31.2km s-min=15.0km az=89.0*

ISC 25 13:13:38.8±0.7,23.°97N±0.°08×142.°0E±0.°2,h50km,n35, σ0°97/31,mb4.1/17,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JCJ	**Chichijima**	**3.12**	**3**	Pn		**Pn**	**13 14 27.6**	**+2.1**
JCJ	**Chichijima**	**3.12**	**3**	Pn		**Pn**	**13 14 23.8**	**-1.7**
	18nm,0.3s,baz=173,slow=23,SNR=36							
JCJ				LR	LR	13 14 43.5		
	comp=Z,40nm,18.4s,baz=110,slow=23							
JCJ				Sn		**Sn**	**13 15 00.0**	**-1.4**
	15nm,0.3s,baz=77,slow=23,SNR=6.4							
	46nm,0.4s							
GUMO	**Guam**	**10.68**	**165**	LR	LR	13 18 22.0		
	comp=Z,13nm,21.1s,baz=60,slow=27							
JMM	**Marumori**	**13.89**	**356**	Pn		**Pn**	**13 16 51.6**	**-1.3**
KSRS	**Korea Array**	**18.04**	**321**	LR	LR	13 24 35.6		
	comp=Z,15nm,18.3s,baz=110,slow=37							
H11N1	**WAKE ISLAND Hy**	**23.50**	**96**	T	T	13 44 02.3		
	baz=283,slow=76							
H11N2

comp=Z,33nm,18.6s,baz=89,slow=33
MBAR Mbarara 42.44 85 LR LR 13 40 31.2
comp=Z,161nm,20.2s,baz=218,slow=34
ESDC Sonseca Array 45.05 8 P **P 13 24 51.6 -0.6**
1.0nm,1.0s,baz=193,slow=6.1,SNR=4.3
1.0nm,1.0s
CPUP Villa Florida 48.55 239 LR LR 13 42 35.6
comp=Z,30nm,19.3s,baz=62,slow=32
BOAV Boa Vista 49.50 277 P **P 13 25 27.5 +0.2**
BOAV IAmb IAmb 13 25 35.9
comp=Z,8.8nm,1.1s
SIV San Ignacio 49.78 253 LR LR 13 45 59.8
comp=Z,90nm,18.5s,baz=106,slow=36
ETMB Extrema 54.38 262 P **P 13 26 03.4 -0.3**
FETA Feichten 55.46 18 *eP* **P 13 26 11.0 -0.2**
comp=Z,9.0nm,1.1s
SQTA Sankt Quirin 55.79 19 *eP* **P 13 26 13.7 +0.2**
comp=Z,7.1nm,0.8s
MOTA Moosalm 55.87 18 *eP* **P 13 26 14.3 +0.2**
comp=Z,4.1nm,1.0s
WATA Walderalm 56.01 19 P **P 13 26 15.7 +0.6**
comp=Z,7.2nm,1.3s
EIL Elat 56.37 49 LR LR 13 49 46.6
comp=Z,37nm,19.3s,baz=245,slow=35
RONA Rosalia, Austr 57.96 22 *eP* **P 13 26 29.1 +0.3**
comp=Z,2.9nm,0.7s
CONA Conrad Observa 57.99 21 *eP* **P 13 26 29.6 +0.6**
comp=Z,5.6nm,1.4s
LVC Limon Verde 58.01 247 LR LR 13 52 07.5
comp=Z,36nm,18.4s,baz=94,slow=37
BAUV El Baul 58.02 284 P **P 13 26 30.6 +0.9**
GEC2 GERESS Array S 58.02 19 P **P 13 26 29.4 +0.2**
GEC2 IAmb IAmb 13 26 30.3
comp=Z,5.7nm,0.9s
GERES GERESS Array B 58.02 19 P **P 13 26 28.9 -0.4**
comp=Z,3.7nm,0.8s,baz=178,slow=4.0,SNR=9.2
comp=Z,3.7nm,0.8s
MMAI Mount Meron Ar 58.40 46 LR LR 13 53 51.4
comp=Z,33nm,19.7s,baz=253,slow=38
CLL Collm 59.95 18 *eP* **P 13 26 42.0 -0.5**
SDV Santo Domingo 60.52 283 LR LR 13 50 59.3
comp=Z,42nm,19.8s,baz=101,slow=34
EKA Eskdalemuir Ar 60.57 5 P **P 13 26 46.1 -0.5**
comp=Z,0.5nm,0.5s,baz=193,slow=6.9,SNR=3.4
comp=Z,0.5nm,0.5s
BRTR Keskin Array B 60.93 39 P **P 13 26 50.5 +0.9**
comp=Z,1.2nm,0.8s,baz=187,slow=5.0,SNR=4.5
comp=Z,1.2nm,0.8s
ROSC El Rosal 63.47 278 LR LR 13 52 43.6
comp=Z,75nm,20.7s,baz=268,slow=34
PLCA Paso Flores 63.48 227 LR LR 13 52 27.5
comp=Z,38nm,18.5s,baz=105,slow=34
NNA Nana 64.83 259 LR LR 13 54 00.2
comp=Z,92nm,21.3s,baz=74,slow=35
KIEV Kiev 65.64 27 P **P 13 27 20.1 -0.3**
KIEV IAmb IAmb 13 27 20.8
comp=Z,11nm,0.9s
AKASG Malin Array Be 65.65 27 P **P 13 27 20.1 -0.3**
comp=Z,2.8nm,0.7s,baz=228,slow=6.9,SNR=10
comp=Z,2.8nm,0.7s
AKBB Malin Array Si 65.65 27 P **P 13 27 20.1 -0.4**
ATAH Atahualpa 66.47 264 LR LR 13 55 25.0
comp=Z,100nm,20.4s,baz=86,slow=35
NOA NORSAR Array B 68.24 12 LR LR 13 58 44.4
comp=Z,28nm,19.0s,baz=340,slow=37
KIV Kislovodsk 68.89 39 P **P 13 27 41.9 +0.6**
KBZ Khabaz 68.91 39 P **P 13 27 41.9 +0.6**
comp=Z,4.9nm,0.9s,baz=268,slow=3.6,SNR=9.4
comp=Z,4.9nm,0.9s
FINES FINESS Array B 72.40 18 P **P 13 28 01.9 -0.2**
comp=Z,1.8nm,0.6s,baz=212,slow=5.2,SNR=11
comp=Z,1.8nm,0.6s
GEYT Alibeck 77.27 49 P **P 13 28 31.1 +0.2**
GEYT IAmb IAmb 13 28 32.7
comp=Z,6.9nm,1.2s
GEYT Alibeck 77.27 49 P **P 13 28 31.6 +0.6**
comp=Z,2.3nm,0.9s,baz=300,slow=6.0,SNR=5.0
comp=Z,2.3nm,0.9s
GYA0B ALIBECK ARRAY 77.27 49 P **P 13 28 30.4 -0.6**
GYA0B IAmb IAmb 13 28 41.3
comp=Z,4.8nm,0.9s
ABKAR Akbulak array 81.88 39 P **P 13 28 54.8 -0.9**
ARU Arti 83.36 32 P **P 13 29 03.0 -0.3**
ARU IAmb IAmb 13 29 04.6
comp=Z,7.6nm,0.9s
QSPA South Pole Qui 85.05 180 P **P 13 29 12.1 +0.3**
comp=Z,3.9nm,1.0s,baz=212,slow=1.4,SNR=9.8
comp=Z,3.9nm,1.0s
KKAR Karatay Array 87.63 47 P **P 13 29 24.9 0.0**
BVAR Borovoye Array 89.15 37 P **P 13 29 32.4 +0.6**
comp=Z,1.1nm,0.7s,baz=258,slow=5.9,SNR=6.4
comp=Z,1.1nm,0.7s
ARSB Arslanbob 89.19 49 P **P 13 29 33.6 +1.1**
AAK Ala-Archa 90.47 47 P **P 13 29 39.0 +0.6**
AAK IAmb IAmb 13 29 40.2
comp=Z,2.9nm,0.9s
NRN Naryn 91.46 49 P **P 13 29 43.6 +0.3**
NRN IAmb IAmb 13 29 44.6
comp=Z,4.6nm,0.9s
TARG Taragay, Kyrgy 92.83 49 P **P 13 29 49.7 -0.1**
TARG IAmb IAmb 13 29 51.2
comp=Z,4.2nm,0.7s
KURBB Kurchatov Arra 93.91 40 P **P 13 29 54.0 +0.1**
comp=Z,1.1nm,0.9s,baz=274,slow=5.4,SNR=6.7
comp=Z,1.1nm,0.9s
TXAR Lajitas Array 94.30 299 P **P 13 29 55.9 -0.5**
comp=Z,0.3nm,0.7s,baz=106,slow=6.7,SNR=2.9
comp=Z,0.3nm,0.7s
RPN Rapa Nui 94.64 242 LR LR 14 09 47.5
comp=Z,42nm,21.4s,baz=26,slow=34
MKAR Makanchi Array 96.27 44 P **P 13 30 04.5 -0.5**
comp=Z,0.4nm,0.7s,baz=274,slow=3.0,SNR=6.1
comp=Z,0.4nm,0.7s

*ROM **25** 13:26:37.7±0.1,46°.381N±0°.005×12°.581E±0°.006, h8km,ML1.3/11,Error ellipse: s-maj=0.7km s-min=0.3km az=332.0*
*VIE **25** 13:26:38.5±0.4,46°.37N×12°.56E,h6km,mb2.7/1,ml1.8/5, Error ellipse: s-maj=4.0km s-min=2.6km az=163.0*
ISC 25 13:26:38.2±0.9,46°.36N±0°.03×12°.57E±0°.02,h9km±6km, n21,σt0.40/41,4C-1D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CIMO	**Cimolais**	**0.10**	**239**	⇑*eP*g		**Pg**	**13 26 40.9**	**0.0**
CIMO				*e*Sg		**Sg**	**13 26 42.6**	**-0.1**
CIMO	**Cimolais**	**0.10**	**239**	⇑P		**Pg**	**13 26 40.9**	**0.0**
CIMO				S		**Sg**	**13 26 42.8**	**+0.1**
CIMO				AML	AML			
	comp=E,65μm,1.3s							
CIMO				AML	AML			
	comp=N,110μm,0.3s							
CIMO				AML	AML			
	comp=N,110μm,1.7s							
CIMO				AML	AML			
	comp=E,65μm,0.7s							
STAL	**STALIGIAL**	**0.14**	**137**	⇓P		**Pg**	**13 26 41.4**	**-0.1**
STAL				S		**Sg**	**13 26 43.7**	**0.0**
STAL				AML	AML			
	comp=N,557μm,1.4s							
STAL				AML	AML			
	comp=E,268μm,0.9s							
STAL				AML	AML			
	comp=N,354μm,0.2s							
STAL				AML	AML			
	comp=E,348μm,0.2s							
STAL				AML	AML			
	comp=N,558μm,1.4s							
CSMI	**Casera Mimoias**	**0.16**	**211**	⇑*eP*g		**Pg**	**13 26 41.8**	**0.0**
CSMI				*e*Sg		**Sg**	**13 26 44.3**	**0.0**
CLUD	**Cludinico**	**0.23**	**67**	*eP*g		**Pg**	**13 26 43.0**	**0.0**
CLUD				*e*Sg		**Sg**	**13 26 46.4**	**+0.1**
CLUD	**Cludinico**	**0.23**	**67**	P		**Pg**	**13 26 43.0**	**0.0**
CLUD				S		**Sg**	**13 26 46.6**	**+0.3**
CLUD				AML	AML			
	comp=E,81μm,1.4s							
CLUD				AML	AML			
	comp=N,104μm,0.6s							
CLUD				AML	AML			
	comp=N,100μm,0.6s							
CLUD				AML	AML			
	comp=E,77μm,0.4s							
CLUD				AML	AML			
	comp=N,100μm,0.6s							
CLUD				AML	AML			
	comp=E,80μm,1.4s							
CLUD				AML	AML			
	comp=N,104μm,0.6s							
FVI	**Forni Avoltri**	**0.28**	**32**	P		**Pg**	**13 26 43.8**	**-0.1**
FVI				S		**Sg**	**13 26 47.8**	**+0.2**
FUSE	**Fusea**	**0.30**	**80**	*eP*g		**Pg**	**13 26 44.5**	**+0.2**
FUSE				*e*Sg		**Sg**	**13 26 48.6**	**+0.2**
ZOU	**Zoufplan**	**0.34**	**55**	*eP*g		**Pg**	**13 26 45.1**	**+0.1**
ZOU				*e*Sg		**Sg**	**13 26 49.9**	**+0.3**
ZOU	**Zoufplan**	**0.34**	**55**	P		**Pg**	**13 26 45.2**	**+0.1**
ZOU				S		**Sg**	**13 26 50.1**	**+0.5**
POLC	**Polcenigo**	**0.34**	**188**	P		**Pb**	**13 26 46.3**	**-0.1**
POLC				S		**Sb**	**13 26 51.7**	**-0.2**
BOO	**Bordano**	**0.37**	**97**	⇑*eP*g		**Pg**	**13 26 45.2**	**-0.3**
BOO				*e*Sg		**Sg**	**13 26 50.8**	**+0.3**
AGOR	**Agordo**	**0.37**	**258**	P		**Pb**	**13 26 47.0**	**0.0**
AGOR				S		**Sb**	**13 26 51.9**	**-1.0**
ABTA	**Abfaltersbach**	**0.39**	**354**	*eP*g		**Pg**	**13 26 46.3**	**+0.4**
	comp=N,0.7nm,0.1s							
ABTA				*e*Sg		**Sg**	**13 26 51.4**	**+0.4**
	comp=N,5.0nm,0.2s							
GEPF	**Gemona**	**0.41**	**102**	P		**Pg**	**13 26 46.2**	**+0.1**
GEPF				S		**Sg**	**13 26 52.6**	**+1.1**
PLRO	**Paularo**	**0.44**	**65**	*eP*g		**Pg**	**13 26 46.8**	**-0.1**
PLRO				*e*Sg		**Sg**	**13 26 53.3**	**+0.5**
BAD	**Bernadia**	**0.48**	**105**	*eP*g		**Pg**	**13 26 47.5**	**-0.2**
BAD				*e*Sg		**Sg**	**13 26 55.0**	**+0.9**
PTCC	**Patocco-Chiusa**	**0.54**	**85**	P		**Pg**	**13 26 48.5**	**-0.3**
PTCC				S		**Sb**	**13 26 57.1**	**-0.8**
PTCC				AML	AML			
	comp=E,26μm,1.6s							
PTCC				AML	AML			
	comp=N,37μm,1.4s							
PTCC				AML	AML			
	comp=N,37μm,0.6s							
ZIAN	**Ziano**	**0.70**	**263**	P		**Pg**	**13 26 52.2**	**+0.4**
ZIAN				S		**Sg**	**13 27 01.6**	**+0.6**
LESA	**Schwarzleotal**	**1.06**	**4**	*i*Pg		**Pn**	**13 26 59.7**	**+0.3**
	comp=N,0.2nm,0.1s							
LESA				*e*Sg		**Sg**	**13 27 12.2**	**-0.3**
	comp=N,0.3nm,0.1s							
FETA	**Feichten**	**1.43**	**298**	Pg		**Pg**	**13 27 05.4**	**-0.2**
	comp=N,0.4nm,0.2s							

*HEL **25** 13:36:53.8±0.3,60°.98N×29°.05E,h0km,ML1.6,Explosion IDC **25** 13:36:55.0±2.7,60°.90N×28°.90E,h0km,mbtmp3.8/1, ML2.1/1,Error ellipse: s-maj=24.5km s-min=14.1km az=176.0*
ISC 25 13:36:51.0±1.3,60°.93N±0°.05×29°.21E±0°.06,h0km,n16, σ0s78/25,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RUF	**Ruokolahti**	**0.52**	**346**	PG		**Pb**	**13 37 02.3**	**-0.7**
RUF				SG		**Sg**	**13 37 07.7**	**+0.1**
VJF	**Virojoki**	**0.90**	**245**	PG		**Pb**	**13 37 09.6**	**+0.2**
	baz=63							
VJF				MSG			13 37 20.2	
	comp=Z,7.6nm,0.2s							
VJF				SB		**Sb**	**13 37 21.6**	**-0.4**
FIA0	**FINESS Array S**	**1.60**	**290**	PG		**Pn**	**13 37 20.5**	**-0.1**
	baz=109							
FIA0				MSG			13 37 39.2	
	comp=Z,7.7nm,0.2s							
FINES	**FINESS Array B**	**1.60**	**290**	Pg		**Pn**	**13 37 20.7**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=110,slow=16,SNR=32							
FINES				Lg		Lg	13 37 41.2	
	comp=Z,2.0nm,0.3s,baz=106,slow=28,SNR=23							
FINES				Rg		Rg	13 37 49.2	
	comp=Z,16nm,0.7s,baz=115,slow=37,SNR=21							
PVF	**Pernaja**	**1.69**	**258**	PG		**Pb**	**13 37 22.4**	**-0.4**
	baz=70							
PVF				MSG			13 37 42.3	
	comp=Z,5.0nm,0.2s							
PVF				SN		**Sg**	**13 37 45.1**	**0.0**
KAF	**Kangasniemi**	**1.83**	**312**	PG		**Pg**	**13 37 25.5**	**-0.6**
KAF				MSG			13 37 45.6	
	comp=Z,4.6nm,0.2s							
KAF				SN		**Sn**	**13 37 47.9**	**+0.3**
ARBE	**Arbavere**	**2.20**	**229**	PG		**Pg**	**13 37 33.1**	**+0.1**
JOF	**Joensuu**	**2.23**	**26**	PG		**Pg**	**13 37 33.4**	**-0.4**
JOF				SG		**Sg**	**13 38 01.4**	**-1.4**
NUR	**Nurmijrvi**	**2.28**	**261**	PB		**Pb**	**13 37 32.1**	**-0.9**
NUR				MSG			13 37 59.4	
	comp=Z,3.1nm,0.2s							
NUR				SG		**Sg**	**13 38 03.9**	**-0.3**
SUF	**Sumiainen**	**2.31**	**322**	PG		**Pb**	**13 37 33.7**	**+0.2**
	baz=137							
SUF				MSG			13 37 59.6	
	comp=Z,1.6nm,0.2s							
SUF				SG		**Sb**	**13 38 03.4**	**+0.8**
KEF	**Keuruu**	**2.42**	**303**	PG		**Pb**	**13 37 34.7**	**-0.7**
	baz=115							
KEF				MSG			13 38 02.5	
	comp=Z,3.1nm,0.2s							
KEF				SG		**Sb**	**13 38 05.8**	**0.0**
MEF	**Metsahovi**	**2.48**	**255**	PG		**Pb**	**13 37 36.6**	**+0.2**
MEF				MSG			13 38 05.3	
	comp=Z,2.8nm,0.2s							
MEF				SG		**Sb**	**13 38 06.4**	**-1.0**
NIF	**Nilsia**	**2.56**	**346**	PG		**Pb**	**13 37 37.4**	**-0.3**
	baz=162							
NIF				SG		**Sb**	**13 38 09.9**	**+0.2**
RMF	**Romuvaara**	**3.32**	**5**	PB		**Pb**	**13 37 50.0**	**-0.7**
I43RU	**DUBNA INFRASON**	**5.92**	**132**	I		I	14 15 20.0	
	baz=318,slow=330,SNR=5.3							
ARCES	**ARCESS Array B**	**8.78**	**351**	Pn		**Pn**	**13 39 01.6**	**+2.5**
	baz=169,slow=15,SNR=3.2							
ARCES				Lg		Lg	13 41 20.1	
	comp=Z,0.1nm,0.3s,baz=173,slow=32,SNR=2.0							
	comp=Z,5.9nm,1.1s							

*NOU **25** 13:43:45.6,41°.07S×175°.77E,h54km,MLv4.3/13,North Island, New Zealand*
*WEL **25** 13:43:46.5±0.2,41°.52S×175°.45E±°,h20km±2km,M4.0/30, ML4.3/30,MLv4.0/30,Error ellipse: s-maj=0.0km s-min=0.0km az=132.8,confirmed*
*NEIC **25** 13:43:46.5±0.9,40°.96S±0°.04×175°.51E±0°.05,h29km±7km, mb4.3/5, Error ellipse: s-maj=8.0km s-min=1.5km az=134.0*
*WEL **25** 13:43:46.5,40°.89S×175°.45E,h32km,ML4.0,Mw4.1, Moment Tensor Solution. s4 Moment tensor: Mrr=46.36; Mθθ185.20; Mϕϕ-138.85; Mrθ=46.34; Mθϕ-119.23; Mϕr23.45; Fault plane solution: NP1: ϕ=297.00000°,δ80.00000°,λ5.00000°. NP2:ϕ=207.00000°, δ85.00000°,λ170.00000°. Principal axes: T 233.7600, Plg11.0000°, Azm162.0000°; N -178.4800, Plg79.0000°, Azm0.0000°; P -55.2800, Plg4.0000°, Azm252.0000°; NORTH ISLAND*
ISC 25 13:43:46.7±0.8,40°.93S±0°.02×175°.49E±0°.02,h28km±4km, n181,σt9s16/198,mb4.3/5,North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOWZ	**Holdsworth Sta**	**0.04**	**29**	P		**Pb**	**13 43 51.4**	**-0.1**
HOWZ				S		**Sb**	**13 43 54.9**	**+0.2**
MTW	**Mount Morrison**	**0.23**	**178**	P		**Pb**	**13 43 53.7**	**+0.6**
MTW				S		**Sb**	**13 43 59.4**	**+2.0**
OGWZ	**Otaki Gorge**	**0.27**	**295**	P		**Pb**	**13 43 53.3**	**-0.3**
OGWZ				S		**Sb**	**13 43 58.0**	**-0.2**
MRZ	**Mangatainoka R**	**0.28**	**14**			**Pb**	**13 43 53.4**	**-0.3**
MRZ				Sg		**Sb**	**13 43 57.9**	**-0.5**
MRZ	**Mangatainoka R**	**0.28**	**14**	P		**Pb**	**13 43 53.4**	**-0.3**
MRZ				S		**Sb**	**13 43 58.4**	**0.0**
TIWZ	**Tintock**	**0.34**	**63**	P		**Pb**	**13 43 55.0**	**+0.4**
TIWZ				S		**Sn**	**13 44 00.9**	**-0.9**
TMWZ	**Te Maipa**	**0.35**	**120**	P		**Pn**	**13 43 55.8**	**-0.2**
TMWZ				S		**Sn**	**13 44 03.0**	**+0.9**
CAW	**Cannon Point**	**0.37**	**241**	P		**Pb**	**13 43 55.2**	**+0.2**
KIW	**Kapiti Island**	**0.45**	**279**	P		**Pb**	**13 43 56.2**	**0.0**
KIW				S		**Sb**	**13 44 03.0**	**+0.4**
PAWZ	**Paruwai Farm**	**0.45**	**186**	P		**Pn**	**13 43 57.2**	**-0.2**
PAWZ				S		**Sn**	**13 44 05.5**	**+0.8**
TRWZ	**Traveller**	**0.49**	**162**	P		**Pn**	**13 43 57.9**	**-0.1**
TRWZ				S		**Sn**	**13 44 07.2**	**+1.6**
MSWZ	**Moikau Station**	**0.52**	**201**			**Pn**	**13 43 58.1**	**-0.3**
MSWZ				Sg		**Sn**	**13 44 06.3**	**0.0**
MSWZ	**Moikau Station**	**0.52**	**201**	P		**Pn**	**13 43 58.3**	**0.0**
PRWZ	**Pori Road**	**0.52**	**44**	P		**Pb**	**13 43 57.8**	**+0.4**
CPWZ	**Castlepoint**	**0.54**	**88**	P		**Pn**	**13 43 58.9**	**+0.4**
CPWZ						S		
POWZ	**Post Office Ro**	**0.58**	**21**	P		**Pb**	**13 43 58.2**	**-0.2**
POWZ						S		
BFZ	**Birch Farm**	**0.62**	**67**			**Pb**	**13 43 59.3**	**+0.2**
BFZ	**Birch Farm**	**0.62**	**67**	P		**Pn**	**13 43 59.6**	**-0.2**
BFZ	**Birch Farm**	**0.62**	**67**	P		**Pn**	**13 43 59.5**	**-0.2**
BFZ						S		
WEL	**Wellington**	**0.65**	**237**	P		**Pn**	**13 43 59.9**	**-0.2**
PLWZ	**Palliser**	**0.66**	**196**			**Pb**	**13 43 59.8**	**0.0**
PLWZ	**Palliser**	**0.66**	**196**	P		**Pb**	**13 43 60.0**	**+0.2**
PLWZ						S		
BHW	**Baring Head**	**0.67**	**224**			**Pb**	**13 44 00.1**	**+0.2**
BHW						Sn		
BHW	**Baring Head**	**0.67**	**224**	P		**Pb**	**13 44 00.1**	**+0.2**
SNZO	**South Karori**	**0.70**	**237**			**Pb**	**13 44 00.5**	**0.0**
SNZO	South Karori	0.70	237	P		Pn	13 44 00.7	-0.1
OHWZ	**Ohakea**	**0.74**	**349**	P		**Pn**	**13 44 01.2**	**0.0**
DVHZ	**Dannevirke**	**0.81**	**39**	P		**Pb**	**13 44 02.1**	**-0.2**
ANWZ	**Angora Road**	**0.88**	**58**	P		**Pb**	**13 44 02.9**	**-0.5**
TSZ	**Takapari Road**	**0.94**	**23**	P		**Pb**	**13 44 04.0**	**-0.5**
TSZ						S		
TCW	**Tory Channel**	**0.96**	**253**			**Pb**	**13 44 04.3**	**-0.4**
TCW	**Tory Channel**	**0.96**	**253**	P		**Pb**	**13 44 04.4**	**-0.4**
PRHZ	**Porangahau**	**1.09**	**53**	P		**Pn**	**13 44 05.5**	**-0.7**
WPHZ	**Waipukurau**	**1.13**	**40**	P		**Pn**	**13 44 06.6**	**-0.1**
PNHZ	**Pukenui**	**1.15**	**28**	P		**Pn**	**13 44 06.8**	**-0.2**
DUWZ	**D'Urville Isla**	**1.20**	**276**	P		**Pn**	**13 44 08.1**	**+0.4**
WAZ	**Wanganui**	**1.24**	**342**	P		**Pb**	**13 44 09.5**	**0.0**
CMWZ	**Cape Campbell**	**1.26**	**229**				**13 44 08.2**	**-0.3**
CMWZ	**Cape Campbell**	**1.26**	**229**	P		**Pn**	**13 44 08.9**	**+0.4**
TUWZ	**Tuamarina**	**1.27**	**246**				**13 44 08.1**	**-0.5**
TUWZ	**Tuamarina**	**1.27**	**246**	P			**13 44 08.2**	**-0.5**
PXZ	**Pawanui**	**1.38**	**50**	P		**Pn**	**13 44 09.3**	**-0.8**
BSWZ	**Blackbirch Sta**	**1.45**	**237**	Pn		**Pn**	**13 44 10.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**1.45**	**237**	P		**Pn**	**13 44 10.8**	**-0.3**
KRHZ	**Kereru**	**1.45**	**28**	P		**Pn**	**13 44 10.7**	**-0.4**
BHHZ	**Black Hill Sta**	**1.50**	**17**	P		**Pn**	**13 44 12.0**	**0.0**
MOVZ	**Moawhango**	**1.54**	**8**	P		**Pn**	**13 44 12.6**	**+0.2**
MTVZ	**Mangateitei**	**1.54**	**359**	P		**Pb**	**13 44 13.7**	**-1.0**
KAHZ	**Kahuranaki**	**1.55**	**43**	P		**Pn**	**13 44 11.9**	**-0.7**
WNVZ	**Wahianoa**	**1.60**	**3**	P		**Pn**	**13 44 14.1**	**+0.7**
NNZ	**Nelson**	**1.62**	**259**				**13 44 13.6**	**+0.1**
NNZ	**Nelson**	**1.62**	**259**	P		**Pn**	**13 44 13.7**	**+0.2**
TRVZ	**Turoa**	**1.63**	**2**	P		**Pn**	**13 44 14.7**	**+0.9**
PKVZ	**Pokaka**	**1.64**	**356**	P		**Pn**	**13 44 15.1**	**-1.3**
WHVZ	**Whangaehu Hut**	**1.65**	**3**	P		**Pn**	**13 44 14.8**	**+0.8**
MAVZ	**Matarangi**	**1.66**	**2**	P		**Pn**	**13 44 15.2**	**+0.9**
KWHZ	**Kaweka Forest**	**1.67**	**26**	P		**Pn**	**13 44 13.7**	**-0.5**
TUNZ	**Tukino**	**1.67**	**4**	P		**Pn**	**13 44 15.2**	**+1.0**
FWVZ	**Far West T-bar**	**1.67**	**2**	P		**Pn**	**13 44 15.2**	**+0.8**
LREZ	**Lake Rotokare**	**1.69**	**330**	P		**Pb**	**13 44 16.3**	**-0.8**
SNVZ	**South Ngauruho**	**1.75**	**4**	P		**Pn**	**13 44 16.3**	**+1.0**
MCHZ	**McNeill Hill**	**1.75**	**32**	P		**Pn**	**13 44 14.7**	**-0.5**
NGZ	**Ngauruhoe**	**1.75**	**3**	P		**Pn**	**13 44 16.4**	**+1.0**
OTVZ	**Oturere**	**1.77**	**4**	P		**Pn**	**13 44 16.6**	**+1.0**
NNVZ	**North Ngauruho**	**1.80**	**3**	P		**Pn**	**13 44 17.0**	**+0.9**
ETVZ	**East Tongariro**	**1.80**	**5**	P		**Pn**	**13 44 16.7**	**+0.7**
WTVZ	**West Tongariro**	**1.81**	**2**	P		**Pn**	**13 44 17.1**	**+0.9**
TMVZ	**Te Maari**	**1.82**	**5**	P		**Pn**	**13 44 17.0**	**+0.7**
NTVZ	**North Tongarir**	**1.83**	**4**	P		**Pn**	**13 44 17.5**	**+0.9**
KRVZ	**Karewarewa**	**1.84**	**4**	P		**Pn**	**13 44 17.4**	**+0.9**
TWVZ	**Taurewa**	**1.86**	**359**	P		**Pn**	**13 44 17.5**	**+0.7**
PREZ	**Palmer Road**	**1.89**	**327**	P		**Pb**	**13 44 19.4**	**-1.2**
VRZ	**Vera Road**	**1.89**	**342**	P		**Pn**	**13 44 18.4**	**+1.3**
TKNZ	**Takaka Hill**	**1.92**	**266**			**Pn**	**13 44 17.9**	**+0.3**
TKNZ	**Takaka Hill**	**1.92**	**266**	P		**Pn**	**13 44 18.2**	**+0.6**
BKZ	**Black Stump Fm**	**1.92**	**24**	Pn		**Pn**	**13 44 16.1**	**-1.0**
BKZ	**Black Stump Fm**	**1.92**	**24**	P		**Pn**	**13 44 16.9**	**-0.8**
BKZ	**Black Stump Fm**	**1.92**	**24**	P		**Pn**	**13 44 16.9**	**-0.8**
NMEZ	**Namu Road**	**1.96**	**320**	P		**Pb**	**13 44 20.4**	**-1.3**
KATZ	**Kakaramea**	**1.96**	**5**	P		**Pn**	**13 44 19.0**	**+0.7**
RITZ	**Rihia Road**	**1.97**	**8**	P		**Pn**	**13 44 18.8**	**+0.5**
NEZ	**North Egmont**	**1.97**	**327**	P		**Pb**	**13 44 20.6**	**-1.4**
KHEZ	**Kahui Hut**	**1.99**	**325**	P		**Pb**	**13 44 20.9**	**-1.4**
KHEZ	**Kahui Hut**	**1.99**	**325**	P		**Pb**	**13 44 21.0**	**-1.3**
DREZ	**Durham Road**	**2.00**	**330**	P		**Pb**	**13 44 21.2**	**-1.3**
ARHZ	**Aropaoanui**	**2.03**	**35**	P		**Pn**	**13 44 18.3**	**-0.7**
MHEZ	**Mangahewa**	**2.06**	**334**	P		**Pb**	**13 44 22.1**	**-1.3**
RATZ	**Rangitukua**	**2.07**	**6**	P		**Pn**	**13 44 19.9**	**+0.2**
NBEZ	**Newall Road No**	**2.08**	**323**	P		**Pb**	**13 44 22.1**	**-1.6**
PKE	**Pukeiti**	**2.08**	**326**	P		**Pb**	**13 44 22.2**	**-1.7**
KHZ	**Kahutara**	**2.08**	**224**	Pn		**Pn**	**13 44 18.6**	**-1.2**
KHZ	**Kahutara**	**2.08**	**224**	P		**Pn**	**13 44 18.5**	**-1.3**
KHZ	**Kahutara**	**2.08**	**224**	P		**Pn**	**13 44 18.6**	**-1.2**
MRNZ	**Matariki Terra**	**2.12**	**256**			**Pn**	**13 44 20.2**	**-0.1**
MRNZ	**Matariki Terra**	**2.12**	**256**	P		**Pn**	**13 44 20.4**	**+0.1**
THZ	**Tophouse**	**2.12**	**246**			**Pn**	**13 44 19.6**	**-0.7**
THZ	**Tophouse**	**2.12**	**246**	P		**Pn**	**13 44 19.6**	**-0.7**
MRHZ	**Matea Rd**	**2.21**	**19**	P		**Pn**	**13 44 20.9**	**-0.8**
WATZ	**Wairara**	**2.23**	**5**	P		**Pn**	**13 44 21.9**	**0.0**
WHHZ	**Waihua**	**2.28**	**36**	P		**Pn**	**13 44 22.0**	**-0.6**
WHTZ	**Whakaora**	**2.29**	**9**	P		**Pn**	**13 44 22.8**	**+0.1**
MTHZ	**Maungataniwha**	**2.32**	**27**	P		**Pn**	**13 44 22.2**	**-0.9**
RAHZ	**Arahi**	**2.36**	**32**	P		**Pn**	**13 44 22.6**	**-1.0**
KUTZ	**Kaahu Road**	**2.45**	**6**	P		**Pn**	**13 44 25.0**	**+0.1**
WPRZ	**Whakapapatarin**	**2.46**	**12**	P		**Pn**	**13 44 24.5**	**-0.5**
HIZ	**Hauiti**	**2.46**	**348**	Pn		**Pn**	**13 44 25.7**	**+0.7**
HIZ	**Hauiti**	**2.46**	**348**	P		**Pn**	**13 44 25.9**	**+0.8**
HIZ	**Hauiti**	**2.46**	**348**	P		**Pn**	**13 44 25.9**	**+0.8**
PRRZ	**Plateau Road**	**2.53**	**16**	P		**Pn**	**13 44 25.3**	**-0.6**
KNZ	**Kokohu**	**2.54**	**42**	P		**Pn**	**13 44 24.2**	**-1.9**
MHNZ	**Mahia Peninsul**	**2.57**	**47**	P		**Pn**	**13 44 24.8

OUZ	Omahuta	5.89 345	P	Pn	13 45 13.2	+1.0
EAZ	Earnscleugh	6.24 224	P	Pn	13 45 14.9	-2.1
MLZ	Mavora Lakes	6.98 228	Pn	Pn	13 45 25.4	-1.7
SYZ	Scrubby Hill	7.25 217	P	Pn	13 45 30.0	-0.7
WHZ	Wether Hill Ro	7.40 225	Pn	Pn	13 45 31.4	-1.4
COEN	Coen	38.91 304	P	P	13 51 09.4	-0.7
FORT	Forrest	39.34 269	P	P	13 51 12.8	-0.8
WB2	Warramunga Arr	40.70 288	P	P	13 51 23.8	-1.2
WB2			IAmb	IAmb	13 52 01.0	
	comp=Z,6.6nm,1.3s					
WRAB	Tennant Creek	40.71 288	P	P	13 51 25.1	0.0
WRAB			IAmb	IAmb	13 51 35.4	
	comp=Z,4.3nm,0.7s					
WB0	Warramunga Arr	40.79 289	P	P	13 51 24.3	-1.4
WB0			IAmb	IAmb	13 51 30.4	
	comp=Z,8.7nm,1.4s					
PZH	PanZhiHua	95.72 300	P	P	13 57 11.0	+0.8
PZH			pmax	pmax		
	comp=Z,10.0nm,0.6s					
PZH			pmax	pmax		
	comp=Z,90nm,5.0s					
HHC	Hu-ho-hao-te	99.94 316	*e*P	Pdif	13 57 31.3	+2.5
HHC			pP	sP	13 57 40.5	-0.9
HHC	Hu-ho-hao-te	99.94 316	eS	S	14 09 06.0	+4.8
HHC			pmax	pmax		
	comp=Z,5.0nm,0.7s					
HHC			pmax	pmax		
	comp=Z,80nm,5.6s					
HHC			LR	LR		
	comp=N,120nm,12.6s					
HHC			LR	LR		
	comp=E,120nm,12.6s					
HHC			LR	LR		
	comp=Z,120nm,16.5s					

*IDC **25** 13:53:28.2±3.2,36°.59N×71°.33E,h118^{km}±28^{km},mb3.4/7, mbtmp3.7/12,MS3.8/1,Error ellipse: s-maj=26.2km s-min=18.9km az=31.0*

*NNC **25** 13:53:33.7±5.4,37°.12N×70°.85E,h164^{km}±78^{km},mb2.6, mpv3.4,Error ellipse: s-maj=46.5km s-min=31.0km az=30.0*

ISC 25 13:53:25.8±1.0,36°.66N±0°.08×70°.83E±0°.08,h100^{km},n20, σ2^{s}48/25,mb3.7/7,6C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.44	358	⇓P	Pn	13 54 59.5	+1.5
	2.5nm,0.3s,baz=183,slow=13,SNR=74						
KK31				⇓S	Sn	13 56 09.8	-0.2
	3.7nm,0.7s,baz=174,slow=16,SNR=8.8						
AAK	Ala-Archa	6.60	24	P	Pn	13 55 01.5	+1.2
	3.5nm,0.4s,baz=198,slow=5.8,SNR=19						
AAK				S	Sn	13 56 15.8	+1.7
	1.2nm,0.3s,baz=3.2,slow=19,SNR=2.0						
CHMS	Chumysh	7.01	24	⇑P	Pn	13 55 05.4	-0.3
	2.3nm,0.4s						
CHMS				⇑S	Sn	13 56 22.6	-1.3
	3.1nm,0.8s						
TKM2	Tokmak 2	7.24	29	⇑P	Pn	13 55 14.8	+5.7
	0.3nm,0.3s						
TKM2				⇓S	Sn	13 56 29.3	-0.6
	2.4nm,0.8s						
GEYT	Alibeck	10.21	281	P	Pn	13 55 57.2	+7.9
	1.2nm,0.4s,baz=96,slow=15,SNR=4.9						
GEYT				S	Sn	13 57 39.8	-2.1
	1.7nm,0.4s,baz=193,slow=20,SNR=4.0						
MKAR	Makanchi Array	13.24	37	P	Pn	13 56 28.8	-0.9
	0.1nm,0.5s,baz=220,slow=15,SNR=1.7						
AB31	Akbulak array	14.88	331	⇑P	Pn	13 56 51.0	+0.3
	0.5nm,0.4s,baz=143,slow=12,SNR=30						
AB31				⇑S	Sn	13 59 30.0	-4.7
	0.7nm,0.6s,baz=151,slow=23,SNR=5.3						
BVAR	Borovoye Array	16.36	359	P	P	13 57 10.9	+0.5
	0.4nm,0.5s,baz=169,slow=12,SNR=1.9						
AKTO	Aktyubinsk	16.57	330	⇑P	P	13 57 13.8	+1.1
	0.5nm,0.5s						
AKTO				⇓S	Sn	14 00 11.4	-4.2
	0.9nm,0.8s						
AKTO	Aktyubinsk	16.57	330	P	P	13 57 16.2	+3.5
	2.8nm,0.7s,baz=159,slow=6.6,SNR=11						
AKTO				S	Sn	14 00 11.4	-4.2
	0.6nm,0.5s,baz=213,slow=18,SNR=1.7						
ZALV	Zalesovo Beam	19.82	25	P	P	13 57 47.7	-0.6
	0.4nm,0.4s,baz=194,slow=10.0,SNR=2.7						
CMAR	Chiang Mai Arr	30.65	119	P	P	13 59 28.9	-1.9
	0.5nm,0.3s,baz=288,slow=6.6,SNR=4.4						
	0.5nm,0.3s						
FINES	FINESS Array B	37.27	326	P	P	14 00 30.8	+3.2
	1.0nm,0.7s,baz=108,slow=12,SNR=4.0						
	1.0nm,0.7s						
ARCES	ARCESS Array B	40.94	338	P	P	14 01 00.6	+2.5
	3.3nm,1.0s,baz=112,slow=9.8,SNR=1.6						
	3.3nm,1.0s						
HFS	Hagfors	42.85	322	P	P	14 01 16.7	+3.0
	0.8nm,0.4s,baz=102,slow=13,SNR=1.6						
	0.8nm,0.4s						
NB2	NORSAR Subarra	44.17	323	P	P	14 01 27.0	+2.7
	comp=Z,0.4nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.17	323	P	P	14 01 26.7	+2.4
	comp=Z,0.4nm,0.5s,baz=98,slow=7.9,SNR=3.3						
	comp=Z,0.4nm,0.5s						
JCJ	Chichijima	60.10	77	LR	LR	14 33 27.7	
	comp=Z,65nm,18.1s,baz=108,slow=40						
YKA	Yellowknife Ar	81.09	3	P	P	14 05 30.7	+1.2
	comp=Z,0.2nm,0.6s,baz=349,slow=6.0,SNR=4.7						
	comp=Z,0.2nm,0.6s						
ASAR	Alice Springs	84.46	125	P	P	14 05 45.0	-2.5
	comp=Z,0.3nm,0.7s,baz=330,slow=5.4,SNR=2.0						
	comp=Z,0.3nm,0.7s						

*IDC **25** 14:03:06.7±1.2,24°.34S×171°.54E,h0^{km},mb3.9/5, mbtmp3.8/6,ML3.5/1,MS3.5/12,Error ellipse: s-maj=36.6km s-min=25.1km az=26.0*

*NEIC **25** 14:03:08.4±1.5,24°.52S±0°.07×171°.6E±0°.2,h15^{km}±7^{km}, mb4.1/8,Error ellipse: s-maj=23.4km s-min=10.8km az=88.0*

*NOU **25** 14:03:43.7,22°.75S×169°.40E,h160^{km},MLv3.6/7, Southeast of Loyalty Islands*

ISC 25 14:03:08.0±1.0,24°.4S±0°.1×171°.7E±0°.1,h10^{km},n41, σ1^{s}83/23,mb4.1/8,MS3.5/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	Pines Island,	4.25	294		Pn	14 04 15.2	+2.4
PINNC	Pines Island,	4.25	294	P	Pn	14 04 17.3	+4.4
MARNC	Mare, Loyalty	4.43	310		Pn	14 04 16.9	+1.6
MARNC	Mare, Loyalty	4.43	310	P	Pn	14 04 17.3	+2.0
OUENC	Ouen Island, N	4.84	293		Pn	14 04 22.0	+1.0
OUENC	Ouen Island, N	4.84	293	P	Pn	14 04 23.4	+2.4
YATNC	Mamie plateau,	4.96	297	P	Pn	14 04 24.8	+2.1
ONTNC	Ouen Toro	5.21	293		Pn	14 04 26.0	-0.1
ONTNC	Ouen Toro	5.21	293	P	Pn	14 04 29.4	+3.3
DZM	Mont Dzumac	5.32	295	P	Pn	14 04 28.6	+0.9
DZM	Mont Dzumac	5.32	295	Pn	Pn	14 04 28.2	+0.5
	1.8nm,0.3s,baz=120,slow=8.3,SNR=50						
DZM				Sn	Sn	14 05 28.2	-1.0
	18nm,0.3s,baz=102,slow=18,SNR=20						
	5.6nm,0.4s						
LIFNC	LIFOU	5.45	311	Pn	Pn	14 04 26.3	-3.0
LIFNC	LIFOU	5.45	311	P	Pn	14 04 29.0	-0.3
KOUNC	Koumac, New Ca	7.82	298		Pn	14 05 03.5	+1.6
RAO	Raoul Island	10.49	120	LR	LR	14 08 39.0	
	comp=Z,129nm,21.3s,baz=355,slow=31						
URZ	Urewera	14.57	163	LR	LR	14 11 19.3	
	comp=Z,190nm,20.8s,baz=121,slow=34						
CTA	Charters Tower	23.88	275	LR	LR	14 17 39.8	
	comp=Z,90nm,18.8s,baz=94,slow=37						
RAR	Rarotonga	26.51	89	LR	LR	14 18 56.4	
	comp=Z,35nm,18.2s,baz=169,slow=36						
STKA	Stephens Creek	27.46	247	P	P	14 08 52.7	-1.7
STKA				IAmb	IAmb	14 09 28.8	
	comp=Z,3.1nm,1.5s						
STKA	Stephens Creek	27.46	247	LR	LR	14 19 33.6	
	comp=Z,88nm,19.1s,baz=29,slow=36						
AS31	Alice Springs	34.41	263	P	P	14 09 52.8	-3.0
ASAR	Alice Springs	34.41	263	P	P	14 09 53.2	-2.6
ASAR	Alice Springs	34.41	263	P	P	14 09 55.7	-0.2
	comp=Z,0.5nm,0.8s,baz=100,slow=10,SNR=8.7						
	comp=Z,0.5nm,0.8s						
WB0	Warramunga Arr	34.76	270	P	P	14 09 57.0	-1.9
WB0				IAmb	IAmb	14 10 23.1	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	34.77	270	P	P	14 09 56.5	-2.4
WRA	Warramunga Arr	34.77	270	P	P	14 09 57.2	-1.7
	comp=Z,0.3nm,0.6s,baz=98,slow=8.2,SNR=6.5						
	comp=Z,0.3nm,0.6s						
FITZ	Fitzroy Crossi	43.19	269	P	P	14 11 08.3	-1.1
FITZ				IAmb	IAmb	14 11 21.3	
	comp=Z,4.6nm,1.4s						
NWAO	Narrogin (SRO)	48.05	247	LR	LR	14 31 27.1	
	comp=Z,52nm,20.2s,baz=235,slow=35						
VNDA	Vanda	53.38	183	LR	LR	14 32 33.9	
	comp=Z,66nm,19.3s,baz=7.0,slow=33						
QSPA	South Pole Qui	65.67	180	P	P	14 13 52.8	+0.3
QSPA				IAmb	IAmb	14 14 00.7	
	comp=Z,4.5nm,1.1s						
QSPA	South Pole Qui	65.67	180	P	P	14 13 53.0	+0.6
	comp=Z,3.5nm,0.9s,baz=38,slow=2.4,SNR=14						
	comp=Z,3.5nm,0.9s						
MJB9	Matsu-Tunnel	68.35	331	P	P	14 14 06.3	-3.4
ASAJ	Asahikawa	73.21	339	LR	LR	14 40 52.1	
	comp=Z,34nm,21.3s,baz=141,slow=31						
USA0B	Ussuriysk Arra	77.33	332	P	P	14 15 02.1	-0.6
USRK	Ussuriysk Ar.	77.33	332	P	P	14 15 02.5	-0.3
CMAR	Chiang Mai Arr	82.65	294	LR	LR	14 54 47.5	
	comp=Z,19nm,18.2s,baz=80,slow=38						
MA2	Magadan	85.42	350	LR	LR	14 50 50.6	
	comp=Z,27nm,18.5s,baz=134,slow=34						
YBH	Yreka Blue Hor	89.49	43	LR	LR	14 45 41.8	
	comp=Z,40nm,21.0s,baz=312,slow=28						
NVAR	Mina Array Bea	90.57	48	P	P	14 16 12.1	+1.3
	comp=Z,0.7nm,0.7s,baz=228,slow=7.7,SNR=6.4						
	comp=Z,0.7nm,0.7s						
YAK	Yakutsk	92.46	342	LR	LR	14 52 34.6	
	comp=Z,20nm,20.4s,baz=174,slow=32						
SONM	Songino Array	92.67	322	P	P	14 16 19.0	-1.1
	comp=Z,0.6nm,0.7s,baz=123,slow=5.3,SNR=4.1						
	comp=Z,0.6nm,0.7s						

IDC 25 14:10:42.2±4.7,6°.08S×132°.23E,h0^{km},mb3.3/1, mbtmp3.1/3,ML3.1/2,MS3.8/1,Error ellipse: s-maj=304.5km s-min=32.8km az=74.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.93	172	Pn	Pn	14 14 00.7	-0.3
	0.1nm,0.3s,baz=351,slow=13,SNR=5.9						
WRA				Sn	Sn	14 16 22.4	-14
	0.3nm,0.3s,baz=334,slow=25,SNR=2.5						
	0.2nm,0.3s						
ASAR	Alice Springs	17.56	175	P	Pn	14 14 48.9	+0.3
	0.1nm,0.3s,baz=355,slow=14,SNR=9.8						
ASAR				S	Sn	14 17 49.6	-15
	0.2nm,0.4s,baz=355,slow=28,SNR=5.2						
	0.2nm,0.5s						
MJAR	Matsushiro Arr	42.77	7	LR	LR	14 33 30.3	
	comp=Z,131nm,21.7s,baz=68,slow=32						
MKAR	Makanchi Array	68.70	326	P	P	14 21 47.7	0.0
	0.1nm,0.5s,baz=108,slow=7.8,SNR=4.3						
	0.1nm,0.5s						

*IDC **25** 14:23:11.2±1.8,0°.55S×99°.06E,h0^{km},mb4.0/9, mbtmp4.0/10,ML4.5/1,MS3.8/3,Error ellipse: s-maj=68.1km s-min=18.8km az=56.0*

*NEIC **25** 14:23:19.9±1.4,0°.45S±0°.09×99°.15E±0°.08,h58^{km}±9^{km}, mb4.2/15,Error ellipse: s-maj=14.7km s-min=8.8km az=222.0*

*DJA **25** 14:23:19.2±0.4,0°.5S±3°×9°.9E±°,h79^{km}±13^{km},M4.7/16, mB5.4/6,mb4.7/7,MLv4.6/16,Mw4.2/21,Mw(mB)4.8/6*

ISC 25 14:23:18.9±0.6,0°.38S±0°.05×99°.25E±0°.06,h50^{km},n62, σ1^{s}07/51,mb4.1/16,MS3.6/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.95	190	P	Pn	14 23 37.1	+1.0
PBSI	Pulau Batu	1.02	288	P	Pn	14 23 37.6	+0.7
BKNI	Bangkinang	1.92	69	Pn	Pn	14 23 51.4	+2.1
BKNI	Bangkinang	1.92	69	P	Pn	14 23 48.2	-1.1
GSI	Gunungsitoli	2.37	315		Pn	14 23 55.9	+0.6
GSI	Gunungsitoli	2.37	315	P	Pn	14 23 56.1	+0.8
PPSI	Pulau Pagai	2.49	162	P	Pn	14 23 57.4	+0.4
KRJI	Kerinci	2.79	128	P	Pn	14 24 03.4	+2.2
RPSI	Rantau Prapat	3.07	354		Pn	14 24 06.8	+1.8
SNSI	Sinabang, Aceh	4.03	313	P	Pn	14 24 18.3	+0.2
KCSI	Kotacane, Aceh	4.15	339	P	Pn	14 24 20.8	+1.0
DSRI	Dabo	5.33	91	P	Pn	14 24 36.9	+0.9
	18nm,0.9s,924nm0.2nm						
MNAI	Manna	5.42	137	Pn	Pn	14 24 38.8	+1.6
MNAI	Manna	5.42	137	P	Pn	14 24 38.4	+1.2
	179nm,0.8s,6µm1.0nm						
MLSI	Meulaboh, Aceh	5.42	328	P	Pn	14 24 37.5	+0.2
	47nm,1.0s,0.4nm						
TPRI	Tanjung Pinang	5.43	76	P	Pn	14 24 36.9	-0.5
	41nm,0.6s,12µm0.8nm						
LHMI	Lhok Sumawe	6.03	338	Pn	Pn	14 24 48.3	+2.7
LWLI	Liwa	6.66	134	P	Pn	14 24 55.0	+0.7
	69nm,0.5s,4µm1.9nm						
KASI	Kota Agung	7.32	134	P	Pn	14 25 04.3	+1.0
	57nm,0.8s,0.2nm						
CNJI	Cibinong	10.45	131	P	Pn	14 25 43.7	-2.5
	10nm,0.7s,405nm						
XMIS	Christmas Isla	11.88	148	Pn	Pn	14 25 60.0	-5.9
UGM	Wanagama	13.50	124	Pn	Pn	14 26 27.1	-0.8
JAGI	Jajag, Banyuwa	16.88	119	P	Pn	14 27 12.8	+0.9
JAGI				IAmb	IAmb	14 27 32.5	
	comp=Z,28nm,1.4s						
CMAR	Chiang Mai Arr	18.72	359	P	P	14 27 35.0	+1.5
CMAR	Chiang Mai Arr	18.72	359	P	P	14 27 34.8	+1.2
	comp=Z,0.6nm,0.3s,baz=190,slow=10,SNR=9.2						
	comp=Z,1.3nm,0.5s						
CRAI	Chiangrai	20.51	3	P	P	14 27 53.5	+0.4
SLVN	Son La	22.05	12	P	P	14 28 10.3	+0.5
SHL	Shillong	26.76	345	P	P	14 28 54.7	+0.4
MBWA	Marble Bar	28.75	137	P	P	14 29 10.1	-1.9
MBWA				IAmb	IAmb	14 29 50.9	
	comp=Z,14nm,1.3s						
PSA00	Pilbara Seismi	29.11	138	P	P	14 29 15.0	-0.2
PSA00				IAmb	IAmb	14 29 42.2	
	comp=Z,5.9nm,1.3s						
LSA	Lhasa	30.89	346	P	P	14 29 31.5	+0.1
LSA				IAmb	IAmb	14 29 34.8	
	comp=Z,2.5nm,0.7s						
H01W3	Cape Leeuwin H	37.04	159	T	T	15 08 36.3	
	baz=334,slow=76,SNR=5.6						
H01W2	Cape Leeuwin H	37.05	159	T	T	15 08 41.9	
	baz=334,slow=76,SNR=4.3						
H01W1	Cape Leeuwin H	37.05	159	T	T	15 08 37.9	
	baz=334,slow=76,SNR=4.5						
WRA	Warramunga Arr	39.47	122	P	P	14 30 44.3	-0.6
	comp=Z,0.6nm,0.5s,baz=303,slow=9.0,SNR=7.4						
	comp=Z,0.6nm,0.5s						
WRAB	Tennant Creek	39.47	122	P	P	14 30 44.4	-0.5
WRAB				IAmb	IAmb	14 30 52.6	
	comp=Z,9.0nm,1.5s						
WB2	Warramunga Arr	39.48	122	P	P	14 30 44.0	-0.9
WB2				IAmb	IAmb	14 31 22.1	
	comp=Z,3.8nm,0.9s						
GTA	Gaotai	39.60	1	P	P	14 30 46.0	+0.2
GTA				pP	pP	14 30 53.3	-5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FORT	Forrest	40.76	141	P	P	14 30 56.7	+1.4
ASAR	Alice Springs	40.81	127	P	P	14 30 55.2	-0.8
	comp=Z,0.4nm,0.4s,baz=302,slow=8.0,SNR=8.4						
	comp=Z,0.4nm,0.4s						
SONM	Songino Array	48.42	6	P	P	14 31 56.9	+0.5
SONM				IAmb	IAmb	14 31 57.9	
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	48.42	6	P	P	14 31 57.0	+0.7
	comp=Z,2.6nm,0.5s,baz=187,slow=9.7,SNR=27						
	comp=Z,2.6nm,0.5s						
MK31	Makanchi Array	49.28	345	P	P	14 32 02.5	-0.3
MKAR	Makanchi Array	49.28	345	P	P	14 32 02.3	-0.5
MKAR	Makanchi Array	49.28	345	P	P	14 32 03.0	+0.3
	comp=Z,0.6nm,0.3s,baz=155,slow=8.4,SNR=20						
MKAR				LR	LR	14 57 29.3	
	comp=Z,30nm,19.4s,baz=139,slow=42						
	comp=Z,0.6nm,0.3s						
MAKZ	Makanchi	49.37	344	P	P	14 32 03.2	-0.3
MAKZ				IAmb	IAmb	14 32 18.9	
	comp=Z,1.1nm,0.7s						
HIA	Hailar	52.51	17	P	P	14 32 27.8	+0.8
USRK	Ussuriysk Ar.	53.10	29	P	P	14 32 31.4	0.0
	comp=Z,5.3nm,0.7s,baz=197,slow=4.4,SNR=4.2						
	comp=Z,5.3nm,0.7s						
KURBB	Kurchatov Arra	53.79	344	P	P	14 32 36.0	-0.4
	comp=Z,0.3nm,0.5s,baz=162,slow=7.3,SNR=4.6						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	55.45	350	P	P	14 32 47.8	-0.6
ZALV	Zalesovo Beam	55.45	350	P	P	14 32 47.5	-0.8
	comp=Z,2.7nm,0.4s,baz=160,slow=6.4,SNR=16						
ZALV				LR	LR	14 59 11.5	
	comp=Z,48nm,19.4s,baz=54,slow=39						
	comp=Z,2.7nm,0.4s						
BVAR	Borovoye Array	58.41	340	P	P	14 33 09.2	-0.2
	comp=Z,0.7nm,0.5s,baz=155,slow=11,SNR=5.0						
	comp=Z,0.7nm,0.5s						
ABKAR	Akbulak array	59.87	331	P	P	14 33 18.2	-1.3
H04N2	CROZET ISLANDS	61.66	216	T	T	15 39 47.9	
	baz=56,slow=75,SNR=234						
H04N1	CROZET ISLANDS	61.67	216	T	T	15 39 48.4	
	baz=56,slow=75,SNR=215						
H04N3	CROZET ISLANDS	61.67	216	T	T	15 39 47.1	
	baz=56,slow=75,SNR=278						
H04S1	CROZET ISLANDS	61.97	215	T	T	15 40 09.9	
	baz=55,slow=75,SNR=9.2						
H04S3	CROZET ISLANDS	61.98	215	T	T	15 40 02.7	
	baz=55,slow=75,SNR=13						
H04S2	CROZET ISLANDS	61.98	215	T	T	15 40 14.6	
	baz=55,slow=75,SNR=8.1						
BRTR	Keskin Array B	71.68	312	LR	LR	15 05 19.1	
	comp=Z,308nm,21.7s,baz=90,slow=35						
BURAR	Bucovina Array	79.56	319	P	P	14 35 20.2	-0.6
ARCES	ARCESS Array B	84.70	340	P	P	14 35 47.3	+0.1
	comp=Z,1.8nm,0.9s,baz=74,slow=8.9,SNR=3.7						
	comp=Z,1.8nm,0.9s						

IDC 25 14:23:59.3±2.8,7°.34S×118°.86E,h0^{km},mb2.9/2, mbtmp3.1/3,ML3.3/1,Error ellipse: s-maj=266.1km s-min=28.9km az=53.0,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.56	131	P	P	14 28 28.9	+0.1
	0.1nm,0.3s,baz=312,slow=11,SNR=5.4						
	0.6nm,0.7s						
ASAR	Alice Springs	21.73	140	P	P	14 28 52.4	-0.1
	0.2nm,0.6s,baz=315,slow=8.7,SNR=9.0						
	0.2nm,0.6s						
MKAR	Makanchi Array	62.92	333	P	P	14 34 27.5	0.0
	0.1nm,0.4s,baz=146,slow=6.6,SNR=1.6						
	0.1nm,0.4s						

*BJI **25** 14:25:38.8±0.0,18°.81N×145°.77E,h234^{km},mb4.2/47, mB4.7/26*

*DJA **25** 14:25:38.6±0.5,19°.N±4°×14°.6E±°,h214^{km}±4^{km},M5.1/61, mb5.3/61,mB5.6/29,MLv5.1/1,Mw(mB)5.1/29*

*MOS **25** 14:25:39.6±0.9,18°.86N×145°.42E,h236^{km},mb4.6/25, Error ellipse: s-maj=10.5km s-min=5.5km az=105.5*

*NEIC **25** 14:25:40.9±1.7,18°.85N±0°.07×145°.6E±0°.1,h227^{km}±7^{km}, mb4.6/196,Error ellipse: s-maj=14.7km s-min=10.1km az=71.0*

*IDC **25** 14:25:41.5±0.6,18°.84N×145°.39E,h236^{km}±5^{km},mb4.1/35, mbtmp4.7/39,Error ellipse: s-maj=10.1km s-min=6.5km az=86.0*

ISC 25 14:25:41.2±0.4,18°.83N±0°.03×145°.55E±0°.06,h235^{km}±3^{km}, h236^{km}:pP-P,n652,σ1^{s}24/611,mb4.6/190,15C-2D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.25	187	Pn	Pn	14 26 59.0	-0.8
GUMO	Guam	5.25	187	P	Pn	14 26 59.5	-0.3
GUMO	Guam	5.25	187	P	Pn	14 26 59.0	-0.8
GUMO	Guam	5.25	187	P	Pn	14 26 58.6	-1.2
	614nm,1.0s,baz=177,slow=3.3,SNR=17						
GUMO				S	S	14 28 01.6	-0.6
	267nm,0.4s,baz=26,slow=22,SNR=5.2						
JCJ	Chichijima	8.79	340	Pn	Pn	14 27 41.2	-3.3
JCJ	Chichijima	8.79	340	P	Pn	14 27 37.0	-7.4
	332nm,0.5s,baz=100,slow=7.1,SNR=71						
JCJ				S	S	14 29 12.7	-11
	438nm,0.5s,baz=260,slow=23,SNR=3.9						
JMZ	Minamidaito 2	14.96	300	P	Pn	14 29 02.2	+0.7
JMZ	Minamidaito 2	14.96	300	P	Pn	14 29 04.0	+2.5
JHJ2	Mitsune	15.12	341		P	14 29 02.6	-0.6
JHJ2	Mitsune	15.12	341	P	Pn	14 29 04.3	+0.9
JHJ	Hachijo jima 2	15.14	341	P	P	14 29 03.4	+0.1
	59nm,0.3s,baz=270,slow=22,SNR=12						
JHJ				S	S	14 31 47.9	-2.7
	34nm,0.4s,baz=78,slow=21,SNR=1.5						
JSG	Sagara	17.08	339	P	P	14 29 24.0	-0.7
JSG	Sagara	17.08	339	P	Pn	14 29 27.7	+1.1
PATS	Pohnpei	17.22	132	P	Pn	14 29 28.1	-0.3
JOW	Kunigami	17.79	300	Pn	Pn	14 29 34.7	-0.3
JOW	Kunigami	17.79	300	P	Pn	14 29 35.1	+0.1
JOW	Kunigami	17.79	300	P	Pn	14 29 34.0	-1.0
	171nm,0.4s,baz=132,slow=11,SNR=42						
INU	Inuyama	18.10	337	P	P	14 29 35.2	-0.5
INU	Inuyama	18.10	337	P	P	14 29 36.8	+1.0
JMN	Monobe	18.13	327		P	14 29 36.8	+0.6
JMN	Monobe	18.13	327	P	Pn	14 29 38.5	-0.5
JGF	Kuroka	18.21	338	P	P	14 29 36.9	0.0
JGF	Kuroka	18.21	338	P	P	14 29 38.0	+1.0
MJAR	Matsushiro Arr	18.79	341	P	P	14 29 42.4	-0.8
	14nm,0.4s,baz=102,slow=11,SNR=106						
MJAR				S	S	14 33 04.0	-0.3
	6.4nm,0.6s,baz=116,slow=12,SNR=5.8						
MJAR				ScP	ScP	14 37 09.4	-3.4
	2.1nm,0.8s,baz=170,slow=3.1,SNR=5.2						
MAJO	Matsushiro	18.79	341	P	P	14 29 42.5	-0.8
MAJO	Matsushiro	18.79	341	P	P	14 29 43.4	+0.2
MAJO	Matsushiro	18.79	341	*i* P	P	14 29 42.4	-0.8
MJB9	Matsu-Tunnel	18.79	341	P	P	14 29 43.3	+0.1

KSRS pP **pP** **14 31 18.7 +0.4**
comp=Z,33nm,0.7s,baz=147,slow=8.7,SNR=5.1
KSRS ScP **ScP** **14 37 24.1 -2.0**
comp=Z,2.8nm,0.8s,baz=123,slow=2.3,SNR=9.2
comp=Z,8.6nm,0.7s
KS19 Wonju Array Si 24.19 324 IAmb IAmb 14 31 20.8
comp=Z,13nm,0.8s
FAKI Fak Fak 25.27 213 P **P** **14 30 45.9 -0.3**
FAKI Fak Fak 25.27 213 P **P** **14 30 46.6 +0.3**
FAKI Fak Fak 25.27 213 P **P** **14 30 45.8 -0.5**
comp=Z,75nm,0.7s
ASAJ Asahikawa 25.33 355 P **P** **14 30 47.8 +1.3**
comp=Z,14nm,0.6s,baz=233,slow=8.5,SNR=28
comp=Z,14nm,0.6s
LBMI Labuha 26.24 224 P **P** **14 30 54.9 -0.1**
comp=Z,62nm,1.1s,comp=Z,1µm
PSTR Posyet 26.83 335 *i* P **P** **14 30 59.4 -0.5**
NJ2 Nanjing 27.38 304 *e*P **P** **14 31 05.5 +0.6**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
MMPI Merauke 27.60 191 P **P** **14 31 07.2 +0.2**
comp=Z,193nm,1.0s
USA0B Ussuriysk Arra 27.73 339 *e*P **P** **14 31 07.5 -0.4**
USRK Ussuriysk Ar. 27.73 339 P **P** **14 31 07.3 -0.6**
comp=Z,2.5nm,0.6s,baz=139,slow=9.9,SNR=7.3
comp=Z,2.5nm,0.6s
PMG Port Moresby 28.11 177 P **P** **14 31 10.8 -0.8**
PMG Port Moresby 28.11 177 P **P** **14 31 11.2 -0.3**
PMG Port Moresby 28.11 177 *ce*P **P** **14 31 09.8 -1.7**
PMG pmax pmax
comp=Z,70nm,1.0s
YSS Yuzh-Sakhalins 28.14 356 P **P** **14 31 11.9 +0.4**
YSS Yuzh-Sakhalins 28.14 356 P **P** **14 31 12.3 +0.8**
YSS Yuzh-Sakhalins 28.14 356⇂ *e*P **P** **14 31 12.2 +0.8**
YSS *e* 14 31 59.3
YSS pmax pmax
comp=Z,20nm,0.5s
SANI Sanana 28.30 225 P **P** **14 31 13.7 +0.5**
SANI Sanana 28.30 225 P **P** **14 31 11.2 -2.0**
comp=Z,19nm,0.6s
GTOI Gorontalo 28.56 233 P **P** **14 31 15.6 0.0**
comp=Z,9.4nm,0.8s
MDJ Mudanjiang 28.96 336 P **P** **14 31 20.5 +1.7**
MDJ pP pP 14 32 05.0 +0.1
MDJ PcP **PcP** **14 34 22.3 +1.0**
MDJ S **S** **14 35 53.0 +1.1**
MDJ PcS **PcS** **14 38 07.3 +3.1**
MDJ pmax pmax
comp=Z,9.0nm,2.3s
MDJ pmax pmax
comp=Z,270nm,3.5s
MRSI Marisa 29.48 234 P **P** **14 31 24.1 +0.3**
comp=Z,74nm,0.8s,comp=Z,705nm
LUWI Luwuk 29.85 231 P **P** **14 31 26.9 -0.1**
LUWI Luwuk 29.85 231 P **P** **14 31 26.0 -1.0**
comp=Z,65nm,0.7s
TOLI2 Tolitoli 30.00 237 P **P** **14 31 29.1 +0.8**
SAUI Saumlaki 30.12 209 P **P** **14 31 29.9 +0.5**
comp=Z,97nm,0.8s
BNX BinXian 30.75 335 ⇓P **P** **14 31 35.8 +1.2**
BNX pmax pmax
comp=Z,8.0nm,0.6s
BNX pmax pmax
comp=Z,120nm,4.4s
HNR Honiara 31.47 152 P **P** **14 31 40.7 -0.5**
HNR Honiara 31.47 152 P **P** **14 31 41.3 +0.1**
HNR Honiara 31.47 152 P **P** **14 31 40.7 -0.5**
HNR pmax pmax
comp=Z,57nm,0.6s
TYV Tymovskoe 32.04 357 *e*P **P** **14 31 46.6 +0.9**
TYV pmax pmax
comp=Z,9.0nm,0.6s
TYV pmax pmax
comp=Z,100nm,3.9s
KLR Kul'dur 32.30 343 *ce*P **P** **14 31 48.0 0.0**
KLR pmax pmax
comp=Z,9.0nm,0.5s
KLR Kul'dur 32.30 343 P **P** **14 31 47.6 -0.4**
comp=Z,14nm,0.5s,baz=160,slow=10,SNR=43
KLR ScP **ScP** **14 37 48.3 -3.0**
comp=Z,3.3nm,0.7s,baz=339,slow=1.2,SNR=6.2
comp=Z,14nm,0.5s
COEN Coen 32.67 184 P **P** **14 31 51.3 -0.2**
HNS HongShan 32.68 311 *e*P **P** **14 31 53.8 +2.3**
BJI Beijing 32.94 316 P **P** **14 31 54.0 +0.3**
BJI pmax pmax
comp=Z,4.0nm,0.7s
TTSI Tana Toraja 33.37 232 P **P** **14 31 59.0 +1.3**
comp=Z,198nm,0.7s,comp=Z,2µm
DRS Darwin Rock St 34.26 206 P **P** **14 32 05.2 -0.1**
HEH HeiHe 34.53 339 *e*P **P** **14 32 06.3 -0.9**
HEH pmax pmax
comp=Z,8.0nm,0.9s
MTN Manton Dam 34.53 205 P **P** **14 32 07.2 -0.5**
MTN Manton Dam 34.53 205 P **P** **14 32 08.0 +0.4**
KAPI Kappang 34.75 230 P **P** **14 32 09.7 +0.2**
KAPI Kappang 34.75 230 P **P** **14 32 09.7 +0.2**
KAPI pmax pmax
comp=Z,69nm,0.6s
XLT XiLinHaoTe 35.13 322 *e*P **P** **14 32 11.8 -0.8**
XLT pmax pmax
comp=Z,4.0nm,0.9s
XLT pmax pmax
comp=Z,130nm,5.3s
SOEI Soe 35.32 218 P **P** **14 32 13.9 -0.6**
SOEI Soe 35.32 218 P **P** **14 32 13.2 -1.3**
comp=Z,104nm,0.7s
PETK Petropavlovsk- 35.49 13 P **P** **14 32 16.0 +0.6**
comp=Z,2.4nm,0.6s,baz=130,slow=6.5,SNR=24
PETK PcP **PcP** **14 34 39.2 0.0**
comp=Z,3.0nm,0.7s,baz=144,slow=6.6,SNR=2.3
comp=Z,2.4nm,0.6s
PET Petropavlovsk 35.62 14 *e*P **P** **14 32 14.1 -2.3**
PET *e**PP **pP** **14 33 01.8 -1.7**
PET *e**SP **sP** **14 33 26.9 -3.3**
PET *e*S **S** **14 37 30.8 -3.8**
PET pmax pmax
comp=Z,20nm,1.1s
MMRI Maumere 35.69 222 P **P** **14 32 17.0 -0.5**
comp=Z,126nm,0.8s
MTKI Muara Teweh, K 35.96 240 P **P** **14 32 20.4 +0.5**
EDFI Ende, Flores 36.12 223 P **P** **14 32 20.4 -0.9**
comp=Z,47nm,0.8s,comp=Z,538nm
HHC Hu-ho-hao-te 36.41 314 *e*P **P** **14 32 24.3 +0.8**
HHC sP sP 14 33 36.8 -0.1
HHC pmax pmax
comp=Z,8.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,5.1s
MTSU Mount Surprise 36.76 182 P **P** **14 32 27.2 +0.7**
BTO Baotou 37.35 313 *e*P **P** **14 32 34.5 +3.1**
BTO pP **pwP** **14 33 21.3 -2.4**
BTO sP **sP** **14 33 46.5 +1.7**
BTO PP **PnPn** **14 34 09.8 +4.0**
BTO S **S** **14 38 08.0 +6.5**
BTO sS **sS** **14 39 29.5 +3.1**
BTO pmax pmax
comp=Z,15nm,0.5s
BTO pmax pmax
comp=Z,310nm,4.6s
BTO LR LR
comp=Z,300nm,15.5s
BTO LR LR
comp=Z,290nm,13.8s
BTO LR LR
comp=Z,340nm,13.2s
ZEA Zeya 37.60 342 *e*P **P** **14 32 33.6 +0.5**
ZEA *e* 14 33 19.5
ZEA pmax pmax
comp=Z,10.0nm,0.4s
TV1H Townsville Har 37.88 178 P **P** **14 32 35.6 -0.2**
STKI Sintang 38.29 245 P **P** **14 32 39.6 +0.2**
comp=Z,44nm,0.9s
CTA Charters Tower 38.69 179 P **P** **14 32 42.8 +0.2**
CTAO Charters Tower 38.69 179 P **P** **14 32 42.0 -0.6**
CTAO Charters Tower 38.69 179 P **P** **14 32 42.7 +0.2**
CTAO Charters Tower 38.69 179 P **P** **14 32 42.0 -0.6**
CTAO pmax pmax
comp=Z,32nm,0.7s
PLAI Plampang 38.80 227 P **P** **14 32 42.9 -0.7**
PLAI Plampang 38.80 227 P **P** **14 32 43.2 -0.4**
comp=Z,112nm,0.5s,comp=Z,2µm
SLVN Son La 39.11 281 IAmb IAmb 14 32 48.8
comp=Z,8.8nm,0.8s
TWSI Taliwang, Sumb 39.37 228 P **P** **14 32 47.7 -0.6**
comp=Z,248nm,0.8s,comp=Z,2µm
CD2 Chengdu 39.56 296 P **P** **14 32 50.8 +1.0**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
QIS Mount Isa 39.58 189 P **P** **14 32 50.7 +0.7**
WRAB Tennant Creek 40.06 196 P **P** **14 32 54.4 +0.5**
WRAB Tennant Creek 40.06 196 P **P** **14 32 54.4 +0.5**
WRAB pmax pmax
comp=Z,178nm,0.7s
WRA Warramunga Arr 40.07 197 IAmb IAmb 14 32 55.6
comp=Z,22nm,0.8s
WRA Warramunga Arr 40.07 197 *i* P **P** **14 32 50.7 -3.3**
WRA pmax pmax
comp=Z,130nm,0.6s
WRA Warramunga Arr 40.07 197 P **P** **14 32 54.3 +0.2**
comp=Z,130nm,0.6s,baz=16,slow=8.8,SNR=67
WRA ScP **ScP** **14 38 19.4 -1.1**
comp=Z,4.9nm,0.8s,baz=12,slow=4.0,SNR=10
LZH Lanzhou 40.45 304 *e*P **P** **14 32 58.3 +1.1**
LZH pmax pmax
comp=Z,12nm,1.1s
MA2 Magadan 40.87 4 P **P** **14 33 00.9 +0.9**
MA2 Magadan 40.87 4 *i* P **P** **14 32 59.2 -0.8**
MA2 pmax pmax
comp=Z,16nm,1.5s
PZH PanZhiHua 40.98 289 P **P** **14 33 02.5 +0.9**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,4.5s
BLJI Banyuglugur 41.11 233 P **P** **14 33 03.5 +0.9**
comp=Z,142nm,0.7s,comp=Z,2µm
JAGI Jajag, Banyuwa 41.17 232 P **P** **14 33 01.3 -1.7**
JAGI Jajag, Banyuwa 41.17 232 P **P** **14 33 01.9 -1.2**
comp=Z,63nm,0.8s,comp=Z,2µm
GRJI Gresik 41.44 235 P **P** **14 33 06.4 +1.1**
comp=Z,330nm,0.7s,comp=Z,3µm
GMJI Gumukmas 41.57 232 P **P** **14 33 06.2 -0.1**
FITZ Fitzroy Crossi 41.59 209 P **P** **14 33 06.7 +0.3**
FITZ IAmb IAmb 14 33 07.9
comp=Z,23nm,0.8s
FITZ Fitzroy Crossi 41.59 209 P **P** **14 33 07.1 +0.7**
RK1H Rockhampton Ha 42.24 173 P **P** **14 33 10.9 -0.6**
CRAI Chiangrai 42.50 280 P **P** **14 33 15.1 +1.3**
NGJI Ngawi 42.51 235 P **P** **14 33 15.2 +1.3**
comp=Z,50nm,0.8s
PWJI Pagerwojo 42.65 234 P **P** **14 33 14.8 -0.3**
comp=Z,149nm,0.8s,comp=Z,2µm
SONM Songino Array 42.95 321 P **P** **14 33 14.9 -2.3**
SONM Songino Array 42.95 321 P **P** **14 33 17.0 -0.2**
comp=Z,2.7nm,0.5s,baz=129,slow=7.3,SNR=24
SONM ScP **ScP** **14 38 28.9 -2.8**
comp=Z,1.9nm,0.8s,baz=134,slow=3.5,SNR=9.0
comp=Z,2.7nm,0.5s
SMRI Semarang 43.12 237 P **P** **14 33 19.2 +0.4**
comp=Z,85nm,1.3s
KOUNC Koumac, New Ca 43.23 154 P **P** **14 33 19.9 +0.4**
KOUNC Koumac, New Ca 43.23 154 P **P** **14 33 20.4 +0.8**
UGM Wanagama 43.58 236 P **P** **14 33 22.9 +0.4**
UGM Wanagama 43.58 236 P **P** **14 33 22.1 -0.4**
comp=Z,139nm,0.9s
AS01 Alice Springs 43.73 195 P **P** **14 33 23.9 +0.4**
AS31 Alice Springs 43.74 196 P **P** **14 33 23.6 0.0**
AS31 IAmb IAmb 14 33 25.6
comp=Z,17nm,0.5s
ASAR Alice Springs 43.74 196 P **P** **14 33 23.9 +0.3**
comp=Z,26nm,0.6s,baz=16,slow=7.2,SNR=209
ASAR ScP **ScP** **14 38 33.2 -1.9**
comp=Z,2.6nm,0.9s,baz=22,slow=4.7,SNR=6.9
comp=Z,26nm,0.6s
CHTO Chiang Mai 44.01 278 P **P** **14 33 26.1 +0.3**
CHTO Chiang Mai 44.01 278 P **P** **14 33 26.2 +0.3**
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CM31 Chiang Mai Arr 44.06 277 P **P** **14 33 27.7 +1.4**
CMAR Chiang Mai Arr 44.06 277 P **P** **14 33 26.9 +0.5**
comp=Z,5.6nm,0.8s,baz=66,slow=6.8,SNR=42
CMAR PcP **PcP** **14 35 08.2 +0.8**
comp=Z,3.3nm,0.8s,baz=143,slow=1.2,SNR=7.8
CMAR ScP **ScP** **14 38 34.4 -2.3**
comp=Z,0.7nm,0.7s,baz=77,slow=1.8,SNR=4.2
comp=Z,5.6nm,0.8s
EIDS Eidsvold 44.27 173 P **P** **14 33 26.9 -0.8**
EIDS IAmb IAmb 14 33 29.1
comp=Z,14nm,0.8s
EIDS Eidsvold 44.27 173 P **P** **14 33 27.6 -0.1**
SEY Seymchan 44.31 4 *ce*P **P** **14 33 28.3 +0.7**
SEY pmax pmax
comp=Z,10.0nm,1.7s
GTA Gaotai 44.35 307 P **P** **14 33 31.3 +2.8**
GTA pP pP 14 34 14.3 -2.9
GTA PcP **PcP** **14 35 08.8 +0.6**
GTA ScP **ScP** **14 38 36.0 -1.6**
KPJI Karang Pucung 44.49 238 P **P** **14 33 29.5 -0.2**
comp=Z,83nm,0.9s
YAK Yakutsk 44.56 349 *e*P **P** **14 33 29.6 0.0**
YAK pmax pmax
comp=Z,19nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,1.0nm,0.9s
DSRI Dabo 44.57 249 P **P** **14 33 30.7 +0.4**
comp=E,39nm,1.1s,comp=E,1µm
LIFNC LIFDU 44.74 151 P **P** **14 33 32.5 +1.0**
QLP Quilpie 45.16 182 P **P** **14 33 34.2 -0.5**
LEM Lembang 45.26 239 P **P** **14 33 35.9 0.0**
comp=E,44nm,0.7s,baz=29,slow=8.0,SNR=11
comp=E,44nm,0.7s
LEM Lembang 45.26 239 P **P** **14 33 36.0 +0.1**
comp=E,55nm,0.8s
DZM Mont Dzumac 45.50 152 P **P** **14 33 38.4 +0.8**
BBJI Bungbulang 45.59 238 P **P** **14 33 37.0 -1.5**
YATNC Mamie plateau, 45.69 152 P **P** **14 33 39.0 0.0**
ATKA Atka Island 45.75 34 P **P** **14 33 40.8 +1.7**
DBJI Dranga 45.81 240 P **P** **14 33 39.3 -0.8**
comp=E,49nm,0.8s
CNJI Cibinong 45.93 239 P **P** **14 33 39.5 -1.5**
comp=E,25nm,0.9s
OUENC Ouen Island, N 45.98 152 P **P** **14 33 41.8 +0.6**
OUENC Ouen Island, N 45.98 152 P **P** **14 33 42.8 +1.6**
PINNC Pines Island, 46.42 152 P **P** **14 33 44.2 -0.4**
INKA Innaminka 46.53 186 P **P** **14 33 45.2 -0.2**
WRKA Warakurna 46.73 202 P **P** **14 33 47.8 +0.8**
MBWA Marble Bar 47.10 214 P **P** **14 33 49.9 -0.1**
MBWA IAmb IAmb 14 33 51.1
comp=Z,52nm,1.0s
MBWA Marble Bar 47.10 214 P **P** **14 33 50.3 +0.3**
KASI Kota Agung 47.13 243 P **P** **14 33 49.0 -1.3**
comp=Z,99nm,0.5s,comp=Z,1µm
LWLI Liwa 47.24 244 P **P** **14 33 50.5 -0.8**
comp=Z,104nm,0.8s
OOD Oodnadatta 47.33 192 P **P** **14 33 51.8 +0.3**
BKNI Bangkinang 47.37 252 P **P** **14 33 51.5 -0.7**
BKNI Bangkinang 47.37 252 P **P** **14 33 50.6 -1.6**
comp=Z,211nm,0.5s
PSA00 Pilbara Seismi 47.38 213 IAmb IAmb 14 33 53.5
comp=Z,34nm,1.1s
PSA00 Pilbara Seismi 47.38 213 P **P** **14 33 52.0 -0.1**
GOMU GeErMu 47.66 302 P **P** **14 33 56.8 +2.2**
GOMU pmax pmax
comp=Z,6.0nm,0.7s
RPSI Rantau Prapat 48.34 256 IAmb IAmb 14 34 01.7
comp=Z,17nm,0.8s
XMI Christmas Isla 48.90 237 P **P** **14 34 03.9 0.0**
XMIS Christmas Isla 48.95 237 P **P** **14 34 04.0 -0.2**
NIKH Nikolski High 48.98 35 P **P** **14 34 05.8 +1.9**
NIKH Nikolski High 48.98 35 P **P** **14 34 03.3 -0.6**
baz=244
ARMA Armidale 49.31 173 IAmb IAmb 14 34 19.7
comp=Z,40nm,1.4s
ARMA Armidale 49.31 173 P **P** **14 34 06.8 0.0**
LCRK Leigh Creek 49.50 188 P **P** **14 34 08.2 +0.2**
SHL Shillong 49.87 288 P **P** **14 34 10.8 -0.4**
SHL IAmb IAmb 14 34 12.6
comp=Z,12nm,0.5s
SHL Shillong 49.87 288 P **P** **14 34 10.9 -0.4**
SHL pmax pmax
comp=Z,12nm,0.5s
MULG Mulgathing 50.07 193 P **P** **14 34 12.7 +0.4**
CMSA Cobar Meteorol 50.08 180 P **P** **14 34 12.2 -0.2**
GSI Gunungsitoli 50.12 255 P **P** **14 34 14.1 +1.0**
SPIA Saint Paul Isl 50.29 30 P **P** **14 34 13.8 +0.2**
baz=239
STKA Stephens Creek 50.56 184 P **P** **14 34 15.9 -0.1**
STKA Stephens Creek 50.56 184 *i* P **P** **14 34 13.8 -2.2**
STKA Stephens Creek 50.56 184 P **P** **14 34 15.7 -0.3**
comp=Z,13nm,0.5s,baz=1.6,slow=8.1,SNR=41
comp=Z,13nm,0.5s
UNV Unalaska Valle 50.63 35 P **P** **14 34 17.2 +1.0**
UNV Unalaska Valle 50.63 35 P **P** **14 34 16.0 -0.2**
baz=245
BILL Bilibino 50.91 10 P **P** **14 34 19.2 +1.1**
BILL IAmb IAmb 14 34 22.6
comp=Z,13nm,0.8s
BILL Bilibino 50.91 10⇂ *e*P **P** **14 34 18.1 -0.1**
BILL pmax pmax
comp=Z,30nm,1.7s
AKUT Akutan 51.14 35 P **P** **14 34 21.5 +1.5**
GIRL Giralia 51.34 218 P **P** **14 34 23.6 +1.7**
MGCD Mangrove Creek 52.02 174 P **P** **14 34 27.1 +0.3**
FORT Forrest 52.12 199 P **P** **14 34 28.4 +0.9**
BBOO Buckleboo 52.15 190 IAmb IAmb 14 34 30.9
comp=Z,54nm,1.3s
BBOO Buckleboo 52.15 190 P **P** **14 34 27.8 +0.1**
MEEK Meekatharra 52.22 211 P **P** **14 34 29.0 +0.6**
HTT Hallett 52.35 187 P **P** **14 34 29.6 +0.3**
SYDH Sydney Hard Ro 52.53 175 P **P** **14 34 30.8 +0.3**
FALS False Pass 52.69 34 P **P** **14 34 31.8 +0.4**
baz=248
TIXI Tiksi 53.72 354 P **P** **14 34 37.9 -0.8**
TIXI Tiksi 53.72 354 *i* P **P** **14 34 37.5 -1.2**
TIXI pmax pmax
comp=Z,2.0nm,0.4s
CAN Canberra 53.95 177 P **P** **14 34 41.5 +0.6**
CNB Canberra Magne 53.97 176 P **P** **14 34 41.6 +0.6**
WMQ Urumqi 54.11 311 *e*P **P** **14 34 43.3 +1.2**
WMQ pmax pmax
comp=Z,14nm,0.9s
SDPT Sand Point 54.44 35 P **P** **14 34 45.5 +1.4**
SDPT Sand Point 54.44 35 P **P** **14 34 43.6 -0.5**
baz=250
CHNA Chernabura Isl 54.75 35 P **P** **14 34 46.2 -0.2**
baz=251
KMBL Kambalda 54.84 205 P **P** **14 34 47.6 +0.3**
M13K Dall Lake 54.99 28 P **P** **14 34 48.3 +0.3**
baz=244
S14K Fog Glacier 55.25 34 P **P** **14 34 50.4 +0.4**
baz=250
DGZ Jazzator, Alta 55.33 318 *i* P **P** **14 34 50.4 -0.4**
DGZ pmax pmax
comp=Z,6.0nm,1.2s
ARPS Mount Arapiles 55.41 184 P **P** **14 34 51.5 +0.3**
O14K Tigyukauivet M 55.47 30 P **P** **14 34 51.8 +0.4**
baz=247
MORW Morawa 55.49 212 P **P** **14 34 52.6 +0.6**
N14K Kuskokwak Cree 55.54 29 P **P** **14 34 52.3 +0.5**
baz=246
L14K Kuka Creek 55.69 27 P **P** **14 34 52.6 -0.3**
baz=244
MILA Mila 55.69 177 P **P** **14 34 54.4 +1.1**
TNA Tin City 55.74 21 P **P** **14 34 54.0 +0.8**
baz=236
M14K Bethel 55.76 28 P **P** **14 34 53.2 -0.2**
baz=245
J14K Nanvaranak Lak 55.96 26 P **P** **14 34 54.2 -0.6**
baz=242
TOO Toolangi 56.10 180 IAmb IAmb 14 34 57.2
comp=Z,23nm,0.8s
TOO Toolangi 56.10 180 P **P** **14 34 56.8 +0.6**
O15K Ungalikthiuk R 56.12 30 P **P** **14 34 55.7 -0.3**
baz=248
ANM Nome 56.13 23 P **P** **14 34 56.9 +0.9**
ANM Nome 56.13 23 P **P** **14 34 56.2 +0.2**
baz=240
ANM Nome 56.13 23 P **P** **14 34 56.9 +0.9**
ANM pmax pmax
comp=Z,4.0nm,0.8s
F14K Arctic Creek 56.26 22 P **P** **14 34 57.7 +0.8**
baz=238
M15K Kasigluk River 56.30 28 P **P** **14 34 57.7 +0.4**
baz=247
L15K Ungalak Mounta 56.35 27 P **P** **14 34 58.5 +0.9**
baz=245
N15K Kwethluk River 56.37 29 P **P** **14 34 58.7 +0.9**
baz=248
BLDU Ballidu 56.45 210 P **P** **14 34 58.5 -0.2**
K15K Wolf Creek Mou 56.59 27 P **P** **14 35 00.8 +1.5**
baz=245
R16K Pilot Point 56.69 33 P **P** **14 35 00.0 0.0**
baz=252
KLBR Kellerberrin 56.79 208 P **P** **14 35 01.8 +0.7**
G15K Niukluk 56.84 23 P **P** **14 35 02.2 +1.2**
baz=241
P16K Nushagak River 56.96 31 P **P** **14 35 03.0 +1.1**
baz=250
F15K North Star Dit 56.98 22 P **P** **14 35 03.2 +1.2**
baz=240
N16K Nishlik Lake 57.10 29 P **P** **14 35 04.1 +1.2**
baz=249
O16K Kokwok River B 57.10 30 P **P** **14 35 03.5 +0.6**
baz=250
M16K Timber Creek 57.21 29 P **P** **14 35 04.1 +0.4**
baz=248
L16K Owhat River 57.24 28 P **P** **14 35 04.2 +0.3**
baz=247
H16K Elim 57.35 24 P **P** **14 35 05.6 +1.0**
baz=243
J16K Anvik River 57.40 26 IAmb IAmb 14 35 17.9
comp=Z,7.0nm,0.7s
J16K Anvik River 57.40 26 P **P** **14 35 06.3 +1.3**
baz=245
I17K Unalakleet 57.62 25 IAmb IAmb 14 35 10.3
comp=Z,18nm,1.4s
I17K Unalakleet 57.62 25 P **P** **14 35 07.0 +0.5**
baz=245
O17K Koliganek Bris 57.64 30 P **P** **14 35 07.2 +0.6**
baz=251
G16K Koyuk River 57.66 23 P **P** **14 35 07.1 +0.4**
baz=242
P17K Kvichak River 57.77 31 P **P** **14 35 08.1 +0.6**
baz=252
MUN Mundaring 57.82 209 P **P** **14 35 09.0 +0.7**
ZALV Zalesovo Beam 57.82 322 P **P** **14 35 07.0 -1.0**
ZALV Zalesovo Beam 57.82 322 P **P** **14 35 07.0 -1.0**
comp=Z,2.6nm,0.5s,baz=110,slow=7.4,SNR=6.9
ZALV pP **PcP** **14 35 58.5 +0.7**
comp=Z,9.6nm,0.9s,baz=99,slow=7.1,SNR=4.3
ZALV ScP **ScP** **14 39 32.9 -2.3**
comp=Z,0.7nm,0.5s,baz=126,slow=3.8,SNR=3.8
comp=Z,2.6nm,0.5s
N17K Nushagak Hills 57.85 29 P **P** **14 35 08.9 +0.8**
baz=250
L17K Donlin 57.92 27 P **P** **14 35 09.3 +0.7**
baz=248
M17K Holitna River 58.04 28 P **P** **14 35 10.1 +0.7**
baz=249
C16K Lisburne Hills 58.09 19 IAmb IAmb 14 35 13.5
comp=Z,7.5nm,0.8s
C16K Lisburne Hills 58.09 19 P **P** **14 35 10.7 +1.1**
baz=237
K17K Iditarod 58.14 27 IAmb IAmb 14 35 27.5
comp=Z,17nm,1.0s
K17K Iditarod 58.14 27 P **P** **14 35 11.7 +1.6**
baz=248
NWAO Narrogin (SRO) 58.15 208 P **P** **14 35 10.8 +0.2**
NWAO Narrogin (SRO) 58.15 208 P **P** **14 35 11.2 +0.6**
NWAO Narrogin (SRO) 58.15 208 P **P** **14 35 10.8 +0.2**
NWAO Narrogin (SRO) 58.15 208 P **P** **14 35 10.8 +0.2**
NWAO pmax pmax
comp=Z,24nm,0.6s
SII Sitkinak Islan 58.18 34 P **P** **14 35 11.6 +1.1**
baz=255
MK31 Makanchi Array 58.27 314 *i* P **P** **14 35 10.9 -0.4**
MKAR Makanchi Array 58.27 314 P **P** **14 35 11.1 -0.2**
comp=Z,2.5nm,0.5s,baz=90,slow=8.9,SNR=37
MKAR ScP **ScP** **14 39 36.7 -0.6**
comp=Z,1.2nm,0.6s,baz=92,slow=6.1,SNR=4.8
comp=Z,2.5nm,0.5s
G17K Kiwalik Mounta 58.34 23 P **P** **14 35 12.6 +1.2**
baz=244
H17K Granite Mounta 58.38 24 IAmb IAmb 14 35 26.4
comp=Z,6.3nm,0.7s
H17K Granite Mounta 58.38 24 P **P** **14 35 12.8 +1.2**
baz=245
MAKZ Makanchi 58.48 314 P **P** **14 35 12.8 0.0**
MAKZ IAmb IAmb 14 35 14.3
comp=Z,6.2nm,0.7s
MAKZ Makanchi 58.48 314 P **P** **14 35 12.8 0.0**
MAKZ pmax pmax
comp=Z,6.0nm,0.7s

N18K **Kilae Creek** 58.50 30 P P 14 35 14.0 +1.3
baz=251
D17K **Noatak River** 58.52 20 P P 14 35 14.4 +1.8
baz=240,SNR=7.4
F17K **Baldwin Pennin** 58.55 22 IAmb IAmb 14 35 27.4
comp=Z,8.8nm,0.7s
F17K **Baldwin Pennin** 58.55 22 P P 14 35 14.7 +1.9
baz=243,SNR=6.4
O18K **Koktuh Hills** 58.57 31 P P 14 35 14.9 +1.8
baz=252
E17K **Hotham Inlet** 58.64 21 P P 14 35 15.7 +2.2
baz=242,SNR=7.4
L18K **Granite Mounta** 58.66 28 P P 14 35 16.2 +2.6
baz=250
M18K **Stony River** 58.80 29 P P 14 35 17.2 +2.5
baz=251
OHAK **Old Harbor** 58.82 34 P P 14 35 16.7 +1.9
baz=256
C17K **DeLong Mountai** 58.88 20 P P 14 35 17.6 +2.5
baz=240
H18K **Honhosa River** 59.06 24 IAmb IAmb 14 35 19.4
comp=Z,26nm,1.4s
H18K **Honhosa River** 59.06 24 P P 14 35 18.4 +1.9
baz=246
J18K **Innoko River** 59.09 26 P P 14 35 18.7 +2.1
baz=249
F18K **Selawik** 59.19 22 P P 14 35 18.9 +1.7
baz=244
TTA **Tatalina** 59.20 27 P P 14 35 19.1 +1.6
baz=250
N19K **Bonanza Creek** 59.20 30 P P 14 35 19.5 +1.9
baz=253
E18K **Tukpahlearik C** 59.22 21 P P 14 35 20.3 +2.8
baz=243
G18K **Tagagawik** 59.26 23 IAmb IAmb 14 35 21.2
comp=Z,8.8nm,1.0s
G18K **Tagagawik** 59.26 23 P P 14 35 19.2 +1.5
baz=246
L19K **White Mountain** 59.45 28 P P 14 35 21.0 +1.8
baz=252
GCSA **Galena City Sc** 59.49 25 P P 14 35 20.1 +0.9
baz=248
GLAD **Gladstone** 59.55 178 P P 14 35 20.4 +0.4
M19K **Big River Lodg** 59.58 28 P P 14 35 20.5 +0.5
baz=252
C18K **Utukok River** 59.60 20 P P 14 35 21.6 +1.5
baz=242
Q20K **Shuyak Island** 59.62 32 P P 14 35 22.5 +2.1
baz=256
J19K **Poorman** 59.73 26 P P 14 35 23.1 +2.1
baz=250
B18K **Kokolik River** 59.75 19 P P 14 35 23.3 +2.2
baz=241
G19K **Purcell Mounta** 59.94 23 P P 14 35 24.2 +1.8
baz=247
H19K **Roundabout Mou** 59.95 24 P P 14 35 24.6 +2.2
baz=248
OUZ **Omahuta** 59.99 154 P P 14 35 24.3 +1.2
PDGK **Podgornoye** 60.01 310 P P 14 35 23.1 -0.3
C19K **Lookout Ridge** 60.33 20 P P 14 35 26.8 +1.8
baz=243
J20K **Nowinta River** 60.40 26 P P 14 35 27.9 +2.4
baz=251
I20K **Naaghedeneel** 60.47 25 P P 14 35 28.2 +2.3
baz=250
D19K **Kuna River** 60.54 21 IAmb IAmb 14 35 43.1
comp=Z,13nm,1.2s
D19K **Kuna River** 60.54 21 P P 14 35 28.6 +2.1
baz=245
H20K **Anotleneega Mo** 60.55 24 P P 14 35 28.2 +1.7
baz=250
PRZ **Przheval'sk** 60.79 309 IAmb IAmb 14 35 31.0
comp=Z,10nm,0.6s
F20K **Avaraart Lake** 60.79 23 P P 14 35 30.1 +2.0
baz=248
PPLA **Purkeypile** 60.85 28 P P 14 35 29.8 +1.1
baz=254
MOO **Moorlands** 60.98 179 P P 14 35 29.7 0.0
CAST **Castle Rocks** 61.04 27 P P 14 35 29.6 -0.3
CAST IAmb IAmb 14 35 45.0
comp=Z,12nm,0.7s
CAST **Castle Rocks** 61.04 27 P P 14 35 31.6 +1.7
baz=254
KURK **Kurchatov** 61.08 318 P P 14 35 29.4 -0.9
KURK IAmb IAmb 14 35 50.0
comp=Z,8.3nm,1.0s
KURK **Kurchatov** 61.08 318 *ce*P P 14 35 29.3 -1.0
KURK pmax pmax
comp=Z,3.0nm,0.7s
CHUM **Lake Minchumin** 61.08 27 P P 14 35 31.5 +1.4
baz=253
E20K **Nigu River** 61.09 21 P P 14 35 32.3 +2.1
baz=247
KURBB **Kurchatov Arra** 61.12 318 P P 14 35 29.3 -1.3
KURBB **Kurchatov Arra** 61.12 318 P P 14 35 29.8 -0.8
comp=Z,6.2nm,0.6s,baz=92,slow=7.4,SNR=87
KURBB pP pP 14 36 22.1 -0.5
comp=Z,9.5nm,0.6s,baz=96,slow=7.1,SNR=5.3
comp=Z,6.2nm,0.6s
D20K **Etivluk River** 61.13 21 P P 14 35 32.2 +1.8
baz=246
H21K **Melozitna Rive** 61.42 25 P P 14 35 33.1 +0.7
baz=252
SEW **Seward** 61.43 31 P P 14 35 32.7 +0.2
baz=258
NRIK **Noril'sk** 61.44 340 P P 14 35 31.9 -0.5
NRIK IAmb IAmb 14 35 38.0
comp=Z,6.5nm,0.6s
NRIK **Noril'sk** 61.44 340 *ce*P P 14 35 31.2 -1.2
NRIK pmax pmax
comp=Z,6.0nm,0.6s
NRIK **Noril'sk** 61.44 340 P P 14 35 32.0 -0.3
comp=Z,6.1nm,0.5s,baz=113,slow=9.2,SNR=10
comp=Z,6.1nm,0.5s
TAU **Tasmania Unive** 61.45 179 P P 14 35 33.3 +0.5
RC01 **Rabbit Creek A** 61.51 30 P P 14 35 33.7 +0.6
baz=257
CUT **Chulitna** 61.57 28 P P 14 35 34.1 +0.7
baz=256
I21K **Tanana** 61.60 25 P P 14 35 34.7 +1.2
baz=253
F21K **Alatna River** 61.67 23 P P 14 35 35.3 +1.2
baz=250
BPAW **Bear Paw Mtn.** 61.70 27 IAmb IAmb 14 35 48.6
comp=Z,13nm,0.7s
BPAW **Bear Paw Mtn.** 61.70 27 P P 14 35 36.0 +1.7
baz=254
TRF **Thorofare Moun** 61.83 27 P P 14 35 36.7 +1.4
baz=255
C21K **Knifeblade Rid** 61.91 20 P P 14 35 37.6 +2.0
baz=249
E21K **Killik River** 61.92 21 P P 14 35 37.7 +2.0
baz=249
H22K **Ishtalitna Cre** 62.05 24 P P 14 35 38.4 +1.9
baz=253
MLY **Manley** 62.06 26 P P 14 35 37.8 +1.1
MLY IAmb IAmb 14 35 51.5
comp=Z,8.3nm,0.7s
MLY **Manley** 62.06 26 P P 14 35 38.7 +2.0
baz=254
KUZ **Kuaotunu** 62.19 153 P P 14 35 38.9 +1.1
A21K **Barrow** 62.21 18 P P 14 35 39.4 +1.9
baz=245
G22K **Bettles** 62.31 23 P P 14 35 39.5 +1.3
baz=252
RND **Reindeer** 62.44 28 IAmb IAmb 14 35 52.7
comp=Z,25nm,1.1s
D22K **Ayikyak River** 62.52 21 IAmb IAmb 14 35 55.1
comp=Z,12nm,0.7s
D22K **Ayikyak River** 62.52 21 P P 14 35 41.3 +1.7
baz=250,SNR=6.1
M23K **Glacier View** 62.60 29 P P 14 35 41.8 +1.5
baz=258
NEA2 **Nenana** 62.63 26 P P 14 35 42.2 +1.7
baz=256
I23K **Minto, Yukon-K** 62.65 26 IAmb IAmb 14 35 43.7
comp=Z,6.5nm,0.6s
I23K **Minto, Yukon-K** 62.65 26 P P 14 35 41.8 +1.3
baz=255
KSH **Kashi** 62.67 305 P P 14 35 44.0 +2.7
KSH pP pP 14 36 34.5 +0.9
KSH pmax pmax
comp=Z,5.0nm,1.0s
GLI **Glacier Island** 62.73 31 P P 14 35 42.6 +1.5
baz=260
G23K **Bananza Creek** 62.81 24 P P 14 35 43.3 +1.7
baz=254
COLD **Coldfoot** 62.89 23 P P 14 35 44.2 +2.1
baz=253
TOZ **Tahuroa Road** 62.93 154 P P 14 35 47.5 +4.9
MDM **Murphy Dome** 63.07 26 IAmb IAmb 14 35 58.4
comp=Z,7.1nm,0.6s
KMRZ **Kaimai** 63.21 153 P P 14 35 45.6 +1.1
D23K **Nanushuk River** 63.23 21 P P 14 35 46.0 +1.7
baz=252
TGRZ **Tauranga** 63.25 153 P P 14 35 45.9 +1.1
HIZ **Hauiti** 63.33 155 P P 14 35 47.0 +1.7
HIZ **Hauiti** 63.33 155 P P 14 35 46.4 +1.2
E23K **Chandalar** 63.34 22 P P 14 35 47.1 +2.0
baz=254
H24K **Noodor Dome** 63.42 25 P P 14 35 46.8 +1.2
baz=256
POKR **Poker Plat Res** 63.44 26 P P 14 35 47.2 +1.5
baz=257
TLZ **Tolley Road** 63.45 154 P P 14 35 47.8 +1.7
HDA **Harding Lake** 63.49 27 P P 14 35 46.9 +0.9
baz=258
KARZ **Kaharoa** 63.49 153 P P 14 35 48.6 +2.3
ILAR **Eielson Array** 63.59 26 P P 14 35 46.5 -0.1
comp=Z,2.5nm,0.5s,baz=251,slow=4.8,SNR=15
ILAR pP pP 14 36 40.1 +1.0
comp=Z,3.8nm,0.8s,baz=261,slow=6.6,SNR=4.0
comp=Z,2.5nm,0.5s
OMRZ **Omania** 63.61 153 P P 14 35 49.0 +1.8
AAK **Ala-Archa** 63.67 309 P P 14 35 47.4 -0.5
AAK **Ala-Archa** 63.67 309 *ce*P P 14 35 47.0 -0.9
AAK pmax pmax
comp=Z,5.0nm,2.5s
GRRZ **Galatos Road** 63.71 154 P P 14 35 48.8 +1.0
G24K **Hadweenzic Riv** 63.78 24 P P 14 35 49.5 +1.6
baz=256
VRZ **Vera Road** 63.81 155 P P 14 35 50.8 +2.4
D24K **Happy Valley** 63.93 21 IAmb IAmb 14 36 03.9
comp=Z,14nm,0.7s
D24K **Happy Valley** 63.93 21 P P 14 35 51.0 +2.2
baz=254,SNR=15
HAZ **Te Kaha** 63.94 152 P P 14 35 48.6 -0.7
RATZ **Rangitukua** 64.00 154 P P 14 35 51.3 +1.5
MXZ **Matakaoa Point** 64.01 151 P P 14 35 49.3 -0.5
MXZ **Matakaoa Point** 64.01 151 P P 14 35 48.7 -1.0
URZ **Urewera** 64.06 153 P P 14 35 50.0 0.0
URZ **Urewera** 64.06 153 P P 14 35 49.3 -0.8
C24K **Franklin Bluff** 64.13 21 P P 14 35 52.3 +2.2
baz=254
WTVZ **West Tongariro** 64.14 154 P P 14 35 51.7 +1.0
NNVZ **North Ngauruho** 64.16 154 P P 14 35 51.9 +1.0
PKGZ **Pakihiroa** 64.18 152 P P 14 35 52.0 +1.1
TMVZ **Te Maari** 64.19 154 P P 14 35 51.9 +0.9
COVZ **Chateau Observ** 64.19 154 P P 14 35 51.8 +0.7
NGZ **Ngauruhoe** 64.19 154 P P 14 35 52.0 +0.9
J25K **Salcha River,** 64.20 27 P P 14 35 51.7 +1.0
baz=259
FWVZ **Far West T-bar** 64.24 154 P P 14 35 52.1 +0.6
WMGZ **Waiomatatini S** 64.27 152 P P 14 35 51.3 -0.2
RTZ **Ruatahuna** 64.30 153 P P 14 35 51.0 -0.7
MWZ **Matawai** 64.30 152 P P 14 35 51.3 -0.4
WNVZ **Wahianoa** 64.32 154 P P 14 35 53.5 +1.5
TWGZ **Tauwhareparae** 64.37 152 P P 14 35 53.0 +0.9
PUZ **Puketiti** 64.41 152 P P 14 35 51.7 -0.6
MOVZ **Moawhango** 64.45 154 P P 14 35 52.7 0.0
BKZ **Black Stump Fm** 64.56 154 P P 14 35 53.2 -0.1
BKZ **Black Stump Fm** 64.56 154 P P 14 35 52.9 -0.4
RAHZ **Arahi** 64.60 153 P P 14 35 54.1 +0.5
NMHZ **Naumai** 64.63 153 P P 14 35 54.6 +0.8
BHHZ **Black Hill Sta** 64.65 154 P P 14 35 53.8 -0.2
SCRK **Sand Creek** 64.68 27 P P 14 35 53.0 -0.9
SCRK IAmb IAmb 14 36 06.8
comp=Z,10nm,1.1s
SCRK **Sand Creek** 64.68 27 P P 14 35 55.2 +1.3
baz=261
F25K **Christian Rive** 64.69 23 P P 14 35 54.7 +0.9
baz=258
CNGZ **Carnagh Statio** 64.73 152 P P 14 35 54.2 -0.2
D25K **Kavik River** 64.81 21 P P 14 35 55.5 +0.9
baz=256
L26K **Log Cabin Wild** 64.82 28 P P 14 35 55.1 +0.3
baz=262
E25K **Arctic Village** 64.83 23 P P 14 35 55.1 +0.4
baz=257
MCHZ **McNeill Hill** 64.87 154 P P 14 35 55.9 +0.6
KRHZ **Kereru** 64.91 154 P P 14 35 55.1 -0.4
J26L **Joseph Creek** 64.95 27 P P 14 35 56.0 +0.4
baz=261
PNHZ **Pukenui** 65.06 154 P P 14 35 55.9 -0.6
TSZ **Takapari Road** 65.09 155 P P 14 35 56.2 -0.5
KAHZ **Kahuranaki** 65.24 154 P P 14 35 57.9 +0.1
I26K **Coal Creek Min** 65.24 26 P P 14 35 57.6 +0.2
baz=261
F26K **Sheenjek River** 65.27 23 P P 14 35 59.1 +1.6
baz=259
G26K **Porcupine Rive** 65.27 24 P P 14 35 59.4 +1.9
baz=260
NIL **Nilore** 65.34 299 P P 14 35 58.7 +0.1
NIL IAmb IAmb 14 36 22.2
comp=Z,16nm,0.8s
NIL **Nilore** 65.34 299 P P 14 35 58.7 +0.1
NIL pmax pmax
comp=Z,16nm,0.8s
M27K **Edge Creek, AK** 65.41 29 P P 14 35 58.4 -0.3
baz=264
PXZ **Pawanui** 65.44 154 P P 14 35 58.5 -0.4
L27K **Beaver Creek,** 65.51 29 P P 14 36 00.9 +1.7
baz=263
K27K **Chicken** 65.52 27 P P 14 36 00.4 +1.2
baz=263
ANWZ **Angora Road** 65.64 155 P P 14 36 00.7 +0.5
SNZO **South Karori** 65.67 156 P P 14 35 59.6 -0.7
BFZ **Birch Farm** 65.73 155 P P 14 36 00.6 -0.1
EGAK **Eagle** 66.01 27 P P 14 36 03.5 +1.2
baz=263
H27K **Steamboat Moun** 66.04 25 P P 14 36 03.7 +1.1
baz=262
PLWZ **Palliser** 66.10 156 P P 14 36 02.3 -0.9
KHZ **Kahutara** 66.19 158 P P 14 36 02.0 -1.6
KHZ **Kahutara** 66.19 158 P P 14 36 02.4 -1.2
BVA0 **Borovoye Array** 66.28 320 *i* P P 14 36 03.4 -0.8
BVAR **Borovoye Array** 66.28 320 P P 14 36 03.7 -0.5
comp=Z,8.3nm,0.4s,baz=95,slow=7.4,SNR=84
BVAR pP pP 14 36 58.4 +1.3
comp=Z,9.1nm,0.6s,baz=97,slow=7.6,SNR=3.4
comp=Z,8.3nm,0.4s
BRVK **Borovoye** 66.34 320 P P 14 36 04.1 -0.5
BRVK IAmb IAmb 14 36 06.4
comp=Z,9.6nm,0.8s
BRVK **Borovoye** 66.34 320 *ce*P P 14 36 03.7 -0.9
BRVK pmax pmax
comp=Z,10.0nm,0.8s
PNL **Peninsula** 66.39 32 P P 14 36 05.7 +0.9
baz=267
KK31 **Karatay Array** 66.57 310 P P 14 36 05.7 -0.6
KK31 IAmb IAmb 14 36 07.6
comp=Z,7.9nm,0.8s
KK31 **Karatay Array** 66.57 310 *i* P P 14 36 05.8 -0.5
KKAR **Karatay Array** 66.57 310 IAmb IAmb 14 36 07.5
comp=Z,7.9nm,0.8s
I28M **Miner Creek** 66.60 26 P P 14 36 07.0 +0.9
baz=264
DAWY **Dawson** 66.70 28 P P 14 36 07.5 +0.8
baz=265
YUK4 **Talbot Arm** 66.85 31 P P 14 36 09.3 +1.3
baz=267
F28M **Old Crow** 66.87 24 IAmb IAmb 14 36 22.4
comp=Z,5.4nm,0.7s
F28M **Old Crow** 66.87 24 P P 14 36 08.7 +1.0
baz=263
YUK6 **Outpost Mounta** 66.97 31 P P 14 36 09.8 +1.1
baz=267
L29M **L29M** 67.19 29 P P 14 36 10.6 +0.7
baz=267
P29M **Windy Craggy** 67.23 32 P P 14 36 11.3 +1.2
baz=268
J29N **Klondike Camp** 67.24 27 P P 14 36 10.9 +0.8
baz=266
H29M **Whitestone** 67.31 25 IAmb IAmb 14 36 23.9
comp=Z,8.2nm,0.9s
H29M **Whitestone** 67.31 25 P P 14 36 11.1 +0.7
baz=265
HYT **Haines Junctio** 67.39 31 P P 14 36 11.6 +0.4
baz=268
K29M **Barlow Dome** 67.51 28 P P 14 36 12.8 +0.9
baz=267
P30M **Million Dollar** 67.64 32 P P 14 36 13.4 +0.7
baz=269
E29M **Blow River** 67.69 23 P P 14 36 13.9 +1.1
baz=265
M30M **Minto, Yukon** 67.78 29 P P 14 36 14.7 +1.2
baz=268
EPYK **Eagle Plains** 67.99 25 IAmb IAmb 14 36 17.7
comp=Z,6.5nm,0.7s
EPYK **Eagle Plains** 67.99 25 P P 14 36 16.0 +1.3
baz=262
J30M **Hart River** 68.06 27 P P 14 36 16.4 +1.0
baz=268
I30M **Mount Dempster** 68.07 26 P P 14 36 17.0 +1.6
baz=267
SIMJ **Simiganj** 68.15 305 P P 14 36 15.7 -0.7
SIMJ IAmb IAmb 14 36 17.5
comp=Z,8.1nm,0.9s
MAYO **Mayo, Yukon** 68.22 28 P P 14 36 18.3 +2.1
baz=268
G30M **tAoh Zraii Nji** 68.22 24 P P 14 36 17.3 +1.1
baz=267
F30M **Barrier River** 68.43 24 P P 14 36 18.5 +1.1
baz=267
KBL **Kabul** 68.68 300 P P 14 36 19.6 -0.2
KBL IAmb IAmb 14 36 42.0
comp=Z,8.2nm,0.7s
KBL **Kabul** 68.68 300 P P 14 36 19.6 -0.2
KBL pmax pmax
comp=Z,8.0nm,0.7s
G31M **Satah River** 68.99 25 IAmb IAmb 14 36 24.5
comp=Z,11nm,0.6s
G31M **Satah River** 68.99 25 P P 14 36 21.8 +1.0
baz=269,SNR=9.0
F31M **Tsiigehtchic** 69.21 24 IAmb IAmb 14 37 05.0
comp=Z,11nm,1.2s
F31M **Tsiigehtchic** 69.21 24 P P 14 36 23.0 +0.9
baz=269
INK **Inuvik** 69.31 23 P P 14 36 23.2 +0.5
baz=269
INK **Inuvik** 69.31 23 P P 14 36 22.3 -0.4
comp=Z,4.6nm,0.7s,baz=296,slow=6.9,SNR=23
comp=Z,4.6nm,0.7s
FARO **Faro, Yukon** 69.39 30 P P 14 36 23.9 +0.5
baz=271
N32M **Quiet Lake** 69.54 31 P P 14 36 24.5 +0.1
baz=272
P33M **Teslin, Yukon** 69.71 32 P P 14 36 25.5 +0.1
baz=272
Q32M **Nakina River** 70.05 33 P P 14 36 28.6 +0.9
baz=273
V35K **Ketchikan** 70.68 37 P P 14 36 32.0 +0.7
baz=275
R33M **Jennings River** 70.69 33 P P 14 36 31.8 +0.3
baz=274
DLBC **Dease Lake** 71.26 34 P P 14 36 35.6 +0.7
baz=276
DLBC **Dease Lake** 71.26 34 P P 14 36 36.8 +1.9
comp=Z,3.5nm,0.5s,baz=230,slow=3.2,SNR=9.1
comp=Z,3.5nm,0.5s
T35M **Bob Quinn** 71.28 35 P P 14 36 35.5 +0.5
baz=276
WTLY **Watson Lake, Y** 71.72 32 P P 14 36 37.4 -0.2
baz=276
TGTN **Hyland Airport** 71.83 30 P P 14 36 39.5 +1.3
baz=276
A36M **Sachs Harbour** 72.00 19 IAmb IAmb 14 36 42.5
comp=Z,11nm,0.9s
A36M **Sachs Harbour** 72.00 19 P P 14 36 39.9 +1.0
baz=275,SNR=6.4
C36M **Paulatuk** 72.68 22 IAmb IAmb 14 36 44.4
comp=Z,10nm,0.9s
C36M **Paulatuk** 72.68 22 P P 14 36 43.9 +1.0
baz=277,SNR=7.1
ARU **Arti** 72.87 325 P P 14 36 42.3 -2.1
ARU IAmb IAmb 14 36 45.3
comp=Z,8.0nm,0.6s
ARU **Arti** 72.87 325 *d* P P 14 36 43.4 -0.9
ARU *PP pP 14 37 35.6 -2.7
ARU S SKiKP 14 45 52.6 -0.1
ARU SS SS 14 50 30.7 -5.1
ARU pmax pmax
comp=Z,8.0nm,0.7s
AB31 **Akbulak array** 73.14 317 *e*P P 14 36 45.0 -1.1
ABKAR **Akbulak array** 73.14 317 IAmb IAmb 14 36 46.6
comp=Z,8.2nm,0.7s
PPT **Papeete** 73.30 116 P P 14 36 49.6 +2.1
comp=Z,31nm,0.9s,baz=64,slow=19,SNR=4.3
comp=Z,31nm,0.9s
WRGLY **Wrigley** 73.82 28 IAmb IAmb 14 36 56.9
comp=Z,25nm,1.3s
WRGLY **Wrigley** 73.82 28 P P 14 36 50.7 +1.0
baz=280
KOTAN **Kotaneelee Air** 74.07 31 P P 14 36 52.4 +1.1
baz=280
AKTO **Aktyubinsk** 74.17 318 P P 14 36 50.4 -1.6
GEYT **Ailbeck** 76.70 306 P P 14 37 05.4 -1.3
comp=Z,3.6nm,0.8s,baz=225,slow=1.9,SNR=7.1
comp=Z,3.6nm,0.8s
KIRV **Kirov** 77.27 328 *ce*P P 14 37 08.8 -0.5
YKA **Yellowknife Ar** 77.94 28 P P 14 37 13.1 +0.2
comp=Z,2.6nm,0.6s,baz=290,slow=5.6,SNR=8.6
comp=Z,2.6nm,0.6s
LTY **Liberty** 78.91 44 IAmb IAmb 14 37 24.1
comp=Z,7.2nm,0.7s
YBH **Yreka Blue Hor** 78.97 50 P P 14 37 21.1 +1.9
comp=Z,5.7nm,0.8s,baz=308,slow=2.5,SNR=9.4
comp=Z,5.7nm,0.8s
SPITS **Spitsbergen Ar** 79.01 351 P P 14 37 18.6 0.0
comp=Z,7.9nm,0.9s,baz=120,slow=5.9,SNR=6.2
comp=Z,7.9nm,0.9s
J05D **Fort Rock, OR** 79.61 48 IAmb IAmb 14 37 25.5
comp=Z,10nm,0.7s
PINE **Pine Mountain** 79.67 47 IAmb IAmb 14 37 26.0
comp=Z,17nm,0.8s
K05A **Summer Lake** 80.00 48 IAmb IAmb 14 37 28.1
comp=Z,16nm,0.9s
BELG **Belogornoye** 80.00 322 *i* P P 14 37 23.1 -1.2
BELG pmax pmax
comp=Z,3.0nm,0.7s
D08A **Wollman Farm,** 80.11 44 IAmb IAmb 14 37 28.2
comp=Z,6.5nm,0.8s
C09A **Chrisman Ranch** 80.31 43 IAmb IAmb 14 37 28.4
comp=Z,3.3nm,0.8s
ORV **Oroville** 80.46 52 P P 14 37 27.3 +0.2
ORV **Oroville** 80.46 52 P P 14 37 27.3 +0.2
ORV pmax pmax
comp=Z,7.0nm,1.0s
NEW **Newport** 80.91 42 IAmb IAmb 14 37 36.2
comp=Z,5.2nm,0.7s
NEW **Newport** 80.91 42 P P 14 37 30.6 +1.2
baz=288,SNR=5.6
NEW **Newport** 80.91 42 P P 14 37 30.6 +1.2
comp=Z,4.2nm,0.7s,baz=294,slow=2.9,SNR=8.9
comp=Z,4.2nm,0.7s
AFDM **Forest Hills D** 81.02 52 IAmb IAmb 14 37 36.6
comp=Z,14nm,1.5s
KLMR **Klimovskoe** 81.27 332 *e*P P 14 37 29.1 -1.8
KLMR pmax pmax
comp=Z,16nm,1.4s
MPK **Martis Peak** 81.62 51 IAmb IAmb 14 37 36.2
comp=Z,13nm,0.8s
CMB **Columbia Colle** 81.73 53 IAmb IAmb 14 37 36.2
comp=Z,8.7nm,0.7s
PNTR **Pine Nut** 82.00 52 IAmb IAmb 14 37 38.5
comp=Z,15nm,0.7s
YERR **Yerington** 82.30 52 IAmb IAmb 14 37 39.4
comp=Z,8.0nm,0.7s
ARCES **ARCESS Array B** 82.32 342 P P 14 37 35.7 -0.5
comp=Z,3.9nm,0.6s,baz=48,slow=3.7,SNR=21
comp=Z,3.9nm,0.6s
RYN **Ryan** 82.94 52 IAmb IAmb 14 37 42.8
comp=Z,9.9nm,0.7s
MLAC **Mammoth, Mammo** 83.02 53 P P 14 37 41.9 +1.1
baz=288
LHV **Little Huntoon** 83.08 52 IAmb IAmb 14 37 43.6
comp=Z,6.5nm,0.7s
KVN **Kaiserville** 83.12 51 IAmb IAmb 14 37 43.5
comp=Z,7.9nm,0.6s
PKM **Mcpherson Peak** 83.12 56 P P 14 37 41.3 0.0
baz=288
NVAR **Mina Array Bea** 83.17 52 P P 14 37 43.2 +1.7
comp=Z,11nm,0.6s,baz=269,slow=5.8,SNR=106
comp=Z,11nm,0.6s
NV11 **Mina Array Sit** 83.28 52 IAmb IAmb 14 37 44.4
comp=Z,7.3nm,0.7s
MFID **Camas Ranch** 83.33 46 IAmb IAmb 14 37 49.7
comp=Z,6.9nm,0.7s
VES **Vestal, Richgr** 83.39 55 P P 14 37 43.2 +0.8
baz=288
NEEM **North Greenlan** 83.42 4 *i* P P 14 37 41.6 -0.5

TIN	Tinemaha, Big baz=289	83.66	53	P	P	14 37 45.0	+1.1
ISA	Isabella, Lake baz=289	83.92	55	P	P	14 37 46.0	+0.8
CWC	Cottonwood Cre baz=289	83.97	54	P	P	14 37 46.6	+1.0
LCH	Last Change Ra comp=Z,4.9nm,0.6s	84.05	53	IAmb	IAmb	14 37 48.1	
MZP	Montezuma Peak comp=Z,4.7nm,0.6s	84.09	52	IAmb	IAmb	14 37 48.4	
HLID	Hailey baz=290	84.24	46	P	P	14 37 47.8	+1.0
GMN	Gold Mountain comp=Z,8.0nm,0.6s	84.32	53	IAmb	IAmb	14 37 49.6	
GRAC	Grapevine Rang baz=289	84.33	53	P	P	14 37 48.4	+1.2
EDW2	Edwards Air Fo baz=289	84.54	55	P	P	14 37 49.3	+1.0
MPMC	Manual Prospec baz=289,SNR=6.7	84.55	54	P	P	14 37 49.5	+1.0
LRMC	Laurel Mtn Rad baz=289,SNR=7.0	84.59	54	P	P	14 37 50.1	+1.4
FURC	Furnace Creek, baz=290	84.89	53	P	P	14 37 51.2	+1.3
WCT	Wildcat Mounta comp=Z,8.8nm,0.7s	84.96	53	IAmb	IAmb	14 37 52.6	
R11B	Troy Canyon, C baz=290	85.21	51	P	P	14 37 52.9	+1.1
GSC	Goldstone, Bar baz=290	85.33	54	P	P	14 37 53.0	+0.8
BOZ	Bozeman (W) comp=Z,9.4nm,1.3s	85.36	43	IAmb	IAmb	14 37 53.5	
BOZ	Bozeman (W) baz=292	85.36	43	P	P	14 37 52.2	-0.1
BBRC	Big Bear Solar baz=290	85.58	55	P	P	14 37 53.8	+0.1
MURC	Murrieta baz=290	85.59	56	P	P	14 37 54.5	+1.0
EGMT	Eagleton baz=293	85.61	41	P	P	14 37 53.8	+0.5
HEC	Hector,Ludlow baz=290	85.85	55	P	P	14 37 55.0	+0.2
KBZ KBZ	Khabaz comp=Z,4.0nm,1.0s	85.95	315 *ce* *i* pmax	P P pmax	P P pmax	14 37 53.2	-1.8
KBZ	Khabaz comp=Z,2.7nm,0.8s,baz=221,slow=4.4,SNR=7.8 comp=Z,2.7nm,0.8s	85.95	315	P	P	14 37 54.5	-0.4
TUQ	Turquoise Moun baz=290	85.96	54	P	P	14 37 56.6	+1.2
HVU	Hansel Valley comp=Z,17nm,1.5s	86.01	47	IAmb	IAmb	14 37 58.1	
PFO	Pinyon Flats O baz=290	86.17	56	P	P	14 37 56.9	+0.5
TPFO	Pinon Flats baz=290	86.17	56	P	P	14 37 57.1	+0.6
GMRC	Granite Mounta baz=290	86.39	55	P	P	14 37 58.5	+0.9
BELC	Belle Mtn. Jos baz=290	86.39	55	P	P	14 37 58.2	+0.6
MONP2	Monument Peak baz=290	86.44	57	P	P	14 37 58.1	+0.2
FLWY	Flagg Ranch comp=Z,5.9nm,0.6s	86.55	45	IAmb	IAmb	14 38 01.1	
DUG	Dugway, Tooele comp=Z,4.0nm,0.6s	86.57	49	IAmb	IAmb	14 38 00.1	
DUG	Dugway, Tooele baz=292,SNR=5.8	86.57	49	P	P	14 37 58.7	+0.4
V12A	Nelson comp=Z,8.0nm,0.7s	86.68	53	IAmb	IAmb	14 38 01.3	
FINES	FINESS Array B comp=Z,3.2nm,0.3s,baz=63,slow=5.1,SNR=51 comp=Z,3.2nm,0.3s	86.70	335	P	P	14 37 56.0	-2.2
BC3	Big Chuckawall baz=291	86.94	56	P	P	14 38 00.7	+0.5
IRM	Iron Mountain baz=291	87.00	55	P	P	14 38 01.8	+1.5
FFC FFC	Flin Flon comp=Z,11nm,0.9s	87.06	32	P IAmb	P IAmb	14 38 00.5 14 38 01.9	+0.3
FFC FFC	Flin Flon comp=Z,11nm,0.9s	87.06	32	P pmax	P pmax	14 38 00.5	+0.3
RLMT	Red Lodge comp=Z,3.6nm,0.6s	87.08	43	IAmb	IAmb	14 38 08.0	
RLMT	Red Lodge baz=294	87.08	43	P	P	14 38 02.4	+1.6
NLU	North Lily Min comp=Z,9.5nm,1.4s	87.18	49	IAmb	IAmb	14 38 03.7	
GLA	Glamis baz=291	87.64	56	P	P	14 38 04.6	+1.1
PDMCI	Parker Dam,Lak baz=291	87.73	55	P	P	14 38 05.1	+1.4
BW06	Boulder Array baz=294	87.83	45	P	P	14 38 05.3	+0.9
PDAR	Pinedale Array comp=Z,0.9nm,0.4s,baz=209,slow=0.9,SNR=25 comp=Z,0.9nm,0.4s	87.83	45	P	P	14 38 04.7	+0.2
Q16A	Castle Valley comp=Z,8.7nm,1.2s	88.22	49	IAmb	IAmb	14 38 09.0	
LAO	LASA Array baz=296	88.35	41	P	P	14 38 07.4	+0.8
FCC	Fort Churchill comp=Z,5.9nm,0.8s	88.61	27	IAmb	IAmb	14 38 09.5	
SRU	San Rafael Swe comp=Z,5.7nm,0.7s	88.61	49	IAmb	IAmb	14 38 10.6	
RDMU	Red Mountain comp=Z,10nm,1.5s	88.71	47	IAmb	IAmb	14 38 10.8	
Y14A	Wickenburg comp=Z,11nm,0.6s	88.74	55	IAmb	IAmb	14 38 11.1	
HMU	Henry Mountain comp=Z,4.8nm,0.8s	88.91	50	IAmb	IAmb	14 38 16.2	
WUAZ	Wupatki comp=Z,7.9nm,0.8s	89.39	53	IAmb	IAmb	14 38 15.1	
WUAZ	Wupatki baz=293,SNR=6.3	89.39	53	P	P	14 38 12.7	+1.0
214A	Organ Pipe Nat comp=Z,7.5nm,1.0s	89.62	56	IAmb	IAmb	14 38 15.5	
214A	Organ Pipe Nat baz=292	89.62	56	P	P	14 38 14.2	+1.4
MNK MNK MNK MNK MNK MNK MNK MNK	Minsk comp=Z,14nm,0.9s	89.76	329	*i* P *i* *PP *i* *i* PPP *i* S *i* SS *i* SSS pmax	P pP PPP SKSac SS SSS pmax	14 38 11.8 14 39 07.9 14 41 47.5 14 43 45.8 14 48 19.5 14 54 47.0 14 58 26.2	-1.0 -1.2 -1.1 +1.2
MNK	comp=E,5.0nm,0.7s			pmax	pmax		
MNK	comp=N,21nm,0.9s			pmax	pmax		
MNK	comp=Z,123nm,15.0s			MLR	MLR		
MNK	comp=E,22nm,11.0s			MLR	MLR		
MNK	comp=N,69nm,13.0s			MLR	MLR		
O20A	White River Ci baz=295	89.81	47	P	P	14 38 14.9	+1.2
K22A	Casper baz=296	89.91	45	P	P	14 38 14.9	+0.8
MVCO	Mesa Verde baz=294	90.84	50	P	P	14 38 19.9	+1.4
RSSD	Black Hills baz=298	90.88	42	P	P	14 38 20.0	+1.4
N23A	Red Feather La comp=Z,9.7nm,1.0s	91.07	46	IAmb	IAmb	14 38 22.4	
N23A	Red Feather La baz=296,SNR=5.9	91.07	46	P	P	14 38 21.2	+1.6
TUC	Tucson baz=293	91.08	55	P	P	14 38 21.1	+1.5
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=2.4 comp=Z,0.2nm,0.3s	91.11	325	P	P	14 38 18.1	-1.1
MDND	Maddock baz=301	91.77	38	P	P	14 38 24.2	+1.8
ISCO	Idaho Springs baz=296	91.78	47	P	P	14 38 24.5	+1.5
HFS	Hagfors comp=Z,1.1nm,0.3s,baz=100,slow=4.0,SNR=14 comp=Z,1.1nm,0.3s	92.21	338	P	P	14 38 23.3	-0.7
NOA	NORSAR Array B comp=Z,0.4nm,0.6s,baz=54,slow=6.7,SNR=5.2 comp=Z,0.4nm,0.6s	92.40	340	P	P	14 38 24.2	-0.7
ULM	Lac du Bonnet comp=Z,2.9nm,0.9s,baz=323,slow=7.0,SNR=6.1	92.57	34	P	P	14 38 25.9	0.0
	comp=Z,2.9nm,0.9s						
SDCO	Great Sand Dun baz=296	92.77	49	P	P	14 38 28.9	+1.4
ANMO ANMO	Albuquerque comp=Z,3.8nm,1.1s	93.29	51	P IAmb	P IAmb	14 38 30.2 14 38 32.2	+0.3
ANMO	Albuquerque baz=296	93.29	51	P	P	14 38 31.3	+1.5
ANMO ANMO	Albuquerque comp=Z,4.0nm,1.2s	93.29	51	P pmax	P pmax	14 38 30.2	+0.3
121A	Cookes Peak, D baz=295	93.31	54	P	P	14 38 31.5	+1.5
Y22D	IRIS PASSCAL I baz=295	93.32	52	P	P	14 38 30.7	+0.8
Y22F	Passcal Instru baz=295	93.32	52	P	P	14 38 31.3	+1.4
AGMN	Agassiz Nation baz=304	93.66	36	P	P	14 38 31.4	+0.4
OGNE	Ogallala baz=299	93.68	45	P	P	14 38 32.0	+0.7
BRTR BRTR	Keskin Array B comp=Z,2.0nm,0.9s	93.92	314	*i* P pmax	P pmax	14 38 31.6	-1.0
BRTR	Keskin Array B comp=Z,2.4nm,0.9s,baz=63,slow=5.7,SNR=7.4 comp=Z,2.4nm,0.9s	93.92	314	P	P	14 38 30.3	-2.3
MNTX	Cornudas Mount baz=296	95.51	54	P	P	14 38 41.1	+1.2
TXAR	Lajitas Array comp=Z,0.1nm,0.4s,baz=272,slow=2.2,SNR=4.3 comp=Z,0.1nm,0.4s	97.88	56	P	Pdif	14 38 51.7	+1.0
TROLL	Troll, Antarti comp=Z,243nm,0.6s	122.69	193	⇑PKPdf	PKPdf	14 44 07.9	-0.5
SNAA	Sanae comp=Z,65nm,0.5s	124.03	192	⇑PKPdf	PKPdf	14 44 09.8	-1.1
SNAA	Sanae comp=Z,2.6nm,0.6s,baz=176,slow=5.4,SNR=14	124.03	192	PKP	PKPdf	14 44 09.4	-1.4
VNA2	Neumayer--Watz comp=Z,8.8nm,0.6s,baz=115,slow=2.5	125.47	191	⇑PKPdf	PKPdf	14 44 13.6	0.0
VNA3	Neumayer Olymp comp=Z,5.7nm,0.7s	125.58	190	⇑PKPdf	PKPdf	14 44 13.6	-0.2
TORD	Torodi Ar. Bea comp=Z,0.7nm,0.5s,baz=22,slow=2.8,SNR=5.5	132.26	309	PKP	PKPdf	14 44 27.5	-0.6
CPUP	Villa Florida comp=Z,7.5nm,0.8s,baz=265,slow=5.2,SNR=15	157.62	114	PKPab	PKPab	14 45 44.9	+1.5
BDFB	Brasilia	166.66	78	PKP2	PKPab	14 46 24.0	+0.5
BDFB	Brasilia comp=Z,0.7nm,0.4s,baz=325,slow=2.1,SNR=3.0	166.66	78	PKPab	PKPab	14 46 24.0	+0.5

DJA 25 14:26:36.8±0.4, 7°S±3°×13°1E±°, h115km±12km, M4.2/8, mb4.1/6, mB4.7/1, MLv4.3/8, Mw(mB)4.0/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.34	152	P	Pn	14 27 02.9	+0.8
SAUI				S	Sn	14 27 21.5	+0.2
BNDI	Bandanaira	2.38	341	P	Pn	14 27 15.2	+0.3
FAKI	Fak Fak	4.16	22	P	Pn	14 27 38.3	-0.1
KMPI	Kaimana, Papua	4.33	44	P	Pn	14 27 41.6	+0.8
SWI	Sorong 17nm,0.8s,0.2nm	5.92	6	P	Pn	14 28 01.2	-0.9
SOEI	Soe 29nm,1.4s,0.1nm	6.99	245	P	Pn	14 28 15.6	-1.1
EDFI	Ende, Flores 7.5nm,1.0s	9.11	257	P	Pn	14 28 46.2	+0.8
PLAI	Plampang	12.93	260	P	Pn	14 29 36.4	-0.1

*NEIC **25** 14:30:43.8±0.8,56°.42N±0°.03×149°.5W±0°.1,h10km±2km, ML3.6/56,ML3.3(AEIC), Error ellipse: s-maj=10.9km s-min=3.6km az=114.0*
*AEIC **25** 14:30:48.1±0.9,56°.37N±0°.09×149°.5W±0°.1,h10km±8km, Error ellipse: s-maj=13.7km s-min=9.2km az=163.0*

ISC 25 14:30:43.4±1.6, 56°.44N±0°.09×149°.45W±0°.06, h10km, n102, σ0§94/107, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.17	309		Pn	14 31 20.4	+0.9
KDAK	Kodiak Island	2.17	309		Sn	14 31 45.2	-1.2
KDAK	Kodiak Island baz=128	2.17	309	S	Sn	14 31 45.2	-1.2
OHAK	Old Harbor	2.25	292		Pn	14 31 20.9	+0.4
OHAK					Sn	14 31 46.3	-2.0
OHAK	Old Harbor baz=111	2.25	292	P	Pn	14 31 20.9	+0.4
OHAK				S	Sn	14 31 46.3	-2.0
Q20K	Shuyak Island baz=144	2.69	325	P	Pn	14 31 27.8	+1.2
Q20K				S	Sn	14 31 59.3	+0.1
SYI	Shuyak Island	2.69	325		Pn	14 31 27.8	+1.2
SYI					Sn	14 31 59.3	+0.1
CNPM	China Poot	3.23	344		Pn	14 31 34.7	+0.6
CNPM					Sn	14 32 11.7	-1.0
Q19K	Cape Douglas,	3.36	320		Pn	14 31 36.8	+1.0
Q19K	comp=N,143nm,1.3s			IAML		14 32 23.3	
Q19K	comp=E,185nm,1.5s			IAML		14 33 03.3	
Q19K	Cape Douglas, baz=137	3.36	320	P	Pn	14 31 37.7	+1.8
BRSE	Bradley Lake S	3.38	349		Pn	14 31 36.6	+0.5
BRSE					Sn	14 32 15.6	-0.6
BRSE	Bradley Lake S baz=168	3.38	349	P	Pn	14 31 36.6	+0.5
BRSE	baz=168			S	Sn	14 32 15.6	-0.6
BRLK	Bradley Lake	3.42	348		Pn	14 31 37.1	+0.4
BRLK					Sn	14 32 15.7	-1.5
Q23K	Middleton Isla	3.42	28	Pn	Pn	14 31 37.1	+0.5
Q23K	comp=N,214nm,1.4s			IAML		14 32 43.0	
MID	Middleton Isla	3.42	28	Pn	Pn	14 31 37.2	+0.5
MID	comp=E,255nm,1.5s			IAML		14 32 16.4	
MID	comp=N,220nm,1.4s			IAML		14 33 08.3	
ACHA	Angle Creek He	3.65	302		Pn	14 31 42.3	+2.5
SEW	Seward	3.67	360		Pn	14 31 40.3	+0.2
SEW	Seward baz=180	3.67	360	P	Pn	14 31 40.3	+0.2
P23K	Montague Islan	3.73	16		Pn	14 31 41.3	+0.4
P23K	Montague Islan baz=197	3.73	16	P	Pn	14 31 41.3	+0.4
P19K	Oil Pt	3.79	330		Pn	14 31 43.5	+1.6
P19K	Oil Pt comp=N,62nm,1.4s	3.79	330	IAML		14 33 53.6	
P19K	comp=E,69nm,1.4s			IAML		14 34 06.7	
P19K	Oil Pt baz=147	3.79	330	P	Pn	14 31 43.4	+1.6
CNTC	Contact Creek	3.93	300		Pn	14 31 46.2	+2.3
Q17K	Contact Creek baz=116	3.94	300	P	Pn	14 31 46.2	+2.3
IVE	Iliamna Volcan	4.05	334		Pn	14 31 46.0	+0.6
ILSW	Iliamna Southw	4.05	333	Pn	Pn	14 31 46.2	+0.7
ILSW	comp=N,52nm,0.9s			IAML		14 34 30.7	
O22K	Cooper Landing	4.05	358		Pn	14 31 46.4	+1.1
O22K	Cooper Landing baz=178	4.05	358	P	Pn	14 31 46.4	+1.1
SLKM	Skilak Lake	4.10	355		Pn	14 31 46.4	+0.4
HIN	Hinchinbrook I	4.26	20		Pn	14 31 48.6	+0.4
P18K	Big Mountain,	4.27	316		Pn	14 31 49.4	+1.0
P18K	Big Mountain, baz=132	4.27	316	P	Pn	14 31 49.4	+1.0
RSO	Redoubt South	4.39	338		Pn	14 31 50.8	+0.6
KAIM	Kayak Island	4.39	35		Pn	14 31 50.8	+0.7
KAIM	Kayak Island baz=219	4.39	35	P	Pn	14 31 50.8	+0.7
CAPN	Captain Cook N	4.43	349	Pn	Pn	14 31 52.1	+1.6
CAPN	comp=E,117nm,1.4s			IAML		14 34 40.2	
EYAK	Cordova Ski Ar	4.55	24		Pn	14 31 52.8	+0.6
EYAK	Cordova Ski Ar	4.55	24	P	Pn	14 31 52.5	+0.3
EYAK	Cordova Ski Ar baz=206	4.55	24	P	Pn	14 31 52.8	+0.6
FID	Port Fidalgo	4.59	19		Pn	14 31 53.0	+0.2
GLI	Glacier Island	4.62	14		Pn	14 31 53.5	+0.4
GLI	Glacier Island comp=E,66nm,0.8s	4.62	14	IAML		14 34 37.3	
GLI				IAML		14 34 42.0	
	comp=N,45nm,0.9s						
GLI	Glacier Island baz=196	4.62	14	P	Pn	14 31 53.5	+0.4
SUCK	Suckling Hills	4.71	37		Pn	14 31 54.9	+0.4
SUCK	Suckling Hills comp=N,116nm,1.3s	4.71	37	IAML		14 34 38.6	
SUCK	comp=E,67nm,1.2s			IAML		14 34 49.7	
HMT	Hamilton	4.76	33		Pn	14 31 55.9	+0.8
NICHA	Nichawak Mount	4.78	35		Pn	14 31 56.1	+0.8
GOAT	Goat Mountain	4.83	29		Pn	14 31 56.9	+0.8
BERG	Berg Lake	4.98	35		Pn	14 31 58.3	+0.2
CHGN	Chignik	4.99	272	Pn	Pn	14 31 59.1	+1.0
CHGN	comp=N,33nm,1.4s			IAML		14 32 54.2	
CHGN	comp=E,37nm,1.0s			IAML		14 33 56.8	
KNK	Knik Glacier	5.01	5		Pn	14 31 59.9	+1.4
KNK	Knik Glacier baz=186	5.01	5	P	Pn	14 31 59.9	+1.4
GRIN	Grindle Hills	5.02	37		Pn	14 31 59.5	+0.8
SUA	Susitna One	5.08	353	Pn	Pn	14 31 59.9	+0.4
SUA	comp=E,26nm,0.9s			IAML		14 34 54.2	
SUA	comp=N,21nm,1.5s			IAML		14 35 05.8	
N19K	Bonanza Creek	5.11	331	Pn	Pn	14 32 00.6	+0.6
N19K	comp=N,22nm,1.4s			IAML		14 35 02.4	
SNH	Sunshine Point	5.12	40	Pn	Pn	14 32 00.5	+0.4
SNH	comp=N,60nm,1.5s			IAML		14 33 46.6	
SNH	comp=E,73nm,1.1s			IAML		14 34 51.3	
KHIT	Khitrov Hills	5.17	37		Pn	14 32 00.8	+0.1
PMR	Palmer	5.17	2	Pn	Pn	14 32 01.3	+0.7
PMR	comp=N,22nm,0.8s			IAML		14 34 54.0	
PMR	comp=E,29nm,0.7s			IAML		14 34 59.1	
PMR	Palmer comp=E,12nm,1.9s	5.17	2	P	Pn	14 32 02.4	+1.8
BMRM	Bremner River	5.19	27		Pn	14 32 01.7	+0.6
BMRM	Bremner River baz=211	5.19	27	P	Pn	14 32 01.7	+0.6
WAX	Waxell Ridge	5.30	38		Pn	14 32 02.9	+0.3
GHO	Glory Hole Cre	5.35	3	Pn	Pn	14 32 04.5	+1.2
GHO	comp=E,38nm,0.6s			IAML		14 35 08.5	
GHO	comp=N,38nm,0.7s			IAML		14 35 08.5	
KLU	Klutina	5.38	18		Pn	14 32 04.7	+1.0
KLU	Klutina baz=201	5.38	18	P	Pn	14 32 04.7	+1.0
SML	Sawmill	5.41	6	Pn	Pn	14 32 05.2	+1.1
CRQM	Cirque	5.44	35		Pn	14 32 04.9	+0.3
MESA	MESA	5.45	43	Pn	Pn	14 32 04.8	+0.1
CRQE	Cirque baz=220	5.45	35	P	Pn	14 32 04.9	+0.2
SCM	Sheep Creek Mo	5.52	11	Pn	Pn	14 32 06.3	+0.8
TGL	Tana Glacier	5.54	36	Pn	Pn	14 32 06.2	+0.3
O16K	Kokwok River B	5.57	308	Pn	Pn	14 32 07.3	+1.1
ISLE	Juniper Island	5.59	39	Pn	Pn	14 32 06.8	+0.2
SVW2	Sparrevohn	5.65	328	Pn	Pn	14 32 08.1	+0.8
VRDI	Verde Repeater	5.72	30	Pn	Pn	14 32 08.8	+0.3
N17K	Nushagak Hills	5.76	318	Pn	Pn	14 32 09.6	+0.8
GLB	Gilahina Butte	5.80	28	Pn	Pn	14 32 10.0	+0.6
GRNC	Granite Creek	5.89	40	Pn	Pn	14 32 11.2	+0.4
TABL	Table Mountain	5.92	44	Pn	Pn	14 32 11.8	+0.6
MCARA	McCarthy VSAT	5.97	31	Pn	Pn	14 32 12.8	+1.1
CNBA	Chernabura Isl	5.97	258	Pn	Pn	14 32 11.5	-0.2
BARN	Barnard Glacie	6.15	38	Pn	Pn	14 32 15.0	+0.7
CTGM	Chitina Glacie	6.20	40	Pn	Pn	14 32 15.5	+0.6
LOGN	Logan Glacier	6.22	42	Pn	Pn	14 32 15.9	+0.6
PNL	Peninsula comp=N,84nm,1.9s	6.24	55	P	Pn	14 32 15.4	0.0
SDPT	Sand Point comp=N,75nm,1.3s	6.30	265	P	Pn	14 32 17.9	+1.7
M16K	Timber Creek	6.75	317	Pn	Pn	14 32 23.6	+1.2
O29M	Mount Kennedy	6.90	51	Pn	Pn	14 32 25.2	+0.6
P29M	Windy Craggy	6.99	58	Pn	Pn	14 32 25.5	-0.2
CAST	Castle Rocks	7.12	350	Pn	Pn	14 32 27.5	+0.1
BPAW	Bear Paw Mtn.	7.72	355	Pn	Pn	14 32 35.5	-0.2
K17K	Iditarod	7.72	328	Pn	Pn	14 32 35.6	-0.1
SKAG	Skagway	8.10	62	Pn	Pn	14 32 41.7	+0.9
SKAG	Skagway	8.10	62	P	Pn	14 32 42.3	+1.5
J20K	Nowinta River	8.10	345	Pn	Pn	14 32 41.5	+0.7
JIS	Juneau Island	8.35	71	P	Pn	14 32 44.0	-0.3
P32M	Atlin	8.92	63	Pn	Pn	14 32 52.6	+0.4
P33M	Teslin, Yukon	9.52	60	Pn	Pn	14 33 01.0	+0.6
Q32M	Nakina River	9.53	68	Pn	Pn	14 33 00.8	+0.1
R33M	Jennings River	10.26	66	Pn	Pn	14 33 11.1	+0.5
DLBC	Dease Lake	10.65	71	Pn	Pn	14 33 15.1	-0.8

*NEIC **25** 14:32:35.0±0.9,56°.36N±0°.08×148°.79W±0°.10,h10km±2km, ML3.7/68,ML3.5(AEIC), Error ellipse: s-maj=13.9km s-min=8.8km az=164.0*
*AEIC **25** 14:32:39.9±1.0,56°.36N±0°.09×148°.8W±0°.1,h12km±8km, Error ellipse: s-maj=13.3km s-min=9.1km az=165.0*

ISC 25 14:32:34.9±1.8, 56°.4N±0°.1×148°.80W±0°.06, h10km, n199, σ1§15/196, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.47	305		Sn	14 33 43.7	-1.7
KDAK	Kodiak Island	2.47	305		Pn	14 33 15.8	+0.7
KDAK	Kodiak Island baz=122	2.47	305	S	Sn	14 33 43.7	-1.7
OHAK	Old Harbor	2.59	290		Pn	14 33 16.7	-0.2
OHAK	Old Harbor	2.59	290		Sn	14 33 46.3	-2.0
OHAK	Old Harbor baz=107	2.59	290	P	Pn	14 33 16.6	-0.2
OHAK	baz=107			S	Sn	14 33 46.3	-2.0
SYI	Shuyak Island	2.92	320		Pn	14 33 22.5	+1.2
SYI					Sn	14 33 56.5	0.0
SYI	Shuyak Island comp=E,144nm,0.5s	2.92	320	IAML		14 33 58.7	
Q20K	Shuyak Island baz=137	2.92	320	P	Pn	14 33 22.5	+1.1
Q20K	baz=137			S	Sn	14 33 56.5	0.0
SII	Sitkinak Islan	2.99	275		Pn	14 33 22.2	-0.2
SII	Sitkinak Islan comp=E,155nm,1.2s	2.99	275	IAML		14 33 51.8	
Q23K	Middleton Isla	3.28	22		Pn	14 33 26.6	+0.4
Q23K	Middleton Isla comp=N,205nm,1.1s	3.28	22	IAML		14 34 12.5	
Q23K	comp=E,245nm,1.4s			IAML		14 35 27.4	
Q23K	Middleton Isla baz=204	3.28	22	P	Pn	14 33 26.6	+0.4
MID	Middleton Isla	3.28	23		Pn	14 33 26.6	+0.3
MID					Sn	14 34 03.5	-1.7
MID	Middleton Isla comp=N,252nm,1.3s	3.28	23	IAML		14 34 12.5	
MID	comp=E,221nm,1.3s			IAML		14 35 36.0	
CNPM	China Poot	3.37	338		Pn	14 33 28.5	+1.0
CNPM					Sn	14 34 07.2	-0.3
BRSE	Bradley Lake S	3.48	344		Pn	14 33 30.0	+0.9
BRSE					Sn	14 34 08.8	-1.5
BRSE	Bradley Lake S baz=162	3.48	344	P	Pn	14 33 30.0	+0.9
BRSE	baz=162			S	Sn	14 34 08.8	-1.5
BRLK	Bradley Lake	3.52	343		Pn	14 33 30.3	+0.6
BRLK	comp=N,62nm,0.5s			IAML		14 34 17.0	
BRLK	comp=E,75nm,0.6s			IAML		14 34 17.1	
BRLK	Bradley Lake	3.52	343		Sn	14 34 10.0	-1.4
HOM	Homer	3.57	336		Pn	14 33 31.8	+1.5
HOM	Homer baz=154	3.57	336	P	Pn	14 33 31.8	+1.5
Q19K	Cape Douglas,	3.61	316		Pn	14 33 32.9	+1.9
Q19K	Cape Douglas, baz=132	3.61	316	P	Pn	14 33 32.9	+1.9
P23K	Montague Islan	3.65	11		Pn	14 33 31.9	+0.5
P23K					Sn	14 34 12.6	-1.9
P23K	Montague Islan baz=192	3.65	11	P	Pn	14 33 31.9	+0.5
P23K				S	Sn	14 34 12.6	-1.9

	baz=192						
KAPH	Katmai Pasha	3.70	308			Pn	14 33 33.7 +1.6
SEW	Seward	3.70	355			Pn	14 33 32.5 +0.5
SEW	Seward	3.70	355	P		Pn	14 33 32.5 +0.5
	baz=174						
AUJK	Augustine Jueg	3.83	322			Pn	14 33 35.9 +2.1
ACHA	Angle Creek He	3.96	299			Pn	14 33 38.1 +2.3
P19K	Oil Pt	4.00	326			Pn	14 33 38.0 +1.7
P19K	Oil Pt	4.00	326	IAML			14 34 28.2
	comp=E,133nm,0.7s						
P19K				IAML			14 34 29.9
	comp=N,137nm,0.5s						
P19K	Oil Pt	4.00	326	P		Pn	14 33 37.9 +1.7
	baz=142						
KAHC	Katmai Hardscr	4.02	306			Pn	14 33 38.4 +1.8
KAHC	Katmai Hardscr	4.02	306	P		Pn	14 33 38.4 +1.8
	baz=122						
ANCK	Angle Creek	4.04	299			Pn	14 33 38.8 +1.9
O22K	Cooper Landing	4.09	354			Pn	14 33 38.0 +0.5
HIN	Hinchinbrook I	4.16	16			Pn	14 33 39.1 +0.7
HIN	Hinchinbrook I	4.16	16	IAML			14 34 26.6
	comp=N,166nm,0.6s						
HIN				IAML			14 34 30.3
	comp=E,98nm,1.3s						
SLKM	Skilak Lake	4.16	350			Pn	14 33 38.9 +0.5
KAIM	Kayak Island	4.20	32			Pn	14 33 39.6 +0.6
KAIM	Kayak Island	4.20	32	IAML			14 34 33.1
	comp=N,230nm,1.3s						
KAIM				IAML			14 34 33.2
	comp=E,156nm,1.0s						
KAIM	Kayak Island	4.20	32	P		Pn	14 33 39.7 +0.7
	baz=215						
IVE	Iliamna Volcan	4.23	330			Pn	14 33 40.4 +0.9
ILSW	Iliamna Southw	4.24	329			Pn	14 33 40.6 +1.0
ILSW	Iliamna Southw	4.24	329	IAML			14 34 32.7
	comp=N,81nm,0.9s						
ILSW				IAML			14 34 36.8
	comp=E,73nm,0.7s						
CNTC	Contact Creek	4.26	299			Pn	14 33 41.5 +1.7
Q17K	Contact Creek	4.26	299	P		Pn	14 33 41.5 +1.7
	baz=113						
EYAK	Cordova Ski Ar	4.43	20			Pn	14 33 42.9 +0.8
EYAK	Cordova Ski Ar	4.43	20	P		Pn	14 33 42.9 +0.8
	baz=202						
FID	Port Fidalgo	4.50	15			Pn	14 33 43.2 +0.2
FID	Port Fidalgo	4.50	15	IAML			14 34 36.4
	comp=E,77nm,0.7s						
FID				IAML			14 34 38.3
	comp=N,71nm,0.7s						
SUCK	Suckling Hills	4.51	34			Pn	14 33 44.1 +0.9
RED	Redoubt Volcan	4.51	334			Pn	14 33 44.3 +0.9
RDSO	Redoubt South	4.54	334			Pn	14 33 44.2 +0.5
P18K	Big Mountain,	4.54	314			Pn	14 33 44.4 +0.7
P18K	Big Mountain,	4.54	314	IAML			14 34 36.5
	comp=N,20nm,1.4s						
P18K				IAML			14 34 43.5
	comp=E,22nm,1.3s						
P18K	Big Mountain,	4.54	314	P		Pn	14 33 44.8 +1.2
	baz=128						
RSO	Redoubt South	4.55	334			Pn	14 33 44.6 +0.8
GLI	Glacier Island	4.55	11			Pn	14 33 44.3 +0.5
RDT	Redoubt	4.57	337			Pn	14 33 44.4 +0.3
HMT	Hamilton	4.59	29			Pn	14 33 45.1 +0.8
NICHA	Nichawak Mount	4.59	32			Pn	14 33 45.4 +1.1
RDWB	Redoubt West	4.59	334			Pn	14 33 45.1 +0.6
DFR	Drift River	4.65	336			Pn	14 33 45.7 +0.8
GOAT	Goat Mountain	4.68	25			Pn	14 33 46.4 +0.8
RC01	Rabbit Creek A	4.70	354			Pn	14 33 46.6 +0.8
RC01				IAML			14 34 40.7
	comp=E,55nm,1.2s						
RC01				IAML			14 34 43.1
	comp=N,44nm,0.5s						
O19K	Port Alsworth	4.77	325			Pn	14 33 47.5 +0.8
O19K	Port Alsworth	4.77	325	P		Pn	14 33 47.5 +0.8
	baz=140						
BERG	Berg Lake	4.79	32			Pn	14 33 47.7 +0.6
O18K	Koktuh Hills	4.83	318			Pn	14 33 48.5 +0.9
O18K	Koktuh Hills	4.83	318	IAML			14 34 56.6
	comp=N,36nm,0.8s						
O18K	Koktuh Hills	4.83	318	P		Pn	14 33 48.5 +0.9
	baz=133						
SNH	Sunshine Point	4.90	37	Pn		Pn	14 33 49.5 +0.9
SNH				IAML			14 35 41.4
	comp=N,63nm,1.4s						
P17K	Kvichak River	4.94	307			Pn	14 33 50.4 +1.4
P17K	Kvichak River	4.94	307	P		Pn	14 33 50.4 +1.4
	baz=121						
KHIT	Khitrov Hills	4.97	34			Pn	14 33 50.0 +0.4
DIV	Divide	4.97	17			Pn	14 33 50.4 +0.8
KNK	Knik Glacier	5.00	2	Pn		Pn	14 33 50.8 +0.8
KNK				IAML			14 34 50.0
	comp=E,30nm,0.7s						
BMRM	Bremner River	5.05	24			Pn	14 33 51.4 +0.7
BMRM	Bremner River	5.05	24	P		Pn	14 33 51.5 +0.9
	baz=207						
WAX	Waxell Ridge	5.10	35			Pn	14 33 52.0 +0.6
WAX	Waxell Ridge	5.10	35	IAML			14 34 48.6
	comp=E,89nm,0.3s						
WAX				IAML			14 34 53.6
	comp=N,130nm,0.8s						
SUA	Susitna One	5.15	350			Pn	14 33 52.4 +0.3
SPCP	Crater Peak Br	5.15	342			Pn	14 33 53.1 +0.9
BARK	Barkley Ridge	5.18	37			Pn	14 33 53.2 +0.7
PMR	Palmer	5.18	358			Pn	14 33 53.4 +1.0
PMR	Palmer	5.18	358	P		Pn	14 33 53.3 +1.0
	baz=178						
MESA	MESA	5.21	41	Pn		Pn	14 33 54.6 +1.6
MESA				IAML			14 35 11.3
	comp=E,69nm,1.4s						
CRQM	Cirque	5.25	32			Pn	14 33 54.3 +0.7
CRQM				IAML			14 34 51.5
	comp=E,48nm,1.4s						
KLU	Klutina	5.29	15			Pn	14 33 54.9 +0.9
KLU				IAML			14 34 57.2
	comp=E,34nm,0.3s						
KLU				IAML			14 34 58.2
	comp=N,53nm,0.7s						
KLU	Klutina	5.29	15	P		Pn	14 33 55.1 +1.1
	baz=197						
N19K	Bonanza Creek	5.30	328	Pn		Pn	14 33 55.1 +0.9
STLK	Strandline Lak	5.32	344			Pn	14 33 55.6 +1.2
TGL	Tana Glacier	5.34	33	Pn		Pn	14 33 55.4 +0.6
SPNN	North Nagishla	5.35	339			Pn	14 33 56.1 +1.2
CHGN	Chignik	5.35	273	Pn		Pn	14 33 55.4 +0.7
CHGN				IAML			14 35 03.0
	comp=E,37nm,1.1s						
CHGN				IAML			14 35 07.2
	comp=N,29nm,1.4s						
GHO	Glory Hole Cre	5.36	359			Pn	14 33 55.1 +0.2
ISLE	Juniper Island	5.38	36			Pn	14 33 55.8 +0.5
BAGL	Bagley Icefiel	5.38	38			Pn	14 33 55.9 +0.8
SML	Sawmill	5.40	2			Pn	14 33 56.6 +1.2
SML	Sawmill	5.40	2	P		Pn	14 33 56.4 +1.0
	baz=182						
M23K	Glacier View	5.41	5			Pn	14 33 56.9 +1.3
M23K	Glacier View	5.41	5	P		Pn	14 33 56.9 +1.3
	baz=186						
SCM	Sheep Creek Mo	5.47	7			Pn	14 33 57.5 +1.0
SCM	Sheep Creek Mo	5.47	7	P		Pn	14 33 57.5 +1.0
	baz=188						
VRDI	Verde Repeater	5.55	28			Pn	14 33 58.5 +0.9
KIAG	Kiagna River	5.62	34			Pn	14 33 59.3 +0.7
N25K	Chitina, Valde	5.63	21	P		Pn	14 34 00.2 +1.6
	baz=204						
GLB	Gilahina Butte	5.65	25			Pn	14 33 59.7 +0.8
N18K	Kilae Creek	5.65	322	Pn		Pn	14 33 59.5 +0.6
GRNC	Granite Creek	5.67	38	Pn		Pn	14 34 00.0 +0.6
TABL	Table Mountain	5.68	42			Pn	14 34 00.3 +0.8
SKT	Skwentna	5.74	347	Pn		Pn	14 34 01.4 +1.3
PTPK	Patty Peak	5.79	32			Pn	14 34 01.9 +0.9
MCARA	McCarthy VSAT	5.80	29			Pn	14 34 01.4 +0.6
MCARA	McCarthy VSAT	5.80	29	P		Pn	14 34 01.9 +1.0
	baz=213						
M24K	Tolsona, Glenn	5.85	12			Pn	14 34 03.1 +1.5
M24K	Tolsona, Glenn	5.85	12	P		Pn	14 34 02.6 +0.9
	baz=194						
SVW2	Sparrevohn	5.86	326	Pn		Pn	14 34 02.1 +0.4
O16K	Kokwok River B	5.87	307	Pn		Pn	14 34 03.2 +1.3
M20K	Styx River	5.91	340	Pn		Pn	14 34 03.4 +1.0
BARN	Barnard Glacie	5.94	36			Pn	14 34 03.9 +0.8
PNL	Peninsula	5.95	53			Pn	14 34 04.0 +1.0
PNL	Peninsula	5.95	53	P		Pn	14 34 04.0 +1.0
	baz=240						
CTGM	Chitina Glacie	5.98	37	Pn		Pn	14 34 04.1 +0.6
LOGN	Logan Glacier	6.00	39			Pn	14 34 04.2 +0.4
N17K	Nushagak Hills	6.02	317			Pn	14 34 04.5 +0.6
N17K	Nushagak Hills	6.02	317	P		Pn	14 34 04.5 +0.6
	baz=130						
CUT	Chulitna	6.04	353	Pn		Pn	14 34 05.3 +1.1
WAT6	Susitna Watana	6.19	5			Pn	14 34 07.7 +1.2
WAT6	Susitna Watana	6.19	5	P		Pn	14 34 07.7 +1.2
	baz=185						
M19K	Big River Lodg	6.20	335	Pn		Pn	14 34 07.1 +0.8
M18K	Stony River	6.24	327			Pn	14 34 07.6 +0.7
M18K	Stony River	6.24	327	P		Pn	14 34 07.6 +0.7
	baz=142						
HARP	HAARP	6.27	16			Pn	14 34 09.0 +1.6
HARP	HAARP	6.27	16	P		Pn	14 34 09.0 +1.6
	baz=198						
CNBA	Chernabura Isl	6.32	260	Pn		Pn	14 34 08.2 +0.1
WAT1	Susitna Watana	6.42	1			Pn	14 34 10.9 +1.5
WAT1	Susitna Watana	6.42	1	P		Pn	14 34 10.9 +1.5
	baz=181						
O15K	Ungalikthiuk R	6.51	300			Pn	14 34 12.4 +1.8
O15K	Ungalikthiuk R	6.51	300	P		Pn	14 34 12.4 +1.8
	baz=111						
L19K	White Mountain	6.55	334	Pn		Pn	14 34 11.9 +0.8
O29M	Mount Kennedy	6.63	50	Pn		Pn	14 34 13.6 +1.2
P29M	Windy Craggy	6.69	57			Pn	14 34 13.8 +0.7
M17K	Holitna River	6.70	322			Pn	14 34 14.2 +1.0
M17K	Holitna River	6.70	322	P		Pn	14 34 14.2 +1.0
	baz=134						
YUK2	White River	6.75	34			Pn	14 34 15.6 +1.5
PAX	Paxson	6.77	13			Pn	14 34 16.0 +1.6
PAX	Paxson	6.77	13	P		Pn	14 34 16.0 +1.6
	baz=196						
M27K	Edge Creek, AK	6.91	28	Pn		Pn	14 34 17.6 +1.3
YUK7	Dusty Glacier	6.93	49			Pn	14 34 17.9 +1.3
M16K	Timber Creek	7.01	315			Pn	14 34 18.4 +0.9
M16K	Timber Creek	7.01	315	P		Pn	14 34 18.8 +1.3
	baz=127						
L18K	Granite Mounta	7.07	328	Pn		Pn	14 34 19.1 +0.8
YUK6	Outpost Mounta	7.07	46			Pn	14 34 20.1 +1.6
YUK6	Outpost Mounta	7.07	46	P		Pn	14 34 20.1 +1.6
	baz=234						
YUK4	Talbot Arm	7.20	43	P		Pn	14 34 22.7 +2.4
	baz=231						
CAST	Castle Rocks	7.20	348	Pn		Pn	14 34 20.9 +0.7
HYT	Haines Junctio	7.36	49	Pn		Pn	14 34 23.7 +1.4
K20K	Telida	7.44	341	Pn		Pn	14 34 24.6 +1.3
TTA	Tatalina	7.47	334	Pn		Pn	14 34 24.5 +0.7
L27K	Beaver Creek,	7.52	25	Pn		Pn	14 34 26.0 +1.5
BCAR	Beaver Creek A	7.54	25	Pn		Pn	14 34 26.0 +1.2
BPAW	Bear Paw Mtn.	7.77	353	Pn		Pn	14 34 29.0 +1.1
SKAG	Skagway	7.78	61	Pn		Pn	14 34 29.4 +1.3
K17K	Iditarod	7.93	327	Pn		Pn	14 34 30.6 +0.5
SCRK	Sand Creek	7.94	16	Pn		Pn	14 34 31.5 +1.2
M29M	Somme Creek	8.00	37	Pn		Pn	14 34 32.9 +1.7
JIS	Juneau Island	8.01	71	Pn		Pn	14 34 32.0 +0.8
HDA	Harding Lake	8.06	6	Pn		Pn	14 34 33.5 +1.6
J18K	Innoko River	8.09	334	Pn		Pn	14 34 33.6 +1.3
J20K	Nowinta River	8.21	343	Pn		Pn	14 34 35.0 +1.1
J19K	Poorman	8.31	339	Pn		Pn	14 34 36.1 +0.8
K27K	Chicken	8.32	21	Pn		Pn	14 34 36.7 +1.2
IL31		8.42	6	Pn		Pn	14 34 37.7 +0.9
J26L	Joseph Creek	8.50	15	Pn		Pn	14 34 39.5 +1.5
P32M	Atlin	8.61	62	Pn		Pn	14 34 39.8 +0.3
M30M	Minto, Yukon	8.66	40	Pn		Pn	14 34 40.9 +0.7
MLY	Manley	8.68	355	Pn		Pn	14 34 42.0 +1.5
L14K	Kuka Creek	8.71	310	Pn		Pn	14 34 42.2 +1.5
I23K	Minto, Yukon-K	8.75	358	Pn		Pn	14 34 42.7 +1.3
I21K	Tanana	8.92	351			Pn	14 34 44.8 +1.2
DAWY	Dawson	8.96	27	Pn		Pn	14 34 45.2 +0.9
J16K	Anvik River	9.07	324	Pn		Pn	14 34 46.2 +0.5
EGAK	Eagle	9.17	21	Pn		Pn	14 34 48.6 +1.5
K29M	Barlow Dome	9.31	32	Pn		Pn	14 34 50.3 +1.2
I26K	Coal Creek Min	9.32	15	Pn		Pn	14 34 50.4 +1.3
M31M	Drury Creek, Y	9.35	46	Pn		Pn	14 34 51.3 +1.7
H21K	Melozitna Rive	9.46	350	Pn		Pn	14 34 51.8 +0.8
FARO	Faro, Yukon	9.79	47	Pn		Pn	14 34 57.3 +1.7
J14K	Nanvaranak Lak	9.79	316	Pn		Pn	14 34 56.1 +0.6
H18K	Honhosa River	9.91	336	Pn		Pn	14 34 58.1 +0.9
R33M	Jennings River	9.94	65	Pn		Pn	14 34 58.9 +1.2
I28M	Miner Creek	10.01	22	Pn		Pn	14 34 59.9 +1.2
J30M	Hart River	10.20	32	Pn		Pn	14 35 02.5 +1.1
DLBC	Dease Lake	10.31	71	Pn		Pn	14 35 03.7 +0.9

IDC ***25*** *14:41:30.8±1.1,20°.90S×178°.92W, h597km±11km, mb3.8/26, mbtmp4.7/27, Error ellipse: s-maj=10.2km s-min=8.5km az=160.0*

NEIC ***25*** *14:41:30.3±1.7,21°.03S±0°.05×178°.8W±0°.1, h593km±6km, mb4.6/115, Error ellipse: s-maj=14.8km s-min=7.2km az=87.0*

NOU ***25*** *14:41:31.3,20°.96S×178°.85W, h605km, mb4.7/51, Fiji Islands Region*

MOS ***25*** *14:41:31.7±2.3,20°.14S×179°.20W, h581km, mb4.7/19, Error ellipse: s-maj=13.1km s-min=11.0km az=130.7*

ISC 25 14:41:29.8±0.3,20°.98S±0°.05×178°.75W±0°.05, h600km, n475, σ1§68/449, mb4.5/111, 87C-40D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	4.39	345	P	P	14 42 59.7	+1.6
DGTI	Dogotuki	4.87	343	P	P	14 43 03.0	+1.2
YSA	Yasawairara	5.50	320	P	P	14 43 07.9	+1.1
GLKZ	Green Lake	8.28	175	P	P	14 43 31.0	-0.6
GLKZ				S	S	14 45 15.0	+3.3
NIUE	Niue	8.51	79	P	P	14 43 34.5	+0.4
AFI	Afiamalu	9.68	45	P	P	14 43 43.7	-1.9
AFI	Afiamalu	9.68	45	P	P	14 43 43.7	-1.9
MARNC	Mare, Loyalty	12.34	265	P	P	14 44 10.6	-1.4
MARNC	Mare, Loyalty	12.34	265	P	P	14 44 12.0	0.0
PINNC	Pines Island,	12.93	260	P	P	14 44 17.6	-0.2
PINNC	Pines Island,	12.93	260	P	P	14 44 17.9	0.0
DZM	Mont Dzumac	13.82	263	P	P	14 44 26.6	-0.5
DZM	Mont Dzumac	13.82	263	*e*Pn	P	14 44 25.8	-1.3
	37nm,0.8s						
DZM				*e*S	S	14 46 49.8	-2.4
	496nm,24.4s						
DZM	Mont Dzumac	13.82	263	P	P	14 44 26.2	-0.9
	10nm,0.4s,baz=124,slow=21,SNR=48						
DZM				S	S	14 46 52.7	+0.5
	7.7nm,1.0s,baz=311,slow=18,SNR=3.3						
NFK	Norfolk Island	14.48	234	P	P	14 44 34.8	+1.6
OUZ	Omahuta	15.70	204	P	P	14 44 46.4	+2.2
OUZ	Omahuta	15.70	204	P	P	14 44 44.9	+0.6
KOUNC	Koumac, New Ca	15.87	269	P	P	14 44 47.6	+1.5
KOUNC	Koumac, New Ca	15.87	269	P	P	14 44 46.5	+0.5
GRZ	Great Barrier	16.04	197	P	P	14 44 47.7	+0.4
WCZ	Waipu Caves	16.09	201	P	P	14 44 51.2	+3.4
KUZ	Kuaotunu	16.43	196	P	P	14 44 52.8	+1.9
KUZ	Kuaotunu	16.43	196	P	P	14 44 52.4	+1.5
ABAZ	Army Bay	16.54	198	P	P	14 44 54.3	+2.4
WIAZ	Waiheke Island	16.64	197	P	P	14 44 55.2	+2.4
MBAZ	Motutapu North	16.68	198	P	P	14 44 55.9	+2.7
MXZ	Matakaoa Point	16.72	188	P	P	14 44 54.4	+0.8
MXZ				S	S	14 47 35.0	-4.4
RVAZ	Riverhead Bore	16.77	199	P	P	14 44 55.7	+1.6
WMGZ	Waiomatatini S	16.96	188	P	P	14 44 55.2	-0.5
WMGZ				S	S	14 47 40.2	-3.1
HAZ	Te Kaha	16.99	189	P	P	14 44 55.2	-0.8
HAZ				S	S	14 47 39.7	-4.0
PKGZ	Pakihiroa	17.07	189	P	P	14 44 56.3	-0.6
RUGZ	Raukumara Rang	17.21	190	P	P	14 44 57.4	-0.7
RUGZ				S	S	14 47 40.2	-7.4
TGRZ	Tauranga	17.24	193	P	P	14 45 00.4	+2.1
TWGZ	Tauwhareparae	17.37	189	P	P	14 44 59.6	+0.1
TWGZ				S	S	14 47 45.9	-4.1
TOZ	Tahuroa Road	17.42	195	P	P	14 45 01.3	+1.3
KMRZ	Kaimai	17.43	194	P	P	14 45 02.3	+2.2
URZ	Urewera	17.59	191	P	P	14 44 58.9	-2.5
	29nm,0.3s,baz=13,slow=3.1,SNR=69						
URZ				S	S	14 47 47.9	-5.5
	7.2nm,0.5s,baz=174,slow=18,SNR=2.6						
URZ	Urewera	17.59	191	P	P	14 44 59.0	-2.5
URZ				S	S	14 47 45.9	-7.5
MWZ	Matawai	17.59	190	P	P	14 44 59.9	-1.6
MWZ				S	S	14 47 49.1	-4.6
RTZ	Ruatahuna	17.96	191	P	P	14 45 03.5	-1.4
HIZ	Hauiti	18.32	196	P	P	14 45 09.2	+1.0
BKZ	Black Stump Fm	18.58	192	P	P	14 45 09.3	-1.3
BKZ				IAmb	IAmb	14 45 29.9	
	comp=Z,48nm,1.4s						
TCW	Tory Channel	21.02	195	P	P	14 45 32.1	-0.4
TKNZ	Takaka Hill	21.20	198	P	P	14 45 33.1	-1.0
TUWZ	Tuamarina	21.31	195	P	P	14 45 33.7	-1.4
THZ	Tophouse	21.89	197	P	P	14 45 39.6	-0.8
HNR	Honiara	23.51	296	P	P	14 45 55.0	0.0
HNR	Honiara	23.51	296	P	P	14 45 56.2	+1.2
HNR	Honiara	23.51	296	P	P	14 45 55.0	0.0
HNR				pmax	pmax		
	comp=Z,32nm,0.8s						
ODZ	Otahua Downs	25.55	198	P	P	14 46 12.9	+0.3
MLZ	Mavora Lakes	26.62	201	P	P	14 46 23.1	+1.0
WHZ	Wether Hill Ro	27.14	201	P	P	14 46 26.6	0.0
TBI	Tubuai	27.21	100	*es*S	sS	14 53 26.0	+4.2
	comp=Z,844nm,41.2s						
PPT2	Papeete2	27.73	88	*e*P	P	14 46 34.6	+2.5
	comp=Z,18nm,22.2s						
PPT2				*es*S	**sS**	14 53 27.3	-3.3
	comp=Z,155nm,24.0s						
PPT2				*es*S	**SS**	14 53 34.0	-5.3
	comp=Z,162nm,26.0s						
PPT	Papeete	27.73	88	P	P	14 46 34.3	+2.2
	comp=Z,22nm,0.7s,baz=44,slow=3.5,SNR=5.2						
	comp=Z,22nm,0.7s						
TVO	Taravao	27.99	89	*e*P	P	14 46 37.3	+2.9
	comp=Z,8.4nm,0.7s						
CTA	Charters Tower	32.75	265	P	P	14 47 15.6	+0.5
	comp=Z,7.4nm,0.3s,baz=91,slow=10,SNR=11						
	comp=Z,7.4nm,0.3s						
RABL	Rabaul	32.82	297	P	P	14 47 15.8	+0.1
CMSA	Cobar Meteorol	33.45	244	P	P	14 47 21.5	+0.8
QLP	Quilpie	34.25	253	P	P	14 47 28.1	+0.6
PMG	Port Moresby	34.77	284	P	P	14 47 32.0	+0.1
PMG	Port Moresby	34.77	284	P	P	14 47 32.4	+0.4
PMG	Port Moresby	34.77	284	*i* P	P	14 47 30.5	-1.5
PMG				pmax	pmax		
	comp=Z,31nm,0.7s						
PMG	Port Moresby	34.77	284	P	P	14 47 32.1	+0.1
	comp=Z,36nm,0.8s,baz=82,slow=5.9,SNR=19						
	comp=Z,36nm,0.8s						
BRAT	Ballarat	36.23	235	P	P	14 47 45.5	+1.8
COEN	Coen	36.91	275	P	P	14 47 49.8	+0.2
COEN				IAmb	IAmb	14 47 50.9	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	36.95	245	P	P	14 47 50.4	+0.7
STKA	Stephens Creek	36.95	245	P	P	14 47 50.6	+0.9
STKA	Stephens Creek	36.95	245	*i* P	P	14 47 47.2	-2.5
STKA	Stephens Creek	36.95	245	P	P	14 47 50.6	+0.9
	comp=Z,9.8nm,0.4s,baz=93,slow=11,SNR=52						
	comp=Z,9.8nm,0.4s						
INKA	Innaminka	37.38	251	P	P	14 47 54.8	+1.5
MANU	Manus Island	38.01	295	IAmb	IAmb	14 48 01.5	
	comp=Z,20nm,0.8s						
MANU	Manus Island	38.01	295	P	P	14 47 59.1	+0.6
HTT	Hallett	39.38	243	P	P	14 48 10.1	+0.7
LCRK	Leigh Creek	39.70	247	P	P	14 48 12.7	+0.8
PTPS	Port Pirie	40.12	243	P	P	14 48 14.7	-0.5
BBOO	Buckleboo	41.71	244	IAmb	IAmb	14 48 29.3	
	comp=Z,12nm,0.7s						
OOD	Oodnadatta	41.86	251	P	P	14 48 30.2	+1.1
MULG	Mulgathing	43.29	248	P	P	14 48 40.3	+0.2
AS01	Alice Springs	43.68	257	P	P	14 48 43.5	+0.1
ASAR	Alice Springs	43.73	257	P	P	14 48 44.0	+0.3
	comp=Z,20nm,0.8s,baz=94,slow=7.4,SNR=309						
ASAR				PcP	**PcP**	14 50 17.4	+0.5
	comp=Z,6.2nm,0.7s,baz=104,slow=3.7,SNR=18						
ASAR				ScP	**ScP**	14 53 14.2	+2.1
	comp=Z,1.2nm,0.6s,baz=105,slow=4.4,SNR=6.1						
ASAR				S	**S**	14 54 29.6	-2.1
	comp=Z,5.6nm,0.8s,baz=93,slow=15,SNR=20						
	comp=Z,20nm,0.8s						
WB0	Warramunga Arr	43.82	263	IAmb	IAmb	14 48 44.8	
	comp=Z,16nm,0.9s						
WB2	Warramunga Arr	43.83	263	IAmb	IAmb	14 48 45.4	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	43.83	263	P	P	14 48 44.0	-0.5
WRAB				IAmb	IAmb	14 48 45.3	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	43.83	263	P	P	14 48 44.0	-0.5
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	43.84	263	P	P	14 48 44.1	-0.5
	comp=Z,9.7nm,0.6s,baz=96,slow=7.6,SNR=172						
WRA				PcP	**PcP**	14 50 18.5	+1.1
	comp=Z,0.7nm,0.4s,baz=93,slow=4.1,SNR=1.5						
WRA				ScP	**ScP**	14 53 15.9	+3.3
	comp=Z,0.5nm,0.6s,baz=96,slow=4.2,SNR=1.5						
WRA				S	**S**	14 54 31.0	-2.3
	comp=Z,4.0nm,0.8s,baz=99,slow=13,SNR=9.2						
	comp=Z,9.7nm,0.6s						
GENI	Genyem	43.97	289	P	P	14 48 46.3	+0.7
KDU	Kakadu	47.26	272	P	P	14 49 10.4	-0.1
FORT	Forrest	48.46	247	P	P	14 49 19.3	0.0
MTN	Manton Dam	48.47	271	P	P	14 49 19.1	-0.4
WRKA	Warakurna	48.66	255	P	P	14 49 21.1	+0.2
DRS	Darwin Rock St	48.80	272	P	P	14 49 21.7	-0.3
SOEI	Soe	55

CMB IAmb IAmb 14 52 43.5
comp=Z,16nm,1.4s
CMB Columbia Colle 80.29 43 P **P** **14 52 41.5 +2.0**
CMB pmax pmax
comp=Z,16nm,1.5s
AFDM Forest Hills D 80.46 42 IAmb IAmb 14 52 43.7
comp=Z,15nm,1.5s
ORV Oroville 80.50 41 P **P** **14 52 42.4 +1.9**
ORV Oroville 80.50 41 P **P** **14 52 42.4 +1.9**
ORV pmax pmax
comp=Z,10.0nm,1.2s
MDJ Mudanjiang 80.51 325 P **P** **14 52 41.5 +1.1**
MDJ S S 15 02 09.0 +10
MDJ ScS **ScS** **15 02 19.8 +7.1**
MDJ Mudanjiang 80.51 325 IAmb IAmb 14 52 42.5
comp=Z,12nm,0.9s
MDJ Mudanjiang 80.51 325 P **P** **14 52 41.7 +1.3**
MPK Martis Peak 81.26 42 IAmb IAmb 14 52 48.3
comp=Z,13nm,0.8s
PNTR Pine Nut 81.41 43 P **P** **14 52 46.9 +1.4**
PNTR IAmb IAmb 14 52 48.8
comp=Z,27nm,1.4s
NVAR Mina Array Bea 81.85 44 P **P** **14 52 49.9 +2.1**
comp=Z,2.5nm,0.7s,baz=227,slow=7.4,SNR=19
comp=Z,2.5nm,0.7s
TPH Tonopah 82.36 44 IAmb IAmb 14 52 54.0
comp=Z,20nm,0.9s
BNX BinXian 82.41 325 ⇓P **P** **14 52 50.5 +0.4**
BNX pmax pmax
comp=Z,15nm,0.9s
BNX pmax pmax
comp=Z,95nm,4.3s
KLR Kul'dur 82.58 330 *ce*P **P** **14 52 50.6 -0.3**
KLR pmax pmax
comp=Z,23nm,2.5s
KLR Kul'dur 82.58 330 P **P** **14 52 51.8 +1.0**
comp=Z,2.9nm,0.8s,baz=112,slow=5.8,SNR=9.0
comp=Z,2.9nm,0.8s
O18K Koktuh Hills 82.81 12 IAmb IAmb 14 52 53.0
comp=Z,21nm,0.9s
J05D Fort Rock, OR 82.92 38 P **P** **14 52 54.2 +1.3**
J05D IAmb IAmb 14 52 56.6
comp=Z,38nm,1.4s
TIA Tai'an 83.08 313 ⇑P **P** **14 52 55.0 +1.3**
TIA pmax pmax
comp=Z,7.0nm,1.4s
RPSI Rantau Prapat 83.80 275 IAmb IAmb 14 52 58.7
comp=Z,11nm,0.9s
PSI Prapat 83.83 275 P **P** **14 52 58.0 -0.1**
MA2 Magadan 84.06 345 P **P** **14 52 58.8 +0.9**
MA2 Magadan 84.06 345 *ce*P **P** **14 52 55.5 -2.4**
MA2 pmax pmax
comp=Z,23nm,1.7s
MA2 Magadan 84.06 345 P **P** **14 52 57.8 -0.1**
comp=Z,2.7nm,0.6s,baz=142,slow=8.3,SNR=5.5
comp=Z,2.7nm,0.6s
GSI Gunungsitoli 84.55 273 P **P** **14 53 02.0 +0.5**
GSI Gunungsitoli 84.55 273 P **P** **14 53 03.0 +1.5**
J08A Circle Bar Ran 84.58 40 IAmb IAmb 14 53 04.3
comp=Z,13nm,1.3s
U15A North Rim 84.80 48 IAmb IAmb 14 53 05.4
comp=Z,5.5nm,0.7s
PKCU Pink Cliffs 85.31 47 IAmb IAmb 14 53 09.2
comp=Z,13nm,1.4s
HEH HeiHe 85.35 329 *e*P **P** **14 53 05.0 +0.6**
HEH pmax pmax
comp=Z,17nm,0.6s
HEH pmax pmax
comp=Z,290nm,4.7s
HNS HongShan 85.35 313 ⇓P **P** **14 53 06.3 +1.6**
HNS pmax pmax
comp=Z,14nm,0.8s
LYN LuoYang 85.51 309 ⇑P **P** **14 53 07.8 +2.2**
LYN pmax pmax
comp=Z,24nm,0.8s
TTA Tatalina 85.54 10 P **P** **14 53 06.1 +1.0**
ENH Enshi 85.73 305 IAmb IAmb 14 53 09.1
comp=Z,20nm,0.9s
ENH Enshi 85.73 305 P **P** **14 53 07.9 +1.1**
BJT Baijiatuau 85.73 316 IAmb IAmb 14 53 08.1
comp=Z,6.1nm,0.8s
BJT Baijiatuau 85.73 316 P **P** **14 53 07.5 +1.0**
E08A Dider Farm, El 86.07 37 IAmb IAmb 14 53 07.9
comp=Z,15nm,1.0s
ELIB Princess Elisa 86.09 187 *d*P **P** **14 53 08.5 +0.6**
comp=Z,23nm,0.8s
BMO Blue Mountains 86.13 39 P **P** **14 53 09.2 +0.8**
BMO Blue Mountains 86.13 39 P **P** **14 53 09.2 +0.8**
BMO pmax pmax
comp=Z,4.0nm,1.0s
K20K Telida 86.27 11 IAmb IAmb 14 53 10.3
comp=Z,19nm,1.4s
COYC Coyhaique 86.27 138 **P** **14 53 11.8 +2.7**
GYA Guiyang 86.28 300 ⇑P **P** **14 53 11.0 +1.4**
GYA pmax pmax
comp=Z,12nm,1.7s
D08A Wollman Farm, 86.48 36 IAmb IAmb 14 53 12.5
comp=Z,6.8nm,0.9s
SEY Seymchan 86.68 347 *ce*P **P** **14 53 09.8 -0.6**
SEY pmax pmax
comp=Z,9.0nm,0.8s
CAST Castle Rocks 86.69 12 IAmb IAmb 14 53 10.3
comp=Z,11nm,1.0s
Q16A Castle Valley 86.83 46 IAmb IAmb 14 53 17.6
comp=Z,11nm,1.5s
PLID Pearl Lake 87.03 39 IAmb IAmb 14 53 16.4
comp=Z,23nm,1.5s
TROLL Troll, Antarti 87.25 180 ⇑P **P** **14 53 14.2 +0.9**
comp=Z,399nm,0.5s
SRU San Rafael Swe 87.36 46 IAmb IAmb 14 53 18.1
comp=Z,10nm,1.3s
LL02 Futaleuf 87.48 136 **P** **14 53 17.0 +2.2**
LL02 IAmb IAmb 14 53 18.7
comp=Z,22nm,1.1s
VHRN Van Horn 87.50 56 IAmb IAmb 14 53 18.8
comp=Z,7.3nm,1.3s
SNAA Sanae 87.55 179 ⇑P **P** **14 53 15.0 +0.3**
comp=Z,63nm,0.6s
SNAA Sanae 87.55 179 *i* P **P** **14 53 12.4 -2.3**
SNAA pmax pmax
comp=Z,18nm,2.0s
SNAA Sanae 87.55 179 P **P** **14 53 14.8 +0.1**
comp=Z,2.5nm,0.6s,baz=192,slow=12,SNR=14
comp=Z,2.5nm,0.6s
ZEA Zeya 87.71 331 *e*P **P** **14 53 16.6 +1.2**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
VNA3 Neumayer Olymp 87.71 176 ⇑P **P** **14 53 15.8 +0.5**
comp=Z,32nm,0.7s
XLT XiLinHaoTe 87.84 319 *e*P **P** **14 53 17.3 +0.9**
XLT pmax pmax
comp=Z,7.0nm,0.7s
XLT pmax pmax
comp=Z,130nm,5.9s
XAN Xi'an 87.86 308 ⇓P **P** **14 53 18.0 +1.3**
XAN pmax pmax
comp=Z,18nm,0.9s
H19K Roundabout Mou 87.90 9 IAmb IAmb 14 53 17.7
comp=Z,6.5nm,0.9s
TX31 Lajitas Ar. Si 87.90 58 IAmb IAmb 14 53 20.7
comp=Z,6.5nm,1.2s
TXAR Lajitas Array 87.91 58 P **P** **14 53 19.6 +2.5**
comp=Z,2.1nm,0.8s,baz=219,slow=6.1,SNR=23
comp=Z,2.1nm,0.8s
VNA2 Neumayer--Watz 88.14 177 ⇑P **P** **14 53 18.1 +0.8**
comp=Z,20nm,0.8s,baz=186,slow=2.9
NVL N'lazarevskaya 88.20 183 *e*P P 14 53 07.8 -10
NVL pmax pmax
comp=Z,17nm,0.9s
ANMO Albuquerque 88.25 52 P **P** **14 53 19.7 +1.0**
ANMO IAmb IAmb 14 53 22.2
comp=Z,8.0nm,1.4s
ANMO Albuquerque 88.25 52 P **P** **14 53 19.7 +1.0**
ANMO pmax pmax
comp=Z,8.0nm,1.4s
I21K Tanana 88.31 11 IAmb IAmb 14 53 19.5
comp=Z,21nm,1.3s
ALPN Alpine 88.37 57 IAmb IAmb 14 53 22.3
comp=Z,3.3nm,0.6s
VNA1 Neumayer--Stat 88.38 177 ⇑P **P** **14 53 19.4 +1.0**
comp=Z,22nm,0.9s
MLY Manley 88.40 12 IAmb IAmb 14 53 19.4
comp=Z,18nm,1.4s
HDA Harding Lake 88.61 13 IAmb IAmb 14 53 21.1
comp=Z,22nm,1.4s
L27K Beaver Creek, 88.66 16 IAmb IAmb 14 53 21.4
comp=Z,6.1nm,1.1s

MDM Murphy Dome 88.82 12 IAmb IAmb 14 53 21.4
comp=Z,15nm,1.2s
COLA College 88.83 13 P **P** **14 53 20.1 -0.2**
COLA College 88.83 13 P **P** **14 53 20.6 +0.2**
COLA College 88.83 13 P **P** **14 53 20.1 -0.2**
COLA pmax pmax
comp=Z,18nm,1.2s
IL31 88.94 13 IAmb IAmb 14 53 22.9
comp=Z,14nm,1.4s
ILAR Eielson Array 88.94 13 P **P** **14 53 20.9 0.0**
comp=Z,2.9nm,0.8s,baz=220,slow=5.5,SNR=31
comp=Z,2.9nm,0.8s
KMI Kunming 88.94 297 ⇓P **P** **14 53 24.3 +2.1**
KMI pmax pmax
comp=Z,11nm,0.9s
J25K Salcha River, 89.13 14 IAmb IAmb 14 53 23.0
comp=Z,3.0nm,0.7s
E18K Tukpahlearik C 89.16 7 IAmb IAmb 14 53 23.8
comp=Z,9.2nm,1.2s
HHC Hu-ho-hao-te 89.19 315 *e*P **P** **14 53 24.3 +1.5**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,72nm,5.1s
GO06 Curarrehue 89.35 132 P **P** **14 53 25.4 +1.6**
GO06 IAmb IAmb 14 53 27.2
comp=Z,11nm,1.1s
BILL Bilibino 89.44 354 P **P** **14 53 23.6 +0.4**
BILL Bilibino 89.44 354 ⇑*e*P **P** **14 53 22.9 -0.3**
BILL pmax pmax
comp=Z,32nm,4.3s
PLCA Paso Flores 89.45 134 **P** **14 53 26.2 +2.0**
PLCA IAmb IAmb 14 53 27.2
comp=Z,6.0nm,0.8s
PLCA Paso Flores 89.45 134 P **P** **14 53 26.2 +2.0**
PLCA pmax pmax
comp=Z,6.0nm,0.8s
PLCA Paso Flores 89.45 134 P **P** **14 53 25.6 +1.4**
comp=Z,5.5nm,0.9s,baz=242,slow=4.8,SNR=23
comp=Z,5.5nm,0.9s
C16K Lisburne Hills 89.53 5 IAmb IAmb 14 53 26.2
comp=Z,19nm,1.5s
CMAR Chiang Mai Arr 89.61 290 P **P** **14 53 26.2 +1.0**
comp=Z,5.7nm,0.8s,baz=132,slow=3.1,SNR=43
comp=Z,5.7nm,0.8s
CHTO Chiang Mai 89.75 290 P **P** **14 53 26.6 +0.8**
CHTO IAmb IAmb 14 53 28.0
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 89.75 290 P **P** **14 53 27.1 +1.3**
CHTO Chiang Mai 89.75 290 P **P** **14 53 26.6 +0.8**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
PDAR Pinedale Array 89.79 44 P **P** **14 53 26.9 +1.1**
comp=Z,1.7nm,0.6s,baz=213,slow=3.7,SNR=20
comp=Z,1.7nm,0.6s
F21K Alatna River 89.93 10 IAmb IAmb 14 54 10.2
comp=Z,6.2nm,1.4s
BTO Baotou 90.10 314 *e*P **P** **14 53 29.5 +2.5**
BTO pP **pwP** **14 55 40.0 +0.6**
BTO sP **sP** **14 56 39.0 +3.8**
BTO PP **PP** **14 57 17.5 +5.4**
BTO pmax pmax
comp=Z,18nm,1.0s
BTO pmax pmax
comp=Z,230nm,8.4s
DAWY Dawson 90.11 16 IAmb IAmb 14 53 28.7
comp=Z,7.5nm,1.3s
PZH PanZhiHua 90.31 298 P **P** **14 53 29.8 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,80nm,6.0s
DRIO Del Rio 90.36 59 IAmb IAmb 14 53 31.0
comp=Z,4.9nm,0.6s
MT01 Popeta 92.09 127 P **P** **14 53 37.0 +0.7**
MT01 IAmb IAmb 14 53 38.6
comp=Z,8.4nm,0.8s
YAK Yakutsk 92.29 338 *e*P **P** **14 53 35.3 -1.1**
YAK *e*S **SKSac** **15 03 12.7 +0.4**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.6s
YAK smax smax
comp=E,230nm,5.1s
YAK smax smax
comp=N,133nm,4.6s
YAK Yakutsk 92.29 338 P **P** **14 53 35.8 -0.6**
comp=N,5.6nm,0.4s,baz=52,slow=2.2,SNR=5.6
comp=N,5.6nm,0.4s
LZH Lanzhou 92.50 308 *e*P **P** **14 53 40.0 +1.7**
LZH pP pwP 14 55 50.8 -0.4
LZH pmax pmax
comp=Z,16nm,1.0s
F31M Tsiigehtchic 94.21 16 IAmb IAmb 14 53 46.1
comp=Z,3.3nm,0.8s
SONM Songino Array 95.65 319 P **P** **14 53 52.4 +0.1**
comp=Z,0.2nm,0.4s,baz=131,slow=6.1,SNR=2.4
comp=Z,0.2nm,0.4s
GTA Gaotai 96.73 310 *e*P **P** **14 53 57.3 0.0**
GTA pP pwP 14 56 14.3 +3.9
GTA pmax pmax
comp=Z,2.0nm,1.5s
YKA Yellowknife Ar 97.24 25 P **P** **14 53 59.5 +0.7**
comp=Z,0.4nm,0.9s,baz=250,slow=4.3,SNR=5.3
YKA PP **PP** **14 58 04.9 -1.1**
comp=Z,0.2nm,0.8s,baz=243,slow=6.5,SNR=4.9
comp=Z,0.4nm,0.9s
TIXI Tiksi 99.03 345 *i* P Pdif 14 54 04.4 -2.2
TIXI pmax pmax
comp=Z,4.0nm,1.4s
ZALV Zalesovo Beam 110.42 321 PKiKP **PKiKP** **14 58 53.6 -0.9**
comp=Z,1.3nm,0.4s,baz=163,slow=2.1,SNR=11
MK31 Makanchi Array 111.01 313 *i* PKiKP **PKiKP** **14 58 55.1 -0.8**
MKAR Makanchi Array 111.01 313 PKiKP **PKiKP** **14 58 55.2 -0.7**
comp=Z,0.7nm,0.4s,baz=140,slow=0.8,SNR=34
KURK Kurchatov 113.87 317 *i* PKiKP **PKiKP** **14 59 00.6 -0.6**
KURBB Kurchatov Arra 113.92 317 PKiKP **PKiKP** **14 59 00.6 -0.6**
comp=Z,1.4nm,0.2s,baz=94,slow=2.0,SNR=11
KURBB PP **PP** **15 00 02.2 -4.8**
comp=Z,1.5nm,0.2s,baz=82,slow=6.8,SNR=5.6
AAK Ala-Archa 116.04 308 *i* PKiKP **PKiKP** **14 59 05.7 -0.2**
FRB Frobisher Bay 117.54 28 PKP **PKiKP** **14 59 07.4 -0.4**
comp=Z,1.2nm,0.4s,baz=274,slow=2.7,SNR=6.8
BVAR Borovoye Array 118.99 320 PKP **PKiKP** **14 59 10.7 -0.4**
comp=Z,5.6nm,0.3s,baz=116,slow=2.8,SNR=79
KK31 Karatay Array 118.99 308 PKPdf **PKiKP** **14 59 10.7 -0.7**
KK31 Karatay Array 118.99 308 PKIKP **PKiKP** **14 59 10.7 -0.7**
BRVK Borovoye 119.05 320 PKPdf **PKiKP** **14 59 10.4 -0.7**
BRVK Borovoye 119.05 320 *i* PKIKP **PKiKP** **14 59 10.7 -0.5**
SPITS Spitsbergen Ar 122.30 356 PKP **PKiKP** **14 59 16.4 -0.5**
comp=Z,9.3nm,0.7s,baz=73,slow=5.6,SNR=7.2
ARU Arti 125.19 325 PKPdf **PKiKP** **14 59 22.9 -0.3**
ARU Arti 125.19 325 *i* PKIKP **PKiKP** **14 59 22.7 -0.5**
ARU 15 01 22.8
ARU 15 05 38.1
ARU SP SP 15 10 24.2 -0.2
ARU SS **SS** **15 17 26.6 -7.8**
BOSA Boshof 125.52 206 PKP **PKiKP** **14 59 25.8 +0.8**
comp=Z,2.0nm,0.8s,baz=306,slow=2.3,SNR=3.6
ABKAR Akbulak array 125.95 316 PKPdf **PKiKP** **14 59 24.2 -0.7**
GEYT Alibeck 128.45 302 PKP **PKiKP** **14 59 30.6 +0.2**
comp=Z,3.3nm,0.7s,baz=246,slow=6.3,SNR=7.1
KIRV Kirov 129.03 330 *i* PKIKP **PKiKP** **14 59 30.2 -0.5**
ARA0 ARCESS Array S 129.26 349 *e*PKPdf **PKiKP** **14 59 30.6 -0.4**
ARCES ARCESS Array B 129.26 349 PKhKP PKPpre 14 59 24.3
comp=Z,3.5nm,1.0s,baz=96,slow=0.4,SNR=5.3
ARCES PKP **PKiKP** **14 59 30.4 -0.6**
comp=Z,4.1nm,0.6s,baz=85,slow=1.3,SNR=27
TRO Tromso 130.18 352 *e*PKPdf **PKiKP** **14 59 32.4 -0.3**
KLMR Klimovskoe 132.03 336 *e*PKIKP **PKiKP** **14 59 35.3 -1.5**
KLMR *e* 15 02 06.5
KLMR pmax pmax
comp=Z,25nm,2.1s
STEI Steigen 132.24 353 *e*PKPdf **PKiKP** **14 59 36.7 -0.3**
BELG Belogornoye 132.56 323 PKP **PKiKP** **14 59 38.0 0.0**
comp=Z,16nm,0.6s,baz=216,slow=1.9,SNR=4.1
FINES FINESS Array B 136.03 343 *c i* PKIKP **PKiKP** **14 59 44.5 -0.4**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 136.03 343 PKhKP PKPpre 14 59 31.5
comp=Z,0.6nm,0.4s,baz=109,slow=3.2,SNR=4.9
FINES PKP **PKiKP** **14 59 44.3 -0.6**
comp=Z,3.0nm,0.7s,baz=107,slow=3.3,SNR=12

FINES SKPbc **SKiKP** **15 02 21.1 -3.6**
comp=Z,2.9nm,0.7s,baz=50,slow=3.0,SNR=9.8
RAYN Ar Rayn 139.08 282 ⇓PKHKP PKPpre 14 59 47.9
NB2 NORSAR Subarra 139.37 353 PKP **PKPdf** **14 59 42.4 -6.9**
comp=Z,1.2nm,0.5s,baz=16,slow=3.2
NB2 SKPa 15 02 31.2
comp=Z,1.3nm,0.7s,baz=11,slow=2.9
NOA NORSAR Array B 139.37 353 PKhKP PKPpre 14 59 42.5
comp=Z,1.5nm,0.7s,baz=13,slow=2.4,SNR=9.5
NOA PKP **PKiKP** **14 59 49.6 -2.2**
comp=Z,1.3nm,0.7s,baz=19,slow=4.1,SNR=5.7
NOA SKPbc **SKiKP** **15 02 30.5 -1.2**
comp=Z,2.0nm,0.8s,baz=15,slow=4.4,SNR=4.9
NC602 NORSAR Array S 139.62 352 *e*PKPdf **PKPdf** **14 59 42.2 -7.4**
HFS Hagfors 139.90 350 PKhKP PKPpre 14 59 43.4
comp=Z,3.5nm,0.3s,baz=62,slow=3.8,SNR=51
HFS PKP **PKiKP** **14 59 50.4 -2.4**
comp=Z,2.1nm,0.6s,baz=39,slow=0.9,SNR=4.2
KONO Kongsberg 140.91 353 *e*PKPdf **PKPdf** **14 59 47.7 -4.3**
MNK Minsk 140.93 335 *i* PKIKP **PKiKP** **14 59 52.6 -2.5**
MNK *i* 15 03 02.5
MNK *i* PPP PPP 15 06 04.5
MNK *i* 15 06 12.9
MNK pmax pmax
comp=E,9.0nm,0.9s
MNK pmax pmax
comp=N,21nm,0.9s
MNK pmax pmax
comp=Z,9.0nm,0.8s
BLS5 Blasjo 141.41 356 *e*PKPdf **PKPdf** **14 59 49.0 -4.0**
TJOU Tjoern 142.22 351 *i* P **PKPdf** **14 59 50.5 -3.9**
HOMB Homborsund 142.38 354 *e*PKPdf **PKPdf** **14 59 54.0 -0.7**
BORU Boraas 142.43 350 *i* P **PKPdf** **14 59 50.6 -4.2**
SNART Snartemo 142.43 355 *e*PKPdf **PKPdf** **14 59 52.6 -2.2**
LODK Lodwar 142.51 247 PKPdf **PKPdf** **14 59 54.8 -1.6**
ONAU Onsala 142.79 350 *i* P **PKPdf** **14 59 52.1 -3.3**
SUW Suwalki 143.03 338 *e*PKPdf **PKPdf** **14 59 54.3 -1.7**
FABU Falkenberg 143.04 350 *i* P PKPbc 14 59 52.5 -1.7
AKASG Malin Array Be 143.08 330 *c i* PKIKP **PKiKP** **14 59 59.7 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 143.08 330 PKP **PKPdf** **14 59 54.2 -2.0**
comp=Z,14nm,0.4s,baz=42,slow=4.3,SNR=70
AKASG SKPbc **SKiKP** **15 02 39.4 -0.2**
comp=Z,0.3nm,0.4s,baz=50,slow=1.5,SNR=4.7
BLEU Blekinge 143.10 347 *i* P PKPbc 14 59 53.1 -1.3
KIEV Kiev 143.10 330 ⇑P PKPbc 14 59 53.4 -1.2
KIEV Kiev 143.10 330 PKPpre 14 59 53.3
KIEV Kiev 143.10 330 ⇑PKHKP PKPpre 14 59 53.4
DEL Delary 143.34 348 *i* P PKPbc 14 59 53.8 -1.3
BJUU Bjuv 143.87 349 *i* P PKPab 14 59 55.3 -1.6
SIM Simferopol' 143.90 319 *e*PKIKP **PKiKP** **15 00 01.7 +0.2**
SIM pmax pmax
comp=Z,15nm,0.6s
MBAR Mbarara 144.06 237 *c i* PKHKP PKPpre 15 00 00.2
MBAR pmax pmax
comp=Z,23nm,1.3s
MUD Monsted U'grnd 144.09 353 *i* P **PKPdf** **14 59 56.8 -0.9**
LUNU Lund 144.21 348 *i* P **PKPab** **14 59 56.7 -1.5**
BSD Bornholm Skovb 144.39 347 *i* P **PKPab** **14 59 58.5 -0.4**
SORM Soroca 145.24 328 ⇓P **PKPab** **15 00 01.4 -1.1**
SORM Soroca 145.24 328 ⇓PKIKP **PKPab** **15 00 01.4 -1.1**
BNN Bunyan 145.39 309 PKPbc **PKPab** **15 00 02.1 -1.5**
GKP Gorka Klasztor 145.50 343 *e*PKPbc **PKPab** **15 00 02.5 -2.0**
EKA Eskdalemuir Ar 145.54 4 PKPbc **PKPab** **15 00 01.7 -1.7**
comp=Z,7.9nm,0.8s,baz=6.0,slow=2.8,SNR=17
MILM Milestii Mici 145.79 326 ⇑P **PKPab** **15 00 03.2 -1.5**
MILM Milestii Mici 145.79 326 ⇓*i* PKP **PKPab** **15 00 02.8 -1.9**
comp=Z,34nm,0.6s
MILM Milestii Mici 145.79 326 ⇑PKIKP **PKPab** **15 00 03.2 -1.5**
ASF Jabal al Asfar 146.37 297 PKPbc **PKiKP** **15 00 05.8 -1.4**
comp=Z,12nm,0.8s,baz=155,slow=0.7,SNR=11
BSEG Bad Segeberg 146.38 350 *e*PKPbc **PKiKP** **15 00 05.0 -1.3**
baz=19,slow=2.4
LEOM Leova 146.38 325 ⇑P **PKPab** **15 00 05.4 -1.7**
LEOM Leova 146.38 325 ⇑PKIKP **PKPab** **15 00 05.4 -1.7**
VASR Vaslui 146.51 326 ⇑P **PKPab** **15 00 05.8 -1.8**
BR131 Keskin Array S 146.63 311 **PKiKP** **15 00 05.2 -2.4**
BR131 Keskin Array S 146.63 311 PKIKP **PKiKP** **15 00 05.2 -2.4**
BRTR Keskin Array B 146.63 311 **PKiKP** **15 00 05.2 -2.4**
BRTR Keskin Array B 146.63 311 PKPbc **PKiKP** **15 00 05.7 -1.9**
comp=Z,7.8nm,0.6s,baz=134,slow=4.2,SNR=35
VLDR Vladesti 146.87 325 ⇑P **PKPab** **15 00 07.0 -2.1**
TLCR 146.88 323 ⇑P **PKiKP** **15 00 06.6 -1.0**
TLCR 146.88 323 ⇑PKIKP **PKiKP** **15 00 06.6 -1.0**
GHRR 147.09 326 ⇑P **PKPab** **15 00 07.6 -2.4**
RUE Ruedersdorf 147.09 346 *e*PKPbc **PKiKP** **15 00 06.7 -1.1**
baz=19,slow=2.4
BURAR Bucovina Array 147.12 330 ⇑P **PKPab** **15 00 07.8 -2.4**
BURAR Bucovina Array 147.12 330 ⇑PKIKP **PKPab** **15 00 07.8 -2.4**
TESR Tescani 147.19 327 ⇑P **PKiKP** **15 00 06.5 -1.7**
CFR Carcaliu 147.26 324 ⇓P **PKiKP** **15 00 07.3 -1.1**
CFR Carcaliu 147.26 324 ⇓PKIKP **PKiKP** **15 00 07.3 -1.1**
TPGR Topolog 147.30 323 ⇑P **PKiKP** **15 00 07.9 -0.7**
OJC Ojcow 147.34 338 *e*PKPbc **PKiKP** **15 00 07.5 -1.0**
OJC Ojcow 147.34 338 **PKiKP** **15 00 06.8 -1.7**
OJC Ojcow 147.34 338 PKIKP **PKiKP** **15 00 06.8 -1.7**
PANC Panciu 147.35 326 ⇑P **PKiKP** **15 00 08.2 -0.4**
MMAI Mount Meron Ar 147.43 299 PKPbc **PKiKP** **15 00 08.5 -0.8**
comp=Z,14nm,0.6s,baz=54,slow=4.2,SNR=22
STHS Stebnicka Huta 147.46 335 *e*PKIKP **PKiKP** **15 00 07.3 -1.5**
STHS *e* 15 00 14.9
STHS Stebnicka Huta 147.46 335 *e*PKP **PKiKP** **15 00 07.3 -1.5**
STHS *e* 15 00 14.9
ODBI Odobesti 147.47 325 ⇑P **PKPab** **15 00 09.1 -2.4**
TIRR Tirgusor 147.55 322 ⇑P **PKiKP** **15 00 08.2 -0.8**
TIRR Tirgusor 147.55 322 ⇑PKIKP **PKiKP** **15 00 08.2 -0.8**
VRI Vrincioaia 147.58 326 ⇑P **PKiKP** **15 00 08.4 -0.7**
VRI Vrincioaia 147.58 326 ⇑PKIKP **PKiKP** **15 00 08.4 -0.7**
PLOR Plostina 147.63 326 ⇑P **PKiKP** **15 00 08.3 -0.9**
PLOR Plostina 147.63 326 ⇑PKIKP **PKiKP** **15 00 08.3 -0.9**
RETH Rethem/Aller, 147.68 351 *e*PKPbc **PKiKP** **15 00 08.4 -0.6**
baz=19,slow=2.4
TLBR Topalu 147.70 323 ⇑P **PKiKP** **15 00 08.9 -0.4**
FLTG Flechtingen 147.76 348 *e*PKPbc **PKiKP** **15 00 08.3 -0.9**
baz=19,slow=2.4
CRVS Cervenica-Dubn 147.79 335 *e*PKIKP **PKiKP** **15 00 08.9 -0.6**
CRVS *e* 15 00 13.8
CRVS Cervenica-Dubn 147.79 335 *e*PKP **PKiKP** **15 00 08.9 -0.6**
CRVS *e* 15 00 13.8
NRDL Niedersach Rie 147.80 350 *e*PKPbc **PKiKP** **15 00 08.6 -0.6**
baz=19,slow=2.4
TURR Turia 147.82 327 ⇑P **PKiKP** **15 00 09.5 -0.1**
NIE Niedzica 147.82 336 *e*PKPbc **PKiKP** **15 00 09.2 -0.4**
MANR Mangalia 147.83 321 ⇓P **PKiKP** **15 00 09.2 -0.5**
COVR Voineasa-Covas 147.86 326 ⇑P **PKiKP** **15 00 08.6 -1.1**
BMR Baia Mare 147.88 331 ⇑P **PKiKP** **15 00 08.6 -1.0**
BMR Baia Mare 147.88 331 ⇑PKIKP **PKiKP** **15 00 08.6 -1.0**
OZUR 147.91 327 ⇑P **PKiKP** **15 00 09.7 -0.1**
ARCR ARCALIA 147.91 330 ⇑P **PKiKP** **15 00 09.8 +0.1**
KSP Ksiaz 147.93 342 *e*PKPbc **PKiKP** **15 00 09.3 -0.3**
BOSR Bodos 147.99 327 ⇑P **PKiKP** **15 00 10.2 +0.3**
NEHR Nehoiu 148.09 326 ⇓P **PKiKP** **15 00 10.2 0.0**
ISR Istrita 148.16 325 ⇓P **PKiKP** **15 00 10.2 -0.2**
ISR Istrita 148.16 325 ⇓PKIKP **PKiKP** **15 00 10.2 -0.2**
DOPR Dopca 148.20 327 ⇑P **PKiKP** **15 00 10.7 +0.3**
OSTC Ostas 148.21 342 ⇑*e*PKP **PKPbc** **15 00 07.5 -1.6**
OSTC Ostas 148.21 342 *e*PKIKP **PKPbc** **15 00 07.5 -1.6**
CHVC Chvalec 148.23 342 ⇑*e*PKP **PKiKP** **15 00 10.3 0.0**
CHVC Chvalec 148.23 342 *e*PKIKP **PKiKP** **15 00 10.3 0.0**
MLR Muntele Rosu 148.24 326 ⇑P **PKiKP** **15 00 10.1 -0.6**
MLR Muntele Rosu 148.24 326 PKPbc **PKiKP** **15 00 10.1 -0.6**
comp=Z,9.9nm,0.6s,baz=273,slow=4.3,SNR=20
UPC Upice 148.31 342 ⇑*e*PKP **PKiKP** **15 00 10.4 -0.1**
UPC Upice 148.31 342 *e*PKIKP **PKiKP** **15 00 10.4 -0.1**
CLL Collm 148.36 346 *i* PKIKP **PKiKP** **15 00 09.9 -0.6**
CLL *i* 15 00 15.2
CLL pmax pmax
comp=Z,20nm,0.9s
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 148.36 346 *i* PKPbc **PKiKP** **15 00 09.9 -0.6**
comp=Z,20nm,0.9s
CLL *i* PKPab **PKPab** **15 00 15.2 +0.2**
comp=Z,8.0nm,0.8s
CLL *e*PKPab **pPKPab** **15 02 27.0 0.0**
CLL *e*(PKSdf) 15 03 40.0
CLL Collm 148.36 346 *e*PKPbc **PKiKP** **15 00 10.2 -0.3**
baz=19,slow=2.4
DPC Dobruska-Polom 148.36 341 ⇑*e*PKP **PKiKP** **15 00 10.5 -0.1**
DPC *e*PKPAB **PKPab** **15 00 16.0 +0.9**
DPC Dobruska-Polom 148.36 341 *e*PKIKP **PKiKP** **15 00 10.5 -0.1**
DPC *e* 15 00 16.0

CLZ	**Clausthal**	**148.38 349**	*e*PKPbc	**PKiKP**	**15 00 10.5**	**-0.1**
	baz=19,slow=2.4						
EIL	**Elat**	**148.42 293**	PKPbc	**PKiKP**	**15 00 11.4**	**0.0**
	comp=Z,7.8nm,0.7s,baz=325,slow=3.8,SNR=8.3						
KRLC	**Kraliky**	**148.47 341**	⇑*e*PKP	**PKiKP**	**15 00 10.5**	**-0.4**
KRLC	**Kraliky**	**148.47 341**	*e*PKIKP	**PKiKP**	**15 00 10.5**	**-0.4**
MORC	**Moravsky Berou**	**148.49 340**	⇓P	**PKiKP**	**15 00 10.8**	**-0.1**
MORC	**Moravsky Berou**	**148.49 340**	*e*PKP	**PKiKP**	**15 00 10.5**	**-0.4**
MORC	**Moravsky Berou**	**148.49 340**	⇓PKIKP	**PKiKP**	**15 00 10.8**	**-0.1**
KECS	**Kecovo**	**148.51 335**	*e*PKP2	**PKPab**	**15 00 12.9**	**-2.8**
KECS	**Kecovo**	**148.51 335**	*e*PKP	**PKPab**	**15 00 12.9**	**-2.8**
KECS			*e*		15 00 18.3	
CBBR	**Cluj-Babes-Bol**	**148.52 330**	⇑P	**PKPbc**	**15 00 07.8**	**-2.1**
BRG	**Berggiesshubel**	**148.54 345**	*e*PKP	**PKiKP**	**15 00 10.7**	**-0.2**
BRG			Amp		15 00 12.2	
	comp=Z,9.7nm,0.8s						
BRG	**Berggiesshubel**	**148.54 345**	*e*PKIKP	**PKiKP**	**15 00 10.6**	**-0.2**
BRG			pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRG	**Berggiesshubel**	**148.54 345**	*e*PKPbc	**PKiKP**	**15 00 10.7**	**-0.2**
	baz=19,slow=2.4						
CJR	**Cluj-Napoca**	**148.54 330**	⇑P	**PKiKP**	**15 00 11.2**	**+0.1**
CJR	**Cluj-Napoca**	**148.54 330**	⇑PKIKP	**PKiKP**	**15 00 11.2**	**+0.1**
MDB	**Medias**	**148.58 328**	⇑P	**PKiKP**	**15 00 11.4**	**+0.2**
MDB	**Medias**	**148.58 328**	⇑PKIKP	**PKiKP**	**15 00 11.4**	**+0.2**
NEUB	**Neuenburg**	**148.72 347**	*e*PKPbc	**PKiKP**	**15 00 11.2**	**0.0**
	baz=19,slow=2.4						
MAUC	**Maruska**	**148.75 339**	⇑*e*PKP	**PKiKP**	**15 00 11.8**	**+0.4**
MARR	**Marisel-Cluj**	**148.79 330**	⇑P	**PKiKP**	**15 00 11.6**	**-0.1**
DRGR		**148.89 331**	⇑P	**PKiKP**	**15 00 12.5**	**+0.7**
DRGR		**148.89 331**	⇑PKHKP	PKPpre	15 00 12.5	
ARR	**Arges**	**148.99 327**	⇑P	**PKiKP**	**15 00 13.0**	**+0.9**
VYHS	**Vyhne**	**149.13 337**	*e*PKHKP	PKPpre	15 00 12.1	
VYHS			*e*		15 00 19.3	
VYHS	**Vyhne**	**149.13 337**	*e*PKP	**PKiKP**	**15 00 12.1**	**-0.1**
VYHS			*e*		15 00 19.3	
RAZG	**Razgrad**	**149.18 323**	⇓P	**PKiKP**	**15 00 11.9**	**-0.6**
GOPC	**GO Pecny, Ondr**	**149.19 343**	⇑*e*PKP	**PKiKP**	**15 00 12.3**	**0.0**
GOPC	**GO Pecny, Ondr**	**149.19 343**	*e*PKHKP	PKPpre	15 00 12.3	
PRU	**Pruhonice**	**149.19 343**	⇑*e*PKP	**PKiKP**	**15 00 12.2**	**-0.1**
PRU	**Pruhonice**	**149.19 343**	*e*PKHKP	PKPpre	15 00 12.2	
VRAC	**Vranov**	**149.20 340**	⇑P	**PKiKP**	**15 00 12.6**	**+0.3**
VRAC	**Vranov**	**149.20 340**	*e*PKP	**PKiKP**	**15 00 11.9**	**-0.4**
VRAC	**Vranov**	**149.20 340**	⇑PKHKP	PKPpre	15 00 12.6	
VRAC	**Vranov**	**149.20 340**	PKPbc	**PKiKP**	**15 00 12.3**	**0.0**
	comp=Z,4.0nm,0.8s,baz=25,slow=12,SNR=6.3						
PSZ	**Piszkesteto**	**149.20 335**	⇓P	**PKPdf**	**15 00 03.9**	**-2.7**
PSZ	**Piszkesteto**	**149.20 335**		**PKiKP**	**15 00 12.0**	**-0.5**
PSZ	**Piszkesteto**	**149.20 335**	⇓PKIKP	**PKPdf**	**15 00 03.9**	**-2.7**
JAVC	**Velka Javorina**	**149.23 339**	*e*PKP	**PKiKP**	**15 00 13.2**	**+0.7**
LOZB	**Loznitsa**	**149.25 322**	⇑P	PKPdf	14 59 56.4	-10
MOX	**Moxa**	**149.29 347**	*e*PKPbc	**PKiKP**	**15 00 12.4**	**-0.1**
	baz=19,slow=2.4						
KASTN	**Kahler Asten**	**149.32 351**	*e*PKPbc	**PKiKP**	**15 00 12.6**	**+0.1**
	baz=19,slow=2.4						
TANN	**Tannenbergstha**	**149.32 346**	*e*PKPbc	**PKiKP**	**15 00 12.6**	**0.0**
	baz=19,slow=2.4						
PLN	**Plauen**	**149.32 346**	*e*PKPbc	**PKiKP**	**15 00 12.7**	**+0.1**
	baz=19,slow=2.4						
LOT	**Lotru**	**149.37 328**	⇓P	**PKPbc**	**15 00 11.0**	**-1.2**
HUMR	**Humele**	**149.39 326**	⇑P	**PKiKP**	**15 00 11.9**	**-1.0**
UBBA	**Unterbreizbach**	**149.43 349**	*e*PKPbc	**PKiKP**	**15 00 12.6**	**0.0**
	baz=19,slow=2.4						
DEV	**Deva**	**149.47 330**	⇑P	**PKiKP**	**15 00 13.2**	**+0.3**
DEV	**Deva**	**149.47 330**	⇑PKHKP	PKPpre	15 00 13.3	
KRUC	**Moravsky**	**149.48 340**	*e*PKP	**PKiKP**	**15 00 12.4**	**-0.5**
BSZH	**Besenyszg**	**149.55 334**	⇑P	**PKPdf**	**15 00 02.5**	**-4.6**
SIRR	**Siria**	**149.76 331**	⇓P	**PKiKP**	**15 00 13.7**	**+0.1**
MODS	**Modra-Piesok**	**149.78 339**	*e*PKHKP	PKPpre	15 00 14.2	
MODS			*e*		15 00 22.7	
MODS	**Modra-Piesok**	**149.78 339**	*e*PKP	**PKiKP**	**15 00 14.2**	**+0.6**
MODS			*e*		15 00 22.6	
MANZ	**Manzenberg**	**149.80 346**	*e*PKPbc	**PKiKP**	**15 00 14.0**	**+0.4**
	baz=19,slow=2.4						
GZR	**Gura Zlata**	**149.89 329**	⇓P	**PKiKP**	**15 00 13.7**	**-0.2**
GZR	**Gura Zlata**	**149.89 329**	⇓PKHKP	PKPpre	15 00 13.7	
SURR	**Surduc**	**149.94 330**	⇓P	**PKiKP**	**15 00 13.9**	**-0.1**
ELND	**Elena**	**149.94 322**	⇑P	**PKiKP**	**15 00 14.4**	**+0.4**
ROTZ	**Rotzenmuhle**	**149.98 346**	*e*PKPbc	**PKiKP**	**15 00 14.2**	**+0.2**
	baz=19,slow=2.4						
MEM	**Membach**	**150.19 354**	*d*PKPbc	**PKiKP**	**15 00 14.2**	**-0.1**
BTNL	**Ternell**	**150.20 354**	*d*PKPbc	**PKiKP**	**15 00 14.0**	**-0.4**
SRE	**Strehaia**	**150.21 328**	⇑P	**PKiKP**	**15 00 15.2**	**+0.6**
SRE	**Strehaia**	**150.21 328**	⇑PKHKP	PKPpre	15 00 15.2	
KHC	**Kasperske Hory**	**150.23 344**	⇑*e*PKP	**PKiKP**	**15 00 14.7**	**+0.2**
KHC			*e*PKPAB	**PKPab**	**15 00 23.7**	**+0.8**
KHC	**Kasperske Hory**	**150.23 344**	*e*PKHKP	PKPpre	15 00 14.7	
KHC			*e*		15 00 23.7	
BSTI	**Sart Tilman**	**150.26 354**	*d*PKPdf	**PKiKP**	**15 00 14.6**	**+0.1**
TNS	**Taunus Mts**	**150.27 351**	*e*PKPbc	**PKiKP**	**15 00 14.8**	**+0.3**
	baz=19,slow=2.4						
GRF	**Grafenberg Arr**	**150.27 347**	*e*PKPbc	**PKiKP**	**15 00 15.0**	**+0.5**
	baz=19,slow=2.4						
BZS	**Buzias**	**150.28 330**	⇓P	**PKiKP**	**15 00 15.4**	**+0.8**
BZS	**Buzias**	**150.28 330**	⇓PKHKP	PKPpre	15 00 15.4	
CKRC	**Cesky Krumlov**	**150.32 342**	⇑*e*PKP	**PKiKP**	**15 00 14.8**	**+0.1**
CKRC	**Cesky Krumlov**	**150.32 342**	*e*PKHKP	PKPpre	15 00 14.8	
PLVB	**Pleven**	**150.34 324**	⇓P	**PKiKP**	**15 00 15.1**	**+0.2**
HERR	**Herculane**	**150.44 329**	⇓P	**PKiKP**	**15 00 15.0**	**0.0**
BCLA	**Clavier**	**150.44 355**	*d*PKPab	**PKPab**	**15 00 23.9**	**+0.2**
GEC2	**GERESS Array S**	**150.46 343**	*e*PKPbc	**PKiKP**	**15 00 15.1**	**0.0**
	baz=19,slow=2.4						
GERES	**GERESS Array B**	**150.46 343**	PKPbc	**PKiKP**	**15 00 15.1**	**0.0**
	comp=Z,6.2nm,0.7s,baz=35,slow=4.9,SNR=19						
BGES	**Gesves**	**150.50 355**	*d*PKPab	**PKPab**	**15 00 23.8**	**-0.1**
DJES	**Djerdap**	**150.55 328**	⇑P	**PKiKP**	**15 00 15.1**	**-0.2**
BMRD	**Maredsous**	**150.60 355**	*d*PKPbc	**PKiKP**	**15 00 15.3**	**+0.2**
CONA	**Conrad Observa**	**150.64 340**	*i* PKP	**PKiKP**	**15 00 15.8**	**+0.3**
	comp=Z,10nm,0.7s						
BANR	**Banloc**	**150.67 331**	⇑P	**PKPbc**	**15 00 13.2**	**-1.9**
RONA	**Rosalia, Austr**	**150.70 339**	*e*PKP	**PKiKP**	**15 00 15.9**	**+0.3**
	comp=Z,10nm,0.5s,SNR=16						
RCHB	**Rochefort**	**150.71 355**	*d*PKPbc	**PKiKP**	**15 00 15.7**	**+0.4**
DOU	**Dourbes**	**150.82 356**	*d*PKP	**PKiKP**	**15 00 15.7**	**0.0**
MDVR	**Moldovita**	**150.85 329**	⇑P	**PKiKP**	**15 00 15.9**	**0.0**
MORH	**Mrgy, Hungar**	**151.09 335**	⇓P	**PKiKP**	**15 00 16.4**	**+0.1**
WLF	**Walferdange**	**151.11 353**	*d*PKiKP	**PKiKP**	**15 00 16.9**	**+0.6**
WLF	**Walferdange**	**151.11 353**	*e*PKPbc	**PKiKP**	**15 00 17.1**	**+0.9**
	baz=19,slow=2.4						
MOA	**Molln**	**151.21 342**	*e*PKP	**PKiKP**	**15 00 16.5**	**0.0**
	comp=Z,2.7nm,0.5s						
BLKB	**Belogradchik**	**151.22 327**	⇑P	**PKiKP**	**15 00 17.1**	**+0.4**
FRGS	**Fruska Gora**	**151.44 332**	⇑P	**PKiKP**	**15 00 17.7**	**+0.6**
BIOA	**Bad Ischl, Aus**	**151.53 342**	*i* PKP	**PKiKP**	**15 00 16.7**	**-0.5**
	comp=Z,2.0nm,0.3s						
SOKA	**Soboth**	**152.01 340**	*i* PKP	**PKiKP**	**15 00 18.0**	**-0.3**
	comp=Z,9.2nm,0.9s						
LESA	**Schwarzleotal**	**152.04 343**	*i* PKP	**PKiKP**	**15 00 18.3**	**-0.1**
	comp=Z,5.0nm,0.5s						
BFO	**Black Forest**	**152.12 350**	*e*PKPbc	**PKiKP**	**15 00 18.6**	**+0.1**
	baz=19,slow=2.4						
WATA	**Walderalm**	**152.40 345**	*i* PKP	**PKiKP**	**15 00 19.1**	**-0.1**
	comp=Z,4.7nm,0.6s						
UBR	**Ueberruh**	**152.41 347**	*e*PKPbc	**PKiKP**	**15 00 19.3**	**+0.2**
	baz=19,slow=2.4						
WTTA	**Wattenberg**	**152.46 345**	*i* PKP	**PKiKP**	**15 00 19.5**	**+0.1**
	comp=Z,4.4nm,0.4s,SNR=8.2						
MYKA	**Terra Mystica**	**152.49 341**	*i* PKP	**PKiKP**	**15 00 18.4**	**-0.9**
	comp=Z,3.7nm,0.6s						
MOTA	**Moosalm**	**152.51 345**	*i* PKP	**PKiKP**	**15 00 19.2**	**-0.2**
	comp=Z,6.0nm,0.9s						
SQTA	**Sankt Quirin**	**152.60 345**	*i* PKP	**PKiKP**	**15 00 19.7**	**+0.1**
	comp=Z,8.6nm,0.9s						
ABTA	**Abfaltersbach**	**152.71 343**	*i* PKP	**PKiKP**	**15 00 19.4**	**-0.4**
	comp=Z,4.9nm,0.6s,SNR=6.0						
DAVOX	**Davos/Dischmat**	**153.32 347**	PKP	**PKPdf**	**15 00 13.5**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=321,slow=20,SNR=3.9						
DAVOX			PKPbc	**PKiKP**	**15 00 21.6**	**+0.4**
	comp=Z,7.1nm,0.6s,baz=286,slow=1.7,SNR=17						
DAVOX			PKPab	**PKPab**	**15 00 37.6**	**+1.4**
	comp=Z,4.7nm,0.7s,baz=346,slow=12,SNR=5.9						
ESDC	**Sonseca Array**	**160.84 12**	PKPab	**PKPab**	**15 01 09.2**	**+0.3**
	comp=Z,3.0nm,1.2s,baz=337,slow=5.3,SNR=7.7						
LIC	**Lamto**	**164.12 157**	⇓*e*P	**PKPab**	**15 01 25.7**	**+1.9**
	comp=Z,22nm,0.8s						
LIC	**Lamto**	**164.12 157**	⇑*e*P	**PKPdf**	**15 00 26.3**	**+0.1**
	comp=Z,24nm,0.8s						
KIC	**Kosan Boka**	**164.35 157**	⇑*e*PKP1	**PKPab**	**15 01 26.4**	**+1.6**
	comp=Z,24nm,0.9s						
KIC	**Kosan Boka**	**164.35 157**	⇑*e*P	**PKPdf**	**15 00 26.5**	**+0.1**
	comp=Z,14nm,0.8s						
TIC	**Toumodi**	**164.51 156**	⇑*e*PKP1	**PKPab**	**15 01 27.1**	**+1.6**
	comp=Z,20nm,0.7s						
TIC	**Toumodi**	**164.51 156**	⇑*e*P	**PKPdf**	**15 00 22.4**	**-4.2**
	comp=Z,4.8nm,0.5s						
DBIC	**Dimbokro**	**164.60 157**	PKP	**PKPdf**	**15 00 26.7**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=180,slow=9.1,SNR=4.3						
DBIC			PKPab	**PKPab**	**15 01 27.1**	**+1.2**
	comp=Z,6.6nm,1.0s,baz=250,slow=5.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**172.20 183**	PKP	**PKPdf**	**15 00 31.4**	**-0.1**
	comp=Z,2.1nm,0.4s,baz=104,slow=0.6,SNR=2.2						
TORD			PKPab	**PKPab**	**15 01 59.9**	**+0.5**
	comp=Z,1.8nm,0.4s,baz=157,slow=2.8,SNR=2.3						

*IDC **25** 14:55:17.3±1.3,9.7°**N**×82.2°**23W**, h0km, mb3.5/7, mbtmp3.5/8, ML3.5/1, MS2.8/2, Error ellipse: s-maj=36.2km s-min=23.7km az=34.0*
*UCR **25** 14:55:19.9±0.6,9.56°**N**×82.29°**W**, h15km±8km, MW4.2*
*CATAC **25** 14:55:19.8±0.4,9.56°**N**×82.26°**W**, h14km±3km, mb4.5, ML4.0*

ISC 25 14:55:20.5±1.6,9.54°N±0.04×82.24°W±0.04, h25km±12km, n74,σ1°31/87, mb3.5/7, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RGM0	**Gandoca**	**0.36**	**278**	*i* P		**Pb**	**14 55 28.8**	**+0.3**
RGM0				*i* S		**Sn**	**14 55 36.2**	**-0.4**
RGM0				IAML			14 55 38.5	
	comp=Z,30μm,1.0s							
BRU2	**Volcan**	**0.86**	**211**	*e*P		**Pn**	**14 55 35.5**	**-1.8**
BRU2				*e*S		**Sn**	**14 55 46.8**	**-2.4**
BRU2	**Volcan**	**0.86**	**211**	*i* P		**Pn**	**14 55 35.5**	**-1.8**
BRU2				*i* S		**Sn**	**14 55 47.2**	**-2.0**
BRU2				IAML			14 55 50.7	
	comp=Z,11μm,1.0s							
POTG	**Potrero Grande**	**0.99**	**241**	*e*P		**Pn**	**14 55 36.9**	**-2.0**
POTG	**Potrero Grande**	**0.99**	**241**	*i* P		**Pn**	**14 55 37.2**	**-1.8**
POTG				*i* S		**Sn**	**14 55 49.4**	**-2.8**
POTG				IAML			14 55 51.0	
	comp=Z,22μm,1.0s							
VITO	**San Vito**	**1.02**	**225**	*e*P		**Pn**	**14 55 38.2**	**-1.1**
CDITO	**Canoas**	**1.15**	**213**	*i* P		**Pn**	**14 55 40.0**	**-1.0**
CDITO				*i* S		**Sn**	**14 55 55.7**	**-0.2**
CDITO				IAML			14 56 01.2	
	comp=Z,11μm,1.0s							
SRBA	**San Rafael, Bu**	**1.15**	**255**	*e*P		**Pn**	**14 55 39.3**	**-1.8**
SRBA	**San Rafael, Bu**	**1.15**	**255**	*i* P		**Pn**	**14 55 39.3**	**-1.8**
SRBA				*i* S		**Sn**	**14 55 52.8**	**-3.3**
SRBA				IAML			14 55 53.6	
	comp=Z,10μm,1.0s							
EDAD	**Golfito**	**1.27**	**226**	*e*P		**Pn**	**14 55 41.8**	**-1.0**
EDPN	**Palmar Norte**	**1.33**	**245**	*e*P		**Pn**	**14 55 43.3**	**-0.2**
CCOL	**Caracol de Cor**	**1.34**	**213**	*e*P		**Pn**	**14 55 43.4**	**-0.2**
CCOL	**Caracol de Cor**	**1.34**	**213**	*i* P		**Pn**	**14 55 43.2**	**-0.4**
CCOL				*i* S		**Sn**	**14 56 00.8**	**+0.1**
CCOL				IAML			14 56 09.9	
	comp=Z,8μm,1.0s							
PEZE	**Perez Zeledon,**	**1.43**	**264**	*e*P		**Pn**	**14 55 43.5**	**-1.4**
PEZE	**Perez Zeledon,**	**1.43**	**264**	*i* P		**Pn**	**14 55 43.7**	**-1.2**
PEZE				*i* S		**Sn**	**14 56 01.2**	**-1.8**
PEZE				IAML			14 56 01.9	
	comp=Z,3μm,1.0s							
PTJ1	**Puerto Jimnez**	**1.45**	**227**	*e*P		**Pn**	**14 55 44.6**	**-0.6**
OCHAL	**Ojochal**	**1.46**	**253**	*i* P		**Pn**	**14 55 45.5**	**+0.3**
OCHAL				IAML			14 55 48.4	
	comp=Z,41nm,1.0s							
OCHAL				*i* S		**Sn**	**14 56 03.6**	**0.0**
VERB	**Verbena**	**1.49**	**286**	*e*P		**Pn**	**14 55 44.9**	**-1.0**
CDM	**Cerro de Muert**	**1.50**	**271**	*e*P		**Pn**	**14 55 44.9**	**-1.4**
CDM	**Cerro de Muert**	**1.50**	**271**	*i* P		**Pn**	**14 55 44.7**	**-1.6**
CDM				IAML			14 55 53.3	
	comp=Z,2μm,1.0s							
CDM				*i* S		**Sn**	**14 56 03.3**	**-2.1**
VTCV	**VTCV, Calle Va**	**1.53**	**287**	*i* P		**Pn**	**14 55 45.5**	**-1.0**
VTCV				IAML			14 56 08.5	
	comp=Z,2μm,1.0s							
PIRO	**Carate, Puerto**	**1.56**	**224**	*e*P		**Pn**	**14 55 46.3**	**-0.4**
CVTR	**Volcan Turrial**	**1.57**	**288**	*e*P		**Pn**	**14 55 46.2**	**-1.0**
VTR0	**Volcan Turrial**	**1.57**	**288**	*e*P		**Pn**	**14 55 46.2**	**-1.0**
CVTQ	**Turrialba Volc**	**1.57**	**287**	*e*P		**Pn**	**14 55 46.3**	**-0.9**
VTUC	**Crater, Volcan**	**1.57**	**288**	*i* P		**Pn**	**14 55 46.0**	**-1.3**
VTUC				IAML			14 56 11.6	
	comp=Z,810nm,1.0s							
VTUN	**Crater Central**	**1.58**	**288**	*i* P		**Pn**	**14 55 46.1**	**-1.2**
VTUN				IAML			14 56 16.2	
	comp=Z,970nm,1.0s							
VTRT	**Volcan Turrial**	**1.60**	**287**	*i* P		**Pn**	**14 55 47.6**	**+0.1**
VTRT				IAML			14 56 03.5	
	comp=Z,2μm,1.0s							
REPA	**Paraso**	**1.63**	**280**	*e*P		**Pn**	**14 55 47.9**	**+0.1**
VICA	**Volcano Irazu**	**1.64**	**286**	*e*P		**Pn**	**14 55 46.7**	**-1.5**
PLAN	**Los Planes de**	**1.66**	**239**	*i* P		**Pn**	**14 55 47.7**	**-0.4**
PLAN				*i* S		**Sn**	**14 56 08.5**	**-0.2**
PLAN				IAML			14 56 10.1	
	comp=Z,2μm,1.0s							
OCM	**Ochomogo**	**1.73**	**282**	*e*P		**Pn**	**14 55 48.1**	**-1.1**
OCM	**Ochomogo**	**1.73**	**282**	*i* P		**Pn**	**14 55 47.7**	**-1.6**
OCM				IAML			14 56 00.2	
	comp=Z,690nm,1.0s							
LCR2	**La Lucha 2**	**1.75**	**277**	*e*P		**Pn**	**14 55 48.7**	**-0.9**
LCR2	**La Lucha 2**	**1.75**	**277**	*i* P		**Pn**	**14 55 48.8**	**-0.7**
LCR2				IAML			14 55 56.5	
	comp=Z,1μm,1.0s							
ABE2	**San Pablo**	**1.80**	**275**	*e*P		**Pn**	**14 55 49.5**	**-0.6**
RIFO	**Rio Frio, Sara**	**1.83**	**295**	*e*P		**Pn**	**14 55 49.2**	**-1.2**
RIFO	**Rio Frio, Sara**	**1.83**	**295**	*i* P		**Pn**	**14 55 49.0**	**-1.4**
RIFO				IAML			14 56 25.4	
	comp=Z,860nm,1.0s							
LLNJ	**Naranjito**	**1.84**	**268**	*e*P		**Pn**	**14 55 50.6**	**+0.1**
HDC3	**Heredia 3**	**1.90**	**284**	*e*P		**Pn**	**14 55 51.7**	**+0.2**
HDC3	**Heredia 3**	**1.90**	**284**	*i* P		**Pn**	**14 55 51.4**	**-0.1**
HDC3				IAML			14 56 03.7	
	comp=Z,750nm,1.0s							
HDC	**Heredia**	**1.90**	**284**	*e*P		**Pn**	**14 55 51.6**	**+0.1**
ACOS	**Acosta**	**1.91**	**278**	*e*P		**Pn**	**14 55 51.4**	**-0.3**
BELE	**Belen**	**1.97**	**283**	*e*P		**Pn**	**14 55 53.3**	**+0.9**
TCS1	**Tacares**	**2.09**	**284**	*i* P		**Pn**	**14 55 54.3**	**+0.2**
TCS1				IAML			14 56 42.2	
	comp=Z,6μm,1.0s							
CPMI	**Catarata Coope**	**2.23**	**289**	*i* P		**Pn**	**14 55 56.4**	**+0.2**
CPMI				IAML			14 56 41.7	
	comp=Z,280nm,1.0s							
JACO	**JACO, Garabito**	**2.39**	**273**	*e*P		**Pn**	**14 55 58.0**	**-0.1**
JACO	**JACO, Garabito**	**2.39**	**273**	*i* P		**Pn**	**14 55 58.4**	**+0.3**
JACO				IAML			14 56 10.9	
	comp=Z,270nm,1.0s							
BCIP	**Isla Barro Col**	**2.40**	**99**	*e*P		**Pn**	**14 55 56.8**	**-1.5**
BCIP	**Isla Barro Col**	**2.40**	**99**	*i* P		**Pn**	**14 55 58.5**	**+0.2**
BCIP				*i* S		**Sn**	**14 56 26.3**	**-0.6**
BCIP				IAML			14 56 32.4	
	comp=Z,240nm,1.0s							
COVE	**Coope Vega, Sa**	**2.43**	**299**	*e*P		**Pn**	**14 55 58.1**	**-0.6**
COVE	**Coope Vega, Sa**	**2.43**	**299**	*i* P		**Pn**	**14 55 57.7**	**-1.0**
COVE				IAML			14 56 43.3	
	comp=Z,480nm,1.0s							
ARZA	**Esparza**	**2.43**	**281**	*e*P		**Pn**	**14 56 00.5**	**+1.7**
SOCE	**Pocosol**	**2.49**	**290**	*i* P		**Pn**	**14 55 59.8**	**+0.3**
SOCE				IAML			14 56 13.2	
	comp=Z,680nm,1.0s							
LAFE	**Finca La Fe, P**	**2.65**	**276**	*i* P		**Pn**	**14 56 02.5**	**+0.9**
LAFE				IAML			14 56 58.8	
	comp=Z,1.4nm,1.0s							
JTS	**Las Juntas de**	**2.77**	**286**	Pn		**Pn**	**14 56 03.5**	**0.0**
	comp=Z,8.0nm,0.3s,baz=144,slow=2.3,SNR=28							
JTS				Sn		**Sn**	**14 56 37.8**	**+1.6**
	comp=Z,8.2nm,0.3s,baz=300,slow=20,SNR=5.6							
JTS				LR		LR	14 57 19.4	
	comp=Z,210nm,18.4s,baz=90,slow=44							
	comp=Z,20nm,0.4s							
JTS	**Las Juntas de**	**2.77**	**286**	*e*P		**Pn**	**14 56 03.5**	**0.0**
BLUN	**Bluefields**	**2.88**	**329**	*i* P		**Pn**	**14 56 02.5**	**-2.3**
BLUN				*i* S		**Sn**	**14 56 36.2**	**-2.5**
BLUN				IAML			14 56 37.4	
	comp=Z,310nm,1.0s							
VMAR	**Armenia, Volca**	**3.10**	**294**	*i* P		**Pn**	**14 56 06.5**	**-1.4**
VMAR				IAML			14 57 06.3	
	comp=Z,260nm,1.0s							
INDI	**Punta indio, G**	**3.23**	**276**	*i* P		**Pn**	**14 56 09.0**	**-0.7**
INDI				IAML			14 57 12.2	
	comp=Z,110nm,1.0s							
ORTG	**Ortega, Santa**	**3.27**	**285**	*i* P		**Pn**	**14 56 12.7**	**+2.3**
ORTG				IAML			14 56 31.3	
	comp=Z,70nm,1.0s							
HZTE	**Horizontes, Gu**	**3.50**	**290**	*i* P		**Pn**	**14 56 16.8**	**+3.4**
HZTE				IAML			14 56 45.0	
	comp=Z,150nm,1.0s							
CONN	**Concepcion**	**3.89**	**301**	*i* P		**Pn**	**14 56 17.6**	**-1.2**
CONN				IAML			14 56 34.4	
	comp=Z,2μm,1.0s							
PRVC	**Isla de Provid**	**3.91**	**13**	*i* P		**Pn**	**14 56 17.6**	**-1.4**
PRVC				IAML			14 56 48.2	
	comp=Z,39nm,1.0s							
BOAB	**BOACO BROADBAN**	**4.43**	**311**	*i* P		**Pn**	**14 56 25.3**	**-1.0**
BOAB				IAML			14 57 53.4	
	comp=Z,69nm,1.0s							
LIMN	**Finca el Limon**	**5.35**	**311**	*i* P		**Pn**	**14 56 38.5**	**-0.4**
LIMN				IAML			14 56 39.3	
	comp=Z,59nm,1.0s							
LIMN				IAmb		IAmb	14 56 39.4	
	comp=Z,35nm,0.7s							
SDV	**Santo Domingo**	**11.48**	**92**	LR		LR	15 04 39.1	
	comp=Z,28nm,19.0s,baz=260,slow=49							
TXAR	**Lajitas Array**	**28.12**	**317**	P		**P**	**15 01 10.6**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=131,slow=9.7,SNR=1.7							
	comp=Z,0.2nm,0.8s							
PDAR	**Pinedale Array**	**40.82**	**329**	P		**P**	**15 03 02.5**	**+2.1**
	comp=Z,0.1nm,0.5s,baz=137,slow=11,SNR=1.6							
	comp=Z,0.1nm,0.5s							
NVAR	**Mina Array Bea**	**43.27**	**318**	P		**P**	**15 03 21.4**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=122,slow=8.6,SNR=5.0							
	comp=Z,1.0nm,0.7s							
PLCA	**Paso Flores**	**51.17**	**169**	P		**P**	**15 04 22.3**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=340,slow=5.8,SNR=3.3							
	comp=Z,0.6nm,1.0s							
YKA	**Yellowknife Ar**	**57.81**	**343**	P		**P**	**15 05 08.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=135,slow=7.0,SNR=9.2							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**70.74**	**336**	P		**P**	**15 06 34.2**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=110,slow=4.1,SNR=2.7							
	comp=Z,0.3nm,0.7s							
ESDC	**Sonseca Array**	**74.97**	**51**	P		**P**	**15 07 01.2**	**+1.2**
	comp=Z,1.1nm,0.9s,baz=294,slow=7.4,SNR=5.1							
	comp=Z,1.1nm,0.9s				

IDC ***25*** *15:21:13.8±0.8,38.62N×25.70E,h0km,mb3.8/16, mbtmp3.8/26,ML3.7/9,MS3.5/29,Error ellipse: s-maj=13.6km s-min=11.9km az=3.0*

ATH ***25*** *15:21:14.8,38.57N×25.61E,h12km,Mw4.3,Moment Tensor Solution. s6 Moment tensor: Mrr-0.23; Mθθ2.63; Mφφ-2.41; Mrθ0.48; Mrφ-1.91; Mθφ0.70; Fault plane solution: NP1:φs153.00000°,δ77.00000°,λ-8.00000°. NP2:φs245.00000°,δ82.00000°,λ-166.00000°.*

BEO ***25*** *15:21:14.3±0.8,38.63N×25.72E,h0km,ML4.2/9*

NEIC ***25*** *15:21:15.5±1.2,38.57N±0.05×25.59E±0.01,h13km±5km, mb4.5/17,Error ellipse: s-maj=7.8km s-min=0.9km az=190.0*

THE ***25*** *15:21:15.0,38.61N×25.63E,h14km,ML4.2/14,Error ellipse: s-maj=1.0km s-min=0.4km az=83.0*

MED_RC ***25*** *15:21:15.0±0.3,38.63N×25.87E,h17km±1km,MW4.4/14, Moment Tensor Solution.Mantle waves: s14,c18; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-1.93±.33; Mθθ3.80±.38; Mφφ-1.87±.25; Mrθ0.24±.43; Mθφ-2.49±.20; Mrφ2.11±.52; Best double couple: M₀4.63000×10¹⁵ NP1:φs148.00000°,δ67.00000°, λ-33.00000°. NP2:φs253.00000°,δ60.00000°, λ-153.00000°. Principal axes: T 4.7800, Plg5.0000°, Azm202.0000°; N -0.3000, Plg50.0000°, Azm298.0000°; P -4.4900, Plg39.0000°, Azm108.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

AFAD ***25*** *15:21:16.6±0.0,38.60N×25.68E,h15km±1km,MW4.4*

CFUSG ***25*** *15:21:22.2,38.99N×26.17E,h12km,Aegean Sea Magtype MSH 3.5 from 4 stations*

NAO ***25*** *15:21:30.9,39.82N×25.09E,h33km,mb3.7*

ISC 25 15:21:15.1±0.9, 38°60N±0.02×25°63E±0.02, h12km±6km, n409,σ1§36/444, mb4.0/25, MS3.6/21, 36C-22D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EAG2	**Marmaro, Chios**	**0.38**	**98**	P		**Pg**	**15 21 22.9**	**+0.3**
EAG2				S		**Sg**	**15 21 28.2**	**+0.6**
CHOS	**Chios island**	**0.39**	**122**	P		**Pg**	**15 21 23.1**	**+0.2**
CHOS				S		**Sg**	**15 21 28.8**	**+0.6**
	34μm,0.4s							
CHOS	**Chios island**	**0.39**	**122**	P		**Pg**	**15 21 23.1**	**+0.2**
CHOS				S		**Sg**	**15 21 27.3**	**-0.9**
KARB	**zmir-Karabur**	**0.61**	**83**	P		**Pg**	**15 21 27.3**	**+0.2**
KARB				S		**Sg**	**15 21 35.2**	**0.0**
SIGR	**SIGRI**	**0.64**	**16**	Pg		**Pg**	**15 21 26.9**	**-0.7**
SIGR				Sg		**Sg**	**15 21 36.9**	**+0.9**
SIGR	**SIGRI**	**0.64**	**16**	P		**Pg**	**15 21 27.4**	**-0.2**
SIGR				S		**Sg**	**15 21 36.9**	**+0.9**
	44μm,0.4s							
SIGR	**SIGRI**	**0.64**	**16**	P		**Pg**	**15 21 27.4**	**-0.2**
SIGR				S		**Sb**	**15 21 37.2**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**0.77**	**117**	P		**Pg**	**15 21 29.9**	**-0.1**
URLA	**Izmir**	**0.79**	**107**	P		**Pb**	**15 21 30.5**	**-0.3**
URLA				S		**Sg**	**15 21 40.5**	**-0.3**
PRK	**Paraskevi**	**0.82**	**37**	P		**Pg**	**15 21 30.3**	**-0.7**
PRK				S		**Sg**	**15 21 41.7**	**+0.1**
	35μm,0.9s							
PRK	**Paraskevi**	**0.82**	**37**	P		**Pg**	**15 21 30.5**	**-0.4**
PRK				S		**Sg**	**15 21 42.3**	**+0.6**
FOCM	**Foa**	**0.87**	**82**	Pg		**Pg**	**15 21 31.8**	**-0.1**
EAG3	**Mitilini, Lesv**	**0.88**	**56**	P		**Pg**	**15 21 31.9**	**-0.2**
EAG3				S		**Sb**	**15 21 44.5**	**+0.5**
LESV	**Lesvos island,**	**0.89**	**55**	P		**Pg**	**15 21 31.8**	**-0.4**
LESV				S		**Sg**	**15 21 44.6**	**+0.8**
	179μm,0.7s							
SKY	**Skiros Island**	**0.89**	**289**	P		**Pg**	**15 21 31.8**	**-0.6**
SKY	**Skiros Island**	**0.89**	**289**	P		**Pg**	**15 21 31.8**	**-0.6**
GPNR	**Gulpinar-Canak**	**0.94**	**24**	Pg		**Pb**	**15 21 32.6**	**-0.8**
GPNR				Sg		**Sn**	**15 21 47.2**	**-0.4**
CAND	**Candarli**	**0.98**	**68**	Pn		**Pg**	**15 21 34.3**	**+0.3**
KOCA	**Canakkale, Ayv**	**0.99**	**23**	P		**Pb**	**15 21 33.4**	**-0.8**
KOCA				S		**Sb**	**15 21 46.8**	**-0.3**
EFSA	**Agios Efstrati**	**1.07**	**332**	P		**Pb**	**15 21 34.9**	**-0.6**
EFSA				S		**Sb**	**15 21 49.2**	**-0.3**
IZMD	**zmir-Dikili-**	**1.08**	**69**	P		**Pb**	**15 21 35.1**	**-0.7**
IZMD				P		**Pb**	**15 21 35.2**	**-0.7**
IZMD				S		**Sb**	**15 21 48.8**	**-1.2**
AYVA	**Ayvalik**	**1.09**	**49**	P		**Pb**	**15 21 35.1**	**-0.8**
DKL	**Dikili**	**1.10**	**64**	Pn		**Pb**	**15 21 35.5**	**-0.6**
TNSA	**Tinos**	**1.12**	**200**	P		**Pb**	**15 21 34.7**	**-1.7**
TNSA				S		**Sb**	**15 21 49.4**	**-1.5**
DGB	**zmir**	**1.12**	**119**	P		**Pb**	**15 21 35.7**	**-0.8**
GMLD	**Gumuldur**	**1.13**	**117**	Pn		**Pb**	**15 21 36.1**	**-0.6**
KYMI	**Kymi, Euboea I**	**1.20**	**272**	P		**Pn**	**15 21 36.1**	**-1.7**
KYMI	**Kymi, Euboea I**	**1.20**	**272**	P		**Pn**	**15 21 36.1**	**-1.7**
KYMI				S		**Sb**	**15 21 51.3**	**-2.0**
BOZC	**Bozcaada**	**1.28**	**15**	P		**Pn**	**15 21 37.3**	**-1.7**
BOZC				P		**Pb**	**15 21 37.6**	**-1.7**
BOZC				S		**Sb**	**15 21 54.6**	**-1.1**
SMG	**Samos**	**1.30**	**133**	P		**Pn**	**15 21 38.0**	**-1.1**
SMG				S		**Sg**	**15 21 56.6**	**-0.4**
	15μm,0.4s							
SMG	**Samos**	**1.30**	**133**	P		**Pn**	**15 21 38.0**	**-1.1**
SMG				S		**Sb**	**15 21 54.4**	**-1.7**
EZN	**Ezine**	**1.34**	**23**	Pn		**Pn**	**15 21 38.0**	**-1.7**
EZN	**Ezine**	**1.34**	**23**	P		**Pn**	**15 21 38.8**	**-0.9**
EZN				S		**Sn**	**15 21 55.4**	**-2.0**
	8μm,0.6s							
BAYC	**CANAKKALE_Bayr**	**1.34**	**32**	P		**Pn**	**15 21 38.5**	**-1.3**
LIA	**Limnos Island**	**1.35**	**345**	P		**Pn**	**15 21 38.8**	**-1.0**
LIA				S		**Sn**	**15 21 56.2**	**-1.3**
	18μm,0.6s							
LIA	**Limnos Island**	**1.35**	**345**	P		**Pn**	**15 21 38.7**	**-1.0**
LIA				S		**Sn**	**15 21 56.3**	**-1.3**
DION	**Dionisos Attik**	**1.43**	**249**	P		**Pn**	**15 21 40.5**	**-0.5**
DION				S		**Sn**	**15 21 57.6**	**-2.2**
BUHA	**Balikesir, Bur**	**1.44**	**51**	P		**Pn**	**15 21 40.0**	**-1.1**
BUHA				S		**Sn**	**15 21 59.0**	**-0.9**
ALNA	**Alonissos**	**1.48**	**292**	P		**Pn**	**15 21 40.4**	**-1.2**
PTL	**Penteli**	**1.50**	**249**	P		**Pn**	**15 21 41.1**	**-0.7**
PTL				S		**Sn**	**15 21 59.9**	**-1.4**
	5μm,0.8s							
PTL	**Penteli**	**1.50**	**249**	P		**Pn**	**15 21 41.4**	**-0.5**
PTL				S		**Sn**	**15 21 59.4**	**-1.9**
ECEA	**Canakkale, Ece**	**1.50**	**16**	P		**Pn**	**15 21 40.8**	**-1.2**
APE	**Apeiranthos**	**1.53**	**183**	⇑P		**Pn**	**15 21 40.4**	**-1.9**
APE				⇑S		**Sb**	**15 22 02.1**	**-0.7**
APE	**Apeiranthos**	**1.53**	**183**	P		**Pn**	**15 21 40.3**	**-1.9**
APE				S		**Sb**	**15 22 01.3**	**-1.4**
	9μm,0.9s							
APE	**Apeiranthos**	**1.53**	**183**	P		**Pn**	**15 21 40.4**	**-1.9**
APE				S		**Sn**	**15 21 59.5**	**-2.6**
GCAM	**G?zelcaml?**	**1.55**	**125**	P		**Pn**	**15 21 41.6**	**-0.9**
GOAD	**anakkale-G¶**	**1.58**	**8**	P		**Pn**	**15 21 41.9**	**-1.1**
CNKL	**anakkale-Mer**	**1.58**	**21**	P		**Pn**	**15 21 41.1**	**-1.9**
CNKL				P		**Pb**	**15 21 41.3**	**-3.0**
ATHU	**Athens Univers**	**1.59**	**247**	P		**Pn**	**15 21 41.4**	**-1.6**
ATHU	**Athens Univers**	**1.59**	**247**	P		**Pn**	**15 21 41.4**	**-1.6**
GADA	**Gvkgeada**	**1.60**	**7**	Pn		**Pn**	**15 21 42.1**	**-1.2**
GOKC	**Gokceada-Canak**	**1.62**	**8**	Pn		**Pn**	**15 21 42.3**	**-1.2**
VLY	**Voula,Athens**	**1.63**	**243**	P		**Pn**	**15 21 42.4**	**-1.3**
VLY				S		**Sb**	**15 22 04.2**	**-1.4**
	6μm,0.5s							
VLY	**Voula,Athens**	**1.63**	**243**	P		**Pn**	**15 21 42.4**	**-1.3**
ATH	**Athens Observa**	**1.63**	**248**	P		**Pn**	**15 21 42.4**	**-1.3**
ATH				S		**Sb**	**15 22 04.1**	**-1.6**
	6μm,0.6s							
ATH	**Athens Observa**	**1.63**	**248**	P		**Pn**	**15 21 42.4**	**-1.3**
ATH				S		**Sn**	**15 22 02.0**	**-2.6**
COMU	**Canakkale**	**1.64**	**23**	Pn		**Pn**	**15 21 43.1**	**-0.7**
DDIM	**Aydin, Didim**	**1.70**	**131**	P		**Pn**	**15 21 44.3**	**-0.3**
AKIS	**Akhisar**	**1.73**	**80**	Pn		**Pn**	**15 21 44.9**	**-0.1**
AKHS	**Akhisar**	**1.73**	**80**	P		**Pn**	**15 21 44.1**	**-0.9**
DIDI	**Didim-Aydin**	**1.76**	**133**	Pn		**Pn**	**15 21 45.2**	**-0.2**
GOMA	**Golmarmara-Man**	**1.79**	**86**	Pn		**Pn**	**15 21 46.2**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.80**	**64**	P		**Pn**	**15 21 45.3**	**-0.7**
SMTH	**Samothraki Isl**	**1.87**	**358**	P		**Pn**	**15 21 45.7**	**-1.3**
SMTH	**Samothraki Isl**	**1.87**	**358**	P		**Pn**	**15 21 45.7**	**-1.3**
SMTH				S		**Sn**	**15 22 08.4**	**-2.2**
VILL	**Villia**	**1.88**	**257**	P		**Pn**	**15 21 46.0**	**-1.1**
VILL				S		**Sn**	**15 22 09.6**	**-1.1**
	4μm,0.7s							
IZMR	**zmir-demi**	**1.88**	**103**	P		**Pn**	**15 21 47.8**	**+0.7**
VIL2	**Platees**	**1.90**	**259**	P		**Pn**	**15 21 46.0**	**-1.4**
GELI	**Tayfur-Gelibol**	**1.91**	**20**	Pn		**Pn**	**15 21 46.8**	**-0.7**
BALY	**Balya**	**1.92**	**53**	P		**Pn**	**15 21 47.5**	**-0.2**
YKAV	**Yalikavak-Bodr**	**1.96**	**138**	Pn		**Pn**	**15 21 47.9**	**-0.3**
LPK	**Lapseki**	**1.98**	**26**	Pn		**Pn**	**15 21 47.8**	**-0.6**
NEO	**Neokhori**	**2.01**	**291**	P		**Pn**	**15 21 47.6**	**-1.3**
PAIG	**Paliouri**	**2.02**	**312**	P		**Pn**	**15 21 47.8**	**-1.2**
BODT	**Bodrum**	**2.03**	**139**	Pn		**Pn**	**15 21 48.6**	**-0.5**
BODT	**Bodrum**	**2.03**	**139**	P		**Pn**	**15 21 48.4**	**-0.7**
ENZZ	**Sultanice-Enez**	**2.05**	**11**	Pn		**Pn**	**15 21 48.5**	**-0.9**
XOR	**Xorichti**	**2.05**	**293**	P		**Pn**	**15 21 48.1**	**-1.4**
BDRM	**Kayabasi**	**2.10**	**136**	P		**Pn**	**15 21 49.2**	**-0.8**
BKES	**Balkesir-Mer**	**2.11**	**57**	P		**Pn**	**15 21 49.9**	**-0.4**
THAS	**Thassos island**	**2.13**	**341**	P		**Pn**	**15 21 48.5**	**-2.0**
THAS				S		**Sn**	**15 22 15.6**	**-1.2**
	2μm,0.9s							
THAS	**Thassos island**	**2.13**	**341**	P		**Pn**	**15 21 49.4**	**-1.1**
CMBO	**Columbo, Santo**	**2.13**	**185**	P		**Pn**	**15 21 48.8**	**-1.7**
CMBO	**Columbo, Santo**	**2.13**	**185**	P		**Pn**	**15 21 48.8**	**-1.7**
CAVK	**Edirne/Enez-Ca**	**2.13**	**11**	P		**Pn**	**15 21 49.1**	**-1.4**
MLSB	**Milas**	**2.13**	**127**	Pn		**Pn**	**15 21 50.5**	**-0.1**
MHLO	**Agia Marina, M**	**2.14**	**208**	P		**Pn**	**15 21 48.8**	**-1.9**
MHLO	**Agia Marina, M**	**2.14**	**208**	P		**Pn**	**15 21 48.9**	**-1.7**
GONE	**Gonen-Balikesi**	**2.15**	**47**	Pn		**Pn**	**15 21 50.9**	**+0.1**
OUR	**Ouranopolis**	**2.16**	**324**	P		**Pn**	**15 21 50.0**	**-0.9**
OUR	**Ouranopolis**	**2.16**	**324**	P		**Pn**	**15 21 49.8**	**-1.1**
ENEZ	**Enez**	**2.17**	**10**	Pn		**Pn**	**15 21 50.4**	**-0.7**
LTK	**Loutraki**	**2.17**	**256**	P		**Pn**	**15 21 49.9**	**-1.2**
LOUT	**Loutraki**	**2.18**	**255**	P		**Pn**	**15 21 50.2**	**-1.0**
ERIK	**Erikli-Kesan**	**2.18**	**18**	Pn		**Pn**	**15 21 50.7**	**-0.5**
THR8	**Santorini-Mono**	**2.19**	**183**	P		**Pn**	**15 21 49.5**	**-1.8**
THR8	**Santorini-Mono**	**2.19**	**183**	P		**Pn**	**15 21 49.5**	**-1.8**
THR3	**Thira Island,**	**2.19**	**185**	P		**Pn**	**15 21 49.7**	**-1.7**
THR3	**Thira Island,**	**2.19**	**185**	P		**Pn**	**15 21 49.7**	**-1.7**
SNTS	**Nea Kammeni, S**	**2.20**	**185**	P		**Pn**	**15 21 49.8**	**-1.7**
STAX	**Taxiarchis Har**	**2.20**	**185**	P		**Pn**	**15 21 49.8**	**-1.7**
KRBG	**Karabiga-Canak**	**2.21**	**35**	Pn		**Pn**	**15 21 51.2**	**-0.4**
KIRA	**zmir-Kiraz**	**2.21**	**100**	P		**Pn**	**15 21 51.6**	**-0.1**
EPID	**Epidavros**	**2.21**	**244**	P		**Pn**	**15 21 50.6**	**-1.1**
BLKS	**Balkesir-Sus**	**2.22**	**54**	P		**Pn**	**15 21 51.1**	**-0.6**
BLKS				P		**Pb**	**15 21 51.3**	**-3.9**
BLKS				S		**Sb**	**15 22 22.8**	**+0.2**
THR6	**Thira Island,**	**2.24**	**185**	P		**Pn**	**15 21 50.4**	**-1.7**
THR6	**Thira Island,**	**2.24**	**185**	P		**Pn**	**15 21 50.3**	**-1.7**
THR9	**Santorini-Faro**	**2.25**	**186**	P		**Pn**	**15 21 50.1**	**-2.0**
ESEN	**Aydn-Nazilli**	**2.28**	**110**	P		**Pn**	**15 21 52.5**	**-0.1**
KRND	**KRANIDI**	**2.31**	**239**	P		**Pn**	**15 21 51.7**	**-1.2**
KRND	**KRANIDI**	**2.31**	**239**	P		**Pn**	**15 21 50.5**	**-2.4**
ALN	**Alexandroupoli**	**2.32**	**8**	Pn		**Pn**	**15 21 52.3**	**-0.8**
ALN	**Alexandroupoli**	**2.32**	**8**	Pn		**Pn**	**15 21 52.0**	**-1.2**
ALN	**Alexandroupoli**	**2.32**	**8**	P		**Pn**	**15 21 52.1**	**-1.0**
ALN	**Alexandroupoli**	**2.32**	**8**	P		**Pn**	**15 21 51.7**	**-1.5**
ALN				S		**Sn**	**15 22 20.8**	**-0.8**
AXAR	**Agios Charalam**	**2.33**	**275**	P		**Pn**	**15 21 52.6**	**-0.8**
AXAR	**Agios Charalam**	**2.33**	**275**	P		**Pn**	**15 21 52.8**	**-0.6**
KULA	**Kula-Manisa**	**2.37**	**91**	Pn		**Pn**	**15 21 54.7**	**+0.7**
KULA	**Kula-Manisa**	**2.37**	**91**	P		**Pn**	**15 21 53.7**	**-0.3**
YAZI	**Mula-Dat§a-**	**2.40**	**142**	P		**Pn**	**15 21 53.2**	**-1.0**
THAL	**Thalero**	**2.40**	**257**	P		**Pn**	**15 21 53.4**	**-0.9**
RKY	**Sarkoy-Tekirda**	**2.40**	**29**	Pn		**Pn**	**15 21 54.0**	**-0.4**
DAT	**Datca**	**2.42**	**140**	P		**Pn**	**15 21 53.6**	**-1.0**
DAT	**Datca**	**2.42**	**140**	P		**Pn**	**15 21 53.6**	**-1.0**
DURS	**Dursunbey**	**2.43**	**65**	P		**Pn**	**15 21 54.0**	**-0.7**
DEMI	**Demirci**	**2.45**	**79**	P		**Pn**	**15 21 54.2**	**-0.8**
EDC	**Edincik**	**2.46**	**44**	Pn		**Pn**	**15 21 55.1**	**+0.1**
DLFA	**Delphi**	**2.46**	**268**	P		**Pn**	**15 21 53.9**	**-1.3**
MULA	**Mugla, Merkez-**	**2.51**	**121**	P		**Pn**	**15 21 55.8**	**-0.1**
MRMT	**Marmara Adasi**	**2.51**	**36**	Pn		**Pn**	**15 21 55.9**	**0.0**
KVLA	**Kavala**	**2.53**	**338**	P		**Pn**	**15 21 55.2**	**-0.8**
DSY	**Dursunbey**	**2.53**	**66**	Pn		**Pn**	**15 21 56.8**	**+0.7**
KAVA	**Kavala**	**2.55**	**341**	P		**Pn**	**15 21 55.2**	**-1.1**
KAVA	**Kavala**	**2.55**	**341**	P		**Pn**	**15 21 55.0**	**-1.2**
RDO	**Rodhopi**	**2.55**	**358**			**Pn**	**15 21 55.4**	**-0.9**
RDO	**Rodhopi**	**2.55**	**358**	P		**Pn**	**15 21 55.4**	**-0.9**
RDO	**Rodhopi**	**2.55**	**358**	P		**Pn**	**15 21 54.3**	**-1.9**
KOKK	**Kokkinochori,**	**2.55**	**331**	P		**Pn**	**15 21 55.4**	**-0.9**
KOKK	**Kokkinochori,**	**2.55**	**331**	P		**Pn**	**15 21 55.3**	**-1.1**
BAND	**Balkesir-Ban**	**2.59**	**47**	P		**Pn**	**15 21 56.6**	**-0.3**
AGG	**Agios Georgios**	**2.62**	**280**	Pn		**Pn**	**15 21 56.5**	**-0.7**
AGG	**Agios Georgios**	**2.62**	**280**	P		**Pn**	**15 21 56.5**	**-0.7**
AGG	**Agios Georgios**	**2.62**	**280**	P		**Pn**	**15 21 56.4**	**-0.9**
UKOP	**Uzunkopru-Edir**	**2.64**	**17**	Pn		**Pn**	**15 21 57.0**	**-0.6**
USAK	**Uak-Merkez**	**2.65**	**86**	P		**Pn**	**15 21 57.8**	**+0.1**
SIMA	**Simav-Kutahya**	**2.66**	**78**	Pn		**Pn**	**15 21 58.6**	**+0.7**
GUR	**Goura**	**2.67**	**257**	P		**Pn**	**15 21 57.3**	**-0.8**
GUR	**Goura**	**2.67**	**257**	P		**Pn**	**15 21 57.0**	**-1.1**
KCTX	**Karacabey (Bur**	**2.69**	**51**	Pn		**Pn**	**15 21 58.3**	**+0.1**
MATR	**Makrakomi, Fth**	**2.77**	**280**	P		**Pn**	**15 21 59.4**	**+0.1**
KLV	**Lavrakhia, Ach**	**2.79**	**260**	P		**Pn**	**15 21 58.7**	**-1.0**
HORT	**Hortiatis**	**2.80**	**316**	P		**Pn**	**15 21 59.3**	**-0.5**
TAVA	**DENIZLI_Tavas**	**2.83**	**113**	P		**Pn**	**15 22 00.2**	**0.0**
SOH	**Sokhos**	**2.83**	**322**	P		**Pn**	**15 21 59.9**	**-0.4**
SOH	**Sokhos**	**2.83**	**322**	P		**Pn**	**15 21 59.8**	**-0.4**
VLI	**Veliai**	**2.84**	**230**	P		**Pn**	**15 21 58.8**	**-1.6**
VLI	**Veliai**	**2.84**	**230**	P		**Pn**	**15 21 58.4**	**-1.9**
DNIZ	**Denizli-Tavas-**	**2.85**	**109**	P		**Pn**	**15 22 01.4**	**+0.8**
LIT	**Litokhoron**	**2.86**	**303**	Pn		**Pn**	**15 21 59.9**	**-0.7**
TYRN	**Tyrnavos**	**2.87**	**294**	P		**Pn**	**15 22 00.2**	**-0.5**
THE	**Thessaloniki**	**2.90**	**315**	P		**Pn**	**15 22 00.6**	**-0.4**
ANX	**Ano Chora**	**2.91**	**271**	P		**Pn**	**15 22 01.0**	**-0.4**
ORLT	**Orhaneli**	**2.92**	**59**	Pn		**Pn**	**15 22 01.7**	**+0.3**
EFP	**Efpalio**	**2.93**	**268**	P		**Pn**	**15 22 00.5**	**-1.0**
SRS	**Serrai**	**2.97**	**329**	*e*Pn		**Pn**	**15 22 01.4**	**-0.7**
SRS				*e*Sg		**Sg**	**15 22 48.5**	**-2.0**
SRS	**Serrai**	**2.97**	**329**	P		**Pn**	**15 22 01.1**	**-0.9**
EMET	**Ktahya-Emet**	**2.98**	**74**	P		**Pn**	**15 22 02.0**	**-0.3**
THL	**Klokotos Trika**	**2.98**	**290**	P		**Pn**	**15 22 01.7**	**-0.5**
THL	**Klokotos Trika**	**2.98**	**290**	P		**Pn**	**15 22 01.9**	**-0.3**
GEDZ	**Gediz**	**2.98**	**80**	Pn		**Pn**	**15 22 03.4**	**+1.1**
DNZT	**Denizli-Tavas-**	**2.99**	**115**	P		**Pn**	**15 22 02.5**	**+0.1**
CRLT	**Corlu**	**3.00**	**32**	Pn		**Pn**	**15 22 02.5**	**0.0**
EVR	**Evrytania**	**3.01**	**277**	P		**Pn**	**15 22 02.6**	**-0.1**
PASA	**Karahalli, USA**	**3.04**	**93**	P		**Pn**	**15 22 03.4**	**+0.4**
GDZ	**Gediz**	**3.04**	**80**	P		**Pn**	**15 22 05.6**	**+2.3**
KHL	**Karahalli**	**3.06**	**94**	Pn		**Pn**	**15 22 04.3**	**+0.8**
NVR	**Nevrokopi**	**3.07**	**334**	P		**Pn**	**15 22 03.8**	**+0.3**
MDNY	**Mudanya-Bursa**	**3.08**	**54**	Pn		**Pn**	**15 22 04.1**	**+0.6**
ARG	**Arkhangelos**	**3.10**	**139**			**Pn**	**15 22 03.5**	**-0.3**
ARG	**Arkhangelos**	**3.10**	**139**	P		**Pn**	**15 22 03.5**	**-0.3**
TVSB	**Tavsanli**	**3.10**	**73**	Pn		**Pn**	**15 22 04.4**	**+0.4**
DRO	**Drossia**	**3.15**	**259**	P		**Pn**	**15 22 03.9**	**-0.8**
ARMT	**Armutlu**	**3.18**	**51**	Pn		**Pn**	**15 22 05.6**	**+0.7**
SABU	**Mula-Dalaman**	**3.18**	**123**	P		**Pn**	**15 22 05.8**	**+1.0**
PVO	**Paravola**	**3.22**	**272**	P		**Pn**	**15 22 05.5**	**0.0**
INCE	**Denizli-Bozkur**	**3.23**	**105**	P		**Pn**	**15 22 06.2**	**+0.4**
KARP	**Karpathos**	**3.28**	**158**	Pn		**Pn**	**15 22 05.6**	**-0.8**
KARP	**Karpathos**	**3.28**	**158**	P		**Pn**	**15 22 05.6**	**-0.8**
KARP	**Karpathos**	**3.28**	**158**	P		**Pn**	**15 22 05.5**	**-0.8**
ANKY	**Antikythira Is**	**3.30**	**215**	P		**Pn**	**15 22 05.1**	**-1.5**
GEMT	**Gemlik**	**3.31**	**55**	Pn		**Pn**	**15 22 07.4**	**+0.7**
KNT	**Kendrikon**	**3.32**	**321**	P		**Pn**	**15 22 06.8**	**-0.1**
CHAN	**Chania**	**3.33**	**203**	P		**Pn**	**15 22 04.1**	**-2.8**
IDI	**Anoyia**	**3.36**	**190**	Pn		**Pn**	**15 22 05.3**	**-2.2**
IDI	**Anoyia**	**3.36**	**190**	P		**Pn**	**15 22 05.3**	**-2.2**
IMMV	**Iera Moni Meta**	**3.40**	**203**	P		**Pn**	**15 22 06.2**	**-1.8**
GRG	**Griva**	**3.43**	**314**	P		**Pn**	**15 22 08.3**	**-0.2**
ZKR	**Zakros**	**3.51**	**172**	P		**Pn**	**15 22 08.6**	**-0.9**
ZKR	**Zakros**	**3.51**	**172**	P		**Pn**	**15 22 08.6**	**-0.9**
FRMA	**Ierapetra Chan**	**3.58**	**179**	P		**Pn**	**15 22 09.9**	**-0.5**
VAY	**Valandovo**	**3.60**	**320**	*e*Pn		**Pn**	**15 22 11.1**	**+0.4**
VAY	**Valandovo**	**3.60**	**320**	*i* Pn		**Pn**	**15 22 11.2**	**+0.4**
PLD	**Plovdiv**	**3.61**	**349**	*e*Pn		**Pn**	**15 22 10.8**	**+0.1**
PEHC	**Pehcevo**	**3.81**	**327**	*i* Pn		**Pn**	**15 22 14.3**	**+0.6**
ISP	**Isparta**	**3.93**	**100**	Pn		**Pn**	**15 22 15.4**	**0.0**
FNA	**Florina**	**3.94**	**305**	Pn		**Pn**	**15 22 15.8**	**+0.3**
FNA	**Florina**	**3.94**	**305**	*e*Pn		**Pn**	**15 22 15.9**	**+0.3**
KBN	**Korca**	**4.25**	**300**			**Pn**	**15 22 19.2**	**-0.7**
ELND	**Elena**	**4.33**	**2**	⇑P		**Pn**	**15 22 20.3**	**-0.5**
ELND				⇓S		**Sn**	**15 23 14.4**	**+3.2**
VTS	**Vitosha**	**4.41**	**336**	*e*Pn		**Pn**	**15 22 22.4**	**+0.3**
OHR	**Ohrid**	**4.49**	**306**	*e*Pn		**Pn**	**15 22 24.7**	**+1.7**
BOSS	**Bosilegrad**	**4.58**	**329**	*e*Pn		**Pn**	**15 22 24.6**	**+0.4**
SKO	**Skopje**	**4.65**	**318**	*i* Pn		**Pn**	**15 22 25.9**	**+0.7**
KEK	**Kerkira**	**4.67**	**286**	Pn		**Pn**	**15 22 24.8**	**-0.7**
MDUB	**Mudurnu**	**4.69**	**65**			**Pn**	**15 22 27.0**	**+1.2**
PRVS	**Prvonek**	**4.75**	**326**	*e*Pn		**Pn**	**15 22 27.0**	**+0.3**
LOZB	**Loznitsa**	**4.82**	**8**	⇑P		**Pn**	**15 22 26.8**	**-0.8**
PLVB	**Pleven**	**4.85**	**351**	⇓P		**Pn**	**15 22 27.9**	**-0.3**
RAZG	**Razgrad**	**5.01**	**7**	⇑P		**Pn**	**15 22 29.8**	**-0.3**
BARS	**Barje**	**5.12**	**327**	*e*Pn		**Pn**	**15 22 31.9**	**+0.3**
ZAPS	**Zavoj**	**5.20**	**335**	*e*Pn		**Pn**	**15 22 33.9**	**+1.2**
TIR	**Tirane**	**5.21**	**304**	⇓P		**Pn**	**15 22 33.3**	**+0.4**
VLAD	**Vladila**	**5.48**	**351**	⇑P		**Pn**	**15 22 36.2**	**-0.3**
BLKB	**Belogradchik**	**5.50**	**337**	⇑P		**Pn**	**15 22 37.4**	**+0.5**
COPA	**Copaceanca**	**5.54**	**357**	⇑P		**Pn**	**15 22 37.8**	**+0.4**
PUK	**Puka**	**5.58**	**310**	Pn		**Pn**	**15 22 38.4**	**+0.4**
SGRR	**Singureni**	**5.63**	**2**	⇑P		**Pn**	**15 22 39.4**	**+0.9**
SELS	**Selova**	**5.75**	**325**	*e*Pn		**Pn**	**15 22 39.9**	**-0.4**
SCTE	**Santa Cesarea**	**5.75**	**287**	Pn		**Pn**	**15 22 40.5**	**+0.2**
ICOR	**Ion Corvin**	**5.75**	**16**	⇓P		**Pn**	**15 22 40.2**	**-0.1**
ZAGS	**Zajecar**	**5.81**	**335**	*e*Pn		**Pn**	**15 22 40.6**	**-0.5**
BOVS	**Bovan**	**5.84**	**331**	⇑P		**Pn**	**15 22 41.7**	**+0.2**
HUMR	**Humele**	**5.95**	**355**	⇑P		**Pn**	**15 22 43.0**	**+0.1**
DRME	**Dracevica, Mon**	**6.09**	**308**	*e*Pn		**Pn**	**15 22 45.8**	**+0.8**
TIRR	**Tirgusor**	**6.22**	**19**	⇑P		**Pn**	**15 22 46.4**	**-0.2**
TIRR	**Tirgusor**	**6.22**	**19**	P

KOLS	**Kolonicke sedl**	**10.61**	**348**	*e*PN	**Pn**	**15 23 48.6**	**+1.6**
CEY	**Cerknica**	**10.95**	**314**	*e*Pn	**Pn**	**15 23 52.0**	**+0.4**
VYHS	**Vyhne**	**11.05**	**336**	*e*PN	Pn	15 24 00.1	+7.2
VYHS				*e*PG		15 24 43.3	
VYHS				*e*SN	Sn	15 25 43.4	-13
SOKA	**Soboth**	**11.22**	**319**	*e*Pn	**Pn**	**15 23 56.9**	**+1.5**
	comp=E,4.1nm,0.7s						
PRNI	**Paran**	**11.28**	**134**	P	**Pn**	**15 23 54.3**	**-1.9**
OBKA	**Obir**	**11.37**	**318**	*e*Pn	**Pn**	**15 23 59.8**	**+2.4**
	comp=E,2.9nm,0.9s						
ARSA	**Arzberg**	**11.38**	**323**	*e*Pn	**Pn**	**15 23 59.1**	**+1.7**
	comp=E,0.5nm,0.2s						
CONA	**Conrad Observa**	**11.73**	**326**	*e*Pn	**Pn**	**15 24 04.4**	**+2.2**
	comp=E,0.6nm,0.4s						
EIL	**Elat**	**11.78**	**136**	Sn	**Sn**	**15 26 08.7**	**-5.7**
	comp=E,0.3nm,0.3s,baz=4.0,slow=23,SNR=1.2						
KBA	**Koelnbreinsper**	**12.37**	**317**	*e*Pn	**Pn**	**15 24 11.9**	**+0.8**
	comp=E,4.1nm,0.9s						
AKASG	**Malin Array Be**	**12.37**	**11**	Pn	**Pn**	**15 24 09.5**	**-1.4**
	comp=E,0.2nm,0.3s,baz=193,slow=13,SNR=1.6						
AKASG				Sn	**Sn**	**15 26 29.8**	**+1.2**
	comp=E,0.3nm,0.3s,baz=298,slow=40,SNR=1.6						
AKASG				LR	LR	15 28 50.0	
	comp=E,124nm,19.3s,baz=177,slow=37						
	comp=E,0.7nm,0.5s						
VRAC	**Vranov**	**12.52**	**332**	Pn	**Pn**	**15 24 13.7**	**+0.7**
	comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=2.0						
	comp=E,1.1nm,0.5s						
LESA	**Schwarzleotal**	**12.94**	**317**	*e*Pn	**Pn**	**15 24 20.4**	**+1.6**
	comp=E,0.7nm,0.2s						
KEST	**Kesra**	**13.30**	**263**	Pn	**Pn**	**15 24 26.5**	**+2.6**
	comp=E,0.1nm,0.3s,baz=25,slow=7.8,SNR=3.1						
	comp=E,10nm,1.1s						
GERES	**GERESS Array B**	**13.38**	**324**	Pn	**Pn**	**15 24 26.4**	**+1.6**
	comp=E,0.2nm,0.3s,baz=148,slow=18,SNR=2.5						
	comp=E,0.5nm,0.6s						
WATA	**Walderalm**	**13.48**	**315**	*e*Pn	**Pn**	**15 24 27.1**	**+0.8**
	comp=E,1.8nm,0.6s						
MOTA	**Moosalm**	**13.75**	**314**	*e*Pn	**Pn**	**15 24 31.2**	**+1.2**
	comp=E,1.6nm,0.6s						
KVAR	**Kislovodsk Arr**	**13.90**	**62**	Pn	**Pn**	**15 24 32.4**	**+0.4**
	baz=254,slow=7.4						
	comp=E,1.7nm,0.5s						
KBZ	**Khabaz**	**13.97**	**63**	Pn	**Pn**	**15 24 36.1**	**+3.2**
	comp=E,0.9nm,0.9s,baz=239,slow=12,SNR=2.0						
KBZ				LR	LR	15 30 55.5	
	comp=E,90nm,20.6s,baz=256,slow=42						
DAVOX	**Davos/Dischmat**	**14.16**	**310**	LR	LR	15 30 14.5	
	comp=E,146nm,19.6s,baz=102,slow=38						
TUE	**Stuetta**	**14.34**	**308**	Pn	**Pn**	**15 24 35.5**	**-2.5**
GNI	**Garni**	**14.86**	**78**	LR	LR	15 30 32.2	
	comp=E,163nm,20.3s,baz=287,slow=38						
CLL	**Collm**	**15.51**	**329**	*e*pP	**P**	**15 24 57.0**	**-0.9**
CLL				*e*PP	**PnPn**	**15 25 02.0**	**+0.2**
CLL				*e*sPP		15 25 08.0	
SENIN	**Lac Senin/Sane**	**15.57**	**306**	Pn	**Pn**	**15 24 54.5**	**-0.1**
SENIN				IAmb	IAmb	15 25 18.0	
	comp=E,27nm,0.8s						
NACGM	**Naroch**	**16.33**	**2**	*e*P	**P**	**15 25 06.5**	**-0.5**
	comp=E,7.0nm,0.8s,baz=184						
RGN	**Rugen**	**18.02**	**336**		**P**	**15 25 25.6**	**0.0**
OBN	**Obninsk**	**18.10**	**21**	LR	LR	15 32 12.2	
	comp=E,128nm,19.2s,baz=214,slow=36						
BELG	**Belogornoye**	**20.58**	**41**	LR	LR	15 34 37.1	
	comp=E,53nm,22.0s,baz=276,slow=39						
HFS	**Hagfors**	**22.84**	**345**	P	**P**	**15 26 17.9**	**0.0**
	comp=E,1.0nm,0.6s,baz=144,slow=8.4,SNR=7.8						
HFS				LR	LR	15 35 45.7	
	comp=E,214nm,20.7s,baz=166,slow=38						
	comp=E,1.0nm,0.6s						
FINES	**FINESS Array B**	**22.87**	**1**	P	**P**	**15 26 17.9**	**-0.3**
FINES	**FINESS Array B**	**22.87**	**1**	P	**P**	**15 26 17.6**	**-0.6**
	comp=E,2.7nm,0.9s,baz=161,slow=9.2,SNR=8.5						
FINES				LR	LR	15 34 41.7	
	comp=E,173nm,20.0s,baz=196,slow=35						
	comp=E,2.7nm,0.9s						
FIA1	**FINESS Array S**	**22.88**	**1**	P	**P**	**15 26 17.9**	**-0.3**
FIA1				IAmb	IAmb	15 26 28.0	
	comp=E,17nm,0.9s						
ESDC	**Sonseca Array**	**22.94**	**282**	P	**P**	**15 26 18.5**	**-0.7**
	comp=E,2.2nm,0.7s,baz=76,slow=10,SNR=16						
	comp=E,2.2nm,0.7s						
PAB	**San Pablo**	**23.25**	**282**	P	**P**	**15 26 21.0**	**-1.5**
NC602	**NORSAR Array S**	**23.86**	**343**	P	**P**	**15 26 27.9**	**-0.1**
NC602				IAmb	IAmb	15 27 10.1	
	comp=E,30nm,1.4s						
NAO01	**NORSAR Array S**	**24.11**	**342**	P	**P**	**15 26 30.6**	**+0.1**
NAO01				IAmb	IAmb	15 26 35.0	
	comp=E,13nm,0.9s						
NB2	**NORSAR Subarra**	**24.20**	**343**	P	**P**	**15 26 30.9**	**-0.5**
	comp=E,2.8nm,0.8s,baz=152,slow=10						
NOA	**NORSAR Array B**	**24.20**	**343**	P	**P**	**15 26 31.2**	**-0.2**
	comp=E,2.0nm,0.9s,baz=147,slow=9.5,SNR=8.4						
NOA				LR	LR	15 36 48.6	
	comp=E,74nm,18.3s,baz=0.0,slow=39						
	comp=E,2.0nm,0.9s						
KIRV	**Kirov**	**25.20**	**30**	LR	LR	15 36 51.0	
	comp=E,104nm,18.8s,baz=280,slow=37						
GEYT	**Alibeck**	**25.45**	**81**	P	**P**	**15 26 43.4**	**+0.5**
GEYT				IAmb	IAmb	15 26 45.5	
	comp=E,7.8nm,1.1s						
GEYT	**Alibeck**	**25.45**	**81**	P	**P**	**15 26 43.4**	**+0.5**
	comp=E,4.7nm,0.8s,baz=290,slow=6.1,SNR=7.7						
GEYT				LR	LR	15 37 37.9	
	comp=E,66nm,18.3s,baz=318,slow=39						
	comp=E,4.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**25.55**	**320**	P	**P**	**15 26 44.9**	**+1.4**
	comp=E,0.6nm,0.6s,baz=216,slow=43,SNR=1.2						
	comp=E,0.6nm,0.6s						
ARU	**Arti**	**28.12**	**40**	LR	LR	15 38 06.6	
	comp=E,54nm,18.5s,baz=222,slow=36						
ARCES	**ARCESS Array B**	**31.00**	**360**	LR	LR	15 42 04.8	
	comp=E,135nm,18.4s,baz=218,slow=40						
TOA0	**Torodi Ar. Sit**	**33.06**	**226**	P	**P**	**15 27 50.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**33.06**	**226**	P	**P**	**15 27 51.4**	**+0.7**
	comp=E,4.2nm,0.5s,baz=23,slow=7.8,SNR=2.8						
	comp=E,4.2nm,0.5s						
SIMJ	**Simiganj**	**33.65**	**76**	P	**P**	**15 27 56.4**	**+0.6**
AAK	**Ala-Archa**	**36.90**	**68**	LR	LR	15 47 04.3	
	comp=E,60nm,18.7s,baz=287,slow=42						
BORG	**Borgarnes**	**37.76**	**329**	LR	LR	15 44 23.6	
	comp=E,81nm,18.6s,baz=352,slow=37						
NIL	**Nilore**	**38.44**	**82**	P	**P**	**15 28 37.6**	**+0.8**
NIL				IAmb	IAmb	15 28 39.0	
	comp=E,13nm,1.0s						
KURBB	**Kurchatov Arra**	**38.74**	**54**	P	**P**	**15 28 39.5**	**+0.5**
	comp=E,0.6nm,0.3s,baz=281,slow=9.0,SNR=3.0						
	comp=E,0.6nm,0.3s						
MBAR	**Mbarara**	**39.29**	**172**	LR	LR	15 46 13.6	
	comp=E,42nm,18.4s,baz=36,slow=38						
MK31	**Makanchi Array**	**41.64**	**60**	P	**P**	**15 29 03.0**	**-0.2**
MKAR	**Makanchi Array**	**41.64**	**60**	P	**P**	**15 29 03.1**	**-0.1**
MKAR	**Makanchi Array**	**41.64**	**60**	P	**P**	**15 29 03.5**	**+0.4**
	comp=E,2.2nm,0.8s,baz=277,slow=7.2,SNR=24						
MKAR				LR	LR	15 49 14.2	
	comp=E,70nm,18.0s,baz=258,slow=40						
	comp=E,2.2nm,0.8s						
DBIC	**Dimbokro**	**42.06**	**229**	P	**P**	**15 29 07.9**	**+1.0**
	comp=E,3.2nm,0.9s,baz=32,slow=9.5,SNR=2.4						
	comp=E,3.2nm,0.9s						
ZALV	**Zalesovo Beam**	**42.41**	**49**	P	**P**	**15 29 09.3**	**+0.1**
	comp=E,1.7nm,0.8s,baz=266,slow=10,SNR=3.1						
ZALV				LR	LR	15 49 09.8	
	comp=E,28nm,18.8s,baz=288,slow=40						
	comp=E,1.7nm,0.8s						
NRIK	**Noril'sk**	**44.62**	**26**	LR	LR	15 50 06.2	
	comp=E,90nm,18.8s,baz=350,slow=39						
SONM	**Songino Array**	**57.05**	**52**	P	**P**	**15 31 01.7**	**+0.7**
	comp=E,0.7nm,0.6s,baz=284,slow=6.0,SNR=4.9						
SONM				LR	LR	15 58 31.0	
	comp=E,56nm,18.0s,baz=174,slow=39						
	comp=E,0.7nm,0.6s						
TIXI	**Tiksi**	**57.83**	**21**	LR	LR	15 59 14.6	
	comp=E,44nm,18.7s,baz=26,slow=40						
TSUM	**Tsumeb**	**57.99**	**189**	LR	LR	15 56 50.1	
	comp=E,43nm,20.1s,baz=339,slow=37						
LZH	**Lanzhou**	**60.40**	**66**	*e*P	**P**	**15 31 28.3**	**+3.8**
LZH				sP	sP	15 31 37.5	+7.7
LZH				pmax	pmax		
	comp=E,11nm,1.1s						
SCHQ	**Schefferville**	**60.84**	**319**	P	**P**	**15 31 27.3**	**+0.2**
HHC	**Hu-ho-hao-te**	**63.45**	**58**	*e*P	**P**	**15 31 46.8**	**+1.9**
HHC				sP	sP	15 31 53.5	+3.3
HHC				pmax	pmax		
	comp=E,12nm,0.5s						
HHC				pmax	pmax		
	comp=E,88nm,5.1s						
PZH	**PanZhiHua**	**63.62**	**76**	P	**P**	**15 31 47.8**	**+1.5**
PZH				pmax	pmax		
	comp=E,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=E,110nm,5.0s						
LMN	**Caledonia Moun**	**63.89**	**309**	P	**P**	**15 31 47.7**	**+0.1**
D62A	**Allapoint, All**	**65.81**	**312**	P	**P**	**15 31 59.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**65.85**	**85**	P	**P**	**15 32 00.9**	**+0.1**
	comp=E,0.3nm,0.5s,baz=286,slow=6.5,SNR=1.6						
	comp=E,0.3nm,0.5s						
SUR	**Sutherland**	**70.76**	**184**	LR	LR	16 05 06.3	
	comp=E,40nm,18.6s,baz=318,slow=37						
KLR	**Kul'dur**	**70.94**	**42**	LR	LR	16 06 56.4	
	comp=E,36nm,18.3s,baz=309,slow=39						
MA2	**Magadan**	**72.22**	**26**	LR	LR	16 05 47.9	
	comp=E,40nm,19.4s,baz=306,slow=37						
INK	**Inuvik**	**72.27**	**352**	LR	LR	16 07 28.2	
	comp=E,33nm,18.4s,baz=3.5,slow=38						
NJ2	**Nanjing**	**73.10**	**62**	*e*P	**P**	**15 32 45.8**	**+0.4**
NJ2				pmax	pmax		
	comp=E,5.0nm,0.5s						
F31M	**Tsiigehtchic**	**73.13**	**352**	P	**P**	**15 32 44.9**	**-0.1**
G31M	**Satah River**	**73.69**	**352**	P	**P**	**15 32 48.3**	**0.0**
G31M				IAmb	IAmb	15 32 54.1	
	comp=E,5.0nm,1.2s						
BMAR	**Burnt Mountain**	**74.04**	**356**	P	**P**	**15 32 51.0**	**+0.6**
YKA	**Yellowknife Ar**	**74.30**	**342**	P	**P**	**15 32 52.3**	**+0.4**
	comp=E,0.3nm,0.9s,baz=41,slow=4.8,SNR=2.6						
	comp=E,0.3nm,0.9s						
KSRS	**Korea Array**	**75.91**	**53**	P	**P**	**15 33 01.3**	**-0.3**
	comp=E,0.9nm,0.8s,baz=288,slow=5.0,SNR=2.9						
	comp=E,0.9nm,0.8s						
ILAR	**Eielson Array**	**76.80**	**357**	P	**P**	**15 33 07.7**	**+1.5**
	comp=E,0.3nm,0.8s,baz=9.6,slow=4.6,SNR=4.5						
	comp=E,0.3nm,0.8s						

*GII **25** 15:23:35.8±0.2, 29°.249N±0°.002×34°.789E±0°.001, h1km, Mws1.8, confirmed*

SGS 25 15:23:36.0, 29°.19N×34°.80E, h14km, MI1.6, Egypt

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAQS	**Haql**	**0.17**	**144**	S	Sg	15 23 43.0	+0.1
HAQS	**Haql**	**0.17**	**144**	P	Pg	15 23 40.0	-0.1
HQLS		**0.25**	**64**	P	Pg	15 23 41.2	-0.2
JMOS	**Jabal al Moall**	**0.27**	**95**	P	Pg	15 23 41.6	0.0
EIL	**Elat**	**0.49**	**15**	P	Pg	15 23 45.6	-0.1
EIL	**Elat**	**0.49**	**15**	S	Sg	15 23 52.6	+0.2
EIL	**Elat**	**0.49**	**15**	Pn	Sg	15 23 52.2	-0.1
	0.7nm,0.3s,baz=341,slow=17,SNR=10						
MBRI	**Mt Berech**	**0.61**	**9**	P	Pg	15 23 47.7	-0.2
JLOS		**0.76**	**127**	P	Pg	15 23 49.8	-0.8
HRFI	**Mount Harif**	**0.87**	**14**	S	Sb	15 24 04.6	+0.3
HRFI	**Mount Harif**	**0.87**	**14**	P	Pg	15 23 52.4	-0.3
KRMI	**Paran Flat**	**0.93**	**356**	S	Sb	15 24 06.6	+0.6
KRMI	**Paran Flat**	**0.93**	**356**	P	Pb	15 23 53.0	-0.9
PRNI	**Paran**	**1.17**	**9**	S	Sn	15 24 13.8	+0.1
PRNI	**Paran**	**1.17**	**9**	P	Pn	15 23 57.5	-0.5

IDC 25 15:27:23.7±6.8, 30°.47S×178°.17W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=281.2km s-min=54.8km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.96**	**267**	P	P	15 35 24.7	0.0
	0.5nm,0.6s,baz=106,slow=7.2,SNR=14						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.96**	**272**	P	P	15 35 32.5	-0.3
	0.4nm,0.3s,baz=113,slow=7.7,SNR=6.8						
	0.4nm,0.3s						
H03N3	**Juan Fernandez**	**80.74**	**123**	T	T	17 08 52.0	
	baz=241						
H03N2	**Juan Fernandez**	**80.74**	**123**	T	T	17 08 51.5	
	baz=241						
H03N1	**Juan Fernandez**	**80.75**	**123**	T	T	17 08 41.0	
	baz=241						
FINES	**FINESS Array B**	**145.16**	**340**	PKPbc	PKPbc	15 47 01.2	-0.8
	1.3nm,0.7s,baz=51,slow=4.4,SNR=9.6						

*ASRS **25** 15:32:36.4±0.2, 51°.N±1°.8×8°.7E±°, h10km, MLh3.3/11, Error ellipse: s-maj=3.9km s-min=2.4km az=62.7, confirmed*
*IDC **25** 15:32:39.6±1.9, 50°.62N×87°.12E, h0km, mbtmp3.3/5, ML2.9/5, Error ellipse: s-maj=17.9km s-min=12.8km az=83.0*
*NNC **25** 15:32:39.9±1.8, 50°.62N×87°.23E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=15.6km s-min=8.6km az=100.0*

ISC 25 15:32:36.7±1.0, 50°.51N±0°.02×87°.37E±0°.03, h8km±9km, n22, σ2$46/36, 12C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHBI	**Chibit, Altay**	**0.22**	**156**	⇓Pg	**Pg**	**15 32 41.3**	**+0.2**
CHBI				Sg	**Sg**	**15 32 44.3**	**+0.2**
AKAR	**Aktash**	**0.25**	**139**	⇑Pg	**Pg**	**15 32 41.8**	**+0.1**
AKAR				Sg	**Sg**	**15 32 45.1**	**-2.0**
ULGR	**Ulagan, Altay**	**0.40**	**73**	⇑Pg	**Pb**	**15 32 46.4**	**+0.3**
ULGR				Sg	**Sb**	**15 32 51.4**	**-0.9**
CUR	**Chagan-Uzun**	**0.75**	**123**	Pg	**Pg**	**15 32 50.8**	**-0.4**
CUR				Sg	**Sg**	**15 33 01.6**	**+0.6**
DGZ	**Jazzator, Alta**	**0.81**	**177**	⇓Pg	**Pg**	**15 32 52.4**	**+0.1**
DGZ				Sg	**Sg**	**15 33 02.7**	**-0.1**
ELDR	**Elanda**	**1.07**	**312**	Pg	**Pn**	**15 32 57.3**	**-0.8**
ELDR				Sg	**Sn**	**15 33 11.9**	**-1.2**
YALR	**Yailyu, Altay**	**1.27**	**7**	⇓Pg	**Pn**	**15 33 00.1**	**-0.7**
YALR				Sg	**Sb**	**15 33 16.5**	**-0.9**
ARTR	**Artybash**	**1.29**	**358**	Pg	**Pg**	**15 33 02.9**	**+1.4**
ARTR				Sg	**Sg**	**15 33 19.8**	**+1.6**
UKR	**Ust'-Kan**	**1.70**	**286**	Pg	**Pg**	**15 33 08.8**	**-0.5**
UKR				Sg	**Sg**	**15 33 33.0**	**+1.6**
TASR	**Tashtagol**	**2.28**	**8**	Pg	**Pg**	**15 33 19.0**	**-1.3**
TASR				Sg	**Sg**	**15 33 49.2**	**-0.6**
ELT	**Eltsovka**	**2.84**	**346**	Pg	**Pb**	**15 33 26.1**	**-1.5**
ELT				Sg	**Sb**	**15 34 03.4**	**+0.8**
CERR	**Cheremushki**	**3.44**	**45**	Sg	**Sg**	**15 34 25.3**	**-2.0**
ZAA0	**Zalesovo Array**	**3.78**	**337**	⇑Pn	**Pn**	**15 33 37.3**	**+2.1**
	0.2nm,0.3s						
ZAA0				⇑Lg	Lg	15 34 34.4	
	5.3nm,0.8s						
ZALV	**Zalesovo Beam**	**3.78**	**337**	Pn	**Pn**	**15 33 37.9**	**+2.6**
	1.0nm,0.3s,baz=154,slow=13,SNR=20						
ZALV				Lg	Lg	15 34 33.0	
	2.1nm,0.3s,baz=157,slow=23,SNR=6.2						
	2.8nm,0.6						
MK31	**Makanchi Array**	**5.01**	**224**	⇑Pn	Pn	15 33 57.6	+5.4
	0.3nm,0.3s,baz=43,slow=13,SNR=86						
MK31				⇓Sn	**Sb**	**15 34 57.9**	**-7.2**
	3.0nm,0.6s,baz=55,slow=26,SNR=5.2						
MK31				⇑Lg	Lg	15 35 17.2	
	10nm,0.7s,baz=41,slow=30,SNR=9.2						
MKAR	**Makanchi Array**	**5.01**	**224**	Pn	Pn	15 33 57.2	+5.0
	1.1nm,0.3s,baz=45,slow=13,SNR=59						
MKAR				Sn	**Sn**	**15 34 54.2**	**+3.9**
	1.3nm,0.3s,baz=42,slow=29,SNR=5.3						
MKAR				Lg	Lg	15 35 17.4	
	3.1nm,0.3s,baz=44,slow=32,SNR=17						
	2.8nm,0.5s						
MAKZ	**Makanchi**	**5.14**	**226**	⇑Pn	Pn	15 33 58.9	+4.9
	0.8nm,0.4s						
MAKZ				⇑Sn	**Sn**	**15 34 58.3**	**+4.8**
	3.9nm,0.5s						
MAKZ				⇓Lg	Lg	15 35 18.9	
	10nm,0.8s						
KURK	**Kurchatov**	**5.57**	**275**	⇑Pn	Pn	15 34 02.0	+2.2
	0.5nm,0.3s						
KURK				⇑Sn	**Sn**	**15 35 06.5**	**+2.5**
	2.1nm,0.5s						
KURK				⇑Lg	Lg	15 35 33.9	
	10nm,0.8s						
KURBB	**Kurchatov Arra**	**5.63**	**275**	⇑Pn	Pn	15 34 03.0	+2.3
	2.0nm,0.5s						
KURBB				⇓Sn	**Sn**	**15 35 10.6**	**+5.2**
	3.8nm,0.4s						
KURBB				⇓Lg	Lg	15 35 37.5	
	22nm,0.9s						
KURBB	**Kurchatov Arra**	**5.63**	**275**	Pn	Pn	15 34 02.8	+2.1
	0.2nm,0.3s,baz=86,slow=15,SNR=7.0						
KURBB				Sn	**Sn**	**15 35 04.6**	**-0.9**
	0.1nm,0.3s,baz=84,slow=29,SNR=1.8						
KURBB				Lg	Lg	15 35 32.6	
	0.3nm,0.3s,baz=86,slow=34,SNR=5.1						
	1.5nm,0.4s						
BVAR	**Borovoye Array**	**10.82**	**290**	Pn	**Pn**	**15 35 11.9**	**+0.2**
BVAR				Sn	**Sn**	**15 37 08.1**	**-4.8**
	baz=91,slow=17,SNR=2.1						
	baz=92,slow=25,SNR=6.0						
	0.5nm,0.4s						
SONM	**Songino Array**	**12.74**	**95**	Pn	Pn	15 35 43.3	+5.2
	0.5nm,0.3s,baz=290,slow=8.9,SNR=2.8						
SONM				Lg	Lg	15 39 24.3	
	0.1nm,0.3s,baz=292,slow=26,SNR=2.5						
	0.4nm,0.4s						

*JMA **25** 15:33:04.0±0.8, 32°.N±2°.×14°.2E±°, h39km, MV3.1/9, E OFF HACHIJOJIMA ISLAND*
*IDC **25** 15:33:05.2±3.8, 31°.95N×140°.74E, h0km, mb3.5/4, mbtmp3.4/5, ML1.9/1, Error ellipse: s-maj=147.8km s-min=21.4km az=71.0*

ISC 25 15:33:07.3±1.4, 32°.3N±0°.1×141°.5E±0°.1, h35km, n10, σ1$37/12, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.62**	**300**	*e*P	**Pn**	**15 33 31.8**	**-1.6**
JHJ2	**Mitsune**	**1.62**	**302**	*e*P	**Pn**	**15 33 32.3**	**-1.2**
JHJ2				*e*S	**Sn**	**15 33 52.2**	**-1.0**
BSO1	**Boso 1**	**2.42**	**350**	*e*P	**Pn**	**15 33 41.9**	**-2.0**
JIZS	**Izushimoda**	**3.26**	**319**	*e*P	**Pn**	**15 33 55.3**	**-0.7**
JAG	**Ashikaga**	**4.47**	**339**	*e*P	**Pn**	**15 34 11.4**	**-1.2**
MJAR	**Matsushiro Arr**	**5.04**	**329**	Pn	**Pn**	**15 34 20.2**	**-0.3**
	baz=154,slow=12,SNR=5.5						
MJAR				Sn	**Sn**	**15 35 18.9**	**+1.5**
	baz=334,slow=15,SNR=1.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**46.82**	**306**	P	**P**	**15 41 34.6**	**+1.0**
	0.8nm,0.8s,baz=92,slow=9.6,SNR=7.5						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**49.07**	**311**	P	**P**	**15 41 52.7**	**+1.8**
	0.4nm,0.6s,baz=89,slow=7.0,SNR=4.0						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**52.36**	**188**	P	**P**	**15 42 15.5**	**-0.4**
	0.6nm,0.5s,baz=3.5,slow=7.5,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**56.09**	**188**	P	**P**	**15 42 43.3**	**+0.2**
	0.3nm,0.9s,baz=2.1,slow=6.9,SNR=2.2						
	0.3nm,0.9s						

IDC 25 15:33:44.8±2.0, 0°.99N×124°.76E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=193.2km s-min=27.8km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.82**	**156**	P	P	15 38 48.9	-0.7
	0.3nm,0.3s,baz=334,slow=11,SNR=8.6						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.07**	**161**	P	P	15 39 20.8	+0.5
	0.3nm,0.6s,baz=345,slow=9.9,SNR=8.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**58.73**	**327**	P	P	15 43 44.5	0.0
	0.2nm,0.5s,baz=131,slow=6.4,SNR=2.7						
	0.2nm,0.5s						

IDC 25 15:46:18.6±5.7, 5°.33S×133°.17E, h0km, mb3.4/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=336.8km s-min=33.0km az=76.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.56**	**176**	Pn	Pn	15 49 45.5	-0.7
	0.1nm,0.3s,baz=356,slow=13,SNR=7.2						
WRA				Sn	Sn	15 52 14.8	-14
	baz=135,slow=19,SNR=1.2						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**18.24**	**178**	P	Pn	15 50 33.5	+0.1
	0.1nm,0.3s,baz=350,slow=10,SNR=10						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**68.62**	**325**	P	P	15 57 23.7	+0.1
	0.4nm,0.8s,baz=111,slow=7.9,SNR=3.5						
	0.4nm,0.8s						

*ROM **25** 15:53:04.9±0.0, 46°.381N±0°.002×12°.599E±0°.003, h7km, ML3.6/210, Error ellipse: s-maj=0.2km s-min=0.1km az=338.0*
*LDG **25** 15:53:04.0±0.0, 46°.38N×12°.61E, h6km, Ml3.6/33, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*IDC **25** 15:53:05.8±1.2, 46°.44N×12°.64E, h0km, mbtmp3.4/7, ML3.3/6, Error ellipse: s-maj=13.8km s-min=9.5km az=161.0*
*BEO **25** 15:53:06.0±0.9, 46°.36N×12°.50E, h5km±4km, ML3.8/9*
*RHSSO **25** 15:53:06.3±0.6, 46°.41N×12°.61E, h7km±2km, ML3.7/10*
*PRU **25** 15:53:08.2, 46°.46N×12°.63E, h10km*

ISC 25 15:53:05.9±0.7, 46°.38N±0°.01×12°.60E±0°.01, h12km±4km, n246, σ1$50/395, 37C-33D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSMI	**Casera Mimoias**	**0.13**	**15**	⇓*e*Pg	**Pg**	**15 53 08.8**	**

MPRI AML AML
comp=N,32700µm,0.4s
MPRI AML AML
comp=E,22000µm,0.4s
MPRI AML AML
comp=E,28100µm,0.4s
MPRI AML AML
comp=N,42200µm,0.4s
ZOU Zoufplan 0.31 56 P **Pg** 15 53 11.9 -0.4
ZOU S **Sg** 15 53 16.9 +0.3
ZOU AML AML
comp=N,23900µm,1.0s
ZOU AML AML
comp=E,19150µm,0.5s
ZOU AML AML
comp=E,19050µm,0.5s
ZOU AML AML
comp=N,23950µm,1.0s
BOO Bordano 0.35 100⇑ *e*Pg **Pg** 15 53 12.1 -0.9
BOO *e*Sg **Sg** 15 53 17.6 -0.1
POLC Polcenigo 0.36 191 P **Pg** 15 53 12.6 -0.6
POLC S **Sg** 15 53 19.2 +1.1
POLC AML AML
comp=E,19150µm,0.7s
POLC AML AML
comp=N,20100µm,0.3s
POLC AML AML
comp=N,20100µm,1.7s
ABTA Abfaltersbach 0.37 350 *e*Pg **Pg** 15 53 13.1 -0.3
comp=N,206nm,0.1s,SNR=293
ABTA *e*Sg **Sg** 15 53 18.0 -0.4
comp=N,2µm,0.3s
GEPF Gemona 0.39 106 P **Pg** 15 53 13.1 -0.5
GEPF S **Sg** 15 53 19.5 +0.7
GEPF AML AML
comp=E,15200µm,0.5s
GEPF AML AML
comp=N,33900µm,0.2s
CAE Caneva 0.39 197⇓ *e*Pg **Pg** 15 53 12.5 -1.3
CAE *e*Sg **Sg** 15 53 18.7 -0.3
BUA Buia 0.40 114⇓ *e*Pg **Pg** 15 53 13.2 -0.6
BUA *e*Sg **Sb** 15 53 20.0 -0.9
AGOR Agordo 0.40 256⇓ *e*Pg **Pg** 15 53 13.0 -0.8
AGOR *e*Sg **Sg** 15 53 18.6 -0.5
AGOR Agordo 0.40 256 P **Pg** 15 53 13.4 -0.4
FRE8 Fregona 0.41 205 P **Pg** 15 53 13.1 -0.9
FRE8 S **Sg** 15 53 20.3 +0.9
PLRO Paularo 0.41 66⇑ *e*Pg **Pg** 15 53 13.7 -0.5
PLRO *e*Sg **Sg** 15 53 20.1 +0.4
FAU Forcella Aurin 0.46 251⇑ *e*Pg **Pg** 15 53 13.8 -1.2
FAU *e*Sg **Sg** 15 53 21.2 +0.1
BAD Bernadia 0.47 108⇑ *e*Pg **Pg** 15 53 14.3 -0.8
BAD *e*Sg **Sg** 15 53 21.8 +0.4
VINO Villanova 0.49 105 ⇑P **Pg** 15 53 14.7 -0.8
VINO S **Sg** 15 53 22.3 +0.3
VINO AML AML
comp=N,8585µm,0.5s
VINO AML AML
comp=E,10900µm,1.0s
VINO AML AML
comp=N,8585µm,1.5s
VINO AML AML
comp=E,10900µm,1.0s
PTCC Patocco-Chiusa 0.52 87 ⇑P **Pg** 15 53 15.3 -0.8
PTCC S **Sb** 15 53 24.2 -0.3
PTCC AML AML
comp=E,5255µm,0.8s
PTCC AML AML
comp=N,4740µm,0.8s
TLI Talmassons 0.58 143⇑ *e*Pg **Pg** 15 53 16.5 -0.6
COLI Coloredo 0.59 115⇑ *e*Pg **Pg** 15 53 16.8 -0.7
COLI *e*Sg **Sg** 15 53 25.8 +0.5
ROBS Robic 0.64 102 *i* Pg **Pg** 15 53 17.0 -1.4
ROBS IAML 15 53 31.6
comp=Z,320nm,0.2s
LSR Lussari 0.65 81⇑ *e*Pg **Pg** 15 53 17.8 -0.8
LSR *e*Sg **Sb** 15 53 28.4 +0.1
ACOM Acomizza, Ital 0.65 75⇑ *e*Pg **Pg** 15 53 18.0 -0.6
ACOM Acomizza, Ital 0.65 75 ⇑P **Pg** 15 53 18.2 -0.4
ACOM S **Sb** 15 53 28.3 -0.1
ACOM AML AML
comp=E,15150µm,0.2s
ACOM AML AML
comp=N,11350µm,0.8s
ACOM AML AML
comp=E,15200µm,0.2s
ACOM AML AML
comp=N,11100µm,0.8s
CRND Cornuda 0.66 214 P **Pg** 15 53 18.3 -0.4
CRND S **Sg** 15 53 28.1 +0.7
CRND AML AML
comp=E,6520µm,0.9s
CRND AML AML
comp=E,6525µm,0.9s
CRND AML AML
comp=N,7975µm,0.5s
PRED Cave del Predi 0.67 85⇑ *e*Pg **Pg** 15 53 17.9 -1.0
BRES Bressanone 0.68 298 P **Pg** 15 53 18.5 -0.7
BRES S **Sg** 15 53 28.1 0.0
BRES AML AML
comp=N,5790µm,0.9s
BRES AML AML
comp=N,5795µm,0.9s
BRES AML AML
comp=E,7120µm,0.3s
BRES AML AML
comp=N,5795µm,1.1s
CTI Castel Tesino 0.74 243 P **Pg** 15 53 19.9 -0.3
CTI AML AML
comp=E,9960µm,0.3s
CTI AML AML
comp=N,10840µm,0.3s
DRE Drenchia 0.75 106⇑ *e*Pg **Pg** 15 53 19.1 -1.4
MYKA Terra Mystica 0.76 71 *e*Pg **Pg** 15 53 19.8 -0.8
comp=N,240nm,0.2s,SNR=90
MYKA *e*Sg **Sg** 15 53 30.7 +0.1
comp=N,166nm,0.2s
ASOL Asolo 0.76 220 P **Pg** 15 53 20.1 -0.6
SABO M.te Sabotino 0.80 120⇑ *e*Pg **Pg** 15 53 20.9 -0.6
SABO M.te Sabotino 0.80 120 P **Pg** 15 53 20.8 -0.6
SABO AML AML
comp=E,24700µm,0.2s
SABO AML AML
comp=N,7135µm,0.3s
SABO AML AML
comp=N,27250µm,0.2s
SABO AML AML
comp=E,5810µm,0.2s
KBA Koelnbreinsper 0.86 36 *e*Pg **Pg** 15 53 22.1 -0.5
comp=E,110nm,0.2s,SNR=48
KBA *e*Sg **Sg** 15 53 33.3 -0.6
comp=E,285nm,0.2s
KBA Koelnbreinsper 0.86 36 *e*Pg **Pg** 15 53 22.5 -0.1
KBA *e*Sg **Sg** 15 53 33.6 -0.3
BOSI Bolzano 0.90 278 P **Pg** 15 53 22.7 -0.5
BOSI AML AML
comp=N,5940µm,0.5s
BOSI AML AML
comp=E,4910µm,0.7s
BOSI AML AML
comp=N,5940µm,1.5s
BOSI AML AML
comp=E,4910µm,1.3s
PANI Panarotta 0.94 250 *e*S **Sb** 15 53 37.3 +0.5
PANI Panarotta 0.94 250⇑ *e*Pg **Pg** 15 53 23.6 -0.5
PANI Panarotta 0.94 250 P **Pg** 15 53 23.6 -0.5
PANI AML AML
comp=N,4475µm,0.4s
PANI AML AML
comp=N,4480µm,0.4s
PANI AML AML
comp=E,3825µm,0.5s
VOJS Vojsko 0.96 111 *i* Pg **Pg** 15 53 23.0 -1.3
VOJS *e*Sg **Sn** 15 53 39.0 +0.2
VOJS IAML 15 53 42.4
comp=Z,1µm,0.3s
VENL Venezia Lido 0.98 189 P **Pn** 15 53 25.9 +0.4
ROSI Rosskopf 0.98 304 P **Pg** 15 53 24.4 -0.5
ROSI AML AML
comp=E,2105µm,0.3s
ROSI AML AML
comp=N,2985µm,0.3s
ROSI AML AML
comp=E,2105µm,1.7s
SANR Sandrigo 1.01 223 P **Pg** 15 53 25.6 +0.2

LESA Schwarzleotal 1.04 3 *i* Pg **Pg** 15 53 25.3 -0.7
comp=E,13nm,0.1s
LESA *e*Sg **Sg** 15 53 39.3 -0.4
comp=E,1µm,0.4s
WTTA Wattenberg 1.10 323 *e*Pg **Pg** 15 53 26.8 -0.4
comp=E,108nm,0.1s,SNR=24
WTTA *e*Sg **Sg** 15 53 41.4 -0.1
comp=E,129nm,0.2s
WTTA Wattenberg 1.10 323 *e*Pg **Pg** 15 53 26.9 -0.2
WTTA *e*Sg **Sg** 15 53 41.4 -0.1
WATA Walderalm 1.19 324 *e*Pg **Pg** 15 53 28.3 -0.5
comp=E,67nm,0.2s,SNR=18
WATA *e*Sg **Sg** 15 53 43.9 -0.2
comp=E,29nm,0.1s
SQTA Sankt Quirin 1.27 312 *e*Pg **Pg** 15 53 29.7 -0.7
comp=E,28nm,0.2s,SNR=40
MOZS Mozjanca 1.28 93 *i* Pg **Pg** 15 53 29.1 -1.4
MOZS IAML 15 53 50.9
comp=Z,129nm,0.1s
SKDS Skadanscina 1.29 130 *e*Pg **Pn** 15 53 30.1 +0.3
SKDS *e*Sg **Sn** 15 53 48.0 +1.0
OBKA Obir 1.35 84 *e*Pn **Pn** 15 53 30.5 -0.1
comp=Z,128nm,0.2s,SNR=49
OBKA Sg **Sn** 15 53 50.7 +2.1
comp=Z,895nm,0.5s
OBKA Obir 1.35 84 *e*Pn **Pn** 15 53 30.8 +0.2
OBKA *e*Sg **Sn** 15 53 52.1 +3.5
OBKA Obir 1.35 84 *e*Pg **Pn** 15 53 30.6 -0.1
OBKA *e*Sg **Sg** 15 53 48.8 -0.7
LJU Ljubljana 1.38 104 *e*Pg **Pg** 15 53 31.9 -0.4
LJU Ljubljana 1.38 104 *e*Pg **Pg** 15 53 32.0 -0.4
LJU *e*Sg **Sn** 15 53 51.8 +2.7
MOTA Moosalm 1.41 314 *e*Pg **Pn** 15 53 32.0 +0.5
comp=Z,7.2nm,0.1s,SNR=18
CEY Cerknica 1.42 116 *e*Pg **Pn** 15 53 32.2 +0.6
CEY *e*Sg **Sg** 15 53 52.8 +1.1
CEY Cerknica 1.42 116⇑ *i*Pg **Pn** 15 53 32.0 +0.4
CEY *e*Sg **Sg** 15 53 51.8 +0.1
FETA Feichten 1.44 297 *e*Pg **Pn** 15 53 32.7 +0.8
comp=Z,33nm,0.1s,SNR=35
FETA Sn **Sb** 15 53 50.7 -0.3
comp=Z,266nm,0.4s
BIOA Bad Ischl, Aus 1.49 28 *e*Pg **Pb** 15 53 33.6 +0.1
comp=Z,86nm,0.3s,SNR=59
BIOA Sg **Sg** 15 53 53.4 -0.4
comp=Z,372nm,0.4s
RETA Reutte 1.68 312 *e*Pg **Pg** 15 53 38.5 +0.4
comp=Z,29nm,0.3s,SNR=31
BRJN Brijuni 1.68 151 *e*Pn **Pn** 15 53 35.3 +0.2
BRJN Brijuni 1.68 151 P **Pn** 15 53 35.6 +0.5
RIY Rijeka 1.69 128 *e*Pn **Pn** 15 53 35.8 +0.6
RIY *e*Sn **Sb** 15 53 58.2 +0.2
RIY Rijeka 1.69 128 *e*Pn **Pn** 15 53 35.8 +0.6
SOKA Soboth 1.70 79 *e*Pg **Pn** 15 53 36.6 +1.1
comp=Z,74nm,0.2s,SNR=31
SOKA Sn **Sn** 15 53 58.4 +1.2
comp=Z,80nm,0.3s
SMRN Sveta Marina 1.73 141 *e*Pn **Pn** 15 53 36.2 +0.5
MOA Molln 1.85 37 *e*Pg **Pb** 15 53 40.0 +0.2
comp=Z,7.1nm,0.1s,SNR=24
MOA Sg **Sg** 15 54 04.1 -1.5
comp=Z,182nm,0.4s
MOA Molln 1.85 37 *e*Pn **Pb** 15 53 40.0 +0.2
MOA *e*Sn **Sb** 15 54 03.6 +0.7
MOA Molln 1.85 37 *e*Pg **Pg** 15 53 40.7 -0.8
MOA *e*Sg **Sg** 15 54 06.1 +0.5
OBER Oberstdorf 1.89 304 *e*Pn **Pb** 15 53 41.2 +0.9
OBER *e*Sg **Sg** 15 54 07.8 +1.2
DAVOX Davos/Dischmat 1.92 283 Pg **Pb** 15 53 40.9 0.0
comp=Z,47nm,0.3s,baz=81,slow=4.5,SNR=597
DAVOX Lg Lg 15 54 06.4
comp=Z,55nm,0.3s,baz=327,slow=21,SNR=16
FUR Furstenfeldbru 2.00 334 *e*Pn **Pb** 15 53 41.8 -0.4
FUR *e*Sg **Sg** 15 54 11.2 +1.0
BOJS Bojanci 2.05 114 *e*Pn **Pn** 15 53 41.4 +1.3
BOJS *e*Sn **Sb** 15 54 09.5 +1.1
BOJS Bojanci 2.05 114⇑ *i*Pn **Pn** 15 53 41.1 +1.0
BOJS *e*Sn **Sn** 15 54 07.4 +1.8
CRES Cresnjev 2.06 105⇑ *i*Pn **Pn** 15 53 41.1 +0.7
CRES *e*Sn **Sn** 15 54 07.4 +1.4
DAVA Damuels 2.08 297 *e*Pn **Pb** 15 53 43.2 -0.3
comp=Z,12nm,0.3s,SNR=37
DAVA Sg **Sg** 15 54 13.1 +0.4
comp=Z,664nm,0.7s
DAVA Damuels 2.08 297 *e*Pn **Pb** 15 53 44.0 +0.4
DAVA *e*Sg **Sg** 15 54 14.3 +1.6
UBR Ueberruh 2.14 308 *e*Pn **Pb** 15 53 44.3 -0.4
ARSA Arzberg 2.19 66 *e*Pn **Pn** 15 53 43.3 +1.2
comp=Z,42nm,0.3s,SNR=30
ARSA Sn **Sn** 15 54 09.9 +0.8
comp=Z,18nm,0.2s
ARSA Arzberg 2.19 66 *e*Pn **Pn** 15 53 43.4 +1.3
ARSA Arzberg 2.19 66 *e*Pn **Pn** 15 53 43.5 +1.5
ARSA Arzberg 2.19 66⇑ *i*Pn **Pn** 15 53 43.4 +1.3
ARSA *e*Sn **Sn** 15 54 09.8 +0.8
PLONS Plons/SG 2.31 288 *e*Pn **Pb** 15 53 47.1 -0.5
PLONS *e*Sg **Sg** 15 54 19.1 -1.2
PTJ Puntijarka 2.39 100 *e*Pn **Pn** 15 53 45.1 +0.2
LOBO Lobor 2.42 94 *e*Pn **Pn** 15 53 45.4 +0.2
NVLJ Novalja 2.42 138 *e*Pn **Pn** 15 53 45.5 +0.3
GEC2 GERESS Array S 2.57 16 *e*Pn **Pn** 15 53 49.0 +1.5
GEC2 *e*Sg **Sg** 15 54 26.8 -1.8
GERES GERESS Array B 2.57 16 Pn **Pn** 15 53 48.6 +1.1
comp=Z,3.5nm,0.3s,baz=194,slow=11,SNR=49
GERES Sn **Sn** 15 54 20.5 +1.8
comp=Z,22nm,0.3s,baz=196,slow=17,SNR=6.0
GERES Lg Lg 15 54 25.9
comp=Z,44nm,0.3s,baz=201,slow=26,SNR=8.7
comp=Z,4.3nm,0.2s
PLIT Plitvice 2.60 124 *e*Pn **Pn** 15 53 48.5 +0.8
KALN Kalnik 2.69 94 *e*Pn **Pn** 15 53 48.5 -0.4
NORI Noerdlinger Ri 2.69 331 *e*Pn **Pn** 15 53 50.6 +1.5
NORI *e*Sg **Sg** 15 54 31.7 -0.7
CKRC Cesky Krumlov 2.70 25 *e*PN **Pn** 15 53 50.9 +1.8
CKRC *e*SN **Sn** 15 54 23.1 +1.4
CKRC *e*SG **Sg** 15 54 31.1 -1.5
comp=Z,148nm,0.5s
CONA Conrad Observa 2.71 54 *i* Pn **Pn** 15 53 50.9 +1.6
comp=Z,11nm,0.2s,SNR=13
CONA Sn **Sn** 15 54 24.1 +2.1
comp=Z,38nm,0.4s
VIRC Vir 2.71 140 *e*Pn **Pn** 15 53 49.7 +0.4
WILA Wila 2.74 293 *e*Pn **Pn** 15 53 52.3 +2.6
WILA *e*Sg **Sg** 15 54 33.4 -0.4
WALHA Wallhausen, DE 2.75 301 *e*Pn **Pn** 15 53 52.5 +2.8
WALHA *e*Sg **Sg** 15 54 34.8 +0.7
WET Wettzell 2.77 4 *e*Pn **Pn** 15 53 51.3 +1.2
WET *e*Sn **Sn** 15 54 25.4 +1.9
KHC Kasperske Hory 2.83 13 *e*PN **Pn** 15 53 52.7 +1.8
KHC *e*PG **Pg** 15 53 59.3 -0.8
KHC *e*SN **Sn** 15 54 25.9 +1.0
KHC *e*SG **Sg** 15 54 35.0 -1.7
comp=Z,119nm,0.6s
RONA Rosalia, Austr 2.85 61 *i* Pn **Pn** 15 53 52.5 +1.4
comp=Z,18nm,0.2s,SNR=9.5
RONA Sn **Sn** 15 54 26.1 +0.7
comp=Z,17nm,0.4s
UDBI Udbina 2.90 129 *e*Pn **Pn** 15 53 53.0 +1.1
DUGI Dugi Otok 2.96 143 *e*Pn **Pn** 15 53 53.0 +0.4
EMING Emmingen-Lipti 2.98 302 *e*Pn **Pn** 15 53 55.1 +2.2
EMING *e*Sg **Sg** 15 54 40.9 -0.7
MOSL Moslavina 2.99 103 *e*Pn **Pn** 15 53 52.2 0.0
SLE Schleitheim 3.13 298 *e*Pn **Pn** 15 53 57.0 +2.0
SLE *e*Sg **Sg** 15 54 45.3 -1.1
PRIJ Prijedor 3.21 115 *e*Sn **Sn** 15 54 35.5 +1.3
METMA Mettma DE 3.26 296 *e*Pn **Pn** 15 53 58.7 +1.9
SULZ Cheisacher 3.28 292 *e*Pn **Pn** 15 53 59.3 +2.1
A051A Mrakovica 3.31 113 *e*Pn **Pn** 15 53 58.2 +0.6
A051A *e*Sn **Sn** 15 54 37.3 +0.4
STU Stuttgart 3.32 317 *e*Pn **Pn** 15 54 00.0 +2.4
MORI Morici 3.34 138 *e*Pn **Pn** 15 53 58.4 +0.5
A050A Klekovaca 3.36 123⇑ *i*Pn **Pn** 15 53 59.1 +0.9
A050A *e*Sn **Sn** 15 54 38.7 +0.7
BERGE Lenzkirch (DE) 3.37 298 *e*Pn **Pn** 15 54 00.1 +1.7
ROTZ Rotzenmuhle 3.40 356 *e*Pn **Pn** 15 53 59.1 +0.4
GRF Grafenberg Arr 3.44 345 *e*Sn **Sn** 15 54 41.6 +1.6
ZIRJ Zirje 3.48 141 *e*Pn **Pn** 15 54 00.7 +0.9
BFO Black Forest 3.50 305 *e*Pn **Pn** 15 54 02.0 +1.9
BALST Balsthal 3.50 288 *e*Pn **Pn** 15 54 02.3 +2.1
TREC Trest 3.50 33 *e*PN **Pn** 15 54 01.5 +1.4
ZST Bratislava 3.56 58 *e*PN **Pn** 15 54 01.4 +0.5
ZST *e*PG **Pg** 15 54 12.6 -1.5
ZST *e*SG **Sg** 15 54 59.6 -0.6

ZST eLG Lg 15 55 10.4
KIJV Kijevo 3.59 130 *e*Pn **Pn** 15 54 02.2 +0.8
BLY Banja Luka 3.61 115 *e*Pn **Pn** 15 54 03.0 +1.4
BLY *e*Sn **Sn** 15 54 44.8 +0.7
MANZ Manzenberg 3.62 355 *e*Pn **Pn** 15 54 03.3 +1.5
KRUC Moravsky 3.71 42 *e*PN **Pn** 15 54 03.4 +0.5
KRUC *e*SN **Sn** 15 54 46.4 -0.1
MGRS Mrkonjic Grad 3.72 120 *e*Pn **Pn** 15 54 04.5 +1.4
MGRS *e*Sn **Sn** 15 54 47.4 +0.6
MODS Modra-Piesok 3.75 56 *e*PN **Pn** 15 54 04.8 +1.3
MODS *e*PG **Pg** 15 54 16.2 -1.5
MODS *e*SG **Sg** 15 55 04.5 -1.7
MODS eLG Lg 15 55 12.3
GOPC GO Pecny, Ondr 3.82 22 *e*PN **Pn** 15 54 06.2 +1.6
PRU Pruhonice 3.83 19 *e*PN **Pn** 15 54 06.2 +1.5
PRU *e*SG **Sg** 15 55 05.8 -3.2
comp=Z,79nm,0.4s
NKC Novy Kostel 3.85 359 *e*PN **Pn** 15 54 06.0 +1.0
NKC *e*SN **Sn** 15 54 50.0 -0.2
VRAC Vranov 3.97 41 ⇓P **Pn** 15 54 07.2 +0.6
VRAC ⇑S **Sn** 15 54 52.9 -0.2
VRAC Vranov 3.97 41 *e*PN **Pn** 15 54 07.0 +0.4
VRAC Vranov 3.97 41 Pn **Pn** 15 54 07.4 +0.8
comp=Z,1.0nm,0.3s,baz=226,slow=14,SNR=7.7
VRAC Pg **Pb** 15 54 17.1 +1.3
comp=Z,1.4nm,0.3s,baz=230,slow=17,SNR=8.7
VRAC Sn **Sn** 15 54 53.3 +0.2
comp=Z,2.6nm,0.3s,baz=308,slow=12,SNR=5.8
VRAC Lg Lg 15 55 10.6
comp=Z,5.7nm,0.3s,baz=126,slow=21,SNR=4.9
comp=Z,2.7nm,0.3s
TANN Tannenbergstha 4.04 359 *e*Pn **Pn** 15 54 08.8 +1.3
CDF Champ du Feu 4.15 301 *e*P **Pn** 15 54 10.6 +1.5
CDF *e*Sn **Sn** 15 54 56.7 -0.8
comp=Z,54nm,0.6s
LPG La Plagne 4.18 260 *e*P **Pn** 15 54 11.8 +2.1
LPG *e*Sn **Sn** 15 54 57.8 -0.7
comp=Z,65nm,0.7s
HINF Hinteralfeld 4.18 292 *e*P **Pn** 15 54 10.9 +1.4
HINF *e*Sn **Sn** 15 54 57.7 -0.6
comp=Z,37nm,0.2s
LPL La Plagne 4.18 260 *e*P **Pn** 15 54 11.4 +1.7
LPL *e*Sn **Sn** 15 54 57.6 -1.0
comp=Z,29nm,0.5s
MORH Mrgy, Hungar 4.19 90 ⇑P **Pn** 15 54 09.4 -0.2
MORH ⇓S **Sn** 15 54 56.1 -2.3
MORH Mrgy, Hungar 4.19 90 *e*Pn **Pn** 15 54 09.4 -0.2
MORH *e*Sn **Sn** 15 54 58.1 -0.3
HVAR Hvar 4.21 138 *e*Pn **Pn** 15 54 10.4 +0.5
JAVC Velka Javorina 4.23 52 *e*PN **Pn** 15 54 12.0 +1.8
HSKC Hora Svate Kat 4.26 7 *e*PN **Pn** 15 54 12.1 +1.5
MOX Moxa 4.32 352 *e*Pn **Pn** 15 54 12.2 +0.9
RICI Ricice 4.32 130 *e*Pn **Pn** 15 54 12.1 +0.7
MAKA Makarska 4.41 133 *e*Pn **Pn** 15 54 12.8 +0.2
MBDF Montbardon 4.42 250 *e*P **Pn** 15 54 12.8 -0.1
MBDF *e*Sn **Sn** 15 55 03.2 -1.1
comp=Z,34nm,0.5s
SBF Sospel 4.44 237 *e*P **Pn** 15 54 14.0 +0.9
SBF *e*Sn **Sn** 15 55 02.8 -1.9
comp=Z,78nm,0.4s
CABF La Chapelle 4.50 275 *e*P **Pn** 15 54 15.7 +1.7
CABF *e*Sn **Sn** 15 55 05.5 -0.8
comp=Z,20nm,0.5s
HAU Haudompre 4.56 293 *e*P **Pn** 15 54 16.3 +1.6
HAU *e*Sn **Sn** 15 55 06.6 -1.0
comp=Z,89nm,0.4s
BRG Berggiesshubel 4.58 11 *e*Pn **Pn** 15 54 16.7 +1.7
BRG Amp 15 54 20.4
comp=Z,2.5nm,0.3s
BRG Berggiesshubel 4.58 11 Pg **Pg** 15 54 32.8 -0.8
BRG Sn **Sn** 15 55 07.0 -1.1
BRG Sg **Sg** 15 55 30.0 -2.9
BRG Amp 15 55 43.4
comp=Z,34nm,0.7s
PGF Pioggiola 4.62 215 *e*P **Pn** 15 54 15.0 -0.6
PGF *e*Sn **Sn** 15 55 07.7 -1.5
comp=Z,23nm,0.4s
KRLC Kraliky 4.63 36 *e*PN **Pn** 15 54 17.2 +1.5
DPC Dobruska-Polom 4.68 31 *e*PN **Pn** 15 54 17.0 +0.7
DPC *e*SN **Sn** 15 55 10.1 -0.5
UPC Upice 4.71 28 *e*PN **Pn** 15 54 17.3 +0.6
UPC *e*SN **Sn** 15 55 10.9 -0.3
VYHS Vyhne 4.73 61 *e*PN **Pn** 15 54 17.0 0.0
VYHS *e*PG **Pg** 15 54 34.6 -1.8
LSTV Lastovo 4.74 138 *i* Pn **Pn** 15 54 17.2 +0.1
TNS Taunus Mts 4.74 326 *e*Pn **Pn** 15 54 19.4 +2.2
MORC Moravsky Berou 4.74 42 ⇓P **Pn** 15 54 19.6 +2.4
MORC Moravsky Berou 4.74 42 *e*PN **Pn** 15 54 17.6 +0.4
UBBA Unterbreizbach 4.76 340 *e*PN **Pn** 15 54 19.9 +2.6
CHVA Chvalec 4.79 27 *e*PN **Pn** 15 54 18.4 +0.5
OSTC Ostas 4.82 29 *e*PN **Pn** 15 54 18.5 +0.3
CLL Collm 4.94 3 *e*Pn **Pn** 15 54 21.0 +1.2
CLL *e*Pg **Pg** 15 54 41.0 +0.6
CLL *e*Sn **Sn** 15 55 16.0 -0.8
CLL *e*Sg **Sg** 15 55 42.0 -2.3
comp=Z,57nm,1.1s
ORIF Oris-en-Rattie 4.94 255 *e*P **Pn** 15 54 22.4 +2.5
ORIF *e*Sn **Sn** 15 55 14.8 -2.2
comp=Z,40nm,0.5s
HAPS Han Pijesak,Bl 5.04 115 *e*Pn **Pn** 15 54 22.4 +1.1
HAPS Han Pijesak,Bl 5.04 115 *e*Pn **Pn** 15 54 22.3 +1.0
HAPS *e*Sn **Sn** 15 55 19.2 -0.3
STON Ston 5.05 132 *e*Pn **Pn** 15 54 21.7 +0.3
STON Ston 5.05 132 *e*Pn **Pn** 15 54 21.5 +0.1
STON *e*Sn **Sn** 15 55 19.2 -0.5
PAGF Fort de Pagny 5.14 297 *e*P **Pn** 15 54 25.6 +2.9
FRGS Fruska Gora 5.19 101 ⇑P **Pn** 15 54 23.8 +0.5
FRGS ⇓S **Sn** 15 55 19.6 -3.5
FRGS Fruska Gora 5.19 101 *e*Pn **Pn** 15 54 23.5 +0.2
FRGS Fruska Gora 5.19 101⇑ *i*Pn **Pn** 15 54 23.3 0.0
FRGS *e*Sn **Sn** 15 55 21.7 -1.4
PSZ Piszkesteto 5.21 70 ⇓P **Pn** 15 54 25.0 +1.4
PSZ ⇑S **Sn** 15 55 22.1 -1.5
LMR La Mourre 5.30 237 *e*P **Pn** 15 54 24.6 -0.2
LMR *e*Sn **Sn** 15 55 23.6 -2.1
comp=Z,36nm,0.6s
LANS Liptovska Anna 5.39 57 *e*PN **Pn** 15 54 27.2 +1.1
LANS *e*PG **Pg** 15 54 48.4 -0.7
LANS *e*SN **Sn** 15 55 27.5 -0.6
BBLS Lazići 5.43 115 *e*Pn **Pn** 15 54 28.4 +1.7
BBLS Lazići 5.43 115 *e*Pn **Pn** 15 54 27.5 +0.8
BBLS *e*Sn **Sn** 15 55 28.5 -0.6
WLF Walferdange 5.43 310 *d*P **Pn** 15 54 29.9 +3.3
WLF *d*S **Sn** 15 55 30.2 +1.2
WLF Walferdange 5.43 310 *e*Pn **Pn** 15 54 30.0 +3.3
SFTF Sexfontaines 5.46 292 *e*P **Pn** 15 54 29.0 +2.0
SFTF *e*Sn **Sn** 15 55 28.1 -1.6
comp=Z,26nm,0.5s
BRY Bratogost 5.48 127 *e*Pn **Pn** 15 54 28.0 +0.5
TREB Trebinje 5.50 130 *e*Pn **Pn** 15 54 28.5 +0.9
TREB *e*Sn **Sn** 15 55 30.2 -0.6
SMRF Simiane la Rot 5.52 247 *e*P **Pn** 15 54 28.9 +1.0
SMRF *e*Sn **Sn** 15 55 29.3 -2.0
comp=Z,9.1nm,0.3s
MEZF Maizieres J'vi 5.54 295 *e*Sn **Sn** 15 55 29.9 -1.8
comp=Z,13nm,0.4s
DIVS Divibare 5.70 111 *e*Pn **Pn** 15 54 31.2 +0.9
KECS Kecovo 5.75 66 *e*PN **Pn** 15 54 31.7 +0.8
KECS *e*SN **Sn** 15 55 34.9 -1.9
KECS eLG Lg 15 55 41.5
HCY Herceg Novi 5.77 131 *e*Pn **Pn** 15 54 31.1 -0.2
VIVF Saint-Julien-l 5.77 258 *e*Pn **Pn** 15 54 31.8 +0.5
VIVF *e*Sn **Sn** 15 55 35.3 -2.1
comp=Z,11nm,0.4s
TRUS Trudelj 5.91 109 *e*Pn **Pn** 15 54 34.2 +1.0
BHOU Houvegnez 5.92 315 *d*P **Pn** 15 54 36.3 +2.9
BTNL Ternell 6.02 317 *d*P **Pn** 15 54 37.8 +3.1
BTNL *d*S **Sn** 15 55 48.2 +4.8
IVAS Ivanjica 6.04 115 *e*Pn **Pn** 15 54 35.8 +0.7
SMF Signal de Mont 6.05 276 *e*P **Pn** 15 54 36.4 +1.2
SMF *e*Sn **Sn** 15 55 42.4 -2.0
comp=Z,23nm,0.6s
LOR Lormes 6.07 282 *e*P **Pn** 15 54 36.4 +1.0
LOR *e*Sn **Sn** 15 55 42.6 -2.1
comp=Z,11nm,0.3s
MEM Membach 6.09 316 *d*P **Pn** 15 54 39.2 +3.5
MEM *d*S **Sn** 15 55 44.8 -0.4
RCHB Rochefort 6.20 310 *d*P **Pn** 15 54 40.6 +3.4
GRUS Gruza 6.26 111 *e*Pn **Pn** 15 54 39.4 +1.4
BSTI Sart Tilman 6.29 315 *d*P **Pn** 15 54 41.2 +2.9
SSF Saint Saulge 6.29 279 *e*P **Pn** 15 54 40.3 +1.9
SSF *e*Sn **Sn** 15 55 48.0 -2.2

comp=Z,12nm,0.6s
DRME Dracevica, Mon 6.32 129 *e*Pn **Pn 15 54 39.3 +0.5**
DRME *e*Sn **Sn 15 55 49.2 -1.6**
BCLA Clavier 6.32 312 *d*P **Pn 15 54 41.9 +3.1**
BCLA *d*S **Sn 15 55 51.8 +1.0**
BZS Buzias 6.33 94 ⇓P **Pn 15 54 39.5 +0.6**
BEBN Eben Emael 6.37 316 *d*P **Pn 15 54 43.7 +4.2**
BEBN *d*S **Sn 15 55 54.6 +2.5**
AVF Avril sur Loir 6.39 277 *e*P **Pn 15 54 41.0 +1.2**
AVF *e*Sn **Sn 15 55 50.4 -2.2**
comp=Z,4.7nm,0.4s
GIVF Givet 6.39 308 *e*P **Pn 15 54 42.8 +3.0**
BGES Gesves 6.41 311 *d*P **Pn 15 54 43.4 +3.3**
BGES *d*S **Sn 15 55 52.0 -1.1**
DOU Dourbes 6.51 308 *d*P **Pn 15 54 44.7 +3.2**
DOU *d*S **Sn 15 55 53.7 -1.9**
BMRD Maredsous 6.53 310 *d*P **Pn 15 54 44.8 +3.1**
MDVR Moldovita 6.59 101 ⇓P **Pn 15 54 44.0 +1.4**
MDVR ⇓S **Sn 15 55 55.1 -2.5**
LASF Ste Croix 6.59 253 *e*P **Pn 15 54 43.2 +0.6**
LASF *e*Sn **Sn 15 55 54.9 -2.7**
comp=Z,7.2nm,0.3s
SURR Surduc 6.66 92 ⇑P **Pn 15 54 43.8 +0.4**
SURR ⇑S **Sn 15 55 57.0 -2.1**
BAIF Baives 6.71 306 *e*P **Pn 15 54 47.2 +3.1**
BGF Bois d'Agland 6.74 275 *e*P **Pn 15 54 46.2 +1.6**
BGF *e*Sn **Sn 15 55 58.6 -2.7**
comp=Z,27nm,0.3s
SELS Selova 6.83 115 *e*Pn **Pn 15 54 47.4 +1.5**
HYF Humbligny 6.89 281 *e*P **Pn 15 54 49.0 +2.3**
HYF *e*Sn **Sn 15 56 02.5 -2.5**
DRGR 6.98 83 ⇑P **Pn 15 54 49.1 +1.2**
DRGR ⇑S **Sn 15 56 03.7 -3.6**
KOLS Kolonicke sedl 7.01 65 *e*PN **Pn 15 54 49.1 +0.8**
HERR Herculane 7.04 99 ⇑P **Pn 15 54 49.8 +1.1**
GZR Gura Zlata 7.17 94 ⇑P **Pn 15 54 51.0 +0.5**
GZR ⇓S **Sn 15 56 09.2 -2.7**
TCF Toulx Ste Croi 7.20 273 *e*P **Pn 15 54 52.5 +1.6**
TCF *e*Sn **Sn 15 56 09.6 -2.9**
comp=Z,8.8nm,0.4s
MARR Marisel-Cluj 7.26 84 ⇑P **Pn 15 54 52.4 +0.6**
MARR ⇓S **Sn 15 56 12.4 -1.8**
ZAGS Zajecar 7.28 107 *e*Pn **Pn 15 54 52.6 +0.6**
BARS Barje 7.48 115 *e*Pn **Pn 15 54 57.4 +2.6**
CAF Calviac 7.53 263 *e*P **Pn 15 54 56.8 +1.4**
PRVS Prvonek 7.81 116 *e*Pn **Pn 15 55 01.0 +1.7**
RJF Les Rejaudoux 7.82 266 *e*P **Pn 15 55 00.9 +1.5**
MFF Saint Martin d 8.80 276 *e*Sn **Sn 15 56 48.3 -3.6**
comp=Z,3.3nm,0.3s
LDF La Druitiere 8.90 289 *e*P **Pn 15 55 16.4 +2.2**
LDF *e*Sn **Sn 15 56 50.3 -3.9**
comp=Z,6.1nm,0.7s
FLN La Foliniere 9.16 290 *e*P **Pn 15 55 20.0 +2.2**
FLN *e*Sn **Sn 15 56 56.4 -4.3**
comp=Z,4.8nm,0.4s
MLR Muntele Rosu 9.34 91 Pn **Pn 15 55 22.6 +2.2**
comp=Z,1.3nm,0.8s,baz=277,slow=8.1
GRR Gorron 9.35 287 *e*P **Pn 15 55 22.4 +2.0**
SGMF Saint Gilles 10.46 286 *e*Sn **Sn 15 57 27.8 -4.9**
comp=Z,1.4nm,0.3s
QUIF Quistinic 10.85 284 *e*Pn **Pn 15 55 40.8 -0.1**
QUIF *e*Sn **Sn 15 57 36.9 -5.3**
comp=Z,1.2nm,0.2s
KEST Kesra 10.92 194 Pn **Pn 15 55 45.7 +3.7**
comp=Z,0.6nm,0.3s,baz=338,slow=18,SNR=5.1
comp=Z,2.6nm,0.5s
EKA Eskdalemuir Ar 13.37 318 Pn **Pn 15 56 18.2 +3.0**
baz=121,slow=14
comp=Z,0.2nm,0.3s
ESDC Sonseca Array 13.84 247 Pn **Pn 15 56 24.4 +2.6**
baz=55,slow=13,SNR=3.0
comp=Z,0.3nm,0.6s
FINES FINESS Array B 16.99 23 Pn **Pn 15 57 02.3 -0.8**
comp=Z,0.1nm,0.3s,baz=207,slow=14,SNR=1.5
comp=Z,0.8nm,0.8s

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*IDC **25** 16:16:53.2±0.8, 19.°69N×120.°70E, h0km, mb3.5/9, mbtmp3.5/10, ML3.2/1, MS2.9/1, Error ellipse: s-maj=28.0km s-min=17.4km az=74.0*

ISC 25 16:16:56.7±0.9, 19.°7N±0.°1×120.°6E±0.°2, h23km, n17, σ0s76/18, mb3.5/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGBT	**Beinan**	**3.13**	**8**	P	**Pn**	**16 17 44.1**	**-0.6**
TPUB	**Ta-pu**	**3.58**	**360**	P	**Pn**	**16 17 49.2**	**-1.7**
YULB	**Yu-li**	**3.73**	**9**	P	**Pn**	**16 17 54.2**	**+1.3**
SSLB	**Suanglung**	**4.08**	**4**	P	**Pn**	**16 17 57.9**	**+0.1**
NACB	**Ninganchiao**	**4.54**	**11**	P	**Pn**	**16 18 04.4**	**+0.3**
YHNB	**Yeheng**	**5.00**	**8**	P	**Pn**	**16 18 10.8**	**+0.4**
TGY	**Tagaytay City**	**5.57**	**177**	LR	LR	16 20 49.9	
	comp=Z,111nm,19.5s,baz=98,slow=43						
KSRS	**Korea Array**	**18.80**	**18**	P	**P**	**16 21 13.9**	**-0.6**
	0.1nm,0.3s,baz=204,slow=12,SNR=1.9						
	0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.53**	**270**	P	**P**	**16 21 33.9**	**+0.3**
	0.3nm,0.3s,baz=55,slow=9.4,SNR=4.9						
	0.3nm,0.3s						
MJAR	**Matsushiro Arr**	**22.78**	**39**	P	**P**	**16 21 57.4**	**-0.3**
	1.0nm,1.0s,baz=248,slow=11,SNR=3.4						
	1.0nm,1.0s						
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**16 24 41.6**	**+1.2**
	0.3nm,0.7s,baz=110,slow=10,SNR=4.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**41.62**	**160**	P	**P**	**16 24 42.5**	**-0.8**
	0.8nm,0.5s,baz=342,slow=9.1,SNR=13						
WRA				PcP	**PcP**	**16 26 40.3**	**+0.1**
	0.4nm,0.4s,baz=346,slow=3.6,SNR=4.7						
	0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**43.79**	**330**	P	**P**	**16 25 00.6**	**+0.1**
	0.4nm,0.6s,baz=139,slow=6.8,SNR=1.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**45.00**	**163**	P	**P**	**16 25 10.8**	**+0.2**
	0.9nm,0.5s,baz=341,slow=7.1,SNR=50						
ASAR				PcP	**PcP**	**16 26 51.5**	**0.0**
	0.3nm,0.9s,baz=336,slow=3.9,SNR=1.5						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**45.28**	**323**	P	**P**	**16 25 12.2**	**-0.3**
	0.5nm,0.5s,baz=122,slow=7.9,SNR=5.3						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**73.43**	**27**	P	**P**	**16 28 26.3**	**-0.5**
	0.2nm,0.6s,baz=280,slow=5.4,SNR=2.3						
	0.2nm,0.6s						
YKA	**Yellowknife Ar**	**87.29**	**22**	P	**P**	**16 29 42.0**	**+0.7**
	0.6nm,0.9s,baz=314,slow=4.6,SNR=8.3						
	0.6nm,0.9s						

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*NEIC **25** 16:17:50.2±0.8, 15.°9S±0.°1×176.°4W±0.°2, h357km±11km, mb4.0/13, Error ellipse: s-maj=25.9km s-min=11.2km az=126.0*

*IDC **25** 16:18:08.0±31.0, 15.°87S×176.°89W, h550km±374km, mb2.9/6, mbtmp3.8/6, Error ellipse: s-maj=96.2km s-min=36.9km az=98.0*

ISC 25 16:17:50.3±0.6, 15.°7S±0.°1×176.°6W±0.°1, h350km, n23, σ1s07/23, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.98**	**70**		**Pn**	**16 19 08.6**	**-1.1**
NIUE	**Niue**	**7.21**	**119**		**Pn**	**16 19 36.3**	**+1.2**
DZM	**Mont Dzumac**	**17.26**	**246**	P	**P**	**16 21 31.6**	**+2.1**
DZM				IAmb	IAmb	16 21 54.8	
	comp=Z,24nm,1.5s						
MLZ	**Mavora Lakes**	**32.28**	**200**	P	**P**	**16 23 47.6**	**+0.1**
ARMA	**Armidale**	**32.58**	**238**	P	**P**	**16 23 49.7**	**-0.8**
COEN	**Coen**	**38.89**	**267**	P	**P**	**16 24 45.0**	**+1.4**
COEN				IAmb	IAmb	16 25 13.2	
	comp=Z,15nm,1.4s						
BBOO	**Buckleboo**	**46.02**	**239**	P	**P**	**16 25 39.1**	**-1.1**
WB0	**Warramunga Arr**	**46.74**	**257**	P	**P**	**16 25 45.3**	**-0.7**
WB0				IAmb	IAmb	16 26 18.8	
	comp=Z,8.8nm,1.5s						
WB2	**Warramunga Arr**	**46.77**	**257**	P	**P**	**16 25 45.8**	**-0.4**
WB2				IAmb	IAmb	16 25 51.9	
	comp=Z,7.7nm,1.4s						
WRA	**Warramunga Arr**	**46.78**	**257**	P	**P**	**16 25 45.6**	**-0.7**
WRA	**Warramunga Arr**	**46.78**	**257**	P	**P**	**16 25 45.9**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=89,slow=6.7,SNR=23						
	comp=Z,1.4nm,0.6s						
AS31	**Alice Springs**	**47.10**	**252**	P	**P**	**16 25 48.1**	**-0.6**
ASAR	**Alice Springs**	**47.10**	**252**	P	**P**	**16 25 47.9**	**-0.9**
ASAR	**Alice Springs**	**47.10**	**252**	P	**P**	**16 25 48.4**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=88,slow=7.5,SNR=73						
	comp=Z,4.2nm,0.5s						
MTN	**Manton Dam**	**50.64**	**266**	P	**P**	**16 26 14.7**	**-0.8**
MTN				IAmb	IAmb	16 26 16.8	
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**74.37**	**180**	P	**P**	**16 28 48.5**	**-1.8**
QSPA				IAmb	IAmb	16 28 57.8	
	comp=Z,2.0nm,1.1s						
QSPA	**South Pole Qui**	**74.37**	**180**	P	**P**	**16 28 48.5**	**-1.8**
	comp=Z,1.5nm,1.0s,baz=22,slow=5.4,SNR=2.4						
	comp=Z,1.5nm,1.0s						
PNTR	**Pine Nut**	**76.12**	**42**	P	**P**	**16 29 01.2**	**+0.4**
PNTR				IAmb	IAmb	16 29 01.2	
	comp=Z,3.9nm,0.9s						
NVAR	**Mina Array Bea**	**76.61**	**43**	P	**P**	**16 29 04.0**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=232,slow=6.8,SNR=2.6						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**83.33**	**57**	P	**P**	**16 29 40.4**	**+1.2**
	comp=Z,0.1nm,0.7s,baz=254,slow=6.5,SNR=1.8						
	comp=Z,0.1nm,0.7s						
ILAR	**Eielson Array**	**83.33**	**12**	P	**P**	**16 29 38.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=215,slow=5.1,SNR=4.5						
	comp=Z,0.2nm,0.6s						
I28M	**Miner Creek**	**85.47**	**14**	P	**P**	**16 29 48.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**89.79**	**289**	P	**P**	**16 30 11.0**	**+0.6**

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*BJI **25** 16:28:35.5±0.0, 37.°51N×141.°73E, h26km, mb5.5/91, mB5.4/64, Ms5.3/99, Ms7 5.2/95*

*MOS **25** 16:28:37.9±0.9, 37.°59N×141.°82E, h36km, mb5.7/74, MS5.3/38, Error ellipse: s-maj=5.5km s-min=3.3km az=109.6*

*JMA **25** 16:28:39.7±0.1, 37.°5N±0.°3×141.°8E±0.°6, h40km±1km, MD5.8/40, MW5.6/40, E OFF FUKUSHIMA PREF*

JMA Felt IV J1 at E OFF FUKUSHIMA PREF .

*NEIC **25** 16:28:39.5±1.3, 37.°60N±0.°05×141.°73E±0.°08, h31km±3km, mb5.5/452, Ms_20 5.2/227, Mwb5.5/85, Mwr5.5/18, Mww5.6/19, Error ellipse: s-maj=8.9km s-min=6.9km az=102.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.44; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.34; $M_{r\theta}$2.17; $M_{\theta\phi}$-0.33; M_{rf}1.19; Fault plane solution: M_{o}2.53000×10^{17} NP1:ϕ_s189.67000°, δ7.99000°, λ39.25000°. NP2: ϕ_s60.69000°, δ84.96000°, λ96.20000°. Principal axes: T 2.5335, Plg50.0000°, Azm337.0000°; N -0.0029, Plg6.0000°, Azm240.0000°; P -2.5306, Plg40.0000°, Azm145.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}1.15; $M_{\theta\theta}$-0.61; $M_{r\theta}$1.93; $M_{\theta\phi}$-0.85; $M_{\phi f}$0.75; Fault plane solution: M_{o}2.45000×10^{17} NP1:ϕ_s201.15000°, δ20.15000°, λ47.92000°. NP2:ϕ_s65.03000°, δ75.18000°, λ103.82000°. Principal axes: T 2.4201, Plg58.0000°, Azm253.0000°; N 0.0578, Plg13.0000°, Azm241.0000°; P -2.4779, Plg29.0000°, Azm144.0000°;*

*NEIC **25** 16:28:39.6, 37.°59N×141.°75E, h30km, Moment Tensor Solution. Duration: 3s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.96; $M_{\theta\theta}$-0.62; $M_{\phi\phi}$-0.34; $M_{r\theta}$3.07; $M_{\theta\phi}$-0.46; $M_{\phi f}$0.73; Fault plane solution: M_{o}3.30000×10^{17} NP1:ϕ_s75.46000°, δ82.06000°, λ95.95000°. NP2:ϕ_s218.45000°, δ9.91000°, λ53.40000°. Principal axes: T 3.3676, Plg53.0000°, Azm352.0000°; N -0.1326, Plg6.0000°, Azm255.0000°; P -3.2349, Plg37.0000°, Azm160.0000°;*

*NEIC **25** 16:28:39.6, 37.°59N×141.°75E, h31km*

*NEIC **25** 16:28:39.6, 37.°59N×141.°75E, h31km*

*NEIC **25** 16:28:39.6, 37.°59N×141.°75E, h31km*

*NIED **25** 16:28:39.7, 37.°54N×141.°76E, h40km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.97; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.68; $M_{r\theta}$2.53; $M_{\theta\phi}$-0.76; $M_{\phi f}$0.90; Fault plane solution: M_{o}2.92000×10^{17} NP1:ϕ_s67.00000°, δ80.00000°, λ104.00000°. NP2:ϕ_s192.00000°, δ17.00000°, λ36.00000°.*

*IPGP **25** 16:28:40.0, 37.°61N×141.°74E, h40km, Mw5.7, Fault plane solution: NP1:ϕ_s70.00000°, δ77.00000°, λ101.00000°. NP2:ϕ_s207.00000°, δ17.00000°, λ49.00000°.*

*IDC **25** 16:28:41.7±1.2, 37.°55N×141.°70E, h53km±10km, mb4.9/41, mbtmp5.2/50, MS5.1/75, Error ellipse: s-maj=9.4km s-min=7.6km az=109.0*

*GCMT **25** 16:28:42.5±0.1, 37.°55N±0.°01×141.°71E±0.°01, h38km, MW5.7/161, Moment Tensor Solution. s131,c246; s161,c338; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}1.75±.04; $M_{\theta\theta}$-0.97±.03; $M_{\theta\phi}$-0.77±.03; $M_{r\theta}$3.54±.07; $M_{\phi\phi}$-0.98±.02; $M_{\phi f}$1.00±.04; Best double couple: M_{o}4.09400×10^{17} NP1:ϕ_s71.00000°, δ78.00000°, λ100.00000°. NP2:ϕ_s210.00000°, δ16.00000°, λ50.00000°. Principal axes: T 4.1970, Plg56.0000°, Azm354.0000°; N -0.2030, Plg10.0000°, Azm249.0000°; P -3.9910, Plg32.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **25** 16:28:46.0, 38.°77N×142.°08E, h44km, mb5.4, Ms5.6*

ISC 25 16:28:39.3±0.3, 37.°55N±0.°02×141.°75E±0.°03, h33km±1km, h33km:pP-P, n1662, σ1s52/1335, mb5.5/440, MS5.2/245, 133C-55D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMST	**Minamisoumatoc**	**0.70**	**285**	*i* P	**Pn**	**16 28 53.3**	**+0.3**
JMST				S	**Sn**	**16 29 02.9**	**+0.2**
JMST	**Minamisoumatoc**	**0.70**	**285**	A	A	16 28 53.3	
	comp=E,242nm,1.2s,comp=N,630nm,2.0s						
JFK	**Kawauchi**	**0.72**	**256**	⇓*i* P	**Pb**	**16 28 53.5**	**+0.1**
JFK				⇓S	**Sb**	**16 29 03.2**	**+0.1**
JFK	**Kawauchi**	**0.72**	**256**	A	A	16 28 53.5	
	comp=E,713nm,1.1s,comp=N,801nm,1.5s						
JIKH	**Ishinomakikobu**	**0.79**	**344**	⇓*i* P	**Pb**	**16 28 54.7**	**0.0**
JIKH				⇓S	**Sn**	**16 29 05.3**	**+0.3**
JIKH	**Ishinomakikobu**	**0.79**	**344**	A	A	16 28 54.7	
	comp=E,207nm,1.8s,comp=N,155nm,2.1s						
JMM	**Marumori**	**0.82**	**293**		**Pb**	**16 28 55.0**	**-0.2**
JMM	**Marumori**	**0.82**	**293**	P	**Pb**	**16 28 55.6**	**+0.4**
JMM	**Marumori**	**0.82**	**293**	⇓*i* P	**Pb**	**16 28 55.2**	**0.0**
JMM				⇓S	**Sn**	**16 29 06.2**	**+0.6**
JMM	**Marumori**	**0.82**	**293**	A	A	16 28 55.2	
	comp=E,368nm,0.4s,comp=N,383nm,3.8s						
ONAJ	**Iwakimizuishiy**	**0.88**	**240**	*i* P	**Pn**	**16 28 55.7**	**+0.2**
ONAJ				S	**Sn**	**16 29 06.7**	**-0.4**
ONAJ	**Iwakimizuishiy**	**0.88**	**240**	A	A	16 28 55.7	
	comp=E,1μm,0.4s,comp=N,1μm,0.4s						
JIO	**Ouri**	**0.96**	**341**	⇓*i* P	**Pb**	**16 28 57.1**	**-0.4**
JIO				⇓S	**Sb**	**16 29 09.3**	**-0.6**
JIO	**Ouri**	**0.96**	**341**	A	A	16 28 57.1	
	comp=E,169nm,2.6s,comp=N,87nm,3.4s						
JFFD	**Fukushimafurud**	**1.05**	**245**	A	A	16 28 58.4	
	comp=E,542nm,0.8s,comp=N,374nm,3.8s						
JOTO	**OTAMA OYAMA**	**1.12**	**271**	*i* P	**Pb**	**16 29 00.1**	**-0.1**
JOTO				S	**Sb**	**16 29 15.0**	**+0.4**
JOTO	**OTAMA OYAMA**	**1.12**	**271**	A	A	16 29 00.1	
	comp=E,506nm,1.1s,comp=N,1μm,2.6s						
JOU	**Okura**	**1.18**	**314**	⇓*i* P	**Pb**	**16 29 00.6**	**-0.6**
JOU	**Okura**	**1.18**	**314**	A	A	16 29 00.6	
	comp=E,264nm,1.9s,comp=N,385nm,3.1s						
JOFO	**Osakifurukawao**	**1.24**	**328**	A	A	16 29 01.4	
	comp=E,773nm,2.4s,comp=N,534nm,2.0s						
JKMT	**Kesennumamotoy**	**1.28**	**350**	A	A	16 29 01.8	
	comp=E,115nm,3.4s,comp=N,71nm,3.3s						
JYAR	**Yonezawaarcadi**	**1.32**	**286**	A	A	16 29 02.5	
	comp=E,549nm,1.4s,comp=N,551nm,1.0s						
JHO	**Hitachi**	**1.33**	**226**	A	A	16 29 02.4	
	comp=E,126nm,1.5s,comp=N,204nm,1.0s						
JMK	**Ichinoseki**	**1.46**	**344**	⇓*i* P	**Pb**	**16 29 04.5**	**-1.4**
JMK	**Ichinoseki**	**1.46**	**344**	A	A	16 29 04.5	
	comp=E,101nm,2.3s,comp=N,80nm,7.9s						
JYS	**Shirataka**	**1.49**	**297**	⇓*i* P	**Pb**	**16 29 05.3**	**-1.1**
JYS				⇓S	**Sb**	**16 29 25.4**	**+0.4**
JYS	**Shirataka**	**1.49**	**297**	A	A	16 29 05.3	
	comp=E,358nm,1.8s,comp=N,232nm,2.3s						
JHYU	**Hitachinakayam**	**1.52**	**218**	A	A	16 29 05.2	
	comp=E,242nm,3.7s,comp=N,217nm,0.7s						
OFUJ	**Ofunato**	**1.53**	**358**	A	A	16 29 05.5	
	comp=E,65nm,4.7s,comp=N,74nm,3.6s						
JSB	**Shiboa**	**1.57**	**249**	A	A	16 29 06.0	
	comp=E,599nm,3.8s,comp=N,599nm,1.5s						
JFY	**Yanaizu**	**1.63**	**266**	⇓*i* P	**Pn**	**16 29 07.1**	**+1.4**
JFY				⇓S	**Sb**	**16 29 27.6**	**-1.5**
JFY	**Yanaizu**	**1.63**	**266**	A	A	16 29 07.1	
	comp=E,130nm,3.6s,comp=N,182nm,1.7s						
JYK	**Kaneyama**	**1.75**	**322**	⇓*i* P	**Pb**	**16 29 08.8**	**-2.1**
JYK	**Kaneyama**	**1.75**	**322**	A	A	16 29 08.8	
	comp=E,76nm,2.2s,comp=N,98nm,3.5s						
JYT	**Yasato**	**1.81**	**224**	A	A	16 29 09.4	
	comp=E,372nm,0.4s,comp=N,216nm,0.4s						
JIHU	**Itakohorinouch**	**1.86**	**212**	A	A	16 29 10.1	
	comp=E,623nm,4.1s,comp=N,655nm,1.4s						
JYA	**Atsumi**	**1.92**	**304**	A	A	16 29 11.2	
	comp=E,102nm,1.4s,comp=N,103nm,1.4s						
JNS	**Sasagawa**	**1.95**	**279**	A	A	16 29 11.6	
	comp=E,66nm,1.6s,comp=N,76nm,3.4s						
JOM	**Ohasama**	**1.96**	**350**	A	A	16 29 11.7	
	comp=E,101nm,3.1s,comp=N,63nm,2.5s						
MIYJ	**Miyakonagasawa**	**2.03**	**2**	A	A	16 29 12.6	
	comp=E,56nm,4.4s,comp=N,55nm,4.1s						
JRG	**Rokugo**	**2.04**	**335**	A	A	16 29 13.0	
	comp=E,113nm,3.9s,comp=N,100nm,4.4s						
JYYZ	**Yamagatayuza**	**2.05**	**316**	A	A	16 29 13.0	
	comp=E,272nm,4.8s,comp=N,211nm,3.3s						
JKT	**Katashina**	**2.14**	**249**	A	A	16 29 14.3	
	comp=E,85nm,0.4s,comp=N,117nm,1.8s						
JAG	**Ashikaga**	**2.15**	**239**	A	A	16 29 14.4	
	comp=E,81nm,1.5s,comp=N,118nm,3.1s						
JSMT	**Sammumatsuo**	**2.17**	**209**	A	A	16 29 14.5	
	comp=E,458nm,4.1s,comp=N,463nm,4.4s						
JUON	**Uonuma**	**2.17**	**262**	A	A	16 29 14.7	
	comp=E,70nm,3.4s,comp=N,144nm,3.3s						
JAW	**Awa shima**	**2.17**	**295**	A	A	16 29 14.8	
	comp=E,90nm,5.9s,comp=N,121nm,3.0s						
JSZI	**Iwateshizukuis**	**2.28**	**344**	A	A	16 29 16.3	
	comp=E,158nm,1.8s,comp=N,200nm,2.2s						
JYW	**Yuwa**	**2.33**	**329**	A	A	16 29 17.1	
	comp=E,136nm,1.3s,comp=N,157nm,2.7s						
JTB	**Tobi-shima**	**2.38**	**314**	A	A	16 29 17.8	
	comp=E,87nm,3.2s,comp=N,65nm,3.9s						
JTH	**Tanohata**	**2.39**	**2**	A	A	16 29 17.9	
	comp=E,69nm,2.6s,comp=N,66nm,3.3s						
JIZZ	**Izumozaki**	**2.42**	**271**	A	A	16 29 18.3	
	comp=E,246nm,2.1s,comp=N,262nm,4.1s						
TOK	**Tokyo**	**2.45**	**221**	A	A	16 29 18.6	
	comp=E,306nm,1.4s,comp=N,322nm,1.2s						
JKZ	**Kuzumaki**	**2.46**	**352**	A	A	16 29 18.8	
	comp=E,129nm,1.8s,comp=N,65nm,3.0s						
JCN	**Nagara**	**2.46**	**211**	A	A	16 29 18.7	
	comp=E,413nm,3.2s,comp=N,405nm,1.8s						
I30JP	**ISUMI INFRASON**	**2.52**	**208**	P	**Pn**	**16 29 20.1**	**+2.2**
	baz=33,slow=11,SNR=0.8						
I30JP				S	**Sn**	**16 29 47.3**	**-0.1**
	baz=52,slow=20,SNR=1.4						
I30JP				I	I	16 47 20.0	
	baz=23,slow=312,SNR=1.0						
JHU	**Hanno**	**2.61**	**230**	A	A	16 29 20.8	
	comp=E,69nm,1.7s,comp=N,79nm,1.6s						
JKEN	**Kujiedanarisaw**	**2.65**	**359**	A	A	16 29 21.6	
	comp=E,102nm,1.3s,comp=N,129nm,2.0s						
JGK	**Kuni**	**2.67**	**249**	A	A	16 29 21.9	
	comp=E,126nm,1.6s,comp=N,225nm,3.0s						
JKUC	**kamogawauchiur**	**2.69**	**208**	A	A	16 29 21.9	
	comp=E,169nm,2.0s,comp=N,325nm,3.0s						
JRY	**Ryogami san**	**2.75**	**237**	A	A	16 29 22.9	
	comp=E,58nm,1.5s,comp=N,136nm,2.1s						
JAH	**Hinai**	**2.78**	**342**	A	A	16 29 23.4	
	comp=E,90nm,3.2s,comp=N,81nm,3.2s						
JSD	**Sado**	**2.81**	**281**		**Pn**	**16 29 23.0**	**+1.1**
JSD	**Sado**	**2.81**	**281**	P	**Pn**	**16 29 23.7**	**+1.8**
JSD	**Sado**	**2.81**	**281**	A	A	16 29 23.8	
	comp=E,41nm,2.8s,comp=N,56nm,3.7s						
JSGW	**Sagamiharawaka**	**2.82**	**227**	A	A	16 29 23.8	
	comp=E,125nm,1.4s,comp=N,158nm,2.2s						
JANG	**Nango**	**2.83**	**356**	A	A	16 29 24.1	
	comp=E,62nm,2.7s,comp=N,41nm,2.2s						
JYO	**Yokosk**	**2.86**	**217**	A	A	16 29 24.4	
	comp=E,219nm,2.7s,comp=N,176nm,3.1s						
JJN	**Nakama**	**2.89**	**262**	A	A	16 29 25.0	
	comp=E,110nm,3.8s,comp=N,127nm,4.1s						
TATJ	**Tateyama 2**	**2.92**	**211**	A	A	16 29 25.3	
	comp=E,421nm,3.6s,comp=N,396nm,2.0s						
JNTW	**Noshirotokiwa**	**2.99**	**336**	A	A	16 29 26.4	
	comp=E,295nm,3.8s,comp=N,291nm,3.0s						
MJAR	**Matsushiro Arr**	**3.00**	**252**	P	**Pn**	**16 29 26.4**	**+1.7**
	comp=N,271nm,0.4s,baz=68,slow=7.6,SNR=371						
MJAR				S	**Sn**	**16 30 01.0**	**+1.4**
	comp=N,4μm,0.7s,baz=112,slow=12,SNR=9.6						
MJAR				LR	LR	16 31 00.7	
	comp=N,26μm,18.2s,baz=56,slow=47						
MAJO	**Matsushiro**	**3.00**	**252**		**Pn**	**16 29 26.8**	**+2.1**
MAJO	**Matsushiro**	**3.00**	**252**	P	**Pn**	**16 29 27.2**	**+2.5**
MAJO	**Matsushiro**	**3.00**	**252**	*d* P	**Pn**	**16 29 26.7**	**+2.1**
MJB9	**Matsu-Tunnel**	**3.01**	**252**	Pn	**Pn**	**16 29 27.3**	**+2.6**
JOD2	**Odawara 2**	**3.13**	**224**	A	A	16 29 28.2	
	comp=E,144nm,2.5s,comp=N,134nm,2.9s						
JNG	**Nsakai**	**3.13**	**250**	A	A	16 29 28.4	
	comp=E,38nm,2.3s,comp=N,88nm,3.9s						
JOG3	**Oga3**	**3.16**	**319**	A	A	16 29 23.9	
	comp=E,61nm,2.0s,comp=N,119nm,3.3s						
JTM	**Tenmabayashi**	**3.28**	**351**	Pn	**Pn**	**16 29 30.0**	**+1.6**
JTM	**Tenmabayashi**	**3.28**	**351**	P	**Pn**	**16 29 30.7**	**+2.3**
JTM	**Tenmabayashi**	**3.28**	**351**	A	A	16 29 30.5	
	comp=E,72nm,4.7

INU	**Inuyama**	**4.40**	**242**	P		**Pn**	**16 29 47.2**	**+3.4**
JYTA	**Yamagatataniai**	**4.48**	**246**	A		A	16 29 47.3	
	comp=E,18nm,2.0s,comp=N,33nm,4.0s							
JKG	**Kaga**	**4.52**	**255**	A		A	16 29 48.0	
	comp=E,19nm,5.1s,comp=N,19nm,5.9s							
JICN	**Ichinomiyachia**	**4.55**	**242**	A		A	16 29 48.2	
	comp=E,84nm,1.6s,comp=N,66nm,2.3s							
ERM	**Erimo**	**4.59**	**13**			**Pn**	**16 29 46.4**	**0.0**
ERM	**Erimo**	**4.59**	**13**	P		**Pn**	**16 29 47.6**	**+1.2**
ERM	**Erimo**	**4.59**	**13**	*ce*P		**Pn**	**16 29 47.0**	**+0.6**
ERM					pmax	pmax		
	comp=Z,180nm,0.7s							
JEM	**Erimo**	**4.59**	**13**	P		**Pn**	**16 29 47.5**	**+1.1**
JEM	**Erimo**	**4.59**	**13**	A		A	16 29 48.9	
	comp=E,23nm,4.4s,comp=N,30nm,3.4s							
TTO5	**TONANKAI O.B.S**	**4.64**	**226**	A		A	16 29 49.5	
	comp=E,116nm,7.7s,comp=N,136nm,2.7s							
JYM2	**Yakumo 2**	**4.69**	**347**	A		A	16 29 50.3	
	comp=E,46nm,4.1s,comp=N,50nm,3.4s							
JHJ2	**Mitsune**	**4.70**	**200**	Pn		**Pn**	**16 29 47.6**	**-0.3**
JHJ2	**Mitsune**	**4.70**	**200**	P		**Pn**	**16 29 48.5**	**+0.6**
JHJ2	**Mitsune**	**4.70**	**200**	A		A	16 29 50.2	
	comp=E,41nm,3.6s,comp=N,30nm,1.4s							
JHJ	**Hachijo jima 2**	**4.70**	**201**	P		**Pn**	**16 29 48.2**	**+0.3**
	comp=N,3µm,0.3s,baz=40,slow=14,SNR=218							
JHJ				S		**Sn**	**16 30 38.8**	**-2.6**
	comp=N,8µm,0.6s,baz=62,slow=24,SNR=14							
JAA	**Atsumi**	**4.73**	**233**	A		A	16 29 50.8	
	comp=E,20nm,4.7s,comp=N,33nm,4.7s							
JHCJ	**Hachijojimakas**	**4.74**	**200**	A		A	16 29 50.8	
	comp=E,24nm,5.3s,comp=N,22nm,3.2s							
JNBK	**Urakawa-nobuka**	**4.79**	**9**	A		A	16 29 51.7	
	comp=E,46nm,5.2s,comp=N,69nm,4.1s							
JOSM	**Okushiri--Mats**	**4.86**	**340**	A		A	16 29 52.7	
	comp=E,16nm,3.6s,comp=N,18nm,4.4s							
JTHR	**Tokachihiroo**	**4.89**	**14**	A		A	16 29 53.0	
	comp=E,27nm,3.4s,comp=N,23nm,3.9s							
JSHD	**Hidakashinhida**	**4.89**	**6**	A		A	16 29 53.1	
	comp=E,70nm,2.9s,comp=N,71nm,7.0s							
TTO4	**TONANKAI O.B.S**	**4.92**	**225**	A		A	16 29 53.4	
	comp=E,67nm,8.5s,comp=N,90nm,2.5s							
JNB	**Noboribetsu**	**4.95**	**354**	A		A	16 29 54.0	
	comp=E,18nm,4.0s,comp=N,17nm,6.3s							
JEG	**Eigenji**	**4.95**	**243**	A		A	16 29 53.9	
	comp=E,15nm,1.6s,comp=N,23nm,3.8s							
JFM	**Mihama**	**5.06**	**248**	A		A	16 29 55.5	
	comp=E,15nm,1.9s,comp=N,28nm,4.3s							
JIAM	**Iburiatsuma**	**5.07**	**1**	A		A	16 29 55.7	
	comp=E,51nm,2.9s,comp=N,59nm,3.3s							
JHST	**Hiyamasetana**	**5.08**	**344**	A		A	16 29 55.8	
	comp=E,50nm,3.8s,comp=N,41nm,3.2s							
TTO3	**TONANKAI O.B.S**	**5.10**	**225**	A		A	16 29 56.0	
	comp=E,95nm,2.8s,comp=N,86nm,4.6s							
TSUJ	**Tsu 2**	**5.16**	**238**	A		A	16 29 56.8	
	comp=E,25nm,4.3s,comp=N,24nm,2.7s							
JIE	**Ise**	**5.16**	**234**	A		A	16 29 56.8	
	comp=E,18nm,1.9s,comp=N,21nm,1.9s							
JCH	**Churui**	**5.21**	**13**	A		A	16 29 57.6	
	comp=E,34nm,3.3s,comp=N,30nm,5.2s							
JBT2	**Biratori 2**	**5.25**	**5**	A		A	16 29 58.1	
	comp=E,33nm,3.9s,comp=N,40nm,7.0s							
JSH	**Shimam**	**5.25**	**346**	A		A	16 29 58.3	
	comp=E,26nm,5.2s,comp=N,26nm,6.1s							
JEW	**Eniwo**	**5.29**	**358**	A		A	16 29 58.8	
	comp=E,39nm,4.2s,comp=N,34nm,5.6s							
JAOM	**Aogashimamukai**	**5.33**	**198**	A		A	16 29 59.0	
	comp=E,37nm,0.7s,comp=N,32nm,3.0s							
TTO2	**TONANKAI O.B.S**	**5.41**	**227**	A		A	16 30 00.3	
	comp=E,86nm,3.4s,comp=N,82nm,5.3s							
JKN2	**Miekihoku**	**5.54**	**235**	A		A	16 30 02.1	
	comp=E,13nm,2.3s,comp=N,22nm,5.2s							
JOB	**Onbets**	**5.58**	**16**	A		A	16 30 02.8	
	comp=E,33nm,3.7s,comp=N,70nm,2.7s							
JWT	**Wachi**	**5.59**	**248**	A		A	16 30 03.0	
	comp=E,10.0nm,3.0s,comp=N,21nm,3.6s							
TTO1	**TONANKAI O.B.S**	**5.63**	**227**	A		A	16 30 03.4	
	comp=E,75nm,3.0s,comp=N,107nm,5.4s							
JFR	**Furan**	**5.65**	**6**	A		A	16 30 03.7	
	comp=E,17nm,3.3s,comp=N,19nm,2.8s							
JKY	**Yasaka**	**5.68**	**252**	A		A	16 30 04.2	
	comp=E,12nm,4.4s,comp=N,24nm,2.4s							
JHE	**Heguri**	**5.69**	**241**	A		A	16 30 04.3	
	comp=E,12nm,2.6s,comp=N,19nm,5.3s							
JISS	**Ishikarishitsu**	**5.73**	**358**	A		A	16 30 04.8	
	comp=E,37nm,3.7s,comp=N,49nm,3.8s							
JNTK	**Naratenkawa**	**5.77**	**237**	A		A	16 30 05.4	
	comp=E,16nm,4.0s,comp=N,18nm,5.4s							
JSK	**Shakotan**	**5.88**	**351**	A		A	16 30 07.0	
	comp=E,20nm,3.1s,comp=N,12nm,8.7s							
JAK	**Akkeshi**	**5.89**	**22**	A		A	16 30 07.1	
	comp=E,34nm,2.7s,comp=N,21nm,3.9s							
JAR	**Ashorobuto**	**5.95**	**14**	A		A	16 30 07.9	
	comp=E,24nm,4.8s,comp=N,23nm,3.7s							
JMMH	**Miemihama**	**5.96**	**233**	A		A	16 30 08.0	
	comp=E,11nm,4.0s,comp=N,9.0nm,4.2s							
JAB	**Ashibetsu**	**5.96**	**3**	A		A	16 30 08.1	
	comp=E,25nm,3.4s,comp=N,45nm,3.0s							
JWY	**Kouya**	**6.00**	**238**	A		A	16 30 08.6	
	comp=E,9.0nm,3.8s,comp=N,17nm,6.2s							
JKSM	**Kasumi**	**6.03**	**253**	A		A	16 30 09.0	
	comp=E,10.0nm,4.4s,comp=N,10.0nm,5.2s							
JMIK	**Miki**	**6.07**	**245**	A		A	16 30 09.5	
	comp=E,19nm,1.9s,comp=N,23nm,2.3s							
JKHN	**Kushirohamanak**	**6.11**	**24**	A		A	16 30 10.2	
	comp=E,17nm,5.8s,comp=N,25nm,2.5s							
JHR	**Hokuryu**	**6.19**	**360**	A		A	16 30 11.3	
	comp=E,21nm,5.3s,comp=N,22nm,3.7s							
JTNC	**Tanabenakahech**	**6.23**	**235**	A		A	16 30 11.8	
	comp=E,15nm,4.2s,comp=N,18nm,3.9s							
NMR	**Nemuro--Hokkai**	**6.56**	**26***c*	*i*P		**Pn**	**16 30 12.2**	**-1.2**
NMR				*i* S		**Sn**	**16 31 22.8**	**-4.2**
ASAJ	**Asahikawa**	**6.59**	**5**	P		**Pn**	**16 30 14.2**	**+0.3**
	comp=N,34nm,0.3s,baz=194,slow=9.3,SNR=92							
ASAJ				S		**Sn**	**16 31 29.1**	**+1.2**
	comp=N,169nm,0.5s,baz=205,slow=27,SNR=1.6							
JKA	**Kamikawa-asahi**	**6.59**	**5**	Pn		**Pn**	**16 30 13.8**	**-0.1**
RUSJ	**Misakicho**	**7.07**	**21***d*	*i*P		**Pn**	**16 30 20.1**	**-0.3**
RUSJ				*e*S		**Sn**	**16 31 37.1**	**-2.4**
YUK	**Yuzh-Kuril'sk**	**7.19**	**24**	*e*P		**Pn**	**16 30 21.3**	**-0.8**
YUK				*e*S		**Sn**	**16 31 38.4**	**-4.2**
YUK					pmax	pmax		
	comp=Z,503nm,0.2s							
YUK					pmax	pmax		
	comp=N,220nm,0.4s							
YUK					pmax	pmax		
	comp=E,212nm,0.3s							
YUK					MLR	MLR		
	comp=Z,9µm,16.0s							
YUK					MLR	MLR		
	comp=E,7µm,14.0s							
YUK					MLR	MLR		
	comp=N,6µm,15.0s							
SHO	**Shikotan**	**7.40**	**30**	*e*P		**Pn**	**16 30 23.3**	**-1.7**
SHO				*e*S		**Sn**	**16 31 41.1**	**-6.6**
SHO					pmax	pmax		
	comp=N,67nm,0.4s							
SHO					pmax	pmax		
	comp=E,77nm,0.4s							
SHO					pmax	pmax		
	comp=Z,87nm,0.4s							
SHO					MLR	MLR		
	comp=Z,25µm,14.0s							
SHO					MLR	MLR		
	comp=N,37µm,15.0s							
SHO					MLR	MLR		
	comp=E,9µm,16.0s							
JMN	**Monobe**	**7.45**	**242**	Pn		**Pn**	**16 30 27.9**	**+2.1**
JMN	**Monobe**	**7.45**	**242**	P		**Pn**	**16 30 28.8**	**+3.0**
TEY	**Ternei**	**8.42**	**334**⇑	*e*P		**Pn**	**16 30 40.8**	**+1.8**
TEY							16 32 16.7	
TEY					pmax	pmax		
	comp=Z,30nm,1.1s							
TEY					pmax	pmax		
	comp=N,30nm,1.1s							
TEY					pmax	pmax		
	comp=E,20nm,1.1s							
TEY					pmax	pmax		
	comp=N,320nm,1.0s							
TEY					pmax	pmax		
	comp=E,160nm,1.0s							
TEY					pmax	pmax		
	comp=Z,270nm,1.0s							
TEY					MLR	MLR		
	comp=E,500nm,16.0s							
TEY					MLR	MLR		
	comp=N,400nm,21.0s							
TEY					MLR	MLR		
	comp=Z,600nm,21.0s							
KUR	**Kuril'sk**	**8.95**	**29**	*e*P		**Pn**	**16 30 46.7**	**+0.5**
KUR				*e*S		**Sn**	**16 32 18.7**	**-7.0**
KUR					pmax	pmax		
	comp=Z,269nm,0.8s							
KUR					smax	smax		
	comp=N,594nm,0.5s							
KUR					smax	smax		
	comp=E,419nm,0.5s							
KUR					MLR	MLR		
	comp=Z,8µm,16.0s							
YSS	**Yuzh-Sakhalins**	**9.43**	**4**	Pn		**Pn**	**16 30 52.3**	**-0.4**
YSS	**Yuzh-Sakhalins**	**9.43**	**4**	P		**Pn**	**16 30 53.7**	**+0.9**
YSS	**Yuzh-Sakhalins**	**9.43**	**4**	*e*P		**Pn**	**16 30 52.4**	**-0.4**
YSS				*e*S		**Sn**	**16 32 35.3**	**-2.3**
YSS					pmax	pmax		
	comp=Z,700nm,2.8s							
YSS					pmax	pmax		
	comp=Z,340nm,0.9s							
YSS					smax	smax		
	comp=N,2µm,5.8s							
YSS					MLR	MLR		
	comp=Z,9µm,18.0s							
PSTR	**Posyet**	**9.81**	**305**	*i* P		**Pn**	**16 31 00.5**	**+2.5**
JNU	**Nakatsue**	**9.91**	**247**	Pn		**Pn**	**16 31 02.1**	**+2.6**
JNU	**Nakatsue**	**9.91**	**247**	P		**Pn**	**16 31 02.8**	**+3.2**
JNU	**Nakatsue**	**9.91**	**247**	P		**Pn**	**16 31 02.3**	**+2.7**
	comp=Z,184nm,0.9s,baz=55,slow=9.1,SNR=51							
JNU					LR	LR	16 35 11.0	
	comp=Z,6µm,20.1s,baz=54,slow=39							
USRK	**Ussuriysk Ar.**	**9.93**	**315**	Pn		**Pn**	**16 31 02.3**	**+2.6**
USRK	**Ussuriysk Ar.**	**9.93**	**315**	P		**Pn**	**16 31 02.3**	**+2.6**
USRK	**Ussuriysk Ar.**	**9.93**	**315**	P		**Pn**	**16 31 01.3**	**+1.6**
	comp=Z,13nm,0.5s,baz=126,slow=9.7,SNR=61							
USRK					LR	LR	16 34 39.0	
	comp=Z,22µm,19.2s,baz=141,slow=36							
USA0B	**Ussuriysk Arra**	**9.93**	**315**			**Pn**	**16 31 02.3**	**+2.6**
USA0B	**Ussuriysk Arra**	**9.93**	**315**	*c* *i*P		**Pn**	**16 31 01.8**	**+2.1**
JCJ	**Chichijima**	**10.43**	**178**			**Pn**	**16 31 03.5**	**-3.1**
JCJ	**Chichijima**	**10.43**	**178**	P		Pn	16 31 00.1	-6.5
	comp=Z,356nm,0.3s,baz=350,slow=11,SNR=86							
JCJ				S		Sn	16 32 49.1	-13
	comp=Z,724nm,0.6s,baz=290,slow=23,SNR=6.2							
JTU	**Tsushima**	**10.45**	**257**	P		**Pn**	**16 31 10.0**	**+3.2**
KSRS	**Korea Array**	**10.98**	**274**	P		**Pn**	**16 31 17.0**	**+2.9**
	comp=Z,73nm,0.8s,baz=89,slow=13,SNR=128							
KSRS					LR	LR	16 35 12.4	
	comp=Z,10µm,20.3s,baz=85,slow=36							
KS19	**Wonju Array Si**	**11.03**	**274**			**Pn**	**16 31 17.7**	**+3.0**
JSU	**Suzuyama**	**11.09**	**240**			**Pn**	**16 31 17.0**	**+1.4**
JSU	**Suzuyama**	**11.09**	**240**	P		**Pn**	**16 31 18.0**	**+2.4**
UGL	**Uglegorsk**	**11.53**	**1**	P		Pn	16 31 31.3	+10
UGL					pmax	pmax		
	comp=Z,39nm,0.8s							
UGL					MLR	MLR		
	comp=Z,8µm,1.0s							
UGL					MLR	MLR		
	comp=N,6µm,14.0s							
UGL					MLR	MLR		
	comp=E,7µm,15.0s							
MDJ	**Mudanjiang**	**11.57**	**311**	P		**Pn**	**16 31 24.5**	**+2.4**
MDJ				pP			16 31 31.8	
MDJ				sP			16 31 35.5	
MDJ				S		**Sn**	**16 33 29.3**	**-0.8**
MDJ				sS			16 33 39.8	
MDJ				SS		**SnSn**	**16 33 42.5**	**+0.5**
MDJ					pmax	pmax		
	comp=E,22nm,1.7s							
MDJ					pmax	pmax		
	comp=E,1µm,3.5s							
MDJ					LR	LR		
	comp=E,8µm,19.9s							
MDJ					LR	LR		
	comp=E,13µm,20.5s							
MDJ					LR	LR		
	comp=E,25µm,21.3s							
MDJ	**Mudanjiang**	**11.57**	**311**	P		**Pn**	**16 31 24.2**	**+2.1**
TJN	**Taejon**	**11.57**	**269**	P		**Pn**	**16 31 25.4**	**+3.3**
TJN	**Taejon**	**11.57**	**269**	*c* *i*P		**Pn**	**16 31 25.4**	**+3.3**
INCN	**Inchon**	**12.01**	**274**			**Pn**	**16 31 31.7**	**+3.6**
INCN	**Inchon**	**12.01**	**274**	P		**Pn**	**16 31 32.0**	**+3.9**
INCN	**Inchon**	**12.01**	**274**	P		**Pn**	**16 31 31.7**	**+3.6**
TYV	**Tymovskoe**	**13.33**	**2**	*e*P		**Pn**	**16 31 45.8**	**-0.3**
TYV				*e*S		**Sn**	**16 34 13.9**	**+0.9**
TYV					pmax	pmax		
	comp=Z,300nm,4.8s							
TYV					pmax	pmax		
	comp=Z,23nm,1.1s							
TYV					smax	smax		
	comp=N,15nm,1.1s							
TYV					smax	smax		
	comp=E,17nm,1.1s							
TYV					smax	smax		
	comp=N,500nm,4.9s							
TYV					smax	smax		
	comp=E,700nm,4.9s							
TYV					MLR	MLR		
	comp=N,6µm,21.0s							
TYV					MLR	MLR		
	comp=Z,8µm,21.0s							
BNX	**BinXian**	**13.48**	**312**	⇑P		**Pn**	**16 31 48.3**	**+0.1**
BNX				S		**Sn**	**16 34 20.5**	**+3.8**
BNX					pmax	pmax		
	comp=Z,30nm,1.3s							
BNX					pmax	pmax		
	comp=Z,1µm,4.6s							
BNX					LR	LR		
	comp=Z,7µm,16.8s							
BNX					LR	LR		
	comp=Z,10µm,20.2s							
BNX					LR	LR		
	comp=Z,16µm,19.8s							
KLR	**Kul'dur**	**13.74**	**331**	*ce*P		**Pn**	**16 31 51.6**	**-0.1**
KLR					pmax	pmax		
	comp=Z,18nm,1.7s							
KLR	**Kul'dur**	**13.74**	**331**	P		**Pn**	**16 31 51.9**	**+0.1**
	comp=Z,5.7nm,0.6s,baz=161,slow=13,SNR=25							
KLR					LR	LR	16 37 02.8	
	comp=Z,16µm,19.9s,baz=142,slow=36							
GRNR	**Gornyy**	**13.75**	**346**	⇓*i*P		**Pn**	**16 31 50.9**	**-1.0**
GRNR					pmax	pmax		
	comp=N,9.0nm,0.9s							
GRNR					pmax	pmax		
	comp=Z,10.0nm,0.8s							
GRNR					MLR	MLR		
	comp=E,5µm,15.0s							
GRNR					MLR	MLR		
	comp=N,6µm,21.0s							
GRNR					MLR	MLR		
	comp=Z,11µm,19.0s							
CN2	**Changchun**	**13.85**	**302**	P		**Pn**	**16 31 54.0**	**+0.8**
CN2				*es*P		P	16 32 05.0	+3.9
CN2				*e*S		**Sn**	**16 34 28.0**	**+2.2**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					pmax	pmax		
	comp=Z,700nm,5.0s							
CN2					LR	LR		
	comp=Z,3µm,14.0s							
CN2					LR	LR		
	comp=Z,3µm,14.0s							
CN2					LR	LR		
	comp=Z,3µm,15.0s							
SNY	**Shenyang**	**14.62**	**293**	⇑P		**Pn**	**16 32 04.5**	**+0.7**
SNY				S		**Sn**	**16 34 45.8**	**+1.1**
SNY					pmax	pmax		
	comp=Z,32nm,1.3s							
SNY					pmax	pmax		
	comp=Z,440nm,2.8s							
SNY					LR	LR		
	comp=Z,4µm,12.3s							
SNY					LR	LR		
	comp=Z,11µm,16.7s							
SNY					LR	LR		
	comp=Z,15µm,18.3s							
JMZ	**Minamidaito 2**	**14.72**	**220**			**Pn**	**16 32 06.8**	**+1.7**
JMZ	**Minamidaito 2**	**14.72**	**220**	P		**Pn**	**16 32 07.1**	**+2.0**
JOW	**Kunigami**	**15.61**	**231**	P		**P**	**16 32 21.5**	**+0.7**
JOW	**Kunigami**	**15.61**	**231**	P		**P**	**16 32 19.9**	**-0.9**
JOW	**Kunigami**	**15.61**	**231**	P		**Pn**	**16 32 18.0**	**+1.1**
	comp=Z,44nm,0.7s,baz=31,slow=11,SNR=5.0							
JOW					LR	LR	16 38 31.9	
	comp=Z,3µm,20.2s,baz=122,slow=38							
NKL	**Nikolayevsk**	**15.62**	**358**	*e*P		**Pn**	**16 32 15.5**	**-1.4**
NKL				*e*S		**Sn**	**16 35 06.5**	**-2.2**
NKL					pmax	pmax		
	comp=E,78nm,0.9s							
NKL					pmax	pmax		
	comp=N,61nm,1.3s							
NKL					pmax	pmax		
	comp=Z,220nm,1.5s							
NKL					smax	smax		
	comp=N,358nm,2.9s							
NKL					smax	smax		
	comp=E,232nm,2.9s							
NKL					MLR	MLR		
	comp=E,22µm,15.0s							
NKL					MLR	MLR		
	comp=N,22µm,17.0s							
NKL					MLR	MLR		
	comp=Z,29µm,17.0s							
DL2	**Dalian**	**15.87**	**281**	P		**Pn**	**16 32 21.0**	**+0.8**
DL2				S		**Sn**	**16 35 17.5**	**+2.5**
DL2					pmax	pmax		
	comp=Z,200nm,1.3s							
DL2					pmax	pmax		
	comp=Z,2µm,8.3s							
DL2					LR	LR		
	comp=Z,2µm,17.7s							
DL2					LR	LR		
	comp=Z,6µm,20.3s							
DL2					LR	LR		
	comp=Z,7µm,19.6s							
OKH	**Okha**	**16.02**	**3***c*	*i*P		**Pn**	**16 32 21.1**	**-1.0**
OKH				*i* S		**Sn**	**16 35 19.2**	**+0.7**
OKH					pmax	pmax		
	comp=Z,700nm,16.2s							
OKH					smax	smax		
	comp=N,800nm,12.9s							
OKH					MLR	MLR		
	comp=N,8µm,20.0s							
OKH					MLR	MLR		
	comp=Z,8µm,22.0s							
OKH					MLR	MLR		
	comp=E,13µm,18.0s							
HEH	**HeiHe**	**16.33**	**326**	*e*P		**Pn**	**16 32 23.3**	**-2.7**
HEH				pP		**P**	**16 32 30.5**	**+1.8**
HEH				S		**Sn**	**16 35 22.3**	**-3.8**
HEH					pmax	pmax		
	comp=E,32nm,0.9s							
HEH					pmax	pmax		
	comp=E,570nm,4.4s							
HEH					LR	LR		
	comp=E,5µm,21.2s							
HEH					LR	LR		
	comp=E,7µm,21.3s							
HEH					LR	LR		
	comp=E,13µm,21.2s							
SKR	**Severo-Kuril's**	**16.66**	**33**⇑	*i*P		**Pn**	**16 32 30.5**	**+0.4**
SKR				*e*S		**Sn**	**16 35 38.2**	**+4.2**
SKR					pmax	pmax		
	comp=Z,192nm,0.9s							
SKR					pmax	pmax		
	comp=Z,800nm,5.7s							
SKR					MLR	MLR		
	comp=Z,5µm,19.0s							
SSE	**Sheshan**	**18.15**	**255**	P		**Pn**	**16 32 47.8**	**-0.9**
SSE				S		**Sn**	**16 36 07.5**	**-2.8**
SSE					pmax	pmax		
	comp=Z,72nm,1.2s							
SSE					LR	LR		
	comp=Z,3µm,21.4s							
SSE					LR	LR		
	comp=Z,2µm,21.4s							
SSE					LR	LR		
	comp=Z,3µm,16.5s							
ZEA	**Zeya**	**19.04**	**333**	*e*P		**P**	**16 32 56.7**	**-1.8**
ZEA				*e*			16 36 26.5	
ZEA					pmax	pmax		
	comp=E,30nm,1.1s							
ZEA					pmax	pmax		
	comp=N,50nm,0.9s							
ZEA					pmax	pmax		
	comp=Z,130nm,1.3s							
ZEA					pmax	pmax		
	comp=E,200nm,5.2s							
ZEA					pmax	pmax		
	comp=N,300nm,5.9s							
ZEA					pmax	pmax		
	comp=Z,600nm,5.8s							
ZEA					MLR	MLR		
	comp=E,3µm,13.0s							
ZEA					MLR	MLR		
	comp=N,4µm,17.0s							
ZEA					MLR	MLR		
	comp=Z,5µm,19.0s							
PEA0B	**Petropavlovsk-**	**19.11**	**30**	*ce*P		**Pn**	**16 33 00.4**	**+0.1**
PETK	**Petropavlovsk-**	**19.11**	**30**	P		**P**	**16 32 59.1**	**-0.1**
PETK	**Petropavlovsk-**	**19.11**	**30**	P		**P**	**16 32 59.6**	**+0.3**
	comp=Z,40nm,0.9s,baz=205,slow=7.1,SNR=31							
PETK					LR	LR	16 39 59.9	
	comp=Z,4µm,21.7s,baz=211,slow=36							
PET	**Petropavlovsk**	**19.44**	**32**	P		**P**	**16 33 02.0**	**-0.8**
PET	**Petropavlovsk**	**19.44**	**32**	P		**Pn**	**16 33 04.1**	**-0.1**
PET	**Petropavlovsk**	**19.44**	**32**	*e*P		**P**	**16 33 02.1**	**-0.8**
PET				*e*S		S	16 36 27.1	-14
PET					pmax	pmax		
	comp=Z,3µm,5.1s							
PET					pmax	pmax		
	comp=Z,2µm,9.9s							
PET					pmax	pmax		
	comp=Z,141nm,1.0s							
PET					MLR	MLR		
	comp=Z,3µm,14.0s							
PET					MLR	MLR		
	comp=Z,3µm,14.0s							
NJ2	**Nanjing**	**19.57**	**261**	⇑P		**P**	**16 33 03.0**	**-1.4**
NJ2				pP		**pP**	**16 33 12.5**	**-0.5**
NJ2				sP		**sP**	**16 33 16.3**	**-0.8**
NJ2				S		**S**	**16 36 40.8**	**-2.7**
NJ2					pmax	pmax		
	comp=Z,51nm,1.2s							
NJ2					LR	LR		
	comp=Z,5µm,17.8s							
NJ2					LR	LR		
	comp=Z,3µm,18.7s							
NJ2					LR	LR		
	comp=Z,6µm,18.5s							
TIA	**Tai'an**	**19.73**	**274**	⇑P		**P**	**16 33 04.0**	**-2.2**
TIA				PP		**PnPn**	**16 33 26.0**	**+4.1**
TIA				S		S	16 36 35.3	-12
TIA				SS		**SnSn**	**16 37 06.0**	**+3.2**
TIA					pmax	pmax		
	comp=Z,180nm,4.1s							
TIA					LR	LR		
	comp=Z,2µm,15.8s							
TIA					LR	LR		
	comp=Z,2µm,18.7s							
TIA					LR	LR		
	comp=Z,3µm,15.8s							
HIA	**Hailar**	**19.74**	**313**	P		**P**	**16 33 04.9**	**-1.3**
HIA	**Hailar**	**19.74**	**313**	P		**P**	**16 33 05.9**	**-0.3**
HIA	**Hailar**	**19.74**	**313**	*c* *i*P		**P**	**16 33 03.7**	**-2.5**
HIA					pmax	pmax		
	comp=Z,89nm,2.0s							
BJI	**Beijing**	**20.07**	**285**	P		**P**	**16 33 07.0**	**-2.8**
BJI				S		**S**	**16 36 46.8**	**-6.7**
BJI				SS		**SnSn**	**16 37 15.3**	**+4.3**
BJI					pmax	pmax		
	comp=Z,74nm,1.0s							
BJI					pmax	pmax		
	comp=Z,770nm,13.1s							
BJI					LR	LR		
	comp=Z,2µm,18.1s							
BJI					LR	LR		
	comp=Z,1µm,17.1s							
BJI					LR	LR		
	comp=Z,2µm,19.6s							
BJT	**Baijiatuau**	**20.07**	**285**	P		**P**	**16 33 08.1**	**-1.8**
**

comp=Z,9μm,20.1s
TATO Taipei 21.32 240 P **P** **16 33 22.8 -0.7**
TATO IAmb IAmb 16 33 30.5
comp=Z,224nm,1.2s
HNS HongShan 21.44 278 ⇑P **P** **16 33 22.0 -2.6**
HNS PP **PnPn** **16 33 46.0 +0.8**
HNS S **S** **16 37 14.5 -6.2**
HNS SS **SnSn** **16 37 49.0 +4.4**
HNS pmax pmax
comp=Z,350nm,1.3s
HNS LR LR
comp=Z,3μm,15.1s
HNS LR LR
comp=Z,6μm,19.6s
HNS LR LR
comp=Z,6μm,19.9s
YHNB Yeheng 21.60 239 P **P** **16 33 24.9 -1.7**
YHNB Yeheng 21.60 239 P **P** **16 33 26.0 -0.6**
NACB Ninganchiao 21.78 238 P **P** **16 33 27.7 -0.7**
SSLB Suanglung 22.47 238 P **P** **16 33 32.1 -3.8**
YULB Yu-li 22.51 237 P **P** **16 33 32.0 -4.2**
YULB IAmb IAmb 16 33 46.3
comp=Z,66nm,0.6s
YULB Yu-li 22.51 237 P **P** **16 33 37.8 +1.5**
MA2 Magadan 22.80 12 P **P** **16 33 38.8 -0.2**
MA2 IAmb IAmb 16 33 54.9
comp=Z,180nm,1.0s
MA2 Magadan 22.80 12 P **P** **16 33 39.8 +0.8**
MA2 Magadan 22.80 12 *ce*P **P** **16 33 36.6 -2.4**
MA2 pmax pmax
comp=Z,73nm,1.0s
MA2 Magadan 22.80 12 LR LR 16 42 31.2
comp=Z,4μm,21.0s,baz=200,slow=36
TWGBT Beinan 23.05 236 P **P** **16 33 42.2 +0.3**
TWG Pinlang 23.05 236 P **P** **16 33 40.8 -1.1**
TWG IAmb IAmb 16 33 59.0
comp=Z,252nm,1.3s
TIY Taiyuan 23.18 279 ⇓P **P** **16 33 40.8 -2.4**
TIY S **S** **16 37 53.5 +0.8**
TIY SS **SnSn** **16 38 35.0 +7.6**
TIY pmax pmax
comp=Z,90nm,1.3s
TIY LR LR
comp=Z,3μm,15.5s
TIY LR LR
comp=Z,4μm,16.9s
TIY LR LR
comp=Z,6μm,18.1s
QZH Quanzhou 23.38 244 P **P** **16 33 43.0 -2.1**
QZH S **S** **16 37 56.3 +0.4**
QZH pmax pmax
comp=Z,78nm,0.9s
QZH LR LR
comp=Z,4μm,22.7s
QZH LR LR
comp=Z,5μm,23.0s
QZH LR LR
comp=Z,3μm,15.8s
HHC Hu-ho-hao-te 23.57 287 *e*P **P** **16 33 43.8 -3.2**
HHC sP sP 16 34 00.3 +0.2
HHC PP **PnPn** **16 34 17.3 +2.9**
HHC S **S** **16 37 52.0 -7.0**
HHC sS pS 16 38 10.0 +1.3
HHC pmax pmax
comp=Z,51nm,0.9s
HHC pmax pmax
comp=Z,400nm,5.0s
HHC LR LR
comp=Z,1μm,12.4s
HHC LR LR
comp=Z,3μm,15.1s
HHC LR LR
comp=Z,5μm,14.7s
WHN Wuhan 23.70 261 ⇑P **P** **16 33 47.5 -0.7**
WHN PP **PnPn** **16 34 21.8 +5.6**
WHN S **S** **16 37 59.0 -2.1**
WHN pmax pmax
comp=Z,370nm,0.8s
WHN LR LR
comp=Z,19μm,18.7s
WHN LR LR
comp=Z,5μm,11.7s
WHN LR LR
comp=Z,20μm,17.6s
KNMB Chin-men Tao 23.82 243 P **P** **16 33 46.7 -2.6**
KNMB IAmb IAmb 16 33 49.2
comp=Z,130nm,0.9s
LYN LuoYang 23.82 272 ⇓P **P** **16 33 46.0 -3.3**
LYN S **S** **16 37 59.8 -3.1**
LYN pmax pmax
comp=Z,250nm,0.7s
LYN pmax pmax
comp=Z,1μm,7.2s
LYN LR LR
comp=Z,6μm,15.0s
LYN LR LR
comp=Z,8μm,17.2s
LYN LR LR
comp=Z,10μm,17.2s
GUMO Guam 24.02 173 P **P** **16 33 50.3 -1.0**
GUMO Guam 24.02 173 P **P** **16 33 52.3 +1.0**
GUMO Guam 24.02 173 P **P** **16 33 50.3 -1.0**
GUMO pmax pmax
comp=Z,1μm,1.2s
GUMO Guam 24.02 173 LR LR 16 43 48.4
comp=Z,2μm,21.4s,baz=28,slow=38
CIT Chita 24.50 315 *e*P **P** **16 33 55.3 -0.2**
CIT *e* 16 34 10.0
CIT *e* 16 34 29.3
CIT *e*S **S** **16 38 08.6 -5.0**
CIT pmax pmax
comp=Z,1μm,1.6s
BTO Baotou 24.75 287 *e*P **P** **16 33 57.8 -0.1**
BTO pP **pP** **16 34 07.0 -0.3**
BTO sP **sP** **16 34 11.0 -0.2**
BTO PP **PnPn** **16 34 35.0 +4.4**
BTO S **S** **16 38 19.8 +1.8**
BTO sS **sS** **16 38 32.8 -0.6**
BTO SS **SnSn** **16 39 14.0 +8.2**
BTO pmax pmax
comp=Z,250nm,1.1s
BTO pmax pmax
comp=Z,2μm,9.7s
BTO LR LR
comp=Z,4μm,14.7s
BTO LR LR
comp=Z,6μm,15.9s
BTO LR LR
comp=Z,7μm,22.3s
YAK Yakutsk 25.63 347 P **P** **16 34 05.4 -0.1**
YAK Yakutsk 25.63 347 IAMs_20 IAMs_20 16 44 17.0
comp=Z,10μm,19.0s
YAK Yakutsk 25.63 347 *c i*P **P** **16 34 04.6 -0.9**
YAK *e**PP **sP** **16 34 16.3 -2.5**
YAK *e* 16 34 41.6
YAK *e*S **S** **16 38 28.4 -2.9**
YAK *e*SS **SnSn** **16 39 27.7 +0.9**
YAK *e* 16 44 57.5
YAK pmax pmax
comp=Z,441nm,1.0s
YAK pmax pmax
comp=N,115nm,1.1s
YAK pmax pmax
comp=E,48nm,0.9s
YAK pmax pmax
comp=Z,260nm,1.3s
YAK pmax pmax
comp=N,51nm,0.9s
YAK pmax pmax
comp=E,84nm,1.3s
YAK smax smax
comp=N,2μm,5.1s
YAK smax smax
comp=E,700nm,3.0s
YAK Yakutsk 25.63 347 LR LR 16 44 33.9
comp=E,11μm,18.2s,baz=140,slow=37
CNSH ChangSha 25.86 257 ⇑*i*P **P** **16 34 07.8 -0.2**
CNSH S **S** **16 38 35.3 -0.3**
CNSH pmax pmax
comp=E,100nm,1.2s
CNSH LR LR
comp=E,4μm,20.0s
CNSH LR LR
comp=E,2μm,20.8s
CNSH LR LR
comp=E,3μm,15.1s
SEY Seymchan 26.24 11 *ce*P **P** **16 34 12.2 +1.2**
SEY pmax pmax
comp=Z,117nm,1.7s
SEY Seymchan 26.24 11 LR LR 16 44 43.3
comp=Z,4μm,21.8s,baz=202,slow=37
XAN Xi'an 26.78 272 ⇑P **P** **16 34 15.5 -0.8**
XAN S **S** **16 38 47.5 -2.7**
XAN pmax pmax
comp=Z,170nm,1.0s
XAN pmax pmax
comp=Z,870nm,7.9s
XAN LR LR
comp=Z,5μm,15.6s
XAN LR LR
comp=Z,4μm,15.9s
XAN LR LR
comp=Z,4μm,18.1s
SHEM Shemya Is, Ala 27.12 46 LR LR 16 42 44.3
comp=Z,964nm,21.4s,baz=250,slow=31
BOD Bodaibo 27.24 327 *e*P **P** **16 34 19.5 -0.6**
BOD pmax pmax
comp=Z,150nm,1.9s
ULN Ulaanbaatar 27.29 303 P **P** **16 34 20.7 -0.2**
ULN IAmb IAmb 16 34 23.5
comp=Z,75nm,0.8s
ULN Ulaanbaatar 27.29 303 IAMs_20 IAMs_20 16 45 16.0
comp=Z,4μm,18.0s
ULN Ulaanbaatar 27.29 303 P **P** **16 34 20.7 -0.2**
ULN pmax pmax
comp=Z,75nm,0.9s
ULN MLR MLR
comp=Z,4μm,18.0s
SZP Santa 27.33 229 P **P** **16 34 21.8 +0.6**
ENH Enshi 27.64 264 IAMs_20 IAMs_20 16 45 41.3
comp=Z,4μm,21.0s
ENH Enshi 27.64 264 P **P** **16 34 23.9 -0.2**
SONM Songino Array 27.72 303 P **P** **16 34 24.1 -0.7**
SONM IAmb IAmb 16 34 26.6
comp=Z,219nm,1.6s
SONM Songino Array 27.72 303 P **P** **16 34 24.2 -0.6**
comp=Z,18nm,0.6s,baz=105,slow=8.9,SNR=74
SONM LR LR 16 45 41.9
comp=Z,4μm,18.4s,baz=93,slow=37
comp=Z,18nm,0.6s
H11N2 WAKE ISLAND Hy 28.19 122 T T 17 04 01.9
baz=315,slow=75,SNR=841
H11N1 WAKE ISLAND Hy 28.20 122 T T 17 04 01.9
baz=315,slow=75,SNR=1577
H11N3 WAKE ISLAND Hy 28.21 122 T T 17 04 02.4
baz=315,slow=75,SNR=1045
HKPS Hong Kong Po S 28.22 245 P **P** **16 34 29.2 0.0**
HKPS IAmb IAmb 16 34 56.5
comp=Z,105nm,1.1s
GZH Guangzhou 28.31 247 P P 16 34 25.3 -4.7
GZH S **S** **16 39 07.0 -7.3**
GZH pmax pmax
comp=Z,350nm,1.0s
GZH LR LR
comp=Z,2μm,14.5s
GZH LR LR
comp=Z,750nm,12.3s
WAKE Wake Island 28.34 123 IAMs_20 IAMs_20 16 43 14.2
comp=Z,5μm,22.0s
H11S1 WAKE ISLAND Hy 28.92 124 T T 17 04 56.7
baz=316,slow=76
H11S3 WAKE ISLAND Hy 28.92 124 T T 17 04 54.9
baz=316,slow=76
H11S2 WAKE ISLAND Hy 28.94 124 T T 17 04 57.7
baz=316,slow=76
GULI GuiLin 29.30 254 ⇑P **P** **16 34 37.3 -1.5**
GULI S **S** **16 39 25.3 -4.6**
GULI pmax pmax
comp=Z,170nm,0.6s
GULI LR LR
comp=Z,2μm,16.8s
GULI LR LR
comp=Z,2μm,16.3s
GULI LR LR
comp=Z,3μm,19.0s
TGY Tagaytay City 29.80 224 P **P** **16 34 43.7 +0.4**
comp=Z,178nm,0.3s,baz=32,slow=9.5,SNR=2.3
TGY LR LR 16 45 53.1
comp=Z,782nm,20.7s,baz=65,slow=35
IRK Irkutsk 29.95 311 *e*P **P** **16 34 44.0 -0.4**
IRK pmax pmax
comp=Z,170nm,2.1s
ZAK Zakamensk 30.16 308 *e*P **P** **16 34 45.6 -0.8**
ZAK pmax pmax
comp=Z,80nm,1.5s
LZH Lanzhou 30.25 279 *e*P **P** **16 34 46.3 -1.0**
LZH pP pP 16 34 58.3 +1.6
LZH S **S** **16 39 38.8 -6.2**
LZH SS **SnSn** **16 41 16.8 -3.4**
LZH pmax pmax
comp=Z,160nm,1.0s
LZH pmax pmax
comp=Z,620nm,4.0s
LZH LR LR
comp=Z,2μm,15.5s
LZH LR LR
comp=Z,5μm,14.6s
LZH LR LR
comp=Z,7μm,20.1s
GYA Guiyang 31.57 260 ⇑P **P** **16 34 58.3 -0.7**
GYA pP pP 16 35 09.3 +0.9
GYA S **S** **16 39 59.3 -6.4**
GYA sS pS 16 40 13.8 -2.6
GYA pmax pmax
comp=Z,270nm,1.2s
GYA pmax pmax
comp=Z,680nm,3.7s
GYA LR LR
comp=Z,1μm,10.7s
GYA LR LR
comp=Z,2μm,18.6s
GYA LR LR
comp=Z,3μm,25.1s
MOY Mondy 31.81 310 *e*P **P** **16 35 00.7 -0.2**
MOY pmax pmax
comp=Z,128nm,2.9s
CD2 Chengdu 31.94 269 P **P** **16 35 00.8 -1.4**
CD2 S **S** **16 40 08.5 -2.8**
CD2 SS **SnSn** **16 42 00.8 -0.5**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 pmax pmax
comp=Z,360nm,6.0s
CD2 LR LR
comp=Z,2μm,14.2s
CD2 LR LR
comp=Z,2μm,12.8s
CD2 LR LR
comp=Z,4μm,18.1s
GTA Gaotai 32.67 286 ⇑P **P** **16 35 07.8 -0.8**
GTA pP sP 16 35 20.5 -1.4
GTA sP pP 16 35 25.0 +7.0
GTA PP **PP** **16 36 21.5 -1.1**
GTA S **S** **16 40 18.0 -4.7**
GTA sS sS 16 40 36.3 -2.0
GTA ScS **ScS** **16 45 32.0 -3.1**
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,490nm,9.6s
GTA LR LR
comp=Z,2μm,17.1s
GTA LR LR
comp=Z,3μm,19.1s
GTA LR LR
comp=Z,4μm,18.7s
QIZ Qiongzhong 33.38 245 P **P** **16 35 14.0 -0.8**
QIZ S **S** **16 40 35.0 +1.2**
QIZ pmax pmax
comp=Z,19nm,1.6s
QIZ LR LR
comp=Z,2μm,21.0s
QIZ LR LR
comp=Z,2μm,20.4s
QIZ LR LR
comp=Z,2μm,16.7s
QIZ Qiongzhong 33.38 245 IAmb IAmb 16 35 17.3
comp=Z,30nm,0.8s
QIZ Qiongzhong 33.38 245 IAMs_20 IAMs_20 16 50 54.1
comp=Z,2μm,18.0s
QIZ Qiongzhong 33.38 245 P **P** **16 35 16.4 +1.6**
QIZ Qiongzhong 33.38 245 P **P** **16 35 15.7 +0.9**
BILL Bilibino 33.46 16 P **P** **16 35 14.5 -0.5**
BILL Bilibino 33.46 16 ⇑*e*P **P** **16 35 14.3 -0.6**
BILL pmax pmax
comp=Z,36nm,1.0s
BILL Bilibino 33.46 16 P **P** **16 35 14.8 -0.1**
BILL pP **sP** **16 35 27.6 -0.6**
DAV Davao City (W) 33.71 210 IAMs_20 IAMs_20 16 46 41.8
comp=Z,4μm,21.0s
DAV Davao City (W) 33.71 210 LR LR 16 47 14.8
comp=Z,3μm,21.7s,baz=46,slow=33
PATS Pohnpei 34.08 150 IAMs_20 IAMs_20 16 46 02.5
comp=Z,6μm,20.0s
TIXI Tiksi 34.81 353 P **P** **16 35 25.7 -0.9**
TIXI IAmb IAmb 16 35 47.4
comp=Z,93nm,1.6s
TIXI Tiksi 34.81 353 IAMs_20 IAMs_20 16 50 33.0
comp=Z,6μm,19.0s
TIXI Tiksi 34.81 353 P **P** **16 35 25.7 -0.9**
TIXI pmax pmax
comp=Z,93nm,1.6s
TIXI MLR MLR
comp=Z,6μm,19.0s
TIXI Tiksi 34.81 353 LR LR 16 50 52.4
comp=Z,5μm,18.3s,baz=169,slow=38
TIXI Tiksi 34.81 353 P **P** **16 35 25.9 -0.7**
KMI Kunming 35.30 261 ⇑P **P** **16 35 31.0 -0.7**
KMI pP pP 16 35 40.3 -0.8
KMI PP **PP** **16 36 52.0 0.0**
KMI S **S** **16 40 58.0 -5.8**
KMI sS sS 16 41 19.5 0.0
KMI pmax pmax
comp=Z,230nm,1.0s
KMI LR LR
comp=Z,1μm,13.7s
KMI LR LR
comp=Z,3μm,17.3s
KMI LR LR
comp=Z,3μm,16.6s
KMI Kunming 35.30 261 P **P** **16 35 31.3 -0.4**
KMI pP **pP** **16 35 42.8 +1.6**
PZH PanZhiHua 35.42 264 P **P** **16 35 31.8 -0.7**
PZH PP **PP** **16 36 54.5 +1.3**
PZH S **S** **16 40 59.0 -6.4**
PZH sS **sS** **16 41 20.0 -1.1**
PZH PcS **PcS** **16 41 49.8 +0.5**
PZH SS **SnSn** **16 43 26.0 0.0**
PZH ScS **ScS** **16 45 46.3 -3.7**
PZH pmax pmax
comp=Z,110nm,0.8s
PZH pmax pmax
comp=Z,590nm,4.9s
PZH LR LR
comp=Z,3μm,18.4s
PZH LR LR
comp=Z,2μm,20.4s
PZH LR LR
comp=Z,3μm,19.4s
SLVN Son La 36.42 254 P **P** **16 35 40.7 -0.3**
SLVN IAmb IAmb 16 35 44.8
comp=Z,37nm,0.9s
SLVN IAMs_20 IAMs_20 16 51 40.6
comp=Z,2μm,20.0s
CLES Cleveland East 36.60 50 IAMs_20 IAMs_20 16 46 05.4
comp=Z,2μm,21.0s
SGSI Sangihe 36.83 208 P **P** **16 35 45.0 +0.5**
comp=Z,405nm,0.9s,comp=Z,10μmcomp=Z,3μm
SPIA Saint Paul Isl 37.01 42 P **P** **16 35 43.6 -1.9**
baz=259
NIKH Nikolski High 37.24 49 P **P** **16 35 47.1 -0.5**
baz=266
GOMU GeErMu 37.27 283 P **P** **16 35 48.0 -0.5**
GOMU pP pP 16 35 53.0 -5.0
GOMU PP **PP** **16 37 14.0 +0.3**
GOMU S **S** **16 41 27.8 -6.1**
GOMU pmax pmax
comp=Z,140nm,1.4s
GOMU LR LR
comp=Z,2μm,15.3s
GOMU LR LR
comp=Z,2μm,20.2s
GOMU LR LR
comp=Z,4μm,20.2s
KRAR Krasnoyarsk 37.28 316 *i*P **P** **16 35 47.3 -0.6**
P08K Saint George I 37.28 43 P **P** **16 35 49.0 +1.1**
baz=260
GAMB Gambell 38.14 31 P **P** **16 35 56.6 +1.6**
baz=249
TNCH TengChong 38.67 264 P **P** **16 36 00.5 +0.2**
TNCH pP pP 16 36 09.5 -0.3
TNCH sP sP 16 36 13.3 -0.4
TNCH PP **PnPn** **16 37 32.0 +0.7**
TNCH PcP **PcP** **16 38 12.8 +0.9**
TNCH S **S** **16 41 54.0 -1.1**
TNCH sS sS 16 42 09.5 -1.3
TNCH SS **SnSn** **16 44 36.0 -8.7**
TNCH ScS **ScS** **16 46 06.8 -1.6**
TNCH pmax pmax
comp=Z,160nm,1.6s
TNCH pmax pmax
comp=Z,760nm,4.1s
TNCH LR LR
comp=Z,950nm,17.4s
TNCH LR LR
comp=Z,720nm,20.4s
TNCH LR LR
comp=Z,2μm,19.7s
UNV Unalaska Valle 38.70 48 P **P** **16 36 00.5 +0.6**
baz=267
TNTI Ternate 38.92 203 P **P** **16 36 01.9 -0.2**
TNTI Ternate 38.92 203 P **P** **16 36 03.4 +1.3**
TNTI Ternate 38.92 203 P **P** **16 36 02.5 +0.4**
comp=Z,127nm,1.5s,comp=Z,4μmcomp=Z,1μm
NONG Nongkai 38.93 251 P **P** **16 36 03.7 +1.5**
SWI Sorong 39.43 197 P **P** **16 36 06.5 +0.1**
comp=Z,67nm,0.8s,comp=Z,1μmcomp=Z,3μm
SMPI Sarmi 39.44 185 P **P** **16 36 07.3 +0.9**
comp=Z,115nm,1.6s,comp=Z,2μmcomp=Z,4μm
M11K Mekoryuk 39.69 38 P **P** **16 36 08.0 0.0**
baz=259
MANU Manus Island 39.73 171 P **P** **16 36 07.8 -1.1**
MANU Manus Island 39.73 171 P **P** **16 36 09.2 +0.3**
CRAI Chiangrai 39.76 256 P **P** **16 36 09.1 -0.1**
CRAI IAmb IAmb 16 36 24.2
comp=Z,97nm,1.2s
GENI Genyem 39.96 182 P **P** **16 36 11.9 +1.1**
GENI Genyem 39.96 182 P **P** **16 36 11.6 +0.8**
comp=Z,118nm,0.8s,comp=Z,2μmcomp=Z,3μm
LBMI Labuha 40.22 202 P **P** **16 36 14.4 +1.5**
comp=Z,268nm,1.2s,comp=Z,4μm
TNA Tin City 40.28 30 P **P** **16 36 14.7 +1.9**
baz=251,SNR=25
KMSI Cibinong 40.28 208 P **P** **16 36 14.0 +0.6**
comp=Z,730nm,1.2s,comp=Z,9μmcomp=Z,2μm
DGZ Jazzator, Alta 40.31 305 *c i*P **P** **16 36 14.8 +1.2**
DGZ pmax pmax
comp=Z,310nm,0.9s
GTOI Gorontalo 40.59 210 P **P** **16 36 15.7 -0.3**
comp=Z,178nm,1.5s,comp=Z,2μm
WMQ Urumqi 40.85 296 ⇑P **P** **16 36 18.8 +0.8**
WMQ PcP **PcP** **16 38 14.0 -4.4**
WMQ S **S** **16 42 26.5 -0.6**
WMQ pmax pmax
comp=Z,270nm,1.1s
WMQ pmax pmax
comp=Z,1μm,5.1s
WMQ LR LR
comp=Z,4μm,20.1s
WMQ LR LR
comp=Z,3μm,16.1s
WMQ LR LR
comp=Z,3μm,24.1s
F14K Arctic Creek 40.88 30 P **P** **16 36 19.3 +1.4**
baz=253
ANM Nome 41.02 32 P **P** **16 36 20.1 +1.1**
ANM Nome 41.02 32 P **P** **16 36 21.5 +2.4**
baz=255,SNR=22
ANM Nome 41.02 32 P **P** **16 36 20.2 +1.1**
ANM pmax pmax
comp=Z,55nm,1.2s
ANM MLR MLR
comp=Z,1μm,22.0s
TOLI2 Tolitoli 41.08 213 P **P** **16 36 19.9 -0.2**
TOLI2 IAmb IAmb 16 36 34.3
comp=Z,165nm,1.3s

TOLI2 **Tolitoli** 41.08 213 P P 16 36 21.8 +1.7
M13K **Dall Lake** 41.09 38 P P 16 36 21.1 +1.4
baz=262
MRSI **Marisa** 41.17 211 P P 16 36 21.4 +0.6
comp=Z,404nm,1.5s,comp=Z,6µmcomp=Z,2µm
FAKI **Fak Fak** 41.22 194 P P 16 36 20.6 -0.5
FAKI **Fak Fak** 41.22 194 P P 16 36 22.4 +1.2
FAKI **Fak Fak** 41.22 194 P P 16 36 21.2 0.0
comp=Z,160nm,0.8s,comp=Z,2µmcomp=Z,µm
J14K **Nanvaranak Lak** 41.40 35 P P 16 36 23.3 +1.2
baz=259
L14K **Kuka Creek** 41.55 37 P P 16 36 25.5 +2.0
baz=261
F15K **North Star Dit** 41.62 30 P P 16 36 25.8 +1.8
baz=254
CHTO **Chiang Mai** 41.68 255 P P 16 36 24.6 -0.4
CHTO **Chiang Mai** 41.68 255 IAMs_20 IAMs_20 16 54 52.6
comp=Z,2µm,20.0s
CHTO **Chiang Mai** 41.68 255 P P 16 36 25.9 +0.9
CHTO **Chiang Mai** 41.68 255 P P 16 36 24.6 -0.4
CHTO pmax pmax
comp=Z,22nm,0.9s
CHTO MLR MLR
comp=Z,2µm,20.0s
CHTO **Chiang Mai** 41.68 255 P P 16 36 24.9 -0.1
CHTO pP sP 16 36 37.7 -0.7
G15K **Niukluk** 41.68 31 P P 16 36 26.1 +1.6
baz=256
ZAA0 **Zalesovo Array** 41.77 312 P P 16 36 24.9 -0.4
ZAA0 IAMs_20 IAMs_20 16 54 09.0
comp=Z,6µm,20.0s
ZALV **Zalesovo Beam** 41.77 312 P P 16 36 25.0 -0.3
ZALV **Zalesovo Beam** 41.77 312 P P 16 36 25.2 -0.1
comp=Z,19nm,0.5s,baz=90,slow=7.4,SNR=157
ZALV PcP PcP 16 38 20.6 -0.5
comp=Z,17nm,0.7s,baz=96,slow=4.0,SNR=2.4
ZALV LR LR 16 54 38.4
comp=Z,6µm,18.2s,baz=92,slow=37
comp=Z,19nm,0.5s
M14K **Bethel** 41.82 38 P P 16 36 26.6 +1.0
baz=263
N14K **Kuskokwak Cree** 41.86 39 P P 16 36 26.9 +1.0
baz=264
CMAR **Chiang Mai Arr** 41.88 255*ce*P P 16 36 26.7 0.0
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CMAR **Chiang Mai Arr** 41.88 255 P P 16 36 26.8 0.0
comp=Z,4.5nm,0.6s,baz=48,slow=6.4,SNR=32
CMAR ScP ScP 16 42 08.2 -1.7
comp=Z,2.0nm,1.0s,baz=12,slow=4.6,SNR=2.1
CMAR LR LR 16 55 09.4
comp=Z,2µm,18.7s,baz=55,slow=38
comp=Z,4.5nm,0.6s
O14K **Tigyukauivet M** 42.00 40 P P 16 36 28.7 +1.6
baz=265
SANI **Sanana** 42.02 204 P P 16 36 27.6 -0.1
SANI **Sanana** 42.02 204 P P 16 36 26.8 -0.9
comp=Z,211nm,1.1s,comp=Z,3µm
MND **Mandalay** 42.11 262 P P 16 36 29.0 +0.6
C16K **Lisburne Hills** 42.12 26 IAMs_20 IAMs_20 16 53 14.6
comp=Z,2µm,22.0s
C16K **Lisburne Hills** 42.12 26 P P 16 36 29.2 +1.2
baz=251
L15K **Ungalak Mounta** 42.17 36 P P 16 36 29.9 +1.4
baz=262
LUWI **Luwuk** 42.22 209 P P 16 36 29.0 -0.4
LUWI **Luwuk** 42.22 209 P P 16 36 30.9 +1.5
LUWI **Luwuk** 42.22 209 P P 16 36 28.9 -0.5
comp=Z,274nm,1.4s,comp=Z,3µm
ZSN **Zaisan** 42.23 302⇑*i*P P 16 36 30.3 +1.0
baz=302
ZSN *e*S S 16 42 47.2 -0.3
baz=302
ZSN **Zaisan** 42.23 302*c i*P P 16 36 30.2 +1.0
ZSN *e*S S 16 42 47.1 -0.3
K15K **Wolf Creek Mou** 42.24 36 P P 16 36 30.6 +1.6
baz=261
SDPT **Sand Point** 42.25 46 P P 16 36 31.2 +2.0
baz=270
H16K **Elim** 42.35 32 P P 16 36 31.1 +1.2
baz=258,SNR=11
LSA **Lhasa** 42.43 275 IAmb IAmb 16 36 35.4
comp=Z,80nm,1.0s
LSA **Lhasa** 42.43 275 P P 16 36 32.6 +1.0
LSA pP sP 16 36 44.4 -0.6
M15K **Kasigluk River** 42.43 38 P P 16 36 32.2 +1.6
baz=264
G16K **Koyuk River** 42.47 31 P P 16 36 32.0 +1.2
baz=257
NAYO **Nakonayok** 42.64 248 P P 16 36 35.0 +2.1
N15K **Kwethluk River** 42.68 39 P P 16 36 34.2 +1.5
baz=265
O15K **Ungalikthiuk R** 42.74 40 P P 16 36 33.8 +0.7
baz=266
D17K **Noatak River** 42.76 27 P P 16 36 35.1 +1.9
baz=254,SNR=102
CHNA **Chernabura Isl** 42.77 47 P P 16 36 34.3 +0.9
baz=271
S14K **Fog Glacier** 42.78 45 P P 16 36 33.9 +0.3
baz=270
NLAI **Namlea** 42.80 202 P P 16 36 35.3 +1.2
comp=Z,52nm,1.4s,comp=Z,5µm
J16K **Anvik River** 42.81 34 P P 16 36 35.5 +1.8
baz=261
I17K **Unalakleet** 42.87 33 IAmb IAmb 16 36 36.8
comp=Z,110nm,1.8s
I17K **Unalakleet** 42.87 33 P P 16 36 35.9 +1.8
baz=260
NRIK **Noril'sk** 42.91 335 P P 16 36 33.9 -0.6
NRIK IAmb IAmb 16 36 35.9
comp=Z,121nm,1.6s
NRIK **Noril'sk** 42.91 335*ce*P P 16 36 34.0 -0.4
NRIK pmax pmax
comp=Z,79nm,1.5s
NRIK **Noril'sk** 42.91 335 P P 16 36 34.2 -0.2
comp=Z,16nm,0.5s,baz=109,slow=9.1,SNR=30
NRIK LR LR 16 55 38.0
comp=Z,6µm,19.2s,baz=102,slow=38
comp=Z,16nm,0.5s
C17K **DeLong Mountai** 42.95 26 P P 16 36 36.1 +1.3
baz=253
E17K **Hotham Inlet** 43.07 29 P P 16 36 37.6 +1.9
baz=256,SNR=43
L16K **Owhat River** 43.13 37 P P 16 36 36.9 +0.7
baz=264
F17K **Baldwin Pennin** 43.14 30 P P 16 36 38.2 +1.9
baz=257,SNR=19
G17K **Kiwalik Mounta** 43.19 31 P P 16 36 38.2 +1.6
baz=259
BNDI **Bandanaira** 43.28 197 P P 16 36 40.2 +2.2
BNDI **Bandanaira** 43.28 197 P P 16 36 38.6 +0.6
comp=Z,824nm,1.2s,comp=Z,8µmcomp=Z,3µm
M16K **Timber Creek** 43.31 38 IAmb IAmb 16 36 42.4
comp=Z,176nm,1.9s
M16K **Timber Creek** 43.31 38 P P 16 36 38.8 +1.1
baz=265
N16K **Nishlik Lake** 43.36 38 P P 16 36 39.6 +1.5
baz=266
H17K **Granite Mounta** 43.39 32 P P 16 36 39.6 +1.3
baz=260
CHGN **Chignik** 43.41 45 P P 16 36 37.8 -0.8
baz=271
E18K **Tukpahlearik C** 43.61 28 P P 16 36 40.4 +0.3
baz=257
O16K **Kokwok River B** 43.64 40 P P 16 36 41.1 +0.7
baz=267
P16K **Nushagak River** 43.67 41 P P 16 36 40.9 +0.2
baz=268
SHL **Shillong** 43.68 269 P P 16 36 40.4 -1.0
SHL IAmb IAmb 16 36 50.2
comp=Z,80nm,0.9s
SHL IAMs_20 IAMs_20 16 56 51.8
comp=Z,2µm,18.0s
SHL **Shillong** 43.68 269 P P 16 36 40.4 -1.0
SHL pmax pmax
comp=Z,80nm,0.9s
SHL MLR MLR
comp=Z,2µm,18.0s
B18K **Kokolik River** 43.69 25 P P 16 36 40.7 +0.1
baz=254
C18K **Utukok River** 43.70 26 IAMs_20 IAMs_20 16 54 38.2
comp=Z,2µm,22.0s
C18K **Utukok River** 43.70 26 P P 16 36 41.1 +0.2
baz=255
L17K **Donlin** 43.73 36 P P 16 36 41.7 +0.7
baz=265
K17K **Iditarod** 43.78 35 P P 16 36 43.3 +1.7
baz=264
F18K **Selawik** 43.80 30 P P 16 36 42.3 +0.7
baz=259,SNR=17
R16K **Pilot Point** 43.87 43 P P 16 36 42.3 0.0
baz=270
G18K **Tagagawik** 44.07 31 P P 16 36 45.4 +1.6
baz=260,SNR=13
H18K **Honosa River** 44.07 32 P P 16 36 45.5 +1.7
baz=261,SNR=14
M17K **Holitna River** 44.07 37 P P 16 36 44.9 +1.1
baz=266
MK31 **Makanchi Array** 44.07 302 IAmb IAmb 16 36 46.1
comp=Z,56nm,0.8s
MK31 **Makanchi Array** 44.07 302 *i* P P 16 36 44.1 0.0
MKAR **Makanchi Array** 44.07 302*ce*P P 16 36 44.2 +0.1
MKAR pmax pmax
comp=Z,48nm,0.7s
MKAR **Makanchi Array** 44.07 302 P P 16 36 44.3 +0.2
comp=Z,47nm,0.7s,baz=87,slow=9.7,SNR=559
comp=Z,47nm,0.7s
N17K **Nushagak Hills** 44.14 38 IAmb IAmb 16 36 49.5
comp=Z,97nm,1.8s
N17K **Nushagak Hills** 44.14 38 P P 16 36 46.1 +1.7
baz=267
O17K **Koliganek Bris** 44.16 40 P P 16 36 45.4 +0.9
baz=268
SRDT **SRDT** 44.25 250 P P 16 36 46.8 +0.9
MAKZ **Makanchi** 44.28 302 P P 16 36 45.9 +0.1
MAKZ IAMs_20 IAMs_20 16 55 25.9
comp=Z,3µm,21.0s
MAKZ **Makanchi** 44.28 302 P P 16 36 46.1 +0.3
MAKZ **Makanchi** 44.28 302 P P 16 36 46.1 +0.3
MAKZ pP sP 16 36 57.9 -1.4
MAKZ sP pP 16 37 02.1 +6.7
Q16K **King Salmon** 44.36 41 P P 16 36 47.0 +0.9
baz=270
C19K **Lookout Ridge** 44.38 26 IAMs_20 IAMs_20 16 54 49.2
comp=Z,3µm,22.0s
C19K **Lookout Ridge** 44.38 26 P P 16 36 47.6 +1.3
baz=256,SNR=127
P17K **Kvichak River** 44.48 40 P P 16 36 48.2 +1.1
baz=269
L18K **Granite Mounta** 44.48 36 P P 16 36 48.0 +0.8
baz=266
J18K **Innoko River** 44.58 34 P P 16 36 48.5 +0.6
baz=265
F19K **Shaleruckik Mo** 44.58 29 IAmb IAmb 16 36 51.2
comp=Z,91nm,1.6s
F19K **Shaleruckik Mo** 44.58 29 P P 16 36 49.0 +1.1
baz=260,SNR=14
GCSA **Galena City Sc** 44.64 32 P P 16 36 49.0 +0.7
baz=263
G19K **Purcell Mounta** 44.74 30 P P 16 36 49.4 +0.2
baz=262
D19K **Kuna River** 44.76 27 P P 16 36 49.8 +0.4
baz=258
Q17K **Contact Creek** 44.77 42 P P 16 36 50.0 +0.5
baz=271
N18K **Kilae Creek** 44.79 38 P P 16 36 50.0 +0.4
baz=268
TTA **Tatalina** 44.85 35 P P 16 36 50.5 +0.3
baz=266
M18K **Stony River** 44.85 37 P P 16 36 51.3 +1.3
baz=268
H19K **Roundabout Mou** 44.92 31 P P 16 36 50.8 +0.2
baz=263
BKB **Balikpapan** 44.95 216 IAMs_20 IAMs_20 16 55 29.6
comp=Z,2µm,20.0s
BKB **Balikpapan** 44.95 216 P P 16 36 52.8 +1.5
SVW2 **Sparrevohn** 44.95 38 P P 16 36 50.9 0.0
SVW2 **Sparrevohn** 44.95 38 P P 16 36 52.0 +1.1
P18K **Big Mountain,** 45.10 40 P P 16 36 52.7 +0.5
P18K IAmb IAmb 16 36 55.8
comp=Z,52nm,1.2s
P18K **Big Mountain,** 45.10 40 P P 16 36 52.5 +0.3
baz=270
J19K **Poorman** 45.11 34 P P 16 36 52.3 +0.2
baz=265
O18K **Koktuh Hills** 45.11 39 IAmb IAmb 16 38 10.2
comp=Z,159nm,1.9s
O18K **Koktuh Hills** 45.11 39 P P 16 36 53.4 +1.2
baz=270
TTSI **Tana Toraja** 45.23 212 P P 16 36 54.9 +1.3
comp=Z,39nm,1.4s,comp=Z,1µm
L19K **White Mountain** 45.34 36 P P 16 36 55.4 +1.4
baz=268
D20K **Etivlik River** 45.35 27 P P 16 36 55.7 +1.7
baz=260,SNR=62
F20K **Avaraart Lake** 45.41 29 P P 16 36 55.3 +0.9
baz=262
E20K **Nigu River** 45.42 28 P P 16 36 55.6 +1.0
baz=260
N19K **Bonanza Creek** 45.48 38 P P 16 36 57.0 +1.8
baz=269
M19K **Big River Lodg** 45.55 37 P P 16 36 57.5 +1.9
baz=268
O19K **Port Alsworth** 45.56 39 IAmb IAmb 16 37 07.4
comp=Z,141nm,1.9s
O19K **Port Alsworth** 45.56 39 P P 16 36 55.7 0.0
baz=270
H20K **Anotleneega Mo** 45.56 31 P P 16 36 56.3 +0.6
baz=264
MTKI **Muara Teweh, K** 45.64 219 P P 16 36 58.2 +1.3
comp=Z,143nm,1.0s,comp=Z,4µm
I20K **Naaghedeneel** 45.67 32 P P 16 36 56.9 +0.4
baz=265
SII **Sitkinak Islan** 45.75 44 P P 16 36 59.6 +2.3
baz=274
K20K **Telida** 45.76 35 P P 16 36 58.3 +1.0
baz=267
J20K **Nowinta River** 45.77 33 P P 16 36 58.1 +0.8
baz=266
L20K **Farewell, AK** 45.81 36 P P 16 36 58.9 +1.2
baz=268
KURK **Kurchatov** 45.83 308 P P 16 36 57.8 -0.1
KURK **Kurchatov** 45.83 308*ce*P P 16 36 57.8 -0.1
KURK pmax pmax
comp=Z,425nm,1.7s
KURK **Kurchatov** 45.83 308 P P 16 36 58.0 +0.1
A21K **Barrow** 45.88 23 P P 16 36 58.6 +0.5
baz=257,SNR=8.9
KURBB **Kurchatov Arra** 45.90 308 P P 16 36 58.1 -0.4
KURBB **Kurchatov Arra** 45.90 308 P P 16 36 58.5 0.0
comp=Z,120nm,0.7s,baz=83,slow=8.1,SNR=581
KURBB S S 16 43 38.5 -2.1
comp=Z,1.4nm,0.9s,baz=80,slow=11,SNR=4.3
comp=Z,120nm,0.7s
Q19K **Cape Douglas,** 45.92 41 P P 16 36 58.8 +0.1
baz=272
TARA **Tarawa** 46.04 134 IAMs_20 IAMs_20 16 52 01.2
comp=Z,4µm,22.0s
C21K **Knifeblade Rid** 46.08 26 P P 16 37 01.0 +1.3
baz=261,SNR=51
P19K **Oil Pt** 46.11 40 P P 16 36 59.6 -0.6
baz=272
M20K **Styx River** 46.15 37 P P 16 37 00.7 +0.2
baz=270
OHAK **Old Harbor** 46.20 43 P P 16 37 01.4 +0.6
baz=274
E21K **Killik River** 46.26 27 P P 16 37 02.4 +1.2
baz=262
F21K **Alatna River** 46.30 29 P P 16 37 02.9 +1.4
baz=264
SAUI **Saumlaki** 46.34 194 P P 16 37 03.5 +1.2
SAUI **Saumlaki** 46.34 194 P P 16 37 02.3 0.0
comp=Z,244nm,1.2s,comp=Z,6µmcomp=Z,4µm
BBSI **Bau Bau** 46.40 207 P P 16 37 04.0 +1.2
comp=Z,132nm,1.3s,comp=Z,2µmcomp=Z,1µm
O20K **Slope Mountain** 46.41 39 P P 16 37 01.9 -0.6
baz=272
H21K **Melozitna Rive** 46.44 31 P P 16 37 03.2 +0.6
baz=266
KDAK **Kodiak Island** 46.54 42 IAMs_20 IAMs_20 16 57 48.1
comp=Z,2µm,21.0s
KDAK **Kodiak Island** 46.54 42 P P 16 37 03.4 -0.1
baz=274
KDAK **Kodiak Island** 46.54 42 LR LR 16 58 08.1
comp=Z,810nm,19.3s,baz=260,slow=38
KDAK **Kodiak Island** 46.54 42 P P 16 37 04.1 +0.6
CHUM **Lake Minchumin** 46.56 34 P P 16 37 04.6 +1.0
baz=268,SNR=8.0
N20K **Mount Spurr** 46.59 38 P P 16 37 05.0 +1.1
baz=271,SNR=14
Q20K **Shuyak Island** 46.59 41 P P 16 37 04.4 +0.6
baz=273
PPLA **Purkeypile** 46.59 35 P P 16 37 05.1 +1.0
baz=269
STKI **Sintang** 46.60 224 P P 16 37 05.4 +1.0
comp=Z,163nm,1.4s,comp=Z,3µm
CAST **Castle Rocks** 46.65 34 P P 16 37 06.3 +2.0
baz=269,SNR=14
I21K **Tanana** 46.75 32 IAmb IAmb 16 37 10.1
comp=Z,117nm,1.9s
I21K **Tanana** 46.75 32 P P 16 37 07.0 +2.0
baz=267,SNR=7.1
PDGK **Podgornoye** 46.77 298 P P 16 37 05.5 -0.2
D22K **Ayikyak River** 46.79 27 IAMs_20 IAMs_20 16 56 49.8
comp=Z,2µm,20.0s
D22K **Ayikyak River** 46.79 27 P P 16 37 07.3 +2.0
baz=263,SNR=32
SHLS **Shalkode** 46.84 297⇑*i*P P 16 37 03.8 -2.5
comp=Z,46nm,1.0s,baz=297
SHLS **Shalkode** 46.84 297*c i*P P 16 37 03.7 -2.5
SHLS pmax pmax
comp=Z,46nm,1.0s
SKT **Skwentna** 46.90 36 IAmb IAmb 16 37 09.4
comp=Z,46nm,1.4s
SKT **Skwentna** 46.90 36 P P 16 37 07.2 +1.0
baz=271
PMG **Port Moresby** 46.98 173 P P 16 37 06.6 -0.7
PMG IAmb IAmb 16 37 54.7
comp=Z,40nm,0.8s
PMG **Port Moresby** 46.98 173 IAMs_20 IAMs_20 16 55 01.4
comp=Z,2µm,22.0s
PMG **Port Moresby** 46.98 173 P P 16 37 08.2 +0.9
PMG **Port Moresby** 46.98 173 P P 16 37 08.1 +0.8
PMG **Port Moresby** 46.98 173*ce*P P 16 37 05.9 -1.4
PMG pmax pmax
comp=Z,17nm,0.6s
PMG **Port Moresby** 46.98 173 LR LR 16 55 58.2
comp=Z,1µm,21.9s,baz=318,slow=35
PMG **Port Moresby** 46.98 173 P P 16 37 07.4 +0.1
E22K **Anaktuvuk Pass** 47.03 28 P P 16 37 08.2 +1.0
baz=265
H22K **Ishtalitna Cre** 47.04 31 P P 16 37 08.1 +0.8
baz=267
KAPI **Kappang** 47.04 211 P P 16 37 08.5 +0.7
KAPI **Kappang** 47.04 211 P P 16 37 08.5 +0.7
KAPI pmax pmax
comp=Z,356nm,1.1s
KAPI MLR MLR
comp=Z,1µm,21.0s
G22K **Bettles** 47.05 30 P P 16 37 07.3 0.0
baz=266
TDK **Taldyqorghan** 47.10 300⇑*i*P P 16 37 08.8 +0.7
baz=300
TDK LR LR 16 56 03.8
comp=Z,2µm,20.2s,baz=300
TDK **Taldyqorghan** 47.10 300*c i*P P 16 37 08.8 +0.7
TDK MLR MLR
comp=Z,2µm,20.0s
CAPN **Captain Cook N** 47.12 38 P P 16 37 09.1 +1.2
baz=272
BPAW **Bear Paw Mtn.** 47.15 34 P P 16 37 09.2 +1.0
baz=269
UZB **Uzynbulak** 47.15 297⇑*i*P P 16 37 08.8 +0.1
comp=Z,60nm,1.4s,baz=298
UZB **Uzynbulak** 47.15 297*c i*P P 16 37 08.7 +0.1
UZB pmax pmax
comp=Z,60nm,1.4s
KTH **Kantishna Hill** 47.17 34 IAmb IAmb 16 37 41.1
comp=Z,42nm,1.0s
MLY **Manley** 47.27 32 P P 16 37 11.1 +1.9
baz=269,SNR=13
SUA **Susitna One** 47.29 37 IAmb IAmb 16 37 55.8
comp=Z,30nm,0.8s
SUA **Susitna One** 47.29 37 P P 16 37 09.4 0.0
baz=272,SNR=11
SURA **Surathani** 47.30 244 P P 16 37 11.7 +1.8
KPKS **Kokpek** 47.30 298⇑*i*P P 16 37 10.0 +0.2
comp=Z,59nm,1.5s,baz=298
KPKS *e*S S 16 44 00.8 -0.4
baz=298
KPKS **Kokpek** 47.30 298*c i*P P 16 37 10.0 +0.2
KPKS *e*S S 16 44 00.7 -0.4
KPKS pmax pmax
comp=Z,59nm,1.5s
BRSE **Bradley Lake S** 47.37 39 P P 16 37 10.5 +0.5
baz=274
TRF **Thorofare Moun** 47.46 34 P P 16 37 11.6 +0.8
baz=270,SNR=7.6
CUT **Chulitna** 47.48 36 P P 16 37 11.4 +0.6
baz=272
D23K **Nanushuk River** 47.52 27 P P 16 37 11.7 +0.8
baz=265
WUS **Wushi** 47.56 295 P P 16 37 12.8 +0.9
ZHN **Zhinishke** 47.56 298⇑*i*P P 16 37 11.9 +0.1
baz=298
ZHN **Zhinishke** 47.56 298*c i*P P 16 37 11.9 +0.1
COLD **Coldfoot** 47.58 29 P P 16 37 12.9 +1.4
baz=267,SNR=8.6
M22K **Willow** 47.58 37 IAmb IAmb 16 37 15.4
comp=Z,40nm,1.0s
M22K **Willow** 47.58 37 P P 16 37 10.3 -1.1
baz=272
SATY **Saty** 47.61 298⇑*i*P P 16 37 12.5 +0.3
comp=Z,56nm,1.5s,baz=298
SATY *e*S S 16 44 05.7 +0.1
baz=298
SATY **Saty** 47.61 298*c i*P P 16 37 12.5 +0.3
SATY *e*S S 16 44 05.6 +0.1
SATY pmax pmax
comp=Z,56nm,1.5s
G23K **Bananza Creek** 47.62 30 P P 16 37 12.6 +0.7
baz=268,SNR=12
ARXS **Arharly** 47.70 299 *i* P P 16 37 12.9 0.0
SRIT **Nakonsritamara** 47.71 244 P P 16 37 14.2 +1.1
PRZ **Przheval'sk** 47.77 297 IAMs_20 IAMs_20 16 57 44.3
comp=Z,4µm,21.0s
RC01 **Rabbit Creek A** 47.79 38 IAmb IAmb 16 37 16.4
comp=Z,50nm,1.0s
RC01 **Rabbit Creek A** 47.79 38 P P 16 37 13.5 +0.3
baz=273
E23K **Chandalar** 47.84 28 P P 16 37 14.7 +1.1
baz=267
I23K **Minto, Yukon-K** 47.86 32 IAmb IAmb 16 37 18.4
comp=Z,129nm,1.8s
I23K **Minto, Yukon-K** 47.86 32 P P 16 37 15.4 +1.8
baz=270,SNR=9.4
NEA2 **Nenana** 47.98 33 IAmb IAmb 16 37 43.7
comp=Z,81nm,1.5s
NEA2 **Nenana** 47.98 33 P P 16 37 16.5 +1.8
baz=271
SKLT **Songkhla** 47.99 241 P P 16 37 16.3 +1.1
SEW **Seward** 47.99 39 P P 16 37 14.2 -0.5
baz=274
PMR **Palmer** 48.05 37 IAmb IAmb 16 37 17.8
comp=Z,43nm,1.1s
PMR **Palmer** 48.05 37 P P 16 37 16.2 +1.0
PMR **Palmer** 48.05 37 P P 16 37 15.8 +0.6
baz=273,SNR=8.4
MCK **McKinley** 48.06 34 P P 16 37 15.3 +0.1
baz=272,SNR=8.8
RND **Reindeer** 48.10 34 IAmb IAmb 16 37 18.4
comp=Z,34nm,0.9s
GHO **Glory Hole Cre** 48.14 37 IAmb IAmb 16 37 19.6
comp=Z,47nm,0.8s
D24K **Happy Valley** 48.20 27 P P 16 37 16.8 +0.6
baz=267
WAT1 **Susitna Watana** 48.26 35 P P 16 37 17.6 +0.7
baz=273
C24K **Franklin Bluff** 48.27 26 P P 16 37 18.0 +1.3
baz=266
MDM **Murphy Dome** 48.34 32 IAmb IAmb 16 37 37.6
comp=Z,36nm,0.8s
KNK **Knik Glacier** 48.39 37 IAmb IAmb 16 37 20.8
comp=Z,33nm,0.8s
KNK **Knik Glacier** 48.39 37 P P 16 37 18.7 +0.9
baz=274,SNR=7.5
SML **Sawmill** 48.42 37 IAmb IAmb 16 37 21.2
comp=Z,47nm,0.9s
SML **Sawmill** 48.42 37 P P 16 37 18.1 0.0
baz=274,SNR=10
H24K **Noodor Dome** 48.48 31 IAmb IAmb 16 38 09.2
comp=Z,35nm,1.1s
H24K **Noodor Dome** 48.48 31 P P 16 37 19.6 +1.1
baz=271
F24K **Squaw Lake** 48.48 29 P P 16 37 20.0 +1.6
baz=269
COLA **College** 48.50 32 P P 16 37 19.0 +0.4
COLA **College** 48.50 32 P P 16 37 20.5 +1.9
COLA **College** 48.50 32 P P 16 37 19.6 +1.0
baz=271
COLA **College** 48.50 32 P P 16 37 19.8 +1.2
COLA **College** 48.50 32 P P 16 37 19.9 +1.2

CCB **Clear Creek Bu** **48.53 33** IAmb IAmb 16 37 21.9
comp=Z,95nm,2.0s
MDOK Medeo **48.53 298** *i* P **P** **16 37 20.0 +0.6**
baz=298
MDOK LR LR 16 56 11.7
comp=Z,3µm,18.2s,baz=298
MDOK Medeo **48.53 298** *i* P **P** **16 37 20.0 +0.6**
MDOK MLR MLR
comp=Z,3µm,18.0s
AAA Alma-Ata **48.61 298** *eP* **P** **16 37 20.9 +0.9**
comp=Z,58nm,1.0s,baz=298
AAA Alma-Ata **48.61 298** *eP* **P** **16 37 20.8 +0.9**
AAA pmax pmax
comp=Z,58nm,1.0s
G24K Hadweenzic Riv **48.63 30** IAmb IAmb 16 37 24.8
comp=Z,52nm,1.2s
G24K Hadweenzic Riv **48.63 30** P **P** **16 37 21.2 +1.6**
baz=270
TNSS Tian-Shan **48.64 298**⇑ *i* P **P** **16 37 21.4 +0.8**
baz=298
TNSS Tian-Shan **48.64 298**⇑ *i* P **P** **16 37 21.3 +0.8**
WAT6 Susitna Watana **48.65 36** P **P** **16 37 20.3 +0.3**
baz=274,SNR=6.3
POKR Poker Plat Res **48.67 32** IAmb IAmb 16 37 40.7
comp=Z,63nm,0.9s
POKR Poker Plat Res **48.67 32** P **P** **16 37 21.8 +1.9**
baz=272,SNR=21
M23K Glacier View **48.71 37** P **P** **16 37 21.4 +1.1**
baz=274,SNR=9.1
DHY Denali Highway **48.79 35** P **P** **16 37 20.9 -0.1**
baz=273
KUU Kurty **48.82 299**⇑ *i* P **P** **16 37 21.2 -0.2**
baz=299
KUU LR LR 16 58 09.2
comp=Z,1µm,13.2s,baz=299
KUU Kurty **48.82 299** *c i* P **P** **16 37 21.2 -0.2**
KUU MLR MLR
comp=Z,1µm,13.0s
SCM Sheep Creek Mo **48.90 37** IAmb IAmb 16 37 25.0
comp=Z,55nm,0.9s
SCM Sheep Creek Mo **48.90 37** P **P** **16 37 21.8 0.0**
baz=275,SNR=7.4
HDA Harding Lake **48.91 33** IAmb IAmb 16 37 24.3
comp=Z,28nm,0.9s
HDA Harding Lake **48.91 33** P **P** **16 37 22.2 +0.5**
baz=273,SNR=13
IL31 **48.92 33** IAmb IAmb 16 37 25.0
comp=Z,31nm,0.8s
ILAR Eielson Array **48.92 33** P **P** **16 37 22.2 +0.4**
comp=Z,18nm,0.7s,baz=264,slow=6.1,SNR=102
ILAR LR LR 16 59 21.6
comp=Z,307nm,20.7s,baz=276,slow=38
comp=Z,18nm,0.7s
P23K Montague Islan **49.03 39** P **P** **16 37 23.2 +0.5**
baz=276
D25K Kavik River **49.07 27** IAMs_20 IAMs_20 16 57 41.3
comp=Z,2µm,22.0s
D25K Kavik River **49.07 27** P **P** **16 37 24.1 +1.1**
baz=269
GLI Glacier Island **49.09 38** P **P** **16 37 24.6 +1.3**
baz=276
G25K Bearman Lake **49.18 30** P **P** **16 37 24.3 +0.6**
baz=271
F25K Christian Rive **49.34 29** P **P** **16 37 26.4 +1.3**
baz=271,SNR=18
E25K Arctic Village **49.36 28** IAmb IAmb 16 37 30.3
comp=Z,101nm,1.6s
E25K Arctic Village **49.36 28** P **P** **16 37 26.1 +0.9**
baz=271,SNR=25
ULHL Ulahol **49.37 297** P **P** **16 37 26.2 +0.4**
SNR=30
M24K Tolsona, Glenn **49.41 36** IAmb IAmb 16 38 15.4
comp=Z,62nm,0.9s
M24K Tolsona, Glenn **49.41 36** P **P** **16 37 27.2 +1.5**
baz=275
MMRI Maumere **49.44 206** P **P** **16 37 27.3 +1.0**
MMRI Maumere **49.44 206** P **P** **16 37 26.5 +0.2**
comp=Z,153nm,1.5s,comp=Z,3µm
K24K Donnelly Dome **49.46 34** P **P** **16 37 26.9 +0.9**
baz=274,SNR=9.5
PRP Porcupine Dome **49.46 32** P **P** **16 37 27.8 +1.6**
baz=273,SNR=11
J25K Salcha River, **49.58 33** P **P** **16 37 26.7 -0.2**
baz=274
KLU Klutina **49.59 37** IAmb IAmb 16 37 30.5
comp=Z,41nm,1.0s
KLU Klutina **49.59 37** P **P** **16 37 27.5 +0.4**
baz=276,SNR=7.6
TKM2 Tokmak 2 **49.62 298** P **P** **16 37 28.7 +0.9**
SNR=12
TKM2 Tokmak 2 **49.62 298** P **P** **16 37 27.9 +0.1**
Q23K Middleton Isla **49.62 40** P **P** **16 37 27.6 +0.4**
baz=278
PAX Paxson **49.66 35** P **P** **16 37 28.9 +1.2**
baz=275,SNR=5.5
BRZS Berezniki **49.70 308**⇑ *i* P **P** **16 37 27.9 -0.2**
comp=Z,96nm,1.7s,baz=308
BRZS *eS* **S** **16 44 33.8 -0.8**
baz=308
BRZS Berezniki **49.70 308** *c i* P **P** **16 37 27.8 -0.2**
BRZS *eS* **S** **16 44 33.8 -0.8**
BRZS pmax pmax
comp=Z,97nm,1.7s
EDFI Ende, Flores **49.73 206** P **P** **16 37 28.1 -0.6**
comp=Z,128nm,1.6s,comp=Z,2µm
HNR Honiara **49.74 156** P **P** **16 37 28.7 +0.1**
HNR IAMs_20 IAMs_20 16 56 52.6
comp=Z,4µm,21.0s
HNR Honiara **49.74 156** P **P** **16 37 30.0 +1.4**
HNR Honiara **49.74 156** P **P** **16 37 28.7 +0.1**
HNR pmax pmax
comp=Z,95nm,0.9s
HNR MLR MLR
comp=Z,4µm,21.0s
HNR Honiara **49.74 156** LR LR 16 57 24.9
comp=Z,41µm,20.6s,baz=326,slow=35
HNR Honiara **49.74 156** P **P** **16 37 29.4 +0.8**
EYAK Cordova Ski Ar **49.78 38** P **P** **16 37 28.3 -0.1**
baz=277
NRN Naryn **49.79 296** IAmb IAmb 16 38 00.6
comp=Z,77nm,1.3s
NRN IAMs_20 IAMs_20 16 59 13.6
comp=Z,3µm,22.0s
SOEI Soe **49.82 203** IAMs_20 IAMs_20 16 56 32.6
comp=Z,2µm,22.0s
SOEI Soe **49.82 203** P **P** **16 37 30.5 +1.1**
SOEI Soe **49.82 203** P **P** **16 37 29.5 +0.1**
comp=Z,337nm,1.1s,comp=Z,4µm
HARP HAARP **49.86 36** P **P** **16 37 29.1 0.0**
baz=276,SNR=5.8
F26K Sheenjek River **49.91 29** P **P** **16 37 29.0 -0.4**
baz=272,SNR=50
TPRI Tanjung Pinang **50.02 232** P **P** **16 37 32.1 +1.3**
comp=Z,76nm,1.1s,comp=Z,2µm
BTLS Baital **50.08 301**⇑ *i* P **P** **16 37 30.8 -0.2**
baz=301
BTLS Baital **50.08 301** *c i* P **P** **16 37 30.7 -0.2**
G26K Porcupine Rive **50.09 30** P **P** **16 37 32.7 +2.0**
baz=273
SGDS Sogindy **50.14 299** *eP* **P** **16 37 31.7 +0.1**
baz=299
SGDS Sogindy **50.14 299** *eP* **P** **16 37 31.6 +0.1**
KBK Karagaybulak **50.16 298** P **P** **16 37 32.5 +0.6**
SNR=94
CHMS Chumysh **50.19 298** P **P** **16 37 32.2 +0.3**
SNR=20
N25K Chitina, Valde **50.21 37** P **P** **16 37 32.6 +0.8**
baz=277
SCRK Sand Creek **50.23 34** IAmb IAmb 16 37 55.7
comp=Z,95nm,1.7s
SCRK Sand Creek **50.23 34** P **P** **16 37 32.7 +0.7**
baz=276,SNR=20
USP Ospenovka **50.28 299** P **P** **16 37 32.9 +0.3**
SNR=41
BMRM Bremner River **50.29 37** P **P** **16 37 32.6 +0.2**
baz=278
FRU1 Bishkek **50.33 298** IAMs_20 IAMs_20 17 00 00.1
comp=Z,4µm,20.0s
OTUK Ortayu **50.34 306** P **P** **16 37 32.1 -0.9**
J26L Joseph Creek **50.37 33** P **P** **16 37 32.0 -0.9**
baz=276
BVA0 Borovoye Array **50.42 312** *i* P **P** **16 37 33.0 -0.5**
BVAR Borovoye Array **50.42 312** P **P** **16 37 33.6 +0.1**
comp=Z,26nm,0.6s,baz=76,slow=7.9,SNR=162
BVAR LR LR 16 59 58.2
comp=Z,5µm,19.4s,baz=82,slow=37
comp=Z,26nm,0.6s
KSH Kashi **50.44 294** P **P** **16 37 38.0 +4.1**
KSH sP sP 16 37 50.3 +2.8
KSH S **S** **16 44 51.3 +5.9**
KSH ScS **ScS** **16 47 22.0 -0.6**
KSH pmax pmax
comp=Z,40nm,1.3s
KSH pmax pmax
comp=Z,810nm,4.3s
KSH LR LR
comp=Z,3µm,17.2s
KSH LR LR
comp=Z,4µm,16.5s
KSH LR LR
comp=Z,6µm,16.5s
KSH Kashi **50.44 294** S **S** **16 44 51.5 +6.1**
I26K Coal Creek Min **50.46 32** P **P** **16 37 33.0 -0.6**
baz=275
BRVK Borovoye **50.48 312** P **P** **16 37 33.6 -0.3**
BRVK IAmb IAmb 16 37 34.8
comp=Z,70nm,1.1s
BRVK Borovoye **50.48 312** *ce* P **P** **16 37 33.9 0.0**
BRVK pmax pmax
comp=Z,156nm,2.5s
BRVK Borovoye **50.48 312** ⇑P **P** **16 37 33.9 0.0**
BRVK pP **sP** **16 37 47.7 +0.3**
AAK Ala-Archa **50.48 298** P **P** **16 37 34.6 +0.3**
SNR=44
AAK Ala-Archa **50.48 298** P **P** **16 37 34.0 -0.3**
AAK IAmb IAmb 16 37 37.6
comp=Z,33nm,0.9s
AAK Ala-Archa **50.48 298** *ce* P **P** **16 37 34.3 0.0**
AAK pmax pmax
comp=Z,70nm,1.7s
AAK Ala-Archa **50.48 298** LR LR 17 00 14.5
comp=Z,6µm,20.0s,baz=72,slow=38
AAK Ala-Archa **50.48 298** ⇑P **P** **16 37 34.5 +0.3**
KAIM Kayak Island **50.53 39** P **P** **16 37 33.5 -0.6**
baz=279
UCH Uchtor **50.60 298** P **P** **16 37 36.2 +0.7**
SNR=25
GLB Gilahina Butte **50.61 37** IAmb IAmb 16 38 30.8
comp=Z,113nm,1.9s
L26K Log Cabin Wild **50.62 35** IAmb IAmb 16 37 38.8
comp=Z,46nm,0.9s
L26K Log Cabin Wild **50.62 35** P **P** **16 37 35.9 +1.1**
baz=277,SNR=17
KDU Kakadu **50.72 192** P **P** **16 37 36.4 +0.4**
DRS Darwin Rock St **50.75 194** P **P** **16 37 34.9 -1.3**
EKS2 Erkin-Say **50.98 298** P **P** **16 37 38.3 +0.3**
SNR=41
MCARA McCarthy VSAT **50.99 37** IAmb IAmb 16 38 15.0
comp=Z,51nm,1.1s
MCARA Mccarthy VSAT **50.99 37** P **P** **16 37 39.1 +1.5**
baz=278
CRQM Cirque **51.03 38** IAmb IAmb 16 37 42.6
comp=Z,112nm,1.4s
H27K Steamboat Moun **51.04 30** P **P** **16 37 40.4 +2.4**
baz=276,SNR=17
CRQE Cirque **51.05 38** P **P** **16 37 38.5 +0.3**
baz=279,SNR=6.2
BGLC Bering Glacier **51.06 38** P **P** **16 37 40.1 +2.0**
baz=279
K27K Chicken **51.06 33** IAmb IAmb 16 37 41.8
comp=Z,61nm,1.2s
K27K Chicken **51.06 33** P **P** **16 37 39.4 +1.3**
baz=277
I27K Kandik River **51.07 31** P **P** **16 37 39.9 +1.7**
baz=276
MTN Manton Dam **51.11 193** P **P** **16 37 39.0 +0.1**
COEN Coen **51.25 178** IAmb IAmb 16 37 41.2
comp=Z,53nm,0.8s
COEN Coen **51.25 178** P **P** **16 37 41.1 +1.1**
PLAI Plampang **51.30 211** P **P** **16 37 41.3 +0.9**
PLAI Plampang **51.30 211** P **P** **16 37 39.0 -1.4**
comp=Z,147nm,1.2s,comp=Z,2µm
L27K Beaver Creek, **51.30 35** IAmb IAmb 16 37 43.9
comp=Z,40nm,1.1s
L27K Beaver Creek, **51.30 35** P **P** **16 37 40.8 +0.8**
baz=278
EGAK Eagle **51.36 32** IAmb IAmb 16 37 44.2
comp=Z,93nm,1.8s
EGAK Eagle **51.36 32** P **P** **16 37 42.3 +2.0**
baz=277,SNR=8.5
M27K Edge Creek, AK **51.38 35** P **P** **16 37 42.2 +1.5**
baz=279,SNR=8.5
ISLE Juniper Island **51.44 38** IAMs_20 IAMs_20 16 56 59.3
comp=Z,2µm,20.0s
PPBI Pangkal Pinang **51.47 228** P **P** **16 37 42.2 +0.5**
comp=Z,89nm,1.2s,comp=Z,4µm
F28M Old Crow **51.55 29** IAmb IAmb 16 37 46.8
comp=Z,116nm,1.8s
F28M Old Crow **51.55 29** P **P** **16 37 43.0 +1.3**
baz=276,SNR=18
TWSI Taliwang, Sumb **51.59 212** P **P** **16 37 41.6 -1.0**
comp=Z,160nm,1.2s,comp=Z,2µm
MESA MESA **51.71 38** P **P** **16 37 43.8 +0.6**
baz=280
SRBI Singaraja **51.73 214** P **P** **16 37 44.2 +0.6**
comp=Z,177nm,1.5s,comp=Z,3µm,comp=Z,3µm
I28M Mint Creek **51.79 31** P **P** **16 37 44.4 +0.8**
baz=278,SNR=24
BVCY Beaver Creek **51.84 35** P **P** **16 37 45.2 +1.3**
baz=280
CTG Chitna Glacier **51.86 37** P **P** **16 37 45.6 +1.3**
baz=280
ABJI Asem Bagus **51.92 216** P **P** **16 37 47.2 +2.2**
comp=Z,194nm,1.2s
ARSB Arslanbob **51.98 297** IAMs_20 IAMs_20 17 00 36.6
comp=Z,2µm,22.0s
GRJI Gresik **51.99 218** P **P** **16 37 46.1 +0.5**
comp=Z,565nm,1.0s,comp=Z,5µm
YUK3 Moose Creek **52.14 36** P **P** **16 37 47.2 +0.8**
baz=280
BLJI Banyuglugur **52.18 216** P **P** **16 37 47.7 +0.8**
comp=Z,77nm,0.6s
E29M Blow River **52.19 28** IAmb IAmb 16 37 51.5
comp=Z,100nm,1.4s
E29M IAMs_20 IAMs_20 17 01 48.7
comp=Z,2µm,20.0s
E29M Blow River **52.19 28** P **P** **16 37 47.2 +0.7**
baz=277
DAWY Dawson **52.23 33** P **P** **16 37 48.2 +1.3**
baz=279,SNR=7.7
DNP Denpasar **52.26 214** P **P** **16 37 48.2 +0.7**
comp=Z,279nm,1.5s,comp=Z,12µm
PSI Prapat **52.28 239** P **P** **16 37 50.0 +2.0**
H29M Whitestone **52.31 30** IAmb IAmb 16 38 13.1
comp=Z,83nm,1.4s
H29M Whitestone **52.31 30** P **P** **16 37 49.5 +2.1**
baz=279,SNR=11
JAGI Jajag, Banyuwa **52.55 215** P **P** **16 37 50.8 +1.1**
JAGI Jajag, Banyuwa **52.55 215** P **P** **16 37 52.2 +2.5**
comp=Z,139nm,1.2s,comp=Z,1µm
YUK8 Steele Glacier **52.55 37** P **P** **16 37 50.6 +1.0**
baz=281
PINM Pinnacle **52.56 38** P **P** **16 37 50.4 +1.0**
baz=282
KCSI Kotacane, Aceh **52.56 241** P **P** **16 37 49.1 -0.8**
comp=Z,44nm,0.9s,comp=Z,2µm
DZA Taraz **52.60 299** *eP* **P** **16 37 50.1 +0.2**
baz=299
DZA Taraz **52.60 299** *eP* **P** **16 37 50.1 +0.2**
J29N Klondike Camp **52.67 32** IAmb IAmb 16 37 54.0
comp=Z,16nm,0.7s
J29N Klondike Camp **52.67 32** P **P** **16 37 50.5 +0.3**
baz=280
BKNI Bangkinang **52.70 235** P **P** **16 37 52.1 +1.2**
BKNI Bangkinang **52.70 235** P **P** **16 37 52.3 +1.4**
comp=Z,199nm,1.1s,comp=Z,2µm
GMJI Gumukmas **52.71 216** P **P** **16 37 51.3 +0.4**
comp=Z,105nm,1.1s
NGJI Ngawi **52.88 219** P **P** **16 37 54.2 +2.0**
comp=Z,143nm,1.1s
M29M Somme Creek **52.93 35** P **P** **16 37 53.8 +1.6**
baz=281
EPYK Eagle Plains **52.95 30** P **P** **16 37 53.2 +1.0**
baz=280,SNR=47
L29M L29M **52.95 34** P **P** **16 37 54.1 +1.9**
baz=281
MLSI Meulaboh, Aceh **52.99 243** P **P** **16 37 52.3 -0.8**
comp=Z,70nm,0.7s
G30M tAoh Zraii Nji **53.04 29** P **P** **16 37 54.1 +1.2**
baz=280
PNL Peninsula **53.07 39** P **P** **16 37 54.3 +1.2**
baz=283
YUK4 Talbot Arm **53.07 36** P **P** **16 37 56.1 +2.7**
baz=282
K29M Barlow Dome **53.08 33** P **P** **16 37 54.6 +1.3**
baz=281
F30M Barrier River **53.10 28** P **P** **16 37 55.8 +2.6**
baz=280
KK31 Karatay Array **53.10 300** *i* P **P** **16 37 53.2 -0.4**
SMRI Semarang **53.13 220** P **P** **16 37 56.4 +2.4**
SMRI Semarang **53.13 220** P **P** **16 37 54.7 +0.7**
comp=Z,125nm,1.1s
PWJI Pagerwojo **53.28 218** P **P** **16 37 54.1 -1.0**
comp=Z,234nm,0.8s,comp=Z,2µm
YUK6 Outpost Mounta **53.29 37** P **P** **16 37 56.8 +1.8**
baz=283
I30M Mount Dempster **53.30 31** P **P** **16 37 56.0 +1.1**
baz=281
O29M Mount Kennedy **53.33 38** P **P** **16 37 56.1 +0.9**
baz=283
J30M Hart River **53.44 32** P **P** **16 37 57.9 +2.0**
baz=282
BRLS Boroldav **53.59 300**⇑ *i* P **P** **16 37 58.6 +1.4**
comp=Z,55nm,1.6s,baz=300
BRLS Boroldav **53.59 300** *c i* P **P** **16 37 58.6 +1.4**
BRLS pmax pmax
comp=Z,55nm,1.6s
M30M Minto, Yukon **53.66 35** IAmb IAmb 16 38 01.7
comp=Z,45nm,1.1s
M30M Minto, Yukon **53.66 35** P **P** **16 37 59.5 +2.1**
baz=283,SNR=6.9
HYT Haines Junctio **53.73 37** IAmb IAmb 16 38 03.4
comp=Z,82nm,1.2s
HYT Haines Junctio **53.73 37** P **P** **16 37 59.8 +1.7**
baz=283,SNR=10
IUG Iuzhnay **53.76 299**⇑ *i* P **P** **16 37 59.0 +0.4**
baz=299
IUG Iuzhnay **53.76 299** *c i* P **P** **16 37 59.0 +0.4**
G31M Satah River **53.80 29** IAmb IAmb 16 38 21.6
comp=Z,140nm,1.9s
G31M Satah River **53.80 29** P **P** **16 37 59.8 +1.4**
baz=282,SNR=17
INK Inuvik **53.81 27** IAmb IAmb 16 38 01.8
comp=Z,30nm,0.9s
INK Inuvik **53.81 27** P **P** **16 37 59.5 +1.1**
baz=281,SNR=25
INK Inuvik **53.81 27** LR LR 17 03 11.6
comp=Z,924nm,20.8s,baz=312,slow=38
UGM Wanagama **53.82 220** P **P** **16 38 00.6 +1.5**
UGM Wanagama **53.82 220** P **P** **16 37 58.7 -0.4**
comp=Z,418nm,1.2s,comp=Z,6µm
MAYO Mayo, Yukon **53.84 33** IAmb IAmb 16 38 02.8
comp=Z,61nm,1.0s
MAYO Mayo, Yukon **53.84 33** P **P** **16 38 00.6 +1.9**
baz=283
P29M Windy Craggy **53.90 38** P **P** **16 38 00.8 +1.6**
baz=284
F31M Tsiigehtchic **53.90 28** IAmb IAmb 16 38 03.0
comp=Z,51nm,1.1s
F31M Tsiigehtchic **53.90 28** P **P** **16 38 00.2 +1.2**
baz=282,SNR=20
KPJI Karang Pucung **54.15 222** P **P** **16 38 01.3 -0.2**
comp=Z,187nm,1.1s,comp=Z,2µm
P30M Million Dollar **54.16 38** P **P** **16 38 02.3 +1.2**
baz=284
GSI Gunungsitoli **54.29 239** P **P** **16 38 04.0 +1.4**
GSI Gunungsitoli **54.29 239** P **P** **16 38 02.8 +0.2**
comp=Z,277nm,1.4s,comp=Z,3µm
O30N Mendenhall **54.41 37** P **P** **16 38 03.9 +1.0**
baz=285
LEM Lembang **54.43 223** LR LR 17 02 34.9
comp=Z,827nm,19.7s,baz=26,slow=37
LEM Lembang **54.43 223** P **P** **16 38 04.1 +0.4**
comp=Z,275nm,1.1s,comp=Z,3µm
CBJI Citeko **54.52 224** P **P** **16 38 06.5 +2.3**
comp=Z,93nm,1.0s
PLBC Pleasant Camp **54.62 38** P **P** **16 38 06.3 +1.9**
baz=285
DBJI Dramaga **54.68 224** P **P** **16 38 06.5 +1.1**
comp=Z,99nm,1.0s
NIL Nilore **54.71 288** P **P** **16 38 05.5 0.0**
NIL Nilore **54.71 288** P **P** **16 38 05.5 0.0**
NIL pmax pmax
comp=Z,87nm,0.8s
NIL Nilore **54.71 288** P **P** **16 38 06.1 +0.6**
CMJI Cimerak **54.79 222** P **P** **16 38 06.8 +0.7**
comp=Z,74nm,1.1s
PBSI Pulau Batu **54.81 237** P **P** **16 38 06.7 +0.4**
comp=Z,107nm,1.1s
M31M Drury Creek, Y **54.84 35** IAmb IAmb 16 38 09.9
comp=Z,7nm,1.1s
M31M Drury Creek, Y **54.84 35** P **P** **16 38 07.0 +1.0**
baz=285,SNR=9.2
SVE Sverdlovsk **54.94 318** *d i* P **P** **16 38 07.5 +0.7**
SVE *eS* **S** **16 45 52.0 +6.0**
SVE pmax pmax
comp=Z,188nm,1.1s
SVE MLR MLR
comp=Z,7µm,18.0s
SVE MLR MLR
comp=E,5µm,18.0s
BBJI Bungbulang **54.94 223** P **P** **16 38 08.8 +1.5**
LWLI Liwa **54.98 228** P **P** **16 38 08.4 +0.7**
comp=E,177nm,0.8s,comp=E,2µm
WHY Whitehorse **55.02 37** IAmb IAmb 16 38 11.5
comp=Z,34nm,1.0s
WHY Whitehorse **55.02 37** P **P** **16 38 08.1 +0.7**
baz=286,SNR=5.9
S31K Pelican **55.09 40** P **P** **16 38 09.1 +1.3**
baz=286
CNJI Cibinong **55.10 223** P **P** **16 38 09.7 +1.3**
comp=Z,52nm,1.1s,comp=Z,424nm
MNAI Manna **55.12 230** P **P** **16 38 09.0 +0.5**
comp=Z,168nm,1.1s
SKAG Skagway **55.13 38** P **P** **16 38 09.1 +1.1**
baz=286
KASI Kota Agung **55.13 227** P **P** **16 38 06.8 -1.8**
comp=Z,85nm,1.0s,comp=Z,863nm
SKJI Sukabumi **55.16 224** P **P** **16 38 09.8 +1.0**
comp=Z,182nm,0.8s
R31K City Hall, Gus **55.22 39** P **P** **16 38 11.0 +2.4**
baz=286
SISI Saibi **55.22 236** P **P** **16 38 10.3 +1.0**
comp=Z,71nm,0.8s,comp=Z,872nm
FARO Faro, Yukon **55.30 35** P **P** **16 38 11.2 +1.8**
baz=286,SNR=6.6
MTSU Mount Surprise **55.44 177** P **P** **16 38 11.5 +0.8**
A36M Sachs Harbour **55.68 22** P **P** **16 38 13.6 +1.7**
baz=281,SNR=22
PPSI Pulau Pagai **55.71 234** P **P** **16 38 13.7 +0.9**
comp=Z,192nm,1.1s,comp=Z,2µm
SIMJ Simiganj **55.79 295** IAMs_20 IAMs_20 17 03 45.8
comp=Z,2µm,18.0s
SIMJ Simiganj **55.79 295** P **P** **16 38 13.6 +0.2**
SIT Sitka **55.83 41** P **P** **16 38 14.1 +1.1**
baz=288
R32K Eaglecrest **55.87 39** IAmb IAmb 16 38 41.8
comp=Z,79nm,1.4s
R32K Eaglecrest **55.87 39** P **P** **16 38 14.7 +1.2**
baz=287
P32M Atlin **55.88 38** P **P** **16 38 16.0 +2.4**
baz=287
JIS Juneau Island **55.94 39** P **P** **16 38 15.3 +1.4**
P33M Teslin, Yukon **56.13 37** IAmb IAmb 16 38 19.5
comp=Z,51nm,1.1s
P33M Teslin, Yukon **56.13 37** P **P** **16 38 17.6 +2.2**
baz=288,SNR=8.5
ARU Arti **56.15 318** P **P** **16 38 15.4 -0.1**
ARU Arti **56.15 318** *c i* P **P** **16 38 15.6 +0.2**
ARU 16 40 19.5
ARU S **S** **16 46 03.9 +1.7**
ARU SS **SS** **16 49 48.0 -0.3**
ARU pmax pmax
comp=Z,121nm,0.7s
ARU MLR MLR
comp=Z,6µm,18.0s
ARU Arti **56.15 318** P **P** **16 38 15.7 +0.2**
comp=Z,91nm,0.5s,baz=82,slow=5.2,SNR=181
ARU LR LR 17 04 36.9
comp=Z,6µm,18.6s,baz=64,slow=38
comp=Z,91nm,0.5s
ARU Arti **56.15 318**⇑ P **P** **16 38 15.6 +0.2**
TV1H Townsville Har **56.70 174** P **P** **16 38 20.1 +0.4**
Q32M Nakina River **56.78 38** P **P** **16 38 22.2 +2.0**
baz=289
C36M Paulatuk **56.85 25** IAmb IAmb 16 38 23.3
comp=Z,63nm,0.9s
C36M Paulatuk **56.85 25** P **P** **16 38 21.4 +1.2**
baz=289,SNR=14
UWB Uwekahuna B **57.22 90** IAMs_20 IAMs_20 16 54 02.6
comp=Z,2µm,21.0s
NPH North Pit **57.22 90** IAMs_20 IAMs_20 16 55 17.7

comp=Z,2µm,19.0s
BYL Byron's Ledge 57.24 90 IAMs_20 IAMs_20 17 03 52.1
comp=Z,2µm,22.0s
R33M Jennings River 57.27 37 P **P** **16 38 25.2 +1.7**
baz=289
U33K Whale Pass 57.28 42 P **P** **16 38 24.5 +1.0**
baz=290
NPOC North of Pu'u 57.37 90 IAMs_20 IAMs_20 16 55 03.6
comp=Z,3µm,22.0s
JCUZ Jacuzzi 57.38 90 IAMs_20 IAMs_20 17 02 22.9
comp=Z,2µm,20.0s
FITZ Fitzroy Crossi 57.39 198 IAmb IAmb 16 38 42.9
comp=Z,59nm,1.6s
FITZ Fitzroy Crossi 57.39 198 P **P** **16 38 25.5 +0.9**
WB0 Warramunga Arr 57.43 188 IAMs_20 IAMs_20 17 00 20.1
comp=Z,2µm,22.0s
WB9 Warramunga Arr 57.45 188 IAMs_20 IAMs_20 17 00 19.7
comp=Z,2µm,20.0s
WB8 Warramunga Arr 57.47 188 IAMs_20 IAMs_20 17 00 57.3
comp=Z,2µm,21.0s
KBL Kabul 57.48 291 P **P** **16 38 24.4 -1.1**
KBL IAMs_20 IAMs_20 17 04 27.7
comp=Z,2µm,20.0s
KBL Kabul 57.48 291 P **P** **16 38 24.4 -1.1**
KBL pmax pmax
comp=Z,150nm,1.4s
KBL MLR MLR
comp=Z,2µm,20.0s
CTAO Charters Tower 57.48 175 P **P** **16 38 24.9 -0.3**
CTAO Charters Tower 57.48 175 P **P** **16 38 25.1 -0.1**
CTAO Charters Tower 57.48 175 P **P** **16 38 25.0 -0.3**
CTAO pmax pmax
comp=Z,19nm,0.7s
CTAO MLR MLR
comp=Z,900nm,22.0s
CTAO Charters Tower 57.48 175 P **P** **16 38 25.0 -0.3**
WB7 Warramunga Arr 57.50 188 IAMs_20 IAMs_20 17 00 22.1
comp=Z,2µm,22.0s
CRAG Craig 57.50 42 P **P** **16 38 26.1 +1.0**
baz=290
WB5 Warramunga Arr 57.54 188 IAMs_20 IAMs_20 17 00 22.1
comp=Z,2µm,22.0s
WB4 Warramunga Arr 57.56 188 IAMs_20 IAMs_20 17 00 12.8
comp=Z,2µm,22.0s
WRAK Wrangell Islan 57.58 41 P **P** **16 38 27.1 +1.5**
baz=290
WC2 Warramunga Arr 57.59 188 IAMs_20 IAMs_20 17 00 13.3
comp=Z,2µm,22.0s
WC1 Warramunga Arr 57.59 188 IAMs_20 IAMs_20 17 00 24.4
comp=Z,2µm,22.0s
WRAB Tennant Creek 57.59 188 P **P** **16 38 25.4 -0.6**
WRAB Tennant Creek 57.59 188 P **P** **16 38 25.4 -0.6**
WRAB pmax pmax
comp=Z,256nm,1.7s
WRAB MLR MLR
comp=Z,100nm,22.0s
WR8 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 24.7
comp=Z,2µm,22.0s
WR9 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 12.7
comp=Z,2µm,22.0s
WR7 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 46.8
comp=Z,1µm,18.0s
WR6 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 12.8
comp=Z,2µm,22.0s
WB2 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 20.8
comp=Z,2µm,18.0s
WR5 Warramunga Arr 57.60 188 IAMs_20 IAMs_20 17 00 13.8
comp=Z,2µm,22.0s
WR1 Warramunga Arr 57.61 188 IAMs_20 IAMs_20 17 00 24.8
comp=Z,2µm,22.0s
WR3 Warramunga Arr 57.61 188 IAMs_20 IAMs_20 17 00 24.9
comp=Z,2µm,22.0s
WR4 Warramunga Arr 57.61 188 IAMs_20 IAMs_20 17 02 52.8
comp=Z,1µm,20.0s
WRA Warramunga Arr 57.61 188 P **P** **16 38 25.5 -0.6**
comp=Z,34nm,0.6s,baz=6.9,slow=7.4,SNR=252
WRA S **S** **16 46 18.9 -3.1**
comp=Z,3.3nm,1.2s,baz=11,slow=12,SNR=5.8
WRA LR LR 17 02 34.7
comp=Z,1µm,21.1s,baz=358,slow=35
comp=Z,34nm,0.6s
WR2 Warramunga Arr 57.61 188 IAMs_20 IAMs_20 17 00 24.9
comp=Z,2µm,22.0s
WC3 Warramunga Arr 57.62 188 IAMs_20 IAMs_20 17 00 14.2
comp=Z,2µm,22.0s
WC4 Warramunga Arr 57.62 188 IAMs_20 IAMs_20 17 02 34.3
comp=Z,1µm,20.0s
S34M Telegraph Cree 57.69 39 IAmb IAmb 16 38 45.3
comp=Z,62nm,1.4s
S34M Telegraph Cree 57.69 39 P **P** **16 38 27.1 +0.8**
baz=290
TGTN Hyland Airport 57.81 34 P **P** **16 38 28.3 +1.1**
baz=290,SNR=12
AB31 Akbulak array 57.81 310 *i* P **P** **16 38 26.8 -0.6**
ABKAR Akbulak array 57.81 310 IAmb IAmb 16 38 27.8
comp=Z,47nm,0.7s
QIS Mount Isa 57.83 182 P **P** **16 38 27.6 -0.1**
DLBC Dease Lake 58.06 38 IAmb IAmb 16 38 33.6
comp=Z,44nm,1.1s
DLBC Dease Lake 58.06 38 P **P** **16 38 31.0 +1.9**
baz=291
DLBC Dease Lake 58.06 38 LR LR 17 06 44.2
comp=Z,136nm,18.9s,baz=300,slow=39
WTLY Watson Lake, Y 58.06 36 IAmb IAmb 16 38 32.8
comp=Z,49nm,1.3s
WTLY Watson Lake, Y 58.06 36 P **P** **16 38 30.3 +1.4**
baz=291
V35K Ketchikan 58.36 42 P **P** **16 38 32.3 +1.2**
baz=291
T35M Bob Quinn 58.47 40 P **P** **16 38 33.4 +1.6**
baz=291,SNR=7.3
HYB Hyderabad 58.48 268 *e*P **P** **16 38 32.4 -0.1**
HYB *es*P **sP** **16 38 45.9 -0.4**
HYB *e*PP **PP** **16 40 42.7 +0.6**
HYB *e*S **S** **16 46 34.9 +0.9**
XMI Christmas Isla 58.49 223 P **P** **16 38 33.6 +1.2**
AKTO Aktyubinsk 58.53 312 P **P** **16 38 31.9 -0.4**
comp=Z,34nm,0.8s,baz=69,slow=5.9,SNR=55
AKTO LR LR 17 04 56.2
comp=Z,4µm,19.2s,baz=68,slow=37
comp=Z,34nm,0.8s
XMIS Christmas Isla 58.53 223 P **P** **16 38 33.9 +1.2**
U35K Hyder 58.98 41 P **P** **16 38 36.3 +1.0**
baz=292
WRGLY Wrigley 59.27 32 IAmb IAmb 16 38 55.5
comp=Z,26nm,0.8s
WRGLY Wrigley 59.27 32 P **P** **16 38 39.1 +1.9**
baz=293,SNR=15
ALE Alert 59.58 4 P **P** **16 38 39.7 +0.5**
ALE pP **sP** **16 38 52.5 -0.4**
HOPEN Hopen 59.61 346 *e*P **P** **16 38 40.1 +0.8**
HOPEN *e*S **S** **16 46 49.8 +2.9**
KIRV Kirov 60.00 323 *ce*P **P** **16 38 42.5 +0.2**
KIRV Kirov 60.00 323 P **P** **16 38 42.7 +0.4**
comp=Z,120nm,0.8s,baz=75,slow=2.8,SNR=60
KIRV LR LR 17 07 20.5
comp=Z,2µm,19.4s,baz=57,slow=39
comp=Z,120nm,0.8s
SPA0 Spitsbergen Ar 60.07 349 *e*P **P** **16 38 43.1 +0.5**
SPA0 *e*S **S** **16 46 54.5 +1.6**
SPITS Spitsbergen Ar 60.07 349 P **P** **16 38 42.4 -0.2**
comp=Z,26nm,0.9s,baz=61,slow=10,SNR=8.0
SPITS LR LR 17 05 59.2
comp=Z,3µm,21.4s,baz=6.0,slow=37
comp=Z,26nm,0.9s
KBS Kingsbay 60.20 350 IAMs_20 IAMs_20 17 04 02.1
comp=Z,2µm,18.0s
TOAD Toad River Com 60.22 37 P **P** **16 38 45.7 +1.8**
baz=294
KOTAN Kotaneelee Air 60.25 35 P **P** **16 38 45.7 +1.6**
baz=294
HSPB Hornsund (broa 61.00 348 *e*P **P** **16 38 49.8 +0.9**
HSPB *e*L L 17 06 48.5
comp=Z,3µm,21.0s
RK1H Rockhampton Ha 61.17 171 P **P** **16 38 51.1 +0.5**
AS01 Alice Springs 61.33 188 P **P** **16 38 52.0 +0.2**
ASAR Alice Springs 61.33 188 P **P** **16 38 51.4 -0.4**
ASAR Alice Springs 61.33 188 P **P** **16 38 51.5 -0.3**
comp=Z,28nm,0.8s,baz=9.5,slow=6.7,SNR=256
ASAR LR LR 17 05 00.2
comp=Z,1µm,21.9s,baz=2.0,slow=36
ASAR PKP2bc 17 08 10.6
comp=Z,1.0nm,0.9s,baz=186,slow=3.1,SNR=7.1
comp=Z,28nm,0.8s
BBB Bella Bella 61.51 44 LR LR 17 04 02.6
comp=Z,208nm,21.9s,baz=297,slow=34
KOUNC Koumac, New Ca 61.56 156 P **P** **16 38 54.2 +0.8**
KOUNC Koumac, New Ca 61.56 156 P **P** **16 38 55.2 +1.9**
LVZ Lovozero 61.75 336 *i* P **P** **16 38 53.2 -1.0**
LVZ pmax pmax
comp=Z,174nm,3.0s
MBWA Marble Bar 61.97 203 P **P** **16 38 55.6 -0.4**
MBWA Marble Bar 61.97 203 P **P** **16 38 56.8 +0.7**
MBWA Marble Bar 61.97 203 P **P** **16 38 56.3 +0.2**
RES Resolute Bay 62.04 15 IAmb IAmb 16 38 58.2
comp=Z,40nm,0.9s
BJO1 Bjornoya 62.04 345 *e*P **P** **16 38 56.6 +0.7**
BJO1 *e*S **S** **16 47 19.6 +1.7**
VADS Vadso 62.18 339 *e*P **P** **16 38 56.9 0.0**
VADS *e*S **S** **16 47 22.6 +2.8**
PSAC2 Pilbara Seismi 62.29 203 IAMs_20 IAMs_20 17 05 09.9
comp=Z,825nm,19.0s
PSA00 Pilbara Seismi 62.32 203 P **P** **16 38 58.1 -0.3**
PSA00 Pilbara Seismi 62.32 203 P **P** **16 38 58.6 +0.2**
APA Apatity 62.33 336 ⇓ *i* P **P** **16 38 56.5 -1.5**
APA pmax pmax
comp=Z,33nm,0.8s
APA MLR MLR
comp=Z,5µm,17.0s
PALK Pallekele 62.74 258 P **P** **16 39 01.4 -0.2**
PALK IAmb IAmb 16 39 15.1
comp=Z,55nm,1.3s
PALK Pallekele 62.74 258 P **P** **16 39 01.4 -0.2**
PALK pmax pmax
comp=Z,55nm,1.3s
PALK MLR MLR
comp=Z,800nm,19.0s
PALK Pallekele 62.74 258 LR LR 17 09 15.1
comp=Z,710nm,19.5s,baz=151,slow=39
LIFNC LIFOU 62.78 153 IAMs_20 IAMs_20 17 02 17.9
comp=Z,1µm,22.0s
EIDS Eidsvold 63.20 171 IAmb IAmb 16 39 05.5
comp=Z,33nm,0.8s
EIDS IAMs_20 IAMs_20 17 04 14.9
comp=Z,1µm,21.0s
EIDS Eidsvold 63.20 171 P **P** **16 39 05.6 +1.4**
YKA Yellowknife Ar 63.23 30 *ce*P **P** **16 39 04.5 +0.4**
YKA pmax pmax
comp=Z,8.0nm,0.8s
YKA Yellowknife Ar 63.23 30 P **P** **16 39 04.0 0.0**
comp=Z,8.2nm,0.8s,baz=302,slow=6.9,SNR=78
YKA PKP2bc 17 08 10.3
comp=Z,0.5nm,1.0s,baz=138,slow=3.9,SNR=4.3
YKA LR LR 17 10 14.9
comp=Z,419nm,19.9s,baz=298,slow=39
comp=Z,8.2nm,0.8s
HAMF Hammerfest 63.42 341 *e*P **P** **16 39 05.1 -0.1**
HAMF *e*S **S** **16 47 37.2 +1.8**
KLMR Klimovskoe 63.47 328 *e*P P 16 39 00.9 -4.7
KLMR S S 16 47 27.2 -9.0
KLMR SS **SS** **16 51 43.0 +0.4**
KLMR pmax pmax
comp=Z,153nm,1.8s
KLMR MLR MLR
comp=Z,4µm,21.0s
WRKA Warakurna 63.52 194 P **P** **16 39 06.9 +0.5**
BELG Belogornoye 63.61 317 *c i* P **P** **16 39 06.4 -0.3**
BELG pmax pmax
comp=Z,25nm,1.0s
BELG Belogornoye 63.61 317 P **P** **16 39 06.2 -0.5**
comp=Z,65nm,0.8s,baz=0.0,slow=7.1,SNR=37
BELG LR LR 17 08 47.5
comp=Z,3µm,18.2s,baz=55,slow=38
comp=Z,65nm,0.8s
ARA0 ARCESS Array S 63.61 339 *e*P **P** **16 39 06.5 0.0**
ARA0 IAmb IAmb 16 39 19.2
comp=Z,62nm,1.2s
ARA0 *e*S **S** **16 47 37.4 -0.4**
ARA0 IAMs_20 IAMs_20 17 07 37.4
comp=Z,4µm,22.3s
ARCES ARCESS Array B 63.61 339 P **P** **16 39 06.5 0.0**
ARCES IAmb IAmb 16 39 19.6
comp=Z,70nm,1.4s
ARCES ARCESS Array B 63.61 339 P **P** **16 39 06.5 0.0**
ARCES pmax pmax
comp=Z,70nm,1.5s
ARCES ARCESS Array B 63.61 339 P **P** **16 39 05.8 -0.7**
comp=Z,19nm,0.9s,baz=54,slow=6.6,SNR=29
ARCES LR LR 17 10 55.4
comp=Z,3µm,18.8s,baz=49,slow=40
comp=Z,19nm,0.9s
NOUC Port Laguerre 63.68 155 P **P** **16 39 08.8 +1.4**
DZM Mont Dzumac 63.70 154 P **P** **16 39 08.7 +1.0**
DZM Mont Dzumac 63.70 154 P **P** **16 39 10.0 +2.3**
DZM Mont Dzumac 63.70 154 *e*P **P** **16 39 07.2 -0.5**
comp=Z,134nm,1.6s
DZM Mont Dzumac 63.70 154 P **P** **16 39 08.7 +1.0**
comp=Z,21nm,0.9s,baz=352,slow=7.4,SNR=14
DZM LR LR 17 04 38.8
comp=Z,3µm,20.7s,baz=320,slow=34
comp=Z,21nm,0.9s
DZM Mont Dzumac 63.70 154 P **P** **16 39 09.5 +1.8**
QLP Quilpie 63.83 178 P **P** **16 39 09.5 +1.1**
ONTNC Ouen Toro 63.92 154 P **P** **16 39 10.4 +1.4**
HILA High Level 64.17 35 P **P** **16 39 10.7 +0.3**
PINNC Pines Island, 64.55 154 IAMs_20 IAMs_20 17 05 20.5
comp=Z,2µm,20.0s
TULEG Thule 64.56 8 IAMs_20 IAMs_20 17 09 17.1
comp=Z,1µm,20.0s
KTK1 Kautokeino 64.57 339 *e*P **P** **16 39 13.4 +0.6**
KTK1 *e*S **S** **16 47 50.8 +1.1**
INKA Innaminka 64.95 181 P **P** **16 39 16.8 +1.1**
JETT Jettan, Norway 64.98 341 *e*P **P** **16 39 15.5 0.0**
NEEM North Greenlan 65.00 3 *i* P **P** **16 39 15.5 -0.3**
NEEM IAmb IAmb 16 39 17.9
comp=Z,104nm,1.1s
OOD Oodnadatta 65.25 186 P **P** **16 39 18.4 +0.8**
TRO Tromso 65.31 341 *e*P **P** **16 39 16.3 -1.3**
VALR Valaam 66.71 331 *c i* P **P** **16 39 26.1 -0.6**
VALR pmax pmax
comp=Z,52nm,1.0s
AULRC Lightning Ridg 66.88 174 P **P** **16 39 28.7 +0.6**
MOS Moscow 67.00 323 *e*P **P** **16 39 25.8 -2.8**
MOS *e* 16 39 55.9
MOS *e*S **S** **16 48 17.9 -1.7**
MOS pmax pmax
comp=Z,600nm,2.0s
MOS pmax pmax
comp=Z,188nm,1.7s
MOS MLR MLR
comp=Z,2µm,15.0s
VRH Novokhopyorsk 67.38 318 *e*P **P** **16 39 29.4 -1.7**
VRH pmax pmax
comp=Z,141nm,1.8s
MEEK Meekatharra 67.44 202 P **P** **16 39 32.9 +1.2**
STEI Steigen 67.47 341 *e*P **P** **16 39 31.2 -0.2**
LCRK Leigh Creek 67.72 183 P **P** **16 39 34.6 +1.2**
LOF Lofoten 67.76 341 *e*P **P** **16 39 33.6 +0.3**
OBN Obninsk 67.84 323 P **P** **16 39 33.6 -0.4**
OBN IAMs_20 IAMs_20 17 12 41.8
comp=Z,2µm,20.0s
OBN Obninsk 67.84 323 *c i* P **P** **16 39 34.0 0.0**
OBN *i* 16 39 43.3
OBN *e* 16 39 58.6
OBN *e*S **S** **16 48 36.3 +6.5**
OBN *i* SS **SS** **16 52 52.7 +1.9**
OBN pmax pmax
comp=Z,171nm,1.7s
OBN MLR MLR
comp=Z,2µm,17.0s
OBN Obninsk 67.84 323 P **P** **16 39 33.9 0.0**
comp=Z,18nm,0.4s,baz=84,slow=1.2,SNR=21
OBN LR LR 17 11 38.7
comp=Z,2µm,18.1s,baz=45,slow=38
comp=Z,18nm,0.4s
FAUS Fauske 67.86 340 *e*P **P** **16 39 32.7 -1.1**
FAUS IAmb IAmb 16 39 35.7
comp=Z,49nm,0.8s
FAUS IAMs_20 IAMs_20 17 12 58.7
comp=Z,7µm,19.5s
MULG Mulgathing 67.86 187 P **P** **16 39 35.3 +1.1**
PUL Pulkovo 67.88 329 *ce*P **P** **16 39 33.7 -0.4**
PUL pmax pmax
comp=Z,100nm,0.7s
LPSR Galich'ya Gora 68.08 320 *e*P **P** **16 39 33.6 -1.9**
LPSR pmax pmax
comp=Z,70nm,0.8s
LPSR MLR MLR
comp=Z,8µm,18.0s
LTY Liberty 68.11 47 IAmb IAmb 16 39 54.9
comp=Z,73nm,1.6s
MAK Makhachkala 68.35 308 *e*P **P** **16 39 37.5 +0.1**
MAK *e*PPP PPP 16 43 50.0
MAK *e*S **S** **16 48 37.9 +1.7**
MAK *e*SS **SS** **16 52 58.2 -1.1**
MAK pmax pmax
comp=Z,196nm,0.9s
MAK MLR MLR
comp=Z,1µm,13.0s
VORR Voronezh 68.45 319 *e*P **P** **16 39 37.4 -0.4**
VORR pmax pmax
comp=Z,135nm,1.8s
FINES FINESS Array B 68.48 332 P **P** **16 39 37.9 0.0**
comp=Z,56nm,0.8s,baz=41,slow=7.9,SNR=135
FINES LR LR 17 13 08.6
comp=Z,2µm,18.1s,baz=32,slow=39
comp=Z,56nm,0.8s
H04A Detroit Lake 68.57 50 P **P** **16 39 38.6 -0.3**
H04A IAmb IAmb 16 39 42.7
comp=Z,48nm,1.1s
VSR Storozhevoye 68.72 319 *e*P **P** **16 39 37.5 -2.1**
VSR pmax pmax
comp=Z,40nm,0.6s
VSR MLR MLR
comp=Z,5µm,16.0s
EDM Edmonton 68.78 39 P **P** **16 39 40.0 +0.1**
EDM Edmonton 68.78 39 P **P** **16 39 40.0 +0.1**
EDM pmax pmax
comp=Z,88nm,1.3s
VORD Divnogorie 68.79 319 *e*P **P** **16 39 37.5 -2.5**
VORD pmax pmax
comp=Z,70nm,1.3s
VORD MLR MLR
comp=Z,6µm,19.0s
CMSA Cobar Meteorol 68.83 176 P **P** **16 39 41.6 +1.3**
MOR8 Moi Rana 68.97 340 *e*P **P** **16 39 39.6 -1.3**
STKA Stephens Creek 69.07 180 P **P** **16 39 41.9 +0.1**
STKA Stephens Creek 69.07 180 P **P** **16 39 42.8 +1.0**
STKA Stephens Creek 69.07 180 *i* P **P** **16 39 39.2 -2.6**
STKA Stephens Creek 69.07 180 P **P** **16 39 42.2 +0.5**
comp=Z,24nm,0.6s,baz=347,slow=6.8,SNR=68
STKA LR LR 17 09 04.7
comp=Z,1µm,21.8s,baz=356,slow=35
comp=Z,24nm,0.6s
FORT Forrest 69.17 193 P **P** **16 39 42.5 +0.2**
FORT IAMs_20 IAMs_20 17 09 10.2
comp=Z,1µm,22.0s
FORT Forrest 69.17 193 P **P** **16 39 43.7 +1.3**
C09A Chrisman Ranch 69.19 45 IAmb IAmb 16 40 11.9
comp=Z,44nm,1.4s
D08A Wollman Farm, 69.22 46 P **P** **16 39 43.2 +0.4**
D08A IAmb IAmb 16 39 57.7
comp=Z,36nm,1.4s
UPNV Upernavik 69.27 6 *i* P **P** **16 39 41.7 -0.9**
UPNV IAmb IAmb 16 39 44.8
comp=Z,22nm,1.1s
NEW Newport 69.58 44 IAmb IAmb 16 40 14.2
comp=Z,38nm,1.4s
NEW Newport 69.58 44 P **P** **16 39 46.0 +1.1**
baz=304
NEW Newport 69.58 44 LR LR 17 09 35.7
comp=Z,169nm,20.1s,baz=307,slow=35
AUDCS Dubbo College 69.72 174 P **P** **16 39 46.8 +1.0**
PINE Pine Mountain 69.80 50 IAmb IAmb 16 39 51.2
comp=Z,54nm,0.9s
L04D Klamath Falls 69.81 52 IAmb IAmb 16 39 50.9
comp=Z,49nm,0.9s
YBH Yreka Blue Hor 69.82 53 LR LR 17 02 51.0
comp=Z,266nm,21.4s,baz=302,slow=29
MEF Metsahovi 69.91 332 *e*P **P** **16 39 47.2 +0.5**
GOF Gofitskoye 69.95 312 *c i* P **P** **16 39 47.4 +0.1**
VSU Vasula 70.15 330 *ce*P **P** **16 39 47.8 -0.4**
VSU pmax pmax
comp=Z,128nm,1.7s
VSU Vasula 70.15 330 *e*P **P** **16 39 48.9 +0.7**
SUMG Summit 70.17 0 P **P** **16 39 48.7 0.0**
SUMG IAmb IAmb 16 39 52.3
comp=Z,40nm,0.9s
SUMG Summit 70.17 0 P **P** **16 39 48.7 0.0**
SUMG pmax pmax
comp=Z,40nm,0.9s
SUMG Summit 70.17 0 *i* P **P** **16 39 47.9 -0.8**
SUMG IAmb IAmb 16 39 52.0
comp=Z,56nm,1.1s
BBOO Buckleboo 70.20 185 IAmb IAmb 16 39 49.6
comp=Z,33nm,0.8s
BBOO IAMs_20 IAMs_20 17 08 34.5
comp=Z,2µm,22.0s
BBOO Buckleboo 70.20 185 P **P** **16 39 49.6 +0.9**
WHYH Whyalla 70.33 184 P **P** **16 39 50.0 +0.5**
RAF Rauma 70.33 333 *e*P **P** **16 39 49.7 +0.5**
K05A Summer Lake 70.41 51 IAmb IAmb 16 39 55.1
comp=Z,50nm,1.0s
NCK Nalchik 70.48 310 *i* P **P** **16 39 50.2 -0.4**
NCK pmax pmax
comp=Z,76nm,1.3s
MORW Morawa 70.51 204 P **P** **16 39 52.8 +2.1**
HTT Hallett 70.67 183 P **P** **16 39 52.6 +1.0**
KVAR Kislovodsk Arr 70.77 311 P **P** **16 39 53.4 +1.0**
comp=Z,26nm,1.0s,baz=90,slow=20,SNR=11
KVAR LR LR 17 13 25.1
comp=Z,1µm,19.5s,baz=285,slow=38
comp=Z,26nm,1.0s
KBZ Khabaz 70.77 311 *ce*P **P** **16 39 52.7 +0.4**
KBZ pmax pmax
comp=Z,140nm,2.0s
KBZ Khabaz 70.77 311 P **P** **16 39 52.6 +0.3**
comp=Z,29nm,0.9s,baz=58,slow=4.5,SNR=37
KBZ LR LR 17 15 55.0
comp=Z,2µm,18.4s,baz=55,slow=40
comp=Z,29nm,0.9s
KIV Kislovodsk 70.77 311 ⇑ P **P** **16 39 53.2 +0.7**
KIV Kislovodsk 70.77 311 P **P** **16 39 52.6 +0.1**
KIV IAMs_20 IAMs_20 17 13 20.0
comp=Z,1µm,20.0s
KIV Kislovodsk 70.77 311 *e*P **P** **16 39 52.9 +0.4**
KIV *e* 16 40 13.3
KIV *e*S **S** **16 49 05.0 +0.1**
KIV *e*SS **SS** **16 53 39.5 +2.8**
KIV pmax pmax
comp=Z,160nm,4.0s
KIV pmax pmax
comp=Z,100nm,1.1s
KIV MLR MLR
comp=Z,1µm,18.0s
KIV Kislovodsk 70.77 311 P **P** **16 39 52.9 +0.4**
NSS Namsos 70.90 339 *e*P **P** **16 39 51.6 -1.0**
WSAR Wadi Sarin 70.99 285 LR LR 17 16 35.5
comp=Z,880nm,18.7s,baz=90,slow=40
KMBL Kambalda 71.03 198 P **P** **16 39 53.7 -0.1**
ONI Oni 71.06 309 P **P** **16 39 53.8 -0.4**
ONI IAmb IAmb 16 40 09.4
comp=Z,62nm,1.0s
ONI IAMs_20 IAMs_20 17 14 21.8
comp=Z,2µm,18.0s
ONI Oni 71.06 309 P **P** **16 39 53.8 -0.4**
ONI pmax pmax
comp=Z,62nm,1.0s
ONI MLR MLR
comp=Z,2µm,18.0s
ERBR Yeremizino-Bor 71.08 313 *e*P **P** **16 39 54.7 +0.5**
ERBR *e**PP **sP** **16 40 06.2 -1.8**
ERBR *e*S **S** **16 49 11.6 +3.3**
ERBR pmax pmax
comp=Z,147nm,1.0s
MTSE Matsula 71.13 331 *e*P **P** **16 39 55.0 +0.8**
J08A Circle Bar Ran 71.54 49 IAmb IAmb 16 40 00.7
comp=Z,49nm,1.3s
LABN Labinsk 71.55 312 *e*P **P** **16 39 57.7 +0.7**
LABN *e**PP **pP** **16 40 07.8 +0.6**
LABN *e*S **S** **16 49 21.6 +7.9**
LABN pmax pmax
comp=Z,204nm,1.9s
GNI Garni 71.61 307 IAMs_20 IAMs_20 17 13 43.6
comp=Z,2µm,20.0s
GNI Garni 71.61 307 *i* P **P** **16 39 57.8 +0.1**
GNI pmax pmax
comp=Z,105nm,1.4s
GNI Garni 71.61 307 P **P** **16 39 57.5 -0.2**
comp=Z,18nm,1.0s,baz=59,slow=12,SNR=13
GNI LR LR 17 13 55.8
comp=Z,2µm,19.9s,baz=68,slow=38
comp=Z,18nm,1.0s
SCO Scoresbysund 71.63 354 *i* P **P** **16 39 57.6 +0.5**
BLDU Ballidu 71.74 203 P **P** **16 39 58.6 +0.5**
ORV Oroville 71.78 54 P **P** **16 39 58.6 +0.1**
ORV Oroville 71.78 54 P **P** **16 39 58.6 +0.1**

IZAR **Zarasai** 72.12 328 *e*P **P** **16 40 01.9 +1.7**
MNK **Minsk** 72.22 326 *i* P **P** **16 40 01.5 +0.7**
MNK *i* *PP **sP** **16 40 14.6 -0.1**
MNK *i* 16 42 42.2
MNK *i* PPP PPP 16 44 26.5
MNK *i* S **S** **16 49 21.6 +0.6**
MNK *i* *SS **sS** **16 49 44.1 +6.4**
MNK *i* 16 50 03.9
MNK *i* SS **SS** **16 53 58.1 +0.1**
MNK pmax pmax
comp=Z,45nm,0.9s
MNK pmax pmax
comp=N,23nm,0.9s
MNK pmax pmax
comp=E,11nm,0.9s
MNK MLR MLR
comp=E,380nm,15.0s
MNK MLR MLR
comp=Z,2µm,16.0s
MNK MLR MLR
comp=N,1µm,16.0s
ISAL Salakas 72.29 327 *e*P **P** **16 40 02.9 +1.6**
KLBR Kellerberrin 72.34 201 P **P** **16 40 02.2 +0.5**
TBLU Trondheim 72.37 339 *e*P **P** **16 40 00.3 -1.3**
SLIT Slitere, Latvi 72.47 331 *e*P **P** **16 40 02.3 +0.1**
VSLR Vesyoloye 72.64 312 *i* P **P** **16 40 03.3 -0.3**
VSLR pmax pmax
comp=Z,61nm,1.0s
SOC Sochi 72.75 312 *i* P **P** **16 40 02.4 -1.8**
SOC *e*PP **pP** **16 40 14.3 -0.1**
SOC *e* 16 42 42.3
SOC *e*PPP PPP 16 44 28.7
SOC *e*S **S** **16 49 24.2 -3.3**
SOC pmax pmax
comp=Z,67nm,1.3s
SOC MLR MLR
comp=Z,2µm,20.0s
BCA Borcka 72.84 309 ⇑P **P** **16 40 05.5 +0.7**
MPK Martis Peak 72.87 53 IAmb IAmb 16 40 09.4
comp=Z,42nm,1.2s
VSVD Vaisvydziai 72.94 329 *e*P **P** **16 40 05.6 +0.5**
MFID Camas Ranch 73.08 48 IAmb IAmb 16 40 09.7
comp=Z,46nm,1.4s
FFC Flin Flon 73.13 33 P **P** **16 40 06.5 +0.2**
FFC Flin Flon 73.13 33 P **P** **16 40 06.5 +0.2**
FFC pmax pmax
comp=Z,34nm,1.1s
PABE Paberze 73.24 328 *e*P **P** **16 40 07.7 +0.8**
PNTR Pine Nut 73.26 53 IAmb IAmb 16 40 37.7
comp=Z,67nm,1.6s
ANN Anapa 73.37 314 *e*P **P** **16 40 05.8 -2.0**
ANN *e*PP **pP** **16 40 18.0 0.0**
ANN *e*S **S** **16 49 33.3 -1.1**
ANN pmax pmax
comp=Z,116nm,1.5s
FCC Fort Churchill 73.42 27 IAmb IAmb 16 40 10.9
comp=Z,66nm,1.2s
NC303 NORSAR Array S 73.62 337 IAmb IAmb 16 40 23.2
comp=Z,81nm,1.4s
DOMB Dombas 73.66 339 *e*P **P** **16 40 09.4 +0.1**
DOMB IAmb IAmb 16 40 11.2
comp=Z,47nm,0.8s
DOMB *e*S **S** **16 49 41.4 +4.0**
DOMB IAMs_20 IAMs_20 17 15 22.3
comp=Z,6µm,20.3s
ICESG Greenland Ices 73.67 1 *i* P **P** **16 40 09.2 -0.4**
ICESG IAmb IAmb 16 40 12.7
comp=Z,82nm,1.2s
EGMT Eagleton 73.71 42 IAmb IAmb 16 40 28.6
comp=Z,50nm,1.1s
EGMT Eagleton 73.71 42 P **P** **16 40 10.2 +0.3**
baz=308,SNR=10.0
PBUR Paburge 73.72 330 *e*P **P** **16 40 10.2 +0.5**
HFS Hagfors 73.73 336 P **P** **16 40 09.7 0.0**
comp=Z,41nm,0.8s,baz=40,slow=5.8,SNR=116
HFS LR LR 17 15 18.4
comp=Z,6µm,20.0s,baz=28,slow=38
comp=Z,41nm,0.8s
NWAO Narrogin (SRO) 73.75 201 P **P** **16 40 10.3 +0.3**
NWAO IAmb IAmb 16 40 23.2
comp=Z,75nm,1.4s
NWAO Narrogin (SRO) 73.75 201 P **P** **16 40 10.5 +0.5**
NWAO Narrogin (SRO) 73.75 201 P **P** **16 40 10.3 +0.3**
NWAO pmax pmax
comp=Z,75nm,1.4s
NWAO MLR MLR
comp=Z,700nm,22.0s
NWAO Narrogin (SRO) 73.75 201 LR LR 17 11 38.5
comp=Z,399nm,20.3s,baz=36,slow=35
NB2 NORSAR Subarra 73.82 337 P **P** **16 40 10.1 -0.1**
comp=Z,555nm,2.5s,baz=38,slow=5.9
NB2 NORSAR Subarra 73.82 337 P **P** **16 40 10.1 -0.1**
baz=38,slow=5.9
NOA NORSAR Array B 73.82 337 P **P** **16 40 10.3 +0.1**
comp=Z,31nm,0.8s,baz=39,slow=5.8,SNR=92
NOA LR LR 17 15 10.6
comp=Z,4µm,21.5s,baz=40,slow=38
comp=Z,31nm,0.8s
HLID Hailey 73.83 47 P **P** **16 40 12.2 +1.4**
baz=307,SNR=19
ARPS Mount Arapiles 73.95 180 P **P** **16 40 12.8 +1.7**
NC602 NORSAR Array S 73.95 337 IAmb IAmb 16 40 24.6
comp=Z,127nm,1.7s
NC602 NORSAR Array S 73.95 337 *e*P **P** **16 40 10.8 -0.2**
NC602 *e*S **S** **16 49 39.8 -0.7**
NBO00 NORSAR Array S 73.96 338 IAmb IAmb 16 40 13.2
comp=Z,42nm,0.8s
AKASG Malin Array Be 74.05 322 P **P** **16 40 11.5 -0.2**
comp=Z,15nm,0.5s,baz=45,slow=6.0,SNR=123
AKASG LR LR 17 16 08.3
comp=Z,2µm,18.9s,baz=44,slow=38
comp=Z,15nm,0.5s
AKBB Malin Array Si 74.05 322*c* *e*P **P** **16 40 11.4 -0.3**
AKBB pmax pmax
comp=Z,112nm,1.6s
KIEV Kiev 74.07 322 ⇑P **P** **16 40 11.7 -0.1**
KIEV Kiev 74.07 322 P **P** **16 40 11.2 -0.7**
KIEV Kiev 74.07 322 P **P** **16 40 11.7 -0.1**
NAO01 NORSAR Array S 74.07 337 IAmb IAmb 16 40 14.1
comp=Z,33nm,0.8s
AKN Aaknes 74.14 340 *e*P **P** **16 40 12.5 +0.5**
AKN IAmb IAmb 16 40 12.8
comp=Z,82nm,1.3s
BOZ Bozeman (W) 74.19 44 P **P** **16 40 13.3 +0.5**
baz=308,SNR=9.9
GURO Guroymak-BITLI 74.25 307 IAmb IAmb 16 40 27.6
comp=Z,50nm,1.1s
MDPB Devils Postpil 74.43 54 IAmb IAmb 16 40 44.5
comp=Z,76nm,1.9s
LHV Little Huntoon 74.44 54 IAmb IAmb 16 40 18.9
comp=Z,40nm,1.1s
NVAR Mina Array Bea 74.47 53 P **P** **16 40 15.8 +1.1**
comp=Z,11nm,0.8s,baz=296,slow=5.3,SNR=48
NVAR LR LR 17 08 45.2
comp=Z,109nm,21.6s,baz=295,slow=32
comp=Z,11nm,0.8s
NV11 Mina Array Sit 74.56 53 IAmb IAmb 16 40 34.9
comp=Z,65nm,1.6s
MLAC Mammoth, Mammo 74.59 54 P **P** **16 40 16.1 +0.7**
baz=306
SUW Suwalki 74.60 327 *e*P **P** **16 40 14.9 +0.1**
SUW *e*L L 17 16 08.3
comp=Z,3µm,19.4s
SUW Suwalki 74.60 327 IAmb IAmb 16 40 29.2
comp=Z,70nm,1.1s
SUW Suwalki 74.60 327 *e*P **P** **16 40 14.9 +0.1**
OSL Oslo 74.83 337 *e*P **P** **16 40 16.6 +0.6**
SKAR Skarslia 74.97 338 *e*P **P** **16 40 17.6 +0.6**
VOG Valley Oaks Go 75.00 56 P **P** **16 40 17.7 +0.2**
baz=306
FOO Floro 75.14 340 *e*P **P** **16 40 18.2 +0.4**
SIM Simferopol' 75.15 316 *e*P **P** **16 40 17.4 -0.8**
SIM *e*S **S** **16 49 53.2 -1.3**
SIM pmax pmax
comp=Z,56nm,0.8s
SIM smax smax
comp=E,41nm,13.4s
SIM MLR MLR
comp=Z,2µm,19.7s
SMMC Simmler 75.17 57 P **P** **16 40 19.4 +0.8**
baz=306
HYA Hoyanger 75.19 339 *e*P **P** **16 40 18.4 +0.3**
HYA IAmb IAmb 16 40 20.2
comp=Z,49nm,0.9s
DSP Deep Springs 75.30 54 IAmb IAmb 16 40 22.9
comp=Z,57nm,1.5s

TIN Tinemaha, Big 75.32 55 P **P** **16 40 21.6 +2.1**
baz=306
SFJD Kangerlussuaq 75.35 5 P **P** **16 40 18.5 -0.4**
SFJD IAmb IAmb 16 40 21.1
comp=Z,30nm,0.9s
SFJD Kangerlussuaq 75.35 5 P **P** **16 40 18.5 -0.4**
SFJD pmax pmax
comp=Z,30nm,0.9s
SFJD Kangerlussuaq 75.35 5 *i* P **P** **16 40 18.9 -0.1**
SFJD IAmb IAmb 16 40 21.4
comp=Z,35nm,0.9s
SFJD Kangerlussuaq 75.35 5 LR LR 17 13 51.7
comp=Z,946nm,21.7s,baz=353,slow=36
KONO Kongsberg 75.41 337 P **P** **16 40 19.3 -0.1**
KONO IAmb IAmb 16 40 21.5
comp=Z,33nm,0.9s
KONO Kongsberg 75.41 337 *e*P **P** **16 40 19.8 +0.3**
KONO Kongsberg 75.41 337 *i* P **P** **16 40 19.7 +0.3**
KONO pmax pmax
comp=Z,38nm,0.9s
VES Vestal, Richgr 75.47 56 P **P** **16 40 20.6 +0.4**
baz=306,SNR=9.5
H17A Grant Village 75.52 45 IAmb IAmb 16 40 26.3
comp=Z,38nm,1.0s
H17A Grant Village 75.52 45 P **P** **16 40 23.2 +2.5**
baz=309,SNR=17
PKM Mcpherson Peak 75.54 57 P **P** **16 40 21.3 +0.4**
baz=306
SUE Sulen 75.67 340 *e*P **P** **16 40 21.4 +0.5**
FXWY Fox Creek 75.73 46 IAmb IAmb 16 40 40.6
comp=Z,96nm,1.7s
CWC Cottonwood Cre 75.78 55 P **P** **16 40 23.6 +1.4**
baz=306
RLMT Red Lodge 75.79 44 IAmb IAmb 16 40 40.5
comp=Z,96nm,1.6s
RLMT Red Lodge 75.79 44 P **P** **16 40 22.6 +0.4**
baz=309,SNR=5.3
MOOW Moose Ponds 75.83 45 IAmb IAmb 16 40 41.2
comp=Z,53nm,1.4s
HVU Hansel Valley 75.87 48 IAmb IAmb 16 40 26.2
comp=Z,60nm,1.7s
TPAW Teton Pass 75.87 46 IAmb IAmb 16 40 40.5
comp=Z,77nm,1.6s
SBC Santa Barbara 75.87 57 P **P** **16 40 23.8 +1.3**
baz=306
GRAC Grapevine Rang 75.91 54 IAmb IAmb 16 40 41.1
comp=Z,32nm,1.1s
GRAC Grapevine Rang 75.91 54 P **P** **16 40 24.8 +2.0**
baz=307,SNR=6.8
ISA Isabella, Lake 75.98 56 P **P** **16 40 24.6 +1.3**
baz=306
ARVC Arvin 76.06 56 P **P** **16 40 24.9 +1.2**
baz=306
BER Bergen 76.07 339 *e*P **P** **16 40 23.6 +0.4**
BER IAmb IAmb 16 40 25.9
comp=Z,43nm,0.8s
ODD1 Odda 76.09 339 *e*P **P** **16 40 23.4 0.0**
DY2G Dye2 76.12 3 *i* P **P** **16 40 23.4 -0.3**
DY2G IAmb IAmb 16 40 26.4
comp=Z,50nm,0.8s
SORM Soroca 76.16 321 ⇑P **P** **16 40 23.8 -0.1**
SORM Soroca 76.16 321 P **P** **16 40 23.8 -0.1**
SCZ2 Santa Cruz Isl 76.19 58 P **P** **16 40 25.2 +0.8**
baz=306
FRB Frobisher Bay 76.21 13 LR LR 17 17 03.1
comp=Z,813nm,19.3s,baz=353,slow=38
R11B Troy Canyon, C 76.24 52 P **P** **16 40 26.1 +1.3**
baz=307,SNR=28
ARPR Argi-MALATY 76.25 309 IAMs_20 IAMs_20 17 17 01.3
comp=Z,961nm,21.0s
DGMT Dagmar 76.27 39 P **P** **16 40 25.6 +1.0**
baz=312,SNR=5.3
MPMC Manual Prospec 76.39 55 P **P** **16 40 26.9 +1.2**
baz=307,SNR=12
LAO LASA Array 76.41 41 P **P** **16 40 26.1 +0.5**
baz=311
OSI Osito Audit: C 76.43 57 P **P** **16 40 27.2 +1.4**
baz=306
PURM Purcari 76.44 319 ⇓P **P** **16 40 25.3 -0.2**
RAO Raoul Island 76.44 144 LR LR 17 07 03.4
comp=Z,1µm,21.9s,baz=352,slow=30
BLS5 Blasjo 76.54 338 *e*P **P** **16 40 25.1 -0.9**
BLS5 IAmb IAmb 16 40 30.6
comp=Z,43nm,1.1s
FURC Furnace Creek, 76.55 54 P **P** **16 40 27.2 +0.8**
baz=307,SNR=7.5
CCAC Calif City Air 76.58 56 IAmb IAmb 16 40 44.6
comp=Z,41nm,0.9s
LRMC Lowrmt Mtn Rad 76.61 56 P **P** **16 40 27.9 +1.1**
baz=307,SNR=9.3
KIS Kishinev 76.68 320⇑ *i*P **P** **16 40 26.0 -0.9**
comp=Z,300nm,4.0s
KIS Kishinev 76.68 320*c* *i*P **P** **16 40 26.0 -0.9**
KIS *e*PPP PPP 16 45 09.0
KIS pmax pmax
comp=Z,300nm,4.0s
KIS MLR MLR
comp=Z,2µm,17.6s
KIS MLR MLR
comp=N,850nm,16.0s
KIS MLR MLR
comp=E,950nm,16.0s
HWUT Hardware Ranch 76.69 48 IAmb IAmb 16 40 45.8
comp=Z,66nm,1.3s
SNCC San Nicolas Is 76.70 58 P **P** **16 40 27.9 +0.6**
baz=306
MILM Milestii Mici 76.73 320 ⇓P **P** **16 40 27.0 -0.2**
MILM Milestii Mici 76.73 320⇑ *i*P **P** **16 40 25.9 -1.2**
comp=Z,250nm,2.5s
MILM Milestii Mici 76.73 320*c* *i*P **P** **16 40 26.0 -1.2**
MILM *e*PS **PnS** **16 50 50.0 -2.5**
MILM *e* 16 51 01.0
MILM pmax pmax
comp=Z,250nm,2.5s
MILM MLR MLR
comp=Z,4µm,18.0s
MILM MLR MLR
comp=N,2µm,18.4s
MILM MLR MLR
comp=E,2µm,16.0s
EDW2 Edwards Air Fo 76.76 56 P **P** **16 40 28.8 +1.2**
baz=307,SNR=10
DUG Dugway, Tooele 76.82 49 IAmb IAmb 16 40 47.9
comp=Z,69nm,1.6s
DUG Dugway, Tooele 76.82 49 P **P** **16 40 29.6 +1.6**
baz=308,SNR=16
QSM Queen of Sheba 76.85 55 IAmb IAmb 16 40 46.1
comp=Z,38nm,0.9s
DECC Green Verdugo 76.90 57 P **P** **16 40 30.3 +1.9**
baz=307
BW06 Boulder Array 77.12 46 P **P** **16 40 30.6 +0.8**
baz=310,SNR=14
PDAR Pinedale Array 77.12 46 P **P** **16 40 30.4 +0.6**
comp=Z,4.7nm,0.7s,baz=275,slow=1.7,SNR=48
comp=Z,4.7nm,0.7s
LVV L'vov 77.12 324 *e*P **P** **16 40 29.0 -0.4**
LVV *e* 16 43 29.7
LVV *e*S **S** **16 50 13.7 -2.3**
LVV *e*PS **PnS** **16 50 57.2 -0.2**
LVV pmax pmax
comp=Z,200nm,1.7s
LVV MLR MLR
comp=E,2µm,15.0s
LVV MLR MLR
comp=N,3µm,16.0s
LVV MLR MLR
comp=Z,2µm,17.0s
CTU Camp Tracy 77.15 48 IAmb IAmb 16 40 33.2
comp=Z,54nm,1.6s
BEL Belsk 77.16 327 *e*P **P** **16 40 30.4 +0.8**
BEL *e*L L 17 17 04.9
comp=Z,3µm,18.2s
BORG Borgarnes 77.17 353 P **P** **16 40 30.2 +0.9**
comp=Z,62nm,1.1s,baz=347,slow=4.4,SNR=3.7
comp=Z,62nm,1.1s
IAS Iasi 77.19 320 ⇑P **P** **16 40 29.8 0.0**
IAS Iasi 77.19 320 P **P** **16 40 29.8 0.0**
SNART Snartemo 77.20 337 *e*P **P** **16 40 29.9 +0.3**
FMP Fort Macarthur 77.25 57 P **P** **16 40 30.4 0.0**
baz=307
SHOC Shoshone, Teco 77.27 55 P **P** **16 40 30.8 +0.3**
baz=307
GSC Goldstone, Bar 77.28 55 P **P** **16 40 31.1 +0.5**
baz=307
CIS Catalina Islan 77.36 58 P **P** **16 40 31.2 +0.2**
baz=307
BFSC Mount Baldy Ra 77.36 57 P **P** **16 40 31.2 0.0**
baz=307
NLU North Lily Min 77.41 49 IAmb IAmb 16 40 51.1
comp=Z,66nm,1.7s
RRX Edison Barstow 77.42 56 P **P** **16 40 31.0 -0.3**
baz=307
VASR Vaslui 77.44 320 ⇓P **P** **16 40 32.0 +0.8**
SCI2 San Clemente I 77.52 58 P **P** **16 40 31.2 -0.7**
baz=307
COP Copenhagen 77.59 333 *i* P **P** **16 40 32.5 +0.7**
COP IAmb IAmb 16 40 34.4
comp=Z,150nm,0.9s
GKP Gorka Klasztor 77.60 330 *e*P **P** **16 40 32.4 +0.5**
GKP *e*L L 17 16 51.6
comp=Z,3µm,22.4s
GKP Gorka Klasztor 77.60 330 *e*P **P** **16 40 32.9 +1.0**
MPU Maple Canyon 77.64 49 IAmb IAmb 16 40 48.1
comp=Z,44nm,1.4s
PRAR RASCA 77.75 321 ⇓P **P** **16 40 33.3 +0.4**
BIR Birlad 77.78 320 ⇑P **P** **16 40 34.6 +1.5**
BIR Birlad 77.78 320 P **P** **16 40 34.5 +1.5**
TUQ Turquoise Moun 77.78 55 P **P** **16 40 33.9 +0.4**
baz=308,SNR=14
VLDR Vladesti 77.82 319 ⇓P **P** **16 40 34.3 +1.0**
BSUT Blindstream Ca 77.83 48 IAmb IAmb 16 40 51.2
comp=Z,75nm,1.8s
BBRC Big Bear Solar 77.83 56 P **P** **16 40 34.7 +0.7**
baz=307
KWP Kalwaria Pacla 77.87 324 *e*P **P** **16 40 34.7 +1.2**
KWP *e*PcP **sP** **16 40 47.0 -0.4**
ELS Elsinore Mount 77.87 57 IAmb IAmb 16 40 51.7
comp=Z,61nm,1.7s
TLCR 77.88 318 ⇑P **P** **16 40 33.3 -0.3**
TLCR 77.88 318 P **P** **16 40 33.3 -0.3**
HEC Hector,Ludlow 77.88 55 P **P** **16 40 34.7 +0.7**
baz=308,SNR=5.8
VARL Varlezi 77.91 319 ⇓P **P** **16 40 35.2 +1.4**
SCTR Scanteiesti 77.98 319 ⇑P **P** **16 40 34.8 +0.5**
TCRU Three Creeks R 78.02 50 IAmb IAmb 16 40 53.5
comp=Z,52nm,1.3s
GHRR 78.03 320 ⇓P **P** **16 40 35.9 +1.5**
NUUK Nuuk 78.05 6 *i* P **P** **16 40 34.1 -0.1**
NUUK IAmb IAmb 16 40 37.2
comp=Z,56nm,0.8s
MURC Murrieta 78.05 57 P **P** **16 40 35.2 +0.3**
baz=307
BURAR Bucovina Array 78.07 322 ⇑P **P** **16 40 35.3 +0.5**
BURAR Bucovina Array 78.07 322 P **P** **16 40 35.3 +0.5**
MUD Monsted U'grnd 78.10 335 *i* P **P** **16 40 34.7 +0.1**
TESR Tescani 78.11 320 ⇑P **P** **16 40 35.3 +0.4**
IZVR Izvoarele 78.19 319 ⇑P **P** **16 40 35.8 +0.4**
SCHLR Schela 78.20 319 ⇑P **P** **16 40 36.9 +1.4**
TUDR 78.20 319 ⇑P **P** **16 40 35.3 -0.1**
OUZ Omahuta 78.21 154 IAMs_20 IAMs_20 17 11 55.6
comp=Z,1µm,20.0s
CFR Carcaliu 78.24 319 ⇓P **P** **16 40 35.7 +0.1**
CFR Carcaliu 78.24 319 P **P** **16 40 35.7 +0.1**
PANC Panciu 78.29 320 ⇑P **P** **16 40 36.0 +0.1**
V12A Nelson 78.29 54 IAmb IAmb 16 40 39.6
comp=Z,56nm,1.7s
TPGR Topolog 78.30 318 ⇓P **P** **16 40 36.8 +0.7**
GMRC Granite Mounta 78.35 55 P **P** **16 40 36.8 +0.2**
baz=308,SNR=8.7
ODBI Odobesti 78.41 320 ⇓P **P** **16 40 37.6 +1.0**
VRI Vrincioaia 78.51 320 ⇓P **P** **16 40 38.2 +1.0**
VRI Vrincioaia 78.51 320 P **P** **16 40 38.2 +1.0**
RDMU Red Mountain 78.51 47 IAmb IAmb 16 40 55.7
comp=Z,75nm,1.2s
P17A Butcher Ranch, 78.52 49 IAmb IAmb 16 40 55.9
comp=Z,58nm,1.2s
PFO Pinyon Flats O 78.53 56 P **P** **16 40 37.9 +0.2**
baz=308,SNR=6.1
PFO Pinyon Flats O 78.53 56 *i* P **P** **16 40 36.9 -0.8**
PFO pmax pmax
comp=Z,54nm,1.5s
PFO Pinyon Flats O 78.53 56 LR LR 17 08 28.9
comp=Z,693nm,21.9s,baz=291,slow=30
TPFO Pinon Flats 78.54 56 P **P** **16 40 38.6 +0.9**
baz=308
109C Camp Elliot, M 78.54 57 P **P** **16 40 38.4 +0.8**
baz=308
PLOR Plostina 78.56 320 ⇑P **P** **16 40 38.9 +1.4**
PLOR Plostina 78.56 320 P **P** **16 40 38.8 +1.4**
KOLS Kolonicke sedl 78.56 324 *e*P **P** **16 40 37.8 +0.4**
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 78.56 324 *e*P **P** **16 40 37.8 +0.4**
TIRR Tirgusor 78.57 318 ⇓P **P** **16 40 37.8 +0.2**
TIRR Tirgusor 78.57 318 P **P** **16 40 37.7 +0.2**
BELC Belle Mtn. Jos 78.60 56 P **P** **16 40 38.9 +0.8**
baz=308
STHS Stebnicka Huta 78.69 325 *e*P **P** **16 40 38.3 +0.2**
STHS pmax pmax
comp=Z,20nm,1.4s
STHS Stebnicka Huta 78.69 325 *e*P **P** **16 40 38.3 +0.2**
BRTR Keskin Array B 78.71 312 LR LR 17 19 57.6
comp=Z,1µm,18.6s,baz=355,slow=39
GRER 78.71 319 ⇑P **P** **16 40 39.5 +1.2**
TLBR Topalu 78.71 318 ⇓P **P** **16 40 39.2 +0.9**
P18A Preston Nutter 78.71 49 IAmb IAmb 16 40 57.1
comp=Z,38nm,1.1s
BISRR Bisoca 78.73 320 ⇑P **P** **16 40 39.5 +1.1**
TURR Turia 78.74 320 ⇑P **P** **16 40 39.8 +1.3**
MFTR Murfatlar 78.75 318 ⇑P **P** **16 40 39.7 +1.2**
OJC Ojcow 78.76 326 *e*P **P** **16 40 39.1 +0.6**
OJC *e*L L 17 18 17.5
comp=Z,3µm,18.8s
COVR Voineasa-Covas 78.79 320 ⇓P **P** **16 40 39.8 +1.0**
OZUR 78.83 320 ⇑P **P** **16 40 40.4 +1.4**
ARCR ARCALIA 78.86 322 ⇓P **P** **16 40 40.3 +1.2**
BMR Baia Mare 78.87 323 ⇑P **P** **16 40 40.2 +1.1**
BMR Baia Mare 78.87 323 P **P** **16 40 40.2 +1.1**
SRU San Rafael Swe 78.87 49 IAmb IAmb 16 40 54.1
comp=Z,51nm,1.4s
K22A Casper 78.90 44 P **P** **16 40 39.8 +0.2**
baz=311
BOSR Bodos 78.91 320 ⇑P **P** **16 40 40.9 +1.5**
ULM Lac du Bonnet 78.93 34 IAmb IAmb 16 40 41.4
comp=Z,94nm,1.6s
ULM Lac du Bonnet 78.93 34 *i* P **P** **16 40 37.3 -2.1**
ULM Lac du Bonnet 78.93 34 P **P** **16 40 39.3 0.0**
comp=Z,9.7nm,0.9s,baz=313,slow=5.9,SNR=13
ULM LR LR 17 16 37.1
comp=Z,547nm,21.8s,baz=325,slow=36
comp=Z,9.7nm,0.9s
MDND Maddock 78.94 37 P **P** **16 40 40.3 +0.8**
baz=315
BAR Barrett 78.96 57 IAmb IAmb 16 40 42.7
comp=Z,60nm,1.6s
CRVS Cervenica-Dubn 78.96 325 *e*P **P** **16 40 40.0 +0.4**
CRVS pmax pmax
comp=Z,156nm,1.6s
CRVS Cervenica-Dubn 78.96 325 *e*P **P** **16 40 40.0 +0.4**
MONP2 Monument Peak 79.00 57 P **P** **16 40 40.7 +0.3**
baz=308
PGOR Pogoanele 79.02 319 ⇑P **P** **16 40 40.2 +0.2**
NEHR Nehoiu 79.03 320 ⇑P **P** **16 40 41.3 +1.3**
NEE2 Needles Airpor 79.03 55 P **P** **16 40 41.0 +0.8**
baz=308
IRM Iron Mountain 79.06 55 P **P** **16 40 40.6 +0.1**
baz=308,SNR=8.0
ISR Istrita 79.11 319 ⇑P **P** **16 40 40.6 0.0**
ISR Istrita 79.11 319 P **P** **16 40 40.5 0.0**
ANTO Ankara 79.12 312 IAMs_20 IAMs_20 17 21 22.5
comp=Z,668nm,18.0s
NIE Niedzica 79.12 325 *e*P **P** **16 40 41.5 +1.0**
DOPR Dopca 79.12 320 ⇑P **P** **16 40 41.5 +1.0**
ICOR Ion Corvin 79.13 318 ⇑P **P** **16 40 41.4 +0.9**
MLR Muntele Rosu 79.17 320 ⇓P **P** **16 40 41.7 +0.7**
MLR Muntele Rosu 79.17 320 P **P** **16 40 40.5 -0.5**
MLR IAmb IAmb 16 40 55.3
comp=Z,63nm,1.2s
MLR Muntele Rosu 79.17 320 P **P** **16 40 41.6 +0.7**
MLR Muntele Rosu 79.17 320 LR LR 17 19 06.2
comp=Z,4µm,18.6s,baz=50,slow=38
BC3 Big Chuckawall 79.17 56 P **P** **16 40 41.6 +0.4**
baz=308
RSSD Black Hills 79.27 42 P **P** **16 40 42.4 +0.8**
baz=313
IKP In-Ko-Pah, Jac 79.35 57 P **P** **16 40 42.8 +0.7**
baz=308
SWSC Sam W. Stewart 79.38 57 P **P** **16 40 43.0 +0.8**
baz=308
YUH Yuha Desert 79.48 57 IAmb IAmb 16 40 57.8
comp=Z,52nm,1.6s
U15A North Rim 79.48 52 IAmb IAmb 16 40 46.6

comp=Z,55nm,1.4s
HMU Henry Mountain 79.49 50 IAmb IAmb 16 41 01.1
comp=Z,42nm,1.1s
CJR Cluj-Napoca 79.50 322 ⇑P **P 16 40 43.8 +1.1**
CJR Cluj-Napoca 79.50 322 P **P 16 40 43.7 +1.1**
MESR Meseseni 79.50 323 ⇑P **P 16 40 42.7 +0.1**
O20A White River Ci 79.57 47 P **P 16 40 43.5 +0.2**
baz=311,SNR=8.3
RUE Ruedersdorf 79.57 331 *eP* **P 16 40 43.7 +0.9**
RUE Ruedersdorf 79.57 331 *eP* **P 16 40 43.4 +0.6**
comp=Z,145nm,1.8s,baz=37,slow=5.3
PDMCI Parker Dam,Lak 79.63 55 P **P 16 40 46.2 +2.7**
baz=309,SNR=9.3
VOIR 79.66 320 ⇓P **P 16 40 44.4 +0.8**
VOIR 79.66 320 P **P 16 40 44.4 +0.8**
LANS Liptovska Anna 79.69 326 *eP* **P 16 40 44.7 +1.1**
LANS pmax pmax
comp=Z,10.0nm,0.8s
LANS Liptovska Anna 79.69 326 *eP* **P 16 40 44.7 +1.1**
BLYC Blythe 79.72 55 IAmb IAmb 16 41 02.1
comp=Z,31nm,1.0s
BSEG Bad Segeberg 79.72 333 *eP* **P 16 40 44.2 +0.6**
comp=Z,50nm,1.1s,baz=37,slow=5.3
BSEG *eL* L 17 19 23.5
comp=Z,3μm,18.4s
MARR Marisel-Cluj 79.75 322 ⇑P **P 16 40 45.4 +1.3**
OKC Ostrava-Krasne 79.77 327 AMS AMS 17 19 00.0
comp=Z,3μm,19.9s
KSP Ksiaz 79.81 328 *eP* **P 16 40 44.8 +0.6**
KSP *eL* L 17 18 57.7
comp=Z,3μm,19.2s
DRGR 79.87 322 ⇓P **P 16 40 45.1 +0.4**
DRGR 79.87 322 P **P 16 40 45.0 +0.4**
ARR Arges 79.92 320 ⇑P **P 16 40 46.3 +1.4**
OSTC Ostas 80.05 328 AMS AMS 17 19 30.0
comp=Z,3μm,21.3s
MORC Moravsky Berou 80.07 327 ⇑P **P 16 40 46.3 +0.6**
MORC Moravsky Berou 80.07 327 IAmb IAmb 16 41 00.3
comp=Z,37nm,1.0s
MORC Moravsky Berou 80.07 327 *eP* **P 16 40 46.0 +0.3**
MORC Moravsky Berou 80.07 327 P **P 16 40 46.3 +0.6**
CHVC Chvalec 80.10 328 *eP* **P 16 40 46.2 +0.4**
CHVC Chvalec 80.10 328 *eP* **P 16 40 46.2 +0.4**
DPC Dobruska-Polom 80.17 328 *eP* **P 16 40 46.8 +0.6**
DPC AMS AMS 17 19 30.0
comp=Z,3μm,18.3s
DPC Dobruska-Polom 80.17 328 *eP* **P 16 40 46.8 +0.6**
DPC MLR MLR
comp=Z,3μm,18.3s
UPC Upice 80.18 328 *eP* **P 16 40 47.0 +0.8**
UPC AMS AMS 17 19 30.0
comp=Z,3μm,18.5s
UPC Upice 80.18 328 *eP* **P 16 40 47.0 +0.8**
UPC MLR MLR
comp=Z,3μm,18.5s
KRLC Kraliky 80.18 328 *eP* **P 16 40 46.6 +0.4**
KRLC AMS AMS 17 18 50.0
comp=Z,3μm,17.9s
KRLC Kraliky 80.18 328 *eP* **P 16 40 46.6 +0.4**
KRLC MLR MLR
comp=Z,2μm,17.9s
RAR Rarotonga 80.25 126 LR LR 17 08 45.4
comp=Z,2μm,21.1s,baz=317,slow=30
MAUC Maruska 80.26 327 *eP* **P 16 40 48.6 +1.9**
MAUC AMS AMS 17 19 20.0
comp=Z,5μm,19.9s
LOT Lotru 80.30 321 ⇑P **P 16 40 48.4 +1.3**
HUMR Humele 80.33 320 ⇑P **P 16 40 47.2 +0.1**
AGMN Agassiz Nation 80.36 35 P **P 16 40 47.2 0.0**
baz=317,SNR=9.8
N23A Red Feather La 80.38 45 IAmb IAmb 16 41 06.2
comp=Z,58nm,1.4s
N23A Red Feather La 80.38 45 P **P 16 40 49.0 +1.2**
baz=312
PSZ Piszkesteto 80.39 325 ⇑P **P 16 40 48.4 +0.9**
PSZ Piszkesteto 80.39 325 IAMs_20 IAMs_20 17 23 34.7
comp=Z,2μm,18.0s
PSZ Piszkesteto 80.39 325 P **P 16 40 48.4 +0.9**
DEV Deva 80.42 322 ⇓P **P 16 40 48.3 +0.8**
DEV Deva 80.42 322 P **P 16 40 48.3 +0.8**
VYHS Vyhne 80.45 326 *eP* **P 16 40 48.2 +0.5**
VYHS pmax pmax
comp=Z,109nm,2.0s
VYHS Vyhne 80.45 326 *eP* **P 16 40 48.2 +0.5**
Y14A Wickenburg 80.59 54 IAmb IAmb 16 41 06.8
comp=Z,29nm,0.9s
WUAZ Wupatki 80.64 52 IAmb IAmb 16 41 07.5
comp=Z,42nm,1.1s
WUAZ Wupatki 80.64 52 P **P 16 40 49.9 +0.7**
baz=310,SNR=11
FLTG Flechtingen 80.66 332 *eP* **P 16 40 48.7 0.0**
comp=Z,37nm,1.0s,baz=37,slow=5.3
SZH Strazhitsa 80.68 318 *i* P **P 16 40 48.7 -0.3**
JAVC Velka Javorina 80.70 326 *eP* **P 16 40 50.5 +1.4**
BRG Berggiesshubel 80.75 330 ⇑*iP* **P 16 40 49.4 +0.2**
BRG Amp 16 40 52.0
comp=Z,31nm,1.0s
BRG Berggiesshubel 80.75 330 SKS **S 16 51 00.0 +5.4**
BRG Berggiesshubel 80.75 330 ⇑*iP* **P 16 40 49.4 +0.2**
BRG 16 41 02.6
BRG 16 43 48.1
BRG 16 51 00.0
BRG pmax pmax
comp=Z,31nm,1.0s
BRG pmax pmax
comp=Z,18nm,1.1s
BRG pmax pmax
comp=Z,12nm,1.1s
BRG MLR MLR
comp=N,2μm,19.3s
BRG MLR MLR
comp=E,2μm,18.3s
BRG MLR MLR
comp=Z,3μm,17.1s
BRG Berggiesshubel 80.75 330 *eP* **P 16 40 49.3 +0.1**
comp=Z,43nm,1.3s,baz=37,slow=5.3
SIRR Siria 80.75 323 ⇑P **P 16 40 49.9 +0.5**
PVCC Panska Ves 80.76 329 *eP* **P 16 40 50.2 +0.9**
PVCC AMS AMS 17 20 40.0
comp=Z,2μm,18.7s
PVCC Panska Ves 80.76 329 *eP* **P 16 40 50.2 +0.9**
PVCC MLR MLR
comp=Z,2μm,18.7s
CLL Collm 80.78 330 IAmb IAmb 16 40 50.1
comp=Z,42nm,1.1s
CLL Collm 80.78 330 ⇑*iP* **P 16 40 49.1 -0.3**
CLL *i* *SP **sP 16 41 02.3 -1.1**
CLL *eS* S **16 50 58.0 +3.1**
CLL pmax pmax
comp=Z,54nm,1.2s
CLL MLR MLR
comp=Z,2μm,18.2s
CLL Collm 80.78 330 *eP* **P 16 40 49.5 +0.1**
comp=Z,44nm,1.1s,baz=37,slow=5.3
CLL *eL* L 17 19 45.8
comp=Z,2μm,18.2s
GZR Gura Zlata 80.83 321 ⇑P **P 16 40 50.3 +0.4**
GZR Gura Zlata 80.83 321 P **P 16 40 50.2 +0.4**
VRAC Vranov 80.83 327 ⇑P **P 16 40 50.6 +0.9**
VRAC Vranov 80.83 327 *eP* **P 16 40 50.1 +0.4**
VRAC Vranov 80.83 327 P **P 16 40 50.6 +0.9**
VRAC Vranov 80.83 327 P **P 16 40 49.9 +0.2**
comp=Z,15nm,0.9s,baz=38,slow=5.0,SNR=23
VRAC LR LR 17 20 17.3
comp=Z,3μm,18.2s,baz=30,slow=38
comp=Z,15nm,0.9s
SURR Surduc 80.90 322 ⇑P **P 16 40 50.6 +0.6**
NRDL Niedersach Rie 80.95 332 *eP* **P 16 40 50.3 +0.2**
comp=Z,19nm,1.0s,baz=37,slow=5.3
ELND Elena 80.96 318 ⇑P **P 16 40 50.7 +0.2**
VLAD Vladila 80.99 320 ⇑P **P 16 40 50.8 +0.2**
RETH Rethem/Aller, 81.03 333 *eP* **P 16 40 51.0 +0.4**
comp=Z,54nm,1.4s,baz=37,slow=5.3
KRUC Moravsky 81.11 327 *eP* **P 16 40 51.3 +0.1**
GOPC GO Pecny, Ondr 81.14 328 *eP* **P 16 40 51.6 +0.2**
GOPC AMS AMS 17 19 20.0
comp=Z,3μm,19.6s
GOPC GO Pecny, Ondr 81.14 328 *eP* **P 16 40 51.6 +0.2**
GOPC MLR MLR
comp=Z,3μm,19.6s
HSKC Hora Svate Kat 81.16 330 *eP* **P 16 40 51.9 +0.5**
HSKC AMS AMS 17 19 30.0
comp=Z,4μm,18.7s
PRA Prague 81.17 329 AMS AMS 17 19 50.0
comp=Z,2μm,17.9s

PRU Pruhonice 81.18 329 *eP* **P 16 40 52.0 +0.5**
PRU AMS AMS 17 19 40.0
comp=Z,3μm,19.0s
PRU Pruhonice 81.18 329 *eP* **P 16 40 52.0 +0.5**
PRU MLR MLR
comp=Z,3μm,19.0s
MODS Modra-Piesok 81.24 326 *eP* **P 16 40 52.7 +0.8**
MODS pmax pmax
comp=Z,476nm,2.4s
MODS Modra-Piesok 81.24 326 *eP* **P 16 40 52.7 +0.8**
BZS Buzias 81.24 322 ⇑P **P 16 40 52.2 +0.2**
BZS Buzias 81.24 322 P **P 16 40 52.1 +0.2**
ISCO Idaho Springs 81.30 46 P **P 16 40 53.9 +1.1**
baz=312
PLVB Pleven 81.31 319 ⇓P **P 16 40 52.9 +0.6**
MVCO Mesa Verde 81.32 49 IAmb IAmb 16 41 10.9
comp=Z,45nm,1.3s
MVCO Mesa Verde 81.32 49 P **P 16 40 54.1 +1.2**
baz=311,SNR=13
TREC Trest 81.32 328 *eP* **P 16 40 52.9 +0.6**
TREC AMS AMS 17 19 30.0
comp=Z,2μm,17.6s
TREC Trest 81.32 328 *eP* **P 16 40 52.9 +0.6**
TREC MLR MLR
comp=Z,2μm,17.6s
NEUB Neuenburg 81.34 331 *eP* **P 16 40 52.6 +0.2**
comp=Z,37nm,1.0s,baz=37,slow=5.3
CLZ Clausthal 81.37 332 *eP* **P 16 40 53.2 +0.6**
comp=Z,50nm,1.1s,baz=37,slow=5.3
CLZ *epP* **sP 16 41 06.2 -0.4**
HERR Herculane 81.38 321 ⇑P **P 16 40 52.6 0.0**
ASF Jabal al Asfar 81.44 304 P **P 16 40 53.8 +0.4**
comp=Z,10nm,0.8s,baz=155,slow=0.9,SNR=6.4
comp=Z,10nm,0.8s
ZST Bratislava 81.45 326 *eP* **P 16 40 53.7 +0.7**
ZST pmax pmax
comp=Z,485nm,2.5s
ZST Bratislava 81.45 326 *eP* **P 16 40 53.7 +0.7**
DJES Djerdap 81.48 321 ⇑P **P 16 40 53.6 +0.4**
HIZ Hauiti 81.61 154 IAMs_20 IAMs_20 17 11 03.6
comp=Z,2μm,22.0s
SUSD Miller 81.67 39 IAmb IAmb 16 40 57.2
comp=Z,55nm,1.0s
SUSD Miller 81.67 39 P **P 16 40 54.2 -0.1**
baz=316
TANN Tannenbergstha 81.70 330 *eP* **P 16 40 54.6 +0.2**
comp=Z,90nm,2.1s,baz=37,slow=5.3
VALD Valchedram 81.71 320 P **P 16 40 55.1 +0.7**
PLN Plauen 81.76 330 *eP* **P 16 40 55.1 +0.5**
comp=Z,61nm,1.7s,baz=37,slow=5.3
GTTG Gottingen 81.76 332 *eP* **P 16 40 54.8 +0.2**
comp=Z,40nm,1.1s,baz=37,slow=5.3
MPEP Malo Peshtene 81.78 319 P **P 16 40 55.7 +0.8**
ISP Isparta 81.80 312 IAMs_20 IAMs_20 17 21 15.6
comp=Z,1μm,22.0s
MDVR Moldovita 81.80 321 ⇓P **P 16 40 55.4 +0.4**
NKC Novy Kostel 81.84 330 AMS AMS 17 24 00.0
comp=Z,2μm,16.7s
MOX Moxa 81.85 331 *eP* **P 16 40 55.1 +0.1**
comp=Z,58nm,1.5s,baz=37,slow=5.3
MOX *eL* L 17 21 57.5
comp=Z,2μm,21.1s
MMAI Mount Meron Ar 81.89 305 P **P 16 40 56.3 +0.6**
comp=Z,26nm,0.8s,baz=52,slow=7.5,SNR=12
MMAI LR LR 17 20 39.8
comp=Z,2μm,19.7s,baz=22,slow=38
comp=Z,26nm,0.8s
W18A Petrified Fore 81.92 52 P **P 16 40 57.1 +1.1**
baz=311
IBBN Ibbenburen 81.95 334 *eP* **P 16 40 55.6 +0.1**
comp=Z,30nm,0.8s,baz=37,slow=5.3
CSS Mathiatis 81.96 308 IAMs_20 IAMs_20 17 20 39.3
comp=Z,759nm,21.0s
F33A 5 Mile Ranch, 81.96 37 IAmb IAmb 16 40 58.8
comp=Z,41nm,1.1s
214A Organ Pipe Nat 81.97 56 IAmb IAmb 16 41 14.2
comp=Z,37nm,1.2s
214A Organ Pipe Nat 81.97 56 P **P 16 40 56.4 +0.3**
baz=310
MXZ Matakaoa Point 82.01 151 IAMs_20 IAMs_20 17 13 14.3
comp=Z,2μm,20.0s
PLD Plovdiv 82.11 318 *i* P **P 16 40 57.5 +0.9**
Q24A Divide 82.13 46 P **P 16 40 58.1 +0.9**
baz=313
BLKB Belogradchik 82.14 320 ⇑P **P 16 40 56.8 0.0**
MANZ Manzenberg 82.17 330 *eP* **P 16 40 57.3 +0.5**
comp=Z,9.9nm,1.4s,baz=37,slow=5.3
CKRC Cesky Krumlov 82.18 328 *eP* **P 16 40 56.9 0.0**
CKRC *ex* x 16 41 09.1
CKRC AMS AMS 17 21 40.0
comp=Z,3μm,18.2s
CKRC Cesky Krumlov 82.18 328 *eP* **P 16 40 56.9 0.0**
CKRC *e* 16 41 09.1
CKRC MLR MLR
comp=Z,3μm,18.2s
RONA Rosalia, Austr 82.18 326 *eP* **P 16 40 57.8 +0.9**
comp=Z,9.1nm,0.8s,SNR=18
URZ Urewera 82.18 153 LR LR 17 13 02.5
comp=Z,2μm,21.9s,baz=98,slow=32
CONA Conrad Observa 82.20 327 *iP* **P 16 40 57.8 +0.7**
comp=Z,4.1nm,0.6s,SNR=10
MORH Mrgy, Hungar 82.23 324 ⇑P **P 16 40 57.6 +0.5**
KHC Kasperske Hory 82.25 329 IAmb IAmb 16 41 11.8
comp=Z,47nm,1.1s
KHC Kasperske Hory 82.25 329 *eP* **P 16 40 57.6 +0.4**
KHC *ex* x 16 41 09.2
KHC AMS AMS 17 21 30.0
comp=Z,3μm,17.7s
KHC Kasperske Hory 82.25 329 *eP* **P 16 40 57.6 +0.4**
KHC *e* 16 41 09.2
KHC MLR MLR
comp=Z,3μm,17.7s
ROTZ Rotzenmuhle 82.31 330 *eP* **P 16 40 58.1 +0.6**
comp=Z,23nm,1.6s,baz=37,slow=5.3
UBBA Unterbreizbach 82.33 331 *eP* **P 16 40 57.6 +0.2**
comp=Z,34nm,1.5s,baz=37,slow=5.3
RDO Rodhopi 82.38 317 IAmb IAmb 16 41 12.4
comp=Z,58nm,1.1s
GEC2 GERESS Array S 82.42 328 *eP* **P 16 40 58.4 +0.2**
baz=37,slow=5.3
GEC2 *epP* **sP 16 41 11.0 -1.2**
GEC2 *eL* L 17 22 29.6
comp=Z,3μm,18.8s
GERES GERESS Array B 82.42 328 P **P 16 40 58.2 0.0**
comp=Z,3.4nm,0.5s,baz=42,slow=7.3,SNR=24
GERES LR LR 17 21 06.5
comp=Z,2μm,18.1s,baz=30,slow=38
comp=Z,3.4nm,0.5s
FRGS Fruska Gora 82.45 323 ⇓P **P 16 40 59.3 +0.9**
OGNE Ogallala 82.52 43 P **P 16 40 59.4 +0.5**
baz=314
WET Wettzell 82.52 329 *eP* **P 16 40 59.2 +0.5**
comp=Z,45nm,1.4s,baz=37,slow=5.3
WET *epP* **sP 16 41 12.0 -0.6**
WET *eL* L 17 20 35.7
comp=Z,4μm,19.5s
EYMN Ely 82.56 33 IAmb IAmb 16 41 01.6
comp=Z,54nm,1.2s
EYMN Ely 82.56 33 P **P 16 40 59.0 +0.2**
baz=320,SNR=6.3
VTS Vitosha 82.57 319 P **P 16 40 59.5 +0.3**
K30B Basset 82.59 41 IAmb IAmb 16 41 02.4
comp=Z,60nm,1.1s
KASTN Kahler Asten 82.61 333 *eP* **P 16 40 59.3 +0.2**
comp=Z,27nm,1.2s,baz=37,slow=5.3
KASTN *epP* **sP 16 41 12.2 -0.9**
BOVS Bovan 82.62 321 ⇑P **P 16 40 58.9 -0.3**
EKA Eskdalemuir Ar 82.74 341 P **P 16 40 59.9 +0.3**
comp=Z,2.7nm,0.6s,baz=25,slow=4.5,SNR=14
comp=Z,2.7nm,0.6s
SDCO Great Sand Dun 82.75 47 P **P 16 41 00.9 +0.5**
baz=312,SNR=5.3
GRF Grafenberg Arr 82.76 330 *eP* **P 16 41 00.6 +0.7**
comp=Z,82nm,1.3s,baz=37,slow=5.3
GRF *eL* L 17 22 16.4
comp=Z,2μm,19.8s
GRFO Grafenberg 82.76 330 P **P 16 41 00.0 +0.2**
GRFO Grafenberg 82.76 330 P **P 16 41 00.0 +0.2**
GRFO pmax pmax
comp=Z,97nm,1.2s
GRFO MLR MLR
comp=Z,2μm,19.0s
BKZ Black Stump Fm 82.76 153 IAMs_20 IAMs_20 17 12 11.1
comp=Z,2μm,21.0s
BUG Bochum--Univer 82.83 333 *eP* **P 16 41 00.0 -0.1**
comp=Z,33nm,1.2s,baz=37,slow=5.3
ARSA Arzberg 82.86 326 *eP* **P 16 41 00.7 +0.3**

comp=Z,3.4nm,0.7s,SNR=6.9
GHAJ Ghor Haditha 82.87 304 IAMs_20 IAMs_20 17 21 18.8
comp=Z,2μm,20.0s
MOA Molln 82.95 327 *eP* **P 16 41 01.1 +0.2**
comp=Z,2.4nm,0.6s,SNR=8.0
MMB Musomishta 83.06 318 *i* P **P 16 40 57.5 -4.1**
TUC Tucson 83.06 54 P **P 16 41 03.4 +1.5**
baz=310
KKB Krupnik 83.17 319 *i* P **P 16 41 02.6 +0.4**
BIOA Bad Ischl, Aus 83.34 328 *eP* **P 16 41 03.2 +0.3**
comp=Z,6.3nm,0.5s,SNR=10
PEHC Pehcevo 83.34 319 *i* P **P 16 41 04.2 +1.1**
ECSD EROS Data Cent 83.35 38 IAmb IAmb 16 41 05.2
comp=Z,31nm,1.2s
TNS Taunus Mts 83.40 332 *eL* L 17 23 24.4
comp=Z,3μm,18.9s
PERS Pernice 83.51 326 *i* P **P 16 41 03.9 0.0**
PERS *i* PP **sP 16 41 16.8 -1.0**
SOKA Soboth 83.52 326 *i* P **P 16 41 04.0 0.0**
comp=Z,78nm,1.9s,SNR=9.6
KSCO Kaye Shedlock' 83.53 45 IAmb IAmb 16 41 06.8
comp=Z,75nm,1.6s
KSCO Kaye Shedlock' 83.53 45 P **P 16 41 04.0 -0.2**
baz=314
NNZ Nelson 83.56 157 IAMs_20 IAMs_20 17 14 17.2
comp=Z,2μm,19.0s
E38A The Farm, Brul 83.56 34 IAmb IAmb 16 41 06.5
comp=Z,32nm,0.8s
GOLS Golise 83.76 326 *i* P **P 16 41 05.1 0.0**
T25A Trinidad 83.80 47 IAmb IAmb 16 41 08.8
comp=Z,38nm,1.2s
T25A Trinidad 83.80 47 P **P 16 41 06.3 +0.6**
baz=313,SNR=13
VAY Valandovo 83.84 319 *i* P **P 16 41 05.9 +0.3**
OBKA Obir 83.86 326 *eP* **P 16 41 05.4 -0.3**
comp=Z,12nm,1.0s
THZ Tophouse 83.91 157 IAMs_20 IAMs_20 17 12 52.4
comp=Z,2μm,22.0s
BEBN Eben Emael 83.93 334 *dP* **P 16 41 05.6 -0.2**
KBA Koelnbreinsper 83.94 327 *eP* **P 16 41 06.0 -0.2**
comp=Z,29nm,1.3s
BTNL Ternell 83.95 333 *dP* **P 16 41 05.3 -0.6**
FUR Furstenfeldbru 83.95 329 *eP* **P 16 41 06.7 +0.6**
comp=Z,34nm,0.8s,baz=37,slow=5.3
FUR *eL* L 17 21 27.3
comp=Z,4μm,20.1s
LESA Schwarzleotal 83.95 328 *eP* **P 16 41 06.3 +0.1**
comp=Z,34nm,1.5s
SKO Skopje 83.96 320 *i* P **P 16 41 06.9 +0.7**
MEM Membach 83.97 333 *dP* **P 16 41 05.8 -0.2**
ANMO Albuquerque 84.05 50 P **P 16 41 06.7 -0.3**
ANMO IAmb IAmb 16 41 27.0
comp=Z,24nm,1.1s
ANMO Albuquerque 84.05 50 P **P 16 41 08.5 +1.5**
baz=312
ANMO Albuquerque 84.05 50 P **P 16 41 06.7 -0.3**
ANMO pmax pmax
comp=Z,24nm,1.1s
SPMN Marine on St. 84.06 35 IAmb IAmb 16 41 24.7
comp=Z,61nm,1.7s
SPMN Marine on St. 84.06 35 P **P 16 41 07.6 +1.0**
baz=320
SNZO South Karori 84.07 156 IAMs_20 IAMs_20 17 13 41.7
comp=Z,2μm,20.0s
BSTI Sart Tilman 84.15 334 *dP* **P 16 41 07.2 +0.2**
MYKA Terra Mystica 84.16 327 *eP* **P 16 41 06.3 -0.9**
comp=Z,8.2nm,1.0s
BHW Baring Head 84.21 156 IAMs_20 IAMs_20 17 13 45.5
comp=Z,1μm,22.0s
BGNE Belgrade 84.26 41 P **P 16 41 07.9 +0.1**
baz=316
STU Stuttgart 84.29 331 IAmb IAmb 16 41 22.1
comp=Z,58nm,1.2s
STU IAMs_20 IAMs_20 17 21 47.4
comp=Z,2μm,18.0s
STU Stuttgart 84.29 331 *eP* **P 16 41 08.1 +0.4**
comp=Z,148nm,1.4s,baz=37,slow=5.3
EIL Elat 84.32 303 P **P 16 41 08.4 +0.2**
comp=Z,26nm,0.8s,baz=69,slow=2.5,SNR=15
EIL LR LR 17 22 19.0
comp=Z,980nm,21.3s,baz=64,slow=38
comp=Z,26nm,0.8s
PRED Cave del Predi 84.34 327 IAmb IAmb 16 41 22.6
comp=Z,18nm,0.8s
Y22D IRIS PASSCAL I 84.35 51 P **P 16 41 08.2 -0.3**
baz=312
Y22F Passcal Instru 84.35 51 P **P 16 41 09.7 +1.2**
baz=312
BCLA Clavier 84.38 334 *dP* **P 16 41 08.0 -0.1**
BGES Gesves 84.48 334 *dP* **P 16 41 08.0 -0.6**
WATA Walderalm 84.48 329 *eP* **P 16 41 08.5 -0.4**
comp=Z,26nm,1.4s,SNR=7.8
GBRS Gornja Briga 84.50 326 *i* P **P 16 41 08.7 -0.2**
WTTA Wattenberg 84.52 328 *eP* **P 16 41 08.8 -0.3**
comp=Z,21nm,1.3s,SNR=7.7
ABTA Abfaltersbach 84.56 328 *eP* **P 16 41 08.0 -1.2**
comp=Z,18nm,1.3s
RCHB Rochefort 84.62 334 *dP* **P 16 41 09.1 -0.3**
PPT Papeete 84.63 117 LR LR 17 13 40.3
comp=Z,950nm,20.0s,baz=293,slow=32
PPT2 Papeete2 84.64 117 *eP* **P 16 41 10.6 +0.7**
comp=Z,71nm,26.0s
PPT2 Papeete2 84.64 117 *eS* S 16 51 21.9 -13
comp=Z,258nm,24.5s
PPT2 *eSS* SS 16 56 48.5 -19
comp=Z,198nm,25.0s
PPT2 Papeete2 84.64 117 *eLR* LR 17 07 07.8
comp=Z,2μm,33.0s
PPT2 *eLR* LR 17 07 31.9
comp=Z,3μm,24.5s
319A Douglas 84.64 54 IAmb IAmb 16 41 28.1
comp=Z,48nm,1.1s
BMRD Maredsous 84.66 334 *dP* **P 16 41 09.3 -0.2**
MOTA Moosalm 84.67 329 *eP* **P 16 41 09.5 -0.3**
comp=Z,31nm,1.3s,SNR=8.3
RETA Reutte 84.70 329 *eP* **P 16 41 10.1 +0.1**
comp=Z,45nm,1.3s,SNR=7.8
WLF Walferdange 84.70 333 *dP* **P 16 41 10.3 +0.5**
SQTA Sankt Quirin 84.73 329 *eP* **P 16 41 09.9 -0.3**
comp=Z,22nm,1.5s
SCHQ Schefferville 84.77 16 IAmb IAmb 16 41 12.4
comp=Z,24nm,0.8s
SCHQ Schefferville 84.77 16 P **P 16 41 10.2 +0.2**
comp=Z,14nm,0.7s,baz=338,slow=6.1,SNR=34
SCHQ LR LR 17 20 59.1
comp=Z,1μm,21.1s,baz=342,slow=37
comp=Z,14nm,0.7s
121A Cookes Peak, D 84.83 53 IAmb IAmb 16 41 29.4
comp=Z,45nm,1.1s
121A Cookes Peak, D 84.83 53 P **P 16 41 12.4 +1.4**
baz=312,SNR=9.6
DOU Dourbes 84.90 334 *dP* **P 16 41 10.8 +0.1**
OHR Ohrid 84.92 319 *i* P **P 16 41 11.4 +0.3**
BFO Black Forest 84.99 331 P **P 16 41 10.8 -0.5**
BFO Black Forest 84.99 331 P **P 16 41 10.8 -0.5**
BFO pmax pmax
comp=Z,60nm,1.0s
BFO Black Forest 84.99 331 *eP* **P 16 41 11.6 +0.3**
comp=Z,47nm,1.1s,baz=37,slow=5.3
BFO *epP* **sP 16 41 24.4 -0.9**
BFO *eL* L 17 22 26.7
comp=Z,2μm,19.3s
FETA Feichten 85.08 329 *eP* **P 16 41 11.7 -0.3**
comp=Z,24nm,1.1s
RPZ Rata Peaks 85.14 159 LR LR 17 14 45.8
comp=Z,1μm,20.2s,baz=330,slow=32
DAVA Damuels 85.22 329 *iP* **P 16 41 12.5 -0.1**
comp=Z,34nm,1.1s,SNR=8.9
RTBA Rita Blanca 85.25 47 IAmb IAmb 16 41 15.6
comp=Z,45nm,1.3s
CBKS Cedar Bluff 85.27 44 P **P 16 41 12.6 -0.3**
baz=316
KARP Karpathos 85.32 312 IAMs_20 IAMs_20 17 25 49.1
comp=Z,1μm,20.0s
DAVOX Davos/Dischmat 85.63 329 LR LR 17 23 01.4
comp=Z,3μm,19.1s,baz=15,slow=38
E43A Lone Tree Farm 85.70 31 IAmb IAmb 16 41 17.0
comp=Z,32nm,0.9s
N35A Tabor 85.95 40 IAmb IAmb 16 41 18.6
comp=Z,42nm,0.9s
SCIA State Center 86.38 38 P **P 16 41 18.0 -0.3**
baz=319
KSU1 Kansas State U 86.75 42 IAmb IAmb 16 41 22.1
comp=Z,20nm,0.8s
KSU1 Kansas State U 86.75 42 P **P 16 41 19.7 -0.5**
baz=318,SNR=6.5
IDI Anoyia 86.83 313 LR LR 17 24 50.6

comp=Z,406nm,18.5s,baz=32,slow=39
MNTX Cornudas Mount 86.90 52 P P 16 41 21.5 +0.5
baz=313,SNR=9.5
MSTX Muleshoe 86.94 49 P P 16 41 21.6 +0.3
baz=314
AMTX Amarillo 86.95 47 IAmb IAmb 16 41 39.4
comp=Z,34nm,1.1s
AMTX Amarillo 86.95 47 P P 16 41 21.4 +0.1
baz=315
JFWS Jewell Farm 87.01 35 P P 16 41 21.2 -0.1
baz=321
ELIS Ellis County 87.42 45 IAmb IAmb 16 41 26.4
comp=Z,43nm,1.1s
OK038 West end E0370 87.50 45 IAMs_20 IAMs_20 17 20 35.4
comp=Z,762nm,22.0s
OK032 Salt Plains WL 87.56 44 IAmb IAmb 16 41 26.7
comp=Z,38nm,1.2s
SMWD Samnorwood 87.63 46 IAmb IAmb 16 41 27.4
comp=Z,35nm,1.2s
VHRN Van Horn 87.77 52 IAmb IAmb 16 41 40.5
comp=Z,28nm,1.6s
GLMI Grayling 87.94 31 P P 16 41 25.8 0.0
baz=325
P38A Dawn 87.95 39 IAmb IAmb 16 41 28.3
comp=Z,32nm,1.1s
DKNS Dickens 88.25 48 IAmb IAmb 16 41 31.4
comp=Z,22nm,1.0s
TIP Timpagrande 88.42 320 IAmb IAmb 16 41 51.1
comp=Z,24nm,0.9s
N41A Harden Midland 88.44 37 IAmb IAmb 16 41 31.2
comp=Z,36nm,1.1s
OK051 E0350 and S346 88.53 43 IAMs_20 IAMs_20 17 23 08.7
comp=Z,702nm,21.0s
TBI Tubuai 88.56 121 *e*P P 16 41 26.5 -2.4
comp=Z,250nm,27.5s
TBI Tubuai 88.56 121 *e*S SKSac 16 52 00.7 +5.1
comp=Z,1µm,27.8s
TBI Tubuai 88.56 121 *e*LR LR 17 08 57.6
comp=Z,4µm,28.0s
TBI *e*LR LR 17 09 27.1
comp=Z,13µm,31.5s
L44A Lake County Fo 88.65 35 P P 16 41 29.5 +0.3
baz=323
LPIG La Paz 88.70 60 LR LR 17 18 02.8
comp=Z,117nm,18.0s,baz=306,slow=33
WMOK Wichita Mounta 88.73 46 IAmb IAmb 16 41 32.2
comp=Z,36nm,1.5s
WMOK Wichita Mounta 88.73 46 P P 16 41 30.2 +0.5
baz=316,SNR=13
MNHN Monahans 88.77 51 IAmb IAmb 16 41 32.5
comp=Z,25nm,1.5s
QUOK Quay 88.85 44 IAmb IAmb 16 41 32.6
comp=Z,37nm,1.3s
OK052 Battle Ridge R 88.92 44 IAMs_20 IAMs_20 17 22 16.1
comp=Z,672nm,18.0s
HDIL Hopedale 89.30 36 IAmb IAmb 16 41 35.2
comp=Z,38nm,1.1s
HDIL Hopedale 89.30 36 P P 16 41 31.9 -0.3
baz=322
SGCY Sterling City 89.37 49 IAmb IAmb 16 41 50.2
comp=Z,34nm,1.0s
S39A Bolivar 89.52 41 IAmb IAmb 16 41 34.9
comp=Z,27nm,1.4s
TUL3 Leonard 89.54 43 IAmb IAmb 16 41 35.9
comp=Z,68nm,1.8s
TUL3 Leonard 89.54 43 P P 16 41 33.9 +0.4
baz=318
TXAR Lajitas Array 89.60 53 P P 16 41 34.7 +0.7
comp=Z,3.5nm,0.5s,baz=298,slow=2.9,SNR=53
comp=Z,3.5nm,0.5s
R40A Maddies Statio 89.60 40 IAmb IAmb 16 41 35.8
comp=Z,56nm,1.4s
WTFS Witchita Falls 89.61 46 IAmb IAmb 16 41 36.0
comp=Z,30nm,1.3s
ABTX Abilene, Hawle 89.75 48 IAmb IAmb 16 41 37.2
comp=Z,40nm,1.3s
ABTX Abilene, Hawle 89.75 48 P P 16 41 34.3 -0.3
baz=316,SNR=7.9
LDAQ Lac Daran 89.92 21 IAmb IAmb 16 41 37.4
comp=Z,21nm,1.0s
ATD Arta Tunnel 90.00 284 IAMs_20 IAMs_20 17 25 24.4
comp=Z,542nm,22.0s
ATD Arta Tunnel 90.00 284 LR LR 17 26 41.0
comp=Z,18nm,19.8s,baz=36,slow=39
SADO Sadowa 90.12 28 LR LR 17 24 11.0
comp=Z,497nm,21.4s,baz=314,slow=37
HHAR Hobbs 90.26 42 IAmb IAmb 16 41 38.7
comp=Z,34nm,1.5s
CCM Cathedral Cave 90.30 39 P P 16 41 37.1 +0.1
baz=321
PLPT Palo Pinto 90.39 47 IAmb IAmb 16 41 40.0
comp=Z,26nm,1.3s
AAM Ann Arbor 90.41 32 P P 16 41 37.4 0.0
baz=326
SFIN Lafayette 90.46 35 P P 16 41 37.5 -0.1
baz=323
MGMO Mountain Grove 90.47 40 IAmb IAmb 16 41 39.6
comp=Z,37nm,1.4s
LMQ La Malbaie 90.56 21 IAmb IAmb 16 41 41.0
comp=Z,29nm,1.1s
X37A Clayton 90.75 44 IAmb IAmb 16 42 05.2
comp=Z,46nm,1.7s
FVM French Village 90.76 39 IAmb IAmb 16 41 42.2
comp=Z,47nm,1.6s
VAE Valguarnera 90.91 321 LR LR 17 26 50.1
comp=Z,2µm,18.7s,baz=40,slow=38
BRDY Brady 91.08 48 IAmb IAmb 16 41 58.5
comp=Z,23nm,1.0s
JCT Junction City 91.18 49 IAmb IAmb 16 41 43.5
comp=Z,41nm,1.5s
JCT Junction City 91.18 49 P P 16 41 41.5 +0.2
baz=316
O48B Farmland 91.43 34 IAmb IAmb 16 41 45.0
comp=Z,16nm,0.9s
O48B Farmland 91.43 34 P P 16 41 41.6 -0.6
baz=325
DRIO Del Rio 91.43 51 IAmb IAmb 16 41 58.8
comp=Z,12nm,0.9s
WHTX Lake Whitney, 91.48 47 P P 16 41 41.9 -0.7
baz=317,SNR=10
FCAR Ozark Folk Cen 91.51 41 IAmb IAmb 16 41 44.4
comp=Z,21nm,1.1s
SIUC Southern Illin 91.56 38 IAmb IAmb 16 41 47.1
comp=Z,21nm,1.1s
PBMO Poplar Bluff 91.69 39 IAmb IAmb 16 41 45.7
comp=Z,37nm,1.4s
MIAR Mount Ida 91.76 43 IAmb IAmb 16 41 47.0
comp=Z,25nm,1.0s
MIAR Mount Ida 91.76 43 P P 16 41 44.5 +0.7
baz=319,SNR=15
LONY Lake Ozonia 91.86 25 IAMs_20 IAMs_20 17 29 16.5
comp=Z,1µm,20.0s
LONY Lake Ozonia 91.86 25 P P 16 41 43.9 -0.3
baz=332
LCAR Lake Charles 91.87 40 IAmb IAmb 16 41 49.2
comp=Z,56nm,2.0s
WHAR Wooly Hollow 91.88 41 IAmb IAmb 16 41 47.0
comp=Z,32nm,1.1s
BATG Bathurst New B 91.96 19 IAmb IAmb 16 41 47.3
comp=Z,25nm,1.0s
ERPA Erie 92.05 30 P P 16 41 45.0 0.0
baz=328
P49A Miami Univ. Ec 92.22 34 P P 16 41 45.4 -0.4
baz=325
435B Jarrell 92.28 48 P P 16 41 46.3 0.0
baz=317
M53A WI Miller and 92.35 31 IAMs_20 IAMs_20 17 19 13.8
comp=Z,1µm,21.0s
ACSO Alum Creek Sta 92.40 33 P P 16 41 45.6 -1.1
baz=326
WCI Wyandotte Cave 92.55 36 P P 16 41 46.8 -0.6
baz=324
PKME Peaks-Kenny Pk 92.94 21 P P 16 41 47.7 -1.3
baz=336
833A Chaparral WMA, 92.97 51 P P 16 41 49.1 -0.4
baz=316
LBNH Lisbon 93.07 24 P P 16 41 48.1 -1.6
baz=334
O53A New Philadelph 93.13 31 P P 16 41 49.4 -0.7
baz=327
T47A Sharon Grove 93.17 37 IAmb IAmb 16 42 07.9
comp=Z,11nm,0.9s
NATX Nacogdoches 93.25 45 IAMs_20 IAMs_20 17 18 04.9
comp=Z,594nm,19.0s
NATX Nacogdoches 93.25 45 P P 16 41 50.0 -0.7
baz=319
P52A Corning 93.26 32 P P 16 41 50.0 -0.7
baz=327
HNH Hanover 93.43 24 IAMs_20 IAMs_20 17 25 15.9
comp=Z,1µm,20.0s
WVL Waterville 93.47 22 IAMs_20 IAMs_20 17 27 37.8
comp=Z,2µm,20.0s
BINY Binghamton 93.50 27 P P 16 41 50.8 -1.0
baz=331
WVT Waverly 93.50 38 P P 16 41 51.2 -0.6
baz=323
OXF Oxford 93.98 40 IAmb IAmb 16 41 56.6
comp=Z,31nm,1.2s
OXF Oxford 93.98 40 P P 16 41 53.7 -0.4
baz=322
SSPA Standing Stone 94.14 29 P P 16 41 54.0 -0.7
baz=330
MCWV Mont Chateau 94.19 31 P P 16 41 54.0 -0.9
baz=328
L61B Northampton 94.42 25 IAMs_20 IAMs_20 17 31 58.3
comp=Z,1µm,19.0s
L61B Northampton 94.42 25 P P 16 41 55.2 -0.8
baz=333
HRV Adam Dziewonsk 94.74 24 IAMs_20 IAMs_20 17 28 44.6
comp=Z,793nm,20.0s
HRV Adam Dziewonsk 94.74 24 P P 16 41 56.6 -0.8
baz=334
KEST Kesra 94.78 323 P P 16 41 57.4 -0.4
comp=Z,7.4nm,1.0s,baz=0.0,slow=7.1,SNR=3.5
KEST LR LR 17 29 40.7
comp=Z,2µm,19.8s,baz=352,slow=39
comp=Z,7.4nm,1.0s
FURI Furi 94.84 285 IAMs_20 IAMs_20 17 32 41.6
comp=Z,817nm,19.0s
WES Weston 94.93 24 IAMs_20 IAMs_20 17 28 50.5
comp=Z,1µm,20.0s
SWET Sewanee 95.15 37 IAmb IAmb 16 45 26.6
comp=Z,24nm,1.7s
PAL Palisades 95.29 26 P P 16 41 59.4 -0.5
baz=332
TKL Tuckaleechee C 95.81 36 LR LR 17 27 24.6
comp=Z,404nm,20.6s,baz=340,slow=37
BLA Blacksburg 96.02 33 P P 16 42 02.0 -1.5
baz=328
PGAV Gavieira, Arco 96.27 338 *e*LR LR 17 17 59.7
comp=Z,2µm,18.0s
MVO Moncorvo 96.62 337 *i* LQ LQ 16 44 54.7
MVO Moncorvo 96.62 337 *e*LR LR 17 18 47.3
comp=Z,2µm,22.0s
PVRL Vila Real 96.73 337 *i* LQ LQ 16 45 01.4
ESDC Sonseca Array 96.95 334 P P 16 42 07.0 -0.6
comp=Z,1.3nm,0.8s,baz=23,slow=4.7,SNR=9.7
ESDC LR LR 17 30 28.9
comp=Z,4µm,21.1s,baz=16,slow=38
comp=Z,1.3nm,0.8s
PVIS Viseu 97.30 337 *i* LQ LQ 16 45 02.6
MTE Manteigas 97.48 337 *e*LR LR 17 18 57.8
comp=Z,2µm,22.0s
PCBR Castelo Branco 97.96 337 *i* LQ LQ 16 45 01.7
PMRV Marv??o 98.31 336 *e*LR LR 17 18 42.0
comp=Z,2µm,22.0s
PBAR Barrancos 99.34 336 *i* LQ LQ 16 44 58.5
PVAQ Vaqueiros 100.26 336 *e*LR LR 17 20 27.6
comp=Z,3µm,22.0s
LODK Lodwar 100.83 283 IAMs_20 IAMs_20 17 34 14.5
comp=Z,631nm,20.0s
KMBO Kilima Mbogo 102.17 278 IAMs_20 IAMs_20 17 35 43.4
comp=Z,465nm,19.0s
AVE Averroes 103.88 334 IAMs_20 IAMs_20 17 34 30.7
comp=Z,1µm,20.0s
TEIG Tepich 105.72 48 IAMs_20 IAMs_20 17 37 18.5
comp=Z,538nm,22.0s
BBSR BB Station 106.19 23 IAMs_20 IAMs_20 17 36 25.7
comp=Z,500nm,18.0s
TAM Tamanrasset 107.21 318 IAMs_20 IAMs_20 17 37 03.1
comp=Z,918nm,20.0s
SNET Serv Nac Est T 110.10 54 IAMs_20 IAMs_20 17 27 03.1
comp=Z,709nm,21.0s
HDC Heredia 116.14 52 IAMs_20 IAMs_20 17 41 19.8
comp=Z,568nm,19.0s
TORD Torodi Ar. Bea 117.16 315 PKP **PKPdf** 16 47 20.9 -0.7
comp=Z,1.6nm,0.4s,baz=42,slow=4.4,SNR=2.9
LSZ Lusaka 117.74 272 IAMs_20 IAMs_20 17 44 35.6
comp=Z,624nm,20.0s
SDV Santo Domingo 124.76 40 PKPdf **PKPdf** 16 47 35.6 -0.9
SDV IAMs_20 IAMs_20 17 49 30.1
comp=Z,539nm,19.0s
DBIC Dimbokro 126.09 317 PKP **PKPdf** 16 47 38.0 -0.8
comp=Z,5.1nm,0.6s,baz=58,slow=2.3,SNR=5.8
BOSA Boshof 126.93 260 PKP **PKPdf** 16 47 39.7 -0.4
comp=Z,2.7nm,0.7s,baz=82,slow=7.1,SNR=4.5
QSPA South Pole Qui 127.29 180 PKP **PKPdf** 16 47 38.4 -1.1
comp=Z,6.8nm,0.9s,baz=325,slow=2.5,SNR=37
ELIB Princess Elisa 133.99 202 *d*PKPdf **PKPdf** 16 47 52.7 +0.6
SNAA Sanae 141.32 197 ⇑P **PKPdf** 16 47 59.6 -6.0
comp=Z,66nm,0.5s
SNAA Sanae 141.32 197 PKhKP PKPpre 16 47 59.1
comp=Z,3.4nm,0.7s,baz=186,slow=7.5,SNR=8.8
VNA2 Neumayer--Watz 142.88 196 ⇑P **PKPdf** 16 48 05.7 -2.6
comp=Z,12nm,0.7s,baz=113,slow=2.1
VNA3 Neumayer Olymp 143.13 195 ⇑P PKPbc 16 48 06.0 +0.3
comp=Z,11nm,0.8s
SAML Samuel 143.69 45 PKPdf PKPbc 16 48 10.6 +1.6
SAML Samuel 143.69 45 PKIKP PKPbc 16 48 10.6 +1.6
SAML MLR MLR
comp=Z,37µm,22.0s
LPAZ La Paz 146.20 59 **PKPbc** 16 48 17.5 0.0
LPAZ La Paz 146.20 59 PKP2 **PKPbc** 16 48 17.5 0.0
H03N2 Juan Fernandez 146.81 95 T T 19 33 28.2
baz=291,slow=76,SNR=254
H03N3 Juan Fernandez 146.82 95 T T 19 33 26.6
baz=291,slow=76,SNR=278
H03N1 Juan Fernandez 146.83 95 T T 19 33 24.4
baz=291,slow=76,SNR=240
VILB Vilhena 148.63 44 **PKPdf** 16 48 22.1 +2.2
LCO Las Campanas 151.68 82 **PKPbc** 16 48 30.7 -0.1
LCO Las Campanas 151.68 82 PKIKP **PKPbc** 16 48 30.7 -0.1
LCO MLR MLR
comp=Z,23µm,19.0s
CO02 Combarbal 152.33 87 **PKPbc** 16 48 31.9 -0.2
GO05 Huala 152.81 95 **PKPbc** 16 48 33.2 +0.3
PLCA Paso Flores 154.82 107 PKPbc **PKPbc** 16 48 37.5 +0.4
comp=Z,2.5nm,1.0s,baz=244,slow=2.8,SNR=7.5
PLCA PKPab **sPKPbc** 16 48 51.4 0.0
comp=Z,9.7nm,1.1s,baz=253,slow=4.5,SNR=8.7
BDFB Brasilia 156.53 24 PKPab **PKPab** 16 48 58.8 -1.4
comp=Z,7.2nm,1.0s,baz=320,slow=2.3,SNR=7.1

JMA 25 16:29:23.0±0.1,36°1N±0.2×137°6E±0.2,h8km±1km,
MV0.1/24,WESTERN NAGANO PREF,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.26**	**309**	P	Pg	16 29 28.4	+0.1
JGN				eS	Sg	16 29 31.9	0.0
JNT	**Takato**	**0.50**	**111**	P	Pg	16 29 32.2	-0.4

*TEH **25** 16:36:01.9,27°.57N×52°.50E,h23km±19km,ML4.5*
*NEIC **25** 16:36:01.4±1.2,27°.50N±0°.07×52°.47E±0°.07,h10km±1km,*
mb4.6/21, Error ellipse: s-maj=11.9km s-min=10.0km
az=141.0
*IDC **25** 16:36:03.3±4.0,27°.54N×52°.53E,h25km±26km,mb4.2/23,*
mbtmp4.3/30,ML4.0/6, Error ellipse: s-maj=18.5km
s-min=13.0km az=14.0
*DSN **25** 16:36:04.1±1.1,27°.46N×52°.51E,h15km,ML4.0/12, Error*
ellipse: s-maj=17.0km s-min=6.5km az=8.0
*SGS **25** 16:36:06.3,27°.67N×52°.33E,h7km,Ml3.8*
*OMAN **25** 16:36:06.3±0.3,27°.24N×52°.63E,h10km,ml4.1/18, Error*
ellipse: s-maj=5.6km s-min=3.0km az=354.0

ISC 25 16:36:01.8±0.3,27°.52N±0°.03×52°.52E±0°.03,h14km,n207,
σ1§33/240,mb4.5/38,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.60**	**108**	Pg	**Pg**	**16 36 13.7**	**+0.1**
LMD1				Sg	**Sn**	**16 36 24.6**	**-0.9**
QIR1	**Qir**	**1.06**	**26**	Pg	**Pb**	**16 36 21.2**	**-0.7**
QIR1				Sg	**Sb**	**16 36 35.8**	**+0.1**
JHRM	**Jahrom**	**1.35**	**43**	Pg	**Pn**	**16 36 26.5**	**+0.2**
DSBU	**Dashti - Bushe**	**1.40**	**307**	Pg	**Pb**	**16 36 27.5**	**-0.2**
LAR1	**LAR**	**1.65**	**84**	Pg	**Pb**	**16 36 32.2**	**+0.2**
SHI	**Shiraz**	**2.11**	**360**	Pn	**Pn**	**16 36 36.9**	**0.0**
SHMA	**Al-Shehemyia**	**2.17**	**220**	P	**Pb**	**16 36 41.4**	**+0.6**
SAKB	**Bahrain**	**2.35**	**230**	P	**Pb**	**16 36 43.9**	**0.0**
JRN	**Qarnain Island**	**2.59**	**173**	P	**Pb**	**16 36 46.7**	**-1.3**
	SNR=6.0						
TRNA	**Turayna**	**3.02**	**203**	P	**Pb**	**16 36 53.5**	**-1.8**
	SNR=7.8						
SMRA	**Abu-Samra**	**3.16**	**209**	P	**Pb**	**16 36 56.2**	**-1.5**
	SNR=8.5						
GENO	**Geno**	**3.24**	**91**	Pn	**Pn**	**16 36 53.7**	**+1.2**
SLWR	**Sila**	**3.52**	**192**	P	**Pn**	**16 36 58.5**	**+2.4**
SHME	**Shamm**	**3.55**	**114**	P	**Pn**	**16 36 58.6**	**+2.1**
SHME				S	**Sn**	**16 37 39.4**	**+1.1**
KLNJ	**Kolanjah**	**3.57**	**347**	Pn	**Pn**	**16 36 56.5**	**-0.5**
IBND	**Bandar-abas**	**3.57**	**90**	Pn	**Pn**	**16 36 58.0**	**+1.3**
SHBH2	**SHBH2**	**3.59**	**198**	P	**Pn**	**16 36 59.8**	**+2.8**
AJN	**Ajban**	**3.69**	**143**	*i* P	**Pn**	**16 37 01.8**	**+3.4**
	SNR=10						
AJN	**Ajban**	**3.69**	**143**	P	**Pn**	**16 37 02.4**	**+4.0**
	SNR=11						
BANOM	**Banah**	**3.73**	**114**	P	**Pn**	**16 37 01.1**	**+2.0**
KFJS2	**Khafji**	**3.74**	**284**	P	**Pn**	**16 37 00.2**	**+1.1**
NAZ	**Nazwa, Dubai**	**3.78**	**131**	*i* P	**Pn**	**16 37 02.6**	**+2.9**
	SNR=9.4						
NAZ				S	**Sn**	**16 37 45.5**	**+1.5**
NAZ	**Nazwa, Dubai**	**3.78**	**131**	P	**Pn**	**16 37 03.0**	**+3.3**
	SNR=9.4						
NAZ				S	**Sn**	**16 37 46.2**	**+2.1**
ASUD	**Al Ashush, Dub**	**3.83**	**138**	*i* P	**Pn**	**16 37 02.9**	**+2.5**
	SNR=66						
ASUD	**Al Ashush, Dub**	**3.83**	**138**	P	**Pn**	**16 37 03.4**	**+3.0**
	SNR=64						
MASF	**Masafi**	**3.90**	**123**	P	**Pn**	**16 37 03.9**	**+2.5**
	SNR=12						
MASF				S	**Sn**	**16 37 48.6**	**+1.6**
FAQ	**Al Faqa, Dubai**	**3.91**	**134**	*i* P	**Pn**	**16 37 03.3**	**+1.9**
	SNR=9.0						
FAQ	**Al Faqa, Dubai**	**3.91**	**134**	P	**Pn**	**16 37 04.8**	**+3.4**
	SNR=16						
MSFE	**Esma-Masafi**	**3.91**	**123**	*i* P	**Pn**	**16 37 02.7**	**+1.3**
	SNR=12						
MZWR	**Madinat Zayed**	**3.94**	**162**	P	**Pn**	**16 37 05.0**	**+3.1**
MDH	**Madha**	**4.04**	**122**	P	**Pn**	**16 37 05.0**	**+1.7**
MDH	**Madha**	**4.04**	**122**	P	**Pn**	**16 37 05.2**	**+1.9**
	SNR=7.2						
MDH				S	**Sn**	**16 37 51.9**	**+1.4**
SHBH1	**SHBH1**	**4.08**	**192**	P	**Pn**	**16 37 05.5**	**+1.8**
UOSS	**Minazif**	**4.18**	**127**		**Pn**	**16 37 06.6**	**+1.4**
UOSS	**Minazif**	**4.18**	**127**	*i* P	**Pn**	**16 37 06.7**	**+1.4**
	SNR=11						
UOSS	**Minazif**	**4.18**	**127**	Pn	**Pn**	**16 37 06.6**	**+1.4**
UOSS	**Minazif**	**4.18**	**127**	P	**Pn**	**16 37 06.8**	**+1.6**
UOSS				S	**Sn**	**16 37 53.2**	**-0.8**
SMAN	**Sihmah**	**4.20**	**252**	P	**Pn**	**16 37 07.0**	**+1.5**
SMAN	**Sihmah**	**4.20**	**252**	S	**Sn**	**16 37 53.7**	**-0.7**
HATD	**Hatta, Dubai**	**4.21**	**129**	P	**Pn**	**16 37 07.6**	**+2.0**
HATD	**Hatta, Dubai**	**4.21**	**129**	P	**Pn**	**16 37 08.2**	**+2.6**
NHRD	**Haradh**	**4.21**	**229**	P	**Pn**	**16 37 08.9**	**+3.3**
NHRD	**Haradh**	**4.21**	**229**	S	**Sn**	**16 37 59.0**	**+4.5**
ASHO	**Ashiyiah**	**4.25**	**131**	*i* P	**Pn**	**16 37 08.1**	**+1.9**
	SNR=27						
ASHO	**Ashiyiah**	**4.25**	**131**	P	**Pn**	**16 37 08.1**	**+1.9**
	SNR=27						
ASHO				S	**Sn**	**16 37 56.8**	**+1.1**
NGRK	**Negar Kerman**	**4.26**	**59**	Pn	**Pn**	**16 37 07.3**	**+0.7**
IRAM	**Ramesheh**	**4.27**	**358**	Pn	**Pn**	**16 37 06.8**	**+0.2**
TVBK	**TV Kerman**	**4.46**	**56**	Pn	**Pn**	**16 37 10.1**	**+0.8**
KHGB	**Koh Gabri**	**4.48**	**50**	Pn	**Pn**	**16 37 10.5**	**+1.0**
ALNE	**Al Ain**	**4.51**	**139**	*i* P	**Pn**	**16 37 11.9**	**+2.1**
	SNR=8.3						
ALNE	**Al Ain**	**4.51**	**139**	P	**Pn**	**16 37 13.1**	**+3.3**
	SNR=11						
MZR	**Muzera**	**4.58**	**169**	P	**Pn**	**16 37 13.0**	**+2.3**
KHNJ	**Kahnooj**	**4.61**	**84**	Pn	**Pn**	**16 37 12.3**	**+1.2**
ZNGN	**Zangian**	**4.80**	**343**	Pn	**Pn**	**16 37 15.6**	**-0.4**
IBAF	**Bafgh**	**4.84**	**32**	Pn	**Pn**	**16 37 16.3**	**+0.9**
IGAR	**Gharneh**	**4.88**	**355**	Pn	**Pn**	**16 37 15.2**	**+0.2**
ZRDN	**Zarand Kerman**	**4.91**	**45**	Pn	**Pn**	**16 37 16.0**	**+0.7**
SOHO	**SOHO**	**4.94**	**132**	*i* P	**Pn**	**16 37 16.8**	**+1.1**
	SNR=21						
SOHO	**SOHO**	**4.94**	**132**	P	**Pn**	**16 37 17.7**	**+2.1**
SOHO				S	**Sn**	**16 38 13.7**	**+1.0**
ICHK	**Chekchek**	**4.98**	**19**	Pn	**Pn**	**16 37 16.8**	**+0.5**
CHMN	**Cheshme madani**	**4.98**	**61**	Pn	**Pn**	**16 37 17.5**	**+1.0**
QYSM	**Um Kedad**	**5.02**	**275**	P	**Pn**	**16 37 17.7**	**+0.9**
JASK	**Jask - Hormozg**	**5.06**	**108**	Pn	**Pn**	**16 37 18.0**	**+0.8**
JASK	**Jask - Hormozg**	**5.06**	**108**	P	**Pn**	**16 37 18.8**	**+1.6**
JASK				S	**Sn**	**16 38 16.0**	**+0.6**
KRM1	**Kerman Provinc**	**5.11**	**53**	Pn	**Pn**	**16 37 18.9**	**+0.7**
UMZA	**Um Al Zommool**	**5.35**	**153**	P	**Pn**	**16 37 23.4**	**+2.2**
UMZA				S	**Sn**	**16 38 23.0**	**+0.3**
IZEF	**Zefreh**	**5.36**	**358**	Pn	**Pn**	**16 37 21.2**	**-0.4**
KBAM	**BAM**	**5.47**	**72**	Pn	**Pn**	**16 37 24.1**	**+1.2**
RMAH	**Rumah**	**5.50**	**248**	P	**Pn**	**16 37 25.2**	**+1.8**
ARQ	**Araqi**	**5.52**	**138**	P	**Pn**	**16 37 25.0**	**+1.5**
	SNR=8.8						
KHRJ	**Al Kharj**	**5.71**	**231**	P	**Pn**	**16 37 28.6**	**+2.4**
ANAR	**Anarak**	**5.74**	**10**	Pn	**Pn**	**16 37 26.7**	**-0.1**
IKLH	**Kolahrood**	**5.83**	**352**	Pn	**Pn**	**16 37 27.9**	**-0.2**
RQBS	**RQBS**	**5.83**	**270**	P	**Pn**	**16 37 28.0**	**+0.1**
HOQ	**Hoqain**	**5.84**	**131**	P	**Pn**	**16 37 30.5**	**+2.5**
HOQ				S	**Sn**	**16 38 35.2**	**+0.4**
QAMS	**Qamsar**	**6.27**	**351**	Pn	**Pn**	**16 37 34.2**	**+0.1**
BSY	**Bisya**	**6.37**	**137**	P	**Pn**	**16 37 37.4**	**+2.1**
	SNR=25						
BSY				S	**Sn**	**16 38 46.8**	**-1.1**
KRSH	**Karshahi**	**6.43**	**357**	Pn	**Pn**	**16 37 35.7**	**-0.6**
BIDO	**Bidbid**	**6.44**	**127**	P	**Pn**	**16 37 38.4**	**+2.2**
BIDO				S	**Sn**	**16 38 49.5**	**-0.1**
TPRV	**Parvadeh(Tabas**	**6.56**	**32**	Pn	**Pn**	**16 37 38.5**	**+0.5**
SMDO	**Samad**	**6.69**	**130**	P	**Pn**	**16 37 42.3**	**+2.6**
SMDO				S	**Sn**	**16 38 57.2**	**+1.3**
ISFB	**Sefidab**	**6.81**	**358**	Pn	**Pn**	**16 37 40.3**	**-1.1**
WSAR	**Wadi Sarin**	**6.98**	**126**	Pn	**Pn**	**16 37 45.1**	**+1.5**
	2.2nm,0.3s,baz=291,slow=13,SNR=26						
WSAR					**Sn**		
	3.6nm,0.3s,baz=208,slow=16,SNR=1.8						
WSAR				Lg	Lg	16 39 52.1	
	baz=208,slow=3.4						
	18nm,0.4s						
JMDO	**Jabal Madar**	**7.21**	**134**	P	**Pn**	**16 37 48.4**	**+1.6**
JMDO				S	**Sn**	**16 39 09.0**	**+0.4**
TKDS	**Koohdasht(Taba**	**7.25**	**32**	Pn	**Pn**	**16 37 47.5**	**+0.1**
TNSJ	**Nastanj**	**7.32**	**28**	Pn	**Pn**	**16 37 48.6**	**+0.3**
IKOO	**Kooshah**	**7.45**	**47**	Pn	**Pn**	**16 37 50.8**	**+0.6**
IVRN	**Varamin**	**7.48**	**355**	Pn	**Pn**	**16 37 49.6**	**-0.9**
RAYN	**Ar Rayn**	**7.49**	**239**	Pn	**Pn**	**16 37 50.3**	**-0.4**
RAYN	**Ar Rayn**	**7.49**	**239**	*i* P	**Pn**	**16 37 50.9**	**+0.2**
	SNR=14						
RAYN	**Ar Rayn**	**7.49**	**239**	Pn	**Pn**	**16 37 50.3**	**-0.4**
ZHDN	**Zahedan**	**7.53**	**74**	Pn	**Pn**	**16 37 52.4**	**+1.1**
WBK	**Wadi Bani Khal**	**7.62**	**129**	P	**Pn**	**16 37 53.6**	**+1.1**
WBK				S	**Sn**	**16 39 18.4**	**-0.3**
HAGD	**Aghdareh**	**7.83**	**339**	Pn	**Pn**	**16 37 54.7**	**-0.8**
NGCH	**Negor - Chabah**	**8.02**	**104**	P	**Pn**	**16 37 59.0**	**+1.2**
IDMV	**Damavand**	**8.04**	**357**	Pn	**Pn**	**16 37 57.8**	**-0.6**
AFRZ	**Afriz**	**8.12**	**42**	Pn	**Pn**	**16 37 59.6**	**+0.2**
IRAZ	**Razeghan**	**8.16**	**345**	Pn	**Pn**	**16 38 00.0**	**-0.1**
MHTO	**MHTO**	**8.19**	**141**	P	**Pn**	**16 38 01.8**	**+1.6**
	SNR=12						
MHTO				S	**Sn**	**16 39 31.2**	**-1.3**
JLN	**Jalan Bani Buh**	**8.23**	**129**	P	**Pn**	**16 38 01.4**	**+0.6**
JLN				S	**Sn**	**16 39 32.8**	**-0.8**
IGHG	**Ghaleghazi**	**8.49**	**324**	Pn	**Pn**	**16 38 04.6**	**0.0**
IALA	**Alasht**	**8.54**	**2**	Pn	**Pn**	**16 38 05.4**	**+0.2**
SRVN	**Saravan**	**8.77**	**89**	Pn	**Pn**	**16 38 09.3**	**+0.9**
DQM	**DQM**	**8.85**	**148**	P	**Pn**	**16 38 10.1**	**+0.9**
DQM				S	**Sn**	**16 39 46.7**	**-2.1**
IDHR	**Dehrash**	**8.88**	**325**	Pn	**Pn**	**16 38 09.0**	**-0.9**
MZPU	**Pul - Mazandar**	**8.93**	**355**	Pn	**Pn**	**16 38 10.3**	**-0.2**
DOK	**Doka**	**8.99**	**170**	P	**Pn**	**16 38 11.7**	**+0.5**
DOK				S	**Sn**	**16 39 52.4**	**+0.1**
IGLO	**Ghaloghah**	**9.02**	**7**	Pn	**Pn**	**16 38 12.4**	**+0.5**
WHFO	**Wadi Hawf**	**9.63**	**173**	P	**Pn**	**16 38 20.5**	**+0.5**
WHFO				S	**Sn**	**16 40 07.7**	**-0.4**
SBZV	**Sabzevar**	**9.84**	**25**	Pn	**Pn**	**16 38 23.7**	**+0.7**
SHAO	**Shalim**	**9.88**	**163**	P	**Pn**	**16 38 24.6**	**+1.1**
SHAO				S	**Sn**	**16 40 12.2**	**-2.0**
DMTO	**DMTO**	**10.01**	**167**	P	**Pn**	**16 38 26.0**	**+0.8**
	SNR=16						
RBK	**Rabkut**	**10.09**	**171**	P	**Pn**	**16 38 26.3**	**-0.1**
RBK				S	**Sn**	**16 40 18.6**	**-0.9

GNI Garni 14.15 335 Pn Pn **16 39 23.3 +1.4**
0.5nm,0.3s,baz=319,slow=2.9,SNR=2.1
1.6nm,0.3s
ASF Jabal al Asfar 14.33 293 Pn Pn **16 39 25.2 +0.9**
0.4nm,0.3s,baz=154,slow=7.0,SNR=1.9
1.8nm,0.5s
KARS Kars 15.22 332 Pn **16 39 36.5 0.0**
GHAJ Ghor Haditha 15.25 288 P P **16 39 40.1 -1.5**
SHMJ Saham 15.40 294 P P **16 39 44.0 +0.8**
HMDT Nahal Hemdat 15.47 292 P P **16 39 45.3 +1.2**
AQBJ Aqaba 15.50 282 P P **16 39 45.9 +1.5**
NATI Neve Ativ 15.57 296 P P **16 39 45.7 +0.6**
EIL Elat 15.58 282 Pn Pn **16 39 42.5 +1.4**
0.1nm,0.3s,baz=316,slow=10,SNR=4.0
7.9nm,1.1s
EIL Elat 15.58 282 P P **16 39 45.5 +0.2**
PRNI Paran 15.60 285 P P **16 39 44.0 -1.5**
MBRI Mt Berech 15.62 282 P P **16 39 47.0 +1.1**
MMAI Mount Meron Ar 15.77 294 Pn Pn **16 39 45.4 +1.9**
1.7nm,0.3s,baz=266,slow=35,SNR=3.1
1.0nm,0.3s
BNN Bunyan 17.93 313 Pn **16 40 10.7 -0.1**
CSS Mathiatis 17.99 299 P P **16 40 15.3 +3.3**
BTK Batken 19.64 46 P Pn **16 40 30.9 -0.6**
BTK IAmb IAmb 16 40 39.9
comp=Z,47nm,1.4s
BR131 Keskin Array S 19.84 313 P P **16 40 32.7 +0.4**
BR131 Keskin Array S 19.84 313 P P **16 40 32.7 +0.4**
BRTR Keskin Array B 19.84 313 P P **16 40 32.8 +0.4**
BRTR Keskin Array B 19.84 313 P P **16 40 32.9 +0.5**
BRTR Keskin Array B 19.84 313 P P **16 40 32.9 +0.5**
comp=Z,0.9nm,0.3s,baz=136,slow=12,SNR=41
comp=Z,8.3nm,0.8s
ELL Elmali 21.20 301 P P **16 40 46.9 -0.3**
KKAR Karatay Array 21.31 38 P P **16 40 47.9 -0.2**
KKAR IAmb IAmb 16 41 02.0
comp=Z,13nm,0.8s
ARSB Arslanbob 21.71 45 P P **16 40 52.6 0.0**
ABKAR Akbulak array 22.44 13 P P **16 41 00.1 -0.1**
ABKAR Akbulak array 22.44 13 P P **16 41 00.7 +0.5**
ABKAR IAmb IAmb 16 41 05.7
comp=Z,23nm,1.1s
KSH Kashi 22.85 52 P P **16 41 04.5 -0.2**
KSH pP pP 16 41 08.3 -0.6
KSH pmax pmax
comp=Z,15nm,0.6s
AKTO Aktyubinsk 23.26 9 P P **16 41 09.7 +1.0**
comp=Z,5.6nm,0.4s,baz=209,slow=9.0,SNR=6.1
comp=Z,5.6nm,0.4s
BELG Belogornoye 25.11 353 P P **16 41 25.8 -0.1**
comp=Z,65nm,1.0s,baz=187,slow=7.1,SNR=3.9
comp=Z,65nm,1.0s
BRVK Borovoye 28.72 23 P P **16 41 57.9 -0.6**
BRVK IAmb IAmb 16 42 00.9
comp=Z,12nm,1.3s
BVAR Borovoye Array 28.73 23 P P **16 41 58.9 +0.3**
comp=Z,5.1nm,0.6s,baz=201,slow=7.9,SNR=3.8
BVAR PcP PcP **16 45 08.7 +0.1**
comp=Z,1.2nm,0.3s,baz=198,slow=2.7,SNR=11
comp=Z,5.1nm,0.6s
AKASG Malin Array Be 29.14 329 P P **16 42 01.0 -1.3**
comp=Z,2.3nm,0.7s,baz=104,slow=6.3,SNR=2.8
comp=Z,2.3nm,0.7s
AKBB Malin Array Si 29.14 329 P P **16 42 01.6 -0.6**
AKBB IAmb IAmb 16 42 05.3
comp=Z,14nm,0.9s
KIEV Kiev 29.14 329 P P **16 42 01.6 -0.6**
KIEV IAmb IAmb 16 42 05.3
comp=Z,14nm,0.9s
MAKZ Makanchi 30.09 42 P P **16 42 11.2 +0.4**
MAKZ IAmb IAmb 16 42 20.9
comp=Z,11nm,1.3s
MK31 Makanchi Array 30.27 43 P P **16 42 12.2 -0.2**
MKAR Makanchi Array 30.27 43 P P **16 42 12.8 +0.4**
MKAR Makanchi Array 30.27 43 P P **16 42 12.6 +0.3**
comp=Z,1.0nm,0.5s,baz=253,slow=8.3,SNR=9.8
comp=Z,1.0nm,0.5s
KURBB Kurchatov Arra 30.37 34 P P **16 42 13.6 +0.4**
comp=Z,5.1nm,0.8s,baz=234,slow=8.6,SNR=6.2
KURBB PcP PcP **16 45 12.6 -0.2**
comp=Z,0.7nm,0.8s,baz=232,slow=3.3,SNR=1.8
KURBB ScP ScP **16 48 54.0 -0.9**
comp=Z,0.3nm,0.7s,baz=227,slow=3.8,SNR=2.1
comp=Z,5.1nm,0.8s
KURK Kurchatov 30.48 33 P P **16 42 14.5 +0.4**
KURK IAmb IAmb 16 42 22.1
comp=Z,12nm,1.1s
WMQ Urumqi 32.58 51 *eP* P **16 42 34.3 +1.5**
WMQ pmax pmax
comp=Z,19nm,1.3s
NACGM Naroch 33.15 333 *eP* P **16 42 34.9 -2.6**
comp=Z,22nm,0.9s,baz=135
ZAA0 Zalesovo Array 35.46 33 P P **16 42 57.2 -0.4**
ZALV Zalesovo Beam 35.46 33 P P **16 42 57.3 -0.3**
ZALV Zalesovo Beam 35.46 33 P P **16 42 57.4 -0.2**
comp=Z,5.1nm,0.3s,baz=239,slow=8.4,SNR=20
comp=Z,5.1nm,0.3s
FINES FINESS Array B 38.26 340 P P **16 43 20.6 -0.6**
comp=Z,2.7nm,0.3s,baz=143,slow=11,SNR=22
comp=Z,2.7nm,0.3s
HFS Hagfors 41.91 332 P P **16 43 51.2 -0.4**
comp=Z,3.1nm,0.3s,baz=136,slow=8.9,SNR=20
comp=Z,3.1nm,0.3s
NC602 NORSAR Array S 43.13 332 *eP* P **16 44 01.8 +0.3**
HOMB Homborsund 43.30 328 *eP* P **16 44 02.9 0.0**
NB2 NORSAR Subarra 43.43 332 P P **16 44 02.6 -1.4**
comp=Z,3.9nm,0.7s,baz=120,slow=7.9
NB2 NORSAR Subarra 43.43 332 P P **16 44 02.6 -1.4**
baz=120,slow=7.9
NOA NORSAR Array B 43.43 332 P P **16 44 02.9 -1.0**
comp=Z,2.7nm,0.8s,baz=121,slow=8.1,SNR=5.4
comp=Z,2.7nm,0.8s
CMAR Chiang Mai Arr 43.47 92 P P **16 44 04.1 -0.7**
comp=Z,0.4nm,0.3s,baz=270,slow=8.1,SNR=1.8
CMAR PcP PcP **16 45 53.1 +0.2**
comp=Z,1.0nm,0.7s,baz=276,slow=3.5,SNR=4.2
comp=Z,0.4nm,0.3s
PZH PanZhiHua 43.63 80 P P **16 44 07.5 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
SKAR Skarslia 44.49 331 *eP* P **16 44 12.6 +0.1**
PHRA Phrae 44.59 91 P P **16 44 13.5 -0.3**
VADS Vadso 44.66 349 *eP* P **16 44 13.7 +0.1**
BLS5 Blasjo 44.76 328 *eP* P **16 44 14.5 -0.1**
DOMB Dombas 44.83 333 *eP* P **16 44 15.0 -0.2**
ARA0 ARCESS Array S 44.88 347 *eP* P **16 44 14.2 -1.3**
ARCES ARCESS Array B 44.88 347 P P **16 44 14.4 -1.1**
comp=Z,5.1nm,0.9s,baz=162,slow=8.0,SNR=20
comp=Z,5.1nm,0.9s
ODD1 Odda 44.89 329 *eP* P **16 44 14.4 -1.3**
KTK1 Kautokeino 44.94 346 *eP* P **16 44 15.5 -0.4**
FAUS Fauske 45.78 341 *eP* P **16 44 22.8 +0.3**
STOK Stokkvaagen 45.80 339 *eP* P **16 44 22.6 -0.1**
JETT Jettan, Norway 46.00 345 *eP* P **16 44 24.0 -0.4**
HAMF Hammerfest 46.15 347 *eP* P **16 44 25.5 +0.1**
STEI Steigen 46.16 341 *eP* P **16 44 26.0 +0.5**
SONM Songino Array 46.17 49 P P **16 44 25.6 -0.6**
comp=Z,1.0nm,0.5s,baz=267,slow=8.5,SNR=4.6
comp=Z,1.0nm,0.5s
SUE Sulen 46.21 330 *eP* P **16 44 26.1 0.0**
TRO Tromso 46.41 344 *eP* P **16 44 26.9 -0.5**
ESDC Sonseca Array 47.88 300 P P **16 44 39.0 -0.5**
comp=Z,3.3nm,1.1s,baz=85,slow=7.4,SNR=9.6
comp=Z,3.3nm,1.1s
EKA Eskdalemuir Ar 48.45 321 P P **16 44 43.0 -0.5**
comp=Z,0.4nm,0.3s,baz=102,slow=8.9,SNR=2.6
comp=Z,0.4nm,0.3s
BTO Baotou 48.60 59 *eP* P **16 44 45.0 -0.1**
BTO pP **sP** **16 44 51.3 0.0**
BTO sP **pP** **16 44 53.3 +3.8**
BTO PP PP **16 46 37.8 -0.1**
BTO pmax pmax
comp=Z,20nm,0.9s
BTO pmax pmax
comp=Z,3μm,11.9s
TOA0 Torodi Ar. Sit 49.43 264 P P **16 44 51.3 -0.4**
TOA0 IAmb IAmb 16 45 29.6
comp=Z,2.8nm,0.8s
TORD Torodi Ar. Bea 49.43 264 P P **16 44 51.9 +0.2**
comp=Z,1.9nm,0.3s,baz=56,slow=8.8,SNR=2.9
comp=Z,1.9nm,0.3s
HHC Hu-ho-hao-te 49.75 58 *eP* P **16 44 55.5 +1.5**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,96nm,5.1s

HOPEN Hopen 50.82 352 *eP* P **16 45 01.2 -0.2**
SPA0 Spitsbergen Ar 53.30 351 *eP* P **16 45 20.0 +0.1**
SPITS Spitsbergen Ar 53.30 351 P P **16 45 20.1 +0.3**
comp=Z,19nm,1.0s,baz=156,slow=16,SNR=8.7
comp=Z,19nm,1.0s
NJ2 Nanjing 56.94 68 *eP* P **16 45 47.0 +0.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
DBIC Dimbokro 58.09 260 P P **16 45 55.4 +0.3**
comp=Z,4.8nm,0.8s,baz=43,slow=8.9,SNR=4.7
comp=Z,4.8nm,0.8s
KSRS Korea Array 62.84 60 P P **16 46 25.9 -1.3**
comp=Z,0.9nm,0.5s,baz=279,slow=6.7,SNR=6.8
comp=Z,0.9nm,0.5s
SUMG Summit 64.30 340 P P **16 46 37.0 +0.2**
A36M Sachs Harbour 80.75 359 P P **16 48 13.5 -0.7**
SCHQ Schefferville 82.93 329 P P **16 48 25.4 -0.8**
comp=Z,3.4nm,1.0s,baz=33,slow=6.9,SNR=2.7
comp=Z,3.4nm,1.0s
YKA Yellowknife Ar 89.71 354 P P **16 48 58.3 -1.0**
comp=Z,1.8nm,0.8s,baz=7.1,slow=5.0,SNR=12
comp=Z,1.8nm,0.8s
WRA Warramunga Arr 92.11 111 P P **16 49 09.7 -1.5**
comp=Z,0.7nm,0.8s,baz=313,slow=4.0,SNR=2.8
comp=Z,0.7nm,0.8s
ASAR Alice Springs 93.52 115 P P **16 49 16.7 -0.9**
comp=Z,0.5nm,0.9s,baz=300,slow=4.7,SNR=1.9
comp=Z,0.5nm,0.9s

IDC 25 16:45:23.8±2.2, 5.82S×150.97E, h0km, mb3.5/3, mbtmp3.5/4, ML0.2/1, Error ellipse: s-maj=134.4km s-min=27.1km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.20**	**226**	Pn	Pn	16 46 42.4	-0.5
	0.1nm,0.3s,baz=212,slow=16,SNR=2.0						
PMG				Sn	Sn	16 47 42.4	-1.2
	1.7nm,0.3s,baz=121,slow=8.4,SNR=4.0						
	4.6nm,0.8s						
WRA	**Warramunga Arr**	**21.41**	**228**	P	P	16 50 13.7	+0.1
	1.4nm,0.8s,baz=54,slow=11,SNR=6.2						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**24.18**	**221**	P	P	16 50 42.6	+0.4
	1.3nm,0.8s,baz=57,slow=8.6,SNR=16						
	1.3nm,0.8s						
ILAR	**Eielson Array**	**83.78**	**22**	P	P	16 57 54.5	-0.2
	0.3nm,0.8s,baz=243,slow=4.0,SNR=1.9						
	0.3nm,0.8s						

DJA 25 16:48:20.0±0.3, 9.S±4.°×11.3E±.°, h10km, M3.9/15, mb4.3/7, MLv3.8/15, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.11**	**40**	P	Pb	16 48 39.9	-1.3
GMJI	**Gumukmas**	**1.11**	**40**	P	Pb	16 48 39.7	-1.5
PWJI	**Pagerwojo**	**1.43**	**320**	P	Pn	16 48 45.5	-0.5
JAGI	**Jajag, Banyuwa**	**1.55**	**65**	P	Pn	16 48 46.6	-1.1
BLJI	**Banyuglugur**	**1.62**	**32**	P	Pn	16 48 48.3	-0.3
ABJI	**Asem Bagus**	**1.99**	**48**	P	Pn	16 48 53.8	0.0
ABJI	**Asem Bagus**	**1.99**	**48**	P	Pn	16 48 53.9	+0.1
NGJI	**Ngawi**	**2.15**	**324**	P	Pn	16 48 56.8	+0.8
GRJI	**Gresik**	**2.21**	**354**	P	Pn	16 48 56.0	-0.8
GRJI	**Gresik**	**2.21**	**354**	P	Pn	16 48 56.5	-0.3
DNP	**Denpasar**	**2.49**	**80**	P	Pn	16 49 01.1	+0.5
UGM	**Wanagama**	**2.50**	**299**	P	Pn	16 49 01.2	+0.5
UGM	**Wanagama**	**2.50**	**299**	P	Pn	16 49 01.3	+0.6
SRBI	**Singaraja**	**2.67**	**67**	P	Pn	16 49 02.5	-0.5
SRBI	**Singaraja**	**2.67**	**67**	P	Pn	16 49 02.6	-0.4
SMRI	**Semarang**	**3.07**	**312**	P	Pn	16 49 09.2	+0.6
BWJI	**Bawean**	**3.26**	**359**	P	Pn	16 49 09.9	-1.3
TWSI	**Taliwang, Sumb**	**4.12**	**85**	P	Pn	16 49 23.3	+0.2
TWSI	**Taliwang, Sumb**	**4.12**	**85**	P	Pn	16 49 23.2	+0.1
KPJI	**Karang Pucung**	**4.16**	**295**	P	Pn	16 49 25.3	+1.7
KPJI	**Karang Pucung**	**4.16**	**295**	P	Pn	16 49 25.1	+1.5
CMJI	**Cimerak**	**4.44**	**287**	P	Pn	16 49 26.6	-0.9
CMJI	**Cimerak**	**4.44**	**287**	P	Pn	16 49 26.8	-0.7
PLAI	**Plampang**	**4.99**	**87**	P	Pn	16 49 36.6	+1.5
PLAI	**Plampang**	**4.99**	**87**	P	Pn	16 49 36.5	+1.4
CNJI	**Cibinong**	**5.83**	**288**	P	Pn	16 49 48.1	+1.5
	7.1nm,1.5s,0.0nm						
CNJI	**Cibinong**	**5.83**	**288**	P	Pn	16 49 46.6	0.0
	7.0nm,1.1s,0.0nm						
EDFI	**Ende, Flores**	**8.86**	**88**	P	Pn	16 50 28.6	+0.3
	11nm,1.1s						
KASI	**Kota Agung**	**8.92**	**293**	P	Pn	16 50 31.2	+2.2
	11nm,2.0s						
KASI	**Kota Agung**	**8.92**	**293**	P	Pn	16 50 29.9	+0.9
	11nm,2.0s						
MNAI	**Manna**	**10.80**	**295**	P	Pn	16 50 55.4	+0.6
	121nm,1.1s						
MNAI	**Manna**	**10.80**	**295**	P	Pn	16 50 55.0	+0.2
	121nm,1.1s						
KMSI	**Cibinong**	**14.78**	**50**	P	Pn	16 51 47.6	-1.7
	40nm,1.1s						
TNTI	**Tenate**	**17.59**	**57**	P	Pn	16 52 22.4	-3.0
	7.9nm,1.4s						

*IDC **25** 17:16:13.9±0.8, 29.90N×95.17E, h0km, mb3.8/11, mbtmp3.7/14, ML3.6/3, Error ellipse: s-maj=36.2km s-min=14.6km az=57.0*
ISC 25 17:16:19.0±0.8, 29.9N±0.1×95.2E±0.2, h35km, n14, σ0.53/15, mb3.8/10, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.91**	**162**	Pn	Pn	**17 19 06.5**	**+0.1**
	0.1nm,0.3s,baz=336,slow=13,SNR=9.2						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**19.60**	**333**	P	P	**17 20 44.2**	**+0.1**
	0.3nm,0.3s,baz=147,slow=13,SNR=22						
MKAR				PcP	PcP	17 25 02.2	-0.7
	0.2nm,0.6s,baz=213,slow=2.2,SNR=5.1						
	0.6nm,0.4s						
SONM	**Songino Array**	**19.89**	**23**	P	P	**17 20 47.7**	**+0.3**
	0.1nm,0.3s,baz=213,slow=11,SNR=6.1						
	0.8nm,0.6s						
AAK	**Ala-Archa**	**20.88**	**313**	P	P	**17 20 59.6**	**+1.3**
	4.4nm,0.8s,baz=136,slow=4.2,SNR=24						
	4.4nm,0.8s						
KURBB	**Kurchatov Arra**	**24.16**	**334**	P	P	**17 21 31.9**	**+0.1**
	1.2nm,0.5s,baz=148,slow=9.7,SNR=21						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**25.17**	**346**	P	P	**17 21 41.2**	**+0.3**
	2.3nm,0.5s,baz=164,slow=9.7,SNR=18						
	2.3nm,0.5s						
BVAR	**Borovoye Array**	**29.36**	**329**	P	P	**17 22 18.5**	**+0.1**
	0.8nm,0.6s,baz=129,slow=12,SNR=6.6						
	0.8nm,0.6s						
BRTR	**Keskin Array B**	**50.57**	**299**	P	P	**17 25 14.0**	**-0.4**
	0.9nm,0.8s,baz=97,slow=4.2,SNR=5.1						
	0.9nm,0.8s						
FINES	**FINESS Array B**	**54.26**	**326**	P	P	**17 25 40.8**	**-0.4**
	1.1nm,0.8s,baz=116,slow=3.2,SNR=3.8						
	1.1nm,0.8s						
NOA	**NORSAR Array B**	**61.45**	**327**	P	P	**17 26 32.1**	**+0.4**
	0.3nm,0.5s,baz=79,slow=6.7,SNR=1.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**62.29**	**138**	P	P	**17 26 37.8**	**0.0**
	0.7nm,0.8s,baz=321,slow=8.1,SNR=7.9						
	0.7nm,0.8s						
GERES	**GERESS Array B**	**62.76**	**313**	P	P	**17 26 40.4**	**-0.4**
	0.3nm,0.4s,baz=73,slow=7.3,SNR=2.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**64.98**	**141**	P	P	**17 26 56.0**	**+0.4**
	0.9nm,0.7s,baz=324,slow=6.6,SNR=20						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**74.11**	**23**	P	P	**17 27 51.1**	**-0.2**
	0.8nm,1.1s,baz=291,slow=5.0,SNR=4.8						
	0.8nm,1.1s						

IDC 25 17:29:38.3±4.7, 15.16S×67.01E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=127.9km s-min=39.1km az=65.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**33.44**	**199**	T	T	18 11 48.5	
	baz=26,slow=75,SNR=87						
H04N1	**CROZET ISLANDS**	**33.44**	**199**	T	T	18 11 44.1	
	baz=26,slow=75,SNR=19						
H04N3	**CROZET ISLANDS**	**33.46**	**199**	T	T	18 11 48.5	
	baz=26,slow=75,SNR=13						

CMAR Chiang Mai Arr 45.89 44 P P 17 38 02.8 -0.1
0.4nm,0.4s,baz=235,slow=7.2,SNR=5.1
0.4nm,0.4s
H01W3 Cape Leeuwin H 46.52 124 T T 18 28 10.6
baz=284
H01W2 Cape Leeuwin H 46.53 124 T T 18 28 05.9
baz=284,slow=74,SNR=5.8
H01W1 Cape Leeuwin H 46.54 124 T T 18 28 12.8
baz=284,slow=74,SNR=8.1
ASAR Alice Springs 63.18 109 P P 17 40 08.7 -0.1
0.5nm,0.8s,baz=266,slow=6.0,SNR=6.7
0.5nm,0.8s
WRA Warramunga Arr 64.01 105 P P 17 40 14.3 +0.1
0.7nm,0.7s,baz=269,slow=6.1,SNR=5.5
0.7nm,0.7s
KURBB Kurchatov Arra 66.27 8 P P 17 40 28.1 -0.1
0.9nm,0.3s,baz=161,slow=8.8,SNR=2.7
0.9nm,0.3s

IDC 25 17:37:07.3±1.3, 13.96S×179.96E, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=52.2km s-min=22.1km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.33**	**236**	P	P	17 44 38.0	-0.4
	2.1nm,0.8s,baz=43,slow=14,SNR=3.6						
	2.1nm,0.8s						
WRA	**Warramunga Arr**	**43.94**	**256**	P	P	17 45 16.3	-0.1
	1.2nm,1.0s,baz=86,slow=7.4,SNR=6.0						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**44.49**	**250**	P	P	17 45 20.6	-0.2
	3.4nm,1.2s,baz=83,slow=8.7,SNR=14						
	3.4nm,1.2s						
MJAR	**Matsushiro Arr**	**63.82**	**323**	P	P	17 47 42.9	+1.4
	0.6nm,0.7s,baz=129,slow=7.0,SNR=2.2						
	0.6nm,0.7s						
PETK	**Petropavlovsk-**	**69.48**	**346**	P	P	17 48 17.3	-0.1
	3.8nm,1.0s,baz=151,slow=5.1,SNR=2.4						
	3.8nm,1.0s						
ILAR	**Eielson Array**	**82.42**	**14**	P	P	17 49 29.5	-1.5
	0.8nm,0.9s,baz=230,slow=7.3,SNR=5.2						
	0.8nm,0.9s						
TXAR	**Lajitas Array**	**85.24**	**58**	P	P	17 49 47.1	+0.8
	0.8nm,0.9s,baz=205,slow=5.8,SNR=6.1						
	0.8nm,0.9s						
PDAR	**Pinedale Array**	**85.60**	**44**	P	P	17 49 48.4	+0.4
	2.1nm,1.1s,baz=234,slow=5.0,SNR=4.2						
	2.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**86.08**	**290**	P	P	17 49 51.1	+0.5
	0.2nm,0.3s,baz=113,slow=6.9,SNR=1.8						
	0.2nm,0.3s						
SONM	**Songino Array**	**89.55**	**320**	P	P	17 50 05.4	-1.4
	0.4nm,0.6s,baz=128,slow=2.4,SNR=1.8						
	0.4nm,0.6s						

*IDC **25** 17:37:19.1±0.6, 37.51N×141.85E, h0km, mb4.1/19, mbtmp4.1/26, ML3.4/6, MS3.1/3, Error ellipse: s-maj=16.4km s-min=13.5km az=95.0*
*NIED **25** 17:37:24.7, 37.52N×141.76E, h40km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.32; Mθθ0.50; Mϕϕ-0.17; Mrθ2.02; Mθϕ-0.46; Mϕr1.12; Fault plane solution: M₀2.38000×10¹⁵ NP1: ϕs244.00000°, δ88.00000°, λ-103.00000°. NP2: ϕs145.00000°, δ14.00000°, λ-10.00000°.*
*JMA **25** 17:37:24.7±0.1, 37.5N±0.3×141.8E±0.7, h40km±1km, MD4.3/40, MV4.7/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*NEIC **25** 17:37:25.9±1.8, 37.53N±0.07×141.90E±0.09, h48km±7km, mb4.4/40, Error ellipse: s-maj=11.3km s-min=8.7km az=122.0*
ISC 25 17:37:24.5±0.6, 37.51N±0.04×141.86E±0.07, h38km±2km, n136, σ1.22/121, mb4.3/38, 12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.79**	**260**	*i* P	Pn	**17 37 38.5**	**-0.7**
JFK				S	Sn	**17 37 47.8**	**-2.0**
JFK	**Kawauchi**	**0.79**	**260**	A	A	17 37 38.5	
	comp=E,16nm,0.8s,comp=N,27nm,1.4s						
JMST	**Minamisoumatoc**	**0.80**	**286**	*i* P	Pn	**17 37 38.4**	**-0.8**
JMST				S	Sn	**17 37 47.9**	**-1.9**
JMST	**Minamisoumatoc**	**0.80**	**286**	A	A	17 37 38.4	
	comp=E,10.0nm,0.4s,comp=N,10.0nm,0.2s						
JIKH	**Ishinomakikobu**	**0.86**	**339**	↓*i* P	Pn	**17 37 39.9**	**-0.2**
JIKH	**Ishinomakikobu**	**0.86**	**339**	A	A	17 37 39.9	
	comp=E,18nm,0.9s,comp=N,13nm,0.5s						
JMM	**Marumori**	**0.92**	**293**		Pn	**17 37 39.9**	**-0.9**
JMM	**Marumori**	**0.92**	**293**	P	Pn	**17 37 40.3**	**-0.5**
JMM	**Marumori**	**0.92**	**293**	↓*i* P	Pn	**17 37 40.2**	**-0.5**
JMM				↓S	Sn	**17 37 51.0**	**-1.8**
JMM	**Marumori**	**0.92**	**293**	A	A	17 37 40.2	
	comp=E,10.0nm,0.4s,comp=N,10.0nm,0.4s						
ONAJ	**Iwakimizuishiy**	**0.94**	**245**	*i* P	Pn	**17 37 40.4**	**-0.7**
ONAJ				S	Sn	**17 37 51.2**	**-2.1**
ONAJ	**Iwakimizuishiy**	**0.94**	**245**	A	A	17 37 40.4	
	comp=E,99nm,0.3s,comp=N,88nm,0.3s						
JIO	**Ouri**	**1.03**	**337**	↓*i* P	Pn	**17 37 42.2**	**-0.1**
JIO				↓S	Sn	**17 37 54.1**	**-1.4**
JFFD	**Fukushimafurud**	**1.11**	**249**	A	A	17 37 43.2	
	comp=E,13nm,0.4s,comp=N,17nm,0.3s						
JOTO	**OTAMA OYAMA**	**1.21**	**273**	*i* P	Pn	**17 37 45.1**	**+0.2**
JOTO				S	Sn	**17 37 59.7**	**-0.3**
JOTO	**OTAMA OYAMA**	**1.21**	**273**	A	A	17 37 45.1	
	comp=E,24nm,0.5s,comp=N,38nm,0.4s						
JOU	**Okura**	**1.27**	**313**	↓*i* P	Pn	**17 37 45.8**	**0.0**
JOU				↓*e*S	Sn	**17 38 01.2**	**-0.4**
JOU	**Okura**	**1.27**	**313**	A	A	17 37 45.8	
	comp=E,11nm,0.7s,comp=N,13nm,1.4s						
JOFO	**Osakifurukawao**	**1.32**	**326**	A	A	17 37 46.5	
	comp=E,21nm,1.5s,comp=N,20nm,1.5s						
JYAR	**Yonezawaarcadi**	**1.42**	**287**	A	A	17 37 47.5	
	comp=E,18nm,0.4s,comp=N,17nm,1.3s						
JMK	**Ichinoseki**	**1.53**	**341**	↓*i* P	Pn	**17 37 49.7**	**+0.6**
JMK				↓S	Sn	**17 38 08.3**	**+0.6**
OFUJ	**Ofunato**	**1.58**	**355**	A	A	17 37 50.8	
	comp=E,4.0nm,2.2s,comp=N,5.0nm,0.5s						
JYS	**Shirataka**	**1.59**	**297**	P	Pn	**17 37 50.8**	**+0.8**
JYS				S	Sn	**17 38 10.4**	**+1.2**
JYS	**Shirataka**	**1.59**	**297**	A	A	17 37 50.8	
	comp=E,8.0nm,1.6s,comp=N,6.0nm,0.6s						
JSB	**Shiroishi**	**1.64**	**251**	A	A	17 37 50.9	
	comp=E,10.0nm,2.5s,comp=N,10.0nm,1.2s						
JFY	**Yanaizu**	**1.71**	**267**	↓*i* P	Pn	**17 37 52.0**	**+0.3**
JFY				↓S	Sn	**17 38 12.9**	**+0.4**
JYK	**Kaneyama**	**1.84**	**321**	↓*i* P	Pn	**17 37 53.9**	**+0.5**
JYT	**Yasato**	**1.85**	**227**	A	A	17 37 54.2	
	comp=E,15nm,0.4s,comp=N,8.0nm,0.3s						
JYA	**Atsumi**	**2.01**	**303**	A	A	17 37 56.2	
	comp=E,4.0nm,0.6s,comp=N,4.0nm,0.6s						
JOM	**Ohasama**	**2.01**	**347**	A	A	17 37 56.9	
	comp=E,6.0nm,0.6s,comp=N,4.0nm,0.3s						
JRG	**Rokugo**	**2.12**	**333**	A	A	17 37 58.1	
	comp=E,4.0nm,0.5s,comp=N,4.0nm,1.1s						
JKEN	**Kujiedanarisaw**	**2.70**	**358**	A	A	17 38 06.8	
	comp=E,7.0nm,0.6s,comp=N,7.0nm,1.2s						
JSD	**Sado**	**2.90**	**282**		Pn	**17 38 08.1**	**+0.1**
JSD	**Sado**	**2.90**	**282**	P	Pn	**17 38 08.2**	**+0.2**
MJAR	**Matsushiro Arr**	**3.07**	**253**	Pn	Pn	**17 38 10.7**	**+0.2**
	comp=N,1.7nm,0.3s,baz=71,slow=14,SNR=60						
MJAR				Sn	Sn	**17 38 48.8**	**+2.8**
	comp=N,3.2nm,0.3s,baz=69,slow=18,SNR=2.8						
	comp=N,8.7nm,0.4s						
MAJO	**Matsushiro**	**3.08**	**253**		Pn	**17 38 12.3**	**+1.8**
MAJO	**Matsushiro**	**3.08**	**253**	P	Pn	**17 38 12.6**	**+2.1**
**MJ

JKA	**Kamikawa-asahi**	**6.63**	**5**	Pn		**Pn**	**17 38 59.7**	**+0.4**
ASAJ	**Asahikawa**	**6.63**	**5**	Pn		**Pn**	**17 38 59.4**	**+0.1**
	comp=N,4.6nm,0.3s,baz=214,slow=11,SNR=20							
ASAJ				Sn		**Sn**	**17 40 11.5**	**-1.9**
	comp=N,1.8nm,0.3s,baz=160,slow=16,SNR=1.6							
	comp=N,12nm,0.3s							
JMN	**Monobe**	**7.51**	**242**	P		**Pn**	**17 39 13.3**	**+1.9**
JNU	**Nakatsue**	**9.98**	**247**	Pn		**Pn**	**17 39 45.6**	**+0.4**
	comp=N,0.1nm,0.3s,baz=69,slow=8.6,SNR=1.7							
	comp=N,4.5nm,0.9s							
USA0B	**Ussuriysk Arra**	**10.02**	**315**			**Pn**	**17 39 48.3**	**+2.5**
USRK	**Ussuriysk Ar.**	**10.02**	**315**	Pn		**Pn**	**17 39 48.4**	**+2.6**
USRK	**Ussuriysk Ar.**	**10.02**	**315**	Pn		**Pn**	**17 39 46.0**	**+0.3**
	comp=N,0.7nm,0.3s,baz=121,slow=14,SNR=16							
	comp=N,1.3nm,0.3s							
JCJ	**Chichijima**	**10.38**	**178**	P		**Pn**	**17 39 48.9**	**-1.9**
JCJ	**Chichijima**	**10.38**	**178**	Pn		Pn	17 39 45.5	-5.4
	comp=N,8.4nm,0.3s,baz=277,slow=23,SNR=11							
JCJ				Sn		Sn	17 41 33.0	-13
	comp=N,6.8nm,0.3s,baz=261,slow=21,SNR=1.6							
KSRS	**Korea Array**	**11.07**	**274**	Pn		**Pn**	**17 40 04.3**	**+4.1**
	comp=N,0.2nm,0.3s,baz=86,slow=14,SNR=8.0							
KSRS				LR		LR	17 43 57.5	
	comp=N,102nm,18.2s,baz=280,slow=36							
MDJ	**Mudanjiang**	**11.66**	**311**			**Pn**	**17 40 10.5**	**+2.3**
KLR	**Kul'dur**	**13.82**	**331**	Pn		**Pn**	**17 40 37.5**	**-0.1**
	comp=N,0.2nm,0.3s,baz=146,slow=17,SNR=5.6							
KLR				LR		LR	17 45 50.3	
	comp=N,168nm,20.0s,baz=112,slow=37							
	comp=N,1.1nm,0.6s							
HEH	**HeiHe**	**16.42**	**325**	*e*P		**Pn**	**17 41 11.3**	**-0.5**
HEH				pmax		pmax		
	comp=Z,2.0nm,0.8s							
PETK	**Petropavlovsk-**	**19.10**	**30**	P		**P**	**17 41 43.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=226,slow=5.7,SNR=3.0							
	comp=Z,3.6nm,0.9s							
YAK	**Yakutsk**	**25.69**	**347**	P		**P**	**17 42 50.4**	**-0.2**
ULN	**Ulaanbaatar**	**27.39**	**303**	P		**P**	**17 43 06.8**	**+0.4**
SONM	**Songino Array**	**27.82**	**303**	P		**P**	**17 43 10.3**	**+0.2**
SONM	**Songino Array**	**27.82**	**303**	P		**P**	**17 43 10.0**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=108,slow=8.5,SNR=6.8							
	comp=Z,1.1nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.09**	**122**	T		T	18 13 34.3	
	baz=315,slow=75,SNR=354							
H11N1	**WAKE ISLAND Hy**	**28.10**	**122**	T		T	18 13 35.5	
	baz=315,slow=75,SNR=461							
H11N3	**WAKE ISLAND Hy**	**28.11**	**122**	T		T	18 13 35.2	
	baz=315,slow=75,SNR=313							
H11S1	**WAKE ISLAND Hy**	**28.82**	**124**	T		T	18 14 24.5	
	baz=316,slow=76,SNR=246							
H11S3	**WAKE ISLAND Hy**	**28.83**	**124**	T		T	18 14 27.7	
	baz=316,slow=76,SNR=201							
H11S2	**WAKE ISLAND Hy**	**28.84**	**124**	T		T	18 14 25.9	
	baz=316,slow=76,SNR=142							
TIXI	**Tiksi**	**34.87**	**353**	P		**P**	**17 44 09.8**	**-1.8**
TIXI				IAmb		IAmb	17 44 25.1	
	comp=Z,6.8nm,1.4s							
CRAI	**Chiangrai**	**39.84**	**256**	P		**P**	**17 44 54.9**	**+0.5**
ZAA0	**Zalesovo Array**	**41.86**	**312**	P		**P**	**17 45 10.8**	**+0.2**
ZALV	**Zalesovo Beam**	**41.86**	**312**	P		**P**	**17 45 09.8**	**-0.8**
ZALV	**Zalesovo Beam**	**41.86**	**312**	P		**P**	**17 45 10.3**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=92,slow=6.8,SNR=7.9							
	comp=Z,1.7nm,0.4s							
C16K	**Lisburne Hills**	**42.12**	**26**	P		**P**	**17 45 13.1**	**+0.6**
F17K	**Baldwin Pennin**	**43.14**	**30**	P		**P**	**17 45 22.4**	**+1.6**
C18K	**Utukok River**	**43.70**	**26**	P		**P**	**17 45 26.6**	**+1.2**
C18K				IAmb		IAmb	17 45 28.1	
	comp=Z,6.1nm,0.7s							
M17K	**Holitna River**	**44.05**	**37**	P		**P**	**17 45 29.0**	**+0.8**
H18K	**Honhosa River**	**44.06**	**32**	P		**P**	**17 45 30.3**	**+2.0**
MK31	**Makanchi Array**	**44.17**	**302**	P		**P**	**17 45 27.7**	**-1.7**
MKAR	**Makanchi Array**	**44.17**	**302**	P		**P**	**17 45 29.1**	**-0.3**
MKAR	**Makanchi Array**	**44.17**	**302**	P		**P**	**17 45 29.4**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=87,slow=9.9,SNR=33							
	comp=Z,2.6nm,0.7s							
C19K	**Lookout Ridge**	**44.38**	**26**	P		**P**	**17 45 29.9**	**-0.9**
C19K				IAmb		IAmb	17 45 34.0	
	comp=Z,6.1nm,0.8s							
MAKZ	**Makanchi**	**44.38**	**302**	P		**P**	**17 45 30.3**	**-0.8**
D19K	**Kuna River**	**44.76**	**27**	P		**P**	**17 45 34.8**	**+1.0**
D19K				IAmb		IAmb	17 45 37.0	
	comp=Z,6.7nm,0.8s							
O18K	**Koktuh Hills**	**45.09**	**39**	P		**P**	**17 45 35.9**	**-0.6**
N19K	**Bonanza Creek**	**45.46**	**38**	P		**P**	**17 45 38.4**	**-1.2**
N19K				IAmb		IAmb	17 46 11.7	
	comp=Z,11nm,1.4s							
KURK	**Kurchatov**	**45.92**	**308**	P		**P**	**17 45 43.3**	**+0.1**
KURBB	**Kurchatov Arra**	**45.99**	**308**	P		**P**	**17 45 43.5**	**-0.3**
	comp=Z,5.7nm,0.4s,baz=82,slow=8.1,SNR=47							
	comp=Z,5.7nm,0.4s							
CAST	**Castle Rocks**	**46.64**	**34**	P		**P**	**17 45 49.5**	**+0.7**
CAST				IAmb		IAmb	17 46 07.1	
	comp=Z,7.3nm,1.4s							
RND	**Reindeer**	**48.09**	**34**	P		**P**	**17 46 00.4**	**+0.3**
RND				IAmb		IAmb	17 46 09.3	
	comp=Z,3.6nm,1.2s							
GHO	**Glory Hole Cre**	**48.12**	**37**	P		**P**	**17 46 00.9**	**+0.5**
ILAR	**Eielson Array**	**48.91**	**33**	P		**P**	**17 46 06.6**	**+0.3**
ILAR	**Eielson Array**	**48.91**	**33**	P		**P**	**17 46 06.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=268,slow=6.8,SNR=13							
	comp=Z,1.1nm,0.7s							
SOEI	**Soe**	**49.82**	**203**	P		**P**	**17 46 13.3**	**-0.6**
BVAR	**Borovoye Array**	**50.52**	**312**	P		**P**	**17 46 18.5**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=78,slow=8.1,SNR=19							
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**50.57**	**312**	P		**P**	**17 46 18.2**	**-0.9**
BRVK				IAmb		IAmb	17 46 31.7	
	comp=Z,2.8nm,0.9s							
K27K	**Chicken**	**51.05**	**33**	P		**P**	**17 46 21.6**	**-0.9**
K27K				IAmb		IAmb	17 46 48.9	
	comp=Z,6.8nm,1.3s							
BCAR	**Beaver Creek A**	**51.30**	**35**	P		**P**	**17 46 24.1**	**-0.4**
I28M	**Miner Creek**	**51.78**	**31**	P		**P**	**17 46 28.6**	**+0.5**
I28M				IAmb		IAmb	17 47 10.8	
	comp=Z,7.8nm,1.5s							
ARSB	**Arslanbob**	**52.07**	**297**	P		**P**	**17 46 31.2**	**+0.6**
M29M	**Somme Creek**	**52.92**	**35**	P		**P**	**17 46 37.5**	**+0.9**
M29M				IAmb		IAmb	17 47 13.3	
	comp=Z,6.7nm,1.4s							
KK31	**Karatay Array**	**53.20**	**300**	P		**P**	**17 46 39.4**	**+0.6**
KK31				IAmb		IAmb	17 46 42.9	
	comp=Z,3.4nm,1.1s							
KKAR	**Karatay Array**	**53.20**	**300**	P		**P**	**17 46 38.5**	**-0.3**
KKAR	**Karatay Array**	**53.20**	**300**	P		**P**	**17 46 39.4**	**+0.6**
KKAR				IAmb		IAmb	17 46 42.9	
	comp=Z,3.4nm,1.1s							
I30M	**Mount Dempster**	**53.29**	**31**	P		**P**	**17 46 39.7**	**+0.4**
J30M	**Hart River**	**53.43**	**32**	P		**P**	**17 46 38.9**	**-1.4**
J30M				IAmb		IAmb	17 46 48.1	
	comp=Z,5.4nm,1.2s							
G31M	**Satah River**	**53.80**	**29**	P		**P**	**17 46 41.9**	**-0.8**
INK	**Inuvik**	**53.80**	**27**	P		**P**	**17 46 42.9**	**+0.1**
INK				IAmb		IAmb	17 46 58.3	
	comp=Z,4.7nm,1.3s							
F31M	**Tsiigehtchic**	**53.90**	**28**	P		**P**	**17 46 43.5**	**0.0**
F31M				IAmb		IAmb	17 47 26.8	
	comp=Z,5.3nm,1.4s							
ARU	**Arti**	**56.24**	**318**	P		**P**	**17 46 59.4**	**-1.2**
WRA	**Warramunga Arr**	**57.58**	**188**	P		**P**	**17 47 10.1**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=6.2,slow=7.4,SNR=33							
	comp=Z,1.7nm,0.5s							
ABKAR	**Akbulak array**	**57.91**	**310**	P		**P**	**17 47 11.9**	**-0.6**
ABKAR				IAmb		IAmb	17 47 12.5	
	comp=Z,2.3nm,0.6s							
ASAR	**Alice Springs**	**61.30**	**188**	P		**P**	**17 47 36.3**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=9.7,slow=6.9,SNR=18							
	comp=Z,1.8nm,0.8s							
MBWA	**Marble Bar**	**61.96**	**203**	P		**P**	**17 47 38.6**	**-1.9**
RES	**Resolute Bay**	**62.06**	**15**	P		**P**	**17 47 40.0**	**-0.5**
RES				IAmb		IAmb	17 47 42.1	
	comp=Z,4.4nm,1.1s							
PSA00	**Pilbara Seismi**	**62.31**	**203**	P		**P**	**17 47 43.1**	**+0.2**
PSA00				IAmb		IAmb	17 47 43.9	
	comp=Z,2.9nm,0.9s							
YKA	**Yellowknife Ar**	**63.22**	**30**	P		**P**	**17 47 48.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=302,slow=6.9,SNR=8.4							
	comp=Z,0.4nm,0.7s							
ARCES	**ARCESS Array B**	**63.68**	**339**	P		**P**	**17 47 51.1**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=44,slow=7.1,SNR=4.9							
	comp=Z,2.5nm,0.8s							
FINES	**FINESS Array B**	**68.56**	**332**	P		**P**	**17 48 22.8**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=37,slow=10,SNR=14							
	comp=Z,3.3nm,0.7s							
STKA	**Stephens Creek**	**69.03**	**180**	P		**P**	**17 48 25.6**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=331,slow=6.3,SNR=3.4							
	comp=Z,1.5nm,0.7s							

KBZ	**Khabaz**	**70.86**	**311**	P		**P**	**17 48 37.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=46,slow=3.3,SNR=3.5							
	comp=Z,1.5nm,0.9s							
HFS	**Hagfors**	**73.80**	**336**	P		**P**	**17 48 54.6**	**0.0**
	comp=Z,2.6nm,0.6s,baz=42,slow=6.9,SNR=14							
	comp=Z,2.6nm,0.6s							
NB2	**NORSAR Subarra**	**73.89**	**337**	P		**P**	**17 48 55.4**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=38,slow=6.2							
NOA	**NORSAR Array B**	**73.89**	**337**	P		**P**	**17 48 55.0**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=39,slow=5.8,SNR=9.2							
	comp=Z,1.7nm,0.7s							
AKASG	**Malin Array Be**	**74.14**	**322**	P		**P**	**17 48 56.5**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=44,slow=6.1,SNR=9.2							
	comp=Z,1.4nm,0.6s							
NVAR	**Mina Array Bea**	**74.42**	**53**	P		**P**	**17 49 00.0**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=294,slow=6.6,SNR=3.7							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**77.08**	**46**	P		**P**	**17 49 15.1**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=304,slow=2.6,SNR=4.7							
	comp=Z,0.3nm,0.5s							
CLL	**Collm**	**80.86**	**330**	*i* P		**P**	**17 49 34.8**	**+0.5**
TXAR	**Lajitas Array**	**89.55**	**53**	P		**P**	**17 50 19.9**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=262,slow=2.0,SNR=4.9							
	comp=Z,0.3nm,0.5s							
H03N2	**Juan Fernandez**	**146.72**	**95**	T		T	20 41 48.7	
	baz=291,slow=76,SNR=7.8							
H03N3	**Juan Fernandez**	**146.73**	**96**	T		T	20 41 49.8	
	baz=291,slow=76,SNR=2.5							
H03N1	**Juan Fernandez**	**146.74**	**95**	T		T	20 41 49.8	
	baz=291,slow=76,SNR=8.2							

IDC ***25*** *17:44:39.6±0.3, 6.04°S×142.80°E, h0km, mb5.9/29, mbtmp5.8/33, ML3.9/2, MS7.3/49, Error ellipse: s-maj=16.1km s-min=8.9km az=65.0*

MOS ***25*** *17:44:40.6±1.3, 6.07°S×142.80°E, h19km, mb6.7/28, MS7.4/46, Error ellipse: s-maj=7.6km s-min=4.5km az=111.1 Broadband fault plane solution: P waves. NP1:φs123.00000°, δ58.00000°, λ79.00000°. NP2: φs323.00000°, δ33.00000°, λ107.00000°. Principal axes: T Plg74.0000°, Azm3.0000°; N Plg9.0000°, Azm129.0000°; P Plg13.0000°, Azm221.0000°:*

BJI ***25*** *17:44:42.3±0.0, 6.19°S×142.76°E, h30km, mb6.2/95, mB6.9/81, Ms7.3/99, Ms7 7.4/96*

NEIC ***25*** *17:44:44.1±2.7, 6.07°S×0.07°×142.75°E±0.06, h25km±3km, mb7.0/424, Ms_20 7.7/1117, Mww7.5/63, Error ellipse: s-maj=9.5km s-min=8.2km az=179.0*

IPGP ***25*** *17:44:44.0, 6.15°S×142.77°E, h17km, Mw7.5, Fault plane solution: NP1:φs108.00000°, δ54.00000°, λ79.00000°. NP2:φs307.00000°, δ37.00000°, λ105.00000°.*

DJA ***25*** *17:44:44.7±0.2, 6.5°S×14.3°E±, h32km±1km, M7.3/145, mb6.7/145, mB7.4/144, MLv7.8/7, Mw7.5/163, Mw(mB)7.4/144, MwMwp7.2/139, Mwp7.0/139*

NEIC ***25*** *17:44:45.8, 6.36°S×142.76°E, h20km, Moment Tensor Solution. Duration: 29s7 Moment tensor: Scale 10^{20}Nm; M_{rr}1.92; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$-0.52; $M_{r\theta}$0.81; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.81; Fault plane solution: M_o2.19000×10^{20} NP1: φs127.24000°, δ60.78000°, λ97.21000°. NP2: φs292.72000°, δ30.02000°, λ77.36000°. Principal axes: T 2.2581, Plg73.0000°, Azm55.0000°; N -0.1385, Plg6.0000°, Azm304.0000°; P -2.1196, Plg15.0000°, Azm212.0000°;*

NEIC ***25*** *17:44:45.8, 6.06°S×142.76°E, h20km*

GCMT ***25*** *17:45:08.1±0.1, 6.29°S×142.97°E, h12km, MW7.5/178, Moment Tensor Solution. s177,c451; s178,c857; Duration: 13s3 Moment tensor: Scale 10^{20}Nm; M_{rr}1.69±.00; $M_{\theta\theta}$-1.29±.00; $M_{\phi\phi}$-0.40±.00; $M_{r\theta}$1.13±.03; $M_{\theta\phi}$0.70±.00; $M_{\phi r}$-0.26±.03; Best double couple: M_o2.04200×10^{20} NP1:φs110.00000°, δ62.00000°, λ82.00000°. NP2:φs307.00000°, δ29.00000°, λ105.00000°. Principal axes: T 2.0700, Plg71.0000°, Azm1.0000°; N -0.0560, Plg7.0000°, Azm114.0000°; P -2.0140, Plg17.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

ISC 25 17:44:44.3±0.3, 6.14°S±0.02×142.78°E±0.03, h29km±1km, h29km:pP-P, n2661, σ2s14/2314, mb6.8/421, MS7.7/707, 204C-65D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.77**	**299**	P		**Pb**	**17 45 14.9**	**-1.4**
MMPI	**Merauke**	**3.32**	**226**	P		**Pn**	**17 45 35.1**	**+0.8**
GENI	**Genyem**	**4.38**	**323**	P		**Pn**	**17 45 50.9**	**+1.9**
GENI	**Genyem**	**4.38**	**323**	P		**Pn**	**17 45 50.1**	**+1.1**
PMG	**Port Moresby**	**5.42**	**127**	P		**Pn**	**17 46 05.1**	**+1.9**
	15μm,1.0s							
PMG	**Port Moresby**	**5.42**	**127**	⇑P		**Pn**	**17 46 01.1**	**-2.1**
PMG	**Port Moresby**	**5.42**	**127**	*ce*P		**Pn**	**17 46 01.5**	**-1.7**
PMG				pmax		pmax		
	comp=Z,2μm,1.3s							
PMG	**Port Moresby**	**5.42**	**127**	Pn		**Pn**	**17 46 01.1**	**-2.1**
	comp=Z,84nm,0.3s,baz=319,slow=8.5,SNR=193							
	comp=Z,987nm,0.6s							
SMPI	**Sarmi**	**5.79**	**315**	P		**Pn**	**17 46 09.7**	**+1.4**
	comp=Z,9μm,1.1s,comp=Z,575nm							
MANU	**Manus Island**	**6.12**	**49**			**Pn**	**17 46 14.2**	**+1.3**
MANU	**Manus Island**	**6.12**	**49**	P		**Pn**	**17 46 15.3**	**+2.4**
MANU	**Manus Island**	**6.12**	**49**	⇑P		**Pn**	**17 46 14.2**	**+1.3**
BULU	**Kimbe**	**7.52**	**86**	P		**Pn**	**17 46 35.5**	**+3.4**
COEN	**Coen**	**7.78**	**177**	P		**Pn**	**17 46 36.9**	**+1.2**
	baz=7.9,SNR=33							
COEN	**Coen**	**7.78**	**177**			**Pn**	**17 46 37.5**	**+1.8**
COEN	**Coen**	**7.78**	**177**	P		**Pn**	**17 46 36.5**	**+0.8**
	comp=Z,2μm,1.3s							
COEN	**Coen**	**7.78**	**177**	⇓P		**Pn**	**17 46 36.7**	**+1.0**
KAVG	**Kavieng**	**8.75**	**67**	P		**Pn**	**17 46 51.2**	**+2.2**
KMPI	**Kaimana, Papua**	**9.37**	**285**	P		**Pn**	**17 46 56.9**	**-0.6**
	comp=Z,9μm,1.0s,comp=Z,338μm							
I40PG	**Kervat**	**9.37**	**79**	Pn		Pn	17 46 51.0	-6.6
	baz=210,slow=110							
I40PG				I		I	18 01 50.0	
	comp=Z,0.2nm,0.9s,baz=240,slow=319,SNR=1.5							
RABL	**Rabaul**	**9.54**	**79**			**Pn**	**17 46 59.9**	**-0.1**
RABL	**Rabaul**	**9.54**	**79**	P		**Pn**	**17 47 02.1**	**+2.2**
	comp=Z,9μm,1.7s							
RABL	**Rabaul**	**9.54**	**79**	⇑P		**Pn**	**17 46 59.4**	**-0.5**
FAKI	**Fak Fak**	**10.97**	**286**			**Pn**	**17 47 17.7**	**-1.8**
FAKI	**Fak Fak**	**10.97**	**286**	P		**Pn**	**17 47 19.5**	**0.0**
	comp=Z,4μm,1.0s							
FAKI	**Fak Fak**	**10.97**	**286**	⇑P		**Pn**	**17 47 17.6**	**-2.0**
FAKI	**Fak Fak**	**10.97**	**286**	P		**Pn**	**17 47 17.5**	**-2.0**
	comp=Z,4μm,1.0s,comp=Z,125μm							
SAUI	**Saumlaki**	**11.54**	**260**			**Pn**	**17 47 28.2**	**+0.9**
SAUI	**Saumlaki**	**11.54**	**260**	P		**Pn**	**17 47 29.0**	**+1.7**
	comp=Z,46μm,1.1s							
SAUI	**Saumlaki**	**11.54**	**260**	⇑P		**Pn**	**17 47 27.3**	**+0.1**
SAUI	**Saumlaki**	**11.54**	**260**	P		**Pn**	**17 47 27.5**	**+0.2**
	comp=Z,46μm,1.1s,comp=Z,752μm							
MTSU	**Mount Surprise**	**12.02**	**173**	P		**Pn**	**17 47 34.8**	**+1.1**
	baz=12,SNR=51							
MTSU	**Mount Surprise**	**12.02**	**173**	P		**Pn**	**17 47 35.1**	**+1.3**
	comp=Z,855nm,0.7s							
KDU	**Kakadu**	**12.07**	**237**	P		**Pn**	**17 47 32.8**	**-1.7**
	baz=12,SNR=523							
KDU	**Kakadu**	**12.07**	**237**	P		**Pn**	**17 47 34.9**	**+0.4**
KDU	**Kakadu**	**12.07**	**237**	⇑P		**Pn**	**17 47 32.8**	**-1.7**
SWI	**Sorong**	**12.63**	**294**	P		**Pn**	**17 47 39.7**	**-2.5**
	comp=Z,4μm,1.4s,comp=Z,84μm							
BNDI	**Bandanaira**	**12.92**	**277**	P		**Pn**	**17 47 45.1**	**+1.4**
	comp=Z,10μm,1.0s							
BNDI	**Bandanaira**	**12.92**	**277**	⇑P		**Pn**	**17 47 44.4**	**-1.7**
BNDI	**Bandanaira**	**12.92**	**277**	P		**Pn**	**17 47 44.8**	**-1.3**
	comp=Z,10μm,1.0s,comp=Z,509μm							
MTN	**Manton Dam**	**13.28**	**239**	P		**Pn**	**17 47 49.1**	**-1.9**
	baz=13,SNR=187							
MTN	**Manton Dam**	**13.28**	**239**			**Pn**	**17 47 49.3**	**-1.7**
MTN	**Manton Dam**	**13.28**	**239**	P		**Pn**	**17 47 50.8**	**-0.2**
	comp=Z,4μm,0.9s							
MTN	**Manton Dam**	**13.28**	**239**	⇓P		**Pn**	**17 47 48.3**	**-2.7**
DRS	**Darwin Rock St**	**13.28**	**241**	P		**Pn**	**17 47 52.0**	**+0.9**
	comp=Z,3μm,0.6s							
TV1H	**Townsville Har**	**13.62**	**164**	P		**Pn**	**17 47 59.1**	**+3.5**
AUAYR	**Ayr State High**	**14.10**	**162**	P		**P**	**17 48 06.1**	**-3.4**
	comp=Z,1μm,1.1s							
CTA	**Charters Tower**	**14.27**	**167**	P		**Pn**	**17 48 07.3**	**+2.7**
CTA	**Charters Tower**	**14.27**	**167**	Pn		**Pn**	**17 48 05.8**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=344,slow=13,SNR=20							
CTA				Sn		**Sn**	**17 50 47.7**	**+5.7**
	comp=Z,14nm,0.3s,baz=32,slow=22,SNR=1.0							

	comp=Z,21nm,0.9s							
CTAO	**Charters Tower**	**14.27**	**167**			**Pn**	**17 48 02.0**	**-2.6**
CTAO	**Charters Tower**	**14.27**	**167**	P		**Pn**	**17 48 07.4**	**+2.8**
CTAO	**Charters Tower**	**14.27**	**167**	⇓P		**Pn**	**17 48 06.9**	**+2.3**
CTAO	**Charters Tower**	**14.27**	**167**	P		**Pn**	**17 48 02.0**	**-2.6**
QIS	**Mount Isa**	**14.66**	**192**	P		**Pn**	**17 48 08.4**	**-1.5**
	baz=15,SNR=137							
QIS	**Mount Isa**	**14.66**	**192**	P		**Pn**	**17 48 10.0**	**+0.1**
WB0	**Warramunga Arr**	**15.81**	**210**			**Pn**	**17 48 21.9**	**-3.2**
I39PW	**PALAU INFRASON**	**15.87**	**329**	Pn		P	17 48 38.0	+8.6
	baz=197,slow=50							
NLAI	**Namlea**	**15.89**	**280**	P		**Pn**	**17 48 25.4**	**-0.7**
	comp=Z,1μm,1.6s,comp=Z,55μm							
WRAB	**Tennant Creek**	**15.97**	**210**			**Pn**	**17 48 23.9**	**-3.2**
WRAB	**Tennant Creek**	**15.97**	**210**	P		**Pn**	**17 48 23.9**	**-3.2**
WRAB				pmax		pmax		
	comp=Z,4μm,2.0s							
WB2	**Warramunga Arr**	**15.98**	**210**	P		**Pn**	**17 48 23.9**	**-3.3**
	baz=16							
WB2	**Warramunga Arr**	**15.98**	**210**			**Pn**	**17 48 24.9**	**-2.3**
I07AU	**WARRAMUNGA INF**	**15.98**	**210**	P		**P**	**17 48 35.1**	**+4.6**
	baz=22,slow=18,SNR=44							
I07AU				I		I	19 04 25.9	
	comp=Z,0.1nm,0.6s,baz=30,slow=311,SNR=3.0							
WRA	**Warramunga Arr**	**15.99**	**210**			**Pn**	**17 48 24.9**	**-2.4**
WRA	**Warramunga Arr**	**15.99**	**210**	P		**Pn**	**17 48 24.9**	**-2.4**
WRA				pmax		pmax		
	comp=Z,55nm,1.0s							
WRA	**Warramunga Arr**	**15.99**	**210**	Pn		**Pn**	**17 48 23.8**	**-3.6**
	comp=Z,12nm,0.3s,baz=32,slow=14,SNR=113							
WRA				Sn		**Sn**	**17 51 25.8**	**+2.0**
	comp=Z,50nm,0.3s,baz=31,slow=24,SNR=2.0							
WRA				Lg		Lg	17 53 06.1	
	comp=Z,69nm,0.3s,baz=22,slow=24,SNR=4.9							
LBMI	**Labuha**	**16.20**	**289**	P		**Pn**	**17 48 28.5**	**-1.5**
	comp=Z,2μm,0.5s,comp=Z,207μm							
KNRA	**Kununurra**	**16.70**	**234**	P		**Pn**	**17 48 33.6**	**-2.8**
	baz=17							
KNRA	**Kununurra**	**16.70**	**234**	P		**Pn**	**17 48 36.2**	**-0.1**
KNRA	**Kununurra**	**16.70**	**234**	P		**P**	**17 48 38.6**	**+0.1**
	comp=Z,2μm,0.8s							
TNTI	**Ternate**	**16.85**	**294**			**Pn**	**17 48 36.1**	**-2.2**
TNTI	**Ternate**	**16.85**	**294**	P		**Pn**	**17 48 38.8**	**+0.5**
TNTI	**Ternate**	**16.85**	**294**	⇑P		**Pn**	**17 48 37.2**	**-1.1**
TNTI	**Ternate**	**16.85**	**294**	P		**Pn**	**17 48 37.0**	**-1.3**
	comp=Z,1μm,1.3s,comp=Z,114μmcomp=Z,812μm							
SANI	**Sanana**	**17.23**	**283**	P		**P**	**17 48 44.1**	**-0.3**
	comp=Z,4μm,1.9s							
SANI	**Sanana**	**17.23**	**283**	P		**Pn**	**17 48 37.3**	**-5.8**
SANI	**Sanana**	**17.23**	**283**	⇑P		**Pn**	**17 48 39.3**	**-3.8**
SANI	**Sanana**	**17.23**	**283**	P		**Pn**	**17 48 39.1**	**-4.0**
	comp=Z,3μm,0.7s,comp=Z,137μm							
SANI				pP		**P**	**17 48 47.8**	**+3.4**
	comp=Z,3μm,0.7s,comp=Z,137μm							
HNR	**Honiara**	**17.32**	**102**			**Pn**	**17 48 42.5**	**-1.7**
HNR				IAmb		IAmb	17 48 54.0	
	comp=Z,16μm,1.9s							
HNR	**Honiara**	**17.32**	**102**	P		**Pn**	**17 48 44.5**	**+0.3

TTSI	Tana Toraja	23.09 277	P		P		17 49 49.4	+1.4		
	comp=Z,4µm,1.3s,comp=Z,228µm									
TTSI			pP		sP		17 49 58.9	-1.1		
	comp=Z,4µm,1.3s,comp=Z,228µm									
TOLI2	Tolitoli	23.11 287	P		P		17 49 47.9	-0.3		
TOLI2	Tolitoli	23.11 287	P		P		17 49 48.9	+0.7		
	comp=Z,6µm,1.2s									
WRKA	Warakurna	23.36 215	P		P		17 49 50.4	-0.2		
	baz=24,SNR=808									
WRKA	Warakurna	23.36 215	P		P		17 49 51.0	+0.4		
	comp=Z,10µm,1.1s									
WRKA	Warakurna	23.36 215	⇑P		P		17 49 49.7	-1.0		
AULRC	Lightning Ridg	23.68 169	P		P		17 49 53.5	-0.1		
	comp=Z,3µm,1.3s									
MPSI	Mapaga	23.73 285	P		P		17 49 54.0	-0.3		
	comp=Z,3µm,2.8s,comp=Z,123µm									
GC1S	Gold Coast 1 S	24.15 156	P		P		17 49 59.4	+1.4		
	comp=Z,492nm,1.1s									
LCRK	Leigh Creek	24.56 190	P		P		17 50 01.7	-0.1		
	comp=Z,5µm,1.1s									
PLAI	Plampang	24.93 262	P		P		17 50 05.4	+0.1		
	comp=Z,2µm,1.5s									
PLAI	Plampang	24.93 262	P		P		17 50 01.8	-3.5		
	comp=Z,2µm,1.5s,comp=Z,49µmcomp=Z,884µm									
KOUNC	Koumac, New Ca	25.31 127	P		P		17 50 08.2	-0.5		
KOUNC	Koumac, New Ca	25.31 127	P		P		17 50 08.6	0.0		
	comp=Z,2µm,1.6s									
KOUNC	Koumac, New Ca	25.31 127	⇑P		P		17 50 07.7	-1.0		
MULG	Mulgathing	25.38 198	P		P		17 50 09.9	+0.7		
	comp=Z,3µm,1.2s									
CMSA	Cobar Meteorol	25.41 174	P		P		17 50 08.5	-1.0		
	baz=26,SNR=40									
CMSA	Cobar Meteorol	25.41 174	P		P		17 50 10.7	+1.2		
	comp=Z,1µm,1.1s									
ARMA	Armidale	25.55 162	P		P		17 50 11.0	+0.2		
	baz=26,SNR=18									
ARMA	Armidale	25.55 162	P		P		17 50 11.9	+1.1		
ARMA			IAmb		IAmb		17 50 35.0			
	comp=Z,6µm,1.8s									
ARMA	Armidale	25.55 162	P		P		17 50 11.9	+1.1		
	comp=Z,2µm,2.3s									
ARMA	Armidale	25.55 162	⇑P		P		17 50 11.7	+0.9		
STKA	Stephens Creek	25.63 182	P		P		17 50 10.5	-1.0		
	baz=26,SNR=104									
STKA	Stephens Creek	25.63 182	P		P		17 50 09.9	-1.5		
STKA	Stephens Creek	25.63 182	P		P		17 50 11.3	-0.2		
	comp=Z,246nm,1.3s									
STKA	Stephens Creek	25.63 182	*i* P		P		17 50 09.1	-2.4		
STKA	Stephens Creek	25.63 182	P		P		17 50 11.4	0.0		
	comp=Z,104nm,0.9s,baz=355,slow=9.0,SNR=62									
STKA			S		S		17 54 44.1	+6.1		
	comp=Z,427nm,1.1s,baz=12,slow=17,SNR=1.8									
STKA			Lg		Lg		17 58 12.0			
	baz=84,slow=23									
STKA			LR		LR		18 02 17.3			
	comp=Z,1013µm,18.4s,baz=8.2,slow=41									
	comp=Z,104nm,0.9s									
TWSI	Taliwang, Sumb	25.81 263	P		P		17 50 10.0	-3.3		
	comp=Z,446nm,0.8s,comp=Z,35µmcomp=Z,754µm									
AUPHS	Peel High Scho	25.97 164	P		P		17 50 16.0	+1.4		
	comp=Z,1µm,1.2s									
BKB	Balikpapan	26.27 280	P		P		17 50 19.2	+1.7		
BKB	Balikpapan	26.27 280	P		P		17 50 19.1	+1.6		
BKB	Balikpapan	26.27 280	⇑P		P		17 50 20.2	+2.7		
BKB	Balikpapan	26.27 280	P		P		17 50 19.8	+2.3		
	comp=Z,7µm,1.2s,comp=Z,183µmcomp=Z,834µm									
AUDCS	Dubbo College	26.53 169	P		P		17 50 20.3	+0.7		
MBWA	Marble Bar	26.86 234	P		P		17 50 21.3	-1.4		
MBWA	Marble Bar	26.86 234	IAMs_20	IAMs_20			18 02 04.0			
	comp=Z,1696µm,21.0s									
MBWA	Marble Bar	26.86 234	P		P		17 50 23.4	+0.7		
	comp=Z,616nm,1.3s									
MBWA	Marble Bar	26.86 234	⇑P		P		17 50 20.9	-1.8		
PSAD2	Pilbara Seismi	26.91 233	IAMs_20	IAMs_20			18 02 28.4			
	comp=Z,2452µm,20.0s									
PSAC2	Pilbara Seismi	26.93 233	IAMs_20	IAMs_20			18 02 28.0			
	comp=Z,2166µm,20.0s									
PSAD1	Pilbara Seismi	26.93 233	IAMs_20	IAMs_20			18 02 07.0			
	comp=Z,1933µm,20.0s									
PSAB2	Pilbara Seismi	26.95 233	IAMs_20	IAMs_20			18 02 29.7			
	comp=Z,2020µm,19.0s									
PSAA2	Pilbara Seismi	26.97 233	IAMs_20	IAMs_20			18 02 30.1			
	comp=Z,2032µm,20.0s									
PSAA3	Pilbara Seismi	26.97 233	IAMs_20	IAMs_20			18 02 30.2			
	comp=Z,2101µm,19.0s									
PSA00	Pilbara Seismi	26.98 233	P		P		17 50 23.3	-0.5		
PSA00	Pilbara Seismi	26.98 233	IAmb		IAmb		17 51 03.5			
	comp=Z,4µm,1.6s									
PSA00			IAMs_20	IAMs_20			18 02 30.3			
	comp=Z,2059µm,20.0s									
PSA00	Pilbara Seismi	26.98 233	P		P		17 50 24.8	+1.0		
	comp=Z,1µm,1.1s									
PSAB3	Pilbara Seismi	26.98 233	IAMs_20	IAMs_20			18 02 30.4			
	comp=Z,2154µm,19.0s									
PSAC1	Pilbara Seismi	26.98 233	IAMs_20	IAMs_20			18 02 08.5			
	comp=Z,1950µm,20.0s									
PSAA1	Pilbara Seismi	26.99 233	IAMs_20	IAMs_20			18 02 30.5			
	comp=Z,2086µm,20.0s									
PSAB1	Pilbara Seismi	26.99 233	IAMs_20	IAMs_20			18 02 30.6			
	comp=Z,1763µm,19.0s									
PSAD3	Pilbara Seismi	27.07 233	IAMs_20	IAMs_20			18 02 33.6			
	comp=Z,2276µm,20.0s									
WHYH	Whyalla	27.19 190	P		P		17 50 26.9	+1.4		
	comp=Z,1µm,1.0s									
PTPS	Port Pirie	27.26 189	P		P		17 50 27.1	+0.9		
BBOO	Buckleboo	27.27 192	P		P		17 50 25.0	-1.2		
	baz=27,SNR=37									
BBOO	Buckleboo	27.27 192	P		P		17 50 25.1	-1.1		
BBOO	Buckleboo	27.27 192	P		P		17 50 24.8	-1.4		
	comp=Z,1µm,1.1s									
HTT	Hallett	27.39 187	P		P		17 50 26.0	-1.4		
	baz=28,SNR=45									
HTT	Hallett	27.39 187	P		P		17 50 27.4	0.0		
	comp=Z,1µm,1.4s									
HTT	Hallett	27.39 187	⇑P		P		17 50 26.2	-1.2		
SRBI	Singaraja	27.42 264	P		P		17 50 25.6	-2.2		
	comp=Z,936nm,1.8s,comp=Z,39µmcomp=Z,586µm									
DNP	Denpasar	27.45 263	P		P		17 50 26.3	-1.8		
	comp=Z,4µm,1.2s,comp=Z,64µmcomp=Z,639µm									
DZM	Mont Dzumac	27.81 127	IAMs_20	IAMs_20			18 02 40.6			
	comp=Z,2046µm,18.0s									
DZM	Mont Dzumac	27.81 127	P		P		17 50 31.1	-0.3		
	comp=Z,1µm,1.2s									
DZM	Mont Dzumac	27.81 127	*e*P		P		17 50 31.0	-0.3		
	comp=Z,3µm,1.2s									
DZM			*e*S		S		17 55 04.6	-8.3		
	comp=Z,752µm,24.9s									
DZM			*e*LR		LR		17 57 38.2			
	comp=Z,1363µm,23.2s									
DZM	Mont Dzumac	27.81 127	⇑P		P		17 50 29.9	-1.5		
DZM	Mont Dzumac	27.81 127	P		P		17 50 31.3	0.0		
	comp=Z,251nm,1.1s,baz=334,slow=7.2,SNR=23									
DZM			S		S		17 55 19.9	+7.1		
	comp=Z,127nm,1.1s,baz=3.0,slow=21,SNR=1.7									
	comp=Z,251nm,1.1s									
LIFNC	LIFOU	27.82 124	IAmb		IAmb		17 50 54.8			
LIFNC	comp=Z,5µm,1.3s		IAMs_20	IAMs_20			18 01 05.8			
	comp=Z,1752µm,20.0s									
LIFNC	LIFOU	27.82 124	P		P		17 50 31.7	+0.4		
	comp=Z,3µm,1.0s									
NTLH	Newcastle Hard	27.89 164	P		P		17 50 33.2	+1.4		
	comp=Z,898nm,0.9s									
ONTNC	Ouen Toro	27.94 127	P		P		17 50 33.9	+1.5		
	comp=Z,4.2nm,1.1s									
ONTNC	Ouen Toro	27.94 127	⇑P		P		17 50 30.8	-1.7		
MGCD	Mangrove Creek	28.03 165	P		P		17 50 34.1	+1.1		
	comp=Z,389nm,1.6s									
FORT	Forrest	28.14 208	P		P		17 50 32.5	-1.6		
	baz=28,SNR=25									
FORT	Forrest	28.14 208	P		P		17 50 34.0	-0.1		
FORT	Forrest	28.14 208	P		P		17 50 35.2	+1.1		
	comp=Z,2µm,0.8s									
FORT	Forrest	28.14 208	⇑P		P		17 50 33.8	-0.3		
YATNC	Mamie plateau,	28.16 127	P		P		17 50 33.8	-0.6		
	comp=Z,1µm,1.2s									
MTKI	Muara Teweh, K	28.30 279	P		P		17 50 35.7	0.0		
	comp=Z,868nm,0.8s,comp=Z,44µmcomp=Z,498µm									
OUENC	Ouen Island, N	28.31 127	P		P		17 50 34.4	-1.3		
OUENC			IAMs_20	IAMs_20			18 02 56.7			
	comp=Z,1903µm,18.0s									
OUENC	Ouen Island, N	28.31 127	P		P		17 50 35.8	+0.1		
ABJI	Asem Bagus	28.38 265	P		P		17 50 35.1	-1.3		
	comp=Z,705nm,1.2s,comp=Z,41µmcomp=Z,518µm									
SYDH	Sydney Hard Ro	28.46 166	P		P		17 50 38.2	+1.3		
	comp=Z,371nm,0.9s									
JAGI	Jajag, Banyuwa	28.49 264	IAmb		IAmb		17 51 01.9			
	comp=Z,3µm,1.1s									
JAGI	Jajag, Banyuwa	28.49 264	P		P		17 50 35.6	-1.8		
	comp=Z,2µm,1.6s									
JAGI	Jajag, Banyuwa	28.49 264	⇑P		P		17 50 34.6	-2.8		
JAGI	Jajag, Banyuwa	28.49 264	P		P		17 50 34.4	-3.0		
	comp=Z,2µm,1.3s,comp=Z,38µmcomp=Z,559µm									
YNG	Young	28.50 170	P		P		17 50 37.1	-0.2		
	baz=29,SNR=26									
YNG	Young	28.50 170	P		P		17 50 38.6	+1.3		
	comp=Z,1µm,1.8s									
RIV	Riverview	28.63 165	P		P		17 50 37.4	-1.0		
MARNC	Mare, Loyalty	28.80 124	P		P		17 50 40.4	+0.3		
	comp=Z,20nm,1.3s									
MARNC	Mare, Loyalty	28.80 124	⇓P		P		17 50 40.2	+0.2		
PINNC	Pines Island,	28.89 127	IAMs_20	IAMs_20			18 03 02.1			
	comp=Z,1797µm,19.0s									
PINNC	Pines Island,	28.89 127	P		P		17 50 42.1	+1.3		
	comp=Z,636nm,1.6s									
GHSS	Government Hou	28.90 187	P		P		17 50 42.5	+1.8		
	comp=Z,602nm,0.9s									
BLJI	Banyuglugur	29.01 265	P		P		17 50 40.0	-2.0		
	comp=Z,1µm,1.3s,comp=Z,25µmcomp=Z,502µm									
WOLH	Wollongong Har	29.11 166	P		P		17 50 43.5	+0.9		
	comp=Z,640nm,1.1s									
GMJI	Gumukmas	29.18 264	P		P		17 50 40.2	-3.3		
LHI	Lord Howe Isla	29.50 151	P		P		17 50 45.4	-0.7		
	baz=30									
LHI	Lord Howe Isla	29.50 151	P		P		17 50 47.3	+1.2		
	comp=Z,923nm,1.2s									
TGY	Tagaytay City	29.57 313	LR		LR		18 02 38.3			
	comp=Z,293µm,21.9s,baz=136,slow=36									
CAN	Canberra	29.60 170	IAMs_20	IAMs_20			18 03 54.2			
	comp=Z,1212µm,19.0s									
CAN	Canberra	29.60 170	P		P		17 50 48.5	+1.5		
	comp=Z,809nm,1.4s									
CAN	Canberra	29.60 170	⇑P		P		17 50 48.6	+1.5		
CNB	Canberra Magne	29.66 169	P		P		17 50 48.9	+1.3		
	comp=Z,517nm,2.3s									
AUUHS	Ulladulla High	29.93 167	P		P		17 50 51.3	+1.4		
BWJI	Bawean	29.96 269	P		P		17 50 50.4	0.0		
	comp=Z,9µm,1.6s,comp=Z,121µmcomp=Z,473µm									
GRJI	Gresik	30.11 267	P		P		17 50 50.5	-1.3		
	comp=Z,2µm,1.6s,comp=Z,36µmcomp=Z,455µm									
ARPS	Mount Arapiles	30.50 181	P		P		17 50 54.9	-0.1		
	baz=31,SNR=18									
ARPS	Mount Arapiles	30.50 181	P		P		17 50 54.8	-0.1		
	comp=Z,700nm,0.9s									
AUSMG	Snwy Mountain	30.61 171	P		P		17 50 57.8	+1.8		
MEEK	Meekatharra	30.75 226	P		P		17 50 55.8	-1.5		
	baz=31,SNR=15									
MEEK	Meekatharra	30.75 226	P		P		17 50 56.6	-0.8		
	comp=Z,495nm,1.5s									
PWJI	Pagerwojo	30.79 265	P		P		17 50 55.0	-2.8		
	comp=Z,1µm,1.1s,comp=Z,19µmcomp=Z,397µm									
TARA	Tarawa	31.00 77	P		P		17 51 00.2	+0.5		
TARA	Tarawa	31.00 77	IAMs_20	IAMs_20			18 03 23.9			
	comp=Z,1274µm,20.0s									
NGJI	Ngawi	31.12 266	P		P		17 51 00.3	-0.4		
	comp=Z,722nm,1.5s,comp=Z,45µmcomp=Z,472µm									
BRAT	Ballarat	31.28 178	P		P		17 51 02.8	+1.0		
	comp=Z,284nm,0.9s									
MILA	Mila	31.32 170	P		P		17 51 01.3	-0.9		
	baz=32,SNR=7.2									
MILA	Mila	31.32 170	P		P		17 51 03.5	+1.3		
TOO	Toolangi	31.38 176	P		P		17 51 04.1	+1.3		
	baz=32,SNR=4.7									
TOO	Toolangi	31.38 176	P		P		17 51 03.3	+0.5		
	comp=Z,111nm,1.1s									
TOO	Toolangi	31.38 176	⇓P		P		17 51 04.2	+1.5		
MLBS	Spotswood, Mel	31.60 177	P		P		17 51 06.6	+2.0		
KMBL	Kambalda	31.83 215	P		P		17 51 06.3	-0.4		
	baz=32,SNR=12									
KMBL	Kambalda	31.83 215	P		P		17 51 06.7	-0.1		
	comp=Z,922nm,1.6s									
STKI	Sintang	31.85 280	P		P		17 51 07.6	+0.5		
	comp=Z,947nm,1.4s,comp=Z,57µmcomp=Z,407µm									
GEXS	Deakin Univers	31.95 178	P		P		17 51 09.5	+1.9		
	comp=Z,360nm,0.9s									
GIRL	Giralia	32.05 236	P		P		17 51 07.9	-0.9		
	baz=32,SNR=13									
GIRL	Giralia	32.05 236	P		P		17 51 08.4	-0.3		
GIRL			IAmb		IAmb		17 52 19.2			
	comp=Z,1µm,0.8s									
GIRL	Giralia	32.05 236	P		P		17 51 09.5	+0.7		
	comp=Z,1µm,1.5s									
GIRL	Giralia	32.05 236	⇑P		P		17 51 08.9	+0.1		
UGM	Wanagama	32.06 265	P		P		17 51 07.0	-2.0		
UGM	Wanagama	32.06 265	P		P		17 51 08.4	-0.6		
	comp=Z,6µm,1.6s									
UGM	Wanagama	32.06 265	P		P		17 51 07.4	-1.6		
	comp=Z,4µm,1.6s,comp=Z,90µmcomp=Z,428µm									
SMRI	Semarang	32.13 267	P		P		17 51 09.2	-0.4		
SMRI	Semarang	32.13 267	P		P		17 51 10.1	+0.4		
	comp=Z,4µm,1.2s									
SMRI	Semarang	32.13 267	⇑P		P		17 51 09.3	-0.4		
SMRI	Semarang	32.13 267	P		P		17 51 08.9	-0.8		
	comp=Z,4µm,1.2s,comp=Z,71µmcomp=Z,422µm									
SZP	Santo	32.26 317	P		P		17 51 09.7	-0.9		
NFK	Norfolk Island	32.92 137	P		P		17 51 16.1	-0.3		
	baz=33									
NFK	Norfolk Island	32.92 137	P		P		17 51 18.2	+1.8		
	comp=Z,1µm,1.3s									
NFK	Norfolk Island	32.92 137	⇑P		P		17 51 16.7	+0.3		
JCJ	Chichijima	33.04 359	P		P		17 51 15.6	-1.8		
JCJ			IAmb		IAmb		17 52 03.9			
	comp=Z,1µm,1.0s									
JCJ	Chichijima	33.04 359	P		P		17 51 14.9	-2.5		
JCJ	Chichijima	33.04 359	⇑P		P		17 51 13.8	-3.6		
JCJ	Chichijima	33.04 359	P		P		17 51 10.1	-7.3		
	comp=Z,80nm,0.4s,baz=262,slow=10.0,SNR=19									
JCJ			S		S		17 56 36.3	+1.9		
	comp=Z,164nm,1.0s,baz=160,slow=16,SNR=1.5									
KPJI	Karang Pucung	33.63 266	P		P		17 51 21.7	-1.0		
	comp=Z,2µm,1.3s,comp=Z,36µmcomp=Z,396µm									
JMZ	Minamidaito 2	33.69 341	P		P		17 51 24.1	+1.1		
	comp=Z,2µm,1.6s									
H11S3	WAKE ISLAND Hy	33.99 43	P		P		17 51 26.0	+0.5		
	baz=234,slow=4.5,SNR=18									
H11S3			T		T		18 27 08.0			
	baz=228,slow=75,SNR=32									
H11S2	WAKE ISLAND Hy	34.00 43	P		P		17 51 24.8	-0.8		
	baz=234,slow=4.5,SNR=12									
H11S2			T		T		18 27 10.3			
	baz=228,slow=75,SNR=23									
H11S1	WAKE ISLAND Hy	34.01 43	P		P		17 51 25.1	-0.6		
	baz=234,slow=4.5,SNR=16									
H11S1			T		T		18 27 10.3			
	baz=228,slow=75,SNR=32									
MORW	Morawa	34.03 225	P		P		17 51 24.8	-1.3		
	baz=34,SNR=21									
MORW	Morawa	34.03 225	P		P		17 51 25.6	-0.4		
MORW	Morawa	34.03 225	P		P		17 51 25.7	-0.4		
	comp=Z,545nm,1.4s									
MORW	Morawa	34.03 225	⇑P		P		17 51 25.4	-0.6		
CMJI	Cimerak	34.11 265	P		P		17 51 24.4	-2.5		
	comp=Z,4µm,1.0s,comp=Z,44µmcomp=Z,361µm									
JCJI	Jatiwangi	34.30 267	P		P		17 51 28.1	-0.4		
	comp=Z,4µm,1.5s,comp=Z,94µmcomp=Z,387µm									
KLBR	Kellerberrin	34.49 220	P		P		17 51 28.8	-1.2		
	baz=35,SNR=8.6									
KLBR	Kellerberrin	34.49 220	P		P		17 51 30.1	+0.1		
	comp=Z,708nm,0.9s									
I60US	Wake Island	34.49 42	I		I		21 01 26.2			
	baz=228,slow=320,SNR=1.6									
WAKE	Wake Island	34.51 42	P		P		17 51 30.8	+0.6		
BLDU	Balidu	34.53 222	P		P		17 51 29.8	-0.6		
	baz=35,SNR=15									
BLDU	Balidu	34.53 222	P		P		17 51 30.7	+0.4		
	comp=Z,473nm,1.4s									
BBJI	Bungbulang	34.90 266	P		P		17 51 32.9	-1.0		
	comp=Z,3µm,1.4s									
LEM	Lembang	34.94 267	LR		LR		18 09 56.4			
	comp=Z,340µm,18.6s,baz=94,slow=43									
LEM	Lembang	34.94 267	P		P		17 51 33.2	-1.1		
	comp=Z,2µm,0.7s,comp=Z,45µmcomp=Z,314µm									
H11N1	WAKE ISLAND Hy	34.97 42	P		P		17 51 32.2	-1.9		
	baz=234,slow=13,SNR=32									
H11N1			T		T		18 28 29.0			
	baz=230,slow=74									
H11N3	WAKE ISLAND Hy	34.99 42	P		P		17 51 35.6	+1.4		
	baz=234,slow=13,SNR=15									
H11N3			T		T		18 28 25.4			
	baz=230									
H11N2	WAKE ISLAND Hy	34.99 42	P		P		17 51 36.1	+2.0		
	baz=234,slow=13,SNR=11									
H11N2			T		T		18 28 25.4			
	baz=230,slow=74									
GLAD	Gladstone	35.01 173	P		P		17 51 35.5	+1.2		
JMJ	Miyako jima 2	35.16 332	P		P		17 51 36.5	+0.7		
AULHS	Lilydale High	35.19 174	P		P		17 51 37.6	+1.8		
CNJI	Cibinong	35.42 266	P		P		17 51 36.4	-1.8		
	comp=Z,3µm,1.2s,comp=Z,31µmcomp=Z,130µm									
YSA	Yasawairara	35.62 110	P		P		17 51 41.4	+1.5		
	comp=Z,611nm,1.9s									
JOW	Kunigami	35.66 337	P		P		17 51 40.1	0.0		
JOW	Kunigami	35.66 337	P		P		17 51 41.1	+1.0		
	comp=Z,2µm,1.9s									
JOW	Kunigami	35.66 337	⇑P		P		17 51 39.8	-0.3		
JOW	Kunigami	35.66 337	P		P		17 51 39.6	-0.5		
	comp=Z,146nm,1.0s,baz=139,slow=6.8,SNR=10									
JOW			S		S		17 57 16.9	+1.9		
	comp=Z,58nm,1.0s,baz=170,slow=16,SNR=1.3									
JOW			LR		LR		18 04 01.1			
	comp=Z,781µm,21.5s,baz=144,slow=33									
	comp=Z,146nm,1.0s									
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 38.9	-1.6		
	baz=36,SNR=5.1									
NWAO			P		P		17 51 38.9	-1.6		
	baz=36,SNR=5.1									
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 40.8	+0.3		
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 40.2	-0.3		
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 41.2	+0.7		
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 40.7	+0.3		
	comp=Z,21nm,1.0s,baz=25,slow=13,SNR=7.2									
NWAO			S		S		17 57 12.9	-2.8		
	comp=Z,921nm,1.2s,baz=44,slow=0.9,SNR=3.1									
NWAO			LR		LR		18 07 40.0			
	comp=Z,1946µm,18.1s,baz=32,slow=39									
	comp=Z,21nm,1.0s									
NWAO	Narrogin (SRO)	35.71 218	P		P		17 51 42.2	+1.8		
NWAO			P		P		17 51 42.2	+1.8		
CBJI	Citeko	35.71 268	P		P		17 51 38.2	-2.5		
	comp=Z,2µm,1.8s,comp=Z,41µmcomp=Z,367µm									
MUN	Mundaring	35.73 221	P		P		17 51 39.0	-1.7		
	baz=36,SNR=5.6									
MUN	Mundaring	35.73 221	P		P		17 51 40.9	+0.2		
	comp=Z,317nm,1.1s									
TWGBT	Beinan	35.76 324	P		P		17 51 38.3	-2.7		
TWG	Pinlang	35.77 324	P		P		17 51 40.5	-0.6		
DBJI	Dramaga	35.81 267	P		P		17 51 40.1	-1.5		
	comp=Z,1µm,1.9s,comp=Z,38µmcomp=Z,356µm									
TNG	Tangerang	35.92 268	P		P		17 51 40.7	-1.8		
	comp=Z,2µm,1.4s,comp=Z,30µmcomp=Z,342µm									
MTKN	Mount Kenneth	35.98 221	P		P		17 51 43.2	+0.4		
SKJI	Sukabumi	35.99 267	P		P		17 51 41.3	-1.8		
	comp=Z,3µm,0.9s,comp=Z,59µmcomp=Z,319µm									
YOJ	Yonaguni jima	36.01 328	P		P		17 51 42.1	-0.9		
YOJ			IAmb		IAmb		17 52 27.2			
	comp=Z,3µm,1.1s									
YOJ	Yonaguni jima	36.01 328	P		P		17 51 44.0	+1.0		
	comp=Z,3µm,1.3s									
YOJ	Yonaguni jima	36.01 328	P		P		17 51 42.2	-0.9		
YOJ			pmax		pmax					
	comp=Z,3µm,1.1s									
YULB	Yu-li	36.08 325	IAmb		IAmb		17 52 06.3			
	comp=Z,4µm,1.8s									
YULB	Yu-li	36.08 325	P		P		17 51 44.7	+0.9		
	comp=Z,1µm,2.6s									
FUNA	Funafuti	36.19 96	P		P		17 51 44.5	-0.3		
FUNA	Funafuti	36.19 96	P		P		17 51 45.2	+0.4		
FUNA	Funafuti	36.19 96	⇑P		P		17 51 44.6	-0.2		
MOO	Moorlands	36.36 174	P		P		17 51 47.6	+1.7		
	baz=37,SNR=4.7									
MOO	Moorlands	36.36 174	P		P		17 51 47.8	+1.9		
	comp=Z,849nm,1.3s									
TPUB	Ta-pu	36.40 324	IAmb		IAmb		17 52

MCO	**Taipa Grande**	**40.10**	**315**	P	**P**	**17 52 17.0**	**-0.7**
OUZ	**Omahuta**	**40.52**	**140**	P	**P**	**17 52 23.4**	**+2.4**
OUZ	**Omahuta**	**40.52**	**140**	⇑P	**P**	**17 52 22.2**	**+1.2**
JMN	**Monobe**	**40.54**	**349**	IAmb	IAmb	17 53 01.1	
	comp=Z,4μm,1.5s						
JMN	**Monobe**	**40.54**	**349**	P	**P**	**17 52 20.9**	**-0.2**
JMN	**Monobe**	**40.54**	**349**	⇑P	**P**	**17 52 20.0**	**-1.1**
JMN	**Monobe**	**40.54**	**349**	P	**P**	**17 52 20.0**	**-1.1**
JNU	**Nakatsue**	**40.65**	**345**	IAmb	IAmb	17 52 59.3	
	comp=Z,4μm,1.5s						
JNU	**Nakatsue**	**40.65**	**345**	P	**P**	**17 52 21.8**	**-0.3**
JNU	**Nakatsue**	**40.65**	**345**	⇑P	**P**	**17 52 20.6**	**-1.5**
JNU	**Nakatsue**	**40.65**	**345**	P	**P**	**17 52 20.9**	**-1.2**
JNU	**Nakatsue**	**40.65**	**345**	LR	LR	18 07 04.0	
	comp=Z,389μm,21.8s,baz=158,slow=33						
JSG	**Sagara**	**40.82**	**354**	IAmb	IAmb	17 52 58.4	
	comp=Z,3μm,1.3s						
JSG	**Sagara**	**40.82**	**354**	P	**P**	**17 52 24.6**	**+1.2**
GZH	**Guangzhou**	**40.89**	**316**	P	**P**	**17 52 26.0**	**+1.9**
GZH				S	**S**	**17 58 40.5**	**+6.5**
GZH				pmax	pmax		
	comp=Z,3μm,1.6s						
GZH				LR	LR		
	comp=Z,34μm,14.3s						
GZH				LR	LR		
	comp=Z,70μm,16.7s						
QIZ	**Qiongzhong**	**40.97**	**308**	P	**P**	**17 52 24.0**	**-0.9**
QIZ				PP	**PP**	**17 53 59.8**	**0.0**
QIZ				PcP	**PcP**	**17 54 23.8**	**-1.1**
QIZ				S	**S**	**17 58 35.5**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,160nm,1.4s						
QIZ				LR	LR		
	comp=Z,158μm,19.5s						
QIZ				LR	LR		
	comp=Z,186μm,21.2s						
QIZ				LR	LR		
	comp=Z,305μm,21.4s						
QIZ	**Qiongzhong**	**40.97**	**308**	P	**P**	**17 52 24.4**	**-0.5**
I30JP	**ISUMI INFRASON**	**41.29**	**357**	I	I	22 00 33.5	
	baz=179,slow=319,SNR=1.4						
KRJI	**Kerinci**	**41.40**	**274**	P	**P**	**17 52 27.9**	**-0.7**
	comp=Z,9μm,0.9s,comp=Z,143μmcomp=Z,332μm						
INU	**Inuyama**	**41.62**	**353**	P	**P**	**17 52 28.7**	**-1.3**
INU	**Inuyama**	**41.62**	**353**	⇑P	**P**	**17 52 27.7**	**-2.3**
JAD	**Aida**	**41.66**	**349**	P	**P**	**17 52 29.1**	**-1.2**
JWT	**Wachi**	**41.78**	**351**	P	**P**	**17 52 29.8**	**-1.5**
JGF	**Kuroka**	**41.83**	**353**	P	**P**	**17 52 29.9**	**-1.8**
JGF	**Kuroka**	**41.83**	**353**	⇑P	**P**	**17 52 29.4**	**-2.4**
JGF	**Kuroka**	**41.83**	**353**	P	**P**	**17 52 29.3**	**-2.4**
JHS	**Saijyo**	**41.92**	**348**	P	**P**	**17 52 31.2**	**-1.3**
JRY	**Ryogami san**	**42.09**	**355**	P	**P**	**17 52 31.6**	**-2.3**
BKNI	**Bangkinang**	**42.16**	**277**	P	**P**	**17 52 35.6**	**+0.8**
BKNI	**Bangkinang**	**42.16**	**277**	P	**P**	**17 52 35.5**	**+0.8**
BKNI	**Bangkinang**	**42.16**	**277**	P	P	17 52 28.8	-5.9
BKNI	**Bangkinang**	**42.16**	**277**	P	**P**	**17 52 34.8**	**+0.1**
	comp=Z,4μm,1.1s,comp=Z,75μmcomp=Z,364μm						
JTU	**Tsushima**	**42.37**	**344**	P	**P**	**17 52 36.0**	**-0.1**
JTU	**Tsushima**	**42.37**	**344**	⇑P	**P**	**17 52 35.2**	**-0.9**
SSE	**Sheshan**	**42.40**	**332**	P	**P**	**17 52 36.5**	**+0.2**
SSE				S	**S**	**17 58 58.5**	**+2.4**
SSE				pmax	pmax		
	comp=Z,410nm,1.2s						
JGN	**Niukaw**	**42.45**	**353**	P	**P**	**17 52 34.5**	**-2.3**
MJAR	**Matsushiro Arr**	**42.67**	**355**	P	**P**	**17 52 35.7**	**-2.9**
	comp=Z,126nm,1.1s,baz=181,slow=8.7,SNR=149						
MJAR				LR	LR	18 08 59.0	
	comp=Z,196μm,19.0s,baz=176,slow=34						
	comp=Z,126nm,1.1s						
MAJO	**Matsushiro**	**42.67**	**355**	P	**P**	**17 52 35.9**	**-2.6**
MAJO	**Matsushiro**	**42.67**	**355**	P	**P**	**17 52 36.5**	**-2.1**
MAJO	**Matsushiro**	**42.67**	**355**	⇑P	**P**	**17 52 35.9**	**-2.6**
MAJO	**Matsushiro**	**42.67**	**355**	*c i*P	**P**	**17 52 35.5**	**-3.1**
MAJO				pmax	pmax		
	comp=Z,1μm,1.0s						
MAT	**Matsushiro**	**42.67**	**355**	P	**P**	**17 52 35.8**	**-2.8**
MKAZ	**Moumakai**	**42.68**	**141**	P	**P**	**17 52 39.8**	**+1.1**
PPSI	**Pulau Pagai**	**42.76**	**273**	P	**P**	**17 52 37.9**	**-1.8**
	comp=Z,2μm,1.6s,comp=Z,48μmcomp=Z,267μm						
KUZ	**Kuaotunu**	**42.81**	**140**	P	**P**	**17 52 41.4**	**+1.7**
TOZ	**Tahuroa Road**	**43.28**	**141**	IAmb	IAmb	17 53 35.6	
	comp=Z,4μm,1.6s						
TOZ				IAMs_20	IAMs_20	18 13 10.3	
	comp=Z,903μm,18.0s						
HIZ	**Hauiti**	**43.38**	**143**	IAmb	IAmb	17 53 08.2	
	comp=Z,2μm,1.0s						
HIZ				IAMs_20	IAMs_20	18 08 51.9	
	comp=Z,895μm,21.0s						
KHEZ	**Kahui Hut**	**43.38**	**144**	P	**P**	**17 52 45.1**	**+0.7**
RAO	**Raoul Island**	**43.61**	**127**	P	**P**	**17 52 48.7**	**+2.4**
RAO	**Raoul Island**	**43.61**	**127**	⇑P	**P**	**17 52 46.4**	**+0.1**
RAO	**Raoul Island**	**43.61**	**127**	LR	LR	18 07 50.3	
	comp=Z,273μm,20.9s,baz=294,slow=32						
VRZ	**Vera Road**	**43.71**	**143**	P	P	17 52 52.6	+5.7
JMM	**Marumori**	**43.82**	**358**	IAmb	IAmb	17 53 27.2	
	comp=Z,1μm,0.9s						
JMM	**Marumori**	**43.82**	**358**	P	**P**	**17 52 46.8**	**-0.9**
JMM	**Marumori**	**43.82**	**358**	⇑P	**P**	**17 52 46.0**	**-1.7**
SISI	**Saibi**	**43.84**	**274**	P	**P**	**17 52 47.0**	**-1.4**
	comp=Z,1μm,1.8s,comp=Z,35μmcomp=Z,306μm						
DSZ	**Denniston Nort**	**43.85**	**148**	IAMs_20	IAMs_20	18 12 31.5	
	comp=Z,729μm,18.0s						
WATZ	**Wairara**	**44.03**	**142**	P	**P**	**17 52 50.3**	**+0.7**
OMRZ	**Omania**	**44.05**	**141**	P	**P**	**17 52 49.5**	**-0.3**
SKLT	**Songkhla**	**44.09**	**287**	P	**P**	**17 52 50.9**	**+0.5**
JCZ	**Jackson Bay**	**44.13**	**153**	P	**P**	**17 52 51.7**	**+1.3**
JSD	**Sado**	**44.15**	**355**	P	**P**	**17 52 49.0**	**-1.4**
JSD	**Sado**	**44.15**	**355**	⇑P	**P**	**17 52 48.7**	**-1.7**
RATZ	**Rangitukua**	**44.15**	**142**	P	**P**	**17 52 54.3**	**+3.7**
FOZ	**Fox Glacier**	**44.19**	**152**	IAMs_20	IAMs_20	18 13 02.3	
	comp=Z,824μm,18.0s						
WTVZ	**West Tongariro**	**44.20**	**143**	P	**P**	**17 52 53.5**	**+2.5**
KRVZ	**Karewarewa**	**44.22**	**143**	P	**P**	**17 52 53.2**	**+2.0**
COVZ	**Chateau Observ**	**44.23**	**143**	P	**P**	**17 52 53.5**	**+2.2**
NNVZ	**North Ngauruho**	**44.23**	**143**	P	**P**	**17 52 55.3**	**+4.0**
NTVZ	**North Tongariro**	**44.24**	**143**	P	P	17 52 57.3	+5.9
FWVZ	**Far West T-bar**	**44.27**	**143**	P	**P**	**17 52 50.9**	**-0.9**
TMVZ	**Te Maari**	**44.27**	**143**	P	**P**	**17 52 54.1**	**+2.5**
ETVZ	**East Tongariro**	**44.29**	**143**	P	**P**	**17 52 54.6**	**+2.8**
NJ2	**Nanjing**	**44.30**	**330**	⇑P	**P**	**17 52 52.3**	**+0.6**
NJ2				pP	**pP**	**17 53 01.5**	**+0.6**
NJ2				sP	**sP**	**17 53 05.0**	**+0.4**
NJ2				S	**S**	**17 59 27.3**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,320nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,9μm,4.6s						
NJ2				LR	LR		
	comp=Z,284μm,19.4s						
NJ2				LR	LR		
	comp=Z,216μm,19.0s						
NJ2				LR	LR		
	comp=Z,441μm,19.9s						
NNZ	**Nelson**	**44.32**	**147**	IAMs_20	IAMs_20	18 11 24.9	
	comp=Z,710μm,19.0s						
GULI	**GuiLin**	**44.38**	**316**	⇑P	**P**	**17 52 52.5**	**0.0**
GULI				S	**S**	**17 59 24.0**	**-1.4**
GULI				pmax	pmax		
	comp=Z,470nm,1.2s						
GULI				LR	LR		
	comp=Z,202μm,23.9s						
GULI				LR	LR		
	comp=Z,205μm,19.5s						
GULI				LR	LR		
	comp=Z,226μm,22.8s						
INZ	**Inchbonnie**	**44.38**	**150**	IAMs_20	IAMs_20	18 12 00.4	
	comp=Z,987μm,19.0s						
THZ	**Tophouse**	**44.45**	**148**	IAmb	IAmb	17 53 36.4	
	comp=Z,3μm,1.9s						
DCZ	**Deep Cove**	**44.53**	**156**	IAmb	IAmb	17 53 27.1	
	comp=Z,5μm,1.9s						
JYA	**Atsumi**	**44.59**	**357**	P	**P**	**17 52 53.1**	**-0.9**
URZ	**Urewera**	**44.61**	**141**	P	**P**	**17 52 55.7**	**+1.5**
URZ	**Urewera**	**44.61**	**141**	⇑P	**P**	**17 52 54.0**	**-0.2**
URZ	**Urewera**	**44.61**	**141**	P	**P**	**17 52 54.1**	**0.0**
	comp=Z,102nm,1.0s,baz=22,slow=6.8,SNR=20						
URZ				LR	LR	18 12 42.4	
	comp=Z,948μm,19.0s,baz=43,slow=38						
	comp=Z,102nm,1.0s						
URZ	**Urewera**	**44.61**	**141**	P	**P**	**17 52 54.0**	**-0.2**
CNSH	**ChangSha**	**44.65**	**321**	⇑*r*P	**P**	**17 52 55.8**	**+1.2**
CNSH				S	**S**	**17 59 32.5**	**+3.2**
CNSH				pmax	pmax		
	comp=Z,200nm,1.3s						
CNSH				pmax	pmax		
	comp=Z,7μm,10.1s						
CNSH				LR	LR		
	comp=Z,175μm,19.8s						
CNSH				LR	LR		
	comp=Z,174μm,20.3s						
CNSH				LR	LR		
	comp=Z,290μm,23.4s						
RPSI	**Rantau Prapat**	**44.66**	**280**	P	**P**	**17 52 53.9**	**-1.1**
RPSI				IAmb	IAmb	17 53 28.7	
	comp=Z,2μm,1.1s						
PSI	**Prapat**	**44.68**	**280**	P	**P**	**17 52 55.5**	**+0.2**
PSI	**Prapat**	**44.68**	**280**	P	**P**	**17 52 53.9**	**-1.4**
PSI				pmax	pmax		
	comp=Z,2μm,1.1s						
PSI				MLR	MLR		
	comp=Z,88μm,21.0s						
TJN	**Taejon**	**44.70**	**342**	P	**P**	**17 52 54.7**	**-0.1**
TJN	**Taejon**	**44.70**	**342**	*ce*P	**P**	**17 52 54.4**	**-0.4**
BHHZ	**Black Hill Sta**	**44.72**	**143**	P	**P**	**17 52 56.3**	**+1.2**
HAZ	**Te Kaha**	**44.74**	**140**	P	**P**	**17 52 56.8**	**+1.7**
RTZ	**Ruatahuna**	**44.74**	**141**	IAmb	IAmb	17 53 43.7	
	comp=Z,3μm,1.5s						
RTZ				IAMs_20	IAMs_20	18 12 02.0	
	comp=Z,1016μm,18.0s						
TUWZ	**Tuamarina**	**44.78**	**146**	P	**P**	**17 52 54.3**	**-1.1**
TUWZ				ScP	**ScP**	**17 58 29.0**	**+1.2**
BKZ	**Black Stump Fm**	**44.78**	**142**	IAMs_20	IAMs_20	18 09 58.0	
	comp=Z,642μm,19.0s						
BKZ	**Black Stump Fm**	**44.78**	**142**	P	**P**	**17 52 56.8**	**+1.2**
BKZ	**Black Stump Fm**	**44.78**	**142**	P	**P**	**17 52 56.8**	**+1.2**
RUGZ	**Raukumara Rang**	**44.79**	**140**	P	**P**	**17 52 57.0**	**+1.2**
MTHZ	**Maungataniwha**	**44.80**	**142**	P	**P**	**17 52 56.7**	**+0.9**
TCW	**Tory Channel**	**44.81**	**146**	ScP	**ScP**	**17 58 28.9**	**+0.9**
PBSI	**Pulau Batu**	**44.82**	**276**	P	**P**	**17 52 54.6**	**-1.6**
	comp=Z,878nm,2.3s,comp=Z,41μmcomp=Z,321μm						
WKZ	**Wanaka**	**44.82**	**153**	IAmb	IAmb	17 54 22.5	
	comp=Z,1μm,1.2s						
MLZ	**Mavora Lakes**	**44.86**	**155**	IAmb	IAmb	17 54 20.2	
	comp=Z,2μm,1.2s						
PYZ	**Puysegur Point**	**44.91**	**156**	IAmb	IAmb	17 53 21.6	
	comp=Z,2μm,1.2s						
PYZ	**Puysegur Point**	**44.91**	**156**	P	**P**	**17 52 57.0**	**+0.5**
MWZ	**Matawai**	**44.91**	**141**	P	**P**	**17 52 56.5**	**-0.1**
RPZ	**Rata Peaks**	**44.92**	**151**	P	**P**	**17 52 56.9**	**+0.3**
RPZ	**Rata Peaks**	**44.92**	**151**	P	**P**	**17 52 57.4**	**+0.9**
	comp=Z,212nm,0.8s,baz=347,slow=3.2,SNR=15						
RPZ				LR	LR	18 12 18.5	
	comp=Z,1042μm,18.1s,baz=313,slow=37						
	comp=Z,212nm,0.8s						
BSWZ	**Blackbirch Sta**	**44.94**	**147**	P	**P**	**17 52 55.6**	**-1.1**
MXZ	**Matakaoa Point**	**44.96**	**139**	IAmb	IAmb	17 53 49.6	
	comp=Z,5μm,1.8s						
MXZ	**Matakaoa Point**	**44.96**	**139**	P	**P**	**17 52 58.6**	**+1.6**
KRHZ	**Kereru**	**45.00**	**143**	P	**P**	**17 52 58.2**	**+0.9**
LBZ	**Lake Benmore**	**45.01**	**152**	IAmb	IAmb	17 53 44.7	
	comp=Z,2μm,1.4s						
LBZ				IAMs_20	IAMs_20	18 13 21.1	
	comp=Z,912μm,18.0s						
TSZ	**Takapari Road**	**45.02**	**144**	P	**P**	**17 52 56.2**	**-1.3**
OXZ	**Oxford**	**45.11**	**150**	IAMs_20	IAMs_20	18 12 15.9	
	comp=Z,780μm,19.0s						
SNZO	**South Karori**	**45.12**	**146**	P	**P**	**17 52 58.1**	**0.0**
SNZO				IAmb	IAmb	17 54 20.5	
	comp=Z,2μm,1.4s						
SNZO	**South Karori**	**45.12**	**146**	IAMs_20	IAMs_20	18 13 06.0	
	comp=Z,780μm,18.0s						
SNZO	**South Karori**	**45.12**	**146**	P	**P**	**17 52 59.7**	**+1.5**
SNZO	**South Karori**	**45.12**	**146**	⇑P	**P**	**17 52 58.1**	**0.0**
MRZ	**Mangatainoka R**	**45.19**	**144**	IAmb	IAmb	17 53 47.5	
	comp=Z,2μm,1.3s						
MRZ				IAMs_20	IAMs_20	18 14 05.8	
	comp=Z,947μm,18.0s						
WHZ	**Wether Hill Ro**	**45.20**	**155**	IAmb	IAmb	17 53 47.3	
	comp=Z,3μm,1.7s						
KHZ	**Kahutara**	**45.24**	**148**	IAMs_20	IAMs_20	18 10 17.2	
	comp=Z,1052μm,22.0s						
KHZ	**Kahutara**	**45.24**	**148**	P	**P**	**17 53 00.5**	**+1.4**
KHZ	**Kahutara**	**45.24**	**148**	⇓P	**P**	**17 53 00.5**	**+1.4**
BHW	**Baring Head**	**45.28**	**146**	P	**P**	**17 52 59.1**	**-0.3**
BHW				IAMs_20	IAMs_20	18 13 20.2	
	comp=Z,623μm,18.0s						
AFI	**Afiamalu**	**45.34**	**103**	P	**P**	**17 53 01.4**	**+0.9**
AFI				IAmb	IAmb	17 53 41.6	
	comp=Z,1μm,1.1s						
AFI	**Afiamalu**	**45.34**	**103**	IAMs_20	IAMs_20	18 09 58.9	
	comp=Z,952μm,21.0s						
AFI	**Afiamalu**	**45.34**	**103**	P	**P**	**17 53 02.2**	**+1.7**
AFI	**Afiamalu**	**45.34**	**103**	⇑P	**P**	**17 53 00.3**	**-0.2**
AFI	**Afiamalu**	**45.34**	**103**	P	**P**	**17 53 01.4**	**+0.9**
AFI				pmax	pmax		
	comp=Z,1μm,1.1s						
AFI				MLR	MLR		
	comp=Z,952μm,21.0s						
GVZ	**Greta Valley S**	**45.36**	**149**	P	**P**	**17 52 58.6**	**-1.5**
GVZ				IAmb	IAmb	17 53 19.8	
	comp=Z,852nm,0.8s						
GVZ				IAMs_20	IAMs_20	18 12 52.5	
	comp=Z,867μm,19.0s						
JOM	**Ohasama**	**45.40**	**358**	P	**P**	**17 52 58.6**	**-1.8**
SRIT	**Nakonsritamara**	**45.47**	**288**	IAmb	IAmb	17 53 34.8	
	comp=Z,2μm,1.4s						
SRIT	**Nakonsritamara**	**45.47**	**288**	P	**P**	**17 53 01.4**	**0.0**
WHN	**Wuhan**	**45.52**	**325**	⇑P	**P**	**17 53 02.8**	**+1.3**
WHN				pP	**pP**	**17 53 10.3**	**-0.4**
WHN				pmax	pmax		
	comp=Z,101μm,6.9s						
WHN				LR	LR		
	comp=Z,599μm,18.4s						
WHN				LR	LR		
	comp=Z,272μm,16.6s						
WHN				LR	LR		
	comp=Z,1005μm,19.9s						
KSAR	**Wonju Array Be**	**45.53**	**343**	P	**P**	**17 52 59.5**	**-1.9**
KSAR	**Wonju Array Be**	**45.53**	**343**	P	**P**	**17 52 59.5**	**-1.9**
KSRS	**Korea Array**	**45.53**	**343**	P	**P**	**17 53 01.0**	**-0.4**
KSRS	**Korea Array**	**45.53**	**343**	P	**P**	**17 53 00.9**	**-0.4**
	comp=Z,235nm,1.0s,baz=162,slow=8.8,SNR=284						
KSRS				S	S	17 59 51.1	+9.4
	comp=Z,8.7nm,0.8s,baz=162,slow=8.6,SNR=1.7						
KSRS				LR	LR	18 09 43.2	
	comp=Z,352μm,21.8s,baz=155,slow=33						
	comp=Z,235nm,1.0s						
BFZ	**Birch Farm**	**45.59**	**144**	P	**P**	**17 53 01.4**	**-0.5**
BFZ				IAmb	IAmb	17 53 35.5	
	comp=Z,1μm,0.9s						
BFZ	**Birch Farm**	**45.59**	**144**	P	**P**	**17 53 02.6**	**+0.7**
KS19	**Wonju Array Si**	**45.59**	**343**	P	**P**	**17 53 00.9**	**-1.1**
SURA	**Surathani**	**45.62**	**289**	P	**P**	**17 53 03.8**	**+1.3**
MQZ	**McQueen's Vall**	**45.70**	**150**	IAmb	IAmb	17 54 25.8	
	comp=Z,2μm,1.5s						
MQZ				IAMs_20	IAMs_20	18 13 10.3	
	comp=Z,825μm,18.0s						
I06AU	**Cocos Islands**	**45.72**	**259**	I	I	21 49 00.0	
	baz=92,slow=308,SNR=1.6						
ODZ	**Otahua Downs**	**45.72**	**152**	P	**P**	**17 53 04.1**	**+1.2**
GSI	**Gunungsitoli**	**45.73**	**278**	P	**P**	**17 53 02.3**	**-1.2**
GSI				IAmb	IAmb	17 53 32.4	
	comp=Z,4μm,2.0s						
GSI	**Gunungsitoli**	**45.73**	**278**	P	**P**	**17 53 03.7**	**+0.2**
GSI	**Gunungsitoli**	**45.73**	**278**	⇑P	**P**	**17 53 02.3**	**-1.2**
GSI	**Gunungsitoli**	**45.73**	**278**	P	**P**	**17 53 01.9**	**-1.6**
	comp=Z,611nm,1.5s,comp=Z,45μmcomp=Z,291μm						
NAYO	**Nakonayok**	**45.87**	**297**	P	**P**	**17 53 04.7**	**+0.2**
NONG	**Nongkai**	**45.91**	**302**	P	**P**	**17 53 04.7**	**-0.1**
INCN	**Inchon**	**45.94**	**342**	P	**P**	**17 53 05.0**	**+0.3**
INCN	**Inchon**	**45.94**	**342**	P	**P**	**17 53 04.8**	**+0.1**
INCN	**Inchon**	**45.94**	**342**	⇑P	**P**	**17 53 04.4**	**-0.3**
INCN	**Inchon**	**45.94**	**342**	P	**P**	**17 53 05.0**	**+0.3**
INCN				pmax	pmax		
	comp=Z,9μm,1.7s						
INCN				MLR	MLR		
	comp=Z,478μm,21.0s						
INCN	**Inchon**	**45.94**	**342**	P	**P**	**17 53 04.5**	**-0.2**
INCN				P	**P**	**17 53 04.5**	**-0.2**
INCN				P	**P**	**17 53 04.5**	**-0.2**
KCSI	**Kotacane, Aceh**	**45.96**	**281**	P	**P**	**17 53 03.8**	**-1.5**
	comp=Z,504nm,0.8s,comp=Z,32μmcomp=Z,283μm						
SYZ	**Scrubby Hill**	**46.22**	**155**	P	**P**	**17 53 07.9**	**+1.1**
JTM	**Tenmabayashi**	**46.72**	**358**	P	**P**	**17 53 10.0**	**-0.7**
JTM	**Tenmabayashi**	**46.72**	**358**	⇑P	**P**	**17 53 09.0**	**-1.7**
JTM	**Tenmabayashi**	**46.72**	**358**	P	**P**	**17 53 09.3**	**-1.5**
HJU	**Haeju**	**46.74**	**341**	P	**P**	**17 53 10.9**	**0.0**
HJU				S	**S**	**17 59 58.4**	**-0.5**
HJU				AmB			
	comp=Z,2μm,3.5s						
HJU				AMS	AMS		
	comp=Z,115μm,16.1s						
LHMI	**Lhok Sumawe**	**47.13**	**283**	P	**P**	**17 53 14.0**	**-0.4**
LHMI	**Lhok Sumawe**	**47.13**	**283**	P	**P**	**17 53 14.9**	**+0.5**
LHMI	**Lhok Sumawe**	**47.13**	**283**	⇑P	**P**	**17 53 14.0**	**-0.4**
LHMI	**Lhok Sumawe**	**47.13**	**283**	P	**P**	**17 53 14.1**	**-0.4**
	comp=Z,2μm,0.9s,comp=Z,67μmcomp=Z,341μm						
SNSI	**Sinabang, Aceh**	**47.16**	**279**	P	**P**	**17 53 14.2**	**-0.5**
	comp=Z,2μm,1.1s,comp=Z,72μmcomp=Z,310μm						
MLSI	**Meulaboh, Aceh**	**47.45**	**281**	P	**P**	**17 53 15.7**	**-1.2**
	comp=Z,2μm,0.9s,comp=Z,13μmcomp=Z,3μm						
PYAG	**Pyongyang**	**47.65**	**342**	P	**P**	**17 53 17.4**	**-0.6**
PYAG				S	**S**	**18 00 12.0**	**0.0**
PYAG				AmB			
	comp=Z,28μm,3.4s						
PYAG				AMS	AMS		
	comp=Z,79μm,21.1s						
GYA	**Guiyang**	**47.70**	**314**	⇑P	**P**	**17 53 20.0**	**+1.2**
GYA				pP	pP	17 53 29.3	+1.1
GYA				S	**S**	**18 00 13.8**	**+0.4**
GYA				pmax	pmax		
	comp=Z,460nm,1.3s						
GYA				pmax	pmax		
	comp=Z,13μm,11.3s						
GYA				LR	LR		
	comp=Z,82μm,16.8s						
GYA				LR	LR		
	comp=Z,118μm,18.4s						
GYA				LR	LR		
	comp=Z,187μm,23.4s						
NIUE	**Niue**	**47.75**	**110**	P	**P**	**17 53 19.7**	**+0.5**
	baz=48,SNR=6.7						
NIUE	**Niue**	**47.75**	**110**	P	**P**	**17 53 19.9**	**+0.7**
NIUE				IAMs_20	IAMs_20	18 10 50.7	
	comp=Z,686μm,22.0s						
NIUE	**Niue**	**47.75**	**110**	P	**P**	**17 53 20.9**	**+1.7**
NIUE	**Niue**	**47.75**	**110**	⇓P	**P**	**17 53 20.5**	**+1.3**
SRDT	**SRDT**	**47.85**	**296**	P	**P**	**17 53 20.8**	**+0.8**
ERM	**Erimo**	**47.92**	**0**	P	**P**	**17 53 17.7**	**-2.4**
ERM				IAmb	IAmb	17 54 10.9	
	comp=Z,887nm,0.9s						
ERM				ScP	**ScP**	**17 58 38.3**	**-2.5**
ERM	**Erimo**	**47.92**	**0**	P	**P**	**17 53 19.6**	**-0.5**
ERM	**Erimo**	**47.92**	**0**	⇑P	**P**	**17 53 18.4**	**-1.7**
ERM	**Erimo**	**47.92**	**0**	*c i*P	**P**	**17 53 18.0**	**-2.1**
ERM				pmax	pmax		
	comp=Z,150nm,1.7s						
JEM	**Erimo**	**47.92**	**0**	P	**P**	**17 53 19.6**	**-0.5**
HHU	**Hamhung**	**47.95**	**344**	P	**P**	**17 53 19.9**	**-0.4**
HHU				S	**S**	**18 00 16.8**	**+0.6**
HHU				AmB			
	comp=Z,8μm,3.2s						
HHU				AMS	AMS		
	comp=Z,111μm,17.0s						
ENH	**Enshi**	**48.26**	**320**	IAmb	IAmb	17 54 18.7	
	comp=Z,2μm,1.0s						
ENH	**Enshi**	**48.26**	**320**	P	**P**	**17 53 23.0**	**0.0**
TIA	**Tai'an**	**48.52**	**332**	⇑P	**P**	**17 53 23.8**	**-1.0**
TIA				S	**S**	**18 00 25.8**	**+1.4**
TIA				SS	**SS**	**18 03 49.0**	**-5.9**
TIA				pmax	pmax		
	comp=Z,76nm,1.3s						
TIA				pmax	pmax		
	comp=Z,780nm,4.3s						
TIA				LR	LR		
	comp=Z,97μm,20.8s						
TIA				LR	LR		
	comp=Z,113μm,18.0s						
TIA				LR	LR		
	comp=Z,163μm,20.8s						
DL2	**Dalian**	**48.92**	**338**	P	**P**	**17 53 27.3**	**-0.5**
DL2				S	**S**	**18 00 35.8**	**+5.8**
DL2				pmax	pmax		
	comp=Z,600nm,1.8s						
DL2				pmax	pmax		
	comp=Z,27μm,9.2s						
DL2				LR	LR		
	comp=Z,212μm,20.0s						
DL2				LR	LR		
	comp=Z,232μm,19.0s						
DL2				LR	LR		
	comp=Z,336μm,22.0s						
SUJ	**Sinuiju**	**49.01**	**341**	P	**P**	**17 53 28.1**	**-0.4**
SUJ				S	**S**	**18 00 32.0**	**+0.9**
SUJ				AmB			
	comp=Z,683nm,3.5s						
SUJ				AMS	AMS		
	comp=Z,95μm,18.4s						
CRAI	**Chiangrai**	**49.24**	**303**	IAmb	IAmb	17 54 09.5	
	comp=Z,1μm,1.4s						
LYN	**LuoYang**	**49.57**	**327**	*c i*P	**P**	**17 53 33.0**	**+0.1**
LYN				pP	pP	17 53 42.5	+0.3
LYN				sP	sP	17 53 47.0	+1.1
LYN				S	**S**	**18 00 45.5**	**+6.3**
LYN				sS	sS	18 00 59.3	+5.0
LYN				pmax	pmax		
	comp=Z,720nm,1.3s						
LYN				pmax	pmax		
	comp=Z,60μm,11.8s						
LYN				LR	LR		
	comp=Z,490μm,18.4s						
LYN				LR	LR		
	comp=Z,164μm,

YUK MLR MLR
comp=Z,78μm,18.0s
YUK MLR MLR
comp=N,65μm,16.0s
JKA Kamikawa-asahi 50.02 360 P **P** **17 53 35.3 -0.8**
JKA IAmb IAmb 17 54 24.8
comp=Z,2μm,1.3s
ASAJ Asahikawa 50.02 360 P **P** **17 53 35.3 -0.9**
ASAJ pmax pmax
comp=Z,2μm,1.3s
ASAJ Asahikawa 50.02 360 P **P** **17 53 35.1 -1.1**
ASAJ Asahikawa 50.02 360 LR LR 18 19 26.5
comp=Z,89μm,18.7s,baz=185,slow=42
HNS HongShan 50.62 331 ⇑P **P** **17 53 40.5 -0.3**
HNS S **S** **18 00 54.8 +1.0**
HNS sS **sS** **18 01 13.8 +4.1**
HNS pmax pmax
comp=Z,310nm,1.6s
HNS LR LR
comp=Z,361μm,20.1s
HNS LR LR
comp=Z,249μm,18.6s
HNS LR LR
comp=Z,418μm,20.7s
SNY Shenyang 50.86 342 ⇑P **P** **17 53 41.5 -1.0**
SNY S **S** **18 00 55.8 -1.1**
SNY pmax pmax
comp=Z,130nm,1.2s
SNY pmax pmax
comp=Z,7μm,5.9s
SNY LR LR
comp=Z,187μm,18.8s
SNY LR LR
comp=Z,153μm,21.0s
SNY LR LR
comp=Z,275μm,21.1s
USA0B Ussuriysk Arra 51.04 350 P **P** **17 53 42.8 -1.0**
USA0B IAmb IAmb 17 54 25.0
comp=Z,4μm,1.6s
USA0B Ussuriysk Arra 51.04 350*c i*P **P** **17 53 42.8 -1.0**
USRK Ussuriysk Ar. 51.04 350 P **P** **17 53 42.2 -1.7**
USRK Ussuriysk Ar. 51.04 350 P **P** **17 53 42.2 -1.7**
USRK Ussuriysk Ar. 51.04 350 P **P** **17 53 43.2 -0.7**
comp=Z,197nm,1.0s,baz=166,slow=7.9,SNR=203
USRK S S 18 01 14.3 +15
comp=Z,14nm,1.0s,baz=122,slow=1.3,SNR=1.5
USRK LR LR 18 13 27.8
comp=Z,226μm,19.4s,baz=159,slow=34
comp=Z,197nm,1.0s
I45RU USSURIYSK INFR 51.05 350 I I 22 56 25.8
baz=163,slow=345,SNR=1.5
XAN Xi'an 51.21 324 ⇑P **P** **17 53 45.3 -0.1**
XAN pP pP 17 53 54.5 -0.3
XAN sP sP 17 53 58.5 +0.1
XAN S **S** **18 01 05.0 +2.8**
XAN pmax pmax
comp=Z,700nm,1.5s
XAN pmax pmax
comp=Z,62μm,8.6s
XAN LR LR
comp=Z,251μm,22.2s
XAN LR LR
comp=Z,203μm,20.0s
XAN LR LR
comp=Z,324μm,24.1s
TEY Ternei 51.24 354⇓*e*P **P** **17 53 43.2 -2.1**
TEY 18 01 01.9
TEY pmax pmax
comp=N,10.0nm,1.5s
TEY pmax pmax
comp=Z,50nm,1.5s
TEY pmax pmax
comp=E,10.0nm,1.5s
PZH PanZhiHua 51.32 311 P **P** **17 53 47.0 +0.5**
PZH pP **sP** **17 53 57.8 -1.8**
PZH sP pP 17 54 05.3 +9.4
PZH PcP **PcP** **17 55 01.0 -0.2**
PZH pmax pmax
comp=E,250nm,1.4s
PZH pmax pmax
comp=E,10μm,8.0s
PZH LR LR
comp=E,138μm,22.2s
PZH LR LR
comp=E,147μm,23.5s
PZH LR LR
comp=E,275μm,24.3s
KUR Kuril'sk 51.34 5*c i*P **P** **17 53 44.5 -1.6**
KUR *e* 17 54 58.8
KUR *e* 17 55 41.8
KUR *e*PPP PPP 17 56 40.8
KUR pmax pmax
comp=Z,3μm,1.4s
KUR pmax pmax
comp=E,2μm,2.2s
KUR pmax pmax
comp=Z,40μm,10.9s
CTZ Chatham Island 51.65 143 IAMs_20 IAMs_20 18 14 39.0
comp=Z,545μm,20.0s
CTZ Chatham Island 51.65 143 P **P** **17 53 50.9 +2.4**
MDJ Mudanjiang 51.90 348 P **P** **17 53 49.5 -0.8**
MDJ pP pP 17 53 59.3 -0.3
MDJ sP sP 17 54 04.0 +0.7
MDJ ScS ScS 18 03 36.8 -1.6
MDJ pmax pmax
comp=Z,180nm,1.1s
MDJ pmax pmax
comp=Z,3μm,4.1s
MDJ LR LR
comp=Z,183μm,22.1s
MDJ LR LR
comp=Z,175μm,22.0s
MDJ LR LR
comp=Z,472μm,23.8s
MDJ Mudanjiang 51.90 348 IAmb IAmb 17 54 30.7
comp=Z,2μm,1.3s
MDJ Mudanjiang 51.90 348 P **P** **17 53 50.0 -0.3**
TIY Taiyuan 51.99 329 ⇑P **P** **17 53 51.0 -0.2**
TIY pmax pmax
comp=Z,110nm,1.6s
TIY pmax pmax
comp=Z,32μm,8.6s
TIY LR LR
comp=Z,311μm,18.8s
TIY LR LR
comp=Z,160μm,18.0s
TIY LR LR
comp=Z,393μm,20.1s
BJT Baijiatuau 52.07 334 P **P** **17 53 51.7 +0.1**
BJI Beijing 52.09 334 P **P** **17 53 51.0 -0.7**
BJI sP **sP** **17 54 10.0 +5.3**
BJI PcP **PcP** **17 55 07.8 +4.3**
BJI PP **PP** **17 55 55.5 +5.2**
BJI S **S** **18 01 16.8 +2.9**
BJI sS **sS** **18 01 31.0 +1.5**
BJI pmax pmax
comp=Z,1μm,1.4s
BJI pmax pmax
comp=Z,17μm,6.2s
BJI LR LR
comp=Z,178μm,20.6s
BJI LR LR
comp=Z,98μm,21.3s
BJI LR LR
comp=Z,247μm,21.2s
CN2 Changchun 52.12 344 ⇑P **P** **17 53 50.5 -1.4**
CN2 *es*P pP 17 54 02.0 +0.8
CN2 *eS* **S** **18 01 12.0 -2.3**
CN2 pmax pmax
comp=Z,200nm,1.6s
CN2 pmax pmax
comp=Z,2μm,4.0s
CN2 LR LR
comp=Z,38μm,16.0s
CN2 LR LR
comp=Z,35μm,16.0s
CN2 LR LR
comp=Z,85μm,18.0s
JOHN Johnston Islan 52.34 64 IAMs_20 IAMs_20 18 14 35.4
comp=Z,707μm,20.0s
JOHN Johnston Islan 52.34 64 P **P** **17 53 54.0 0.0**
CD2 Chengdu 52.44 317⇑*i*P **P** **17 53 55.0 +0.4**
CD2 pmax pmax
comp=Z,410nm,1.1s
CD2 pmax pmax
comp=Z,7μm,9.0s
CD2 LR LR
comp=Z,36μm,16.2s
CD2 LR LR
comp=Z,72μm,15.1s
CD2 LR LR
comp=Z,230μm,19.0s
PBA Port Blair 52.82 290 P **P** **17 54 01.3 +3.7**
YSS Yuzh-Sakhalins 52.86 360 P **P** **17 53 56.1 -1.2**
YSS Yuzh-Sakhalins 52.86 360 P **P** **17 53 56.7 -0.6**
YSS Yuzh-Sakhalins 52.86 360 ⇑P **P** **17 53 55.9 -1.4**
YSS Yuzh-Sakhalins 52.86 360*ae*P **P** **17 53 56.2 -1.2**
YSS *eS* **S** **18 01 22.4 -1.9**
YSS *e* 18 06 49.0
YSS pmax pmax
comp=Z,800nm,0.7s
YSS pmax pmax
comp=Z,25μm,7.7s
YSS pmax pmax
comp=N,10μm,8.0s
YSS smax smax
comp=E,37μm,12.2s
TNCH TengChong 53.04 308 ⇑P **P** **17 54 00.0 +0.7**
TNCH pP pP 17 54 07.0 -1.8
TNCH PcP **PcP** **17 55 09.0 +1.3**
TNCH S **S** **18 01 29.0 +1.2**
TNCH sS pS 18 01 39.3 +0.5
TNCH SS **SS** **18 05 07.5 -0.1**
TNCH pmax pmax
comp=E,2μm,1.3s
TNCH pmax pmax
comp=E,38μm,8.8s
TNCH LR LR
comp=E,38μm,16.3s
TNCH LR LR
comp=E,52μm,20.8s
TNCH LR LR
comp=E,193μm,22.9s
DGPR DIGLIPUR 53.10 291*e*P **P** **17 53 59.0 -0.7**
DGPR IAMs_20 IAMs_20 18 08 44.1
comp=Z,123μm,23.8s
BNX BinXian 53.45 347 ⇑P **P** **17 54 00.5 -1.2**
BNX pP **pP** **17 54 09.0 -2.1**
BNX sP **sP** **17 54 12.5 -2.2**
BNX S **S** **18 01 25.3 -7.0**
BNX sS **sS** **18 01 52.3 +4.3**
BNX pmax pmax
comp=Z,550nm,1.3s
BNX pmax pmax
comp=Z,27μm,6.0s
BNX LR LR
comp=Z,194μm,22.5s
BNX LR LR
comp=Z,119μm,21.6s
BNX LR LR
comp=Z,285μm,19.3s
MND Mandalay 53.59 303 P **P** **17 54 04.2 +1.0**
HHC Hu-ho-hao-te 54.84 331⇑*i*P **P** **17 54 12.0 -0.1**
HHC pP pP 17 54 23.0 +1.5
HHC PcP **PcP** **17 55 10.3 -3.9**
HHC S **S** **18 01 59.0 +7.4**
HHC pmax pmax
comp=Z,200nm,1.3s
HHC pmax pmax
comp=Z,6μm,4.2s
HHC LR LR
comp=Z,146μm,18.6s
HHC LR LR
comp=Z,196μm,18.6s
HHC LR LR
comp=Z,299μm,17.9s
UGL Uglegorsk 54.99 359*e*P **P** **17 54 12.1 -0.7**
UGL *e* 17 54 21.9
UGL *eS* S 18 02 10.6 +18
UGL pmax pmax
comp=Z,400nm,1.2s
UGL MLR MLR
comp=E,40μm,17.0s
UGL MLR MLR
comp=N,89μm,18.0s
UGL MLR MLR
comp=Z,85μm,17.0s
XLT XiLinHaoTe 55.34 337⇑*i*P **P** **17 54 14.5 -1.1**
XLT sP sP 17 54 29.0 +0.4
XLT sS sS 18 02 17.0 +3.2
XLT pmax pmax
comp=Z,74nm,1.2s
XLT pmax pmax
comp=Z,30μm,6.7s
XLT LR LR
comp=Z,226μm,20.8s
XLT LR LR
comp=Z,276μm,21.5s
BTO Baotou 55.41 330*e*P **P** **17 54 17.3 +1.1**
BTO pP **sP** **17 54 27.5 -1.8**
BTO sP **pP** **17 54 31.3 +5.7**
BTO PP **PP** **17 56 23.0 +2.7**
BTO S **S** **18 02 00.5 +1.3**
BTO sS **sS** **18 02 18.5 +4.2**
BTO SS **SS** **18 05 45.3 +1.0**
BTO pmax pmax
comp=Z,400nm,1.3s
BTO pmax pmax
comp=Z,18μm,11.2s
BTO LR LR
comp=Z,757μm,18.4s
BTO LR LR
comp=Z,614μm,18.8s
BTO LR LR
comp=Z,1034μm,18.7s
LZH Lanzhou 55.65 322⇑*i*P **P** **17 54 19.0 +0.8**
LZH sP sP 17 54 29.5 -1.7
LZH pmax pmax
comp=Z,2μm,1.2s
LZH pmax pmax
comp=Z,52μm,4.6s
LZH LR LR
comp=Z,124μm,16.2s
LZH LR LR
comp=Z,126μm,17.7s
LZH LR LR
comp=Z,294μm,19.2s
KLR Kul'dur 55.98 351*ce*P **P** **17 54 19.0 -1.0**
KLR pmax pmax
comp=Z,439nm,1.7s
KLR Kul'dur 55.98 351 LR LR 18 14 35.7
comp=Z,163μm,20.6s,baz=166,slow=32
SAIH SAIHA 56.41 302*e*P **P** **17 54 25.1 +1.3**
SAIH IAMs_20 IAMs_20 18 11 51.4
comp=Z,71μm,22.4s
IMP Imphal 56.61 305*e*P **P** **17 54 25.0 -0.1**
IMP IAmb IAmb 17 55 02.2
comp=Z,2μm,1.3s
IMP IAMs_20 IAMs_20 18 10 35.3
comp=Z,45μm,21.3s
TYV Tymovskoe 56.77 360*e*P **P** **17 54 26.1 +0.5**
TYV *eS* S 18 02 27.8 +11
TYV pmax pmax
comp=Z,282nm,1.9s
TYV pmax pmax
comp=Z,16μm,6.6s
KOHI KOHIMA 56.88 306*e*P **P** **17 54 27.3 +0.3**
KOHI IAmb IAmb 17 54 48.4
comp=Z,2μm,1.0s
KOHI IAMs_20 IAMs_20 18 10 02.5
comp=Z,53μm,19.1s
GRNR Gornyy 56.95 355⇑*i*P **P** **17 54 26.2 -0.7**
GRNR *eS* **S** **18 02 24.3 +5.3**
GRNR pmax pmax
comp=N,30nm,1.1s
GRNR pmax pmax
comp=E,8.0nm,1.1s
GRNR pmax pmax
comp=Z,70nm,1.2s
GRNR smax smax
comp=N,5.0nm,0.9s
RAR Rarotonga 57.49 111 P **P** **17 54 31.3 0.0**
RAR Rarotonga 57.49 111 P **P** **17 54 33.1 +1.8**
RAR Rarotonga 57.49 111 ⇓P **P** **17 54 32.2 +0.9**
RAR Rarotonga 57.49 111 P **P** **17 54 31.3 0.0**
RAR pmax pmax
comp=Z,5μm,2.2s
RAR Rarotonga 57.49 111 P **P** **17 54 32.4 +1.1**
comp=Z,123nm,1.2s,baz=248,slow=10,SNR=13
RAR LR LR 18 16 01.5
comp=Z,196μm,21.4s,baz=274,slow=33
comp=Z,123nm,1.2s
BRDH Bariadhala 57.62 302 LR LR 18 19 09.6
comp=Z,121μm,21.9s,baz=90,slow=36
HEH HeiHe 57.72 348*e*P **P** **17 54 30.3 -2.0**
HEH pP **pP** **17 54 38.5 -3.3**
HEH S **S** **18 02 30.0 +0.8**
HEH sS **sS** **18 02 43.5 -1.3**
HEH pmax pmax
comp=Z,240nm,1.6s
HEH pmax pmax
comp=Z,30μm,6.1s
HEH LR LR
comp=Z,131μm,20.9s
HEH LR LR
comp=Z,142μm,20.9s
HEH LR LR
comp=Z,433μm,21.3s
SKR Severo-Kuril's 57.76 10*d i*P **P** **17 54 29.2 -3.3**
SKR *eS* **S** **18 02 32.1 +2.5**
SKR pmax pmax
comp=Z,367nm,1.1s
SKR pmax pmax
comp=Z,7μm,3.8s
SKR smax smax
comp=N,53μm,9.5s
SKR smax smax
comp=E,88μm,13.4s
SKR MLR MLR
comp=Z,112μm,19.0s
ZIRO ZIRO 57.91 308*e*P **P** **17 54 36.0 +1.6**
ZIRO IAmb IAmb 17 55 06.2
comp=Z,2μm,1.1s
ZIRO IAMs_20 IAMs_20 18 11 37.1
comp=Z,47μm,17.4s
BELO BELONIA 58.02 302*e*P **P** **17 54 36.9 +2.0**
AGT Agartala 58.44 303*e*P **P** **17 54 40.8 +2.9**
AGT IAmb IAmb 17 55 10.4
comp=Z,6μm,1.5s
AGT IAMs_20 IAMs_20 18 09 55.3
comp=Z,110μm,22.2s
SHL Shillong 58.61 305*e*P **P** **17 54 40.6 +1.3**
SHL IAmb IAmb 17 55 17.0
comp=Z,2μm,1.1s
SHL IAMs_20 IAMs_20 18 09 56.2
comp=Z,62μm,22.9s
SHL Shillong 58.61 305 P **P** **17 54 39.9 +0.6**
SNR=392
HIA Hailar 58.73 343 IAmb IAmb 17 55 20.2
comp=Z,3μm,1.9s
HIA Hailar 58.73 343 P **P** **17 54 39.5 +0.1**
GUWA GUWAHATI 59.03 305*e*P **P** **17 54 42.7 +0.7**
GUWA IAmb IAmb 17 55 13.2
comp=Z,5μm,1.4s
GUWA IAMs_20 IAMs_20 18 10 02.4
comp=Z,79μm,22.9s
NKL Nikolayevsk 59.09 359*e*P **P** **17 54 38.2 -3.6**
NKL *eS* **S** **18 02 50.4 +3.5**
NKL pmax pmax
comp=N,649nm,1.1s
NKL pmax pmax
comp=E,2μm,1.1s
NKL pmax pmax
comp=Z,8μm,1.2s
NKL smax smax
comp=E,12μm,6.2s
NKL smax smax
comp=N,18μm,7.3s
NKL MLR MLR
comp=E,72μm,12.0s
NKL MLR MLR
comp=N,176μm,16.0s
NKL MLR MLR
comp=Z,242μm,17.0s
GTA Gaotai 60.23 323 ⇑P **P** **17 54 50.8 +0.6**
GTA pP sP 17 55 02.3 -1.0
GTA pmax pmax
comp=Z,220nm,1.1s
GTA pmax pmax
comp=Z,9μm,10.4s
GTA LR LR
comp=Z,46μm,21.5s
GTA LR LR
comp=Z,131μm,17.9s
GTA LR LR
comp=Z,161μm,16.7s
XMAS Kiritimati 60.23 84 P **P** **17 54 50.1 -0.4**
XMAS Kiritimati 60.23 84 P **P** **17 54 51.8 +1.3**
PETK Petropavlovsk- 60.36 10 P **P** **17 54 49.6 -1.0**
PETK Petropavlovsk- 60.36 10 P **P** **17 54 49.6 -1.0**
PETK Petropavlovsk- 60.36 10 P **P** **17 54 50.3 -0.3**
comp=Z,157nm,1.1s,baz=172,slow=4.0,SNR=65
PETK LR LR 18 21 06.2
comp=Z,113μm,19.0s,baz=187,slow=36
comp=Z,157nm,1.1s
PET Petropavlovsk 60.46 11 P **P** **17 54 49.8 -1.4**
PET IAmb IAmb 17 55 59.1
comp=Z,2μm,1.5s
PET Petropavlovsk 60.46 11 P **P** **17 54 50.1 -1.1**
PET Petropavlovsk 60.46 11 ⇑P **P** **17 54 49.9 -1.4**
PET Petropavlovsk 60.46 11*α i*P **P** **17 54 49.5 -1.7**
PET *e* 17 55 36.7
PET *e* 17 57 07.8
PET *eS* **S** **18 03 04.4 -0.1**
PET *e* 18 04 35.1
PET pmax pmax
comp=Z,7μm,12.1s
PET pmax pmax
comp=Z,779nm,1.1s
PET smax smax
comp=E,35μm,17.8s
PET smax smax
comp=E,34μm,17.2s
PET MLR MLR
comp=Z,148μm,19.0s
PET MLR MLR
comp=Z,133μm,19.0s
LSA Lhasa 61.01 309 IAmb IAmb 17 55 42.7
comp=Z,2μm,1.1s
LSA Lhasa 61.01 309 P **P** **17 54 56.9 +0.8**
ZEA Zeya 61.08 350*e*P **P** **17 54 55.2 -0.2**
ZEA *e* 17 57 18.1
ZEA *eS* S 18 03 31.4 +19
ZEA pmax pmax
comp=E,2μm,4.0s
ZEA pmax pmax
comp=N,8μm,7.0s
ZEA pmax pmax
comp=Z,15μm,7.0s
ZEA pmax pmax
comp=N,900nm,1.4s
ZEA pmax pmax
comp=Z,2μm,1.1s
ZEA pmax pmax
comp=N,4μm,6.5s
ZEA pmax pmax
comp=Z,6μm,11.7s
GOMU GeErMu 61.57 317 P **P** **17 55 00.5 +0.9**
GOMU pP pP 17 55 05.5 -3.7
GOMU pmax pmax
comp=Z,130nm,1.2s
GOMU LR LR
comp=Z,58μm,17.7s
GOMU LR LR
comp=Z,65μm,18.9s
GOMU LR LR
comp=Z,79μm,18.1s
GTK Tadong 62.01 305*e*P **P** **17 55 04.5 +2.0**
GTK IAMs_20 IAMs_20 18 12 37.5
comp=Z,57μm,20.5s
ULN Ulaanbaatar 62.29 334 P **P** **17 55 04.4 +0.4**
ULN Ulaanbaatar 62.29 334 ⇑P **P** **17 55 04.2 +0.2**
ULN Ulaanbaatar 62.29 334*c i*P **P** **17 55 03.3 -0.7**
ULN pmax pmax
comp=Z,801nm,1.2s
ULN MLR MLR
comp=Z,313μm,19.0s
ULN Ulaanbaatar 62.29 334 P **P** **17 55 04.6 +0.6**
ULN P **P** **17 55 04.6 +0.6**
ULN P **P** **17 55 04.6 +0.6**
SONM Songino Array 62.56 333 P **P** **17 55 02.8 -3.0**
SONM IAmb IAmb 17 55 51.0
comp=Z,2μm,1.6s
SONM Songino Array 62.56 333 P **P** **17 55 02.8 -3.0**
SONM pmax pmax
comp=Z,2μm,1.6s
SONM Songino Array 62.56 333 P **P** **17 55 06.3 +0.6**
comp=Z,92nm,1.1s,baz=152,slow=7.2,SNR=211

SONM S S 18 03 43.0 +11
comp=Z,11nm,1.1s,baz=162,slow=4.9,SNR=1.4
SONM LR LR 18 22 53.7
comp=Z,360µm,19.2s,baz=140,slow=37
SONM PKP2bc 18 24 16.0
comp=Z,16nm,1.2s,baz=225,slow=1.5,SNR=4.0
comp=Z,92nm,1.1s
KEKH Kekaha 62.86 62 IAMs_20 IAMs_20 18 19 12.9
comp=Z,527µm,21.0s
BOK Bokaro 62.95 301 *e*P **P** **17 55 10.5 +1.9**
BOK IAmb IAmb 17 55 40.7
comp=Z,2µm,1.3s
CIT Chita 63.08 340 *e*P **P** **17 55 09.0 0.0**
CIT *e*S S 18 04 03.4 +25
CIT *e* 18 04 56.4
CIT pmax pmax
comp=Z,2µm,2.4s
HALK Hakmana 63.16 280 ⇑P **P** **17 55 10.8 +0.6**
VIS Vishakhapatnam 63.28 293 *e*P **P** **17 55 12.8 +1.8**
VIS IAmb IAmb 17 55 43.0
comp=Z,7µm,2.0s
VIS IAMs_20 IAMs_20 18 11 31.5
comp=Z,59µm,19.4s
PALK Pallekele 63.35 281*c i*P **P** **17 55 11.5 0.0**
PALK pmax pmax
comp=Z,2µm,2.0s
PALK MLR MLR
comp=Z,181µm,21.0s
PALK Pallekele 63.35 281 LR LR 18 25 17.8
comp=Z,121µm,21.3s,baz=215,slow=38
PALK Pallekele 63.35 281 P **P** **17 55 12.7 +1.1**
PALK P **P** **17 55 12.7 +1.1**
PALK P **P** **17 55 12.7 +1.1**
MALK Mahakanadarawa 63.71 282 P **P** **17 55 13.6 -0.3**
MALK Mahakanadarawa 63.71 282 ⇑P **P** **17 55 14.7 +0.8**
CASY Casey 64.06 194 P **P** **17 55 14.8 -0.4**
CASY Casey 64.06 194 IAMs_20 IAMs_20 18 24 43.7
comp=Z,427µm,18.0s
CASY Casey 64.06 194 ⇑P **P** **17 55 15.0 -0.3**
JHSG JHARSUGUGA 64.10 298 *e*P **P** **17 55 18.4 +2.1**
HON Honolulu 64.15 63 P **P** **17 55 15.1 -1.5**
HON IAMs_20 IAMs_20 18 19 46.2
comp=Z,452µm,21.0s
HON Honolulu 64.15 63 P **P** **17 55 15.1 -1.5**
HON pmax pmax
comp=Z,4µm,1.2s
HON MLR MLR
comp=Z,452µm,21.0s
KIP Kipapa 64.17 63 P **P** **17 55 17.2 +0.5**
KIP Kipapa 64.17 63 IAMs_20 IAMs_20 18 19 34.8
comp=Z,415µm,22.0s
KIP Kipapa 64.17 63 P **P** **17 55 17.7 +1.0**
KIP Kipapa 64.17 63 *e*P **P** **17 55 16.2 -0.5**
KIP pmax pmax
comp=Z,1µm,1.2s
OPA Opana 64.25 63 P **P** **17 55 17.2 -0.1**
OPA IAMs_20 IAMs_20 18 19 38.0
comp=Z,450µm,22.0s
OPA Opana 64.25 63 P **P** **17 55 17.2 -0.1**
OPA pmax pmax
comp=Z,9µm,2.2s
OPA MLR MLR
comp=Z,450µm,22.0s
SHEM Shemya Is, Ala 64.39 21 LR LR 18 18 22.8
comp=Z,318µm,21.9s,baz=210,slow=32
MDRS Chennai 64.97 287 *e*P **P** **17 55 23.0 +0.9**
MDRS IAMs_20 IAMs_20 18 10 08.7
comp=Z,37µm,18.4s
VJD Vijayawada 65.43 291 *e*P **P** **17 55 27.4 +2.4**
I59US HAWAII INFRASO 65.52 65 I I 00 37 15.5
baz=260,slow=321,SNR=1.0
KHLU Kahalu`u 65.52 65 IAMs_20 IAMs_20 18 19 57.6
comp=Z,441µm,22.0s
HLK Haleakala 65.54 64 IAMs_20 IAMs_20 18 21 27.0
comp=Z,504µm,21.0s
HUH Hualalai 65.60 65 IAmb IAmb 17 56 17.6
comp=Z,823nm,1.0s
KHU Kahuku 65.67 66 IAMs_20 IAMs_20 18 20 00.7
comp=Z,468µm,22.0s
MHA Mahukona 65.68 65 P **P** **17 55 26.6 0.0**
MHA Mahukona 65.68 65 P **P** **17 55 26.6 0.0**
MLOA Mauna Loa Obse 65.79 66 IAMs_20 IAMs_20 18 20 04.8
comp=Z,469µm,22.0s
MA2 Magadan 65.81 4 P **P** **17 55 24.7 -1.9**
MA2 IAmb IAmb 17 55 54.5
comp=Z,2µm,1.0s
MA2 Magadan 65.81 4 P **P** **17 55 26.6 -0.1**
MA2 Magadan 65.81 4*c i*P **P** **17 55 25.6 -1.1**
MA2 pmax pmax
comp=Z,624nm,2.5s
HPAH Hawaii Prepara 65.82 65 IAmb IAmb 17 56 16.2
comp=Z,891nm,0.9s
HPAH IAMs_20 IAMs_20 18 21 55.6
comp=Z,471µm,20.0s
ZAK Zakamensk 65.82 333 *e*P **P** **17 55 27.0 -0.1**
ZAK pmax pmax
comp=Z,1µm,1.3s
POHA Pohakuloa 65.89 65 P **P** **17 55 28.0 -0.2**
POHA IAmb IAmb 17 56 06.4
comp=Z,1µm,0.9s
POHA Pohakuloa 65.89 65 IAMs_20 IAMs_20 18 20 08.5
comp=Z,472µm,22.0s
POHA Pohakuloa 65.89 65 P **P** **17 55 29.8 +1.5**
HMH Humu'ula Sheep 65.89 65 IAMs_20 IAMs_20 18 20 18.5
comp=Z,422µm,22.0s
MLH Mauna Loa 65.95 66 IAMs_20 IAMs_20 18 20 09.0
comp=Z,449µm,22.0s
HLP Hilina Pali 65.97 66 IAMs_20 IAMs_20 18 20 20.5
comp=Z,446µm,22.0s
SDHHI Sand Hill 66.00 66 IAMs_20 IAMs_20 18 20 09.5
comp=Z,444µm,22.0s
WRMHI West Rim 66.00 66 IAMs_20 IAMs_20 18 20 21.5
comp=Z,438µm,22.0s
UWE Uwekahuna 66.01 66 IAMs_20 IAMs_20 18 20 21.8
comp=Z,439µm,22.0s
OBL Observatory Le 66.02 66 IAMs_20 IAMs_20 18 20 21.9
comp=Z,436µm,22.0s
NPH North Pit 66.02 66 IAMs_20 IAMs_20 18 20 22.0
comp=Z,424µm,22.0s
RIM Rim 66.02 66 IAMs_20 IAMs_20 18 20 22.0
comp=Z,425µm,22.0s
UWB Uwekahuna B 66.03 66 IAMs_20 IAMs_20 18 20 11.1
comp=Z,444µm,22.0s
KKO Keanakako`i 66.03 66 IAMs_20 IAMs_20 18 20 22.2
comp=Z,428µm,22.0s
SBLHI Steaming Bluff 66.04 66 IAMs_20 IAMs_20 18 20 22.4
comp=Z,436µm,22.0s
BYL Byron's Ledge 66.04 66 IAMs_20 IAMs_20 18 20 22.5
comp=Z,427µm,22.0s
HATHI Halema'uma'u T 66.04 66 IAMs_20 IAMs_20 18 20 22.5
comp=Z,437µm,22.0s
PUH Pauahi 66.07 66 IAMs_20 IAMs_20 18 20 12.3
comp=Z,443µm,22.0s
STCH Steam Cracks 66.16 66 IAMs_20 IAMs_20 18 20 25.5
comp=Z,456µm,22.0s
NPOC North of Pu'u 66.17 66 IAMs_20 IAMs_20 18 20 26.9
comp=Z,459µm,22.0s
JCUZ Jacuzzi 66.18 66 IAMs_20 IAMs_20 18 20 26.1
comp=Z,465µm,22.0s
SALM Salem 66.62 285 *e*P **P** **17 55 34.5 +1.8**
AIS Amsterdam Isla 66.73 232 IAmb IAmb 17 55 55.8
comp=Z,2µm,1.3s
IRK Irkutsk 66.76 335 *e*P **P** **17 55 32.4 -0.5**
IRK *e*S S 18 04 48.7 +26
IRK pmax pmax
comp=Z,6µm,3.4s
PAE Paea 66.88 107 *e*PKIKP **P** **17 55 35.1 +0.8**
comp=Z,364nm,1.3s
PPT Papeete 66.88 106 P **P** **17 55 35.3 +0.9**
comp=Z,93nm,1.1s,baz=258,slow=2.4,SNR=8.9
PPT S S 18 04 38.5 +13
comp=Z,23nm,1.0s,baz=245,slow=14,SNR=1.2
PPT LR LR 18 20 50.9
comp=Z,260µm,21.6s,baz=266,slow=32
comp=Z,93nm,1.1s
PPT2 Papeete2 66.88 106 *e*PKIKP **P** **17 55 35.6 +1.1**
comp=Z,946nm,1.3s
PPT2 *e*S **S** **18 04 30.7 +4.7**
comp=Z,168µm,28.0s
PPT2 *e*SS **SS** **18 08 45.2 +0.5**
comp=Z,138µm,35.2s
PPT2 *e*LQ LQ 18 12 53.2
comp=Z,1739µm,31.0s
PPT2 *e*LR LR 18 15 35.1
comp=Z,386µm,22.5s
PPT2 *e*LR LR 18 15 50.7
comp=Z,478µm,22.2s

PPTF Pamatai, Papee 66.89 106 IAmb IAmb 17 56 37.4
comp=Z,792nm,1.0s
PPTF Pamatai, Papee 66.89 106 P **P** **17 55 36.0 +1.5**
ALBI Allahabad 66.95 301 *e*P **P** **17 55 35.8 +1.2**
KOD Kodaikanal 67.05 284 *e*P **P** **17 55 37.5 +1.6**
TBI Tubuai 67.18 113 *e*P **P** **17 55 36.6 +0.4**
comp=Z,2µm,1.4s
TBI *e*S **S** **18 04 35.5 +6.2**
comp=Z,730µm,28.8s
TBI *e*SS **SS** **18 08 52.7 +3.7**
comp=Z,547µm,36.5s
TBI *e*LQ LQ 18 13 04.5
comp=Z,4920µm,36.2s
TBI *e*LR LR 18 15 50.5
comp=Z,1859µm,26.2s
TBI *e*LR LR 18 15 54.0
comp=Z,435µm,25.5s
TVO Taravao 67.19 107 *e*PKIKP **P** **17 55 37.2 +0.8**
comp=Z,225nm,0.9s
TRD Trivandrum 67.22 282 *e*P **P** **17 55 38.5 +1.9**
TRD IAmb IAmb 17 56 04.2
comp=Z,610nm,0.9s
ADK Adak 67.35 26 P **P** **17 55 36.4 -0.2**
ADK Adak 67.35 26 IAMs_20 IAMs_20 18 19 28.4
comp=Z,431µm,21.0s
ADK Adak 67.35 26 P **P** **17 55 37.2 +0.6**
ADK Adak 67.35 26 P **P** **17 55 36.4 -0.2**
ADK pmax pmax
comp=Z,4µm,1.3s
ADK MLR MLR
comp=Z,430µm,21.0s
HYB Hyderabad 67.59 292 *e*P **P** **17 55 36.3 -2.7**
HYB *es*P **pP** **17 55 49.3 +0.8**
HYB IVmBBB 17 55 50.3
comp=Z,7µm,2.5s
HYB *e*PcP **PcP** **17 56 05.6 -0.4**
HYB *e*PP **PP** **17 58 07.5 -0.8**
HYB *e*S **S** **18 04 34.2 -0.3**
HYB IVMs_BB IVMs_BB 18 28 15.4
comp=Z,48µm,22.6s
HYB Hyderabad 67.59 292 *e*P **P** **17 55 39.4 +0.5**
MOY Mondy 67.75 333 *e*P **P** **17 55 39.8 +0.4**
MOY pmax pmax
comp=Z,2µm,3.5s
GSTR Great Sitkin T 67.78 26 P **P** **17 55 38.2 -1.2**
BOD Bodaibo 67.87 344 *e*P **P** **17 55 38.5 -1.3**
BOD pmax pmax
comp=Z,455nm,2.1s
PMOR Pomariorio Ree 68.50 104 *e*P **P** **17 55 46.6 +2.0**
comp=Z,2µm,1.2s
ATKA Atka Island 68.68 27 IAmb IAmb 17 56 07.4
comp=Z,1µm,1.0s
ATKA IAMs_20 IAMs_20 18 20 38.3
comp=Z,357µm,21.0s
ATKA Atka Island 68.68 27 P **P** **17 55 45.5 +0.6**
YAK Yakutsk 68.72 353 P **P** **17 55 44.7 -0.4**
YAK Yakutsk 68.72 353 *e*P **P** **17 55 43.8 -1.2**
YAK *e**PP **pP** **17 55 50.0 -4.7**
YAK *e* 17 56 08.4
YAK *e* 17 58 18.1
YAK *e*PPP PPP 17 59 54.8
YAK *e*S **S** **18 04 47.6 +1.4**
YAK *e**SS **sS** **18 05 04.1 +2.1**
YAK *e* 18 05 43.9
YAK *e*SS **SS** **18 09 13.3 +1.8**
YAK pmax pmax
comp=Z,156nm,1.6s
YAK pmax pmax
comp=N,66nm,1.4s
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=Z,8µm,3.9s
YAK pmax pmax
comp=N,3µm,3.0s
YAK pmax pmax
comp=E,1µm,2.0s
YAK smax smax
comp=N,4µm,5.8s
YAK smax smax
comp=E,1µm,4.4s
YAK MLR MLR
comp=Z,92µm,20.0s
YAK MLR MLR
comp=N,54µm,20.0s
YAK MLR MLR
comp=E,72µm,27.0s
YAK Yakutsk 68.72 353 LR LR 18 24 46.2
comp=E,126µm,18.9s,baz=162,slow=35
VAH Vaihoa 68.75 104 *e*P **P** **17 55 44.9 -1.3**
comp=E,424nm,1.2s
SEY Seymchan 69.27 5*c i*P **P** **17 55 47.5 -0.9**
SEY pmax pmax
comp=Z,403nm,2.5s
SEY MLR MLR
comp=Z,83µm,18.0s
SEY Seymchan 69.27 5 LR LR 18 24 15.8
comp=Z,81µm,20.6s,baz=188,slow=34
LGTI Lohaghat 69.63 304 *e*P **P** **17 55 52.0 +0.6**
PTH Pithoragarh 69.69 304 *e*P **P** **17 55 52.0 0.0**
DGAR Diego Garcia 69.78 264*c i*P **P** **17 55 54.1 +1.4**
DGAR pmax pmax
comp=Z,800nm,1.7s
DGAR MLR MLR
comp=Z,149µm,21.0s
DGAR Diego Garcia 69.78 264 P **P** **17 55 54.0 +1.4**
DGAR P **P** **17 55 54.0 +1.4**
JHNI Jhansi 69.81 300 *e*P **P** **17 55 51.8 -0.7**
AKL Akola 69.83 295 *e*P **P** **17 55 53.5 +0.7**
KAAM Kaadhehdhoo 69.96 273 IAmb IAmb 17 56 26.7
comp=Z,2µm,1.3s
KAAM Kaadhehdhoo 69.96 273 P **P** **17 55 55.2 +1.5**
SNR=10.0
MNGI Mangalore 70.11 286 *e*P **P** **17 55 54.8 +0.2**
WMQ Urumqi 70.21 321 ⇑P **P** **17 55 55.3 +0.6**
WMQ pP pP 17 56 04.8 +0.4
WMQ sP sP 17 56 11.0 +3.0
WMQ S **S** **18 05 01.5 -3.1**
WMQ pmax pmax
comp=Z,1µm,1.3s
WMQ pmax pmax
comp=Z,47µm,8.3s
WMQ LR LR
comp=Z,95µm,19.7s
WMQ LR LR
comp=Z,76µm,17.9s
WMQ LR LR
comp=Z,96µm,23.5s
HMDM Hanimaadhoo 70.62 279 P **P** **17 55 59.7 +2.0**
CLES Cleveland East 71.06 28 P **P** **17 55 59.1 -0.5**
GOA Goa 71.58 288 *e*P **P** **17 56 05.1 +1.7**
KAD Karad 71.63 290 *e*P **P** **17 56 04.6 +0.8**
NIKH Nikolski High 71.64 28 P **P** **17 56 03.2 +0.1**
NIKH Nikolski High 71.64 28 P **P** **17 56 01.5 -1.7**
baz=232
NIKH S **S** **18 05 25.8 +5.1**
baz=232
DDI Dehra Dun 71.72 305 *e*P **P** **17 56 04.9 +0.8**
DDI IAmb IAmb 17 56 44.8
comp=Z,8µm,1.8s
SONA Sohna 71.88 302 *e*P **P** **17 56 05.4 +0.3**
NDI New Delhi 71.90 303 *e*P **P** **17 56 05.1 -0.1**
VNDA Vanda 72.05 176 P **P** **17 56 04.9 -0.4**
VNDA IAMs_20 IAMs_20 18 26 26.9
comp=Z,304µm,19.0s
VNDA Vanda 72.05 176 P **P** **17 56 04.9 -0.4**
VNDA pmax pmax
comp=Z,767nm,1.2s
VNDA MLR MLR
comp=Z,304µm,19.0s
VNDA Vanda 72.05 176 P **P** **17 56 05.1 -0.2**
comp=Z,60nm,1.2s,baz=323,slow=8.1,SNR=28
VNDA S **S** **18 05 29.4 +4.6**
comp=Z,11nm,1.0s,baz=299,slow=8.9,SNR=1.6
VNDA LR LR 18 26 38.5
comp=Z,295µm,19.7s,baz=349,slow=35
comp=Z,60nm,1.2s
POO Poona 72.21 292 *e*P **P** **17 56 08.0 +0.7**
POO IAmb IAmb 17 56 33.8
comp=Z,749nm,0.8s
KUDL Kundal 72.35 302 *e*P **P** **17 56 07.9 0.0**
SMLA Simla 72.70 305 *e*P **P** **17 56 10.3 +0.4**
SMLA IAmb IAmb 17 56 50.1
comp=Z,9µm,2.0s
SBA Scott Base 72.77 175 P **P** **17 56 08.9 -0.6**

SBA Scott Base 72.77 175 IAMs_20 IAMs_20 18 25 35.7
comp=Z,362µm,20.0s
SBA Scott Base 72.77 175 P **P** **17 56 08.9 -0.6**
SBA pmax pmax
comp=Z,8µm,2.6s
SBA MLR MLR
comp=Z,362µm,20.0s
KHET Khetri 72.91 302 *e*P **P** **17 56 11.2 -0.1**
UNV Unalaska Valle 73.29 29 P **P** **17 56 12.0 -0.9**
UNV IAmb IAmb 17 56 33.1
comp=Z,2µm,1.3s
UNV Unalaska Valle 73.29 29 P **P** **17 56 13.6 +0.7**
UNV Unalaska Valle 73.29 29 P **P** **17 56 11.7 -1.2**
baz=233
UNV S **S** **18 05 39.7 +0.2**
baz=233
DGZ Jazzator, Alta 73.36 326*c i*P **P** **17 56 13.2 -0.5**
DGZ pmax pmax
comp=Z,644nm,0.9s
DGZ MLR MLR
comp=Z,241µm,21.0s
BHK Bhakra 73.40 305 *e*P **P** **17 56 15.1 +1.0**
AJM Ajmer 73.46 300 *e*P **P** **17 56 14.1 -0.4**
AJM IAMs_20 IAMs_20 18 12 18.7
comp=Z,48µm,23.9s
P08K Saint George I 73.63 25 P **P** **17 56 14.9 0.0**
baz=230
P08K S **S** **18 05 44.2 +0.9**
baz=230
ZSN Zaisan 73.71 323⇑ *i*P **P** **17 56 15.5 -0.2**
baz=323
ZSN Zaisan 73.71 323*c i*P **P** **17 56 15.4 -0.2**
SPIA Saint Paul Isl 73.71 25 P **P** **17 56 16.0 +0.7**
SPIA Saint Paul Isl 73.71 25 P **P** **17 56 14.9 -0.5**
baz=229
SPIA S **S** **18 05 50.5 +6.3**
baz=229
DHRM DHARAMSHALA 73.75 306 *e*P **P** **17 56 16.2 -0.3**
AKUT Akutan 73.81 29 P **P** **17 56 16.8 +0.8**
PAF Port-aux-Franc 74.03 220 P **P** **17 56 18.0 +0.6**
PAF IAmb IAmb 17 57 46.6
comp=Z,1µm,1.3s
PAF Port-aux-Franc 74.03 220 P **P** **17 56 18.0 +0.6**
PAF pmax pmax
comp=Z,1µm,1.3s
PAF MLR MLR
comp=Z,519µm,19.0s
KRAR Krasnoyarsk 74.23 333 *i* P **P** **17 56 18.2 -0.2**
THN Thein Dam 74.28 306 *e*P **P** **17 56 19.0 -0.2**
MK31 Makanchi Array 74.97 322 P **P** **17 56 22.7 -0.3**
MK31 IAmb IAmb 17 57 03.3
comp=Z,2µm,1.2s
MK31 Makanchi Array 74.97 322*c i*P **P** **17 56 22.9 -0.1**
MKAR Makanchi Array 74.97 322 P **P** **17 56 22.7 -0.3**
MKAR Makanchi Array 74.97 322 P **P** **17 56 22.7 -0.3**
MKAR Makanchi Array 74.97 322 P **P** **17 56 23.0 0.0**
comp=Z,264nm,1.0s,baz=111,slow=6.6,SNR=608
MKAR S **S** **18 06 06.4 +7.6**
comp=Z,10.0nm,0.9s,baz=123,slow=4.8,SNR=1.2
MKAR LR LR 18 30 54.1
comp=Z,99µm,19.7s,baz=120,slow=37
comp=Z,264nm,1.0s
JMU Jammu 75.02 306 *e*P **P** **17 56 25.3 +1.8**
MAKZ Makanchi 75.17 322 P **P** **17 56 24.1 0.0**
MAKZ IAmb IAmb 17 57 04.3
comp=Z,2µm,1.1s
MAKZ Makanchi 75.17 322 P **P** **17 56 24.1 0.0**
MAKZ pmax pmax
comp=Z,2µm,1.2s
MAKZ MLR MLR
comp=Z,132µm,19.0s
SHLS Shalkode 75.27 317⇑ *i*P **P** **17 56 23.7 -1.3**
baz=318
SHLS *e*S **S** **18 06 01.3 -1.2**
baz=318
SHLS Shalkode 75.27 317*c i*P **P** **17 56 23.6 -1.3**
SHLS *e*S **S** **18 06 01.3 -1.2**
FALS False Pass 75.35 29 P **P** **17 56 25.4 +0.5**
FALS False Pass 75.35 29 P **P** **17 56 23.8 -1.1**
baz=236
FALS S **S** **18 06 06.5 +3.9**
baz=236
UZB Uzynbulak 75.56 317⇑ *i*P **P** **17 56 26.9 +0.2**
comp=Z,1µm,2.4s,baz=317
UZB Uzynbulak 75.56 317*c i*P **P** **17 56 26.8 +0.2**
UZB pmax pmax
comp=Z,1µm,2.4s
PRZ Przheval'sk 75.73 317 IAmb IAmb 17 57 18.7
comp=Z,1µm,1.0s
BILL Bilibino 75.84 9 P **P** **17 56 26.9 -0.6**
BILL IAmb IAmb 17 56 53.9
comp=Z,2µm,1.6s
BILL Bilibino 75.84 9 *i* P **P** **17 56 26.5 -1.0**
BILL pmax pmax
comp=Z,307nm,2.5s
TARG Taragay, Kyrgy 75.86 316 IAmb IAmb 17 57 00.8
comp=Z,1µm,1.1s
KPKS Kokpek 75.91 318⇑ *i*P **P** **17 56 28.8 +0.3**
comp=Z,1µm,2.5s,baz=318
KPKS Kokpek 75.91 318*c i*P **P** **17 56 28.8 +0.3**
KPKS pmax pmax
comp=Z,1µm,2.5s
SATY Saty 75.94 317⇑ *i*P **P** **17 56 29.3 +0.5**
comp=Z,1µm,2.2s,baz=317
SATY *e*S **S** **18 06 13.0 +3.1**
baz=317
SATY Saty 75.94 317*c i*P **P** **17 56 29.2 +0.5**
SATY *e*S **S** **18 06 13.0 +3.1**
SATY pmax pmax
comp=Z,1µm,2.2s
ZHN Zhinishke 75.96 317⇑ *i*P **P** **17 56 29.1 +0.2**
baz=317
ZHN Zhinishke 75.96 317*c i*P **P** **17 56 29.0 +0.2**
TAOE Nuku Hiva Isla 76.34 98 P **P** **17 56 32.7 +1.1**
TAOE Nuku Hiva Isla 76.34 98 *e*PKIKP **P** **17 56 36.2 +4.6**
comp=Z,2µm,1.4s
TAOE *e*S **S** **18 06 18.0 +2.6**
comp=Z,29µm,30.7s
TAOE *e*SS SS 18 10 57.3 -13
comp=Z,53µm,31.6s
TAOE *e*LQ LQ 18 16 55.7
comp=Z,172µm,25.9s
TAOE *e*LR LR 18 19 55.8
comp=Z,245µm,26.8s
KSH Kashi 76.37 313 P **P** **17 56 32.5 +1.2**
KSH sP sP 17 56 50.5 +6.0
KSH pmax pmax
comp=Z,340nm,1.2s
KSH pmax pmax
comp=Z,40µm,6.7s
KSH LR LR
comp=Z,78µm,19.9s
KSH LR LR
comp=Z,197µm,20.6s
KSH LR LR
comp=Z,233µm,19.6s
NIL Nilore 76.62 307 P **P** **17 56 32.7 0.0**
NIL IAmb IAmb 17 57 04.6
comp=Z,2µm,1.1s
NIL Nilore 76.62 307 P **P** **17 56 32.7 0.0**
NIL pmax pmax
comp=Z,2µm,1.1s
TDK Taldyqorghan 76.69 319⇑ *i*P **P** **17 56 33.2 +0.3**
baz=319
TDK LR LR 18 30 07.9
comp=Z,37µm,18.0s,baz=319
TDK Taldyqorghan 76.69 319*c i*P **P** **17 56 33.1 +0.3**
TDK MLR MLR
comp=Z,37µm,18.0s
ARXS Arharly 76.77 318 *e*P **P** **17 56 32.8 -0.6**
JASL Jaisalmer 76.80 299 *e*P **P** **17 56 34.9 +1.1**
MDOK Medeo 76.90 317 *i* P **P** **17 56 34.6 +0.4**
baz=317
MDOK LR LR 18 30 32.3
comp=Z,34µm,19.1s,baz=317
MDOK Medeo 76.90 317 *i* P **P** **17 56 34.6 +0.4**
MDOK MLR MLR
comp=Z,34µm,19.0s
TNSS Tian-Shan 76.92 317⇑ *i*P **P** **17 56 35.2 +0.5**
baz=317
TNSS Tian-Shan 76.92 317⇑ *i*P **P** **17 56 35.2 +0.5**
ZAA0 Zalesovo Array 76.93 329 P **P** **17 56 32.5 -1.5**
ZALV Zalesovo Beam 76.93 329 *i* P **P** **17 56 32.7 -1.2**
ZALV pmax pmax
comp=Z,89nm,0.9s
ZALV Zalesovo Beam 76.93 329 P **P** **17 56 33.1 -0.9**

comp=Z,89nm,0.9s,baz=107,slow=5.1,SNR=215
ZALV PKKPbc **PKKPbc** **18 15 47.8 +2.6**
comp=Z,2.9nm,0.8s,baz=236,slow=2.6,SNR=2.2
ZALV LR LR 18 31 36.9
comp=Z,161μm,18.9s,baz=124,slow=37
comp=Z,89nm,0.9s
AAA Alma-Ata 77.01 317 *i* P **P** **17 56 35.2 +0.5**
baz=317
AAA Alma-Ata 77.01 317 *i* P **P** **17 56 35.2 +0.5**
SDPT Sand Point 77.04 29 IAmb IAmb 17 57 25.9
comp=Z,2μm,0.9s
SDPT Sand Point 77.04 29 P **P** **17 56 34.2 -0.3**
SDPT Sand Point 77.04 29 P **P** **17 56 33.7 -0.8**
baz=239,SNR=10
SDPT S **S** **18 06 26.7 +5.6**
baz=239
BHUJ Bhuj 77.07 295 *e*P **P** **17 56 36.6 +1.3**
BHUJ IAmb IAmb 17 57 16.2
comp=Z,2μm,1.4s
ULHL Ulahol 77.13 316 P **P** **17 56 35.8 +0.2**
SNR=101
CNBA Chernabura Isl 77.21 30 IAmb IAmb 17 57 01.8
comp=Z,4μm,1.9s
CHNA Chernabura Isl 77.21 30 P **P** **17 56 34.3 -1.1**
baz=239,SNR=7.3
CHNA S **SKSac** **18 06 39.3 -6.8**
baz=239
M11K Mekoryuk 77.38 23 P **P** **17 56 35.8 -0.5**
baz=232,SNR=7.2
M11K S **SKSac** **18 06 43.3 -3.8**
baz=232
GAMB Gambell 77.62 19 P **P** **17 56 37.3 -0.3**
baz=227
GAMB S **SKSac** **18 06 45.1 -3.6**
baz=227
KUU Kurty 77.65 317⇑ *i*P **P** **17 56 38.1 -0.1**
baz=317
KUU Kurty 77.65 317 *c i*P **P** **17 56 38.1 -0.1**
SEM Semipalatinsk 77.77 324 LR LR 18 30 48.2
comp=Z,41μm,18.9s,baz=324
TKM2 Tokmak 2 77.81 316 P **P** **17 56 39.5 0.0**
SNR=132
S14K Fog Glacier 77.97 29 P **P** **17 56 39.5 -0.4**
baz=239,SNR=5.4
S14K S **SKSac** **18 06 47.2 -4.7**
baz=239
ROCAM Rodrigues Isla 78.01 251 P **P** **17 56 40.0 -0.6**
KBK Karagaybulak 78.17 316 P **P** **17 56 41.6 +0.3**
SNR=64
TIXI Tiksi 78.17 356 P **P** **17 56 38.1 -2.4**
TIXI Tiksi 78.17 356 *c i*P **P** **17 56 38.1 -2.4**
TIXI pmax pmax
comp=Z,1μm,2.5s
TIXI MLR MLR
comp=Z,106μm,19.0s
TIXI Tiksi 78.17 356 S **SKSac** **18 06 42.8 -10**
comp=Z,5.8nm,0.9s,baz=159,slow=14,SNR=1.1
TIXI LR LR 18 30 42.4
comp=Z,100μm,20.4s,baz=174,slow=35
UCH Uchtor 78.33 315 P **P** **17 56 43.3 +0.7**
SNR=274
CHMS Chumysh 78.42 316 P **P** **17 56 42.6 0.0**
SNR=99
FRU1 Bishkek 78.44 316 IAmb IAmb 17 57 31.7
comp=Z,1μm,1.5s
AAK Ala-Archa 78.48 316 P **P** **17 56 43.4 +0.4**
SNR=163
AAK Ala-Archa 78.48 316 P **P** **17 56 43.2 +0.2**
AAK Ala-Archa 78.48 316 *i* P **P** **17 56 43.4 +0.4**
SNR=188
AAK Ala-Archa 78.48 316 *c i*P **P** **17 56 43.3 +0.2**
AAK pmax pmax
comp=Z,828nm,1.2s
AAK MLR MLR
comp=Z,88μm,20.0s
AAK Ala-Archa 78.48 316 P **P** **17 56 43.4 +0.4**
comp=Z,158nm,1.2s,baz=104,slow=5.2,SNR=176
AAK LR LR 18 33 16.1
comp=Z,72μm,21.5s,baz=124,slow=37
comp=Z,158nm,1.2s
AAK Ala-Archa 78.48 316 P **P** **17 56 43.8 +0.7**
AAK P **P** **17 56 43.8 +0.7**
CHGN Chignik 78.53 29 P **P** **17 56 41.5 -1.2**
CHGN IAmb IAmb 17 57 33.2
comp=Z,2μm,1.3s
CHGN Chignik 78.53 29 P **P** **17 56 41.2 -1.6**
baz=240,SNR=19
CHGN S **SKSac** **18 06 51.6 -3.9**
baz=240
M13K Dall Lake 78.54 24 IAMs_20 IAMs_20 18 26 47.1
comp=Z,302μm,21.0s
M13K Dall Lake 78.54 24 P **P** **17 56 43.0 +0.2**
baz=235,SNR=13
M13K S **SKSac** **18 06 55.9 +0.5**
baz=235
SGDS Sogindy 78.66 316⇑ *i*P **P** **17 56 43.7 -0.2**
baz=316
SGDS Sogindy 78.66 316 *c i*P **P** **17 56 43.7 -0.2**
USP Ospenovka 78.68 316 P **P** **17 56 44.1 +0.1**
SNR=360
O14K Tigyukauivet M 78.76 26 IAMs_20 IAMs_20 18 27 21.1
comp=Z,285μm,21.0s
O14K Tigyukauivet M 78.76 26 P **P** **17 56 43.3 -0.7**
baz=237
O14K S **SKSac** **18 06 55.3 -1.7**
baz=237
KURK Kurchatov 78.84 324 P **P** **17 56 44.2 -0.4**
KURK IAmb IAmb 17 57 43.6
comp=Z,1μm,1.2s
KURK Kurchatov 78.84 324 *ce*P **P** **17 56 44.2 -0.4**
KURK pmax pmax
comp=Z,992nm,1.2s
KURK MLR MLR
comp=Z,152μm,19.0s
KURK Kurchatov 78.84 324 P **P** **17 56 44.6 0.0**
KURK P **P** **17 56 44.6 0.0**
KURBB Kurchatov Arra 78.86 324 P **P** **17 56 44.2 -0.5**
comp=Z,216nm,1.1s,baz=114,slow=4.7,SNR=420
KURBB S **SKSac** **18 06 55.5 -2.7**
comp=Z,13nm,1.1s,baz=122,slow=3.6,SNR=1.5
KURBB PKKPbc **PKKPbc** **18 15 42.5 +1.7**
comp=Z,1.8nm,0.7s,baz=304,slow=2.9,SNR=5.6
KURBB LR LR 18 32 49.3
comp=Z,120μm,20.1s,baz=102,slow=37
comp=Z,216nm,1.1s
N14K Kuskokwak Cree 78.95 25 P **P** **17 56 44.7 -0.3**
baz=237,SNR=15
N14K S **SKSac** **18 06 57.4 -1.0**
baz=237
EKS2 Erkin-Say 78.98 315 P **P** **17 56 46.0 +0.2**
SNR=287
M14K Bethel 79.30 24 IAMs_20 IAMs_20 18 27 21.1
comp=Z,321μm,21.0s
M14K Bethel 79.30 24 P **P** **17 56 46.5 -0.4**
baz=236,SNR=42
M14K S **SKSac** **18 07 01.7 +0.9**
baz=236
L14K Kuka Creek 79.34 24 IAmb IAmb 17 57 40.3
comp=Z,1μm,0.9s
L14K IAMs_20 IAMs_20 18 26 39.5
comp=Z,298μm,21.0s
L14K Kuka Creek 79.34 24 P **P** **17 56 46.7 -0.3**
baz=236
L14K S S 18 07 02.6 +17
baz=236
O15K Ungalikthiuk R 79.35 26 P **P** **17 56 47.0 -0.2**
baz=238
O15K S **SKSac** **18 07 02.0 +0.7**
baz=238
R16K Pilot Point 79.56 28 P **P** **17 56 47.8 -0.6**
baz=241
R16K S **SKSac** **18 07 03.4 +0.7**
baz=241
BTLS Baital 79.59 318⇑ *i*P **P** **17 56 48.8 -0.1**
comp=Z,1μm,2.5s,baz=318
BTLS Baital 79.59 318 *c i*P **P** **17 56 48.7 -0.1**
BTLS pmax pmax
comp=Z,1μm,2.5s
N15K Kwethluk River 79.76 25 IAmb IAmb 17 57 40.4
comp=Z,3μm,1.5s
N15K IAMs_20 IAMs_20 18 26 26.3
comp=Z,309μm,22.0s
N15K Kwethluk River 79.76 25 P **P** **17 56 49.2 -0.2**
baz=238,SNR=38
N15K S S 18 07 06.6 +16
baz=238
M15K Kasigluk River 79.79 25 P **P** **17 56 49.0 -0.5**
baz=237,SNR=30
M15K S S 18 07 05.8 +15
baz=237
J14K Nanvaranak Lak 79.81 22 P **P** **17 56 49.6 0.0**
baz=234,SNR=31
J14K S S 18 07 09.2 +19
baz=234
L15K Ungalak Mounta 80.00 24 P **P** **17 56 50.0 -0.7**
baz=237,SNR=31
L15K S S 18 07 09.0 +16
baz=237
TNA Tin City 80.03 19 P **P** **17 56 50.1 -0.6**
TNA IAmb IAmb 17 57 27.7
comp=Z,2μm,1.5s
TNA Tin City 80.03 19 P **P** **17 56 50.1 -0.6**
baz=230,SNR=63
TNA S S 18 07 08.6 +16
baz=230
P16K Nushagak River 80.09 27 P **P** **17 56 50.4 -0.8**
baz=240
P16K S S 18 07 08.9 +15
baz=240
KBU Kabul Universi 80.14 306 P **P** **17 56 48.3 -4.0**
KBL Kabul 80.22 306 P **P** **17 56 51.1 -1.7**
KBL Kabul 80.22 306 P **P** **17 56 51.1 -1.7**
KBL pmax pmax
comp=Z,580nm,1.1s
KBL Kabul 80.22 306 P **P** **17 56 52.2 -0.6**
SNR=152
ANM Nome 80.24 20 P **P** **17 56 51.6 -0.4**
ANM IAmb IAmb 17 57 34.2
comp=Z,4μm,1.8s
ANM Nome 80.24 20 P **P** **17 56 51.6 -0.4**
baz=232,SNR=103
ANM S S 18 07 11.5 +16
baz=232
ANM Nome 80.24 20 P **P** **17 56 51.6 -0.4**
ANM pmax pmax
comp=Z,4μm,1.8s
ANM MLR MLR
comp=Z,222μm,22.0s
O16K Kokwok River B 80.32 26 IAmb IAmb 17 57 43.1
comp=Z,3μm,1.3s
O16K IAMs_20 IAMs_20 18 26 41.8
comp=Z,374μm,22.0s
O16K Kokwok River B 80.32 26 P **P** **17 56 51.9 -0.6**
baz=240,SNR=52
O16K S S 18 07 11.3 +15
baz=240
K15K Wolf Creek Mou 80.33 23 IAmb IAmb 17 57 43.6
comp=Z,2μm,1.1s
K15K IAMs_20 IAMs_20 18 27 53.3
comp=Z,327μm,21.0s
K15K Wolf Creek Mou 80.33 23 P **P** **17 56 52.4 0.0**
baz=236,SNR=43
K15K S S 18 07 11.9 +16
baz=236
N16K Nishlik Lake 80.48 25 P **P** **17 56 53.4 +0.1**
baz=239
N16K S S 18 07 15.1 +17
baz=239
F14K Arctic Creek 80.49 19 P **P** **17 56 53.2 -0.1**
baz=232,SNR=103
F14K S S 18 07 15.1 +18
baz=232
MAW Mawson 80.51 202 P **P** **17 56 54.4 +1.0**
baz=80,SNR=4.5
MAW Mawson 80.51 202 P **P** **17 56 53.6 +0.2**
MAW Mawson 80.51 202 P **P** **17 56 53.6 +0.2**
MAW pmax pmax
comp=Z,354nm,1.4s
MAW Mawson 80.51 202 P **P** **17 56 54.5 +1.0**
comp=Z,53nm,1.1s,baz=75,slow=4.2,SNR=3.6
MAW S **SKSac** **18 07 04.9 -4.3**
comp=Z,28nm,1.0s,baz=60,slow=8.8,SNR=1.8
MAW LR LR 18 32 02.8
comp=Z,184μm,18.1s,baz=82,slow=35
comp=Z,53nm,1.1s
Q16K King Salmon 80.52 27 P **P** **17 56 51.6 -2.0**
baz=241
Q16K S S 18 07 11.2 +13
baz=241
Q17K Contact Creek 80.68 28 P **P** **17 56 53.0 -1.5**
baz=242,SNR=30
Q17K S **SKSac** **18 07 12.0 +1.1**
baz=242
M16K Timber Creek 80.68 25 P **P** **17 56 54.4 -0.1**
baz=239,SNR=56
M16K S S 18 07 15.0 +15
baz=239
SII Sitkinak Islan 80.73 30 P **P** **17 56 54.0 -0.7**
baz=244
SII S S 18 07 15.8 +15
baz=244
DZA Taraz 80.77 315⇑ *i*P **P** **17 56 55.4 +0.1**
comp=Z,1μm,2.2s,baz=315
DZA Taraz 80.77 315 *c i*P **P** **17 56 55.3 0.0**
DZA pmax pmax
comp=Z,1μm,2.2s
L16K Owhat River 80.83 24 IAmb IAmb 17 57 24.6
comp=Z,2μm,1.3s
L16K IAMs_20 IAMs_20 18 28 17.6
comp=Z,335μm,21.0s
L16K Owhat River 80.83 24 P **P** **17 56 54.6 -0.6**
baz=238,SNR=54
L16K S S 18 07 15.8 +14
baz=238
O17K Koliganek Bris 80.85 26 P **P** **17 56 55.0 -0.3**
baz=241,SNR=112
O17K S S 18 07 16.5 +15
baz=241
P17K Kvichak River 80.87 27 P **P** **17 56 54.0 -1.4**
baz=242
P17K S S 18 07 14.8 +13
baz=242
G15K Niukluk 80.96 20 P **P** **17 56 55.2 -0.6**
baz=234
G15K S S 18 07 17.7 +15
baz=234
R18K Karluk 81.04 29 P **P** **17 56 55.5 -0.9**
baz=244
R18K S S 18 07 18.0 +14
baz=244
F15K North Star Dit 81.18 19 P **P** **17 56 56.5 -0.5**
baz=233
F15K S S 18 07 20.0 +15
baz=233
N17K Nushagak Hills 81.18 26 IAmb IAmb 17 57 34.7
comp=Z,889nm,1.0s
N17K IAMs_20 IAMs_20 18 28 06.1
comp=Z,323μm,21.0s
N17K Nushagak Hills 81.18 26 P **P** **17 56 57.1 0.0**
baz=241,SNR=37
N17K S S 18 07 21.7 +17
baz=241
J16K Anvik River 81.23 22 IAmb IAmb 17 57 48.7
comp=Z,2μm,1.2s
J16K Anvik River 81.23 22 P **P** **17 56 57.2 -0.1**
baz=237
J16K S S 18 07 20.8 +15
baz=237
SIMJ Simiganj 81.29 310 P **P** **17 56 57.9 -0.4**
SIMJ IAmb IAmb 17 57 25.4
comp=Z,1μm,0.9s
H16K Elim 81.38 21 P **P** **17 56 57.4 -0.7**
baz=235,SNR=121
H16K S S 18 07 22.2 +15
baz=235
KK31 Karatay Array 81.41 315 IAmb IAmb 17 57 30.2
comp=Z,3μm,1.8s
KKAR Karatay Array 81.41 315 IAmb IAmb 17 57 30.2
comp=Z,3μm,1.8s
OHAK Old Harbor 81.46 30 P **P** **17 56 58.1 -0.5**
OHAK IAmb IAmb 17 58 07.0
comp=Z,3μm,1.8s
OHAK Old Harbor 81.46 30 P **P** **17 56 59.1 +0.5**
OHAK Old Harbor 81.46 30 P **P** **17 56 58.0 -0.5**
baz=245,SNR=8.8
OHAK S S 18 07 22.0 +14
baz=245
IUG Iuzhnay 81.47 314⇑ *i*P **P** **17 56 59.4 +0.1**
comp=Z,1μm,2.5s,baz=314
IUG Iuzhnay 81.47 314 *c i*P **P** **17 56 59.3 +0.1**
IUG pmax pmax
comp=Z,1μm,2.5s
P18K Big Mountain, 81.51 27 P **P** **17 56 57.3 -1.6**
baz=243,SNR=11
P18K S S 18 07 22.3 +14
baz=243
M17K Holitna River 81.51 25 IAmb IAmb 17 57 25.5
comp=Z,3μm,1.3s
M17K Holitna River 81.51 25 P **P** **17 56 59.1 +0.3**
baz=240
M17K S S 18 07 25.2 +17
baz=240
I17K Unalakleet 81.52 22 P **P** **17 56 58.4 -0.4**
I17K IAmb IAmb 17 57 50.2
comp=Z,2μm,1.1s
I17K IAMs_20 IAMs_20 18 27 38.8
comp=Z,297μm,22.0s
I17K Unalakleet 81.52 22 P **P** **17 56 59.0 +0.3**
baz=237,SNR=77
I17K S S 18 07 25.3 +17
baz=237
L17K Donlin 81.52 24 P **P** **17 56 58.9 0.0**
baz=239,SNR=44
L17K S S 18 07 25.3 +17
baz=239
O18K Koktuh Hills 81.73 27 IAMs_20 IAMs_20 18 27 35.6
comp=Z,289μm,22.0s
O18K Koktuh Hills 81.73 27 P **P** **17 56 58.7 -1.4**
baz=242,SNR=14
O18K S S 18 07 22.8 +12
baz=242
G16K Koyuk River 81.77 20 IAmb IAmb 17 57 43.1
comp=Z,1μm,1.1s
G16K Koyuk River 81.77 20 P **P** **17 56 59.7 -0.4**
baz=235
G16K S S 18 07 26.0 +15
baz=235
N18K Kilae Creek 81.82 26 IAMs_20 IAMs_20 18 29 27.6
comp=Z,317μm,20.0s
N18K Kilae Creek 81.82 26 P **P** **17 57 00.5 0.0**
baz=242
N18K S S 18 07 28.6 +17
baz=242
K17K Iditarod 81.82 23 IAMs_20 IAMs_20 18 28 38.8
comp=Z,382μm,21.0s
K17K Iditarod 81.82 23 P **P** **17 57 00.4 0.0**
baz=239,SNR=95
K17K S S 18 07 26.9 +15
baz=239
CHM Chimkent 81.83 314 LR LR 18 33 37.1
comp=Z,21μm,18.5s,baz=314
BRLS Borolday 81.86 315⇑ *i*P **P** **17 57 01.2 0.0**
comp=Z,2μm,3.0s,baz=315
BRLS Borolday 81.86 315 *c i*P **P** **17 57 01.1 0.0**
BRLS pmax pmax
comp=Z,2μm,3.0s
Q19K Cape Douglas, 82.03 28 P **P** **17 57 00.1 -1.6**
baz=244
Q19K S S 18 07 26.2 +12
baz=244
KDAK Kodiak Island 82.04 29 P **P** **17 57 01.1 -0.6**
KDAK IAmb IAmb 17 57 53.2
comp=Z,2μm,1.4s
KDAK Kodiak Island 82.04 29 P **P** **17 57 01.0 -0.6**
baz=245
KDAK S S 18 07 28.6 +15
baz=245
KDAK Kodiak Island 82.04 29 P **P** **17 57 01.1 -0.6**
KDAK pmax pmax
comp=Z,2μm,1.4s
KDAK MLR MLR
comp=Z,198μm,20.0s
KDAK Kodiak Island 82.04 29 LR LR 18 30 42.8
comp=Z,139μm,19.6s,baz=266,slow=34
BRZS Berezniki 82.11 322⇑ *e*P **P** **17 57 02.0 -0.3**
comp=Z,1μm,2.4s,baz=322
BRZS *e*S **SKSac** **18 07 18.1 -2.6**
baz=322
BRZS Berezniki 82.11 322 *ce*P **P** **17 57 01.9 -0.3**
BRZS *e*S **SKSac** **18 07 18.1 -2.6**
BRZS pmax pmax
comp=Z,1μm,2.4s
SVW2 Sparrevohn 82.15 26 IAmb IAmb 17 57 54.0
comp=Z,2μm,1.1s
SVW2 IAMs_20 IAMs_20 18 28 35.2
comp=Z,298μm,21.0s
SVW2 Sparrevohn 82.15 26 P **P** **17 57 02.4 +0.2**
L18K Granite Mounta 82.22 24 IAmb IAmb 17 57 40.1
comp=Z,1μm,1.1s
L18K IAMs_20 IAMs_20 18 30 34.2
comp=Z,283μm,20.0s
L18K Granite Mounta 82.22 24 P **P** **17 57 02.5 -0.1**
baz=241
L18K S S 18 07 31.9 +16
baz=241
M18K Stony River 82.23 25 P **P** **17 57 02.5 -0.1**
baz=242
M18K S S 18 07 32.5 +17
baz=242
O19K Port Alsworth 82.28 27 IAmb IAmb 17 57 38.9
comp=Z,1μm,1.2s
O19K IAMs_20 IAMs_20 18 29 39.5
comp=Z,265μm,20.0s
O19K Port Alsworth 82.28 27 P **P** **17 57 01.5 -1.3**
baz=243,SNR=16
O19K S S 18 07 30.4 +14
baz=243
H17K Granite Mounta 82.38 21 IAmb IAmb 17 57 41.4
comp=Z,2μm,1.2s
H17K IAMs_20 IAMs_20 18 28 59.4
comp=Z,285μm,22.0s
H17K Granite Mounta 82.38 21 P **P** **17 57 03.1 -0.2**
baz=238,SNR=123
H17K S S 18 07 33.3 +16
baz=238
G17K Kiwalik Mounta 82.42 21 P **P** **17 57 03.4 -0.1**
baz=237,SNR=118
G17K S S 18 07 32.9 +15
baz=237
Q20K Shuyak Island 82.48 29 P **P** **17 57 02.8 -1.2**
baz=245
Q20K S S 18 07 31.4 +13
baz=245
SYI Shuyak Island 82.48 29 IAmb IAmb 17 57 46.1
comp=Z,1μm,1.3s
SYI IAMs_20 IAMs_20 18 28 41.5
comp=Z,404μm,21.0s
N19K Bonanza Creek 82.49 26 IAmb IAmb 17 57 55.5
comp=Z,2μm,1.2s
N19K IAMs_20 IAMs_20 18 29 48.5
comp=Z,356μm,21.0s
N19K Bonanza Creek 82.49 26 P **P** **17 57 03.4 -0.7**
baz=243
N19K S S 18 07 34.4 +16
baz=243
C16K Lisburne Hills 82.53 17 IAmb IAmb 17 57 41.2
comp=Z,1μm,1.2s
C16K Lisburne Hills 82.53 17 P **P** **17 57 03.4 -0.6**
baz=232
C16K S S 18 07 34.7 +16
baz=232
P19K Oil Pt 82.54 27 P **P** **17 57 02.6 -1.7**
baz=244,SNR=14
P19K S S 18 07 30.6 +11
baz=244
ILSW Iliamna Southw 82.72 27 IAmb IAmb 17 57 31.7
comp=Z,2μm,1.7s
ILSW IAMs_20 IAMs_20 18 27 42.6
comp=Z,279μm,22.0s
F17K Baldwin Pennin 82.74 20 IAmb IAmb 17 57 40.2
comp=Z,2μm,1.4s
F17K Baldwin Pennin 82.74 20 P **P** **17 57 04.7 -0.4**
baz=236
F17K S S 18 07 35.8 +15
baz=236
J18K Innoko River 82.82 23 IAmb IAmb 17 57 56.2
comp=Z,1μm,1.2s
J18K IAMs_20 IAMs_20 18 29 09.2
comp=Z,346μm,22.0s
J18K Innoko River 82.82 23 P **P** **17 57 05.0 -0.7**
baz=241,SNR=62
J18K S S 18 07 35.0 +13
baz=241
TTA Tatalina 82.84 24 IAmb IAmb 17 57 56.6
comp=Z,2μm,1.5s
TTA Tatalina 82.84 24 P **P** **17 57 06.1 +0.3**
TTA Tatalina 82.84 24 P **P** **17 57 05.2 -0.7**
baz=241,SNR=43
TTA S S 18 07 36.8 +15
baz=241
D17K Noatak River 82.87 18 P **P** **17 57 05.5 -0.2**
baz=234,SNR=137
D17K S S 18 07 38.8 +17
baz=234

E17K	**Hotham Inlet**	**82.91**	**19**	P	**P**	**17 57 05.8**	**-0.2**	
	baz=236							
E17K				S	S	18 07 39.0	+16	
	baz=236							
L19K	**White Mountain**	**82.96**	**25**	IAmb	IAmb	17 57 34.4		
	comp=Z,1µm,1.1s							
L19K	**White Mountain**	**82.96**	**25**	P	**P**	**17 57 06.0**	**-0.4**	
	baz=243,SNR=67							
L19K				S	S	18 07 39.2	+16	
	baz=243							
O20K	**Slope Mountain**	**83.00**	**27**	P	**P**	**17 57 05.0**	**-1.7**	
	baz=245							
O20K				S	S	18 07 36.5	+13	
	baz=245							
M19K	**Big River Lodg**	**83.03**	**25**	IAmb	IAmb	17 57 34.2		
	comp=Z,2µm,1.4s							
M19K				IAMs_20	IAMs_20	18 29 25.2		
	comp=Z,265µm,21.0s							
M19K	**Big River Lodg**	**83.03**	**25**	P	**P**	**17 57 06.5**	**-0.2**	
	baz=243							
M19K				S	S	18 07 39.0	+15	
	baz=243							
H18K	**Honhosa River**	**83.05**	**21**	IAmb	IAmb	17 57 47.5		
	comp=Z,2µm,1.6s							
H18K				IAMs_20	IAMs_20	18 29 20.5		
	comp=Z,327µm,22.0s							
H18K	**Honhosa River**	**83.05**	**21**	P	**P**	**17 57 06.1**	**-0.7**	
	baz=239							
H18K				S	S	18 07 40.9	+17	
	baz=239							
HOM	**Homer**	**83.27**	**28**	P	**P**	**17 57 06.7**	**-1.3**	
	baz=246							
HOM				S	S	18 07 37.8	+11	
	baz=246							
C17K	**DeLong Mountai**	**83.30**	**18**	P	**P**	**17 57 07.5**	**-0.5**	
	baz=234,SNR=155							
C17K				S	S	18 07 39.2	+13	
	baz=234							
G18K	**Tagagawik**	**83.33**	**21**	IAmb	IAmb	17 57 42.9		
	comp=Z,1µm,1.1s							
G18K				IAMs_20	IAMs_20	18 28 44.6		
	comp=Z,256µm,21.0s							
G18K	**Tagagawik**	**83.33**	**21**	P	**P**	**17 57 07.6**	**-0.6**	
	baz=239							
G18K				S	S	18 07 39.4	+12	
	baz=239							
F18K	**Selawik**	**83.36**	**20**	P	**P**	**17 57 07.5**	**-0.8**	
	baz=238,SNR=43							
F18K				S	S	18 07 41.3	+14	
	baz=238							
GCSA	**Galena City Sc**	**83.39**	**22**	P	**P**	**17 57 07.8**	**-0.7**	
	baz=240,SNR=95							
GCSA				S	S	18 07 41.4	+14	
	baz=240							
E18K	**Tukpahlearik C**	**83.50**	**19**	IAmb	IAmb	17 57 46.3		
	comp=Z,994nm,1.1s							
E18K	**Tukpahlearik C**	**83.50**	**19**	P	**P**	**17 57 08.6**	**-0.4**	
	baz=237							
E18K				S	S	18 07 43.7	+15	
	baz=237							
L20K	**Farewell, AK**	**83.50**	**25**	P	**P**	**17 57 08.7**	**-0.5**	
	baz=243							
L20K				S	S	18 07 44.9	+16	
	baz=243							
J19K	**Poorman**	**83.50**	**23**	IAmb	IAmb	17 58 00.1		
	comp=Z,2µm,1.4s							
J19K	**Poorman**	**83.50**	**23**	P	**P**	**17 57 08.8**	**-0.3**	
	baz=242							
J19K				S	S	18 07 43.2	+14	
	baz=242							
M20K	**Styx River**	**83.55**	**25**	IAmb	IAmb	17 57 32.8		
	comp=Z,1µm,1.1s							
M20K				IAMs_20	IAMs_20	18 29 40.3		
	comp=Z,315µm,21.0s							
M20K	**Styx River**	**83.55**	**25**	P	**P**	**17 57 08.9**	**-0.7**	
	baz=244							
M20K				S	S	18 07 44.6	+15	
	baz=244							
N20K	**Mount Spurr**	**83.66**	**26**	P	**P**	**17 57 08.1**	**-2.0**	
	baz=245,SNR=13							
N20K				S	S	18 07 39.7	+9.1	
	baz=245							
BRLK	**Bradley Lake**	**83.66**	**28**	IAmb	IAmb	17 58 09.7		
	comp=Z,1µm,1.2s							
BRSE	**Bradley Lake S**	**83.72**	**28**	P	**P**	**17 57 09.4**	**-1.0**	
	baz=246,SNR=13							
BRSE				S	S	18 07 44.9	+14	
	baz=246							
K20K	**Telida**	**83.82**	**24**	IAmb	IAmb	17 57 48.1		
	comp=Z,2µm,1.4s							
K20K				IAMs_20	IAMs_20	18 30 01.0		
	comp=Z,374µm,21.0s							
K20K	**Telida**	**83.82**	**24**	P	**P**	**17 57 10.4**	**-0.4**	
	baz=243							
K20K				S	S	18 07 46.4	+14	
	baz=243							
QSPA	**South Pole Qui**	**83.83**	**180**	P	**P**	**17 57 10.0**	**-1.0**	
QSPA	**South Pole Qui**	**83.83**	**180**	P	**P**	**17 57 10.1**	**-0.9**	
	comp=Z,80nm,0.8s,baz=213,slow=0.5,SNR=145							
QSPA				S	**SKSac**	**18 07 32.0**	**+0.1**	
	comp=Z,23nm,1.1s,baz=317,slow=15,SNR=1.5							
QSPA				PKKPbc	**PKKPbc**	**18 15 30.9**	**+0.6**	
	comp=Z,25nm,1.0s,baz=286,slow=1.9,SNR=3.6							
QSPA				LR	LR	18 34 21.4		
	comp=Z,609µm,20.8s,baz=11,slow=36							
	comp=Z,80nm,0.8s							
H19K	**Roundabout Mou**	**83.93**	**21**	IAMs_20	IAMs_20	18 29 04.2		
	comp=Z,280µm,22.0s							
H19K	**Roundabout Mou**	**83.93**	**21**	P	**P**	**17 57 10.9**	**-0.4**	
	baz=241							
H19K				S	S	18 07 46.0	+13	
	baz=241							
CAPN	**Captain Cook N**	**83.95**	**27**	IAMs_20	IAMs_20	18 28 21.2		
	comp=Z,256µm,22.0s							
CAPN	**Captain Cook N**	**83.95**	**27**	P	**P**	**17 57 11.2**	**-0.2**	
	baz=246,SNR=8.9							
CAPN				S	S	18 07 47.0	+14	
	baz=246							
C18K	**Utukok River**	**83.99**	**18**	P	**P**	**17 57 10.7**	**-1.0**	
	baz=236							
C18K				S	S	18 07 48.3	+15	
	baz=236							
G19K	**Purcell Mounta**	**84.01**	**21**	IAMs_20	IAMs_20	18 28 53.7		
	comp=Z,282µm,22.0s							
G19K	**Purcell Mounta**	**84.01**	**21**	P	**P**	**17 57 11.3**	**-0.4**	
	baz=240							
G19K				S	S	18 07 48.3	+15	
	baz=240							
F19K	**Shaleruckik Mo**	**84.12**	**20**	IAmb	IAmb	17 57 49.0		
	comp=Z,2µm,1.6s							
F19K	**Shaleruckik Mo**	**84.12**	**20**	P	**P**	**17 57 11.2**	**-1.0**	
	baz=239							
F19K				S	S	18 07 48.9	+14	
	baz=239							
NRIK	**Noril'sk**	**84.15**	**343**	P	**P**	**17 57 11.6**	**-0.7**	
	comp=Z,271nm,1.0s,baz=126,slow=5.3,SNR=278							
NRIK				S	**S**	**18 07 37.2**	**+2.2**	
	comp=Z,20nm,1.1s,baz=34,slow=19,SNR=2.2							
NRIK				LR	LR	18 33 03.2		
	comp=Z,165µm,21.7s,baz=122,slow=34							
	comp=Z,271nm,1.0s							
J20K	**Nowinta River**	**84.16**	**23**	IAMs_20	IAMs_20	18 30 00.4		
	comp=Z,277µm,21.0s							
J20K	**Nowinta River**	**84.16**	**23**	P	**P**	**17 57 12.5**	**0.0**	
	baz=243							
J20K				S	S	18 07 50.1	+15	
	baz=243							
B18K	**Kokolik River**	**84.22**	**17**	P	**P**	**17 57 12.1**	**-0.5**	
	baz=235							
B18K				S	S	18 07 49.4	+14	
	baz=235							
SKT	**Skwentna**	**84.28**	**26**	IAmb	IAmb	17 58 02.1		
	comp=Z,1µm,1.4s							
SKT				IAMs_20	IAMs_20	18 29 40.9		
	comp=Z,310µm,21.0s							
SKT	**Skwentna**	**84.28**	**26**	P	**P**	**17 57 11.2**	**-2.0**	
	baz=246,SNR=20							
SKT				S	S	18 07 47.7	+11	
	baz=246							
I20K	**Naaghedeneel**	**84.32**	**22**	P	**P**	**17 57 13.1**	**-0.2**	
	baz=243							
I20K				S	S	18 07 46.0	+9.2	
	baz=243							
PPLA	**Purkeypile**	**84.39**	**25**	P	**P**	**17 57 12.5**	**-1.4**	
	baz=245,SNR=37							
PPLA				S	S	18 07 49.2	+11	
	baz=245							
SUA	**Susitna One**	**84.41**	**26**	IAmb	IAmb	17 57 35.7		
	comp=Z,832nm,1.1s							
SUA				IAMs_20	IAMs_20	18 29 01.4		
	comp=Z,292µm,22.0s							
SUA	**Susitna One**	**84.41**	**26**	P	**P**	**17 57 11.8**	**-2.2**	
	baz=246,SNR=30							
SUA				S	S	18 07 47.4	+9.2	
	baz=246							
BVAR	**Borovoye Array**	**84.43**	**325**	P	**P**	**17 57 13.9**	**-0.2**	
	comp=Z,863nm,0.9s,baz=108,slow=4.8,SNR=871							
BVAR				S	**S**	**18 07 44.0**	**+5.5**	
	comp=Z,9.5nm,0.9s,baz=75,slow=7.6,SNR=1.9							
BVAR				LR	LR	18 35 39.4		
	comp=Z,67µm,21.5s,baz=104,slow=36							
SEW	**Seward**	**84.46**	**28**	P	**P**	**17 57 13.0**	**-1.1**	
	baz=248,SNR=18							
SEW				S	S	18 07 50.6	+12	
	baz=248							
O22K	**Cooper Landing**	**84.48**	**27**	IAMs_20	IAMs_20	18 33 57.4		
	comp=Z,265µm,20.0s							
O22K	**Cooper Landing**	**84.48**	**27**	P	**P**	**17 57 12.8**	**-1.3**	
	baz=247,SNR=21							
O22K				S	S	18 07 50.7	+12	
	baz=247							
H20K	**Anotleneega Mo**	**84.49**	**22**	P	**P**	**17 57 13.6**	**-0.6**	
	baz=242							
H20K				S	S	18 07 49.8	+11	
	baz=242							
BRVK	**Borovoye**	**84.50**	**325**	P	**P**	**17 57 12.4**	**-2.1**	
BRVK	**Borovoye**	**84.50**	**325**	*c iP*	**P**	**17 57 14.2**	**-0.3**	
BRVK	**Borovoye**	**84.50**	**325**	P	**P**	**17 57 14.6**	**+0.2**	
BRVK				P	**P**	**17 57 14.6**	**+0.2**	
FIS	**Fire Island**	**84.52**	**27**	P	**P**	**17 57 13.5**	**-0.8**	
FIS				IAMs_20	IAMs_20	18 29 13.9		
	comp=Z,266µm,22.0s							
CAST	**Castle Rocks**	**84.65**	**24**	IAmb	IAmb	17 58 05.0		
	comp=Z,1µm,1.1s							
CAST				IAMs_20	IAMs_20	18 30 04.7		
	comp=Z,254µm,21.0s							
CAST	**Castle Rocks**	**84.65**	**24**	P	**P**	**17 57 13.5**	**-1.6**	
	baz=245,SNR=108							
CAST				S	S	18 07 51.5	+11	
	baz=245							
RC01	**Rabbit Creek A**	**84.71**	**27**	P	**P**	**17 57 13.9**	**-1.5**	
	baz=247,SNR=70							
RC01				S	**S**	**18 07 48.9**	**+8.0**	
	baz=247							
C19K	**Lookout Ridge**	**84.73**	**18**	P	**P**	**17 57 15.3**	**-0.1**	
	baz=238							
C19K				S	S	18 07 52.9	+12	
	baz=238							
CHUM	**Lake Minchumin**	**84.76**	**24**	P	**P**	**17 57 14.9**	**-0.6**	
	baz=245,SNR=226							
CHUM				S	S	18 07 55.0	+14	
	baz=245							
M22K	**Willow**	**84.80**	**26**	IAMs_20	IAMs_20	18 29 24.7		
	comp=Z,302µm,22.0s							
M22K	**Willow**	**84.80**	**26**	P	**P**	**17 57 14.0**	**-1.7**	
	baz=247,SNR=47							
M22K				S	S	18 07 52.3	+11	
	baz=247							
PTCN	**Pitcairn Islan**	**84.84**	**115**	P	**P**	**17 57 17.9**	**+1.1**	
D19K	**Kuna River**	**84.86**	**19**	P	**P**	**17 57 15.5**	**-0.6**	
	baz=239							
D19K				S	S	18 07 52.6	+10	
	baz=239							
F20K	**Avaraart Lake**	**84.93**	**20**	IAmb	IAmb	17 57 51.6		
	comp=Z,1µm,1.2s							
F20K				IAMs_20	IAMs_20	18 29 22.8		
	comp=Z,247µm,22.0s							
F20K	**Avaraart Lake**	**84.93**	**20**	P	**P**	**17 57 16.3**	**0.0**	
	baz=241							
F20K				S	S	18 07 55.9	+13	
	baz=241							
CUT	**Chulitna**	**84.99**	**25**	IAMs_20	IAMs_20	18 31 08.9		
	comp=Z,310µm,21.0s							
CUT	**Chulitna**	**84.99**	**25**	P	**P**	**17 57 14.6**	**-2.1**	
	baz=247,SNR=24							
CUT				S	**S**	**18 07 52.3**	**+8.6**	
	baz=247							
RER	**Riviere de l'E**	**85.06**	**249**	P	**P**	**17 57 20.2**	**+2.1**	
	SNR=16							
NGCH	**Negor - Chabah**	**85.10**	**296**	P	**P**	**17 57 19.5**	**+1.4**	
	SNR=7.9							
PMR	**Palmer**	**85.17**	**26**	IAmb	IAmb	17 57 39.8		
	comp=Z,1µm,1.1s							
PMR				IAMs_20	IAMs_20	18 29 35.6		
	comp=Z,259µm,22.0s							
PMR	**Palmer**	**85.17**	**26**	P	**P**	**17 57 17.4**	**-0.2**	
PMR	**Palmer**	**85.17**	**26**	P	**P**	**17 57 16.0**	**-1.6**	
	baz=248,SNR=58							
PMR				S	S	18 07 60.0	+15	
	baz=248							
KTH	**Kantishna Hill**	**85.18**	**24**	IAmb	IAmb	17 58 07.2		
	comp=Z,1µm,1.1s							
KTH				IAMs_20	IAMs_20	18 30 00.7		
	comp=Z,296µm,22.0s							
GHO	**Glory Hole Cre**	**85.33**	**26**	IAMs_20	IAMs_20	18 29 28.8		
	comp=Z,301µm,22.0s							
H21K	**Melozitna Rive**	**85.34**	**22**	IAmb	IAmb	17 57 55.5		
	comp=Z,711nm,1.2s							
H21K				IAMs_20	IAMs_20	18 30 40.7		
	comp=Z,282µm,22.0s							
H21K	**Melozitna Rive**	**85.34**	**22**	P	**P**	**17 57 17.7**	**-0.7**	
	baz=244							
H21K				S	S	18 08 01.8	+15	
	baz=244							
E20K	**Nigu River**	**85.36**	**19**	P	**P**	**17 57 18.3**	**-0.3**	
	baz=241							
E20K				S	S	18 08 00.9	+14	
	baz=241							
BPAW	**Bear Paw Mtn.**	**85.38**	**24**	IAmb	IAmb	17 58 08.5		
	comp=Z,651nm,1.0s							
BPAW				IAMs_20	IAMs_20	18 30 35.9		
	comp=Z,308µm,21.0s							
BPAW	**Bear Paw Mtn.**	**85.38**	**24**	P	**P**	**17 57 17.0**	**-1.7**	
	baz=246,SNR=22							
BPAW				S	S	18 08 00.0	+12	
	baz=246							
P23K	**Montague Islan**	**85.38**	**28**	P	**P**	**17 57 17.3**	**-1.4**	
	baz=250,SNR=8.4							
P23K				S	S	18 08 02.9	+15	
	baz=250							
TRF	**Thorofare Moun**	**85.40**	**25**	IAmb	IAmb	17 57 59.3		
	comp=Z,636nm,1.0s							
TRF				IAMs_20	IAMs_20	18 30 29.5		
	comp=Z,303µm,21.0s							
TRF	**Thorofare Moun**	**85.40**	**25**	P	**P**	**17 57 17.0**	**-2.0**	
	baz=247,SNR=26							
TRF				S	**S**	**18 07 55.3**	**+7.2**	
	baz=247							
KNK	**Knik Glacier**	**85.41**	**27**	P	**P**	**17 57 17.8**	**-1.1**	
	baz=248,SNR=45							
KNK				S	S	18 07 57.2	+9.3	
	baz=248							
I21K	**Tanana**	**85.44**	**23**	IAmb	IAmb	17 57 46.3		
	comp=Z,2µm,1.2s							
I21K				IAMs_20	IAMs_20	18 30 42.8		
	comp=Z,294µm,21.0s							
I21K	**Tanana**	**85.44**	**23**	P	**P**	**17 57 18.4**	**-0.5**	
	baz=245,SNR=74							
I21K				S	S	18 07 58.4	+10	
	baz=245							
D20K	**Etivluk River**	**85.45**	**19**	P	**P**	**17 57 18.3**	**-0.7**	
	baz=240							
D20K				S	S	18 07 58.4	+10	
	baz=240							
SML	**Sawmill**	**85.61**	**26**	P	**P**	**17 57 18.8**	**-1.1**	
	baz=248,SNR=45							
SML				S	S	18 08 02.1	+12	
	baz=248							
Q23K	**Middleton Isla**	**85.68**	**29**	P	**P**	**17 57 19.3**	**-0.9**	
	baz=250							
Q23K				S	S	18 08 04.4	+14	
	baz=250							
F21K	**Alatna River**	**85.79**	**20**	IAMs_20	IAMs_20	18 30 33.5		
	comp=Z,264µm,22.0s							
F21K	**Alatna River**	**85.79**	**20**	P	**P**	**17 57 19.9**	**-0.7**	
	baz=243							
F21K				S	S	18 08 03.0	+12	
	baz=243							
GLI	**Glacier Island**	**85.83**	**27**	IAmb	IAmb	17 57 42.9		
	comp=Z,1µm,1.0s							
GLI	**Glacier Island**	**85.83**	**27**	P	**P**	**17 57 20.2**	**-0.7**	
	baz=250,SNR=9.4							
GLI				S	S	18 08 04.2	+12	
	baz=250							
MLY	**Manley**	**85.86**	**23**	IAMs_20	IAMs_20	18 32 28.4		
	comp=Z,295µm,21.0s							
MLY	**Manley**	**85.86**	**23**	P	**P**	**17 57 20.1**	**-1.0**	
	baz=246,SNR=135							
MLY				S	**S**	**18 08 00.4**	**+8.2**	
	baz=246							
M23K	**Glacier View**	**85.87**	**26**	P	**P**	**17 57 19.9**	**-1.2**	
	baz=249,SNR=29							
M23K				S	S	18 08 02.4	+10	
	baz=249							
WAT1	**Susitna Watana**	**85.89**	**25**	P	**P**	**17 57 19.8**	**-1.4**	
	baz=248							
WAT1				S	S	18 08 03.5	+11	
	baz=248							
H22K	**Ishtalitna Cre**	**85.97**	**22**	P	**P**	**17 57 21.0**	**-0.5**	
	baz=245							
H22K				S	S	18 08 03.9	+11	
	baz=245							
RND	**Reindeer**	**85.98**	**25**	IAmb	IAmb	17 57 43.6		
	comp=Z,1µm,0.9s							
RND				IAMs_20	IAMs_20	18 30 47.7		
	comp=Z,377µm,22.0s							
BWN	**Browne**	**86.02**	**24**	IAMs_20	IAMs_20	18 31 20.7		
	comp=Z,246µm,21.0s							
SCM	**Sheep Creek Mo**	**86.06**	**27**	IAMs_20	IAMs_20	18 29 54.0		
	comp=Z,286µm,22.0s							
SCM	**Sheep Creek Mo**	**86.06**	**27**	P	**P**	**17 57 21.2**	**-0.9**	
	baz=249,SNR=32							
SCM				S	S	18 08 06.3	+12	
	baz=249							
MCK	**McKinley**	**86.07**	**24**	P	**P**	**17 57 20.3**	**-1.8**	
	baz=248,SNR=96							
MCK				S	**S**	**18 07 58.5**	**+4.2**	
	baz=248							
WAT6	**Susitna Watana**	**86.15**	**26**	P	**P**	**17 57 21.0**	**-1.7**	
	baz=249,SNR=42							
WAT6				S	S	18 08 06.7	+11	
	baz=249							
H04S1	**CROZET ISLANDS**	**86.16**	**223**	P	P	17 57 34.5	+12	
	baz=84							
E21K	**Killik River**	**86.17**	**19**	IAmb	IAmb	17 58 24.7		
	comp=Z,707nm,1.0s							
E21K	**Killik River**	**86.17**	**19**	P	**P**	**17 57 22.1**	**-0.5**	
	baz=243							
E21K				S	S	18 08 04.9	+10	
	baz=243							
H04S2	**CROZET ISLANDS**	**86.17**	**223**	P	P	17 57 36.8	+14	
	baz=84,slow=74,SNR=3.0							
H04S3	**CROZET ISLANDS**	**86.18**	**223**	P	P	17 57 34.5	+12	
	baz=84,slow=74,SNR=4.4							
JLN	**Jalan Bani Buh**	**86.18**	**293**	P	**P**	**17 57 24.0**	**+0.4**	
	SNR=55							
JLN				P	**P**	**17 57 24.0**	**+0.4**	
	SNR=55							
C21K	**Knifeblade Rid**	**86.25**	**19**	P	**P**	**17 57 22.6**	**-0.2**	
	baz=242							
C21K				S	**S**	**18 08 03.3**	**+7.5**	
	baz=242							
H04N2	**CROZET ISLANDS**	**86.30**	**224**	P	**P**	**17 57 26.3**	**+2.9**	
	baz=106,slow=4.2,SNR=2.5							
H04N3	**CROZET ISLANDS**	**86.31**	**224**	P	**P**	**17 57 25.1**	**+1.6**	
	baz=106,slow=4.2,SNR=6.2							
H04N1	**CROZET ISLANDS**	**86.31**	**224**	P	**P**	**17 57 25.7**	**+2.2**	
	baz=106,slow=4.2,SNR=5.1							
EYAK	**Cordova Ski Ar**	**86.34**	**28**	P	**P**	**17 57 23.6**	**+0.2**	
EYAK	**Cordova Ski Ar**	**86.34**	**28**	P	**P**	**17 57 22.2**	**-1.3**	
	baz=251,SNR=8.0							
EYAK				S	S	18 08 08.6	+12	
	baz=251							
NEA2	**Nenana**	**86.34**	**24**	IAmb	IAmb	17 58 03.9		
	comp=Z,771nm,1.1s							
NEA2				IAMs_20	IAMs_20	18 31 05.3		
	comp=Z,227µm,21.0s							
NEA2	**Nenana**	**86.34**	**24**	P	**P**	**17 57 21.4**	**-2.0**	
	baz=248,SNR=32							
NEA2				S	S	18 08 09.6	+13	
	baz=248							
G22K	**Bettles**	**86.35**	**21**	P	**P**	**17 57 22.7**	**-0.7**	
	baz=245							
G22K				S	S	18 08 07.7	+11	
	baz=245							
I23K	**Minto, Yukon-K**	**86.44**	**23**	IAmb	IAmb	17 58 05.2		
	comp=Z,2µm,1.5s							
I23K				IAMs_20	IAMs_20	18 32 35.9		
	comp=Z,341µm,20.0s							
I23K	**Minto, Yukon-K**	**86.44**	**23**	P	**P**	**17 57 22.8**	**-1.1**	
	baz=247,SNR=30							
I23K				S	**S**	**18 08 04.3**	**+6.5**	
	baz=247							
DHY	**Denali Highway**	**86.48**	**25**	IAmb	IAmb	17 58 00.8		
	comp=Z,1µm,0.9s							
DHY				IAMs_20	IAMs_20	18 32 07.1		
	comp=Z,267µm,21.0s							
DHY	**Denali Highway**	**86.48**	**25**	P	**P**	**17 57 23.2**	**-1.1**	
	baz=249,SNR=72							
DHY				S	**S**	**18 08 07.4**	**+8.7**	
	baz=249							
KLU	**Klutina**	**86.57**	**27**	P	**P**	**17 57 24.0**	**-0.7**	
	baz=251,SNR=32							
KLU				S	S	18 08 09.7	+10	
	baz=251							
WBK	**Wadi Bani Khal**	**86.65**	**293**	P	**P**	**17 57 27.0**	**+1.1**	
	SNR=37							
WBK				P	**P**	**17 57 27.0**	**+1.1**	
	SNR=37							
M24K	**Tolsona, Glenn**	**86.67**	**26**	IAMs_20	IAMs_20	18 30 36.1		
	comp=Z,334µm,22.0s							
M24K	**Tolsona, Glenn**	**86.67**	**26**	P	**P**	**17 57 24.5**	**-0.6**	
	baz=250,SNR=22							
M24K				S	S	18 08 13.1	+13	
	baz=250							
WRH	**Wood River Hil**	**86.69**	**24**	IAmb	IAmb	17 58 14.5		
	comp=Z,1µm,1.1s							
A21K	**Barrow**	**86.75**	**16**	P	**P**	**17 57 24.5**	**-0.7**	
	baz=240,SNR=37							
A21K				S	S	18 08 09.7	+9.1	
	baz=240							
E22K	**Anaktuvuk Pass**	**86.76**	**20**	IAmb	IAmb	17 58 19.1		
	comp=Z,831nm,1.0s							
E22K	**Anaktuvuk Pass**	**86.76**	**20**	P	**P**	**17 57 25.1**	**-0.3**	
	baz=245							
E22K				S	S	18 08 10.7	+10	
	baz=245							
KAIM	**Kayak Island**	**86.77**	**29**	IAmb	IAmb	17 57 48.3		
	comp=Z,1µm,1.0s							
KAIM				IAMs_20	IAMs_20	18 30 07.0		
	comp=Z,240µm,21.0s							
KAIM	**Kayak Island**	**86.77**	**29**	P	**P**	**17 57 24.9**	**-0.7**	
	baz=252,SNR=6.6							
KAIM				S	S	18 08 12.6	+11	
	baz=252							
D22K	**Ayikyak River**	**86.79**	**19**	P	**P**	**17 57 25.6**	**+0.1**	
	baz=244							
D22K				S	S	18 08 11.8	+11	
	baz=244							
RAGM	**Ragged Mountai**	**86.79**	**28**	IAMs_20	IAMs_20	18 35 00.5		
	comp=Z,277µm,20.0s							
G23K	**Bananza Creek**	**86.80**	**22**	IAmb	IAmb	17 58 07.5		
	comp=Z,706nm,1.0s							
G23K				IAMs_20	IAMs_20	18 31 37.4		
	comp=Z,340µm,22.0s							
G23K	**Bananza Creek**	**86.80**	**22**	P	**P**	**17 57 25.3**	**-0.4**	
	baz=247							
G23K				S	S	18 08 11.8	+10	
	baz=247							
MDM	**Murphy Dome**	**86.81**	**23**	IAmb	IAmb	17 58 15.3		
	comp=Z,800nm,1.3s							
MSEY	**Mahe Island**	**86.83**	**266**	P	**P**	**17 57 27.2**	**+0.2**	
MSEY				IAmb	IAmb	17 57 57.8		
	comp=Z,907nm,1.4s							
MSEY	**Mahe Island**	**86.83**	**266**	*i* P	**P**	**17 57 27.1**	**+0.1**	
	SNR=20							
MSEY	**Mahe Island**	**86.83**	**266**	P	**P**	**17 57 27.2**	**+0.2**	
MSEY				pmax	pmax			
	comp=Z,907nm,1.5s							
MSEY	**Mahe Island**	**86.83**	**266**	P	**P**	**17 57 27.8**	**+0.8**	
MSEY				P	**P**	**17 57 27.8**	**+0.8**	
CCB	**Clear Creek Bu**	**86.87**	**24**	IAmb	IAmb	17 58 06.1		
	comp=Z,1µm,1.0s							
COLA	**College**	**86.93**	**24**	P	**P

baz=246,SNR=80
COLD S **S** **18 08 10.6 +7.9**
baz=246
HMT **Hamilton** **86.97 28** IAMs_20 IAMs_20 18 35 15.3
comp=Z,270µm,20.0s
BMRM **Bremner River** **87.01 28** P **P** **17 57 25.5 -1.3**
baz=252,SNR=33
BMRM S **S** **18 08 10.9 +7.3**
baz=252
WSAR **Wadi Sarin** **87.05 294** LR LR 18 38 16.3
comp=Z,51µm,22.0s,baz=124,slow=37
HDA **Harding Lake** **87.13 24** IAmb IAmb 17 57 52.8
comp=Z,824nm,1.2s
HDA IAMs_20 IAMs_20 18 31 32.2
comp=Z,233µm,21.0s
HDA **Harding Lake** **87.13 24** P **P** **17 57 25.2 -2.1**
baz=250,SNR=46
HDA S S 18 08 14.4 +10
baz=250
HDA S S 18 08 14.4 +10
baz=250
POKR **Poker Plat Res** **87.19 23** IAMs_20 IAMs_20 18 33 18.6
comp=Z,241µm,21.0s
POKR **Poker Plat Res** **87.19 23** P **P** **17 57 25.3 -2.2**
baz=249,SNR=26
POKR S **S** **18 08 12.7 +7.6**
baz=249
N25K **Chitina, Valde** **87.21 27** P **P** **17 57 27.4 -0.4**
baz=252,SNR=25
N25K S S 18 08 14.8 +9.2
baz=252
HARP **HAARP** **87.21 26** P **P** **17 57 26.3 -1.5**
baz=251,SNR=12
HARP S **S** **18 08 13.8 +8.3**
baz=251
BERG **Berg Lake** **87.26 28** IAMs_20 IAMs_20 18 35 23.8
comp=Z,239µm,21.0s
PAX **Paxson** **87.26 26** P **P** **17 57 27.1 -1.0**
baz=251,SNR=46
PAX S **S** **18 08 14.0 +8.0**
baz=251
H24K **Noodor Dome** **87.27 23** IAmb IAmb 17 57 56.9
comp=Z,2µm,1.5s
H24K IAMs_20 IAMs_20 18 33 22.9
comp=Z,336µm,21.0s
H24K **Noodor Dome** **87.27 23** P **P** **17 57 27.0 -1.0**
baz=249,SNR=92
H24K S **S** **18 08 13.1 +7.2**
baz=249
IL31 **87.28 24** IAmb IAmb 17 58 07.8
comp=Z,781nm,0.9s
ILAR **Eielson Array** **87.28 24** P **P** **17 57 26.0 -2.0**
ILAR **Eielson Array** **87.28 24** P **P** **17 57 25.9 -2.0**
comp=Z,101nm,0.8s,baz=258,slow=4.3,SNR=362
ILAR S **SKSac** **18 07 56.2 +3.0**
comp=Z,3.0nm,0.9s,baz=311,slow=2.3,SNR=1.3
ILAR PKKPbc **PKKPbc** **18 15 18.9 -2.8**
comp=Z,3.9nm,0.8s,baz=8.0,slow=0.4,SNR=5.2
ILAR LR LR 18 32 06.9
comp=Z,139µm,21.3s,baz=248,slow=33
comp=Z,101nm,0.8s
MHTO **MHTO** **87.35 291** P **P** **17 57 29.2 -0.1**
SNR=157
MHTO P **P** **17 57 29.2 -0.1**
SNR=157
BGLC **Bering Glacier** **87.37 29** P **P** **17 57 27.9 -0.6**
baz=253
BGLC S S 18 08 20.4 +13
baz=253
K24K **Donnelly Dome** **87.41 25** P **P** **17 57 27.4 -1.2**
baz=251,SNR=24
K24K S **S** **18 08 12.8 +5.5**
baz=251
JMDO **Jabal Madar** **87.41 293** P **P** **17 57 29.5 -0.1**
SNR=16
E23K **Chandalar** **87.48 20** P **P** **17 57 29.0 0.0**
baz=247
E23K S S 18 08 18.0 +10
baz=247
D23K **Nanushuk River** **87.49 19** P **P** **17 57 29.4 +0.5**
baz=246
D23K S **S** **18 08 16.1 +8.3**
baz=246
GLB **Gilahina Butte** **87.52 27** IAmb IAmb 17 57 52.1
comp=Z,1µm,1.2s
BIDO **Bidbid** **87.54 294** P **P** **17 57 30.5 +0.4**
SNR=57
BIDO P **P** **17 57 30.5 +0.4**
SNR=57
SMDO **Samad** **87.55 293** P **P** **17 57 30.5 +0.1**
SNR=26
DQM **DQM** **87.61 290** P **P** **17 57 31.0 +0.4**
SNR=40
DQM P **P** **17 57 31.0 +0.4**
SNR=40
VRDI **Verde Repeater** **87.62 28** IAmb IAmb 17 57 52.7
comp=Z,1µm,1.3s
CRQE **Cirque** **87.65 28** P **P** **17 57 29.5 -0.5**
baz=253,SNR=40
CRQE S **S** **18 08 16.8 +6.9**
baz=253
G24K **Hadweenzic Riv** **87.74 22** IAMs_20 IAMs_20 18 32 05.5
comp=Z,341µm,22.0s
G24K **Hadweenzic Riv** **87.74 22** P **P** **17 57 29.7 -0.5**
baz=249
G24K S **S** **18 08 14.4 +4.0**
baz=249
J25K **Salcha River,** **87.84 24** IAmb IAmb 17 58 11.6
comp=Z,1µm,1.1s
J25K IAMs_20 IAMs_20 18 31 52.0
comp=Z,266µm,21.0s
J25K **Salcha River,** **87.84 24** P **P** **17 57 29.1 -1.6**
baz=251
J25K S **S** **18 08 16.8 +5.3**
baz=251
MCARA **McCarthy VSAT** **87.86 28** P **P** **17 57 30.1 -0.7**
baz=253,SNR=17
MCARA S **S** **18 08 16.9 +5.2**
baz=253
F24K **Squaw Lake** **87.89 21** IAMs_20 IAMs_20 18 32 12.0
comp=Z,304µm,21.0s
F24K **Squaw Lake** **87.89 21** P **P** **17 57 30.8 -0.1**
baz=249
F24K S **S** **18 08 18.0 +6.2**
baz=249
MESA **MESA** **88.03 29** P **P** **17 57 31.0 -0.9**
baz=254,SNR=8.2
MESA S **S** **18 08 19.6 +5.9**
baz=254
PRP **Porcupine Dome** **88.08 23** IAMs_20 IAMs_20 18 33 44.2
comp=Z,254µm,21.0s
PRP **Porcupine Dome** **88.08 23** P **P** **17 57 29.6 -2.4**
baz=251,SNR=12
PRP S **S** **18 08 18.9 +5.0**
baz=251
JASK **Jask - Hormozg** **88.09 296** P **P** **17 57 34.3 +1.6**
M26K **Nabesna, AK** **88.17 27** IAMs_20 IAMs_20 18 31 33.3
comp=Z,348µm,22.0s
M26K **Nabesna, AK** **88.17 27** P **P** **17 57 31.4 -1.0**
baz=253
M26K S S 18 08 24.2 +9.4
baz=253
D24K **Happy Valley** **88.17 19** P **P** **17 57 32.0 -0.2**
baz=248
D24K S **S** **18 08 23.2 +8.9**
baz=248
L26K **Log Cabin Wild** **88.20 26** IAmb IAmb 17 57 58.0
comp=Z,850nm,1.2s
L26K IAMs_20 IAMs_20 18 35 49.6
comp=Z,289µm,20.0s
L26K **Log Cabin Wild** **88.20 26** P **P** **17 57 31.7 -0.8**
baz=253,SNR=60
L26K S **S** **18 08 21.4 +6.5**
baz=253
SCRK **Sand Creek** **88.21 25** IAmb IAmb 17 58 16.3
comp=Z,2µm,1.7s
SCRK **Sand Creek** **88.21 25** P **P** **17 57 31.4 -1.3**
baz=252,SNR=52
SCRK S **S** **18 08 19.5 +4.3**
baz=252
G25K **Bearman Lake** **88.27 22** P **P** **17 57 32.9 +0.2**
baz=250
G25K S S 18 08 26.6 +11
baz=250
BSY **Bisya** **88.29 293** P **P** **17 57 33.8 0.0**
SNR=24
BSY P **P** **17 57 33.8 0.0**
SNR=24

HOQ **Hoqain** **88.29 294** P **P** **17 57 34.1 +0.3**
SNR=20
HOQ P **P** **17 57 34.1 +0.3**
SNR=20
C24K **Franklin Bluff** **88.43 19** P **P** **17 57 33.3 -0.1**
baz=248
C24K S **S** **18 08 23.5 +6.7**
baz=248
CTG **Chitna Glacier** **88.53 28** P **P** **17 57 33.9 -0.4**
baz=255,SNR=44
CTG S S 18 08 27.8 +9.4
baz=255
FYU **Fort Yukon** **88.53 22** IAMs_20 IAMs_20 18 32 17.1
comp=Z,289µm,22.0s
J26L **Joseph Creek** **88.55 25** IAmb IAmb 17 58 11.2
comp=Z,1µm,1.4s
J26L IAMs_20 IAMs_20 18 33 32.7
comp=Z,338µm,21.0s
J26L **Joseph Creek** **88.55 25** P **P** **17 57 33.2 -0.9**
baz=253
J26L S S 18 08 28.8 +11
baz=253
M27K **Edge Creek, AK** **88.66 27** IAmb IAmb 17 57 58.1
comp=Z,907nm,0.9s
M27K IAMs_20 IAMs_20 18 32 01.4
comp=Z,291µm,22.0s
M27K **Edge Creek, AK** **88.66 27** P **P** **17 57 34.1 -0.7**
baz=254
M27K S **S** **18 08 25.5 +6.0**
baz=254
F25K **Christian Rive** **88.72 21** P **P** **17 57 34.7 -0.1**
baz=251
F25K S **S** **18 08 26.7 +7.0**
baz=251
PINM **Pinnacle** **88.83 29** P **P** **17 57 35.4 -0.2**
baz=256,SNR=11
PINM S **S** **18 08 24.3 +3.3**
baz=256
L27K **Beaver Creek,** **88.88 26** IAmb IAmb 17 57 59.1
comp=Z,1µm,1.2s
L27K IAMs_20 IAMs_20 18 31 32.4
comp=Z,299µm,22.0s
L27K **Beaver Creek,** **88.88 26** P **P** **17 57 35.2 -0.5**
baz=254,SNR=90
L27K S **S** **18 08 28.4 +7.1**
baz=254
E25K **Arctic Village** **88.92 21** IAMs_20 IAMs_20 18 31 50.4
comp=Z,258µm,22.0s
E25K **Arctic Village** **88.92 21** P **P** **17 57 35.8 0.0**
baz=251,SNR=145
E25K S **S** **18 08 27.7 +6.1**
baz=251
I26K **Coal Creek Min** **88.95 24** IAmb IAmb 17 58 13.3
comp=Z,649nm,1.4s
I26K IAMs_20 IAMs_20 18 38 59.7
comp=Z,234µm,20.0s
I26K **Coal Creek Min** **88.95 24** P **P** **17 57 34.8 -1.1**
baz=253
I26K S **S** **18 08 25.9 +4.0**
baz=253
ARQ **Araqi** **88.98 293** P **P** **17 57 37.1 +0.1**
SNR=30
ARQ P **P** **17 57 37.1 +0.1**
SNR=30
K27K **Chicken** **89.03 25** IAMs_20 IAMs_20 18 32 43.2
comp=Z,289µm,22.0s
K27K **Chicken** **89.03 25** P **P** **17 57 36.5 +0.2**
baz=254
K27K S **S** **18 08 28.2 +5.5**
baz=254
D25K **Kavik River** **89.05 20** IAmb IAmb 17 58 37.1
comp=Z,908nm,1.1s
D25K **Kavik River** **89.05 20** P **P** **17 57 35.8 -0.5**
baz=250
D25K S **S** **18 08 26.3 +3.6**
baz=250
SOHO **SOHO** **89.07 294** *i* P **P** **17 57 36.3 -1.0**
SNR=19
SOHO **SOHO** **89.07 294** P **P** **17 57 36.9 -0.5**
BVCY **Beaver Creek** **89.13 27** P **P** **17 57 36.5 -0.3**
baz=255,SNR=43
BVCY S **S** **18 08 29.6 +5.9**
baz=255
PNL **Peninsula** **89.14 30** P **P** **17 57 37.9 +0.9**
PNL **Peninsula** **89.14 30** P **P** **17 57 36.5 -0.5**
baz=256,SNR=6.3
PNL S **S** **18 08 30.6 +6.7**
baz=256
YUK3 **Moose Creek** **89.15 28** P **P** **17 57 36.7 -0.5**
baz=256,SNR=51
YUK3 S **S** **18 08 29.7 +5.4**
baz=256
SHAO **Shalim** **89.18 288** *i* P **P** **17 57 37.5 -0.5**
SNR=5.9
SHAO **Shalim** **89.18 288** P **P** **17 57 38.5 +0.5**
SNR=9.1
SHAO P **P** **17 57 38.5 +0.5**
SNR=9.1
G26K **Porcupine Rive** **89.20 22** P **P** **17 57 37.3 +0.3**
baz=252
G26K S **S** **18 08 29.0 +4.9**
baz=252
F26K **Sheenjek River** **89.29 21** P **P** **17 57 37.9 +0.3**
baz=252
F26K S **S** **18 08 29.4 +4.4**
baz=252
YUK8 **Steele Glacier** **89.35 28** P **P** **17 57 37.7 -0.6**
baz=256,SNR=22
YUK8 S **S** **18 08 30.7 +4.3**
baz=256
MDH **Madha** **89.42 295** P **P** **17 57 37.9 -1.2**
MDH **Madha** **89.42 295** P **P** **17 57 39.1 0.0**
MDH P **P** **17 57 39.1 0.0**
UOSS **Minazif** **89.47 295** P **P** **17 57 38.4 -0.8**
UOSS **Minazif** **89.47 295** *i* P **P** **17 57 38.2 -1.1**
SNR=12
UOSS **Minazif** **89.47 295** P **P** **17 57 38.8 -0.4**
UOSS P **P** **17 57 38.8 -0.4**
HATD **Hatta, Dubai** **89.52 295** *i* P **P** **17 57 38.7 -0.8**
SNR=11
HATD **Hatta, Dubai** **89.52 295** P **P** **17 57 39.2 -0.3**
SNR=11
GEYT **Alibeck** **89.54 308** PKKPbc PKKPbc 18 15 12.7 -2.4
MSFE **Esma-Masafi** **89.56 295** *i* P **P** **17 57 39.2 -0.5**
SNR=20
MASF **Masafi** **89.56 295** P **P** **17 57 39.5 -0.2**
SNR=10.0
MASF P **P** **17 57 39.5 -0.2**
SNR=10.0
ASHO **Ashiyiah** **89.56 295** *i* P **P** **17 57 40.0 +0.2**
SNR=16
ASHO **Ashiyiah** **89.56 295** P **P** **17 57 39.2 -0.6**
SNR=12
EGAK **Eagle** **89.62 25** IAmb IAmb 17 58 04.6
comp=Z,1µm,1.3s
EGAK **Eagle** **89.62 25** P **P** **17 57 38.2 -0.8**
baz=255,SNR=81
EGAK S **S** **18 08 31.9 +3.8**
baz=255
I27K **Kandik River** **89.65 24** P **P** **17 57 39.2 -0.1**
baz=254
I27K S **S** **18 08 32.1 +3.5**
baz=254
SHME **Shamm** **89.65 296** *i* P **P** **17 57 40.4 +0.3**
SNR=22
SHME **Shamm** **89.65 296** P **P** **17 57 40.2 +0.1**
SNR=9.9
SHME P **P** **17 57 40.2 +0.1**
SNR=9.9
O29M **Mount Kennedy** **89.69 29** IAmb IAmb 17 58 02.5
comp=Z,899nm,1.0s
O29M **Mount Kennedy** **89.69 29** P **P** **17 57 39.4 -0.3**
baz=257
O29M S **S** **18 08 33.2 +4.0**
baz=257
ALNE **Al Ain** **89.77 294** *i* P **P** **17 57 40.9 +0.2**
SNR=24
ALNE **Al Ain** **89.77 294** P **P** **17 57 40.6 -0.1**
SNR=33
ALNE P **P** **17 57 40.6 -0.1**
SNR=33
DMTO **DMTO** **89.79 288** P **P** **17 57 40.7 -0.1**
SNR=9.1
DMTO P **P** **17 57 40.7 -0.1**
SNR=9.1
H27K **Steamboat Moun** **89.86 23** P **P** **17 57 40.3 0.0**
baz=254
H27K S **S** **18 08 35.9 +5.5**
baz=254
YUK4 **Talbot Arm** **89.89 28** P **P** **17 57 40.6 -0.1**
baz=257,SNR=45
YUK4 S **S** **18 08 31.5 +0.3**
baz=257
YUK6 **Outpost Mounta** **89.94 29** P **P** **17 57 40.4 -0.5**
baz=257,SNR=8.4
YUK6 S **S** **18 08 35.3 +3.6**
baz=257
ABKAR **Akbulak array** **89.94 319** IAmb IAmb 17 58 10.8
comp=Z,1000nm,1.8s
P29M **Windy Craggy** **89.96 30** IAmb IAmb 17 58 09.0
comp=Z,2µm,1.4s
P29M **Windy Craggy** **89.96 30** P **P** **17 57 40.6 -0.2**
baz=258
P29M S **S** **18 08 34.4 +2.9**
baz=258
NAZ **Nazwa, Dubai** **89.96 295** *i* P **P** **17 57 42.0 +0.4**
SNR=9.3
NAZ **Nazwa, Dubai** **89.96 295** P **P** **17 57 41.2 -0.3**
SNR=9.8
FAQ **Al Faqa, Dubai** **89.99 295** *i* P **P** **17 57 40.7 -1.0**
SNR=18
FAQ **Al Faqa, Dubai** **89.99 295** P **P** **17 57 41.3 -0.4**
SNR=13
UMQ **Umm Al-Quwin** **90.02 296** P **P** **17 57 41.6 -0.2**
UMQ P **P** **17 57 41.6 -0.2**
UMZA **Um Al Zommool** **90.15 293** P **P** **17 57 41.9 -0.6**
UMZA P **P** **17 57 41.9 -0.6**
DAWY **Dawson** **90.19 25** IAmb IAmb 17 58 19.9
comp=Z,2µm,1.3s
DAWY IAMs_20 IAMs_20 18 33 19.0
comp=Z,363µm,21.0s
DAWY **Dawson** **90.19 25** P **P** **17 57 41.3 -0.4**
baz=256,SNR=117
DAWY S **S** **18 08 33.5 0.0**
baz=256
ASUD **Al Ashush, Dub** **90.22 295** *i* P **P** **17 57 42.2 -0.6**
SNR=21
ASUD **Al Ashush, Dub** **90.22 295** P **P** **17 57 43.1 +0.3**
SNR=9.7
M29M **Somme Creek** **90.22 27** IAmb IAmb 17 58 05.4
comp=Z,1µm,1.4s
M29M IAMs_20 IAMs_20 18 32 02.9
comp=Z,255µm,22.0s
M29M **Somme Creek** **90.22 27** P **P** **17 57 41.8 -0.2**
baz=257
M29M S **S** **18 08 35.7 +1.6**
baz=257
I28M **Miner Creek** **90.29 24** IAmb IAmb 17 58 20.4
comp=Z,935nm,1.2s
I28M IAMs_20 IAMs_20 18 37 49.1
comp=Z,247µm,20.0s
I28M **Miner Creek** **90.29 24** P **P** **17 57 41.7 -0.6**
baz=256
I28M S **S** **18 08 35.0 +0.5**
baz=256
HYT **Haines Junctio** **90.32 29** IAmb IAmb 17 58 33.8
comp=Z,761nm,1.2s
HYT IAMs_20 IAMs_20 18 37 53.9
comp=Z,227µm,20.0s
HYT **Haines Junctio** **90.32 29** P **P** **17 57 42.2 -0.4**
baz=258,SNR=19
HYT S **S** **18 08 32.2 -2.8**
baz=258
S31K **Pelican** **90.39 32** IAmb IAmb 17 58 37.0
comp=Z,1µm,1.5s
S31K **Pelican** **90.39 32** P **P** **17 57 42.3 -0.5**
baz=259
S31K S **S** **18 08 36.4 +1.0**
baz=259
P30M **Million Dollar** **90.44 30** P **P** **17 57 42.6 -0.5**
baz=259
P30M S **S** **18 08 36.7 +0.6**
baz=259
RBK **Rabkut** **90.47 287** P **P** **17 57 43.5 -0.6**
SNR=48
RBK P **P** **17 57 43.5 -0.6**
SNR=48
L29M **L29M** **90.52 27** IAmb IAmb 17 58 06.9
comp=Z,1µm,1.1s
L29M IAMs_20 IAMs_20 18 37 10.9
comp=Z,241µm,20.0s
L29M **L29M** **90.52 27** P **P** **17 57 43.4 +0.1**
baz=258
L29M S **S** **18 08 36.1 -0.5**
baz=258
AJN **Ajban** **90.52 295** *i* P **P** **17 57 42.9 -1.2**
SNR=6.6
AJN **Ajban** **90.52 295** P **P** **17 57 43.6 -0.6**
SNR=7.8
AJN P **P** **17 57 43.6 -0.6**
SNR=7.8
PLBC **Pleasant Camp** **90.61 30** P **P** **17 57 42.8 -1.0**
baz=259
PLBC S **S** **18 08 37.4 0.0**
baz=259
N30M **Aishikik Lake** **90.65 28** P **P** **17 57 43.6 -0.5**
baz=258
N30M S **S** **18 08 37.6 -0.3**
baz=258
DOK **Doka** **90.66 289** P **P** **17 57 44.4 -0.5**
SNR=25
DOK P **P** **17 57 44.4 -0.5**
SNR=25
SIT **Sitka** **90.71 33** P **P** **17 57 44.7 +0.4**
SIT **Sitka** **90.71 33** P **P** **17 57 43.5 -0.8**
baz=260
SIT S **S** **18 08 39.8 +1.5**
baz=260
R31K **City Hall, Gus** **90.73 31** P **P** **17 57 43.3 -1.1**
baz=260
R31K S **S** **18 08 38.0 -0.5**
baz=260
J29N **Klondike Camp** **90.77 25** IAmb IAmb 17 58 08.3
comp=Z,558nm,1.0s
J29N IAMs_20 IAMs_20 18 34 10.5
comp=Z,392µm,21.0s
J29N **Klondike Camp** **90.77 25** P **P** **17 57 44.5 -0.1**
baz=258,SNR=32
J29N S **S** **18 08 38.2 -0.7**
baz=258
SVE **Sverdlovsk** **90.80 327** *d* P **P** **17 57 43.5 -1.2**
SVE *e* S **SKSac** **18 08 12.9 -1.5**
SVE *e* 18 14 40.3
SVE *e* 18 18 25.8
SVE pmax pmax
comp=Z,793nm,1.8s
SVE pmax pmax
comp=Z,13µm,17.6s
SVE MLR MLR
comp=Z,152µm,19.0s
SVE MLR MLR
comp=E,121µm,19.0s
F28M **Old Crow** **90.84 22** IAmb IAmb 17 58 19.8
comp=Z,1µm,1.7s
F28M IAMs_20 IAMs_20 18 34 00.2
comp=Z,363µm,22.0s
F28M **Old Crow** **90.84 22** P **P** **17 57 44.4 -0.4**
baz=256,SNR=26
F28M S **S** **18 08 37.6 -1.8**
baz=256
WHFO **Wadi Hawf** **90.92 288** P **P** **17 57 45.4 -0.8**
SNR=30
WHFO P **P** **17 57 45.4 -0.8**
SNR=30
K29M **Barlow Dome** **90.94 26** IAmb IAmb 17 58 08.8
comp=Z,951nm,1.1s
K29M IAMs_20 IAMs_20 18 32 58.0
comp=Z,310µm,22.0s
K29M **Barlow Dome** **90.94 26** P **P** **17 57 44.6 -0.8**
baz=258
K29M S **S** **18 08 39.0 -1.6**
baz=258
O30N **Mendenhall** **90.99 29** IAmb IAmb 17 58 11.4
comp=Z,2µm,1.9s
O30N **Mendenhall** **90.99 29** P **P** **17 57 45.4 -0.2**
baz=259,SNR=16
O30N S **S** **18 08 40.2 -0.8**
baz=259
M30M **Minto, Yukon** **91.01 27** P **P** **17 57 45.0 -0.6**
baz=259,SNR=33
M30M S **S** **18 08 41.2 +0.1**
baz=259
H29M **Whitestone** **91.10 23** IAmb IAmb 17 59 02.3
comp=Z,1µm,1.4s
H29M **Whitestone** **91.10 23** P **P** **17 57 45.4 -0.5**
baz=257

H29M S **S** **18 08 40.7 -1.0**
baz=257
SKAG **Skagway** **91.13 30** IAmb IAmb 17 58 11.8
comp=Z,611nm,1.1s
SKAG **Skagway** **91.13 30** P **P** **17 57 46.6 +0.4**
SKAG **Skagway** **91.13 30** P **P** **17 57 45.8 -0.4**
baz=260,SNR=10
SKAG S **S** **18 08 42.8 +0.6**
baz=260
S32K **Killisnoo** **91.18 32** IAmb IAmb 17 58 41.4
comp=Z,793nm,1.4s
S32K **Killisnoo** **91.18 32** P **P** **17 57 45.9 -0.5**
baz=261,SNR=6.0
ABTO **Aybut** **91.31 287** P **P** **17 57 47.9 -0.1**
SNR=41
ABTO P **P** **17 57 47.9 -0.1**
SNR=41
R32K **Eaglecrest** **91.34 32** IAMs_20 IAMs_20 18 36 17.1
comp=Z,233µm,20.0s
R32K **Eaglecrest** **91.34 32** P **P** **17 57 46.5 -0.7**
baz=261
R32K S **S** **18 08 44.7 +0.5**
baz=261
AKTO **Aktyubinsk** **91.36 320** P **P** **17 57 46.0 -1.5**
AKTO **Aktyubinsk** **91.36 320** P **P** **17 57 46.0 -1.5**
comp=Z,62nm,0.9s,baz=87,slow=4.2,SNR=97
AKTO S **SKSac** **18 08 20.4 +2.5**
comp=Z,8.5nm,1.0s,baz=150,slow=13,SNR=1.1
AKTO LR LR 18 39 50.6
comp=Z,106µm,21.9s,baz=98,slow=36
comp=Z,62nm,0.9s
JIS **Juneau Island** **91.41 32** IAMs_20 IAMs_20 18 36 19.9
comp=Z,224µm,21.0s
JIS **Juneau Island** **91.41 32** P **P** **17 57 48.5 +1.0**
MZWR **Madinat Zayed** **91.44 294** P **P** **17 57 47.6 -0.8**
MZWR P **P** **17 57 47.6 -0.8**
WHY **Whitehorse** **91.56 29** P **P** **17 57 47.6 -0.7**
baz=260,SNR=9.1
WHY S **S** **18 08 43.8 -2.6**
baz=260
J30M **Hart River** **91.60 25** IAmb IAmb 17 58 13.4
comp=Z,1µm,1.4s
J30M **Hart River** **91.60 25** P **P** **17 57 48.1 -0.4**
baz=259
J30M S **S** **18 08 43.9 -2.6**
baz=259
MAYO **Mayo, Yukon** **91.60 26** IAmb IAmb 17 58 33.8
comp=Z,888nm,1.0s
MAYO **Mayo, Yukon** **91.60 26** P **P** **17 57 47.6 -0.7**
baz=260,SNR=8.0
MAYO S **S** **18 08 44.0 -2.4**
baz=260
D28M **Stokes Point** **91.65 20** P **P** **17 57 46.5 -1.9**
baz=257
D28M S **S** **18 08 44.2 -2.3**
baz=257
CRAG **Craig** **91.67 35** IAMs_20 IAMs_20 18 33 19.9
comp=Z,318µm,20.0s
CRAG **Craig** **91.67 35** P **P** **17 57 49.3 +0.6**
CRAG **Craig** **91.67 35** P **P** **17 57 48.4 -0.4**
baz=262
CRAG S **S** **18 08 47.2 0.0**
baz=262
I30M **Mount Dempster** **91.70 25** IAmb IAmb 17 58 17.8
comp=Z,450nm,0.9s
I30M **Mount Dempster** **91.70 25** P **P** **17 57 47.8 -1.1**
baz=259
I30M S **S** **18 08 46.4 -1.1**
baz=259
H02S1 **DAWSON INLET T** **91.72 37** P P 17 58 01.9 +13
E29M **Blow River** **91.74 21** IAMs_20 IAMs_20 18 34 42.0
comp=Z,301µm,22.0s
E29M **Blow River** **91.74 21** P **P** **17 57 47.8 -1.0**
baz=258
E29M S **S** **18 08 46.6 -0.9**
baz=258
U33K **Whale Pass** **91.76 34** IAMs_20 IAMs_20 18 33 13.3
comp=Z,293µm,20.0s
U33K **Whale Pass** **91.76 34** P **P** **17 57 48.0 -1.2**
baz=262
U33K S **S** **18 08 45.7 -2.3**
baz=262
EPYK **Eagle Plains** **91.78 23** P **P** **17 57 48.2 -0.9**
baz=259,SNR=49
EPYK S **S** **18 08 44.8 -3.2**
baz=259
ARU **Arti** **91.87 326** P **P** **17 57 47.9 -1.8**
ARU **Arti** **91.87 326***c i* P **P** **17 57 47.9 -1.8**
ARU 18 01 26.1
ARU PPP PPP 18 03 24.4
ARU S **SKSac** **18 08 20.1 -0.4**
ARU SP **SPn** **18 10 02.7 +3.5**
ARU pmax pmax
comp=Z,274nm,1.1s
ARU MLR MLR
comp=Z,143µm,19.0s
ARU **Arti** **91.87 326** P **P** **17 57 47.7 -2.0**
comp=Z,135nm,1.0s,baz=100,slow=3.1,SNR=160
ARU S **SKSac** **18 08 16.9 -3.6**
comp=Z,7.1nm,0.8s,baz=342,slow=20,SNR=1.7
ARU LR LR 18 41 22.6
comp=Z,148µm,19.8s,baz=94,slow=37
comp=Z,135nm,1.0s
T33K **Petersburg** **91.95 33** P **P** **17 57 49.7 -0.4**
baz=262
T33K S **S** **18 08 45.6 -4.1**
baz=262
P32M **Atlin** **91.96 30** P **P** **17 57 49.3 -0.9**
baz=261,SNR=9.1
P32M S **S** **18 08 49.5 -0.4**
baz=261
M31M **Drury Creek, Y** **92.04 28** IAMs_20 IAMs_20 18 37 17.3
comp=Z,221µm,21.0s
M31M **Drury Creek, Y** **92.04 28** P **P** **17 57 49.5 -0.9**
baz=261,SNR=10.0
M31M S **S** **18 08 48.9 -1.5**
baz=261
G30M **tAoh Zraii Nji** **92.09 23** IAmb IAmb 17 58 19.0
comp=Z,639nm,1.2s
G30M IAMs_20 IAMs_20 18 36 30.0
comp=Z,227µm,20.0s
G30M **tAoh Zraii Nji** **92.09 23** P **P** **17 57 49.3 -1.3**
baz=259
G30M S **S** **18 08 44.3 -6.5**
baz=259
WRAK **Wrangell Islan** **92.23 34** IAmb IAmb 17 58 13.8
comp=Z,608nm,1.2s
WRAK **Wrangell Islan** **92.23 34** IAMs_20 IAMs_20 18 34 56.5
comp=Z,240µm,20.0s
WRAK **Wrangell Islan** **92.23 34** P **P** **17 57 50.0 -1.3**
baz=262,SNR=5.3
WRAK S **S** **18 08 46.8 -5.4**
baz=262
F30M **Barrier River** **92.37 22** P **P** **17 57 50.6 -1.2**
baz=260
F30M S **S** **18 08 47.5 -5.6**
baz=260
GHWR **Ruwais** **92.37 294** P **P** **17 57 52.3 -0.5**
GHWR P **P** **17 57 52.3 -0.5**
JRN **Qarnain Island** **92.49 295** P **P** **17 57 53.3 0.0**
JRN P **P** **17 57 53.3 0.0**
P33M **Teslin, Yukon** **92.50 30** P **P** **17 57 52.1 -0.6**
baz=262,SNR=11
P33M S **S** **18 08 50.0 -4.7**
baz=262
V35K **Ketchikan** **92.50 35** IAmb IAmb 17 58 28.8
comp=Z,526nm,1.3s
V35K IAMs_20 IAMs_20 18 33 53.9
comp=Z,276µm,20.0s
V35K **Ketchikan** **92.50 35** P **P** **17 57 51.6 -1.0**
baz=263
V35K S **S** **18 08 49.0 -5.6**
baz=263
N32M **Quiet Lake** **92.50 29** IAmb IAmb 17 58 18.0
comp=Z,475nm,1.1s
N32M **Quiet Lake** **92.50 29** P **P** **17 57 51.5 -1.1**
baz=262
N32M S **S** **18 08 50.0 -4.6**
baz=262
FARO **Faro, Yukon** **92.53 28** P **P** **17 57 51.8 -0.9**
baz=262,SNR=20
FARO S **S** **18 08 49.2 -5.6**
baz=262
Q32M **Nakina River** **92.61 31** IAmb IAmb 17 58 21.2
comp=Z,1µm,1.8s
Q32M **Nakina River** **92.61 31** P **P** **17 57 52.9 -0.4**
baz=263
Q32M S **S** **18 08 51.5 -4.5**
baz=263
FOMA **Nahampoana Res** **92.67 245** IAmb IAmb 17 58 26.3
comp=Z,1µm,1.7s
FOMA **Nahampoana Res** **92.67 245** P **P** **17 57 55.4 +1.3**
G31M **Satah River** **92.84 23** IAmb IAmb 17 58 22.3
comp=Z,1µm,1.4s
G31M **Satah River** **92.84 23** P **P** **17 57 52.4 -1.5**
baz=261,SNR=37
G31M S S 18 08 45.7 -11
baz=261
ELIB **Princess Elisa** **92.95 196** *d* P **P** **17 57 54.4 -0.3**
comp=Z,398nm,1.0s
S34M **Telegraph Cree** **93.07 32** IAmb IAmb 17 58 49.6
comp=Z,499nm,1.4s
S34M **Telegraph Cree** **93.07 32** P **P** **17 57 54.9 -0.3**
baz=264,SNR=8.4
S34M S **S** **18 08 58.5 -1.2**
baz=264
F31M **Tsiigehtchic** **93.12 23** IAmb IAmb 17 58 23.4
comp=Z,666nm,1.3s
F31M IAMs_20 IAMs_20 18 35 50.4
comp=Z,217µm,20.0s
F31M **Tsiigehtchic** **93.12 23** P **P** **17 57 53.5 -1.7**
baz=262,SNR=46
F31M S **S** **18 08 52.9 -6.8**
baz=262
ABPO **Ambohimpanom** **93.25 251** P **P** **17 57 56.9 -0.2**
ABPO **Ambohimpanom** **93.25 251** P **P** **17 57 56.9 -0.2**
ABPO pmax pmax
comp=Z,145nm,1.4s
VOI **Vohitsoka** **93.26 248** P **P** **17 57 57.3 +0.2**
VOI **Vohitsoka** **93.26 248** P **P** **17 57 57.5 +0.4**
VOI **Vohitsoka** **93.26 248** P **P** **17 57 57.6 +0.5**
SNR=13
GRNB **Grenville Isla** **93.29 36** IAmb IAmb 17 58 18.6
comp=Z,598nm,1.6s
INK **Inuvik** **93.33 22** IAMs_20 IAMs_20 18 35 40.8
comp=Z,233µm,22.0s
INK **Inuvik** **93.33 22** P **P** **17 57 54.6 -1.5**
baz=262
INK S **S** **18 08 52.8 -8.6**
baz=262
INK **Inuvik** **93.33 22** LR LR 18 35 52.0
comp=Z,224µm,21.7s,baz=246,slow=33
R33M **Jennings River** **93.33 31** IAmb IAmb 17 58 22.3
comp=Z,1µm,1.9s
R33M **Jennings River** **93.33 31** P **P** **17 57 55.9 -0.7**
baz=264
R33M S **S** **18 08 53.8 -8.4**
baz=264
T35M **Bob Quinn** **93.45 33** IAmb IAmb 17 58 51.4
comp=Z,1µm,2.0s
T35M IAMs_20 IAMs_20 18 37 35.8
comp=Z,269µm,20.0s
T35M **Bob Quinn** **93.45 33** P **P** **17 57 56.6 -0.4**
baz=264,SNR=7.0
T35M S **S** **18 08 57.3 -5.9**
baz=264
SLWR **Sila** **93.46 294** P **P** **17 57 57.4 -0.4**
SLWR P **P** **17 57 57.4 -0.4**
U35K **Hyder** **93.46 34** P **P** **17 57 56.2 -0.8**
baz=264
U35K S **S** **18 08 56.4 -6.8**
baz=264
MMPY **Sheldon Lake,** **93.54 28** P **P** **17 57 56.7 -0.7**
baz=264,SNR=11
MMPY S S 18 08 54.8 -9.0
baz=264
DLBC **Dease Lake** **93.71 32** IAmb IAmb 17 58 35.4
comp=Z,683nm,1.4s
DLBC IAMs_20 IAMs_20 18 37 40.7
comp=Z,213µm,20.0s
DLBC **Dease Lake** **93.71 32** P **P** **17 57 57.5 -0.8**
baz=264,SNR=8.9
DLBC S **S** **18 08 58.5 -7.0**
baz=264
DLBC **Dease Lake** **93.71 32** LR LR 18 34 48.6
comp=Z,119µm,19.8s,baz=286,slow=32
BBB **Bella Bella** **94.25 38** IAMs_20 IAMs_20 18 36 12.5
comp=Z,209µm,20.0s
BBB **Bella Bella** **94.25 38** LR LR 18 36 42.3
comp=Z,151µm,18.8s,baz=255,slow=33
SHMA **Al-Shehemyia** **94.27 295** P **P** **17 58 00.6 -0.9**
SMRA **Abu-Samra** **94.31 294** P **P** **17 58 01.2 -0.4**
WTLY **Watson Lake, Y** **94.49 30** IAmb IAmb 17 58 38.7
comp=Z,1µm,1.6s
WTLY **Watson Lake, Y** **94.49 30** P **P** **17 58 01.0 -0.7**
baz=266,SNR=17
WTLY S S 18 09 02.0 -10
baz=266
TGTN **Hyland Airport** **94.85 29** P **P** **17 58 02.5 -0.9**
baz=266,SNR=14
TGTN S S 18 09 04.6 -11
baz=266
BELA **Belgrano 2** **96.09 181** P **P** **17 58 07.0 -1.8**
TOAD **Toad River Com** **96.24 32** P **P** **17 58 08.6 -1.2**
baz=269
C03A **Quillayute Air** **96.29 43** IAMs_20 IAMs_20 18 34 39.8
comp=Z,239µm,22.0s
KMPM **Mount Pierce** **96.30 50** IAmb IAmb 17 58 48.6
comp=Z,1µm,1.9s
KMPM IAMs_20 IAMs_20 18 35 41.6
comp=Z,247µm,22.0s
KBO **Bosley Butte** **96.30 48** IAMs_20 IAMs_20 18 37 45.5
comp=Z,277µm,19.0s
JCC **Jacoby Creek,** **96.38 50** IAMs_20 IAMs_20 18 39 05.9
comp=Z,215µm,20.0s
KRPM **Rodgers** **96.40 49** IAmb IAmb 17 58 44.8
comp=Z,1µm,1.7s
KRPM IAMs_20 IAMs_20 18 39 09.4
comp=Z,244µm,19.0s
A36M **Sachs Harbour** **96.41 18** P **P** **17 58 08.5 -1.6**
baz=270
A36M S S 18 09 11.6 -17
baz=270
KRMB **Red Mountain** **96.50 49** IAMs_20 IAMs_20 18 39 06.1
comp=Z,248µm,20.0s
KSXB **Camp Six Broad** **96.54 49** IAMs_20 IAMs_20 18 38 50.0
comp=Z,303µm,20.0s
J01E **Myrtle Point** **96.55 47** IAMs_20 IAMs_20 18 42 00.2
comp=Z,204µm,19.0s
KMRM **Mail Ridge** **96.60 50** IAmb IAmb 17 58 50.0
comp=Z,789nm,1.5s
CLRS **Cowichan Lake** **96.61 42** IAMs_20 IAMs_20 18 37 26.2
comp=Z,183µm,20.0s
KHMM **Horse Mountain** **96.61 50** IAMs_20 IAMs_20 18 41 25.9
comp=Z,250µm,20.0s
NVL **N'lazarevskaya** **96.64 195** *e* P P 17 58 01.8 -10
NVL *e** PP **PcP** **17 58 10.4 -1.1**
NVL *e* 18 02 05.4
NVL pmax pmax
comp=Z,83nm,1.6s
NVL MLR MLR
comp=Z,243µm,18.0s
KCPM **Cahto Peak** **96.67 51** IAmb IAmb 17 58 50.1
comp=Z,698nm,1.3s
K02D **Willamette Mer** **96.73 48** IAMs_20 IAMs_20 18 38 11.0
comp=Z,293µm,20.0s
NLWA **Neilton Lookou** **96.74 43** IAMs_20 IAMs_20 18 37 39.1
comp=Z,186µm,20.0s
HEBO **Mount Hebo** **96.75 45** IAMs_20 IAMs_20 18 39 35.3
comp=Z,212µm,20.0s
RADR **Rader Ridge** **96.76 44** IAMs_20 IAMs_20 18 38 04.4
comp=Z,280µm,20.0s
WISH **Wishkah** **96.80 43** IAMs_20 IAMs_20 18 37 50.4
comp=Z,250µm,20.0s
C36M **Paulatuk** **96.82 21** IAMs_20 IAMs_20 18 37 26.0
comp=Z,242µm,22.0s
C36M **Paulatuk** **96.82 21** P **P** **17 58 10.7 -1.4**
baz=271,SNR=5.6
KOTAN **Kotaneelee Air** **96.86 30** P **P** **17 58 11.3 -1.3**
baz=270,SNR=13
F03A **Seaside** **96.91 45** IAMs_20 IAMs_20 18 38 25.5
comp=Z,274µm,20.0s
E03A **Lebam** **96.93 44** IAmb IAmb 17 58 37.1
comp=Z,614nm,1.1s
E03A IAMs_20 IAMs_20 18 38 10.8
comp=Z,242µm,20.0s
KIRV **Kirov** **96.95 328** P **P** **17 58 10.8 -2.1**
comp=Z,34nm,1.0s,baz=99,slow=2.5,SNR=30
KIRV LR LR 18 44 04.3
comp=Z,256µm,20.2s,baz=91,slow=37
comp=Z,34nm,1.0s
I03D **Drain, OR** **97.00 47** IAmb IAmb 17 58 34.6
comp=Z,381nm,1.3s
B04A **Port Angeles** **97.01 42** IAMs_20 IAMs_20 18 35 02.8
comp=Z,277µm,21.0s
HOPS **Hopland Field** **97.04 52** IAmb IAmb 17 58 48.0
comp=Z,955nm,1.5s
HOPS IAMs_20 IAMs_20 18 35 25.6
comp=Z,302µm,21.0s
DBO **Dodson Butte** **97.06 47** IAMs_20 IAMs_20 18 42 16.5
comp=Z,189µm,19.0s
COR **Corvallis** **97.06 46** IAMs_20 IAMs_20 18 34 42.4
comp=Z,207µm,21.0s
G03D **McMinnville, O** **97.10 45** IAMs_20 IAMs_20 18 39 56.5
comp=Z,199µm,20.0s
WRGLY **Wrigley** **97.14 27** P **P** **17 58 12.8 -0.8**
baz=271
FLDN **Fort Liard** **97.15 30** IAmb IAmb 17 58 35.9
comp=Z,304nm,1.1s
FLDN **Fort Liard** **97.15 30** P **P** **17 58 13.1 -0.7**
baz=270
BUCK **Buck Mountain** **97.27 46** IAmb IAmb 17 58 48.3
comp=Z,859nm,1.5s
BUCK IAMs_20 IAMs_20 18 37 27.2
comp=Z,189µm,20.0s
F04D **Rainier, OR** **97.30 44** IAMs_20 IAMs_20 18 38 28.7
comp=Z,242µm,20.0s
YBH **Yreka Blue Hor** **97.41 49** LR LR 18 35 52.4
comp=Z,144µm,20.0s,baz=276,slow=32
GNW **Green Mountain** **97.46 43** IAmb IAmb 17 58 45.6
comp=Z,630nm,1.6s
GNW IAMs_20 IAMs_20 18 37 51.7
comp=Z,252µm,21.0s
H04D **Lebanon** **97.46 46** IAmb IAmb 17 58 39.5
comp=Z,406nm,1.1s
F04A **Amboy** **97.71 45** IAMs_20 IAMs_20 18 37 14.6
comp=Z,216µm,22.0s
L04D **Klamath Falls** **97.72 48** IAMs_20 IAMs_20 18 38 40.3
comp=Z,262µm,20.0s
TROLL **Troll, Antarti** **97.85 192** ⇑P **P** **17 58 17.0 0.0**
TROLL ⇑PKKPbc PKKPbc 18 14 45.0 -9.3
comp=Z,693nm,0.6s
BELG **Belogornoye** **97.97 322***c i* P **P** **17 58 15.5 -2.2**
BELG pmax pmax
comp=Z,81nm,1.0s
BELG MLR MLR
comp=Z,9µm,20.0s
BELG **Belogornoye** **97.97 322** P **P** **17 58 15.8 -1.8**
comp=Z,311nm,0.9s,baz=282,slow=0.8,SNR=105
BELG LR LR 18 45 13.5
comp=Z,81µm,21.0s,baz=81,slow=37
MAK **Makhachkala** **98.00 312***c i* P **P** **17 58 16.0 -2.0**
MAK *e* 18 02 18.3
MAK *e* 18 08 51.1
MAK *e* SSS SSS 18 20 14.7
MAK pmax pmax
comp=Z,3µm,2.8s
MAK pmax pmax
comp=Z,425nm,1.2s
D05A **Enumclaw** **98.02 43** IAmb IAmb 17 58 43.0
comp=Z,676nm,1.3s
D05A IAMs_20 IAMs_20 18 39 38.6
comp=Z,192µm,20.0s
K04D **Chiloquin, OR** **98.14 48** IAmb IAmb 17 58 57.2
comp=Z,362nm,1.1s
K04D IAMs_20 IAMs_20 18 38 36.2
comp=Z,234µm,20.0s
HOOD **Mount Hood Mea** **98.24 45** IAmb IAmb 17 58 46.5
comp=Z,373nm,1.0s
SAO **San Andreas Ge** **98.26 54** IAmb IAmb 17 58 57.7
comp=Z,822nm,1.8s
SAO IAMs_20 IAMs_20 18 37 17.9
comp=Z,260µm,20.0s
ORV **Oroville** **98.28 51** P **P** **17 58 15.9 -3.5**
ORV IAmb IAmb 17 58 56.6
comp=Z,463nm,1.7s
ORV IAMs_20 IAMs_20 18 36 16.2
comp=Z,228µm,22.0s
ORV **Oroville** **98.28 51** P **P** **17 58 15.9 -3.5**
ORV pmax pmax
comp=Z,463nm,1.7s
ORV MLR MLR
comp=Z,228µm,22.0s
I05D **Terrebonne, OR** **98.46 46** IAmb IAmb 17 58 53.4
comp=Z,1µm,1.9s
G05A **Wamic** **98.48 45** IAmb IAmb 17 59 16.1
comp=Z,346nm,0.9s
J05D **Fort Rock, OR** **98.53 47** P **P** **17 58 19.3 -1.3**
J05D IAmb IAmb 17 59 10.0
comp=Z,288nm,1.0s
J05D IAMs_20 IAMs_20 18 39 40.5
comp=Z,202µm,20.0s
BBGB **Big Mountain B** **98.58 54** IAmb IAmb 17 58 54.5
comp=Z,486nm,1.1s
BBGB IAMs_20 IAMs_20 18 34 48.5
comp=Z,283µm,22.0s
AFDM **Forest Hills D** **98.68 52** IAMs_20 IAMs_20 18 36 58.9
comp=Z,283µm,21.0s
PINE **Pine Mountain** **98.74 47** IAmb IAmb 17 59 11.1
comp=Z,245nm,0.9s
PMPB **Monarch Peak** **98.77 54** IAMs_20 IAMs_20 18 35 27.4
comp=Z,272µm,22.0s
K05A **Summer Lake** **98.78 48** IAmb IAmb 17 58 55.4
comp=Z,739nm,1.4s
K05A IAMs_20 IAMs_20 18 39 46.0
comp=Z,294µm,20.0s
LTY **Liberty** **98.92 43** IAmb IAmb 17 59 00.4
comp=Z,718nm,1.9s
LTY IAMs_20 IAMs_20 18 37 51.5
comp=Z,213µm,21.0s
RAYN **Ar Rayn** **99.08 293** P **Pdif** **17 58 19.6 -3.8**
RAYN **Ar Rayn** **99.08 293** *i* P **Pdif** **17 58 22.2 -1.2**
SNR=35
RAYN **Ar Rayn** **99.08 293** P **Pdif** **17 58 19.6 -3.8**
RAYN pmax pmax
comp=Z,399nm,1.6s
RAYN **Ar Rayn** **99.08 293** P **Pdif** **17 58 21.7 -1.7**
SNAA **Sanae** **99.14 190** P **Pdif** **17 58 22.2 -0.5**
SNAA IAmb IAmb 17 58 51.2
comp=Z,284nm,1.3s
SNAA IAMs_20 IAMs_20 18 45 11.5
comp=Z,505µm,18.0s
SNAA **Sanae** **99.14 190** ⇑PKKPbc **PKKPbc** **18 14 46.9 -3.8**
comp=Z,262nm,0.9s
SNAA ⇑Pdiff **Pdif** **17 58 21.6 -1.1**
comp=Z,164nm,1.0s
SNAA **Sanae** **99.14 190***ce* P **Pdif** **17 58 21.6 -1.1**
SNAA pmax pmax
comp=Z,192nm,1.5s
SNAA MLR MLR
comp=Z,270µm,19.0s
SNAA **Sanae** **99.14 190** P **Pdif** **17 58 22.7 0.0**
comp=Z,6.7nm,0.9s,baz=135,slow=3.5,SNR=11
SNAA S **SKSac** **18 08 53.5 -5.3**
comp=Z,18nm,1.2s,baz=238,slow=6.9,SNR=1.4
SNAA PKKPbc **PKKPbc** **18 14 47.1 -3.5**
comp=Z,6.2nm,0.9s,baz=322,slow=11,SNR=2.8
SNAA LR LR 18 45 49.7
comp=Z,479µm,18.3s,baz=137,slow=37
comp=Z,6.7nm,0.9s
MXC **Moxie City** **99.19 44** IAMs_20 IAMs_20 18 39 52.4
comp=Z,235µm,20.0s
SMMC **Simmler** **99.40 55** Pdiff **Pdif** **17 58 23.6 -1.0**
baz=269
MPK **Martis Peak** **99.41 51** IAmb IAmb 17 58 46.0
comp=Z,391nm,1.2s
F07A **Phinny Hill Vi** **99.45 45** IAMs_20 IAMs_20 18 39 45.6
comp=Z,232µm,20.0s
E07A **Sunnyside** **99.49 44** IAMs_20 IAMs_20 18 40 11.5
comp=Z,238µm,20.0s
PKM **Mcpherson Peak** **99.55 56** Pdiff **Pdif** **17 58 24.4 -1.0**
baz=269
SBC **Santa Barbara** **99.62 56** Pdiff **Pdif** **17 58 23.3 -2.2**
baz=269
SCZ2 **Santa Cruz Isl** **99.68 57** Pdiff **Pdif** **17 58 24.0 -1.8**
baz=269
HAWA **Hanford** **99.71 44** IAMs_20 IAMs_20 18 40 07.8
comp=Z,176µm,20.0s
SNCC **San Nicolas Is** **99.76 57** IAMs_20 IAMs_20 18 36 45.1
comp=Z,318µm,21.0s
SNCC **San Nicolas Is** **99.76 57** Pdiff **Pdif** **17 58 24.7 -1.5**
baz=269
VOG **Valley Oaks Go** **99.91 54** Pdiff **Pdif** **17 58 25.4 -1.4**
baz=270
PAHR **Pah Rah Range** **99.91 51** IAMs_20 IAMs_20 18 37 52.5
comp=Z,299µm,22.0s
YERR **Yerington** **100.03 52** IAMs_20 IAMs_20 18 37 51.6
comp=Z,307µm,21.0s
E08A **Dider Farm, El** **100.04 44** IAMs_20 IAMs_20 18 40 08.1
comp=Z,245µm,20.0s
GNI **Garni** **100.07 310** P **Pdif** **17 58 25.6 -1.9**
GNI **Garni** **100.07 310***c i* P **Pdif** **17 58 25.9 -1.7**
GNI pmax pmax
comp=Z,374nm,1.9s

GNI MLR MLR
comp=Z,39µm,24.0s
D08A Wollman Farm, 100.12 43 IAMs_20 IAMs_20 18 40 53.1
comp=Z,208µm,20.0s
VES Vestal, Richgr 100.15 55 Pdiff **Pdif 17 58 26.4 -1.4**
baz=270
HARA HARA 100.31 278 *e*P **Pdif 17 58 35.3 +6.0**
MLAC Mammoth, Mammt 100.35 53 Pdiff **Pdif 17 58 27.5 -1.5**
baz=270
ARVC Arvin 100.36 56 Pdiff **Pdif 17 58 27.9 -0.9**
baz=270
OSI Osito Audit: C 100.44 56 Pdiff **Pdif 17 58 28.3 -1.0**
baz=270
WVOR Wild Horse Val 100.44 48 IAMs_20 IAMs_20 18 40 29.5
comp=Z,302µm,20.0s
C09A Chrisman Ranch 100.53 43 IAMs_20 IAMs_20 18 40 08.9
comp=Z,275µm,20.0s
J08A Circle Bar Ran 100.54 47 IAMs_20 IAMs_20 18 40 05.7
comp=Z,197µm,20.0s
VNA2 Neumayer--Watz 100.56 190 ⇑PKKPdf **PKKPbc 18 14 47.6 +1.2**
comp=Z,20nm,0.6s,baz=329,slow=5.9
VNA2 ⇑Pdiff **Pdif 17 58 30.7 +1.7**
baz=154,slow=2.1
SCI2 San Clemente I 100.58 58 Pdiff **Pdif 17 58 28.5 -1.3**
baz=270
RYN Ryan 100.59 52 IAMs_20 IAMs_20 18 38 18.5
comp=Z,308µm,21.0s
VNA3 Neumayer Olymp 100.64 189 ⇑PKKPbc **PKKPbc 18 14 41.8 -4.5**
comp=Z,15nm,0.7s
VNA3 ⇑Pdiff **Pdif 17 58 28.5 -0.8**
ISA Isabella, Lake 100.65 55 IAMs_20 IAMs_20 18 39 49.3
comp=Z,222µm,20.0s
ISA Isabella, Lake 100.65 55 Pdiff **Pdif 17 58 28.8 -1.3**
baz=270
E09A Wood Farm, Sta 100.67 44 IAMs_20 IAMs_20 18 40 25.8
comp=Z,219µm,20.0s
CIS Catalina Islan 100.69 57 Pdiff **Pdif 17 58 29.6 -0.7**
baz=270
BRLDA Berland Lookou 100.70 36 IAMs_20 IAMs_20 18 39 54.9
comp=Z,183µm,20.0s
DECC Green Verdugo 100.76 56 Pdiff **Pdif 17 58 29.8 -0.8**
baz=270
NVAR Mina Array Bea 100.77 52 P **Pdif 17 58 30.3 -0.5**
comp=Z,4.0nm,0.8s,baz=259,slow=5.4,SNR=24
NVAR PP PP 18 02 49.1 +10
comp=Z,18nm,0.9s,baz=259,slow=6.8,SNR=4.3
NVAR S 18 09 23.4
comp=Z,3.0nm,1.0s,baz=346,slow=3.1,SNR=1.4
NVAR PKKPbc **PKKPbc 18 14 43.3 -2.0**
comp=Z,3.1nm,1.0s,baz=98,slow=3.1,SNR=1.6
FMP Fort Macarthur 100.79 57 Pdiff **Pdif 17 58 29.9 -0.8**
baz=270
TIN Tinemaha, Big 100.84 54 Pdiff **Pdif 17 58 29.9 -1.1**
baz=271
NCK Nalchik 100.86 313 *i* P **Pdif 17 58 29.6 -1.2**
NCK pmax pmax
comp=Z,194nm,1.5s
NCK MLR MLR
comp=Z,32µm,20.0s
NV11 Mina Array Sit 100.88 52 IAMs_20 IAMs_20 18 38 47.2
comp=Z,305µm,21.0s
ATD Arta Tunnel 100.91 281 *e*P **Pdif 17 58 38.2 +6.5**
KVN Kaiserville 100.92 52 IAMs_20 IAMs_20 18 38 08.1
comp=Z,246µm,21.0s
CWC Cottonwood Cre 100.96 54 Pdiff **Pdif 17 58 30.7 -1.0**
baz=270
EDW2 Edwards Air Fo 101.04 56 Pdiff **Pdif 17 58 31.4 -0.5**
baz=270
GOF Gofitskoye 101.19 315*c i*P **Pdif 17 58 30.8 -1.5**
YKAW3 Yellowknife Wh 101.23 27 IAMs_20 IAMs_20 18 42 16.1
comp=Z,210µm,20.0s
YKA Yellowknife Ar 101.24 28 *i* P **Pdif 17 58 31.2 -0.8**
YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 101.24 28 P **Pdif 17 58 30.9 -1.1**
comp=Z,5.4nm,0.9s,baz=280,slow=4.7,SNR=64
YKA PP PP 18 02 50.1 +9.0
comp=Z,77nm,1.2s,baz=280,slow=6.9,SNR=6.4
YKA PKKPbc **PKKPbc 18 14 41.4 -3.0**
comp=Z,4.7nm,0.9s,baz=97,slow=3.2,SNR=5.8
NEW Newport 101.28 42 IAMs_20 IAMs_20 18 40 12.8
comp=Z,238µm,20.0s
NEW Newport 101.28 42 Pdiff **Pdif 17 58 31.7 -0.9**
baz=274
LRMC Laurel Mtn Rad 101.29 55 Pdiff **Pdif 17 58 32.4 -0.7**
baz=271
YKAW1 Yellowknife Wh 101.30 28 IAMs_20 IAMs_20 18 42 38.9
comp=Z,219µm,20.0s
LCH Last Change Ra 101.30 53 IAMs_20 IAMs_20 18 38 45.5
comp=Z,301µm,21.0s
BFSC Mount Baldy Ra 101.32 56 Pdiff **Pdif 17 58 32.2 -1.1**
baz=270
KBZ Khabaz 101.36 313*c i*P **Pdif 17 58 30.7 -2.3**
KBZ pmax pmax
comp=Z,144nm,1.6s
KBZ MLR MLR
comp=Z,53µm,23.0s
KBZ Khabaz 101.36 313 P **Pdif 17 58 31.2 -1.7**
comp=Z,10nm,1.1s,baz=65,slow=2.3,SNR=21
MPMC Manual Prospec 101.44 55 Pdiff **Pdif 17 58 32.6 -1.3**
baz=271
KIV Kislovodsk 101.50 313 ⇓P **Pdif 17 58 33.1 -0.7**
KIV Kislovodsk 101.50 313 ⇑P PKiKP 18 03 05.9 +8.2
KIV Kislovodsk 101.50 313 *i* P **Pdif 17 58 31.9 -1.9**
SNR=16
KIV Kislovodsk 101.50 313 *e*P **Pdif 17 58 31.4 -2.4**
KIV *e* 18 02 43.4
KIV *e* 18 09 11.8
KIV *e*SS SS 18 17 18.7 +4.3
KIV pmax pmax
comp=Z,15nm,1.1s
MZP Montezuma Peak 101.50 53 IAMs_20 IAMs_20 18 38 53.8
comp=Z,211µm,21.0s
ELS Elsinore Mount 101.52 57 IAMs_20 IAMs_20 18 37 26.5
comp=Z,312µm,21.0s
GRAC Grapevine Rang 101.53 54 IAMs_20 IAMs_20 18 39 10.5
comp=Z,261µm,21.0s
GRAC Grapevine Rang 101.53 54 Pdiff **Pdif 17 58 33.3 -0.7**
baz=271
BMN Battle Mountai 101.56 50 IAMs_20 IAMs_20 18 38 48.0
comp=Z,272µm,22.0s
Q09A Carvers 101.64 52 IAMs_20 IAMs_20 18 38 42.2
comp=Z,273µm,21.0s
VRH Novokhopyorsk 101.69 321 *e*P **Pdif 17 58 31.0 -3.3**
VRH *e*S **Sdif 18 10 08.6 -5.0**
VRH *e*SS SS 18 17 29.5 +13
VRH pmax pmax
comp=Z,100nm,0.8s
VRH pmax pmax
comp=Z,2µm,4.8s
VRH smax smax
comp=N,23µm,20.4s
VRH MLR MLR
comp=Z,121µm,20.0s
MURC Murrieta 101.71 57 Pdiff **Pdif 17 58 33.8 -1.1**
baz=270
KLMR Klimovskoe 101.79 331 *e*P **Pdif 17 58 30.6 -3.9**
KLMR 18 02 46.3
KLMR S **SKSac 18 09 10.0 -1.8**
KLMR SS **SS 18 17 12.5 -4.6**
KLMR pmax pmax
comp=Z,84nm,1.2s
KLMR MLR MLR
comp=Z,218µm,20.0s
109C Camp Elliot, M 101.79 58 IAMs_20 IAMs_20 18 37 43.8
comp=Z,275µm,21.0s
109C Camp Elliot, M 101.79 58 Pdiff **Pdif 17 58 34.0 -1.2**
baz=270
TJX Tijuana 101.83 58 IAMs_20 IAMs_20 18 42 03.0
comp=Z,239µm,19.0s
RRX Edison Barstow 101.86 56 Pdiff **Pdif 17 58 33.2 -2.3**
baz=271
BBRC Big Bear Solar 101.93 56 Pdiff **Pdif 17 58 35.2 -0.9**
baz=271
FURC Furnace Creek, 101.94 54 Pdiff **Pdif 17 58 34.8 -0.9**
baz=271
QSM Queen of Sheba 101.95 55 IAMs_20 IAMs_20 18 40 31.7
comp=Z,225µm,20.0s
GSC Goldstone, Bar 102.01 55 Pdiff **Pdif 17 58 35.2 -1.0**
baz=271
GWY Greenwater Val 102.11 54 IAMs_20 IAMs_20 18 40 27.9
comp=Z,181µm,20.0s
WCT Wildcat Mounta 102.13 54 IAMs_20 IAMs_20 18 39 59.4
comp=Z,220µm,20.0s
BAR Barrett 102.16 58 IAMs_20 IAMs_20 18 42 04.5
comp=Z,260µm,19.0s
TKX Tecate 102.21 58 IAMs_20 IAMs_20 18 42 15.0
comp=Z,258µm,19.0s
PLID Pearl Lake 102.24 45 IAMs_20 IAMs_20 18 38 50.5
comp=Z,187µm,22.0s
HOPEN Hopen 102.24 348 *e*Pdif **Pdif 17 58 35.8 -0.4**
HOPEN *e*PP **PP 18 02 51.7 +3.5**
HOPEN *e*SKSac **SKSac 18 09 11.3 -2.1**
HOPEN *e*SP SP 18 11 50.4 +0.3
HOPEN *e*SS **SS 18 17 22.7 0.0**
HOPEN IVMs_BB IVMs_BB 18 46 36.7
comp=Z,37µm,19.8s
PFO Pinyon Flats O 102.33 57 Pdiff **Pdif 17 58 37.1 -0.7**
baz=271
TPFO Pinon Flats 102.33 57 Pdiff **Pdif 17 58 37.4 -0.3**
baz=271
MONP2 Monument Peak 102.36 58 Pdiff **Pdif 17 58 37.4 -0.7**
baz=271
HEC Hector,Ludlow 102.41 56 Pdiff **Pdif 17 58 37.0 -1.0**
baz=271
SHOC Shoshone, Teco 102.43 55 Pdiff **Pdif 17 58 37.3 -0.7**
baz=272
MFID Camas Ranch 102.47 47 IAMs_20 IAMs_20 18 41 06.9
comp=Z,250µm,21.0s
IKP In-Ko-Pah, Jac 102.63 58 Pdiff **Pdif 17 58 38.2 -0.9**
baz=271
BELC Belle Mtn. Jos 102.70 57 Pdiff **Pdif 17 58 38.2 -1.2**
baz=271
TUQ Turquoise Moun 102.73 55 Pdiff **Pdif 17 58 38.8 -0.8**
baz=272
LABN Labinsk 102.87 314 *e*P **Pdif 17 58 38.5 -1.2**
LABN *i* 18 02 56.1
LABN pmax pmax
comp=Z,642nm,2.7s
SWSC Sam W. Stewart 102.89 58 Pdiff **Pdif 17 58 39.2 -0.8**
baz=271
R11B Troy Canyon, C 102.90 52 Pdiff **Pdif 17 58 39.2 -1.1**
baz=272
VTX Valle De La Tr 102.92 59 IAMs_20 IAMs_20 18 44 04.0
comp=Z,173µm,20.0s
ERBR Yeremizino-Bor 102.95 315 *e*P **Pdif 17 58 43.9 +3.8**
GMRC Granite Mounta 102.96 56 Pdiff **Pdif 17 58 39.9 -0.7**
baz=272
SMAI San Martin Ant 102.97 169 IAMs_20 IAMs_20 18 46 23.9
comp=Z,227µm,18.0s
APA Apatity 102.98 338 ⇓*i*P **Pdif 17 58 49.9 +10**
APA *i* 18 03 00.0
APA *i* 18 10 11.0
APA *i* PPS PPS 18 12 54.0
APA pmax pmax
comp=Z,90nm,1.0s
APA MLR MLR
comp=Z,135µm,20.0s
SPA0 Spitsbergen Ar 103.04 350 *e*Pdif **Pdif 17 58 42.4 +2.5**
SPA0 *e*PP **PP 18 02 53.6 -0.7**
SPA0 *e*SKSac **SKSac 18 09 16.0 -1.2**
SPA0 *e*SP SP 18 11 59.1 +0.6
SPA0 *e*SS **SS 18 17 33.8 +0.1**
SPA0 IVMs_BB IVMs_BB 18 43 09.0
comp=Z,39µm,21.4s
SPITS Spitsbergen Ar 103.04 350 P **Pdif 17 58 38.0 -1.8**
comp=Z,16nm,0.9s,baz=50,slow=9.6,SNR=2.4
ELK Elko 103.06 50 IAMs_20 IAMs_20 18 39 34.8
comp=Z,264µm,22.0s
BC3 Big Chuckawall 103.16 57 Pdiff **Pdif 17 58 40.4 -1.0**
baz=271
EDM Edmonton 103.19 37 IAMs_20 IAMs_20 18 44 43.8
comp=Z,257µm,20.0s
UABX UABC, Campus M 103.20 58 IAMs_20 IAMs_20 18 42 44.0
comp=Z,187µm,19.0s
VORR Voronezh 103.20 322 *e*P **Pdif 17 58 39.0 -2.0**
VORR *e* 18 02 50.5
VORR *e*S **Sdif 18 10 28.6 +2.4**
VORR *e*SS SS 18 17 52.4 +15
VORR pmax pmax
comp=Z,50nm,0.4s
VORR pmax pmax
comp=Z,80nm,0.4s
VORR smax smax
comp=N,520nm,5.7s
VORR MLR MLR
comp=Z,108µm,19.0s
VORD Divnogorie 103.23 321 *e*P **Pdif 17 58 39.5 -1.7**
VORD *e* 18 02 58.1
VORD *e*S **Sdif 18 10 27.6 +1.1**
VORD *e*SS SS 18 17 48.6 +11
VORD pmax pmax
comp=Z,280nm,2.2s
VORD pmax pmax
comp=Z,50nm,1.0s
VORD smax smax
comp=N,6µm,11.5s
LPSR Galich'ya Gora 103.26 323 *e*P **Pdif 17 58 39.0 -2.2**
LPSR *e*S **Sdif 18 10 22.9 -3.8**
LPSR *e*SS **SS 18 17 46.7 +8.8**
LPSR pmax pmax
comp=Z,80nm,1.1s
LPSR pmax pmax
comp=Z,690nm,2.7s
LPSR smax smax
comp=N,13µm,14.5s
LPSR MLR MLR
comp=Z,104µm,20.0s
VSR Storozhevoye 103.28 321 *e*P **Pdif 17 58 38.6 -2.8**
VSR *e* 18 02 56.2
VSR *e*S **Sdif 18 10 31.4 +4.5**
VSR *e*SS **SS 18 17 41.0 +2.6**
VSR pmax pmax
comp=Z,140nm,2.2s
VSR pmax pmax
comp=Z,1µm,5.5s
VSR smax smax
comp=N,13µm,13.6s
VSR MLR MLR
comp=Z,93µm,19.0s
KBS Kingsbay 103.29 351 *e*Pdif **Pdif 17 58 43.8 +2.9**
KBS *e*PP **PP 18 02 53.0 -3.2**
KBS *e*SP SP 18 12 01.7 +0.7
KBS *e*SS **SS 18 17 38.9 +1.8**
KBS IVMs_BB IVMs_BB 18 36 49.8
comp=Z,26µm,35.6s
IRM Iron Mountain 103.41 56 Pdiff **Pdif 17 58 41.7 -0.7**
baz=272
Q12A Willow Creek R 103.46 51 IAMs_20 IAMs_20 18 40 02.4
comp=Z,314µm,22.0s
HLID Hailey 103.48 47 IAMs_20 IAMs_20 18 41 28.8
comp=Z,273µm,20.0s
HLID Hailey 103.48 47 Pdiff **Pdif 17 58 42.3 -0.4**
baz=274
MOS Moscow 103.57 326 *e*P **Pdif 17 58 38.3 -4.2**
MOS *e* 18 02 56.0
MOS *e*S **Sdif 18 10 30.3 +1.2**
MOS *e*PS PS 18 12 14.7 +5.4
MOS *e*SS **SS 18 17 51.2 +9.2**
MOS *e*SSS SSS 18 21 38.7
MOS pmax pmax
comp=Z,123nm,1.6s
VADS Vadso 103.59 341 *e*Pdif **Pdif 17 58 45.3 +2.9**
VADS *e*PP **PP 18 02 56.1 -2.5**
VADS *e*SKSac **SKSac 18 09 18.6 -1.3**
VADS *e*SP SP 18 12 03.9 -0.6
VADS *e*SS **SS 18 17 41.5 0.0**
VADS IVMs_BB IVMs_BB 18 48 27.8
comp=Z,66µm,21.4s
SOC Sochi 103.67 313 *i* P **Pdif 17 58 40.3 -3.0**
SOC *i* 18 02 59.0
SOC *e*PPP PPP 18 05 07.9
SOC *e* 18 09 15.8
SOC *e*PS PS 18 12 07.6 -3.3
SOC *e*SS SS 18 17 41.6 -2.5
SOC pmax pmax
comp=Z,19nm,0.6s
SOC pmax pmax
comp=Z,89nm,1.3s
GLA Glamis 103.70 58 Pdiff **Pdif 17 58 43.2 -0.6**
baz=272
SFX San Felipe 103.73 60 IAMs_20 IAMs_20 18 44 17.3
comp=Z,202µm,20.0s
NEE2 Needles Airpor 103.82 56 Pdiff **Pdif 17 58 43.2 -0.9**
baz=272
HSPB Hornsund (broa 103.87 349 *e*Pdif Pdif 17 59 01.5 +18
HSPB *e*PP PKiKP 18 03 20.3 +19
HSPB *e*L L 18 44 44.8
comp=Z,79µm,24.6s
BLYC Blythe 103.94 57 IAMs_20 IAMs_20 18 39 03.5
comp=Z,269µm,21.0s
PDMCI Parker Dam,Lak 104.23 56 Pdiff **Pdif 17 58 44.6 -1.4**
baz=272
OBN Obninsk 104.27 325*d i*P **Pdif 17 58 44.4 -1.3**
OBN *e* 18 03 04.0
OBN *i* 18 10 12.5
OBN *e*SS SS 18 17 59.9 +8.4
OBN pmax pmax
comp=Z,96nm,1.3s
OBN MLR MLR
comp=Z,115µm,21.0s
OBN Obninsk 104.27 325 Pdiff **Pdif 17 58 44.3 -1.3**
comp=Z,21nm,0.7s,baz=76,slow=3.4,SNR=18
KIBK Kibwezi 104.38 266 PKP **PKiKP 18 02 59.8 -4.0**
W13A Hualapai Mount 104.41 55 IAMs_20 IAMs_20 18 39 24.9
comp=Z,270µm,21.0s
BJO1 Bjornoya 104.54 347 *e*Pdif **Pdif 17 58 44.6 -1.8**
BJO1 *e*PP **PP 18 03 05.5 +0.1**
BJO1 *e*SKSac **SKSac 18 09 27.1 +3.0**
BJO1 *e*SP **SP 18 12 15.9 +1.7**
BJO1 *e*SS **SS 18 17 53.9 -0.4**
BJO1 IVMs_BB IVMs_BB 18 46 55.9
comp=Z,37µm,19.5s
113A Mohawk Valley, 104.60 58 IAMs_20 IAMs_20 18 43 56.3
comp=Z,196µm,19.0s
CCUT Cedar City 104.70 53 IAMs_20 IAMs_20 18 40 55.4
comp=Z,290µm,21.0s
BGU Big Grassy Mou 104.72 49 IAMs_20 IAMs_20 18 40 38.4
comp=Z,214µm,22.0s
WLRA Wolmera 104.81 278 *e*P **Pdif 17 58 55.8 +6.3**
FURI Furi 104.82 278 *e*P **Pdif 17 58 55.8 +6.3**
DUG Dugway, Tooele 104.94 50 IAMs_20 IAMs_20 18 41 14.7
comp=Z,214µm,21.0s
DUG Dugway, Tooele 104.94 50 Pdiff **Pdif 17 58 48.1 -1.2**
baz=275
DILA Dilla 105.02 275 *e*P **Pdif 17 58 57.2 +7.0**
ARA0 ARCESS Array S 105.05 341 *e*P **Pdif 17 58 46.9 -2.0**
ARCES ARCESS Array B 105.05 341 Pdiff **Pdif 17 58 47.7 -1.2**
comp=Z,23nm,1.0s,baz=70,slow=4.0,SNR=18
ARCES PKiKP **PKiKP 18 03 03.6 +0.3**
comp=Z,20nm,0.9s,baz=80,slow=2.0,SNR=2.9
ARCES PKKPbc **PKKPbc 18 14 35.3 +2.1**
comp=Z,5.8nm,1.0s,baz=232,slow=1.0,SNR=1.9
SPUT South Promonto 105.12 49 IAMs_20 IAMs_20 18 40 42.1
comp=Z,194µm,21.0s
HAMF Hammerfest 105.15 342 *e*P **Pdif 17 58 46.5 -2.8**
ANN Anapa 105.19 315 *e*P **Pdif 17 58 47.7 -2.3**
ANN *e* 18 03 11.5
ANN *e* 18 09 26.3
Y14A Wickenburg 105.19 57 IAMs_20 IAMs_20 18 39 30.7
comp=Z,286µm,21.0s
BOZ Bozeman (W) 105.26 45 IAMs_20 IAMs_20 18 41 54.6
comp=Z,184µm,22.0s
BOZ Bozeman (W) 105.26 45 PKiKP **PKiKP 18 03 03.8 -0.9**
baz=277
KMBO Kilima Mbogo 105.31 267 *e*P **Pdif 17 59 00.9 +9.3**
214A Organ Pipe Nat 105.44 59 IAMs_20 IAMs_20 18 44 10.6
comp=Z,162µm,19.0s
214A Organ Pipe Nat 105.44 59 PKiKP **PKiKP 18 03 03.2 -2.0**
baz=272
PKCU Pink Cliffs 105.54 53 IAMs_20 IAMs_20 18 41 54.6
comp=Z,223µm,20.0s
U15A North Rim 105.63 54 IAMs_20 IAMs_20 18 40 00.1
comp=Z,228µm,22.0s
YHL Hebgen Lake 105.67 45 IAMs_20 IAMs_20 18 46 46.6
comp=Z,165µm,20.0s
CTU Camp Tracy 105.70 50 IAMs_20 IAMs_20 18 41 19.6
comp=Z,196µm,22.0s
HWUT Hardware Ranch 105.75 49 IAMs_20 IAMs_20 18 43 35.1
comp=Z,180µm,20.0s
MPU Maple Canyon 105.86 50 IAMs_20 IAMs_20 18 41 56.7
comp=Z,260µm,21.0s
FXWY Fox Creek 105.92 46 IAMs_20 IAMs_20 18 44 13.1
comp=Z,267µm,20.0s
TPAW Teton Pass 106.00 47 IAMs_20 IAMs_20 18 43 42.9
comp=Z,294µm,21.0s
KTK1 Kautokeino 106.01 341 *e*Pdif **Pdif 17 58 51.9 -1.2**
KTK1 *e*PP **PP 18 03 15.8 -0.6**
KTK1 *e*SKSdf **SKSdf 18 10 11.3 -3.4**
KTK1 *e*SS **SS 18 18 14.9 +0.3**
KTK1 IVMs_BB IVMs_BB 18 50 11.9
comp=Z,64µm,19.7s
YNR Norris Junctio 106.04 45 IAMs_20 IAMs_20 18 46 48.1
comp=Z,152µm,19.0s
MOOW Moose Ponds 106.11 46 IAMs_20 IAMs_20 18 43 17.1
comp=Z,251µm,21.0s
H17A Grant Village 106.15 46 PKiKP **PKiKP 18 03 04.2 -2.3**
baz=277
EGMT Eagleton 106.20 42 IAMs_20 IAMs_20 18 43 38.2
comp=Z,181µm,21.0s
EGMT Eagleton 106.20 42 PKiKP **PKiKP 18 03 04.9 -1.3**
baz=279
Q16A Castle Valley 106.31 51 IAMs_20 IAMs_20 18 41 34.5
comp=Z,298µm,22.0s
WUAZ Wupatki 106.44 55 PKiKP **PKiKP 18 03 05.2 -2.0**
baz=274
BSUT Blindstream Ca 106.47 50 IAMs_20 IAMs_20 18 41 55.8
comp=Z,204µm,22.0s
PMSA Palmer Station 106.51 168 IAMs_20 IAMs_20 18 43 06.5
comp=Z,177µm,20.0s
P17A Butcher Ranch, 106.59 51 IAMs_20 IAMs_20 18 42 30.3
comp=Z,226µm,22.0s
JETT Jettan, Norway 106.65 342 *e*Pdif **Pdif 17 58 53.3 -2.7**
JETT *e*PP **PP 18 03 19.3 -1.9**
JETT *e*SKSdf **SKSdf 18 10 13.0 -3.0**
JETT *e*SP SP 18 12 35.6 -0.8
JETT *e*SS **SS 18 18 25.7 +2.4**
JETT IVMs_BB IVMs_BB 18 48 50.0
comp=Z,60µm,21.6s
HMU Henry Mountain 106.74 52 IAMs_20 IAMs_20 18 42 25.3
comp=Z,239µm,21.0s
SRU San Rafael Swe 106.80 51 IAMs_20 IAMs_20 18 42 01.7
comp=Z,249µm,22.0s
P18A Preston Nutter 106.96 51 IAMs_20 IAMs_20 18 42 51.9
comp=Z,268µm,21.0s
RLMT Red Lodge 106.98 45 PKiKP **PKiKP 18 03 06.4 -1.5**
baz=279
TRO Tromso 107.06 342 *e*Pdif **Pdif 17 58 57.4 -0.4**
TRO *e*PP **PP 18 03 23.6 -0.5**
TRO *e*SKSac **SKSac 18 09 34.3 -1.2**
TRO *e*SS **SS 18 18 28.9 +0.1**
TRO IVMs_BB IVMs_BB 18 50 19.1
comp=Z,64µm,21.1s
BW06 Boulder Array 107.10 47 PKiKP **PKiKP 18 03 06.3 -2.0**
baz=278
PDAR Pinedale Array 107.10 47 Pdiff **Pdif 17 58 58.3 -0.6**
comp=Z,1.4nm,0.7s,baz=223,slow=2.0,SNR=10
PDAR PKiKP **PKiKP 18 03 07.7 -0.6**
comp=Z,7.5nm,1.0s,baz=280,slow=5.2,SNR=2.5
PDAR PP **PP 18 03 26.8 +1.1**
comp=Z,12nm,0.9s,baz=152,slow=1.7,SNR=4.7
PDAR PKKPbc **PKKPbc 18 14 24.5 -1.9**
comp=Z,4.1nm,1.0s,baz=103,slow=6.8,SNR=2.2
DIKM Dikmen 107.14 312 ⇓P **PKiKP 18 03 12.8 +4.8**
TUC Tucson 107.14 58 IAMs_20 IAMs_20 18 40 05.5
comp=Z,235µm,22.0s
TUC Tucson 107.14 58 PKiKP **PKiKP 18 03 05.9 -2.5**
baz=274
RDMU Red Mountain 107.37 50 IAMs_20 IAMs_20 18 42 25.6
comp=Z,206µm,21.0s
SIM Simferopol' 107.50 315 *e*P **Pdif 17 59 11.1 +11**
SIM pmax pmax
comp=Z,6µm,15.6s
LODK Lodwar 107.66 272 *e*P **Pdif 17 59 10.8 +9.0**
X18A Snowflake 107.68 56 IAMs_20 IAMs_20 18 41 23.5
comp=Z,296µm,22.0s
W18A Petrified Fore 107.80 55 PKiKP **PKiKP 18 03 07.4 -2.4**
baz=275
MMAI Mount Meron Ar 107.89 303 Pdiff **Pdif 17 59 02.6 +0.2**
comp=Z,0.3nm,0.2s,baz=76,slow=7.6,SNR=1.8
MMAI PKiKP **PKiKP 18 03 11.0 +1.2**
comp=Z,23nm,1.0s,baz=151,slow=3.3,SNR=3.9
MMAI PP **PP 18 03 30.9 -0.6**
comp=Z,8.8nm,0.8s,baz=70,slow=9.8,SNR=4.2
FINES FINESS Array B 107.93 333 Pdiff **Pdif 17 59 00.6 -1.2**
comp=Z,5.6nm,0.9s,baz=108,slow=4.2,SNR=13
FINES PKiKP **PKiKP 18 03 08.9 +0.1**
comp=Z,9.9nm,0.8s,baz=70,slow=12,SNR=2.9
FINES PP **PP 18 03 33.6 +2.8**
comp=Z,6.6nm,0.6s,baz=79,slow=2.0,SNR=6.4
FINES PKKPbc **PKKPbc 18 14 27.0 +2.9**
comp=Z,8.1nm,1.0s,baz=126,slow=1.9,SNR=3.1
GRHM Grahamstown, E 108.20 232 IAMs_20 IAMs_20 18 48 37.8
comp=Z,222µm,20.0s
SLBS Sierra La Lagu 108.25 67 IAMs_20 IAMs_20 18 41 36.2
comp=Z,213µm,21.0s
O20A White River Ci 108.43 50 IAMs_20 IAMs_20 18 43 41.7
comp=Z,227µm,21.0s

O20A	**White River Ci**	**108.43**	**50**	PKiKP	**PKiKP**	**18 03 08.4**	**-2.4**		
	baz=278								
319A	**Douglas**	**108.48**	**59**	IAMs_20	IAMs_20	18 40 54.1			
	comp=Z,269µm,22.0s								
GRD1	**Great Renaissa**	**108.51**	**280**	*e*P	**Pdif**	**17 59 11.1**	**+5.6**		
MVCO	**Mesa Verde**	**108.59**	**53**	PKiKP	**PKiKP**	**18 03 08.9**	**-2.2**		
	baz=277								
BRTR	**Keskin Array B**	**108.61**	**310**	Pdiff	**Pdif**	**17 59 04.1**	**-1.5**		
	comp=Z,3.0nm,1.0s,baz=101,slow=4.0,SNR=7.4								
BRTR				PKiKP	**PKiKP**	**18 03 10.0**	**-1.0**		
	comp=Z,9.9nm,1.0s,baz=130,slow=4.4,SNR=2.9								
BRTR				PP	**PP**	**18 03 37.6**	**+0.9**		
	comp=Z,15nm,0.9s,baz=121,slow=1.5,SNR=6.2								
BRTR				PKKPbc	**PKKPbc**	**18 14 22.5**	**+1.0**		
	comp=Z,6.6nm,1.1s,baz=241,slow=5.1,SNR=4.1								
LAO	**LASA Array**	**108.80**	**43**	IAMs_20	IAMs_20	18 49 01.1			
	comp=Z,194µm,20.0s								
LAO	**LASA Array**	**108.80**	**43**	PKiKP	**PKiKP**	**18 03 08.9**	**-2.2**		
	baz=281								
RWWY	**Rawlins**	**108.98**	**48**	IAMs_20	IAMs_20	18 45 30.1			
	comp=Z,201µm,20.0s								
SOE	**Somerset East**	**109.04**	**232**	IAMs_20	IAMs_20	18 44 55.1			
	comp=Z,170µm,20.0s								
STEI	**Steigen**	**109.11**	**342**	*e*Pdif	**Pdif**	**17 59 08.2**	**+1.3**		
STEI				*e*PP	**PP**	**18 03 39.0**	**-0.1**		
STEI				*e*PS	**PS**	**18 13 08.0**	**+2.1**		
STEI				*e*SS	SS	18 18 59.3	+2.9		
STEI				IVMs_BB	IVMs_BB	18 50 26.1			
	comp=Z,52µm,22.4s								
MNK	**Minsk**	**109.30**	**326**	*i* P	**Pdif**	**17 59 07.6**	**-0.4**		
MNK				*i*		18 03 40.6			
MNK				*i* PPP	PPP	18 05 58.6			
MNK				*i*		18 10 23.6			
MNK				*i* PS	**PS**	**18 13 08.2**	**-0.2**		
MNK				*i* SS	SS	18 19 03.1	+3.3		
MNK				*i* SSS	SSS	18 23 08.3			
MNK				pmax	pmax				
	comp=N,8.0nm,0.6s								
MNK				pmax	pmax				
	comp=E,13nm,1.3s								
MNK				pmax	pmax				
	comp=Z,31nm,0.9s								
MNK				MLR	MLR				
	comp=N,62µm,19.0s								
MNK				MLR	MLR				
	comp=E,25µm,20.0s								
MNK				MLR	MLR				
	comp=Z,60µm,22.0s								
K22A	**Casper**	**109.33**	**47**	IAMs_20	IAMs_20	18 46 56.2			
	comp=Z,178µm,20.0s								
K22A	**Casper**	**109.33**	**47**	PKiKP	**PKiKP**	**18 03 09.8**	**-2.5**		
	baz=280								
FAUS	**Fauske**	**109.39**	**341**	*e*Pdif	**Pdif**	**17 59 08.1**	**-0.1**		
FAUS				*e*PP	**PP**	**18 03 41.3**	**+0.1**		
FAUS				*e*SKSdf	**SKSdf**	**18 10 19.9**	**-1.4**		
FAUS				*e*PS	PS	18 13 10.3	+1.4		
FAUS				*e*SS	**SS**	**18 19 01.8**	**+1.5**		
FAUS				IVMs_BB	IVMs_BB	18 52 13.8			
	comp=Z,74µm,20.0s								
FFC	**Flin Flon**	**109.42**	**34**	IAMs_20	IAMs_20	18 45 06.7			
	comp=Z,254µm,20.0s								
LOF	**Lofoten**	**109.52**	**342**	*e*	Pdif	17 59 31.2	+22		
LOF				*e*PP	**PP**	**18 03 43.4**	**+1.4**		
LOF				*e*SKSac	**SKSac**	**18 09 46.5**	**+0.4**		
LOF				*e*SS	**SS**	**18 19 03.5**	**+1.6**		
LOF				IVMs_BB	IVMs_BB	18 50 15.3			
	comp=Z,37µm,20.0s								
AKASG	**Malin Array Be**	**109.55**	**322**	Pdiff	**Pdif**	**17 59 08.2**	**-1.1**		
	comp=Z,7.6nm,1.0s,baz=61,slow=4.2,SNR=29								
AKASG				PKiKP	**PKiKP**	**18 03 12.6**	**+0.4**		
	comp=Z,8.8nm,0.9s,baz=59,slow=8.5,SNR=4.2								
AKASG				PP	**PP**	**18 03 42.4**	**-0.6**		
	comp=Z,13nm,0.9s,baz=68,slow=2.5,SNR=5.3								
AKASG				PKKPbc	**PKKPbc**	**18 14 22.6**	**+4.0**		
	comp=Z,0.9nm,0.5s,baz=95,slow=21,SNR=1.7								
KIEV	**Kiev**	**109.57**	**322**	⇑P	**Pdif**	**17 59 08.7**	**-0.6**		
KIEV	**Kiev**	**109.57**	**322**	⇑P	**Pdif**	**17 59 08.7**	**-0.6**		
121A	**Cookes Peak, D**	**109.65**	**58**	IAMs_20	IAMs_20	18 47 32.0			
	comp=Z,264µm,20.0s								
121A	**Cookes Peak, D**	**109.65**	**58**	PKiKP	**PKiKP**	**18 03 10.6**	**-2.6**		
	baz=275								
DGMT	**Dagmar**	**109.76**	**41**	IAMs_20	IAMs_20	18 45 43.2			
	comp=Z,156µm,20.0s								
DGMT	**Dagmar**	**109.76**	**41**	PKiKP	**PKiKP**	**18 03 11.4**	**-1.3**		
	baz=284								
N23A	**Red Feather La**	**110.05**	**49**	IAMs_20	IAMs_20	18 46 25.5			
	comp=Z,174µm,20.0s								
N23A	**Red Feather La**	**110.05**	**49**	PKiKP	**PKiKP**	**18 03 11.2**	**-2.7**		
	baz=280								
Y22D	**IRIS PASSCAL I**	**110.22**	**56**	IAMs_20	IAMs_20	18 42 43.8			
	comp=Z,194µm,21.0s								
Y22D	**IRIS PASSCAL I**	**110.22**	**56**	PKiKP	**PKiKP**	**18 03 11.9**	**-2.3**		
	baz=276								
Y22F	**Passcal Instru**	**110.22**	**56**	PKiKP	**PKiKP**	**18 03 12.1**	**-2.1**		
	baz=276								
PHWY	**Pilot Hill**	**110.34**	**48**	IAMs_20	IAMs_20	18 46 24.2			
	comp=Z,177µm,20.0s								
MOR8	**Moi Rana**	**110.34**	**340**	*e*Pdif	**Pdif**	**17 59 11.3**	**-1.2**		
MOR8				*e*PP	**PP**	**18 03 44.1**	**-4.0**		
MOR8				*e*SKSac	**SKSac**	**18 09 49.9**	**+0.2**		
MOR8				*e*PS	**PS**	**18 13 18.1**	**-0.3**		
MOR8				*e*SS	**SS**	**18 19 11.1**	**-2.1**		
MOR8				IVMs_BB	IVMs_BB	18 52 54.2			
	comp=Z,72µm,20.8s								
ISCO	**Idaho Springs**	**110.47**	**50**	IAMs_20	IAMs_20	18 44 17.2			
	comp=Z,283µm,22.0s								
ISCO	**Idaho Springs**	**110.47**	**50**	PKiKP	**PKiKP**	**18 03 12.5**	**-2.3**		
	baz=279								
ANMO	**Albuquerque**	**110.50**	**55**	IAMs_20	IAMs_20	18 43 09.0			
	comp=Z,221µm,21.0s								
ANMO	**Albuquerque**	**110.50**	**55**	IAMs_20	IAMs_20	18 43 09.4			
	comp=Z,218µm,21.0s								
ANMO	**Albuquerque**	**110.50**	**55**	PKiKP	**PKiKP**	**18 03 13.1**	**-1.7**		
	baz=277								
BOSA	**Boshof**	**110.69**	**236**	IAMs_20	IAMs_20	18 46 22.1			
	comp=Z,193µm,20.0s								
BOSA	**Boshof**	**110.69**	**236**	Pdiff	**Pdif**	**17 59 15.4**	**+0.4**		
	comp=Z,2.6nm,1.0s,baz=134,slow=7.6,SNR=1.8								
BOSA				PP	**PP**	**18 03 54.8**	**+2.9**		
	comp=Z,21nm,1.0s,baz=127,slow=7.1,SNR=2.3								
BOSA				PKKPbc	**PKKPbc**	**18 14 19.2**	**+4.8**		
	comp=Z,2.2nm,1.0s,baz=331,slow=15,SNR=0.9								
KIS	**Kishinev**	**110.72**	**318**	*e*P	**Pdif**	**17 59 21.0**	**+6.4**		
KIS	**Kishinev**	**110.72**	**318**	*e*PKP	**PKiKP**	**18 03 14.0**	**-0.6**		
KIS	**Kishinev**	**110.72**	**318**	*e*PS	PS	18 13 40.0	+17		
KIS	**Kishinev**	**110.72**	**318**	*e*PKIKP	**PKiKP**	**18 03 14.0**	**-0.6**		
STOK	**Stokkvaagen**	**110.73**	**341**	*e*Pdif	**Pdif**	**17 59 16.1**	**+2.0**		
STOK				*e*PP	**PP**	**18 03 47.6**	**-3.2**		
STOK				*e*SKSac	**SKSac**	**18 09 50.1**	**-1.0**		
STOK				*e*PS	PKKPbc	18 13 22.2	-53		
STOK				*e*SS	**SS**	**18 19 18.6**	**+0.4**		
STOK				IVMs_BB	IVMs_BB	18 52 55.9			
	comp=Z,45µm,20.0s								
MILM	**Milestii Mici**	**110.75**	**318**	⇓P	**PKiKP**	**18 03 14.0**	**-0.6**		
MILM	**Milestii Mici**	**110.75**	**318**	*e*P	**Pdif**	**17 59 21.0**	**+6.3**		
MILM	**Milestii Mici**	**110.75**	**318**	*e*PKP	**PKiKP**	**18 03 14.0**	**-0.6**		
MILM	**Milestii Mici**	**110.75**	**318**	LRM	MLR	18 53 40.0			
	comp=Z,68µm,20.0s								
MILM	**Milestii Mici**	**110.75**	**318**	*e*PKIKP	**PKiKP**	**18 03 14.0**	**-0.6**		
MILM				pmax	pmax				
	comp=Z,9µm,5.7s								
MILM	**Milestii Mici**	**110.75**	**318**	*e*PS	PS	18 13 40.0	+17		
MILM	**Milestii Mici**	**110.75**	**318**	*e*L	L	18 36 32.0			
MILM	**Milestii Mici**	**110.75**	**318**	LQM		18 50 20.0			
	comp=Z,46µm,22.0s								
SORM	**Soroca**	**110.75**	**319**	⇑P	**Pdif**	**17 59 13.1**	**-1.6**		
SORM	**Soroca**	**110.75**	**319**	⇑P	**PKiKP**	**18 03 15.3**	**+0.8**		
SORM	**Soroca**	**110.75**	**319**	⇑P	**Pdif**	**17 59 13.1**	**-1.6**		
EPT	**El Paso**	**110.81**	**58**	IAMs_20	IAMs_20	18 42 30.0			
	comp=Z,287µm,22.0s								
RSSD	**Black Hills**	**110.83**	**45**	IAMs_20	IAMs_20	18 44 16.8			
	comp=Z,204µm,22.0s								
RSSD	**Black Hills**	**110.83**	**45**	PKiKP	**PKiKP**	**18 03 13.4**	**-1.8**		
	baz=282								
Q24A	**Divide**	**110.97**	**51**	PKiKP	**PKiKP**	**18 03 14.1**	**-1.6**		
	baz=279								
PABE	**Paberze**	**111.10**	**328**	IAMs_20	IAMs_20	18 53 11.5			
	comp=Z,194µm,20.0s								
BRIGG	**Briggsdale**	**111.32**	**49**	IAMs_20	IAMs_20	18 44 22.1			
	comp=Z,186µm,21.0s								
TPGR	**Topolog**	**111.49**	**316**	⇓P	PKiKP	18 03 28.3	+12		
LBTB	**Lobatse**	**111.56**	**240**	IAMs_20	IAMs_20	18 52 06.3			
	comp=Z,167µm,19.0s								
TIRR	**Tirgusor**	**111.59**	**315**	⇑P	PKiKP	18 03 29.3	+13		
TIRR	**Tirgusor**	**111.59**	**315**	IAMs_20	IAMs_20	18 52 08.7			
	comp=Z,168µm,22.0s								
CFR	**Carcaliu**	**111.61**	**316**	⇓P	**Pdif**	**17 59 19.9**	**+1.3**		
CFR	**Carcaliu**	**111.61**	**316**	⇑P	PKiKP	18 03 30.9	+15		
CFR	**Carcaliu**	**111.61**	**316**	⇓P	**Pdif**	**17 59 19.9**	**+1.3**		
MNTX	**Cornudas Mount**	**111.77**	**58**	PKiKP	**PKiKP**	**18 03 15.3**	**-1.8**		
	baz=276								
T25A	**Trinidad**	**111.83**	**53**	IAMs_20	IAMs_20	18 43 14.1			
	comp=Z,181µm,22.0s								
T25A	**Trinidad**	**111.83**	**53**	PKiKP	**PKiKP**	**18 03 15.6**	**-1.7**		
	baz=279								
ISK	**Istanbul-Kandi**	**111.84**	**312**	P	PKiKP	18 03 30.0	+13		
MBAR	**Mbarara**	**111.84**	**267**	*e*P	**Pdif**	**17 59 30.1**	**+10**		
GHRR		**111.90**	**317**	⇓P	**PKiKP**	**18 03 18.3**	**+1.5**		
SUW	**Suwalki**	**112.06**	**326**	*e*Pdif	**Pdif**	**17 59 19.7**	**-0.6**		
SUW				*e*PKiKP	**PKiKP**	**18 03 19.9**	**+3.1**		
SUW				*e*SP	SP	18 13 18.0	-12		
SUW				*e*SS	SS	18 19 56.9	+20		
SUW				*e*L	L	18 53 25.7			
	comp=Z,202µm,21.8s								
SUW	**Suwalki**	**112.06**	**326**	IAMs_20	IAMs_20	18 53 29.1			
	comp=Z,194µm,21.0s								
SUW	**Suwalki**	**112.06**	**326**	*e*P	**Pdif**	**17 59 20.5**	**+0.2**		
NSS	**Namsos**	**112.14**	**339**	*e*Pdif	**Pdif**	**17 59 22.3**	**+1.8**		
NSS				*e*PP	**PP**	**18 03 58.9**	**-2.0**		
NSS				*e*SKPdf	**SKiKP**	**18 06 47.8**	**-2.5**		
NSS				*e*SKSac	**SKSac**	**18 10 05.4**	**+8.4**		
NSS				*e*SP	SP	18 13 31.9	+1.7		
NSS				*e*SS	**SS**	**18 19 35.7**	**-1.3**		
NSS				IVMs_BB	IVMs_BB	18 52 28.1			
	comp=Z,48µm,20.5s								
TESR	**Tescani**	**112.29**	**318**	⇑P	**Pdif**	**17 59 19.9**	**-1.7**		
TESR	**Tescani**	**112.29**	**318**	⇑P	PKiKP	18 03 32.2	+15		
VRI	**Vrincioaia**	**112.41**	**317**	⇓P	**Pdif**	**17 59 23.5**	**+1.4**		
VRI	**Vrincioaia**	**112.41**	**317**	⇓P	PKiKP	18 03 31.3	+13		
VRI	**Vrincioaia**	**112.41**	**317**	⇓P	**Pdif**	**17 59 23.5**	**+1.4**		
SPBR	**Spulber**	**112.42**	**317**	⇓P	PKiKP	18 03 32.0	+14		
UPNV	**Upernavik**	**112.43**	**6**	*e*P	PKiKP	18 03 25.9	+8.8		
PLOR	**Plostina**	**112.46**	**317**	⇓P	**Pdif**	**17 59 21.6**	**-0.8**		
PLOR	**Plostina**	**112.46**	**317**	⇑P	PKiKP	18 03 31.2	+13		
PLOR	**Plostina**	**112.46**	**317**	⇓P	**Pdif**	**17 59 21.6**	**-0.8**		
E28A	**Huff**	**112.53**	**42**	IAMs_20	IAMs_20	18 48 46.5			
	comp=Z,215µm,21.0s								
BIZ	**Bicaz**	**112.54**	**318**	⇓P	**Pdif**	**17 59 22.8**	**+0.1**		
JMIC	**Jan Mayen**	**112.72**	**350**	*e*Pdif	**Pdif**	**17 59 28.8**	**+5.8**		
JMIC				*e*PP	**PP**	**18 04 05.1**	**+0.3**		
JMIC				*e*SS	SS	18 19 49.6	+5.3		
JMIC				IVMs_BB	IVMs_BB	18 40 48.9			
	comp=Z,22µm,49.3s								
ISR	**Istrita**	**112.72**	**316**	⇓P	PKiKP	18 03 30.8	+12		
COVR	**Voineasa-Covas**	**112.76**	**317**	⇑P	**Pdif**	**17 59 23.8**	**+0.1**		
JMI	**Jan Mayen**	**112.81**	**350**	*e*PP	**PP**	**18 04 05.5**	**+0.1**		
JMI				*e*PS	PKKPbc	18 13 47.0	-21		
JMI				*e*SS	SS	18 19 54.5	+9.0		
JMI				IVMs_BB	IVMs_BB	18 40 52.6			
	comp=Z,23µm,46.4s								
NEHR	**Nehoiu**	**112.81**	**317**	⇓P	**Pdif**	**17 59 25.0**	**+1.1**		
NEHR	**Nehoiu**	**112.81**	**317**	⇓P	**PKiKP**	**18 03 20.0**	**+1.4**		
TURR	**Turia**	**112.83**	**318**	⇑P	**Pdif**	**17 59 24.6**	**+0.5**		
SUR	**Sutherland**	**112.88**	**231**	IAMs_20	IAMs_20	18 48 31.6			
	comp=Z,214µm,19.0s								
KSCO	**Kaye Shedlock'**	**112.89**	**50**	PKiKP	**PKiKP**	**18 03 18.3**	**-0.8**		
	baz=281								
MDND	**Maddock**	**112.89**	**40**	PKiKP	**PKiKP**	**18 03 18.0**	**-0.7**		
	baz=287								
BURAR	**Bucovina Array**	**112.93**	**319**	⇑P	**Pdif**	**17 59 22.5**	**-2.0**		
BURAR	**Bucovina Array**	**112.93**	**319**	⇑P	PKiKP	18 03 29.1	+10		
BURAR	**Bucovina Array**	**112.93**	**319**	⇑P	**Pdif**	**17 59 22.5**	**-2.0**		
OGNE	**Ogallala**	**112.95**	**48**	IAMs_20	IAMs_20	18 48 08.4			
	comp=Z,193µm,20.0s								
OGNE	**Ogallala**	**112.95**	**48**	PKiKP	**PKiKP**	**18 03 17.9**	**-1.2**		
	baz=282								
OZUR		**112.98**	**318**	⇓P	PKiKP	18 03 33.0	+14		
LVV	**L'vov**	**113.00**	**322**	*e*PKiKP	**PKiKP**	**18 03 13.0**	**-5.8**		
LVV				*e*PPP	PPP	18 06 40.0			
LVV				*e*		18 09 53.0			
MLR	**Muntele Rosu**	**113.03**	**317**	⇑P	**Pdif**	**17 59 26.3**	**+1.2**		
MLR	**Muntele Rosu**	**113.03**	**317**	⇑P	**PKiKP**	**18 03 17.6**	**-1.6**		
MLR	**Muntele Rosu**	**113.03**	**317**	⇑PKiKP	**PKiKP**	**18 03 17.6**	**-1.6**		
BOSR	**Bodos**	**113.07**	**318**	⇑P	PKiKP	18 03 33.8	+15		
DOPR	**Dopca**	**113.28**	**318**	⇑P	**Pdif**	**17 59 26.1**	**+0.1**		
DOPR	**Dopca**	**113.28**	**318**	⇓P	PKiKP	18 03 33.5	+14		
EDRB	**Edirne**	**113.37**	**313**	P	PKiKP	18 03 39.1	+19		
TXAR	**Lajitas Array**	**113.50**	**61**	Pdiff	**Pdif**	**17 59 26.8**	**-0.6**		
	comp=Z,0.1nm,0.3s,baz=100,slow=12,SNR=9.5								
TXAR				PKiKP	**PKiKP**	**18 03 20.7**	**+0.2**		
	comp=Z,7.0nm,1.0s,baz=136,slow=1.7,SNR=5.8								
TXAR				PKKPbc	**PKKPab**	**18 14 13.7**	**+1.9**		
	comp=Z,11nm,1.0s,baz=119,slow=5.5,SNR=6.9								
TBLU	**Trondheim**	**113.50**	**339**	*e*Pdif	**Pdif**	**17 59 26.9**	**+0.3**		
TBLU				*e*PP	**PP**	**18 04 10.0**	**-0.7**		
TBLU				*e*SKSac	**SKSac**	**18 10 00.8**	**-1.7**		
TBLU				*e*SP	**SP**	**18 13 41.8**	**-0.9**		
TBLU				IVMs_BB	IVMs_BB	18 55 40.1			
	comp=Z,45µm,19.2s								
SUMG	**Summit**	**113.63**	**0**	PKP	PKiKP	18 02 57.2	-23		
ARCR	**ARCALIA**	**113.64**	**319**	⇓P	**Pdif**	**17 59 27.1**	**-0.4**		
MSTX	**Muleshoe**	**113.65**	**56**	IAMs_20	IAMs_20	18 47 41.5			
	comp=Z,157µm,21.0s								
MSTX	**Muleshoe**	**113.65**	**56**	PKiKP	**PKiKP**	**18 03 19.3**	**-1.4**		
	baz=279								
VOIR		**113.65**	**317**	⇑P	**Pdif**	**17 59 27.9**	**+0.1**		
VOIR		**113.65**	**317**	⇑P	**PKiKP**	**18 03 24.2**	**+3.9**		
VOIR		**113.65**	**317**	⇑P	**Pdif**	**17 59 27.9**	**+0.1**		
ELND	**Elena**	**113.74**	**314**	⇓P	**PKiKP**	**18 03 21.4**	**+1.0**		
DAT	**Datca**	**113.79**	**307**	P	**PKiKP**	**18 03 25.9**	**+5.0**		
KWP	**Kalwaria Pacla**	**113.87**	**322**	*e*Pdif	**Pdif**	**17 59 33.4**	**+4.9**		
KWP				*e*SP	SP	18 14 05.1	+18		
KWP				*e*L	L	18 54 11.5			
	comp=Z,187µm,21.2s								
KWP	**Kalwaria Pacla**	**113.87**	**322**	IAMs_20	IAMs_20	18 54 13.9			
	comp=Z,185µm,21.0s								
HFS	**Hagfors**	**113.94**	**335**	Pdiff	**Pdif**	**17 59 25.0**	**-3.6**		
	comp=Z,1.9nm,0.8s,baz=86,slow=5.9,SNR=1.8								
HFS				PKiKP	**PKiKP**	**18 03 20.5**	**+0.2**		
	comp=Z,7.0nm,0.8s,baz=124,slow=2.6,SNR=2.8								
HFS				PKKPbc	**PKKPab**	**18 14 08.8**	**-0.3**		
	comp=Z,2.9nm,0.7s,baz=242,slow=3.1,SNR=1.9								
BODT	**Bodrum**	**113.94**	**308**	P	PKiKP	18 03 32.9	+12		
HUMR	**Humele**	**113.95**	**316**	⇓P	**PKiKP**	**18 03 20.6**	**-0.2**		
ARR	**Arges**	**113.95**	**317**	⇑P	**Pdif**	**17 59 28.4**	**-0.7**		
ARR	**Arges**	**113.95**	**317**	⇓P	**PKiKP**	**18 03 22.8**	**+1.9**		
BMR	**Baia Mare**	**114.02**	**320**	⇓P	**Pdif**	**17 59 28.6**	**-0.6**		
BMR	**Baia Mare**	**114.02**	**320**	⇑P	**PKiKP**	**18 03 21.6**	**+0.8**		
BMR	**Baia Mare**	**114.02**	**320**	P	**Pdif**	**17 59 28.6**	**-0.6**		
MG03	**Isla Dawson**	**114.03**	**159**	IAMs_20	IAMs_20	18 55 08.6			
	comp=Z,196µm,18.0s								
ENEZ	**Enez**	**114.06**	**312**	P	PKiKP	18 03 42.0	+21		
MG01	**Puerto William**	**114.09**	**161**	IAMs_20	IAMs_20	18 48 57.1			
	comp=Z,221µm,18.0s								
ALN	**Alexandroupoli**	**114.10**	**312**	P	**PKiKP**	**18 03 24.7**	**+3.5**		
EZN	**Ezine**	**114.14**	**311**	P	**PKiKP**	**18 03 28.9**	**+7.6**		
SMG	**Samos**	**114.19**	**309**	P	PKiKP	18 03 35.2	+14		
BEL	**Belsk**	**114.22**	**325**	*e*Pdif	**Pdif**	**17 59 39.0**	**+9.0**		
BEL				*e*SP	SP	18 13 41.2	-8.8		
BEL				*e*L	L	18 56 44.9			
	comp=Z,199µm,19.2s								
CBBR	**Cluj-Babes-Bol**	**114.26**	**319**	⇑P	PKPdf	18 03 19.6	-1.7		
SUSD	**Miller**	**114.29**	**44**	IAMs_20	IAMs_20	18 49 34.3			
	comp=Z,225µm,21.0s								
SUSD	**Miller**	**114.29**	**44**	PKiKP	PKPdf	18 03 20.0	-1.4		
	baz=286								
K30B	**Basset**	**114.30**	**46**	IAMs_20	IAMs_20	18 48 46.8			
	comp=Z,224µm,20.0s								
PRK	**Paraskevi**	**114.30**	**310**	P	**PKiKP**	**18 03 22.8**	**+1.2**		
KARP	**Karpathos**	**114.34**	**306**	P	PKiKP	18 03 32.6	+11		
GO10	**Punta Arenas**	**114.37**	**158**	IAMs_20	IAMs_20	19 01 54.7			
	comp=Z,144µm,18.0s								
KOLS	**Kolonicke sedl**	**114.38**	**321**	*e*P	**Pdif**	**17 59 31.3**	**+0.5**		
KOLS	**Kolonicke sedl**	**114.38**	**321**	*e*PDIFF	**Pdif**	**17 59 31.3**	**+0.5**		
KOLS	**Kolonicke sedl**	**114.38**	**321**	*e*PKP	**PKiKP**	**18 03 23.0**	**+1.5**		
AMTX	**Amarillo**	**114.39**	**55**	IAMs_20	IAMs_20	18 45 56.3			
	comp=Z,206µm,21.0s								
AMTX	**Amarillo**	**114.39**	**55**	PKiKP	PKPdf	18 03 20.4	-1.7		
	baz=280								
MG04	**Isla Riesco**	**114.41**	**158**	IAMs_20	IAMs_20	18 49 39.9			
	comp=Z,165µm,18.0s								
RDO	**Rodhopi**	**114.42**	**312**	P	PKPdf	18 03 18.2	-3.6		
ULM	**Lac du Bonnet**	**114.43**	**37**	IAMs_20	IAMs_20	18 45 33.0			
	comp=Z,211µm,21.0s								
ULM	**Lac du Bonnet**	**114.43**	**37**	PKP	PKPdf	18 03 20.8	-0.8		
	comp=Z,5.3nm,0.5s,baz=285,slow=1.3,SNR=9.2								
ULM				PKKPbc	**PKKPbc**	**18 14 03.7**	**+1.3**		
	comp=Z,7.6nm,0.9s,baz=98,slow=4.8,SNR=2.3								
NB2	**NORSAR Subarra**	**114.45**	**336**	P	**Pdif**	**17 59 42.4**	**+11**		
	comp=Z,9.5nm,1.2s,baz=48,slow=5.1								
NB2	**NORSAR Subarra**	**114.45**	**336**	PKPdf	**PKiKP**	**18 03 20.5**	**-0.8**		
	comp=Z,70nm,2.0s,baz=44,slow=1.9								
NB2				PKKP	PKKPdf	18 14 16.8	-8.8		
	comp=Z,6.2nm,0.9s,baz=248,slow=5.6								
NB2	**NORSAR Subarra**	**114.45**	**336**	PKPdf	**PKiKP**	**18 03 20.5**	**-0.8**		
	baz=44,slow=1.9								
NOA	**NORSAR Array B**	**114.45**	**336**	Pdiff	**Pdif**	**17 59 35.7**	**+4.8**		
	comp=Z,1.4nm,0.8s,baz=61,slow=4.6,SNR=3.9								
NOA				PKP	**PKiKP**	**18 03 20.5**	**-0.8**		
	comp=Z,3.9nm,0.8s,baz=58,slow=1.9,SNR=6.1								
NOA				PP	**PP**	**18 04 20.6**	**+3.1**		
	comp=Z,19nm,1.2s,baz=51,slow=6.8,SNR=3.1								
NOA				PKKPbc	**PKKPab**	**18 14 05.6**	**-1.3**		
	comp=Z,2.3nm,1.1s,baz=247,slow=7.8,SNR=1.9								
NC602	**NORSAR Array S**	**114.49**	**336**	*e*PKPdf	**PKiKP**	**18 03 20.7**	**-0.6**		
NC602				*e*PP	**PP**	**18 04 18.2**	**+0.5**		
NC602				*e*PS	**PS**	**18 13 55.1**	**-1.5**		
NC602				*e*SS	SS	18 20 10.3	+1.9		
NC602				IVMs_BB	IVMs_BB	18 54 03.9			
	comp=Z,57µm,19.9s								
PLVB	**Pleven**	**114.51**	**315**	⇓P	**PKiKP**	**18 03 24.0**	**+2.2**		
MARR	**Marisel-Cluj**	**114.57**	**319**	⇓P	**Pdif**	**17 59 31.0**	**-0.9**		
SMTH	**Samothraki Isl**	**114.58**	**312**	P	**PKiKP**	**18 03 23.7**	**+1.5**		
CHOS	**Chios island**	**114.65**	**309**	P	PKiKP	18 03 32.1	+10		
DOMB	**Dombas**	**114.68**	**338**	*e*Pdif	**Pdif**	**17 59 33.3**	**+1.4**		
DOMB				*e*PKPdf	PKPdf	18 03 21.9	+0.1		
DOMB				*e*PP	**PP**	**18 04 18.6**	**-0.5**		
DOMB				*e*SP	SP	18 13 54.2	+0.6		
DOMB				*e*SS	**SS**	**18 20 12.4**	**+1.6**		
DOMB

FOO *e*PS PKKPdf 18 14 11.5 -10
FOO *e*SS SS 18 20 35.8 +2.2
FOO IVMs_BB IVMs_BB 18 56 24.9
comp=Z,51µm,20.2s
THE Thessaloniki 116.44 312 P **PKiKP 18 03 32.8 +7.1**
ABTX Abilene, Hawle 116.45 57 IAMs_20 IAMs_20 18 45 43.9
comp=Z,229µm,22.0s
ABTX Abilene, Hawle 116.45 57 PKiKP **PKPdf 18 03 25.0 -1.0**
baz=280
BOVS Bovan 116.47 316 ⇑P **PKiKP 18 03 26.1 +0.4**
ATHU Athens Univers 116.49 309 P **PKPdf 18 03 25.3 -0.6**
VAY Valandovo 116.53 313 *i* P PKiKP 18 03 38.6 +13
OKC Ostrava-Krasne 116.54 323 *e*PDIFF Pdif 18 00 00.0 +20
OKC AMS AMS 18 58 10.0
comp=Z,139µm,18.6s
VYHS Vyhne 116.66 322 *e*P **Pdif 17 59 41.1 +0.1**
VYHS *e* 18 03 26.1
VYHS Vyhne 116.66 322 *e*PDIFF **Pdif 17 59 41.1 +0.1**
VYHS Vyhne 116.66 322 *e*PKP **PKiKP 18 03 26.1 +0.2**
JCT Junction City 116.67 59 PKiKP **PKPdf 18 03 25.3 -1.2**
baz=279
GRG Griva 116.76 313 P PKiKP 18 03 34.3 +7.9
WMOK Wichita Mounta 116.76 54 IAMs_20 IAMs_20 18 48 12.1
comp=Z,194µm,21.0s
WMOK Wichita Mounta 116.76 54 PKiKP **PKPdf 18 03 24.9 -1.6**
baz=282
OK032 Salt Plains WL 116.77 52 IAMs_20 IAMs_20 18 46 20.7
comp=Z,260µm,22.0s
L34A Svendsen Farm, 116.81 46 IAMs_20 IAMs_20 18 50 13.4
comp=Z,173µm,21.0s
SUE Sulen 116.90 339 *e*Pdif **Pdif 17 59 42.1 +0.4**
SUE *e*PKPdf **PKPdf 18 03 24.5 -1.4**
SUE *e*PP **PP 18 04 34.1 -0.5**
SUE *e*SKSac **SKSac 18 10 15.6 +0.2**
SUE *e*SP SP 18 14 14.9 +1.2
SUE *e*SS **SS 18 20 35.6 -4.0**
SUE IVMs_BB IVMs_BB 18 55 55.7
comp=Z,64µm,19.4s
IMMV Iera Moni Meta 116.90 307 P **PKPdf 18 03 23.7 -3.0**
MORC Moravsky Berou 116.92 324 ⇑P **Pdif 17 59 39.0 -3.2**
MORC Moravsky Berou 116.92 324 ⇑P **PKiKP 18 03 27.5 +1.1**
MORC Moravsky Berou 116.92 324 *e*PDIFF **Pdif 17 59 41.2 -1.0**
MORC Moravsky Berou 116.92 324 *e*PKP **PKPdf 18 03 26.3 -0.1**
MORC Moravsky Berou 116.92 324 ⇑P **Pdif 17 59 39.0 -3.2**
ODD1 Odda 116.94 337 *e*Pdif **Pdif 17 59 40.6 -1.4**
ODD1 *e*PKPdf **PKPdf 18 03 25.1 -1.0**
ODD1 *e*PP **PP 18 04 32.5 -2.5**
ODD1 *e*SP SP 18 14 13.7 -0.5
ODD1 *e*SS **SS 18 20 44.6 +4.2**
ODD1 IVMs_BB IVMs_BB 18 57 40.1
comp=Z,70µm,19.4s
CROK Carrier 117.01 52 IAMs_20 IAMs_20 18 47 21.3
comp=Z,243µm,21.0s
RGN Rugen 117.03 330 IAMs_20 IAMs_20 18 56 58.3
comp=Z,189µm,20.0s
LOUT Loutraki 117.11 310 P **PKPdf 18 03 25.4 -1.7**
ICESG Greenland Ices 117.12 1 *e*P **PKPdf 18 03 25.7 -0.9**
ASK Askoy 117.12 338 *e* **PKPdf 18 03 25.1 -1.3**
ASK *e*SP SP 18 14 14.0 -1.7
BER Bergen 117.13 338 *e*Pdif **Pdif 17 59 42.4 -0.3**
BER *e*PKPdf **PKPdf 18 03 26.0 -0.3**
BER *e*PP **PP 18 04 37.0 +0.8**
BER *e*SP SP 18 14 15.6 -0.2
BER *e*SS **SS 18 20 39.9 -2.9**
BER IVMs_BB IVMs_BB 18 57 06.4
comp=Z,73µm,19.5s
AXAR Agios Charalam 117.15 311 P **PKPdf 18 03 24.6 -2.6**
SKO Skopje 117.16 314 *i* P **PKiKP 18 03 27.6 +0.5**
HOMB Homborsund 117.20 335 *e*Pdif **Pdif 17 59 42.4 -0.7**
HOMB *e*PKPdf **PKPdf 18 03 24.9 -1.7**
HOMB *e*PP **PP 18 04 37.2 +0.5**
HOMB *e*SP SP 18 14 15.6 -0.9
HOMB *e*SS **SS 18 20 43.9 +0.2**
HOMB IVMs_BB IVMs_BB 18 56 46.1
comp=Z,53µm,19.8s
KSP Ksiaz 117.20 325 *e*Pdif **Pdif 17 59 49.0 +5.7**
KSP *e*PKiKP **PKiKP 18 03 28.0 +1.1**
KSP *e*SP SP 18 14 09.6 -7.6
KSP *e*SS **SKKSdf 18 21 21.5 -9.4**
KSP *e*L L 18 56 54.9
comp=Z,138µm,21.2s
JAVC Velka Javorina 117.22 323 *e*PDIFF **Pdif 17 59 44.3 +0.8**
JAVC Velka Javorina 117.22 323 *e*PKP **PKiKP 18 03 28.0 +0.9**
FRGS Fruska Gora 117.25 318 ⇓P **PKiKP 18 03 27.4 +0.2**
FRGS Fruska Gora 117.25 318 *e*P **PKiKP 18 03 28.0 +0.8**
BLS5 Blasjo 117.32 337 *e*PKPdf **PKPdf 18 03 25.8 -1.0**
BLS5 *e*PP **PP 18 04 36.4 -1.3**
BLS5 *e*SP SP 18 14 18.4 +0.8
BLS5 *e*SS **SS 18 20 49.0 +3.7**
BLS5 IVMs_BB IVMs_BB 18 57 01.9
comp=Z,64µm,20.3s
AGG Agios Georgios 117.33 311 P **PKPdf 18 03 25.5 -2.0**
THAL Thalero 117.33 310 P **PKPdf 18 03 22.8 -4.7**
833A Chaparral WMA, 117.34 61 PKiKP **PKPdf 18 03 26.4 -1.4**
baz=278
OSTC Ostas 117.36 325 *e*PDIFF Pdif 18 00 05.4 +21
OSTC *e*PKP **PKiKP 18 03 27.6 +0.4**
OSTC AMS AMS 18 57 00.0
comp=Z,162µm,21.2s
DPC Dobruska-Polom 117.39 325 *e*PKPDF **PKiKP 18 03 28.0 +0.7**
DPC *e*PKKP PKKPab 18 14 04.9 +11
DPC AMS AMS 18 57 10.0
comp=Z,140µm,20.6s
DPC Dobruska-Polom 117.39 325 *e*PKIKP **PKiKP 18 03 28.0 +0.7**
DPC MLR MLR
comp=Z,140µm,20.6s
THL Klokotos Trika 117.42 312 P PKiKP 18 03 38.4 +11
GO08 Villa O'Higgin 117.42 154 IAMs_20 IAMs_20 18 49 09.8
comp=Z,136µm,19.0s
KSU1 Kansas State U 117.43 49 PKiKP **PKPdf 18 03 26.1 -1.6**
baz=286
CHVC Chvalec 117.44 325 AMS AMS 18 57 10.0
comp=Z,153µm,21.1s
F36A Milaca 117.48 41 IAMs_20 IAMs_20 18 51 38.3
comp=Z,145µm,20.0s
MAKR Makrakomi, Fth 117.48 311 P **PKPdf 18 03 27.3 -0.5**
UPC Upice 117.50 325 *e*PDIFF Pdif 18 00 06.7 +22
UPC *e*PKPDF **PKiKP 18 03 28.4 +0.9**
UPC AMS AMS 18 57 00.0
comp=Z,167µm,20.9s
X34A Smith Ranch, M 117.55 54 IAMs_20 IAMs_20 18 51 17.7
comp=Z,168µm,20.0s
FNA Florina 117.55 313 *i* P **PKPdf 18 03 27.8 -0.1**
FNA Florina 117.55 313 P **PKPdf 18 03 27.5 -0.4**
BLOK Blackwell 117.56 52 IAMs_20 IAMs_20 18 47 17.6
comp=Z,202µm,22.0s
GUR Goura 117.60 310 P **PKPdf 18 03 26.9 -1.3**
MORH Mrgy, Hungar 117.64 320 ⇓P **PKPdf 18 03 27.6 -0.3**
N35A Tabor 117.66 47 IAMs_20 IAMs_20 18 51 08.6
comp=Z,157µm,21.0s
MODS Modra-Piesok 117.66 322 *e*P **Pdif 17 59 44.7 -0.7**
MODS Modra-Piesok 117.66 322 *e*PDIFF **Pdif 17 59 44.7 -0.7**
MODS Modra-Piesok 117.66 322 *e*PKP **PKiKP 18 03 28.9 +1.0**
FW03 Perrin-Whitt E 117.68 56 IAMs_20 IAMs_20 18 52 57.3
comp=Z,156µm,20.0s
VRAC Vranov 117.68 323 ⇓P **Pdif 17 59 44.9 -0.6**
VRAC Vranov 117.68 323 ⇑P **PKiKP 18 03 29.3 +1.5**
VRAC Vranov 117.68 323 *e*PDIFF **Pdif 17 59 45.6 +0.1**
VRAC Vranov 117.68 323 *e*PKP **PKiKP 18 03 28.1 +0.2**
VRAC Vranov 117.68 323 ⇓P **Pdif 17 59 44.9 -0.6**
SNART Snartemo 117.70 335 *e*PKPdf **PKiKP 18 03 28.7 +1.2**
SNART *e*PP **PP 18 04 39.9 -0.3**
SNART Snartemo 117.70 335 *i* P **PKPdf 18 03 27.0 -0.6**
KLV Kalavryta, Ach 117.72 310 P **PKPdf 18 03 27.6 -0.7**
EVR Evrytania 117.75 311 P **PKiKP 18 03 29.9 +1.5**
ANX Ano Chora 117.75 311 P **PKPdf 18 03 28.3 -0.1**
FNO Franklin 117.76 53 IAMs_20 IAMs_20 18 47 58.0
comp=Z,229µm,21.0s
KPRO Kipourio 117.80 312 P **PKPdf 18 03 27.6 -0.8**
EFP Efpalio 117.81 310 P **PKiKP 18 03 28.6 +0.2**
RUE Ruedersdorf 117.83 327 *e*PKPdf **PKiKP 18 03 28.5 +0.5**
baz=60,slow=1.9
ZST Bratislava 117.84 322 *e*PKIKP **PKPdf 18 03 27.7 -0.5**
ZST Bratislava 117.84 322 *e*PKP **PKPdf 18 03 27.7 -0.5**
OHR Ohrid 117.87 314 *i* P **PKiKP 18 03 29.6 +1.1**
SOEG Soedalen 117.90 358 *e*P **PKiKP 18 03 28.3 +0.6**
KRUC Moravsky 117.91 323 *e*PDIFF **Pdif 17 59 46.1 -0.4**
KRUC Moravsky 117.91 323 *e*PKP **PKiKP 18 03 28.6 +0.3**
OK051 E0350 and S346 117.91 52 IAMs_20 IAMs_20 18 47 39.0
comp=Z,241µm,22.0s
KMY Karmoy 117.93 337 *e*PKPdf **PKiKP 18 03 28.3 +0.3**
KMY *e*PP **PP 18 04 43.0 +1.2**
KMY *e*SP SP 18 14 23.5 +0.4
KMY *e*SS **SS 18 20 54.9 +1.8**
KMY IVMs_BB IVMs_BB 18 58 08.7
comp=Z,55µm,19.7s
PHP Peshkopia 117.96 314 *i* P **PKPdf 18 03 28.5 -0.2**
PHP Peshkopia 117.96 314 P **PKiKP 18 03 28.7 0.0**
EYMN Ely 117.97 38 IAMs_20 IAMs_20 18 50 03.9
comp=Z,232µm,21.0s
EYMN Ely 117.97 38 PKiKP **PKPdf 18 03 26.8 -1.6**
baz=294
BBLS Lazići 117.97 317 *e*P **PKPdf 18 03 27.6 -1.1**
FW07 Weatherford 117.98 56 IAMs_20 IAMs_20 18 54 43.9
comp=Z,208µm,19.0s
MUD Monsted U'grnd 117.98 333 *i* P **PKPdf 18 03 28.0 -0.1**
BCI Bajram Curri 118.01 315 *i* P **PKiKP 18 03 30.4 +1.7**
KBN Korca 118.03 313 *i* P **PKiKP 18 03 29.1 +0.3**
KBN Korca 118.03 313 P **PKPdf 18 03 26.9 -2.0**
T35A Sooner Cattle 118.07 51 IAMs_20 IAMs_20 18 51 35.0
comp=Z,193µm,20.0s
RUDO Rudo 118.08 317 *e*P **PKPdf 18 03 28.2 -0.6**
FW06 Azle 118.11 56 IAMs_20 IAMs_20 18 53 05.3
comp=Z,227µm,20.0s
SPMN Marine on St. 118.19 41 PKiKP **PKPdf 18 03 27.8 -1.1**
baz=292
W35A Tecumseh 118.20 53 IAMs_20 IAMs_20 18 48 11.8
comp=Z,214µm,21.0s
HAPS Han Pijesak,Bl 118.20 317 *e*P **PKiKP 18 03 29.6 +0.4**
LOOK Love County 118.21 55 IAMs_20 IAMs_20 18 52 39.2
comp=Z,171µm,20.0s
I37A Lemond, Waseca 118.22 43 IAMs_20 IAMs_20 18 49 49.4
comp=Z,234µm,21.0s
PUK Puka 118.23 315 *i* P PKPdf 18 03 13.1 -16
RLS Riolos of Patr 118.24 310 P **PKiKP 18 03 30.0 +0.7**
JAN Janina 118.26 312 P **PKiKP 18 03 31.1 +1.8**
Z35A Perchaven, San 118.29 55 IAMs_20 IAMs_20 18 52 24.1
comp=Z,150µm,20.0s
PVCC Panska Ves 118.32 325 AMS AMS 18 56 10.0
comp=Z,192µm,22.3s
PYL PYLOS 118.33 309 P **PKPdf 18 03 23.1 -6.4**
AY03 Cochrane 118.33 153 IAMs_20 IAMs_20 18 44 46.9
comp=Z,143µm,22.0s
TREC Trest 118.34 324 *e*PKPDF **PKPdf 18 03 29.0 -0.1**
TREC AMS AMS 18 57 50.0
comp=Z,124µm,20.4s
TREC Trest 118.34 324 *e*PKIKP **PKPdf 18 03 29.0 -0.1**
TREC MLR MLR
comp=Z,124µm,20.4s
WHTX Lake Whitney, 118.39 57 PKiKP **PKPdf 18 03 28.1 -1.6**
baz=281
E38A The Farm, Brul 118.47 40 IAMs_20 IAMs_20 18 49 22.2
comp=Z,189µm,22.0s
TIR Tirane 118.47 314 *i* P PKPdf 18 03 14.4 -15
GOPC GO Pecny, Ondr 118.47 325 *e*PKPDF **PKiKP 18 03 29.9 +0.5**
GOPC AMS AMS 18 57 50.0
comp=Z,140µm,20.4s
GOPC GO Pecny, Ondr 118.47 325 *e*PKIKP **PKiKP 18 03 29.9 +0.5**
GOPC MLR MLR
comp=Z,140µm,20.4s
435B Jarrell 118.50 58 PKiKP **PKPdf 18 03 27.9 -2.1**
baz=281
BRG Berggiesshubel 118.51 326 PKP **PKiKP 18 03 30.0 +0.6**
BRG Amp 18 03 31.3
comp=Z,41nm,1.0s
BRG Berggiesshubel 118.51 326 PKIKP **PKiKP 18 03 30.0 +0.6**
BRG 18 03 39.9
BRG pmax pmax
comp=Z,41nm,1.0s
BRG Berggiesshubel 118.51 326 *e*PKPdf **PKiKP 18 03 29.8 +0.4**
baz=60,slow=1.9
RONA Rosalia, Austr 118.54 322 *e*pPKP **PKiKP 18 03 29.7 +0.1**
comp=Z,36nm,1.1s,SNR=6.2
RONA *e*PKKP PKKPab 18 14 01.1 +12
comp=Z,2.4nm,0.6s
SFJD Kangerlussuaq 118.55 6 **PKPdf 18 03 28.3 -0.6**
SFJD Kangerlussuaq 118.55 6 PKIKP **PKPdf 18 03 28.3 -0.6**
SFJD MLR MLR
comp=Z,72µm,21.0s
RICC Richard 118.58 325 AMS AMS 18 56 30.0
comp=Z,210µm,21.3s
PRU Pruhonice 118.58 325 *e*PDIFF Pdif 18 00 11.8 +22
PRU *e*PKPDF **PKPdf 18 03 29.5 0.0**
PRU AMS AMS 18 57 00.0
comp=Z,161µm,20.6s
PRA Prague 118.61 325 *e*PDIFF Pdif 18 00 11.4 +22
PRA AMS AMS 18 57 00.0
comp=Z,180µm,21.0s
735A Kenedy 118.64 61 IAMs_20 IAMs_20 18 46 54.4
comp=Z,226µm,22.0s
NYDR Nydri-Lefkada 118.64 311 P PKPpre 18 03 20.2
LKD2 Lefkada island 118.65 311 P **PKPdf 18 03 29.5 -0.6**
IGT Igoumenitsa 118.68 312 P **PKPdf 18 03 28.4 -1.7**
DRME Dracevica, Mon 118.69 315 *e*P **PKiKP 18 03 30.6 +0.6**
EVGI Lefkada island 118.70 311 P **PKPdf 18 03 29.4 -0.7**
CONA Conrad Observa 118.71 322 *e*pPdiff **Pdif 17 59 51.7 +1.5**
comp=Z,9.7nm,1.3s
CONA *e*pPKP **PKPdf 18 03 29.8 -0.2**
comp=Z,27nm,1.0s
CONA *e*PKKP PKKPab 18 14 01.2 +13
comp=Z,7.6nm,0.9s
KVTX Kingsville 118.77 62 IAMs_20 IAMs_20 18 46 40.3
comp=Z,229µm,22.0s
FSK Fiskardo 118.82 311 P **PKPdf 18 03 30.1 -0.2**
CLL Collm 118.82 327 IAMs_20 IAMs_20 18 56 27.7
comp=Z,189µm,22.0s
CLL Collm 118.82 327 *e*PKIKP **PKiKP 18 03 30.0 0.0**
CLL pmax pmax
comp=Z,39nm,1.0s
CLL Collm 118.82 327 *e*PKPdf **PKPdf 18 03 29.7 -0.3**
baz=60,slow=1.9
CLL *e*L L 18 56 28.0
comp=Z,186µm,21.8s
SRN Sarande 118.82 312 *i* P **PKiKP 18 03 37.7 +7.4**
SRN Sarande 118.82 312 P **PKiKP 18 03 36.8 +6.5**
BSEG Bad Segeberg 118.86 330 *e*PKPdf **PKiKP 18 03 30.3 +0.4**
baz=60,slow=1.9
BSEG *e*L L 18 57 35.3
comp=Z,170µm,20.0s
TUL3 Leonard 118.88 52 PKiKP **PKPdf 18 03 29.2 -1.4**
baz=284
BRY Bratogost 118.89 316 *e*P **PKiKP 18 03 30.7 +0.1**
HSKC Hora Svate Kat 118.92 326 *e*PKPDF **PKPdf 18 03 29.9 -0.3**
HSKC AMS AMS 18 56 40.0
comp=Z,262µm,20.8s
KEF4 Livadi, Kephal 118.98 311 P **PKPdf 18 03 29.4 -1.2**
KEK Kerkira 119.02 312 P PKPdf 18 03 15.0 -16
SCIA State Center 119.06 45 IAMs_20 IAMs_20 18 53 01.9
comp=Z,182µm,20.0s
SCIA State Center 119.06 45 PKiKP **PKPdf 18 03 29.2 -1.6**
baz=290
TREB Trebinje 119.09 316 *e*P **PKPdf 18 03 29.7 -1.0**
K38A Parkersburg 119.12 44 IAMs_20 IAMs_20 18 51 25.1
comp=Z,179µm,21.0s
BLY Banja Luka 119.14 318 *e*P **PKPdf 18 03 29.6 -1.2**
ARSA Arzberg 119.20 322 *e*pPdiff **Pdif 17 59 53.4 +1.1**
comp=Z,6.6nm,1.8s
ARSA *e*pPKP **PKPdf 18 03 30.7 -0.1**
comp=Z,15nm,1.0s
ARSA *e*PKKP PKKPab 18 13 59.6 +13
comp=Z,3.2nm,0.7s
A051A Mrakovica 119.22 319 *e*P **PKPdf 18 03 30.4 -0.6**
FLTG Flechtingen 119.25 328 *e*PKPdf **PKPdf 18 03 30.4 -0.3**
baz=60,slow=1.9
CKRC Cesky Krumlov 119.25 324 *e*PKPDF **PKiKP 18 03 31.7 +0.8**
CKRC *e*PKKP **PKKPab 18 13 50.7 +4.7**
CKRC AMS AMS 18 58 40.0
comp=Z,108µm,20.6s
CKRC Cesky Krumlov 119.25 324 *e*PKIKP **PKiKP 18 03 31.7 +0.8**
CKRC MLR MLR
comp=Z,108µm,20.6s
MGRS Mrkonjic Grad 119.33 318 *e*P **PKiKP 18 03 31.8 +0.5**
N38A Joes South For 119.42 46 IAMs_20 IAMs_20 18 57 38.1
comp=Z,138µm,20.0s
RLO Rose Lookout 119.42 52 IAMs_20 IAMs_20 18 48 44.7
comp=Z,244µm,22.0s
DY2G Dye2 119.44 4 *e*P **PKPdf 18 03 29.9 -1.1**
STON Ston 119.48 316 *e*P **PKPdf 18 03 30.1 -1.3**
X37A Clayton 119.53 54 IAMs_20 IAMs_20 18 53 50.1
comp=Z,148µm,20.0s
KHC Kasperske Hory 119.53 324 *e*PDIFF **Pdif 17 59 53.0 -0.8**
KHC *e*pP **pPdif 17 59 59.9 -3.7**
KHC *e*PKPDF **PKiKP 18 03 31.7 +0.2**
KHC *e*PP **PP 18 04 51.3 -2.1**
KHC *ex* x 18 13 05.3
KHC AMS AMS 18 58 50.0
comp=Z,160µm,19.7s
KHC Kasperske Hory 119.53 324 *e*PKIKP **PKiKP 18 03 31.7 +0.2**
KHC *e* 18 04 51.3
KHC MLR MLR
comp=Z,160µm,19.7s
NEUB Neuenburg 119.54 327 *e*PKPdf **PKiKP 18 03 31.8 +0.4**
baz=60,slow=1.9
TANN Tannenbergstha 119.56 326 *e*PKPdf **PKiKP 18 03 31.6 +0.1**
baz=60,slow=1.9
P38A Dawn 119.57 48 IAMs_20 IAMs_20 18 50 55.7
comp=Z,208µm,22.0s
GEC2 GERESS Array S 119.59 324 *e*PKPdf **PKPdf 18 03 31.6 -0.1**
baz=60,slow=1.9
GEC2 *e*L L 18 59 28.3
comp=Z,107µm,20.8s
GERES GERESS Array B 119.59 324 Pdiff **Pdif 17 59 52.8 -1.3**
comp=Z,2.5nm,1.0s,baz=53,slow=8.9,SNR=7.3
GERES PKP **PKPdf 18 03 31.2 -0.4**
comp=Z,11nm,0.8s,baz=70,slow=2.7,SNR=17
GERES PKKPbc **PKKPab 18 13 44.7 +0.1**
comp=Z,3.7nm,0.9s,baz=323,slow=2.5,SNR=1.9
ASSE Asse, Remlinge 119.65 328 *e*PKPdf **PKiKP 18 03 32.2 +0.7**
baz=60,slow=1.9
NKC Novy Kostel 119.65 326 *e*PDIFF **Pdif 18 00 01.4 +7.1**
NKC *ex* x 18 13 08.3
NKC AMS AMS 18 57 00.0
comp=Z,220µm,21.2s
NKC Novy Kostel 119.65 326 *e*P **Pdif 18 00 01.4 +7.1**
NKC MLR MLR
comp=Z,220µm,21.2s
A050A Klekovaca 119.67 318 *e*P **PKiKP 18 03 32.3 +0.3**
PLN Plauen 119.69 326 *e*PKPdf **PKiKP 18 03 31.8 +0.1**
baz=60,slow=1.9
MOA Molln 119.71 323 *e*pPdiff **Pdif 17 59 55.6 +1.0**
comp=Z,12nm,1.6s
MOA *e*pPKP **PKPdf 18 03 31.5 -0.4**
comp=Z,27nm,1.2s
MOA *e*PKKP PKKPab 18 13 57.5 +14
comp=Z,12nm,0.8s
NRDL Niedersach Rie 119.75 329 *e*PKPdf **PKiKP 18 03 31.9 +0.3**
baz=60,slow=1.9
SOKA Soboth 119.75 321 *e*pPdiff **Pdif 17 59 54.0 -0.9**
comp=Z,8.0nm,1.3s
SOKA *e*pPKP **PKiKP 18 03 32.1 +0.1**
comp=Z,41nm,1.0s,SNR=7.5
SOKA *e*PKKP PKKPab 18 13 57.1 +13
comp=Z,8.6nm,0.9s
COYC Coyhaique 119.83 152 IAMs_20 IAMs_20 18 52 52.7
comp=Z,146µm,18.0s
CRES Cresnjev 119.84 320 *e*P **PKPdf 18 03 31.9 -0.2**
U38A Gravette 119.84 51 IAMs_20 IAMs_20 18 49 02.0
comp=Z,173µm,22.0s
G40A Rib Lake 119.87 41 IAMs_20 IAMs_20 18 51 54.3
comp=Z,162µm,20.0s
SCTE Santa Cesarea 119.88 313 *i* P PKiKP 18 03 41.9 +9.5
MOX Moxa 119.91 326 *e*PKPdf **PKiKP 18 03 32.3 +0.2**
baz=60,slow=1.9
MOX *e*L L 18 57 00.1
comp=Z,152µm,22.0s
WET Wettzell 119.93 324 *e*PKPdf **PKiKP 18 03 32.6 +0.3**
baz=60,slow=1.9
WET *e*L L 18 57 50.4
comp=Z,190µm,21.3s
CLZ Clausthal 119.96 328 *e*PKPdf **PKiKP 18 03 32.8 +0.6**
baz=60,slow=1.9
MANZ Manzenberg 119.96 326 *e*PKPdf **PKiKP 18 03 32.3 0.0**
baz=60,slow=1.9
RETH Rethem/Aller, 119.99 329 *e*PKPdf **PKiKP 18 03 32.3 +0.2**
baz=60,slow=1.9
ROTZ Rotzenmuhle 120.02 325 *e*PKPdf **PKPdf 18 03 32.2 -0.1**
baz=60,slow=1.9
BOJS Bojanci 120.10 320 *e*PKPdf **PKiKP 18 03 33.0 +0.3**
BOJS *i* 18 03 55.7
BOJS *e* 18 21 49.2
BOJS Bojanci 120.10 320 *e*P **PKPdf 18 03 32.0 -0.6**
OBKA Obir 120.12 321 *i* pPKP **PKPdf 18 03 31.9 -0.8**
comp=Z,25nm,1.2s
OBKA Obir 120.12 321 *e*P **PKPdf 18 03 31.8 -0.9**
D41A Chassel 120.14 38 IAMs_20 IAMs_20 18 51 31.3
comp=Z,238µm,21.0s
HKT Hockley 120.15 59 **PKPdf 18 03 31.8 -1.2**
HKT Hockley 120.15 59 PKIKP **PKPdf 18 03 31.8 -1.2**
HKT MLR MLR
comp=Z,559µm,21.0s
Z38A Mt. Pleasant 120.16 55 IAMs_20 IAMs_20 18 55 39.8
comp=Z,156µm,21.0s
BIOA Bad Ischl, Aus 120.16 323 pPdiff **Pdif 17 59 57.1 +0.5**
comp=Z,3.8nm,0.8s
BIOA *e*pPKP **PKPdf 18 03 32.0 -0.7**
comp=Z,39nm,1.2s,SNR=5.7
COWI Conover 120.20 39 IAMs_20 IAMs_20 18 52 21.2
comp=Z,184µm,21.0s
HHAR Hobbs 120.23 51 IAMs_20 IAMs_20 18 56 48.3
comp=Z,149µm,20.0s
GTTG Gottingen 120.33 328 *e*PKPdf **PKiKP 18 03 33.2 +0.3**
baz=60,slow=1.9
LJU Ljubljana 120.33 321 *e*PKPdf **PKPdf 18 03 32.6 -0.5**
LJU *e* 18 03 56.0
LJU *e*PP **PP 18 04 53.6 -5.3**
LJU *i* 18 13 13.3
LJU *e* 18 15 24.8
L40A Anamosa 120.40 44 IAMs_20 IAMs_20 18 52 11.0
comp=Z,134µm,21.0s
TSUM Tsumeb 120.46 244 IAMs_20 IAMs_20 18 58 32.3
comp=Z,139µm,18.0s
CEY Cerknica 120.53 320 *i* PKPdf **PKPdf 18 03 33.1 -0.4**
CEY Cerknica 120.53 320 *e*P **PKPdf 18 03 32.5 -1.0**
GRA1 Grafenberg Arr 120.61 326 IAMs_20 IAMs_20 18 57 59.6
comp=Z,182µm,22.0s
GRF Grafenberg Arr 120.61 326 *e*PKPdf **PKPdf 18 03 33.1 -0.4**
baz=60,slow=1.9
GRF *e*L L 18 57 59.3
comp=Z,177µm,21.9s
GRFO Grafenberg 120.61 326 IAMs_20 IAMs_20 18 57 58.6
comp=Z,183µm,22.0s
KBA Koelnbreinsper 120.61 322 *i* pPKP **PKPdf 18 03 32.9 -0.8**
comp=Z,38nm,1.0s
ANGG Ammassalik, Gr 120.63 0 *e*P **PKPdf 18 03 31.3 -1.6**
MYKA Terra Mystica 120.63 322 *i* pPKP **PKPdf 18 03 33.1 -0.5**
comp=Z,15nm,0.9s
ISOG Isortoq, Green 120.68 1 *e*P **PKPdf 18 03 31.6 -1.4**
P40A Paris 120.69 47 IAMs_20 IAMs_20 18 55 20.8
comp=Z,146µm,20.0s
UBBA Unterbreizbach 120.70 327 *e*PKPdf **PKiKP 18 03 34.0 +0.5**
baz=60,slow=1.9
JFWS Jewell Farm 120.76 43 IAMs_20 IAMs_20 18 52 06.4
comp=Z,199µm,21.0s
JFWS Jewell Farm 120.76 43 PKiKP **PKPdf 18 03 31.9 -2.0**
baz=293
NATX Nacogdoches 120.76 57 IAMs_20 IAMs_20 18 51 12.4
comp=Z,212µm,20.0s
NATX Nacogdoches 120.76 57 PKiKP **PKPdf 18 03 32.7 -1.6**
baz=283
LESA Schwarzleotal 120.86 323 *i* pPKP **PKPdf 18 03 33.5 -0.6**
comp=Z,27nm,0.7s
SKDS Skadanscina 120.87 320 *e*P **PKPdf 18 03 33.5 -0.6**
MIAR Mount Ida 120.98 53 IAMs_20 IAMs_20 18 47 46.6
comp=Z,143µm,21.0s
MIAR Mount Ida 120.98 53 PKiKP **PKPdf 18 03 32.8 -1.8**
baz=285
F42A Maple Grove Fa 120.98 39 IAMs_20 IAMs_20 18 53 04.7
comp=Z,155µm,21.0s
IBBN Ibbenburen 121.05 330 *e*PKPdf **PKiKP 18 03 34.5 +0.2**
baz=60,slow=1.9
N41A Harden Midland 121.14 46 IAMs_20 IAMs_20 18 51 48.2
comp=Z,175µm,22.0s
LL07 Hotel Espejo d 121.19 149 IAMs_20 IAMs_20 18 49 46.8
comp=Z,129µm,20.0s
ABTA Abfaltersbach 121.27 322 pPdiff **Pdif 18 00 00.3 -1.3**
comp=Z,6.7nm,1.3s
ABTA *e*pPKP **PKPdf 18 03 33.9 -1.0**
comp=Z,66nm,1.0s,SNR=7.8
ABTA *e*PKKP PKKPbc 18 13 52.2 +14
comp=Z,11nm,1.1s
KASTN Kahler Asten 121.33 328 *e*PKPdf **PKiKP 18 03 35.4 +0.5**
baz=60,slow=1.9
FUR Furstenfeldbru 121.33 324 *e*PKPdf **PKPdf 18 03 34.7 -0.3**
baz=60,slow=1.9
FUR *e*L L 18 58 43.8
comp=Z,222µm,20.8s
E43A Lone Tree Farm 121.42 38 IAMs_20 IAMs_20 18 53 01.0
comp=Z,211µm,22.0s
TIP Timpagrande 121.42 313 ⇑P **PKiKP 18 03 37.0 +1.4**
TIP Timpagrande 121.42 313 **PKPdf 18 03 35.2 -0.2**
WTTA Wattenberg 121.56 323 *e*Pdiff **Pdif 18 00 00.1 -2.9**
comp=Z,12nm,1.3s
WTTA *i* pPKP **PKPdf 18 03 35.6 0.0**
comp=Z,92nm,0.9s,SNR=14
WATA Walderalm 121.56 323 *e*pPKP **PKPdf 18 03 35.3 -0.3**

comp=Z,91nm,1.3s,SNR=11
WLAR White Oak Lake 121.57 54 IAMs_20 IAMs_20 18 56 24.1
comp=Z,146µm,21.0s
X40A Basin Creek Fa 121.58 53 IAMs_20 IAMs_20 18 49 05.4
comp=Z,139µm,22.0s
FCAR Ozark Folk Cen 121.75 51 IAMs_20 IAMs_20 18 50 18.6
comp=Z,186µm,21.0s
CCM Cathedral Cave 121.76 49 **PKPdf 18 03 34.6 -1.4**
CCM Cathedral Cave 121.76 49 PKiKP **PKPdf 18 03 34.4 -1.6**
baz=289
CCM Cathedral Cave 121.76 49 PKIKP **PKPdf 18 03 34.6 -1.4**
CCM MLR MLR
comp=Z,324µm,21.0s
H43A Windswept, Lux 121.77 41 IAMs_20 IAMs_20 18 52 31.1
comp=Z,175µm,21.0s
BIGH Upper Bighouse 121.79 340 *e*P **PKiKP 18 03 35.5 0.0**
BIGH IAMs_20 IAMs_20 19 00 03.6
comp=Z,152µm,20.0s
BUG Bochum--Univer 121.79 329 *e*PKPdf **PKPdf 18 03 35.4 -0.2**
baz=60,slow=1.9
WHAR Wooly Hollow 121.79 52 IAMs_20 IAMs_20 18 50 16.8
comp=Z,222µm,21.0s
CUC Castrocucco 121.83 314 **PKPdf 18 03 35.5 -0.6**
SQTA Sankt Quirin 121.83 323 *ep*Pdiff **Pdif 18 00 04.9 +0.8**
comp=Z,10nm,1.3s
SQTA *ep*PKP **PKPdf 18 03 35.9 -0.1**
comp=Z,73nm,1.2s,SNR=9.7
SQTA *e*PKKP PKKPbc 18 13 52.6 +17
comp=Z,6.1nm,0.6s
MOTA Moosalm 121.84 323 *i* pPKP **PKPdf 18 03 35.8 -0.3**
comp=Z,60nm,0.9s,SNR=11
TNS Taunus Mts 121.86 327 *e*PKPdf **PKPdf 18 03 35.9 0.0**
baz=60,slow=1.9
TNS *e*L L 19 00 02.5
comp=Z,152µm,19.9s
RETA Reutte 121.97 324 *ep*PKP **PKPdf 18 03 36.0 -0.3**
comp=Z,38nm,1.4s
K43A Burlington 122.14 43 IAMs_20 IAMs_20 18 55 54.0
comp=Z,155µm,20.0s
FETA Feichten 122.22 323 *ep*Pdiff **Pdif 18 00 05.9 -0.1**
comp=Z,15nm,1.8s
FETA *ep*PKP **PKPdf 18 03 36.9 +0.1**
comp=Z,67nm,1.2s,SNR=12
FETA *e*PKKP PKKPdf 18 13 57.2 -13
comp=Z,8.4nm,0.9s
STU Stuttgart 122.22 325 IAMs_20 IAMs_20 18 57 17.1
comp=Z,140µm,21.0s
STU Stuttgart 122.22 325 *e*PKPdf **PKiKP 18 03 36.7 -0.1**
baz=60,slow=1.9
MCD Coleburn Disti 122.26 339 *e*P **PKPdf 18 03 35.7 -0.7**
UBR Ueberruh 122.26 324 *e*PKPdf **PKPdf 18 03 36.8 0.0**
baz=60,slow=1.9
HDIL Hopedale 122.31 45 IAMs_20 IAMs_20 18 58 14.8
comp=Z,163µm,20.0s
HDIL Hopedale 122.31 45 PKiKP **PKPdf 18 03 35.3 -1.7**
baz=292
AHRW Bad Neuenahr-A 122.41 328 *e*PKPdf **PKiKP 18 03 37.4 +0.4**
baz=60,slow=1.9
INTR Introdacqua 122.41 317 **PKiKP 18 03 37.9 +0.4**
LCAR Lake Charles 122.45 51 IAMs_20 IAMs_20 18 51 24.0
comp=Z,186µm,20.0s
P43A Skaggs, Pawnee 122.48 46 IAMs_20 IAMs_20 18 54 18.2
comp=Z,146µm,22.0s
LINV Loch Inver, As 122.49 341 *e*P **PKPdf 18 03 36.5 -0.2**
LINV IAMs_20 IAMs_20 19 00 14.5
comp=Z,153µm,20.6s
CCAR Cane Creek 122.58 54 IAMs_20 IAMs_20 18 52 27.9
comp=Z,149µm,21.0s
DAVA Damuels 122.59 324 pPdiff **Pdif 18 00 07.5 -0.1**
comp=Z,16nm,1.7s
DAVA *ep*PKP **PKPdf 18 03 37.5 -0.1**
comp=Z,32nm,0.7s,SNR=7.7
L44A Lake County Fo 122.63 43 IAMs_20 IAMs_20 18 55 59.3
comp=Z,171µm,21.0s
L44A Lake County Fo 122.63 43 PKiKP **PKPdf 18 03 35.5 -2.1**
baz=294
FUORN Ofenpass-Fuorn 122.69 323 IAMs_20 IAMs_20 19 01 41.1
comp=Z,132µm,21.0s
PBMO Poplar Bluff 122.78 50 IAMs_20 IAMs_20 18 52 42.7
comp=Z,194µm,20.0s
HQIL Hanson Quary C 122.83 43 IAMs_20 IAMs_20 18 53 58.0
comp=Z,228µm,21.0s
M44A Midewin, Midew 122.86 44 IAMs_20 IAMs_20 18 55 50.0
comp=Z,162µm,20.0s
G45A Suttons Bay 122.86 39 IAMs_20 IAMs_20 18 55 09.8
comp=Z,197µm,21.0s
BTNL Ternell 122.87 329 *d*PKP **PKPdf 18 03 37.4 -0.4**
MEM Membach 122.92 329 *d*PcP **PKiKP 18 03 38.2 +0.1**
BFO Black Forest 122.94 325 **PKPdf 18 03 37.5 -0.5**
BFO Black Forest 122.94 325 PKIKP **PKPdf 18 03 37.5 -0.5**
BFO Black Forest 122.94 325 *e*PKPdf **PKPdf 18 03 37.5 -0.5**
baz=60,slow=1.9
BFO *e*L L 18 57 48.8
comp=Z,143µm,21.6s
BEBN Eben Emael 122.98 329 *d*PKP **PKPdf 18 03 37.7 -0.3**
HBAR Harrisburg 122.99 51 IAMs_20 IAMs_20 18 53 47.4
comp=Z,166µm,20.0s
O44A Mansfield 123.04 45 IAMs_20 IAMs_20 18 58 47.1
comp=Z,162µm,19.0s
BHOU Houvegnez 123.07 328 *d*PKP **PKiKP 18 03 38.8 +0.4**
Q44A Meyer Farm, Va 123.11 47 IAMs_20 IAMs_20 18 53 06.4
comp=Z,194µm,21.0s
BSTI Sart Tilman 123.17 329 *d*PKP **PKiKP 18 03 38.8 +0.2**
143A Socs Landing, 123.21 55 IAMs_20 IAMs_20 18 58 22.6
comp=Z,206µm,20.0s
KPL Plockton 123.28 340 *e*P **PKPdf 18 03 38.4 +0.1**
KPL IAMs_20 IAMs_20 19 00 37.1
comp=Z,211µm,20.6s
PARMO Parma 123.33 50 IAMs_20 IAMs_20 18 55 40.3
comp=Z,201µm,20.0s
GNAR Gosnell 123.36 51 IAMs_20 IAMs_20 18 50 60.0
comp=Z,190µm,21.0s
WLF Walferdange 123.40 328 IAMs_20 IAMs_20 19 00 29.6
comp=Z,171µm,21.0s
WLF Walferdange 123.40 328 *d*PKP **PKPdf 18 03 38.5 -0.3**
WLF Walferdange 123.40 328 PKP **PKPdf 18 03 38.7 -0.1**
WLF Walferdange 123.40 328 *e*PKPdf **PKiKP 18 03 39.1 +0.1**
baz=60,slow=1.9
BCLA Clavier 123.40 329 *d*PKP **PKPdf 18 03 38.2 -0.6**
INVG Invergeldie, C 123.42 339 *e*P **PKPdf 18 03 38.3 -0.4**
INVG IAMs_20 IAMs_20 18 57 24.4
comp=Z,135µm,22.9s
EDI Edinburgh 123.48 338 *e*P **PKPdf 18 03 38.7 0.0**
EDI IAMs_20 IAMs_20 19 00 57.2
comp=Z,113µm,20.8s
BGES Gesves 123.53 329 *d*PKP **PKiKP 18 03 39.3 0.0**
HDBT Hernando Brdge 123.58 52 IAMs_20 IAMs_20 18 59 06.0
comp=Z,148µm,19.0s
RCHB Rochefort 123.59 329 *d*PKP **PKiKP 18 03 39.4 0.0**
GLMI Grayling 123.61 39 IAMs_20 IAMs_20 18 55 40.5
comp=Z,227µm,22.0s
GLMI Grayling 123.61 39 PKiKP **PKPdf 18 03 38.3 -1.1**
baz=299
MET Memphis--Engin 123.69 52 IAMs_20 IAMs_20 18 59 18.8
comp=Z,198µm,19.0s
BMRD Maredsous 123.74 329 *d*PKP **PKiKP 18 03 39.6 -0.1**
L46A Eue Claire 123.80 43 IAMs_20 IAMs_20 18 53 59.0
comp=Z,194µm,22.0s
VLC Villacollemand 123.80 320 PKP **PKiKP 18 03 41.3 +1.2**
EDMD Edmundbyers 123.81 336 *e*P **PKPdf 18 03 39.0 -0.4**
EDMD IAMs_20 IAMs_20 19 03 22.9
comp=Z,94µm,19.0s
OLIL Olney 123.84 47 IAMs_20 IAMs_20 18 53 18.3
comp=Z,208µm,22.0s
HALT Halls 123.89 51 IAMs_20 IAMs_20 18 54 39.2
comp=Z,177µm,20.0s
EKA Eskdalemuir Ar 123.91 337 PKP **PKPdf 18 03 39.4 -0.2**
comp=Z,7.3nm,0.5s,baz=34,slow=2.4,SNR=35
EKA PKKPbc **PKKPbc 18 13 30.9 +3.1**
comp=Z,2.7nm,0.7s,baz=233,slow=4.8,SNR=5.8
SFIN Lafayette 123.92 45 IAMs_20 IAMs_20 18 56 01.2
comp=Z,131µm,21.0s
SFIN Lafayette 123.92 45 PKiKP **PKPdf 18 03 38.4 -1.7**
baz=294
ESK Eskdalemuir 123.94 337 **PKPdf 18 03 39.7 0.0**
ESK Eskdalemuir 123.94 337 PKIKP **PKPdf 18 03 39.7 0.0**
DOU Dourbes 123.96 329 *d*PKP **PKiKP 18 03 40.5 +0.4**
H03S2 Juan Fernandez 123.99 138 PKP **PKPdf 18 03 36.6 -3.5**
baz=242,slow=75,SNR=5.4
H03S1 Juan Fernandez 124.00 138 PKP **PKPdf 18 03 36.1 -4.0**
baz=242,slow=75,SNR=3.2
H03S3 Juan Fernandez 124.00 138 PKP **PKiKP 18 03 40.6 +0.2**
baz=242,slow=75,SNR=2.1
LAWE Loch Awe, Argy 124.03 339 *e*P **PKPdf 18 03 39.4 -0.4**
LAWE IAMs_20 IAMs_20 19 01 42.4
comp=Z,168µm,18.9s
VBMS Vicksburg 124.06 55 PKiKP **PKPdf 18 03 39.3 -1.3**
baz=286
LR03 Panguipulli 124.09 148 IAMs_20 IAMs_20 18 54 52.9
comp=Z,126µm,18.0s
P46A Rosedale 124.14 46 IAMs_20 IAMs_20 18 59 48.2
comp=Z,134µm,19.0s
WACR West Acre 124.19 333 *e*P **PKPdf 18 03 39.9 -0.3**
WACR IAMs_20 IAMs_20 19 00 42.1
comp=Z,221µm,20.2s
PLCA Paso Flores 124.21 150 **PKiKP 18 03 41.2 +0.1**
PLCA IAMs_20 IAMs_20 18 52 02.9
comp=Z,135µm,20.0s
PLCA Paso Flores 124.21 150 PKP **PKiKP 18 03 41.5 +0.4**
comp=Z,18nm,1.0s,baz=241,slow=3.2,SNR=23
PLCA PKKPbc **PKKPbc 18 13 27.7 +1.3**
comp=Z,8.9nm,1.1s,baz=66,slow=2.4,SNR=3.7
PLCA SKKPbc SKKPbc 18 17 10.2 -4.3
comp=Z,5.6nm,0.9s,baz=354,slow=0.3,SNR=3.5
PLCA Paso Flores 124.21 150 *e*P **PKiKP 18 03 41.0 -0.1**
H03N3 Juan Fernandez 124.22 138 PKP PKiKP 18 03 54.1 +13
baz=244
H03N2 Juan Fernandez 124.22 138 PKP PKiKP 18 03 55.2 +14
baz=244,slow=74,SNR=6.8
H03N1 Juan Fernandez 124.23 138 PKP PKiKP 18 03 52.8 +12
baz=244,slow=74,SNR=4.5
OXF Oxford 124.28 52 IAMs_20 IAMs_20 18 51 43.0
comp=Z,212µm,21.0s
OXF Oxford 124.28 52 PKiKP **PKPdf 18 03 39.5 -1.5**
baz=288
HPK Haverah Park 124.30 335 *e*P **PKiKP 18 03 40.6 -0.1**
HPK IAMs_20 IAMs_20 19 02 56.8
comp=Z,113µm,19.4s
Y45A Yeager Farm, C 124.38 53 IAMs_20 IAMs_20 18 51 55.7
comp=Z,194µm,20.0s
KESW Keswick, Cumbr 124.44 337 *e*P **PKiKP 18 03 41.3 +0.3**
KESW IAMs_20 IAMs_20 19 00 01.7
comp=Z,108µm,21.9s
IVI Ivigtut 124.44 6 *e*P **PKPdf 18 03 39.3 -1.1**
NEWG New Galloway 124.48 338 *e*P **PKPdf 18 03 40.3 -0.4**
NEWG IAMs_20 IAMs_20 19 01 04.8
comp=Z,141µm,21.0s
GO06 Curarrehue 124.59 148 IAMs_20 IAMs_20 18 54 54.0
comp=Z,110µm,18.0s
N47A Urbana 124.69 44 IAMs_20 IAMs_20 18 55 34.3
comp=Z,183µm,21.0s
LBWR Ladybower, Pea 124.74 335 *e*P **PKPdf 18 03 40.9 -0.3**
LBWR IAMs_20 IAMs_20 19 02 05.8
comp=Z,104µm,20.5s
BLO Bloomington 124.81 46 IAMs_20 IAMs_20 18 55 28.3
comp=Z,144µm,22.0s
WVT Waverly 124.97 50 **PKPdf 18 03 40.7 -1.5**
WVT Waverly 124.97 50 PKiKP **PKPdf 18 03 40.3 -1.9**
baz=290
WVT Waverly 124.97 50 PKIKP **PKPdf 18 03 40.7 -1.5**
WVT MLR MLR
comp=Z,317µm,22.0s
CWF Charnwood Fore 125.03 334 *e*P **PKPdf 18 03 41.9 +0.1**
CWF IAMs_20 IAMs_20 19 00 24.9
comp=Z,119µm,21.1s
L48A N Adams 125.07 42 IAMs_20 IAMs_20 18 57 54.3
comp=Z,205µm,20.0s
346A Big Creek Wild 125.15 56 IAMs_20 IAMs_20 18 52 25.6
comp=Z,182µm,22.0s
I49A Point Hope 125.17 39 IAMs_20 IAMs_20 18 54 53.5
comp=Z,194µm,20.0s
PLAL Pickwick Lake 125.17 51 IAMs_20 IAMs_20 18 53 46.5
comp=Z,194µm,22.0s
O48B Farmland 125.32 44 IAMs_20 IAMs_20 19 00 12.6
comp=Z,135µm,20.0s
O48B Farmland 125.32 44 PKiKP **PKPdf 18 03 41.2 -1.6**
baz=295
WCI Wyandotte Cave 125.34 47 **PKPdf 18 03 42.3 -0.6**
WCI Wyandotte Cave 125.34 47 PKiKP **PKPdf 18 03 41.3 -1.5**
baz=293
WCI Wyandotte Cave 125.34 47 PKIKP **PKPdf 18 03 42.3 -0.6**
WCI MLR MLR
comp=Z,230µm,21.0s
AAM Ann Arbor 125.42 41 PKiKP **PKPdf 18 03 41.0 -1.9**
baz=298
BI05 Punta Hualpn 125.67 144 IAMs_20 IAMs_20 18 52 06.9
comp=Z,120µm,20.0s
N49A Columbus Grove 125.70 43 IAMs_20 IAMs_20 18 55 46.5
comp=Z,156µm,21.0s
FOEL Foel Wylfa 125.72 335 *e*P **PKiKP 18 03 43.6 +0.1**
FOEL IAMs_20 IAMs_20 18 59 23.2
comp=Z,88µm,22.5s
WLF1 Llynfaes 125.92 336 *e*P **PKiKP 18 03 44.0 +0.1**
WLF1 IAMs_20 IAMs_20 18 58 32.5
comp=Z,212µm,22.8s
O49A Covington 125.92 44 IAMs_20 IAMs_20 18 57 34.4
comp=Z,197µm,20.0s
P49A Miami Univ. Ec 125.94 45 IAMs_20 IAMs_20 19 07 54.5
comp=Z,124µm,18.0s
P49A Miami Univ. Ec 125.94 45 PKiKP **PKPdf 18 03 42.8 -1.2**
baz=295
YLL Llanberis 125.94 336 *e*P **PKPdf 18 03 43.7 +0.2**
ILTH Belurgan, Co L 126.10 338 PKP **PKiKP 18 03 44.4 +0.2**
SWN1 Swindon 126.11 333 *e*P **PKiKP 18 03 44.2 -0.1**
SWN1 IAMs_20 IAMs_20 18 59 41.1
comp=Z,147µm,22.0s
R49A Shelbyville 126.13 46 IAMs_20 IAMs_20 18 56 22.8
comp=Z,183µm,20.0s
X48A Hartselle 126.15 51 IAMs_20 IAMs_20 18 57 22.6
comp=Z,198µm,20.0s
M50A Fremont 126.25 42 IAMs_20 IAMs_20 18 58 01.4
comp=Z,172µm,20.0s
MCH1 Michaelchurch 126.29 334 *e*P **PKPdf 18 03 44.4 +0.2**
MCH1 IAMs_20 IAMs_20 18 59 22.7
comp=Z,140µm,23.5s
LRAL Lakeview Retre 126.66 53 PKiKP **PKPdf 18 03 44.0 -1.6**
baz=289
DSB Dublin 126.72 337 PKP **PKPdf 18 03 42.7 -2.4**
R50A Paris 126.74 46 IAMs_20 IAMs_20 18 59 50.9
comp=Z,121µm,20.0s
ACSO Alum Creek Sta 126.83 43 IAMs_20 IAMs_20 18 56 01.1
comp=Z,120µm,20.0s
ACSO Alum Creek Sta 126.83 43 PKiKP **PKPdf 18 03 44.5 -1.2**
baz=297
Y49A Blount Mountai 126.85 52 IAMs_20 IAMs_20 19 01 14.1
comp=Z,179µm,19.0s
RSBS Rosebush, Pemb 127.06 335 *e*P **PKPdf 18 03 45.2 -0.5**
RSBS IAMs_20 IAMs_20 18 59 19.3
comp=Z,82µm,22.3s
P51A Williamsport 127.11 44 IAMs_20 IAMs_20 19 00 47.6
comp=Z,162µm,20.0s
BRAL Brewton 127.19 55 IAMs_20 IAMs_20 18 55 59.5
comp=Z,177µm,20.0s
BRAL Brewton 127.19 55 PKiKP **PKPdf 18 03 45.7 -0.9**
baz=288
FPAL Fort Paine 127.23 51 IAMs_20 IAMs_20 18 57 57.6
comp=Z,177µm,22.0s
M52A Chesterland 127.29 41 IAMs_20 IAMs_20 18 58 38.9
comp=Z,208µm,20.0s
IWEX Carrickbyrne, 127.55 337 PKP PKiKP 18 04 02.6 +15
250A Grady 127.58 54 IAMs_20 IAMs_20 18 57 02.8
comp=Z,182µm,20.0s
GO05 Huala 127.61 144 IAMs_20 IAMs_20 18 52 50.4
comp=Z,131µm,20.0s
O52A Adamsville 127.66 43 IAMs_20 IAMs_20 18 58 53.3
comp=Z,180µm,20.0s
P52A Corning 127.68 44 IAMs_20 IAMs_20 18 58 35.6
comp=Z,154µm,21.0s
P52A Corning 127.68 44 PKiKP **PKPdf 18 03 45.6 -1.7**
baz=298
IGLA Glengowla, Co 127.69 339 PKP **PKiKP 18 03 55.2 +7.8**
M53A WI Miller and 127.79 41 IAMs_20 IAMs_20 19 01 26.0
comp=Z,191µm,19.0s
M53A WI Miller and 127.79 41 PKiKP **PKPdf 18 03 45.6 -1.9**
baz=300
X51A Calhoun 127.80 51 IAMs_20 IAMs_20 18 58 58.6
comp=Z,167µm,21.0s
ERPA Erie 127.88 40 IAMs_20 IAMs_20 18 57 12.5
comp=Z,187µm,20.0s
ERPA Erie 127.88 40 PKiKP **PKPdf 18 03 46.0 -1.6**
baz=301
Q52A Bidwell 127.90 44 IAMs_20 IAMs_20 18 56 42.3
comp=Z,154µm,21.0s
O53A New Philadelph 128.02 42 PKiKP **PKPdf 18 03 47.1 -0.9**
baz=299
TZTN Tazewell 128.02 48 PKiKP **PKPdf 18 03 47.1 -1.0**
baz=294
KEST Kesra 128.17 311 PKP **PKiKP 18 03 49.5 +0.4**
comp=Z,44nm,1.0s,baz=240,slow=1.4,SNR=12
P53A Whipple 128.26 43 IAMs_20 IAMs_20 19 04 09.8
comp=Z,126µm,20.0s
V52A Sevierville 128.27 49 IAMs_20 IAMs_20 18 53 01.7
comp=Z,192µm,22.0s
R53A Hurricane 128.40 45 IAMs_20 IAMs_20 19 07 03.2
comp=Z,156µm,18.0s
451A Vernon 128.43 56 IAMs_20 IAMs_20 18 56 40.9
comp=Z,189µm,20.0s
BO01 Tunca 128.54 144 IAMs_20 IAMs_20 18 52 37.9
comp=Z,145µm,20.0s
TEIG Tepich 128.57 69 **PKPdf 18 03 48.6 -0.9**
WVNY West Valley, N 128.60 39 IAMs_20 IAMs_20 18 58 02.3
comp=Z,165µm,21.0s
O54A Avella 128.61 42 IAMs_20 IAMs_20 18 58 26.9
comp=Z,202µm,21.0s
Y52A Lilburn 128.67 51 IAMs_20 IAMs_20 18 55 56.3
comp=Z,213µm,21.0s
MT01 Popeta 128.81 143 IAMs_20 IAMs_20 18 55 13.2
comp=Z,106µm,19.0s
352A Blakely 128.82 54 IAMs_20 IAMs_20 18 57 35.1
comp=Z,163µm,21.0s
Q54A Coxs Mills 128.88 44 IAMs_20 IAMs_20 18 57 36.6
comp=Z,163µm,21.0s
S54A Dingess, Beckl 129.09 45 IAMs_20 IAMs_20 18 56 40.1
comp=Z,163µm,20.0s
BO04 La Punta 129.10 144 IAMs_20 IAMs_20 18 53 13.9
comp=Z,138µm,21.0s
VAL Valentia 129.20 339 PKP **PKPdf 18 03 49.5 -0.3**
MCWV Mont Chateau 129.22 42 PKiKP **PKPdf 18 03 49.5 -0.8**
baz=300
LDAQ Lac Daran 129.24 29 **PKPdf 18 03 49.7 -0.4**
GOGA Godfrey 129.30 51 PKiKP **PKPdf 18 03 49.3 -1.3**
baz=292
EJON La Jonquera 129.37 322 PKP **PKiKP 18 03 53.2 +2.0**
LMEL Las Melosas 129.44 144 IAMs_20 IAMs_20 18 53 26.7
comp=Z,149µm,20.0s
MT13 San Alfonso 129.46 144 IAMs_20 IAMs_20 18 53 25.5
comp=Z,142µm,20.0s
MT03 Universidad Ad 129.51 144 IAMs_20 IAMs_20 18 57 44.7
comp=Z,106µm,18.0s
MT16 CCHEN 129.55 143 IAMs_20 IAMs_20 18 57 20.7
comp=Z,102µm,18.0s
553A Crawfordville 129.64 56 IAMs_20 IAMs_20 18 58 26.0
comp=Z,165µm,20.0s
VA06 Catapilco 129.69 142 IAMs_20 IAMs_20 18 53 51.5
comp=Z,129µm,21.0s
LONY Lake Ozonia 129.70 34 IAMs_20 IAMs_20 18 58 28.5
comp=Z,187µm,21.0s
LONY Lake Ozonia 129.70 34 PKiKP **PKPdf 18 03 49.7 -1.3**
baz=308
MAHO Mahon 129.86 318 PKP **PKiKP 18 03 52.0 -0.2**
TIGA Tifton 129.91 54 IAMs_20 IAMs_20 18 59 57.9
comp=Z,171µm,21.0s
TIGA Tifton 129.91 54 PKiKP **PKPdf 18 03 50.8 -1.0**
baz=290
LMQ La Malbaie 129.97 29 **PKPdf 18 03 50.8 -0.6**
BLA Blacksburg 129.99 46 IAMs_20 IAMs_20 18 56 23.1
comp=Z,201µm,21.0s
BLA Blacksburg 129.99 46 PKiKP **PKPdf 18 03 50.7 -1.2**
baz=298
SSPA Standing Stone 130.01 40 PKiKP **PKPdf 18 03 50.6 -1.1**
baz=302
V55A Taylorsville 130.02 47 IAMs_20 IAMs_20 18 56 54.5
comp=Z,170µm,22.0s
TGUH Tegucigalpa,Un 130.18 77 IAMs_20 IAMs_20 18 54 48.2
comp=Z,181µm,20.0s
KMSC Kings Mountain 130.24 48 PKiKP **PKPdf 18 03 51.1 -1.3**
baz=295
BINY Binghamton 130.33 38 PKiKP **PKPdf 18 03 51.2 -1.2**
baz=305
J59A Piesco 130.46 35 IAMs_20 IAMs_20 19 00 12.9
comp=Z,163µm,20.0s
CO06 Fray Jorge 130.75 140 IAMs_20 IAMs_20 18 50 38.0
comp=Z,137µm,22.0s
S57A Dark Hollow, R 130.76 44 IAMs_20 IAMs_20 19 01 37.5
comp=Z,180µm,20.0s
CO02 Combarbal 130.80 141 IAMs_20 IAMs_20 18 53 13.1
comp=Z,166µm,21.0s
CNGN Cerro Negro 130.83 79 IAMs_20 IAMs_20 18 49 55.9
comp=Z,168µm,22.0s
ETOS Mallorca 130.88 319 PKP **PKPdf 18 03 53.5 0.0**
ACCN Adirondack Com 130.98 35 IAMs_20 IAMs_20 19 02 16.8
comp=Z,158µm,19.0s
CO03 El Pedregal 131.24 141 IAMs_20 IAMs_20 18 53 46.9
comp=Z,132µm,21.0s
LBNH Lisbon 131.41 33 PKiKP **PKPdf 18 03 52.9 -1.3**
baz=311
456A Hilliard 131.42 54 IAMs_20 IAMs_20 19 07 08.4
comp=Z,126µm,19.0s
656A Williston 131.47 56 IAMs_20 IAMs_20 18 57 29.9
comp=Z,153µm,21.0s
CO05 La Serena 131.51 140 IAMs_20 IAMs_20 18 50 59.2
comp=Z,186µm,22.0s
CBN Corbin Frederi 131.62 43 PKiKP **PKPdf 18 03 53.6 -1.2**
baz=301
257A Skidaway Islan 131.75 52 IAMs_20 IAMs_20 18 56 23.8
comp=Z,208µm,22.0s
BOAB BOACCO BROADBAN 131.84 79 PKP **PKPdf 18 03 53.2 -2.7**
NHSC New Hope 131.95 50 PKiKP **PKPdf 18 03 54.4 -1.2**
baz=294
DUNO Dulce Nombre, 132.08 82 IAMs_20 IAMs_20 18 52 10.3
comp=Z,163µm,21.0s
PKME Peaks-Kenny Pk 132.09 30 PKiKP **PKPdf 18 03 54.4 -1.1**
baz=315
L61B Northampton 132.13 35 IAMs_20 IAMs_20 18 59 43.6
comp=Z,195µm,21.0s
L61B Northampton 132.13 35 PKiKP **PKPdf 18 03 54.8 -0.9**
baz=309
EIBI Ibiza 132.24 319 PKP **PKPdf 18 03 50.9 -5.1**
K62A Royalston 132.25 35 IAMs_20 IAMs_20 19 03 59.4
comp=Z,143µm,20.0s
PAL Palisades 132.29 38 PKiKP **PKPdf 18 03 54.8 -1.2**
baz=307
ACON Acoyapa 132.34 79 IAMs_20 IAMs_20 18 51 02.0
comp=Z,169µm,22.0s
WVL Waterville 132.39 31 IAMs_20 IAMs_20 19 00 13.5
comp=Z,181µm,20.0s
QUA2 Belchertown 132.43 35 IAMs_20 IAMs_20 19 01 41.1
comp=Z,165µm,20.0s
LCO Las Campanas 132.47 139 IAMs_20 IAMs_20 18 52 20.5
comp=Z,172µm,22.0s
T60A Surry 132.60 44 IAMs_20 IAMs_20 19 01 07.7
comp=Z,188µm,21.0s
JTS Las Juntas de 132.61 82 PKP **PKPdf 18 03 57.2 -0.2**
comp=Z,10.0nm,0.7s,baz=328,slow=5.1,SNR=9.5
CNNC Cliffs of the 132.72 47 PKiKP **PKPdf 18 03 56.1 -0.8**
baz=298
HRV Adam Dziewonsk 132.74 35 IAMs_20 IAMs_20 19 04 24.2
comp=Z,102µm,19.0s
HRV Adam Dziewonsk 132.74 35 PKiKP **PKPdf 18 03 55.9 -0.9**
baz=310
DWPF Disney Wildern 132.79 57 PKiKP **PKPdf 18 03 56.2 -1.1**
baz=289
AC05 El Transito 132.86 139 IAMs_20 IAMs_20 18 52 33.9
comp=Z,175µm,22.0s
SOR Soroa 132.91 65 IAMs_20 IAMs_20 18 59 47.6
comp=Z,137µm,21.0s
R61A Willards 132.91 42 IAMs_20 IAMs_20 19 05 44.0
comp=Z,149µm,19.0s
WES Weston 132.95 35 IAMs_20 IAMs_20 18 58 54.8
comp=Z,143µm,21.0s
BCX Boston College 133.07 35 IAMs_20 IAMs_20 18 58 57.9
comp=Z,141µm,21.0s
COVE Coope Vega, Sa 133.14 81 IAMs_20 IAMs_20 18 52 13.3
comp=Z,185µm,20.0s
ECHE Chera 133.40 321 PKP **PKPdf 18 03 53.7 -4.5**
HDC Heredia 133.44 82 *e*P **PKPdf 18 03 58.3 -0.8**
L64A Middleborough 133.51 35 IAMs_20 IAMs_20 19 00 51.7
comp=Z,126µm,20.0s
EKNA AfricaArray - 133.62 270↑ *e*P PKiKP 18 04 09.9 +9.3
DRLN Deer Lake 133.74 18 IAMs_20 IAMs_20 19 01 57.0
comp=Z,121µm,21.0s
M65A Busby, Falmout 133.87 35 PKiKP **PKPdf 18 03 58.1 -0.8**
baz=311
061Z Ochoppi 133.94 60 IAMs_20 IAMs_20 19 00 07.4
comp=Z,148µm,22.0s
060A Indiantown 134.04 58 IAMs_20 IAMs_20 18 59 32.6
comp=Z,133µm,22.0s
SRBA San Rafael, Bu 134.19 83 **PKPdf 18 03 54.7 -5.8**
CAMR Camarioca 134.31 64 IAMs_20 IAMs_20 19 00 30.6
comp=Z,185µm,20.0s
OKGL Djebel Kef Gue 134.31 316 P 18 05 05.0
ETOB Tobarra 134.32 320 PKP **PKPdf 18 03 56.9 -3.2**
OJGS Djebel Guires 134.51 315 P 18 05 12.0
CART Cartagena 134.57 319 PKP **PKPdf 18 03 55.7 -4.7**
EMUR La Murta 134.58 319 PKP **PKPdf 18 03 56.3 -4.2**
ESDC Sonseca Array 135.18 323 PKP **PKPdf 18 04 02.2 +0.7**
comp=Z,5.1nm,0.8s,baz=18,slow=2.4,SNR=12
ESDC PP **PP 18 06 38.4 +1.8**
comp=Z,9.0nm,0.9s,baz=48,slow=4.2,SNR=2.2
ESDC SKKPbc SKKPbc 18 16 32.3 -4.2
comp=Z,14nm,1.1s,baz=229,slow=1.7,SNR=3.2

ODJA	Bouhanifia	135.23	316	P			18 05 04.0		
HAL	Halifax	135.27	27	IAMs_20	IAMs_20		18 58 50.1		
	comp=Z,190µm,21.0s								
PBRG	Braganca	135.34	327	*e*PKPdf	PKiKP		18 04 02.6	-0.7	
PBRG	Braganca	135.34	327	*e*P	PP		18 06 47.6	+10	
PAB	San Pablo	135.49	323		PKPdf		18 04 02.3	+0.1	
PAB	San Pablo	135.49	323	⇑PKIKP	PKiKP		18 04 03.2	-0.6	
PB14	IPOC Station P	135.51	135	PKP	PKPpre		18 03 54.1		
TAM	Tamanrasset	135.63	296	PKPdf	PKPdf		18 04 03.6	+0.6	
TAM	Tamanrasset	135.63	296	PKIKP	PKPdf		18 04 03.6	+0.6	
GO02	Mina Guanaco	135.74	136	IAMs_20	IAMs_20		18 53 24.4		
	comp=Z,140µm,22.0s								
MVO	Moncorvo	135.94	327	*e*PKPdf	PKPdf		18 04 03.5	+0.5	
MVO	Moncorvo	135.94	327	*e*PP	PP		18 07 07.3	+26	
MVO	Moncorvo	135.94	327	*e*SS	SS		18 25 15.0	+37	
MVO	Moncorvo	135.94	327	*e*LQ	LQ		18 42 26.2		
MVO				*e*LR	LR		18 51 12.0		
	comp=Z,154µm,20.0s								
PRVC	Isla de Provid	135.96	77	*e*P	PKiKP		18 04 05.2	0.0	
PGAV	Gavieira, Arco	136.03	329	*e*PKPdf	PKPdf		18 04 03.9	+0.7	
PGAV	Gavieira, Arco	136.03	329	*e*PP	PP		18 07 03.1	+21	
PGAV	Gavieira, Arco	136.03	329	*e*SS	SS		18 25 09.8	+30	
PGAV	Gavieira, Arco	136.03	329	*e*LQ	LQ		18 41 42.6		
PGAV				*e*LR	LR		18 50 52.4		
	comp=Z,88µm,20.0s								
PB10	IPOC Station P	136.09	133	IAMs_20	IAMs_20		18 54 06.1		
	comp=Z,117µm,21.0s								
POLO	Lamas de Olo	136.20	328	*e*PKPdf	PKiKP		18 04 04.5	-0.7	
POLO	Lamas de Olo	136.20	328	*e*PP	PP		18 07 05.0	+22	
PVRL	Vila Real	136.23	328	*e*PKPdf	PKiKP		18 04 04.6	-0.6	
PVRL	Vila Real	136.23	328	*e*PP	PP		18 07 16.0	+33	
NNA	Nana	136.68	115	PKP	PKPdf		18 04 04.6	-0.5	
	comp=Z,60nm,0.9s,baz=247,slow=5.7,SNR=12								
NNA				SKKPbc	SKKPbc		18 16 35.9	+6.4	
	comp=Z,30nm,1.1s,baz=358,slow=3.7,SNR=5.7								
PVIS	Viseu	136.72	327	*e*PKPdf	PKiKP		18 04 06.1	-0.1	
PVIS	Viseu	136.72	327	*e*PP	PP		18 07 12.8	+27	
MTE	Manteigas	136.75	327	*e*PKPdf	PKiKP		18 04 06.3	0.0	
MTE	Manteigas	136.75	327	*e*PP	PP		18 07 05.7	+19	
MTE	Manteigas	136.75	327	*e*SS	SS		18 24 36.0	-12	
MTE	Manteigas	136.75	327	*e*LQ	LQ		18 42 42.3		
MTE				*e*LR	LR		18 49 24.9		
	comp=Z,180µm,20.0s								
ATAH	Atahualpa	136.85	107	PKhKP	PKPpre		18 03 59.2		
	comp=Z,9.6nm,0.8s,baz=263,slow=4.7,SNR=4.5								
ATAH				PKP	PKPdf		18 04 06.5	+0.6	
	comp=Z,86nm,1.0s,baz=277,slow=1.6,SNR=18								
PCBR	Castelo Branco	137.10	326	*e*PKPdf	PKiKP		18 04 06.3	-0.6	
PCBR	Castelo Branco	137.10	326	*e*PP	PP		18 06 51.4	+2.9	
PB06	IPOC Station P	137.30	133	IAMs_20	IAMs_20		18 55 02.1		
	comp=Z,149µm,22.0s								
PMRV	Marv??o	137.33	325	*e*PKPdf	PKPdf		18 03 54.2	-11	
PMRV	Marv??o	137.33	325	*e*PP	PP		18 07 11.6	+22	
PMRV	Marv??o	137.33	325	*e*SS	SS		18 25 07.9	+13	
PMRV	Marv??o	137.33	325	*e*LQ	LQ		18 42 52.5		
PMRV				*e*LR	LR		18 52 19.2		
	comp=Z,151µm,20.0s								
COI	Coimbra	137.36	327	*e*PKPdf	PKiKP		18 04 14.3	+6.9	
COI	Coimbra	137.36	327	*e*PP	PP		18 07 16.4	+26	
COI	Coimbra	137.36	327	IAMs_20	IAMs_20		19 09 30.1		
	comp=Z,176µm,20.0s								
PCAS	Casmilo, Conde	137.51	327	*e*PKPdf	PKPdf		18 04 05.8	0.0	
PCAS	Casmilo, Conde	137.51	327	*e*PP	PP		18 07 19.0	+28	
PB07	IPOC Station P	137.66	132	PKP	PKPdf		18 03 57.5	-9.4	
BCIP	Isla Barro Col	137.67	83	*e*P	PKiKP		18 04 13.4	+4.7	
PESTR	Estremoz	137.83	325	*e*PKPdf	PKPdf		18 04 06.2	-0.3	
PESTR	Estremoz	137.83	325	*e*PP	PP		18 07 00.3	+7.2	
LVC	Limon Verde	137.84	134	IAMs_20	IAMs_20		18 55 18.2		
	comp=Z,128µm,21.0s								
PBAR	Barrancos	137.97	324	*e*PKPdf	PKPdf		18 04 07.6	+0.9	
PBAR	Barrancos	137.97	324	*e*PP	PP		18 07 20.9	+27	
PMTG	Montargil	138.05	326	*e*PKPdf	PKPdf		18 03 55.9	-11	
PMTG	Montargil	138.05	326	*e*PP	PP		18 07 17.8	+23	
PSBE	So Bento	138.06	327	*e*PKPdf	PKPdf		18 04 06.7	-0.2	
PSBE	So Bento	138.06	327	*e*PP	PP		18 07 21.9	+27	
TA01	Diego Aracena	138.13	130	IAMs_20	IAMs_20		18 58 41.5		
	comp=Z,108µm,20.0s								
EVO	Evora	138.30	325	*e*PKPdf	PKPdf		18 03 57.1	-10	
EVO	Evora	138.30	325	*e*PP	PP		18 07 19.1	+23	
TA02	Huaiquique	138.34	130	IAMs_20	IAMs_20		18 58 56.1		
	comp=Z,125µm,20.0s								
TUMC	Tumaco	138.38	94	*e*P	PKiKP		18 04 15.6	+5.3	
OTAV	Otavalo	138.44	97	⇑PKIKP	PKPdf		18 04 06.7	-2.2	
OTAV	Otavalo	138.44	97	*e*P	PKPdf		18 04 08.6	-0.3	
CUSE	Cuicocha Este	138.50	96	*e*P	PKiKP		18 04 13.1	+2.1	
PBEJ	Beja	138.56	324	*e*PKPdf	PKPdf		18 04 07.7	-0.1	
PBEJ	Beja	138.56	324	*e*PP	PP		18 07 22.3	+25	
SFS	San Fernando	138.58	321	IAMs_20	IAMs_20		19 11 24.6		
	comp=Z,113µm,20.0s								
IMBA	Imbabura, San	138.69	97	IAMs_20	IAMs_20		19 00 26.8		
	comp=Z,97µm,19.0s								
PMAFR	Mafra	138.72	326	*e*PKPdf	PKPdf		18 04 06.8	-1.3	
PMAFR	Mafra	138.72	326	*e*PP	PP		18 07 24.7	+26	
LIS	Lisbon	138.81	326	*e*PKPdf	PKPdf		18 04 06.1	-2.1	
LIS	Lisbon	138.81	326	*e*PP	PP		18 07 24.9	+26	
LIS	Lisbon	138.81	326	*e*PKPdf	PKPdf		18 04 06.4	-1.8	
LIS				IAMs_20	IAMs_20		19 10 25.3		
	comp=Z,201µm,25.7s								
LIS	Lisbon	138.81	326	*e*PKIKP	PKPdf		18 04 06.4	-1.8	
PNCL	Nicolau / Gran	138.88	325	*e*PKPdf	PKPdf		18 03 58.7	-10	
PNCL	Nicolau / Gran	138.88	325	*e*PP	PP		18 07 26.0	+26	
PVAQ	Vaqueiros	138.89	323	*e*PKPdf	PKPdf		18 03 59.9	-8.5	
PVAQ	Vaqueiros	138.89	323	*e*PP	PP		18 07 25.7	+26	
PVAQ	Vaqueiros	138.89	323	*e*SS	SS		18 25 26.7	+16	
PVAQ	Vaqueiros	138.89	323	*e*LQ	LQ		18 43 26.7		
PVAQ				*e*LR	LR		18 51 31.8		
	comp=Z,102µm,20.0s								
MESJ	Messejana	138.89	324	*e*PKPdf	PKiKP		18 04 09.6	-1.0	
MESJ	Messejana	138.89	324	*e*PP	PP		18 07 27.6	+28	
MESJ	Messejana	138.89	324	*e*PKPdf	PKPdf		18 04 06.7	-1.7	
MESJ				*e*PP	PP		18 06 59.2	-0.5	
MESJ				IAMs_20	IAMs_20		19 10 17.4		
	comp=Z,99µm,16.7s								
MESJ	Messejana	138.89	324	*e*PKIKP	PKPdf		18 04 06.7	-1.7	
MESJ				*e*			18 06 59.2		
PCVE	Castro Verde	138.92	324	*e*PKPdf	PKPdf		18 04 07.2	-1.3	
PCVE	Castro Verde	138.92	324	*e*PP	PP		18 07 26.6	+27	
GR1C	Gorgona, Isla	139.07	92	*e*P	PKPdf		18 04 09.6	+0.2	
PBDV	Barranco-do-Ve	139.12	323	*e*PKPdf	PKPdf		18 04 09.9	+1.0	
PBDV	Barranco-do-Ve	139.12	323	*e*PP	PP		18 07 27.1	+26	
PB08	IPOC Station P	139.16	131	IAMs_20	IAMs_20		18 59 12.7		
	comp=Z,102µm,20.0s								
PB08	IPOC Station P	139.16	131	PKP	PKPdf		18 04 00.9	-9.0	
TULM	Tulcn-Chalpat	139.16	96		PKPdf		18 04 09.6	-0.6	
TULM	Tulcn-Chalpat	139.16	96	*e*P	PKiKP		18 04 17.5	+5.0	
PLTB	Pedras Altas	139.19	158	*e*P	PKPdf		18 04 07.8	-1.5	
BONI	La Bonita	139.38	96⇑	*e*P	PKPdf		18 04 11.4	+1.1	
PTEO	Sao Teotonio	139.38	324	*e*PKPdf	PKiKP		18 04 10.6	-1.0	
PTEO	Sao Teotonio	139.38	324	*e*PP	PP		18 07 27.7	+25	
GO01	Chusmiza	139.41	130	IAMs_20	IAMs_20		18 59 11.3		
	comp=Z,100µm,20.0s								
MORF	Marmelete	139.50	324	*e*PKPdf	PKPdf		18 04 10.4	+0.8	
MORF	Marmelete	139.50	324	*e*PP	PP		18 07 31.0	+27	
MORF	Marmelete	139.50	324	*e*PKPdf	PKPdf		18 04 07.9	-1.7	
MORF				IAMs_20	IAMs_20		19 11 05.1		
	comp=Z,137µm,30.7s								
MORF	Marmelete	139.50	324	*e*PKIKP	PKPdf		18 04 07.9	-1.7	
GCUF	Volcan Galeras	139.68	95	*e*P	PKPdf		18 04 11.4	+0.3	
PTAC	Punta Ardita,	139.68	86	*e*P	PKPdf		18 04 07.6	-2.9	
PFVI	Vila Bisbo	139.72	324	*e*PKPdf	PKPdf		18 04 10.6	+0.6	
PFVI	Vila Bisbo	139.72	324	*e*PP	PP		18 07 32.5	+28	
ITQB	Itaqui	139.81	153	IAMs_20	IAMs_20		19 12 49.5		
	comp=Z,153µm,20.0s								
ITQB	Itaqui	139.81	153	*e*P	PKPdf		18 04 08.2	-2.2	
BBAC	Balboa, Cauca	139.88	94	*e*P	PKiKP		18 04 13.1	-0.5	
MALC	Bahia Malaga	139.99	91	*e*P	PKiKP		18 04 12.4	-1.2	
PIZC	Pizarro, Choco	140.04	90	*e*P	PKPdf		18 04 10.9	-0.2	
CAPC	Capurgana	140.14	84	*e*P	PKiKP		18 04 16.6	+2.7	
POPC	Popayan, Colom	140.50	93	*e*P	PKPdf		18 04 10.9	-1.4	
JAMC	Jamundi, Valle	140.58	92	*e*P	PKPdf		18 04 04.8	-7.7	
GTBY	Guantanamo Bay	140.74	66	IAMs_20	IAMs_20		18 59 07.8		
	comp=Z,120µm,22.0s								
APAC	Apartado, Choc	140.91	85⇑	*e*P	PKiKP		18 04 17.4	+2.0	
YOTC	Yotoco, Valle	140.97	91	*e*P	PKPdf		18 04 07.7	-5.3	
UNIS	Unistalda (Bra	141.00	155	*e*P	PKPdf		18 04 10.5	-2.1	
TOA0	Torodi Ar. Sit	141.05	283		PKPdf		18 04 08.6	-6.2	
TORD	Torodi Ar. Bea	141.05	283	PKhKP	PKPpre		18 04 06.5		
	comp=Z,32nm,1.0s,baz=79,slow=1.6,SNR=16								
PLMC	San Jos del P	141.10	90	*e*P	PKPdf		18 04 08.6	-4.6	
DBBC	Dabeiba	141.26	86	*e*P	PKPdf		18 04 14.1	+0.6	
FLOC	Florencia	141.40	95	*e*P	PKPdf		18 04 12.2	-1.5	
CBOC	Ciudad Bolivar	141.43	88	*e*P	PKPdf		18 04 12.8	-1.1	
GARC	Garzon, Huila	141.64	94	*e*P	PKPdf		18 04 10.9	-3.5	
SHEL	Horse Pasture	141.88	234	IAMs_20	IAMs_20		19 00 20.1		
	comp=Z,165µm,21.0s								
HELC	Santa Helena	141.92	88	*e*P	PKPdf		18 04 10.1	-4.9	
UREC	San Jos de Ur	141.94	85	*e*P	PKiKP		18 04 22.3	+4.7	
ANIL	Santa Ana	141.95	91	*e*P	PKPdf		18 04 13.1	-1.9	
CZSB	Cruzeiro do Su	142.02	111	IAMs_20	IAMs_20		18 59 00.4		
	comp=Z,128µm,21.0s								
PTLC	Puerto Leguiza	142.03	98	*e*P	PKPdf		18 04 11.1	-3.7	
GUY2C	Guyana, Caldas	142.04	89	*e*P	PKPdf		18 04 09.6	-5.8	
ORTC	Ortega, Tolima	142.06	92	*e*P	PKPdf		18 04 10.9	-3.9	
SJCC	San Jacinto, C	142.24	82	*e*P	PKPdf		18 04 08.1	-7.1	
CPUP	Villa Florida	142.29	150	PKhKP	PKPpre		18 04 10.6		
	comp=Z,18nm,1.1s,baz=219,slow=4.5,SNR=17								
ESFA	Espinillo Form	142.80	147	*e*P	PKPdf		18 04 13.9	-1.9	
PTBC	PUERTO BERRIO	142.99	87	*e*P	PKPdf		18 04 11.7	-4.8	
ROSC	El Rosal	143.05	90	IAMs_20	IAMs_20		18 58 57.3		
	comp=Z,110µm,22.0s								
ROSC	El Rosal	143.05	90	PKhKP	PKPpre		18 04 13.4		
	comp=Z,67nm,0.7s,baz=313,slow=2.7,SNR=48								
SMRC	Santa Marta, M	143.10	80	*e*P	PKPbc		18 04 12.9	-0.6	
ARGC	Ariguani, Magd	143.16	82	*e*P	PKPdf		18 04 16.0	-0.8	
CVER	Cruz Verde, Cu	143.28	91	*e*P	PKPbc		18 04 15.4	+0.8	
SPBC	San Pablo de B	143.34	89	*e*P	PKPab		18 04 11.7	-1.5	
BBSR	BB Station	143.43	41		PKPdf		18 04 17.1	+0.4	
BBSR	BB Station	143.43	41	IAMs_20	IAMs_20		19 04 43.1		
	comp=Z,99µm,21.0s								
VILC	Villavicencio,	143.62	91	*e*P	PKPab		18 04 14.3	0.0	
ITAB	Concordia	143.82	157		PKPdf		18 04 16.7	-0.9	
ITAB	Concordia	143.82	157	*e*P	PKPbc		18 04 16.0	+0.8	
LL6C	La Loma 6 Bece	144.13	82	*e*P	PKPab		18 04 14.8	-1.3	
OCAC	Ocana	144.13	84	*e*P	PKPab		18 04 14.8	-1.5	
BARC	Barichara	144.26	87	*e*P	PKPab		18 04 15.4	-1.5	
RUSC	La Rusia	144.34	88	*e*P	PKPab		18 04 15.9	-1.6	
CRJC	Cerrejon, Guaj	144.42	80	*e*P	PKPbc		18 04 18.3	+0.7	
FRBT	Francisco Belt	144.56	155	*e*P	PKPab		18 04 17.4	0.0	
PAMC	Pamplona, Colo	144.75	86	*e*P	PKPab		18 04 18.1	-0.9	
PTGC	Puerto Gaitan,	145.18	91	*e*P	PKPbc		18 04 17.7	-2.2	
URIC	Uribia, Colom	145.23	78	*e*P	PKPbc		18 04 18.3	-1.7	
MCR1	Marichal Candi	145.45	152	*e*P	PKPdf		18 04 20.1	-0.3	
TAMC	Tame, Arauca	145.64	88	*e*P	PKPdf		18 04 20.1	-1.0	
TBTG	Tabatinga, AM	145.78	107	PKPdf	PKPdf		18 04 20.2	-1.2	
TBTG				IAMs_20	IAMs_20		19 01 27.9		
	comp=Z,120µm,20.0s								
TBTG	Tabatinga, AM	145.78	107	*e*P	PKPdf		18 04 20.5	-0.8	
TBTG	Tabatinga, AM	145.78	107	*e*P	PKPdf		18 04 20.7	-0.6	
MURT	Porto Murtinho	145.90	145	*e*P	PKPdf		18 04 20.5	-0.8	
PTGB	Pitanga	146.09	155	*e*P	PKPdf		18 04 21.3	-0.4	
H07N1	FLORES T-PHASE	146.15	352	*e*PKP	PKPbc		18 04 22.3	+0.1	
PAGU	Agualva, Azore	146.27	346	*e*PKP	PKPbc		18 04 22.8	+0.2	
PSBA	Serra de Santa	146.31	346	*e*PKP	PKPab		18 04 24.1	+0.6	
PSCM	Serra do Cume	146.32	346	*e*PKP	PKPab		18 04 23.6	+0.1	
H07S1	FLORES T-PHASE	146.47	352	*e*PKP	PKiKP		18 04 27.6	+1.4	
H07S1	FLORES T-PHASE	146.47	352	PKPbc	PKiKP		18 04 28.8	+2.6	
	SNR=47								
ANTJ	Antonio Joao (	146.52	147	*e*P	PKPdf		18 04 22.1	-0.4	
ROSA	Rosais	146.56	347	*e*PKP	PKiKP		18 04 27.7	+1.4	
PMAN	Manadas	146.61	347	*e*PKP	PKPab		18 04 25.0	+0.4	
BART	Pico Bartolome	146.65	342	*e*PKP	PKPdf		18 04 20.9	-1.4	
PCALD	Caldeiras da R	146.73	343	*e*PKP	PKiKP		18 04 27.1	+0.4	
SDV	Santo Domingo	146.77	83		PKPdf		18 04 23.1	-0.1	
SDV				IAMs_20	IAMs_20		19 06 14.8		
	comp=Z,118µm,20.0s								
SDV	Santo Domingo	146.77	83	PKPbc	PKPbc		18 04 25.1	+0.1	
	comp=Z,122nm,0.8s,baz=210,slow=0.6,SNR=75								
SDV	Santo Domingo	146.77	83	*e*P	PKPdf		18 04 22.1	-1.2	
PID	Ribeirinha	146.80	347	*e*PKP	PKPab		18 04 25.2	-0.2	
PDA	Ponta Delgada	146.83	343	*e*PKP	PKiKP		18 04 28.2	+1.3	
PMPST	Porto Santo, M	146.90	327	*e*PKPdf	PKPbc		18 04 24.6	0.0	
PMPST	Porto Santo, M	146.90	327	*e*PP	PP		18 08 09.0	+21	
PMPS	Porto Santo	146.91	327	*e*PKPdf	PKPdf		18 04 06.1	-17	
ETMB	Extrema	147.05	119	PKPbc	PKPbc		18 04 25.2	-0.3	
ETMB	Extrema	147.05	119	*e*P	PKPdf		18 04 22.9	-0.6	
AUA1	Aruba	147.05	77	*e*P	PKiKP		18 04 27.7	-0.3	
BBRB	Robore, Bolivi	147.06	138	*e*P	PKPdf		18 04 24.0	+0.6	
PCDR	Punta Cana, DR	147.24	65	IAMs_20	IAMs_20		19 07 13.4		
	comp=Z,111µm,20.0s								
BBSD	Serra de San D	147.26	135	*e*P	PKPdf		18 04 23.2	-0.5	
PSMN	Pico do Norte,	147.33	342	*e*PKP	PKPbc		18 04 24.6	-1.1	
BDQN	Bodoquena, MS	147.34	144	*e*P	PKPdf		18 04 24.0	+0.2	
PSMA	Santa Maria	147.36	342	*e*PKP	PKPbc		18 04 26.4	+0.7	
PMAR	Madeira	147.48	327	*e*PKPdf	PKPdf		18 04 27.9	-0.6	
TRCB	Terra Rica	147.53	153	*e*P	PKPdf		18 04 23.6	-0.5	
FUL	Funchal	147.53	327	*e*PKPdf	PKPab		18 04 27.4	-1.0	
PMOZ	Porto Moniz, M	147.56	327	*e*PKPdf	PKPdf		18 04 22.5	-1.5	
PMOZ	Porto Moniz, M	147.56	327	*e*SS	SS		18 26 42.9	-11	
PMOZ	Porto Moniz, M	147.56	327	*e*LQ	LQ		18 46 56.4		
PMOZ				*e*LR	LR		18 55 00.0		
	comp=Z,79µm,20.0s								
LDASE	Londrina, Braz	147.66	156	*e*P	PKPdf		18 04 24.0	-0.3	
KIC	Kosan Boka	147.72	272	*e*P	PKPdf		18 04 24.5	-0.1	
	comp=Z,782nm,1.1s								
DBIC	Dimbokro	147.84	273		PKPdf		18 04 24.6	-0.2	
DBIC	Dimbokro	147.84	273	PKIKP	PKPdf		18 04 24.6	-0.2	
DBIC	Dimbokro	147.84	273	PKPbc	PKPbc		18 04 28.1	+0.4	
	comp=Z,400nm,1.0s,baz=86,slow=3.6,SNR=60								
AQDB	Aquiauana	147.91	146		PKPdf		18 04 24.5	-0.2	
AQDB	Aquidauana	147.91	146	*e*P	PKPdf		18 04 24.4	-0.3	
LIC	Lamto	148.00	272	*e*P	PKPdf		18 04 22.5	-2.6	
	comp=Z,999nm,0.9s								
TIC	Toumodi	148.00	273	*e*P	PKPdf		18 04 23.2	-1.9	
	comp=Z,322nm,0.9s								
PET01	Itanhaem-SP	148.21	162	*e*P	PKPdf		18 04 25.2	0.0	
FRTB	Fartura	148.31	158	*e*P	PKPdf		18 04 25.2	-0.2	
AGPR	Aguadilla, PR	148.39	64	IAMs_20	IAMs_20		19 05 33.0		
	comp=Z,124µm,20.0s								
MLPR	Magueyes Islan	148.61	65		PKPdf		18 04 24.8	-1.1	
MLPR				IAMs_20	IAMs_20		19 09 11.9		
	comp=Z,100µm,21.0s								
SPB	Sao Paulo	148.81	162	IAMs_20	IAMs_20		19 10 28.8		
	comp=Z,151µm,21.0s								
SPB	Sao Paulo	148.81	162	*e*P	PKPdf		18 04 25.9	-0.2	
EMPR	Esperanza - Ma	148.91	64	IAMs_20	IAMs_20		19 06 09.7		
	comp=Z,133µm,20.0s								
RPRD	Ribas do Rio P	148.98	149	*e*P	PKPdf		18 04 26.3	-0.2	
PCMB	Pacaembu	149.18	154	*e*P	PKPdf		18 04 26.3	-0.5	
BAUV	El Baul	149.32	83		PKPdf		18 04 25.6	-1.6	
PTLB	Pontes e Lacer	149.48	135	PKPdf	PKPdf		18 04 26.8	-0.6	
PTLB	Pontes e Lacer	149.48	135	*e*P	PKPdf		18 04 26.7	-0.6	
VAO	Valinhos	149.51	162	*e*P	PKPdf		18 04 27.5	+0.1	
PARB	Paraibuna	149.57	165	*e*P	PKPdf		18 04 27.9	+0.4	
RCLB	Rio Claro- Sao	149.88	161	*e*P	PKPdf		18 04 28.3	+0.3	
SAML	Samuel	150.09	120	*e*P	PKPdf		18 04 28.3	-0.1	
VILB	Vilhena	150.32	130	*e*P	PKPdf		18 04 28.7	-0.1	
BB19B	Bebedouro	150.77	158	*e*P	PKPdf		18 04 29.8	+0.4	
TEFE	Tefe	151.00	109	*e*P	PKPdf		18 04 29.8	0.0	
VAS01	Vassouras-RJ	151.11	168	*e*P	PKPdf		18 04 29.4	-0.4	
ITRB	Iturama	151.25	154	*e*P	PKPdf		18 04 30.2	+0.1	
SALV	Santo Antonio	151.47	140	*e*P	PKPdf		18 04 30.6	+0.1	
DUB01	Friburgo-RJ	151.50	170	*e*P	PKPdf		18 04 31.0	+0.5	
BSCB	Bom Sucesso	152.03	165	*e*P	PKPdf		18 04 31.0	-0.4	
SABA	Saba	152.14	64	IAMs_20	IAMs_20		19 06 49.1		
	comp=Z,104µm,20.0s								
SEUS	St. Eustatius	152.42	64	IAMs_20	IAMs_20		19 06 25.5		
	comp=Z,142µm,22.0s								
PCRV	Puerto La Cruz	152.57	80	PKP	PKPdf		18 04 31.6	-0.7	
	comp=Z,21nm,0.8s,baz=7.3,slow=10,SNR=3.6								
PCRV				PKPbc	PKPbc		18 04 37.3	-1.9	
	comp=Z,22nm,0.6s,baz=249,slow=4.5,SNR=15								
H10N1	ASCENSION HYDR	153.40	239	PKPbc	PKPbc		18 04 40.6	-0.1	
	baz=204,slow=74,SNR=18								
H10N2	ASCENSION HYDR	153.42	239	PKPbc	PKPbc		18 04 40.5	-0.2	
	baz=204,slow=74,SNR=20								
H10N3	ASCENSION HYDR	153.42	239	PKPbc	PKPbc		18 04 39.1	-1.6	
	baz=204,slow=74,SNR=11								
IPMB	Ipameri, GO	153.69	156	*e*P	PKPdf		18 04 33.7	-0.1	
PDRB	Porto dos Gac	153.78	132	*e*P	PKPdf		18 04 33.7	-0.3	
PMNB	Patos De Minas	153.85	160	*e*P	PKPdf		18 04 33.3	-0.8	
GDHS	Morne Mazeau,	153.93	65	IAMs_20	IAMs_20		19 09 56.7		
	comp=Z,146µm,22.0s								
ABD	La Joyeuse, An	154.11	65	IAMs_20	IAMs_20		19 10 09.6		
	comp=Z,92µm,21.0s								
CBE	Ff, Capester	154.15	66	IAMs_20	IAMs_20		19 12 44.5		
	comp=Z,195µm,20.0s								
MAGL	Barra de l'Ile	154.48	66	IAMs_20	IAMs_20		19 10 12.4		
	comp=Z,142µm,22.0s								
RIB01	Linhares ES	154.51	173	*e*P	PKPdf		18 04 30.2	-4.6	
H05N1	Guadeloupe/Mar	154.56	65	PKP	PKPdf		18 04 36.8	+1.8	
	SNR=55								
MACA	Manacapuru-AM	154.81	111	*e*P	PKPdf		18 04 34.9	-0.6	
DIAM	Diamantina, MG	154.90	165	*e*P	PKPdf		18 04 36.0	+0.4	
CLDB	Colider	154.95	132	*e*P	PKPdf		18 04 35.2	-0.4	
FDF	Fort de France	154.99	68	PKPdf	PKPdf		18 04 34.8	-0.8	
FDF	Fort de France	154.99	68	PKIKP	PKPdf		18 04 34.8	-0.8	
FDF				MLR	MLR				
	comp=Z,85µm,21.0s								
SJMB	Sao Joao De Ma	155.01	171	*e*P	PKPdf		18 04 35.2	-0.3	
ILAM	Ilet Lapin Mar	155.23	68	IAMs_20	IAMs_20		19 10 22.5		
	comp=Z,123µm,22.0s								
H05S1	Guadeloupe/Mar	155.37	69	PKP	PKPdf		18

KSRS **Korea Array** 45.94 343 P **P** **18 10 16.6 +0.2**
16nm,1.0s,baz=163,slow=8.9,SNR=11
16nm,1.0s
CMAR **Chiang Mai Arr** 50.46 300 P **P** **18 10 52.6 +0.9**
1.3nm,0.8s,baz=120,slow=5.9,SNR=2.1
1.3nm,0.8s
USRK **Ussuriysk Ar.** 51.36 349 P **P** **18 10 57.4 -0.5**
16nm,1.0s,baz=161,slow=8.5,SNR=6.4
16nm,1.0s
PETK **Petropavlovsk-** 60.39 10 P **P** **18 12 02.7 +0.2**
21nm,0.9s,baz=189,slow=7.5,SNR=14
21nm,0.9s
SONM **Songino Array** 63.09 333 P **P** **18 12 20.7 -0.3**
6.7nm,1.0s,baz=158,slow=5.6,SNR=3.8
6.7nm,1.0s
MKAR **Makanchi Array** 75.62 322 P **P** **18 13 38.4 0.0**
1.0nm,0.5s,baz=98,slow=6.5,SNR=6.4
1.0nm,0.5s
ZALV **Zalesovo Beam** 77.51 329 P **P** **18 13 47.5 -1.3**
3.2nm,0.8s,baz=111,slow=7.0,SNR=2.9
3.2nm,0.8s
TIXI **Tiksi** 78.41 355 P **P** **18 13 55.1 +1.6**
0.8nm,0.5s,baz=236,slow=3.6,SNR=1.2
0.8nm,0.5s
KURBB **Kurchatov Arra** 79.48 324 P **P** **18 13 59.5 -0.3**
1.7nm,0.9s,baz=106,slow=3.9,SNR=2.2
1.7nm,0.9s
QSPA **South Pole Qui** 83.66 180 P **P** **18 14 21.2 -0.6**
14nm,1.0s,baz=353,slow=2.0,SNR=5.7
14nm,1.0s
NRIK **Noril'sk** 84.56 343 P **P** **18 14 26.0 -0.1**
9.4nm,0.8s,baz=151,slow=4.5,SNR=6.2
9.4nm,0.8s
BVAR **Borovoye Array** 85.05 325 P **P** **18 14 27.3 -1.7**
4.4nm,0.7s,baz=111,slow=8.1,SNR=3.9
4.4nm,0.7s
ILAR **Eielson Array** 87.11 24 P **P** **18 14 38.1 -0.7**
7.2nm,1.0s,baz=246,slow=4.8,SNR=7.0
7.2nm,1.0s
DBIC **Dimbokro** 148.67 272 PKPbc **PKPbc** **18 21 41.6 +0.1**
9.0nm,0.8s,baz=68,slow=6.3,SNR=4.4

*IDC **25** 18:06:23.7±1.3,6.05S×143.08E,h0km,mb4.1/5, mbtmp4.1/7,ML2.0/1,Error ellipse: s-maj=43.0km s-min=29.4km az=67.0*
ISC 25 18:06:28.1±0.8,**6.2S**±0.1×**143.1E**±0.1,**h35**km,**n8,**σ1§**58**/9, **mb4.1**/5,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**5.10**	**128**	Pn		**Pn**	**18 07 43.0**	**+0.9**
	3.5nm,0.3s,baz=335,slow=19,SNR=0.8							
PMG				Sn		**Sn**	**18 08 38.4**	**-1.5**
	8.1nm,0.3s,baz=250,slow=15,SNR=1.5							
	58nm,0.9s							
WRA	**Warramunga Arr**	**16.07**	**211**	Pn		**Pn**	**18 10 09.7**	**-1.9**
	2.2nm,0.3s,baz=30,slow=13,SNR=1.5							
ASAR	**Alice Springs**	**19.46**	**206**	P		**P**	**18 10 54.2**	**+2.2**
	6.7nm,0.5s,baz=32,slow=12,SNR=4.1							
KSRS	**Korea Array**	**45.72**	**343**	P		**P**	**18 14 44.9**	**-0.9**
	1.1nm,0.8s,baz=166,slow=8.8,SNR=2.5							
	1.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**49.99**	**300**	P		**P**	**18 15 18.2**	**-1.1**
	0.6nm,0.9s,baz=122,slow=6.4,SNR=2.0							
	0.6nm,0.9s							
MKAR	**Makanchi Array**	**75.25**	**322**	P		**P**	**18 18 08.7**	**+1.2**
	1.5nm,0.7s,baz=105,slow=6.9,SNR=1.3							
	1.5nm,0.7s							
BVAR	**Borovoye Array**	**84.70**	**325**	P		**P**	**18 18 58.8**	**+0.5**
	2.5nm,0.7s,baz=103,slow=6.2,SNR=1.9							
	2.5nm,0.7s							
ILAR	**Eielson Array**	**87.24**	**24**	P		**P**	**18 19 10.7**	**0.0**
	3.4nm,1.1s,baz=238,slow=3.1,SNR=2.4							
	3.4nm,1.1s							

OMAN 25 18:06:43.6±2.5,**16.79N**×**52.53E**,**h11**km,**ml3.9**/6,**Error ellipse: s-maj=30.7km s-min=11.9km az=168.0,Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABTO	**Aybut**	**0.93**	**53**	P		Pg	18 07 00.3	-1.2
	SNR=69							
ABTO				S		Sg	18 07 13.2	-0.4
WHFO	**Wadi Hawf**	**1.63**	**46**	P		Pn	18 07 11.8	-0.6
	SNR=72							
WHFO				S		Sb	18 07 34.1	-0.4
	SNR=9.0							
RBK	**Rabkut**	**1.75**	**66**	P		Pn	18 07 13.3	-0.7
	SNR=14							
RBK				S		Sb	18 07 38.3	+0.4
DOK	**Doka**	**2.37**	**40**	P		Pn	18 07 22.3	-0.2
	SNR=9.4							
DOK				S		Sg	18 07 57.9	-2.1
DMTO	**DMTO**	**2.49**	**68**	P		Pn	18 07 23.9	-0.2
	SNR=41							
DMTO				S		Sb	18 07 59.5	+0.4
SHAO	**Shalim**	**3.20**	**67**	P		Pn	18 07 33.6	-0.3
	SNR=14							
UMZA	**Um Al Zommool**	**6.39**	**22**	P		Pn	18 08 18.1	+0.3

*DJA **25** 18:07:41.1±0.8,3°N±3°×9°E±°,h30km±6km,M5.0/12, mb5.1/7,mB7.1/2,MLv5.0/12,Mw(mB)7.0/2*
*IDC **25** 18:08:05.8±10.0,3.77N×96.29E,h204km±83km,mb3.9/12, mbtmp4.4/13,Error ellipse: s-maj=47.0km s-min=34.5km az=4.0*
ISC 25 18:07:40.3±0.6,**2.67N**±0.06×**96.15E**±0.10,**h25**km,**n40,** σ1§**29**/44,**mb4.5**/12,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.32**	**146**	P		**Pn**	**18 07 50.3**	**+1.0**
MLSI	**Meulaboh, Aceh**	**1.60**	**9**	P		**Pn**	**18 08 08.5**	**+1.5**
KCSI	**Kotacane, Aceh**	**1.83**	**62**	P		**Pb**	**18 08 13.8**	**+0.8**
GSI	**Gunungsitoli**	**1.97**	**134**	P		**Pn**	**18 08 12.0**	**-0.1**
LHMI	**Lhok Sumawe**	**2.66**	**17**	P		**Pn**	**18 08 23.7**	**+2.1**
PBSI	**Pulau Batu**	**3.45**	**142**	P		**Pn**	**18 08 32.9**	**+0.5**
PBSI				S		**Sn**	**18 09 12.3**	**-0.1**
SISI	**Saibi**	**4.94**	**143**	P		**Pn**	**18 08 53.8**	**+0.8**
PPSI	**Pulau Pagai**	**6.64**	**144**	P		**Pn**	**18 09 16.8**	**+0.5**
	121nm,1.5s,2.7nm							
KRJI	**Kerinci**	**7.11**	**132**	P		**Pn**	**18 09 24.6**	**+1.7**
	203nm,1.2s,3.9nm							
MNAI	**Manna**	**9.75**	**136**	P		**Pn**	**18 09 59.9**	**+0.9**
	116nm,0.9s							
KASI	**Kota Agung**	**11.65**	**134**	P		**Pn**	**18 10 24.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**15.93**	**10**	P		**P**	**18 11 25.4**	**-0.9**
	3.9nm,0.8s,baz=116,slow=5.5,SNR=20							
ENH	**Enshi**	**30.22**	**23**	P		**P**	**18 13 49.0**	**-0.1**
ENH				pP		**pP**	**18 13 55.3**	**-1.0**
ENH				sP		**sP**	**18 13 58.1**	**-1.2**
WUS	**Wushi**	**41.28**	**341**	P		**P**	**18 15 22.9**	**-0.9**
WUS				pP		**pP**	**18 15 29.5**	**-1.8**
BJT	**Baijiatuau**	**41.37**	**23**	P		**P**	**18 15 25.7**	**+1.3**
BJT				pP		**pP**	**18 15 32.0**	**+0.2**
AAK	**Ala-Archa**	**44.25**	**337**	P		**P**	**18 15 48.3**	**+0.4**
AAK				pP		**pP**	**18 15 55.0**	**-0.4**
AAK				sP		**sP**	**18 15 57.4**	**-1.0**
KSRS	**Korea Array**	**45.26**	**36**	P		**P**	**18 15 55.3**	**-0.5**
	1.2nm,0.8s,baz=218,slow=9.4,SNR=5.7							
	1.2nm,0.8s							
MKAR	**Makanchi Array**	**45.57**	**347**	P		**P**	**18 15 57.3**	**-0.9**
	3.4nm,0.4s,baz=162,slow=8.6,SNR=33							
	3.4nm,0.4s							
MAKZ	**Makanchi**	**45.66**	**346**	P		**P**	**18 15 57.8**	**-1.1**
MAKZ				pP		**pP**	**18 16 04.3**	**-2.1**
SONM	**Songino Array**	**45.85**	**10**	P		**P**	**18 15 59.8**	**-0.7**
	5.6nm,0.7s,baz=189,slow=9.1,SNR=10							
SONM				PcP		**PcP**	**18 17 37.2**	**-0.4**
	3.4nm,0.9s,baz=218,slow=2.2,SNR=4.0							
	5.6nm,0.7s							
ULN	**Ulaanbaatar**	**45.99**	**10**	P		**P**	**18 16 01.3**	**-0.4**
ULN				pP		**pP**	**18 16 08.1**	**-1.0**
OOD	**Oodnadatta**	**48.62**	**131**	P		P	18 16 36.4	+14
KURBB	**Kurchatov Arra**	**50.05**	**345**	P		**P**	**18 16 31.6**	**-1.1**
	3.6nm,0.8s,baz=160,slow=7.7,SNR=12							
	3.6nm,0.8s							
ZALV	**Zalesovo Beam**	**51.95**	**352**	P		**P**	**18 16 45.5**	**-1.5**
	6.8nm,0.7s,baz=162,slow=6.4,SNR=8.6							
	6.8nm,0.7s							
BVAR	**Borovoye Array**	**54.53**	**341**	P		**P**	**18 17 03.5**	**-2.5**
	5.6nm,0.9s,baz=128,slow=6.8,SNR=1.8							
	5.6nm,0.9s							
BRVK	**Borovoye**	**54.59**	**341**	P		**P**	**18 17 06.8**	**+0.4**
BRVK				pP		**pP**	**18 17 13.8**	**-0.3**
H04N2	**CROZET ISLANDS**	**62.41**	**213**	T		T	19 25 23.2	
	baz=51,slow=75,SNR=2781							
H04N1	**CROZET ISLANDS**	**62.42**	**213**	T		T	19 25 37.1	
	baz=51,slow=75,SNR=1961							
H04N3	**CROZET ISLANDS**	**62.42**	**213**	T		T	19 25 22.5	
	baz=51,slow=75,SNR=2658							
H04S1	**CROZET ISLANDS**	**62.77**	**213**	T		T	19 25 55.7	
	baz=51,slow=76,SNR=48							
H04S3	**CROZET ISLANDS**	**62.78**	**213**	T		T	19 25 55.5	
	baz=51,slow=76,SNR=82							
H04S2	**CROZET ISLANDS**	**62.78**	**213**	T		T	19 25 58.0	
	baz=51,slow=76,SNR=76							
BRTR	**Keskin Array B**	**67.35**	**312**	P		**P**	**18 18 36.8**	**+3.1**
	5.7nm,1.2s,baz=146,slow=8.1,SNR=1.4							
	5.7nm,1.2s							
AKASG	**Malin Array Be**	**73.46**	**322**	P		**P**	**18 19 12.9**	**+2.3**
	0.6nm,0.6s,baz=91,slow=5.1,SNR=2.0							
	0.6nm,0.6s							
FINES	**FINESS Array B**	**78.22**	**333**	P		**P**	**18 19 35.9**	**-1.6**
	2.8nm,0.8s,baz=90,slow=1.9,SNR=2.2							
	2.8nm,0.8s							
ARCES	**ARCESS Array B**	**80.81**	**340**	P		**P**	**18 19 50.5**	**-1.0**
	2.4nm,0.8s,baz=90,slow=4.9,SNR=4.2							
	2.4nm,0.8s							
HFS	**Hagfors**	**83.93**	**330**	P		**P**	**18 20 10.2**	**+2.2**
	1.9nm,0.9s,baz=96,slow=8.8,SNR=1.1							
	1.9nm,0.9s							
SPITS	**Spitsbergen Ar**	**85.30**	**348**	P		**P**	**18 20 14.0**	**-0.6**
	24nm,1.0s,baz=77,slow=12,SNR=1.2							
	24nm,1.0s							
TXAR	**Lajitas Array**	**142.94**	**29**	PKP		**PKPdf**	**18 27 13.7**	**+1.0**
	0.3nm,0.7s,baz=355,slow=1.9,SNR=1.1							
CPUP	**Villa Florida**	**145.34**	**225**	PKPbc		**PKiKP**	**18 27 21.6**	**+0.9**
	0.5nm,0.4s,baz=59,slow=5.5,SNR=4.0							

*IDC **25** 18:07:48.1±0.7,6.29S×143.27E,h0km,mb4.3/14, mbtmp4.5/18,ML4.6/2,Error ellipse: s-maj=26.6km s-min=16.0km az=73.0*
*NEIC **25** 18:07:50.1±1.7,6.36S±0.03×143.24E±0.10,h10km±2km, mb4.6/6,Error ellipse: s-maj=16.1km s-min=5.3km az=275.0*
ISC 25 18:07:50.0±0.5,**6.38S**±0.06×**143.17E**±0.07,**h10**km,**n40,** σ1§**71**/39,**mb4.4**/15,**2C-1D,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.96**	**128**	Pn		**Pn**	**18 09 04.3**	**-0.3**
PMG	**Port Moresby**	**4.96**	**128**	Pn		**Pn**	**18 09 04.1**	**-0.6**
	134nm,0.6s,baz=345,slow=7.0,SNR=5.0							
PMG				Sn		**Sn**	**18 10 04.4**	**+2.2**
	26nm,0.3s,baz=18,slow=20,SNR=5.8							
MANU	**Manus Island**	**6.00**	**44**			**Pn**	**18 09 18.8**	**-0.2**
COEN	**Coen**	**7.53**	**180**	Pn		**Pn**	**18 09 40.4**	**+0.4**
FAKI	**Fak Fak**	**11.42**	**287**	Pn		**Pn**	**18 10 33.6**	**+0.3**
SAUI	**Saumlaki**	**11.89**	**262**	Pn		**Pn**	**18 10 40.9**	**+1.1**
WRA	**Warramunga Arr**	**15.98**	**212**	Pn		**Pn**	**18 11 36.8**	**+1.7**
	1.6nm,0.3s,baz=23,slow=13,SNR=1.3							
WRA				Sn		**Sn**	**18 14 26.7**	**-5.9**
	2.3nm,0.3s,baz=36,slow=26,SNR=2.1							
WRA				Lg		Lg	18 16 15.6	
	baz=18,slow=27							
	44nm,1.0s							
HNR	**Honiara**	**16.89**	**101**	Pn		**Pn**	**18 11 46.3**	**-0.4**
	274nm,0.6s,baz=244,slow=6.3,SNR=1.9							
TNTI	**Ternate**	**17.30**	**294**			**Pn**	**18 11 53.0**	**+1.1**
TNTI				IAmb		IAmb	18 12 13.4	
	comp=Z,71nm,1.5s							
AS31	**Alice Springs**	**19.36**	**206**	P		**P**	**18 12 16.1**	**+0.1**
AS31				IAmb		IAmb	18 12 42.8	
	comp=Z,86nm,1.4s							
ASAR	**Alice Springs**	**19.36**	**206**	P		**P**	**18 12 13.6**	**-2.5**
ASAR	**Alice Springs**	**19.36**	**206**	P		**P**	**18 12 18.7**	**+2.6**
	comp=Z,3.9nm,0.3s,baz=36,slow=9.3,SNR=8.6							
	comp=Z,26nm,0.6s							
EIDS	**Eidsvold**	**20.35**	**159**	P		P	18 12 21.8	-4.9
EIDS				IAmb		IAmb	18 12 41.4	
	comp=Z,20nm,1.2s							
ARMA	**Armidale**	**25.20**	**163**	P		**P**	**18 13 15.4**	**-0.8**
JNU	**Nakatsue**	**40.98**	**344**	P		**P**	**18 15 32.0**	**-1.3**
JNU				IAmb		IAmb	18 15 38.7	
	comp=Z,17nm,1.0s							
MJAR	**Matsushiro Arr**	**42.95**	**354**	P		**P**	**18 15 48.2**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=181,slow=7.8,SNR=2.5							
	comp=Z,1.7nm,0.8s							
RTZ	**Ruatahuna**	**44.31**	**141**	P		**P**	**18 16 00.5**	**+0.1**
TUWZ	**Tuamarina**	**44.37**	**147**	P		P	18 15 56.9	-3.8
KSRS	**Korea Array**	**45.87**	**343**	P		**P**	**18 16 12.4**	**-0.1**
	comp=Z,3.9nm,0.8s,baz=164,slow=10,SNR=8.9							
	comp=Z,3.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**50.11**	**300**	P		**P**	**18 16 46.6**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=121,slow=5.9,SNR=2.6							
	comp=Z,0.8nm,0.8s							
USRK	**Ussuriysk Ar.**	**51.34**	**350**	P		**P**	**18 16 53.4**	**-1.2**
	comp=Z,3.7nm,0.8s,baz=161,slow=6.0,SNR=4.6							
	comp=Z,3.7nm,0.8s							
PEA0B	**Petropavlovsk-**	**60.53**	**10**	P		**P**	**18 18 00.1**	**-0.2**
PETK	**Petropavlovsk-**	**60.53**	**10**	P		**P**	**18 17 58.9**	**-1.4**
PETK	**Petropavlovsk-**	**60.53**	**10**	P		**P**	**18 17 59.6**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=167,slow=6.3,SNR=7.1							
	comp=Z,5.5nm,0.8s							
SONM	**Songino Array**	**62.95**	**333**	P		**P**	**18 18 16.9**	**0.0**
	comp=Z,1.0nm,0.6s,baz=158,slow=5.4,SNR=1.4							
	comp=Z,1.0nm,0.6s							
VNDA	**Vanda**	**71.79**	**176**	P		**P**	**18 19 11.1**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=264,slow=19,SNR=1.6							
	comp=Z,2.3nm,0.9s							
MKAR	**Makanchi Array**	**75.40**	**322**	P		**P**	**18 19 33.8**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=97,slow=8.0,SNR=8.9							
	comp=Z,4.1nm,0.7s							
ZALV	**Zalesovo Beam**	**77.34**	**329**	P		**P**	**18 19 43.7**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=113,slow=6.0,SNR=2.9							
	comp=Z,1.6nm,0.6s							
KURBB	**Kurchatov Arra**	**79.28**	**324**	P		**P**	**18 19 54.6**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=114,slow=4.4,SNR=4.3							
	comp=Z,1.6nm,0.8s							
QSPA	**South Pole Qui**	**83.59**	**180**	P		**P**	**18 20 18.2**	**-0.3**
	comp=Z,5.8nm,0.7s,baz=202,slow=0.4,SNR=8.5							
	comp=Z,5.8nm,0.7s							
NRIK	**Noril'sk**	**84.49**	**343**	P		**P**	**18 20 21.8**	**-0.9**
	comp=Z,7.2nm,0.9s,baz=117,slow=3.6,SNR=5.6							
	comp=Z,7.2nm,0.8s							
BVAR	**Borovoye Array**	**84.85**	**325**	P		**P**	**18 20 24.7**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=108,slow=8.0,SNR=6.6							
	comp=Z,6.8nm,0.8s							
ILAR	**Eielson Array**	**87.34**	**24**	P		P	18 20 35.1	-1.8
	comp=Z,1.5nm,0.8s,baz=256,slow=4.6,SNR=2.6							
	comp=Z,1.5nm,0.8s							
NVAR	**Mina Array Bea**	**100.60**	**52**	P		**Pdif**	**18 21 39.1**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=266,slow=5.2,SNR=1.1							
EKA	**Eskdalemuir Ar**	**124.28**	**337**	PKP		**PKPdf**	**18 26 48.7**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=46,slow=4.1,SNR=2.5							
TORD	**Torodi Ar. Bea**	**141.48**	**283**	PKP		**PKPdf**	**18 27 22.9**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=88,slow=2.7,SNR=1.7							
KIC	**Kosan Boka**	**148.12**	**272**	*e*P		**PKPab**	**18 27 42.8**	**+2.7**
	comp=Z,28nm,1.0s							
DBIC	**Dimbokro**	**148.24**	**272**	PKPbc		**PKPdf**	**18 27 37.3**	**+3.1**
	comp=Z,3.2nm,0.8s,baz=93,slow=3.4,SNR=2.3							
LIC	**Lamto**	**148.40**	**272**	*e*P		**PKPab**	**18 27 43.9**	**+2.7**
	comp=Z,63nm,0.8s							
TIC	**Tomodi**	**148.40**	**272**	*i*P		**PKPab**	**18 27 44.2**	**+3.0**
	comp=Z,23nm,0.9s							

*IDC **25** 18:10:10.4±0.8,6.36S×143.47E,h0km,mb4.4/13, mbtmp4.4/16,ML2.1/1,Error ellipse: s-maj=30.6km s-min=17.8km az=76.0*
ISC 25 18:10:15.6±0.6,**6.4S**±0.1×**143.4E**±0.1,**h35**km,**n19,** σ0§**62**/19,**mb4.4**/13,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.76**	**129**	Pn		**Pn**	**18 11 25.4**	**+0.4**
	6.0nm,0.3s,baz=341,slow=18,SNR=1.8							
PMG				Sn		**Sn**	**18 12 18.9**	**-0.1**
	9.4nm,0.3s,baz=249,slow=22,SNR=1.8							
	161nm,0.8s							
WRA	**Warramunga Arr**	**16.08**	**212**	Pn		**Pn**	**18 13 58.3**	**-0.9**
	5.7nm,0.6s,baz=26,slow=14,SNR=2.1							
ASAR	**Alice Springs**	**19.44**	**207**	P		**Pn**	**18 14 41.5**	**+0.8**
	28nm,0.8s,baz=36,slow=9.0,SNR=4.6							
MJAR	**Matsushiro Arr**	**43.00**	**354**	P		**P**	**18 18 11.3**	**-0.4**
	2.0nm,0.9s,baz=181,slow=6.8,SNR=2.6							
	2.0nm,0.9s							
KSRS	**Korea Array**	**45.97**	**343**	P		**P**	**18 18 35.4**	**+0.1**
	3.0nm,0.8s,baz=163,slow=9.5,SNR=4.5							
	3.0nm,0.8s							

*MOS **25** 18:11:28.3±1.0,5.72S×142.36E,h10km,mb5.7/38,Error ellipse: s-maj=9.3km s-min=5.2km az=109.6*
*IDC **25** 18:11:29.2±0.5,5.69S×142.37E,h0km,mb5.3/21, mbtmp5.3/25,ML5.0/3,Error ellipse: s-maj=18.9km s-min=12.2km az=78.0*
*NEIC **25** 18:11:30.6±1.6,5.83S±0.07×142.26E±0.06,h10km±1km, mb5.7/143,Error ellipse: s-maj=12.5km s-min=9.3km az=184.0*
*BJI **25** 18:11:31.3±0.0,5.67S×142.74E,h39km,mb5.2/70, mB5.1/1*
*DJA **25** 18:11:31.8±0.2,6°S±3°×14°2E±°,h10km,M6.4/60,mB7.2/3, mb5.6/60,MLv6.3/5,Mw(mB)7.2/3,MwMwp8.1/4,Mwp7.6/4*
ISC 25 18:11:31.3±0.6,**5.82S**±0.04×**142.32E**±0.04,**h14**km±3km, **h14**km:**pP-P,n794,**σ1§**68**/802,**mb5.6**/161,**MS6.7**/4,**9C-10D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TABU	**Tabubil**	**1.22**	**297**	P		**Pn**	**18 11 54.3**	**+0.2**
MMPI	**Merauke**	**3.25**	**216**	P		**Pn**	**18 12 24.6**	**+2.6**
GENI	**Genyem**	**3.86**	**326**	P		**Pn**	**18 12 31.0**	**+0.7**
GENI	**Genyem**	**3.86**	**326**	P		**Pn**	**18 12 32.2**	**+1.9**
PMG	**Port Moresby**	**5.97**	**127**	Pn		**Pn**	**18 12 59.3**	**0.0**
PMG	**Port Moresby**	**5.97**	**127**	P		**Pn**	**18 13 03.9**	**+4.5**
PMG	**Port Moresby**	**5.97**	**127**	P		**Pn**	**18 13 03.6**	**+4.2**
PMG	**Port Moresby**	**5.97**	**127**	*i* P		**Pn**	**18 12 58.2**	**-1.2**
PMG	**Port Moresby**	**5.97**	**127**	Pn		**Pn**	**18 12 58.9**	**-0.5**
	134nm,0.5s,baz=292,slow=8.5,SNR=3.0							
PMG				Sn		**Sn**	**18 14 01.4**	**-6.2**
	17nm,0.3s,baz=289,slow=12,SNR=1.3							
MANU	**Manus Island**	**6.28**	**53**			**Pn**	**18 13 04.8**	**+1.2**
MANU	**Manus Island**	**6.28**	**53**	P		**Pn**	**18 13 05.2**	**+1.6**
BULU	**Kimbe**	**7.96**	**88**	P		**Pn**	**18 13 30.8**	**+4.1**
KMPI	**Kaimana, Papua**	**8.85**	**284**	P		**Pn**	**18 13 39.0**	**+0.1**
	890nm,1.1s							
KAVG	**Kavieng**	**9.05**	**70**	P		**Pn**	**18 13 44.4**	**+2.7**
RABL	**Rabaul**	**9.94**	**81**	Pn		**Pn**	**18 13 55.3**	**+1.4**
RABL	**Rabaul**	**9.94**	**81**	P		**Pn**	**18 13 56.7**	**+2.8**
FAKI	**Fak Fak**	**10.45**	**286**			**Pn**	**18 13 59.4**	**-1.4**
FAKI	**Fak Fak**	**10.45**	**286**	P		**Pn**	**18 13 59.5**	**-1.4**
FAKI	**Fak Fak**	**10.45**	**286**	P		**Pn**	**18 13 59.4**	**-1.4**
	329nm,1.0s							
SAUI	**Saumlaki**	**11.15**	**258**	Pn		**Pn**	**18 14 10.2**	**-0.3**
SAUI	**Saumlaki**	**11.15**	**258**	P		**Pn**	**18 14 12.6**	**+2.2**
SAUI	**Saumlaki**	**11.15**	**258**	P		**Pn**	**18 14 11.7**	**+1.3**
	2μm,1.0s							
KDU	**Kakadu**	**11.87**	**234**	P		**Pn**	**18 14 21.0**	**+0.7**
	baz=12,SNR=7.7							
KDU	**Kakadu**	**11.87**	**234**	P		**Pn**	**18 14 21.7**	**+1.4**
SWI	**Sorong**	**12.09**	**294**	P		**Pn**	**18 14 21.9**	**-1.4**
	244nm,0.8s							
BNDI	**Bandanaira**	**12.43**	**275**	P		**Pn**	**18 14 29.2**	**+1.2**
BNDI	**Bandanaira**	**12.43**	**275**	P		**Pn**	**18 14 30.0**	**+2.0**
	1μm,1.7s							
DRS	**Darwin Rock St**	**13.04**	**239**	P		**Pn**	**18 14 37.2**	**+0.8**
MTN	**Manton Dam**	**13.05**	**237**	P		**Pn**	**18 14 35.8**	**-0.7**
	baz=13,SNR=4.2							
MTN	**Manton Dam**	**13.05**	**237**	Pn		**Pn**	**18 14 34.9**	**-1.6**
CTA	**Charters Tower**	**14.69**	**165**	Pn		**Pn**	**18 15 00.0**	**+1.2**
	0.7nm,0.3s,baz=345,slow=18,SNR=3.7							
CTA				Lg		Lg	18 19 21.6	
	2.0nm,0.3s,baz=249,slow=21,SNR=2.5							
	59nm,1.3s							
NLAI	**Namlea**	**15.39**	**279**	P		**Pn**	**18 15 09.2**	**+1.0**
	85nm,1.4s,180μm							
LBMI	**Labuha**	**15.66**	**289**	P		**Pn**	**18 15 13.0**	**+1.2**
	304nm,1.0s							
WB0	**Warramunga Arr**	**15.86**	**208**	Pn		**Pn**	**18 15 13.3**	**-1.1**
WRAB	**Tennant Creek**	**16.02**	**208**			**Pn**	**18 15 15.9**	**-0.6**
WRAB	**Tennant Creek**	**16.02**	**208**	P		**Pn**	**18 15 15.9**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,182nm,0.6s							
WB2	**Warramunga Arr**	**16.03**	**208**	P		**Pn**	**18 15 16.7**	**+0.1**
	baz=16							
WB2	**Warramunga Arr**	**16.03**	**208**			**Pn**	**18 15 14.0**	**-2.6**
WB2				IAmb		IAmb	18 15 20.6	
	comp=Z,945nm,1.9s							
WRA	**Warramunga Arr**	**16.04**	**208**	Pn		**Pn**	**18 15 16.5**	**-0.2**
	comp=Z,12nm,0.3s,baz=30,slow=13,SNR=13							
WRA				Sn		**Sn**	**18 18 05.7**	**-8.7**
	comp=Z,4.6nm,0.3s,baz=24,slow=24,SNR=2.1							
WRA				Lg		Lg	18 19 59.1	
	comp=Z,3.5nm,0.3s,baz=14,slow=37,SNR=1.3							
	comp=Z,38nm,0.4s							
**TN

LUWI **Luwuk** 20.08 283 P **P** 18 16 03.9 -0.7
LUWI IAmb IAmb 18 16 12.7
comp=Z,672nm,1.3s
LUWI **Luwuk** 20.08 283 P **P** 18 16 05.8 +1.2
LUWI **Luwuk** 20.08 283 P **P** 18 16 05.8 +1.2
comp=Z,515nm,1.2s
MMRI **Maumere** 20.12 261 P **P** 18 16 03.7 -1.3
MMRI IAmb IAmb 18 16 13.8
comp=Z,255nm,0.9s
MMRI **Maumere** 20.12 261 P **P** 18 16 06.4 +1.4
MMRI **Maumere** 20.12 261 P **P** 18 16 05.4 +0.4
comp=Z,392nm,0.9s
PATS **Pohnpei** 20.32 52 P **P** 18 16 06.5 -0.7
baz=20,SNR=6.6
PATS **Pohnpei** 20.32 52 P **P** 18 16 06.6 -0.7
PATS **Pohnpei** 20.32 52 P **P** 18 16 08.4 +1.2
FITZ **Fitzroy Crossi** 20.35 232 P **P** 18 16 08.4 +0.9
baz=20,SNR=6.5
FITZ **Fitzroy Crossi** 20.35 232 P **P** 18 16 07.1 -0.4
EDFI **Ende, Flores** 20.67 261 P **P** 18 16 10.7 -0.4
comp=Z,244nm,0.9s
QLP **Quilpie** 20.73 175 P Pn 18 16 13.9 0.0
baz=21,SNR=12
QLP **Quilpie** 20.73 175 P Pn 18 16 14.5 +0.6
DAV **Davao City (W)** 21.05 307 P **P** 18 16 17.1 +2.0
comp=Z,50nm,0.3s,baz=147,slow=17,SNR=1.4
EIDS **Eidsvold** 21.17 158 P **P** 18 16 18.3 +2.0
baz=21,SNR=5.4
EIDS **Eidsvold** 21.17 158 P **P** 18 16 18.4 +2.0
EIDS **Eidsvold** 21.17 158 P **P** 18 16 20.0 +3.7
MRSI **Marisa** 21.29 286 P **P** 18 16 17.6 -0.1
comp=Z,270nm,0.9s
BASI **Baing, Sumba** 21.96 257 P **P** 18 16 26.5 +1.5
comp=Z,780nm,1.2s
KAPI **Kappang** 22.48 271 P **P** 18 16 29.2 -1.3
KAPI **Kappang** 22.48 271 P **P** 18 16 29.2 -1.3
KAPI pmax pmax
comp=Z,146nm,0.9s
TOLI2 **Tolitoli** 22.58 287 P **P** 18 16 29.1 -2.6
TOLI2 IAmb IAmb 18 16 47.2
comp=Z,361nm,1.2s
TOLI2 **Tolitoli** 22.58 287 P **P** 18 16 32.1 +0.5
TTSI **Tana Toraja** 22.60 276 P **P** 18 16 33.0 +1.2
comp=Z,146nm,1.6s
MPSI **Mapaga** 23.21 285 P **P** 18 16 38.6 +0.5
WRKA **Warakurna** 23.36 214 P **P** 18 16 40.5 +0.8
baz=24,SNR=20
WRKA **Warakurna** 23.36 214 P **P** 18 16 40.4 +0.8
AULRC **Lightning Ridg** 24.08 168 P **P** 18 16 50.1 +3.6
PLAI **Plampang** 24.52 262 P **P** 18 16 50.2 -0.5
PLAI **Plampang** 24.52 262 P **P** 18 16 48.9 -1.8
comp=Z,222nm,0.8s
TWSI **Taliwang, Sumb** 25.39 262 P **P** 18 16 58.9 +0.3
comp=Z,75nm,0.9s
BKB **Balikpapan** 25.77 279 P **P** 18 17 01.5 -0.5
BKB IAmb IAmb 18 17 10.9
comp=Z,196nm,1.1s
BKB **Balikpapan** 25.77 279 P **P** 18 17 03.1 +1.1
BKB **Balikpapan** 25.77 279 P **P** 18 17 03.7 +1.7
KOUNC **Koumac, New Ca** 25.86 127 P **P** 18 17 02.3 -0.5
KOUNC IAmb IAmb 18 17 09.8
comp=Z,174nm,1.1s
KOUNC **Koumac, New Ca** 25.86 127 P **P** 18 17 06.6 +3.8
STKA **Stephens Creek** 25.93 181 P **P** 18 17 03.4 +0.2
STKA **Stephens Creek** 25.93 181 *i* P **P** 18 17 02.1 -1.2
STKA **Stephens Creek** 25.93 181 P **P** 18 17 05.4 +2.1
comp=Z,55nm,1.1s,baz=346,slow=8.1,SNR=5.6
comp=Z,55nm,1.1s
ARMA **Armidale** 25.99 161 P **P** 18 17 05.5 +1.6
MBWA **Marble Bar** 26.68 233 P **P** 18 17 10.3 +0.2
PSA00 **Pilbara Seismi** 26.80 232 P **P** 18 17 09.7 -1.6
SRBI **Singaraja** 27.00 264 P **P** 18 17 13.0 -0.1
comp=Z,124nm,2.9s
SRBI pP **pP** 18 17 15.3 -2.2
comp=Z,124nm,2.9s
DNP **Denpasar** 27.04 262 P **P** 18 17 13.8 +0.3
comp=Z,169nm,1.0s
BBOO **Buckleboo** 27.48 191 P **P** 18 17 17.5 +0.2
MTKI **Muara Teweh, K** 27.79 279 P **P** 18 17 21.7 +1.4
comp=Z,50nm,1.5s
JAGI **Jajag, Banyuwa** 28.07 263 P **P** 18 17 19.5 -3.2
JAGI IAmb IAmb 18 17 27.0
comp=Z,76nm,0.8s
JAGI **Jajag, Banyuwa** 28.07 263 P **P** 18 17 21.0 -1.7
JAGI **Jajag, Banyuwa** 28.07 263 P **P** 18 17 20.3 -2.4
comp=Z,126nm,0.7s
FORT **Forrest** 28.21 207 P **P** 18 17 23.9 +0.1
DZM **Mont Dzumac** 28.37 127 P **P** 18 17 24.4 -1.0
DZM **Mont Dzumac** 28.37 127 P **P** 18 17 28.3 +2.9
LIFNC **LIFOU** 28.38 124 P **P** 18 17 28.6 +3.2
ONTNC **Ouen Toro** 28.50 127 P **P** 18 17 29.6 +3.2
BLJI **Banyuglugur** 28.59 265 P **P** 18 17 26.3 -1.0
BLJI pP **pP** 18 17 30.2 -1.5
YATNC **Mamie plateau,** 28.72 127 P **P** 18 17 31.4 +3.0
PINNC **Pines Island,** 29.44 127 P **P** 18 17 35.0 +0.1
BWJI **Bawean** 29.51 268 P **P** 18 17 36.2 +0.7
comp=Z,509nm,1.1s,comp=Z,58µm
PWJI **Pagerwojo** 30.37 264 P **P** 18 17 43.2 +0.1
comp=Z,88nm,1.1s
STKI **Sintang** 31.34 280 P **P** 18 17 53.3 +1.5
comp=Z,32nm,1.6s
UGM **Wanagama** 31.63 264 P **P** 18 17 53.1 -1.2
UGM IAmb IAmb 18 18 01.6
comp=Z,121nm,0.9s
UGM **Wanagama** 31.63 264 P **P** 18 17 54.9 +0.5
UGM **Wanagama** 31.63 264 P **P** 18 17 55.8 +1.4
comp=Z,161nm,0.9s
SMRI **Semarang** 31.70 266 P **P** 18 17 56.5 +1.6
SMRI **Semarang** 31.70 266 P **P** 18 17 57.2 +2.3
KPJI **Karang Pucung** 33.20 266 P **P** 18 18 08.3 +0.2
comp=Z,91nm,1.1s
CMJI **Cimerak** 33.68 265 P **P** 18 18 10.0 -2.3
comp=Z,236nm,1.1s
BBJI **Bungbulang** 34.47 265 P **P** 18 18 17.6 -1.6
LEM **Lembang** 34.50 266 P **P** 18 18 18.9 -0.7
comp=Z,67nm,0.8s,baz=50,slow=6.9,SNR=13
comp=Z,67nm,0.8s
LEM **Lembang** 34.50 266 P **P** 18 18 19.4 -0.2
CNJI **Cibinong** 34.99 266 P **P** 18 18 22.0 -1.6
comp=Z,180nm,1.1s
JOW **Kunigami** 35.20 338 P **P** 18 18 25.4 +0.2
CBJI **Citeko** 35.27 267 P **P** 18 18 28.3 +2.3
comp=Z,96nm,1.0s
DBJI **Dramaga** 35.37 267 P **P** 18 18 29.8 +2.9
comp=Z,55nm,1.1s
SKJI **Sukabumi** 35.55 266 P **P** 18 18 29.5 +1.0
comp=Z,197nm,0.8s
YULB **Yu-li** 35.56 325 P **P** 18 18 26.4 -2.0
YULB IAmb IAmb 18 18 40.8
comp=Z,192nm,1.9s
NWAO **Narrogin (SRO)** 35.68 218 P **P** 18 18 28.5 -0.8
NWAO **Narrogin (SRO)** 35.68 218 P **P** 18 18 28.5 -0.8
NWAO pmax pmax
comp=Z,59nm,1.7s
TPUB **Ta-pu** 35.87 325 P **P** 18 18 29.6 -1.5
TPUB IAmb IAmb 18 18 49.5
comp=Z,150nm,1.5s
TPUB PcP **PcP** 18 20 58.2 -0.2
NACB **Ninganchiao** 36.02 327 P **P** 18 18 31.8 -0.5
SSLB **Suanglung** 36.07 325 P **P** 18 18 31.9 -0.9
SSLB **Suanglung** 36.07 325 P **P** 18 18 33.2 +0.4
PPBI **Pangkal Pinang** 36.27 274 P **P** 18 18 37.1 +2.5
YHNB **Yeheng** 36.53 327 P **P** 18 18 35.3 -1.4
YHNB IAmb IAmb 18 18 45.9
comp=Z,124nm,1.1s
YHNB **Yeheng** 36.53 327 P **P** 18 18 37.7 +0.9
XMI **Christmas Isla** 36.53 260 P **P** 18 18 35.5 -1.4
XMIS **Christmas Isla** 36.57 260 P **P** 18 18 36.1 -1.1
XMIS IAmb IAmb 18 18 43.7
comp=Z,90nm,0.9s
KASI **Kota Agung** 37.63 269 P **P** 18 18 45.8 -0.5
comp=Z,56nm,1.0s
KNMB **Chin-men Tao** 38.08 323 P **P** 18 18 50.2 +0.4
LWLI **Liwa** 38.09 269 P **P** 18 18 51.9 +1.6
comp=Z,119nm,1.0s
DGTI **Dogotuki** 38.10 109 P **P** 18 18 51.2 +1.1
JMN **Monobe** 40.14 349 P **P** 18 19 04.9 -2.1
JMN **Monobe** 40.14 349 P **P** 18 19 06.4 -0.6
JNU **Nakatsue** 40.23 345 P **P** 18 19 06.1 -1.6
JNU PcP **PcP** 18 21 08.1 -3.6
JNU **Nakatsue** 40.23 345 P **P** 18 19 06.9 -0.8
JGF **Kuroka** 41.47 354 P **P** 18 19 18.2 +0.3
JGF **Kuroka** 41.47 354 P **P** 18 19 18.5 +0.6
MJAR **Matsushiro Arr** 42.32 355 P **P** 18 19 21.9 -2.9
comp=Z,14nm,1.1s,baz=183,slow=8.4,SNR=14
comp=Z,14nm,1.1s
MAJO **Matsushiro** 42.32 355 P **P** 18 19 21.6 -3.2
MAJO **Matsushiro** 42.32 355 P **P** 18 19 22.8 -2.0
MAJO **Matsushiro** 42.32 355 P **P** 18 19 21.9 -2.9
MAJO pmax pmax
comp=Z,32nm,1.0s
MJB9 **Matsu-Tunnel** 42.32 355 P **P** 18 19 21.7 -3.2
KUZ **Kuaotunu** 43.35 140 P **P** 18 19 35.9 +2.7
JMM **Marumori** 43.49 358 P **P** 18 19 32.0 -2.3
JMM **Marumori** 43.49 358 P **P** 18 19 33.0 -1.2
JSD **Sado** 43.80 355 P **P** 18 19 35.1 -1.6
JSD IAmb IAmb 18 19 41.8
comp=Z,70nm,0.8s
JSD **Sado** 43.80 355 P **P** 18 19 34.9 -1.8
NJ2 **Nanjing** 43.80 331 *e*P **P** 18 19 37.5 +0.6
NJ2 pmax pmax
comp=Z,52nm,1.1s
PSI **Prapat** 44.18 280 P **P** 18 19 40.3 -0.1
TJN **Taejon** 44.26 343 P **P** 18 19 39.3 -1.2
TJN **Taejon** 44.26 343 *i* P **P** 18 19 39.2 -1.2
MRNZ **Matariki Terra** 44.62 147 P **P** 18 19 43.1 -0.3
SRIT **Nakonsritamara** 44.94 288 P **P** 18 19 47.6 +1.3
THZ **Tophouse** 44.96 147 P **P** 18 19 44.6 -1.5
WHN **Wuhan** 45.00 325 P **P** 18 19 47.0 +0.5
WHN pP **sP** 18 19 53.3 +0.6
SURA **Surathani** 45.08 289 P **P** 18 19 48.2 +0.8
KSAR **Wonju Array Be** 45.10 344 P **P** 18 19 46.9 -0.3
KSAR **Wonju Array Be** 45.10 344 P **P** 18 19 46.9 -0.3
KSRS **Korea Array** 45.10 344 P **P** 18 19 46.0 -1.1
comp=Z,24nm,1.0s,baz=163,slow=9.5,SNR=29
KSRS PP **PcP** 18 21 28.9 +1.1
comp=Z,1.0nm,0.9s,baz=108,slow=14,SNR=2.2
comp=Z,24nm,1.0s
KS19 **Wonju Array Si** 45.16 344 P **P** 18 19 46.6 -1.1
RTZ **Ruatahuna** 45.27 141 P **P** 18 19 47.2 -1.5
RTZ IAmb IAmb 18 19 57.1
comp=Z,73nm,0.9s
TUWZ **Tuamarina** 45.29 146 P **P** 18 19 47.9 -0.9
BKZ **Black Stump Fm** 45.31 142 P **P** 18 19 52.2 +3.2
NAYO **Nakonayok** 45.32 297 P **P** 18 19 50.1 +0.8
TCW **Tory Channel** 45.33 146 P **P** 18 19 49.7 +0.7
MLZ **Mavora Lakes** 45.34 154 P **P** 18 19 50.5 +1.4
MLZ IAmb IAmb 18 21 32.9
comp=Z,209nm,1.9s
NONG **Nongkai** 45.36 302 P **P** 18 19 50.7 +1.1
INCN **Inchon** 45.50 342 P **P** 18 19 50.0 -0.4
JTM **Tenmabayashi** 46.40 359 P **P** 18 19 55.6 -1.7
JTM **Tenmabayashi** 46.40 359 P **P** 18 19 55.7 -1.7
GYA **Guiyang** 47.16 315 ⇓P **P** 18 20 05.0 +1.3
GYA pmax pmax
comp=Z,27nm,1.6s
SRDT **SRDT** 47.30 295 P **P** 18 20 05.7 +0.8
ERM **Erimo** 47.61 1 *i* P **P** 18 20 05.1 -1.7
ERM pmax pmax
comp=Z,70nm,1.0s
ENH **Enshi** 47.73 321 P **P** 18 20 08.3 +0.2
ENH **Enshi** 47.73 321 P **P** 18 20 08.1 +0.1
PHRA **Phrae** 48.02 301 P **P** 18 20 10.3 -0.1
TIA **Tai'an** 48.03 332 *e*P **P** 18 20 09.0 -1.2
TIA pmax pmax
comp=Z,18nm,1.1s
CRAI **Chiangrai** 48.68 303 P **P** 18 20 14.3 -1.2
LYN **LuoYang** 49.05 327 ⇑P **P** 18 20 17.8 -0.3
LYN pmax pmax
comp=Z,70nm,1.2s
CM31 **Chiang Mai Arr** 49.10 300 P **P** 18 20 19.0 +0.2
CMAR **Chiang Mai Arr** 49.10 300 P **P** 18 20 19.1 +0.3
comp=Z,6.2nm,0.8s,baz=126,slow=6.1,SNR=20
comp=Z,6.2nm,0.8s
CHTO **Chiang Mai** 49.26 301 P **P** 18 20 19.9 0.0
CHTO **Chiang Mai** 49.26 301 P **P** 18 20 20.6 +0.6
CHTO **Chiang Mai** 49.26 301 P **P** 18 20 19.9 0.0
CHTO pmax pmax
comp=Z,86nm,1.9s
KMI **Kunming** 49.27 310 ⇓P **P** 18 20 21.8 +1.6
KMI pmax pmax
comp=Z,42nm,1.5s
PSTR **Posyet** 49.37 349 *i* P **P** 18 20 19.6 -0.8
JKA **Kamikawa-asahi** 49.71 0 P **P** 18 20 22.5 -0.4
JKA IAmb IAmb 18 20 23.1
comp=Z,97nm,1.2s
ASAJ **Asahikawa** 49.71 0 P **P** 18 20 22.5 -0.5
ASAJ pmax pmax
comp=Z,97nm,1.2s
HNS **HongShan** 50.12 331 ⇑P **P** 18 20 25.8 -0.4
HNS pmax pmax
comp=Z,65nm,1.3s
USRK **Ussuriysk Ar.** 50.66 350 P **P** 18 20 29.4 -0.7
USRK **Ussuriysk Ar.** 50.66 350 P **P** 18 20 29.4 -0.7
USRK **Ussuriysk Ar.** 50.66 350 P **P** 18 20 29.1 -1.0
comp=Z,38nm,0.8s,baz=158,slow=6.6,SNR=36
comp=Z,38nm,0.8s
USA0B **Ussuriysk Arra** 50.66 350 P **P** 18 20 28.1 -2.1
USA0B IAmb IAmb 18 20 36.6
comp=Z,93nm,0.9s
USA0B **Ussuriysk Arra** 50.66 350 *i* P **P** 18 20 28.9 -1.2
XAN **Xi'an** 50.69 324 ⇑P **P** 18 20 30.0 -0.6
XAN pmax pmax
comp=Z,53nm,1.8s
PZH **PanZhiHua** 50.77 311 P **P** 18 20 33.3 +1.8
PZH pmax pmax
comp=Z,30nm,0.9s
TIY **Taiyuan** 51.49 330 *e*P **P** 18 20 37.5 +0.9
TIY pP **sP** 18 20 42.0 -0.9
TIY pmax pmax
comp=Z,23nm,0.5s
MDJ **Mudanjiang** 51.50 348 P **P** 18 20 35.3 -1.2
MDJ pmax pmax
comp=Z,32nm,1.2s
MDJ **Mudanjiang** 51.50 348 P **P** 18 20 35.9 -0.5
MDJ IAmb IAmb 18 20 42.8
comp=Z,60nm,0.9s
MDJ **Mudanjiang** 51.50 348 P **P** 18 20 35.8 -0.7
BJT **Baijiatuau** 51.59 334 P **P** 18 20 36.1 -1.1
BJT IAmb IAmb 18 20 44.0
comp=Z,98nm,1.1s
BJT **Baijiatuau** 51.59 334 P **P** 18 20 36.8 -0.4
BJT **Baijiatuau** 51.59 334 P **P** 18 20 36.1 -1.1
BJT pmax pmax
comp=Z,98nm,1.1s
BJI **Beijing** 51.60 334 P **P** 18 20 36.3 -1.0
BJI sP sP 18 20 52.0 +8.4
BJI pmax pmax
comp=Z,45nm,1.4s
CD2 **Chengdu** 51.89 317 P **P** 18 20 40.5 +0.7
TNCH **TengChong** 52.48 308 P **P** 18 20 44.8 +0.4
TNCH pP sP 18 20 51.8 +1.1
TNCH pmax pmax
comp=Z,88nm,1.5s
YSS **Yuzh-Sakhalins** 52.55 0 P **P** 18 20 42.7 -1.5
YSS **Yuzh-Sakhalins** 52.55 0 P **P** 18 20 43.1 -1.1
YSS **Yuzh-Sakhalins** 52.55 0 *e*P **P** 18 20 42.4 -1.8
YSS pmax pmax
comp=Z,50nm,1.1s
MND **Mandalay** 53.03 303 P **P** 18 20 49.0 +0.7
BNX **BinXian** 53.03 347 ⇓P **P** 18 20 47.0 -0.9
BNX pmax pmax
comp=Z,100nm,1.1s
HHC **Hu-ho-hao-te** 54.34 331 *e*P **P** 18 20 58.3 +0.6
HHC pmax pmax
comp=Z,19nm,0.6s
XLT **XiLinHaoTe** 54.87 337 *e*P **P** 18 21 00.5 -0.9
XLT pmax pmax
comp=Z,17nm,1.3s
BTO **Baotou** 54.91 330 *e*P **P** 18 21 03.0 +1.2
BTO pP sP 18 21 15.5 +7.4
BTO sP pP 18 21 21.0 +15
BTO PP **PP** 18 23 08.3 +3.4
BTO pmax pmax
comp=Z,83nm,1.6s
LZH **Lanzhou** 55.12 322 *e*P **P** 18 21 04.5 +1.0
LZH pP sP 18 21 14.8 +5.0
LZH pmax pmax
comp=Z,100nm,1.0s
KLR **Kul'dur** 55.60 352 *c i*P **P** 18 21 05.5 -1.0
KLR pmax pmax
comp=Z,90nm,1.0s
SAIH **SAIHA** 55.85 302 *e*P **P** 18 21 10.0 +1.0
IMP **Imphal** 56.05 305 *e*P **P** 18 21 09.8 -0.6
KOHI **KOHIMA** 56.32 306 *e*P **P** 18 21 11.3 -1.0
TYV **Tymovskoe** 56.46 0 *e*P **P** 18 21 11.8 -0.8
TYV pmax pmax
comp=Z,20nm,1.2s
GRNR **Gornyy** 56.59 356 ⇑ *i*P **P** 18 21 12.5 -1.1
GRNR pmax pmax
comp=N,9.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=E,8µm,16.0s
GRNR MLR MLR
comp=N,10µm,19.0s
GRNR MLR MLR
comp=Z,14µm,16.0s
BRDH **Bariadhala** 57.07 302 P **P** 18 21 19.2 +1.8
comp=Z,109nm,0.3s,baz=90,slow=18,SNR=1.5
comp=Z,109nm,0.3s
HEH **HeiHe** 57.32 349 *e*P **P** 18 21 17.5 -1.2
HEH pmax pmax
comp=Z,38nm,1.2s
SKR **Severo-Kuril's** 57.53 10 *i* P **P** 18 21 17.9 -2.2
SHL **Shillong** 58.06 305 *e*P **P** 18 21 25.3 +0.6
HIA **Hailar** 58.29 343 P **P** 18 21 25.6 0.0
HIA **Hailar** 58.29 343 *i* P **P** 18 21 23.6 -2.0
HIA pmax pmax
comp=Z,44nm,1.1s
GUWA **GUWAHATI** 58.48 305 *e*P **P** 18 21 26.1 -1.2
GTA **Gaotai** 59.70 323 *e*P **P** 18 21 36.0 +0.2
GTA pmax pmax
comp=Z,7.0nm,1.4s
PEA0B **Petropavlovsk-** 60.14 11 *e*P P 18 21 32.4 -5.9
PETK **Petropavlovsk-** 60.14 11 P **P** 18 21 37.0 -1.3
PETK **Petropavlovsk-** 60.14 11 P **P** 18 21 37.0 -1.3
comp=Z,60nm,0.9s,baz=178,slow=4.5,SNR=28
comp=Z,60nm,0.9s
PET **Petropavlovsk** 60.24 11 *e*P P 18 21 34.5 -4.4
PET pmax pmax
comp=Z,43nm,1.2s
LSA **Lhasa** 60.46 309 P **P** 18 21 40.4 -1.1
LSA **Lhasa** 60.46 309 P **P** 18 21 40.4 -1.1
LSA pmax pmax
comp=Z,74nm,0.7s
ZEA **Zeya** 60.68 350 *e*P **P** 18 21 41.4 -0.6
ZEA pmax pmax
comp=N,90nm,1.1s
ZEA pmax pmax
comp=E,30nm,0.9s
ZEA pmax pmax
comp=Z,180nm,0.9s
GOMU **GeErMu** 61.03 317 P **P** 18 21 49.0 +3.8
GOMU pmax pmax
comp=Z,20nm,1.2s
GTK **Tadong** 61.46 305 *e*P **P** 18 21 49.6 +1.6
GTK IAmb IAmb 18 21 54.7
comp=Z,90nm,1.0s
ULN **Ulaanbaatar** 61.81 334 P **P** 18 21 49.3 -0.7
ULN IAmb IAmb 18 21 57.1
comp=Z,78nm,1.4s
ULN **Ulaanbaatar** 61.81 334 P **P** 18 21 50.6 +0.6
SONM **Songino Array** 62.07 333 P **P** 18 21 50.9 -0.8
SONM **Songino Array** 62.07 333 P **P** 18 21 52.2 +0.5
comp=Z,5.6nm,0.8s,baz=160,slow=7.2,SNR=9.8
SONM PKPPKP **P'P'df** 18 51 01.4 +2.8
comp=Z,0.4nm,0.5s,baz=238,slow=2.7,SNR=2.1
SONM PKP2bc 18 51 10.2
comp=Z,2.2nm,1.1s,baz=249,slow=2.9,SNR=3.7
comp=Z,5.6nm,0.8s
BOK **Bokaro** 62.39 301 *e*P **P** 18 21 56.6 +2.5
CIT **Chita** 62.63 340 *e*P **P** 18 21 55.0 -0.3
PALK **Pallekele** 62.84 281 P **P** 18 21 59.0 +1.7
comp=Z,24nm,1.2s,baz=169,slow=5.2,SNR=3.4
comp=Z,24nm,1.2s
CASY **Casey** 64.26 194 P **P** 18 22 05.8 0.0
CASY IAmb IAmb 18 22 12.3
comp=Z,51nm,0.9s
ZAK **Zakamensk** 65.33 334 *e*P **P** 18 22 12.8 -0.4
ZAK pmax pmax
comp=Z,55nm,1.4s
ZAK pmax pmax
comp=Z,47nm,2.1s
MA2 **Magadan** 65.54 5 P **P** 18 22 12.9 -1.2
MA2 IAmb IAmb 18 22 17.5
comp=Z,59nm,0.8s
MA2 **Magadan** 65.54 5 P **P** 18 22 13.1 -1.0
MA2 **Magadan** 65.54 5 *i* P **P** 18 22 11.9 -2.2
MA2 pmax pmax
comp=Z,63nm,0.8s
HYB **Hyderabad** 67.05 292 *e*P **P** 18 22 23.8 -0.9
HYB *e*PcP **PcP** 18 22 52.2 -0.9
HYB *e*PP **PP** 18 24 52.2 -0.5
HYB *e*S **S** 18 31 19.2 +0.5
HYB **Hyderabad** 67.05 292 ⇑ *e*P **P** 18 22 24.1 -0.7
HYB IAmb IAmb 18 22 31.7
comp=Z,17nm,0.8s
MOY **Mondy** 67.27 334 *e*P **P** 18 22 26.0 +0.5
MOY pmax pmax
comp=Z,1µm,3.7s
BOD **Bodaibo** 67.44 344 *e*P **P** 18 22 25.9 -0.5
BOD pmax pmax
comp=Z,62nm,1.3s
YAK **Yakutsk** 68.36 354 P **P** 18 22 30.4 -1.6
YAK **Yakutsk** 68.36 354 *e*P **P** 18 22 31.0 -1.0
YAK *e* 18 22 56.1
YAK *e*S **S** 18 31 28.4 -4.2
YAK *e**SS SKiKP 18 32 05.9 -20
YAK pmax pmax
comp=Z,131nm,1.5s
YAK pmax pmax
comp=N,59nm,1.4s
YAK pmax pmax
comp=E,21nm,1.2s
YAK smax smax
comp=N,34µm,13.6s
YAK smax smax
comp=E,9µm,12.9s
SEY **Seymchan** 68.99 5 *i* P **P** 18 22 33.6 -2.4
SEY pmax pmax
comp=Z,30nm,0.8s
KAAM **Kaadhehdhoo** 69.49 273 P **P** 18 22 37.1 -3.0
WMQ **Urumqi** 69.67 321 *e*P **P** 18 22 42.0 +1.3
WMQ pP sP 18 22 54.8 +7.7
WMQ pmax pmax
comp=Z,100nm,1.1s
NIKH **Nikolski High** 71.59 29 P **P** 18 22 51.5 -0.5
baz=232
POO **Poona** 71.67 292 *e*P **P** 18 22 54.3 +1.0
POO IAmb IAmb 18 23 00.3
comp=Z,45nm,0.8s
SMLA **Simla** 72.14 305 *e*P **P** 18 22 56.6 +0.7
SMLA IAmb IAmb 18 23 07.8
comp=Z,74nm,1.0s
VNDA **Vanda** 72.40 176 P **P** 18 22 55.8 -0.8
VNDA **Vanda** 72.40 176 P **P** 18 22 56.4 -0.2
comp=Z,9.2nm,0.9s,baz=331,slow=9.8,SNR=7.0
comp=Z,9.2nm,0.9s
DGZ **Jazzator, Alta** 72.85 326 *i* P **P** 18 22 59.8 -0.1
DGZ pmax pmax
comp=Z,49nm,0.9s
ZSN **Zaisan** 73.19 323 *e*P **P** 18 23 01.1 -0.8
baz=323
ZSN **Zaisan** 73.19 323 *e*P **P** 18 23 01.0 -0.8
DHRM **DHARAMSHALA** 73.20 306 *e*P **P** 18 23 02.7 +0.2
DHRM IAmb IAmb 18 23 07.9
comp=Z,46nm,0.8s
UNV **Unalaska Valle** 73.24 29 P **P** 18 23 02.4 +0.5
UNV **Unalaska Valle** 73.24 29 P **P** 18 23 01.6 -0.2
baz=234
P08K **Saint George I** 73.54 25 P **P** 18 23 01.4 -2.2
baz=231
SPIA **Saint Paul Isl** 73.62 25 P **P** 18 23 01.4 -2.7
baz=230
KRAR **Krasnoyarsk** 73.75 334 *i* P **P** 18 23 04.0 -0.8
MK31 **Makanchi Array** 74.44 322 P **P** 18 23 07.5 -1.7
MK31 IAmb IAmb 18 23 15.9
comp=Z,72nm,1.1s
MK31 **Makanchi Array** 74.44 322 P **P** 18 23 07.5 -1.7
MK31 pmax pmax
comp=Z,72nm,1.1s
MKAR **Makanchi Array** 74.44 322 P **P** 18 23 07.8 -1.3
MKAR **Makanchi Array** 74.44 322 P **P** 18 23 09.0 -0.2
comp=Z,48nm,0.9s,baz=96,slow=7.0,SNR=25
comp=Z,48nm,0.9s
JMU **Jammu** 74.47 306 *e*P **P** 18 23 10.5 +1.0
MAKZ **Makanchi** 74.64 322 P **P** 18 23 10.0 -0.3
MAKZ IAmb IAmb 18 23 17.5
comp=Z,89nm,0.9s
MAKZ **Makanchi** 74.64 322 P **P** 18 23 10.0 -0.3
MAKZ pmax pmax
comp=Z,89nm,1.0s
SHLS **Shalkode** 74.73 318 *e*P **P** 18 23 08.4 -2.6

comp=Z,58nm,1.3s,baz=318
SHLS Shalkode 74.73 318 *e*P **P 18 23 08.4 -2.6**
SHLS pmax pmax
comp=Z,58nm,1.3s
UZB Uzynbulak 75.02 317 *e*P **P 18 23 11.8 -1.0**
comp=Z,37nm,1.0s,baz=317
UZB Uzynbulak 75.02 317 *e*P **P 18 23 11.8 -1.0**
UZB pmax pmax
comp=Z,37nm,1.0s
PRZ Przheval'sk 75.18 317 P **P 18 23 12.5 -1.3**
PRZ IAmb IAmb 18 23 20.2
comp=Z,110nm,1.2s
PRZ Przheval'sk 75.18 317 P **P 18 23 12.5 -1.3**
PRZ pmax pmax
comp=Z,110nm,1.2s
KPKS Kokpek 75.37 318 *e*P **P 18 23 13.9 -0.9**
baz=317
KPKS Kokpek 75.37 318 *e*P **P 18 23 13.8 -0.9**
SATY Saty 75.40 317 *e*P **P 18 23 14.1 -0.8**
baz=317
SATY Saty 75.40 317 *e*P **P 18 23 14.1 -0.8**
ZHN Zhinishke 75.42 317 *e*P **P 18 23 14.5 -0.6**
baz=317
ZHN Zhinishke 75.42 317 *e*P **P 18 23 14.4 -0.6**
BILL Bilibino 75.60 9 *i*P **P 18 23 14.1 -1.3**
BILL pmax pmax
comp=Z,29nm,1.2s
KSH Kashi 75.83 313 P **P 18 23 19.0 +1.5**
KSH sP PcP 18 23 39.5 +9.5
KSH pmax pmax
comp=Z,61nm,1.0s
NIL Nilore 76.06 307 P **P 18 23 17.2 -1.6**
NIL Nilore 76.06 307 P **P 18 23 17.2 -1.6**
NIL pmax pmax
comp=Z,133nm,1.0s
TDK Taldyqorghan 76.15 319 *e*P **P 18 23 18.2 -0.8**
comp=Z,82nm,0.9s,baz=319
TDK Taldyqorghan 76.15 319 *e*P **P 18 23 18.2 -0.8**
TDK pmax pmax
comp=Z,82nm,0.9s
ARXS Arharly 76.23 318 *e*P **P 18 23 19.3 -0.3**
MDOK Medeo 76.36 317 *e*P **P 18 23 19.9 -0.6**
baz=317
MDOK Medeo 76.36 317 *e*P **P 18 23 19.8 -0.6**
ZAA0 Zalesovo Array 76.43 329 P **P 18 23 19.8 -0.5**
ZALV Zalesovo Beam 76.43 329 P **P 18 23 18.8 -1.6**
comp=Z,7.3nm,0.8s,baz=116,slow=4.6,SNR=10
comp=Z,7.3nm,0.8s
AAA Alma-Ata 76.47 317 *e*P **P 18 23 20.6 -0.3**
baz=317
AAA Alma-Ata 76.47 317 *e*P **P 18 23 20.6 -0.3**
BHUJ Bhuj 76.52 295 *e*P **P 18 23 22.7 +1.2**
BHUJ IAmb IAmb 18 23 28.4
comp=Z,105nm,1.1s
SDPT Sand Point 76.99 30 P **P 18 23 23.2 -0.3**
SDPT Sand Point 76.99 30 P **P 18 23 23.2 -0.3**
SDPT Sand Point 76.99 30 P **P 18 23 22.9 -0.6**
baz=239
KUU Kurty 77.11 317 *e*P **P 18 23 23.6 -0.9**
comp=Z,66nm,1.1s,baz=317
KUU Kurty 77.11 317 *e*P **P 18 23 23.6 -0.9**
KUU pmax pmax
comp=Z,66nm,1.1s
CNBA Chernabura Isl 77.16 30 P **P 18 23 24.1 -0.4**
CNBA IAmb IAmb 18 23 29.9
comp=Z,48nm,0.9s
CHNA Chernabura Isl 77.17 30 P **P 18 23 24.7 +0.2**
baz=240
TKM2 Tokmak 2 77.27 316 P **P 18 23 29.6 +4.0**
SNR=7.9
M11K Mekoryuk 77.27 23 P **P 18 23 25.0 0.0**
baz=233
GAMB Gambell 77.47 19 P **P 18 23 26.1 +0.1**
baz=227
KBK Karagaybulak 77.62 316 P **P 18 23 32.4 +4.8**
SNR=12
UCH Uchtor 77.78 315 P **P 18 23 33.5 +4.7**
SNR=13
TIXI Tiksi 77.83 356 P **P 18 23 27.6 -0.3**
TIXI Tiksi 77.83 356 *i*P **P 18 23 25.1 -2.8**
TIXI pmax pmax
comp=Z,30nm,1.5s
CHMS Chumysh 77.88 316 P **P 18 23 33.2 +4.3**
SNR=13
S14K Fog Glacier 77.92 29 P **P 18 23 29.1 +0.3**
baz=240
AAK Ala-Archa 77.93 316 P **P 18 23 33.5 +4.1**
SNR=11
AAK Ala-Archa 77.93 316 P **P 18 23 27.8 -1.6**
AAK IAmb IAmb 18 24 15.9
comp=Z,66nm,1.2s
AAK Ala-Archa 77.93 316 *i*P **P 18 23 30.4 +1.1**
AAK pmax pmax
comp=Z,33nm,1.3s
USP Ospenovka 78.14 316 P **P 18 23 30.6 +0.3**
SNR=26
KURK Kurchatov 78.32 324 P **P 18 23 29.0 -2.0**
KURK IAmb IAmb 18 23 36.8
comp=Z,55nm,0.9s
KURK Kurchatov 78.32 324 *i*P **P 18 23 30.1 -0.9**
KURK pmax pmax
comp=Z,52nm,0.9s
KURBB Kurchatov Arra 78.33 324 P **P 18 23 30.6 -0.5**
comp=Z,266nm,0.9s,baz=114,slow=5.0,SNR=24
comp=Z,266nm,0.9s
EKS2 Erkin-Say 78.44 316 P P 18 23 37.0 +4.9
SNR=13
M13K Dall Lake 78.44 24 P **P 18 23 31.5 +0.1**
baz=236
CHGN Chignik 78.48 29 P **P 18 23 30.7 -1.1**
CHGN IAmb IAmb 18 23 38.6
comp=Z,81nm,0.8s
CHGN Chignik 78.48 29 P **P 18 23 31.1 -0.7**
baz=241,SNR=8.8
ARSB Arslanbob 78.57 314 P **P 18 23 32.4 -0.5**
ARSB Arslanbob 78.57 314 P **P 18 23 32.4 -0.5**
O14K Tigyukauivet M 78.68 26 P **P 18 23 32.4 -0.4**
O14K Tigyukauivet M 78.68 26 P **P 18 23 32.4 -0.4**
baz=238
N14K Kuskokwak Cree 78.86 25 P **P 18 23 33.3 -0.5**
baz=237
BTLS Baital 79.05 318 *e*P **P 18 23 34.3 -0.9**
comp=Z,38nm,1.3s,baz=318
BTLS Baital 79.05 318 *e*P **P 18 23 34.3 -0.9**
BTLS pmax pmax
comp=Z,38nm,1.3s
M14K Bethel 79.20 24 IAmb IAmb 18 23 41.5
comp=Z,94nm,0.8s
M14K Bethel 79.20 24 P **P 18 23 35.4 -0.2**
baz=237
L14K Kuka Creek 79.23 24 P **P 18 23 35.6 -0.2**
baz=236
O15K Ungalikthiuk R 79.27 26 P **P 18 23 36.1 0.0**
baz=239
R16K Pilot Point 79.50 28 P **P 18 23 37.3 0.0**
baz=241
N15K Kwethluk River 79.67 25 P **P 18 23 38.2 -0.1**
baz=239
J14K Nanvaranak Lak 79.69 22 P **P 18 23 38.8 +0.5**
J14K IAmb IAmb 18 24 30.4
comp=Z,127nm,1.7s
J14K Nanvaranak Lak 79.69 22 P **P 18 23 38.5 +0.2**
baz=235
M15K Kasigluk River 79.69 25 P **P 18 23 38.6 +0.2**
baz=238
TNA Tin City 79.88 19 P **P 18 23 38.6 -0.6**
baz=230,SNR=15
L15K Ungalak Mounta 79.90 24 P **P 18 23 39.2 -0.2**
baz=237
P16K Nushagak River 80.02 27 P **P 18 23 40.1 0.0**
baz=241
ANM Nome 80.11 20 P **P 18 23 39.1 -1.4**
ANM Nome 80.11 20 P **P 18 23 40.7 +0.2**
baz=233,SNR=15
ANM Nome 80.11 20 P **P 18 23 39.1 -1.4**
ANM pmax pmax
comp=Z,35nm,1.0s
K15K Wolf Creek Mou 80.22 23 P **P 18 23 41.5 +0.3**
K15K IAmb IAmb 18 23 47.6
comp=Z,72nm,1.0s
K15K Wolf Creek Mou 80.22 23 P **P 18 23 40.9 -0.3**
baz=237
DZA Taraz 80.22 315 *e*P **P 18 23 40.5 -1.2**
baz=315
DZA Taraz 80.22 315 *e*P **P 18 23 40.5 -1.2**
O16K Kokwok River B 80.25 26 P **P 18 23 41.2 -0.1**
O16K IAmb IAmb 18 23 47.0
comp=Z,100nm,0.8s
O16K Kokwok River B 80.25 26 P **P 18 23 41.3 -0.1**
baz=240
F14K Arctic Creek 80.34 19 P **P 18 23 41.5 -0.3**
baz=232
N16K Nishlik Lake 80.39 25 P **P 18 23 42.1 -0.1**
baz=240
M16K Timber Creek 80.59 25 P **P 18 23 43.4 +0.2**
M16K Timber Creek 80.59 25 P **P 18 23 42.6 -0.6**
baz=240
Q17K Contact Creek 80.62 28 P **P 18 23 42.5 -1.1**
baz=243,SNR=22
L16K Owhat River 80.73 24 IAmb IAmb 18 23 49.5
comp=Z,80nm,0.9s
L16K Owhat River 80.73 24 P **P 18 23 43.5 -0.4**
baz=239,SNR=20
O17K Koliganek Bris 80.78 27 P **P 18 23 44.2 0.0**
baz=241,SNR=55
P17K Kvichak River 80.80 27 P **P 18 23 43.9 -0.4**
baz=242
G15K Niukluk 80.82 20 P **P 18 23 43.8 -0.6**
baz=234
KKAR Karatay Array 80.86 315 P **P 18 23 44.2 -0.9**
KKAR Karatay Array 80.86 315 P **P 18 23 44.6 -0.5**
KKAR Karatay Array 80.86 315 P **P 18 23 44.6 -0.5**
R18K Karluk 80.99 29 P **P 18 23 44.8 -0.6**
baz=244
F15K North Star Dit 81.04 20 P **P 18 23 46.1 +0.6**
F15K IAmb IAmb 18 23 50.9
comp=Z,51nm,0.9s
F15K North Star Dit 81.04 20 P **P 18 23 44.7 -0.8**
baz=234,SNR=6.3
N17K Nushagak Hills 81.10 26 P **P 18 23 46.7 +0.8**
N17K IAmb IAmb 18 23 52.6
comp=Z,79nm,1.0s
N17K Nushagak Hills 81.10 26 P **P 18 23 46.2 +0.2**
baz=241
J16K Anvik River 81.11 23 P **P 18 23 46.4 +0.4**
J16K IAmb IAmb 18 23 52.2
comp=Z,59nm,0.8s
J16K Anvik River 81.11 23 P **P 18 23 46.5 +0.5**
baz=238
H16K Elim 81.25 21 P **P 18 23 46.6 0.0**
baz=236,SNR=14
I17K Unalakleet 81.40 22 IAmb IAmb 18 23 53.8
comp=Z,81nm,0.9s
I17K Unalakleet 81.40 22 P **P 18 23 48.0 +0.6**
baz=238,SNR=11
OHAK Old Harbor 81.41 30 P **P 18 23 47.6 0.0**
OHAK IAmb IAmb 18 23 53.0
comp=Z,44nm,0.7s
OHAK Old Harbor 81.41 30 P **P 18 23 49.3 +1.7**
OHAK Old Harbor 81.41 30 P **P 18 23 47.7 +0.1**
baz=245
M17K Holitna River 81.42 25 P **P 18 23 48.0 +0.3**
baz=241
L17K Donlin 81.42 24 P **P 18 23 48.0 +0.4**
baz=240
P18K Big Mountain, 81.44 27 P **P 18 23 47.4 -0.5**
P18K Big Mountain, 81.44 27 P **P 18 23 47.9 0.0**
baz=243
BRZS Berezniki 81.58 322 *e*P **P 18 23 47.5 -1.3**
baz=322
BRZS Berezniki 81.58 322 *e*P **P 18 23 47.4 -1.3**
G16K Koyuk River 81.64 20 P **P 18 23 48.9 +0.2**
G16K IAmb IAmb 18 23 54.9
comp=Z,59nm,0.9s
G16K Koyuk River 81.64 20 P **P 18 23 49.7 +1.0**
baz=236,SNR=13
O18K Koktuh Hills 81.66 27 P **P 18 23 48.4 -0.5**
O18K Koktuh Hills 81.66 27 P **P 18 23 48.2 -0.7**
baz=243
K17K Iditarod 81.72 24 P **P 18 23 49.4 +0.3**
K17K Iditarod 81.72 24 P **P 18 23 48.4 -0.8**
baz=240
N18K Kilae Creek 81.73 26 P **P 18 23 49.8 +0.5**
N18K IAmb IAmb 18 23 55.9
comp=Z,65nm,0.9s
N18K Kilae Creek 81.73 26 P **P 18 23 49.1 -0.3**
baz=242
Q19K Cape Douglas, 81.97 28 P **P 18 23 50.3 -0.3**
Q19K IAmb IAmb 18 23 58.7
comp=Z,87nm,0.8s
Q19K Cape Douglas, 81.97 28 P **P 18 23 50.3 -0.3**
baz=245
KDAK Kodiak Island 81.99 29 P **P 18 23 50.4 -0.3**
baz=246
KDAK Kodiak Island 81.99 29 P **P 18 23 50.8 +0.1**
comp=Z,104nm,1.1s,baz=251,slow=6.1,SNR=10
comp=Z,104nm,1.1s
SVW2 Sparrevohn 82.06 26 P **P 18 23 51.1 0.0**
L18K Granite Mounta 82.12 24 P **P 18 23 51.4 +0.1**
L18K IAmb IAmb 18 23 57.5
comp=Z,69nm,1.1s
L18K Granite Mounta 82.12 24 P **P 18 23 51.1 -0.2**
baz=242
M18K Stony River 82.14 25 P **P 18 23 51.2 -0.2**
baz=242
O19K Port Alsworth 82.21 27 IAmb IAmb 18 23 56.9
comp=Z,51nm,1.0s
O19K Port Alsworth 82.21 27 P **P 18 23 51.7 -0.1**
baz=244,SNR=7.7
H17K Granite Mounta 82.25 21 P **P 18 23 51.3 -0.6**
H17K IAmb IAmb 18 23 57.9
comp=Z,62nm,0.8s
H17K Granite Mounta 82.25 21 P **P 18 23 51.9 -0.1**
baz=238
G17K Kiwalik Mounta 82.29 21 P **P 18 23 52.1 -0.1**
baz=237
C16K Lisburne Hills 82.37 17 P **P 18 23 53.2 +0.7**
C16K IAmb IAmb 18 24 26.9
comp=Z,132nm,1.6s
C16K Lisburne Hills 82.37 17 P **P 18 23 52.5 0.0**
baz=233
N19K Bonanza Creek 82.41 26 P **P 18 23 52.9 -0.1**
N19K Bonanza Creek 82.41 26 P **P 18 23 52.8 -0.2**
baz=244,SNR=25
Q20K Shuyak Island 82.42 29 P **P 18 23 52.3 -0.6**
baz=246
P19K Oil Pt 82.47 28 P **P 18 23 52.9 -0.3**
P19K Oil Pt 82.47 28 P **P 18 23 53.3 +0.1**
baz=245,SNR=5.6
F17K Baldwin Pennin 82.60 20 P **P 18 23 54.5 +0.8**
F17K IAmb IAmb 18 23 59.8
comp=Z,58nm,0.8s
F17K Baldwin Pennin 82.60 20 P **P 18 23 53.2 -0.5**
baz=237
ILSW Iliamna Southw 82.65 27 P **P 18 23 52.5 -1.7**
ILSW IAmb IAmb 18 23 59.5
comp=Z,48nm,1.0s
D17K Noatak River 82.71 18 P **P 18 23 54.4 +0.1**
baz=235
J18K Innoko River 82.71 23 P **P 18 23 53.9 -0.5**
J18K IAmb IAmb 18 24 00.2
comp=Z,55nm,1.0s
J18K Innoko River 82.71 23 P **P 18 23 53.9 -0.5**
baz=241
TTA Tatalina 82.74 24 P **P 18 23 54.4 -0.2**
baz=242
E17K Hotham Inlet 82.76 19 P **P 18 23 55.2 +0.6**
baz=236,SNR=14
L19K White Mountain 82.87 25 P **P 18 23 55.3 +0.1**
L19K IAmb IAmb 18 24 01.6
comp=Z,64nm,1.1s
L19K White Mountain 82.87 25 P **P 18 23 55.2 -0.1**
baz=243
H18K Honhosa River 82.92 21 P **P 18 23 55.5 +0.1**
H18K Honhosa River 82.92 21 P **P 18 23 55.6 +0.1**
baz=249
O20K Slope Mountain 82.93 27 P **P 18 23 55.7 +0.1**
baz=245
M19K Big River Lodg 82.94 25 P **P 18 23 55.5 -0.1**
M19K Big River Lodg 82.94 25 P **P 18 23 55.8 +0.2**
baz=244
C17K DeLong Mountai 83.14 18 P **P 18 23 57.0 +0.5**
baz=235
G18K Tagagawik 83.20 21 P **P 18 23 57.0 +0.2**
G18K IAmb IAmb 18 24 02.7
comp=Z,68nm,0.9s
G18K Tagagawik 83.20 21 P **P 18 23 57.2 +0.3**
baz=239
HOM Homer 83.20 28 P **P 18 23 57.2 +0.2**
baz=246
F18K Selawik 83.22 20 P **P 18 23 56.9 0.0**
baz=238
GCSA Galena City Sc 83.27 22 P **P 18 23 57.3 +0.1**
baz=241,SNR=5.1
CNPM China Poot 83.34 28 P **P 18 23 57.5 -0.2**
E18K Tukpahlearik C 83.35 19 P **P 18 23 57.7 +0.1**
E18K IAmb IAmb 18 24 03.8
comp=Z,48nm,0.9s
E18K Tukpahlearik C 83.35 19 P **P 18 23 57.3 -0.3**
baz=237
J19K Poorman 83.39 23 P **P 18 23 57.7 -0.2**
baz=242
L20K Farewell, AK 83.41 25 P **P 18 23 57.6 -0.5**
baz=244
M20K Styx River 83.47 26 P **P 18 23 58.3 -0.1**
baz=245
N20K Mount Spurr 83.58 26 P **P 18 23 58.4 -0.7**
baz=246
BRLK Bradley Lake 83.60 28 P **P 18 23 58.6 -0.5**
BRSE Bradley Lake S 83.66 28 P **P 18 23 59.1 -0.3**
baz=247
NRIK Noril'sk 83.71 343 *i*P **P 18 23 56.8 -2.6**
NRIK pmax pmax
comp=Z,115nm,1.0s
NRIK Noril'sk 83.71 343 P **P 18 23 59.4 0.0**
comp=Z,42nm,1.0s,baz=118,slow=5.3,SNR=33
comp=Z,42nm,1.0s
K20K Telida 83.72 24 IAmb IAmb 18 24 05.9
comp=Z,46nm,0.9s
K20K Telida 83.72 24 P **P 18 23 59.9 +0.2**
baz=244
H19K Roundabout Mou 83.81 22 P **P 18 24 00.8 +0.8**
H19K Roundabout Mou 83.81 22 P **P 18 24 00.1 +0.1**
baz=241
C18K Utukok River 83.83 18 P **P 18 23 59.5 -0.7**
C18K Utukok River 83.83 18 P **P 18 23 59.9 -0.3**
baz=237
CAPN Captain Cook N 83.87 27 P **P 18 24 00.3 -0.1**
baz=247
G19K Purcell Mounta 83.88 21 P **P 18 23 59.7 -0.6**
baz=241
BVAR Borovoye Array 83.91 325 P **P 18 24 00.4 -0.4**
comp=Z,40nm,0.8s,baz=116,slow=5.0,SNR=25
comp=Z,40nm,0.8s
BRVK Borovoye 83.98 325 P **P 18 24 01.7 +0.5**
BRVK Borovoye 83.98 325 *i*P **P 18 24 00.2 -0.9**
BRVK pmax pmax
comp=Z,96nm,0.9s
F19K Shaleruckik Mo 83.98 20 P **P 18 24 00.3 -0.6**
baz=240
J20K Nowinta River 84.05 23 P **P 18 24 01.8 +0.5**
J20K IAmb IAmb 18 24 06.8
comp=Z,51nm,0.9s
J20K Nowinta River 84.05 23 P **P 18 24 00.8 -0.5**
baz=244
QSPA South Pole Qui 84.14 180 P **P 18 24 02.0 +0.1**
QSPA South Pole Qui 84.14 180 P **P 18 24 01.5 -0.4**
comp=Z,67nm,1.1s,baz=339,slow=2.7,SNR=8.7
comp=Z,67nm,1.1s
SKT Skwentna 84.19 26 P **P 18 24 02.2 +0.1**
SKT IAmb IAmb 18 24 03.7
comp=Z,60nm,1.3s
SKT Skwentna 84.19 26 P **P 18 24 01.8 -0.3**
baz=246
I20K Naaghedeneel 84.20 23 P **P 18 24 02.0 0.0**
baz=243
PPLA Purkeypile 84.29 25 P **P 18 24 01.7 -1.0**
baz=246
SUA Susitna One 84.33 26 P **P 18 24 02.8 -0.1**
SUA IAmb IAmb 18 24 07.4
comp=Z,54nm,0.9s
SUA Susitna One 84.33 26 P **P 18 24 01.9 -1.0**
baz=247
H20K Anotleneega Mo 84.37 22 P **P 18 24 02.1 -0.8**
baz=243
SEW Seward 84.40 28 P **P 18 24 02.9 -0.1**
baz=248,SNR=5.3
O22K Cooper Landing 84.41 27 P **P 18 24 03.0 -0.1**
baz=248,SNR=8.2
FIS Fire Island 84.44 27 P **P 18 24 03.1 -0.1**
CAST Castle Rocks 84.55 24 P **P 18 24 03.8 -0.1**
CAST IAmb IAmb 18 24 09.1
comp=Z,38nm,0.8s
CAST Castle Rocks 84.55 24 P **P 18 24 03.3 -0.6**
baz=246
C19K Lookout Ridge 84.57 18 P **P 18 24 03.7 -0.2**
baz=238
RC01 Rabbit Creek A 84.64 27 P **P 18 24 03.4 -0.9**
RC01 Rabbit Creek A 84.64 27 P **P 18 24 03.9 -0.4**
baz=248,SNR=6.4
CHUM Lake Minchumin 84.65 24 P **P 18 24 04.6 +0.3**
baz=245,SNR=9.0
D19K Kuna River 84.71 19 P **P 18 24 04.5 -0.1**
baz=240
M22K Willow 84.72 26 P **P 18 24 04.7 0.0**
baz=248,SNR=6.9
F20K Avaraart Lake 84.79 20 P **P 18 24 04.6 -0.3**
F20K IAmb IAmb 18 24 10.9
comp=Z,40nm,0.8s
F20K Avaraart Lake 84.79 20 P **P 18 24 04.9 0.0**
baz=242
KTH Kantishna Hill 85.08 24 P **P 18 24 05.3 -1.3**
KTH IAmb IAmb 18 24 11.4
comp=Z,51nm,1.0s
PMR Palmer 85.10 27 P **P 18 24 06.3 -0.2**
baz=248,SNR=5.8
E20K Nigu River 85.22 19 P **P 18 24 07.2 +0.1**
baz=241
H21K Melozitna Rive 85.22 22 P **P 18 24 06.6 -0.6**
baz=245
BPAW Bear Paw Mtn. 85.28 24 P **P 18 24 06.8 -0.7**
baz=246
D20K Etivluk River 85.30 19 P **P 18 24 07.0 -0.6**
baz=241
TRF Thorofare Moun 85.31 25 P **P 18 24 07.5 -0.4**
baz=247
P23K Montague Islan 85.32 28 P **P 18 24 07.1 -0.6**
baz=250
I21K Tanana 85.33 23 P **P 18 24 07.7 0.0**
baz=246
KNK Knik Glacier 85.33 27 P **P 18 24 08.5 +0.7**
baz=249,SNR=6.2
SML Sawmill 85.53 26 P **P 18 24 08.6 -0.2**
SML Sawmill 85.53 26 P **P 18 24 08.6 -0.2**
baz=249,SNR=6.0
Q23K Middleton Isla 85.63 29 P **P 18 24 09.6 +0.3**
baz=251
F21K Alatna River 85.65 21 P **P 18 24 09.1 -0.2**
baz=244
MLY Manley 85.75 23 P **P 18 24 09.9 0.0**
MLY IAmb IAmb 18 24 15.5
comp=Z,60nm,0.8s
MLY Manley 85.75 23 P **P 18 24 09.7 -0.1**
baz=247,SNR=6.1
GLI Glacier Island 85.76 28 P **P 18 24 09.5 -0.5**
GLI Glacier Island 85.76 28 P **P 18 24 10.2 +0.2**
baz=250
M23K Glacier View 85.79 27 P **P 18 24 10.7 +0.6**
baz=250
WAT1 Susitna Watana 85.80 25 P **P 18 24 10.3 +0.1**
baz=249
H22K Ishtalitna Cre 85.85 22 P **P 18 24 10.4 +0.1**
baz=246
RND Reindeer 85.89 25 P **P 18 24 09.8 -0.8**
RND Reindeer 85.89 25 P **P 18 24 09.8 -0.8**
RND pmax pmax
comp=Z,109nm,0.8s
MCK McKinley 85.97 25 P **P 18 24 10.8 -0.2**
baz=248,SNR=5.0
SCM Sheep Creek Mo 85.98 27 P **P 18 24 10.7 -0.4**
baz=250
E21K Killik River 86.03 19 P **P 18 24 11.0 -0.1**
baz=243
WAT6 Susitna Watana 86.06 26 P **P 18 24 11.3 -0.3**
baz=250
C21K Knifeblade Rid 86.09 19 P **P 18 24 11.4 0.0**
baz=243
G22K Bettles 86.22 21 P **P 18 24 12.3 +0.2**
baz=246
NEA2 Nenana 86.24 24 P **P 18 24 12.7 +0.5**
baz=248,SNR=6.4
EYAK Cordova Ski Ar 86.28 28 P **P 18 24 13.0 +0.5**
baz=251
I23K Minto, Yukon-K 86.33 23 P **P 18 24 13.1 +0.4**
baz=248
DHY Denali Highway 86.39 25 P **P 18 24 13.2 -0.1**
baz=250,SNR=7.3
KLU Klutina 86.50 27 P **P 18 24 13.8 +0.1**
baz=251
A21K Barrow 86.58 16 P **P 18 24 14.1 +0.4**

baz=241
M24K Tolsona, Glenn 86.59 27 P P 18 24 13.9 -0.2
baz=251
E22K Anaktuvuk Pass 86.62 20 P P 18 24 14.9 +0.8
baz=246
D22K Ayikyak River 86.65 19 P P 18 24 14.0 -0.2
baz=245
G23K Bananza Creek 86.68 22 P P 18 24 15.2 +0.8
baz=247
KAIM Kayak Island 86.72 29 P P 18 24 15.1 +0.4
baz=253
COLD Coldfoot 86.82 21 P P 18 24 15.5 +0.5
baz=247
COLA College 86.83 24 P P 18 24 15.5 +0.4
baz=249
BMRM Bremner River 86.94 28 P P 18 24 15.6 -0.2
baz=252
HDA Harding Lake 87.03 24 P P 18 24 16.1 0.0
baz=250
POKR Poker Plat Res 87.08 23 P P 18 24 16.1 -0.2
baz=250
HARP HAARP 87.14 26 P P 18 24 16.1 -0.6
baz=252
N25K Chitina, Valde 87.14 27 P P 18 24 16.3 -0.5
baz=252
H24K Nodoor Dome 87.16 23 P P 18 24 16.3 -0.5
baz=249
PAX Paxson 87.18 26 P P 18 24 16.5 -0.5
baz=252
ILAR Eielson Array 87.18 24 P P 18 24 14.3 -2.5
comp=Z,15nm,0.8s,baz=262,slow=0.7,SNR=4.9
comp=Z,15nm,0.8s
K24K Donnelly Dome 87.31 25 P P 18 24 17.0 -0.5
baz=251
D23K Nanushuk River 87.34 19 P P 18 24 17.9 +0.4
baz=246
E23K Chandalar 87.35 20 P P 18 24 17.5 -0.2
baz=248
GLB Gilahina Butte 87.45 28 IAmb IAmb 18 24 23.8
comp=Z,36nm,0.9s
CRQM Cirque 87.57 28 P P 18 24 18.6 -0.4
CRQE Cirque 87.59 28 P P 18 24 19.2 +0.1
baz=254,SNR=5.5
G24K Hadweenzic Riv 87.62 22 P P 18 24 18.6 -0.3
baz=250
J25K Salcha River, 87.74 24 P P 18 24 19.2 -0.5
baz=252
F24K Squaw Lake 87.76 21 P P 18 24 19.7 +0.1
baz=249
MCARA McCarthy VSAT 87.80 28 P P 18 24 19.6 -0.3
baz=254
PRP Porcupine Dome 87.97 23 P P 18 24 20.1 -0.7
baz=251
MESA MESA 87.98 29 P P 18 24 21.1 +0.1
baz=255
D24K Happy Valley 88.03 20 P P 18 24 20.9 0.0
baz=248
M26K Nabesna, AK 88.10 27 P P 18 24 21.1 -0.3
baz=254
L26K Log Cabin Wild 88.12 26 IAmb IAmb 18 24 27.2
comp=Z,30nm,0.9s
L26K Log Cabin Wild 88.12 26 P P 18 24 20.3 -1.1
baz=253
SCRK Sand Creek 88.12 25 P P 18 24 20.4 -1.1
baz=253
G25K Bearman Lake 88.15 22 P P 18 24 20.8 -0.7
baz=251
C24K Franklin Bluff 88.28 19 P P 18 24 21.6 -0.4
baz=248
J26L Joseph Creek 88.45 25 P P 18 24 22.6 -0.4
baz=253
CTG Chitna Glacier 88.47 28 P P 18 24 23.2 -0.1
baz=255,SNR=6.4
M27K Edge Creek, AK 88.59 27 P P 18 24 23.5 -0.3
baz=255
F25K Christian Rive 88.59 21 P P 18 24 23.2 -0.4
baz=251
PINM Pinnacle 88.78 29 P P 18 24 24.0 -0.7
baz=256
E25K Arctic Village 88.79 21 P P 18 24 24.5 +0.1
baz=251
L27K Beaver Creek, 88.80 26 P P 18 24 24.6 0.0
baz=255
I26K Coal Creek Min 88.85 24 P P 18 24 24.5 -0.3
baz=254
D25K Kavik River 88.91 20 P P 18 24 24.4 -0.6
baz=250
K27K Chicken 88.94 25 P P 18 24 24.8 -0.4
baz=255
BVCY Beaver Creek 89.06 27 P P 18 24 25.6 -0.3
baz=256
G26K Porcupine Rive 89.08 22 P P 18 24 25.9 +0.1
baz=253
YUK3 Moose Creek 89.08 28 P P 18 24 25.7 -0.5
baz=256
PNL Peninsula 89.10 30 P P 18 24 25.4 -0.7
baz=257
F26K Sheenjek River 89.17 21 P P 18 24 26.4 +0.1
baz=253
YUK8 Steele Glacier 89.29 28 P P 18 24 26.9 -0.4
baz=257
EGAK Eagle 89.52 25 P P 18 24 27.7 -0.2
baz=255
I27K Kandik River 89.55 24 P P 18 24 28.0 -0.2
baz=255
C26K Camden Bay 89.59 19 P P 18 24 28.1 0.0
baz=252
O29M Mount Kennedy 89.64 29 P P 18 24 28.1 -0.7
baz=258
H27K Steamboat Moun 89.75 23 P P 18 24 28.4 -0.6
baz=255
YUK4 Talbot Arm 89.83 28 P P 18 24 29.0 -0.7
baz=258
YUK6 Outpost Mounta 89.88 29 P P 18 24 28.7 -1.3
baz=258
P29M Windy Craggy 89.92 30 P P 18 24 29.0 -0.9
baz=258
DAWY Dawson 90.10 26 IAmb IAmb 18 24 36.9
comp=Z,37nm,1.0s
DAWY Dawson 90.10 26 P P 18 24 30.1 -0.7
baz=257
M29M Somme Creek 90.15 27 P P 18 24 30.9 -0.2
baz=258
I28M Miner Creek 90.19 24 P P 18 24 30.6 -0.6
baz=256
HYT Haines Junctio 90.27 29 P P 18 24 31.7 0.0
HYT IAmb IAmb 18 24 44.7
comp=Z,44nm,1.1s
HYT Haines Junctio 90.27 29 P P 18 24 30.8 -0.9
baz=259
SVE Sverdlovsk 90.29 327 eP P 18 24 34.2 +2.5
S31K Pelican 90.37 32 P P 18 24 31.3 -0.6
baz=260
P30M Million Dollar 90.40 30 P P 18 24 31.8 -0.4
baz=259
L29M L29M 90.44 27 P P 18 24 32.6 +0.3
L29M IAmb IAmb 18 24 38.7
comp=Z,43nm,0.9s
L29M L29M 90.44 27 P P 18 24 32.3 0.0
baz=258
PLBC Pleasant Camp 90.57 30 P P 18 24 31.7 -1.2
baz=260
N30M Aishikik Lake 90.59 28 P P 18 24 32.1 -1.0
baz=259
J29N Klondike Camp 90.68 25 P P 18 24 32.8 -0.7
baz=258
SIT Sitka 90.69 33 P P 18 24 33.4 -0.1
baz=260
F28M Old Crow 90.72 22 P P 18 24 33.6 +0.1
baz=257
K29M Barlow Dome 90.86 26 P P 18 24 34.4 0.0
K29M IAmb IAmb 18 24 40.1
comp=Z,27nm,0.8s
K29M Barlow Dome 90.86 26 P P 18 24 34.2 -0.2
baz=259
M30M Minto, Yukon 90.94 27 P P 18 24 34.3 -0.4
baz=259
O30N Mendenhall 90.94 29 P P 18 24 34.7 0.0
baz=260
H29M Whitestone 90.99 23 P P 18 24 34.4 -0.4
baz=258
SKAG Skagway 91.09 30 P P 18 24 34.8 -0.5
baz=260
S32K Killisnoo 91.16 32 P P 18 24 35.1 -0.5
baz=261
R32K Eaglecrest 91.32 32 P P 18 24 35.8 -0.6
baz=261
ARU Arti 91.36 326 P P 18 24 36.4 -0.3
ARU 18 28 14.6
ARU S SKSac 18 35 05.4 -3.2
WHY Whitehorse 91.51 29 P P 18 24 36.8 -0.6
baz=261
J30M Hart River 91.51 25 P P 18 24 37.5 +0.1
J30M IAmb IAmb 18 24 52.6
comp=Z,31nm,1.1s
J30M Hart River 91.51 25 P P 18 24 36.9 -0.5
baz=260
D28M Stokes Point 91.52 20 P P 18 24 36.5 -0.6
baz=258
MAYO Mayo, Yukon 91.52 26 P P 18 24 37.1 -0.2
baz=260
I30M Mount Dempster 91.60 25 P P 18 24 37.4 -0.4
I30M IAmb IAmb 18 24 43.5
comp=Z,27nm,1.1s
I30M Mount Dempster 91.60 25 P P 18 24 37.8 0.0
baz=260
E29M Blow River 91.62 21 P P 18 24 37.2 -0.5
baz=258
EPYK Eagle Plains 91.67 23 P P 18 24 37.8 -0.1
baz=259
U33K Whale Pass 91.76 34 P P 18 24 38.3 -0.2
baz=262
P32M Atlin 91.92 30 P P 18 24 38.7 -0.6
baz=262
M31M Drury Creek, Y 91.98 28 P P 18 24 38.7 -0.7
baz=261
G30M tAoh Zraii Nji 91.98 23 P P 18 24 39.0 -0.4
baz=260
WRAK Wrangell Islan 92.22 34 P P 18 24 39.5 -1.1
baz=263
F30M Barrier River 92.25 22 P P 18 24 40.0 -0.6
baz=260
N32M Quiet Lake 92.45 29 P P 18 24 40.5 -1.2
baz=262
P33M Teslin, Yukon 92.45 30 P P 18 24 40.6 -1.2
baz=263
FARO Faro, Yukon 92.47 28 P P 18 24 41.1 -0.6
baz=262
V35K Ketchikan 92.50 35 P P 18 24 40.8 -1.1
baz=264
Q32M Nakina River 92.58 31 P P 18 24 41.7 -0.8
baz=263
G31M Satah River 92.73 23 P P 18 24 42.1 -0.7
baz=262
F31M Tsiigehtchic 93.01 23 P P 18 24 43.4 -0.6
baz=262
S34M Telegraph Cree 93.05 32 P P 18 24 43.8 -0.7
baz=264
ELIB Princess Elisa 93.12 196 dP P 18 24 46.0 +1.2
comp=Z,13nm,1.1s
INK Inuvik 93.20 22 P P 18 24 45.2 +0.3
baz=262
R33M Jennings River 93.29 31 P P 18 24 45.3 -0.4
baz=264
T35M Bob Quinn 93.44 33 P P 18 24 45.8 -0.5
baz=265
MMPY Sheldon Lake, 93.47 28 P P 18 24 45.5 -0.9
baz=264
DLBC Dease Lake 93.69 32 P P 18 24 47.4 -0.1
baz=265
TGTN Hyland Airport 94.79 29 P P 18 24 52.7 +0.2
baz=267
TOAD Toad River Com 96.21 31 P P 18 24 58.8 -0.2
baz=269
A36M Sachs Harbour 96.25 18 P P 18 24 58.9 +0.1
baz=271
KIRV Kirov 96.44 328 i P P 18 24 57.6 -2.3
KIRV Kirov 96.44 328 P P 18 25 01.6 +1.7
comp=Z,9.1nm,0.8s,baz=63,slow=6.8,SNR=2.6
comp=Z,9.1nm,0.8s
C36M Paulatuk 96.69 21 P P 18 25 00.5 -0.3
baz=271
KOTAN Kotaneelee Air 96.82 30 P P 18 25 01.1 -0.6
baz=270
BELG Belogornoye 97.44 322 i P P 18 25 02.1 -2.5
BELG pmax pmax
comp=Z,10.0nm,0.9s
BELG Belogornoye 97.44 322 P P 18 25 03.1 -1.5
comp=Z,51nm,0.9s,baz=165,slow=1.4,SNR=5.6
comp=Z,51nm,0.9s
PKM Mcpherson Peak 99.75 56 P Pdif 18 25 14.5 -1.2
baz=270
SCZ2 Santa Cruz Isl 99.89 57 P Pdif 18 25 14.6 -1.5
baz=270
VES Vestal, Richgr 100.34 55 P Pdif 18 25 17.7 -0.4
baz=270
NVAR Mina Array Bea 100.93 52 P Pdif 18 25 21.7 +0.8
comp=Z,0.6nm,0.6s,baz=241,slow=7.5,SNR=2.0
NVAR PP PP 18 29 25.1 -3.9
comp=Z,1.4nm,0.9s,baz=259,slow=7.7,SNR=4.3
KIV Kislovodsk 100.95 314 eP Pdif 18 25 21.5 +0.8
KIV pmax pmax
comp=Z,6.0nm,1.0s
YKA Yellowknife Ar 101.17 27 P Pdif 18 25 19.7 -1.3
comp=Z,1.9nm,1.1s,baz=2.5,slow=0.3,SNR=3.7
YKA PP PP 18 29 23.6 -6.1
comp=Z,1.0nm,0.9s,baz=271,slow=7.6,SNR=4.1
LABN Labinsk 102.32 314 eP Pdif 18 25 24.1 -2.5
APA Apatity 102.52 338 iP Pdif 18 25 21.8 -5.2
APA pmax pmax
comp=Z,11nm,1.2s
APA MLR MLR
comp=Z,34µm,20.0s
ARCES ARCESS Array B 104.61 341 Pdiff Pdif 18 25 37.5 +1.3
comp=Z,7.2nm,0.9s,baz=52,slow=7.9,SNR=5.6
ANN Anapa 104.64 315 i P Pdif 18 25 32.2 -4.7
PDAR Pinedale Array 107.22 47 Pdiff Pdif 18 25 53.6 +4.8
comp=Z,0.6nm,0.8s,baz=202,slow=1.6,SNR=2.1
PDAR PKiKP PKiKP 18 29 59.8 +1.9
comp=Z,1.2nm,0.9s,baz=90,slow=1.5,SNR=4.0
FINES FINESS Array B 107.44 333 Pdiff Pdif 18 25 48.9 -0.1
comp=Z,0.7nm,0.7s,baz=67,slow=11,SNR=2.3
MNK Minsk 108.78 326 i P Pdif 18 25 52.4 -2.7
MNK i 18 30 22.8
MNK i PPP PPP 18 32 40.0
MNK i 18 37 07.9
MNK i SS SS 18 45 37.2 -6.3
MNK i SSS SSS 18 49 41.2
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=E,7.0nm,1.1s
MNK pmax pmax
comp=N,12nm,1.0s
MNK MLR MLR
comp=E,7µm,18.0s
MNK MLR MLR
comp=Z,19µm,20.0s
MNK MLR MLR
comp=N,12µm,18.0s
MNTX Cornudas Mount 111.99 58 P PKiKP 18 30 06.3 -0.6
baz=272
TXAR Lajitas Array 113.74 61 PKiKP PKiKP 18 30 10.0 -0.4
comp=N,0.3nm,0.7s,baz=225,slow=0.9,SNR=2.2
TXAR PKKPab PKKPab 18 41 01.2 +1.1
comp=N,1.1nm,0.8s,baz=120,slow=5.5,SNR=7.3
KOLS Kolonicke sedl 113.85 321 ePKIKP PKiKP 18 30 15.4 +5.5
KOLS Kolonicke sedl 113.85 321 ePKP PKiKP 18 30 15.4 +5.5
ULM Lac du Bonnet 114.45 37 PKiKP PKPdf 18 30 12.2 +1.2
comp=N,1.3nm,0.6s,baz=235,slow=18,SNR=2.4
LANS Liptovska Anna 115.49 322 ePKIKP PKPdf 18 30 19.5 +6.4
LANS Liptovska Anna 115.49 322 ePKP PKPdf 18 30 19.5 +6.4
VYHS Vyhne 116.13 322 ePKIKP PKPdf 18 30 17.2 +2.9
VYHS Vyhne 116.13 322 ePKP PKPdf 18 30 17.2 +2.9
MORC Moravsky Berou 116.40 324 ePKP PKiKP 18 30 19.6 +4.8
JAVC Velka Javorina 116.69 323 ePKP PKiKP 18 30 21.4 +6.0
WMOK Wichita Mounta 116.94 54 P PKPdf 18 30 15.5 -0.8
baz=282
MODS Modra-Piesok 117.13 322 ePKIKP PKPdf 18 30 15.5 -0.7
MODS Modra-Piesok 117.13 322 ePKP PKPdf 18 30 15.5 -0.7
VRAC Vranov 117.16 323 ePKP PKiKP 18 30 20.8 +4.5
KRUC Moravsky 117.38 323 ePKP PKiKP 18 30 21.2 +4.5
KSU1 Kansas State U 117.57 49 P PKPdf 18 30 16.5 -0.8
baz=286
BRG Berggiesshubel 117.99 326 ePKP PKiKP 18 30 23.0 +5.2
BRG Amp 18 30 24.8
comp=Z,7.9nm,1.0s
BRG Amp 18 56 40.0
comp=N,136nm,20.4s
BRG Amp 18 56 42.0
comp=Z,255nm,21.0s
BRG Amp 18 56 50.0
comp=E,109nm,23.2s
BRG Berggiesshubel 117.99 326 ePKIKP PKiKP 18 30 23.0 +5.2
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG MLR MLR
comp=N,136µm,20.4s
BRG MLR MLR
comp=Z,255µm,21.0s
BRG MLR MLR
comp=E,109µm,23.2s
RONA Rosalia, Austr 118.01 322 ePKiKP PKiKP 18 30 22.8 +4.8
comp=E,2.5nm,0.6s
CONA Conrad Observa 118.18 322 ePKiKP PKiKP 18 30 22.0 +3.7
comp=E,2.8nm,0.7s
SPMN Marine on St. 118.25 41 P PKPdf 18 30 18.2 -0.2
baz=292
CLL Collm 118.30 327 ePKIKP PKPdf 18 30 18.0 -0.3
CLL e 18 30 22.0
CLL Collm 118.30 327 ePKiKP PKPdf 18 30 18.0 -0.3
CLL epPKiKP pPKPdf 18 30 22.0 -1.2
comp=Z,10.0nm,1.0s
CLL ePP PP 18 31 37.0 +3.1
ARSA Arzberg 118.67 322 i PKiKP PKiKP 18 30 23.5 +4.3
comp=Z,0.4nm,0.2s
TUL3 Leonard 119.05 52 P PKPdf 18 30 20.1 -0.2
baz=285
GERES GERESS Array B 119.07 324 PKP PKPdf 18 30 19.5 -0.6
comp=Z,1.1nm,0.5s,baz=20,slow=3.2,SNR=3.0
SCIA State Center 119.17 45 P PKPdf 18 30 20.2 -0.1
baz=290
MOA Molln 119.18 323 i PKiKP PKiKP 18 30 24.2 +4.0
comp=Z,3.0nm,0.8s
SOKA Soboth 119.22 321 ePKiKP PKiKP 18 30 24.9 +4.5
comp=Z,2.7nm,0.6s
BIOA Bad Ischl, Aus 119.63 323 ePKiKP PKiKP 18 30 24.4 +3.3
comp=Z,1.5nm,0.5s
MYKA Terra Mystica 120.10 322 ePKiKP PKiKP 18 30 25.3 +3.2
comp=Z,4.2nm,0.8s
LESA Schwarzleotal 120.33 323 ePKiKP PKiKP 18 30 26.7 +4.1
comp=Z,5.2nm,0.7s
JFWS Jewell Farm 120.84 43 P PKPdf 18 30 23.8 +0.2
baz=293
WTTA Wattenberg 121.03 323 ePKiKP PKiKP 18 30 27.1 +3.0
comp=Z,5.6nm,0.5s
MIAR Mount Ida 121.16 53 P PKPdf 18 30 24.0 -0.4
baz=286
SQTA Sankt Quirin 121.31 323 ePKiKP PKiKP 18 30 28.2 +3.6
comp=Z,5.2nm,0.6s
MOTA Moosalm 121.31 323 ePKiKP PKiKP 18 30 28.0 +3.4
comp=Z,9.9nm,0.8s
FETA Feichten 121.69 323 ePKiKP PKiKP 18 30 30.0 +4.6
comp=Z,2.4nm,0.6s
CCM Cathedral Cave 121.89 48 P PKPdf 18 30 25.2 -0.4
baz=290
DAVA Damuels 122.06 324 ePKiKP PKiKP 18 30 29.5 +3.4
comp=Z,1.1nm,0.7s
DAVOX Davos/Dischmat 122.32 323 PKP PKPdf 18 30 26.5 0.0
comp=Z,3.2nm,0.6s,baz=90,slow=7.1,SNR=4.4
HDIL Hopedale 122.41 45 P PKPdf 18 30 26.7 +0.1
baz=293
MEM Membach 122.42 329 dPKP PKPdf 18 30 26.9 +0.6
BCLA Clavier 122.89 329 dPKP PKiKP 18 30 32.1 +4.7
BGES Gesves 123.02 329 dPKP PKPdf 18 30 24.7 -2.8
BMRD Maredsous 123.24 329 dPKP PKiKP 18 30 32.0 +3.9
EKA Eskdalemuir Ar 123.44 337 PKP PKPdf 18 30 27.2 -0.9
comp=Z,0.4nm,0.5s,baz=22,slow=2.3,SNR=2.0
DOU Dourbes 123.45 329 dPKP PKPdf 18 30 26.8 -1.5
GLMI Grayling 123.66 39 P PKPdf 18 30 29.0 +0.1
baz=299
SFIN Lafayette 124.02 44 P PKPdf 18 30 29.4 -0.2
baz=294
VBMS Vicksburg 124.26 55 P PKPdf 18 30 29.8 -0.6
baz=286
OXF Oxford 124.45 52 P PKPdf 18 30 30.3 -0.4
baz=289
PLCA Paso Flores 124.72 150 PKP PKPdf 18 30 32.1 +1.0
comp=Z,12nm,1.1s,baz=256,slow=1.6,SNR=10
WVT Waverly 125.12 49 P PKPdf 18 30 31.2 -0.8
baz=291
O48B Farmland 125.42 44 P PKPdf 18 30 31.3 -1.1
baz=296
WCI Wyandotte Cave 125.46 47 P PKPdf 18 30 31.4 -1.1
baz=294
AAM Ann Arbor 125.49 41 P PKPdf 18 30 31.4 -1.0
baz=299
SCHQ Schefferville 125.80 20 PKP PKiKP 18 30 34.5 +1.5
comp=Z,4.2nm,0.8s,baz=41,slow=5.6,SNR=5.1
P49A Miami Univ. Ec 126.03 44 P PKPdf 18 30 32.9 -0.7
baz=296
ACSO Alum Creek Sta 126.91 43 P PKPdf 18 30 34.8 -0.4
baz=298
P52A Corning 127.77 43 P PKPdf 18 30 36.6 -0.3
baz=298
M53A WI Miller and 127.85 40 P PKPdf 18 30 36.5 -0.5
baz=301
O53A New Philadelph 128.09 42 P PKPdf 18 30 36.6 -0.9
baz=300
TZTN Tazewell 128.14 47 P PKPdf 18 30 36.9 -0.9
baz=295
MCWV Mont Chateau 129.30 42 P PKPdf 18 30 39.0 -0.8
baz=300
GOGA Godfrey 129.46 51 P PKPdf 18 30 39.2 -1.1
baz=293
SSPA Standing Stone 130.06 40 P PKPdf 18 30 40.4 -0.8
baz=303
TIGA Tifton 130.09 53 P PKPdf 18 30 40.4 -1.2
baz=291
BLA Blacksburg 130.09 45 P PKPdf 18 30 40.4 -1.0
baz=298
BINY Binghamton 130.36 37 P PKPdf 18 30 41.0 -0.8
baz=306
CBN Corbin Frederi 131.70 42 P PKPdf 18 30 44.0 -0.4
baz=302
PKME Peaks-Kenny Pk 132.04 30 P PKPdf 18 30 44.0 -0.9
baz=316
NHSC New Hope 132.10 50 P PKPdf 18 30 43.3 -2.0
baz=295
L61B Northampton 132.14 35 P PKPdf 18 30 44.4 -0.7
baz=310
PAL Palisades 132.32 37 P PKPdf 18 30 43.5 -2.0
baz=308
DWPF Disney Wildern 133.00 57 P PKPdf 18 30 45.6 -1.5
baz=290
M65A Busby, Falmout 133.87 35 P PKPdf 18 30 47.0 -1.3
baz=312
ESDC Sonseca Array 134.65 323 PKP PKPdf 18 30 49.0 -1.0
comp=Z,0.2nm,0.4s,baz=355,slow=2.1,SNR=2.4
ESDC PP PP 18 33 22.1 -0.5
comp=Z,2.0nm,1.0s,baz=45,slow=6.2,SNR=5.0
MVO Moncorvo 135.42 327 ePKPdf PKiKP 18 30 59.0 +6.0
POLO Lamas de Olo 135.69 328 ePKPdf PKiKP 18 30 54.3 +0.8
PVRL Vila Real 135.72 327 ePKPdf PKiKP 18 30 58.5 +5.0
MTE Manteigas 136.23 326 ePKPdf PKiKP 18 31 00.6 +6.0
PCBR Castelo Branco 136.58 326 ePKPdf PKiKP 18 30 59.4 +4.2
PMTG Montargil 137.53 325 ePKPdf PKiKP 18 31 01.2 +4.0
PSBE So Bento 137.54 326 ePKPdf PKiKP 18 30 59.1 +1.8
PCVE Castro Verde 138.40 324 ePKPdf PKiKP 18 31 03.6 +4.6
PBDV Barranco-do-Ve 138.60 323 ePKPdf PKiKP 18 31 04.6 +5.1
MORF Marmelete 138.98 324 ePKPdf PKiKP 18 31 06.4 +6.1
TORD Torodi Ar. Bea 140.53 284 PKhKP PKPpre 18 30 56.5
comp=Z,1.9nm,0.4s,baz=63,slow=4.7,SNR=1.7
TORD PKP PKPdf 18 31 02.4 +1.0
comp=Z,2.0nm,0.3s,baz=74,slow=3.7,SNR=2.6
YOTC Yotoco, Valle 141.44 91 eP PKPdf 18 31 01.5 -1.8
CBOC Ciudad Bolivar 141.87 88 eP PKPdf 18 31 04.4 +0.3
GUY2C Guyana, Caldas 142.49 89 eP PKPdf 18 31 00.5 -5.1
ORTC Ortega, Tolima 142.53 91 eP PKPdf 18 31 00.4 -4.7
CPUP Villa Florida 142.79 150 PKP PKPdf 18 31 03.3 -1.9
comp=Z,18nm,1.1s,baz=210,slow=4.2,SNR=7.4
CPUP PKPab 18 39 02.8
comp=Z,0.7nm,0.3s,baz=152,slow=4.7,SNR=3.1
NORC Norcasia 143.00 88 eP 18 31 02.5
PTBC PUERTO BERRIO 143.44 87 eP PKPab 18 31 01.1 -1.7
ROSC El Rosal 143.51 90 PKP PKPbc 18 31 06.8 +2.3
comp=Z,27nm,0.7s,baz=305,slow=15,SNR=8.5
CVER Cruz Verde, Cu 143.74 90 eP PKPab 18 31 02.6 -2.0
SPBC San Pablo de B 143.79 88 eP PKPab 18 31 03.8 -0.5
OCAC Ocana 144.56 84 eP PKPab 18 31 06.7 -0.5
BARC Barichara 144.70 87 eP PKPab 18 31 06.8 -1.1
RUSC La Rusia 144.78 88 eP PKPab 18 31 07.4 -1.1
PAMC Pamplona, Colo 145.18 86 eP PKPbc 18 31 07.4 -2.5
TAMC Tame, Arauca 146.08 87 eP PKPdf 18 31 11.4 +0.1
PMAR Madeira 146.97 327 ePKPdf PKiKP 18 31 20.5 +3.5
SDV Santo Domingo 147.18 83 PKPdf PKPbc 18 31 16.0 +0.5
KIC Kosan Boka 147.25 273 ePKIKP PKPbc 18 31 15.8 +0.3
comp=Z,51nm,0.9s
DBIC Dimbokro 147.36 273 PKPdf PKPbc 18 31 16.5 +0.7
DBIC pPKPdf 18 31 16.7 -1.5
DBIC Dimbokro 147.36 273 PKPbc PKPbc 18 31 16.2 +0.4

comp=Z,36nm,1.0s,baz=96,slow=4.4,SNR=12
DBIC SKP 18 34 49.0
comp=Z,6.3nm,0.8s,baz=79,slow=4.8,SNR=3.2
DBIC SKPbc **SKPbc 18 34 54.0 0.0**
comp=Z,7.7nm,1.0s,baz=62,slow=4.3,SNR=3.2
TIC Toumodi 147.53 273 ll *e*PKIKP **PKPbc 18 31 16.5 +0.2**
comp=Z,17nm,0.8s
LIC Lamto 147.53 272 ll *e*P **PKPdf 18 31 15.8 +2.1**
comp=Z,95nm,0.9s
SAML Samuel 150.65 120 PKPab **PKPab 18 31 29.9 -1.1**
VILB Vilhena 150.87 130 PKPab **PKPab 18 31 30.5 -1.3**
BDFB Brasilia 156.34 154 PKP **PKPdf 18 31 28.1 +1.2**
comp=Z,2.6nm,0.5s,baz=214,slow=7.3,SNR=4.7

*IDC **25** 18:15:00.4±1.7,6.05S×143.38E,h0km,mb4.2/6, mbtmp4.3/7,ML2.2/1,Error ellipse: s-maj=76.3km s-min=33.5km az=40.0*
ISC 25 18:15:05.3±1.1,6.2S±0.3×143.4E±0.3,h35km,n14, σ0§43/7,mb4.1/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.94 131**		Pn	**Pn**	**18 16 16.9**	**-0.1**
	5.7nm,0.3s,baz=280,slow=12,SNR=1.4						
PMG	**Port Moresby**	**4.94 131**					
	340nm,1.0s						
KSRS	**Korea Array**	**45.72 343**		P	**P**	**18 23 22.8**	**-0.3**
	1.0nm,0.7s,baz=159,slow=7.7,SNR=1.6						
KSRS	**Korea Array**	**45.72 343**					
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.19 300**		P	**P**	**18 23 58.1**	**0.0**
	1.2nm,0.7s,baz=122,slow=6.0,SNR=2.4						
CMAR	**Chiang Mai Arr**	**50.19 300**					
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**75.36 322**		P	**P**	**18 26 45.0**	**-0.2**
	2.7nm,1.0s,baz=114,slow=5.7,SNR=1.2						
MKAR	**Makanchi Array**	**75.36 322**					
	2.7nm,1.0s						
KURBB	**Kurchatov Arra**	**79.22 324**		P	**P**	**18 27 06.5**	**-0.3**
	0.5nm,0.4s,baz=128,slow=6.2,SNR=6.2						
KURBB	**Kurchatov Arra**	**79.22 324**					
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**84.79 325**		P	**P**	**18 27 36.7**	**+0.7**
	8.0nm,0.8s,baz=110,slow=6.7,SNR=2.4						
BVAR	**Borovoye Array**	**84.79 325**					
	8.0nm,0.8s						
ILAR	**Eielson Array**	**87.04 24**		P	**P**	**18 27 47.1**	**+0.2**
	1.3nm,0.9s,baz=264,slow=5.3,SNR=2.7						
ILAR	**Eielson Array**	**87.04 24**					
	1.3nm,0.9s						

*NEIC **25** 18:15:22.7±2.9,6.73S±0.09×143.4E±0.1,h10km±1km, mb5.0/43,Error ellipse: s-maj=21.8km s-min=14.5km az=249.0*
*IDC **25** 18:15:24.5±0.8,6.14S×143.04E,h0km,mb4.7/12, mbtmp4.8/15,ML4.9/2,Error ellipse: s-maj=27.7km s-min=19.0km az=82.0*
ISC 25 18:15:25.4±0.5,6.32S±0.08×142.93E±0.09,h10km,n74, σ1§59/73,mb5.0/35,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.19 127**		Pn	Pn	18 16 32.3	-11
PMG	**Port Moresby**	**5.19 127**		Pn	**Pn**	**18 16 44.7**	**+1.4**
	94nm,0.5s,baz=303,slow=20,SNR=1.3						
PMG				Sn	**Sn**	**18 17 42.4**	**-0.9**
	10nm,0.3s,baz=38,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**15.91 211**		Pn	**Pn**	**18 19 11.8**	**+2.1**
	3.8nm,0.3s,baz=38,slow=11,SNR=1.6						
WRA				Sn	**Sn**	**18 22 00.4**	**-5.8**
	1.3nm,0.3s,baz=30,slow=24,SNR=0.6						
WRA				Lg	Lg	18 23 53.2	
	2.4nm,0.3s,baz=28,slow=25,SNR=2.1						
	20nm,0.6s						
ASAR	**Alice Springs**	**19.31 206**		P	P	18 19 44.3	-6.6
ASAR	**Alice Springs**	**19.31 206**		P	**Pn**	**18 19 53.9**	**+1.9**
	6.5nm,0.3s,baz=33,slow=11,SNR=4.2						
	71nm,0.8s						
TOLI2	**Tolitoli**	**23.31 288**		P	**P**	**18 20 33.0**	**-0.8**
TOLI2				IAmb	IAmb	18 20 38.0	
	comp=Z,30nm,0.9s						
LEM	**Lembang**	**35.08 267**		P	**P**	**18 22 20.8**	**+1.4**
LEM	**Lembang**	**35.08 267**		P	**P**	**18 22 20.8**	**+1.4**
	comp=Z,22nm,0.6s,baz=18,slow=13,SNR=3.7						
	comp=Z,22nm,0.6s						
TWG	**Pinlang**	**36.00 324**		P	**P**	**18 22 28.0**	**+1.1**
TWG				IAmb	IAmb	18 22 39.4	
	comp=Z,45nm,1.5s						
YHNB	**Yeheng**	**37.28 327**		P	**P**	**18 22 38.6**	**+0.8**
JMN	**Monobe**	**40.74 348**		P	**P**	**18 23 06.8**	**+0.1**
JMN				IAmb	IAmb	18 23 33.0	
	comp=Z,59nm,1.5s						
JNU	**Nakatsue**	**40.86 344**		P	**P**	**18 23 07.6**	**0.0**
JNU				IAmb	IAmb	18 23 31.0	
	comp=Z,32nm,1.3s						
MJAR	**Matsushiro Arr**	**42.86 354**		P	**P**	**18 23 22.5**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=182,slow=7.9,SNR=5.3						
	comp=Z,1.3nm,0.5s						
MAJO	**Matsushiro**	**42.86 354**		P	**P**	**18 23 22.4**	**-1.6**
KSRS	**Korea Array**	**45.74 343**		P	**P**	**18 23 47.2**	**+0.2**
KSRS	**Korea Array**	**45.74 343**		P	**P**	**18 23 47.2**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=164,slow=9.0,SNR=5.9						
	comp=Z,5.8nm,0.9s						
JTM	**Tenmabayashi**	**46.90 358**		P	**P**	**18 23 55.2**	**-0.8**
PHRA	**Phrae**	**48.80 301**		P	**P**	**18 24 12.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**49.88 300**		P	**P**	**18 24 20.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**49.88 300**		P	**P**	**18 24 20.5**	**+1.0**
	comp=Z,3.4nm,0.7s,baz=112,slow=6.0,SNR=6.3						
	comp=Z,3.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.24 350**		P	**P**	**18 24 28.3**	**-1.0**
	comp=Z,4.2nm,0.9s,baz=139,slow=20,SNR=4.8						
	comp=Z,4.2nm,0.9s						
HMH	**Humu'ula Sheep**	**65.83 65**		P	P	18 26 05.0	-7.0
HYB	**Hyderabad**	**67.80 292**	*e*P	P	**P**	**18 26 24.3**	**+0.1**
MK31	**Makanchi Array**	**75.20 322**		P	**P**	**18 27 06.7**	**-1.7**
MK31				IAmb	IAmb	18 27 35.3	
	comp=Z,17nm,1.3s						
MKAR	**Makanchi Array**	**75.20 322**		P	**P**	**18 27 06.8**	**-1.6**
MKAR	**Makanchi Array**	**75.20 322**		P	**P**	**18 27 09.2**	**+0.9**
	comp=Z,8.1nm,0.9s,baz=98,slow=7.7,SNR=5.5						
	comp=Z,8.1nm,0.9s						
MAKZ	**Makanchi**	**75.40 322**		P	**P**	**18 27 09.7**	**+0.2**
MAKZ				IAmb	IAmb	18 27 35.8	
	comp=Z,31nm,1.4s						
ZAA0	**Zalesovo Array**	**77.16 329**		P	**P**	**18 27 18.6**	**-0.7**
ZAA0				IAmb	IAmb	18 27 43.8	
	comp=Z,19nm,1.4s						
ZALV	**Zalesovo Beam**	**77.16 329**		P	**P**	**18 27 18.2**	**-1.1**
ZALV	**Zalesovo Beam**	**77.16 329**		P	**P**	**18 27 18.9**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=112,slow=5.9,SNR=4.5						
	comp=Z,4.3nm,0.7s						
CHGN	**Chignik**	**78.61 29**		P	**P**	**18 27 26.6**	**-0.7**
KURBB	**Kurchatov Arra**	**79.09 324**		P	**P**	**18 27 30.4**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=115,slow=4.3,SNR=6.2						
	comp=Z,3.0nm,0.8s						
M14K	**Bethel**	**79.39 24**		P	**P**	**18 27 28.5**	**-3.0**
M14K				IAmb	IAmb	18 27 45.4	
	comp=Z,21nm,1.1s						
L14K	**Kuka Creek**	**79.44 23**		P	**P**	**18 27 30.8**	**-0.9**
L14K				IAmb	IAmb	18 27 43.4	
	comp=Z,16nm,0.9s						
ANM	**Nome**	**80.36 20**		P	**P**	**18 27 37.6**	**+0.9**
M16K	**Timber Creek**	**80.78 25**		P	**P**	**18 27 36.7**	**-2.3**
L16K	**Owhat River**	**80.93 24**		P	**P**	**18 27 38.3**	**-1.4**
N17K	**Nushagak Hills**	**81.28 26**		P	**P**	**18 27 40.9**	**-0.8**
N17K				IAmb	IAmb	18 27 53.5	
	comp=Z,11nm,0.9s						
F15K	**North Star Dit**	**81.30 19**		P	**P**	**18 27 38.8**	**-2.9**
J16K	**Anvik River**	**81.33 22**		P	**P**	**18 27 38.1**	**-3.8**
G16K	**Koyuk River**	**81.88 20**		P	**P**	**18 27 45.0**	**+0.2**
G16K				IAmb	IAmb	18 27 46.3	
	comp=Z,11nm,1.0s						
N18K	**Kilae Creek**	**81.91 26**		P	**P**	**18 27 45.1**	**+0.1**
N18K				IAmb	IAmb	18 28 03.8	
	comp=Z,21nm,1.2s						
H17K	**Granite Mounta**	**82.49 21**		P	**P**	**18 27 48.1**	**+0.1**
H17K				IAmb	IAmb	18 27 50.0	
	comp=Z,7.6nm,0.6s						
C16K	**Lisburne Hills**	**82.66 17**		P	**P**	**18 27 47.1**	**-1.6**
C16K				IAmb	IAmb	18 28 13.9	
	comp=Z,21nm,1.4s						
H18K	**Honhosa River**	**83.16 21**		P	**P**	**18 27 49.3**	**-2.2**
QSPA	**South Pole Qui**	**83.65 180**		P	**P**	**18 27 54.9**	**+0.7**
	comp=Z,4.9nm,0.6s,baz=318,slow=1.2,SNR=8.7						
	comp=Z,4.9nm,0.6s						
BVAR	**Borovoye Array**	**84.66 325**		P	**P**	**18 28 00.2**	**+0.8**
	comp=Z,24nm,0.8s,baz=107,slow=7.2,SNR=18						
	comp=Z,24nm,0.8s						
BRVK	**Borovoye**	**84.73 325**		P	**P**	**18 28 00.8**	**+1.0**
IMAR	**Indian Mountai**	**85.24 22**		P	**P**	**18 28 00.2**	**-1.8**
KTH	**Kantishna Hill**	**85.28 24**		P	**P**	**18 27 59.7**	**-2.7**
KTH				IAmb	IAmb	18 28 09.8	
	comp=Z,17nm,1.4s						
GHO	**Glory Hole Cre**	**85.42 26**		P	**P**	**18 28 02.4**	**-0.7**
GHO				IAmb	IAmb	18 28 22.6	
	comp=Z,12nm,0.9s						
H21K	**Melozitna Rive**	**85.44 22**		P	**P**	**18 28 01.1**	**-1.9**
I21K	**Tanana**	**85.55 23**		P	**P**	**18 28 03.3**	**-0.2**
SML	**Sawmill**	**85.70 26**		P	**P**	**18 28 03.3**	**-1.1**
SML				IAmb	IAmb	18 28 26.1	
	comp=Z,17nm,0.9s						
MLY	**Manley**	**85.96 23**		P	**P**	**18 28 03.2**	**-2.5**
RND	**Reindeer**	**86.08 25**		P	**P**	**18 28 05.3**	**-1.0**
RND				IAmb	IAmb	18 28 16.5	
	comp=Z,11nm,0.8s						
E22K	**Anaktuvuk Pass**	**86.87 20**		P	**P**	**18 28 10.1**	**-0.1**
E22K				IAmb	IAmb	18 28 22.7	
	comp=Z,8.0nm,0.8s						
G23K	**Bananza Creek**	**86.91 22**		P	**P**	**18 28 10.2**	**-0.1**
CCB	**Clear Creek Bu**	**86.97 24**		P	**P**	**18 28 08.1**	**-2.5**
CCB				IAmb	IAmb	18 28 11.9	
	comp=Z,7.9nm,0.8s						
HDA	**Harding Lake**	**87.23 24**		P	**P**	**18 28 10.8**	**-1.1**
HDA				IAmb	IAmb	18 28 24.4	
	comp=Z,6.3nm,0.8s						
H24K	**Noodor Dome**	**87.38 23**		P	**P**	**18 28 12.2**	**-0.5**
IL31		**87.38 24**		P	**P**	**18 28 11.6**	**-0.9**
IL31				IAmb	IAmb	18 28 14.4	
	comp=Z,9.0nm,0.9s						
ILAR	**Eielson Array**	**87.38 24**		P	**P**	**18 28 10.8**	**-1.7**
ILAR	**Eielson Array**	**87.38 24**		P	**P**	**18 28 11.7**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=256,slow=4.7,SNR=14						
	comp=Z,4.8nm,0.7s						
CRQM	**Cirque**	**87.71 28**		P	**P**	**18 28 13.1**	**-1.4**
TGL	**Tana Glacier**	**87.86 28**		P	**P**	**18 28 12.2**	**-2.9**
F24K	**Squaw Lake**	**88.00 21**		P	**P**	**18 28 14.6**	**-1.0**
F24K				IAmb	IAmb	18 28 27.5	
	comp=Z,5.2nm,0.8s						
K29M	**Barlow Dome**	**91.03 26**		P	**P**	**18 28 28.7**	**-1.2**
BELG	**Belogornoye**	**98.20 322**		P	**P**	**18 29 01.4**	**-1.4**
	comp=Z,9.7nm,0.8s,baz=8.3,slow=4.1,SNR=4.5						
	comp=Z,9.7nm,0.8s						
NVAR	**Mina Array Bea**	**100.75 52**		P	**Pdif**	**18 29 15.7**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=256,slow=6.0,SNR=2.3						
GERES	**GERESS Array B**	**119.82 324**		PKP	**PKiKP**	**18 34 16.4**	**0.0**
	comp=Z,0.5nm,0.6s,baz=92,slow=6.0,SNR=2.0						
PLCA	**Paso Flores**	**123.99 150**		PKP	**PKiKP**	**18 34 26.4**	**+1.6**
	comp=Z,1.4nm,0.8s,baz=224,slow=5.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**141.23 283**		PKP	**PKiKP**	**18 34 59.8**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=55,slow=3.5,SNR=1.7						
DBIC	**Dimbokro**	**148.00 272**		PKPbc	**PKiKP**	**18 35 13.2**	**-1.0**
	comp=Z,5.0nm,0.6s,baz=74,slow=4.4,SNR=4.9						

*NEIC **25** 18:16:14.6±2.1,6.41S±0.10×143.14E±0.06,h10km±1km, mb5.4/17,Error ellipse: s-maj=16.9km s-min=10.2km az=183.0*
*IDC **25** 18:16:19.1±2.9,6.15S×143.46E,h0km,mb4.6/3, mbtmp4.8/4,ML4.7/1,MS6.2/1,Error ellipse: s-maj=121.3km s-min=35.9km az=107.0*
ISC 25 18:16:15.7±0.6,6.49S±0.08×143.19E±0.09,h10km,n30, σ2§27/24,mb5.2/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**9.22 76**		Pn	**Pn**	**18 18 27.6**	**-1.3**
SAUI	**Saumlaki**	**11.89 262**		Pn	**Pn**	**18 19 04.0**	**-1.5**
CTAO	**Charters Tower**	**13.84 168**		Pn	**Pn**	**18 19 30.9**	**-1.3**
WB0	**Warramunga Arr**	**15.73 212**		Pn	**Pn**	**18 19 54.3**	**-3.3**
WRAB	**Tennant Creek**	**15.89 212**			**Pn**	**18 20 02.2**	**+2.5**
ASAR	**Alice Springs**	**19.28 207**		P	Pn	18 20 50.4	+8.6
	2.1nm,0.3s,baz=31,slow=12,SNR=4.6						
	86nm,0.8s						
GUMO	**Guam**	**20.01 5**		P	P	18 20 44.1	-4.8
GUMO				IAmb	IAmb	18 20 51.3	
	comp=Z,133nm,1.1s						
DZM	**Mont Dzumac**	**27.28 127**		P	**P**	**18 22 01.4**	**+0.8**
JOW	**Kunigami**	**36.14 337**		LR	LR	18 36 07.4	
	comp=Z,39μm,21.1s,baz=159,slow=33						
YULB	**Yu-li**	**36.60 325**		P	**P**	**18 23 24.0**	**+1.7**
YULB				IAmb	IAmb	18 23 27.0	
	comp=Z,43nm,1.4s						
MAJO	**Matsushiro**	**43.06 354**		P	**P**	**18 24 16.1**	**+0.2**
MJB9	**Matsu-Tunnel**	**43.06 354**		P	**P**	**18 24 16.1**	**+0.2**
MQZ	**McQueen's Vall**	**45.19 150**		P	**P**	**18 24 37.6**	**+4.7**
MQZ				IAmb	IAmb	18 24 57.1	
	comp=Z,170nm,1.5s						
JTM	**Tenmabayashi**	**47.08 358**		P	**P**	**18 24 47.1**	**-0.6**
JTM				IAmb	IAmb	18 25 01.3	
	comp=Z,66nm,1.2s						
PEA0B	**Petropavlovsk-**	**60.63 10**		P	**P**	**18 26 24.4**	**-2.3**
PETK	**Petropavlovsk-**	**60.63 10**		P	**P**	**18 26 25.0**	**-1.7**
PETK	**Petropavlovsk-**	**60.63 10**		P	**P**	**18 26 29.3**	**+2.5**
	comp=Z,5.9nm,0.9s,baz=153,slow=5.4,SNR=1.0						
	comp=Z,5.9nm,0.9s						
AMKA	**Amchitka**	**65.44 24**		P	**P**	**18 26 56.4**	**-2.3**
ADK	**Adak**	**67.49 26**		P	**P**	**18 27 10.1**	**-1.7**
HYB	**Hyderabad**	**68.10 292**	*e*P	P	**P**	**18 27 15.0**	**-1.4**
HYB				*e*S	**S**	**18 36 14.4**	**-2.3**
MKAR	**Makanchi Array**	**75.50 322**		P	P	18 28 05.4	+5.1
	comp=Z,2.0nm,0.7s,baz=117,slow=5.8,SNR=1.7						
	comp=Z,2.0nm,0.7s						
M13K	**Dall Lake**	**78.69 24**		P	**P**	**18 28 16.6**	**-1.3**
M13K				IAmb	IAmb	18 28 21.9	
	comp=Z,50nm,1.3s						
J14K	**Nanvaranak Lak**	**79.98 22**		P	P	18 28 20.6	-4.3
P18K	**Big Mountain,**	**81.63 27**		P	P	18 28 28.6	-5.3
P18K				IAmb	IAmb	18 28 48.1	
	comp=Z,27nm,1.4s						
O18K	**Koktuh Hills**	**81.86 27**		P	P	18 28 30.9	-4.2
O18K				IAmb	IAmb	18 28 47.3	
	comp=Z,45nm,1.4s						
N18K	**Kilae Creek**	**81.95 26**		P	**P**	**18 28 33.5**	**-2.0**
K17K	**Iditarod**	**81.97 23**		P	**P**	**18 28 34.0**	**-1.5**
RSO	**Redoubt South**	**83.22 27**		P	**P**	**18 28 40.3**	**-2.1**
BRLK	**Bradley Lake**	**83.78 28**		P	**P**	**18 28 43.0**	**-2.0**
BRLK				IAmb	IAmb	18 28 58.6	
	comp=Z,19nm,1.1s						
BVAR	**Borovoye Array**	**84.95 325**		P	**P**	**18 28 54.7**	**+3.6**
	comp=Z,5.7nm,0.6s,baz=108,slow=4.7,SNR=1.1						
	comp=Z,5.7nm,0.6s						

*IDC **25** 18:17:16.3±1.5,6.26S×143.33E,h0km,mb4.3/8, mbtmp4.3/9,ML2.7/1,Error ellipse: s-maj=59.6km s-min=33.3km az=47.0*
ISC 25 18:17:22.1±1.2,6.1S±0.3×143.7E±0.3,h35km,n10, σ1§48/11,mb4.3/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.74 134**		Pn	**Pn**	**18 18 32.6**	**+1.6**
	21nm,0.3s,baz=242,slow=18,SNR=1.3						
PMG				Sn	**Sn**	**18 19 22.5**	**-2.3**
	11nm,0.3s,baz=293,slow=20,SNR=1.2						
	112nm,0.5s						
KSRS	**Korea Array**	**45.78 342**		P	**P**	**18 25 38.1**	**-2.2**
	2.4nm,0.8s,baz=166,slow=10,SNR=2.3						
	2.4nm,0.8s						
PETK	**Petropavlovsk-**	**60.18 10**		P	**P**	**18 27 27.9**	**+1.6**
	3.5nm,0.8s,baz=120,slow=5.6,SNR=1.6						
	3.5nm,0.8s						
SONM	**Songino Array**	**62.95 333**		P	**P**	**18 27 46.0**	**+0.8**
	3.2nm,1.0s,baz=186,slow=2.0,SNR=0.9						
	3.2nm,1.0s						
MKAR	**Makanchi Array**	**75.52 321**		P	**P**	**18 29 02.5**	**-0.5**
	1.9nm,0.6s,baz=103,slow=7.0,SNR=5.7						
	1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**77.39 329**		P	**P**	**18 29 12.6**	**-0.8**
	1.8nm,0.6s,baz=125,slow=7.4,SNR=2.0						
	1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**79.37 324**		P	**P**	**18 29 24.0**	**-0.4**
	0.5nm,0.3s,baz=123,slow=4.3,SNR=1.4						
	0.5nm,0.3s						
BVAR	**Borovoye Array**	**84.94 324**		P	**P**	**18 29 53.4**	**-0.2**
	1.9nm,0.5s,baz=105,slow=6.9,SNR=1.3						
	1.9nm,0.5s						
ILAR	**Eielson Array**	**86.89 24**		P	**P**	**18 30 02.7**	**-0.2**
	2.2nm,0.9s,baz=252,slow=4.3,SNR=2.3						
	2.2nm,0.9s						
DBIC	**Dimbokro**	**148.75 273**		PKPbc	**PKPdf**	**18 37 03.9**	**+0.8**
	5.7nm,0.8s,baz=144,slow=5.6,SNR=2.3						

*IDC **25** 18:19:38.1±1.0,5.94S×142.73E,h0km,mb4.2/11, mbtmp4.3/14,ML4.3/1,Error ellipse: s-maj=33.1km s-min=21.3km az=99.0*
ISC 25 18:19:41.8±0.7,6.1S±0.1×142.7E±0.1,h28km,n15, σ0§68/15,mb4.4/11,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.50 127**		Pn	**Pn**	**18 21 01.8**	**-0.1**
	40nm,0.7s,baz=331,slow=19,SNR=0.8						
WRA	**Warramunga Arr**	**15.99 210**		Pn	**P**	**18 23 28.1**	**-0.1**
	1.2nm,0.3s,baz=30,slow=13,SNR=1.6						
WRA				Lg	Lg	18 28 11.8	
	1.2nm,0.3s,baz=28,slow=29,SNR=1.6						
	20nm,0.8s						
ASAR	**Alice Springs**	**19.42 205**		P	**Pn**	**18 24 07.0**	**-0.3**
	8.1nm,0.7s,baz=31,slow=11,SNR=1.1						
MJAR	**Matsushiro Arr**	**42.62 355**		P	**P**	**18 27 34.8**	**-0.9**
	1.1nm,0.8s,baz=185,slow=8.1,SNR=1.4						
	1.1nm,0.8s						
KSRS	**Korea Array**	**45.47 343**		P	**P**	**18 27 57.2**	**-1.3**
	1.8nm,0.8s,baz=154,slow=7.8,SNR=4.0						
	1.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.57 300**		P	**P**	**18 28 30.8**	**0.0**
	0.8nm,0.7s,baz=123,slow=6.5,SNR=2.5						
	0.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**50.99 350**		P	**P**	**18 28 41.3**	**+0.3**
	4.3nm,0.9s,baz=165,slow=6.0,SNR=4.0						
	4.3nm,0.9s						
PETK	**Petropavlovsk-**	**60.33 10**		P	**P**	**18 29 48.4**	**+0.4**
	3.7nm,0.6s,baz=165,slow=7.2,SNR=9.7						
	3.7nm,0.6s						
MKAR	**Makanchi Array**	**74.89 322**		P	**P**	**18 31 20.3**	**+0.2**
	3.5nm,0.9s,baz=93,slow=8.7,SNR=6.4						
	3.5nm,0.9s						
ZALV	**Zalesovo Beam**	**76.86 329**		P	**P**	**18 31 30.3**	**-0.8**
	1.3nm,0.6s,baz=113,slow=5.7,SNR=2.8						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**78.78 324**		P	**P**	**18 31 41.9**	**0.0**
	1.3nm,0.9s,baz=105,slow=4.5,SNR=3.2						
	1.3nm,0.9s						
NRIK	**Noril'sk**	**84.08 343**		P	**P**	**18 32 10.2**	**+0.6**
	3.7nm,0.9s,baz=119,slow=6.3,SNR=3.9						
	3.7nm,0.9s						
BVAR	**Borovoye Array**	**84.35 325**		P	**P**	**18 32 11.9**	**+0.6**
	6.8nm,0.7s,baz=115,slow=7.4,SNR=8.4						
	6.8nm,0.7s						
ILAR	**Eielson Array**	**87.27 24**		P	**P**	**18 32 25.1**	**-0.4**
	2.0nm,0.7s,baz=258,slow=4.9,SNR=7.8						
	2.0nm,0.7s						
DBIC	**Dimbokro**	**147.76 273**		PKPbc	**PKPbc**	**18 39 26.1**	**+1.0**
	3.8nm,0.9s,baz=127,slow=4.6,SNR=2.5						

*IDC **25** 18:21:10.6±0.9,6.25S×143.27E,h0km,mb4.2/12, mbtmp4.3/15,ML2.5/1,Error ellipse: s-maj=32.2km s-min=20.2km az=92.0*
ISC 25 18:21:15.6±0.6,6.31S±0.10×143.3E±0.1,h35km,n20, σ0§84/20,mb4.2/13,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.91 129**		Pn	**Pn**	**18 22 27.7**	**+0.8**
	13nm,0.3s,baz=15,slow=11,SNR=2.1						
PMG				Sn	**Sn**	**18 23 20.8**	**-1.7**
	10nm,0.3s,baz=17,slow=19,SNR=2.1						
	35nm,0.3s						
WRA	**Warramunga Arr**	**16.10 212**		Pn	**Pn**	**18 24 59.3**	**-0.2**
	34nm,0.9s,baz=29,slow=13,SNR=2.3						
WRA				Lg	Lg	18 29 43.0	
	baz=9.9,slow=34						
HNR	**Honiara**	**16.78 102**		Pn	**P**	**18 25 11.5**	**+1.5**
	23nm,0.3s,baz=302,slow=17,SNR=2.0						
ASAR	**Alice Springs**	**19.48 207**		P	**P**	**18 25 40.2**	**+0.5**
	32nm,0.7s,baz=32,slow=9.9,SNR=5.3						
MJAR	**Matsushiro Arr**	**42.90 354**		P	**P**	**18 29 10.6**	**-0.3**
	0.9nm,0.8s,baz=170,slow=16,SNR=1.6						
	0.9nm,0.8s						
KSRS	**Korea Array**	**45.85 343**		P	**P**	**18 29 34.5**	**+0.1**
	2.8nm,0.9s,baz=170,slow=9.1,SNR=5.0						
	2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.19 300**		P	**P**	**18 30 09.0**	**+0.6**
	0.8nm,0.7s,baz=118,slow=5.7,SNR=2.5						
	0.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.30 350**		P	**P**	**18 30 16.0**	**-0.3**
	2.6nm,0.9s,baz=174,slow=14,SNR=2.2						
	2.6nm,0.9s						
PETK	**Petropavlovsk-**	**60.44 10**		P	**P**	**18 31 22.7**	**+1.1**
	3.5nm,1.0s,baz=172,slow=5.9,SNR=2.4						
	3.5nm,1.0s						
SONM	**Songino Array**	**62.95 333**		P	**P**	**18 31 39.2**	**+0.5**
	1.9nm,1.0s,baz=159,slow=5.6,SNR=3.2						
	1.9nm,1.0s						
MKAR	**Makanchi Array**	**75.42 322**		P	**P**	**18 32 56.5**	**+0.5**
	3.0nm,0.7s,baz=101,slow=5.9,SNR=8.7						
	3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**77.34 329**		P

NLC	**Nalytchevo**	**5.37**	**260**	*eS*		**Sn**	**18 24 13.9**	**-2.5**
SMAR	**Somma**	**5.66**	**261**	*eP*		**Pn**	**18 23 20.6**	**+1.1**
UGLR	**Uglovaya**	**5.66**	**261**	*eP*		**Pn**	**18 23 20.9**	**+1.4**
KRER	**Koryakskii**	**5.68**	**262**	*eP*		**Pn**	**18 23 21.4**	**+1.6**
KRER				*eS*		**Sn**	**18 24 22.8**	**-1.6**
AVH	**Avacha**	**5.70**	**262**	*eP*		**Pn**	**18 23 21.5**	**+1.5**
AVH				*eS*		**Sn**	**18 24 23.4**	**-1.2**
KRX	**Arik**	**5.72**	**263**	*eP*		**Pn**	**18 23 21.7**	**+1.3**
KRX				*eS*		**Sn**	**18 24 24.9**	**-0.5**
KOK	**Koryaka**	**5.75**	**262**	*eP*		**Pn**	**18 23 22.1**	**+1.4**
DALK	**Dalny**	**5.75**	**259**	*eP*		**Pn**	**18 23 21.9**	**+1.2**
DALK				*eS*		**Sn**	**18 24 24.3**	**-1.6**
PET	**Petropavlovsk**	**5.81**	**259**	*eP*		**Pn**	**18 23 24.4**	**+2.9**
GNL	**Ganaly**	**6.05**	**267**	*eP*		**Pn**	**18 23 26.9**	**+2.0**
RUS	**Russkaya**	**6.11**	**254**	*eP*		**Pn**	**18 23 26.6**	**+1.2**
KRMR	**Karymshinskiy**	**6.18**	**259**	*eP*		**Pn**	**18 23 28.0**	**+1.6**
KRMR				*eS*		**Sn**	**18 24 34.5**	**-1.8**
MTVR	**Mutnovka**	**6.27**	**256**	*eP*		**Pn**	**18 23 29.9**	**+2.0**
MTVR				*eS*		**Sn**	**18 24 37.7**	**-1.2**
GRL	**Gorelyy**	**6.31**	**256**	*eP*		**Pn**	**18 23 30.3**	**+1.9**
PETK	**Petropavlovsk-** 1.6nm,0.3s,baz=85,slow=21,SNR=45	**6.34**	**262**	Pn		**Pn**	**18 23 30.2**	**+1.5**
PETK				Sn		**Sn**	**18 24 40.7**	**+0.3**
	0.8nm,0.3s,baz=102,slow=21,SNR=5.7 5.1nm,0.5s							
PALN	**Palana**	**6.45**	**319**	*eP*		Pn	18 23 37.0	+6.8
ASAK	**Asacha**	**6.47**	**255**	*eP*		**Pn**	**18 23 32.5**	**+1.9**
ASAK				*eS*		**Sn**	**18 24 42.4**	**-1.3**
KDTR	**Khodutka, Kamc**	**6.62**	**250**	*eP*		**Pn**	**18 23 33.8**	**+1.3**
KDTR				*eS*		**Sn**	**18 24 43.6**	**-3.6**
APC	**Apacha**	**6.71**	**261**	*eP*		**Pn**	**18 23 37.1**	**+3.4**
ILAR	**Eielson Array** 1.9nm,1.1s,baz=254,slow=8.6,SNR=2.3 1.9nm,1.1s	**24.41**	**47**	P		**P**	**18 27 12.2**	**-0.9**
H11N2	**WAKE ISLAND Hy** baz=1.2,slow=76,SNR=387	**34.70**	**182**	T		T	19 05 28.2	
H11N3	**WAKE ISLAND Hy** baz=1.2,slow=76,SNR=275	**34.71**	**182**	T		T	19 05 34.9	
H11N1	**WAKE ISLAND Hy** baz=1.2,slow=76,SNR=270	**34.71**	**182**	T		T	19 05 35.3	
H11S1	**WAKE ISLAND Hy** baz=0.9,slow=76,SNR=49	**35.92**	**182**	T		T	19 07 05.5	
H11S3	**WAKE ISLAND Hy** baz=0.9,slow=76,SNR=24	**35.93**	**182**	T		T	19 07 07.0	
H11S2	**WAKE ISLAND Hy** baz=0.9,slow=76,SNR=70	**35.93**	**182**	T		T	19 07 03.9	
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=52,slow=7.7,SNR=0.7 0.2nm,0.4s	**51.06**	**305**	P		**P**	**18 30 56.9**	**+0.1**
BVAR	**Borovoye Array** 0.7nm,0.5s,baz=32,slow=5.6,SNR=1.1 0.7nm,0.5s	**53.16**	**312**	P		**P**	**18 31 11.6**	**-0.8**
TXAR	**Lajitas Array** 0.5nm,0.5s,baz=303,slow=4.7,SNR=10 0.5nm,0.5s	**65.68**	**73**	P		**P**	**18 32 39.7**	**+0.5**

*CATAC **25** 18:24:11.5±0.4, 13°.82N×91°.78W, h30km±760km, mb4.2, ML4.3*

*SNET **25** 18:24:12.0±1.0, 13°.93N×91°.68W, h35km±556km, ML3.3*

ISC 25 18:24:10.7±2.1, 13°.81N±0°.07×91°.80W±0.10, h34km±4km, n69, σ1°23/113, 10C-6D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.72**	**8**	*i*P	**Pb**	**18 24 24.6**	**-0.3**
RTAL				*i* S	**Sb**	**18 24 34.6**	**+0.1**
RTAL				IAML		18 24 42.5	
	comp=Z,3μm,1.0s						
SMCA	**Catarina**	**1.07**	**346**	⇑*i*P	**Pn**	**18 24 29.2**	**-0.2**
SMCA				*i* S	**Sn**	**18 24 43.1**	**-0.1**
SMCA				IAML		18 24 48.8	
	comp=Z,2μm,1.0s						
SMSP	**San Marcos**	**1.16**	**1**	*i* P	**Pn**	**18 24 30.2**	**-0.6**
SMSP				*i* S	**Sn**	**18 24 45.4**	**-0.2**
SMSP				IAML		18 24 46.4	
	comp=Z,9μm,1.0s						
GUMI	**Mixco**	**1.41**	**54**	*i* P	**Pn**	**18 24 34.5**	**+0.3**
GUMI				IAML		18 24 34.9	
	comp=Z,11μm,1.0s						
GUMI				*i* S	**Sn**	**18 24 52.0**	**+0.2**
GCG4	**OSOP**	**1.45**	**58**	*i* P	**Pn**	**18 24 35.0**	**+0.2**
GCG4				IAML		18 24 36.6	
	comp=Z,11μm,1.0s						
GCG4				*i* S	**Sn**	**18 24 53.4**	**+0.7**
HUEH	**Huehuetenango**	**1.52**	**11**	⇑*i*P	**Pn**	**18 24 36.5**	**+0.6**
HUEH				IAML		18 25 01.6	
	comp=Z,2μm,1.0s						
GUNB	**GUNB**	**1.61**	**61**	⇑*i*P	**Pn**	**18 24 37.2**	**+0.1**
GUNB				IAML		18 24 39.0	
	comp=Z,2μm,1.0s						
GUNB				*i* S	**Sn**	**18 24 57.6**	**+0.7**
NUBE	**Las Nubes**	**1.96**	**87**	*e*P	**Pn**	**18 24 41.4**	**-0.4**
NUBE				*e*S	**Sn**	**18 25 03.6**	**-1.7**
NUBE				IAML		18 25 05.8	
	comp=Z,339nm,0.3s						
NUBE	**Las Nubes**	**1.96**	**87**	⇓*i*P	**Pn**	**18 24 41.1**	**-0.7**
NUBE				IAML		18 24 42.7	
	comp=Z,1μm,1.0s						
NUBE				*i* S	**Sn**	**18 25 03.5**	**-1.8**
SLOZ	**Alcaldia de Sa**	**1.97**	**84**	*e*P	**Pn**	**18 24 41.5**	**-0.2**
SLOZ				*e*S	**Sn**	**18 25 04.5**	**-0.8**
LOAL	**Lomas de Alarc**	**1.97**	**84**	*i* P	**Pn**	**18 24 41.6**	**-0.2**
LOAL				IAML		18 24 43.3	
	comp=Z,3μm,1.0s						
LOAL				*i* S	**Sn**	**18 25 04.7**	**-0.6**
RTR	**El Retiro**	**2.09**	**87**	*e*P	**Pn**	**18 24 43.9**	**+0.2**
JUAM	**Asuncion Mita**	**2.10**	**75**	⇑*i*P	**Pn**	**18 24 44.0**	**+0.5**
JUAM				*i* S	**Sn**	**18 25 08.9**	**+0.4**
JUAM				IAML		18 25 11.4	
	comp=Z,870nm,1.0s						
CEVE	**Cerro Verde**	**2.11**	**89**	*e*P	**Pn**	**18 24 43.7**	**-0.3**
CEVE				*e*S	**Sn**	**18 25 09.4**	**+0.2**
CEVE	**Cerro Verde**	**2.11**	**89**	*i* P	**Pn**	**18 24 43.6**	**-0.3**
CEVE				*i* S	**Sn**	**18 25 08.8**	**-0.4**
CEVE				IAML		18 25 16.3	
	comp=Z,2μm,1.0s						
SBLS	**San Blas**	**2.11**	**89**	*e*P	**Pn**	**18 24 43.8**	**-0.2**
AVCB	**Coban**	**2.13**	**39**	*i* P	**Pn**	**18 24 44.3**	**+0.2**
AVCB				IAML		18 26 10.4	
	comp=Z,8μm,1.0s						
SNJE	**San Jose**	**2.13**	**88**	*e*P	**Pn**	**18 24 44.1**	**0.0**
UNIC	**Universidad Ca**	**2.19**	**85**	⇓*i*P	**Pn**	**18 24 44.8**	**-0.1**
UNIC				IAML		18 24 45.7	
	comp=Z,700nm,1.0s						
UNIC				*i* S	**Sn**	**18 25 10.1**	**-0.8**
JAYA	**Jayaque - finc**	**2.29**	**94**	*e*P	**Pn**	**18 24 46.0**	**-0.3**
JAYA				*e*S	**Sn**	**18 25 11.9**	**-1.5**
JAYA	**Jayaque - finc**	**2.29**	**94**	⇓*i*P	**Pn**	**18 24 45.8**	**-0.5**
JAYA				*i* S	**Sn**	**18 25 10.9**	**-2.5**
JAYA				IAML		18 25 14.7	
	comp=Z,3μm,1.0s						
CEDA	**San Andres**	**2.33**	**90**	*e*P	**Pn**	**18 24 46.9**	**+0.1**
CEDA				*e*S	**Sn**	**18 25 14.7**	**+0.3**
CEDA				IAML		18 25 23.3	
	comp=Z,583nm,0.3s						
CEDA	**San Andres**	**2.33**	**90**	⇓*i*P	**Pn**	**18 24 47.3**	**+0.5**
CEDA				*i* S	**Sn**	**18 25 14.2**	**-0.2**
CEDA				IAML		18 25 30.3	
	comp=Z,2μm,1.0s						
PMON	**Piamonte**	**2.42**	**92**	⇓*i*P	**Pn**	**18 24 48.0**	**0.0**
PMON				*i* S	**Sn**	**18 25 15.7**	**-0.8**
PMON				IAML		18 25 21.7	
	comp=Z,2μm,1.0s						
LALI	**Alcalda de L**	**2.43**	**97**	*i* P	**Pn**	**18 24 48.2**	**+0.1**
LALI				*i* S	**Sn**	**18 25 15.3**	**-1.3**
LALI				IAML		18 25 17.4	
	comp=Z,240nm,1.0s						
MTO3	**Montecristo**	**2.44**	**76**	*e*P	**Pn**	**18 24 48.3**	**-0.1**
MTO3				IAML		18 25 01.1	
	comp=Z,48nm,0.3s						
MTO3	**Montecristo**	**2.44**	**76**	⇑*i*P	**Pn**	**18 24 48.2**	**-0.1**
MTO3				IAML		18 24 48.6	
	comp=Z,260nm,1.0s						
MTO3				*i* S	**Sn**	**18 25 18.0**	**+0.9**
ITCA	**Escuela Especi**	**2.45**	**93**	*i* P	**Pn**	**18 24 49.0**	**+0.5**
ITCA				*i* S	**Sn**	**18 25 16.9**	**-0.5**
ITCA				IAML		18 25 29.9	
	comp=Z,2μm,1.0s						
QUEZ	**Alcaldia de Qu**	**2.45**	**89**	*i* P	**Pn**	**18 24 48.7**	**+0.2**
QUEZ				*i* S	**Sn**	**18 25 17.2**	**-0.1**
QUEZ				IAML		18 25 50.3	
	comp=Z,2μm,1.0s						
CCIG	**Comitan**	**2.48**	**352**	*i* P	**Pn**	**18 24 51.4**	**+2.5**
CCIG				IAML		18 25 31.5	
	comp=Z,450nm,1.0s						
UEES	**Universidad Ev**	**2.49**	**92**	*i* P	**Pn**	**18 24 48.9**	**-0.1**
UEES				*i* S	**Sn**	**18 25 17.1**	**-1.1**
UEES				IAML		18 25 24.9	
	comp=Z,510nm,1.0s						
ESQI	**Esquipulas**	**2.50**	**72**	*i* P	**Pn**	**18 24 49.3**	**+0.2**
ESQI				IAML		18 25 48.9	
	comp=Z,490nm,1.0s						
SNET	**Serv Nac Est T**	**2.50**	**93**	*i* P	**Pn**	**18 24 49.9**	**+0.8**
SNET				*i* S	**Sn**	**18 25 18.2**	**-0.3**
SNET				IAML		18 25 24.3	
	comp=Z,1μm,1.0s						
SEMO	**Seminario San**	**2.50**	**92**	*i* P	**Pn**	**18 24 48.7**	**-0.5**
SEMO				*i* S	**Sn**	**18 25 17.4**	**-1.2**
SEMO				IAML		18 25 26.8	
	comp=Z,3μm,1.0s						
UTEC	**Universidad Te**	**2.52**	**92**	*i* P	**Pn**	**18 24 47.5**	**-2.0**
UTEC				IAML		18 26 09.6	
	comp=Z,930nm,1.0s						
PANCS	**Alcalda de**	**2.55**	**94**	*i* P	**Pn**	**18 24 50.1**	**+0.3**
PANCS				*i* S	**Sn**	**18 25 18.9**	**-0.9**
PANCS				IAML		18 25 24.7	
	comp=Z,2μm,1.0s						
IGN	**Direccin Gen**	**2.56**	**92**	*i* P	**Pn**	**18 24 50.7**	**+0.8**
IGN				*i* S	**Sn**	**18 25 22.2**	**+2.3**
IGN				IAML		18 25 27.0	
	comp=Z,4μm,1.0s						
LOMA	**Loma Larga**	**2.56**	**93**	*e*P	**Pn**	**18 24 50.3**	**+0.3**
LOMA				*e*S	**Sn**	**18 25 20.0**	**0.0**
LOMA	**Loma Larga**	**2.56**	**93**	*i* P	**Pn**	**18 24 50.1**	**+0.1**
LOMA				*i* S	**Sn**	**18 25 19.3**	**-0.7**
LOMA				IAML		18 25 23.8	
	comp=Z,850nm,1.0s						
UDBS	**Universidad Do**	**2.57**	**92**	*i* P	**Pn**	**18 24 50.3**	**+0.2**
UDBS				*i* S	**Sn**	**18 25 20.9**	**+0.7**
UDBS				IAML		18 25 23.8	
	comp=Z,810nm,1.0s						
LFRS	**El Faro**	**2.67**	**94**	*e*P	**Pn**	**18 24 51.8**	**+0.4**
SJTE	**Alcalda de S**	**2.72**	**94**	*i* P	**Pn**	**18 24 52.9**	**+0.7**
SJTE				*i* S	**Sn**	**18 25 23.1**	**-0.9**
SJTE				IAML		18 25 35.0	
	comp=Z,400nm,1.0s						
PAVA	**Las Pavas**	**2.78**	**92**	*i* P	**Pn**	**18 24 54.2**	**+1.2**
PAVA				*i* S	**Sn**	**18 25 26.8**	**+1.3**
PAVA				IAML		18 25 30.9	
	comp=Z,530nm,1.0s						
COEG	**Centro de Oper**	**2.84**	**93**	*e*P	**Pn**	**18 24 54.6**	**+0.7**
COEG	**Centro de Oper**	**2.84**	**93**	⇓*i*P	**Pn**	**18 24 54.5**	**+0.7**
COEG				IAML		18 24 55.6	
	comp=Z,290nm,1.0s						
COEG				*i* S	**Sn**	**18 25 29.0**	**+2.0**
UESV	**Universidad de**	**2.93**	**93**	*i* P	**Pn**	**18 24 55.3**	**+0.3**
UESV				IAML		18 25 15.6	
	comp=Z,440nm,1.0s						
UESV				*i* S	**Sn**	**18 25 32.6**	**+3.5**
TECO	**Alcaldia de Te**	**2.94**	**95**	*i* P	**Pn**	**18 24 55.5**	**+0.3**
TECO				IAML		18 24 56.4	
	comp=Z,300nm,1.0s						
TECO				*i* S	**Sn**	**18 25 28.7**	**-0.7**
SCLA	**Alcaldia de Sa**	**2.98**	**92**	*e*P	**Pn**	**18 24 56.3**	**+0.5**
SCLA	**Alcaldia de Sa**	**2.98**	**92**	⇑*i*P	**Pn**	**18 24 55.9**	**+0.1**
SCLA				*i* S	**Sn**	**18 25 33.1**	**+2.7**
SCLA				IAML		18 25 45.4	
	comp=Z,140nm,1.0s						
PQSS	**Presa 15 de Se**	**3.15**	**93**	*i* P	**Pn**	**18 24 58.1**	**+0.1**
PQSS				IAML		18 25 00.1	
	comp=Z,92nm,1.0s						
PQSS				*i* S	**Sn**	**18 25 33.7**	**-0.8**
ALJI	**Alcalda de J**	**3.17**	**98**	*i* P	**Pn**	**18 25 02.8**	**+4.5**
ALJI				IAML		18 25 05.2	
	comp=Z,990nm,1.0s						
ALJI				*i* S	Sn	18 25 25.0	-10
PACA	**Pacayal**	**3.40**	**95**	*i* P	**Pn**	**18 25 03.9**	**+2.4**
PACA				*i* S	**Sn**	**18 25 41.1**	**+0.4**
PACA				IAML		18 25 45.9	
	comp=Z,1μm,1.0s						
PETF	**Flores**	**3.60**	**31**	*i* P	**Pn**	**18 25 05.6**	**+1.3**
PETF				IAML		18 26 07.7	
	comp=Z,260nm,1.0s						
LCND	**La Caada**	**3.83**	**97**	⇑*i*P	**Pn**	**18 25 07.8**	**+0.4**
LCND				*i* S	**Sn**	**18 25 50.3**	**-1.0**
CNCH	**Conchagua**	**3.89**	**97**	⇑*i*P	**Pn**	**18 25 08.5**	**+0.2**
CNCH				*i* S	**Sn**	**18 25 54.4**	**+1.4**
CNCH				IAML		18 26 01.8	
	comp=Z,330nm,1.0s						
AMPH	**Amapala**	**4.06**	**97**	*i* P	**Pn**	**18 25 10.8**	**+0.3**
CSGN	**Cosiguina Volc**	**4.21**	**101**	*i* P	**Pn**	**18 25 12.6**	**0.0**
CSGN				IAML		18 26 14.9	
	comp=Z,400nm,1.0s						
TGUH	**Tegucigalpa,Un**	**4.40**	**86**	*i* P	**Pn**	**18 25 13.4**	**-1.9**
TGUH				IAML		18 26 15.4	
	comp=Z,140nm,1.0s						
YUSH	**Yuscaran**	**4.81**	**88**	⇑*i*P	**Pn**	**18 25 20.5**	**-0.5**
PKGN	**Cerro Pekin**	**4.83**	**103**	*i* P	**Pn**	**18 25 21.3**	**+0.2**
PKGN				*i* S	**Sn**	**18 26 10.1**	**-5.8**
PKGN				IAML		18 26 19.3	
	comp=Z,200nm,1.0s						
COPN	**Copaltepe**	**5.33**	**107**	*i* P	**Pn**	**18 25 28.0**	**0.0**
COPN				IAmb	IAmb	18 25 34.5	
	comp=Z,91nm,0.9s						
COPN				IAML		18 25 35.5	
	comp=Z,140nm,1.0s						
LIMN	**Finca el Limon**	**5.34**	**97**	*i* P	**Pn**	**18 25 27.3**	**-0.9**
LIMN				IAmb	IAmb	18 25 42.0	
	comp=Z,31nm,0.9s						
LIMN				IAML		18 26 27.2	
	comp=Z,120nm,1.0s						
BOAB	**BOACO BROADBAN**	**6.12**	**102**	*i* P	**Pn**	**18 25 37.8**	**-1.1**
BOAB				*i* S	**Sn**	**18 26 46.4**	**-1.5**
BOAB				IAML		18 27 57.1	
	comp=Z,130nm,1.0s						
HZTE	**Horizontes, Gu**	**6.80**	**116**	*i* P	**Pn**	**18 25 50.0**	**+1.8**
HZTE				IAmb	IAmb	18 25 53.0	
	comp=Z,37nm,1.7s						
HZTE				IAML		18 27 19.2	
	comp=Z,120nm,1.0s						
SIUN	**Universidad Ur**	**6.83**	**90**	*i* P	**Pn**	**18 25 49.4**	**+0.8**
SIUN				IAmb	IAmb	18 25 51.0	
	comp=Z,3.6nm,0.8s						
SIUN				IAML		18 27 32.3	
	comp=Z,34nm,1.0s						
SAJU	**San Juanillo,**	**7.02**	**121**	*i* P	**Pn**	**18 25 51.6**	**+0.3**
SAJU				IAmb	IAmb	18 25 56.8	
	comp=Z,35nm,1.0s						
SAJU				IAML		18 26 08.9	
	comp=Z,110nm,1.0s						
ORTG	**Ortega, Santa**	**7.08**	**118**	*i* P	**Pn**	**18 25 53.4**	**+1.2**
ORTG				IAmb	IAmb	18 25 57.5	
	comp=Z,24nm,0.9s						
ORTG				IAML		18 27 10.3	
	comp=Z,200nm,1.0s						
CDM	**Cerro de Muert**	**8.93**	**117**	*i* P	**Pn**	**18 26 19.9**	**+2.0**
CDM				IAmb	IAmb	18 26 34.4	
	comp=Z,15nm,2.5s						
CDM				*i* S	**Sn**	**18 27 57.8**	**+0.1**
SRBA	**San Rafael, Bu**	**9.44**	**118**	*i* P	**Pn**	**18 26 26.8**	**+2.3**
SRBA				IAmb	IAmb	18 26 29.2	
	comp=Z,15nm,0.9s						

IDC 25 18:25:00.7±1.3, 6°.86S×144°.81E, h0km, mb4.2/2, mbtmp4.3/4, ML1.2/1, Error ellipse: s-maj=41.4km s-min=27.6km az=81.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.44**	**138**	Pn	Pn	18 25 55.0	-0.5
	1.8nm,0.3s,baz=300,slow=20,SNR=1.0						
PMG				Sn	Sn	18 26 37.9	+0.9
	3.0nm,0.3s,baz=13,slow=4.7,SNR=1.7 28nm,0.8s						
ASAR	**Alice Springs**	**19.73**	**211**	P	Pn	18 29 33.1	-0.4
	24nm,0.9s,baz=38,slow=10,SNR=7.4						
PETK	**Petropavlovsk-** 2.5nm,0.8s,baz=168,slow=7.4,SNR=2.8 2.5nm,0.8s	**60.73**	**9**	P	P	18 35 13.9	-0.1
ILAR	**Eielson Array** 1.0nm,0.8s,baz=261,slow=4.9,SNR=4.6 1.0nm,0.8s	**87.13**	**23**	P	P	18 37 49.1	+0.9
DBIC	**Dimbokro** 5.0nm,0.8s,baz=72,slow=4.4,SNR=4.4	**149.88**	**271**	PKPbc	PKPbc	18 44 52.4	-1.7

*IDC **25** 18:26:08.4±0.7, 6°.38S×143°.51E, h0km, mb4.6/16, mbtmp4.7/19, ML4.5/2, Error ellipse: s-maj=23.2km s-min=15.1km az=81.0*

*NEIC **25** 18:26:09.8±1.9, 6°.43S±0°.08×143°.47E±0°.07, h10km±1km, mb5.1/103, Error ellipse: s-maj=13.1km s-min=11.8km az=203.0*

*BJI **25** 18:26:12.4±0.0, 6°.22S×143°.56E, h27km, mb5.1/40, mB5.1/1*

*DJA **25** 18:26:12.0±0.3, 7°.S±4°×14°.3E±°, h24km±2km, M5.7/26, mb5.2/26, MLv6.0/6*

ISC 25 18:26:12.9±0.6, 6°.53S±0°.05×143°.46E±0°.05, h32km±4km, h32km:pP-P, n196, σ1°53/204, mb5.0/87, 6C, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**2.55**	**299**	P	**Pn**	**18 26 54.9**	**+2.7**
MMPI	**Merauke**	**3.60**	**238**	P	**Pn**	**18 27 05.0**	**-1.6**
PMG	**Port Moresby**	**4.65**	**128**	P	**Pn**	**18 27 21.5**	**+0.5**
PMG	**Port Moresby**	**4.65**	**128**	Pn	**Pn**	**18 27 21.0**	**0.0**
	333nm,0.7s,baz=336,slow=2.2,SNR=18						
PMG				Sn	**Sn**	**18 28 14.3**	**+0.4**
	18nm,0.3s,baz=5.2,slow=18,SNR=2.6						
GENI	**Genyem**	**5.10**	**320**	P	**Pn**	**18 27 26.2**	**-1.0**
	985nm,0.8s,13nm						
MANU	**Manus Island**	**5.92**	**41**	Pn	**Pn**	**18 27 35.9**	**-2.6**
MANU	**Manus Island**	**5.92**	**41**	P	**Pn**	**18 27 39.4**	**+0.9**
SMPI	**Sarmi**	**6.54**	**313**	P	**Pn**	**18 27 47.5**	**+0.6**
	498nm,1.8s,6.6nm						
RABL	**Rabaul**	**8.97**	**75**	Pn	**Pn**	**18 28 21.5**	**+1.0**
RABL	**Rabaul**	**8.97**	**75**	P	**Pn**	**18 28 22.8**	**+2.3**
FAKI	**Fak Fak**	**11.73**	**287**	Pn	**Pn**	**18 28 57.9**	**-0.3**
FAKI	**Fak Fak**	**11.73**	**287**	P	**Pn**	**18 28 56.7**	**-1.5**
	89nm,0.9s						
SAUI	**Saumlaki**	**12.15**	**262**	Pn	**Pn**	**18 29 03.5**	**-0.4**
SWI	**Sorong**	**13.40**	**294**	P	**Pn**	**18 29 18.1**	**-3.0**
CTA	**Charters Tower**	**13.75**	**169**	Lg	Lg	18 33 26.1	
	0.5nm,0.3s,baz=315,slow=12,SNR=1.7						
WRA	**Warramunga Arr**	**16.01**	**213**	Pn	**P**	**18 29 58.8**	**-0.2**
	1.4nm,0.3s,baz=31,slow=13,SNR=3.0						
WRA				Lg	Lg	18 34 35.6	
	2.0nm,0.3s,baz=43,slow=25,SNR=1.5 15nm,0.8s						
HNR	**Honiara**	**16.58**	**101**	Pn	**Pn**	**18 30 03.2**	**0.0**
HNR				P	**P**	**18 30 05.6**	**+0.2**
HNR	**Honiara**	**16.58**	**101**	P	**Pn**	**18 30 03.7**	**+0.5**
HNR	**Honiara**	**16.58**	**101**	Pn	**Pn**	**18 30 03.9**	**+0.6**
	36nm,0.3s,baz=184,slow=5.4,SNR=15						
NLAI	**Namlea**	**16.62**	**281**	P	**P**	**18 30 05.2**	**-0.7**
	42nm,1.5s						
LBMI	**Labuha**	**16.96**	**290**	P	**P**	**18 30 09.3**	**-0.4**
	189nm,1.6s						
KNRA	**Kununurra**	**17.03**	**237**		**Pn**	**18 30 09.6**	**+0.7**
KNRA				IAmb	IAmb	18 30 30.7	
	comp=Z,109nm,1.0s						
TNTI	**Ternate**	**17.62**	**294**	P	**P**	**18 30 16.8**	**-0.2**
	comp=Z,32nm,0.9s						
SANI	**Sanana**	**17.98**	**284**	P	**P**	**18 30 21.8**	**+0.9**
SANI	**Sanana**	**17.98**	**284**	P	**P**	**18 30 21.3**	**+0.4**
SOEI	**Soe**	**19.26**	**259**	P	**P**	**18 30 35.7**	**+0.5**
	comp=Z,184nm,0.8s						
AS31	**Alice Springs**	**19.36**	**207**	P	**P**	**18 30 36.3**	**+0.3**
ASAR	**Alice Springs**	**19.36**	**207**		**P**	**18 30 34.7**	**-1.4**
ASAR	**Alice Springs**	**19.36**	**207**	P	**Pn**	**18 30 39.2**	**+1.9**
	comp=Z,3.6nm,0.3s,baz=37,slow=9.7,SNR=16 comp=Z,66nm,0.8s						
PATS	**Pohnpei**	**19.90**	**48**	P	**P**	**18 30 39.0**	**-3.0**
EIDS	**Eidsvold**	**20.11**	**160**	P	**P**	**18 30 43.5**	**-0.6**
SGSI	**Sangihe**	**20.57**	**299**	P	**P**	**18 30 49.8**	**+0.5**
	comp=Z,314nm,0.8s						
KMSI	**Cibinong**	**20.68**	**289**	P	**P**	**18 30 49.9**	**-0.6**
	comp=Z,424nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.84**	**235**	P	**P**	**18 30 52.8**	**+0.7**
MMRI	**Maumere**	**21.14**	**263**	P	**P**	**18 30 56.4**	**+1.0**
MMRI	**Maumere**	**21.14**	**263**	P	**P**	**18 30 53.9**	**-1.5**
	comp=Z,104nm,1.0s						
MMRI				pP	**pP**	**18 30 59.8**	**-4.4**
	comp=Z,104nm,1.0s						
LUWI	**Luwuk**	**21.34**	**284**	P	**P**	**18 30 59.2**	**+1.6**
	comp=Z,176nm,1.1s						
GTOI	**Gorontalo**	**21.61**	**288**	P	**P**	**18 31 02.9**	**+2.4**
	comp=Z,48nm,0.8s						
GTOI				pP	**pP**	**18 31 09.4**	**+0.1**
	comp=Z,48nm,0.8s						
EDFI	**Ende, Flores**	**21.68**	**263**	P	**P**	**18 31 01.0**	**-0.4**
	comp=Z,90nm,0.9s						
EDFI				pP	**pP**	**18 31 06.5**	**-3.7**
	comp=Z,90nm,0.9s						
MRSI	**Marisa**	**22.57**	**287**	P	**P**	**18 31 10.2**	**-0.6**
	comp=Z,47nm,1.0s						
KAPI	**Kappang**	**23.63**	**272**	P	**P**	**18 31 19.3**	**-2.3**
TTSI	**Tana Toraja**	**23.80**	**277**	P	**P**	**18 31 23.6**	**+0.4**
	comp=Z,76nm,1.3s						
TOLI2	**Tolitoli**	**23.87**	**288**	P	**P**	**18 31 22.8**	**-1.1**
TOLI2				IAmb	IAmb	18 31 25.9	
	comp=Z,52nm,0.8s						
TOLI2	**Tolitoli**	**23.87**	**288**	P	**P**	**18 31 23.6**	**-0.2**
MPSI	**Mapaga**	**24.48**	**285**	P	**P**	**18 31 27.9**	**-1.5**
KOUNC	**Koumac, New Ca**	**24.54**	**127**	P	**P**	**18 31 27.7**	**-2.2**
ARMA	**Armidale**	**24.98**	**163**	P	**P**	**18 31 35.0**	**+1.1**
ARMA				IAmb	IAmb	18 31 52.0

PHRA **Phrae** 49.35 301 P **P** 18 34 58.3 -1.4
CM31 **Chiang Mai Arr** 50.43 300 P **P** 18 35 06.9 -1.0
CM31 IAmb IAmb 18 35 19.2
comp=Z,40nm,1.4s
CMAR **Chiang Mai Arr** 50.43 300 P **P** 18 35 08.4 +0.4
CMAR **Chiang Mai Arr** 50.43 300 P **P** 18 35 08.9 +1.0
comp=Z,4.2nm,0.7s,baz=116,slow=6.0,SNR=14
comp=Z,4.2nm,0.7s
KMI **Kunming** 50.58 310 ⇑P **P** 18 35 11.5 +2.3
KMI pP pP 18 35 19.8 +0.6
KMI pmax pmax
comp=Z,23nm,1.1s
CHTO **Chiang Mai** 50.59 301 P **P** 18 35 09.2 +0.1
USA0B **Ussuriysk Arra** 51.54 349 P **P** 18 35 15.5 -0.3
USA0B IAmb IAmb 18 35 20.1
comp=Z,15nm,0.8s
USRK **Ussuriysk Ar.** 51.54 349 P **P** 18 35 15.8 0.0
comp=Z,13nm,0.8s,baz=165,slow=7.3,SNR=5.2
comp=Z,13nm,0.8s
XAN **Xi'an** 51.92 323 ⇑P **P** 18 35 18.3 -0.6
XAN pmax pmax
comp=Z,38nm,1.2s
PZH **PanZhiHua** 52.08 311 P **P** 18 35 22.3 +1.9
PZH pmax pmax
comp=Z,10.0nm,0.8s
CN2 **Changchun** 52.68 344 *e*P **P** 18 35 28.5 +4.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BJT **Baijiatuau** 52.71 334 P **P** 18 35 22.9 -1.7
BJT IAmb IAmb 18 35 25.3
comp=Z,17nm,0.7s
BJI **Beijing** 52.73 334 P **P** 18 35 24.0 -0.7
BJI PcP **PcP** 18 36 32.3 -1.8
BJI pmax pmax
comp=Z,12nm,0.8s
CD2 **Chengdu** 53.18 317 P **P** 18 35 28.8 +0.5
CD2 pmax pmax
comp=Z,70nm,0.9s
BNX **BinXian** 53.98 346 ⇑P **P** 18 35 33.5 -0.3
BNX pmax pmax
comp=Z,38nm,1.0s
HHC **Hu-ho-hao-te** 55.50 331 *e*P **P** 18 35 45.8 +0.7
HHC pmax pmax
comp=Z,30nm,0.7s
BTO **Baotou** 56.08 330 *e*P **P** 18 35 53.0 +3.8
BTO pP **sP** 18 36 03.0 -0.1
BTO sP **pP** 18 36 07.0 +7.7
BTO PP **PP** 18 38 00.3 +5.7
BTO pmax pmax
comp=Z,34nm,0.9s
LZH **Lanzhou** 56.37 322 *e*P **P** 18 35 52.8 +1.3
LZH pP sP 18 36 04.0 -1.4
LZH sP pP 18 36 07.5 +5.9
LZH pmax pmax
comp=Z,35nm,1.0s
PEA0B **Petropavlovsk-** 60.63 10 P **P** 18 36 19.1 -1.4
PEA0B IAmb IAmb 18 36 37.5
comp=Z,14nm,0.9s
PETK **Petropavlovsk-** 60.63 10 P **P** 18 36 19.6 -1.0
PETK **Petropavlovsk-** 60.63 10 P **P** 18 36 19.8 -0.8
comp=Z,8.2nm,0.9s,baz=163,slow=6.3,SNR=6.5
comp=Z,8.2nm,0.9s
GTA **Gaotai** 60.95 322 *e*P **P** 18 36 23.8 +0.6
GTA pP pP 18 36 30.5 -2.9
GTA pmax pmax
comp=Z,11nm,1.1s
KEKH **Kekaha** 62.45 61 P **P** 18 36 31.1 -2.4
ULN **Ulaanbaatar** 62.94 333 P **P** 18 36 37.5 +1.1
ULN IAmb IAmb 18 36 48.1
comp=Z,21nm,1.2s
SONM **Songino Array** 63.21 333 P **P** 18 36 37.0 -1.3
SONM IAmb IAmb 18 36 49.7
comp=Z,18nm,1.5s
SONM **Songino Array** 63.21 333 P **P** 18 36 38.3 0.0
comp=Z,5.3nm,1.0s,baz=154,slow=6.4,SNR=3.5
comp=Z,5.3nm,1.0s
HPAH **Hawaii Prepara** 65.38 65 P **P** 18 36 52.0 -0.9
HYB **Hyderabad** 68.36 292 *e*P **P** 18 37 12.2 +0.2
WMQ **Urumqi** 70.93 321 *e*P **P** 18 37 28.8 +1.5
WMQ pP pP 18 37 34.5 -3.1
WMQ pmax pmax
comp=Z,33nm,0.9s
VNDA **Vanda** 71.62 176 P **P** 18 37 32.1 +1.3
VNDA **Vanda** 71.62 176 P **P** 18 37 32.0 +1.2
comp=Z,3.6nm,1.1s,baz=328,slow=11,SNR=3.3
comp=Z,3.6nm,1.1s
MK31 **Makanchi Array** 75.69 322 P **P** 18 37 55.4 +0.1
MK31 IAmb IAmb 18 38 02.7
comp=Z,15nm,1.1s
MKAR **Makanchi Array** 75.69 322 P **P** 18 37 53.3 -2.0
MKAR **Makanchi Array** 75.69 322 P **P** 18 37 55.6 +0.4
comp=Z,3.6nm,0.6s,baz=100,slow=7.3,SNR=8.3
comp=Z,3.6nm,0.6s
MAKZ **Makanchi** 75.89 322 P **P** 18 37 56.1 -0.3
MAKZ IAmb IAmb 18 38 03.9
comp=Z,23nm,1.1s
KSH **Kashi** 77.13 313 P **P** 18 38 06.0 +2.3
KSH pmax pmax
comp=Z,13nm,1.1s
ZAA0 **Zalesovo Array** 77.61 329 P **P** 18 38 04.2 -1.7
ZALV **Zalesovo Beam** 77.61 329 P **P** 18 38 04.3 -1.6
ZALV **Zalesovo Beam** 77.61 329 P **P** 18 38 05.3 -0.6
comp=Z,2.6nm,0.6s,baz=109,slow=7.0,SNR=2.0
comp=Z,2.6nm,0.6s
M13K **Dall Lake** 78.62 24 P **P** 18 38 11.4 +0.1
M13K IAmb IAmb 18 38 26.4
comp=Z,30nm,1.2s
O14K **Tigyukauivet M** 78.82 25 P **P** 18 38 10.9 -1.6
O14K IAmb IAmb 18 38 13.9
comp=Z,26nm,1.1s
L14K **Kuka Creek** 79.42 23 P **P** 18 38 13.3 -2.4
L14K IAmb IAmb 18 38 16.9
comp=Z,9.8nm,0.7s
KURBB **Kurchatov Arra** 79.56 324 P **P** 18 38 16.5 -0.3
comp=Z,2.2nm,0.8s,baz=118,slow=4.6,SNR=2.6
comp=Z,2.2nm,0.8s
ARSB **Arslanbob** 79.87 314 P **P** 18 38 16.6 -2.2
O16K **Kokwok River B** 80.38 26 P **P** 18 38 19.6 -1.4
O16K IAmb IAmb 18 38 30.5
comp=Z,16nm,1.1s
ANM **Nome** 80.38 20 P **P** 18 38 20.6 -0.2
K15K **Wolf Creek Mou** 80.42 23 P **P** 18 38 21.2 +0.1
K15K IAmb IAmb 18 38 31.9
comp=Z,24nm,1.2s
M16K **Timber Creek** 80.75 25 P **P** 18 38 23.3 +0.3
M16K IAmb IAmb 18 38 24.9
comp=Z,16nm,1.1s
L16K **Owhat River** 80.91 24 P **P** 18 38 23.4 -0.4
N17K **Nushagak Hills** 81.24 25 P **P** 18 38 24.1 -1.4
F15K **North Star Dit** 81.33 19 P **P** 18 38 25.8 -0.1
F15K IAmb IAmb 18 38 37.1
comp=Z,19nm,1.3s
J16K **Anvik River** 81.33 22 P **P** 18 38 26.1 +0.1
N18K **Kilae Creek** 81.87 26 P **P** 18 38 28.5 -0.4
N18K IAmb IAmb 18 38 35.8
comp=Z,18nm,1.4s
G16K **Koyuk River** 81.90 20 P **P** 18 38 28.9 0.0
G16K IAmb IAmb 18 38 40.0
comp=Z,16nm,1.1s
K17K **Iditarod** 81.91 23 P **P** 18 38 29.2 +0.2
K17K IAmb IAmb 18 38 30.9
comp=Z,16nm,0.9s
KKAR **Karatay Array** 82.15 315 P **P** 18 38 31.1 +0.3
SVW2 **Sparrevohn** 82.21 25 P **P** 18 38 30.9 +0.2
SVW2 IAmb IAmb 18 38 32.4
comp=Z,12nm,1.0s
L18K **Granite Mounta** 82.30 24 P **P** 18 38 30.7 -0.4
H17K **Granite Mounta** 82.50 21 P **P** 18 38 32.2 +0.2
H17K IAmb IAmb 18 38 33.3
comp=Z,9.4nm,0.8s
C16K **Lisburne Hills** 82.70 17 P **P** 18 38 33.3 +0.2
F17K **Baldwin Pennin** 82.88 19 P **P** 18 38 33.7 -0.2
F17K IAmb IAmb 18 38 40.8
comp=Z,19nm,1.4s
J18K **Innoko River** 82.91 23 P **P** 18 38 32.5 -1.8
TTA **Tatalina** 82.92 24 P **P** 18 38 34.1 -0.4
L19K **White Mountain** 83.03 25 P **P** 18 38 34.1 -0.9
L19K IAmb IAmb 18 38 44.7
comp=Z,13nm,1.2s
M19K **Big River Lodg** 83.09 25 P **P** 18 38 34.7 -0.6
M19K IAmb IAmb 18 38 35.9
comp=Z,18nm,1.2s
QSPA **South Pole Qui** 83.44 180 P **P** 18 38 37.1 -0.1
QSPA IAmb IAmb 18 38 39.0
comp=Z,13nm,0.9s

J19K **Poorman** 83.60 23 P **P** 18 38 37.9 +0.1
J19K IAmb IAmb 18 38 49.2
comp=Z,13nm,1.2s
M20K **Styx River** 83.61 25 P **P** 18 38 36.4 -1.7
E18K **Tukpahlearik C** 83.64 19 P **P** 18 38 37.9 0.0
E18K IAmb IAmb 18 38 52.4
comp=Z,11nm,1.1s
K20K **Telida** 83.90 24 P **P** 18 38 37.5 -1.9
C18K **Utukok River** 84.16 18 P **P** 18 38 40.3 -0.3
C18K IAmb IAmb 18 39 05.1
comp=Z,24nm,1.5s
J20K **Nowinta River** 84.25 23 P **P** 18 38 40.3 -0.8
J20K IAmb IAmb 18 38 52.2
comp=Z,22nm,1.4s
FIS **Fire Island** 84.56 27 P **P** 18 38 41.2 -1.5
NRIK **Noril'sk** 84.72 343 P **P** 18 38 42.7 -0.6
comp=Z,6.7nm,0.8s,baz=133,slow=3.3,SNR=3.9
comp=Z,6.7nm,0.8s
CAST **Castle Rocks** 84.73 24 P **P** 18 38 41.4 -2.2
CAST IAmb IAmb 18 38 50.9
comp=Z,15nm,1.2s
RC01 **Rabbit Creek A** 84.75 27 P **P** 18 38 42.2 -1.6
C19K **Lookout Ridge** 84.90 18 P **P** 18 38 45.5 +1.2
D19K **Kuna River** 85.02 18 P **P** 18 38 44.9 0.0
D19K IAmb IAmb 18 39 12.8
comp=Z,14nm,1.1s
F20K **Avaraart Lake** 85.06 20 P **P** 18 38 43.8 -1.4
F20K IAmb IAmb 18 38 55.6
comp=Z,7.9nm,1.0s
BVAR **Borovoye Array** 85.14 325 P **P** 18 38 45.7 -0.1
comp=Z,12nm,0.9s,baz=116,slow=6.8,SNR=6.0
comp=Z,12nm,0.9s
BRVK **Borovoye** 85.21 325 P **P** 18 38 45.6 -0.6
BRVK IAmb IAmb 18 38 56.9
comp=Z,12nm,1.1s
IMAR **Indian Mountai** 85.25 21 P **P** 18 38 44.7 -1.4
H21K **Melozitna Rive** 85.44 22 P **P** 18 38 45.7 -1.4
H21K IAmb IAmb 18 38 57.8
comp=Z,15nm,1.4s
TRF **Thorofare Moun** 85.47 24 P **P** 18 38 46.9 -0.6
I21K **Tanana** 85.54 22 P **P** 18 38 47.2 -0.4
I21K IAmb IAmb 18 38 59.3
comp=Z,17nm,1.3s
SML **Sawmill** 85.66 26 P **P** 18 38 46.8 -1.5
GLI **Glacier Island** 85.86 27 P **P** 18 38 47.7 -1.6
RND **Reindeer** 86.05 25 P **P** 18 38 49.0 -1.3
RND IAmb IAmb 18 38 49.7
comp=Z,14nm,0.8s
SCM **Sheep Creek Mo** 86.11 26 P **P** 18 38 49.0 -1.6
DHY **Denali Highway** 86.54 25 P **P** 18 38 52.8 0.0
DHY IAmb IAmb 18 39 02.7
comp=Z,13nm,0.8s
E22K **Anaktuvuk Pass** 86.89 20 P **P** 18 38 54.0 -0.2
CCB **Clear Creek Bu** 86.95 24 P **P** 18 38 52.4 -2.1
CCB IAmb IAmb 18 38 54.4
comp=Z,7.0nm,0.8s
ILAR **Eielson Array** 87.36 24 P **P** 18 38 54.9 -1.6
ILAR **Eielson Array** 87.36 24 P **P** 18 38 55.1 -1.5
comp=Z,3.9nm,0.8s,baz=255,slow=5.0,SNR=9.9
comp=Z,3.9nm,0.8s
H24K **Noodor Dome** 87.37 23 P **P** 18 38 55.7 -0.9
VRDI **Verde Repeater** 87.65 28 P **P** 18 38 57.8 -0.5
J25K **Salcha River,** 87.92 24 P **P** 18 38 59.5 +0.2
J25K IAmb IAmb 18 39 09.1
comp=Z,15nm,1.2s
F24K **Squaw Lake** 88.00 21 P **P** 18 38 59.9 +0.3
F24K IAmb IAmb 18 39 01.2
comp=Z,7.9nm,0.8s
D24K **Happy Valley** 88.32 19 P **P** 18 39 01.6 +0.6
BARN **Barnard Glacie** 88.43 28 P **P** 18 39 02.5 +0.6
CTGM **Chitina Glacie** 88.56 28 P **P** 18 39 02.0 -0.5
M27K **Edge Creek, AK** 88.70 27 P **P** 18 39 03.5 +0.3
M27K IAmb IAmb 18 39 04.3
comp=Z,9.0nm,0.8s
BCAR **Beaver Creek A** 88.95 26 P **P** 18 39 04.3 +0.1
BMAR **Burnt Mountain** 89.17 22 P **P** 18 39 05.4 +0.3
P29M **Windy Craggy** 89.96 30 P **P** 18 39 09.0 +0.1
M29M **Somme Creek** 90.26 27 P **P** 18 39 10.2 -0.2
M29M IAmb IAmb 18 39 11.5
comp=Z,6.8nm,0.8s
NVAR **Mina Array Bea** 100.47 52 P **Pdif** 18 39 58.7 +1.0
comp=Z,0.3nm,0.7s,baz=258,slow=4.4,SNR=4.0
PLCA **Paso Flores** 123.54 149 PKP **PKiKP** 18 45 08.4 +0.5
comp=Z,1.1nm,0.8s,baz=200,slow=2.1,SNR=5.8
CPUP **Villa Florida** 141.61 149 PKP **PKPdf** 18 45 42.4 +0.5
comp=Z,1.6nm,0.7s,baz=244,slow=5.3,SNR=5.3
TORD **Torodi Ar. Bea** 141.79 283 PKhKP PKPpre 18 45 39.1
comp=Z,2.4nm,0.5s,baz=48,slow=2.6,SNR=1.9
KIC **Kosan Boka** 148.40 272 ⇑*i*PKP1 **PKPab** 18 46 04.5 +3.8
comp=Z,29nm,1.0s
DBIC **Dimbokro** 148.53 272 PKPbc **PKPbc** 18 45 58.4 +0.7
comp=Z,16nm,1.0s,baz=110,slow=4.5,SNR=4.4
LIC **Lamto** 148.68 271 ⇑*i*PKP1 **PKPab** 18 46 05.2 +3.4
comp=Z,48nm,0.8s
TIC **Toumodi** 148.69 272 ⇑*i*PKP1 **PKPab** 18 46 05.3 +3.5
comp=Z,28nm,0.9s

*IDC **25** 18:27:17.1±0.5,6°.31S×143°.39E,h0km,mb5.1/20, mbtmp5.2/25,ML3.4/2,Error ellipse: s-maj=19.4km s-min=12.8km az=76.0*
*NEIC **25** 18:27:18.9±1.8,6°.33S±0°.09×143°.20E±0°.10,h10km±1km, mb5.4/117,Error ellipse: s-maj=17.1km s-min=13.6km az=63.0*
ISC 25 18:27:18.3±0.3,**6°.43S**±0°.05×**143°.23E**±0°.06,**h10**km,**n360,** σ1§**09**/336,**mb5.4**/76,**3C**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.89**	**127**	Pn	**Pn**	**18 28 32.1**	**+0.1**
	26nm,0.3s,baz=307,slow=15,SNR=3.4						
PMG				Sn	**Sn**	**18 29 23.8**	**-4.9**
	18nm,0.3s,baz=346,slow=19,SNR=5.5						
PMG				Lg	Lg	18 29 44.7	
	34nm,0.3s,baz=2.1,slow=19,SNR=1.9						
	227nm,0.8s						
COEN	**Coen**	**7.48**	**180**	Pn	**Pn**	**18 29 05.4**	**-2.2**
SAUI	**Saumlaki**	**11.93**	**262**	Pn	**Pn**	**18 30 05.2**	**-3.4**
MTN	**Manton Dam**	**13.52**	**241**	Pn	**Pn**	**18 30 32.3**	**+2.0**
CTA	**Charters Tower**	**13.89**	**168**	Pn	**Pn**	**18 30 37.5**	**+2.0**
	0.4nm,0.3s,baz=50,slow=9.0,SNR=1.8						
CTA				Lg	Lg	18 34 37.0	
	0.6nm,0.3s,baz=334,slow=17,SNR=3.1						
	21nm,1.0s						
WB0	**Warramunga Arr**	**15.79**	**212**	Pn	**Pn**	**18 30 59.1**	**-2.0**
WB0				IAmb	IAmb	18 31 00.6	
	comp=Z,332nm,1.4s						
WRAB	**Tennant Creek**	**15.95**	**212**	Pn	**Pn**	**18 31 01.9**	**-1.2**
WB2	**Warramunga Arr**	**15.96**	**212**	Pn	**Pn**	**18 31 01.4**	**-1.8**
WRA	**Warramunga Arr**	**15.97**	**212**	Pn	**Pn**	**18 31 02.3**	**-1.0**
	comp=Z,2.6nm,0.3s,baz=31,slow=13,SNR=4.7						
WRA				Sn	**Sn**	**18 33 53.9**	**-6.6**
	comp=Z,1.9nm,0.3s,baz=32,slow=24,SNR=1.6						
WRA				Lg	Lg	18 35 44.6	
	comp=Z,1.1nm,0.3s,baz=42,slow=29,SNR=1.9						
HNR	**Honiara**	**16.83**	**101**	Pn	**Pn**	**18 31 14.0**	**-0.2**
	comp=Z,1μm,1.0s,baz=227,slow=18,SNR=1.1						
KNRA	**Kununurra**	**16.90**	**236**	Pn	**Pn**	**18 31 13.2**	**-2.0**
AS31	**Alice Springs**	**19.34**	**207**	P	**P**	**18 31 46.0**	**+1.9**
ASAR	**Alice Springs**	**19.34**	**207**	P	**Pn**	**18 31 46.2**	**+1.0**
ASAR	**Alice Springs**	**19.34**	**207**	P	**Pn**	**18 31 47.8**	**+2.6**
	comp=Z,159nm,0.8s,baz=35,slow=10,SNR=14						
ASAR				Lg	Lg	18 37 35.5	
	comp=Z,0.5nm,0.3s,baz=296,slow=36,SNR=2.0						
GUMO	**Guam**	**19.95**	**5**	P	**P**	**18 31 50.5**	**-0.3**
	comp=Z,73nm,0.9s,baz=226,slow=13,SNR=2.1						
EIDS	**Eidsvold**	**20.28**	**159**	P	**P**	**18 31 56.0**	**+1.8**
DAV	**Davao City (W)**	**22.13**	**307**	P	**P**	**18 32 15.8**	**+1.4**
	comp=Z,97nm,0.3s,baz=135,slow=3.0,SNR=1.8						
	comp=Z,97nm,0.3s						
TOLI2	**Tolitoli**	**23.62**	**288**	P	**P**	**18 32 29.5**	**-0.4**
TOLI2				IAmb	IAmb	18 32 33.5	
	comp=Z,92nm,0.8s						
KOUNC	**Koumac, New Ca**	**24.78**	**127**	P	**P**	**18 32 41.0**	**+0.4**
ARMA	**Armidale**	**25.14**	**163**	P	**P**	**18 32 44.9**	**+1.1**
STKA	**Stephens Creek**	**25.36**	**183**	P	**P**	**18 32 47.8**	**+2.1**
STKA	**Stephens Creek**	**25.36**	**183**	P	**P**	**18 32 47.5**	**+1.8**
	comp=Z,13nm,0.8s,baz=357,slow=12,SNR=2.2						
	comp=Z,13nm,0.8s						
CAN	**Canberra**	**29.24**	**170**	P	**P**	**18 33 22.5**	**+1.9**
CAN				IAmb	IAmb	18 33 41.8	
	comp=Z,102nm,1.5s						
MORW	**Morawa**	**34.14**	**225**	P	**P**	**18 34 03.7**	**-0.1**
MORW				IAmb	IAmb	18 34 31.1	
	comp=Z,90nm,1.4s						

LEM **Lembang** 35.37 267 P **P** 18 34 14.8 +0.1
comp=Z,21nm,0.7s,baz=105,slow=17,SNR=3.7
comp=Z,21nm,0.7s
TWG **Pinlang** 36.26 324 P **P** 18 34 19.7 -2.3
TWG IAmb IAmb 18 34 20.5
comp=Z,70nm,0.7s
YOJ **Yonaguni jima** 36.48 328 P **P** 18 34 22.5 -1.4
KNMB **Chin-men Tao** 39.10 323 P **P** 18 34 42.6 -3.5
KNMB IAmb IAmb 18 34 55.1
comp=Z,114nm,1.1s
HKPS **Hong Kong Po S** 40.31 316 P **P** 18 34 54.7 -1.5
HKPS IAmb IAmb 18 35 00.8
comp=Z,152nm,1.2s
JMN **Monobe** 40.91 348 P **P** 18 34 59.3 -1.6
JNU **Nakatsue** 41.05 344 P **P** 18 35 01.0 -1.1
JNU **Nakatsue** 41.05 344 P **P** 18 35 01.4 -0.7
comp=Z,29nm,0.9s,baz=153,slow=3.9,SNR=5.8
comp=Z,29nm,0.9s
MJAR **Matsushiro Arr** 43.00 354 P **P** 18 35 16.7 -1.3
comp=Z,18nm,1.1s,baz=181,slow=8.4,SNR=13
comp=Z,18nm,1.1s
MAJO **Matsushiro** 43.00 354 P **P** 18 35 15.9 -2.1
MJB9 **Matsu-Tunnel** 43.01 354 P **P** 18 35 16.9 -1.2
THZ **Tophouse** 43.97 148 P **P** 18 35 27.1 +1.2
JMM **Marumori** 44.12 357 P **P** 18 35 25.9 -1.1
RTZ **Ruatahuna** 44.24 141 P **P** 18 35 27.0 -1.2
RTZ IAmb IAmb 18 35 36.9
comp=Z,50nm,0.9s
BKZ **Black Stump Fm** 44.28 142 P **P** 18 35 29.1 +0.7
TUWZ **Tuamarina** 44.29 147 P **P** 18 35 28.5 +0.1
MLZ **Mavora Lakes** 44.41 155 P **P** 18 35 32.8 +3.5
MLZ IAmb IAmb 18 35 38.9
comp=Z,34nm,0.8s
JSD **Sado** 44.48 354 P **P** 18 35 28.7 -1.1
GVZ **Greta Valley S** 44.89 149 P **P** 18 35 33.1 0.0
GVZ IAmb IAmb 18 35 34.8
comp=Z,100nm,1.3s
KSAR **Wonju Array Be** 45.94 343 P **P** 18 35 40.9 -0.5
KSRS **Korea Array** 45.94 343 P **P** 18 35 42.1 +0.7
comp=Z,53nm,1.0s,baz=162,slow=9.2,SNR=23
comp=Z,53nm,1.0s
JTM **Tenmabayashi** 47.02 358 P **P** 18 35 49.3 -0.6
NIUE **Niue** 47.24 110 P **P** 18 35 52.8 +0.8
PHRA **Phrae** 49.10 301 P **P** 18 36 07.4 +0.9
CM31 **Chiang Mai Arr** 50.19 300 P **P** 18 36 15.0 +0.3
CMAR **Chiang Mai Arr** 50.19 300 P **P** 18 36 16.6 +1.9
comp=Z,10nm,1.0s,baz=123,slow=5.6,SNR=6.6
comp=Z,10nm,1.0s
ASAJ **Asahikawa** 50.31 359 P **P** 18 36 15.4 +0.2
comp=Z,54nm,1.2s,baz=244,slow=16,SNR=5.7
comp=Z,54nm,1.2s
USRK **Ussuriysk Ar.** 51.41 350 P **P** 18 36 23.7 +0.3
comp=Z,49nm,0.9s,baz=168,slow=8.2,SNR=19
comp=Z,49nm,0.9s
MDJ **Mudanjiang** 52.27 348 P **P** 18 36 28.6 -1.3
MDJ IAmb IAmb 18 36 31.3
comp=Z,43nm,1.0s
BJT **Baijiatuau** 52.52 334 P **P** 18 36 30.5 -1.4
BJT IAmb IAmb 18 36 33.6
comp=Z,60nm,1.2s
BRDH **Bariadhala** 58.15 302 P **P** 18 37 13.9 +1.1
comp=Z,105nm,0.3s,baz=90,slow=11,SNR=4.3
HIA **Hailar** 59.13 342 P **P** 18 37 19.4 +0.2
HIA IAmb IAmb 18 37 20.8
comp=Z,47nm,1.2s
PEA0B **Petropavlovsk-** 60.57 10 P **P** 18 37 29.3 +0.4
PETK **Petropavlovsk-** 60.57 10 P **P** 18 37 28.5 -0.4
PETK **Petropavlovsk-** 60.57 10 P **P** 18 37 28.8 -0.2
comp=Z,47nm,0.9s,baz=191,slow=7.2,SNR=17
comp=Z,47nm,0.9s
SONM **Songino Array** 63.02 333 P **P** 18 37 46.6 +0.9
SONM IAmb IAmb 18 37 48.2
comp=Z,39nm,1.4s
SONM **Songino Array** 63.02 333 P **P** 18 37 46.6 +0.9
comp=Z,13nm,1.0s,baz=164,slow=7.1,SNR=9.3
comp=Z,13nm,1.0s
HPAH **Hawaii Prepara** 65.54 65 P **P** 18 38 02.4 -0.3
MA2 **Magadan** 66.07 4 P **P** 18 38 04.7 -0.6
PPT **Papeete** 66.37 106 P **P** 18 38 08.6 +0.5
comp=Z,17nm,1.0s,baz=257,slow=19,SNR=1.7
comp=Z,17nm,1.0s
HYB **Hyderabad** 68.11 292 *e*P **P** 18 38 19.9 +0.8
YAK **Yakutsk** 69.06 353 P **P** 18 38 23.1 -0.9
YAK IAmb IAmb 18 38 24.5
comp=Z,29nm,1.1s
NIKH **Nikolski High** 71.69 28 P **P** 18 38 41.2 +0.8
baz=231
VNDA **Vanda** 71.73 176 P **P** 18 38 41.6 +1.3
VNDA **Vanda** 71.73 176 P **P** 18 38 42.5 +2.2
comp=Z,2.8nm,0.8s,baz=336,slow=5.0,SNR=2.9
comp=Z,2.8nm,0.8s
UNV **Unalaska Valle** 73.33 28 P **P** 18 38 50.6 +0.5
baz=233
P08K **Saint George I** 73.71 25 P **P** 18 38 51.8 -0.4
baz=230
SPIA **Saint Paul Isl** 73.79 24 P **P** 18 38 52.5 -0.3
baz=229
ZSN **Zaisan** 74.21 323 *e*P **P** 18 38 56.4 +0.9
baz=323
FALS **False Pass** 75.39 29 P **P** 18 39 03.2 +1.1
baz=236
MK31 **Makanchi Array** 75.47 322 P **P** 18 39 04.1 +1.3
MK31 IAmb IAmb 18 39 05.2
comp=Z,60nm,1.1s
MKAR **Makanchi Array** 75.47 322 P **P** 18 39 04.0 +1.2
comp=Z,57nm,1.1s,baz=115,slow=7.2,SNR=19
comp=Z,57nm,1.1s
MAKZ **Makanchi** 75.67 322 P **P** 18 39 04.2 +0.3
SHLS **Shalkode** 75.78 317 *e*P **P** 18 39 04.7 -0.1
baz=317
UZB **Uzynbulak** 76.07 317 *e*P **P** 18 39 08.0 +1.6
baz=317
TARG **Taragay, Kyrgy** 76.37 316 P **P** 18 39 09.3 +0.7
TARG IAmb IAmb 18 39 22.2
comp=Z,54nm,1.3s
KPKS **Kokpek** 76.42 317 *e*P **P** 18 39 09.6 +1.2
baz=317
SATY **Saty** 76.45 317 *e*P **P** 18 39 10.1 +1.4
baz=317
ZHN **Zhinishke** 76.47 317 *e*P **P** 18 39 10.0 +1.2
baz=317
SDPT **Sand Point** 77.08 29 P **P** 18 39 12.0 +0.3
baz=238
TDK **Taldyqorghan** 77.20 319 *e*P **P** 18 39 14.1 +1.5
baz=319
CHNA **Chernabura Isl** 77.24 30 P **P** 18 39 13.2 +0.7
baz=239
ZAA0 **Zalesovo Array** 77.41 329 P **P** 18 39 13.5 -0.1
ZALV **Zalesovo Beam** 77.41 329 P **P** 18 39 13.5 0.0
ZALV **Zalesovo Beam** 77.41 329 P **P** 18 39 13.3 -0.3
comp=Z,8.5nm,0.8s,baz=108,slow=5.4,SNR=7.3
comp=Z,8.5nm,0.8s
MDOK **Medeo** 77.42 317 *e*P **P** 18 39 15.5 +1.4
baz=316
TNSS **Tian-Shan** 77.44 317 *e*P **P** 18 39 16.3 +1.8
baz=316
ULHL **Ulahol** 77.64 316 P **P** 18 39 16.9 +1.4
SNR=6.7
S14K **Fog Glacier** 78.01 29 P **P** 18 39 17.9 +0.9
baz=239
KUU **Kurty** 78.16 317 *e*P **P** 18 39 18.9 +0.9
baz=317
TKM2 **Tokmak 2** 78.32 316 P **P** 18 39 20.4 +1.2
SNR=9.6
CHGN **Chignik** 78.57 29 P **P** 18 39 19.2 -0.7
baz=240
M13K **Dall Lake** 78.62 24 P **P** 18 39 20.5 +0.3
baz=234
KBK **Karagaybulak** 78.68 316 P **P** 18 39 22.9 +1.7
SNR=6.8
O14K **Tigyukauivet M** 78.83 26 P **P** 18 39 21.4 +0.1
O14K IAmb IAmb 18 39 23.1
comp=Z,56nm,1.1s
O14K **Tigyukauivet M** 78.83 26 P **P** 18 39 22.2 +0.9
baz=237
UCH **Uchtor** 78.84 315 P **P** 18 39 24.2 +1.8
SNR=13
CHMS **Chumysh** 78.93 316 P **P** 18 39 23.4 +1.1
SNR=12
AAK **Ala-Archa** 78.99 316 P **P** 18 39 24.7 +1.8
SNR=7.7
AAK **Ala-Archa** 78.99 316 P **P** 18 39 21.3 -1.6
AAK IAmb IAmb 18 39 25.5
comp=Z,34nm,1.1s
N14K **Kuskokwak Cree** 79.03 25 P **P** 18 39 23.2 +0.8
baz=236
USP **Ospenovka** 79.20 316 P **P** 18 39 25.0 +1.2

SNR=17
KURK **Kurchatov** 79.33 324 P P 18 39 24.1 -0.2
KURK IAmb IAmb 18 39 26.2
comp=Z,69nm,1.2s
KURBB **Kurchatov Arra** 79.35 324 P P 18 39 24.4 0.0
comp=Z,23nm,1.1s,baz=115,slow=4.9,SNR=15
comp=Z,23nm,1.1s
M14K **Bethel** 79.38 24 P P 18 39 24.1 -0.1
M14K IAmb IAmb 18 39 25.8
comp=Z,59nm,1.1s
M14K **Bethel** 79.38 24 P P 18 39 25.3 +1.0
baz=236
O15K **Ungalikthiuk R** 79.41 26 P P 18 39 25.4 +0.9
baz=238
L14K **Kuka Creek** 79.42 23 P P 18 39 24.1 -0.4
L14K IAmb IAmb 18 39 26.2
comp=Z,34nm,0.8s
L14K **Kuka Creek** 79.42 23 P P 18 39 24.8 +0.3
baz=235
EKS2 **Erkin-Say** 79.50 315 P P 18 39 27.1 +1.6
SNR=16
ARSB **Arslanbob** 79.64 314 P P 18 39 25.9 -0.5
N15K **Kwethluk River** 79.83 25 P P 18 39 26.3 -0.5
baz=238
M15K **Kasigluk River** 79.87 25 P P 18 39 27.7 +0.8
baz=237
J14K **Nanvaranak Lak** 79.91 22 P P 18 39 26.7 -0.5
J14K **Nanvaranak Lak** 79.91 22 P P 18 39 26.4 -0.7
baz=234
L15K **Ungalak Mounta** 80.09 23 P P 18 39 28.2 0.0
baz=236
BTLS **Baital** 80.10 318 eP P 18 39 29.6 +1.0
baz=318
P16K **Nushagak River** 80.15 27 P P 18 39 29.4 +0.9
baz=240
TNA **Tin City** 80.16 19 P P 18 39 28.0 -0.4
baz=229,SNR=5.6
ANM **Nome** 80.36 20 P P 18 39 30.2 +0.6
ANM **Nome** 80.36 20 P P 18 39 29.7 +0.1
baz=232,SNR=6.4
O16K **Kokwok River B** 80.39 26 P P 18 39 29.7 -0.1
O16K IAmb IAmb 18 39 32.1
comp=Z,56nm,1.3s
O16K **Kokwok River B** 80.39 26 P P 18 39 30.0 +0.2
baz=240
K15K **Wolf Creek Mou** 80.42 23 P P 18 39 30.4 +0.5
K15K IAmb IAmb 18 39 31.7
comp=Z,45nm,1.0s
K15K **Wolf Creek Mou** 80.42 23 P P 18 39 29.9 -0.1
baz=236
N16K **Nishlik Lake** 80.55 25 P P 18 39 31.5 +0.8
baz=239
F14K **Arctic Creek** 80.61 19 P P 18 39 31.2 +0.2
baz=231
Q17K **Contact Creek** 80.73 28 P P 18 39 32.0 +0.2
baz=242
SII **Sitkinak Islan** 80.75 30 P P 18 39 33.5 +1.6
baz=243
M16K **Timber Creek** 80.76 25 P P 18 39 31.3 -0.5
M16K IAmb IAmb 18 39 33.5
comp=Z,48nm,0.9s
M16K **Timber Creek** 80.76 25 P P 18 39 33.1 +1.3
baz=238
L16K **Owhat River** 80.91 24 P P 18 39 32.8 +0.2
L16K IAmb IAmb 18 39 33.9
comp=Z,32nm,0.9s
L16K **Owhat River** 80.91 24 P P 18 39 33.2 +0.7
baz=239
O17K **Koliganek Bris** 80.92 26 P P 18 39 33.7 +1.1
baz=240
G15K **Niukluk** 81.08 20 P P 18 39 33.3 -0.1
baz=233
R18K **Karluk** 81.08 29 P P 18 39 35.2 +1.7
baz=243
N17K **Nushagak Hills** 81.25 26 P P 18 39 34.2 -0.2
N17K IAmb IAmb 18 39 36.3
comp=Z,43nm,1.1s
N17K **Nushagak Hills** 81.25 26 P P 18 39 34.6 +0.1
baz=240
DZA **Taraz** 81.28 315 eP P 18 39 36.1 +1.0
baz=315
F15K **North Star Dit** 81.31 19 P P 18 39 34.8 +0.2
F15K IAmb IAmb 18 39 36.3
comp=Z,49nm,1.2s
F15K **North Star Dit** 81.31 19 P P 18 39 35.1 +0.5
baz=232
J16K **Anvik River** 81.33 22 P P 18 39 34.5 -0.3
J16K IAmb IAmb 18 39 36.8
comp=Z,38nm,1.0s
J16K **Anvik River** 81.33 22 P P 18 39 35.6 +0.9
baz=237,SNR=9.5
OHAK **Old Harbor** 81.49 29 P P 18 39 36.8 +1.1
baz=244
H16K **Elim** 81.49 21 P P 18 39 36.2 +0.6
baz=235,SNR=7.8
M17K **Holitna River** 81.58 25 P P 18 39 37.6 +1.4
baz=240
L17K **Donlin** 81.61 24 P P 18 39 37.4 +1.1
baz=239
I17K **Unalakleet** 81.62 22 P P 18 39 37.6 +1.4
baz=236,SNR=9.4
O18K **Koktuh Hills** 81.79 27 P P 18 39 37.9 +0.5
baz=242
SIMJ **Simiganj** 81.81 310 P P 18 39 37.3 -0.8
SIMJ IAmb IAmb 18 39 40.2
comp=Z,50nm,1.1s
N18K **Kilae Creek** 81.88 26 P P 18 39 38.8 +1.0
baz=241
G16K **Koyuk River** 81.89 20 IAmb IAmb 18 39 39.3
comp=Z,44nm,1.1s
G16K **Koyuk River** 81.89 20 P P 18 39 38.3 +0.6
baz=235
K17K **Iditarod** 81.91 23 P P 18 39 38.8 +0.9
baz=239
KK31 **Karatay Array** 81.92 315 IAmb IAmb 18 39 40.5
comp=Z,42nm,1.4s
KKAR **Karatay Array** 81.92 315 IAmb IAmb 18 39 40.5
comp=Z,42nm,1.4s
IUG **Iuzhnay** 81.99 314 eP P 18 39 40.0 +1.1
baz=314
KDAK **Kodiak Island** 82.08 29 P P 18 39 40.1 +1.2
baz=245
SVW2 **Sparrevohn** 82.22 25 P P 18 39 38.8 -0.8
SVW2 IAmb IAmb 18 39 41.2
comp=Z,31nm,1.0s
L18K **Granite Mounta** 82.30 24 IAmb IAmb 18 39 42.2
comp=Z,31nm,1.1s
L18K **Granite Mounta** 82.30 24 P P 18 39 40.6 +0.6
baz=240
M18K **Stony River** 82.30 25 P P 18 39 40.7 +0.7
baz=241
O19K **Port Alsworth** 82.34 27 P P 18 39 40.7 +0.5
baz=243
BRLS **Borolday** 82.38 315 eP P 18 39 41.7 +0.9
baz=314
H17K **Granite Mounta** 82.49 21 IAmb IAmb 18 39 42.5
comp=Z,46nm,1.1s
H17K **Granite Mounta** 82.49 21 P P 18 39 41.5 +0.6
baz=237
G17K **Kiwalik Mounta** 82.54 20 P P 18 39 41.8 +0.7
baz=236
N19K **Bonanza Creek** 82.56 26 P P 18 39 40.9 -0.6
N19K IAmb IAmb 18 39 42.6
comp=Z,33nm,1.0s
N19K **Bonanza Creek** 82.56 26 P P 18 39 41.4 0.0
baz=243
BRZS **Berezniki** 82.61 322 eP P 18 39 42.5 +0.7
baz=322
C16K **Lisburne Hills** 82.68 17 P P 18 39 41.7 -0.1
baz=232
F17K **Baldwin Pennin** 82.86 20 IAmb IAmb 18 39 50.4
comp=Z,37nm,1.1s
F17K **Baldwin Pennin** 82.86 20 P P 18 39 41.7 -1.0
baz=236
J18K **Innoko River** 82.91 23 P P 18 39 43.6 +0.5
baz=240
TTA **Tatalina** 82.92 24 IAmb IAmb 18 39 44.6
comp=Z,43nm,1.4s
TTA **Tatalina** 82.92 24 P P 18 39 44.3 +1.1
baz=241,SNR=5.8
D17K **Noatak River** 83.00 18 P P 18 39 43.7 +0.2
baz=234,SNR=6.1
L19K **White Mountain** 83.04 25 P P 18 39 43.8 0.0
baz=242
E17K **Hotham Inlet** 83.04 19 P P 18 39 44.2 +0.6
baz=235,SNR=12
O20K **Slope Mountain** 83.05 27 P P 18 39 45.4 +1.4
baz=244
M19K **Big River Lodg** 83.10 25 P P 18 39 45.4 +1.3
baz=242
H18K **Honhosa River** 83.16 21 P P 18 39 44.1 -0.3
baz=238
HOM **Homer** 83.32 28 P P 18 39 46.3 +1.0
baz=245
C17K **DeLong Mountai** 83.44 17 P P 18 39 46.1 +0.4
baz=234
G18K **Tagagawik** 83.45 21 P P 18 39 46.0 +0.1
baz=238,SNR=11
F18K **Selawik** 83.48 20 P P 18 39 46.2 +0.3
baz=237
GCSA **Galena City Sc** 83.49 22 P P 18 39 46.5 +0.5
baz=240,SNR=9.7
QSPA **South Pole Qui** 83.54 180 P P 18 39 47.2 +0.6
QSPA IAmb IAmb 18 39 59.3
comp=Z,18nm,0.8s
QSPA **South Pole Qui** 83.54 180 P P 18 39 47.0 +0.5
comp=Z,7.5nm,0.6s,baz=29,slow=1.4,SNR=3.7
comp=Z,7.5nm,0.6s
L20K **Farewell, AK** 83.58 25 P P 18 39 47.2 +0.6
baz=243
J19K **Poorman** 83.60 23 IAmb IAmb 18 39 48.8
comp=Z,45nm,1.2s
J19K **Poorman** 83.60 23 P P 18 39 47.1 +0.5
baz=241
M20K **Styx River** 83.62 25 IAmb IAmb 18 39 49.8
comp=Z,44nm,1.1s
M20K **Styx River** 83.62 25 P P 18 39 46.8 -0.1
baz=244
E18K **Tukpahlearik C** 83.62 19 P P 18 39 46.8 +0.2
baz=236
K20K **Telida** 83.91 24 IAmb IAmb 18 39 49.8
comp=Z,48nm,1.1s
K20K **Telida** 83.91 24 P P 18 39 49.0 +0.8
baz=243,SNR=6.6
H19K **Roundabout Mou** 84.04 21 P P 18 39 49.2 +0.4
baz=240
G19K **Purcell Mounta** 84.12 21 P P 18 39 50.2 +0.9
baz=240
C18K **Utukok River** 84.13 18 P P 18 39 49.9 +0.6
baz=236
F19K **Shaleruckik Mo** 84.24 20 P P 18 39 49.5 -0.4
baz=239
J20K **Nowinta River** 84.25 23 P P 18 39 51.1 +1.1
baz=242
SKT **Skwentna** 84.35 26 P P 18 39 49.9 -0.6
baz=245
B18K **Kokolik River** 84.36 17 P P 18 39 51.1 +0.7
baz=235
I20K **Naaghedeneel** 84.42 22 P P 18 39 51.8 +1.1
baz=242
PPLA **Purkeypile** 84.46 25 P P 18 39 51.8 +0.5
baz=244
SUA **Susitna One** 84.47 26 P P 18 39 52.1 +0.8
baz=246,SNR=5.3
SEW **Seward** 84.51 28 P P 18 39 52.2 +0.9
baz=247
NRIK **Noril'sk** 84.55 343 P P 18 39 51.5 +0.1
comp=Z,43nm,0.9s,baz=120,slow=5.2,SNR=13
comp=Z,43nm,0.9s
H20K **Anotleneega Mo** 84.59 22 P P 18 39 52.4 +0.7
baz=242
CAST **Castle Rocks** 84.73 24 IAmb IAmb 18 39 52.9
comp=Z,30nm,1.1s
CAST **Castle Rocks** 84.73 24 P P 18 39 52.3 -0.1
baz=244
RC01 **Rabbit Creek A** 84.77 27 P P 18 39 52.8 +0.2
baz=247,SNR=12
CHUM **Lake Minchumin** 84.84 24 P P 18 39 53.5 +0.5
baz=244,SNR=9.2
M22K **Willow** 84.86 26 P P 18 39 52.5 -0.5
baz=246
C19K **Lookout Ridge** 84.87 18 P P 18 39 53.2 +0.2
baz=237
BVAR **Borovoye Array** 84.92 325 P P 18 39 53.9 +0.3
comp=Z,38nm,0.9s,baz=110,slow=6.5,SNR=14
comp=Z,38nm,0.9s
D19K **Kuna River** 85.00 18 P P 18 39 54.4 +0.7
baz=238
F20K **Avaraart Lake** 85.05 20 IAmb IAmb 18 39 55.5
comp=Z,24nm,0.9s
F20K **Avaraart Lake** 85.05 20 P P 18 39 54.8 +1.0
baz=241
CUT **Chulitna** 85.06 25 P P 18 39 54.7 +0.7
baz=246
PMR **Palmer** 85.23 26 P P 18 39 54.0 -0.9
baz=247,SNR=7.7
GHO **Glory Hole Cre** 85.39 26 IAmb IAmb 18 39 56.2
comp=Z,29nm,1.0s
P23K **Montague Islan** 85.42 28 P P 18 39 57.0 +1.0
baz=249
H21K **Melozitna Rive** 85.44 22 P P 18 39 56.3 +0.4
baz=244
KNK **Knik Glacier** 85.46 27 P P 18 39 56.7 +0.6
baz=248
BPAW **Bear Paw Mtn.** 85.47 24 P P 18 39 56.7 +0.6
baz=245
TRF **Thorofare Moun** 85.48 24 P P 18 39 56.9 +0.5
baz=246
E20K **Nigu River** 85.49 19 P P 18 39 56.9 +0.7
baz=240
I21K **Tanana** 85.54 23 P P 18 39 57.1 +0.7
baz=244,SNR=6.2
D20K **Etivluk River** 85.58 19 P P 18 39 57.1 +0.5
baz=240
SML **Sawmill** 85.67 26 P P 18 39 56.8 -0.4
baz=248,SNR=6.9
GLI **Glacier Island** 85.88 27 P P 18 39 58.4 +0.1
baz=249
F21K **Alatna River** 85.90 20 P P 18 39 57.8 -0.4
baz=243
M23K **Glacier View** 85.93 26 P P 18 39 58.5 0.0
baz=248
MLY **Manley** 85.95 23 IAmb IAmb 18 40 00.6
comp=Z,50nm,1.2s
MLY **Manley** 85.95 23 P P 18 39 58.7 +0.2
baz=246,SNR=7.7
WAT1 **Susitna Watana** 85.96 25 P P 18 39 58.5 -0.1
baz=248
H22K **Ishtalitna Cre** 86.07 22 P P 18 39 58.6 -0.5
baz=245
SCM **Sheep Creek Mo** 86.12 26 P P 18 39 58.8 -0.7
baz=249
MCK **McKinley** 86.15 24 P P 18 39 58.5 -1.0
baz=247,SNR=7.5
WAT6 **Susitna Watana** 86.22 26 P P 18 39 59.8 -0.2
baz=248
E21K **Killik River** 86.30 19 P P 18 40 00.3 +0.1
baz=242
C21K **Knifeblade Rid** 86.38 18 P P 18 40 00.5 0.0
baz=242
EYAK **Cordova Ski Ar** 86.39 28 P P 18 40 01.5 +0.8
baz=250
NEA2 **Nenana** 86.43 24 IAmb IAmb 18 40 00.9
comp=Z,32nm,1.2s
NEA2 **Nenana** 86.43 24 P P 18 40 00.0 -0.8
baz=247
G22K **Bettles** 86.46 21 P P 18 39 58.7 -2.2
baz=245
I23K **Minto, Yukon-K** 86.53 23 IAmb IAmb 18 40 02.0
comp=Z,29nm,1.4s
I23K **Minto, Yukon-K** 86.53 23 P P 18 40 01.1 -0.2
baz=247
DHY **Denali Highway** 86.55 25 P P 18 40 02.4 +0.7
baz=249,SNR=12
KLU **Klutina** 86.63 27 P P 18 40 03.3 +1.3
baz=250,SNR=5.4
M24K **Tolsona, Glenn** 86.73 26 P P 18 40 03.0 +0.6
baz=250
WRH **Wood River Hil** 86.77 24 IAmb IAmb 18 40 03.0
comp=Z,51nm,1.1s
E22K **Anaktuvuk Pass** 86.88 20 P P 18 40 03.8 +0.7
baz=244
A21K **Barrow** 86.90 16 P P 18 40 02.8 -0.1
baz=240
G23K **Bananza Creek** 86.91 21 IAmb IAmb 18 40 04.6
comp=Z,22nm,1.1s
G23K **Bananza Creek** 86.91 21 P P 18 40 03.4 +0.2
baz=246
D22K **Ayikyak River** 86.92 19 P P 18 40 03.9 +0.7
baz=244
CCB **Clear Creek Bu** 86.95 24 IAmb IAmb 18 40 03.1
comp=Z,46nm,1.1s
COLA **College** 87.02 24 P P 18 40 04.1 +0.5
baz=248
COLD **Coldfoot** 87.06 21 P P 18 40 03.5 -0.4
baz=246
BMRM **Bremner River** 87.06 28 P P 18 40 04.6 +0.6
baz=251
SUCK **Suckling Hills** 87.16 29 P P 18 40 05.1 +0.6
HDA **Harding Lake** 87.21 24 P P 18 40 04.9 +0.2
baz=249
N25K **Chitina, Valde** 87.27 27 P P 18 40 06.3 +1.2
baz=251
POKR **Poker Plat Res** 87.27 23 P P 18 40 04.5 -0.5
baz=249
HARP **HAARP** 87.28 26 P P 18 40 06.3 +1.2
baz=251
PAX **Paxson** 87.33 26 P P 18 40 06.0 +0.6
baz=250
IL31 87.37 24 IAmb IAmb 18 40 04.8
comp=Z,34nm,1.1s
ILAR **Eielson Array** 87.37 24 P P 18 40 03.8 -1.7
comp=Z,17nm,0.9s,baz=256,slow=4.9,SNR=17
comp=Z,17nm,0.9s
H24K **Noodor Dome** 87.37 23 P P 18 40 05.5 0.0
baz=248
K24K **Donnelly Dome** 87.48 25 P P 18 40 07.0 +0.9
baz=250
E23K **Chandalar** 87.60 20 P P 18 40 07.3 +0.7
baz=246
D23K **Nanushuk River** 87.61 19 P P 18 40 07.2 +0.7
baz=245
CRQM **Cirque** 87.67 28 P P 18 40 07.2 0.0
CRQE **Cirque** 87.69 28 P P 18 40 08.1 +0.9
baz=253
G24K **Hadweenzic Riv** 87.84 22 P P 18 40 07.9 +0.3
baz=248
MCARA **McCarthy VSAT** 87.92 28 P P 18 40 09.2 +1.1
baz=253
J25K **Salcha River,** 87.92 24 P P 18 40 07.9 -0.2
baz=250
F24K **Squaw Lake** 88.00 21 P P 18 40 09.4 +1.0
baz=248
MESA **MESA** 88.07 29 P P 18 40 10.2 +1.1
baz=254
PRP **Porcupine Dome** 88.17 23 P P 18 40 10.1 +0.7
baz=250
L26K **Log Cabin Wild** 88.27 26 IAmb IAmb 18 40 10.8
comp=Z,18nm,1.0s
L26K **Log Cabin Wild** 88.27 26 P P 18 40 09.7 -0.1
baz=252,SNR=5.4
SCRK **Sand Creek** 88.29 25 P P 18 40 09.1 -0.9
SCRK **Sand Creek** 88.29 25 P P 18 40 10.3 +0.3
baz=252
D24K **Happy Valley** 88.30 19 P P 18 40 09.3 -0.4
D24K **Happy Valley** 88.30 19 P P 18 40 10.5 +0.7
baz=247
G25K **Bearman Lake** 88.37 22 P P 18 40 10.2 +0.1
baz=250
BARN **Barnard Glacie** 88.45 28 P P 18 40 09.7 -1.2
C24K **Franklin Bluff** 88.56 19 P P 18 40 11.7 +0.7
baz=247
CTG **Chitna Glacier** 88.58 28 P P 18 40 12.5 +1.0
baz=254,SNR=6.5
J26L **Joseph Creek** 88.63 24 P P 18 40 11.2 -0.3
baz=252
M27K **Edge Creek, AK** 88.72 27 P P 18 40 11.8 -0.2
M27K **Edge Creek, AK** 88.72 27 P P 18 40 11.9 -0.2
baz=254,SNR=9.3
F25K **Christian Rive** 88.83 21 P P 18 40 12.5 +0.1
baz=250
L27K **Beaver Creek,** 88.94 26 P P 18 40 13.6 +0.7
baz=254
E25K **Arctic Village** 89.03 21 P P 18 40 14.1 +0.8
baz=250
I26K **Coal Creek Min** 89.04 24 P P 18 40 14.0 +0.7
baz=252
K27K **Chicken** 89.11 25 P P 18 40 14.9 +1.2
baz=254
D25K **Kavik River** 89.17 20 P P 18 40 14.7 +0.7
baz=250
PNL **Peninsula** 89.18 30 P P 18 40 15.5 +1.4
baz=256
BVCY **Beaver Creek** 89.19 27 P P 18 40 14.4 +0.2
baz=255,SNR=5.5
YUK3 **Moose Creek** 89.20 28 P P 18 40 14.5 +0.1
baz=255,SNR=6.6
G26K **Porcupine Rive** 89.30 22 P P 18 40 16.0 +1.5
baz=252
YUK8 **Steele Glacier** 89.40 28 P P 18 40 16.5 +1.0
baz=256
F26K **Sheenjek River** 89.40 21 P P 18 40 15.8 +0.8
baz=252
EGAK **Eagle** 89.70 25 IAmb IAmb 18 40 17.5
comp=Z,28nm,1.1s
EGAK **Eagle** 89.70 25 P P 18 40 17.3 +0.9
baz=254
O29M **Mount Kennedy** 89.73 29 P P 18 40 18.1 +1.2
baz=257
I27K **Kandik River** 89.74 24 P P 18 40 17.3 +0.6
baz=254
C26K **Camden Bay** 89.86 19 P P 18 40 16.9 -0.1
baz=251
YUK4 **Talbot Arm** 89.94 28 P P 18 40 18.6 +0.7
baz=257
H27K **Steamboat Moun** 89.95 23 P P 18 40 18.3 +0.7
baz=254
YUK6 **Outpost Mounta** 89.98 29 P P 18 40 19.4 +1.2
baz=257
DAWY **Dawson** 90.25 25 P P 18 40 19.5 +0.3
baz=256
M29M **Somme Creek** 90.28 27 P P 18 40 20.1 +0.7
baz=257
HYT **Haines Junctio** 90.36 29 P P 18 40 20.3 +0.5
baz=258
I28M **Miner Creek** 90.37 24 P P 18 40 20.4 +0.7
baz=255
S31K **Pelican** 90.41 32 P P 18 40 20.8 +1.0
baz=259
L29M **L29M** 90.58 26 P P 18 40 21.1 +0.5
baz=257
N30M **Aishikik Lake** 90.69 28 P P 18 40 22.1 +0.8
baz=258
F28M **Old Crow** 90.94 22 P P 18 40 21.3 -1.0
baz=256
K29M **Barlow Dome** 91.01 26 IAmb IAmb 18 40 24.1
comp=Z,23nm,0.9s
K29M **Barlow Dome** 91.01 26 P P 18 40 23.6 +0.8
baz=258
M30M **Minto, Yukon** 91.06 27 P P 18 40 23.6 +0.7
baz=258
S32K **Killisnoo** 91.19 32 P P 18 40 25.0 +1.6
baz=260
J30M **Hart River** 91.67 25 IAmb IAmb 18 40 28.6
comp=Z,18nm,1.0s
J30M **Hart River** 91.67 25 P P 18 40 26.7 +0.9
baz=259
U33K **Whale Pass** 91.75 34 P P 18 40 28.1 +2.0
baz=261
D28M **Stokes Point** 91.77 20 P P 18 40 25.4 -0.5
baz=257
I30M **Mount Dempster** 91.78 25 P P 18 40 26.9 +0.6
baz=259
EPYK **Eagle Plains** 91.87 23 P P 18 40 26.8 +0.3
baz=258
G30M **tAoh Zraii Nji** 92.18 23 P P 18 40 27.9 -0.1
baz=259
F30M **Barrier River** 92.47 22 P P 18 40 29.0 -0.2
baz=259
V35K **Ketchikan** 92.48 35 P P 18 40 31.2 +1.7
baz=262
FARO **Faro, Yukon** 92.58 28 P P 18 40 30.2 +0.3
baz=261
G31M **Satah River** 92.93 23 IAmb IAmb 18 40 31.8
comp=Z,18nm,1.1s
G31M **Satah River** 92.93 23 P P 18 40 31.0 -0.4
baz=261
S34M **Telegraph Cree** 93.08 32 P P 18 40 33.5 +1.2
baz=263
F31M **Tsiigehtchic** 93.22 23 P P 18 40 32.4 -0.2
baz=261
INK **Inuvik** 93.43 22 P P 18 40 32.1 -1.5
baz=261
T35M **Bob Quinn** 93.44 33 P P 18 40 35.0 +0.9
baz=264
NVAR **Mina Array Bea** 100.59 52 P Pdif 18 41 06.3 -0.8
comp=Z,1.5nm,1.0s,baz=272,slow=5.2,SNR=4.7
TXAR **Lajitas Array** 113.25 61 PKiKP PKiKP 18 45 56.6 -0.6
comp=Z,1.1nm,1.0s,baz=274,slow=3.4,SNR=3.6
GERES **GERESS Array B** 120.09 324 PKP PKPdf 18 46 08.6 -1.1
comp=Z,0.3nm,0.3s,baz=0.0,slow=6.0,SNR=2.6
PLCA **Paso Flores** 123.74 149 PKP PKPdf 18 46 15.9 -1.1
comp=Z,1.1nm,1.0s,baz=235,slow=5.0,SNR=1.7
EKA **Eskdalemuir Ar** 124.34 337 PKP PKPdf 18 46 15.9 -1.6
comp=Z,3.5nm,1.0s,baz=20,slow=2.3,SNR=3.4

SCHQ	**Schefferville**	**126.04**	**21**	PKP	**PKPdf**	18 46 19.3	**-1.5**
	comp=Z,1.5nm,0.8s,baz=337,slow=3.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**141.54**	**283**	PKhKP	PKPpre	18 46 47.0	
	comp=Z,1.4nm,0.3s,baz=67,slow=4.8,SNR=2.1						
CPUP	**Villa Florida**	**141.81**	**149**	PKP	**PKPdf**	**18 46 50.3**	**-0.8**
	comp=Z,3.4nm,1.1s,baz=185,slow=3.3,SNR=2.5						
KIC	**Kosan Boka**	**148.17**	**272**⇑*e*PKP1		**PKPbc**	**18 47 06.5**	**+0.8**
	comp=Z,77nm,1.1s						
DBIC	**Dimbokro**	**148.29**	**272**	PKPbc	**PKPbc**	**18 47 06.7**	**+0.7**
	comp=Z,32nm,0.9s,baz=87,slow=2.6,SNR=11						
LIC	**Lamto**	**148.45**	**271**⇑*e*PKP1		**PKPbc**	**18 47 07.2**	**+0.8**
	comp=Z,128nm,0.9s						
TIC	**Toumodi**	**148.45**	**272**⇑*i*PKP1		**PKPbc**	**18 47 07.2**	**+0.7**
	comp=Z,99nm,1.1s						

BJI ***25*** *18:28:38.1±0.0,24°.30N×121°.84E,h10km,mb4.8/63, mB4.6/1,ML5.1/13,Ms5.1/1,Ms7 4.8/1*
MOS ***25*** *18:28:39.6±1.1,24°.32N×122°.03E,h33km,mb5.2/51,Error ellipse: s-maj=7.8km s-min=4.7km az=119.9*
NEIC ***25*** *18:28:39.3±2.0,24°.44N±0°.06×122°.04E±0°.06,h10km±1km, mb5.1/65,Error ellipse: s-maj=12.6km s-min=6.1km az=143.0*
TAP ***25*** *18:28:40.9,24°.43N×121°.90E,h22km,ML5.5,B*
JMA ***25*** *18:28:41.1±0.1,24°.4N±0°.5×121°.9E±0°.7,h31km±2km, MD5.3/19,MV5.2/19,TAIWAN REGION*
JMA Felt I J1 at TAIWAN REGION .
IDC ***25*** *18:28:45.6±2.0,24°.70N×121°.88E,h46km±19km,mb4.4/29, mbtmp4.7/33,ML4.2/3,Error ellipse: s-maj=18.2km s-min=12.8km az=163.0*

ISC 25 18:28:40.9±0.3,24°.42N±0°.01×121°.99E±0°.02,h20km±1km, n606,σ1ⁱ41/715,mb4.9/109,99C-64D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
EWUT	**Wuta**	**0.19**	**278**	⇓P	**Pb**	**18 28 45.4**	**-0.8**
	baz=278						
EWUT				S	**Sb**	**18 28 48.4**	**-1.4**
	baz=278						
ESAO	**Su ao**	**0.20**	**320**	P	**Pb**	**18 28 45.8**	**-0.5**
	baz=341						
ESAO				*i* S	**Sb**	**18 28 48.9**	**-1.1**
	baz=341						
EOS2	**EOS2**	**0.22**	**90**⇑*e*P		**Pb**	**18 28 48.5**	**+2.2**
	baz=93						
ENA	**Nanau**	**0.23**	**272**⇓*i*P		**Pb**	**18 28 45.6**	**-0.9**
	baz=268						
ENA				*i* S	**Sb**	**18 28 48.8**	**-1.6**
	baz=268						
TWC	**Suao**	**0.23**	**326**⇓*i*P		**Pb**	**18 28 46.2**	**-0.4**
	baz=348						
TWC				*i* S	**Sb**	**18 28 49.4**	**-1.1**
	baz=348						
EAHA	**Aohua**	**0.24**	**249**⇓*i*P		**Pb**	**18 28 46.0**	**-0.8**
	baz=238						
EAHA				*i* S	**Sb**	**18 28 49.8**	**-1.0**
	baz=238						
EHP	**Heping Village**	**0.25**	**245**	*i* P	**Pb**	**18 28 46.1**	**-0.7**
	baz=231						
EHP				*i* S	**Sb**	**18 28 50.0**	**-1.0**
	baz=231						
EOS3	**EOS3**	**0.33**	**114**⇑*e*P		**Pn**	**18 28 50.3**	**-0.1**
	baz=110						
EOS3				*e*S	**Sn**	**18 28 57.1**	**+0.8**
	baz=110						
NDS	**Dongshan**	**0.33**	**311**⇑*i*P		**Pb**	**18 28 47.5**	**-0.5**
	baz=321						
NDS				*i* S	**Sb**	**18 28 51.6**	**-1.3**
	baz=321						
ILA	**Ilan**	**0.41**	**328**⇑*i*P		**Pb**	**18 28 49.3**	**0.0**
	baz=335						
ILA				*i* S	**Sb**	**18 28 54.8**	**-0.3**
	baz=335						
TWE	**Neicheng**	**0.42**	**316**⇑*i*P		**Pb**	**18 28 49.1**	**-0.5**
	baz=326						
TWE				S	**Sb**	**18 28 53.9**	**-1.6**
	baz=326						
EOS4	**EOS4**	**0.42**	**135**⇑*i*P		**Pn**	**18 28 51.1**	**-0.4**
	baz=122						
EOS4				*e*S	**Sn**	**18 28 58.9**	**+0.5**
	baz=122						
ETL	**Fush Village**	**0.42**	**232**⇓*i*P		**Pb**	**18 28 48.8**	**-0.8**
	baz=228						
ETL				S	**Sb**	**18 28 54.7**	**-0.8**
	baz=228						
EGS		**0.43**	**353**⇓*i*P		**Pb**	**18 28 50.0**	**+0.3**
	baz=5.0						
EGS				S	**Sb**	**18 28 55.5**	**-0.2**
	baz=5.0						
NACB	**Ninganchiao**	**0.43**	**236**		**Pb**	**18 28 48.7**	**-1.2**
NACB				Sg	**Sb**	**18 28 55.1**	**-0.8**
NACB	**Ninganchiao**	**0.43**	**236**	P	**Pb**	**18 28 49.3**	**-0.5**
NACB	**Ninganchiao**	**0.43**	**236**⇓*i*P		**Pb**	**18 28 48.9**	**-0.9**
	baz=232						
NACB				S	**Sb**	**18 28 54.5**	**-1.4**
	baz=232						
LATG	**Datong**	**0.44**	**285**⇑*i*P		**Pb**	**18 28 49.0**	**-1.0**
	baz=288						
LATG				*i* S	**Sb**	**18 28 54.0**	**-2.1**
	baz=288						
ENTT	**Nioudou**	**0.44**	**300**⇑*i*P		**Pb**	**18 28 49.2**	**-0.8**
	baz=305						
ENTT				*i* S	**Sb**	**18 28 54.6**	**-1.6**
	baz=305						
NTC	**Toucheng**	**0.46**	**341**	*e*P	**Pb**	**18 28 50.3**	**+0.1**
	baz=351						
NTC				*e*S	**Sb**	**18 28 56.3**	**-0.3**
	baz=351						
NDT	**Datong Townshi**	**0.47**	**293**⇑*i*P		**Pb**	**18 28 49.7**	**-0.7**
	baz=296						
NDT				*i* S	**Sb**	**18 28 55.3**	**-1.7**
	baz=296						
TWD	**Chiawan**	**0.49**	**227**⇓*i*P		**Pb**	**18 28 50.0**	**-0.8**
	baz=219						
TWD				*e*S	**Sb**	**18 28 57.5**	**-0.1**
	baz=219						
FUSB	**Fushanzhiwuyua**	**0.50**	**313**⇑*i*P		**Pb**	**18 28 50.4**	**-0.6**
	baz=319						
FUSB				*i* S	**Sb**	**18 28 56.0**	**-1.9**
	baz=319						
ETLH	**Xiulin Townshi**	**0.51**	**246**⇓*i*P		**Pb**	**18 28 50.0**	**-1.1**
	baz=244						
ETLH				S	**Sb**	**18 28 56.7**	**-1.5**
	baz=244						
NNSB	**Datong**	**0.55**	**271**⇑*i*P		**Pb**	**18 28 50.8**	**-1.2**
	baz=277						
NNSB				*e*S	**Sb**	**18 28 56.2**	**-3.3**
	baz=277						
NNSH	**Datong**	**0.55**	**271**	⇓P	**Pb**	**18 28 51.0**	**-1.0**
	baz=274						
NNSH				S	**Sb**	**18 28 57.4**	**-2.2**
	baz=274						
NNS	**Nan Shan**	**0.56**	**272**⇑*i*P		**Pb**	**18 28 51.0**	**-1.2**
	baz=272						
NNS				S	**Sb**	**18 28 57.6**	**-2.2**
	baz=272						
HWA	**Hwalien**	**0.56**	**219**	*e*P	**Pb**	**18 28 52.2**	**+0.1**
	baz=219						
HWA				*e*S	**Sn**	**18 29 03.0**	**+0.6**
	baz=219						
NWLT	**Wulai**	**0.57**	**309**⇑*i*P		**Pb**	**18 28 51.3**	**-0.9**
	baz=314						
NWLT				*i* S	**Sb**	**18 28 58.1**	**-1.9**
	baz=314						
TIPB	**Shuangxi**	**0.57**	**345**	⇓P	**Pb**	**18 28 52.0**	**-0.3**
	baz=358						
TIPB				*i* S	**Sb**	**18 28 59.2**	**-0.8**
	baz=358						
TWB1	**Santiao Chiao**	**0.59**	**360**⇓*i*P		**Pb**	**18 28 52.6**	**+0.1**
	baz=3.0						
TWB1				*i* S	**Sb**	**18 29 00.0**	**-0.4**
	baz=3.0						
YHNB	**Yeheng**	**0.61**	**294**	Pg	**Pb**	**18 28 52.4**	**-0.6**
YHNB	**Yeheng**	**0.61**	**294**	P	**Pb**	**18 28 52.2**	**-0.8**
YHNB	**Yeheng**	**0.61**	**294**⇑*i*P		**Pb**	**18 28 52.1**	**-0.9**
	baz=297						
YHNB				*i* S	**Sb**	**18 28 58.6**	**-2.6**
	baz=297						
NSK	**Sanguang**	**0.63**	**294**⇑*i*P		**Pb**	**18 28 52.2**	**-1.1**
	baz=297						
NSK				*i* S	**Sb**	**18 28 59.1**	**-2.7**
	baz=297						
ETM	**Tongmen**	**0.64**	**225**⇓*i*P		**Pb**	**18 28 52.5**	**-0.9**
	baz=227						
ETM				*e*S	**Sb**	**18 29 02.5**	**+0.6**
	baz=227						
LXIB	**Xiulin Townshi**	**0.66**	**233**⇓*i*P		**Pb**	**18 28 52.8**	**-1.1**
	baz=228						
LXIB				S	**Sb**	**18 29 03.0**	**+0.4**
	baz=228						
TWA	**Mucha**	**0.67**	**327**⇑*i*P		**Pb**	**18 28 53.5**	**-0.4**
	baz=324						
TWA				S	**Sb**	**18 29 02.4**	**-0.4**
	baz=324						
NWF	**Wu-fen Shan**	**0.68**	**344**⇑*i*P		**Pb**	**18 28 54.3**	**+0.2**
	baz=344						
NWF				*i* S	**Sb**	**18 29 03.0**	**0.0**
	baz=344						
WFSB	**Wu-fen Shan**	**0.68**	**344**⇑*i*P		**Pb**	**18 28 54.3**	**+0.3**
	baz=344						
WFSB				*i* S	**Sb**	**18 29 03.1**	**+0.1**
	baz=344						
SXI1	**Grass Mountain**	**0.68**	**351**⇓*i*P		**Pb**	**18 28 54.4**	**+0.3**
	baz=2.0						
SXI1				*e*S	**Sb**	**18 29 03.1**	**-0.1**
	baz=2.0						
NHDH	**Xindian Distri**	**0.69**	**322**	⇑P	**Pb**	**18 28 53.8**	**-0.4**
	baz=321						
NHDH				*e*S	**Sb**	**18 29 01.5**	**-1.8**
	baz=321						
FUSS	**Fushou**	**0.70**	**256**	⇓P	**Pb**	**18 28 53.6**	**-0.9**
	baz=259						
FUSS				S	**Sb**	**18 29 02.2**	**-1.7**
	baz=259						
WHF	**Hehuan Shan**	**0.71**	**248**⇑*i*P		**Pb**	**18 28 53.9**	**-1.0**
	baz=251						
WHF				S	**Sb**	**18 29 03.9**	**-0.6**
	baz=251						
TATO	**Taipei**	**0.72**	**321**	Pg	**Pb**	**18 28 54.5**	**-0.2**
TATO	**Taipei**	**0.72**	**321**	P	**Pb**	**18 28 54.5**	**-0.2**
TATO	**Taipei**	**0.72**	**321**⇑*i*P		**Pb**	**18 28 54.4**	**-0.2**
	baz=319						
TATO				S	**Sb**	**18 29 02.4**	**-1.7**
	baz=319						
NHY	**Taipei**	**0.73**	**328**	⇑P	**Pb**	**18 28 54.9**	**0.0**
	baz=327						
NHY				S	**Sb**	**18 29 04.3**	**-0.1**
	baz=327						
SHUL	**Shoufeng**	**0.74**	**212**⇓*i*P		**Pn**	**18 28 55.7**	**-0.4**
	baz=198						
SHUL				*e*S	**Sn**	**18 29 08.4**	**+1.6**
	baz=198						
TNOU	**National Taiwa**	**0.75**	**345**	⇑P	**Pb**	**18 28 55.5**	**+0.2**
	baz=346						
TNOU				S	**Sb**	**18 29 04.5**	**-0.7**
	baz=346						
TAP	**Taipei**	**0.76**	**325**⇑*i*P		**Pb**	**18 28 55.4**	**0.0**
	baz=330						
TAP				*i* S	**Sb**	**18 29 05.5**	**+0.2**
	baz=330						
TWT	**Tachien**	**0.76**	**258**⇓*i*P		**Pb**	**18 28 55.0**	**-0.5**
	baz=255						
BACT	**New Taipei Cit**	**0.76**	**319**	⇑P	**Pb**	**18 28 55.4**	**0.0**
	baz=324						
BACT				*e*S	**Sb**	**18 29 05.7**	**+0.4**
	baz=324						
TDCB	**Techi**	**0.78**	**258**	⇓P	**Pb**	**18 28 55.1**	**-0.7**
	baz=252						
TDCB				*e*S	**Sb**	**18 29 03.9**	**-2.0**
	baz=252						
ESL	**Shilin**	**0.79**	**220**⇓*i*P		**Pb**	**18 28 55.3**	**-0.6**
	baz=229						
ESL				*e*S	**Sn**	**18 29 08.2**	**+0.1**
	baz=229						
TEGC	**Jichi Village**	**0.82**	**210**	*e*P	**Pb**	**18 28 56.7**	**+0.3**
	baz=204						
TEGC				S	**Sn**	**18 29 10.3**	**+1.6**
	baz=204						
YM01	**YM01**	**0.82**	**332**⇑*i*P		**Pb**	**18 28 56.6**	**+0.2**
	baz=337						
YM01				S	**Sb**	**18 29 06.7**	**-0.4**
	baz=337						
NFF	**Wufeng Townshi**	**0.82**	**285**⇑*e*P		**Pb**	**18 28 55.7**	**-0.8**
	baz=290						
CHGB	**Renai**	**0.83**	**245**⇓*i*P		**Pb**	**18 28 56.0**	**-0.7**
	baz=248						
CHGB				*i* S	**Sb**	**18 29 07.6**	**+0.2**
	baz=248						
NWRT	**Kuosheng**	**0.84**	**339**	*e*P	**Pb**	**18 28 56.9**	**+0.2**
	baz=344						
NWRT				*e*S	**Sb**	**18 29 08.1**	**+0.6**
	baz=344						
YM08	**YM08**	**0.85**	**335**⇑*i*P		**Pb**	**18 28 56.6**	**-0.3**
	baz=332						
NTY	**Taoyuan**	**0.85**	**313**⇑*i*P		**Pn**	**18 28 57.4**	**-0.4**
	baz=320						
NTY				*e*S	**Sn**	**18 29 09.3**	**-0.4**
	baz=320						
TWS1	**Kuangyinshan**	**0.85**	**323**⇑*i*P		**Pb**	**18 28 57.2**	**+0.2**
	baz=321						
TWS1				*i* S	**Sb**	**18 29 08.6**	**+0.5**
	baz=321						
JYNG	**Yonagunijimaku**	**0.87**	**88**	*e*P	**Pn**	**18 28 59.0**	**+1.0**
JYNG				*e*S	**Sn**	**18 29 11.8**	**+1.8**
JYNG	**Yonagunijimaku**	**0.87**	**88**	A	A	18 28 59.0	
	comp=E,119nm,0.7s,comp=N,156nm,2.3s						
OWD	**Renai**	**0.88**	**238**⇓*i*P		**Pb**	**18 28 56.7**	**-0.7**
	baz=235						
OWD				*e*S	**Sb**	**18 29 09.0**	**+0.2**
	baz=235						
ANP	**Anpu**	**0.88**	**331**	⇑P	**Pb**	**18 28 56.9**	**-0.6**
	baz=336						
NJD	**Zhudong**	**0.88**	**291**⇑*i*P		**Pb**	**18 28 57.6**	**+0.1**
	baz=292						
WARBT	**Fenglin Townsh**	**0.89**	**218**⇓*i*P		**Pb**	**18 28 56.8**	**-0.9**
	baz=227						
WARBT				*e*S	**Sb**	**18 29 09.7**	**+0.6**
	baz=227						
NTST	**Danshui**	**0.89**	**327**⇑*e*P		**Pb**	**18 28 57.8**	**+0.2**
	baz=341						
NTST				S	**Sn**	**18 29 10.0**	**-0.6**
	baz=341						
WUSB	**Renai**	**0.90**	**242**⇓*i*P		**Pb**	**18 28 57.4**	**-0.5**
	baz=245						
WUSB				S	**Sb**	**18 29 09.0**	**-0.6**
	baz=245						
EGFH	**Guangfu**	**0.91**	**215**⇓*e*P		**Pb**	**18 28 57.3**	**-0.6**
	baz=224						
NCU	**National Centr**	**0.91**	**307**⇑*i*P		**Pb**	**18 28 57.9**	**-0.1**
	baz=295						
NCU				S	**Sb**	**18 29 10.0**	**+0.3**
	baz=295						
NCUH	**Zhongli**	**0.91**	**307**⇑*i*P		**Pb**	**18 28 58.2**	**+0.1**
	baz=295						
NCUH				S	**Sb**	**18 29 10.3**	**+0.6**
	baz=295						
LIOB	**Emei**	**0.92**	**284**	⇑P	**Pb**	**18 28 57.6**	**-0.5**
	baz=286						
LIOB				*e*S	**Sb**	**18 29 10.2**	**+0.4**
	baz=286						
TWY	**Chenhua**	**0.92**	**338**	P	**Pn**	**18 28 58.7**	**0.0**
	baz=334						
NSTT	**Nanjuang**	**0.93**	**283**	⇑P	**Pb**	**18 28 57.5**	**-0.7**
	baz=279						
NSTT				*e*S	**Sb**	**18 29 10.4**	**+0.4**
	baz=279						
YOJ	**Yonaguni jima**	**0.93**	**87**	Pg	**Pb**	**18 28 54.8**	**-3.5**
YOJ	**Yonaguni jima**	**0.93**	**87**	P	**Pn**	**18 29 00.0**	**+1.2**
YOJ	**Yonaguni jima**	**0.93**	**87**⇓*e*P		**Pn**	**18 28 59.5**	**+0.7**
	baz=79						
YOJ				*e*S	**Sn**	**18 29 12.7**	**+1.1**
	baz=79						
YOJ	**Yonaguni jima**	**0.93**	**87**	P	**Pb**	**18 28 54.8**	**-3.5**
YOJ	**Yonaguni jima**	**0.93**	**87**	P	**Pn**	**18 28 59.8**	**+1.0**
YOJ				*e*S	**Sn**	**18 29 13.2**	**+1.7**
YOJ	**Yonaguni jima**	**0.93**	**87**	A	A	18 28 59.8	
	comp=E,92nm,1.2s,comp=N,167nm,1.3s						
NSM	**Shimen**	**0.94**	**337**	*e*P	**Pn**	**18 28 59.0**	**+0.1**
	baz=342						
NSM				*e*S	**Sn**	**18 29 11.6**	**-0.1**
	baz=342						
HSN1	**Hsinchu**	**0.95**	**292**⇑*i*P		**Pn**	**18 28 59.0**	**-0.1**
	baz=293						
WHP	**Taichung City**	**0.96**	**262**⇑*e*P		**Pb**	**18 28 58.6**	**-0.3**
	baz=260						
SBCB	**Hsinchu**	**0.99**	**292**⇑*i*P		**Pn**	**18 28 59.5**	**-0.1**
	baz=294						
SBCB				*i* S	**Sn**	**18 29 12.6**	**-0.4**
	baz=294						
HSN	**Hsinchu**	**1.00**	**293**⇑*i*P		**Pb**	**18 28 59.3**	**-0.3**
	baz=297						
HSN				S	**Sb**	**18 29 12.5**	**+0.2**
	baz=297						
VWDT	**VWDT**	**1.02**	**230**⇓*i*P		**Pb**	**18 28 59.6**	**-0.2**
	baz=227						
VWDT				*i* S	**Sn**	**18 29 13.6**	**-0.2**
	baz=227						
WPL	**Puli Township**	**1.03**	**247**	*e*P	**Pn**	**18 29 00.0**	**-0.1**
	baz=252						
WPL				S	**Sb**	**18 29 12.3**	**-0.7**
	baz=252						
NHW	**Xinwu Township**	**1.04**	**305**	⇑P	**Pb**	**18 28 59.8**	**-0.4**
	baz=307						
NHW				*e*S	**Sn**	**18 29 13.7**	**-0.5**
	baz=307						
DPDB	**Guoxing**	**1.04**	**249**	⇓P	**Pb**	**18 28 59.8**	**-0.5**
	baz=247						
DPDB				*e*S	**Sb**	**18 29 13.4**	**-0.2**
	baz=247						
WCS	**Beigang Elemen**	**1.05**	**250**⇓*e*P		**Pn**	**18 29 00.5**	**0.0**
	baz=255						
WCS				*e*S	**Sb**	**18 29 13.1**	**-0.5**
	baz=255						
NJN	**Zhunan**	**1.05**	**285**⇑*i*P		**Pn**	**18 29 00.7**	**+0.2**
	baz=281						
NJN				*e*S	**Sn**	**18 29 14.6**	**+0.1**
	baz=281						
HGSD	**Ruisui**	**1.06**	**209**⇓*e*P		**Pn**	**18 29 00.8**	**+0.3**
	baz=220						
EHYH	**Wanning**	**1.09**	**213**	*e*P	**Pn**	**18 29 00.2**	**-0.8**
	baz=221						
NMLH	**Miaoli**	**1.10**	**276**⇑*i*P		**Pb**	**18 29 01.6**	**+0.5**
	baz=277						
NMLH				*e*S	**Sn**	**18 29 16.8**	**+1.1**
	baz=277						
TWQ1	**Liyutan**	**1.11**	**267**⇑*e*P		**Pb**	**18 29 01.4**	**0.0**
	baz=267						
TWQ1				*e*S	**Sn**	**18 29 17.2**	**+1.1**
	baz=267						
NSY	**Sanyi**	**1.12**	**270**	*e*P	**Pb**	**18 29 01.9**	**+0.4**
	baz=270						
NSY				*e*S	**Sn**	**18 29 18.7**	**+2.4**
	baz=270						
SMLT	**Sun Moon Lake**	**1.13**	**242**⇓*i*P		**Pn**	**18 29 01.4**	**-0.3**
	baz=249						
SMLT				S	**Sn**	**18 29 16.5**	**-0.1**
	baz=249						
SSLB	**Suanglung**	**1.14**	**237**	Pn	**Pn**	**18 29 00.1**	**-1.6**
SSLB	**Suanglung**	**1.14**	**237**	P	**Pb**	**18 29 01.9**	**+0.1**
SSLB	**Suanglung**	**1.14**	**237**⇓*i*P		**Pn**	**18 29 01.3**	**-0.4**
	baz=235						
SSLB				*i* S	**Sb**	**18 29 15.3**	**-0.8**
	baz=235						
TYC	**Yuchr**	**1.15**	**244**⇓*i*P		**Pn**	**18 29 01.7**	**-0.2**
	baz=251						
TYC				S	**Sb**	**18 29 16.6**	**-0.1**
	baz=251						
YULB	**Yu-li**	**1.20**	**212**		**Pb**	**18 29 03.0**	**+0.1**
YULB	**Yu-li**	**1.20**	**212**	P	**Pn**	**18 29 02.5**	**-0.1**
YULB	**Yu-li**	**1.20**	**212**⇓*e*P		**Pn**	**18 29 01.2**	**-1.3**
	baz=208						
YULB				*e*S	**Sn**	**18 29 19.0**	**+0.7**
	baz=208						
ECBN	**Changbin**	**1.20**	**204**	*e*P	**Pn**	**18 29 02.1**	**-0.5**
	baz=200						
PCYT	**Pengchaiyu**	**1.21**	**3**	*e*P	**Pn**	**18 29 02.2**	**-0.5**
	baz=8.0						
TCU	**Taichung**	**1.23**	**258**⇑*i*P		**Pb**	**18 29 03.9**	**+0.5**
	baz=257						
TCU				*e*S	**Sn**	**18 29 21.1**	**+2.2**
	baz=257						
EYUL	**Yuli**	**1.23**	**210**	*e*P	**Pb**	**18 29 03.4**	**0.0**
	baz=219						
WDJ	**Dajia District**	**1.23**	**267**	⇑P	**Pb**	**18 29 03.9**	**+0.4**
	baz=267						
WDJ				*e*S	**Sn**	**18 29 20.8**	**+1.8**
	baz=267						
TWF1	**Yuli**	**1.24**	**211**⇓*e*P		**Pn**	**18 29 01.6**	**-1.5**
	baz=219						
WWF	**Wufeng**	**1.24**	**253**⇑*i*P		**Pb**	**18 29 04.3**	**+0.8**
	baz=251						
WWF				*e*S	**Sn**	**18 29 21.4**	**+2.3**
	baz=251						
WHYT	**Xinyi Township**	**1.26**	**236**⇓*e*P		**Pb**	**18 29 04.0**	**0.0**
	baz=234						
WHYT				*e*S	**Sb**	**18 29 21.9**	**+2.1**
	baz=234						
WJS	**Zhushan**	**1.30**	**243**⇓*e*P		**Pb**	**18 29 05.2**	**+0.6**
	baz=225						
WJS				*e*S	**Sb**	**18 29 23.7**	**+2.9**
	baz=225						
WNT1	**Nantou City**	**1.30**	**247**	⇑P	**Pb**	**18 29 05.5**	**+0.9**
	baz=246						
WNT1				S	**Sb**	**18 29 23.7**	**+2.8**
	baz=246						
WNT	**Mingjian**	**1.31**	**246**	⇓P	**Pb**	**18 29 05.4**	**+0.6**
	baz=245						
WNT				S	**Sb**	**18 29 23.6**	**+2.5**
	baz=245						
CHKH	**Chenggong**	**1.34**	**204**	*e*P	**Pn**	**18 29 04.0**	**-0.4**
	baz=185						
WCHH	**Zhanghua**	**1.35**	**256**	⇑P	**Pb**	**18 29 05.3**	**-0.2**
	baz=255						
WCHH				*e*S	**Sb**	**18 29 24.3**	**+2.1**
	baz=255						
FULB	**Fuli**	**1.37**	**208**	*e*P	**Pn**	**18 29 04.6**	**-0.3**
	baz=219						
ALS	**Alishan**	**1.41**	**230**⇓*i*P		**Pb**	**18 29 06.3**	**-0.4**
	baz=216						
ALS				*e*S	**Sb**	**18 29 25.6**	**+1.3**
	baz=216						
CHKT	**Chengkung**	**1.43**	**204**	*e*P	**Pn**	**18 29 04.9**	**-0.8**
	baz=185						
EHD	**Haiduan**	**1.45**	**210**	*e*P	**Pn**	**18 29 05.5**	**-0.5**
	baz=206						
ECS	**Chishang**	**1.50**	**208**	*e*P	**Pn**	**18 29 06.9**	**+0.3**
	baz=204						
WGK	**Gukeng**	**1.50**	**241**⇓*e*P		**Pb**	**18 29 08.1**	**+0.1**
	baz=240						
WGK				*e*S	**Sb**	**18 29 29.5**	**+3.0**
	baz=240						
WDLH	**Douliu**	**1.51**	**242**	*e*P	**Pb**	**18 29 08.7**	**+0.4**
	baz=240						
WDLH				*e*S	**Sb**	**18 29 29.4**	**+2.4**
	baz=240						
ELDTW	**Lidau**	**1.51**	**216**⇓*e*P		**Pn**	**18 29 05.9**	**-1.0**
	baz=200						
ELDTW				*e*S	**Sb**	**18 29 27.8**	**+0.7**
	baz=200						
WRL	**Guolierlin Hig**	**1.56**	**251**	*e*P	**Pb**	**18 29 08.6**	**-0.4**
	baz=267						
WRL				*e*S	**Sb**	**18 29 29.8**	**+1.4**
	baz=267						
EDH	**Donghe**	**1.57**	**204**	*e*P	**Pn**	**18 29 06.5**	**-1.1**
	baz=187						
RLNB	**Erlin**	**1.58**	**251**	⇑P	**Pb**	**18 29 08.6**	**-0.7**
	baz=267						
RLNB				S	**Sb**	**18 29 30.0**	**+1.1**
	baz=267						
IRIF	**Iriomote-Funau**	**1.59**	**93**	P	**Pn**	**18 29 08.7**	**+0.9**
IRIF				*e*S	**Sb**	**18 29 29.9**	**+0.8**
IRIF	**Iriomote-Funau**	**1.59**	**93**	A	A	18 29 08.7	
	comp=E,99nm,1.1s,comp=N,169nm,0.9s						
WCKO	**Fanlu**	**1.60**	**233**⇓*e*P		**Pb**	**18 29 10.1**	**+0.3**
	baz=219						
WCKO				*e*S	**Sb**	**18 29 32.2**	**+2.6**
	baz=219						
WTK	**Tuku**	**1.64**	**244**	⇓P	**Pb**	**18 29 10.1**	**-0.2**
	baz=243						
WTK				*e*S	**Sb**	**18 29 31.8**	**+1.3**
	baz=243						
CHN2	**Minshiung**	**1.64**	**238**	*e*P	**Pb**	**18 29 10.6**	**+0.2**
	baz=237						
CHN2				*e*S	**Sb**	**18 29 32.9**	**+2.2**
	baz=237						
WTCT	**Ta-ch'eng**	**1.66**	**251**	*e*P	**Pn**	**18

baz=221
STYT eS Sb 18 29 33.6 +1.6
baz=221
HATJ Hateruma jima 1.70 102 P Pb 18 29 10.4 -0.9
HATJ Hateruma jima 1.70 102 A 18 29 10.4
comp=E,93nm,2.5s,comp=N,88nm,4.7s
LONT Longtian 1.70 208 eP **Pn 18 29 08.9 -0.5**
baz=190
CHY Chiayi 1.70 238 eP **Pb 18 29 11.0 -0.5**
baz=224
WTP Ta-pu 1.72 227 ⇓iP **Pb 18 29 11.1 -0.7**
baz=226
WTP eS **Sb 18 29 35.6 +2.6**
baz=226
WMLT Mailiao 1.73 250 eP **Pb 18 29 10.8 -1.1**
baz=249
TWK Hsinying 1.79 230 ⇓iP **Pb 18 29 12.2 -0.8**
baz=229
TWK eS **Sb 18 29 36.8 +1.7**
baz=229
WSF Szhu 1.79 245 eP **Pn 18 29 11.7 +1.1**
baz=244
WSF eS **Sb 18 29 34.9 -0.2**
baz=244
TWGBT Beinan 1.80 208 P **Pn 18 29 10.4 -0.4**
TWGBT Beinan 1.80 208 eP **Pn 18 29 09.8 -1.0**
baz=191
TWG Pinlang 1.80 208 Pn 18 29 09.5 -1.3
TWG Pinlang 1.80 208 eP **Pn 18 29 09.3 -1.5**
baz=191
LDUT Ludao 1.80 195 eP **Pn 18 29 09.7 -1.1**
baz=181
SNST Tainan City 1.81 229 ⇓eP **Pb 18 29 12.4 -1.0**
baz=227
CHN1 Nanshi 1.82 228 ⇓P **Pb 18 29 12.6 -0.9**
baz=226
CHN1 eS **Sb 18 29 37.6 +1.8**
baz=226
TTN Taitung 1.83 205 eP **Pn 18 29 11.3 +0.2**
baz=202
WSL Shuilin Townsh 1.84 241 eP **Pb 18 29 12.6 -1.2**
baz=241
WSL eS **Sb 18 29 37.8 +1.3**
baz=241
JKRS Kuro-shima 1.85 95 P **Pn 18 29 12.8 +1.3**
JKRS S **Sb 18 29 36.2 -0.5**
JKRS Kuro-shima 1.85 95 A 18 29 12.8
comp=E,89nm,4.2s,comp=N,140nm,1.5s
SGST Jiashian 1.85 224 ⇓eP **Pn 18 29 12.2 +0.7**
baz=223
SGST eS **Sb 18 29 37.9 +1.1**
baz=223
SLGT Liugui 1.88 221 eP **Pb 18 29 13.7 -0.8**
baz=220
SLGT eS **Sb 18 29 39.2 +1.7**
baz=220
ICHU Yijhu 1.89 236 eP **Pb 18 29 13.8 -0.8**
baz=219
ICHU eS **Sb 18 29 39.8 +2.0**
baz=219
CHN8 Yiju 1.95 237 eP **Pb 18 29 14.6 -1.0**
baz=235
JIJ Ishigaki jima 1.96 91 P **Pn 18 29 13.7 +0.7**
JIJ eS **Sn 18 29 37.8 +0.7**
JIJ Ishigaki jima 1.96 91 A 18 29 13.7
comp=E,15nm,1.8s,comp=N,28nm,3.8s
CHN3 Shinhua 2.00 228 eP **Pb 18 29 16.0 -0.5**
baz=226
SSHA Shanhua 2.02 231 eP **Pb 18 29 15.8 -1.1**
baz=229
ECL Taimali 2.05 208 eP **Pn 18 29 13.4 -0.8**
baz=193
SHHT Tainan City 2.05 228 eP **Pb 18 29 17.2 -0.2**
baz=225
SCST Cishan 2.05 222 eP **Pb 18 29 17.2 -0.2**
baz=220
SCLT Jiali 2.06 233 eP **Pb 18 29 16.0 -1.5**
baz=232
SCLT eS **Sb 18 29 43.9 +1.2**
baz=232
SSD Sandimen 2.08 217 eP **Pn 18 29 15.7 +1.1**
baz=226
TSMG Majia 2.10 216 eP **Pn 18 29 16.6 +1.6**
baz=199
TAI1 Yung-k'ang 2.12 230 eP **Pb 18 29 17.4 -1.2**
baz=228
JISG Ishigakijimahi 2.12 85 P **Pn 18 29 15.7 +0.6**
JISG eS **Sb 18 29 43.2 -1.3**
JISG Ishigakijimahi 2.12 85 A A 18 29 15.7
comp=E,20nm,0.7s,comp=N,20nm,1.9s
TWM1 Shoushan 2.14 222 eP **Pb 18 29 18.0 -1.0**
baz=220
TSCK Chigu Township 2.15 234 eP **Pb 18 29 17.4 -1.8**
baz=232
TAI Tainan 2.17 230 eP **Pb 18 29 18.4 -1.1**
baz=227
SGLT Jiouru 2.18 220 eP **Pb 18 29 18.8 -0.8**
baz=216
MASBT Mashibuluo 2.19 215 ⇓iP **Pb 18 29 18.2 -1.6**
baz=212
MASBT eS **Sn 18 29 44.2 +1.6**
baz=212
TSPT Pingtung City 2.21 219 eP **Pb 18 29 18.9 -1.2**
baz=215
SNJT Kaohsiung City 2.25 223 eP **Pb 18 29 19.2 -1.6**
baz=220
EAST Anshuo 2.28 208 eP **Pn 18 29 16.4 -1.1**
baz=195
TAW Tawu 2.28 206 eP **Pn 18 29 17.5 +0.1**
baz=193
TAWH Dawu Township 2.30 206 eP **Pn 18 29 17.9 +0.2**
baz=193
WSSB Gushan 2.38 222 eP **Pn 18 29 20.7 +2.0**
baz=219
VWUC VWUC 2.38 284 ⇑eP **Pn 18 29 17.9 -0.8**
baz=285
PNG Penghu 2.38 250 eP **Pn 18 29 18.8 0.0**
baz=249
PHUB P'eng-hu 2.39 248 ⇑eP **Pn 18 29 18.6 -0.3**
baz=248
PHUB eS **Sn 18 29 46.7 -0.8**
baz=248
SCZT Fangliau 2.40 212 eP **Pn 18 29 20.6 +1.7**
baz=196
LAY Lan-yu 2.40 190 eP **Pn 18 29 18.3 -0.8**
baz=176
WDGT Dungji 2.42 242 ⇑eP **Pn 18 29 19.8 +0.5**
baz=241
LYUB Lan-yu 2.44 189 eP **Pn 18 29 18.0 -1.5**
baz=175
SLIU Shizi 2.45 207 eP **Pn 18 29 21.5 +1.7**
baz=196
JTJ Tarama 2.48 84 P **Pn 18 29 21.8 +1.7**
JTJ eS **Sn 18 29 52.1 +2.3**
JTJ Tarama 2.48 84 A A 18 29 21.8
comp=E,38nm,1.6s,comp=N,42nm,5.8s
MATB Ma-tsu 2.53 313 eP **Pn 18 29 20.4 -0.4**
baz=314
TWP Hsiaoliuchiu 2.55 216 eP **Pb 18 29 25.6 -0.3**
baz=231
MSUT Lienchiang 2.56 313 eP **Pn 18 29 20.5 -0.7**
baz=314
SMST Manzhou Townsh 2.61 204 eP **Pn 18 29 22.7 +0.8**
baz=190
VCHM Qimei 2.64 243 eP **Pn 18 29 22.3 +0.1**
baz=242
HEN Hengchun 2.66 206 eP **Pb 18 29 25.5 -2.3**
baz=196
PTMZ Houxiangcun 2.68 284 ⇑eP **Pn 18 29 21.9 -1.0**
baz=284
TWK1 Hengchun 2.69 204 eP **Pn 18 29 24.7 +1.7**
baz=191
TWKBT Hengchun 2.69 204 eP **Pn 18 29 23.5 +0.4**
baz=191
TSEB Hengchuen, Pin 2.70 202 eP **Pn 18 29 24.8 +1.7**
baz=190
JIRB Irabujima 2.93 81 eP **Pn 18 29 28.4 +2.1**
JIRB eS **Sn 18 30 03.2 +2.4**
JIRB Irabujima 2.93 81 A A 18 29 28.4
comp=E,20nm,4.8s,comp=N,25nm,4.5s
LYJJ Jianjiangzhen 2.93 317 eP **Pn 18 29 25.0 -1.3**
baz=317
XPSS Dashiqiu 2.98 327 ⇑eP **Pn 18 29 26.1 -0.9**
baz=328
JIKM Ikemajima 3.01 80 P **Pn 18 29 29.5 +2.2**
JIKM S **Sn 18 30 05.7 +2.9**
JIKM Ikemajima 3.01 80 A A 18 29 29.5
comp=E,24nm,5.2s,comp=N,29nm,4.6s

JMJ Miyako jima 2 3.03 82 P **Pn 18 29 30.9 +3.2**
JMJ Miyako jima 2 3.03 82 eP **Pn 18 29 30.9 +3.2**
baz=84
JMJ2 Miyako jima3 3.06 83 eP **Pn 18 29 30.7 +2.7**
JMJ2 eS **Sn 18 30 06.5 +2.5**
JMJ2 Miyako jima3 3.06 83 A A 18 29 30.7
comp=E,43nm,4.7s,comp=N,39nm,5.1s
JOGS Gusukube 3.13 83 eP **Pn 18 29 32.1 +3.0**
JOGS eS **Sn 18 30 09.6 +3.8**
JOGS Gusukube 3.13 83 A A 18 29 32.1
comp=E,36nm,2.6s,comp=N,41nm,7.4s
QZH Quanzhou 3.13 280 ⇑iPn **Pn 18 29 28.0 -1.1**
QZH Sn **Sn 18 30 03.5 -2.5**
QZH smax smax
comp=N,3μm,0.9s
QZH smax smax
comp=N,2μm,1.0s
MHZQ Yeshan 3.16 303 eP **Pn 18 29 28.2 -1.2**
baz=303
KNM Kinmen 3.24 271 ⇑P **Pn 18 29 31.5 +0.9**
baz=270
KNMB Chin-men Tao 3.28 272 Pn **Pn 18 29 30.3 -0.9**
KNMB Chin-men Tao 3.28 272 ⇑P **Pn 18 29 30.3 -0.9**
baz=271
AXDP Jialang 3.69 278 ⇑iP **Pn 18 29 36.4 -0.4**
baz=278
ZPLA Ao Xicun 3.90 264 ⇑eP **Pn 18 29 39.3 -0.4**
baz=263
DSXP Dongshan 4.23 261 ⇑P **Pn 18 29 43.7 -0.5**
baz=261
SXFK Yanhouchang 4.40 298 eP **Pn 18 29 45.9 -0.6**
baz=297
VDOS Pratas Island 6.11 234 eP **Pn 18 30 12.2 +2.2**
baz=231
JOW Kunigami 6.16 66 Pn **Pn 18 30 08.8 -1.9**
JOW Kunigami 6.16 66 P **Pn 18 30 13.1 +2.4**
JOW Kunigami 6.16 66 eP **Pn 18 30 13.4 +2.7**
baz=72
JOW Kunigami 6.16 66 P **Pn 18 30 12.7 +2.0**
comp=N,15nm,0.3s,baz=234,slow=5.1,SNR=15
JOW S **Sn 18 31 23.7 +3.1**
comp=N,44nm,0.8s,baz=313,slow=28,SNR=0.8
comp=N,60nm,0.4s
SSE Sheshan 6.69 354 Pn **Pn 18 30 17.5 -0.5**
SSE Sn **Sn 18 31 38.5 +4.9**
SSE smax smax
comp=N,280nm,1.0s
SSE smax smax
comp=N,330nm,0.9s
HKPS Hong Kong Po S 7.52 255 Pn **Pn 18 30 29.8 +0.4**
HKPS Hong Kong Po S 7.52 255 P **Pn 18 30 30.4 +1.0**
HKPS Hong Kong Po S 7.52 255 eP **Pn 18 30 30.0 +0.6**
baz=253
GZH Guangzhou 8.03 262 Pn **Pn 18 30 32.0 -4.4**
GZH Sn **Sn 18 31 58.8 -7.9**
GZH smax smax
comp=N,1μm,1.0s
GZH smax smax
comp=N,910nm,1.3s
NJ2 Nanjing 8.09 341 eP **Pn 18 30 35.3 -1.9**
NJ2 pmax pmax
comp=N,55nm,0.7s
NJ2 smax smax
comp=N,690nm,0.9s
NJ2 smax smax
comp=N,340nm,0.8s
CNSH ChangSha 8.95 297 ⇑P **Pn 18 30 47.5 -1.5**
CNSH S **Sn 18 32 30.0 +0.7**
CNSH smax smax
comp=N,1μm,1.2s
CNSH smax smax
comp=N,840nm,1.1s
WHN Wuhan 9.12 314 ⇑P **Pn 18 30 50.5 -0.8**
WHN sP 18 30 55.3
WHN S **Sn 18 32 34.3 +0.9**
WHN pmax pmax
comp=N,76nm,0.7s
TGY Tagaytay City 10.31 186 P Pn 18 31 13.8 +6.0
comp=N,238nm,0.5s,baz=314,slow=19,SNR=2.7
GULI GuiLin 10.59 277 P **Pn 18 31 09.5 -2.0**
GULI S **Sn 18 33 03.0 -6.6**
JNU Nakatsue 11.65 40 Pn **Pn 18 31 27.1 +0.9**
JNU Nakatsue 11.65 40 P Pn 18 31 31.1 +5.0
comp=N,85nm,0.9s,baz=198,slow=6.9,SNR=30
TIA Tai'an 12.48 341 eP **Pn 18 31 37.0 -0.3**
TIA pmax pmax
comp=N,3.0nm,1.4s
QIZ Qiongzhong 12.49 247 P **Pn 18 31 37.3 -0.3**
QIZ S **Sn 18 33 58.8 +2.5**
ENH Enshi 12.54 300 Pn **Pn 18 31 39.3 +1.0**
TJN Taejon 12.79 20 iP **Pn 18 31 44.3 +2.8**
LYN LuoYang 13.06 323 ⇑P **Pn 18 31 45.3 +0.1**
LYN sP P 18 31 51.8 -3.6
LYN PP **PnPn 18 31 58.8 +5.6**
LYN pmax pmax
comp=N,27nm,0.5s
JMN Monobe 13.92 46 Pn **Pn 18 31 55.1 -2.0**
KSAR Wonju Array Be 13.93 20 Pn **Pn 18 31 59.2 +2.1**
KSAR Wonju Array Be 13.93 20 P **Pn 18 31 59.2 +2.1**
KSRS Korea Array 13.95 20 P **Pn 18 31 57.2 -0.1**
comp=N,0.5nm,0.3s,baz=205,slow=14,SNR=11
comp=N,1.5nm,0.4s
KS19 Wonju Array Si 13.98 20 Pn 18 31 57.8 0.0
GYA Guiyang 14.00 282 ⇓P **Pn 18 31 58.5 +0.3**
GYA pmax pmax
comp=N,52nm,0.9s
HNS HongShan 14.36 336 ⇓P **P 18 32 10.3 +0.4**
HNS pmax pmax
comp=Z,44nm,1.3s
DL2 Dalian 14.45 359 P **Pn 18 32 07.0 +2.8**
DL2 pmax pmax
comp=Z,69nm,1.0s
XAN Xi'an 14.89 313 ⇑P **Pn 18 32 10.5 +0.2**
XAN sP P 18 32 17.0 +1.1
XAN pmax pmax
comp=Z,33nm,1.1s
TIY Taiyuan 15.56 331 eP **P 18 32 22.0 -1.4**
TIY pmax pmax
comp=Z,47nm,0.6s
BJT Baijiatuan 16.31 344 Pn 18 32 26.0 -2.7
BJT Baijiatuan 16.31 344 P **Pn 18 32 26.0 -2.7**
BJT pmax pmax
comp=Z,89nm,1.8s
BJI Beijing 16.33 344 P **P 18 32 31.8 +0.1**
BJI pmax pmax
comp=Z,14nm,1.0s
SLVN Son La 16.95 263 P **P 18 32 38.4 -0.4**
JGF Kuroka 17.34 46 Pn **Pn 18 32 37.4 -4.3**
CD2 Chengdu 17.39 296 P **Pn 18 32 42.0 -0.4**
CD2 pmax pmax
comp=Z,30nm,1.0s
KMI Kunming 17.50 276 ⇓P **P 18 32 45.0 -0.1**
KMI pmax pmax
comp=Z,29nm,0.9s
JHJ Hachijo jima 2 17.83 57 P **P 18 32 51.1 +2.7**
comp=Z,8.3nm,0.3s,baz=235,slow=4.0,SNR=7.6
comp=Z,270nm,0.8s
JCJ Chichijima 18.39 77 P **P 18 32 51.5 -3.1**
comp=Z,112nm,1.0s,baz=197,slow=20,SNR=2.9
PZH PanZhiHua 18.40 281 P **Pn 18 32 56.8 +1.8**
PZH pmax pmax
comp=Z,20nm,1.1s
MAJO Matsushiro 18.45 45 P **P 18 32 55.0 -0.2**
MAJO Matsushiro 18.45 45 iP **P 18 32 53.8 -1.4**
MJAR Matsushiro Arr 18.45 45 P **P 18 32 54.3 -0.9**
comp=Z,3.7nm,0.7s,baz=239,slow=9.8,SNR=14
HHC Hu-ho-hao-te 18.56 334 ⇑iP **Pn 18 33 01.3 +4.5**
HHC sP sP 18 33 07.5 +2.6
HHC pmax pmax
comp=Z,39nm,1.0s
BTO Baotou 19.00 331 eP **Pn 18 33 05.5 +3.3**
BTO pP **sP 18 33 09.3 -0.4**
BTO sP **pP 18 33 12.5 +5.6**
BTO PP **PnPn 18 33 22.5 +7.7**
BTO pmax pmax
comp=Z,55nm,1.4s
JSD Sado 19.40 42 P **P 18 33 04.1 -1.5**
LZH Lanzhou 19.48 311 eP **Pn 18 33 08.8 +0.8**
LZH sP sP 18 33 16.3 +1.0
LZH pmax pmax
comp=Z,74nm,1.2s
PSTR Posyet 19.59 20 iP **Pn 18 33 10.0 +0.9**
XLT XiLinHaoTe 20.03 347 eP Pn 18 33 14.3 -0.1
XLT pmax pmax
comp=Z,49nm,1.2s

CRAI Chiangrai 20.42 262 P 18 33 16.9 0.0
PHRA Phrae 21.08 258 P 18 33 24.9 +0.9
MDJ Mudanjiang 21.08 15 P **P 18 33 25.5 +1.7**
MDJ pmax pmax
comp=Z,14nm,1.2s
TNCH TengChong 21.33 277 P **P 18 33 28.5 +1.6**
TNCH pmax pmax
comp=Z,62nm,1.0s
USA0B Ussuriysk Arra 21.36 20 P **P 18 33 29.1 +2.2**
USA0B Ussuriysk Arra 21.36 20 iP **P 18 33 26.9 +0.1**
USRK Ussuriysk Ar. 21.36 20 P **P 18 33 29.1 +2.3**
USRK Ussuriysk Ar. 21.36 20 P **P 18 33 29.1 +2.3**
USRK Ussuriysk Ar. 21.36 20 P **P 18 33 27.6 +0.8**
comp=Z,16nm,0.9s,baz=203,slow=9.5,SNR=14
comp=Z,16nm,0.9s
BNX BinXian 21.72 10 ⇑P **P 18 33 30.5 -0.2**
BNX pmax pmax
comp=Z,8.0nm,1.4s
CHTO Chiang Mai 22.13 260 P **P 18 33 36.6 +1.3**
CHTO Chiang Mai 22.13 260 P **P 18 33 36.6 +1.3**
CHTO pmax pmax
comp=Z,20nm,1.0s
CM31 Chiang Mai Arr 22.24 259 P **P 18 33 37.6 +1.1**
CMAR Chiang Mai Arr 22.24 259 P **P 18 33 35.9 -0.7**
CMAR Chiang Mai Arr 22.24 259 P **P 18 33 35.9 -0.7**
CMAR Chiang Mai Arr 22.24 259 P **P 18 33 38.1 +1.6**
comp=Z,5.8nm,0.9s,baz=61,slow=8.4,SNR=30
comp=Z,5.8nm,0.9s
GTA Gaotai 23.95 314 P **P 18 33 54.3 +0.4**
GTA pmax pmax
comp=Z,21nm,1.2s
GUMO Guam 24.13 112 P **P 18 33 52.1 -3.5**
GUMO Guam 24.13 112 P **P 18 33 52.1 -3.5**
GUMO pmax pmax
comp=Z,254nm,1.1s
GUMO Guam 24.13 112 P **P 18 33 56.0 +0.4**
comp=Z,173nm,1.1s,baz=283,slow=6.0,SNR=3.6
HIA Hailar 24.86 356 iP **P 18 34 01.6 -0.4**
HIA pmax pmax
comp=Z,34nm,1.0s
LBMI Labuha 25.48 167 P **P 18 34 09.9 +2.1**
comp=Z,113nm,1.3s
ASAJ Asahikawa 25.87 36 P **P 18 34 10.1 -1.1**
comp=Z,10nm,1.0s,baz=214,slow=10,SNR=2.5
comp=Z,10nm,1.0s
KLR Kul'dur 25.92 15ceP **P 18 34 12.1 +0.5**
KLR pmax pmax
comp=Z,26nm,1.3s
HEH HeiHe 26.13 8 eP **P 18 34 15.5 +2.0**
HEH pmax pmax
comp=Z,14nm,1.0s
GOMU GeErMu 26.14 303 P **P 18 34 15.5 +1.3**
GOMU GeErMu 26.14 303 P **P 18 34 15.5 +1.1**
GOMU pP pP 18 34 18.5 -1.7
GOMU sP sP 18 34 20.5 -1.8
GOMU pmax pmax
comp=Z,11nm,1.1s
ULN Ulaanbaatar 26.23 337 P **P 18 34 14.4 -0.2**
ULN IAmb IAmb 18 34 16.1
comp=Z,34nm,0.8s
ULN Ulaanbaatar 26.23 337 iP **P 18 34 14.0 -0.6**
ULN pmax pmax
comp=Z,34nm,0.7s
SONM Songino Array 26.45 336 P **P 18 34 17.1 +0.6**
SONM IAmb IAmb 18 34 18.1
comp=Z,23nm,1.0s
SONM Songino Array 26.45 336 P **P 18 34 17.1 +0.6**
SONM pmax pmax
comp=Z,23nm,1.0s
SONM Songino Array 26.45 336 P **P 18 34 16.6 +0.1**
comp=Z,31nm,1.1s,baz=151,slow=10.0,SNR=37
comp=Z,31nm,1.1s
SHL Shillong 27.29 279 P **P 18 34 24.1 -0.3**
SHL Shillong 27.29 279 P **P 18 34 24.1 -0.3**
SHL pmax pmax
comp=Z,78nm,1.0s
BRDH Bariadhala 27.85 273 P **P 18 34 30.6 +1.4**
comp=Z,144nm,0.3s,baz=90,slow=12,SNR=4.1
LSA Lhasa 27.91 288 IAmb IAmb 18 34 36.2
comp=Z,15nm,0.7s
YSS Yuzh-Sakhalins 27.95 31 iP **P 18 34 28.2 -1.6**
ZEA Zeya 29.55 6 eP **P 18 34 44.8 +0.8**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.7s
MOY Mondy 31.61 335 eP **P 18 35 02.4 +0.1**
MOY pmax pmax
comp=Z,53nm,3.2s
WMQ Urumqi 34.03 313 eP **P 18 35 24.5 +0.9**
WMQ pmax pmax
comp=Z,25nm,0.9s
DGZ Jazzator, Alta 36.86 322 iP **P 18 35 46.5 -1.4**
DGZ pmax pmax
comp=Z,6.0nm,1.1s
ZSN Zaisan 37.32 318 eP **P 18 35 50.6 -1.2**
baz=318
ZSN Zaisan 37.32 318 eP **P 18 35 50.5 -1.2**
YAK Yakutsk 37.96 6 P **P 18 35 56.5 -0.4**
YAK IAmb IAmb 18 35 58.4
comp=Z,26nm,0.7s
YAK Yakutsk 37.96 6 eP **P 18 35 57.3 +0.5**
YAK pmax pmax
comp=Z,22nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,1.0nm,1.0s
MK31 Makanchi Array 38.68 315 P **P 18 36 03.3 0.0**
MK31 Makanchi Array 38.68 315ceP **P 18 36 03.4 +0.1**
MKAR Makanchi Array 38.68 315 P **P 18 36 03.4 +0.2**
MKAR Makanchi Array 38.68 315ceP **P 18 36 03.0 -0.3**
MKAR pmax pmax
comp=Z,17nm,0.8s
MKAR Makanchi Array 38.68 315 P **P 18 36 03.1 -0.1**
comp=Z,16nm,0.8s,baz=102,slow=9.7,SNR=39
comp=Z,16nm,0.8s
MAKZ Makanchi 38.89 315 P **P 18 36 05.0 0.0**
MAKZ IAmb IAmb 18 36 06.1
comp=Z,23nm,0.9s
MAKZ Makanchi 38.89 315 P **P 18 36 05.0 0.0**
MAKZ pmax pmax
comp=Z,23nm,0.9s
PETK Petropavlovsk- 39.26 34 P **P 18 36 09.7 +1.7**
comp=Z,3.3nm,0.9s,baz=276,slow=14,SNR=1.7
comp=Z,3.3nm,0.9s
SHLS Shalkode 39.48 309 eP **P 18 36 06.8 -3.3**
comp=Z,20nm,1.0s,baz=309
SHLS Shalkode 39.48 309 eP **P 18 36 06.8 -3.3**
SHLS pmax pmax
comp=Z,20nm,1.0s
UZB Uzynbulak 39.80 309 eP **P 18 36 11.8 -1.0**
baz=309
UZB Uzynbulak 39.80 309 eP **P 18 36 11.7 -1.0**
KPKS Kokpek 40.11 309 eP **P 18 36 14.6 -0.7**
baz=309
KPKS Kokpek 40.11 309 eP **P 18 36 14.6 -0.7**
SATY Saty 40.21 308 eP **P 18 36 15.0 -1.3**
baz=309
SATY Saty 40.21 308 eP **P 18 36 14.9 -1.3**
ZHN Zhinishke 40.22 309 eP **P 18 36 15.4 -0.9**
baz=309
ZHN Zhinishke 40.22 309 eP **P 18 36 15.3 -0.9**
ZAA0 Zalesovo Array 40.45 327 P **P 18 36 17.3 -0.5**
ZALV Zalesovo Beam 40.45 327 P **P 18 36 16.8 -1.0**
ZALV Zalesovo Beam 40.45 327 P **P 18 36 17.1 -0.7**
comp=Z,13nm,0.6s,baz=112,slow=8.0,SNR=39
comp=Z,13nm,0.6s
TDK Taldyorghan 40.70 311 eP **P 18 36 19.7 -0.4**
comp=Z,33nm,0.9s,baz=312
TDK Taldyqorghan 40.70 311 eP **P 18 36 19.6 -0.4**
TDK pmax pmax
comp=Z,33nm,0.9s
HYB Hyderabad 41.04 269 eP **P 18 36 23.2 +0.1**
MDOK Medeo 41.21 308 eP **P 18 36 23.7 -0.7**
baz=309
MDOK Medeo 41.21 308 eP **P 18 36 23.7 -0.7**
TNSS Tian-Shan 41.25 308 eP **P 18 36 24.2 -0.9**
baz=308
TNSS Tian-Shan 41.25 308 eP **P 18 36 24.2 -0.9**
KSH Kashi 41.39 303 P **P 18 36 29.5 +3.5**
KSH pmax pmax
comp=Z,13nm,1.0s
ULHL Ulahol 41.61 307 P **P 18 36 29.2 +1.3**
SNR=8.8
NRN Naryn 41.65 306 P **P 18 36 27.4 -0.9**

NRN	**Naryn**	**41.65**	**306**		P		**P**		**18 36 27.4**	**-0.9**
NRN					pmax		pmax				
	comp=Z,15nm,0.8s										
KUU	**Kurty**	**41.87**	**309**	*e*	P		**P**		**18 36 28.3**	**-1.3**
	comp=Z,17nm,0.8s,baz=310										
KUU	**Kurty**	**41.87**	**309**	*e*	P		**P**		**18 36 28.3**	**-1.3**
KUU					pmax		pmax				
	comp=Z,17nm,0.8s										
TKM2	**Tokmak 2**	**42.20**	**308**		P		**P**		**18 36 33.6**	**+0.9**
	SNR=20										
KURK	**Kurchatov**	**42.39**	**320**		P		**P**		**18 36 33.7**	**-0.1**
KURK	**Kurchatov**	**42.39**	**320**	*ce*	P		**P**		**18 36 33.7**	**-0.1**
KURK					pmax		pmax				
	comp=Z,15nm,0.8s										
KURBB	**Kurchatov Arra**	**42.41**	**319**		P		**P**		**18 36 33.4**	**-0.5**
	comp=Z,5.8nm,0.7s,baz=114,slow=9.7,SNR=35										
	comp=Z,5.8nm,0.7s										
KBK	**Karagaybulak**	**42.62**	**307**		P		**P**		**18 36 36.4**	**+0.4**
	SNR=8.6										
CHMS	**Chumysh**	**42.83**	**308**		P		**P**		**18 36 38.2**	**+0.7**
	SNR=8.8										
UCH	**Uchtor**	**42.87**	**306**		P		**P**		**18 36 40.0**	**+1.6**
	SNR=14										
AAK	**Ala-Archa**	**42.95**	**307**		P		**P**		**18 36 39.1**	**+0.4**
AAK	**Ala-Archa**	**42.95**	**307**	*ce*	P		**P**		**18 36 37.2**	**-1.5**
AAK					pmax		pmax				
	comp=Z,6.0nm,1.0s										
EKS2	**Erkin-Say**	**43.48**	**307**		P		**P**		**18 36 44.0**	**+1.1**
	SNR=5.3										
SEY	**Seymchan**	**43.51**	**20**	*i*	P		**P**		**18 36 42.3**	**-0.3**
SEY					pmax		pmax				
	comp=Z,4.0nm,0.9s										
BTLS	**Baital**	**43.71**	**310**	*e*	P		**P**		**18 36 43.6**	**-1.0**
	comp=Z,17nm,1.1s,baz=311										
BTLS	**Baital**	**43.71**	**310**	*e*	P		**P**		**18 36 43.6**	**-1.0**
BTLS					pmax		pmax				
	comp=Z,17nm,1.1s										
DZA	**Taraz**	**45.29**	**307**	*e*	P		**P**		**18 36 56.5**	**-0.8**
	baz=307										
DZA	**Taraz**	**45.29**	**307**	*e*	P		**P**		**18 36 56.5**	**-0.8**
BRZS	**Berezniki**	**45.76**	**317**	*e*	P		**P**		**18 36 59.5**	**-1.5**
	comp=Z,12nm,1.0s,baz=317										
BRZS	**Berezniki**	**45.76**	**317**	*e*	P		**P**		**18 36 59.4**	**-1.5**
BRZS					pmax		pmax				
	comp=Z,12nm,1.0s										
KK31	**Karatay Array**	**45.91**	**307**		P		**P**		**18 37 00.8**	**-1.4**
KK31	**Karatay Array**	**45.91**	**307**		P		**P**		**18 37 00.8**	**-1.4**
KK31					pmax		pmax				
	comp=Z,6.0nm,0.8s										
KKAR	**Karatay Array**	**45.91**	**307**		P		**P**		**18 37 02.4**	**+0.2**
KKAR	**Karatay Array**	**45.91**	**307**		P		**P**		**18 37 01.1**	**-1.2**
KKAR	**Karatay Array**	**45.91**	**307**		P		**P**		**18 37 02.4**	**+0.2**
KKAR					pmax		pmax				
	comp=Z,6.0nm,0.8s										
IUG	**luzhnay**	**46.16**	**306**	*e*	P		**P**		**18 37 03.6**	**-0.7**
	comp=Z,20nm,1.0s,baz=306										
IUG	**luzhnay**	**46.16**	**306**	*e*	P		**P**		**18 37 03.6**	**-0.7**
IUG					pmax		pmax				
	comp=Z,20nm,1.0s										
BRLS	**Borolday**	**46.40**	**307**	*e*	P		**P**		**18 37 05.8**	**-0.3**
	baz=307										
BRLS	**Borolday**	**46.40**	**307**	*e*	P		**P**		**18 37 05.7**	**-0.3**
KBL	**Kabul**	**46.73**	**295**		P		**P**		**18 37 08.9**	**0.0**
KBL	**Kabul**	**46.73**	**295**		P		**P**		**18 37 08.9**	**0.0**
KBL					pmax		pmax				
	comp=Z,33nm,0.9s										
SIMJ	**Simiganj**	**46.73**	**301**		P		**P**		**18 37 09.0**	**+0.2**
SIMJ					IAmb		IAmb		18 38 37.8		
	comp=Z,12nm,0.9s										
TIXI	**Tiksi**	**47.42**	**3**		P		**P**		**18 37 12.4**	**-1.1**
TIXI					IAmb		IAmb		18 37 14.0		
	comp=Z,22nm,1.0s										
TIXI	**Tiksi**	**47.42**	**3**	*i*	P		**P**		**18 37 12.5**	**-1.0**
BVAR	**Borovoye Array**	**47.96**	**320**		P		**P**		**18 37 17.8**	**-0.2**
	comp=Z,12nm,0.8s,baz=105,slow=8.2,SNR=26										
	comp=Z,12nm,0.8s										
BRVK	**Borovoye**	**48.03**	**320**		P		**P**		**18 37 18.5**	**-0.1**
BRVK					IAmb		IAmb		18 37 19.5		
	comp=Z,26nm,1.1s										
BRVK	**Borovoye**	**48.03**	**320**	*ce*	P		**P**		**18 37 18.7**	**+0.2**
BRVK					pmax		pmax				
	comp=Z,19nm,0.8s										
NRIK	**Noril'sk**	**49.37**	**345**	*ce*	P		**P**		**18 37 27.9**	**-0.7**
NRIK					pmax		pmax				
	comp=Z,15nm,1.1s										
NRIK	**Noril'sk**	**49.37**	**345**		P		**P**		**18 37 27.1**	**-1.5**
	comp=Z,10nm,1.0s,baz=130,slow=9.7,SNR=8.2										
	comp=Z,10nm,1.0s										
BILL	**Bilibino**	**51.22**	**20**		P		**P**		**18 37 41.5**	**-1.0**
BILL					IAmb		IAmb		18 39 07.0		
	comp=Z,83nm,2.0s										
BILL	**Bilibino**	**51.22**	**20**	*i*	P		**P**		**18 37 40.9**	**-1.7**
ABKAR	**Akbulak array**	**53.80**	**314**		P		**P**		**18 38 01.5**	**-0.6**
SVE	**Sverdlovsk**	**54.29**	**324**	*e*	P		**P**		**18 38 05.3**	**-0.2**
SVE					pmax		pmax				
	comp=Z,26nm,1.1s										
ARU	**Arti**	**55.36**	**323**		P		**P**		**18 38 11.8**	**-1.5**
ARU					IAmb		IAmb		18 38 13.4		
	comp=Z,15nm,0.8s										
ARU	**Arti**	**55.36**	**323**	*c*	*i* P		**P**		**18 38 12.5**	**-0.8**
ARU									18 40 12.7		
ARU					S		**S**		**18 46 01.8**	**+5.4**
ARU					pmax		pmax				
	comp=Z,41nm,1.8s										
STKA	**Stephens Creek**	**59.03**	**161**		P		**P**		**18 38 43.5**	**+4.1**
	comp=Z,7.1nm,0.7s,baz=17,slow=6.3,SNR=3.7										
	comp=Z,7.1nm,0.7s										
KIRV	**Kirov**	**60.45**	**325**	*ce*	P		**P**		**18 38 48.3**	**-0.6**
KIRV	**Kirov**	**60.45**	**325**		P		**P**		**18 38 47.7**	**-1.2**
	comp=Z,26nm,0.7s,baz=64,slow=0.6,SNR=16										
	comp=Z,26nm,0.7s										
BELG	**Belogornoye**	**61.61**	**318**	*i*	P		**P**		**18 38 54.3**	**-2.6**
BELG					pmax		pmax				
	comp=Z,8.0nm,0.9s										
BELG	**Belogornoye**	**61.61**	**318**		P		**P**		**18 38 55.5**	**-1.3**
	comp=Z,35nm,0.8s,baz=180,slow=20,SNR=25										
	comp=Z,35nm,0.8s										
GNI	**Garni**	**65.28**	**305**		P		**P**		**18 39 20.2**	**-1.4**
GNI					IAmb		IAmb		18 39 31.3		
	comp=Z,10nm,0.8s										
GNI	**Garni**	**65.28**	**305**	*ce*	P		**P**		**18 39 19.8**	**-1.8**
GNI					pmax		pmax				
	comp=Z,22nm,1.7s										
KLMR	**Klimovskoe**	**65.36**	**328**	*e*	P		**P**		**18 39 18.8**	**-2.7**
KLMR					pmax		pmax				
	comp=Z,61nm,1.4s										
VRH	**Novokhopyorsk**	**65.39**	**317**	*e*	P		**P**		**18 39 19.8**	**-2.1**
VRH					pmax		pmax				
	comp=Z,40nm,1.0s										
NCK	**Nalchik**	**65.45**	**308**	*i*	P		**P**		**18 39 21.3**	**-1.2**
NCK					pmax		pmax				
	comp=Z,8.0nm,1.0s										
GOF	**Gofitskoye**	**65.55**	**310**	*ce*	P		**P**		**18 39 23.2**	**+0.1**
KBZ	**Khabaz**	**65.91**	**309**	*ce*	P		**P**		**18 39 24.6**	**-0.7**
KBZ					pmax		pmax				
	comp=Z,16nm,0.9s										
KBZ	**Khabaz**	**65.91**	**309**		P		**P**		**18 39 24.2**	**-1.1**
	comp=Z,11nm,0.9s,baz=118,slow=4.3,SNR=22										
	comp=Z,11nm,0.9s										
AKH	**Akhalkalaki**	**65.94**	**306**		P		**P**		**18 39 26.3**	**+0.4**
AKH	**Akhalkalaki**	**65.94**	**306**		P		**P**		**18 39 26.3**	**+0.4**
AKH					pmax		pmax				
	comp=Z,66nm,0.9s										
KVAR	**Kislovodsk Arr**	**66.00**	**309**		P		**P**		**18 39 27.6**	**+1.4**
	comp=Z,4.8nm,0.9s,baz=360,slow=19,SNR=3.9										
	comp=Z,4.8nm,0.9s										
KIV	**Kislovodsk**	**66.01**	**309**	⇓	P		**P**		**18 39 26.4**	**+0.3**
KIV	**Kislovodsk**	**66.01**	**309**		P		**P**		**18 39 25.6**	**-0.5**
KIV	**Kislovodsk**	**66.01**	**309**	*e*	P		**P**		**18 39 26.0**	**-0.2**
KIV					pmax		pmax				
	comp=Z,29nm,1.0s										
CAST	**Castle Rocks**	**66.65**	**29**		P		**P**		**18 39 30.0**	**+0.1**
VORR	**Voronezh**	**66.86**	**318**	*e*	P		**P**		**18 39 29.3**	**-2.0**
VORR					pmax		pmax				
	comp=Z,40nm,0.5s										
LPSR	**Galich'ya Gora**	**66.86**	**319**	*e*	P		**P**		**18 39 29.1**	**-2.2**
LPSR					pmax		pmax				
	comp=Z,30nm,0.8s										
VORD	**Divnogorie**	**66.94**	**317**	*e*	P		**P**		**18 39 29.7**	**-2.1**
VORD					pmax		pmax				
	comp=Z,10.0nm,0.8s										
VSR	**Storozhevoye**	**66.97**	**317**	*e*	P		**P**		**18 39 29.9**	**-2.1**
VSR					pmax		pmax				
	comp=Z,20nm,1.0s										
MOS	**Moscow**	**67.07**	**322**	*e*	P		**P**		**18 39 30.5**	**-2.0**
MOS					pmax		pmax				
	comp=Z,34nm,0.7s										
APA	**Apatity**	**67.15**	**335**	⇓ *i*	P		**P**		**18 39 29.1**	**-3.8**
APA					pmax		pmax				
	comp=Z,15nm,1.1s										
SUA	**Susitna One**	**67.57**	**31**		P		**P**		**18 39 35.4**	**-0.4**
GURO	**Guroymak-BITLI**	**67.68**	**303**		IAmb		IAmb		18 39 38.8		
	comp=Z,8.5nm,1.0s										
OBN	**Obninsk**	**67.77**	**322**	⇑ *e*	P		**P**		**18 39 35.9**	**-1.1**
OBN					pmax		pmax				
	comp=Z,42nm,1.7s										
H24K	**Noodor Dome**	**68.05**	**26**		IAmb		IAmb		18 40 07.0		
	comp=Z,19nm,1.1s										
MDM	**Murphy Dome**	**68.07**	**27**		P		**P**		**18 39 38.3**	**-0.5**
COLA	**College**	**68.24**	**27**		P		**P**		**18 39 42.6**	**+2.8**
ILAR	**Eielson Array**	**68.67**	**27**		P		**P**		**18 39 43.2**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=281,slow=8.1,SNR=6.4										
	comp=Z,1.9nm,0.8s										
RAYN	**Ar Rayn**	**68.98**	**287**		P		**P**		**18 39 44.6**	**-0.7**
RAYN					IAmb		IAmb		18 39 46.8		
	comp=Z,27nm,1.3s										
RAYN	**Ar Rayn**	**68.98**	**287**		P		**P**		**18 39 45.5**	**+0.2**
VALR	**Valaam**	**69.41**	**329**	*i*	P		**P**		**18 39 46.4**	**-0.7**
VALR					pmax		pmax				
	comp=Z,46nm,1.3s										
SPITS	**Spitsbergen Ar**	**69.41**	**348**		P		**P**		**18 39 46.3**	**-0.6**
	comp=Z,15nm,1.0s,baz=84,slow=7.6,SNR=11										
	comp=Z,15nm,1.0s										
ARCES	**ARCESS Array B**	**69.60**	**338**		P		**P**		**18 39 48.0**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=54,slow=5.1,SNR=8.4										
	comp=Z,4.8nm,0.7s										
GLB	**Gilahina Butte**	**70.83**	**30**		P		**P**		**18 39 55.8**	**-0.1**
M26K	**Nabesna, AK**	**70.93**	**29**		IAmb		IAmb		18 40 18.7		
	comp=Z,17nm,1.0s										
L27K	**Beaver Creek,**	**71.26**	**29**		P		**P**		**18 39 57.8**	**-0.8**
FINES	**FINESS Array B**	**71.61**	**330**		P		**P**		**18 40 00.7**	**+0.1**
	comp=Z,6.3nm,0.5s,baz=64,slow=5.9,SNR=58										
	comp=Z,6.3nm,0.5s										
CTG	**Chitna Glacier**	**72.11**	**31**		P		**P**		**18 40 03.2**	**-0.6**
	baz=288										
VSU	**Vasula**	**72.19**	**327**	*ce*	P		**P**		**18 40 02.2**	**-1.9**
VSU					pmax		pmax				
	comp=Z,42nm,1.7s										
VSU	**Vasula**	**72.19**	**327**	*e*	P		**P**		**18 40 04.8**	**+0.7**
F30M	**Barrier River**	**72.19**	**23**		P		**P**		**18 40 03.3**	**-0.7**
	baz=291										
G30M	**tAoh Zraii Nji**	**72.26**	**24**		P		**P**		**18 40 04.1**	**-0.3**
	baz=290										
YUK3	**Moose Creek**	**72.26**	**30**		P		**P**		**18 40 04.5**	**-0.3**
	baz=288										
EPYK	**Eagle Plains**	**72.28**	**25**		P		**P**		**18 40 04.1**	**-0.5**
	baz=290										
J29N	**Klondike Camp**	**72.35**	**27**		IAmb		IAmb		18 40 35.7		
	comp=Z,14nm,0.8s										
J29N	**Klondike Camp**	**72.35**	**27**		P		**P**		**18 40 05.2**	**+0.2**
	baz=290										
INK	**Inuvik**	**72.73**	**22**		P		**P**		**18 40 06.1**	**-1.1**
INK					IAmb		IAmb		18 40 34.3		
	comp=Z,16nm,1.1s										
INK	**Inuvik**	**72.73**	**22**		P		**P**		**18 40 07.1**	**-0.1**
	baz=292										
INK	**Inuvik**	**72.73**	**22**		P		**P**		**18 40 06.1**	**-1.1**
INK					pmax		pmax				
	comp=Z,16nm,1.1s										
YUK8	**Steele Glacier**	**72.73**	**30**		P		**P**		**18 40 07.0**	**-0.6**
	baz=289										
MEF	**Metsahovi**	**72.78**	**329**	*e*	P		**P**		**18 40 08.5**	**+0.9**
MNK	**Minsk**	**72.79**	**322**	*i*	P		**P**		**18 40 04.6**	**-3.2**
MNK					*i*				18 40 21.1		
MNK					*i*				18 42 46.9		
MNK					*i*	PPP		PPP	18 44 41.2		
MNK					*i*	S		**S**	**18 49 32.6**	**+0.2**
MNK					*i*				18 50 12.5		
MNK					pmax		pmax				
	comp=N,11nm,0.9s										
MNK					pmax		pmax				
	comp=Z,21nm,1.0s										
MNK					pmax		pmax				
	comp=E,7.0nm,1.0s										
MNK					MLR		MLR				
	comp=N,25μm,19.0s										
MNK					MLR		MLR				
	comp=Z,22μm,18.0s										
MNK					MLR		MLR				
	comp=E,7μm,18.0s										
I30M	**Mount Dempster**	**72.82**	**26**		P		**P**		**18 40 07.1**	**-0.8**
I30M	**Mount Dempster**	**72.82**	**26**		P		**P**		**18 40 07.9**	**0.0**
	baz=291										
L29M	**L29M**	**72.84**	**28**		P		**P**		**18 40 08.2**	**+0.1**
	baz=290										
K29M	**Barlow Dome**	**72.84**	**27**		P		**P**		**18 40 08.4**	**+0.3**
	baz=290										
PINM	**Pinnacle**	**72.90**	**31**		P		**P**		**18 40 08.4**	**-0.1**
	baz=289										
M29M	**Somme Creek**	**72.92**	**29**		P		**P**		**18 40 08.5**	**-0.1**
	baz=290										
F31M	**Tsiigehtchic**	**72.99**	**23**		P		**P**		**18 40 07.6**	**-1.1**
F31M					IAmb		IAmb		18 40 33.0		
	comp=Z,12nm,1.0s										
F31M	**Tsiigehtchic**	**72.99**	**23**		P		**P**		**18 40 08.1**	**-0.5**
	baz=292										
G31M	**Satah River**	**73.00**	**24**		P		**P**		**18 40 08.2**	**-0.6**
	baz=292										
J30M	**Hart River**	**73.07**	**26**		P		**P**		**18 40 09.2**	**-0.3**
	baz=291										
AKASG	**Malin Array Be**	**73.18**	**318**		P		**P**		**18 40 09.3**	**-0.9**
	comp=Z,4.5nm,0.7s,baz=60,slow=5.5,SNR=14										
	comp=Z,4.5nm,0.7s										
AKBB	**Malin Array Si**	**73.18**	**318**		IAmb		IAmb		18 40 10.1		
	comp=Z,17nm,1.3s										
AKBB	**Malin Array Si**	**73.18**	**318**	*ce*	P		**P**		**18 40 07.5**	**-2.7**
AKBB					pmax		pmax				
	comp=Z,19nm,1.5s										
KIEV	**Kiev**	**73.19**	**318**	⇑	P		**P**		**18 40 09.9**	**-0.4**
KIEV	**Kiev**	**73.19**	**318**		P		**P**		**18 40 09.8**	**-0.4**
NACGM	**Naroch**	**73.27**	**323**	*e*	P		**P**		**18 40 10.7**	**0.0**
ISAL	**Salakas**	**73.41**	**324**	*e*	P		**P**		**18 40 08.9**	**-2.6**
MTSE	**Matsula**	**73.56**	**327**	*e*	P		**P**		**18 40 12.7**	**+0.5**
M30M	**Minto, Yukon**	**73.60**	**28**		P		**P**		**18 40 12.1**	**-0.4**
M30M					IAmb		IAmb		18 40 34.6		
	comp=Z,42nm,1.7s										
M30M	**Minto, Yukon**	**73.60**	**28**		P		**P**		**18 40 12.3**	**-0.2**
	baz=291										
MAYO	**Mayo, Yukon**	**73.61**	**27**		P		**P**		**18 40 12.2**	**-0.2**
	baz=292										
BR131	**Keskin Array S**	**73.62**	**307**		P		**P**		**18 40 13.0**	**-0.1**
BR131					IAmb		IAmb		18 40 14.6		
	comp=Z,12nm,0.9s										
BR131	**Keskin Array S**	**73.62**	**307**	*i*	P		**P**		**18 40 12.0**	**-1.2**
BRTR	**Keskin Array B**	**73.62**	**307**		P		**P**		**18 40 13.1**	**-0.2**
	comp=Z,7.0nm,0.9s,baz=108,slow=6.8,SNR=23										
	comp=Z,7.0nm,0.9s										
A36M	**Sachs Harbour**	**73.68**	**17**		IAmb		IAmb		18 40 28.6		
	comp=Z,11nm,0.9s										
A36M	**Sachs Harbour**	**73.68**	**17**		P		**P**		**18 40 12.4**	**-0.3**
	baz=299										
N30M	**Aishikik Lake**	**73.88**	**29**		P		**P**		**18 40 14.0**	**-0.1**
	baz=291										
HYT	**Haines Junctio**	**73.92**	**30**		P		**P**		**18 40 14.5**	**0.0**
	baz=291										
P29M	**Windy Craggy**	**74.25**	**31**		P		**P**		**18 40 16.6**	**+0.3**
	baz=291										
MMAI	**Mount Meron Ar**	**74.42**	**299**		P		**P**		**18 40 18.5**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=74,slow=5.1,SNR=2.5										
	comp=Z,3.0nm,0.7s										
P30M	**Million Dollar**	**74.43**	**31**		P		**P**		**18 40 17.5**	**+0.1**
	baz=292										
VSVD	**Vaisvydziai**	**74.44**	**325**	*e*	P		**P**		**18 40 16.2**	**-1.2**
SORM	**Soroca**	**74.55**	**316**	⇓	P		**P**		**18 40 18.0**	**-0.2**
SORM	**Soroca**	**74.55**	**316**		P		**P**		**18 40 18.0**	**-0.2**
O30N	**Mendenhall**	**74.59**	**30**		P		**P**		**18 40 18.2**	**-0.1**
	baz=292										
PABE	**Paberze**	**74.59**	**324**	*e*	P		**P**		**18 40 16.7**	**-1.6**
MILM	**Milestii Mici**	**74.65**	**315**		P		**P**		**18 40 19.1**	**+0.2**
MILM	**Milestii Mici**	**74.65**	**315**		P		**P**		**18 40 19.0**	**+0.2**
M31M	**Drury Creek, Y**	**74.78**	**28**		P		**P**		**18 40 19.3**	**-0.1**
	baz=293										
WHY	**Whitehorse**	**75.18**	**30**		P		**P**		**18 40 21.5**	**-0.3**
	baz=293										
FARO	**Faro, Yukon**	**75.22**	**28**		IAmb		IAmb		18 40 59.2		
	comp=Z,19nm,1.3s										
FARO	**Faro, Yukon**	**75.22**	**28**		P		**P**		**18 40 21.6**	**-0.3**
	baz=294										
C36M	**Paulatuk**	**75.34**	**20**		IAmb		IAmb		18 41 22.2		
	comp=Z,25nm,1.5s										
C36M	**Paulatuk**	**75.34**	**20**		P		**P**		**18 40 22.3**	**-0.1**
	baz=300										
SKAG	**Skagway**	**75.45**	**31**		P		**P**		**18 40 23.2**	**+0.1**
	baz=293										
SUW	**Suwalki**	**75.55**	**323**	*e*	P		P		18 40 17.3	-6.6
N32M	**Quiet Lake**	**75.78**	**29**		P		**P**		**18 40 24.9**	**-0.3**
	baz=295										
MMPY	**Sheldon Lake,**	**75.93**	**27**		P		**P**		**18 40 25.7**	**-0.3**
	baz=296										
P32M	**Atlin**	**76.15**	**31**		P		**P**		**18 40 26.3**	**-1.0**
	baz=294										
TESR	**Tescani**	**76.19**	**315**	⇓	P		**P**		**18 40 28.2**	**+0.5**
P33M	**Teslin, Yukon**	**76.30**	**30**		P		**P**		**18 40 27.4**	**-0.8**
	baz=295										
R32K	**Eaglecrest**	**76.31**	**32**		P		**P**		**18 40 27.1**	**-1.0**
	baz=294										
VRI	**Vrincioaia**	**76.37**	**314**	⇓	P		**P**		**18 40 29.4**	**+0.6**
VRI	**Vrincioaia**	**76.37**	**314**		P		**P**		**18 40 29.3**	**+0.6**
SIT	**Sitka**	**76.41**	**33**		P		**P**		**18 40 28.0**	**-0.7**
	baz=294										
PLOR	**Plostina**	**76.42**	**314**	⇑	P		**P**		**18 40 29.9**	**+0.8**
PLOR	**Plostina**	**76.42**	**314**		P		**P**		**18 40 29.9**	**+0.8**
ISP	**Isparta**	**76.55**	**306**		IAmb		IAmb		18 40 32.4		
	comp=Z,16nm,0.9s										
ISP	**Isparta**	**76.55**	**306**	*ce*	P		**P**		**18 40 28.4**	**-1.7**
ISP					pmax		pmax				
	comp=Z,30nm,1.7s										
LVV	**L'vov**	**76.62**	**319**	*e*	P		**P**		**18 40 29.3**	**-0.8**
LVV					MLR		MLR				
	comp=E,29μm,16.0s										
LVV					MLR		MLR				
	comp=N,11μm,17.0s										
LVV					MLR		MLR				
	comp=Z,27μm,16.0s										
TURR	**Turia**	**76.76**	**315**	⇑	P		**P**		**18 40 31.9**	**+0.8**
MLR	**Muntele Rosu**	**77.02**	**314**	⇑	P		**P**		**18 40 32.8**	**+0.2**
MLR	**Muntele Rosu**	**77.02**	**314**		P		**P**		**18 40 32.7**	**+0.2**
Q32M	**Nakina River**	**77.09**	**31**		P		**P**		**18 40 31.3**	**-1.5**
	baz=296										
R33M	**Jennings River**	**77.50**	**30**		P		**P**		**18 40 33.8**	**-1.2**
	baz=297										
TGTN	**Hyland Airport**	**77.69**	**27**		P		**P**		**18 40 35.6**	**-0.3**
	baz=299										
HFS	**Hagfors**	**77.72**	**331**		P		**P**		**18 40 35.1**	**-0.9**
	comp=Z,3.5nm,0.6s,baz=91,slow=7.4,SNR=7.7										
	comp=Z,3.5nm,0.6s										
ARR	**Arges**	**77.92**	**314**	⇓	P		**P**		**18 40 37.0**	**-0.6**
NC405	**NORSAR Array S**	**78.11**	**332**		P		**P**		**18 40 36.5**	**-1.8**
NC405					IAmb		IAmb		18 40 39.2		
	comp=Z,19nm,0.8s										
WTLY	**Watson Lake, Y**	**78.14**	**29**		P		**P**		**18 40 37.6**	**-0.8**
	baz=298										
WRAK	**Wrangell Islan**	**78.17**	**33**		P		**P**		**18 40 37.9**	**-0.7**
	baz=296										
NB2	**NORSAR Subarra**	**78.36**	**332**		P		**P**		**18 40 38.9**	**-0.7**
	comp=Z,10nm,1.1s,baz=62,slow=5.6										
NOA	**NORSAR Array B**	**78.36**	**332**		P		**P**		**18 40 38.5**	**-1.1**
	comp=Z,6.8nm,0.9s,baz=58,slow=5.6,SNR=17										
	comp=Z,6.8nm,0.9s										
MARR	**Marisel-Cluj**	**78.39**	**316**	⇓	P		**P**		**18 40 40.5**	**+0.4**
DRGR		**78.60**	**316**	⇑	P		**P**		**18 40 40.9**	**-0.4**
DRGR		**78.60**	**316**		P		**P**		**18 40 40.8**	**-0.4**
WRGLY	**Wrigley**	**78.75**	**25**		P		**P**		**18 40 41.7**	**0.0**
	baz=302										
DEV	**Deva**	**78.84**	**315**	⇑	P		**P**		**18 40 43.4**	**+0.9**
DEV	**Deva**	**78.84**	**315**		P		**P**		**18 40 43.4**	**+0.9**
SURR	**Surduc**	**79.39**	**315**	⇑	P		**P**		**18 40 45.1**	**-0.4**
HERR	**Herculane**	**79.55**	**315**	⇑	P		**P**		**18 40 47.3**	**+0.9**
BLKB	**Belogradchik**	**79

ORTC	Ortega, Tolima	147.23	33	*e*P		PKPdf	18 48 20.5	-1.0
POPC	Popayan, Colom	147.64	37	*e*P		PKPdf	18 48 23.6	+1.2
BBAC	Balboa, Cauca	147.75	38	*e*P		PKPbc	18 48 25.6	+0.3
VILC	Villavicencio,	147.79	30	*e*P		PKPbc	18 48 25.9	+0.5
OTAV	Otavalo	148.48	42	*e*P		PKPdf	18 48 14.2	-10
TULM	Tulcn-Chalpat	148.50	40	*e*P		PKPbc	18 48 27.6	0.0
FLOC	Florencia	148.99	36	*e*P		PKPbc	18 48 27.2	-1.2

IDC ***25*** *18:32:15.9±0.6, 6°42′S×143°71′E, h0km, mb4.7/15, mbtmp4.7/18, ML4.8/2, Error ellipse: s-maj=27.5km s-min=14.8km az=80.0*

NEIC ***25*** *18:32:16.4±1.9, 6°54′S±0°07′×143°86′E±0°04, h10km±1km, mb5.0/80, Error ellipse: s-maj=13.1km s-min=4.2km az=151.0*

ISC 25 18:32:16.9±0.4, 6°46′S±0°07′×143°67′E±0°09, h10km, n112, σ1§39/105, mb5.0/52, 3C, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.53**	**130**	Pn	Pn	18 33 21.5	-4.1
PMG	**Port Moresby**	**4.53**	**130**	Pn	**Pn**	**18 33 27.8**	**+2.3**
	56nm,0.5s,baz=23,slow=3.7,SNR=5.9						
PMG				Sn	**Sn**	**18 34 18.9**	**+0.6**
	4.0nm,0.3s,baz=268,slow=16,SNR=1.6						
MANU	**Manus Island**	**5.74**	**40**	Pn	Pn	18 33 39.5	-2.7
WRAB	**Tennant Creek**	**16.16**	**213**	Pn	**Pn**	**18 36 01.1**	**-3.1**
WB2	**Warramunga Arr**	**16.17**	**213**	Pn	**Pn**	**18 36 01.4**	**-2.9**
WRA	**Warramunga Arr**	**16.18**	**213**	Pn	**Pn**	**18 36 03.6**	**-0.8**
	3.8nm,0.3s,baz=23,slow=14,SNR=6.1						
WRA				Sn	Sn	18 38 50.2	-14
	1.1nm,0.3s,baz=28,slow=23,SNR=1.2						
WRA				Lg	Lg	18 40 39.3	
	baz=36,slow=27						
	72nm,0.9s						
HNR	**Honiara**	**16.39**	**101**	Pn	**Pn**	**18 36 03.6**	**-3.7**
	26nm,0.3s,baz=275,slow=14,SNR=1.0						
ASAR	**Alice Springs**	**19.51**	**208**	P	**P**	**18 36 47.3**	**+2.8**
ASAR	**Alice Springs**	**19.51**	**208**	P	**P**	**18 36 47.0**	**+2.6**
	2.3nm,0.3s,baz=36,slow=10,SNR=7.4						
ASAR				S	Sn	18 40 13.3	-12
	7.9nm,0.7s,baz=14,slow=28,SNR=2.4						
	30nm,0.7s						
TOLI2	**Tolitoli**	**24.05**	**287**	P	**P**	**18 37 31.2**	**-1.3**
TOLI2				IAmb	IAmb	18 37 34.1	
	comp=Z,29nm,0.9s						
STKA	**Stephens Creek**	**25.36**	**184**	P	**P**	**18 37 44.5**	**+0.3**
	comp=Z,11nm,1.1s,baz=5.2,slow=16,SNR=1.7						
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**27.16**	**194**	P	**P**	**18 37 57.3**	**-3.2**
PINNC	**Pines Island,**	**27.99**	**127**	P	P	18 38 02.5	-5.6
PINNC				IAmb	IAmb	18 38 08.6	
	comp=Z,61nm,1.4s						
YULB	**Yu-li**	**36.85**	**324**	P	P	18 39 23.8	-1.8
YULB				IAmb	IAmb	18 39 47.4	
	comp=Z,61nm,1.4s						
TPUB	**Ta-pu**	**37.17**	**323**	P	P	18 39 26.9	-1.5
SSLB	**Suanglung**	**37.36**	**324**	P	**P**	**18 39 29.6**	**-0.3**
YHNB	**Yeheng**	**37.80**	**326**	P	**P**	**18 39 32.9**	**-0.8**
KNMB	**Chin-men Tao**	**39.39**	**322**	P	**P**	**18 39 47.9**	**+0.9**
KNMB				IAmb	IAmb	18 39 49.1	
	comp=Z,43nm,0.8s						
JMN	**Monobe**	**41.03**	**348**	P	**P**	**18 39 59.8**	**-0.7**
JMN				IAmb	IAmb	18 40 27.6	
	comp=Z,46nm,1.5s						
JNU	**Nakatsue**	**41.20**	**344**	P	**P**	**18 40 01.9**	**+0.1**
	comp=Z,12nm,0.7s,baz=187,slow=1.9,SNR=8.2						
	comp=Z,12nm,0.7s						
JGF	**Kuroka**	**42.26**	**352**	P	**P**	**18 40 10.2**	**-0.3**
MJAR	**Matsushiro Arr**	**43.08**	**354**	P	**P**	**18 40 16.9**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=177,slow=8.0,SNR=7.6						
	comp=Z,3.0nm,0.9s						
RTZ	**Ruatahuna**	**43.94**	**142**	P	**P**	**18 40 24.0**	**-0.2**
RTZ				IAmb	IAmb	18 40 28.9	
	comp=Z,18nm,0.8s						
JMM	**Marumori**	**44.18**	**357**	P	**P**	**18 40 26.2**	**+0.2**
JMM				IAmb	IAmb	18 40 38.5	
	comp=Z,39nm,1.4s						
GVZ	**Greta Valley S**	**44.63**	**149**	P	**P**	**18 40 28.1**	**-1.6**
KSRS	**Korea Array**	**46.10**	**343**	P	**P**	**18 40 42.4**	**+1.2**
	comp=Z,12nm,0.9s,baz=165,slow=9.1,SNR=24						
KSRS				PcP	**PcP**	**18 42 19.0**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=137,slow=4.5,SNR=2.3						
	comp=Z,12nm,0.9s						
JTM	**Tenmabayashi**	**47.08**	**357**	P	**P**	**18 40 49.0**	**+0.1**
PHRA	**Phrae**	**49.50**	**301**	P	**P**	**18 41 08.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**50.58**	**300**	P	**P**	**18 41 17.2**	**+1.0**
	comp=Z,2.9nm,0.5s,baz=119,slow=6.1,SNR=13						
	comp=Z,2.9nm,0.5s						
CHTO	**Chiang Mai**	**50.73**	**301**	P	**P**	**18 41 17.0**	**-0.3**
CHTO				IAmb	IAmb	18 41 20.4	
	comp=Z,19nm,1.4s						
USA0B	**Ussuriysk Arra**	**51.52**	**349**	P	**P**	**18 41 22.3**	**-0.5**
USA0B				IAmb	IAmb	18 41 24.7	
	comp=Z,15nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.52**	**349**	P	**P**	**18 41 22.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**51.52**	**349**	P	**P**	**18 41 23.9**	**+1.1**
	comp=Z,14nm,0.7s,baz=184,slow=8.7,SNR=28						
	comp=Z,14nm,0.7s						
JOHN	**Johnston Islan**	**51.70**	**63**	P	P	18 41 21.5	-3.2
PEA0B	**Petropavlovsk-**	**60.53**	**10**	P	**P**	**18 42 26.3**	**-0.8**
PETK	**Petropavlovsk-**	**60.53**	**10**	P	**P**	**18 42 26.1**	**-1.0**
PETK	**Petropavlovsk-**	**60.53**	**10**	P	**P**	**18 42 27.9**	**+0.8**
	comp=Z,8.7nm,0.8s,baz=158,slow=7.0,SNR=21						
	comp=Z,8.7nm,0.8s						
SONM	**Songino Array**	**63.24**	**333**	P	**P**	**18 42 44.7**	**-1.0**
SONM	**Songino Array**	**63.24**	**333**	P	**P**	**18 42 46.8**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=166,slow=5.9,SNR=3.7						
	comp=Z,1.4nm,0.7s						
PALK	**Pallekele**	**64.27**	**281**	P	**P**	**18 42 52.2**	**-0.8**
HYB	**Hyderabad**	**68.53**	**291**	*e*P	**P**	**18 43 20.5**	**+0.2**
SBA	**Scott Base**	**72.37**	**175**	P	**P**	**18 43 41.0**	**-1.6**
SBA				IAmb	IAmb	18 43 56.8	
	comp=Z,29nm,1.4s						
MK31	**Makanchi Array**	**75.77**	**322**	P	**P**	**18 44 03.6**	**+0.6**
MKAR	**Makanchi Array**	**75.77**	**322**	P	**P**	**18 44 03.5**	**+0.5**
MKAR	**Makanchi Array**	**75.77**	**322**	P	**P**	**18 44 04.0**	**+0.9**
	comp=Z,4.9nm,0.6s,baz=100,slow=7.5,SNR=29						
	comp=Z,4.9nm,0.6s						
MAKZ	**Makanchi**	**75.97**	**321**	P	**P**	**18 44 05.0**	**+0.9**
MAKZ				IAmb	IAmb	18 44 06.0	
	comp=Z,15nm,1.2s						
TARG	**Taragay, Kyrgy**	**76.70**	**315**	P	**P**	**18 44 08.2**	**-0.7**
TARG				IAmb	IAmb	18 44 30.0	
	comp=Z,20nm,1.4s						
ZAA0	**Zalesovo Array**	**77.66**	**329**	P	**P**	**18 44 13.2**	**-0.3**
ZALV	**Zalesovo Beam**	**77.66**	**329**	P	**P**	**18 44 12.8**	**-0.7**
ZALV	**Zalesovo Beam**	**77.66**	**329**	P	**P**	**18 44 13.1**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=110,slow=5.9,SNR=9.3						
	comp=Z,3.0nm,0.5s						
TIXI	**Tiksi**	**78.56**	**355**	P	**P**	**18 44 17.9**	**-0.2**
O14K	**Tigyukauivet M**	**78.67**	**25**	P	**P**	**18 44 17.6**	**-1.3**
M14K	**Bethel**	**79.23**	**24**	P	**P**	**18 44 21.2**	**-0.8**
M14K				IAmb	IAmb	18 44 42.7	
	comp=Z,20nm,1.2s						
KURK	**Kurchatov**	**79.62**	**324**	P	**P**	**18 44 23.6**	**-0.7**
KURK				IAmb	IAmb	18 44 33.3	
	comp=Z,19nm,1.4s						
KURBB	**Kurchatov Arra**	**79.63**	**324**	P	**P**	**18 44 24.6**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=112,slow=4.4,SNR=11						
	comp=Z,2.0nm,0.6s						
N15K	**Kwethluk River**	**79.67**	**25**	P	**P**	**18 44 24.4**	**-0.1**
J14K	**Nanvaranak Lak**	**79.78**	**22**	P	**P**	**18 44 23.5**	**-1.4**
ARSB	**Arslanbob**	**79.98**	**314**	P	**P**	**18 44 26.4**	**-0.3**
O16K	**Kokwok River B**	**80.22**	**26**	P	**P**	**18 44 27.4**	**0.0**
ANM	**Nome**	**80.24**	**20**	P	**P**	**18 44 28.1**	**+0.6**
K15K	**Wolf Creek Mou**	**80.28**	**23**	P	**P**	**18 44 26.5**	**-1.2**
K15K				IAmb	IAmb	18 44 31.2	
	comp=Z,29nm,1.4s						
M16K	**Timber Creek**	**80.61**	**25**	P	**P**	**18 44 29.3**	**-0.1**
M16K				IAmb	IAmb	18 44 32.3	
	comp=Z,12nm,0.8s						
L16K	**Owhat River**	**80.76**	**24**	P	**P**	**18 44 31.0**	**+0.7**
L16K				IAmb	IAmb	18 44 34.5	
	comp=Z,22nm,1.4s						
N17K	**Nushagak Hills**	**81.09**	**25**	P	**P**	**18 44 32.0**	**-0.1**
J16K	**Anvik River**	**81.19**	**22**	P	**P**	**18 44 32.8**	**+0.2**
J16K				IAmb	IAmb	18 44 35.8	
	comp=Z,8.1nm,0.7s						
F15K	**North Star Dit**	**81.19**	**19**	P	**P**	**18 44 33.1**	**+0.6**
F15K				IAmb	IAmb	18 44 46.1	
	comp=Z,15nm,1.3s						
M17K	**Holitna River**	**81.43**	**25**	P	**P**	**18 44 32.2**	**-1.7**
O18K	**Koktuh Hills**	**81.62**	**27**	P	P	18 44 31.3	-3.6
O18K				IAmb	IAmb	18 44 37.8	
	comp=Z,12nm,1.1s						
N18K	**Kilae Creek**	**81.72**	**26**	P	P	18 44 33.4	-2.1
N18K				IAmb	IAmb	18 44 40.3	
	comp=Z,14nm,1.2s						
K17K	**Iditarod**	**81.77**	**23**	P	**P**	**18 44 34.1**	**-1.5**
K17K				IAmb	IAmb	18 44 38.6	
	comp=Z,15nm,0.9s						
G16K	**Koyuk River**	**81.77**	**20**	P	**P**	**18 44 34.2**	**-1.3**
SVW2	**Sparrevohn**	**82.06**	**25**	P	**P**	**18 44 36.3**	**-1.0**
L18K	**Granite Mounta**	**82.15**	**24**	P	**P**	**18 44 37.4**	**-0.3**
SIMJ	**Simiganj**	**82.17**	**310**	P	**P**	**18 44 38.0**	**-0.5**
SIMJ				IAmb	IAmb	18 44 40.0	
	comp=Z,21nm,1.4s						
KK31	**Karatay Array**	**82.25**	**315**	P	**P**	**18 44 38.5**	**-0.1**
KKAR	**Karatay Array**	**82.25**	**315**	P	**P**	**18 44 38.5**	**-0.1**
H17K	**Granite Mounta**	**82.36**	**21**	P	**P**	**18 44 38.5**	**-0.2**
H17K				IAmb	IAmb	18 44 41.4	
	comp=Z,7.7nm,0.8s						
N19K	**Bonanza Creek**	**82.39**	**26**	P	**P**	**18 44 38.4**	**-0.7**
N19K				IAmb	IAmb	18 44 41.5	
	comp=Z,10nm,0.9s						
P19K	**Oil Pt**	**82.42**	**27**	P	**P**	**18 44 37.9**	**-1.3**
C16K	**Lisburne Hills**	**82.58**	**17**	P	**P**	**18 44 39.4**	**-0.3**
C16K				IAmb	IAmb	18 44 51.4	
	comp=Z,11nm,1.1s						
F17K	**Baldwin Pennin**	**82.75**	**19**	P	**P**	**18 44 40.7**	**+0.1**
J18K	**Innoko River**	**82.77**	**23**	P	**P**	**18 44 40.9**	**0.0**
TTA	**Tatalina**	**82.78**	**24**	P	**P**	**18 44 40.2**	**-0.9**
TTA				IAmb	IAmb	18 44 46.3	
	comp=Z,15nm,1.5s						
L19K	**White Mountain**	**82.89**	**25**	P	**P**	**18 44 41.5**	**0.0**
M19K	**Big River Lodg**	**82.95**	**25**	P	**P**	**18 44 41.5**	**-0.4**
M19K				IAmb	IAmb	18 44 46.9	
	comp=Z,20nm,1.4s						
J19K	**Poorman**	**83.46**	**23**	P	**P**	**18 44 44.7**	**+0.3**
J19K				IAmb	IAmb	18 44 54.8	
	comp=Z,18nm,1.4s						
M20K	**Styx River**	**83.47**	**25**	P	**P**	**18 44 44.6**	**0.0**
QSPA	**South Pole Qui**	**83.51**	**180**	P	**P**	**18 44 45.5**	**+0.7**
	comp=Z,13nm,0.9s,baz=9.8,slow=2.7,SNR=5.6						
	comp=Z,13nm,0.9s						
E18K	**Tukpahlearik C**	**83.52**	**19**	P	**P**	**18 44 45.3**	**+0.7**
E18K				IAmb	IAmb	18 44 47.3	
	comp=Z,11nm,1.1s						
BRLK	**Bradley Lake**	**83.54**	**28**	P	**P**	**18 44 44.8**	**-0.1**
K20K	**Telida**	**83.76**	**24**	P	**P**	**18 44 46.3**	**+0.3**
K20K				IAmb	IAmb	18 44 48.7	
	comp=Z,7.4nm,0.9s						
G19K	**Purcell Mounta**	**84.00**	**21**	P	**P**	**18 44 46.6**	**-0.5**
G19K				IAmb	IAmb	18 44 50.3	
	comp=Z,8.9nm,1.1s						
C18K	**Utukok River**	**84.03**	**18**	P	**P**	**18 44 47.1**	**-0.3**
C18K				IAmb	IAmb	18 45 08.4	
	comp=Z,16nm,1.5s						
SUA	**Susitna One**	**84.31**	**26**	P	**P**	**18 44 47.6**	**-1.4**
CAST	**Castle Rocks**	**84.58**	**24**	P	**P**	**18 44 49.8**	**-0.4**
NRIK	**Noril'sk**	**84.71**	**343**	P	**P**	**18 44 51.3**	**+0.6**
NRIK	**Noril'sk**	**84.71**	**343**	P	**P**	**18 44 50.7**	**0.0**
	comp=Z,17nm,0.7s,baz=129,slow=4.3,SNR=17						
	comp=Z,17nm,0.7s						
D19K	**Kuna River**	**84.89**	**18**	P	**P**	**18 44 50.7**	**-1.0**
F20K	**Avaraart Lake**	**84.93**	**20**	P	**P**	**18 44 51.8**	**0.0**
F20K				IAmb	IAmb	18 44 54.6	
	comp=Z,10.0nm,1.1s						
BVAR	**Borovoye Array**	**85.20**	**325**	P	**P**	**18 44 53.8**	**+0.3**
	comp=Z,11nm,0.7s,baz=111,slow=6.9,SNR=30						
	comp=Z,11nm,0.7s						
RND	**Reindeer**	**85.90**	**25**	P	**P**	**18 44 55.3**	**-1.6**
RND				IAmb	IAmb	18 44 58.6	
	comp=Z,13nm,0.8s						
DHY	**Denali Highway**	**86.39**	**25**	P	**P**	**18 44 59.2**	**-0.2**
DHY				IAmb	IAmb	18 45 01.2	
	comp=Z,10nm,0.8s						
CCB	**Clear Creek Bu**	**86.81**	**24**	P	**P**	**18 44 59.5**	**-1.7**
CCB				IAmb	IAmb	18 45 02.2	
	comp=Z,15nm,1.2s						
ILAR	**Eielson Array**	**87.22**	**24**	P	**P**	**18 45 02.3**	**-0.9**
	comp=Z,3.3nm,0.9s,baz=257,slow=4.4,SNR=12						
	comp=Z,3.3nm,0.9s						
GERES	**GERESS Array B**	**120.37**	**324**	PKP	**PKPdf**	**18 51 08.3**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=43,slow=7.3,SNR=2.3						
PLCA	**Paso Flores**	**123.49**	**149**	PKP	**PKPdf**	**18 51 16.1**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=187,slow=1.1,SNR=7.1						
EKA	**Eskdalemuir Ar**	**124.54**	**338**	PKP	**PKPdf**	**18 51 16.8**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=28,slow=3.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**141.98**	**283**	PKhKP	PKPpre	18 51 46.5	
	comp=Z,2.4nm,0.4s,baz=54,slow=2.7,SNR=3.0						
KIC	**Kosan Boka**	**148.61**	**272**	*e*PKP1	**PKPdf**	**18 52 06.1**	**+4.4**
	comp=Z,16nm,0.7s						
DBIC	**Dimbokro**	**148.73**	**272**	PKPbc	**PKPdf**	**18 52 06.6**	**+4.7**
	comp=Z,10nm,0.7s,baz=60,slow=2.0,SNR=13						
LIC	**Lamto**	**148.89**	**271**	*e*PKP1	**PKPdf**	**18 52 06.8**	**+4.7**
	comp=Z,47nm,0.6s						
TIC	**Toumodi**	**148.89**	**272**	*e*PKP1	**PKPdf**	**18 52 05.9**	**+3.7**
	comp=Z,20nm,0.7s						

IDC ***25*** *18:34:22.9±1.7, 6°03′S×143°23′E, h0km, mb3.8/6, mbtmp3.9/7, ML1.6/1, Error ellipse: s-maj=95.4km s-min=34.5km az=45.0*

ISC 25 18:34:28.1±0.9, 6°05′S±0°1×143°4′E±0°2, h35km, n8, σ0§48/8, mb3.8/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.07**	**133**	Pn	**Pn**	**18 35 41.6**	**0.0**
	1.4nm,0.3s,baz=49,slow=11,SNR=1.2						
	43nm,0.5s						
WRA	**Warramunga Arr**	**16.45**	**212**	Pn	**Pn**	**18 38 16.6**	**+0.3**
	baz=31,slow=13						
KSRS	**Korea Array**	**45.54**	**343**	P	**P**	**18 42 45.1**	**+0.6**
	1.3nm,0.8s,baz=162,slow=8.4,SNR=2.6						
	1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.09**	**300**	P	**P**	**18 43 20.0**	**-0.1**
	0.3nm,0.5s,baz=123,slow=6.6,SNR=1.1						
	0.3nm,0.5s						
SONM	**Songino Array**	**62.68**	**333**	P	**P**	**18 44 49.8**	**+0.3**
	0.6nm,0.8s,baz=140,slow=7.0,SNR=2.2						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**75.21**	**322**	P	**P**	**18 46 06.9**	**-0.3**
	1.1nm,0.6s,baz=107,slow=6.7,SNR=3.3						
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**79.07**	**324**	P	**P**	**18 46 28.1**	**-0.6**
	0.4nm,0.6s,baz=119,slow=4.8,SNR=2.0						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**84.64**	**325**	P	**P**	**18 46 57.8**	**-0.3**
	1.9nm,0.7s,baz=96,slow=6.3,SNR=2.7						
	1.9nm,0.7s						

IDC ***25*** *18:35:27.8±0.9, 6°41′S×143°14′E, h0km, mb4.1/12, mbtmp4.2/14, ML2.1/1, Error ellipse: s-maj=35.0km s-min=20.7km az=82.0*

ISC 25 18:35:32.9±0.7, 6°45′S±0°1×143°3′E±0°1, h35km, n15, σ1§06/16, mb4.3/12, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.85**	**128**	Pn	**Pn**	**18 36 43.6**	**+0.3**
	5.2nm,0.3s,baz=334,slow=19,SNR=1.0						
PMG				Sn	**Sn**	**18 37 37.2**	**-1.1**
	4.8nm,0.3s,baz=330,slow=23,SNR=1.9						
	30nm,0.6s						
ASAR	**Alice Springs**	**19.35**	**207**	P	**P**	**18 39 55.3**	**-0.2**
	7.6nm,0.7s,baz=29,slow=14,SNR=1.1						
STKA	**Stephens Creek**	**25.36**	**183**	P	**P**	**18 40 57.9**	**+1.2**
	9.6nm,1.0s,baz=18,slow=14,SNR=1.9						
	9.6nm,1.0s						
KSRS	**Korea Array**	**45.96**	**343**	P	**P**	**18 43 52.5**	**0.0**
	2.1nm,0.8s,baz=169,slow=10.0,SNR=5.7						
	2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.23**	**300**	P	**P**	**18 44 23.8**	**-2.1**
	0.3nm,0.5s,baz=118,slow=6.6,SNR=1.6						
	0.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.42**	**350**	P	**P**	**18 44 34.7**	**+0.3**
	2.5nm,0.8s,baz=115,slow=7.2,SNR=4.1						
	2.5nm,0.8s						
PETK	**Petropavlovsk-**	**60.57**	**10**	P	**P**	**18 45 40.2**	**+0.5**
	2.7nm,0.7s,baz=165,slow=6.4,SNR=8.1						
	2.7nm,0.7s						
SONM	**Songino Array**	**63.05**	**333**	P	**P**	**18 45 57.1**	**+0.5**
	0.9nm,0.8s,baz=147,slow=5.8,SNR=2.8						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**75.51**	**322**	P	**P**	**18 47 14.9**	**+1.2**
	2.5nm,0.7s,baz=104,slow=7.2,SNR=8.6						
	2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**77.44**	**329**	P	**P**	**18 47 23.7**	**-0.7**
	1.0nm,0.5s,baz=113,slow=7.5,SNR=4.4						
	1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**79.38**	**324**	P	**P**	**18 47 35.7**	**+0.5**
	0.6nm,0.5s,baz=104,slow=4.7,SNR=3.7						
	0.6nm,0.5s						
NRIK	**Noril'sk**	**84.58**	**343**	P	**P**	**18 48 02.7**	**+0.6**
	2.1nm,0.6s,baz=162,slow=6.7,SNR=2.8						
	2.1nm,0.6s						
BVAR	**Borovoye Array**	**84.96**	**325**	P	**P**	**18 48 03.1**	**-1.3**
	2.2nm,0.7s,baz=107,slow=7.9,SNR=4.5						
	2.2nm,0.7s						
ILAR	**Eielson Array**	**87.36**	**24**	P	**P**	**18 48 15.3**	**-0.7**
	1.6nm,0.9s,baz=255,slow=4.3,SNR=5.7						
	1.6nm,0.9s						
DBIC	**Dimbokro**	**148.34**	**272**	PKPbc	**PKPdf**	**18 55 14.6**	**+1.4**
	4.3nm,0.8s,baz=139,slow=6.2,SNR=3.9						

IDC ***25*** *18:37:02.0±1.1, 6°30′S×143°54′E, h0km, mb3.7/5, mbtmp4.0/8, ML4.3/2, Error ellipse: s-maj=33.9km s-min=24.9km az=82.0*

ISC 25 18:37:06.9±0.8, 6°45′S±0°1×143°5′E±0°1, h35km, n10, σ0§72/11, mb3.7/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.68**	**130**	Pn	**Pn**	**18 38 16.0**	**+0.9**
	42nm,0.3s,baz=331,slow=15,SNR=2.8						
PMG				Sn	**Sn**	**18 39 08.5**	**+0.2**
	5.2nm,0.3s,baz=354,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**16.17**	**213**	Pn	**Pn**	**18 40 51.2**	**-0.4**
	1.2nm,0.3s,baz=29,slow=13,SNR=4.7						
	7.2nm,0.7s						
HNR	**Honiara**	**16.54**	**102**	Pn	**Pn**	**18 40 55.2**	**-1.1**
	67nm,0.3s,baz=199,slow=12,SNR=2.1						
ASAR	**Alice Springs**	**19.52**	**207**	P	**Pn**	**18 41 32.8**	**-0.1**
	0.8nm,0.3s,baz=30,slow=10,SNR=3.4						
	9.0nm,0.7s						
KSRS	**Korea Array**	**45.98**	**343**	P	**P**	**18 45 27.5**	**+0.8**
	0.7nm,0.8s,baz=166,slow=8.7,SNR=2.5						
	0.7nm,0.8s						
PETK	**Petropavlovsk-**	**60.47**	**10**	P	**P**	**18 47 13.0**	**-0.1**
	1.2nm,0.7s,baz=209,slow=8.3,SNR=4.0						
	1.2nm,0.7s						
SONM	**Songino Array**	**63.11**	**333**	P	**P**	**18 47 31.2**	**0.0**
	0.3nm,0.5s,baz=152,slow=5.4,SNR=1.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**75.62**	**322**	P	**P**	**18 48 48.9**	**+0.5**
	0.5nm,0.6s,baz=109,slow=7.0,SNR=1.9						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**87.20**	**24**	P	**P**	**18 49 48.7**	**-0.6**
	0.4nm,0.6s,baz=245,slow=4.8,SNR=2.8						
	0.4nm,0.6s						
DBIC	**Dimbokro**	**148.59**	**272**	PKPbc	**PKPbc**	**18 56 50.5**	**-0.9**
	1.7nm,0.6s,baz=117,slow=2.3,SNR=1.8						

IDC ***25*** *18:37:57.9±1.0, 6°08′S×142°66′E, h0km, mb4.0/11, mbtmp4.1/14, ML2.2/1, Error ellipse: s-maj=31.6km s-min=24.1km az=87.0*

ISC 25 18:38:01.8±0.7, 6°2′S±0°1×142°7′E±0°1, h28km, n17, σ1§37/18, mb3.9/11, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.44**	**127**	Pn	**Pn**	**18 39 21.5**	**+0.4**
	5.2nm,0.3s,baz=31,slow=23,SNR=1.7						
PMG				Sn	**Sn**	**18 40 21.9**	**-0.9**
	3.2nm,0.3s,baz=212,slow=20,SNR=0.9						
	22nm,0.3s						
WRA	**Warramunga Arr**	**15.95**	**210**	Pn	**Pn**	**18 41 42.7**	**-1.7**
	6.7nm,0.6s,baz=30,slow=13,SNR=1.3						
WRA				Lg	Lg	18 46 20.4	
	0.2nm,0.3s,baz=28,slow=30,SNR=1.8						
ASAR	**Alice Springs**	**19.37**	**205**	P	**P**	**18 42 27.2**	**+1.7**
	10.0nm,0.7s,baz=25,slow=10,SNR=4.2						
MJAR	**Matsushiro Arr**	**42.68**	**355**	P	**P**	**18 45 54.4**	**-1.9**
	0.3nm,0.5s,baz=173,slow=9.0,SNR=1.4						
	0.3nm,0.5s						
KSRS	**Korea Array**	**45.53**	**343**	P	**P**	**18 46 18.3**	**-0.8**
	0.6nm,0.7s,baz=158,slow=8.7,SNR=1.4						
	0.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.63**	**300**	P	**P**	**18 46 50.6**	**-0.6**
	0.6nm,0.8s,baz=118,slow=7.3,SNR=2

GIRL	**Giralia**	**32.88 238**	P	**P**	**18 48 22.5**	**-0.8**
GIRL			IAmb	IAmb	18 48 36.9	
	comp=Z,196nm,1.5s					
JCJ	**Chichijima**	**33.41 357**	P	**P**	**18 48 27.2**	**-0.7**
JCJ			IAmb	IAmb	18 48 28.1	
	comp=Z,95nm,1.1s					
YULB	**Yu-li**	**37.05 324**	P	**P**	**18 48 58.4**	**-0.9**
YULB			IAmb	IAmb	18 49 11.4	
	comp=Z,47nm,1.4s					
KSAR	**Wonju Array Be**	**46.20 342**	P	**P**	**18 50 13.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**50.86 300**	P	P	18 50 54.3	+4.1
	comp=Z,0.6nm,0.6s,baz=119,slow=7.1,SNR=4.2					
	comp=Z,0.6nm,0.6s					
KHLU	**Kahalu`u**	**64.57 65**	P	**P**	**18 52 26.8**	**0.0**
KHLU			IAmb	IAmb	18 52 28.1	
	comp=Z,60nm,1.0s					
HLK	**Haleakala**	**64.60 64**	P	**P**	**18 52 26.8**	**-0.3**
MLOA	**Mauna Loa Obse**	**64.83 65**	P	**P**	**18 52 28.5**	**-0.4**
HYB	**Hyderabad**	**68.83 291**	*eP*	**P**	**18 52 54.4**	**+0.4**
MKAR	**Makanchi Array**	**75.97 321**	P	P	18 53 40.8	+4.8
	comp=Z,0.6nm,0.8s,baz=101,slow=7.5,SNR=3.3					
	comp=Z,0.6nm,0.8s					
KURBB	**Kurchatov Arra**	**79.83 324**	P	**P**	**18 53 58.7**	**+1.5**
	comp=Z,0.1nm,0.4s,baz=118,slow=5.1,SNR=2.2					
	comp=Z,0.1nm,0.4s					
BVAR	**Borovoye Array**	**85.39 324**	P	**P**	**18 54 27.7**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=103,slow=6.7,SNR=4.5					
	comp=Z,1.4nm,0.7s					
ILAR	**Eielson Array**	**87.10 24**	P	P	18 54 38.9	+4.6
	comp=Z,0.4nm,0.6s,baz=255,slow=4.8,SNR=4.2					
	comp=Z,0.4nm,0.6s					

*IDC **25** 18:42:21.4±1.3,5.88S×143.63E,h0km,mb3.8/5, mbtmp3.9/7,ML3.8/1,Error ellipse: s-maj=44.6km s-min=28.6km az=82.0*

ISC 25 18:42:26.1±1.0,6.0S±0.1×143.6E±0.1,h35km,n7,σ0s88/8, mb3.8/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.83**	**134**	Pn	**Pn**	**18 43 37.4**	**+1.1**
	8.5nm,0.3s,baz=312,slow=6.9,SNR=1.7						
PMG				Sn	**Sn**	**18 44 30.1**	**-1.0**
	3.3nm,0.3s,baz=307,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**16.51**	**212**	Pn	**Pn**	**18 46 14.5**	**-0.6**
	0.3nm,0.3s,baz=32,slow=13,SNR=2.7						
	8.7nm,1.0s						
ASAR	**Alice Springs**	**19.87**	**207**	P	**Pn**	**18 46 56.3**	**+0.1**
	1.6nm,0.5s,baz=30,slow=11,SNR=0.8						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	**75.43**	**321**	P	**P**	**18 54 06.5**	**+0.1**
	1.0nm,0.8s,baz=102,slow=7.3,SNR=4.7						
	1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**79.28**	**324**	P	**P**	**18 54 28.6**	**+0.7**
	0.2nm,0.4s,baz=114,slow=5.0,SNR=1.7						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**84.85**	**324**	P	**P**	**18 54 57.5**	**+0.4**
	1.2nm,0.8s,baz=115,slow=6.8,SNR=2.3						
	1.2nm,0.8s						
ILAR	**Eielson Array**	**86.85**	**24**	P	**P**	**18 55 05.9**	**-0.8**
	0.4nm,0.9s,baz=257,slow=4.2,SNR=1.7						
	0.4nm,0.9s						

*NEIC **25** 18:44:00.6±1.4,6.0S±0.1×143.08E±0.05,h10km±2km, mb4.7/10,Error ellipse: s-maj=19.9km s-min=6.6km az=192.0*

*IDC **25** 18:44:03.8±2.0,5.89S×143.09E,h0km,mb3.7/3, mbtmp3.8/5,ML4.0/1,Error ellipse: s-maj=65.0km s-min=33.9km az=106.0*

ISC 25 18:44:01.9±0.8,6.13S±0.09×143.1E±0.1,h10km,n21, σ2s58/18,mb3.8/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**7.78**	**179**	Pn	**Pn**	**18 45 54.9**	**-0.4**
FAKI	**Fak Fak**	**11.28**	**286**	Pn	**Pn**	**18 46 40.6**	**-2.7**
MTN	**Manton Dam**	**13.56**	**240**	Pn	Pn	18 47 10.8	-3.6
WB0	**Warramunga Arr**	**15.98**	**211**		**Pn**	**18 47 47.6**	**+0.6**
WB0				IAmb	IAmb	18 47 49.7	
	comp=Z,118nm,1.5s						
WRAB	**Tennant Creek**	**16.14**	**211**		**Pn**	**18 47 52.1**	**+3.0**
WRAB				IAmb	IAmb	18 48 07.3	
	comp=Z,89nm,1.3s						
WB2	**Warramunga Arr**	**16.15**	**211**	P	**Pn**	**18 47 51.9**	**+2.7**
WB2				IAmb	IAmb	18 48 07.6	
	comp=Z,104nm,1.2s						
WRA	**Warramunga Arr**	**16.16**	**211**	Pn	**P**	**18 47 53.9**	**+1.4**
	comp=Z,3.9nm,0.8s,baz=28,slow=13,SNR=1.5						
AS31	**Alice Springs**	**19.55**	**206**	P	**P**	**18 48 29.4**	**-0.5**
ASAR	**Alice Springs**	**19.55**	**206**	P	**P**	**18 48 29.2**	**-0.8**
ASAR	**Alice Springs**	**19.55**	**206**	P	**Pn**	**18 48 35.9**	**+4.6**
	comp=Z,0.5nm,0.3s,baz=31,slow=10,SNR=2.2						
	comp=Z,0.9nm,0.6s						
PATS	**Pohnpei**	**19.91**	**50**	P	**P**	**18 48 32.1**	**-1.7**
EIDS	**Eidsvold**	**20.60**	**159**	P	**P**	**18 48 40.9**	**-0.4**
MMRI	**Maumere**	**20.84**	**262**	P	**P**	**18 48 42.0**	**-2.1**
MMRI				IAmb	IAmb	18 49 05.7	
	comp=Z,19nm,0.8s						
LUWI	**Luwuk**	**20.91**	**283**	P	**P**	**18 48 42.3**	**-2.4**
LUWI				IAmb	IAmb	18 49 08.7	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**27.24**	**233**	P	**P**	**18 49 44.0**	**-2.4**
PSA00				IAmb	IAmb	18 49 49.0	
	comp=Z,18nm,1.1s						
LIFNC	**LIFOU**	**27.56**	**124**	P	**P**	**18 49 45.5**	**-3.7**
CMAR	**Chiang Mai Arr**	**49.93**	**300**	P	**P**	**18 52 58.5**	**+2.2**
	comp=Z,0.5nm,0.8s,baz=129,slow=7.1,SNR=3.8						
	comp=Z,0.5nm,0.8s						
MK31	**Makanchi Array**	**75.16**	**322**	P	P	18 55 41.7	-2.9
MKAR	**Makanchi Array**	**75.16**	**322**	P	P	18 55 42.0	-2.6
BVAR	**Borovoye Array**	**84.61**	**325**	P	**P**	**18 56 38.9**	**+3.3**
	comp=Z,1.0nm,0.8s,baz=93,slow=5.8,SNR=3.9						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**87.14**	**24**	P	**P**	**18 56 49.7**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=268,slow=5.6,SNR=1.8						
	comp=Z,0.3nm,0.8s						

IDC 25 18:47:06.0±2.0,6.17S×143.02E,h0km,mb4.1/3, mbtmp4.1/5,ML3.7/2,MS5.5/1,Error ellipse: s-maj=89.9km s-min=30.9km az=105.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**14.18**	**168**	LR	LR	18 56 14.8	
	comp=Z,21μm,19.9s,baz=81,slow=39						
WRA	**Warramunga Arr**	**16.08**	**211**	P	Pn	18 50 52.7	-1.0
WRA	**Warramunga Arr**	**16.08**	**211**	Pn	Pn	18 50 52.7	-0.9
	0.2nm,0.3s,baz=30,slow=14,SNR=1.7						
	3.0nm,0.8s						
ASAR	**Alice Springs**	**19.48**	**206**	P	P	18 51 35.3	+0.6
	0.4nm,0.3s,baz=31,slow=11,SNR=1.8						
	3.1nm,0.7s						
KSRS	**Korea Array**	**45.63**	**343**	P	P	18 55 28.7	+0.4
	6.2nm,1.3s,baz=172,slow=7.6,SNR=1.7						
	6.2nm,1.3s						
BVAR	**Borovoye Array**	**84.60**	**325**	P	P	18 59 41.4	0.0
	0.9nm,0.7s,baz=91,slow=6.8,SNR=3.9						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**87.21**	**24**	P	P	18 59 53.5	-0.5
	1.3nm,1.1s,baz=255,slow=5.1,SNR=4.1						
	1.3nm,1.1s						

*MOS **25** 18:47:12.5±0.8,5.91S×142.97E,h13km,mb5.0/35,Error ellipse: s-maj=12.6km s-min=5.9km az=114.9*

*IDC **25** 18:47:12.4±0.6,5.90S×143.12E,h0km,mb4.7/15, mbtmp4.8/20,ML2.9/2,Error ellipse: s-maj=25.4km s-min=13.6km az=79.0*

*BJI **25** 18:47:12.8±0.0,5.93S×143.39E,h21km,mb4.9/63, mB5.4/2*

*NEIC **25** 18:47:14.1±2.5,6.10S±0.07×142.93E±0.08,h10km±1km, mb4.9/99,Error ellipse: s-maj=13.9km s-min=12.1km az=255.0*

*DJA **25** 18:47:16.6±0.2,6˚S±3˚×14˚3E±˚,h10km,M5.4/21,mB6.2/1, mb4.9/21,MLv5.6/5,Mw(mB)5.9/1*

ISC 25 18:47:13.3±0.3,6.10S±0.05×142.97E±0.06,h10km,n242, σ1s83/223,mb4.9/107,3C-8D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.48**	**227**	P	**Pn**	**18 48 10.2**	**+2.7**
GENI	**Genyem**	**4.47**	**321**	P	**Pn**	**18 48 22.8**	**+1.6**

PMG	**Port Moresby**	**5.29**	**129**	Pn	**Pn**	**18 48 30.0**	**-2.5**
PMG	**Port Moresby**	**5.29**	**129**	*i* P	**Pn**	**18 48 29.9**	**-2.7**
PMG	**Port Moresby**	**5.29**	**129**	Pn	**Pn**	**18 48 30.9**	**-1.7**
	8.3nm,0.3s,baz=17,slow=7.4,SNR=8.4						
PMG				Sn	Sn	18 49 25.5	-8.1
	10nm,0.3s,baz=322,slow=14,SNR=3.3						
	19nm,0.3s						
SMPI	**Sarmi**	**5.89**	**314**	P	**Pn**	**18 48 42.5**	**+1.7**
	249nm,1.5s,3.0nm						
MANU	**Manus Island**	**5.96**	**48**	Pn	**Pn**	**18 48 46.0**	**+4.3**
COEN	**Coen**	**7.81**	**179**	Pn	**Pn**	**18 49 08.1**	**+1.0**
KMPI	**Kaimana, Papua**	**9.54**	**284**	P	**Pn**	**18 49 32.0**	**+1.1**
	317nm,0.8s						
FAKI	**Fak Fak**	**11.14**	**286**	Pn	**Pn**	**18 49 52.6**	**-0.2**
FAKI	**Fak Fak**	**11.14**	**286**	P	**Pn**	**18 49 52.8**	**-0.1**
	59nm,0.7s						
SAUI	**Saumlaki**	**11.73**	**260**	P	**Pn**	**18 50 02.5**	**+1.6**
	442nm,0.9s						
SWI	**Sorong**	**12.79**	**294**	P	**Pn**	**18 50 13.8**	**-1.6**
	47nm,1.3s						
MTN	**Manton Dam**	**13.45**	**239**	Pn	**Pn**	**18 50 21.4**	**-3.1**
CTA	**Charters Tower**	**14.26**	**167**	Pn	**Pn**	**18 50 38.6**	**+3.0**
	0.1nm,0.3s,baz=10.0,slow=17,SNR=1.1						
CTA				Lg	Lg	18 54 45.2	
	0.4nm,0.3s,baz=49,slow=20,SNR=1.8						
	3.8nm,0.7s						
CTAO	**Charters Tower**	**14.26**	**167**	Pn	**Pn**	**18 50 33.3**	**-2.3**
CTAO	**Charters Tower**	**14.26**	**167**	P	**Pn**	**18 50 33.3**	**-2.3**
I39PW	**PALAU INFRASON**	**15.94**	**328**		**PcP**	**18 55 51.4**	**-4.7**
NLAI	**Namlea**	**16.07**	**279**	P	**Pn**	**18 51 01.4**	**+1.8**
	14nm,0.9s						
WRAB	**Tennant Creek**	**16.10**	**211**	Pn	**Pn**	**18 50 55.4**	**-4.5**
WRAB	**Tennant Creek**	**16.10**	**211**	P	**Pn**	**18 50 55.4**	**-4.5**
WRAB				pmax	pmax		
	comp=Z,42nm,1.1s						
WRA	**Warramunga Arr**	**16.11**	**211**	Pn	**Pn**	**18 51 00.0**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=28,slow=13,SNR=5.1						
WRA				Sn	**Sn**	**18 53 54.3**	**-4.7**
	comp=Z,0.9nm,0.3s,baz=27,slow=24,SNR=1.9						
WRA				Lg	Lg	18 55 39.6	
	comp=Z,0.3nm,0.3s,baz=38,slow=29,SNR=2.0						
LBMI	**Labuha**	**16.36**	**289**	P	**Pn**	**18 51 03.9**	**+0.6**
	comp=Z,60nm,1.1s						
HNR	**Honiara**	**17.15**	**102**	P	**Pn**	**18 51 14.1**	**+0.8**
	comp=Z,110nm,0.3s,baz=206,slow=9.8,SNR=1.8						
SANI	**Sanana**	**17.40**	**283**	P	**Pn**	**18 51 17.1**	**+0.6**
	comp=Z,38nm,1.4s						
SOEI	**Soe**	**18.87**	**258**		**Pn**	**18 51 36.9**	**+2.2**
SOEI				IAmb	IAmb	18 52 00.9	
	comp=Z,132nm,1.0s						
SOEI	**Soe**	**18.87**	**258**	P	**Pn**	**18 51 35.7**	**+1.1**
	comp=Z,162nm,1.1s						
AS31	**Alice Springs**	**19.52**	**206**	P	**P**	**18 51 42.1**	**+1.0**
ASAR	**Alice Springs**	**19.52**	**206**	P	**P**	**18 51 42.0**	**+0.9**
ASAR	**Alice Springs**	**19.52**	**206**	P	**Pn**	**18 51 44.8**	**+2.4**
	comp=Z,76nm,0.9s,baz=32,slow=11,SNR=24						
GUMO	**Guam**	**19.66**	**6**	P	**P**	**18 51 41.4**	**-1.2**
	comp=Z,63nm,0.9s,baz=184,slow=19,SNR=1.7						
SGSI	**Sangihe**	**19.94**	**299**	P	**Pn**	**18 51 47.3**	**-0.1**
KMSI	**Cibinong**	**20.08**	**289**	P	**P**	**18 51 47.5**	**+0.3**
	comp=Z,181nm,0.9s						
EIDS	**Eidsvold**	**20.67**	**159**	P	**P**	**18 51 53.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.69**	**233**	P	**P**	**18 51 52.3**	**-1.5**
EDFI	**Ende, Flores**	**21.26**	**262**	P	**P**	**18 52 02.1**	**+2.0**
	comp=Z,26nm,1.0s						
MRSI	**Marisa**	**21.98**	**287**	P	**P**	**18 52 08.7**	**+0.9**
	comp=Z,30nm,1.4s						
TOLI2	**Tolitoli**	**23.28**	**287**	P	**P**	**18 52 20.5**	**-0.9**
TOLI2				IAmb	IAmb	18 52 24.7	
	comp=Z,46nm,1.1s						
MPSI	**Mapaga**	**23.90**	**285**	P	**P**	**18 52 28.6**	**+1.0**
	comp=Z,34nm,0.8s						
STKA	**Stephens Creek**	**25.67**	**183**	P	**P**	**18 52 44.8**	**+1.2**
STKA	**Stephens Creek**	**25.67**	**183**	*i* P	**P**	**18 52 44.4**	**+0.8**
STKA	**Stephens Creek**	**25.67**	**183**	P	**P**	**18 52 46.4**	**+2.8**
	comp=Z,4.0nm,0.7s,baz=8.6,slow=10,SNR=6.2						
	comp=Z,4.0nm,0.7s						
BBOO	**Buckleboo**	**27.34**	**193**	P	**P**	**18 52 59.4**	**+0.7**
FORT	**Forrest**	**28.26**	**208**	P	**P**	**18 53 08.0**	**+1.1**
FORT				IAmb	IAmb	18 53 34.5	
	comp=Z,38nm,1.1s						
UGM	**Wanagama**	**32.25**	**265**	P	**P**	**18 53 42.1**	**-0.3**
TPUB	**Ta-pu**	**36.48**	**324**	P	**P**	**18 54 16.0**	**-2.9**
NACB	**Ninganchiao**	**36.61**	**326**	P	**P**	**18 54 16.8**	**-3.2**
SSLB	**Suanglung**	**36.66**	**325**	P	**P**	**18 54 17.7**	**-2.8**
SSLB				IAmb	IAmb	18 54 20.5	
	comp=Z,29nm,1.2s						
YHNB	**Yeheng**	**37.12**	**326**	P	**P**	**18 54 22.1**	**-2.3**
MJAR	**Matsushiro Arr**	**42.66**	**354**	P	**P**	**18 55 08.6**	**-1.7**
	comp=Z,6.0nm,0.9s,baz=184,slow=12,SNR=13						
	comp=Z,6.0nm,0.9s						
MAJO	**Matsushiro**	**42.66**	**354**	P	**P**	**18 55 08.7**	**-1.6**
MAJO	**Matsushiro**	**42.66**	**354**	*i* P	**P**	**18 55 07.5**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,20nm,1.3s						
MJB9	**Matsu-Tunnel**	**42.66**	**354**	P	**P**	**18 55 09.7**	**-0.6**
TOZ	**Tahuroa Road**	**43.19**	**141**	P	**P**	**18 55 14.9**	**+0.4**
NJ2	**Nanjing**	**44.36**	**330**	*e*P	**P**	**18 55 25.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,21nm,1.0s						
RTZ	**Ruatahuna**	**44.65**	**141**	P	**P**	**18 55 27.1**	**+0.6**
RTZ				IAmb	IAmb	18 55 33.2	
	comp=Z,30nm,1.0s						
RPSI	**Rantau Prapat**	**44.84**	**280**	P	**P**	**18 55 28.1**	**-0.1**
RPSI				IAmb	IAmb	18 55 32.7	
	comp=Z,13nm,1.1s						
PSI	**Prapat**	**44.86**	**280**	P	**P**	**18 55 28.1**	**-0.4**
PSI				pmax	pmax		
	comp=Z,13nm,1.1s						
KSAR	**Wonju Array Be**	**45.55**	**343**	P	**P**	**18 55 33.4**	**0.0**
KSAR	**Wonju Array Be**	**45.55**	**343**	P	**P**	**18 55 33.4**	**0.0**
KSRS	**Korea Array**	**45.55**	**343**	P	**P**	**18 55 33.5**	**+0.2**
	comp=Z,14nm,0.9s,baz=163,slow=9.3,SNR=32						
	comp=Z,14nm,0.9s						
WHN	**Wuhan**	**45.60**	**325**	⇓P	**P**	**18 55 36.0**	**+2.1**
KS19	**Wonju Array Si**	**45.61**	**343**	P	**P**	**18 55 31.6**	**-2.3**
KS19				IAmb	IAmb	18 55 36.1	
	comp=Z,20nm,1.1s						
JTM	**Tenmabayashi**	**46.69**	**358**	P	**P**	**18 55 41.6**	**-0.7**
GYA	**Guiyang**	**47.81**	**314**	⇓P	**P**	**18 55 53.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
ENH	**Enshi**	**48.35**	**320**	P	**P**	**18 55 55.0**	**-0.5**
ENH				IAmb	IAmb	18 56 04.9	
	comp=Z,19nm,1.2s						
CRAI	**Chiangrai**	**49.37**	**303**	P	**P**	**18 56 03.8**	**+0.3**
LYN	**LuoYang**	**49.64**	**327**	⇓*i*P	**P**	**18 56 06.0**	**+0.7**
LYN				pmax	pmax		
	comp=Z,33nm,1.0s						
CM31	**Chiang Mai Arr**	**49.80**	**300**	P	**P**	**18 56 06.7**	**-0.1**
CM31				IAmb	IAmb	18 56 08.6	
	comp=Z,9.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.80**	**300**	P	**P**	**18 56 06.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**49.80**	**300**	P	**P**	**18 56 07.6**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=127,slow=6.1,SNR=34						
	comp=Z,3.8nm,0.7s						
KMI	**Kunming**	**49.94**	**310**	⇓P	**P**	**18 56 09.0**	**+1.0**
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
CHTO	**Chiang Mai**	**49.95**	**301**	P	**P**	**18 56 07.0**	**-0.9**
CHTO	**Chiang Mai**	**49.95**	**301**	P	**P**	**18 56 07.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HNS	**HongShan**	**50.68**	**331**	⇓P	**P**	**18 56 13.8**	**+0.7**
USA0B	**Ussuriysk Arra**	**51.04**	**350**	P	**P**	**18 56 15.2**	**-0.5**
USA0B				IAmb	IAmb	18 56 16.8	
	comp=Z,23nm,1.1s						
USA0B	**Ussuriysk Arra**	**51.04**	**350**	*i* P	**P**	**18 56 16.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**51.04**	**350**	P	**P**	**18 56 15.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**51.04**	**350**	P	**P**	**18 56 15.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**51.04**	**350**	P	**P**	**18 56 15.1**	**-0.6**
	comp=Z,18nm,0.9s,baz=172,slow=8.5,SNR=28						
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**51.29**	**323**	⇓P	**P**	**18 56 18.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,28nm,1.3s						
PZH	**PanZhiHua**	**51.44**	**311**	P	**P**	**18 56 19.8**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDJ	**Mudanjiang**	**51.90**	**348**	P	**P**	**18 56 22.0**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ	**Mudanjiang**	**51.90**	**348**	P	**P**	**18 56 21.8**	**-0.4**
MDJ				IAmb	IAmb	18 56 24.4	
	comp=Z,13nm,0.9s						

BJT	**Baijiatuau**	**52.12**	**334**	P	**P**	**18 56 23.9**	**0.0**
BJT	**Baijiatuau**	**52.12**	**334**	P	**P**	**18 56 23.9**	**0.0**
BJT				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI	**Beijing**	**52.14**	**334**	P	**P**	**18 56 24.0**	**0.0**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CN2	**Changchun**	**52.14**	**344**	*e*P	**P**	**18 56 22.8**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2	**Chengdu**	**52.54**	**317**	P	**P**	**18 56 28.3**	**+1.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**52.83**	**360**	P	**P**	**18 56 28.2**	**-0.7**
YSS				IAmb	IAmb	18 56 31.4	
	comp=Z,15nm,0.8s						
YSS	**Yuzh-Sakhalins**	**52.83**	**360**	*e*P	**P**	**18 56 29.1**	**+0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
TNCH	**TengChong**	**53.16**	**307**	P	**P**	**18 56 33.0**	**+0.9**
TNCH				pmax	pmax		
	comp=Z,18nm,1.2s						
BNX	**BinXian**	**53.45**	**346**	⇓P	**P**	**18 56 33.5**	**-0.1**
BNX				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC	**Hu-ho-hao-te**	**54.90**	**331**	*e*P	**P**	**18 56 47.5**	**+3.1**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
BTO	**Baotou**	**55.47**	**330**	*e*P	**P**	**18 56 50.3**	**+1.8**
BTO				pP	**sP**	**18 56 54.8**	**+1.1**
BTO				sP	**pP**	**18 56 57.3**	**+5.0**
BTO				PP	**PP**	**18 58 56.3**	**+3.7**
BTO				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH	**Lanzhou**	**55.74**	**322**	*e*P	**P**	**18 56 51.8**	**+1.1**
LZH				pP	sP	18 57 00.0	+4.2
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
KLR	**Kul'dur**	**55.97**	**351**	*i* P	**P**	**18 56 50.2**	**-1.6**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HEH	**HeiHe**	**57.73**	**348**	*e*P	**P**	**18 57 03.8**	**-0.4**
HEH				pmax	pmax		
	comp=Z,14nm,1.0s						
SHL	**Shillong**	**58.74**	**305**	P	**P**	**18 57 12.2**	**+0.1**
SHL	**Shillong**	**58.74**	**305**	P	**P**	**18 57 12.2**	**+0.1**
SHL				pmax	pmax		
	comp=Z,24nm,1.2s						
PEA0B	**Petropavlovsk-**	**60.30**	**10**	*i* P	**P**	**18 57 21.5**	**-0.6**
PETK	**Petropavlovsk-**	**60.30**	**10**	P	**P**	**18 57 21.8**	**-0.3**
PETK	**Petropavlovsk-**	**60.30**	**10**	P	**P**	**18 57 21.8**	**-0.3**
PETK	**Petropavlovsk-**	**60.30**	**10**	P	**P**	**18 57 21.4**	**-0.6**
	comp=Z,11nm,0.9s,baz=205,slow=6.6,SNR=10						
	comp=Z,11nm,0.9s						
GTA	**Gaotai**	**60.31**	**322**	P	**P**	**18 57 23.5**	**+0.9**
GTA				pP	sP	18 57 31.5	+3.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZEA	**Zeya**	**61.07**	**349**	*e*P	**P**	**18 57 27.6**	**+0.3**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
LSA	**Lhasa**	**61.13**	**309**	P	**P**	**18 57 28.8**	**0.0**
LSA	**Lhasa**	**61.13**	**309**	P	**P**	**18 57 28.8**	**0.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	**Ulaanbaatar**	**62.34**	**334**	P	**P**	**18 57 36.0**	**-0.2**
ULN				IAmb	IAmb	18 57 38.1	
	comp=Z,7.5nm,0.9s						
ULN	**Ulaanbaatar**	**62.34**	**334**	*i* P	**P**	**18 57 36.1**	**-0.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**18 57 38.4**	**+0.4**
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**18 57 38.4**	**+0.4**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**18 57 38.0**	**0.0**
	comp=Z,3.3nm,1.0s,baz=149,slow=6.6,SNR=12						
	comp=Z,3.3nm,1.0s						
CIT	**Chita**	**63.11**	**340**	*e*P	**P**	**18 57 42.4**	**+1.2**
MA2	**Magadan**	**65.77**	**4**	P	**P**	**18 57 56.9**	**-1.4**
MA2	**Magadan**	**65.77**	**4**	*i* P	**P**	**18 57 57.2**	**-1.1**
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
ZAK	**Zakamensk**	**65.87**	**333**	*e*P	**P**	**18 57 59.6**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
MOY	**Mondy**	**67.80**	**333**	*e*P	**P**	**18 58 12.0**	**+0.4**
MOY				pmax	pmax		
	comp=Z,22nm,2.1s						
YAK	**Yakutsk**	**68.71**	**353**	P	**P**	**18 58 15.9**	**-1.0**
YAK				IAmb	IAmb	18 58 17.8	
	comp=Z,13nm,1.1s						
YAK	**Yakutsk**	**68.71**	**353**	*e*P	**P**	**18 58 16.5**	**-0.4**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.8s						
YAK				pmax	pmax	

	comp=Z,9.0nm,1.0s,baz=319							
TDK	**Taldyqorghan**	**76.78**	**319**	*eP*	**P**	**18 59 05.2**	**-0.1**
TDK				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SDPT	**Sand Point**	**76.92**	**29**	P	**P**	**18 59 03.5**	**-2.2**
ZAA0	**Zalesovo Array**	**77.00**	**329**	P	**P**	**18 59 05.1**	**-1.1**
ZAA0				IAmb	IAmb	18 59 06.8		
	comp=Z,9.7nm,1.2s							
ZALV	**Zalesovo Beam**	**77.00**	**329**	*i* P	**P**	**18 59 05.9**	**-0.4**
ZALV				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ZALV	**Zalesovo Beam**	**77.00**	**329**	P	**P**	**18 59 05.3**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=106,slow=5.3,SNR=17							
	comp=Z,4.6nm,0.8s							
MDOK	**Medeo**	**77.00**	**317**	*eP*	**P**	**18 59 06.1**	**-0.7**
	baz=317							
MDOK	**Medeo**	**77.00**	**317**	*eP*	**P**	**18 59 06.1**	**-0.7**
KUU	**Kurty**	**77.75**	**317**	*eP*	**P**	**18 59 10.1**	**-0.7**
	comp=Z,16nm,1.2s,baz=317							
KUU	**Kurty**	**77.75**	**317**	*eP*	**P**	**18 59 10.0**	**-0.7**
KUU				pmax	pmax			
	comp=Z,16nm,1.2s							
TIXI	**Tiksi**	**78.15**	**355**	P	**P**	**18 59 11.3**	**-1.0**
TIXI	**Tiksi**	**78.15**	**355**	*i* P	**P**	**18 59 08.9**	**-3.5**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.9s							
AAK	**Ala-Archa**	**78.58**	**316**	P	**P**	**18 59 15.6**	**0.0**
AAK	**Ala-Archa**	**78.58**	**316**	*i* P	**P**	**18 59 15.3**	**-0.3**
AAK				pmax	pmax			
	comp=Z,10.0nm,1.4s							
KURK	**Kurchatov**	**78.92**	**324**	P	**P**	**18 59 15.9**	**-1.2**
KURK				IAmb	IAmb	18 59 18.4		
	comp=Z,17nm,1.1s							
KURK	**Kurchatov**	**78.92**	**324**	*i* P	**P**	**18 59 15.8**	**-1.2**
KURK				pmax	pmax			
	comp=Z,18nm,1.2s							
KURBB	**Kurchatov Arra**	**78.94**	**324**	P	**P**	**18 59 17.2**	**+0.1**
	comp=Z,5.7nm,0.9s,baz=114,slow=5.0,SNR=32							
	comp=Z,5.7nm,0.9s							
ARSB	**Arslanbob**	**79.23**	**314**	P	**P**	**18 59 18.3**	**-0.9**
ARSB	**Arslanbob**	**79.23**	**314**	P	**P**	**18 59 18.3**	**-0.9**
ARSB				pmax	pmax			
	comp=Z,4.0nm,1.2s							
BTLS	**Baital**	**79.68**	**318**	*eP*	**P**	**18 59 21.0**	**-0.4**
	baz=318							
BTLS	**Baital**	**79.68**	**318**	*eP*	**P**	**18 59 20.9**	**-0.4**
KBL	**Kabul**	**80.34**	**306**	P	**P**	**18 59 24.1**	**-1.4**
KBL	**Kabul**	**80.34**	**306**	P	**P**	**18 59 24.1**	**-1.4**
KBL				pmax	pmax			
	comp=Z,7.0nm,1.2s							
BTK	**Batken**	**80.43**	**312**	P	**P**	**18 59 22.9**	**-2.8**
BTK	**Batken**	**80.43**	**312**	P	**P**	**18 59 22.9**	**-2.8**
BTK				pmax	pmax			
	comp=Z,10.0nm,1.5s							
DZA	**Taraz**	**80.87**	**315**	*eP*	**P**	**18 59 27.4**	**-0.5**
	baz=315							
DZA	**Taraz**	**80.87**	**315**	*eP*	**P**	**18 59 27.4**	**-0.5**
F15K	**North Star Dit**	**81.09**	**19**	P	**P**	**18 59 28.1**	**-0.3**
F15K				IAmb	IAmb	18 59 30.6		
	comp=Z,16nm,1.2s							
J16K	**Anvik River**	**81.12**	**22**	P	**P**	**18 59 27.7**	**-1.0**
J16K				IAmb	IAmb	18 59 31.3		
	comp=Z,21nm,1.2s							
SIMJ	**Simiganj**	**81.41**	**310**	P	**P**	**18 59 29.4**	**-1.5**
SIMJ				IAmb	IAmb	18 59 32.4		
	comp=Z,13nm,1.1s							
KK31	**Karatay Array**	**81.51**	**315**	P	**P**	**18 59 29.9**	**-1.4**
KK31				IAmb	IAmb	18 59 32.8		
	comp=Z,13nm,1.4s							
KK31	**Karatay Array**	**81.51**	**315**	P	**P**	**18 59 29.9**	**-1.4**
KK31				pmax	pmax			
	comp=Z,13nm,1.4s							
KKAR	**Karatay Array**	**81.51**	**315**	P	**P**	**18 59 31.4**	**+0.1**
KKAR	**Karatay Array**	**81.51**	**315**	IAmb	IAmb	18 59 32.8		
	comp=Z,13nm,1.4s							
KKAR	**Karatay Array**	**81.51**	**315**	P	**P**	**18 59 31.4**	**+0.1**
IUG	**Iuzhnay**	**81.58**	**314**	*eP*	**P**	**18 59 31.3**	**-0.5**
	comp=Z,16nm,1.4s,baz=314							
IUG	**Iuzhnay**	**81.58**	**314**	*eP*	**P**	**18 59 31.3**	**-0.5**
IUG				pmax	pmax			
	comp=Z,16nm,1.4s							
G16K	**Koyuk River**	**81.67**	**20**	IAmb	IAmb	18 59 33.8		
	comp=Z,13nm,1.1s							
BRLS	**Borolday**	**81.96**	**315**	*eP*	**P**	**18 59 33.3**	**-0.4**
	baz=314							
BRLS	**Borolday**	**81.96**	**315**	*eP*	**P**	**18 59 33.2**	**-0.4**
BRZS	**Berezniki**	**82.19**	**322**	*eP*	**P**	**18 59 33.6**	**-1.1**
	baz=322							
BRZS	**Berezniki**	**82.19**	**322**	*eP*	**P**	**18 59 33.5**	**-1.1**
H17K	**Granite Mounta**	**82.28**	**21**	P	**P**	**18 59 36.0**	**+1.2**
H17K				IAmb	IAmb	18 59 38.2		
	comp=Z,7.8nm,0.9s							
F17K	**Baldwin Pennin**	**82.64**	**20**	IAmb	IAmb	18 59 48.9		
	comp=Z,12nm,1.2s							
J18K	**Innoko River**	**82.72**	**23**	IAmb	IAmb	18 59 55.9		
	comp=Z,9.9nm,1.2s							
G18K	**Tagagawik**	**83.23**	**21**	IAmb	IAmb	18 59 47.0		
	comp=Z,6.5nm,0.9s							
E18K	**Tukpahlearik C**	**83.40**	**19**	IAmb	IAmb	18 59 42.6		
	comp=Z,9.7nm,1.1s							
K20K	**Telida**	**83.71**	**24**	IAmb	IAmb	18 59 44.1		
	comp=Z,10nm,1.2s							
H19K	**Roundabout Mou**	**83.83**	**21**	IAmb	IAmb	18 59 44.9		
	comp=Z,10nm,1.1s							
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**18 59 43.9**	**+0.7**
QSPA				IAmb	IAmb	19 00 00.7		
	comp=Z,9.5nm,0.9s							
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**18 59 44.4**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=5.7,slow=1.3,SNR=6.3							
	comp=Z,3.9nm,0.8s							
G19K	**Purcell Mounta**	**83.91**	**21**	IAmb	IAmb	18 59 45.3		
	comp=Z,10.0nm,1.1s							
F19K	**Shaleruckik Mo**	**84.03**	**20**	IAmb	IAmb	18 59 47.2		
	comp=Z,10nm,1.2s							
NRIK	**Noril'sk**	**84.17**	**343**	*i* P	**P**	**18 59 43.9**	**-0.5**
NRIK	**Noril'sk**	**84.17**	**343**	P	**P**	**18 59 44.2**	**-0.2**
	comp=Z,12nm,0.9s,baz=115,slow=5.1,SNR=18							
	comp=Z,12nm,0.9s							
BVAR	**Borovoye Array**	**84.51**	**325**	P	**P**	**18 59 46.9**	**+0.3**
	comp=Z,32nm,0.9s,baz=115,slow=5.6,SNR=74							
	comp=Z,32nm,0.9s							
CAST	**Castle Rocks**	**84.54**	**24**	P	**P**	**18 59 47.1**	**+0.6**
CAST				IAmb	IAmb	18 59 49.5		
	comp=Z,12nm,1.0s							
BRVK	**Borovoye**	**84.58**	**325**	P	**P**	**18 59 47.3**	**+0.5**
BRVK	**Borovoye**	**84.58**	**325**	*i* P	**P**	**18 59 47.4**	**+0.5**
BRVK				pmax	pmax			
	comp=Z,22nm,0.9s							
D19K	**Kuna River**	**84.77**	**18**	IAmb	IAmb	19 00 04.8		
	comp=Z,15nm,1.1s							
F20K	**Avaraart Lake**	**84.83**	**20**	IAmb	IAmb	18 59 51.4		
	comp=Z,5.4nm,0.9s							
MLY	**Manley**	**85.75**	**23**	IAmb	IAmb	18 59 55.8		
	comp=Z,7.1nm,0.9s							
RND	**Reindeer**	**85.87**	**25**	IAmb	IAmb	18 59 53.8		
	comp=Z,11nm,1.0s							
WRH	**Wood River Hil**	**86.58**	**24**	IAmb	IAmb	18 59 58.3		
	comp=Z,10nm,0.9s							
G23K	**Bananza Creek**	**86.70**	**22**	IAmb	IAmb	19 00 00.4		
	comp=Z,6.3nm,0.9s							
H24K	**Noodor Dome**	**87.17**	**23**	IAmb	IAmb	19 00 02.9		
	comp=Z,6.2nm,1.0s							
ILAR	**Eielson Array**	**87.17**	**24**	P	**P**	**18 59 57.9**	**-1.6**
	comp=Z,6.3nm,0.8s,baz=258,slow=4.8,SNR=38							
	comp=Z,6.3nm,0.8s							
E25K	**Arctic Village**	**88.82**	**21**	IAmb	IAmb	19 00 11.8		
	comp=Z,14nm,1.3s							
BMAR	**Burnt Mountain**	**88.95**	**22**	P	**P**	**19 00 09.6**	**+1.6**
EGAK	**Eagle**	**89.51**	**25**	IAmb	IAmb	19 00 13.5		
	comp=Z,9.6nm,0.9s							
DAWY	**Dawson**	**90.07**	**25**	IAmb	IAmb	19 00 15.3		
	comp=Z,15nm,1.2s							
M29M	**Somme Creek**	**90.11**	**27**	IAmb	IAmb	19 00 15.8		
	comp=Z,11nm,1.2s							
L29M	**L29M**	**90.41**	**27**	IAmb	IAmb	19 00 17.6		
	comp=Z,10nm,0.9s							
K29M	**Barlow Dome**	**90.83**	**26**	IAmb	IAmb	19 00 20.9		
	comp=Z,11nm,1.1s							
ARU	**Arti**	**91.95**	**326**	P	**P**	**19 00 19.5**	**-2.6**
ARU						19 03 59.3		
ARU				S		**19 10 49.4**	**-5.7**	**SKSac**
BELG	**Belogornoye**	**98.06**	**322**	*i* P	**P**	**19 00 49.1**	**-1.0**
NVAR	**Mina Array Bea**	**100.60**	**52**	P	**Pdif**	**19 01 03.4**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=268,slow=5.9,SNR=5.7							
YKA	**Yellowknife Ar**	**101.12**	**28**	P	**Pdif**	**19 01 03.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=282,slow=5.1,SNR=5.0							
APA	**Apatity**	**103.02**	**338**	⇓*i* P	**Pdif**	**19 01 27.0**	**+15**
APA				pmax	pmax			
	comp=Z,7.0nm,1.1s							
APA				MLR	MLR			
	comp=Z,15μm,22.0s							
GERES	**GERESS Array B**	**119.67**	**324**	PKP	**PKPdf**	**19 06 04.1**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=108,slow=3.2,SNR=2.3							
TORD	**Torodi Ar. Bea**	**141.22**	**283**	PKhKP	PKPpre	19 06 43.0		
	comp=Z,2.4nm,0.3s,baz=58,slow=2.9,SNR=2.3							
CPUP	**Villa Florida**	**142.22**	**149**	PKP	**PKPdf**	**19 06 49.2**	**+2.3**
	comp=Z,1.0nm,0.8s,baz=201,slow=5.2,SNR=2.1							
ROSC	**El Rosal**	**142.87**	**90**	PKP	**PKPdf**	**19 06 48.2**	**-0.6**
	comp=Z,2.8nm,0.3s,baz=307,slow=20,SNR=3.9							
SDV	**Santo Domingo**	**146.58**	**83**	PKPdf	**PKPdf**	**19 06 56.1**	**+1.1**
ETMB	**Extrema**	**146.91**	**118**	PKPdf	**PKPbc**	**19 06 57.4**	**+0.2**
KIC	**Kosan Boka**	**147.90**	**272**⇑	*eP*	**PKPab**	**19 07 04.1**	**+1.6**
	comp=Z,5.7nm,0.7s							
DBIC	**Dimbokro**	**148.02**	**273**	PKPbc	**PKPbc**	**19 07 01.5**	**+1.2**
	comp=Z,5.8nm,0.7s,baz=90,slow=5.4,SNR=6.1							
LIC	**Lamto**	**148.18**	**272**⇑	*eP*	**PKPbc**	**19 07 01.8**	**+1.1**
	comp=Z,22nm,0.8s							
TIC	**Toumodi**	**148.18**	**273**⇑	*eP*	**PKPbc**	**19 07 01.9**	**+1.1**
	comp=Z,13nm,0.9s							
PTLB	**Pontes e Lacer**	**149.37**	**135**	PKPbc	**PKPbc**	**19 07 04.9**	**+1.2**
HUMP	**Col San Antoni**	**149.45**	**64**	PKPbc	**PKPbc**	**19 07 04.2**	**+0.4**
SAML	**Samuel**	**149.95**	**120**	PKPbc	**PKPbc**	**19 07 06.3**	**+1.1**

*IDC **25** 18:49:09.0±1.0,6˚18S×143˚03E, h0km, mb4.1/9, mbtmp4.2/12, ML4.1/2, Error ellipse: s-maj=36.0km s-min=22.6km az=82.0*
*NEIC **25** 18:49:10.1±1.7,6˚29S±0˚06×143˚1E±0˚1, h10km±1km, mb4.3/10, Error ellipse: s-maj=17.6km s-min=8.6km az=72.0*
ISC 25 18:49:10.2±0.6,**6˚31S**±0˚08×**143˚01E**±0˚08,**h10**km,**n27,**
σ1§**08**/**27**,**mb4.2**/**13**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.13**	**127**	Pn	Pn	18 50 25.1	-2.1
PMG	**Port Moresby**	**5.13**	**127**	Pn	**Pn**	**18 50 28.4**	**+1.2**
	63nm,0.7s,baz=324,slow=17,SNR=1.4						
PMG				Sn	**Sn**	**18 51 24.2**	**-2.3**
	4.6nm,0.3s,baz=33,slow=22,SNR=1.6						
COEN	**Coen**	**7.61**	**179**		**Pn**	**18 51 01.7**	**+0.5**
FAKI	**Fak Fak**	**11.24**	**287**	Pn	**Pn**	**18 51 50.6**	**-0.5**
WB0	**Warramunga Arr**	**15.79**	**211**	Pn	**Pn**	**18 52 52.0**	**-0.7**
WB0				IAmb	IAmb	18 52 59.1	
	comp=Z,36nm,1.1s						
WRAB	**Tennant Creek**	**15.95**	**211**	Pn	**Pn**	**18 52 55.0**	**+0.1**
WRA	**Warramunga Arr**	**15.96**	**211**	Pn	**Pn**	**18 52 54.7**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=31,slow=13,SNR=1.0						
	comp=Z,7.9nm,0.9s						
SOEI	**Soe**	**18.87**	**258**	P	**P**	**18 53 29.4**	**-1.5**
AS31	**Alice Springs**	**19.36**	**206**	P	**P**	**18 53 37.5**	**+1.4**
ASAR	**Alice Springs**	**19.36**	**206**		**P**	**18 53 36.9**	**+0.8**
ASAR	**Alice Springs**	**19.36**	**206**	P	**P**	**18 53 38.5**	**+2.4**
	comp=Z,1.4nm,0.3s,baz=34,slow=9.3,SNR=4.8						
	comp=Z,13nm,0.6s						
EIDS	**Eidsvold**	**20.47**	**159**	P	**P**	**18 53 47.2**	**-1.0**
EIDS				IAmb	IAmb	18 54 12.1	
	comp=Z,9.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.61**	**234**	P	**P**	**18 53 48.5**	**-1.2**
TOLI2	**Tolitoli**	**23.38**	**288**	P	**P**	**18 54 19.3**	**0.0**
TOLI2				IAmb	IAmb	18 54 21.7	
	comp=Z,13nm,0.9s						
KSRS	**Korea Array**	**45.76**	**343**	P	**P**	**18 57 31.9**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=166,slow=9.8,SNR=2.0						
	comp=Z,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.94**	**300**	P	**P**	**18 58 05.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=114,slow=6.2,SNR=2.7						
	comp=Z,0.9nm,0.7s						
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**18 59 20.6**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=202,slow=7.3,SNR=1.3						
	comp=Z,1.4nm,0.8s						
MK31	**Makanchi Array**	**75.24**	**322**	P	**P**	**19 00 52.5**	**-0.9**
MK31				IAmb	IAmb	19 00 57.0	
	comp=Z,2.5nm,1.1s						
MKAR	**Makanchi Array**	**75.24**	**322**	P	**P**	**19 00 52.9**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=96,slow=8.6,SNR=5.0						
	comp=Z,1.7nm,0.7s						
MAKZ	**Makanchi**	**75.44**	**322**	P	**P**	**19 00 54.1**	**-0.4**
MAKZ				IAmb	IAmb	19 00 58.1	
	comp=Z,3.0nm,0.9s						
ZALV	**Zalesovo Beam**	**77.19**	**329**	P	**P**	**19 01 03.7**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=113,slow=3.7,SNR=1.6						
	comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**79.11**	**324**	P	**P**	**19 01 14.1**	**-0.8**
KURK				IAmb	IAmb	19 01 21.2	
	comp=Z,4.1nm,1.0s						
KURBB	**Kurchatov Arra**	**79.13**	**324**	P	**P**	**19 01 14.8**	**-0.2**
	comp=Z,1.0nm,0.2s,baz=112,slow=4.3,SNR=3.2						
	comp=Z,1.0nm,0.2s						
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**19 01 40.5**	**+1.5**
	comp=Z,2.6nm,0.9s,baz=307,slow=2.1,SNR=2.2						
	comp=Z,2.6nm,0.9s						
BVAR	**Borovoye Array**	**84.70**	**325**	P	**P**	**19 01 44.8**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=111,slow=7.0,SNR=5.7						
	comp=Z,4.7nm,0.8s						
ILAR	**Eielson Array**	**87.34**	**24**	P	**P**	**19 01 55.8**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=265,slow=4.6,SNR=3.2						
	comp=Z,0.9nm,0.8s						
BMAR	**Burnt Mountain**	**89.12**	**22**	P	**P**	**19 02 06.3**	**+0.8**

*TEH **25** 18:49:32.3,28˚05N×51˚49E, h22km±38km, ML3.4*
*OMAN **25** 18:49:39.7±1.9,28˚06N×52˚19E, h10km, mb5.0/4, Error ellipse: s-maj=18.1km s-min=12.4km az=20.0*
ISC 25 18:49:33.7±0.9,**28˚12N**±0˚04×**51˚58E**±0˚06,**h10**km,**n20,**
σ1§**95**/**29**,**1C**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSBU	**Dashti - Bushe**	**0.37**	**311**	Pg	**Pg**	**18 49 40.5**	**-0.6**
DSBU				Sg	**Sb**	**18 49 48.4**	**+0.1**
AHBU	**AHRAM**	**0.79**	**342**	Pg	**Pg**	**18 49 48.8**	**0.0**
QIR1	**Qir**	**1.34**	**74**	Pg	**Pn**	**18 50 00.2**	**+1.6**
LMD1	**Lamerd**	**1.61**	**118**	Pg	**Pb**	**18 50 04.9**	**+1.4**
SHI	**Shiraz**	**1.73**	**28**	Pn	**Pn**	**18 50 06.1**	**+2.1**
JHRM	**Jahrom**	**1.81**	**77**	Pn	**Pn**	**18 50 05.5**	**+0.5**
SHMA	**Al-Shehemyia**	**2.32**	**194**	P	**Pg**	**18 50 19.9**	**+1.7**
SHMA				S	**Sg**	**18 50 52.1**	**+4.0**
LAR1	**LAR**	**2.52**	**100**	Pn	**Pn**	**18 50 15.9**	**+1.2**
KLNJ	**Kolanjah**	**2.88**	**0**	Pn	**Pn**	**18 50 21.9**	**+1.8**
SMRA	**Abu-Samra**	**3.42**	**192**	P	**Pb**	**18 50 33.1**	**-1.4**
NAZ	**Nazwa, Dubai**	**4.80**	**129**	P	**Pn**	**18 50 47.3**	**+1.1**
ASUD	**Al Ashush, Dub**	**4.84**	**135**	P	**Pn**	**18 50 47.8**	**+1.2**
	SNR=8.9						
ASUD				S	**Sn**	**18 51 39.9**	**-2.8**
UOSS	**Minazif**	**5.21**	**126**	P	**Pn**	**18 50 51.1**	**-0.7**
UOSS				S	**Sn**	**18 51 50.6**	**-1.4**
HATD	**Hatta, Dubai**	**5.24**	**128**	P	**Pn**	**18 50 52.5**	**+0.5**
ASHO	**Ashiyiah**	**5.28**	**129**	P	**Pn**	**18 50 52.8**	**+0.1**
	SNR=11						
ASHO				S	**Sn**	**18 51 51.5**	**-2.1**
SOHO	**SOHO**	**5.96**	**131**	P	**Pn**	**18 51 02.0**	**-0.1**
SOHO				S	**Sn**	**18 52 09.0**	**-1.5**
ARQ	**Araqi**	**6.52**	**136**	P	**Pn**	**18 51 08.1**	**-1.7**
ARQ				⇑S	**Sn**	**18 52 22.3**	**-2.0**
BSY	**Bisya**	**7.38**	**135**	P	**Pn**	**18 51 21.7**	**+0.1**
BSY				S	**Sn**	**18 52 40.9**	**-4.5**
SMDO	**Samad**	**7.71**	**129**	P	**Pn**	**18 51 26.0**	**-0.2**
MHTO	**MHTO**	**9.18**	**139**	P	**Pn**	**18 51 45.8**	**-0.4**
MHTO				S	**Sn**	**18 53 25.5**	**-4.1**

*NEIC **25** 18:50:42.1±2.9,6˚63S±0˚10×143˚1E±0˚1, h10km±1km, mb4.7/12, Error ellipse: s-maj=23.2km s-min=15.8km az=258.0*
*IDC **25** 18:50:42.3±0.8,6˚55S×143˚25E, h0km, mb4.2/12, mbtmp4.3/15, ML4.2/2, Error ellipse: s-maj=30.3km s-min=19.6km az=75.0*
ISC 25 18:50:43.6±0.6,**6˚60S**±0˚09×**143˚10E**±0˚09,**h10**km,**n34,**
σ1§**74**/**31**,**mb4.5**/**17**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.89**	**125**	Pn	**Pn**	**18 51 56.1**	**-1.2**
PMG	**Port Moresby**	**4.89**	**125**	Pn	**Pn**	**18 51 57.4**	**+0.1**
	99nm,0.6s,baz=298,slow=11,SNR=4.3						
PMG				Sn	**Sn**	**18 52 54.8**	**+0.8**
	1.2nm,0.3s,baz=252,slow=22,SNR=1.6						
MANU	**Manus Island**	**6.21**	**43**	Pn	Pn	18 52 11.6	-3.8
WRA	**Warramunga Arr**	**15.76**	**212**	Pn	**Pn**	**18 54 27.4**	**+1.6**
	1.0nm,0.3s,baz=29,slow=13,SNR=3.3						
	14nm,1.0s						
SOEI	**Soe**	**18.90**	**259**	P	**P**	**18 55 01.5**	**-3.2**
ASAR	**Alice Springs**	**19.14**	**207**	P	**P**	**18 55 04.9**	**-2.3**
ASAR	**Alice Springs**	**19.14**	**207**	P	**P**	**18 55 10.2**	**+3.1**
	0.6nm,0.3s,baz=35,slow=9.7,SNR=6.6						
	18nm,0.8s						
PATS	**Pohnpei**	**20.21**	**49**	P	P	18 55 11.0	-7.8
FITZ	**Fitzroy Crossi**	**20.51**	**235**	P	P	18 55 18.4	-3.7
TOLI2	**Tolitoli**	**23.55**	**288**	P	**P**	**18 55 52.7**	**-1.8**
TOLI2				IAmb	IAmb	18 56 02.3	
	comp=Z,15nm,0.9s						
KSRS	**Korea Array**	**46.06**	**343**	P	**P**	**18 59 08.0**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=172,slow=8.5,SNR=4.5						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.16**	**301**	P	**P**	**18 59 42.5**	**+2.7**
	comp=Z,0.8nm,0.7s,baz=120,slow=6.3,SNR=3.4						
	comp=Z,0.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.55**	**350**	P	**P**	**18 59 51.1**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=122,slow=5.2,SNR=2.5						
	comp=Z,1.6nm,0.7s						
PETK	**Petropavlovsk-**	**60.75**	**10**	P	**P**	**19 00 56.4**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=190,slow=7.5,SNR=4.8						
	comp=Z,3.5nm,0.7s						
SONM	**Songino Array**	**63.11**	**333**	P	**P**	**19 01 11.1**	**-0.4**
SONM	**Songino Array**	**63.11**	**333**	P	**P**	**19 01 11.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=108,slow=13,SNR=2.6						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**75.52**	**322**	P	**P**	**19 02 28.8**	**+0.4**
MKAR	**Makanchi Array**	**75.52**	**322**	P	**P**	**19 02 28.6**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=107,slow=7.2,SNR=8.3						
	comp=Z,2.3nm,0.6s						
MAKZ	**Makanchi**	**75.72**	**322**	P	**P**	**19 02 27.8**	**-1.7**
MAKZ				IAmb	IAmb	19 02 34.4	
	comp=Z,5.8nm,1.1s						
ZALV	**Zalesovo Beam**	**77.48**	**329**	P	**P**	**19 02 39.8**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=107,slow=5.9,SNR=3.8						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**79.40**	**324**	P	**P**	**19 02 49.4**	**-0.5**
KURBB	**Kurchatov Arra**	**79.41**	**324**	P	**P**	**19 02 49.5**	**-0.5**
	comp=Z,1.3nm,0.2s,baz=112,slow=4.4,SNR=5.0						
	comp=Z,1.3nm,0.2s						
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**19 03 09.7**	**-1.2**
QSPA				IAmb	IAmb	19 03 19.4	
	comp=Z,7.5nm,1.4s						
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**19 03 09.9**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=284,slow=2.9,SNR=3.3						
	comp=Z,2.5nm,0.6s						
M20K	**Styx River**	**83.83**	**25**	P	**P**	**19 03 10.8**	**-2.4**
M20K				IAmb	IAmb	19 03 19.1	
	comp=Z,10nm,1.4s						
SKT	**Skwentna**	**84.55**	**26**	P	**P**	**19 03 15.2**	**-1.6**
SKT				IAmb	IAmb	19 03 28.7	
	comp=Z,7.0nm,1.3s						
NRIK	**Noril'sk**	**84.67**	**343**	P	**P**	**19 03 17.2**	**0.0**
	comp=Z,3.4nm,0.6s,baz=122,slow=4.4,SNR=4.5						
	comp=Z,3.4nm,0.6s						
E19K	**Redstone River**	**84.94**	**20**	P	**P**	**19 03 16.6**	**-2.0**
E19K				IAmb	IAmb	19 03 23.6	
	comp=Z,3.5nm,1.1s						
BVAR	**Borovoye Array**	**84.99**	**325**	P	**P**	**19 03 19.2**	**0.0**
	comp=Z,3.6nm,0.7s,baz=112,slow=6.7,SNR=5.8						
	comp=Z,3.6nm,0.7s						
ILAR	**Eielson Array**	**87.57**	**24**	P	**P**	**19 03 30.4**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=264,slow=4.7,SNR=4.4						
	comp=Z,0.9nm,0.8s						
BCAR	**Beaver Creek A**	**89.16**	**26**	P	P	19 03 36.0	-3.3
BMAR	**Burnt Mountain**	**89.36**	**22**	P	**P**	**19 03 37.8**	**-2.3**
L29M	**L29M**	**90.78**	**26**	P	**P**	**19 03 45.0**	**-1.8**
DBIC	**Dimbokro**	**148.17**	**272**	PKPbc	**PKPdf**	**19 10 31.2**	**+3.5**
	comp=Z,5.1nm,0.9s,baz=96,slow=6.9,SNR=3.8						

*IDC **25** 18:51:12.0±1.3,6˚28S×143˚62E, h0km, mb3.9/5, mbtmp4

CTA Lg Lg 19 01 39.0
0.4nm,0.3s,baz=45,slow=20,SNR=1.7
12nm,0.9s
QIS Mount Isa 14.63 194 P **Pn** **18 57 44.4 +2.5**
WRAB Tennant Creek 16.16 212 Pn **Pn** **18 57 58.9 -3.1**
WRAB IAmb IAmb 18 58 10.9
comp=Z,98nm,1.0s
WRAB Tennant Creek 16.16 212 P **Pn** **18 57 58.9 -3.1**
WRAB pmax pmax
comp=Z,98nm,1.0s
WB2 Warramunga Arr 16.17 212 Pn **Pn** **18 58 00.1 -2.0**
WB2 IAmb IAmb 18 58 10.7
comp=Z,64nm,0.8s
WRA Warramunga Arr 16.18 212 Pn **Pn** **18 58 00.1 -2.1**
comp=Z,2.6nm,0.3s,baz=33,slow=12,SNR=5.1
WRA Sn Sn 19 00 50.3 -12
comp=Z,0.6nm,0.3s,baz=36,slow=19,SNR=1.3
WRA Lg Lg 19 02 41.6
comp=Z,0.7nm,0.3s,baz=45,slow=29,SNR=1.7
HNR Honiara 16.62 102 Pn **Pn** **18 58 06.6 -1.3**
HNR IAmb IAmb 18 58 30.2
comp=Z,66nm,1.0s
HNR Honiara 16.62 102 P **Pn** **18 58 06.6 -1.3**
HNR pmax pmax
comp=Z,66nm,1.0s
HNR Honiara 16.62 102 Pn **P** **18 58 11.1 +0.8**
comp=Z,20nm,0.3s,baz=222,slow=9.2,SNR=4.2
AS01 Alice Springs 19.52 207 P **Pn** **18 58 45.3 +1.8**
AS31 Alice Springs 19.54 207 P **Pn** **18 58 44.4 +0.6**
AS31 IAmb IAmb 18 58 46.3
comp=Z,58nm,0.7s
ASAR Alice Springs 19.54 207 P **Pn** **18 58 44.2 +0.4**
ASAR Alice Springs 19.54 207 P **Pn** **18 58 44.2 +0.4**
ASAR Alice Springs 19.54 207 P **Pn** **18 58 44.4 +0.7**
comp=Z,9.9nm,0.3s,baz=34,slow=10,SNR=7.2
PATS Pohnpei 19.77 49 P **P** **18 58 44.0 -1.0**
QLP Quilpie 20.16 178 P Pn 18 58 52.1 +1.0
EIDS Eidsvold 20.29 160 P **P** **18 58 49.9 -0.8**
EIDS IAmb IAmb 18 58 54.4
comp=Z,49nm,1.2s
EIDS Eidsvold 20.29 160 P Pn 18 58 53.8 +1.1
FITZ Fitzroy Crossi 20.95 234 P **P** **18 58 57.4 -0.5**
INKA Innaminka 21.45 187 P **P** **18 59 05.8 +2.6**
OOD Oodnadatta 22.59 198 P **P** **18 59 17.1 +1.7**
WRKA Warakurna 23.60 216 P **P** **18 59 26.6 +0.7**
TOLI2 Tolitoli 23.81 287 P **P** **18 59 27.5 -0.5**
LCRK Leigh Creek 24.50 191 P **P** **18 59 35.1 +0.9**
ARMA Armidale 25.17 163 P **P** **18 59 39.6 -0.7**
ARMA IAmb IAmb 18 59 57.5
comp=Z,58nm,1.4s
CMSA Cobar Meteorol 25.17 176 P **P** **18 59 42.6 +2.4**
MULG Mulgathing 25.42 199 P **P** **18 59 43.6 +1.1**
STKA Stephens Creek 25.48 184 P **P** **18 59 43.4 +0.4**
STKA Stephens Creek 25.48 184 *i* P **P** **18 59 41.6 -1.4**
STKA Stephens Creek 25.48 184 P **P** **18 59 42.4 -0.7**
comp=Z,11nm,0.8s,baz=352,slow=10.0,SNR=14
comp=Z,11nm,0.8s
BBOO Buckleboo 27.24 194 P **P** **18 59 58.0 -1.0**
BBOO IAmb IAmb 19 00 05.1
comp=Z,27nm,1.1s
BBOO Buckleboo 27.24 194 P **P** **19 00 01.6 +2.7**
HTT Hallett 27.30 188 P **P** **19 00 00.4 +0.9**
FORT Forrest 28.30 209 P **P** **19 00 07.9 -0.6**
CAN Canberra 29.30 171 P **P** **19 00 17.7 +0.3**
CAN IAmb IAmb 19 00 40.0
comp=Z,37nm,1.3s
CAN Canberra 29.30 171 P **P** **19 00 17.7 +0.3**
CAN pmax pmax
comp=Z,37nm,1.3s
YULB Yu-li 36.62 324 P **P** **19 01 19.5 -1.9**
TPUB Ta-pu 36.94 324 P **P** **19 01 21.4 -2.7**
JMN Monobe 40.86 348 P **P** **19 01 55.2 -1.6**
JMN IAmb IAmb 19 02 02.2
comp=Z,28nm,1.2s
JNU Nakatsue 41.01 344 P **P** **19 01 58.1 0.0**
JNU IAmb IAmb 19 02 01.4
comp=Z,23nm,1.3s
MJAR Matsushiro Arr 42.92 354 P **P** **19 02 11.7 -2.0**
comp=Z,2.9nm,0.8s,baz=179,slow=7.1,SNR=6.1
comp=Z,2.9nm,0.8s
TUWZ Tuamarina 44.25 147 P **P** **19 02 22.5 -1.8**
MLZ Mavora Lakes 44.40 155 P **P** **19 02 25.8 +0.3**
NJ2 Nanjing 44.80 330 *e*P **P** **19 02 30.8 +2.1**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
KSAR Wonju Array Be 45.91 343 P **P** **19 02 37.5 +0.1**
KSAR Wonju Array Be 45.91 343 P **P** **19 02 37.5 +0.1**
KSRS Korea Array 45.91 343 P **P** **19 02 37.5 +0.1**
comp=Z,6.9nm,0.9s,baz=162,slow=9.6,SNR=16
comp=Z,6.9nm,0.9s
JTM Tenmabayashi 46.93 358 P **P** **19 02 44.2 -1.3**
GYA Guiyang 48.31 314 ⇓P **P** **19 02 58.3 +1.7**
GYA pmax pmax
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 50.33 300 P **P** **19 03 11.0 -1.0**
CMAR Chiang Mai Arr 50.33 300 P **P** **19 03 12.2 +0.1**
comp=Z,1.1nm,0.7s,baz=121,slow=5.7,SNR=8.0
comp=Z,1.1nm,0.7s
KMI Kunming 50.45 310 ⇑P **P** **19 03 14.0 +0.8**
KMI pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 50.48 301 P **P** **19 03 15.5 +2.3**
HNS HongShan 51.11 331 ⇓P **P** **19 03 18.0 +0.4**
USA0B Ussuriysk Arra 51.35 349 P **P** **19 03 18.0 -1.3**
USA0B IAmb IAmb 19 03 20.4
comp=Z,29nm,1.4s
USA0B Ussuriysk Arra 51.35 349 *i* P **P** **19 03 18.2 -1.0**
USRK Ussuriysk Ar. 51.35 349 P **P** **19 03 19.0 -0.3**
USRK Ussuriysk Ar. 51.35 349 P **P** **19 03 18.9 -0.3**
comp=Z,6.7nm,0.8s,baz=163,slow=8.2,SNR=11
comp=Z,6.7nm,0.8s
XAN Xi'an 51.76 323 ⇑P **P** **19 03 22.5 -0.1**
XAN pmax pmax
comp=Z,12nm,1.3s
PZH PanZhiHua 51.95 311 P **P** **19 03 28.0 +3.7**
PZH pmax pmax
comp=Z,10.0nm,0.7s
MDJ Mudanjiang 52.22 347 P **P** **19 03 28.3 +2.5**
MDJ pmax pmax
comp=Z,11nm,1.2s
CN2 Changchun 52.49 344 *e*P P 19 03 37.0 +9.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BJT Baijiatuau 52.53 334 P **P** **19 03 27.7 -0.5**
BJT Baijiatuau 52.53 334 P **P** **19 03 27.7 -0.5**
BJT pmax pmax
comp=Z,8.0nm,1.0s
BJI Beijing 52.55 334 P **P** **19 03 28.3 0.0**
BJI pmax pmax
comp=Z,4.0nm,0.8s
CD2 Chengdu 53.03 317 P **P** **19 03 33.0 +0.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
BNX BinXian 53.78 346 ⇓P **P** **19 03 37.3 0.0**
BNX pmax pmax
comp=Z,34nm,0.7s
HHC Hu-ho-hao-te 55.33 331 *e*P **P** **19 03 52.0 +3.2**
HHC pP sP 19 04 02.5 +8.6
HHC pmax pmax
comp=Z,7.0nm,0.6s
BTO Baotou 55.91 330 *e*P **P** **19 03 57.3 +4.4**
BTO PP **PP** **19 06 05.0 +7.2**
BTO pmax pmax
comp=Z,24nm,0.9s
LZH Lanzhou 56.22 322 *e*P **P** **19 03 56.5 +1.2**
LZH pP sP 19 04 04.8 +4.3
LZH pmax pmax
comp=Z,14nm,1.1s
KLR Kul'dur 56.26 351 *i* P **P** **19 03 55.0 -0.1**
KLR pmax pmax
comp=Z,18nm,1.5s
HEH HeiHe 58.04 348 *e*P **P** **19 04 07.3 -0.4**
HEH pmax pmax
comp=Z,6.0nm,1.0s
HIA Hailar 59.11 342 *i* P **P** **19 04 15.7 +0.5**
HIA pmax pmax
comp=Z,5.0nm,0.9s
SHL Shillong 59.27 305 P **P** **19 04 16.4 -0.6**
SHL IAmb IAmb 19 04 18.4
comp=Z,5.8nm,0.9s
SHL Shillong 59.27 305 P **P** **19 04 16.4 -0.6**
SHL pmax pmax
comp=Z,6.0nm,0.9s
PEA0B Petropavlovsk- 60.43 10 P **P** **19 04 24.3 +0.1**
PEA0B Petropavlovsk- 60.43 10 P **P** **19 04 24.3 +0.1**
PEA0B pmax pmax
comp=Z,15nm,0.8s
PETK Petropavlovsk- 60.43 10 P **P** **19 04 23.6 -0.6**
comp=Z,14nm,0.8s,baz=152,slow=6.3,SNR=20
comp=Z,14nm,0.8s
GTA Gaotai 60.79 322 P **P** **19 04 28.0 +0.9**
GTA pmax pmax
comp=Z,5.0nm,0.8s
ZEA Zeya 61.38 349 *e*P **P** **19 04 31.2 +0.5**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,1.0s
LSA Lhasa 61.65 309 P **P** **19 04 33.6 0.0**
LSA Lhasa 61.65 309 P **P** **19 04 33.6 0.0**
LSA pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 62.76 333 P **P** **19 04 40.7 +0.5**
ULN IAmb IAmb 19 04 41.6
comp=Z,5.7nm,0.6s
ULN Ulaanbaatar 62.76 333 *i* P **P** **19 04 40.1 -0.1**
SONM Songino Array 63.03 333 P **P** **19 04 42.0 0.0**
SONM Songino Array 63.03 333 P **P** **19 04 42.2 +0.2**
comp=Z,1.8nm,0.6s,baz=156,slow=6.6,SNR=8.9
SONM PP **PP** **19 06 58.4 -2.4**
comp=Z,0.3nm,0.4s,baz=204,slow=3.2,SNR=2.4
comp=Z,1.8nm,0.6s
CASY Casey 64.05 194 P **P** **19 04 48.1 -0.1**
MA2 Magadan 65.95 4 P **P** **19 05 00.4 -0.3**
MA2 Magadan 65.95 4 *i* P **P** **19 05 01.4 +0.7**
MA2 pmax pmax
comp=Z,21nm,1.0s
ZAK Zakamensk 66.29 333 *e*P **P** **19 05 03.2 0.0**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
MOY Mondy 68.22 333 *e*P **P** **19 05 16.0 +0.5**
YAK Yakutsk 68.99 353 *e*P **P** **19 05 17.8 -2.0**
YAK pmax pmax
comp=Z,7.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,1.0nm,1.4s
SEY Seymchan 69.40 4 *i* P **P** **19 05 21.6 -0.8**
SEY pmax pmax
comp=Z,9.0nm,1.0s
WMQ Urumqi 70.78 321 *e*P **P** **19 05 32.0 +0.6**
WMQ pmax pmax
comp=Z,14nm,0.9s
VNDA Vanda 71.82 176 P **P** **19 05 34.1 -2.9**
VNDA Vanda 71.82 176 P **P** **19 05 37.5 +0.5**
comp=Z,3.3nm,0.9s,baz=347,slow=8.9,SNR=5.9
comp=Z,3.3nm,0.9s
DGZ Jazzator, Alta 73.89 326 *i* P **P** **19 05 48.3 -1.7**
DGZ pmax pmax
comp=Z,4.0nm,0.6s
MK31 Makanchi Array 75.53 322 *i* P **P** **19 05 57.9 -1.5**
MKAR Makanchi Array 75.53 322 P **P** **19 05 59.7 +0.3**
comp=Z,3.7nm,0.6s,baz=98,slow=8.1,SNR=34
comp=Z,3.7nm,0.6s
MAKZ Makanchi 75.73 321 P **P** **19 06 00.9 +0.3**
MAKZ IAmb IAmb 19 06 02.0
comp=Z,13nm,1.2s
MAKZ Makanchi 75.73 321 P **P** **19 06 00.9 +0.3**
MAKZ pmax pmax
comp=Z,13nm,1.3s
BILL Bilibino 75.92 9 *i* P **P** **19 06 00.7 -0.5**
BILL pmax pmax
comp=Z,24nm,3.9s
PRZ Przheval'sk 76.33 316 IAmb IAmb 19 06 06.3
comp=Z,6.7nm,0.8s
TARG Taragay, Kyrgy 76.46 315 P **P** **19 06 04.9 -0.4**
TARG Taragay, Kyrgy 76.46 315 P **P** **19 06 04.9 -0.4**
TARG pmax pmax
comp=Z,3.0nm,0.8s
KSH Kashi 76.99 313 P **P** **19 06 10.0 +2.0**
KSH sP PcP 19 06 25.3 +6.3
KSH pmax pmax
comp=Z,5.0nm,1.1s
NIL Nilore 77.27 306 P **P** **19 06 09.5 -0.1**
NIL IAmb IAmb 19 06 26.1
comp=Z,12nm,1.0s
NIL Nilore 77.27 306 P **P** **19 06 09.5 -0.1**
NIL pmax pmax
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 77.44 329 P **P** **19 06 08.9 -1.1**
ZALV Zalesovo Beam 77.44 329 P **P** **19 06 09.0 -1.0**
comp=Z,1.9nm,0.6s,baz=108,slow=6.6,SNR=9.3
comp=Z,1.9nm,0.6s
CHGN Chignik 78.36 29 P **P** **19 06 13.6 -1.5**
TIXI Tiksi 78.41 355 *i* P **P** **19 06 14.8 -0.2**
TIXI pmax pmax
comp=Z,1.0nm,1.1s
M13K Dall Lake 78.43 24 P **P** **19 06 14.1 -1.3**
O14K Tigyukauivet M 78.64 26 P **P** **19 06 14.5 -2.1**
AAK Ala-Archa 79.08 315 P **P** **19 06 19.6 0.0**
AAK Ala-Archa 79.08 315 *i* P **P** **19 06 17.6 -2.0**
AAK pmax pmax
comp=Z,2.0nm,1.0s
M14K Bethel 79.19 24 P **P** **19 06 19.8 +0.3**
L14K Kuka Creek 79.24 23 P **P** **19 06 20.1 +0.3**
L14K IAmb IAmb 19 06 21.6
comp=Z,9.2nm,0.7s
KURK Kurchatov 79.39 324 P **P** **19 06 19.9 -0.9**
KURK Kurchatov 79.39 324 *i* P **P** **19 06 19.9 -0.9**
KURK pmax pmax
comp=Z,11nm,2.5s
KURBB Kurchatov Arra 79.40 324 P **P** **19 06 20.6 -0.3**
comp=Z,1.2nm,0.2s,baz=119,slow=4.3,SNR=8.1
comp=Z,1.2nm,0.2s
N15K Kwethluk River 79.64 25 P **P** **19 06 21.7 -0.3**
J14K Nanvaranak Lak 79.73 22 P **P** **19 06 22.1 -0.3**
O16K Kokwok River B 80.19 26 P **P** **19 06 24.4 -0.6**
O16K IAmb IAmb 19 06 25.6
comp=Z,31nm,1.4s
K15K Wolf Creek Mou 80.23 23 P **P** **19 06 25.0 -0.2**
M16K Timber Creek 80.57 25 P **P** **19 06 25.2 -1.8**
M16K IAmb IAmb 19 06 27.5
comp=Z,26nm,1.4s
L16K Owhat River 80.72 24 P **P** **19 06 27.9 +0.1**
L16K IAmb IAmb 19 06 37.4
comp=Z,14nm,1.2s
G16K Koyuk River 81.71 20 IAmb IAmb 19 06 34.4
comp=Z,9.6nm,1.1s
SIMJ Simiganj 81.92 310 P **P** **19 06 34.8 -0.1**
SIMJ IAmb IAmb 19 06 47.1
comp=Z,11nm,1.4s
KKAR Karatay Array 82.01 315 P **P** **19 06 35.1 -0.1**
KKAR Karatay Array 82.01 315 P **P** **19 06 35.1 -0.1**
KKAR pmax pmax
comp=Z,7.0nm,1.5s
F17K Baldwin Pennin 82.69 19 IAmb IAmb 19 06 47.8
comp=Z,6.8nm,1.0s
G18K Tagagawik 83.27 21 IAmb IAmb 19 06 43.5
comp=Z,7.3nm,1.1s
M20K Styx River 83.43 25 P **P** **19 06 41.8 -0.4**
M20K IAmb IAmb 19 06 44.8
comp=Z,12nm,1.0s
E18K Tukpahlearik C 83.45 19 IAmb IAmb 19 07 01.4
comp=Z,5.2nm,0.9s
QSPA South Pole Qui 83.64 180 P **P** **19 06 42.9 -0.4**
QSPA South Pole Qui 83.64 180 P **P** **19 06 42.9 -0.4**
comp=Z,15nm,0.8s,baz=326,slow=1.3,SNR=18
comp=Z,15nm,0.8s
G19K Purcell Mounta 83.95 21 IAmb IAmb 19 06 47.5
comp=Z,7.4nm,1.0s
NRIK Noril'sk 84.52 343 IAmb IAmb 19 06 48.4
comp=Z,5.8nm,0.8s
NRIK Noril'sk 84.52 343 *i* P **P** **19 06 46.7 -0.7**
NRIK pmax pmax
comp=Z,27nm,2.5s
NRIK Noril'sk 84.52 343 P **P** **19 06 46.8 -0.7**
comp=Z,3.8nm,0.6s,baz=136,slow=4.7,SNR=7.6
comp=Z,3.8nm,0.6s
E19K Redstone River 84.57 19 IAmb IAmb 19 06 49.5
comp=Z,5.1nm,0.8s
C19K Lookout Ridge 84.70 18 IAmb IAmb 19 06 53.5
comp=Z,10nm,0.9s
D19K Kuna River 84.83 18 IAmb IAmb 19 06 51.2
comp=Z,4.9nm,0.8s
F20K Avaraart Lake 84.87 20 IAmb IAmb 19 07 07.0
comp=Z,9.3nm,1.3s
BVAR Borovoye Array 84.97 325 P **P** **19 06 50.2 +0.1**
comp=Z,3.6nm,0.6s,baz=110,slow=7.0,SNR=15
comp=Z,3.6nm,0.6s
BRVK Borovoye 85.05 325 P **P** **19 06 50.4 0.0**
BRVK IAmb IAmb 19 07 06.8
comp=Z,14nm,1.4s
BRVK Borovoye 85.05 325 *i* P **P** **19 06 49.8 -0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
RND Reindeer 85.87 25 P **P** **19 06 53.5 -0.9**
RND IAmb IAmb 19 06 55.8
comp=Z,12nm,0.8s
RND Reindeer 85.87 25 P **P** **19 06 53.5 -0.9**
RND pmax pmax
comp=Z,12nm,0.8s
WRH Wood River Hil 86.59 24 IAmb IAmb 19 07 01.1
comp=Z,6.3nm,1.0s
CCB Clear Creek Bu 86.77 24 IAmb IAmb 19 06 59.9
comp=Z,8.5nm,0.9s
IL31 87.18 24 IAmb IAmb 19 07 00.4
comp=Z,4.0nm,0.8s
ILAR Eielson Array 87.18 24 P **P** **19 06 59.3 -1.5**
comp=Z,2.5nm,0.7s,baz=264,slow=4.1,SNR=25
comp=Z,2.5nm,0.7s
E25K Arctic Village 88.86 21 IAmb IAmb 19 07 12.5
comp=Z,16nm,1.5s
K27K Chicken 88.92 25 IAmb IAmb 19 07 29.9
comp=Z,7.7nm,1.1s
BMAR Burnt Mountain 88.98 22 P **P** **19 07 07.4 -1.9**
EGAK Eagle 89.51 24 P **P** **19 07 11.7 -0.1**
ARU Arti 92.40 326 *i* P **P** **19 07 24.9 -0.5**
ARU pmax pmax
comp=Z,3.0nm,1.2s
ELIB Princess Elisa 92.95 196 *d*P **P** **19 07 26.6 -1.3**
comp=Z,2.8nm,1.1s
OBN Obninsk 104.80 325 *i* P **Pdif** **19 08 20.0 -1.3**
OBN pmax pmax
comp=Z,3.0nm,0.9s
PLCA Paso Flores 123.71 149 PKP **PKPdf** **19 13 13.5 +0.3**
comp=Z,1.5nm,0.9s,baz=289,slow=4.3,SNR=4.2
CPUP Villa Florida 141.78 149 PKP **PKPdf** **19 13 47.3 -0.1**
comp=Z,1.2nm,0.8s,baz=166,slow=4.2,SNR=3.2
SDV Santo Domingo 146.12 84 PKPdf **PKPab** **19 13 57.4 +0.4**
DBIC Dimbokro 148.52 272 PKPbc **PKPbc** **19 14 03.0 +0.2**
comp=Z,4.1nm,0.8s,baz=108,slow=9.8,SNR=4.1

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*IDC **25** 18:59:04.0±0.6,6.°05S×142.°76E,h0km,mb4.3/15,*
mbtmp4.5/19,ML4.4/2,Error ellipse: s-maj=25.6km
s-min=14.6km az=75.0
*NEIC **25** 18:59:05.9±2.2,6.°05S±0.°09×142.°7E±0.°1,h10km±1km,*
mb4.8/35,Error ellipse: s-maj=23.0km s-min=15.4km
az=262.0
ISC 25 18:59:08.1±0.5,**6.°09S**±0.°07×**142.°69E**±0.°09,**h28**km,**n58,**
s1900/56,mb4.7/30,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.52**	**127**	Pn	**Pn**	**19 00 28.3**	**-0.2**
PMG	**Port Moresby**	**5.52**	**127**	Pn	**Pn**	**19 00 29.1**	**+0.6**
	40nm,0.5s,baz=338,slow=11,SNR=2.9						
PMG				Sn	**Sn**	19 01 31.4	+0.4
	14nm,0.3s,baz=211,slow=20,SNR=9.7						
MANU	**Manus Island**	**6.15**	**49**		**Pn**	**19 00 37.6**	**+0.4**
CTA	**Charters Tower**	**14.34**	**166**	Lg	Lg	19 06 33.6	
	0.3nm,0.3s,baz=45,slow=20,SNR=0.9						
WRA	**Warramunga Arr**	**15.99**	**210**	Pn	**Pn**	**19 02 49.4**	**-1.8**
	1.2nm,0.3s,baz=30,slow=14,SNR=4.6						
WRA				Sn	Sn	19 05 36.7	-11
	baz=31,slow=21						
WRA				Lg	Lg	19 07 27.8	
	baz=24,slow=32						
	13nm,0.7s						
HNR	**Honiara**	**17.41**	**102**	P	**Pn**	**19 03 09.3**	**0.0**
	139nm,0.3s,baz=213,slow=13,SNR=1.9						
AS31	**Alice Springs**	**19.42**	**205**	P	**P**	**19 03 32.7**	**+0.4**
ASAR	**Alice Springs**	**19.42**	**205**	P	**Pn**	**19 03 33.9**	**+0.2**
ASAR	**Alice Springs**	**19.42**	**205**	P	**Pn**	**19 03 33.2**	**-0.5**
	2.1nm,0.3s,baz=32,slow=10.0,SNR=18						
	52nm,0.9s						
EIDS	**Eidsvold**	**20.79**	**158**	P	**P**	**19 03 46.7**	**-0.5**
STKA	**Stephens Creek**	**25.68**	**182**	P	**P**	**19 04 34.3**	**-1.5**
	5.2nm,0.9s,baz=296,slow=12,SNR=2.9						
	5.2nm,0.9s						
MJAR	**Matsushiro Arr**	**42.61**	**355**	P	**P**	**19 07 00.6**	**-1.4**
	1.2nm,0.7s,baz=173,slow=9.7,SNR=4.6						
	1.2nm,0.7s						
KSRS	**Korea Array**	**45.46**	**343**	P	**P**	**19 07 24.9**	**+0.2**
	2.4nm,1.0s,baz=150,slow=8.5,SNR=7.0						
	2.4nm,1.0s						
CRAI	**Chiangrai**	**49.14**	**303**	P	**P**	**19 07 54.4**	**+0.6**
CRAI				IAmb	IAmb	19 07 56.8	
	comp=Z,11nm,1.5s						
CM31	**Chiang Mai Arr**	**49.56**	**300**	P	**P**	**19 07 56.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**49.56**	**300**	P	**P**	**19 07 56.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**49.56**	**300**	P	**P**	**19 07 57.8**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=121,slow=6.1,SNR=12						
	comp=Z,1.8nm,0.7s						
USA0B	**Ussuriysk Arra**	**50.98**	**350**	P	P	19 08 02.5	-4.7
USA0B				IAmb	IAmb	19 08 08.7	
	comp=Z,9.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.98**	**350**	P	P	19 08 02.1	-5.2
USRK	**Ussuriysk Ar.**	**50.98**	**350**	P	**P**	**19 08 05.7**	**-1.6**
	comp=Z,3.4nm,0.8s,baz=157,slow=7.8,SNR=3.1						
	comp=Z,3.4nm,0.8s						
SHL	**Shillong**	**58.51**	**305**	P	**P**	**19 09 01.6**	**-0.9**
SHL				IAmb	IAmb	19 09 05.2	
	comp=Z,18nm,1.3s						
PETK	**Petropavlovsk-**	**60.33**	**10**	P	**P**	**19 09 15.8**	**+1.5**
PETK	**Petropavlovsk-**	**60.33**	**10**	P	**P**	**19 09 14.7**	**+0.4**
	comp=Z,9.7nm,1.1s,baz=238,slow=2.8,SNR=4.4						
	comp=Z,9.7nm,1.1s						
LSA	**Lhasa**	**60.91**	**309**	P	**P**	**19 09 20.4**	**+1.1**
LSA				IAmb	IAmb	19 09 23.0	
	comp=Z,5.2nm,1.1s						
ULN	**Ulaanbaatar**	**62.21**	**334**	P	**P**	**19 09 26.6**	**-0.7**
SONM	**Songino Array**	**62.48**	**333**	P	**P**	**19 09 29.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=148,slow=6.3,SNR=3.8						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**72.11**	**176**	P	**P**	**19 10 30.9**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=304,slow=9.8,SNR=1.2						
	comp=Z,0.8nm,0.6s						
MK31	**Makanchi Array**	**74.88**	**322**	P	**P**	**19 10 46.5**	**+0.1**
MKAR	**Makanchi Array**	**74.88**	**322**	P	**P**	**19 10 46.1**	**-0.3**
MKAR	**Makanchi Array**	**74.88**	**322**	P	**P**	**19 10 47.4**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=108,slow=7.8,SNR=11						
	comp=Z,3.1nm,0.9s						
MAKZ	**Makanchi**	**75.08**	**322**	P	**P**	**19 10 48.5**	**+1.0**
MAKZ				IAmb	IAmb	19 10 50.0	
	comp=Z,5.4nm,1.1s						
NIL	**Nilore**	**76.52**	**307**	P	**P**	**19 10 56.0**	**0.0**
NIL				IAmb	IAmb	19 10 58.6	
	comp=Z,7.2nm,0.6s						
ZAA0	**Zalesovo Array**	**76.84**	**329**	P	**P**	**19 10 57.0**	**-0.3**
ZALV	**Zalesovo Beam**	**76.84**	**329**	P	**P**	**19 10 56.1**	**-1.3**
ZALV	**Zalesovo Beam**	**76.84**	**329**	P	**P**	**19 10 57.3**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=106,slow=5.3,SNR=5.4						
	comp=Z,1.5nm,0.7s						
CNBA	**Chernabura Isl**	**77.20**	**30**	P	**P**	**19 10 55.9**	**-3.5**
KURK	**Kurchatov**	**78.75**	**324**	P	**P**	**19 11 07.0**	**-1.0**
KURBB	**Kurchatov Arra**	**78.77**	**324**	P	**P**	**19 11 09.1**	**+1.0**
	comp=Z,1.6nm,0.2s,baz=115,slow=4.6,SNR=7.0						
	comp=Z,1.6nm,0.2s						
ARSB	**Arslanbob**	**79.02**	**314**	P	**P**	**19 11 11.8**	**+1.8**
M14K	**Bethel**	**79.28**	**24**	P	**P**	**19 11 09.5**	**-1.2**
K15K	**Wolf Creek Mou**	**80.31**	**23**	P	**P**	**19 11 17.3**	**+0.9**
K15K				IAmb	IAmb	19 11 21.4	
	comp=Z,21nm,1.4s						
M16K	**Timber Creek**	**80.67**	**25**	P	**P**	**19 11 18.1**	**-0.2**
J16K	**Anvik River**	**81.21**	**22**	P	**P**	**19 11 21.3**	**+0.2**
J16K				IAmb	IAmb	19 11 35.7	
	comp=Z,7.2nm,1.3s						
F17K	**Baldwin Pennin**	**82.72**	**20**	P	**P**	**19 11 29.7**	**+0.7**
F17K				IAmb	IAmb	19 11 53.3	
	comp=Z,7.4nm,1.2s						
E18K	**Tukpahlearik C**	**83.47**	**19**	P	**P**	**19 11 33.3**	**+0.4**
E18K				IAmb	IAmb	19 11 53.0	
	comp=Z,4.8nm,1.1s						
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**19 11 35.3**	**+0.1**
QSPA				IAmb	IAmb	19 11 59.4	
	comp=Z,7.4nm,1.4s						
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**19 11 35.7**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=317,slow=2.4,SNR=6.7						
	comp=Z,4.5nm,0.8s						
C18K	**Utukok River**	**83.97**	**18**	P	**P**	**19 11 35.4**	**-0.1**
C18K				IAmb	IAmb	19 11 52.6	
	comp=Z,9.9nm,1.4s						
NRIK	**Noril'sk**	**84.07**	**343**	P	**P**	**19 11 36.1**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=94,slow=3.7,SNR=7.0						
	comp=Z,5.7nm,0.8s						

J20K	**Nowinta River**	**84.15**	**23**	P	**P**	**19 11 35.9**	**-0.4**
J20K				IAmb	IAmb	19 11 39.9	
	comp=Z,14nm,1.4s						
BVAR	**Borovoye Array**	**84.34**	**325**	P	**P**	**19 11 39.0**	**+1.4**
	comp=Z,12nm,0.8s,baz=110,slow=6.5,SNR=30						
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**84.41**	**325**	P	**P**	**19 11 39.4**	**+1.5**
E19K	**Redstone River**	**84.60**	**20**	P	**P**	**19 11 39.6**	**+1.0**
E19K				IAmb	IAmb	19 11 41.1	
	comp=Z,4.7nm,0.9s						
RC01	**Rabbit Creek A**	**84.70**	**27**	P	**P**	**19 11 38.5**	**-0.8**
RND	**Reindeer**	**85.97**	**25**	P	**P**	**19 11 44.1**	**-1.5**
RND				IAmb	IAmb	19 11 46.9	
	comp=Z,7.5nm,0.9s						
CCB	**Clear Creek Bu**	**86.86**	**24**	P	**P**	**19 11 49.2**	**-0.6**
CCB				IAmb	IAmb	19 11 50.5	
	comp=Z,5.1nm,0.8s						
ILAR	**Eielson Array**	**87.27**	**24**	P	**P**	**19 11 51.2**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=260,slow=4.8,SNR=24						
	comp=Z,3.3nm,0.8s						
DBIC	**Dimbokro**	**147.75**	**273**	PKPbc	**PKPbc**	**19 18 51.7**	**+0.3**
	comp=Z,6.2nm,1.0s,baz=41,slow=0.6,SNR=4.1						

*IDC **25** 19:02:55.4±1.1,5.°87S×143.°80E,h0km,mb4.3/6, mbtmp4.3/7,ML2.1/1,Error ellipse: s-maj=43.6km s-min=22.1km az=70.0*

ISC 25 19:03:00.6±1.0,5.°9S±0.°1×143.°8E±0.°2,h35km,n7,σ0§69/8, mb4.3/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.80**	**136**	Pn	**Pn**	**19 04 09.5**	**-1.0**
	5.7nm,0.3s,baz=3.8,slow=15,SNR=1.5						
PMG				Sn	**Sn**	**19 05 05.8**	**+0.9**
	1.1nm,0.3s,baz=273,slow=21,SNR=1.5						
	12nm,0.3s						
ASAR	**Alice Springs**	**20.05**	**207**	P	**P**	**19 07 30.5**	**-0.3**
	7.8nm,0.8s,baz=32,slow=8.8,SNR=2.3						
	7.8nm,0.8s						
STKA	**Stephens Creek**	**25.90**	**184**	P	**P**	**19 08 30.1**	**+0.7**
	8.8nm,0.9s,baz=354,slow=12,SNR=2.8						
	8.8nm,0.9s						
MKAR	**Makanchi Array**	**75.43**	**321**	P	**P**	**19 14 40.9**	**-0.1**
	2.2nm,0.8s,baz=111,slow=6.7,SNR=9.2						
	2.2nm,0.8s						
KURBB	**Kurchatov Arra**	**79.28**	**324**	P	**P**	**19 15 02.6**	**+0.3**
	1.7nm,0.2s,baz=121,slow=4.0,SNR=1.4						
	1.7nm,0.2s						
BVAR	**Borovoye Array**	**84.84**	**324**	P	**P**	**19 15 31.6**	**0.0**
	2.6nm,0.8s,baz=103,slow=6.5,SNR=7.1						
	2.6nm,0.8s						
ILAR	**Eielson Array**	**86.68**	**24**	P	**P**	**19 15 40.7**	**+0.3**
	0.7nm,0.9s,baz=258,slow=4.4,SNR=3.9						
	0.7nm,0.9s						

*IDC **25** 19:04:55.7±0.7,6.°26S×143.°23E,h0km,mb4.5/12, mbtmp4.5/14,ML2.2/1,Error ellipse: s-maj=29.9km s-min=16.5km az=73.0*

*NEIC **25** 19:04:57.3±2.0,6.°26S±0.°08×143.°13E±0.°08,h10km±1km, mb4.7/40,Error ellipse: s-maj=14.2km s-min=12.6km az=71.0*

ISC 25 19:05:00.7±0.4,6.°38S±0.°05×143.°07E±0.°06,h35km,n90, σ1§48/90,mb4.7/33,1C,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**4.75**	**322**	P	**Pn**	**19 06 10.4**	**+0.5**
PMG	**Port Moresby**	**5.04**	**127**	Pn	**Pn**	**19 06 13.2**	**-0.7**
PMG	**Port Moresby**	**5.04**	**127**	Pn	**Pn**	**19 06 13.8**	**0.0**
	5.8nm,0.3s,baz=326,slow=14,SNR=5.5						
PMG				Sn	**Sn**	**19 07 11.3**	**+0.4**
	16nm,0.3s,baz=280,slow=18,SNR=12						
	32nm,0.5s						
MANU	**Manus Island**	**6.08**	**45**	Pn	**Pn**	**19 06 26.7**	**-1.5**
COEN	**Coen**	**7.53**	**179**	Pn	**Pn**	**19 06 51.2**	**+3.1**
FAKI	**Fak Fak**	**11.32**	**287**	Pn	**Pn**	**19 07 38.3**	**-1.9**
FAKI	**Fak Fak**	**11.32**	**287**	P	**Pn**	**19 07 38.8**	**-1.4**
SAUI	**Saumlaki**	**11.79**	**262**	Pn	**Pn**	**19 07 45.1**	**-1.4**
KDU	**Kakadu**	**12.18**	**238**	P	**Pn**	**19 07 50.6**	**-1.3**
MTN	**Manton Dam**	**13.40**	**241**	Pn	**Pn**	**19 08 05.7**	**-2.9**
MTN	**Manton Dam**	**13.40**	**241**	P	**Pn**	**19 08 06.7**	**-1.9**
DRS	**Darwin Rock St**	**13.43**	**243**	P	**Pn**	**19 08 08.2**	**-0.7**
CTA	**Charters Tower**	**13.97**	**168**	Lg	Lg	19 12 22.5	
	0.4nm,0.3s,baz=53,slow=20,SNR=2.5						
QIS	**Mount Isa**	**14.49**	**193**	P	**Pn**	**19 08 23.4**	**0.0**
WB0	**Warramunga Arr**	**15.75**	**212**	Pn	**Pn**	**19 08 40.2**	**+0.1**
WB0				IAmb	IAmb	19 08 60.0	
	comp=Z,105nm,1.4s						
WRAB	**Tennant Creek**	**15.91**	**211**	Pn	**Pn**	**19 08 42.4**	**+0.2**
WRAB				IAmb	IAmb	19 08 59.7	
	comp=Z,57nm,0.9s						
WB2	**Warramunga Arr**	**15.92**	**211**	Pn	**Pn**	**19 08 40.9**	**-1.4**
WB2				IAmb	IAmb	19 08 54.1	
	comp=Z,53nm,1.1s						
WRA	**Warramunga Arr**	**15.93**	**211**	Pn	**Pn**	**19 08 41.2**	**-1.2**
	comp=Z,1.6nm,0.3s,baz=33,slow=11,SNR=6.1						
WRA				Sn	**Sn**	**19 11 30.4**	**-7.5**
	comp=Z,1.5nm,0.3s,baz=30,slow=23,SNR=2.5						
WRA				Lg	Lg	19 13 21.9	
	comp=Z,0.9nm,0.3s,baz=28,slow=29,SNR=4.8						
SOEI	**Soe**	**18.92**	**259**		**Pn**	**19 09 20.6**	**+1.0**
SOEI	**Soe**	**18.92**	**259**	P	**Pn**	**19 09 20.0**	**+0.4**
AS01	**Alice Springs**	**19.29**	**206**	P	**Pn**	**19 09 24.1**	**+0.1**
AS31	**Alice Springs**	**19.31**	**206**		**Pn**	**19 09 25.9**	**+1.6**
AS31				IAmb	IAmb	19 09 27.5	
	comp=Z,21nm,0.7s						
ASAR	**Alice Springs**	**19.32**	**206**		**Pn**	**19 09 26.0**	**+1.7**
ASAR	**Alice Springs**	**19.32**	**206**	P	**Pn**	**19 09 25.2**	**+1.0**
	comp=Z,55nm,0.6s,baz=31,slow=11,SNR=43						
EIDS	**Eidsvold**	**20.38**	**159**	P	**P**	**19 09 34.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.61**	**234**	P	**P**	**19 09 37.0**	**-0.1**
FITZ				IAmb	IAmb	19 09 59.4	
	comp=Z,27nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.61**	**234**	P	Pn	19 09 38.7	-0.8
MMRI	**Maumere**	**20.78**	**263**	P	**P**	**19 09 38.0**	**-1.0**
MMRI				IAmb	IAmb	19 10 04.7	
	comp=Z,49nm,1.1s						
INKA	**Innaminka**	**21.36**	**186**	P	**P**	**19 09 47.9**	**+2.8**
OOD	**Oodnadatta**	**22.42**	**197**	P	**P**	**19 09 58.4**	**+1.9**
KAPI	**Kappang**	**23.25**	**272**	P	**P**	**19 10 04.8**	**-0.4**
WRKA	**Warakurna**	**23.33**	**216**	P	**P**	**19 10 07.1**	**+1.1**
TOLI2	**Tolitoli**	**23.46**	**288**	P	**P**	**19 10 06.4**	**-1.0**
TOLI2				IAmb	IAmb	19 10 09.3	
	comp=Z,26nm,0.8s						
TOLI2	**Tolitoli**	**23.46**	**288**	P	**P**	**19 10 08.5**	**+1.1**
LCRK	**Leigh Creek**	**24.37**	**190**	P	**P**	**19 10 16.5**	**+0.8**
ARMA	**Armidale**	**25.23**	**162**	P	**P**	**19 10 23.9**	**+0.3**
ARMA				IAmb	IAmb	19 10 49.9	
	comp=Z,35nm,1.5s						
MULG	**Mulgathing**	**25.24**	**199**	P	**P**	**19 10 24.7**	**+1.1**
STKA	**Stephens Creek**	**25.40**	**183**	P	**P**	**19 10 24.7**	**-0.3**
STKA	**Stephens Creek**	**25.40**	**183**	P	**P**	**19 10 25.6**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=342,slow=11,SNR=4.4						
	comp=Z,4.9nm,0.7s						
PSA00	**Pilbara Seismi**	**27.07**	**234**	P	**P**	**19 10 40.1**	**-0.1**
PSA00	**Pilbara Seismi**	**27.07**	**234**	P	**P**	**19 10 40.5**	**+0.3**
PSA00				IAmb	IAmb	19 10 47.8	
	comp=Z,22nm,1.1s						
MARNC	**Mare, Loyalty**	**28.42**	**124**	P	**P**	**19 10 53.0**	**+0.7**
NJ2	**Nanjing**	**44.65**	**330**	*eP*	**P**	**19 13 12.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	**Korea Array**	**45.85**	**343**	P	**P**	**19 13 19.4**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=162,slow=8.9,SNR=5.4						
	comp=Z,1.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.03**	**300**	P	**P**	**19 13 53.0**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=112,slow=6.1,SNR=13						
	comp=Z,1.7nm,0.7s						
XAN	**Xi'an**	**51.58**	**323**	⇑P	**P**	**19 14 03.5**	**-0.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH	**PanZhiHua**	**51.70**	**311**	P	**P**	**19 14 07.3**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2	**Chengdu**	**52.81**	**317**	P	**P**	**19 14 13.5**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**55.19**	**331**	*eP*	**P**	**19 14 35.0**	**+4.8**
HHC				pP	sP	19 14 45.3	0.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				LR	LR		
	comp=N,7μm,13.8s						
HHC				LR	LR		
	comp=Z,8μm,17.7s						
LZH	**Lanzhou**	**56.02**	**322**	*eP*	**P**	**19 14 37.5**	**+1.1**
LZH				pP	pP	19 14 45.3	-1.9
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SHL	**Shillong**	**58.99**	**305**	P	**P**	**19 14 57.6**	**+0.1**
SHL				IAmb	IAmb	19 14 59.2	
	comp=Z,7.9nm,1.1s						
PETK	**Petropavlovsk-**	**60.55**	**10**	P	**P**	**19 15 06.5**	**-1.0**
	comp=Z,5.1nm,0.9s,baz=186,slow=7.4,SNR=5.5						
	comp=Z,5.1nm,0.9s						
GTA	**Gaotai**	**60.60**	**322**	P	**P**	**19 15 09.0**	**+0.7**
GTA				pP	pP	19 15 14.3	-4.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**62.64**	**334**	P	**P**	**19 15 22.1**	**+0.3**
SONM	**Songino Array**	**62.91**	**333**	P	**P**	**19 15 23.7**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=167,slow=7.3,SNR=4.7						
	comp=Z,1.0nm,0.8s						
WMQ	**Urumqi**	**70.58**	**321**	*eP*	**P**	**19 16 12.0**	**-0.5**
WMQ				pP	pP	19 16 19.3	-4.4
WMQ				sP	sP	19 16 30.0	+2.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
VNDA	**Vanda**	**71.79**	**176**	P	**P**	**19 16 19.0**	**-0.2**
VNDA				IAmb	IAmb	19 16 38.6	
	comp=Z,5.5nm,1.2s						
SBA	**Scott Base**	**72.50**	**175**	P	**P**	**19 16 23.1**	**-0.3**
MK31	**Makanchi Array**	**75.34**	**322**	P	**P**	**19 16 40.9**	**+0.3**
MK31				IAmb	IAmb	19 16 41.8	
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**75.34**	**322**	P	**P**	**19 16 40.5**	**-0.1**
MKAR	**Makanchi Array**	**75.34**	**322**	P	**P**	**19 16 41.3**	**+0.7**
	comp=Z,6.7nm,0.8s,baz=95,slow=8.6,SNR=39						
	comp=Z,6.7nm,0.8s						
MAKZ	**Makanchi**	**75.54**	**322**	P	**P**	**19 16 41.8**	**0.0**
MAKZ				IAmb	IAmb	19 16 43.3	
	comp=Z,8.7nm,0.9s						
KSH	**Kashi**	**76.75**	**313**	P	**P**	**19 16 51.3**	**+2.3**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NIL	**Nilore**	**76.99**	**307**	P	**P**	**19 16 50.9**	**+0.5**
ZAA0	**Zalesovo Array**	**77.29**	**329**	P	**P**	**19 16 50.6**	**-0.9**
ZALV	**Zalesovo Beam**	**77.29**	**329**	P	**P**	**19 16 50.9**	**-0.6**
ZALV	**Zalesovo Beam**	**77.29**	**329**	P	**P**	**19 16 51.2**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=102,slow=5.3,SNR=11						
	comp=Z,2.2nm,0.6s						
TIXI	**Tiksi**	**78.44**	**355**	P	**P**	**19 16 55.9**	**-1.6**
AAK	**Ala-Archa**	**78.85**	**316**	P	**P**	**19 17 00.4**	**-0.2**
AAK				IAmb	IAmb	19 17 17.5	
	comp=Z,6.6nm,1.3s						
KURK	**Kurchatov**	**79.21**	**324**	P	**P**	**19 17 02.2**	**0.0**
KURK				IAmb	IAmb	19 17 03.4	
	comp=Z,6.3nm,0.8s						
KURBB	**Kurchatov Arra**	**79.22**	**324**	P	**P**	**19 17 02.7**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=114,slow=4.7,SNR=20						
	comp=Z,4.4nm,0.7s						
SIMJ	**Simiganj**	**81.67**	**310**	P	**P**	**19 17 15.8**	**-0.1**
SIMJ				IAmb	IAmb	19 17 17.3	
	comp=Z,7.7nm,1.1s						
KKAR	**Karatay Array**	**81.78**	**315**	P	**P**	**19 17 15.7**	**-0.5**
QSPA	**South Pole Qui**	**83.59**	**180**	P	**P**	**19 17 24.4**	**-0.9**
QSPA	**South Pole Qui**	**83.59**	**180**	P	**P**	**19 17 26.0**	**+0.7**
	comp=Z,4.9nm,0.8s,baz=341,slow=1.7,SNR=9.2						
	comp=Z,4.9nm,0.8s						
NRIK	**Noril'sk**	**84.47**	**343**	P	**P**	**19 17 28.6**	**-0.9**
NRIK	**Noril'sk**	**84.47**	**343**	P	**P**	**19 17 29.8**	**+0.4**
	comp=Z,6.3nm,0.8s,baz=128,slow=3.1,SNR=8.7						
	comp=Z,6.3nm,0.8s						
E19K	**Redstone River**	**84.75**	**20**	P	**P**	**19 17 29.7**	**-1.3**
E19K				IAmb	IAmb	19 17 41.1	
	comp=Z,5.9nm,1.2s						
RC01	**Rabbit Creek A**	**84.80**	**27**	P	**P**	**19 17 30.4**	**-0.9**
BVAR	**Borovoye Array**	**84.80**	**325**	P	**P**	**19 17 32.4**	**+0.8**
	comp=Z,18nm,0.7s,baz=113,slow=6.8,SNR=57						
	comp=Z,18nm,0.7s						
BRVK	**Borovoye**	**84.87**	**325**	P	**P**	**19 17 31.8**	**-0.1**
D19K	**Kuna River**	**85.00**	**18**	P	**P**	**19 17 31.4**	**-0.8**
D19K				IAmb	IAmb	19 17 42.2	
	comp=Z,6.8nm,1.2s						
GHO	**Glory Hole Cre**	**85.42**	**26**	P	**P**	**19 17 34.5**	**0.0**
ILAR	**Eielson Array**	**87.39**	**24**	P	**P**	**19 17 40.4**	**-3.6**
ILAR	**Eielson Array**	**87.39**	**24**	P	**P**	**19 17 43.3**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=260,slow=5.5,SNR=14						
	comp=Z,1.9nm,0.8s						
C23K	**Itkillik River**	**88.00**	**19**	P	**P**	**19 17 47.2**	**+0.4**
BCAR	**Beaver Creek A**	**88.98**	**26**	P	**P**	**19 17 50.9**	**-0.8**
BMAR	**Burnt Mountain**	**89.17**	**22**	P	**P**	**19 17 52.6**	**+0.1**
ABKAR	**Akbulak array**	**90.32**	**319**	P	**P**	**19 17 57.2**	**-1.0**
DBIC	**Dimbokro**	**148.14**	**272**	PKPbc	**PKPbc**	**19 24 44.5**	**+0.5**
	comp=Z,8.2nm,0.8s,baz=119,slow=4.4,SNR=8.6						

*IDC **25** 19:07:52.0±0.9,6.°16S×143.°02E,h0km,mb4.2/9, mbtmp4.3/13,ML4.2/2,Error ellipse: s-maj=34.7km s-min=20.2km az=74.0*

*NEIC **25** 19:07:53.5±2.1,6.°26S±0.°09×143.°0E±0.°1,h10km±1km, mb4.7/19,Error ellipse: s-maj=20.9km s-min=15.4km az=266.0*

ISC 25 19:07:53.2±0.6,6.°23S±0.°08×142.°95E±0.°09,h10km,n40, σ0§98/38,mb4.6/18,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.23**	**127**	Pn	**Pn**	**19 09 11.6**	**+0.1**
PMG	**Port Moresby**	**5.23**	**127**	Pn	**Pn**	**19 09 12.1**	**+0.6**
	27nm,0.7s,baz=315,slow=17,SNR=1.1						
PMG				Sn	**Sn**	**19 10 10.8**	**-1.1**
	4.2nm,0.3s,baz=230,slow=22,SNR=1.7						
CTA	**Charters Tower**	**14.14**	**167**	Pn	**Pn**	**19 11 15.7**	**+1.9**
	0.3nm,0.3s,baz=30,slow=14,SNR=1.4						
	3.1nm,0.5s						
WRA	**Warramunga Arr**	**15.99**	**211**	Pn	**Pn**	**19 11 38.2**	**-0.3**
	1.5nm,0.3s,baz=34,slow=12,SNR=2.6						
	11nm,0.8s						
KNRA	**Kununurra**	**16.79**	**235**	Pn	**Pn**	**19 11 47.4**	**-1.2**
KNRA				IAmb	IAmb	19 12 07.1	
	comp=Z,89nm,0.8s						
SOEI	**Soe**	**18.83**	**258**	P	**P**	**19 12 14.5**	**+1.0**
SOEI				IAmb	IAmb	19 12 42.8	
	comp=Z,43nm,0.8s						
AS31	**Alice Springs**	**19.40**	**206**	P	**P**	**19 12 20.4**	**+0.8**
ASAR	**Alice Springs**	**19.40**	**206**	P	**P**	**19 12 21.0**	**+1.4**
ASAR	**Alice Springs**	**19.40**	**206**	P	**P**	**19 12 21.1**	**+1.5**
	comp=Z,37nm,0.7s,baz=30,slow=10,SNR=17						
FITZ	**Fitzroy Crossi**	**20.60**	**234**	P	**P**	**19 12 30.7**	**-2.0**
BBOO	**Buckleboo**	**27.21**	**193**	P	**P**	**19 13 35.8**	**-1.5**
BBOO				IAmb	IAmb	19 13 48.3	
	comp=Z,31nm,1.4s						
MJAR	**Matsushiro Arr**	**42.78**	**354**	P	**P**	**19 15 50.7**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=172,slow=8.9,SNR=2.8						
	comp=Z,1.3nm,0.8s						
KSRS	**Korea Array**	**45.67**	**343**	P	**P**	**19 16 14.2**	**0.0**
	comp=Z,1.5nm,0.9s,baz=155,slow=9.1,SNR=4.2						
	comp=Z,1.5nm,0.9s						
SONM	**Songino Array**	**62.72**	**333**	P	**P**	**19 18 18.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=2.2						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**71.95**	**176**	P	**P**	**19 19 15.6**	**-0.9**
VNDA				IAmb	IAmb	19 19 39.9	
	comp=Z,5.6nm,1.2s						
MKAR	**Makanchi Array**	**75.15**	**322**	P	**P**	**19 19 35.1**	**-0.7**
MKAR	**Makanchi Array**	**75.15**	**322**	P	**P**	**19 19 35.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=98,slow=8.5,SNR=4.5						
	comp=Z,0.7nm,0.7s						
MAKZ	**Makanchi**	**75.35**	**322**	P	**P**	**19 19 36.9**	**0.0**
ZALV	**Zalesovo Beam**	**77.10**	**329**	P	**P**	**19 19 46.3**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=120,slow=6.7,SNR=3.5						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**79.02**	**324**	P	**P**	**19 19 58.1**	**+0.7**
KURBB	**Kurchatov Arra**	**79.03**	**324**	P	**P**	**19 19 57.9**	**+0.4**
	comp=Z,1.2nm,0.2s,baz=122,slow=4.9,SNR=4.1						
	comp=Z,1.2nm,0.2s						
M14K	**Bethel**	**79.31**	**24**	P	**P**	**19 19 58.4**	**-0.3**
M16K	**Timber Creek**	**80.69**	**25**	P	**P**	**19 20 06.9**	**+0.6**
K20K	**Telida**	**83.83**	**24**	P	**P**	**19 20 23.5**	**+0.7**
K20K				IAmb	IAmb	19 20 27.8	
	comp=Z,10nm,1.5s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**19 20 25.9**	**+1.1**
	comp=Z,4.1nm,0.8s,baz=149,slow=6.8,SNR=2.6						
	comp=Z,4.1nm,0.8s						
BVAR	**Borovoye Array**	**84.60**	**325**	P	**P**	**19 20 28.0**	**+1.2**
	comp=Z,6.5nm,0.7s,baz=110,slow=6.5,SNR=15						
	comp=Z,6.5nm,0.7s						
BRVK	**Borovoye**	**84.67**	**325**	P	**P**	**19 20 27.8**	**+0.6**
BRVK				IAmb	IAmb	19 20 34.2	
	comp=Z,6.2nm,1.0s						
D19K	**Kuna River**	**84.90**	**18**	P	**P**	**19 20 27.5**	**-0.5**
D19K				IAmb	IAmb	19 20 30.1	
	comp=Z,7.9nm,1.2s						
F20K	**Avaraart Lake**	**84.95**	**20**	P	**P**	**19 20 28.9**	**+0.6**
F20K				IAmb	IAmb	19 20 34.8	
	comp=Z,3.3nm,1.1s						
RND	**Reindeer**	**85.99**	**25**	P	**P**	**19 20 33.4**	**-0.3**
RND				IAmb	IAmb	19 20 45.5	
	comp=Z,4.9nm,1.0s						
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	19 20 38.6	-1.3
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**19 20 39.8**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=257,slow=5.0,SNR=12						
	comp=Z,1.7nm,0.7s						
C23K	**Itkillik River**	**87.90**	**19**	P	**P**	**19 20 43.1**	**+0.5**
BARN	**Barnard Glacie**	**88.41**	**28**	P	**P**	**19 20 45.5**	**-0.1**
BCAR	**Beaver Creek A**	**88.90**	**26**	P	**P**	19 20 46.0	-1.6
BMAR	**Burnt Mountain**	**89.07**	**22**	P	**P**	**19 20 49.5**	**+1.1**
M29M	**Somme Creek**	**90.22**	**27**	P	**P**	**19 20 54.8**	**+0.9**
M29M				IAmb	IAmb	19 21 00.5	
	comp=Z,3.8nm,1.1s						
L29M	**L29M**	**90.52**	**27**	P	P	19 20 53.6	-1.7
L29M				IAmb	IAmb	19 21 01.5	
	comp=Z,6.0nm,1.1s						
K29M	**Barlow Dome**	**90.95**	**26**	P	**P**	**19 20 57.2**	**-0.1**
OK051	**E0350 and S346**	**117.83**	**52**		**PKPdf**	**19 26 38.1**	**-2.4**

*IDC **25** 19:10:39.2±0.9,6.°14S×143.°68E,h0km,mb3.9/11, mbtmp4.0/13,ML2.6/1,Error ellipse: s-maj=34.5km s-min=20.5km az=67.0*

*NEIC **25** 19:10:41.4±2.4,6.°64S±0.°08×143.°76E±0.°09,h10km±1km, mb4.7/13,Error ellipse: s-maj=18.8km s-min=8.9km az=127.0*

ISC 25 19:10:41.4±0.6,6.°44S±0.°07×143.°56E±0.°09,h10km,n35, σ1§58/28,mb4.1/15,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.62**	**130**	Pn	**Pn**	19 11 48.8	-2.6
PMG	**Port Moresby**	**4.62**	**130**	Pn	**Pn**	**19 11 53.7**	**+2.3**
	18nm,0.3s,baz=334,slow=8.9,SNR=9.9						
PMG				Sn	**Sn**	**19 12 46.0**	**+0.8**
	11nm,0.3s,baz=248,slow=19,SNR=2.5						
	141nm,0.9s						
MANU	**Manus Island**	**5.79**	**41**	Pn	**Pn**	**19 12 10.2**	**+2.8**
CTA	**Charters Tower**	**13.81**	**169**	Lg	Lg	19 18 08.2	
	0.3nm,0.3s,baz=36,slow=18,SNR=2.4						
WB2	**Warramunga Arr**	**16.13**	**213**		**Pn**	**19 14 28.7**	**+0.3**
WB2				IAmb	IAmb	19 14 33.5	
	comp=Z,83nm,1.1s						
WRA	**Warramunga Arr**	**16.14**	**213**	Pn	**Pn**	**19 14 27.7**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=18,slow=13,SNR=1.5						
WRA				Lg	Lg	19 19 14.8	
	baz=32,slow=29						
HNR	**Honiara**	**16.50**	**101**	Pn	**Pn**	**19 14 28.5**	**-4.6**
HNR				IAmb	IAmb	19 14 57.9	
	comp=Z,58nm,1.1s						
AS31	**Alice Springs**	**19.48**	**207**	P	**P**	**19 15 07.6**	**-1.1**
ASAR	**Alice Springs**	**19.48**	**207**	P	**P**	**19 15 09.0**	**+0.2**
ASAR	**Alice Springs**	**19.48**	**207**	P	**Pn**	**19 15 12.0**	**+2.1**
	comp=Z,18nm,0.7s,baz=32,slow=9.8,SNR=11						
FITZ	**Fitzroy Crossi**	**20.97**	**235**	P	**P**	**19 15 25.3**	**+0.4**
FITZ				IAmb	IAmb	19 15 54.5	
	comp=Z,34nm,1.3s						
MORW	**Morawa**	**34.37**	**226**	P	P	19 17 24.6	-4.2
MORW				IAmb	IAmb	19 17 29.1	
	comp=Z,16nm,1.1s						
YULB	**Yu-li**	**36.78**	**324**	P	**P**	**19 17 51.1**	**+1.6**
KSRS	**Korea Array**	**46.05**	**343**	P	P	19 19 02.7	-2.7
	comp=Z,0.4nm,0.5s,baz=161,slow=9.2,SNR=2.3						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**50.48**	**300**	P	**P**	**19 19 39.1**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=117,slow=5.5,SNR=4.3						
	comp=Z,0.5nm,0.7s						
PETK	**Petropavlovsk-**	**60.52**	**10**	P	P	19 20 49.4	-2.3
	comp=Z,3.4nm,1.1s,baz=166,slow=7.4,SNR=1.8						
	comp=Z,3.4nm,1.1s						
SONM	**Songino Array**	**63.18**	**333**	P	**P**	**19 21 07.9**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=141,slow=6.6,SNR=2.6						
	comp=Z,0.5nm,0.7s						
MK31	**Makanchi Array**	**75.69**	**322**	P	**P**	**19 22 28.6**	**+1.

	4.6nm,0.7s								
ASAR	**Alice Springs**	**18.84**	**204**	P		**P**		**19 18 00.4**	**+0.9**
	1.1nm,0.3s,baz=31,slow=10,SNR=6.2								
	13nm,0.7s								
SONM	**Songino Array**	**62.52**	**334**	P		**P**		**19 24 01.4**	**-1.3**
	0.4nm,0.4s,baz=142,slow=7.3,SNR=4.5								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**74.77**	**322**	P		**P**		**19 25 19.8**	**+0.8**
	0.9nm,0.7s,baz=100,slow=7.3,SNR=3.6								
	0.9nm,0.7s								
BVAR	**Borovoye Array**	**84.27**	**325**	P		**P**		**19 26 11.2**	**+0.8**
	1.6nm,0.8s,baz=115,slow=6.5,SNR=4.2								
	1.6nm,0.8s								
ILAR	**Eielson Array**	**87.84**	**24**	P		**P**		**19 26 27.6**	**-0.2**
	0.6nm,0.8s,baz=254,slow=5.2,SNR=3.6								
	0.6nm,0.8s								

*IDC **25** 19:14:20.4±0.8,5°.66S×142°.40E,h0km,mb4.1/10, mbtmp4.2/13,ML4.3/2,Error ellipse: s-maj=29.2km s-min=19.4km az=74.0*
*NEIC **25** 19:14:22.0±1.6,5°.68S±0°.10×142°.3E±0°.1,h10km±1km, mb4.9/28,Error ellipse: s-maj=22.2km s-min=9.4km az=226.0*
ISC 25 19:14:22.2±0.5,5°.70S±0°.08×142°.34E±0°.09,h10km,n51, σ1§12/46,mb4.8/23,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**6.03**	**128**	Pn		**Pn**	**19 15 51.3**	**-0.3**
	24nm,0.3s,baz=183,slow=21,SNR=2.2							
PMG				Sn		**Sn**	**19 16 57.9**	**-2.8**
	9.2nm,0.3s,baz=126,slow=22,SNR=2.1							
RABL	**Rabaul**	**9.90**	**82**	Pn		**Pn**	**19 16 46.3**	**+1.5**
CTA	**Charters Tower**	**14.80**	**165**	Lg		Lg	19 22 14.3	
	0.5nm,0.3s,baz=328,slow=18,SNR=1.8							
WRA	**Warramunga Arr**	**16.16**	**208**	Pn		**Pn**	**19 18 08.6**	**-1.0**
	1.2nm,0.3s,baz=28,slow=13,SNR=1.1							
	3.3nm,0.6s							
HNR	**Honiara**	**17.84**	**103**	P		**Pn**	**19 18 31.8**	**+1.0**
	285nm,0.4s,baz=227,slow=6.2,SNR=4.8							
AS31	**Alice Springs**	**19.62**	**204**	P		**P**	**19 18 52.4**	**+1.3**
ASAR	**Alice Springs**	**19.62**	**204**	P		**P**	**19 18 51.6**	**+0.5**
	1.2nm,0.3s,baz=32,slow=10,SNR=5.2							
	15nm,0.8s							
EIDS	**Eidsvold**	**21.27**	**158**	P		**P**	**19 19 11.8**	**+2.8**
YULB	**Yu-li**	**35.48**	**325**	P		**P**	**19 21 19.2**	**-0.1**
JMN	**Monobe**	**40.02**	**349**	P		**P**	**19 21 57.3**	**-0.3**
JMN				IAmb		IAmb	19 22 00.9	
	comp=Z,42nm,1.3s							
KSRS	**Korea Array**	**44.99**	**344**	P		**P**	**19 22 37.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=159,slow=8.5,SNR=2.2							
	comp=Z,0.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**49.06**	**300**	P		**P**	**19 23 10.4**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=113,slow=5.3,SNR=2.8							
	comp=Z,0.7nm,0.8s							
USRK	**Ussuriysk Ar.**	**50.54**	**350**	P		**P**	**19 23 20.6**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=165,slow=6.0,SNR=1.5							
	comp=Z,1.3nm,0.8s							
PETK	**Petropavlovsk-**	**60.01**	**11**	P		**P**	**19 24 28.0**	**-1.1**
	comp=Z,3.8nm,0.9s,baz=165,slow=6.0,SNR=2.7							
	comp=Z,3.8nm,0.9s							
SONM	**Songino Array**	**61.98**	**333**	P		**P**	**19 24 42.7**	**0.0**
	comp=Z,0.3nm,0.6s,baz=158,slow=4.7,SNR=1.2							
	comp=Z,0.3nm,0.6s							
VNDA	**Vanda**	**72.52**	**176**	P		**P**	**19 25 48.7**	**-0.2**
VNDA				IAmb		IAmb	19 26 07.8	
	comp=Z,12nm,1.5s							
MK31	**Makanchi Array**	**74.36**	**322**	P		**P**	**19 26 00.0**	**-0.3**
MKAR	**Makanchi Array**	**74.36**	**322**	P		**P**	**19 25 59.3**	**-1.0**
MKAR	**Makanchi Array**	**74.36**	**322**	P		**P**	**19 26 00.2**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=95,slow=8.9,SNR=7.8							
	comp=Z,1.3nm,0.6s							
MAKZ	**Makanchi**	**74.56**	**322**	P		**P**	**19 26 00.6**	**-0.9**
CHGN	**Chignik**	**78.36**	**29**	P		P	19 26 20.2	-2.5
L14K	**Kuka Creek**	**79.11**	**24**	P		**P**	**19 26 25.6**	**-1.1**
N15K	**Kwethluk River**	**79.55**	**25**	P		P	19 26 27.8	-1.4
K15K	**Wolf Creek Mou**	**80.10**	**23**	P		**P**	**19 26 31.5**	**-0.6**
O16K	**Kokwok River B**	**80.13**	**26**	P		**P**	**19 26 31.8**	**-0.5**
O16K				IAmb		IAmb	19 26 38.4	
	comp=Z,30nm,1.4s							
L16K	**Owhat River**	**80.61**	**24**	P		**P**	**19 26 34.7**	**-0.2**
N17K	**Nushagak Hills**	**80.98**	**26**	P		**P**	**19 26 36.5**	**-0.4**
N17K				IAmb		IAmb	19 26 37.6	
	comp=Z,16nm,1.3s							
O18K	**Koktuh Hills**	**81.54**	**27**	P		**P**	**19 26 38.7**	**-1.3**
O18K				IAmb		IAmb	19 27 02.4	
	comp=Z,23nm,1.3s							
N18K	**Kilae Creek**	**81.62**	**26**	P		**P**	**19 26 40.0**	**-0.3**
N18K				IAmb		IAmb	19 26 48.6	
	comp=Z,11nm,1.1s							
NRIK	**Noril'sk**	**83.60**	**343**	P		**P**	**19 26 50.2**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=47,slow=2.8,SNR=1.9							
	comp=Z,1.3nm,0.4s							
BVAR	**Borovoye Array**	**83.82**	**325**	P		**P**	**19 26 51.9**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=100,slow=6.2,SNR=6.1							
	comp=Z,3.1nm,0.8s							
QSPA	**South Pole Qui**	**84.27**	**180**	P		**P**	**19 26 53.7**	**-0.5**
QSPA				IAmb		IAmb	19 26 56.9	
	comp=Z,7.5nm,1.2s							
QSPA	**South Pole Qui**	**84.27**	**180**	P		**P**	**19 26 53.4**	**-0.8**
	comp=Z,5.4nm,1.0s,baz=347,slow=1.8,SNR=4.9							
	comp=Z,5.4nm,1.0s							
CAST	**Castle Rocks**	**84.43**	**24**	P		**P**	**19 26 54.3**	**-0.6**
CAST				IAmb		IAmb	19 27 02.3	
	comp=Z,6.6nm,1.1s							
RC01	**Rabbit Creek A**	**84.52**	**27**	P		**P**	**19 26 54.2**	**-1.1**
RC01				IAmb		IAmb	19 27 15.4	
	comp=Z,11nm,1.0s							
D19K	**Kuna River**	**84.59**	**19**	P		**P**	**19 26 55.4**	**-0.2**
D19K				IAmb		IAmb	19 27 14.8	
	comp=Z,10nm,1.4s							
ILAR	**Eielson Array**	**87.06**	**24**	P		P	19 27 06.3	-1.6
ILAR	**Eielson Array**	**87.06**	**24**	P		P	19 27 06.1	-1.7
	comp=Z,1.6nm,0.8s,baz=259,slow=4.6,SNR=8.1							
	comp=Z,1.6nm,0.8s							
C23K	**Itkillik River**	**87.59**	**19**	P		**P**	**19 27 09.8**	**-0.5**
F24K	**Squaw Lake**	**87.64**	**21**	P		**P**	**19 27 10.9**	**+0.3**
BARN	**Barnard Glacie**	**88.23**	**28**	P		**P**	**19 27 13.4**	**-0.3**
BARN				IAmb		IAmb	19 27 31.6	
	comp=Z,10nm,1.0s							
M27K	**Edge Creek, AK**	**88.47**	**27**	P		**P**	**19 27 14.1**	**-0.8**
M27K				IAmb		IAmb	19 27 35.2	
	comp=Z,12nm,1.4s							
BCAR	**Beaver Creek A**	**88.70**	**26**	P		**P**	**19 27 14.4**	**-1.3**
BMAR	**Burnt Mountain**	**88.81**	**22**	P		**P**	**19 27 15.3**	**-0.9**
K27K	**Chicken**	**88.83**	**25**	P		**P**	**19 27 15.3**	**-1.0**
K27K				IAmb		IAmb	19 27 34.5	
	comp=Z,4.8nm,0.9s							
ABKAR	**Akbulak array**	**89.33**	**319**	P		P	19 27 17.6	-1.4
EGAK	**Eagle**	**89.41**	**25**	P		**P**	**19 27 18.4**	**-0.5**
EGAK				IAmb		IAmb	19 27 25.7	
	comp=Z,5.6nm,1.0s							
SNAA	**Sanae**	**99.49**	**191**	P		**Pdif**	**19 28 02.5**	**-2.7**
PLCA	**Paso Flores**	**124.81**	**150**	PKP		**PKPdf**	**19 33 23.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=275,slow=5.6,SNR=5.3							
DBIC	**Dimbokro**	**147.38**	**273**	PKPbc		**PKPdf**	**19 34 07.5**	**+2.5**
	comp=Z,2.6nm,0.8s,baz=49,slow=3.9,SNR=3.3							
ETMB	**Extrema**	**147.64**	**118**			**PKPdf**	**19 34 07.5**	**+2.0**

IDC 25 19:16:07.0±2.1,5°.87S×143°.17E,h0km,mb4.1/3, mbtmp4.2/4,ML4.0/1,Error ellipse: s-maj=84.1km s-min=38.1km az=106.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**19.82**	**206**	P		P	19 20 39.4	-0.1
	0.4nm,0.3s,baz=35,slow=9.3,SNR=5.0							
	13nm,0.8s							
MKAR	**Makanchi Array**	**75.00**	**322**	P		P	19 27 50.6	+0.1
	0.5nm,0.6s,baz=106,slow=6.7,SNR=2.7							
	0.5nm,0.6s							
BVAR	**Borovoye Array**	**84.44**	**325**	P		P	19 28 41.6	0.0
	3.0nm,0.8s,baz=104,slow=6.3,SNR=5.0							
	3.0nm,0.8s							
ILAR	**Eielson Array**	**86.88**	**24**	P		P	19 28 53.4	-0.1
	0.7nm,0.7s,baz=255,slow=4.8,SNR=4.1							
	0.7nm,0.7s							

IDC 25 19:16:36.4±4.5,6°.11S×143°.54E,h0km,mb3.7/3, mbtmp3.8/4,Error ellipse: s-maj=138.3km s-min=40.0km az=93.0,New Guinea

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

ASAR	**Alice Springs**	**19.77**	**207**	P		P		19 21 08.3	+0.1
	6.1nm,0.8s,baz=41,slow=10.0,SNR=5.8								
CMAR	**Chiang Mai Arr**	**50.30**	**300**	P		P		19 25 34.6	-0.6
	0.2nm,0.4s,baz=122,slow=5.9,SNR=1.7								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**75.42**	**322**	P		P		19 28 22.4	+0.3
	0.6nm,0.7s,baz=115,slow=5.7,SNR=2.7								
	0.6nm,0.7s								
BVAR	**Borovoye Array**	**84.84**	**325**	P		P		19 29 13.1	+0.2
	0.8nm,0.8s,baz=97,slow=6.0,SNR=1.8								
	0.8nm,0.8s								

*IDC **25** 19:19:13.9±0.7,5°.71S×142°.57E,h0km,mb4.3/14, mbtmp4.3/17,ML4.6/2,Error ellipse: s-maj=28.7km s-min=16.1km az=77.0*
*NEIC **25** 19:19:15.2±1.4,5°.79S±0°.08×142°.39E±0°.08,h10km±1km, mb4.8/49,Error ellipse: s-maj=13.9km s-min=13.1km az=114.0*
ISC 25 19:19:17.8±0.5,5°.78S±0°.06×142°.36E±0°.07,h28km,n77, σ1§07/78,mb4.7/32,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**5.97**	**127**	Pn		**Pn**	**19 20 43.5**	**-0.9**
	21nm,0.8s,baz=110,slow=3.3,SNR=2.1							
PMG				Sn		**Sn**	**19 21 49.6**	**-2.3**
	6.8nm,0.3s,baz=266,slow=17,SNR=3.1							
MANU	**Manus Island**	**6.23**	**54**			**Pn**	**19 20 50.9**	**+2.9**
COEN	**Coen**	**8.16**	**174**	Pn		**Pn**	**19 21 17.5**	**+2.9**
RABL	**Rabaul**	**9.90**	**81**			**Pn**	**19 21 39.4**	**+1.0**
WRAB	**Tennant Creek**	**16.08**	**208**	Pn		**Pn**	**19 23 01.1**	**-1.0**
WRAB				IAmb		IAmb	19 23 33.3	
	comp=Z,81nm,0.9s							
WRA	**Warramunga Arr**	**16.09**	**208**	Pn		**Pn**	**19 23 02.2**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=29,slow=13,SNR=3.1							
	comp=Z,6.5nm,0.5s							
HNR	**Honiara**	**17.81**	**103**			**Pn**	**19 23 22.6**	**-1.2**
HNR				IAmb		IAmb	19 23 36.5	
	comp=Z,45nm,0.7s							
HNR	**Honiara**	**17.81**	**103**	P		**Pn**	**19 23 23.9**	**+0.1**
	comp=Z,625nm,0.6s,baz=324,slow=19,SNR=2.1							
SOEI	**Soe**	**18.35**	**256**	P		**P**	**19 23 29.3**	**-1.2**
SOEI				IAmb		IAmb	19 23 47.5	
	comp=Z,87nm,0.8s							
SOEI	**Soe**	**18.35**	**256**			**Pn**	**19 23 30.7**	**+0.1**
SOEI	**Soe**	**18.35**	**256**	P		**Pn**	**19 23 31.3**	**+0.7**
SOEI	**Soe**	**18.35**	**256**	P		**Pn**	**19 23 31.0**	**+0.4**
	comp=Z,86nm,1.1s,comp=Z,1.3nm							
ASAR	**Alice Springs**	**19.55**	**204**	P		**P**	**19 23 42.1**	**-1.5**
ASAR	**Alice Springs**	**19.55**	**204**	P		**Pn**	**19 23 45.4**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=33,slow=9.6,SNR=14							
	comp=Z,21nm,0.7s							
LUWI	**Luwuk**	**20.10**	**283**	P		**P**	**19 23 47.7**	**-1.9**
LUWI				IAmb		IAmb	19 24 26.3	
	comp=Z,40nm,0.8s							
MMRI	**Maumere**	**20.16**	**261**	P		**P**	**19 23 50.1**	**-0.1**
MMRI				IAmb		IAmb	19 23 54.4	
	comp=Z,42nm,0.6s							
TOLI2	**Tolitoli**	**22.61**	**287**	P		**P**	**19 24 15.5**	**-1.1**
PSA00	**Pilbara Seismi**	**26.86**	**232**	P		**P**	**19 24 57.0**	**+0.7**
YULB	**Yu-li**	**35.55**	**325**	P		**P**	**19 26 11.5**	**-1.3**
MNAI	**Manna**	**39.27**	**270**	P		**P**	**19 26 44.4**	**-0.1**
JGF	**Kuroka**	**41.43**	**354**	P		**P**	**19 27 01.6**	**-0.6**
MJAR	**Matsushiro Arr**	**42.28**	**355**	P		**P**	**19 27 07.8**	**-1.2**
	comp=Z,1.7nm,0.5s,baz=174,slow=7.1,SNR=12							
	comp=Z,1.7nm,0.5s							
MAJO	**Matsushiro**	**42.28**	**355**	P		**P**	**19 27 07.1**	**-2.0**
MJB9	**Matsu-Tunnel**	**42.29**	**355**	P		**P**	**19 27 08.2**	**-0.9**
JMM	**Marumori**	**43.45**	**358**	P		**P**	**19 27 17.3**	**-1.1**
JMM				IAmb		IAmb	19 27 18.6	
	comp=Z,26nm,1.1s							
JSD	**Sado**	**43.76**	**355**	P		**P**	**19 27 20.8**	**-0.2**
JSD				IAmb		IAmb	19 27 43.3	
	comp=Z,18nm,0.9s							
KSRS	**Korea Array**	**45.07**	**344**	P		**P**	**19 27 32.2**	**+0.8**
	comp=Z,4.7nm,0.8s,baz=162,slow=9.9,SNR=14							
	comp=Z,4.7nm,0.8s							
JTM	**Tenmabayashi**	**46.36**	**359**	P		**P**	**19 27 39.7**	**-1.9**
CM31	**Chiang Mai Arr**	**49.11**	**300**	P		**P**	**19 28 02.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**49.11**	**300**	P		**P**	**19 28 04.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**49.11**	**300**	P		**P**	**19 28 04.9**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=123,slow=6.2,SNR=9.6							
	comp=Z,1.0nm,0.6s							
USA0B	**Ussuriysk Arra**	**50.62**	**350**	P		**P**	**19 28 15.0**	**+0.6**
USA0B				IAmb		IAmb	19 28 15.9	
	comp=Z,14nm,0.9s							
USRK	**Ussuriysk Ar.**	**50.62**	**350**	P		**P**	**19 28 14.7**	**+0.4**
USRK	**Ussuriysk Ar.**	**50.62**	**350**	P		**P**	**19 28 15.2**	**+0.8**
	comp=Z,9.7nm,0.8s,baz=177,slow=8.1,SNR=18							
	comp=Z,9.7nm,0.8s							
PETK	**Petropavlovsk-**	**60.09**	**11**	P		**P**	**19 29 22.7**	**+0.3**
	comp=Z,7.6nm,0.9s,baz=191,slow=4.5,SNR=6.2							
	comp=Z,7.6nm,0.9s							
ULN	**Ulaanbaatar**	**61.79**	**334**	P		**P**	**19 29 33.9**	**-0.3**
SONM	**Songino Array**	**62.05**	**333**	P		**P**	**19 29 35.4**	**-0.6**
SONM	**Songino Array**	**62.05**	**333**	P		**P**	**19 29 36.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=146,slow=5.2,SNR=3.0							
	comp=Z,0.6nm,0.5s							
VNDA	**Vanda**	**72.44**	**176**	P		**P**	**19 30 41.7**	**+0.5**
VNDA				IAmb		IAmb	19 31 11.7	
	comp=Z,11nm,1.4s							
VNDA	**Vanda**	**72.44**	**176**	P		**P**	**19 30 42.1**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=347,slow=8.8,SNR=1.3							
	comp=Z,1.4nm,1.0s							
MKAR	**Makanchi Array**	**74.43**	**322**	P		**P**	**19 30 53.6**	**+0.1**
MKAR	**Makanchi Array**	**74.43**	**322**	P		**P**	**19 30 54.8**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=113,slow=6.8,SNR=15							
	comp=Z,2.5nm,0.8s							
MAKZ	**Makanchi**	**74.63**	**322**	P		**P**	**19 30 53.5**	**-1.1**
ZALV	**Zalesovo Beam**	**76.41**	**329**	P		**P**	**19 31 04.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=94,slow=4.5,SNR=4.8							
	comp=Z,0.8nm,0.5s							
KURK	**Kurchatov**	**78.31**	**324**	P		**P**	**19 31 14.5**	**-0.8**
KURBB	**Kurchatov Arra**	**78.32**	**324**	P		**P**	**19 31 15.7**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=121,slow=4.5,SNR=7.3							
	comp=Z,0.4nm,0.3s							
CHGN	**Chignik**	**78.43**	**29**	P		**P**	**19 31 16.2**	**+0.4**
O14K	**Tigyukauivet M**	**78.63**	**26**	P		**P**	**19 31 16.9**	**0.0**
M14K	**Bethel**	**79.15**	**24**	P		**P**	**19 31 17.4**	**-2.3**
M14K				IAmb		IAmb	19 31 20.9	
	comp=Z,10nm,0.8s							
L14K	**Kuka Creek**	**79.18**	**24**	P		**P**	**19 31 19.6**	**-0.3**
L14K				IAmb		IAmb	19 31 31.8	
	comp=Z,17nm,1.2s							
ANM	**Nome**	**80.06**	**20**	P		**P**	**19 31 24.2**	**-0.5**
K15K	**Wolf Creek Mou**	**80.17**	**23**	P		**P**	**19 31 24.8**	**-0.4**
O16K	**Kokwok River B**	**80.19**	**26**	P		**P**	**19 31 25.6**	**+0.1**
M16K	**Timber Creek**	**80.54**	**25**	P		**P**	**19 31 25.2**	**-2.1**
M16K				IAmb		IAmb	19 31 45.5	
	comp=Z,26nm,1.4s							
L16K	**Owhat River**	**80.68**	**24**	P		**P**	**19 31 27.6**	**-0.4**
L16K				IAmb		IAmb	19 31 35.9	
	comp=Z,7.4nm,1.0s							
F15K	**North Star Dit**	**80.99**	**20**	P		**P**	**19 31 29.3**	**-0.3**
F15K				IAmb		IAmb	19 31 32.2	
	comp=Z,8.8nm,1.4s							
N17K	**Nushagak Hills**	**81.05**	**26**	P		**P**	**19 31 30.1**	**+0.1**
N17K				IAmb		IAmb	19 31 49.9	
	comp=Z,23nm,1.4s							
J16K	**Anvik River**	**81.06**	**23**	P		**P**	**19 31 29.8**	**-0.2**
J16K				IAmb		IAmb	19 31 40.9	
	comp=Z,12nm,1.4s							
SVW2	**Sparrevohn**	**82.01**	**26**	P		**P**	**19 31 35.5**	**+0.4**
SVW2				IAmb		IAmb	19 32 10.9	
	comp=Z,15nm,1.3s							
H17K	**Granite Mounta**	**82.20**	**21**	P		**P**	**19 31 36.3**	**+0.3**
H17K				IAmb		IAmb	19 31 37.6	
	comp=Z,4.0nm,0.8s							
F17K	**Baldwin Pennin**	**82.55**	**20**	P		**P**	**19 31 38.1**	**+0.4**
F17K				IAmb		IAmb	19 31 49.3	
	comp=Z,9.3nm,1.2s							
E18K	**Tukpahlearik C**	**83.30**	**19**	P		**P**	**19 31 42.1**	**+0.4**
E18K				IAmb		IAmb	19 31 44.6	
	comp=Z,4.4nm,0.8s							
NRIK	**Noril'sk**	**83.69**	**343**	P		**P**	**19 31 44.4**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=96,slow=4.4,SNR=5.3							
	comp=Z,2.7nm,0.7s							
BVAR	**Borovoye Array**	**83.90**	**325**	P		**P**	**19 31 46.0**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=104,slow=6.3,SNR=16							
	comp=Z,5.3nm,0.8s							
J20K	**Nowinta River**	**84.00**	**23**	P		**P**	**19 31 45.9**	**+0.5**
J20K				IAmb		IAmb	19 32 04.0	
	comp=Z,8.9nm,1.1s							
QSPA	**South Pole Qui**	**84.18**	**180**	P		**P**	**19 31 47.4**	**+0.9**
QSPA	**South Pole Qui**	**84.18**	**180**	P		**P**	**19 31 47.4**	**+0.9**

	comp=Z,1.3nm,0.6s,baz=300,slow=3.0,SNR=2.5								
	comp=Z,1.3nm,0.6s								
SUA	**Susitna One**	**84.28**	**26**	P		**P**		**19 31 44.8**	**-2.2**
SUA				IAmb		IAmb		19 32 15.6	
	comp=Z,11nm,1.3s								
E19K	**Redstone River**	**84.43**	**20**	P		**P**		**19 31 47.9**	**+0.4**
E19K				IAmb		IAmb		19 32 03.7	
	comp=Z,4.9nm,1.0s								
RC01	**Rabbit Creek A**	**84.59**	**27**	P		**P**		**19 31 47.4**	**-1.0**
D19K	**Kuna River**	**84.66**	**19**	P		**P**		**19 31 48.6**	**-0.1**
KNK	**Knik Glacier**	**85.28**	**27**	P		**P**		**19 31 51.6**	**-0.3**
ILAR	**Eielson Array**	**87.13**	**24**	P		**P**		**19 31 59.4**	**-1.6**
	comp=Z,2.4nm,0.7s,baz=258,slow=4.6,SNR=17								
	comp=Z,2.4nm,0.7s								
C23K	**Itkillik River**	**87.67**	**19**	P		**P**		**19 32 04.0**	**+0.7**
F24K	**Squaw Lake**	**87.71**	**21**	P		**P**		**19 32 04.5**	**+0.8**
F24K				IAmb		IAmb		19 32 05.4	
	comp=Z,3.3nm,0.8s								
BARN	**Barnard Glacie**	**88.30**	**28**	P		**P**		**19 32 06.5**	**-0.3**
PLCA	**Paso Flores**	**124.73**	**150**	PKP		**PKiKP**		**19 38 16.7**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=225,slow=5.7,SNR=3.5								

*IDC **25** 19:21:50.1±1.1,6°.50S×129°.60E,h0km,mb3.9/5, mbtmp4.1/7,ML4.8/2,Error ellipse: s-maj=60.3km s-min=21.0km az=69.0*
*NEIC **25** 19:22:04.8±2.6,6°.91S±0°.08×129°.48E±0°.09,h166km±10km, mb4.3/9,Error ellipse: s-maj=15.3km s-min=7.9km az=50.0*
*DJA **25** 19:22:05.3±0.2,7°.S±3°×13°.0E±°,h140km±12km,M4.8/14, mb4.6/13,MLv4.8/14*
ISC 25 19:22:03.9±0.6,6°.96S±0°.05×129°.54E±0°.08,h150km,n50, σ2§46/52,mb3.7/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.02**	**120**	Pn		**Pn**	**19 22 42.8**	**+3.6**
SAUI	**Saumlaki**	**2.02**	**120**	P		**Pn**	**19 22 43.3**	**+4.1**
BNDI	**Bandanaira**	**2.45**	**8**	P		**Pn**	**19 22 47.8**	**+3.4**
BNDI	**Bandanaira**	**2.45**	**8**	P		**Pn**	**19 22 47.4**	**+3.0**
NLAI	**Namlea**	**4.42**	**327**	Pn		**Pn**	**19 23 13.0**	**+3.3**
FAKI	**Fak Fak**	**4.83**	**34**	Pn		**Pn**	**19 23 15.3**	**+0.2**
FAKI	**Fak Fak**	**4.83**	**34**	P		**Pn**	**19 23 15.4**	**+0.2**
FAKI	**Fak Fak**	**4.83**	**34**	P		**Pn**	**19 23 15.2**	**+0.1**
KMPI	**Kaimana, Papua**	**5.28**	**52**	P			19 23 22.5	
	125nm,0.8s,2.8nm							
KMPI				Pn		**Pn**	**19 23 22.4**	**+1.4**
	125nm,0.8s,2.8nm							
DRS	**Darwin Rock St**	**5.60**	**166**	P		**Pn**	**19 23 27.4**	**+2.1**
SANI	**Sanana**	**6.03**	**324**	P		**Pn**	**19 23 33.1**	**+2.1**
SANI	**Sanana**	**6.03**	**324**	P		**Pn**	**19 23 33.5**	**+2.5**
	16nm,0.4s,0.2nm							
MTN	**Manton Dam**	**6.05**	**165**	Pn		**Pn**	**19 23 32.9**	**+1.6**
MTN	**Manton Dam**	**6.05**	**165**	P		**Pn**	**19 23 33.1**	**+1.8**
SWI	**Sorong**	**6.29**	**16**	P		**Pn**	**19 23 34.2**	**-0.3**
	25nm,0.9s,0.6nm							
KDU	**Kakadu**	**6.38**	**153**	P		**Pn**	**19 23 37.1**	**+1.4**
LBMI	**Labuha**	**6.60**	**342**	P		**Pn**	**19 23 41.2**	**+2.6**
	158nm,0.6s,0.5nm							
BBSI	**Bau Bau**	**7.08**	**282**	P		**Pn**	**19 23 47.8**	**+2.7**
	70nm,1.2s,0.3nm							
MMRI	**Maumere**	**7.43**	**257**			**Pn**	**19 23 49.6**	**-0.1**
MMRI	**Maumere**	**7.43**	**257**	P		**Pn**	**19 23 51.3**	**+1.6**
	68nm,1.0s,0.3nm							
TNTI	**Ternate**	**7.98**	**344**	Pn		**Pn**	**19 23 59.4**	**+2.3**
	24nm,1.0s							
EDFI	**Ende, Flores**	**7.98**	**257**	P		**Pn**	**19 23 58.7**	**+1.5**
	39nm,0.9s							
KNRA	**Kununurra**	**8.

JHRM	**Jahrom**	**1.28**	**46**	Pg	**Pn**	**19 25 04.6**	**+0.6**
DSBU	**Dashti - Bushe**	**1.35**	**304**	Pg	**Pb**	**19 25 05.9**	**+0.5**
LAR1	**LAR**	**1.63**	**87**	Pg	**Pb**	**19 25 10.4**	**+0.2**
AHBU	**AHRAM**	**1.66**	**319**	Pg	**Pb**	**19 25 11.1**	**+0.5**
SHI	**Shiraz**	**2.03**	**359**	Pn	**Pn**	**19 25 15.7**	**+1.4**
KHGB	**Koh Gabri**	**4.42**	**50**	Pn	**Pn**	**19 25 48.1**	**+0.9**
IBAF	**Bafgh**	**4.77**	**33**	Pn	**Pn**	**19 25 53.0**	**+1.0**
ICHK	**Chekchek**	**4.90**	**19**	Pn	**Pn**	**19 25 55.2**	**+1.4**
BRTR	**Keskin Array B**	**19.79**	**312**	P	**P**	**19 29 10.3**	**-0.1**
	0.1nm,0.3s,baz=122,slow=13,SNR=2.1 0.6nm,0.7s						
BVAR	**Borovoye Array**	**28.65**	**23**	P	**P**	**19 30 35.8**	**-0.7**
	0.6nm,0.5s,baz=201,slow=7.7,SNR=2.3 0.6nm,0.5s						
MKAR	**Makanchi Array**	**30.20**	**43**	P	**P**	**19 30 50.2**	**-0.3**
	1.0nm,0.9s,baz=230,slow=10.0,SNR=2.5 1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**35.39**	**33**	P	**P**	**19 31 34.8**	**-0.8**
	1.9nm,0.5s,baz=242,slow=9.4,SNR=9.9 1.9nm,0.5s						
FINES	**FINESS Array B**	**38.19**	**340**	P	**P**	**19 31 58.1**	**-1.3**
	1.9nm,0.9s,baz=138,slow=10,SNR=6.7 1.9nm,0.9s						
HFS	**Hagfors**	**41.84**	**332**	P	**P**	**19 32 28.6**	**-1.1**
	2.5nm,0.9s,baz=123,slow=13,SNR=5.5 2.5nm,0.9s						

IDC ***25*** *19:26:39.7±1.0,6˚30S×14˚24E, h0km, mb3.9/9, mbtmp4.0/12, ML1.6/1, Error ellipse: s-maj=33.8km s-min=20.9km az=89.0*
DJA ***25*** *19:27:10.1±0.5,3˚S±4˚×14˚3E±˚, h35km±6km, M5.0/10, mBB6.3/2, mb4.6/10, MLv5.2/4, Mw(mB)6.0/2*
ISC 25 19:26:41.4±0.8,6˚4S±0.1×143˚4E±0.1,h10km,n18, σ1♀94/13,mb3.9/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.80**	**128**	Pn	**Pn**	**19 27 55.8**	**+2.0**
	1.5nm,0.3s,baz=331,slow=19,SNR=1.0 17nm,0.5s						
GENI	**Genyem**	**4.95**	**320**	P	**Pn**	**19 28 00.6**	**+4.7**
SMPI	**Sarmi**	**6.38**	**313**	P	Pn	19 28 23.0	+7.4
FAKI	**Fak Fak**	**11.60**	**287**	P	Pn	19 29 49.0	+22
	34nm,0.9s						
WRA	**Warramunga Arr**	**16.05**	**212**	Pn	**Pn**	**19 30 27.1**	**-0.3**
	8.2nm,0.9s,baz=34,slow=13,SNR=3.3						
LBMI	**Labuha**	**16.82**	**289**	P	P	19 30 57.0	+18
	18nm,1.0s,6μm						
SANI	**Sanana**	**17.85**	**283**	P	P	19 31 09.7	+19
	14nm,0.9s						
ASAR	**Alice Springs**	**19.41**	**207**	P	**Pn**	**19 31 09.5**	**+0.4**
	15nm,0.8s,baz=36,slow=9.9,SNR=8.6						
ASAR				Lg	Lg	19 36 56.0	
	baz=12,slow=28						
GTOI	**Gorontalo**	**21.48**	**288**	P	P	19 31 52.2	+22
KSRS	**Korea Array**	**45.96**	**343**	P	**P**	**19 35 03.0**	**-1.7**
	0.3nm,0.3s,baz=169,slow=7.9,SNR=2.5 0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**50.29**	**300**	P	**P**	**19 35 36.5**	**-2.1**
	0.4nm,0.7s,baz=122,slow=5.6,SNR=3.0 0.4nm,0.7s						
PETK	**Petropavlovsk-**	**60.53**	**10**	P	**P**	**19 36 51.6**	**-0.2**
	2.5nm,0.8s,baz=166,slow=6.7,SNR=2.1 2.5nm,0.8s						
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	**19 38 25.2**	**-1.1**
	1.4nm,0.8s,baz=117,slow=7.1,SNR=8.2 1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**77.46**	**329**	P	**P**	**19 38 35.8**	**-1.1**
	0.6nm,0.6s,baz=111,slow=11,SNR=2.9 0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**79.41**	**324**	P	**P**	**19 38 47.3**	**-0.5**
	0.4nm,0.5s,baz=109,slow=5.0,SNR=1.9 0.4nm,0.5s						
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**19 39 09.4**	**-0.3**
	0.9nm,0.5s,baz=259,slow=5.6,SNR=2.4 0.9nm,0.5s						
BVAR	**Borovoye Array**	**84.98**	**325**	P	**P**	**19 39 16.7**	**-0.3**
	1.5nm,0.8s,baz=123,slow=7.4,SNR=8.3 1.5nm,0.8s						
ILAR	**Eielson Array**	**87.30**	**24**	P	**P**	**19 39 27.2**	**-1.0**
	0.5nm,0.7s,baz=268,slow=5.2,SNR=5.2 0.5nm,0.7s						

NEIC ***25*** *19:27:29.7±2.9,6˚55S±0.04×143˚09E±0.08, h10km±1km, mb4.8/28, Error ellipse: s-maj=13.2km s-min=7.0km az=76.0*
IDC ***25*** *19:27:29.4±0.7,6˚19S×143˚31E, h0km, mb4.3/13, mbtmp4.4/17, ML4.0/2, Error ellipse: s-maj=26.7km s-min=14.0km az=85.0*
ISC 25 19:27:29.6±0.5,6˚42S±0.05×143˚05E±0.06,h10km,n61, σ2♀06/62,mb4.7/23,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.34**	**232**	P	**Pg**	**19 28 34.4**	**+0.7**
	3μm,0.8s,47μm20nm						
PMG	**Port Moresby**	**5.04**	**126**	Pn	**Pn**	**19 28 42.4**	**-2.9**
PMG	**Port Moresby**	**5.04**	**126**	Pn	**Pn**	**19 28 44.4**	**-0.9**
	35nm,0.4s,baz=346,slow=9.9,SNR=3.5						
PMG				Sn	**Sn**	**19 29 39.0**	**-4.6**
	16nm,0.3s,baz=234,slow=22,SNR=6.3						
MANU	**Manus Island**	**6.11**	**45**	Pn	**Pn**	**19 28 59.6**	**-0.4**
RABL	**Rabaul**	**9.34**	**77**	Pn	**Pn**	**19 29 46.1**	**+1.7**
FAKI	**Fak Fak**	**11.31**	**287**	Pn	**Pn**	**19 30 11.3**	**-0.2**
SAUI	**Saumlaki**	**11.77**	**262**	Pn	**Pn**	**19 30 17.6**	**-0.1**
MTN	**Manton Dam**	**13.37**	**241**	Pn	**Pn**	**19 30 39.4**	**-0.3**
CTA	**Charters Tower**	**13.94**	**167**	Pn	**Pn**	**19 30 50.0**	**+2.6**
	4.8nm,0.9s,baz=11,slow=16,SNR=1.5						
CTA				Sn	**Sn**	**19 33 27.8**	**+5.4**
	0.2nm,0.3s,baz=270,slow=15,SNR=1.6						
CTA				Lg	Lg	19 34 59.2	
	0.1nm,0.3s,baz=66,slow=22,SNR=3.9						
CTAO	**Charters Tower**	**13.94**	**167**	Pn	**Pn**	**19 30 43.6**	**-3.8**
WRAB	**Tennant Creek**	**15.88**	**211**	Pn	**Pn**	**19 31 13.0**	**-0.3**
WB2	**Warramunga Arr**	**15.88**	**211**		**Pn**	**19 31 15.3**	**+1.9**
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**19 31 13.4**	**-0.2**
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**P**	**19 31 17.8**	**+0.5**
	0.6nm,0.3s,baz=30,slow=13,SNR=2.4						
WRA				Lg	Lg	19 36 04.5	
	1.1nm,0.3s,baz=30,slow=31,SNR=6.0 15nm,0.8s						
HNR	**Honiara**	**17.00**	**101**	P	**Pn**	**19 31 27.6**	**-0.1**
HNR				IAmb	IAmb	19 31 36.6	
	comp=Z,119nm,1.1s						
HNR	**Honiara**	**17.00**	**101**	Pn	**Pn**	**19 31 26.9**	**-0.8**
	comp=Z,117nm,0.3s,baz=177,slow=12,SNR=1.8						
TNTI	**Ternate**	**17.21**	**294**		**Pn**	**19 31 26.1**	**-4.3**
SOEI	**Soe**	**18.89**	**259**	P	**P**	**19 31 45.4**	**-5.3**
SOEI				IAmb	IAmb	19 32 01.4	
	comp=Z,80nm,1.1s						
AS31	**Alice Springs**	**19.28**	**206**	P	**P**	**19 31 51.4**	**-3.3**
ASAR	**Alice Springs**	**19.28**	**206**	P	**P**	**19 31 51.2**	**-3.5**
ASAR	**Alice Springs**	**19.28**	**206**	P	**Pn**	**19 31 59.8**	**+4.1**
	comp=Z,0.7nm,0.3s,baz=35,slow=9.7,SNR=2.6						
ASAR				Lg	Lg	19 37 49.8	
	comp=Z,0.3nm,0.3s,baz=23,slow=29,SNR=2.6 comp=Z,13nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.57**	**234**	P	P	19 32 02.0	-6.8
FITZ				IAmb	IAmb	19 32 21.3	
	comp=Z,57nm,1.9s						
LUWI	**Luwuk**	**20.92**	**284**	P	**P**	**19 32 12.4**	**-0.2**
LUWI				IAmb	IAmb	19 32 27.3	
	comp=Z,58nm,0.9s						
KAPI	**Kappang**	**23.23**	**272**	P	**P**	**19 32 34.6**	**-2.6**
KAPI				IAmb	IAmb	19 33 00.2	
	comp=Z,48nm,1.1s						
TOLI2	**Tolitoli**	**23.45**	**288**	P	**P**	**19 32 37.9**	**-1.6**
TOLI2				IAmb	IAmb	19 32 54.0	
	comp=Z,35nm,1.0s						
STKA	**Stephens Creek**	**25.37**	**183**	P	**P**	**19 33 01.7**	**+4.6**
	comp=Z,4.0nm,0.9s,baz=336,slow=12,SNR=2.4 comp=Z,4.0nm,0.9s						
PSA00	**Pilbara Seismi**	**27.03**	**234**	P	**P**	**19 33 12.1**	**-0.2**
PSA00				IAmb	IAmb	19 33 54.0	
	comp=Z,13nm,0.8s						
MJAR	**Matsushiro Arr**	**42.97**	**354**	P	**P**	**19 35 29.0**	**0.0**
	comp=Z,0.9nm,0.8s,baz=174,slow=8.2,SNR=1.9 comp=Z,0.9nm,0.8s						
MAJO	**Matsushiro**	**42.97**	**354**	P	**P**	**19 35 27.9**	**-1.2**
MAJO				IAmb	IAmb	19 35 36.8	
	comp=Z,28nm,1.7s						
MJB9	**Matsu-Tunnel**	**42.98**	**354**	P	**P**	**19 35 29.7**	**+0.6**
MJB9				IAmb	IAmb	19 35 37.8	
	comp=Z,24nm,1.6s						

KSRS	**Korea Array**	**45.87**	**343**	P	**P**	**19 35 52.7**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=162,slow=8.5,SNR=3.1 comp=Z,3.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.03**	**300**	P	**P**	**19 36 26.1**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=120,slow=6.1,SNR=2.5 comp=Z,0.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.36**	**350**	P	**P**	**19 36 34.5**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=166,slow=5.3,SNR=2.4 comp=Z,3.4nm,0.9s						
PETK	**Petropavlovsk-**	**60.59**	**10**	P	**P**	**19 37 39.1**	**-1.2**
	comp=Z,6.3nm,0.8s,baz=192,slow=8.3,SNR=6.6 comp=Z,6.3nm,0.8s						
MA2	**Magadan**	**66.07**	**4**	P	**P**	**19 38 17.2**	**+0.7**
VNDA	**Vanda**	**71.76**	**176**	P	**P**	**19 38 50.5**	**-1.3**
VNDA				IAmb	IAmb	19 39 52.3	
	comp=Z,16nm,1.6s						
MK31	**Makanchi Array**	**75.35**	**322**	P	**P**	**19 39 14.3**	**+0.9**
MKAR	**Makanchi Array**	**75.35**	**322**	P	**P**	**19 39 13.9**	**+0.5**
MKAR	**Makanchi Array**	**75.35**	**322**	P	**P**	**19 39 14.8**	**+1.4**
	comp=Z,4.0nm,0.9s,baz=101,slow=6.4,SNR=12 comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**75.55**	**322**	P	**P**	**19 39 13.7**	**-0.9**
MAKZ				IAmb	IAmb	19 39 31.6	
	comp=Z,13nm,1.2s						
ZALV	**Zalesovo Beam**	**77.31**	**329**	P	**P**	**19 39 24.8**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=131,slow=7.9,SNR=3.3 comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**79.22**	**324**	P	**P**	**19 39 35.6**	**+0.6**
KURK				IAmb	IAmb	19 39 50.4	
	comp=Z,5.2nm,0.9s						
KURBB	**Kurchatov Arra**	**79.24**	**324**	P	**P**	**19 39 35.9**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=110,slow=4.6,SNR=1.9 comp=Z,1.7nm,0.6s						
ARSB	**Arslanbob**	**79.51**	**314**	P	**P**	**19 39 37.3**	**+0.3**
SIMJ	**Simiganj**	**81.67**	**310**	P	**P**	**19 39 49.8**	**+1.1**
SIMJ				IAmb	IAmb	19 40 14.3	
	comp=Z,6.7nm,1.1s						
KKAR	**Karatay Array**	**81.79**	**315**	P	**P**	**19 39 51.0**	**+2.0**
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**19 39 58.4**	**+0.5**
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**19 39 59.5**	**+1.6**
	comp=Z,6.0nm,0.9s,baz=343,slow=2.5,SNR=5.7 comp=Z,6.0nm,0.9s						
E18K	**Tukpahlearik C**	**83.67**	**19**	P	**P**	**19 40 01.7**	**+3.5**
K20K	**Telida**	**83.96**	**24**	P	**P**	**19 39 59.6**	**-0.2**
C18K	**Utukok River**	**84.17**	**18**	P	**P**	**19 40 01.3**	**+0.5**
NRIK	**Noril'sk**	**84.49**	**343**	P	**P**	**19 40 00.5**	**-1.8**
NRIK	**Noril'sk**	**84.49**	**343**	P	**P**	**19 40 03.5**	**+1.2**
	comp=Z,5.5nm,0.8s,baz=124,slow=5.5,SNR=6.4 comp=Z,5.5nm,0.8s						
BVAR	**Borovoye Array**	**84.81**	**325**	P	**P**	**19 40 05.7**	**+1.4**
	comp=Z,11nm,0.9s,baz=113,slow=6.8,SNR=12 comp=Z,11nm,0.9s						
BRVK	**Borovoye**	**84.88**	**325**	P	**P**	**19 40 06.8**	**+2.2**
BRVK				IAmb	IAmb	19 40 11.0	
	comp=Z,8.8nm,1.1s						
ILAR	**Eielson Array**	**87.42**	**24**	P	**P**	**19 40 17.3**	**+0.3**
ILAR	**Eielson Array**	**87.42**	**24**	P	**P**	**19 40 17.1**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=262,slow=4.9,SNR=7.3 comp=Z,1.7nm,0.9s						
BCAR	**Beaver Creek A**	**89.02**	**26**	P	**P**	**19 40 24.0**	**-0.6**
K27K	**Chicken**	**89.17**	**25**	P	**P**	**19 40 24.8**	**-0.5**
BMAR	**Burnt Mountain**	**89.21**	**22**	P	**P**	**19 40 26.6**	**+1.1**
DBIC	**Dimbokro**	**148.12**	**272**	PKPbc	**PKPab**	**19 47 19.9**	**+0.2**
	comp=Z,7.3nm,0.8s,baz=360,slow=0.7,SNR=6.7						

IDC ***25*** *19:30:33.1±1.9,6˚10S×142˚80E, h0km, mb4.2/5, mbtmp4.2/6, ML4.1/1, Error ellipse: s-maj=70.2km s-min=35.5km az=110.0*
ISC 25 19:30:38.0±1.6,6˚2S±0˚2×143˚0E±0˚5,h35km,n6,σ0♀95/6, mb4.1/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**19.43**	**206**	P	**P**	**19 35 01.9**	**+0.2**
	0.5nm,0.3s,baz=31,slow=9.9,SNR=3.4 7.2nm,0.8s						
PETK	**Petropavlovsk-**	**60.39**	**10**	P	**P**	**19 40 44.8**	**+1.2**
	4.6nm,1.0s,baz=190,slow=7.3,SNR=3.5 4.6nm,1.0s						
MKAR	**Makanchi Array**	**75.13**	**322**	P	**P**	**19 42 16.4**	**-0.4**
	0.6nm,0.6s,baz=111,slow=6.3,SNR=5.0 0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**77.07**	**329**	P	**P**	**19 42 27.0**	**-0.5**
	1.0nm,0.8s,baz=123,slow=5.3,SNR=1.9 1.0nm,0.8s						
BVAR	**Borovoye Array**	**84.58**	**325**	P	**P**	**19 43 07.8**	**0.0**
	4.6nm,0.8s,baz=112,slow=6.6,SNR=7.5 4.6nm,0.8s						
ILAR	**Eielson Array**	**87.26**	**24**	P	**P**	**19 43 19.8**	**-0.9**
	1.0nm,0.8s,baz=253,slow=4.7,SNR=5.1 1.0nm,0.8s						

IDC ***25*** *19:35:58.4±1.9,5˚53S×142˚62E, h0km, mb4.0/5, mbtmp4.0/6, ML4.0/1, MS5.4/1, Error ellipse: s-maj=69.5km s-min=38.2km az=103.0*
ISC 25 19:36:03.6±1.8,5˚6S±0˚2×142˚7E±0˚5,h35km,n7,σ1♀14/6, mb4.0/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**19.84**	**204**	P	**P**	**19 40 31.5**	**-0.2**
	0.4nm,0.3s,baz=35,slow=11,SNR=2.1 3.6nm,0.7s						
NWAO	**Narrogin (SRO)**	**36.06**	**218**	LR	LR	19 57 10.6	
	comp=Z,6μm,18.5s,baz=194,slow=35						
MKAR	**Makanchi Array**	**74.51**	**322**	P	**P**	**19 47 39.0**	**+0.3**
	1.1nm,0.7s,baz=105,slow=7.7,SNR=6.4 1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**76.45**	**329**	P	**P**	**19 47 47.7**	**-1.9**
	0.6nm,0.5s,baz=130,slow=8.3,SNR=2.6 0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**78.39**	**324**	P	**P**	**19 48 00.7**	**+0.2**
	0.5nm,0.6s,baz=113,slow=4.6,SNR=2.7 0.5nm,0.6s						
BVAR	**Borovoye Array**	**83.96**	**325**	P	**P**	**19 48 30.1**	**-0.1**
	2.6nm,0.8s,baz=104,slow=6.3,SNR=6.4 2.6nm,0.8s						
ILAR	**Eielson Array**	**86.85**	**24**	P	**P**	**19 48 44.5**	**+0.2**
	1.2nm,0.8s,baz=258,slow=5.0,SNR=8.9 1.2nm,0.8s						

NEIC ***25*** *19:36:45.3±2.7,6˚48S±0.07×143˚19E±0.06, h10km±1km, mb4.5/18, Error ellipse: s-maj=14.3km s-min=5.8km az=144.0*
IDC ***25*** *19:36:46.6±0.9,6˚10S×143˚57E, h0km, mb3.9/11, mbtmp4.0/14, ML3.9/2, Error ellipse: s-maj=37.2km s-min=20.1km az=80.0*
ISC 25 19:36:46.4±0.6,6˚63S±0.07×143˚12E±0.07,h10km,n43, σ1♀95/35,mb4.2/17,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.85**	**125**		**Pn**	**19 37 59.0**	**-0.5**
PMG	**Port Moresby**	**4.85**	**125**	Pn	**Pn**	**19 38 01.3**	**+1.8**
	40nm,0.4s,baz=270,slow=6.8,SNR=8.8						
PMG				Sn	**Sn**	**19 38 52.6**	**-3.3**
	18nm,0.3s,baz=47,slow=22,SNR=3.2						
MANU	**Manus Island**	**6.22**	**43**	Pn	Pn	19 38 13.1	-5.2
COEN	**Coen**	**7.28**	**180**	Pn	**Pn**	**19 38 33.6**	**+0.7**
SAUI	**Saumlaki**	**11.80**	**263**	Pn	**Pn**	**19 39 34.5**	**-0.5**
CTAO	**Charters Tower**	**13.72**	**168**	Pn	**P**	**19 40 10.0**	**+0.2**
WB0	**Warramunga Arr**	**15.57**	**212**	Pn	**Pn**	**19 40 25.1**	**-1.1**
WB0				IAmb	IAmb	19 40 26.5	
	comp=Z,53nm,1.1s						
WRA	**Warramunga Arr**	**15.74**	**212**	Pn	**Pn**	**19 40 25.4**	**-3.1**
WRA	**Warramunga Arr**	**15.74**	**212**	Pn	**P**	**19 40 37.4**	**+5.0**
	comp=Z,0.4nm,0.3s,baz=33,slow=12,SNR=2.1 comp=Z,5.0nm,0.8s						
KNRA	**Kununurra**	**16.70**	**236**	Pn	**Pn**	**19 40 38.9**	**-1.8**
KNRA				IAmb	IAmb	19 40 40.6	
	comp=Z,36nm,0.9s						
HNR	**Honiara**	**16.89**	**101**	Pn	Pn	19 40 35.1	-8.0
HNR				IAmb	IAmb	19 40 48.0	
	comp=Z,54nm,0.9s						
TNTI	**Ternate**	**17.36**	**294**		**Pn**	**19 40 48.9**	**-0.1**
AS31	**Alice Springs**	**19.11**	**207**	P	**P**	**19 41 09.2**	**-0.5**
ASAR	**Alice Springs**	**19.12**	**207**	P	**P**	**19 41 11.0**	**+1.3**
ASAR	**Alice Springs**	**19.12**	**207**	P	Pn	19 41 19.4	+8.9
	comp=Z,0.9nm,0.3s,baz=34,slow=9.9,SNR=12 comp=Z,27nm,0.9s						
EIDS	**Eidsvold**	**20.13**	**159**	P	**P**	**19 41 20.3**	**-0.4**
EIDS				IAmb	IAmb	19 41 29.9	
	comp=Z,37nm,1.4s						

FITZ	**Fitzroy Crossi**	**20.51**	**235**	P	**P**	**19 41 24.1**	**-0.8**
FITZ				IAmb	IAmb	19 42 02.7	
	comp=Z,12nm,1.1s						
MMRI	**Maumere**	**20.80**	**263**	P	**P**	**19 41 26.4**	**-1.6**
LUWI	**Luwuk**	**21.05**	**284**	P	**P**	**19 41 26.8**	**-3.9**
KAPI	**Kappang**	**23.31**	**273**	P	**P**	**19 41 54.8**	**0.0**
KAPI				IAmb	IAmb	19 42 11.3	
	comp=Z,20nm,1.1s						
BBOO	**Buckleboo**	**26.86**	**193**	P	**P**	**19 42 26.9**	**-0.5**
MARNC	**Mare, Loyalty**	**28.24**	**124**	P	P	19 42 37.0	-2.9
KSRS	**Korea Array**	**46.10**	**343**	P	P	19 45 08.6	-2.2
	comp=Z,1.8nm,0.9s,baz=155,slow=9.2,SNR=4.9 comp=Z,1.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.20**	**301**	P	**P**	**19 45 45.6**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=110,slow=11,SNR=1.1 comp=Z,0.3nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.59**	**350**	P	**P**	**19 45 51.4**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=190,slow=7.3,SNR=2.6 comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**60.78**	**10**	P	**P**	**19 46 58.7**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=123,slow=5.3,SNR=2.3						
SONM	**Songino Array**	**63.15**	**333**	P	**P**	**19 47 14.0**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=2.0 comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**75.57**	**322**	P	**P**	**19 48 29.7**	**-1.7**
MK31				IAmb	IAmb	19 48 43.9	
	comp=Z,2.5nm,1.1s						
MKAR	**Makanchi Array**	**75.57**	**322**	P	**P**	**19 48 29.7**	**-1.7**
MKAR	**Makanchi Array**	**75.57**	**322**	P	**P**	**19 48 32.1**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=117,slow=7.3,SNR=2.2 comp=Z,0.5nm,0.7s						
MAKZ	**Makanchi**	**75.77**	**322**	P	P	19 48 29.4	-3.2
MAKZ				IAmb	IAmb	19 48 45.5	
	comp=Z,6.2nm,1.2s						
BILL	**Bilibino**	**76.28**	**9**	P	P	19 48 31.6	-3.3
BILL				IAmb	IAmb	19 48 46.2	
	comp=Z,8.1nm,1.4s						
ZALV	**Zalesovo Beam**	**77.53**	**329**	P	**P**	**19 48 43.5**	**+1.1**
	comp=Z,3.3nm,0.3s,baz=113,slow=11,SNR=1.6 comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**79.45**	**324**	P	**P**	**19 48 54.8**	**+1.8**
	comp=Z,0.6nm,1.0s,baz=108,slow=4.4,SNR=2.1 comp=Z,0.6nm,1.0s						
MAW	**Mawson**	**80.19**	**203**	P	P	19 48 52.2	-4.5
MAW				IAmb	IAmb	19 48 56.5	
	comp=Z,9.0nm,1.1s						
QSPA	**South Pole Qui**	**83.34**	**180**	P	**P**	**19 49 14.9**	**+1.3**
QSPA	**South Pole Qui**	**83.34**	**180**	P	**P**	**19 49 17.4**	**+3.8**
	comp=Z,4.0nm,0.9s,baz=3.4,slow=2.2,SNR=6.0 comp=Z,4.0nm,0.9s						
NRIK	**Noril'sk**	**84.72**	**343**	P	**P**	**19 49 20.3**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=68,slow=3.5,SNR=2.1 comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**85.03**	**325**	P	**P**	**19 49 23.9**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=81,slow=9.2,SNR=2.1 comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**87.59**	**24**	P	P	19 49 27.6	-7.0
ILAR	**Eielson Array**	**87.59**	**24**	P	**P**	**19 49 33.2**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=267,slow=4.6,SNR=4.2 comp=Z,0.7nm,0.7s						
BMAR	**Burnt Mountain**	**89.38**	**22**	P	**P**	**19 49 42.3**	**-0.8**
CPUP	**Villa Florida**	**141.69**	**150**	PKP	**PKPdf**	**19 56 21.2**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=135,slow=2.8,SNR=4.1						

IDC ***25*** *19:40:26.3±0.9,6˚21S×143˚68E, h0km, mb4.1/13, mbtmp4.2/16, ML1.5/1, Error ellipse: s-maj=32.9km s-min=19.6km az=87.0*
ISC 25 19:40:31.1±0.7,6˚3S±0˚1×143˚7E±0˚2,h35km,n18, σ0♀69/18,mb4.0/13,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.58**	**132**	Pn	**Pn**	**19 41 37.2**	**-0.8**
	1.6nm,0.3s,baz=310,slow=18,SNR=0.8 28nm,0.8s						
WRA	**Warramunga Arr**	**16.33**	**213**	Pn	**Pn**	**19 44 17.2**	**-0.7**
	5.5nm,0.7s,baz=31,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**19.67**	**208**	P	**Pn**	**19 44 58.4**	**-0.5**
	18nm,0.6s,baz=27,slow=12,SNR=15						
MJAR	**Matsushiro Arr**	**42.94**	**353**	P	**P**	**19 48 26.8**	**+0.1**
	0.7nm,0.6s,baz=186,slow=7.4,SNR=2.2 0.7nm,0.6s						
KSRS	**Korea Array**	**45.97**	**342**	P	**P**	**19 48 50.5**	**-0.4**
	1.5nm,0.8s,baz=159,slow=8.5,SNR=4.5 1.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.56**	**300**	P	**P**	**19 49 26.1**	**-0.5**
	0.8nm,0.6s,baz=124,slow=6.3,SNR=5.6 0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.38**	**349**	P	**P**	**19 49 32.0**	**-0.4**
	2.1nm,0.8s,baz=178,slow=6.7,SNR=4.1 2.1nm,0.8s						
PETK	**Petropavlovsk-**	**60.37**	**10**	P	**P**	**19 50 36.1**	**-0.5**
	1.9nm,0.8s,baz=201,slow=10,SNR=1.8

MTN Manton Dam 13.65 241 Pn Pn 19 43 59.8 -2.9
CTA Charters Tower 13.83 169 Pn **Pn** **19 44 05.3 +0.2**
comp=Z,0.3nm,0.3s,baz=31,slow=15,SNR=2.0
CTA Lg Lg 19 48 06.2
comp=Z,0.3nm,0.3s,baz=106,slow=18,SNR=2.7
comp=Z,6.8nm,0.8s
CTAO Charters Tower 13.83 169 Pn Pn 19 43 59.3 -5.8
CTAO Charters Tower 13.83 169 P Pn 19 43 59.3 -5.8
QIS Mount Isa 14.49 194 P **Pn** **19 44 16.4 +2.2**
baz=15,SNR=3.6
WB0 Warramunga Arr 15.86 213 Pn **Pn** **19 44 29.0 -3.5**
WRAB Tennant Creek 16.02 212 Pn Pn 19 44 27.2 -7.3
WRAB Tennant Creek 16.02 212 P Pn 19 44 27.2 -7.3
WRAB pmax pmax
comp=Z,72nm,1.0s
WB2 Warramunga Arr 16.02 212 Pn Pn 19 44 28.6 -6.0
WRA Warramunga Arr 16.03 212 **Pn** **19 44 34.6 -0.1**
WRA Warramunga Arr 16.03 212 P **Pn** **19 44 34.6 -0.1**
WRA pmax pmax
comp=Z,10.0nm,0.9s
WRA Warramunga Arr 16.03 212 Pn **Pn** **19 44 33.9 -0.8**
comp=Z,7.1nm,0.9s,baz=33,slow=13,SNR=17
WRA Sn **Sn** **19 47 29.1 -3.5**
comp=Z,1.0nm,0.3s,baz=39,slow=25,SNR=2.7
WRA Lg Lg 19 49 16.0
comp=Z,1.6nm,0.3s,baz=23,slow=26,SNR=4.8
NLAI Namlea 16.55 280 P **Pn** **19 44 42.9 +1.6**
comp=Z,67nm,1.1s
HNR Honiara 16.65 101 Pn Pn 19 44 36.5 -6.1
HNR Honiara 16.65 101 Pn **Pn** **19 44 41.1 -1.5**
comp=Z,316nm,0.3s,baz=204,slow=12,SNR=1.0
LBMI Labuha 16.88 289 P **Pn** **19 44 45.5 0.0**
comp=Z,161nm,1.1s
KNRA Kununurra 17.02 236 Pn **Pn** **19 44 44.8 -2.5**
TNTI Ternate 17.54 294 P **Pn** **19 44 54.2 +0.5**
comp=Z,52nm,1.5s
SANI Sanana 17.90 283 P **Pn** **19 44 56.6 -1.6**
comp=Z,95nm,1.2s
SOEI Soe 19.22 259 P **P** **19 45 11.4 -2.0**
SOEI Soe 19.22 259 P **P** **19 45 13.5 0.0**
comp=Z,739nm,0.9s,comp=Z,13µm
AS31 Alice Springs 19.39 207 Pn **P** **19 45 16.1 +0.9**
ASAR Alice Springs 19.39 207 P **P** **19 45 16.9 +1.7**
comp=Z,176nm,0.7s,baz=36,slow=8.6,SNR=32
ASAR S **Sn** **19 48 52.4 -1.6**
comp=Z,5.1nm,0.8s,baz=20,slow=20,SNR=1.7
ASPA Alice Springs 19.39 207 P **P** **19 45 17.5 +2.3**
baz=20
PATS Pohnpei 19.90 49 P **P** **19 45 18.1 -2.7**
PATS IAmb IAmb 19 45 24.8
comp=Z,260nm,1.1s
QLP Quilpie 20.03 178 P **P** **19 45 25.7 +3.6**
baz=20,SNR=4.6
EIDS Eidsvold 20.19 159 P **P** **19 45 26.3 +2.4**
baz=20,SNR=4.3
EIDS Eidsvold 20.19 159 **P** **19 45 23.4 -0.4**
SGSI Sangihe 20.49 299 P **P** **19 45 29.1 +1.9**
comp=Z,227nm,1.2s
KMSI Cibinong 20.60 289 P **P** **19 45 27.1 -1.3**
comp=Z,515nm,1.0s,comp=Z,6µm
BBSI Bau Bau 20.73 272 P **P** **19 45 30.7 +0.8**
comp=Z,109nm,1.1s
FITZ Fitzroy Crossi 20.83 235 P **P** **19 45 32.8 +1.9**
baz=21,SNR=13
FITZ Fitzroy Crossi 20.83 235 P **P** **19 45 29.4 -1.5**
MMRI Maumere 21.09 263 P **P** **19 45 32.4 -1.3**
MMRI IAmb IAmb 19 45 39.3
comp=Z,120nm,0.8s
MMRI Maumere 21.09 263 P **P** **19 45 32.5 -1.2**
comp=Z,203nm,1.0s
LUWI Luwuk 21.27 284 P **P** **19 45 33.7 -1.9**
LUWI Luwuk 21.27 284 P **P** **19 45 35.8 +0.2**
comp=Z,288nm,1.3s
EDFI Ende, Flores 21.63 263 P **P** **19 45 38.8 -0.9**
comp=Z,142nm,1.2s
DAV Davao City (W) 22.29 307 P **P** **19 45 47.9 +1.3**
comp=Z,82nm,0.4s,baz=78,slow=2.9,SNR=5.4
comp=Z,82nm,0.4s
MRSI Marisa 22.50 287 P **P** **19 45 48.0 -0.9**
comp=Z,75nm,1.0s
BASI Baing, Sumba 22.88 259 P **P** **19 45 52.8 -0.1**
comp=Z,297nm,0.9s
WRKA Warakurna 23.46 216 P **P** **19 46 01.1 +2.3**
baz=24,SNR=12
KAPI Kappang 23.57 272 P **P** **19 45 59.6 -0.3**
KAPI Kappang 23.57 272 P **P** **19 45 59.6 -0.3**
KAPI pmax pmax
comp=Z,152nm,0.9s
TTSI Tana Toraja 23.74 277 P **P** **19 46 02.3 +0.7**
comp=Z,95nm,1.6s
TOLI2 Tolitoli 23.79 288 P **P** **19 46 00.4 -1.7**
TOLI2 IAmb IAmb 19 46 05.0
comp=Z,91nm,0.8s
MPSI Mapaga 24.40 285 P **P** **19 46 06.4 -1.4**
comp=Z,49nm,0.9s
CMSA Cobar Meteorol 25.04 175 P **P** **19 46 15.8 +2.4**
baz=25,SNR=6.2
STKA Stephens Creek 25.34 184 P **P** **19 46 18.6 +2.5**
baz=26,SNR=4.6
STKA Stephens Creek 25.34 184 P **P** **19 46 15.8 -0.3**
STKA Stephens Creek 25.34 184 *i* P **P** **19 46 14.7 -1.4**
STKA Stephens Creek 25.34 184 P **P** **19 46 16.9 +0.8**
comp=Z,13nm,0.9s,baz=17,slow=9.3,SNR=10
comp=Z,13nm,0.9s
PLAI Plampang 25.50 263 P **P** **19 46 15.6 -2.1**
comp=Z,123nm,0.8s
TWSI Taliwang, Sumb 26.38 263 P **P** **19 46 23.2 -2.5**
comp=Z,44nm,0.7s
BKB Balikpapan 26.93 280 P **P** **19 46 33.3 +2.6**
comp=Z,84nm,1.1s
BBOO Buckleboo 27.09 194 P **P** **19 46 34.4 +2.4**
baz=27,SNR=5.0
BBOO Buckleboo 27.09 194 P **P** **19 46 30.9 -1.0**
BBOO IAmb IAmb 19 47 13.2
comp=Z,74nm,1.4s
DZM Mont Dzumac 27.13 127 P **P** **19 46 30.7 -1.8**
DZM Mont Dzumac 27.13 127 P **P** **19 46 32.2 -0.3**
comp=Z,4.6nm,0.9s,baz=34,slow=8.6,SNR=2.7
comp=Z,4.6nm,0.9s
HTT Hallett 27.16 188 P **P** **19 46 35.6 +3.0**
baz=27,SNR=5.8
MBWA Marble Bar 27.17 235 P **P** **19 46 32.8 0.0**
MBWA IAmb IAmb 19 46 52.3
comp=Z,88nm,1.4s
PSA00 Pilbara Seismi 27.28 234 P **P** **19 46 32.1 -1.7**
PSA00 Pilbara Seismi 27.28 234 P **P** **19 46 31.5 -2.3**
PSA00 IAmb IAmb 19 46 56.0
comp=Z,45nm,0.9s
FORT Forrest 28.15 209 P **P** **19 46 43.6 +2.1**
baz=28,SNR=18
FORT Forrest 28.15 209 P **P** **19 46 42.1 +0.7**
JAGI Jajag, Banyuwa 29.06 264 P **P** **19 46 47.8 -2.0**
JAGI IAmb IAmb 19 46 50.6
comp=Z,40nm,0.7s
JAGI Jajag, Banyuwa 29.06 264 P **P** **19 46 48.1 -1.7**
comp=Z,65nm,0.8s
BLJI Banyuglugur 29.60 266 P **P** **19 46 52.8 -1.7**
comp=Z,35nm,0.8s
ARPS Mount Arapiles 30.20 182 P **P** **19 47 01.5 +1.9**
baz=30,SNR=5.5
PWJI Pagerwojo 31.38 265 P **P** **19 47 08.2 -2.0**
comp=Z,22nm,1.0s
UGM Wanagama 32.64 265 P P 19 47 18.4 -3.1
UGM Wanagama 32.64 265 P **P** **19 47 22.2 +0.8**
comp=Z,79nm,0.9s
SMRI Semarang 32.73 267 P P 19 47 18.9 -3.3
SMRI Semarang 32.73 267 P P 19 47 19.4 -2.8
comp=Z,113nm,1.0s
KPJI Karang Pucung 34.22 266 P **P** **19 47 34.8 -0.4**
comp=Z,66nm,0.9s
KPJI pP **pP** **19 47 40.2 +1.6**
comp=Z,66nm,0.9s
KLBR Kellerberrin 34.64 221 P **P** **19 47 40.2 +1.7**
baz=35,SNR=5.1
CMJI Cimerak 34.70 266 P P 19 47 37.0 -2.3
comp=Z,135nm,0.8s
LEM Lembang 35.54 267 P **P** **19 47 45.8 -0.9**
comp=Z,63nm,0.9s
CNJI Cibinong 36.01 266 P **P** **19 47 49.3 -1.3**
comp=Z,80nm,0.9s
CNJI pP **pP** **19 47 54.1 +0.1**
comp=Z,80nm,0.9s
CBJI Citeko 36.31 268 P **P** **19 47 53.9 +0.7**
comp=Z,55nm,0.7s
DBJI Dramaga 36.41 268 P **P** **19 47 52.2 -1.8**
comp=Z,33nm,1.2s
SKJI Sukabumi 36.58 267 P **P** **19 47 54.4 -1.1**

comp=Z,168nm,0.8s
SBJI Serang 37.04 268 P **P** **19 47 59.4 0.0**
comp=Z,647nm,0.9s,comp=Z,9µm
PPBI Pangkal Pinang 37.39 275 P **P** **19 48 02.7 +0.3**
XMIS Christmas Isla 37.53 261 P **P** **19 48 02.7 -0.9**
XMIS IAmb IAmb 19 48 06.5
comp=Z,67nm,0.8s
KASI Kota Agung 38.69 269 P P 19 48 09.5 -3.9
comp=Z,30nm,0.9s
LWLI Liwa 39.16 270 P **P** **19 48 16.8 -0.7**
comp=Z,118nm,0.9s
DSRI Dabo 39.18 277 P **P** **19 48 16.7 -0.8**
comp=Z,31nm,0.9s
JNU Nakatsue 41.12 344 P **P** **19 48 31.7 -1.6**
KRJI Kerinci 42.03 274 P **P** **19 48 39.5 -1.7**
comp=Z,152nm,1.0s
MJAR Matsushiro Arr 43.05 354 P **P** **19 48 48.8 -0.2**
comp=Z,9.4nm,0.9s,baz=186,slow=9.0,SNR=21
comp=Z,9.4nm,0.9s
MAJO Matsushiro 43.05 354 *i* P **P** **19 48 48.1 -0.9**
MAJO pmax pmax
comp=Z,19nm,1.0s
RTZ Ruatahuna 44.11 141 P **P** **19 48 57.5 -0.1**
RTZ IAmb IAmb 19 49 05.1
comp=Z,30nm,0.8s
NJ2 Nanjing 44.88 330 *e*P **P** **19 49 05.3 +1.6**
NJ2 pmax pmax
comp=Z,14nm,1.0s
GULI GuiLin 45.03 316 P **P** **19 49 04.5 -0.6**
TJN Taejon 45.19 342 *ce*P P 19 49 03.9 -2.2
KSAR Wonju Array Be 46.02 343 P P 19 49 10.7 -2.0
KSAR Wonju Array Be 46.02 343 P P 19 49 10.7 -1.9
KSRS Korea Array 46.02 343 P **P** **19 49 12.4 -0.2**
comp=Z,33nm,0.9s,baz=163,slow=8.6,SNR=34
comp=Z,33nm,0.9s
WHN Wuhan 46.13 324 ⇑P **P** **19 49 16.3 +2.6**
WHN pmax pmax
comp=Z,110nm,1.3s
GSI Gunungsitoli 46.38 278 P **P** **19 49 15.2 -0.8**
GSI IAmb IAmb 19 49 21.2
comp=Z,26nm,0.8s
KCSI Kotacane, Aceh 46.62 281 P **P** **19 49 16.7 -1.2**
comp=Z,27nm,0.8s
JTM Tenmabayashi 47.06 358 P **P** **19 49 19.5 -1.3**
MLSI Meulaboh, Aceh 48.11 282 P **P** **19 49 28.7 -0.8**
comp=Z,64nm,0.7s
GYA Guiyang 48.36 314 ⇑P **P** **19 49 32.8 +1.5**
GYA pmax pmax
comp=Z,11nm,0.9s
ENH Enshi 48.90 320 IAmb IAmb 19 49 40.3
comp=Z,34nm,1.0s
PHRA Phrae 49.27 301 P **P** **19 49 37.4 -0.8**
CRAI Chiangrai 49.92 303 P **P** **19 49 42.1 -1.2**
LYN LuoYang 50.17 326 ⇑P **P** **19 49 45.5 +0.6**
LYN pmax pmax
comp=Z,40nm,1.0s
PSTR Posyet 50.21 348 *i* P **P** **19 49 45.1 +0.1**
CM31 Chiang Mai Arr 50.35 300 IAmb IAmb 19 49 53.2
comp=Z,46nm,1.8s
CMAR Chiang Mai Arr 50.35 300 P **P** **19 49 47.5 +1.0**
comp=Z,4.8nm,0.8s,baz=124,slow=6.0,SNR=21
comp=Z,4.8nm,0.8s
KMI Kunming 50.49 310 ⇓P **P** **19 49 49.3 +1.5**
KMI pmax pmax
comp=Z,26nm,1.3s
CHTO Chiang Mai 50.50 301 P P 19 49 45.6 -2.1
CHTO Chiang Mai 50.50 301 P P 19 49 45.6 -2.1
CHTO pmax pmax
comp=Z,7.0nm,0.9s
HNS HongShan 51.20 331 ⇓P **P** **19 49 53.5 +0.9**
HNS pmax pmax
comp=Z,25nm,0.9s
USA0B Ussuriysk Arra 51.47 350 IAmb IAmb 19 49 57.6
comp=Z,47nm,0.9s
USA0B Ussuriysk Arra 51.47 350 *i* P **P** **19 49 53.9 -0.6**
USRK Ussuriysk Ar. 51.47 350 P **P** **19 49 54.2 -0.2**
comp=Z,34nm,0.8s,baz=164,slow=8.0,SNR=31
comp=Z,34nm,0.8s
XAN Xi'an 51.83 323 ⇑P **P** **19 49 57.8 +0.3**
XAN pmax pmax
comp=Z,38nm,1.4s
PZH PanZhiHua 51.99 311 P **P** **19 49 59.8 +0.9**
PZH pmax pmax
comp=Z,10.0nm,1.0s
MDJ Mudanjiang 52.34 348 P **P** **19 50 00.0 -1.0**
MDJ pmax pmax
comp=Z,6.0nm,1.0s
CN2 Changchun 52.60 344 *e*P **P** **19 50 03.8 +0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BJT Baijiatuau 52.63 334 IAmb IAmb 19 50 06.2
comp=Z,64nm,1.8s
BJI Beijing 52.64 334 P **P** **19 50 01.5 -1.8**
BJI sP sP 19 50 20.8 +13
BJI pmax pmax
comp=Z,9.0nm,1.4s
CD2 Chengdu 53.09 317 P **P** **19 50 07.5 +0.7**
CD2 pmax pmax
comp=Z,20nm,0.9s
YSS Yuzh-Sakhalins 53.18 359 *e*P **P** **19 50 06.9 -0.2**
YSS pmax pmax
comp=Z,30nm,0.8s
TNCH TengChong 53.72 307 P **P** **19 50 14.0 +2.3**
TNCH pmax pmax
comp=Z,23nm,0.9s
BNX BinXian 53.90 346 ⇑P **P** **19 50 11.5 -0.9**
BNX pmax pmax
comp=Z,92nm,1.0s
HHC Hu-ho-hao-te 55.41 331 ⇑*i*P **P** **19 50 25.5 +1.8**
HHC pP sP 19 50 38.5 +10
HHC pmax pmax
comp=Z,17nm,0.8s
XLT XiLinHaoTe 55.88 336 *e*P **P** **19 50 26.3 -0.6**
XLT pmax pmax
comp=Z,5.0nm,0.9s
BTO Baotou 55.99 330 *e*P **P** **19 50 29.5 +1.7**
BTO pP **pP** **19 50 34.3 +3.0**
BTO sP **sP** **19 50 36.5 +3.8**
BTO PP **PP** **19 52 36.3 +3.5**
BTO pmax pmax
comp=Z,15nm,0.9s
BTO pmax pmax
comp=Z,15µm,14.3s
LZH Lanzhou 56.28 322 *e*P **P** **19 50 30.8 +0.7**
LZH sP sP 19 50 43.5 +8.5
LZH pmax pmax
comp=Z,47nm,1.1s
KLR Kul'dur 56.39 351 *ce*P **P** **19 50 29.0 -1.3**
KLR pmax pmax
comp=Z,44nm,1.7s
TYV Tymovskoe 57.10 359 *e*P **P** **19 50 37.4 +2.1**
TYV pmax pmax
comp=Z,24nm,0.8s
GRNR Gornyy 57.32 355 ⇓*i*P **P** **19 50 36.8 -0.1**
GRNR pmax pmax
comp=Z,7.0nm,1.0s
GRNR MLR MLR
comp=E,3µm,18.0s
GRNR MLR MLR
comp=N,3µm,22.0s
GRNR MLR MLR
comp=Z,5µm,21.0s
SKR Severo-Kuril's 57.97 10 *e*P P 19 50 55.8 +14
SKR pmax pmax
comp=Z,107nm,0.9s
SKR MLR MLR
comp=Z,7µm,17.0s
HEH HeiHe 58.16 348 *e*P **P** **19 50 41.5 -1.4**
HEH pmax pmax
comp=Z,15nm,1.1s
HIA Hailar 59.22 342 IAmb IAmb 19 50 53.3
comp=Z,68nm,1.6s
HIA Hailar 59.22 342 *i* P **P** **19 50 50.7 +0.4**
HIA pmax pmax
comp=Z,19nm,0.7s
SHL Shillong 59.30 305 IAmb IAmb 19 50 54.4
comp=Z,33nm,1.1s
PEA0B Petropavlovsk- 60.57 10 P **P** **19 50 58.4 -1.1**
PEA0B Petropavlovsk- 60.57 10 *ce*P **P** **19 50 59.2 -0.3**
PETK Petropavlovsk- 60.57 10 P **P** **19 50 58.1 -1.4**
PETK Petropavlovsk- 60.57 10 P **P** **19 50 58.7 -0.8**
comp=Z,32nm,0.8s,baz=158,slow=4.9,SNR=23
comp=Z,32nm,0.8s
PET Petropavlovsk 60.66 11 *e*P **P** **19 51 00.9 +0.9**
GTA Gaotai 60.86 322 P **P** **19 51 02.5 +0.6**
GTA pP sP 19 51 13.5 +6.7
GTA pmax pmax
comp=Z,9.0nm,0.9s
ZEA Zeya 61.50 349 *e*P **P** **19 51 05.8 0.0**
ZEA pmax pmax
comp=N,40nm,1.0s
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,70nm,0.9s
LSA Lhasa 61.69 309 IAmb IAmb 19 51 14.4
comp=Z,18nm,1.0s
GOMU GeErMu 62.22 317 P **P** **19 51 12.0 +0.5**
GOMU pP pP 19 51 16.3 +1.2
GOMU pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 62.85 333 P **P** **19 51 14.8 -0.4**
ULN IAmb IAmb 19 51 20.6
comp=Z,20nm,0.8s
ULN Ulaanbaatar 62.85 333 *i* P **P** **19 51 15.2 0.0**
ULN pmax pmax
comp=Z,20nm,0.8s
SONM Songino Array 63.12 333 IAmb IAmb 19 51 20.8
comp=Z,30nm,1.6s
SONM Songino Array 63.12 333 P **P** **19 51 16.8 -0.1**
comp=Z,6.3nm,0.7s,baz=152,slow=7.1,SNR=18
comp=Z,6.3nm,0.7s
CIT Chita 63.59 340 *e*P **P** **19 51 20.2 +0.3**
CIT *e* 19 51 26.6
CIT *e* 19 51 55.3
CIT *e* 19 59 54.5
MA2 Magadan 66.09 4 P **P** **19 51 34.3 -1.7**
MA2 Magadan 66.09 4 *ce*P **P** **19 51 34.8 -1.1**
MA2 pmax pmax
comp=Z,85nm,1.3s
ZAK Zakamensk 66.38 333 *e*P **P** **19 51 37.6 -0.5**
ZAK pmax pmax
comp=Z,32nm,1.0s
MOY Mondy 68.31 333 *e*P **P** **19 51 49.7 -0.7**
MOY pmax pmax
comp=Z,28nm,1.9s
BOD Bodaibo 68.35 344 *e*P **P** **19 51 50.2 -0.1**
BOD pmax pmax
comp=Z,23nm,1.4s
YAK Yakutsk 69.11 353 P **P** **19 51 53.5 -1.4**
YAK IAmb IAmb 19 51 58.8
comp=Z,20nm,0.8s
YAK Yakutsk 69.11 353 *e*P **P** **19 51 53.8 -1.1**
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.3s
SEY Seymchan 69.54 4 *ce*P **P** **19 51 56.5 -1.1**
SEY pmax pmax
comp=Z,46nm,1.3s
WMQ Urumqi 70.84 321 *e*P **P** **19 52 06.8 +0.7**
WMQ PcP **PcP** **19 52 27.3 +0.6**
WMQ pmax pmax
comp=Z,48nm,1.1s
VNDA Vanda 71.69 176 P **P** **19 52 10.6 0.0**
VNDA Vanda 71.69 176 P **P** **19 52 10.6 0.0**
VNDA pmax pmax
comp=Z,11nm,1.0s
VNDA Vanda 71.69 176 P **P** **19 52 10.1 -0.5**
comp=Z,5.9nm,0.8s,baz=61,slow=9.0,SNR=6.5
comp=Z,5.9nm,0.8s
UNV Unalaska Valle 73.28 28 P **P** **19 52 21.4 +1.1**
baz=233
SPIA Saint Paul Isl 73.75 24 P **P** **19 52 23.9 +0.8**
baz=228
DGZ Jazzator, Alta 73.97 326 *i* P **P** **19 52 24.4 -0.4**
DGZ pmax pmax
comp=Z,35nm,1.0s
ZSN Zaisan 74.34 323 *e*P **P** **19 52 26.6 -0.2**
baz=323
ZSN Zaisan 74.34 323 *e*P **P** **19 52 26.6 -0.2**
MK31 Makanchi Array 75.60 322 *ce*P **P** **19 52 33.9 -0.2**
MKAR Makanchi Array 75.60 322 P **P** **19 52 33.8 -0.3**
comp=Z,21nm,0.7s,baz=99,slow=7.5,SNR=48
comp=Z,21nm,0.7s
SHLS Shalkode 75.92 317 *e*P **P** **19 52 34.5 -1.6**
comp=Z,27nm,1.2s,baz=318
SHLS Shalkode 75.92 317 *e*P **P** **19 52 34.5 -1.6**
SHLS pmax pmax
comp=Z,27nm,1.2s
BILL Bilibino 76.07 9 *e*P **P** **19 52 36.3 0.0**
UZB Uzynbulak 76.21 317 *e*P **P** **19 52 37.6 -0.2**
comp=Z,32nm,1.2s,baz=317
UZB Uzynbulak 76.21 317 *e*P **P** **19 52 37.6 -0.2**
UZB pmax pmax
comp=Z,32nm,1.2s
KPKS Kokpek 76.56 317 *e*P **P** **19 52 39.6 -0.2**
baz=317
KPKS Kokpek 76.56 317 *e*P **P** **19 52 39.5 -0.2**
SATY Saty 76.59 317 *e*P **P** **19 52 40.0 -0.1**
comp=Z,19nm,1.2s,baz=317
SATY Saty 76.59 317 *e*P **P** **19 52 39.9 -0.1**
SATY pmax pmax
comp=Z,19nm,1.2s
ZHN Zhinishke 76.61 317 *e*P **P** **19 52 39.6 -0.6**
baz=317
ZHN Zhinishke 76.61 317 *e*P **P** **19 52 39.5 -0.6**
SDPT Sand Point 77.02 29 P **P** **19 52 42.9 +1.0**
baz=238
KSH Kashi 77.04 313 P **P** **19 52 44.0 +1.4**
KSH sP PcP 19 52 56.0 +2.5
KSH pmax pmax
comp=Z,20nm,1.0s
NIL Nilore 77.30 306 P **P** **19 52 43.6 -0.4**
NIL Nilore 77.30 306 P **P** **19 52 43.7 -0.4**
NIL pmax pmax
comp=Z,50nm,0.7s
TDK Taldyqorghan 77.33 319 *e*P **P** **19 52 43.9 -0.1**
comp=Z,24nm,0.9s,baz=319
TDK Taldyqorghan 77.33 319 *e*P **P** **19 52 43.9 -0.1**
TDK pmax pmax
comp=Z,24nm,0.9s
ARXS Arharly 77.42 318 *e*P **P** **19 52 44.4 -0.1**
ZAA0 Zalesovo Array 77.52 329 P P 19 52 42.3 -2.5
ZALV Zalesovo Beam 77.52 329 P **P** **19 52 43.0 -1.8**
ZALV Zalesovo Beam 77.52 329 P **P** **19 52 43.7 -1.1**
comp=Z,8.2nm,0.7s,baz=111,slow=5.3,SNR=19
comp=Z,8.2nm,0.7s
MDOK Medeo 77.56 317 *e*P **P** **19 52 45.3 -0.2**
baz=317
MDOK Medeo 77.56 317 *e*P **P** **19 52 45.2 -0.2**
TNSS Tian-Shan 77.58 317 *e*P **P** **19 52 45.8 -0.2**
baz=316
TNSS Tian-Shan 77.58 317 *e*P **P** **19 52 45.7 -0.2**
AAA Alma-Ata 77.66 317 *e*P **P** **19 52 45.8 -0.2**
comp=Z,20nm,1.0s,baz=317
AAA Alma-Ata 77.66 317 *e*P **P** **19 52 45.7 -0.2**
AAA pmax pmax
comp=Z,20nm,1.0s
NRN Naryn 77.67 315 P P 19 52 44.1 -2.3
NRN Naryn 77.67 315 P P 19 52 44.1 -2.2
NRN pmax pmax
comp=Z,11nm,1.0s
GAMB Gambell 77.73 19 P **P** **19 52 47.1 +1.4**
baz=226
ULHL Ulahol 77.78 316 P **P** **19 52 47.3 +0.5**
SNR=6.6
S14K Fog Glacier 77.96 29 P **P** **19 52 48.2 +0.9**
baz=238
KUU Kurty 78.30 317 *e*P **P** **19 52 49.0 -0.4**
baz=317
KUU Kurty 78.30 317 *e*P **P** **19 52 49.0 -0.4**
TKM2 Tokmak 2 78.47 316 P **P** **19 52 50.0 -0.6**
SNR=11
CHGN Chignik 78.51 29 P **P** **19 52 50.7 +0.5**
baz=239
TIXI Tiksi 78.54 355 P **P** **19 52 49.0 -1.1**
TIXI Tiksi 78.54 355 *ce*P **P** **19 52 49.7 -0.4**
TIXI pmax pmax
comp=Z,9.0nm,1.3s
M13K Dall Lake 78.58 24 P **P** **19 52 51.4 +0.9**
baz=234
O14K Tigyukauivet M 78.79 26 P **P** **19 52 52.6 +0.9**
baz=236
KBK Karagaybulak 78.83 316 P **P** **19 52 52.5 0.0**
SNR=11
N14K Kuskokwak Cree 78.98 25 P **P** **19 52 53.2 +0.5**
baz=236
UCH Uchtor 78.99 315 P **P** **19 52 55.2 +1.5**
SNR=23

CHMS Chumysh 79.08 316 P P 19 52 54.4 +0.7
SNR=11
FRU1 Bishkek 79.10 316 P P 19 52 50.2 -3.7
FRU1 Bishkek 79.10 316 P P 19 52 50.2 -3.7
FRU1 pmax pmax
comp=Z,17nm,1.0s
AAK Ala-Archa 79.13 315 P P 19 52 54.2 0.0
SNR=17
AAK Ala-Archa 79.13 315 P P 19 52 53.2 -1.0
AAK Ala-Archa 79.13 315 ceP P 19 52 53.9 -0.3
AAK pmax pmax
comp=Z,23nm,1.3s
M14K Bethel 79.34 24 P P 19 52 54.4 -0.2
M14K IAmb IAmb 19 52 58.7
comp=Z,45nm,0.9s
M14K Bethel 79.34 24 P P 19 52 55.8 +1.1
baz=235
USP Ospenovka 79.34 316 P P 19 52 56.1 +0.9
SNR=28
O15K Ungalikthiuk R 79.37 26 P P 19 52 55.1 +0.3
baz=238
L14K Kuka Creek 79.39 23 P P 19 52 54.7 -0.2
L14K IAmb IAmb 19 52 58.9
comp=Z,41nm,1.0s
L14K Kuka Creek 79.39 23 P P 19 52 56.6 +1.8
baz=235
KURK Kurchatov 79.46 324 P P 19 52 54.7 -0.9
KURK IAmb IAmb 19 52 58.2
comp=Z,29nm,1.0s
KURK Kurchatov 79.46 324 ceP P 19 52 53.5 -2.0
KURK pmax pmax
comp=Z,39nm,1.3s
KURBB Kurchatov Arra 79.47 324 P P 19 52 55.0 -0.6
comp=Z,16nm,1.0s,baz=112,slow=4.4,SNR=33
comp=Z,16nm,1.0s
R16K Pilot Point 79.55 28 P P 19 52 56.9 +1.1
baz=240
EKS2 Erkin-Say 79.64 315 P P 19 52 57.5 +0.6
SNR=23
N15K Kwethluk River 79.79 25 P P 19 52 58.1 +0.9
N15K IAmb IAmb 19 53 01.2
comp=Z,29nm,0.9s
N15K Kwethluk River 79.79 25 P P 19 52 58.0 +0.9
baz=237
M15K Kasigluk River 79.83 24 P P 19 52 58.4 +1.1
baz=237
J14K Nanvaranak Lak 79.88 22 P P 19 52 58.7 +1.2
baz=234
L15K Ungalak Mounta 80.05 23 P P 19 52 59.6 +1.1
baz=236
P16K Nushagak River 80.10 27 P P 19 52 59.7 +0.9
baz=239
TNA Tin City 80.14 18 P P 19 52 59.5 +0.6
baz=229
BTLS Baital 80.23 318 eP P 19 52 59.5 -0.4
baz=318
BTLS Baital 80.23 318 eP P 19 52 59.5 -0.4
ANM Nome 80.33 20 P P 19 52 59.2 -0.7
ANM Nome 80.33 20 P P 19 53 00.5 +0.5
baz=232
ANM Nome 80.33 20 P P 19 52 59.3 -0.7
ANM pmax pmax
comp=Z,14nm,1.0s
O16K Kokwok River B 80.34 26 P P 19 53 00.2 0.0
baz=239
K15K Wolf Creek Mou 80.38 23 P P 19 53 01.2 +0.9
baz=236
N16K Nishlik Lake 80.51 25 P P 19 53 01.5 +0.4
baz=238
Q16K King Salmon 80.52 27 P P 19 53 01.0 -0.1
baz=241
F14K Arctic Creek 80.59 19 P P 19 53 02.1 +0.7
baz=231
Q17K Contact Creek 80.68 28 P P 19 53 02.6 +0.5
baz=241
SII Sitkinak Islan 80.70 30 P P 19 53 03.1 +0.9
baz=243
M16K Timber Creek 80.72 25 IAmb IAmb 19 53 06.2
comp=Z,37nm,0.9s
M16K Timber Creek 80.72 25 P P 19 53 03.0 +0.8
baz=238
O17K Koliganek Bris 80.87 26 P P 19 53 04.0 +1.0
baz=240
L16K Owhat River 80.87 24 P P 19 53 03.8 +0.9
baz=238
P17K Kvichak River 80.88 27 P P 19 53 03.4 +0.4
baz=241
KBL Kabul 80.90 306 P P 19 53 01.2 -2.8
KBL Kabul 80.90 306 P P 19 53 01.2 -2.8
KBL pmax pmax
comp=Z,9.0nm,0.9s
BTK Batken 80.98 312 P P 19 53 02.5 -1.7
BTK Batken 80.98 312 P P 19 53 02.5 -1.7
BTK pmax pmax
comp=Z,30nm,1.6s
R18K Karluk 81.03 29 P P 19 53 04.4 +0.6
baz=243
G15K Niukluk 81.05 20 P P 19 53 04.7 +0.9
baz=233
N17K Nushagak Hills 81.21 26 P P 19 53 05.6 +0.8
baz=240
F15K North Star Dit 81.28 19 P P 19 53 04.8 -0.2
F15K IAmb IAmb 19 53 09.1
comp=Z,26nm,1.1s
F15K North Star Dit 81.28 19 P P 19 53 05.9 +0.9
baz=232
J16K Anvik River 81.29 22 P P 19 53 04.4 -0.8
J16K IAmb IAmb 19 53 09.6
comp=Z,24nm,0.9s
J16K Anvik River 81.29 22 P P 19 53 06.3 +1.2
baz=236,SNR=6.2
DZA Taraz 81.43 315 eP P 19 53 06.1 -0.4
baz=315
DZA Taraz 81.43 315 eP P 19 53 06.0 -0.4
OHAK Old Harbor 81.44 29 P P 19 53 06.8 +0.8
baz=244
H16K Elim 81.46 21 P P 19 53 07.0 +1.0
baz=235,SNR=9.0
P18K Big Mountain, 81.51 27 P P 19 53 07.4 +0.9
baz=242
M17K Holitna River 81.54 25 IAmb IAmb 19 53 11.0
comp=Z,39nm,0.9s
M17K Holitna River 81.54 25 P P 19 53 07.9 +1.4
baz=240
L17K Donlin 81.57 24 P P 19 53 07.9 +1.2
baz=239
I17K Unalakleet 81.59 22 IAmb IAmb 19 53 11.2
comp=Z,35nm,1.0s
I17K Unalakleet 81.59 22 P P 19 53 08.3 +1.7
baz=236,SNR=9.8
O18K Koktuh Hills 81.74 27 P P 19 53 08.6 +0.9
baz=242
N18K Kilae Creek 81.84 26 P P 19 53 09.5 +1.3
baz=241
G16K Koyuk River 81.86 20 IAmb IAmb 19 53 12.1
comp=Z,30nm,1.1s
G16K Koyuk River 81.86 20 P P 19 53 09.4 +1.3
baz=234
K17K Iditarod 81.87 23 IAmb IAmb 19 53 12.5
comp=Z,40nm,0.9s
K17K Iditarod 81.87 23 P P 19 53 09.5 +1.2
baz=239
SIMJ Simiganj 81.96 310 P P 19 53 08.3 -1.1
SIMJ IAmb IAmb 19 53 12.1
comp=Z,27nm,0.9s
KDAK Kodiak Island 82.02 29 P P 19 53 10.2 +1.2
baz=244
Q19K Cape Douglas, 82.03 28 P P 19 53 09.9 +0.8
baz=243
KK31 Karatay Array 82.06 315 IAmb IAmb 19 53 13.3
comp=Z,48nm,1.7s
KKAR Karatay Array 82.06 315 IAmb IAmb 19 53 13.3
comp=Z,48nm,1.7s
IUG luzhnay 82.14 314 eP P 19 53 09.7 -0.6
baz=314
IUG luzhnay 82.14 314 eP P 19 53 09.6 -0.6
SVW2 Sparrevohn 82.17 25 IAmb IAmb 19 53 15.2
comp=Z,20nm,0.8s
M18K Stony River 82.26 25 P P 19 53 11.8 +1.5
baz=241,SNR=5.9
L18K Granite Mounta 82.26 24 IAmb IAmb 19 53 14.0
comp=Z,23nm,1.1s
L18K Granite Mounta 82.26 24 P P 19 53 11.9 +1.6
baz=240
O19K Port Alsworth 82.30 27 P P 19 53 11.3 +0.8
baz=242
H17K Granite Mounta 82.45 21 IAmb IAmb 19 53 15.3
comp=Z,28nm,1.1s
H17K Granite Mounta 82.45 21 P P 19 53 12.5 +1.2
baz=237
G17K Kiwalik Mounta 82.51 20 P P 19 53 12.8 +1.2
baz=236
N19K Bonanza Creek 82.51 26 IAmb IAmb 19 53 15.4
comp=Z,36nm,1.1s
N19K Bonanza Creek 82.51 26 P P 19 53 12.0 +0.2
baz=242
BRLS Borolday 82.52 315 eP P 19 53 11.5 -0.6
baz=315
P19K Oil Pt 82.54 27 P P 19 53 12.7 +0.9
baz=244
C16K Lisburne Hills 82.66 17 P P 19 53 13.5 +1.3
baz=231
BRZS Berezniki 82.73 322 eP P 19 53 12.5 -0.6
baz=322
BRZS Berezniki 82.73 322 eP P 19 53 12.4 -0.6
F17K Baldwin Pennin 82.84 19 IAmb IAmb 19 53 23.4
comp=Z,39nm,1.4s
F17K Baldwin Pennin 82.84 19 P P 19 53 14.5 +1.3
baz=235
J18K Innoko River 82.88 23 P P 19 53 14.1 +0.6
baz=240
TTA Tatalina 82.89 24 P P 19 53 14.1 +0.5
baz=241
D17K Noatak River 82.98 18 P P 19 53 14.5 +0.6
baz=234,SNR=6.4
L19K White Mountain 83.00 25 P P 19 53 15.3 +1.2
baz=242,SNR=7.8
E17K Hotham Inlet 83.02 19 P P 19 53 15.2 +1.1
baz=235
M19K Big River Lodg 83.06 25 P P 19 53 15.3 +0.8
baz=242
H18K Honhosa River 83.13 21 IAmb IAmb 19 53 36.1
comp=Z,18nm,1.2s
H18K Honhosa River 83.13 21 P P 19 53 15.3 +0.6
baz=238
HOM Homer 83.27 28 P P 19 53 14.7 -0.9
baz=245
G18K Tagagawik 83.42 21 P P 19 53 16.2 0.0
baz=238
C17K DeLong Mountai 83.42 17 P P 19 53 16.4 +0.2
baz=233
F18K Selawik 83.46 20 P P 19 53 17.0 +0.7
baz=237
GCSA Galena City Sc 83.46 22 P P 19 53 17.1 +0.7
baz=240,SNR=7.6
QSPA South Pole Qui 83.51 180 P P 19 53 16.6 -0.4
QSPA IAmb IAmb 19 53 20.8
comp=Z,27nm,0.8s
QSPA South Pole Qui 83.51 180 P P 19 53 16.4 -0.5
comp=Z,23nm,0.8s,baz=277,slow=0.4,SNR=25
comp=Z,39nm,0.8s
L20K Farwell, AK 83.54 25 P P 19 53 17.6 +0.7
baz=243
J19K Poorman 83.56 23 IAmb IAmb 19 53 21.0
comp=Z,27nm,1.1s
J19K Poorman 83.56 23 P P 19 53 17.2 +0.1
baz=241
M20K Styx River 83.58 25 P P 19 53 17.7 +0.4
baz=243,SNR=8.2
E18K Tukpahlearik C 83.60 19 P P 19 53 18.2 +1.0
baz=236
N20K Mount Spurr 83.68 26 P P 19 53 18.6 +0.8
baz=244
BRSE Bradley Lake S 83.72 28 P P 19 53 18.6 +0.7
baz=246
K20K Telida 83.87 24 IAmb IAmb 19 53 22.6
comp=Z,29nm,1.1s
K20K Telida 83.87 24 P P 19 53 19.1 +0.5
baz=242
H19K Roundabout Mou 84.01 21 IAmb IAmb 19 53 23.1
comp=Z,32nm,1.0s
H19K Roundabout Mou 84.01 21 P P 19 53 19.8 +0.6
baz=240
G19K Purcell Mounta 84.09 21 P P 19 53 20.7 +1.0
baz=239
C18K Utukok River 84.11 18 P P 19 53 20.8 +0.9
baz=235
F19K Shaleruckik Mo 84.21 20 IAmb IAmb 19 54 10.1
comp=Z,44nm,1.8s
F19K Shaleruckik Mo 84.21 20 P P 19 53 20.7 +0.4
baz=239
J20K Nowinta River 84.22 23 IAmb IAmb 19 53 24.5
comp=Z,30nm,1.1s
SKT Skwentna 84.30 25 P P 19 53 21.5 +0.7
baz=245
B18K Kokolik River 84.35 17 P P 19 53 21.7 +0.8
baz=235
I20K Naaghedeneel 84.38 22 P P 19 53 22.1 +1.0
baz=242
PPLA Purkeypile 84.42 25 P P 19 53 22.5 +0.9
baz=244
SUA Susitna One 84.43 26 IAmb IAmb 19 53 25.5
comp=Z,21nm,1.0s
SUA Susitna One 84.43 26 P P 19 53 22.9 +1.3
baz=246
SEW Seward 84.46 28 P P 19 53 23.1 +1.5
baz=247
O22K Cooper Landing 84.48 27 P P 19 53 23.2 +1.4
baz=247
H20K Anotleneega Mo 84.56 22 P P 19 53 23.4 +1.3
baz=241
NRIK Noril'sk 84.63 343 P P 19 53 21.3 -1.1
comp=Z,26nm,0.8s,baz=117,slow=5.0,SNR=26
comp=Z,26nm,0.8s
CAST Castle Rocks 84.69 24 IAmb IAmb 19 53 25.7
comp=Z,20nm,1.0s
CAST Castle Rocks 84.69 24 P P 19 53 23.4 +0.6
baz=244,SNR=8.0
E19K Redstone River 84.72 19 IAmb IAmb 19 53 26.7
comp=Z,25nm,0.9s
E19K Redstone River 84.72 19 P P 19 53 24.2 +1.4
baz=239
RC01 Rabbit Creek A 84.72 27 P P 19 53 23.2 +0.3
baz=246,SNR=5.3
CHUM Lake Minchumin 84.80 24 P P 19 53 24.3 +1.0
baz=244,SNR=9.7
M22K Willow 84.82 26 P P 19 53 23.8 +0.4
baz=246
C19K Lookout Ridge 84.85 18 P P 19 53 24.9 +1.3
baz=237
D19K Kuna River 84.97 18 P P 19 53 25.7 +1.5
baz=238
F20K Avaraart Lake 85.02 20 IAmb IAmb 19 53 28.4
comp=Z,16nm,0.9s
F20K Avaraart Lake 85.02 20 P P 19 53 25.7 +1.4
baz=240
CUT Chulitna 85.02 25 P P 19 53 25.3 +0.9
baz=246
BVAR Borovoye Array 85.05 325 P P 19 53 24.4 -0.4
comp=Z,26nm,0.9s,baz=108,slow=4.8,SNR=20
comp=Z,26nm,0.9s
BRVK Borovoye 85.12 325 P P 19 53 24.0 -1.2
BRVK IAmb IAmb 19 53 28.6
comp=Z,36nm,1.1s
BRVK Borovoye 85.12 325 ceP P 19 53 24.9 -0.2
BRVK pmax pmax
comp=Z,44nm,1.3s
PMR Palmer 85.19 26 IAmb IAmb 19 53 27.9
comp=Z,27nm,1.0s
PMR Palmer 85.19 26 P P 19 53 25.6 +0.4
baz=247,SNR=5.4
KTH Kantishna Hill 85.22 24 IAmb IAmb 19 53 29.2
comp=Z,30nm,0.9s
GHO Glory Hole Cre 85.35 26 IAmb IAmb 19 53 37.6
comp=Z,21nm,1.0s
P23K Montague Islan 85.37 28 P P 19 53 26.4 +0.1
baz=249
H21K Melozitna Rive 85.40 22 P P 19 53 27.2 +0.9
baz=243
KNK Knik Glacier 85.42 27 P P 19 53 26.8 +0.4
baz=248,SNR=6.0
BPAW Bear Paw Mtn. 85.43 24 IAmb IAmb 19 53 29.8
comp=Z,46nm,1.6s
BPAW Bear Paw Mtn. 85.43 24 P P 19 53 27.3 +0.8
baz=245
TRF Thorofare Moun 85.44 24 P P 19 53 27.4 +0.6
baz=246
E20K Nigu River 85.47 19 P P 19 53 27.3 +0.7
baz=240
I21K Tanana 85.50 22 IAmb IAmb 19 53 30.6
comp=Z,27nm,1.1s
I21K Tanana 85.50 22 P P 19 53 27.7 +0.9
baz=244
G21K Allakaket 85.54 21 P P 19 53 27.7 +0.7
baz=243
D20K Etivluk River 85.56 18 P P 19 53 28.0 +0.9
baz=240
SML Sawmill 85.62 26 P P 19 53 27.7 +0.1
baz=248
F21K Alatna River 85.87 20 P P 19 53 29.4 +0.7
baz=243
M23K Glacier View 85.88 26 P P 19 53 29.1 +0.3
baz=248
MLY Manley 85.91 23 IAmb IAmb 19 53 33.5
comp=Z,22nm,0.9s
MLY Manley 85.91 23 P P 19 53 29.5 +0.6
baz=245,SNR=9.6
WAT1 Susitna Watana 85.92 25 P P 19 53 29.5 +0.5
baz=247
H22K Ishtalitna Cre 86.04 22 P P 19 53 30.1 +0.6
baz=245
B20K Meade River 86.06 17 IAmb IAmb 19 53 35.5
comp=Z,14nm,0.8s
B20K Meade River 86.06 17 P P 19 53 30.7 +1.3
baz=239
SCM Sheep Creek Mo 86.08 26 P P 19 53 30.5 +0.7
baz=249
MCK McKinley 86.11 24 P P 19 53 29.5 -0.3
baz=247,SNR=9.6
WAT6 Susitna Watana 86.17 26 P P 19 53 30.6 +0.2
baz=248,SNR=5.5
E21K Killik River 86.28 19 IAmb IAmb 19 53 36.5
comp=Z,18nm,0.9s
E21K Killik River 86.28 19 P P 19 53 31.6 +1.0
baz=242
EYAK Cordova Ski Ar 86.34 28 P P 19 53 31.6 +0.6
baz=250
C21K Knifeblade Rid 86.36 18 P P 19 53 31.8 +0.8
baz=241
NEA2 Nenana 86.39 24 IAmb IAmb 19 53 34.4
comp=Z,36nm,1.4s
NEA2 Nenana 86.39 24 P P 19 53 32.1 +0.8
baz=247
G22K Bettles 86.43 21 P P 19 53 32.0 +0.7
baz=244
DHY Denali Highway 86.51 25 P P 19 53 32.4 +0.4
baz=248,SNR=10.0
KLU Klutina 86.58 27 P P 19 53 33.1 +0.8
baz=250,SNR=10
M24K Tolsona, Glenn 86.68 26 P P 19 53 33.4 +0.6
baz=250
WRH Wood River Hil 86.73 24 IAmb IAmb 19 53 35.2
comp=Z,26nm,1.0s
G23K Bananza Creek 86.88 21 IAmb IAmb 19 53 38.8
comp=Z,13nm,0.7s
G23K Bananza Creek 86.88 21 P P 19 53 35.0 +1.4
baz=246
A21K Barrow 86.89 16 P P 19 53 34.4 +1.0
baz=239
D22K Ayikyak River 86.90 19 IAmb IAmb 19 53 38.8
comp=Z,23nm,0.8s
D22K Ayikyak River 86.90 19 P P 19 53 34.4 +0.7
baz=243,SNR=6.7
CCB Clear Creek Bu 86.91 24 IAmb IAmb 19 53 35.9
comp=Z,20nm,0.9s
COLA College 86.98 23 P P 19 53 33.2 -0.9
COLA IAmb IAmb 19 53 36.1
comp=Z,19nm,0.9s
COLA College 86.98 23 P P 19 53 34.6 +0.5
baz=248
COLA College 86.98 23 P P 19 53 33.2 -0.9
COLA pmax pmax
comp=Z,19nm,1.0s
BMRM Bremner River 87.01 28 P P 19 53 35.7 +1.3
baz=251
COLD Coldfoot 87.03 21 P P 19 53 35.7 +1.5
baz=246
HDA Harding Lake 87.17 24 P P 19 53 36.0 +1.0
baz=249
N25K Chitina, Valde 87.22 27 P P 19 53 36.3 +0.8
baz=251
HARP HAARP 87.23 26 P P 19 53 36.3 +0.9
baz=250
POKR Poker Plat Res 87.24 23 P P 19 53 36.0 +0.7
baz=248
PAX Paxson 87.28 26 P P 19 53 36.8 +1.1
baz=250,SNR=5.3
IL31 87.33 24 IAmb IAmb 19 53 37.5
comp=Z,22nm,1.0s
ILAR Eielson Array 87.33 24 P P 19 53 34.4 -1.4
comp=Z,14nm,0.9s,baz=259,slow=4.3,SNR=28
comp=Z,14nm,0.9s
H24K Noodor Dome 87.33 23 P P 19 53 36.9 +1.1
baz=248
K24K Donnelly Dome 87.44 25 P P 19 53 36.7 +0.3
baz=250
GLB Gilahina Butte 87.52 27 IAmb IAmb 19 53 41.5
comp=Z,23nm,0.8s
E23K Chandalar 87.57 20 P P 19 53 37.7 +0.7
baz=246
D23K Nanushuk River 87.59 19 P P 19 53 38.0 +1.1
baz=245,SNR=7.0
CRQE Cirque 87.64 28 P P 19 53 38.5 +0.9
baz=252
G24K Hadweenzic Riv 87.81 22 P P 19 53 38.5 +0.4
baz=248
MCARA McCarthy VSAT 87.86 28 P P 19 53 39.3 +0.9
baz=252
J25K Salcha River, 87.88 24 P P 19 53 39.0 +0.4
baz=250
F24K Squaw Lake 87.96 21 P P 19 53 39.5 +0.6
baz=248
C23K Itkillik River 87.97 18 P P 19 53 39.4 +0.6
baz=245
MESA MESA 88.02 29 P P 19 53 40.3 +0.8
baz=253
PRP Porcupine Dome 88.13 23 P P 19 53 40.2 +0.5
baz=250
M26K Nabesna, AK 88.18 27 P P 19 53 41.1 +1.1
baz=252
L26K Log Cabin Wild 88.22 26 IAmb IAmb 19 53 43.6
comp=Z,14nm,1.0s
L26K Log Cabin Wild 88.22 26 P P 19 53 41.5 +1.3
baz=252,SNR=6.9
SCRK Sand Creek 88.25 25 P P 19 53 41.3 +1.0
baz=252
D24K Happy Valley 88.27 19 P P 19 53 40.6 +0.4
baz=247
G25K Bearman Lake 88.34 22 P P 19 53 42.0 +1.4
baz=250
CTG Chitna Glacier 88.53 28 P P 19 53 42.6 +0.9
baz=254
C24K Franklin Bluff 88.53 19 P P 19 53 42.7 +1.3
baz=247
J26L Joseph Creek 88.58 24 IAmb IAmb 19 53 46.7
comp=Z,15nm,0.8s
J26L Joseph Creek 88.58 24 P P 19 53 42.9 +1.0
baz=252
LOGN Logan Glacier 88.65 28 IAmb IAmb 19 53 46.1
comp=Z,26nm,1.0s
M27K Edge Creek, AK 88.67 27 P P 19 53 43.7 +1.3
baz=253
F25K Christian Rive 88.80 21 P P 19 53 44.3 +1.5
baz=250
PINM Pinnacle 88.81 29 P P 19 53 43.7 +0.6
baz=255
L27K Beaver Creek, 88.89 26 IAmb IAmb 19 53 48.4
comp=Z,18nm,0.9s
L27K Beaver Creek, 88.89 26 P P 19 53 43.9 +0.6
baz=253,SNR=8.5
I26K Coal Creek Min 89.00 24 P P 19 53 44.3 +0.6
baz=252
E25K Arctic Village 89.00 21 IAmb IAmb 19 53 48.1
comp=Z,19nm,1.0s
E25K Arctic Village 89.00 21 P P 19 53 44.8 +1.1
baz=250,SNR=8.6
K27K Chicken 89.06 25 IAmb IAmb 19 53 49.7
comp=Z,32nm,1.0s
K27K Chicken 89.06 25 P P 19 53 45.1 +1.0
baz=253
PNL Peninsula 89.12 30 P P 19 53 45.0 +0.6
baz=256
BVCY Beaver Creek 89.14 27 P P 19 53 45.0 +0.5
baz=254
D25K Kavik River 89.15 20 IAmb IAmb 19 53 48.8
comp=Z,21nm,1.1s
D25K Kavik River 89.15 20 P P 19 53 45.5 +1.1
baz=249
YUK3 Moose Creek 89.15 27 P P 19 53 45.5 +0.7
baz=255
G26K Porcupine Rive 89.27 22 P P 19 53 46.7 +1.8
baz=252
YUK8 Steele Glacier 89.35 28 P P 19 53 46.3 +0.5

baz=255
F26K Sheenjek River 89.37 21 P P 19 53 46.5 +1.0
baz=251
EGAK Eagle 89.66 25 IAmb IAmb 19 53 50.8
comp=Z,56nm,1.7s
EGAK Eagle 89.66 25 P P 19 53 47.5 +0.7
baz=254
O29M Mount Kennedy 89.67 29 P P 19 53 48.6 +1.4
baz=256
I27K Kandik River 89.70 24 P P 19 53 48.4 +1.3
baz=254
YUK4 Talbot Arm 89.89 28 P P 19 53 49.9 +1.7
baz=256
H27K Steamboat Moun 89.91 23 P P 19 53 49.5 +1.4
baz=254
YUK6 Outpost Mounta 89.93 29 P P 19 53 49.6 +1.1
baz=256
P29M Windy Craggy 89.93 30 P P 19 53 49.1 +0.9
baz=257
DAWY Dawson 90.21 25 P P 19 53 50.1 +0.6
baz=256
M29M Somme Creek 90.23 27 IAmb IAmb 19 53 54.8
comp=Z,11nm,0.8s
M29M Somme Creek 90.23 27 P P 19 53 50.5 +0.8
baz=256
HYT Haines Junctio 90.31 29 P P 19 53 51.3 +1.2
baz=257
I28M Miner Creek 90.33 24 P P 19 53 50.9 +0.8
baz=255
S31K Pelican 90.34 32 P P 19 53 50.6 +0.5
baz=258
L29M L29M 90.53 26 IAmb IAmb 19 53 55.4
comp=Z,16nm,0.8s
L29M L29M 90.53 26 P P 19 53 51.9 +0.9
baz=257
N30M Aishikik Lake 90.64 28 P P 19 53 52.4 +0.8
baz=258
J29N Klondike Camp 90.80 25 IAmb IAmb 19 53 57.1
comp=Z,62nm,1.7s
J29N Klondike Camp 90.80 25 P P 19 53 53.5 +1.2
baz=257
F28M Old Crow 90.91 22 P P 19 53 54.1 +1.4
baz=255
K29M Barlow Dome 90.96 26 IAmb IAmb 19 53 56.9
comp=Z,24nm,1.1s
K29M Barlow Dome 90.96 26 P P 19 53 54.0 +0.9
baz=257,SNR=6.1
O30N Mendenhall 90.97 29 P P 19 53 54.4 +1.3
baz=258
M30M Minto, Yukon 91.01 27 IAmb IAmb 19 53 56.9
comp=Z,13nm,1.1s
M30M Minto, Yukon 91.01 27 P P 19 53 54.8 +1.5
baz=258
SKAG Skagway 91.10 30 P P 19 53 54.6 +1.0
baz=259
H29M Whitestone 91.15 23 P P 19 53 55.3 +1.5
baz=257
R32K Eaglecrest 91.30 32 P P 19 53 55.9 +1.3
baz=260
J30M Hart River 91.62 25 IAmb IAmb 19 54 01.3
comp=Z,11nm,0.8s
J30M Hart River 91.62 25 P P 19 53 57.6 +1.4
baz=258
I30M Mount Dempster 91.74 25 P P 19 53 57.4 +0.8
baz=258
E29M Blow River 91.82 21 P P 19 53 58.0 +1.2
baz=257
EPYK Eagle Plains 91.83 23 IAmb IAmb 19 54 00.2
comp=Z,22nm,1.1s
EPYK Eagle Plains 91.83 23 P P 19 53 57.5 +0.6
baz=258
G30M tAoh Zraii Nji 92.15 23 IAmb IAmb 19 54 01.2
comp=Z,12nm,1.1s
G30M tAoh Zraii Nji 92.15 23 P P 19 53 59.2 +0.8
baz=259
F30M Barrier River 92.44 22 P P 19 54 00.5 +0.8
baz=259
P33M Teslin, Yukon 92.47 30 P P 19 53 59.8 -0.3
baz=261
ARU Arti 92.48 326 *c i* P P 19 53 58.4 -1.7
ARU 19 57 38.8
ARU S SKSac 20 04 31.4 -2.2
ARU pmax pmax
comp=Z,9.0nm,1.0s
FARO Faro, Yukon 92.53 28 P P 19 54 01.1 +0.8
baz=261
ELIB Princess Elisa 92.81 196 *d* P P 19 54 02.6 +1.1
comp=Z,5.7nm,1.0s
G31M Satah River 92.89 23 IAmb IAmb 19 54 04.6
comp=Z,12nm,0.9s
G31M Satah River 92.89 23 P P 19 54 02.2 +0.4
baz=260,SNR=5.7
F31M Tsiigehtchic 93.18 23 IAmb IAmb 19 54 17.6
comp=Z,30nm,1.7s
F31M Tsiigehtchic 93.18 23 P P 19 54 03.3 +0.3
baz=261
R33M Jennings River 93.29 31 P P 19 54 04.5 +0.5
baz=263
INK Inuvik 93.40 22 P P 19 54 04.1 +0.1
baz=261,SNR=5.2
DLBC Dease Lake 93.66 32 P P 19 54 06.2 +0.5
baz=264
A36M Sachs Harbour 96.52 18 P P 19 54 19.1 +0.9
baz=269
KOTAN Kotaneelee Air 96.83 30 P P 19 54 20.4 +0.4
baz=269
C36M Paulatuk 96.90 21 P P 19 54 19.7 -0.3
baz=270
WRGLY Wrigley 97.14 27 P P 19 54 21.2 -0.1
baz=270
BELG Belogornoye 98.60 322 *i* P P 19 54 25.4 -2.7
BELG pmax pmax
comp=Z,3.0nm,0.9s
SMMC Simmler 99.08 55 P Pdif 19 54 30.7 0.0
baz=268
SCI2 San Clemente I 100.23 58 P Pdif 19 54 34.1 -1.7
baz=269
NVAR Mina Array Bea 100.48 52 P Pdif 19 54 36.6 -0.6
comp=Z,0.8nm,0.7s,baz=268,slow=6.0,SNR=5.0
LRMC Laurel Mtn Rad 100.97 55 P Pdif 19 54 39.0 -0.3
baz=270
BFSC Mount Baldy Ra 100.99 56 P Pdif 19 54 39.1 -0.3
baz=270
NEW Newport 101.10 42 P Pdif 19 54 39.2 -0.2
baz=273
MPMC Manual Prospec 101.13 55 P Pdif 19 54 39.1 -0.9
baz=270
YKA Yellowknife Ar 101.24 28 P Pdif 19 54 38.4 -1.3
comp=Z,1.3nm,1.0s,baz=278,slow=4.8,SNR=9.5
APA Apatity 103.51 338 ⇩ *i* P Pdif 19 54 59.6 +10
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,6μm,16.0s
T25A Trinidad 111.54 53 P PKiKP 19 59 23.6 -0.8
baz=278
KOLS Kolonicke sedl 115.01 321 *e* P Pdif 19 55 40.5 -0.7
KOLS Kolonicke sedl 115.01 321 *e* PDIFF Pdif 19 55 40.5 -0.7
S39A Bolivar 120.04 50 PKPdf PKPdf 19 59 41.6 +1.2
GERES GERESS Array B 120.21 324 PKP PKPdf 19 59 40.8 +0.3
comp=Z,0.4nm,0.4s,baz=64,slow=4.5,SNR=1.6
MIAR Mount Ida 120.68 54 P PKPdf 19 59 39.3 -2.5
baz=284
CCM Cathedral Cave 121.51 49 P PKPdf 19 59 41.0 -2.2
baz=288
HDIL Hopedale 122.09 46 P PKPdf 19 59 41.9 -2.4
baz=291
L44A Lake County Fo 122.45 43 P PKPdf 19 59 42.8 -2.1
baz=293
EKA Eskdalemuir Ar 124.44 338 PKP PKPdf 19 59 48.7 +0.5
comp=Z,1.1nm,0.7s,baz=53,slow=4.7,SNR=1.7
WVT Waverly 124.71 50 P PKPdf 19 59 47.4 -2.0
baz=290
WCI Wyandotte Cave 125.11 47 P PKPdf 19 59 48.5 -1.6
baz=292
O48B Farmland 125.12 45 P PKPdf 19 59 48.5 -1.6
baz=294
AAM Ann Arbor 125.26 42 P PKPdf 19 59 48.3 -2.0
baz=297
P49A Miami Univ. Ec 125.73 45 P PKPdf 19 59 49.3 -1.9
baz=294
LRAL Lakeview Retre 126.36 53 P PKPdf 19 59 50.6 -2.1
baz=288
ACSO Alum Creek Sta 126.64 44 P PKPdf 19 59 51.7 -1.3
baz=296
BRAL Brewton 126.87 56 P PKPdf 19 59 51.8 -1.3
baz=287
P52A Corning 127.49 44 P PKPdf 19 59 53.2 -1.4
baz=297
M53A WI Miller and 127.63 41 P PKPdf 19 59 53.4 -1.5
baz=299
TZTN Tazewell 127.78 48 P PKPdf 19 59 53.6 -1.7
baz=293
O53A New Philadelph 127.84 43 P PKPdf 19 59 53.5 -1.7
baz=298
KMSC Kings Mountain 129.99 49 P PKPdf 19 59 57.8 -1.8
baz=294
BINY Binghamton 130.21 38 P PKPdf 19 59 57.7 -2.0
baz=304
L61B Northampton 132.04 36 P PKPdf 20 00 02.0 -1.2
baz=308
PKME Peaks-Kenny Pk 132.05 31 P PKPdf 20 00 01.6 -1.5
baz=314
PAL Palisades 132.17 38 P PKPdf 20 00 02.0 -1.5
baz=306
ESDC Sonseca Array 135.80 323 PKP PKPdf 20 00 09.4 -1.0
comp=Z,0.5nm,0.8s,baz=2.6,slow=4.4,SNR=3.5
CPUP Villa Florida 141.70 149 PKP PKPdf 20 00 20.8 -0.8
comp=Z,1.3nm,0.6s,baz=198,slow=3.2,SNR=3.6
TORD Torodi Ar. Bea 141.72 283 PKP PKPdf 20 00 19.4 -2.4
comp=Z,1.8nm,0.4s,baz=41,slow=2.8,SNR=2.4
KIC Kosan Boka 148.34 272 ⇩ *e* PKP1 PKPdf 20 00 37.7 +4.4
comp=Z,41nm,0.9s
DBIC Dimbokro 148.46 272 PKPab PKPdf 20 00 37.0 +3.5
DBIC Dimbokro 148.46 272 PKP2 PKPdf 20 00 37.0 +3.5
DBIC Dimbokro 148.46 272 PKPbc PKPdf 20 00 36.8 +3.3
comp=Z,23nm,0.9s,baz=95,slow=2.2,SNR=14
LIC Lamto 148.62 271 ⇩ *e* PKP1 PKPdf 20 00 38.3 +4.6
comp=Z,88nm,0.6s
TIC Toumodi 148.62 272 ⇩ *e* PKP1 PKPdf 20 00 38.4 +4.6
comp=Z,23nm,0.6s
PTLB Pontes e Lacer 148.82 134 PKPdf 20 00 38.0 +4.0

*NEIC **25** 19:46:28.2±2.8, 6°.55S±0°.04×143°.1E±0°.1, h10km±1km, mb4.6/17, Error ellipse: s-maj=21.5km s-min=5.4km az=260.0*
*IDC **25** 19:46:29.3±1.0, 6°.27S×143°.70E, h0km, mb3.7/8, mbtmp3.9/10, ML2.6/1, Error ellipse: s-maj=36.0km s-min=20.7km az=68.0*
ISC 25 19:46:28.8±0.6, 6°.58S±0°.07×143°.15E±0°.08, h10km, n32, σ2°.72/30, mb4.2/13, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.86	126	Pn	Pn	19 47 42.9	+0.9
PMG	Port Moresby	4.86	126	Pn	Pn	19 47 42.7	+0.6
	19nm,0.3s,baz=315,slow=8.1,SNR=12						
PMG				Sn	Sn	19 48 35.5	-3.0
	7.3nm,0.3s,baz=267,slow=22,SNR=1.4						
	51nm,0.3s						
MANU	Manus Island	6.16	43	Pn	Pn	19 47 60.0	+0.1
WRA	Warramunga Arr	15.81	212	Pn	P	19 50 18.8	+3.3
	baz=29,slow=13						
KNRA	Kununurra	16.76	236		Pn	19 50 23.0	-0.8
TNTI	Ternate	17.36	294		Pn	19 50 31.7	+0.3
SOEI	Soe	18.96	259	P	P	19 50 46.4	-4.1
AS31	Alice Springs	19.18	207	P	P	19 50 51.0	-1.7
AS31				IAmb	IAmb	19 51 20.0	
	comp=Z,34nm,0.9s						
ASAR	Alice Springs	19.18	207	P	P	19 50 51.3	-1.4
ASAR	Alice Springs	19.18	207	P	Pn	19 51 00.8	+7.1
	comp=Z,12nm,0.8s,baz=38,slow=8.4,SNR=4.2						
FITZ	Fitzroy Crossi	20.56	235	P	P	19 51 03.2	-4.7
FITZ				IAmb	IAmb	19 51 20.3	
	comp=Z,59nm,1.1s						
MMRI	Maumere	20.83	263	P	P	19 51 05.9	-4.9
MMRI				IAmb	IAmb	19 51 26.6	
	comp=Z,112nm,1.2s						
KOUNC	Koumac, New Ca	24.75	126	P	P	19 51 48.2	-2.6
KOUNC				IAmb	IAmb	19 51 53.1	
	comp=Z,8.9nm,1.0s						
STKA	Stephens Creek	25.21	183	P	P	19 51 55.1	+0.2
PSA00	Pilbara Seismi	27.02	234	P	P	19 52 10.3	-1.0
PSA00				IAmb	IAmb	19 52 13.8	
	comp=Z,38nm,1.1s						
LIFNC	LIFOU	27.27	124	P	P	19 52 12.4	-1.2
JOW	Kunigami	36.20	337	P	P	19 53 31.0	-0.9
YULB	Yu-li	36.65	325	P	P	19 53 33.0	-2.9
YULB				IAmb	IAmb	19 53 53.9	
	comp=Z,26nm,1.1s						
MJB9	Matsu-Tunnel	43.15	354	P	P	19 54 26.2	-3.4
MJB9				IAmb	IAmb	19 54 31.0	
	comp=Z,4.9nm,1.1s						
KSRS	Korea Array	46.05	343	P	P	19 54 53.6	+0.8
	comp=Z,0.8nm,0.9s,baz=176,slow=7.4,SNR=2.5						
	comp=Z,0.8nm,0.9s						
CMAR	Chiang Mai Arr	50.20	301	P	P	19 55 30.8	+5.6
	comp=Z,0.5nm,0.9s,baz=115,slow=6.1,SNR=1.6						
	comp=Z,0.5nm,0.9s						
SONM	Songino Array	63.11	333	P	P	19 56 59.1	+2.3
	comp=Z,0.3nm,0.4s,baz=145,slow=5.3,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MK31	Makanchi Array	75.54	322	P	P	19 58 12.1	-1.6
MKAR	Makanchi Array	75.54	322	P	P	19 58 11.8	-1.8
MKAR	Makanchi Array	75.54	322	P	P	19 58 16.0	+2.4
	comp=Z,0.2nm,0.4s,baz=98,slow=7.7,SNR=1.2						
	comp=Z,0.2nm,0.4s						
MAKZ	Makanchi	75.74	322	P	P	19 58 13.8	-1.0
MAKZ				IAmb	IAmb	19 58 30.1	
	comp=Z,3.8nm,1.4s						
ZALV	Zalesovo Beam	77.50	329	P	P	19 58 26.0	+1.5
	comp=Z,0.4nm,0.5s,baz=116,slow=6.6,SNR=1.7						
	comp=Z,0.4nm,0.5s						
ARSB	Arslanbob	79.69	314	P	P	19 58 35.3	-1.9
QSPA	South Pole Qui	83.39	180	P	P	19 58 57.0	+0.8
QSPA				IAmb	IAmb	19 59 07.1	
	comp=Z,3.5nm,1.1s						
QSPA	South Pole Qui	83.39	180	P	P	19 58 59.2	+2.9
	comp=Z,2.1nm,0.9s,baz=9.4,slow=6.1,SNR=2.3						
	comp=Z,2.1nm,0.9s						
BVAR	Borovoye Array	85.00	325	P	P	19 59 08.3	+3.8
	comp=Z,2.2nm,0.8s,baz=106,slow=7.7,SNR=1.5						
	comp=Z,1.2nm,0.8s						
ILAR	Eielson Array	87.53	24	P	P	19 59 15.6	-1.1
	comp=Z,0.3nm,0.6s,baz=260,slow=4.5,SNR=2.3						
	comp=Z,0.3nm,0.6s						

*IDC **25** 19:50:10.6±0.9, 6°.34S×143°.30E, h0km, mb4.0/9, mbtmp4.1/12, ML3.9/2, Error ellipse: s-maj=28.7km s-min=20.3km az=89.0*
ISC 25 19:50:15.3±0.6, 6°.56S±0°.09×143°.1E±0°.1, h35km, n14, σ1°.42/16, mb4.0/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.90	126	Pn	Pn	19 51 27.0	+0.5
	16nm,0.4s,baz=250,slow=16,SNR=2.2						
PMG				Sn	Sn	19 52 21.9	-0.2
	5.9nm,0.3s,baz=231,slow=23,SNR=2.0						
WRA	Warramunga Arr	15.80	212	Pn	P	19 53 56.9	-1.9
	0.4nm,0.3s,baz=35,slow=12,SNR=1.8						
WRA				Sn	S	19 57 01.4	-1.8
	0.2nm,0.3s,baz=22,slow=23,SNR=1.7						
WRA				Lg	Lg	19 58 42.3	
	0.3nm,0.3s,baz=33,slow=30,SNR=1.6						
	3.7nm,0.7s						
ASAR	Alice Springs	19.18	207	P	Pn	19 54 40.2	+3.0
	0.6nm,0.3s,baz=33,slow=9.8,SNR=5.1						
	8.5nm,0.7s						
KSRS	Korea Array	46.03	343	P	P	19 58 36.1	+0.6
	0.6nm,0.5s,baz=170,slow=8.0,SNR=1.7						
	0.6nm,0.5s						
CMAR	Chiang Mai Arr	50.16	301	P	P	19 59 07.8	0.0
	0.3nm,0.4s,baz=123,slow=9.8,SNR=1.6						
	0.3nm,0.4s						
PETK	Petropavlovsk-	60.71	10	P	P	20 00 22.9	-0.3
	2.4nm,0.8s,baz=186,slow=7.2,SNR=2.4						
	2.4nm,0.8s						
SONM	Songino Array	63.08	333	P	P	20 00 39.1	-0.3
	0.3nm,0.5s,baz=132,slow=2.1,SNR=1.5						
	0.3nm,0.5s						
MKAR	Makanchi Array	75.50	322	P	P	20 01 57.0	+0.8
	1.3nm,0.6s,baz=108,slow=7.3,SNR=10						
	1.3nm,0.6s						
ZALV	Zalesovo Beam	77.46	329	P	P	20 02 06.8	-0.2
	0.4nm,0.4s,baz=98,slow=7.7,SNR=2.4						
	0.4nm,0.4s						
NRIK	Noril'sk	84.64	343	P	P	20 02 45.2	+0.2
	3.5nm,0.7s,baz=128,slow=3.8,SNR=5.4						
	3.5nm,0.7s						
BVAR	Borovoye Array	84.97	325	P	P	20 02 48.0	+1.0
	3.2nm,0.8s,baz=111,slow=6.8,SNR=8.3						
	3.2nm,0.8s						
ILAR	Eielson Array	87.53	24	P	P	20 02 57.3	-2.0
	0.7nm,0.8s,baz=258,slow=3.6,SNR=4.8						
	0.7nm,0.8s						
NOA	NORSAR Array B	114.97	336	PKP	PKPdf	20 08 53.7	+1.3
	0.9nm,0.9s,baz=76,slow=7.3,SNR=2.3						
DBIC	Dimbokro	148.19	272	PKPbc	PKPbc	20 09 57.3	-1.4
	2.3nm,0.7s,baz=90,slow=7.1,SNR=1.9						

*IDC **25** 19:50:33.0±0.9, 6°.31S×143°.30E, h0km, mb4.3/9, mbtmp4.3/12, ML4.2/2, Error ellipse: s-maj=28.8km s-min=20.0km az=82.0*
ISC 25 19:50:38.4±0.7, 6°.3S±0°.1×143°.3E±0°.1, h35km, n13, σ0°.41/13, mb4.2/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.90	129	Pn	Pn	19 51 49.5	-0.1
	21nm,0.4s,baz=325,slow=15,SNR=3.0						
PMG				Sn	Sn	19 52 45.4	+0.3
	6.5nm,0.3s,baz=219,slow=20,SNR=4.7						
CTA	Charters Tower	13.97	168	Lg	Lg	19 58 00.0	
	0.1nm,0.3s,baz=81,slow=5.1,SNR=2.9						
WRA	Warramunga Arr	16.08	212	Pn	Pn	19 54 21.7	-0.3
	0.9nm,0.3s,baz=28,slow=14,SNR=0.9						
WRA				Lg	Lg	19 59 03.0	
	0.5nm,0.3s,baz=36,slow=27,SNR=4.7						
	8.9nm,0.8s						
ASAR	Alice Springs	19.45	207	P	P	19 55 02.6	+0.5
	1.0nm,0.3s,baz=31,slow=9.8,SNR=5.6						
	8.5nm,0.7s						
CMAR	Chiang Mai Arr	50.19	300	P	P	19 59 31.1	-0.1
	0.4nm,0.6s,baz=112,slow=6.1,SNR=2.0						
	0.4nm,0.6s						
PETK	Petropavlovsk-	60.47	10	P	P	20 00 45.0	+0.4
	3.5nm,0.8s,baz=158,slow=5.2,SNR=7.4						
	3.5nm,0.8s						
MKAR	Makanchi Array	75.44	322	P	P	20 02 19.2	+0.3
	1.5nm,0.6s,baz=99,slow=7.4,SNR=8.3						
	1.5nm,0.6s						
ZALV	Zalesovo Beam	77.36	329	P	P	20 02 28.9	-0.6
	1.4nm,0.6s,baz=109,slow=6.0,SNR=6.4						
	1.4nm,0.6s						
KURBB	Kurchatov Arra	79.31	324	P	P	20 02 40.2	-0.2
	2.1nm,0.2s,baz=120,slow=4.8,SNR=4.4						
	2.1nm,0.2s						
QSPA	South Pole Qui	83.63	180	P	P	20 03 02.8	-0.4
	1.4nm,0.7s,baz=36,slow=1.4,SNR=2.0						
	1.4nm,0.7s						
NRIK	Noril'sk	84.49	343	P	P	20 03 07.2	0.0
	3.3nm,0.6s,baz=83,slow=3.9,SNR=4.4						
	3.3nm,0.6s						
BVAR	Borovoye Array	84.89	325	P	P	20 03 09.9	+0.3
	3.9nm,0.7s,baz=112,slow=7.2,SNR=7.9						
	3.9nm,0.7s						
ILAR	Eielson Array	87.26	24	P	P	20 03 20.4	-0.6
	1.1nm,0.7s,baz=258,slow=5.6,SNR=6.6						
	1.1nm,0.7s						

IDC 25 19:54:53.6±2.1, 6°.18S×143°.17E, h0km, mb3.9/3, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=86.0km s-min=40.0km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	19.54	206	P	P	19 59 22.9	0.0
	0.3nm,0.3s,baz=32,slow=12,SNR=2.3						
	3.9nm,0.7s						
MKAR	Makanchi Array	75.24	322	P	P	20 06 38.0	-0.4
	0.4nm,0.8s,baz=126,slow=3.9,SNR=2.9						
	0.4nm,0.8s						
BVAR	Borovoye Array	84.69	325	P	P	20 07 29.8	+0.4
	1.7nm,0.6s,baz=103,slow=6.5,SNR=5.4						
	1.7nm,0.6s						
ILAR	Eielson Array	87.17	24	P	P	20 07 41.3	-0.1
	0.7nm,0.8s,baz=258,slow=4.6,SNR=4.9						
	0.7nm,0.8s						

*NEIC **25** 19:55:27.7±2.7, 6°.61S±0°.08×142°.77E±0°.08, h10km±1km, mb4.6/21, Error ellipse: s-maj=13.7km s-min=13.4km az=351.0*
*IDC **25** 19:55:29.4±1.0, 6°.10S×143°.44E, h0km, mb4.0/9, mbtmp4.0/11, ML2.2/1, Error ellipse: s-maj=33.5km s-min=22.8km az=64.0*
ISC 25 19:55:28.1±0.5, 6°.67S±0°.07×142°.85E±0°.07, h10km, n41, σ1°.94/36, mb4.4/15, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.06	123	Pn	Pn	19 56 46.2	+2.2
PMG	Port Moresby	5.06	123	Pn	Pn	19 56 45.8	+1.7
	6.1nm,0.3s,baz=21,slow=8.5,SNR=7.2						
PMG				Sn	Sn	19 57 41.0	-1.6
	3.3nm,0.3s,baz=307,slow=12,SNR=1.6						
	14nm,0.3s						
MANU	Manus Island	6.43	45		Pn	19 57 03.2	+0.3
RABL	Rabaul	9.59	76	Pn	Pn	19 57 46.2	-0.2
FAKI	Fak Fak	11.20	289	Pn	Pn	19 58 06.9	-1.6
CTA	Charters Tower	13.74	166	Lg	Lg	20 02 58.7	
	0.2nm,0.3s,baz=257,slow=19,SNR=1.6						
WRAB	Tennant Creek	15.56	211		Pn	19 59 10.5	+2.8
WRAB				IAmb	IAmb	19 59 18.2	
	comp=Z,54nm,1.1s						
WB2	Warramunga Arr	15.56	211	Pn	Pn	19 59 07.8	0.0
WB2				IAmb	IAmb	19 59 29.6	
	comp=Z,93nm,1.4s						
WRA	Warramunga Arr	15.57	211	Pn	Pn	19 59 05.2	-2.6
KNRA	Kununurra	16.46	236	Pn	Pn	19 59 16.4	-2.9
KNRA				IAmb	IAmb	19 59 21.2	
	comp=Z,48nm,1.1s						
SOEI	Soe	18.65	259	P	P	19 59 41.6	-4.8
SOEI				IAmb	IAmb	19 59 45.8	
	comp=Z,38nm,1.1s						
AS31	Alice Springs	18.96	206	P	P	19 59 48.2	-1.5
ASAR	Alice Springs	18.96	206	P	P	19 59 46.0	-3.7
ASAR	Alice Springs	18.96	206	P	Pn	20 00 00.6	+10
	comp=Z,8.1nm,0.6s,baz=31,slow=10,SNR=11						
ASAR				Lg	Lg	20 05 48.9	
	baz=318,slow=36						
FITZ	Fitzroy Crossi	20.27	234	P	P	20 00 00.7	-3.3
PATS	Pohnpei	20.44	49	P	P	20 00 03.1	-2.8
LIFNC	LIFOU	27.47	123	P	P	20 01 14.2	-0.4
UGM	Wanagama	32.09	266	P	P	20 01 55.5	-0.2
UGM				IAmb	IAmb	20 02 04.5	
	comp=Z,42nm,1.3s						
JMZ	Minamidaito 2	34.21	341	P	P	20 02 13.5	-0.6
HKPS	Hong Kong Po S	40.23	316	P	P	20 03 03.0	-2.2
JSG	Sagara	41.35	354	P	P	20 03 13.4	-1.0
INU	Inuyama	42.15	353	P	P	20 03 19.7	-1.1
INU				IAmb	IAmb	20 03 24.4	
	comp=Z,24nm,1.4s						
MAJO	Matsushiro	43.20	355	P	P	20 03 26.4	-3.0
MJB9	Matsu-Tunnel	43.21	355	P	P	20 03 27.5	-1.9
MJB9				IAmb	IAmb	20 03 46.0	
	comp=Z,5.8nm,1.1s						
KSRS	Korea Array	46.05	343	P	P	20 03 51.4	-0.7
	comp=Z,0.5nm,0.6s,baz=164,slow=8.8,SNR=1.9						
	comp=Z,0.5nm,0.6s						
CMAR	Chiang Mai Arr	49.99	301	P	P	20 04 27.1	+4.1
	comp=Z,0.5nm,0.4s,baz=119,slow=7.3,SNR=4.9						
	comp=Z,0.5nm,0.4s						
PETK	Petropavlovsk-	60.87	10	P	P	20 05 39.2	-1.5
	comp=Z,3.2nm,0.8s,baz=163,slow=7.4,SNR=4.1						
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	63.06	333	P	P	20 05 57.5	+1.7
	comp=Z,0.3nm,0.6s,baz=101,slow=7.5,SNR=1.1						
	comp=Z,0.3nm,0.6s						
VNDA	Vanda	71.53	176	P	P	20 06 49.5	+0.8
VNDA				IAmb	IAmb	20 06 54.2	
	comp=Z,8.9nm,1.3s						
MK31	Makanchi Array	75.43	322	P	P	20 07 12.9	+0.6
MKAR	Makanchi Array	75.43	322	P	P	20 07 12.9	+0.6
MKAR	Makanchi Array	75.43	322	P	P	20 07 15.1	+2.8
	comp=Z,1.8nm,0.8s,baz=105,slow=7.0,SNR=11						
	comp=Z,1.8nm,0.8s						
MAKZ	Makanchi	75.63	322	P	P	20 07 14.2	+0.7
MAKZ				IAmb	IAmb	20 07 24.9	
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	77.42	329	P	P	20 07 25.0	+1.6
	comp=Z,0.4nm,0.5s,baz=111,slow=7.9,SNR=2.1						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	83.30	180	P	P	20 07 56.3	+1.2
QSPA				IAmb	IAmb	20 08 00.6	
	comp=Z,3.0nm,0.7s						
NRIK	Noril'sk	84.67	343	P	P	20 08 02.6	+0.9

comp=Z,1.3nm,0.4s,baz=148,slow=2.7,SNR=1.9
comp=Z,1.3nm,0.4s
BVAR Borovoye Array 84.90 325 P **P** **20 08 05.5 +2.2**
comp=Z,2.3nm,0.6s,baz=103,slow=6.5,SNR=6.6
comp=Z,2.3nm,0.6s
ILAR Eielson Array 87.73 24 P **P** **20 08 15.9 -1.1**
ILAR Eielson Array 87.73 24 P **P** **20 08 16.1 -0.8**
comp=Z,1.0nm,0.9s,baz=251,slow=6.0,SNR=5.7
comp=Z,1.0nm,0.9s
BMAR Burnt Mountain 89.52 22 P **P** **20 08 24.5 -0.8**
DBIC Dimbokro 147.93 272 PKPbc **PKiKP** **20 15 19.1 +2.4**
comp=Z,4.4nm,1.0s,baz=116,slow=6.4,SNR=4.6

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*NEIC **25** 19:58:41.4±2.0,5.64S±0.10×142.86E±0.09,h10km±2km, mb4.4/12, Error ellipse: s-maj=17.1km s-min=14.5km az=160.0*
*IDC **25** 19:58:44.4±1.2,5.78S×142.95E,h0km,mb3.7/5, mbtmp3.7/8,ML3.9/2, Error ellipse: s-maj=43.2km s-min=27.7km az=81.0*
ISC 25 19:58:41.4±0.6,5.66S±0.07×142.85E±0.08,h10km,n25, σ2s02/21,mb3.8/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**5.67**	**131**	Pn	**Pn**		**20 00 07.8**	**+2.0**
	11nm,0.8s,baz=320,slow=22,SNR=0.9							
MANU	**Manus Island**	**5.76**	**52**	Pn	**Pn**		**20 00 05.4**	**-1.7**
FAKI	**Fak Fak**	**10.91**	**284**	Pn	**Pn**		**20 01 18.5**	**+0.8**
SAUI	**Saumlaki**	**11.69**	**258**	Pn	**Pn**		**20 01 24.1**	**-4.4**
CTAO	**Charters Tower**	**14.72**	**167**	Pn	**Pn**		**20 02 06.8**	**-3.1**
WRA	**Warramunga Arr**	**16.43**	**209**	Pn	**P**		**20 02 34.5**	**-0.6**
	0.5nm,0.3s,baz=27,slow=14,SNR=2.1							
WRA				Lg	Lg		20 07 21.2	
	0.2nm,0.3s,baz=24,slow=35,SNR=2.3							
	1.1nm,0.5s							
TNTI	**Ternate**	**16.72**	**292**		**P**		**20 02 39.9**	**+1.6**
TNTI				IAmb	IAmb		20 02 43.4	
	comp=Z,13nm,0.9s							
SOEI	**Soe**	**18.85**	**256**	P	**Pn**		**20 03 02.8**	**+0.3**
SOEI				IAmb	IAmb		20 03 39.4	
	comp=Z,60nm,1.4s							
AS31	**Alice Springs**	**19.87**	**205**	P	**P**		**20 03 12.1**	**-0.8**
ASAR	**Alice Springs**	**19.87**	**205**	P	**P**		**20 03 12.5**	**-0.4**
ASAR	**Alice Springs**	**19.87**	**205**	P	**Pn**		**20 03 16.8**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=31,slow=12,SNR=4.3							
	comp=Z,4.4nm,0.7s							
MMRI	**Maumere**	**20.66**	**261**	P	**P**		**20 03 22.5**	**+0.9**
MMRI				IAmb	IAmb		20 03 24.0	
	comp=Z,62nm,1.4s							
FITZ	**Fitzroy Crossi**	**20.86**	**232**	P	**P**		**20 03 23.9**	**+0.2**
ARMA	**Armidale**	**25.98**	**162**	P	**P**		**20 04 14.1**	**-0.5**
ARMA				IAmb	IAmb		20 04 43.9	
	comp=Z,22nm,1.3s							
STKA	**Stephens Creek**	**26.11**	**182**	P	**P**		**20 04 16.2**	**+0.6**
STKA				IAmb	IAmb		20 04 37.9	
	comp=Z,3.0nm,1.3s							
MARNC	**Mare, Loyalty**	**29.02**	**125**	P	**P**		**20 04 41.4**	**-0.4**
KNMB	**Chin-men Tao**	**38.26**	**322**	P	**P**		**20 06 01.0**	**-1.0**
QIZ	**Qiongzhong**	**40.73**	**308**	P	**P**		**20 06 21.7**	**-1.0**
INU	**Inuyama**	**41.15**	**353**	P	**P**		**20 06 25.1**	**-0.9**
INU				IAmb	IAmb		20 06 39.2	
	comp=Z,13nm,1.2s							
JTU	**Tsushima**	**41.93**	**343**	P	**P**		**20 06 30.9**	**-1.5**
MKAR	**Makanchi Array**	**74.63**	**322**	P	P		20 10 26.7	+5.7
	comp=Z,0.2nm,0.5s,baz=101,slow=7.8,SNR=2.6							
	comp=Z,0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**76.55**	**329**	P	P		20 10 38.2	+6.4
	comp=Z,0.2nm,0.3s,baz=101,slow=7.6,SNR=1.7							
	comp=Z,0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**78.50**	**324**	P	P		20 10 48.1	+5.3
	comp=Z,0.1nm,0.5s,baz=99,slow=5.3,SNR=1.4							
	comp=Z,0.1nm,0.5s							
BVAR	**Borovoye Array**	**84.08**	**325**	P	P		20 11 18.1	+5.7
	comp=Z,1.6nm,0.7s,baz=122,slow=5.2,SNR=4.5							
	comp=Z,1.6nm,0.7s							
ILAR	**Eielson Array**	**86.81**	**24**	P	**P**		**20 11 30.3**	**+4.6**
	comp=Z,0.4nm,0.7s,baz=253,slow=4.6,SNR=2.9							
	comp=Z,0.4nm,0.7s							

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*IDC **25** 19:58:43.7±1.4,37.67S×73.59W,h0km,mb4.1/4, mbtmp4.0/6,ML4.5/2, Error ellipse: s-maj=37.7km s-min=23.3km az=85.0*
*NEIC **25** 19:58:47.3±2.9,37.70S±0.03×73.1W±0.1,h10km±1km, mb4.4/18, Error ellipse: s-maj=16.1km s-min=4.6km az=91.0*
*GUC **25** 19:58:50.7±0.7,37.72S×73.05W,h56km±12km,ML4.6*
ISC 25 19:58:50.6±0.9,37.66S±0.03×73.16W±0.04,h51km±10km, n89,σ1s55/105,mb4.5/8,9C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BI05	**Punta Hualpn**	**0.91**	**359**		**Pn**		**19 59 08.5**	**+1.4**
BI05				Sn	**Sn**		**19 59 21.2**	**+2.1**
BI05	**Punta Hualpn**	**0.91**	**359**	i	P	**Pn**	**19 59 08.4**	**+1.4**
BI05				eS	**Sn**		**19 59 21.1**	**+1.9**
BI05				IAML			19 59 22.9	
	comp=E,28μm,0.2s							
BI04	**Isla Mocha**	**0.95**	**217**	i	P	**Pn**	**19 59 07.8**	**+0.1**
BI04				eS	**Sn**		**19 59 20.7**	**+0.6**
BI04				IAML			19 59 21.9	
	comp=E,39μm,0.2s							
LC02	**Puerto Saavedr**	**1.15**	**189**			**Pn**	**19 59 10.1**	**-0.2**
LC02				Sn		**Sn**	**19 59 24.9**	**-0.1**
LC02	**Puerto Saavedr**	**1.15**	**189**	i	P	**Pn**	**19 59 10.0**	**-0.3**
LC02				eS		**Sn**	**19 59 23.8**	**-1.1**
BI02	**San Fabin de**	**1.80**	**57**	i	P	**Pn**	**19 59 19.1**	**-0.3**
BI02				eS		**Sn**	**19 59 40.4**	**-0.7**
LR03	**Panguipulli**	**2.08**	**162**			**Pn**	**19 59 22.9**	**0.0**
LR03	**Panguipulli**	**2.08**	**162**	eP		**Pn**	**19 59 23.0**	**0.0**
LR03				eS		**Sn**	**19 59 46.0**	**-1.6**
LR03				IAML			19 59 50.7	
	comp=E,7μm,0.4s							
GO06	**Curarrehue**	**2.34**	**146**	Pn		**Pn**	**19 59 26.5**	**-0.2**
GO06	**Curarrehue**	**2.34**	**146**	i	P	**Pn**	**19 59 26.5**	**-0.2**
GO06				eS		**Sn**	**19 59 52.1**	**-2.1**
ML02	**Panimavida**	**2.35**	**37**	Pn		**Pn**	**19 59 26.9**	**+0.1**
ML02	**Panimavida**	**2.35**	**37**	eP		**Pn**	**19 59 26.9**	**+0.1**
LR05	**Currie**	**2.73**	**161**	Pn		**Pn**	**19 59 32.0**	**+0.2**
LR05	**Currie**	**2.73**	**161**	eP		**Pn**	**19 59 32.2**	**+0.3**
GO05	**Huala**	**2.82**	**21**	Pn		**Pn**	**19 59 33.4**	**+0.2**
GO05	**Huala**	**2.82**	**21**	eP		**Pn**	**19 59 33.4**	**+0.2**
BO03	**Pichilemu**	**3.30**	**17**	eP		**Pn**	**19 59 39.4**	**-0.3**
BO02	**Sierra Bellavi**	**3.44**	**35**			**Pn**	**19 59 41.9**	**+0.1**
BO02	**Sierra Bellavi**	**3.44**	**35**	eP		**Pn**	**19 59 41.9**	**+0.1**
BO02				eS		**Sn**	**20 00 20.4**	**-1.1**
LL03	**Petrohue**	**3.53**	**171**			**Pn**	**19 59 42.0**	**-0.8**
BO01	**Tunca**	**3.67**	**28**	Pn		**Pn**	**19 59 44.1**	**-0.7**
PLCA	**Paso Flores**	**3.68**	**147**	PKIKP		**Pn**	**19 59 45.4**	**+0.3**
PLCA	**Paso Flores**	**3.68**	**147**	Pn		**Pn**	**19 59 45.4**	**+0.3**
	comp=E,11nm,0.3s,baz=322,slow=11,SNR=575							
PLCA				Sn		**Sn**	**20 00 33.5**	**+6.2**
	comp=E,7.3nm,0.3s,baz=225,slow=22,SNR=4.1							
	comp=E,34nm,0.4s							
LL05	**Los Muermos**	**3.75**	**184**			**Pn**	**19 59 45.0**	**-0.9**
MT01	**Popeta**	**4.09**	**23**			**Pn**	**19 59 50.1**	**-0.5**
MT01	**Popeta**	**4.09**	**23**	eP		**Pn**	**19 59 50.1**	**-0.5**
VA05	**Santo Domingo**	**4.18**	**18**			**Pn**	**19 59 50.6**	**-1.2**
VA05	**Santo Domingo**	**4.18**	**18**	i	P	**Pn**	**19 59 50.7**	**-1.2**
BO04	**La Punta**	**4.21**	**30**			**Pn**	**19 59 51.5**	**-0.7**
BO04	**La Punta**	**4.21**	**30**	eP		**Pn**	**19 59 51.5**	**-0.7**
MT09	**Talagante**	**4.25**	**25**	Pn		**Pn**	**19 59 52.2**	**-0.8**
LMEL	**Las Melosas**	**4.50**	**33**			**Pn**	**19 59 56.9**	**+0.5**
MT13	**San Alfonso**	**4.55**	**32**			**Pn**	**19 59 57.3**	**+0.3**
MT13	**San Alfonso**	**4.55**	**32**	eP		**Pn**	**19 59 57.6**	**+0.6**
MT13				eS		**Sn**	**20 00 49.5**	**+0.8**
LL06	**Loncomilla**	**4.57**	**184**	Pn		**Pn**	**19 59 56.5**	**-0.7**
MT03	**Universidad Ad**	**4.68**	**28**			**Pn**	**19 59 57.8**	**-1.0**
MT02	**Curacav**	**4.69**	**21**			**Pn**	**19 59 57.8**	**-1.0**
MT05	**Renca**	**4.69**	**26**			**Pn**	**19 59 57.7**	**-1.2**
MT16	**CCHEN**	**4.74**	**28**			**Pn**	**19 59 58.8**	**-0.7**
LL01	**San Ignacio de**	**4.75**	**173**			**Pn**	**19 59 59.1**	**-0.5**
ROCH	**El Roble**	**4.99**	**21**	eP		**Pn**	**20 00 02.3**	**-0.9**
LL07	**Hotel Espejo d**	**5.18**	**183**			**Pn**	**20 00 03.9**	**-1.6**
VA06	**Catapilco**	**5.31**	**17**	Pn		**Pn**	**20 00 06.3**	**-1.0**
LL02	**Futaleuf**	**5.62**	**170**	Pn		**Pn**	**20 00 11.1**	**-0.4**
H03S1	**Juan Fernandez**	**6.02**	**307**	Pn		**Pn**	**20 00 18.9**	**+2.1**
	baz=96,slow=10							
H03S1				Sn		**Sn**	**20 01 21.0**	**-3.4**
	baz=118,slow=76							
H03S1				T	T		20 06 06.0	
	baz=122,slow=75,SNR=136							
H03S3	**Juan Fernandez**	**6.04**	**308**	Pn		**Pn**	**20 00 19.3**	**+2.3**
	baz=96,slow=10							
H03S3				Sn		**Sn**	**20 01 22.1**	**-2.6**
	baz=118,slow=76							
H03S3				T	T		20 06 13.0	
	baz=122,slow=75,SNR=129							
H03S2	**Juan Fernandez**	**6.04**	**307**	Pn		**Pn**	**20 00 19.0**	**+2.0**
	baz=96,slow=10							
H03S2				Sn		**Sn**	**20 01 22.1**	**-2.7**
	baz=118,slow=76							
H03S2				T	T		20 06 08.4	
	baz=122,slow=75,SNR=163							
VA04	**Juan Fernndez**	**6.11**	**309**	Pn		**Pn**	**20 00 20.6**	**+2.3**
VA04	**Juan Fernndez**	**6.11**	**309**	eP		**Pn**	**20 00 20.3**	**+2.0**
VA04				eS		**Sn**	**20 01 25.2**	**-1.6**
H03N3	**Juan Fernandez**	**6.29**	**310**	Pn		**Pn**	**20 00 23.7**	**+3.1**
H03N3				Sn		**Sn**	**20 01 30.3**	**-0.7**
H03N1	**Juan Fernandez**	**6.30**	**310**	Pn		**Pn**	**20 00 23.7**	**+3.1**
H03N1				Sn		**Sn**	**20 01 29.8**	**-1.3**
H03N2	**Juan Fernandez**	**6.31**	**310**	Pn		Pn	20 00 24.2	+3.5
H03N2				Sn		**Sn**	**20 01 30.3**	**-1.0**
CO02	**Combarbal**	**6.68**	**16**	Pn		**Pn**	**20 00 25.3**	**-1.0**
GO04	**Tololo Observa**	**7.72**	**15**			**Pn**	**20 00 39.5**	**-1.0**
COYC	**Coyhaique**	**7.95**	**175**			**Pn**	**20 00 44.5**	**+1.0**
LCO	**Las Campanas**	**8.86**	**14**			**Pn**	**20 00 53.9**	**-2.4**
AC05	**El Transito**	**9.12**	**16**			**Pn**	**20 00 58.1**	**-1.6**
AY03	**Cochrane**	**9.60**	**178**			**Pn**	**20 01 06.8**	**+0.8**
GO03	**Copiap**	**10.33**	**15**	Pn		**Pn**	**20 01 13.3**	**-2.9**
GO08	**Villa O'Higgin**	**10.81**	**178**	Pn		**Pn**	**20 01 22.6**	**0.0**
AC02	**Maricunga**	**11.31**	**19**	Pn		**Pn**	**20 01 26.6**	**-3.4**
GO02	**Mina Guanaco**	**12.82**	**15**	Pn		**Pn**	**20 01 48.0**	**-2.5**
PB07	**IPOC Station P**	**16.12**	**11**	Pn		**Pn**	**20 02 34.1**	**+0.1**
PB09	**IPOC Station P**	**16.16**	**13**	Pn		**Pn**	**20 02 32.3**	**-2.2**
PB09				IAmb	IAmb		20 02 57.8	
	comp=Z,19nm,1.2s							
MG03	**Isla Dawson**	**16.30**	**174**	P		**P**	**20 02 39.5**	**+1.4**
MG03				IAmb	IAmb		20 02 40.6	
	comp=Z,49nm,1.1s							
PB01	**IPOC Station P**	**16.86**	**12**	Pn		**Pn**	**20 02 43.9**	**+0.7**
PB01				IAmb	IAmb		20 02 58.1	
	comp=Z,16nm,0.9s							
PLTB	**Pedras Altas**	**17.11**	**76**	Pn		**Pn**	**20 02 44.0**	**-2.2**
PLTB				IAmb	IAmb		20 03 02.6	
	comp=Z,24nm,1.4s							
TA01	**Diego Aracena**	**17.23**	**9**	Pn		**Pn**	**20 02 47.0**	**-0.6**
CPUP	**Villa Florida**	**17.52**	**54**	Pn		**Pn**	**20 02 50.2**	**-1.0**
CPUP	**Villa Florida**	**17.52**	**54**	P		**P**	**20 02 52.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=15,SNR=2.5							
	comp=Z,1.2nm,0.5s							
PB11	**IPOC Station P**	**18.09**	**11**			**Pn**	**20 02 55.1**	**-3.3**
PB11				IAmb	IAmb		20 03 19.1	
	comp=Z,16nm,0.9s							
ITAB	**Concordia**	**20.52**	**66**	P		**P**	**20 03 22.3**	**-2.3**
ITAB				IAmb	IAmb		20 03 27.5	
	comp=Z,13nm,0.5s							
TRCB	**Terra Rica**	**23.04**	**56**	P		**P**	**20 03 48.6**	**-2.9**
SMAI	**San Martin Ant**	**30.71**	**176**	P		**P**	**20 04 59.4**	**-0.9**
BDFB	**Brasilia**	**31.22**	**52**	P		**P**	**20 05 07.0**	**+1.6**
BDFB				IAmb	IAmb		20 05 35.3	
	comp=Z,5.5nm,1.1s							
BDFB	**Brasilia**	**31.22**	**52**	P		**P**	**20 05 07.8**	**+2.4**
	comp=Z,1.6nm,0.5s,baz=216,slow=9.5,SNR=4.0							
	comp=Z,1.6nm,0.5s							
OTAV	**Otavalo**	**38.02**	**351**	P		**P**	**20 06 04.9**	**+0.4**
BELA	**Belgrano 2**	**43.46**	**169**	P		**P**	**20 06 47.7**	**-0.4**
BELA				IAmb	IAmb		20 07 11.9	
	comp=Z,12nm,1.5s							
VNA3	**Neumayer Olymp**	**46.35**	**156**	P		**P**	**20 07 12.0**	**+0.8**
	comp=Z,9.5nm,0.7s							
VNA2	**Neumayer--Watz**	**47.03**	**156**	P		**P**	**20 07 17.1**	**+0.7**
	comp=Z,6.6nm,0.7s,baz=284,slow=9.4							
SNAA	**Sanae**	**48.58**	**157**	P		**P**	**20 07 28.9**	**+0.3**
SNAA				IAmb	IAmb		20 07 30.1	
	comp=Z,7.4nm,1.0s							
SNAA	**Sanae**	**48.58**	**157**	P		**P**	**20 07 29.2**	**+0.7**
	comp=Z,99nm,0.7s							
SNAA	**Sanae**	**48.58**	**157**	P		**P**	**20 07 28.8**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=275,slow=7.5,SNR=8.8							
	comp=Z,4.7nm,0.8s							
TROLL	**Troll, Antarti**	**50.27**	**157**	P		**P**	**20 07 42.3**	**+0.8**
	comp=Z,181nm,0.5s							
QSPA	**South Pole Qui**	**52.59**	**180**	P		**P**	**20 07 59.2**	**+0.3**
QSPA				IAmb	IAmb		20 08 26.1	
	comp=Z,8.1nm,1.3s							
QSPA	**South Pole Qui**	**52.59**	**180**	P		**P**	**20 07 58.7**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=337,slow=2.0,SNR=7.5							
	comp=Z,2.5nm,0.6s							
MPOM	**Morne Pois Mar**	**53.10**	**15**	P		**P**	**20 08 04.5**	**+1.6**
TXAR	**Lajitas Array**	**72.51**	**332**	P		**P**	**20 10 11.9**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=165,slow=11,SNR=2.6							
	comp=Z,0.2nm,0.6s							
BOSA	**Boshof**	**79.18**	**118**	P		P	20 10 56.5	+6.1
	comp=Z,1.5nm,0.4s,baz=240,slow=4.3,SNR=8.7							

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*IDC **25** 19:59:49.8±1.3,6.52S×142.86E,h0km,mb3.9/4, mbtmp3.9/8, ML3.5/3, Error ellipse: s-maj=47.9km s-min=25.4km az=73.0*
ISC 25 19:59:54.7±1.2,6.7S±0.1×143.0E±0.1,h35km,n8,σ1s68/9, mb3.8/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**4.95**	**123**	Pn		**Pn**	**20 01 08.8**	**+2.2**
	12nm,0.5s,baz=302,slow=9.5,SNR=2.2							
PMG				Sn		**Sn**	**20 02 00.1**	**-2.5**
	1.4nm,0.3s,baz=258,slow=20,SNR=1.4							
CTA	**Charters Tower**	**13.69**	**167**	Pn		**Pn**	**20 03 06.2**	**-0.3**
	0.2nm,0.3s,baz=299,slow=13,SNR=2.4							
	7.8nm,1.1s							
WRA	**Warramunga Arr**	**15.61**	**212**	Pn		**Pn**	**20 03 31.1**	**-1.1**
	0.2nm,0.3s,baz=34,slow=14,SNR=1.5							
	2.0nm,0.8s							
ASAR	**Alice Springs**	**18.99**	**206**	P		**Pn**	**20 04 15.7**	**+1.3**
	0.2nm,0.3s,baz=31,slow=12,SNR=2.0							
	2.2nm,0.8s							
MKAR	**Makanchi Array**	**75.52**	**322**	P		**P**	**20 11 35.7**	**+0.1**
	1.2nm,0.8s,baz=103,slow=7.4,SNR=8.3							
	1.2nm,0.8s							
ZALV	**Zalesovo Beam**	**77.50**	**329**	P		**P**	**20 11 45.2**	**-1.4**
	0.4nm,0.5s,baz=116,slow=6.7,SNR=2.3							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**79.41**	**324**	P		**P**	**20 11 56.5**	**-0.7**
	0.3nm,0.6s,baz=112,slow=4.5,SNR=2.8							
	0.3nm,0.6s							
BVAR	**Borovoye Array**	**84.99**	**325**	P		**P**	**20 12 25.7**	**-0.7**
	2.6nm,0.9s,baz=104,slow=6.3,SNR=5.4							
	2.6nm,0.9s							

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*IDC **25** 20:02:53.2±0.8,6.42S×143.75E,h0km,mb4.3/15, mbtmp4.3/17,ML1.8/1, Error ellipse: s-maj=29.2km s-min=19.3km az=74.0*
ISC 25 20:02:58.2±0.6,6.51S±0.09×143.7E±0.1,h35km,n18, σ0s96/19,mb4.3/15,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**4.51**	**130**	Pn		**Pn**	**20 04 03.8**	**-0.2**
	3.6nm,0.3s,baz=324,slow=19,SNR=3.2							
PMG				Sn		**Sn**	**20 04 55.4**	**+0.2**
	5.2nm,0.3s,baz=0.0,slow=20,SNR=2.0							
	13nm,0.5s							
WRA	**Warramunga Arr**	**16.14**	**213**	Pn		**Pn**	**20 06 40.0**	**-2.5**
	0.7nm,0.3s,baz=23,slow=14,SNR=5.7							
ASAR	**Alice Springs**	**19.47**	**208**	P		**P**	**20 07 24.4**	**+2.1**
	13nm,0.6s,baz=35,slow=9.9,SNR=19							
KSRS	**Korea Array**	**46.13**	**343**	P		**P**	**20 11 19.6**	**+0.4**
	6.1nm,0.9s,baz=164,slow=9.6,SNR=17							
	6.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**50.60**	**300**	P		**P**	**20 11 54.5**	**+0.4**
	1.4nm,0.7s,baz=123,slow=5.6,SNR=14							
	1.4nm,0.7s							
USRK	**Ussuriysk Ar.**	**51.56**	**349**	P		**P**	**20 12 01.1**	**+0.4**
	8.2nm,0.8s,baz=179,slow=8.5,SNR=19							
	8.2nm,0.8s							
KLR	**Kul'dur**	**56.47**	**351**	P		**P**	**20 12 37.0**	**+0.5**
	3.3nm,0.9s,baz=191,slow=5.9,SNR=12							
	3.3nm,0.9s							
PETK	**Petropavlovsk-**	**60.57**	**10**	P		**P**	**20 13 05.6**	**+0.5**
	3.2nm,0.8s,baz=162,slow=5.3,SNR=6.0							
	3.2nm,0.8s							
SONM	**Songino Array**	**63.28**	**333**	P		**P**	**20 13 23.6**	**0.0**
	0.3nm,0.3s,baz=168,slow=7.6,SNR=4.6							
	0.3nm,0.3s							
SEY	**Seymchan**	**69.56**	**4**	P		**P**	**20 14 02.7**	**-0.5**
	0.8nm,0.5s,baz=227,slow=8.9,SNR=5.1							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**75.80**	**322**	P		**P**	**20 14 40.5**	**-0.2**
	2.7nm,0.9s,baz=97,slow=8.6,SNR=16							
	2.7nm,0.9s							
ZALV	**Zalesovo Beam**	**77.69**	**329**	P		**P**	**20 14 50.9**	**-0.4**
	1.1nm,0.6s,baz=108,slow=4.8,SNR=7.0							
	1.1nm,0.6s							
TIXI	**Tiksi**	**78.61**	**355**	P		**P**	**20 14 54.7**	**-1.2**
	1.3nm,0.3s,baz=151,slow=4.8,SNR=6.6							
	1.3nm,0.3s							
KURBB	**Kurchatov Arra**	**79.66**	**324**	P		**P**	**20 15 02.2**	**+0.1**
	1.7nm,0.9s,baz=111,slow=4.5,SNR=10							
	1.7nm,0.9s							
QSPA	**South Pole Qui**	**83.47**	**180**	P		**P**	**20 15 22.8**	**+0.6**
	2.5nm,1.0s,baz=342,slow=9.6,SNR=3.7							
	2.5nm,1.0s							
NRIK	**Noril'sk**	**84.75**	**343**	P		**P**	**20 15 28.8**	**+0.4**
	5.8nm,0.6s,baz=123,slow=4.3,SNR=11							
	5.8nm,0.6s							
BVAR	**Borovoye Array**	**85.23**	**325**	P		**P**	**20 15 31.7**	**+0.5**
	3.3nm,0.7s,baz=111,slow=8.3,SNR=15							
	3.3nm,0.7s							
ILAR	**Eielson Array**	**87.26**	**24**	P		**P**	**20 15 40.2**	**-0.7**
	1.2nm,0.8s,baz=254,slow=5.9,SNR=9.5							
	1.2nm,0.8s							

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*NEIC **25** 20:04:21.5±2.6,5.70S±0.09×142.87E±0.05,h10km±1km, mb4.2/8, Error ellipse: s-maj=15.3km s-min=8.4km az=355.0*
*IDC **25** 20:04:22.8±2.0,5.83S×142.96E,h0km,mb3.8/4, mbtmp3.9/6,ML3.8/2, Error ellipse: s-maj=78.1km s-min=31.8km az=105.0*
ISC 25 20:04:22.7±0.8,5.9S±0.1×142.77E±0.09,h10km,n21, σ2s06/18,mb4.1/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**5.59**	**129**	Pn		**Pn**	**20 05 45.8**	**-0.2**
PMG	**Port Moresby**	**5.59**	**129**	Sn		**Sn**	**20 06 51.6**	**+1.3**
	4.4nm,0.3s,baz=330,slow=14,SNR=2.0							
MANU	**Manus Island**	**5.96**	**50**	Pn		Pn	20 05 48.1	-3.1
COEN	**Coen**	**8.04**	**177**	Pn		**Pn**	**20 06 21.8**	**+2.0**
FAKI	**Fak Fak**	**10.89**	**285**	Pn		**Pn**	**20 06 58.4**	**-0.4**
WRAB	**Tennant Creek**	**16.19**	**210**	Pn		**Pn**	**20 08 10.9**	**+0.3**
WRAB				IAmb	IAmb		20 08 20.4	
	comp=Z,19nm,1.0s							
WRA	**Warramunga Arr**	**16.21**	**210**	Pn		**Pn**	**20 08 07.8**	**-2.9**
WRA	**Warramunga Arr**	**16.21**	**210**	Pn		**Pn**	**20 08 12.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=27,slow=11,SNR=1.9							
	comp=Z,1.9nm,0.6s							
ASAR	**Alice Springs**	**19.64**	**205**	P		**Pn**	**20 08 55.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=31,slow=10,SNR=3.5							
	comp=Z,3.6nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.67**	**233**	P		**P**	**20 09 01.7**	**-1.3**
TOLI2	**Tolitoli**	**23.03**	**287**	P		**P**	**20 09 26.8**	**-1.5**
TOLI2				IAmb	IAmb		20 09 44.6	
	comp=Z,5.7nm,0.9s							
KOUNC	**Koumac, New Ca**	**25.47**	**127**	P		**P**	**20 09 47.3**	**-3.9**
FORT	**Forrest**	**28.37**	**207**	P		**P**	**20 10 16.0**	**-1.3**
VNDA	**Vanda**	**72.31**	**176**	P		**P**	**20 15 48.4**	**+0.2**
VNDA				IAmb	IAmb		20 15 59.5	
	comp=Z,5.6nm,1.3s							
MKAR	**Makanchi Array**	**74.76**	**322**	P		P	20 16 00.4	-2.7
MKAR	**Makanchi Array**	**74.76**	**322**	P		**P**	**20 16 05.9**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=106,slow=6.3,SNR=1.8							
	comp=Z,0.3nm,0.6s							
MAKZ	**Makanchi**	**74.96**	**322**	P		**P**	**20 16 02.4**	**-1.9**
MAKZ				IAmb	IAmb		20 16 08.2	
	comp=Z,2.4nm,1.1s							
KURBB	**Kurchatov Arra**	**78.64**	**324**	P		**P**	**20 16 26.7**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=118,slow=4.7,SNR=2.4							
	comp=Z,0.3nm,0.6s

comp=Z,1.3nm,0.8s,baz=154,slow=8.4,SNR=3.4
comp=Z,1.3nm,0.8s
CMAR Chiang Mai Arr 49.46 300 P P 20 16 34.4 +0.4
comp=Z,1.8nm,0.8s,baz=124,slow=6.1,SNR=10
comp=Z,1.8nm,0.8s
USRK Ussuriysk Ar. 50.91 350 P P 20 16 43.1 -1.3
comp=Z,1.3nm,0.6s,baz=163,slow=5.6,SNR=2.9
comp=Z,1.3nm,0.6s
KLR Kul'dur 55.84 351 P P 20 17 21.1 +0.5
comp=Z,2.1nm,0.8s,baz=199,slow=1.4,SNR=6.1
comp=Z,2.1nm,0.8s
PEA0B Petropavlovsk- 60.28 10 P P 20 17 51.4 -0.2
PETK Petropavlovsk- 60.28 10 P P 20 17 52.5 +0.8
PETK Petropavlovsk- 60.28 10 P P 20 17 52.1 +0.4
comp=Z,3.1nm,0.8s,baz=171,slow=6.4,SNR=5.8
comp=Z,3.1nm,0.8s
AMKA Amchitka 65.25 24 P P 20 18 22.2 -2.6
SEY Seymchan 69.17 5 P P 20 18 49.6 +0.2
comp=Z,1.5nm,0.8s,baz=236,slow=18,SNR=2.7
comp=Z,1.5nm,0.8s
MK31 Makanchi Array 74.78 322 P P 20 19 23.5 0.0
MKAR Makanchi Array 74.78 322 P P 20 19 23.2 -0.3
MKAR Makanchi Array 74.78 322 P P 20 19 24.3 +0.8
comp=Z,1.3nm,0.7s,baz=104,slow=6.7,SNR=7.9
comp=Z,1.3nm,0.7s
MAKZ Makanchi 74.98 322 P P 20 19 24.9 +0.2
ZALV Zalesovo Beam 76.75 329 P P 20 19 34.6 +0.1
comp=Z,0.8nm,0.6s,baz=122,slow=8.6,SNR=2.7
comp=Z,0.8nm,0.6s
KURBB Kurchatov Arra 78.67 324 P P 20 19 45.8 +0.5
comp=Z,0.6nm,0.6s,baz=118,slow=4.5,SNR=7.0
comp=Z,0.6nm,0.6s
M14K Bethel 79.26 24 P P 20 19 49.3 +1.0
L14K Kuka Creek 79.30 24 P P 20 19 49.0 +0.6
L14K IAmb IAmb 20 19 55.7
comp=Z,11nm,1.0s
K15K Wolf Creek Mou 80.28 23 P P 20 19 54.1 +0.2
L16K Owhat River 80.79 24 P P 20 19 56.8 +0.3
L16K IAmb IAmb 20 19 58.3
comp=Z,7.1nm,1.1s
F15K North Star Dit 81.13 19 P P 20 19 57.4 -1.0
N17K Nushagak Hills 81.15 26 P P 20 19 57.5 -1.0
N17K IAmb IAmb 20 20 06.9
comp=Z,9.8nm,1.1s
J16K Anvik River 81.18 22 P P 20 19 58.3 -0.3
J16K IAmb IAmb 20 20 07.3
comp=Z,8.2nm,1.1s
N18K Kilae Creek 81.79 26 P P 20 20 01.4 -0.5
J18K Innoko River 82.78 23 P P 20 20 06.9 -0.1
J18K IAmb IAmb 20 20 12.9
comp=Z,6.2nm,1.3s
J19K Poorman 83.46 23 P P 20 20 10.7 +0.2
J19K IAmb IAmb 20 20 11.7
comp=Z,14nm,1.4s
QSPA South Pole Qui 83.94 180 P P 20 20 12.8 -0.4
QSPA IAmb IAmb 20 20 17.0
comp=Z,6.7nm,1.0s
QSPA South Pole Qui 83.94 180 P P 20 20 14.1 +0.9
comp=Z,4.6nm,0.7s,baz=320,slow=1.0,SNR=13
comp=Z,4.6nm,0.7s
NRIK Noril'sk 83.99 343 P P 20 20 13.6 +0.4
comp=Z,2.3nm,0.4s,baz=96,slow=8.8,SNR=4.1
comp=Z,2.3nm,0.4s
J20K Nowinta River 84.12 23 P P 20 20 13.7 -0.2
J20K IAmb IAmb 20 20 22.9
comp=Z,5.7nm,1.1s
BVAR Borovoye Array 84.25 325 P P 20 20 15.9 +1.1
comp=Z,6.1nm,0.7s,baz=111,slow=6.4,SNR=16
comp=Z,6.1nm,0.7s
BRVK Borovoye 84.32 325 P P 20 20 14.1 -1.0
BRVK IAmb IAmb 20 20 23.8
comp=Z,6.4nm,0.9s
E19K Redstone River 84.57 20 P P 20 20 16.0 -0.2
E19K IAmb IAmb 20 20 24.6
comp=Z,6.3nm,1.1s
RC01 Rabbit Creek A 84.68 27 P P 20 20 15.6 -1.2
D19K Kuna River 84.81 19 P P 20 20 14.9 -2.5
D19K IAmb IAmb 20 20 29.1
comp=Z,10nm,1.3s
SML Sawmill 85.58 26 P P 20 20 21.9 +0.6
RND Reindeer 85.94 25 P P 20 20 22.4 -0.8
RND IAmb IAmb 20 20 30.4
comp=Z,7.2nm,0.9s
CCB Clear Creek Bu 86.83 24 P P 20 20 26.2 -1.1
CCB IAmb IAmb 20 20 34.0
comp=Z,7.4nm,1.1s
IL31 87.24 24 P P 20 20 28.9 -0.5
IL31 IAmb IAmb 20 20 36.7
comp=Z,3.5nm,0.9s
ILAR Eielson Array 87.24 24 P P 20 20 27.3 -2.1
ILAR Eielson Array 87.24 24 P P 20 20 28.9 -0.6
comp=Z,2.0nm,0.7s,baz=259,slow=4.7,SNR=18
comp=Z,2.0nm,0.7s
J25K Salcha River, 87.80 24 P P 20 20 31.4 -0.8
J25K IAmb IAmb 20 20 40.0
comp=Z,6.0nm,1.1s
C23K Itkillik River 87.81 19 P P 20 20 33.4 +1.4
BCAR Beaver Creek A 88.86 26 P P 20 20 37.3 +0.1
BMAR Burnt Mountain 89.01 22 P P 20 20 38.6 +0.8
ABKAR Akbulak array 89.75 319 P P 20 20 37.9 -3.8
M29M Somme Creek 90.19 27 P P 20 20 44.1 +0.5
L29M L29M 90.49 27 P P 20 20 43.7 -1.1
K29M Barlow Dome 90.91 26 P P 20 20 46.4 -0.5
K29M IAmb IAmb 20 20 55.6
comp=Z,6.0nm,1.1s
J30M Hart River 91.56 25 P P 20 20 49.7 -0.2
TUDR 111.64 317 ⇓P Pdif P 20 22 16.7 -3.6
KAN13 South Haven SW 117.35 51 PKPdf PKPdf 20 26 27.7 -1.5
EKA Eskdalemuir Ar 123.74 337 PKP PKiKP 20 26 42.0 +0.8
comp=Z,0.5nm,0.5s,baz=52,slow=4.6,SNR=2.1
DBIC Dimbokro 147.67 273 PKPbc **PKiKP 20 27 30.6 -0.3**
comp=Z,4.2nm,0.7s,baz=100,slow=5.4,SNR=4.4

*IDC **25** 20:09:26.8±0.8,6.˚19S×142.˚93E,h0km,mb4.3/14, mbtmp4.3/15,ML4.4/2,Error ellipse: s-maj=38.6km s-min=14.8km az=85.0*
*NEIC **25** 20:09:28.9±2.0,6.˚27S±0.˚09×142.˚87E±0.˚05,h10km±1km, mb4.8/40,Error ellipse: s-maj=15.9km s-min=5.0km az=26.0*
ISC 25 20:09:28.8±0.5,**6.˚26S**±0.˚06×**142.˚75E**±0.˚09,**h10**km,**n64,**
σ1§**21**/59,**mb4.7**/28,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**7.66**	**177**	Pn	**Pn**	**20 11 19.2**	**-1.4**
FAKI	**Fak Fak**	**10.98**	**287**	Pn	**Pn**	**20 12 06.9**	**+0.7**
SAUI	**Saumlaki**	**11.49**	**261**	Pn	**Pn**	**20 12 13.6**	**+0.4**
MTN	**Manton Dam**	**13.19**	**239**	Pn	**Pn**	**20 12 35.3**	**-1.1**
CTA	**Charters Tower**	**14.16**	**166**	Pn	**Pn**	**20 12 50.6**	**+1.0**
CTA	0.2nm,0.3s,baz=346,slow=8.3,SNR=2.1			Sn	**Sn**	**20 15 28.7**	**+1.7**
CTA	0.3nm,0.3s,baz=68,slow=19,SNR=2.1			Lg	Lg	20 16 57.8	
	0.7nm,0.3s,baz=240,slow=17,SNR=2.5 5.5nm,0.9s						
WB0	**Warramunga Arr**	**15.70**	**210**	Pn	**Pn**	**20 13 09.1**	**-1.1**
WB0				IAmb	IAmb	20 13 22.8	
	comp=Z,32nm,0.8s						
WRAB	**Tennant Creek**	**15.86**	**210**	Pn	**Pn**	**20 13 10.0**	**-2.4**
WRAB				IAmb	IAmb	20 13 20.9	
	comp=Z,44nm,0.8s						
WB2	**Warramunga Arr**	**15.87**	**210**	Pn	**Pn**	**20 13 11.2**	**-1.2**
WB2				IAmb	IAmb	20 13 21.0	
	comp=Z,57nm,0.8s						
WRA	**Warramunga Arr**	**15.87**	**210**	Pn	**Pn**	**20 13 09.5**	**-3.0**
WRA	**Warramunga Arr**	**15.87**	**210**	Pn	**Pn**	**20 13 09.9**	**-2.6**
WRA	comp=Z,1.4nm,0.3s,baz=27,slow=13,SNR=2.6			Lg	Lg	20 17 53.5	
	comp=Z,0.6nm,0.3s,baz=41,slow=29,SNR=2.4						
SOEI	**Soe**	**18.63**	**258**	P	**P**	**20 13 49.1**	**+2.2**
AS31	**Alice Springs**	**19.29**	**205**	Pn	**P**	**20 13 56.3**	**+2.3**
AS31				IAmb	IAmb	20 13 58.6	
	comp=Z,51nm,0.7s						
ASAR	**Alice Springs**	**19.29**	**205**	Pn	**P**	**20 13 55.2**	**+1.2**
ASAR	**Alice Springs**	**19.29**	**205**	P	**P**	**20 13 55.9**	**+1.9**
	comp=Z,9.3nm,0.3s,baz=32,slow=9.7,SNR=48						
FITZ	**Fitzroy Crossi**	**20.43**	**233**	P	**P**	**20 14 07.0**	**+0.6**
MMRI	**Maumere**	**20.48**	**262**	P	**P**	**20 14 06.5**	**-0.5**
EIDS	**Eidsvold**	**20.61**	**158**	P	**P**	**20 14 07.5**	**-0.9**
TOLI2	**Tolitoli**	**23.12**	**288**	P	**P**	**20 14 35.7**	**+0.3**
TOLI2				IAmb	IAmb	20 14 37.6	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**25.51**	**182**	P	**P**	**20 14 55.6**	**-1.9**
STKA	**Stephens Creek**	**25.51**	**182**	P	**P**	**20 14 57.5**	**-0.1**
	comp=Z,9.1nm,0.7s,baz=344,slow=8.9,SNR=8.0						
	comp=Z,9.1nm,0.7s						
PSA00	**Pilbara Seismi**	**26.88**	**233**	P	**P**	**20 15 10.1**	**-0.1**
PSA00	**Pilbara Seismi**	**26.88**	**233**	P	**P**	**20 15 09.4**	**-0.7**
PSA00				IAmb	IAmb	20 15 15.7	
	comp=Z,24nm,1.1s						
BBOO	**Buckleboo**	**27.14**	**192**	P	**P**	**20 15 12.0**	**-0.3**
BBOO				IAmb	IAmb	20 15 27.3	
	comp=Z,24nm,1.1s						
LIFNC	**LIFOU**	**27.78**	**124**	P	**P**	**20 15 16.8**	**-1.3**
UGM	**Wanagama**	**32.02**	**265**	P	**P**	**20 15 54.4**	**-1.5**
MJAR	**Matsushiro Arr**	**42.79**	**355**	P	P	20 17 25.1	-1.6
	comp=Z,2.1nm,0.9s,baz=182,slow=9.2,SNR=3.8						
	comp=Z,2.1nm,0.9s						
RPSI	**Rantau Prapat**	**44.66**	**280**	P	**P**	**20 17 42.2**	**0.0**
RPSI				IAmb	IAmb	20 17 43.3	
	comp=Z,14nm,1.0s						
KSRS	**Korea Array**	**45.64**	**343**	P	**P**	**20 17 50.1**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=162,slow=9.5,SNR=5.0						
	comp=Z,2.9nm,0.9s						
JTM	**Tenmabayashi**	**46.84**	**358**	P	P	20 17 57.2	-1.7
PHRA	**Phrae**	**48.61**	**301**	P	**P**	**20 18 13.0**	**-0.1**
CRAI	**Chiangrai**	**49.28**	**303**	P	**P**	**20 18 16.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**49.69**	**300**	P	**P**	**20 18 21.1**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=118,slow=5.8,SNR=9.6						
	comp=Z,2.0nm,0.8s						
CHTO	**Chiang Mai**	**49.85**	**301**	P	**P**	**20 18 22.1**	**-0.5**
USA0B	**Ussuriysk Arra**	**51.16**	**350**	P	**P**	**20 18 32.1**	**+0.1**
USA0B				IAmb	IAmb	20 18 44.1	
	comp=Z,8.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.16**	**350**	P	**P**	**20 18 32.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**51.16**	**350**	P	**P**	**20 18 31.9**	**-0.1**
	comp=Z,4.6nm,0.9s,baz=176,slow=7.9,SNR=4.5						
	comp=Z,4.6nm,0.9s						
HHC	**Hu-ho-hao-te**	**54.93**	**331**	*e*P	P	20 18 53.5	-6.6
LZH	**Lanzhou**	**55.73**	**322**	*e*P	**P**	**20 19 08.0**	**+2.0**
LZH				sP	sP	20 19 20.3	+9.3
LZH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KLR	**Kul'dur**	**56.09**	**351**	P	**P**	**20 19 07.1**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=138,slow=14,SNR=1.9						
	comp=Z,1.1nm,0.7s						
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**20 19 38.7**	**-0.1**
	comp=Z,4.4nm,0.9s,baz=186,slow=12,SNR=3.7						
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**62.65**	**333**	P	**P**	**20 19 53.3**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=152,slow=6.4,SNR=1.7						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	**71.94**	**176**	P	**P**	**20 20 54.3**	**+2.3**
MKAR	**Makanchi Array**	**75.05**	**322**	P	**P**	**20 21 11.4**	**+0.6**
MKAR	**Makanchi Array**	**75.05**	**322**	P	**P**	**20 21 11.3**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=105,slow=7.8,SNR=5.9						
	comp=Z,1.9nm,0.8s						
TIXI	**Tiksi**	**78.29**	**356**	P	**P**	**20 21 27.9**	**-0.6**
KURBB	**Kurchatov Arra**	**78.94**	**324**	P	**P**	**20 21 33.0**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=116,slow=4.7,SNR=6.9						
	comp=Z,1.7nm,0.9s						
M14K	**Bethel**	**79.42**	**24**	P	**P**	**20 21 35.0**	**+0.1**
L14K	**Kuka Creek**	**79.46**	**24**	P	**P**	**20 21 34.9**	**-0.3**
QSPA	**South Pole Qui**	**83.71**	**180**	P	**P**	**20 21 57.2**	**-0.7**
QSPA				IAmb	IAmb	20 21 58.4	
	comp=Z,6.7nm,0.8s						
QSPA	**South Pole Qui**	**83.71**	**180**	P	**P**	**20 21 57.7**	**-0.2**
	comp=Z,7.5nm,0.9s,baz=322,slow=1.7,SNR=7.7						
	comp=Z,7.5nm,0.9s						
K20K	**Telida**	**83.94**	**24**	P	**P**	**20 21 58.9**	**0.0**
K20K				IAmb	IAmb	20 22 02.5	
	comp=Z,6.2nm,1.1s						
H19K	**Roundabout Mou**	**84.05**	**21**	P	**P**	**20 21 59.6**	**+0.3**
H19K				IAmb	IAmb	20 22 03.1	
	comp=Z,5.4nm,0.9s						
G19K	**Purcell Mounta**	**84.13**	**21**	P	**P**	**20 22 00.7**	**+0.9**
G19K				IAmb	IAmb	20 22 21.1	
	comp=Z,9.0nm,1.4s						
NRIK	**Noril'sk**	**84.25**	**343**	P	**P**	**20 21 59.6**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=153,slow=2.8,SNR=4.0						
	comp=Z,1.3nm,0.3s						
J20K	**Nowinta River**	**84.28**	**23**	P	**P**	**20 22 01.0**	**+0.4**
BVAR	**Borovoye Array**	**84.51**	**325**	P	**P**	**20 22 01.1**	**-0.9**
	comp=Z,9.1nm,0.8s,baz=116,slow=6.6,SNR=8.4						
	comp=Z,9.1nm,0.8s						
E19K	**Redstone River**	**84.74**	**20**	P	**P**	**20 22 02.5**	**-0.3**
E19K				IAmb	IAmb	20 22 06.1	
	comp=Z,5.9nm,1.0s						
D19K	**Kuna River**	**84.98**	**19**	P	**P**	**20 22 03.2**	**-0.9**
D19K				IAmb	IAmb	20 22 10.0	
	comp=Z,6.9nm,1.1s						
F20K	**Avaraart Lake**	**85.05**	**20**	P	**P**	**20 22 04.6**	**+0.2**
I21K	**Tanana**	**85.56**	**23**	P	**P**	**20 22 06.8**	**-0.2**
I21K				IAmb	IAmb	20 22 10.0	
	comp=Z,6.4nm,1.2s						
CCB	**Clear Creek Bu**	**86.99**	**24**	IAmb	IAmb	20 22 16.0	
	comp=Z,6.5nm,1.0s						
IL31		**87.40**	**24**	IAmb	IAmb	20 22 17.9	
	comp=Z,7.3nm,1.1s						
ILAR	**Eielson Array**	**87.40**	**24**	P	P	20 22 14.3	-1.8
	comp=Z,2.5nm,0.7s,baz=253,slow=4.9,SNR=11						
	comp=Z,2.5nm,0.7s						
DBIC	**Dimbokro**	**147.81**	**273**	PKPbc	**PKPdf**	**20 29 14.8**	**+2.5**
	comp=Z,12nm,1.0s,baz=65,slow=3.6,SNR=6.0						

*IDC **25** 20:10:35.6±0.8,6.˚15S×143.˚10E,h0km,mb4.5/14, mbtmp4.5/14,ML5.3/1,Error ellipse: s-maj=37.4km s-min=17.7km az=91.0*
*NEIC **25** 20:10:36.9±2.3,6.˚41S±0.˚08×142.˚95E±0.˚05,h10km±1km, mb4.9/42,Error ellipse: s-maj=15.8km s-min=4.2km az=148.0*
ISC 25 20:10:36.2±0.5,**6.˚37S**±0.˚07×**142.˚90E**±0.˚09,**h10**km,**n65,**
σ1§**46**/65,**mb4.8**/33,**3C**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.19**	**126**		**Pn**	**20 11 52.0**	**-1.9**
MANU	**Manus Island**	**6.20**	**46**	Pn	**Pn**	**20 12 06.3**	**-1.5**
WRA	**Warramunga Arr**	**15.84**	**211**	Pn	**Pn**	**20 14 16.8**	**-2.7**
WRA	**Warramunga Arr**	**15.84**	**211**	Pn	**Pn**	**20 14 20.5**	**+1.0**
	2.1nm,0.3s,baz=37,slow=13,SNR=3.6						
WRA				Lg	Lg	20 19 07.6	
	baz=33,slow=28						
AS31	**Alice Springs**	**19.24**	**206**		**P**	**20 15 00.6**	**-0.3**
ASAR	**Alice Springs**	**19.25**	**206**		**P**	**20 14 57.5**	**-3.4**
ASAR	**Alice Springs**	**19.25**	**206**	P	**Pn**	**20 15 05.4**	**+3.5**
	8.0nm,0.3s,baz=32,slow=10,SNR=18						
FITZ	**Fitzroy Crossi**	**20.47**	**234**	P	**P**	**20 15 10.2**	**-4.1**
MMRI	**Maumere**	**20.60**	**262**	P	**P**	**20 15 14.0**	**-1.7**
MMRI				IAmb	IAmb	20 15 23.1	
	comp=Z,49nm,0.9s						
KAPI	**Kappang**	**23.07**	**272**	P	**P**	**20 15 39.8**	**-2.4**
KAPI				IAmb	IAmb	20 15 45.6	
	comp=Z,24nm,0.8s						
TOLI2	**Tolitoli**	**23.29**	**288**	P	**P**	**20 15 43.8**	**-0.7**
TOLI2				IAmb	IAmb	20 15 46.5	
	comp=Z,29nm,1.0s						
KOUNC	**Koumac, New Ca**	**25.08**	**126**	P	**P**	**20 15 59.5**	**-1.6**
STKA	**Stephens Creek**	**25.40**	**183**	P	**P**	**20 16 07.2**	**+3.3**
	comp=Z,14nm,0.9s,baz=339,slow=12,SNR=3.8						
	comp=Z,14nm,0.9s						
TWG	**Pinlang**	**36.02**	**324**	P	**P**	**20 17 37.0**	**-0.8**
MJAR	**Matsushiro Arr**	**42.91**	**354**	P	**P**	**20 18 34.3**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=179,slow=7.9,SNR=4.8						
	comp=Z,1.7nm,0.8s						
KSRS	**Korea Array**	**45.79**	**343**	P	**P**	**20 18 58.0**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=163,slow=9.6,SNR=5.1						
	comp=Z,3.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.87**	**301**	P	**P**	**20 19 31.1**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=120,slow=6.0,SNR=8.1						
	comp=Z,3.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.29**	**350**	P	**P**	**20 19 40.6**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=145,slow=8.3,SNR=4.6						
	comp=Z,4.2nm,0.8s						
KLR	**Kul'dur**	**56.22**	**351**	P	**P**	**20 20 16.4**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=329,slow=1.3,SNR=4.4						
	comp=Z,1.9nm,0.8s						
SHL	**Shillong**	**58.84**	**305**	P	**P**	**20 20 37.0**	**+1.4**
SHL				IAmb	IAmb	20 20 38.0	
	comp=Z,9.6nm,0.9s						
PETK	**Petropavlovsk-**	**60.57**	**10**	P	**P**	**20 20 45.0**	**-1.8**
	comp=Z,6.2nm,0.9s,baz=185,slow=6.8,SNR=4.4						
	comp=Z,6.2nm,0.9s						
SONM	**Songino Array**	**62.82**	**333**	P	**P**	**20 21 03.3**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=148,slow=8.5,SNR=1.9						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**71.81**	**176**	P	**P**	**20 22 00.0**	**+1.4**
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**	**20 22 19.6**	**+0.4**
	comp=Z,4.9nm,1.0s,baz=108,slow=6.6,SNR=5.7						
	comp=Z,4.9nm,1.0s						
KURBB	**Kurchatov Arra**	**79.11**	**324**	P	**P**	**20 22 41.3**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=115,slow=4.7,SNR=7.4						
	comp=Z,3.1nm,0.9s						
O16K	**Kokwok River B**	**80.48**	**26**	P	**P**	**20 22 48.6**	**+0.5**
O16K				IAmb	IAmb	20 23 07.5	
	comp=Z,17nm,1.2s						
K15K	**Wolf Creek Mou**	**80.50**	**23**	P	**P**	**20 22 48.6**	**+0.5**
K15K				IAmb	IAmb	20 22 51.4	
	comp=Z,12nm,0.9s						
M16K	**Timber Creek**	**80.84**	**25**	P	**P**	**20 22 52.0**	**+1.9**
L16K	**Owhat River**	**81.00**	**24**	P	**P**	**20 22 51.5**	**+0.7**
L16K				IAmb	IAmb	20 23 14.1	
	comp=Z,16nm,1.4s						
F15K	**North Star Dit**	**81.36**	**19**	P	**P**	**20 22 54.2**	**+1.4**
F15K				IAmb	IAmb	20 22 59.9	
	comp=Z,12nm,1.4s						
J16K	**Anvik River**	**81.40**	**22**	P	**P**	**20 22 54.0**	**+1.0**
M17K	**Holitna River**	**81.67**	**25**	P	**P**	**20 22 55.5**	**+1.0**
G16K	**Koyuk River**	**81.95**	**20**	P	**P**	**20 22 55.7**	**-0.2**
G16K				IAmb	IAmb	20 22 58.8	
	comp=Z,7.6nm,0.9s						
SVW2	**Sparrevohn**	**82.31**	**26**	P	**P**	**20 22 56.5**	**-1.3**
H17K	**Granite Mounta**	**82.55**	**21**	P	**P**	**20 22 59.2**	**+0.1**
H17K				IAmb	IAmb	20 23 01.7	
	comp=Z,7.4nm,0.7s						
J18K	**Innoko River**	**82.99**	**23**	P	**P**	**20 23 00.5**	**-0.9**
J18K				IAmb	IAmb	20 23 08.7	
	comp=Z,9.0nm,1.4s						
QSPA	**South Pole Qui**	**83.59**	**180**	P	**P**	**20 23 06.1**	**+1.4**
QSPA				IAmb	IAmb	20 23 07.3	
	comp=Z,5.8nm,0.8s						
QSPA	**South Pole Qui**	**83.59**	**180**	P	**P**	**20 23 06.4**	**+1.7**
	comp=Z,7.7nm,1.0s,baz=324,slow=1.9,SNR=7.1						
	comp=Z,7.7nm,1.0s						
J19K	**Poorman**	**83.67**	**23**	P	**P**	**20 23 05.9**	**+1.0**
J19K				IAmb	IAmb	20 23 07.3	
	comp=Z,6.7nm,1.1s						
E18K	**Tukpahlearik C**	**83.68**	**19**	P	**P**	**20 23 05.6**	**+0.8**
M20K	**Styx River**	**83.72**	**25**	P	**P**	**20 23 05.9**	**+0.7**
K20K	**Telida**	**83.99**	**24**	P	**P**	**20 23 07.1**	**+0.6**
K20K				IAmb	IAmb	20 23 09.0	
	comp=Z,5.0nm,0.8s						
C18K	**Utukok River**	**84.18**	**18**	P	**P**	**20 23 08.6**	**+1.1**
G19K	**Purcell Mounta**	**84.19**	**21**	P	**P**	**20 23 09.1**	**+1.7**
J20K	**Nowinta River**	**84.33**	**23**	P	**P**	**20 23 09.2**	**+1.0**
J20K				IAmb	IAmb	20 23 12.9	
	comp=Z,6.5nm,1.0s						
NRIK	**Noril'sk**	**84.41**	**343**	P	**P**	**20 23 07.8**	**-0.7**
	comp=Z,5.0nm,0.7s,baz=124,slow=5.8,SNR=4.5						
	comp=Z,5.0nm,0.7s						
BVAR	**Borovoye Array**	**84.69**	**325**	P	**P**	**20 23 11.2**	**+0.9**
	comp=Z,21nm,0.8s,baz=114,slow=6.6,SNR=14						
	comp=Z,21nm,0.8s						
BRVK	**Borovoye**	**84.76**	**325**	P	**P**	**20 23 11.7**	**+1.1**
E19K	**Redstone River**	**84.80**	**20**	P	**P**	**20 23 11.4**	**+0.9**
E19K				IAmb	IAmb	20 23 13.0	
	comp=Z,7.5nm,0.8s						
CAST	**Castle Rocks**	**84.82**	**24**	P	**P**	**20 23 10.7**	**0.0**
CAST				IAmb	IAmb	20 23 12.7	
	comp=Z,7.5nm,1.0s						
RC01	**Rabbit Creek A**	**84.87**	**27**	P	**P**	**20 23 11.5**	**+0.5**
C19K	**Lookout Ridge**	**84.92**	**18**	P	**P**	**20 23 12.8**	**+1.6**
C19K				IAmb	IAmb	20 23 15.2	
	comp=Z,9.0nm,0.8s						
D19K	**Kuna River**	**85.05**	**18**	P	**P**	**20 23 12.4**	**+0.6**
D19K				IAmb	IAmb	20 23 33.8	
	comp=Z,11nm,1.2s						
IMAR	**Indian Mountai**	**85.31**	**22**	P	**P**	**20 23 13.0**	**-0.1**
KNK	**Knik Glacier**	**85.56**	**27**	P	**P**	**20 23 15.2**	**+0.8**
DHY	**Denali Highway**	**86.64**	**25**	P	**P**	**20 23 20.4**	**+0.5**
DHY				IAmb	IAmb	20 23 21.6	
	comp=Z,8.7nm,0.8s						
CCB	**Clear Creek Bu**	**87.04**	**24**	P	**P**	**20 23 21.4**	**-0.2**
CCB				IAmb	IAmb	20 23 22.7	
	comp=Z,8.6nm,0.8s						
ILAR	**Eielson Array**	**87.45**	**24**	P	**P**	**20 23 21.9**	**-1.7**
ILAR	**Eielson Array**	**87.45**	**24**	P	**P**	**20 23 23.4**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=256,slow=5.0,SNR=11						
	comp=Z,2.5nm,0.7s						
C23K	**Itkillik River**	**88.05**	**19**	P	**P**	**20 23 28.1**	**+1.7**
NVAR	**Mina Array Bea**	**100.82**	**52**	P	**Pdif**	**20 24 26.5**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=260,slow=5.3,SNR=3.7						
KIC	**Kosan Boka**	**147.84**	**272⇑**	*e*PKP1	**PKPbc**	**20 30 24.3**	**+1.6**
	comp=Z,37nm,1.0s						
DBIC	**Dimbokro**	**147.96**	**272**	PKPbc	**PKPbc**	**20 30 24.4**	**+1.4**
	comp=Z,14nm,0.9s,baz=97,slow=2.9,SNR=7.2						
LIC	**Lamto**	**148.12**	**272⇑**	*e*PKP1	**PKPbc**	**20 30 25.0**	**+1.6**
	comp=Z,50nm,0.9s						
TIC	**Toumodi**	**148.12**	**272⇑**	*e*PKP1	**PKiKP**	**20 30 25.3**	**+0.1**
	comp=Z,24nm,0.7s						

*IDC **25** 20:12:55.1±1.1,5.˚98S×142.˚90E,h0km,mb3.9/6, mbtmp4.1/9,ML4.3/1,Error ellipse: s-maj=36.0km s-min=24.2km az=62.0*
ISC 25 20:13:00.3±0.9,**6.˚1S**±0.˚1×**142.˚9E**±0.˚1,**h35**km,**n9,**
σ0§**62**/10,**mb3.8**/6,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.39**	**128**	Pn	**Pn**	**20 14 17.5**	**-0.8**
	70nm,0.8s,baz=288,slow=16,SNR=1.3						
PMG				Sn	**Sn**	**20 15 20.1**	**+0.8**
	8.5nm,0.3s,baz=161,slow=23,SNR=7.3						
WRA	**Warramunga Arr**	**16.09**	**210**	Pn	**Pn**	**20 16 43.6**	**-0.4**

JASK Jask - Hormozg 2.15 146 P Pn 20 16 22.9 +1.3
SNR=19
JASK S Sb 20 16 50.4 -1.4
KBAM BAM 2.23 49 Pn Pb 20 16 26.2 -0.9
UMQ Umm Al-Quwin 2.28 201 P Pb 20 16 26.6 -1.2
MASF Masafi 2.31 189 P Pb 20 16 26.6 -1.8
SNR=10
TVBK TV Kerman 2.32 5 Pn Pb 20 16 28.2 -0.5
MSFE Esma-Masafi 2.33 189 eP Pb 20 16 26.2 -2.5
SNR=9.9
CHMN Cheshme madani 2.35 22 Pn Pb 20 16 28.5 -0.8
MDH Madha 2.37 185 eP Pn 20 16 26.1 +1.4
SNR=9.2
MDH Madha 2.37 185 P Pn 20 16 26.1 +1.4
SNR=9.2
KHGB Koh Gabri 2.70 359 Pn Pb 20 16 33.7 -1.4
UOSS Minazif 2.73 187 Pn 20 16 31.2 +1.6
UOSS Sn Sn 20 17 02.7 +0.9
UOSS Minazif 2.73 187 eP Pn 20 16 30.3 +0.7
SNR=14
UOSS Minazif 2.73 187 P Pb 20 16 32.6 -2.9
JHRM Jahrom 2.75 288 Pn Pb 20 16 33.5 -2.5
NAZ Nazwa, Dubai 2.78 197 eP Pn 20 16 32.9 +2.6
SNR=9.0
NAZ Nazwa, Dubai 2.78 197 P Pb 20 16 33.3 -3.1
SNR=9.0
NAZ S Sn 20 17 04.7 +1.6
HATD Hatta, Dubai 2.85 188 iP Pn 20 16 33.2 +1.8
SNR=8.5
HATD Hatta, Dubai 2.85 188 P Pn 20 16 33.6 +2.2
SNR=8.5
KRM1 Kerman Provinc 2.90 12 Pn Pb 20 16 35.9 -2.6
ASHO Ashiyiah 3.00 189 iP Pn 20 16 35.2 +1.8
SNR=75
ASHO Ashiyiah 3.00 189 P Pn 20 16 36.0 +2.6
SNR=75
LMD1 Lamerd 3.02 265 Pn Pn 20 16 36.4 +2.8
FAQ Al Faqa, Dubai 3.03 197 iP Pn 20 16 36.0 +2.2
SNR=26
FAQ Al Faqa, Dubai 3.03 197 P Pn 20 16 36.3 +2.5
SNR=26
QIR1 Qir 3.20 285 Pn Pn 20 16 38.8 +2.7
ASUD Al Ashush, Dub 3.22 200 iP Pn 20 16 38.6 +2.2
SNR=110
ASUD Al Ashush, Dub 3.22 200 P Pn 20 16 39.5 +3.1
SNR=110
ZRDN Zarand Kerman 3.29 360 Pn Pb 20 16 41.9 -3.3
AJN Ajban 3.40 205 iP Pn 20 16 40.4 +1.7
SNR=17
AJN Ajban 3.40 205 P Pn 20 16 41.6 +2.9
SNR=17
SOHO SOHO 3.52 180 P Pn 20 16 39.7 -0.8
SOHO SOHO 3.52 180 P Pn 20 16 41.9 +1.5
ALNE Al Ain 3.67 191 iP Pn 20 16 44.3 +1.8
SNR=16
ALNE Al Ain 3.67 191 P Pn 20 16 44.5 +2.0
SNR=16
ALNE S Sn 20 17 28.0 +3.1
IBAF Bafgh 4.00 348 Pn Pn 20 16 50.7 +3.5
SHI Shiraz 4.05 300 Pn Pn 20 16 50.7 +2.8
CHBR Chabahar 4.08 119 Pn Pn 20 16 49.4 +1.3
HOQ Hoqain 4.13 170 Pn Pn 20 16 49.0 +0.1
HOQ Hoqain 4.13 170 P Pn 20 16 49.0 +0.1
ZHDN Zahedan 4.13 64 Pn Pn 20 16 51.9 +2.9
JRN Qarnain Island 4.29 232 P Pn 20 16 52.5 +1.6
JRN S Sn 20 17 42.4 +2.2
ARQ Araqi 4.31 180 P Pn 20 16 53.6 +2.2
SNR=53
BIDO Bidbid 4.37 161 P Pn 20 16 52.2 0.0
SNR=8.9
MZWR Madinat Zayed 4.57 212 P Pn 20 16 56.7 +1.8
MZWR S Sn 20 17 47.9 +0.7
NGCH Negor - Chabah 4.71 118 Pn Pn 20 16 58.6 +1.7
NGCH Negor - Chabah 4.71 118 P Pn 20 16 58.9 +2.1
SNR=21
DSBU Dashti - Bushe 4.72 280 Pn Pn 20 16 59.3 +2.2
AHBU AHRAM 4.78 286 Pn Pn 20 17 00.2 +2.4
SMDO Samad 4.79 163 P Pn 20 16 58.8 +0.8
SNR=7.9
SMDO S Sn 20 17 53.7 +1.1
WSAR Wadi Sarin 4.80 156 Pn Pn 20 16 56.3 -1.7
14nm,0.3s,baz=16,slow=14,SNR=155
WSAR Sn Sn 20 17 51.0 -1.8
30nm,0.3s,baz=133,slow=22,SNR=10
WSAR Lg Lg 20 18 12.2
12nm,0.3s,baz=270,slow=20,SNR=3.9
30nm,0.3s
NHDN Nehbandan 4.81 39 Pn Pn 20 17 01.4 +3.1
BSRN Basiran 4.83 27 Pn Pn 20 17 02.3 +3.6
ICHK Chekchek 4.92 338 Pn Pn 20 17 03.9 +4.0
BSY Bisya 4.94 173 P Pn 20 17 02.3 +2.3
SNR=19
IKOO Kooshah 5.20 24 Pn Pn 20 17 07.2 +3.5
SRVN Saravan 5.20 92 Pn Pn 20 17 06.3 +2.6
SHMA Al-Shehemyia 5.31 251 P Pn 20 17 07.7 +2.7
SNR=79
SHMA S Sn 20 18 05.9 +0.6
TPRV Parvadeh(Tabas 5.34 1 Pn Pn 20 17 09.4 +3.8
KLNJ Kolanjah 5.46 309 Pn Pn 20 17 10.5 +3.1
JMDO Jabal Madar 5.46 165 P Pn 20 17 08.8 +1.6
SNR=12
WBK Wadi Bani Khal 5.49 156 Pn Pn 20 17 08.5 +0.8
WBK Wadi Bani Khal 5.49 156 P Pn 20 17 08.4 +0.8
SNR=20
ITEG Tejag 5.55 20 Pn Pn 20 17 12.5 +4.0
TRNA Turayna 5.61 240 P Pn 20 17 10.7 +1.5
SNR=68
TRNA S Sn 20 18 13.8 +0.9
SNR=7.1
SAKB Bahrain 5.63 254 P Pn 20 17 11.4 +2.0
SAKB S Sn 20 18 15.6 +2.3
SLWR Sila 5.65 232 P Pn 20 17 09.8 0.0
SLWR S Sn 20 18 13.7 -0.2
SMRA Abu-Samra 5.91 242 P Pn 20 17 15.3 +2.0
SNR=18
SMRA S Sn 20 18 20.1 -0.1
TKDS Koohdasht(Taba 5.95 5 Pn Pn 20 17 17.8 +3.9
ANAR Anarak 6.02 337 Pn Pn 20 17 18.8 +3.9
JLN Jalan Bani Buh 6.08 154 P Pn 20 17 16.0 +0.4
SNR=6.8
AFRZ Afriz 6.12 20 Pn Pn 20 17 19.6 +3.3
IGAR Gharneh 6.12 321 Pn Pn 20 17 19.8 +3.3
IBRJ Brojen 6.24 314 Pn Pn 20 17 21.6 +3.5
TNSJ Nastanj 6.28 0 Pn Pn 20 17 22.6 +4.1
SHRT Shahrakht 6.78 28 Pn Pn 20 17 29.3 +4.0
MHTO MHTO 6.78 169 P Pn 20 17 26.5 +1.2
SNR=9.9
IKLH Kolahrood 7.08 324 Pn Pn 20 17 33.3 +3.8
ISFB Sefidab 7.62 332 Pn Pn 20 17 40.2 +3.4
DQM DQM 7.76 173 P Pn 20 17 38.1 -0.6
HRA Herat 8.29 35 Pn Pn 20 17 46.1 -0.1
IVRN Varamin 8.38 332 Pn Pn 20 17 51.0 +3.6
IPRN Peran 9.26 338 Pn Pn 20 18 03.5 +4.0
SHAO Shalim 9.64 185 P Pn 20 18 04.4 -0.1
SNR=18
KLST Kelardasht - M 9.97 334 Pn Pn 20 18 13.9 +4.6
WHFO Wadi Hawf 10.04 195 P Pn 20 18 09.1 -0.9
SNR=9.2
GEYT Alibeck 10.32 7 Pn Pn 20 18 18.8 +5.0
RBK Rabkut 10.35 193 P Pn 20 18 14.9 +0.7
ABTO Aybut 10.70 197 P Pn 20 18 18.1 -1.0
SNR=12
RAYN Ar Rayn 10.79 250 P Pn 20 18 18.6 -1.7
RAYN Ar Rayn 10.79 250 iP Pn 20 18 18.7 -1.5
SNR=37
RAYN Ar Rayn 10.79 250 P Pn 20 18 18.6 -1.7
RAYN Ar Rayn 10.79 250 P Pn 20 18 18.6 -1.7
SIMJ Simiganj 15.12 40 Pn Pn 20 19 19.0 -0.4
NIL Nilore 15.56 63 Pn Pn 20 19 21.6 -3.5
NIL Nilore 15.56 63 P Pn 20 19 21.6 -3.5
NIL pmax pmax
comp=Z,9.0nm,0.8s
GNI Garni 15.82 325 P P 20 19 30.5 -1.7
GNI IAmb IAmb 20 19 47.1
comp=Z,23nm,0.9s
GNI Garni 15.82 325 ceP Pn 20 19 27.1 -1.5
GNI pmax pmax
comp=Z,12nm,0.7s
GNI Garni 15.82 325 Pn P 20 19 31.2 -1.0
comp=Z,0.2nm,0.3s,baz=296,slow=0.5,SNR=3.7
comp=Z,8.7nm,0.8s
GNI Garni 15.82 325 P P 20 19 32.8 +0.6
GURO Guroymak-BITLI 16.28 315 Pn 20 19 33.8 -0.6
BTK Batken 17.09 40 Pn 20 19 42.1 -2.5

BTK Batken 17.09 40 P Pn 20 19 42.1 -2.5
BTK pmax pmax
comp=Z,7.0nm,0.9s
ASF Jabal al Asfar 17.61 290 P Pn 20 19 50.0 -1.1
comp=Z,0.7nm,0.3s,baz=325,slow=0.6,SNR=7.6
ASF S Sn 20 22 59.5 -7.1
comp=Z,2.8nm,0.7s,baz=333,slow=17,SNR=2.0
comp=Z,6.5nm,0.7s
GHAJ Ghor Haditha 18.62 286 P P 20 20 01.2 -1.7
NCK Nalchik 18.95 330 iP Pn 20 20 07.7 +0.4
MMAI Mount Meron Ar 19.00 291 P P 20 20 07.5 +0.2
comp=Z,1.1nm,0.3s,baz=103,slow=19,SNR=7.8
MMAI S Sn 20 23 32.7 -7.5
comp=Z,4.4nm,0.8s,baz=286,slow=41,SNR=2.0
comp=Z,6.9nm,0.8s
EIL Elat 19.05 281 P Pn 20 20 08.8 +0.1
comp=Z,0.5nm,0.3s,baz=340,slow=7.9,SNR=6.3
comp=Z,7.6nm,0.8s
KK31 Karatay Array 19.11 33 P 20 20 08.6 +0.3
KK31 Karatay Array 19.11 33 P P 20 20 08.6 +0.3
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 19.11 33 P 20 20 08.3 +0.1
KKAR Karatay Array 19.11 33 P P 20 20 08.4 +0.1
KKAR pmax pmax
comp=Z,3.0nm,0.9s
ARSB Arslanbob 19.17 40 P P 20 20 09.4 +0.3
ARSB Arslanbob 19.17 40 P P 20 20 09.4 +0.3
ARSB pmax pmax
comp=Z,1.0nm,0.8s
KBZ Khabaz 19.44 329 iP P 20 20 11.1 -0.8
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KBZ Khabaz 19.44 329 P Pn 20 20 14.2 +1.1
comp=Z,0.1nm,0.3s,baz=126,slow=11,SNR=2.8
comp=Z,4.3nm,0.9s
KVAR Kislovodsk Arr 19.71 329 P Pn 20 20 16.1 -0.4
baz=90,slow=20
comp=Z,2.8nm,0.5s
KIV Kislovodsk 19.71 329 ⇑P Pn 20 20 18.6 +2.0
KIV Kislovodsk 19.71 329 P Pn 20 20 16.1 -0.5
KIV Kislovodsk 19.71 329 eP P 20 20 14.5 -0.5
KIV pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 19.71 329 P Pn 20 20 18.4 +1.9
KSH Kashi 19.99 49 P P 20 20 15.5 -2.6
KSH pmax pmax
comp=Z,13nm,0.6s
GOF Gofitskoye 20.43 332 ceP Pn 20 20 25.7 +0.8
BNN Bunyan 20.54 308 Pn 20 20 26.9 +0.5
BNN IAmb IAmb 20 20 28.0
comp=Z,38nm,0.8s
ATD Arta Tunnel 20.57 221 P P 20 20 21.9 -2.5
ATD IAmb IAmb 20 20 39.0
comp=Z,24nm,1.2s
AAK Ala-Archa 20.87 40 Pn 20 20 29.3 -0.9
AAK Ala-Archa 20.87 40 ceP P 20 20 28.3 +0.6
AAK pmax pmax
comp=Z,7.0nm,1.0s
AAK Ala-Archa 20.87 40 P Pn 20 20 29.4 -0.9
comp=Z,6.6nm,0.7s,baz=221,slow=6.1,SNR=23
comp=Z,6.6nm,0.7s
AAK Ala-Archa 20.87 40 P Pn 20 20 29.5 -0.8
NRN Naryn 21.04 44 P P 20 20 29.9 +0.3
NRN IAmb IAmb 20 20 31.9
comp=Z,16nm,0.8s
NRN Naryn 21.04 44 P P 20 20 30.0 +0.3
NRN pmax pmax
comp=Z,16nm,0.8s
ABKAR Akbulak array 21.71 6 P P 20 20 37.3 +0.8
TARG Taragay, Kyrgy 22.33 46 P P 20 20 43.2 -0.4
TARG IAmb IAmb 20 20 47.7
comp=Z,20nm,1.5s
TARG Taragay, Kyrgy 22.33 46 P P 20 20 43.2 -0.4
TARG pmax pmax
comp=Z,20nm,1.5s
BR131 Keskin Array S 22.47 308 P P 20 20 45.9 +1.1
BR131 IAmb IAmb 20 20 52.3
comp=Z,13nm,0.7s
BR131 Keskin Array S 22.47 308 iP P 20 20 45.5 +0.7
BRTR Keskin Array B 22.47 308 P P 20 20 46.0 +1.2
BRTR Keskin Array B 22.47 308 iP P 20 20 46.5 +1.7
BRTR pmax pmax
comp=Z,5.0nm,0.5s
BRTR Keskin Array B 22.47 308 P P 20 20 46.2 +1.5
comp=Z,5.3nm,0.6s,baz=140,slow=8.3,SNR=32
comp=Z,5.3nm,0.6s
PRZ Przheval'sk 23.11 45 P P 20 20 51.8 +0.3
PRZ Przheval'sk 23.11 45 P P 20 20 51.8 +0.3
PRZ pmax pmax
comp=Z,9.0nm,1.1s
ANTO Ankara 23.12 308 P P 20 20 49.9 -1.6
ANTO IAmb IAmb 20 21 00.3
comp=Z,14nm,0.8s
ANTO Ankara 23.12 308 P P 20 20 49.9 -1.6
ANTO pmax pmax
comp=Z,14nm,0.8s
BR231 Keskin MP Arra 23.12 308 P P 20 20 52.5 +0.9
BR231 IAmb IAmb 20 21 00.7
comp=Z,16nm,0.6s
ISP Isparta 24.05 301 P P 20 21 00.6 0.0
ISP IAmb IAmb 20 21 06.0
comp=Z,21nm,1.3s
ISP Isparta 24.05 301 P P 20 21 00.6 0.0
ISP pmax pmax
comp=Z,21nm,1.3s
ELL Elmali 24.23 299 P P 20 21 02.5 +0.3
ELL Elmali 24.23 299 P P 20 21 02.6 +0.3
ELL pmax pmax
comp=Z,46nm,0.7s
MDUB Mudurnu 24.48 308 P P 20 21 06.8 +2.2
SIM Simferopol' 24.85 320 eP P 20 21 01.9 -5.8
SIM eS S 20 25 24.5 -4.6
SIM pmax pmax
comp=Z,45nm,0.9s
SIM smax smax
comp=E,4µm,17.0s
BELG Belogornoye 25.58 347 iP P 20 21 13.8 -0.4
BELG pmax pmax
comp=Z,3.0nm,0.8s
KARP Karpathos 26.16 295 P P 20 21 20.1 +0.3
BVAR Borovoye Array 27.34 18 P P 20 21 31.2 +1.1
comp=Z,5.3nm,0.7s,baz=198,slow=8.9,SNR=11
BVAR PcP PcP 20 24 50.2 +1.3
comp=Z,0.9nm,0.5s,baz=216,slow=2.9,SNR=4.6
comp=Z,5.3nm,0.7s
BRVK Borovoye 27.34 18 P P 20 21 30.7 +0.6
BRVK IAmb IAmb 20 22 03.6
comp=Z,7.2nm,0.9s
BRVK Borovoye 27.34 18 ceP P 20 21 30.4 +0.3
BRVK pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 27.81 40 P P 20 21 35.5 +1.0
comp=Z,1.6nm,0.7s,baz=233,slow=9.2,SNR=12
MKAR PcP PcP 20 24 50.7 +0.4
comp=Z,1.2nm,0.9s,baz=136,slow=4.0,SNR=2.7
comp=Z,1.6nm,0.7s
IDI Anoyia 27.96 294 P P 20 21 36.6 +0.7
IDI IAmb IAmb 20 21 38.8
comp=Z,8.7nm,0.7s
KURBB Kurchatov Arra 28.36 30 P P 20 21 40.3 +1.1
comp=Z,4.0nm,0.7s,baz=229,slow=8.6,SNR=39
comp=Z,4.0nm,0.7s
KURK Kurchatov 28.47 30 P P 20 21 38.9 -1.3
KURK Kurchatov 28.47 30 ceP P 20 21 40.9 +0.7
KURK pmax pmax
comp=Z,5.0nm,1.3s
WMQ Urumqi 29.76 49 eP P 20 21 52.5 +0.7
WMQ pP pP 20 21 55.5 -4.3
WMQ pmax pmax
comp=Z,14nm,1.1s
SORM Soroca 29.94 321 ⇑P P 20 21 55.1 +1.9
SORM Soroca 29.94 321 ⇑P P 20 21 55.1 +1.9
COVR Voineasa-Covas 30.08 315 ⇑P P 20 21 56.6 +2.0
MLR Muntele Rosu 30.08 314 P P 20 21 53.1 -1.7
MLR IAmb IAmb 20 22 10.3
comp=Z,8.7nm,1.2s
MLR Muntele Rosu 30.08 314 P P 20 21 53.1 -1.7
MLR pmax pmax
comp=Z,9.0nm,1.2s
AGG Agios Georgios 30.58 301 P P 20 21 58.7 -0.4
AGG IAmb IAmb 20 22 00.9
comp=Z,20nm,1.4s
AGG Agios Georgios 30.58 301 P P 20 21 58.7 -0.4
AGG pmax pmax
comp=Z,20nm,1.4s

ARR Arges 30.87 313 ⇓P P 20 22 03.5 +1.9
AKASG Malin Array Be 30.95 325 P P 20 22 01.5 -0.8
AKASG IAmb IAmb 20 22 05.2
comp=Z,4.3nm,0.8s
AKASG Malin Array Be 30.95 325 P P 20 22 02.7 +0.5
comp=Z,6.4nm,0.5s,baz=132,slow=8.3,SNR=22
AKASG PcP PcP 20 24 58.9 +0.8
comp=Z,0.2nm,0.3s,baz=95,slow=1.7,SNR=1.8
comp=Z,6.4nm,0.5s
AKBB Malin Array Si 30.95 325 P P 20 22 03.2 +1.0
AKBB Malin Array Si 30.95 325 ceP P 20 22 02.2 0.0
AKBB pmax pmax
comp=Z,23nm,0.8s
KIEV Kiev 30.96 325 ⇓P P 20 22 03.5 +1.3
KIEV Kiev 30.96 325 P P 20 22 02.9 +0.7
KIEV Kiev 30.96 325 P P 20 22 02.9 +0.7
KIEV pmax pmax
comp=Z,19nm,0.7s
DRBR Darabani 30.97 320 ⇓P P 20 21 56.3 -6.1
OBN Obninsk 31.02 338 eP P 20 22 03.1 +0.4
OBN e 20 23 05.0
OBN pmax pmax
comp=Z,11nm,1.1s
BURAR Bucovina Array 31.49 318 ⇑P P 20 22 07.1 0.0
BURAR Bucovina Array 31.49 318 P P 20 22 07.2 0.0
BURAR Bucovina Array 31.49 318 ⇑P P 20 22 07.1 0.0
BUR08 Bucovina Ar. S 31.52 318 P P 20 22 06.4 -0.9
FNA Florina 31.67 304 P P 20 22 09.5 +0.8
FNA IAmb IAmb 20 22 11.8
comp=Z,3.7nm,0.8s
FNA Florina 31.67 304 P P 20 22 09.5 +0.8
FNA pmax pmax
comp=Z,4.0nm,0.8s
MARR Marisel-Cluj 32.37 315 ⇓P P 20 22 15.2 +0.4
MDVR Moldovita 32.57 311 ⇑P P 20 22 17.9 +1.3
DRGR 32.67 315 ⇓P P 20 22 19.9 +2.5
DRGR 32.67 315 ⇓P P 20 22 19.9 +2.5
BZS Buzias 32.92 312 ⇑P P 20 22 17.6 -2.0
BZS Buzias 32.92 312 ⇑P P 20 22 17.6 -2.0
SIRR Siria 33.13 313 ⇓P P 20 22 24.8 +3.4
ZAA0 Zalesovo Array 33.46 31 P P 20 22 24.4 +0.2
ZALV Zalesovo Beam 33.46 31 P P 20 22 24.0 -0.2
ZALV Zalesovo Beam 33.46 31 iP P 20 22 25.2 +1.1
ZALV pmax pmax
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 33.46 31 P P 20 22 25.0 +0.8
comp=Z,12nm,0.5s,baz=242,slow=9.8,SNR=50
ZALV PcP PcP 20 25 05.1 +0.2
comp=Z,0.5nm,0.4s,baz=209,slow=2.9,SNR=2.7
comp=Z,12nm,0.5s
KOLS Kolonicke sedl 33.84 318 eP P 20 22 30.8 +3.2
KOLS pmax pmax
comp=Z,7.0nm,0.7s
KOLS Kolonicke sedl 33.84 318 eP P 20 22 30.8 +3.2
FRGS Fruska Gora 33.97 311 ⇓P P 20 22 29.7 +1.0
MNK Minsk 33.99 330 iP P 20 22 27.2 -1.6
comp=E,7.0nm,0.8s
MNK iP P 20 22 27.2 -1.6
comp=N,11nm,1.2s
MNK iP P 20 22 27.2 -1.6
comp=Z,10.0nm,0.7s,baz=130
MNK iPP PnPn 20 23 41.3 -0.9
MNK iPPP PPP 20 23 53.5
MNK iS S 20 27 51.6 -0.7
MNK iSS SnSn 20 30 01.8 +2.1
MNK iSSS SSS 20 30 18.4
MNK iLR LR 20 34 40.5
MNK iLRM MLR 20 35 45.0
comp=E,2µm,16.8s
MNK iLRM MLR 20 35 57.2
comp=Z,7µm,16.3s
MNK iLRM MLR 20 36 06.2
comp=N,3µm,16.6s
MNK Minsk 33.99 330 iP P 20 22 27.2 -1.6
MNK i 20 23 41.3
MNK i 20 25 03.8
MNK iS S 20 27 51.6 -0.7
MNK iSS SnSn 20 30 01.8 +2.1
MNK iSSS SSS 20 30 18.4
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.7s
MNK pmax pmax
comp=N,11nm,1.2s
MNK MLR MLR
comp=E,2µm,17.0s
MNK MLR MLR
comp=Z,7µm,16.0s
MNK MLR MLR
comp=N,3µm,17.0s
KMBO Kilima Mbogo 34.11 216 P P 20 22 30.6 +0.1
KMBO Kilima Mbogo 34.11 216 P P 20 22 30.6 +0.1
KMBO pmax pmax
comp=Z,2.0nm,0.8s
TIP Timpagrande 34.88 300 P P 20 22 37.5 +0.7
TIP IAmb IAmb 20 22 40.8
comp=Z,22nm,1.2s
MORH Mrgy, Hungar 35.08 312 ⇑P P 20 22 39.2 +0.9
CUC Castrocucco 35.70 301 P P 20 22 43.4 -0.5
VYHS Vyhne 35.74 316 eP P 20 22 45.4 +1.4
VYHS Vyhne 35.74 316 eP P 20 22 45.4 +1.4
OJC Ojcow 35.85 319 IAmb IAmb 20 22 47.4
comp=Z,5.5nm,0.8s
SUW Suwalki 35.90 326 P P 20 22 45.1 -0.1
SUW Suwalki 35.90 326 P P 20 22 45.1 -0.1
SUW pmax pmax
comp=Z,42nm,1.1s
SUW Suwalki 35.90 326 eP P 20 22 47.8 +2.6
PABE Paberze 36.38 329 P P 20 22 48.9 -0.5
PABE Paberze 36.38 329 eP P 20 22 51.0 +1.7
MODS Modra-Piesok 36.67 315 eP P 20 22 53.0 +1.0
MODS Modra-Piesok 36.67 315 eP P 20 22 53.0 +1.0
VSVD Vaisvydziai 36.69 330 eP P 20 22 53.5 +1.6
RONA Rosalia, Austr 37.07 314 iP P 20 22 56.6 +1.1
comp=Z,6.1nm,0.5s
VSU Vasula 37.11 334 eP P 20 22 57.0 +1.5
CONA Conrad Observa 37.42 314 iP P 20 22 59.3 +0.9
comp=Z,1.7nm,0.5s
ARSA Arzberg 37.44 313 iP P 20 23 00.1 +1.5
comp=Z,2.4nm,0.7s
KRLC Kraliky 37.58 317 eP P 20 23 00.3 +0.6
KRLC Kraliky 37.58 317 eP P 20 23 00.3 +0.6
GTA Gaotai 37.59 61 eP P 20 23 01.5 +1.5
GTA pP pP 20 23 06.3 -1.7
GTA pmax pmax
comp=Z,3.0nm,0.8s
CAMP Campotosto 37.86 305 P P 20 23 02.0 -0.3
NRCA Norcia 38.12 305 P P 20 23 04.4 -0.1
NRCA IAmb IAmb 20 23 28.1
comp=Z,33nm,1.4s
CHVC Chvalec 38.20 318 eP P 20 23 06.1 +1.2
CHVC Chvalec 38.20 318 eP P 20 23 06.1 +1.2
SABO M.te Sabotino 38.39 310 P P 20 23 04.9 -1.7
SABO IAmb IAmb 20 23 35.5
comp=Z,75nm,1.4s
MOA Molln 38.43 313 iP P 20 23 07.9 +1.0
comp=Z,4.8nm,0.5s
CESX Cesi 38.48 305 P P 20 23 07.3 0.0
CESX IAmb IAmb 20 23 34.2
comp=Z,15nm,1.3s
PRED Cave del Predi 38.52 311 P P 20 23 07.6 -0.1
PRED IAmb IAmb 20 23 19.3
comp=Z,17nm,1.3s
CKRC Cesky Krumlov 38.68 315 eP P 20 23 09.9 +0.9
CKRC Cesky Krumlov 38.68 315 eP P 20 23 09.9 +0.9
BIOA Bad Ischl, Aus 38.79 313 iP P 20 23 10.9 +1.0
comp=Z,5.5nm,0.5s
KBA Koelnbreinsper 38.83 312 eP P 20 23 11.4 +1.0
comp=Z,5.4nm,0.7s
STAL STALIGIAL 39.06 310 P P 20 23 10.8 -1.3
STAL IAmb IAmb 20 23 37.2
comp=Z,26nm,1.3s
GERES GERESS Array B 39.07 315 P P 20 23 12.8 +0.4
comp=Z,1.9nm,0.5s,baz=113,slow=8.0,SNR=8.5
comp=Z,1.9nm,0.5s
KHC Kasperske Hory 39.23 315 P P 20 23 14.4 +0.8
KHC IAmb IAmb 20 23 15.4
comp=Z,10nm,1.0s
KHC Kasperske Hory 39.23 315 eP P 20 23 14.4 +0.8
KHC Kasperske Hory 39.23 315 ceP P 20 23 13.4 -0.2
KHC pmax pmax
comp=Z,28nm,1.7s
CIMO Cimolais 39.25 310 P P 20 23 13.5 -0.3

CIMO IAmb IAmb 20 23 54.1
comp=Z,9.4nm,1.3s
ABTA Abfaltersbach 39.30 311 *eP* **P 20 23 15.2 +1.0**
comp=Z,4.0nm,0.5s
LESA Schwarzleotal 39.35 312 *eP* **P 20 23 15.2 +0.6**
comp=Z,3.7nm,0.5s
FIA1 FINESS Array S 39.43 337 P **P 20 23 14.8 -0.2**
FIA1 IAmb IAmb 20 23 33.3
comp=Z,32nm,1.2s
FINES FINESS Array B 39.43 337 *i* P **P 20 23 15.8 +0.8**
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 39.43 337 P **P 20 23 15.9 +0.9**
comp=Z,2.3nm,0.6s,baz=140,slow=10,SNR=28
comp=Z,2.3nm,0.6s
CTI Castel Tesino 39.73 310 P **P 20 23 18.4 +0.5**
CTI IAmb IAmb 20 23 19.1
comp=Z,22nm,1.5s
CTI Castel Tesino 39.73 310 P **P 20 23 18.4 +0.5**
CTI pmax pmax
comp=Z,22nm,1.5s
ZCCA Zocca 39.90 307 P **P 20 23 19.0 -0.2**
WTTA Wattenberg 40.00 312 *eP* **P 20 23 20.7 +0.5**
comp=Z,9.3nm,0.5s,SNR=20
WATA Walderalm 40.06 312 *eP* **P 20 23 20.7 0.0**
comp=Z,6.6nm,0.6s,SNR=8.8
PZH PanZhiHua 40.09 81 P **P 20 23 22.3 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.5s
CLL Collm 40.26 318 *eP* **P 20 23 22.0 0.0**
CLL Collm 40.26 318 *eP* **P 20 23 22.0 0.0**
SQTA Sankt Quirin 40.28 311 *eP* **P 20 23 22.7 +0.3**
comp=Z,20nm,0.5s,SNR=27
MOTA Moosalm 40.37 312 *eP* **P 20 23 23.2 0.0**
comp=Z,8.7nm,0.5s,SNR=13
FETA Feichten 40.55 311 *i* P **P 20 23 25.3 +0.5**
comp=Z,12nm,0.5s
RETA Reutte 40.63 312 *eP* **P 20 23 25.4 +0.1**
comp=Z,5.2nm,0.7s
KEST Kesra 40.64 294 P **P 20 23 26.8 +1.3**
comp=Z,4.3nm,0.8s,baz=129,slow=3.7,SNR=5.2
comp=Z,4.3nm,0.8s
FUORN Ofenpass-Fuorn 40.79 310 P **P 20 23 28.4 +1.6**
FUORN IAmb IAmb 20 23 44.3
comp=Z,8.3nm,1.1s
DAVA Damuels 41.17 311 *eP* **P 20 23 30.2 +0.3**
comp=Z,35nm,0.5s,SNR=40
TUE Stuetta 41.38 310 P **P 20 23 32.8 +1.2**
TUE IAmb IAmb 20 23 43.0
comp=Z,8.5nm,1.1s
SENIN Lac Senin/Sane 42.76 309 P **P 20 23 42.6 -0.3**
BNI Bardonecchia 43.03 307 P **P 20 23 44.6 -0.4**
BNI IAmb IAmb 20 24 12.3
comp=Z,18nm,1.4s
BNI Bardonecchia 43.03 307 P **P 20 23 44.6 -0.4**
BNI pmax pmax
comp=Z,18nm,1.5s
ECH Echery 43.15 312 P **P 20 23 46.0 +0.2**
ECH IAmb IAmb 20 23 47.3
comp=Z,6.0nm,0.9s
ECH Echery 43.15 312 P **P 20 23 46.0 +0.2**
ECH pmax pmax
comp=Z,6.0nm,0.9s
SONM Songino Array 43.39 49 P **P 20 23 49.1 +1.2**
comp=Z,1.4nm,0.8s,baz=246,slow=9.1,SNR=6.0
comp=Z,1.4nm,0.8s
HFS Hagfors 43.50 330 P **P 20 23 49.1 +0.7**
comp=Z,4.1nm,0.5s,baz=128,slow=9.6,SNR=25
comp=Z,4.1nm,0.5s
ULN Ulaanbaatar 43.84 49 P **P 20 23 50.8 -0.7**
ULN Ulaanbaatar 43.84 49 P **P 20 23 50.8 -0.7**
ULN pmax pmax
comp=Z,2.0nm,0.7s
WLF Walferdange 44.07 314 P **P 20 23 53.0 -0.1**
WLF IAmb IAmb 20 23 55.3
comp=Z,7.7nm,0.8s
WLF Walferdange 44.07 314 *dP* **P 20 23 54.0 +0.9**
WLF Walferdange 44.07 314 P **P 20 23 53.0 -0.1**
WLF pmax pmax
comp=Z,8.0nm,0.8s
BTNL Ternell 44.26 315 *dP* **P 20 23 56.8 +2.1**
SSB Saint Sauveur 44.55 308 P **P 20 23 55.8 -1.3**
SSB Saint Sauveur 44.55 308 P **P 20 23 55.8 -1.3**
SSB pmax pmax
comp=Z,29nm,1.5s
NC602 NORSAR Array S 44.73 330 P **P 20 23 58.1 -0.2**
RCHB Rochefort 44.75 314 *dP* **P 20 24 00.1 +1.6**
NC405 NORSAR Array S 44.83 331 P **P 20 23 57.8 -1.3**
NC405 IAmb IAmb 20 24 39.4
comp=Z,22nm,1.3s
BGES Gesves 44.88 315 *dP* **P 20 24 00.5 +0.9**
NB201 NORSAR Array S 44.98 331 P **P 20 23 59.0 -1.3**
NB2 NORSAR Subarra 45.01 331 P **P 20 24 00.5 0.0**
comp=Z,1.8nm,0.6s,baz=112,slow=7.9
NOA NORSAR Array B 45.01 331 P **P 20 24 00.8 +0.3**
comp=Z,3.6nm,0.8s,baz=115,slow=7.8,SNR=15
comp=Z,3.6nm,0.8s
BMRD Maredsous 45.06 315 *dP* **P 20 24 02.8 +1.8**
DOU Dourbes 45.14 314 *dP* **P 20 24 02.5 +0.8**
NBO00 NORSAR Array S 45.20 331 P **P 20 24 02.0 +0.1**
NBO00 IAmb IAmb 20 24 15.6
comp=Z,20nm,1.5s
NC204 NORSAR Array S 45.31 331 P **P 20 24 03.2 +0.3**
NC204 IAmb IAmb 20 24 42.1
comp=Z,12nm,1.1s
ARCES ARCESS Array B 45.60 345 P **P 20 24 06.1 +1.0**
comp=Z,2.1nm,0.8s,baz=120,slow=7.1,SNR=6.7
comp=Z,2.1nm,0.8s
TAM Tamanrasset 46.15 276 P **P 20 24 11.0 +0.8**
TAM IAmb IAmb 20 24 12.8
comp=Z,7.4nm,0.8s
TAM Tamanrasset 46.15 276 P **P 20 24 11.0 +0.8**
TAM pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 46.63 59 *eP* **P 20 24 15.0 +1.3**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC LR LR
comp=N,12μm,18.8s
HHC LR LR
comp=E,4μm,17.9s
HHC LR LR
comp=Z,16μm,18.0s
EKA Eskdalemuir Ar 50.60 320 P **P 20 24 44.6 +0.8**
comp=Z,1.0nm,0.6s,baz=88,slow=7.2,SNR=4.4
comp=Z,1.0nm,0.6s
ESBB Sonseca Array 50.90 300 P **P 20 24 46.4 -0.1**
ESBB IAmb IAmb 20 25 02.6
comp=Z,13nm,1.5s
ESDC Sonseca Array 50.90 300 P **P 20 24 46.5 +0.1**
ESDC Sonseca Array 50.90 300 P **P 20 24 47.1 +0.6**
comp=Z,1.2nm,0.5s,baz=73,slow=7.1,SNR=29
ESDC PcP **PcP 20 26 03.1 +0.3**
comp=Z,0.8nm,1.0s,baz=52,slow=3.1,SNR=4.4
comp=Z,1.2nm,0.5s
PAB San Pablo 51.21 300 P **P 20 24 49.5 +0.7**
PAB IAmb IAmb 20 24 50.6
comp=Z,8.0nm,1.0s
PAB San Pablo 51.21 300 P **P 20 24 49.5 +0.7**
PAB pmax pmax
comp=Z,8.0nm,1.0s
TOA0 Torodi Ar. Sit 53.00 266 P **P 20 25 02.3 -0.1**
TOA0 IAmb IAmb 20 25 03.3
comp=Z,5.7nm,0.6s
TORD Torodi Ar. Bea 53.00 266 P **P 20 25 02.4 +0.1**
TORD IAmb IAmb 20 25 03.4
comp=Z,3.5nm,0.6s
TORD Torodi Ar. Bea 53.00 266 P **P 20 25 02.7 +0.3**
comp=Z,4.9nm,0.5s,baz=62,slow=6.8,SNR=10
comp=Z,4.9nm,0.5s
NJ2 Nanjing 53.56 69 *eP* **P 20 25 06.0 -0.3**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
PESTR Estremoz 53.79 299 P **P 20 25 08.0 +0.1**
PESTR IAmb IAmb 20 25 16.2
comp=Z,7.1nm,1.0s
KLR Kul'dur 60.18 47 *i* P **P 20 25 52.9 0.0**
KLR pmax pmax
comp=Z,4.0nm,1.0s
LBTB Lobatse 60.27 213 P **P 20 25 53.8 -0.1**
LBTB IAmb IAmb 20 26 05.5
comp=Z,14nm,1.4s
LBTB Lobatse 60.27 213 P **P 20 25 53.8 -0.1**
LBTB pmax pmax
comp=Z,14nm,1.5s
DBIC Dimbokro 61.64 262 P **P 20 26 03.5 +0.2**
comp=Z,1.1nm,0.4s,baz=28,slow=6.8,SNR=5.5
comp=Z,1.1nm,0.4s
BOSA Boshof 63.49 211 P **P 20 26 15.6 +0.1**
BOSA Boshof 63.49 211 P **P 20 26 15.7 +0.1**
comp=Z,1.4nm,0.4s,baz=21,slow=7.4,SNR=9.8
comp=Z,1.4nm,0.4s
SUMG Summit 65.34 341 *i* P **P 20 26 27.4 0.0**
ICESG Greenland Ices 66.62 337 *i* P **P 20 26 36.9 +1.3**
ICESG IAmb IAmb 20 26 39.0
comp=Z,12nm,1.1s
DY2G Dye2 69.87 335 *i* P **P 20 26 53.3 -2.6**
SCHQ Schefferville 84.58 331 P **P 20 28 18.0 -0.4**
comp=Z,1.5nm,0.6s,baz=3.7,slow=2.9,SNR=6.2
comp=Z,1.5nm,0.6s
ILAR Eielson Array 86.07 10 P **P 20 28 25.0 -0.6**
comp=Z,0.3nm,0.6s,baz=322,slow=5.5,SNR=4.3
comp=Z,0.3nm,0.6s
YKA Yellowknife Ar 89.87 356 *i* P **P 20 28 45.2 +1.4**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 89.87 356 P **P 20 28 44.0 +0.3**
comp=Z,1.1nm,0.8s,baz=0.7,slow=5.0,SNR=19
comp=Z,1.1nm,0.8s

IDC ***25*** *20:17:23.3±0.5,5˚.98S×142˚.86E, h0km, mb4.6/15, mbtmp4.7/19, ML4.3/2, Error ellipse: s-maj=23.4km s-min=11.7km az=78.0*
MOS ***25*** *20:17:23.2±1.1,6˚.07S×142˚.78E, h13km, mb5.2/36, Error ellipse: s-maj=10.7km s-min=5.9km az=109.6*
NEIC ***25*** *20:17:25.0±2.6, 6˚.10S±0˚.09×142˚.80E±0˚.08, h10km±1km, mb5.1/66, Error ellipse: s-maj=16.1km s-min=12.2km az=219.0*
DJA ***25*** *20:17:27.7±0.4, 6˚S±3˚×14˚3E±˚, h11km±3km, M5.6/42, mB5.9/4, mb5.0/42, MLv5.5/5, Mw(mB)5.5/4, MwMwp6.9/4, Mwp6.7/4*
ISC 25 20:17:25.0±0.3,**6˚15S**±0˚.04×**142˚.81E**±0˚.05,**h10**km,**n283,** σ1°**80**/269,**mb5.0**/96,**MS5.7**/3,**9C-4D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.80**	**299**	P	**Pg**	**20 17 58.3**	**-1.4**
MMPI	**Merauke**	**3.33**	**226**	P	**Pn**	**20 18 20.0**	**+2.8**
GENI	**Genyem**	**4.41**	**323**	P	**Pn**	**20 18 33.7**	**+1.7**
GENI	**Genyem**	**4.41**	**323**	P	**Pn**	**20 18 34.8**	**+2.8**
PMG	**Port Moresby**	**5.39**	**127**	Pn	**Pn**	**20 18 47.2**	**+1.6**
PMG	**Port Moresby**	**5.39**	**127**	P	**Pn**	**20 18 47.5**	**+1.9**
PMG	**Port Moresby**	**5.39**	**127**	P	**Pn**	**20 18 47.2**	**+1.6**
PMG	**Port Moresby**	**5.39**	**127**	Pn	**Pn**	**20 18 46.9**	**+1.3**
	158nm,0.8s,baz=354,slow=2.6,SNR=15						
PMG				Sn	**Sn**	**20 19 48.6**	**+0.8**
	13nm,0.3s,baz=190,slow=19,SNR=2.1						
SMPI	**Sarmi**	**5.81**	**315**	P	**Pn**	**20 18 53.7**	**+2.4**
	651nm,1.4s,8μm2.6nm						
MANU	**Manus Island**	**6.11**	**48**		**Pn**	**20 18 56.8**	**+1.4**
COEN	**Coen**	**7.77**	**177**	Pn	**Pn**	**20 19 18.1**	**-0.1**
KMPI	**Kaimana, Papua**	**9.40**	**285**	P	**Pn**	**20 19 41.3**	**+0.6**
	340nm,0.9s						
RABL	**Rabaul**	**9.52**	**79**		Pn	20 19 36.7	-5.6
FAKI	**Fak Fak**	**11.00**	**286**	Pn	**Pn**	**20 20 00.6**	**-2.0**
FAKI	**Fak Fak**	**11.00**	**286**	P	**Pn**	**20 20 03.2**	**+0.5**
FAKI	**Fak Fak**	**11.00**	**286**	P	**Pn**	**20 20 02.3**	**-0.4**
	123nm,1.1s						
SAUI	**Saumlaki**	**11.57**	**260**	Pn	**Pn**	**20 20 09.1**	**-1.2**
SAUI	**Saumlaki**	**11.57**	**260**	P	**Pn**	**20 20 11.6**	**+1.2**
SAUI	**Saumlaki**	**11.57**	**260**	P	**Pn**	**20 20 11.9**	**+1.5**
	796nm,1.3s						
KDU	**Kakadu**	**12.09**	**237**	P	**Pn**	**20 20 18.4**	**+0.9**
	baz=12,SNR=3.7						
KDU	**Kakadu**	**12.09**	**237**	P	**Pn**	**20 20 19.5**	**+2.0**
SWI	**Sorong**	**12.66**	**294**	P	**Pn**	**20 20 24.2**	**-1.2**
	108nm,1.3s						
BNDI	**Bandanaira**	**12.95**	**277**	P	**Pn**	**20 20 31.8**	**+2.5**
	442nm,1.3s						
MTN	**Manton Dam**	**13.30**	**239**	P	**Pn**	**20 20 34.0**	**+0.1**
	baz=13,SNR=5.8						
MTN	**Manton Dam**	**13.30**	**239**	Pn	**Pn**	**20 20 34.0**	**+0.1**
MTN	**Manton Dam**	**13.30**	**239**	P	**Pn**	**20 20 34.1**	**+0.1**
DRS	**Darwin Rock St**	**13.30**	**241**	P	**Pn**	**20 20 36.5**	**+2.4**
CTA	**Charters Tower**	**14.26**	**167**	Pn	**Pn**	**20 20 47.0**	**-0.1**
	0.6nm,0.3s,baz=32,slow=16,SNR=2.3						
CTA				Lg	Lg	20 25 01.9	
	0.4nm,0.3s,baz=260,slow=18,SNR=1.8						
	19nm,0.8s						
CTAO	**Charters Tower**	**14.26**	**167**	Pn	**Pn**	**20 20 45.7**	**-1.5**
CTAO	**Charters Tower**	**14.26**	**167**	P	**Pn**	**20 20 45.7**	**-1.5**
QIS	**Mount Isa**	**14.66**	**192**	P	**Pn**	**20 20 53.8**	**+1.1**
WB0	**Warramunga Arr**	**15.82**	**210**	Pn	**Pn**	**20 21 08.3**	**+0.3**
NLAI	**Namlea**	**15.92**	**280**	P	**Pn**	**20 21 10.7**	**+1.4**
	21nm,1.0s,48μm						
WRAB	**Tennant Creek**	**15.98**	**210**	Pn	**Pn**	**20 21 10.4**	**+0.3**
WRAB	**Tennant Creek**	**15.98**	**210**	P	**Pn**	**20 21 10.4**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,143nm,1.7s						
WB2	**Warramunga Arr**	**15.99**	**210**		**P**	**20 21 12.7**	**-1.1**
WC3	**Warramunga Arr**	**15.99**	**210**	P	**P**	**20 21 13.0**	**-0.8**
	baz=16						
WRA	**Warramunga Arr**	**15.99**	**210**	Pn	**Pn**	**20 21 08.9**	**-1.4**
WRA	**Warramunga Arr**	**15.99**	**210**	Pn	**Pn**	**20 21 10.2**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=30,slow=12,SNR=2.0						
WRA				Sn	**Sn**	**20 24 00.8**	**-7.0**
	comp=Z,4.5nm,0.3s,baz=28,slow=23,SNR=6.5						
WRA				Lg	Lg	20 25 50.8	
	baz=330,slow=38						
	comp=Z,10nm,0.6s						
LBMI	**Labuha**	**16.23**	**289**	P	**P**	**20 21 14.8**	**-1.6**
	comp=Z,49nm,1.0s,comp=Z,2μm						
SANI	**Sanana**	**17.26**	**283**	P	**P**	**20 21 27.6**	**-0.3**
SANI	**Sanana**	**17.26**	**283**	P	**Pn**	**20 21 26.8**	**+0.4**
	comp=Z,40nm,1.0s						
HNR	**Honiara**	**17.29**	**102**	P	**P**	**20 21 27.9**	**-0.3**
	comp=Z,2μm,0.7s,baz=187,slow=3.2,SNR=21						
SOEI	**Soe**	**18.71**	**258**		**Pn**	**20 21 47.6**	**+3.2**
SOEI				IAmb	IAmb	20 21 54.5	
	comp=Z,88nm,0.9s						
SOEI	**Soe**	**18.71**	**258**	P	**Pn**	**20 21 45.4**	**+1.0**
SOEI	**Soe**	**18.71**	**258**	P	**Pn**	**20 21 45.7**	**+1.3**
	comp=Z,193nm,1.3s						
AS01	**Alice Springs**	**19.39**	**205**	P	**Pn**	**20 21 54.1**	**+1.6**
AS31	**Alice Springs**	**19.41**	**205**		**P**	**20 21 52.6**	**+1.0**
ASAR	**Alice Springs**	**19.41**	**205**	Pn	**Pn**	**20 21 52.8**	**+0.1**
ASAR	**Alice Springs**	**19.41**	**205**	P	**Pn**	**20 21 54.8**	**+2.1**
	comp=Z,122nm,0.7s,baz=32,slow=11,SNR=54						
ASAR				S	**Sn**	**20 25 26.7**	**-4.0**
	comp=Z,7.1nm,0.5s,baz=19,slow=28,SNR=5.2						
ASAR				Lg	Lg	20 27 41.5	
	comp=Z,0.5nm,0.3s,baz=28,slow=32,SNR=2.1						
KMSI	**Cibinong**	**19.95**	**289**	P	**Pn**	**20 21 59.8**	**+0.7**
	comp=Z,375nm,0.9s,comp=Z,4μm						
PATS	**Pohnpei**	**20.14**	**50**	P	Pn	20 22 02.5	+1.1
QLP	**Quilpie**	**20.37**	**176**	P	Pn	20 22 05.5	+1.5
	baz=21,SNR=6.8						
QLP	**Quilpie**	**20.37**	**176**	P	Pn	20 22 05.4	+1.4
FITZ	**Fitzroy Crossi**	**20.54**	**233**	P	P	20 21 53.5	-10
FITZ				IAmb	IAmb	20 21 56.5	
	comp=Z,89nm,1.2s						
MMRI	**Maumere**	**20.55**	**262**	P	Pn	20 22 05.9	-0.3
	comp=Z,74nm,1.7s						
LUWI	**Luwuk**	**20.62**	**283**		**P**	**20 22 04.8**	**-0.1**
LUWI				IAmb	IAmb	20 22 12.8	
	comp=Z,242nm,1.5s						
LUWI	**Luwuk**	**20.62**	**283**	P	Pn	20 22 06.5	-0.6
LUWI	**Luwuk**	**20.62**	**283**	P	Pn	20 22 05.7	-1.4
	comp=Z,111nm,1.2s						
EIDS	**Eidsvold**	**20.69**	**158**	P	Pn	20 22 08.7	+0.9
	baz=21,SNR=6.9						
EIDS	**Eidsvold**	**20.69**	**158**		**P**	**20 22 05.8**	**+0.3**
EIDS				IAmb	IAmb	20 22 13.3	
	comp=Z,146nm,1.4s						
EDFI	**Ende, Flores**	**21.10**	**262**	P	**P**	**20 22 12.0**	**+1.9**
	comp=Z,56nm,1.2s						
MRSI	**Marisa**	**21.85**	**287**	P	**P**	**20 22 19.7**	**+1.7**
	comp=Z,43nm,0.6s						
OOD	**Oodnadatta**	**22.57**	**197**	P	**P**	**20 22 28.0**	**+2.4**
KAPI	**Kappang**	**22.98**	**272**	P	**P**	**20 22 27.7**	**-2.3**
KAPI	**Kappang**	**22.98**	**272**	P	**P**	**20 22 27.7**	**-2.3**
KAPI				pmax	pmax		
	comp=Z,32nm,0.8s						
TTSI	**Tana Toraja**	**23.12**	**277**	P	**P**	**20 22 33.4**	**+1.9**
	comp=Z,44nm,1.5s						
TOLI2	**Tolitoli**	**23.14**	**287**	P	**P**	**20 22 28.4**	**-3.4**
TOLI2				IAmb	IAmb	20 22 36.4	
	comp=Z,58nm,1.0s						
TOLI2	**Tolitoli**	**23.14**	**287**	P	**P**	**20 22 33.0**	**+1.2**
WRKA	**Warakurna**	**23.37**	**215**	P	**P**	**20 22 36.0**	**+2.0**
	baz=24,SNR=5.9						
WRKA	**Warakurna**	**23.37**	**215**	P	**P**	**20 22 36.1**	**+2.0**
MPSI	**Mapaga**	**23.76**	**285**	P	**P**	**20 22 38.3**	**+0.4**
	comp=Z,30nm,0.8s						
LCRK	**Leigh Creek**	**24.56**	**190**	P	**P**	**20 22 46.3**	**+1.2**
PLAI	**Plampang**	**24.96**	**262**	P	**P**	**20 22 50.5**	**+1.5**
PLAI	**Plampang**	**24.96**	**262**	P	**P**	**20 22 49.4**	**+0.4**
	comp=Z,29nm,0.9s						
KOUNC	**Koumac, New Ca**	**25.28**	**127**	P	**P**	**20 22 48.3**	**-3.5**
MULG	**Mulgathing**	**25.38**	**198**	P	**P**	**20 22 55.3**	**+2.7**
CMSA	**Cobar Meteorol**	**25.40**	**174**	P	**P**	**20 22 55.1**	**+2.3**
STKA	**Stephens Creek**	**25.62**	**182**	P	**P**	**20 22 57.4**	**+2.6**
	baz=26,SNR=8.3						
STKA	**Stephens Creek**	**25.62**	**182**	P	**P**	**20 22 51.1**	**-3.7**
STKA	**Stephens Creek**	**25.62**	**182**	P	**P**	**20 22 57.4**	**+2.6**
STKA	**Stephens Creek**	**25.62**	**182**	P	**P**	**20 22 51.1**	**-3.7**
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
STKA	**Stephens Creek**	**25.62**	**182**	P	**P**	**20 22 55.5**	**+0.7**
	comp=Z,20nm,0.8s,baz=2.8,slow=10.0,SNR=12						
STKA				Lg	Lg	20 31 05.0	
	comp=Z,0.1nm,0.3s,baz=229,slow=18,SNR=2.9						
	comp=Z,20nm,0.8s						
TWSI	**Taliwang, Sumb**	**25.83**	**263**	P	**P**	**20 22 59.0**	**+2.1**
	comp=Z,12nm,0.6s						
BBOO	**Buckleboo**	**27.26**	**192**	P	**P**	**20 23 12.6**	**+2.9**
BBOO				IAmb	IAmb	20 23 15.7	
	comp=Z,51nm,1.4s						
BBOO	**Buckleboo**	**27.26**	**192**	P	**P**	**20 23 11.5**	**+1.9**
HTT	**Hallett**	**27.39**	**187**	P	**P**	**20 23 11.8**	**+1.0**
	baz=28,SNR=3.6						
HTT	**Hallett**	**27.39**	**187**	P	**P**	**20 23 12.9**	**+2.1**
DZM	**Mont Dzumac**	**27.79**	**127**	P	**P**	**20 23 13.8**	**-0.7**
MARNC	**Mare, Loyalty**	**28.77**	**124**	P	**P**	**20 23 21.7**	**-1.6**
TOO	**Toolangi**	**31.38**	**176**	P	**P**	**20 23 44.5**	**-1.6**
TOO				IAmb	IAmb	20 23 49.2	
	comp=Z,75nm,1.6s						
TOO	**Toolangi**	**31.38**	**176**	P	**P**	**20 23 44.5**	**-1.6**
TOO				pmax	pmax		
	comp=Z,75nm,1.6s						
GEXS	**Deakin Univers**	**31.94**	**178**	P	**P**	**20 23 53.3**	**+2.3**
UGM	**Wanagama**	**32.09**	**265**	P	**P**	**20 23 51.1**	**-1.6**
UGM	**Wanagama**	**32.09**	**265**	P	**P**	**20 23 54.4**	**+1.7**
	comp=Z,43nm,1.4s						
KPJI	**Karang Pucung**	**33.66**	**266**	P	**P**	**20 24 08.8**	**+2.4**
	comp=Z,21nm,0.8s						
CMJI	**Cimerak**	**34.14**	**265**	P	**P**	**20 24 09.7**	**-0.9**
	comp=Z,48nm,1.0s						
TPUB	**Ta-pu**	**36.42**	**324**	P	**P**	**20 24 28.6**	**-1.5**
TPUB	**Ta-pu**	**36.42**	**324**	P	**P**	**20 24 31.2**	**+1.1**
NACB	**Ninganchiao**	**36.55**	**326**	P	**P**	**20 24 28.3**	**-2.9**
YHNB	**Yeheng**	**37.07**	**327**	P	**P**	**20 24 36.0**	**+0.3**
YHNB	**Yeheng**	**37.07**	**327**	P	**P**	**20 24 37.1**	**+1.4**
KNMB	**Chin-nan Tao**	**38.63**	**323**	P	**P**	**20 24 44.5**	**-4.3**
TPRI	**Tanjung Pinang**	**38.86**	**279**	P	**P**	**20 24 54.7**	**+3.8**
	comp=Z,68nm,1.2s						
MNAI	**Manna**	**39.72**	**271**	P	**P**	**20 24 58.7**	**+0.6**
	comp=Z,111nm,1.4s						
OUZ	**Omahuta**	**40.49**	**140**	P	**P**	**20 25 07.4**	**+3.2**
QIZ	**Qiongzhong**	**41.00**	**308**	P	**P**	**20 25 09.0**	**+0.4**
QIZ				S	**S**	**20 31 22.0**	**+0.9**
QIZ				LR	LR		
	comp=Z,5μm,20.6s						
QIZ				LR	LR		
	comp=Z,4μm,19.8s						
QIZ				LR	LR		
	comp=Z,9μm,21.6s						
MJAR	**Matsushiro Arr**	**42.68**	**355**	P	**P**	**20 25 20.0**	**-2.2**
MJAR	**Matsushiro Arr**	**42.68**	**355**	P	**P**	**20 25 19.9**	**-2.2**
	comp=Z,5.1nm,1.0s,baz=167,slow=5.8,SNR=8.9						
	comp=Z,5.1nm,1.0s						
MAJO	**Matsushiro**	**42.68**	**355**	P	**P**	**20 25 22.3**	**+0.1**
MAJO				IAmb	IAmb	20 25 36.3	
	comp=Z,76nm,1.9s						
MAJO	**Matsushiro**	**42.68**	**355**	P	**P**	**20 25 22.3**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,76nm,1.9s						
MJB9	**Matsu-Tunnel**	**42.69**	**355**	P	**P**	**20 25 20.1**	**-2.1**
MJB9				IAmb	IAmb	20 25 37.2	
	comp=Z,72nm,1.8s						
KUZ	**Kuaotunu**	**42.79**	**140**	P	**P**	**20 25 26.2**	**+3.2**
JMM	**Marumori**	**43.83**	**358**	P	**P**	**20 25 29.9**	**-1.4**
JMM				IAmb	IAmb	20 25 43.8	
	comp=Z,54nm,1.3s						
MRNZ	**Matariki Terra**	**44.09**	**147**	P	**P**	**20 25 34.8**	**+1.3**
NJ2	**Nanjing**	**44.32**	**330**	*eP*	P	20 25 40.5	+5.1
NJ2				sP	sP	20 25 53.0	+12
NJ2				pmax	pmax		
	comp=Z,20nm,1.3s						
RTZ	**Ruatahuna**	**44.72**	**141**	P	**P**	**20 25 38.7**	**0.0**
RTZ				IAmb	IAmb	20 25 42.7	
	comp=Z,39nm,1.0s						
BKZ	**Black Stump Fm**	**44.76**	**142**	P	**P**	**20 25 38.5**	**-0.4**
BKZ				IAmb	IAmb	20 25 48.3	
	comp=Z,30nm,1.1s						
TUWZ	**Tuamarina**	**44.76**	**146**	P	**P**	**20 25 39.2**	**+0.5**
TCW	**Tory Channel**	**44.79**	**146**	P	**P**	**20 25 38.9**	**-0.2**
WHN	**Wuhan**	**45.54**	**325**	⇑P	P	20 25 51.0	+5.9
WHN				pmax	pmax		
	comp=Z,110nm,1.2s						
KSRS	**Korea Array**	**45.55**	**343**	P	**P**	**20 25 43.3**	**-1.8**
	comp=Z,7.1nm,1.0s,baz=162,slow=9.2,SNR=14						
	comp=Z,7.1nm,1.0s						
GSI	**Gunungsitoli**	**45.76**	**278**	P	**P**	**20 25 49.3**	**+2.1**
NONG	**Nongkai**	**45.94**	**302**	P	**P**	**20 25 50.1**	**+1.6**
JTM	**Tenmabayashi**	**46.73**	**358**	P	**P**	**20 25 52.7**	**-1.7**
JTM	**Tenmabayashi**	**46.73**	**358**	P	**P**	**20 25 56.2**	**+1.9**
GYA	**Guiyang**	**47.73**	**314**	⇓P	P	20 26 08.0	+5.5
GYA				pmax	pmax		
	comp=Z,11nm,0.8s						
PHRA	**Phrae**	**48.60**	**301**	P	**P**	**20 26 08.8**	**-0.5**
LYN	**LuoYang**	**49.59**	**327**	⇑P	**P**	**20 26 20.3**	**+3.7**
LYN				pmax	pmax		
	comp=Z,57nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.69**	**300**	P	**P**	**20 26 16.9**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=116,slow=6.2,SNR=24						
	comp=Z,2.6nm,0.7s						
CHTO	**Chiang Mai**	**49.84**	**301**	P	**P**	**20 26 19.6**	**+0.8**
CHTO	**Chiang Mai**	**49.84**	**301**	P	**P**	**20 26 19.6**	**+0.8**
CHTO	**Chiang Mai**	**49.84**	**301**	P	**P**	**20 26 19.6**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	**Kunming**	**49.84**	**310**	⇑P	**P**	**20 26 19.0**	**0.0**
KMI				pP	sP	20 26 29.5	+5.4
KMI				PcP	**PcP**	**20 27 40.8**	**+1.2**
KMI				pmax	pmax		
	comp=Z,20nm,1.3s						
HNS	**HongShan**	**50.64**	**331**	⇑P	**P**	**20 26 24.3**	**-0.2**
HNS				pmax	pmax		
	comp=Z,22nm,1.4s						
USA0B	**Ussuriysk Arra**	**51.06**	**350**	P	**P**	**20 26 25.4**	**-2.1**
USA0B				IAmb	IAmb	20 26 33.1	
	comp=Z,22nm,1.1s						
USA0B	**Ussuriysk Arra**	**51.06**	**350**	*i* P	**P**	**20 26 27.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**51.06**	**350**	P	**P**	**20 26 25.7**	**-1.8**
	comp=Z,7.6nm,0.7s,baz=107,slow=4.1,SNR=12						

BNX pmax pmax
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 54.86 331 *e*P **P 20 27 00.0 +4.2**
HHC pP sP 20 27 10.3 +9.3
HHC pmax pmax
comp=Z,13nm,0.6s
HHC LR LR
comp=Z,7μm,18.0s
BTO Baotou 55.43 330 *e*P P 20 27 05.5 +5.6
BTO PP PP 20 29 12.0 +8.1
BTO pmax pmax
comp=Z,33nm,1.1s
LZH Lanzhou 55.68 322 *e*P **P 20 27 01.8 -0.1**
LZH pP sP 20 27 13.5 +6.4
LZH pmax pmax
comp=Z,23nm,1.2s
KLR Kul'dur 55.99 351 *i* P **P 20 27 01.3 -2.3**
KLR pmax pmax
comp=Z,19nm,1.0s
TYV Tymovskoe 56.78 360 *e*P **P 20 27 09.2 0.0**
TYV pmax pmax
comp=Z,8.0nm,1.2s
HEH HeiHe 57.74 348 *e*P **P 20 27 15.0 -1.0**
HEH pmax pmax
comp=Z,18nm,1.0s
SHL Shillong 58.64 305 P **P 20 27 23.8 +0.7**
SHL IAmb IAmb 20 27 35.7
comp=Z,32nm,1.2s
SHL Shillong 58.64 305 P **P 20 27 23.8 +0.7**
SHL pmax pmax
comp=Z,32nm,1.2s
HIA Hailar 58.74 343 *i* P **P 20 27 23.0 -0.1**
HIA pmax pmax
comp=Z,10.0nm,1.0s
XMAS Kiritimati 60.20 84 P **P 20 27 34.5 +0.6**
GTA Gaotai 60.25 323 *e*P **P 20 27 34.5 +0.6**
GTA pmax pmax
comp=Z,4.0nm,1.0s
PEA0B Petropavlovsk- 60.37 10 P **P 20 27 33.4 -0.8**
PEA0B Petropavlovsk- 60.37 10 P **P 20 27 33.4 -0.8**
PEA0B pmax pmax
comp=Z,44nm,1.3s
PETK Petropavlovsk- 60.37 10 P **P 20 27 31.7 -2.5**
PETK Petropavlovsk- 60.37 10 P **P 20 27 33.2 -1.0**
comp=Z,4.8nm,0.8s,baz=146,slow=4.5,SNR=11
comp=Z,4.8nm,0.8s
PET Petropavlovsk 60.46 11 P **P 20 27 32.2 -2.6**
ZEA Zeya 61.09 350 *e*P **P 20 27 38.9 -0.2**
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,40nm,1.3s
ULN Ulaanbaatar 62.31 334 P **P 20 27 46.5 -1.2**
ULN IAmb IAmb 20 27 55.5
comp=Z,12nm,0.9s
ULN Ulaanbaatar 62.31 334 *i* P **P 20 27 47.1 -0.6**
ULN pmax pmax
comp=Z,16nm,1.1s
SONM Songino Array 62.58 333 P **P 20 27 47.5 -2.0**
SONM Songino Array 62.58 333 P **P 20 27 49.0 -0.5**
comp=Z,1.6nm,0.6s,baz=148,slow=8.6,SNR=6.4
comp=Z,1.6nm,0.6s
HLK Haleakala 65.51 64 P **P 20 28 13.7 +4.2**
MA2 Magadan 65.82 4 P **P 20 28 10.2 -0.1**
MA2 Magadan 65.82 4 *i* P **P 20 28 09.4 -0.9**
MA2 pmax pmax
comp=Z,35nm,1.5s
ZAK Zakamensk 65.84 333 *e*P **P 20 28 10.1 -0.7**
ZAK pmax pmax
comp=Z,23nm,1.3s
MOY Mondy 67.77 333 *e*P **P 20 28 23.6 +0.5**
MOY pmax pmax
comp=Z,25nm,1.6s
YAK Yakutsk 68.73 353 *e*P **P 20 28 31.8 +3.1**
YAK pmax pmax
comp=Z,19nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.5s
SEY Seymchan 69.27 5 *i* P **P 20 28 31.1 -1.0**
SEY pmax pmax
comp=Z,22nm,1.3s
WMQ Urumqi 70.23 321 *e*P **P 20 28 39.5 +1.0**
WMQ pmax pmax
comp=Z,20nm,1.1s
VNDA Vanda 72.04 176 P **P 20 28 50.0 +1.2**
comp=Z,2.1nm,0.7s,baz=334,slow=7.4,SNR=6.5
comp=Z,2.1nm,0.7s
DGZ Jazzator, Alta 73.39 326 *i* P **P 20 28 55.9 -1.6**
DGZ pmax pmax
comp=Z,57nm,3.6s
ZSN Zaisan 73.74 323 *e*P **P 20 28 58.9 -0.5**
comp=Z,11nm,1.4s,baz=323
ZSN Zaisan 73.74 323 *e*P **P 20 28 58.9 -0.5**
ZSN pmax pmax
comp=Z,11nm,1.4s
MK31 Makanchi Array 74.99 322 P **P 20 29 06.3 -0.4**
MK31 Makanchi Array 74.99 322 *i* P **P 20 29 06.5 -0.3**
MKAR Makanchi Array 74.99 322 P **P 20 29 06.9 +0.1**
MKAR Makanchi Array 74.99 322 *i* P **P 20 29 07.1 +0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 74.99 322 P **P 20 29 06.6 -0.2**
comp=Z,4.5nm,0.6s,baz=101,slow=7.8,SNR=48
comp=Z,4.5nm,0.6s
MAKZ Makanchi 75.19 322 P **P 20 29 06.5 -1.4**
MAKZ IAmb IAmb 20 29 13.7
comp=Z,22nm,1.2s
MAKZ Makanchi 75.19 322 P **P 20 29 06.5 -1.4**
MAKZ pmax pmax
comp=Z,22nm,1.3s
SHLS Shalkode 75.29 317 *e*P **P 20 29 06.2 -2.5**
comp=Z,8.1nm,0.9s,baz=318
SHLS Shalkode 75.29 317 *e*P **P 20 29 06.2 -2.5**
SHLS pmax pmax
comp=Z,8.0nm,0.9s
BILL Bilibino 75.85 9 *i* P **P 20 29 10.8 -0.4**
BILL pmax pmax
comp=Z,16nm,1.5s
KPKS Kokpek 75.94 318 *e*P **P 20 29 10.8 -1.6**
baz=318
KPKS Kokpek 75.94 318 *e*P **P 20 29 10.7 -1.6**
SATY Saty 75.97 317 *e*P **P 20 29 10.9 -1.7**
comp=Z,14nm,1.4s,baz=317
SATY Saty 75.97 317 *e*P **P 20 29 10.9 -1.7**
SATY pmax pmax
comp=Z,14nm,1.4s
NIL Nilore 76.64 307 P **P 20 29 16.2 -0.3**
NIL IAmb IAmb 20 29 25.6
comp=Z,22nm,0.8s
NIL Nilore 76.64 307 P **P 20 29 16.2 -0.3**
NIL pmax pmax
comp=Z,22nm,0.9s
TDK Taldyqorghan 76.72 319 *e*P **P 20 29 15.8 -0.9**
comp=Z,15nm,1.3s,baz=319
TDK Taldyqorghan 76.72 319 *e*P **P 20 29 15.7 -0.9**
TDK pmax pmax
comp=Z,15nm,1.3s
MDOK Medeo 76.93 317 *e*P **P 20 29 17.4 -0.7**
baz=317
MDOK Medeo 76.93 317 *e*P **P 20 29 17.3 -0.7**
ZAA0 Zalesovo Array 76.95 329 P **P 20 29 16.6 -1.2**
ZALV Zalesovo Beam 76.95 329 P **P 20 29 17.1 -0.6**
ZALV Zalesovo Beam 76.95 329 *i* P **P 20 29 17.1 -0.6**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 76.95 329 P **P 20 29 16.6 -1.2**
comp=Z,3.2nm,0.6s,baz=116,slow=5.1,SNR=16
comp=Z,3.2nm,0.6s
KUU Kurty 77.67 317 *e*P **P 20 29 20.8 -1.3**
baz=317
KUU Kurty 77.67 317 *e*P **P 20 29 20.7 -1.3**
TIXI Tiksi 78.18 356 *i* P **P 20 29 22.6 -1.6**
TIXI pmax pmax
comp=Z,11nm,1.9s
AAK Ala-Archa 78.50 316 *i* P **P 20 29 23.8 -3.1**
AAK pmax pmax
comp=Z,11nm,1.4s
KURK Kurchatov 78.87 324 P **P 20 29 24.5 -3.9**
KURK IAmb IAmb 20 29 33.9
comp=Z,25nm,1.3s
KURK Kurchatov 78.87 324 *i* P **P 20 29 27.1 -1.3**
KURK pmax pmax
comp=Z,23nm,1.3s
KURBB Kurchatov Arra 78.88 324 P **P 20 29 28.2 -0.3**
comp=Z,1.9nm,0.5s,baz=113,slow=4.3,SNR=21
comp=Z,1.9nm,0.5s
M14K Bethel 79.29 24 P **P 20 29 30.5 0.0**
M14K IAmb IAmb 20 29 36.5
comp=Z,37nm,1.1s
BTLS Baital 79.61 318 *e*P **P 20 29 31.9 -0.8**
baz=318
BTLS Baital 79.61 318 *e*P **P 20 29 31.8 -0.8**
L16K Owhat River 80.82 24 P **P 20 29 38.8 0.0**
L16K IAmb IAmb 20 29 44.0
comp=Z,44nm,1.5s
SIMJ Simiganj 81.31 310 P **P 20 29 41.2 -0.9**
SIMJ IAmb IAmb 20 29 48.9
comp=Z,12nm,0.8s
KKAR Karatay Array 81.43 315 P **P 20 29 41.4 -1.1**
KKAR Karatay Array 81.43 315 P **P 20 29 41.4 -1.1**
IUG luzhnay 81.50 314 *e*P **P 20 29 41.9 -1.2**
comp=Z,16nm,1.3s,baz=314
IUG luzhnay 81.50 314 *e*P **P 20 29 41.8 -1.2**
IUG pmax pmax
comp=Z,16nm,1.3s
BRLS Borolday 81.88 315 *e*P **P 20 29 44.4 -0.5**
baz=315
BRLS Borolday 81.88 315 *e*P **P 20 29 44.4 -0.5**
BRZS Berezniki 82.13 322 *e*P **P 20 29 45.1 -0.9**
baz=322
BRZS Berezniki 82.13 322 *e*P **P 20 29 45.1 -0.9**
SVW2 Sparrevohn 82.14 26 P **P 20 29 45.9 0.0**
QSPA South Pole Qui 83.82 180 P **P 20 29 54.6 0.0**
comp=Z,12nm,0.9s,baz=310,slow=1.8,SNR=23
comp=Z,12nm,0.9s
NRIK Noril'sk 84.16 343 *i* P **P 20 29 54.6 -1.5**
NRIK pmax pmax
comp=Z,38nm,1.3s
NRIK Noril'sk 84.16 343 P **P 20 29 55.1 -1.0**
comp=Z,7.1nm,0.8s,baz=121,slow=5.1,SNR=13
comp=Z,7.1nm,0.8s
SUA Susitna One 84.40 26 P **P 20 29 56.8 -0.9**
BVAR Borovoye Array 84.45 325 P **P 20 29 57.5 -0.4**
comp=Z,22nm,0.6s,baz=112,slow=6.7,SNR=88
comp=Z,22nm,0.6s
BRVK Borovoye 84.53 325 P **P 20 29 58.0 -0.3**
BRVK Borovoye 84.53 325 *i* P **P 20 29 57.7 -0.6**
BRVK pmax pmax
comp=Z,34nm,1.0s
CAST Castle Rocks 84.65 24 P **P 20 29 58.2 -0.5**
CAST IAmb IAmb 20 30 03.5
comp=Z,12nm,1.1s
RC01 Rabbit Creek A 84.70 27 P **P 20 29 58.2 -0.8**
RC01 IAmb IAmb 20 30 03.7
comp=Z,17nm,0.9s
KTH Kantishna Hill 85.18 24 P **P 20 30 00.2 -1.2**
KTH IAmb IAmb 20 30 05.7
comp=Z,20nm,1.1s
MLY Manley 85.85 23 IAmb IAmb 20 30 10.0
comp=Z,9.3nm,0.9s
RND Reindeer 85.97 25 P **P 20 30 04.1 -1.3**
RND IAmb IAmb 20 30 10.1
comp=Z,19nm,0.8s
RND Reindeer 85.97 25 P **P 20 30 04.1 -1.3**
RND pmax pmax
comp=Z,19nm,0.8s
ILAR Eielson Array 87.28 24 P **P 20 30 09.4 -2.3**
comp=Z,5.2nm,0.7s,baz=258,slow=4.5,SNR=37
comp=Z,5.2nm,0.7s
F24K Squaw Lake 87.88 21 IAmb IAmb 20 30 20.9
comp=Z,14nm,1.1s
ABKAR Akbulak array 89.97 319 P **P 20 30 23.4 -1.3**
ABKAR Akbulak array 89.97 319 P **P 20 30 23.5 -1.3**
ABKAR IAmb IAmb 20 30 28.9
comp=Z,4.2nm,0.8s
I28M Miner Creek 90.29 24 IAmb IAmb 20 30 31.6
comp=Z,14nm,1.2s
L29M L29M 90.51 27 IAmb IAmb 20 30 33.5
comp=Z,12nm,0.9s
K29M Barlow Dome 90.94 26 IAmb IAmb 20 30 35.4
comp=Z,9.1nm,0.8s
ARU Arti 91.90 326 P **P 20 30 31.8 -1.8**
ARU IAmb IAmb 20 30 39.2
comp=Z,7.5nm,1.0s
ARU Arti 91.90 326 *d i*P **P 20 30 31.7 -1.8**
ARU 20 34 13.5
ARU S **SKSac 20 41 02.4 -4.1**
ARU SS **SS 20 47 44.1 +0.9**
ARU pmax pmax
comp=Z,12nm,1.4s
ELIB Princess Elisa 92.95 196 *d*P **P 20 30 39.5 +1.1**
comp=Z,5.5nm,1.1s
BELG Belogornoye 98.00 322 *i* P **P 20 30 56.9 -4.6**
BELG pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 101.23 28 *i* P **Pdif 20 31 15.1 -0.6**
YKA Yellowknife Ar 101.23 28 Pdiff **Pdif 20 31 14.2 -1.5**
comp=Z,0.3nm,0.7s,baz=282,slow=4.7,SNR=4.7
KIV Kislovodsk 101.53 313 *e*P **Pdif 20 31 14.7 -2.9**
KIV pmax pmax
comp=Z,4.0nm,1.0s
APA Apatity 103.00 338 ||*i*P **Pdif 20 31 34.7 +11**
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,2μm,17.0s
CLL Collm 118.84 327 *e*PKiKP **PKiKP 20 36 14.0 +0.2**
CLL Collm 118.84 327 *e*PKiKP **PKiKP 20 36 14.0 +0.2**
GERES GERESS Array B 119.62 324 PKP **PKPdf 20 36 15.1 -0.4**
comp=Z,0.8nm,0.5s,baz=92,slow=4.9,SNR=4.0
ABTA Abfaltersbach 121.30 322 *e*PKP **PKPdf 20 36 18.4 -0.3**
comp=Z,1.3nm,0.6s
WTTA Wattenberg 121.58 323 *i* PKiKP **PKiKP 20 36 19.7 +0.1**
comp=Z,2.8nm,0.4s
MOTA Moosalm 121.86 323 *e*PKiKP **PKPdf 20 36 19.9 -0.1**
comp=Z,2.4nm,0.5s
DAVA Damuels 122.61 324 *e*PKiKP **PKiKP 20 36 21.8 +0.2**
comp=Z,2.7nm,0.4s
EKA Eskdalemuir Ar 123.93 337 PKP **PKPdf 20 36 23.4 -0.1**
comp=Z,0.7nm,0.4s,baz=33,slow=2.4,SNR=6.5
PLCA Paso Flores 124.19 150 PKP **PKiKP 20 36 25.0 +0.1**
comp=Z,1.2nm,1.0s,baz=40,slow=2.7,SNR=4.2
SCHQ Schefferville 125.93 21 PKP **PKPdf 20 36 27.1 -0.2**
comp=Z,1.7nm,0.9s,baz=7.9,slow=6.2,SNR=3.6
ESDC Sonseca Array 135.20 323 PKP **PKPdf 20 36 45.2 -0.2**
comp=Z,0.3nm,0.7s,baz=43,slow=1.3,SNR=1.5
TORD Torodi Ar. Bea 141.08 283 PKP **PKPdf 20 36 56.6 -0.2**
comp=Z,2.8nm,1.0s,baz=83,slow=1.6,SNR=5.5
GUY2C Guyana, Caldas 142.01 89 *e*P **PKPdf 20 36 54.4 -4.7**
SPBC San Pablo de B 143.31 89 *e*P PKPbc 20 36 57.9 -0.1
BARC Barichara 144.23 87 *e*P PKPbc 20 37 01.2 +0.2
RUSC La Rusia 144.31 88 *e*P **PKPab 20 37 00.9 -0.3**
SDDR Presa de Saban 144.44 66 *e*P **PKPab 20 37 00.7 -0.3**
PAMC Pamplona, Colo 144.72 86 *e*P **PKPab 20 37 02.5 -0.1**
SDV Santo Domingo 146.74 83 **PKPbc 20 37 08.5 -0.2**
ETMB Extrema 147.02 119 **PKPbc 20 37 09.0 -0.2**
KIC Kosan Boka 147.75 272 ||*e*PKP1 **PKPbc 20 37 11.8 +0.5**
comp=Z,20nm,0.9s
DBIC Dimbokro 147.87 273 PKPbc **PKPbc 20 37 11.4 -0.1**
comp=Z,12nm,1.0s,baz=142,slow=2.9,SNR=8.1
LIC Lamto 148.03 272 ||*e*PKP1 **PKPbc 20 37 12.5 +0.5**
comp=Z,38nm,0.8s
TIC Toumodi 148.03 273 ||*e*PKP1 **PKPbc 20 37 11.3 -0.7**
comp=Z,10.0nm,0.7s
PTLB Pontes e Lacer 149.45 135 PKPab **PKPbc 20 37 16.1 +0.5**
SAML Samuel 150.06 120 **PKPbc 20 37 17.6 +0.4**
SAML Samuel 150.06 120 PKIKP **PKPbc 20 37 17.6 +0.4**
SAML Samuel 150.06 120 *e*P **PKPbc 20 37 17.0 -0.1**
VILB Vilhena 150.29 130 **PKiKP 20 37 18.7 +0.2**

*IDC **25** 20:20:23.2±1.1,5.°71S×142.°78E,h0km,mb4.1/10, mbtmp4.2/12,ML1.6/1,Error ellipse: s-maj=33.9km s-min=23.5km az=64.0*
ISC 25 20:20:28.4±0.8,5.°7S±0.°1×142.°8E±0.°1,h35km,n12, σ0s60/13,mb4.1/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.69**	**130**	Pn	**Pn**	**20 21 50.6**	**+0.1**
	1.1nm,0.3s,baz=330,slow=16,SNR=1.0						
PMG				Sn	**Sn**	**20 22 54.8**	**+0.2**
	3.9nm,0.3s,baz=331,slow=19,SNR=1.0						
	80nm,0.8s						
ASAR	**Alice Springs**	**19.77**	**205**	P	**P**	**20 24 55.2**	**-0.4**
	9.5nm,0.7s,baz=31,slow=10,SNR=2.8						
MJAR	**Matsushiro Arr**	**42.27**	**355**	P	**P**	**20 28 18.4**	**-0.1**
	1.7nm,0.9s,baz=172,slow=11,SNR=4.1						
	1.7nm,0.9s						
KSRS	**Korea Array**	**45.14**	**343**	P	**P**	**20 28 41.7**	**+0.2**
	1.7nm,0.7s,baz=170,slow=11,SNR=4.8						
	1.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.43**	**300**	P	**P**	**20 29 15.9**	**+0.6**
	2.0nm,0.8s,baz=126,slow=6.1,SNR=5.0						
	2.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.64**	**350**	P	**P**	**20 29 25.1**	**+1.0**
	3.6nm,0.7s,baz=171,slow=7.6,SNR=5.7						
	3.6nm,0.7s						
PETK	**Petropavlovsk-**	**59.97**	**10**	P	**P**	**20 30 30.6**	**-0.5**
	4.7nm,0.9s,baz=140,slow=5.7,SNR=5.7						
	4.7nm,0.9s						
MKAR	**Makanchi Array**	**74.64**	**322**	P	**P**	**20 32 04.6**	**+0.4**
	1.9nm,0.9s,baz=103,slow=6.9,SNR=3.2						
	1.9nm,0.9s						
ZALV	**Zalesovo Beam**	**76.57**	**329**	P	**P**	**20 32 14.2**	**-0.9**
	0.5nm,0.5s,baz=106,slow=5.1,SNR=2.0						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**78.51**	**324**	P	**P**	**20 32 25.4**	**-0.6**
	0.5nm,0.5s,baz=120,slow=5.4,SNR=1.8						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**84.09**	**325**	P	**P**	**20 32 56.1**	**+0.5**
	6.2nm,1.0s,baz=104,slow=6.3,SNR=3.9						
	6.2nm,1.0s						
ILAR	**Eielson Array**	**86.92**	**24**	P	**P**	**20 33 09.0**	**-0.4**
	1.0nm,0.7s,baz=266,slow=4.3,SNR=4.4						
	1.0nm,0.7s						

*IDC **25** 20:25:17.1±0.7,6.°36S×143.°57E,h0km,mb4.2/12, mbtmp4.3/15,ML4.0/2,Error ellipse: s-maj=27.4km s-min=16.5km az=82.0*
*NEIC **25** 20:25:18.7±1.7,6.°5S±0.°1×143.°45E±0.°10,h10km±1km, mb4.8/63,Error ellipse: s-maj=20.3km s-min=13.3km az=218.0*
ISC 25 20:25:21.7±0.5,6.°50S±0.°07×143.°44E±0.°08,h35km,n84, σ0s94/85,mb4.7/43,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.68**	**128**	Pn	**Pn**	**20 26 30.6**	**+0.7**
	18nm,0.3s,baz=358,slow=7.5,SNR=7.4						
PMG				Sn	**Sn**	**20 27 23.2**	**+0.1**
	11nm,0.3s,baz=238,slow=23,SNR=7.7						
FAKI	**Fak Fak**	**11.70**	**287**	Pn	**Pn**	**20 28 05.5**	**-0.8**
WRA	**Warramunga Arr**	**16.02**	**213**	Pn	**Pn**	**20 29 04.7**	**+0.2**
	0.5nm,0.3s,baz=23,slow=14,SNR=1.6						
WRA				Lg	Lg	20 33 52.3	
	0.3nm,0.3s,baz=25,slow=36,SNR=1.8						
	15nm,1.0s						
AS31	**Alice Springs**	**19.37**	**207**	P	**P**	**20 29 44.6**	**0.0**
ASAR	**Alice Springs**	**19.37**	**207**	P	**P**	**20 29 42.5**	**-2.1**
ASAR	**Alice Springs**	**19.37**	**207**	P	**Pn**	**20 29 48.2**	**+2.3**
	0.9nm,0.3s,baz=38,slow=9.3,SNR=7.2						
	23nm,0.7s						
EIDS	**Eidsvold**	**20.14**	**160**	P	**P**	**20 29 51.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**20.84**	**235**	P	**P**	**20 30 00.9**	**+0.4**
FITZ				IAmb	IAmb	20 30 12.8	
	comp=Z,49nm,1.4s						
BBOO	**Buckleboo**	**27.07**	**194**	P	**P**	**20 31 00.3**	**-0.7**
BBOO				IAmb	IAmb	20 31 27.9	
	comp=Z,36nm,1.2s						
LIFNC	**LIFOU**	**27.08**	**124**	P	**P**	**20 30 58.6**	**-2.7**
MJAR	**Matsushiro Arr**	**43.09**	**354**	P	**P**	**20 33 18.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=186,slow=9.3,SNR=2.5						
	comp=Z,1.1nm,0.8s						
TUWZ	**Tuamarina**	**44.12**	**147**	P	**P**	**20 33 27.2**	**+0.5**
LTZ	**Lake Taylor**	**44.20**	**149**	P	**P**	**20 33 27.0**	**-0.4**
LTZ				IAmb	IAmb	20 33 34.1	
	comp=Z,26nm,1.2s						
MLZ	**Mavora Lakes**	**44.26**	**155**	P	**P**	**20 33 27.6**	**-0.2**
KSRS	**Korea Array**	**46.06**	**343**	P	**P**	**20 33 42.8**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=163,slow=9.7,SNR=7.5						
	comp=Z,2.3nm,0.8s						
GSI	**Gunungsitoli**	**46.43**	**278**	P	**P**	**20 33 45.0**	**-0.5**
ENH	**Enshi**	**48.95**	**320**	P	**P**	**20 34 03.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**50.40**	**300**	P	**P**	**20 34 17.2**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=120,slow=5.3,SNR=2.8						
	comp=Z,0.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.51**	**349**	P	**P**	**20 34 24.3**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=177,slow=6.4,SNR=7.7						
	comp=Z,3.8nm,0.7s						
PEA0B	**Petropavlovsk-**	**60.60**	**10**	P	**P**	**20 35 29.3**	**+0.5**
PETK	**Petropavlovsk-**	**60.60**	**10**	P	**P**	**20 35 29.2**	**+0.4**
PETK	**Petropavlovsk-**	**60.60**	**10**	P	**P**	**20 35 28.4**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=124,slow=6.1,SNR=7.9						
	comp=Z,4.4nm,0.8s						
PALK	**Pallekele**	**64.06**	**281**	P	**P**	**20 35 51.3**	**-1.4**
HMH	**Humu'ula Sheep**	**65.45**	**65**	P	**P**	**20 36 00.4**	**-1.6**
VNDA	**Vanda**	**71.65**	**176**	P	**P**	**20 36 40.6**	**+1.3**
MK31	**Makanchi Array**	**75.66**	**322**	P	**P**	**20 37 03.9**	**+0.5**
MKAR	**Makanchi Array**	**75.66**	**322**	P	**P**	**20 37 04.2**	**+0.8**
MKAR	**Makanchi Array**	**75.66**	**322**	P	**P**	**20 37 04.1**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=102,slow=7.5,SNR=16						
	comp=Z,1.5nm,0.6s						
MAKZ	**Makanchi**	**75.86**	**322**	P	**P**	**20 37 05.8**	**+1.3**
ZALV	**Zalesovo Beam**	**77.58**	**329**	P	**P**	**20 37 13.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=113,slow=5.7,SNR=4.7						
	comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**79.53**	**324**	P	**P**	**20 37 25.3**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=108,slow=4.3,SNR=6.8						
	comp=Z,1.0nm,0.8s						
N15K	**Kwethluk River**	**79.80**	**25**	P	**P**	**20 37 25.5**	**-0.7**
N15K				IAmb	IAmb	20 37 32.0	
	comp=Z,19nm,1.4s						
ARSB	**Arslanbob**	**79.84**	**314**	P	**P**	**20 37 25.6**	**-1.4**
ANM	**Nome**	**80.36**	**20**	P	**P**	**20 37 29.2**	**+0.2**
O16K	**Kokwok River B**	**80.36**	**26**	P	**P**	**20 37 29.2**	**+0.1**
O16K				IAmb	IAmb	20 37 57.6	
	comp=Z,17nm,1.4s						
K15K	**Wolf Creek Mou**	**80.40**	**23**	P	**P**	**20 37 30.2**	**+0.8**
K15K				IAmb	IAmb	20 37 58.2	
	comp=Z,13nm,1.4s						
M16K	**Timber Creek**	**80.73**	**25**	P	**P**	**20 37 32.5**	**+1.4**
L16K	**Owhat River**	**80.89**	**24**	P	**P**	**20 37 33.7**	**+1.7**
L16K				IAmb	IAmb	20 38 01.5	
	comp=Z,23nm,1.4s						
H17K	**Granite Mounta**	**82.48**	**21**	P	**P**	**20 37 39.7**	**-0.6**
H17K				IAmb	IAmb	20 37 42.9	
	comp=Z,7.7nm,1.0s						
C16K	**Lisburne Hills**	**82.68**	**17**	P	**P**	**20 37 41.8**	**+0.5**
C16K				IAmb	IAmb	20 37 58.5	
	comp=Z,14nm,1.5s						
F17K	**Baldwin Pennin**	**82.86**	**19**	P	**P**	**20 37 42.7**	**+0.5**
F17K				IAmb	IAmb	20 37 52.9	
	comp=Z,10nm,1.4s						
J18K	**Innoko River**	**82.89**	**23**	P	**P**	**20 37 43.3**	**+0.8**
J18K				IAmb	IAmb	20 37 48.8	
	comp=Z,7.0nm,1.2s						
TTA	**Tatalina**	**82.91**	**24**	P	**P**	**20 37 42.8**	**+0.1**
TTA				IAmb	IAmb	20 37 52.7	
	comp=Z,9.4nm,1.5s						
M19K	**Big River Lodg**	**83.08**	**25**	P	**P**	**20 37 43.9**	**+0.4**
M19K				IAmb	IAmb	20 37 45.3	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**83.47**	**180**	P	**P**	**20 37 46.5**	**+0.8**
QSPA				IAmb	IAmb	20 37 47.8	
	comp=Z,5.7nm,0.8s						
QSPA	**South Pole Qui**	**83.47**	**180**	P	**P**	**20 37 46.9**	**+1.2**
	comp=Z,5.8nm,0.9s,baz=314,slow=0.8,SNR=21						
	comp=Z,5.8nm,0.9s						
J19K	**Poorman**	**83.58**	**23**	P	**P**	**20 37 47.0**	**+1.0**
J19K				IAmb	IAmb	20 37 54.3	
	comp=Z,8.9nm,1.2s						
M20K	**Styx River**	**83.60**	**25**	P	**P**	**20 37 47.7**	**+1.4**
M20K				IAmb	IAmb	20 37 48.4	
	comp=Z,5.0nm,0.8s						
E18K	**Tukpahlearik C**	**83.62**	**19**	P	**P**	**20 37 47.0**	**+0.8**
E18K				IAmb	IAmb	20 37 48.6	
	comp=Z,7.0nm,1.1s						
BRLK	**Bradley Lake**	**83.68**	**28**	P	**P**	**20 37 47.4**	**+0.8**
K20K	**Telida**	**83.89**	**24**	P	**P**	**20 37 48.7**	**+1.1**
K20K				IAmb	IAmb	20 37 50.3	
	comp=Z,7.2nm,1.1s						
H19K	**Roundabout Mou**	**84.03**	**21**	P	**P**	**20 37 49.2**	**+0.9**
H19K				IAmb	IAmb	20 37 50.7	
	comp=Z,6.5nm,1.1s						
C18K	**Utukok River**	**84.14**	**18**	P	**P**	**20 37 49.4**	**+0.5**
J20K	**Nowinta River**	**84.24**	**23**	P	**P**	**20 37 49.8**	**+0.4**
J20K				IAmb	IAmb	20 37 52.0	
	comp=Z,16nm,1.2s						
SUA	**Susitna One**	**84.44**	**26**	P	**P**	**20 37 50.2**	**-0.4**
NRIK	**Noril'sk**	**84.68**	**343**	P	**P**	**20 37 51.7**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=121,slow=3.9,SNR=5.8						
	comp=Z,3.6nm,0.7s						
CAST	**Castle Rocks**	**84.71**	**24**	P	**P**	**20 37 52.1**	**+0.3**
RC01	**Rabbit Creek A**	**84.74**	**27**	P	**P**	**20 37 51.9**	**0.0**

E19K	Redstone River	84.74	19	P		P	20 37 53.4	+1.5
E19K				IAmb		IAmb	20 37 54.8	
	comp=Z,7.9nm,1.1s							
C19K	Lookout Ridge	84.88	18	P		P	20 37 54.7	+2.2
C19K				IAmb		IAmb	20 37 55.3	
	comp=Z,8.2nm,1.1s							
D19K	Kuna River	85.00	18	P		P	20 37 54.0	+0.8
D19K				IAmb		IAmb	20 37 56.0	
	comp=Z,10nm,1.4s							
BVAR	Borovoye Array	85.10	325	P		P	20 37 54.6	+0.7
	comp=Z,2.7nm,0.7s,baz=111,slow=8.1,SNR=12							
	comp=Z,2.7nm,0.7s							
BRVK	Borovoye	85.17	325	P		P	20 37 55.2	+0.9
KTH	Kantishna Hill	85.24	24	P		P	20 37 53.5	-1.0
KTH				IAmb		IAmb	20 38 05.0	
	comp=Z,19nm,1.4s							
GHO	Glory Hole Cre	85.36	26	P		P	20 37 54.4	-0.8
H21K	Melozitna Rive	85.42	22	P		P	20 37 55.3	0.0
KNK	Knik Glacier	85.43	27	P		P	20 37 55.3	-0.2
TRF	Thorofare Moun	85.46	24	P		P	20 37 55.6	-0.2
TRF				IAmb		IAmb	20 38 00.6	
	comp=Z,5.1nm,1.0s							
SML	Sawmill	85.64	26	P		P	20 37 56.5	0.0
F21K	Alatna River	85.89	20	P		P	20 37 57.4	-0.3
F21K				IAmb		IAmb	20 37 59.2	
	comp=Z,8.9nm,1.4s							
RND	Reindeer	86.03	25	P		P	20 37 57.9	-0.6
RND				IAmb		IAmb	20 37 59.7	
	comp=Z,9.3nm,0.9s							
B20K	Meade River	86.08	17	P		P	20 37 58.4	0.0
B20K				IAmb		IAmb	20 38 25.0	
	comp=Z,7.1nm,1.2s							
DHY	Denali Highway	86.53	25	P		P	20 38 00.8	-0.2
DHY				IAmb		IAmb	20 38 03.2	
	comp=Z,8.3nm,0.9s							
B21K	Ikpikpuk River	86.66	18	P		P	20 38 02.7	+1.4
B21K				IAmb		IAmb	20 38 04.1	
	comp=Z,6.2nm,0.7s							
M24K	Tolsona, Glenn	86.70	26	P		P	20 38 01.9	+0.1
RAGM	Ragged Mountai	86.80	28	P		P	20 38 02.8	+0.6
G23K	Bananza Creek	86.90	21	P		P	20 38 03.0	+0.4
G23K				IAmb		IAmb	20 38 05.0	
	comp=Z,4.3nm,0.9s							
D22K	Ayikyak River	86.92	19	P		P	20 38 03.9	+1.3
D22K				IAmb		IAmb	20 38 06.0	
	comp=Z,5.2nm,0.7s							
CCB	Clear Creek Bu	86.93	24	P		P	20 38 01.4	-1.4
CCB				IAmb		IAmb	20 38 03.4	
	comp=Z,9.4nm,1.2s							
IL31		87.34	24	P		P	20 38 04.2	-0.5
ILAR	Eielson Array	87.34	24	P		P	20 38 04.2	-0.5
	comp=Z,2.5nm,0.9s,baz=257,slow=5.3,SNR=13							
	comp=Z,2.5nm,0.9s							
H24K	Noodor Dome	87.35	23	P		P	20 38 05.7	+0.8
PLCA	Paso Flores	123.57	149	PKP		PKiKP	20 44 17.2	+1.0
	comp=Z,0.9nm,0.8s,baz=182,slow=2.1,SNR=3.9							
DBIC	Dimbokro	148.50	272	PKPbc		PKPbc	20 45 06.9	+1.0
	comp=Z,4.8nm,0.6s,baz=108,slow=1.5,SNR=7.8							

*IDC **25** 20:29:59.2±1.2,6.34S×143.64E,h0km,mb3.9/4, mbtmp3.9/6,ML1.6/1,Error ellipse: s-maj=42.5km s-min=25.9km az=65.0*

ISC 25 20:30:04.6±0.9,6.4S±0.2×143.6E±0.2,h35km,n6,σ0s52/7, mb3.9/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.64	131	Pn	Pn	20 31 12.1	-0.1
	1.9nm,0.3s,baz=198,slow=20,SNR=2.3						
PMG				Sn	Sn	20 32 05.4	+0.5
	2.4nm,0.3s,baz=252,slow=20,SNR=2.6						
	14nm,0.5s						
ASAR	Alice Springs	19.57	207	P	P	20 34 29.8	+0.1
	5.5nm,0.7s,baz=38,slow=9.5,SNR=7.5						
MKAR	Makanchi Array	75.65	322	P	P	20 41 46.9	+0.6
	0.3nm,0.6s,baz=97,slow=6.4,SNR=2.9						
	0.3nm,0.6s						
QSPA	South Pole Qui	83.60	180	P	P	20 42 28.8	-0.5
	2.2nm,1.0s,baz=332,slow=1.9,SNR=5.0						
	2.2nm,1.0s						
BVAR	Borovoye Array	85.09	325	P	P	20 42 37.0	+0.2
	0.4nm,0.5s,baz=104,slow=6.1,SNR=2.4						
	0.4nm,0.5s						
ILAR	Eielson Array	87.16	24	P	P	20 42 46.3	-0.5
	0.7nm,1.0s,baz=258,slow=4.5,SNR=3.4						
	0.7nm,1.0s						

*IDC **25** 20:31:51.1±0.8,5.81S×142.59E,h0km,mb3.9/10, mbtmp4.0/13,ML1.7/1,Error ellipse: s-maj=29.1km s-min=18.2km az=81.0*

ISC 25 20:31:53.3±0.6,5.75S±0.09×142.55E±0.09,h10km,n22, σ1s71/22,mb3.9/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.83	129	Pn	Pn	20 33 19.6	-0.3
	1.3nm,0.3s,baz=291,slow=14,SNR=1.1						
PMG				Sn	Sn	20 34 24.7	-2.2
	2.1nm,0.3s,baz=338,slow=19,SNR=1.4						
	15nm,0.7s						
KAVG	Kavieng	8.81	69	P	Pg	20 34 35.3	-6.9
KDU	Kakadu	12.10	235	P	Pn	20 34 44.8	-1.0
DRS	Darwin Rock St	13.28	239	P	Pn	20 35 01.0	-1.0
MTN	Manton Dam	13.28	237	P	Pn	20 34 59.9	-2.2
WRA	Warramunga Arr	16.21	209	Pn	Pn	20 35 39.4	-1.9
	6.5nm,0.7s,baz=31,slow=11,SNR=11						
WRA				Lg	Lg	20 40 21.2	
	0.7nm,0.3s,baz=26,slow=28,SNR=2.9						
SOEI	Soe	18.55	256	P	P	20 36 12.1	+1.6
ASAR	Alice Springs	19.66	204	P	P	20 36 22.9	+0.4
	14nm,0.7s,baz=36,slow=10.0,SNR=23						
GD1S	Gladstone Soft	19.80	156	P	Pn	20 36 31.1	+5.5
OOD	Oodnadatta	22.87	196	P	P	20 36 57.0	0.0
WRKA	Warakurna	23.55	214	P	P	20 37 03.4	-0.6
LCRK	Leigh Creek	24.90	189	P	P	20 37 17.4	+0.9
KSRS	Korea Array	45.10	344	P	P	20 40 09.6	-0.2
	0.9nm,0.6s,baz=148,slow=5.7,SNR=3.4						
	0.9nm,0.6s						
CMAR	Chiang Mai Arr	49.27	300	P	P	20 40 42.3	-0.3
	0.2nm,0.5s,baz=99,slow=5.8,SNR=1.7						
	0.2nm,0.5s						
PETK	Petropavlovsk-	60.03	10	P	P	20 42 00.5	+0.4
	4.5nm,1.0s,baz=207,slow=4.8,SNR=3.4						
	4.5nm,1.0s						
SONM	Songino Array	62.12	333	P	P	20 42 15.9	+1.3
	0.3nm,0.4s,baz=125,slow=4.2,SNR=1.9						
	0.3nm,0.4s						
MKAR	Makanchi Array	74.53	322	P	P	20 43 32.3	0.0
	0.7nm,0.7s,baz=106,slow=7.7,SNR=6.7						
	0.7nm,0.7s						
ZALV	Zalesovo Beam	76.49	329	P	P	20 43 43.1	-0.2
	0.3nm,0.4s,baz=120,slow=8.5,SNR=2.0						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	78.41	324	P	P	20 43 54.4	+0.2
	0.2nm,0.3s,baz=133,slow=5.2,SNR=1.7						
	0.2nm,0.3s						
BVAR	Borovoye Array	83.99	325	P	P	20 44 23.1	-0.8
	1.9nm,0.7s,baz=95,slow=7.9,SNR=6.9						
	1.9nm,0.7s						
QSPA	South Pole Qui	84.21	180	P	P	20 44 23.9	-1.0
	2.8nm,0.9s,baz=304,slow=1.4,SNR=10						
	2.8nm,0.9s						
ILAR	Eielson Array	87.02	24	P	P	20 44 37.4	-1.3
	0.8nm,0.7s,baz=262,slow=4.7,SNR=13						
	0.8nm,0.7s						

*IDC **25** 20:33:02.2±1.0,6.02S×143.03E,h0km,mb3.9/13, mbtmp4.0/15,ML4.4/2,Error ellipse: s-maj=42.4km s-min=17.3km az=95.0*

*NEIC **25** 20:33:02.9±2.7,6.2S±0.1×142.8E±0.1,h10km±1km, mb4.2/8,Error ellipse: s-maj=23.1km s-min=16.7km az=25.0*

ISC 25 20:33:03.3±0.6,6.13S±0.08×142.9E±0.1,h10km,n29, σ1s41/25,mb3.9/14,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.35	128	Pn	Pn	20 34 21.9	-1.3
FAKI	Fak Fak	11.06	286	Pn	Pn	20 35 40.1	-1.6
SAUI	Saumlaki	11.63	260	Pn	Pn	20 35 48.9	-0.7
MTN	Manton Dam	13.36	239	Pn	Pn	20 36 10.3	-2.9
WB0	Warramunga Arr	15.87	211	Pn	Pn	20 36 45.6	-1.3
WRAB	Tennant Creek	16.03	210	Pn	Pn	20 36 46.9	-2.1
WRAB				IAmb	IAmb	20 36 55.2	
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	16.04	210		Pn	20 36 49.3	+0.1
WRA	Warramunga Arr	16.04	210	Pn	Pn	20 36 49.9	+0.7
	comp=Z,1.0nm,0.3s,baz=30,slow=12,SNR=2.2						
WRA				Lg	Lg	20 41 35.8	
	comp=Z,0.7nm,0.3s,baz=34,slow=28,SNR=3.1						
	comp=Z,4.6nm,0.8s						
AS31	Alice Springs	19.45	205	P	P	20 37 32.5	+2.2
AS31				IAmb	IAmb	20 37 35.6	
	comp=Z,7.6nm,0.7s						
ASAR	Alice Springs	19.45	205	P	P	20 37 29.5	-0.8
ASAR	Alice Springs	19.45	205	P	P	20 37 33.1	+2.8
	comp=Z,3.3nm,0.3s,baz=29,slow=13,SNR=16						
	comp=Z,27nm,0.6s						
FITZ	Fitzroy Crossi	20.60	233	P	P	20 37 40.5	-2.3
STKA	Stephens Creek	25.64	183	P	P	20 38 35.5	+2.3
	comp=Z,3.9nm,0.8s,baz=360,slow=14,SNR=3.2						
	comp=Z,3.9nm,0.8s						
MJAR	Matsushiro Arr	42.67	354	P	P	20 40 59.7	-0.7
	comp=Z,0.9nm,0.6s,baz=189,slow=7.3,SNR=2.7						
	comp=Z,0.9nm,0.6s						
KSRS	Korea Array	45.55	343	P	P	20 41 23.5	+0.1
	comp=Z,0.9nm,0.8s,baz=158,slow=7.6,SNR=2.2						
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	49.74	300	P	P	20 41 58.6	+2.3
	comp=Z,0.5nm,0.6s,baz=119,slow=6.7,SNR=1.8						
	comp=Z,0.5nm,0.6s						
USRK	Ussuriysk Ar.	51.05	350	P	P	20 42 05.9	+0.1
	comp=Z,1.2nm,0.7s,baz=181,slow=8.6,SNR=1.9						
	comp=Z,1.2nm,0.7s						
PETK	Petropavlovsk-	60.34	10	P	P	20 43 12.7	+0.3
	comp=Z,0.9nm,0.6s,baz=148,slow=8.5,SNR=1.7						
	comp=Z,0.9nm,0.6s						
SONM	Songino Array	62.60	333	P	P	20 43 28.7	+0.9
	comp=Z,0.3nm,0.5s,baz=172,slow=4.4,SNR=1.5						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	75.02	322	P	P	20 44 42.7	-2.5
MKAR	Makanchi Array	75.02	322	P	P	20 44 45.2	0.0
	comp=Z,1.0nm,0.8s,baz=97,slow=10,SNR=4.7						
	comp=Z,1.0nm,0.8s						
MAKZ	Makanchi	75.22	322	P	P	20 44 44.9	-1.5
MAKZ				IAmb	IAmb	20 44 48.6	
	comp=Z,2.6nm,1.2s						
ZALV	Zalesovo Beam	76.98	329	P	P	20 44 55.5	-0.7
	comp=Z,0.5nm,0.6s,baz=147,slow=8.2,SNR=1.5						
	comp=Z,0.5nm,0.6s						
KURBB	Kurchatov Arra	78.91	324	P	P	20 45 07.0	0.0
	comp=Z,0.5nm,0.7s,baz=114,slow=4.8,SNR=1.9						
	comp=Z,0.5nm,0.7s						
QSPA	South Pole Qui	83.83	180	P	P	20 45 32.8	-0.3
QSPA				IAmb	IAmb	20 45 56.3	
	comp=Z,1.9nm,1.0s						
QSPA	South Pole Qui	83.83	180	P	P	20 45 33.9	+0.9
	comp=Z,0.8nm,0.8s,baz=245,slow=2.2,SNR=1.3						
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	84.48	325	P	P	20 45 36.5	+0.2
	comp=Z,4.1nm,0.8s,baz=110,slow=6.6,SNR=5.8						
	comp=Z,4.1nm,0.8s						
E19K	Redstone River	84.58	20	P	P	20 45 35.1	-1.4
ILAR	Eielson Array	87.24	24	P	P	20 45 49.0	-0.8
	comp=Z,1.2nm,0.8s,baz=260,slow=4.1,SNR=5.6						
	comp=Z,1.2nm,0.8s						

*IDC **25** 20:33:40.9±1.0,5.87S×142.68E,h0km,mb4.2/10, mbtmp4.2/13,ML4.3/2,Error ellipse: s-maj=30.7km s-min=22.6km az=71.0*

ISC 25 20:33:45.0±0.7,5.9S±0.1×142.6E±0.1,h28km,n13, σ1s01/14,mb4.2/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.70	128	Pn	Pn	20 35 08.4	+0.6
	15nm,0.6s,baz=249,slow=8.6,SNR=1.7						
PMG				Sn	Sn	20 36 12.4	0.0
	2.4nm,0.3s,baz=164,slow=18,SNR=1.6						
WRA	Warramunga Arr	16.07	209	Pn	Pn	20 37 27.4	-1.7
	1.0nm,0.3s,baz=32,slow=12,SNR=1.8						
	6.3nm,0.8s						
ASAR	Alice Springs	19.51	204	P	P	20 38 11.6	+1.3
	1.1nm,0.3s,baz=29,slow=11,SNR=4.6						
	8.5nm,0.6s						
KSRS	Korea Array	45.28	344	P	P	20 42 00.0	-0.2
	1.0nm,0.7s,baz=163,slow=7.7,SNR=2.6						
	1.0nm,0.7s						
CMAR	Chiang Mai Arr	49.38	300	P	P	20 42 33.3	+0.7
	1.5nm,0.8s,baz=122,slow=5.5,SNR=7.1						
	1.5nm,0.8s						
USRK	Ussuriysk Ar.	50.81	350	P	P	20 42 43.5	+0.5
	2.2nm,0.7s,baz=163,slow=10,SNR=4.1						
	2.2nm,0.7s						
PETK	Petropavlovsk-	60.20	10	P	P	20 43 50.7	+0.4
	5.7nm,0.9s,baz=217,slow=8.6,SNR=5.1						
	5.7nm,0.9s						
MKAR	Makanchi Array	74.69	322	P	P	20 45 23.4	+1.2
	1.5nm,0.7s,baz=117,slow=7.3,SNR=5.4						
	1.5nm,0.7s						
ZALV	Zalesovo Beam	76.66	329	P	P	20 45 33.7	+0.5
	0.6nm,0.6s,baz=101,slow=7.5,SNR=2.3						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	78.58	324	P	P	20 45 43.9	-0.1
	1.1nm,0.8s,baz=113,slow=4.8,SNR=4.7						
	1.1nm,0.8s						
NRIK	Noril'sk	83.89	343	P	P	20 46 11.4	-0.4
	2.1nm,0.4s,baz=117,slow=5.6,SNR=4.4						
	2.1nm,0.4s						
BVAR	Borovoye Array	84.15	325	P	P	20 46 13.7	+0.1
	5.8nm,0.8s,baz=120,slow=5.8,SNR=7.2						
	5.8nm,0.8s						
ILAR	Eielson Array	87.17	24	P	P	20 46 26.5	-1.8
	1.9nm,0.7s,baz=254,slow=5.3,SNR=7.9						
	1.9nm,0.7s						

*IDC **25** 20:35:11.5±0.8,6.35S×143.74E,h0km,mb4.4/12, mbtmp4.4/15,ML4.2/2,Error ellipse: s-maj=27.9km s-min=17.3km az=83.0*

*NEIC **25** 20:35:13.4±1.8,6.44S±0.10×143.7E±0.1,h10km±1km, mb4.7/40,Error ellipse: s-maj=24.5km s-min=15.8km az=100.0*

ISC 25 20:35:13.1±0.5,6.34S±0.07×143.69E±0.09,h10km,n65, σ1s14/60,mb4.7/30,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.59	132	Pn	Pn	20 36 22.5	-0.1
	16nm,0.4s,baz=288,slow=20,SNR=2.3						
PMG				Sn	Sn	20 37 17.2	+1.1
	8.7nm,0.3s,baz=287,slow=19,SNR=1.6						
COEN	Coen	7.58	184		Pn	20 37 06.4	+2.5
CTAO	Charters Tower	13.89	170	Pn	Pn	20 38 28.6	-1.6
WRA	Warramunga Arr	16.29	213	Pn	Pn	20 39 02.6	+0.4
	0.8nm,0.3s,baz=32,slow=13,SNR=3.8						
WRA				Lg	Lg	20 43 49.2	
	baz=44,slow=27						
	8.6nm,0.8s						
PATS	Pohnpei	19.60	48	P	P	20 39 39.5	-2.2
ASAR	Alice Springs	19.63	208	P	P	20 39 40.1	-2.0
ASAR	Alice Springs	19.63	208	P	P	20 39 43.3	+1.2
	1.3nm,0.3s,baz=37,slow=7.8,SNR=5.1						
	9.7nm,0.6s						
FITZ	Fitzroy Crossi	21.13	235	P	P	20 39 56.2	-2.2
KAPI	Kappang	23.86	272	P	P	20 40 26.0	-1.0
KAPI				IAmb	IAmb	20 40 28.5	
	comp=Z,20nm,1.1s						
TOLI2	Tolitoli	24.04	287	P	P	20 40 27.3	-1.4
TOLI2				IAmb	IAmb	20 40 29.5	
	comp=Z,9.2nm,0.7s						
PSA00	Pilbara Seismi	27.59	234	P	P	20 40 58.9	-1.9
MJAR	Matsushiro Arr	42.97	354	P	P	20 43 12.4	-0.2
	comp=Z,1.1nm,0.7s,baz=185,slow=9.1,SNR=3.4						
	comp=Z,1.1nm,0.7s						
KSRS	Korea Array	45.99	343	P	P	20 43 37.0	+0.3
	comp=Z,6.4nm,0.9s,baz=165,slow=9.8,SNR=14						
	comp=Z,6.4nm,0.9s						
CRAI	Chiangrai	50.10	303	P	P	20 44 10.6	+1.7
CM31	Chiang Mai Arr	50.54	300	P	P	20 44 13.0	+0.8
CMAR	Chiang Mai Arr	50.54	300	P	P	20 44 12.6	+0.4
CMAR	Chiang Mai Arr	50.54	300	P	P	20 44 13.2	+0.9
	comp=Z,1.6nm,0.8s,baz=122,slow=6.1,SNR=8.8						
	comp=Z,1.6nm,0.8s						
USA0B	Ussuriysk Arra	51.41	349	P	P	20 44 18.9	+0.7
USA0B				IAmb	IAmb	20 44 20.6	
	comp=Z,10nm,0.8s						
USRK	Ussuriysk Ar.	51.41	349	P	P	20 44 18.1	-0.1
USRK	Ussuriysk Ar.	51.41	349	P	P	20 44 19.1	+0.9
	comp=Z,7.5nm,0.7s,baz=156,slow=5.2,SNR=12						
	comp=Z,7.5nm,0.7s						
PEA0B	Petropavlovsk-	60.41	10	P	P	20 45 24.0	+1.4
PETK	Petropavlovsk-	60.41	10	P	P	20 45 23.7	+1.1
PETK	Petropavlovsk-	60.41	10	P	P	20 45 24.0	+1.4
	comp=Z,4.7nm,0.8s,baz=163,slow=5.7,SNR=4.8						
	comp=Z,4.7nm,0.8s						
MK31	Makanchi Array	75.69	321	P	P	20 46 59.0	+0.2
MKAR	Makanchi Array	75.69	321	P	P	20 46 57.8	-1.1
MKAR	Makanchi Array	75.69	321	P	P	20 46 59.3	+0.4
	comp=Z,1.9nm,0.6s,baz=96,slow=7.6,SNR=11						
	comp=Z,1.9nm,0.6s						
MAKZ	Makanchi	75.89	321	P	P	20 47 00.2	+0.1
MAKZ				IAmb	IAmb	20 47 01.3	
	comp=Z,3.2nm,0.6s						
NIL	Nilore	77.46	306	P	P	20 47 08.0	-1.2
NIL				IAmb	IAmb	20 47 10.8	
	comp=Z,6.5nm,0.8s						
ZAA0	Zalesovo Array	77.57	329	P	P	20 47 08.8	-0.5
ZALV	Zalesovo Beam	77.57	329	P	P	20 47 07.7	-1.6
ZALV	Zalesovo Beam	77.57	329	P	P	20 47 09.1	-0.2
	comp=Z,1.6nm,0.6s,baz=130,slow=5.7,SNR=7.5						
	comp=Z,1.6nm,0.6s						
KURBB	Kurchatov Arra	79.55	324	P	P	20 47 19.9	-0.3
	comp=Z,0.8nm,0.5s,baz=112,slow=4.5,SNR=6.7						
	comp=Z,0.8nm,0.5s						
ARSB	Arslanbob	79.91	314	P	P	20 47 21.1	-1.6
ANM	Nome	80.12	20	P	P	20 47 22.3	-0.8
ANM				IAmb	IAmb	20 47 33.0	
	comp=Z,8.0nm,1.3s						
K15K	Wolf Creek Mou	80.16	23	P	P	20 47 21.5	-1.9
K15K				IAmb	IAmb	20 47 28.2	
	comp=Z,6.6nm,1.1s						
M16K	Timber Creek	80.49	25	P	P	20 47 25.6	+0.5
M16K				IAmb	IAmb	20 47 45.9	
	comp=Z,10nm,1.1s						
L16K	Owhat River	80.64	24	P	P	20 47 27.0	+1.1
L16K				IAmb	IAmb	20 47 42.4	
	comp=Z,11nm,1.2s						
N17K	Nushagak Hills	80.97	25	P	P	20 47 28.4	+0.7
J16K	Anvik River	81.07	22	P	P	20 47 29.4	+1.2
F15K	North Star Dit	81.07	19	P	P	20 47 28.9	+0.7
F15K				IAmb	IAmb	20 47 33.9	
	comp=Z,14nm,1.5s						
N18K	Kilae Creek	81.61	26	P	P	20 47 32.3	+1.2
N18K				IAmb	IAmb	20 47 39.7	
	comp=Z,13nm,1.2s						
K17K	Iditarod	81.65	23	P	P	20 47 31.8	+0.6
G16K	Koyuk River	81.65	20	P	P	20 47 31.4	+0.2
SVW2	Sparrevohn	81.94	25	P	P	20 47 34.4	+1.5
SVW2				IAmb	IAmb	20 48 03.1	
	comp=Z,10nm,1.3s						
KKAR	Karatay Array	82.19	315	P	P	20 47 34.7	+0.1
H17K	Granite Mounta	82.24	21	P	P	20 47 35.6	+1.3
H17K				IAmb	IAmb	20 47 38.9	
	comp=Z,9.2nm,1.4s						
L19K	White Mountain	82.77	25	P	P	20 47 36.6	-0.6
M19K	Big River Lodg	82.83	25	P	P	20 47 37.9	+0.4
RSO	Redoubt South	82.88	27	P	P	20 47 37.6	-0.4
J19K	Poorman	83.34	23	P	P	20 47 40.0	-0.1
J19K				IAmb	IAmb	20 47 58.6	
	comp=Z,7.9nm,1.4s						
M20K	Styx River	83.35	25	P	P	20 47 41.5	+1.2
QSPA	South Pole Qui	83.63	180	P	P	20 47 41.9	+0.1
QSPA				IAmb	IAmb	20 48 11.2	
	comp=Z,9.1nm,1.4s						
QSPA	South Pole Qui	83.63	180	P	P	20 47 41.1	-0.6
	comp=Z,2.2nm,0.9s,baz=230,slow=2.1,SNR=3.5						
	comp=Z,2.2nm,0.9s						
CAST	Castle Rocks	84.47	24	P	P	20 47 46.7	+0.8
CAST				IAmb	IAmb	20 47 49.8	
	comp=Z,11nm,1.5s						
RC01	Rabbit Creek A	84.48	27	P	P	20 47 46.6	+0.6
E19K	Redstone River	84.51	19	P	P	20 47 46.5	+0.5
E19K				IAmb	IAmb	20 47 49.1	
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	84.61	343	P	P	20 47 46.1	-0.3
	comp=Z,8.6nm,0.8s,baz=124,slow=4.9,SNR=8.7						
	comp=Z,8.6nm,0.8s						
D19K	Kuna River	84.77	18	P	P	20 47 47.6	+0.2
BVAR	Borovoye Array	85.12	325	P	P	20 47 48.6	-0.8
	comp=Z,4.5nm,0.6s,baz=101,slow=5.7,SNR=7.7						
	comp=Z,4.5nm,0.6s						
SML	Sawmill	85.39	26	P	P	20 47 51.1	+0.5
RND	Reindeer	85.78	25	IAmb	IAmb	20 47 54.8	
	comp=Z,6.4nm,0.8s						
B21K	Ikpikpuk River	86.43	18	IAmb	IAmb	20 47 58.6	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	87.10	24	P	P	20 47 57.4	-1.5
	comp=Z,1.0nm,0.7s,baz=257,slow=5.1,SNR=4.9						
	comp=Z,1.0nm,0.7s						
PLCA	Paso Flores	123.58	149	PKP	PKPdf	20 54 11.5	0.0
	comp=Z,0.4nm,0.6s,baz=229,slow=2.7,SNR=3.6						
DBIC	Dimbokro	148.75	272	PKPbc	PKPdf	20 55 01.7	+3.5
	comp=Z,3.8nm,0.6s,baz=51,slow=3.6,SNR=6.2						

*IDC **25** 20:36:52.6±1.2,6.32S×143.67E,h0km,mb4.0/9, mbtmp4.1/10,ML4.2/1,Error ellipse: s-maj=48.3km s-min=25.0km az=90.0*

ISC 25 20:36:58.1±1.1,6.3S±0.2×143.6E±0.3,h35km,n10, σ0s62/10,mb4.1/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	19.61	207	P	P	20 41 23.9	+0.2
	0.8nm,0.3s,baz=36,slow=9.7,SNR=4.4						
	9.0nm,0.7s						
KSRS	Korea Array	45.95	343	P	P	20 45 17.3	-0.4
	1.8nm,0.8s,baz=166,slow=9.2,SNR=4.8						
	1.8nm,0.8s						
CMAR	Chiang Mai Arr	50.47	300	P	P	20 45 52.9	-0.1

GUMO	**Guam**	**20.19**	**5**	P	**P**	**20 42 38.8**	**+1.6**		
FITZ	**Fitzroy Crossi**	**20.58**	**235**	P	**P**	**20 42 40.1**	**-1.5**		
KAPI	**Kappang**	**23.42**	**273**	P	**P**	**20 43 12.4**	**+0.6**		
KAPI				IAmb	IAmb	20 43 20.7			
	comp=Z,36nm,1.1s								
TOLI2	**Tolitoli**	**23.71**	**288**	P	**P**	**20 43 18.7**	**+4.0**		
STKA	**Stephens Creek**	**25.13**	**183**	P	P	20 43 35.8	+8.2		
	comp=Z,1.7nm,0.6s,baz=339,slow=8.6,SNR=2.0								
STKA				LR	LR	20 53 47.7			
	comp=Z,15µm,21.7s,baz=326,slow=37								
	comp=Z,1.7nm,0.6s								
PSA00	**Pilbara Seismi**	**27.04**	**234**	P	**P**	**20 43 43.9**	**-1.1**		
JTU	**Tsushima**	**43.01**	**343**	P	**P**	**20 46 03.8**	**+1.9**		
MJAR	**Matsushiro Arr**	**43.24**	**354**	P	P	20 45 59.1	-4.7		
	comp=Z,1.0nm,0.8s,baz=188,slow=8.3,SNR=2.5								
	comp=Z,1.0nm,0.8s								
INZ	**Inchbonnie**	**43.70**	**150**	P	**P**	**20 46 08.1**	**+0.6**		
TUWZ	**Tuamarina**	**44.09**	**147**	P	**P**	**20 46 11.9**	**+1.2**		
KSRS	**Korea Array**	**46.16**	**343**	P	P	20 46 23.3	-3.8		
	comp=Z,1.6nm,0.9s,baz=156,slow=9.3,SNR=4.9								
	comp=Z,1.6nm,0.9s								
ENH	**Enshi**	**48.95**	**320**		**P**	**20 46 51.5**	**+2.4**		
ENH				IAmb	IAmb	20 46 54.0			
	comp=Z,8.4nm,0.8s								
PHRA	**Phrae**	**49.24**	**301**	P	**P**	**20 46 47.9**	**-3.5**		
CRAI	**Chiangrai**	**49.91**	**303**	P	**P**	**20 46 56.2**	**-0.2**		
CRAI				IAmb	IAmb	20 47 03.7			
	comp=Z,9.9nm,1.3s								
CM31	**Chiang Mai Arr**	**50.32**	**301**	P	P	20 46 55.8	-3.8		
CMAR	**Chiang Mai Arr**	**50.32**	**301**	P	P	20 46 55.8	-3.8		
CMAR	**Chiang Mai Arr**	**50.32**	**301**	P	**P**	**20 46 56.2**	**-3.4**		
	comp=Z,1.8nm,0.7s,baz=120,slow=5.9,SNR=11								
	comp=Z,1.8nm,0.7s								
CHTO	**Chiang Mai**	**50.47**	**301**	P	**P**	**20 47 03.7**	**+2.9**		
USA0B	**Ussuriysk Arra**	**51.64**	**350**	P	**P**	**20 47 08.4**	**-0.7**		
USA0B				IAmb	IAmb	20 47 12.3			
	comp=Z,13nm,0.9s								
USRK	**Ussuriysk Ar.**	**51.64**	**350**	P	**P**	**20 47 06.2**	**-2.9**		
USRK	**Ussuriysk Ar.**	**51.64**	**350**	P	**P**	**20 47 06.0**	**-3.1**		
	comp=Z,1.8nm,0.7s,baz=152,slow=9.3,SNR=3.2								
	comp=Z,1.8nm,0.7s								
MDJ	**Mudanjiang**	**52.51**	**348**	P	**P**	**20 47 16.0**	**+0.5**		
BJT	**Baijiatuan**	**52.74**	**334**		**P**	**20 47 17.1**	**-0.3**		
PETK	**Petropavlovsk-**	**60.80**	**10**	P	**P**	**20 48 13.2**	**-1.2**		
	comp=Z,8.9nm,0.8s,baz=133,slow=5.2,SNR=10.0								
	comp=Z,8.9nm,0.8s								
SONM	**Songino Array**	**63.23**	**333**	P	**P**	**20 48 29.1**	**-1.9**		
	comp=Z,0.2nm,0.3s,baz=152,slow=6.4,SNR=1.7								
	comp=Z,0.2nm,0.3s								
MKAR	**Makanchi Array**	**75.66**	**322**	P	**P**	**20 49 45.2**	**-2.6**		
MKAR	**Makanchi Array**	**75.66**	**322**	P	**P**	**20 49 45.5**	**-2.3**		
	comp=Z,1.5nm,0.8s,baz=129,slow=5.7,SNR=6.2								
	comp=Z,1.5nm,0.8s								
MAKZ	**Makanchi**	**75.86**	**322**	P	**P**	**20 49 46.9**	**-2.0**		
MAKZ				IAmb	IAmb	20 49 53.8			
	comp=Z,7.7nm,1.1s								
ZALV	**Zalesovo Beam**	**77.61**	**329**	P	**P**	**20 49 55.4**	**-3.2**		
	comp=Z,1.0nm,0.7s,baz=126,slow=7.3,SNR=2.9								
	comp=Z,1.0nm,0.7s								
TIXI	**Tiksi**	**78.73**	**355**	P	**P**	**20 50 02.3**	**-2.1**		
	comp=Z,1.1nm,0.5s,baz=198,slow=3.2,SNR=2.9								
	comp=Z,1.1nm,0.5s								
AAK	**Ala-Archa**	**79.17**	**316**	P	**P**	**20 50 09.3**	**+1.6**		
KURBB	**Kurchatov Arra**	**79.55**	**324**	P	**P**	**20 50 06.8**	**-2.5**		
	comp=Z,0.7nm,0.7s,baz=118,slow=4.9,SNR=4.8								
	comp=Z,0.7nm,0.7s								
ARSB	**Arslanbob**	**79.81**	**314**	P	**P**	**20 50 14.9**	**+3.6**		
H17K	**Granite Mounta**	**82.70**	**21**	P	**P**	**20 50 26.4**	**+0.6**		
H17K				IAmb	IAmb	20 50 38.2			
	comp=Z,7.0nm,0.8s								
QSPA	**South Pole Qui**	**83.31**	**180**	P	**P**	**20 50 33.8**	**+4.6**		
	comp=Z,4.2nm,1.0s,baz=312,slow=1.0,SNR=7.5								
	comp=Z,4.2nm,1.0s								
G19K	**Purcell Mounta**	**84.34**	**21**	P	**P**	**20 50 35.6**	**+1.4**		
G19K				IAmb	IAmb	20 50 47.0			
	comp=Z,11nm,1.1s								
NRIK	**Noril'sk**	**84.78**	**343**	P	**P**	**20 50 35.0**	**-1.4**		
	comp=Z,9.8nm,0.8s,baz=130,slow=6.8,SNR=3.4								
	comp=Z,9.8nm,0.8s								
E19K	**Redstone River**	**84.96**	**19**	P	**P**	**20 50 38.3**	**+0.9**		
E19K				IAmb	IAmb	20 50 40.8			
	comp=Z,12nm,1.1s								
C19K	**Lookout Ridge**	**85.09**	**18**		**P**	**20 50 37.7**	**-0.4**		
BVAR	**Borovoye Array**	**85.12**	**325**	P	**P**	**20 50 36.4**	**-2.2**		
	comp=Z,5.4nm,0.7s,baz=76,slow=6.3,SNR=12								
	comp=Z,5.4nm,0.7s								
D19K	**Kuna River**	**85.22**	**18**	IAmb	IAmb	20 50 42.9			
	comp=Z,1.4nm,1.4s								
F20K	**Avaraart Lake**	**85.26**	**20**	IAmb	IAmb	20 50 42.4			
	comp=Z,8.0nm,1.1s								
IMAR	**Indian Mountai**	**85.45**	**21**	P	**P**	**20 50 39.7**	**-0.2**		
MLY	**Manley**	**86.16**	**23**	P	**P**	**20 50 42.1**	**-1.4**		
RND	**Reindeer**	**86.26**	**25**		**P**	**20 50 44.1**	**0.0**		
B20K	**Meade River**	**86.30**	**17**	P	**P**	**20 50 46.1**	**+2.1**		
B20K				IAmb	IAmb	20 50 47.4			
	comp=Z,4.7nm,0.7s								
DHY	**Denali Highway**	**86.76**	**25**		**P**	**20 50 47.6**	**+1.0**		
DHY				IAmb	IAmb	20 50 50.8			
	comp=Z,7.0nm,0.7s								
B21K	**Ikpikpuk River**	**86.87**	**18**	P	**P**	**20 50 47.0**	**+0.2**		
B21K				IAmb	IAmb	20 50 50.6			
	comp=Z,7.6nm,0.7s								
G23K	**Bananza Creek**	**87.12**	**21**	P	**P**	**20 50 48.9**	**+0.7**		
G23K				IAmb	IAmb	20 50 51.3			
	comp=Z,3.8nm,0.8s								
CCB	**Clear Creek Bu**	**87.16**	**24**	P	**P**	**20 50 47.6**	**-0.7**		
CCB				IAmb	IAmb	20 50 50.0			
	comp=Z,10nm,1.1s								
IL31		**87.58**	**24**	P	**P**	**20 50 48.6**	**-1.7**		
IL31				IAmb	IAmb	20 51 01.5			
	comp=Z,9.0nm,1.1s								
ILAR	**Eielson Array**	**87.58**	**24**	P	**P**	**20 50 49.0**	**-1.4**		
	comp=Z,3.5nm,0.8s,baz=256,slow=3.9,SNR=14								
	comp=Z,3.5nm,0.8s								
F24K	**Squaw Lake**	**88.21**	**21**	IAmb	IAmb	20 50 57.1			
	comp=Z,6.5nm,0.8s								
C23K	**Itkillik River**	**88.22**	**18**	P	**P**	**20 50 54.3**	**+1.0**		
L27K	**Beaver Creek,**	**89.14**	**26**	P	**P**	**20 50 59.6**	**+1.7**		
L27K				IAmb	IAmb	20 51 01.0			
	comp=Z,4.6nm,0.9s								
E25K	**Arctic Village**	**89.25**	**21**	P	**P**	**20 50 59.9**	**+1.6**		
E25K				IAmb	IAmb	20 51 02.1			
	comp=Z,9.0nm,1.1s								
BMAR	**Burnt Mountain**	**89.37**	**22**	P	**P**	**20 50 58.9**	**0.0**		
L29M	**L29M**	**90.78**	**26**	P	**P**	**20 51 04.8**	**-0.7**		
TORD	**Torodi Ar. Bea**	**141.61**	**283**	PKP	**PKPdf**	**20 57 33.2**	**-1.7**		
	comp=Z,0.8nm,0.7s,baz=73,slow=4.5,SNR=6.4								
DBIC	**Dimbokro**	**148.31**	**272**	PKPbc	**PKiKP**	**20 57 51.8**	**+0.1**		
	comp=Z,5.8nm,0.6s,baz=76,slow=2.8,SNR=7.4								

*IDC **25** 20:43:32.9±0.8,5.˚83S×142.˚58E, h0km, mb4.3/12, mbtmp4.3/15, ML3.9/2, Error ellipse: s-maj=27.4km s-min=17.7km az=84.0*

*NEIC **25** 20:43:34.6±1.0,5.˚9S±0.˚1×142.˚39E±0.˚05, h10km±1km, mb4.9/12, Error ellipse: s-maj=21.9km s-min=4.4km az=197.0*

ISC 25 20:43:36.6±0.5,5.˚87S±0.˚08×142.˚41E±0.˚08, h28km, n30, σ1§28/31, mb4.4/14, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.87**	**127**		**Pn**	**20 45 01.4**	**-0.4**
PMG	**Port Moresby**	**5.87**	**127**	Pn	**Pn**	**20 45 00.6**	**-1.1**
	23nm,0.5s,baz=13,slow=1.6,SNR=5.9						
PMG				Sn	**Sn**	**20 46 06.2**	**-2.0**
	1.3nm,0.3s,baz=196,slow=20,SNR=1.6						
FAKI	**Fak Fak**	**10.55**	**286**		**Pn**	**20 46 03.9**	**-2.1**
SAUI	**Saumlaki**	**11.23**	**259**	Pn	**Pn**	**20 46 17.4**	**+2.1**
MTN	**Manton Dam**	**13.10**	**237**	Pn	**Pn**	**20 46 39.7**	**-1.3**
WRA	**Warramunga Arr**	**16.04**	**209**	Pn	**Pn**	**20 47 21.2**	**+0.9**
	0.5nm,0.3s,baz=29,slow=14,SNR=1.7						
WRA				Lg	Lg	20 52 04.7	
	0.7nm,0.3s,baz=23,slow=27,SNR=3.4						
	6.3nm,0.8s						
ASAR	**Alice Springs**	**19.49**	**204**	P	**P**	**20 48 02.4**	**+0.7**
	0.5nm,0.3s,baz=34,slow=9.2,SNR=3.3						
	3.7nm,0.6s						
TOLI2	**Tolitoli**	**22.68**	**287**	P	**P**	**20 48 33.6**	**-2.6**
PINNC	**Pines Island,**	**29.34**	**127**	P	**P**	**20 49 37.0**	**-0.2**
MJAR	**Matsushiro Arr**	**42.38**	**355**	P	**P**	**20 51 28.4**	**-0.2**
	1.0nm,0.6s,baz=173,slow=7.4,SNR=4.5						
	1.0nm,0.6s						
KSRS	**Korea Array**	**45.17**	**344**	P	**P**	**20 51 51.1**	**+0.2**
	1.7nm,0.7s,baz=164,slow=9.9,SNR=6.8						
	1.7nm,0.7s						

CMAR	**Chiang Mai Arr**	**49.21**	**300**	P	**P**	**20 52 24.1**	**+1.3**		
	1.5nm,0.7s,baz=119,slow=6.2,SNR=11								
	1.5nm,0.7s								
USRK	**Ussuriysk Ar.**	**50.72**	**350**	P	**P**	**20 52 34.3**	**+0.5**		
	4.9nm,0.8s,baz=186,slow=9.2,SNR=11								
	4.9nm,0.8s								
PEA0B	**Petropavlovsk-**	**60.17**	**11**	P	**P**	**20 53 41.1**	**-0.6**		
PETK	**Petropavlovsk-**	**60.17**	**11**	P	**P**	**20 53 42.3**	**+0.6**		
PETK	**Petropavlovsk-**	**60.17**	**11**	P	**P**	**20 53 42.0**	**+0.4**		
	2.8nm,0.8s,baz=175,slow=7.8,SNR=4.7								
	2.8nm,0.8s								
SONM	**Songino Array**	**62.16**	**333**	P	**P**	**20 53 54.6**	**-0.8**		
SEY	**Seymchan**	**69.03**	**5**	P	**P**	**20 54 40.0**	**+0.7**		
	2.5nm,0.7s,baz=260,slow=6.0,SNR=8.2								
	2.5nm,0.7s								
VNDA	**Vanda**	**72.34**	**176**	P	**P**	**20 54 59.1**	**-0.2**		
VNDA				IAmb	IAmb	20 55 03.0			
	comp=Z,12nm,1.5s								
MKAR	**Makanchi Array**	**74.53**	**322**	P	**P**	**20 55 10.9**	**-1.9**		
MKAR	**Makanchi Array**	**74.53**	**322**	P	**P**	**20 55 14.4**	**+1.6**		
	comp=Z,2.3nm,0.8s,baz=103,slow=7.1,SNR=4.5								
	comp=Z,2.3nm,0.8s								
ZALV	**Zalesovo Beam**	**76.52**	**329**	P	**P**	**20 55 25.1**	**+1.2**		
	comp=Z,0.8nm,0.5s,baz=66,slow=14,SNR=1.6								
	comp=Z,0.8nm,0.5s								
KURBB	**Kurchatov Arra**	**78.43**	**324**	P	**P**	**20 55 36.3**	**+1.6**		
	comp=Z,2.5nm,0.2s,baz=118,slow=4.4,SNR=2.7								
	comp=Z,2.5nm,0.2s								
SIMJ	**Simiganj**	**80.84**	**311**	P	**P**	**20 55 48.1**	**-0.2**		
BVAR	**Borovoye Array**	**84.00**	**325**	P	**P**	**20 56 05.7**	**+1.4**		
	comp=Z,2.1nm,0.6s,baz=165,slow=6.0,SNR=4.5								
	comp=Z,2.1nm,0.6s								
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**20 56 05.7**	**+1.0**		
QSPA				IAmb	IAmb	20 56 14.5			
	comp=Z,13nm,1.4s								
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**20 56 06.3**	**+1.6**		
	comp=Z,4.0nm,0.9s,baz=27,slow=0.6,SNR=5.2								
	comp=Z,4.0nm,0.9s								
D19K	**Kuna River**	**84.73**	**19**	P	**P**	**20 56 08.6**	**+0.8**		
ILAR	**Eielson Array**	**87.19**	**24**	P	**P**	**20 56 19.2**	**-0.7**		
	comp=Z,1.0nm,0.8s,baz=251,slow=4.8,SNR=7.4								
	comp=Z,1.0nm,0.8s								
C23K	**Itkillik River**	**87.73**	**19**	P	**P**	**20 56 23.7**	**+1.2**		
C23K				IAmb	IAmb	20 56 29.6			
	comp=Z,6.4nm,0.8s								

IDC 25 20:48:18.9±1.3,6.˚29S×143.˚69E, h0km, mb4.0/2, mbtmp4.3/5, ML4.2/2, Error ellipse: s-maj=36.6km s-min=24.9km az=77.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.62**	**132**	Pn	Pn	20 49 29.8	-0.2
	42nm,0.5s,baz=104,slow=1.8,SNR=12						
PMG				Sn	Sn	20 50 23.3	-1.1
	5.3nm,0.3s,baz=252,slow=17,SNR=6.1						
WRA	**Warramunga Arr**	**16.33**	**213**	Pn	Pn	20 52 07.8	-2.0
	0.7nm,0.3s,baz=28,slow=13,SNR=3.5						
WRA				Lg	Lg	20 56 53.1	
	0.1nm,0.3s,baz=31,slow=30,SNR=1.6						
	6.5nm,0.7s						
ASAR	**Alice Springs**	**19.67**	**208**	P	Pn	20 52 51.0	0.0
	1.1nm,0.3s,baz=34,slow=10,SNR=18						
	16nm,0.8s						
PETK	**Petropavlovsk-**	**60.36**	**10**	P	P	20 58 30.1	+0.5
	3.2nm,0.9s,baz=168,slow=5.9,SNR=5.1						
	3.2nm,0.9s						
MKAR	**Makanchi Array**	**75.65**	**321**	P	P	21 00 05.6	-0.5
	0.5nm,0.6s,baz=96,slow=6.8,SNR=5.1						
	0.5nm,0.6s						

*IDC **25** 20:49:34.8±1.3,55.˚86N×110.˚23E, h0km, mb3.9/11, mbtmp4.0/18, ML4.0/7, Error ellipse: s-maj=25.9km s-min=19.2km az=146.0*

*MOS **25** 20:49:34.4±1.0,55.˚83N×110.˚09E, h7km, mb4.2/4, Error ellipse: s-maj=8.5km s-min=6.2km az=69.5*

*NEIC **25** 20:49:35.4±2.0,55.˚87N±0.˚06×110.˚4E±0.˚2, h10km±1km, mb4.4/11, Error ellipse: s-maj=20.0km s-min=10.5km az=270.0*

*BYKL **25** 20:49:36.5±0.1,55.˚73N×110.˚19E, h5km±2km*

ISC 25 20:49:35.9±1.0,55.˚83N±0.˚02×110.˚31E±0.˚02, h11km±7km, n112, σ2§62/207, mb4.1/15, 18C-8D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZB	**Nizh Angarsk**	**0.44**	**263**	⇑*i*Pg	**Pg**	**20 49 43.5**	**-1.0**
NIZB				Pmax		20 49 43.7	
	3µm,0.3s						
NIZB				*e*Sg	**Sg**	**20 49 48.2**	**-2.1**
NIZB				Smax		20 49 49.9	
	20µm,0.2s						
NIZB	**Nizh Angarsk**	**0.44**	**263**	⇑*i*PG	**Pg**	**20 49 43.5**	**-1.0**
NIZB				*e*		20 49 48.7	
NIZB				pmax	pmax		
	comp=Z,3µm,0.3s						
NIZB				smax	smax		
	comp=N,18µm,0.3s						
KMO	**Kumora**	**0.50**	**83**	⇑*i*Pg	**Pb**	**20 49 47.2**	**+0.4**
KMO				Pmax		20 49 48.1	
	comp=N,3µm,0.3s						
KMO				*e*Sg	**Sb**	**20 49 55.0**	**+0.9**
KMO				Smax		20 49 57.6	
	comp=N,9µm,1.0s						
KMO	**Kumora**	**0.50**	**83**	⇑*i*PG	**Pb**	**20 49 47.2**	**+0.4**
KMO				*e*		20 49 53.7	
KMO				pmax	pmax		
	comp=Z,3µm,0.3s						
KMO				smax	smax		
	comp=N,9µm,1.0s						
YOA	**Uoyan**	**0.85**	**68**	⇑*i*Pg	**Pn**	**20 49 53.8**	**0.0**
YOA				Pmax		20 49 55.5	
	comp=N,2µm,0.2s						
YOA				*e*Sg	**Sn**	**20 50 06.6**	**+0.3**
YOA				Smax		20 50 11.2	
	comp=N,10µm,0.4s						
YOA	**Uoyan**	**0.85**	**68**	⇑*i*PG	**Pn**	**20 49 53.9**	**+0.1**
YOA				*e*		20 50 06.3	
YOA				pmax	pmax		
	comp=Z,1µm,0.2s						
YOA				smax	smax		
	comp=N,10µm,0.3s						
YLYR	**Ulyunkhan**	**1.07**	**153**	⇓*i*Pg	**Pb**	**20 49 55.2**	**-1.2**
	comp=N,697nm,0.6s						
YLYR				⇑*i*Pg	**Pb**	**20 49 55.2**	**-1.2**
	comp=N,425nm,0.6s						
YLYR				⇑*i*Pg	**Pb**	**20 49 55.2**	**-1.2**
	comp=N,851nm,0.6s						
YLYR				Pmax		20 49 55.3	
	comp=N,681nm,0.4s						
YLYR				*e*Sg	**Sg**	**20 50 08.8**	**-1.5**
YLYR				Smax		20 50 16.3	
	comp=N,2µm,0.3s						
YLYR	**Ulyunkhan**	**1.07**	**153**	⇑*i*PG	**Pb**	**20 49 55.2**	**-1.2**
YLYR				*e*		20 50 08.5	
YLYR				pmax	pmax		
	comp=Z,637nm,0.6s						
YLYR				smax	smax		
	comp=N,2µm,0.7s						
SVKR	**Severomuysk**	**1.85**	**80**	*e*Pg	**Pg**	**20 50 11.8**	**+0.5**
SVKR				Pmax		20 50 12.3	
	comp=N,3µm,0.4s						
SVKR				*e*		20 50 15.1	
SVKR				*e*Sg	**Sg**	**20 50 36.2**	**+1.0**
SVKR				*e*		20 50 39.1	
SVKR				max		20 50 40.8	
	comp=N,17µm,0.5s						
SVKR	**Severomuysk**	**1.85**	**80**	*e*PN	**Pg**	**20 50 12.0**	**+0.7**
SVKR				*e*		20 50 36.2	
SVKR				pmax	pmax		
	comp=Z,3µm,0.4s						
SVKR				smax	smax		
	comp=N,16µm,0.6s						
UKT	**Uakit**	**1.91**	**99**	⇓*i*Pg	**Pb**	**20 50 11.5**	**+0.8**
	comp=N,84nm,0.6s						
UKT				⇑*i*Pg	**Pb**	**20 50 11.5**	**+0.8**
	comp=N,198nm,0.6s						
UKT				⇑*i*Pg	**Pb**	**20 50 11.5**	**+0.8**
	comp=N,240nm,0.6s						
UKT				Pmax		20 50 12.5	
	comp=N,2µm,0.9s						
UKT				*e*		20 50 19.0	
UKT				*e*Sn	**Sb**	**20 50 35.7**	**+1.1**
UKT				*e*Sg	**Sg**	**20 50 37.9**	**+0.7**
UKT				Smax		20 50 39.1	

	comp=N,3µm,0.6s								
UKT	**Uakit**	**1.91**	**99**	⇑*i*PN	**Pb**	**20 50 11.5**	**+0.8**		
UKT				*e*		20 50 37.4			
UKT				pmax	pmax				
	comp=Z,2µm,0.8s								
UKT				smax	smax				
	comp=N,2µm,0.5s								
SYVR	**Suvo**	**2.18**	**185**	*e*Pn	**Pn**	**20 50 12.2**	**+0.1**		
SYVR				⇓*i*Pg	**Pb**	**20 50 14.2**	**-1.1**		
SYVR				*e*		20 50 15.7			
SYVR				max		20 50 18.2			
	comp=N,474nm,0.6s								
SYVR				*e*Sn	**Sn**	**20 50 38.9**	**-0.2**		
SYVR				*e*Sg	**Sb**	**20 50 42.2**	**-0.1**		
SYVR				Smax		20 50 44.4			
	comp=N,7µm,0.7s								
SYVR	**Suvo**	**2.18**	**185**	*e*PN	**Pn**	**20 50 12.1**	**0.0**		
SYVR				*e*		20 50 14.1			
SYVR				*e*		20 50 41.7			
SYVR				pmax	pmax				
	comp=Z,487nm,0.5s								
SYVR				smax	smax				
	comp=E,7µm,0.7s								
OGRR	**Ongureny**	**2.70**	**217**	⇓*i*Pn	**Pn**	**20 50 19.8**	**+0.6**		
OGRR				*e*Pg	**Pb**	**20 50 23.2**	**-0.9**		
OGRR				Pmax		20 50 38.3			
	comp=E,171nm,0.4s								
OGRR				*e*Sn	**Sn**	**20 50 51.3**	**-0.5**		
OGRR				*e*Sg	**Sb**	**20 50 56.0**	**-1.2**		
OGRR				Smax		20 51 01.7			
	comp=E,843nm,0.5s								
OGRR	**Ongureny**	**2.70**	**217**	*e*PN	**Pn**	**20 50 19.8**	**+0.6**		
OGRR				*e*		20 50 23.6			
OGRR				*e*		20 50 56.0			
OGRR				pmax	pmax				
	comp=Z,172nm,0.6s								
OGRR				smax	smax				
	comp=E,993nm,1.1s								
MXMB	**Maximikha**	**2.73**	**200**	*e*Pg	**Pb**	**20 50 23.5**	**-1.1**		
MXMB				*e*PgPg	**Pg**	**20 50 28.5**	**+0.4**		
MXMB				*e*Sn	**Sn**	**20 50 49.5**	**-3.0**		
MXMB				*e*Sg	**Sb**	**20 50 57.3**	**-0.7**		
BOD	**Bodaibo**	**2.85**	**44**	*e*Pn	**Pb**	**20 50 24.6**	**-2.1**		
BOD				*e*Pg	**Pg**	**20 50 29.2**	**-1.2**		
BOD				Pmax		20 50 36.6			
	comp=E,91nm,0.3s								
BOD				*e*Sg	**Sg**	**20 51 07.3**	**+0.1**		
BOD				Smax		20 51 09.1			
	comp=E,2µm,0.3s								
BOD				*e*SgSg	**SbSb**	**20 51 18.5**	**+12**		
BOD	**Bodaibo**	**2.85**	**44**	*e*PN	**Pb**	**20 50 24.4**	**-2.3**		
BOD				*e*		20 50 29.4			
BOD				*e*S	**Sn**	**20 50 58.3**	**+2.9**		
BOD				*e*		20 51 07.0			
BOD				pmax	pmax				
	comp=Z,69nm,0.3s								
BOD				smax	smax				
	comp=N,2µm,0.5s								
GORB	**Goryachinsk**	**3.08**	**203**	⇓*i*Pn	**Pn**	**20 50 24.4**	**-0.1**		
GORB				*e*Pg	**Pb**	**20 50 29.2**	**-1.5**		
GORB				*e*PgPg	**PnPn**	**20 50 32.7**	**+1.1**		
GORB				*e*Sg	**Sb**	**20 51 08.6**	**+0.3**		
NLYR	**Nelyaty**	**3.09**	**75**	⇑*i*Pn	**Pn**	**20 50 27.5**	**+3.0**		
NLYR				*e*Pg	**Pg**	**20 50 33.2**	**-1.8**		
NLYR				*e*PgPg	**PbPb**	**20 50 36.2**	**+2.3**		
NLYR				max		20 50 37.6			
	comp=N,588nm,0.7s								
NLYR				*e*		20 50 40.4			
NLYR				*e*Sn	**Sn**	**20 51 04.8**	**+3.4**		
NLYR				*e*Sg	**Sg**	**20 51 15.1**	**+0.1**		
NLYR				Smax		20 51 18.4			
	comp=N,2µm,0.8s								
NLYR				*e*		20 51 24.3			
NLYR	**Nelyaty**	**3.09**	**75**	*e*PN	**Pn**	**20 50 27.7**	**+3.2**		
NLYR				*e*		20 50 32.9			
NLYR				*e*		20 51 13.4			
NLYR				pmax	pmax				
	comp=Z,588nm,0.8s								
NLYR				smax	smax				
	comp=N,2µm,1.0s								
KELR	**Kotokel**	**3.34**	**204**	*e*Pn	**Pn**	**20 50 28.3**	**+0.3**		
KELR				*e*Pg	**Pb**	**20 50 34.7**	**-0.4**		
KELR				*e*		20 50 42.8			
KELR				*e*Sn	**Sn**	**20 51 06.5**	**-1.1**		
KELR				*e*Sg	**Sb**	**20 51 16.2**	**+0.5**		
ZRHB	**Zarechye**	**3.77**	**211**	⇑*i*Pn	**Pn**	**20 50 34.4**	**+0.5**		
ZRHB				*e*Pg	**Pb**	**20 50 42.9**	**+0.5**		
ZRHB				Pmax		20 50 48.0			
	comp=N,344nm,0.7s								
ZRHB				*e*		20 51 10.9			
ZRHB				*e*Sg	**Sb**	**20 51 30.1**	**+2.1**		
ZRHB				*e*		20 51 37.1			
ZRHB				max		20 51 40.3			
	comp=N,1µm,0.5s								
VTMR	**Vitim**	**3.82**	**

HRMR Smax 20 52 09.5
comp=E,971nm,0.6s
BGT Bolshoye Golou 4.77 219 Smax 20 50 47.7
BGT *e* 20 51 42.9
BGT *eSg* **Sb** **20 51 59.4 +2.6**
BGT Smax 20 52 06.4
comp=E,441nm,0.7s
VBR Suhoy Ruchey 4.77 214 *ePn* **Pn** **20 50 48.3 +0.6**
VBR *e* 20 51 44.2
VBR *eSg* **Sb** **20 52 00.3 +3.4**
IRK Irkutsk 5.06 227 *ePn* **Pn** **20 50 51.7 +0.1**
IRK *e* 20 50 58.9
IRK max 20 51 05.5
comp=E,12nm,0.9s
IRK *eSn* **Sn** **20 51 46.6 -3.3**
IRK *eSg* **Sb** **20 52 08.6 +3.6**
IRK Smax 20 52 19.8
comp=E,120nm,0.9s
IRK Irkutsk 5.06 227 *e*PN **Pn** **20 50 51.0 -0.6**
IRK *e* 20 51 05.4
IRK *eS* **Sn** **20 51 46.4 -3.5**
IRK *e* 20 52 09.3
IRK pmax pmax
comp=Z,114nm,0.3s
IRK smax smax
comp=E,1µm,0.7s
LSTR Listvyanka 5.12 222 *ePn* **Pn** **20 50 52.4 -0.1**
LSTR *ePg* **Pb** **20 51 06.2 +0.7**
LSTR Pmax 20 51 13.5
comp=E,40nm,0.8s
LSTR *eSn* **Sn** **20 51 48.4 -3.2**
LSTR *e* 20 52 04.6
LSTR *eSg* **Sb** **20 52 10.8 +3.8**
LSTR Smax 20 52 13.0
comp=E,326nm,1.3s
LSTR *e* 20 52 19.7
IVK Ivanovka 5.34 223 *ePn* **Pn** **20 50 55.1 -0.3**
IVK *e* 20 51 14.5
IVK max 20 51 16.1
comp=E,53nm,0.7s
IVK *eSn* **Sn** **20 51 53.0 -3.8**
IVK *eSg* **Sb** **20 52 17.3 +4.2**
IVK Smax 20 52 28.6
comp=E,434nm,0.8s
KHNR Khani 5.48 74 *ePn* **Pn** **20 51 00.7 +3.2**
KHNR *ePg* **Pb** **20 51 15.7 +4.1**
KHNR *eSn* **Sn** **20 52 02.6 +2.1**
KHNR *eSg* **Sg** **20 52 28.6 -3.2**
KHNR *e* 20 52 54.0
TUP Tupik 5.71 100⇑ *i*Pn **Pn** **20 51 02.3 +1.8**
TUP *ePg* **Pb** **20 51 20.1 +4.7**
TUP Pmax 20 51 23.1
comp=E,59nm,0.6s
TUP *eSn* **Sn** **20 52 06.0 0.0**
TUP *eSg* **Sg** **20 52 35.7 -3.2**
TUP Smax 20 52 46.6
comp=E,806nm,1.0s
TUP Tupik 5.71 100⇑ *i*PN **Pn** **20 51 02.3 +1.8**
TUP *e* 20 51 20.2
TUP *eS* **Sn** **20 52 04.5 -1.5**
TUP *e* 20 52 34.6
TUP pmax pmax
comp=Z,60nm,0.6s
TUP smax smax
comp=N,809nm,0.8s
TLY Talaya 5.74 226 *ePn* **Pn** **20 51 00.1 -0.8**
TLY *ePg* **Pb** **20 51 15.9 0.0**
TLY *e* 20 51 19.7
TLY max 20 51 23.9
comp=N,45nm,0.5s
TLY *eSn* **Sn** **20 52 03.5 -3.2**
TLY *eSg* **Sb** **20 52 29.2 +4.6**
TLY *e* 20 52 37.4
TLY max 20 52 38.8
comp=N,362nm,1.0s
ARS Arshan 6.09 233⇑ *i*Pn **Pn** **20 51 05.6 -0.2**
ARS *ePg* **Pb** **20 51 24.0 +2.1**
ARS Pmax 20 51 32.0
comp=N,124nm,0.5s
ARS *eSn* **Sn** **20 52 11.8 -3.7**
ARS *eSg* **Sb** **20 52 41.2 +6.4**
ARS Smax 20 52 45.3
comp=N,1µm,0.5s
ARS *e* 20 53 02.2
KPC Khapcheranga 6.26 168 *ePn* **Pn** **20 51 08.3 +0.1**
KPC *ePg* **Pb** **20 51 27.8 +2.9**
KPC *e* 20 51 29.2
KPC max 20 51 29.8
comp=N,29nm,0.5s
KPC *eSn* **Sn** **20 52 16.8 -2.9**
KPC *eSg* **Sb** **20 52 47.5 +7.8**
KPC Smax 20 52 57.7
comp=N,357nm,1.3s
KPC *e* 20 53 03.7
KPC Khapcheranga 6.26 168 *e*PN **Pn** **20 51 08.4 +0.2**
KPC *e* 20 51 27.3
KPC *eS* **Sn** **20 52 16.6 -3.1**
KPC *e* 20 52 47.4
KPC pmax pmax
comp=Z,29nm,0.5s
KPC smax smax
comp=E,358nm,1.4s
YKLR Yuktali 6.38 78 *ePn* **Pn** **20 51 12.7 +3.0**
YKLR *e* 20 51 20.9
YKLR *ePg* Pb 20 51 32.0 +5.2
YKLR *e* 20 51 35.6
YKLR *eSg* **Sg** **20 52 55.8 -4.5**
ZAK Zakamensk 6.90 221 *ePn* **Pn** **20 51 17.5 +0.5**
ZAK *e* 20 51 41.6
ZAK max 20 51 51.8
comp=E,30nm,0.6s
ZAK *e* 20 52 39.0
ZAK *eSg* **Sb** **20 53 06.3 +8.1**
ZAK Smax 20 53 26.7
comp=E,205nm,0.7s
ZAK Zakamensk 6.90 221 *e*PN **Pn** **20 51 17.0 0.0**
ZAK *eS* **Sb** **20 53 06.9 +8.7**
ZAK smax smax
comp=N,206nm,0.7s
MOY Mondy 6.92 237 *ePn* **Pn** **20 51 18.5 +1.2**
MOY max 20 51 19.1
comp=N,160nm,0.8s
MOY *e* 20 51 26.7
MOY *eSn* **Sn** **20 52 32.4 -3.6**
MOY *e* 20 52 49.8
MOY *eSg* **Sb** **20 53 06.4 +7.7**
MOY Smax 20 53 11.6
comp=N,552nm,1.4s
MOY Mondy 6.92 237 *e*PN **Pn** **20 51 18.3 +1.0**
MOY *eS* **Sn** **20 52 33.1 -2.9**
MOY *eS* Sb 20 53 07.8 +9.1
MOY smax smax
comp=E,549nm,1.5s
ORL Orlik 6.99 246⇑ *i*Pn **Pn** **20 51 19.4 +1.2**
ORL max 20 51 23.0
comp=E,74nm,0.8s
ORL *e* 20 51 28.1
ORL *eSn* **Sn** **20 52 33.6 -4.0**
ORL *e* 20 52 52.3
ORL *eSg* **Sb** **20 53 09.4 +8.8**
ORL Smax 20 53 21.6
comp=E,313nm,1.1s
ORL Orlik 6.99 246 *e*PN **Pn** **20 51 18.9 +0.7**
ORL *eS* **Sn** **20 52 34.3 -3.3**
ORL *eS* **Sb** **20 53 09.5 +8.8**
ORL smax smax
comp=E,196nm,0.7s
CLNS Chul'man 8.17 77 *ePn* **Pn** **20 51 38.6 +4.3**
CLNS *e* 20 52 01.8
CLNS *eSg* **Sg** **20 53 51.7 -6.0**
ULN Ulaanbaatar 8.22 196 **Pn** **20 51 35.3 +0.1**
ULN Ulaanbaatar 8.22 196 *i* PN **Pn** **20 51 36.6 +1.4**
SONM Songino Array 8.36 198 Pn **Pn** **20 51 37.9 +0.8**
SONM Songino Array 8.36 198 PN **Pn** **20 51 37.9 +0.8**
SONM Songino Array 8.36 198 Pn **Pn** **20 51 37.3 +0.2**
comp=E,0.8nm,0.3s,baz=14,slow=13,SNR=11
comp=E,1.4nm,0.4s
ZEA Zeya 10.00 95 *eP* **Pn** **20 52 01.7 +2.3**
ZEA *e* 20 53 52.1
KZLR Kyzyl 10.25 253 *ePn* **Pn** **20 52 03.8 +1.0**
KZLR *e* 20 52 16.6
KZLR *e* 20 54 11.5
KZLR *eSg* Sg 20 54 50.0

YAK Yakutsk 11.75 50 *eP* **Pn** **20 52 22.2 -1.0**
YAK *eS* **Sn** **20 54 34.8 +0.7**
YAK pmax pmax
comp=Z,11nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK smax smax
comp=N,3µm,16.3s
YAK smax smax
comp=E,2µm,13.1s
YAK MLR MLR
comp=Z,7µm,18.0s
YAK MLR MLR
comp=E,2µm,16.0s
YAK MLR MLR
comp=N,3µm,18.0s
YAK Yakutsk 11.75 50 Pn **Pn** **20 52 22.7 -0.5**
comp=N,2.2nm,0.3s,baz=338,slow=4.9,SNR=4.7
YAK Sn **Sn** **20 54 25.8 -8.3**
comp=N,0.5nm,0.3s,baz=227,slow=19,SNR=1.4
YAK Lg Lg 20 55 39.7
comp=N,1.1nm,0.3s,baz=164,slow=22,SNR=8.6
KLR Kul'dur 14.59 108 *i* P **Pn** **20 53 04.8 +2.8**
KLR Kul'dur 14.59 108 Pn **Pn** **20 53 03.9 +1.9**
comp=N,0.6nm,0.3s,baz=311,slow=13,SNR=16
KLR Lg Lg 20 57 11.0
comp=N,0.1nm,0.3s,baz=175,slow=7.8,SNR=4.1
comp=N,1.8nm,0.4s
ZAA0 Zalesovo Array 14.77 273 Pn **Pn** **20 53 04.7 +0.3**
ZALV Zalesovo Beam 14.77 273 **Pn** **20 53 03.7 -0.7**
ZALV Zalesovo Beam 14.77 273 P **Pn** **20 53 03.7 -0.7**
ZALV Zalesovo Beam 14.77 273 Pn **Pn** **20 53 03.2 -1.2**
comp=N,0.4nm,0.3s,baz=84,slow=10,SNR=10
ZALV Lg Lg 20 57 15.3
comp=N,0.1nm,0.3s,baz=70,slow=31,SNR=1.8
comp=N,2.2nm,0.6s
DGZ Jazzator, Alta 15.11 256 *i* P **Pn** **20 53 10.7 +1.5**
NRIK Noril'sk 16.96 332 *i* P **Pn** **20 53 31.3 -1.4**
NRIK Noril'sk 16.96 332 Pn **Pn** **20 53 31.0 -1.7**
comp=N,1.0nm,0.3s,baz=135,slow=5.9,SNR=2.4
NRIK Sn Sn 20 56 29.2 -12
comp=N,0.5nm,0.3s,baz=124,slow=21,SNR=6.0
NRIK Lg Lg 20 58 31.3
comp=N,0.4nm,0.3s,baz=32,slow=19,SNR=1.4
comp=N,2.2nm,0.3s
TIXI Tiksi 17.73 19 **Pn** **20 53 40.4 -1.9**
TIXI IAmb IAmb 20 53 47.1
comp=Z,13nm,0.8s
TIXI Tiksi 17.73 19 *i* P **Pn** **20 53 40.5 -1.8**
TIXI Tiksi 17.73 19 P **Pn** **20 53 40.7 -1.5**
comp=Z,1.0nm,0.3s,baz=242,slow=8.8,SNR=16
TIXI S Sn 20 56 43.7 -16
comp=Z,0.9nm,0.4s,baz=284,slow=12,SNR=1.4
TIXI Lg Lg 20 58 51.0
baz=320,slow=15,SNR=7.0
comp=Z,2.4nm,0.3s
USRK Ussuriysk Ar. 18.06 121 Lg Lg 20 59 09.2
comp=Z,0.1nm,0.3s,baz=312,slow=28,SNR=2.2
KURK Kurchatov 19.52 268 P **P** **20 54 01.6 -1.3**
KURK IAmb IAmb 20 54 06.3
comp=Z,11nm,0.9s
KURK Kurchatov 19.52 268 *i* P **P** **20 54 03.5 +0.5**
KURK pmax pmax
comp=Z,12nm,0.9s
MK31 Makanchi Array 19.59 254 P **P** **20 54 03.4 -0.4**
MK31 Makanchi Array 19.59 254 *i* P **P** **20 54 03.6 -0.2**
MKAR Makanchi Array 19.59 254 P **P** **20 54 03.6 -0.2**
comp=Z,0.8nm,0.3s,baz=58,slow=8.8,SNR=50
MKAR Lg Lg 20 59 54.5
baz=52,slow=28,SNR=3.3
comp=Z,5.9nm,0.6s
KURBB Kurchatov Arra 19.62 268 P **P** **20 54 03.7 -0.3**
comp=Z,0.4nm,0.3s,baz=67,slow=11,SNR=12
comp=Z,4.4nm,0.6s
MAKZ Makanchi 19.75 255 P **P** **20 54 04.8 -0.8**
MAKZ Makanchi 19.75 255 P **P** **20 54 04.8 -0.8**
MAKZ pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 23.17 280 P **P** **20 54 41.7 -0.5**
comp=Z,3.7nm,0.6s,baz=57,slow=11,SNR=12
comp=Z,3.7nm,0.6s
BRVK Borovoye 23.22 280 **P** **20 54 41.0 -1.6**
BRVK IAmb IAmb 20 55 02.3
comp=Z,4.5nm,0.8s
BRVK Borovoye 23.22 280 *i* P **P** **20 54 42.0 -0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 30.74 279 P **P** **20 55 49.3 -1.4**
QIZ Qiongzhong 36.74 181 P **P** **20 56 42.0 -1.0**
QIZ IAmb IAmb 20 56 43.7
comp=Z,23nm,1.1s
KEV Kevo 37.17 325 P **P** **20 56 45.9 -0.3**
KEV Kevo 37.17 325 P **P** **20 56 45.9 -0.3**
ARCES ARCESS Array B 37.74 325 P **P** **20 56 51.9 +0.8**
ARCES IAmb IAmb 20 57 00.9
comp=Z,15nm,1.4s
ARCES ARCESS Array B 37.74 325 *eP* **P** **20 56 50.3 -0.8**
ARCES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 37.74 325 P **P** **20 56 51.7 +0.6**
comp=Z,1.4nm,0.7s,baz=70,slow=9.1,SNR=17
comp=Z,1.4nm,0.7s
FIA1 FINESS Array S 41.30 314 P **P** **20 57 21.4 +0.6**
FINES FINESS Array B 41.30 314 P **P** **20 57 21.4 +0.6**
FINES FINESS Array B 41.30 314 P **P** **20 57 21.6 +0.8**
comp=Z,1.5nm,0.4s,baz=65,slow=8.6,SNR=26
comp=Z,1.5nm,0.4s
GSTR Great Sitkin T 41.59 63 P **P** **20 57 23.2 -0.2**
AKASG Malin Array Be 46.15 299 P **P** **20 57 59.4 -0.6**
comp=Z,0.6nm,0.6s,baz=44,slow=8.9,SNR=5.7
comp=Z,0.6nm,0.6s
HFS Hagfors 46.99 317 P **P** **20 58 06.9 +0.5**
comp=Z,1.7nm,0.4s,baz=59,slow=9.0,SNR=17
comp=Z,1.7nm,0.4s
NB2 NORSAR Array B 47.33 319 P **P** **20 58 09.7 +0.6**
comp=Z,0.8nm,0.6s,baz=51,slow=7.9
NOA NORSAR Array B 47.33 319 *eP* **P** **20 58 10.0 +0.9**
NOA NORSAR Array B 47.33 319 P **P** **20 58 09.8 +0.7**
comp=Z,0.6nm,0.6s,baz=47,slow=7.9,SNR=5.4
comp=Z,0.6nm,0.6s
NC204 NORSAR Array S 47.34 320 P **P** **20 58 09.8 +0.6**
NC204 IAmb IAmb 20 58 35.3
comp=Z,9.3nm,1.2s
INK Inuvik 47.63 27 P **P** **20 58 12.2 +0.9**
comp=Z,1.4nm,0.8s,baz=323,slow=6.0,SNR=3.9
comp=Z,1.4nm,0.8s
C36M Paulatuk 49.06 22 P **P** **20 58 21.6 -0.6**
C36M IAmb IAmb 20 58 27.4
comp=Z,6.2nm,0.9s
BRTR Keskin Array B 51.26 286 P **P** **20 58 40.1 +0.5**
comp=Z,1.2nm,0.9s,baz=36,slow=7.6,SNR=2.7
comp=Z,1.2nm,0.9s
EKA Eskdalemuir Ar 56.69 321 P **P** **20 59 19.2 +0.3**
comp=Z,1.9nm,0.8s,baz=54,slow=6.3,SNR=4.2
comp=Z,1.9nm,0.8s
YKA Yellowknife Ar 56.93 23 P **P** **20 59 20.2 -0.2**
comp=Z,0.5nm,0.7s,baz=330,slow=7.3,SNR=5.4
comp=Z,0.5nm,0.7s
ESDC Sonseca Array 69.76 311 P **P** **21 00 46.1 +0.3**
comp=Z,0.9nm,0.8s,baz=29,slow=7.1,SNR=6.5
comp=Z,0.9nm,0.8s

*IDC **25** 20:50:41.3±0.7,6˚.24S×143˚.27E,h0km,mb4.3/13, mbtmp4.3/15,ML2.5/1,Error ellipse: s-maj=30.2km s-min=16.1km az=76.0*
*NEIC **25** 20:50:43.2±2.2,6˚.3S±0˚.1×143˚.06E±0˚.09,h10km±1km, mb4.6/44,Error ellipse: s-maj=18.9km s-min=13.3km az=211.0*
ISC 25 20:50:42.7±0.5,6˚31S±0˚.07×143˚.06E±0˚.07,h10km,n67, σ1§11/66,mb4.5/25,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.09**	**127**	Pn	**Pn**	**Pn**	**20 52 00.3**	**+1.2**
PMG	**Port Moresby**	**5.09**	**127**	Pn	**Pn**	**Pn**	**20 51 58.2**	**-0.9**
	12nm,0.3s,baz=3.7,slow=3.9,SNR=6.6							
PMG				Sn		**Sn**	**20 52 57.2**	**-0.8**
	19nm,0.3s,baz=246,slow=18,SNR=8.1							
	86nm,0.9s							
FAKI	**Fak Fak**	**11.29**	**287**	Pn		**Pn**	**20 53 26.7**	**+2.5**
SAUI	**Saumlaki**	**11.79**	**261**			**Pn**	**20 53 29.0**	**-2.1**
MTN	**Manton Dam**	**13.43**	**240**			**Pn**	**20 53 51.5**	**-2.0**
CTA	**Charters Tower**	**14.04**	**168**	Lg		Lg	20 58 04.4	
	0.4nm,0.3s,baz=245,slow=19,SNR=2.7							

WB0 Warramunga Arr 15.81 211 Pn **Pn** **20 54 25.2 -0.3**
WB0 IAmb IAmb 20 54 39.6
comp=Z,28nm,0.9s
WRAB Tennant Creek 15.97 211 Pn **Pn** **20 54 26.8 -0.8**
WRAB IAmb IAmb 20 54 48.5
comp=Z,21nm,0.7s
WB2 Warramunga Arr 15.97 211 Pn **Pn** **20 54 27.1 -0.6**
WB2 IAmb IAmb 20 54 37.7
comp=Z,26nm,0.6s
WRA Warramunga Arr 15.98 211 Pn **Pn** **20 54 24.5 -3.3**
WRA Warramunga Arr 15.98 211 Pn **Pn** **20 54 26.5 -1.3**
comp=Z,2.3nm,0.3s,baz=34,slow=14,SNR=13
WRA Lg Lg 20 59 05.5
baz=125,slow=16
SOEI Soe 18.92 258 **Pn** **20 55 06.8 +2.2**
AS31 Alice Springs 19.37 206 P **Pn** **20 55 10.5 +0.6**
AS31 IAmb IAmb 20 55 21.2
comp=Z,14nm,0.6s
ASAR Alice Springs 19.37 206 P **P** **20 55 08.9 +0.1**
ASAR Alice Springs 19.37 206 P **Pn** **20 55 11.8 +1.8**
comp=Z,29nm,0.7s,baz=30,slow=12,SNR=25
EIDS Eidsvold 20.45 159 P Pn 20 55 22.7 +0.2
FITZ Fitzroy Crossi 20.64 234 P **P** **20 55 21.4 -1.2**
MMRI Maumere 20.77 262 P **P** **20 55 25.2 +1.1**
MMRI IAmb IAmb 20 55 49.3
comp=Z,22nm,0.9s
KAPI Kappang 23.23 272 P **P** **20 55 51.0 +0.7**
TOLI2 Tolitoli 23.43 288 P **P** **20 55 50.4 -2.0**
TOLI2 IAmb IAmb 20 56 00.1
comp=Z,23nm,1.1s
KOUNC Koumac, New Ca 24.98 127 P **P** **20 56 07.6 +0.9**
KOUNC IAmb IAmb 20 56 10.7
comp=Z,9.7nm,0.8s
STKA Stephens Creek 25.47 183 P **P** **20 56 12.5 +1.5**
STKA Stephens Creek 25.47 183 P **P** **20 56 12.2 +1.1**
comp=Z,3.1nm,0.7s,baz=344,slow=11,SNR=3.9
comp=Z,3.1nm,0.7s
MBWA Marble Bar 26.98 235 P **P** **20 56 26.7 +1.8**
MBWA IAmb IAmb 20 56 38.3
comp=Z,11nm,1.0s
PSA00 Pilbara Seismi 27.10 234 P **P** **20 56 24.8 -1.2**
PSA00 IAmb IAmb 20 56 31.9
comp=Z,9.9nm,0.8s
PINNC Pines Island, 28.56 127 P **P** **20 56 39.6 +0.7**
TOO Toolangi 31.19 176 P **P** **20 57 01.9 -0.3**
MJAR Matsushiro Arr 42.87 354 P **P** **20 58 40.4 -0.9**
comp=Z,1.0nm,0.8s,baz=145,slow=9.8,SNR=3.1
comp=Z,1.0nm,0.8s
KSRS Korea Array 45.78 343 P **P** **20 59 04.9 +0.4**
comp=Z,1.1nm,0.6s,baz=167,slow=9.5,SNR=4.0
comp=Z,1.1nm,0.6s
CM31 Chiang Mai Arr 49.99 300 P **P** **20 59 37.7 +0.2**
CM31 IAmb IAmb 20 59 47.0
comp=Z,6.9nm,1.3s
CMAR Chiang Mai Arr 49.99 300 P **P** **20 59 37.9 +0.3**
CMAR Chiang Mai Arr 49.99 300 P **P** **20 59 38.9 +1.4**
comp=Z,0.9nm,0.6s,baz=122,slow=6.0,SNR=7.7
comp=Z,0.9nm,0.6s
CHTO Chiang Mai 50.14 301 P **P** **20 59 38.1 -0.6**
USRK Ussuriysk Ar. 51.26 350 P **P** **20 59 47.3 +0.6**
comp=Z,1.8nm,0.7s,baz=182,slow=14,SNR=3.3
comp=Z,1.8nm,0.7s
SHL Shillong 58.94 305 P **P** **21 00 41.0 -1.8**
SHL IAmb IAmb 21 00 52.2
comp=Z,6.3nm,1.0s
PETK Petropavlovsk- 60.48 10 P **P** **21 00 52.4 -0.2**
PETK Petropavlovsk- 60.48 10 P **P** **21 00 52.7 0.0**
comp=Z,5.5nm,0.9s,baz=191,slow=7.1,SNR=4.3
comp=Z,5.5nm,0.9s
SONM Songino Array 62.84 333 P **P** **21 01 08.3 -0.6**
SONM Songino Array 62.84 333 P **P** **21 01 09.4 +0.6**
comp=Z,1.0nm,0.9s,baz=161,slow=9.2,SNR=2.3
comp=Z,1.0nm,0.9s
MK31 Makanchi Array 75.28 322 P **P** **21 02 25.4 -0.7**
MK31 IAmb IAmb 21 02 28.2
comp=Z,7.2nm,1.1s
MKAR Makanchi Array 75.28 322 P **P** **21 02 25.5 -0.5**
MKAR Makanchi Array 75.28 322 P **P** **21 02 26.7 +0.7**
comp=Z,4.7nm,0.7s,baz=107,slow=7.1,SNR=26
comp=Z,4.7nm,0.7s
MAKZ Makanchi 75.48 322 P **P** **21 02 27.9 +0.7**
MAKZ IAmb IAmb 21 02 29.2
comp=Z,8.2nm,1.1s
PRZ Przheval'sk 76.04 316 P **P** **21 02 30.7 0.0**
TARG Taragay, Kyrgy 76.17 316 P **P** **21 02 31.2 -0.6**
TARG IAmb IAmb 21 02 34.3
comp=Z,2.8nm,0.8s
NIL Nilore 76.94 307 P **P** **21 02 35.8 0.0**
CNBA Chernabura Isl 77.22 30 P **P** **21 02 37.4 +0.6**
ZAA0 Zalesovo Array 77.22 329 P **P** **21 02 36.6 -0.3**
ZALV Zalesovo Beam 77.22 329 P **P** **21 02 35.5 -1.4**
ZALV Zalesovo Beam 77.22 329 P **P** **21 02 36.6 -0.2**
comp=Z,1.2nm,0.6s,baz=96,slow=7.4,SNR=7.0
comp=Z,1.2nm,0.6s
NRN Naryn 77.33 315 P **P** **21 02 37.8 -0.4**
AAK Ala-Archa 78.80 316 P **P** **21 02 46.6 +0.5**
AAK IAmb IAmb 21 02 53.9
comp=Z,4.8nm,1.4s
KURK Kurchatov 79.15 324 P **P** **21 02 48.0 +0.4**
KURK IAmb IAmb 21 02 49.3
comp=Z,4.9nm,0.8s
KURBB Kurchatov Arra 79.16 324 P **P** **21 02 48.3 +0.6**
comp=Z,3.4nm,0.9s,baz=117,slow=4.3,SNR=14
comp=Z,3.4nm,0.9s
KBL Kabul 80.55 306 P **P** **21 02 54.8 -1.1**
BTK Batken 80.64 312 P **P** **21 02 56.2 +0.1**
KKAR Karatay Array 81.72 315 P **P** **21 03 00.5 -1.3**
KKAR Karatay Array 81.72 315 P **P** **21 03 01.3 -0.4**
KKAR IAmb IAmb 21 03 08.3
comp=Z,4.5nm,1.3s
QSPA South Pole Qui 83.66 180 P **P** **21 03 12.0 +0.5**
QSPA IAmb IAmb 21 03 18.2
comp=Z,5.2nm,0.9s
QSPA South Pole Qui 83.66 180 P **P** **21 03 11.4 0.0**
comp=Z,3.6nm,0.7s,baz=283,slow=1.2,SNR=11
comp=Z,3.6nm,0.7s
E19K Redstone River 84.69 20 P **P** **21 03 16.2 -0.3**
BVAR Borovoye Array 84.73 325 P **P** **21 03 17.9 +0.8**
comp=Z,16nm,0.8s,baz=114,slow=6.6,SNR=47
comp=Z,16nm,0.8s
BRVK Borovoye 84.81 325 P **P** **21 03 16.6 -0.7**
ILAR Eielson Array 87.33 24 P **P** **21 03 28.8 -0.8**
comp=Z,2.2nm,0.8s,baz=257,slow=5.1,SNR=7.8
comp=Z,2.2nm,0.8s
C23K Itkillik River 87.94 19 P **P** **21 03 33.4 +1.0**
F07A Phinny Hill Vi 99.38 45 **Pdif** **21 04 23.9 -1.6**
DBIC Dimbokro 148.12 272 PKPbc **PKPbc** **21 10 30.1 +0.1**
comp=Z,7.9nm,0.8s,baz=98,slow=3.1,SNR=6.8

*IDC **25** 20:53:22.6±1.2,5˚.91S×143˚.55E,h0km,mb3.9/8, mbtmp4.0/10,ML4.6/2,Error ellipse: s-maj=47.3km s-min=22.6km az=98.0*
ISC 25 20:53:27.9±1.1,6˚.0S±0˚.1×143˚.4E±0˚.3,h35km,n11, σ0§98/11,mb3.9/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.42**	**212**	Pn	**P**		**20 57 18.3**	**0.0**
	2.0nm,0.3s,baz=30,slow=13,SNR=3.4							
WRA				Lg		Lg	21 02 01.2	
	baz=34,slow=29							
	6.1nm,0.7s							
ASAR	**Alice Springs**	**19.80**	**206**	P		**Pn**	**20 57 57.0**	**-0.2**
	2.0nm,0.3s,baz=31,slow=11,SNR=9.9							
	15nm,0.7s							
MJAR	**Matsushiro Arr**	**42.59**	**354**	P		**P**	**21 01 20.3**	**-0.4**
	0.6nm,0.4s,baz=168,slow=7.5,SNR=2.4							
	0.6nm,0.4s							
KSRS	**Korea Array**	**45.57**	**343**	P		**P**	**21 01 44.1**	**-0.4**
	0.6nm,0.4s,baz=154,slow=8.8,SNR=3.7							
	0.6nm,0.4s							
CMAR	**Chiang Mai Arr**	**50.11**	**300**	P		**P**	**21 02 20.5**	**+0.5**
	0.3nm,0.5s,baz=120,slow=5.3,SNR=1.9							
	0.3nm,0.5s							
USRK	**Ussuriysk Ar.**	**51.01**	**349**	P		**P**	**21 02 26.7**	**+0.3**
	2.7nm,0.8s,baz=187,slow=10,SNR=4.3							
	2.7nm,0.8s							
MKAR	**Makanchi Array**	**75.23**	**322**	P		**P**	**21 05 06.2**	**-1.0**
	0.6nm,0.7s,baz=112,slow=6.4,SNR=3.9							
	0.6nm,0.7s							
QSPA	**South Pole Qui**	**83.97**	**180**	P		**P**	**21 05 54.6**	**+0.1**
	0.9nm,0.6s,baz=23,slow=0.3,SNR=2.4							
	0.9nm,0.6s							
BVAR	**Borovoye Array**	**84.67**	**325**	P		**P**	**21 05 58.7**	**+0.7**
	1.6nm,0.7s,baz=118,slow=5.7,SNR=1.4							
	1.6nm,0.7s							

ILAR	**Eielson Array**	**86.91**	**24**	P	**P**	**21 06 09.3**	**+0.5**
	0.6nm,0.7s,baz=265,slow=4.4,SNR=5.7						
	0.6nm,0.7s						
YKA	**Yellowknife Ar**	**100.83**	**28**	P	**Pdif**	**21 07 10.6**	**-2.3**
	4.1nm,0.8s,baz=285,slow=2.7,SNR=38						

NEIC ***25*** *20:55:14.7±2.0,56.02N±0.06×162.00W±0.09, h191km±5km,mb4.6/72,ML4.5/38,ML4.4(AEIC),Error ellipse: s-maj=8.9km s-min=6.6km az=162.0*

MOS ***25*** *20:55:14.0±1.0,56.22N×162.15W,h193km,mb4.6/37, Error ellipse: s-maj=10.7km s-min=5.1km az=90.4*

IDC ***25*** *20:55:15.9±0.6,56.22N×162.21W,h193km±4km,mb4.0/33, mbtmp4.5/35,Error ellipse: s-maj=12.4km s-min=6.9km az=8.0*

AEIC ***25*** *20:55:15.7±2.0,55.97N±0.04×161.91W±0.09, h194km±3km,Error ellipse: s-maj=7.5km s-min=5.0km az=102.0*

ISC 25 20:55:15.0±0.4,56.13N±0.05×162.01W±0.03, h192km±3km,h192km:pP-P,n764,σ1§24/778,mb4.3/112, 48C-9D,Bristol Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PN7A	**Pavlof North-7**	**0.70**	**179**		**Pn**	**20 55 41.7**	**-0.6**
PN7A					**Sn**	**20 56 02.1**	**-1.1**
PS1A	**Pavlof South-1**	**0.73**	**168**		**Pn**	**20 55 41.5**	**-0.8**
PS1A					**Sn**	**20 56 01.6**	**-1.7**
PVV	**Pavlof Volcano**	**0.77**	**170**		**Pn**	**20 55 41.7**	**-0.8**
PVV					**Sn**	**20 56 02.5**	**-1.2**
DT1	**Dutton Round H**	**1.04**	**189**		**Pn**	**20 55 43.1**	**-1.2**
SDPT	**Sand Point**	**1.17**	**131**		**Pn**	**20 55 43.8**	**-1.4**
SDPT	**Sand Point**	**1.17**	**131**		**Sn**	**20 56 05.7**	**-2.8**
SDPT	**Sand Point**	**1.17**	**131**	IAML		20 56 07.0	
	comp=N,9μm,0.6s						
SDPT				IAML		20 56 07.1	
	comp=E,12μm,0.3s						
SDPT	**Sand Point**	**1.17**	**131**	P	**Pn**	**20 55 43.8**	**-1.4**
SDPT	**Sand Point**	**1.17**	**131**	P	**Pn**	**20 55 43.9**	**-1.3**
	baz=309,SNR=144						
VNWF	**Veniaminof 8**	**1.37**	**88**		**Pn**	**20 55 47.3**	**+0.3**
VNSW	**Veniaminof 7**	**1.38**	**91**		**Pn**	**20 55 46.5**	**-0.4**
S14K	**Fog Glacier**	**1.38**	**83**	P	**Pn**	**20 55 47.6**	**+0.5**
	baz=260						
VNFG	**Fog Glacier, M**	**1.38**	**83**		**Pn**	**20 55 47.6**	**+0.5**
VNFG	**Fog Glacier, M**	**1.38**	**83**		**Pn**	**20 55 47.5**	**+0.5**
VNFG					**Sn**	**20 56 12.2**	**+0.3**
FALS	**False Pass**	**1.51**	**213**	Pn	**Pn**	**20 55 47.0**	**-1.1**
FALS	**False Pass**	**1.51**	**213**		**Sn**	**20 56 11.6**	**-2.0**
FALS	**False Pass**	**1.51**	**213**	P	**Pn**	**20 55 47.1**	**-1.0**
FALS	**False Pass**	**1.51**	**213**	P	**Pn**	**20 55 46.9**	**-1.1**
	baz=34,SNR=13						
ISNN	**Isanotski Nort**	**1.64**	**218**		**Pn**	**20 55 48.8**	**-0.6**
ISLZ	**Isanotski Laza**	**1.71**	**215**		**Pn**	**20 55 49.0**	**-1.0**
ISLZ					**Sn**	**20 56 15.9**	**-1.3**
BRPK	**Brown Peak**	**1.79**	**214**		**Pn**	**20 55 49.6**	**-1.1**
SSLS	**Shishaldin Sou**	**1.82**	**219**		**Pn**	**20 55 50.3**	**-0.9**
SSLS					**Sn**	**20 56 17.0**	**-2.2**
CHNA	**Chernabura Isl**	**1.90**	**132**	P	**Pn**	**20 55 49.7**	**-2.1**
	baz=312,SNR=75						
CNBA	**Chernabura Isl**	**1.91**	**133**	Pn	**Pn**	**20 55 49.7**	**-2.2**
CNBA				IAML		20 56 16.8	
	comp=E,5μm,0.6s						
CNBA				IAML		20 56 16.9	
	comp=N,4μm,0.5s						
CNBA	**Chernabura Isl**	**1.91**	**133**		**Sn**	**20 56 16.2**	**-4.4**
CHGN	**Chignik**	**2.02**	**84**		**Pn**	**20 55 52.3**	**-0.8**
CHGN				IAML		20 56 22.2	
	comp=N,3μm,0.5s						
CHGN				IAML		20 56 22.6	
	comp=E,2μm,0.4s						
CHGN	**Chignik**	**2.02**	**84**		**Sn**	**20 56 21.2**	**-1.4**
CHGN	**Chignik**	**2.02**	**84**	P	**Pn**	**20 55 52.3**	**-0.8**
	baz=263,SNR=160						
WECS	**Westdahl Cape**	**2.25**	**226**		**Sn**	**20 56 26.5**	**-0.8**
ANNE	**Aniakchak Nort**	**2.33**	**69**		**Pn**	**20 55 56.9**	**+0.4**
R16K	**Pilot Point**	**2.83**	**58**		**Pn**	**20 56 03.1**	**+0.9**
R16K					**Sn**	**20 56 39.3**	**+0.3**
R16K	**Pilot Point**	**2.83**	**58**	IAML		20 57 03.3	
	comp=E,2μm,1.2s						
R16K				IAML		20 57 04.2	
	comp=N,2μm,1.0s						
R16K	**Pilot Point**	**2.83**	**58**	P	**Pn**	**20 56 02.5**	**+0.3**
	baz=239						
AKSA	**Akutan Strait**	**2.91**	**228**		**Sn**	**20 56 39.5**	**-1.1**
AKUT	**Akutan**	**2.94**	**229**		**Pn**	**20 56 02.8**	**-0.7**
AKUT				IAML		20 56 43.1	
	comp=N,618nm,0.3s						
AKUT	**Akutan**	**2.94**	**229**	P	**Pn**	**20 56 02.9**	**-0.6**
AKRB	**Akutan Reef Bi**	**3.07**	**231**		**Sn**	**20 56 44.1**	**-0.1**
O14K	**Tigyukauivet M**	**3.16**	**7**		**Pn**	**20 56 06.6**	**+0.6**
O14K	**Tigyukauivet M**	**3.16**	**7**	IAML		20 56 48.2	
	comp=E,383nm,1.3s						
O14K	**Tigyukauivet M**	**3.16**	**7**	P	**Pn**	**20 56 06.6**	**+0.6**
	baz=187						
O15K	**Ungalikthiuk R**	**3.27**	**20**		**Pn**	**20 56 08.2**	**+0.7**
O15K	**Ungalikthiuk R**	**3.27**	**20**	P	**Pn**	**20 56 08.1**	**+0.7**
	baz=201						
PLK5	**Peulik 5**	**3.37**	**54**		**Pn**	**20 56 09.9**	**+1.3**
UNV	**Unalaska Valle**	**3.46**	**230**	Pn	**Pn**	**20 56 08.6**	**-1.1**
UNV	**Unalaska Valle**	**3.46**	**230**	P	**Pn**	**20 56 08.6**	**-1.1**
UNV	**Unalaska Valle**	**3.46**	**230**	P	**Pn**	**20 56 08.4**	**-1.3**
	baz=48,SNR=29						
P16K	**Nushagak River**	**3.63**	**35**	P	**Pn**	**20 56 13.2**	**+1.5**
	baz=217,SNR=175						
N14K	**Kuskokwak Cree**	**3.81**	**2**		**Pn**	**20 56 14.7**	**+0.7**
N14K	**Kuskokwak Cree**	**3.81**	**2**	P	**Pn**	**20 56 14.8**	**+0.8**
	baz=183,SNR=114						
Q16K	**King Salmon**	**3.86**	**46**	P	**Pn**	**20 56 15.9**	**+1.3**
	baz=230,SNR=19						
Q17K	**Contact Creek**	**3.96**	**55**	P	**Pn**	**20 56 17.0**	**+1.0**
	baz=238,SNR=85						
O16K	**Kokwok River B**	**4.05**	**29**	Pn	**Pn**	**20 56 17.7**	**+0.6**
O16K				IAML		20 57 08.4	
	comp=N,313nm,1.1s						
O16K	**Kokwok River B**	**4.05**	**29**	P	**Pn**	**20 56 17.9**	**+0.9**
	baz=212,SNR=79						
N15K	**Kwethluk River**	**4.18**	**13**	Pn	**Pn**	**20 56 19.6**	**+0.9**
N15K				IAML		20 57 11.0	
	comp=E,233nm,1.4s						
N15K				IAML		20 57 11.1	
	comp=N,346nm,1.1s						
N15K	**Kwethluk River**	**4.18**	**13**	P	**Pn**	**20 56 19.6**	**+1.0**
	baz=194,SNR=163						
KCE	**Katmai Mt Cerb**	**4.28**	**57**		**Pn**	**20 56 21.3**	**+1.3**
P17K	**Kvichak River**	**4.29**	**42**	P	**Pn**	**20 56 21.5**	**+1.5**
	baz=226,SNR=76						
M13K	**Dall Lake**	**4.35**	**351**	Pn	**Pn**	**20 56 21.9**	**+1.1**
M13K				IAML		20 57 31.1	
	comp=E,238nm,1.0s						
M13K				IAML		20 57 36.4	
	comp=N,167nm,1.4s						
M13K	**Dall Lake**	**4.35**	**351**	P	**Pn**	**20 56 21.9**	**+1.1**
	baz=170,SNR=48						
OKFG	**Magazine Ridge**	**4.37**	**234**		**Pn**	**20 56 19.7**	**-1.4**
SII	**Sitkinak Islan**	**4.38**	**81**	P	**Pn**	**20 56 20.1**	**-1.1**
	baz=266						
R18K	**Karluk**	**4.39**	**68**		**Pn**	**20 56 20.7**	**-0.6**
R18K	**Karluk**	**4.39**	**68**	P	**Pn**	**20 56 21.1**	**-0.3**
	baz=253						
OKNC	**Okmok New Cone**	**4.44**	**235**		**Pn**	**20 56 20.6**	**-1.4**
OKCE	**Okmok Cone E**	**4.47**	**235**		**Pn**	**20 56 21.7**	**-0.8**
O17K	**Koliganek Bris**	**4.50**	**34**	P	**Pn**	**20 56 23.8**	**+1.2**
	baz=217,SNR=141						
M15K	**Kasigluk River**	**4.63**	**8**		**Pn**	**20 56 24.7**	**+0.3**
M15K	**Kasigluk River**	**4.63**	**8**	P	**Pn**	**20 56 24.7**	**+0.3**
	baz=189,SNR=83						
M14K	**Bethel**	**4.64**	**0**		**Pn**	**20 56 25.1**	**+0.8**
M14K				IAML		20 57 21.3	
	comp=N,218nm,1.4s						
M14K				IAML		20 57 29.9	
	comp=E,262nm,1.2s						
M14K	**Bethel**	**4.64**	**0**	P	**Pn**	**20 56 25.3**	**+1.0**
	baz=180,SNR=143						
SPIA	**Saint Paul Isl**	**4.66**	**286**	Pn	**Pn**	**20 56 25.1**	**+0.3**
SPIA	**Saint Paul Isl**	**4.66**	**286**	P	**Pn**	**20 56 25.8**	**+1.0**
SPIA	**Saint Paul Isl**	**4.66**	**286**	P	**Pn**	**20 56 25.1**	**+0.3**
	baz=101,SNR=11						
N16K	**Nishlik Lake**	**4.68**	**20**		**Pn**	**20 56 26.1**	**+1.1**
N16K	**Nishlik Lake**	**4.68**	**20**	P	**Pn**	**20 56 26.0**	**+1.1**
	baz=202						
M11K	**Mekoryuk**	**4.81**	**334**		**Pn**	**20 56 26.6**	**0.0**
M11K	**Mekoryuk**	**4.81**	**334**	P	**Pn**	**20 56 26.9**	**+0.3**
	baz=151,SNR=10						
P18K	**Big Mountain,**	**4.89**	**45**		**Pn**	**20 56 28.9**	**+1.3**
P18K	**Big Mountain,**	**4.89**	**45**	P	**Pn**	**20 56 29.1**	**+1.5**
	baz=230,SNR=89						
OHAK	**Old Harbor**	**4.94**	**74**		**Pn**	**20 56 27.0**	**-1.3**
OHAK				IAML		20 57 37.2	
	comp=E,420nm,1.0s						
OHAK	**Old Harbor**	**4.94**	**74**	P	**Pn**	**20 56 27.0**	**-1.3**
OHAK	**Old Harbor**	**4.94**	**74**	P	**Pn**	**20 56 26.9**	**-1.3**
	baz=260,SNR=50						
NIKH	**Nikolski High**	**5.08**	**234**	Pn	**Pn**	**20 56 29.1**	**-1.2**
NIKH	**Nikolski High**	**5.08**	**234**	P	**Pn**	**20 56 29.2**	**-1.1**
NIKH	**Nikolski High**	**5.08**	**234**	P	**Pn**	**20 56 29.0**	**-1.3**
	baz=50,SNR=8.0						
N17K	**Nushagak Hills**	**5.09**	**28**	Pn	**Pn**	**20 56 31.2**	**+1.0**
N17K	**Nushagak Hills**	**5.09**	**28**	P	**Pn**	**20 56 31.1**	**+0.9**
	baz=211,SNR=29						
M16K	**Timber Creek**	**5.16**	**17**	Pn	**Pn**	**20 56 31.8**	**+0.6**
M16K	**Timber Creek**	**5.16**	**17**	P	**Pn**	**20 56 31.8**	**+0.6**
	baz=199,SNR=36						
O18K	**Koktuh Hills**	**5.20**	**41**	Pn	**Pn**	**20 56 33.2**	**+1.5**
O18K				IAML		20 58 16.4	
	comp=E,125nm,1.2s						
O18K				IAML		20 58 22.5	
	comp=N,112nm,1.1s						
O18K	**Koktuh Hills**	**5.20**	**41**	P	**Pn**	**20 56 33.1**	**+1.5**
	baz=226,SNR=86						
L14K	**Kuka Creek**	**5.24**	**356**		**Pn**	**20 56 32.9**	**+0.7**
L14K	**Kuka Creek**	**5.24**	**356**	IAML		20 57 34.1	
	comp=N,221nm,1.1s						
L14K				IAML		20 57 34.2	
	comp=E,326nm,1.4s						
L14K	**Kuka Creek**	**5.24**	**356**	P	**Pn**	**20 56 32.8**	**+0.7**
	baz=176						
Q19K	**Cape Douglas,**	**5.31**	**55**		**Pn**	**20 56 33.8**	**+0.7**
Q19K	**Cape Douglas,**	**5.31**	**55**	P	**Pn**	**20 56 33.7**	**+0.7**
	baz=241,SNR=50						
KDAK	**Kodiak Island**	**5.42**	**68**	Pn	**Pn**	**20 56 33.5**	**-1.0**
KDAK	**Kodiak Island**	**5.42**	**68**	P	**Pn**	**20 56 33.8**	**-0.7**
	baz=255						
KDAK	**Kodiak Island**	**5.42**	**68**	eP	**Pn**	**20 56 33.5**	**-1.0**
KDAK	**Kodiak Island**	**5.42**	**68**	P	**Pn**	**20 56 33.2**	**-1.3**
	comp=E,170nm,0.3s,baz=278,slow=5.8,SNR=812						
KDAK				S	**Sn**	**20 57 31.4**	**-5.8**
	comp=E,151nm,0.3s,baz=58,slow=22,SNR=12						
L15K	**Ungalak Mounta**	**5.57**	**3**		**Pn**	**20 56 36.8**	**+0.4**
L15K	**Ungalak Mounta**	**5.57**	**3**	P	**Pn**	**20 56 36.9**	**+0.5**
	baz=183,SNR=70						
N18K	**Kilae Creek**	**5.58**	**33**		**Pn**	**20 56 37.8**	**+1.2**
N18K	**Kilae Creek**	**5.58**	**33**	P	**Pn**	**20 56 37.8**	**+1.2**
	baz=217,SNR=41						
CLCO	**Concord Point,**	**5.61**	**237**		**Pn**	**20 56 36.1**	**-0.9**
AU22	**Augustine Moun**	**5.66**	**51**		**Pn**	**20 56 38.2**	**+0.7**
L16K	**Owhat River**	**5.75**	**12**		**Pn**	**20 56 39.2**	**+0.5**
L16K	**Owhat River**	**5.75**	**12**	P	**Pn**	**20 56 39.3**	**+0.6**
	baz=194,SNR=66						
O19K	**Port Alsworth**	**5.76**	**42**	P	**Pn**	**20 56 40.2**	**+1.3**
	baz=228						
Q20K	**Shuyak Island**	**5.77**	**60**	P	**Pn**	**20 56 39.1**	**+0.1**
	baz=248,SNR=35						
SYI	**Shuyak Island**	**5.77**	**61**	Pn	**Pn**	**20 56 38.6**	**-0.4**
M17K	**Holitna River**	**5.80**	**22**		**Pn**	**20 56 40.5**	**+1.1**
M17K	**Holitna River**	**5.80**	**22**	P	**Pn**	**20 56 39.6**	**+0.3**
	baz=206						
P19K	**Oil Pt**	**5.86**	**49**	Pn	**Pn**	**20 56 41.5**	**+1.2**
P19K	**Oil Pt**	**5.86**	**49**	P	**Pn**	**20 56 41.1**	**+0.8**
	baz=236,SNR=11						
SVW2	**Sparrevohn**	**6.01**	**31**	P	**Pn**	**20 56 43.2**	**+1.1**
ILSW	**Iliamna Southw**	**6.09**	**47**		**Pn**	**20 56 44.2**	**+1.0**
N19K	**Bonanza Creek**	**6.13**	**37**		**Pn**	**20 56 45.5**	**+1.7**
N19K	**Bonanza Creek**	**6.13**	**37**	P	**Pn**	**20 56 45.3**	**+1.5**
	baz=223,SNR=30						
IVE	**Iliamna Volcan**	**6.16**	**47**		**Pn**	**20 56 45.1**	**+0.9**
K15K	**Wolf Creek Mou**	**6.19**	**2**		**Pn**	**20 56 45.1**	**+0.7**
K15K	**Wolf Creek Mou**	**6.19**	**2**	P	**Pn**	**20 56 44.9**	**+0.5**
	baz=182,SNR=39						
M18K	**Stony River**	**6.26**	**28**	P	**Pn**	**20 56 47.0**	**+1.6**
	baz=213,SNR=79						
L17K	**Donlin**	**6.32**	**16**		**Pn**	**20 56 46.7**	**+0.5**
L17K	**Donlin**	**6.32**	**16**	P	**Pn**	**20 56 46.6**	**+0.5**
	baz=199,SNR=44						
O20K	**Slope Mountain**	**6.36**	**48**		**Pn**	**20 56 48.0**	**+1.3**
O20K	**Slope Mountain**	**6.36**	**48**	P	**Pn**	**20 56 48.3**	**+1.6**
	baz=235						
RDSO	**Redoubt South**	**6.53**	**45**		**Pn**	**20 56 50.3**	**+1.3**
RSO	**Redoubt South**	**6.53**	**45**		**Pn**	**20 56 50.6**	**+1.5**
HOM	**Homer**	**6.56**	**53**	Pn	**Pn**	**20 56 50.1**	**+0.8**
HOM	**Homer**	**6.56**	**53**	P	**Pn**	**20 56 49.4**	**+0.2**
	baz=241						
CNPM	**China Poot**	**6.69**	**55**		**Pn**	**20 56 50.8**	**-0.1**
J14K	**Nanvaranak Lak**	**6.69**	**354**		**Pn**	**20 56 51.3**	**+0.5**
J14K	**Nanvaranak Lak**	**6.69**	**354**	P	**Pn**	**20 56 51.5**	**+0.6**
	baz=173,SNR=25						
L18K	**Granite Mounta**	**6.69**	**22**		**Pn**	**20 56 52.1**	**+1.1**
L18K	**Granite Mounta**	**6.69**	**22**	P	**Pn**	**20 56 52.1**	**+1.1**
	baz=206						
K17K	**Iditarod**	**6.87**	**14**	Pn	**Pn**	**20 56 53.3**	**0.0**
K17K	**Iditarod**	**6.87**	**14**	P	**Pn**	**20 56 54.0**	**+0.7**
	baz=197,SNR=42						
BRLK	**Bradley Lake**	**6.95**	**54**	Pn	**Pn**	**20 56 53.6**	**-0.8**
M19K	**Big River Lodg**	**7.00**	**31**		**Pn**	**20 56 56.9**	**+1.9**
M19K	**Big River Lodg**	**7.00**	**31**	P	**Pn**	**20 56 56.8**	**+1.9**
	baz=217						
BRSE	**Bradley Lake S**	**7.01**	**54**		**Pn**	**20 56 54.1**	**-1.0**
BRSE	**Bradley Lake S**	**7.01**	**54**	P	**Pn**	**20 56 54.7**	**-0.5**
	baz=243,SNR=16						
L19K	**White Mountain**	**7.09**	**28**	Pn	**Pn**	**20 56 56.5**	**+0.2**
L19K	**White Mountain**	**7.09**	**28**	P	**Pn**	**20 56 57.9**	**+1.6**
	baz=214,SNR=99						
N20K	**Mount Spurr**	**7.21**	**41**	P	**Pn**	**20 56 59.6**	**+1.9**
	baz=229,SNR=32						
J16K	**Anvik River**	**7.21**	**5**		**Pn**	**20 56 58.4**	**+0.7**
J16K	**Anvik River**	**7.21**	**5**	P	**Pn**	**20 56 58.5**	**+0.7**
	baz=186						
CAPN	**Captain Cook N**	**7.35**	**46**		**Pn**	**20 57 01.3**	**+1.8**
CAPN	**Captain Cook N**	**7.35**	**46**	P	**Pn**	**20 57 02.0**	**+2.4**
	baz=235						
M20K	**Styx River**	**7.36**	**35**		**Pn**	**20 57 02.6**	**+2.8**
M20K	**Styx River**	**7.36**	**35**	P	**Pn**	**20 57 02.4**	**+2.6**
	baz=222						
TTA	**Tatalina**	**7.47**	**22**	Pn	**Pn**	**20 57 02.4**	**+1.2**
TTA	**Tatalina**	**7.47**	**22**	P	**Pn**	**20 57 02.4**	**+1.2**
TTA	**Tatalina**	**7.47**	**22**	P	**Pn**	**20 57 02.6**	**+1.4**
	baz=206,SNR=16						
TTA	**Tatalina**	**7.47**	**22**	P	**Pn**	**20 57 02.4**	**+1.2**
SLKM	**Skilak Lake**	**7.60**	**50**		**Pn**	**20 57 02.2**	**-0.6**
L20K	**Farewell, AK**	**7.60**	**30**		**Pn**	**20 57 04.8**	**+1.9**
L20K	**Farewell, AK**	**7.60**	**30**	P	**Pn**	**20 57 04.6**	**+1.7**
	baz=216						
SEW	**Seward**	**7.75**	**54**	P	**Pn**	**20 57 04.4**	**-0.3**
	baz=244,SNR=39						
O22K	**Cooper Landing**	**7.80**	**51**	Pn	**Pn**	**20 57 05.3**	**-0.2**
O22K	**Cooper Landing**	**7.80**	**51**	P	**Pn**	**20 57 05.2**	**-0.2**
	baz=241,SNR=52						
I17K	**Unalakleet**	**7.81**	**4**		**Pn**	**20 57 06.1**	**+0.6**
I17K	**Unalakleet**	**7.81**	**4**	P	**Pn**	**20 57 06.2**	**+0.7**
	baz=185,SNR=18						
J18K	**Innoko River**	**7.83**	**18**	P	**Pn**	**20 57 07.3**	**+1.5**
	baz=202,SNR=76						
SUA	**Susitna One**	**7.92**	**43**	Pn	**Pn**	**20 57 07.7**	**+0.5**
SUA	**Susitna One**	**7.92**	**43**	P	**Pn**	**20 57 07.4**	**+0.2**
	baz=232,SNR=29						
FIS	**Fire Island**	**7.94**	**46**		**Pn**	**20 57 07.9**	**+0.7**
SKT	**Skwentna**	**7.97**	**38**	Pn	**Pn**	**20 57 09.4**	**+1.7**
SKT	**Skwentna**	**7.97**	**38**	P	**Pn**	**20 57 08.9**	**+1.3**
	baz=227,SNR=13						
RC01	**Rabbit Creek A**	**8.11**	**47**	Pn	**Pn**	**20 57 08.7**	**-0.8**
RC01	**Rabbit Creek A**	**8.11**	**47**	P	**Pn**	**20 57 08.8**	**-0.6**
	baz=237,SNR=27						
ATKA	**Atka Island**	**8.16**	**246**	Pn	**Pn**	**20 57 09.6**	**-0.6**
ATKA	**Atka Island**	**8.16**	**246**	P	**Pn**	**20 57 09.8**	**-0.4**
K20K	**Telida**	**8.28**	**26**		**Pn**	**20 57 13.9**	**+2.2**
K20K	**Telida**	**8.28**	**26**	P	**Pn**	**20 57 13.7**	**+2.0**
	baz=212						
M22K	**Willow**	**8.33**	**43**	P	**Pn**	**20 57 13.2**	**+0.9**
	baz=232						
PPLA	**Purkeypile**	**8.42**	**32**		**Pn**	**20 57 16.0**	**+2.4**
PPLA	**Purkeypile**	**8.42**	**32**	P	**Pn**	**20 57 16.2**	**+2.5**
	baz=220,SNR=25						
J19K	**Poorman**	**8.51**	**19**		**Pn**	**20 57 16.5**	**+1.9**
J19K	**Poorman**	**8.51**	**19**	P	**Pn**	**20 57 16.8**	**+2.1**
	baz=205,SNR=43						
H16K	**Elim**	**8.54**	**359**		**Pn**	**20 57 15.9**	**+0.8**
H16K	**Elim**	**8.54**	**359**	P	**Pn**	**20 57 15.6**	**+0.5**
	baz=179,SNR=9.4						
ANM	**Nome**	**8.62**	**350**	Pn	**Pn**	**20 57 17.7**	**+1.5**
ANM	**Nome**	**8.62**	**350**	P	**Pn**	**20 57 17.8**	**+1.7**
	baz=167,SNR=16						
ANM	**Nome**	**8.62**	**350**	P	**Pn**	**20 57 17.7**	**+1.5**
PMR	**Palmer**	**8.62**	**45**	Pn	**Pn**	**20 57 15.2**	**-1.0**
PMR	**Palmer**	**8.62**	**45**	P	**Pn**	**20 57 16.3**	**+0.1**
PMR	**Palmer**	**8.62**	**45**	P	**Pn**	**20 57 16.3**	**+0.1**
	baz=236						
PMR	**Palmer**	**8.62**	**45**	P	**Pn**	**20 57 15.2**	**-1.0**
P23K	**Montague Islan**	**8.66**	**57**	P	**Pn**	**20 57 16.1**	**-0.5**
	baz=249,SNR=11						
CUT	**Chulitna**	**8.69**	**39**	Pn	**Pn**	**20 57 17.7**	**+0.6**
CUT	**Chulitna**	**8.69**	**39**	P	**Pn**	**20 57 17.1**	**0.0**
	baz=228,SNR=9.1						
KNK	**Knik Glacier**	**8.80**	**47**		**Pn**	**20 57 16.9**	**-1.6**
KNK	**Knik Glacier**	**8.80**	**47**	P	**Pn**	**20 57 17.3**	**-1.3**
	baz=238,SNR=19						
GHO	**Glory Hole Cre**	**8.81**	**45**		**Pn**	**20 57 16.4**	**-2.3**
CAST	**Castle Rocks**	**8.85**	**30**	Pn	**Pn**	**20 57 21.4**	**+2.2**
CAST	**Castle Rocks**	**8.85**	**30**	P	**Pn**	**20 57 20.9**	**+1.7**
	baz=218,SNR=52						
H17K	**Granite Mounta**	**8.90**	**6**	P	**Pn**	**20 57 21.3**	**+1.6**
	baz=188,SNR=40						
G15K	**Niukluk**	**8.95**	**354**		**Pn**	**20 57 21.2**	**+0.8**
G15K	**Niukluk**	**8.95**	**354**	P	**Pn**	**20 57 21.7**	**+1.3**
	baz=173						
J20K	**Nowinta River**	**8.97**	**23**		**Pn**	**20 57 22.4**	**+1.8**
J20K	**Nowinta River**	**8.97**	**23**	P	**Pn**	**20 57 22.5**	**+1.8**
	baz=209,SNR=37						
Q23K	**Middleton Isla**	**8.99**	**62**	Pn	**Pn**	**20 57 20.2**	**-0.8**
Q23K	**Middleton Isla**	**8.99**	**62**	P	**Pn**	**20 57 20.6**	**-0.5**
	baz=255						
MID	**Middleton Isla**	**9.00**	**62**	Pn	**Pn**	**20 57 20.1**	**-1.0**
MID	**Middleton Isla**	**9.00**	**62**	P	**Pn**	**20 57 20.1**	**-1.0**
GCSA	**Galena City Sc**	**9.01**	**14**	P	**Pn**	**20 57 23.0**	**+1.9**
	baz=198,SNR=55						
SML	**Sawmill**	**9.06**	**45**	Pn	**Pn**	**20 57 20.8**	**-1.1**
SML	**Sawmill**	**9.06**	**45**	P	**Pn**	**20 57 21.5**	**-0.5**
	baz=237,SNR=6.2						
GAMB	**Gambell**	**9.07**	**332**	P	**Pn**	**20 57 22.1**	**+0.1**
	baz=144						
GLI	**Glacier Island**	**9.14**	**52**		**Pn**	**20 57 20.9**	**-2.0**
GLI	**Glacier Island**	**9.14**	**52**	P	**Pn**	**20 57 21.1**	**-1.8**
	baz=245						
CHUM	**Lake Minchumin**	**9.16**	**28**		**Pn**	**20 57 25.0**	**+1.9**
CHUM	**Lake Minchumin**	**9.16**	**28**	P	**Pn**	**20 57 25.2**	**+2.1**
	baz=216,SNR=25						
HIN	**Hinchinbrook I**	**9.22**	**56**		**Pn**	**20 57 23.0**	**-1.0**
H18K	**Honhosa River**	**9.23**	**10**	Pn	**Pn**	**20 57 25.2**	**+1.2**
H18K	**Honhosa River**	**9.23**	**10**	P	**Pn**	**20 57 25.7**	**+1.7**
	baz=193						
G16K	**Koyuk River**	**9.30**	**359**		**Pn**	**20 57 26.2**	**+1.3**
G16K	**Koyuk River**	**9.30**	**359**	P	**Pn**	**20 57 26.5**	**+1.6**
	baz=179,SNR=11						
M23K	**Glacier View**	**9.30**	**47**	P	**Pn**	**20 57 24.0**	**-1.0**
	baz=238,SNR=52						
FID	**Port Fidalgo**	**9.36**	**54**		**Pn**	**20 57 23.6**	**-2.2**
TRF	**Thorofare Moun**	**9.41**	**34**		**Pn**	**20 57 27.1**	**+0.5**
TRF	**Thorofare Moun**	**9.41**	**34**	P	**Pn**	**20 57 27.3**	**+0.7**
	baz=224,SNR=15						
G17K	**Kiwalik Mounta**	**9.43**	**3**		**Pn**	**20 57 28.8**	**+2.2**
G17K	**Kiwalik Mounta**	**9.43**	**3**	P	**Pn**	**20 57 28.1**	**+1.5**
	baz=185,SNR=15						
I20K	**Naaghedeneel**	**9.45**	**20**	Pn	**Pn**	**20 57 25.7**	**-1.2**
I20K	**Naaghedeneel**	**9.45**	**20**	P	**Pn**	**20 57 28.8**	**+1.9**
	baz=206						
SCM	**Sheep Creek Mo**	**9.48**	**47**		**Pn**	**20 57 25.6**	**-1.9**
SCM	**Sheep Creek Mo**	**9.48**	**47**	P	**Pn**	**20 57 26.8**	**-0.7**
	baz=239,SNR=31						
SCM	**

baz=234
COLA College 11.18 33 P Pn 20 57 50.6 +1.4
COLA College 11.18 33 P Pn 20 57 49.0 -0.2
baz=225
MESA MESA 11.33 61 P Pn 20 57 51.8 +0.3
baz=257,SNR=5.8
F20K Avaraart Lake 11.35 13 Pn Pn 20 57 53.1 +1.7
F20K Avaraart Lake 11.35 13 P Pn 20 57 52.0 +0.6
baz=198
E18K Tukpahlearik C 11.35 3 Pn Pn 20 57 52.5 +1.0
E18K Tukpahlearik C 11.35 3 P Pn 20 57 53.6 +2.1
baz=184
IL31 11.40 34 Pn Pn 20 57 50.3 -1.8
ILAR Eielson Array 11.40 34 Pn Pn 20 57 50.7 -1.5
ILAR Eielson Array 11.40 34 P Pn 20 57 50.7 -1.5
ILAR Eielson Array 11.40 34 P Pn 20 57 49.8 -2.4
comp=E,2.7nm,0.7s,baz=227,slow=12,SNR=26
ILAR S Sn 20 59 52.2 -6.8
comp=E,1.6nm,0.5s,baz=3.2,slow=25,SNR=2.1
POKR Poker Plat Res 11.47 32 Pn 20 57 52.1 -1.0
POKR Poker Plat Res 11.47 32 P Pn 20 57 52.4 -0.8
baz=225
GRNC Granite Creek 11.55 58 Pn 20 57 54.9 +0.5
E19K Redstone River 11.59 9 Pn Pn 20 57 56.5 +2.0
E19K Redstone River 11.59 9 P Pn 20 57 56.7 +2.2
baz=193
D17K Noatak River 11.62 358 P Pn 20 57 57.2 +2.3
baz=177
L26K Log Cabin Wild 11.68 46 P Pn 20 57 55.9 +0.1
baz=242,SNR=25
J25K Salcha River, 11.80 37 Pn Pn 20 57 55.3 -2.1
J25K Salcha River, 11.80 37 P Pn 20 57 55.2 -2.1
baz=231
CTG Chitna Glacier 11.81 57 P Pn 20 57 57.9 +0.3
baz=254,SNR=15
CTGM Chitina Glacie 11.81 57 Pn Pn 20 57 57.8 +0.2
F21K Alatna River 11.83 16 P Pn 20 57 59.3 +1.7
baz=204
H24K Noodor Dome 11.87 29 Pn Pn 20 57 57.0 -1.2
H24K Noodor Dome 11.87 29 P Pn 20 57 57.7 -0.5
baz=221
G22K Bettles 11.91 20 P Pn 20 58 00.2 +1.6
baz=209
SCRK Sand Creek 11.92 41 P Pn 20 57 57.2 -1.7
baz=237,SNR=11
M27K Edge Creek, AK 12.01 50 Pn Pn 20 58 00.2 0.0
M27K Edge Creek, AK 12.01 50 P Pn 20 58 00.7 +0.6
baz=247
G23K Bananza Creek 12.04 23 Pn Pn 20 58 01.7 +1.4
G23K Bananza Creek 12.04 23 P Pn 20 58 02.3 +2.0
baz=214
PINM Pinnacle 12.15 62 P Pn 20 58 02.5 +0.6
baz=260
C16K Lisburne Hills 12.29 354 Pn Pn 20 58 05.2 +1.8
C16K Lisburne Hills 12.29 354 P P 20 58 05.3 -2.6
baz=171
L27K Beaver Creek, 12.32 47 Pn Pn 20 58 01.9 -2.0
L27K Beaver Creek, 12.32 47 P Pn 20 58 03.4 -0.5
baz=244,SNR=18
PRP Porcupine Dome 12.33 34 P Pn 20 58 03.8 -0.4
baz=228
J26L Joseph Creek 12.36 40 Pn Pn 20 58 03.5 -0.9
J26L Joseph Creek 12.36 40 P Pn 20 58 05.8 +1.3
baz=236,SNR=7.0
C17K DeLong Mountai 12.40 358 P Pn 20 58 06.6 +1.7
baz=177,SNR=10
COLD Coldfoot 12.43 22 P Pn 20 58 06.8 +1.5
baz=212,SNR=17
YUK3 Moose Creek 12.44 54 P Pn 20 58 06.2 +0.5
baz=252,SNR=27
E20K Nigu River 12.46 10 P P 20 58 07.6 -2.4
baz=195
BVCY Beaver Creek 12.47 51 P Pn 20 58 06.3 +0.4
baz=249,SNR=13
PNL Peninsula 12.52 64 P Pn 20 58 06.7 +0.2
PNL Peninsula 12.52 64 P Pn 20 58 06.6 +0.2
baz=263
D19K Kuna River 12.54 7 Pn Pn 20 58 06.9 +0.2
D19K Kuna River 12.54 7 P P 20 58 08.5 -2.2
baz=190
C18K Utukok River 12.57 1 Pn Pn 20 58 08.6 +1.5
C18K Utukok River 12.57 1 P P 20 58 09.1 -2.0
baz=182
YUK8 Steele Glacier 12.63 57 P Pn 20 58 09.2 +1.1
baz=255,SNR=16
K27K Chicken 12.66 43 Pn Pn 20 58 07.8 -0.4
K27K Chicken 12.66 43 P Pn 20 58 09.1 +0.9
baz=240
D20K Etivluk River 12.87 9 P P 20 58 13.0 -1.4
baz=194
I26K Coal Creek Min 12.97 37 Pn Pn 20 58 09.8 -2.3
I26K Coal Creek Min 12.97 37 P Pn 20 58 10.1 -2.0
baz=233
O29M Mount Kennedy 13.01 62 Pn Pn 20 58 12.9 +0.2
O29M Mount Kennedy 13.01 62 P Pn 20 58 13.4 +0.7
baz=261
G25K Bearman Lake 13.05 29 P Pn 20 58 14.1 +1.1
baz=223
C19K Lookout Ridge 13.07 4 P P 20 58 15.1 -1.5
baz=186
YUK4 Talbot Arm 13.17 57 P P 20 58 16.6 -1.4
baz=256,SNR=11
F24K Squaw Lake 13.18 24 Pn Pn 20 58 15.5 +0.8
F24K Squaw Lake 13.18 24 P P 20 58 16.3 -1.6
baz=217
YUK6 Outpost Mounta 13.22 59 P Pn 20 58 16.2 +0.7
baz=259,SNR=11
E23K Chandalar 13.26 21 P P 20 58 17.7 -1.1
baz=211,SNR=9.9
B18K Kokolik River 13.29 0 P P 20 58 18.3 -0.7
baz=180
P29M Windy Craggy 13.35 65 P P 20 58 18.9 -1.0
P29M Windy Craggy 13.35 65 P Pn 20 58 18.3 +1.3
baz=265
EGAK Eagle 13.38 41 P P 20 58 18.9 -1.2
baz=239,SNR=13
C21K Knifeblade Rid 13.47 11 P P 20 58 20.6 -0.5
baz=198
D22K Ayikyak River 13.48 15 P P 20 58 20.6 -0.6
baz=203,SNR=14
M29M Somme Creek 13.54 53 Pn Pn 20 58 19.1 -0.2
M29M Somme Creek 13.54 53 P Pn 20 58 19.9 +0.6
baz=252
HYT Haines Junctio 13.61 60 P Pn 20 58 20.6 +0.3
baz=260,SNR=18
I27K Kandik River 13.67 38 P P 20 58 21.9 -1.4
baz=235
DAWY Dawson 13.73 45 P Pn 20 58 22.0 +0.4
baz=245,SNR=27
F25K Christian Rive 13.78 27 P Pn 20 58 22.4 +0.1
baz=221
P30M Million Dollar 13.79 63 P Pn 20 58 22.7 +0.3
baz=264,SNR=6.8
G26K Porcupine Rive 13.82 31 P Pn 20 58 23.0 +0.3
baz=227
D23K Nanushuk River 13.86 17 P P 20 58 24.4 -1.0
baz=207
L29M L29M 13.89 50 P Pn 20 58 23.6 -0.1
baz=250
N30M Aishikik Lake 13.93 57 Pn Pn 20 58 24.6 +0.5
N30M Aishikik Lake 13.93 57 P Pn 20 58 24.8 +0.7
baz=258
B21K Ikpikpuk River 13.94 11 P 20 58 26.3 +0.1
B21K Ikpikpuk River 13.94 11 P P 20 58 25.8 -0.4
baz=197,SNR=14
PLBC Pleasant Camp 14.04 66 P Pn 20 58 26.5 +1.1
baz=267
H27K Steamboat Moun 14.06 36 P P 20 58 26.5 -1.2
baz=233
B20K Meade River 14.10 7 P P 20 58 28.1 +0.1
baz=191,SNR=12
S31K Pelican 14.12 72 P 20 58 30.4 +2.0
S31K Pelican 14.12 72 P P 20 58 27.7 -0.6
baz=273
I28M Miner Creek 14.17 40 Pn Pn 20 58 24.6 -2.6
I28M Miner Creek 14.17 40 P P 20 58 28.0 -1.0
baz=239
E25K Arctic Village 14.20 26 P P 20 58 28.4 -0.8
baz=220,SNR=7.2
F26K Sheenjek River 14.25 28 P P 20 58 28.6 -1.2
baz=224
O30N Mendenhall 14.29 60 P 20 58 29.8 -0.5
O30N Mendenhall 14.29 60 P Pn 20 58 29.4 +0.8
baz=262,SNR=12
M30M Minto, Yukon 14.32 53 P Pn 20 58 29.1 +0.1
baz=254,SNR=6.6
D24K Happy Valley 14.35 19 P P 20 58 31.2 +0.4
baz=211
J29N Klondike Camp 14.36 45 P P 20 58 30.9 -0.2
J29N Klondike Camp 14.36 45 P P 20 58 31.3 +0.3
baz=245,SNR=23
K29M Barlow Dome 14.40 48 P 20 58 31.2 -0.4
K29M Barlow Dome 14.40 48 P P 20 58 31.9 +0.3
baz=248
SKAG Skagway 14.57 66 P P 20 58 33.4 +0.1
baz=268,SNR=6.6
C23K Itkillik River 14.65 16 P 20 58 34.0 -0.2
C23K Itkillik River 14.65 16 P P 20 58 35.1 +1.0
baz=206
SIT Sitka 14.70 75 P P 20 58 34.7 0.0
baz=277
C24K Franklin Bluff 14.86 18 P P 20 58 37.7 +1.3
baz=210,SNR=10
WHY Whitehorse 14.87 61 P P 20 58 37.1 +0.4
baz=264,SNR=9.8
D25K Kavik River 14.97 22 P P 20 58 38.8 +1.0
D25K IAmb IAmb 20 59 19.2
comp=Z,9.2nm,0.8s
D25K Kavik River 14.97 22 P P 20 58 38.4 +0.7
baz=216
MAYO Mayo, Yukon 15.01 49 P P 20 58 40.0 +1.9
baz=252,SNR=6.7
R32K Eaglecrest 15.01 70 P P 20 58 39.1 +0.9
baz=273
S32K Killisnoo 15.05 73 P P 20 58 39.1 +0.5
baz=276
JIS Juneau Island 15.08 70 P P 20 58 40.5 +1.5
JIS IAmb IAmb 20 58 56.2
comp=Z,38nm,1.0s
H29M Whitestone 15.12 39 Pn Pn 20 58 37.7 -1.0
H29M IAmb IAmb 20 58 43.9
comp=Z,21nm,0.7s
H29M Whitestone 15.12 39 P P 20 58 39.6 +0.2
baz=239
J30M Hart River 15.16 46 IAmb IAmb 20 58 41.5
comp=Z,14nm,0.7s
J30M Hart River 15.16 46 P P 20 58 40.1 +0.1
baz=248
M31M Drury Creek, Y 15.33 55 P P 20 58 43.2 +1.5
M31M Drury Creek, Y 15.33 55 P P 20 58 42.5 +0.8
baz=259,SNR=24
P32M Atlin 15.39 65 IAmb IAmb 20 58 52.9
comp=Z,16nm,0.8s
P32M Atlin 15.39 65 P P 20 58 42.9 +0.5
baz=269
I30M Mount Dempster 15.39 43 IAmb IAmb 20 58 44.9
comp=Z,17nm,0.5s
I30M Mount Dempster 15.39 43 P P 20 58 42.8 +0.3
baz=246,SNR=20
F28M Old Crow 15.42 33 P Pn 20 58 41.5 -0.8
baz=232
A21K Barrow 15.43 7 P P 20 58 42.9 +0.3
baz=191,SNR=12
C26K Camden Bay 15.76 22 P P 20 58 48.7 +2.3
baz=217
EPYK Eagle Plains 15.78 39 IAmb IAmb 20 58 51.7
comp=Z,30nm,0.8s
EPYK Eagle Plains 15.78 39 P P 20 58 48.8 +2.1
baz=241,SNR=5.2
N32M Quiet Lake 15.79 60 P Pn 20 58 48.7 +1.8
baz=264
FARO Faro, Yukon 15.81 56 P Pn 20 58 48.7 +1.5
baz=260,SNR=48
P33M Teslin, Yukon 15.86 63 IAmb IAmb 20 58 54.0
comp=Z,27nm,0.7s
P33M Teslin, Yukon 15.86 63 P Pn 20 58 49.2 +1.4
baz=268,SNR=14
T33K Petersburg 16.02 75 P Pn 20 58 50.7 +1.1
baz=279
U33K Whale Pass 16.06 78 P Pn 20 58 51.6 +1.5
baz=282
Q32M Nakina River 16.15 68 P Pn 20 58 52.4 +1.0
baz=272
CRAG Craig 16.21 80 P Pn 20 58 52.7 +0.8
baz=284
G30M tAoh Zraii Nji 16.25 38 P Pn 20 58 52.1 -0.2
baz=240
WRAK Wrangell Islan 16.42 77 P P 20 58 53.1 -0.7
baz=281
E29M Blow River 16.48 32 P Pn 20 58 55.5 +0.4
baz=234
F30M Barrier River 16.71 36 P Pn 20 58 57.5 -0.4
baz=239,SNR=12
R33M Jennings River 16.80 66 IAmb IAmb 20 59 03.2
comp=Z,32nm,1.0s
R33M Jennings River 16.80 66 P P 20 58 58.7 +0.7
baz=272
MMPY Sheldon Lake, 16.83 55 IAmb IAmb 20 59 03.7
comp=Z,32nm,0.9s
MMPY Sheldon Lake, 16.83 55 P Pn 20 59 00.2 +0.8
baz=261,SNR=14
S34M Telegraph Cree 16.84 71 IAmb IAmb 20 59 16.0
comp=Z,23nm,1.1s
S34M Telegraph Cree 16.84 71 P P 20 58 58.8 +0.5
baz=277
G31M Satah River 16.90 39 P P 20 58 58.8 -0.1
G31M IAmb IAmb 20 59 03.8
comp=Z,23nm,1.0s
G31M Satah River 16.90 39 P P 20 58 58.6 -0.3
baz=243,SNR=9.5
V35K Ketchikan 17.08 80 P P 20 58 59.7 -1.2
baz=285
F31M Tsiigehtchic 17.32 38 P P 20 59 02.8 -0.7
F31M IAmb IAmb 20 59 37.9
comp=Z,33nm,1.1s
F31M Tsiigehtchic 17.32 38 P P 20 59 03.7 +0.2
baz=243
DLBC Dease Lake 17.36 69 IAmb IAmb 20 59 08.8
comp=Z,19nm,0.8s
DLBC Dease Lake 17.36 69 P Pn 20 59 05.3 -0.3
baz=276,SNR=6.1
DLBC Dease Lake 17.36 69 P P 20 59 04.2 +0.1
comp=Z,18nm,0.9s,baz=260,slow=8.5,SNR=21
DLBC S S 21 02 16.4 +1.9
comp=Z,1.8nm,0.7s,baz=114,slow=20,SNR=1.5
T35M Bob Quinn 17.45 74 P Pn 20 59 07.3 +0.6
baz=280
INK Inuvik 17.80 35 P P 20 59 08.2 -0.5
INK IAmb IAmb 20 59 43.1
comp=Z,30nm,0.9s
INK Inuvik 17.80 35 P P 20 59 09.3 +0.6
baz=241,SNR=11
INK Inuvik 17.80 35 P P 20 59 08.2 -0.5
INK pmax pmax
comp=Z,30nm,1.0s
INK Inuvik 17.80 35 P P 20 59 07.9 -0.8
comp=Z,16nm,0.8s,baz=200,slow=13,SNR=21
INK S S 21 02 16.6 -6.3
comp=Z,1.7nm,0.7s,baz=221,slow=17,SNR=1.5
WTLY Watson Lake, Y 17.87 63 P Pn 20 59 11.7 +0.1
baz=271
TGTN Hyland Airport 18.13 59 P Pn 20 59 14.9 +0.2
baz=268,SNR=12
BILL Bilibino 18.76 322 eP P 20 59 20.5 -1.4
BILL pmax pmax
comp=Z,36nm,1.3s
KOTAN Kotaneelee Air 20.24 63 P P 20 59 37.1 +2.0
baz=275
WRGLY Wrigley 20.44 54 P P 20 59 38.5 +1.3
baz=267
FLDN Fort Liard 20.52 62 P P 20 59 38.3 +0.3
baz=275
C36M Paulatuk 21.36 37 P P 20 59 46.5 -0.3
C36M IAmb IAmb 21 00 20.5
comp=Z,12nm,0.8s
C36M Paulatuk 21.36 37 P P 20 59 46.5 -0.3
baz=251
A36M Sachs Harbour 22.03 30 P P 20 59 53.6 0.0
A36M IAmb IAmb 21 00 31.0
comp=Z,28nm,0.9s
A36M Sachs Harbour 22.03 30 P P 20 59 53.5 -0.1
baz=243,SNR=8.0
PEA0B Petropavlovsk- 23.29 280 P P 21 00 05.0 -0.3
PEA0B IAmb IAmb 21 00 16.7
comp=Z,30nm,1.3s
PEA0B Petropavlovsk- 23.29 280 eP P 21 00 05.0 -0.3
PETK Petropavlovsk- 23.29 280 P P 21 00 04.4 -0.9
comp=Z,5.1nm,0.7s,baz=74,slow=13,SNR=15
comp=Z,5.1nm,0.7s
SEY Seymchan 23.66 305 ceP P 21 00 07.8 -0.7
SEY pmax pmax
comp=Z,26nm,0.8s
SEY Seymchan 23.66 305 P P 21 00 08.1 -0.4
comp=Z,21nm,0.7s,baz=96,slow=10.0,SNR=57
comp=Z,21nm,0.7s
HILA High Level 24.05 65 P P 21 00 12.9 +0.8
YKA Yellowknife Ar 24.53 55 P P 21 00 17.5 +1.1
comp=Z,1.5nm,0.6s,baz=281,slow=9.4,SNR=26
YKA pP pP 21 00 54.0 +0.1
comp=Z,5.1nm,0.8s,baz=275,slow=10,SNR=10
YKA PcP PcP 21 03 49.2 +0.4
comp=Z,0.7nm,0.6s,baz=285,slow=2.0,SNR=5.5
comp=Z,1.5nm,0.6s
MA2 Magadan 24.94 298 P P 21 00 20.6 +0.5
MA2 Magadan 24.94 298 ceP P 21 00 20.3 +0.1
MA2 pmax pmax
comp=Z,26nm,0.8s
MA2 Magadan 24.94 298 P P 21 00 20.0 -0.2
comp=Z,20nm,0.7s,baz=75,slow=13,SNR=13
comp=Z,20nm,0.7s
J01E Myrtle Point 27.47 102 P P 21 00 40.4 -2.6
NEW Newport 28.18 87 P P 21 00 49.8 +0.5
baz=303
NEW Newport 28.18 87 P P 21 00 51.4 +2.1
comp=Z,2.0nm,0.6s,baz=304,slow=16,SNR=4.1
comp=Z,2.0nm,0.6s
HOPS Hopland Field 30.84 107 P P 21 01 11.8 -1.0
RES Resolute Bay 31.06 28 P P 21 01 14.9 +0.6
RES Resolute Bay 31.06 28 P P 21 01 14.9 +0.6
RES pmax pmax
comp=Z,2.0nm,0.7s
RES Resolute Bay 31.06 28 P P 21 01 14.4 +0.1
comp=Z,1.9nm,0.6s,baz=258,slow=10,SNR=15
RES PcP PcP 21 04 05.6 +1.0
comp=Z,1.4nm,0.5s,baz=229,slow=4.1,SNR=5.2
comp=Z,1.9nm,0.6s
TIXI Tiksi 31.89 326 P P 21 01 22.6 +1.0
TIXI IAmb IAmb 21 01 23.5
comp=Z,14nm,0.9s
TIXI Tiksi 31.89 326 ceP P 21 01 21.6 +0.1
TIXI pmax pmax
comp=Z,16nm,1.0s
TIXI Tiksi 31.89 326 P P 21 01 21.3 -0.2
comp=Z,11nm,0.8s,baz=102,slow=8.9,SNR=7.4
comp=Z,11nm,0.8s
HLID Hailey 32.50 92 P P 21 01 29.5 +2.0
HLID Hailey 32.50 92 P P 21 01 29.3 +1.9
baz=310
PNTR Pine Nut 32.65 103 P P 21 01 32.0 +3.1
PNTR IAmb IAmb 21 01 38.7
comp=Z,8.7nm,0.8s
EUNU Eureka 32.84 18 P P 21 01 31.2 +1.3
YERR Yerington 32.92 103 P P 21 01 33.7 +2.6
YERR IAmb IAmb 21 01 34.6
comp=Z,4.0nm,0.5s
KVN Kaiserville 33.49 102 P P 21 01 38.4 +2.3
KVN Kaiserville 33.49 102 P P 21 01 38.4 +2.3
KVN pmax pmax
comp=Z,2.0nm,0.6s
RYN Ryan 33.56 103 P P 21 01 38.0 +1.3
YHH Holmes Hill 33.72 88 P P 21 01 41.0 +2.8
NVAR Mina Array Bea 33.83 103 P P 21 01 41.6 +2.5
comp=Z,1.8nm,0.5s,baz=306,slow=8.1,SNR=18
NVAR pP pP 21 02 20.5 +1.7
comp=Z,1.2nm,0.6s,baz=308,slow=8.3,SNR=3.6
comp=Z,1.8nm,0.5s
YAK Yakutsk 34.08 309 P P 21 01 40.3 -0.3
YAK Yakutsk 34.08 309 ceP P 21 01 39.5 -1.1
YAK pmax pmax
comp=Z,89nm,0.6s
MLAC Mammoth, Mammo 34.11 104 P P 21 01 40.0 -1.6
baz=317
H17A Grant Village 34.12 88 P P 21 01 44.7 +3.2
baz=309,SNR=9.7
RLMT Red Lodge 34.40 86 P P 21 01 42.2 -1.7
baz=308
YSS Yuzh-Sakhalins 34.68 279 eP P 21 01 46.6 +0.6
YSS pmax pmax
comp=Z,10.0nm,0.6s
FCC Fort Churchill 35.23 57 P P 21 01 52.1 +1.5
FCC IAmb IAmb 21 02 34.5
comp=Z,9.3nm,1.0s
FCC Fort Churchill 35.23 57 P P 21 01 52.1 +1.5
FCC pmax pmax
comp=Z,9.0nm,1.0s
VES Vestal, Richgr 35.30 107 P P 21 01 52.6 +1.1
baz=319
R11B Troy Canyon, C 35.37 100 P P 21 01 54.4 +2.1
R11B Troy Canyon, C 35.37 100 P P 21 01 55.0 +2.7
baz=315,SNR=6.7
GRAC Grapevine Rang 35.38 104 P P 21 01 51.4 -0.7
GRAC IAmb IAmb 21 01 55.3
comp=Z,8.5nm,0.6s
GRAC Grapevine Rang 35.38 104 P P 21 01 53.9 +1.7
baz=317
CWC Cottonwood Cre 35.40 105 P P 21 01 53.7 +1.2
baz=318
DUG Dugway, Tooele 35.62 95 P P 21 01 54.7 +0.4
baz=313
BW06 Boulder Array 35.73 89 P P 21 01 57.1 +1.8
baz=310
PD31 Pinedale Array 35.73 89 P P 21 01 56.4 +1.1
PDAR Pinedale Array 35.73 89 P P 21 01 57.8 +2.5
PDAR Pinedale Array 35.73 89 P P 21 01 57.6 +2.4
comp=Z,1.9nm,0.6s,baz=304,slow=3.0,SNR=27
comp=Z,1.9nm,0.6s
ISA Isabella, Lake 35.76 106 P P 21 01 57.0 +1.5
baz=319
WCT Wildcat Mounta 35.93 103 P P 21 01 58.0 +1.1
MPMC Manual Prospec 36.00 105 P P 21 01 58.8 +1.2
baz=318
LRMC Laurel Mtn Rad 36.33 106 P P 21 02 01.1 +0.8
baz=319
GWY Greenwater Val 36.35 104 P P 21 02 01.3 +0.8
GWY IAmb IAmb 21 02 04.0
comp=Z,6.3nm,0.9s
QSM Queen of Sheba 36.41 104 P P 21 02 03.1 +2.3
QSM IAmb IAmb 21 02 04.4
comp=Z,5.0nm,0.6s
BSUT Blindstream Ca 36.53 93 P P 21 02 03.3 +1.0
HMH Humu'ula Sheep 36.80 170 P P 21 02 03.6 -1.0
GSC Goldstone, Bar 36.93 105 P P 21 02 06.1 +0.7
baz=319
RRX Edison Barstow 37.15 106 P P 21 02 08.3 +1.2
baz=319
BFSC Mount Baldy Ra 37.28 107 P P 21 02 08.9 +0.5
baz=320
TUQ Turquoise Moun 37.31 104 P P 21 02 09.3 +0.6
baz=318
K22A Casper 37.50 87 P P 21 02 11.7 +1.5
baz=311
SRU San Rafael Swe 37.65 95 P P 21 02 12.6 +1.1
SRU IAmb IAmb 21 02 15.3
comp=Z,14nm,0.9s
SRU San Rafael Swe 37.65 95 P P 21 02 12.6 +1.1
SRU pmax pmax
comp=Z,14nm,0.9s
RSSD Black Hills 37.94 83 P P 21 02 14.1 +0.2
RSSD Black Hills 37.94 83 P P 21 02 15.1 +1.2
baz=309
RSSD Black Hills 37.94 83 P P 21 02 14.1 +0.2
RSSD pmax pmax
comp=Z,4.0nm,0.8s
GMRC Granite Mounta 37.94 104 P P 21 02 15.1 +1.1
baz=319
O20A White River Ci 38.22 91 P P 21 02 18.4 +2.2
O20A IAmb IAmb 21 02 19.3
comp=Z,14nm,0.7s
O20A White River Ci 38.22 91 P P 21 02 17.5 +1.2
baz=313,SNR=13
HMU Henry Mountain 38.35 96 P P 21 02 18.9 +1.5
HMU IAmb IAmb 21 02 21.0
comp=Z,15nm,0.7s
BELC Belle Mtn. Jos 38.35 106 P P 21 02 19.1 +1.8
baz=320
PFO Pinyon Flats O 38.40 106 P P 21 02 19.4 +1.7
baz=320
TPFO Pinon Flats 38.41 106 P P 21 02 18.8 +1.0
baz=320
ULM Lac du Bonnet 38.68 70 P P 21 02 21.3 +1.6
comp=Z,1.2nm,0.3s,baz=310,slow=7.2,SNR=5.0
ULM pP pP 21 03 02.3 +2.1
comp=Z,2.7nm,0.7s,baz=324,slow=9.1,SNR=3.7
comp=Z,1.2nm,0.3s
IRM Iron Mountain 38.69 105 P P 21 02 20.2 +0.1
baz=319,SNR=5.1
BC3 Big Chuckawall 38.91 105 P P 21 02 23.0 +1.1
baz=320
MONP2 Monument Peak 38.97 107 P P 21 02 23.3 +0.7
baz=320
PHWY Pilot Hill 38.99 88 P P 21 02 21.1 -1.6
ZEA Zeya 39.08 297 eP P 21 02 22.5 -0.5

ZEA pmax pmax
comp=Z,10.0nm,0.7s
KLR Kul'dur 39.32 289 *i* P **P 21 02 23.1 -1.9**
KLR pmax pmax
comp=Z,6.0nm,1.9s
KLR Kul'dur 39.32 289 P **P 21 02 24.2 -0.8**
comp=Z,1.7nm,0.6s,baz=62,slow=5.6,SNR=5.9
comp=Z,1.7nm,0.6s
YUH Yuha Desert 39.43 107 P **P 21 02 26.2 +0.1**
WUAZ Wupatki 39.75 99 P **P 21 02 29.5 +0.6**
baz=317
MVCO Mesa Verde 40.12 95 P **P 21 02 32.3 +0.3**
baz=316
NEEM North Greenlan 40.12 18 *i* P **P 21 02 32.1 +0.5**
NEEM IAmb IAmb 21 02 33.0
comp=Z,7.0nm,0.6s
HEH HeiHe 40.99 293 *eP* **P 21 02 36.5 -2.2**
HEH pmax pmax
comp=Z,6.0nm,0.8s
214A Organ Pipe Nat 41.63 104 P **P 21 02 45.0 +0.8**
baz=320
T25A Trinidad 42.45 92 P **P 21 02 51.1 +0.1**
baz=316
TUC Tucson 42.47 102 P **P 21 02 50.4 -0.7**
baz=320
ANMO Albuquerque 42.89 96 P **P 21 02 53.8 -0.7**
baz=317
BGNE Belgrade 42.99 82 P **P 21 02 55.0 0.0**
baz=312
BOD Bodaibo 43.00 309 *eP* **P 21 02 54.4 -0.5**
BOD pmax pmax
comp=Z,20nm,0.7s
Y22D IRIS PASSCAL I 43.28 97 P **P 21 02 57.8 +0.2**
baz=318
Y22F Passcal Instru 43.28 97 P **P 21 02 56.7 -0.9**
baz=318
CBKS Cedar Bluff 43.89 86 P **P 21 03 02.7 +0.4**
baz=314
121A Cookes Peak, D 43.95 99 P **P 21 03 03.7 +0.7**
baz=319
MJAR Matsushiro Arr 44.10 270 P **P 21 03 03.3 -0.6**
comp=Z,1.8nm,0.3s,baz=38,slow=6.4,SNR=15
comp=Z,1.8nm,0.3s
NRIK Noril'sk 45.15 332 P **P 21 03 12.5 +0.7**
NRIK IAmb IAmb 21 03 13.5
comp=Z,11nm,0.7s
NRIK Noril'sk 45.15 332 *ceP* **P 21 03 12.2 +0.5**
NRIK pmax pmax
comp=Z,10.0nm,0.6s
NRIK Noril'sk 45.15 332 P **P 21 03 12.2 +0.5**
comp=Z,8.5nm,0.6s,baz=64,slow=7.5,SNR=14
comp=Z,8.5nm,0.6s
MSTX Muleshoe 45.67 93 P **P 21 03 16.4 0.0**
baz=318
SUMG Summit 45.83 20 P **P 21 03 18.8 +1.3**
SUMG IAmb IAmb 21 03 21.0
comp=Z,26nm,1.4s
SUMG Summit 45.83 20 P **P 21 03 18.8 +1.3**
SUMG pmax pmax
comp=Z,26nm,1.4s
SUMG Summit 45.83 20 *i* P **P 21 03 18.0 +0.5**
SUMG IAmb IAmb 21 03 20.8
comp=Z,6.2nm,0.8s
MNTX Cornudas Mount 45.91 98 P **P 21 03 19.7 +1.4**
baz=319,SNR=5.1
SPITS Spitsbergen Ar 45.95 0 P **P 21 03 17.7 -0.2**
comp=Z,29nm,1.1s,baz=32,slow=3.3,SNR=5.6
comp=Z,29nm,1.1s
SFJD Kangerlussuaq 47.03 30 *i* P **P 21 03 26.9 +0.5**
WMOK Wichita Mounta 47.34 89 P **P 21 03 30.5 +1.2**
WMOK Wichita Mounta 47.34 89 P **P 21 03 30.2 +0.9**
baz=317,SNR=7.2
WMOK Wichita Mounta 47.34 89 P **P 21 03 30.5 +1.2**
WMOK pmax pmax
comp=Z,4.0nm,0.7s
TUL3 Leonard 48.16 86 P **P 21 03 35.0 -0.5**
baz=316
ICESG Greenland Ices 48.26 24 *i* P **P 21 03 35.4 -0.9**
ABTX Abilene, Hawle 48.42 92 P **P 21 03 38.7 +1.1**
baz=318,SNR=6.4
HDIL Hopedale 48.44 76 P **P 21 03 37.9 +0.2**
baz=314
TXAR Lajitas Array 48.67 98 P **P 21 03 41.7 +2.0**
comp=Z,2.5nm,0.7s,baz=301,slow=5.9,SNR=24
TXAR pP **pP 21 04 22.4 +0.3**
comp=Z,0.6nm,0.5s,baz=312,slow=5.3,SNR=2.6
comp=Z,2.5nm,0.7s
CCM Cathedral Cave 49.14 80 P **P 21 03 43.2 +0.2**
baz=316
KSRS Korea Array 49.18 279 P **P 21 03 43.5 +0.2**
comp=Z,1.0nm,0.6s,baz=38,slow=7.4,SNR=6.1
comp=Z,1.0nm,0.6s
SCHQ Schefferville 49.72 49 P **P 21 03 47.4 +0.3**
comp=Z,2.2nm,0.8s,baz=296,slow=8.4,SNR=6.6
comp=Z,2.2nm,0.8s
SFIN Lafayette 49.76 75 P **P 21 03 48.2 +0.5**
baz=315
JCT Junction City 49.95 94 P **P 21 03 49.0 -0.2**
baz=320
WHTX Lake Whitney, 50.12 91 P **P 21 03 50.6 +0.2**
baz=319
AAM Ann Arbor 50.25 71 P **P 21 03 51.3 0.0**
baz=314
MIAR Mount Ida 50.39 85 P **P 21 03 53.0 +0.6**
baz=318
SCO Scoresbysund 50.50 16 *i* P **P 21 03 53.3 +0.6**
XLT XiLinHaoTe 50.99 293 *eP* **P 21 03 57.8 +0.9**
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax
comp=Z,6μm,17.3s
ISOG Isortoq, Green 51.22 27 *i* P **P 21 03 58.5 +0.3**
WCI Wyandotte Cave 51.73 76 P **P 21 04 02.7 +0.3**
baz=316
833A Chaparral WMA, 51.82 95 P **P 21 04 03.2 0.0**
baz=321
ACSO Alum Creek Sta 52.08 72 P **P 21 04 04.6 -0.3**
baz=316
ERPA Erie 52.31 69 P **P 21 04 06.7 +0.1**
baz=316
WVT Waverly 52.41 79 P **P 21 04 06.9 -0.5**
baz=317
ULN Ulaanbaatar 52.67 302 *i* P **P 21 04 07.9 -1.4**
ULN pmax pmax
comp=Z,4.0nm,0.6s
OXF Oxford 52.73 82 P **P 21 04 08.7 -1.1**
baz=318
SONM Songino Array 53.00 303 P **P 21 04 11.9 +0.1**
comp=Z,6.1nm,0.7s,baz=45,slow=6.7,SNR=21
SONM pP **pP 21 04 54.3 -0.4**
comp=Z,1.9nm,0.8s,baz=48,slow=6.8,SNR=3.0
comp=Z,6.1nm,0.7s
BINY Binghamton 54.31 66 P **P 21 04 20.1 -1.1**
baz=316
ARCES ARCESS Array B 54.52 357 P **P 21 04 22.1 -0.1**
comp=Z,1.9nm,0.7s,baz=14,slow=7.2,SNR=10
ARCES PcP **PcP 21 05 23.1 +0.2**
comp=Z,4.1nm,0.9s,baz=10,slow=5.5,SNR=6.0
comp=Z,1.9nm,0.7s
LRAL Lakeview Retre 55.17 81 P **P 21 04 25.9 -1.5**
baz=319
PKME Peaks-Kenny Pk 55.40 59 P **P 21 04 27.8 -1.1**
baz=317
HHC Hu-ho-hao-te 55.50 293 *eP* **P 21 04 30.3 +0.5**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC LR LR
comp=N,2μm,17.9s
HHC LR LR
comp=Z,2μm,16.7s
BLA Blacksburg 55.65 73 P **P 21 04 31.1 +0.3**
baz=318
PAL Palisades 56.25 65 P **P 21 04 34.6 -0.3**
baz=318
HRV Adam Dziewonsk 56.32 63 P **P 21 04 34.4 -1.1**
baz=318
GOGA Godfrey 56.83 78 P **P 21 04 37.7 -1.4**
baz=319
ZALV Zalesovo Beam 57.45 320 P **P 21 04 42.9 -0.3**
comp=Z,1.1nm,0.5s,baz=20,slow=5.7,SNR=7.0
comp=Z,1.1nm,0.5s
NJ2 Nanjing 58.18 281 *eP* **P 21 04 48.5 -0.1**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
NHSC New Hope 58.86 76 P **P 21 04 51.9 -1.3**
baz=320
DGZ Jazzator, Alta 59.83 315 *i* P **P 21 04 59.2 -0.7**
DGZ pmax pmax

comp=Z,3.0nm,1.0s
KLMR Klimovskoe 62.13 348 *eP* **P 21 05 13.9 -1.0**
KLMR pmax pmax
comp=Z,22nm,1.2s
KURK Kurchatov 62.29 321 *ceP* **P 21 05 15.8 -0.4**
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURBB Kurchatov Arra 62.40 321 P **P 21 05 16.9 0.0**
comp=Z,2.2nm,0.8s,baz=24,slow=6.6,SNR=7.3
KURBB pP **pP 21 06 00.7 -0.6**
comp=Z,1.0nm,0.6s,baz=34,slow=7.4,SNR=2.5
comp=Z,2.2nm,0.8s
VALR Valaam 62.41 353 *i* P **P 21 05 15.1 -1.7**
VALR pmax pmax
comp=Z,24nm,1.1s
GTA Gaotai 62.47 300 *eP* **P 21 05 17.0 -0.7**
GTA pmax pmax
comp=Z,5.0nm,1.0s
FIA1 FINESS Array S 62.59 356 P **P 21 05 17.8 -0.2**
FINES FINESS Array B 62.59 356 P **P 21 05 17.7 -0.3**
FINES FINESS Array B 62.59 356 P **P 21 05 18.0 0.0**
comp=Z,12nm,0.7s,baz=14,slow=7.6,SNR=125
FINES pP **pP 21 06 03.7 +1.3**
comp=Z,3.0nm,0.8s,baz=35,slow=4.9,SNR=2.6
comp=Z,12nm,0.7s
NC204 NORSAR Array S 62.80 4 P **P 21 05 20.0 +0.6**
NC303 NORSAR Array S 62.87 4 P **P 21 05 20.1 +0.2**
NC303 IAmb IAmb 21 05 21.3
comp=Z,6.2nm,0.7s
KIRV Kirov 62.90 342 *ceP* **P 21 05 18.9 -1.1**
NC405 NORSAR Array S 62.99 3 P **P 21 05 21.4 +0.7**
BVAR Borovoye Array 63.00 328 P **P 21 05 21.4 +0.5**
comp=Z,12nm,0.7s,baz=38,slow=7.5,SNR=21
BVAR pP **pP 21 06 06.5 +1.2**
comp=Z,3.9nm,0.7s,baz=42,slow=6.9,SNR=3.8
comp=Z,12nm,0.7s
BRVK Borovoye 63.00 328 *ceP* **P 21 05 20.7 -0.2**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
NB201 NORSAR Array S 63.04 4 P **P 21 05 22.1 +1.1**
NB2 NORSAR Subarra 63.05 4 P **P 21 05 21.3 +0.2**
comp=Z,2.4nm,0.6s,baz=357,slow=6.5
NOA NORSAR Array B 63.05 4 P **P 21 05 21.4 +0.3**
comp=Z,3.9nm,0.7s,baz=357,slow=6.7,SNR=16
comp=Z,3.9nm,0.7s
LZH Lanzhou 63.06 295 *eP* **P 21 05 21.5 -0.2**
LZH pmax pmax
comp=Z,12nm,1.0s
ARU Arti 63.08 336 P **P 21 05 21.5 +0.2**
ARU Arti 63.08 336 *c i* P **P 21 05 20.7 -0.6**
ARU 21 07 40.5
ARU S **S 21 13 36.9 +0.7**
ARU pmax pmax
comp=Z,13nm,0.7s
NAO01 NORSAR Array S 63.23 4 P **P 21 05 22.8 +0.6**
NAO01 IAmb IAmb 21 05 47.4
comp=Z,9.4nm,1.1s
HFS Hagfors 64.03 2 P **P 21 05 27.7 +0.3**
comp=Z,16nm,0.6s,baz=27,slow=3.6,SNR=78
comp=Z,16nm,0.6s
MKAR Makanchi Array 64.20 317 P **P 21 05 28.4 -0.4**
MKAR Makanchi Array 64.20 317 P **P 21 05 28.2 -0.6**
comp=Z,0.8nm,0.4s,baz=42,slow=6.8,SNR=17
MKAR pP **pP 21 06 13.5 0.0**
comp=Z,1.0nm,0.7s,baz=40,slow=6.4,SNR=3.2
comp=Z,0.8nm,0.4s
MAKZ Makanchi 64.31 317 P **P 21 05 29.2 -0.3**
MAKZ Makanchi 64.31 317 P **P 21 05 29.2 -0.3**
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
KONO Kongsberg 64.37 5 P **P 21 05 29.7 0.0**
KONO IAmb IAmb 21 05 58.8
comp=Z,16nm,1.1s
KONO Kongsberg 64.37 5 P **P 21 05 29.7 0.0**
KONO pmax pmax
comp=Z,16nm,1.2s
WMQ Urumqi 64.46 311 *eP* **P 21 05 31.0 +0.4**
WMQ pmax pmax
comp=Z,9.0nm,0.7s
VSU Vasula 65.54 355 *ceP* **P 21 05 35.5 -1.7**
VSU pmax pmax
comp=Z,31nm,1.7s
CD2 Chengdu 67.17 292 P **P 21 05 48.3 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
EKA Eskdalemuir Ar 67.57 13 P **P 21 05 50.6 +0.5**
comp=Z,6.1nm,0.8s,baz=342,slow=4.9,SNR=12
comp=Z,6.1nm,0.8s
OBN Obninsk 68.08 349 *eP* **P 21 05 52.3 -1.0**
OBN *e* 21 08 24.8
OBN pmax pmax
comp=Z,18nm,1.7s
PABE Paberze 68.62 356 P **P 21 05 57.1 +0.5**
BELG Belogornoye 69.11 341 *i* P **P 21 05 58.8 -0.9**
BELG pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 69.32 332 P **P 21 06 01.2 +0.2**
MNK Minsk 69.43 354 *i* P **P 21 05 59.4 -2.2**
MNK *i* *PP **pP 21 06 46.4 -0.5**
MNK *i* 21 08 35.7
MNK *i* PPP PPP 21 10 18.7
MNK *i* S **S 21 14 51.5 -1.1**
MNK *i* SS **SS 21 19 24.3 +1.9**
MNK pmax pmax
comp=N,14nm,1.0s
MNK pmax pmax
comp=Z,18nm,0.9s
MNK pmax pmax
comp=E,6.0nm,1.0s
LPSR Galich'ya Gora 70.27 347 *eP* **P 21 06 04.9 -1.9**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 70.66 319 P **P 21 06 09.9 +0.3**
AAK Ala-Archa 70.66 319 *ceP* **P 21 06 08.5 -1.1**
AAK pmax pmax
comp=Z,4.0nm,1.7s
VORR Voronezh 71.14 346 *eP* **P 21 06 10.0 -2.0**
VORR pmax pmax
comp=Z,10.0nm,0.9s
VRH Novokhopyorsk 71.24 344 *eP* **P 21 06 10.6 -2.0**
VRH pmax pmax
comp=Z,7.0nm,0.8s
VSR Storozhevoye 71.59 346 *eP* **P 21 06 12.7 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 71.66 322 P **P 21 06 16.0 +0.6**
KKAR Karatay Array 71.66 322 P **P 21 06 16.0 +0.6**
PZH PanZhiHua 71.75 290 P **P 21 06 14.0 -2.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 71.82 346 *eP* **P 21 06 14.4 -1.7**
VORD pmax pmax
comp=Z,10.0nm,0.9s
KSH Kashi 72.81 317 P **P 21 06 26.0 +3.6**
KSH pP pP 21 07 13.8 +5.7
KSH pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 72.85 3 *eP* **P 21 06 22.0 -0.2**
CLL Collm 72.85 3 *eP* **P 21 06 22.0 -0.2**
AKASG Malin Array Be 73.13 353 P **P 21 06 23.5 -0.4**
comp=Z,12nm,0.5s,baz=8.2,slow=5.9,SNR=43
comp=Z,12nm,0.5s
AKBB Malin Array Si 73.13 353 P **P 21 06 23.5 -0.4**
AKBB Malin Array Si 73.13 353 P **P 21 06 23.5 -0.4**
AKBB pmax pmax
comp=Z,23nm,0.7s
KIEV Kiev 73.14 353 ⇓P **P 21 06 23.6 -0.3**
KIEV Kiev 73.14 353 P **P 21 06 23.6 -0.3**
KIEV Kiev 73.14 353 P **P 21 06 23.6 -0.3**
BRG Berggiesshubel 73.31 3 *eP* **P 21 06 25.7 +0.7**
BRG Amp 21 06 26.5
comp=Z,5.6nm,1.0s
BRG Berggiesshubel 73.31 3 *eP* **P 21 06 25.6 +0.7**
BRG pmax pmax
comp=Z,6.0nm,1.0s
CHVC Chvalec 73.64 1 *eP* **P 21 06 27.6 +0.7**
CHVC Chvalec 73.64 1 *eP* **P 21 06 27.6 +0.7**
PVCC Panska Ves 73.67 2 *eP* **P 21 06 28.3 +1.3**
PVCC Panska Ves 73.67 2 *eP* **P 21 06 28.3 +1.3**
DPC Dobruska-Polom 73.88 1 *eP* **P 21 06 29.4 +1.1**
DPC Dobruska-Polom 73.88 1 *eP* **P 21 06 29.4 +1.1**
KRLC Kraliky 74.16 1 *eP* **P 21 06 30.9 +1.0**
KRLC Kraliky 74.16 1 *eP* **P 21 06 30.9 +1.0**
MORC Moravsky Berou 74.46 0 ⇑P **P 21 06 31.0 -0.7**
MORC Moravsky Berou 74.46 0 *eP* **P 21 06 32.2 +0.5**

MORC Moravsky Berou 74.46 0 ⇑P **P 21 06 31.0 -0.7**
MAUC Maruska 74.87 0 *eP* **P 21 06 35.3 +1.2**
VRAC Vranov 74.92 1 ⇑P **P 21 06 34.2 -0.1**
VRAC Vranov 74.92 1 *eP* **P 21 06 35.2 +0.9**
VRAC Vranov 74.92 1 ⇑P **P 21 06 34.2 -0.1**
KHC Kasperske Hory 75.04 3 *eP* **P 21 06 36.5 +1.5**
KHC Kasperske Hory 75.04 3 *ceP* **P 21 06 33.7 -1.3**
KHC pmax pmax
comp=Z,8.0nm,1.0s
LANS Liptovska Anna 75.08 359 *eP* **P 21 06 36.5 +1.2**
LANS pmax pmax
comp=Z,4.0nm,0.7s
LANS Liptovska Anna 75.08 359 *eP* **P 21 06 36.5 +1.2**
KRUC Moravsky 75.17 1 *eP* **P 21 06 36.2 +0.5**
KOLS Kolonicke sedl 75.25 357 *eP* **P 21 06 36.9 +0.7**
KOLS pmax pmax
comp=Z,2.0nm,0.6s
KOLS Kolonicke sedl 75.25 357 *eP* **P 21 06 36.9 +0.7**
CKRC Cesky Krumlov 75.37 3 *eP* **P 21 06 37.5 +0.6**
CKRC Cesky Krumlov 75.37 3 *eP* **P 21 06 37.5 +0.6**
JAVC Velka Javorina 75.38 0 *eP* **P 21 06 38.7 +1.7**
SORM Soroca 75.74 353 ⇓P **P 21 06 38.8 -0.2**
SORM Soroca 75.74 353 ⇓P **P 21 06 38.8 -0.2**
VYHS Vyhne 75.74 359 *eP* **P 21 06 39.8 +0.8**
VYHS pmax pmax
comp=Z,4.0nm,0.7s
VYHS Vyhne 75.74 359 *eP* **P 21 06 39.8 +0.8**
MODS Modra-Piesok 75.86 0 *eP* **P 21 06 40.9 +1.2**
MODS pmax pmax
comp=Z,16nm,1.0s
MODS Modra-Piesok 75.86 0 *eP* **P 21 06 40.9 +1.2**
CONA Conrad Observa 76.30 1 *i* P **P 21 06 43.6 +1.4**
comp=Z,1.7nm,0.4s
BUR08 Bucovina Ar. S 76.42 355 P **P 21 06 43.3 +0.3**
BUR08 IAmb IAmb 21 06 44.3
comp=Z,4.9nm,0.7s
BURAR Bucovina Array 76.45 355 ⇑P **P 21 06 43.8 +0.7**
BURAR Bucovina Array 76.45 355 P **P 21 06 43.8 +0.7**
BURAR IAmb IAmb 21 06 44.8
comp=Z,4.7nm,0.8s
BURAR Bucovina Array 76.45 355 ⇑P **P 21 06 43.8 +0.7**
BMR Baia Mare 76.46 356 ⇓P **P 21 06 43.3 +0.3**
BMR Baia Mare 76.46 356 ⇓P **P 21 06 43.3 +0.3**
BIOA Bad Ischl, Aus 76.48 3 *i* P **P 21 06 43.9 +0.7**
comp=Z,1.3nm,0.4s
RONA Rosalia, Austr 76.53 1 *i* P **P 21 06 43.3 -0.1**
comp=Z,1.4nm,0.5s
LESA Schwarzleotal 76.72 4 *eP* **P 21 06 45.7 +1.1**
comp=Z,1.0nm,0.4s
MOTA Moosalm 76.73 5 *i* P **P 21 06 45.9 +1.2**
comp=Z,3.6nm,0.8s
WATA Walderalm 76.77 4 *i* P **P 21 06 46.1 +1.2**
comp=Z,3.7nm,0.6s,SNR=4.4
WTTA Wattenberg 76.84 4 *i* P **P 21 06 46.8 +1.4**
comp=Z,2.7nm,0.5s,SNR=5.0
SQTA Sankt Quirin 76.86 5 *i* P **P 21 06 46.9 +1.5**
comp=Z,1.9nm,0.4s
ARSA Arzberg 76.97 2 *i* P **P 21 06 47.4 +1.5**
comp=Z,1.8nm,0.6s
FETA Feichten 77.04 5 *i* P **P 21 06 48.1 +1.6**
comp=Z,1.1nm,0.4s
KBA Koelnbreinsper 77.09 3 *eP* **P 21 06 48.5 +1.7**
comp=Z,5.3nm,0.7s
DRGR 77.37 357 ⇑P **P 21 06 48.9 +0.7**
DRGR 77.37 357 ⇑P **P 21 06 48.9 +0.7**
ABTA Abfaltersbach 77.39 4 *eP* **P 21 06 50.0 +1.6**
comp=Z,2.1nm,0.7s
CJR Cluj-Napoca 77.42 356 ⇑P **P 21 06 48.7 +0.2**
CJR Cluj-Napoca 77.42 356 ⇑P **P 21 06 48.7 +0.2**
MARR Marisel-Cluj 77.47 356 ⇑P **P 21 06 49.5 +0.7**
SOKA Soboth 77.53 2 *eP* **P 21 06 50.3 +1.2**
comp=Z,2.9nm,0.4s,SNR=6.4
MYKA Terra Mystica 77.55 3 *eP* **P 21 06 51.4 +2.2**
comp=Z,2.3nm,0.4s
OBKA Obir 77.69 2 *eP* **P 21 06 51.0 +1.0**
comp=Z,13nm,0.4s,SNR=17
GHRR 77.87 353 ⇑P **P 21 06 52.1 +1.2**
SIRR Siria 77.93 357 ⇑P **P 21 06 50.3 -0.9**
TURR Turia 77.96 354 ⇑P **P 21 06 52.9 +1.5**
MORH Mrgy, Hungar 78.02 360 ⇑P **P 21 06 52.7 +1.0**
VRI Vrincioaia 78.11 354 ⇑P **P 21 06 52.7 +0.5**
VRI Vrincioaia 78.11 354 ⇑P **P 21 06 52.7 +0.5**
KIV Kislovodsk 78.13 342 ⇓P **P 21 06 53.4 +0.9**
KIV Kislovodsk 78.13 342 *eP* **P 21 06 52.5 0.0**
KIV pmax pmax
comp=Z,13nm,1.0s
COVR Voineasa-Covas 78.16 354 ⇑P **P 21 06 54.0 +1.4**
KBZ Khabaz 78.31 342 *ceP* **P 21 06 53.6 +0.3**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 78.31 342 P **P 21 06 53.9 +0.6**
comp=Z,8.0nm,0.9s,baz=339,slow=3.8,SNR=14
comp=Z,8.0nm,0.9s
NCK Nalchik 78.41 341 *i* P **P 21 06 54.0 0.0**
NCK pmax pmax
comp=Z,22nm,0.6s
SURR Surduc 78.43 357 ⇑P **P 21 06 55.0 +1.1**
MLR Muntele Rosu 78.53 354 ⇑P **P 21 06 56.0 +1.3**
MLR Muntele Rosu 78.53 354 ⇑P **P 21 06 56.0 +1.3**
BZS Buzias 78.58 357 ⇑P **P 21 06 55.8 +1.0**
BZS Buzias 78.58 357 ⇑P **P 21 06 55.8 +1.0**
VOIR 78.63 355 ⇑P **P 21 06 55.9 +0.7**
VOIR 78.63 355 ⇑P **P 21 06 55.9 +0.7**
CFR Carcaliu 78.70 353 ⇓P **P 21 06 56.2 +0.8**
CFR Carcaliu 78.70 353 ⇓P **P 21 06 56.2 +0.8**
ARR Arges 78.72 355 ⇑P **P 21 06 56.9 +1.2**
GZR Gura Zlata 78.77 357 ⇑P **P 21 06 56.9 +1.0**
GZR Gura Zlata 78.77 357 ⇑P **P 21 06 56.9 +1.0**
FRGS Fruska Gora 79.07 359 ⇑P **P 21 06 58.5 +1.0**
HERR Herculane 79.29 357 ⇑P **P 21 06 59.1 +0.4**
MDVR Moldovita 79.41 357 ⇑P **P 21 07 00.2 +0.8**
CMAR Chiang Mai Arr 79.79 288 P **P 21 07 01.6 -0.2**
comp=Z,3.2nm,0.7s,baz=20,slow=5.4,SNR=19
comp=Z,3.2nm,0.7s
VLAD Vladila 80.09 355 ⇓P **P 21 07 04.6 +1.6**
BOVS Bovan 80.56 357 ⇑P **P 21 07 05.9 +0.4**
ESDC Sonseca Array 82.76 17 P **P 21 07 18.0 +0.9**
comp=Z,2.5nm,0.8s,baz=339,slow=4.4,SNR=22
comp=Z,2.5nm,0.8s
BRTR Keskin Array B 83.59 348 P **P 21 07 21.6 +0.1**
comp=Z,1.7nm,0.8s,baz=356,slow=1.1,SNR=6.7
comp=Z,1.7nm,0.8s
ISP Isparta 85.81 350 *ceP* **P 21 07 29.7 -2.9**
ISP pmax pmax
comp=Z,14nm,2.5s
ARG Arkhangelos 87.61 352 P **P 21 07 39.4 -1.8**
KEST Kesra 88.20 7 P **P 21 07 45.9 +1.8**
comp=Z,2.5nm,0.7s,baz=295,slow=2.0,SNR=4.1
comp=Z,2.5nm,0.7s
QSPA South Pole Qui 145.91 180 PKPbc **PKPbc 21 14 30.9 +0.6**
comp=Z,15nm,0.5s,baz=333,slow=0.1,SNR=41
BOSA Boshof 152.01 346 PKPbc **PKPbc 21 14 46.7 -0.3**
comp=Z,3.0nm,0.7s,baz=269,slow=1.4,SNR=6.3
SNAA Sanae 162.10 159 PKPab **PKPab 21 15 38.9 -0.6**
comp=Z,3.4nm,0.9s,baz=232,slow=13,SNR=8.8

IDC ***25*** *20:56:59.0±0.5,5˚.85S×142˚.70E, h0km, mb4.7/16, mbtmp4.7/18, ML2.6/1, Error ellipse: s-maj=23.1km s-min=12.9km az=76.0*
BJI ***25*** *20:56:59.8±0.0, 5˚.91S×143˚.14E, h29km, mb4.8/61, Ms5.5/6, Ms7 5.3/5*
MOS ***25*** *20:57:00.2±1.0, 5˚.59S×142˚.83E, h15km, mb5.0/23, Error ellipse: s-maj=16.1km s-min=7.4km az=111.6*
NEIC ***25*** *20:57:01.1±2.3, 5˚.87S±0˚.08×142˚.58E±0˚.03, h10km±1km, mb5.0/84, Error ellipse: s-maj=13.7km s-min=5.7km az=182.0*
DJA ***25*** *20:57:05.1±0.3, 6˚S±3˚×14˚2E±˚, h32km±3km, M5.0/25, mB5.5/1, mb4.8/25, MLv5.1/5, Mw(mB)5.0/1*
ISC 25 20:57:03.3±0.3,**5˚94S**±0˚05×**142˚58E**±0˚05,**h28km**,**n202,**
σ1§**59**/170,**mb4.9**/96,**9C-4D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.50**	**296**	P	**Pb**	**20 57 29.9**	**-0.7**
MMPI	**Merauke**	**3.32**	**221**	P	**Pn**	**20 57 55.3**	**+1.8**
GENI	**Genyem**	**4.10**	**324**	P	**Pn**	**20 58 06.1**	**+1.9**
GENI	**Genyem**	**4.10**	**324**	P	**Pn**	**20 58 05.7**	**+1.5**
SMPI	**Sarmi**	**5.50**	**315**	P	**Pn**	**20 58 25.5**	**+2.1**
	123nm,0.6s,4μm0.9nm						
PMG	**Port Moresby**	**5.70**	**127**	Pn	**Pn**	**20 58 27.4**	**+1.2**
PMG	**Port Moresby**	**5.70**	**127**	P	**Pn**	**20 58 27.4**	**+1.2**
PMG	**Port Moresby**	**5.70**	**127**	P	**Pn**	**20 58 27.3**	**+1.2**

PMG	**Port Moresby**	**5.70**	**127**	*i* P		**Pn**	**20 58 25.7**	**-0.4**
PMG	**Port Moresby**	**5.70**	**127**	Pn		**Pn**	**20 58 26.2**	**+0.1**
	10nm,0.3s,baz=12,slow=2.8,SNR=12							
PMG					Sn	**Sn**	**20 59 29.9**	**-0.7**
	20nm,0.3s,baz=233,slow=20,SNR=11							
	40nm,0.4s							
MANU	**Manus Island**	**6.15**	**51**			**Pn**	**20 58 36.3**	**+4.0**
RABL	**Rabaul**	**9.70**	**80**	Pn		**Pn**	**20 59 25.0**	**+3.8**
FAKI	**Fak Fak**	**10.73**	**286**	Pn		**Pn**	**20 59 35.4**	**+0.2**
FAKI	**Fak Fak**	**10.73**	**286**	P		**Pn**	**20 59 35.7**	**+0.5**
FAKI	**Fak Fak**	**10.73**	**286**	P		**Pn**	**20 59 35.3**	**+0.2**
	120nm,0.8s							
SAUI	**Saumlaki**	**11.38**	**259**	Pn		**Pn**	**20 59 44.9**	**+0.8**
SAUI	**Saumlaki**	**11.38**	**259**	P		**Pn**	**20 59 44.3**	**+0.2**
	354nm,0.7s							
KDU	**Kakadu**	**12.01**	**235**	P		**Pn**	**20 59 52.6**	**-0.2**
SWI	**Sorong**	**12.37**	**294**	P		**Pn**	**20 59 56.2**	**-1.4**
	43nm,0.8s							
DRS	**Darwin Rock St**	**13.21**	**240**	P		**Pn**	**21 00 08.5**	**-0.6**
MTN	**Manton Dam**	**13.21**	**238**	Pn		**Pn**	**21 00 07.7**	**-1.4**
MTN	**Manton Dam**	**13.21**	**238**	P		**Pn**	**21 00 07.9**	**-1.2**
CTA	**Charters Tower**	**14.51**	**166**	Lg		Lg	21 04 39.2	
	0.4nm,0.3s,baz=228,slow=22,SNR=1.3							
WB0	**Warramunga Arr**	**15.88**	**209**	Pn		**Pn**	**21 00 43.8**	**-1.2**
LBMI	**Labuha**	**15.94**	**289**	P		**Pn**	**21 00 45.4**	**-0.4**
	52nm,0.9s							
WRA	**Warramunga Arr**	**16.06**	**209**	Pn		**Pn**	**21 00 44.3**	**-3.0**
	2.9nm,0.3s,baz=26,slow=14,SNR=8.7							
WRA				Lg		Lg	21 05 33.0	
	baz=32,slow=29							
SANI	**Sanana**	**16.99**	**282**	P		**P**	**21 01 01.0**	**+0.2**
SANI	**Sanana**	**16.99**	**282**	P		**Pn**	**21 00 59.6**	**+0.5**
	22nm,0.9s							
HNR	**Honiara**	**17.56**	**102**	P		**Pn**	**21 01 04.7**	**-1.5**
	366nm,0.3s,baz=195,slow=12,SNR=1.4							
SOEI	**Soe**	**18.53**	**257**			**Pn**	**21 01 19.1**	**+0.8**
SOEI				IAmb		IAmb	21 01 45.0	
	comp=Z,114nm,0.9s							
SOEI	**Soe**	**18.53**	**257**	P		**P**	**21 01 18.2**	**+0.3**
	comp=Z,134nm,1.0s							
AS31	**Alice Springs**	**19.50**	**204**	P		**Pn**	**21 01 29.3**	**-0.5**
ASAR	**Alice Springs**	**19.50**	**204**	P		**Pn**	**21 01 29.6**	**-0.2**
	comp=Z,12nm,0.5s,baz=34,slow=11,SNR=20							
ASAR				Lg		Lg	21 07 20.6	
	comp=Z,0.2nm,0.3s,baz=28,slow=30,SNR=1.8							
EDFI	**Ende, Flores**	**20.90**	**261**	P		Pn	21 01 45.7	-0.7
	comp=Z,31nm,0.8s							
EIDS	**Eidsvold**	**20.97**	**158**	P		Pn	21 01 47.1	+0.1
MRSI	**Marisa**	**21.57**	**287**	P		**P**	**21 01 52.5**	**+1.6**
	comp=Z,27nm,0.6s							
TOLI2	**Tolitoli**	**22.86**	**287**	P		**P**	**21 02 04.3**	**-0.4**
TOLI2	**Tolitoli**	**22.86**	**287**	P		**P**	**21 02 06.7**	**+2.0**
WRKA	**Warakurna**	**23.41**	**214**	P		**P**	**21 02 11.0**	**+0.8**
MULG	**Mulgathing**	**25.51**	**197**	P		**P**	**21 02 31.4**	**+1.9**
ARMA	**Armidale**	**25.80**	**162**	P		**P**	**21 02 33.3**	**+1.1**
STKA	**Stephens Creek**	**25.82**	**182**	P		**P**	**21 02 32.6**	**+0.3**
STKA	**Stephens Creek**	**25.82**	**182**	*i* P		**P**	**21 02 38.1**	**+5.8**
STKA	**Stephens Creek**	**25.82**	**182**	P		**P**	**21 02 32.4**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=27,slow=9.0,SNR=3.8							
	comp=Z,2.9nm,0.7s							
LIFNC	**LIFOU**	**28.10**	**124**	P		**P**	**21 02 52.4**	**-0.5**
GMJI	**Gumukmas**	**29.00**	**264**	P		**P**	**21 02 59.0**	**-2.0**
	comp=Z,16nm,1.6s							
TPUB	**Ta-pu**	**36.12**	**324**	P		**P**	**21 04 01.8**	**-1.4**
JNU	**Nakatsue**	**40.40**	**345**	P		**P**	**21 04 37.4**	**-1.8**
MJAR	**Matsushiro Arr**	**42.45**	**355**	P		**P**	**21 04 54.3**	**-1.6**
	comp=Z,2.1nm,0.6s,baz=182,slow=7.6,SNR=7.5							
	comp=Z,2.1nm,0.6s							
MAJO	**Matsushiro**	**42.46**	**355**	*i* P		**P**	**21 04 54.3**	**-1.6**
MAJO				pmax		pmax		
	comp=Z,18nm,1.4s							
JMM	**Marumori**	**43.61**	**358**	P		**P**	**21 05 03.4**	**-1.7**
JMM				IAmb		IAmb	21 05 13.7	
	comp=Z,61nm,1.4s							
JSD	**Sado**	**43.93**	**355**	P		**P**	**21 05 06.7**	**-1.1**
JSD				IAmb		IAmb	21 05 15.5	
	comp=Z,20nm,0.7s							
NJ2	**Nanjing**	**44.03**	**331**	*e*P		**P**	**21 05 10.0**	**+1.4**
NJ2				pP		**pP**	**21 05 19.5**	**+1.6**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
TUWZ	**Tuamarina**	**45.05**	**146**	P		**P**	**21 05 17.6**	**+0.8**
WHN	**Wuhan**	**45.24**	**325**	⇑P		**P**	**21 05 19.8**	**+1.5**
KSRS	**Korea Array**	**45.28**	**344**	P		**P**	**21 05 18.2**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=164,slow=9.7,SNR=17							
	comp=Z,3.9nm,0.6s							
BFZ	**Birch Farm**	**45.87**	**144**	P		**P**	**21 05 24.2**	**+1.0**
GYA	**Guiyang**	**47.42**	**314**	⇑P		**P**	**21 05 37.0**	**+1.3**
GYA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
TIA	**Tai'an**	**48.25**	**332**	P		**P**	**21 05 42.0**	**+0.2**
TIA				pmax		pmax		
	comp=Z,4.0nm,0.8s							
PHRA	**Phrae**	**48.30**	**301**	P		**P**	**21 05 41.8**	**-0.8**
CRAI	**Chiangrai**	**48.96**	**303**	P		**P**	**21 05 46.5**	**-1.1**
LYN	**LuoYang**	**49.29**	**327**	⇑P		**P**	**21 05 50.5**	**+0.6**
LYN				pmax		pmax		
	comp=Z,36nm,0.6s							
CM31	**Chiang Mai Arr**	**49.38**	**300**	P		**P**	**21 05 50.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**49.38**	**300**	P		**P**	**21 05 51.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**49.38**	**300**	*i* P		**P**	**21 05 51.5**	**+0.7**
CMAR				pmax		pmax		
	comp=Z,5.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**49.38**	**300**	P		**P**	**21 05 51.6**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=123,slow=6.0,SNR=40							
	comp=Z,4.3nm,0.7s							
KMI	**Kunming**	**49.54**	**310**	⇓P		**P**	**21 05 53.3**	**+1.1**
KMI				pP		pP	21 06 01.5	+0.5
KMI				pmax		pmax		
	comp=Z,15nm,1.0s							
VLA	**Vladivostok**	**49.78**	**350**	*i* P		**P**	**21 05 51.4**	**-2.0**
VLA				pmax		pmax		
	comp=Z,14nm,0.7s							
HNS	**HongShan**	**50.35**	**331**	⇓P		**P**	**21 05 58.5**	**+0.7**
HNS				pmax		pmax		
	comp=Z,10.0nm,0.7s							
USA0B	**Ussuriysk Arra**	**50.81**	**350**	P		**P**	**21 06 00.6**	**-0.7**
USA0B				IAmb		IAmb	21 06 10.3	
	comp=Z,17nm,0.8s							
USA0B	**Ussuriysk Arra**	**50.81**	**350**	*i* P		**P**	**21 05 59.4**	**-1.8**
USRK	**Ussuriysk Ar.**	**50.81**	**350**	P		**P**	**21 06 00.9**	**-0.3**
USRK	**Ussuriysk Ar.**	**50.81**	**350**	P		**P**	**21 06 01.5**	**+0.3**
	comp=Z,8.1nm,0.7s,baz=180,slow=8.4,SNR=20							
	comp=Z,8.1nm,0.7s							
XAN	**Xi'an**	**50.93**	**324**	⇓P		**P**	**21 06 03.3**	**+0.9**
XAN				pP		pP	21 06 10.5	-1.0
XAN				pmax		pmax		
	comp=Z,14nm,1.1s							
PZH	**PanZhiHua**	**51.04**	**311**	P		**P**	**21 06 04.3**	**+0.9**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
MDJ	**Mudanjiang**	**51.66**	**348**	P		**P**	**21 06 07.3**	**-0.3**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.1s							
BJI	**Beijing**	**51.82**	**334**	P		**P**	**21 06 09.0**	**+0.2**
BJI				pmax		pmax		
	comp=Z,5.0nm,1.3s							
CD2	**Chengdu**	**52.15**	**317**	P		**P**	**21 06 12.8**	**+1.2**
CD2				pP		pP	21 06 20.0	-0.8
CD2				pmax		pmax		
	comp=Z,30nm,0.7s							
YSS	**Yuzh-Sakhalins**	**52.66**	**0**	*e*P		**P**	**21 06 14.5**	**-0.4**
YSS				*e*			21 06 22.8	
YSS				pmax		pmax		
	comp=Z,10.0nm,0.7s							
TNCH	**TengChong**	**52.76**	**308**	P		**P**	**21 06 17.5**	**+1.2**
TNCH				pmax		pmax		
	comp=Z,13nm,1.4s							
BNX	**BinXian**	**53.20**	**347**	⇑P		**P**	**21 06 18.5**	**-0.5**
BNX				pmax		pmax		
	comp=Z,22nm,1.0s							
HHC	**Hu-ho-hao-te**	**54.57**	**331**	*e*P		**P**	**21 06 32.3**	**+3.1**
HHC				sP		sP	21 06 47.8	+5.7
HHC				pmax		pmax		
	comp=Z,8.0nm,0.6s							
HHC				LR		LR		
	comp=Z,930nm,17.2s							
HHC				LR		LR		
	comp=Z,1μm,17.0s							
LZH	**Lanzhou**	**55.37**	**322**	*e*P		**P**	**21 06 36.5**	**+1.3**
LZH				pP		pP	21 06 43.5	-0.9
LZH				sP		sP	21 06 49.0	+0.9
LZH				pmax		pmax		
	comp=Z,16nm,0.9s							
KLR	**Kul'dur**	**55.75**	**351**	*i* P		**P**	**21 06 36.2**	**-1.2**
KLR				pmax		pmax		
	comp=Z,12nm,0.8s							
HEH	**HeiHe**	**57.49**	**349**	*e*P		**P**	**21 06 49.3**	**-0.5**
HEH				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GTA	**Gaotai**	**59.95**	**323**	P		**P**	**21 07 08.5**	**+1.2**
GTA				pP		pP	21 07 16.5	-0.1
GTA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
PEA0B	**Petropavlovsk-**	**60.20**	**10**	P		**P**	**21 07 08.3**	**-0.3**
PEA0B	**Petropavlovsk-**	**60.20**	**10**	P		**P**	**21 07 08.3**	**-0.3**
PEA0B				pmax		pmax		
	comp=Z,87nm,1.5s							
PETK	**Petropavlovsk-**	**60.20**	**10**	P		**P**	**21 07 08.1**	**-0.5**
PETK	**Petropavlovsk-**	**60.20**	**10**	P		**P**	**21 07 08.1**	**-0.5**
PETK	**Petropavlovsk-**	**60.20**	**10**	P		**P**	**21 07 08.0**	**-0.7**
	comp=Z,15nm,1.0s,baz=166,slow=6.3,SNR=15							
	comp=Z,15nm,1.0s							
LSA	**Lhasa**	**60.73**	**309**	IAmb		IAmb	21 07 23.7	
	comp=Z,14nm,1.0s							
ZEA	**Zeya**	**60.84**	**350**	*e*P		**P**	**21 07 13.2**	**+0.3**
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
ULN	**Ulaanbaatar**	**62.02**	**334**	P		**P**	**21 07 21.9**	**+0.6**
ULN				IAmb		IAmb	21 07 31.1	
	comp=Z,5.5nm,0.8s							
ULN	**Ulaanbaatar**	**62.02**	**334**	P		**P**	**21 07 21.9**	**+0.6**
ULN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
SONM	**Songino Array**	**62.29**	**333**	P		**P**	**21 07 22.9**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=188,slow=7.3,SNR=5.7							
	comp=Z,1.3nm,0.8s							
ZAK	**Zakamensk**	**65.55**	**334**	*e*P		**P**	**21 07 44.5**	**+0.1**
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.3s							
MA2	**Magadan**	**65.63**	**5**	*i* P		**P**	**21 07 41.7**	**-2.9**
MA2				pmax		pmax		
	comp=Z,9.0nm,1.1s							
MOY	**Mondy**	**67.48**	**333**	*e*P		**P**	**21 07 57.6**	**+0.9**
YAK	**Yakutsk**	**68.50**	**354**	*i* P		**P**	**21 08 02.1**	**-0.6**
YAK				pmax		pmax		
	comp=Z,11nm,1.2s							
SEY	**Seymchan**	**69.08**	**5**	*i* P		**P**	**21 08 02.9**	**-3.5**
SEY				pmax		pmax		
	comp=Z,12nm,1.6s							
WMQ	**Urumqi**	**69.92**	**321**	*e*P		**P**	**21 08 13.3**	**+1.2**
WMQ				pP		pP	21 08 21.0	-0.6
WMQ				sP		sP	21 08 26.8	+1.6
WMQ				PcP		**PcP**	**21 08 35.3**	**+0.9**
WMQ				pmax		pmax		
	comp=Z,16nm,0.9s							
VNDA	**Vanda**	**72.27**	**176**	P		**P**	**21 08 26.4**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=340,slow=6.7,SNR=13							
	comp=Z,2.7nm,0.6s							
DGZ	**Jazzator, Alta**	**73.09**	**326**	*i* P		**P**	**21 08 30.5**	**-0.6**
DGZ				pmax		pmax		
	comp=Z,8.0nm,0.8s							
MK31	**Makanchi Array**	**74.69**	**322**	*c* iP		**P**	**21 08 41.0**	**+0.6**
MKAR	**Makanchi Array**	**74.69**	**322**	*i* P		**P**	**21 08 41.2**	**+0.8**
MKAR				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MKAR	**Makanchi Array**	**74.69**	**322**	P		**P**	**21 08 40.8**	**+0.4**
	comp=Z,6.5nm,0.7s,baz=109,slow=7.1,SNR=43							
	comp=Z,6.5nm,0.7s							
MAKZ	**Makanchi**	**74.89**	**322**	P		**P**	**21 08 42.2**	**+0.7**
MAKZ				IAmb		IAmb	21 08 43.2	
	comp=Z,9.2nm,0.8s							
MAKZ	**Makanchi**	**74.89**	**322**	⇑P		**P**	**21 08 42.5**	**+0.9**
PRZ	**Przheval'sk**	**75.44**	**317**	IAmb		IAmb	21 08 48.0	
	comp=Z,13nm,1.0s							
BILL	**Bilibino**	**75.68**	**9**	*i* P		**P**	**21 08 43.2**	**-2.4**
BILL				pmax		pmax		
	comp=Z,3.0nm,1.1s							
KSH	**Kashi**	**76.09**	**313**	P		**P**	**21 08 51.0**	**+2.2**
KSH				pP		pP	21 08 58.8	+0.4
KSH				pmax		pmax		
	comp=Z,9.0nm,0.9s							
NIL	**Nilore**	**76.33**	**307**	P		**P**	**21 08 51.3**	**+1.1**
NIL	**Nilore**	**76.33**	**307**	P		**P**	**21 08 51.3**	**+1.1**
NIL				pmax		pmax		
	comp=Z,33nm,0.7s							
ZALV	**Zalesovo Beam**	**76.66**	**329**	P		**P**	**21 08 51.0**	**-0.5**
ZALV	**Zalesovo Beam**	**76.66**	**329**	P		**P**	**21 08 51.0**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=112,slow=5.5,SNR=14							
	comp=Z,3.1nm,0.7s							
TIXI	**Tiksi**	**77.96**	**356**	*i* P		**P**	**21 08 56.0**	**-2.4**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.4s							
AAK	**Ala-Archa**	**78.19**	**316**	P		**P**	**21 09 00.4**	**-0.2**
AAK	**Ala-Archa**	**78.19**	**316**	*e*P		**P**	**21 09 00.0**	**-0.6**
AAK				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KURK	**Kurchatov**	**78.56**	**324**	P		**P**	**21 09 02.5**	**+0.4**
KURK				IAmb		IAmb	21 09 11.3	
	comp=Z,9.8nm,1.1s							
KURK	**Kurchatov**	**78.56**	**324**	*i* P		**P**	**21 09 01.5**	**-0.7**
KURK				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KURBB	**Kurchatov Arra**	**78.58**	**324**	P		**P**	**21 09 02.5**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=117,slow=4.7,SNR=18							
	comp=Z,4.4nm,0.8s							
ARSB	**Arslanbob**	**78.84**	**314**	P		**P**	**21 09 04.7**	**+0.5**
ARSB	**Arslanbob**	**78.84**	**314**	P		**P**	**21 09 04.7**	**+0.5**
ARSB				pmax		pmax		
	comp=Z,3.0nm,0.8s							
L14K	**Kuka Creek**	**79.23**	**24**	IAmb		IAmb	21 09 07.0	
	comp=Z,14nm,0.6s							
SIMJ	**Simiganj**	**81.01**	**311**	P		**P**	**21 09 16.1**	**+0.2**
SIMJ				IAmb		IAmb	21 09 17.4	
	comp=Z,20nm,1.1s							
F15K	**North Star Dit**	**81.06**	**19**	P		**P**	**21 09 15.8**	**+0.4**
G16K	**Koyuk River**	**81.65**	**20**	IAmb		IAmb	21 09 31.7	
	comp=Z,10nm,1.1s							
K17K	**Iditarod**	**81.72**	**24**	IAmb		IAmb	21 09 37.1	
	comp=Z,18nm,1.0s							
KDAK	**Kodiak Island**	**81.97**	**29**	P		**P**	**21 09 20.1**	**-0.2**
	comp=Z,13nm,0.8s,baz=349,slow=3.4,SNR=5.5							
	comp=Z,13nm,0.8s							
H17K	**Granite Mounta**	**82.26**	**21**	IAmb		IAmb	21 09 39.7	
	comp=Z,11nm,1.0s							
F17K	**Baldwin Pennin**	**82.62**	**20**	IAmb		IAmb	21 09 38.3	
	comp=Z,21nm,1.4s							
G18K	**Tagagawik**	**83.22**	**21**	P		**P**	**21 09 26.6**	**-0.2**
G18K				IAmb		IAmb	21 09 39.5	
	comp=Z,15nm,1.4s							
E18K	**Tukpahlearik C**	**83.37**	**19**	IAmb		IAmb	21 09 29.1	
	comp=Z,5.1nm,0.8s							
J19K	**Poorman**	**83.40**	**23**	IAmb		IAmb	21 09 28.9	
	comp=Z,5.9nm,0.8s							
H19K	**Roundabout Mou**	**83.82**	**21**	IAmb		IAmb	21 09 46.3	
	comp=Z,5.7nm,0.8s							
G19K	**Purcell Mounta**	**83.89**	**21**	IAmb		IAmb	21 09 32.0	
	comp=Z,10nm,1.2s							
NRIK	**Noril'sk**	**83.90**	**343**	IAmb		IAmb	21 09 31.4	
	comp=Z,15nm,1.0s							
NRIK	**Noril'sk**	**83.90**	**343**	*i* P		**P**	**21 09 29.5**	**-0.6**
NRIK				pmax		pmax		
	comp=Z,16nm,0.9s							
NRIK	**Noril'sk**	**83.90**	**343**	P		**P**	**21 09 30.1**	**0.0**
	comp=Z,10.0nm,0.8s,baz=119,slow=4.4,SNR=19							
	comp=Z,10.0nm,0.8s							
QSPA	**South Pole Qui**	**84.03**	**180**	P		**P**	**21 09 31.8**	**+0.6**
QSPA	**South Pole Qui**	**84.03**	**180**	P		**P**	**21 09 31.5**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=297,slow=0.6,SNR=56							
	comp=Z,14nm,0.6s							
J20K	**Nowinta River**	**84.06**	**23**	P		**P**	**21 09 30.8**	**-0.3**
J20K				IAmb		IAmb	21 09 44.0	
	comp=Z,8.7nm,1.0s							
BVAR	**Borovoye Array**	**84.15**	**325**	P		**P**	**21 09 32.4**	**+0.6**
	comp=Z,26nm,0.8s,baz=112,slow=6.6,SNR=60							
	comp=Z,26nm,0.8s							
SKT	**Skwentna**	**84.19**	**26**	P		**P**	**21 09 30.1**	**-1.7**
BRVK	**Borovoye**	**84.22**	**325**	P		**P**	**21 09 31.4**	**-0.7**
BRVK	**Borovoye**	**84.22**	**325**	*i* P		**P**	**21 09 31.5**	**-0.7**
BRVK				pmax		pmax		
	comp=Z,20nm,1.0s							
SUA	**Susitna One**	**84.32**	**26**	P		**P**	**21 09 31.5**	**-1.1**
SUA				IAmb		IAmb	21 09 33.2	
	comp=Z,12nm,1.0s							
FIS	**Fire Island**	**84.43**	**27**	P		**P**	**21 09 32.7**	**-0.3**
E19K	**Redstone River**	**84.50**	**20**	IAmb		IAmb	21 09 34.9	
	comp=Z,9.7nm,0.9s							
CAST	**Castle Rocks**	**84.55**	**24**	P		**P**	**21 09 33.2**	**-0.4**
CAST				IAmb		IAmb	21 09 34.9	
	comp=Z,6.8nm,1.0s							
D19K	**Kuna River**	**84.74**	**19**	IAmb		IAmb	21 09 36.4	
	comp=Z,7.0nm,0.8s							
F20K	**Avaraart Lake**	**84.81**	**20**	P		**P**	**21 09 34.1**	**-0.7**
KTH	**Kantishna Hill**	**85.08**	**24**	P		**P**	**21 09 35.5**	**-0.8**
PMR	**Palmer**	**85.08**	**26**	P		**P**	**21 09 34.8**	**-1.5**
PMR				IAmb		IAmb	21 09 36.6	
	comp=Z,15nm,1.0s							
PMR	**Palmer**	**85.08**	**26**	P		**P**	**21 09 34.8**	**-1.5**
PMR				pmax		pmax		
	comp=Z,15nm,1.0s							
H21K	**Melozitna Rive**	**85.23**	**22**	P		**P**	**21 09 37.0**	**+0.1**
GHO	**Glory Hole Cre**	**85.24**	**26**	P		**P**	**21 09 36.5**	**-0.7**
BPAW	**Bear Paw Mtn.**	**85.28**	**24**	P		**P**	**21 09 36.2**	**-1.1**
BPAW				IAmb		IAmb	21 09 53.1	
	comp=Z,6.6nm,1.0s							
KNK	**Knik Glacier**	**85.32**	**27**	P		**P**	**21 09 37.4**	**-0.1**
KNK				IAmb		IAmb	21 09 38.8	
	comp=Z,12nm,0.7s							
SML	**Sawmill**	**85.52**	**26**	P		**P**	**21 09 38.3**	**-0.3**
MLY	**Manley**	**85.75**	**23**	IAmb		IAmb	21 09 52.0	
	comp=Z,7.8nm,0.9s							
DHY	**Denali Highway**	**86.39**	**25**	IAmb		IAmb	21 09 58.6	
	comp=Z,12nm,0.8s							
B21K	**Ikpikpuk River**	**86.39**	**18**	IAmb		IAmb	21 09 44.0	
	comp=Z,6.9nm,0.7s							
WRH	**Wood River Hil**	**86.59**	**24**	IAmb		IAmb	21 09 43.3	
	comp=Z,7.2nm,0.8s							
CCB	**Clear Creek Bu**	**86.77**	**24**	IAmb		IAmb	21 09 44.3	
	comp=Z,9.3nm,0.8s							
IL31		**87.18**	**24**	IAmb		IAmb	21 09 45.7	
	comp=Z,7.4nm,0.8s							
ILAR	**Eielson Array**	**87.18**	**24**	P		**P**	**21 09 44.3**	**-2.3**
ILAR	**Eielson Array**	**87.18**	**24**	P		**P**	**21 09 44.9**	**-1.7**
	comp=Z,6.2nm,0.7s,baz=257,slow=4.8,SNR=61							
	comp=Z,6.2nm,0.7s							
J25K	**Salcha River,**	**87.74**	**24**	IAmb		IAmb	21 09 49.8	
	comp=Z,8.6nm,1.0s							
F24K	**Squaw Lake**	**87.77**	**21**	IAmb		IAmb	21 09 51.5	
	comp=Z,10.0nm,1.0s							
L26K	**Log Cabin Wild**	**88.11**	**26**	IAmb		IAmb	21 10 03.2	
	comp=Z,7.0nm,1.0s							
L27K	**Beaver Creek,**	**88.78**	**26**	IAmb		IAmb	21 09 55.4	
	comp=Z,5.4nm,0.9s							
E25K	**Arctic Village**	**88.81**	**21**	IAmb		IAmb	21 09 56.4	
	comp=Z,8.2nm,1.1s							
K27K	**Chicken**	**88.94**	**25**	P		**P**	**21 09 55.8**	**+0.8**
K27K				IAmb		IAmb	21 09 57.0	
	comp=Z,10nm,0.9s							
BMAR	**Burnt Mountain**	**88.94**	**22**	P		**P**	**21 09 55.8**	**+0.8**
EGAK	**Eagle**	**89.52**	**25**	P		**P**	**21 09 57.4**	**-0.3**
EGAK				IAmb		IAmb	21 10 09.9	
	comp=Z,8.5nm,1.0s							
ABKAR	**Akbulak array**	**89.66**	**319**	P		**P**	**21 09 57.4**	**-1.3**
ARU	**Arti**	**91.60**	**326**	*i* P		**P**	**21 10 05.3**	**-2.2**
ARU				pmax		pmax		
	comp=Z,23nm,3.1s							
ELIB	**Princess Elisa**	**93.08**	**196**	*d*P		**P**	**21 10 15.8**	**+1.4**
	comp=Z,5.5nm,0.9s							
BELG	**Belogornoye**	**97.69**	**322**	*i* P		**P**	**21 10 34.1**	**-1.4**
BELG				pmax		pmax		
	comp=Z,1.0nm,0.7s							
FINES	**FINESS Array B**	**107.66**	**333**	P		**Pdif**	**21 11 30.8**	**+11**
HFS	**Hagfors**	**113.67**	**335**	P		**Pdif**	**21 11 48.7**	**+2.2**
EKA	**Eskdalemuir Ar**	**123.65**	**337**	PKP		**PKPdf**	**21 15 58.0**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=42,slow=2.2,SNR=1.5							
ESK	**Eskdalemuir**	**123.68**	**337**	P		**Pdif**	**21 12 32.0**	**+0.9**
ESK				pmax		pmax		
	comp=Z,59nm,1.5s							
PLCA	**Paso Flores**	**124.49**	**150**	PKP		**PKiKP**	**21 16 01.2**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=234,slow=2.0,SNR=5.6							
SCHQ	**Schefferville**	**125.81**	**21**	PKP		**PKPdf**	**21 16 02.3**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=333,slow=2.3,SNR=1.7							
GUY2C	**Guyana, Caldas**	**142.23**	**89**	*e*P		**PKPdf**	**21 16 31.9**	**-2.9**
ORTC	**Ortega, Tolima**	**142.27**	**91**	*e*P		**PKPdf**	**21 16 30.3**	**-4.1**
CPUP	**Villa Florida**	**142.56**	**150**	PKP		**PKPdf**	**21 16 35.3**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=19,slow=2.8,SNR=5.2							
ROSC	**El Rosal**	**143.25**	**90**	PKP		PKPbc	21 16 34.8	+1.3
	comp=Z,12nm,0.6s,baz=0.5,slow=21,SNR=6.7			

comp=Z,4.8nm,0.7s,baz=194,slow=9.6,SNR=7.8
comp=Z,4.8nm,0.7s
PETK Petropavlovsk- 60.56 10 P P 21 09 45.6 -1.7
comp=Z,6.2nm,0.9s,baz=207,slow=8.3,SNR=5.0
comp=Z,6.2nm,0.9s
SONM Songino Array 63.07 333 P P 21 10 04.5 +0.1
comp=Z,1.2nm,0.7s,baz=159,slow=7.3,SNR=3.7
comp=Z,1.2nm,0.7s
VNDA Vanda 71.71 176 P P 21 11 00.2 +1.7
comp=Z,3.2nm,0.8s,baz=334,slow=5.5,SNR=5.5
comp=Z,3.2nm,0.8s
MK31 Makanchi Array 75.54 322 P P 21 11 21.7 +0.2
MKAR Makanchi Array 75.54 322 P P 21 11 21.9 +0.3
MKAR Makanchi Array 75.54 322 P P 21 11 21.6 0.0
comp=Z,5.4nm,0.7s,baz=106,slow=7.7,SNR=10
comp=Z,5.4nm,0.7s
MAKZ Makanchi 75.74 322 P P 21 11 22.7 0.0
MAKZ IAmb IAmb 21 11 24.7
comp=Z,13nm,1.1s
ZALV Zalesovo Beam 77.47 329 P P 21 11 31.9 -0.3
comp=Z,1.5nm,0.6s,baz=119,slow=6.4,SNR=5.0
comp=Z,1.5nm,0.6s
KURBB Kurchatov Arra 79.42 324 P P 21 11 43.5 +0.5
comp=Z,1.1nm,0.6s,baz=119,slow=4.7,SNR=5.8
comp=Z,1.1nm,0.6s
ARSB Arslanbob 79.72 314 P P 21 11 44.9 -0.2
SIMJ Simiganj 81.89 310 P P 21 11 57.2 +0.4
SIMJ IAmb IAmb 21 11 58.7
comp=Z,9.3nm,1.1s
KKAR Karatay Array 82.00 315 P P 21 11 57.0 -0.1
H17K Granite Mounta 82.46 21 P P 21 11 59.0 0.0
H17K IAmb IAmb 21 12 03.4
comp=Z,6.3nm,0.9s
QSPA South Pole Qui 83.53 180 P P 21 12 06.0 +1.2
QSPA South Pole Qui 83.53 180 P P 21 12 05.8 +1.0
comp=Z,17nm,0.8s,baz=309,slow=0.8,SNR=20
comp=Z,17nm,0.8s
NRIK Noril'sk 84.59 343 P P 21 12 09.7 -0.2
comp=Z,4.6nm,0.7s,baz=115,slow=6.2,SNR=5.6
comp=Z,4.6nm,0.7s
E19K Redstone River 84.72 19 P P 21 12 10.2 -0.4
E19K IAmb IAmb 21 12 14.5
comp=Z,6.1nm,0.9s
BVAR Borovoye Array 84.99 325 P P 21 12 12.3 +0.1
comp=Z,6.3nm,0.8s,baz=114,slow=7.3,SNR=7.8
comp=Z,6.3nm,0.8s
F20K Avaraart Lake 85.03 20 P P 21 12 13.4 +1.4
BRVK Borovoye 85.06 325 P P 21 12 13.3 +0.7
BRVK IAmb IAmb 21 12 22.1
comp=Z,7.8nm,1.1s
RND Reindeer 86.03 25 P P 21 12 16.7 -0.6
RND IAmb IAmb 21 12 29.8
comp=Z,8.8nm,1.0s
B21K Ikpikpuk River 86.64 18 P P 21 12 20.3 +0.3
B21K IAmb IAmb 21 12 30.7
comp=Z,4.9nm,0.7s
ILAR Eielson Array 87.34 24 P P 21 12 22.6 -0.9
comp=Z,2.3nm,0.8s,baz=260,slow=5.0,SNR=6.4
comp=Z,2.3nm,0.8s
J25K Salcha River, 87.89 24 P P 21 12 26.4 +0.1
F24K Squaw Lake 87.97 21 P P 21 12 27.0 +0.5
F24K IAmb IAmb 21 12 32.2
comp=Z,6.3nm,0.9s
C23K Itkillik River 87.98 18 P P 21 12 27.1 +0.6
D24K Happy Valley 88.28 19 P P 21 12 29.0 +1.1
K29M Barlow Dome 90.98 26 P P 21 12 41.1 +0.3
OK032 Salt Plains WL 116.53 52 PKPdf 21 18 20.0 -1.2
PLCA Paso Flores 123.68 149 PKP PKiKP 21 18 36.4 +1.1
comp=Z,0.7nm,0.6s,baz=234,slow=5.5,SNR=4.6
KIC Kosan Boka 148.27 272 ↑*i*PKP1 PKiKP 21 19 25.3 -0.5
comp=Z,21nm,0.8s
DBIC Dimbokro 148.39 272 PKPbc PKiKP 21 19 25.4 -0.6
comp=Z,16nm,0.8s,baz=96,slow=3.0,SNR=12
LIC Lamto 148.55 271 ↑*i*PKP1 PKiKP 21 19 26.1 -0.3
comp=Z,48nm,0.7s
TIC Toumodi 148.55 272 ↑*i*PKP1 PKiKP 21 19 25.9 -0.5
comp=Z,26nm,0.9s

*IDC **25** 21:05:52.0±1.3,6.°11S×143.°25E,h0km,mb3.8/3, mbtmp4.0/6,ML1.6/1,Error ellipse: s-maj=42.5km s-min=30.1km az=87.0*

ISC 25 21:05:53.4±1.0,6.°2S±0.°1×143.°3E±0.°2,h10km,n6,σ0s85/6, mb3.9/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.99**	**131**	Pn	**Pn**	**21 07 08.2**	**-0.3**
	1.5nm,0.3s,baz=165,slow=17,SNR=1.5						
	3.9nm,0.3s						
WRA	**Warramunga Arr**	**16.26**	**212**	Pn	**Pn**	**21 09 41.7**	**-0.3**
	8.5nm,1.0s,baz=29,slow=13,SNR=1.2						
WRA				Lg	Lg	21 14 25.9	
	0.4nm,0.3s,baz=244,slow=44,SNR=3.5						
ASAR	**Alice Springs**	**19.64**	**207**	P	**P**	**21 10 23.1**	**+0.8**
	11nm,0.6s,baz=26,slow=13,SNR=2.4						
MKAR	**Makanchi Array**	**75.31**	**322**	P	**P**	**21 17 36.9**	**-0.1**
	0.4nm,0.7s,baz=106,slow=4.7,SNR=3.2						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**84.75**	**325**	P	**P**	**21 18 27.0**	**-0.8**
	0.7nm,0.6s,baz=106,slow=5.4,SNR=4.3						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**87.07**	**24**	P	**P**	**21 18 39.9**	**+0.9**
	0.4nm,0.5s,baz=255,slow=4.5,SNR=8.6						
	0.4nm,0.5s						

*IDC **25** 21:07:04.0±1.0,6.°31S×143.°90E,h0km,mb4.0/7, mbtmp4.1/9,ML1.6/1,MS5.2/1,Error ellipse: s-maj=37.8km s-min=23.7km az=62.0*

ISC 25 21:07:09.3±0.7,6.°4S±0.°1×143.°9E±0.°2,h35km,n11, σ0s59/11,mb4.0/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.45**	**133**	Pn	**Pn**	**21 08 13.5**	**-0.8**
	2.1nm,0.3s,baz=326,slow=22,SNR=1.6						
PMG				Sn	**Sn**	**21 09 05.8**	**+0.9**
	1.5nm,0.3s,baz=35,slow=7.0,SNR=3.6						
	6.4nm,0.4s						
CTA	**Charters Tower**	**13.85**	**171**	LR	LR	21 16 27.2	
	comp=Z,9μm,18.6s,baz=9.5,slow=41						
ASAR	**Alice Springs**	**19.71**	**208**	P	**P**	**21 11 36.2**	**+0.4**
	18nm,0.7s,baz=35,slow=10.0,SNR=6.9						
KSRS	**Korea Array**	**46.05**	**342**	P	**P**	**21 15 30.4**	**+0.8**
	1.4nm,0.8s,baz=197,slow=29,SNR=4.6						
	1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.70**	**300**	P	**P**	**21 16 05.5**	**-0.4**
	0.9nm,0.6s,baz=117,slow=6.1,SNR=8.0						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**75.81**	**321**	P	**P**	**21 18 51.8**	**0.0**
	1.3nm,0.8s,baz=102,slow=7.9,SNR=6.6						
	1.3nm,0.8s						
KURBB	**Kurchatov Arra**	**79.66**	**324**	P	**P**	**21 19 12.9**	**-0.3**
	0.2nm,0.2s,baz=96,slow=4.7,SNR=3.0						
	0.2nm,0.2s						
NRIK	**Noril'sk**	**84.67**	**343**	P	**P**	**21 19 39.0**	**+0.1**
	2.3nm,0.6s,baz=140,slow=4.4,SNR=5.5						
	2.3nm,0.6s						
BVAR	**Borovoye Array**	**85.23**	**324**	P	**P**	**21 19 42.6**	**+0.5**
	2.2nm,0.8s,baz=116,slow=6.8,SNR=7.5						
	2.2nm,0.8s						
ILAR	**Eielson Array**	**87.03**	**24**	P	**P**	**21 19 50.5**	**-0.3**
	0.7nm,0.8s,baz=270,slow=4.5,SNR=4.3						
	0.7nm,0.8s						
DBIC	**Dimbokro**	**148.93**	**272**	PKPbc	**PKPbc**	**21 26 54.3**	**-0.3**
	4.4nm,0.8s,baz=252,slow=2.2,SNR=4.8						

IDC 25 21:09:50.5±7.0,5.°84S×142.°83E,h0km,mb3.6/2, mbtmp3.8/4,ML3.8/2,Error ellipse: s-maj=259.9km s-min=34.4km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.27**	**210**	Pn	Pn	21 13 40.9	+0.4
	0.4nm,0.3s,baz=32,slow=13,SNR=1.8						
	2.3nm,0.8s						
ASAR	**Alice Springs**	**19.69**	**205**	P	P	21 14 21.3	-0.2
	0.2nm,0.3s,baz=32,slow=10.0,SNR=5.3						
	4.8nm,0.7s						
MKAR	**Makanchi Array**	**74.77**	**322**	P	P	21 21 32.7	+0.1
	0.2nm,0.5s,baz=96,slow=6.4,SNR=2.5						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**84.22**	**325**	P	P	21 22 23.8	0.0
	0.9nm,0.8s,baz=123,slow=5.3,SNR=3.8						
	0.9nm,0.8s						

*BEO **25** 21:10:24.8±1.2,39.°35N×26.°24E,h0km,ML3.5/5*
*ISK **25** 21:10:26.4,39.°55N×26.°02E,h9km,ML3.6/30*
*ATH **25** 21:10:28.7,39.°50N×26.°15E,h18km,ML3.4/18,Error ellipse: s-maj=1.3km s-min=0.5km az=229.0*
*THE **25** 21:10:28.2,39.°53N×26.°18E,h11km,ML3.6/9,Error ellipse: s-maj=1.1km s-min=0.4km az=102.0*
*AFAD **25** 21:10:28.0±0.0,39.°55N×26.°20E,h7km±1km,MW3.6*
*SOF **25** 21:10:29.5,39.°7N±0.°1×25.°91E±0.°08,h8km±19km, MD3.4/4*

ISC 25 21:10:27.5±0.8,39.°52N±0.°01×26.°18E±0.°02,h14km±4km, n172,σ0s85/220,17C-15D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.03**	**243**	P	**Pg**	**21 10 30.2**	**+0.2**
KOCA				S	**Sg**	**21 10 31.5**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.07**	**209**	Pg	**Pg**	**21 10 30.2**	**0.0**
GPNR				Sg	**Sg**	**21 10 32.1**	**0.0**
PRK	**Paraskevi**	**0.28**	**165**	P	**Pb**	**21 10 34.3**	**0.0**
PRK				S	**Sb**	**21 10 38.8**	**-0.1**
	24μm,0.8s						
PRK	**Paraskevi**	**0.28**	**165**	P	**Pb**	**21 10 34.4**	**0.0**
PRK				S	**Sb**	**21 10 38.8**	**-0.1**
PRK				AML	AML	21 10 39.1	
	comp=E,44456μm,0.2s						
PRK				AML	AML	21 10 40.6	
	comp=N,49684μm,0.4s						
EZN	**Ezine**	**0.33**	**20**	Pg	**Pg**	**21 10 34.5**	**+0.2**
EZN				Sg	**Sg**	**21 10 39.1**	**+0.2**
EZN	**Ezine**	**0.33**	**20**	P	**Pg**	**21 10 34.5**	**+0.2**
EZN				S	**Sg**	**21 10 39.0**	**+0.2**
	comp=N,9μm,0.3s						
BOZC	**Bozcaada**	**0.34**	**344**	P	**Pg**	**21 10 34.6**	**+0.2**
BOZC				P	**Pg**	**21 10 34.6**	**+0.2**
BOZC				S	**Sg**	**21 10 38.0**	**-1.1**
BAYC	**CANAKKALE_Bayr**	**0.36**	**52**	P	**Pg**	**21 10 34.9**	**0.0**
BAYC				S	**Sg**	**21 10 39.3**	**-0.6**
SIGR	**SIGRI**	**0.39**	**219**	P	**Pb**	**21 10 36.0**	**-0.3**
SIGR				S	**Sb**	**21 10 41.8**	**-0.4**
	comp=N,8μm,0.3s						
SIGR	**SIGRI**	**0.39**	**219**	P	**Pb**	**21 10 36.0**	**-0.3**
SIGR				S	**Sb**	**21 10 41.8**	**-0.4**
SIGR				AML	AML	21 10 42.4	
	comp=N,15614μm,0.3s						
SIGR				AML	AML	21 10 42.7	
	comp=E,16428μm,0.3s						
AYVA	**Ayvalik**	**0.45**	**117**	P	**Pb**	**21 10 36.9**	**-0.3**
LESV	**Lesvos island,**	**0.51**	**144**	P	**Pb**	**21 10 38.3**	**+0.1**
LESV				S	**Sb**	**21 10 45.4**	**0.0**
	comp=E,21μm,0.3s						
ECEA	**Canakkale, Ece**	**0.53**	**360**	P	**Pg**	**21 10 38.0**	**+0.2**
ECEA				S	**Sg**	**21 10 44.3**	**-0.6**
EAG3	**Mitilini, Lesv**	**0.53**	**145**	P	**Pb**	**21 10 38.5**	**-0.1**
EAG3				S	**Sb**	**21 10 46.4**	**+0.4**
CNKL	**anakkale-Mer**	**0.57**	**16**	P	**Pg**	**21 10 38.6**	**-0.1**
CNKL				P	**Pb**	**21 10 38.8**	**-0.6**
CNKL				S	**Sg**	**21 10 45.8**	**-0.6**
COMU	**Canakkale**	**0.62**	**21**	Pg	**Pg**	**21 10 39.9**	**+0.2**
COMU				Sg	**Sb**	**21 10 48.9**	**0.0**
GOAD	**anakkale-G¶**	**0.68**	**342**	P	**Pg**	**21 10 40.6**	**0.0**
GOAD				S	**Sg**	**21 10 48.5**	**-1.2**
BUHA	**Balikesir, Bur**	**0.70**	**91**	P	**Pg**	**21 10 41.2**	**+0.1**
GADA	**Gvkgeada**	**0.71**	**343**	Pg	**Pg**	**21 10 40.8**	**-0.5**
GADA				Sg	**Sg**	**21 10 48.8**	**-1.8**
GOKC	**Gokceada-Canak**	**0.71**	**344**	Pg	**Pg**	**21 10 38.9**	**-2.4**
DKL	**Dikili**	**0.72**	**128**	Pg	**Pn**	**21 10 42.9**	**-0.4**
DKL				Sg	**Sn**	**21 10 55.3**	**+1.2**
CAND	**Candarli**	**0.74**	**139**	Pg	**Pn**	**21 10 43.3**	**-0.3**
IZMD	**zmir-Dikili-**	**0.79**	**132**	P	**Pn**	**21 10 43.9**	**-0.4**
LIA	**Limnos Island**	**0.85**	**297**	P	**Pb**	**21 10 44.4**	**+0.2**
LIA	**Limnos Island**	**0.85**	**297**	P	**Pb**	**21 10 44.4**	**+0.2**
LIA				S	**Sb**	**21 10 55.5**	**0.0**
LIA				AML	AML	21 10 57.2	
	comp=E,11269μm,0.3s						
LIA				AML	AML	21 10 59.3	
	comp=N,11062μm,0.2s						
KARB	**zmir-Karabur**	**0.87**	**168**	P	**Pn**	**21 10 45.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.91**	**15**	Pg	**Pb**	**21 10 44.5**	**-0.6**
FOCM	**Foa**	**0.91**	**152**	Pg	**Pn**	**21 10 45.6**	**-0.3**
EFSA	**Agios Efstrati**	**0.92**	**272**	P	**Pn**	**21 10 45.6**	**-0.4**
EFSA				S	**Sb**	**21 10 57.4**	**+0.1**
EFSA				AML	AML	21 10 59.5	
	comp=E,5317μm,0.5s						
EFSA				AML	AML	21 11 01.3	
	comp=N,5330μm,0.6s						
LPK	**Lapseki**	**0.97**	**28**	Pg	**Pb**	**21 10 45.9**	**-0.2**
EAG2	**Marmaro, Chios**	**0.97**	**183**	P	**Pn**	**21 10 46.8**	**+0.1**
EAG2				S	**Sb**	**21 10 58.7**	**-0.2**
SMTH	**Samothraki Isl**	**1.07**	**333**	P	**Pn**	**21 10 48.1**	**-0.1**
SMTH				S	**Sg**	**21 11 02.4**	**+0.1**
	comp=N,2μm,0.2s						
SMTH	**Samothraki Isl**	**1.07**	**333**	P	**Pb**	**21 10 47.8**	**-0.2**
SMTH				S	**Sg**	**21 11 02.3**	**0.0**
SMTH				AML	AML	21 11 03.5	
	comp=E,3041μm,0.2s						
SMTH				AML	AML	21 11 03.8	
	comp=N,3507μm,0.2s						
PSRA	**Psara**	**1.08**	**206**	P	**Pb**	**21 10 48.1**	**0.0**
PSRA				AML	AML	21 11 06.2	
	comp=E,12944μm,0.3s						
PSRA				AML	AML	21 11 07.7	
	comp=N,14109μm,0.2s						
ENZZ	**Sultanice-Enez**	**1.09**	**359**	Pg	**Pb**	**21 10 46.9**	**-1.3**
CHOS	**Chios island**	**1.13**	**185**	Pn	**Pb**	**21 10 48.8**	**-0.1**
CHOS	**Chios island**	**1.13**	**185**	P	**Pg**	**21 10 49.2**	**-0.1**
CHOS				S	**Sn**	**21 11 04.6**	**+0.1**
	comp=N,4μm,0.2s						
CHOS	**Chios island**	**1.13**	**185**	P	**Pg**	**21 10 49.2**	**-0.1**
CHOS				S	**Sb**	**21 11 02.5**	**-1.0**
CHOS				AML	AML	21 11 08.8	
	comp=N,5612μm,0.3s						
CHOS				AML	AML	21 11 11.1	
	comp=E,9471μm,0.2s						
BALY	**Balya**	**1.14**	**78**	P	**Pg**	**21 10 49.3**	**-0.2**
BALY				S	**Sb**	**21 11 03.3**	**-0.4**
CAVK	**Edirne/Enez-Ca**	**1.17**	**360**	P	**Pb**	**21 10 49.6**	**0.0**
ERIK	**Erikli-Kesan**	**1.18**	**13**	Pn	**Pn**	**21 10 49.2**	**-0.5**
URLA	**Izmir**	**1.20**	**164**	P	**Pb**	**21 10 50.0**	**-0.1**
URLA				S	**Sb**	**21 11 05.7**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.20**	**96**	P	**Pg**	**21 10 50.9**	**+0.2**
ENEZ	**Enez**	**1.22**	**359**	Pn	**Pn**	**21 10 49.1**	**-1.1**
ENEZ	**Enez**	**1.22**	**359**	P	**Pb**	**21 10 50.5**	**+0.1**
ENEZ				S	**Sb**	**21 11 06.0**	**0.0**
	comp=E,5μm,0.5s						
KRBG	**Karabiga-Canak**	**1.23**	**44**	Pn	**Pg**	**21 10 50.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.28**	**65**	Pn	**Pg**	**21 10 51.9**	**-0.2**
KNL	**Balıkesir**	**1.28**	**54**	P	**Pn**	**21 10 51.2**	**+0.1**
ZEYE	**Izmir, Urla-Ze**	**1.30**	**169**	P	**Pn**	**21 10 51.3**	**0.0**
BKES	**Balkesir-Mer**	**1.37**	**80**	P	**Pb**	**21 10 53.3**	**+0.3**
BKES				S	**Sg**	**21 11 11.0**	**-0.7**
ALN	**Alexandroupoli**	**1.38**	**356**	Pn	**Pn**	**21 10 51.8**	**-0.6**
ALN	**Alexandroupoli**	**1.38**	**356**	P	**Pb**	**21 10 52.9**	**-0.3**
ALN				S	**Sb**	**21 11 10.9**	**+0.2**
	comp=E,3μm,0.5s						
ALN	**Alexandroupoli**	**1.38**	**356**	P	**Pn**	**21 10 52.3**	**-0.1**
ALN				S	**Sn**	**21 11 10.5**	**0.0**
ALN				AML	AML	21 11 12.2	
	comp=E,4061μm,0.5s						
ALN				AML	AML	21 11 13.1	
	comp=N,6772μm,0.5s						
RKY	**Sarkoy-Tekirda**	**1.40**	**33**	Pn	**Pb**	**21 10 53.3**	**-0.2**
SART	**Tekirdag**	**1.40**	**33**	P	**Pb**	**21 10 53.4**	**-0.2**
AKHS	**Akhisar**	**1.42**	**116**	P	**Pb**	**21 10 53.7**	**-0.1**
AKS	**Akhisar**	**1.42**	**116**	Pn	**Pg**	**21 10 54.5**	**-0.3**
BLKS	**Balkesir-Sus**	**1.43**	**75**	P	**Pb**	**21 10 54.0**	**+0.1**
BLKS				P	**Pg**	**21 10 54.4**	**-0.6**
MRMT	**Marmara Adasi**	**1.54**	**45**	Pn	**Pb**	**21 10 55.3**	**-0.6**
EDC	**Edincik**	**1.54**	**57**	Pn	**Pb**	**21 10 55.7**	**-0.1**
GMLD	**Gumuldur**	**1.55**	**158**	Pn	**Pn**	**21 10 55.0**	**+0.3**
THAS	**Thassos island**	**1.56**	**315**	P	**Pn**	**21 10 54.7**	**-0.2**
THAS	**Thassos island**	**1.56**	**315**	P	**Pn**	**21 10 54.6**	**-0.3**
THAS				AML	AML	21 11 20.3	
	comp=N,1082μm,0.3s						
THAS				AML	AML	21 11 20.7	
	comp=E,1206μm,0.2s						
DGB	**zmir**	**1.56**	**159**	P	**Pn**	**21 10 54.8**	**-0.1**
GOMA	**Golmarmara-Man**	**1.58**	**120**	Pn	**Pb**	**21 10 56.6**	**+0.1**
UKOP	**Uzunkopru-Edir**	**1.65**	**12**	Pn	**Pn**	**21 10 55.8**	**-0.3**
BAND	**Balkesir-Ban**	**1.70**	**60**	P	**Pb**	**21 10 57.8**	**-0.8**
RDO	**Rodhopi**	**1.70**	**344**	Pn	**Pn**	**21 10 55.7**	**-1.1**
RDO	**Rodhopi**	**1.70**	**344**	P	**Pn**	**21 10 57.2**	**+0.4**
RDO				AML	AML	21 11 24.0	
	comp=E,1224μm,0.3s						
RDO				AML	AML	21 11 24.4	
	comp=N,1146μm,0.5s						
DURS	**Dursunbey**	**1.78**	**87**	P	**Pb**	**21 10 59.0**	**-0.9**
DURS				S	**Sn**	**21 11 20.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.84**	**65**	Pn	**Pb**	**21 10 59.8**	**-1.1**
KYMI	**Kymi, Euboea I**	**1.84**	**242**	P	**Pn**	**21 10 58.4**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.84**	**242**	P	**Pn**	**21 10 58.5**	**-0.3**
KYMI				AML	AML	21 11 29.3	
	comp=E,1423μm,0.6s						
KYMI				AML	AML	21 11 29.3	
	comp=N,2051μm,0.5s						
OUR	**Ouranopolis**	**1.87**	**297**	Pn	**Pn**	**21 10 58.4**	**-0.8**
OUR	**Ouranopolis**	**1.87**	**297**	P	**Pn**	**21 10 59.5**	**+0.3**
OUR	**Ouranopolis**	**1.87**	**297**	P	**Pn**	**21 10 59.2**	**0.0**
OUR				AML	AML	21 11 31.3	
	comp=E,986μm,0.4s						
OUR				AML	AML	21 11 34.9	
	comp=N,808μm,0.5s						
SMG	**Samos**	**1.88**	**164**	P	**Pn**	**21 10 59.3**	**+0.1**
SMG				AML	AML	21 11 31.3	
	comp=E,2566μm,0.4s						
SMG				AML	AML	21 11 31.7	
	comp=N,1840μm,0.5s						
DST	**Dursunbey**	**1.89**	**87**	Pn	**Pb**	**21 11 01.3**	**-0.6**
KAVA	**Kavala**	**1.95**	**320**	P	**Pn**	**21 11 00.3**	**+0.1**
KAVA	**Kavala**	**1.95**	**320**	P	**Pn**	**21 11 00.4**	**+0.1**
KAVA				S	**Sn**	**21 11 22.7**	**-1.8**
IZMR	**zmir-demi**	**1.96**	**134**	P	**Pn**	**21 11 01.1**	**+0.8**
PAIG	**Paliouri**	**1.97**	**283**	Pn	**Pn**	**21 10 58.9**	**-1.6**
KVLA	**Kavala**	**1.97**	**317**	P	**Pn**	**21 11 00.6**	**+0.1**
KVLA				S	**Sn**	**21 11 23.3**	**-1.8**
CRLT	**Corlu**	**2.00**	**36**	Pn	**Pb**	**21 11 02.5**	**-1.3**
KOKK	**Kokkinochori,**	**2.11**	**309**	P	**Pn**	**21 11 02.2**	**-0.1**
KOKK	**Kokkinochori,**	**2.11**	**309**	P	**Pn**	**21 11 02.2**	**-0.3**
TNSA	**Tinos**	**2.13**	**202**	P	**Pn**	**21 11 02.0**	**-0.7**
ORLT	**Orhaneli**	**2.16**	**75**	Pn	**Pb**	**21 11 04.9**	**-1.6**
KULA	**Kula-Manisa**	**2.18**	**117**	Pn	**Pb**	**21 11 05.4**	**-1.4**
KDZ	**Kurdzhali**	**2.21**	**343**	*i* P	**Pn**	**21 11 04.4**	**+0.6**
KDZ				S	**Sn**	**21 11 31.0**	**+0.1**
SIMA	**Simav-Kutahya**	**2.22**	**100**	Pn	**Pb**	**21 11 06.2**	**-1.3**
DION	**Dionisos Attik**	**2.27**	**231**	P	**Pn**	**21 11 05.5**	**+0.9**
DION	**Dionisos Attik**	**2.27**	**231**	P	**Pn**	**21 11 05.2**	**+0.6**
DION				AML	AML	21 11 45.9	
	comp=N,588μm,0.4s						
DION				AML	AML	21 11 50.0	
	comp=E,719μm,0.4s						
PTL	**Penteli**	**2.33**	**232**	P	**Pn**	**21 11 06.0**	**+0.6**
PTL				AML	AML	21 11 47.7	
	comp=E,337μm,0.6s						
PTL				AML	AML	21 11 53.0	
	comp=N,386μm,0.6s						
EDRB	**Edirne**	**2.37**	**10**	P	**Pn**	**21 11 06.3**	**+0.3**
ATHU	**Athens Univers**	**2.43**	**231**	P	**Pn**	**21 11 06.1**	**-0.7**
RZN	**Rozhen**	**2.44**	**334**	*i* P	**Pn**	**21 11 07.8**	**+0.7**
RZN				S	**Sn**	**21 11 35.3**	**-1.5**
APE	**Apeiranthos**	**2.50**	**192**	⇑P	**Pn**	**21 11 07.9**	**+0.2**
APE				⇓S	**Sn**	**21 11 38.6**	**+0.5**
APE	**Apeiranthos**	**2.50**	**192**	P	**Pn**	**21 11 07.5**	**-0.3**
APE				S	**Sn**	**21 11 38.6**	**+0.5**
APE	**Apeiranthos**	**2.50**	**192**	P	**Pn**	**21 11 07.4**	**-0.3**
VLY	**Voula,Athens**	**2.50**	**229**	P	**Pn**	**21 11 07.2**	**-0.1**
VLY	**Voula,Athens**	**2.50**	**229**	P	**Pn**	**21 11 07.3**	**-0.5**
SRS	**Serrai**	**2.54**	**310**	*e*Pn	**Pn**	**21 11 08.5**	**+0.2**
SRS				*e*Sg	**Sg**	**21 11 50.0**	**+0.8**
SRS	**Serrai**	**2.54**	**310**	P	**Pn**	**21 11 08.6**	**+0.2**
SRS				AML	AML	21 11 50.9	
	comp=N,204μm,0.4s						
SRS				AML	AML	21 11 53.1	
	comp=E,385μm,0.4s						
NVR	**Nevrokopi**	**2.54**	**317**	P	**Pn**	**21 11 09.6**	**+1.2**
DIM	**Dimitrovgrad**	**2.57**	**350**	P	**Pn**	**21 11 09.5**	**+0.8**
HORT	**Hortiatis**	**2.60**	**296**	P	**Pn**	**21 11 09.5**	**+0.3**
BODT	**Bodrum**	**2.61**	**160**	P	**Pn**	**21 11 09.7**	**+0.4**
VILL	**Villia**	**2.61**	**240**	P	**Pn**	**21 11 09.6**	**+0.2**
VIL2	**Platees**	**2.62**	**241**	P	**Pn**	**21 11 08.9**	**-0.5**
VIL2				AML	AML	21 11 55.7	
	comp=N,569μm,0.5s						
VIL2				AML	AML	21 11 59.2	
	comp=E,616μm,0.8s						
MMB	**Musomishta**	**2.74**	**318**	P	**Pn**	**21 11 12.2**	**+1.0**
MMB				S	**Sn**	**21 11 42.0**	**-2.2**
PLD	**Plovdiv**	**2.84**	**338**	*e*Pn	**Pn**	**21 11 13.5**	**+1.0**
LTK	**Loutraki**	**2.92**	**240**	P	**Pn**	**21 11 13.4**	**-0.1**
DAT	**Datca**	**3.00**	**158**	P	**Pn**	**21 11 15.1**	**+0.4**
KNT	**Kendrikon**	**3.00**	**304**	P	**Pn**	**21 11 15.6**	**+1.0**
KNT	**Kendrikon**	**3.00**	**304**	P	**Pn**	**21 11 15.2**	**+0.6**
KNT				AML	AML	21 12 03.8	
	comp=E,228μm,0.7s						
KNT				AML	AML	21 12 04.6	
	comp=N,214μm,0.6s						
AGG	**Agios Georgios**	**3.02**	**262**	P	**Pn**	**21 11 15.4**	**+0.4**
THR8	**Santorini-Mono**	**3.15**	**190**	P	**Pn**	**21 11 16.6**	**-0.1**
THR3	**Thira Island,**	**3.16**	**191**	P	**Pn**	**21 11 16.8**	**-0.1**
SNT5	**Nea Kammeni, S**	**3.17**	**191**	P	**Pn**	**21 11 16.9**	**0.0**
MAKR	**Makrakomi, Fth**	**3.18**	**262**	P	**Pn**	**21 11 17.2**	**+0.1**
KRND	**KRANIDI**	**3.19**	**229**	P	**Pn**	**21 11 16.5**	**-0.8**
THR6	**Thira Island,**	**3.21**	**191**	P	**Pn**	**21 11 17.6**	**-0.1**
KKB	**Krupnik**	**3.28**	**316**	P	**Pn**	**21 11 20.6**	**+2.1**
VAY	**Valand

*NEIC **25** 21:11:39.7±1.2,5.7°70S±0.7°08×142.°34E±0.°04, h10km±1km, mb5.1/82, Error ellipse: s-maj=12.9km s-min=6.4km az=178.0*
*BJI **25** 21:11:40.9±0.0,5.°71S×142.°80E, h48km, mb4.7/72, mB5.3/2, Ms5.2/8, MS7.5/0.7*
*DJA **25** 21:11:42.0±0.2,6.°5S±3.°×14.°2E±.°, h10km, M5.3/30, mB5.9/5, mb5.0/30, MLv5.3/5, Mw(mB)5.5/5*
ISC 25 21:11:39.6±0.3,5.°69S±0.°05×142.°43E±0.°05, h10km, n283, σ1°22/259, mb5.0/108, 14C-5D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.28**	**289**	P	**Pn**	**21 12 03.3**	**-0.2**
MMPI	**Meraukе**	**3.42**	**216**	P	**Pn**	**21 12 33.5**	**+0.5**
GENI	**Genyem**	**3.82**	**324**	P	**Pn**	**21 12 41.2**	**+2.7**
GENI	**Genyem**	**3.82**	**324**	P	**Pn**	**21 12 40.7**	**+2.2**
SMPI	**Sarmi**	**5.23**	**315**	P	**Pn**	**21 12 59.5**	**+1.6**
	769nm,1.2s,9μm2.3nm						
PMG	**Port Moresby**	**5.96**	**129**	Pn	**Pn**	**21 13 08.3**	**+0.3**
PMG	**Port Moresby**	**5.96**	**129**	P	**Pn**	**21 13 08.9**	**+1.0**
PMG	**Port Moresby**	**5.96**	**129**	P	**Pn**	**21 13 08.8**	**+0.9**
PMG	**Port Moresby**	**5.96**	**129**	*ce*P	**Pn**	**21 13 08.4**	**+0.5**
PMG				pmax	pmax		
	comp=Z,115nm,1.7s						
PMG	**Port Moresby**	**5.96**	**129**	Pn	**Pn**	**21 13 08.5**	**+0.5**
	comp=Z,15nm,0.4s,baz=266,slow=9.5,SNR=15						
PMG				Sn	**Sn**	**21 14 14.5**	**-1.8**
	comp=Z,5.2nm,0.3s,baz=334,slow=9.6,SNR=3.5						
MANU	**Manus Island**	**6.11**	**54**	Pn	**Pn**	**21 13 11.5**	**+1.4**
COEN	**Coen**	**8.24**	**175**	Pn	**Pn**	**21 13 40.4**	**+1.0**
FAKI	**Fak Fak**	**10.52**	**285**		**Pn**	**21 14 09.6**	**-1.0**
FAKI	**Fak Fak**	**10.52**	**285**	P	**Pn**	**21 14 12.2**	**+1.6**
FAKI	**Fak Fak**	**10.52**	**285**	P	**Pn**	**21 14 08.9**	**-1.7**
	comp=Z,68nm,0.7s						
SAUI	**Saumlaki**	**11.29**	**258**		**Pn**	**21 14 19.5**	**-1.5**
SAUI	**Saumlaki**	**11.29**	**258**	P	**Pn**	**21 14 19.8**	**-1.3**
	comp=Z,487nm,1.0s,comp=Z,9μm						
KDU	**Kakadu**	**12.04**	**234**	P	**Pn**	**21 14 30.3**	**-1.0**
	baz=12,SNR=8.5						
KDU	**Kakadu**	**12.04**	**234**	P	**Pn**	**21 14 30.2**	**-1.1**
SWI	**Sorong**	**12.14**	**293**	P	**Pn**	**21 14 33.0**	**+0.2**
	comp=Z,64nm,0.8s						
MTSU	**Mount Surprise**	**12.50**	**172**	P	**Pn**	**21 14 41.5**	**+3.8**
	baz=13						
DRS	**Darwin Rock St**	**13.21**	**239**	P	**Pn**	**21 14 47.1**	**-0.2**
MTN	**Manton Dam**	**13.22**	**237**	P	**Pn**	**21 14 45.7**	**-1.8**
	baz=13,SNR=4.3						
MTN	**Manton Dam**	**13.22**	**237**		**Pn**	**21 14 45.6**	**-1.8**
MTN	**Manton Dam**	**13.22**	**237**	P	**Pn**	**21 14 47.7**	**+0.2**
CTA	**Charters Tower**	**14.78**	**166**	Pn	**Pn**	**21 15 09.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=16,slow=22,SNR=2.3						
CTA				Lg	Lg	21 19 28.9	
	comp=Z,0.7nm,0.3s,baz=54,slow=7.7,SNR=5.5						
	comp=Z,2.4nm,0.3s						
QIS	**Mount Isa**	**15.03**	**190**	P	**P**	**21 15 17.5**	**-0.1**
	baz=15,SNR=4.1						
QIS	**Mount Isa**	**15.03**	**190**	P	**Pn**	**21 15 11.0**	**-1.2**
LBMI	**Labuha**	**15.73**	**288**	P	**Pn**	**21 15 23.0**	**+1.6**
	comp=Z,74nm,1.1s						
WB0	**Warramunga Arr**	**16.03**	**208**		**Pn**	**21 15 26.0**	**+0.8**
WRAB	**Tennant Creek**	**16.19**	**208**	Pn	**Pn**	**21 15 27.0**	**-0.3**
WRAB	**Tennant Creek**	**16.19**	**208**	P	**Pn**	**21 15 27.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,49nm,0.8s						
WB2	**Warramunga Arr**	**16.20**	**208**	Pn	**Pn**	**21 15 26.5**	**-0.9**
WC3	**Warramunga Arr**	**16.20**	**208**	P	**Pn**	**21 15 28.8**	**+1.3**
	baz=16						
WRA	**Warramunga Arr**	**16.20**	**208**	Pn	**Pn**	**21 15 25.6**	**-1.9**
WRA	**Warramunga Arr**	**16.20**	**208**	P	**Pn**	**21 15 25.6**	**-1.9**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRA	**Warramunga Arr**	**16.20**	**208**	Pn	**Pn**	**21 15 24.8**	**-2.7**
	comp=Z,1.3nm,0.3s,baz=25,slow=13,SNR=5.1						
WRA				Sn	Sn	21 18 09.9	-18
	baz=25,slow=22						
WRA				Lg	Lg	21 20 09.1	
	comp=Z,1.4nm,0.3s,baz=40,slow=25,SNR=1.7						
	comp=Z,8.6nm,0.6s						
SANI	**Sanana**	**16.80**	**282**	P	**Pn**	**21 15 36.4**	**+1.3**
	comp=Z,22nm,0.8s						
HNR	**Honiara**	**17.75**	**103**	P	**Pn**	**21 15 48.6**	**+1.6**
HNR				IAmb	IAmb	21 15 52.3	
	comp=Z,106nm,0.8s						
HNR	**Honiara**	**17.75**	**103**	P	**Pn**	**21 15 47.6**	**+0.5**
	comp=Z,896nm,0.6s,baz=220,slow=5.0,SNR=12						
SOEI	**Soe**	**18.45**	**256**	P	**Pn**	**21 15 54.2**	**-1.5**
SOEI				IAmb	IAmb	21 16 04.7	
	comp=Z,84nm,0.8s						
SOEI	**Soe**	**18.45**	**256**	P	**Pn**	**21 15 55.7**	**0.0**
KMSI	**Cibinong**	**19.45**	**288**	P	**P**	**21 16 08.0**	**+1.5**
	comp=Z,137nm,0.9s						
AS31	**Alice Springs**	**19.66**	**204**	P	**P**	**21 16 07.6**	**-1.3**
ASAR	**Alice Springs**	**19.67**	**204**	P	**P**	**21 16 08.0**	**-0.9**
ASAR	**Alice Springs**	**19.67**	**204**	P	**P**	**21 16 08.8**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=31,slow=10,SNR=30						
ASAR				S	S	21 19 37.8	-13
	comp=Z,2.4nm,0.5s,baz=63,slow=41,SNR=2.6						
ASAR				Lg	Lg	21 21 56.0	
	comp=Z,0.5nm,0.3s,baz=21,slow=29,SNR=1.9						
	comp=Z,22nm,0.8s						
ASPA	**Alice Springs**	**19.67**	**204**	P	**P**	**21 16 10.5**	**+1.6**
	baz=20						
MMRI	**Maumere**	**20.25**	**261**	P	**P**	**21 16 14.2**	**-1.1**
MMRI				IAmb	IAmb	21 16 22.8	
	comp=Z,118nm,1.3s						
MMRI	**Maumere**	**20.25**	**261**	P	**P**	**21 16 16.6**	**+1.3**
	comp=Z,70nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.52**	**232**	P	**P**	**21 16 18.8**	**+0.7**
	baz=20,SNR=5.4						
EDFI	**Ende, Flores**	**20.80**	**260**	P	**P**	**21 16 22.3**	**+0.9**
	comp=Z,81nm,1.2s						
QLP	**Quilpie**	**20.84**	**175**	P	**P**	**21 16 23.6**	**+2.0**
	baz=21,SNR=17						
EIDS	**Eidsvold**	**21.25**	**158**	P	**P**	**21 16 30.2**	**+4.3**
	baz=21,SNR=5.8						
EIDS	**Eidsvold**	**21.25**	**158**		**P**	**21 16 25.7**	**-0.3**
MRSI	**Marisa**	**21.36**	**286**	P	**P**	**21 16 30.6**	**+3.3**
	comp=Z,70nm,1.1s						
BKSI	**Bulukumba**	**22.21**	**270**	P	**P**	**21 16 38.0**	**+1.5**
	comp=Z,29nm,1.1s						
KAPI	**Kappang**	**22.59**	**271**	P	**P**	**21 16 39.1**	**-1.5**
KAPI	**Kappang**	**22.59**	**271**	P	**P**	**21 16 39.1**	**-1.5**
KAPI				pmax	pmax		
	comp=Z,54nm,1.2s						
TOLI2	**Tolitoli**	**22.66**	**287**	P	**P**	**21 16 40.3**	**-0.9**
TTSI	**Tana Toraja**	**22.70**	**276**	P	**P**	**21 16 42.7**	**+1.0**
	comp=Z,31nm,1.5s,comp=Z,1μm						
WRKA	**Warakurna**	**23.53**	**214**	P	**P**	**21 16 49.0**	**-1.1**
	baz=24,SNR=11						
STKA	**Stephens Creek**	**26.06**	**182**	P	**P**	**21 17 15.1**	**+1.8**
	baz=26,SNR=5.1						
STKA	**Stephens Creek**	**26.06**	**182**	*i* P	**P**	**21 17 13.5**	**+0.2**
STKA	**Stephens Creek**	**26.06**	**182**	P	**P**	**21 17 13.9**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=3.1,slow=8.1,SNR=3.3						
STKA				Lg	Lg	21 25 23.4	
	comp=Z,0.2nm,0.3s,baz=82,slow=23,SNR=3.4						
STKA				LR	LR	21 27 34.7	
	comp=Z,4μm,19.6s,baz=300,slow=37						
	comp=Z,4.2nm,0.8s						
BBOO	**Buckleboo**	**27.63**	**192**	P	**P**	**21 17 31.2**	**+3.8**
	baz=28,SNR=4.5						
JOW	**Kunigami**	**35.12**	**338**	P	P	21 18 31.8	-1.6
	comp=Z,11nm,0.4s,baz=126,slow=18,SNR=2.0						
	comp=Z,11nm,0.4s						
MJAR	**Matsushiro Arr**	**42.20**	**355**	P	P	21 19 30.7	-2.0
	comp=Z,3.8nm,1.0s,baz=184,slow=9.7,SNR=7.7						
	comp=Z,3.8nm,1.0s						
MAJO	**Matsushiro**	**42.20**	**355**	*i* P	P	21 19 28.7	-4.0
MAJO				pmax	pmax		
	comp=Z,13nm,1.3s						
NJ2	**Nanjing**	**43.74**	**331**	*e*P	**P**	**21 19 46.3**	**+1.0**
NJ2				pP	**sP**	**21 19 56.5**	**+5.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GULI	**GuiLin**	**43.82**	**316**	P	**P**	**21 19 45.3**	**-0.7**
KSAR	**Wonju Array Be**	**45.01**	**344**	P	**P**	**21 19 54.4**	**-0.9**
KSAR	**Wonju Array Be**	**45.01**	**344**	P	**P**	**21 19 54.4**	**-0.9**
KSRS	**Korea Array**	**45.01**	**344**	P	**P**	**21 19 54.9**	**-0.4**
	comp=Z,8.9nm,1.1s,baz=160,slow=9.4,SNR=21						
	comp=Z,8.9nm,1.1s						
GYA	**Guiyang**	**47.15**	**314**	⇓P	**P**	**21 20 13.0**	**+0.5**
GYA				pmax	pmax		
	comp=Z,12nm,1.4s						
ENH	**Enshi**	**47.70**	**320**	P	**P**	**21 20 15.9**	**-0.7**
ENH				IAmb	IAmb	21 20 25.0	
	comp=Z,18nm,0.9s						
TIA	**Tai'an**	**47.97**	**332**	P	**P**	**21 20 18.3**	**-0.3**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PHRA	**Phrae**	**48.05**	**301**	P	P	21 20 16.9	-2.6
LYN	**LuoYang**	**49.01**	**327**	⇑P	**P**	**21 20 26.5**	**-0.2**
LYN				pmax	pmax		
	comp=Z,24nm,1.1s						
CMAR	**Chiang Mai Arr**	**49.14**	**300**	P	**P**	**21 20 27.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**49.14**	**300**	P	**P**	**21 20 27.6**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=123,slow=6.2,SNR=16						
	comp=Z,1.6nm,0.8s						
KMI	**Kunming**	**49.27**	**310**	⇓P	**P**	**21 20 30.0**	**+0.9**
KMI				pP	sP	21 20 37.8	+3.9
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
HNS	**HongShan**	**50.07**	**331**	⇓P	**P**	**21 20 34.8**	**+0.1**
HNS				pmax	pmax		
	comp=Z,19nm,1.2s						
USRK	**Ussuriysk Ar.**	**50.55**	**350**	P	**P**	**21 20 37.3**	**-0.9**
USRK	**Ussuriysk Ar.**	**50.55**	**350**	P	**P**	**21 20 38.1**	**-0.1**
	comp=Z,9.1nm,0.9s,baz=164,slow=7.9,SNR=12						
	comp=Z,9.1nm,0.9s						
XAN	**Xi'an**	**50.65**	**324**	⇓P	**P**	**21 20 39.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,20nm,1.5s						
PZH	**PanZhiHua**	**50.77**	**311**	P	**P**	**21 20 40.0**	**-0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MDJ	**Mudanjiang**	**51.40**	**348**	P	**P**	**21 20 44.0**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJT	**Baijiatuau**	**51.52**	**334**	P	**P**	**21 20 45.3**	**-0.3**
BJT				IAmb	IAmb	21 20 54.0	
	comp=Z,20nm,1.1s						
BJT	**Baijiatuau**	**51.52**	**334**	P	**P**	**21 20 45.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,20nm,1.1s						
BJI	**Beijing**	**51.54**	**334**	P	**P**	**21 20 45.8**	**+0.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CN2	**Changchun**	**51.60**	**344**	*e*P	**P**	**21 20 48.5**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2	**Chengdu**	**51.88**	**317**	P	**P**	**21 20 49.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**52.42**	**0**	*e*P	**P**	**21 20 52.3**	**+0.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
TNCH	**TengChong**	**52.49**	**308**	P	**P**	**21 20 53.8**	**+0.4**
TNCH				pmax	pmax		
	comp=Z,19nm,1.2s						
BNX	**BinXian**	**52.94**	**347**	⇑P	**P**	**21 20 55.0**	**-1.0**
BNX				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC	**Hu-ho-hao-te**	**54.29**	**331**	*e*P	**P**	**21 21 10.3**	**+4.1**
HHC				pP	sP	21 21 21.5	+10
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,290nm,4.9s						
HHC				LR	LR		
	comp=Z,740nm,18.6s						
HHC				LR	LR		
	comp=Z,890nm,15.5s						
BTO	**Baotou**	**54.85**	**330**	*e*P	**P**	**21 21 11.0**	**+0.7**
BTO				pP	sP	21 21 27.0	+11
BTO				sP	pP	21 21 34.0	+20
BTO				PP	**PP**	**21 23 16.8**	**+3.5**
BTO				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH	**Lanzhou**	**55.09**	**322**	*e*P	**P**	**21 21 13.0**	**+0.8**
LZH				pP	sP	21 21 23.0	+5.3
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
KLR	**Kul'dur**	**55.49**	**352**	*ce*P	**P**	**21 21 13.2**	**-1.4**
KLR				pmax	pmax		
	comp=Z,31nm,1.7s						
TYV	**Tymovskoe**	**56.33**	**0**	*e*P	**P**	**21 21 20.1**	**-0.5**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,4.8s						
HEH	**HeiHe**	**57.22**	**349**	*e*P	P	21 21 25.3	-1.6
HEH				pmax	pmax		
	comp=Z,11nm,1.2s						
SHL	**Shillong**	**58.08**	**305**	P	**P**	**21 21 32.4**	**-1.3**
SHL				IAmb	IAmb	21 21 34.5	
	comp=Z,27nm,1.1s						
SHL	**Shillong**	**58.08**	**305**	P	**P**	**21 21 32.4**	**-1.3**
SHL				pmax	pmax		
	comp=Z,27nm,1.1s						
HIA	**Hailar**	**58.20**	**343**	*i* P	P	21 21 32.3	-1.6
HIA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA	**Gaotai**	**59.67**	**323**	P	**P**	**21 21 44.8**	**+0.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
PEA0B	**Petropavlovsk-**	**59.99**	**11**	P	**P**	**21 21 45.8**	**-0.3**
PEA0B	**Petropavlovsk-**	**59.99**	**11**	*ce*P	**P**	**21 21 45.5**	**-0.7**
PETK	**Petropavlovsk-**	**59.99**	**11**	P	**P**	**21 21 45.4**	**-0.8**
	comp=Z,22nm,1.0s,baz=183,slow=4.0,SNR=12						
	comp=Z,22nm,1.0s						
LSA	**Lhasa**	**60.47**	**309**	P	P	21 21 48.5	-2.0
LSA				IAmb	IAmb	21 21 52.5	
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**60.47**	**309**	P	P	21 21 48.5	-2.0
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEA	**Zeya**	**60.58**	**350**	*e*P	**P**	**21 21 50.4**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
GOMU	**GeErMu**	**61.01**	**317**	P	**P**	**21 21 54.8**	**+0.8**
GOMU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	**Ulaanbaatar**	**61.74**	**334**	P	**P**	**21 21 57.9**	**-0.5**
ULN				IAmb	IAmb	21 22 07.0	
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**61.74**	**334**	*i* P	**P**	**21 21 57.5**	**-0.9**
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**62.01**	**333**	P	**P**	**21 21 59.6**	**-0.6**
SONM				IAmb	IAmb	21 22 08.7	
	comp=Z,19nm,1.6s						
SONM	**Songino Array**	**62.01**	**333**	P	**P**	**21 21 59.9**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=145,slow=5.4,SNR=7.6						
	comp=Z,1.3nm,0.7s						
CIT	**Chita**	**62.55**	**340**	*e*P	**P**	**21 22 04.0**	**+0.4**
CIT				*e*		21 22 09.0	
CIT				*e*		21 22 48.4	
CIT				pmax	pmax		
	comp=Z,55nm,2.0s						
ZAK	**Zakamensk**	**65.27**	**334**	*e*P	**P**	**21 22 21.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,17nm,1.6s						
MA2	**Magadan**	**65.40**	**5**	P	**P**	**21 22 21.4**	**-0.8**
MA2	**Magadan**	**65.40**	**5**	*ce*P	P	21 22 19.4	-2.7
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MOY	**Mondy**	**67.20**	**333**	*e*P	**P**	**21 22 34.0**	**0.0**
MOY				pmax	pmax		
	comp=Z,46nm,2.2s						
BOD	**Bodaibo**	**67.35**	**344**	*e*P	**P**	**21 22 33.8**	**-0.9**
BOD				pmax	pmax		
	comp=Z,14nm,1.6s						
YAK	**Yakutsk**	**68.24**	**354**	*e*P	P	21 22 38.5	-1.7
YAK				pmax	pmax		
	comp=Z,24nm,1.5s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
SEY	**Seymchan**	**68.85**	**5**	*ce*P	**P**	**21 22 42.8**	**-1.2**
SEY				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ	**Urumqi**	**69.65**	**321**	*e*P	**P**	**21 22 50.0**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
VNDA	**Vanda**	**72.52**	**176**	P	**P**	**21 23 06.3**	**+0.1**
VNDA				IAmb	IAmb	21 23 17.2	
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**72.52**	**176**	P	**P**	**21 23 06.3**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,14nm,1.2s						
VNDA	**Vanda**	**72.52**	**176**	P	**P**	**21 23 05.3**	**-0.9**
	comp=Z,5.1nm,1.1s,baz=321,slow=6.0,SNR=10						
	comp=Z,5.1nm,1.1s						
DGZ	**Jazzator, Alta**	**72.80**	**326**	*i* P	**P**	**21 23 07.0**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,11nm,1.0s						
ZSN	**Zaisan**	**73.15**	**323**	*e*P	**P**	**21 23 10.0**	**-0.6**
	comp=Z,19nm,2.2s,baz=323						
ZSN	**Zaisan**	**73.15**	**323**	*e*P	**P**	**21 23 09.9**	**-0.6**
ZSN				pmax	pmax		
	comp=Z,19nm,2.2s						
MK31	**Makanchi Array**	**74.41**	**322**	P	**P**	**21 23 17.5**	**-0.4**
MK31	**Makanchi Array**	**74.41**	**322**	*ce*P	**P**	**21 23 17.2**	**-0.7**
MKAR	**Makanchi Array**	**74.41**	**322**	P	**P**	**21 23 17.4**	**-0.5**
MKAR	**Makanchi Array**	**74.41**	**322**	*c i*P	**P**	**21 23 17.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**74.41**	**322**	P	**P**	**21 23 16.6**	**-1.3**
	comp=Z,6.0nm,0.8s,baz=114,slow=6.8,SNR=46						
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	**74.61**	**322**	P	**P**	**21 23 18.6**	**-0.5**
MAKZ				IAmb	IAmb	21 23 27.7	
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	**74.61**	**322**	P	**P**	**21 23 18.6**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
SHLS	**Shalkode**	**74.71**	**317**	*e*P	P	21 23 17.9	-2.0
	comp=Z,7.7nm,0.9s,baz=318						
SHLS	**Shalkode**	**74.71**	**317**	*e*P	P	21 23 17.8	-2.0
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
UZB	**Uzynbulak**	**75.00**	**317**	*e*P	**P**	**21 23 21.3**	**-0.3**
	baz=317						
UZB	**Uzynbulak**	**75.00**	**317**	*e*P	**P**	**21 23 21.3**	**-0.3**
PRZ	**Przheval'sk**	**75.17**	**317**	P	**P**	**21 23 22.5**	**-0.1**
PRZ				IAmb	IAmb	21 23 30.4	
	comp=Z,23nm,1.3s						
PRZ	**Przheval'sk**	**75.17**	**317**	P	**P**	**21 23 22.5**	**-0.1**
PRZ				pmax	pmax		
	comp=Z,23nm,1.3s						
KPKS	**Kokpek**	**75.35**	**318**	*e*P	**P**	**21 23 22.8**	**-0.7**
	baz=318						
KPKS	**Kokpek**	**75.35**	**318**	*e*P	**P**	**21 23 22.8**	**-0.7**
SATY	**Saty**	**75.38**	**317**	*e*P	**P**	**21 23 23.3**	**-0.4**
	comp=Z,7.0nm,0.9s,baz=317						
SATY	**Saty**	**75.38**	**317**	*e*P	**P**	**21 23 23.3**	**-0.4**
SATY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZHN	**Zhinishke**	**75.41**	**317**	*e*P	**P**	**21 23 23.2**	**-0.7**
	baz=317						
ZHN	**Zhinishke**	**75.41**	**317**	*e*P	**P**	**21 23 23.2**	**-0.7**
BILL	**Bilibino**	**75.46**	**9**	*i* P	P	21 23 22.1	-1.4
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH	**Kashi**	**75.82**	**313**	P	**P**	**21 23 27.8**	**+1.5**
KSH				pP	sP	21 23 35.5	+4.3
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	**Nilore**	**76.08**	**307**	P	P	21 23 25.9	-1.9
NIL				IAmb	IAmb	21 23 36.1	
	comp=Z,16nm,0.8s						
NIL	**Nilore**	**76.08**	**307**	P	P	21 23 25.9	-1.9
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
TDK	**Taldyqorghan**	**76.13**	**319**	*e*P	**P**	**21 23 27.4**	**-0.4**
	baz=319						
TDK	**Taldyqorghan**	**76.13**	**319**	*e*P	**P**	**21 23 27.4**	**-0.4**
MDOK	**Medeo**	**76.34**	**317**	*e*P	**P**	**21 23 28.7**	**-0.6**
	baz=317						
MDOK	**Medeo**	**76.34**	**317**	*e*P	**P**	**21 23 28.6**	**-0.7**
TNSS	**Tian-Shan**	**76.37**	**317**	*e*P	**P**	**21 23 29.1**	**-0.6**
	baz=317						
TNSS	**Tian-Shan**	**76.37**	**317**	*e*P	**P**	**21 23 29.1**	**-0.6**
ZAA0	**Zalesovo Array**	**76.38**	**329**	P	**P**	**21 23 27.9**	**-1.0**
ZALV	**Zalesovo Beam**	**76.38**	**329**	P	**P**	**21 23 27.8**	**-1.2**
ZALV	**Zalesovo Beam**	**76.38**	**329**	*i* P	**P**	**21 23 27.8**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**76.38**	**329**	P	**P**	**21 23 27.9**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=101,slow=6.2,SNR=11						
	comp=Z,1.9nm,0.7s						
AAA	**Alma-Ata**	**76.45**	**317**	*e*P	**P**	**21 23 29.3**	**-0.5**
	baz=317						
AAA	**Alma-Ata**	**76.45**	**317**	*e*P	**P**	**21 23 29.3**	**-0.5**
NRN	**Naryn**	**76.46**	**315**	P	**P**	**21 23 28.8**	**-1.4**
NRN	**Naryn**	**76.46**	**315**	P	**P**	**21 23 28.8**	**-1.4**
NRN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KUU	**Kurty**	**77.09**	**317**	*e*P	**P**	**21 23 32.5**	**-0.9**
	comp=Z,15nm,1.2s,baz=317						
KUU	**Kurty**	**77.09**	**317**	*e*P	**P**	**21 23 32.4**	**-0.9**
KUU				pmax	pmax		
	comp=Z,15nm,1.2s						
TIXI	**Tiksi**	**77.71**	**356**	P	**P**	**21 23 36.1**	**0.0**
TIXI	**Tiksi**	**77.71**	**356**	*i* P	P	21 23 31.7	-4.4
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
AAK	**Ala-Archa**	**77.92**	**316**	P	**P**	**21 23 36.6**	**-1.5**
AAK	**Ala-Archa**	**77.92**	**316**	*ce*P	**P**	**21 23 37.2**	**-1.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	**Kurchatov**	**78.28**	**324**	P	**P**	**21 23 39.1**	**-0.7**
KURK	**Kurchatov**	**78.28**	**324**	*ce*P	**P**	**21 23 38.5**	**-1.2**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURBB	**Kurchatov Arra**	**78.30**	**324**	P	**P**	**21 23 38.7**	**-1.1**
	comp=Z,4.5nm,1.0s,baz=112,slow=4.8,SNR=27						
	comp=Z,4.5nm,1.0s						
ARSB	**Arslanbob**	**78.57**	**314**	P	**

SVW2					IAmb	IAmb	21 24 10.2		
	comp=Z,16nm,1.0s								
H17K	**Granite Mounta**	**82.09**	**21**	P	**P**	**P**	**21 24 00.9**	**+0.9**	
H17K					IAmb	IAmb	21 24 09.1		
	comp=Z,18nm,0.9s								
F17K	**Baldwin Pennin**	**82.44**	**20**	P	**P**	**P**	**21 24 02.2**	**+0.4**	
F17K					IAmb	IAmb	21 24 10.7		
	comp=Z,14nm,1.1s								
RSO	**Redoubt South**	**82.86**	**27**	P	**P**	**P**	**21 24 04.4**	**0.0**	
G18K	**Tagagawik**	**83.04**	**21**	P	**P**	**P**	**21 24 05.4**	**+0.5**	
G18K					IAmb	IAmb	21 24 13.0		
	comp=Z,10.0nm,1.1s								
E18K	**Tukpahlearik C**	**83.19**	**19**	P	**P**	**P**	**21 24 05.8**	**+0.1**	
E18K					IAmb	IAmb	21 24 13.9		
	comp=Z,13nm,1.1s								
K20K	**Telida**	**83.56**	**24**	P	**P**	**P**	**21 24 08.1**	**+0.5**	
K20K					IAmb	IAmb	21 24 16.6		
	comp=Z,12nm,0.9s								
NRIK	**Noril'sk**	**83.62**	**343**	P	**P**	**P**	**21 24 07.4**	**-0.4**	
NRIK	**Noril'sk**	**83.62**	**343**	*ceP*	**P**	**P**	**21 24 06.9**	**-1.0**	
NRIK					pmax	pmax			
	comp=Z,28nm,1.1s								
NRIK	**Noril'sk**	**83.62**	**343**	P	**P**	**P**	**21 24 07.7**	**-0.2**	
	comp=Z,4.3nm,0.8s,baz=121,slow=5.4,SNR=12								
	comp=Z,4.3nm,0.8s								
BVAR	**Borovoye Array**	**83.87**	**325**	P	**P**		**21 24 08.9**	**-0.6**	
	comp=Z,15nm,0.9s,baz=115,slow=5.6,SNR=53								
	comp=Z,15nm,0.9s								
J20K	**Nowinta River**	**83.89**	**23**	P	**P**	**P**	**21 24 09.8**	**+0.5**	
J20K					IAmb	IAmb	21 24 18.4		
	comp=Z,17nm,1.1s								
BRVK	**Borovoye**	**83.94**	**325**	P	**P**	**P**	**21 24 09.3**	**-0.6**	
BRVK	**Borovoye**	**83.94**	**325**	*ceP*	**P**	**P**	**21 24 08.9**	**-1.0**	
BRVK					pmax	pmax			
	comp=Z,25nm,1.3s								
QSPA	**South Pole Qui**	**84.27**	**180**	P	**P**	**P**	**21 24 10.6**	**-0.9**	
QSPA	**South Pole Qui**	**84.27**	**180**	P	**P**	**P**	**21 24 10.2**	**-1.2**	
	comp=Z,14nm,1.0s,baz=340,slow=1.5,SNR=17								
	comp=Z,14nm,1.0s								
E19K	**Redstone River**	**84.32**	**20**	P	**P**	**P**	**21 24 11.9**	**+0.4**	
CAST	**Castle Rocks**	**84.39**	**24**	P	**P**	**P**	**21 24 11.1**	**-0.9**	
CAST					IAmb	IAmb	21 24 19.3		
	comp=Z,11nm,1.0s								
C19K	**Lookout Ridge**	**84.42**	**18**	P	**P**	**P**	**21 24 11.5**	**-0.5**	
C19K					IAmb	IAmb	21 24 20.6		
	comp=Z,11nm,0.9s								
RC01	**Rabbit Creek A**	**84.47**	**27**	P	**P**	**P**	**21 24 11.5**	**-0.9**	
D19K	**Kuna River**	**84.56**	**19**	P	**P**	**P**	**21 24 11.9**	**-0.8**	
D19K					IAmb	IAmb	21 24 23.7		
	comp=Z,14nm,1.1s								
F20K	**Avaraart Lake**	**84.63**	**20**	P	**P**	**P**	**21 24 13.2**	**+0.1**	
F20K					IAmb	IAmb	21 24 22.9		
	comp=Z,25nm,1.7s								
MLY	**Manley**	**85.58**	**23**	P	**P**	**P**	**21 24 17.7**	**-0.2**	
MLY					IAmb	IAmb	21 24 26.2		
	comp=Z,9.4nm,0.9s								
RND	**Reindeer**	**85.72**	**25**	P	P	P	21 24 17.1	-1.6	
RND					IAmb	IAmb	21 24 27.3		
	comp=Z,14nm,0.8s								
RND	**Reindeer**	**85.72**	**25**	P	P	P	21 24 17.1	-1.6	
RND					pmax	pmax			
	comp=Z,14nm,0.8s								
B21K	**Ikpikpuk River**	**86.20**	**18**	P	**P**	**P**	**21 24 21.0**	**+0.2**	
B21K					IAmb	IAmb	21 24 29.0		
	comp=Z,16nm,1.1s								
DHY	**Denali Highway**	**86.23**	**25**	P	**P**	**P**	**21 24 20.8**	**-0.5**	
DHY					IAmb	IAmb	21 24 30.8		
	comp=Z,11nm,0.9s								
WRH	**Wood River Hil**	**86.42**	**24**	P	**P**	**P**	**21 24 21.1**	**-0.9**	
WRH					IAmb	IAmb	21 24 29.2		
	comp=Z,13nm,0.9s								
CCB	**Clear Creek Bu**	**86.60**	**24**	P	P	P	21 24 21.2	-1.7	
CCB					IAmb	IAmb	21 24 29.9		
	comp=Z,14nm,0.9s								
IL31		**87.02**	**24**	P	**P**	**P**	**21 24 23.9**	**-1.0**	
IL31					IAmb	IAmb	21 24 32.3		
	comp=Z,9.0nm,0.8s								
ILAR	**Eielson Array**	**87.02**	**24**	P	**P**	**P**	**21 24 23.7**	**-1.3**	
ILAR	**Eielson Array**	**87.02**	**24**	P	**P**	**P**	**21 24 23.7**	**-1.3**	
ILAR	**Eielson Array**	**87.02**	**24**	P	P	P	21 24 22.7	-2.2	
	comp=Z,4.1nm,0.9s,baz=257,slow=5.3,SNR=19								
	comp=Z,4.1nm,0.9s								
C23K	**Itkillik River**	**87.56**	**19**	P	**P**	**P**	**21 24 27.3**	**-0.1**	
J25K	**Salcha River,**	**87.58**	**24**	P	**P**	**P**	**21 24 27.3**	**-0.5**	
J25K					IAmb	IAmb	21 24 35.4		
	comp=Z,16nm,1.1s								
F24K	**Squaw Lake**	**87.60**	**21**	P	**P**	**P**	**21 24 28.0**	**+0.2**	
D24K	**Happy Valley**	**87.87**	**20**	P	**P**	**P**	**21 24 29.2**	**+0.2**	
E25K	**Arctic Village**	**88.63**	**21**	P	**P**	**P**	**21 24 32.9**	**+0.2**	
L27K	**Beaver Creek,**	**88.63**	**26**	P	**P**	**P**	**21 24 33.1**	**+0.4**	
BCAR	**Beaver Creek A**	**88.65**	**26**	P	**P**	**P**	**21 24 33.0**	**+0.1**	
BMAR	**Burnt Mountain**	**88.77**	**22**	P	**P**	**P**	**21 24 33.7**	**+0.4**	
K27K	**Chicken**	**88.78**	**25**	P	**P**	**P**	**21 24 34.3**	**+0.9**	
GEYT	**Alibeck**	**88.99**	**308**	P	**P**	**P**	**21 24 34.5**	**-0.6**	
	comp=Z,16nm,0.8s								
	comp=Z,16nm,0.8s								
EGAK	**Eagle**	**89.36**	**25**	P	**P**	**P**	**21 24 36.5**	**+0.5**	
EGAK					IAmb	IAmb	21 24 42.6		
	comp=Z,12nm,1.0s								
ABKAR	**Akbulak array**	**89.38**	**319**	P	P	P	21 24 34.7	-1.8	
ABKAR	**Akbulak array**	**89.38**	**319**	P	P	P	21 24 34.7	-1.8	
ABKAR					IAmb	IAmb	21 24 43.3		
	comp=Z,4.2nm,0.9s								
DAWY	**Dawson**	**89.93**	**25**	P	**P**	**P**	**21 24 38.9**	**0.0**	
DAWY					IAmb	IAmb	21 24 47.7		
	comp=Z,13nm,1.1s								
I28M	**Miner Creek**	**90.03**	**24**	P	**P**	**P**	**21 24 39.4**	**+0.1**	
I28M					IAmb	IAmb	21 24 47.9		
	comp=Z,16nm,1.3s								
K29M	**Barlow Dome**	**90.69**	**26**	P	**P**	**P**	**21 24 43.1**	**+0.6**	
K29M					IAmb	IAmb	21 24 51.2		
	comp=Z,14nm,1.1s								
ARU	**Arti**	**91.31**	**326**	P	P	P	21 24 42.5	-2.9	
ARU					IAmb	IAmb	21 24 52.2		
	comp=Z,12nm,1.1s								
ARU	**Arti**	**91.31**	**326**	*ceP*	P	P	21 24 42.6	-2.8	
ARU					pmax	pmax			
	comp=Z,12nm,1.1s								
I30M	**Mount Dempster**	**91.44**	**25**	P	**P**	**P**	**21 24 45.5**	**-0.4**	
ELIB	**Princess Elisa**	**93.28**	**196**	*dP*	**P**	**P**	**21 24 53.1**	**-1.3**	
	comp=Z,5.6nm,0.8s								
BELG	**Belogornoye**	**97.41**	**322**	*i* P	P	P	21 25 10.3	-3.1	
BELG					pmax	pmax			
	comp=Z,2.0nm,1.0s								
NVAR	**Mina Array Bea**	**100.77**	**52**	P		**Pdif**	**21 25 29.8**	**+0.7**	
	comp=Z,0.4nm,0.8s,baz=265,slow=4.5,SNR=2.5								
YKA	**Yellowknife Ar**	**101.01**	**27**	P		**Pdif**	**21 25 30.3**	**+1.1**	
	comp=Z,0.4nm,0.8s,baz=276,slow=5.6,SNR=4.3								
CLL	**Collm**	**118.26**	**327**	*eP*	PKiKP	**PKPdf**	**21 30 26.0**	**-1.2**	
CLL	**Collm**	**118.26**	**327**	*eP*	PKiKP	**PKPdf**	**21 30 26.0**	**-1.2**	
PLCA	**Paso Flores**	**124.77**	**150**	PKP		**PKPdf**	**21 30 38.7**	**-1.5**	
	comp=Z,2.3nm,0.9s,baz=252,slow=3.5,SNR=5.2								
MCRA	**Macar, Loja**	**136.50**	**102**	*eP*		**PKPdf**	**21 31 01.4**	**-1.7**	
TORD	**Torodi Ar. Bea**	**140.61**	**284**	PKhKP		PKPpre	21 31 03.0		
	comp=Z,1.1nm,0.5s,baz=102,slow=1.1,SNR=2.2								
TORD					PKP	**PKPdf**	**21 31 10.2**	**-0.3**	
	comp=Z,1.5nm,0.3s,baz=186,slow=1.5,SNR=4.1								
GUY2C	**Guyana, Caldas**	**142.37**	**89**	*eP*		**PKPdf**	**21 31 16.5**	**+2.2**	
ORTC	**Ortega, Tolima**	**142.41**	**91**	*eP*		**PKPdf**	**21 31 18.5**	**+4.6**	
LPAZ	**La Paz**	**142.70**	**126**	PKiKP		**PKPdf**	**21 31 11.2**	**-3.8**	
CPUP	**Villa Florida**	**142.84**	**150**	PKhKP		PKPpre	21 31 07.5		
	comp=Z,0.6nm,0.4s,baz=144,slow=5.2,SNR=2.1								
CPUP					PKP	**PKPdf**	**21 31 13.7**	**-0.5**	
	comp=Z,3.1nm,0.8s,baz=264,slow=3.0,SNR=7.3								
ROSC	**El Rosal**	**143.40**	**90**	PKhKP		PKPpre	21 31 10.5		
	comp=Z,3.2nm,0.3s,baz=13,slow=6.9,SNR=4.5								
SPBC	**San Pablo de B**	**143.68**	**88**	*eP*		PKPab	21 31 13.7	+0.9	
BARC	**Barichara**	**144.58**	**87**	*eP*		**PKPab**	**21 31 15.9**	**-0.5**	
RUSC	**La Rusia**	**144.67**	**88**	*eP*		**PKPab**	**21 31 15.7**	**-1.3**	
PAMC	**Pamplona, Colo**	**145.06**	**85**	*eP*		**PKPbc**	**21 31 17.1**	**-1.3**	
SDV	**Santo Domingo**	**147.06**	**82**	PKPdf		**PKPdf**	**21 31 20.0**	**-2.1**	
SDV	**Santo Domingo**	**147.06**	**82**	*eP*		**PKPdf**	**21 31 21.8**	**-0.3**	
DBIC	**Dimbokro**	**147.47**	**273**	PKPbc		**PKPdf**	**21 31 22.7**	**+0.2**	
	comp=Z,5.4nm,0.9s,baz=340,slow=8.0,SNR=5.6								
TRCB	**Terra Rica**	**148.08**	**153**	PKPdf		**PKPdf**	**21 31 22.1**	**-1.2**	
SAML	**Samuel**	**150.61**	**119**	*eP*		**PKPdf**	**21 31 26.7**	**-0.8**	

*IDC **25** 21:23:40.5±0.9,6°.20S×142°.98E,h0km,mb4.1/7,*
mbtmp4.2/10,ML3.7/1,Error ellipse: s-maj=37.1km
s-min=20.6km az=78.0
*NEIC **25** 21:23:43.2±1.6,6°.3S±0°.1×142°.97E±0°.06,h10km±2km,*
mb4.4/12,Error ellipse: s-maj=21.0km s-min=5.5km
az=24.0

ISC 25 21:23:42.8±0.7,6°.37S±0°.08×142°.94E±0°.09,h10km,n26,
σ2s20/25,mb4.3/11,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.16**	**126**	Pn		**Pn**	**Pn**	**21 25 00.6**	**+0.4**
PMG	**Port Moresby**	**5.16**	**126**	Pn		**Pn**	**Pn**	**21 25 01.4**	**+1.3**
	18nm,0.6s,baz=313,slow=8.9,SNR=4.8								
PMG						Sn	**Sn**	**21 25 57.6**	**-2.1**
	2.1nm,0.3s,baz=47,slow=20,SNR=2.2								
CTA	**Charters Tower**	**14.01**	**167**	Lg		Lg	Lg	21 31 13.2	
	0.4nm,0.3s,baz=71,slow=22,SNR=2.4								
WRAB	**Tennant Creek**	**15.86**	**211**	Pn		Pn	**Pn**	**21 27 27.6**	**+1.3**
WRAB						IAmb	IAmb	21 27 31.0	
	comp=Z,40nm,1.4s								
WRA	**Warramunga Arr**	**15.87**	**211**	Pn			**Pn**	**21 27 28.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=5.1								
WRA						Sn	Sn	21 30 11.2	-11
	comp=Z,0.2nm,0.3s,baz=41,slow=24,SNR=1.5								
WRA						Lg	Lg	21 32 07.5	
	comp=Z,0.4nm,0.3s,baz=47,slow=21,SNR=5.9								
	comp=Z,4.2nm,0.8s								
AS31	**Alice Springs**	**19.27**	**206**	P		**P**	**P**	**21 28 11.0**	**+3.2**
ASAR	**Alice Springs**	**19.27**	**206**	P		**P**	**P**	**21 28 09.9**	**+2.1**
ASAR	**Alice Springs**	**19.27**	**206**	Pn		**P**	**P**	**21 28 09.7**	**+1.9**
	comp=Z,27nm,0.8s,baz=33,slow=9.8,SNR=29								
ASAR						Sn	**Sn**	**21 31 37.1**	**-7.9**
	comp=Z,0.1nm,0.3s,baz=35,slow=12,SNR=2.0								
ASAR						Lg	Lg	21 33 54.9	
	baz=33,slow=7.8								
EIDS	**Eidsvold**	**20.44**	**158**				**P**	**21 28 21.6**	**+1.1**
EIDS						IAmb	IAmb	21 28 22.8	
	comp=Z,21nm,1.4s								
FITZ	**Fitzroy Crossi**	**20.51**	**234**	Pn		P	**P**	**21 28 23.2**	**+1.9**
STKA	**Stephens Creek**	**25.41**	**183**	P		P	**P**	**21 29 11.4**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=8.5,slow=10,SNR=2.0								
	comp=Z,6.0nm,1.0s								
PLWZ	**Palliser**	**45.33**	**146**	P		P	**P**	**21 32 01.0**	**-0.1**
KSRS	**Korea Array**	**45.79**	**343**	P		P	**P**	**21 32 04.3**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=167,slow=11,SNR=2.6								
	comp=Z,1.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**49.91**	**300**	P		P	**P**	**21 32 36.0**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=135,slow=6.2,SNR=4.6								
	comp=Z,0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**77.21**	**329**	P		P	P	21 35 35.1	-1.8
	comp=Z,0.3nm,0.5s,baz=110,slow=7.8,SNR=2.2								
	comp=Z,0.3nm,0.5s								
J16K	**Anvik River**	**81.38**	**22**	P		**P**	**P**	**21 35 59.2**	**-0.3**
J16K						IAmb	IAmb	21 36 07.8	
	comp=Z,4.6nm,1.1s								
H17K	**Granite Mounta**	**82.53**	**21**	P		**P**	**P**	**21 36 05.9**	**+0.3**
H17K						IAmb	IAmb	21 36 09.0	
	comp=Z,3.2nm,1.1s								
QSPA	**South Pole Qui**	**83.60**	**180**	P		**P**	**P**	**21 36 11.2**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=68,slow=0.9,SNR=5.7								
	comp=Z,2.5nm,0.8s								
E18K	**Tukpahlearik C**	**83.66**	**19**	P		**P**	**P**	**21 36 11.3**	**0.0**
E18K						IAmb	IAmb	21 36 17.6	
	comp=Z,2.7nm,1.0s								
C18K	**Utukok River**	**84.16**	**18**	P		**P**	**P**	**21 36 12.9**	**-1.0**
BVAR	**Borovoye Array**	**84.71**	**325**	P		**P**	**P**	**21 36 15.8**	**-1.2**
	comp=Z,5.8nm,0.8s,baz=112,slow=6.9,SNR=21								
	comp=Z,5.8nm,0.8s								
E19K	**Redstone River**	**84.78**	**20**	P		**P**	**P**	**21 36 15.9**	**-1.2**
D19K	**Kuna River**	**85.03**	**18**	P		**P**	**P**	**21 36 18.8**	**+0.5**
F20K	**Avaraart Lake**	**85.09**	**20**	P		**P**	**P**	**21 36 19.1**	**+0.5**
F20K						IAmb	IAmb	21 36 22.3	
	comp=Z,2.4nm,1.1s								
KTH	**Kantishna Hill**	**85.33**	**24**	P		**P**	**P**	**21 36 18.9**	**-1.1**
ILAR	**Eielson Array**	**87.43**	**24**	P		P	P	21 36 27.9	-2.2
	comp=Z,1.1nm,0.8s,baz=258,slow=5.4,SNR=11								
	comp=Z,1.1nm,0.8s								

*IDC **25** 21:27:40.0±0.9,6°.07S×142°.90E,h0km,mb4.0/7,*
mbtmp4.0/10,ML3.8/2,Error ellipse: s-maj=32.8km
s-min=19.4km az=95.0

ISC 25 21:27:44.9±0.7,6°.2S±0°.1×143°.0E±0°.1,h35km,n10,
σ1s28/11,mb3.9/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.25**	**128**	Pn		**Pn**	**Pn**	**21 29 02.4**	**+1.5**
	8.5nm,0.3s,baz=224,slow=5.1,SNR=2.5								
PMG						Sn	**Sn**	**21 29 58.1**	**-2.1**
	0.8nm,0.3s,baz=309,slow=23,SNR=1.8								
WRA	**Warramunga Arr**	**16.06**	**211**	Pn			**Pn**	**21 31 26.6**	**-1.6**
	0.3nm,0.3s,baz=117,slow=42,SNR=2.0								
WRA						Lg	Lg	21 36 09.8	
	baz=297,slow=40								
	1.1nm,0.3s								
ASAR	**Alice Springs**	**19.47**	**206**	P		**P**	**P**	**21 32 09.7**	**+0.8**
	0.5nm,0.3s,baz=32,slow=8.1,SNR=4.2								
ASAR						Lg	Lg	21 38 00.5	
	baz=176,slow=34								
	3.2nm,0.7s								
KSRS	**Korea Array**	**45.61**	**343**	P		**P**	**P**	**21 36 01.5**	**-0.2**
	0.7nm,0.6s,baz=160,slow=7.9,SNR=2.7								
	0.7nm,0.6s								
CMAR	**Chiang Mai Arr**	**49.84**	**300**	P		**P**	**P**	**21 36 34.1**	**-0.9**
	0.5nm,0.7s,baz=122,slow=6.1,SNR=1.5								
	0.5nm,0.7s								
PETK	**Petropavlovsk-**	**60.35**	**10**	P		**P**	**P**	**21 37 49.5**	**-0.7**
	4.3nm,1.1s,baz=193,slow=5.9,SNR=2.0								
	4.3nm,1.1s								
MKAR	**Makanchi Array**	**75.11**	**322**	P		**P**	**P**	**21 39 23.8**	**+0.4**
	0.5nm,0.6s,baz=103,slow=7.3,SNR=4.3								
	0.5nm,0.6s								
QSPA	**South Pole Qui**	**83.80**	**180**	P		**P**	**P**	**21 40 11.6**	**+1.1**
	1.1nm,0.8s,baz=274,slow=2.8,SNR=7.7								
	1.1nm,0.8s								
BVAR	**Borovoye Array**	**84.56**	**325**	P		**P**	**P**	**21 40 15.1**	**+0.7**
	2.8nm,0.7s,baz=108,slow=8.0,SNR=6.7								
	2.8nm,0.7s								
ILAR	**Eielson Array**	**87.23**	**24**	P		**P**	**P**	**21 40 27.2**	**-0.1**
	0.6nm,0.7s,baz=256,slow=5.0,SNR=9.5								
	0.6nm,0.7s								

*SOME **25** 21:30:14.1,40°.03N×75°.22E,h5km*
*KRNET **25** 21:30:16.8±0.1,40°.12N×75°.18E,h18km,mb3.8*
*NNC **25** 21:30:18.1±1.1,40°.13N×75°.30E,h0km,mb4.2,mpv3.9,*
Error ellipse: s-maj=8.5km s-min=5.5km az=163.0
*IDC **25** 21:30:20.6±6.4,40°.17N×75°.51E,h0km,mb3.6/1,*
mbtmp3.3/4,ML2.8/2,Error ellipse: s-maj=90.7km
s-min=33.9km az=166.0

ISC 25 21:30:17.8±0.9,40°.16N±0°.05×75°.23E±0°.02,h10km,n95,
σ2s01/136,32C-35D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.33**	**264**	⇑*i*	P		**Pn**	**21 30 41.4**	**-1.4**
	baz=66								
SFK				⇑*i*	S		**Sb**	**21 30 59.3**	**-1.1**
	baz=66								
NRN	**Naryn**	**1.40**	**24**	⇑*i*	P		**Pb**	**21 30 43.6**	**-0.6**
	baz=25								
NRN				⇑*i*	S		**Sg**	**21 31 03.6**	**+0.8**
	baz=25								
ARLS	**Aral**	**1.83**	**338**	⇑*e*	P		**Pb**	**21 30 51.3**	**-0.2**
	baz=40								
ARLS				⇑*e*	S		**Sb**	**21 31 16.1**	**+1.5**
	baz=40								
OHH	**Osh**	**1.91**	**282**	⇓*i*	P		**Pb**	**21 30 51.7**	**-1.0**
	baz=83								
OHH				⇓*i*	S		**Sb**	**21 31 17.2**	**+0.6**
	baz=83								
ARSB	**Arslanbob**	**2.07**	**305**	⇓*i*	P		**Pb**	**21 30 54.5**	**-1.0**
	baz=7.0								
ARSB				⇓*i*	S		**Sb**	**21 31 22.0**	**+0.7**
	baz=7.0								
UCH	**Uchtor**	**2.13**	**345**	P			**Pb**	**21 30 57.5**	**+0.7**
	SNR=350								
UCH	**Uchtor**	**2.13**	**345**	⇑*i*	P		**Pb**	**21 30 56.1**	**-0.7**
	baz=47								
UCH				⇑*i*	S		**Sb**	**21 31 24.9**	**+1.4**
	baz=47								
ULHL	**Ulahol**	**2.21**	**20**	P			**Pg**	**21 30 59.1**	**-1.2**
	SNR=250								
ULHL	**Ulahol**	**2.21**	**20**	⇑*i*	P		**Pb**	**21 30 57.6**	**-0.5**
	baz=20								
ULHL				⇑*i*	S		**Sg**	**21 31 27.6**	**-1.5**
	baz=20								
KDJ	**Kajisay**	**2.45**	**36**	⇓*i*	P		**Pb**	**21 31 00.9**	**-1.3**
	baz=37								
KDJ				⇓*i*	S		**Sb**	**21 31 33.4**	**+0.9**
	baz=37								
KBK	**Karagaybulak**	**2.50**	**355**	P			**Pb**	**21 31 03.4**	**+0.5**
	SNR=26								
KBK	**Karagaybulak**	**2.50**	**355**	⇓*e*	P		**Pb**	**21 31 01.4**	**-1.5**
	baz=56								
KBK				⇓*i*	S		**Sb**	**21 31 33.8**	**0.0**
	baz=56								
AAK	**Ala-Archa**	**2.53**	**348**	P			**Pb**	**21 31 03.7**	**+0.2**
	SNR=148								
AAK	**Ala-Archa**	**2.53**	**348**	⇓*e*	P		**Pb**	**21 31 01.7**	**-1.8**
	baz=49								
AAK				⇓*i*	S		**Sb**	**21 31 34.4**	**-0.4**
	baz=49								
FRU1	**Bishkek**	**2.68**	**350**	⇓*i*	P		**Pb**	**21 31 03.9**	**-2.1**
	baz=51								
FRU1				⇓*i*	S		**Sb**	**21 31 38.6**	**-0.4**
	baz=51								
EKS2	**Erkin-Say**	**2.73**	**337**	P			**Pb**	**21 31 07.3**	**+0.5**
	SNR=11								
EKS2	**Erkin-Say**	**2.73**	**337**	⇑*i*	P		**Pb**	**21 31 04.2**	**-2.5**
	baz=38								
EKS2				⇑*i*	S		**Sb**	**21 31 38.8**	**-1.5**
	baz=38								
DRK	**Karamyk**	**2.73**	**257**	⇑*e*	P		**Pn**	**21 31 03.1**	**+1.1**
	baz=57								
DRK				⇑*e*	S		**Sn**	**21 31 37.2**	**+2.0**
	baz=57								
TKM2	**Tokmak 2**	**2.77**	**6**	P			**Pb**	**21 31 06.7**	**-0.8**
	SNR=83								
TKM2	**Tokmak 2**	**2.77**	**6**	⇓Pn			**Pb**	**21 31 06.7**	**-0.8**
	23nm,0.3s								
TKM2				⇑Lg			Lg	21 31 48.2	
	148nm,0.7s								
TKM2	**Tokmak 2**	**2.77**	**6**	⇑*i*	P		**Pb**	**21 31 05.2**	**-2.3**
	baz=6.0								
TKM2				⇑*e*	S		**Sb**	**21 31 40.5**	**-1.1**
	baz=6.0								
CHMS	**Chumysh**	**2.86**	**353**	P			**Pb**	**21 31 07.8**	**-1.1**
	SNR=14								
CHMS	**Chumysh**	**2.86**	**353**	⇓Pn			**Pb**	**21 31 07.8**	**-1.1**
	9.2nm,0.3s								
CHMS				⇑Lg			Lg	21 31 50.8	
	373nm,0.8s								
CHMS	**Chumysh**	**2.86**	**353**	⇓*i*	P		**Pb**	**21 31 06.1**	**-2.8**
	baz=54								
CHMS				⇓*i*	S		**Sb**	**21 31 42.0**	**-1.9**
	baz=54								
KST	**Kastek**	**2.93**	**11**	Pg			**Pb**	**21 31 11.7**	**+1.5**
	87nm,0.3s								
KST				Lg			Lg	21 31 53.6	
	226nm,0.5s								
KST	**Kastek**	**2.93**	**11**	*eP*			**Pb**	**21 31 11.7**	**+1.5**
	87nm,0.3s								
KST				*eS*			**Sg**	**21 31 53.6**	**+1.6**
	226nm,0.5s								
ARK	**Arkit**	**2.96**	**304**	⇓*i*	P		**Pn**	**21 31 07.1**	**+2.0**
	baz=6.0								
ARK				⇓*i*	S		**Sn**	**21 31 43.8**	**+3.0**
	baz=6.0								
MRKS	**Merke**	**2.99**	**330**	Pg			**Pb**	**21 31 11.9**	**+0.7**
	10nm,0.6s								
MRKS				Lg			Lg	21 31 53.1	
	135nm,0.3s								
MRKS	**Merke**	**2.99**	**330**	*eP*			**Pb**	**21 31 11.9**	**+0.7**
	10nm,0.6s								
MRKS				*eS*			**Sg**	**21 31 53.1**	**-0.7**
	135nm,0.3s								
MTBS	**Maitube**	**3.10**	**16**	Pg			**Pb**	**21 31 14.6**	**+1.5**
	24nm,0.3s								
MTBS				Lg			Lg	21 31 58.8	
	130nm,0.2s								
MTBS	**Maitube**	**3.10**	**16**	*eP*			**Pb**	**21 31 14.6**	**+1.5**
	24nm,0.3s								
MTBS				*eS*			**Sg**	**21 31 58.8**	**+1.5**
	130nm,0.2s								
MNAS	**Manas**	**3.10**	**319**	⇑*i*	P		**Pn**	**21 31

	74nm,0.6s								
ZHN	**Zhinishke**	**3.84**	**38**	Pg	**Pb**	**21 31 26.3 +0.5**			
	11nm,0.4s								
ZHN				Lg	Lg	21 32 18.6			
	102nm,0.4s								
ZHN	**Zhinishke**	**3.84**	**38**	*e*P	**Pb**	**21 31 26.3 +0.5**			
ZHN	11nm,0.4s			*e*S	**Sg**	**21 32 18.6 -2.6**			
	102nm,0.4s								
KURS	**Kuram**	**3.98**	**32**	Pg	**Pb**	**21 31 29.3 +1.2**			
	25nm,0.6s								
KURS				Lg	Lg	21 32 23.2			
	53nm,0.6s								
KURS	**Kuram**	**3.98**	**32**	*e*P	**Pb**	**21 31 29.3 +1.2**			
KURS	25nm,0.6s			*e*S	**Sg**	**21 32 23.2 -2.5**			
	53nm,0.6s								
UZB	**Uzynbulak**	**4.12**	**42**	Pg	**Pb**	**21 31 31.3 +0.8**			
	9.0nm,0.2s								
UZB				Lg	Lg	21 32 27.1			
	46nm,0.9s								
UZB	**Uzynbulak**	**4.12**	**42**	*e*P	**Pb**	**21 31 31.3 +0.8**			
UZB	9.0nm,0.2s			*e*S	**Sg**	**21 32 27.1 -2.9**			
	46nm,0.9s								
KPKS	**Kokpek**	**4.19**	**37**	Pg	**Pb**	**21 31 32.5 +0.8**			
	12nm,0.4s								
KPKS				Lg	Lg	21 32 29.0			
	94nm,0.6s								
KPKS	**Kokpek**	**4.19**	**37**	*e*P	**Pb**	**21 31 32.5 +0.8**			
KPKS	12nm,0.4s			*e*S	**Sg**	**21 32 29.0 -3.3**			
	94nm,0.6s								
SHLS	**Shalkode**	**4.36**	**45**	Pg	**Pg**	**21 31 41.3 0.0**			
	33nm,0.4s								
SHLS				Lg	Lg	21 32 44.3			
	80nm,0.5s								
SHLS	**Shalkode**	**4.36**	**45**	*e*P	**Pg**	**21 31 41.3 0.0**			
SHLS	33nm,0.4s			*e*S	**Sg**	**21 32 44.3 +6.6**			
	80nm,0.5s								
IUG	**luzhnay**	**4.40**	**298**	Pg	**Pb**	**21 31 36.8 +1.6**			
	78nm,0.5s								
IUG				Lg	Lg	21 32 36.8			
	75nm,0.8s								
IUG	**luzhnay**	**4.40**	**298**	*e*P	**Pb**	**21 31 36.8 +1.6**			
IUG	78nm,0.5s			*e*S	**Sg**	**21 32 36.9 -2.2**			
	75nm,0.8s								
ARXS	**Arharly**	**4.48**	**25**	Pg	**Pb**	**21 31 38.7 +2.1**			
	11nm,0.3s								
ARXS				Lg	Lg	21 32 39.8			
	49nm,0.7s								
ARXS	**Arharly**	**4.48**	**25**	*e*P	**Pb**	**21 31 38.7 +2.1**			
ARXS	11nm,0.3s			*e*S	**Sg**	**21 32 39.8 -1.9**			
	49nm,0.7s								
PDGK	**Podgornoye**	**4.49**	**44**	Pg	**Pb**	**21 31 38.4 +1.6**			
	4.9nm,0.6s								
PDGK				Lg	Lg	21 32 38.0			
	41nm,0.8s								
PDGK	**Podgornoye**	**4.49**	**44**	⇓Pn	**Pn**	**21 31 29.1 +3.0**			
	1.9nm,0.5s								
PDGK				⇑Pg	**Pg**	**21 31 40.4 -3.4**			
	4.2nm,0.4s								
PDGK				⇓Lg	Lg	21 32 37.8			
	56nm,0.6s								
KK31	**Karatay Array**	**4.60**	**311**	⇑Pn	**Pn**	**21 31 30.1 +2.6**			
	0.8nm,0.3s,baz=131,slow=12,SNR=16								
KK31				⇑Pg	**Pg**	**21 31 42.7 -3.2**			
	1.6nm,0.3s,baz=124,slow=13,SNR=18								
KK31				⇑Lg	Lg	21 32 44.9			
	17nm,0.6s,baz=138,slow=29,SNR=8.4								
KKAR	**Karatay Array**	**4.60**	**311**	⇑*i*P	**Pn**	**21 31 29.7 +2.3**			
	baz=12								
KKAR				⇑*i*S	**Sn**	**21 32 22.9 +2.0**			
	baz=12								
BLB	**Baldybastay**	**4.61**	**30**	Pg	**Pb**	**21 31 41.6 +2.7**			
	27nm,0.3s								
BLB				Lg	Lg	21 32 43.8			
	51nm,0.8s								
BTLS	**Baital**	**4.95**	**350**	Pg	**Pb**	**21 31 47.7 +3.1**			
	5.4nm,0.5s								
BTLS				Lg	Lg	21 32 54.8			
	15nm,0.7s								
BTLS	**Baital**	**4.95**	**350**	*e*P	**Pb**	**21 31 47.7 +3.1**			
BTLS	5.4nm,0.5s			*e*S	**Sg**	**21 32 54.8 -2.0**			
	15nm,0.7s								
BRLS	**Boroldaу**	**4.96**	**307**	Pg	**Pb**	**21 31 46.0 +1.3**			
	5.3nm,0.3s								
BRLS				Lg	Lg	21 32 52.3			
	13nm,0.7s								
BRLS	**Boroldaу**	**4.96**	**307**	*e*P	**Pb**	**21 31 46.0 +1.3**			
BRLS	5.3nm,0.3s			*e*S	**Sg**	**21 32 52.3 -4.6**			
	13nm,0.7s								
KTMS	**Ketmen**	**5.04**	**48**	Pg	**Pb**	**21 31 48.5 +2.3**			
	4.3nm,0.4s								
KTMS				Lg	Lg	21 32 56.6			
	20nm,0.6s								
KTMS	**Ketmen**	**5.04**	**48**	*e*P	**Pb**	**21 31 48.5 +2.3**			
KTMS	4.3nm,0.4s			*e*S	**Sg**	**21 32 56.6 -3.0**			
	20nm,0.6s								
KNOS	**Konyrlen**	**5.11**	**34**	Pg	**Pb**	**21 31 49.6 +2.2**			
	35nm,0.7s								
KNOS				Lg	Lg	21 32 58.1			
	21nm,0.5s								
DJR	**Jarkent**	**5.37**	**38**	Pg	**Pb**	**21 31 54.9 +3.2**			
	4.4nm,0.3s								
DJR				Lg	Lg	21 33 07.0			
	17nm,0.5s								
DJR	**Jarkent**	**5.37**	**38**	*e*P	Pg	21 31 55.8 -4.8			
	2.4nm,0.2s								
DJR				*e*S	**Sg**	**21 33 08.5 -1.6**			
	29nm,0.5s								
KAPS	**Kapalarasan**	**5.95**	**29**	Pg	**Pb**	**21 32 04.0 +2.4**			
	3.0nm,0.6s								
KAPS				Lg	Lg	21 33 23.9			
	12nm,0.5s								
KAPS	**Kapalarasan**	**5.95**	**29**	*e*P	Pg	21 32 06.8 -5.0			
	3.1nm,0.2s								
KAPS				*e*S	**Sg**	**21 33 27.3 -1.5**			
	18nm,0.6s								
MAKZ	**Makanchi**	**8.25**	**34**	⇑Pn	**Pn**	**21 32 20.6 +3.1**			
	0.2nm,0.4s								
MAKZ				⇑Lg	Lg	21 34 35.9			
	7.9nm,0.9s								
OTUK	**Ortayu**	**8.34**	**347**	⇑Pn	Pn	21 32 23.7 +4.9			
	0.4nm,0.5s								
OTUK				⇓Lg	Lg	21 34 42.7			
	16nm,0.8s								
MK31	**Makanchi Array**	**8.38**	**35**	Pn	**Pn**	**21 32 22.1 +2.8**			
	0.2nm,0.3s,baz=209,slow=12,SNR=20								
MK31				⇓Lg	Lg	21 34 40.8			
	2.5nm,0.8s,baz=211,slow=29,SNR=3.7								
MKAR	**Makanchi Array**	**8.38**	**35**	Pn	**Pn**	**21 32 22.2 +2.9**			
	0.3nm,0.3s,baz=214,slow=12,SNR=20								
MKAR				Lg	Lg	21 34 36.4			
	0.1nm,0.3s,baz=212,slow=22,SNR=1.5								
	0.6nm,0.4s								
KURBB	**Kurchatov Arra**	**10.71**	**11**	⇓Lg	Lg	21 35 59.3			
	17nm,0.9s								
KURBB	**Kurchatov Arra**	**10.71**	**11**	Lg	Lg	21 35 57.6			
	baz=199,slow=29,SNR=4.4								
KURK	**Kurchatov**	**10.82**	**12**	⇑Lg	Lg	21 36 00.8			
	14nm,1.1s								
BVAR	**Borovoye Array**	**13.29**	**347**	Pn	**Pn**	**21 33 27.8 +1.4**			
	0.3nm,0.5s,baz=151,slow=9.9,SNR=1.5								
BVAR				Lg	Lg	21 37 16.7			
	baz=213,slow=42,SNR=2.0								
ZALV	**Zalesovo Beam**	**15.24**	**22**	Pn	**Pn**	**21 33 54.0 +1.1**			
	0.1nm,0.3s,baz=204,slow=14,SNR=2.6								
	0.4nm,0.5s								
FINES	**FINESS Array B**	**36.46**	**322**	P	P	21 37 27.8 +5.2			
	0.8nm,0.8s,baz=116,slow=9.7,SNR=5.2								
	0.8nm,0.8s								

IDC 25 21:31:01.7±1.5, 6°35S×143°53E, h0km, mb3.6/2, mbtmp3.9/5, ML4.2/2, Error ellipse: s-maj=40.8km s-min=27.4km az=104.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.70**	**130**	Pn	Pn	21 32 14.4	+0.5
	9.6nm,0.4s,baz=304,slow=18,SNR=1.6						
PMG				Sn	Sn	21 33 06.8	-2.5
	2.2nm,0.3s,baz=252,slow=16,SNR=1.5						
WRA	**Warramunga Arr**	**16.20**	**213**	Pn	Pn	21 34 48.7	-2.1
	1.1nm,0.3s,baz=29,slow=13,SNR=9.6						
WRA				Lg	Lg	21 39 36.0	
	0.1nm,0.3s,baz=40,slow=26,SNR=2.0						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**19.55**	**207**	P	Pn	21 35 32.1	-0.3
	0.6nm,0.3s,baz=36,slow=9.8,SNR=8.6						
	9.9nm,0.8s						
MKAR	**Makanchi Array**	**75.60**	**322**	P	P	21 42 48.8	+0.2
	0.4nm,0.8s,baz=117,slow=7.5,SNR=3.2						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**87.17**	**24**	P	P	21 43 49.0	-0.4
	0.4nm,0.8s,baz=258,slow=3.6,SNR=2.8						
	0.4nm,0.8s						

SJA 25 21:32:07.8±0.6, 22°91S×66°24W, h264km±4km, ML3.7, MW3.5, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**0.99**	**43**	*e*P	Pn	21 32 45.6	+0.7
YJA				*e*S	S	21 33 13.1	-0.9
SLA	**San Lorenzo**	**1.93**	**160**	*e*P	Pn	21 32 45.5	-5.4
LVC	**Limon Verde**	**2.48**	**276**	*e*P	Pn	21 32 56.5	+0.2
PB09	**IPOC Station P**	**2.99**	**291**	*e*P	Pn	21 33 01.8	+0.6
PB15	**IPOC Station P**	**2.99**	**264**	*e*P	Pn	21 33 01.3	0.0
PB15				*e*S	S	21 33 41.5	-2.2
PB06	**IPOC Station P**	**3.08**	**273**	*e*P	Pn	21 33 02.5	+0.3
PB06				*e*S	S	21 33 42.8	-2.5
PB06				IAML		21 33 45.0	
	comp=Z,115nm,0.1s						
FSA	**Cafayete**	**3.20**	**176**	*e*P	Pn	21 33 04.0	+0.6
PB01	**IPOC Station P**	**3.54**	**301**	*e*P	Pn	21 33 07.4	+0.2
PB01				IAML		21 33 54.3	
	comp=Z,49nm,0.2s						
PB07	**IPOC Station P**	**3.58**	**289**	*e*P	Pn	21 33 07.8	+0.2
PB07				IAML		21 33 55.5	
	comp=Z,81nm,0.3s						
PB04	**IPOC Station P**	**3.66**	**278**	*e*P	Pn	21 33 08.9	+0.4
PB04				IAML		21 33 58.3	
	comp=Z,97nm,0.1s						
PB02	**IPOC Station P**	**3.74**	**294**	*e*P	Pn	21 33 09.4	0.0
PB02				IAML		21 34 01.1	
	comp=Z,127nm,0.1s						
GO02	**Mina Guanaco**	**3.80**	**233**	*e*P	Pn	21 33 10.4	+0.2
GO02				*e*S	S	21 33 57.6	-2.3
PB08	**IPOC Station P**	**3.87**	**315**	*e*P	Pn	21 33 12.3	+1.2
PB08				IAML		21 34 03.5	
	comp=Z,42nm,0.4s						
GO01	**Chusmiza**	**4.24**	**319**	*e*P	Pn	21 33 16.4	+0.8
TA01	**Diego Aracena**	**4.34**	**302**	*e*P	Pn	21 33 15.6	-0.7
TA01				IAML		21 34 09.1	
	comp=Z,35nm,0.2s						
PB11	**IPOC Station P**	**4.47**	**314**	*e*P	Pn	21 33 17.4	-0.5
PB11				IAML		21 34 13.2	
	comp=Z,56nm,0.4s						
AC02	**Maricunga**	**4.71**	**213**	*e*P	Pn	21 33 22.7	+1.7
AC01	**Pan de Azucar**	**5.11**	**230**	*e*P	Pn	21 33 24.3	-1.1
AC01				IAML		21 34 24.1	
	comp=Z,28nm,0.4s						

IDC 25 21:35:38.6±4.5, 36°15N×71°03E, h163km±28km, mb3.4/8, mbtmp3.8/13, Error ellipse: s-maj=54.7km s-min=21.5km az=154.0
NNC 25 21:35:46.3±5.8, 36°94N×70°74E, h167km±78km, mb3.4, mpv4.3, Error ellipse: s-maj=49.1km s-min=33.3km az=22.0

ISC 25 21:35:42.3±1.4, 36.7N±0°1×70.73E±0°08, h150km, n26, σ1s57/32, mb3.8/7, 4C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.24**	**27**	P	**Pn**	**21 37 14.7**	**+2.2**
	SNR=18						
KK31	**Karatay Array**	**6.39**	**359**	⇓P	**Pn**	**21 37 16.6**	**+2.6**
	12nm,0.5s,baz=179,slow=14,SNR=162						
KK31				⇓S	**Sn**	**21 38 26.6**	**+0.6**
	34nm,0.6s,baz=183,slow=22,SNR=21						
EKS2	**Erkin-Say**	**6.39**	**21**	P	**Pn**	**21 37 16.4**	**+2.2**
	SNR=112						
AAK	**Ala-Archa**	**6.59**	**25**	P	**Pn**	**21 37 19.1**	**+2.2**
	SNR=18						
AAK	**Ala-Archa**	**6.59**	**25**	P	**Pn**	**21 37 19.1**	**+2.2**
	6.9nm,0.3s,baz=194,slow=3.0,SNR=31						
AAK				S	**Sn**	**21 38 32.4**	**+1.3**
	8.1nm,0.4s,baz=134,slow=23,SNR=11						
KBK	**Karagaybulak**	**6.77**	**27**	P	**Pn**	**21 37 21.5**	**+2.2**
	SNR=9.2						
CHMS	**Chumysh**	**7.00**	**25**	P	**Pn**	**21 37 24.2**	**+2.0**
	SNR=6.9						
CHMS	**Chumysh**	**7.00**	**25**	⇓P	**Pn**	**21 37 23.1**	**+0.9**
	9.7nm,0.6s						
CHMS				⇑S	**Sn**	**21 38 40.8**	**+0.1**
	7.9nm,0.6s						
USP	**Ospenovka**	**7.16**	**23**	P	**Pn**	**21 37 26.0**	**+1.6**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.24**	**30**	P	**Pn**	**21 37 27.4**	**+1.7**
	SNR=24						
TKM2	**Tokmak 2**	**7.24**	**30**	⇑P	**Pn**	**21 37 26.4**	**+0.7**
	17nm,0.6s						
TKM2				⇑S	**Sn**	**21 38 44.9**	**-1.8**
	5.6nm,0.7s						
GEYT	**Alibeck**	**10.12**	**281**	P	**Pn**	**21 38 05.0**	**+1.1**
	1.3nm,0.3s						
GEYT				S	**Sn**	**21 39 55.8**	**-0.1**
MKAR	**Makanchi Array**	**13.25**	**37**	P	**Pn**	**21 38 44.4**	**-0.1**
	0.3nm,0.6s,baz=213,slow=10.0,SNR=3.2						
AB31	**Akbulak array**	**14.79**	**331**	P	**Pn**	**21 39 04.7**	**+0.8**
	1.1nm,0.3s,baz=143,slow=12,SNR=78						
AB31				⇑S	**Sn**	**21 41 44.6**	**-3.5**
	1.3nm,0.6s,baz=156,slow=23,SNR=5.8						
KURBB	**Kurchatov Arra**	**14.99**	**20**	P	**Pn**	**21 39 08.0**	**+1.6**
	0.2nm,0.3s,baz=212,slow=10,SNR=4.4						
BVAR	**Borovoye Array**	**16.31**	**359**	P	**Pn**	**21 39 23.4**	**+0.8**
	0.9nm,0.5s,baz=157,slow=9.5,SNR=5.2						
AKTO	**Aktyubinsk**	**16.49**	**330**	⇓P	**Pn**	**21 39 26.4**	**+1.6**
	3.0nm,0.5s						
AKTO				⇓S	**S**	**21 42 28.1**	**+0.2**
	1.9nm,1.1s						
ZALV	**Zalesovo Beam**	**19.81**	**25**	P	**P**	**21 40 00.2**	**-0.7**
	1.2nm,0.3s,baz=221,slow=12,SNR=9.3						
	1.2nm,0.4s						
AKASG	**Malin Array Be**	**32.65**	**309**	P	**P**	**21 41 59.5**	**-0.2**
	0.8nm,0.4s,baz=82,slow=6.9,SNR=3.6						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**37.19**	**326**	P	**P**	**21 42 38.5**	**0.0**
	0.8nm,0.3s,baz=117,slow=9.5,SNR=15						
	0.8nm,0.3s						
ARCES	**ARCESS Array B**	**40.87**	**338**	P	**P**	**21 43 09.0**	**0.0**
	0.8nm,0.4s,baz=117,slow=8.3,SNR=19						
	0.8nm,0.4s						
HFS	**Hagfors**	**42.77**	**322**	P	**P**	**21 43 24.2**	**-0.3**
	2.1nm,0.5s,baz=90,slow=12,SNR=13						
	2.1nm,0.5s						
NB2	**NORSAR Subarra**	**44.08**	**323**	P	**P**	**21 43 34.2**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.08**	**323**	P	**P**	**21 43 34.2**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=106,slow=7.2,SNR=5.9						
	comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.51**	**268**	P	P	21 46 05.6	-4.2
	comp=Z,0.6nm,0.3s,baz=54,slow=5.7,SNR=1.4						
	comp=Z,0.6nm,0.3s						
YKA	**Yellowknife Ar**	**81.04**	**3**	P	**P**	**21 47 38.3**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=11,slow=6.3,SNR=5.4						
	comp=Z,0.1nm,0.4s						

SCB 25 21:36:06.6±1.2, 20°24S×68°67W, h126km±12km, ML3.6/4, MW4.0, Error ellipse: s-maj=4.8km s-min=2.4km az=1.0
SJA 25 21:36:06.9±2.8, 20°22S×68°47W, h100km, ML3.7, MW3.7
GUC 25 21:36:06.6±0.8, 20°20S×68°58W, h134km±4km, ML3.6

ISC 25 21:36:07.0±1.4, 20°23S±0°03×68°70W±0°05, h138km±9km, n52, σ0s78/84, 4C-8D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.44**	**282**	*e*P	**Pn**	**21 36 26.5**	**-0.6**
PB08				IAML		21 36 42.4	
	comp=Z,1μm,0.2s						
PB08				*e*S	**Sn**	**21 36 42.4**	**+0.1**
PB08	**IPOC Station P**	**0.44**	**282**	⇑*i*P	**Pn**	**21 36 26.5**	**-0.6**
PB08				*i*S	**Sn**	**21 36 41.6**	**-0.6**
PB08				IAML		21 36 42.4	
	comp=E,2μm,0.4s						
PB08	**IPOC Station P**	**0.44**	**282**	Pg	**Pn**	**21 36 26.5**	**-0.6**
GO01	**Chusmiza**	**0.73**	**320**	*e*P	**Pn**	**21 36 28.1**	**-0.8**
GO01				*e*S	**Sn**	**21 36 49.6**	**+4.0**
GO01	**Chusmiza**	**0.73**	**320**	⇑*i*P	**Pn**	**21 36 28.2**	**-0.8**
GO01	**Chusmiza**	**0.73**	**320**	Pg	**Pn**	**21 36 28.2**	**-0.8**
PB11	**IPOC Station P**	**1.01**	**297**	*e*P	**Pn**	**21 36 30.2**	**-0.7**
PB11				*e*S	**Sn**	**21 36 49.3**	**+0.2**
PB11				*e*S		21 36 49.6	
PB11				IAML		21 36 50.8	
	comp=Z,779nm,0.2s						
PB11	**IPOC Station P**	**1.01**	**297**	⇑*i*P	**Pn**	**21 36 30.3**	**-0.6**
PB11				*i*S	**Sn**	**21 36 48.8**	**-0.3**
PB11				IAML		21 36 49.3	
	comp=N,3μm,0.2s						
PB11	**IPOC Station P**	**1.01**	**297**	Pg	**Pn**	**21 36 30.4**	**-0.6**
PB01	**IPOC Station P**	**1.09**	**222**	*e*P	**Pn**	**21 36 31.4**	**-0.2**
PB01				*e*S	**Sn**	**21 36 50.6**	**+0.3**
PB01				IAML		21 36 51.3	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	**1.09**	**222**	⇓*i*P	**Pn**	**21 36 31.3**	**-0.2**
PB01				*i*S	**Sn**	**21 36 50.4**	**+0.1**
PB01				IAML		21 36 51.0	
	comp=E,3μm,0.2s						
PB01	**IPOC Station P**	**1.09**	**222**	Pg	**Pn**	**21 36 31.4**	**-0.2**
TA02	**Huaiquique**	**1.34**	**268**	*e*P	**Pn**	**21 36 33.9**	**0.0**
TA02				*e*S	**Sn**	**21 36 54.8**	**+0.3**
TA02				IAML		21 36 55.2	
	comp=Z,1μm,0.2s						
TA02	**Huaiquique**	**1.34**	**268**	*i*P	**Pn**	**21 36 33.8**	**-0.2**
TA02				*i*S	**Sn**	**21 36 54.7**	**+0.1**
TA01	**Diego Aracena**	**1.43**	**256**	*e*P	**Pn**	**21 36 34.7**	**-0.2**
TA01				*e*S	**Sn**	**21 36 57.2**	**+1.1**
TA01	**Diego Aracena**	**1.43**	**256**	⇓*i*P	**Pn**	**21 36 34.4**	**-0.4**
TA01				*i*S	**Sn**	**21 36 55.1**	**-1.0**
TA01				IAML		21 36 58.7	
	comp=E,374nm,0.1s						
PATCX	**Punta Patache**	**1.48**	**247**	⇓*i*P	**Pn**	**21 36 35.3**	**-0.3**
PATCX				*i*S	**Sn**	**21 36 57.4**	**0.0**
PATCX				IAML		21 37 04.7	
	comp=E,742nm,0.2s						
PB02	**IPOC Station P**	**1.56**	**226**	*e*P	**Pn**	**21 36 36.5**	**+0.1**
PB02				*e*S	**Sn**	**21 36 59.5**	**+0.6**
PB02				IAML		21 37 02.6	
	comp=Z,1μm,0.2s						
PB02	**IPOC Station P**	**1.56**	**226**	⇓*i*P	**Pn**	**21 36 36.2**	**-0.1**
PB02				*i*S	**Sn**	**21 36 59.4**	**+0.6**
PB02				IAML		21 37 00.7	
	comp=E,2μm,0.5s						
PB02	**IPOC Station P**	**1.56**	**226**	Pg	**Pn**	**21 36 36.3**	**-0.1**
PB02				Sg	**Sn**	**21 36 59.1**	**+0.2**
PB02				IAML		21 37 00.8	
	comp=E,1μm,0.5s						
PB09	**IPOC Station P**	**1.64**	**198**	*e*P	**Pn**	**21 36 37.2**	**-0.1**
PB09				*e*S	**Sn**	**21 37 02.0**	**+1.4**
PB09	**IPOC Station P**	**1.64**	**198**	⇓*i*P	**Pn**	**21 36 37.4**	**0.0**
PB09				*i*S	**Sn**	**21 37 01.9**	**+1.3**
PB09				IAML		21 37 04.5	
	comp=E,278nm,0.4s						
PB09	**IPOC Station P**	**1.64**	**198**	Pg	**Pn**	**21 36 37.5**	**+0.1**
SOEO	**Opoqueri**	**1.83**	**25**	Pg	**Pn**	**21 36 39.0**	**-0.9**
PB07	**IPOC Station P**	**1.85**	**217**	*e*P	**Pn**	**21 36 40.0**	**+0.1**
PB07				*e*S	**Sn**	**21 37 06.2**	**+1.2**
PB07				IAML		21 37 12.4	
	comp=Z,279nm,0.2s						
PB07	**IPOC Station P**	**1.85**	**217**	⇓*i*P	**Pn**	**21 36 39.4**	**-0.4**
PB07				*i*S	**Sn**	**21 37 04.5**	**-0.5**
PB07				IAML		21 37 06.8	
	comp=E,490nm,0.5s						
PB07	**IPOC Station P**	**1.85**	**217**	Pg	**Pn**	**21 36 39.2**	**-0.7**
PX02	**IPOC Station P**	**1.90**	**312**	*i*P	**Pn**	**21 36 38.9**	**-1.4**
PB16	**IPOC Station P**	**2.04**	**338**	*e*P	**Pn**	**21 36 42.2**	**-0.3**
PB16				*e*S	**Sn**	**21 37 11.2**	**+1.7**
PB16	**IPOC Station P**	**2.04**	**338**	⇑*i*P	**Pn**	**21 36 42.6**	**+0.1**
PB16				*i*S	**Sn**	**21 37 09.6**	**+0.1**
PB16				IAML		21 37 12.4	
	comp=N,153nm,0.6s						
PB16	**IPOC Station P**	**2.04**	**338**	Pg	**Pn**	**21 36 42.6**	**+0.1**
PB12	**IPOC Station P**	**2.23**	**316**	*e*P	**Pn**	**21 36 43.3**	**-1.0**
PB12				*e*S	**Sn**	**21 37 13.4**	**+0.5**
PB12				IAML		21 37 19.5	
	comp=Z,165nm,0.3s						
PB12	**IPOC Station P**	**2.23**	**316**	⇓*i*P	**Pn**	**21 36 43.1**	**-1.2**
PB12				*i*S	**Sn**	**21 37 11.9**	**-1.0**
PB12				IAML		21 37 20.2	
	comp=N,200nm,0.2s						
LVC	**Limon Verde**	**2.37**	**185**	*e*P	**Pn**	**21 36 46.3**	**0.0**
LVC				*e*S	**Sn**	**21 37 17.1**	**+0.5**
LVC	**Limon Verde**	**2.37**	**185**	⇓*i*P	**Pn**	**21 36 46.2**	**-0.2**
LVC				*i*S	**Sn**	**21 37 16.6**	**+0.1**
LVC	**Limon Verde**	**2.37**	**185**	Pg	**Pn**	**21 36 46.3**	**0.0**
PB04	**IPOC Station P**	**2.49**	**213**	*e*P	**Pn**	**21 36 47.8**	**+0.2**
PB04				*e*S	**Sn**	**21 37 17.1**	**-1.7**
PB04				*e*S		21 37 19.2	
PB04				IAML		21 37 20.7	
	comp=Z,211nm,0.1s						
PB04	**IPOC Station P**	**2.49**	**213**	*i*P	**Pn**	**21 36 47.6**	**0.0**
PB04				IAML		21 37 23.9	
	comp=E,253nm,0.1s						
PB06	**IPOC Station P**	**2.59**	**198**	*e*P	**Pn**	**21 36 49.0**	**+0.1**
PB06				*e*S	**Sn**	**21 37 21.7**	**+0.6**
PB06				IAML		21 37 23.1	
	comp=Z,168nm,0.2s						
PB06	**IPOC Station P**	**2.59**	**198**	*i*P	**Pn**	**21 36 48.4**	**-0.4**
PB06				*i*S	**Sn**	**21 37 20.4**	**-0.7**
PB06	**IPOC Station P**	**2.59**	**198**	Pg	**Pn**	**21 36 48.5**	**-0.4**
PB06				Sg	**Sn**	**21 37 20.6**	**-0.5**
PB06				IAML		21 37 23.9	
	comp=Z,143nm,0.2s						
MOCB	**Mochara**	**3.04**	**110**	Pg	**Pn**	**21 36 54.4**	**-0.4**
MOCB				Sg	**Sn

*IDC **25** 21:39:57.6±1.3,6˚.26S×143˚.08E, h0km, mb3.8/3, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=39.1km s-min=24.1km az=104.0*

ISC 25 21:40:02.7±1.1,6˚.4S±0˚.1×143˚.3E±0˚.1, h35km, n7, σ1s81/7, mb3.8/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.83**	**128**	Pn	**Pn**	**21 41 13.3**	**+0.3**
	7.8nm,0.4s,baz=353,slow=11,SNR=2.7						
PMG				Sn	**Sn**	**21 42 06.2**	**-1.6**
	2.8nm,0.3s,baz=325,slow=18,SNR=2.3						
CTA	**Charters Tower**	**13.88**	**168**	Lg	Lg	21 47 31.6	
	0.1nm,0.3s,baz=222,slow=17,SNR=1.7						
WRA	**Warramunga Arr**	**16.01**	**212**	Pn	**Pn**	**21 43 44.3**	**-1.1**
	0.3nm,0.3s,baz=30,slow=13,SNR=4.2						
WRA				Lg	Lg	21 48 26.3	
	0.3nm,0.3s,baz=36,slow=28,SNR=4.6						
	2.3nm,0.9s						
ASAR	**Alice Springs**	**19.38**	**207**	P	**P**	**21 44 26.1**	**+0.4**
	0.2nm,0.3s,baz=33,slow=10,SNR=8.9						
ASAR				Lg	Lg	21 50 14.6	
	baz=24,slow=30						
	3.3nm,0.7s						
MKAR	**Makanchi Array**	**75.52**	**322**	P	**P**	**21 51 41.7**	**-2.0**
	0.3nm,0.6s,baz=123,slow=4.5,SNR=3.5						
	0.3nm,0.6s						
QSPA	**South Pole Qui**	**83.54**	**180**	P	**P**	**21 52 29.2**	**+2.1**
	1.2nm,0.9s,baz=172,slow=12,SNR=2.1						
	1.2nm,0.9s						
ILAR	**Eielson Array**	**87.33**	**24**	P	**P**	**21 52 46.6**	**+0.9**
	0.5nm,0.9s,baz=263,slow=5.9,SNR=4.5						
	0.5nm,0.9s						

*IDC **25** 21:41:08.8±0.9,5˚.81S×142˚.69E, h0km, mb4.1/8, mbtmp4.1/10, ML3.7/2, Error ellipse: s-maj=43.4km s-min=20.0km az=96.0*

ISC 25 21:41:13.1±0.9,5˚.8S±0˚.1×142˚.7E±0˚.3, h28km, n12, σ0s57/12, mb4.3/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.20**	**209**	Pn	**Pn**	**21 44 58.9**	**+0.1**
	0.2nm,0.3s,baz=21,slow=10,SNR=2.6						
WRA				Lg	Lg	21 49 43.6	
	baz=40,slow=30						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**19.64**	**205**	P	**P**	**21 45 39.5**	**-0.3**
	0.3nm,0.3s,baz=33,slow=9.4,SNR=6.7						
	5.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.73**	**350**	P	**P**	**21 50 10.8**	**+0.5**
	3.6nm,0.8s,baz=178,slow=8.4,SNR=5.5						
	3.6nm,0.8s						
PETK	**Petropavlovsk-**	**60.09**	**10**	P	**P**	**21 51 18.0**	**+0.4**
	3.1nm,0.9s,baz=191,slow=5.9,SNR=2.0						
	3.1nm,0.9s						
MKAR	**Makanchi Array**	**74.67**	**322**	P	**P**	**21 52 50.6**	**+0.5**
	0.8nm,0.6s,baz=112,slow=8.6,SNR=7.7						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**76.62**	**329**	P	**P**	**21 53 00.4**	**-0.7**
	0.3nm,0.4s,baz=90,slow=2.9,SNR=2.0						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**78.56**	**324**	P	**P**	**21 53 11.8**	**-0.2**
	0.8nm,1.0s,baz=118,slow=4.7,SNR=4.1						
	0.8nm,1.0s						
QSPA	**South Pole Qui**	**84.13**	**180**	P	**P**	**21 53 41.9**	**+0.5**
	2.3nm,0.6s,baz=275,slow=3.2,SNR=7.5						
	2.3nm,0.6s						
BVAR	**Borovoye Array**	**84.13**	**325**	P	**P**	**21 53 42.0**	**+0.5**
	2.6nm,0.8s,baz=102,slow=6.2,SNR=6.6						
	2.6nm,0.8s						
ILAR	**Eielson Array**	**87.05**	**24**	P	**P**	**21 53 54.9**	**-0.9**
	1.4nm,0.8s,baz=256,slow=4.6,SNR=7.9						
	1.4nm,0.8s						
DBIC	**Dimbokro**	**147.72**	**273**	PKPbc	**PKPbc**	**22 00 55.6**	**-0.7**
	3.0nm,0.8s,baz=258,slow=2.4,SNR=3.3						
SIV	**San Ignacio**	**148.01**	**133**	PKPbc	**PKPbc**	**22 00 57.2**	**+0.2**
	1.5nm,0.8s,baz=208,slow=4.8,SNR=6.2						

*IDC **25** 21:43:57.1±1.8,6˚.06S×142˚.84E, h0km, mb3.8/4, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=58.7km s-min=31.9km az=105.0*

ISC 25 21:43:58.5±1.6,6˚.1S±0˚.2×142˚.9E±0˚.4, h10km, n6, σ0s92/6, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.04**	**210**	Pn	**Pn**	**21 47 43.4**	**-0.9**
	0.3nm,0.3s,baz=30,slow=13,SNR=2.3						
	3.4nm,1.0s						
ASAR	**Alice Springs**	**19.45**	**205**	P	**P**	**21 48 26.5**	**+1.0**
	0.4nm,0.3s,baz=30,slow=10,SNR=4.8						
	1.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**49.70**	**300**	P	**P**	**21 52 50.8**	**-0.4**
	0.5nm,0.6s,baz=129,slow=6.3,SNR=4.3						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**75.00**	**322**	P	**P**	**21 55 40.8**	**+0.6**
	0.5nm,0.7s,baz=109,slow=8.1,SNR=4.2						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**84.45**	**325**	P	**P**	**21 56 31.6**	**+0.2**
	1.4nm,0.7s,baz=104,slow=6.9,SNR=4.8						
	1.4nm,0.7s						
ILAR	**Eielson Array**	**87.23**	**24**	P	**P**	**21 56 44.5**	**-0.4**
	0.6nm,0.7s,baz=264,slow=5.0,SNR=5.4						
	0.6nm,0.7s						

*IDC **25** 21:44:35.4±1.1,30˚.24N×138˚.72E, h394km±19km, mb3.1/6, mbtmp3.9/9, Error ellipse: s-maj=35.2km s-min=22.0km az=61.0*

*JMA **25** 21:44:36.2±0.4,31˚.N±3˚.×13˚.9E±˚, h435km, MV3.6/16, NEAR TORISHIMA IS*

ISC 25 21:44:36.2±0.9,30˚.43N±0˚.07×139˚.0E±0˚.1, h411km, n19, σ1s79/22, mb3.3/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**2.73**	**15**	*eP*	**P**	**21 45 39.7**	**+1.7**
JHJ2	**Mitsune**	**2.77**	**15**	*eP*	**P**	**21 45 40.4**	**+2.1**
JMKN	**Mikurajimanish**	**3.50**	**9**	*eP*	**P**	**21 45 45.4**	**+1.2**
CBIJ	**Chichi jima**	**4.37**	**139**	*eS*	**S**	**21 46 56.5**	**+2.1**
JCJ	**Chichijima**	**4.37**	**139**	P	**P**	**21 45 50.5**	**-1.8**
	53nm,0.7s,baz=5.9,slow=14,SNR=8.5						
JCJ				S	**S**	**21 46 52.2**	**-2.2**
	52nm,0.3s,baz=113,slow=24,SNR=8.3						
JIE	**Ise**	**4.39**	**335**	*eP*	**P**	**21 45 54.3**	**+1.9**
JTNC	**Tanabenakahech**	**4.41**	**321**	*eP*	**P**	**21 45 53.8**	**+1.2**
BSO1	**Boso 1**	**4.55**	**22**	*eP*	**P**	**21 45 54.6**	**+1.3**
BSO1				*eS*	**S**	**21 46 55.9**	**-0.5**
JOD2	**Odawara 2**	**4.82**	**1**	*eS*	**S**	**21 47 02.0**	**-0.5**
JRY	**Ryogami san**	**5.57**	**360**	*eP*	**P**	**21 46 05.0**	**+0.6**
MJAR	**Matsushiro Arr**	**6.13**	**354**	P	**P**	**21 46 09.9**	**-0.3**
	1.8nm,0.3s,baz=85,slow=28,SNR=11						
MJAR				S	**S**	**21 47 24.9**	**-2.6**
	0.7nm,0.4s,baz=121,slow=9.9,SNR=4.0						
JMK	**Ichinoseki**	**8.71**	**12**	*eS*	**S**	**21 48 16.5**	**-3.6**
KSRS	**Korea Array**	**11.53**	**310**	P	**P**	**21 47 11.5**	**+1.2**
	0.8nm,0.4s,baz=127,slow=10,SNR=3.6						
CMAR	**Chiang Mai Arr**	**38.14**	**261**	P	**P**	**21 51 16.5**	**-1.9**
	0.3nm,0.4s,baz=82,slow=7.4,SNR=2.1						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**45.12**	**317**	P	**P**	**21 52 13.3**	**-0.3**
	0.4nm,0.4s,baz=91,slow=8.7,SNR=2.5						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**48.70**	**312**	P	**P**	**21 52 41.4**	**+0.4**
	0.2nm,0.3s,baz=96,slow=9.0,SNR=3.3						
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**69.46**	**340**	P	**P**	**21 55 03.1**	**+2.0**
	4.0nm,1.0s,baz=66,slow=9.0,SNR=5.1						
	4.0nm,1.0s						
FINES	**FINESS Array B**	**73.70**	**333**	P	**P**	**21 55 27.6**	**+1.3**
	0.4nm,0.3s,baz=72,slow=6.0,SNR=9.9						
	0.4nm,0.3s						
HFS	**Hagfors**	**79.24**	**335**	P	**P**	**21 55 57.8**	**+0.9**
	3.1nm,1.0s,baz=38,slow=7.3,SNR=4.5						
	3.1nm,1.0s						

*BJI **25** 21:47:42.2±0.0,6˚.36S×142˚.85E, h22km, mb4.7/59, mB5.4/17, Ms4.9/9, Ms7 4.7/9*

*IDC **25** 21:47:42.8±0.5,5˚.91S×142˚.73E, h0km, mb4.7/15, mbtmp4.7/20, ML4.4/3, MS4.8/20, Error ellipse: s-maj=23.2km s-min=11.7km az=80.0*

*MOS **25** 21:47:43.4±0.7,5˚.92S×142˚.74E, h16km, mb5.1/36, Error ellipse: s-maj=9.9km s-min=5.3km az=110.9*

*NEIC **25** 21:47:46.8±1.5,5˚.94S±0˚.08×142˚.61E±0˚.08, h19km±3km, mb5.2/106, Error ellipse: s-maj=11.8km s-min=11.0km az=49.0*

*DJA **25** 21:47:47.4±0.3,6˚.S±2˚.×14˚.3E±˚, h22km±2km, M5.3/66, mB5.7/34, mb5.2/66, MLv5.8/6, Mw(mB)5.2/34*

ISC 25 21:47:46.6±0.3,6˚.02S±0˚.04×142˚.68E±0˚.05, h28km, n393, σ1s41/367, mb5.1/132, MS4.8/17, 12C-5D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.33**	**223**	P	**Pn**	**21 48 37.3**	**+0.5**
GENI	**Genyem**	**4.23**	**324**	P	**Pn**	**21 48 51.2**	**+2.0**
GENI	**Genyem**	**4.23**	**324**	P	**Pn**	**21 48 49.6**	**+0.4**
PMG	**Port Moresby**	**5.57**	**127**	Pn	**Pn**	**21 49 09.5**	**+1.8**
PMG	**Port Moresby**	**5.57**	**127**	P	**Pn**	**21 49 09.3**	**+1.6**
PMG	**Port Moresby**	**5.57**	**127**	P	**Pn**	**21 49 09.7**	**+2.1**
PMG	**Port Moresby**	**5.57**	**127**	*ce*P	**Pn**	**21 49 09.2**	**+1.6**
PMG				pmax	pmax		
	comp=Z,79nm,0.6s						
PMG	**Port Moresby**	**5.57**	**127**	Pn	**Pn**	**21 49 08.6**	**+0.9**
	comp=Z,113nm,0.6s,baz=331,slow=7.5,SNR=33						
PMG				Sn	**Sn**	**21 50 11.4**	**+0.7**
	comp=Z,26nm,0.3s,baz=278,slow=15,SNR=7.3						
SMPI	**Sarmi**	**5.63**	**315**	P	**Pn**	**21 49 09.6**	**+1.1**
	comp=Z,721nm,1.1s,comp=Z,9μmcomp=Z,4.9nm						
MANU	**Manus Island**	**6.12**	**50**	Pn	**Pn**	**21 49 16.1**	**+0.8**
MANU	**Manus Island**	**6.12**	**50**	P	Pn	21 49 19.0	+3.7
KAVG	**Kavieng**	**8.79**	**67**	P	Pn	21 49 57.2	+5.2
KMPI	**Kaimana, Papua**	**9.24**	**284**	P	**Pn**	**21 49 57.8**	**-0.4**
	comp=Z,301nm,0.8s,comp=Z,4μm						
RABL	**Rabaul**	**9.62**	**80**	P	Pn	21 50 07.2	+3.9
FAKI	**Fak Fak**	**10.85**	**286**	Pn	**Pn**	**21 50 19.8**	**-0.4**
FAKI	**Fak Fak**	**10.85**	**286**	P	**Pn**	**21 50 21.0**	**+0.9**
FAKI	**Fak Fak**	**10.85**	**286**	P	**Pn**	**21 50 19.0**	**-1.1**
	comp=Z,65nm,0.8s,comp=Z,1μm						
SAUI	**Saumlaki**	**11.46**	**260**	Pn	**Pn**	**21 50 29.5**	**+0.9**
SAUI	**Saumlaki**	**11.46**	**260**	P	**Pn**	**21 50 29.8**	**+1.3**
SAUI	**Saumlaki**	**11.46**	**260**	P	**Pn**	**21 50 29.8**	**+1.3**
	comp=Z,618nm,0.9s,comp=Z,12μm						
KDU	**Kakadu**	**12.05**	**236**	P	**Pn**	**21 50 35.7**	**-0.9**
	baz=12,SNR=16						
KDU	**Kakadu**	**12.05**	**236**	P	**Pn**	**21 50 36.7**	**+0.1**
SWI	**Sorong**	**12.49**	**294**	P	**Pn**	**21 50 41.0**	**-1.7**
	comp=Z,70nm,0.9s,comp=Z,2μm						
MTN	**Manton Dam**	**13.25**	**238**	P	**Pn**	**21 50 51.8**	**-1.2**
	baz=13,SNR=12						
MTN	**Manton Dam**	**13.25**	**238**	Pn	**Pn**	**21 50 51.9**	**-1.2**
MTN	**Manton Dam**	**13.25**	**238**	P	**Pn**	**21 50 52.3**	**-0.7**
DRS	**Darwin Rock St**	**13.25**	**240**	P	**Pn**	**21 50 52.9**	**-0.1**
TV1H	**Townsville Har**	**13.76**	**163**	P	**Pn**	**21 51 02.6**	**+2.7**
CTA	**Charters Tower**	**14.41**	**166**	P	**P**	**21 51 11.7**	**-3.6**
CTA	**Charters Tower**	**14.41**	**166**	Pn	**Pn**	**21 51 10.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=343,slow=13,SNR=7.2						
CTA				Lg	Lg	21 55 24.7	
	comp=Z,0.7nm,0.3s,baz=219,slow=13,SNR=4.4						
CTA				LR	LR	21 56 52.6	
	comp=Z,4μm,18.9s,baz=351,slow=38						
	comp=Z,8.4nm,0.9s						
CTAO	**Charters Tower**	**14.41**	**166**	Pn	**Pn**	**21 51 10.2**	**+1.4**
CTAO	**Charters Tower**	**14.41**	**166**	P	**P**	**21 51 11.8**	**-3.6**
CTAO	**Charters Tower**	**14.41**	**166**	P	**Pn**	**21 51 10.2**	**+1.4**
QIS	**Mount Isa**	**14.75**	**191**	P	**Pn**	**21 51 14.7**	**+1.2**
	baz=15,SNR=7.2						
QIS	**Mount Isa**	**14.75**	**191**	P	**Pn**	**21 51 13.8**	**+0.3**
WB0	**Warramunga Arr**	**15.86**	**210**	Pn	**P**	**21 51 30.1**	**-1.4**
WRAB	**Tennant Creek**	**16.02**	**210**	Pn	**Pn**	**21 51 30.5**	**+0.4**
WRAB	**Tennant Creek**	**16.02**	**210**	P	**Pn**	**21 51 30.5**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,55nm,1.1s						
WB2	**Warramunga Arr**	**16.03**	**210**	P	**Pn**	**21 51 30.3**	**0.0**
	ba16						
WB2	**Warramunga Arr**	**16.03**	**210**	Pn	**Pn**	**21 51 31.0**	**+0.7**
WRA	**Warramunga Arr**	**16.04**	**210**	Pn	**Pn**	**21 51 30.0**	**-0.3**
WRA	**Warramunga Arr**	**16.04**	**210**	P	**Pn**	**21 51 30.0**	**-0.3**
WRA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
WRA	**Warramunga Arr**	**16.04**	**210**	Pn	**Pn**	**21 51 29.4**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=28,slow=13,SNR=15						
WRA				Sn	Sn	21 54 17.3	-10
	comp=Z,1.6nm,0.3s,baz=32,slow=24,SNR=5.5						
WRA				Lg	Lg	21 56 10.1	
	comp=Z,1.1nm,0.3s,baz=15,slow=22,SNR=4.6						
WRA				LR	LR	21 58 45.1	
	comp=Z,4μm,19.1s,baz=16,slow=41						
	comp=Z,20nm,1.1s						
LBMI	**Labuha**	**16.06**	**289**	P	**Pn**	**21 51 30.9**	**+0.2**
	comp=Z,108nm,0.9s,comp=Z,3μm						
SANI	**Sanana**	**17.11**	**283**	P	**P**	**21 51 46.0**	**+0.6**
SANI	**Sanana**	**17.11**	**283**	P	**Pn**	**21 51 43.1**	**-0.8**
	comp=Z,141nm,1.1s,comp=Z,777nm						
HNR	**Honiara**	**17.44**	**102**	P	**Pn**	**21 51 46.2**	**-1.9**
	comp=Z,1μm,0.5s,baz=239,slow=5.3,SNR=1.6						
SOEI	**Soe**	**18.61**	**257**		**Pn**	**21 52 03.0**	**+0.5**
SOEI				IAmb	IAmb	21 52 12.5	
	comp=Z,286nm,1.3s						
SOEI	**Soe**	**18.61**	**257**	P	**Pn**	**21 52 05.6**	**+3.1**
SOEI	**Soe**	**18.61**	**257**	P	**Pn**	**21 52 02.7**	**+0.2**
	comp=Z,270nm,0.9s,comp=Z,4μm						
RK1H	**Rockhampton Ha**	**18.83**	**157**	P	**Pn**	**21 52 08.0**	**+3.0**
AS01	**Alice Springs**	**19.45**	**205**	P	**Pn**	**21 52 13.9**	**+1.4**
AS31	**Alice Springs**	**19.47**	**205**		**Pn**	**21 52 13.9**	**+1.2**
AS31				IAmb	IAmb	21 52 16.9	
	comp=Z,177nm,1.6s						
ASAR	**Alice Springs**	**19.47**	**205**		**Pn**	**21 52 13.9**	**+1.2**
ASAR	**Alice Springs**	**19.47**	**205**	P	**Pn**	**21 52 14.1**	**+1.3**
	comp=Z,78nm,0.6s,baz=32,slow=10,SNR=100						
ASAR				S	**S**	**21 55 42.8**	**-7.3**
	comp=Z,5.1nm,0.7s,baz=309,slow=29,SNR=1.3						
ASAR				Lg	Lg	21 58 03.7	
	comp=Z,0.1nm,0.3s,baz=23,slow=29,SNR=4.3						
ASAR				LR	LR	22 00 46.1	
	comp=Z,5μm,19.5s,baz=35,slow=40						
ASPA	**Alice Springs**	**19.47**	**205**	P	**Pn**	**21 52 13.4**	**+0.6**
	baz=19						
GUMO	**Guam**	**19.61**	**6**	P	**Pn**	**21 52 11.4**	**-2.9**
	comp=Z,4.3nm,0.3s,baz=60,slow=23,SNR=2.7						
GUMO				LR	LR	22 00 01.8	
	comp=Z,925nm,20.2s,baz=176,slow=38						
	comp=Z,74nm,0.8s						
KMSI	**Cibinong**	**19.78**	**289**	P	**Pn**	**21 52 15.4**	**-1.1**
	comp=Z,412nm,1.1s,comp=Z,5μm						
MMRI	**Maumere**	**20.44**	**261**	P	Pn	21 52 22.4	-1.8
	comp=Z,105nm,1.6s,comp=Z,2μm						
LUWI	**Luwuk**	**20.47**	**283**	P	Pn	21 52 25.8	+1.2
LUWI	**Luwuk**	**20.47**	**283**	P	**P**	**21 52 22.0**	**-0.4**
	comp=Z,167nm,1.1s,comp=Z,2μm						
LUWI				pP	**pP**	**21 52 28.4**	**-1.9**
	comp=Z,167nm,1.1s,comp=Z,2μm						
QLP	**Quilpie**	**20.50**	**176**	P	Pn	21 52 24.9	+0.1
	baz=20,SNR=20						
QLP	**Quilpie**	**20.50**	**176**	P	Pn	21 52 26.7	+1.9
FITZ	**Fitzroy Crossi**	**20.51**	**233**	P	Pn	21 52 23.5	-1.4
	baz=20,SNR=7.5						
FITZ	**Fitzroy Crossi**	**20.51**	**233**	P	Pn	21 52 23.8	-1.2
FITZ	**Fitzroy Crossi**	**20.51**	**233**	P	Pn	21 52 23.6	-1.4
EIDS	**Eidsvold**	**20.85**	**158**	P	Pn	21 52 28.4	-0.6
	baz=21,SNR=20						
EIDS	**Eidsvold**	**20.85**	**158**		Pn	21 52 29.7	+0.8
EIDS	**Eidsvold**	**20.85**	**158**	P	Pn	21 52 30.2	+1.3
EDFI	**Ende, Flores**	**20.99**	**261**	P	**P**	**21 52 27.5**	**-0.6**
	comp=Z,77nm,1.5s						
MRSI	**Marisa**	**21.69**	**287**	P	**P**	**21 52 36.4**	**+0.9**
	comp=Z,72nm,1.0s,comp=Z,1μm						
OOD	**Oodnadatta**	**22.65**	**196**	P	**P**	**21 52 48.5**	**+2.9**
KAPI	**Kappang**	**22.84**	**271**	P	**P**	**21 52 48.8**	**+1.0**
KAPI				IAmb	IAmb	21 52 57.4	
	comp=Z,144nm,1.1s						
KAPI	**Kappang**	**22.84**	**271**	P	**P**	**21 52 48.8**	**+1.0**
KAPI				pmax	pmax		
	comp=Z,145nm,1.1s						
TTSI	**Tana Toraja**	**22.98**	**276**	P	**P**	**21 52 50.7**	**+1.5**
	comp=Z,37nm,1.3s						
TOLI2	**Tolitoli**	**22.98**	**287**	P	**P**	**21 52 49.4**	**+0.1**
TOLI2				IAmb	IAmb	21 52 51.7	
	comp=Z,123nm,1.2s						
TOLI2	**Tolitoli**	**22.98**	**287**	P	**P**	**21 52 50.7**	**+1.4**
WRKA	**Warakurna**	**23.40**	**215**	P	**P**	**21 52 53.3**	**-0.1**
	baz=23,SNR=20						
WRKA	**Warakurna**	**23.40**	**215**	P	**P**	**21 52 55.2**	**+1.8**
MPSI	**Mapaga**	**23.60**	**285**	P	**P**	**21 52 56.0**	**+0.6**
	comp=Z,40nm,0.8s,comp=Z,1μm						
AULRC	**Lightning Ridg**	**23.81**	**168**	P	**P**	**21 52 59.9**	**+2.6**
LCRK	**Leigh Creek**	**24.66**	**189**	P	**P**	**21 53 06.6**	**+1.6**
PLAI	**Plampang**	**24.85**	**262**	P	**P**	**21 53 08.3**	**+1.3**
PLAI	**Plampang**	**24.85**	**262**	P	**P**	**21 53 06.1**	**-0.9**
	comp=Z,72nm,1.1s,comp=Z,1μm						
MULG	**Mulgathing**	**25.46**	**198**	P	**P**	**21 53 14.2**	**+1.9**
CMSA	**Cobar Meteorol**	**25.54**	**174**	P	**P**	**21 53 14.3**	**+1.3**
	baz=26,SNR=6.7						
CMSA	**Cobar Meteorol**	**25.54**	**174**	P	**P**	**21 53 16.2**	**+3.2**
ARMA	**Armidale**	**25.69**	**162**	P	**P**	**21 53 15.7**	**+1.2**
	baz=26						
STKA	**Stephens Creek**	**25.74**	**182**	P	**P**	**21 53 16.5**	**+1.6**
	baz=26,SNR=6.6						
STKA	**Stephens Creek**	**25.74**	**182**	P	**P**	**21 53 15.8**	**+1.0**
STKA	**Stephens Creek**	**25.74**	**182**	P	**P**	**21 53 15.9**	**+1.0**
STKA	**Stephens Creek**	**25.74**	**182**	*i* P	**P**	**21 53 14.5**	**-0.4**
STKA	**Stephens Creek**	**25.74**	**182**	P	**P**	**21 53 15.8**	**+1.0**
	comp=Z,14nm,0.7s,baz=347,slow=8.4,SNR=15						
STKA				Lg	Lg	22 01 20.2	
	comp=Z,0.2nm,0.3s,baz=279,slow=21,SNR=1.1						
STKA				LR	LR	22 04 44.9	
	comp=Z,5μm,18.1s,baz=353,slow=40						
	comp=Z,14nm,0.7s						
BKB	**Balikpapan**	**26.16**	**279**	P	**P**	**21 53 20.0**	**+1.1**
BKB	**Balikpapan**	**26.16**	**279**	P	**P**	**21 53 21.6**	**+2.8**
BKB	**Balikpapan**	**26.16**	**279**	P	**P**	**21 53 21.4**	**+2.6**
	comp=Z,159nm,1.1s,comp=Z,2μm						
PSA00	**Pilbara Seismi**	**26.96**	**233**	P	**P**	**21 53 25.4**	**-0.7**
PSA00	**Pilbara Seismi**	**26.96**	**233**	P	**P**	**21 53 28.2**	**+2.1**
HTT	**Hallett**	**27.49**	**187**	P	**P**	**21 53 33.5**	**+2.8**
JAGI	**Jajag, Banyuwa**	**28.40**	**263**	P	**P**	**21 53 36.7**	**-2.3**
JAGI				IAmb	IAmb	21 53 38.6	
	comp=Z,97nm,1.4s						
JAGI	**Jajag, Banyuwa**	**28.40**	**263**	P	**P**	**21 53 37.3**	**-1.7**
	comp=Z,53nm,1.5s,comp=Z,1μm						
YNG	**Young**	**28.63**	**170**	P	P	21 53 45.9	+5.1
ARPS	**Mount Arapiles**	**30.61**	**181**	P	**P**	**21 53 59.9**	**+1.6**
	baz=31,SNR=7.6						
PWJI	**Pagerwojo**	**30.70**	**264**	P	**P**	**21 53 58.3**	**-1.1**
	comp=Z,17nm,1.1s						
BRAT	**Ballarat**	**31.40**	**178**	P	**P**	**21 54 07.8**	**+2.6**
STKI	**Sintang**	**31.73**	**280**	P	**P**	**21 54 09.4**	**+0.9**
	comp=Z,37nm,2.1s						
UGM	**Wanagama**	**31.97**	**265**	P	**P**	**21 54 10.4**	**-0.2**
	comp=Z,97nm,1.7s						
SMRI	**Semarang**	**32.04**	**266**	P	**P**	**21 54 11.7**	**+0.5**
KPJI	**Karang Pucung**	**33.54**	**266**	P	**P**	**21 54 24.3**	**0.0**
	comp=Z,45nm,1.2s						
CMJI	**Cimerak**	**34.02**	**265**	P	**P**	**21 54 26.9**	**-1.6**
	comp=Z,94nm,1.4s,comp=Z,884nm						
BBJI	**Bungbulang**	**34.81**	**266**	P	**P**	**21 54 34.9**	**-0.6**
CNJI	**Cibinong**	**35.33**	**266**	P	**P**	**21 54 38.7**	**-1.1**
	comp=Z,73nm,1.2s,comp=Z,784nm						
JOW	**Kunigami**	**35.52**	**338**	LR	LR	22 07 57.7	
	comp=Z,4μm,21.7s,baz=129,slow=34						
NWAO	**Narrogin (SRO)**	**35.74**	**218**	LR	LR	22 10 09.9	
	comp=Z,4μm,18.1s,baz=38,slow=38						
NACB	**Ninganchiao**	**36.38**	**326**	P	**P**	**21 54 49.4**	**+0.7**
NACB	**Ninganchiao**	**36.38**	**326**	P	**P**	**21 54 50.1**	**+1.4**
PPBI	**Pangkal Pinang**	**36.64**	**274**	P	**P**	**21 54 52.5**	**+1.4**
XMI	**Christmas Isla**	**36.85**	**261**	P	**P**	**21 54 54.1**	**+1.2**
XMIS	**Christmas Isla**	**36.89**	**261**	P	**P**	**21 54 53.9**	**+0.7**
XMIS	**Christmas Isla**	**36.89**	**261**	P	**P**	**21 54 54.5**	**+1.3**
YHNB	**Yeheng**	**36.90**	**327**	P	**P**	**21 54 55.1**	**+1.9**
KASI	**Kota Agung**	**37.99**	**269**	P	**P**	**21 55 00.7**	**-1.8**
	comp=Z,17nm,1.1s						
DSRI	**Dabo**	**38.42**	**277**	P	**P**	**21 55 07.3**	**+1.1**
	comp=Z,60nm,1.2s						
LWLI	**Liwa**	**38.45**	**270**	P	**P**	**21 55 06.8**	**+0.2**
	comp=Z,42nm,0.8s,comp=Z,7μm						
OUZ	**Omahuta**	**40.67**	**140**	P	P	21 55 28.9	+4.3
KRJI	**Kerinci**	**41.29**	**274**	P	**P**	**21 55 30.5**	**+0.4**
	comp=Z,213nm,0.5s,comp=Z,3μm						
BKNI	**Bangkinang**	**42.04**	**277**	P	**P**	**21 55 38.0**	**+1.8**
BKNI	**Bangkinang**	**42.04**	**277**	P	**P**	**21 55 37.4**	**+1.2**
	comp=Z,124nm,0.5s

PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,210nm,4.1s
MDJ Mudanjiang 51.77 348 P **P** **21 56 51.9 +0.2**
MDJ Mudanjiang 51.77 348 P **P** **21 56 52.7 +1.0**
BJT Baijiatuau 51.92 334 P **P** **21 56 53.1 +0.1**
BJT Baijiatuau 51.92 334 P P 21 56 55.6 +2.6
BJT Baijiatuau 51.92 334 P **P** **21 56 53.1 +0.1**
BJT pmax pmax
comp=Z,85nm,1.5s
CN2 Changchun 51.98 344 *e*P **P** **21 56 49.3 -4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 Chengdu 52.28 317 P **P** **21 56 57.5 +1.6**
CD2 pmax pmax
comp=Z,20nm,0.7s
YSS Yuzh-Sakhalins 52.74 0 *e*P **P** **21 56 58.3 -0.6**
YSS *e* 21 57 05.8
TNCH TengChong 52.89 308 *e*P **P** **21 57 02.0 +1.4**
TNCH pP pP 21 57 07.0 -2.8
TNCH sP sP 21 57 09.5 -3.8
TNCH pmax pmax
comp=Z,35nm,1.4s
BNX BinXian 53.31 347 ⇑P **P** **21 57 03.5 +0.4**
BNX pmax pmax
comp=Z,22nm,0.9s
MND Mandalay 53.44 303 P **P** **21 57 06.2 +1.7**
XLT XiLinHaoTe 55.19 337 *e*P P 21 57 24.0 +7.0
XLT pmax pmax
comp=Z,11nm,1.0s
XLT pmax pmax
comp=Z,400nm,11.5s
BTO Baotou 55.26 330 *e*P **P** **21 57 19.3 +1.8**
BTO pP **pP** **21 57 23.8 -2.8**
BTO sP **sP** **21 57 26.0 -4.1**
BTO PP **PP** **21 59 24.5 +3.1**
BTO pmax pmax
comp=Z,18nm,1.3s
LZH Lanzhou 55.50 322 *e*P **P** **21 57 21.5 +2.0**
LZH pP pP 21 57 27.5 -1.1
LZH pmax pmax
comp=Z,20nm,1.1s
KLR Kul'dur 55.85 351 *ce*P **P** **21 57 21.7 +0.2**
KLR pmax pmax
comp=Z,11nm,1.7s
TYV Tymovskoe 56.66 360 *e*P P 21 57 34.3 +7.1
TYV *e*S S 22 05 31.8 +14
TYV pmax pmax
comp=Z,9.0nm,0.9s
TYV pmax pmax
comp=Z,300nm,4.7s
HEH HeiHe 57.59 348 *e*P **P** **21 57 33.8 0.0**
HEH pmax pmax
comp=Z,5.0nm,0.5s
HIA Hailar 58.59 343 *i*P **P** **21 57 41.2 +0.3**
HIA pmax pmax
comp=Z,30nm,1.8s
GTA Gaotai 60.08 323 P **P** **21 57 53.0 +1.5**
GTA pP pP 21 58 00.0 -0.7
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA LR LR
comp=Z,280nm,17.5s
GTA LR LR
comp=Z,230nm,15.1s
GTA LR LR
comp=Z,410nm,18.7s
PEA0B Petropavlovsk- 60.27 10 *i*P **P** **21 57 52.4 0.0**
PETK Petropavlovsk- 60.27 10 P **P** **21 57 53.0 +0.6**
PETK Petropavlovsk- 60.27 10 P **P** **21 57 52.9 +0.6**
comp=Z,8.5nm,0.9s,baz=161,slow=5.1,SNR=9.5
comp=Z,8.5nm,0.9s
LSA Lhasa 60.86 309 P **P** **21 57 57.7 +0.2**
LSA IAmb IAmb 21 58 45.2
comp=Z,32nm,1.5s
LSA Lhasa 60.86 309 P **P** **21 57 57.7 +0.2**
LSA pmax pmax
comp=Z,32nm,1.5s
ZEA Zeya 60.94 350 *e*P **P** **21 57 58.1 +1.2**
ZEA pmax pmax
comp=Z,30nm,1.5s
GOMU GeErMu 61.42 317 P **P** **21 58 02.5 +1.5**
GOMU pP pP 21 58 06.5 -3.7
GOMU sP sP 21 58 08.8 -4.9
GOMU pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 62.14 334 P **P** **21 58 05.7 +0.3**
ULN Ulaanbaatar 62.14 334 *i*P **P** **21 58 06.6 +1.2**
ULN pmax pmax
comp=Z,33nm,1.8s
SONM Songino Array 62.41 333 P **P** **21 58 07.7 +0.5**
SONM IAmb IAmb 21 58 16.6
comp=Z,24nm,1.5s
SONM Songino Array 62.41 333 P **P** **21 58 07.7 +0.5**
SONM pmax pmax
comp=Z,24nm,1.5s
SONM Songino Array 62.41 333 P **P** **21 58 06.4 -0.8**
comp=Z,1.0nm,0.5s,baz=148,slow=7.0,SNR=4.3
comp=Z,1.0nm,0.5s
CIT Chita 62.94 340 *e*P P 21 58 18.8 +8.3
CIT pmax pmax
comp=Z,99nm,2.1s
CASY Casey 64.15 194 P **P** **21 58 19.8 +1.6**
SHEM Shemya Is, Ala 64.32 21 LR LR 22 21 04.1
comp=Z,670nm,20.1s,baz=295,slow=31
ZAK Zakamensk 65.67 334 *e*P **P** **21 58 28.5 0.0**
ZAK pmax pmax
comp=Z,21nm,1.4s
MA2 Magadan 65.71 5 P **P** **21 58 29.1 +0.7**
MA2 Magadan 65.71 5 *ce*P **P** **21 58 28.4 0.0**
MA2 pmax pmax
comp=Z,18nm,1.7s
HYB Hyderabad 67.46 292 *e*P **P** **21 58 40.7 +0.2**
MOY Mondy 67.60 333 *e*P P 21 58 48.8 +8.0
MOY pmax pmax
comp=Z,49nm,2.4s
BOD Bodaibo 67.73 344 *e*P **P** **21 58 41.9 +0.6**
BOD pmax pmax
comp=Z,27nm,2.0s
YAK Yakutsk 68.60 353 *e*P **P** **21 58 47.3 +0.7**
YAK pmax pmax
comp=Z,9.0nm,1.4s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.6s
SEY Seymchan 69.16 5 *i*P **P** **21 58 49.7 -0.5**
SEY pmax pmax
comp=Z,28nm,1.9s
SEY Seymchan 69.16 5 LR LR 22 26 35.6
comp=Z,409nm,21.9s,baz=212,slow=34
WMQ Urumqi 70.05 321 *e*P **P** **21 58 57.8 +1.6**
WMQ pP pP 21 59 04.3 -1.2
WMQ pmax pmax
comp=Z,23nm,1.1s
VNDA Vanda 72.18 176 P **P** **21 59 10.2 +1.8**
comp=Z,4.1nm,0.8s,baz=323,slow=7.9,SNR=9.7
VNDA LR LR 22 30 24.7
comp=Z,991nm,18.1s,baz=332,slow=35
comp=Z,4.1nm,0.8s
DGZ Jazzator, Alta 73.21 326 *i*P **P** **21 59 16.1 +0.9**
DGZ pmax pmax
comp=Z,21nm,1.4s
ZSN Zaisan 73.56 323 *e*P **P** **21 59 17.8 +0.6**
comp=Z,10nm,1.3s,baz=323
ZSN Zaisan 73.56 323 *e*P **P** **21 59 17.7 +0.6**
ZSN pmax pmax
comp=Z,10.0nm,1.3s
MK31 Makanchi Array 74.82 322 P **P** **21 59 25.2 +0.7**
MK31 IAmb IAmb 21 59 52.1
comp=Z,18nm,1.0s
MK31 Makanchi Array 74.82 322 *ce*P **P** **21 59 25.8 +1.3**
MKAR Makanchi Array 74.82 322 P **P** **21 59 25.1 +0.7**
MKAR Makanchi Array 74.82 322 P **P** **21 59 25.5 +1.0**
comp=Z,5.7nm,0.8s,baz=110,slow=7.1,SNR=44
comp=Z,5.7nm,0.8s
MAKZ Makanchi 75.02 322 P **P** **21 59 26.0 +0.3**
MAKZ IAmb IAmb 21 59 53.1
comp=Z,21nm,0.9s
MAKZ Makanchi 75.02 322 P **P** **21 59 26.0 +0.3**
MAKZ pmax pmax
comp=Z,21nm,1.0s
SHLS Shalkode 75.11 317 *e*P **P** **21 59 25.1 -1.4**
comp=Z,9.5nm,1.1s,baz=318
SHLS Shalkode 75.11 317 *e*P **P** **21 59 25.0 -1.4**
SHLS pmax pmax
comp=Z,9.0nm,1.1s
UZB Uzynbulak 75.41 317 *e*P **P** **21 59 28.6 +0.4**
comp=Z,25nm,1.9s,baz=317
UZB Uzynbulak 75.41 317 *e*P **P** **21 59 28.5 +0.4**
UZB pmax pmax
comp=Z,25nm,1.9s
PRZ Przheval'sk 75.57 317 P **P** **21 59 29.3 +0.1**
PRZ IAmb IAmb 22 00 01.5
comp=Z,24nm,1.1s
PRZ Przheval'sk 75.57 317 P **P** **21 59 29.3 +0.1**
PRZ pmax pmax
comp=Z,24nm,1.1s
BILL Bilibino 75.75 9 *i*P **P** **21 59 30.1 +0.8**
BILL pmax pmax
comp=Z,17nm,1.9s
KPKS Kokpek 75.76 318 *e*P **P** **21 59 30.6 +0.5**
comp=Z,16nm,1.8s,baz=318
KPKS Kokpek 75.76 318 *e*P **P** **21 59 30.6 +0.5**
KPKS pmax pmax
comp=Z,16nm,1.8s
SATY Saty 75.79 317 *e*P **P** **21 59 30.1 -0.2**
comp=Z,19nm,1.9s,baz=317
SATY Saty 75.79 317 *e*P **P** **21 59 30.9 +0.6**
SATY pmax pmax
comp=Z,19nm,1.9s
ZHN Zhinishke 75.81 317 *e*P **P** **21 59 30.9 +0.5**
baz=317
ZHN Zhinishke 75.81 317 *e*P **P** **21 59 30.9 +0.5**
KSH Kashi 76.22 313 P **P** **21 59 35.3 +2.5**
KSH sP PcP 21 59 42.8 -2.0
KSH pmax pmax
comp=Z,10.0nm,1.1s
NIL Nilore 76.47 307 P **P** **21 59 34.3 +0.1**
NIL IAmb IAmb 21 59 36.3
comp=Z,23nm,0.8s
NIL Nilore 76.47 307 P **P** **21 59 34.3 +0.1**
NIL pmax pmax
comp=Z,23nm,0.8s
TDK Taldyqorghan 76.54 319 *e*P **P** **21 59 34.8 +0.4**
comp=Z,22nm,1.6s,baz=319
TDK Taldyqorghan 76.54 319 *e*P **P** **21 59 34.7 +0.4**
TDK pmax pmax
comp=Z,22nm,1.6s
MDOK Medeo 76.75 317 *e*P **P** **21 59 35.1 -0.7**
baz=317
MDOK Medeo 76.75 317 *e*P **P** **21 59 35.9 +0.1**
TNSS Tian-Shan 76.77 317 *e*P **P** **21 59 36.6 +0.3**
baz=317
TNSS Tian-Shan 76.77 317 *e*P **P** **21 59 36.5 +0.3**
ZAA0 Zalesovo Array 76.78 329 P **P** **21 59 35.4 -0.1**
ZALV Zalesovo Beam 76.78 329 P **P** **21 59 35.4 -0.1**
ZALV Zalesovo Beam 76.78 329 P **P** **21 59 35.4 -0.1**
ZALV Zalesovo Beam 76.78 329 P **P** **21 59 34.2 -1.3**
comp=Z,3.1nm,0.8s,baz=104,slow=6.3,SNR=14
comp=Z,3.1nm,0.8s
NRN Naryn 76.86 315 P **P** **21 59 36.3 -0.3**
NRN Naryn 76.86 315 P **P** **21 59 36.3 -0.3**
NRN pmax pmax
comp=Z,5.0nm,1.0s
KUU Kurty 77.50 317 *e*P **P** **21 59 40.1 +0.3**
comp=Z,19nm,1.2s,baz=317
KUU Kurty 77.50 317 *e*P **P** **21 59 40.1 +0.3**
KUU pmax pmax
comp=Z,19nm,1.2s
TKM2 Tokmak 2 77.66 316 P **P** **21 59 42.0 +1.0**
SNR=5.1
TIXI Tiksi 78.05 356 P **P** **21 59 42.7 +0.5**
TIXI Tiksi 78.05 356 *ce*P **P** **21 59 41.4 -0.8**
TIXI pmax pmax
comp=Z,8.0nm,2.5s
UCH Uchtor 78.17 315 P **P** **21 59 45.5 +1.4**
SNR=9.6
AAK Ala-Archa 78.32 316 P **P** **21 59 45.7 +1.1**
SNR=5.8
AAK Ala-Archa 78.32 316 P **P** **21 59 45.3 +0.7**
AAK Ala-Archa 78.32 316 *ce*P **P** **21 59 44.8 +0.2**
AAK pmax pmax
comp=Z,9.0nm,1.7s
USP Ospenovka 78.53 316 P **P** **21 59 46.5 +0.9**
SNR=8.0
KURK Kurchatov 78.69 324 P **P** **21 59 46.4 +0.2**
KURK IAmb IAmb 21 59 55.1
comp=Z,38nm,1.5s
KURBB Kurchatov Arra 78.70 324 P **P** **21 59 46.1 -0.2**
comp=Z,5.5nm,1.1s,baz=116,slow=4.8,SNR=29
comp=Z,5.5nm,1.1s
EKS2 Erkin-Say 78.83 315 P **P** **21 59 48.7 +1.3**
SNR=8.6
ARSB Arslanbob 78.97 314 P **P** **21 59 48.4 +0.2**
ARSB Arslanbob 78.97 314 P **P** **21 59 48.4 +0.2**
ARSB pmax pmax
comp=Z,5.0nm,1.1s
L14K Kuka Creek 79.27 24 P **P** **21 59 50.1 +1.0**
L14K IAmb IAmb 21 59 51.7
comp=Z,23nm,0.9s
BTLS Baital 79.43 318 *e*P **P** **21 59 50.7 +0.2**
comp=Z,11nm,1.7s,baz=318
BTLS Baital 79.43 318 *e*P **P** **21 59 50.6 +0.2**
BTLS pmax pmax
comp=Z,11nm,1.7s
BTK Batken 80.16 312 P **P** **21 59 54.6 -0.1**
BTK IAmb IAmb 22 02 57.1
comp=Z,12nm,0.6s
BTK Batken 80.16 312 P **P** **21 59 54.6 -0.1**
BTK pmax pmax
comp=Z,12nm,0.6s
ANM Nome 80.17 20 P **P** **21 59 54.9 +0.9**
ANM IAmb IAmb 22 00 14.7
comp=Z,26nm,1.3s
ANM Nome 80.17 20 P **P** **21 59 54.9 +0.9**
ANM pmax pmax
comp=Z,26nm,1.3s
MAW Mawson 80.58 202 LR LR 22 34 11.8
comp=Z,618nm,18.1s,baz=88,slow=35
DZA Taraz 80.61 315 *e*P **P** **21 59 57.0 0.0**
baz=315
DZA Taraz 80.61 315 *e*P **P** **21 59 56.9 0.0**
F15K North Star Dit 81.11 19 P **P** **21 59 59.9 +0.9**
SIMJ Simiganj 81.14 310 P **P** **21 59 59.8 -0.2**
SIMJ IAmb IAmb 22 00 26.4
comp=Z,17nm,1.0s
J16K Anvik River 81.16 22 P **P** **21 59 59.8 +0.5**
J16K IAmb IAmb 22 00 19.9
comp=Z,36nm,1.3s
KK31 Karatay Array 81.25 315 P **P** **22 00 00.4 +0.1**
KK31 Karatay Array 81.25 315 P **P** **22 00 00.4 +0.1**
KK31 pmax pmax
comp=Z,23nm,1.6s
KKAR Karatay Array 81.25 315 P **P** **22 00 00.8 +0.5**
KKAR Karatay Array 81.25 315 P **P** **22 00 00.6 +0.3**
KKAR IAmb IAmb 22 00 01.9
comp=Z,23nm,1.6s
KKAR Karatay Array 81.25 315 P **P** **22 00 00.6 +0.3**
KKAR pmax pmax
comp=Z,23nm,1.6s
IUG Iuzhnay 81.32 314 *e*P **P** **22 00 01.2 +0.4**
comp=Z,14nm,1.5s,baz=314
IUG Iuzhnay 81.32 314 *e*P **P** **22 00 01.2 +0.4**
IUG pmax pmax
comp=Z,15nm,1.5s
I17K Unalakleet 81.45 22 P **P** **22 00 02.2 +1.4**
I17K IAmb IAmb 22 00 22.0
comp=Z,23nm,1.1s
CHM Chimkent 81.67 314 *e*P **P** **22 00 02.8 +0.2**
baz=314
CHM Chimkent 81.67 314 *e*P **P** **22 00 02.7 +0.2**
G16K Koyuk River 81.70 20 P **P** **22 00 03.2 +1.1**
G16K IAmb IAmb 22 00 18.4
comp=Z,17nm,1.0s
BRLS Boroldav 81.71 315 *e*P **P** **22 00 03.1 +0.4**
baz=315
BRLS Boroldav 81.71 315 *e*P **P** **22 00 03.1 +0.4**
K17K Iditarod 81.75 24 P **P** **22 00 03.4 +1.0**
BRZS Berezniki 81.95 322 *e*P **P** **22 00 03.6 -0.2**
comp=Z,9.2nm,1.4s,baz=322
BRZS Berezniki 81.95 322 *e*P **P** **22 00 03.6 -0.2**
BRZS pmax pmax
comp=Z,9.0nm,1.4s
KDAK Kodiak Island 81.99 29 LR LR 22 34 14.5
comp=Z,490nm,18.8s,baz=250,slow=34
H17K Granite Mounta 82.31 21 P **P** **22 00 05.9 +0.6**
H17K IAmb IAmb 22 00 25.7
comp=Z,42nm,1.5s
F17K Baldwin Pennin 82.66 20 P **P** **22 00 08.1 +1.0**
F17K IAmb IAmb 22 00 33.8
comp=Z,19nm,1.2s
G18K Tagagawik 83.26 21 P **P** **22 00 11.2 +0.9**
J19K Poorman 83.44 23 P **P** **22 00 12.2 +0.9**
J19K IAmb IAmb 22 00 32.0
comp=Z,15nm,1.1s
M20K Styx River 83.49 25 P **P** **22 00 12.3 +0.7**
K20K Telida 83.76 24 P **P** **22 00 13.5 +0.6**
G19K Purcell Mounta 83.94 21 P **P** **22 00 14.0 +0.3**
G19K IAmb IAmb 22 00 37.5
comp=Z,38nm,1.6s
QSPA South Pole Qui 83.94 180 P **P** **22 00 14.8 +0.8**
comp=Z,17nm,0.9s,baz=320,slow=1.1,SNR=23
QSPA LR LR 22 37 39.6
comp=Z,2μm,19.9s,baz=16,slow=36
comp=Z,17nm,0.9s
NRIK Noril'sk 84.01 343 P **P** **22 00 14.3 +0.3**
NRIK IAmb IAmb 22 00 22.8
comp=Z,27nm,1.1s
NRIK Noril'sk 84.01 343 *ce*P **P** **22 00 13.4 -0.6**
NRIK pmax pmax
comp=Z,21nm,1.0s
NRIK Noril'sk 84.01 343 P **P** **22 00 14.6 +0.5**
comp=Z,10nm,0.7s,baz=119,slow=4.3,SNR=16
NRIK LR LR 22 37 10.5
comp=Z,395nm,19.9s,baz=46,slow=35
comp=Z,10nm,0.7s
J20K Nowinta River 84.10 23 P **P** **22 00 15.8 +1.2**
BVAR Borovoye Array 84.28 325 P **P** **22 00 16.6 +0.8**
comp=Z,20nm,0.8s,baz=110,slow=6.5,SNR=77
comp=Z,20nm,0.8s
BRVK Borovoye 84.35 325 P **P** **22 00 16.8 +0.7**
BRVK Borovoye 84.35 325 *ce*P **P** **22 00 16.5 +0.4**
BRVK pmax pmax
comp=Z,28nm,1.0s
CAST Castle Rocks 84.59 24 P **P** **22 00 18.1 +0.9**
CAST IAmb IAmb 22 00 42.4
comp=Z,18nm,1.2s
C19K Lookout Ridge 84.65 18 P **P** **22 00 18.6 +1.2**
C19K IAmb IAmb 22 00 43.0
comp=Z,24nm,1.1s
RC01 Rabbit Creek A 84.65 27 P **P** **22 00 17.4 -0.1**
RC01 IAmb IAmb 22 00 33.8
comp=Z,21nm,1.0s
F20K Avaraart Lake 84.86 20 P **P** **22 00 19.0 +0.6**
H21K Melozitna Rive 85.27 22 P **P** **22 00 21.0 +0.5**
H21K IAmb IAmb 22 01 50.2
comp=Z,17nm,1.6s
SML Sawmill 85.55 26 P **P** **22 00 22.3 +0.3**
MLY Manley 85.79 23 P **P** **22 00 23.8 +0.7**
MLY IAmb IAmb 22 00 46.5
comp=Z,26nm,1.4s
RND Reindeer 85.92 25 P **P** **22 00 23.5 -0.4**
RND IAmb IAmb 22 00 39.9
comp=Z,17nm,0.9s
RND Reindeer 85.92 25 P **P** **22 00 23.5 -0.4**
RND pmax pmax
comp=Z,17nm,0.9s
DHY Denali Highway 86.42 25 P **P** **22 00 26.4 0.0**
B21K Ikpikpuk River 86.44 18 P **P** **22 00 27.4 +1.2**
B21K IAmb IAmb 22 00 52.3
comp=Z,11nm,0.8s
WRH Wood River Hil 86.62 24 P **P** **22 00 26.8 -0.4**
WRH IAmb IAmb 22 00 50.2
comp=Z,17nm,1.2s
D22K Ayikyak River 86.72 19 P **P** **22 00 29.3 +1.7**
D22K IAmb IAmb 22 00 37.6
comp=Z,24nm,1.3s
G23K Bananza Creek 86.73 22 P **P** **22 00 28.6 +0.9**
CCB Clear Creek Bu 86.80 24 P **P** **22 00 27.3 -0.7**
CCB IAmb IAmb 22 00 28.7
comp=Z,10.0nm,0.8s
HDA Harding Lake 87.06 24 P **P** **22 00 29.6 +0.3**
HDA IAmb IAmb 22 00 37.4
comp=Z,41nm,1.8s
H24K Noodor Dome 87.20 23 P **P** **22 00 29.9 -0.2**
ILAR Eielson Array 87.22 24 P **P** **22 00 29.2 -0.8**
ILAR Eielson Array 87.22 24 P **P** **22 00 29.0 -1.1**
ILAR Eielson Array 87.22 24 P **P** **22 00 28.9 -1.1**
comp=Z,6.0nm,0.8s,baz=258,slow=4.6,SNR=89
ILAR LR LR 22 35 22.3
comp=Z,427nm,21.2s,baz=240,slow=33
comp=Z,6.0nm,0.8s
J25K Salcha River, 87.78 24 P **P** **22 00 32.6 -0.2**
J25K IAmb IAmb 22 00 55.6
comp=Z,30nm,1.6s
C23K Itkillik River 87.79 19 P **P** **22 00 34.0 +1.3**
F24K Squaw Lake 87.81 21 P **P** **22 00 34.2 +1.2**
D24K Happy Valley 88.10 19 P **P** **22 00 36.0 +1.8**
BARN Barnard Glacie 88.35 28 P **P** **22 00 36.8 +0.9**
L27K Beaver Creek, 88.82 26 P **P** **22 00 38.6 +0.8**
L27K IAmb IAmb 22 01 07.2
comp=Z,13nm,1.2s
E25K Arctic Village 88.85 21 P **P** **22 00 39.3 +1.4**
BMAR Burnt Mountain 88.98 22 P **P** **22 00 40.2 +1.7**
EGAK Eagle 89.56 25 P **P** **22 00 41.9 +0.7**
ABKAR Akbulak array 89.79 319 P **P** **22 00 42.6 0.0**
ABKAR Akbulak array 89.79 319 P **P** **22 00 42.4 -0.2**
ABKAR IAmb IAmb 22 01 07.4
comp=Z,6.5nm,1.1s
DAWY Dawson 90.12 25 P **P** **22 00 45.0 +1.1**
DAWY IAmb IAmb 22 01 12.8
comp=Z,13nm,1.0s
M29M Somme Creek 90.17 27 P **P** **22 00 45.0 +0.7**
M29M IAmb IAmb 22 01 13.1
comp=Z,11nm,0.9s
I28M Miner Creek 90.23 24 P **P** **22 00 45.1 +0.7**
I28M IAmb IAmb 22 00 54.7
comp=Z,11nm,1.1s
L29M L29M 90.46 27 P **P** **22 00 47.0 +1.5**
L29M IAmb IAmb 22 01 14.5
comp=Z,10nm,0.8s
K29M Barlow Dome 90.88 26 P **P** **22 00 48.5 +0.9**
K29M IAmb IAmb 22 01 16.4
comp=Z,16nm,1.1s
J30M Hart River 91.53 25 P **P** **22 00 51.8 +1.2**
I30M Mount Dempster 91.64 25 P **P** **22 00 51.0 0.0**
I30M IAmb IAmb 22 01 19.0
comp=Z,15nm,1.4s
ARU Arti 91.72 326 P **P** **22 00 50.2 -1.2**
ARU IAmb IAmb 22 00 58.9
comp=Z,15nm,1.3s
ARU Arti 91.72 326 *c*P **P** **22 00 49.3 -2.1**
ARU 22 04 28.1
ARU S **SKSac** **22 11 18.8 -3.4**
ARU SS **SS** **22 17 57.9 +0.1**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ELIB Princess Elisa 93.03 196 *d*P **P** **22 00 59.2 +1.8**
comp=Z,12nm,1.3s
BBB Bella Bella 94.22 38 LR LR 22 38 12.1
comp=Z,283nm,18.7s,baz=6.5,slow=32
BELG Belogornoye 97.82 322 *i*P Pdif 22 01 18.2 -1.2
BELG pmax pmax
comp=Z,3.0nm,1.0s
SNAA Sanae 99.23 190 *ce*P **Pdif** **22 01 23.2 -2.3**
SNAA pmax pmax
comp=Z,5.0nm,1.3s
NVAR Mina Array Bea 100.78 52 P **Pdif** **22 01 34.9 +1.6**
comp=Z,0.3nm,0.6s,baz=248,slow=4.5,SNR=1.9
YKA Yellowknife Ar 101.18 27 P **Pdif** **22 01 34.0 -0.2**
comp=Z,0.2nm,0.6s,baz=280,slow=4.2,SNR=4.5
YKA PP **PP** **22 05 40.8 -2.3**
comp=Z,0.4nm,0.9s,baz=273,slow=7.9,SNR=6.5
APA Apatity 102.84 338 ‖ *i*P **Pdif** **22 01 51.5 +10**
APA pmax pmax
comp=Z,9.0nm,0.9s
S39A Bolivar 120.31 50 **PKiKP** **22 06 36.1 +0.3**
PLCA Paso Flores 124.36 150 PKP **PKiKP** **22 06 44.5 +0.7**
comp=Z,1.1nm,0.8s,baz=332,slow=2.5,SNR=5.0
SCHQ Schefferville 125.86 21 PKP **PKiKP** **22 06 46.6 +0.4**
comp=Z,1.0nm,0.6s,baz=349,slow=7.3,SNR=3.9
MCRA Macar, Loja 136.19 103 PKPdf **PKiKP** **22 07 07.4 -0.9**
TORD Torodi Ar. Bea 140.92 283 PKhKP PKPpre 22 07 08.4
comp=Z,0.9nm,0.4s,baz=72,slow=4.7,SNR=2.0
TORD PKP **PKiKP** **22 07 15.8 -2.0**
comp=Z,2.4nm,0.4s,baz=56,slow=2.3,SNR=3.7
GUY2C Guyana, Caldas 142.13 89 *e*P **PKPdf** **22 07 15.3 -2.7**
LPAZ La Paz 142.31 126 PKPdf **PKPdf** **22 07 17.2 -1.2**
LPAZ La Paz 142.31 126 PKiKP **PKPdf** **22 07 17.2 -1.2**
CPUP Villa Florida 142.44 150 PKhKP PKPpre 22 07 14.7
comp=Z,1.2nm,0.6s,baz=216,slow=13,SNR=2.9
PTBC PUERTO BERRIO 143.09 87 *e*P PKPbc 22 07 15.1 -0.9
ROSC El Rosal 143.15 90 PKPdf **PKPdf** **22 07 19.2 -0.5**
ROSC El Rosal 143.15 90 PKiKP **PKPdf** **22 07 19.2 -0.5**

ROSC	El Rosal	143.15	90	PKhKP	PKPpre	22 07 17.1	
	comp=Z,3.9nm,0.3s,baz=101,slow=9.3,SNR=8.5						
SPBC	San Pablo de B	143.44	89	*eP*	**PKPdf**	**22 07 18.3**	**-1.5**
VILC	Villavicencio,	143.72	91	*eP*	**PKPdf**	**22 07 18.9**	**-1.4**
OCAC	Ocana	144.22	84	*eP*	**PKPdf**	**22 07 20.0**	**-1.2**
BARC	Barichara	144.36	87	*eP*	**PKPdf**	**22 07 20.3**	**-1.3**
RUSC	La Rusia	144.43	88	*eP*	**PKPdf**	**22 07 20.3**	**-1.7**
CRJC	Cerrejon, Guaj	144.50	80	*eP*	**PKiKP**	**22 07 21.7**	**-3.6**
PAMC	Pamplona, Colo	144.84	86	*eP*	**PKPdf**	**22 07 22.1**	**-0.6**
TAMC	Tame, Arauca	145.73	87	*eP*	**PKiKP**	**22 07 25.7**	**-2.1**
TBTG	Tabatinga, AM	145.91	107	PKPdf	**PKPab**	**22 07 24.1**	**-1.0**
SDV	Santo Domingo	146.85	85	PKPdf	**PKPbc**	**22 07 26.4**	**-1.3**
SDV	Santo Domingo	146.85	83	*eP*	**PKPbc**	**22 07 26.4**	**-1.3**
ETMB	Extrema	147.19	118		**PKiKP**	**22 07 28.8**	**-2.0**
DBIC	Dimbokro	147.73	273	PKPbc	**PKiKP**	**22 07 30.1**	**-1.7**
	comp=Z,18nm,1.0s,baz=72,slow=3.8,SNR=9.8						
SIV	San Ignacio	147.89	133	PKPbc	**PKiKP**	**22 07 30.5**	**-1.7**
	comp=Z,7.7nm,0.8s,baz=234,slow=2.9,SNR=28						
AQDB	Aquidauana	148.07	146	PKPdf	**PKPbc**	**22 07 28.0**	**-2.6**
BAUV	El Baul	149.41	83	PKPdf	**PKPbc**	**22 07 30.9**	**-3.3**
PTLB	Pontes e Lacer	149.63	135		**PKPbc**	**22 07 31.7**	**-2.9**
SAML	Samuel	150.24	120	*eP*	**PKPdf**	**22 07 31.9**	**+0.8**

IDC 25 22:00:12.4±5.1, 6°17.5S×142°30.6E, h0km, mb3.9/3, mbtmp3.9/5, ML3.8/2, Error ellipse: s-maj=196.7km s-min=31.8km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.73**	**209**	Pn	Pn	22 03 54.8	-0.6
	0.4nm,0.3s,baz=30,slow=13,SNR=4.8						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**19.18**	**204**	P	P	22 04 38.0	+0.2
	0.4nm,0.3s,baz=34,slow=9.8,SNR=5.8						
	2.9nm,0.7s						
MKAR	**Makanchi Array**	**74.70**	**322**	P	P	22 11 54.5	+0.5
	0.4nm,0.7s,baz=117,slow=5.0,SNR=3.6						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**76.72**	**329**	P	P	22 12 04.4	-1.0
	0.3nm,0.4s,baz=123,slow=10,SNR=2.0						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**84.18**	**325**	P	P	22 12 46.0	+0.4
	2.5nm,0.7s,baz=120,slow=6.9,SNR=8.9						
	2.5nm,0.7s						

*IDC **25** 22:06:18.6±1.2, 23°.04S×111°.84W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=149.3km s-min=30.5km az=92.0*

ISC 25 22:06:20.4±1.1, 23°.0S±0°.2×11°3W±°, h10km, n18, σ1s05/11, mb3.7/4, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**31.33**	**117**	T	T	22 47 33.8	
	baz=283,slow=75,SNR=15						
H03N3	**Juan Fernandez**	**31.34**	**117**	T	T	22 47 36.2	
	baz=283,slow=75,SNR=36						
H03N1	**Juan Fernandez**	**31.35**	**117**	T	T	22 47 34.9	
	baz=283,slow=75,SNR=41						
NVAR	**Mina Array Bea**	**61.37**	**355**	P	**P**	**22 16 36.7**	**-0.1**
	0.4nm,0.6s,baz=190,slow=9.7,SNR=3.7						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**65.53**	**2**	P	**P**	**22 17 04.7**	**+0.5**
	0.3nm,0.7s,baz=157,slow=7.8,SNR=2.8						
	0.3nm,0.7s						
QSPA	**South Pole Qui**	**67.12**	**180**	P	**P**	**22 17 14.2**	**0.0**
	1.0nm,0.5s,baz=76,slow=4.4,SNR=3.9						
	1.0nm,0.5s						
YKA	**Yellowknife Ar**	**85.24**	**359**	P	**P**	**22 18 57.4**	**+0.6**
	0.5nm,0.9s,baz=173,slow=4.9,SNR=3.5						
	0.5nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**88.89**	**291**	T	T	23 55 34.4	
	baz=116,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**88.91**	**291**	T	T	23 55 30.7	
	baz=116,slow=75,SNR=33						
H11S3	**WAKE ISLAND Hy**	**88.91**	**291**	T	T	23 55 39.0	
	baz=116,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**89.23**	**292**	T	T	23 55 59.2	
	baz=117,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**89.24**	**292**	T	T	23 55 58.9	
	baz=117,slow=75,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**89.25**	**292**	T	T	23 56 00.9	
	baz=117,slow=75,SNR=24						
ZALV	**Zalesovo Beam**	**146.43**	**341**	PKPbc	**PKPdf**	**22 26 00.1**	**0.0**
	0.3nm,0.3s,baz=9.5,slow=3.6,SNR=3.6						
BVAR	**Borovoye Array**	**149.96**	**356**	PKPbc	**PKPbc**	**22 26 10.6**	**-0.3**
	1.0nm,0.5s,baz=333,slow=1.7,SNR=5.1						
BVAR				PKPab	**pPKPab**	**22 26 17.6**	**-1.1**
	1.1nm,0.6s,baz=7.6,slow=4.5,SNR=4.8						
CMAR	**Chiang Mai Arr**	**150.15**	**267**	PKP	**PKPdf**	**22 26 08.8**	**+1.5**
	1.0nm,0.4s,baz=47,slow=0.5,SNR=9.8						
CMAR				PKPbc	**pPKPbc**	**22 26 14.6**	**0.0**
	1.7nm,0.3s,baz=62,slow=0.8,SNR=5.0						
KURBB	**Kurchatov Arra**	**151.11**	**345**	PKPbc	**PKPbc**	**22 26 12.5**	**-1.2**
	1.3nm,0.9s,baz=20,slow=1.8,SNR=7.7						
MKAR	**Makanchi Array**	**153.41**	**337**	PKPbc	**PKPbc**	**22 26 17.2**	**-1.8**
	0.8nm,0.9s,baz=20,slow=1.5,SNR=5.2						

IDC 25 22:06:21.7±6.6, 6°75S×142°35E, h0km, mb3.6/1, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=225.8km s-min=36.5km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.25**	**210**	Pn	Pn	22 09 60.0	+1.4
	0.4nm,0.3s,baz=30,slow=14,SNR=4.5						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**18.68**	**205**	P	P	22 10 40.8	-0.9
	0.3nm,0.3s,baz=34,slow=9.9,SNR=8.3						
	3.5nm,0.9s						
MKAR	**Makanchi Array**	**75.18**	**322**	P	P	22 18 06.3	+0.1
	0.4nm,0.6s,baz=104,slow=6.1,SNR=4.7						
	0.4nm,0.6s						

*IDC **25** 22:08:08.0±1.3, 6°.18S×143°.20E, h0km, mb4.1/6, mbtmp4.0/8, ML3.9/2, MS4.2/1, Error ellipse: s-maj=57.9km s-min=24.0km az=93.0*

ISC 25 22:08:13.6±0.9, 6°24S±0°.09×143°.0E±0°.1, h35km, n10, σ0s76/10, mb3.9/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.16**	**128**	Sn	**Sn**	**22 10 26.9**	**+0.1**
	4.4nm,0.3s,baz=224,slow=18,SNR=2.4						
CTA	**Charters Tower**	**14.12**	**167**	LR	LR	22 17 31.4	
	comp=Z,934nm,18.4s,baz=304,slow=40						
WRA	**Warramunga Arr**	**16.02**	**211**	Pn	**Pn**	**22 11 56.3**	**-0.1**
	0.4nm,0.3s,baz=33,slow=12,SNR=4.6						
WRA				Sn	**Sn**	**22 14 52.3**	**-0.9**
	baz=9.9,slow=36						
	3.2nm,0.8s						
ASAR	**Alice Springs**	**19.42**	**206**	P	**P**	**22 12 37.7**	**+0.6**
	0.5nm,0.3s,baz=34,slow=9.0,SNR=15						
	3.2nm,0.7s						
KSRS	**Korea Array**	**45.70**	**343**	P	**P**	**22 16 30.5**	**-0.7**
	1.2nm,0.8s,baz=165,slow=11,SNR=4.1						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**75.20**	**322**	P	**P**	**22 19 53.4**	**+0.7**
	0.5nm,0.5s,baz=109,slow=7.8,SNR=6.6						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**79.08**	**324**	P	**P**	**22 20 13.6**	**-0.8**
	0.8nm,1.0s,baz=57,slow=8.0,SNR=4.6						
	0.8nm,1.0s						
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**22 20 38.9**	**0.0**
	1.2nm,0.4s,baz=11,slow=10,SNR=5.6						
	1.2nm,0.4s						
BVAR	**Borovoye Array**	**84.66**	**325**	P	**P**	**22 20 44.5**	**+0.8**
	3.9nm,0.6s,baz=110,slow=6.6,SNR=13						
	3.9nm,0.6s						
ILAR	**Eielson Array**	**87.27**	**24**	P	**P**	**22 20 55.6**	**-0.8**
	0.5nm,0.7s,baz=262,slow=4.3,SNR=5.8						
	0.5nm,0.7s						

*IDC **25** 22:09:31.9±0.7, 6°.15S×143°.04E, h0km, mb4.5/12, mbtmp4.5/15, ML4.5/1, Error ellipse: s-maj=28.6km s-min=15.2km az=80.0*

*NEIC **25** 22:09:34.1±1.9, 6°.11S±0°.09×143°.00E±0°.09, h10km±1km, mb4.6/31, Error ellipse: s-maj=17.1km s-min=13.5km az=41.0*

ISC 25 22:09:33.5±0.5, 6°28S±0°.06×142°.93E±0°.07, h10km, n60, σ1s94/62, mb4.5/31, 1C, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.22**	**127**		**Pn**	**22 10 52.5**	**+0.8**
PMG	**Port Moresby**	**5.22**	**127**	Pn	**Pn**	**22 10 53.2**	**+1.5**
	25nm,0.4s,baz=346,slow=5.4,SNR=5.4						
PMG				Sn	**Sn**	**22 11 52.3**	**+0.3**
	5.4nm,0.3s,baz=63,slow=22,SNR=5.7						
FAKI	**Fak Fak**	**11.15**	**287**	Pn	**Pn**	**22 12 15.1**	**+1.9**
SAUI	**Saumlaki**	**11.66**	**261**		**Pn**	**22 12 22.1**	**+1.9**
MTN	**Manton Dam**	**13.33**	**240**	Pn	**Pn**	**22 12 46.2**	**+3.3**
WB0	**Warramunga Arr**	**15.77**	**211**	Pn	**Pn**	**22 13 18.0**	**+2.2**
WRAB	**Tennant Creek**	**15.93**	**211**	Pn	**Pn**	**22 13 19.8**	**+1.9**
WB2	**Warramunga Arr**	**15.93**	**211**	Pn	**Pn**	**22 13 19.3**	**+1.3**
WB2				lAmb	lAmb	22 13 52.6	
	comp=Z,26nm,1.1s						
WRA	**Warramunga Arr**	**15.94**	**211**	Pn	**Pn**	**22 13 20.6**	**+2.5**
WRA	**Warramunga Arr**	**15.94**	**211**	Pn	**Pn**	**22 13 20.2**	**+2.1**
	comp=Z,1.8nm,0.3s,baz=32,slow=12,SNR=7.6						
WRA				Sn	**Sn**	**22 16 08.1**	**-6.9**
	comp=Z,1.2nm,0.3s,baz=31,slow=23,SNR=4.6						
WRA				Lg	Lg	22 18 02.4	
	comp=Z,0.7nm,0.3s,baz=26,slow=23,SNR=5.2						
	comp=Z,2.8nm,0.4s						
AS31	**Alice Springs**	**19.34**	**206**	P	**Pn**	**22 14 01.5**	**+1.2**
AS31				lAmb	lAmb	22 14 04.5	
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**19.34**	**206**		**Pn**	**22 14 02.7**	**+2.3**
ASAR	**Alice Springs**	**19.34**	**206**	P	**Pn**	**22 14 01.7**	**+1.4**
	comp=Z,40nm,0.7s,baz=33,slow=9.8,SNR=49						
ASAR				S	**Sn**	**22 17 28.9**	**-8.7**
	comp=Z,4.5nm,0.8s,baz=14,slow=29,SNR=4.7						
ASAR				Lg		22 19 54.7	
	comp=Z,0.3nm,0.3s,baz=22,slow=27,SNR=4.8						
EIDS	**Eidsvold**	**20.53**	**159**	P	Pn	22 14 15.1	+0.8
EIDS				lAmb	lAmb	22 14 57.0	
	comp=Z,19nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.55**	**234**	P	**P**	**22 14 13.6**	**+1.1**
KAPI	**Kappang**	**23.09**	**272**	P	**P**	**22 14 40.9**	**+1.2**
KAPI				lAmb	lAmb	22 14 42.9	
	comp=Z,14nm,0.8s						
TOLI2	**Tolitoli**	**23.29**	**288**	P	**P**	**22 14 41.2**	**-0.6**
TOLI2				lAmb	lAmb	22 14 47.2	
	comp=Z,13nm,0.9s						
STKA	**Stephens Creek**	**25.50**	**183**	P	**P**	**22 15 02.2**	**+0.1**
STKA	**Stephens Creek**	**25.50**	**183**	P	**P**	**22 15 02.0**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=2.6,slow=12,SNR=6.3						
	comp=Z,4.3nm,0.7s						
MBWA	**Marble Bar**	**26.89**	**234**	P	**P**	**22 15 15.3**	**+0.5**
MBWA				lAmb	lAmb	22 15 21.8	
	comp=Z,21nm,1.3s						
PSA00	**Pilbara Seismi**	**27.01**	**233**	P	**P**	**22 15 16.8**	**+0.9**
PSA00				lAmb	lAmb	22 15 25.7	
	comp=Z,11nm,0.9s						
BBOO	**Buckleboo**	**27.16**	**193**	P	**P**	**22 15 17.1**	**-0.1**
BBOO				lAmb	lAmb	22 15 49.6	
	comp=Z,35nm,1.5s						
NWAO	**Narrogin (SRO)**	**35.69**	**219**	P	**P**	**22 16 34.5**	**+2.3**
RPSI	**Rantau Prapat**	**44.83**	**280**	P	**P**	**22 17 46.3**	**-2.0**
RPSI				lAmb	lAmb	22 17 52.7	
	comp=Z,9.1nm,1.1s						
BFZ	**Birch Farm**	**45.39**	**144**	P	**P**	**22 17 52.9**	**+0.5**
KSRS	**Korea Array**	**45.70**	**343**	P	**P**	**22 17 54.0**	**-0.8**
	comp=Z,5.1nm,1.1s,baz=165,slow=10,SNR=8.2						
	comp=Z,5.1nm,1.1s						
JTM	**Tenmabayashi**	**46.86**	**358**	P	**P**	**22 18 03.0**	**-0.9**
PHRA	**Phrae**	**48.77**	**301**	P	**P**	**22 18 18.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**49.85**	**300**	P	**P**	**22 18 27.0**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=126,slow=6.0,SNR=8.3						
	comp=Z,1.3nm,0.4s						
USRK	**Ussuriysk Ar.**	**51.20**	**350**	P	**P**	**22 18 36.5**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=203,slow=9.3,SNR=6.5						
	comp=Z,2.5nm,0.8s						
XAN	**Xi'an**	**51.41**	**324**	P	**P**	**22 18 38.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNX	**BinXian**	**53.61**	**347**	⇑P	**P**	**22 18 55.0**	**+0.1**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LZH	**Lanzhou**	**55.85**	**322**	*e*P	**P**	**22 19 12.5**	**+0.9**
LZH				pP	pP	22 19 16.3	+1.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA	**Gaotai**	**60.43**	**323**	P	**P**	**22 19 43.5**	**-0.1**
GTA				pP	pP	22 19 48.3	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**62.75**	**333**	P	**P**	**22 19 57.6**	**-1.5**
SONM	**Songino Array**	**62.75**	**333**	P	**P**	**22 19 58.4**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=163,slow=6.2,SNR=2.4						
	comp=Z,0.9nm,0.5s						
ATKA	**Atka Island**	**68.73**	**27**	P	**P**	**22 20 33.9**	**-3.5**
WMQ	**Urumqi**	**70.40**	**321**	*e*P	**P**	**22 20 49.3**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
MK31	**Makanchi Array**	**75.17**	**322**	P	**P**	**22 21 16.5**	**+0.3**
MK31				lAmb	lAmb	22 21 17.5	
	comp=Z,2.7nm,0.9s						
MKAR	**Makanchi Array**	**75.17**	**322**	P	**P**	**22 21 15.7**	**-0.6**
MKAR	**Makanchi Array**	**75.17**	**322**	P	**P**	**22 21 16.5**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=94,slow=8.7,SNR=22						
	comp=Z,3.8nm,0.8s						
MAKZ	**Makanchi**	**75.37**	**322**	P	**P**	**22 21 17.3**	**-0.1**
MAKZ				lAmb	lAmb	22 21 18.6	
	comp=Z,5.8nm,1.1s						
KSH	**Kashi**	**76.57**	**313**	P	**P**	**22 21 26.5**	**+1.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**77.12**	**329**	P	**P**	**22 21 25.9**	**-1.2**
ZALV	**Zalesovo Beam**	**77.12**	**329**	P	**P**	**22 21 26.5**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=110,slow=5.5,SNR=8.8						
	comp=Z,2.1nm,0.7s						
KURK	**Kurchatov**	**79.04**	**324**	P	**P**	**22 21 36.4**	**-1.4**
KURK				lAmb	lAmb	22 21 38.7	
	comp=Z,4.5nm,0.8s						
KURBB	**Kurchatov Arra**	**79.05**	**324**	P	**P**	**22 21 37.9**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=116,slow=5.0,SNR=14						
	comp=Z,2.8nm,0.8s						
ARSB	**Arslanbob**	**79.32**	**314**	P	**P**	**22 21 40.5**	**+0.6**
L14K	**Kuka Creek**	**79.41**	**23**	P	**P**	**22 21 39.7**	**+0.1**
L14K				lAmb	lAmb	22 22 09.2	
	comp=Z,12nm,1.1s						
O16K	**Kokwok River B**	**80.38**	**26**	P	**P**	**22 21 45.2**	**+0.3**
K15K	**Wolf Creek Mou**	**80.40**	**23**	P	**P**	**22 21 44.5**	**-0.5**
K15K				lAmb	lAmb	22 22 12.4	
	comp=Z,20nm,1.4s						
L16K	**Owhat River**	**80.89**	**24**	P	**P**	**22 21 47.5**	**-0.2**
L16K				lAmb	lAmb	22 22 29.8	
	comp=Z,13nm,1.4s						
N17K	**Nushagak Hills**	**81.25**	**26**	P	**P**	**22 21 48.7**	**-0.9**
N17K				lAmb	lAmb	22 22 03.8	
	comp=Z,15nm,1.4s						
J16K	**Anvik River**	**81.30**	**22**	P	**P**	**22 21 49.9**	**+0.1**
QSPA	**South Pole Qui**	**83.69**	**180**	P	**P**	**22 22 03.2**	**+0.7**
	comp=Z,4.7nm,0.8s,baz=277,slow=1.6,SNR=11						
	comp=Z,4.7nm,0.8s						
NRIK	**Noril'sk**	**84.32**	**343**	P	**P**	**22 22 05.2**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=121,slow=5.5,SNR=8.6						
	comp=Z,4.1nm,0.8s						
BVAR	**Borovoye Array**	**84.63**	**325**	P	**P**	**22 22 07.5**	**+0.2**
	comp=Z,20nm,0.8s,baz=112,slow=6.7,SNR=53						
	comp=Z,20nm,0.8s						
ILAR	**Eielson Array**	**87.35**	**24**	P	**P**	**22 22 18.8**	**-1.7**
	comp=Z,3.8nm,0.8s,baz=256,slow=4.6,SNR=34						
	comp=Z,3.8nm,0.8s						
DBIC	**Dimbokro**	**147.99**	**273**	PKIKP	**PKPbc**	**22 29 21.4**	**+1.0**
DBIC	**Dimbokro**	**147.99**	**273**	PKPbc	**PKPbc**	**22 29 21.4**	**+1.0**
	comp=Z,8.7nm,1.0s,baz=128,slow=4.3,SNR=4.9						

*KRSC **25** 22:10:41.0±1.9, 55°.30N×166°.45E, h41km±10km, Ml4.6, Felt [II] at Nikolskoe.*

*IDC **25** 22:10:41.1±0.8, 55°.58N×166°.40E, h0km, mb3.7/12, mbtmp3.9/16, ML4.4/4, MS4.5/1, Error ellipse: s-maj=27.7km s-min=13.2km az=170.0*

*NEIC **25** 22:10:42.2±1.7, 55°.4N±0°.1×166°.5E±0°.1, h10km±1km, mb4.2/55, Error ellipse: s-maj=24.8km s-min=12.1km az=163.0*

*MOS **25** 22:10:43.1±0.8, 55°.39N×166°.43E, h32km, mb4.4/5, Error ellipse: s-maj=9.1km s-min=5.9km az=150.0*

ISC 25 22:10:43.4±0.5, 55°.45N±0°.05×166°.39E±0°.04, h20km, n162, σ1s06/176, mb4.2/39, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.34**	**224**	PN	**Pb**	**22 10 50.0**	**-0.8**
BKI					S		
BKI	**Bering**	**0.34**	**224**	*e*P	**Pb**	**22 10 50.0**	**-0.8**
BKI					*e*S	**Sb**	**22 10 55.4**	**-0.3**
KBG	**Krutoberegovo**	**2.23**	**293**	PN	**Pn**	**22 11 17.5**	**-1.6**
KBG	**Krutoberegovo**	**2.23**	**293**	*e*P	**Pn**	**22 11 17.5**	**-1.6**
SRKR	**Sorokina**	**3.17**	**295**	PN	**Pn**	**22 11 32.9**	**+0.8**
SRKR	**Sorokina**	**3.17**	**295**	*e*P	**Pn**	**22 11 32.9**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**3.26**	**281**	PN	**Pn**	**22 11 34.2**	**+0.8**
BZGR					S	**Sb**	**22 12 15.7**	**-4.1**
BZGR	**Bezymyannyi-Gr**	**3.26**	**281**	*e*P	**Pn**	**22 11 34.2**	**+0.8**
BZGR					*e*S	**Sb**	**22 12 15.7**	**-4.1**
LGNR	**Loginova**	**3.28**	**283**	PN	**Pn**	**22 11 35.7**	**+1.8**
LGNR	**Loginova**	**3.28**	**283**	*e*P	**Pn**	**22 11 35.7**	**+1.8**
BZP	**Bezymyannyi-Pe**	**3.34**	**280**	*e*P	**Pn**	**22 11 35.5**	**+0.9**
KLY	**Klyuchi**	**3.34**	**287**	PN	**Pn**	**22 11 33.9**	**-0.5**
KLY	**Klyuchi**	**3.34**	**287**	*e*P	**Pn**	**22 11 33.9**	**-0.5**
KRSR	**Krestovskiy**	**3.37**	**286**	PN	**Pn**	**22 11 35.2**	**+0.2**
KRSR	**Krestovskiy**	**3.37**	**286**	*e*P	**Pn**	**22 11 35.2**	**+0.2**
BZMR	**Bezymyannaya**	**3.37**	**281**	PN	**Pn**	**22 11 35.6**	**+0.6**
BZMR	**Bezymyannaya**	**3.37**	**281**	*e*P	**Pn**	**22 11 35.6**	**+0.6**
BZWR	**Bezymyannyi-We**	**3.37**	**281**	PN	**Pn**	**22 11 36.2**	**+1.2**
BZWR	**Bezymyannyi-We**	**3.37**	**281**	*e*P	**Pn**	**22 11 36.2**	**+1.2**
TUMD	**Tumrok D**	**3.43**	**268**	*e*P	**Pn**	**22 11 36.8**	**+1.1**
TUMD					*e*S	**Sn**	**22 12 16.9**	**+1.2**
KIRR	**Kirishev**	**3.46**	**281**	PN	**Pn**	**22 11 37.1**	**+0.9**
KIRR	**Kirishev**	**3.46**	**281**	*e*P	**Pn**	**22 11 37.1**	**+0.9**
KPT	**Kopyto**	**3.53**	**281**	PN	**Pn**	**22 11 38.2**	**+1.1**
KPT	**Kopyto**	**3.53**	**281**	*e*P	**Pn**	**22 11 38.2**	**+1.1**
TUMR	**Tumrok**	**3.57**	**270**	PN	**Pn**	**22 11 36.8**	**-0.8**
TUMR	**Tumrok**	**3.57**	**270**	*e*P	**Pn**	**22 11 38.1**	**+0.5**
SRDR	**Sredinnyy**	**3.86**	**286**	PN	**Pn**	**22 11 42.7**	**+1.1**
SRDR	**Sredinnyy**	**3.86**	**286**	*e*P	**Pn**	**22 11 42.7**	**+1.1**
KII	**Karymskiy**	**4.26**	**253**	PN	**Pn**	**22 11 47.9**	**+0.7**
KII	**Karymskiy**	**4.26**	**253**	*e*P	**Pn**	**22 11 47.9**	**+0.7**
SPN	**Mys Shipunski**	**4.41**	**240**	PN	**Pn**	**22 11 48.3**	**-0.8**
SPN	**Mys Shipunski**	**4.41**	**240**	*e*P	**Pn**	**22 11 48.3**	**-0.8**
NLC	**Nalytchevo**	**4.71**	**244**	PN	**Pn**	**22 11 53.3**	**+0.1**
NLC	**Nalytchevo**	**4.71**	**244**	*e*P	**Pn**	**22 11 53.3**	**+0.1**
SMAR	**Somma**	**4.95**	**247**	PN	**Pn**	**22 11 57.0**	**+0.3**
SMAR	**Somma**	**4.95**	**247**	*e*P	**Pn**	**22 11 57.0**	**+0.3**
SMAR					*e*S	**Sn**	**22 12 52.6**	**-0.8**
KRER	**Koryakskii**	**4.96**	**247**	PN	**Pn**	**22 11 57.8**	**+1.0**
KRER	**Koryakskii**	**4.96**	**247**	*e*P	**Pn**	**22 11 57.8**	**+1.0**
KRER					*e*S	**Sn**	**22 12 53.3**	**-0.2**
UGLR	**Uglovaya**	**4.96**	**246**	PN	**Pn**	**22 11 57.5**	**+0.7**
UGLR	**Uglovaya**	**4.96**	**246**	*e*P	**Pn**	**22 11 57.5**	**+0.7**
UGLR					*e*S	**Sn**	**22 12 54.1**	**+0.5**
AVH	**Avacha**	**4.98**	**247**	PN	**Pn**	**22 11 58.0**	**+1.0**
AVH	**Avacha**	**4.98**	**247**	*e*P	**Pn**	**22 11 58.0**	**+1.0**
AVH					*e*S	**Sn**	**22 12 54.9**	**+0.9**
KRX	**Arik**	**4.98**	**248**	PN	**Pn**	**22 11 58.0**	**+0.9**
KRX	**Arik**	**4.98**	**248**	*e*P	**Pn**	**22 11 58.0**	**+0.9**
KRX					*e*S	**Sn**	**22 12 54.5**	**+0.4**
KOK	**Koryaka**	**5.02**	**248**	PN	**Pn**	**22 11 58.7**	**+1.1**
KOK	**Koryaka**	**5.02**	**248**	*e*P	**Pn**	**22 11 58.7**	**+1.1**
KOK					*e*S	**Sn**	**22 12 54.8**	**-0.2**
DALK	**Dalny**	**5.09**	**245**	PN	**Pn**	**22 11 58.6**	**+0.2**
DALK	**Dalny**	**5.09**	**245**	*e*P	**Pn**	**22 11 58.6**	**+0.2**
DALK					*e*S	**Sn**	**22 12 54.2**	**-2.3**
PET	**Petropavlovsk**	**5.15**	**245**		**Pn**	**22 11 59.9**	**+0.7**
PET	**Petropavlovsk**	**5.15**	**245**	*e*PN	**Pn**	**22 11 59.6**	**+0.4**
PET				pmax	pmax		
	comp=Z,66nm,0.6s						
PET	**Petropavlovsk**	**5.15**	**245**	*e*P	**Pn**	**22 12 00.1**	**+0.9**
GNL	**Ganaly**	**5.22**	**254**	PN	**Pn**	**22 12 01.6**	**+1.3**
GNL	**Ganaly**	**5.22**	**254**	*e*P	**Pn**	**22 12 01.6**	**+1.3**
SHEM	**Shenya Is, Ala**	**5.29**	**118**	Pn	**Pn**	**22 12 01.1**	**-0.1**
	comp=Z,11nm,0.3s,baz=302,slow=22,SNR=1.8						
SHEM				Sn	**Sn**	**22 12 58.

	comp=Z,8.2nm,0.8s									
ILAR	**Eielson Array**	**24.51**	**49**	P		**P**		**22 16 01.0**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=256,slow=7.8,SNR=29									
	comp=Z,4.2nm,0.9s									
IL03	**Eielson Array**	**24.52**	**49**	P		**P**		**22 16 00.5**	**-0.6**
M24K	**Tolsona, Glenn**	**24.97**	**55**	P		**P**		**22 16 05.6**	**+0.3**
J25K	**Salcha River,**	**25.16**	**49**	P		**P**		**22 16 06.1**	**-0.8**
J25K				IAmb		IAmb		22 16 16.4	
	comp=Z,5.4nm,1.2s									
E25K	**Arctic Village**	**25.22**	**41**	P		**P**		**22 16 08.2**	**+0.9**
BMAR	**Burnt Mountain**	**25.53**	**43**	P		**P**		**22 16 10.9**	**+0.7**
N25K	**Chitina, Valde**	**25.78**	**56**	P		**P**		**22 16 13.0**	**+0.5**
N25K				IAmb		IAmb		22 16 32.6	
	comp=Z,12nm,1.2s									
SCRK	**Sand Creek**	**25.80**	**51**	P		**P**		**22 16 12.2**	**-0.5**
BMRM	**Bremner River**	**25.88**	**58**	P		**P**		**22 16 13.9**	**+0.5**
HMT	**Hamilton**	**26.16**	**59**	P		**P**		**22 16 16.2**	**+0.2**
K27K	**Chicken**	**26.63**	**50**	P		**P**		**22 16 20.1**	**-0.1**
K27K				IAmb		IAmb		22 16 24.1	
	comp=Z,6.8nm,1.1s									
L27K	**Beaver Creek,**	**26.85**	**52**	P		**P**		**22 16 21.8**	**-0.4**
L27K				IAmb		IAmb		22 16 33.0	
	comp=Z,5.7nm,1.0s									
BCAR	**Beaver Creek A**	**26.87**	**52**	P		**P**		**22 16 22.9**	**+0.5**
MJAR	**Matsushiro Arr**	**26.92**	**237**	P		**P**		**22 16 24.3**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=34,slow=7.7,SNR=4.2									
	comp=Z,2.0nm,0.9s									
EGAK	**Eagle**	**26.96**	**49**	P		**P**		**22 16 22.3**	**-0.7**
EGAK				IAmb		IAmb		22 16 23.3	
	comp=Z,4.7nm,0.9s									
F28M	**Old Crow**	**27.35**	**42**	P		**P**		**22 16 25.6**	**-1.0**
L29M	**L29M**	**28.51**	**52**	P		**P**		**22 16 38.4**	**+1.4**
L29M				IAmb		IAmb		22 17 11.6	
	comp=Z,9.2nm,1.4s									
HYT	**Haines Junctio**	**29.30**	**56**	P		**P**		**22 16 45.1**	**+1.0**
HYT				IAmb		IAmb		22 17 15.3	
	comp=Z,8.6nm,1.2s									
INK	**Inuvik**	**29.71**	**41**	P		**P**		**22 16 48.2**	**+0.7**
INK				IAmb		IAmb		22 17 32.2	
	comp=Z,7.8nm,1.5s									
INK	**Inuvik**	**29.71**	**41**	P		**P**		**22 16 48.2**	**+0.7**
INK				pmax		pmax				
	comp=Z,8.0nm,1.5s									
C36M	**Paulatuk**	**32.96**	**38**	P		**P**		**22 17 16.4**	**+0.3**
C36M				IAmb		IAmb		22 17 26.7	
	comp=Z,3.8nm,1.2s									
H11N2	**WAKE ISLAND Hy**	**35.66**	**179**	T		T		22 54 59.9		
	baz=360,slow=76,SNR=624									
H11N3	**WAKE ISLAND Hy**	**35.68**	**179**	T		T		22 55 00.9		
	baz=360,slow=76,SNR=546									
H11N1	**WAKE ISLAND Hy**	**36.88**	**179**	T		T		22 55 06.6		
	baz=360,slow=76,SNR=529									
H11S1	**WAKE ISLAND Hy**	**36.88**	**180**	T		T		22 56 30.2		
	baz=360,slow=76,SNR=43									
H11S3	**WAKE ISLAND Hy**	**36.89**	**180**	T		T		22 56 34.9		
	baz=360,slow=76,SNR=20									
H11S2	**WAKE ISLAND Hy**	**36.90**	**179**	T		T		22 56 27.0		
	baz=360,slow=76,SNR=56									
SONM	**Songino Array**	**36.94**	**284**	P		**P**		**22 17 52.3**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=45,slow=8.3,SNR=4.3									
	comp=Z,1.9nm,0.7s									
YKA	**Yellowknife Ar**	**38.89**	**47**	P		**P**		**22 18 07.2**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=299,slow=16,SNR=1.8									
	comp=Z,0.7nm,0.8s									
RES	**Resolute Bay**	**39.70**	**24**	P		**P**		**22 18 13.3**	**-0.3**
RES	**Resolute Bay**	**39.70**	**24**	P		**P**		**22 18 13.3**	**-0.3**
RES				pmax		pmax				
	comp=Z,5.0nm,1.5s									
FCC	**Fort Churchill**	**49.28**	**43**	P		**P**		**22 19 30.8**	**+0.6**
FCC				IAmb		IAmb		22 19 41.8	
	comp=Z,2.0nm,0.8s									
FCC	**Fort Churchill**	**49.28**	**43**	P		**P**		**22 19 30.8**	**+0.6**
FCC				pmax		pmax				
	comp=Z,2.0nm,0.8s									
KURK	**Kurchatov**	**49.57**	**303**	P		**P**		**22 19 32.4**	**-0.1**
KURK				IAmb		IAmb		22 19 46.0	
	comp=Z,5.2nm,1.1s									
KURK	**Kurchatov**	**49.57**	**303**	P		**P**		**22 19 32.4**	**-0.1**
KURK				pmax		pmax				
	comp=Z,5.0nm,1.2s									
KURBB	**Kurchatov Arra**	**49.67**	**303**	P		**P**		**22 19 33.2**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=54,slow=7.8,SNR=14									
	comp=Z,1.5nm,0.8s									
MK31	**Makanchi Array**	**50.40**	**298**	P		**P**		**22 19 38.4**	**-0.6**
MK31				IAmb		IAmb		22 20 06.2	
	comp=Z,3.0nm,1.5s									
MK31	**Makanchi Array**	**50.40**	**298**	P		**P**		**22 19 38.4**	**-0.6**
MK31				pmax		pmax				
	comp=Z,3.0nm,1.5s									
MKAR	**Makanchi Array**	**50.40**	**298**	P		**P**		**22 19 38.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=48,slow=5.8,SNR=8.4									
	comp=Z,0.8nm,0.7s									
NVAR	**Mina Array Bea**	**51.52**	**76**	P		**P**		**22 19 47.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=272,slow=16,SNR=3.7									
NVAR				LR		LR		22 38 35.5		
	comp=Z,548nm,21.4s,baz=272,slow=32									
	comp=Z,0.1nm,0.3s									
BVAR	**Borovoye Array**	**51.76**	**310**	P		**P**		**22 19 48.9**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=54,slow=6.9,SNR=7.0									
	comp=Z,1.3nm,0.7s									
BRVK	**Borovoye**	**51.78**	**310**	P		**P**		**22 19 49.1**	**-0.1**
BRVK				IAmb		IAmb		22 19 54.4	
	comp=Z,1.9nm,0.6s									
BRVK	**Borovoye**	**51.78**	**310**	P		**P**		**22 19 49.1**	**-0.1**
BRVK				pmax		pmax				
	comp=Z,2.0nm,0.6s									
PDAR	**Pinedale Array**	**53.17**	**66**	P		**P**		**22 20 01.1**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=284,slow=3.6,SNR=2.6									
	comp=Z,0.6nm,0.8s									
HMU	**Henry Mountain**	**56.01**	**71**	P		**P**		**22 20 20.2**	**-0.4**
N23A	**Red Feather La**	**56.39**	**65**	P		**P**		**22 20 22.0**	**-1.3**
121A	**Cookes Peak, D**	**61.65**	**73**	P		**P**		**22 20 58.4**	**-1.3**
NOA	**NORSAR Array B**	**62.21**	**347**	P		**P**		**22 21 02.7**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=1.0,slow=5.3,SNR=1.8									
	comp=Z,0.5nm,0.9s									
TX31	**Lajitas Ar. Si**	**66.36**	**72**	P		**P**		**22 21 31.5**	**+0.9**
TX31				IAmb		IAmb		22 22 01.0	
	comp=Z,4.9nm,1.4s									
TXAR	**Lajitas Array**	**66.36**	**72**	P		**P**		**22 21 30.2**	**-0.5**
TXAR	**Lajitas Array**	**66.36**	**72**	P		**P**		**22 21 30.2**	**-0.5**
TXAR	**Lajitas Array**	**66.36**	**72**	P		**P**		**22 21 31.7**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=296,slow=5.1,SNR=8.1									
	comp=Z,1.1nm,0.6s									
AKASG	**Malin Array Be**	**68.37**	**332**	P		**P**		**22 21 42.7**	**-0.2**
AKASG				IAmb		IAmb		22 21 46.5	
	comp=Z,3.1nm,1.2s									
AKASG	**Malin Array Be**	**68.37**	**332**	P		**P**		**22 21 42.7**	**-0.2**
AKASG				pmax		pmax				
	comp=Z,3.0nm,1.2s									
BURAR	**Bucovina Array**	**72.25**	**334**	P		**P**		**22 22 07.0**	**+0.1**
BURAR				IAmb		IAmb		22 22 40.2	
	comp=Z,1.9nm,1.3s									
MTN	**Manton Dam**	**74.20**	**216**	P		**P**		**22 22 19.0**	**+0.4**
WB0	**Warramunga Arr**	**79.70**	**210**	P		**P**		**22 22 49.8**	**+0.4**
WRAB	**Tennant Creek**	**79.87**	**210**	P		**P**		**22 22 51.4**	**+1.1**
WRAB	**Tennant Creek**	**79.87**	**210**	P		**P**		**22 22 51.4**	**+1.1**
WRAB				pmax		pmax				
	comp=Z,32nm,1.0s									
WB2	**Warramunga Arr**	**79.88**	**210**	P		**P**		**22 22 50.3**	**-0.1**
WRA	**Warramunga Arr**	**79.89**	**210**	P		**P**		**22 22 49.0**	**-1.4**
WRA	**Warramunga Arr**	**79.89**	**210**	P		**P**		**22 22 49.0**	**-1.4**
WRA				pmax		pmax				
	comp=Z,1.0nm,1.0s									

*IDC **25** 22:18:04.2±0.8,6˚43S×143˚60E,h0km,mb4.2/13, mbtmp4.2/16,ML4.1/2,Error ellipse: s-maj=25.8km s-min=16.9km az=79.0*
*NEIC **25** 22:18:07.2±1.1,6˚40S±0˚05×143˚65E±0˚10,h10km±1km, mb4.4/14,Error ellipse: s-maj=17.2km s-min=8.0km az=252.0*

ISC 25 22:18:09.7±0.5,6˚43S±0˚07×143˚60E±0˚08,h35km,n37, σ0s74/38,mb4.3/18,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
PMG	**Port Moresby**	**4.60**	**130**			**Pn**	**22**	**19**	**16.4**	**-0.4**
PMG	**Port Moresby**	**4.60**	**130**	Pn		**Pn**	**22**	**19**	**16.0**	**-0.9**
	28nm,0.7s,baz=295,slow=15,SNR=6.1									
PMG				Sn		**Sn**	**22**	**20**	**09.2**	**+0.1**
	10nm,0.3s,baz=302,slow=22,SNR=11									
MANU	**Manus Island**	**5.75**	**41**	Pn		**Pn**	**22**	**19**	**31.5**	**-1.1**
FAKI	**Fak Fak**	**11.84**	**287**	Pn		**Pn**	**22**	**20**	**56.2**	**+0.1**
WB0	**Warramunga Arr**	**15.99**	**213**	Pn		**Pn**	**22**	**21**	**51.9**	**-0.3**
WB0				IAmb		IAmb	22	22	23.5	
	comp=Z,23nm,1.2s									
WRAB	**Tennant Creek**	**16.15**	**213**	Pn		**Pn**	**22**	**21**	**54.5**	**+0.3**
WRAB				IAmb		IAmb	22	22	29.0	
	comp=Z,24nm,1.1s									
WB2	**Warramunga Arr**	**16.16**	**213**	Pn		**Pn**	**22**	**21**	**54.3**	**+0.1**
WRA	**Warramunga Arr**	**16.17**	**213**	Pn		**Pn**	**22**	**21**	**54.9**	**+0.5**
WRA	**Warramunga Arr**	**16.17**	**213**	Pn		**Pn**	**22**	**21**	**52.8**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=33,slow=12,SNR=1.8									
	comp=Z,4.6nm,1.2s									
HNR	**Honiara**	**16.46**	**102**	Pn		**Pn**	**22**	**21**	**58.7**	**+0.6**
	comp=Z,286nm,0.3s,baz=181,slow=11,SNR=2.3									
AS31	**Alice Springs**	**19.51**	**208**	P		**Pn**	**22**	**22**	**35.8**	**+0.2**
ASAR	**Alice Springs**	**19.51**	**208**			**Pn**	**22**	**22**	**35.6**	**0.0**
ASAR	**Alice Springs**	**19.51**	**208**	P		**P**	**22**	**22**	**34.7**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=36,slow=9.6,SNR=18									
ASAR				Lg		Lg	22	28	23.3	
	comp=Z,0.1nm,0.3s,baz=23,slow=29,SNR=1.8									
	comp=Z,21nm,1.0s									
TOLI2	**Tolitoli**	**23.98**	**287**	P		**P**	**22**	**23**	**20.5**	**-0.7**
TOLI2				IAmb		IAmb	22	23	22.0	
	comp=Z,8.7nm,0.8s									
MJAR	**Matsushiro Arr**	**43.04**	**354**	P		**P**	**22**	**26**	**05.7**	**-0.3**
	comp=Z,2.4nm,1.1s,baz=193,slow=12,SNR=1.9									
	comp=Z,2.4nm,1.1s									
KSRS	**Korea Array**	**46.04**	**343**	P		**P**	**22**	**26**	**29.9**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=163,slow=9.7,SNR=11									
	comp=Z,3.9nm,0.9s									
KSAR	**Wonju Array Be**	**46.04**	**343**	P		**P**	**22**	**26**	**29.5**	**-0.6**
CRAI	**Chiangrai**	**50.07**	**303**	P		**P**	**22**	**27**	**02.1**	**+0.5**
CRAI				IAmb		IAmb	22	27	03.9	
	comp=Z,6.7nm,1.3s									
CMAR	**Chiang Mai Arr**	**50.50**	**300**	P		**P**	**22**	**27**	**05.0**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=133,slow=5.2,SNR=4.8									
	comp=Z,0.9nm,0.7s									
USA0B	**Ussuriysk Arra**	**51.47**	**349**	P		**P**	**22**	**27**	**12.5**	**+0.9**
USA0B				IAmb		IAmb	22	27	12.7	
	comp=Z,5.0nm,0.8s									
USRK	**Ussuriysk Ar.**	**51.47**	**349**	P		**P**	**22**	**27**	**12.2**	**+0.6**
USRK	**Ussuriysk Ar.**	**51.47**	**349**	P		**P**	**22**	**27**	**11.7**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=175,slow=8.5,SNR=12									
	comp=Z,4.5nm,0.8s									
KLR	**Kul'dur**	**56.38**	**351**	P		**P**	**22**	**27**	**47.8**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=236,slow=1.4,SNR=4.2									
	comp=Z,1.5nm,0.6s									
PEA0B	**Petropavlovsk-**	**60.50**	**10**	P		**P**	**22**	**28**	**17.8**	**+1.7**
PETK	**Petropavlovsk-**	**60.50**	**10**	P		**P**	**22**	**28**	**16.9**	**+0.8**
	comp=Z,4.2nm,0.9s,baz=190,slow=7.3,SNR=2.8									
	comp=Z,4.2nm,0.9s									
MKAR	**Makanchi Array**	**75.70**	**322**	P		**P**	**22**	**29**	**52.0**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=95,slow=8.4,SNR=7.7									
	comp=Z,0.9nm,0.5s									
MAKZ	**Makanchi**	**75.90**	**321**	P		**P**	**22**	**29**	**52.6**	**-0.2**
MAKZ				IAmb		IAmb	22	29	53.8	
	comp=Z,4.0nm,1.1s									
ZALV	**Zalesovo Beam**	**77.60**	**329**	P		**P**	**22**	**30**	**01.6**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=107,slow=4.8,SNR=2.4									
	comp=Z,0.6nm,0.6s									
O14K	**Tigyukauivet M**	**78.67**	**25**	P		**P**	**22**	**30**	**08.7**	**+0.8**
KURK	**Kurchatov**	**79.55**	**324**	P		**P**	**22**	**30**	**12.5**	**-0.5**
KURK				IAmb		IAmb	22	30	13.2	
	comp=Z,4.3nm,1.2s									
KURBB	**Kurchatov Arra**	**79.56**	**324**	P		**P**	**22**	**30**	**12.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=112,slow=5.0,SNR=4.8									
	comp=Z,1.2nm,0.8s									
QSPA	**South Pole Qui**	**83.54**	**180**	P		**P**	**22**	**30**	**33.8**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=280,slow=0.5,SNR=5.5									
	comp=Z,2.5nm,0.8s									
K20K	**Telida**	**83.75**	**24**	P		**P**	**22**	**30**	**36.3**	**+1.3**
NRIK	**Noril'sk**	**84.66**	**343**	P		**P**	**22**	**30**	**39.4**	**0.0**
	comp=Z,3.5nm,0.7s,baz=124,slow=5.2,SNR=8.5									
	comp=Z,3.5nm,0.7s									
BVAR	**Borovoye Array**	**85.14**	**325**	P		**P**	**22**	**30**	**42.0**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=108,slow=8.0,SNR=9.4									
	comp=Z,2.1nm,0.7s									
ILAR	**Eielson Array**	**87.22**	**24**	P		**P**	**22**	**30**	**50.7**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=260,slow=3.1,SNR=7.5									
	comp=Z,1.1nm,0.8s									
DBIC	**Dimbokro**	**148.66**	**272**	PKPbc		**PKPbc**	**22**	**37**	**52.9**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=136,slow=2.3,SNR=4.1									

*IDC **25** 22:19:03.7±1.1,6˚33S×143˚72E,h0km,mb4.3/14, mbtmp4.3/15,ML4.8/1,MS3.8/1,Error ellipse: s-maj=39.7km s-min=22.9km az=99.0*
*NEIC **25** 22:19:07.0±1.0,6˚23S±0˚08×143˚18E±0˚10,h10km±1km, mb5.1/77,Error ellipse: s-maj=17.6km s-min=12.9km az=116.0*
*DJA **25** 22:19:09.0±0.4,6˚S±4˚×14˚3E±˚,h24km±2km,M5.2/31, mB5.6/12,mb4.9/31,MLv5.5/4,Mw(mB)5.1/12*

ISC 25 22:19:09.8±0.6,6˚43S±0˚07×143˚25E±0˚08,h35km,n147, σ1s33/143,mb5.0/75,1C,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
MMPI	**Merauke**	**3.49**	**234**	P		**Pn**	**22**	**20**	**02.6**	**+1.0**
PMG	**Port Moresby**	**4.87**	**128**	Sn		Sn	22	21	06.5	-9.4
	baz=108,slow=23									
PMG				LR		LR	22	22	48.4	
	comp=Z,925nm,18.9s,baz=224,slow=49									
GENI	**Genyem**	**4.89**	**321**	P		**Pn**	**22**	**20**	**22.4**	**+1.4**
MANU	**Manus Island**	**5.99**	**43**	Pn		**Pn**	**22**	**20**	**35.2**	**-0.8**
SMPI	**Sarmi**	**6.32**	**314**	P		**Pn**	**22**	**20**	**42.2**	**+1.6**
	104nm,1.0s,1.1nm									
COEN	**Coen**	**7.48**	**181**	Pn		**Pn**	**22**	**20**	**59.0**	**+2.4**
FAKI	**Fak Fak**	**11.50**	**287**	Pn		**Pn**	**22**	**21**	**48.8**	**-3.0**
FAKI	**Fak Fak**	**11.50**	**287**	P		**Pn**	**22**	**21**	**49.4**	**-2.3**
	50nm,0.8s									
SAUI	**Saumlaki**	**11.95**	**262**	Pn		**Pn**	**22**	**21**	**55.6**	**-2.3**
SAUI	**Saumlaki**	**11.95**	**262**	P		**Pn**	**22**	**21**	**58.7**	**+0.8**
	471nm,1.0s,13µm									
SWI	**Sorong**	**13.18**	**294**	P		**Pn**	**22**	**22**	**13.1**	**-1.5**
	24nm,0.8s									
MTN	**Manton Dam**	**13.53**	**241**			**Pn**	**22**	**22**	**17.8**	**-1.7**
WB0	**Warramunga Arr**	**15.80**	**212**	Pn		**Pn**	**22**	**22**	**51.8**	**+1.9**
WB0				IAmb		IAmb	22	22	59.0	
	comp=Z,42nm,1.1s									
WRAB	**Tennant Creek**	**15.96**	**212**	Pn		**Pn**	**22**	**22**	**53.6**	**+1.7**
WRAB				IAmb		IAmb	22	22	58.3	
	comp=Z,19nm,0.9s									
WB2	**Warramunga Arr**	**15.97**	**212**	Pn		**Pn**	**22**	**22**	**52.5**	**+0.5**
WRA	**Warramunga Arr**	**15.98**	**212**	Pn		**Pn**	**22**	**22**	**53.5**	**+1.4**
WRA				IAmb		IAmb	22	23	02.1	
	comp=Z,1.5nm,1.4s									
WRA	**Warramunga Arr**	**15.98**	**212**	Pn		**Pn**	**22**	**22**	**50.5**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=36,slow=13,SNR=8.6									

KRSC 25 22:18:03.8±1.7,50˚75N×157˚28E,h120km±17km,MI3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**0.74**	**265**	*eP*		Pn	22	18	24.2	+0.8
SKR				*eS*		Sn	22	18	38.8	+0.7
PAU	**Pauzhetka**	**0.78**	**338**	*eP*		Pn	22	18	26.1	+2.5
KDTR	**Khodutka, Kamc**	**1.17**	**25**	*eP*		Pn	22	18	29.3	+1.9
KDTR				*eS*		Sn	22	18	47.2	+1.8
ASAK	**Asacha**	**1.68**	**13**	*eP*		Pn	22	18	35.0	+1.7
ASAK				*eS*		Sn	22	18	58.9	+3.0
MTVR	**Mutnovka**	**1.82**	**18**	*eP*		Pn	22	18	36.9	+1.8
MTVR				*eS*		Sn	22	19	00.7	+1.6
RUS	**Russkaya**	**1.85**	**24**	*eP*		Pn	22	18	36.7	+1.4
RUS				*eS*		Sn	22	19	00.2	+0.9
GRL	**Gorelyy**	**1.87**	**15**	*eP*		Pn	22	18	37.5	+1.9
GRL				*eS*		Sn	22	19	03.2	+3.2
KRMR	**Karymshinskiy**	**2.15**	**14**	*eP*		Pn	22	18	40.4	+1.4
APC	**Apacha**	**2.18**	**358**	*eP*		Pn	22	18	39.6	+0.3
PET	**Petropavlovsk**	**2.43**	**20**	*eP*		Pn	22	18	43.6	+1.1
PET				*eS*		Sn	22	19	13.4	+1.1
DALK	**Dalny**	**2.46**	**21**	*eP*		Pn	22	18	44.4	+1.5
DALK				*eS*		Sn	22	19	13.8	+0.9
UGLR	**Uglovaya**	**2.64**	**21**	*eP*		Pn	22	18	47.4	+2.1
AVH	**Avacha**	**2.67**	**19**	*eP*		Pn	22	18	48.1	+2.3
KOK	**Koryaka**	**2.68**	**18**	*eP*		Pn	22	18	48.2	+2.4
SMAR	**Somma**	**2.69**	**20**	*eP*		Pn	22	18	48.0	+1.9
KRER	**Koryakskii**	**2.71**	**19**	*eP*		Pn	22	18	48.4	+2.0
NLC	**Nalytchevo**	**2.74**	**27**	*eS*		Sn	22	19	18.0	-1.4
KRX	**Arik**	**2.75**	**17**	*eP*		Pn	22	18	48.6	+1.8
SPN	**Mys Shipunski**	**2.90**	**35**	*eP*		Pn	22	18	50.4	+1.8
SPN				*eS*		Sn	22	19	22.8	-0.4
GNL	**Ganaly**	**2.98**	**8**	*eP*		Pn	22	18	50.5	+0.7
KII	**Karymskiy**	**3.55**	**21**	*eP*		Pn	22	18	59.1	+1.8
TUMD	**Tumrok D**	**4.84**	**22**	*eP*		Pn	22	19	16.9	+2.4
TUMR	**Tumrok**	**4.86**	**20**	*eP*		Pn	22	19	18.0	+3.3
BZMR	**Bezymyannaya**	**5.54**	**19**	*eP*		Pn	22	19	26.1	+2.2
WRA						Sn				**S**
	comp=Z,0.9nm,0.3s,baz=38,slow=23,SNR=1.6									
WRA						Lg				Lg
	comp=Z,0.5nm,0.3s,baz=97,slow=30,SNR=2.9									
NLAI	**Namlea**	**16.40**	**280**	P		**P**	**22**	**22**	**58.4**	**-1.6**
	comp=Z,23nm,1.5s									
LBMI	**Labuha**	**16.73**	**289**	P		**Pn**	**22**	**23**	**01.6**	**-0.1**
	comp=Z,68nm,1.0s									
TNTI	**Ternate**	**17.39**	**294**			**Pn**	**22**	**23**	**08.9**	**-1.1**
SANI	**Sanana**	**17.75**	**283**	P		**Pn**	**22**	**23**	**13.4**	**-1.0**
	comp=Z,52nm,0.8s,comp=Z,833nm									
SOEI	**Soe**	**19.08**	**259**				**22**	**23**	**27.1**	**-2.6**
SOEI				IAmb		IAmb	22	23	37.9	
	comp=Z,98nm,0.9s									
SOEI	**Soe**	**19.08**	**259**	P		**P**	**22**	**23**	**29.1**	**-0.6**
	comp=Z,159nm,0.9s,comp=Z,2µm									
AS31	**Alice Springs**	**19.35**	**207**	Pn		**Pn**	**22**	**23**	**35.4**	**+1.6**
ASAR	**Alice Springs**	**19.35**	**207**			**Pn**	**22**	**23**	**34.6**	**+0.8**
ASAR	**Alice Springs**	**19.35**	**207**	P		**Pn**	**22**	**23**	**35.0**	**+1.1**
	comp=Z,2.5nm,0.3s,baz=38,slow=8.9,SNR=22									
	comp=Z,64nm,0.9s									
KMSI	**Cibinong**	**20.45**	**289**	P		**P**	**22**	**23**	**44.7**	**+0.2**
	comp=Z,323nm,1.0s,comp=Z,4µm									
FITZ	**Fitzroy Crossi**	**20.72**	**234**	P		**P**	**22**	**23**	**47.3**	**-0.2**
MMRI	**Maumere**	**20.94**	**263**	P		**P**	**22**	**23**	**49.5**	**-0.4**
MMRI	**Maumere**	**20.94**	**263**	P		**P**	**22**	**23**	**50.6**	**+0.7**
	comp=Z,59nm,0.9s									
LUWI	**Luwuk**	**21.11**	**284**	P		**P**	**22**	**23**	**51.1**	**-0.6**
GTOI	**Gorontalo**	**21.38**	**288**	P		**P**	**22**	**23**	**56.8**	**+2.2**
	comp=Z,25nm,0.8s,comp=Z,312nm									
EDFI	**Ende, Flores**	**21.49**	**262**	P		**P**	**22**	**23**	**54.1**	**-1.8**
	comp=Z,39nm,0.9s,comp=Z,646nm									
MRSI	**Marisa**	**22.34**	**287**	P		**P**	**22**	**24**	**05.5**	**+0.5**
	comp=Z,22nm,0.9s									
BASI	**Baing, Sumba**	**22.74**	**259**	P		**P**	**22**	**24**	**09.2**	**0.0**
	comp=Z,98nm,0.9s									
KAPI	**Kappang**	**23.42**	**272**	P		**P**	**22**	**24**	**15.9**	**-0.1**
KAPI				IAmb		IAmb	22	24	19.7	
	comp=Z,79nm,1.1s									
TTSI	**Tana Toraja**	**23.59**	**277**	P		**P**	**22**	**24**	**19.8**	**+2.2**
	comp=Z,35nm,1.3s,comp=Z,1µm									
TOLI2	**Tolitoli**	**23.64**	**288**	P		**P**	**22**	**24**	**17.6**	**-0.6**
TOLI2				IAmb		IAmb	22	24	26.7	
	comp=Z,43nm,1.1s				

I17K	**Unalakleet**	**81.62**	**22**	P		**P**	**22 31 22.8**	**-1.1**
N18K	**Kilae Creek**	**81.88**	**26**	P		**P**	**22 31 25.7**	**+0.3**
G16K	**Koyuk River**	**81.88**	**20**	P		**P**	**22 31 25.6**	**+0.3**
G16K	comp=Z,16nm,1.1s			IAmb		IAmb	22 31 27.0	
K17K	**Iditarod**	**81.90**	**23**	P		**P**	**22 31 25.7**	**+0.2**
SVW2	**Sparrevohn**	**82.21**	**25**	P		**P**	**22 31 27.1**	**0.0**
L18K	**Granite Mounta**	**82.29**	**24**	P		**P**	**22 31 27.5**	**0.0**
L18K	comp=Z,22nm,1.2s			IAmb		IAmb	22 31 29.4	
H17K	**Granite Mounta**	**82.48**	**21**	P		**P**	**22 31 28.7**	**+0.2**
H17K	comp=Z,27nm,1.5s			IAmb		IAmb	22 31 30.4	
N19K	**Bonanza Creek**	**82.55**	**26**	P		**P**	**22 31 28.6**	**-0.4**
C16K	**Lisburne Hills**	**82.67**	**17**	P		**P**	**22 31 29.6**	**+0.2**
C16K	comp=Z,30nm,1.9s			IAmb		IAmb	22 34 02.8	
F17K	**Baldwin Pennin**	**82.86**	**20**	P		**P**	**22 31 30.5**	**+0.2**
J18K	**Innoko River**	**82.90**	**23**	P		**P**	**22 31 30.6**	**-0.1**
J18K	comp=Z,21nm,1.6s			IAmb		IAmb	22 32 03.0	
L19K	**White Mountain**	**83.03**	**25**	P		**P**	**22 31 31.5**	**+0.1**
M19K	**Big River Lodg**	**83.09**	**25**	P		**P**	**22 31 32.0**	**+0.3**
G18K	**Tagagawik**	**83.44**	**21**	P		**P**	**22 31 33.5**	**+0.1**
QSPA	**South Pole Qui**	**83.54**	**180**	P		**P**	**22 31 33.8**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=122,slow=12,SNR=1.3							
	comp=Z,0.8nm,0.5s							
J19K	**Poorman**	**83.59**	**23**	P		**P**	**22 31 34.1**	**-0.1**
J19K	comp=Z,9.8nm,1.1s			IAmb		IAmb	22 31 36.4	
M20K	**Styx River**	**83.61**	**25**	P		**P**	**22 31 34.5**	**0.0**
M20K	comp=Z,20nm,1.2s			IAmb		IAmb	22 31 38.2	
E18K	**Tukpahlearik C**	**83.62**	**19**	P		**P**	**22 31 34.5**	**+0.3**
E18K	comp=Z,19nm,1.7s			IAmb		IAmb	22 32 05.8	
K20K	**Telida**	**83.90**	**24**	P		**P**	**22 31 35.7**	**-0.1**
K20K	comp=Z,10nm,1.0s			IAmb		IAmb	22 31 36.9	
H19K	**Roundabout Mou**	**84.03**	**21**	P		**P**	**22 31 36.5**	**+0.1**
H19K	comp=Z,12nm,1.0s			IAmb		IAmb	22 31 37.6	
G19K	**Purcell Mounta**	**84.12**	**21**	P		**P**	**22 31 37.2**	**+0.3**
G19K	comp=Z,14nm,1.1s			IAmb		IAmb	22 31 38.6	
C18K	**Utukok River**	**84.13**	**18**	P		**P**	**22 31 36.9**	**-0.1**
C18K	comp=Z,14nm,1.5s			IAmb		IAmb	22 32 24.2	
J20K	**Nowinta River**	**84.25**	**23**	P		**P**	**22 31 37.7**	**+0.2**
J20K	comp=Z,9.8nm,1.0s			IAmb		IAmb	22 31 38.8	
SUA	**Susitna One**	**84.46**	**26**	P		**P**	**22 31 37.7**	**-1.2**
NRIK	**Noril'sk**	**84.56**	**343**	P		**P**	**22 31 39.4**	**+0.4**
NRIK	comp=Z,11nm,0.8s			IAmb		IAmb	22 32 37.0	
NRIK	**Noril'sk**	**84.56**	**343**	P		**P**	**22 31 38.8**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=120,slow=5.2,SNR=5.3							
	comp=Z,3.4nm,0.8s							
CAST	**Castle Rocks**	**84.72**	**24**	P		**P**	**22 31 39.2**	**-0.8**
CAST	comp=Z,16nm,1.1s			IAmb		IAmb	22 31 40.0	
E19K	**Redstone River**	**84.74**	**19**	P		**P**	**22 31 39.8**	**-0.2**
E19K	comp=Z,12nm,0.9s			IAmb		IAmb	22 31 41.0	
RC01	**Rabbit Creek A**	**84.76**	**27**	P		**P**	**22 31 39.3**	**-0.9**
C19K	**Lookout Ridge**	**84.87**	**18**	P		**P**	**22 31 41.2**	**+0.5**
C19K	comp=Z,14nm,1.0s			IAmb		IAmb	22 31 42.6	
BVAR	**Borovoye Array**	**84.94**	**325**	P		**P**	**22 31 41.8**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=116,slow=6.9,SNR=6.9							
	comp=Z,3.4nm,0.8s							
D19K	**Kuna River**	**84.99**	**18**	P		**P**	**22 31 41.1**	**-0.2**
D19K	comp=Z,13nm,1.3s			IAmb		IAmb	22 31 43.9	
BRVK	**Borovoye**	**85.01**	**325**	P		**P**	**22 31 41.0**	**-0.6**
F20K	**Avaraart Lake**	**85.04**	**20**	P		**P**	**22 31 41.5**	**0.0**
IMAR	**Indian Mountai**	**85.23**	**21**	P		**P**	**22 31 42.7**	**+0.2**
KTH	**Kantishna Hill**	**85.25**	**24**	P		**P**	**22 31 41.6**	**-1.2**
GHO	**Glory Hole Cre**	**85.39**	**26**	P		**P**	**22 31 42.9**	**-0.5**
H21K	**Melozitna Rive**	**85.43**	**22**	P		**P**	**22 31 43.5**	**0.0**
I21K	**Tanana**	**85.53**	**23**	P		**P**	**22 31 43.3**	**-0.7**
MLY	**Manley**	**85.94**	**23**	P		**P**	**22 31 45.8**	**-0.3**
RND	**Reindeer**	**86.05**	**25**	P		**P**	**22 31 45.3**	**-1.4**
RND	comp=Z,16nm,0.9s			IAmb		IAmb	22 31 46.6	
DHY	**Denali Highway**	**86.54**	**25**	P		**P**	**22 31 48.7**	**-0.6**
DHY	comp=Z,12nm,0.8s			IAmb		IAmb	22 31 51.3	
B21K	**Ikpikpuk River**	**86.65**	**18**	P		**P**	**22 31 49.3**	**-0.1**
WRH	**Wood River Hil**	**86.77**	**24**	P		**P**	**22 31 49.1**	**-1.0**
WRH	comp=Z,14nm,1.1s			IAmb		IAmb	22 31 49.5	
G23K	**Bananza Creek**	**86.90**	**21**	P		**P**	**22 31 51.0**	**+0.2**
CCB	**Clear Creek Bu**	**86.94**	**24**	P		**P**	**22 31 50.5**	**-0.4**
CCB	comp=Z,8.1nm,0.9s			IAmb		IAmb	22 31 50.7	
IL31		**87.36**	**24**	P		**P**	**22 31 51.8**	**-1.1**
IL31	comp=Z,12nm,1.1s			IAmb		IAmb	22 31 51.9	
ILAR	**Eielson Array**	**87.36**	**24**	P		**P**	**22 31 50.8**	**-2.2**
	comp=Z,4.5nm,0.9s,baz=260,slow=5.1,SNR=16							
	comp=Z,4.5nm,0.9s							
J25K	**Salcha River,**	**87.92**	**24**	P		**P**	**22 31 54.8**	**-1.0**
J25K	comp=Z,14nm,1.1s			IAmb		IAmb	22 31 56.2	
F24K	**Squaw Lake**	**87.99**	**21**	P		**P**	**22 31 56.2**	**+0.2**
F24K	comp=Z,11nm,0.9s			IAmb		IAmb	22 31 57.5	
C23K	**Itkillik River**	**87.99**	**18**	P		**P**	**22 31 56.4**	**+0.5**
D24K	**Happy Valley**	**88.29**	**19**	P		**P**	**22 31 57.6**	**+0.3**
M27K	**Edge Creek, AK**	**88.71**	**27**	P		**P**	**22 31 59.5**	**-0.1**
M27K	comp=Z,13nm,0.9s			IAmb		IAmb	22 32 00.6	
L27K	**Beaver Creek,**	**88.93**	**26**	P		**P**	**22 32 00.5**	**0.0**
L27K	comp=Z,8.9nm,1.1s			IAmb		IAmb	22 32 01.4	
BCAR	**Beaver Creek A**	**88.95**	**26**	P		**P**	**22 32 00.2**	**-0.4**
K27K	**Chicken**	**89.10**	**25**	P		**P**	**22 32 01.7**	**+0.4**
K27K	comp=Z,12nm,1.0s			IAmb		IAmb	22 32 02.8	
BMAR	**Burnt Mountain**	**89.15**	**22**	P		**P**	**22 32 01.0**	**-0.5**
DAWY	**Dawson**	**90.25**	**25**	P		**P**	**22 32 06.8**	**+0.1**
DAWY	comp=Z,8.4nm,0.9s			IAmb		IAmb	22 32 07.6	
L29M	**L29M**	**90.57**	**26**	P		**P**	**22 32 08.2**	**0.0**
L29M	comp=Z,9.8nm,0.8s			IAmb		IAmb	22 32 09.3	
K29M	**Barlow Dome**	**91.00**	**26**	P		**P**	**22 32 10.6**	**+0.3**
K29M	comp=Z,9.1nm,0.9s			IAmb		IAmb	22 32 11.3	
YKA	**Yellowknife Ar**	**101.28**	**28**	P		**Pdif**	**22 32 54.4**	**-2.4**
	comp=Z,0.2nm,0.6s,baz=304,slow=4.4,SNR=5.3							
CDITO	**Canoas**	**134.24**	**84**			**PKPdf**	**22 38 24.6**	**-0.4**
PB10	**IPOC Station P**	**135.55**	**133**			PKPpre	22 38 17.3	
AF01	**San Pedro de A**	**137.61**	**135**			PKPpre	22 38 20.5	

*IDC **25** 22:20:00.9±2.5,6˚34S×143˚87E,h0km,mb4.5/8,*
mbtmp4.5/9,ML4.7/1,Error ellipse: s-maj=88.7km
s-min=30.3km az=101.0

ISC 25 22:20:06.5±0.9,6˚4S±0˚1×143˚7E±0˚2,h35km,n11,
σ0s57/11,mb4.4/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.54**	**131**	Sn		**Sn**	**22 22 04.5**	**+0.2**
	8.6nm,0.3s,baz=277,slow=24,SNR=1.1							
ASAR	**Alice Springs**	**15.58**	**208**	P		**Pn**	**22 24 33.0**	**-0.2**
	2.1nm,0.3s,baz=33,slow=9.6,SNR=6.1							
	30nm,0.8s							
KSRS	**Korea Array**	**46.06**	**343**	P		**P**	**22 28 27.2**	**+0.3**
	4.8nm,0.9s,baz=164,slow=10,SNR=5.4							
	4.8nm,0.9s							
CMAR	**Chiang Mai Arr**	**50.58**	**300**	P		**P**	**22 29 03.0**	**+0.8**
	1.8nm,0.6s,baz=128,slow=5.9,SNR=4.4							
	1.8nm,0.6s							
USRK	**Ussuriysk Ar.**	**51.47**	**349**	P		**P**	**22 29 08.6**	**+0.1**
	7.4nm,0.8s,baz=172,slow=7.9,SNR=10							
	7.4nm,0.8s							
MKAR	**Makanchi Array**	**75.75**	**322**	P		**P**	**22 31 48.9**	**+0.1**
	3.5nm,0.8s,baz=100,slow=8.2,SNR=6.7							
	3.5nm,0.8s							
ZALV	**Zalesovo Beam**	**77.63**	**329**	P		**P**	**22 31 58.4**	**-0.8**
	2.1nm,0.7s,baz=117,slow=6.6,SNR=5.1							
	2.1nm,0.7s							
KURBB	**Kurchatov Arra**	**79.61**	**324**	P		**P**	**22 32 09.1**	**-1.0**
	1.9nm,0.9s,baz=112,slow=4.1,SNR=4.2							
	1.9nm,0.9s							
NRIK	**Noril'sk**	**84.67**	**343**	P		**P**	**22 32 36.0**	**-0.3**
	9.7nm,0.7s,baz=118,slow=2.7,SNR=8.1							
	9.7nm,0.7s							
BVAR	**Borovoye Array**	**85.18**	**325**	P		**P**	**22 32 39.5**	**+0.3**
	5.9nm,0.7s,baz=111,slow=7.1,SNR=5.0							
	5.9nm,0.7s							
DBIC	**Dimbokro**	**148.76**	**272**	PKPbc		**PKPbc**	**22 39 51.3**	**-0.1**
	4.9nm,0.7s,baz=77,slow=4.8,SNR=5.0							

JMA 25 22:20:16.7±0.2,20˚7N±1˚0×122˚1E±0˚6,h80km,MV3.9/17,
PHILIPPINE ISL REGION,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HATJ	**Hateruma jima**	**3.67**	**25**	P		Pn	22 21 12.6	+1.4
HATJ				S		Sn	22 21 54.7	+1.5
JYNG	**Yonagunijimaku**	**3.79**	**11**	P		Pn	22 21 13.7	+0.9
JYNG				S		Sn	22 21 58.0	+1.9
YOJ	**Yonaguni jima**	**3.81**	**12**	*e*P		Pn	22 21 14.7	+1.6
YOJ				*e*S		Sn	22 21 57.9	+1.2
IRIF	**Iriomote-Funau**	**3.89**	**22**	P		Pn	22 21 15.6	+1.4
IRIF				S		Sn	22 21 59.8	+1.1
JKRS	**Kuro-shima**	**3.91**	**26**	*e*P		Pn	22 21 15.9	+1.5
JKRS				S		Sn	22 22 00.7	+1.6
JIJ	**Ishigaki jima**	**4.08**	**27**	P		Pn	22 21 17.6	+0.9
JIJ				*e*S		Sn	22 22 03.9	+0.6
JISG	**Ishigakijimahi**	**4.34**	**27**	P		Pn	22 21 21.2	+0.9
JISG				S		Sn	22 22 11.2	+1.4
JTJ	**Tarama**	**4.57**	**31**	*e*P		Pn	22 21 25.0	+1.6
JTJ				S		Sn	22 22 16.8	+1.6
JIRB	**Irabujima**	**4.96**	**34**	P		Pn	22 21 30.4	+1.7
JMJ2	**Miyako jima3**	**4.97**	**36**	P		Pn	22 21 31.0	+2.1
JMJ2				S		Sn	22 22 27.1	+1.9
JIKM	**Ikemajima**	**5.08**	**34**	P		Pn	22 21 32.1	+1.7
JIKM				*e*S		Sn	22 22 29.6	+1.9

*IDC **25** 22:22:25.6±0.9,6˚31S×144˚00E,h0km,mb4.0/8,*
mbtmp4.1/12,ML4.1/3,Error ellipse: s-maj=35.0km
s-min=20.7km az=75.0

ISC 25 22:22:27.2±0.7,6˚35S±0˚10×144˚0E±0˚1,h10km,n13,
σ0s85/13,mb4.1/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.33**	**135**	Pn		**Pn**	**22 23 35.0**	**+1.7**
	75nm,1.0s,baz=201,slow=10,SNR=1.7							
PMG				Sn		**Sb**	**22 24 35.4**	**-0.6**
	5.3nm,0.3s,baz=158,slow=20,SNR=1.4							
CTA	**Charters Tower**	**13.83**	**171**	Pn		**Pn**	**22 25 42.7**	**-0.8**
	0.3nm,0.3s,baz=249,slow=20,SNR=2.5							
	6.4nm,0.8s							
HNR	**Honiara**	**16.05**	**102**	Pn		**Pn**	**22 26 12.3**	**-0.9**
	170nm,0.3s,baz=137,slow=8.0,SNR=3.7							
WRA	**Warramunga Arr**	**16.48**	**214**	Pn		**Pn**	**22 26 19.2**	**+0.5**
	0.8nm,0.3s,baz=25,slow=14,SNR=2.7							
	2.1nm,0.4s							
ASAR	**Alice Springs**	**19.79**	**208**	P		**P**	**22 26 57.9**	**0.0**
	1.1nm,0.3s,baz=34,slow=10.0,SNR=8.0							
	21nm,0.7s							
SONM	**Songino Array**	**63.31**	**333**	P		P	22 32 55.2	-1.4
	0.4nm,0.3s,baz=145,slow=10,SNR=2.0							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**75.91**	**321**	P		**P**	**22 34 14.1**	**-0.1**
	0.7nm,0.7s,baz=108,slow=7.8,SNR=3.0							
	0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**77.76**	**329**	P		**P**	**22 34 25.6**	**+1.2**
	0.4nm,0.5s,baz=124,slow=8.0,SNR=2.4							
	0.4nm,0.5s							
QSPA	**South Pole Qui**	**83.62**	**180**	P		**P**	**22 34 55.8**	**-0.1**
	1.7nm,0.5s,baz=289,slow=0.9,SNR=6.6							
	1.7nm,0.5s							
NRIK	**Noril'sk**	**84.71**	**343**	P		**P**	**22 35 01.1**	**0.0**
	0.8nm,0.6s,baz=136,slow=12,SNR=1.8							
	0.8nm,0.6s							
BVAR	**Borovoye Array**	**85.33**	**324**	P		**P**	**22 35 04.6**	**0.0**
	0.7nm,0.6s,baz=123,slow=6.0,SNR=2.7							
	0.7nm,0.6s							
ILAR	**Eielson Array**	**86.97**	**24**	P		**P**	**22 35 12.2**	**-0.1**
	0.3nm,0.8s,baz=269,slow=4.8,SNR=2.3							
	0.3nm,0.8s							
GEYT	**Alibeck**	**90.65**	**308**	P		**P**	**22 35 29.6**	**-0.9**
	0.7nm,0.6s							
	0.7nm,0.6s							

*BJI **25** 22:28:06.0±0.0,6˚36S×143˚41E,h30km,mb4.9/74,*
mB5.4/27,Ms4.8/11,Ms7 4.6/12
*IDC **25** 22:28:06.5±0.5,6˚11S×142˚86E,h0km,mb4.8/17,*
mbtmp4.8/20,ML2.9/2,MS4.3/4,Error ellipse:
s-maj=24.0km s-min=12.4km az=78.0
*MOS **25** 22:28:06.8±0.8,6˚12S×142˚81E,h15km,mb5.2/41,Error*
ellipse: s-maj=11.5km s-min=5.6km az=113.7
*DJA **25** 22:28:08.8±0.4,6˚S±3˚×14˚3E±˚,h11km±2km,M5.1/40,*
mB5.5/16,mb4.9/40,MLv5.7/7,Mw(mB)5.0/16
*NEIC **25** 22:28:10.2±1.5,6˚15S±0˚07×142˚66E±0˚07,h19km±3km,*
mb5.3/163,Error ellipse: s-maj=10.6km s-min=10.0km
az=176.0

ISC 25 22:28:08.5±0.3,6˚19S±0˚04×142˚69E±0˚05,h10km,n566,
σ1s20/516,mb5.2/157,MS4.4/5,20C-5D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMPI	**Merauke**	**3.22**	**225**	P		**Pn**	**22 28 59.4**	**+0.3**
GENI	**Genyem**	**4.36**	**325**	P		**Pn**	**22 29 16.3**	**+1.4**
PMG	**Port Moresby**	**5.47**	**126**	Pn		**Pn**	**22 29 29.2**	**-0.8**
PMG	**Port Moresby**	**5.47**	**126**	Pn		**Pn**	**22 29 28.5**	**-1.6**
	7.7nm,0.3s,baz=312,slow=12,SNR=24							
PMG				Sn		**Sn**	**22 30 31.4**	**-1.7**
	22nm,0.3s,baz=252,slow=22,SNR=8.0							
	83nm,0.6s							
SMPI	**Sarmi**	**5.75**	**316**	P		**Pn**	**22 29 35.3**	**+1.3**
	334nm,1.3s,1.8nm							
MANU	**Manus Island**	**6.22**	**49**	Pn		**Pn**	**22 29 42.9**	**+2.4**
COEN	**Coen**	**7.74**	**176**	P		**Pn**	**22 30 03.4**	**+2.1**
	baz=7.8							
COEN	**Coen**	**7.74**	**176**	Pn		**Pn**	**22 30 03.4**	**+2.1**
KMPI	**Kaimana, Papua**	**9.29**	**285**	P		**Pn**	**22 30 22.0**	**-0.7**
	286nm,0.8s							
RABL	**Rabaul**	**9.64**	**79**	Pn		**Pn**	**22 30 27.9**	**+0.3**
FAKI	**Fak Fak**	**10.90**	**287**			**Pn**	**22 30 43.5**	**-1.2**
FAKI	**Fak Fak**	**10.90**	**287**	P		**Pn**	**22 30 43.6**	**-1.1**
	65nm,1.0s,1μm							
SAUI	**Saumlaki**	**11.44**	**260**	Pn		**Pn**	**22 30 52.0**	**-0.1**
SAUI	**Saumlaki**	**11.44**	**260**	P		**Pn**	**22 30 52.2**	**+0.1**
	1μm,1.1s,10μm							
KDU	**Kakadu**	**11.96**	**237**	P		**Pn**	**22 30 57.7**	**-1.6**
	baz=12,SNR=9.4							
SWI	**Sorong**	**12.57**	**294**	P		**Pn**	**22 31 06.9**	**-0.6**
	41nm,1.2s							
MTN	**Manton Dam**	**13.17**	**239**	P		**Pn**	**22 31 13.5**	**-2.2**
	baz=13,SNR=5.0							
CTA	**Charters Tower**	**14.25**	**166**	Pn		**Pn**	**22 31 29.7**	**-0.8**
	0.1nm,0.3s,baz=156,slow=1.4,SNR=2.4							
CTA				Lg		Lg	22 35 41.9	
	0.5nm,0.3s,baz=53,slow=22,SNR=7.0							
CTA				LR		LR	22 36 40.6	
	comp=Z,485nm,18.3s,baz=0.5,slow=36							
	12nm,0.9s							
WB0	**Warramunga Arr**	**15.72**	**210**	Pn		**Pn**	**22 31 50.3**	**0.0**
WB0				IAmb		IAmb	22 31 58.5	
	comp=Z,197nm,1.4s							
NLAI	**Namlea**	**15.81**	**280**	P		**Pn**	**22 31 51.2**	**-0.2**
	comp=Z,11nm,0.7s							
WRAB	**Tennant Creek**	**15.88**	**210**	Pn		**Pn**	**22 31 53.2**	**+0.8**
WRAB	**Tennant Creek**	**15.88**	**210**	P		**Pn**	**22 31 53.2**	**+0.8**
WRAB				pmax		pmax		
	comp=Z,86nm,1.1s							
WB2	**Warramunga Arr**	**15.89**	**210**	Pn		**Pn**	**22 31 51.0**	**-1.5**
WC3	**Warramunga Arr**	**15.90**	**210**	P		**Pn**	**22 31 52.5**	**0.0**
	baz=16							
WRA	**Warramunga Arr**	**15.90**	**210**	Pn		**Pn**	**22 31 49.3**	**-3.3**
	comp=Z,2.0nm,0.3s,baz=28,slow=14,SNR=7.7							
WRA				Sn		Sn	22 34 39.9	-9.1
	comp=Z,1.7nm,0.3s,baz=32,slow=21,SNR=5.1							
WRA				Lg		Lg	22 36 38.0	
	comp=Z,1.9nm,0.3s,baz=33,slow=28,SNR=7.0							
WRA				LR		LR	22 38 41.6	
	comp=Z,2μm,20.2s,baz=7.0,slow=40							
LBMI	**Labuha**	**16.12**	**289**	P		**Pn**	**22 31 55.3**	**-0.2**
	comp=Z,53nm,1.0s							

SANI	**Sanana**	**17.15**	**283**	P		**Pn**	**22 32 08.1**	**-0.4**
	comp=Z,35nm,1.0s							
HNR	**Honiara**	**17.40**	**102**	P		**Pn**	**22 32 13.4**	**+1.8**
HNR	**Honiara**	**17.40**	**102**	P		**Pn**	**22 32 13.4**	**+1.8**
HNR				pmax		pmax		
	comp=Z,155nm,1.1s							
HNR	**Honiara**	**17.40**	**102**	P		**Pn**	**22 32 11.3**	**-0.3**
	comp=Z,744nm,0.4s,baz=145,slow=6.1,SNR=8.1							
SOEI	**Soe**	**18.58**	**258**			**P**	**22 32 25.1**	**-1.0**
SOEI				IAmb		IAmb	22 32 31.8	
	comp=Z,361nm,1.2s							
SOEI	**Soe**	**18.58**	**258**	P		**P**	**22 32 25.2**	**-0.9**
	comp=Z,266nm,1.1s,comp=Z,3μm							
AS31	**Alice Springs**	**19.32**	**205**			**P**	**22 32 34.1**	**+0.1**
ASAR	**Alice Springs**	**19.32**	**205**			**P**	**22 32 33.1**	**-1.0**
ASAR	**Alice Springs**	**19.32**	**205**	P		**P**	**22 32 34.5**	**+0.4**
	comp=Z,83nm,0.9s,baz=35,slow=9.4,SNR=43							
ASAR				S		Sn	22 36 02.7	-9.3
	comp=Z,15nm,0.9s,baz=17,slow=28,SNR=6.8							
ASAR				Lg		Lg	22 38 25.6	
	comp=Z,0.5nm,0.3s,baz=32,slow=31,SNR=6.3							
ASAR				LR		LR	22 40 41.4	
	comp=Z,2μm,20.6s,baz=18,slow=39							
ASPA	**Alice Springs**	**19.33**	**205**	P		**P**	**22 32 35.0**	**+0.8**
	baz=19							
KMSI	**Cibinong**	**19.84**	**289**	P		**P**	**22 32 38.6**	**-1.2**
	comp=Z,295nm,1.1s,comp=Z,4μm							
PATS	**Pohnpei**	**20.26**	**51**			**P**	**22 32 42.4**	**-2.0**
QLP	**Quilpie**	**20.34**	**176**	P		**P**	**22 32 47.0**	**+1.9**
	baz=20,SNR=7.6							
FITZ	**Fitzroy Crossi**	**20.42**	**233**	P		**P**	**22 32 46.7**	**+0.7**
	baz=20,SNR=8.6							
FITZ	**Fitzroy Crossi**	**20.42**	**233**			**P**	**22 32 46.1**	**+0.1**
MMRI	**Maumere**	**20.42**	**262**			**P**	**22 32 45.2**	**-0.9**
MMRI				IAmb		IAmb	22 32 52.7	
	comp=Z,235nm,1.6s							
MMRI	**Maumere**	**20.42**	**262**	P		**P**	**22 32 45.9**	**-0.2**
	comp=Z,65nm,1.2s							
LUWI	**Luwuk**	**20.52**	**284**	P		**P**	**22 32 49.1**	**+2.0**
	comp=Z,95nm,1.2s,comp=Z,3μm							
EIDS	**Eidsvold**	**20.70**	**158**	P		**P**	**22 32 51.6**	**+2.5**
	baz=21,SNR=17							
EIDS	**Eidsvold**	**20.70**	**158**			**P**	**22 32 48.4**	**-0.6**
EIDS				IAmb		IAmb	22 32 57.2	
	comp=Z,97nm,1.1s							
GTOI	**Gorontalo**	**20.78**	**288**	P		**P**	**22 32 51.8**	**+1.8**
	comp=Z,43nm,0.8s,comp=Z,518nm							
EDFI	**Ende, Flores**	**20.97**	**262**	P		**P**	**22 32 49.6**	**-2.6**
	comp=Z,93nm,1.0s,comp=Z,1μm							
MRSI	**Marisa**	**21.74**	**287**	P		**P**	**22 32 59.5**	**-0.8**
	comp=Z,38nm,0.9s,comp=Z,626nm							
KAPI	**Kappang**	**22.85**	**272**	P		**P**	**22 33 12.0**	**-0.3**
KAPI				IAmb		IAmb	22 33 17.7	
	comp=Z,120nm,1.6s							
KAPI	**Kappang**	**22.85**	**272**	P		**P**	**22 33 12.0**	**-0.3**
KAPI				pmax		pmax		
	comp=Z,120nm,1.6s							
TTSI	**Tana Toraja**	**23.00**	**277**	P		**P**	**22 33 14.2**	**+0.4**
	comp=Z,51nm,1.1s,comp=Z,783nm							
TTSI				pP		**pP**	**22 33 17.1**	**+0.2**
	comp=Z,51nm,1.1s,comp=Z,783nm							
TOLI2	**Tolitoli**	**23.04**	**288**	P		**P**	**22 33 14.1**	**-0.1**
WRKA	**Warakurna**	**23.27**	**215**	P		**P**	**22 33 15.8**	**-0.7**
	baz=23,SNR=6.1							
PLAI	**Plampang**	**24.83**	**262**	P		**P**	**22 33 30.7**	**-0.6**
	comp=Z,38nm,1.2s							
KOUNC	**Koumac, New Ca**	**25.36**	**126**	P		**P**	**22 33 35.9**	**-0.1**
STKA	**Stephens Creek**	**25.58**	**182**	P		**P**	**22 33 39.4**	**+1.5**
	baz=26							
STKA	**Stephens Creek**	**25.58**	**182**	P		**P**	**22 33 37.9**	**+0.1**
STKA	**Stephens Creek**	**25.58**	**182**	*i* P		**P**	**22 33 35.0**	**-2.9**
STKA	**Stephens Creek**	**25.58**	**182**	P		**P**	**22 33 37.2**	**-0.6**
	comp=Z,16nm,1.1s,baz=35,slow=15,SNR=4.6							
	comp=Z,16nm,1.1s							
TWSI	**Taliwang, Sumb**	**25.71**	**263**	P		**P**	**22 33 38.3**	**-0.9**
	comp=Z,11nm,1.0s							
MBWA	**Marble Bar**	**26.75**	**234**	P		**P**	**22 33 48.4**	**-0.3**
PSA00	**Pilbara Seismi**	**26.87**	**233**	P		**P**	**22 33 48.9**	**-0.8**
PSA00				IAmb		IAmb	22 34 08.4	
	comp=Z,49nm,1.1s							
BBOO	**Buckleboo**	**27.20**	**192**	P		**P**	**22 33 54.9**	**+2.4**
	baz=27							
KLBR	**Kellerberrin**	**34.39**	**220**	P		**P**	**22 34 56.4**	**+0.3**
	baz=34							
XMIS	**Christmas Isla**	**36.87**	**261**	P		**P**	**22 35 17.4**	**-0.2**
XMIS				IAmb		IAmb	22 36 41.5	
	comp=Z,35nm,0.6s							
KASI	**Kota Agung**	**37.99**	**269**	P		**P**	**22 35 26.6**	**-0.5**
	comp=Z,16nm,1.0s							
JHJ	**Hachijo jima 2**	**39.19**	**356**	LR		LR	22 50 16.4	
	comp=Z,230nm,20.4s,baz=180,slow=34							
INU	**Inuyama**	**

comp=Z,29nm,1.1s
USA0B Ussuriysk Arra 51.07 350 *i* P **P** **22 37 09.2 -1.9**
USRK Ussuriysk Ar. 51.07 350 P **P** **22 37 09.8 -1.3**
USRK Ussuriysk Ar. 51.07 350 P **P** **22 37 10.9 -0.2**
comp=Z,24nm,1.0s,baz=169,slow=7.9,SNR=37
comp=Z,24nm,1.0s
XAN Xi'an 51.19 324 ⇑P **P** **22 37 12.3 0.0**
XAN pmax pmax
comp=Z,30nm,1.4s
PZH PanZhiHua 51.28 311 P **P** **22 37 14.3 +1.1**
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH pmax pmax
comp=Z,150nm,4.0s
MDJ Mudanjiang 51.93 348 P **P** **22 37 17.0 -0.5**
MDJ pmax pmax
comp=Z,14nm,1.2s
MDJ pmax pmax
comp=Z,220nm,4.3s
MDJ Mudanjiang 51.93 348 P **P** **22 37 17.2 -0.3**
TIY Taiyuan 51.98 330 *eP* **P** **22 37 20.0 +1.9**
TIY sP sP 22 37 33.0 +10
TIY pmax pmax
comp=Z,8.0nm,0.7s
BJT Baijiatuau 52.07 334 P **P** **22 37 17.1 -1.6**
BJT Baijiatuau 52.07 334 P **P** **22 37 17.1 -1.6**
BJT pmax pmax
comp=Z,21nm,1.2s
BJI Beijing 52.09 334 P **P** **22 37 18.5 -0.3**
BJI PP **PP** **22 39 17.3 +0.1**
BJI pmax pmax
comp=Z,8.0nm,1.3s
CN2 Changchun 52.14 344 *eP* **P** **22 37 23.8 +4.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 Chengdu 52.41 317 P **P** **22 37 22.5 +1.1**
CD2 pmax pmax
comp=Z,20nm,0.9s
YSS Yuzh-Sakhalins 52.91 0 *eP* **P** **22 37 23.9 -0.8**
YSS *e* 22 37 35.3
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=Z,500nm,18.0s
TNCH TengChong 52.99 308 P **P** **22 37 27.0 +1.0**
TNCH pP sP 22 37 37.5 +6.7
TNCH PcP **PcP** **22 38 33.0 -1.8**
TNCH S **S** **22 44 53.5 -2.6**
TNCH SS **SS** **22 48 31.8 -3.7**
TNCH pmax pmax
comp=Z,30nm,1.6s
TNCH pmax pmax
comp=Z,190nm,3.5s
TNCH LR LR
comp=Z,110nm,16.3s
TNCH LR LR
comp=Z,150nm,13.5s
TNCH LR LR
comp=Z,400nm,23.7s
BNX BinXian 53.47 347 ⇑P **P** **22 37 28.3 -0.6**
BNX pmax pmax
comp=Z,42nm,1.1s
BNX pmax pmax
comp=Z,240nm,12.2s
HHC Hu-ho-hao-te 54.84 331 *eP* **P** **22 37 40.3 +1.2**
HHC pP sP 22 37 52.0 +7.6
HHC *e*S **S** **22 45 26.5 +6.1**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,65nm,4.4s
HHC LR LR
comp=Z,170nm,17.7s
HHC LR LR
comp=Z,260nm,18.4s
BTO Baotou 55.40 330 *eP* **P** **22 37 45.0 +1.8**
BTO pP **sP** **22 37 49.8 +1.4**
BTO sP **pP** **22 37 52.0 +5.0**
BTO PP **PP** **22 39 50.5 +3.3**
BTO S **S** **22 45 29.8 +1.8**
BTO sS **sS** **22 45 40.8 +7.1**
BTO SS **SS** **22 49 13.3 +0.4**
BTO pmax pmax
comp=Z,27nm,1.4s
BTO pmax pmax
comp=Z,540nm,4.6s
LZH Lanzhou 55.63 322 *eP* **P** **22 37 46.5 +1.5**
LZH pP sP 22 37 56.5 +6.6
LZH pmax pmax
comp=Z,24nm,1.1s
KLR Kul'dur 56.01 351 *ceP* **P** **22 37 46.3 -0.9**
KLR pmax pmax
comp=Z,30nm,1.7s
TYV Tymovskoe 56.82 360 *eP* **P** **22 37 53.4 +0.4**
TYV pmax pmax
comp=Z,200nm,4.1s
TYV pmax pmax
comp=Z,11nm,1.2s
HEH HeiHe 57.75 348 *eP* **P** **22 37 58.5 -1.1**
HEH pmax pmax
comp=Z,14nm,1.1s
SHL Shillong 58.56 305 P **P** **22 38 05.8 -0.2**
SHL Shillong 58.56 305 P **P** **22 38 05.8 -0.2**
SHL pmax pmax
comp=Z,98nm,1.6s
HIA Hailar 58.74 343 *i* P **P** **22 38 05.6 -1.0**
HIA pmax pmax
comp=Z,10.0nm,1.4s
GTA Gaotai 60.21 323 P **P** **22 38 18.0 +0.9**
GTA pP sP 22 38 29.0 +7.1
GTA pmax pmax
comp=Z,11nm,1.1s
PEA0B Petropavlovsk- 60.43 10 P **P** **22 38 17.7 -0.4**
PEA0B IAmb IAmb 22 38 19.6
comp=Z,32nm,1.1s
PEA0B Petropavlovsk- 60.43 10 *ceP* **P** **22 38 18.1 0.0**
PETK Petropavlovsk- 60.43 10 P **P** **22 38 17.7 -0.4**
PETK Petropavlovsk- 60.43 10 P **P** **22 38 17.7 -0.4**
PETK Petropavlovsk- 60.43 10 P **P** **22 38 17.1 -1.0**
comp=Z,24nm,0.9s,baz=191,slow=6.2,SNR=20
comp=Z,24nm,0.9s
LSA Lhasa 60.97 309 P **P** **22 38 21.1 -1.7**
LSA IAmb IAmb 22 38 29.3
comp=Z,24nm,1.4s
LSA Lhasa 60.97 309 P **P** **22 38 21.1 -1.7**
LSA pmax pmax
comp=Z,24nm,1.4s
ZEA Zeya 61.10 350 *eP* **P** **22 38 22.9 +0.2**
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,30nm,1.0s
GOMU GeErMu 61.54 317 P **P** **22 38 27.8 +1.3**
GOMU pP pP 22 38 32.0 +2.0
GOMU pmax pmax
comp=Z,6.0nm,1.2s
ULN Ulaanbaatar 62.29 334 P **P** **22 38 29.4 -1.6**
ULN Ulaanbaatar 62.29 334 *i* P **P** **22 38 31.6 +0.5**
ULN pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 62.56 333 P **P** **22 38 32.6 -0.3**
SONM Songino Array 62.56 333 P **P** **22 38 33.0 +0.2**
SONM Songino Array 62.56 333 P **P** **22 38 33.0 +0.2**
comp=Z,4.1nm,0.9s,baz=163,slow=6.9,SNR=14
comp=Z,4.1nm,0.9s
ZAK Zakamensk 65.82 334 *eP* **P** **22 38 53.7 -0.4**
ZAK pmax pmax
comp=Z,22nm,1.2s
MA2 Magadan 65.87 4 P **P** **22 38 53.1 -1.0**
MA2 IAmb IAmb 22 38 55.5
comp=Z,25nm,1.2s
MA2 Magadan 65.87 4 *ceP* **P** **22 38 53.3 -0.8**
MA2 pmax pmax
comp=Z,20nm,1.0s
MOY Mondy 67.75 333 *eP* **P** **22 39 07.0 +0.5**
MOY pmax pmax
comp=Z,35nm,2.5s
BOD Bodaibo 67.89 344 *eP* **P** **22 39 06.7 -0.3**
BOD pmax pmax
comp=Z,12nm,1.3s
YAK Yakutsk 68.76 353 *eP* **P** **22 39 10.9 -1.4**
YAK pmax pmax
comp=Z,12nm,1.4s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.4s
SEY Seymchan 69.32 5 *ceP* **P** **22 39 14.9 -0.9**
SEY pmax pmax
comp=Z,12nm,1.7s
WMQ Urumqi 70.18 321 *eP* **P** **22 39 21.8 +0.1**
WMQ pP sP 22 39 35.0 +8.0
WMQ pmax pmax
comp=Z,31nm,1.3s
WMQ pmax pmax
comp=Z,170nm,5.1s
VNDA Vanda 72.01 176 P **P** **22 39 33.0 +0.9**
comp=Z,4.8nm,1.1s,baz=324,slow=6.0,SNR=4.4
comp=Z,4.8nm,1.1s
DGZ Jazzator, Alta 73.35 326 *i* P **P** **22 39 40.1 -0.6**
DGZ pmax pmax
comp=Z,23nm,1.4s
ZSN Zaisan 73.69 323 *eP* **P** **22 39 42.3 -0.4**
comp=Z,14nm,1.2s,baz=323
ZSN Zaisan 73.69 323 *eP* **P** **22 39 42.2 -0.4**
ZSN pmax pmax
comp=Z,13nm,1.2s
MK31 Makanchi Array 74.95 322 P **P** **22 39 49.3 -0.7**
MK31 Makanchi Array 74.95 322 *ceP* **P** **22 39 50.1 +0.1**
MKAR Makanchi Array 74.95 322 P **P** **22 39 48.9 -1.1**
MKAR Makanchi Array 74.95 322 P **P** **22 39 50.4 +0.4**
comp=Z,10nm,0.9s,baz=109,slow=7.1,SNR=62
comp=Z,10nm,0.9s
MAKZ Makanchi 75.15 322 P **P** **22 39 51.0 -0.1**
MAKZ IAmb IAmb 22 39 52.7
comp=Z,28nm,1.2s
MAKZ Makanchi 75.15 322 P **P** **22 39 51.0 -0.1**
MAKZ pmax pmax
comp=Z,28nm,1.2s
SHLS Shalkode 75.24 317 *eP* **P** **22 39 49.9 -2.0**
comp=Z,14nm,1.4s,baz=318
SHLS Shalkode 75.24 317 *eP* **P** **22 39 49.8 -2.0**
SHLS pmax pmax
comp=Z,14nm,1.4s
UZB Uzynbulak 75.53 317 *eP* **P** **22 39 53.2 -0.4**
baz=317
UZB Uzynbulak 75.53 317 *eP* **P** **22 39 53.1 -0.4**
PRZ Przheval'sk 75.70 317 P **P** **22 39 53.4 -1.2**
PRZ IAmb IAmb 22 40 00.7
comp=Z,52nm,1.6s
PRZ Przheval'sk 75.70 317 P **P** **22 39 53.4 -1.2**
PRZ pmax pmax
comp=Z,52nm,1.6s
TARG Taragay, Kyrgy 75.82 316 P **P** **22 39 55.0 -0.6**
TARG Taragay, Kyrgy 75.82 316 P **P** **22 39 55.0 -0.6**
TARG pmax pmax
comp=Z,8.0nm,1.2s
KPKS Kokpek 75.88 318 *eP* **P** **22 39 55.2 -0.3**
comp=Z,13nm,1.6s,baz=318
KPKS Kokpek 75.88 318 *eP* **P** **22 39 55.2 -0.3**
KPKS pmax pmax
comp=Z,13nm,1.6s
BILL Bilibino 75.90 9 P **P** **22 39 53.7 -1.3**
BILL Bilibino 75.90 9 ⇑*eP* **P** **22 39 54.1 -0.9**
BILL pmax pmax
comp=Z,11nm,1.7s
SATY Saty 75.91 317 *eP* **P** **22 39 55.6 -0.2**
comp=Z,18nm,1.7s,baz=317
SATY Saty 75.91 317 *eP* **P** **22 39 55.5 -0.2**
SATY pmax pmax
comp=Z,18nm,1.7s
ZHN Zhinishke 75.93 317 *eP* **P** **22 39 55.7 -0.2**
baz=317
ZHN Zhinishke 75.93 317 *eP* **P** **22 39 55.6 -0.2**
KSH Kashi 76.34 313 P **P** **22 40 00.0 +1.8**
KSH pmax pmax
comp=Z,8.0nm,1.1s
KSH LR LR
comp=Z,330nm,16.8s
KSH LR LR
comp=Z,310nm,16.1s
KSH LR LR
comp=Z,540nm,16.1s
NIL Nilore 76.57 307 P **P** **22 39 58.6 -0.9**
NIL Nilore 76.57 307 P **P** **22 39 58.6 -0.9**
NIL pmax pmax
comp=Z,69nm,1.5s
TDK Taldyqorghan 76.66 319 *eP* **P** **22 39 59.8 -0.1**
comp=Z,15nm,1.2s,baz=319
TDK Taldyqorghan 76.66 319 *eP* **P** **22 39 59.7 -0.1**
TDK pmax pmax
comp=Z,15nm,1.2s
MDOK Medeo 76.87 317 *eP* **P** **22 40 00.8 -0.4**
baz=317
MDOK Medeo 76.87 317 *eP* **P** **22 40 00.8 -0.4**
TNSS Tian-Shan 76.89 317 *eP* **P** **22 40 01.2 -0.4**
baz=317
TNSS Tian-Shan 76.89 317 *eP* **P** **22 40 01.2 -0.4**
ZAA0 Zalesovo Array 76.92 329 P **P** **22 40 00.5 -0.6**
ZALV Zalesovo Beam 76.92 329 P **P** **22 39 59.7 -1.3**
ZALV Zalesovo Beam 76.92 329 P **P** **22 40 00.2 -0.8**
comp=Z,7.3nm,0.9s,baz=106,slow=5.3,SNR=22
comp=Z,7.3nm,0.9s
KUU Kurty 77.62 317 *eP* **P** **22 40 05.1 -0.1**
comp=Z,22nm,1.3s,baz=317
KUU Kurty 77.62 317 *eP* **P** **22 40 05.1 -0.1**
KUU pmax pmax
comp=Z,22nm,1.3s
TIXI Tiksi 78.21 356 P **P** **22 40 07.1 -0.7**
TIXI Tiksi 78.21 356 *ceP* **P** **22 40 04.8 -3.1**
TIXI pmax pmax
comp=Z,8.0nm,1.7s
AAK Ala-Archa 78.44 316 P **P** **22 40 09.3 -0.7**
AAK Ala-Archa 78.44 316 *ceP* **P** **22 40 10.4 +0.4**
AAK pmax pmax
comp=Z,13nm,1.7s
CHGN Chignik 78.62 29 P **P** **22 40 10.0 -0.4**
baz=240
M13K Dail Lake 78.62 24 P **P** **22 40 10.4 +0.1**
baz=235
KURK Kurchatov 78.83 324 P **P** **22 40 11.6 -0.1**
KURK IAmb IAmb 22 40 12.9
comp=Z,32nm,1.3s
KURK Kurchatov 78.83 324 *ceP* **P** **22 40 11.4 -0.3**
KURK pmax pmax
comp=Z,36nm,1.7s
KURBB Kurchatov Arra 78.84 324 P **P** **22 40 11.8 0.0**
comp=Z,8.0nm,1.0s,baz=113,slow=5.0,SNR=36
comp=Z,8.0nm,1.0s
O14K Tigyukauivet M 78.85 26 P **P** **22 40 11.8 +0.2**
baz=237
N14K Kuskokwak Cree 79.03 25 P **P** **22 40 12.7 +0.1**
baz=237
ARSB Arslanbob 79.09 314 P **P** **22 40 13.2 -0.3**
ARSB Arslanbob 79.09 314 P **P** **22 40 13.2 -0.3**
ARSB pmax pmax
comp=Z,9.0nm,1.5s
M14K Bethel 79.38 24 P **P** **22 40 14.9 +0.5**
M14K IAmb IAmb 22 40 16.1
comp=Z,48nm,1.1s
M14K Bethel 79.38 24 P **P** **22 40 15.0 +0.5**
baz=236
L14K Kuka Creek 79.42 24 P **P** **22 40 15.1 +0.4**
L14K IAmb IAmb 22 40 16.3
comp=Z,32nm,0.9s
L14K Kuka Creek 79.42 24 P **P** **22 40 15.4 +0.7**
baz=236
O15K Ungalikthiuk R 79.43 26 P **P** **22 40 15.5 +0.7**
baz=238
BTLS Baital 79.56 318 *eP* **P** **22 40 15.3 -0.5**
comp=Z,22nm,1.9s,baz=318
BTLS Baital 79.56 318 *eP* **P** **22 40 15.3 -0.5**
BTLS pmax pmax
comp=Z,22nm,1.9s
N15K Kwethluk River 79.84 25 P **P** **22 40 17.8 +0.7**
baz=238
M15K Kasigluk River 79.87 25 P **P** **22 40 17.7 +0.6**
baz=238
J14K Nanvaranak Lak 79.89 22 IAmb IAmb 22 40 19.4
comp=Z,48nm,1.6s
J14K Nanvaranak Lak 79.89 22 P **P** **22 40 18.0 +0.8**
baz=234
L15K Ungalak Mounta 80.08 24 P **P** **22 40 18.5 +0.2**
baz=237
TNA Tin City 80.10 19 P **P** **22 40 18.6 +0.3**
baz=230,SNR=6.2
P16K Nushagak River 80.17 27 P **P** **22 40 18.9 +0.1**
baz=240
BTK Batken 80.28 312 P **P** **22 40 19.4 -0.6**
BTK Batken 80.28 312 P **P** **22 40 19.4 -0.6**
BTK pmax pmax
comp=Z,29nm,1.9s
ANM Nome 80.32 20 IAmb IAmb 22 40 21.2
comp=Z,28nm,1.3s
ANM Nome 80.32 20 P **P** **22 40 20.2 +0.7**
baz=233,SNR=8.8
K15K Wolf Creek Mou 80.41 23 P **P** **22 40 20.8 +0.7**
baz=236
O16K Kokwok River B 80.41 26 IAmb IAmb 22 40 21.9
comp=Z,61nm,1.4s
O16K Kokwok River B 80.41 26 P **P** **22 40 20.4 +0.3**
baz=240
N16K Nishlik Lake 80.56 25 P **P** **22 40 21.6 +0.6**
baz=239
F14K Arctic Creek 80.56 19 P **P** **22 40 21.3 +0.5**
baz=232
DZA Taraz 80.73 315 *eP* **P** **22 40 22.2 -0.1**
baz=315
DZA Taraz 80.73 315 *eP* **P** **22 40 22.2 -0.1**
M16K Timber Creek 80.76 25 IAmb IAmb 22 40 23.7
comp=Z,39nm,0.9s
M16K Timber Creek 80.76 25 P **P** **22 40 22.7 +0.7**
baz=239
Q17K Contact Creek 80.77 28 P **P** **22 40 22.0 -0.2**
baz=242
L16K Owhat River 80.91 24 P **P** **22 40 23.0 +0.2**
baz=238
O17K Koliganek Bris 80.94 26 P **P** **22 40 23.5 +0.5**
baz=241
G15K Niukluk 81.04 20 P **P** **22 40 23.6 +0.2**
baz=234,SNR=9.3
SIMJ Simiganj 81.25 311 P **P** **22 40 25.3 0.0**
F15K North Star Dit 81.26 19 IAmb IAmb 22 40 26.1
comp=Z,23nm,1.1s
F15K North Star Dit 81.26 19 P **P** **22 40 25.2 +0.7**
baz=233
N17K Nushagak Hills 81.27 26 IAmb IAmb 22 40 26.5
comp=Z,21nm,0.9s
N17K Nushagak Hills 81.27 26 P **P** **22 40 25.3 +0.6**
baz=241
J16K Anvik River 81.31 22 IAmb IAmb 22 40 26.3
comp=Z,22nm,0.9s
J16K Anvik River 81.31 22 P **P** **22 40 25.4 +0.6**
baz=237
IUG luznay 81.44 314 *eP* **P** **22 40 25.5 -0.7**
comp=Z,28nm,1.9s,baz=314
IUG luznay 81.44 314 *eP* **P** **22 40 25.5 -0.7**
IUG pmax pmax
comp=Z,28nm,1.9s
H16K Elim 81.46 21 P **P** **22 40 25.9 +0.3**
baz=236,SNR=13
OHAK Old Harbor 81.55 30 P **P** **22 40 26.7 +0.5**
baz=245
M17K Holitna River 81.59 25 IAmb IAmb 22 40 28.5
comp=Z,28nm,0.9s
M17K Holitna River 81.59 25 P **P** **22 40 27.3 +0.9**
baz=240
I17K Unalakleet 81.60 22 IAmb IAmb 22 40 28.4
comp=Z,30nm,1.1s
I17K Unalakleet 81.60 22 P **P** **22 40 27.2 +0.9**
baz=237,SNR=7.9
L17K Donlin 81.61 24 P **P** **22 40 27.2 +0.7**
baz=240
CHM Chimkent 81.79 314 *eP* **P** **22 40 27.7 -0.2**
baz=314
CHM Chimkent 81.79 314 *eP* **P** **22 40 27.7 -0.2**
BRLS Borolday 81.83 315 *eP* **P** **22 40 27.7 -0.4**
baz=315
BRLS Borolday 81.83 315 *eP* **P** **22 40 27.7 -0.4**
G16K Koyuk River 81.85 20 IAmb IAmb 22 40 29.1
comp=Z,29nm,1.1s
G16K Koyuk River 81.85 20 P **P** **22 40 28.5 +0.8**
baz=235
K17K Iditarod 81.90 24 IAmb IAmb 22 40 29.8
comp=Z,38nm,1.0s
K17K Iditarod 81.90 24 P **P** **22 40 28.6 +0.6**
baz=239
N18K Kilae Creek 81.90 26 P **P** **22 40 28.8 +0.7**
baz=242
BRZS Berezniki 82.09 322 *eP* **P** **22 40 28.8 -0.6**
comp=Z,11nm,1.5s,baz=322
BRZS Berezniki 82.09 322 *eP* **P** **22 40 28.7 -0.6**
BRZS pmax pmax
comp=Z,11nm,1.5s
Q19K Cape Douglas, 82.11 28 P **P** **22 40 30.0 +0.7**
baz=244
KDAK Kodiak Island 82.13 29 P **P** **22 40 29.8 +0.5**
baz=245
SVW2 Sparrevohn 82.23 26 IAmb IAmb 22 40 31.4
comp=Z,25nm,1.0s
L18K Granite Mounta 82.30 24 IAmb IAmb 22 40 31.9
comp=Z,28nm,1.1s
L18K Granite Mounta 82.30 24 P **P** **22 40 30.7 +0.6**
baz=241,SNR=5.6
M18K Stony River 82.31 25 P **P** **22 40 30.7 +0.5**
baz=242
O19K Port Alsworth 82.37 27 P **P** **22 40 30.7 +0.3**
baz=243
H17K Granite Mounta 82.45 21 IAmb IAmb 22 40 32.5
comp=Z,23nm,0.9s
H17K Granite Mounta 82.45 21 P **P** **22 40 31.5 +0.6**
baz=238
G17K Kiwalik Mounta 82.50 21 P **P** **22 40 31.7 +0.6**
baz=237
N19K Bonanza Creek 82.58 26 IAmb IAmb 22 40 32.9
comp=Z,32nm,1.1s
N19K Bonanza Creek 82.58 26 P **P** **22 40 31.7 0.0**
baz=243
C16K Lisburne Hills 82.61 17 P **P** **22 40 31.6 +0.1**
baz=232
P19K Oil Pt 82.62 27 P **P** **22 40 31.6 -0.3**
baz=244
F17K Baldwin Pennin 82.81 20 P **P** **22 40 33.1 +0.4**
baz=236
J18K Innoko River 82.90 23 P **P** **22 40 33.5 +0.3**
baz=241
TTA Tatalina 82.92 24 IAmb IAmb 22 40 34.8
comp=Z,40nm,1.5s
TTA Tatalina 82.92 24 P **P** **22 40 33.9 +0.5**
baz=242,SNR=6.0
D17K Noatak River 82.94 18 P **P** **22 40 33.9 +0.6**
baz=234
E17K Hotham Inlet 82.99 19 P **P** **22 40 34.2 +0.6**
baz=236
L19K White Mountain 83.04 25 P **P** **22 40 34.3 +0.3**
baz=243
O20K Slope Mountain 83.08 27 P **P** **22 40 34.4 +0.1**
baz=245
M19K Big River Lodg 83.11 25 IAmb IAmb 22 40 40.4
comp=Z,52nm,1.8s
M19K Big River Lodg 83.11 25 P **P** **22 40 34.6 +0.2**
baz=243
H18K Honhosa River 83.13 21 P **P** **22 40 34.6 +0.2**
baz=239
HOM Homer 83.36 28 P **P** **22 40 36.0 +0.4**
baz=246
C17K DeLong Mountai 83.37 18 P **P** **22 40 36.2 +0.6**
baz=234
G18K Tagagawik 83.41 21 IAmb IAmb 22 40 36.8
comp=Z,16nm,0.9s
G18K Tagagawik 83.41 21 P **P** **22 40 35.9 +0.1**
baz=239
F18K Selawik 83.44 20 P **P** **22 40 36.1 +0.2**
baz=238
GCSA Galena City Sc 83.47 22 P **P** **22 40 36.4 +0.3**
baz=240,SNR=5.9
E18K Tukpahlearik C 83.57 19 IAmb IAmb 22 40 38.0
comp=Z,19nm,1.0s
E18K Tukpahlearik C 83.57 19 P **P** **22 40 37.1 +0.5**
baz=237
J19K Poorman 83.58 23 IAmb IAmb 22 40 38.2
comp=Z,33nm,1.2s
J19K Poorman 83.58 23 P **P** **22 40 37.1 +0.4**
baz=242
L20K Farewell, AK 83.58 25 P **P** **22 40 37.0 +0.2**
baz=244
M20K Styx River 83.64 25 P **P** **22 40 37.2 0.0**
baz=244
N20K Mount Spurr 83.74 26 P **P** **22 40 37.5 -0.2**
baz=245
QSPA South Pole Qui 83.78 180 P **P** **22 40 37.8 -0.2**
QSPA IAmb IAmb 22 40 44.1
comp=Z,32nm,1.6s
QSPA South Pole Qui 83.78 180 P **P** **22 40 37.3 -0.7**
comp=Z,3.2nm,0.8s,baz=317,slow=1.3,SNR=6.8
comp=Z,3.2nm,0.8s
BRSE Bradley Lake S 83.81 28 P **P** **22 40 38.2 +0.2**
baz=247
K20K Telida 83.90 24 IAmb IAmb 22 40 39.9

	comp=Z,30nm,1.1s								
K20K	**Telida**	83.90	24	P	P	22 40 38.8	+0.4		
	baz=243,SNR=12								
H19K	**Roundabout Mou**	84.01	21	P	P	22 40 39.2	+0.4		
	baz=241								
C18K	**Utukok River**	84.07	18	IAmb	IAmb	22 40 40.9			
	comp=Z,19nm,1.1s								
C18K	**Utukok River**	84.07	18	P	P	22 40 39.1	-0.1		
	baz=236								
G19K	**Purcell Mounta**	84.09	21	IAmb	IAmb	22 40 40.7			
	comp=Z,30nm,1.1s								
G19K	**Purcell Mounta**	84.09	21	P	P	22 40 39.5	+0.2		
	baz=240								
NRIK	**Noril'sk**	84.17	343	*ce*P	P	22 40 39.1	-0.5		
NRIK				pmax	pmax				
	comp=Z,36nm,1.0s								
NRIK	**Noril'sk**	84.17	343	P	P	22 40 38.8	-0.8		
	comp=Z,28nm,1.0s,baz=119,slow=5.1,SNR=34								
	comp=Z,28nm,1.0s								
F19K	**Shaleruckik Mo**	84.20	20	IAmb	IAmb	22 40 40.8			
	comp=Z,15nm,1.2s								
F19K	**Shaleruckik Mo**	84.20	20	P	P	22 40 39.7	-0.1		
	baz=240								
J20K	**Nowinta River**	84.24	23	IAmb	IAmb	22 40 41.7			
	comp=Z,26nm,1.0s								
J20K	**Nowinta River**	84.24	23	P	P	22 40 40.6	+0.5		
	baz=243								
B18K	**Kokolik River**	84.29	17	P	P	22 40 40.4	+0.1		
	baz=235								
SKT	**Skwentna**	84.36	26	IAmb	IAmb	22 40 40.0			
	comp=Z,18nm,1.1s								
SKT	**Skwentna**	84.36	26	P	P	22 40 40.1	-0.7		
	baz=246								
I20K	**Naaghedeneel**	84.40	23	P	P	22 40 41.2	+0.4		
	baz=243								
BVAR	**Borovoye Array**	84.42	325	P	P	22 40 41.1	-0.1		
	comp=Z,39nm,0.9s,baz=111,slow=6.5,SNR=156								
	comp=Z,39nm,0.9s								
PPLA	**Purkeypile**	84.47	25	P	P	22 40 41.0	-0.5		
	baz=245								
BRVK	**Borovoye**	84.49	325	P	P	22 40 41.8	+0.2		
BRVK	**Borovoye**	84.49	325	*ce*P	P	22 40 41.6	0.0		
BRVK				pmax	pmax				
	comp=Z,73nm,1.7s								
SUA	**Susitna One**	84.49	26	IAmb	IAmb	22 40 40.8			
	comp=Z,18nm,1.0s								
SEW	**Seward**	84.55	28	P	P	22 40 41.5	-0.2		
	baz=248								
H20K	**Anotleneega Mo**	84.57	22	P	P	22 40 42.0	+0.2		
	baz=242								
E19K	**Redstone River**	84.70	20	IAmb	IAmb	22 40 43.7			
	comp=Z,26nm,0.9s								
E19K	**Redstone River**	84.70	20	P	P	22 40 42.6	+0.3		
	baz=240								
CAST	**Castle Rocks**	84.73	24	IAmb	IAmb	22 40 43.0			
	comp=Z,18nm,1.0s								
CAST	**Castle Rocks**	84.73	24	P	P	22 40 42.3	-0.3		
	baz=245,SNR=9.9								
RC01	**Rabbit Creek A**	84.80	27	P	P	22 40 42.2	-0.8		
	baz=247,SNR=8.9								
C19K	**Lookout Ridge**	84.81	18	P	P	22 40 43.2	+0.3		
	baz=238								
CHUM	**Lake Minchumin**	84.84	24	P	P	22 40 43.2	+0.1		
	baz=245,SNR=19								
M22K	**Willow**	84.88	26	P	P	22 40 43.1	-0.3		
	baz=247								
D19K	**Kuna River**	84.94	19	IAmb	IAmb	22 40 44.7			
	comp=Z,27nm,1.1s								
D19K	**Kuna River**	84.94	19	P	P	22 40 43.6	0.0		
	baz=239								
F20K	**Avaraart Lake**	85.01	20	IAmb	IAmb	22 40 45.4			
	comp=Z,20nm,1.1s								
F20K	**Avaraart Lake**	85.01	20	P	P	22 40 44.0	+0.1		
	baz=241,SNR=14								
CUT	**Chulitna**	85.08	25	P	P	22 40 43.4	-0.9		
	baz=247,SNR=5.3								
PMR	**Palmer**	85.26	26	P	P	22 40 44.6	-0.6		
	baz=248,SNR=9.1								
H21K	**Melozitna Rive**	85.42	22	P	P	22 40 46.0	0.0		
	baz=244								
E20K	**Nigu River**	85.44	19	P	P	22 40 46.2	0.0		
	baz=241								
BPAW	**Bear Paw Mtn.**	85.46	24	P	P	22 40 46.2	-0.1		
	baz=246								
TRF	**Thorofare Moun**	85.48	25	IAmb	IAmb	22 41 06.7			
	comp=Z,34nm,1.5s								
TRF	**Thorofare Moun**	85.48	25	P	P	22 40 46.1	-0.5		
	baz=247								
KNK	**Knik Glacier**	85.49	27	P	P	22 40 46.5	+0.1		
	baz=248,SNR=7.3								
I21K	**Tanana**	85.52	23	IAmb	IAmb	22 40 48.4			
	comp=Z,18nm,1.0s								
I21K	**Tanana**	85.52	23	P	P	22 40 46.7	+0.2		
	baz=245								
D20K	**Etivluk River**	85.53	19	P	P	22 40 46.7	+0.2		
	baz=240								
SML	**Sawmill**	85.69	26	P	P	22 40 47.4	-0.1		
	baz=249,SNR=6.4								
Q23K	**Middleton Isla**	85.77	29	P	P	22 40 47.5	-0.3		
	baz=250								
F21K	**Alatna River**	85.86	21	P	P	22 40 48.4	+0.2		
	baz=244								
GLI	**Glacier Island**	85.92	27	P	P	22 40 48.3	-0.2		
	baz=250								
MLY	**Manley**	85.94	23	IAmb	IAmb	22 40 49.4			
	comp=Z,20nm,0.9s								
MLY	**Manley**	85.94	23	P	P	22 40 48.3	-0.3		
	baz=246,SNR=19								
M23K	**Glacier View**	85.95	27	P	P	22 40 48.2	-0.5		
	baz=249								
WAT1	**Susitna Watana**	85.97	25	P	P	22 40 48.6	-0.3		
	baz=248								
H22K	**Ishtalitna Cre**	86.05	22	P	P	22 40 49.3	+0.2		
	baz=246								
SCM	**Sheep Creek Mo**	86.14	27	P	P	22 40 49.4	-0.4		
	baz=249								
MCK	**McKinley**	86.15	24	P	P	22 40 49.0	-0.7		
	baz=248,SNR=17								
WAT6	**Susitna Watana**	86.23	26	P	P	22 40 49.6	-0.7		
	baz=249,SNR=7.3								
E21K	**Killik River**	86.25	19	IAmb	IAmb	22 40 52.6			
	comp=Z,18nm,1.1s								
E21K	**Killik River**	86.25	19	P	P	22 40 50.3	+0.2		
	baz=243								
C21K	**Knifeblade Rid**	86.32	19	P	P	22 40 50.8	+0.4		
	baz=242								
NEA2	**Nenana**	86.42	24	IAmb	IAmb	22 40 50.4			
	comp=Z,14nm,1.1s								
NEA2	**Nenana**	86.42	24	P	P	22 40 51.0	0.0		
	baz=248								
EYAK	**Cordova Ski Ar**	86.43	28	P	P	22 40 51.0	-0.1		
	baz=251								
G22K	**Bettles**	86.43	21	P	P	22 40 51.1	+0.1		
	baz=245								
I23K	**Minto, Yukon-K**	86.52	23	IAmb	IAmb	22 41 41.0			
	comp=Z,45nm,1.8s								
I23K	**Minto, Yukon-K**	86.52	23	P	P	22 40 51.3	-0.1		
	baz=247								
DHY	**Denali Highway**	86.56	25	P	P	22 40 51.5	-0.4		
	baz=249,SNR=13								
KLU	**Klutina**	86.66	27	P	P	22 40 52.1	-0.3		
	baz=251								
M24K	**Tolsona, Glenn**	86.75	26	P	P	22 40 52.7	0.0		
	baz=250								
A21K	**Barrow**	86.82	16	P	P	22 40 52.9	+0.1		
	baz=240								
KAIM	**Kayak Island**	86.86	29	P	P	22 40 53.2	0.0		
	baz=252								
D22K	**Ayikyak River**	86.87	19	P	P	22 40 53.7	+0.6		
	baz=244								
G23K	**Bananza Creek**	86.88	22	IAmb	IAmb	22 40 54.5			
	comp=Z,11nm,0.9s								
G23K	**Bananza Creek**	86.88	22	P	P	22 40 53.5	+0.3		
	baz=247,SNR=8.7								
MDM	**Murphy Dome**	86.89	23	IAmb	IAmb	22 40 53.0			
	comp=Z,32nm,1.8s								
COLA	**College**	87.01	24	P	P	22 40 53.9	+0.1		
	baz=249								
COLD	**Coldfoot**	87.02	21	P	P	22 40 54.0	+0.2		
	baz=246,SNR=8.3								
BMRM	**Bremner River**	87.09	28	P	P	22 40 54.2	-0.3		
	baz=252								
HDA	**Harding Lake**	87.21	24	IAmb	IAmb	22 40 56.3			
	comp=Z,13nm,0.8s								
HDA	**Harding Lake**	87.21	24	P	P	22 40 54.7	-0.2		
	baz=250								
POKR	**Poker Plat Res**	87.27	23	P	P	22 40 54.9	-0.2		
	baz=249								
N25K	**Chitina, Valde**	87.30	27	P	P	22 40 55.4	0.0		
	baz=252								
HARP	**HAARP**	87.30	26	P	P	22 40 55.3	0.0		
	baz=251								
PAX	**Paxson**	87.34	26	P	P	22 40 55.3	-0.3		
	baz=251								
H24K	**Noodor Dome**	87.35	23	IAmb	IAmb	22 40 56.5			
	comp=Z,11nm,0.9s								
H24K	**Noodor Dome**	87.35	23	P	P	22 40 55.5	-0.1		
	baz=249								
IL31		87.36	24	IAmb	IAmb	22 40 54.8			
	comp=Z,19nm,0.8s								
ILAR	**Eielson Array**	87.36	24	P	P	22 40 53.7	-1.9		
	comp=Z,14nm,0.8s,baz=257,slow=5.0,SNR=104								
	comp=Z,14nm,0.8s								
K24K	**Donnelly Dome**	87.49	25	P	P	22 40 56.4	+0.1		
	baz=251								
E23K	**Chandalar**	87.56	20	P	P	22 40 57.2	+0.6		
	baz=247								
D23K	**Nanushuk River**	87.56	19	P	P	22 40 57.2	+0.7		
	baz=246								
GLB	**Gilahina Butte**	87.61	27	IAmb	IAmb	22 40 57.7			
	comp=Z,21nm,0.9s								
CRQE	**Cirque**	87.73	28	P	P	22 40 57.7	+0.1		
	baz=253,SNR=5.1								
G24K	**Hadweenzic Riv**	87.82	22	P	P	22 40 58.0	+0.2		
	baz=249								
J25K	**Salcha River,**	87.92	24	P	P	22 40 57.7	-0.6		
	baz=251								
C23K	**Itkillik River**	87.94	19	P	P	22 40 58.9	+0.6		
	baz=246								
MCARA	**McCarthy VSAT**	87.95	28	P	P	22 40 58.8	+0.3		
	baz=253								
F24K	**Squaw Lake**	87.96	21	P	P	22 40 59.3	+0.9		
	baz=249								
MESA	**MESA**	88.12	29	P	P	22 40 59.6	0.0		
	baz=254								
PRP	**Porcupine Dome**	88.16	23	P	P	22 40 59.9	+0.4		
	baz=251								
D24K	**Happy Valley**	88.25	19	P	P	22 41 00.6	+0.9		
	baz=248								
L26K	**Log Cabin Wild**	88.28	26	IAmb	IAmb	22 41 01.0			
	comp=Z,21nm,1.1s								
L26K	**Log Cabin Wild**	88.28	26	P	P	22 41 00.4	+0.3		
	baz=253,SNR=6.0								
SCRK	**Sand Creek**	88.30	25	P	P	22 41 00.0	-0.2		
	baz=252,SNR=5.9								
G25K	**Bearman Lake**	88.35	22	P	P	22 41 00.7	+0.5		
	baz=250								
C24K	**Franklin Bluff**	88.51	19	P	P	22 41 01.4	+0.5		
	baz=248								
CTG	**Chitna Glacier**	88.62	28	P	P	22 41 01.9	+0.1		
	baz=255,SNR=7.1								
J26L	**Joseph Creek**	88.63	25	P	P	22 41 02.0	+0.2		
	baz=253								
M27K	**Edge Creek, AK**	88.75	27	P	P	22 41 02.6	+0.2		
	baz=254,SNR=7.4								
F25K	**Christian Rive**	88.80	21	P	P	22 41 03.0	+0.5		
	baz=251,SNR=14								
L27K	**Beaver Creek,**	88.96	26	IAmb	IAmb	22 41 04.6			
	comp=Z,21nm,1.1s								
L27K	**Beaver Creek,**	88.96	26	P	P	22 41 03.6	+0.4		
	baz=254								
E25K	**Arctic Village**	89.00	21	IAmb	IAmb	22 41 05.2			
	comp=Z,23nm,1.1s								
E25K	**Arctic Village**	89.00	21	P	P	22 41 04.0	+0.7		
	baz=251,SNR=12								
I26K	**Coal Creek Min**	89.03	24	IAmb	IAmb	22 41 04.0			
	comp=Z,14nm,1.1s								
I26K	**Coal Creek Min**	89.03	24	P	P	22 41 04.0	+0.5		
	baz=253								
K27K	**Chicken**	89.12	25	P	P	22 41 04.7	+0.8		
	baz=254								
D25K	**Kavik River**	89.13	20	P	P	22 41 04.1	+0.2		
	baz=250								
BVCY	**Beaver Creek**	89.22	27	P	P	22 41 05.0	+0.6		
	baz=255,SNR=6.6								
PNL	**Peninsula**	89.23	30	P	P	22 41 05.2	+0.6		
	baz=256								
YUK3	**Moose Creek**	89.24	28	P	P	22 41 05.3	+0.5		
	baz=256,SNR=6.8								
G26K	**Porcupine Rive**	89.28	22	P	P	22 41 05.5	+0.9		
	baz=252								
F26K	**Sheenjek River**	89.37	21	P	P	22 41 05.7	+0.6		
	baz=252,SNR=30								
YUK8	**Steele Glacier**	89.44	28	P	P	22 41 06.2	+0.3		
	baz=256								
EGAK	**Eagle**	89.70	25	IAmb	IAmb	22 41 07.6			
	comp=Z,23nm,1.0s								
EGAK	**Eagle**	89.70	25	P	P	22 41 07.0	+0.4		
	baz=255,SNR=14								
I27K	**Kandik River**	89.73	24	P	P	22 41 07.1	+0.3		
	baz=254								
O29M	**Mount Kennedy**	89.78	29	P	P	22 41 07.6	+0.4		
	baz=257								
H27K	**Steamboat Moun**	89.94	23	P	P	22 41 08.3	+0.5		
	baz=255								
YUK4	**Talbot Arm**	89.98	28	P	P	22 41 09.0	+0.7		
	baz=257,SNR=6.3								
YUK6	**Ouposit Mounta**	90.02	29	P	P	22 41 08.7	+0.1		
	baz=257								
P29M	**Windy Craggy**	90.05	30	P	P	22 41 09.0	+0.6		
	baz=258								
DAWY	**Dawson**	90.27	25	IAmb	IAmb	22 41 10.7			
	comp=Z,25nm,1.1s								
DAWY	**Dawson**	90.27	25	P	P	22 41 09.9	+0.5		
	baz=256,SNR=11								
M29M	**Somme Creek**	90.31	27	IAmb	IAmb	22 41 11.0			
	comp=Z,14nm,0.9s								
M29M	**Somme Creek**	90.31	27	P	P	22 41 10.2	+0.5		
	baz=257								
I28M	**Miner Creek**	90.37	24	IAmb	IAmb	22 41 11.0			
	comp=Z,16nm,1.1s								
I28M	**Miner Creek**	90.37	24	P	P	22 41 10.5	+0.6		
	baz=256								
HYT	**Haines Junctio**	90.41	29	P	P	22 41 10.7	+0.5		
	baz=258								
S31K	**Pelican**	90.48	32	P	P	22 41 11.2	+0.8		
	baz=259								
P30M	**Million Dollar**	90.53	30	P	P	22 41 11.1	+0.4		
	baz=259								
L29M	**L29M**	90.60	27	P	P	22 41 11.2	+0.3		
	baz=258								
PLBC	**Pleasant Camp**	90.70	30	P	P	22 41 12.0	+0.6		
	baz=259								
N30M	**Aishikik Lake**	90.73	28	P	P	22 41 12.0	+0.3		
	baz=258								
SIT	**Sitka**	90.80	33	P	P	22 41 12.0	+0.1		
	baz=260								
J29N	**Klondike Camp**	90.86	25	IAmb	IAmb	22 41 13.9			
	comp=Z,18nm,1.1s								
J29N	**Klondike Camp**	90.86	25	P	P	22 41 12.8	+0.7		
	baz=258								
F28M	**Old Crow**	90.92	22	P	P	22 41 13.0	+0.7		
	baz=256								
K29M	**Barlow Dome**	91.03	26	IAmb	IAmb	22 41 14.3			
	comp=Z,23nm,1.1s								
K29M	**Barlow Dome**	91.03	26	P	P	22 41 13.5	+0.5		
	baz=258								
O30N	**Mendenhall**	91.08	29	P	P	22 41 13.6	+0.4		
	baz=259								
M30M	**Minto, Yukon**	91.09	27	P	P	22 41 13.4	+0.1		
	baz=259								
H29M	**Whitestone**	91.18	23	P	P	22 41 13.8	+0.3		
	baz=257								
SKAG	**Skagway**	91.22	30	P	P	22 41 14.2	+0.4		
	baz=260								
E28M	**Babbage River**	91.28	21	IAmb	IAmb	22 41 18.7			
	comp=Z,18nm,1.9s								
E28M	**Babbage River**	91.28	21	P	P	22 41 14.9	+1.0		
	baz=256								
R32K	**Eaglecrest**	91.43	32	P	P	22 41 15.3	+0.5		
	baz=261								
J30M	**Hart River**	91.68	25	IAmb	IAmb	22 41 17.3			
	comp=Z,16nm,1.1s								
J30M	**Hart River**	91.68	25	P	P	22 41 16.4	+0.4		
	baz=259								
I30M	**Mount Dempster**	91.78	25	IAmb	IAmb	22 41 17.3			
	comp=Z,14nm,1.1s								
I30M	**Mount Dempster**	91.78	25	P	P	22 41 16.7	+0.2		
	baz=259								
U33K	**Whale Pass**	91.85	34	P	P	22 41 17.1	+0.3		
	baz=262								
ARU	**Arti**	91.86	326	P	P	22 41 14.8	-2.0		
ARU				IAmb	IAmb	22 41 16.4			
	comp=Z,12nm,1.0s								
ARU	**Arti**	91.86	326	*d* iP	P	22 41 15.0	-1.8		
ARU						22 44 53.0			
ARU				S	SKSac	22 51 44.4	-5.4		
ARU				SS	SS	22 58 18.6	-7.6		
ARU				pmax	pmax				
	comp=Z,16nm,1.1s								
EPYK	**Eagle Plains**	91.86	23	P	P	22 41 16.9	+0.2		
	baz=259,SNR=6.8								
P32M	**Atlin**	92.05	30	P	P	22 41 17.9	+0.2		
	baz=261								
M31M	**Drury Creek, Y**	92.13	28	P	P	22 41 18.3	+0.2		
	baz=261								
G30M	**tAoh Zraii Nji**	92.17	23	IAmb	IAmb	22 41 18.6			
	comp=Z,13nm,1.1s								
G30M	**tAoh Zraii Nji**	92.17	23	P	P	22 41 18.6	+0.5		
	baz=259								
WRAK	**Wrangell Islan**	92.32	34	P	P	22 41 19.3	+0.4		
	baz=262								
F30M	**Barrier River**	92.45	22	P	P	22 41 19.9	+0.6		
	baz=260								
P33M	**Teslin, Yukon**	92.59	30	P	P	22 41 20.6	+0.4		
	baz=262								
N32M	**Quiet Lake**	92.59	29	P	P	22 41 20.5	+0.3		
	baz=262								
V35K	**Ketchikan**	92.59	35	P	P	22 41 20.6	+0.3		
	baz=263								
FARO	**Faro, Yukon**	92.61	28	P	P	22 41 20.5	+0.2		
	baz=262								
ELIB	**Princess Elisa**	92.88	196	*d*P	P	22 41 23.1	+1.6		
	comp=Z,3.1nm,1.1s								
G31M	**Satah River**	92.92	23	IAmb	IAmb	22 41 21.9			
	comp=Z,9.7nm,0.9s								
G31M	**Satah River**	92.92	23	P	P	22 41 21.9	+0.4		
	baz=261								
S34M	**Telegraph Cree**	93.16	32	P	P	22 41 23.0	+0.1		
	baz=264								
F31M	**Tsiigehtchic**	93.20	23	IAmb	IAmb	22 41 23.0			
	comp=Z,10.0nm,1.2s								
F31M	**Tsiigehtchic**	93.20	23	P	P	22 41 22.8	+0.1		
	baz=262								
INK	**Inuvik**	93.40	22	P	P	22 41 23.7	0.0		
	baz=262								
INK	**Inuvik**	93.40	22	P	P	22 41 22.8	-0.9		
	comp=Z,2.0nm,1.0s,baz=161,slow=5.8,SNR=3.7								
	comp=Z,2.0nm,1.0s								
R33M	**Jennings River**	93.42	31	P	P	22 41 23.7	-0.5		
	baz=264								
MMPY	**Sheldon Lake,**	93.63	28	P	P	22 41 24.7	-0.3		
	baz=264								
DLBC	**Dease Lake**	93.80	32	P	P	22 41 25.9	0.0		
	baz=264								
DLBC	**Dease Lake**	93.80	32	P	P	22 41 25.1	-0.8		
	comp=Z,3.8nm,0.9s,baz=6.5,slow=6.3,SNR=3.3								
	comp=Z,3.8nm,0.9s								
WTLY	**Watson Lake, Y**	94.58	30	P	P	22 41 30.0	+0.6		
	baz=266								
C36M	**Paulatuk**	96.89	21	P	P	22 41 40.1	+0.5		
	baz=271								
KOTAN	**Kotaneelee Air**	96.95	30	P	P	22 41 40.4	+0.2		
	baz=270								
YBH	**Yreka Blue Hor**	97.51	49		pP	22 41 48.8	+2.0		
BELG	**Belogornoye**	97.95	322	*i* P	P	22 41 42.7	-2.1		
BELG				pmax	pmax				
	comp=Z,4.0nm,1.3s								
NVAR	**Mina Array Bea**	100.87	52	P	Pdif	22 41 57.5	-1.0		
	comp=Z,0.3nm,0.5s,baz=278,slow=4.6,SNR=4.8								
YKA	**Yellowknife Ar**	101.33	28	*i* P	Pdif	22 41 57.9	-1.7		
YKA				pmax	pmax				
	comp=Z,1.0nm,0.9s								
YKA	**Yellowknife Ar**	101.33	28	P	Pdif	22 41 58.2	-1.4		
	comp=Z,0.8nm,0.9s,baz=281,slow=4.9,SNR=9.6								
YKA				PKKPbc	PKKPbc	22 58 12.5	+1.1		
	comp=Z,0.2nm,0.7s,baz=108,slow=4.6,SNR=3.8								
LRMC	**Laurel Mtn Rad**	101.40	55	P	Pdif	22 41 59.9	-0.9		
	baz=271								
KLMR	**Klimovskoe**	101.78	331	*e*P	Pdif	22 41 58.4	-3.3		
KLMR				pmax	pmax				
	comp=Z,14nm,1.3s								
PFO	**Pinyon Flats O**	102.43	57	P	Pdif	22 42 04.8	-0.6		
	baz=271								
TPFO	**Pinon Flats**	102.43	57	P	Pdif	22 42 04.9	-0.5		
	baz=271								
IKP	**In-Ko-Pah, Jac**	102.74	58	P	Pdif	22 42 06.0	-0.7		
	baz=271								
BELC	**Belle Mtn. Jos**	102.81	57	P	Pdif	22 42 06.4	-0.6		
	baz=271								
KSCO	**Kaye Shedlock'**	112.99	50	P	PKiKP	22 46 46.4	-0.2		
	baz=281								
SUSD	**Miller**	114.39	44	P	PKPdf	22 46 48.9	0.0		
	baz=286								
WMOK	**Wichita Mounta**	116.86	54	P	PKPdf	22 46 53.6	-0.5		
	baz=282								
EYMN	**Ely**	118.06	38	P	PKPdf	22 46 56.0	+0.1		
	baz=294								
MIAR	**Mount Ida**	121.08	53	P	PKPdf	22 47 02.0	-0.1		
	baz=285								
CCM	**Cathedral Cave**	121.86	49	P	PKPdf	22 47 03.3	-0.2		
	baz=289								
HDIL	**Hopedale**	122.41	45	P	PKPdf	22 47 04.3	-0.1		
	baz=292								
L44A	**Lake County Fo**	122.73	43	P	PKPdf	22 47 04.6	-0.4		
	baz=294								
SFIN	**Lafayette**	124.02	45	P	PKPdf	22 47 07.0	-0.6		
	baz=294								
OXF	**Oxford**	124.39	52	P	PKPdf	22 47 08.1	-0.3		
	baz=288								
O48B	**Farmland**	125.42	44	P	PKPdf	22 47 10.0	-0.2		
	baz=295								
WCI	**Wyandotte Cave**	125.44	47	P	PKPdf	22 47 09.9	-0.5		
	baz=293								
P49A	**Miami Univ. Ec**	126.04	45	P	PKPdf	22 47 11.2	-0.3		
	baz=295								
LRAL	**Lakeview Retre**	126.76	53	P	PKPdf	22 47 12.4	-0.6		
	baz=289								
ACSO	**Alum Creek Sta**	126.93	43	P	PKPdf	22 47 12.8	-0.3		
	baz=297								
P52A	**Corning**	127.78	44	P	PKPdf	22 47 14.5	-0.3		
	baz=298								
M53A	**WI Miller and**	127.89	41	P	PKPdf	22 47 14.7	-0.2		
	baz=300								
O53A	**New Philadelph**	128.11	42	P	PKPdf	22 47 15.3	-0.1		
	baz=299								
TZTN	**Tazewell**	128.12	48	P	PKPdf	22 47 15.3	-0.3		
	baz=294								
MT09	**Talagante**	129.05	144	PKPdf	PKPdf	22 47 15.5	-2.1		
GOGA	**Godfrey**	129.40	51	P	PKPdf	22 47 17.5	-0.5		
	baz=292								

DBIC	**Dimbokro**	**147.75**	**273**	PKPab	**PKPbc**	**22 47 55.5**	**+0.7**
DBIC	**Dimbokro**	**147.75**	**273**	PKPbc	**PKPdf**	**22 47 54.9**	**+3.0**
	comp=Z,12nm,1.1s,baz=93,slow=4.3,SNR=9.5						
LIC	**Lamto**	**147.91**	**272**⇗	*eP*	**PKPdf**	**22 47 55.2**	**+3.0**
	comp=Z,32nm,1.0s						
TIC	**Toumodi**	**147.91**	**273**⇗	*eP*	**PKPbc**	**22 47 57.3**	**+2.1**
	comp=Z,24nm,1.0s						
OBIP	**Obispado Ponce**	**149.09**	**65**		**PKPdf**	**22 47 56.2**	**+2.3**
CELP	**Cerrillos**	**149.10**	**65**		**PKPbc**	**22 47 57.8**	**-0.3**
BAUV	**El Baul**	**149.42**	**83**		**PKPdf**	**22 47 58.4**	**+3.8**
GCPR	**Guaynabo City**	**149.47**	**64**		**PKPdf**	**22 47 57.8**	**+3.2**
PTLB	**Pontes e Lacer**	**149.51**	**135**	PKPab	**PKPbc**	**22 48 00.9**	**+1.7**
SAML	**Samuel**	**150.15**	**120**		**PKPdf**	**22 47 59.6**	**+3.8**
SAML	**Samuel**	**150.15**	**120**	PKIKP	**PKPdf**	**22 47 59.6**	**+3.8**
SAML	**Samuel**	**150.15**	**120**	*eP*	**PKPdf**	**22 47 58.2**	**+2.4**
BDFB	**Brasilia**	**155.86**	**154**	PKPab	**PKPab**	**22 48 30.9**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=160,slow=4.8,SNR=4.2						

DJA 25 22:32:10.1±0.5,**1°S**±4″×**10°0E**±°,**h85**km±14km,**M3.9**/10,
mb4.2/2,**mB5.2**/1,**MLv3.8**/10,**Mw(mB)4.6**/1,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**1.26**	**239**	P		Pn	22 32 32.9 +0.3
SISI				S		Sn	22 32 49.6 +0.1
BKNI	**Bangkinang**	**1.32**	**41**	P		Pn	22 32 32.2 -1.2
KRJI	**Kerinci**	**1.91**	**137**	P		Pn	22 32 43.8 +2.8
PBSI	**Pulau Batu**	**1.99**	**288**	P		Pn	22 32 42.4 +0.4
PPSI	**Pulau Pagai**	**2.08**	**184**	P		Pn	22 32 42.8 -0.4
GSI	**Gunungsitoli**	**3.26**	**307**	P		Pn	22 32 59.7 +0.6
MNAI	**Manna**	**4.59**	**143**	P		Pn	22 33 16.7 -0.5
KASI	**Kota Agung**	**6.47**	**138**	P		Pn	22 33 41.8 -0.9

DJA 25 22:35:22.2±0.3,**8°S**±3″×**10°6E**±°,**h10**km,**M4.0**/14,**mb4.2**/4,
mB5.2/1,**MLv3.9**/14,**Mw(mB)4.6**/1,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**0.90**	**18**	Pg		22 35 39.2	-0.4
CNJI	**Cibinong**	**1.01**	**57**	Pg		22 35 41.1	-0.6
DBJI	**Dramaga**	**1.39**	**20**	P		Pn 22 35 47.5	-0.2
LEM	**Lembang**	**1.68**	**52**	Pn		Pn 22 35 51.7	-0.2
TNG	**Tangerang**	**1.73**	**12**	Pn		Pn 22 35 52.6	+0.3
SBJI	**Serang**	**1.75**	**355**	Pn		Pn 22 35 52.7	+0.1
CMJI	**Cimerak**	**2.15**	**88**	Pn		Pn 22 35 57.6	-0.5
KPJI	**Karang Pucung**	**2.68**	**79**	P		Pn 22 36 06.9	+1.4
KASI	**Kota Agung**	**2.93**	**323**	P		Pn 22 36 09.1	+0.3
UGM	**Wanagama**	**4.20**	**91**	P		Pn 22 36 26.0	-0.4
MNAI	**Manna**	**4.80**	**316**	P		Pn 22 36 35.0	+0.3
PWJI	**Pagerwojo**	**5.47**	**92**	P		Pn 22 36 45.0	+0.1
	13nm,0.6s,0.1nm						
GMJI	**Gumukmas**	**7.11**	**94**	P		Pn 22 37 06.2	-0.1
	20nm,1.0s						
JAGI	**Jajag, Banyuwa**	**7.82**	**95**	P		Pn 22 37 15.3	-0.8
	17nm,1.2s,1μm0.1nm						
SISI	**Saibi**	**9.67**	**312**	P		Pn 22 37 39.3	-2.3

*IDC **25** 22:36:15.6±0.8,6.1°8S×143.2°2E,h0km,mb4.3/8,*
mbtmp4.4/12,ML4.0/2,Error ellipse: s-maj=29.9km
s-min=16.1km az=81.0
*NEIC **25** 22:36:16.8±2.0,6.2°0S±0.1°08×143.2°2E±0.1°1,h10km±1km,*
mb4.4/12,Error ellipse: s-maj=21.8km s-min=11.4km
az=69.0
ISC 25 22:36:17.2±0.7,**6.1°7S**±0.1°09×**143.2°2E**±0.1°1,**h10**km,**n29,**
σ1s**14**/27,**mb4.3**/13,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.07**	**130**		**Pn**	**22 37 31.9**	**-1.3**
PMG	**Port Moresby**	**5.07**	**130**	Pn	**Pn**	**22 37 34.3**	**+1.1**
	32nm,0.6s,baz=62,slow=1.4,SNR=7.6						
PMG				Sn	**Sn**	**22 38 31.8**	**-0.1**
	7.2nm,0.3s,baz=217,slow=21,SNR=9.2						
CTA	**Charters Tower**	**14.15**	**168**	Pn	**Pn**	**22 39 39.4**	**+1.5**
	0.2nm,0.3s,baz=258,slow=20,SNR=2.2						
CTA				Lg	Lg	22 43 45.8	
	0.1nm,0.3s,baz=348,slow=18,SNR=1.7						
	11nm,0.8s						
WRAB	**Tennant Creek**	**16.16**	**211**	Pn	**Pn**	**22 40 03.6**	**-1.0**
WRAB				IAmb	IAmb	22 40 08.8	
	comp=Z,62nm,1.1s						
WB2	**Warramunga Arr**	**16.17**	**211**		**Pn**	**22 40 05.3**	**+0.6**
WRA	**Warramunga Arr**	**16.17**	**211**		**Pn**	**22 40 05.8**	**+1.0**
WRA	**Warramunga Arr**	**16.17**	**211**	Pn	**Pn**	**22 40 04.5**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=32,slow=11,SNR=5.7						
WRA				Lg	Lg	22 44 50.0	
	comp=Z,0.4nm,0.3s,baz=36,slow=28,SNR=6.6						
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**19.56**	**206**	Pn	**P**	**22 40 45.4**	**0.0**
ASAR	**Alice Springs**	**19.56**	**206**	Pn	**P**	**22 40 45.3**	**-0.1**
ASAR	**Alice Springs**	**19.56**	**206**	P	**P**	**22 40 45.4**	**0.0**
	comp=Z,29nm,0.6s,baz=29,slow=13,SNR=22						
ASAR				Lg	Lg	22 46 36.6	
	comp=Z,0.1nm,0.3s,baz=21,slow=30,SNR=4.7						
FITZ	**Fitzroy Crossi**	**20.84**	**234**	P	**P**	**22 40 57.7**	**-1.6**
OUENC	**Ouen Island, N**	**27.95**	**128**	P	**P**	**22 42 07.0**	**-1.0**
OUENC				IAmb	IAmb	22 42 11.9	
	comp=Z,6.5nm,0.9s						
KSRS	**Korea Array**	**45.69**	**343**	P	**P**	**22 44 38.4**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=78,slow=16,SNR=2.6						
	comp=Z,1.3nm,0.8s						
LSA	**Lhasa**	**61.36**	**309**	P	P	22 46 32.0	-2.2
LSA				IAmb	IAmb	22 46 38.2	
	comp=Z,1.7nm,0.6s						
MK31	**Makanchi Array**	**75.26**	**322**	P	**P**	**22 48 00.7**	**+0.2**
MKAR	**Makanchi Array**	**75.26**	**322**	P	**P**	**22 48 00.5**	**0.0**
MKAR	**Makanchi Array**	**75.26**	**322**	P	**P**	**22 48 00.7**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=105,slow=7.2,SNR=17						
	comp=Z,2.2nm,0.7s						
MAKZ	**Makanchi**	**75.46**	**322**	P	**P**	**22 48 01.6**	**0.0**
MAKZ				IAmb	IAmb	22 48 02.6	
	comp=Z,5.1nm,1.1s						
ZALV	**Zalesovo Beam**	**77.18**	**329**	P	**P**	**22 48 10.4**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=97,slow=3.6,SNR=5.7						
	comp=Z,0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**79.13**	**324**	P	**P**	**22 48 22.1**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=116,slow=4.7,SNR=7.2						
	comp=Z,0.6nm,0.3s						
KK31	**Karatay Array**	**81.72**	**315**	P	P	22 48 33.7	-2.5
KK31				IAmb	IAmb	22 48 37.7	
	comp=Z,4.6nm,1.5s						
KKAR	**Karatay Array**	**81.72**	**315**	P	**P**	**22 48 35.5**	**-0.7**
KKAR	**Karatay Array**	**81.72**	**315**	P	P	22 48 34.2	-2.1
KKAR				IAmb	IAmb	22 48 37.7	
	comp=Z,4.5nm,1.5s						
QSPA	**South Pole Qui**	**83.80**	**180**	P	**P**	**22 48 45.0**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=268,slow=2.4,SNR=5.2						
	comp=Z,1.9nm,0.5s						
NRIK	**Noril'sk**	**84.30**	**343**	P	**P**	**22 48 48.9**	**0.0**
NRIK	**Noril'sk**	**84.30**	**343**	P	**P**	**22 48 50.5**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=137,slow=6.1,SNR=5.1						
	comp=Z,1.3nm,0.6s						
BVAR	**Borovoye Array**	**84.70**	**325**	P	**P**	**22 48 51.7**	**+0.3**
	comp=Z,8.3nm,0.7s,baz=112,slow=6.9,SNR=43						
	comp=Z,8.3nm,0.7s						
ILAR	**Eielson Array**	**87.14**	**24**	P	**P**	**22 49 02.5**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=264,slow=4.4,SNR=9.3						
	comp=Z,1.3nm,0.9s						
DBIC	**Dimbokro**	**148.26**	**273**	PKPbc	**PKPdf**	**22 56 05.1**	**+3.7**
	comp=Z,5.0nm,0.9s,baz=72,slow=6.7,SNR=3.1						

*NOU **25** 22:39:40.3,42.2°29S×173.3°93E,h21km,MLv4.3/13,South*
Island, New Zealand
*WEL **25** 22:39:40.2±0.4,42.2°S±2.2°×17.4°4E±°,h5km±3km,M4.0/11,*
ML4.2/11,MLv4.0/11,Error ellipse: s-maj=0.0km
s-min=0.0km az=124.4,confirmed
ISC 25 22:39:39.9±0.9,**42.0°5S**±0.0°02×**173.6°3E**±0.0°02,**h11**km±7km,
n144,σ1s**62**/164,**South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEKS	**Kekerengu Vall**	**0.28**	**71**	P	**Pb**	**22 39 46.1**	**-0.8**
KEKS				S	**Sb**	**22 39 50.8**	**-0.8**
MOLW	**Molesworth Sta**	**0.28**	**261**	P	**Pg**	**22 39 45.9**	**+0.2**
MOLW				S	**Sg**	**22 39 50.0**	**+0.5**
KHZ	**Kahutara**	**0.38**	**190**	P	**Pb**	**22 39 48.5**	**-0.1**
KHZ	**Kahutara**	**0.38**	**190**	P	**Pb**	**22 39 48.6**	**+0.1**
KHZ				S	**Sb**	**22 39 54.6**	**+0.2**
BSWZ	**Blackbirch Sta**	**0.38**	**29**	P	**Pg**	**22 39 47.2**	**-0.2**
BSWZ				S	**Sg**	**22 39 53.1**	**+0.6**
KIKS	**Kaikoura**	**0.38**	**174**	P	**Pn**	**22 39 49.1**	**-2.2**
KIKS				S	**Sn**	**22 39 56.0**	**+3.4**
WDFS	**Ward Fire Stat**	**0.44**	**60**	P	**Pb**	**22 39 49.4**	**-0.2**
WDFS				S	**Sb**	**22 39 56.7**	**+0.5**
WVFS	**Wairau Valley**	**0.47**	**334**	P	**Pg**	**22 39 47.5**	**-1.7**
WVFS				S	**Sg**	**22 39 54.0**	**-1.4**
SEDS	**Seddon Fire St**	**0.50**	**42**	P	**Pg**	**22 39 50.4**	**+0.7**
SEDS				S	**Sb**	**22 39 58.4**	**+0.5**
CMWZ	**Cape Campbell**	**0.53**	**56**	P	**Pb**	**22 39 51.2**	**+0.1**
CMWZ				S	**Sb**	**22 39 59.6**	**+0.8**
SDNS	**Seddon**	**0.54**	**45**	P	**Pg**	**22 39 51.4**	**+1.0**
MGCS	**Blenheim Marlb**	**0.59**	**24**	P	**Pg**	**22 39 49.8**	**-1.5**
MGCS				S	**Sg**	**22 39 58.9**	**-0.2**
THZ	**Tophouse**	**0.61**	**297**	P	**Pg**	**22 39 51.6**	**-0.2**
THZ				S	**Sg**	**22 39 59.5**	**-0.3**
BWRS	**Waikakaho Road**	**0.64**	**19**	P	**Pg**	**22 39 51.9**	**-0.4**
BWRS				S	**Sg**	**22 40 01.0**	**+0.3**
TUWZ	**Tuamarina**	**0.66**	**21**	P	**Pg**	**22 39 52.4**	**-0.3**
TUWZ				S	**Sg**	**22 40 01.6**	**+0.3**
BTWS	**Nelson Brightw**	**0.76**	**330**	P	**Pg**	**22 39 53.1**	**-1.4**
BTWS				S	**Sg**	**22 40 02.4**	**-2.0**
HSES	**Hanmer Springs**	**0.76**	**231**	P	**Pg**	**22 39 55.2**	**+0.6**
HAVS	**Havelock**	**0.78**	**9**	P	**Pg**	**22 39 54.2**	**-0.8**
NELH	**Nelson Hospita**	**0.80**	**341**	P	**Pg**	**22 39 53.8**	**-1.6**
CECS	**Cheviot Emerge**	**0.81**	**199**	P	**Pn**	**22 39 57.1**	**-0.1**
CECS				S	**Sn**	**22 40 10.5**	**+1.3**
NCBS	**Nelson Council**	**0.82**	**341**	P	**Pb**	**22 39 54.4**	**-1.6**
QCCS	**Picton Queen C**	**0.82**	**21**	P	**Pg**	**22 39 53.5**	**-2.2**
QCCS				S	**Sg**	**22 40 04.9**	**-1.5**
NNZ	**Nelson**	**0.85**	**347**	P	**Pb**	**22 39 55.3**	**-1.3**
NNZ				S	**Sg**	**22 40 01.4**	**-1.0**
MRNZ	**Matariki Terra**	**0.92**	**314**	P	**Pb**	**22 39 57.2**	**-0.6**
MRNZ				S	**Sb**	**22 40 09.8**	**-0.2**
MATW	**Matariki Wadsw**	**0.93**	**311**	P	**Pb**	**22 39 57.2**	**-0.8**
TCW	**Tory Channel**	**0.97**	**30**	P	**Pb**	**22 39 57.6**	**-1.0**
TCW				S	**Sb**	**22 40 11.1**	**-0.2**
GVZ	**Greta Valley S**	**1.02**	**205**	P	**Pn**	**22 40 00.3**	**+0.1**
SNZO	**South Karori**	**1.09**	**48**	P	**Pn**	**22 40 01.1**	**+0.1**
BHW	**Baring Head**	**1.13**	**56**	P	**Pb**	**22 40 01.1**	**-0.2**
BHW				S	**Sn**	**22 40 18.6**	**+1.6**
TKNZ	**Takaka Hill**	**1.13**	**333**	P	**Pn**	**22 40 00.6**	**-1.0**
WEL	**Wellington**	**1.14**	**49**	P	**Pb**	**22 40 01.8**	**+0.1**
LTZ	**Lake Taylor**	**1.25**	**233**	P	**Pn**	**22 40 02.8**	**-0.4**
DUWZ	**D'Urville Isla**	**1.26**	**10**	P	**Pn**	**22 40 02.6**	**-0.8**
PLWZ	**Palliser**	**1.31**	**69**	P	**Pn**	**22 40 03.1**	**-1.0**
AMCZ	**Amberley**	**1.34**	**212**	P	**Pn**	**22 40 04.4**	**-0.1**
MSWZ	**Moikau Station**	**1.37**	**63**	P	**Pg**	**22 40 09.0**	**+2.8**
DSZ	**Denniston Nort**	**1.39**	**282**	P	**Pn**	**22 40 06.3**	**+1.1**
CAW	**Cannon Point**	**1.43**	**49**	P	**Pn**	**22 40 05.4**	**-0.3**
PAWZ	**Paruwai Farm**	**1.50**	**64**	P	**Pn**	**22 40 05.8**	**-0.9**
KIW	**Kapiti Island**	**1.53**	**40**	P	**Pn**	**22 40 07.1**	**0.0**
MTW	**Mount Morrison**	**1.66**	**58**	P	**Pn**	**22 40 07.6**	**-1.3**
TRWZ	**Traveller**	**1.67**	**68**	P	**Pn**	**22 40 07.7**	**-1.4**
OGWZ	**Otaki Gorge**	**1.69**	**44**	P	**Pn**	**22 40 09.0**	**-0.3**
OXZ	**Oxford**	**1.73**	**222**	P	**Pn**	**22 40 09.2**	**-0.7**
INZ	**Inchbonnie**	**1.75**	**247**	P	**Pn**	**22 40 10.8**	**+0.6**
MQZ	**McQueen's Vall**	**1.81**	**203**	P	**Pn**	**22 40 09.4**	**-1.5**
HOWZ	**Holdsworth Sta**	**1.82**	**52**	P	**Pn**	**22 40 10.1**	**-1.1**
AKCZ	**Akaroa Harbour**	**1.90**	**196**	P	**Pn**	**22 40 11.2**	**-1.0**
TMWZ	**Te Maipa**	**1.94**	**62**	P	**Pn**	**22 40 11.5**	**-1.3**
RACZ	**Rakaia**	**2.00**	**213**	P	**Pn**	**22 40 12.4**	**-1.2**
MRZ	**Mangatainoka R**	**2.02**	**47**	P	**Pn**	**22 40 12.9**	**-0.9**
TIWZ	**Tintock**	**2.12**	**54**	P	**Pb**	**22 40 17.1**	**-1.2**
MHCZ	**Mount Hutt**	**2.12**	**225**	P	**Pn**	**22 40 14.5**	**-0.8**
OHWZ	**Ohakea**	**2.24**	**35**	P	**Pb**	**22 40 20.0**	**-0.2**
WAKZ	**Wakanui South**	**2.31**	**214**	P	**Pn**	**22 40 16.1**	**-1.1**
POWZ	**Post Office Ro**	**2.31**	**45**	P	**Pn**	**22 40 17.0**	**-0.9**
PRWZ	**Pori Road**	**2.31**	**51**	P	**Pn**	**22 40 16.9**	**-0.9**
WVZ	**Waitaha Valley**	**2.37**	**243**	P	**Pn**	**22 40 19.2**	**+0.5**
BFZ	**Birch Farm**	**2.40**	**56**	P	**Pn**	**22 40 16.7**	**-2.3**
BFZ	**Birch Farm**	**2.40**	**56**	P	**Pn**	**22 40 16.9**	**-2.1**
WAZ	**Wanganui**	**2.51**	**25**	P	**Pb**	**22 40 23.7**	**-1.2**
RPZ	**Rata Peaks**	**2.52**	**228**	P	**Pn**	**22 40 20.0**	**-0.8**
RPZ	**Rata Peaks**	**2.52**	**228**	P	**Pn**	**22 40 19.9**	**-0.9**
DVHZ	**Dannevirke**	**2.59**	**49**	P	**Pn**	**22 40 19.9**	**-1.8**
ARCZ	**Arundel**	**2.62**	**223**	P	**Pn**	**22 40 21.0**	**-1.1**
NMEZ	**Namu Road**	**2.64**	**4**	P	**Pn**	**22 40 25.5**	**+3.2**
LREZ	**Lake Rotokare**	**2.65**	**13**	P	**Pb**	**22 40 26.5**	**-0.8**
TSZ	**Takapari Road**	**2.66**	**42**	P	**Pn**	**22 40 21.5**	**-1.1**
ANWZ	**Angora Road**	**2.67**	**55**	P	**Pn**	**22 40 22.5**	**-0.2**
PREZ	**Palmer Road**	**2.73**	**9**	P	**Pn**	**22 40 26.9**	**+3.2**
GCSZ	**Gaunt Creek Bo**	**2.75**	**241**	P	**Pn**	**22 40 24.7**	**+0.9**
KHEZ	**Kahui Hut**	**2.76**	**6**	P	**Pn**	**22 40 27.1**	**+2.9**
KHEZ	**Kahui Hut**	**2.76**	**6**	P	**Pn**	**22 40 27.4**	**+2.9**
NBEZ	**Newall Road No**	**2.78**	**4**	P	**Pn**	**22 40 26.9**	**+2.6**
NEZ	**North Egmont**	**2.79**	**7**	P	**Pn**	**22 40 27.8**	**+3.2**
PKE	**Pukeiti**	**2.86**	**6**	P	**Pn**	**22 40 28.2**	**+2.7**
PNHZ	**Pukenui**	**2.89**	**43**	P	**Pn**	**22 40 24.4**	**-1.4**
DREZ	**Durham Road**	**2.89**	**9**	P	**Pn**	**22 40 29.1**	**+3.4**
MTVZ	**Mangateitei**	**3.00**	**28**	P	**Pb**	**22 40 34.1**	**+0.7**
TMZ	**Timaru**	**3.02**	**218**	P	**Pn**	**22 40 26.5**	**-1.2**
VRZ	**Vera Road**	**3.04**	**17**	P	**Pn**	**22 40 30.5**	**+2.6**
PKVZ	**Pokaka**	**3.05**	**26**	P	**Pb**	**22 40 32.0**	**-2.2**
MOVZ	**Moawhango**	**3.09**	**32**	P	**Pn**	**22 40 31.1**	**+2.4**
WNVZ	**Wahianoa**	**3.10**	**30**	P	**Pn**	**22 40 29.8**	**+0.9**
TRVZ	**Turoa**	**3.11**	**29**	P	**Pn**	**22 40 32.7**	**+3.6**
WHVZ	**Whangaehu Hut**	**3.14**	**29**	P	**Pn**	**22 40 31.8**	**+2.4**
MAVZ	**Matarangi**	**3.14**	**29**	P	**Pn**	**22 40 33.2**	**+3.6**
FWVZ	**Far West T-bar**	**3.15**	**28**	P	**Pn**	**22 40 30.9**	**+1.3**
BHHZ	**Black Hill Sta**	**3.15**	**37**	P	**Pn**	**22 40 33.2**	**+3.7**
TUVZ	**Tukino**	**3.17**	**30**	P	**Pn**	**22 40 31.0**	**+1.2**
FOX	**Fox Glacier**	**3.17**	**241**	P	**Pn**	**22 40 30.2**	**+0.5**
KRHZ	**Kereru**	**3.18**	**42**	P	**Pn**	**22 40 28.2**	**-1.6**
COVZ	**Chateau Observ**	**3.19**	**28**	P	**Pn**	**22 40 33.7**	**+3.6**
NGZ	**Ngauruhoe**	**3.24**	**28**	P	**Pn**	**22 40 31.5**	**+0.8**
SNVZ	**South Ngauruho**	**3.24**	**29**	P	**Pn**	**22 40 34.9**	**+4.1**
OTVZ	**Oturere**	**3.27**	**29**	P	**Pb**	**22 40 36.3**	**-1.7**
TWVZ	**Taurewa**	**3.28**	**25**	P	**Pn**	**22 40 32.0**	**+0.8**
NNVZ	**North Ngauruho**	**3.28**	**28**	P	**Pn**	**22 40 32.6**	**+1.3**
WTVZ	**West Tongariro**	**3.29**	**28**	P	**Pn**	**22 40 32.2**	**+0.8**
ETVZ	**East Tongariro**	**3.31**	**29**	P	**Pn**	**22 40 32.8**	**+1.1**
KRVZ	**Karewarewa**	**3.32**	**28**	P	**Pb**	**22 40 37.4**	**-1.5**
TMVZ	**Te Maari**	**3.33**	**29**	P	**Pn**	**22 40 32.8**	**+0.9**
NTVZ	**North Tongarir**	**3.33**	**29**	P	**Pb**	**22 40 37.7**	**-1.3**
KAHZ	**Kahuranaki**	**3.33**	**49**	P	**Pn**	**22 40 30.0**	**-2.0**
KWHZ	**Kaweka Forest**	**3.37**	**40**	P	**Pb**	**22 40 39.2**	**-0.5**
LBZ	**Lake Benmore**	**3.44**	**226**	P	**Pn**	**22 40 32.7**	**-0.6**
KATZ	**Kakaramea**	**3.45**	**28**	P	**Pb**	**22 40 41.1**	**+0.1**
RITZ	**Rihia Road**	**3.50**	**30**	P	**Pb**	**22 40 39.6**	**-2.0**
RATZ	**Rangitukua**	**3.57**	**28**	P	**Pb**	**22 40 41.5**	**-1.5**
BKZ	**Black Stump Fm**	**3.61**	**38**	P	**Pn**	**22 40 36.7**	**+0.9**
HIZ	**Hauiti**	**3.65**	**15**	P	**Pn**	**22 40 39.1**	**+2.8**
ODZ	**Otahua Downs**	**3.70**	**215**	P	**Pn**	**22 40 35.5**	**-1.4**
ODZ	**Otahua Downs**	**3.70**	**215**	P	**Pn**	**22 40 35.4**	**-1.5**
WATZ	**Wairara**	**3.70**	**26**	P	**Pb**	**22 40 43.1**	**-2.2**
NMHZ	**Naumai**	**3.81**	**40**	P	**Pn**	**22 40 40.8**	**+2.3**
TLZ	**Tolley Road**	**3.99**	**22**	P	**Pn**	**22 40 44.1**	**+3.1**
MTHZ	**Maungataniwha**	**4.02**	**39**	P	**Pn**	**22 40 43.7**	**+2.3**
JCZ	**Jackson Bay**	**4.09**	**239**	P	**Pn**	**22 40 41.9**	**-0.4**
JCZ	**Jackson Bay**	**4.09**	**239**	P	**Pn**	**22 40 41.8**	**-0.6**
HHSZ	**Highcliff Hill**	**4.42**	**209**	P	**Pn**	**22 40 45.5**	**-1.3**
EAZ	**Earnscleugh**	**4.47**	**223**	P	**Pn**	**22 40 45.9**	**-1.6**
TOZ	**Tahuroa Road**	**4.54**	**19**	P	**Pn**	**22 40 51.2**	**+2.6**
URZ	**Urewera**	**4.63**	**36**	P	**Pn**	**22 40 49.0**	**-0.7**
URZ	**Urewera**	**4.63**	**36**	P	**Pn**	**22 40 48.9**	**-0.8**
TUZ	**Tuapeka**	**4.86**	**215**	P	**Pn**	**22 40 51.9**	**-0.8**
AWAZ	**Awhitu Peninsu**	**5.04**	**9**	P	**Pn**	**22 40 57.5**	**+2.2**
MKAZ	**Moumakai**	**5.08**	**14**	P	**Pn**	**22 40 57.6**	**+1.8**
TWGZ	**Tauwhareparae**	**5.11**	**42**	P	**Pn**	**22 40 56.6**	**+0.3**
ETAZ	**East Tamaki Re**	**5.18**	**12**	P	**Pn**	**22 40 59.8**	**+2.5**
MLZ	**Mavora Lakes**	**5.19**	**228**	P	**Pn**	**22 40 56.7**	**-0.7**
HAZ	**Te Kaha**	**5.34**	**38**	P	**Pn**	**22 40 58.2**	**-1.4**
MBAZ	**Motutapu North**	**5.36**	**11**	P	**Pn**	**22 41 02.2**	**+2.4**
WIAZ	**Waiheke Island**	**5.37**	**13**	P	**Pn**	**22 41 02.6**	**+2.7**
ABAZ	**Army Bay**	**5.52**	**10**	P	**Pn**	**22 41 04.5**	**+2.6**
SYZ	**Scrubby Hill**	**5.53**	**214**	P	**Pn**	**22 41 01.6**	**-0.4**
SYZ	**Scrubby Hill**	**5.53**	**214**	P	**Pn**	**22 41 01.4**	**-0.6**
KUZ	**Kuaotunu**	**5.54**	**18**	P	**Pn**	**22 41 04.3**	**+2.1**
MXZ	**Matakaoa Point**	**5.75**	**40**	P	**Pn**	**22 41 05.8**	**+0.8**
MXZ	**Matakaoa Point**	**5.75**	**40**	P	**Pn**	**22 41 04.5**	**-0.5**
GRZ	**Great Barrier**	**5.96**	**14**	P	**Pn**	**22 41 10.2**	**+2.2**
WCZ	**Waipu Caves**	**6.12**	**5**	P	**Pn**	**22 41 12.3**	**+2.1**
APZ	**The Paps**	**6.26**	**218**	P	**Pn**	**22 41 10.8**	**-1.3**
OUZ	**Omahuta**	**6.82**	**360**	P	**Pn**	**22 41 22.0**	**+2.3**
OUZ	**Omahuta**	**6.82**	**360**	P	**Pn**	**22 41 22.0**	**+2.3**

IDC 25 22:41:24.2±1.4,**6.1°5S**×**143.1°2E**,**h0**km,**mb4.1**/2,

mbtmp4.1/5,**ML4.0**/2,**Error ellipse: s-maj=37.6km**
s-min=28.3km az=73.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.15**	**129**	Pn	Pn	22 42 42.9	+0.2
	5.9nm,0.4s,baz=190,slow=22,SNR=1.9						
PMG				Sn	Sn	22 43 42.5	-0.3
	1.2nm,0.3s,baz=337,slow=14,SNR=1.4						
WRA	**Warramunga Arr**	**16.14**	**211**	Pn	Pn	22 45 11.4	-1.3
	0.5nm,0.3s,baz=40,slow=14,SNR=5.7						
	7.1nm,0.8s						
ASAR	**Alice Springs**	**19.54**	**206**	P	Pn	22 45 54.5	-0.3
	0.6nm,0.3s,baz=31,slow=12,SNR=6.7						
	4.3nm,0.6s						
BVAR	**Borovoye Array**	**84.64**	**325**	P	P	22 53 59.4	-0.3
	1.3nm,0.6s,baz=116,slow=6.9,SNR=8.9						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**87.16**	**24**	P	P	22 54 12.2	+0.2
	1.1nm,1.2s,baz=241,slow=2.9,SNR=4.7						
	1.1nm,1.2s						

*IDC **25** 22:44:25.1±0.7,6.2°20S×143.1°16E,h0km,mb4.3/12,*
mbtmp4.3/16,ML1.6/1,Error ellipse: s-maj=26.0km
s-min=14.1km az=85.0
ISC 25 22:44:26.8±0.6,**6.1°9S**±0.1°07×**143.1°0E**±0.1°08,**h10**km,**n28,**
σ1s**63**/27,**mb4.3**/12,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.14**	**129**	Pn	**Pn**	**22 45 41.7**	**-2.2**
	1.4nm,0.3s,baz=284,slow=8.3,SNR=1.3						
PMG				Sn	**Sn**	**22 46 43.9**	**+0.6**
	1.2nm,0.3s,baz=121,slow=23,SNR=1.4						
	8.3nm,0.5s						
COEN	**Coen**	**7.71**	**179**	P	**Pb**	**22 46 40.5**	**-0.3**
ALOT	**Alotau**	**8.35**	**120**	P	**Pg**	**22 47 06.7**	**-

KTK1				*e*S	**Sn**	**22 52 08.8**	**-6.5**		
KTK1				IAML		22 52 24.4			
	comp=Z,1.8nm,0.6s								
KONS	**Konsvik**	**6.91**	**157**	*e*P	**Pn**	**22 51 01.6**	**+0.8**		
KONS				*e*S	**Sn**	**22 52 14.6**	**-4.7**		
KONS				IAML		22 52 20.0			
	comp=Z,6.9nm,0.4s								
SALU	**Saltoluokta**	**6.94**	**138**	*e*P	**Pn**	**22 51 03.4**	**+2.1**		
ARA0	**ARCESS Array S**	**7.01**	**110**	Pn	**Pn**	**22 51 04.0**	**+1.8**		
	baz=307,slow=10								
ARA0				Sn	**Sn**	**22 52 22.4**	**+0.5**		
	baz=301,slow=22								
ARA0	**ARCESS Array S**	**7.01**	**110**	*e*P	**Pn**	**22 51 04.2**	**+2.0**		
ARA0				IAML		22 52 17.5			
	comp=Z,2.0nm,0.8s								
ARA0				Sn	**Sn**	**22 52 22.4**	**+0.5**		
	baz=301,slow=22								
ARCES	**ARCESS Array B**	**7.01**	**110**	Pn	**Pn**	**22 51 03.3**	**+1.1**		
	comp=Z,0.4nm,0.3s,baz=315,slow=11,SNR=29								
ARCES				Sn	**Sn**	**22 52 21.4**	**-0.4**		
	comp=Z,0.2nm,0.3s,baz=310,slow=21,SNR=1.9								
	comp=Z,2.2nm,0.5s								
STOK	**Stokkvaagen**	**7.06**	**158**	*e*P	**Pn**	**22 51 04.9**	**+2.1**		
STOK				*e*S	**Sn**	**22 52 17.2**	**-5.7**		
STOK				IAML		22 52 22.9			
	comp=Z,4.9nm,0.5s								
HEF	**Hetta**	**7.29**	**121**	*e*P	**Pn**	**22 51 07.0**	**+1.0**		
HEF				*e*S	Sn	22 52 20.8	-7.8		
KEV	**Kevo**	**7.30**	**106**	Pn	**Pn**	**22 51 07.0**	**+0.9**		
KEV	**Kevo**	**7.30**	**106**	*e*P	**Pn**	**22 51 06.7**	**+0.6**		
MOR8	**Moi Rana**	**7.38**	**154**	*e*P	**Pn**	**22 51 08.7**	**+1.3**		
MOR8				*e*S	Sn	22 52 22.9	-8.1		
MOR8				IAML		22 52 32.4			
	comp=Z,6.5nm,0.5s								
VADS	**Vadso**	**7.77**	**101**	*e*P	**Pn**	**22 51 12.8**	**+0.3**		
VADS				*e*S	Sn	22 52 30.9	-9.4		
VADS				IAML		22 52 44.9			
	comp=Z,6.0nm,0.7s								
NSS	**Namsos**	**8.72**	**164**	*e*P	**Pn**	**22 51 26.9**	**+1.2**		
NSS				*e*S	Sn	22 52 55.6	-8.2		
NSS				IAML		22 53 04.5			
	comp=Z,4.4nm,0.5s								
SCO	**Scoresbysund**	**9.22**	**268**	*i* P	**Pn**	**22 51 28.0**	**-4.4**		
APA0	**Apatity Array**	**10.36**	**108**	Pn	**Pn**	**22 51 48.6**	**+0.6**		
	baz=317,slow=12								
APA0	**Apatity Array**	**10.36**	**108**	Pn	**Pn**	**22 51 48.6**	**+0.6**		
	baz=317,slow=12								
AKN	**Aaknes**	**10.86**	**179**	Pn	**Pn**	**22 51 58.0**	**+3.0**		
AKN	**Aaknes**	**10.86**	**179**	Pn	**Pn**	**22 51 58.0**	**+3.0**		
NB2	**NORSAR Subarra**	**12.14**	**169**	Pn	**Pn**	**22 52 13.8**	**+1.4**		
	baz=341,slow=14								
NB2	**NORSAR Subarra**	**12.14**	**169**	Pn	**Pn**	**22 52 13.8**	**+1.4**		
	baz=341,slow=14								
NOA	**NORSAR Array B**	**12.14**	**169**	Pn	**Pn**	**22 52 13.9**	**+1.4**		
	baz=357,slow=14,SNR=2.7								
NOA				Sn	**Sn**	**22 54 23.0**	**-4.6**		
	baz=9.7,slow=16,SNR=2.0								
	comp=Z,0.3nm,0.4s								
NRA0	**NORESS Array S**	**12.46**	**168**	Pn	**Pn**	**22 52 17.4**	**+0.7**		
	baz=354,slow=9.3								
NRA0	**NORESS Array S**	**12.46**	**168**	Pn	**Pn**	**22 52 17.4**	**+0.7**		
	baz=354,slow=9.3								
HFS	**Hagfors**	**13.21**	**164**	Pn	**Pn**	**22 52 27.2**	**+0.3**		
	baz=350,slow=12								
HFS	**Hagfors**	**13.21**	**164**	Pn	**Pn**	**22 52 27.2**	**+0.3**		
	baz=350,slow=12								
HFS	**Hagfors**	**13.21**	**164**	Pn	**Pn**	**22 52 27.0**	**+0.1**		
	comp=Z,0.3nm,0.3s,baz=356,slow=13,SNR=10								
	comp=Z,2.2nm,0.6s								
FIA0	**FINESS Array S**	**13.74**	**137**	Pn	**Pn**	**22 52 35.5**	**+1.4**		
	baz=338,slow=16								
FIA0	**FINESS Array S**	**13.74**	**137**	Pn	**Pn**	**22 52 35.5**	**+1.4**		
	baz=338,slow=16								
FINES	**FINESS Array B**	**13.74**	**137**	Pn	**Pn**	**22 52 34.4**	**+0.3**		
	comp=Z,0.2nm,0.3s,baz=340,slow=13,SNR=15								
	comp=Z,1.7nm,0.6s								
LSH	**Leshukonskoye**	**15.94**	**100**	P	**Pn**	**22 53 01.5**	**-2.0**		
KLMR	**Klimovskoe**	**17.41**	**117**	P	**P**	**22 53 24.8**	**+1.3**		
PRGR	**Permogore**	**18.43**	**108**	*e*P	**P**	**22 53 33.0**	**-1.7**		
AKASG	**Malin Array Be**	**24.46**	**144**	P	**P**	**22 54 40.5**	**+2.2**		
	comp=Z,1.3nm,0.7s,baz=352,slow=10,SNR=2.6								
	comp=Z,1.3nm,0.7s								
YKA	**Yellowknife Ar**	**39.12**	**321**	P	**P**	**22 56 48.3**	**+1.9**		
	comp=Z,0.2nm,0.7s,baz=21,slow=9.8,SNR=4.4								
	comp=Z,0.2nm,0.7s								
ILAR	**Eielson Array**	**41.35**	**343**	P	**P**	**22 57 05.9**	**+1.0**		
	comp=Z,0.3nm,0.8s,baz=11,slow=7.2,SNR=4.5								
	comp=Z,0.3nm,0.8s								
MKAR	**Makanchi Array**	**41.92**	**85**	P	**P**	**22 57 11.4**	**+1.5**		
	comp=Z,0.5nm,0.8s,baz=116,slow=4.7,SNR=1.9								
	comp=Z,0.5nm,0.9s								
PDAR	**Pinedale Array**	**56.54**	**308**	P	**P**	**22 59 06.0**	**+4.1**		
	comp=Z,0.7nm,0.9s,baz=49,slow=4.5,SNR=5.1								
	comp=Z,0.7nm,0.9s								

IDC 25 22:52:38.0±1.5, 6°36S×143°65E, h0km, mb3.7/2, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=44.3km s-min=27.0km az=61.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.61**	**131**	Pn	Pn	22 53 49.2	+0.2
	5.8nm,0.4s,baz=334,slow=3.7,SNR=2.3						
PMG				Sn	Sn	22 54 43.8	+0.5
	1.9nm,0.3s,baz=62,slow=3.0,SNR=3.9						
WRA	**Warramunga Arr**	**16.25**	**213**	Pn	Pn	22 56 26.8	-1.0
	0.2nm,0.3s,baz=38,slow=13,SNR=2.3						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**19.59**	**208**	P	P	22 57 08.5	+0.5
	4.3nm,0.9s,baz=36,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**75.67**	**322**	P	P	23 04 25.1	-0.2
	0.4nm,0.7s,baz=100,slow=7.3,SNR=5.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**85.11**	**325**	P	P	23 05 16.1	+0.3
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.3						
	0.4nm,0.6s						

*KRSC **25** 22:57:08.5±0.9, 54°.06N×159°.19E, h182km±10km, Ml4.5*
*MOS **25** 22:57:08.7±0.8, 54°.15N×158°.79E, h182km, mb4.4/28, Error ellipse: s-maj=9.1km s-min=4.0km az=84.5*
*IDC **25** 22:57:09.8±0.6, 54°.31N×158°.66E, h167km±8km, mb3.9/31, mbtmp4.4/35, Error ellipse: s-maj=14.2km s-min=8.7km az=169.0*
*NEIC **25** 22:57:09.7±0.7, 54°.35N±0°.05×158°.5E±0°.2, h162km±4km, mb4.4/54, Error ellipse: s-maj=13.2km s-min=7.0km az=86.0*

ISC 25 22:57:09.5±0.5, 54°10N±0°.04×158°92E±0°.04, h177km±4km, n276, σ0°98/321, mb4.3/90, 19C-11D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.32**	**101**	PN	**Pn**	**22 57 33.2**	**-0.1**
KII	**Karymskiy**	**0.32**	**101**	*e*P	**Pn**	**22 57 33.2**	**-0.1**
GNL	**Ganaly**	**0.71**	**236**	PN	**Pn**	**22 57 35.6**	**+0.6**
GNL				S	**Sn**	**22 57 55.5**	**+0.9**
GNL	**Ganaly**	**0.71**	**236**	*e*P	**Pn**	**22 57 35.6**	**+0.6**
GNL				*e*S	**Sn**	**22 57 55.5**	**+0.9**
KRX	**Arik**	**0.76**	**193**	PN	**Pn**	**22 57 35.9**	**+0.5**
KRX	**Arik**	**0.76**	**193**	*e*P	**Pn**	**22 57 35.9**	**+0.5**
KRER	**Koryakskii**	**0.80**	**188**	PN	**Pn**	**22 57 36.2**	**+0.5**
KRER	**Koryakskii**	**0.80**	**188**	*e*P	**Pn**	**22 57 36.2**	**+0.5**
KOK	**Koryaka**	**0.82**	**192**	PN	**Pn**	**22 57 36.5**	**+0.7**
KOK	**Koryaka**	**0.82**	**192**	*e*P	**Pn**	**22 57 36.5**	**+0.7**
SMAR	**Somma**	**0.84**	**185**	PN	**Pn**	**22 57 36.5**	**+0.5**
SMAR	**Somma**	**0.84**	**185**	*e*P	**Pn**	**22 57 36.5**	**+0.5**
AVH	**Avacha**	**0.84**	**188**	PN	**Pn**	**22 57 36.5**	**+0.7**
AVH	**Avacha**	**0.84**	**188**	*e*P	**Pn**	**22 57 36.5**	**+0.7**
UGLR	**Uglovaya**	**0.89**	**184**	PN	**Pn**	**22 57 36.6**	**+0.4**
UGLR	**Uglovaya**	**0.89**	**184**	*e*P	**Pn**	**22 57 36.6**	**+0.4**
NLC	**Nalytchevo**	**0.96**	**165**	PN	**Pn**	**22 57 36.2**	**-0.3**
NLC				S	**Sn**	**22 57 56.8**	**-0.5**
NLC	**Nalytchevo**	**0.96**	**165**	*e*P	**Pn**	**22 57 36.2**	**-0.3**
NLC				*e*S	**Sn**	**22 57 56.8**	**-0.5**
INSR	**Institute**	**1.05**	**191**	*e*P	**Pn**	**22 57 37.6**	**+0.4**
INSR				*e*S	**Sn**	**22 57 59.3**	**+0.8**
DALK	**Dalny**	**1.07**	**186**	PN	**Pn**	**22 57 37.5**	**+0.1**
DALK				S	**Sn**	**22 57 58.9**	**+0.1**
DALK	**Dalny**	**1.07**	**186**	*e*P	**Pn**	**22 57 37.5**	**+0.1**
DALK				*e*S	**Sn**	**22 57 58.9**	**+0.1**
PET	**Petropavlovsk**	**1.09**	**189**	Pn	**Pn**	**22 57 37.8**	**+0.3**
PET	**Petropavlovsk**	**1.09**	**189**	*e*PN	**Pn**	**22 57 37.9**	**+0.4**
PET				*e*S	**Sn**	**22 57 59.1**	**+0.1**
PET				pmax	pmax		
	comp=Z,2μm,0.4s						
PET				smax	smax		
	comp=N,2μm,0.7s						
PET				smax	smax		
	comp=E,3μm,1.1s						
PET	**Petropavlovsk**	**1.09**	**189**	*e*P	**Pn**	**22 57 37.8**	**+0.4**
PET				*e*S	**Sn**	**22 57 59.3**	**+0.3**
SPN	**Mys Shipunski**	**1.20**	**146**	PN	**Pn**	**22 57 37.1**	**-1.3**
SPN				S	**Sn**	**22 57 58.6**	**-2.1**
SPN	**Mys Shipunski**	**1.20**	**146**	*e*P	**Pn**	**22 57 37.1**	**-1.3**
SPN				*e*S	**Sn**	**22 57 58.6**	**-2.1**
PEA0B	**Petropavlovsk-**	**1.23**	**217**		**Pn**	**22 57 39.2**	**+0.5**
PEA0B				Sn	**Sn**	**22 58 01.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**1.23**	**217**	PN	**Pn**	**22 57 39.2**	**+0.5**
PEA0B						22 58 01.4	
PETK	**Petropavlovsk-**	**1.23**	**217**	P	**Pn**	**22 57 38.2**	**-0.5**
	comp=E,107nm,0.5s,baz=66,slow=15,SNR=276						
PETK				S	**Sn**	**22 58 01.5**	**+0.3**
	comp=E,63nm,0.6s,baz=75,slow=18,SNR=5.3						
KRMR	**Karymshinskiy**	**1.35**	**201**	PN	**Pn**	**22 57 40.2**	**+0.4**
KRMR				S	**Sn**	**22 58 03.6**	**+0.5**
KRMR	**Karymshinskiy**	**1.35**	**201**	*e*P	**Pn**	**22 57 40.2**	**+0.4**
KRMR				*e*S	**Sn**	**22 58 03.6**	**+0.5**
TUMR	**Tumrok**	**1.39**	**30**	PN	**Pn**	**22 57 40.1**	**0.0**
TUMR				S	**Sn**	**22 58 03.8**	**-0.1**
TUMR	**Tumrok**	**1.39**	**30**	*e*P	**Pn**	**22 57 40.7**	**+0.6**
TUMR				*e*S	**Sn**	**22 58 04.6**	**+0.6**
TUMD	**Tumrok D**	**1.40**	**37**	*e*P	**Pn**	**22 57 40.1**	**-0.1**
TUMD				*e*S	**Sn**	**22 58 03.8**	**-0.2**
APC	**Apacha**	**1.58**	**223**	PN	**Pn**	**22 57 43.1**	**+1.3**
APC				S	**Sn**	**22 58 08.7**	**+1.9**
APC	**Apacha**	**1.58**	**223**	*e*P	**Pn**	**22 57 43.1**	**+1.3**
APC				*e*S	**Sn**	**22 58 08.7**	**+1.9**
GRL	**Gorelyy**	**1.63**	**199**	PN	**Pn**	**22 57 43.6**	**+1.1**
GRL				S	**Sn**	**22 58 10.4**	**+2.3**
GRL	**Gorelyy**	**1.63**	**199**	*e*P	**Pn**	**22 57 43.6**	**+1.1**
GRL				*e*S	**Sn**	**22 58 10.4**	**+2.3**
MTVR	**Mutnovka**	**1.68**	**196**	PN	**Pn**	**22 57 44.0**	**+1.0**
MTVR	**Mutnovka**	**1.68**	**196**	*e*P	**Pn**	**22 57 44.0**	**+1.0**
RUS	**Russkaya**	**1.69**	**189**	PN	**Pn**	**22 57 42.8**	**-0.2**
RUS				S	**Sn**	**22 58 07.8**	**-1.0**
RUS	**Russkaya**	**1.69**	**189**	*e*P	**Pn**	**22 57 42.8**	**-0.2**
RUS				*e*S	**Sn**	**22 58 07.8**	**-1.0**
ASAK	**Asacha**	**1.82**	**200**	PN	**Pn**	**22 57 45.7**	**+1.2**
ASAK				S	**Sn**	**22 58 13.9**	**+2.4**
ASAK	**Asacha**	**1.82**	**200**	*e*P	**Pn**	**22 57 45.7**	**+1.2**
ASAK				*e*S	**Sn**	**22 58 13.9**	**+2.4**
KMNR	**Kamenistaya**	**1.83**	**24**	PN	**Pn**	**22 57 45.0**	**+0.5**
KMNR				S	**Sn**	**22 58 13.1**	**+1.4**
KMNR	**Kamenistaya**	**1.83**	**24**	*e*P	**Pn**	**22 57 45.0**	**+0.5**
KMNR				*e*S	**Sn**	**22 58 13.1**	**+1.4**
ESO	**Esso**	**1.84**	**356**	PN	**Pn**	**22 57 44.8**	**+0.3**
ESO	**Esso**	**1.84**	**356**	*e*P	**Pn**	**22 57 44.8**	**+0.3**
KPT	**Kopyto**	**2.02**	**21**	PN	**Pn**	**22 57 46.4**	**-0.1**
KPT	**Kopyto**	**2.02**	**21**	*e*P	**Pn**	**22 57 46.4**	**-0.1**
KIRR	**Kirishev**	**2.03**	**23**	PN	**Pn**	**22 57 46.7**	**0.0**
KIRR	**Kirishev**	**2.03**	**23**	*e*P	**Pn**	**22 57 46.7**	**0.0**
KOZ	**Kozyrevsk**	**2.04**	**15**	PN	**Pn**	**22 57 46.9**	**+0.2**
KOZ	**Kozyrevsk**	**2.04**	**15**	*e*P	**Pn**	**22 57 46.9**	**+0.2**
BZMR	**Bezymyannaya**	**2.05**	**25**	PN	**Pn**	**22 57 47.2**	**+0.3**
BZMR				S	**Sn**	**22 58 17.0**	**+0.9**
BZMR	**Bezymyannaya**	**2.05**	**25**	*e*P	**Pn**	**22 57 47.2**	**+0.3**
BZMR				*e*S	**Sn**	**22 58 17.0**	**+0.9**
BZWR	**Bezymyannyi-We**	**2.08**	**25**	PN	**Pn**	**22 57 47.5**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.08**	**25**	*e*P	**Pn**	**22 57 47.5**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**2.11**	**28**	PN	**Pn**	**22 57 48.0**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**2.11**	**28**	*e*P	**Pn**	**22 57 48.0**	**+0.4**
ZLN	**Zelenaya**	**2.21**	**29**	PN	**Pn**	**22 57 49.4**	**+0.8**
ZLN	**Zelenaya**	**2.21**	**29**	*e*P	**Pn**	**22 57 49.4**	**+0.8**
LGNR	**Loginova**	**2.23**	**26**	PN	**Pn**	**22 57 49.7**	**+0.6**
LGNR	**Loginova**	**2.23**	**26**	*e*P	**Pn**	**22 57 49.7**	**+0.6**
SRDR	**Sredinnyy**	**2.27**	**11**	PN	**Pn**	**22 57 49.6**	**+0.3**
SRDR	**Sredinnyy**	**2.27**	**11**	*e*P	**Pn**	**22 57 49.6**	**+0.3**
KRSR	**Krestovskiy**	**2.33**	**23**	PN	**Pn**	**22 57 49.9**	**0.0**
KRSR	**Krestovskiy**	**2.33**	**23**	*e*P	**Pn**	**22 57 49.9**	**0.0**
KDTR	**Khodutka, Kamc**	**2.35**	**193**	PN	**Pn**	**22 57 49.6**	**-0.5**
KDTR				S	**Sn**	**22 58 20.3**	**-1.4**
KDTR	**Khodutka, Kamc**	**2.35**	**193**	*e*P	**Pn**	**22 57 49.6**	**-0.5**
KDTR				*e*S	**Sn**	**22 58 20.3**	**-1.4**
KLY	**Klyuchi**	**2.43**	**23**	PN	**Pn**	**22 57 52.2**	**+1.2**
KLY	**Klyuchi**	**2.43**	**23**	*e*P	**Pn**	**22 57 52.2**	**+1.2**
SRKR	**Sorokina**	**2.87**	**26**	PN	**Pn**	**22 57 57.0**	**+0.7**
SRKR	**Sorokina**	**2.87**	**26**	*e*P	**Pn**	**22 57 57.0**	**+0.7**
PAU	**Pauzhetka**	**2.93**	**207**	PN	**Pn**	**22 57 59.3**	**+2.3**
PAU	**Pauzhetka**	**2.93**	**207**	*e*P	**Pn**	**22 57 59.3**	**+2.3**
KBG	**Krutoberegovo**	**3.06**	**44**	PN	**Pn**	**22 57 57.8**	**-0.8**
KBG	**Krutoberegovo**	**3.06**	**44**	*e*P	**Pn**	**22 57 57.8**	**-0.8**
TIGL	**Tigil**	**3.68**	**358**	*e*P	**Pn**	**22 58 06.5**	**+0.3**
SKR	**Severo-Kuril's**	**3.83**	**208**	⇑*i* PN	**Pn**	**22 58 09.5**	**+1.3**
SKR				*i* S	**Sn**	**22 58 54.4**	**+0.3**
SKR				pmax	pmax		
	comp=Z,598nm,0.8s						
SKR				smax	smax		
	comp=N,453nm,0.6s						
SKR				smax	smax		
	comp=E,694nm,0.7s						
SKR				MLR	MLR		
	comp=Z,1μm,13.0s						
BKI	**Bering**	**4.24**	**72**	PN	**Pn**	**22 58 12.0**	**-1.4**
BKI	**Bering**	**4.24**	**72**	*e*P	**Pn**	**22 58 12.0**	**-1.4**
PALN	**Palana**	**5.04**	**6**	PN	**Pn**	**22 58 24.1**	**+0.4**
PALN	**Palana**	**5.04**	**6**	*e*P	**Pn**	**22 58 24.1**	**+0.4**
SHEM	**Shemya Is, Ala**	**9.17**	**92**	P	**Pn**	**22 59 20.6**	**+2.6**
	comp=Z,78nm,0.8s,baz=274,slow=18,SNR=1.7						
SHEM				S	**Sn**	**23 00 58.6**	**-1.4**
	comp=Z,62nm,0.6s,baz=302,slow=11,SNR=2.2						
SEY	**Seymchan**	**9.49**	**342**	*i* PN	**Pn**	**22 59 22.0**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**13.20**	**226**	*i* PN	**Pn**	**23 00 09.1**	**-1.0**
BILL	**Bilibino**	**14.42**	**11**	Pn	**Pn**	**23 00 24.0**	**-1.1**
BILL	**Bilibino**	**14.42**	**11**	⇑*e*P	**P**	**23 00 27.7**	**+0.7**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ASAJ	**Asahikawa**	**14.60**	**233**	P	**P**	**23 00 29.8**	**+0.6**
	comp=Z,14nm,0.5s,baz=81,slow=7.3,SNR=8.0						
ERM	**Erimo**	**15.99**	**227**	Pn	**Pn**	**23 00 43.4**	**-1.2**
ERM	**Erimo**	**15.99**	**227**	*i* P	**Pn**	**23 00 43.0**	**-1.6**
YAK	**Yakutsk**	**17.26**	**309**		**P**	**23 00 56.2**	**-2.2**
YAK	**Yakutsk**	**17.26**	**309**	*e*P	**P**	**23 00 57.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,26nm,0.7s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK	**Yakutsk**	**17.26**	**309**	P	**P**	**23 00 58.4**	**+0.1**
	comp=E,64nm,0.6s,baz=305,slow=0.2,SNR=15						
KLR	**Kul'dur**	**17.49**	**265**	*i* P	**Pn**	**23 01 02.5**	**0.0**
KLR				pmax	pmax		
	comp=Z,12nm,1.2s						
KLR	**Kul'dur**	**17.49**	**265**	P	**Pn**	**23 01 02.2**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=66,slow=9.6,SNR=19						
ZEA	**Zeya**	**18.58**	**282**	*e*P	**P**	**23 01 13.5**	**+0.6**
HEH	**HeiHe**	**19.61**	**272**	*e*P	**P**	**23 01 23.5**	**-0.5**
HEH				pmax	pmax		
	comp=Z,13nm,0.7s						
USRK	**Ussuriysk Ar.**	**20.09**	**252**	P	**P**	**23 01 30.4**	**+1.2**
	comp=Z,2.0nm,0.6s,baz=52,slow=13,SNR=2.5						
	comp=Z,2.0nm,0.6s						
BNX	**BinXian**	**21.80**	**260**	⇑P	**P**	**23 01 47.0**	**-0.3**
BNX				pmax	pmax		
	comp=Z,22nm,1.1s						
TIXI	**Tiksi**	**21.88**	**335**	P	**P**	**23 01 44.9**	**-2.9**
TIXI	**Tiksi**	**21.88**	**335**	*ce*P	**P**	**23 01 45.8**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TIXI	**Tiksi**	**21.88**	**335**	P	**P**	**23 01 46.9**	**-0.8**
	comp=Z,4.5nm,0.6s,baz=133,slow=8.5,SNR=16						
	comp=Z,4.5nm,0.6s						
MJB9	**Matsu-Tunnel**	**22.67**	**228**	P	**P**	**23 01 57.3**	**+1.6**
MJB9				IAmb	IAmb	23 02 02.3	
	comp=Z,12nm,0.6s						
MAJO	**Matsushiro**	**22.67**	**228**	P	**P**	**23 01 56.7**	**+1.0**
MAJO				IAmb	IAmb	23 02 01.4	
	comp=Z,13nm,0.6s						
MAJO	**Matsushiro**	**22.67**	**228**	*i* P	**P**	**23 01 56.4**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MJAR	**Matsushiro Arr**	**22.67**	**228**	P	**P**	**23 01 56.7**	**+1.0**
	comp=Z,4.4nm,0.7s,baz=16,slow=9.7,SNR=12						
	comp=Z,4.4nm,0.7s						
C19K	**Lookout Ridge**	**24.13**	**36**	P	**P**	**23 02 08.5**	**-0.2**
BOD	**Bodaibo**	**25.06**	**297**	*e*P	**P**	**23 02 16.6**	**-0.5**
BOD				pmax	pmax		
	comp=Z,15nm,0.8s						
K20K	**Telida**	**25.52**	**50**	P	**P**	**23 02 23.0**	**+1.7**
KSRS	**Korea Array**	**26.98**	**245**	P	**P**	**23 02 36.4**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=36,slow=9.3,SNR=5.2						
	comp=Z,1.1nm,0.5s						
C23K	**Itkillik River**	**27.38**	**36**	P	**P**	**23 02 38.7**	**+0.9**
C23K				IAmb	IAmb	23 02 44.9	
	comp=Z,9.5nm,1.2s						
D24K	**Happy Valley**	**27.91**	**37**	P	**P**	**23 02 42.8**	**+0.3**
D24K				IAmb	IAmb	23 02 45.6	
	comp=Z,5.0nm,0.5s						
IL31		**28.62**	**47**	P	**P**	**23 02 50.2**	**+1.5**
ILAR	**Eielson Array**	**28.62**	**47**	P	**P**	**23 02 49.5**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=273,slow=7.4,SNR=22						
	comp=Z,1.6nm,0.8s						
D25K	**Kavik River**	**28.80**	**37**	P	**P**	**23 02 51.5**	**+1.0**
D25K				IAmb	IAmb	23 02 52.8	
	comp=Z,8.2nm,0.6s						
J25K	**Salcha River,**	**29.28**	**47**	P	**P**	**23 02 55.0**	**+0.2**
E29M	**Blow River**	**31.89**	**39**	P	**P**	**23 03 18.4**	**+0.8**
EPYK	**Eagle Plains**	**32.62**	**42**	P	**P**	**23 03 25.5**	**+1.5**
EPYK				IAmb	IAmb	23 03 25.8	
	comp=Z,5.8nm,1.1s						
I30M	**Mount Dempster**	**32.97**	**44**	P	**P**	**23 03 28.4**	**+1.2**
SONM	**Songino Array**	**33.01**	**281**	P	**P**	**23 03 26.3**	**-1.4**
SONM	**Songino Array**	**33.01**	**281**	P	**P**	**23 03 26.8**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=52,slow=9.0,SNR=4.9						
SONM				PcP	**PcP**	**23 06 08.2**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=57,slow=2.7,SNR=4.9						
	comp=Z,1.1nm,0.3s						
INK	**Inuvik**	**33.51**	**38**	P	**P**	**23 03 32.8**	**+1.2**
INK				IAmb	IAmb	23 03 33.6	
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**33.51**	**38**	P	**P**	**23 03 32.8**	**+1.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
F31M	**Tsiigehtchic**	**33.58**	**40**	P	**P**	**23 03 33.5**	**+1.3**
F31M				IAmb	IAmb	23 03 35.1	
	comp=Z,5.9nm,0.6s						
HHC	**Hu-ho-hao-te**	**33.98**	**267**	*e*P	**P**	**23 03 35.5**	**-0.7**
HHC				pP	pP	23 04 04.5	-8.7
HHC				sP	sP	23 04 28.8	-4.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,95nm,7.1s						
C36M	**Paulatuk**	**36.63**	**35**	P	**P**	**23 03 59.4**	**+1.2**
ZAA0	**Zalesovo Array**	**41.65**	**301**	P	**P**	**23 04 39.4**	**-0.7**
ZALV	**Zalesovo Beam**	**41.65**	**301**	P	**P**	**23 04 38.0**	**-2.0**
ZALV	**Zalesovo Beam**	**41.65**	**301**	P	**P**	**23 04 39.4**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=54,slow=7.5,SNR=9.1						
ZALV				PcP	**PcP**	**23 06 34.2**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=44,slow=6.6,SNR=3.7						
	comp=Z,1.5nm,0.4s						
LZH	**Lanzhou**	**41.67**	**267**	*e*P	**P**	**23 04 40.3**	**-0.3**
LZH				pP	pP	23 05 14.3	-4.6
LZH				sP	sP	23 05 31.0	-7.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA	**Gaotai**	**41.82**	**274**	P	**P**	**23 04 42.3**	**+0.6**
GTA				pm

ARSB	**Arslanbob**	**55.74**	**295**	P	**P**	**23 06 27.4**	**-0.2**
ARSB	**Arslanbob**	**55.74**	**295**	P	**P**	**23 06 27.4**	**-0.2**
ARSB				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KK31	**Karatay Array**	**55.79**	**298**	P	**P**	**23 06 26.7**	**-1.2**
KK31				IAmb	IAmb	23 06 27.5	
	comp=Z,3.2nm,0.8s						
KK31	**Karatay Array**	**55.79**	**298**	P	**P**	**23 06 26.7**	**-1.2**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**55.79**	**298**	P	**P**	**23 06 26.7**	**-1.2**
KKAR				IAmb	IAmb	23 06 27.5	
	comp=Z,3.1nm,0.8s						
KKAR	**Karatay Array**	**55.79**	**298**	P	**P**	**23 06 26.7**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**56.05**	**70**	P	**P**	**23 06 32.1**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=302,slow=7.3,SNR=6.3						
	comp=Z,0.8nm,0.6s						
ABKAR	**Akbulak array**	**56.62**	**309**	P	**P**	**23 06 32.8**	**-0.7**
ABKAR				IAmb	IAmb	23 06 33.9	
	comp=Z,4.6nm,0.6s						
ABKAR	**Akbulak array**	**56.62**	**309**	P	**P**	**23 06 32.7**	**-0.8**
PD31	**Pinedale Array**	**57.64**	**61**	P	**P**	**23 06 43.3**	**+2.1**
PD31				IAmb	IAmb	23 06 43.6	
	comp=Z,2.4nm,0.5s						
PDAR	**Pinedale Array**	**57.64**	**61**	P	**P**	**23 06 43.1**	**+2.0**
	comp=Z,1.8nm,0.5s,baz=355,slow=3.1,SNR=36						
	comp=Z,1.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**57.72**	**256**	PcP	**PcP**	**23 07 33.7**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=6.6,slow=2.9,SNR=1.7						
BTK	**Batken**	**57.79**	**295**	P	**P**	**23 06 41.2**	**-0.9**
BTK				IAmb	IAmb	23 06 42.1	
	comp=Z,4.9nm,0.8s						
BTK	**Batken**	**57.79**	**295**	P	**P**	**23 06 41.2**	**-0.9**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULM	**Lac du Bonnet**	**58.64**	**47**	P	**P**	**23 06 48.6**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=328,slow=7.3,SNR=6.8						
	comp=Z,1.3nm,0.3s						
FINES	**FINESS Array B**	**58.92**	**336**	P	**P**	**23 06 49.0**	**-0.3**
	comp=Z,5.6nm,0.5s,baz=36,slow=8.3,SNR=89						
FINES				PcP	**PcP**	**23 07 36.6**	**0.0**
	comp=Z,1.2nm,0.7s,baz=54,slow=5.8,SNR=1.7						
	comp=Z,5.6nm,0.5s						
K22A	**Casper**	**59.27**	**59**	P	**P**	**23 06 54.4**	**+2.1**
BELG	**Belogornoye**	**59.50**	**318**	*i* P	**P**	**23 06 52.4**	**-1.1**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SIMJ	**Simiganj**	**59.77**	**295**	P	**P**	**23 06 54.0**	**-1.8**
SIMJ				IAmb	IAmb	23 06 55.3	
	comp=Z,4.3nm,0.7s						
HMU	**Henry Mountain**	**60.52**	**65**	P	**P**	**23 07 03.6**	**+2.5**
HMU				IAmb	IAmb	23 07 03.9	
	comp=Z,5.1nm,0.6s						
NIL	**Nilore**	**61.13**	**288**	P	**P**	**23 07 04.5**	**-0.4**
NIL	**Nilore**	**61.13**	**288**	P	**P**	**23 07 04.5**	**-0.4**
NIL				pmax	pmax		
	comp=Z,12nm,1.0s						
NB2	**NORSAR Subarra**	**62.38**	**343**	P	**P**	**23 07 12.3**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**62.38**	**343**	P	**P**	**23 07 12.1**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=25,slow=6.6,SNR=11						
	comp=Z,2.1nm,0.7s						
HFS	**Hagfors**	**62.78**	**341**	P	**P**	**23 07 14.7**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=39,slow=5.7,SNR=18						
HFS				PcP	**PcP**	**23 07 52.2**	**0.0**
	comp=Z,2.5nm,0.8s,baz=80,slow=9.2,SNR=1.6						
	comp=Z,2.6nm,0.5s						
SCHQ	**Schefferville**	**65.08**	**27**	P	**P**	**23 07 30.6**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=358,slow=7.7,SNR=14						
	comp=Z,1.8nm,0.3s						
GEYT	**Alibeck**	**65.96**	**302**	P	**P**	**23 07 36.1**	**-0.4**
	comp=Z,3.6nm,0.7s						
	comp=Z,3.6nm,0.7s						
AKASG	**Malin Array Be**	**67.39**	**328**	P	**P**	**23 07 44.1**	**-1.1**
	comp=Z,2.3nm,0.3s,baz=29,slow=6.9,SNR=16						
AKASG				PcP	**PcP**	**23 08 10.5**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=28,slow=4.0,SNR=4.0						
	comp=Z,2.3nm,0.3s						
KIEV	**Kiev**	**67.40**	**328**	⇑P	**P**	**23 07 44.5**	**-0.8**
KIV	**Kislovodsk**	**68.23**	**316**	⇓P	**P**	**23 07 51.3**	**+0.6**
KIV	**Kislovodsk**	**68.23**	**316**	P	**P**	**23 07 50.7**	**0.0**
KIV				IAmb	IAmb	23 07 52.9	
	comp=Z,7.3nm,0.7s						
KIV	**Kislovodsk**	**68.23**	**316**	*eP*	**P**	**23 07 50.6**	**-0.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	**Khabaz**	**68.33**	**315**	P	**P**	**23 07 51.5**	**+0.3**
	comp=Z,9.9nm,0.9s,baz=90,slow=3.9,SNR=21						
	comp=Z,9.9nm,0.9s						
ONI	**Oni**	**69.03**	**314**	P	**P**	**23 07 56.4**	**+0.7**
ONI				IAmb	IAmb	23 07 57.0	
	comp=Z,4.9nm,0.7s						
ONI	**Oni**	**69.03**	**314**	P	**P**	**23 07 56.4**	**+0.7**
ONI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SORM	**Soroca**	**69.92**	**327**	⇑P	**P**	**23 07 59.8**	**-1.1**
EKA	**Eskdalemuir Ar**	**69.94**	**349**	P	**P**	**23 08 00.9**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=18,slow=5.5,SNR=32						
	comp=Z,2.2nm,0.3s						
AKH	**Akhalkalaki**	**69.99**	**314**	P	**P**	**23 08 01.9**	**+0.2**
AKH	**Akhalkalaki**	**69.99**	**314**	P	**P**	**23 08 01.9**	**+0.2**
AKH				pmax	pmax		
	comp=Z,17nm,0.8s						
KWP	**Kalwaria Pacla**	**70.28**	**331**	P	**P**	**23 08 02.7**	**-0.4**
KWP	**Kalwaria Pacla**	**70.28**	**331**	P	**P**	**23 08 02.7**	**-0.4**
KWP				pmax	pmax		
	comp=Z,19nm,1.1s						
LOOK	**Love County**	**70.60**	**59**	P	**P**	**23 08 07.3**	**+2.0**
NRDL	**Niedersach Rie**	**70.65**	**340**	*eP*	**P**	**23 08 05.9**	**+0.7**
	baz=19,slow=6.0						
TX31	**Lajitas Ar. Si**	**70.88**	**66**	P	**P**	**23 08 09.0**	**+1.8**
TXAR	**Lajitas Array**	**70.88**	**66**	P	**P**	**23 08 09.2**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=295,slow=5.1,SNR=17						
	comp=Z,0.9nm,0.4s						
CLL	**Collm**	**71.16**	**338**	P	**P**	**23 08 08.4**	**0.0**
CLL				IAmb	IAmb	23 08 09.1	
	comp=Z,7.5nm,0.8s						
CLL	**Collm**	**71.16**	**338**	*i* P	**P**	**23 08 08.1**	**-0.3**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	**Collm**	**71.16**	**338**	*i* P	**P**	**23 08 08.1**	**-0.3**
	comp=Z,9.0nm,1.0s						
CLL	**Collm**	**71.16**	**338**	*eP*	**P**	**23 08 08.6**	**+0.2**
	comp=Z,8.0nm,0.9s,baz=19,slow=6.0						
CLZ	**Clausthal**	**71.21**	**340**	*eP*	**P**	**23 08 09.7**	**+1.0**
	comp=Z,7.9nm,0.9s,baz=19,slow=6.0						
BUR08	**Bucovina Ar. S**	**71.33**	**329**	P	**P**	**23 08 09.5**	**-0.2**
BUR08				IAmb	IAmb	23 08 11.2	
	comp=Z,6.1nm,1.2s						
BURAR	**Bucovina Array**	**71.35**	**329**	⇑P	**P**	**23 08 09.5**	**-0.2**
BURAR	**Bucovina Array**	**71.35**	**329**	⇑P	**P**	**23 08 09.5**	**-0.2**
LANS	**Liptovska Anna**	**71.60**	**333**	*eP*	**P**	**23 08 12.3**	**+1.1**
LANS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LANS	**Liptovska Anna**	**71.60**	**333**	*eP*	**P**	**23 08 12.2**	**+1.1**
MOX	**Moxa**	**72.09**	**339**	*eP*	**P**	**23 08 14.3**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=19,slow=6.0						
VRAC	**Vranov**	**72.19**	**335**	⇑P	**P**	**23 08 14.7**	**+0.1**
VRAC	**Vranov**	**72.19**	**335**	⇑P	**P**	**23 08 14.7**	**+0.1**
VYHS	**Vyhne**	**72.37**	**333**	*eP*	**P**	**23 08 16.2**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VYHS	**Vyhne**	**72.37**	**333**	*eP*	**P**	**23 08 16.2**	**+0.5**
CBBR	**Cluj-Babes-Bol**	**72.62**	**330**	⇑P	**P**	**23 08 14.4**	**-2.8**
COVR	**Voineasa-Covas**	**72.63**	**327**	⇓P	**P**	**23 08 18.2**	**+0.9**
MARR	**Marisel-Cluj**	**72.83**	**330**	⇓P	**P**	**23 08 17.5**	**-1.0**
DRGR		**72.84**	**330**	⇓P	**P**	**23 08 18.4**	**-0.2**
DRGR		**72.84**	**330**	⇓P	**P**	**23 08 18.4**	**-0.2**
GURO	**Guroymak-BITLI**	**72.98**	**313**	P	**P**	**23 08 18.8**	**-0.8**
MLR	**Muntele Rosu**	**73.03**	**327**	⇓P	**P**	**23 08 20.2**	**+0.4**
MLR	**Muntele Rosu**	**73.03**	**327**	⇓P	**P**	**23 08 20.2**	**+0.4**
GRF	**Grafenberg Arr**	**73.07**	**339**	*eP*	**P**	**23 08 20.5**	**+0.7**
	comp=Z,7.2nm,0.8s,baz=19,slow=6.0						
KHC	**Kasperske Hory**	**73.08**	**337**	P	**P**	**23 08 19.6**	**-0.2**
KHC				IAmb	IAmb	23 08 21.3	
	comp=Z,4.6nm,0.9s						
KHC	**Kasperske Hory**	**73.08**	**337**	*eP*	**P**	**23 08 20.5**	**+0.6**
KHC	**Kasperske Hory**	**73.08**	**337**	*eP*	**P**	**23 08 20.5**	**+0.6**
AHRW	**Bad Neuenahr-A**	**73.09**	**342**	*eP*	**P**	**23 08 20.3**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=19,slow=6.0						
WET	**Wettzell**	**73.22**	**337**	*eP*	**P**	**23 08 21.5**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=19,slow=6.0						
GEC2	**GERESS Array S**	**73.32**	**337**	*eP*	**P**	**23 08 21.2**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=19,slow=6.0						
GERES	**GERESS Array B**	**73.32**	**337**	P	**P**	**23 08 21.5**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=23,slow=7.4,SNR=4.2						
	comp=Z,1.1nm,0.6s						
VOIR		**73.36**	**328**	⇑P	**P**	**23 08 21.5**	**-0.1**
VOIR		**73.36**	**328**	⇑P	**P**	**23 08 21.5**	**-0.1**
ARR	**Arges**	**73.55**	**328**	⇑P	**P**	**23 08 23.6**	**+0.9**
SIRR	**Siria**	**73.62**	**331**	⇑P	**P**	**23 08 23.5**	**+0.4**
CONA	**Conrad Observa**	**73.65**	**335**	*eP*	**P**	**23 08 23.8**	**+0.4**
	comp=Z,1.9nm,0.6s						
SURR	**Surduc**	**73.95**	**330**	⇑P	**P**	**23 08 24.3**	**-0.7**
GZR	**Gura Zlata**	**74.09**	**329**	⇓P	**P**	**23 08 25.8**	**-0.1**
GZR	**Gura Zlata**	**74.09**	**329**	⇓P	**P**	**23 08 25.8**	**-0.1**
BZS	**Buzias**	**74.23**	**330**	⇑P	**P**	**23 08 26.5**	**-0.1**
BZS	**Buzias**	**74.23**	**330**	⇑P	**P**	**23 08 26.5**	**-0.1**
BIOA	**Bad Ischl, Aus**	**74.41**	**336**	*eP*	**P**	**23 08 27.8**	**+0.2**
	comp=Z,0.9nm,0.4s						
SOKA	**Soboth**	**75.02**	**335**	*eP*	**P**	**23 08 31.6**	**+0.4**
	comp=Z,2.6nm,0.4s						
KBA	**Koelnbreinsper**	**75.06**	**336**	*eP*	**P**	**23 08 32.1**	**+0.5**
	comp=Z,5.0nm,0.5s						
FRGS	**Fruska Gora**	**75.17**	**331**	⇑P	**P**	**23 08 32.1**	**+0.1**
WATA	**Walderalm**	**75.22**	**338**	*i* P	**P**	**23 08 32.7**	**+0.3**
	comp=Z,1.8nm,0.4s						
WTTA	**Wattenberg**	**75.28**	**338**	*i* P	**P**	**23 08 33.3**	**+0.5**
	comp=Z,2.9nm,0.4s						
MOTA	**Moosalm**	**75.32**	**338**	*eP*	**P**	**23 08 33.2**	**+0.2**
	comp=Z,1.8nm,0.4s						
BRTR	**Keskin Array B**	**75.40**	**319**	P	**P**	**23 08 33.4**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=20,slow=3.6,SNR=11						
	comp=Z,1.7nm,0.6s						
SQTA	**Sanki Quirin**	**75.41**	**338**	*i* P	**P**	**23 08 34.1**	**+0.6**
	comp=Z,2.4nm,0.5s						
ABTA	**Abfaltersbach**	**75.56**	**337**	*eP*	**P**	**23 08 34.7**	**+0.4**
	comp=Z,3.1nm,0.6s						
FETA	**Feichten**	**75.71**	**338**	*eP*	**P**	**23 08 35.6**	**+0.4**
	comp=Z,1.4nm,0.4s						
RICI	**Ricice**	**77.44**	**333**	*i* P	**P**	**23 08 44.0**	**-0.8**
DUGI	**Dugi Otok**	**77.53**	**334**	*i* P	**P**	**23 08 44.6**	**-0.7**
MAKA	**Makarska**	**77.66**	**333**	*i* P	**P**	**23 08 44.9**	**-1.1**
ZIRJ	**Zirje**	**77.69**	**334**	*i* P	**P**	**23 08 45.4**	**-0.7**
HVAR	**Hvar**	**77.92**	**333**	*i* P	**P**	**23 08 46.5**	**-1.0**
MMAI	**Mount Meron Ar**	**80.51**	**315**	P	**P**	**23 09 01.8**	**+0.1**
	comp=Z,6.4nm,0.6s,baz=40,slow=6.6,SNR=13						
	comp=Z,6.4nm,0.6s						
RAYN	**Ar Rayn**	**83.93**	**302**	⇓P	**P**	**23 09 19.0**	**-0.6**
ESDC	**Sonseca Array**	**85.44**	**347**	P	**P**	**23 09 27.9**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=0.8,slow=4.9,SNR=51						
	comp=Z,3.7nm,0.6s						
KEST	**Kesra**	**86.75**	**336**	P	**P**	**23 09 33.4**	**-0.1**
	comp=Z,7.6nm,1.0s,baz=348,slow=2.2,SNR=11						
	comp=Z,7.6nm,1.0s						
QSPA	**South Pole Qui**	**143.84**	**180**	PKP	**PKPdf**	**23 16 21.3**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=323,slow=1.2,SNR=7.3						
PLCA	**Paso Flores**	**144.70**	**88**	PKP	**PKPdf**	**23 16 24.8**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=321,slow=4.2,SNR=6.4						

*IDC **25** 22:57:39.9±0.6, 6˚.33S×143˚.19E, h0km, mb4.5/15, mbtmp4.5/19, ML4.3/3, MS4.2/17, Error ellipse: s-maj=21.8km s-min=12.2km az=71.0*
*MOS **25** 22:57:39.6±0.9, 6˚.34S×143˚.17E, h10km, mb5.0/31, Error ellipse: s-maj=11.8km s-min=6.3km az=122.2*
*NEIC **25** 22:57:42.7±1.5, 6˚.32S±0˚.07×143˚.11E±0˚.08, h10km±1km, mb5.1/64, Error ellipse: s-maj=13.1km s-min=12.4km az=125.0*
*BJI **25** 22:57:45.6±0.0, 6˚.48S×143˚.09E, h51km, mb4.7/53, mB5.1/21, Ms4.7/11, Ms7 4.6/11*
*DJA **25** 22:57:45.9±0.6, 6˚S±3˚×14˚3E±˚, h31km±6km, M4.9/37, mB5.3/13, mb4.8/37, MLvs.4/6, Mw(mB)4.7/13*
ISC 25 22:57:41.8±0.4, 6˚.37S±0˚.05×143˚.16E±0˚.06, h10km, n239, σ1§26/228, mb4.9/86, MS4.1/18, 5C-1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.45**	**233**	P	**Pn**	**22 59 37.4**	**+1.7**
GENI	**Genyem**	**4.79**	**321**	P	**Pn**	**22 58 54.5**	**+0.4**
PMG	**Port Moresby**	**4.99**	**128**	P	**Pn**	**22 58 57.2**	**+0.4**
PMG	**Port Moresby**	**4.99**	**128**	*i* P	**Pn**	**22 58 56.3**	**-0.5**
PMG	**Port Moresby**	**4.99**	**128**	Pn	**Pn**	**22 58 57.0**	**+0.3**
	29nm,0.4s,baz=308,slow=10,SNR=11						
PMG				Sn	**Sn**	**22 59 56.0**	**+1.5**
	19nm,0.3s,baz=98,slow=14,SNR=4.5						
PMG				Lg	Lg	23 00 18.0	
	6.2nm,0.3s,baz=122,slow=20,SNR=3.1						
MANU	**Manus Island**	**6.00**	**45**		**Pn**	**22 59 12.3**	**+1.5**
SMPI	**Sarmi**	**6.21**	**314**	P	**Pn**	**22 59 17.1**	**+3.5**
	274nm,1.0s,1.7nm						
COEN	**Coen**	**7.54**	**180**	Pn	**Pn**	**22 59 35.0**	**+3.0**
RABL	**Rabaul**	**9.22**	**77**	Pn	**Pn**	**22 59 56.8**	**+1.7**
FAKI	**Fak Fak**	**11.40**	**287**	Pn	**Pn**	**23 00 25.4**	**+0.5**
FAKI	**Fak Fak**	**11.40**	**287**	P	**Pn**	**23 00 25.3**	**+0.5**
FAKI	**Fak Fak**	**11.40**	**287**	P	**Pn**	**23 00 23.8**	**-1.0**
	40nm,1.0s						
SAUI	**Saumlaki**	**11.87**	**262**	Pn	**Pn**	**23 00 30.0**	**-1.4**
SAUI	**Saumlaki**	**11.87**	**262**	P	**Pn**	**23 00 32.7**	**+1.3**
	447nm,0.8s,20μm						
SWI	**Sorong**	**13.07**	**294**	P	**Pn**	**23 00 48.3**	**+0.6**
	90nm,0.8s,2μm						
MTN	**Manton Dam**	**13.49**	**241**	Pn	**Pn**	**23 00 51.8**	**-1.6**
DRS	**Darwin Rock St**	**13.51**	**243**	P	**Pn**	**23 00 53.8**	**+0.1**
CTA	**Charters Tower**	**13.97**	**168**	Pn	**Pn**	**23 01 01.2**	**+1.2**
	0.3nm,0.3s,baz=229,slow=12,SNR=1.3						
CTA				Lg	Lg	23 05 07.0	
	0.2nm,0.3s,baz=74,slow=23,SNR=4.5						
CTA				LR	LR	23 05 53.5	
	comp=Z,739nm,19.9s,baz=2.5,slow=35						
	1.7nm,0.4s						
QIS	**Mont Isa**	**14.52**	**193**	P	**Pn**	**23 01 08.6**	**+1.0**
WRA	**Warramunga Arr**	**15.98**	**212**		**Pn**	**23 01 25.1**	**-1.9**
WRA	**Warramunga Ar**	**15.98**	**212**	P	**Pn**	**23 01 25.1**	**-1.9**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
WRA	**Warramunga Arr**	**15.98**	**212**	Pn	**Pn**	**23 01 25.4**	**-1.6**
	comp=Z,1.8nm,0.3s,baz=29,slow=13,SNR=10						
WRA				Sn	**Sn**	**23 04 18.7**	**-5.7**
	comp=Z,0.6nm,0.3s,baz=36,slow=23,SNR=1.7						
WRA				Lg	Lg	23 06 07.7	
	comp=Z,0.4nm,0.3s,baz=26,slow=27,SNR=5.5						
	comp=Z,4.9nm,0.4s						
LBMI	**Labuha**	**16.62**	**289**	P	**P**	**23 01 37.6**	**0.0**
	comp=Z,66nm,1.1s,comp=Z,1μm						
HNR	**Honiara**	**16.91**	**101**	Pn	**Pn**	**23 01 38.9**	**+0.1**
	comp=Z,358nm,0.3s,baz=200,slow=13,SNR=2.1						
SANI	**Sanana**	**17.65**	**283**	P	**P**	**23 01 48.9**	**-0.1**
	comp=Z,31nm,1.1s						
SOEI	**Soe**	**19.00**	**259**	Pn	**Pn**	**23 02 05.8**	**+1.1**
SOEI				IAmb	IAmb	23 02 12.0	
	comp=Z,79nm,0.7s						
SOEI	**Soe**	**19.00**	**259**	P	**Pn**	**23 02 05.2**	**+0.5**
	comp=Z,170nm,1.1s,comp=Z,2μm						
AS01	**Alice Springs**	**19.35**	**206**	P	**Pn**	**23 02 09.5**	**+0.8**
AS31	**Alice Springs**	**19.37**	**206**	Pn	**Pn**	**23 02 10.1**	**+1.2**
ASAR	**Alice Springs**	**19.37**	**206**	Pn	**Pn**	**23 02 10.5**	**+1.5**
ASAR	**Alice Springs**	**19.37**	**206**	P	**Pn**	**23 02 09.7**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=32,slow=10.0,SNR=53						
ASAR				S	**Sn**	**23 05 42.7**	**-3.6**
	comp=Z,2.4nm,0.6s,baz=19,slow=26,SNR=3.0						
ASAR				Lg	Lg	23 07 54.6	
	comp=Z,0.2nm,0.3s,baz=18,slow=28,SNR=4.0						
ASAR				LR	LR	23 10 11.0	
	comp=Z,1μm,21.2s,baz=34,slow=39						
	comp=Z,42nm,0.9s						
EIDS	**Eidsvold**	**20.36**	**159**	P	**P**	**23 02 20.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**20.69**	**234**	P	**P**	**23 02 22.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.69**	**234**	P	**P**	**23 02 23.0**	**+0.7**
LUWI	**Luwuk**	**21.01**	**284**	P		23 02 28.9	
GTOI	**Gorontalo**	**21.28**	**288**	P	**P**	**23 02 30.5**	**+1.8**
	comp=Z,37nm,1.6s,comp=Z,424nm						
INKA	**Inaminka**	**21.38**	**186**	P	**P**	**23 02 31.8**	**+2.1**
EDFI	**Ende, Flores**	**21.41**	**262**	P	**P**	**23 02 31.3**	**+1.1**
	comp=Z,36nm,1.2s						
DAV	**Davao City (W)**	**22.04**	**307**	LR	LR	23 13 10.1	
	comp=Z,301nm,18.1s,baz=133,slow=42						
MRSI	**Marisa**	**22.24**	**287**	P	**P**	**23 02 42.4**	**+3.4**
	comp=Z,36nm,0.9s,comp=Z,666nm						
OOD	**Oodnadatta**	**22.46**	**198**	P	**P**	**23 02 42.5**	**+1.2**
BKSI	**Bulukumba**	**22.94**	**271**	P	**P**	**23 02 46.1**	**-0.3**
	comp=Z,44nm,0.9s,comp=Z,687nm						
KAPI	**Kappang**	**23.33**	**272**	P	**P**	**23 02 51.3**	**+0.8**
KAPI				IAmb	IAmb	23 02 54.9	
	comp=Z,66nm,1.1s						
KAPI	**Kappang**	**23.33**	**272**	P	**P**	**23 02 51.3**	**+0.8**
KAPI				pmax	pmax		
	comp=Z,66nm,1.1s						
WRKA	**Warakurna**	**23.39**	**216**	P	**P**	**23 02 51.6**	**+0.5**
TTSI	**Tana Toraja**	**23.49**	**277**	P	**P**	**23 02 53.5**	**+1.4**
	comp=Z,41nm,1.5s						
TOLI2	**Tolitoli**	**23.54**	**288**	P	**P**	**23 02 53.1**	**+0.6**
MPSI	**Mapaga**	**24.15**	**285**	P	**P**	**23 02 58.9**	**+0.5**
	comp=Z,19nm,1.0s						
LCRK	**Leigh Creek**	**24.40**	**190**	P	**P**	**23 03 01.7**	**+1.2**
MULG	**Mulgathing**	**25.28**	**199**	P	**P**	**23 03 10.7**	**+2.2**
STKA	**Stephens Creek**	**25.42**	**183**	P	**P**	**23 03 11.2**	**+1.5**
STKA	**Stephens Creek**	**25.42**	**183**	*i* P	**P**	**23 03 08.0**	**-1.8**
STKA	**Stephens Creek**	**25.42**	**183**	P	**P**	**23 03 09.8**	**+0.1**
	comp=Z,4.5nm,0.9s,baz=358,slow=11,SNR=4.1						
	comp=Z,4.5nm,0.9s						
BBOO	**Buckleboo**	**27.13**	**193**	P	**P**	**23 03 27.6**	**+2.4**
BLJI	**Banyuglugur**	**29.37**	**266**	P	**P**	**23 03 47.3**	**+1.9**
TGY	**Tagaytay City**	**30.00**	**313**	LR	LR	23 15 26.7	
	comp=Z,317nm,21.2s,baz=138,slow=36						
UGM	**Wanagama**	**32.41**	**265**	P	**P**	**23 04 13.9**	**+1.6**
	comp=Z,32nm,2.1s						
JCJ	**Chichijima**	**33.28**	**358**	LR	LR	23 17 28.6	
	comp=Z,249nm,20.7s,baz=99,slow=36						
LEM	**Lembang**	**35.30**	**267**	LR	LR	23 21 40.0	
	comp=Z,402nm,21.6s,baz=106,slow=41						
NWAO	**Narrogin (SRO)**	**35.77**	**219**	LR	LR	23 18 58.4	
	comp=Z,385nm,20.1s,baz=56,slow=36						
JOW	**Kunigami**	**36.01**	**337**	LR	LR	23 16 34.6	
	comp=Z,389nm,21.7s,baz=128,slow=32						
JHJ	**Hachijo jima 2**	**39.40**	**356**	LR	LR	23 21 21.5	
	comp=Z,236nm,18.1s,baz=182,slow=36						
MJAR	**Matsushiro Arr**	**42.93**	**354**	P	**P**	**23 05 41.3**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=180,slow=9.3,SNR=5.6						
	comp=Z,4.0nm,1.0s						
RAO	**Raoul Island**	**43.18**	**127**	LR	LR	23 22 15.0	
	comp=Z,197nm,20.0s,baz=24,slow=34						
URZ	**Urewera**	**44.20**	**141**	LR	LR	23 24 28.7	
	comp=Z,425nm,18.2s,baz=100,slow=36						
RPZ	**Rata Peaks**	**44.54**	**151**	LR	LR	23 23 44.7	
	comp=Z,647nm,18.8s,baz=292,slow=35						
KSAR	**Wonju Array Be**	**45.85**	**343**	P	**P**	**23 06 04.1**	**-0.2**
KSAR	**Wonju Array Be**	**45.85**	**343**	P	**P**	**23 06 04.1**	**-0.2**
KSRS	**Korea Array**	**45.85**	**343**	P	**P**	**23 06 05.2**	**+0.9**
	comp=Z,8.6nm,1.0s,baz=165,slow=9.2,SNR=14						
KSRS				LR	LR	23 21 50.1	
	comp=Z,122nm,20.0s,baz=165,slow=32						
	comp=Z,8.6nm,1.0s						
PHRA	**Phrae**	**49.01**	**301**	P	**P**	**23 06 28.5**	**-0.7**
LYN	**LuoYang**	**49.96**	**327**	*eP*	**P**	**23 06 37.3**	**+1.1**
LYN				pmax	pmax		
	comp=Z,21nm,1.1s						
LYN				LR	LR		
	comp=Z,420nm,16.1s						
LYN				LR	LR		
	comp=Z,230nm,13.1s						
LYN				LR	LR		
	comp=Z,520nm,18.4s						
CM31	**Chiang Mai Arr**	**50.09**	**300**	P	**P**	**23 06 36.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**50.09**	**300**	P	**P**	**23 06 37.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**50.09**	**300**	P	**P**	**23 06 37.4**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=122,slow=5.8,SNR=16						
CMAR				LR	LR	23 28 44.3	
	comp=Z,63nm,20.4s,baz=5.0,slow=37			

ULN pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 62.93 333 P **P** **23 08 09.8 +1.2**
comp=Z,2.1nm,0.8s,baz=143,slow=5.2,SNR=6.2
SONM LR LR 23 35 08.5
comp=Z,188nm,20.7s,baz=54,slow=36
comp=Z,2.1nm,0.8s
MA2 Magadan 66.01 4 *i* P **P** **23 08 26.0 -2.3**
MA2 pmax pmax
comp=Z,13nm,1.0s
ZAK Zakamensk 66.19 333 *e*P **P** **23 08 28.4 -1.4**
ZAK pmax pmax
comp=Z,9.0nm,1.3s
SEY Seymchan 69.46 4 *i* P **P** **23 08 49.6 -0.4**
SEY pmax pmax
comp=Z,13nm,1.0s
WMQ Urumqi 70.62 321 *e*P **P** **23 08 57.8 +0.1**
WMQ pmax pmax
comp=Z,17nm,0.9s
DGZ Jazzator, Alta 73.76 326 *i* P **P** **23 09 15.6 -0.9**
DGZ pmax pmax
comp=Z,12nm,1.0s
ZSN Zaisan 74.12 323 *e*P **P** **23 09 18.5 +0.1**
baz=323
ZSN Zaisan 74.12 323 *e*P **P** **23 09 18.5 +0.1**
MK31 Makanchi Array 75.38 322 P **P** **23 09 24.9 -0.8**
MK31 IAmb IAmb 23 09 29.9
comp=Z,12nm,1.1s
MK31 Makanchi Array 75.38 322 *i* P **P** **23 09 24.9 -0.8**
MKAR Makanchi Array 75.38 322 P **P** **23 09 24.9 -0.8**
MKAR Makanchi Array 75.38 322 P **P** **23 09 25.1 -0.6**
comp=Z,12nm,1.0s,baz=110,slow=6.6,SNR=35
comp=Z,12nm,1.0s
MAKZ Makanchi 75.58 322 P P 23 09 26.1 -0.8
MAKZ IAmb IAmb 23 09 30.9
comp=Z,18nm,1.1s
MAKZ Makanchi 75.58 322 P **P** **23 09 26.1 -0.8**
MAKZ pmax pmax
comp=Z,18nm,1.1s
SHLS Shalkode 75.69 317 *e*P **P** **23 09 25.2 -2.6**
baz=318
SHLS Shalkode 75.69 317 *e*P **P** **23 09 25.1 -2.6**
UZB Uzynbulak 75.98 317 *e*P **P** **23 09 28.6 -0.9**
baz=317
UZB Uzynbulak 75.98 317 *e*P **P** **23 09 28.5 -0.9**
BILL Bilibino 76.01 9 P **P** **23 09 29.3 +0.4**
BILL IAmb IAmb 23 09 32.6
comp=Z,17nm,1.5s
BILL Bilibino 76.01 9 *i* P **P** **23 09 26.8 -2.1**
BILL pmax pmax
comp=Z,11nm,1.3s
PRZ Przheval'sk 76.15 316 P 23 09 30.9 +0.5
PRZ IAmb IAmb 23 09 35.7
comp=Z,22nm,1.2s
PRZ Przheval'sk 76.15 316 P **P** **23 09 30.9 +0.5**
PRZ pmax pmax
comp=Z,23nm,1.2s
KPKS Kokpek 76.33 317 *e*P **P** **23 09 30.1 -1.3**
baz=317
KPKS Kokpek 76.33 317 *e*P **P** **23 09 30.0 -1.3**
SATY Saty 76.36 317 *e*P **P** **23 09 30.9 -0.8**
baz=317
SATY Saty 76.36 317 *e*P **P** **23 09 30.8 -0.8**
KSH Kashi 76.80 313 P **P** **23 09 36.5 +2.3**
KSH sP PcP 23 09 52.5 +7.1
KSH pmax pmax
comp=Z,8.0nm,1.0s
NIL Nilore 77.05 307 P **P** **23 09 35.3 -0.3**
NIL Nilore 77.05 307 P **P** **23 09 35.3 -0.3**
NIL pmax pmax
comp=Z,20nm,0.8s
TDK Taldyqorghan 77.11 319 *e*P **P** **23 09 34.8 -0.8**
baz=319
TDK Taldyqorghan 77.11 319 *e*P **P** **23 09 34.8 -0.8**
ZAA0 Zalesovo Array 77.32 329 P **P** **23 09 36.9 +0.4**
ZALV Zalesovo Beam 77.32 329 P **P** **23 09 36.2 -0.4**
ZALV Zalesovo Beam 77.32 329 *i* P **P** **23 09 37.2 +0.7**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 77.32 329 P **P** **23 09 35.0 -1.6**
comp=Z,2.0nm,0.7s,baz=111,slow=8.1,SNR=8.4
comp=Z,2.0nm,0.7s
MDOK Medeo 77.32 317 *e*P **P** **23 09 36.6 -0.4**
baz=317
MDOK Medeo 77.32 317 *e*P **P** **23 09 36.6 -0.4**
TNSS Tian-Shan 77.34 317 *e*P **P** **23 09 36.9 -0.7**
baz=316
TNSS Tian-Shan 77.34 317 *e*P **P** **23 09 36.8 -0.7**
AAA Alma-Ata 77.43 317 *e*P **P** **23 09 36.9 -0.7**
baz=317
AAA Alma-Ata 77.43 317 *e*P **P** **23 09 36.8 -0.7**
NRN Naryn 77.44 315 P 23 09 38.0 +0.1
NRN Naryn 77.44 315 P **P** **23 09 38.1 +0.1**
NRN pmax pmax
comp=Z,5.0nm,1.2s
KUU Kurty 78.07 317 *e*P **P** **23 09 40.2 -0.8**
comp=Z,13nm,1.1s,baz=317
KUU Kurty 78.07 317 *e*P **P** **23 09 40.2 -0.8**
KUU pmax pmax
comp=Z,13nm,1.1s
SEM Semipalatinsk 78.17 324 *e*P **P** **23 09 41.1 -0.6**
baz=324
SEM Semipalatinsk 78.17 324 *e*P **P** **23 09 41.1 -0.6**
TIXI Tiksi 78.43 355 P **P** **23 09 42.9 +0.5**
TIXI Tiksi 78.43 355 *i* P **P** **23 09 40.9 -1.5**
TIXI pmax pmax
comp=Z,6.0nm,1.6s
TIXI Tiksi 78.43 355 P **P** **23 09 40.8 -1.5**
comp=Z,1.0nm,0.3s,baz=292,slow=2.7,SNR=5.4
comp=Z,1.0nm,0.3s
AAK Ala-Archa 78.90 316 P **P** **23 09 45.6 -0.2**
AAK Ala-Archa 78.90 316 *i* P **P** **23 09 43.8 -2.0**
AAK pmax pmax
comp=Z,8.0nm,1.2s
SGDS Sogindy 79.08 316 *e*P **P** **23 09 46.9 +0.1**
baz=316
SGDS Sogindy 79.08 316 *e*P **P** **23 09 46.8 +0.1**
KURK Kurchatov 79.24 324 P **P** **23 09 46.3 -0.9**
KURK IAmb IAmb 23 09 51.0
comp=Z,16nm,1.2s
KURK Kurchatov 79.24 324 *i* P **P** **23 09 46.5 -0.8**
KURK pmax pmax
comp=Z,16nm,1.2s
KURBB Kurchatov Arra 79.26 324 P **P** **23 09 46.6 -0.8**
comp=Z,9.5nm,1.1s,baz=117,slow=4.6,SNR=16
comp=Z,9.5nm,1.1s
ARSB Arslanbob 79.55 314 P **P** **23 09 49.7 +0.3**
ARSB Arslanbob 79.55 314 P **P** **23 09 49.7 +0.3**
ARSB pmax pmax
comp=Z,13nm,1.8s
BTLS Baital 80.00 318 *e*P **P** **23 09 51.2 -0.4**
comp=Z,11nm,1.6s,baz=318
BTLS Baital 80.00 318 *e*P **P** **23 09 51.1 -0.5**
BTLS pmax pmax
comp=Z,11nm,1.6s
KBL Kabul 80.65 306 P **P** **23 09 55.1 -0.4**
KBL Kabul 80.65 306 P **P** **23 09 55.2 -0.4**
KBL pmax pmax
comp=Z,5.0nm,0.9s
BTK Batken 80.74 312 P 23 09 55.3 -0.5
BTK Batken 80.74 312 P **P** **23 09 55.3 -0.5**
BTK pmax pmax
comp=Z,12nm,1.6s
DZA Taraz 81.19 315 *e*P **P** **23 09 57.8 -0.2**
comp=Z,10nm,1.6s,baz=315
DZA Taraz 81.19 315 *e*P **P** **23 09 57.8 -0.2**
DZA pmax pmax
comp=Z,10.0nm,1.6s
F15K North Star Dit 81.27 19 P **P** **23 09 58.9 +0.9**
F15K IAmb IAmb 23 10 02.3
comp=Z,36nm,1.6s
J16K Anvik River 81.29 22 P **P** **23 09 58.6 +0.6**
I17K Unalakleet 81.59 22 P **P** **23 10 00.5 +0.9**
SIMJ Simiganj 81.72 310 P **P** **23 10 00.9 -0.2**
SIMJ IAmb IAmb 23 10 04.9
comp=Z,17nm,1.2s
KKAR Karatay Array 81.83 315 P **P** **23 10 01.6 +0.2**
KKAR Karatay Array 81.83 315 P **P** **23 10 01.6 +0.2**
G16K Koyuk River 81.85 20 P **P** **23 10 01.8 +0.8**
G16K IAmb IAmb 23 10 04.5
comp=Z,22nm,1.4s
IUG Iuzhnay 81.90 314 *e*P **P** **23 10 01.7 -0.2**
comp=Z,26nm,2.0s,baz=314
IUG Iuzhnay 81.90 314 *e*P **P** **23 10 01.7 -0.2**
IUG pmax pmax
comp=Z,26nm,2.0s
CHM Chimkent 82.25 314 *e*P **P** **23 10 03.0 -0.7**
baz=314
CHM Chimkent 82.25 314 *e*P **P** **23 10 02.9 -0.7**
BRLS Borolday 82.28 315 *e*P **P** **23 10 03.4 -0.5**
baz=315
BRLS Borolday 82.28 315 *e*P **P** **23 10 03.3 -0.5**
H17K Granite Mounta 82.45 21 P **P** **23 10 04.4 +0.2**
H17K IAmb IAmb 23 10 09.3
comp=Z,12nm,1.2s
BRZS Berezniki 82.51 322 *e*P **P** **23 10 04.2 -0.6**
comp=Z,12nm,1.9s,baz=322
BRZS Berezniki 82.51 322 *e*P **P** **23 10 04.2 -0.6**
BRZS pmax pmax
comp=Z,12nm,1.9s
F17K Baldwin Pennin 82.83 20 P **P** **23 10 07.4 +1.4**
F17K IAmb IAmb 23 10 13.0
comp=Z,13nm,1.1s
G18K Tagagawik 83.41 21 P **P** **23 10 10.0 +0.9**
G18K IAmb IAmb 23 10 13.6
comp=Z,10nm,1.2s
J19K Poorman 83.56 23 P **P** **23 10 11.1 +1.1**
J19K IAmb IAmb 23 10 14.2
comp=Z,23nm,1.4s
M20K Styx River 83.59 25 P **P** **23 10 11.1 +0.8**
M20K IAmb IAmb 23 10 19.0
comp=Z,15nm,1.1s
QSPA South Pole Qui 83.61 180 P **P** **23 10 09.8 -0.6**
comp=Z,9.7nm,1.0s,baz=339,slow=1.0,SNR=18
QSPA LR LR 23 47 36.4
comp=Z,499nm,18.1s,baz=338,slow=36
comp=Z,9.7nm,1.0s
K20K Telida 83.87 24 P **P** **23 10 10.4 -1.2**
K20K IAmb IAmb 23 10 16.5
comp=Z,30nm,1.6s
G19K Purcell Mounta 84.09 21 P **P** **23 10 13.4 +0.8**
G19K IAmb IAmb 23 10 16.8
comp=Z,27nm,1.5s
J20K Nowinta River 84.22 23 P **P** **23 10 14.2 +0.9**
J20K IAmb IAmb 23 10 18.4
comp=Z,22nm,1.4s
NRIK Noril'sk 84.47 343 P **P** **23 10 13.2 -1.3**
NRIK Noril'sk 84.47 343 *i* P **P** **23 10 13.7 -0.8**
NRIK pmax pmax
comp=Z,28nm,1.1s
NRIK Noril'sk 84.47 343 P **P** **23 10 13.2 -1.3**
comp=Z,16nm,0.9s,baz=127,slow=4.9,SNR=25
comp=Z,16nm,0.9s
CAST Castle Rocks 84.70 24 P **P** **23 10 16.1 +0.3**
BVAR Borovoye Array 84.83 325 P **P** **23 10 15.6 -1.0**
comp=Z,22nm,0.9s,baz=114,slow=6.6,SNR=37
comp=Z,22nm,0.9s
C19K Lookout Ridge 84.83 18 P **P** **23 10 16.9 +0.5**
BRVK Borovoye 84.90 325 P **P** **23 10 16.8 -0.2**
BRVK Borovoye 84.90 325 *i* P **P** **23 10 15.6 -1.4**
BRVK pmax pmax
comp=Z,29nm,1.2s
F20K Avaraart Lake 85.01 20 P **P** **23 10 18.2 +1.1**
F20K IAmb IAmb 23 10 22.1
comp=Z,7.1nm,1.2s
BPAW Bear Paw Mtn. 85.43 24 P **P** **23 10 18.2 -1.2**
BPAW IAmb IAmb 23 10 22.6
comp=Z,33nm,1.8s
I21K Tanana 85.50 23 P **P** **23 10 20.1 +0.4**
I21K IAmb IAmb 23 10 23.9
comp=Z,28nm,1.6s
MLY Manley 85.92 23 P **P** **23 10 22.1 +0.2**
MLY IAmb IAmb 23 10 25.5
comp=Z,25nm,1.5s
RND Reindeer 86.03 25 P **P** **23 10 22.2 -0.3**
RND IAmb IAmb 23 10 23.8
comp=Z,14nm,1.2s
RND Reindeer 86.03 25 P **P** **23 10 22.2 -0.3**
RND pmax pmax
comp=Z,14nm,1.2s
CCB Clear Creek Bu 86.92 24 P **P** **23 10 26.8 +0.1**
CCB IAmb IAmb 23 10 29.9
comp=Z,19nm,1.4s
IL31 87.33 24 P **P** **23 10 28.0 -0.7**
IL31 IAmb IAmb 23 10 30.7
comp=Z,22nm,1.6s
ILAR Eielson Array 87.33 24 P **P** **23 10 28.3 -0.5**
ILAR Eielson Array 87.33 24 P **P** **23 10 28.3 -0.5**
ILAR Eielson Array 87.33 24 P **P** **23 10 26.6 -2.2**
comp=Z,4.0nm,1.0s,baz=260,slow=4.2,SNR=17
comp=Z,4.0nm,1.0s
J25K Salcha River, 87.89 24 P **P** **23 10 31.6 +0.1**
C23K Itkillik River 87.96 19 P **P** **23 10 32.1 +0.5**
F24K Squaw Lake 87.96 21 P **P** **23 10 32.5 +0.8**
D24K Happy Valley 88.26 19 P **P** **23 10 34.0 +1.0**
J26L Joseph Creek 88.60 24 P **P** **23 10 35.3 +0.4**
M27K Edge Creek, AK 88.69 27 P **P** **23 10 35.8 +0.3**
L27K Beaver Creek, 88.91 26 P **P** **23 10 36.6 +0.3**
L27K IAmb IAmb 23 10 41.1
comp=Z,17nm,1.3s
BCAR Beaver Creek A 88.93 26 P **P** **23 10 36.3 -0.1**
E25K Arctic Village 89.00 21 P **P** **23 10 37.0 +0.3**
E25K IAmb IAmb 23 10 41.4
comp=Z,22nm,1.4s
BMAR Burnt Mountain 89.12 22 P **P** **23 10 37.8 +0.5**
DAWY Dawson 90.23 25 P **P** **23 10 42.5 0.0**
ABKAR Akbulak array 90.36 319 P **P** **23 10 41.9 -1.4**
ABKAR Akbulak array 90.36 319 P **P** **23 10 42.2 -1.1**
ABKAR IAmb IAmb 23 10 44.5
comp=Z,3.4nm,0.8s
ARU Arti 92.27 326 P **P** **23 10 51.2 -0.8**
ARU IAmb IAmb 23 10 54.2
comp=Z,7.2nm,1.1s
ARU Arti 92.27 326 *i* P **P** **23 10 50.6 -1.4**
ARU pmax pmax
comp=Z,8.0nm,1.1s
GERES GERESS Array B 119.99 324 PKP **PKPdf** **23 16 33.2 +0.2**
comp=Z,0.6nm,0.4s,baz=152,slow=4.4,SNR=3.1
152A Waverly Hall 128.42 53 **PKPdf** **23 16 49.1 -0.5**
ETMB Extrema 146.62 119 **PKPdf** **23 17 21.1 -2.2**
KIC Kosan Boka 148.10 272⇑ *e*P **PKPbc** **23 17 28.9 -0.1**
comp=Z,21nm,0.9s
DBIC Dimbokro 148.22 272 PKPdf **PKPdf** **23 17 24.5 -1.5**
DBIC Dimbokro 148.22 272 PKIKP **PKPdf** **23 17 24.5 -1.5**
DBIC Dimbokro 148.22 272 PKPbc **PKPbc** **23 17 28.9 -0.4**
comp=Z,19nm,1.0s,baz=60,slow=2.2,SNR=11
LIC Lamto 148.38 272⇑ *i*P **PKPbc** **23 17 30.4 +0.7**
comp=Z,50nm,0.8s
TIC Toumodi 148.38 272⇑ *i*P **PKPbc** **23 17 30.3 +0.5**
comp=Z,43nm,1.2s
SAML Samuel 149.66 120 PKPdf **PKPdf** **23 17 26.7 -1.7**
SAML Samuel 149.66 120 PKHKP PKPpre 23 17 26.7

IDC ***25*** *23:03:25.3±0.5,28˚.06N×127˚.49E,h214km±9km,mb3.6/14, mbtmp4.1/16,Error ellipse: s-maj=18.5km s-min=14.8km az=107.0*
NEIC ***25*** *23:03:25.9±1.2,28˚.1N±0˚.1×127˚.4E±0˚.1,h213km±11km, mb4.3/66,Error ellipse: s-maj=18.0km s-min=12.8km az=172.0*
JMA ***25*** *23:03:27.4±0.2,28˚N±1˚×12˚7E±˚,h175km±4km,MD3.8/24, MV4.2/24,NW OFF OKINAWAJIMA IS*
ISC 25 23:03:25.5±0.6,28˚.19N±0˚.05×127˚.45E±0˚.06,h206km±6km, n120,σ1§11/135,mb4.3/46,2D,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**1.23**	**158**	P		**Pn**	**23 03 58.2**	**+0.6**
JIH				S		**S**	**23 04 21.9**	**-0.4**
JIH	**Iheya**	**1.23**	**158**	A		A	23 03 58.2	
comp=E,1.0nm,6.1s,comp=N,2.0nm,6.0s								
JOKE	**Okinoerabujima**	**1.29**	**129**	P		**Pn**	**23 03 58.6**	**+0.6**
JOKE				S		**S**	**23 04 22.1**	**-0.9**
JTK	**Tokunoshima**	**1.38**	**106**	P		**Pn**	**23 03 59.2**	**+0.5**
JTK				S		**S**	**23 04 23.4**	**-0.9**
JTK	**Tokunoshima**	**1.38**	**106**	A		A	23 03 59.2	
comp=E,1.0nm,0.4s,comp=N,2.0nm,1.7s								
JYRO	**Yoronjima**	**1.46**	**142**	P		**Pn**	**23 04 00.1**	**+0.8**
JYRO				S		**S**	**23 04 24.5**	**-0.9**
JAMN	**Amaminishikomi**	**1.52**	**87**	P		**Pn**	**23 04 00.1**	**+0.3**
JAMN				*e*S		**S**	**23 04 25.2**	**-1.0**
JOW	**Kunigami**	**1.53**	**151**	P		**Pn**	**23 04 01.1**	**+1.0**
JOW				S		**S**	**23 04 26.1**	**-0.5**
JOW	**Kunigami**	**1.53**	**151**	A		A	23 04 01.1	
comp=E,2.0nm,0.2s,comp=N,4.0nm,2.9s								
JOW	**Kunigami**	**1.53**	**151**	P		**Pn**	**23 04 01.1**	**+1.0**
comp=N,612nm,0.3s,baz=115,slow=21,SNR=194								
JOW				S		**S**	**23 04 26.1**	**-0.5**
comp=N,966nm,0.3s,baz=181,slow=27,SNR=27
JNTH Nagotoyohara 1.74 163 P **Pn** **23 04 03.2 +1.3**
JNTH S **S** **23 04 29.7 -0.2**
JAM Amami Oshima 1.91 83 P **Pn** **23 04 04.4 +0.9**
JKE Kume jima 2 1.95 198 P **Pn** **23 04 04.6 +0.7**
JKE *e*S **S** **23 04 33.0 -0.5**
JJT3 Tamagusuku3 2.06 172 P **Pn** **23 04 06.7 +1.6**
JJT3 *e*S **S** **23 04 36.7 +1.2**
JZK Kikaishima 2.23 86 S **S** **23 04 39.4 +1.0**
JZK Kikaishima 2.23 86 A A 23 04 39.4
comp=E,8.0nm,3.3s,comp=N,4.0nm,2.7s
JNN Nakanoshima 2.69 52 *e*P **Pn** **23 04 12.0 +0.2**
JYAK Yakushimahirau 3.36 52 P **Pn** **23 04 20.4 +0.7**
JYAK *e*S **S** **23 04 59.9 -1.8**
JMTN Minamitane 3.73 53 P **Pn** **23 04 24.5 +0.4**
JMTN *e*S **S** **23 05 08.1 -1.6**
JTN Tanegashima 3 3.94 51 P **Pn** **23 04 27.0 +0.3**
JTN *e*S **S** **23 05 12.4 -2.0**
JKDJ Kitadaitoujima 4.09 122 P **Pn** **23 04 31.3 +2.8**
JKDJ S **S** **23 05 18.7 +1.0**
JMZ Minamidaito 2 4.11 124 **Pn** **23 04 28.0 -0.9**
JMZ Sn **S** **23 05 18.0 -0.1**
JMZ Minamidaito 2 4.11 124 P **Pn** **23 04 31.4 +2.6**
YOJ Yonaguni jima 5.45 228 Pn **Pn** **23 04 43.1 -2.6**
YOJ Yonaguni jima 5.45 228 P **Pn** **23 04 43.1 -2.6**
JNU Nakatsue 5.74 30 **Pn** **23 04 49.9 +0.5**
JNU Nakatsue 5.74 30 P **Pn** **23 04 50.8 +1.4**
comp=N,40nm,0.8s,baz=233,slow=4.5,SNR=19
JNU S **S** **23 05 57.9 +2.2**
comp=N,10.0nm,0.9s,baz=162,slow=16,SNR=1.6
YHNB Yeheng 6.48 239 Pn **Pn** **23 04 57.7 -1.4**
NACB Ninganchiao 6.61 234 Pn **Pn** **23 04 58.8 -1.9**
SSLB Suanglung 7.31 235 **Pn** **23 05 08.4 -1.4**
YULB Yu-li 7.32 231 **Pn** **23 05 07.1 -2.8**
JMN Monobe 7.81 43 **Pn** **23 05 14.3 -1.8**
KSRS Korea Array 9.25 2 P **Pn** **23 05 36.1 +1.3**
comp=N,1.6nm,0.8s,baz=191,slow=13,SNR=5.7
WHN Wuhan 11.67 285 P **P** **23 06 14.0 +3.1**
HNS HongShan 14.11 314 ⇓P **P** **23 06 39.0 +1.1**
HNS pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuau 15.04 325 P **P** **23 06 51.3 +3.1**
BJT IAmb IAmb 23 06 52.1
comp=Z,8.0nm,0.7s
BJT Baijiatuau 15.04 325 P **P** **23 06 51.3 +3.1**
XAN Xi'an 16.90 295 ⇓P **Pn** **23 07 10.0 -0.3**
XAN pmax pmax
comp=Z,34nm,0.7s
ULN Ulaanbaatar 25.24 327 P **P** **23 08 34.8 +2.2**
SONM Songino Array 25.55 326 P **P** **23 08 38.3 +3.0**
SONM IAmb IAmb 23 08 38.9
comp=Z,10nm,0.8s
SONM Songino Array 25.55 326 P **P** **23 08 37.3 +2.0**
comp=Z,13nm,0.7s,baz=141,slow=10,SNR=21
comp=Z,13nm,0.7s
MK31 Makanchi Array 39.73 310 P **P** **23 10 38.5 +0.6**
MKAR Makanchi Array 39.73 310 P **P** **23 10 37.8 -0.1**
MKAR Makanchi Array 39.73 310 P **P** **23 10 37.6 -0.3**
comp=Z,1.5nm,0.9s,baz=95,slow=11,SNR=1.0
MKAR PcP **PcP** **23 12 39.9 -0.2**
comp=Z,0.9nm,0.8s,baz=80,slow=3.3,SNR=3.7
comp=Z,1.5nm,0.9s
MAKZ Makanchi 39.95 310 P **P** **23 10 40.2 +0.6**
ZAA0 Zalesovo Array 40.28 322 P **P** **23 10 41.8 -0.5**
ZAA0 IAmb IAmb 23 10 41.9
comp=Z,4.6nm,0.8s
ZALV Zalesovo Beam 40.28 322 P **P** **23 10 41.9 -0.3**
ZALV Zalesovo Beam 40.28 322 P **P** **23 10 41.4 -0.8**
comp=Z,6.0nm,0.6s,baz=110,slow=8.4,SNR=14
ZALV PcP **PcP** **23 12 40.6 -1.0**
comp=Z,0.4nm,0.3s,baz=137,slow=5.3,SNR=3.2
comp=Z,6.0nm,0.6s
KURK Kurchatov 42.94 315 P **P** **23 11 03.6 -0.2**
KURBB Kurchatov Arra 42.97 315 P **P** **23 11 04.0 -0.1**
comp=Z,1.3nm,0.4s,baz=99,slow=8.8,SNR=4.7
comp=Z,1.3nm,0.4s
BVAR Borovoye Array 48.37 317 P **P** **23 11 46.0 -0.2**
comp=Z,3.9nm,0.6s,baz=86,slow=10,SNR=11
BVAR PcP **PcP** **23 13 09.6 +0.1**
comp=Z,0.5nm,0.4s,baz=97,slow=4.5,SNR=2.1
comp=Z,3.9nm,0.6s
BRVK Borovoye 48.43 317 P **P** **23 11 46.6 -0.1**
ABKAR Akbulak array 54.81 312 P **P** **23 12 33.4 -0.6**
ABKAR Akbulak array 54.81 312 P **P** **23 12 33.8 -0.2**
ANM Nome 55.13 29 P **P** **23 12 36.6 +0.6**
ANM IAmb IAmb 23 13 15.6
comp=Z,9.2nm,1.4s
ARU Arti 55.44 321 P **P** **23 12 37.6 -0.8**
ARU IAmb IAmb 23 12 37.9
comp=Z,3.1nm,0.7s
F15K North Star Dit 55.59 28 P **P** **23 12 39.9 +0.7**
F15K IAmb IAmb 23 13 11.7
comp=Z,11nm,1.4s
C16K Lisburne Hills 55.71 25 P **P** **23 12 39.9 -0.1**
L14K Kuka Creek 56.07 33 P **P** **23 12 42.7 0.0**
M14K Bethel 56.40 34 P **P** **23 12 44.5 -0.6**
K15K Wolf Creek Mou 56.66 32 P **P** **23 12 47.4 +0.5**
F17K Baldwin Pennin 57.04 27 P **P** **23 12 49.8 +0.3**
I17K Unalakleet 57.11 30 P **P** **23 12 50.0 0.0**
J16K Anvik River 57.12 31 P **P** **23 12 50.3 +0.2**
J16K IAmb IAmb 23 13 03.1
comp=Z,9.5nm,1.4s
N15K Kwethluk River 57.32 34 P **P** **23 12 51.9 +0.3**
E18K Tukpahlearik C 57.38 26 P **P** **23 12 52.1 +0.2**
L16K Owhat River 57.62 33 P **P** **23 12 52.8 -0.8**
L16K IAmb IAmb 23 13 31.4
comp=Z,9.4nm,1.4s
M16K Timber Creek 57.87 33 P **P** **23 12 55.3 -0.1**
C19K Lookout Ridge 57.90 24 P **P** **23 12 55.5 0.0**
G18K Tagagawik 58.06 28 P **P** **23 12 56.5 -0.2**
H18K Honhosa River 58.16 29 P **P** **23 12 57.6 +0.3**
H18K IAmb IAmb 23 13 36.1
comp=Z,5.3nm,1.4s
K17K Iditarod 58.17 31 P **P** **23 12 58.0 +0.6**
K17K IAmb IAmb 23 13 19.2
comp=Z,15nm,1.4s
D19K Kuna River 58.39 25 P **P** **23 12 59.2 +0.2**
M17K Holitna River 58.60 33 P **P** **23 13 01.7 +1.3**
E19K Redstone River 58.68 26 P **P** **23 13 01.4 +0.5**
G19K Purcell Mounta 58.71 27 P **P** **23 13 01.4 +0.2**
G19K IAmb IAmb 23 13 01.6
comp=Z,9.5nm,1.5s
N17K Nushagak Hills 58.75 34 P **P** **23 13 02.4 +0.9**
N17K IAmb IAmb 23 13 39.8
comp=Z,14nm,1.4s
J18K Innoko River 58.88 31 P **P** **23 13 02.5 +0.2**
J18K IAmb IAmb 23 13 17.2
comp=Z,12nm,1.5s
L18K Granite Mounta 58.92 32 P **P** **23 13 03.6 +1.0**
L18K IAmb IAmb 23 13 22.1
comp=Z,4.8nm,1.1s
H19K Roundabout Mou 58.97 28 P **P** **23 13 03.1 +0.2**
H19K IAmb IAmb 23 13 06.1
comp=Z,3.4nm,0.8s
TTA Tatalina 59.21 31 P **P** **23 13 04.9 +0.2**
J19K Poorman 59.35 30 P **P** **23 13 06.4 +0.8**
J19K IAmb IAmb 23 13 06.9
comp=Z,3.1nm,0.7s
SVW2 Sparrevohn 59.51 33 P **P** **23 13 06.8 +0.2**
SVW2 IAmb IAmb 23 13 08.8
comp=Z,7.1nm,1.1s
L19K White Mountain 59.79 32 P **P** **23 13 09.3 +0.8**
L19K IAmb IAmb 23 13 24.3
comp=Z,12nm,1.4s
J20K Nowinta River 59.99 30 P **P** **23 13 10.9 +1.0**
J20K IAmb IAmb 23 13 11.3
comp=Z,3.6nm,0.5s
M19K Big River Lodg 60.02 32 P **P** **23 13 10.8 +0.6**
M19K IAmb IAmb 23 13 16.5
comp=Z,16nm,1.4s
N19K Bonanza Creek 60.06 34 P **P** **23 13 10.8 +0.2**
K20K Telida 60.07 31 P **P** **23 13 11.6 +1.1**
K20K IAmb IAmb 23 13 12.5
comp=Z,4.3nm,0.8s
F21K Alatna River 60.13 26 P **P** **23 13 11.1 +0.3**
F21K IAmb IAmb 23 13 39.4
comp=Z,5.7nm,1.5s
H21K Melozitna River 60.48 28 P **P** **23 13 14.0 +0.8**
M20K Styx River 60.62 32 P **P** **23 13 15.4 +1.1**
M20K IAmb IAmb 23 13 45.2
comp=Z,15nm,1.4s
I21K Tanana 60.85 28 P **P** **23 13 16.3 +0.6**
I21K IAmb IAmb 23 13 18.0
comp=Z,12nm,1.5s

CAST	**Castle Rocks**	**60.96**	**30**	P	**P**	**23 13 16.9**	**+0.4**
CAST				IAmb	IAmb	23 13 58.2	
	comp=Z,6.7nm,1.4s						
C23K	**Itkillik River**	**61.07**	**23**	P	**P**	**23 13 18.0**	**+0.9**
C23K				IAmb	IAmb	23 13 20.3	
	comp=Z,7.7nm,1.4s						
SKT	**Skwentna**	**61.36**	**32**	P	**P**	**23 13 19.2**	**0.0**
SKT				IAmb	IAmb	23 13 19.8	
	comp=Z,12nm,1.2s						
KDAK	**Kodiak Island**	**61.37**	**37**	P	**P**	**23 13 19.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**61.38**	**30**	P	**P**	**23 13 19.6**	**+0.3**
BPAW				IAmb	IAmb	23 14 00.2	
	comp=Z,13nm,1.4s						
MLY	**Manley**	**61.39**	**29**	P	**P**	**23 13 20.4**	**+1.0**
MLY				IAmb	IAmb	23 13 20.6	
	comp=Z,2.7nm,0.6s						
KTH	**Kantishna Hill**	**61.46**	**30**	P	**P**	**23 13 19.5**	**-0.4**
KTH				IAmb	IAmb	23 14 03.1	
	comp=Z,8.7nm,1.2s						
SUA	**Susitna One**	**61.80**	**33**	P	**P**	**23 13 22.2**	**0.0**
I23K	**Minto, Yukon-K**	**61.96**	**28**	P	**P**	**23 13 23.3**	**+0.2**
I23K				IAmb	IAmb	23 13 45.1	
	comp=Z,6.9nm,1.3s						
F24K	**Squaw Lake**	**62.27**	**26**	P	**P**	**23 13 25.8**	**+0.6**
RC01	**Rabbit Creek A**	**62.33**	**33**	P	**P**	**23 13 25.4**	**-0.3**
RND	**Reindeer**	**62.40**	**30**	P	**P**	**23 13 25.9**	**-0.3**
O22K	**Cooper Landing**	**62.43**	**34**	P	**P**	**23 13 26.3**	**+0.1**
MDM	**Murphy Dome**	**62.46**	**29**	P	**P**	**23 13 27.2**	**+0.7**
MDM				IAmb	IAmb	23 13 27.9	
	comp=Z,5.6nm,0.7s						
H24K	**Noodor Dome**	**62.48**	**28**	P	**P**	**23 13 27.7**	**+1.0**
ILAR	**Eielson Array**	**63.05**	**29**	P	**P**	**23 13 29.4**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=294,slow=10,SNR=12						
	comp=Z,0.6nm,0.7s						
J29N	**Klondike Camp**	**66.77**	**28**	P	**P**	**23 13 55.5**	**+1.1**
J29N				IAmb	IAmb	23 13 55.8	
	comp=Z,27nm,1.4s						
EPYK	**Eagle Plains**	**66.80**	**26**	P	**P**	**23 13 54.7**	**+0.2**
G30M	**tAoh Zraii Nji**	**66.81**	**25**	P	**P**	**23 13 54.6**	**0.0**
G30M				IAmb	IAmb	23 13 55.4	
	comp=Z,5.4nm,0.7s						
C36M	**Paulatuk**	**70.12**	**21**	P	**P**	**23 14 14.8**	**-0.2**
C36M				IAmb	IAmb	23 14 15.6	
	comp=Z,3.7nm,0.6s						
FINES	**FINESS Array B**	**70.83**	**330**	P	**P**	**23 14 18.4**	**-0.9**
	comp=Z,2.9nm,0.4s,baz=65,slow=5.6,SNR=62						
	comp=Z,2.9nm,0.4s						
AKASG	**Malin Array Be**	**73.60**	**319**	P	**P**	**23 14 34.7**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=64,slow=6.3,SNR=3.0						
	comp=Z,1.3nm,0.6s						
BRTR	**Keskin Array B**	**75.30**	**307**	P	**P**	**23 14 45.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=106,slow=4.8,SNR=4.6						
	comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**76.77**	**332**	P	**P**	**23 14 53.4**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=88,slow=7.4,SNR=1.2						
	comp=Z,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**77.05**	**25**	P	**P**	**23 14 55.5**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=300,slow=5.6,SNR=23						
	comp=Z,1.5nm,0.6s						
NOA	**NORSAR Array B**	**77.26**	**333**	P	**P**	**23 14 55.5**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=51,slow=6.1,SNR=2.0						
	comp=Z,0.8nm,0.9s						
EKA	**Eskdalemuir Ar**	**86.72**	**334**	P	**P**	**23 15 44.8**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=50,slow=4.8,SNR=1.3						
	comp=Z,1.2nm,0.7s						
PDAR	**Pinedale Array**	**92.06**	**38**	P	**P**	**23 16 11.1**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=179,slow=1.3,SNR=5.1						
	comp=Z,0.5nm,0.7s						

*IDC **25** 23:07:22.9±0.8,6°.05S×143°.13E,h0km,mb4.5/10, mbtmp4.5/12,ML2.2/1,Error ellipse: s-maj=35.2km s-min=17.7km az=75.0*
*NEIC **25** 23:07:24.2±1.7,6°.13S±0°.08×143°.10E±0°.08,h10km±1km, mb5.0/70,Error ellipse: s-maj=14.1km s-min=12.9km az=86.0*
*DJA **25** 23:07:29.1±0.3,6°.S±3°×14°.3E±°,h37km±2km,M5.0/19, mB5.8/2,mb4.5/19,MLv5.3/6,Mw(mB)5.4/2*

ISC 25 23:07:24.9±0.5,6°.17S±0°.06×143°.12E±0°.07,h10km,n113, σ1s75/103,mb4.8/52,2C,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.54**	**230**	P	**Pn**	**23 08 17.7**	**-2.3**
GENI	**Genyem**	**4.61**	**320**	P	**Pn**	**23 08 35.6**	**+0.9**
PMG	**Port Moresby**	**5.14**	**129**		**Pn**	**23 08 41.0**	**-1.0**
PMG	**Port Moresby**	**5.14**	**129**	Pn	**Pn**	**23 08 44.0**	**+2.1**
	5.8nm,0.3s,baz=316,slow=5.0,SNR=12						
PMG				Sn	**Sn**	**23 09 41.0**	**-0.3**
	18nm,0.3s,baz=110,slow=21,SNR=7.9						
	23nm,0.4s						
MANU	**Manus Island**	**5.90**	**46**		Pn	23 08 51.2	-1.2
SMPI	**Sarmi**	**6.04**	**313**	P	**Pn**	**23 08 58.0**	**+3.6**
	113nm,1.2s,1.3nm						
COEN	**Coen**	**7.74**	**180**	Pn	**Pn**	**23 09 16.5**	**-1.2**
FAKI	**Fak Fak**	**11.30**	**286**	Pn	Pn	23 10 03.8	-2.9
FAKI	**Fak Fak**	**11.30**	**286**	P	**Pn**	**23 10 08.3**	**+1.7**
	18nm,0.6s						
MTN	**Manton Dam**	**13.55**	**240**	Pn	**Pn**	**23 10 34.2**	**-3.0**
WB0	**Warramunga Arr**	**15.96**	**211**	Pn	**Pn**	**23 11 08.8**	**-0.8**
WRAB	**Tennant Creek**	**16.11**	**211**		**Pn**	**23 11 10.7**	**-1.0**
WB2	**Warramunga Arr**	**16.12**	**211**	Pn	**Pn**	**23 11 10.3**	**-1.5**
WRA	**Warramunga Arr**	**16.13**	**211**	Pn	**Pn**	**23 11 09.7**	**-2.2**
WRA	**Warramunga Arr**	**16.13**	**211**	Pn	**Pn**	**23 11 09.6**	**-2.3**
	1.1nm,0.3s,baz=31,slow=13,SNR=22						
WRA				Sn	Sn	23 13 57.5	-13
	1.3nm,0.3s,baz=28,slow=23,SNR=6.1						
SOEI	**Soe**	**19.00**	**258**	P	**P**	**23 11 48.4**	**+1.3**
SOEI	**Soe**	**19.00**	**258**	P	**P**	**23 11 45.4**	**-1.7**
	56nm,0.7s						
AS31	**Alice Springs**	**19.52**	**206**	P	**P**	**23 11 54.4**	**+1.8**
ASAR	**Alice Springs**	**19.52**	**206**	P	**P**	**23 11 54.0**	**+1.4**
	21nm,0.7s,baz=32,slow=10,SNR=41						
ASAR				S	Sn	23 15 20.8	-12
	5.8nm,0.8s,baz=14,slow=29,SNR=8.1						
SGSI	**Sangihe**	**20.11**	**299**	P	**P**	**23 11 58.0**	**-1.1**
	156nm,0.5s,9μm						
EIDS	**Eidsvold**	**20.56**	**159**	P	**P**	**23 12 04.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.77**	**234**	P	**P**	**23 12 06.2**	**+0.1**
GTOI	**Gorontalo**	**21.18**	**288**	P	**P**	**23 12 11.7**	**+1.0**
	20nm,0.8s						
GTOI				pP	**sP**	**23 12 19.9**	**+4.4**
	20nm,0.8s						
EDFI	**Ende, Flores**	**21.40**	**262**	P	**P**	**23 12 11.4**	**-1.7**
EDFI				pP	**sP**	**23 12 20.5**	**+2.6**
KAPI	**Kappang**	**23.28**	**272**	P	**P**	**23 12 32.0**	**-1.0**
KAPI				IAmb	IAmb	23 12 34.4	
	comp=Z,27nm,1.0s						
TOLI2	**Tolitoli**	**23.44**	**287**	P	**P**	**23 12 33.7**	**-0.9**
MPSI	**Mapaga**	**24.06**	**285**	P	**P**	**23 12 38.8**	**-1.8**
	comp=Z,10nm,1.5s						
MPSI				pP	**sP**	**23 12 50.1**	**+4.5**
	comp=Z,10nm,1.5s						
PLAI	**Plampang**	**25.26**	**262**	P	**P**	**23 12 48.6**	**-2.9**
	comp=Z,19nm,1.1s						
PLAI				pP	**sP**	**23 12 59.9**	**+3.5**
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**25.61**	**183**	P	**P**	**23 12 55.1**	**+0.5**
	comp=Z,5.7nm,0.9s,baz=352,slow=14,SNR=1.3						
	comp=Z,5.7nm,0.9s						
TWSI	**Taliwang, Sumb**	**26.13**	**263**	P	**P**	**23 12 57.8**	**-1.7**
	comp=Z,12nm,0.8s,comp=Z,1μm						
PWJI	**Pagerwojo**	**31.12**	**265**	P	**P**	**23 13 42.7**	**-1.3**
KSRS	**Korea Array**	**45.66**	**343**	P	**P**	**23 15 45.4**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=168,slow=9.5,SNR=11						
	comp=Z,3.3nm,0.8s						
LYN	**LuoYang**	**49.78**	**327**	⇑P	**P**	**23 16 18.0**	**+0.1**
LYN				pmax	pmax		
	comp=Z,16nm,0.5s						
CMAR	**Chiang Mai Arr**	**49.96**	**300**	P	**P**	**23 16 18.6**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=118,slow=6.2,SNR=16						
	comp=Z,2.9nm,0.7s						
PZH	**PanZhiHua**	**51.59**	**311**	P	**P**	**23 16 32.8**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,60nm,4.6s						
BNX	**BinXian**	**53.55**	**346**	⇑P	**P**	**23 16 44.5**	**-1.4**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**55.03**	**331**	eP	**P**	**23 16 58.5**	**+1.6**
HHC				pP	sP	23 17 10.0	+7.8
HHC				PcP	**PcP**	**23 18 06.0**	**+7.5**
HHC				eS	**S**	**23 24 35.5**	**-3.8**
HHC				sS	sS	23 24 51.5	+6.2
HHC	**Hu-ho-hao-te**	**55.03**	**331**	SS	**SS**	**23 28 21.0**	**-2.4**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=N,180nm,15.2s						
HHC				LR	LR		
	comp=E,110nm,14.2s						
HHC				LR	LR		
	comp=Z,220nm,15.7s						
RAR	**Rarotonga**	**57.17**	**111**	P	P	23 17 08.6	-3.9
SHL	**Shillong**	**58.90**	**305**	P	P	23 17 22.5	-2.2
GTA	**Gaotai**	**60.46**	**322**	P	**P**	**23 17 35.3**	**+0.1**
GTA				pP	pP	23 17 40.0	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**75.20**	**322**	P	**P**	**23 19 06.8**	**-1.0**
MKAR	**Makanchi Array**	**75.20**	**322**	P	**P**	**23 19 06.5**	**-1.3**
MKAR	**Makanchi Array**	**75.20**	**322**	P	**P**	**23 19 07.2**	**-0.6**
	comp=Z,4.4nm,0.7s,baz=103,slow=7.6,SNR=56						
	comp=Z,4.4nm,0.7s						
MAKZ	**Makanchi**	**75.40**	**322**	P	**P**	**23 19 07.8**	**-1.1**
MAKZ				IAmb	IAmb	23 19 09.2	
	comp=Z,8.5nm,1.1s						
PRZ	**Przheval'sk**	**75.98**	**316**	P	**P**	**23 19 11.8**	**-0.8**
PRZ				IAmb	IAmb	23 19 14.1	
	comp=Z,8.7nm,1.0s						
KSH	**Kashi**	**76.64**	**313**	P	**P**	**23 19 17.0**	**+0.7**
KSH				pP	sP	23 19 24.5	+2.7
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	**Nilore**	**76.90**	**306**	P	**P**	**23 19 16.2**	**-1.6**
NIL				IAmb	IAmb	23 19 18.2	
	comp=Z,16nm,0.7s						
ZAA0	**Zalesovo Array**	**77.13**	**329**	P	P	23 19 16.3	-2.3
ZAA0				IAmb	IAmb	23 21 00.2	
	comp=Z,17nm,2.0s						
ZALV	**Zalesovo Beam**	**77.13**	**329**	P	**P**	**23 19 16.7**	**-1.8**
ZALV	**Zalesovo Beam**	**77.13**	**329**	P	**P**	**23 19 17.2**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=108,slow=4.8,SNR=8.9						
	comp=Z,1.4nm,0.6s						
NRN	**Naryn**	**77.27**	**315**	P	**P**	**23 19 18.3**	**-1.7**
AAK	**Ala-Archa**	**78.73**	**316**	P	**P**	**23 19 26.2**	**-1.8**
KURK	**Kurchatov**	**79.06**	**324**	P	P	23 19 27.3	-2.1
KURBB	**Kurchatov Arra**	**79.08**	**324**	P	**P**	**23 19 28.3**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=116,slow=4.6,SNR=26						
	comp=Z,3.7nm,0.9s						
ARSB	**Arslanbob**	**79.38**	**314**	P	**P**	**23 19 30.3**	**-1.3**
SIMJ	**Simiganj**	**81.56**	**310**	P	P	23 19 41.2	-2.1
SIMJ				IAmb	IAmb	23 19 43.4	
	comp=Z,8.4nm,0.9s						
KK31	**Karatay Array**	**81.66**	**315**	P	P	23 19 41.0	-2.6
KKAR	**Karatay Array**	**81.66**	**315**	P	**P**	**23 19 41.8**	**-1.8**
KKAR	**Karatay Array**	**81.66**	**315**	P	**P**	**23 19 41.8**	**-1.8**
KKAR				IAmb	IAmb	23 19 43.5	
	comp=Z,9.5nm,1.6s						
H17K	**Granite Mounta**	**82.29**	**21**	P	**P**	**23 19 45.8**	**-0.5**
H17K				IAmb	IAmb	23 19 47.8	
	comp=Z,29nm,1.7s						
QSPA	**South Pole Qui**	**83.80**	**180**	P	**P**	**23 19 53.9**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=310,slow=0.7,SNR=17						
	comp=Z,3.4nm,0.7s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**23 19 55.3**	**-1.2**
NRIK				IAmb	IAmb	23 19 56.6	
	comp=Z,6.3nm,0.8s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**23 19 55.7**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=111,slow=5.1,SNR=16						
	comp=Z,5.2nm,0.8s						
SUA	**Susitna One**	**84.29**	**26**	P	**P**	**23 19 55.6**	**-1.3**
E19K	**Redstone River**	**84.54**	**20**	P	**P**	**23 19 57.2**	**-0.7**
E19K				IAmb	IAmb	23 19 59.1	
	comp=Z,4.3nm,0.8s						
CAST	**Castle Rocks**	**84.54**	**24**	P	**P**	**23 19 56.9**	**-1.2**
CAST				IAmb	IAmb	23 20 28.8	
	comp=Z,30nm,1.9s						
RC01	**Rabbit Creek A**	**84.59**	**27**	P	**P**	**23 19 57.1**	**-1.2**
BVAR	**Borovoye Array**	**84.65**	**325**	P	**P**	**23 19 58.1**	**-0.6**
	comp=Z,20nm,0.8s,baz=112,slow=6.7,SNR=133						
	comp=Z,20nm,0.8s						
C19K	**Lookout Ridge**	**84.66**	**18**	P	**P**	**23 19 58.3**	**-0.3**
C19K				IAmb	IAmb	23 20 00.7	
	comp=Z,7.6nm,0.9s						
BRVK	**Borovoye**	**84.72**	**325**	P	**P**	**23 19 57.9**	**-1.2**
BRVK				IAmb	IAmb	23 19 59.5	
	comp=Z,12nm,0.8s						
D19K	**Kuna River**	**84.79**	**18**	P	**P**	**23 19 59.0**	**-0.2**
D19K				IAmb	IAmb	23 20 11.8	
	comp=Z,7.7nm,1.3s						
F20K	**Avaraart Lake**	**84.84**	**20**	P	**P**	**23 19 58.0**	**-1.4**
F20K				IAmb	IAmb	23 22 13.6	
	comp=Z,18nm,1.9s						
IMAR	**Indian Mountai**	**85.04**	**21**	P	**P**	**23 19 59.1**	**-1.3**
KTH	**Kantishna Hill**	**85.07**	**24**	P	P	23 19 58.5	-2.3
H21K	**Melozitna Rive**	**85.24**	**22**	P	**P**	**23 20 01.6**	**+0.1**
H21K				IAmb	IAmb	23 22 27.2	
	comp=Z,31nm,1.9s						
KNK	**Knik Glacier**	**85.28**	**27**	P	**P**	**23 20 00.6**	**-1.3**
TRF	**Thorofare Moun**	**85.29**	**24**	P	**P**	**23 20 00.7**	**-1.3**
I21K	**Tanana**	**85.34**	**23**	P	**P**	**23 20 01.1**	**-0.9**
I21K				IAmb	IAmb	23 20 07.9	
	comp=Z,30nm,1.7s						
SML	**Sawmill**	**85.49**	**26**	P	**P**	**23 20 02.1**	**-0.8**
RND	**Reindeer**	**85.87**	**25**	P	P	23 20 02.9	-1.9
RND				IAmb	IAmb	23 20 20.2	
	comp=Z,9.3nm,1.0s						
DHY	**Denali Highway**	**86.37**	**25**	P	**P**	**23 20 07.4**	**+0.1**
DHY				IAmb	IAmb	23 23 16.3	
	comp=Z,32nm,1.8s						
KLU	**Klutina**	**86.45**	**27**	P	**P**	**23 20 06.2**	**-1.4**
M24K	**Tolsona, Glenn**	**86.55**	**26**	P	P	23 20 06.0	-2.2
G23K	**Bananza Creek**	**86.71**	**21**	P	**P**	**23 20 07.9**	**-0.9**
G23K				IAmb	IAmb	23 20 09.5	
	comp=Z,3.6nm,0.8s						
D22K	**Ayikyak River**	**86.72**	**19**	P	P	23 20 06.1	-2.6
D22K				IAmb	IAmb	23 20 18.2	
	comp=Z,4.6nm,0.8s						
CCB	**Clear Creek Bu**	**86.76**	**24**	P	**P**	**23 20 07.3**	**-1.7**
CCB				IAmb	IAmb	23 20 08.5	
	comp=Z,5.6nm,0.8s						
B22K	**Teshekpuk Lake**	**87.14**	**18**	P	**P**	**23 20 09.9**	**-0.8**
B22K				IAmb	IAmb	23 20 11.0	
	comp=Z,10nm,0.8s						
H24K	**Noodor Dome**	**87.17**	**23**	P	**P**	**23 20 09.5**	**-1.6**
H24K				IAmb	IAmb	23 20 11.7	
	comp=Z,36nm,2.0s						
IL31		**87.17**	**24**	P	P	23 20 08.9	-2.1
IL31				IAmb	IAmb	23 20 29.0	
	comp=Z,21nm,1.6s						
ILAR	**Eielson Array**	**87.17**	**24**	P	P	23 20 08.9	-2.2
ILAR	**Eielson Array**	**87.17**	**24**	P	**P**	**23 20 09.4**	**-1.6**
	comp=Z,3.0nm,0.7s,baz=255,slow=4.7,SNR=32						
	comp=Z,3.0nm,0.7s						
C23K	**Itkillik River**	**87.79**	**19**	P	**P**	**23 20 13.4**	**-0.5**
D24K	**Happy Valley**	**88.09**	**19**	P	**P**	**23 20 14.7**	**-0.6**
D24K				IAmb	IAmb	23 20 17.1	
	comp=Z,9.1nm,0.8s						
LOGN	**Logan Glacier**	**88.52**	**28**	P	**P**	**23 20 17.1**	**-0.6**
M27K	**Edge Creek, AK**	**88.54**	**27**	P	**P**	**23 20 17.8**	**0.0**
L27K	**Beaver Creek,**	**88.76**	**26**	P	**P**	**23 20 17.9**	**-0.7**
L27K				IAmb	IAmb	23 20 43.2	
	comp=Z,21nm,1.8s						
E25K	**Arctic Village**	**88.83**	**21**	P	**P**	**23 20 19.5**	**+0.6**
E25K				IAmb	IAmb	23 20 30.4	
	comp=Z,14nm,1.6s						
K27K	**Chicken**	**88.92**	**25**	P	**P**	**23 20 19.4**	**+0.1**
K27K				IAmb	IAmb	23 23 37.0	
	comp=Z,22nm,1.7s						
BMAR	**Burnt Mountain**	**88.96**	**22**	P	**P**	**23 20 20.2**	**+0.6**
EGAK	**Eagle**	**89.51**	**25**	P	**P**	**23 20 21.9**	**-0.2**
EGAK				IAmb	IAmb	23 20 28.6	
	comp=Z,33nm,1.9s						
DAWY	**Dawson**	**90.07**	**25**	P	**P**	**23 20 25.0**	**+0.2**
DAWY				IAmb	IAmb	23 23 51.3	
	comp=Z,22nm,1.9s						
I28M	**Miner Creek**	**90.18**	**24**	P	**P**	**23 20 24.8**	**-0.6**
I28M				IAmb	IAmb	23 23 40.2	
	comp=Z,18nm,1.9s						
ABKAR	**Akbulak array**	**90.18**	**319**	P	P	23 20 23.5	-2.1
ABKAR	**Akbulak array**	**90.18**	**319**	P	P	23 20 23.2	-2.4
ABKAR				IAmb	IAmb	23 20 24.3	
	comp=Z,3.1nm,0.8s						
L29M	**L29M**	**90.40**	**26**	P	**P**	**23 20 24.7**	**-1.6**
L29M				IAmb	IAmb	23 20 28.0	
	comp=Z,13nm,1.2s						
K29M	**Barlow Dome**	**90.82**	**26**	P	**P**	**23 20 27.4**	**-1.1**
K29M				IAmb	IAmb	23 21 23.8	
	comp=Z,25nm,1.8s						
O30N	**Mendenhall**	**90.86**	**29**	P	**P**	**23 20 27.8**	**-0.8**
WHY	**Whitehorse**	**91.42**	**29**	P	P	23 20 28.3	-2.9
J30M	**Hart River**	**91.48**	**25**	P	**P**	**23 20 30.7**	**-0.8**
G31M	**Satah River**	**92.74**	**23**	P	**P**	**23 20 35.8**	**-1.2**
Z51A	**Franklin**	**127.76**	**52**		**PKPdf**	**23 26 30.1**	**-1.2**
DBIC	**Dimbokro**	**148.17**	**273**	PKPbc	**PKPdf**	**23 27 11.9**	**+3.0**
	comp=Z,12nm,1.0s,baz=107,slow=4.7,SNR=7.6						

*IDC **25** 23:12:27.4±0.8,6°.33S×143°.62E,h0km,mb4.2/11, mbtmp4.2/13,ML1.9/1,Error ellipse: s-maj=32.8km s-min=19.4km az=85.0*

ISC 25 23:12:32.4±0.6,6°.48S±0°.08×143°.5E±0°.1,h35km,n16, σ2s05/18,mb4.3/12,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.63**	**129**	Pn	**Pn**	**23 13 40.7**	**+0.7**
	4.3nm,0.3s,baz=325,slow=9.9,SNR=3.2						
PMG				Sn	**Sn**	**23 14 30.0**	**-2.6**
	7.2nm,0.3s,baz=97,slow=23,SNR=6.0						
	11nm,0.3s						
WRA	**Warramunga Arr**	**16.09**	**213**	Pn	**Pn**	**23 16 14.3**	**-1.8**
	0.9nm,0.3s,baz=28,slow=13,SNR=7.6						
WRA				Sn	**Sn**	**23 19 09.3**	**-4.2**
	0.7nm,0.3s,baz=23,slow=15,SNR=2.4						
WRA				Lg	Lg	23 20 58.1	
	0.4nm,0.3s,baz=13,slow=27,SNR=2.1						
ASAR	**Alice Springs**	**19.43**	**207**	P	**P**	**23 16 57.9**	**+1.8**
	13nm,0.8s,baz=28,slow=9.5,SNR=11						
ASAR				Lg	Lg	23 22 51.4	
	baz=21,slow=32						
STKA	**Stephens Creek**	**25.33**	**184**	P	**P**	**23 18 01.4**	**+5.3**
	2.4nm,0.8s,baz=337,slow=13,SNR=2.9						
KSRS	**Korea Array**	**46.07**	**343**	P	**P**	**23 20 52.1**	**-0.9**
	2.4nm,0.7s,baz=164,slow=9.4,SNR=7.9						
	2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.46**	**300**	P	**P**	**23 21 27.7**	**+0.5**
	1.4nm,0.3s,baz=116,slow=6.3,SNR=5.5						
	1.4nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.51**	**349**	P	**P**	**23 21 33.7**	**-0.9**
	4.2nm,0.7s,baz=166,slow=6.4,SNR=7.1						
	4.2nm,0.7s						
PETK	**Petropavlovsk-**	**60.56**	**10**	P	**P**	**23 22 38.6**	**-0.6**
	2.1nm,0.6s,baz=134,slow=6.4,SNR=3.7						
	2.1nm,0.6s						
MKAR	**Makanchi Array**	**75.69**	**322**	P	**P**	**23 24 14.6**	**+0.3**
	1.3nm,0.6s,baz=103,slow=7.1,SNR=13						
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**77.60**	**329**	P	**P**	**23 24 24.9**	**0.0**
	0.5nm,0.5s,baz=105,slow=11,SNR=4.0						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**79.56**	**324**	P	**P**	**23 24 35.9**	**+0.1**
	0.7nm,0.8s,baz=112,slow=4.3,SNR=7.0						
	0.7nm,0.8s						
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**23 24 57.1**	**+0.5**
	2.1nm,0.8s,baz=291,slow=1.5,SNR=9.0						
	2.1nm,0.8s						
NRIK	**Noril'sk**	**84.69**	**343**	P	**P**	**23 25 02.2**	**0.0**
	5.2nm,0.9s,baz=128,slow=5.3,SNR=10						
	5.2nm,0.9s						
BVAR	**Borovoye Array**	**85.13**	**325**	P	**P**	**23 25 05.0**	**+0.1**
	2.1nm,0.7s,baz=108,slow=8.0,SNR=15						
	2.1nm,0.7s						
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**23 25 14.4**	**-0.8**
	1.9nm,0.9s,baz=256,slow=5.0,SNR=9.8						
	1.9nm,0.9s						
DBIC	**Dimbokro**	**148.59**	**272**	PKPbc	**PKPbc**	**23 32 17.1**	**+0.2**
	4.9nm,0.9s,baz=95,slow=3.3,SNR=4.3						

*IDC **25** 23:16:32.3±0.8,6°.03S×143°.20E,h0km,mb4.3/10, mbtmp4.3/13,ML3.9/1,Error ellipse: s-maj=29.0km s-min=16.0km az=82.0*

ISC 25 23:16:34.0±0.7,6°.0S±0°.1×143°.1E±0°.1,h10km,n13, σ0s54/14,mb4.3/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.20**	**130**	Pn	**Pn**	**23 17 51.4**	**-0.5**
	10nm,0.4s,baz=22,slow=7.7,SNR=1.9						
PMG				Sn	**Sn**	**23 18 52.7**	**+0.7**
	0.2nm,0.3s,baz=225,slow=22,SNR=1.0						
WRA	**Warramunga Arr**	**16.25**	**211**	Pn	**Pn**	**23 20 21.9**	**-0.6**
	0.4nm,0.3s,baz=32,slow=13,SNR=2.6						
WRA				Lg	Lg	23 25 09.8	
	0.5nm,0.3s,baz=28,slow=29,SNR=5.2						
	2.9nm,0.5s						
ASAR	**Alice Springs**	**19.64**	**206**	P	**P**	**23 21 03.5**	**+0.4**
	31nm,0.9s,baz=33,slow=10.0,SNR=22						
ASAR				Lg	Lg	23 26 58.7

s-min=25.1km az=108.0
ISC 25 23:36:01.3±1.6, 6°2S±0°.2×142°.9E±0°.4, h35km, n8, σ0°30/8, mb4.0/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.03 211**		Pn	**Pn**	**23 39 44.0**	**-0.3**
	0.2nm,0.3s,baz=26,slow=11,SNR=6.1						
WRA				Lg	Lg	23 44 27.2	
	0.3nm,0.3s,baz=15,slow=30,SNR=2.3						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**19.44 206**	P		**Pn**	**23 40 26.7**	**+0.3**
	0.4nm,0.3s,baz=32,slow=9.9,SNR=20						
	8.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.81 300**	P		**P**	**23 44 51.0**	**-0.2**
	0.8nm,0.5s,baz=130,slow=5.9,SNR=7.9						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**75.09 322**	P		**P**	**23 47 39.9**	**+0.1**
	1.9nm,1.0s,baz=108,slow=7.8,SNR=11						
	1.9nm,1.0s						
KURBB	**Kurchatov Arra**	**78.98 324**	P		**P**	**23 48 01.5**	**0.0**
	0.5nm,0.6s,baz=120,slow=5.2,SNR=8.4						
	0.5nm,0.6s						
NRIK	**Noril'sk**	**84.23 343**	P		**P**	**23 48 29.2**	**+0.4**
	1.1nm,0.4s,baz=127,slow=7.0,SNR=1.7						
	1.1nm,0.4s						
BVAR	**Borovoye Array**	**84.55 325**	P		**P**	**23 48 30.8**	**0.0**
	5.0nm,0.9s,baz=112,slow=6.6,SNR=20						
	5.0nm,0.9s						
ILAR	**Eielson Array**	**87.25 24**	P		**P**	**23 48 43.7**	**-0.3**
	0.8nm,0.8s,baz=238,slow=5.3,SNR=6.8						
	0.8nm,0.8s						

IDC 25 23:37:15.6±6.0, 6°19S×142°.20E, h0km, mb3.7/3, mbtmp3.9/5, ML4.0/2, MS3.7/1, Error ellipse: s-maj=228.5km s-min=31.9km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.66 208**		Pn	**Pn**	23 40 56.4	-1.4
	0.5nm,0.3s,baz=28,slow=13,SNR=4.9						
	1.7nm,0.4s						
ASAR	**Alice Springs**	**19.12 204**	P		P	23 41 40.7	+0.3
	0.6nm,0.3s,baz=33,slow=10,SNR=8.0						
	6.0nm,0.9s						
LEM	**Lembang**	**34.36 267**	LR		LR	23 58 56.9	
	comp=Z,124nm,21.8s,baz=119,slow=38						
MKAR	**Makanchi Array**	**74.65 322**	P		P	23 48 56.9	0.0
	0.2nm,0.5s,baz=130,slow=5.8,SNR=4.1						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**78.55 324**	P		P	23 49 19.6	+0.7
	0.2nm,0.3s,baz=114,slow=4.5,SNR=2.2						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**84.13 325**	P		P	23 49 48.0	-0.5
	0.7nm,0.6s,baz=99,slow=7.4,SNR=4.4						
	0.7nm,0.6s						

*IDC **25** 23:43:19.5±1.1, 5°.87S×142°.75E, h0km, mb3.9/4, mbtmp4.0/6, ML2.0/1, Error ellipse: s-maj=46.1km s-min=26.5km az=75.0*
ISC 25 23:43:23.7±0.9, 6°.0S±0°.1×142°.6E±0°.2, h28km, n7, σ1°44/7, mb4.0/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.61 127**	Pn		**Pn**	**23 44 45.6**	**+0.2**
	3.2nm,0.3s,baz=313,slow=16,SNR=3.7						
	7.8nm,0.3s						
WRA	**Warramunga Arr**	**16.04 209**	Pn		**Pn**	**23 47 05.6**	**-1.9**
	0.2nm,0.3s,baz=25,slow=13,SNR=1.7						
ASAR	**Alice Springs**	**19.48 205**	P		**P**	**23 47 50.0**	**+1.3**
	3.9nm,0.6s,baz=31,slow=10,SNR=17						
MKAR	**Makanchi Array**	**74.77 322**	P		**P**	**23 55 02.0**	**+0.6**
	0.4nm,0.8s,baz=99,slow=7.5,SNR=4.4						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**83.97 180**	P		**P**	**23 55 51.8**	**+0.5**
	1.9nm,0.7s,baz=300,slow=1.2,SNR=13						
	1.9nm,0.7s						
BVAR	**Borovoye Array**	**84.24 325**	P		**P**	**23 55 53.1**	**+0.4**
	1.6nm,0.8s,baz=90,slow=4.7,SNR=7.9						
	1.6nm,0.8s						
ILAR	**Eielson Array**	**87.21 24**	P		**P**	**23 56 05.8**	**-1.4**
	0.4nm,0.8s,baz=248,slow=4.8,SNR=3.1						
	0.4nm,0.8s						

*IDC **25** 23:43:41.8±0.9, 5°.70S×142°.55E, h0km, mb4.0/8, mbtmp4.1/11, ML4.2/2, Error ellipse: s-maj=34.6km s-min=17.6km az=69.0*
ISC 25 23:43:47.2±0.8, 5°.8S±0°.1×142°.5E±0°.1, h35km, n11, σ0°73/12, mb3.9/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.88 128**	Pn		**Pn**	**23 45 11.7**	**-0.1**
	9.5nm,0.3s,baz=254,slow=15,SNR=3.2						
PMG				Sn	**Sn**	**23 46 18.0**	**0.0**
	3.6nm,0.3s,baz=32,slow=21,SNR=1.7						
WRA	**Warramunga Arr**	**16.16 209**	Pn		**Pn**	**23 47 30.2**	**-1.6**
	0.8nm,0.3s,baz=28,slow=13,SNR=7.6						
	3.7nm,0.7s						
ASAR	**Alice Springs**	**19.62 204**	P		**P**	**23 48 13.5**	**+0.7**
	1.3nm,0.3s,baz=31,slow=12,SNR=12						
	8.8nm,0.6s						
STKA	**Stephens Creek**	**25.99 182**	P		**P**	**23 49 17.2**	**+0.5**
	1.2nm,0.4s,baz=0.0,slow=14,SNR=2.5						
	1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**49.22 300**	P		**P**	**23 52 32.5**	**-0.1**
	0.9nm,0.7s,baz=116,slow=6.6,SNR=5.7						
	0.9nm,0.7s						
VNDA	**Vanda**	**72.44 176**	P		**P**	**23 55 10.1**	**+0.6**
	0.7nm,0.5s,baz=348,slow=5.9,SNR=6.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**74.50 322**	P		**P**	**23 55 22.5**	**+0.3**
	1.0nm,0.6s,baz=112,slow=6.9,SNR=14						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**78.39 324**	P		**P**	**23 55 44.2**	**+0.1**
	0.3nm,0.3s,baz=110,slow=5.1,SNR=4.9						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**83.96 325**	P		**P**	**23 56 14.2**	**+0.5**
	2.9nm,0.8s,baz=104,slow=6.3,SNR=8.4						
	2.9nm,0.8s						
QSPA	**South Pole Qui**	**84.20 180**	P		**P**	**23 56 14.9**	**+0.1**
	2.4nm,0.7s,baz=321,slow=0.5,SNR=8.8						
	2.4nm,0.7s						
ILAR	**Eielson Array**	**87.06 24**	P		**P**	**23 56 27.9**	**-1.0**
	0.7nm,0.8s,baz=261,slow=4.2,SNR=4.5						
	0.7nm,0.8s						

*IDC **25** 23:46:18.9±0.8, 6°.26S×143°.38E, h0km, mb4.2/12, mbtmp4.2/14, ML1.9/1, Error ellipse: s-maj=30.3km s-min=16.5km az=80.0*
*NEIC **25** 23:46:22.0±1.5, 6°.49S±0°.08×143°.13E±0°.08, h20km±5km, mb4.7/36, Error ellipse: s-maj=12.1km s-min=11.6km az=95.0*
ISC 25 23:46:20.6±0.4, 6°47S±0°.05×143°16E±0°.06, h10km, n78, σ1°76/75, mb4.6/31, 3C, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.92 127**	Pn		**Pn**	**23 47 34.3**	**-0.4**
PMG	**Port Moresby**	**4.92 127**	P		**Pb**	**23 47 45.1**	**-1.9**
	92nm,0.9s						
PMG	**Port Moresby**	**4.92 127**	Pn		**Pn**	**23 47 34.0**	**-0.7**
	3.4nm,0.3s,baz=258,slow=17,SNR=1.6						
PMG				Sn	**Sn**	**23 48 32.8**	**+1.1**
	16nm,0.3s,baz=206,slow=19,SNR=2.5						
	11nm,0.3s						
MANU	**Manus Island**	**6.08 44**			**Pn**	**23 47 50.5**	**-0.1**
MTSU	**Mount Surprise**	**11.65 175**	P		**Pn**	**23 49 11.9**	**+4.8**
	11nm,0.7s						
SAUI	**Saumlaki**	**11.86 262**	Pn		**Pn**	**23 49 08.0**	**-2.0**
KDU	**Kakadu**	**12.21 239**	P		**Pn**	**23 49 14.3**	**-0.5**
	92nm,0.8s						
MTN	**Manton Dam**	**13.44 241**			**Pn**	**23 49 30.0**	**-1.6**
MTN	**Manton Dam**	**13.44 241**	P		**Pn**	**23 49 30.5**	**-1.1**
DRS	**Darwin Rock St**	**13.46 243**	P		**Pn**	**23 49 32.2**	**+0.3**
	54nm,0.5s						
QIS	**Mount Isa**	**14.42 193**	P		**Pn**	**23 49 47.5**	**+2.4**
	27nm,0.6s						
WB0	**Warramunga Arr**	**15.73 212**			**Pn**	**23 50 01.6**	**-0.9**
WB0				IAmb	IAmb	23 50 14.7	
	comp=Z,32nm,0.9s						
WRAB	**Tennant Creek**	**15.89 212**			**Pn**	**23 50 02.6**	**-2.0**
WRAB				IAmb	IAmb	23 50 28.5	
	comp=Z,85nm,1.5s						
WB2	**Warramunga Arr**	**15.89 212**			**Pn**	**23 50 03.1**	**-1.5**
WB2				IAmb	IAmb	23 50 30.8	
	comp=Z,29nm,0.8s						
WRA	**Warramunga Arr**	**15.90 212**			**Pn**	**23 50 01.9**	**-2.8**
WRA	**Warramunga Arr**	**15.90 212**	Pn		**Pn**	**23 50 03.3**	**-1.4**
	comp=Z,4.3nm,0.3s,baz=30,slow=13,SNR=17						
WRA				Lg	Lg	23 54 52.6	
	comp=Z,0.8nm,0.3s,baz=31,slow=25,SNR=4.8						
KNRA	**Kununurra**	**16.82 236**	Pn		**Pn**	**23 50 13.7**	**-2.8**
KNRA				IAmb	IAmb	23 50 39.2	
	comp=Z,27nm,0.8s						
HNR	**Honiara**	**16.88 101**	P		**Pn**	**23 50 19.3**	**+2.0**
SOEI	**Soe**	**18.98 259**	P		**P**	**23 50 42.1**	**-0.5**
SOEI				IAmb	IAmb	23 51 19.0	
	comp=Z,71nm,1.0s						
AS31	**Alice Springs**	**19.28 207**	P		**P**	**23 50 45.5**	**-0.2**
AS31				IAmb	IAmb	23 50 50.9	
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	**19.28 207**	P		**P**	**23 50 45.4**	**-0.3**
ASAR	**Alice Springs**	**19.28 207**	P		**Pn**	**23 50 48.9**	**+2.1**
	comp=Z,41nm,0.7s,baz=30,slow=10,SNR=35						
ASAR				Lg	Lg	23 56 41.4	
	comp=Z,0.3nm,0.3s,baz=13,slow=30,SNR=2.4						
PATS	**Pohnpei**	**20.08 49**	P		**P**	**23 50 54.9**	**+0.4**
EIDS	**Eidsvold**	**20.27 159**	P		**P**	**23 50 54.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**20.63 234**	P		**P**	**23 51 00.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**20.63 234**	P		**P**	**23 51 01.7**	**+1.2**
	comp=Z,1.3nm,1.3s						
OOD	**Oodnadatta**	**22.36 198**	P		**P**	**23 51 21.5**	**+2.5**
	comp=Z,52nm,0.9s						
WRKA	**Warakurna**	**23.31 216**	P		**P**	**23 51 30.1**	**+1.0**
	comp=Z,51nm,1.1s						
KAPI	**Kappang**	**23.34 272**	P		**P**	**23 51 28.7**	**-0.7**
KAPI				IAmb	IAmb	23 51 35.8	
	comp=Z,47nm,1.4s						
TOLI2	**Tolitoli**	**23.57 288**	P		**P**	**23 51 31.7**	**0.0**
TOLI2				IAmb	IAmb	23 51 39.1	
	comp=Z,20nm,1.0s						
MULG	**Mulgathing**	**25.19 199**	P		**P**	**23 51 49.2**	**+2.7**
	comp=Z,30nm,1.9s						
STKA	**Stephens Creek**	**25.32 183**	P		**P**	**23 51 50.0**	**+2.4**
	comp=Z,2.6nm,0.7s,baz=323,slow=11,SNR=3.3						
	comp=Z,2.6nm,0.7s						
BBOO	**Buckleboo**	**27.03 193**	P		**P**	**23 52 01.9**	**-1.3**
BBOO				IAmb	IAmb	23 52 27.6	
	comp=Z,47nm,1.4s						
PSA00	**Pilbara Seismi**	**27.09 234**	P		**P**	**23 52 03.1**	**-0.7**
DZM	**Mont Dzumac**	**27.31 127**	P		**P**	**23 52 05.0**	**-1.0**
DZM				IAmb	IAmb	23 52 19.7	
	comp=Z,11nm,1.2s						
KSRS	**Korea Array**	**45.95 343**	P		**P**	**23 54 43.2**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=156,slow=9.8,SNR=6.7						
	comp=Z,2.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.15 300**	P		**P**	**23 55 17.9**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=107,slow=4.8,SNR=1.2						
	comp=Z,0.6nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.43 350**	P		P	23 55 24.5	-1.4
	comp=Z,2.6nm,0.8s,baz=179,slow=7.6,SNR=4.2						
	comp=Z,2.6nm,0.8s						
PZH	**PanZhiHua**	**51.82 311**	P		**P**	**23 55 31.5**	**+2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
BNX	**BinXian**	**53.85 346**	⇑P		**P**	**23 55 43.0**	**-0.8**
BNX				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BNX				pmax	pmax		
	comp=Z,100nm,5.7s						
HHC	**Hu-ho-hao-te**	**55.31 331**	*e*P		**P**	**23 55 58.0**	**+3.3**
HHC				sP	sP	23 56 08.0	+8.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
LZH	**Lanzhou**	**56.14 322**	*e*P		P	23 55 58.0	-2.8
LZH				pP	sP	23 56 09.0	+3.5
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**60.62 10**	P		**P**	**23 56 30.8**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=152,slow=4.4,SNR=6.3						
	comp=Z,4.7nm,0.7s						
GTA	**Gaotai**	**60.72 322**	*e*P		**P**	**23 56 34.0**	**+1.3**
GTA				pP	sP	23 56 42.0	+4.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**71.70 176**	P		**P**	**23 57 41.9**	**-0.5**
VNDA				IAmb	IAmb	23 58 06.1	
	comp=Z,9.9nm,1.2s						
MK31	**Makanchi Array**	**75.46 322**	P		**P**	**23 58 04.5**	**-0.5**
MKAR	**Makanchi Array**	**75.46 322**	P		**P**	**23 58 04.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=103,slow=7.4,SNR=12						
	comp=Z,1.6nm,0.8s						
MAKZ	**Makanchi**	**75.66 322**	P		**P**	**23 58 05.7**	**-0.5**
KSH	**Kashi**	**76.87 313**	P		**P**	**23 58 15.0**	**+1.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.6s						
ZALV	**Zalesovo Beam**	**77.41 329**	P		**P**	**23 58 14.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=101,slow=7.5,SNR=3.0						
	comp=Z,0.6nm,0.5s						
M13K	**Dall Lake**	**78.68 24**	P		P	23 58 21.3	-1.5
O14K	**Tigyukauivet M**	**78.89 26**	P		**P**	**23 58 23.0**	**-1.0**
KURK	**Kurchatov**	**79.33 324**	P		**P**	**23 58 26.2**	**-0.3**
KURBB	**Kurchatov Arra**	**79.34 324**	P		**P**	**23 58 26.0**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=117,slow=4.7,SNR=7.5						
	comp=Z,1.3nm,1.0s						
N15K	**Kwethluk River**	**79.89 25**	P		**P**	**23 58 28.9**	**-0.6**
MAW	**Mawson**	**80.35 203**	P		**P**	**23 58 31.6**	**-0.2**
MAW				IAmb	IAmb	23 58 43.1	
	comp=Z,12nm,1.1s						
QSPA	**South Pole Qui**	**83.50 180**	P		**P**	**23 58 49.1**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=265,slow=1.6,SNR=7.1						
	comp=Z,1.5nm,0.7s						
G18K	**Tagagawik**	**83.50 21**	P		**P**	**23 58 48.8**	**+0.3**
G18K				IAmb	IAmb	23 58 54.8	
	comp=Z,7.0nm,1.2s						
E18K	**Tukpahlearik C**	**83.68 19**			**P**	**23 58 50.1**	**+0.9**
E18K				IAmb	IAmb	23 58 56.1	
	comp=Z,3.8nm,1.1s						
J20K	**Nowinta River**	**84.31 23**	P		**P**	**23 58 52.4**	**-0.2**
NRIK	**Noril'sk**	**84.57 343**	P		**P**	**23 58 52.8**	**-1.0**
NRIK				IAmb	IAmb	23 59 01.7	
	comp=Z,5.9nm,0.9s						
NRIK	**Noril'sk**	**84.57 343**	P		**P**	**23 58 52.9**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=140,slow=5.9,SNR=5.2						
	comp=Z,1.3nm,0.3s						
BVAR	**Borovoye Array**	**84.92 325**	P		**P**	**23 58 55.7**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=101,slow=7.5,SNR=8.8						
	comp=Z,2.2nm,0.7s						
ILAR	**Eielson Array**	**87.43 24**	P		P	23 59 06.0	-2.1
	comp=Z,1.2nm,0.9s,baz=254,slow=5.1,SNR=7.0						
	comp=Z,1.2nm,0.9s						
C23K	**Itkillik River**	**88.06 19**	P		**P**	**23 59 10.7**	**-0.2**
D24K	**Happy Valley**	**88.36 19**	P		**P**	**23 59 12.3**	**0.0**
J26L	**Joseph Creek**	**88.69 24**	P		**P**	**23 59 13.4**	**-0.7**
J26L				IAmb	IAmb	23 59 21.1	
	comp=Z,4.5nm,1.0s						
BCAR	**Beaver Creek A**	**89.02 26**	P		**P**	**23 59 15.8**	**+0.2**
E25K	**Arctic Village**	**89.09 21**	P		**P**	**23 59 15.3**	**-0.5**
E25K				IAmb	IAmb	23 59 24.4	
	comp=Z,4.4nm,1.3s						
BMAR	**Burnt Mountain**	**89.22 22**	P		**P**	**23 59 16.1**	**-0.4**
ABKAR	**Akbulak array**	**90.44 319**	P		**P**	**23 59 22.6**	**+0.1**
SNAA	**Sanae**	**98.89 190**	⇑Pdiff		**P**	**23 59 59.3**	**-1.6**
	comp=Z,93nm,0.8s						
VNA1	**Neumayer--Stat**	**100.68 189**	⇑Pdiff		**Pdif**	**23 59 59.8**	**-9.0**
	comp=Z,41nm,0.5s						

IDC 26 00:02:47.2±7.2, 6°.11S×142°.22E, h0km, mb3.7/2, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=270.7km s-min=35.0km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.73 208**		Pn	Pn	00 06 28.3	-2.1
	0.1nm,0.3s,baz=30,slow=13,SNR=2.0						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**19.20 204**	P		Pn	00 07 13.8	+0.2
	0.1nm,0.3s,baz=32,slow=9.6,SNR=1.9						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**74.60 322**	P		P	00 14 29.1	+0.9
	0.3nm,0.6s,baz=102,slow=6.1,SNR=4.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.08 325**	P		P	00 15 18.8	-1.1
	0.5nm,0.6s,baz=112,slow=5.5,SNR=3.4						
	0.5nm,0.6s						

*IDC **26** 00:03:15.0±0.9, 6°.24S×143°.46E, h0km, mb3.9/8, mbtmp3.9/9, ML1.9/1, Error ellipse: s-maj=40.4km s-min=22.0km az=78.0*
ISC 26 00:03:19.5±0.7, 6°.4S±0°.1×143°.5E±0°.1, h35km, n13, σ1°39/13, mb3.9/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.69 129**	Pn		**Pn**	**00 04 29.4**	**+1.6**
	3.7nm,0.3s,baz=327,slow=6.2,SNR=13						
PMG				Sn	**Sn**	**00 05 18.9**	**-2.2**
	4.6nm,0.3s,baz=2.3,slow=7.5,SNR=6.3						
	36nm,0.6s						
CTA	**Charters Tower**	**13.83 169**	Lg		Lg	00 10 26.9	
	baz=353,slow=16,SNR=1.3						
WRA	**Warramunga Arr**	**16.09 213**	Pn		**Pn**	**00 07 01.4**	**-1.8**
	0.2nm,0.3s,baz=31,slow=13,SNR=5.7						
WRA				Lg	Lg	00 11 34.3	
	0.3nm,0.3s,baz=35,slow=28,SNR=2.0						
ASAR	**Alice Springs**	**19.44 207**	P		**Pn**	**00 07 46.8**	**+2.2**
	50nm,0.8s,baz=36,slow=9.5,SNR=89						
ASAR				Lg	Lg	00 13 18.5	
	baz=20,slow=30						
STKA	**Stephens Creek**	**25.36 184**	P		**P**	**00 08 42.2**	**-1.3**
	1.9nm,0.7s,baz=360,slow=14,SNR=3.0						
KSRS	**Korea Array**	**46.02 343**	P		**P**	**00 11 39.4**	**-0.3**
	1.4nm,0.8s,baz=171,slow=6.9,SNR=2.3						
	1.4nm,0.8s						
PETK	**Petropavlovsk-**	**60.54 10**	P		**P**	**00 13 25.6**	**-0.6**
	1.3nm,0.5s,baz=166,slow=6.7,SNR=1.8						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**75.63 322**	P		**P**	**00 15 01.1**	**-0.1**
	0.4nm,0.8s,baz=103,slow=7.2,SNR=6.9						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**77.55 329**	P		**P**	**00 15 11.6**	**-0.1**
	0.2nm,0.3s,baz=134,slow=6.2,SNR=1.6						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**79.50 324**	P		**P**	**00 15 22.4**	**-0.1**
	0.1nm,0.3s,baz=116,slow=4.2,SNR=1.9						
	0.1nm,0.3s						
QSPA	**South Pole Qui**	**83.53 180**	P		**P**	**00 15 44.8**	**+1.0**
	4.6nm,0.9s,baz=319,slow=2.8,SNR=8.9						
	4.6nm,0.9s						
BVAR	**Borovoye Array**	**85.08 325**	P		**P**	**00 15 51.1**	**-0.6**
	1.3nm,0.9s,baz=111,slow=7.9,SNR=2.6						
	1.3nm,0.9s						
ILAR	**Eielson Array**	**87.28 24**	P		**P**	**00 16 03.0**	**+0.7**
	0.7nm,0.9s,baz=252,slow=5.9,SNR=4.8						
	0.7nm,0.9s						

*IDC **26** 00:16:37.0±0.8, 6°.17S×143°.22E, h0km, mb4.2/12, mbtmp4.2/14, ML1.5/1, Error ellipse: s-maj=33.2km s-min=17.6km az=71.0*
*NEIC **26** 00:16:39.8±1.8, 6°.2S±0°.1×142°.97E±0°.09, h10km±1km, mb4.7/42, Error ellipse: s-maj=18.6km s-min=13.8km az=210.0*
*DJA **26** 00:16:41.2±0.3, 6°S±3°×14°3E±°, h10km, M5.0/12, mb4.6/12, mB5.4/6, MLv5.2/6, Mw(mB)4.8/6, MwMwp4.5/1, Mwp4.9/1*
ISC 26 00:16:39.4±0.5, 6°.41S±0°.06×143°.05E±0°.07, h10km, n88, σ1°98/87, mb4.6/39, 1C, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.34 232**		P	**Pn**	**00 17 34.7**	**+3.0**
GENI	**Genyem**	**4.76 323**		P	**Pn**	**00 17 48.9**	**-2.4**
PMG	**Port Moresby**	**5.04 126**	Pn		**Pn**	**00 17 56.8**	**+1.7**
PMG	**Port Moresby**	**5.04 126**	Pn		**Pn**	**00 17 53.6**	**-1.6**
	1.3nm,0.3s,baz=267,slow=12,SNR=1.5						
PMG				Sn	**Sn**	**00 18 53.3**	**-0.1**
	1.3nm,0.3s,baz=225,slow=15,SNR=1.8						
PMG				Lg	Lg	00 19 14.9	
	2.4nm,0.3s,baz=269,slow=14,SNR=3.6						
	4.1nm,0.3s						
MANU	**Manus Island**	**6.11 45**			Lg	00 19 58.0	
SMPI	**Sarmi**	**6.17 315**	P		**Pn**	**00 18 11.9**	**+1.3**
	113nm,1.2s,0.5nm						
COEN	**Coen**	**7.50 179**			LR	00 20 38.4	
FAKI	**Fak Fak**	**11.31 287**	Pn		**Pn**	**00 19 19.9**	**-1.3**
SAUI	**Saumlaki**	**11.76 262**	Pn		**Pn**	**00 19 27.4**	**0.0**
SAUI	**Saumlaki**	**11.76 262**	P		**Pn**	**00 19 29.2**	**+1.8**
	248nm,0.9s						
MTN	**Manton Dam**	**13.37 241**			**Pn**	**00 19 48.9**	**-0.5**
CTA	**Charters Tower**	**13.95 167**	Lg		Lg	00 24 00.1	
	0.2nm,0.3s,baz=283,slow=16,SNR=1.5						
WB0	**Warramunga Arr**	**15.71 212**			**P**	**00 20 25.9**	**+0.8**
WRAB	**Tennant Creek**	**15.88 211**			**Pn**	**00 20 25.1**	**+2.0**
WB2	**Warramunga Arr**	**15.88 211**	Pn		**Pn**	**00 20 24.4**	**+1.1**
WB2				IAmb	IAmb	00 20 42.8	
	comp=Z,27nm,1.1s						
WRA	**Warramunga Arr**	**15.89 211**			**Pn**	**00 20 24.5**	**+1.1**
WRA	**Warramunga Arr**	**15.89 211**	Pn		**Pn**	**00 20 22.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=32,slow=13,SNR=15						
WRA				Sn	**Sn**	**00 23 12.4**	**-7.3**
	comp=Z,0.2nm,0.3s,baz=24,slow=21,SNR=3.9						
WRA				Lg	Lg	00 25 00.9	
	comp=Z,0.3nm,0.3s,baz=36,slow=27,SNR=4.8						
KNRA	**Kununurra**	**16.76 236**	Pn		**Pn**	**00 20 34.2**	**-0.3**
KNRA				IAmb	IAmb	00 20 38.8	
	comp=Z,56nm,1.1s						
SOEI	**Soe**	**18.89 259**			**Pn**	**00 21 00.7**	**-0.3**
SOEI				IAmb	IAmb	00 21 26.2	
	comp=Z,81nm,1.0s						
SOEI	**Soe**	**18.89 259**	P		**Pn**	**00 21 03.1**	**+2.2**
	comp=Z,91nm,0.9s						
AS31	**Alice Springs**	**19.28 206**	P		**Pn**	**00 21 07.0**	**

comp=Z,100nm,5.4s
MDJ Mudanjiang 52.22 348 P **P** **00 25 53.0 +2.4**
MDJ pmax pmax
comp=Z,7.0nm,1.0s
MDJ pmax pmax
comp=Z,110nm,6.1s
HHC Hu-ho-hao-te 55.21 331 *e*P **P** **00 26 15.0 +2.3**
HHC pmax pmax
comp=Z,10.0nm,0.6s
GTA Gaotai 60.61 322 *e*P **P** **00 26 54.5 +3.8**
GTA pP sP 00 27 03.5 +8.1
GTA pmax pmax
comp=Z,2.0nm,1.1s
SONM Songino Array 62.92 333 P **P** **00 27 04.6 -1.6**
comp=Z,0.4nm,0.7s,baz=149,slow=7.5,SNR=2.9
comp=Z,0.4nm,0.7s
WMQ Urumqi 70.59 321 *e*P **P** **00 27 58.5 +3.4**
MK31 Makanchi Array 75.35 322 P **P** **00 28 22.2 -1.0**
MKAR Makanchi Array 75.35 322 P **P** **00 28 21.9 -1.3**
MKAR Makanchi Array 75.35 322 P **P** **00 28 22.3 -0.9**
comp=Z,2.2nm,0.8s,baz=108,slow=7.8,SNR=19
comp=Z,2.2nm,0.8s
MAKZ Makanchi 75.55 322 P **P** **00 28 22.8 -1.6**
MAKZ lAmb lAmb 00 28 29.5
comp=Z,4.3nm,1.0s
PRZ Przheval'sk 76.11 316 P **P** **00 28 26.0 -1.8**
PRZ lAmb lAmb 00 28 34.4
comp=Z,6.1nm,1.0s
KSH Kashi 76.76 313 P **P** **00 28 32.5 +1.0**
KSH pP PcP 00 28 41.8 -1.0
KSH pmax pmax
comp=Z,3.0nm,1.1s
NIL Nilore 76.99 307 P **P** **00 28 31.3 -1.5**
NIL lAmb lAmb 00 28 37.7
comp=Z,13nm,1.3s
ZAA0 Zalesovo Array 77.30 329 P **P** **00 28 32.1 -1.9**
ZALV Zalesovo Beam 77.30 329 P **P** **00 28 31.7 -2.3**
ZALV Zalesovo Beam 77.30 329 P **P** **00 28 32.1 -2.0**
comp=Z,1.2nm,0.8s,baz=104,slow=6.3,SNR=7.0
comp=Z,1.2nm,0.8s
KURK Kurchatov 79.22 324 P **P** **00 28 43.7 -1.1**
KURK lAmb lAmb 00 28 49.7
comp=Z,4.8nm,1.1s
KURBB Kurchatov Arra 79.23 324 P **P** **00 28 43.4 -1.4**
comp=Z,2.0nm,0.9s,baz=111,slow=4.4,SNR=13
comp=Z,2.0nm,0.9s
J16K Anvik River 81.38 22 **P** **00 28 56.1 0.0**
J16K lAmb lAmb 00 29 02.8
comp=Z,15nm,1.4s
OHAK Old Harbor 81.56 30 P **P** **00 28 56.5 -0.7**
SIMJ Simiganj 81.67 310 P **P** **00 28 55.8 -2.6**
SIMJ lAmb lAmb 00 29 04.1
comp=Z,3.5nm,0.9s
KK31 Karatay Array 81.79 315 P **P** **00 28 57.6 -1.2**
KKAR Karatay Array 81.79 315 P **P** **00 28 57.6 -1.2**
KKAR Karatay Array 81.79 315 P **P** **00 28 57.3 -1.5**
KKAR lAmb lAmb 00 29 08.3
comp=Z,2.4nm,1.2s
N18K Kilae Creek 81.95 26 P **P** **00 28 58.0 -1.2**
N18K lAmb lAmb 00 29 19.3
comp=Z,12nm,1.3s
K17K Iditarod 81.96 23 P **P** **00 28 59.8 +0.6**
K17K lAmb lAmb 00 29 21.9
comp=Z,12nm,1.2s
SYI Shuyak Island 82.59 28 P **P** **00 29 02.0 -0.5**
L19K White Mountain 83.10 25 P **P** **00 29 05.2 0.0**
QSPA South Pole Qui 83.56 180 P **P** **00 29 07.8 +0.2**
comp=Z,1.8nm,0.8s,baz=40,slow=4.1,SNR=4.1
comp=Z,1.8nm,0.8s
I20K Naaghedeneel 84.47 22 P **P** **00 29 12.5 +0.5**
NRIK Noril'sk 84.49 343 P **P** **00 29 11.2 -0.9**
NRIK lAmb lAmb 00 29 12.3
comp=Z,5.0nm,1.1s
NRIK Noril'sk 84.49 343 P **P** **00 29 10.0 -2.1**
comp=Z,2.0nm,0.7s,baz=131,slow=7.2,SNR=5.6
comp=Z,2.0nm,0.7s
E19K Redstone River 84.79 20 P **P** **00 29 13.0 -0.7**
E19K lAmb lAmb 00 29 14.9
comp=Z,3.2nm,0.9s
BVAR Borovoye Array 84.81 325 P **P** **00 29 13.1 -1.0**
comp=Z,9.5nm,0.8s,baz=115,slow=6.7,SNR=44
comp=Z,9.5nm,0.8s
BRVK Borovoye 84.88 325 P **P** **00 29 13.1 -1.3**
BRVK lAmb lAmb 00 29 15.0
comp=Z,8.1nm,0.9s
C19K Lookout Ridge 84.91 18 P **P** **00 29 14.2 -0.2**
CCB Clear Creek Bu 87.01 24 P **P** **00 29 23.0 -1.7**
CCB lAmb lAmb 00 29 36.6
comp=Z,7.9nm,1.2s
IL31 87.42 24 P **P** **00 29 25.0 -1.7**
IL31 lAmb lAmb 00 29 25.8
comp=Z,3.5nm,0.9s
ILAR Eielson Array 87.42 24 P **P** **00 29 25.5 -1.3**
ILAR Eielson Array 87.42 24 P **P** **00 29 24.9 -1.9**
comp=Z,1.7nm,0.8s,baz=260,slow=5.5,SNR=20
comp=Z,1.7nm,0.8s
C23K Itkillik River 88.04 19 P **P** **00 29 29.9 +0.3**
F24K Squaw Lake 88.04 21 P **P** **00 29 29.6 -0.2**
F24K lAmb lAmb 00 29 31.5
comp=Z,6.9nm,1.1s
BCAR Beaver Creek A 89.02 26 P **P** **00 29 34.4 -0.1**
K27K Chicken 89.17 25 P **P** **00 29 35.5 +0.5**
K27K lAmb lAmb 00 29 52.3
comp=Z,10nm,1.4s
BMAR Burnt Mountain 89.21 22 P **P** **00 29 36.2 +0.9**
DAWY Dawson 90.32 25 P **P** **00 29 40.9 +0.5**
DAWY lAmb lAmb 00 29 50.1
comp=Z,10nm,1.5s
ABKAR Akbulak array 90.33 319 P **P** **00 29 38.8 -1.9**

*IDC **26** 00:24:16.6±1.7,7.7°16S×128.52E,h0km,mb3.5/2, mbtmp3.8/4,ML4.4/2,Error ellipse: s-maj=113.7km s-min=30.1km az=66.0*
*DJA **26** 00:24:30.5±0.2,7.7°S±3.3°×12.9°E±.°,h175km±4km,M4.4/13, mb4.2/13,mB4.2/2,MLv4.5/8,Mw(mB)3.3/2,MwMwp5.2/1, Mwp5.5/1*
ISC 26 00:24:29.5±0.8,7.24S±0.06×129.45E±0.06,h150km,n15, σ3§15/20,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.98**	**112**	P	**Pn**	**00 25 07.5**	**+3.0**
SAUI				S	**Sn**	**00 25 35.2**	**+3.9**
BNDI	**Bandanaira**	**2.73**	**10**	P	**Pn**	**00 25 16.2**	**+2.6**
FAKI	**Fak Fak**	**5.12**	**33**	P	**Pn**	**00 25 46.8**	**+2.2**
17nm,1.0s,0.1nm							
FAKI				S	**Sn**	**00 26 39.7**	**-3.4**
17nm,1.0s,0.1nm							
KMPI	**Kaimana, Papua**	**5.53**	**50**	P	**Pn**	**00 25 50.9**	**+0.9**
209nm,0.8s,0.9nm							
KMPI				S	**Sn**	**00 26 48.9**	**-4.0**
209nm,0.8s,0.9nm							
SOEI	**Soe**	**5.70**	**244**	P	**Pn**	**00 25 54.6**	**+2.2**
59nm,0.8s,15µm0.7nm							
SOEI				S	**Sn**	**00 26 57.3**	**+0.2**
59nm,0.8s,15µm0.7nm							
EDFI	**Ende, Flores**	**7.83**	**258**	P	**Pn**	**00 26 22.5**	**+1.7**
9.6nm,0.9s,0.1nm							
BASI	**Baing, Sumba**	**9.25**	**251**	P	**Pn**	**00 26 39.6**	**-0.1**
100nm,1.1s							
PLAI	**Plampang**	**11.66**	**261**	P	**Pn**	**00 27 10.6**	**-0.9**
28nm,1.0s							
TWSI	**Taliwang, Sumb**	**12.53**	**262**	P	**Pn**	**00 27 21.1**	**-1.7**
8.9nm,0.8s							
WRA	**Warramunga Arr**	**13.49**	**160**	Pn	**Pn**	**00 27 33.4**	**-1.7**
2.2nm,0.3s,baz=335,slow=14,SNR=21							
WRA				Sn	Sn	00 29 55.5	-9.1
2.7nm,0.3s,baz=331,slow=25,SNR=10.0							
3.1nm,0.3s							
GMJI	**Gumukmas**	**15.89**	**265**	P	**Pn**	**00 28 03.8**	**-1.2**
16nm,0.9s							
ASAR	**Alice Springs**	**16.89**	**166**	P	**Pn**	**00 28 20.0**	**+2.8**
0.7nm,0.3s,baz=340,slow=9.3,SNR=11							
ASAR				S	**S**	**00 31 16.6**	**-8.4**
0.8nm,0.4s,baz=354,slow=28,SNR=2.1							
1.5nm,0.4s							
PWJI	**Pagerwojo**	**17.50**	**266**	P	**P**	**00 28 23.4**	**-0.1**
14nm,1.6s							
MKAR	**Makanchi Array**	**68.12**	**327**	P	**P**	**00 35 14.6**	**+1.3**
0.2nm,0.3s,baz=120,slow=7.9,SNR=6.5							
0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**72.42**	**329**	P	**P**	**00 35 42.0**	**+2.7**
0.2nm,0.4s,baz=126,slow=4.9,SNR=2.2							
0.2nm,0.4s							

IDC 26 00:24:53.0±4.8,6.21S×142.45E,h0km,mb3.8/2, mbtmp3.8/4,Error ellipse: s-maj=174.4km s-min=35.4km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.77**	**209**	Pn	Pn	00 28 34.5	-2.1
1.2nm,0.4s,baz=31,slow=12,SNR=1.6							
ASAR	**Alice Springs**	**19.21**	**204**	P	Pn	00 29 19.8	+0.2
2.9nm,0.8s,baz=30,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**74.82**	**322**	P	P	00 36 35.5	+0.1
0.3nm,0.6s,baz=111,slow=7.1,SNR=2.4							
0.3nm,0.6s							
BVAR	**Borovoye Array**	**84.30**	**325**	P	P	00 37 26.8	-0.1
0.8nm,0.6s,baz=104,slow=6.3,SNR=4.7							
0.8nm,0.6s							

*IDC **26** 00:34:54.3±1.9,5.95S×142.61E,h0km,mb4.0/8, mbtmp3.9/9,ML3.9/1,MS4.1/2,Error ellipse: s-maj=72.3km s-min=32.1km az=99.0*
ISC 26 00:34:58.1±1.7,6.2S±0.2×142.5E±0.5,h28km,n11, σ0§99/10,mb4.0/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.85**	**209**	Pn	**Pn**	**00 38 37.9**	**-1.5**
0.2nm,0.3s,baz=30,slow=12,SNR=5.4							
WRA				Lg	Lg	00 43 22.8	
baz=30,slow=28							
ASAR	**Alice Springs**	**19.29**	**205**	P	**Pn**	**00 39 23.9**	**+1.7**
0.3nm,0.3s,baz=29,slow=10,SNR=14							
ASAR				Lg	Lg	00 45 11.3	
0.1nm,0.3s,baz=19,slow=32,SNR=2.4							
ASAR				LR	LR	00 47 29.0	
comp=Z,742nm,19.3s,baz=34,slow=39							
2.2nm,0.7s							
KSRS	**Korea Array**	**45.46**	**344**	P	**P**	**00 43 14.9**	**+0.2**
0.4nm,0.3s,baz=145,slow=9.2,SNR=4.2							
0.4nm,0.3s							
SONM	**Songino Array**	**62.45**	**333**	P	**P**	**00 45 19.5**	**+0.6**
0.4nm,0.7s,baz=162,slow=10,SNR=4.1							
0.4nm,0.7s							
MKAR	**Makanchi Array**	**74.81**	**322**	P	**P**	**00 46 35.7**	**-0.3**
2.5nm,0.9s,baz=113,slow=5.7,SNR=13							
2.5nm,0.9s							
ZALV	**Zalesovo Beam**	**76.80**	**329**	P	**P**	**00 46 46.2**	**-0.9**
0.3nm,0.5s,baz=132,slow=2.2,SNR=3.7							
0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**78.71**	**324**	P	**P**	**00 46 57.9**	**0.0**
1.3nm,0.9s,baz=121,slow=5.0,SNR=9.0							
1.3nm,0.9s							
NRIK	**Noril'sk**	**84.08**	**343**	P	**P**	**00 47 25.9**	**0.0**
2.1nm,0.8s,baz=180,slow=5.1,SNR=3.2							
2.1nm,0.8s							
BVAR	**Borovoye Array**	**84.29**	**325**	P	**P**	**00 47 27.5**	**+0.2**
3.6nm,0.9s,baz=116,slow=6.8,SNR=14							
3.6nm,0.9s							
ILAR	**Eielson Array**	**87.39**	**24**	P	**P**	**00 47 42.0**	**-0.4**
0.7nm,0.9s,baz=256,slow=4.6,SNR=4.9							
0.7nm,0.9s							
DLBC	**Dease Lake**	**93.85**	**32**	LR	LR	01 22 27.3	
comp=Z,69nm,19.7s,baz=302,slow=30							

*IDC **26** 00:37:58.5±1.4,6.13S×143.25E,h0km,mb4.0/8, mbtmp4.0/9,ML4.1/1,Error ellipse: s-maj=63.4km s-min=24.2km az=91.0*
*NEIC **26** 00:38:01.4±1.6,6.4S±0.2×143.2E±0.2,h10km±2km, mb4.0/9,Error ellipse: s-maj=33.6km s-min=19.7km az=321.0*
ISC 26 00:37:59.8±0.8,6.3S±0.1×143.2E±0.1,h10km,n22, σ1§49/22,mb3.9/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	**13.56**	**240**	Pn	**Pn**	**00 41 09.1**	**-3.2**
WB0	**Warramunga Arr**	**15.89**	**212**	Pn	**Pn**	**00 41 43.8**	**0.0**
WB0				lAmb	lAmb	00 42 24.9	
comp=Z,12nm,1.0s							
WRAB	**Tennant Creek**	**16.05**	**212**	Pn	**Pn**	**00 41 46.6**	**+0.7**
WRAB				lAmb	lAmb	00 42 09.5	
comp=Z,14nm,1.2s							
WB2	**Warramunga Arr**	**16.06**	**212**	Pn	**Pn**	**00 41 46.0**	**+0.1**
WB2				lAmb	lAmb	00 42 01.3	
comp=Z,8.2nm,0.8s							
WRA	**Warramunga Arr**	**16.07**	**212**	Pn	**Pn**	**00 41 44.2**	**-1.8**
comp=Z,0.2nm,0.3s,baz=33,slow=12,SNR=3.3							
WRA				Lg	Lg	00 46 29.0	
comp=Z,0.1nm,0.3s,baz=27,slow=29,SNR=3.1							
HNR	**Honiara**	**16.88**	**102**	Pn	**Pn**	**00 41 54.3**	**-2.1**
KNRA	**Kununurra**	**16.95**	**235**	Pn	**Pn**	**00 41 56.1**	**-1.1**
KNRA				lAmb	lAmb	00 42 23.4	
comp=Z,26nm,1.1s							
AS31	**Alice Springs**	**19.45**	**206**	P	**P**	**00 42 26.9**	**+0.1**
ASAR	**Alice Springs**	**19.45**	**206**		**Pn**	**00 42 28.6**	**+0.6**
ASAR	**Alice Springs**	**19.45**	**206**	P	**Pn**	**00 42 28.9**	**+0.9**
comp=Z,0.5nm,0.3s,baz=33,slow=10,SNR=13							
ASAR				Lg	Lg	00 48 19.5	
baz=21,slow=29							
comp=Z,6.3nm,0.7s							
FITZ	**Fitzroy Crossi**	**20.76**	**234**	P	**P**	**00 42 40.9**	**-0.2**
STKA	**Stephens Creek**	**25.50**	**183**	P	**P**	**00 43 30.1**	**+1.6**
comp=Z,2.5nm,0.9s,baz=356,slow=6.6,SNR=3.1							
comp=Z,2.5nm,0.9s							
SONM	**Songino Array**	**62.89**	**333**	P	**P**	**00 48 26.3**	**0.0**
comp=Z,0.3nm,0.7s,baz=152,slow=6.5,SNR=1.9							
comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**	**75.35**	**322**	P	**P**	**00 49 43.7**	**+0.1**
comp=Z,0.9nm,0.7s,baz=99,slow=7.7,SNR=6.0							
comp=Z,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**77.28**	**329**	P	**P**	**00 49 52.4**	**-1.9**
comp=Z,0.4nm,0.5s,baz=119,slow=5.1,SNR=2.7							
comp=Z,0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**79.22**	**324**	P	**P**	**00 50 04.4**	**-0.8**
comp=Z,0.5nm,0.2s,baz=109,slow=4.3,SNR=4.4							
comp=Z,0.5nm,0.2s							
NRIK	**Noril'sk**	**84.42**	**343**	P	**P**	**00 50 32.0**	**-0.1**
comp=Z,0.6nm,0.3s,baz=106,slow=4.1,SNR=4.4							
comp=Z,0.6nm,0.3s							
E19K	**Redstone River**	**84.63**	**20**	P	**P**	**00 50 35.3**	**+2.0**
BVAR	**Borovoye Array**	**84.80**	**325**	P	**P**	**00 50 35.1**	**+0.6**
comp=Z,4.3nm,0.7s,baz=116,slow=6.7,SNR=18							
comp=Z,4.3nm,0.7s							
F20K	**Avaraart Lake**	**84.93**	**20**	P	**P**	**00 50 37.2**	**+2.4**
F20K				lAmb	lAmb	00 51 11.8	
comp=Z,0.7nm,1.1s							
IMAR	**Indian Mountai**	**85.12**	**21**	P	**P**	**00 50 37.6**	**+1.8**
ILAR	**Eielson Array**	**87.25**	**24**	P	**P**	**00 50 45.9**	**-0.5**
comp=Z,0.5nm,0.7s,baz=254,slow=4.7,SNR=7.1							
comp=Z,0.5nm,0.7s							

IDC 26 00:44:14.9±3.9,6.04S×142.48E,h0km,mb3.7/2, mbtmp3.6/4,ML3.6/1,MS3.5/1,Error ellipse: s-maj=135.1km s-min=29.1km az=101.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.92**	**209**	Pn	Pn	00 48 00.7	+0.2
1.4nm,1.0s,baz=32,slow=13,SNR=1.4							
WRA				Lg	Lg	00 52 41.2	
0.1nm,0.3s,baz=29,slow=26,SNR=2.5							
ASAR	**Alice Springs**	**19.37**	**204**	P	P	00 48 42.0	-0.4
0.2nm,0.3s,baz=35,slow=9.0,SNR=5.3							
1.0nm,0.6s							
RPZ	**Rata Peaks**	**45.15**	**151**	LR	LR	01 09 22.1	
comp=Z,64nm,21.9s,baz=322,slow=33							
MKAR	**Makanchi Array**	**74.71**	**322**	P	P	00 55 57.0	+0.4
0.3nm,0.6s,baz=111,slow=6.1,SNR=2.7							
0.3nm,0.6s							
BVAR	**Borovoye Array**	**84.18**	**325**	P	P	00 56 47.8	-0.2
0.7nm,0.8s,baz=108,slow=9.4,SNR=4.1							
0.7nm,0.8s							

IDC 26 00:51:54.7±7.5,6.05S×142.18E,h0km,mb3.2/1, mbtmp3.4/3,ML2.5/2,Error ellipse: s-maj=262.2km s-min=37.7km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.77**	**208**	Pn	Pn	00 55 37.1	-1.2
baz=32,slow=12,SNR=1.6							
0.4nm,0.7s							
ASAR	**Alice Springs**	**19.24**	**204**	P	Pn	00 56 21.2	-0.4
0.1nm,0.3s,baz=33,slow=9.5,SNR=6.5							

1.6nm,0.7s
MKAR Makanchi Array 74.53 322 P **P** 01 03 35.5 +0.1
0.1nm,0.4s,baz=110,slow=7.3,SNR=1.9
0.1nm,0.4s

IDC 26 00:53:36.9±5.6,6.18S×142.32E,h0km,mb3.6/1, mbtmp3.9/3,ML3.5/2,Error ellipse: s-maj=189.1km s-min=37.0km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.73**	**209**	Pn	Pn	00 57 17.9	-2.2
0.1nm,0.3s,baz=34,slow=12,SNR=3.0							
0.5nm,0.7s							
ASAR	**Alice Springs**	**19.18**	**204**	P	Pn	00 58 03.5	+0.2
0.4nm,0.3s,baz=34,slow=10.0,SNR=9.6							
10nm,0.3s							
MKAR	**Makanchi Array**	**74.72**	**322**	P	P	01 05 18.6	-0.1
0.7nm,1.1s,baz=123,slow=5.3,SNR=2.5							
0.7nm,1.1s							

*IDC **26** 00:55:50.0±0.9,5.98S×142.69E,h0km,mb4.0/7, mbtmp4.0/10,ML2.5/2,Error ellipse: s-maj=41.7km s-min=21.0km az=81.0*
ISC 26 00:55:51.5±0.8,6.0S±0.1×142.7E±0.2,h10km,n10, σ1§08/10,mb4.0/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.61**	**127**	Pn	**Pn**	**00 57 15.2**	**+0.1**
1.6nm,0.3s,baz=304,slow=12,SNR=1.5							
7.4nm,0.5s							
WRA	**Warramunga Arr**	**16.04**	**209**	Pn	**Pn**	**00 59 36.1**	**-1.3**
0.1nm,0.3s,baz=33,slow=13,SNR=2.6							
WRA				Lg	Lg	01 04 15.3	
baz=29,slow=28							
0.9nm,0.6s							
ASAR	**Alice Springs**	**19.48**	**205**	P	**P**	**01 00 20.5**	**+1.7**
11nm,0.3s,baz=36,slow=8.3,SNR=5.0							
STKA	**Stephens Creek**	**25.76**	**182**	P	**P**	**01 01 22.5**	**-0.1**
1.5nm,0.7s,baz=350,slow=12,SNR=2.2							
1.5nm,0.7s							
MKAR	**Makanchi Array**	**74.78**	**322**	P	**P**	**01 07 31.8**	**-0.2**
0.5nm,0.7s,baz=120,slow=7.1,SNR=5.6							
0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**78.67**	**324**	P	**P**	**01 07 54.0**	**+0.2**
0.4nm,0.3s,baz=118,slow=5.0,SNR=4.8							
0.4nm,0.3s							
QSPA	**South Pole Qui**	**83.97**	**180**	P	**P**	**01 08 21.4**	**-0.5**
0.9nm,0.6s,baz=331,slow=0.5,SNR=2.3							
0.9nm,0.6s							
NRIK	**Noril'sk**	**83.98**	**343**	P	**P**	**01 08 20.6**	**-1.1**
0.7nm,0.5s,baz=173,slow=19,SNR=4.0							
0.7nm,0.5s							
BVAR	**Borovoye Array**	**84.24**	**325**	P	**P**	**01 08 24.7**	**+1.4**
3.5nm,0.8s,baz=103,slow=6.7,SNR=16							
3.5nm,0.8s							
ILAR	**Eielson Array**	**87.21**	**24**	P	**P**	**01 08 38.0**	**+0.1**
0.5nm,0.7s,baz=254,slow=5.4,SNR=5.2							
0.5nm,0.7s							

*IDC **26** 00:56:51.0±1.4,6.24S×143.78E,h0km,mb3.8/3, mbtmp4.1/5,ML1.9/1,MS2.8/1,Error ellipse: s-maj=47.2km s-min=32.2km az=75.0*
ISC 26 00:56:55.6±1.0,6.5S±0.1×143.7E±0.1,h35km,n7,σ1§42/7, mb3.8/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.52**	**130**	Pn	**Pn**	**00 58 01.3**	**-0.2**
3.8nm,0.3s,baz=343,slow=11,SNR=2.2							
PMG				Sn	**Sn**	**00 58 53.1**	**+0.2**
2.1nm,0.3s,baz=1.5,slow=22,SNR=1.7							
13nm,0.4s							
WRA	**Warramunga Arr**	**16.13**	**213**	Pn	**Pn**	**01 00 37.9**	**-1.9**
0.6nm,0.3s,baz=34,slow=12,SNR=5.2							
WRA				Lg	Lg	01 05 27.4	
0.4nm,0.3s,baz=31,slow=29,SNR=1.1							
ASAR	**Alice Springs**	**19.47**	**208**	P	**Pn**	**01 01 22.9**	**+2.0**
35nm,0.7s,baz=35,slow=9.5,SNR=5.7							
DAV	**Davao City (W)**	**22.51**	**306**	LR	LR	01 12 11.9	
comp=Z,21nm,18.8s,baz=74,slow=41							
MKAR	**Makanchi Array**	**75.79**	**322**	P	**P**	**01 08 38.1**	**+0.1**
0.3nm,0.6s,baz=107,slow=4.9,SNR=3.7							
0.3nm,0.6s							
BVAR	**Borovoye Array**	**85.23**	**325**	P	**P**	**01 09 29.0**	**+0.5**
0.9nm,0.6s,baz=101,slow=6.0,SNR=3.0							
0.9nm,0.6s							
ILAR	**Eielson Array**	**87.26**	**24**	P	**P**	**01 09 37.8**	**-0.5**
0.5nm,0.8s,baz=240,slow=5.1,SNR=4.1							
0.5nm,0.8s							

*IDC **26** 00:58:54.8±1.1,6.15S×143.24E,h0km,mb4.1/6, mbtmp4.3/7,ML5.1/1,MS3.8/2,Error ellipse: s-maj=59.1km s-min=22.8km az=86.0*
*NEIC **26** 00:58:55.7±1.4,5.9S±0.1×142.9E±0.1,h10km±2km, mb4.1/10,Error ellipse: s-maj=24.5km s-min=19.7km az=28.0*
ISC 26 00:58:57.0±0.9,6.1S±0.1×142.8E±0.1,h10km,n24, σ1§26/22,mb4.1/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.41**	**128**	Pn	**Pn**	**01 00 16.3**	**-1.5**
COEN	**Coen**	**7.84**	**178**	Pn	**Pn**	**01 00 52.5**	**+1.3**
MTN	**Manton Dam**	**13.36**	**239**	Pn	**Pn**	**01 02 06.2**	**-0.6**
WB0	**Warramunga Arr**	**15.90**	**210**	Pn	**Pn**	**01 02 40.8**	**-0.1**
WB0				lAmb	lAmb	01 03 10.7	
comp=Z,9.0nm,0.8s							
WRAB	**Tennant Creek**	**16.06**	**210**	Pn	**Pn**	**01 02 43.6**	**+0.5**
WRAB				lAmb	lAmb	01 02 47.4	
comp=Z,20nm,1.2s							
WB2	**Warramunga Arr**	**16.07**	**210**	Pn	**Pn**	**01 02 43.8**	**+0.7**
WB2				lAmb	lAmb	01 02 56.7	
comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**16.07**	**210**	Pn	**Pn**	**01 02 44.1**	**+0.9**
WRA	**Warramunga Arr**	**16.07**	**210**	Pn	**Pn**	**01 02 40.6**	**-2.6**
comp=Z,0.4nm,0.3s,baz=32,slow=12,SNR=1.8							
WRA				Lg	Lg	01 07 23.0	
comp=Z,0.5nm,0.3s,baz=25,slow=30,SNR=3.6							
KNRA	**Kununurra**	**16.78**	**234**	Pn	**Pn**	**01 02 52.7**	**+0.4**
KNRA				lAmb	lAmb	01 03 03.5	
comp=Z,28nm,0.8s							
AS31	**Alice Springs**	**19.49**	**205**	P	**P**	**01 03 26.1**	**+1.7**
AS31				lAmb	lAmb	01 03 27.8	
comp=Z,8.1nm,0.8s							
ASAR	**Alice Springs**	**19.49**	**205**	P	**P**	**01 03 24.8**	**+0.4**
ASAR	**Alice Springs**	**19.49**	**205**	P	**P**	**01 03 25.7**	**+1.3**
comp=Z,5.5nm,0.3s,baz=34,slow=9.9,SNR=4.6							
comp=Z,14nm,0.3s							
FITZ	**Fitzroy Crossi**	**20.60**	**233**	P	**P**	**01 03 37.0**	**+0.5**
LUWI	**Luwuk**	**20.63**	**283**	P	**P**	**01 03 35.5**	**-1.3**
EIDS	**Eidsvold**	**20.75**	**159**	P	**P**	**01 03 39.1**	**+1.1**
EIDS				lAmb	lAmb	01 03 43.0	
comp=Z,8.6nm,0.8s							
STKA	**Stephens Creek**	**25.70**	**182**	P	**P**	**01 04 25.7**	**-1.7**
comp=Z,2.1nm,0.5s,baz=10,slow=7.4,SNR=4.1							
comp=Z,2.1nm,0.5s							
BBOO	**Buckleboo**	**27.34**	**192**	P	**P**	**01 04 41.5**	**-0.7**
JHJ	**Hachijo jima 2**	**39.08**	**356**	LR	LR	01 21 17.1	
comp=Z,86nm,18.2s,baz=87,slow=34							
MKAR	**Makanchi Array**	**74.95**	**322**	P	**P**	**01 10 39.8**	**+1.4**
comp=Z,0.6nm,0.6s,baz=118,slow=6.4,SNR=6.3							
comp=Z,0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**78.83**	**324**	P	**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**19.94**	**205**	P	P	01 08 00.8	0.0
	0.3nm,0.3s,baz=36,slow=10,SNR=2.2 11nm,0.3s						
MKAR	**Makanchi Array**	**74.62**	**322**	P	P	01 15 08.2	-0.1
	0.8nm,0.7s,baz=100,slow=7.5,SNR=8.7 0.8nm,0.7s						
BVAR	**Borovoye Array**	**84.06**	**325**	P	P	01 15 59.8	+0.1
	1.3nm,0.7s,baz=114,slow=7.2,SNR=7.1 1.3nm,0.7s						
ILAR	**Eielson Array**	**86.75**	**24**	P	P	01 16 12.8	0.0
	0.5nm,0.8s,baz=246,slow=4.9,SNR=5.7 0.5nm,0.8s						

IDC 26 01:13:27.2±6.1, 6°22S×142°40E, h0km, mb3.8/2, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=230.2km s-min=33.9km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.73**	**209**	Pn	Pn	01 17 08.2	-2.1
	0.4nm,0.3s,baz=30,slow=13,SNR=7.5 0.9nm,0.4s						
ASAR	**Alice Springs**	**19.18**	**204**	P	Pn	01 17 53.5	+0.1
	0.3nm,0.3s,baz=36,slow=9.7,SNR=5.6 1.0nm,0.5s						
MKAR	**Makanchi Array**	**74.80**	**322**	P	P	01 25 10.0	+0.5
	0.3nm,0.6s,baz=99,slow=7.4,SNR=3.0 0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.28**	**325**	P	P	01 26 00.4	-0.5
	0.7nm,0.6s,baz=120,slow=10,SNR=5.2 0.7nm,0.6s						

*IDC **26** 01:16:25.7±5.3, 20°41S×178°22W, h577km±57km, mb3.6/5, mbtmp4.5/7, Error ellipse: s-maj=42.9km s-min=33.2km az=23.0*

ISC 26 01:16:26.9±1.2, 20°5S±0°2×178°2W±0°2, h600km, n14, σ0s87/12, mb4.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.41**	**261**	P	P	**01 19 29.7**	**0.0**
	3.4nm,0.6s,baz=298,slow=24,SNR=7.3						
URZ	**Urewera**	**18.20**	**192**	P	P	**01 20 04.4**	**+0.3**
	5.3nm,0.4s,baz=5.6,slow=5.3,SNR=8.6						
CTA	**Charters Tower**	**33.31**	**264**	P	P	**01 22 17.0**	**+0.1**
	3.4nm,0.4s,baz=92,slow=9.2,SNR=6.7 3.4nm,0.4s						
ASAR	**Alice Springs**	**44.35**	**257**	P	P	**01 23 45.6**	**+0.1**
	3.8nm,0.5s,baz=94,slow=7.2,SNR=18 3.8nm,0.5s						
WRA	**Warramunga Arr**	**44.42**	**262**	P	P	**01 23 45.2**	**-0.9**
	2.7nm,0.3s,baz=97,slow=7.6,SNR=5.7 2.7nm,0.3s						
ILAR	**Eielson Array**	**88.31**	**13**	P	P	**01 28 15.4**	**+0.3**
	0.4nm,0.5s,baz=214,slow=5.3,SNR=8.5 0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.93**	**290**	P	P	**01 28 24.9**	**+1.2**
	1.9nm,0.2s,baz=127,slow=2.5,SNR=8.6 1.9nm,0.2s						
BVAR	**Borovoye Array**	**118.93**	**320**	PKP	**PKiKP**	**01 34 08.0**	**0.0**
	0.8nm,0.4s,baz=188,slow=0.9,SNR=5.8						
ARCES	**ARCESS Array B**	**128.84**	**350**	PKP	**PKiKP**	**01 34 26.9**	**-0.4**
	1.6nm,0.8s,baz=355,slow=1.5,SNR=3.8						
FINES	**FINESS Array B**	**135.68**	**344**	PKP	**PKiKP**	**01 34 41.4**	**+0.2**
	1.7nm,0.9s,baz=146,slow=2.7,SNR=5.0						
HFS	**Hagfors**	**139.47**	**351**	PKhKP	PKPpre	01 34 41.4	
	1.0nm,0.4s,baz=66,slow=3.7,SNR=7.3						
AKASG	**Malin Array Be**	**142.89**	**331**	PKhKP	PKPpre	01 34 49.5	
	1.5nm,0.5s,baz=42,slow=3.9,SNR=8.5						
BRTR	**Keskin Array B**	**146.67**	**312**	PKPbc	**PKiKP**	**01 35 02.8**	**-1.9**
	0.7nm,0.6s,baz=108,slow=3.2,SNR=8.1						
MMAI	**Mount Meron Ar**	**147.63**	**300**	PKPbc	**PKiKP**	**01 35 06.2**	**-0.5**
	1.0nm,0.4s,baz=80,slow=6.9,SNR=12						

IDC 26 01:17:48.1±2.2, 6°62S×143°83E, h0km, mb3.6/2, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=92.2km s-min=33.0km az=110.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.14**	**214**	Pn	P	01 21 38.4	-1.5
	0.2nm,0.3s,baz=31,slow=12,SNR=2.8 0.6nm,0.5s						
ASAR	**Alice Springs**	**19.45**	**208**	P	P	01 22 15.7	-0.8
	0.2nm,0.3s,baz=37,slow=9.9,SNR=8.9 4.4nm,0.9s						
MKAR	**Makanchi Array**	**75.99**	**321**	P	P	01 29 37.5	+0.3
	0.3nm,0.7s,baz=102,slow=6.1,SNR=2.4 0.3nm,0.7s						
ILAR	**Eielson Array**	**87.30**	**24**	P	P	01 30 36.2	-0.3
	0.6nm,0.9s,baz=260,slow=5.4,SNR=3.0 0.6nm,0.9s						

IDC 26 01:19:49.5±3.0, 6°17S×142°49E, h0km, mb3.6/2, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=105.0km s-min=32.6km az=87.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.81**	**209**	Pn	Pn	01 23 32.1	-1.7
	0.4nm,0.3s,baz=33,slow=13,SNR=5.5 1.1nm,0.5s						
ASAR	**Alice Springs**	**19.26**	**205**	P	Pn	01 24 17.0	+0.3
	0.9nm,0.3s,baz=33,slow=9.9,SNR=19 8.0nm,0.6s						
STKA	**Stephens Creek**	**25.59**	**182**	P	P	01 25 20.1	-0.4
	1.1nm,0.6s,baz=346,slow=12,SNR=1.8 1.1nm,0.6s						
MKAR	**Makanchi Array**	**74.82**	**322**	P	P	01 31 31.9	0.0
	0.2nm,0.6s,baz=101,slow=7.6,SNR=2.4 0.2nm,0.6s						

TRN 26 01:25:45.9, 15°04N×60°54W, h39km, MD4.1, North-east of Martinique., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.41**	**231**	*e*P	Pn	01 25 56.9	+1.7
MVM	**Montagne Vaucl**	**0.59**	**216**	*e*P	Pn	01 25 59.0	+1.1
LPMF	**Morne Lapointe**	**0.62**	**222**	*e*P	Pn	01 25 59.1	+0.9
BAMF	**Morne Balai**	**0.63**	**250**	*e*P	Pn	01 26 00.2	+1.8
SVN	**Savane Anatole**	**0.64**	**253**	*e*P	Pn	01 26 00.3	+1.7
GBMF	**Grand Be**	**0.65**	**249**	*e*P	Pn	01 26 00.4	+1.7
ZAM	**Aeronautique**	**0.66**	**226**	*e*P	Pn	01 25 59.9	+1.1
FDF	**Fort de France**	**0.66**	**243**	*e*P	Pn	01 26 00.4	+1.5
FDF				*e*S	Sn	01 26 11.2	+3.1
MPOM	**Morne Pois Mar**	**0.66**	**208**	*e*P	Pn	01 25 59.6	+0.8
MPOM				*e*S	Sn	01 26 09.8	+1.8
PML	**Morne Lenard**	**0.67**	**248**	*e*P	Pn	01 26 00.7	+1.7
PCM	**Pelee Case Pet**	**0.69**	**252**	*e*P	Pn	01 26 00.8	+1.7
TRMF	**Trois Ilets**	**0.70**	**225**	*e*P	Pn	01 26 00.5	+1.2
BIM	**Bigot**	**0.73**	**225**	*e*P	Pn	01 26 01.2	+1.5
SLW	**Petit Monier**	**1.08**	**201**	*e*P	Pn	01 26 06.4	+1.9
SLBI	**Saint Lucia, B**	**1.09**	**203**	*e*P	Pn	01 26 05.2	+0.6
SLBI				*e*S	Sn	01 26 20.9	+2.4
SLCP	**Castries, St.**	**1.11**	**203**	*e*P	Pn	01 26 05.8	+0.9
SLCP				*e*S	Sn	01 26 21.3	+2.4
MAGL	**Barre de l'ile**	**1.16**	**322**	*e*P	Pn	01 26 06.3	+0.7
SLB	**Belfond**	**1.29**	**202**	*e*P	Pn	01 26 09.6	+2.1
SLDE	**Delcer**	**1.32**	**202**	*e*P	Pn	01 26 10.6	+2.7
TDBA	**Terre de Bas,**	**1.33**	**308**	*e*P	Pn	01 26 09.3	+1.4
TDBA	**Terre de Bas,**	**1.33**	**308**	*e*P	Pn	01 26 11.1	+3.2
TDBA				*e*S	Sn	01 26 27.1	+2.6
CBE	**Ff, Capester**	**1.46**	**315**	*e*P	Pn	01 26 11.3	+1.6
CBE				*e*S	Sn	01 26 29.7	+2.2
ABD	**La Joyeuse, An**	**1.70**	**328**	*e*P	Pn	01 26 14.5	+1.5
ABD	**La Joyeuse, An**	**1.70**	**328**	*e*P	Pn	01 26 14.5	+1.6
ABD				*e*S	Sn	01 26 35.7	+2.2
SSV	**Crater Summit**	**1.81**	**201**	*e*P	Pn	01 26 16.0	+1.4
SVB	**Belmont**	**1.88**	**202**	*e*P	Pn	01 26 17.0	+1.4
SVB				*e*S	Sn	01 26 40.9	+2.8
SVOC	**Richmond Hill,**	**1.98**	**200**	*e*P	Pn	01 26 18.2	+1.3
SVOC				*e*S	Sn	01 26 42.5	+2.0
BCHC	**Barbados, Cave**	**2.08**	**155**	*e*P	Pn	01 26 19.5	+1.3
BCHC				*e*S	Sn	01 26 46.5	+3.5
BBGH	**Gun Hill**	**2.11**	**153**	*e*P	Pn	01 26 19.9	+1.2
BBGH				*e*S	Sn	01 26 45.8	+2.2
ANBD	**Bethesda, Anti**	**2.32**	**330**	*e*P	Pn	01 26 23.4	+1.8
ANBD				*e*S	Sn	01 26 51.5	+2.6
MBFL	**Flemmings, Mon**	**2.34**	**317**	*e*P	Pn	01 26 24.4	+2.6
MBFL				*e*S	Sn	01 26 51.9	+2.4
ANDO	**Antigua, Disas**	**2.41**	**329**	*e*P	Pn	01 26 24.4	+1.7
ANDO				*e*S	Sn	01 26 53.5	+2.5
GCMP	**Grenada, Carri**	**2.68**	**199**	*e*P	Pn	01 26 27.9	+1.5
GCMP				*e*S	Sn	01 26 59.2	+1.6
GRHS	**Sauteurs**	**2.99**	**201**	*e*P	Pn	01 26 32.6	+1.8
GRHS				*e*S	Sn	01 27 07.0	+1.6
GRW	**Mount Saint Ca**	**3.06**	**201**	*e*P	Pn	01 26 34.2	+2.4
GRW				*e*S	Sn	01 27 08.3	+1.1
GRGR	**Grenville**	**3.08**	**201**	*e*P	Pn	01 26 33.4	+1.4
GRGR				*e*S	Sn	01 27 09.5	+1.8
GRFF	**Grenada Fort F**	**3.19**	**202**	*e*P	Pn	01 26 35.7	+2.2
GRFF				*e*S	Sn	01 27 12.2	+1.9
TRN	**Trinidad (W)**	**4.44**	**191**	*e*P	Pn	01 26 52.9	+2.2
TRN				*e*S	Sn	01 27 42.3	+1.2
AOPR	**Arecibo Observ**	**6.80**	**300**	*e*P	Pn	01 27 25.4	+2.2
BAUV	**El Baul**	**9.51**	**231**	*e*P	Pn	01 28 01.6	+1.2

*IDC **26** 01:31:35.3±0.8, 6°26S×143°62E, h0km, mb4.2/9, mbtmp4.2/11, ML1.7/1, MS3.6/6, Error ellipse: s-maj=42.3km s-min=19.3km az=77.0*

*NEIC **26** 01:31:37.2±2.0, 6°4S±0°1×143°3E±0°1, h10km±1km, mb4.3/17, Error ellipse: s-maj=18.5km s-min=17.8km az=135.0*

ISC 26 01:31:40.3±0.6, 6°47S±0°08×143°38E±0°08, h35km, n52, σ1s51/46, mb4.3/16, MS3.6/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.74**	**128**	Pn	**Pn**	**01 32 49.9**	**+0.6**
PMG	**Port Moresby**	**4.74**	**128**	Pn	**Pn**	**01 32 49.2**	**-0.1**
	2.3nm,0.3s,baz=303,slow=10.0,SNR=6.0						
PMG				Sn	**Sn**	**01 33 40.2**	**-2.9**
	2.5nm,0.3s,baz=86,slow=4.9,SNR=3.8 10nm,0.4s						
COEN	**Coen**	**7.44**	**182**	Pn	**Pn**	**01 33 27.9**	**+1.4**
COEN	**Coen**	**7.44**	**182**	P	**Pn**	**01 33 28.4**	**+1.9**
KDU	**Kakadu**	**12.40**	**239**	P	**Pn**	**01 34 32.0**	**-2.4**
MTN	**Manton Dam**	**13.63**	**241**	Pn	**Pn**	**01 34 48.0**	**-3.2**
MTN	**Manton Dam**	**13.63**	**241**	P	**Pn**	**01 34 48.8**	**-2.5**
CTA	**Charters Tower**	**13.82**	**169**	Lg	Lg	01 39 07.2	
	0.2nm,0.3s,baz=315,slow=4.3,SNR=2.9						
QIS	**Mount Isa**	**14.47**	**194**	P	Pn	01 34 55.9	-6.9
WB0	**Warramunga Arr**	**15.84**	**213**	Pn	**Pn**	**01 35 18.6**	**-2.2**
WB0				IAmb	IAmb	01 35 32.3	
	comp=Z,10.0nm,0.8s						
WRAB	**Tennant Creek**	**16.00**	**212**	Pn	**Pn**	**01 35 21.0**	**-1.8**
WRAB				IAmb	IAmb	01 35 32.6	
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**16.01**	**212**	Pn	**Pn**	**01 35 21.8**	**-1.1**
WB2				IAmb	IAmb	01 35 31.0	
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**16.02**	**212**	Pn	**Pn**	**01 35 21.6**	**-1.4**
WRA	**Warramunga Arr**	**16.02**	**212**	Pn	**Pn**	**01 35 21.0**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=20,slow=13,SNR=12						
WRA				Lg	Lg	01 40 06.6	
	comp=Z,0.4nm,0.3s,baz=32,slow=30,SNR=6.8						
KNRA	**Kununurra**	**17.00**	**236**	Pn	**Pn**	**01 35 33.1**	**-2.4**
KNRA				IAmb	IAmb	01 35 57.1	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**17.00**	**236**	P	**Pn**	**01 35 33.4**	**-2.1**
SOEI	**Soe**	**19.20**	**259**	P	**P**	**01 35 59.4**	**-2.1**
AS31	**Alice Springs**	**19.37**	**207**		**Pn**	**01 36 04.8**	**+0.3**
ASAR	**Alice Springs**	**19.38**	**207**	P	**Pn**	**01 36 04.8**	**+0.3**
ASAR	**Alice Springs**	**19.38**	**207**	P	**Pn**	**01 36 06.2**	**+1.7**
	comp=Z,23nm,0.8s,baz=34,slow=9.6,SNR=49						
ASAR				Lg	Lg	01 41 53.3	
	comp=Z,0.2nm,0.3s,baz=20,slow=28,SNR=4.6						
FITZ	**Fitzroy Crossi**	**20.81**	**235**	P	**P**	**01 36 18.8**	**-0.1**
OOD	**Oodnadatta**	**22.43**	**198**	P	**P**	**01 36 38.4**	**+2.3**
TOLI2	**Tolitoli**	**23.79**	**288**	P	**P**	**01 36 48.4**	**-1.6**
TOLI2				IAmb	IAmb	01 36 56.7	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**25.33**	**184**	P	**P**	**01 37 06.0**	**+2.1**
	comp=Z,3.7nm,1.2s,baz=4.8,slow=12,SNR=2.0						
STKA				LR	LR	01 48 10.6	
	comp=Z,157nm,20.6s,baz=347,slow=39 comp=Z,3.7nm,1.2s						
LEM	**Lembang**	**35.52**	**267**	LR	LR	01 57 07.0	
	comp=Z,38nm,19.1s,baz=68,slow=43						
NWAO	**Narrogin (SRO)**	**35.83**	**219**	LR	LR	01 53 59.3	
	comp=Z,112nm,20.4s,baz=263,slow=37						
URZ	**Urewera**	**43.97**	**141**	LR	LR	01 56 00.1	
	comp=Z,88nm,20.5s,baz=292,slow=33						
KSRS	**Korea Array**	**46.02**	**343**	LR	LR	01 58 53.6	
	comp=Z,90nm,19.0s,baz=355,slow=36						
PZH	**PanZhiHua**	**51.99**	**311**	P	**P**	**01 40 47.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.5s						
HHC	**Hu-ho-hao-te**	**55.42**	**331**	*e*P	**P**	**01 41 13.3**	**+1.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,68nm,6.0s						
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**01 42 05.2**	**+0.6**
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**01 42 05.4**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=162,slow=5.2,SNR=2.4 comp=Z,0.5nm,0.6s						
WMQ	**Urumqi**	**70.84**	**321**	*e*P	**P**	**01 42 54.3**	**+0.6**
MK31	**Makanchi Array**	**75.60**	**322**	P	**P**	**01 43 21.8**	**+0.1**
MK31				IAmb	IAmb	01 43 26.1	
	comp=Z,2.6nm,0.9s						
MKAR	**Makanchi Array**	**75.60**	**322**	P	**P**	**01 43 21.3**	**-0.3**
MKAR	**Makanchi Array**	**75.60**	**322**	P	**P**	**01 43 22.2**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=103,slow=7.2,SNR=17 comp=Z,2.6nm,0.8s						
MAKZ	**Makanchi**	**75.80**	**322**	P	**P**	**01 43 22.1**	**-0.7**
MAKZ				IAmb	IAmb	01 43 27.1	
	comp=Z,3.0nm,0.8s						
KSH	**Kashi**	**77.04**	**313**	P	**P**	**01 43 32.0**	**+1.9**
KSH				pP	PcP	01 43 39.8	-1.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.7s						
NIL	**Nilore**	**77.29**	**306**	P	**P**	**01 43 30.6**	**-0.9**
ZALV	**Zalesovo Beam**	**77.52**	**329**	P	**P**	**01 43 31.2**	**-1.1**
ZALV	**Zalesovo Beam**	**77.52**	**329**	P	**P**	**01 43 32.5**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=122,slow=5.5,SNR=4.4 comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**79.47**	**324**	P	**P**	**01 43 43.2**	**0.0**
	comp=Z,0.5nm,0.3s,baz=114,slow=4.5,SNR=5.2 comp=Z,0.5nm,0.3s						
J16K	**Anvik River**	**81.30**	**22**	P	**P**	**01 43 53.2**	**+0.5**
J16K				IAmb	IAmb	01 44 02.0	
	comp=Z,7.2nm,1.3s						
G18K	**Tagagawik**	**83.43**	**21**	P	**P**	**01 44 04.5**	**+0.7**
QSPA	**South Pole Qui**	**83.50**	**180**	P	**P**	**01 44 04.5**	**+0.1**
QSPA				IAmb	IAmb	01 44 11.8	
	comp=Z,5.6nm,1.2s						
QSPA	**South Pole Qui**	**83.50**	**180**	P	**P**	**01 44 05.0**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=294,slow=2.3,SNR=10 comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**84.64**	**343**	P	**P**	**01 44 09.5**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=106,slow=2.4,SNR=1.5 comp=Z,1.2nm,0.3s						
E19K	**Redstone River**	**84.73**	**19**	P	**P**	**01 44 10.6**	**+0.2**
BVAR	**Borovoye Array**	**85.05**	**325**	P	**P**	**01 44 12.6**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=116,slow=6.8,SNR=9.8 comp=Z,2.7nm,0.8s						
ILAR	**Eielson Array**	**87.34**	**24**	P	**P**	**01 44 22.1**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=258,slow=4.8,SNR=6.7 comp=Z,1.1nm,0.9s						
DLBC	**Dease Lake**	**93.68**	**32**	LR	LR	02 22 14.8	
	comp=Z,54nm,18.6s,baz=65,slow=33						
DBIC	**Dimbokro**	**148.45**	**272**	PKPbc	**PKiKP**	**01 51 26.5**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=65,slow=2.4,SNR=4.4						

*IDC **26** 01:33:29.0±1.9, 6°06S×143°24E, h0km, mb4.2/6, mbtmp4.3/7, ML4.5/1, MS3.5/3, Error ellipse: s-maj=60.9km s-min=32.8km az=101.0*

ISC 26 01:33:32.8±1.7, 6°4S±0°1×143°3E±0°4, h35km, n11, σ1s41/9, mb4.3/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.92**	**168**	LR	LR	01 42 35.7	
	comp=Z,224nm,21.4s,baz=8.5,slow=38						
WRA	**Warramunga Arr**	**16.01**	**212**	Pn	**Pn**	**01 37 14.2**	**-1.3**
	1.3nm,0.3s,baz=30,slow=13,SNR=8.3						
ASAR	**Alice Springs**	**19.39**	**207**	P	**Pn**	**01 37 59.8**	**+2.6**
	1.4nm,0.3s,baz=32,slow=9.9,SNR=12						
ASAR				S	**S**	**01 41 32.1**	**-1.2**
	4.7nm,0.9s,baz=25,slow=27,SNR=4.1 25nm,0.9s						
RPZ	**Rata Peaks**	**44.47**	**151**	LR	LR	02 00 16.0	
	comp=Z,86nm,19.7s,baz=290,slow=36						
KSRS	**Korea Array**	**45.91**	**343**	P	**P**	**01 41 51.4**	**-0.7**
	1.1nm,0.7s,baz=185,slow=10.0,SNR=5.9 1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.19**	**300**	P	**P**	**01 42 26.4**	**+0.8**
	1.7nm,0.3s,baz=121,slow=6.1,SNR=4.4 1.7nm,0.3s						
SHEM	**Shemya Is, Ala**	**64.46**	**20**	LR	LR	02 12 33.9	
	comp=Z,16nm,18.1s,baz=178,slow=36						
MKAR	**Makanchi Array**	**75.46**	**322**	P	**P**	**01 45 13.2**	**-0.2**
	1.4nm,0.8s,baz=111,slow=6.8,SNR=5.3 1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**79.34**	**324**	P	**P**	**01 45 34.5**	**-0.5**
	1.3nm,0.2s,baz=112,slow=4.9,SNR=2.5 1.3nm,0.2s						
BVAR	**Borovoye Array**	**84.91**	**325**	P	**P**	**01 46 04.7**	**+0.5**
	1.7nm,0.5s,baz=121,slow=5.7,SNR=7.2 1.7nm,0.5s						
ILAR	**Eielson Array**	**87.32**	**24**	P	**P**	**01 46 15.5**	**-0.3**
	0.6nm,0.9s,baz=253,slow=4.7,SNR=2.8 0.6nm,0.9s						

*JMA **26** 01:38:11.5±0.2, 23°3N±0°6×12°2E±°, h34km±4km, MV3.6/15, TAIWAN REGION*

*TAP **26** 01:38:12.2, 23°25N×121°89E, h27km, ML3.9, C*

ISC 26 01:38:10.7±1.1, 23°23N±0°02×121°93E±0°02, h20km±4km, n123, σ0s77/231, 9C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.45**	**281**	*i* P	**Pb**	**01 38 20.6**	**+0.5**
	baz=280						
ECBN				*i* S	**Sb**	**01 38 26.4**	**+0.1**
	baz=280						
CHKH	**Chenggong**	**0.49**	**266**	*i* P	**Pb**	**01 38 20.9**	**+0.2**
	baz=257						
CHKH				*i* S	**Sg**	**01 38 27.1**	**-0.4**
	baz=257						
CHKT	**Chengkung**	**0.53**	**256**	⇓*i* P	**Pg**	**01 38 21.6**	**+0.1**
	baz=247						
CHKT				*i* S	**Sg**	**01 38 28.1**	**-0.7**
	baz=247						
HGSD	**Ruisui**	**0.53**	**300**	⇓*i* P	**Pg**	**01 38 21.3**	**-0.2**
	baz=300						
HGSD				*e*S	**Sg**	**01 38 28.0**	**-0.8**
	baz=300						
EYUL	**Yuli**	**0.57**	**282**	*i* P	**Pb**	**01 38 22.6**	**+0.5**
	baz=281						
EYUL				*i* S	**Sb**	**01 38 30.8**	**+1.0**
	baz=281						
FULB	**Fuli**	**0.58**	**267**	P	**Pg**	**01 38 22.3**	**-0.1**
	baz=265						
FULB				S	**Sg**	**01 38 29.8**	**-0.6**
	baz=265						
TWF1	**Yuli**	**0.59**	**282**	⇓*i* P	**Pg**	**01 38 22.7**	**0.0**
	baz=273						
TWF1				S	**Sg**	**01 38 30.3**	**-0.4**
	baz=273						
TEGC	**Jichi Village**	**0.60**	**323**	⇓*i* P	**Pg**	**01 38 22.7**	**0.0**
	baz=318						
TEGC				*i* S	**Sg**	**01 38 30.6**	**-0.2**
	baz=318						
YULB	**Yu-li**	**0.60**	**286**	⇓P	**Pg**	**01 38 22.8**	**0.0**
	baz=280						
YULB				*e*S	**Sb**	**01 38 31.8**	**+1.1**
	baz=280						
EDH	**Donghe**	**0.63**	**246**	P	**Pb**	**01 38 23.4**	**+0.4**
	baz=238						
EDH				S	**Sg**	**01 38 31.3**	**-0.4**
	baz=238						
EGFH	**Guangfu**	**0.64**	**314**	P	**Pg**	**01 38 23.2**	**-0.3**
	baz=315						
EGFH				S	**Sg**	**01 38 31.8**	**-0.2**
	baz=315						
SHUL	**Shoufeng**	**0.65**	**329**	⇑P	**Pb**	**01 38 23.8**	**+0.4**
	baz=331						
SHUL				S	**Sb**	**01 38 32.4**	**+0.4**
	baz=331						
ECS	**Chishang**	**0.67**	**259**	P	**Pb**	**01 38 24.3**	**+0.6**
	baz=256						
ECS				S	**Sb**	**01 38 33.5**	**+1.0**
	baz=256						
EHD	**Haiduan**	**0.67**	**263**	P	**Pg**	**01 38 23.9**	**-0.2**
	baz=254						
EHD				S	**Sg**	**01 38 32.2**	**-0.8**
	baz=254						
LDUT	**Ludao**	**0.69**	**218**	P	**Pb**	**01 38 24.4**	**+0.3**
	baz=214						
LDUT				S	**Sb**	**01 38 33.2**	**-0.1**
	baz=214						
WARBT	**Fenglin Townsh**	**0.70**	**315**	⇑*i* P	**Pb**	**01 38 24.1**	**-0.2**
	baz=324						
WARBT				S	**Sg**	**01 38 32.8**	**-1.1**
	baz=324						
ESL	**Shilin**	**0.74**	**322**	⇑*i* P	**Pb**	**01 38 24.5**	**-0.5**
	baz=324						
ESL				*i* S	**Sb**	**01 38 34.4**	**-0.3**
	baz=324						
LONT	**Longtian**	**0.80**	**247**	P	**Pg**	**01 38 27.0**	**+0.5**
	baz=238						
LONT				S	**Sb**	**01 38 36.9**	**+0.4**
	baz=238						
HWA	**Hwalien**	**0.80**	**338**	P	**Pb**	**01 38 26.1**	**0.0**
	baz=341						
ETM	**Tongmen**	**0.84**	**332**	P	**Pb**	**01 38 26.2**	**-0.5**
	baz=342						
ETM				S	**Sb**	**01 38 36.2**	**-1.3**
	baz=342						
ELDTW	**Lidau**	**0.84**	**268**	⇓*i* P	**Pb**	**01 38 26.4**	**-0.4**
	baz=266						
ELDTW				S	**Sb**	**01 38 36.0**	**-1.6**
	baz=266						
TTN	**Taitung**	**0.86**	**237**	P	**Pg**	**01 38 27.7**	**+0.1**
	baz=234						
TTN				S	**Sb**	**01 38 38.1**	**0.0**
	baz=234						
TWGBT	**Beinan**	**0.88**	**243**	P	**Pb**	**01 38 27.4**	**0.

	baz=316					
WUSB			S	Sb	01 38 42.6	-1.5
	baz=316					
ALS	**Alishan**	**1.07 285**	P	Pb	01 38 31.1	+0.3
	baz=285					
ALS			S	Sb	01 38 44.6	+0.1
	baz=285					
CHGB	**Renai**	**1.08 320**	⇑P	Pb	01 38 30.7	-0.2
	baz=321					
CHGB			S	Sb	01 38 43.6	-1.1
	baz=321					
STYT	**Tauyuan**	**1.08 267**	P	Pb	01 38 30.9	+0.1
	baz=265					
STYT			S	Sb	01 38 43.6	-1.0
	baz=265					
EHP	**Heping Village**	**1.09 351**	P	Pb	01 38 30.8	-0.2
	baz=353					
EHP			S	Sb	01 38 44.2	-0.6
	baz=353					
WHYT	**Xinyi Township**	**1.09 296**	*e*P	Pn	01 38 31.6	+0.6
	baz=302					
WHYT			*e*S	Sb	01 38 44.5	-0.4
	baz=302					
ECL	**Taimali**	**1.09 235**	P	Pb	01 38 30.1	-0.9
	baz=245					
ECL			*e*S	Sb	01 38 43.1	-1.9
	baz=245					
WHF	**Hehuan Shan**	**1.10 326**	P	Pb	01 38 30.8	-0.6
	baz=327					
WHF			S	Sb	01 38 44.5	-0.9
	baz=327					
EAHA	**Aohua**	**1.11 351**	*e*P	Pb	01 38 31.3	0.0
	baz=4.0					
EAHA			*e*S	Sb	01 38 44.6	-0.8
	baz=4.0					
EOS3	**EOS3**	**1.11 19**	*e*P	Pb	01 38 31.8	+0.6
	baz=16					
EOS3			*e*S	Sb	01 38 45.7	+0.4
	baz=16					
SMLT	**Sun Moon Lake**	**1.15 305**	P	Pn	01 38 31.9	+0.1
	baz=305					
SMLT			S	Sb	01 38 45.8	-0.8
	baz=305					
WPL	**Puli Township**	**1.18 311**	P	Pn	01 38 32.6	+0.3
	baz=319					
WPL			S	Sb	01 38 46.4	-1.1
	baz=319					
TYC	**Yuchr**	**1.19 305**	P	Pn	01 38 32.6	+0.2
	baz=305					
TYC			S	Sn	01 38 48.1	+0.2
	baz=305					
FUSS	**Fushou**	**1.19 328**	P	Pn	01 38 32.5	-0.1
	baz=329					
FUSS			S	Sb	01 38 47.1	-0.9
	baz=329					
TPUB	**Ta-pu**	**1.20 274**	P	Pb	01 38 33.4	+0.6
	baz=266					
TPUB			S	Sb	01 38 48.3	+0.4
	baz=266					
SLGT	**Liugui**	**1.20 259**	*e*P	Pb	01 38 33.2	+0.3
	baz=263					
SLGT			*e*S	Sb	01 38 47.4	-0.6
	baz=263					
ENA	**Nanau**	**1.21 352**	P	Pn	01 38 32.3	-0.2
	baz=353					
ENA			S	Sb	01 38 46.7	-1.5
	baz=353					
WTP	**Ta-pu**	**1.21 271**	P	Pb	01 38 33.6	+0.5
	baz=262					
WTP			S	Sn	01 38 48.7	+0.2
	baz=262					
EOS2	**EOS2**	**1.22 13**	*e*P	Pb	01 38 33.4	+0.4
	baz=10.0					
EOS2			*e*S	Sb	01 38 48.3	-0.1
	baz=10.0					
DPDB	**Guoxing**	**1.22 311**	P	Pn	01 38 33.3	+0.5
	baz=319					
DPDB			*e*S	Sn	01 38 49.1	+0.3
	baz=319					
EWUT	**Wuta**	**1.22 354**	P	Pn	01 38 32.9	+0.1
	baz=355					
EWUT			S	Sb	01 38 47.4	-1.2
	baz=355					
TWT	**Tachien**	**1.23 326**	P	Pn	01 38 33.4	+0.3
	baz=326					
TWT			S	Sb	01 38 47.7	-1.4
	baz=326					
LAY	**Lan-yu**	**1.23 196**	*e*P	Pn	01 38 31.5	-1.4
	baz=184					
WCKO	**Fanlu**	**1.23 280**	*e*P	Pg	01 38 34.8	+0.2
	baz=273					
WCKO			*e*S	Sg	01 38 50.5	-0.4
	baz=273					
TDCB	**Techi**	**1.24 326**	⇑P	Pn	01 38 33.4	+0.2
	baz=326					
TDCB			S	Sb	01 38 47.9	-1.4
	baz=326					
WCS	**Beigang Elemen**	**1.25 312**	P	Pn	01 38 33.6	+0.5
	baz=319					
WJS	**Zhushan**	**1.25 298**	*e*P	Pg	01 38 35.1	+0.2
	baz=298					
WJS			*e*S	Sn	01 38 50.4	+0.9
	baz=298					
LYUB	**Lan-yu**	**1.26 195**	⇑P	Pn	01 38 31.6	-1.7
	baz=193					
LYUB			*e*S	Sb	01 38 49.0	-0.7
	baz=193					
TAW	**Tawu**	**1.29 228**	P	Pn	01 38 33.7	+0.1
	baz=236					
TAW			*e*S	Sb	01 38 48.0	-2.5
	baz=236					
CHN1	**Nanshi**	**1.29 268**	P	Pb	01 38 35.2	+0.8
	baz=261					
CHN1			*e*S	Sg	01 38 52.5	-0.1
	baz=261					
NNSH	**Datong**	**1.29 337**	P	Pn	01 38 34.0	+0.1
	baz=338					
NNSH			S	Sb	01 38 49.2	-1.7
	baz=338					
NNSB	**Datong**	**1.30 337**	P	Pn	01 38 33.8	-0.1
	baz=338					
NNSB			S	Sb	01 38 48.9	-1.9
	baz=338					
TAWH	**Dawu Township**	**1.30 228**	*e*P	Pn	01 38 33.8	-0.1
	baz=235					
TAWH			*e*S	Sn	01 38 49.5	-1.3
	baz=235					
NNS	**Nan Shan**	**1.31 337**	P	Pn	01 38 34.2	+0.1
	baz=338					
NNS			*e*S	Sb	01 38 49.3	-2.0
	baz=338					
WNT	**Mingjian**	**1.31 300**	P	Pb	01 38 35.6	+0.8
	baz=300					
WNT			S	Sg	01 38 52.2	-1.1
	baz=300					
SNST	**Tainan City**	**1.32 270**	P	Pb	01 38 35.6	+0.8
	baz=269					
SNST			S	Sb	01 38 52.3	+1.0
	baz=269					
TWK	**Hsinying**	**1.32 272**	P	Pb	01 38 35.5	+0.5
	baz=271					
TWK			*e*S	Sg	01 38 53.1	-0.6
	baz=271					
WNT1	**Nantou City**	**1.33 301**	*e*P	Pg	01 38 37.2	+0.8
	baz=301					
WNT1			S	Sg	01 38 53.2	-0.7
	baz=301					
MASBT	**Mashibuluo**	**1.34 243**	*i* P	Pn	01 38 34.8	+0.4
	baz=235					
ESAO	**Su ao**	**1.34 357**	P	Pn	01 38 34.9	+0.5
	baz=358					
ESAO			S	Sn	01 38 50.7	-1.1
	baz=358					
LATG	**Datong**	**1.35 344**	⇓P	Pn	01 38 34.7	+0.1
	baz=345					
LATG			S	Sn	01 38 51.4	-0.7
	baz=345					
WDLH	**Douliu**	**1.36 290**	S	Sb	01 38 53.5	+1.0
	baz=289					
TWC	**Suao**	**1.38 357**	P	Pn	01 38 35.6	+0.7
	baz=358					
TWC			S	Sn	01 38 52.1	-0.4
	baz=358					
WHP	**Taichung City**	**1.38 319**	*e*P	Pb	01 38 36.3	+0.3
	baz=327					
WHP			*e*S	Sn	01 38 53.0	+0.3
	baz=327					
WWF	**Wufeng**	**1.39 306**	*e*P	Pg	01 38 37.1	-0.5
	baz=305					
NDS	**Dongshan**	**1.41 352**	P	Pn	01 38 35.9	+0.5
	baz=353					
NDS			*e*S	Sn	01 38 53.0	-0.5
	baz=353					
NDT	**Datong Townshi**	**1.42 345**	*e*P	Pn	01 38 36.0	+0.5
	baz=345					
NDT			*e*S	Sn	01 38 53.2	-0.5
	baz=345					
ENTT	**Nioudou**	**1.45 347**	P	Pn	01 38 36.2	+0.3
	baz=348					
ENTT			*e*S	Sn	01 38 53.5	-0.7
	baz=348					
SLIU	**Shizi**	**1.45 226**	*e*P	Pn	01 38 35.8	-0.1
	baz=233					
TCU	**Taichung**	**1.47 309**	*e*P	Pb	01 38 38.2	+0.8
	baz=309					
TCU			*e*S	Sg	01 38 57.4	-0.9
	baz=309					
SCZT	**Fangliau**	**1.48 235**	*e*P	Pn	01 38 36.9	+0.7
	baz=227					
SCZT			*e*S	Sn	01 38 55.0	0.0
	baz=227					
TWE	**Neicheng**	**1.51 351**	P	Pn	01 38 37.3	+0.6
	baz=352					
TWE			S	Sn	01 38 55.0	-0.7
	baz=352					
WCHH	**Zhanghua**	**1.52 304**	*e*P	Pg	01 38 40.0	0.0
	baz=304					
WCHH			*e*S	Sg	01 38 59.0	-0.8
	baz=304					
ICHU	**Yijhu**	**1.52 275**	*e*P	Pb	01 38 39.2	+0.9
	baz=274					
ICHU			*e*S	Sg	01 38 58.8	-1.2
	baz=274					
YHNB	**Yeheng**	**1.52 341**	P	Pn	01 38 37.4	+0.4
	baz=341					
YHNB			*e*S	Sn	01 38 55.4	-0.9
	baz=341					
NSK	**Sanguang**	**1.53 340**	P	Pn	01 38 37.6	+0.5
	baz=341					
NSK			*e*S	Sn	01 38 55.7	-0.8
	baz=341					
JYNG	**Yonagunijimaku**	**1.53 37**	*e*S	Sn	01 38 56.7	+0.3
TWQ1	**Liyutan**	**1.54 317**	P	Pb	01 38 39.3	+0.7
	baz=327					
TWQ1			*e*S	Sb	01 38 59.0	+1.3
	baz=327					
SNJT	**Kaohsiung City**	**1.54 252**	*e*S	Sg	01 39 02.1	+1.5
	baz=251					
FUSB	**Fushanzhiwuyua**	**1.56 349**	P	Pn	01 38 37.9	+0.4
	baz=349					
FUSB			*e*S	Sn	01 38 56.1	-1.0
	baz=349					
SMST	**Manzhou Townsh**	**1.57 220**	*e*P	Pn	01 38 38.8	+1.3
	baz=219					
WRL	**Guolierlin Hig**	**1.57 296**	*e*P	Pb	01 38 39.2	0.0
	baz=295					
WRL			*e*S	Sb	01 38 58.7	0.0
	baz=295					
YOJ	**Yonaguni jima**	**1.58 39**	P	Pb	01 38 39.3	0.0
	baz=52					
YOJ			S	Sn	01 38 58.1	+0.6
	baz=52					
YOJ	**Yonaguni jima**	**1.58 39**	P	Pn	01 38 38.8	+1.1
YOJ			*e*S	Sn	01 38 58.2	+0.6
NFF	**Wufeng Townshi**	**1.58 332**	*e*P	Pb	01 38 39.8	+0.3
	baz=342					
NFF			*e*S	Sb	01 38 59.4	+0.3
	baz=342					
RLNB	**Erlin**	**1.58 295**	*e*S	Sb	01 38 58.6	-0.4
	baz=294					
NWLT	**Wulai**	**1.59 346**	*e*P	Pn	01 38 38.8	+1.0
	baz=346					
NSY	**Sanyi**	**1.59 318**	P	Pb	01 38 40.2	+0.6
	baz=318					
NSY			S	Sb	01 39 00.6	+1.3
	baz=318					
EGS		**1.61 0**	*e*P	Pb	01 38 39.8	0.0
	baz=12					
WDJ	**Dajia District**	**1.62 314**	*e*P	Pb	01 38 40.6	+0.5
	baz=314					
WDJ			*e*S	Sb	01 39 00.8	+0.6
	baz=314					
NSTT	**Nanjuang**	**1.63 329**	P	Pb	01 38 40.2	-0.1
	baz=329					
NSTT			S	Sn	01 38 59.0	0.0
	baz=329					
LIOB	**Emei**	**1.64 330**	P	Pb	01 38 40.6	+0.2
	baz=313					
WSSB	**Gushan**	**1.64 250**	*e*P	Pg	01 38 42.7	+0.3
	baz=248					
WSSB			*e*S	Sg	01 39 03.9	0.0
	baz=248					
TWKBT	**Hengchun**	**1.64 219**	*e*P	Pn	01 38 38.7	+0.1
	baz=218					
TWKBT			S	Sn	01 38 59.6	+0.4
	baz=218					
NMLH	**Miaoli**	**1.67 322**	*e*P	Pb	01 38 41.0	+0.1
	baz=322					
NMLH			*e*S	Sb	01 39 02.0	+0.5
	baz=322					
NJD	**Zhudong**	**1.69 333**	*e*P	Pb	01 38 41.5	+0.4
	baz=344					
NJD			*e*S	Sb	01 39 02.4	+0.4
	baz=344					
NHDH	**Xindian Distri**	**1.77 348**	*e*P	Pn	01 38 41.7	+1.4
	baz=348					
NHDH			*e*S	Sn	01 39 02.3	+0.1
	baz=348					
TATO	**Taipei**	**1.79 347**	P	Pn	01 38 41.8	+1.3
	baz=347					
TATO			*e*S	Sn	01 39 03.4	+0.8
	baz=347					
NWF	**Wu-fen Shan**	**1.84 356**	P	Pb	01 38 43.5	-0.4
	baz=356					
NWF			S	Sn	01 39 04.9	+0.8
	baz=356					
WFSB	**Wu-fen Shan**	**1.84 356**	*e*P	Pb	01 38 43.5	-0.2
	baz=356					
WFSB			S	Sn	01 39 05.0	+0.9
	baz=356					
SXI1	**Grass Mountain**	**1.86 359**	*e*P	Pn	01 38 43.3	+1.7
	baz=12					
SXI1			*e*S	Sn	01 39 05.3	+0.7
	baz=12					
NCUH	**Zhongli**	**1.86 339**	*e*P	Pb	01 38 43.3	-0.8
	baz=355					
NCUH			*e*S	Sb	01 39 06.7	-0.3
	baz=355					
HATJ	**Hateruma jima**	**1.91 64**	P	Pn	01 38 43.2	+1.0
HATJ			S	Sn	01 39 05.9	+0.2
IRIF	**Iriomote-Funau**	**1.98 56**	P	Pn	01 38 44.8	+1.5
IRIF			*e*S	Sn	01 39 08.7	+1.1
JKRS	**Kuro-shima**	**2.16 62**	*e*P	Pn	01 38 47.0	+1.4
JKRS			*e*S	Sn	01 39 12.5	+0.8
PHUB	**P'eng-hu**	**2.18 278**	*e*P	Pn	01 38 47.7	+1.7
	baz=263					
PHUB			*e*S	Sn	01 39 12.8	+0.4
	baz=263					
JIJ	**Ishigaki jima**	**2.32 60**	P	Pn	01 38 49.1	+1.2
JIJ			S	Sn	01 39 15.8	-0.1
JISG	**Ishigakijimahi**	**2.57 58**	*e*P	Pn	01 38 52.2	+0.9
JISG			*e*S	Sn	01 39 20.4	-1.6
JTJ	**Tarama**	**2.90 60**	S	Sn	01 39 30.4	+0.2

IDC 26 01:43:34.6±7.0, 6°50S×142°35E, h0km, mb3.4/1, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=243.8km s-min=37.0km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.47**	**209**	Pn	Pn	01 47 12.4	-1.9
	0.3nm,0.3s,baz=30,slow=13,SNR=8.0						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**18.91**	**205**	P	Pn	01 47 57.3	-0.2
	0.4nm,0.3s,baz=33,slow=10,SNR=19						
	2.7nm,0.6s						
MKAR	**Makanchi Array**	**74.99**	**322**	P	P	01 55 18.1	+0.2
	0.2nm,0.6s,baz=130,slow=6.2,SNR=2.0						
	0.2nm,0.6s						

IDC 26 01:45:26.8±1.9, 6°01S×142°84E, h0km, mb3.8/2, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=101.2km s-min=32.8km az=110.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.13**	**210**	Pn	Pn	01 49 13.8	-1.2
	0.3nm,0.3s,baz=28,slow=13,SNR=2.8						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**19.55**	**205**	P	P	01 49 56.7	+0.4
	0.2nm,0.3s,baz=32,slow=9.9,SNR=6.6						
	3.1nm,0.8s						
BVAR	**Borovoye Array**	**84.36**	**325**	P	P	01 58 01.7	+0.8
	0.6nm,0.7s,baz=125,slow=7.6,SNR=3.3						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**87.14**	**24**	P	P	01 58 13.8	-0.7
	0.3nm,0.7s,baz=255,slow=5.0,SNR=4.4						
	0.3nm,0.7s						

*IDC **26** 01:46:20.6±1.2, 6°26S×143°55E, h0km, mb3.8/4, mbtmp4.0/7, ML3.8/1, MS3.5/1, Error ellipse: s-maj=41.2km s-min=24.4km az=86.0*

ISC 26 01:46:25.7±1.0, 6°46S±0°1×143°6E±0°1, h35km, n8, σ0s62/8, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.64**	**131**	Pn	**Pn**	**01 47 34.0**	**+0.6**
	14nm,0.3s,baz=330,slow=9.2,SNR=5.6						
PMG				Sn	**Sn**	**01 48 25.5**	**-0.6**
	3.5nm,0.3s,baz=238,slow=19,SNR=1.9						
CTA	**Charters Tower**	**13.87**	**169**	LR	LR	01 55 20.4	
	comp=Z,197nm,21.9s,baz=339,slow=39						
WRA	**Warramunga Arr**	**16.20**	**213**	Pn	**Pn**	**01 50 10.7**	**-0.1**
	0.4nm,0.3s,baz=31,slow=12,SNR=5.2						
	2.5nm,0.7s						
ASAR	**Alice Springs**	**19.55**	**207**	P	**Pn**	**01 50 52.8**	**+0.8**
	29nm,0.7s,baz=36,slow=9.6,SNR=56						
STKA	**Stephens Creek**	**25.43**	**184**	P	**P**	**01 51 49.6**	**-0.7**
	0.9nm,0.3s,baz=326,slow=14,SNR=1.9						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**75.66**	**322**	P	**P**	**01 58 07.2**	**-0.2**
	0.4nm,0.6s,baz=116,slow=5.6,SNR=3.7						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**85.09**	**325**	P	**P**	**01 58 58.0**	**+0.1**
	0.7nm,0.6s,baz=93,slow=10,SNR=4.0						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**87.18**	**24**	P	**P**	**01 59 08.0**	**0.0**
	0.4nm,0.8s,baz=262,slow=4.7,SNR=4.1						
	0.4nm,0.8s						

*NEIC **26** 01:48:01.8±1.3, 19°0N±0°1×64°28W±0°04, h35km±2km, ML2.8/22, Md3.6/3(RSPR), Error ellipse: s-maj=23.6km s-min=5.2km az=10.0*
*RSPR **26** 01:48:03.4, 18°85N×64°25W, h54km±22km, MD3.6/3*

ISC 26 01:48:01.7±2.9, 19°0N±0°3×64°25W±0°08, h42km, n22, σ0s67/24, 5C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**1.44**	**129**	Pn	**Pn**	**01 48 25.3**	**0.0**
SMRT				IAML		01 48 45.2	
	comp=E,168nm,0.1s						
SMRT				IAML		01 49 05.1	
	comp=N,120nm,0.3s						
HUMP	**Col San Antoni**	**1.72**	**242**	⇑*e*P	**Pn**	**01 48 29.7**	**+0.4**
HUMP	**Col San Antoni**	**1.72**	**242**	*e*S	**Sn**	**01 48 49.6**	**-0.4**
HUMP	**Col San Antoni**	**1.72**	**242**		**Pn**	**01 48 29.3**	**+0.1**
HUMP					**Sn**	**01 48 49.7**	**-0.3**
GCPR	**Guaynabo City**	**1.85**	**250**	⇑*e*P	**Pn**	**01 48 31.1**	**+0.1**
GCPR	**Guaynabo City**	**1.85**	**250**	Pn	**Pn**	**01 48 30.5**	**-0.5**
EMPR	**Esperanza - Ma**	**2.21**	**258**	Pn	**Pn**	**01 48 35.2**	**-0.8**
CELP	**Cerrillos**	**2.38**	**249**	⇓*e*P	**Pn**	**01 48 39.0**	**+0.7**
CELP	**Cerrillos**	**2.38**	**249**	*e*S	**Sn**	**01 49 06.5**	**+0.3**
CELP	**Cerrillos**	**2.38**	**249**	Pn	**Pn**	**01 48 38.0**	**-0.2**
CELP				Sn	**Sn**	**01 49 06.2**	**0.0**
CELP				IAML		01 49 22.7	
	comp=N,31nm,3.0s						
OBIP	**Obispado Ponce**	**2.42**	**248**	⇑*e*P	**Pn**	**01 48 38.6**	**-0.1**
OBIP	**Obispado Ponce**	**2.42**	**248**	Pn	**Pn**	**01 48 37.8**	**-0.9**
OBIP				IAML		01 49 12.1	
	comp=E,28nm,1.9s						
OBIP				IAML		01 49 17.3	
	comp=N,27nm,2.4s						
UUPR	**Utuado, UPR, P**	**2.45**	**254**	Pn	**Pn**	**01 48 37.9**	**-1.3**
UUPR				IAML		01 49 13.5	
	comp=E,110nm,0.3s						
AOPR	**Arecibo Observ**	**2.45**	**256**	⇑*e*P	**Pn**	**01 48 39.5**	**+0.2**
AOPR	**Arecibo Observ**	**2.45**	**256**	*e*S	**Sn**	**01 49 08.3**	**+0.3**
AOPR	**Arecibo Observ**	**2.45**	**256**	Pn	**Pn**	**01 48 38.8**	**-0.5**
AOPR				Sn	**Sn**	**01 49 07.9**	**-0.1**
AOPR				IAML		01 49 22.5	
	comp=E,77nm,0.5s						
AOPR				IAML		01 49 40.4	
	comp=N,46nm,2.5s						
AGPR	**Aguadilla, PR**	**2.75**	**260**	Pn	Pn	01 48 39.0	-4.4
LSP	**Las Mesas**	**2.80**	**254**	⇑*e*P	**Pn**	**01 48 45.4**	**+1.3**
LSP	**Las Mesas**	**2.80**	**254**		**Pn**	**01 48 45.4**	**+1.3**
MLPR	**Magueyes Islan**	**2.83**	**250**	Pn	**Pn**	**01 48 44.1**	**-0.3**
MLPR				IAML		01 49 50.4	
	comp=N,39nm,3.2s						
MLPR				IAML		01 50 13.1	
	comp=E,29nm,2.5s						
CRPR	**Cabo Rojo, PR**	**2.88**	**251**	⇓*e*P	**Pn**	**01 48 45.9**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.88**	**251**	Pn	**Pn**	**01 48 45.2**	**+0.1**
CRPR				IAML		01 50 21.6	
	comp=E,33nm,2.0s						
CRPR				IAML		01 50 22.3	
	comp=N,45nm,2.3s						

IDC 26 01:50:03.9±2.0, 5°97S×142°16E, h0km, mb3.7/3, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=84.9km s-min=31.8km az=104.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.83**	**208**	Pn	Pn	01 53 48.4	0.0
	0.2nm,0.3s,baz=26,slow=13,SNR=1.4						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**19.31**	**203**	P	P	01 54 30.6	-0.1
	0.4nm,0.3s,baz=31,slow=11,SNR=7.2						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**74.45**	**322**	P	P	02 01 44.4	+0.2
	0.2nm,0.5s,baz=101,slow=7.5,SNR=2.6						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**83.94**	**325**	P	P	02 02 36.0	+0.2
	0.8nm,0.6s,baz=116,slow=6.9,SNR=4.3						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**87.38**	**24**	P	P	02 02 52.4	-0.4
	0.5nm,0.9s,baz=265,slow=5.3,SNR=3.4						
	0.5nm,0.9s						

*TEH **26** 01:55:09.0, 27°78N×57°90E, h22km±16km, ML3.6*
*DSN **26** 01:55:10.2±1.6, 27°50N×58°21E, h15km, ML3.1/11, Error ellipse: s-maj=27.2km s-min=13.1km az=154.0*
*OMAN **26** 01:55:13.7±1.0, 27°46N×57°67E, h10km, mb4.4/2, ml3.2/21, Error ellipse: s-maj=8.8km s-min=6.3km az=44.0*

ISC 26 01:55:09.8±1.2, 27°75N±0°05×57°79E±0°04, h20km±6km, n60, σ1s65/78, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.21**	**340**	Pg	**Pg**	**01 55 14.7**	**-0.4**
KHNJ				Sg	**Sg**	**01 55 18.7**	**-0.2**
IBND	**Bandar-abas**	**1.15**	**255**	Pg	**Pn**	**01 55 32.0**	**+1.2**
IBND				Sg	**Sn**	**01 55 48.8**	**+2.9**
GENO	**Geno**	**1.48**	**257**	Pg	**Pb**	**01 55 36.7**	**0.0**
KBAM	**BAM**	**1.50**	**23**	Pg	**Pn**	**01 55 35.0**	**-0.8**
JASK	**Jask - Hormozg**	**1.87**	**178**	Pn	**Pb**	**01 55 43.1**	**-0.3**
JASK	**Jask - Hormozg**	**1.87**	**178**	P	**Pb**	**01 55 43.3**	**-0.1**
	SNR=20						
NGRK	**Negar Kerman**	**2.11**	**334**	Pn	**Pn**	**01 55 45.7**	**+1.4**
CHMN	**Cheshme madani**	**2.12**	**354**	Pn	**Pn**	**01 55 45.5**	**+1.1**
SHME	**Shamm**	**2.24**	**221**	P	**Pb**	**01 55 48.1**	**-1.6**
SHME	**Shamm**	**2.24**	**221**	P	**Pb**	**01 55 48.9**	**-0.7**
	SNR=22						
SHME				S	**Sn**	**01 56 15.3**	**+2.4**
BANOM	**Banah**	**2.25**	**217**	P	**Pn**	**01 55 47.1**	**+1.1**
BANOM				S	**Sb**	**01 56 17.1**	**-0.1**
BANOM	**Banah**	**2.25**	**217**	P	**Pn**	**01 55 47.7**	**+1.7**
TVBK	**TV Kerman**	**2.41**	**338**	Pn	**Pn**	**01 55 49.7**	**+1.3**
MASF	**Masafi**	**2.78**	**212**	P	**Pn**	**01 55 55.1**	**+1.8**
MASF				S	**Sn**	**01 56 28.3**	**+2.0**
MDH	**Madha**	**2.78**	**209**	P	**Pn**	**01 55 53.1**	**-0.1**
MDH	**Madha**	**2.78**	**209**	P	**Pn**	**01 55 53.2**	**-0.1**

	SNR=17						
MDH				S	Sn	01 56 25.0	-1.3
MSFE	Esma-Masafi	2.79 212		P	Pn	01 55 54.7	+1.3
KHGB	Koh Gabri	2.86 337		Pn	Pn	01 55 56.8	+2.2
UMQ	Umm Al-Quwin	2.92 221		P	Pn	01 55 57.2	+2.1
UOSS	Minazif	3.13 207		P	Pn	01 55 57.7	-0.4
HATD	Hatta, Dubai	3.27 207		P	Pn	01 56 01.4	+1.4
HATD	Hatta, Dubai	3.27 207		P	Pn	01 56 03.4	+3.5
NAZ	Nazwa, Dubai	3.34 215		P	Pn	01 56 03.9	+2.9
NAZ	Nazwa, Dubai	3.34 215		P	Pn	01 56 03.6	+2.6
ZRDN	Zarand Kerman	3.39 341		Pn	Pn	01 56 03.9	+2.1
ASHO	Ashiyiah	3.42 207		P	Pn	01 56 03.8	+1.7
ASHO	Ashiyiah	3.42 207		P	Pn	01 56 04.6	+2.5
	SNR=17						
FAQ	Al Faqa, Dubai	3.58 214		P	Pn	01 56 06.0	+1.8
FAQ	Al Faqa, Dubai	3.58 214		P	Pn	01 56 06.4	+2.1
	SNR=6.4						
SOHO	SOHO	3.77 198		P	Pn	01 56 06.1	-0.8
SOHO	SOHO	3.77 198		P	Pn	01 56 06.3	-0.6
SOHO				S	Sn	01 56 48.2	-2.5
ASUD	Al Ashush, Dub	3.81 216		P	Pn	01 56 09.5	+2.0
ASUD	Al Ashush, Dub	3.81 216		P	Pn	01 56 09.8	+2.4
	SNR=7.3						
AJN	Ajban	4.05 219		S	Sn	01 56 57.2	-0.3
	SNR=6.8						
ALNE	Al Ain	4.11 207		P	Pn	01 56 12.8	+1.2
NHDN	Nehbandan	4.13 28		Pn	Pn	01 56 13.4	+1.4
HOQ	Hoqain	4.17 186		P	Pn	01 56 12.7	+0.3
	SNR=30						
HOQ				S	Sn	01 56 59.9	-0.7
BIDO	Bidbid	4.22 176		P	Pn	01 56 14.1	+1.0
BSRN	Basiran	4.36 15		Pn	Pn	01 56 16.5	+1.4
ARQ	Araqi	4.54 195		P	Pn	01 56 20.1	+2.6
	SNR=38						
ARQ				S	Sn	01 57 11.3	+1.6
SMDO	Samad	4.67 177		P	Pn	01 56 21.0	+1.6
SMDO				S	Sn	01 57 12.9	-0.3
IKOO	Kooshah	4.78 12		Pn	Pn	01 56 22.2	+1.2
BSY	Bisya	5.01 186		P	Pn	01 56 27.1	+3.2
	SNR=14						
BSY				S	Sn	01 57 21.9	+0.6
ITEG	Tejag	5.20 9		Pn	Pn	01 56 27.7	+1.1
WBK	Wadi Bani Khal	5.23 168		P	Pn	01 56 28.2	+1.3
	SNR=40						
WBK				S	Sn	01 57 25.9	-0.8
TPRV	Parvadeh(Tabas	5.35 350		Pn	Pn	01 56 30.7	+2.1
JMDO	Jabal Madar	5.36 177		P	Pn	01 56 31.3	+2.5
	SNR=6.2						
JMDO				S	Sn	01 57 30.7	+0.7
UMZA	Um Al Zommool	5.55 206		P	Pn	01 56 31.7	+0.4
AFRZ	Afriz	5.76 10		Pn	Pn	01 56 36.1	+1.8
JLN	Jalan Bani Buh	5.76 165		P	Pn	01 56 35.2	+0.9
JLN				S	Sn	01 57 37.8	-2.1
GHWR	Ruwais	5.81 231		P	Pn	01 56 34.4	-0.5
GHWR				S	Sn	01 57 38.2	-2.8
SHRT	Shahrakht	6.26 20		Pn	Pn	01 56 42.9	+1.7
SHMA	Al-Shehemyia	6.38 254		P	Pn	01 56 43.3	+0.5
	SNR=19						
SHMA				S	Sn	01 57 52.2	-2.8
SLWR	Sila	6.60 238		P	Pn	01 56 46.4	+0.6
SLWR				S	Sn	01 57 58.4	-2.0
TRNA	Turayna	6.62 245		P	Pn	01 56 45.1	-0.9
	SNR=7.1						
TRNA				S	Sn	01 57 58.7	-2.3
	SNR=11						
SAKB	Bahrain	6.71 256		P	Pn	01 56 47.1	-0.2
SMRA	Abu-Samra	6.93 246		P	Pn	01 56 50.6	+0.3
DOK	Doka	9.69 201		P	Pn	01 57 27.8	-0.3
WHFO	Wadi Hawf	10.46 202		P	Pn	01 57 37.6	-1.2
ABTO	Aybut	11.14 203		P	Pn	01 57 46.8	-1.3

IDC ***26*** *02:02:18.6±1.9,* **6°46S×141°51E, h0km, mb3.5/2, mbtmp3.8/4, ML3.8/2, MS3.0/1, Error ellipse: s-maj=88.0km s-min=32.3km az=107.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.11	207	Pn	Pn	02 05 52.2	-1.2
	0.3nm,0.3s,baz=30,slow=14,SNR=5.4						
	0.7nm,0.4s						
ASAR	Alice Springs	18.61	202	P	P	02 06 37.5	-0.2
	0.7nm,0.3s,baz=34,slow=10,SNR=30						
	6.0nm,0.7s						
DAV	Davao City (W)	20.81	310	LR	LR	02 16 08.9	
	comp=Z,38nm,19.6s,baz=182,slow=40						
MKAR	Makanchi Array	74.44	322	P	P	02 13 58.6	-0.1
	0.2nm,0.6s,baz=122,slow=7.0,SNR=2.4						
	0.2nm,0.6s						
ILAR	Eielson Array	88.08	24	P	P	02 15 11.1	+0.3
	0.3nm,0.7s,baz=251,slow=4.6,SNR=5.6						
	0.3nm,0.7s						

RSPR ***26*** *02:04:55.2, 18°.79N×64°.24W, h83km±10km, MD3.8/10*
NEIC ***26*** *02:04:58.4±2.1, 18°.5N±0°.2×64°.57W±0°.06, h107km±17km, ML3.3/24, Md3.8/10(RSPR), Error ellipse: s-maj=26.0km s-min=7.4km az=185.0*

ISC 26 02:04:58.4±2.2, 18°.8N±0°.2×64°.49W±0°.06, h87km±39km, n31, σ1§47/37, 10C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	Col San Antoni	1.44	244	⇑eP	Pn	02 05 22.6	-0.6
HUMP	Col San Antoni	1.44	244	eS	Sn	02 05 43.5	+1.6
HUMP	Col San Antoni	1.44	244	Pn	Pn	02 05 22.3	-0.9
HUMP					Sn	02 05 43.0	+1.0
HUMP				IAML		02 05 47.5	
	comp=E,313nm,0.5s						
HUMP				IAML		02 05 48.1	
	comp=N,199nm,0.4s						
SMRT	St. Maarten	1.53	118	Pn	Pn	02 05 24.3	-0.1
SMRT				IAML		02 05 56.0	
	comp=E,458nm,0.3s						
GCPR	Guaynabo City	1.58	253	⇑eP	Pn	02 05 23.6	-1.4
GCPR	Guaynabo City	1.58	253	eS	Sn	02 05 46.7	+1.5
GCPR	Guaynabo City	1.58	253	Pn	Pn	02 05 23.1	-1.9
GCPR				Sn	Sn	02 05 45.5	+0.2
SABA	Saba	1.66	134	Pn	Pn	02 05 26.4	+0.4
SABA				IAML		02 06 13.7	
	comp=E,431nm,0.6s						
SABA				IAML		02 06 17.6	
	comp=N,284nm,0.7s						
EMPR	Esperanza - Ma	1.96	261	⇑eP	Pn	02 05 29.1	-0.8
EMPR	Esperanza - Ma	1.96	261	eS	Sn	02 05 56.5	+2.6
EMPR	Esperanza - Ma	1.96	261	Pn	Pn	02 05 27.6	-2.2
EMPR				Sn	Sn	02 05 55.1	+1.2
EMPR				IAML		02 05 58.8	
	comp=E,249nm,0.8s						
EMPR				IAML		02 06 03.3	
	comp=N,282nm,0.5s						
OBIP	Obispado Ponce	2.14	250	⇑eP	Pn	02 05 31.6	-0.7
OBIP	Obispado Ponce	2.14	250	eS	Sn	02 05 58.5	+0.3
OBIP	Obispado Ponce	2.14	250	Pn	Pn	02 05 30.8	-1.5
OBIP				Sn	Sn	02 05 56.2	-2.0
OBIP				IAML		02 06 04.5	
	comp=E,107nm,0.6s						
OBIP				IAML		02 06 06.4	
	comp=N,87nm,0.9s						
UUPR	Utuado, UPR, P	2.18	256	⇑eP	Pn	02 05 32.0	-0.8
UUPR	Utuado, UPR, P	2.18	256	Pn	Pn	02 05 31.7	-1.2
AOPR	Arecibo Observ	2.19	259	⇑eP	Pn	02 05 32.3	-0.8
AOPR	Arecibo Observ	2.19	259	eS	Sn	02 06 01.3	+1.8
AOPR	Arecibo Observ	2.19	259	Pn	Pn	02 05 31.7	-1.3
AOPR				Sn	Sn	02 05 59.6	+0.1
AOPR				IAML		02 06 16.5	
	comp=N,224nm,0.4s						
AGPR	Aguadilla, PR	2.50	263	⇑eP	Pn	02 05 37.1	0.0
AGPR	Aguadilla, PR	2.50	263	eS	Sn	02 06 09.5	+2.6
AGPR	Aguadilla, PR	2.50	263	Pn	Pn	02 05 35.6	-1.6
AGPR				Sn	Sn	02 06 05.7	-1.3
AGPR				IAML		02 06 27.9	
	comp=E,131nm,2.5s						
AGPR				IAML		02 06 43.3	
	comp=N,104nm,2.6s						
LSP	Las Mesas	2.53	257	⇑eP	Pn	02 05 37.7	0.0
LSP	Las Mesas	2.53	257		Pn	02 05 37.7	0.0
MLPR	Magueyes Islan	2.56	252	⇑eP	Pn	02 05 37.2	-0.7
MLPR	Magueyes Islan	2.56	252	Pn	Pn	02 05 36.4	-1.5
CRPR	Cabo Rojo, PR	2.60	253	⇑eP	Pn	02 05 39.1	+0.6
CRPR	Cabo Rojo, PR	2.60	253	eS	Sn	02 06 11.3	+2.0
CRPR	Cabo Rojo, PR	2.60	253	Pn	Pn	02 05 38.3	-0.2
GDHS	Morne Mazeau,	3.61	133	Pn	Pn	02 05 48.9	-3.3
SDDR	Presa de Saban	6.44	273	Pn	Pn	02 06 29.4	-1.2

IDC ***26*** *02:05:51.4±0.9, 6°.25S×143°.30E, h0km, mb3.9/7, mbtmp3.9/9, ML1.5/1, Error ellipse: s-maj=43.7km s-min=20.6km az=77.0*

ISC 26 02:05:56.5±0.8, 6°.3S±0°.1×143°.4E±0°.2, h35km, n10, σ1§40/10, mb3.9/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.83	130	Pn	Pn	02 07 07.9	+1.2
	1.3nm,0.3s,baz=288,slow=9.6,SNR=2.3						
PMG				Sn	Sn	02 07 60.0	-1.5
	1.7nm,0.3s,baz=356,slow=17,SNR=2.0						
	11nm,0.6s						
WRA	Warramunga Arr	16.14	212	Pn	Pn	02 09 33.6	-7.3
	0.4nm,0.3s,baz=35,slow=12,SNR=5.8						
ASAR	Alice Springs	19.51	207	P	P	02 10 18.9	-2.0
	4.4nm,0.7s,baz=34,slow=9.3,SNR=11						
STKA	Stephens Creek	25.48	184	P	P	02 11 22.1	+0.7
	1.9nm,0.7s,baz=354,slow=7.7,SNR=3.6						
	1.9nm,0.7s						
SONM	Songino Array	63.00	333	P	P	02 16 20.6	+0.7
	0.3nm,0.6s,baz=142,slow=7.2,SNR=2.1						
	0.3nm,0.6s						
MKAR	Makanchi Array	75.49	322	P	P	02 17 37.5	+0.3
	0.9nm,0.6s,baz=112,slow=6.8,SNR=11						
	0.9nm,0.6s						
KURBB	Kurchatov Arra	79.36	324	P	P	02 17 58.2	-0.5
	0.3nm,0.5s,baz=113,slow=5.1,SNR=5.3						
	0.3nm,0.5s						
QSPA	South Pole Qui	83.65	180	P	P	02 18 22.9	+1.6
	1.1nm,0.7s,baz=279,slow=0.5,SNR=5.3						
	1.1nm,0.7s						
BVAR	Borovoye Array	84.93	325	P	P	02 18 27.9	0.0
	1.5nm,0.7s,baz=104,slow=6.3,SNR=7.7						
	1.5nm,0.7s						
ILAR	Eielson Array	87.20	24	P	P	02 18 37.4	-1.5
	0.6nm,0.8s,baz=255,slow=5.6,SNR=5.0						
	0.6nm,0.8s						

IDC ***26*** *02:06:34.3±1.4, 5°.77S×142°.89E, h0km, mb3.8/5, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=64.1km s-min=27.9km az=94.0*

ISC 26 02:06:39.8±1.3, 5°.8S±0°.2×142°.9E±0°.4, h35km, n7, σ0§18/7, mb3.7/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.31	210	Pn	Pn	02 10 26.4	+0.1
	0.2nm,0.3s,baz=26,slow=13,SNR=2.1						
	1.2nm,0.5s						
ASAR	Alice Springs	19.74	205	P	P	02 11 06.5	-0.1
	0.4nm,0.3s,baz=33,slow=10,SNR=1.8						
	2.8nm,0.6s						
MKAR	Makanchi Array	74.78	322	P	P	02 18 16.2	-0.2
	0.4nm,0.6s,baz=116,slow=5.3,SNR=2.1						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	78.65	324	P	P	02 18 38.0	-0.1
	0.1nm,0.3s,baz=101,slow=4.8,SNR=2.1						
	0.1nm,0.3s						
QSPA	South Pole Qui	84.15	180	P	P	02 19 07.2	0.0
	1.6nm,0.8s,baz=37,slow=5.1,SNR=5.3						
	1.6nm,0.8s						
BVAR	Borovoye Array	84.22	325	P	P	02 19 07.8	+0.2
	0.9nm,0.8s,baz=106,slow=9.2,SNR=2.6						
	0.9nm,0.8s						
ILAR	Eielson Array	86.95	24	P	P	02 19 21.0	0.0
	0.4nm,0.8s,baz=242,slow=4.7,SNR=4.2						
	0.4nm,0.8s						

IDC 26 02:09:17.9±2.2, 5°.99S×143°.17E, h0km, mb3.7/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=89.0km s-min=37.0km az=105.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	19.71	206	P	P	02 13 49.0	-0.1
	0.3nm,0.3s,baz=32,slow=10,SNR=9.0						
	4.9nm,0.9s						
MKAR	Makanchi Array	75.09	322	P	P	02 21 01.6	-0.3
	0.2nm,0.5s,baz=134,slow=4.2,SNR=3.2						
	0.2nm,0.5s						
BVAR	Borovoye Array	84.54	325	P	P	02 21 53.5	+0.6
	1.0nm,0.6s,baz=100,slow=5.3,SNR=5.0						
	1.0nm,0.6s						
ILAR	Eielson Array	86.99	24	P	P	02 22 04.5	-0.3
	0.3nm,0.7s,baz=258,slow=3.6,SNR=2.6						
	0.3nm,0.7s						

IDC ***26*** *02:20:04.4±1.8, 6°.25S×143°.11E, h0km, mb3.9/4, mbtmp4.0/5, ML4.3/1, Error ellipse: s-maj=68.7km s-min=35.0km az=106.0*

ISC 26 02:20:06.6±1.3, 6°.4S±0°.2×142°.9E±0°.1, h10km, n7, σ1§28/6, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.22	125	Sn	Sn	02 22 25.0	-0.1
	1.6nm,0.3s,baz=332,slow=22,SNR=3.3						
WRA	Warramunga Arr	15.82	211	Pn	Pn	02 23 48.2	-1.4
	0.2nm,0.3s,baz=36,slow=13,SNR=5.4						
ASAR	Alice Springs	19.22	206	P	P	02 24 32.7	+1.6
	0.8nm,0.3s,baz=33,slow=11,SNR=29						
	4.8nm,0.5s						
MKAR	Makanchi Array	75.20	322	P	P	02 31 49.2	-0.3
	0.4nm,0.6s,baz=111,slow=6.5,SNR=6.4						
	0.4nm,0.6s						
KURBB	Kurchatov Arra	79.09	324	P	P	02 32 10.9	-0.3
	0.2nm,0.3s,baz=112,slow=4.3,SNR=3.1						
	0.2nm,0.3s						
BVAR	Borovoye Array	84.67	325	P	P	02 32 40.8	+0.2
	2.8nm,0.7s,baz=116,slow=6.8,SNR=16						
	2.8nm,0.7s						
ILAR	Eielson Array	87.47	24	P	P	02 32 52.4	-1.8
	1.0nm,0.7s,baz=254,slow=5.0,SNR=16						
	1.0nm,0.7s						

IDC 26 02:23:35.7±8.4, 6°.53S×143°.82E, h0km, mb3.5/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=282.4km s-min=38.8km az=99.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.20	214	Pn	Pn	02 27 24.0	-0.9
	0.2nm,0.3s,baz=37,slow=13,SNR=2.5						
	0.9nm,0.7s						
ASAR	Alice Springs	19.52	208	P	P	02 28 05.2	+0.3
	0.2nm,0.3s,baz=36,slow=7.9,SNR=2.4						
	0.7nm,0.5s						
MKAR	Makanchi Array	75.92	321	P	P	02 35 24.4	+0.1
	0.3nm,0.7s,baz=97,slow=7.3,SNR=4.0						
	0.3nm,0.7s						

MOS ***26*** *02:25:28.9±0.8, 6°.33S×143°.10E, h10km, mb5.1/36, Error ellipse: s-maj=11.4km s-min=5.9km az=113.3*
BJI ***26*** *02:25:29.6±0.0, 6°.51S×143°.53E, h31km, mb4.7/61, mB5.2/25, Ms4.5/5, Ms7 4.3/5*
IDC ***26*** *02:25:29.2±0.5, 6°.29S×143°.23E, h0km, mb4.7/15, mbtmp4.7/18, ML3.0/2, MS4.2/21, Error ellipse: s-maj=25.6km s-min=13.1km az=75.0*
NEIC ***26*** *02:25:31.4±2.8, 6°.32S±0°.07×142°.94E±0°.07, h10km±1km, mb5.1/119, Error ellipse: s-maj=12.5km s-min=12.0km az=215.0*
DJA ***26*** *02:25:33.6±1.2, 6°.S±3°×14°.3E±°, h25km±10km, M5.0/31, mb5.1/31, mB5.4/22, MLv5.7/6, Mw(mB)4.9/22, MwMwp6.3/1, Mwp6.3/1*

ISC 26 02:25:30.8±0.3, 6°.37S±0°.04×143°.00E±0°.05, h10km, n329, σ1§55/283, mb5.0/121, MS4.3/21, 23C-3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	Tabubil	2.08	302	P	Pg	02 26 09.0	-1.6
MMPI	Merauke	3.33	231	P	Pn	02 26 24.3	+1.4
MMPI				S	Sg	02 27 20.5	+2.8
GENI	Genyem	4.69	323	P	Pn	02 26 45.4	+3.7
GENI	Genyem	4.69	323	P	Pn	02 26 43.0	+1.3
PMG	Port Moresby	5.11	126	Pn	Pn	02 26 47.8	+0.4
PMG	Port Moresby	5.11	126	P	Pn	02 26 48.0	+0.5
PMG	Port Moresby	5.11	126	P	Pn	02 26 47.9	+0.4
PMG	Port Moresby	5.11	126	*ceP*	Pn	02 26 47.3	-0.1
PMG				pmax	pmax		
	comp=Z,111nm,0.8s						
PMG	Port Moresby	5.11	126	Pn	Pn	02 26 47.4	-0.1
	comp=Z,12nm,0.3s,baz=316,slow=14,SNR=24						
PMG				Sn	Sn	02 27 42.7	-3.8
	comp=Z,14nm,0.3s,baz=245,slow=22,SNR=8.0						
	comp=Z,85nm,0.6s						
SMPI	Sarmi	6.10	315	P	Pn	02 27 02.4	+1.3
	comp=Z,246nm,0.9s,comp=Z,6μmcomp=Z,2.3nm						
MANU	Manus Island	6.12	46	Pn	Pn	02 27 00.6	-0.8
COEN	Coen	7.54	179	P	Pn	02 27 23.2	+2.3
	baz=7.6,SNR=6.4						
COEN	Coen	7.54	179	Pn	Pn	02 27 22.7	+1.7
COEN	Coen	7.54	179	P	Pn	02 27 23.8	+2.9
RABL	Rabaul	9.38	77	Pn	Pn	02 27 48.0	+1.8
KMPI	Kaimana, Papua	9.64	286	P	Pn	02 27 50.4	+0.7
	comp=Z,379nm,0.8s						
FAKI	Fak Fak	11.25	287	Pn	Pn	02 28 09.4	-2.4
FAKI	Fak Fak	11.25	287	P	Pn	02 28 09.2	-2.5
	comp=Z,73nm,0.8s						
SAUI	Saumlaki	11.72	261	Pn	Pn	02 28 17.8	-0.4
SAUI	Saumlaki	11.72	261	P	Pn	02 28 18.5	+0.3
	comp=Z,1μm,0.9s,comp=Z,10μm						
MTSU	Mount Surprise	11.77	174	P	Pn	02 28 21.4	+2.5
	baz=12,SNR=5.8						
MTSU	Mount Surprise	11.77	174	P	Pn	02 28 21.9	+3.0
KDU	Kakadu	12.13	238	P	Pn	02 28 23.6	-0.2
	baz=12,SNR=38						
KDU	Kakadu	12.13	238	P	Pn	02 28 23.5	-0.2
MTN	Manton Dam	13.35	240	P	Pn	02 28 40.0	-0.5
	baz=13,SNR=27						
MTN	Manton Dam	13.35	240	Pn	Pn	02 28 39.2	-1.3
MTN	Manton Dam	13.35	240	P	Pn	02 28 40.2	-0.3
DRS	Darwin Rock St	13.37	242	P	Pn	02 28 40.9	+0.2
CTA	Charters Tower	14.00	167	Pn	Pn	02 28 49.4	-0.1
	comp=Z,0.2nm,0.3s,baz=32,slow=15,SNR=1.7						
CTA				Lg	Lg	02 32 56.5	
	comp=Z,0.4nm,0.3s,baz=68,slow=19,SNR=3.3						
	comp=Z,1.5nm,0.4s						
CTAO	Charters Tower	14.00	167	Pn	Pn	02 28 49.1	-0.3
CTAO	Charters Tower	14.00	167	P	Pn	02 28 49.1	-0.3
QIS	Mount Isa	14.48	193	P	Pn	02 28 58.1	+2.1
	baz=15,SNR=14						
QIS	Mount Isa	14.48	193	P	Pn	02 28 56.9	+0.9
WB0	Warramunga Arr	15.73	211	Pn	Pn	02 29 11.6	-1.0
WRAB	Tennant Creek	15.89	211	Pn	Pn	02 29 10.8	-3.9
WRAB	Tennant Creek	15.89	211	P	Pn	02 29 10.8	-3.9
WRAB				pmax	pmax		
	comp=Z,82nm,1.1s						
WB2	Warramunga Arr	15.89	211	Pn	Pn	02 29 11.4	-3.4
WC3	Warramunga Arr	15.90	211	P	Pn	02 29 15.3	+0.5
	baz=16						
WRA	Warramunga Arr	15.90	211	Pn	Pn	02 29 13.4	-1.5
WRA	Warramunga Arr	15.90	211	P	Pn	02 29 13.4	-1.5
WRA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRA	Warramunga Arr	15.90	211	Pn	Pn	02 29 13.5	-1.4
	comp=Z,2.8nm,0.3s,baz=30,slow=13,SNR=29						
WRA				Sn	Sn	02 32 02.7	-8.6
	comp=Z,1.6nm,0.3s,baz=22,slow=21,SNR=3.5						
WRA				Lg	Lg	02 33 49.5	
	comp=Z,0.9nm,0.3s,baz=29,slow=28,SNR=5.6						
NLAI	Namlea	16.14	280	P	Pn	02 29 17.5	-0.5
	comp=Z,30nm,1.0s,comp=Z,6μm						
LBMI	Labuha	16.48	290	P	Pn	02 29 17.4	-4.9
KNRA	Kununurra	16.74	235	P	Pn	02 29 25.0	-0.6
	baz=17						
KNRA	Kununurra	16.74	235	Pn	Pn	02 29 23.5	-2.1
KNRA				IAmb	IAmb	02 29 32.3	
	comp=Z,166nm,1.1s						
KNRA	Kununurra	16.74	235	P	Pn	02 29 24.9	-0.7
SANI	Sanana	17.49	283	P	Pn	02 29 32.1	-3.0
	comp=Z,102nm,1.0s,comp=Z,2μm						
SOEI	Soe	18.85	258		Pn	02 29 52.7	+0.9
SOEI	Soe	18.85	258	P	P	02 29 51.2	-0.1
SOEI	Soe	18.85	258	P	Pn	02 29 52.3	+0.5
	comp=Z,367nm,0.8s,comp=Z,3μm						
AS01	Alice Springs	19.27	206	P	Pn	02 29 58.5	+1.7
AS31	Alice Springs	19.29	206	P	Pn	02 29 58.2	+1.2
ASAR	Alice Springs	19.30	206	P	Pn	02 29 57.5	+0.5
ASAR	Alice Springs	19.30	206	P	Pn	02 29 58.5	+1.5
	comp=Z,103nm,0.8s,baz=32,slow=10.0,SNR=178						
ASAR				S	Sn	02 33 29.2	-4.4
	comp=Z,8.2nm,0.8s,baz=21,slow=27,SNR=4.5						
ASAR				LR	LR	02 38 15.9	
	comp=Z,1μm,19.6s,baz=34,slow=39						
ASPA	Alice Springs	19.30	206	P	Pn	02 29 58.8	+1.7
	baz=19						
QLP	Quilpie	20.14	177	P	Pn	02 30 08.3	+1.3
	baz=20,SNR=9.2						
KMSI	Cibinong	20.20	289	P	P	02 30 05.7	-0.2
	comp=Z,269nm,0.9s						
EIDS	Eidsvold	20.42	159	P	Pn	02 30 11.1	+0.7
	baz=21,SNR=5.3						
EIDS	Eidsvold	20.42	159	P	P	02 30 10.6	+2.4
FITZ	Fitzroy Crossi	20.56	234	P	P	02 30 11.0	+1.1
	baz=21,SNR=37						
FITZ	Fitzroy Crossi	20.56	234	P	P	02 30 10.9	+1.1
FITZ	Fitzroy Crossi	20.56	234	P	Pn	02 30 11.7	-0.3
MMRI	Maumere	20.70	262	P	P	02 30 11.4	0.0
MMRI				IAmb	IAmb	02 30 20.8	
	comp=Z,109nm,0.8s						
LUWI	Luwuk	20.86	284	P	Pn	02 30 14.2	-1.4
LUWI	Luwuk	20.86	284	P	Pn	02 30 15.2	-0.4
EDFI	Ende, Flores	21.25	262	P	P	02 30 16.2	-1.3
	comp=Z,84nm,1.2s,comp=Z,1μm						
OOD	Oodnadatta	22.41	197	P	P	02 30 31.6	+1.9
BASI	Baing, Sumba	22.51	259	P	P	02 30 29.4	-1.5
	comp=Z,192nm,0.9s						
KAPI	Kappang	23.17	272	P	P	02 30 38.0	+0.2
KAPI	Kappang	23.17	272	P	P	02 30 38.0	+0.2
KAPI				pmax	pmax		
	comp=Z,214nm,1.2s						
WRKA	Warakurna	23.30	216	P	P	02 30 40.1	+1.0
	baz=23,SNR=90						
WRKA	Warakurna	23.30	216	P	P	02 30 40.5	+1.4
TTSI	Tana Toraja	23.33	277	P	P	02 30 40.8	+1.4
	comp=Z,51nm,1.0s,comp=Z,2μm						
TOLI2	Tolitoli	23.39	288	P	P	02 30 38.9	-1.1
LCRK	Leigh Creek	24.37	190	P	P	02 30 50.1	+0.9
KOU

comp=Z,251nm,20.6s,baz=324,slow=33
XMIS Christmas Isla 37.15 261 P **P** **02 32 42.7 +0.5**
BKNI Bangkinang 42.40 277 P **P** **02 33 26.8 +0.8**
MJAR Matsushiro Arr 42.92 354 P **P** **02 33 28.6 -1.2**
comp=Z,1.9nm,0.6s,baz=135,slow=16,SNR=1.4
comp=Z,1.9nm,0.6s
MAJO Matsushiro 42.92 354⇑*iP* **P** **02 33 29.9 +0.1**
MAJO pmax pmax
comp=Z,15nm,1.5s
URZ Urewera 44.30 141 LR LR 02 52 13.5
comp=Z,447nm,18.2s,baz=78,slow=36
TUWZ Tuamarina 44.47 146 P **P** **02 33 43.2 +1.0**
NJ2 Nanjing 44.60 330 *eP* **P** **02 33 44.8 +1.4**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
RPZ Rata Peaks 44.61 151 LR LR 02 52 20.0
comp=Z,357nm,18.1s,baz=308,slow=36
RPSI Rantau Prapat 44.91 280 P **P** **02 33 46.4 +0.1**
RPSI IAmb IAmb 02 33 51.1
comp=Z,18nm,1.0s
PSI Prapat 44.94 280 P **P** **02 33 46.4 -0.2**
PSI pmax pmax
comp=Z,17nm,1.0s
KSAR Wonju Array Be 45.81 343 P **P** **02 33 52.5 -0.4**
KSAR Wonju Array Be 45.81 343 P **P** **02 33 52.5 -0.4**
KSRS Korea Array 45.81 343 P **P** **02 33 52.9 0.0**
comp=Z,4.1nm,0.9s,baz=163,slow=8.8,SNR=14
KSRS PcP **PcP** **02 35 30.1 -0.3**
comp=Z,2.2nm,0.8s,baz=187,slow=3.6,SNR=4.4
comp=Z,4.1nm,0.9s
WHN Wuhan 45.83 325 P **P** **02 33 56.0 +2.8**
PHRA Phrae 48.88 301 P **P** **02 34 16.7 -0.5**
CRAI Chiangrai 49.54 303 P **P** **02 34 21.4 -0.9**
LYN LuoYang 49.88 327 ⇓P **P** **02 34 25.5 +1.0**
LYN S **S** **02 41 34.5 -0.2**
LYN sS sS 02 41 51.0 +11
LYN SS **SS** **02 45 04.3 -3.4**
LYN pmax pmax
comp=Z,15nm,0.6s
LYN pmax pmax
comp=Z,260nm,6.5s
CM31 Chiang Mai Arr 49.96 300 P **P** **02 34 26.2 +0.7**
CMAR Chiang Mai Arr 49.96 300 P **P** **02 34 25.8 +0.3**
CMAR Chiang Mai Arr 49.96 300 P **P** **02 34 27.1 +1.6**
comp=Z,2.2nm,0.4s,baz=124,slow=5.8,SNR=17
comp=Z,2.2nm,0.4s
CHTO Chiang Mai 50.11 301 P **P** **02 34 26.2 -0.4**
CHTO Chiang Mai 50.11 301 P **P** **02 34 26.2 -0.4**
CHTO pmax pmax
comp=Z,7.0nm,0.9s
KMI Kunming 50.13 310 ⇑P **P** **02 34 29.3 +2.4**
KMI pmax pmax
comp=Z,29nm,0.9s
ASAJ Asahikawa 50.25 360 LR LR 02 52 43.4
comp=Z,69nm,21.8s,baz=158,slow=33
HNS HongShan 50.92 331 ⇑P **P** **02 34 32.5 +0.1**
HNS pmax pmax
comp=Z,7.0nm,1.0s
USRK Ussuriysk Ar. 51.31 350 P **P** **02 34 34.2 -0.9**
USRK Ussuriysk Ar. 51.31 350 P **P** **02 34 35.1 0.0**
comp=Z,3.9nm,0.9s,baz=165,slow=8.1,SNR=6.3
comp=Z,3.9nm,0.9s
XAN Xi'an 51.52 324 P **P** **02 34 37.0 0.0**
XAN pP sP 02 34 45.8 +4.2
XAN S **S** **02 41 58.5 +0.9**
XAN pmax pmax
comp=Z,19nm,1.2s
XAN pmax pmax
comp=Z,190nm,4.8s
PZH PanZhiHua 51.63 311 P **P** **02 34 38.8 +0.7**
PZH S **S** **02 42 04.0 +4.4**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,130nm,6.5s
MDJ Mudanjiang 52.17 348 P **P** **02 34 44.0 +2.4**
MDJ pmax pmax
comp=Z,11nm,1.9s
MDJ pmax pmax
comp=Z,250nm,3.6s
BJI Beijing 52.39 334 P **P** **02 34 43.0 -0.3**
BJI sP sP 02 34 59.8 +12
BJI S **S** **02 42 11.0 +1.8**
BJI pmax pmax
comp=Z,5.0nm,1.0s
CN2 Changchun 52.40 344 P **P** **02 34 42.5 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 Chengdu 52.75 317 P **P** **02 34 47.5 +1.3**
CD2 S **S** **02 42 12.8 -1.8**
CD2 pmax pmax
comp=Z,20nm,0.7s
TNCH TengChong 53.34 308 ⇑P **P** **02 34 52.3 +1.4**
TNCH pP sP 02 35 01.5 +6.0
TNCH pmax pmax
comp=Z,230nm,4.7s
BNX BinXian 53.72 346 ⇓P **P** **02 34 53.0 0.0**
BNX pmax pmax
comp=Z,10.0nm,1.0s
BNX pmax pmax
comp=Z,160nm,5.0s
HHC Hu-ho-hao-te 55.14 331 *eP* **P** **02 35 05.0 +1.4**
HHC S **S** **02 42 50.0 +3.2**
HHC ScS **ScS** **02 44 49.3 -4.0**
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,140nm,6.6s
BTO Baotou 55.71 330 *eP* **P** **02 35 11.0 +3.3**
BTO pP sP 02 35 21.3 +9.0
BTO sP pP 02 35 25.0 +14
BTO PP **PP** **02 37 17.5 +5.3**
BTO S **S** **02 42 57.5 +3.1**
BTO sS sS 02 43 11.3 +11
BTO SS **SS** **02 46 43.5 +3.5**
BTO pmax pmax
comp=Z,13nm,1.6s
BTO pmax pmax
comp=Z,200nm,7.2s
BTO LR LR
comp=Z,350nm,15.4s
BTO LR LR
comp=Z,350nm,15.9s
BTO LR LR
comp=Z,460nm,17.6s
LZH Lanzhou 55.97 322 *eP* **P** **02 35 11.0 +1.3**
LZH pP sP 02 35 22.0 +7.7
LZH pmax pmax
comp=Z,23nm,1.0s
KLR Kul'dur 56.23 351*c iP* **P** **02 35 10.9 -0.2**
KLR pmax pmax
comp=Z,8.0nm,1.8s
RAR Rarotonga 57.21 111 LR LR 02 57 58.2
comp=Z,63nm,20.9s,baz=266,slow=34
HEH HeiHe 57.99 348 *eP* **P** **02 35 22.0 -1.5**
HEH pmax pmax
comp=Z,3.0nm,0.8s
HEH pmax pmax
comp=Z,220nm,5.1s
SHL Shillong 58.92 305 P **P** **02 35 30.7 -0.1**
SHL IAmb IAmb 02 35 32.9
comp=Z,25nm,1.2s
SHL Shillong 58.92 305 P **P** **02 35 30.7 -0.1**
SHL pmax pmax
comp=Z,25nm,1.2s
GTA Gaotai 60.54 322 P **P** **02 35 42.8 +1.2**
GTA pmax pmax
comp=Z,9.0nm,1.0s
PEA0B Petropavlovsk- 60.55 10 *eP* **P** **02 35 41.7 +0.5**
PETK Petropavlovsk- 60.55 10 P **P** **02 35 40.7 -0.5**
PETK Petropavlovsk- 60.55 10 P **P** **02 35 41.5 +0.3**
comp=Z,13nm,0.9s,baz=182,slow=6.2,SNR=9.4
comp=Z,13nm,0.9s
ZEA Zeya 61.34 349 *eP* **P** **02 35 47.1 +0.5**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
GOMU GeErMu 61.88 317 P **P** **02 35 52.5 +1.4**
GOMU pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 62.59 334 P **P** **02 35 55.6 +0.3**
ULN Ulaanbaatar 62.59 334*c iP* **P** **02 35 56.1 +0.8**
ULN pmax pmax
comp=Z,4.0nm,1.1s
SONM Songino Array 62.86 333 P **P** **02 35 57.9 +0.8**
SONM Songino Array 62.86 333 P **P** **02 35 57.9 +0.8**
SONM pmax pmax
comp=Z,9.0nm,1.6s
SONM Songino Array 62.86 333 P **P** **02 35 57.6 +0.5**
comp=Z,1.1nm,0.8s,baz=163,slow=7.2,SNR=9.5
comp=Z,1.1nm,0.8s
PALK Pallekele 63.60 281 LR LR 03 07 56.1
comp=Z,62nm,18.6s,baz=220,slow=40
SHEM Shemya Is, Ala 64.53 20 LR LR 02 58 48.8
comp=Z,186nm,20.2s,baz=310,slow=31
MA2 Magadan 66.02 4 P **P** **02 36 16.5 -0.9**
MA2 IAmb IAmb 02 36 21.5
comp=Z,9.1nm,0.8s
MA2 Magadan 66.02 4⇑*iP* **P** **02 36 17.1 -0.3**
MA2 pmax pmax
comp=Z,13nm,0.9s
ZAK Zakamensk 66.12 333 *eP* **P** **02 36 18.2 -0.2**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
HYB Hyderabad 67.88 292 *eP* **P** **02 36 29.9 -0.2**
YAK Yakutsk 68.97 353⇑*iP* **P** **02 36 34.9 -1.1**
YAK pmax pmax
comp=Z,16nm,0.6s
SEY Seymchan 69.47 5⇑*iP* **P** **02 36 38.8 -0.3**
SEY pmax pmax
comp=Z,10.0nm,1.0s
WMQ Urumqi 70.52 321 *eP* **P** **02 36 47.5 +1.5**
WMQ pP sP 02 36 54.3 +3.6
WMQ pmax pmax
comp=Z,22nm,1.1s
VNDA Vanda 71.81 176 P **P** **02 36 53.9 +0.7**
comp=Z,4.6nm,1.0s,baz=304,slow=3.6,SNR=4.7
VNDA LR LR 03 08 02.4
comp=Z,143nm,18.4s,baz=348,slow=36
comp=Z,4.6nm,1.0s
DGZ Jazzator, Alta 73.67 326*c iP* **P** **02 37 05.5 +0.6**
DGZ pmax pmax
comp=Z,13nm,0.8s
ZSN Zaisan 74.02 323 *eP* **P** **02 37 07.3 +0.4**
comp=Z,9.0nm,1.1s,baz=323
ZSN Zaisan 74.02 323 *eP* **P** **02 37 07.2 +0.4**
ZSN pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 75.28 322 P **P** **02 37 14.2 0.0**
MK31 IAmb IAmb 02 37 16.1
comp=Z,17nm,1.1s
MK31 Makanchi Array 75.28 322*c iP* **P** **02 37 14.8 +0.6**
MKAR Makanchi Array 75.28 322 P **P** **02 37 13.8 -0.4**
MKAR Makanchi Array 75.28 322*ceP* **P** **02 37 14.8 +0.6**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 75.28 322 P **P** **02 37 14.9 +0.7**
comp=Z,10nm,0.7s,baz=106,slow=7.2,SNR=123
comp=Z,10nm,0.7s
MAKZ Makanchi 75.48 322 P **P** **02 37 15.1 -0.2**
MAKZ Makanchi 75.48 322 P **P** **02 37 15.1 -0.2**
MAKZ pmax pmax
comp=Z,35nm,1.3s
SHLS Shalkode 75.58 317 *eP* **P** **02 37 15.3 -0.9**
comp=Z,10nm,1.1s,baz=318
SHLS Shalkode 75.58 317 *eP* **P** **02 37 15.2 -0.9**
SHLS pmax pmax
comp=Z,10.0nm,1.1s
UZB Uzynbulak 75.87 317 *eP* **P** **02 37 18.6 +0.7**
comp=Z,11nm,0.8s,baz=317
UZB Uzynbulak 75.87 317 *eP* **P** **02 37 18.5 +0.7**
UZB pmax pmax
comp=Z,11nm,0.8s
BILL Bilibino 76.03 9 P **P** **02 37 17.7 -0.3**
BILL Bilibino 76.03 9⇑*iP* **P** **02 37 16.9 -1.1**
BILL pmax pmax
comp=Z,4.0nm,0.8s
PRZ Przheval'sk 76.04 316 P **P** **02 37 18.9 +0.1**
PRZ IAmb IAmb 02 37 21.9
comp=Z,25nm,1.1s
PRZ Przheval'sk 76.04 316 P **P** **02 37 18.9 +0.1**
PRZ pmax pmax
comp=Z,25nm,1.1s
TARG Taragay, Kyrgy 76.17 316 IAmb IAmb 02 37 36.0
comp=Z,32nm,1.7s
KPKS Kokpek 76.22 318 *eP* **P** **02 37 20.6 +0.8**
comp=Z,11nm,1.1s,baz=318
KPKS Kokpek 76.22 318 *eP* **P** **02 37 20.5 +0.8**
KPKS pmax pmax
comp=Z,11nm,1.1s
SATY Saty 76.25 317 *eP* **P** **02 37 20.8 +0.8**
comp=Z,10.0nm,1.1s,baz=317
SATY Saty 76.25 317 *eP* **P** **02 37 20.7 +0.8**
SATY pmax pmax
comp=Z,10.0nm,1.1s
ZHN Zhinishke 76.28 317 *eP* **P** **02 37 20.7 +0.6**
baz=317
ZHN Zhinishke 76.28 317 *eP* **P** **02 37 20.6 +0.6**
KSH Kashi 76.69 313 P **P** **02 37 25.0 +2.5**
KSH sP PcP 02 37 41.5 +7.6
KSH pmax pmax
comp=Z,15nm,0.8s
NIL Nilore 76.92 307 P **P** **02 37 22.6 -1.2**
NIL Nilore 76.92 307 P **P** **02 37 22.6 -1.2**
NIL pmax pmax
comp=Z,33nm,0.9s
TDK Taldyqorghan 77.00 319 *eP* **P** **02 37 24.7 +0.7**
comp=Z,10nm,0.7s,baz=319
TDK Taldyqorghan 77.00 319 *eP* **P** **02 37 24.7 +0.7**
TDK pmax pmax
comp=Z,10.0nm,0.7s
MDOK Medeo 77.22 317 *eP* **P** **02 37 26.1 +0.7**
baz=317
MDOK Medeo 77.22 317 *eP* **P** **02 37 26.1 +0.7**
ZAA0 Zalesovo Array 77.24 329 P **P** **02 37 23.1 -1.9**
ZALV Zalesovo Beam 77.24 329 P **P** **02 37 23.1 -1.9**
ZALV Zalesovo Beam 77.24 329 P **P** **02 37 24.6 -0.5**
comp=Z,4.5nm,0.8s,baz=108,slow=4.8,SNR=19
comp=Z,4.5nm,0.8s
NRN Naryn 77.33 315 P **P** **02 37 25.1 -1.2**
NRN Naryn 77.33 315 P **P** **02 37 25.1 -1.2**
NRN pmax pmax
comp=Z,5.0nm,1.0s
ULHL Ulahol 77.44 316 P **P** **02 37 27.8 +1.0**
SNR=5.2
BOOM Boomskoye usch 77.74 316 P **P** **02 37 28.5 +0.1**
BOOM IAmb IAmb 02 37 30.0
comp=Z,8.3nm,0.7s
BOOM Boomskoye usch 77.74 316 P **P** **02 37 28.5 +0.1**
BOOM pmax pmax
comp=Z,8.0nm,0.7s
KUU Kurty 77.96 317 *eP* **P** **02 37 29.8 +0.3**
comp=Z,22nm,1.1s,baz=317
KUU Kurty 77.96 317 *eP* **P** **02 37 29.7 +0.3**
KUU pmax pmax
comp=Z,22nm,1.1s
TKM2 Tokmak 2 78.12 316 P **P** **02 37 31.4 +0.9**
SNR=8.1
TIXI Tiksi 78.42 355 P **P** **02 37 29.9 -1.4**
TIXI Tiksi 78.42 355⇑*iP* **P** **02 37 29.0 -2.3**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
UCH Uchtor 78.64 315 P **P** **02 37 35.2 +1.4**
SNR=14
AAK Ala-Archa 78.79 316 P **P** **02 37 35.3 +1.0**
SNR=7.1
AAK Ala-Archa 78.79 316 P **P** **02 37 32.8 -1.4**
AAK Ala-Archa 78.79 316*c iP* **P** **02 37 35.2 +1.0**
AAK pmax pmax
comp=Z,15nm,1.7s
AAK Ala-Archa 78.79 316 LR LR 03 15 57.5
comp=Z,31nm,19.8s,baz=120,slow=38
USP Ospenovka 79.00 316 P **P** **02 37 35.9 +0.7**
SNR=13
KURK Kurchatov 79.15 324 P **P** **02 37 35.2 -0.5**
KURK IAmb IAmb 02 37 37.2
comp=Z,17nm,1.0s
KURK Kurchatov 79.15 324 P **P** **02 37 36.0 +0.2**
KURBB Kurchatov Arra 79.17 324 P **P** **02 37 36.0 +0.2**
comp=Z,8.4nm,0.9s,baz=114,slow=4.6,SNR=65
comp=Z,8.4nm,0.9s
EKS2 Erkin-Say 79.30 315 P **P** **02 37 38.2 +1.2**
SNR=14
BTLS Baital 79.90 318 *eP* **P** **02 37 40.6 +0.6**
baz=318
BTLS Baital 79.90 318 *eP* **P** **02 37 40.5 +0.6**
MAW Mawson 80.38 203 LR LR 03 10 51.6
comp=Z,78nm,18.6s,baz=73,slow=34
ANM Nome 80.38 20 P **P** **02 37 42.1 -0.1**
ANM Nome 80.38 20 P **P** **02 37 42.1 -0.1**
ANM pmax pmax
comp=Z,11nm,1.1s
KBL Kabul 80.53 306 P **P** **02 37 43.4 -0.5**
KBL Kabul 80.53 306 P **P** **02 37 43.4 -0.5**
KBL pmax pmax
comp=Z,5.0nm,0.8s
BTK Batken 80.63 312 P **P** **02 37 42.8 -1.3**
BTK Batken 80.63 312 P **P** **02 37 42.8 -1.3**
BTK pmax pmax
comp=Z,6.0nm,1.0s
DZA Taraz 81.08 315 *eP* **P** **02 37 47.0 +0.5**
baz=315
DZA Taraz 81.08 315 *eP* **P** **02 37 46.9 +0.5**
F15K North Star Dit 81.33 19 IAmb IAmb 02 37 48.3
comp=Z,15nm,1.2s
SIMJ Simiganj 81.60 310 P **P** **02 37 48.8 -0.6**
SIMJ IAmb IAmb 02 37 51.1
comp=Z,19nm,1.0s
I17K Unalakleet 81.65 22 P **P** **02 37 48.6 -0.3**
I17K IAmb IAmb 02 37 55.6
comp=Z,28nm,1.3s
KK31 Karatay Array 81.72 315 P **P** **02 37 49.3 -0.5**
KK31 IAmb IAmb 02 37 55.4
comp=Z,20nm,1.5s
KK31 Karatay Array 81.72 315 P **P** **02 37 49.3 -0.5**
KK31 pmax pmax
comp=Z,20nm,1.5s
KKAR Karatay Array 81.72 315 P **P** **02 37 49.7 -0.1**
KKAR Karatay Array 81.72 315 P **P** **02 37 49.7 -0.1**
IUG luzhnay 81.79 314 *eP* **P** **02 37 50.8 +0.4**
baz=314
IUG luzhnay 81.79 314 *eP* **P** **02 37 50.7 +0.4**
G16K Koyuk River 81.91 20 IAmb IAmb 02 37 51.9
comp=Z,21nm,1.2s
K17K Iditarod 81.94 23 IAmb IAmb 02 37 58.0
comp=Z,20nm,1.0s
KDAK Kodiak Island 82.13 29 LR LR 03 07 29.4
comp=Z,134nm,21.2s,baz=252,slow=31
BRLS Boroldav 82.17 315 *eP* **P** **02 37 52.4 +0.2**
baz=315
BRLS Boroldav 82.17 315 *eP* **P** **02 37 52.4 +0.2**
BRZS Berezniki 82.42 322 *eP* **P** **02 37 53.5 +0.2**
baz=322
BRZS Berezniki 82.42 322 *eP* **P** **02 37 53.5 +0.2**
H17K Granite Mounta 82.51 21 IAmb IAmb 02 38 00.3
comp=Z,13nm,1.0s
N19K Bonanza Creek 82.60 26 IAmb IAmb 02 38 01.0
comp=Z,22nm,1.1s
F17K Baldwin Pennin 82.88 20 IAmb IAmb 02 38 02.4
comp=Z,20nm,1.2s
J18K Innoko River 82.94 23 P **P** **02 37 55.0 -0.7**
J18K IAmb IAmb 02 37 57.1
comp=Z,19nm,1.6s
G18K Tagagawik 83.47 21 IAmb IAmb 02 38 05.2
comp=Z,15nm,1.1s
QSPA South Pole Qui 83.60 180 P **P** **02 37 58.3 -1.0**
QSPA IAmb IAmb 02 38 00.6
comp=Z,19nm,1.1s
QSPA South Pole Qui 83.60 180 P **P** **02 37 59.4 +0.1**
comp=Z,11nm,0.8s,baz=331,slow=1.1,SNR=36
QSPA LR LR 03 15 21.7
comp=Z,356nm,18.8s,baz=12,slow=36
comp=Z,11nm,0.8s
J19K Poorman 83.63 23 IAmb IAmb 02 38 05.9
comp=Z,13nm,1.1s
E18K Tukpahlearik C 83.64 19 IAmb IAmb 02 38 05.9
comp=Z,9.6nm,0.9s
M20K Styx River 83.67 25 IAmb IAmb 02 38 06.6
comp=Z,18nm,1.1s
K20K Telida 83.94 24 IAmb IAmb 02 38 06.4
comp=Z,21nm,1.2s
H19K Roundabout Mou 84.07 21 IAmb IAmb 02 38 08.1
comp=Z,20nm,1.1s
C18K Utukok River 84.14 18 IAmb IAmb 02 38 08.1
comp=Z,14nm,1.2s
G19K Purcell Mounta 84.15 21 IAmb IAmb 02 38 09.2
comp=Z,18nm,1.1s
F19K Shaleruckik Mo 84.26 20 IAmb IAmb 02 38 36.4
comp=Z,14nm,1.4s
NRIK Noril'sk 84.43 343 IAmb IAmb 02 38 10.2
comp=Z,17nm,0.9s
NRIK Noril'sk 84.43 343*c iP* **P** **02 38 02.9 -0.3**
NRIK pmax pmax
comp=Z,16nm,1.0s
NRIK Noril'sk 84.43 343 P **P** **02 38 02.3 -0.9**
comp=Z,12nm,0.9s,baz=117,slow=5.4,SNR=18
comp=Z,12nm,0.9s
BVAR Borovoye Array 84.74 325 P **P** **02 38 05.5 +0.4**
comp=Z,42nm,0.8s,baz=112,slow=6.6,SNR=132
comp=Z,42nm,0.8s
E19K Redstone River 84.76 20 IAmb IAmb 02 38 18.1
comp=Z,13nm,0.9s
CAST Castle Rocks 84.77 24 IAmb IAmb 02 38 17.3
comp=Z,27nm,1.5s
BRVK Borovoye 84.81 325 P **P** **02 38 05.4 -0.1**
BRVK Borovoye 84.81 325*c iP* **P** **02 38 05.9 +0.4**
BRVK pmax pmax
comp=Z,29nm,1.0s
PMR Palmer 85.28 26 P **P** **02 38 06.7 -0.9**
PMR IAmb IAmb 02 38 13.5
comp=Z,16nm,1.0s
PMR Palmer 85.28 26 P **P** **02 38 06.7 -0.9**
PMR pmax pmax
comp=Z,16nm,1.0s
KTH Kantishna Hill 85.30 24 IAmb IAmb 02 38 26.5
comp=Z,23nm,1.3s
BPAW Bear Paw Mtn. 85.50 24 IAmb IAmb 02 38 13.6
comp=Z,14nm,1.3s
I21K Tanana 85.57 23 IAmb IAmb 02 38 14.3
comp=Z,19nm,1.3s
MLY Manley 85.98 23 IAmb IAmb 02 38 18.4
comp=Z,14nm,1.2s
RND Reindeer 86.09 25 P **P** **02 38 09.8 -2.0**
RND IAmb IAmb 02 38 17.9
comp=Z,18nm,1.0s
RND Reindeer 86.09 25 P **P** **02 38 09.8 -2.0**
RND pmax pmax
comp=Z,18nm,1.0s
NEA2 Nenana 86.46 24 IAmb IAmb 02 38 18.1
comp=Z,16nm,1.4s
DHY Denali Highway 86.59 25 IAmb IAmb 02 38 20.8
comp=Z,19nm,1.1s
E22K Anaktuvuk Pass 86.90 20 IAmb IAmb 02 38 24.0
comp=Z,9.8nm,1.1s
G23K Bananza Creek 86.94 21 IAmb IAmb 02 38 17.4
comp=Z,22nm,1.6s
D22K Ayikyak River 86.94 19 IAmb IAmb 02 38 21.8
comp=Z,15nm,1.1s
CCB Clear Creek Bu 86.99 24 P **P** **02 38 13.9 -2.1**
CCB IAmb IAmb 02 38 21.6
comp=Z,25nm,1.4s
H24K Noodor Dome 87.40 23 IAmb IAmb 02 38 19.2
comp=Z,14nm,1.4s
IL31 87.40 24 IAmb IAmb 02 38 17.3
comp=Z,8.4nm,0.9s
ILAR Eielson Array 87.40 24 P **P** **02 38 15.7 -2.3**
ILAR Eielson Array 87.40 24 P **P** **02 38 16.6 -1.4**
comp=Z,5.3nm,0.9s,baz=257,slow=4.9,SNR=34
ILAR LR LR 03 17 02.6
comp=Z,66nm,18.5s,baz=254,slow=36
comp=Z,5.3nm,0.9s
J25K Salcha River, 87.96 24 IAmb IAmb 02 38 27.0
comp=Z,16nm,1.1s
SCRK Sand Creek 88.33 25 IAmb IAmb 02 38 32.7
comp=Z,12nm,1.2s
BARN Barnard Glacie 88.51 28 P **P** **02 38 22.7 -1.0**
J26L Joseph Creek 88.67 25 IAmb IAmb 02 38 31.1
comp=Z,13nm,1.1s
L27K Beaver Creek, 88.98 26 IAmb IAmb 02 38 32.3
comp=Z,19nm,1.4s
E25K Arctic Village 89.06 21 IAmb IAmb 02 38 39.6
comp=Z,20nm,1.4s
K27K Chicken 89.15 25 IAmb IAmb 02 38 34.1
comp=Z,20nm,1.2s
D25K Kavik River 89.19 20 IAmb IAmb 02 38 33.6
comp=Z,6.7nm,0.8s
EGAK Eagle 89.74 25 IAmb IAmb 02 38 41.9
comp=Z,13nm,1.1s
ABKAR Akbulak array 90.26 319 P **P** **02 38 30.2 -1.6**
L29M L29M 90.63 26 IAmb IAmb 02 39 01.1
comp=Z,20nm,1.3s
I30M Mount Dempster 91.82 25 IAmb IAmb 02 38 52.9
comp=Z,10nm,1.4s
ARU Arti 92.18 326 P **P** **02 38 38.6 -2.0**
ARU IAmb IAmb 02 38 40.4
comp=Z,7.8nm,1.1s
ARU Arti 92.18 326*c iP* **P** **02 38 39.2 -1.4**
ARU 02 42 20.7
ARU S **SKSac** **02 49 09.9 -3.9**

ARU				SS	**SS**	02 55 51.7	-1.4	
ARU				pmax	pmax			
	comp=Z,7.0nm,1.0s							
ELIB	**Princess Elisa**	**92.79**	**196**	*d*P	**P**	**02 38 42.5**	**-0.9**	
INK	**Inuvik**	**93.46**	**22**	LR	LR	03 17 22.5		
	comp=Z,135nm,20.6s,baz=242,slow=33							
DLBC	**Dease Lake**	**93.79**	**32**	LR	LR	03 16 34.6		
	comp=Z,89nm,19.0s,baz=282,slow=33							
BBB	**Bella Bella**	**94.30**	**38**	LR	LR	03 15 53.3		
	comp=Z,145nm,18.4s,baz=249,slow=32							
YBH	**Yreka Blue Hor**	**97.40**	**49**	LR	LR	03 16 22.1		
	comp=Z,276nm,19.8s,baz=290,slow=31							
SNAA	**Sanae**	**98.96**	**190**	LR	LR	03 25 36.2		
	comp=Z,281nm,18.1s,baz=136,slow=36							
NVAR	**Mina Array Bea**	**100.73**	**52**	P	**Pdif**	**02 39 20.8**	**+0.6**	
	comp=Z,0.2nm,0.3s,baz=269,slow=4.5,SNR=3.9							
YKA	**Yellowknife Ar**	**101.34**	**28**	*i* P	**Pdif**	**02 39 21.1**	**-0.9**	
YKA	**Yellowknife Ar**	**101.34**	**28**	P	**Pdif**	**02 39 20.0**	**-2.0**	
	comp=Z,0.2nm,0.6s,baz=352,slow=0.9,SNR=3.9							
OBN	**Obninsk**	**104.58**	**325**	*e*P	**Pdif**	**02 39 36.3**	**-0.2**	
OBN				*e*		02 43 59.3		
OBN				*e*PPP	PPP	02 46 08.9		
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
TXAR	**Lajitas Array**	**113.42**	**61**	PKKPab	PKKPab	02 55 02.2	+0.6	
	comp=Z,0.8nm,0.9s,baz=101,slow=4.8,SNR=7.4							
CPUP	**Villa Florida**	**141.98**	**150**	PKP	**PKPdf**	**02 45 05.2**	**+1.3**	
	comp=Z,2.3nm,1.0s,baz=162,slow=3.2,SNR=3.9							
ROSC	**El Rosal**	**142.84**	**90**	PKiKP	PKPpre	02 45 01.6		
	comp=Z,4.5nm,0.5s,baz=247,slow=7.7,SNR=1.7							
SDV	**Santo Domingo**	**146.58**	**84**	PKPdf	**PKPdf**	**02 45 11.3**	**-1.2**	
SDV	**Santo Domingo**	**146.58**	**84**	PKPbc	**PKPdf**	**02 45 11.7**	**-0.8**	
	comp=Z,8.3nm,0.8s,baz=230,slow=1.5,SNR=15							
KIC	**Kosan Boka**	**147.94**	**272**	⇑*i* PKP1	**PKPbc**	**02 45 18.4**	**+0.8**	
	comp=Z,52nm,1.0s							
DBIC	**Dimbokro**	**148.06**	**272**		**PKPdf**	**02 45 13.8**	**-0.9**	
DBIC	**Dimbokro**	**148.06**	**272**	PKIKP	**PKPdf**	**02 45 13.8**	**-0.9**	
DBIC	**Dimbokro**	**148.06**	**272**	PKPbc	**PKPbc**	**02 45 18.8**	**+0.9**	
	comp=Z,26nm,1.0s,baz=113,slow=2.7,SNR=17							
LIC	**Lamto**	**148.22**	**272**	⇑*i* PKP1	**PKPbc**	**02 45 19.0**	**+0.7**	
	comp=Z,84nm,0.9s							
TIC	**Toumodi**	**148.22**	**272**	⇑*i* PKP1	**PKPbc**	**02 45 19.1**	**+0.8**	
	comp=Z,42nm,0.8s							
PTLB	**Pontes e Lacer**	**149.17**	**135**		**PKPdf**	**02 45 17.8**	**+1.4**	
SAML	**Samuel**	**149.79**	**120**	PKPdf	**PKPdf**	**02 45 16.6**	**-0.9**	
SAML	**Samuel**	**149.79**	**120**	PKHKP	PKPpre	02 45 16.6		
VILB	**Vilhena**	**150.00**	**130**	PKPbc	**PKPdf**	**02 45 19.1**	**+1.3**	

*IDC **26** 02:31:49.1±0.6,6°.35S×143°.51E,h0km,mb4.4/13, mbtmp4.3/14,ML2.2/1,MS3.6/3,Error ellipse: s-maj=29.5km s-min=15.7km az=73.0*
*NEIC **26** 02:31:52.3±2.0,6°.42S±0°.08×143°.29E±0°.08,h21km±5km, mb4.8/25,Error ellipse: s-maj=12.2km s-min=12.0km az=190.0*

ISC 26 02:31:54.0±0.4,6°.56S±0°.05×143°.28E±0°.07,h35km,n69, σ1§62/67,mb4.7/32,MS3.6/3,1C-1D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.78**	**127**			**Pn**	**02 33 02.1**	**-1.4**
PMG	**Port Moresby**	**4.78**	**127**	Pn		**Pn**	**02 33 02.7**	**-0.9**
	8.1nm,0.3s,baz=21,slow=8.5,SNR=4.1							
PMG				Sn		**Sn**	**02 33 57.7**	**0.0**
	21nm,0.3s,baz=272,slow=19,SNR=4.9							
	24nm,0.4s							
MANU	**Manus Island**	**6.06**	**42**	Pn		**Pn**	**02 33 19.8**	**-1.4**
RABL	**Rabaul**	**9.15**	**76**	Pn		**Pn**	**02 34 03.1**	**-0.7**
FAKI	**Fak Fak**	**11.57**	**288**	Pn		**Pn**	**02 34 35.2**	**-1.6**
MTN	**Manton Dam**	**13.50**	**242**	Pn		**Pn**	**02 35 03.2**	**0.0**
CTA	**Charters Tower**	**13.76**	**168**	Lg		Lg	02 39 17.4	
	0.3nm,0.3s,baz=229,slow=19,SNR=2.6							
WRA	**Warramunga Arr**	**15.89**	**212**	Pn		**Pn**	**02 35 35.0**	**-0.2**
	1.5nm,0.3s,baz=33,slow=13,SNR=1.8							
WRA				Sn		**Sn**	**02 38 23.7**	**-6.5**
	0.6nm,0.3s,baz=25,slow=22,SNR=0.9							
WRA				Lg		Lg	02 40 19.3	
	1.5nm,0.3s,baz=37,slow=27,SNR=4.7							
KNRA	**Kununurra**	**16.87**	**236**	Pn		**Pn**	**02 35 47.7**	**+0.1**
AS31	**Alice Springs**	**19.25**	**207**			**Pn**	**02 36 20.2**	**+3.4**
AS31				IAmb		IAmb	02 36 21.6	
	comp=Z,41nm,0.8s							
ASAR	**Alice Springs**	**19.25**	**207**	P		**Pn**	**02 36 19.5**	**+2.7**
ASAR	**Alice Springs**	**19.25**	**207**	P		**Pn**	**02 36 20.4**	**+3.6**
	comp=Z,98nm,0.7s,baz=31,slow=11,SNR=29							
ASAR				S		**Sn**	**02 39 48.0**	**-3.8**
	comp=Z,2.8nm,0.6s,baz=20,slow=28,SNR=1.8							
ASAR				Lg		Lg	02 42 01.5	
	comp=Z,0.5nm,0.3s,baz=19,slow=28,SNR=3.1							
GUMO	**Guam**	**20.07**	**5**	LR		LR	02 44 37.5	
	comp=Z,137nm,18.6s,baz=156,slow=39							
FITZ	**Fitzroy Crossi**	**20.67**	**235**	P		**P**	**02 36 30.6**	**-0.5**
KAPI	**Kappang**	**23.45**	**272**	P		**P**	**02 37 01.0**	**+0.5**
TOLI2	**Tolitoli**	**23.71**	**288**	P		**P**	**02 37 01.1**	**-1.9**
TOLI2				IAmb		IAmb	02 37 15.5	
	comp=Z,24nm,0.7s							
STKA	**Stephens Creek**	**25.24**	**183**	P		**P**	**02 37 17.4**	**+0.6**
STKA	**Stephens Creek**	**25.24**	**183**	P		**P**	**02 37 18.1**	**+1.2**
	comp=Z,5.9nm,0.8s,baz=295,slow=2.9,SNR=3.9							
	comp=Z,5.9nm,0.8s							
BBOO	**Buckleboo**	**26.97**	**193**	P		**P**	**02 37 33.4**	**+0.9**
BBOO				IAmb		IAmb	02 38 08.8	
	comp=Z,25nm,1.3s							
FORT	**Forrest**	**28.01**	**209**	P		**P**	**02 37 42.9**	**+1.1**
XMIS	**Christmas Isla**	**37.40**	**261**	P		**P**	**02 39 05.2**	**+1.2**
NJ2	**Nanjing**	**44.90**	**330**	*e*P		**P**	**02 40 06.5**	**+1.1**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
KSRS	**Korea Array**	**46.07**	**343**	P		**P**	**02 40 12.8**	**-1.7**
	comp=Z,2.7nm,0.8s,baz=162,slow=10,SNR=7.7							
	comp=Z,2.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**50.29**	**300**	P		**P**	**02 40 48.4**	**+0.9**
	comp=Z,2.0nm,0.3s,baz=120,slow=5.5,SNR=5.8							
	comp=Z,2.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.54**	**350**	P		**P**	**02 40 55.6**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=163,slow=5.4,SNR=5.1							
	comp=Z,2.9nm,0.6s							
XAN	**Xi'an**	**51.84**	**323**	P		**P**	**02 40 58.5**	**-0.4**
XAN				pmax		pmax		
	comp=Z,9.0nm,1.2s							
PZH	**PanZhiHua**	**51.97**	**311**	P		**P**	**02 41 01.5**	**+1.4**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
PZH				pmax		pmax		
	comp=Z,100nm,5.3s							
MDJ	**Mudanjiang**	**52.41**	**348**	P		**P**	**02 41 05.0**	**+2.1**
MDJ				pmax		pmax		
	comp=Z,5.0nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,79nm,4.0s							
CN2	**Changchun**	**52.65**	**344**	P		P	02 41 13.5	+8.8
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
BJT	**Baijiatuan**	**52.66**	**334**	P		**P**	**02 41 04.3**	**-0.6**
BJT				IAmb		IAmb	02 41 12.4	
	comp=Z,11nm,1.5s							
BNX	**BinXian**	**53.96**	**346**	⇑P		**P**	**02 41 16.5**	**+2.2**
BNX				pmax		pmax		
	comp=Z,10.0nm,0.8s							
BNX				pmax		pmax		
	comp=Z,83nm,4.7s							
HHC	**Hu-ho-hao-te**	**55.44**	**331**	*e*P		**P**	**02 41 28.5**	**+3.2**
HHC				pmax		pmax		
	comp=Z,13nm,0.6s							
HHC				pmax		pmax		
	comp=Z,58nm,5.0s							
LZH	**Lanzhou**	**56.28**	**322**	*e*P		**P**	**02 41 33.3**	**+1.8**
LZH				pP		pP	02 41 39.3	-3.1
LZH				sP		sP	02 41 43.3	-3.3
LZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PETK	**Petropavlovsk-**	**60.68**	**10**	P		**P**	**02 42 01.1**	**-0.6**
	comp=Z,5.3nm,0.8s,baz=163,slow=6.2,SNR=4.0							
	comp=Z,5.3nm,0.8s							
GTA	**Gaotai**	**60.86**	**322**	*e*P		**P**	**02 42 04.0**	**+0.7**
GTA				pP		pP	02 42 12.0	-2.3
GTA				pmax		pmax		
	comp=Z,2.0nm,1.3s							
ULN	**Ulaanbaatar**	**62.88**	**333**	P		**P**	**02 42 15.4**	**-1.4**
SONM	**Songino Array**	**63.15**	**333**	P		**P**	**02 42 18.7**	**+0.2**
SONM				IAmb		IAmb	02 42 30.3	
	comp=Z,12nm,2.0s							
SONM	**Songino Array**	**63.15**	**333**	P		**P**	**02 42 19.1**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=156,slow=7.6,SNR=5.1							
	comp=Z,1.1nm,0.7s							

WMQ	**Urumqi**	**70.84**	**321**	*e*P		**P**	**02 43 08.0**	**+0.6**
WMQ				pP		pP	02 43 15.8	-2.8
WMQ				sP		PcP	02 43 26.5	-1.4
WMQ				pmax		pmax		
	comp=Z,10.0nm,1.1s							
VNDA	**Vanda**	**71.61**	**176**	P		**P**	**02 43 13.3**	**+1.9**
VNDA				IAmb		IAmb	02 43 39.0	
	comp=Z,25nm,1.7s							
MK31	**Makanchi Array**	**75.60**	**322**	P		**P**	**02 43 35.4**	**0.0**
MKAR	**Makanchi Array**	**75.60**	**322**	P		**P**	**02 43 35.3**	**-0.1**
MKAR	**Makanchi Array**	**75.60**	**322**	P		**P**	**02 43 36.1**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=102,slow=7.3,SNR=16							
	comp=Z,2.6nm,0.7s							
MAKZ	**Makanchi**	**75.80**	**322**	P		**P**	**02 43 34.8**	**-1.8**
KSH	**Kashi**	**77.02**	**313**	P		**P**	**02 43 46.3**	**+2.6**
KSH				pmax		pmax		
	comp=Z,7.0nm,0.6s							
NIL	**Nilore**	**77.26**	**307**	P		**P**	**02 43 45.4**	**+0.3**
NIL				IAmb		IAmb	02 43 46.8	
	comp=Z,16nm,0.8s							
ZALV	**Zalesovo Beam**	**77.54**	**329**	P		**P**	**02 43 44.8**	**-1.3**
ZALV	**Zalesovo Beam**	**77.54**	**329**	P		**P**	**02 43 45.7**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=112,slow=4.6,SNR=4.4							
	comp=Z,1.0nm,0.6s							
BOOM	**Boomskoye usch**	**78.06**	**316**	P		**P**	**02 43 48.8**	**-0.8**
BOOM				IAmb		IAmb	02 43 51.2	
	comp=Z,4.0nm,0.7s							
AAK	**Ala-Archa**	**79.12**	**316**	P		**P**	**02 43 55.3**	**-0.1**
KURBB	**Kurchatov Arra**	**79.48**	**324**	P		**P**	**02 43 56.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=121,slow=4.2,SNR=7.6							
	comp=Z,0.7nm,0.5s							
SIMJ	**Simiganj**	**81.93**	**310**	P		**P**	**02 44 09.8**	**-0.8**
SIMJ				IAmb		IAmb	02 44 11.8	
	comp=Z,5.9nm,1.0s							
KK31	**Karatay Array**	**82.04**	**315**	P		**P**	**02 44 09.9**	**-1.0**
KKAR	**Karatay Array**	**82.04**	**315**	P		**P**	**02 44 09.9**	**-1.0**
H17K	**Granite Mounta**	**82.58**	**21**	P		**P**	**02 44 12.3**	**-0.9**
QSPA	**South Pole Qui**	**83.42**	**180**	P		**P**	**02 44 18.8**	**+1.1**
QSPA				IAmb		IAmb	02 44 19.8	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**83.42**	**180**	P		**P**	**02 44 18.8**	**+1.1**
	comp=Z,11nm,0.8s,baz=335,slow=0.9,SNR=28							
	comp=Z,11nm,0.8s							
NRIK	**Noril'sk**	**84.69**	**343**	P		**P**	**02 44 23.0**	**-0.9**
NRIK				IAmb		IAmb	02 44 32.7	
	comp=Z,7.7nm,0.8s							
NRIK	**Noril'sk**	**84.69**	**343**	P		**P**	**02 44 24.1**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=130,slow=2.3,SNR=4.2							
	comp=Z,1.4nm,0.4s							
BVAR	**Borovoye Array**	**85.05**	**325**	P		**P**	**02 44 26.4**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=79,slow=8.0,SNR=10							
	comp=Z,3.2nm,0.7s							
DHY	**Denali Highway**	**86.64**	**25**	P		**P**	**02 44 32.9**	**-1.1**
DHY				IAmb		IAmb	02 44 43.4	
	comp=Z,7.6nm,0.8s							
ILAR	**Eielson Array**	**87.46**	**24**	P		**P**	**02 44 36.5**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=263,slow=4.2,SNR=8.7							
	comp=Z,1.3nm,0.7s							
AKTO	**Aktyubinsk**	**91.99**	**320**	LR		LR	03 27 22.2	
	comp=Z,23nm,21.3s,baz=245,slow=36							
ELIB	**Princess Elisa**	**92.68**	**196**	*d*P		**P**	**02 45 01.4**	**-0.8**
OPO	**Ambohidratompo**	**93.67**	**251**	LR		LR	03 25 12.6	
	comp=Z,37nm,19.1s,baz=288,slow=34							
PLCA	**Paso Flores**	**123.61**	**149**	PKP		**PKPdf**	**02 50 48.0**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=210,slow=8.1,SNR=4.2							
CPUP	**Villa Florida**	**141.68**	**149**	PKP		**PKiKP**	**02 51 24.4**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=141,slow=6.5,SNR=1.9							
SDV	**Santo Domingo**	**146.33**	**84**	PKPbc		**PKPab**	**02 51 32.7**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=315,slow=1.4,SNR=2.9							
DBIC	**Dimbokro**	**148.35**	**272**	PKPbc		**PKiKP**	**02 51 38.9**	**-0.6**
	comp=Z,9.5nm,0.8s,baz=96,slow=2.4,SNR=12							

ROM 26 02:32:31.8±0.1,42°.848N±0°.004×11°.690E±0°.005, h7km,ML2.2/24,Error ellipse: s-maj=0.5km s-min=0.4km az=177.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SF11	**Podere del Sol**	**0.02**	**339**	P		Pg	02 32 33.4	+0.1
SF11				S		Sg	02 32 34.1	-0.2
SF04	**Casetta**	**0.03**	**240**	P		Pg	02 32 33.5	+0.3
SF04				S		Sg	02 32 34.2	0.0
SF04				AML		AML		
SF04				AML		AML		
SF03	**Valle Cupa**	**0.04**	**184**	P		Pg	02 32 33.9	+0.5
SF03				S		Sg	02 32 34.9	+0.3
SF13	**Bagnolo**	**0.06**	**240**	P		Pg	02 32 34.1	+0.5
SF13				S		Sg	02 32 35.2	+0.3
MCIV	**Monte Civitell**	**0.07**	**188**	P		Pg	02 32 34.1	+0.4
MCIV				S		Sg	02 32 35.5	+0.4
MCIV				AML		AML		
	comp=N,26550μm,0.3s							
MCIV				AML		AML		
	comp=E,22750μm,0.2s							
MCIV				AML		AML		
	comp=N,17996μm,0.1s							
MCIV				AML		AML		
	comp=E,22773μm,0.2s							
SF01	**Poggio Pratacc**	**0.10**	**249**	P		Pg	02 32 34.8	+0.6
SF01				S		Sg	02 32 36.3	+0.6
SF01				AML		AML		
	comp=E,41350μm,0.2s							
SF01				AML		AML		
	comp=N,31250μm,0.2s							
SF01				AML		AML		
	comp=N,31241μm,0.2s							
SF01				AML		AML		
	comp=E,41355μm,0.2s							
SF14	**Selvena**	**0.11**	**211**	P		Pg	02 32 34.4	+0.2
SF14				S		Sg	02 32 36.1	+0.2
ARCI	**Arcidosso**	**0.16**	**271**	P		Pg	02 32 35.7	+0.6
ARCI				S		Sg	02 32 38.5	+1.1
SACS	**San Casciano d**	**0.16**	**90**	P		Pg	02 32 36.0	+0.8
SACS				S		Sg	02 32 38.9	+1.4
SACS				AML		AML		
	comp=E,2525μm,0.3s							
SACS				AML		AML		
	comp=N,2410μm,0.4s							
SACS				AML		AML		
	comp=N,2395μm,0.4s							
SACS				AML		AML		
	comp=E,2310μm,0.3s							
SACS				AML		AML		
	comp=E,2527μm,0.3s							
SACS				AML		AML		
	comp=N,2398μm,0.4s							
SACS				AML		AML		
	comp=N,2410μm,0.4s							
SACS				AML		AML		
	comp=E,2309μm,0.3s							
LATE	**Laterza**	**0.25**	**160**	P		Pg	02 32 37.6	+0.9
LATE				S		Sg	02 32 41.5	+1.4
MGAB	**Montegabbione**	**0.32**	**78**	P		Pg	02 32 38.7	+0.6
MGAB				S		Sb	02 32 43.9	-1.3
MGAB				AML		AML		
	comp=E,814μm,0.3s							
MGAB				AML		AML		
	comp=N,780μm,0.9s							
MGAB				AML		AML		
	comp=E,820μm,0.3s							
MGAB				AML		AML		
	comp=N,799μm,0.9s							
MGAB				AML		AML		
	comp=E,820μm,0.3s							
MGAB				AML		AML		
	comp=E,814μm,0.3s							
MGAB				AML		AML		
	comp=N,764μm,0.2s							
MGAB				AML		AML		
	comp=N,798μm,0.2s							
RIBO	**Ribolla Roccas**	**0.48**	**282**	P		Pb	02 32 42.2	-0.4
RIBO				AML		AML		
	comp=E,868μm,0.3s							
CAFI	**Castiglion Fio**	**0.52**	**23**	P		Pg	02 32 42.2	+0.3
CAFI				S		Sb	02 32 50.4	-0.7
CAFI				AML		AML		
	comp=E,154μm,0.3s							
CAFI				AML		AML		
	comp=N,257μm,1.6s							
CAFI				AML		AML		
	comp=E,159μm,0.3s							
CAFI				AML		AML		
	comp=N,176μm,0.9s							
CAFI				AML		AML		
	comp=E,159μm,0.3s							
CAFI				AML		AML		
	comp=N,249μm,1.0s							
CAFI				AML		AML		
	comp=E,153μm,0.3s							
CAFI				AML		AML		
	comp=N,115μm,0.4s							
FROS	**Frosini**	**0.53**	**313**	P		Pg	02 32 42.6	+0.5
FROS				AML		AML		
	comp=E,1160μm,0.4s							
FROS				AML		AML		
	comp=N,1420μm,0.3s							
FROS				AML		AML		
	comp=E,1160μm,0.5s							
FROS				AML		AML		
	comp=N,1420μm,0.4s							
FROS				AML		AML		
	comp=E,1162μm,0.5s							
FROS				AML		AML		
	comp=N,1421μm,0.3s							
MAON	**Monte Argentar**	**0.59**	**225**	P		Pg	02 32 43.7	+0.5
MAON				AML		AML		
	comp=E,348μm,1.1s							
MAON				AML		AML		
	comp=N,366μm,1.1s							
MAON				AML		AML		
	comp=N,261μm,0.3s							
MAON				AML		AML		
	comp=E,306μm,0.2s							
CASP	**Castiglione de**	**0.61**	**265**	P		Pg	02 32 44.1	+0.5
CASP				AML		AML		
	comp=E,172μm,0.8s							
CASP				AML		AML		
	comp=N,164μm,1.0s							
CASP				AML		AML		
	comp=E,149μm,0.3s							
CASP				AML		AML		
	comp=N,130μm,0.4s							
TRIF	**Trifonti**	**0.64**	**295**	P		Pb	02 32 45.0	-0.3
CSNT	**Castellina Chi**	**0.69**	**335**	P		Pg	02 32 45.1	0.0
CSNT				AML		AML		
	comp=E,180μm,0.6s							
CSNT				AML		AML		
	comp=N,216μm,0.3s							
CSNT				AML		AML		
	comp=E,156μm,0.3s							
CSNT				AML		AML		
	comp=N,216μm,0.3s							
OSSC	**Osservatorio P**	**0.75**	**334**	P		Pg	02 32 46.3	+0.1
OSSC				AML		AML		
	comp=E,184μm,1.3s							
OSSC				AML		AML		
	comp=N,187μm,1.5s							
OSSC				AML		AML		
	comp=E,187μm,0.9s							
OSSC				AML		AML		
	comp=E,136μm,0.3s							
OSSC				AML		AML		
	comp=N,227μm,0.9s							
OSSC				AML		AML		
	comp=N,163μm,0.4s							
ARRO	**Arrone**	**0.84**	**108**	P		Pb	02 32 48.3	-0.4
ARRO				AML		AML		
	comp=E,87μm,0.3s							
ARRO				AML		AML		
	comp=N,124μm,0.3s							
GAVE	**Gavelli**	**0.90**	**100**	AML		AML		
	comp=E,228μm,0.6s							
GAVE				AML		AML		
	comp=N,274μm,1.2s							
RUFI	**Rufina**	**1.00**	**353**	P		Pg	02 32 51.2	+0.2
RUFI				AML		AML		
	comp=N,113μm,2.5s							
RUFI				AML		AML		
	comp=E,101μm,2.0s							

ROM 26 02:32:43.9±0.1,42°.736N±0°.003×13°.176E±0°.005, h11km,ML1.3/14,2C-1D,Error ellipse: s-maj=0.4km s-min=0.3km az=264.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T1214	**Arquata del Tr**	**0.03**	**45**	⇓P		Pg	02 32 46.3	+0.1
T1214				S		Sg	02 32 47.6	-0.2
T1214				AML		AML		
	comp=E,292μm,0.8s							
T1214				AML		AML		
	comp=N,288μm,0.2s							
T1214				AML		AML		
	comp=E,320μm,1.6s							
T1214				AML		AML		
	comp=N,282μm,0.1s							
T1214				AML		AML		
	comp=N,283μm,0.1s							
T1214				AML		AML		
	comp=N,288μm,0.2s							
T1214				AML		AML		
	comp=E,290μm,0.1s							
T1214				AML		AML		
	comp=E,283μm,0.1s							
NRCA	**Norcia**	**0.11**	**335**	⇑P		Pg	02 32 47.3	+0.4
NRCA				S		Sg	02 32 49.4	+0.4
NRCA				AML		AML		
	comp=N,364μm,0.1s							
NRCA				AML		AML		
	comp=E,619μm,0.7s							
NRCA				AML		AML		
	comp=N,468μm,0.6s							
NRCA				AML		AML		
	comp=E,650μm,0.7s							
NRCA				AML		AML		
	comp=E,640μm,0.2s							
NRCA				AML		AML		
	comp=N,330μm,0.1s							
NRCA				AML		AML		
	comp=N,363μm,0.1s							
NRCA				AML		AML		
	comp=E,618μm,0.1s							
SMA1	**SAN MARTINO**	**0.16**	**132**	P		Pb	02 32 48.4	-0.6
SMA1				AML		AML		
	comp=N,109μm,0.5s							
SMA1				AML		AML		
	comp=E,120μm,0.4s							
LNSS	**Leonessa**	**0.17**	**217**	P		Pg	02 32 48.3	+0.5
LNSS				S		Sg	02 32 51.3	+0.9
LNSS				AML		AML		
	comp=E,156μm,0.2s							
LNSS				AML		AML		
	comp=N,249μm,0.3s							
LNSS				AML		AML		
	comp=N,235μm,0.1s							
LNSS				AML		AML		
	comp=E,156μm,0.2s							
MC2	**Monte Cornacci**	**0.18**	**3**	P		Pg	02 32 48.5	+0.5
MC2				S		Sg	02 32 52.0	+1.2
MMO1	**Montemonaco**	**0.20**	**34**	⇑P		Pg	02 32 48.7	+0.5
MMO1				S		Sg	02 32 52.0	+0.8
GAVE	**Gavelli**	**0.21**	**258**	P		Pg	02 32 49.1	+0.6
MF5	**Montefalcone A**	**0.33**	**39**	P		Pg	02 32 51.2	+0.6
CESI	**CESI - Serrava**	**0.34**	**324**	P		Pg	02 32 50.9	+0.2
TERO	**Teramo**	**0.34**	**110**	P		Pg	02 32 51.0	+0.3
TERO				S		Sg	02 32 56.1	+0.9
TERO				AML		AML		
	comp=E,79μm,0.1s							
PF6	**Pievefavera**	**0.41**	**2**	P		Pg	02 32 52.3	+0.2
PF6				S		Sg	02 32 58.4	+0.7

**IDC 26 02:35:35.0±2.0,6°.23S×143°.31E,

*NEIC **26** 02:40:38.6±0.8, 18°.7N±0°.2×64°.21W±0°.05, h35$^{km}_{\pm}$2^{km}, ML2.8/18, Md3.5/4(RSPR), Error ellipse: s-maj=31.1km s-min=5.1km az=10.0*
*RSPR **26** 02:40:42.0, 17°.96N×64°.49W, h118$^{km}_{\pm}$5^{km}, MD3.5/4*

ISC 26 02:40:37.1±3.1, 18°.8N±0°.3×64°.16W±0°.10, h35^{km}, n19, σ1§08/23, 6C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.75**	**247**	*eP*	**Pn**	**02 41 06.2**	**+1.2**
HUMP	**Col San Antoni**	**1.75**	**247**	*eS*	**Sn**	**02 41 26.5**	**+0.5**
HUMP	**Col San Antoni**	**1.75**	**247**		**Pn**	**02 41 05.9**	**+0.9**
HUMP					**Sn**	**02 41 25.4**	**-0.6**
GCPR	**Guaynabo City**	**1.90**	**254**	Pn	**Pn**	**02 41 06.7**	**-0.3**
OBIP	**Obispado Ponce**	**2.46**	**252**	*eP*	**Pn**	**02 41 15.0**	**+0.3**
OBIP	**Obispado Ponce**	**2.46**	**252**	Pn	**Pn**	**02 41 14.8**	**+0.1**
OBIP	comp=E,24nm,2.5s			IAML		02 41 42.4	
OBIP	comp=N,28nm,2.3s			IAML		02 41 56.0	
UUPR	**Utuado, UPR, P**	**2.50**	**257**	*eP*	**Pn**	**02 41 16.5**	**+1.2**
UUPR	**Utuado, UPR, P**	**2.50**	**257**	*eS*	**Sn**	**02 41 44.2**	**-0.4**
UUPR	**Utuado, UPR, P**	**2.50**	**257**	Pn	**Pn**	**02 41 15.5**	**+0.2**
UUPR				Sn	**Sn**	**02 41 43.8**	**-0.8**
UUPR	comp=E,64nm,0.4s			IAML		02 41 55.9	
UUPR	comp=N,63nm,0.5s			IAML		02 41 57.6	
AOPR	**Arecibo Observ**	**2.51**	**259**	*eP*	**Pn**	**02 41 18.1**	**+2.6**
AOPR	**Arecibo Observ**	**2.51**	**259**	*eS*	**Sn**	**02 41 45.2**	**+0.3**
AOPR	**Arecibo Observ**	**2.51**	**259**	Pn	**Pn**	**02 41 14.9**	**-0.5**
AOPR				Sn	**Sn**	**02 41 44.6**	**-0.3**
AOPR	comp=N,44nm,1.4s			IAML		02 42 07.2	
AOPR	comp=E,53nm,2.2s			IAML		02 42 35.5	
AGPR	**Aguadilla, PR**	**2.83**	**263**	Pn	**Pn**	**02 41 19.3**	**-0.5**
MLPR	**Magueyes Islan**	**2.88**	**253**	*eP*	**Pn**	**02 41 21.2**	**+0.8**
MLPR	**Magueyes Islan**	**2.88**	**253**	Pn	**Pn**	**02 41 20.5**	**+0.1**
MLPR	comp=E,31nm,3.0s			IAML		02 41 47.0	
MLPR	comp=N,32nm,2.9s			IAML		02 41 56.9	
CRPR	**Cabo Rojo, PR**	**2.92**	**254**	*eP*	**Pn**	**02 41 22.0**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.92**	**254**	*eS*	**Sn**	**02 41 52.1**	**-2.9**
CRPR	**Cabo Rojo, PR**	**2.92**	**254**	Pn	**Pn**	**02 41 21.7**	**+0.7**
CRPR				Sn	**Sn**	**02 41 54.4**	**-0.6**
CRPR	comp=N,28nm,2.4s			IAML		02 42 25.1	
CRPR	comp=E,34nm,2.0s			IAML		02 42 25.5	
GDHS	**Morne Mazeau,**	**3.42**	**138**	Pn	**Pn**	**02 41 28.1**	**+0.2**

IDC 26 02:46:21.6±5.5, 6°.07S×142°.20E, h0^{km}, mb3.7/2, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=209.5km s-min=34.0km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.76**	**208**	Pn	**Pn**	**02 50 03.8**	**-1.4**
	0.1nm,0.3s,baz=31,slow=14,SNR=1.2 0.3nm,0.4s						
ASAR	**Alice Springs**	**19.23**	**204**	P	**Pn**	**02 50 48.2**	**-0.2**
	0.2nm,0.3s,baz=35,slow=9.7,SNR=4.7 2.2nm,0.9s						
MKAR	**Makanchi Array**	**74.56**	**322**	P	**P**	**02 58 01.9**	**-0.6**
	0.1nm,0.5s,baz=108,slow=8.2,SNR=1.7 0.1nm,0.5s						
BVAR	**Borovoye Array**	**84.05**	**325**	P	**P**	**02 58 54.6**	**+0.5**
	1.1nm,0.6s,baz=104,slow=6.3,SNR=6.3 1.1nm,0.6s						

IDC 26 02:48:55.2±1.3, 19°.29N×147°.25E, h0^{km}, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=52.7km s-min=22.3km az=90.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.99**	**199**	P	**P**	**02 56 40.1**	**0.0**
	5.9nm,0.7s,baz=18,slow=9.0,SNR=29						
ASAR	**Alice Springs**	**44.63**	**198**	P	**P**	**02 57 09.2**	**-0.4**
	1.1nm,0.8s,baz=20,slow=7.3,SNR=5.3 1.1nm,0.8s						
MKAR	**Makanchi Array**	**59.12**	**314**	P	**P**	**02 58 57.3**	**-0.3**
	0.1nm,0.5s,baz=79,slow=10,SNR=1.8 0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**61.87**	**318**	P	**P**	**02 59 16.1**	**-0.1**
	0.2nm,0.4s,baz=91,slow=7.4,SNR=5.9 0.2nm,0.4s						
BVAR	**Borovoye Array**	**66.96**	**320**	P	**P**	**02 59 50.0**	**+0.5**
	0.7nm,0.5s,baz=73,slow=11,SNR=5.8 0.7nm,0.5s						
YKA	**Yellowknife Ar**	**76.79**	**28**	P	**P**	**03 00 48.1**	**-0.3**
	0.1nm,0.4s,baz=290,slow=4.4,SNR=4.3 0.1nm,0.4s						
FINES	**FINESS Array B**	**86.96**	**336**	P	**P**	**03 01 42.2**	**+0.2**
	1.8nm,0.9s,baz=64,slow=3.2,SNR=5.0 1.8nm,0.9s						

IDC 26 02:51:25.3±6.9, 6°.06S×141°.74E, h0^{km}, mb3.3/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=244.6km s-min=37.0km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.56**	**207**	Pn	**Pn**	**02 55 04.1**	**-2.1**
	0.1nm,0.3s,baz=29,slow=13,SNR=2.8 0.7nm,0.5s						
ASAR	**Alice Springs**	**19.06**	**203**	P	**Pn**	**02 55 50.0**	**-0.1**
	0.2nm,0.3s,baz=31,slow=10,SNR=9.0 1.4nm,0.6s						
MKAR	**Makanchi Array**	**74.27**	**322**	P	**P**	**03 03 04.6**	**+0.1**
	0.2nm,0.7s,baz=114,slow=6.5,SNR=2.2 0.2nm,0.7s						

IDC 26 02:53:19.1±4.7, 6°.20S×143°.10E, h0^{km}, mb3.4/1, mbtmp3.7/3, ML3.4/2, Error ellipse: s-maj=151.9km s-min=37.3km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.10**	**211**	Pn	**Pn**	**02 57 05.4**	**-1.6**
	0.1nm,0.3s,baz=32,slow=11,SNR=1.7 0.5nm,0.6s						
ASAR	**Alice Springs**	**19.49**	**206**	P	**Pn**	**02 57 48.5**	**-0.6**
	0.4nm,0.3s,baz=36,slow=9.5,SNR=22 5.0nm,0.7s						
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**	**03 05 03.8**	**0.0**
	0.3nm,0.8s,baz=108,slow=6.6,SNR=3.0 0.3nm,0.8s						

IDC 26 02:54:25.2±2.0, 6°.14S×142°.98E, h0^{km}, mb3.8/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=80.7km s-min=32.1km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.09**	**211**	Pn	**Pn**	**02 58 12.3**	**-0.6**
	0.1nm,0.3s,baz=30,slow=14,SNR=2.5 0.5nm,0.5s						
ASAR	**Alice Springs**	**19.49**	**206**	P	**P**	**02 58 54.0**	**0.0**
	0.2nm,0.3s,baz=33,slow=9.5,SNR=4.6 2.0nm,0.8s						
MKAR	**Makanchi Array**	**75.09**	**322**	P	**P**	**03 06 09.0**	**-0.1**
	0.2nm,0.6s,baz=98,slow=9.2,SNR=1.9 0.2nm,0.6s						
BVAR	**Borovoye Array**	**84.54**	**325**	P	**P**	**03 07 00.8**	**+0.6**
	1.1nm,0.6s,baz=125,slow=7.4,SNR=6.5 1.1nm,0.6s						
ILAR	**Eielson Array**	**87.20**	**24**	P	**P**	**03 07 12.7**	**-0.5**
	0.5nm,0.8s,baz=249,slow=6.2,SNR=4.8 0.5nm,0.8s						

IDC 26 02:57:17.8±2.0, 5°.53S×142°.26E, h0^{km}, mb3.5/2, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=89.4km s-min=31.9km az=106.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.27**	**208**	Pn	**Pn**	**03 01 05.6**	**-2.2**
	0.3nm,0.3s,baz=29,slow=12,SNR=4.6 0.9nm,0.5s						
ASAR	**Alice Springs**	**19.75**	**203**	P	**Pn**	**03 01 50.3**	**-0.5**
	0.3nm,0.3s,baz=31,slow=11,SNR=7.9 2.6nm,0.7s						
MKAR	**Makanchi Array**	**74.18**	**322**	P	**P**	**03 08 56.6**	**+0.2**
	0.3nm,0.6s,baz=100,slow=7.8,SNR=3.3 0.3nm,0.6s						
ILAR	**Eielson Array**	**86.94**	**24**	P	**P**	**03 10 04.2**	**-0.2**
	0.3nm,0.7s,baz=243,slow=4.0,SNR=4.0 0.3nm,0.7s						

*IDC **26** 02:59:25.0±1.9, 5°.94S×143°.13E, h0^{km}, mb3.8/4, mbtmp3.9/6, ML3.5/2, Error ellipse: s-maj=73.3km s-min=30.0km az=104.0*

ISC 26 02:59:29.8±1.8, 6°.1S±0°.2×143°.2E±0°.5, h35^{km}, n6, σ1§74/6, mb3.7/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.25**	**211**	Pn	**Pn**	**03 03 14.2**	**-1.3**
	0.1nm,0.3s,baz=30,slow=13,SNR=1.6 1.0nm,0.6s						
ASAR	**Alice Springs**	**19.64**	**206**	P	**P**	**03 03 57.1**	**+1.4**
	0.4nm,0.3s,baz=34,slow=9.3,SNR=13 6.7nm,0.7s						
MKAR	**Makanchi Array**	**75.19**	**322**	P	**P**	**03 11 09.4**	**+0.6**
	0.6nm,0.9s,baz=108,slow=7.9,SNR=4.9 0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**79.06**	**324**	P	**P**	**03 11 28.5**	**-1.9**
	0.4nm,0.8s,baz=121,slow=4.0,SNR=4.1 0.4nm,0.8s						
BVAR	**Borovoye Array**	**84.63**	**325**	P	**P**	**03 12 00.8**	**+1.1**
	1.9nm,0.7s,baz=118,slow=5.9,SNR=8.8 1.9nm,0.7s						
ILAR	**Eielson Array**	**87.06**	**24**	P	**P**	**03 12 11.3**	**-0.2**
	0.6nm,0.8s,baz=247,slow=4.1,SNR=5.2 0.6nm,0.8s						

*IDC **26** 03:01:22.3±1.3, 5°.87S×142°.98E, h0^{km}, mb4.0/4, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=66.4km s-min=30.3km az=92.0*

ISC 26 03:01:27.8±1.3, 6°.0S±0°.2×142°.8E±0°.4, h35^{km}, n6, σ1§72/6, mb4.0/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.09**	**210**	Pn	**Pn**	**03 05 09.4**	**-2.1**
	0.4nm,0.3s,baz=29,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**19.52**	**205**	P	**P**	**03 05 54.0**	**+1.7**
	0.3nm,0.3s,baz=31,slow=10,SNR=4.4 5.1nm,0.6s						
MKAR	**Makanchi Array**	**74.85**	**322**	P	**P**	**03 13 05.1**	**+0.3**
	0.7nm,0.8s,baz=101,slow=7.0,SNR=4.8 0.7nm,0.8s						
QSPA	**South Pole Qui**	**83.97**	**180**	P	**P**	**03 13 54.9**	**+0.7**
	1.0nm,0.5s,baz=268,slow=20,SNR=6.8 1.0nm,0.5s						
BVAR	**Borovoye Array**	**84.31**	**325**	P	**P**	**03 13 56.4**	**+0.3**
	1.8nm,0.7s,baz=111,slow=8.1,SNR=7.2 1.8nm,0.7s						
ILAR	**Eielson Array**	**87.16**	**24**	P	**P**	**03 14 09.0**	**-1.0**
	0.5nm,0.7s,baz=263,slow=4.4,SNR=6.1 0.5nm,0.7s						

IDC 26 03:02:47.2±2.1, 5°.93S×142°.89E, h0^{km}, mb3.6/2, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=95.2km s-min=34.1km az=108.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.22**	**210**	Pn	**Pn**	**03 06 35.0**	**-1.6**
	0.1nm,0.3s,baz=26,slow=14,SNR=1.3 1.6nm,0.9s						
ASAR	**Alice Springs**	**19.64**	**205**	P	**Pn**	**03 07 18.3**	**-0.7**
	1.4nm,0.7s,baz=33,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**74.88**	**322**	P	**P**	**03 14 30.3**	**+0.5**
	0.4nm,0.8s,baz=111,slow=7.1,SNR=2.9 0.4nm,0.8s						
ILAR	**Eielson Array**	**87.05**	**24**	P	**P**	**03 15 33.9**	**-0.5**
	0.2nm,0.5s,baz=264,slow=5.3,SNR=2.4 0.2nm,0.5s						

*IDC **26** 03:06:02.4±1.4, 6°.11S×143°.32E, h0^{km}, mb4.0/5, mbtmp4.0/7, ML3.6/2, Error ellipse: s-maj=62.7km s-min=26.9km az=96.0*

ISC 26 03:06:07.9±1.3, 6°.2S±0°.2×143°.2E±0°.4, h35^{km}, n7, σ1§04/7, mb3.8/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.16**	**211**	Pn	**Pn**	**03 09 51.0**	**-1.4**
	0.2nm,0.3s,baz=35,slow=13,SNR=2.2 2.0nm,0.8s						
ASAR	**Alice Springs**	**19.55**	**206**	P	**P**	**03 10 33.6**	**+1.0**
	0.4nm,0.3s,baz=32,slow=10,SNR=14 9.3nm,0.9s						
MKAR	**Makanchi Array**	**75.26**	**322**	P	**P**	**03 17 47.7**	**+0.4**
	0.7nm,0.9s,baz=133,slow=5.1,SNR=4.5 0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**79.14**	**324**	P	**P**	**03 18 09.0**	**+0.1**
	0.3nm,0.5s,baz=110,slow=5.0,SNR=3.3 0.3nm,0.5s						
QSPA	**South Pole Qui**	**83.78**	**180**	P	**P**	**03 18 34.0**	**+0.6**
	3.6nm,1.1s,baz=290,slow=4.3,SNR=3.8 3.6nm,1.1s						
BVAR	**Borovoye Array**	**84.71**	**325**	P	**P**	**03 18 38.4**	**+0.2**
	2.4nm,0.8s,baz=104,slow=6.3,SNR=8.6 2.4nm,0.8s						
ILAR	**Eielson Array**	**87.16**	**24**	P	**P**	**03 18 49.2**	**-0.8**
	0.5nm,0.8s,baz=248,slow=4.9,SNR=4.0 0.5nm,0.8s						

*IDC **26** 03:06:35.6±1.7, 50°.33N×130°.35W, h0^{km}, mb3.6/3, mbtmp3.6/8, ML3.4/5, Error ellipse: s-maj=26.7km s-min=16.2km az=76.0*
*PGC **26** 03:06:36.3±3.0, 50°.16N×130°.25W, h10^{km}, MLSn3.3/17, Mw3.9/17, 209km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

ISC 26 03:06:37.0±2.8, 50°.20N±0°.06×130°.11W±0°.06, h9^{km}±17^{km}, n45, σ1§87/51, mb3.5/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.34**	**70**	Pn	Pn	03 06 59.7	-2.2
HOLB				Sn	**Sg**	**03 07 17.7**	**-2.4**
PHC	**Port Hardy**	**1.79**	**72**	Pn	**Pn**	**03 07 06.2**	**-1.8**
PHC				Sn	**Sn**	**03 07 28.2**	**-2.6**
MAYB	**Maynard**	**1.90**	**83**	Pn	Pn	03 07 07.4	-2.2
EDB	**Eliza Dome**	**1.96**	**98**	Pn	**Pn**	**03 07 09.2**	**-1.1**
WOSB	**Woss**	**2.28**	**90**	Pn	**Pn**	**03 07 12.9**	**-1.9**
WOSB				Sn	**Sn**	**03 07 40.8**	**-2.1**
BBB	**Bella Bella**	**2.35**	**32**	Pn	**Pn**	**03 07 15.3**	**-0.5**
BBB	23nm,0.3s,baz=215,slow=6.1,SNR=314			Sn	**Sn**	**03 07 42.1**	**-2.5**
BBB	9.4nm,0.3s,baz=313,slow=22,SNR=4.7 72nm,0.3s						
BBB	**Bella Bella**	**2.35**	**32**	Pn	**Pn**	**03 07 15.1**	**-0.7**
BBB				Sn	**Sn**	**03 07 42.3**	**-2.4**
BAIB	**Barry Inlet**	**2.59**	**337**	Pn	**Pn**	**03 07 16.7**	**-2.4**
BAIB				Sn	**Sn**	**03 07 46.8**	**-4.0**
BNB	**Barry Inlet**	**2.59**	**337**	Pn	**Pn**	**03 07 16.7**	**-2.4**
NCSB	**Newcastle Ridg**	**2.61**	**84**	Pn	**Pn**	**03 07 18.3**	**-1.1**
NCSB				Sn	**Sn**	**03 07 49.4**	**-1.9**
HG1B	**Mitchell Dam**	**3.02**	**336**	Pn	**Pn**	**03 07 23.0**	**-1.8**
BUTB	**Butedale**	**3.05**	**19**	Pn	**Pn**	**03 07 25.2**	**-0.2**
BUTB				Sn	**Sn**	**03 08 01.2**	**-0.8**
CBB	**Campbell River**	**3.06**	**91**	Pn	**Pn**	**03 07 24.3**	**-1.2**
CBB				Sn	**Sn**	**03 07 59.3**	**-2.8**
GRIB	**Gribbell Islan**	**3.20**	**11**	Pn	**Pn**	**03 07 26.9**	**-0.6**
GRIB				Sn	**Sn**	**03 08 03.7**	**-2.0**
OZB	**Mount Ozzard**	**3.25**	**111**	Sn	**Sn**	**03 08 04.4**	**-2.6**
HWKB	**Hawksbury Isla**	**3.46**	**10**	Pn	**Pn**	**03 07 29.9**	**-1.1**
HWKB				Sn	**Sn**	**03 08 10.3**	**-1.7**
GRNB	**Grenville Isla**	**3.66**	**1**	Pn	**Pn**	**03 07 32.5**	**-1.2**
GRNB				Sn	**Sn**	**03 08 14.8**	**-2.0**
KITB	**Kitimat**	**3.99**	**13**	Pn	**Pn**	**03 07 37.6**	**-0.6**
KITB				Sn	**Sn**	**03 08 24.1**	**-0.9**
PFB	**Port Renfrew**	**4.05**	**112**	Sn	**Sn**	**03 08 23.8**	**-2.8**
SHB	**Sechelt**	**4.08**	**96**	Pn	**Pn**	**03 07 39.4**	**-0.1**
SHB				Sn	**Sn**	**03 08 25.4**	**-2.0**
RUBB	**Prince Rupert**	**4.13**	**359**	Pn	**Pn**	**03 07 39.5**	**-0.7**
HNBB	**Haney**	**4.97**	**98**	Pn	**Pn**	**03 07 51.9**	**+0.1**
HNBB				Sn	**Sn**	**03 08 48.6**	**-0.8**
V35K	**Ketchikan**	**5.22**	**351**	Pn	**Pn**	**03 07 54.6**	**-0.5**
MBW	**Mount Baker**	**5.54**	**102**	Pn	**Pn**	**03 07 60.0**	**+0.3**
T35M	**Bob Quinn**	**6.80**	**359**	Pn	**Pn**	**03 08 17.9**	**+1.2**
BMTB	**Bullhead Mount**	**7.57**	**36**	Pn	**Pn**	**03 08 29.9**	**+2.5**
NBC4	**NorthernBC 4**	**7.92**	**42**	Pn	**Pn**	**03 08 33.9**	**+1.7**
BDMTA	**Bald Mountain**	**8.24**	**52**	Pn	**Pn**	**03 08 38.9**	**+2.2**
DLBC	**Dease Lake**	**8.26**	**0**	Pn	Pn	03 08 33.6	-3.2
	0.2nm,0.3s,baz=188,slow=18,SNR=2.0 1.5nm,0.7s						
DLBC	**Dease Lake**	**8.26**	**0**	Pn	**Pn**	**03 08 39.2**	**+2.4**
NBC5	**NorthernBC 5**	**8.55**	**28**	Pn	**Pn**	**03 08 42.8**	**+2.0**
NVAR	**Mina Array Bea**	**14.46**	**140**	Pn	**P**	**03 10 07.6**	**-1.2**
	baz=321,slow=7.0,SNR=2.8 0.6nm,0.8s						
YKA	**Yellowknife Ar**	**14.96**	**29**	Pn	**Pn**	**03 10 09.3**	**+0.9**
	0.1nm,0.3s,baz=218,slow=12,SNR=14						
PDAR	**Pinedale Array**	**15.96**	**110**	Pn	**Pn**	**03 10 25.2**	**+3.5**
	baz=304,slow=8.8,SNR=10.0 1.7nm,1.0s						
ILAR	**Eielson Array**	**17.07**	**335**	Pn	**Pn**	**03 10 37.5**	**+1.9**
	baz=149,slow=11,SNR=3.0						
INK	**Inuvik**	**18.24**	**356**	P	**Pn**	**03 10 49.6**	**-0.4**
	baz=180,slow=8.1,SNR=5.9 1.2nm,1.0s						
ULM	**Lac du Bonnet**	**21.80**	**77**	P	**P**	**03 11 30.0**	**+1.0**
	7.2nm,1.1s,baz=298,slow=12,SNR=5.3 7.2nm,1.1s						
TXAR	**Lajitas Array**	**28.85**	**126**	P	**P**	**03 12 37.2**	**+1.5**
	0.4nm,0.9s,baz=311,slow=6.9,SNR=3.0 0.4nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**57.86**	**262**	T	T	04 19 09.5	
	baz=42,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**57.86**	**262**	T	T	04 19 06.0	
	baz=42,slow=75,SNR=59						
H11N1	**WAKE ISLAND Hy**	**57.87**	**262**	T	T	04 19 06.0	
	baz=42,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**58.88**	**262**	T	T	04 20 22.3	
	baz=40,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**58.89**	**262**	T	T	04 20 25.2	
	baz=40,slow=74,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**58.90**	**262**	T	T	04 20 26.4	
	baz=40						
MKAR	**Makanchi Array**	**79.40**	**338**	P	**P**	**03 18 43.0**	**-0.2**
	0.4nm,0.8s,baz=39,slow=5.5,SNR=3.7 0.4nm,0.8s						

IDC 26 03:07:05.9±2.3, 6°.43S×144°.07E, h0^{km}, mb3.8/3, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=92.1km s-min=40.5km az=108.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.43**	**214**	Pn	Pn	03 10 53.0	-5.0
	0.2nm,0.3s,baz=30,slow=14,SNR=1.5						
ASAR	**Alice Springs**	**19.73**	**209**	P	P	03 11 37.1	-0.2
	0.3nm,0.3s,baz=30,slow=10,SNR=2.1 1.7nm,0.6s						
MKAR	**Makanchi Array**	**75.99**	**321**	P	**P**	**03 18 55.0**	**+0.1**
	0.4nm,0.7s,baz=108,slow=4.7,SNR=2.5 0.4nm,0.7s						
BVAR	**Borovoye Array**	**85.41**	**324**	P	P	03 19 45.7	+0.5
	1.3nm,0.7s,baz=106,slow=4.8,SNR=4.4 1.3nm,0.7s						
ILAR	**Eielson Array**	**87.03**	**24**	P	P	03 19 52.5	-0.5
	0.3nm,0.8s,baz=245,slow=5.9,SNR=2.2 0.3nm,0.8s						

*IDC **26** 03:10:53.1±0.7, 6°.29S×143°.19E, h0^{km}, mb4.4/15, mbtmp4.4/17, ML1.9/1, Error ellipse: s-maj=29.7km s-min=16.5km az=76.0*
*MOS **26** 03:10:53.2±0.7, 6°.34S×143°.09E, h12^{km}, mb4.8/18, Error ellipse: s-maj=13.5km s-min=8.0km az=115.0*
*NEIC **26** 03:10:55.9±1.8, 6°.30S±0°.08×142°.97E±0°.06, h10$^{km}_{\pm}$1^{km}, mb5.1/44, Error ellipse: s-maj=13.3km s-min=9.9km az=155.0*
*BJI **26** 03:10:56.3±0.0, 6°.62S×142°.98E, h34^{km}, mb4.7/49, mB5.1/22, Ms4.6/5, Ms7 4.3/6*
*DJA **26** 03:11:04.0±0.5, 6°.S±4°×14°.3E±°, h61^{km}±6^{km}, M5.1/14, mB5.1/4, mb4.7/14, MLv5.4/4, Mw(mB)4.5/4*

ISC 26 03:10:55.0±0.4, 6°.35S±0°.05×143°.13E±0°.06, h10^{km}, n147, σ1§66/147, mb4.8/55, MS4.3/3, 7C-3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.44**	**232**	P	**Pb**	**03 11 58.3**	**+2.3**
GENI	**Genyem**	**4.76**	**322**	P	**Pn**	**03 12 07.6**	**+0.8**
PMG	**Port Moresby**	**5.02**	**127**	*iP*	**Pn**	**03 12 11.2**	**+0.8**
PMG	**Port Moresby**	**5.02**	**127**	Pn	**Pn**	**03 12 11.7**	**+1.4**
	3.3nm,0.3s,baz=314,slow=12,SNR=3.5						
PMG	5.2nm,0.3s,baz=289,slow=18,SNR=2.2 15nm,0.3s			Sn	**Sn**	**03 13 08.5**	**0.0**
MANU	**Manus Island**	**6.02**	**45**	Pn	**Pn**	**03 12 26.7**	**+2.5**
SMPI	**Sarmi**	**6.18**	**314**	P	**Pn**	**03 12 27.8**	**+1.4**
	183nm,1.3s,2µm1.3nm						
COEN	**Coen**	**7.56**	**180**	P	**Pn**	**03 12 47.5**	**+2.2**
	baz=7.7						
COEN	**Coen**	**7.56**	**180**	Pn	**Pn**	**03 12 46.8**	**+1.4**
FAKI	**Fak Fak**	**11.36**	**287**	Pn	**Pn**	**03 13 35.4**	**-2.1**
KDU	**Kakadu**	**12.24**	**238**	P	**Pn**	**03 13 48.2**	**-1.3**
	baz=12,SNR=3.5						
MTN	**Manton Dam**	**13.46**	**240**	P	**P**	**03 14 04.2**	**-2.1**
	baz=13,SNR=4.4						
MTN	**Manton Dam**	**13.46**	**240**		**Pn**	**03 14 02.9**	**-3.4**
CTA	**Charters Tower**	**13.99**	**168**	Lg	Lg	03 18 22.5	
	0.4nm,0.3s,baz=295,slow=17,SNR=2.0						
QIS	**Mount Isa**	**14.53**	**193**	P	**Pn**	**03 14 22.2**	**+1.4**
	baz=15,SNR=3.1						
WB0	**Warramunga Arr**	**15.80**	**212**	Pn	**Pn**	**03 14 36.7**	**-1.2**
WRAB	**Tennant Creek**	**15.97**	**211**	Pn	**Pn**	**03 14 36.7**	**-3.2**
WRAB	**Tennant Creek**	**15.97**	**211**	P	**Pn**	**03 14 36.7**	**-3.2**
WRAB	comp=Z,37nm,1.3s			pmax	pmax		
WB2	**Warramunga Arr**	**15.97**	**211**	Pn	**Pn**	**03 14 36.1**	**-3.9**
WRA	**Warramunga Arr**	**15.98**	**211**	Pn	**Pn**	**03 14 37.7**	**-2.4**
WRA	**Warramunga Arr**	**15.98**	**211**	P	**Pn**	**03 14 37.7**	**-2.4**
WRA	comp=Z,1.0nm,1.0s			pmax	pmax		
WRA	**Warramunga Arr**	**15.98**	**211**	Pn	**Pn**	**03 14 37.0**	**-3.1**
	comp=Z,1.1nm,0.3s,baz=28,slow=13,SNR=7.2						
KNRA	**Kununurra**	**16.86**	**235**	Pn	**Pn**	**03 14 48.0**	**-3.3**
SANI	**Sanana**	**17.61**	**283**	P	**P**	**03 15 02.9**	**+1.1**
	comp=Z,35nm,1.0s						
SOEI	**Soe**	**18.97**	**259**	P	**P**	**03 15 16.1**	**-0.8**
SOEI	comp=Z,73nm,0.7s			IAmb	IAmb	03 15 28.0	
SOEI	**Soe**	**18.97**	**259**	P	**Pn**	**03 15 17.8**	**+0.2**
	comp=Z,120nm,0.8s						
AS31	**Alice Springs**	**19.36**	**206**	P	**P**	**03 15 21.1**	**+0.1**
ASAR	**Alice Spring

STKA	Stephens Creek	25.43	183	*i*	P		P	03 16 26.7	+3.7
STKA	Stephens Creek	25.43	183		P		P	03 16 23.3	+0.3
	comp=Z,1.8nm,0.7s,baz=24,slow=12,SNR=2.5								
	comp=Z,1.8nm,0.7s								
MAJO	Matsushiro	42.92	354	*i*	P		P	03 18 53.0	-1.0
MAJO					pmax	pmax			
	comp=Z,3.0nm,1.1s								
NJ2	Nanjing	44.65	330	*e*	P		P	03 19 10.0	+2.0
NJ2					pmax	pmax			
	comp=Z,7.0nm,0.5s								
RPSI	Rantau Prapat	45.04	280		P		P	03 19 10.3	-1.1
PSI	Prapat	45.06	280		P		P	03 19 10.3	-1.4
PSI					pmax	pmax			
	comp=Z,12nm,1.1s								
KSRS	Korea Array	45.83	343		P		P	03 19 17.2	-0.1
	comp=Z,1.7nm,0.7s,baz=163,slow=9.5,SNR=9.2								
	comp=Z,1.7nm,0.7s								
WHN	Wuhan	45.89	325		P		P	03 19 20.3	+2.4
GYA	Guiyang	48.10	314		P		P	03 19 37.0	+1.6
GYA					pmax	pmax			
	comp=Z,15nm,0.9s								
LYN	LuoYang	49.93	327	*e*	P		P	03 19 49.3	+0.1
LYN					pmax	pmax			
	comp=Z,17nm,0.7s								
LYN					pmax	pmax			
	comp=Z,150nm,4.1s								
CMAR	Chiang Mai Arr	50.06	300		P		P	03 19 49.8	-0.6
CMAR	Chiang Mai Arr	50.06	300	*i*	P		P	03 19 50.7	+0.3
CMAR					pmax	pmax			
	comp=Z,2.0nm,0.4s								
CMAR	Chiang Mai Arr	50.06	300		P		P	03 19 50.4	0.0
	comp=Z,1.6nm,0.3s,baz=148,slow=5.8,SNR=8.4								
	comp=Z,1.6nm,0.3s								
USA0B	Ussuriysk Arra	51.31	350	⇑*i*	P		P	03 19 58.8	-0.6
USRK	Ussuriysk Ar.	51.31	350		P		P	03 19 59.3	-0.1
USRK	Ussuriysk Ar.	51.31	350		P		P	03 19 59.3	-0.1
USRK	Ussuriysk Ar.	51.31	350		P		P	03 19 59.5	+0.1
	comp=Z,3.0nm,0.9s,baz=145,slow=7.0,SNR=4.8								
	comp=Z,3.0nm,0.9s								
XAN	Xi'an	51.59	323		P		P	03 20 01.5	-0.2
XAN					sP		sP	03 20 16.5	+10
XAN					pmax	pmax			
	comp=Z,12nm,0.8s								
MDJ	Mudanjiang	52.18	348		P		P	03 20 07.0	+1.1
MDJ					pP		sP	03 20 17.0	+6.2
MDJ					sP		pP	03 20 22.0	+13
MDJ					PcP		PcP	03 21 18.0	+0.5
MDJ					PcS		PcS	03 25 16.8	+1.2
MDJ					S		S	03 27 30.5	+0.1
MDJ					ScS		ScS	03 29 53.8	-2.3
MDJ					pmax	pmax			
	comp=Z,8.0nm,1.5s								
MDJ					pmax	pmax			
	comp=Z,140nm,4.0s								
MDJ					LR	LR			
	comp=Z,200nm,16.1s								
MDJ					LR	LR			
	comp=Z,190nm,15.2s								
MDJ					LR	LR			
	comp=Z,240nm,16.8s								
CN2	Changchun	52.42	344		P		P	03 20 12.5	+4.8
CN2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
CD2	Chengdu	52.83	317		P		P	03 20 11.3	+0.3
CD2					pmax	pmax			
	comp=Z,10.0nm,0.9s								
YSS	Yuzh-Sakhalins	53.07	360	*e*	P		P	03 20 17.8	+5.4
BNX	BinXian	53.73	346	⇓	P		P	03 20 16.5	-0.8
BNX					pmax	pmax			
	comp=Z,10.0nm,1.2s								
BNX					pmax	pmax			
	comp=Z,170nm,6.0s								
HHC	Hu-ho-hao-te	55.19	331	*e*	P		P	03 20 30.0	+1.8
HHC					pmax	pmax			
	comp=Z,14nm,0.8s								
HHC					pmax	pmax			
	comp=Z,120nm,6.2s								
HHC					LR	LR			
	comp=Z,100nm,16.0s								
HHC					LR	LR			
	comp=Z,100nm,16.0s								
HHC					LR	LR			
	comp=Z,110nm,16.0s								
BTO	Baotou	55.76	330	*e*	P		P	03 20 36.3	+4.0
BTO					pP		sP	03 20 46.3	+9.0
BTO					sP		pP	03 20 50.3	+14
BTO					S		S	03 28 21.5	+2.2
BTO					sS		sS	03 28 36.0	+11
BTO					SS		SS	03 32 06.0	+0.9
BTO					pmax	pmax			
	comp=Z,14nm,0.9s								
BTO					pmax	pmax			
	comp=Z,270nm,5.5s								
BTO					LR	LR			
	comp=Z,400nm,17.4s								
BTO					LR	LR			
	comp=Z,260nm,21.6s								
BTO					LR	LR			
	comp=Z,350nm,24.0s								
SHL	Shillong	59.01	305		P		P	03 20 55.1	-0.6
SHL	Shillong	59.01	305		P		P	03 20 55.1	-0.6
SHL					pmax	pmax			
	comp=Z,36nm,1.0s								
PETK	Petropavlovsk-	60.51	10		P		P	03 21 05.3	+0.1
	comp=Z,4.4nm,0.8s,baz=191,slow=7.2,SNR=4.0								
	comp=Z,4.4nm,0.8s								
GTA	Gaotai	60.61	322	*e*	P		P	03 21 06.8	+0.5
GTA					pP		sP	03 21 14.3	+3.0
GTA					pmax	pmax			
	comp=Z,5.0nm,1.1s								
ZEA	Zeya	61.35	349	*e*	P		P	03 21 10.9	+0.1
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.2s								
GOMU	GeErMu	61.96	317		P		P	03 21 15.5	-0.3
GOMU					pmax	pmax			
	comp=Z,3.0nm,1.2s								
ULN	Ulaanbaatar	62.63	333		P		P	03 21 18.4	-1.4
ULN	Ulaanbaatar	62.63	333	*e*	P		P	03 21 20.3	+0.5
ULN					pmax	pmax			
	comp=Z,2.0nm,0.9s								
SONM	Songino Array	62.90	333		P		P	03 21 21.5	-0.1
SONM					IAmb	IAmb		03 23 20.4	
	comp=Z,16nm,1.6s								
SONM	Songino Array	62.90	333		P		P	03 21 21.5	-0.1
SONM					pmax	pmax			
	comp=Z,16nm,1.6s								
SONM	Songino Array	62.90	333		P		P	03 21 21.5	-0.1
	comp=Z,1.0nm,0.8s,baz=156,slow=6.9,SNR=7.6								
	comp=Z,1.0nm,0.8s								
MA2	Magadan	66.00	4	*e*	P		P	03 21 41.1	-0.3
MA2					pmax	pmax			
	comp=Z,11nm,1.3s								
ZAK	Zakamensk	66.16	333	*e*	P		P	03 21 42.2	-0.6
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.4s								
HYB	Hyderabad	67.99	292	*e*	P		P	03 21 55.3	+0.3
YAK	Yakutsk	68.97	353	*e*	P		P	03 22 00.8	+0.6
YAK					pmax	pmax			
	comp=Z,5.0nm,0.8s								
SEY	Seymchan	69.45	5	*e*	P		P	03 22 02.8	-0.3
SEY					pmax	pmax			
	comp=Z,7.0nm,1.1s								
WMQ	Urumqi	70.59	321	*e*	P		P	03 22 10.5	-0.2
WMQ					pP		sP	03 22 18.3	+2.6
WMQ					pmax	pmax			
	comp=Z,13nm,1.5s								
DGZ	Jazzator, Alta	73.73	326	⇑*i*	P		P	03 22 29.4	-0.1
DGZ					pmax	pmax			
	comp=Z,8.0nm,0.8s								
MK31	Makanchi Array	75.35	322		P		P	03 22 38.3	-0.5
MK31	Makanchi Array	75.35	322	*c i*	P		P	03 22 38.6	-0.2
MKAR	Makanchi Array	75.35	322		P		P	03 22 38.6	-0.2
MKAR	Makanchi Array	75.35	322		P		P	03 22 38.9	+0.1
	comp=Z,6.6nm,0.8s,baz=107,slow=7.1,SNR=66								
	comp=Z,6.6nm,0.8s								
MAKZ	Makanchi	75.55	322		P		P	03 22 39.6	-0.3
MAKZ	Makanchi	75.55	322		P		P	03 22 39.6	-0.3
MAKZ					pmax	pmax			
	comp=Z,35nm,1.1s								
BILL	Bilibino	76.00	9	⇑*i*	P		P	03 22 41.2	-0.8
BILL					pmax	pmax			
	comp=Z,7.0nm,1.6s								
PRZ	Przheval'sk	76.12	316		P		P	03 22 43.9	+0.4
PRZ	Przheval'sk	76.12	316		P		P	03 22 43.9	+0.4
PRZ					pmax	pmax			
	comp=Z,38nm,1.1s								
KSH	Kashi	76.77	313		P		P	03 22 49.0	+1.8
KSH					pmax	pmax			
	comp=Z,5.0nm,0.8s								
ZAA0	Zalesovo Array	77.29	329		P		P	03 22 47.9	-1.6
ZAA0					IAmb	IAmb		03 24 47.1	
	comp=Z,11nm,1.1s								
ZALV	Zalesovo Beam	77.29	329		P		P	03 22 47.5	-2.0
ZALV	Zalesovo Beam	77.29	329		P		P	03 22 48.7	-0.9
	comp=Z,1.7nm,0.6s,baz=104,slow=6.3,SNR=9.1								
	comp=Z,1.7nm,0.6s								
BOOM	Boomskoye usch	77.81	316		P		P	03 22 52.3	-0.7
BOOM	Boomskoye usch	77.81	316		P		P	03 22 52.3	-0.7
BOOM					pmax	pmax			
	comp=Z,19nm,0.6s								
TIXI	Tiksi	78.41	355	*i*	P		P	03 22 54.7	-0.7
TIXI					pmax	pmax			
	comp=Z,1.0nm,0.9s								
TIXI	Tiksi	78.41	355		P		P	03 22 54.5	-0.9
	comp=Z,2.7nm,0.3s,baz=271,slow=1.1,SNR=5.1								
	comp=Z,2.7nm,0.3s								
AAK	Ala-Archa	78.87	316		P		P	03 22 58.2	-0.7
AAK					IAmb	IAmb		03 24 57.8	
	comp=Z,17nm,1.4s								
AAK	Ala-Archa	78.87	316	*c i*	P		P	03 22 58.7	-0.1
AAK					pmax	pmax			
	comp=Z,5.0nm,1.4s								
KURK	Kurchatov	79.22	324		P		P	03 22 59.6	-0.7
KURK	Kurchatov	79.22	324	*d i*	P		P	03 23 00.2	-0.1
KURK					pmax	pmax			
	comp=Z,8.0nm,1.0s								
KURBB	Kurchatov Arra	79.23	324		P		P	03 22 59.9	-0.5
	comp=Z,5.3nm,1.0s,baz=116,slow=4.5,SNR=36								
	comp=Z,5.3nm,1.0s								
ARSB	Arslanbob	79.52	314		P		P	03 23 02.0	-0.4
ARSB	Arslanbob	79.52	314		P		P	03 23 02.0	-0.4
ARSB					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KBL	Kabul	80.62	306		P		P	03 23 08.0	-0.6
KBL	Kabul	80.62	306		P		P	03 23 08.0	-0.6
KBL					pmax	pmax			
	comp=Z,14nm,0.7s								
SIMJ	Simiganj	81.69	310		P		P	03 23 13.4	-0.6
KK31	Karatay Array	81.80	315		P		P	03 23 13.4	-1.0
KK31					IAmb	IAmb		03 25 12.4	
	comp=Z,10nm,0.7s								
KK31	Karatay Array	81.80	315		P		P	03 23 13.4	-1.0
KK31					pmax	pmax			
	comp=Z,10.0nm,0.7s								
KKAR	Karatay Array	81.80	315		P		P	03 23 13.7	-0.7
KKAR					IAmb	IAmb		03 25 12.4	
	comp=Z,10nm,0.7s								
KKAR	Karatay Array	81.80	315		P		P	03 23 13.0	-1.5
KKAR	Karatay Array	81.80	315		P		P	03 23 13.7	-0.7
KKAR					pmax	pmax			
	comp=Z,10.0nm,0.7s								
QSPA	South Pole Qui	83.62	180		P		P	03 23 23.3	-0.3
	comp=Z,2.7nm,0.8s,baz=342,slow=1.0,SNR=7.4								
	comp=Z,2.7nm,0.8s								
G19K	Purcell Mounta	84.09	21		P		P	03 23 25.9	+0.2
NRIK	Noril'sk	84.45	343		P		P	03 23 26.1	-1.4
NRIK	Noril'sk	84.45	343	*c i*	P		P	03 23 27.1	-0.4
NRIK					pmax	pmax			
	comp=Z,14nm,1.4s								
NRIK	Noril'sk	84.45	343		P		P	03 23 27.1	-0.4
	comp=Z,4.9nm,0.5s,baz=120,slow=5.3,SNR=7.1								
	comp=Z,4.9nm,0.5s								
BVAR	Borovoye Array	84.80	325		P		P	03 23 29.9	+0.2
	comp=Z,16nm,0.7s,baz=114,slow=6.6,SNR=70								
	comp=Z,16nm,0.7s								
C19K	Lookout Ridge	84.83	18		P		P	03 23 29.5	0.0
BRVK	Borovoye	84.88	325		P		P	03 23 29.7	-0.3
BRVK	Borovoye	84.88	325	*d i*	P		P	03 23 30.3	+0.3
BRVK					pmax	pmax			
	comp=Z,12nm,0.9s								
D19K	Kuna River	84.96	18		P		P	03 23 28.8	-1.3
MLY	Manley	85.92	23		P		P	03 23 34.7	-0.4
DHY	Denali Highway	86.53	25		P		P	03 23 38.3	0.0
G23K	Bananza Creek	86.88	21		P		P	03 23 39.7	0.0
CCB	Clear Creek Bu	86.92	24		P		P	03 23 38.5	-1.4
ILAR	Eielson Array	87.34	24		P		P	03 23 40.1	-1.8
	comp=Z,1.6nm,0.8s,baz=260,slow=4.4,SNR=14								
	comp=Z,1.6nm,0.8s								
J25K	Salcha River,	87.89	24		P		P	03 23 44.9	+0.2
ABKAR	Akbulak array	90.33	319		P		P	03 23 53.8	-2.6
ABKAR					IAmb	IAmb		03 25 53.5	
	comp=Z,11nm,0.8s								
CRAG	Craig	91.65	34		P		P	03 24 03.1	+0.7
AKTO	Aktyubinsk	91.74	320		P		P	03 24 00.8	-2.1
	comp=Z,1.2nm,0.8s,baz=55,slow=3.1,SNR=5.2								
	comp=Z,1.2nm,0.8s								
ARU	Arti	92.24	326		P		P	03 24 02.7	-2.4
ARU								03 27 43.8	
ARU					S		SKSac	03 34 33.0	-5.4
ARU					SS		SS	03 41 27.0	+8.9
OBN	Obninsk	104.64	325	*e*	P		Pdif	03 24 56.8	-4.2
OBN				*e*				03 29 23.6	
OBN				*e*	PPP		PPP	03 31 29.3	
OBN					pmax	pmax			
	comp=Z,4.0nm,0.9s								
SDV	Santo Domingo	146.45	84				PKPdf	03 30 36.8	+0.4
ETMB	Extrema	146.65	119				PKPdf	03 30 36.4	-0.2
DBIC	Dimbokro	148.19	272				PKPbc	03 30 41.7	-0.7
DBIC	Dimbokro	148.19	272		PKP2		PKPbc	03 30 41.7	-0.7
DBIC	Dimbokro	148.19	272		PKPbc		PKPbc	03 30 42.5	+0.1
	comp=Z,9.5nm,1.0s,baz=132,slow=2.5,SNR=6.6								
PTLB	Pontes e Lacer	149.09	135		PKPbc		PKPbc	03 30 44.2	-0.4
SAML	Samuel	149.69	120		PKPbc		PKPdf	03 30 43.8	+2.3
SAML	Samuel	149.69	120		PKHKP		PKPpre	03 30 43.8	

IDC **26** *03:12:52.0±0.5,6.09S×143.09E,h0km,mb4.9/18, mbtmp4.9/21,ML2.1/1,MS3.9/8,Error ellipse: s-maj=27.3km s-min=13.5km az=80.0*

MOS **26** *03:12:53.3±0.8,6.07S×143.00E,h18km,mb5.2/40,Error ellipse: s-maj=10.1km s-min=5.7km az=112.0*

NEIC **26** *03:12:54.3±1.7,6.06S±0.04×143.04E±0.07,h10km±1km, mb5.2/175,Error ellipse: s-maj=12.9km s-min=4.8km az=121.0*

BJI **26** *03:12:55.5±0.0,6.09S×143.43E,h43km,mb5.0/71, mB5.1/33,Ms4.5/9,Ms7 4.2/10*

DJA **26** *03:13:20.8±0.5,5.5S±8×14.4E±°,h384km±12km,M4.8/13, mb4.8/13,mB4.9/6,MLv5.1/1,Mw(mB)4.2/6,MwMwp6.3/1, Mwp6.2/1*

ISC 26 03:12:53.5±0.3,6.13S±0.04×143.04E±0.05,h10km,n640, σ1§**21**/571,**mb5.2**/157,**MS4.2**/12,**21C-6D,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MMPI	Merauke	3.51	228	P		Sg		03 14 44.8	-1.7
PMG	Port Moresby	5.22	129	Pn		Pn		03 14 13.0	+1.3
PMG	Port Moresby	5.22	129	P		Pn		03 14 13.7	+2.0
PMG	Port Moresby	5.22	129	P		Pn		03 14 13.8	+2.0
PMG	Port Moresby	5.22	129	*c i*	P	Pn		03 14 12.9	+1.2
PMG	Port Moresby	5.22	129	Pn		Pn		03 14 13.2	+1.4
	4.8nm,0.3s,baz=260,slow=9.3,SNR=8.2								
PMG				Sn		Sn		03 15 10.8	-1.2
	17nm,0.3s,baz=299,slow=7.6,SNR=3.2								
PMG				LR		LR		03 16 15.2	
	comp=Z,1µm,19.3s,baz=290,slow=39								
	78nm,0.6s								
MANU	Manus Island	5.92	47	Pn		Pn		03 14 20.8	-0.5
COEN	Coen	7.78	179	P		Pn		03 14 48.8	+1.8
	baz=7.8,SNR=5.0								
COEN	Coen	7.78	179	Pn		Pn		03 14 48.6	+1.7
RABL	Rabaul	9.29	78	Pn		Pn		03 15 08.6	+1.0
KMPI	Kaimana, Papua	9.62	284	P		Pg		03 15 43.1	
	313nm,0.6s								
FAKI	Fak Fak	11.22	286	Pn		Pn		03 15 34.0	0.0
FAKI	Fak Fak	11.22	286	P		Pg		03 16 07.3	
KDU	Kakadu	12.29	237	P		Pn		03 15 47.4	-1.3
	baz=12,SNR=4.8								
KDU				P		Pn		03 15 47.4	-1.3
	baz=12,SNR=4.8								
KDU	Kakadu	12.29	237	P		Pn		03 15 49.1	+0.4
MTN	Manton Dam	13.50	240	Pn		Pn		03 16 05.6	+0.3
CTA	Charters Tower	14.22	168	Pn		P		03 16 22.6	0.0
	0.3nm,0.3s,baz=354,slow=16,SNR=2.6								
CTA				Lg		Lg		03 20 32.7	
	0.6nm,0.3s,baz=252,slow=20,SNR=2.4								
CTA				LR		LR		03 22 05.9	
	comp=Z,1µm,18.8s,baz=352,slow=39								
QIS	Mount Isa	14.73	193	P		Pn		03 16 22.5	+0.5
	baz=15,SNR=5.4								
QIS	Mount Isa	14.73	193	P		Pn		03 16 23.0	+0.9
WB0	Warramunga Arr	15.95	211	Pn		Pn		03 16 38.3	0.0
WRAB	Tennant Creek	16.11	211	Pn		Pn		03 16 41.4	+1.1
WRAB	Tennant Creek	16.11	211	P		Pn		03 16 41.4	+1.1
WRAB				pmax	pmax				
	comp=Z,34nm,0.7s								
WB2	Warramunga Arr	16.12	211			P		03 16 44.2	+0.5
WRA	Warramunga Arr	16.13	211	Pn		Pn		03 16 42.3	+1.8
WRA	Warramunga Arr	16.13	211	*i*	P	Pn		03 16 40.0	-0.5
WRA				pmax	pmax				
	comp=Z,10.0nm,0.6s								
WRA	Warramunga Arr	16.13	211	Pn		Pn		03 16 37.7	-2.8
	comp=Z,1.6nm,0.3s,baz=20,slow=13,SNR=5.2								
WRA				Sn		Sn		03 19 24.7	-15
	comp=Z,2.8nm,0.3s,baz=38,slow=22,SNR=6.0								
WRA				Lg		Lg		03 21 20.7	
	baz=37,slow=28								
NLAI	Namlea	16.14	280	P		P		03 16 49.7	+5.7
KNRA	Kununurra	16.92	235	Pn		Pn		03 16 51.1	+0.6
KNRA	Kununurra	16.92	235	P		Pn		03 16 49.9	-0.6
SANI	Sanana	17.48	283	P		P		03 17 04.1	+5.3
SOEI	Soe	18.94	258	P		Pn		03 17 16.3	+0.7
SOEI				IAmb		IAmb		03 17 26.3	
	comp=Z,92nm,0.8s								
SOEI	Soe	18.94	258	P		P		03 17 14.8	-0.2
SOEI	Soe	18.94	258	P		Pn		03 17 28.5	+13
	comp=Z,168nm,0.9s,comp=Z,2µm								
AS01	Alice Springs	19.51	206	P		P		03 17 23.0	+1.9
AS31	Alice Springs	19.53	206	P		P		03 17 22.4	+1.1
ASAR	Alice Springs	19.53	206	P		P		03 17 22.5	+1.2
ASAR	Alice Springs	19.53	206	P		P		03 17 22.9	+1.6
	comp=Z,75nm,0.7s,baz=35,slow=9.6,SNR=21								
ASAR				S		S		03 20 50.9	-11
	comp=Z,23nm,0.8s,baz=17,slow=29,SNR=6.7								
GUMO	Guam	19.67	5	P		P		03 17 22.9	0.0
	comp=Z,86nm,0.8s,baz=230,slow=4.4,SNR=4.1								
KMSI	Cibinong	20.16	289	P		Pn		03 17 37.4	+7.3
	comp=Z,377nm,0.5s								
QLP	Quilpie	20.37	177	P		Pn		03 17 33.6	+1.0
	baz=20,SNR=4.0								
EIDS	Eidsvold	20.62	159	P		P		03 17 35.6	+2.4
	baz=21,SNR=3.4								
EIDS	Eidsvold	20.62	159	P		P		03 17 34.1	+0.9
FITZ	Fitzroy Crossi	20.73	233	P		P		03 17 35.2	+0.8
	baz=21,SNR=8.3								
FITZ	Fitzroy Crossi	20.73	233	P		P		03 17 35.0	+0.6
LUWI	Luwuk	20.84	283	P		P		03 17 37.0	+1.3
LUWI				IAmb		IAmb		03 17 42.4	
	comp=Z,268nm,1.5s								
LUWI	Luwuk	20.84	283	P		Pn		03 17 42.1	+4.0
	comp=Z,144nm,0.8s								
GTOI	Gorontalo	21.09	288	P		P		03 17 42.9	+4.5
EDFI	Ende, Flores	21.33	262	P		P		03 17 52.1	+11
	comp=Z,41nm,1.4s,comp=Z,689nm								
OOD	Oodnadatta	22.65	197	P		P		03 17 55.9	+0.9
KAPI	Kappang	23.20	272	P		P		03 18 01.3	+0.4
KAPI				IAmb		IAmb		03 18 03.7	
	comp=Z,132nm,1.1s								
KAPI	Kappang	23.20	272	P		P		03 18 01.3	+0.4
KAPI				pmax	pmax				
	comp=Z,132nm,1.1s								
TOLI2	Tolitoli	23.36	287	P		P		03 18 01.5	-1.0
TOLI2				IAmb		IAmb		03 18 04.0	
	comp=Z,55nm,0.8s								
TOLI2	Tolitoli	23.36	287	P		P		03 18 01.2	-1.2
WRKA	Warakurna	23.52	215	P		P		03 18 03.8	-0.1
	baz=24,SNR=12								
WRKA	Warakurna	23.52	215	P		P		03 18 04.3	+0.3
PLAI	Plampang	25.19	262	P		P		03 18 18.9	-0.6
MULG	Mulgathing	25.47	198	P		P		03 18 21.5	-0.4
STKA	Stephens Creek	25.65	183	P		P		03 18 23.8	+0.3
	baz=26								
STKA	Stephens Creek	25.65	183	P		P		03 18 23.3	-0.3
STKA	Stephens Creek	25.65	183	P		P		03 18 23.7	+0.2
	comp=Z,7.1nm,0.8s,baz=14,slow=11,SNR=3.9								
	comp=Z,7.1nm,0.8s								
BKB	Balikpapan	26.52	279	P		P		03 18 32.9	+1.2
MBWA	Marble Bar	27.07	234	P		P		03 18 38.0	+1.4
BBOO	Buckleboo	27.33	193	P		P		03 18 39.5	+0.8
HTT	Hallett	27.43	187	P		P		03 18 42.3	+2.6
	baz=28,SNR=3.4								
FORT	Forrest	28.27	208	P		P		03 18 47.0	-0.2
JAGI	Jajag, Banyuwa	28.74	264	P		P		03 18 48.5	-3.1
CNJI	Cibinong	35.68	266	P		P		03 19 51.0	-1.3
	comp=Z,50nm,1.1s,comp=Z,463nm								
XMIS	Christmas Isla	37.23	261	P		P		03 20 04.2	-1.5
XMIS				IAmb		IAmb		03 20 13.9	
	comp=Z,45nm,0.9s								
JMN	Monobe	40.58	348	P		P		03 20 33.4	0.0
JMN				IAmb		IAmb		03 20 41.3	
	comp=Z,39nm,1.1s								
JNU	Nakatsue	40.71	344	P		P		03 20 32.9	-1.6
BKNI	Bangkinang	42.41	277	P		P		03 20 48.2	-0.6
MJAR	Matsushiro Arr	42.69	354	P		P		03 20 49.0	-1.7
	comp=Z,2.3nm,0.7s,baz=178,slow=7.3,SNR=6.3								
MJAR				PcP		PcP		03 22 42.3	-0.2
	comp=Z,2.9nm,0.7s,baz=189,slow=3.1,SNR=4.1								
	comp=Z,2.3nm,0.7s								
MAJO	Matsushiro	42.69	354	P		P		03 20 49.4	-1.3
MAJO	Matsushiro	42.69	354	⇓ *i*	P	P		03 20 49.6	-1.0
MAJO				pmax	pmax				
	comp=Z,7.0nm,0.9s								
MJB9	Matsu-Tunnel	42.69	354	P		P		03 20 49.9	-0.7
NJ2	Nanjing	44.42	330	*e*	P	P		03 21 07.8	+3.2
NJ2				pmax	pmax				
	comp=Z,6.0nm,0.5s								
RPZ	Rata Peaks	44.80	151	LR		LR		03 40 13.7	
	comp=Z

USA0B Ussuriysk Arra 51.08 350 P **P** **03 21 56.2 +0.1**
USA0B pmax pmax
comp=Z,12nm,0.9s
USRK Ussuriysk Ar. 51.08 350 P **P** **03 21 55.8 -0.3**
USRK Ussuriysk Ar. 51.08 350 P **P** **03 21 56.9 +0.8**
comp=Z,6.7nm,0.8s,baz=166,slow=7.5,SNR=10
comp=Z,6.7nm,0.8s
XAN Xi'an 51.35 323 P **P** **03 21 58.3 -0.2**
XAN pP sP 03 22 09.0 +5.4
XAN pmax pmax
comp=Z,33nm,0.6s
XAN pmax pmax
comp=Z,170nm,3.8s
PZH PanZhiHua 51.51 311 P **P** **03 22 00.5 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,120nm,5.7s
PZH PanZhiHua 51.51 311 P **P** **03 22 01.8 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,5.7s
MDJ Mudanjiang 51.94 348 P **P** **03 22 04.3 +1.7**
MDJ pP sP 03 22 14.5 +6.8
MDJ sP pP 03 22 18.5 +12
MDJ PP **PP** **03 24 05.0 +4.2**
MDJ ScP **ScP** **03 27 09.5 -2.8**
MDJ PcS **PcS** **03 27 13.0 -0.1**
MDJ S **S** **03 29 26.5 +0.8**
MDJ pmax pmax
comp=Z,8.0nm,0.8s
MDJ pmax pmax
comp=Z,230nm,4.8s
MDJ LR LR
comp=Z,820nm,20.0s
MDJ LR LR
comp=Z,770nm,20.1s
MDJ LR LR
comp=Z,240nm,22.1s
BJT Baijiatuau 52.17 334 P **P** **03 22 04.2 -0.2**
BJT Baijiatuau 52.17 334 P **P** **03 22 04.2 -0.2**
BJT pmax pmax
comp=Z,10.0nm,0.8s
CN2 Changchun 52.18 344 P **P** **03 22 04.8 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BJI Beijing 52.19 334 P **P** **03 22 04.5 0.0**
BJI pmax pmax
comp=Z,9.0nm,0.8s
CD2 Chengdu 52.60 317 P **P** **03 22 08.8 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.8s
YSS Yuzh-Sakhalins 52.85 360 *e*P **P** **03 22 09.3 0.0**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,200nm,14.0s
TNCH TengChong 53.23 307 *e*P **P** **03 22 14.5 +1.7**
TNCH pP sP 03 22 25.0 +7.1
BNX BinXian 53.49 346 ⇓P **P** **03 22 14.0 -0.1**
BNX pmax pmax
comp=Z,26nm,1.2s
BNX pmax pmax
comp=Z,65nm,3.5s
HHC Hu-ho-hao-te 54.95 331 *e*P **P** **03 22 25.5 +0.5**
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,110nm,5.4s
HHC LR LR
comp=Z,120nm,16.0s
HHC LR LR
comp=Z,120nm,15.2s
HHC LR LR
comp=Z,110nm,16.0s
BTO Baotou 55.52 330 *e*P **P** **03 22 30.3 +1.2**
BTO sP sP 03 22 48.3 +14
BTO PP **PP** **03 24 36.5 +3.2**
BTO S **S** **03 30 12.8 -1.8**
BTO sS sS 03 30 34.3 +14
BTO SS **SS** **03 33 57.3 -2.5**
BTO pmax pmax
comp=Z,22nm,0.9s
BTO pmax pmax
comp=Z,210nm,8.4s
BTO LR LR
comp=Z,400nm,17.1s
BTO LR LR
comp=Z,240nm,18.8s
BTO LR LR
comp=Z,330nm,15.4s
LZH Lanzhou 55.80 322 *e*P **P** **03 22 32.5 +1.2**
LZH pP sP 03 22 42.5 +6.1
LZH pmax pmax
comp=Z,33nm,1.1s
KLR Kul'dur 56.00 351 ⇑*i*P **P** **03 22 32.1 -0.1**
KLR pmax pmax
comp=Z,13nm,1.7s
TYV Tymovskoe 56.76 360 *e*P **P** **03 22 42.0 +4.4**
TYV pmax pmax
comp=Z,10.0nm,0.9s
TYV pmax pmax
comp=Z,100nm,3.3s
HEH HeiHe 57.76 348 *e*P **P** **03 22 43.8 -0.9**
HEH pmax pmax
comp=Z,8.0nm,0.9s
SHL Shillong 58.82 305 P **P** **03 22 52.9 +0.1**
SHL Shillong 58.82 305 P **P** **03 22 52.9 +0.1**
SHL pmax pmax
comp=Z,36nm,1.0s
PEA0B Petropavlovsk- 60.31 10 ⇑*i*P **P** **03 23 02.6 +0.3**
PETK Petropavlovsk- 60.31 10 P **P** **03 23 03.2 +0.9**
comp=Z,6.2nm,0.8s,baz=151,slow=3.4,SNR=5.0
comp=Z,6.2nm,0.8s
GTA Gaotai 60.38 322 P **P** **03 23 04.3 +1.1**
GTA pmax pmax
comp=Z,14nm,0.9s
ZEA Zeya 61.11 349 *e*P **P** **03 23 08.4 +0.7**
ZEA pmax pmax
comp=Z,20nm,0.8s
LSA Lhasa 61.20 309 IAmb IAmb 03 23 12.0
comp=Z,15nm,0.9s
GOMU GeErMu 61.74 317 P **P** **03 23 13.5 +0.7**
GOMU pmax pmax
comp=Z,8.0nm,1.1s
ULN Ulaanbaatar 62.40 333 P **P** **03 23 17.0 +0.2**
ULN Ulaanbaatar 62.40 333*c i*P **P** **03 23 17.6 +0.9**
ULN pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 62.67 333 P **P** **03 23 17.7 -0.8**
SONM Songino Array 62.67 333 P **P** **03 23 19.0 +0.5**
comp=Z,2.8nm,0.7s,baz=158,slow=6.7,SNR=13
comp=Z,2.8nm,0.7s
PALK Pallekele 63.60 281 *e*P **P** **03 23 24.3 -1.0**
PALK pmax pmax
comp=Z,18nm,1.1s
MA2 Magadan 65.78 4 ⇑*e*P **P** **03 23 38.6 0.0**
MA2 pmax pmax
comp=Z,20nm,1.4s
MA2 Magadan 65.78 4 LR LR 03 47 26.7
comp=Z,25nm,21.9s,baz=126,slow=32
ZAK Zakamensk 65.93 333 *e*P **P** **03 23 39.6 -0.2**
ZAK pmax pmax
comp=Z,15nm,1.1s
PPT Papeete 66.64 106 LR LR 03 48 53.2
comp=Z,48nm,20.9s,baz=226,slow=32
MOY Mondy 67.86 333 *e*P **P** **03 23 52.8 +0.7**
MOY pmax pmax
comp=Z,36nm,2.8s
YAK Yakutsk 68.74 353 ⇑*i*P **P** **03 23 57.8 +0.6**
YAK pmax pmax
comp=Z,10.0nm,0.5s
SEY Seymchan 69.23 5 ⇑*i*P **P** **03 24 00.5 +0.2**
SEY pmax pmax
comp=Z,11nm,1.5s
WMQ Urumqi 70.36 321 ⇑*i*P **P** **03 24 08.5 +0.7**
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ LR LR
comp=Z,130nm,24.1s
NIKH Nikolski High 71.51 28 P **P** **03 24 15.3 +0.8**
baz=231
VNDA Vanda 72.05 176 P **P** **03 24 17.6 +0.3**
comp=Z,2.7nm,0.7s,baz=342,slow=7.6,SNR=7.1
comp=Z,2.7nm,0.7s

UNV Unalaska Valle 73.16 29 P **P** **03 24 25.4 +1.2**
baz=233
DGZ Jazzator, Alta 73.50 326*c i*P **P** **03 24 26.9 +0.3**
DGZ pmax pmax
comp=Z,21nm,0.7s
P08K Saint George I 73.51 25 P **P** **03 24 26.6 +0.3**
baz=230
SPIA Saint Paul Isl 73.60 24 P **P** **03 24 27.8 +1.1**
baz=229
ZSN Zaisan 73.86 323 *e*P **P** **03 24 28.3 -0.4**
baz=323
ZSN Zaisan 73.86 323 *e*P **P** **03 24 28.2 -0.4**
MK31 Makanchi Array 75.12 322 P **P** **03 24 35.8 -0.1**
MK31 IAmb IAmb 03 24 37.5
comp=Z,20nm,1.1s
MK31 Makanchi Array 75.12 322*c i*P **P** **03 24 36.4 +0.4**
MKAR Makanchi Array 75.12 322 P **P** **03 24 36.0 0.0**
MKAR Makanchi Array 75.12 322 P **P** **03 24 36.5 +0.5**
comp=Z,21nm,0.7s,baz=98,slow=8.2,SNR=65
comp=Z,21nm,0.7s
MAKZ Makanchi 75.32 322 P **P** **03 24 37.2 +0.2**
MAKZ IAmb IAmb 03 24 38.5
comp=Z,35nm,1.1s
MAKZ Makanchi 75.32 322 P **P** **03 24 37.3 +0.2**
MAKZ pmax pmax
comp=Z,35nm,1.1s
SHLS Shalkode 75.43 317 *e*P **P** **03 24 36.4 -1.6**
comp=Z,9.9nm,0.7s,baz=318
SHLS Shalkode 75.43 317 *e*P **P** **03 24 36.4 -1.6**
SHLS pmax pmax
comp=Z,10.0nm,0.7s
PDGK Podgornoye 75.48 318 P **P** **03 24 37.7 -0.6**
UZB Uzynbulak 75.72 317 *e*P **P** **03 24 39.6 -0.2**
comp=Z,12nm,0.6s,baz=317
UZB Uzynbulak 75.72 317 *e*P **P** **03 24 39.5 -0.2**
UZB pmax pmax
comp=Z,12nm,0.6s
BILL Bilibino 75.79 9 P **P** **03 24 39.4 +0.1**
BILL Bilibino 75.79 9 ⇑*i*P **P** **03 24 39.5 +0.2**
BILL pmax pmax
comp=Z,12nm,1.5s
PRZ Przheval'sk 75.89 316 P **P** **03 24 41.7 +1.0**
PRZ IAmb IAmb 03 24 43.3
comp=Z,38nm,1.1s
PRZ Przheval'sk 75.89 316 P **P** **03 24 41.7 +1.0**
PRZ pmax pmax
comp=Z,38nm,1.1s
KPKS Kokpek 76.08 317 *e*P **P** **03 24 41.5 -0.1**
comp=Z,11nm,1.1s,baz=317
KPKS Kokpek 76.08 317 *e*P **P** **03 24 41.5 -0.1**
KPKS pmax pmax
comp=Z,11nm,1.1s
SATY Saty 76.11 317 *e*P **P** **03 24 42.0 +0.1**
comp=Z,12nm,1.1s,baz=317
SATY Saty 76.11 317 *e*P **P** **03 24 41.9 +0.1**
SATY pmax pmax
comp=Z,12nm,1.1s
ZHN Zhinishke 76.13 317 *e*P **P** **03 24 41.8 -0.1**
baz=317
ZHN Zhinishke 76.13 317 *e*P **P** **03 24 41.8 -0.1**
NIL Nilore 76.81 306 P **P** **03 24 45.8 -0.1**
NIL Nilore 76.81 306 P **P** **03 24 45.8 -0.1**
NIL pmax pmax
comp=Z,69nm,0.7s
TDK Taldyqorghan 76.85 319 *e*P **P** **03 24 46.0 +0.1**
comp=Z,16nm,0.6s,baz=319
TDK Taldyqorghan 76.85 319 *e*P **P** **03 24 46.0 +0.1**
TDK pmax pmax
comp=Z,16nm,0.6s
SDPT Sand Point 76.91 29 P **P** **03 24 46.7 +0.8**
baz=238
ZAA0 Zalesovo Array 77.06 329 P **P** **03 24 46.0 -0.8**
ZALV Zalesovo Beam 77.06 329 P **P** **03 24 45.6 -1.2**
ZALV Zalesovo Beam 77.06 329 P **P** **03 24 46.0 -0.7**
comp=Z,7.2nm,0.8s,baz=106,slow=5.2,SNR=19
comp=Z,7.2nm,0.8s
MDOK Medeo 77.07 317 *e*P **P** **03 24 47.0 -0.3**
baz=317
MDOK Medeo 77.07 317 *e*P **P** **03 24 47.0 -0.3**
CHNA Chernabura Isl 77.07 30 P **P** **03 24 47.5 +0.7**
baz=239
M11K Mekoryuk 77.27 23 P **P** **03 24 48.8 +1.0**
baz=232
ULHL Ulahol 77.30 316 P **P** **03 24 49.5 +0.7**
SNR=5.3
GAMB Gambell 77.53 19 P **P** **03 24 50.4 +1.2**
baz=226
BOOM Boomskoye usch 77.59 316 P **P** **03 24 51.0 +0.7**
BOOM IAmb IAmb 03 24 51.9
comp=Z,19nm,0.6s
BOOM Boomskoye usch 77.59 316 P **P** **03 24 51.0 +0.7**
BOOM pmax pmax
comp=Z,19nm,0.6s
KUU Kurty 77.81 317 *e*P **P** **03 24 51.1 -0.3**
baz=317
KUU Kurty 77.81 317 *e*P **P** **03 24 51.0 -0.3**
S14K Fog Glacier 77.84 29 P **P** **03 24 52.0 +0.8**
baz=239
SEM Semipalatinsk 77.91 324 *e*P **P** **03 24 50.8 -1.2**
baz=324
SEM Semipalatinsk 77.91 324 *e*P **P** **03 24 50.7 -1.2**
TKM2 Tokmak 2 77.98 316 P **P** **03 24 53.0 +0.5**
SNR=12
TKM2 Tokmak 2 77.98 316 *i*P **P** **03 24 51.6 -0.9**
TKM2 pmax pmax
comp=Z,9.0nm,0.5s
TIXI Tiksi 78.18 355 ⇓*i*P **P** **03 24 51.7 -0.9**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
TIXI Tiksi 78.18 355 P **P** **03 24 51.8 -0.9**
comp=Z,3.3nm,0.4s,baz=238,slow=0.9,SNR=9.6
comp=Z,3.3nm,0.4s
CHGN Chignik 78.39 29 P **P** **03 24 54.2 0.0**
baz=240
M13K Dall Lake 78.42 24 P **P** **03 24 55.6 +1.4**
baz=235
UCH Uchtor 78.50 315 P **P** **03 24 56.8 +1.1**
SNR=15
O14K Tigyukauivet M 78.64 26 P **P** **03 24 56.6 +1.1**
baz=237
AAK Ala-Archa 78.65 316 P **P** **03 24 56.9 +0.7**
SNR=11
AAK Ala-Archa 78.65 316 P **P** **03 24 56.2 0.0**
AAK Ala-Archa 78.65 316*c i*P **P** **03 24 56.7 +0.6**
AAK pmax pmax
comp=Z,14nm,1.3s
AAK Ala-Archa 78.65 316 LR LR 04 01 00.2
comp=Z,18nm,21.7s,baz=113,slow=37
N14K Kuskokwak Cree 78.83 25 P **P** **03 24 57.2 +0.8**
baz=236
USP Ospenovka 78.85 316 P **P** **03 24 57.6 +0.5**
SNR=25
KURK Kurchatov 78.98 324 P **P** **03 24 57.1 -0.4**
KURK IAmb IAmb 03 24 58.7
comp=Z,22nm,0.8s
KURK Kurchatov 78.98 324 P **P** **03 24 57.6 +0.1**
KURBB Kurchatov Arra 79.00 324 P **P** **03 24 57.2 -0.4**
KURBB Kurchatov Arra 79.00 324 P **P** **03 24 57.6 -0.1**
comp=Z,15nm,0.9s,baz=115,slow=4.6,SNR=46
comp=Z,15nm,0.9s
EKS2 Erkin-Say 79.16 315 P **P** **03 24 59.8 +0.9**
SNR=12
M14K Bethel 79.18 24 P **P** **03 24 59.0 +0.6**
baz=236
L14K Kuka Creek 79.22 23 P **P** **03 24 59.9 +1.3**
baz=235
O15K Ungalikthiuk R 79.22 26 P **P** **03 24 60.0 +1.3**
baz=238
N15K Kwethluk River 79.64 25 P **P** **03 25 01.9 +0.9**
baz=238
M15K Kasigluk River 79.67 25 P **P** **03 25 02.4 +1.3**
baz=237
J14K Nanvaranak Lak 79.70 22 P **P** **03 25 02.9 +1.7**
baz=234
BTLS Baital 79.75 318 *e*P **P** **03 25 01.6 -0.4**
comp=Z,11nm,0.7s,baz=318
BTLS Baital 79.75 318 *e*P **P** **03 25 01.5 -0.4**
BTLS pmax pmax
comp=Z,11nm,0.7s
L15K Ungalak Mounta 79.89 24 P **P** **03 25 03.1 +0.9**
baz=236
TNA Tin City 79.93 19 P **P** **03 25 03.2 +0.8**
baz=230
P16K Nushagak River 79.96 27 P **P** **03 25 03.7 +1.1**
baz=240
ANM Nome 80.14 20 P **P** **03 25 04.2 +0.6**
ANM Nome 80.14 20 P **P** **03 25 04.7 +1.1**
baz=232,SNR=6.1
ANM Nome 80.14 20 P **P** **03 25 04.2 +0.6**
ANM pmax pmax
comp=Z,8.0nm,0.9s
O16K Kokwok River B 80.20 26 IAmb IAmb 03 25 05.8
comp=Z,34nm,1.2s
O16K Kokwok River B 80.20 26 P **P** **03 25 04.8 +0.8**
baz=240
K15K Wolf Creek Mou 80.21 23 IAmb IAmb 03 25 10.8
comp=Z,23nm,0.8s
K15K Wolf Creek Mou 80.21 23 P **P** **03 25 05.1 +1.1**
baz=236
N16K Nishlik Lake 80.36 25 P **P** **03 25 05.7 +0.9**
baz=239
F14K Arctic Creek 80.39 19 P **P** **03 25 06.1 +1.2**
baz=231
Q16K King Salmon 80.39 27 P **P** **03 25 05.9 +0.9**
baz=241
KBL Kabul 80.42 306 P **P** **03 25 04.6 -1.4**
KBL IAmb IAmb 03 25 06.3
comp=Z,14nm,0.7s
KBL Kabul 80.42 306 P **P** **03 25 04.6 -1.4**
KBL pmax pmax
comp=Z,14nm,0.7s
Q17K Contact Creek 80.55 28 P **P** **03 25 06.1 +0.1**
baz=242
M16K Timber Creek 80.56 25 IAmb IAmb 03 25 13.8
comp=Z,29nm,0.8s
M16K Timber Creek 80.56 25 P **P** **03 25 06.8 +0.9**
baz=239
L16K Owhat River 80.71 24 IAmb IAmb 03 25 13.4
comp=Z,18nm,0.8s
L16K Owhat River 80.71 24 P **P** **03 25 07.5 +0.8**
baz=238
O17K Koliganek Bris 80.73 26 P **P** **03 25 07.8 +1.0**
baz=241
P17K Kvichak River 80.74 27 P **P** **03 25 08.0 +1.1**
baz=241
G15K Niukluk 80.86 20 P **P** **03 25 08.1 +0.7**
baz=234
DZA Taraz 80.94 315 *e*P **P** **03 25 08.2 -0.3**
baz=315
DZA Taraz 80.94 315 *e*P **P** **03 25 08.1 -0.3**
N17K Nushagak Hills 81.06 26 IAmb IAmb 03 25 16.2
comp=Z,19nm,0.8s
N17K Nushagak Hills 81.06 26 P **P** **03 25 09.3 +0.7**
baz=240
F15K North Star Dit 81.09 19 IAmb IAmb 03 25 10.6
comp=Z,30nm,1.4s
F15K North Star Dit 81.09 19 P **P** **03 25 09.5 +0.9**
baz=233
J16K Anvik River 81.12 22 IAmb IAmb 03 25 15.8
comp=Z,20nm,0.8s
J16K Anvik River 81.12 22 P **P** **03 25 09.9 +1.1**
baz=237
H16K Elim 81.28 21 P **P** **03 25 10.3 +0.6**
baz=235,SNR=24
OHAK Old Harbor 81.32 30 P **P** **03 25 10.8 +0.8**
baz=244
M17K Holitna River 81.39 25 P **P** **03 25 12.0 +1.7**
baz=240
L17K Donlin 81.41 24 P **P** **03 25 11.7 +1.3**
baz=239
I17K Unalakleet 81.41 22 IAmb IAmb 03 25 18.3
comp=Z,26nm,0.8s
I17K Unalakleet 81.41 22 P **P** **03 25 11.7 +1.4**
baz=237,SNR=13
SIMJ Simiganj 81.48 310 P **P** **03 25 11.0 -0.5**
SIMJ IAmb IAmb 03 25 12.6
comp=Z,34nm,0.9s
KK31 Karatay Array 81.58 315 *i*P **P** **03 25 11.5 -0.3**
KKAR Karatay Array 81.58 315 P **P** **03 25 11.3 -0.5**
KKAR Karatay Array 81.58 315 P **P** **03 25 11.3 -0.5**
IUG luzhnay 81.65 314 *e*P **P** **03 25 12.0 -0.4**
comp=Z,9.4nm,0.9s,baz=314
IUG luzhnay 81.65 314 *e*P **P** **03 25 11.9 -0.4**
IUG pmax pmax
comp=Z,9.0nm,0.9s
G16K Koyuk River 81.67 20 IAmb IAmb 03 25 19.1
comp=Z,18nm,0.8s
G16K Koyuk River 81.67 20 P **P** **03 25 12.7 +1.0**
baz=235
N18K Kilae Creek 81.69 26 IAmb IAmb 03 25 19.5
comp=Z,20nm,0.8s
N18K Kilae Creek 81.69 26 P **P** **03 25 12.8 +0.8**
baz=242
K17K Iditarod 81.71 23 P **P** **03 25 13.2 +1.2**
baz=239
Q19K Cape Douglas, 81.90 28 P **P** **03 25 13.5 +0.4**
baz=244
KDAK Kodiak Island 81.91 29 P **P** **03 25 13.6 +0.5**
baz=245
KDAK Kodiak Island 81.91 29 LR LR 03 53 13.8
comp=Z,75nm,21.4s,baz=268,slow=30
OTUK Otayu 81.91 320 P **P** **03 25 13.2 -0.2**
SVW2 Sparrevohn 82.03 26 P **P** **03 25 14.0 +0.3**
SVW2 IAmb IAmb 03 25 20.8
comp=Z,16nm,0.8s
BRLS Borolday 82.03 315 *e*P **P** **03 25 14.1 -0.2**
baz=315
BRLS Borolday 82.03 315 *e*P **P** **03 25 14.0 -0.2**
L18K Granite Mounta 82.11 24 IAmb IAmb 03 25 21.7
comp=Z,14nm,0.8s
L18K Granite Mounta 82.11 24 P **P** **03 25 15.3 +1.2**
baz=241
M18K Stony River 82.11 25 P **P** **03 25 15.8 +1.7**
baz=242
O19K Port Alsworth 82.16 27 P **P** **03 25 15.2 +0.8**
baz=243
BRZS Berezniki 82.25 322 *e*P **P** **03 25 15.2 0.0**
comp=Z,9.1nm,0.9s,baz=322
BRZS Berezniki 82.25 322 *e*P **P** **03 25 15.1 0.0**
BRZS pmax pmax
comp=Z,9.0nm,0.9s
H17K Granite Mounta 82.27 21 IAmb IAmb 03 25 22.3
comp=Z,22nm,0.8s
H17K Granite Mounta 82.27 21 P **P** **03 25 15.7 +0.8**
baz=237
G17K Kiwalik Mounta 82.32 20 P **P** **03 25 16.0 +0.8**
baz=237
Q20K Shuyak Island 82.35 28 P **P** **03 25 16.0 +0.6**
baz=245
N19K Bonanza Creek 82.37 26 IAmb IAmb 03 25 17.3
comp=Z,32nm,1.1s
N19K Bonanza Creek 82.37 26 P **P** **03 25 16.2 +0.5**
baz=243
P19K Oil Pt 82.41 27 P **P** **03 25 15.9 +0.1**
baz=244
C16K Lisburne Hills 82.45 17 IAmb IAmb 03 25 25.0
comp=Z,14nm,0.9s
C16K Lisburne Hills 82.45 17 P **P** **03 25 16.1 +0.4**
baz=232
F17K Baldwin Pennin 82.64 20 IAmb IAmb 03 25 23.6
comp=Z,17nm,0.8s
F17K Baldwin Pennin 82.64 20 P **P** **03 25 18.2 +1.5**
baz=236
J18K Innoko River 82.71 23 P **P** **03 25 17.7 +0.5**
baz=240
TTA Tatalina 82.73 24 P **P** **03 25 18.3 +0.9**
TTA Tatalina 82.73 24 P **P** **03 25 18.0 +0.6**
baz=241
TTA Tatalina 82.73 24 P **P** **03 25 18.3 +0.9**
TTA pmax pmax
comp=Z,13nm,1.2s
D17K Noatak River 82.78 18 P **P** **03 25 18.3 +0.9**
baz=234,SNR=14
E17K Hotham Inlet 82.82 19 P **P** **03 25 18.5 +0.8**
baz=235,SNR=25
L19K White Mountain 82.84 25 IAmb IAmb 03 25 25.8
comp=Z,15nm,0.9s
L19K White Mountain 82.84 25 P **P** **03 25 18.8 +0.8**
baz=242
M19K Big River Lodg 82.91 25 IAmb IAmb 03 25 28.1
comp=Z,22nm,1.1s
M19K Big River Lodg 82.91 25 P **P** **03 25 19.7 +1.4**
baz=243
H18K Honhosa River 82.95 21 P **P** **03 25 18.8 +0.4**
baz=239
RSO Redoubt South 82.98 27 P **P** **03 25 18.9 0.0**
HOM Homer 83.14 28 P **P** **03 25 19.2 -0.3**
baz=246
C17K DeLong Mountai 83.21 17 P **P** **03 25 20.3 +0.6**
baz=234
G18K Tagagawik 83.23 21 IAmb IAmb 03 25 25.9
comp=Z,15nm,0.8s
G18K Tagagawik 83.23 21 P **P** **03 25 20.1 +0.2**
baz=238
F18K Selawik 83.26 20 P **P** **03 25 20.6 +0.6**

baz=237
GCSA Galena City Sc 83.28 22 P P 03 25 20.9 +0.8
baz=240,SNR=6.1
L20K Farewell, AK 83.38 25 P P 03 25 21.0 +0.2
baz=243
J19K Poorman 83.39 23 IAmb IAmb 03 25 28.1
comp=Z,13nm,0.9s
J19K Poorman 83.39 23 P P 03 25 21.2 +0.4
baz=241,SNR=7.8
E18K Tukpahlearik C 83.40 19 IAmb IAmb 03 25 27.9
comp=Z,16nm,0.8s
E18K Tukpahlearik C 83.40 19 P P 03 25 21.3 +0.5
baz=236
M20K Styx River 83.43 25 IAmb IAmb 03 25 22.8
comp=Z,25nm,1.1s
M20K Styx River 83.43 25 P P 03 25 21.4 +0.3
baz=244
N20K Mount Spurr 83.53 26 P P 03 25 21.4 -0.2
baz=245
BRSE Bradley Lake S 83.59 28 P P 03 25 21.7 -0.2
baz=246
K20K Telida 83.71 24 IAmb IAmb 03 25 28.9
comp=Z,17nm,0.9s
K20K Telida 83.71 24 P P 03 25 23.0 +0.6
baz=243
H19K Roundabout Mou 83.83 21 IAmb IAmb 03 25 30.6
comp=Z,18nm,0.9s
H19K Roundabout Mou 83.83 21 P P 03 25 23.4 +0.5
baz=240
QSPA South Pole Qui 83.84 180 P P 03 25 22.2 -1.0
QSPA IAmb IAmb 03 26 13.8
comp=Z,11nm,0.8s
QSPA South Pole Qui 83.84 180 P P 03 25 22.4 -0.8
comp=Z,8.4nm,0.7s,baz=317,slow=1.0,SNR=22
comp=Z,8.4nm,0.7s
C18K Utukok River 83.90 18 IAmb IAmb 03 25 24.8
comp=Z,32nm,1.6s
C18K Utukok River 83.90 18 P P 03 25 23.9 +0.6
baz=236
G19K Purcell Mounta 83.91 21 IAmb IAmb 03 25 25.3
comp=Z,26nm,1.2s
G19K Purcell Mounta 83.91 21 P P 03 25 23.8 +0.5
baz=240
F19K Shaleruckik Mo 84.02 20 IAmb IAmb 03 25 33.0
comp=Z,13nm,1.1s
F19K Shaleruckik Mo 84.02 20 P P 03 25 24.3 +0.4
baz=239
J20K Nowinta River 84.05 23 IAmb IAmb 03 25 26.2
comp=Z,23nm,1.0s
J20K Nowinta River 84.05 23 P P 03 25 25.0 +0.9
baz=243
B18K Kokolik River 84.13 17 P P 03 25 25.0 +0.6
baz=235
SKT Skwentna 84.16 26 P P 03 25 24.2 -0.6
baz=245
I20K Naaghedeneel 84.21 22 P P 03 25 25.7 +0.9
baz=242
NRIK Noril'sk 84.21 343 P P 03 25 23.8 -1.0
NRIK Noril'sk 84.21 343 *c i* P P 03 25 24.8 0.0
NRIK pmax pmax
comp=Z,27nm,0.9s
NRIK Noril'sk 84.21 343 P P 03 25 25.1 +0.3
comp=Z,18nm,0.8s,baz=118,slow=4.5,SNR=16
comp=Z,18nm,0.8s
PPLA Purkeypile 84.27 25 P P 03 25 25.0 -0.4
baz=245
SUA Susitna One 84.29 26 IAmb IAmb 03 25 33.7
comp=Z,16nm,0.8s
SUA Susitna One 84.29 26 P P 03 25 24.9 -0.6
baz=246
SEW Seward 84.33 28 P P 03 25 25.7 +0.1
baz=247
O22K Cooper Landing 84.35 27 P P 03 25 26.0 +0.3
baz=247
H20K Anotleneega Mo 84.39 22 P P 03 25 26.3 +0.5
baz=242,SNR=20
E19K Redstone River 84.52 20 P P 03 25 27.3 +0.8
baz=240
CAST Castle Rocks 84.54 24 IAmb IAmb 03 25 33.3
comp=Z,17nm,0.8s
CAST Castle Rocks 84.54 24 P P 03 25 26.6 -0.1
baz=245,SNR=15
BVAR Borovoye Array 84.57 325 P P 03 25 27.9 +0.9
comp=Z,74nm,0.8s,baz=113,slow=6.8,SNR=111
comp=Z,74nm,0.8s
RC01 Rabbit Creek A 84.58 27 P P 03 25 26.4 -0.5
baz=247,SNR=8.0
BRVK Borovoye 84.64 325 P P 03 25 27.2 -0.2
BRVK Borovoye 84.64 325 P P 03 25 27.2 -0.2
BRVK pmax pmax
comp=Z,55nm,0.9s
CHUM Lake Minchumin 84.64 24 P P 03 25 27.5 +0.4
baz=244,SNR=31
C19K Lookout Ridge 84.64 18 P P 03 25 28.4 +1.3
baz=237
M22K Willow 84.68 26 P P 03 25 27.2 -0.1
baz=247
D19K Kuna River 84.77 18 IAmb IAmb 03 25 29.3
comp=Z,23nm,1.1s
D19K Kuna River 84.77 18 P P 03 25 28.0 +0.3
baz=239
F20K Avaraart Lake 84.83 20 IAmb IAmb 03 25 29.9
comp=Z,13nm,1.0s
F20K Avaraart Lake 84.83 20 P P 03 25 28.7 +0.7
baz=241
CUT Chulitna 84.87 25 P P 03 25 27.8 -0.5
baz=246
PMR Palmer 85.05 26 P P 03 25 28.6 -0.5
baz=248,SNR=10
KTH Kantishna Hill 85.07 24 IAmb IAmb 03 25 29.8
comp=Z,19nm,1.1s
GHO Glory Hole Cre 85.21 26 P P 03 25 29.3 -0.8
GHO IAmb IAmb 03 25 35.4
comp=Z,21nm,0.9s
BPAW Bear Paw Mtn. 85.27 24 IAmb IAmb 03 25 31.0
comp=Z,12nm,1.1s
BPAW Bear Paw Mtn. 85.27 24 P P 03 25 30.2 -0.1
baz=246,SNR=6.0
E20K Nigu River 85.27 19 P P 03 25 30.9 +0.6
baz=240
KNK Knik Glacier 85.28 27 P P 03 25 30.7 +0.2
baz=248,SNR=9.8
TRF Thorofare Moun 85.28 24 IAmb IAmb 03 25 37.2
comp=Z,13nm,0.9s
TRF Thorofare Moun 85.28 24 P P 03 25 30.3 -0.3
baz=246
I21K Tanana 85.33 23 IAmb IAmb 03 25 32.4
comp=Z,22nm,1.1s
I21K Tanana 85.33 23 P P 03 25 31.2 +0.7
baz=245
D20K Etivluk River 85.36 19 P P 03 25 31.5 +0.8
baz=240
SML Sawmill 85.48 26 P P 03 25 31.9 +0.5
baz=248,SNR=15
F21K Alatna River 85.69 20 P P 03 25 32.7 +0.4
baz=243
GLI Glacier Island 85.70 27 P P 03 25 32.5 0.0
baz=249
M23K Glacier View 85.75 26 P P 03 25 33.1 +0.4
baz=249
MLY Manley 85.75 23 IAmb IAmb 03 25 39.3
comp=Z,18nm,0.8s
MLY Manley 85.75 23 P P 03 25 33.0 +0.3
baz=246,SNR=19
WAT1 Susitna Watana 85.77 25 P P 03 25 33.0 +0.1
baz=248
H22K Ishtalitna Cre 85.86 22 P P 03 25 33.8 +0.6
baz=245
SCM Sheep Creek Mo 85.94 26 P P 03 25 34.2 +0.4
baz=249
MCK McKinley 85.95 24 P P 03 25 33.1 -0.6
baz=248,SNR=14
WAT6 Susitna Watana 86.03 26 P P 03 25 34.1 -0.1
baz=249
E21K Killik River 86.08 19 P P 03 25 34.5 +0.2
E21K IAmb IAmb 03 25 41.7
comp=Z,21nm,0.8s
E21K Killik River 86.08 19 P P 03 25 35.1 +0.9
baz=243
C21K Knifeblade Rid 86.15 18 P P 03 25 35.4 +0.8
baz=242
EYAK Cordova Ski Ar 86.21 28 P P 03 25 35.2 +0.3
baz=251
NEA2 Nenana 86.23 24 IAmb IAmb 03 25 35.5
comp=Z,16nm,1.2s
NEA2 Nenana 86.23 24 P P 03 25 34.8 -0.2
baz=247,SNR=5.3
G22K Bettles 86.25 21 P P 03 25 35.5 +0.4
baz=245
I23K Minto, Yukon-K 86.33 23 P P 03 25 35.9 +0.4
baz=247
DHY Denali Highway 86.36 25 P P 03 25 36.1 +0.2
baz=249,SNR=12
KLU Klutina 86.45 27 IAmb IAmb 03 25 42.2
comp=Z,16nm,1.0s
KLU Klutina 86.45 27 P P 03 25 36.8 +0.5
baz=250
M24K Tolsona, Glenn 86.54 26 P P 03 25 36.9 +0.2
baz=250
WRH Wood River Hil 86.57 24 IAmb IAmb 03 25 42.0
comp=Z,20nm,0.9s
KAIM Kayak Island 86.64 29 P P 03 25 37.6 +0.4
baz=252
E22K Anaktuvuk Pass 86.66 20 IAmb IAmb 03 25 44.6
comp=Z,18nm,0.8s
E22K Anaktuvuk Pass 86.66 20 P P 03 25 38.0 +0.8
baz=245
A21K Barrow 86.67 16 P P 03 25 37.7 +0.7
baz=240
G23K Bananza Creek 86.70 21 IAmb IAmb 03 25 47.5
comp=Z,14nm,0.8s
G23K Bananza Creek 86.70 21 P P 03 25 38.0 +0.7
baz=246
D22K Ayikyak River 86.70 19 IAmb IAmb 03 25 44.5
comp=Z,17nm,0.8s
D22K Ayikyak River 86.70 19 P P 03 25 38.4 +1.1
baz=244
COLA College 86.82 24 P P 03 25 36.8 -1.1
COLA College 86.82 24 P P 03 25 37.7 -0.2
baz=248
COLA College 86.82 24 P P 03 25 36.8 -1.1
COLA pmax pmax
comp=Z,24nm,0.8s
COLD Coldfoot 86.84 21 P P 03 25 38.8 +0.8
baz=246
BMRM Bremner River 86.88 28 P P 03 25 39.0 +0.6
baz=252
HDA Harding Lake 87.01 24 IAmb IAmb 03 25 46.1
comp=Z,12nm,0.8s
HDA Harding Lake 87.01 24 P P 03 25 38.9 +0.1
baz=249
POKR Poker Plat Res 87.07 23 P P 03 25 38.8 -0.4
baz=249
N25K Chitina, Valde 87.08 27 P P 03 25 39.5 +0.1
baz=252
HARP HAARP 87.09 26 P P 03 25 39.6 +0.3
baz=251
PAX Paxson 87.14 26 P P 03 25 40.1 +0.5
baz=251,SNR=5.3
H24K Noodor Dome 87.16 23 IAmb IAmb 03 25 46.4
comp=Z,11nm,0.8s
H24K Noodor Dome 87.16 23 P P 03 25 39.9 +0.2
baz=248
IL31 87.17 24 IAmb IAmb 03 25 44.2
comp=Z,19nm,0.8s
ILAR Eielson Array 87.17 24 P P 03 25 37.6 -2.1
ILAR Eielson Array 87.17 24 P P 03 25 38.5 -1.1
comp=Z,12nm,0.8s,baz=257,slow=4.8,SNR=47
comp=Z,12nm,0.8s
K24K Donnelly Dome 87.29 25 P P 03 25 40.6 +0.3
baz=250
E23K Ft Yukalar 87.38 20 P P 03 25 41.4 +0.7
baz=247
D23K Nanushuk River 87.39 19 P P 03 25 42.2 +1.5
baz=246
GLB Gilahina Butte 87.39 27 IAmb IAmb 03 25 50.5
comp=Z,14nm,0.8s
CRQE Cirque 87.52 28 P P 03 25 41.8 +0.2
baz=253
G24K Hadweenzic Riv 87.63 22 IAmb IAmb 03 25 43.6
comp=Z,24nm,1.2s
G24K Hadweenzic Riv 87.63 22 P P 03 25 42.1 +0.3
baz=249
J25K Salcha River, 87.72 24 P P 03 25 42.3 -0.1
baz=251
MCARA McCarthy VSAT 87.73 28 P P 03 25 42.4 -0.1
baz=253
F24K Squaw Lake 87.78 21 IAmb IAmb 03 25 44.8
comp=Z,21nm,0.9s
F24K Squaw Lake 87.78 21 P P 03 25 43.5 +0.9
baz=248
PRP Porcupine Dome 87.96 23 P P 03 25 42.9 -0.7
baz=251
L26K Log Cabin Wild 88.08 26 IAmb IAmb 03 25 53.5
comp=Z,13nm,0.8s
L26K Log Cabin Wild 88.08 26 P P 03 25 44.3 +0.2
baz=253,SNR=6.9
D24K Happy Valley 88.08 19 P P 03 25 44.9 +1.0
baz=247
SCRK Sand Creek 88.09 25 IAmb IAmb 03 25 50.3
comp=Z,6.8nm,0.8s
SCRK Sand Creek 88.09 25 P P 03 25 44.6 +0.4
baz=252
G25K Bearman Lake 88.17 22 P P 03 25 45.0 +0.7
baz=250
BARN Barnard Glacie 88.28 28 P P 03 25 43.9 -1.4
C24K Franklin Bluff 88.34 19 P P 03 25 45.9 +0.8
baz=248
CTG China Glacier 88.40 28 P P 03 25 46.1 +0.3
baz=254
J26L Joseph Creek 88.43 25 IAmb IAmb 03 25 47.2
comp=Z,12nm,0.8s
J26L Joseph Creek 88.43 25 P P 03 25 46.1 +0.3
baz=252
M27K Edge Creek, AK 88.53 27 P P 03 25 47.5 +1.1
baz=254
F25K Christian Rive 88.61 21 P P 03 25 47.9 +1.4
baz=250
PINM Pinnacle 88.69 29 P P 03 25 47.6 +0.5
baz=256
L27K Beaver Creek, 88.75 26 IAmb IAmb 03 25 57.0
comp=Z,11nm,0.8s
L27K Beaver Creek, 88.75 26 P P 03 25 48.0 +0.7
baz=254
BCAR Beaver Creek A 88.77 26 P P 03 25 47.6 +0.2
E25K Arctic Village 88.82 21 IAmb IAmb 03 25 49.7
comp=Z,16nm,1.1s
E25K Arctic Village 88.82 21 P P 03 25 48.4 +0.9
baz=250
I26K Coal Creek Min 88.84 24 P P 03 25 47.4 -0.2
baz=253
K27K Chicken 88.91 25 P P 03 25 49.1 +1.2
baz=254
BMAR Burnt Mountain 88.95 22 P P 03 25 48.7 +0.6
D25K Kavik River 88.95 20 IAmb IAmb 03 25 57.6
comp=Z,12nm,0.9s
D25K Kavik River 88.95 20 P P 03 25 49.1 +1.0
baz=250
BVCY Beaver Creek 89.01 27 P P 03 25 49.3 +0.9
baz=255,SNR=9.4
PNL Peninsula 89.01 30 P P 03 25 49.0 +0.5
baz=256
YUK3 Moose Creek 89.02 28 P P 03 25 49.6 +0.8
baz=255
G26K Porcupine Rive 89.09 22 P P 03 25 50.1 +1.4
baz=252
F26K Sheenjek River 89.19 21 P P 03 25 50.4 +1.2
baz=252
YUK8 Steele Glacier 89.22 28 P P 03 25 50.3 +0.5
baz=256
EGAK Eagle 89.50 25 IAmb IAmb 03 25 57.5
comp=Z,16nm,0.9s
EGAK Eagle 89.50 25 P P 03 25 51.2 +0.5
baz=255,SNR=10.0
I27K Kandik River 89.54 24 P P 03 25 51.4 +0.5
baz=254
O29M Mount Kennedy 89.56 29 P P 03 25 51.7 +0.5
baz=257
H27K Steamboat Moun 89.75 23 P P 03 25 52.9 +1.1
baz=254
YUK4 Talbot Arm 89.76 28 P P 03 25 53.6 +1.3
baz=257
P29M Windy Craggy 89.82 30 P P 03 25 52.9 +0.6
baz=258
DAWY Dawson 90.06 25 IAmb IAmb 03 26 00.1
comp=Z,9.9nm,0.8s
DAWY Dawson 90.06 25 P P 03 25 54.2 +0.8
baz=256,SNR=8.8
M29M Somme Creek 90.09 27 P P 03 25 54.1 +0.4
baz=257
AB31 Akbulak array 90.10 319 P P 03 25 51.7 -2.1
ABKAR Akbulak array 90.10 319 P P 03 25 52.4 -1.5
I28M Miner Creek 90.17 24 IAmb IAmb 03 26 01.0
comp=Z,10nm,0.8s
I28M Miner Creek 90.17 24 P P 03 25 54.7 +0.7
baz=256
HYT Haines Junctio 90.19 29 IAmb IAmb 03 27 13.2
comp=Z,30nm,1.5s
HYT Haines Junctio 90.19 29 P P 03 25 55.0 +0.8
baz=258
S31K Pelican 90.25 32 P P 03 25 55.1 +0.8
baz=259
P30M Million Dollar 90.31 30 P P 03 25 56.0 +1.4
baz=258
L29M L29M 90.39 26 IAmb IAmb 03 26 02.3
comp=Z,17nm,0.8s
L29M L29M 90.39 26 P P 03 25 56.1 +1.1
baz=257,SNR=12
R31K City Hall, Gus 90.59 31 P P 03 25 56.8 +0.9
baz=259
J29N Klondike Camp 90.65 25 IAmb IAmb 03 26 06.7
comp=Z,13nm,1.2s
J29N Klondike Camp 90.65 25 P P 03 25 56.6 +0.4
baz=257
F28M Old Crow 90.74 22 P P 03 25 57.1 +0.6
baz=256
K29M Barlow Dome 90.82 26 IAmb IAmb 03 26 03.8
comp=Z,13nm,0.8s
K29M Barlow Dome 90.82 26 P P 03 25 57.8 +0.8
baz=258
O30N Mendenhall 90.86 29 P P 03 25 57.2 +0.1
baz=259
M30M Minto, Yukon 90.88 27 IAmb IAmb 03 26 16.9
comp=Z,24nm,1.8s
M30M Minto, Yukon 90.88 27 P P 03 25 57.6 +0.4
baz=258
H29M Whitestone 90.98 23 P P 03 25 58.2 +0.6
baz=257
SKAG Skagway 90.99 30 P P 03 25 58.0 +0.3
baz=260
S32K Kilisnoo 91.03 32 P P 03 25 57.9 0.0
baz=260
R32K Eaglecrest 91.20 32 P P 03 25 58.6 -0.2
baz=260
WHY Whitehorse 91.42 29 P P 03 26 00.1 +0.2
baz=260
J30M Hart River 91.48 25 P P 03 26 00.2 +0.2
baz=259
AKTO Aktyubinsk 91.51 320 P P 03 25 58.9 -1.5
comp=Z,6.1nm,0.8s,baz=96,slow=3.3,SNR=22
comp=Z,6.1nm,0.8s
I30M Mount Dempster 91.58 25 IAmb IAmb 03 26 12.4
comp=Z,9.7nm,1.1s
I30M Mount Dempster 91.58 25 P P 03 26 00.7 +0.2
baz=259
U33K Whale Pass 91.61 34 P P 03 26 00.7 0.0
baz=262
E29M Blow River 91.64 21 P P 03 26 00.6 0.0
baz=258
EPYK Eagle Plains 91.67 23 IAmb IAmb 03 26 07.4
comp=Z,13nm,0.8s
EPYK Eagle Plains 91.67 23 P P 03 26 01.3 +0.5
baz=259
P32M Atlin 91.82 30 P P 03 26 01.9 +0.3
baz=261
M31M Drury Creek, Y 91.91 28 P P 03 26 02.2 +0.2
baz=261
G30M tAoh Zraii Nji 91.98 23 P P 03 26 02.5 +0.3
baz=259
ARU Arti 92.01 326 P P 03 26 00.8 -1.7
ARU IAmb IAmb 03 26 02.0
comp=Z,13nm,1.0s
ARU Arti 92.01 326 *c i* P P 03 26 01.0 -1.5
ARU 03 29 41.1
ARU S SKSac 03 36 31.2 -4.4
ARU pmax pmax
comp=Z,13nm,1.0s
ARU Arti 92.01 326 P P 03 26 01.3 -1.2
comp=Z,7.6nm,0.2s,baz=87,slow=3.7,SNR=11
comp=Z,7.6nm,0.2s
WRAK Wrangell Islan 92.08 34 P P 03 26 03.0 +0.2
baz=262
F30M Barrier River 92.26 22 P P 03 26 04.1 +0.6
baz=260
V35K Ketchikan 92.34 35 P P 03 26 04.0 -0.1
baz=263
P33M Teslin, Yukon 92.36 30 P P 03 26 04.3 +0.1
baz=262
N32M Quiet Lake 92.37 29 P P 03 26 03.8 -0.4
baz=262
FARO Faro, Yukon 92.40 28 P P 03 26 04.3 +0.1
baz=262
G31M Satah River 92.73 23 IAmb IAmb 03 26 11.0
comp=Z,7.3nm,0.8s
G31M Satah River 92.73 23 P P 03 26 05.5 -0.1
baz=261
S34M Telegraph Cree 92.93 32 P P 03 26 06.5 -0.2
baz=263
F31M Tsiigehtchic 93.01 23 P P 03 26 06.6 -0.3
baz=261
ELIB Princess Elisa 93.03 196 *d* P P 03 26 07.2 0.0
R33M Jennings River 93.19 31 P P 03 26 07.7 -0.4
baz=264
INK Inuvik 93.22 22 P P 03 26 07.4 -0.5
INK Inuvik 93.22 22 P P 03 26 07.7 -0.1
baz=262
INK Inuvik 93.22 22 P P 03 26 07.4 -0.5
INK pmax pmax
comp=Z,7.0nm,1.3s
WTLY Watson Lake, Y 94.35 30 P P 03 26 12.6 -0.7
baz=265
TGTN Hyland Airport 94.71 29 P P 03 26 13.6 -1.4
baz=266
BELG Belogornoye 98.12 322 P P 03 26 29.8 -0.8
comp=Z,35nm,0.8s,baz=176,slow=1.2,SNR=13
SMMC Simmler 99.19 55 P Pdif 03 26 34.9 -1.0
baz=269
SNAA Sanae 99.20 190 LR LR 04 12 20.3
comp=Z,105nm,19.4s,baz=120,slow=36
LRMC Laurel Mtn Rad 101.08 55 P Pdif 03 26 43.0 -1.3
baz=270
YKA Yellowknife Ar 101.11 28 *i* P Pdif 03 26 44.5 +0.8
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 101.11 28 P Pdif 03 26 42.7 -0.9
comp=Z,0.6nm,0.9s,baz=274,slow=4.8,SNR=8.4
YKA PKKPbc PKKPbc 03 42 53.3 -3.7
comp=Z,0.4nm,0.8s,baz=103,slow=2.9,SNR=5.7
KIV Kislovodsk 101.68 313 *e* P Pdif 03 26 43.3 -3.5
KIV pmax pmax
comp=Z,4.0nm,1.0s
FURC Furnace Creek, 101.73 54 P Pdif 03 26 45.6 -1.4
baz=271
GSC Goldstone, Bar 101.79 55 P Pdif 03 26 46.3 -1.2
baz=271
PFO Pinyon Flats O 102.10 57 P Pdif 03 26 48.2 -0.8
baz=271
TPFO Pinon Flats 102.11 57 P Pdif 03 26 47.7 -1.3
baz=271
MONP2 Monument Peak 102.14 58 P Pdif 03 26 47.9 -1.4
baz=271
IKP In-Ko-Pah, Jac 102.41 58 P Pdif 03 26 48.4 -1.9
baz=271
TUQ Turquoise Moun 102.51 55 P Pdif 03 26 49.2 -1.5
baz=271
SWSC Sam W. Stewart 102.66 58 P Pdif 03 26 50.2 -1.1
baz=271
R11B Troy Canyon, C 102.69 52 P Pdif 03 26 50.8 -0.8
baz=272
BC3 Big Chuckawall 102.94 57 P Pdif 03 26 52.4 -0.2
baz=271
APA Apatity 103.07 338 *i* P Pdif 03 27 05.3 +13
APA pmax pmax
comp=Z,5.0nm,1.1s
APA MLR MLR
comp=Z,800nm,16.0s
HLID Hailey 103.29 47 P Pdif 03 26 54.3 +0.3
baz=274
OBN Obninsk 104.40 325 *e* P Pdif 03 26 59.3 +0.9
OBN *e* 03 31 14.5
OBN pmax pmax
comp=Z,4.0nm,0.9s
DUG Dugway, Tooele 104.73 50 P Pdif 03 27 00.5 0.0
baz=274
ARCES ARCESS Array B 105.12 341 Pdiff Pdif 03 26 59.1 -2.3
comp=Z,4.7nm,1.0s,baz=82,slow=6.6,SNR=3.9
MVCO Mesa Verde 108.38 53 P PKiKP 03 31 21.8 -1.3
baz=276
LAO LASA Array 108.62 43 P PKiKP 03 31 22.2 -0.8
baz=281
K22A Casper 109.13 47 P PKiKP 03 31 24.6 +0.3
baz=280
121A Cookes Peak, D 109.43 58 P PKiKP 03 31 24.6 -0.5
baz=275

DGMT	Dagmar baz=283	109.58	41	P	PKiKP	03 31 24.5	-0.3
N23A	Red Feather La baz=279	109.85	49	P	PKiKP	03 31 25.0	-0.8
Y22D	IRIS PASSCAL I baz=276	110.00	56	P	PKiKP	03 31 25.3	-0.8
Y22F	Passcal Instru baz=276	110.00	56	P	PKiKP	03 31 25.0	-1.0
ISCO	Idaho Springs baz=279	110.27	50	P	PKiKP	03 31 25.3	-1.3
ANMO	Albuquerque baz=277	110.28	55	P	PKiKP	03 31 25.3	-1.3
RSSD	Black Hills baz=282	110.64	45	P	PKiKP	03 31 26.2	-0.9
SDCO	Great Sand Dun baz=279	110.67	52	P	PKiKP	03 31 26.5	-0.9
Q24A	Divide baz=279	110.76	51	P	PKiKP	03 31 26.1	-1.5
MNTX	Cornudas Mount baz=276	111.54	58	P	PKiKP	03 31 28.0	-0.9
T25A	Trinidad baz=279	111.62	53	P	PKiKP	03 31 28.1	-1.1
KSCO	Kaye Shedlock' baz=281	112.69	50	P	PKiKP	03 31 30.3	-0.8
OGNE	Ogallala baz=282	112.75	48	P	PKiKP	03 31 30.2	-0.8
TXAR	Lajitas Array comp=Z,0.6nm,0.9s,baz=117,slow=0.2,SNR=5.0	113.27	61	PKiKP	PKiKP	03 31 32.1	-0.3
TXAR	comp=Z,0.7nm,0.8s,baz=111,slow=6.9,SNR=5.9			PKKPab	PKKPab	03 42 25.6	+0.6
MSTX	Muleshoe baz=279	113.43	56	P	PKiKP	03 31 31.6	-1.0
SUSD	Miller baz=286	114.11	44	P	PKPdf	03 31 33.2	-0.2
AMTX	Amarillo baz=280	114.17	55	P	PKPdf	03 31 33.6	-0.3
CBKS	Cedar Bluff baz=283	114.93	50	P	PKiKP	03 31 34.9	-0.3
AGMN	Agassiz Nation baz=290	114.95	39	P	PKiKP	03 31 34.5	-0.3
BGNE	Belgrade baz=285	115.49	47	P	PKiKP	03 31 36.1	-0.1
JCT	Junction City baz=279	116.45	59	P	PKPdf	03 31 36.4	-2.0
WMOK	Wichita Mounta baz=282	116.54	54	P	PKPdf	03 31 37.0	-1.4
BRDY	Brady	117.00	58		PKPdf	03 31 38.6	-0.8
833A	Chaparral WMA, baz=278	117.11	61	P	PKPdf	03 31 37.9	-1.7
KSU1	Kansas State U baz=285	117.23	49	P	PKPdf	03 31 38.0	-1.5
EYMN	Ely baz=294	117.80	38	P	PKPdf	03 31 39.2	-1.2
SPMN	Marine on St. baz=291	118.01	41	P	PKPdf	03 31 39.4	-1.5
WHTX	Lake Whitney, baz=281	118.17	57	P	PKPdf	03 31 39.4	-2.1
TUL3	Leonard baz=284	118.67	52	P	PKPdf	03 31 41.2	-1.2
SCIA	State Center baz=289	118.87	45	P	PKPdf	03 31 42.4	-0.3
CLL	Collm	118.95	327	*e*PKiKP	PKPdf	03 31 43.0	+0.5
CLL	Collm	118.95	327	*e*PKiKP	PKPdf	03 31 43.0	+0.5
U38A	Gravette	119.63	51	PKPdf	PKPdf	03 31 42.9	-1.4
S39A	Bolivar	120.10	50	PKPdf	PKPdf	03 31 43.9	-1.2
NATX	Nacogdoches baz=283	120.54	57	P	PKPdf	03 31 44.9	-1.2
JFWS	Jewell Farm baz=292	120.57	43	P	PKPdf	03 31 45.0	-0.8
MIAR	Mount Ida baz=285	120.76	53	P	PKPdf	03 31 46.0	-0.5
CCM	Cathedral Cave baz=289	121.56	49	P	PKPdf	03 31 47.5	-0.4
HDIL	Hopedale baz=292	122.12	45	P	PKPdf	03 31 48.1	-0.8
L44A	Lake County Fo baz=294	122.45	43	P	PKPdf	03 31 47.8	-1.7
GLMI	Grayling baz=298	123.44	39	P	PKPdf	03 31 50.1	-1.2
SFIN	Lafayette baz=294	123.73	45	P	PKPdf	03 31 50.9	-1.1
EKA	Eskdalemuir Ar comp=Z,1.4nm,0.6s,baz=32,slow=4.2,SNR=5.8	124.00	337	PKP	PKPdf	03 31 51.9	-0.2
OXF	Oxford baz=288	124.07	52	P	PKPdf	03 31 51.1	-1.7
PLCA	Paso Flores comp=Z,2.3nm,0.7s,baz=231,slow=1.5,SNR=14	124.09	149	PKP	PKPdf	03 31 53.8	+0.9
WVT	Waverly baz=290	124.77	50	P	PKPdf	03 31 53.4	-0.7
O48B	Farmland baz=295	125.14	44	P	PKPdf	03 31 54.5	-0.2
WCI	Wyandotte Cave baz=293	125.15	47	P	PKPdf	03 31 54.1	-0.7
AAM	Ann Arbor baz=298	125.24	41	P	PKPdf	03 31 54.3	-0.6
P49A	Miami Univ. Ec baz=295	125.75	45	P	PKPdf	03 31 55.7	-0.2
SCHQ	Schefferville comp=Z,1.3nm,0.6s,baz=0.0,slow=3.0,SNR=5.3	125.83	21	PKP	PKPdf	03 31 55.0	-0.6
LRAL	Lakeview Retre baz=289	126.44	53	P	PKPdf	03 31 57.0	-0.4
ACSO	Alum Creek Sta baz=297	126.64	43	P	PKPdf	03 31 57.4	-0.2
BRAL	Brewton baz=288	126.97	55	P	PKPdf	03 31 57.8	-0.6
P52A	Corning baz=297	127.50	44	P	PKPdf	03 31 58.3	-1.0
M53A	WI Miller and baz=300	127.61	41	P	PKPdf	03 31 58.9	-0.5
ERPA	Erie baz=301	127.71	40	P	PKPdf	03 31 59.1	-0.5
TZTN	Tazewell baz=294	127.82	48	P	PKPdf	03 31 58.8	-1.2
O53A	New Philadelph baz=299	127.83	43	P	PKPdf	03 31 58.9	-0.9
MCWV	Mont Chateau baz=300	129.04	43	P	PKPdf	03 32 01.2	-1.0
GOGA	Godfrey baz=292	129.09	51	P	PKPdf	03 32 01.5	-1.0
LONY	Lake Ozonia baz=308	129.54	34	P	PKPdf	03 32 02.0	-1.0
TIGA	Tifton baz=290	129.69	54	P	PKPdf	03 32 03.9	+0.2
BLA	Blacksburg baz=297	129.80	46	P	PKPdf	03 32 03.8	0.0
SSPA	Standing Stone baz=302	129.83	40	P	PKPdf	03 32 03.9	+0.2
BINY	Binghamton baz=305	130.16	38	P	PKPdf	03 32 03.9	-0.4
LBNH	Lisbon baz=311	131.26	33	P	PKPdf	03 32 04.6	-1.7
CBN	Corbin Frederi baz=301	131.44	43	P	PKPdf	03 32 05.7	-1.0
NHSC	New Hope baz=294	131.75	50	P	PKPdf	03 32 06.8	-0.7
PKME	Peaks-Kenny Pk baz=314	131.95	31	P	PKPdf	03 32 06.4	-1.1
L61B	Northampton baz=309	131.97	36	P	PKPdf	03 32 06.5	-1.2
PAL	Palisades baz=306	132.12	38	P	PKPdf	03 32 07.7	-0.3
DWPF	Disney Wildern baz=289	132.57	57	P	PKPdf	03 32 08.9	-0.3
HRV	Adam Dziewonsk baz=310	132.58	35	P	PKPdf	03 32 08.8	0.0
M65A	Busby, Falmout baz=316	133.71	35	P	PKPdf	03 32 10.6	-0.3
TORD	Torodi Ar. Bea comp=Z,1.7nm,0.4s,baz=56,slow=4.7,SNR=3.3	141.30	283	PKhKP	PKPpre	03 32 19.7	
CZSB	Cruzeiro do Su	141.78	111	PKPdf	PKPdf	03 32 21.1	-5.6
CPUP	Villa Florida comp=Z,3.0nm,0.9s,baz=222,slow=4.6,SNR=6.1	142.17	149	PKP	PKPdf	03 32 28.5	+1.5
ROSC	El Rosal comp=Z,9.3nm,0.5s,baz=175,slow=8.2,SNR=5.8	142.79	90	PKhKP	PKPpre	03 32 25.8	
ETMB	Extrema	146.83	118		PKPdf	03 32 34.8	-0.6
AQDB	Aquidauana	147.78	146		PKPdf	03 32 38.0	+1.2
KIC	Kosan Boka comp=Z,71nm,1.0s	147.97	272⫛	*e*PKP1	PKPbc	03 32 40.6	+0.2
DBIC	Dimbokro	148.09	273	PKPbc	PKPbc	03 32 40.0	-0.7
DBIC	Dimbokro comp=Z,37nm,1.0s,baz=91,slow=3.4,SNR=21	148.09	273	PKPbc	PKPbc	03 32 41.0	+0.3
LIC	Lamto comp=Z,140nm,0.8s	148.25	272⫛	*e*PKP1	PKPbc	03 32 41.3	+0.2
TIC	Toumodi comp=Z,41nm,0.8s	148.26	273⫛	*e*PKP1	PKPbc	03 32 41.3	+0.2
BAUV	El Baul	149.07	83	PKPbc	PKPbc	03 32 42.0	-1.2
VILB	Vilhena	150.12	129	PKPdf	PKPdf	03 32 40.1	-0.6

IDC 26 03:26:56.6±2.0, 6°.31S×143°.17E, h0km, mb3.8/3, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=81.6km s-min=30.9km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.3nm,0.3s,baz=30,slow=13,SNR=5.4 0.4nm,0.4s	16.04	212	Pn	Pn	03 30 41.5	-2.1
ASAR	Alice Springs 0.4nm,0.3s,baz=33,slow=10,SNR=12 2.4nm,0.6s	19.42	206	P	Pn	03 31 25.2	-0.5
MKAR	Makanchi Array 0.2nm,0.5s,baz=120,slow=5.2,SNR=3.0 0.2nm,0.5s	75.34	322	P	P	03 38 41.7	-0.2
BVAR	Borovoye Array 1.9nm,0.7s,baz=116,slow=6.8,SNR=7.8 1.9nm,0.7s	84.80	325	P	P	03 39 33.5	+0.7
ILAR	Eielson Array 0.5nm,0.8s,baz=266,slow=5.2,SNR=5.1 0.5nm,0.8s	87.28	24	P	P	03 39 44.5	-0.5

IDC 26 03:29:04.9±0.9, 6°.07S×143°.06E, h0km, mb3.9/8, mbtmp3.9/9, ML1.4/1, MS3.4/2, Error ellipse: s-maj=43.7km s-min=19.4km az=78.0

ISC 26 03:29:10.0±0.8, 6°.2S±0°.1×142°.9E±0°.2, h35km, n12, σ1§40/11, mb3.8/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby 1.0nm,0.3s,baz=335,slow=19,SNR=1.2 6.7nm,0.2s	5.26	128	Pn	Pn	03 30 25.8	-0.3
CTA	Charters Tower baz=302,slow=19,SNR=1.9	14.18	167	Lg	Lg	03 36 34.8	
CTA	comp=Z,191nm,18.9s,baz=312,slow=36			LR	LR	03 37 37.6	
WRA	Warramunga Arr 1.0nm,0.3s,baz=30,slow=14,SNR=14	16.01	211	Pn	Pn	03 32 49.8	-3.0
WRA	baz=28,slow=22			Sn	Sn	03 35 39.9	-9.4
WRA	0.7nm,0.3s,baz=24,slow=35,SNR=2.0			Lg	Lg	03 37 23.7	
ASAR	Alice Springs 47nm,0.8s,baz=34,slow=10.0,SNR=84	19.42	206	P	P	03 33 35.5	+2.1
STKA	Stephens Creek 2.2nm,0.6s,baz=8.0,slow=11,SNR=4.2	25.58	183	P	P	03 34 36.8	+0.9
STKA	comp=Z,75nm,19.3s,baz=19,slow=38 2.2nm,0.6s			LR	LR	03 45 24.7	
KSRS	Korea Array 0.6nm,0.6s,baz=188,slow=7.4,SNR=2.6 0.6nm,0.6s	45.63	343	P	P	03 37 27.1	0.0
SONM	Songino Array 0.2nm,0.6s,baz=158,slow=4.5,SNR=2.3 0.2nm,0.6s	62.68	333	P	P	03 39 30.9	-0.5
MKAR	Makanchi Array 0.6nm,0.7s,baz=100,slow=6.6,SNR=6.9 0.6nm,0.7s	75.11	322	P	P	03 40 48.9	+0.3
KURBB	Kurchatov Arra 0.7nm,0.9s,baz=117,slow=4.5,SNR=5.4 0.7nm,0.9s	79.00	324	P	P	03 41 10.5	+0.2
QSPA	South Pole Qui 1.2nm,0.8s,baz=273,slow=0.4,SNR=5.8 1.2nm,0.8s	83.77	180	P	P	03 41 36.1	+0.6
BVAR	Borovoye Array 2.6nm,0.7s,baz=121,slow=7.7,SNR=8.4 2.6nm,0.7s	84.57	325	P	P	03 41 40.3	+0.7
ILAR	Eielson Array 0.6nm,0.7s,baz=267,slow=5.1,SNR=6.1 0.6nm,0.7s	87.27	24	P	P	03 41 52.0	-0.8

IDC 26 03:30:13.5±1.2, 6°.03S×143°.35E, h0km, mb4.1/5, mbtmp4.2/7, ML1.9/1, MS3.5/1, Error ellipse: s-maj=44.3km s-min=28.5km az=72.0

ISC 26 03:30:18.2±0.9, 6°.3S±0°.1×143°.2E±0°.2, h35km, n9, σ1§01/8, mb4.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby 3.3nm,0.3s,baz=288,slow=19,SNR=3.7 11nm,0.3s	4.97	129	Pn	Pn	03 31 30.3	-0.1
WRA	Warramunga Arr 1.1nm,0.3s,baz=36,slow=14,SNR=4.8	16.10	212	Pn	Pn	03 34 00.7	-1.4
ASAR	Alice Springs 17nm,0.6s,baz=38,slow=8.3,SNR=14	19.48	206	P	Pn	03 34 45.4	+1.6
DZM	Mont Dzumac comp=Z,90nm,18.5s,baz=340,slow=36	27.36	127	LR	LR	03 46 35.3	
SONM	Songino Array 0.2nm,0.4s,baz=148,slow=5.8,SNR=2.4 0.2nm,0.4s	62.89	333	P	P	03 40 41.2	+0.2
MKAR	Makanchi Array 1.2nm,0.6s,baz=108,slow=7.2,SNR=6.7 1.2nm,0.6s	75.36	322	P	P	03 41 58.1	-0.1
KURBB	Kurchatov Arra 0.5nm,0.6s,baz=127,slow=4.8,SNR=4.5 0.5nm,0.6s	79.24	324	P	P	03 42 19.2	-0.6
BVAR	Borovoye Array 4.7nm,0.6s,baz=111,slow=6.7,SNR=8.5 4.7nm,0.6s	84.81	325	P	P	03 42 49.1	0.0
ILAR	Eielson Array 1.5nm,0.7s,baz=256,slow=4.7,SNR=6.6 1.5nm,0.7s	87.22	24	P	P	03 43 00.6	-0.1

IDC 26 03:42:10.2±1.8, 6°.21S×143°.11E, h0km, mb4.1/3, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=70.9km s-min=30.6km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.3nm,0.3s,baz=28,slow=14,SNR=2.1 0.5nm,0.4s	16.09	211	Pn	Pn	03 45 55.9	-2.1
ASAR	Alice Springs 0.7nm,0.3s,baz=34,slow=9.4,SNR=8.3 2.8nm,0.7s	19.48	206	P	P	03 46 39.5	+0.5
MKAR	Makanchi Array 0.6nm,0.6s,baz=106,slow=6.6,SNR=6.9 0.6nm,0.6s	75.22	322	P	P	03 53 54.9	0.0
BVAR	Borovoye Array 3.2nm,0.6s,baz=106,slow=7.9,SNR=14 3.2nm,0.6s	84.68	325	P	P	03 54 46.4	+0.6
ILAR	Eielson Array 0.7nm,0.7s,baz=253,slow=4.8,SNR=10 0.7nm,0.7s	87.22	24	P	P	03 54 57.6	-0.5

IDC 26 03:43:24.8±1.0, 6°.06S×143°.22E, h0km, mb4.1/11, mbtmp4.1/11, ML4.8/1, MS3.7/6, Error ellipse: s-maj=48.1km s-min=19.0km az=85.0

NEIC 26 03:43:27.0±2.3, 6°.18S±0°.08×142°.85E±0°.09, h10km±1km, mb4.5/24, Error ellipse: s-maj=15.8km s-min=13.5km az=118.0

ISC 26 03:43:26.8±0.5, 6°.23S±0°.06×142°.84E±0°.07, h10km, n53, σ1§10/47, mb4.3/18, MS3.4/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.32	127	Pn	Pn	03 44 44.9	-1.4
PMG	Port Moresby 3.8nm,0.3s,baz=50,slow=21,SNR=3.7	5.32	127	Sn	Sn	03 45 48.7	+1.0
MANU	Manus Island	6.14	48	Pn	Pn	03 44 57.0	-0.6
COEN	Coen	7.69	178	Pn	Pn	03 45 17.5	-1.4
RABL	Rabaul	9.51	78	Pn	Pn	03 45 42.8	-1.1
MTN	Manton Dam	13.28	239	Pn	Pn	03 46 33.0	-2.5
CTA	Charters Tower 0.3nm,0.3s,baz=282,slow=19,SNR=2.3	14.17	167	Lg	Lg	03 50 55.8	
CTA	comp=Z,554nm,19.7s,baz=352,slow=39			LR	LR	03 52 37.6	
WB0	Warramunga Arr	15.76	211	Pn	Pn	03 47 07.9	-1.1
WB0	comp=Z,42nm,1.1s			lAmb	lAmb	03 47 25.9	
WRAB	Tennant Creek	15.93	210	Pn	Pn	03 47 08.4	-2.7
WRAB	comp=Z,24nm,0.7s			lAmb	lAmb	03 47 30.2	
WB2	Warramunga Arr	15.93	210	Pn	Pn	03 47 10.1	-1.2
WB2	comp=Z,31nm,0.6s			lAmb	lAmb	03 47 30.4	
WRA	Warramunga Arr	15.94	210	Pn	Pn	03 47 10.0	-1.3
WRA	Warramunga Arr comp=Z,1.4nm,0.3s,baz=30,slow=13,SNR=9.6	15.94	210	Pn	Pn	03 47 10.7	-0.7
WRA	comp=Z,0.8nm,0.3s,baz=22,slow=22,SNR=4.1			Sn	Sn	03 50 07.5	-0.7
WRA				Lg	Lg	03 51 48.6	
KNRA	Kununurra comp=Z,0.9nm,0.3s,baz=27,slow=30,SNR=8.4	16.69	235	Pn	Pn	03 47 19.7	-1.3
KNRA	comp=Z,36nm,0.7s			lAmb	lAmb	03 47 21.3	
SOEI	Soe	18.72	258	P	P	03 47 46.3	+0.4
AS31	Alice Springs	19.35	205	P	P	03 47 53.5	+0.9
AS31	comp=Z,17nm,0.7s			lAmb	lAmb	03 47 58.2	
ASAR	Alice Springs	19.35	205	P	P	03 47 53.3	+0.6
ASAR	Alice Springs comp=Z,2.9nm,0.3s,baz=34,slow=9.9,SNR=65	19.35	205	P	P	03 47 55.8	+3.1
ASAR	comp=Z,866nm,18.5s,baz=39,slow=39			LR	LR	03 56 16.4	
FITZ	Fitzroy Crossi	20.51	233	P	P	03 48 05.8	+0.5
EIDS	Eidsvold	20.61	158	P	P	03 48 07.3	+1.1
EIDS	comp=Z,25nm,1.2s			lAmb	lAmb	03 48 25.9	
LUWI	Luwuk	20.67	284	P	P	03 48 07.6	+0.5
KAPI	Kappang	23.00	272	P	P	03 48 32.0	-0.1
KAPI	comp=Z,15nm,0.8s			lAmb	lAmb	03 48 34.9	
TOLI2	Tolitoli	23.19	288	P	P	03 48 33.0	-1.0
TOLI2	comp=Z,19nm,1.0s			lAmb	lAmb	03 48 48.7	
STKA	Stephens Creek	25.54	182	P	P	03 48 56.7	+0.9
STKA	Stephens Creek comp=Z,3.0nm,0.5s,baz=355,slow=7.5,SNR=6.1 comp=Z,3.0nm,0.5s	25.54	182	P	P	03 48 57.1	+1.3
BBOO	Buckleboo	27.19	193	P	P	03 49 11.4	+0.7
BBOO	comp=Z,22nm,1.2s			lAmb	lAmb	03 49 21.7	
XMIS	Christmas Isla	37.01	261	P	P	03 50 37.1	0.0
JNU	Nakatsue comp=Z,50nm,21.3s,baz=175,slow=32	40.75	345	LR	LR	04 05 12.3	
MJAR	Matsushiro Arr comp=Z,1.0nm,0.6s,baz=165,slow=6.9,SNR=1.8	42.77	355	P	P	03 51 27.0	+2.4
MJAR	comp=Z,74nm,21.5s,baz=132,slow=34			LR	LR	04 07 28.2	
URZ	Urewera comp=Z,111nm,18.1s,baz=62,slow=37	44.50	141	LR	LR	04 10 28.8	
JTM	Tennabayashi	46.81	358	P	P	03 51 55.7	-1.0
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,baz=138,slow=5.6,SNR=1.7 comp=Z,0.8nm,0.3s	49.75	300	P	P	03 52 21.4	+1.5
USRK	Ussuriysk Ar.	51.14	350	P	P	03 52 28.9	-1.0
USRK	Ussuriysk Ar. comp=Z,2.1nm,0.7s,baz=134,slow=4.2,SNR=5.1 comp=Z,2.1nm,0.7s	51.14	350	P	P	03 52 29.4	-0.4
KLR	Kul'dur comp=Z,21nm,21.3s,baz=298,slow=33	56.07	351	LR	LR	04 14 22.8	
SONM	Songino Array comp=Z,0.6nm,1.0s,baz=172,slow=4.9,SNR=3.5 comp=Z,0.6nm,1.0s	62.66	333	P	P	03 53 52.3	+0.5
MK31	Makanchi Array	75.07	322	P	P	03 55 08.7	-0.3
MKAR	Makanchi Array	75.07	322	P	P	03 55 08.7	-0.3
MKAR	Makanchi Array comp=Z,1.2nm,0.8s,baz=111,slow=6.8,SNR=7.0 comp=Z,1.2nm,0.8s	75.07	322	P	P	03 55 09.0	0.0
MAKZ	Makanchi	75.27	322	P	P	03 55 10.0	-0.1
MAKZ	comp=Z,4.1nm,1.1s			lAmb	lAmb	03 55 35.2	
NIL	Nilore	76.71	307	P	P	03 55 17.4	-1.3
ZAA0	Zalesovo Array	77.04	329	P	P	03 55 17.9	-2.0
ZALV	Zalesovo Beam	77.04	329	P	P	03 55 18.8	-1.2
ZALV	Zalesovo Beam comp=Z,0.5nm,0.5s,baz=150,slow=9.4,SNR=2.3 comp=Z,0.5nm,0.5s	77.04	329	P	P	03 55 19.3	-0.6
KURBB	Kurchatov Arra comp=Z,0.3nm,0.2s,baz=127,slow=4.4,SNR=5.0 comp=Z,0.3nm,0.2s	78.96	324	P	P	03 55 30.6	-0.1
SIMJ	Simiganj	81.39	310	P	P	03 55 44.1	-0.2
SIMJ	comp=Z,4.4nm,1.1s			lAmb	lAmb	03 55 59.3	
KK31	Karatay Array	81.51	315	P	P	03 55 43.8	-0.9
KKAR	Karatay Array	81.51	315	P	P	03 55 44.3	-0.3
QSPA	South Pole Qui	83.74	180	P	P	03 55 56.0	0.0
QSPA	South Pole Qui comp=Z,2.2nm,0.8s,baz=150,slow=0.3,SNR=10 comp=Z,2.2nm,0.8s	83.74	180	P	P	03 55 56.6	+0.6
NRIK	Noril'sk comp=Z,1.8nm,0.4s,baz=94,slow=4.9,SNR=3.6 comp=Z,1.8nm,0.4s	84.25	343	P	P	03 55 57.9	-0.3
BVAR	Borovoye Array comp=Z,3.8nm,0.8s,baz=116,slow=6.8,SNR=12 comp=Z,3.8nm,0.8s	84.54	325	P	P	03 56 00.2	+0.1
BRVK	Borovoye	84.61	325	P	P	03 56 00.3	-0.1
BRVK	comp=Z,4.6nm,0.9s			lAmb	lAmb	03 56 14.7	
ILAR	Eielson Array comp=Z,1.2nm,0.9s,baz=258,slow=5.8,SNR=9.5 comp=Z,1.2nm,0.9s	87.34	24	P	P	03 56 11.7	-2.0

IDC 26 03:45:41.9±1.5, 6°.16S×143°.17E, h0km, mb4.0/3, mbtmp4.0/5, ML4.2/1, MS3.5/2, Error ellipse: s-maj=83.9km s-min=32.0km az=105.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 1.7nm,0.6s,baz=30,slow=13,SNR=1.2	16.17	211	Pn	Pn	03 49 29.5	-1.2
ASAR	Alice Springs 0.8nm,0.3s,baz=30,slow=10,SNR=4.3 5.0nm,0.5s	19.56	206	P	Pn	03 50 12.8	+0.1
DZM	Mont Dzumac comp=Z,144nm,21.6s,baz=327,slow=32	27.50	127	LR	LR	04 00 17.8	
RAR	Rarotonga comp=Z,28nm,18.3s,baz=340,slow=35	57.13	111	LR	LR	04 19 15.4	
QSPA	South Pole Qui 2.2nm,1.0s,baz=303,slow=2.3,SNR=2.9 2.2nm,1.0s	83.81	180	P	P	03 58 12.3	-0.8
BVAR	Borovoye Array 1.3nm,0.6s,baz=120,slow=7.2,SNR=3.6 1.3nm,0.6s	84.67	325	P	P	03 58 17.7	+0.2
ILAR	Eielson Array 0.3nm,0.8s,baz=243,slow=6.0,SNR=1.9 0.3nm,0.8s	87.14	24	P	P	03 58 29.8	+0.2

IDC 26 03:46:49.6±1.2, 6°.42S×143°.74E, h0km, mb4.0/9, mbtmp4.1/10, ML4.2/1, Error ellipse: s-maj=59.2km s-min=24.4km az=88.0

ISC 26 03:46:55.0±1.2, 6°.5S±0°.1×143°.6E±0°.4, h35km, n10, σ0§63/10, mb4.0/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs 0.7nm,0.3s,baz=36,slow=9.9,SNR=18 27nm,0.8s	19.48	208	P	Pn	03 51 20.9	+0.4
KSRS	Korea Array 0.7nm,0.4s,baz=165,slow=8.4,SNR=2.8 0.7nm,0.4s	46.09	343	P	P	03 55 16.6	+0.8
SONM	Songino Array 0.6nm,0.8s,baz=134,slow=10,SNR=3.7 0.6nm,0.8s	63.23	333	P	P	03 57 19.2	-0.9
MKAR	Makanchi Array 1.0nm,0.7s,baz=121,slow=5.8,SNR=5.9 1.0nm,0.7s	75.75	322	P	P	03 58 37.2	-0.1
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=96,slow=8.9,SNR=2.5 0.4nm,0.4s	77.65	329	P	P	03 58 47.7	0.0
KURBB	Kurchatov Arra 0.8nm,0.9s,baz=111,slow=4.4,SNR=4.7 0.8nm,0.9s	79.61	324	P	P	03 58 59.3	+0.7
QSPA	South Pole Qui 3.5nm,0.9s,baz=288,slow=1.2,SNR=9.5 3.5nm,0.9s	83.50	180	P	P	03 59 18.8	-0.3
NRIK	Noril'sk 1.3nm,0.4s,baz=63,slow=2.3,SNR=1.5 1.3nm,0.4s	84.71	343	P	P	03 59 24.3	-0.7
BVAR	Borovoye Array 2.1nm,0.8s,baz=116,slow=6.8,SNR=5.0 2.1nm,0.8s	85.19	325	P	P	03 59 27.6	-0.1
ILAR	Eielson Array 1.1nm,1.0s,baz=265,slow=3.9,SNR=7.2 1.1nm,1.0s	87.25	24	P	P	03 59 38.1	+0.5

IDC 26 03:51:54.0±0.8, 5°.93S×142°.96E, h0km, mb4.1/9, mbtmp4.2/11, ML2.2/1, Error ellipse: s-maj=36.8km s-min=17.1km az=75.0

ISC 26 03:51:59.2±0.8, 6°.0S±0°.1×142°.8E±0°.1, h35km, n13, σ1§20/13, mb4.2/9, New Guinea

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

PMG	**Port Moresby**	**5.45 128**	Pn	**Pn**	**03 53 17.5**	**-0.4**	
	4.9nm,0.3s,baz=41,slow=1.0,SNR=6.5						
PMG			Sn	**Sn**	**03 54 19.6**	**+0.2**	
	4.5nm,0.3s,baz=270,slow=17,SNR=1.9						
	30nm,0.6s						
CTA	**Charters Tower**	**14.37 167**	Lg	Lg	03 59 40.5		
	0.7nm,0.3s,baz=107,slow=4.0,SNR=3.1						
WRA	**Warramunga Arr**	**16.11 210**	Pn	**Pn**	**03 55 41.0**	**-2.2**	
	0.7nm,0.3s,baz=28,slow=14,SNR=1.8						
WRA			Sn	Sn	03 58 31.0	-10	
	0.8nm,0.3s,baz=26,slow=23,SNR=3.4						
WRA			Lg	Lg	04 00 17.8		
	baz=39,slow=25						
ASAR	**Alice Springs**	**19.53 205**	P	**P**	**03 56 25.1**	**+1.1**	
	18nm,0.7s,baz=31,slow=10.0,SNR=16						
STKA	**Stephens Creek**	**25.75 182**	P	**P**	**03 57 26.8**	**+0.1**	
	6.0nm,0.9s,baz=350,slow=12,SNR=3.9						
	6.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**50.94 350**	P	**P**	**04 00 57.5**	**+0.4**	
	1.9nm,0.8s,baz=192,slow=4.8,SNR=4.9						
	1.9nm,0.8s						
VNDA	**Vanda**	**72.16 176**	P	**P**	**04 03 22.1**	**+2.2**	
	2.1nm,0.8s,baz=335,slow=0.6,SNR=5.1						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**74.91 322**	P	**P**	**04 03 37.5**	**+0.8**	
	0.8nm,0.7s,baz=109,slow=7.6,SNR=6.7						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**76.86 329**	P	**P**	**04 03 47.8**	**+0.3**	
	0.6nm,0.6s,baz=142,slow=7.3,SNR=2.5						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**78.80 324**	P	**P**	**04 03 57.9**	**-0.5**	
	0.3nm,0.5s,baz=115,slow=4.6,SNR=4.1						
	0.3nm,0.5s						
QSPA	**South Pole Qui**	**83.94 180**	P	**P**	**04 04 25.0**	**-0.6**	
	0.8nm,0.6s,baz=154,slow=0.7,SNR=6.2						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**84.37 325**	P	**P**	**04 04 28.2**	**+0.4**	
	4.1nm,0.7s,baz=111,slow=6.5,SNR=17						
	4.1nm,0.7s						
ILAR	**Eielson Array**	**87.16 24**	P	**P**	**04 04 40.1**	**-1.3**	
	1.2nm,0.7s,baz=261,slow=4.5,SNR=32						
	1.2nm,0.7s						

*IDC **26** 03:54:57.1±1.3,6˚19S×143˚23E,h0km,mb4.0/4, mbtmp4.1/6,ML4.2/2,Error ellipse: s-maj=63.3km s-min=27.6km az=101.0*

ISC 26 03:55:02.5±1.3,6˚3S±0˚2×143˚2E±0˚4,h35km,n6,σ1s01/6, mb4.1/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.09**	**211**	Pn	**Pn**	**03 58 45.8**	**-0.5**
	0.7nm,0.3s,baz=26,slow=13,SNR=4.6						
	5.9nm,0.9s						
ASAR	**Alice Springs**	**19.48**	**206**	P	**P**	**03 59 26.8**	**+0.2**
	1.4nm,0.3s,baz=28,slow=12,SNR=14						
	9.4nm,0.7s						
MKAR	**Makanchi Array**	**75.31**	**322**	P	**P**	**04 06 43.4**	**+1.2**
	0.5nm,0.8s,baz=106,slow=7.3,SNR=4.0						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**83.71**	**180**	P	**P**	**04 07 28.1**	**+0.4**
	1.7nm,1.0s,baz=256,slow=3.9,SNR=3.0						
	1.7nm,1.0s						
BVAR	**Borovoye Array**	**84.76**	**325**	P	**P**	**04 07 32.0**	**-1.1**
	1.9nm,0.8s,baz=101,slow=7.7,SNR=5.3						
	1.9nm,0.8s						
ILAR	**Eielson Array**	**87.23**	**24**	P	**P**	**04 07 44.8**	**-0.3**
	0.7nm,0.7s,baz=254,slow=5.1,SNR=14						
	0.7nm,0.7s						

*IDC **26** 03:57:38.4±1.4,6˚35S×143˚31E,h0km,mb3.9/4, mbtmp3.9/6,ML4.0/1,Error ellipse: s-maj=64.0km s-min=28.9km az=100.0*

ISC 26 03:57:43.9±1.3,6˚4S±0˚2×143˚2E±0˚4,h35km,n6,σ1s17/6, mb3.8/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.95**	**212**	Pn	**Pn**	**04 01 24.4**	**-1.4**
	3.3nm,0.8s,baz=30,slow=13,SNR=1.2						
ASAR	**Alice Springs**	**19.33**	**206**	P	**P**	**04 02 07.5**	**+1.2**
	0.4nm,0.3s,baz=37,slow=12,SNR=3.3						
	2.3nm,0.7s						
MKAR	**Makanchi Array**	**75.42**	**322**	P	**P**	**04 09 24.6**	**+0.4**
	0.4nm,0.7s,baz=103,slow=6.4,SNR=3.9						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**04 10 08.7**	**+0.4**
	0.7nm,0.8s,baz=268,slow=1.7,SNR=1.4						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**84.88**	**325**	P	**P**	**04 10 15.1**	**0.0**
	2.0nm,0.7s,baz=111,slow=8.1,SNR=9.1						
	2.0nm,0.7s						
ILAR	**Eielson Array**	**87.37**	**24**	P	**P**	**04 10 26.5**	**-0.6**
	0.3nm,0.7s,baz=251,slow=4.9,SNR=8.0						
	0.3nm,0.7s						

IDC 26 04:01:06.8±2.1,6˚05S×143˚10E,h0km,mb3.8/2, mbtmp3.8/4,ML3.7/2,Error ellipse: s-maj=104.4km s-min=32.6km az=109.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.22**	**211**	Pn	Pn	04 04 56.0	-0.2
	0.2nm,0.3s,baz=30,slow=11,SNR=2.2						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**19.62**	**206**	P	P	04 05 36.9	-0.2
	0.4nm,0.3s,baz=35,slow=8.4,SNR=9.6						
	5.4nm,0.8s						
BVAR	**Borovoye Array**	**84.55**	**325**	P	P	04 13 42.0	+0.2
	1.1nm,0.6s,baz=100,slow=7.5,SNR=5.0						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**87.07**	**24**	P	P	04 13 54.0	-0.1
	0.2nm,0.7s,baz=252,slow=5.0,SNR=2.2						
	0.2nm,0.7s						

IDC 26 04:07:54.3±1.4,6˚42S×143˚47E,h0km,mb3.8/3, mbtmp3.9/5,ML3.9/2,Error ellipse: s-maj=69.8km s-min=29.7km az=103.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.10**	**213**	Pn	Pn	04 11 40.1	-2.1
	0.5nm,0.3s,baz=33,slow=13,SNR=14						
WRA				Sn	Sn	04 14 30.2	-11
	0.1nm,0.3s,baz=25,slow=22,SNR=2.4						
	2.6nm,0.8s						
ASAR	**Alice Springs**	**19.45**	**207**	P	Pn	04 12 23.9	+0.1
	0.4nm,0.3s,baz=32,slow=11,SNR=25						
	7.1nm,0.9s						
MKAR	**Makanchi Array**	**75.61**	**322**	P	P	04 19 41.6	+0.4
	0.2nm,0.5s,baz=116,slow=6.7,SNR=2.8						
	0.2nm,0.5s						
QSPA	**South Pole Qui**	**83.55**	**180**	P	P	04 20 24.0	-0.2
	0.9nm,0.6s,baz=267,slow=0.5,SNR=7.2						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**87.26**	**24**	P	P	04 20 42.3	-0.3
	0.8nm,1.1s,baz=244,slow=10,SNR=4.0						
	0.8nm,1.1s						

IDC 26 04:08:50.1±2.0,6˚06S×142˚60E,h0km,mb3.7/3, mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=83.8km s-min=32.5km az=106.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.97**	**209**	Pn	Pn	04 12 34.4	-2.0
	0.6nm,0.6s,baz=32,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**19.41**	**205**	P	Pn	04 13 18.8	-0.3
	0.2nm,0.3s,baz=32,slow=11,SNR=4.1						
	3.2nm,0.8s						
MKAR	**Makanchi Array**	**74.80**	**322**	P	P	04 20 31.9	-0.4
	0.2nm,0.6s,baz=120,slow=6.5,SNR=1.9						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**84.26**	**325**	P	P	04 21 24.4	+0.7
	1.1nm,0.6s,baz=96,slow=9.1,SNR=5.2						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**87.28**	**24**	P	P	04 21 38.0	-0.4
	0.3nm,0.8s,baz=258,slow=4.5,SNR=4.0						
	0.3nm,0.8s						

IDC 26 04:11:31.7±2.0,6˚32S×143˚33E,h0km,mb3.7/3, mbtmp3.6/5,ML3.5/2,Error ellipse: s-maj=84.9km s-min=32.7km az=108.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.11**	**212**	Pn	Pn	04 15 20.1	+0.4
	0.2nm,0.3s,baz=29,slow=14,SNR=2.3						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**19.48**	**207**	P	P	04 16 00.1	-0.3
	0.1nm,0.3s,baz=34,slow=10,SNR=3.8						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**75.45**	**322**	P	P	04 23 17.9	+0.2
	0.2nm,0.5s,baz=127,slow=9.2,SNR=2.8						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**84.89**	**325**	P	P	04 24 08.7	+0.2
	1.3nm,0.7s,baz=125,slow=7.2,SNR=5.3						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**87.23**	**24**	P	P	04 24 19.5	-0.3
	0.2nm,0.7s,baz=266,slow=5.2,SNR=4.6						
	0.2nm,0.7s						

IDC 26 04:12:48.8±4.7,6˚17S×142˚68E,h0km,mb3.8/2, mbtmp4.0/4,ML3.7/2,Error ellipse: s-maj=170.8km s-min=32.4km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.91**	**210**	Pn	Pn	04 16 33.2	-1.2
	0.2nm,0.3s,baz=28,slow=12,SNR=4.5						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**19.34**	**205**	P	P	04 17 16.5	+0.5
	0.6nm,0.3s,baz=36,slow=9.6,SNR=42						
	13nm,0.8s						
MKAR	**Makanchi Array**	**74.93**	**322**	P	P	04 24 32.1	+0.2
	0.3nm,0.6s,baz=109,slow=6.0,SNR=4.8						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.40**	**325**	P	P	04 25 22.9	-0.2
	0.9nm,0.7s,baz=128,slow=9.7,SNR=4.9						
	0.9nm,0.7s						

IDC 26 04:20:32.4±8.9,5˚97S×142˚55E,h0km,mb3.4/1, mbtmp3.6/3,ML3.0/2,Error ellipse: s-maj=314.9km s-min=37.4km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.02**	**209**	Pn	Pn	04 24 19.7	+0.4
	baz=30,slow=14,SNR=1.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**19.46**	**204**	P	P	04 25 00.8	-0.1
	0.3nm,0.3s,baz=29,slow=12,SNR=13						
	3.5nm,0.7s						
MKAR	**Makanchi Array**	**74.69**	**322**	P	P	04 32 14.1	0.0
	0.2nm,0.5s,baz=98,slow=7.4,SNR=2.3						
	0.2nm,0.5s						

IDC 26 04:22:57.6±6.1,6˚28S×142˚68E,h0km,mb3.3/1, mbtmp3.4/3,ML3.3/2,Error ellipse: s-maj=207.5km s-min=37.9km az=96.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.82**	**210**	Pn	Pn	04 26 39.8	-2.0
	0.1nm,0.3s,baz=32,slow=13,SNR=2.4						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**19.24**	**205**	P	Pn	04 27 24.4	-0.1
	0.1nm,0.3s,baz=36,slow=9.6,SNR=6.2						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**75.01**	**322**	P	P	04 34 41.1	+0.1
	0.1nm,0.5s,baz=101,slow=7.5,SNR=2.2						
	0.1nm,0.5s						

*JSN **26** 04:27:27.0±0.3,17˚93N×76˚70W,h20km±3km,MD2.9*
*SSNC **26** 04:27:28.4±0.9,18˚15N×76˚80W,h5km,MD2.9,ML2.1, MW2.6*

ISC 26 04:27:26.4±2.4,18˚1N±0˚2×76˚8W±0˚1,h29km±13km,n11, σ0s96/21,1C,Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STH	**Stony Hill**	**0.03**	**326**	*i*P	**Pb**	**04 27 31.7**	**+0.4**
STH				*i* S	**Sb**	**04 27 35.3**	**+0.7**
HOJ	**Hope**	**0.06**	**139**	*i* P	**Pb**	**04 27 30.8**	**-0.5**
HOJ				*i* S	**Sb**	**04 27 33.5**	**-1.1**
GWJ	**Greenwich**	**0.06**	**68**	*i* P	**Pb**	**04 27 31.5**	**0.0**
PILO	**Pilon**	**1.94**	**343**	*e*P	**Pn**	**04 27 58.3**	**+0.8**
PILO				*e*S	**Sn**	**04 28 20.2**	**-0.7**
PILO				IAML		04 28 23.4	
	comp=N,28nm,0.1s						
PILO				IAML		04 28 23.5	
	comp=E,20nm,0.1s						
CHIV	**Chivirico**	**1.95**	**10**	*e*P	**Pn**	**04 27 58.5**	**+1.0**
CHIV				*e*S	**Sn**	**04 28 20.4**	**-0.7**
CHIV				IAML		04 28 23.9	
	comp=E,4.4nm,0.4s						
CHIV				IAML		04 28 25.0	
	comp=N,4.7nm,0.4s						
LMGC	**Las Mercedes**	**2.01**	**354**	*e*P	**Pn**	**04 27 59.0**	**+0.6**
LMGC				*e*S	**Sn**	**04 28 21.4**	**-1.3**
LMGC				IAML		04 28 24.6	
	comp=E,32nm,0.1s						
LMGC				IAML		04 28 24.8	
	comp=N,52nm,0.1s						
MARVS	**Santiago de Cu**	**2.12**	**23**	*e*P	**Pn**	**04 28 00.6**	**+0.7**
MARVS				*e*S	**Sn**	**04 28 23.9**	**-1.3**
MARVS				IAML		04 28 27.3	
	comp=N,11nm,0.3s						
MARVS				IAML		04 28 28.6	
	comp=E,7.3nm,0.4s						
RCC	**Rio Carpintero**	**2.19**	**28**	*e*P	**Pn**	**04 28 02.0**	**+1.0**
RCC				*e*S	**Sn**	**04 28 26.7**	**-0.5**
RCC				IAML		04 28 28.5	
	comp=N,4.3nm,0.7s						
RCC				IAML		04 28 32.1	
	comp=E,7.7nm,0.8s						
YAR	**Yar**	**2.34**	**10**	*e*P	**Pn**	**04 28 03.4**	**+0.4**
YAR				*e*S	**Sn**	**04 28 29.2**	**-1.7**
YAR				IAML		04 28 31.3	
	comp=N,3.7nm,0.4s						
YAR				IAML		04 28 32.9	
	comp=E,11nm,0.4s						
PINC	**Pinares de May**	**2.60**	**21**	*e*P	**Pn**	**04 28 07.3**	**+0.7**
PINC				*e*S	**Sn**	**04 28 37.7**	**+0.4**
PINC				IAML		04 28 39.6	
	comp=N,7.3nm,0.1s						
PINC				IAML		04 28 40.0	
	comp=E,6.0nm,0.1s						
SABCS	**La Quijada**	**2.69**	**31**	*e*P	**Pn**	**04 28 08.9**	**+1.0**
SABCS				*e*S	**Sn**	**04 28 38.9**	**-0.6**
SABCS				IAML		04 28 45.5	
	comp=E,23nm,1.3s						
SABCS				IAML		04 28 47.2	
	comp=N,25nm,1.3s						

*IDC **26** 04:34:12.1±0.7,5˚96S×142˚77E,h0km,mb4.3/13, mbtmp4.3/16,ML4.4/2,Error ellipse: s-maj=27.8km s-min=15.7km az=75.0*
*NEIC **26** 04:34:13.7±1.8,5˚98S±0˚06×142˚7E±0˚1,h10km±1km, mb4.7/43,Error ellipse: s-maj=17.7km s-min=9.4km az=97.0*

ISC 26 04:34:16.3±0.5,6˚01S±0˚06×142˚72E±0˚07,h28km,n77, σ1s07/76,mb4.6/33,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**4.24**	**323**	P	**Pn**	**04 35 21.8**	**+2.6**
PMG	**Port Moresby**	**5.55**	**128**		**Pn**	**04 35 36.2**	**-0.9**
PMG	**Port Moresby**	**5.55**	**128**	P	**Pn**	**04 35 38.5**	**+1.4**
PMG	**Port Moresby**	**5.55**	**128**	Pn	**Pn**	**04 35 37.9**	**+0.8**
	20nm,0.5s,baz=321,slow=4.2,SNR=8.9						
PMG				Sn	**Sn**	**04 36 40.8**	**+0.9**
	6.6nm,0.3s,baz=50,slow=24,SNR=8.7						
MANU	**Manus Island**	**6.09**	**50**	Pn	**Pn**	**04 35 42.5**	**-2.1**
MANU	**Manus Island**	**6.09**	**50**	P	Pn	04 35 49.9	+5.3
COEN	**Coen**	**7.91**	**177**	Pn	**Pn**	**04 36 08.7**	**-0.8**
KDU	**Kakadu**	**12.08**	**236**	P	**Pn**	**04 37 05.4**	**-1.4**
MTN	**Manton Dam**	**13.28**	**238**	Pn	**Pn**	**04 37 21.1**	**-2.1**
MTN	**Manton Dam**	**13.28**	**238**	P	**Pn**	**04 37 20.7**	**-2.5**
DRS	**Darwin Rock St**	**13.29**	**240**	P	**Pn**	**04 37 22.8**	**-0.4**
CTA	**Charters Tower**	**14.41**	**167**	Pn	**P**	**04 37 45.3**	**+0.2**
	0.4nm,0.3s,baz=352,slow=11,SNR=7.6						
CTAO	**Charters Tower**	**14.41**	**167**	P	**P**	**04 37 47.4**	**+2.3**
QIS	**Mount Isa**	**14.77**	**192**	P	**Pn**	**04 37 43.4**	**-0.1**
WB0	**Warramunga Arr**	**15.89**	**210**	Pn	**Pn**	**04 37 56.6**	**-1.6**
WRAB	**Tennant Creek**	**16.05**	**210**	Pn	**Pn**	**04 37 59.2**	**-0.9**
WB2	**Warramunga Arr**	**16.05**	**210**	Pn	**Pn**	**04 37 57.9**	**-2.4**
WRA	**Warramunga Arr**	**16.06**	**210**	Pn	**Pn**	**04 37 57.3**	**-3.1**
WRA	**Warramunga Arr**	**16.06**	**210**	Pn	**Pn**	**04 37 58.4**	**-2.0**
	1.1nm,0.3s,baz=29,slow=13,SNR=19						
	1.5nm,0.4s						
KNRA	**Kununurra**	**16.72**	**234**	Pn	**Pn**	**04 38 07.0**	**-1.8**
KNRA				IAmb	IAmb	04 38 17.1	
	comp=Z,39nm,0.9s						
SOEI	**Soe**	**18.64**	**257**	P	**P**	**04 38 30.9**	**-1.3**
SOEI				IAmb	IAmb	04 38 59.9	
	comp=Z,76nm,1.2s						
AS31	**Alice Springs**	**19.49**	**205**	P	**Pn**	**04 38 42.5**	**-0.2**
ASAR	**Alice Springs**	**19.49**	**205**	P	**Pn**	**04 38 41.9**	**-0.8**
ASAR	**Alice Springs**	**19.49**	**205**	P	**Pn**	**04 38 42.9**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=32,slow=10,SNR=90						
	comp=Z,13nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.54**	**233**	P	Pn	04 38 53.5	-1.6
EIDS	**Eidsvold**	**20.85**	**158**	P	**P**	**04 38 55.3**	**-0.7**
STKA	**Stephens Creek**	**25.75**	**182**	P	**P**	**04 39 44.5**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=1.4,slow=16,SNR=3.3						
	comp=Z,3.5nm,0.8s						
PSA00	**Pilbara Seismi**	**27.00**	**233**	P	**P**	**04 39 56.1**	**0.0**
PSA00				IAmb	IAmb	04 40 04.9	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**27.37**	**192**	P	**P**	**04 39 59.5**	**+0.2**
BBOO				IAmb	IAmb	04 40 09.4	
	comp=Z,16nm,1.3s						
TUWZ	**Tuamarina**	**44.92**	**146**	P	**P**	**04 42 29.7**	**+1.0**
KSRS	**Korea Array**	**45.39**	**343**	P	**P**	**04 42 33.0**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=158,slow=7.5,SNR=3.5						
	comp=Z,1.2nm,0.4s						
JTM	**Tenmabayashi**	**46.60**	**358**	P	**P**	**04 42 41.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**49.54**	**300**	P	**P**	**04 43 05.2**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=128,slow=6.0,SNR=11						
	comp=Z,1.4nm,0.4s						
USRK	**Ussuriysk Ar.**	**50.91**	**350**	P	**P**	**04 43 14.5**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=131,slow=4.4,SNR=5.3						
	comp=Z,2.6nm,0.7s						
PETK	**Petropavlovsk-**	**60.25**	**10**	P	**P**	**04 44 21.5**	**-0.5**
PETK	**Petropavlovsk-**	**60.25**	**10**	P	**P**	**04 44 22.1**	**+0.1**
	comp=Z,9.5nm,1.0s,baz=161,slow=6.8,SNR=5.6						
	comp=Z,9.5nm,1.0s						
SONM	**Songino Array**	**62.42**	**333**	P	**P**	**04 44 37.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=145,slow=3.6,SNR=3.5						
	comp=Z,0.5nm,0.6s						
MK31	**Makanchi Array**	**74.83**	**322**	P	**P**	**04 45 54.0**	**-0.4**
MKAR	**Makanchi Array**	**74.83**	**322**	P	**P**	**04 45 54.6**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=108,slow=6.9,SNR=19						
	comp=Z,1.7nm,0.8s						
MAKZ	**Makanchi**	**75.03**	**322**	P	**P**	**04 45 55.4**	**-0.1**
MAKZ				IAmb	IAmb	04 46 01.7	
	comp=Z,5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**76.79**	**329**	P	**P**	**04 46 04.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=140,slow=7.2,SNR=4.6						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**78.72**	**324**	P	**P**	**04 46 16.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=118,slow=4.7,SNR=7.1						
	comp=Z,0.9nm,0.6s						
L14K	**Kuka Creek**	**79.25**	**24**	P	**P**	**04 46 17.6**	**-1.1**
K15K	**Wolf Creek Mou**	**80.24**	**23**	P	**P**	**04 46 24.2**	**+0.1**
M16K	**Timber Creek**	**80.60**	**25**	P	**P**	**04 46 26.5**	**+0.4**
F15K	**North Star Dit**	**81.09**	**19**	P	**P**	**04 46 29.0**	**+0.4**
F15K				IAmb	IAmb	04 46 35.2	
	comp=Z,7.6nm,1.3s						
N17K	**Nushagak Hills**	**81.10**	**26**	P	**P**	**04 46 30.2**	**+1.4**
J16K	**Anvik River**	**81.14**	**22**	P	**P**	**04 46 29.6**	**+0.6**
J16K				IAmb	IAmb	04 46 54.1	
	comp=Z,14nm,1.5s						
G16K	**Koyuk River**	**81.68**	**20**	P	**P**	**04 46 32.0**	**+0.3**
G16K				IAmb	IAmb	04 46 41.4	
	comp=Z,12nm,1.4s						
N18K	**Kilae Creek**	**81.73**	**26**	P	**P**	**04 46 31.4**	**-0.8**
H17K	**Granite Mounta**	**82.28**	**21**	P	**P**	**04 46 35.5**	**+0.5**
H17K				IAmb	IAmb	04 46 40.9	
	comp=Z,5.5nm,1.2s						
N19K	**Bonanza Creek**	**82.41**	**26**	P	**P**	**04 46 36.5**	**+0.7**
F17K	**Baldwin Pennin**	**82.64**	**20**	P	**P**	**04 46 35.3**	**-1.4**
F17K				IAmb	IAmb	04 46 43.7	
	comp=Z,4.0nm,1.0s						
L19K	**White Mountain**	**82.88**	**25**	P	**P**	**04 46 38.0**	**-0.1**
L19K				IAmb	IAmb	04 46 43.8	
	comp=Z,8.2nm,1.2s						
RSO	**Redoubt South**	**83.02**	**27**	P	**P**	**04 46 38.3**	**-0.8**
G18K	**Tagagawik**	**83.24**	**21**	P	**P**	**04 46 39.8**	**-0.2**
E18K	**Tukpahlearik C**	**83.40**	**19**	P	**P**	**04 46 40.6**	**-0.1**
E18K				IAmb	IAmb	04 46 52.9	
	comp=Z,11nm,1.4s						
J19K	**Poorman**	**83.42**	**23**	P	**P**	**04 46 40.6**	**-0.2**
J19K				IAmb	IAmb	04 46 47.9	
	comp=Z,9.5nm,1.5s						
M20K	**Styx River**	**83.47**	**25**	P	**P**	**04 46 40.8**	**-0.5**
M20K				IAmb	IAmb	04 46 49.6	
	comp=Z,9.2nm,1.2s						
K20K	**Telida**	**83.73**	**24**	P	**P**	**04 46 42.4**	**-0.1**
C18K	**Utukok River**	**83.90**	**18**	P	**P**	**04 46 43.3**	**0.0**
G19K	**Purcell Mounta**	**83.92**	**21**	P	**P**	**04 46 44.1**	**+0.7**
G19K				IAmb	IAmb	04 46 57.1	
	comp=Z,7.1nm,1.4s						
QSPA	**South Pole Qui**	**83.95**	**180**	P	**P**	**04 46 43.3**	**-0.5**
QSPA	**South Pole Qui**	**83.95**	**180**	P	**P**	**04 46 44.2**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=288,slow=1.0,SNR=28						
	comp=Z,4.4nm,0.7s						
NRIK	**Noril'sk**	**84.01**	**343**	P	**P**	**04 46 43.6**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=88,slow=3.6,SNR=4.0						
	comp=Z,1.8nm,0.3s						
F19K	**Shaleruckih Mo**	**84.03**	**20**	P	**P**	**04 46 44.8**	**+0.9**
F19K				IAmb	IAmb	04 47 10.6	
	comp=Z,3.6nm,1.2s						
J20K	**Nowinta River**	**84.07**	**23**	P	**P**	**04 46 43.6**	**-0.6**
J20K				IAmb	IAmb	04 47 12.0	
	comp=Z,8.7nm,1.4s						
BVAR	**Borovoye Array**	**84.29**	**325**	P	**P**	**04 46 45.7**	**+0.1**
	comp=Z,7.2nm,0.8s,baz=111,slow=6.5,SNR=32						
	comp=Z,7.2nm,0.8s						
BRVK	**Borovoye**	**84.36**	**325**	P	**P**	**04 46 45.5**	**-0.4**
BRVK				IAmb	I

comp=Z,2.1nm,0.3s,baz=26,slow=11,SNR=4.9
comp=Z,3.3nm,0.5s

KNRA	Kununurra	17.03 233	Pn	Pn	04 39 15.4	-1.0
AS31	Alice Springs	19.87 205	Pn	Pn	04 39 51.3	+0.1
AS31			IAmb	IAmb	04 39 54.6	

comp=Z,6.1nm,0.5s

ASAR	Alice Springs	19.87 205	Pn	Pn	04 39 51.7	+0.5
ASAR	Alice Springs	19.87 205	P	Pn	04 39 52.7	+1.5

comp=Z,2.3nm,0.3s,baz=33,slow=10,SNR=9.7
comp=Z,13nm,0.5s

FITZ	Fitzroy Crossi	20.85 232	P	P	04 40 00.1	-0.1
KAPI	Kappang	22.98 270	P	P	04 40 22.3	-0.8
SONM	Songino Array	62.14 333	P	P	04 45 39.0	-0.5
SONM			IAmb	IAmb	04 45 40.8	

comp=Z,1.0nm,1.3s

AMKA	Amchitka	64.82 24	P	P	04 45 58.4	+1.4
MKAR	Makanchi Array	74.61 322	P	P	04 47 03.5	+6.0

comp=Z,0.7nm,0.7s,baz=113,slow=7.5,SNR=2.0
comp=Z,0.7nm,0.7s

BVAR	Borovoye Array	84.05 325	P	P	04 47 55.1	+6.2

comp=Z,2.0nm,0.7s,baz=116,slow=8.2,SNR=2.1
comp=Z,2.0nm,0.7s

ILAR	Eielson Array	86.81 24	P	P	04 48 07.8	+5.5

comp=Z,0.8nm,0.7s,baz=258,slow=4.9,SNR=2.7
comp=Z,0.8nm,0.7s

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*IDC **26** 04:37:02.9±0.8,6˚.20S×143˚.12E,h0km,mb4.5/14, mbtmp4.5/16,ML4.6/2,Error ellipse: s-maj=34.2km s-min=16.2km az=88.0*

*NEIC **26** 04:37:04.3±1.7,6˚.34S±0˚.09×143˚.03E±0˚.09,h12km±5km, mb4.9/58,Error ellipse: s-maj=13.0km s-min=12.4km az=93.0*

*DJA **26** 04:37:45.9±2.6,10˚S±4˚×13˚8E±˚,h13km±20km,M5.6/13, mb5.0/13,mB5.8/7,MLv6.2/2,Mw(mB)5.3/7,MwMwp7.3/1, Mwp7.0/1*

ISC 26 04:37:04.4±0.4,**6˚27S**±0˚.06×**142˚98E**±0˚.07,**h10**km,**n115,** σ1$\hat{r}$**22**/108,**mb4.8**/48,**3C-3D**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	4.61 322		P	Sg	04 39 33.1	+0.7

2μm,0.7s,36μm10nm

PMG	Port Moresby	5.18 127	Pn	Pn	04 38 19.9	-2.1
PMG	Port Moresby	5.18 127	Pn	Pn	04 38 24.1	+2.1

3.9nm,0.3s,baz=309,slow=6.5,SNR=2.5

PMG			Sn	Sn	04 39 23.2	+1.3

4.5nm,0.3s,baz=335,slow=12,SNR=3.5

MANU	Manus Island	6.07 46	Pn	Pn	04 38 34.2	0.0
SAUI	Saumlaki	11.71 261		Pn	04 39 51.4	-0.3
WB0	Warramunga Arr	15.80 211	P	Pn	04 40 46.2	-0.9
WRAB	Tennant Creek	15.96 211	Pn	Pn	04 40 47.2	-2.0
WB2	Warramunga Arr	15.97 211	Pn	Pn	04 40 49.5	+0.2
WRA	Warramunga Arr	15.97 211	P	Pn	04 40 48.6	-0.7
WRA	Warramunga Arr	15.97 211	Pn	Pn	04 40 50.2	+0.8

1.5nm,0.3s,baz=35,slow=14,SNR=4.2
5.3nm,0.6s

LBMI	Labuha	16.43 289	P	P	04 41 12.2	+14

75nm,1.1s,2μm

KNRA	Kununurra	16.79 235	Pn	Pn	04 40 57.6	-2.1
KNRA			IAmb	IAmb	04 41 07.8	

comp=Z,54nm,0.7s

SANI	Sanana	17.45 283	P	P	04 41 15.5	+6.1

comp=Z,30nm,0.8s

SOEI	Soe	18.85 258	P	Pn	04 41 25.3	-0.1
SOEI			IAmb	IAmb	04 41 35.7	

comp=Z,76nm,0.8s

AS31	Alice Springs	19.37 206	P	P	04 41 30.9	+0.4
ASAR	Alice Springs	19.37 206	P	P	04 41 31.1	+0.6
ASAR	Alice Springs	19.37 206	P	Pn	04 41 33.5	+1.9

comp=Z,5.5nm,0.3s,baz=32,slow=10,SNR=35
comp=Z,71nm,0.7s

KMSI	Cibinong	20.15 289	P	Pn	04 42 00.9	+20

comp=Z,195nm,1.1s

EIDS	Eidsvold	20.51 159	P	P	04 41 42.2	-0.7
FITZ	Fitzroy Crossi	20.60 234	P	P	04 41 43.8	0.0
FITZ			IAmb	IAmb	04 41 55.5	

comp=Z,58nm,1.7s

LUWI	Luwuk	20.82 284	P	P	04 41 46.4	+0.1
LUWI			IAmb	IAmb	04 41 54.6	

comp=Z,144nm,1.4s

LUWI	Luwuk	20.82 284	P	Pn	04 41 54.5	+5.8

comp=Z,66nm,0.9s

GTOI	Gorontalo	21.08 288	P	P	04 41 50.4	+1.3
MRSI	Marisa	22.04 287	P	P	04 42 14.6	+15

comp=Z,42nm,1.1s,comp=Z,753nm

KAPI	Kappang	23.15 272	P	P	04 42 11.7	+0.6
TTSI	Tana Toraja	23.30 277	P	P	04 42 25.3	+13
TOLI2	Tolitoli	23.34 288	P	P	04 42 10.9	-2.2
TOLI2			IAmb	IAmb	04 42 18.1	

comp=Z,42nm,1.1s

STKA	Stephens Creek	25.51 183	P	P	04 42 33.0	-0.1
STKA	Stephens Creek	25.51 183	P	P	04 42 35.0	+2.0

comp=Z,9.0nm,0.9s,baz=348,slow=8.0,SNR=6.4
comp=Z,9.0nm,0.9s

BKB	Balikpapan	26.49 280	P	P	04 42 39.8	-2.4
BBOO	Buckleboo	27.18 193	P	P	04 42 47.2	-1.0
BBOO			IAmb	IAmb	04 43 09.9	

comp=Z,88nm,1.9s

SMRI	Semarang	32.33 267	P	P	04 43 33.9	-0.2
KPJI	Karang Pucung	33.82 266	P	P	04 43 48.6	+1.5

comp=Z,38nm,1.1s

CMJI	Cimerak	34.30 265	P	P	04 43 50.7	-0.6

comp=Z,65nm,1.1s

CNJI	Cibinong	35.61 266	P	P	04 44 02.0	-0.6
MJAR	Matsushiro Arr	42.82 354	P	P	04 45 02.7	+0.1

comp=Z,0.7nm,0.3s,baz=181,slow=7.3,SNR=1.9
comp=Z,0.7nm,0.3s

NJ2	Nanjing	44.51 330	*e*P	P	04 45 19.0	+2.8
NJ2			pmax	pmax		

comp=Z,6.0nm,0.5s

RPSI	Rantau Prapat	44.88 280	P	P	04 45 18.5	-1.1
RPSI			IAmb	IAmb	04 45 24.2	

comp=Z,16nm,1.0s

KSAR	Wonju Array Be	45.72 343	P	P	04 45 24.8	-1.0
KSRS	Korea Array	45.72 343	P	P	04 45 26.0	+0.3

comp=Z,5.6nm,1.0s,baz=161,slow=8.4,SNR=11
comp=Z,5.6nm,1.0s

WHN	Wuhan	45.74 325	P	P	04 45 35.8	+10
PHRA	Phrae	48.81 301	P	P	04 45 49.6	-0.6
CRAI	Chiangrai	49.47 303	P	P	04 45 54.4	-0.9
LYN	LuoYang	49.79 327	*e*P	P	04 45 57.8	+0.4
LYN			pmax	pmax		

comp=Z,18nm,0.7s

LYN			pmax	pmax		

comp=Z,130nm,4.5s

CMAR	Chiang Mai Arr	49.90 300	P	P	04 45 57.8	-0.8
CMAR	Chiang Mai Arr	49.90 300	P	P	04 45 59.4	+0.8

comp=Z,1.5nm,0.3s,baz=126,slow=6.5,SNR=7.6
comp=Z,1.5nm,0.3s

KMI	Kunming	50.05 310	⇓P	P	04 46 05.0	+5.1
KMI			pmax	pmax		

comp=Z,16nm,1.0s

HNS	HongShan	50.83 331	⇓P	P	04 46 05.3	+0.1
HNS			pmax	pmax		

comp=Z,8.0nm,1.2s

USRK	Ussuriysk Ar.	51.21 350	P	P	04 46 06.9	-1.1
USRK	Ussuriysk Ar.	51.21 350	P	P	04 46 08.2	+0.2

comp=Z,3.3nm,0.7s,baz=174,slow=7.2,SNR=6.9
comp=Z,3.3nm,0.7s

XAN	Xi'an	51.43 324	P	P	04 46 07.5	-2.4
XAN			pP	pP	04 46 14.3	+0.7
XAN			pmax	pmax		

comp=Z,11nm,1.2s

PZH	PanZhiHua	51.56 311	P	P	04 46 11.5	+0.4
PZH			pmax	pmax		

comp=Z,10.0nm,1.0s

PZH			pmax	pmax		

comp=Z,120nm,6.0s

CD2	Chengdu	52.67 317	P	P	04 46 20.0	+0.8
CD2			pmax	pmax		

comp=Z,10.0nm,0.7s

BNX	BinXian	53.62 346	⇑P	P	04 46 25.3	-0.5
BNX			pmax	pmax		

comp=Z,10.0nm,0.9s

BNX			pmax	pmax		

comp=Z,180nm,5.7s

HHC	Hu-ho-hao-te	55.05 331	*e*P	P	04 46 40.5	+4.0
HHC			pmax	pmax		

comp=Z,10.0nm,0.7s

HHC			pmax	pmax		

comp=Z,80nm,5.4s

LZH	Lanzhou	55.88 322	*e*P	P	04 46 43.0	+0.3
LZH			pP	sP	04 46 53.8	+6.1
LZH			sP	pP	04 47 01.5	+15
LZH			pmax	pmax		

comp=Z,13nm,1.2s

HEH	HeiHe	57.89 348	*e*P	P	04 46 49.5	-6.9
SHL	Shillong	58.85 305	P	P	04 47 03.5	-0.3
GTA	Gaotai	60.46 322	P	P	04 47 15.5	+0.9
GTA			pP	sP	04 47 24.0	+4.3
GTA			pmax	pmax		

comp=Z,4.0nm,1.1s

PETK	Petropavlovsk-	60.46 10	P	P	04 47 14.7	+0.5

comp=Z,3.6nm,0.9s,baz=73,slow=5.1,SNR=3.7
comp=Z,3.6nm,0.9s

GOMU	GeErMu	61.80 317	P	P	04 47 23.8	-0.3
GOMU			pP	pP	04 47 28.5	+0.7
GOMU			sP	sP	04 47 30.3	+1.1
GOMU			pmax	pmax		

comp=Z,3.0nm,1.0s

SONM	Songino Array	62.77 333	P	P	04 47 30.3	+0.2
SONM			IAmb	IAmb	04 49 09.7	

comp=Z,8.1nm,1.6s

SONM	Songino Array	62.77 333	P	P	04 47 30.3	+0.2

comp=Z,2.2nm,1.1s,baz=156,slow=7.4,SNR=8.0
comp=Z,2.2nm,1.1s

WMQ	Urumqi	70.43 321	*e*P	P	04 48 19.5	+0.4
WMQ			pP	sP	04 48 29.5	+5.3
WMQ			pmax	pmax		

comp=Z,18nm,0.7s

WMQ			LR	LR		

comp=N,740nm,18.3s

WMQ			LR	LR		

comp=E,810nm,19.5s

WMQ			LR	LR		

comp=Z,750nm,24.1s

MK31	Makanchi Array	75.20 322	P	P	04 48 46.9	-0.4
MKAR	Makanchi Array	75.20 322	P	P	04 48 46.6	-0.6
MKAR	Makanchi Array	75.20 322	P	P	04 48 47.5	+0.2

comp=Z,4.6nm,0.9s,baz=108,slow=7.8,SNR=15
comp=Z,4.6nm,0.9s

MAKZ	Makanchi	75.39 322	P	P	04 48 47.9	-0.5
PRZ	Przheval'sk	75.96 316	P	P	04 48 52.4	+0.5
PRZ			IAmb	IAmb	04 50 32.6	

comp=Z,15nm,1.0s

NIL	Nilore	76.85 307	P	P	04 48 56.8	-0.3
ZAA0	Zalesovo Array	77.15 329	P	P	04 48 56.7	-1.4
ZALV	Zalesovo Beam	77.15 329	P	P	04 48 56.7	-1.4
ZALV	Zalesovo Beam	77.15 329	P	P	04 48 57.7	-0.4

comp=Z,2.0nm,0.7s,baz=126,slow=3.8,SNR=7.0
comp=Z,2.0nm,0.7s

BOOM	Boomskoye usch	77.66 316	P	P	04 49 01.6	+0.1
AAK	Ala-Archa	78.71 316	P	P	04 49 06.6	-0.8
KURK	Kurchatov	79.06 324	P	P	04 49 08.6	-0.2
KURK			IAmb	IAmb	04 49 10.0	

comp=Z,11nm,1.1s

KURBB	Kurchatov Arra	79.08 324	P	P	04 49 08.7	-0.2

comp=Z,5.4nm,1.1s,baz=115,slow=4.7,SNR=15
comp=Z,5.4nm,1.1s

ARSB	Arslanbob	79.36 314	P	P	04 49 11.2	+0.3
SIMJ	Simiganj	81.52 310	P	P	04 49 21.9	-0.7
SIMJ			IAmb	IAmb	04 49 23.8	

comp=Z,11nm,1.2s

KK31	Karatay Array	81.64 315	P	P	04 49 22.1	-0.8
KKAR	Karatay Array	81.64 315	P	P	04 49 22.2	-0.7
H17K	Granite Mounta	82.43 21	P	P	04 49 26.3	-0.3
H17K			IAmb	IAmb	04 50 25.4	

comp=Z,11nm,1.2s

G18K	Tagagawik	83.39 21	P	P	04 49 30.7	-0.8
G18K			IAmb	IAmb	04 50 15.9	

comp=Z,16nm,1.5s

E18K	Tukpahlearik C	83.56 19	P	P	04 49 32.4	0.0
QSPA	South Pole Qui	83.70 180	P	P	04 49 34.1	+0.8
QSPA	South Pole Qui	83.70 180	P	P	04 49 32.0	-1.3

comp=Z,4.3nm,0.8s,baz=304,slow=1.7,SNR=10
comp=Z,4.3nm,0.8s

H19K	Roundabout Mou	83.98 21	P	P	04 49 34.2	-0.4
H19K			IAmb	IAmb	04 49 35.7	

comp=Z,20nm,1.4s

C18K	Utukok River	84.06 18	P	P	04 49 33.7	-1.3
C18K			IAmb	IAmb	04 50 08.8	

comp=Z,18nm,1.6s

J20K	Nowinta River	84.21 23	P	P	04 49 35.3	-0.5
J20K			IAmb	IAmb	04 50 22.9	

comp=Z,22nm,1.4s

NRIK	Noril'sk	84.33 343	P	P	04 49 35.5	-0.8
NRIK			IAmb	IAmb	04 49 54.7	

comp=Z,12nm,1.1s

NRIK	Noril'sk	84.33 343	P	P	04 49 36.3	0.0

comp=Z,4.8nm,0.8s,baz=122,slow=3.9,SNR=7.2
comp=Z,4.8nm,0.8s

BVAR	Borovoye Array	84.65 325	P	P	04 49 38.7	+0.4

comp=Z,13nm,0.8s,baz=117,slow=5.6,SNR=30
comp=Z,13nm,0.8s

E19K	Redstone River	84.68 20	P	P	04 49 38.1	0.0
E19K			IAmb	IAmb	04 50 19.7	

comp=Z,25nm,1.6s

BRVK	Borovoye	84.72 325	P	P	04 49 38.2	-0.4
C19K	Lookout Ridge	84.80 18	P	P	04 49 39.4	+0.7
F20K	Avaraart Lake	84.98 20	P	P	04 49 39.4	-0.2
E22K	Anaktuvuk Pass	86.82 20	P	P	04 49 48.6	-0.2
E22K			IAmb	IAmb	04 49 52.8	

comp=Z,5.8nm,0.8s

G23K	Bananza Creek	86.85 22	P	P	04 49 48.7	-0.3
G23K			IAmb	IAmb	04 49 52.5	

comp=Z,4.3nm,0.8s

D22K	Ayikyak River	86.85 19	P	P	04 49 49.2	+0.3
CCB	Clear Creek Bu	86.91 24	P	P	04 49 48.0	-1.2
CCB			IAmb	IAmb	04 50 32.4	

comp=Z,15nm,1.4s

IL31		87.32 24	P	P	04 49 49.3	-1.8
IL31			IAmb	IAmb	04 50 08.3	

comp=Z,22nm,1.8s

ILAR	Eielson Array	87.32 24	P	P	04 49 50.0	-1.3

comp=Z,2.6nm,0.7s,baz=256,slow=4.4,SNR=16
comp=Z,2.6nm,0.7s

J25K	Salcha River,	87.88 24	P	P	04 49 51.9	-2.1
F24K	Squaw Lake	87.94 21	P	P	04 49 53.5	-0.7
D24K	Happy Valley	88.23 19	P	P	04 49 56.0	+0.6
L27K	Beaver Creek,	88.91 26	P	P	04 49 58.3	-0.6
L27K			IAmb	IAmb	04 51 47.1	

comp=Z,13nm,1.4s

K27K	Chicken	89.07 25	P	P	04 49 59.3	-0.2
K27K			IAmb	IAmb	04 50 04.1	

comp=Z,10nm,1.1s

BMAR	Burnt Mountain	89.10 22	P	P	04 49 59.5	-0.2
ABKAR	Akbulak array	90.17 319	P	P	04 50 03.1	-1.9
CPUP	Villa Florida	142.07 150	PKP	PKPdf	04 56 38.6	+0.9

comp=Z,3.3nm,1.2s,baz=211,slow=5.9,SNR=3.3

SDV	Santo Domingo	146.59 83	PKPbc	PKPbc	04 56 47.5	-0.1

comp=Z,5.0nm,0.8s,baz=215,slow=2.6,SNR=5.7

KIC	Kosan Boka	147.92 272	⇑PKIKP	PKPbc	04 56 51.9	+0.8

comp=Z,20nm,1.1s

DBIC	Dimbokro	148.04 273	PKPbc	PKPbc	04 56 52.3	+0.9

comp=Z,11nm,1.1s,baz=127,slow=5.8,SNR=4.3

LIC	Lamto	148.20 272	⇓*e*P	PKPbc	04 56 51.9	+0.1

comp=Z,30nm,1.2s

TIC	Toumodi	148.20 272	⇑*e*PKIKP	PKPbc	04 56 51.6	-0.2

comp=Z,15nm,1.0s

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*NEIC **26** 04:37:50.2±1.4,6˚.5S±0˚.1×144˚.08E±0˚.09,h10km±2km, mb4.6/7,Error ellipse: s-maj=24.1km s-min=10.3km az=33.0*

*IDC **26** 04:37:53.8±2.1,6˚.08S×143˚.26E,h0km,mb4.5/5, mbtmp4.5/6,Error ellipse: s-maj=77.2km s-min=38.2km az=102.0*

ISC 26 04:37:51.1±0.9,**6˚6S**±0˚.1×**144˚0E**±0˚.1,**h10**km,**n18,** σ1$\hat{r}$**97**/18,**mb4.5**/9,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.24 132		Pn	Pn	04 38 53.8	-2.0
COEN	Coen	7.37 186		Pn	Pn	04 39 37.2	-1.6
MTN	Manton Dam	14.08 243		Pn	Pn	04 41 11.0	+0.2
WB0	Warramunga Arr	16.06 214		Pn	Pn	04 41 38.0	+0.8
WB0				IAmb	IAmb	04 41 48.3	

comp=Z,88nm,1.4s

AS31	Alice Springs	19.54 209	P	P	04 42 19.1	0.0
ASAR	Alice Springs	19.54 209	P	P	04 42 19.8	+0.7
ASAR	Alice Springs	19.54 209	P	Pn	04 42 24.5	+4.2

comp=Z,26nm,0.8s,baz=33,slow=10,SNR=1.4

KAPI	Kappang	24.12 272	P	P	04 43 03.8	-3.7
SONM	Songino Array	63.48 333	P	P	04 48 21.3	-0.3

comp=Z,0.8nm,0.6s,baz=154,slow=8.0,SNR=2.0
comp=Z,0.8nm,0.6s

MK31	Makanchi Array	76.04 321	P	P	04 49 38.1	-0.7
MK31			IAmb	IAmb	04 49 51.5	

comp=Z,3.2nm,0.9s

MKAR	Makanchi Array	76.04 321	P	P	04 49 37.2	-1.7
MKAR	Makanchi Array	76.04 321	P	P	04 49 38.4	-0.4

comp=Z,3.2nm,0.7s,baz=109,slow=7.2,SNR=4.7
comp=Z,3.2nm,0.7s

MAKZ	Makanchi	76.24 321	P	P	04 49 39.1	-0.8
MAKZ			IAmb	IAmb	04 49 40.2	

comp=Z,8.1nm,1.2s

BOOM	Boomskoye usch	78.55 316	P	P	04 49 51.5	-1.7
BOOM			IAmb	IAmb	04 49 53.2	

comp=Z,4.2nm,0.8s

KURK	Kurchatov	79.88 324	P	P	04 49 58.9	-1.1
KURK			IAmb	IAmb	04 49 60.0	

comp=Z,6.0nm,0.9s

KURBB	Kurchatov Arra	79.90 324	P	P	04 49 59.7	-0.4

comp=Z,2.6nm,0.9s,baz=115,slow=4.6,SNR=4.6
comp=Z,2.6nm,0.9s

BVAR	Borovoye Array	85.47 324	P	P	04 50 29.7	+0.6

comp=Z,18nm,0.7s,baz=114,slow=6.8,SNR=8.5
comp=Z,18nm,0.7s

ILAR	Eielson Array	87.22 24	P	P	04 50 40.8	+3.3

comp=Z,2.1nm,0.9s,baz=252,slow=4.8,SNR=4.0
comp=Z,2.1nm,0.9s

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*IDC **26** 04:38:38.5±1.0,6˚.26S×143˚.72E,h0km,mb4.5/10, mbtmp4.5/11,ML4.9/1,Error ellipse: s-maj=50.7km s-min=20.3km az=86.0*

*NEIC **26** 04:38:40.3±1.8,6˚.33S±0˚.08×143˚.6E±0˚.1,h10km±1km, mb4.8/25,Error ellipse: s-maj=22.5km s-min=12.5km az=76.0*

ISC 26 04:38:39.9±0.6,**6˚32S**±0˚.08×**143˚6E**±0˚.1,**h10**km,**n43,** σ0$\hat{r}$**95**/43,**mb4.8**/18,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.65 132		Pn	Pn	04 39 49.2	-1.0
WB0	Warramunga Arr	16.10 213			Pn	04 42 28.5	+1.9
WB0				IAmb	IAmb	04 42 53.5	

comp=Z,89nm,1.0s

WRAB	Tennant Creek	16.26 213			P	04 42 30.9	-0.7
WRAB				IAmb	IAmb	04 42 56.3	

comp=Z,102nm,1.1s

WB2	Warramunga Arr	16.27 213			P	04 42 31.6	-0.1
WB2				IAmb	IAmb	04 42 55.4	

comp=Z,50nm,0.9s

WRA	Warramunga Arr	16.28 213			P	04 42 30.7	-1.0
AS31	Alice Springs	19.62 207			Pn	04 43 10.1	0.0
ASAR	Alice Springs	19.62 207	P		Pn	04 43 10.2	+0.1
ASAR	Alice Springs	19.62 207	P		Pn	04 43 11.2	+1.1

comp=Z,3.2nm,0.3s,baz=35,slow=9.7,SNR=7.1
comp=Z,61nm,0.7s

PATS	Pohnpei	19.63 49	P	P	04 43 08.2	-0.6
FITZ	Fitzroy Crossi	21.10 235	P	P	04 43 22.9	-1.9
TOLI2	Tolitoli	23.98 287	P	P	04 43 53.8	-1.0
TOLI2			IAmb	IAmb	04 44 05.3	

comp=Z,17nm,0.8s

KSRS	Korea Array	45.95 343	P	P	04 47 03.8	+0.7

comp=Z,3.0nm,0.8s,baz=166,slow=9.2,SNR=4.6
comp=Z,3.0nm,0.8s

USA0B	Ussuriysk Arra	51.37 349	P	P	04 47 42.8	-1.9
PETK	Petropavlovsk-	60.39 10	P	P	04 48 50.0	+0.8
PETK	Petropavlovsk-	60.39 10	P	P	04 48 49.6	+0.4

comp=Z,7.8nm,1.0s,baz=207,slow=6.3,SNR=3.6
comp=Z,7.8nm,1.0s

SONM	Songino Array	63.10 333	P	P	04 49 07.9	+0.1
SONM	Songino Array	63.10 333	P	P	04 49 08.7	+0.9

comp=Z,1.6nm,0.7s,baz=162,slow=6.1,SNR=4.9
comp=Z,1.6nm,0.7s

VNDA	Vanda	71.81 176	P	P	04 50 02.9	+0.6
VNDA	Vanda	71.81 176	P	P	04 50 03.1	+0.9

comp=Z,1.1nm,0.6s,baz=31,slow=5.9,SNR=1.7
comp=Z,1.1nm,0.6s

MK31	Makanchi Array	75.64 322	P	P	04 50 25.3	0.0
MK31			IAmb	IAmb	04 50 26.6	

comp=Z,7.7nm,1.1s

MKAR	Makanchi Array	75.64 322	P	P	04 50 25.2	-0.1
MKAR	Makanchi Array	75.64 322	P	P	04 50 25.1	-0.2

comp=Z,6.1nm,0.7s,baz=103,slow=7.5,SNR=11
comp=Z,6.1nm,0.7s

MAKZ	Makanchi	75.84 321	P	P	04 50 26.1	-0.4
MAKZ			IAmb	IAmb	04 50 27.6	

comp=Z,12nm,1.1s

NIL	Nilore	77.40 306	P	P	04 50 34.9	-0.8
ZALV	Zalesovo Beam	77.52 329	P	P	04 50 35.0	-0.8
ZALV	Zalesovo Beam	77.52 329	P	P	04 50 34.8	-0.9

comp=Z,1.8nm,0.6s,baz=100,slow=5.6,SNR=4.3
comp=Z,1.8nm,0.6s

BOOM	Boomskoye usch	78.14 316	P	P	04 50 39.8	+0.1
BOOM			IAmb	IAmb	04 50 41.1	

comp=Z,6.3nm,0.7s

L14K	Kuka Creek	79.17 23

cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
ISC 26 04:41:01.1±0.3,5˚**47S**±0.03×**151˚91E**±0.04,**h28**km±2km,
h29km:**pP-P,n1223,**○**1942/870,mb5.4**/239,**MS5.5**/379,
34C-23D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.16**	**6**	Pn	**Pb**		**04 41 23.7**	**+1.2**
	191nm,0.3s,baz=105,slow=19,SNR=14							
KRVT				Sn	**Sn**		**04 41 40.5**	**+4.2**
	baz=8.2,slow=23							
I40PG	**Keravat**	**1.16**	**5**	Pn	**Pb**		**04 41 24.0**	**+1.4**
	baz=178,slow=24							
RABL	**Rabaul**	**1.29**	**11**		**Pb**		**04 41 25.6**	**+0.8**
RABL	**Rabaul**	**1.29**	**11**	P	**Pb**		**04 41 26.2**	**+1.4**
MANU	**Manus Island**	**5.67**	**307**	Pn	Pn		04 42 29.2	+5.7
MANU	**Manus Island**	**5.67**	**307**	P	Pn		04 42 28.9	+5.4
PMG	**Port Moresby**	**6.13**	**230**	Pn	Pn		**04 42 32.8**	**+3.0**
PMG	**Port Moresby**	**6.13**	**230**	P	Pn		04 42 33.8	+4.0
PMG	**Port Moresby**	**6.13**	**230**	P	Pn		04 42 33.7	+3.9
PMG	**Port Moresby**	**6.13**	**230**	P	**Pn**		**04 42 32.8**	**+3.0**
PMG	**Port Moresby**	**6.13**	**230**	Pn	**Pn**		**04 42 32.9**	**+3.1**
	27nm,0.3s,baz=35,slow=7.3,SNR=18							
PMG				Sn	**Sn**		**04 43 40.6**	**+1.6**
	118nm,0.3s,baz=22,slow=20,SNR=8.0							
	780nm,0.9s							
HNR	**Honiara**	**8.88**	**117**	Pn	**Pn**		**04 43 09.7**	**+2.0**
HNR	**Honiara**	**8.88**	**117**	Pn	Pn		04 43 12.2	+4.5
	363nm,0.3s,baz=164,slow=1.2,SNR=4.4							
HNR				LR	LR		04 46 58.6	
	comp=Z,86μm,18.1s,baz=287,slow=39							
PATS	**Pohnpei**	**13.79**	**28**		**Pn**		**04 44 15.1**	**+0.3**
TV1H	**Townsville Har**	**14.59**	**200**	P	**P**		**04 44 30.7**	**-1.2**
CTA	**Charters Tower**	**15.54**	**200**	P	**P**		**04 44 44.1**	**+1.6**
CTA	**Charters Tower**	**15.54**	**200**	Pn	**P**		**04 44 44.9**	**+2.5**
	0.9nm,0.3s,baz=41,slow=15,SNR=8.4							
CTA				LR	LR		04 50 19.1	
	comp=Z,10μm,19.6s,baz=28,slow=36							
CTAO	**Charters Tower**	**15.54**	**200**	Pn	**Pn**		**04 44 38.9**	**+0.5**
CTAO	**Charters Tower**	**15.54**	**200**	P	**P**		**04 44 44.1**	**+1.6**
CTAO	**Charters Tower**	**15.54**	**200**	P	**Pn**		**04 44 38.9**	**+0.5**
CTAO				pmax	pmax			
	comp=Z,41nm,1.4s							
RK1H	**Rockhampton Ha**	**17.87**	**184**	P	**P**		**04 45 09.6**	**+1.4**
GD1S	**Gladstone Soft**	**18.29**	**182**	P	**P**		**04 45 15.5**	**+2.7**
KOUNC	**Koumac, New Ca**	**19.22**	**142**	P	**Pn**		**04 45 24.7**	**+0.6**
EIDS	**Eidsvold**	**19.81**	**182**	P	**Pn**		**04 45 30.9**	**-0.2**
	baz=20,SNR=27							
EIDS	**Eidsvold**	**19.81**	**182**	P	**Pn**		**04 45 30.9**	**-0.2**
EIDS				IAmb	IAmb		04 45 35.0	
	comp=Z,432nm,1.5s							
EIDS	**Eidsvold**	**19.81**	**182**	P	**Pn**		**04 45 31.6**	**+0.5**
GUMO	**Guam**	**20.18**	**340**	P	**P**		**04 45 32.6**	**-1.0**
GUMO	**Guam**	**20.18**	**340**	P	Pn		04 45 36.2	+0.6
GUMO	**Guam**	**20.18**	**340**	P	**P**		**04 45 32.6**	**-1.0**
GUMO				pmax	pmax			
	comp=Z,754nm,1.2s							
GUMO	**Guam**	**20.18**	**340**	P	Pn		04 45 35.8	+0.1
	comp=Z,283nm,0.9s,baz=178,slow=6.7,SNR=9.8							
GUMO				LR	LR		04 52 41.8	
	comp=Z,472nm,20.5s,baz=150,slow=35							
KDU	**Kakadu**	**20.48**	**248**	P	**P**		**04 45 35.8**	**-1.1**
	baz=20							
RMQ	**Roma**	**21.12**	**188**	P	**P**		**04 45 45.6**	**+1.9**
	baz=21,SNR=5.1							
RMQ	**Roma**	**21.12**	**188**	P	**P**		**04 45 47.3**	**+3.6**
SWI	**Sorong**	**21.12**	**282**	P	**P**		**04 45 46.3**	**+2.5**
	comp=Z,179nm,1.1s							
LIFNC	**LIFOU**	**21.28**	**137**	P	**P**		**04 45 46.6**	**+1.1**
LIFNC				IAmb	IAmb		04 46 02.6	
	comp=Z,306nm,1.3s							
DZM	**Mont Dzumac**	**21.68**	**141**	P	**P**		**04 45 51.0**	**+1.1**
DZM	**Mont Dzumac**	**21.68**	**141**	P	**P**		**04 45 52.0**	**+2.1**
DZM	**Mont Dzumac**	**21.68**	**141**	P	**P**		**04 45 51.8**	**+1.9**
	comp=Z,6.9nm,0.6s,baz=327,slow=13,SNR=15							
	comp=Z,6.9nm,0.6s							
ONTNC	**Ouen Toro**	**21.86**	**141**	P	**P**		**04 45 51.5**	**-0.2**
YATNC	**Mamie plateau,**	**21.96**	**140**	P	**P**		**04 45 56.0**	**+3.3**
	comp=Z,65nm,1.0s							
TARA	**Tarawa**	**22.05**	**73**	P	**P**		**04 45 53.9**	**+0.1**
OUENC	**Ouen Island, N**	**22.19**	**141**	P	**P**		**04 45 56.1**	**+0.9**
QLP	**Quilpie**	**22.24**	**198**	P	**P**		**04 45 57.1**	**+1.4**
	baz=22,SNR=7.5							
QLP	**Quilpie**	**22.24**	**198**	P	**P**		**04 45 57.6**	**+1.8**
WRA	**Warramunga Arr**	**22.34**	**228**	P	**P**		**04 45 57.9**	**+1.0**
	comp=Z,82nm,0.7s,baz=52,slow=10,SNR=4.7							
WRA				S	**S**		**04 49 58.2**	**-3.0**
	comp=Z,37nm,1.1s,baz=54,slow=19,SNR=5.6							
WRA				ScP	**ScP**		**04 53 27.7**	**0.0**
	comp=Z,24nm,1.2s,baz=50,slow=2.9,SNR=7.1							
	comp=Z,82nm,0.7s							
GC1S	**Gold Coast 1 S**	**22.62**	**176**	P	**P**		**04 46 02.2**	**+2.4**
AULRC	**Lightning Ridg**	**24.12**	**188**	P	**P**		**04 46 15.4**	**+0.8**
INKA	**Innaminka**	**24.57**	**204**	P	**P**		**04 46 20.9**	**+2.2**
ARMA	**Armidale**	**24.82**	**181**	P	**P**		**04 46 22.6**	**+1.4**
	baz=25,SNR=4.6							
ARMA	**Armidale**	**24.82**	**181**	P	**P**		**04 46 20.8**	**-0.3**
ARMA				IAmb	IAmb		04 46 31.3	
	comp=Z,188nm,1.6s							
ARMA	**Armidale**	**24.82**	**181**	P	**P**		**04 46 23.0**	**+1.9**
LBMI	**Labuha**	**24.84**	**280**	P	**P**		**04 46 23.2**	**+1.9**
	comp=Z,225nm,1.6s,comp=Z,5μm							
AS01	**Alice Springs**	**25.03**	**222**	P	**P**		**04 46 25.3**	**+2.2**
AS31	**Alice Springs**	**25.07**	**222**	P	**P**		**04 46 23.1**	**-0.2**
ASAR	**Alice Springs**	**25.07**	**222**	P	**P**		**04 46 23.5**	**+0.2**
ASAR	**Alice Springs**	**25.07**	**222**	P	**P**		**04 46 24.7**	**+1.4**
	comp=Z,113nm,0.7s,baz=53,slow=9.1,SNR=32							
ASAR				S	**S**		**04 50 49.4**	**+3.1**
	comp=Z,13nm,1.1s,baz=52,slow=15,SNR=2.5							
ASAR				ScP	**ScP**		**04 53 36.0**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=37,slow=3.1,SNR=3.7							
ASAR				LR	LR		04 57 12.5	
	comp=Z,3μm,20.2s,baz=74,slow=39							
	comp=Z,113nm,0.7s							
ASPA	**Alice Springs**	**25.07**	**222**	P	**P**		**04 46 24.6**	**+1.3**
	baz=25							
AUPHS	**Peel High Scho**	**25.52**	**182**	P	**P**		**04 46 29.6**	**+2.3**
SANI	**Sanana**	**26.09**	**276**	P	**P**		**04 46 34.3**	**+1.6**
SANI	**Sanana**	**26.09**	**276**	P	P		04 46 52.1	+19
CMSA	**Cobar Meteorol**	**26.59**	**192**	P	**P**		**04 46 38.6**	**+1.6**
	baz=27,SNR=5.7							
CMSA	**Cobar Meteorol**	**26.59**	**192**	P	**P**		**04 46 37.7**	**+0.8**
AUDCS	**Dubbo College**	**26.80**	**186**	P	**P**		**04 46 42.7**	**+3.8**
OOD	**Oodnadatta**	**27.04**	**213**	P	**P**		**04 46 41.1**	**0.0**
STKA	**Stephens Creek**	**28.00**	**199**	P	**P**		**04 46 52.2**	**+2.6**
	baz=28,SNR=7.8							
STKA	**Stephens Creek**	**28.00**	**199**	P	**P**		**04 46 52.9**	**+3.3**
STKA	**Stephens Creek**	**28.00**	**199**	P	**P**		**04 46 52.7**	**+3.1**
	comp=Z,16nm,0.8s,baz=30,slow=15,SNR=5.5							
STKA				LR	LR		04 58 21.6	
	comp=Z,5μm,19.2s,baz=6.2,slow=37							
	comp=Z,16nm,0.8s							
LCRK	**Leigh Creek**	**28.00**	**206**	P	**P**		**04 46 52.8**	**+3.1**
FITZ	**Fitzroy Crossi**	**28.57**	**242**	P	**P**		**04 46 55.0**	**+0.1**
	baz=29,SNR=7.3							
DAV	**Davao City (W)**	**29.08**	**295**	LR	LR		04 58 07.5	
	comp=Z,5μm,18.9s,baz=107,slow=36							
DGTI	**Dogotuki**	**29.32**	**114**	P	**P**		**04 47 03.5**	**+1.9**
WRKA	**Warakurna**	**29.86**	**227**	P	**P**		**04 47 06.5**	**+0.1**
	baz=30,SNR=4.1							
WRKA	**Warakurna**	**29.86**	**227**	P	**P**		**04 47 06.9**	**+0.5**
MULG	**Mulgathing**	**29.87**	**212**	P	**P**		**04 47 08.2**	**+1.9**
EDFI	**Ende, Flores**	**30.16**	**262**	P	**P**		**04 47 08.5**	**-0.7**
HTT	**Hallett**	**30.34**	**202**	P	**P**		**04 47 11.1**	**+0.6**
	baz=30,SNR=4.4							
HTT	**Hallett**	**30.34**	**202**	P	**P**		**04 47 13.6**	**+3.1**
WHYH	**Whyalla**	**30.51**	**204**	P	**P**		**04 47 15.3**	**+3.4**
BASI	**Baing, Sumba**	**31.39**	**259**	P	**P**		**04 47 19.7**	**-0.2**
	comp=Z,369nm,1.0s,comp=Z,5μm							
TOLI2	**Tolitoli**	**31.77**	**281**	P	**P**		**04 47 21.6**	**-1.7**
ARPS	**Mount Arapiles**	**32.50**	**195**	P	**P**		**04 47 30.6**	**+1.3**
	baz=33,SNR=17							
ARPS	**Mount Arapiles**	**32.50**	**195**	P	**P**		**04 47 30.7**	**+1.4**
JCJ	**Chichijima**	**33.71**	**344**	LR	LR		04 59 49.8	
	comp=Z,4μm,21.9s,baz=130,slow=34							
FORT	**Forrest**	**33.72**	**219**	P	**P**		**04 47 40.3**	**+0.1**
	baz=34							
FORT	**Forrest**	**33.72**	**219**	P	**P**		**04 47 40.0**	**-0.2**
FORT	**Forrest**	**33.72**	**219**	P	**P**		**04 47 39.9**	**-0.2**
PLAI	**Plampang**	**34.03**	**262**	P	**P**		**04 47 41.6**	**-1.4**
PLAI	**Plampang**	**34.03**	**262**	P	**P**		**04 47 45.8**	**+2.8**
	comp=Z,58nm,0.7s,comp=Z,892nm							
MBWA	**Marble Bar**	**34.88**	**240**	P	**P**		**04 47 49.5**	**-0.7**
MBWA	**Marble Bar**	**34.88**	**240**	P	**P**		**04 47 50.2**	**-0.1**
TWSI	**Taliwang, Sumb**	**34.91**	**263**	P	P		04 48 00.4	+10
PSA00	**Pilbara Seismi**	**34.93**	**240**	P	**P**		**04 47 49.8**	**-1.0**
PSA00				IAmb	IAmb		04 48 01.4	
	comp=Z,126nm,1.6s							
PSA00	**Pilbara Seismi**	**34.93**	**240**	P	**P**		**04 47 51.1**	**+0.3**
AULHS	**Lilydale High**	**35.88**	**186**	P	**P**		**04 48 00.5**	**+1.9**
TGY	**Tagaytay City**	**36.37**	**303**	LR	LR		05 00 38.0	
	comp=Z,2μm,21.5s,baz=122,slow=32							
MOO	**Moorlands**	**37.06**	**186**	P	**P**		**04 48 11.6**	**+2.9**
JAGI	**Jajag, Banyuwa**	**37.59**	**263**	P	**P**		**04 48 11.0**	**-2.6**
JAGI				IAmb	IAmb		04 48 56.0	
	comp=Z,60nm,1.1s							
JAGI	**Jajag, Banyuwa**	**37.59**	**263**	P	**P**		**04 48 11.9**	**-1.7**
JAGI	**Jajag, Banyuwa**	**37.59**	**263**	P	**P**		**04 48 11.7**	**-1.9**
MEEK	**Meekatharra**	**38.10**	**233**	P	**P**		**04 48 17.7**	**-0.1**
	baz=38,SNR=82							
MEEK	**Meekatharra**	**38.10**	**233**	P	**P**		**04 48 18.1**	**+0.3**
KMBL	**Kambalda**	**38.16**	**224**	P	**P**		**04 48 20.6**	**+2.4**
	baz=38,SNR=6.4							
KMBL	**Kambalda**	**38.16**	**224**	P	**P**		**04 48 18.3**	**+0.1**
JOW	**Kunigami**	**39.43**	**326**	P	**P**		**04 48 29.6**	**+0.7**
JOW				IAmb	IAmb		04 48 30.9	
	comp=Z,83nm,0.8s							
JOW	**Kunigami**	**39.43**	**326**	P	**P**		**04 48 27.6**	**-1.2**
JOW	**Kunigami**	**39.43**	**326**	LR	LR		05 01 40.9	
	comp=Z,4μm,21.4s,baz=126,slow=32							
PWJI	**Pagerwojo**	**39.90**	**264**	P	**P**		**04 48 31.9**	**-1.1**
JHJ	**Hachijo jima 2**	**40.06**	**344**	LR	LR		05 02 16.7	
	comp=Z,2μm,21.8s,baz=186,slow=32							
GIRL	**Giralia**	**40.17**	**241**	P	**P**		**04 48 34.9**	**-0.2**
	baz=40,SNR=4.9							
GIRL	**Giralia**	**40.17**	**241**	P	**P**		**04 48 35.5**	**+0.4**
GIRL	**Giralia**	**40.17**	**241**	P	**P**		**04 48 36.2**	**+1.1**
NNZ	**Nelson**	**40.44**	**155**	IAMs_20	IAMs_20		05 03 46.9	
	comp=Z,5μm,20.0s							
MRZ	**Mangatainoka R**	**40.97**	**152**	IAMs_20	IAMs_20		05 03 16.0	
	comp=Z,5μm,21.0s							
SNZO	**South Karori**	**41.09**	**154**	IAMs_20	IAMs_20		05 04 28.2	
	comp=Z,6μm,20.0s							
KLBR	**Kellerberrin**	**41.21**	**227**	P	**P**		**04 48 43.7**	**+0.1**
	baz=41,SNR=8.3							
KLBR	**Kellerberrin**	**41.21**	**227**	P	**P**		**04 48 44.8**	**+1.2**
MORW	**Morawa**	**41.24**	**231**	P	**P**		**04 48 45.9**	**+2.0**
	baz=41,SNR=27							
MORW	**Morawa**	**41.24**	**231**	P	**P**		**04 48 46.8**	**+2.9**
LTZ	**Lake Taylor**	**41.31**	**157**	IAMs_20	IAMs_20		05 04 18.7	
	comp=Z,6μm,20.0s							
YULB	**Yu-li**	**41.43**	**315**	P	**P**		**04 48 44.7**	**-0.8**
YULB				IAMs_20	IAMs_20		05 02 31.8	
	comp=Z,5μm,20.0s							
YULB	**Yu-li**	**41.43**	**315**	P	**P**		**04 48 46.9**	**+1.4**
BLDU	**Ballidu**	**41.48**	**229**	P	**P**		**04 48 47.7**	**+1.9**
	baz=42,SNR=5.3							
KHZ	**Kahutara**	**41.51**	**156**	IAMs_20	IAMs_20		05 03 51.0	
	comp=Z,5μm,20.0s							
RPZ	**Rata Peaks**	**41.66**	**159**	IAMs_20	IAMs_20		05 04 01.9	
	comp=Z,6μm,21.0s							
OXZ	**Oxford**	**41.68**	**158**	IAMs_20	IAMs_20		05 04 15.6	
	comp=Z,4μm,20.0s							
NACB	**Ninganchiao**	**41.73**	**316**	P	**P**		**04 48 47.7**	**-0.2**
TPUB	**Ta-pu**	**41.84**	**314**	IAMs_20	IAMs_20		05 02 56.8	
	comp=Z,5μm,20.0s							
SSLB	**Suanglung**	**41.92**	**315**	P	**P**		**04 48 49.0**	**-0.5**
SSLB				IAmb	IAmb		04 49 37.2	
	comp=Z,223nm,2.0s							
SSLB				IAMs_20	IAMs_20		05 02 58.9	
	comp=Z,5μm,20.0s							
WKZ	**Wanaka**	**41.96**	**162**	IAMs_20	IAMs_20		05 03 55.8	
	comp=Z,8μm,21.0s							
YHNB	**Yeheng**	**42.20**	**317**	P	**P**		**04 48 52.1**	**+0.3**
YHNB				IAmb	IAmb		04 49 13.6	
	comp=Z,129nm,1.2s							
YHNB	**Yeheng**	**42.20**	**317**	P	**P**		**04 48 53.1**	**+1.3**
NWAO	**Narrogin (SRO)**	**42.30**	**225**	LR	LR		05 07 22.6	
	comp=Z,4μm,19.9s,baz=54,slow=37							
TATO	**Taipei**	**42.33**	**317**	IAMs_20	IAMs_20		05 03 06.4	
	comp=Z,5μm,21.0s							
MUN	**Mundaring**	**42.53**	**227**	P	**P**		**04 48 56.6**	**+2.2**
	baz=43,SNR=5.3							
MUN	**Mundaring**	**42.53**	**227**	P	**P**		**04 48 53.9**	**-0.5**
JMN	**Monobe**	**42.56**	**338**	P	**P**		**04 48 54.6**	**0.0**
KPJI	**Karang Pucung**	**42.74**	**265**	P	**P**		**04 48 58.3**	**+1.9**
	comp=Z,73nm,0.7s,comp=Z,2μm							
JGF	**Furoka**	**43.08**	**343**	P	**P**		**04 48 58.0**	**-0.8**
CMJI	**Cimerak**	**43.22**	**264**	P	**P**		**04 48 59.3**	**-0.9**
JNU	**Nakatsue**	**43.26**	**334**	P	**P**		**04 48 59.4**	**-0.9**
JNU	**Nakatsue**	**43.26**	**334**	P	**P**		**04 49 00.6**	**+0.4**
JNU	**Nakatsue**	**43.26**	**334**	LR	LR		05 05 39.0	
	comp=Z,1μm,20.9s,baz=179,slow=34							
MJAR	**Matsushiro Arr**	**43.71**	**344**	P	**P**		**04 49 01.7**	**-2.2**
	comp=Z,6.5nm,0.9s,baz=166,slow=8.8,SNR=8.1							
MJAR				LR	LR		05 06 02.9	
	comp=Z,3μm,20.8s,baz=166,slow=34							
	comp=Z,6.5nm,0.9s							
MAJO	**Matsushiro**	**43.72**	**344**	P	**P**		**04 49 02.1**	**-1.7**
MAJO	**Matsushiro**	**43.72**	**344**	P	**P**		**04 49 02.3**	**-1.5**
MAJO	**Matsushiro**	**43.72**	**344**	P	**P**		**04 49 02.2**	**-1.7**
MAJO				pmax	pmax			
	comp=Z,20nm,0.9s							
BBJI	**Bungbulang**	**44.02**	**265**	P	**P**		**04 49 05.7**	**-1.0**
JOHN	**Johnston Islan**	**44.04**	**59**	IAMs_20	IAMs_20		05 04 40.2	
	comp=Z,4μm,20.0s							
LEM	**Lembang**	**44.05**	**266**	LR	LR		05 11 26.6	
	comp=Z,979nm,20.5s,baz=86,slow=42							
QZH	**Quanzhou**	**44.32**	**314**	⇑*iP*	**P**		**04 49 09.5**	**+0.7**
QZH				pP	**sP**		**04 49 19.8**	**-1.5**
QZH				S	**S**		**04 55 49.5**	**+8.1**
QZH				sS	sS		04 56 01.5	+5.5
QZH				LR	LR			
	comp=Z,2μm,16.8s							
QZH				LR	LR			
	comp=Z,3μm,18.2s							
QZH				LR	LR			
	comp=Z,3μm,21.3s							
CNJI	**Cibinong**	**44.53**	**265**	P	**P**		**04 49 11.3**	**+0.5**
	comp=Z,58nm,0.9s,comp=Z,665nm							
JSD	**Sado**	**45.11**	**345**	P	**P**		**04 49 17.2**	**+2.3**
XMI	**Christmas Isla**	**46.01**	**261**	P	**P**		**04 49 21.3**	**-1.2**
XMIS	**Christmas Isla**	**46.05**	**261**	P	**P**		**04 49 21.1**	**-1.7**
XMIS				IAmb	IAmb		04 49 23.5	
	comp=Z,45nm,0.8s							
XMIS	**Christmas Isla**	**46.05**	**261**	P	**P**		**04 49 23.1**	**+0.3**
SSE	**Sheshan**	**46.73**	**323**	P	**P**		**04 49 26.8**	**-1.0**
SSE				S	**S**		**04 56 15.3**	**-0.7**
SSE				sS	sS		04 56 37.0	+6.4
SSE				pmax	pmax			
	comp=Z,10.0nm,1.7s							
SSE				pmax	pmax			
	comp=Z,230nm,6.0s							
SSE				LR	LR			
	comp=Z,980nm,19.0s							
KASI	**Kota Agung**	**47.19**	**268**	P	**P**		**04 49 31.4**	**-0.4**
TJN	**Taejon**	**47.55**	**333**	P	**P**		**04 49 34.9**	**+0.7**
QIZ	**Qiongzhong**	**48.05**	**302**	P	**P**		**04 49 38.3**	**-0.1**
QIZ				sP	**sP**		**04 49 50.0**	**-0.5**
QIZ				PP	**PP**		**04 51 29.3**	**-1.5**
QIZ				S	**S**		**04 56 36.8**	**+1.5**
QIZ				sS	**sS**		**04 56 51.3**	**+1.6**
QIZ				SS	**SS**		**05 00 04.8**	**+0.1**
QIZ				pmax	pmax			
	comp=Z,300nm,4.4s							
QIZ				LR	LR			
	comp=Z,810nm,19.6s							
QIZ				LR	LR			
	comp=Z,1μm,19.1s							
QIZ				LR	LR			
	comp=Z,3μm,21.6s							
KSRS	**Korea Array**	**48.20**	**334**	P	**P**		**04 49 38.8**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=151,slow=9.3,SNR=9.8							
KSRS				LR	LR		05 08 24.8	
	comp=Z,1μm,20.9s,baz=150,slow=34							
	comp=Z,4.4nm,0.8s							
INCN	**Inchon**	**48.80**	**333**	P	**P**		**04 49 42.6**	**-1.2**
INCN				IAmb	IAmb		04 50 13.1	
	comp=Z,88nm,1.2s							
INCN	**Inchon**	**48.80**	**333**	P	**P**		**04 49 44.1**	**+0.3**
INCN	**Inchon**	**48.80**	**333**	P	**P**		**04 49 42.6**	**-1.2**
INCN				pmax	pmax			
	comp=Z,88nm,1.3s							
NJ2	**Nanjing**	**48.81**	**322**	⇓P	**P**		**04 49 45.0**	**+1.0**
NJ2				S	**S**		**04 56 52.3**	**+6.7**
NJ2				pmax	pmax			
	comp=Z,23nm,2.0s							
NJ2				pmax	pmax			
	comp=Z,620nm,5.0s							
NJ2				LR	LR			
	comp=Z,3μm,19.9s							
NJ2				LR	LR			
	comp=Z,2μm,21.8s							
NJ2				LR	LR			
	comp=Z,4μm,19.9s							
JKA	**Kamikawa-asahi**	**50.06**	**351**	IAmb	IAmb		04 50 17.7	
	comp=Z,44nm,1.1s							
CNSH	**ChangSha**	**50.31**	**314**	⇑P	**P**		**04 49 56.8**	**+1.3**
CNSH				S	**S**		**04 57 08.5**	**+1.9**
CNSH				pmax	pmax			
	comp=Z,45nm,1.0s							
CNSH				LR	LR			
	comp=Z,830nm,16.4s							
CNSH				LR	LR			
	comp=Z,720nm,17.6s							
CNSH				LR	LR			
	comp=Z,1μm,18.3s							
KUR	**Kuril'sk**	**50.60**	**356**	*eP*	**P**		**04 49 53.8**	**-3.5**
KUR				S	**S**		**04 57 09.4**	**-0.7**
KUR				*e*SSS	SSS		05 02 13.5	
KUR				MLR	MLR			
	comp=Z,2μm,17.0s							
WHN	**Wuhan**	**50.73**	**317**	P	**P**		**04 49 59.5**	**+0.9**
WHN				pP	**sP**		**04 50 09.8**	**-1.3**
WHN				sP	pP		04 50 13.3	+5.7
WHN				S	S		04 57 21.8	+9.3
WHN				pmax	pmax			
	comp=Z,77nm,0.9s							
WHN				pmax	pmax			
	comp=Z,1μm,3.6s							
WHN				LR	LR			
	comp=Z,6μm,21.7s							
WHN				LR	LR			
	comp=Z,10μm,23.5s							
WHN				LR	LR			
	comp=Z,9μm,21.1s							
DL2	**Dalian**	**52.30**	**330**	P	**P**		**04 50 10.0**	**-0.2**
DL2				*e*S	**S**		**04 57 32.3**	**-1.5**
DL2				pmax	pmax			
	comp=Z,36nm,1.3s							
DL2				pmax	pmax			
	comp=Z,260nm,4.9s							
DL2				LR	LR			
	comp=Z,1μm,21.9s							
DL2				LR	LR			
	comp=Z,1μm,22.1s							
DL2				LR	LR			
	comp=Z,2μm,23.1s							
USA0B	**Ussuriysk Arra**	**52.60**	**342**	IAmb	IAmb		04 50 37.5	
	comp=Z,111nm,1.9s							
USA0B	**Ussuriysk Arra**	**52.60**	**342**	*c iP*	**P**		**04 50 11.5**	**-0.8**
USRK	**Ussuriysk Ar.**	**52.60**	**342**	P	**P**		**04 50 10.7**	**-1.6**
USRK	**Ussuriysk Ar.**	**52.60**	**342**	P	**P**		**04 50 12.1**	**-0.2**
	comp=Z,10nm,0.8s,baz=166,slow=7.9,SNR=9.1							
USRK				LR	LR		05 12 31.1	
	comp=Z,1μm,18.1s,baz=158,slow=36							
	comp=Z,10nm,0.8s							
TIA	**Tai'an**	**52.73**	**325**	P	**P**		**04 50 13.3**	**-0.2**
TIA				pmax	pmax			
	comp=Z,8.0nm,0.9s							
TIA				pmax	pmax			
	comp=Z,200nm,7.4s							
TIA				LR	LR			
	comp=Z,510nm,21.4s							
TIA				LR	LR			
	comp=Z,1μm,21.6s							
TIA				LR	LR			
	comp=Z,1μm,22.0s							
YSS	**Yuzh-Sakhalins**	**52.82**	**352**	*eP*	**P**		**04 50 16.4**	**+2.5**
YSS				*e*S	**S**		**04 57 42.6**	**+2.0**
YSS				pmax	pmax			
	comp=Z,10.0nm,1.0s							
YSS				MLR	MLR			
	comp=E,600nm,15.0s							
YSS				MLR	MLR			
	comp=Z,800nm,15.0s							
NONG	**Nongkai**	**53.48**	**297**	P	**P**		**04 50 20.0**	**+0.7**
MDJ	**Mudanjiang**	**53.74**	**340**	P	**P**		**04 50 23.0**	**+2.3**
MDJ				pP	sP		04 50 32.5	-0.7
MDJ				PP	**PP**		**04 52 19.8**	**-2.2**
MDJ				S	**S**		**04 57 53.0**	**-0.2**
MDJ				sS	sS		04 58 09.3	+1.1
MDJ				SS	**SKiKP**		**05 01 34.5**	**+1.1**
MDJ				pmax	pmax			
	comp=Z,13nm,1.4s							
MDJ				pmax	pmax			
	comp=Z,410nm,10.3s							
MDJ				LR	LR			
	comp=Z,820nm,22.0s							
MDJ

BNX LR LR
comp=Z,410nm,18.8s
BNX LR LR
comp=Z,230nm,13.6s
BNX LR LR
comp=Z,500nm,17.3s
SRDT SRDT 55.94 291 P **P** **04 50 37.9 +0.8**
BJI Beijing 55.96 327 P **P** **04 50 36.3 -0.6**
BJI S **S** **04 58 24.8 +1.6**
BJI sS **sS** **04 58 41.8 +3.7**
BJI pmax pmax
comp=Z,14nm,1.6s
BJI pmax pmax
comp=Z,200nm,7.6s
BJI LR LR
comp=Z,1μm,19.7s
BJI LR LR
comp=Z,600nm,18.4s
BJI LR LR
comp=Z,1μm,21.0s
XAN Xi'an 56.50 317 ⇑P **P** **04 50 40.5 -0.5**
XAN pP sP 04 50 50.0 -3.5
XAN S **S** **04 58 29.8 -1.0**
XAN pmax pmax
comp=Z,56nm,1.2s
XAN pmax pmax
comp=Z,490nm,4.6s
XAN LR LR
comp=Z,2μm,22.0s
XAN LR LR
comp=Z,2μm,19.6s
XAN LR LR
comp=Z,5μm,20.6s
KMI Kunming 56.63 305 ⇑P **P** **04 50 41.0 -1.3**
KMI pP sP 04 50 52.8 -1.7
KMI sP pP 04 50 57.3 +6.1
KMI S **S** **04 58 38.3 +5.2**
KMI pmax pmax
comp=Z,29nm,1.4s
KMI pmax pmax
comp=Z,440nm,5.3s
KMI LR LR
comp=Z,600nm,19.4s
KMI LR LR
comp=Z,920nm,21.5s
KMI LR LR
comp=Z,1μm,20.9s
CRAI Chiangrai 56.71 298 IAmb IAmb 04 50 44.5
comp=Z,73nm,1.2s
KLR Kul'dur 57.24 344 LR LR 05 12 26.2
comp=Z,2μm,22.0s,baz=166,slow=33
CMAR Chiang Mai Arr 57.37 296 P **P** **04 50 47.8 +0.4**
comp=Z,13nm,0.9s,baz=118,slow=5.1,SNR=28
CMAR LR LR 05 15 49.8
comp=Z,596nm,18.6s,baz=100,slow=36
CMAR PKP2bc 05 20 47.1
comp=Z,1.0nm,0.4s,baz=309,slow=3.3,SNR=10
comp=Z,13nm,0.9s
HPAH Hawaii Prepara 57.38 62 IAMs_20 IAMs_20 05 14 19.4
comp=Z,3μm,18.0s
POHA Pohakuloa 57.43 63 IAMs_20 IAMs_20 05 12 31.7
comp=Z,3μm,18.0s
CHTO Chiang Mai 57.48 296 P **P** **04 50 47.7 -0.5**
CHTO IAmb IAmb 04 50 49.6
comp=Z,127nm,1.7s
CHTO Chiang Mai 57.48 296 P **P** **04 50 48.6 +0.5**
CHTO Chiang Mai 57.48 296 P **P** **04 50 47.7 -0.5**
CHTO pmax pmax
comp=Z,127nm,1.7s
STCH Steam Cracks 57.67 63 IAMs_20 IAMs_20 05 11 28.9
comp=Z,3μm,20.0s
NPOC North of Pu'u 57.68 63 IAMs_20 IAMs_20 05 11 39.4
comp=Z,3μm,18.0s
PZH PanZhiHua 58.04 306 P **P** **04 50 51.8 -0.2**
PZH pP **sP** **04 51 01.8 -2.5**
PZH S **S** **04 58 55.3 +3.9**
PZH SS **SS** **05 02 48.0 +4.8**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,290nm,5.1s
PZH LR LR
comp=Z,660nm,20.6s
PZH LR LR
comp=Z,770nm,19.0s
PZH LR LR
comp=Z,1μm,20.0s
CD2 Chengdu 58.51 311 P **P** **04 50 54.8 -0.3**
CD2 S **S** **04 58 57.0 -0.2**
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,300nm,6.8s
CD2 LR LR
comp=Z,470nm,17.9s
CD2 LR LR
comp=Z,470nm,15.3s
CD2 LR LR
comp=Z,3μm,22.6s
PET Petropavlovsk 58.55 5 *e*P **P** **04 50 57.3 +2.4**
PET *e*S **S** **04 59 01.4 +4.6**
PET pmax pmax
comp=Z,200nm,14.2s
PET MLR MLR
comp=Z,1μm,17.0s
PET MLR MLR
comp=Z,1μm,15.0s
PETK Petropavlovsk- 58.56 4 P **P** **04 50 54.4 -0.7**
comp=Z,2.8nm,0.5s,baz=153,slow=6.0,SNR=13
comp=Z,2.8nm,0.5s
XLT XiLinHaoTe 58.80 330 *e*P **P** **04 50 56.0 -1.0**
XLT sP sP 04 51 11.0 +1.4
XLT S **S** **04 58 57.5 -3.1**
XLT sS sS 04 59 21.5 +5.9
XLT pmax pmax
comp=Z,51nm,0.9s
XLT pmax pmax
comp=Z,330nm,7.3s
XLT LR LR
comp=Z,110nm,21.6s
XLT LR LR
comp=Z,870nm,22.5s
XLT LR LR
comp=Z,2μm,24.4s
HHC Hu-ho-hao-te 59.08 325 *e*P **P** **04 50 59.3 +0.3**
HHC pP sP 04 51 09.5 -2.1
HHC S **S** **04 59 03.8 -0.6**
HHC sS sS 04 59 19.5 +0.1
HHC SS **SS** **05 02 56.8 -2.2**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,170nm,6.3s
HHC LR LR
comp=Z,2μm,19.1s
HHC LR LR
comp=Z,1μm,18.3s
HHC LR LR
comp=Z,3μm,17.6s
HEH HeiHe 59.41 342 *e*P **P** **04 50 58.0 -2.9**
HEH pmax pmax
comp=Z,10.0nm,0.8s
HEH pmax pmax
comp=Z,280nm,5.9s
HEH LR LR
comp=Z,540nm,20.7s
HEH LR LR
comp=Z,780nm,21.1s
HEH LR LR
comp=Z,2μm,21.5s
BTO Baotou 59.81 324 *e*P **P** **04 51 05.5 +1.4**
BTO pP **sP** **04 51 15.8 -0.9**
BTO sP pP 04 51 19.8 +6.6
BTO PP **PP** **04 53 20.3 +3.9**
BTO S **S** **04 59 14.0 +0.1**
BTO sS **sS** **04 59 33.0 +4.1**
BTO SS **SS** **05 03 11.5 +1.0**
BTO pmax pmax
comp=Z,49nm,0.8s
BTO pmax pmax
comp=Z,750nm,7.6s
BTO LR LR
comp=Z,4μm,21.8s
BTO LR LR
comp=Z,3μm,20.6s
BTO LR LR
comp=Z,4μm,22.3s
TNCH TengChong 60.09 303 P **P** **04 51 06.5 +0.1**
TNCH S **S** **04 59 18.3 +0.2**
TNCH pmax pmax
comp=Z,50nm,0.7s
TNCH pmax pmax
comp=Z,260nm,5.2s
TNCH LR LR
comp=Z,360nm,21.7s
TNCH LR LR
comp=Z,490nm,21.2s
TNCH LR LR
comp=Z,1μm,22.0s
MND Mandalay 61.05 299 P **P** **04 51 12.7 -0.1**
LZH Lanzhou 61.10 316 ⇑P **P** **04 51 13.5 +0.5**
LZH pP sP 04 51 24.0 -1.7
LZH sP pP 04 51 29.0 +6.8
LZH S **S** **04 59 35.5 +4.8**
LZH sS sS 04 59 47.5 +2.0
LZH pmax pmax
comp=Z,52nm,1.0s
LZH pmax pmax
comp=Z,490nm,5.3s
LZH LR LR
comp=Z,860nm,15.8s
LZH LR LR
comp=Z,1μm,17.5s
LZH LR LR
comp=Z,2μm,18.7s
HIA Hailar 61.28 337 P **P** **04 51 13.7 -0.1**
ZEA Zeya 62.53 344 *e*P **P** **04 51 21.6 -0.5**
ZEA pmax pmax
comp=Z,20nm,1.4s
MA2 Magadan 64.84 359 P **P** **04 51 36.7 -0.5**
MA2 Magadan 64.84 359 P **P** **04 51 36.2 -1.0**
MA2 Magadan 64.84 359 *d i*P **P** **04 51 37.2 0.0**
MA2 pmax pmax
comp=Z,16nm,0.7s
GTA Gaotai 65.55 318 P **P** **04 51 42.8 +0.4**
GTA pP sP 04 51 52.8 -2.3
GTA pmax pmax
comp=Z,180nm,9.2s
GTA LR LR
comp=Z,430nm,17.9s
GTA LR LR
comp=Z,890nm,19.1s
GTA LR LR
comp=Z,1μm,21.5s
SHL Shillong 65.89 301 P **P** **04 51 43.8 -1.2**
SHL Shillong 65.89 301 P **P** **04 51 43.8 -1.2**
SHL pmax pmax
comp=Z,72nm,1.1s
CIT Chita 65.92 335 *e*P **P** **04 51 44.4 -0.1**
CIT *e* 04 52 00.4
CIT *e* 04 52 22.2
CIT pmax pmax
comp=Z,556nm,1.9s
ULN Ulaanbaatar 66.10 329 P **P** **04 51 44.9 -0.9**
ULN IAmb IAmb 04 51 47.3
comp=Z,30nm,1.0s
ULN Ulaanbaatar 66.10 329 *c i*P **P** **04 51 46.0 +0.2**
ULN pmax pmax
comp=Z,26nm,0.9s
SONM Songino Array 66.42 328 P **P** **04 51 46.7 -1.2**
SONM IAmb IAmb 04 51 49.2
comp=Z,61nm,1.4s
SONM Songino Array 66.42 328 P **P** **04 51 47.7 -0.1**
comp=Z,15nm,0.7s,baz=147,slow=4.6,SNR=65
SONM LR LR 05 19 17.3
comp=Z,2μm,21.3s,baz=130,slow=35
SONM PKP2bc 05 20 24.1
comp=Z,1.2nm,0.9s,baz=270,slow=4.3,SNR=8.6
comp=Z,15nm,0.7s
NIKH Nikolski High 66.98 25 P **P** **04 51 52.3 +1.2**
baz=223
CASY Casey 67.12 197 IAMs_20 IAMs_20 05 18 38.5
comp=Z,3μm,20.0s
GOMU GeErMu 67.56 313 P **P** **04 51 55.3 -0.3**
GOMU S **S** **05 00 55.5 +4.5**
GOMU sS sS 05 01 05.8 -0.3
GOMU pmax pmax
comp=Z,16nm,1.0s
GOMU LR LR
comp=Z,730nm,21.4s
GOMU LR LR
comp=Z,1μm,21.1s
GOMU LR LR
comp=Z,2μm,21.2s
LSA Lhasa 67.89 305 P **P** **04 51 57.3 -0.7**
LSA IAmb IAmb 04 51 59.3
comp=Z,29nm,0.9s
LSA Lhasa 67.89 305 P **P** **04 51 57.3 -0.7**
LSA pmax pmax
comp=Z,29nm,0.9s
SEY Seymchan 68.21 0 ⇑*i*P **P** **04 52 00.2 +1.5**
SEY pmax pmax
comp=Z,26nm,3.6s
UNV Unalaska Valle 68.59 25 P **P** **04 52 02.8 +1.6**
baz=225
P08K Saint George I 69.40 22 P **P** **04 52 07.6 +1.4**
baz=222
YAK Yakutsk 69.45 349 P **P** **04 52 05.4 -1.0**
YAK IAmb IAmb 04 52 46.9
comp=Z,29nm,0.6s
YAK Yakutsk 69.45 349 *e*P **P** **04 52 07.1 +0.7**
YAK *e**PP **sP** **04 52 19.9 +0.8**
YAK *e* 04 52 26.1
YAK *e* 04 54 37.1
YAK *e*S S 05 00 59.3 -12
YAK *e**SS **SKSac** **05 02 02.5 -2.0**
YAK pmax pmax
comp=Z,30nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,15nm,0.7s
YAK smax smax
comp=N,250nm,14.6s
YAK smax smax
comp=E,89nm,15.5s
SPIA Saint Paul Isl 69.58 21 P **P** **04 52 08.4 +1.1**
baz=221
ZAK Zakamensk 69.60 329 *e*P **P** **04 52 07.2 -0.6**
ZAK pmax pmax
comp=Z,57nm,0.9s
BOD Bodaibo 70.10 340 *e*P **P** **04 52 09.3 -1.2**
BOD pmax pmax
comp=Z,16nm,1.3s
MOY Mondy 71.53 329 *e*P **P** **04 52 19.4 -0.1**
MOY pmax pmax
comp=Z,61nm,3.5s
PALK Pallekele 72.17 279 LR LR 05 29 20.9
comp=Z,304nm,19.1s,baz=209,slow=40
SDPT Sand Point 72.20 26 P **P** **04 52 23.4 +0.2**
baz=231
VNDA Vanda 72.20 178 P **P** **04 52 23.9 +0.9**
comp=Z,3.4nm,0.9s,baz=290,slow=8.1,SNR=4.7
comp=Z,3.4nm,0.9s
CHNA Chernabura Isl 72.27 27 P **P** **04 52 23.9 +0.3**
baz=232
S14K Fog Glacier 73.20 26 P **P** **04 52 30.0 +0.7**
baz=231
M11K Mekoryuk 73.38 20 P **P** **04 52 31.5 +1.4**
baz=224
BILL Bilibino 74.03 6 P **P** **04 52 32.5 -1.4**
BILL Bilibino 74.03 6 *i* P **P** **04 52 34.5 +0.6**
BILL pmax pmax
comp=Z,18nm,1.0s
GAMB Gambell 74.26 16 P **P** **04 52 36.6 +1.4**
baz=218
O14K Tigyukauivet M 74.41 23 P **P** **04 52 37.5 +1.3**
baz=229
M13K Dall Lake 74.41 21 P **P** **04 52 37.6 +1.5**
baz=227
N14K Kuskokwak Cree 74.69 22 P **P** **04 52 38.3 +0.5**
baz=228
O15K Ungalikthiuk R 74.92 23 P **P** **04 52 40.1 +0.9**
baz=230
M14K Bethel 75.14 21 P **P** **04 52 40.9 +0.5**
baz=228
L14K Kuka Creek 75.28 21 IAmb IAmb 04 52 59.0
comp=Z,36nm,1.1s
L14K Kuka Creek 75.28 21 P **P** **04 52 41.6 +0.4**
baz=227
N15K Kwethluk River 75.45 23 IAMs_20 IAMs_20 05 21 10.8
comp=Z,2μm,20.0s
N15K Kwethluk River 75.45 23 P **P** **04 52 42.9 +0.7**
baz=230
P16K Nushagak River 75.57 24 P **P** **04 52 42.8 -0.1**
baz=232
M15K Kasigluk River 75.57 22 P **P** **04 52 43.5 +0.6**
baz=229
WMQ Urumqi 75.63 318 *e*P **P** **04 52 43.3 -0.5**
WMQ pP sP 04 52 54.0 -2.3
WMQ pmax pmax
comp=Z,32nm,1.3s
WMQ pmax pmax
comp=Z,350nm,5.5s
WMQ LR LR
comp=Z,800nm,17.3s
WMQ LR LR
comp=Z,810nm,21.9s
WMQ LR LR
comp=Z,720nm,23.9s
O16K Kokwok River B 75.87 24 IAMs_20 IAMs_20 05 22 11.3
comp=Z,2μm,20.0s
O16K Kokwok River B 75.87 24 P **P** **04 52 45.1 +0.4**
baz=232
HYB Hyderabad 75.88 289 *e*P **P** **04 52 45.0 -0.7**
HYB *e*pP **pP** **04 52 51.3 -3.5**
HYB *e*PcP **PcP** **04 52 57.0 -1.0**
Q16K King Salmon 75.90 25 P **P** **04 52 45.0 +0.2**
baz=233
L15K Ungalak Mounta 75.93 21 P **P** **04 52 45.8 +0.8**
baz=228
J14K Nanvaranak Lak 75.96 19 IAmb IAmb 04 53 03.3
comp=Z,64nm,1.4s
J14K Nanvaranak Lak 75.96 19 P **P** **04 52 45.3 +0.3**
baz=226
Q17K Contact Creek 75.98 25 P **P** **04 52 45.8 +0.3**
baz=234,SNR=5.6
N16K Nishlik Lake 76.16 23 P **P** **04 52 46.7 +0.4**
baz=231
P17K Kvichak River 76.30 25 P **P** **04 52 47.1 0.0**
baz=234
K15K Wolf Creek Mou 76.33 20 IAmb IAmb 04 53 04.5
comp=Z,70nm,1.2s
K15K Wolf Creek Mou 76.33 20 P **P** **04 52 47.7 +0.5**
baz=228,SNR=6.5
O17K Koliganek Bris 76.38 24 P **P** **04 52 48.3 +0.8**
baz=233
M16K Timber Creek 76.43 22 IAmb IAmb 04 53 04.5
comp=Z,37nm,0.9s
M16K Timber Creek 76.43 22 P **P** **04 52 48.6 +0.8**
baz=231
OHAK Old Harbor 76.54 27 P **P** **04 52 49.2 +0.7**
baz=237
ANM Nome 76.67 18 IAmb IAmb 04 53 07.7
comp=Z,52nm,1.5s
ANM IAMs_20 IAMs_20 05 22 00.7
comp=Z,2μm,22.0s
ANM Nome 76.67 18 P **P** **04 52 49.6 +0.5**
baz=224,SNR=5.1
TNA Tin City 76.67 16 P **P** **04 52 49.8 +0.8**
baz=221
L16K Owhat River 76.68 22 IAmb IAmb 04 53 06.7
comp=Z,81nm,1.7s
L16K Owhat River 76.68 22 P **P** **04 52 49.5 +0.3**
baz=230,SNR=5.4
N17K Nushagak Hills 76.81 23 IAMs_20 IAMs_20 05 24 31.9
comp=Z,2μm,19.0s
N17K Nushagak Hills 76.81 23 P **P** **04 52 50.5 +0.5**
baz=232
F14K Arctic Creek 77.06 17 P **P** **04 52 51.6 +0.4**
baz=223
KDAK Kodiak Island 77.17 27 P **P** **04 52 53.2 +1.2**
baz=237
M17K Holitna River 77.25 22 P **P** **04 52 53.1 +0.7**
baz=232
J16K Anvik River 77.31 20 P **P** **04 52 53.8 +1.1**
J16K IAmb IAmb 04 53 11.2
comp=Z,67nm,1.4s
J16K Anvik River 77.31 20 P **P** **04 52 53.8 +1.1**
baz=229
Q19K Cape Douglas, 77.33 26 IAMs_20 IAMs_20 05 26 50.7
comp=Z,2μm,20.0s
Q19K Cape Douglas, 77.33 26 P **P** **04 52 52.2 -0.7**
baz=236,SNR=9.2
G15K Niukluk 77.38 18 P **P** **04 52 53.0 -0.1**
baz=225
L17K Donlin 77.38 22 P **P** **04 52 54.0 +0.9**
baz=231
N18K Kilae Creek 77.41 23 IAmb IAmb 04 52 55.9
comp=Z,58nm,1.4s
N18K IAMs_20 IAMs_20 05 24 28.9
comp=Z,2μm,20.0s
N18K Kilae Creek 77.41 23 P **P** **04 52 53.8 +0.5**
baz=234
I17K Unalakleet 77.68 19 IAmb IAmb 04 53 40.9
comp=Z,110nm,1.9s
I17K Unalakleet 77.68 19 P **P** **04 52 55.8 +1.0**
baz=229,SNR=7.7
H16K Elim 77.69 18 P **P** **04 52 55.5 +0.7**
baz=227
SYI Shuyak Island 77.70 26 IAMs_20 IAMs_20 05 21 57.5
comp=Z,2μm,20.0s
F15K North Star Dit 77.71 17 IAmb IAmb 04 53 16.0
comp=Z,58nm,1.8s
F15K IAMs_20 IAMs_20 05 23 46.1
comp=Z,2μm,20.0s
F15K North Star Dit 77.71 17 P **P** **04 52 55.5 +0.6**
baz=224
K17K Iditarod 77.75 21 IAmb IAmb 04 53 13.2
comp=Z,78nm,1.4s
K17K Iditarod 77.75 21 P **P** **04 52 55.7 +0.5**
baz=231
O19K Port Alsworth 77.76 24 P **P** **04 52 55.4 +0.2**
baz=235
SVW2 Sparrevohn 77.78 23 IAMs_20 IAMs_20 05 24 50.1
comp=Z,2μm,21.0s
SVW2 Sparrevohn 77.78 23 P **P** **04 52 57.0 +1.6**
P19K Oil Pt 77.91 25 P **P** **04 52 55.9 -0.3**
P19K Oil Pt 77.91 25 P **P** **04 52 56.0 -0.2**
baz=236,SNR=7.9
M18K Stony River 77.92 23 P **P** **04 52 56.9 +0.7**
baz=234
L18K Granite Mounta 78.03 22 IAmb IAmb 04 53 15.0
comp=Z,60nm,1.2s
L18K Granite Mounta 78.03 22 P **P** **04 52 57.5 +0.7**
baz=233
N19K Bonanza Creek 78.05 24 IAmb IAmb 04 54 43.1
comp=Z,64nm,1.8s
N19K IAMs_20 IAMs_20 05 24 06.5
comp=Z,2μm,20.0s
N19K Bonanza Creek 78.05 24 P **P** **04 52 57.4 +0.3**
baz=235
DGZ Jazzator, Alta 78.08 323 *c i*P **P** **04 52 56.9 -0.6**
DGZ pmax pmax
comp=Z,39nm,1.0s
ILSW Iliamna Southw 78.13 25 IAmb IAmb 04 53 13.8
comp=Z,57nm,1.3s
G16K Koyuk River 78.17 18 IAMs_20 IAMs_20 05 23 20.4
comp=Z,2μm,20.0s
G16K Koyuk River 78.17 18 P **P** **04 52 58.4 +0.9**
baz=227
O20K Slope Mountain 78.40 25 P **P** **04 52 59.1 +0.1**
baz=237
TIXI Tiksi 78.44 353 ⇑*i*P **P** **04 52 58.7 -0.1**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
HOM Homer 78.59 26 P **P** **04 53 00.4 +0.5**
baz=238
H17K Granite Mounta 78.63 19 IAMs_20 IAMs_20 05 25 45.8
comp=Z,1μm,18.0s
H17K Granite Mounta 78.63 19 P **P** **04 53 00.7 +0.6**
baz=229,SNR=9.6
CNPM China Poot 78.69 26 IAMs_20 IAMs_20 05 28 02.8
comp=Z,2μm,20.0s
L19K White Mountain 78.70 23 IAmb IAmb 04 53 18.3
comp=Z,42nm,1.1s
L19K White Mountain 78.70 23 P **P** **04 53 00.9 +0.4**
baz=234
TTA Tatalina 78.71 22 P **P** **04 53 00.2 -0.4**
TTA Tatalina 78.71 22 P **P** **04 53 01.7 +1.1**
TTA Tatalina 78.71 22 P **P** **04 53 00.9 +0.3**
baz=233
TTA Tatalina 78.71 22 P **P** **04 53 00.2 -0.4**
TTA pmax pmax
comp=Z,23nm,1.1s
M19K Big River Lodg 78.71 23 IAmb IAmb 04 53 18.0
comp=Z,64nm,1.4s
M19K IAMs_20 IAMs_20 05 24 29.4

comp=Z,2µm,21.0s
M19K Big River Lodg 78.71 23 P **P** **04 53 01.0 +0.4**
baz=235
G17K Kiwalik Mounta 78.77 18 P **P** **04 53 01.2 +0.4**
baz=228
J18K Innoko River 78.78 21 P **P** **04 53 01.4 +0.5**
baz=232,SNR=7.9
ZSN Zaisan 78.81 320 *e*P **P** **04 53 00.6 -0.8**
comp=Z,29nm,1.1s,baz=320
ZSN Zaisan 78.81 320 *e*P **P** **04 53 00.6 -0.8**
ZSN pmax pmax
comp=Z,29nm,1.1s
DGAR Diego Garcia 78.89 264*c i*P **P** **04 53 02.6 +0.1**
DGAR pmax pmax
comp=Z,188nm,1.3s
BRLK Bradley Lake 78.97 26 IAMs_20 IAMs_20 05 28 47.7
comp=Z,2µm,20.0s
BRSE Bradley Lake S 79.02 26 P **P** **04 53 02.4 0.0**
baz=239
N20K Mount Spurr 79.19 24 P **P** **04 53 03.7 +0.4**
baz=237
M20K Styx River 79.19 23 IAmb IAmb 04 53 30.2
comp=Z,54nm,1.4s
M20K IAMs_20 IAMs_20 05 24 34.8
comp=Z,2µm,19.0s
M20K Styx River 79.19 23 P **P** **04 53 03.9 +0.5**
baz=236
F17K Baldwin Pennin 79.22 17 IAMs_20 IAMs_20 05 23 09.1
comp=Z,3µm,21.0s
F17K Baldwin Pennin 79.22 17 P **P** **04 53 03.6 +0.5**
baz=228
L20K Farewell, AK 79.24 23 P **P** **04 53 03.8 +0.3**
baz=235
H18K Honhosa River 79.27 19 P **P** **04 53 04.0 +0.5**
baz=231
C16K Lisburne Hills 79.38 15 IAMs_20 IAMs_20 05 24 18.1
comp=Z,3µm,21.0s
C16K Lisburne Hills 79.38 15 P **P** **04 53 04.2 +0.2**
baz=224
CAPN Captain Cook N 79.39 25 P **P** **04 53 04.2 0.0**
baz=238
E17K Hotham Inlet 79.48 17 P **P** **04 53 05.2 +0.5**
baz=227
J19K Poorman 79.49 21 P **P** **04 53 05.4 +0.7**
baz=233
GCSA Galena City Sc 79.51 20 P **P** **04 53 05.1 +0.3**
baz=232
D17K Noatak River 79.56 16 P **P** **04 53 06.1 +1.0**
baz=226
G18K Tagagawik 79.65 18 P **P** **04 53 06.2 +0.6**
baz=230
K20K Telida 79.67 22 IAmb IAmb 04 53 23.1
comp=Z,58nm,1.4s
K20K Telida 79.67 22 P **P** **04 53 06.2 +0.4**
baz=235
SEW Seward 79.77 26 P **P** **04 53 07.5 +1.2**
baz=240,SNR=6.0
F18K Selawik 79.80 18 P **P** **04 53 06.1 -0.2**
baz=229
MNCI Minicoy 79.81 279 P **P** **04 53 05.1 -2.5**
O22K Cooper Landing 79.84 25 IAMs_20 IAMs_20 05 31 02.1
comp=Z,2µm,20.0s
O22K Cooper Landing 79.84 25 P **P** **04 53 06.6 -0.1**
baz=239
SKT Skwentna 79.88 24 P **P** **04 53 06.7 -0.3**
baz=238
SUA Susitna One 79.92 24 P **P** **04 53 07.2 -0.1**
baz=238,SNR=6.9
E18K Tukpahlearik C 80.07 17 IAMs_20 IAMs_20 05 25 30.5
comp=Z,2µm,20.0s
E18K Tukpahlearik C 80.07 17 P **P** **04 53 08.1 +0.3**
baz=228
C17K DeLong Mountai 80.08 15 P **P** **04 53 08.2 +0.3**
baz=226
J20K Nowinta River 80.12 21 IAmb IAmb 04 53 49.6
comp=Z,36nm,1.1s
J20K Nowinta River 80.12 21 P **P** **04 53 08.6 +0.5**
baz=235,SNR=6.7
H19K Roundabout Mou 80.13 19 IAmb IAmb 04 53 52.7
comp=Z,52nm,1.4s
H19K Roundabout Mou 80.13 19 P **P** **04 53 07.8 -0.4**
baz=232
RC01 Rabbit Creek A 80.14 25 IAmb IAmb 04 53 25.3
comp=Z,69nm,1.2s
RC01 Rabbit Creek A 80.14 25 P **P** **04 53 08.1 -0.3**
baz=239,SNR=6.6
MK31 Makanchi Array 80.25 319 P **P** **04 53 08.4 -0.8**
MK31 Makanchi Array 80.25 319*c i*P **P** **04 53 08.6 -0.7**
MKAR Makanchi Array 80.25 319 P **P** **04 53 08.3 -0.9**
MKAR Makanchi Array 80.25 319 P **P** **04 53 08.8 -0.5**
comp=Z,15nm,0.9s,baz=101,slow=6.3,SNR=32
MKAR PKKPbc **PKKPbc** **05 11 52.1 -2.3**
comp=Z,0.5nm,0.6s,baz=288,slow=2.6,SNR=5.4
MKAR LR LR 05 28 51.7
comp=Z,1µm,20.2s,baz=96,slow=36
comp=Z,15nm,0.9s
G19K Purcell Mounta 80.31 19 IAmb IAmb 04 53 27.2
comp=Z,75nm,1.6s
G19K IAMs_20 IAMs_20 05 24 45.1
comp=Z,2µm,20.0s
G19K Purcell Mounta 80.31 19 P **P** **04 53 09.0 -0.1**
baz=232
M22K Willow 80.33 24 IAmb IAmb 04 53 26.3
comp=Z,81nm,1.1s
M22K Willow 80.33 24 P **P** **04 53 08.8 -0.5**
baz=239
I20K Naaghedeneel 80.36 20 P **P** **04 53 09.9 +0.5**
baz=234
CAST Castle Rocks 80.45 22 P **P** **04 53 09.5 -0.5**
baz=237,SNR=9.7
MAKZ Makanchi 80.46 319 P **P** **04 53 08.9 -1.5**
MAKZ IAmb IAmb 04 53 11.0
comp=Z,36nm,1.0s
MAKZ Makanchi 80.46 319 P **P** **04 53 09.2 -1.2**
F19K Shaleruckik Mo 80.53 18 IAMs_20 IAMs_20 05 25 23.6
comp=Z,2µm,21.0s
F19K Shaleruckik Mo 80.53 18 P **P** **04 53 10.1 -0.2**
baz=231
CUT Chulitna 80.61 24 P **P** **04 53 10.7 -0.1**
baz=239
CHUM Lake Minchumin 80.62 22 P **P** **04 53 10.7 -0.1**
baz=237,SNR=9.3
H20K Anotleneega Mo 80.64 20 P **P** **04 53 11.0 +0.1**
baz=234
PMR Palmer 80.65 25 P **P** **04 53 11.4 +0.4**
PMR Palmer 80.65 25 P **P** **04 53 10.6 -0.5**
baz=240,SNR=5.6
C18K Utukok River 80.73 16 IAmb IAmb 04 53 56.6
comp=Z,81nm,2.0s
C18K IAMs_20 IAMs_20 05 23 56.9
comp=Z,3µm,22.0s
C18K Utukok River 80.73 16 P **P** **04 53 10.8 -0.6**
baz=228
KNK Knik Glacier 80.84 25 IAmb IAmb 04 53 28.9
comp=Z,45nm,1.1s
KNK IAMs_20 IAMs_20 05 22 41.5
comp=Z,2µm,21.0s
KNK Knik Glacier 80.84 25 P **P** **04 53 12.0 -0.1**
baz=240
KTH Kantishna Hill 80.96 22 P **P** **04 53 12.1 -0.7**
KTH IAMs_20 IAMs_20 05 24 54.4
comp=Z,2µm,21.0s
B18K Kokolik River 81.06 15 P **P** **04 53 13.6 +0.5**
baz=227
SHLS Shalkode 81.08 315 *e*P **P** **04 53 11.6 -2.4**
comp=Z,21nm,1.1s,baz=315
SHLS Shalkode 81.08 315 *e*P **P** **04 53 11.5 -2.4**
SHLS pmax pmax
comp=Z,21nm,1.1s
E19K Redstone River 81.08 18 IAmb IAmb 04 53 49.2
comp=Z,28nm,0.8s
E19K IAMs_20 IAMs_20 05 24 28.4
comp=Z,3µm,21.0s
E19K Redstone River 81.08 18 P **P** **04 53 13.5 +0.2**
baz=231
SML Sawmill 81.09 25 IAmb IAmb 04 53 30.0
comp=Z,83nm,1.3s
SML Sawmill 81.09 25 P **P** **04 53 13.2 -0.3**
baz=240,SNR=7.3
PDGK Podgornoye 81.10 315 P **P** **04 53 13.3 -0.8**
TRF Thorofare Moun 81.15 23 IAMs_20 IAMs_20 05 29 05.4
comp=Z,2µm,20.0s
TRF Thorofare Moun 81.15 23 P **P** **04 53 13.2 -0.7**
baz=238
GLI Glacier Island 81.16 26 P **P** **04 53 13.4 -0.5**
baz=242
ZAA0 Zalesovo Array 81.22 327 P **P** **04 53 11.6 -2.6**
ZALV Zalesovo Beam 81.22 327 P **P** **04 53 11.6 -2.6**
comp=Z,7.8nm,0.4s,baz=110,slow=5.1,SNR=38
ZALV LR LR 05 28 48.0
comp=Z,1µm,20.4s,baz=111,slow=35
comp=Z,7.8nm,0.4s
BPAW Bear Paw Mtn. 81.23 22 P **P** **04 53 14.5 +0.4**
baz=238
F20K Avaraart Lake 81.29 18 IAMs_20 IAMs_20 05 24 37.1
comp=Z,2µm,21.0s
F20K Avaraart Lake 81.29 18 P **P** **04 53 14.4 0.0**
baz=233
IMAR Indian Mountai 81.30 20 P **P** **04 53 14.7 +0.3**
M23K Glacier View 81.33 25 P **P** **04 53 14.4 -0.4**
baz=241
UZB Uzynbulak 81.38 315 *e*P **P** **04 53 14.8 -0.9**
comp=Z,22nm,1.1s,baz=315
UZB Uzynbulak 81.38 315 *e*P **P** **04 53 14.7 -0.9**
UZB pmax pmax
comp=Z,22nm,1.1s
H21K Melozitna Rive 81.44 20 IAmb IAmb 04 54 04.1
comp=Z,59nm,1.9s
H21K Melozitna Rive 81.44 20 P **P** **04 53 15.5 +0.3**
baz=236
I21K Tanana 81.46 21 P **P** **04 53 15.5 +0.2**
baz=237,SNR=6.2
C19K Lookout Ridge 81.47 16 IAMs_20 IAMs_20 05 24 54.6
comp=Z,3µm,22.0s
C19K Lookout Ridge 81.47 16 P **P** **04 53 15.8 +0.4**
baz=229
D19K Kuna River 81.48 17 P **P** **04 53 16.0 +0.6**
baz=230
WAT1 Susitna Watana 81.51 24 P **P** **04 53 15.0 -0.7**
baz=240
SCM Sheep Creek Mo 81.52 25 IAmb IAmb 04 53 41.3
comp=Z,56nm,1.1s
SCM Sheep Creek Mo 81.52 25 P **P** **04 53 15.5 -0.3**
baz=241
RND Reindeer 81.68 23 IAmb IAmb 04 53 41.2
comp=Z,39nm,1.2s
RND IAMs_20 IAMs_20 05 27 15.4
comp=Z,2µm,20.0s
KPKS Kokpek 81.70 315 *e*P **P** **04 53 16.4 -0.9**
comp=Z,20nm,1.2s,baz=315
KPKS Kokpek 81.70 315 *e*P **P** **04 53 16.3 -0.9**
KPKS pmax pmax
comp=Z,20nm,1.2s
WAT6 Susitna Watana 81.71 24 P **P** **04 53 16.4 -0.6**
baz=241
SATY Saty 81.79 315 *e*P **P** **04 53 17.0 -0.7**
comp=Z,13nm,0.9s,baz=315
SATY Saty 81.79 315 *e*P **P** **04 53 17.0 -0.7**
SATY pmax pmax
comp=Z,13nm,0.9s
ZHN Zhinishke 81.80 315 *e*P **P** **04 53 16.4 -1.4**
baz=315
ZHN Zhinishke 81.80 315 *e*P **P** **04 53 16.4 -1.4**
MCK McKinley 81.81 23 P **P** **04 53 16.2 -1.1**
baz=240,SNR=8.9
MLY Manley 81.82 21 IAmb IAmb 04 53 34.4
comp=Z,46nm,1.4s
MLY Manley 81.82 21 P **P** **04 53 17.1 -0.2**
baz=238,SNR=22
TARG Taragay, Kyrgy 81.88 313 P **P** **04 53 17.6 -1.0**
TARG Taragay, Kyrgy 81.88 313 P **P** **04 53 17.6 -1.0**
TARG pmax pmax
comp=Z,23nm,1.0s
E20K Nigu River 81.89 17 P **P** **04 53 17.7 +0.1**
baz=232
KLU Klutina 81.95 25 IAmb IAmb 04 53 35.1
comp=Z,46nm,1.1s
KLU Klutina 81.95 25 P **P** **04 53 18.3 +0.2**
baz=243,SNR=11
D20K Etivluk River 82.05 17 P **P** **04 53 18.2 -0.2**
baz=232
H22K Ishtalitna Cre 82.06 20 P **P** **04 53 18.6 +0.1**
baz=237
DHY Denali Highway 82.10 24 P **P** **04 53 17.9 -1.1**
DHY Denali Highway 82.10 24 P **P** **04 53 18.6 -0.3**
baz=241
F21K Alatna River 82.10 19 IAMs_20 IAMs_20 05 26 35.4
comp=Z,2µm,21.0s
F21K Alatna River 82.10 19 P **P** **04 53 18.7 0.0**
baz=235
M24K Tolsona, Glenn 82.13 25 IAmb IAmb 04 53 36.2
comp=Z,61nm,1.1s
M24K Tolsona, Glenn 82.13 25 P **P** **04 53 18.7 -0.3**
baz=242
NEA2 Nenana 82.20 22 IAMs_20 IAMs_20 05 25 38.5
comp=Z,2µm,19.0s
NEA2 Nenana 82.20 22 P **P** **04 53 18.6 -0.7**
baz=240,SNR=11
BMRM Bremner River 82.29 26 P **P** **04 53 19.6 -0.2**
baz=244
TDK Taldyqorghan 82.31 317 *e*P **P** **04 53 19.7 -0.6**
comp=Z,17nm,0.8s,baz=317
TDK Taldyqorghan 82.31 317 *e*P **P** **04 53 19.7 -0.6**
TDK pmax pmax
comp=Z,17nm,0.8s
I23K Minto, Yukon-K 82.38 21 IAMs_20 IAMs_20 05 24 30.8
comp=Z,2µm,21.0s
I23K Minto, Yukon-K 82.38 21 P **P** **04 53 19.7 -0.4**
baz=239,SNR=6.2
BERG Berg Lake 82.44 27 IAmb IAmb 04 53 37.1
comp=Z,2nm,1.0s
N25K Chitina, Valde 82.57 26 IAmb IAmb 04 54 07.4
comp=Z,44nm,1.4s
N25K Chitina, Valde 82.57 26 P **P** **04 53 21.1 -0.3**
baz=244
G22K Bettles 82.58 19 P **P** **04 53 21.0 -0.2**
baz=237
HARP HAARP 82.69 25 P **P** **04 53 21.2 -0.6**
baz=243
KSH Kashi 82.70 311 P **P** **04 53 24.5 +1.9**
KSH pP sP 04 53 33.5 -1.6
KSH S **SKSac** **05 03 42.5 +0.2**
KSH pmax pmax
comp=Z,22nm,0.9s
KSH pmax pmax
comp=Z,380nm,6.9s
KSH LR LR
comp=Z,620nm,19.9s
KSH LR LR
comp=Z,460nm,21.3s
KSH LR LR
comp=Z,670nm,22.7s
CCB Clear Creek Bu 82.70 22 IAMs_20 IAMs_20 05 28 06.3
comp=Z,2µm,20.0s
MDOK Medeo 82.78 315 *e*P **P** **04 53 21.5 -1.4**
baz=315
MDOK Medeo 82.78 315 *e*P **P** **04 53 21.5 -1.4**
COLA College 82.79 22 P **P** **04 53 20.6 -1.6**
COLA IAmb IAmb 04 53 46.1
comp=Z,34nm,1.1s
COLA College 82.79 22 P **P** **04 53 22.0 -0.3**
COLA College 82.79 22 P **P** **04 53 21.4 -0.9**
baz=241
COLA College 82.79 22 P **P** **04 53 20.7 -1.6**
COLA pmax pmax
comp=Z,34nm,1.1s
PAX Paxson 82.82 24 P **P** **04 53 22.1 -0.5**
baz=243
GLB Gilahina Butte 82.84 26 IAmb IAmb 04 53 39.5
comp=Z,63nm,1.2s
C21K Knifeblade Rid 82.84 17 P **P** **04 53 22.9 +0.4**
baz=234
CRQM Cirque 82.84 27 IAmb IAmb 04 53 39.9
comp=Z,73nm,1.3s
CRQE Cirque 82.86 27 P **P** **04 53 22.7 -0.2**
baz=245
VRDI Verde Repeater 82.90 26 IAmb IAmb 04 53 40.0
comp=Z,48nm,1.3s
HDA Harding Lake 82.91 23 IAMs_20 IAMs_20 05 26 42.9
comp=Z,2µm,20.0s
HDA Harding Lake 82.91 23 P **P** **04 53 22.3 -0.7**
baz=242,SNR=6.4
G23K Bananza Creek 82.96 20 P **P** **04 53 23.3 +0.1**
baz=238
POKR Poker Plat Res 83.07 22 P **P** **04 53 24.2 +0.4**
baz=241
K24K Donnelly Dome 83.08 23 P **P** **04 53 23.4 -0.4**
baz=243
ILAR Eielson Array 83.11 22 P **P** **04 53 22.0 -1.9**
ILAR Eielson Array 83.11 22 P **P** **04 53 22.8 -1.2**
comp=Z,8.8nm,0.7s,baz=248,slow=4.7,SNR=31
comp=Z,8.8nm,0.7s
ULHL Ulahl 83.14 314 P **P** **04 53 25.0 +0.1**
SNR=29
MESA MESA 83.14 27 P **P** **04 53 24.0 -0.5**
baz=246
E22K Anaktuvuk Pass 83.15 18 IAMs_20 IAMs_20 05 26 60.0
comp=Z,2µm,20.0s
E22K Anaktuvuk Pass 83.15 18 P **P** **04 53 24.1 0.0**
baz=237
MCARA McCarthy VSAT 83.16 26 IAmb IAmb 04 53 51.5
comp=Z,49nm,1.2s
MCARA McCarthy VSAT 83.16 26 P **P** **04 53 23.9 -0.4**
baz=245
COLD Coldfoot 83.17 19 P **P** **04 53 24.2 0.0**
baz=238
H24K Noodor Dome 83.26 21 P **P** **04 53 24.5 -0.3**
baz=240,SNR=7.0
D22K Ayikyak River 83.30 17 IAmb IAmb 04 53 28.3
comp=Z,21nm,0.8s
D22K IAMs_20 IAMs_20 05 26 33.0
comp=Z,2µm,20.0s
D22K Ayikyak River 83.30 17 P **P** **04 53 25.1 +0.2**
baz=236
BOOM Boomskoye usch 83.41 314 IAmb IAmb 04 53 27.4
comp=Z,33nm,0.8s
GRNC Granite Creek 83.46 27 IAmb IAmb 04 53 42.4
comp=Z,21nm,1.0s
KUU Kurty 83.46 315 *e*P **P** **04 53 25.5 -0.8**
baz=315
KUU Kurty 83.46 315 *e*P **P** **04 53 25.4 -0.8**
MENT Mentasta 83.52 25 P **P** **04 53 25.7 -0.5**
J25K Salcha River, 83.61 23 IAmb IAmb 04 53 50.1
comp=Z,66nm,1.3s
J25K IAMs_20 IAMs_20 05 28 15.5
comp=Z,2µm,19.0s
J25K Salcha River, 83.61 23 P **P** **04 53 26.5 -0.1**
baz=243
TABL Table Mountain 83.62 27 IAmb IAmb 04 53 43.2
comp=Z,32nm,0.8s
NIL Nilore 83.62 305 P **P** **04 53 26.0 -1.3**
NIL Nilore 83.62 305 P **P** **04 53 26.0 -1.3**
NIL pmax pmax
comp=Z,66nm,0.9s
BARN Barnard Glacie 83.63 27 IAmb IAmb 04 53 44.1
comp=Z,65nm,1.3s
A21K Barrow 83.67 15 P **P** **04 53 26.9 +0.2**
baz=232
L26K Log Cabin Wild 83.71 25 IAMs_20 IAMs_20 05 23 32.3
comp=Z,2µm,22.0s
L26K Log Cabin Wild 83.71 25 P **P** **04 53 27.2 +0.1**
baz=245
CTG Chitna Glacier 83.73 27 P **P** **04 53 27.4 -0.1**
baz=247
CTGM Chitina Glacie 83.74 27 IAmb IAmb 04 53 44.5
comp=Z,43nm,1.1s
KURK Kurchatov 83.75 322 P **P** **04 53 25.9 -1.6**
KURK IAmb IAmb 04 53 27.8
comp=Z,39nm,1.0s
KURK Kurchatov 83.75 322*c i*P **P** **04 53 26.2 -1.3**
KURK pmax pmax
comp=Z,32nm,1.0s
TKM2 Tokmak 2 83.76 314 P **P** **04 53 28.0 -0.1**
SNR=21
TKM2 Tokmak 2 83.76 314 P **P** **04 53 27.3 -0.8**
KURBB Kurchatov Arra 83.78 322 P **P** **04 53 26.1 -1.6**
KURBB Kurchatov Arra 83.78 322 P **P** **04 53 26.6 -1.0**
comp=Z,12nm,0.8s,baz=112,slow=4.2,SNR=44
KURBB PKPPKP **P'P'df** **05 19 51.0 +1.8**
comp=Z,0.3nm,0.3s,baz=270,slow=3.1,SNR=5.3
KURBB LR LR 05 31 33.2
comp=Z,922nm,19.1s,baz=122,slow=36
comp=Z,12nm,0.8s
E23K Chandalar 83.80 19 P **P** **04 53 27.5 -0.1**
baz=239
G24K Hadweenzic Riv 83.83 20 P **P** **04 53 27.7 +0.1**
baz=241
LOGN Logan Glacier 83.83 27 P **P** **04 53 28.0 0.0**
LOGN IAmb IAmb 04 53 54.5
comp=Z,47nm,1.2s
SCRK Sand Creek 83.86 24 P **P** **04 53 27.8 -0.2**
baz=244,SNR=6.5
PINM Pinnacle 83.90 28 P **P** **04 53 27.7 -0.5**
baz=248
D23K Nanushuk River 83.95 18 P **P** **04 53 28.3 +0.1**
baz=238
PRP Porcupine Dome 83.96 22 IAMs_20 IAMs_20 05 25 07.8
comp=Z,1µm,21.0s
M27K Edge Creek, AK 84.05 25 IAmb IAmb 04 53 47.1
comp=Z,53nm,1.1s
M27K Edge Creek, AK 84.05 25 P **P** **04 53 29.1 0.0**
baz=246,SNR=9.0
F24K Squaw Lake 84.09 20 IAmb IAmb 04 53 32.3
comp=Z,21nm,0.8s
F24K IAMs_20 IAMs_20 05 24 30.2
comp=Z,2µm,22.0s
PNL Peninsula 84.14 28 P **P** **04 53 29.2 -0.2**
baz=249
KBK Karagaybulak 84.16 314 P **P** **04 53 29.9 -0.2**
SNR=15
J26L Joseph Creek 84.26 23 IAmb IAmb 04 53 55.4
comp=Z,33nm,1.5s
J26L IAMs_20 IAMs_20 05 28 05.9
comp=Z,2µm,20.0s
J26L Joseph Creek 84.26 23 P **P** **04 53 30.0 0.0**
baz=245
G25K Bearman Lake 84.34 21 P **P** **04 53 30.4 +0.2**
baz=242
L27K Beaver Creek, 84.36 25 IAMs_20 IAMs_20 05 23 49.7
comp=Z,2µm,22.0s
L27K Beaver Creek, 84.36 25 P **P** **04 53 30.5 +0.1**
baz=246,SNR=8.1
CHMS Chumysh 84.38 314 P **P** **04 53 30.9 -0.1**
SNR=19
UCH Uchtor 84.38 313 P **P** **04 53 32.2 +0.6**
SNR=45
YUK3 Moose Creek 84.44 26 P **P** **04 53 30.7 -0.4**
baz=248
AAK Ala-Archa 84.48 314 P **P** **04 53 31.8 +0.1**
SNR=27
AAK Ala-Archa 84.48 314 P **P** **04 53 31.4 -0.3**
AAK IAmb IAmb 04 53 32.8
comp=Z,33nm,0.9s
AAK Ala-Archa 84.48 314*c i*P **P** **04 53 31.0 -0.7**
AAK pmax pmax
comp=Z,37nm,0.9s
AAK Ala-Archa 84.48 314 LR LR 05 31 16.9
comp=Z,1µm,20.7s,baz=98,slow=36
QSPA South Pole Qui 84.50 180 P **P** **04 53 30.8 -0.5**
QSPA IAmb IAmb 04 53 53.0
comp=Z,43nm,1.2s
QSPA South Pole Qui 84.50 180 P **P** **04 53 31.6 +0.4**
comp=Z,6.9nm,0.7s,baz=209,slow=0.5,SNR=15
comp=Z,6.9nm,0.7s
BVCY Beaver Creek 84.51 26 P **P** **04 53 31.7 +0.5**
baz=247
SGDS Sogindy 84.56 314 *e*P **P** **04 53 30.6 -1.4**
baz=314
SGDS Sogindy 84.56 314 *e*P **P** **04 53 30.5 -1.4**
USP Ospenovka 84.62 314 P **P** **04 53 32.2 0.0**
SNR=59
D24K Happy Valley 84.62 18 IAmb IAmb 04 53 37.6
comp=Z,15nm,0.7s
D24K IAMs_20 IAMs_20 05 27 13.8
comp=Z,2µm,20.0s
D24K Happy Valley 84.62 18 P **P** **04 53 32.4 +0.8**
baz=239
MAW Mawson 84.62 203 P **P** **04 53 31.4 -0.3**
comp=Z,11nm,0.7s,baz=90,slow=5.1,SNR=1.6
MAW LR LR 05 28 18.4
comp=Z,1µm,21.1s,baz=87,slow=34
comp=Z,11nm,0.7s
K27K Chicken 84.65 24 IAmb IAmb 04 53 49.5
comp=Z,35nm,1.4s
K27K Chicken 84.65 24 P **P** **04 53 32.8 +0.9**
baz=246
O29M Mount Kennedy 84.75 28 IAmb IAmb 04 53 52.4
comp=Z,51nm,1.5s
O29M Mount Kennedy 84.75 28 P **P** **04 53 33.4 +0.8**
baz=250
I26K Coal Creek Min 84.76 22 IAMs_20 IAMs_20 05 29 22.0
comp=Z,2µm,19.0s
I26K Coal Creek Min 84.76 22 P **P** **04 53 32.9 +0.5**
baz=245
F25K Christian Rive 84.88 20 P **P** **04 53 33.7 +0.7**
baz=242
P29M Windy Craggy 84.92 29 P **P** **04 53 34.2 +0.9**
baz=250
C24K Franklin Bluff 84.95 18 P **P** **04 53 33.6 +0.5**
baz=239
EKS2 Erkin-Say 85.00 314 P **P** **04 53 34.7 +0.4**
SNR=51
YUK6 Outpost Mounta 85.08 27 P **P** **04 53 34.9 +0.5**

baz=250
YUK4 **Talbot Arm** 85.09 27 P P 04 53 35.3 +1.0
baz=249,SNR=6.6
E25K **Arctic Village** 85.16 19 IAMs_20 IAMs_20 05 25 04.0
comp=Z,2µm,22.0s
E25K **Arctic Village** 85.16 19 P P 04 53 34.6 +0.2
baz=242
BMAR **Burnt Mountain** 85.17 20 P P 04 53 34.6 +0.1
G26K **Porcupine Rive** 85.24 21 P P 04 53 35.3 +0.6
baz=244,SNR=24
ARSB **Arslanbob** 85.31 312 IAmb IAmb 04 53 37.3
comp=Z,37nm,1.2s
EGAK **Eagle** 85.31 23 IAmb IAmb 04 53 59.5
comp=Z,27nm,1.1s
EGAK **Eagle** 85.31 23 P P 04 53 35.6 +0.5
baz=247,SNR=8.8
BTLS **Baital** 85.32 316 eP P 04 53 35.0 -0.6
comp=Z,28nm,1.1s,baz=316
BTLS **Baital** 85.32 316 eP P 04 53 35.0 -0.6
BTLS pmax pmax
comp=Z,28nm,1.1s
HYT **Haines Junctio** 85.43 28 IAmb IAmb 04 53 40.5
comp=Z,23nm,0.9s
HYT **Haines Junctio** 85.43 28 P P 04 53 36.5 +0.5
baz=250
F26K **Sheenjek River** 85.44 20 P P 04 53 36.2 +0.4
baz=244
P30M **Million Dollar** 85.45 28 P P 04 53 36.8 +0.7
baz=251
D25K **Kavik River** 85.46 18 IAMs_20 IAMs_20 05 30 05.0
comp=Z,2µm,20.0s
D25K **Kavik River** 85.46 18 P P 04 53 36.1 +0.2
baz=242
I27K **Kandik River** 85.47 22 P P 04 53 35.9 -0.1
baz=246
PLBC **Pleasant Camp** 85.52 29 P P 04 53 37.3 +1.0
baz=252
M29M **Somme Creek** 85.56 26 IAmb IAmb 04 53 53.9
comp=Z,25nm,1.1s
M29M **Somme Creek** 85.56 26 P P 04 53 37.4 +0.8
baz=249,SNR=9.6
DAWY **Dawson** 85.75 24 IAmb IAmb 04 54 04.4
comp=Z,26nm,1.2s
DAWY **Dawson** 85.75 24 P P 04 53 38.0 +0.6
baz=248,SNR=5.3
H27K **Steamboat Moun** 85.75 22 P P 04 53 38.2 +0.8
baz=246
S32K **Killisnoo** 85.81 31 P P 04 53 38.8 +1.0
baz=253
L29M **L29M** 85.94 25 P P 04 53 38.4 0.0
L29M IAmb IAmb 04 53 55.4
comp=Z,26nm,0.9s
L29M **L29M** 85.94 25 P P 04 53 39.0 +0.7
baz=250
SKAG **Skagway** 86.02 29 IAmb IAmb 04 53 55.8
comp=Z,52nm,1.4s
SKAG **Skagway** 86.02 29 P P 04 53 39.8 +1.0
SKAG **Skagway** 86.02 29 P P 04 53 39.8 +1.0
baz=252
I28M **Miner Creek** 86.05 23 IAmb IAmb 04 54 24.9
comp=Z,73nm,1.9s
I28M **Miner Creek** 86.05 23 P P 04 53 39.4 +0.4
baz=248
O30N **Mendenhall** 86.07 28 IAmb IAmb 04 54 07.4
comp=Z,24nm,1.1s
O30N **Mendenhall** 86.07 28 P P 04 53 39.7 +0.6
baz=252
NRIK **Noril'sk** 86.31 341 IAmb IAmb 04 53 57.7
comp=Z,42nm,1.6s
NRIK **Noril'sk** 86.31 341 ceP P 04 53 38.3 -1.7
NRIK pmax pmax
comp=Z,20nm,1.5s
NRIK **Noril'sk** 86.31 341 P P 04 53 38.5 -1.5
comp=Z,6.0nm,0.5s,baz=52,slow=5.7,SNR=7.7
NRIK LR LR 05 32 30.6
comp=Z,809nm,20.7s,baz=115,slow=36
comp=Z,6.0nm,0.5s
M30M **Minto, Yukon** 86.33 26 IAmb IAmb 04 54 01.7
comp=Z,79nm,1.9s
M30M **Minto, Yukon** 86.33 26 P P 04 53 41.1 +0.8
baz=251,SNR=6.4
J29N **Klondike Camp** 86.37 24 IAmb IAmb 04 54 06.2
comp=Z,25nm,0.8s
J29N **Klondike Camp** 86.37 24 P P 04 53 40.8 +0.3
baz=250,SNR=6.1
K29M **Barlow Dome** 86.45 25 IAmb IAmb 04 53 58.5
comp=Z,40nm,1.1s
K29M **Barlow Dome** 86.45 25 P P 04 53 41.6 +0.7
baz=250
T33K **Petersburg** 86.48 32 P P 04 53 41.8 +0.8
baz=255
WHY **Whitehorse** 86.60 28 IAmb IAmb 04 53 58.5
comp=Z,30nm,1.1s
WHY **Whitehorse** 86.60 28 P P 04 53 42.3 +0.5
baz=253,SNR=6.3
BTK **Batken** 86.70 311 IAmb IAmb 04 53 44.4
comp=Z,23nm,1.1s
WRAK **Wrangell Islan** 86.70 33 P P 04 53 42.4 +0.3
WRAK IAmb IAmb 04 54 00.4
comp=Z,60nm,1.2s
WRAK **Wrangell Islan** 86.70 33 P P 04 53 42.3 +0.2
baz=255
DZA **Taraz** 86.82 313 eP P 04 53 42.2 -0.9
baz=314
DZA **Taraz** 86.82 313 eP P 04 53 42.2 -0.9
V35K **Ketchikan** 86.82 34 P P 04 53 43.0 +0.3
baz=256
P32M **Atlin** 86.85 29 IAmb IAmb 04 53 59.8
comp=Z,46nm,1.4s
P32M **Atlin** 86.85 29 P P 04 53 43.3 +0.3
baz=254
F28M **Old Crow** 86.90 21 IAmb IAmb 04 54 07.4
comp=Z,20nm,0.9s
F28M **Old Crow** 86.90 21 P P 04 53 43.5 +0.6
baz=248,SNR=16
H29M **Whitestone** 86.94 22 IAmb IAmb 04 54 10.5
comp=Z,90nm,2.0s
H29M IAMs_20 IAMs_20 05 28 50.3
comp=Z,2µm,20.0s
H29M **Whitestone** 86.94 22 P P 04 53 44.0 +0.8
baz=249
MAYO **Mayo, Yukon** 87.05 25 P P 04 53 44.1 +0.3
baz=252,SNR=6.2
OTUK **Ortayu** 87.13 319 P P 04 53 42.9 -1.6
J30M **Hart River** 87.18 24 IAmb IAmb 04 54 14.4
comp=Z,30nm,0.9s
J30M **Hart River** 87.18 24 P P 04 53 44.7 +0.2
baz=251
KBL **Kabul** 87.22 305 P P 04 53 43.2 -2.3
KBL **Kabul** 87.22 305 P P 04 53 43.2 -2.3
KBL pmax pmax
comp=Z,8.0nm,0.9s
BRZS **Berezniki** 87.26 321 eP P 04 53 43.1 -2.1
baz=321
BRZS **Berezniki** 87.26 321 eP P 04 53 43.0 -2.1
M31M **Drury Creek, Y** 87.28 27 IAmb IAmb 04 54 12.0
comp=Z,31nm,1.2s
M31M **Drury Creek, Y** 87.28 27 P P 04 53 45.1 +0.2
baz=253,SNR=7.5
I30M **Mount Dempster** 87.37 24 IAmb IAmb 04 54 09.7
comp=Z,30nm,1.2s
I30M IAMs_20 IAMs_20 05 29 16.0
comp=Z,1µm,21.0s
I30M **Mount Dempster** 87.37 24 P P 04 53 45.9 +0.4
baz=251
Q32M **Nakina River** 87.39 30 P P 04 53 46.9 +1.1
baz=255
KK31 **Karatay Array** 87.45 314 IAmb IAmb 04 53 46.9
comp=Z,66nm,1.5s
KK31 **Karatay Array** 87.45 314 iP P 04 53 45.5 -0.7
KKAR **Karatay Array** 87.45 314 P P 04 53 45.4 -0.7
KKAR IAmb IAmb 04 53 46.9
comp=Z,66nm,1.5s
KKAR **Karatay Array** 87.45 314 P P 04 53 45.4 -0.7
KKAR pmax pmax
comp=Z,66nm,1.5s
P33M **Teslin, Yukon** 87.45 29 P P 04 53 46.0 +0.2
baz=255
N32M **Quiet Lake** 87.58 28 P P 04 53 47.1 +0.7
baz=254
EPYK **Eagle Plains** 87.61 22 IAmb IAmb 04 54 11.4
comp=Z,31nm,0.9s
EPYK **Eagle Plains** 87.61 22 P P 04 53 47.1 +0.6
baz=251,SNR=13
IUG **Iuzhnay** 87.64 313 eP P 04 53 46.0 -1.3
comp=Z,21nm,1.1s,baz=313
IUG **Iuzhnay** 87.64 313 eP P 04 53 45.9 -1.3
IUG pmax pmax
comp=Z,21nm,1.1s
S34M **Telegraph Cree** 87.71 31 P P 04 53 48.2 +1.1
baz=256
FARO **Faro, Yukon** 87.76 27 IAmb IAmb 04 54 04.3
comp=Z,26nm,1.1s
FARO **Faro, Yukon** 87.76 27 P P 04 53 47.8 +0.6
baz=254,SNR=9.4
U35K **Hyder** 87.84 33 P P 04 53 48.3 +0.7
baz=257
SIMJ **Simiganj** 87.86 309 P P 04 53 46.6 -1.8
SIMJ IAmb IAmb 04 53 51.1
comp=Z,18nm,1.0s
E29M **Blow River** 87.87 20 IAmb IAmb 04 54 27.8
comp=Z,26nm,1.4s
E29M **Blow River** 87.87 20 P P 04 53 48.1 +0.5
baz=250
BRLS **Borolday** 87.92 313 eP P 04 53 47.0 -1.4
comp=Z,23nm,1.9s,baz=313
BRLS **Borolday** 87.92 313 eP P 04 53 47.0 -1.4
BRLS pmax pmax
comp=Z,23nm,1.9s
T35M **Bob Quinn** 87.96 32 P P 04 53 49.1 +0.8
baz=257
G30M **tAoh Zraii Nji** 88.00 22 IAmb IAmb 04 54 15.0
comp=Z,40nm,1.4s
G30M **tAoh Zraii Nji** 88.00 22 P P 04 53 48.5 +0.2
baz=251
R33M **Jennings River** 88.15 30 IAmb IAmb 04 54 14.4
comp=Z,38nm,1.2s
R33M **Jennings River** 88.15 30 P P 04 53 50.1 +0.8
baz=256
F30M **Barrier River** 88.36 21 P P 04 53 51.0 +1.0
baz=252
DLBC **Dease Lake** 88.40 31 P P 04 53 51.4 +1.0
baz=257,SNR=5.9
G31M **Satah River** 88.72 22 P P 04 53 51.7 +0.1
baz=253,SNR=14
F31M **Tsiigehtchic** 89.06 22 IAmb IAmb 04 53 54.8
comp=Z,79nm,1.9s
F31M **Tsiigehtchic** 89.06 22 P P 04 53 53.0 -0.2
baz=254
KCPM **Cahto Peak** 89.23 50 IAmb IAmb 04 54 15.7
comp=Z,33nm,1.2s
BVAR **Borovoye Array** 89.24 323 P P 04 53 52.6 -1.8
comp=Z,16nm,0.7s,baz=101,slow=6.2,SNR=23
BVAR LR LR 05 36 14.9
comp=Z,562nm,18.4s,baz=85,slow=37
comp=Z,16nm,0.7s
BRVK **Borovoye** 89.31 323 P P 04 53 52.5 -2.3
BRVK IAmb IAmb 04 53 55.4
comp=Z,20nm,1.1s
BRVK **Borovoye** 89.31 323 cP P 04 53 52.6 -2.1
BRVK pmax pmax
comp=Z,20nm,1.0s
WTLY **Watson Lake, Y** 89.38 29 IAmb IAmb 04 54 12.7
comp=Z,51nm,1.2s
WTLY **Watson Lake, Y** 89.38 29 P P 04 53 55.6 +0.6
baz=258,SNR=7.7
INK **Inuvik** 89.39 21 P P 04 53 55.2 +0.5
baz=254
CBB **Campbell River** 89.48 40 IAmb IAmb 04 53 57.9
comp=Z,35nm,0.9s
TGTN **Hyland Airport** 89.92 28 P P 04 53 58.2 +0.7
baz=258,SNR=7.0
YBH **Yreka Blue Hor** 90.15 48 IAmb IAmb 04 54 02.0
comp=Z,45nm,1.1s
I04A **Tendick Farm,** 90.62 46 IAmb IAmb 04 54 03.0
comp=Z,46nm,1.1s
GNW **Green Mountain** 90.80 42 IAmb IAmb 04 54 04.0
comp=Z,34nm,0.9s
ORV **Oroville** 90.81 51 P P 04 54 01.4 -0.7
ORV IAmb IAmb 04 54 04.6
comp=Z,22nm,1.1s
ORV IAMs_20 IAMs_20 05 26 40.9
comp=Z,2µm,21.0s
ORV **Oroville** 90.81 51 P P 04 54 01.4 -0.7
ORV pmax pmax
comp=Z,22nm,1.2s
K04D **Chiloquin, OR** 90.97 47 IAMs_20 IAMs_20 05 30 22.6
comp=Z,2µm,19.0s
AFDM **Forest Hills D** 91.16 51 IAMs_20 IAMs_20 05 26 39.1
comp=Z,2µm,22.0s
J05D **Fort Rock, OR** 91.42 47 P P 04 54 05.8 +0.8
CMB **Columbia Colle** 91.52 52 IAmb IAmb 04 54 08.0
comp=Z,45nm,1.4s
SMMC **Simmler** 91.56 55 P P 04 54 07.5 +1.7
baz=264
PKM **Mcpherson Peak** 91.67 55 P P 04 54 07.4 +1.0
baz=264
PINE **Pine Mountain** 91.68 46 IAMs_20 IAMs_20 05 29 40.4
comp=Z,2µm,20.0s
SNCC **San Nicolas Is** 91.76 57 IAMs_20 IAMs_20 05 27 02.7
comp=Z,2µm,22.0s
LTY **Liberty** 92.22 43 IAmb IAmb 04 54 09.6
comp=Z,19nm,0.9s
PNTR **Pine Nut** 92.23 51 P P 04 54 09.4 +0.4
WAKR **Walker** 92.31 52 IAmb IAmb 04 54 11.6
comp=Z,17nm,0.9s
VES **Vestal, Richgr** 92.35 54 P P 04 54 10.1 +0.8
baz=265,SNR=6.2
MXC **Moxie City** 92.41 44 IAmb IAmb 04 54 10.9
comp=Z,18nm,1.1s
WRGLY **Wrigley** 92.42 27 IAMs_20 IAMs_20 05 33 31.6
comp=Z,1µm,18.0s
WRGLY **Wrigley** 92.42 27 P P 04 54 10.1 +1.2
baz=263
PAHR **Pah Rah Range** 92.45 51 IAmb IAmb 04 56 47.5
comp=Z,21nm,0.8s
PAHR IAMs_20 IAMs_20 05 27 09.3
comp=Z,2µm,22.0s
ARVC **Arvin** 92.50 55 P P 04 54 11.0 +1.0
baz=265
YERR **Yerington** 92.50 51 IAMs_20 IAMs_20 05 27 42.7
comp=Z,2µm,22.0s
MDPB **Devils Postpil** 92.51 53 IAMs_20 IAMs_20 05 28 45.1
comp=Z,2µm,20.0s
I07A **Izee** 92.74 46 IAMs_20 IAMs_20 05 31 13.5
comp=Z,2µm,20.0s
ISA **Isabella, Lake** 92.83 55 IAMs_20 IAMs_20 05 28 39.9
comp=Z,2µm,21.0s
ISA **Isabella, Lake** 92.83 55 P P 04 54 12.4 +0.8
baz=265,SNR=6.3
HAWA **Hanford** 92.92 44 P P 04 54 11.8 +0.1
A36M **Sachs Harbour** 92.94 18 IAMs_20 IAMs_20 05 34 58.7
comp=Z,2µm,20.0s
PASC **Pasadena Art C** 92.95 56 IAMs_20 IAMs_20 05 27 49.1
comp=Z,2µm,22.0s
C36M **Paulatuk** 92.96 21 IAmb IAmb 04 54 55.7
comp=Z,42nm,1.8s
C36M **Paulatuk** 92.96 21 P P 04 54 12.6 +1.3
baz=262
RYN **Ryan** 93.03 52 IAmb IAmb 04 54 15.3
comp=Z,33nm,1.1s
PNT **Penticton** 93.10 41 P P 04 54 09.4 -3.1
PNT pmax pmax
comp=Z,42nm,1.0s
TIN **Tinemaha, Big** 93.14 53 P P 04 54 14.2 +1.2
baz=266
EDW2 **Edwards Air Fo** 93.16 55 P P 04 54 14.3 +1.2
baz=266,SNR=12
CCAC **Calif City Air** 93.17 55 IAMs_20 IAMs_20 05 31 45.7
comp=Z,2µm,20.0s
NVAR **Mina Array Bea** 93.19 52 P P 04 54 14.9 +1.6
comp=Z,18nm,0.8s,baz=256,slow=6.4,SNR=102
NVAR PP PP 04 57 58.0 +1.0
comp=Z,0.5nm,0.6s,baz=230,slow=7.7,SNR=2.5
NVAR LR LR 05 32 09.1
comp=Z,2µm,18.8s,baz=272,slow=33
comp=Z,18nm,0.8s
CWC **Cottonwood Cre** 93.21 54 P P 04 54 14.9 +1.4
baz=266
G08A **Pilot Rock** 93.23 45 IAMs_20 IAMs_20 05 29 19.2
comp=Z,2µm,20.0s
WVOR **Wild Horse Val** 93.24 48 P P 04 54 13.4 0.0
WVOR IAMs_20 IAMs_20 05 27 45.1
comp=Z,2µm,21.0s
WVOR **Wild Horse Val** 93.24 48 P P 04 54 13.4 0.0
WVOR pmax pmax
comp=Z,49nm,1.2s
D08A **Wollman Farm,** 93.39 43 IAmb IAmb 04 54 15.2
comp=Z,34nm,1.3s
BFSC **Mount Baldy Ra** 93.39 56 P P 04 54 15.4 +1.1
baz=266,SNR=5.2
KVN **Kaiserville** 93.39 51 IAMs_20 IAMs_20 05 28 11.3
comp=Z,2µm,22.0s
J08A **Circle Bar Ran** 93.43 47 P P 04 54 13.5 -0.8
J08A IAMs_20 IAMs_20 05 32 30.7
comp=Z,2µm,21.0s
LRMC **Laurel Mtn Rad** 93.46 55 P P 04 54 15.8 +1.2
baz=266
ELS **Elsinore Mount** 93.54 57 IAMs_20 IAMs_20 05 26 32.8
comp=Z,2µm,22.0s
MPMC **Manual Prospec** 93.66 54 P P 04 54 16.8 +1.3
baz=266,SNR=18
MURC **Murrieta** 93.73 57 P P 04 54 17.4 +1.7
baz=266
109C **Camp Elliot, M** 93.75 57 IAMs_20 IAMs_20 05 28 02.5
comp=Z,2µm,20.0s
109C **Camp Elliot, M** 93.75 57 P P 04 54 17.5 +1.7
baz=266
TJX **Tijuana** 93.77 58 IAMs_20 IAMs_20 05 27 05.0
comp=Z,2µm,22.0s
GRAC **Grapevine Rang** 93.83 53 IAMs_20 IAMs_20 05 29 05.0
comp=Z,2µm,21.0s
GRAC **Grapevine Rang** 93.83 53 P P 04 54 17.1 +1.0
baz=266,SNR=9.2
C09A **Chrisman Ranch** 93.88 43 IAmb IAmb 04 54 17.9
comp=Z,20nm,1.0s
E09A **Wood Farm, Sta** 93.88 44 P P 04 54 15.9 -0.2
GMN **Gold Mountain** 93.93 53 IAmb IAmb 04 54 19.3
comp=Z,24nm,1.5s
BBRC **Big Bear Solar** 94.00 56 P P 04 54 18.6 +1.4
baz=266
CCX **Cicese** 94.06 59 IAMs_20 IAMs_20 05 33 07.6
comp=Z,1µm,18.0s
Q09A **Carvers** 94.09 52 IAMs_20 IAMs_20 05 31 07.8
comp=Z,2µm,21.0s
BAR **Barrett** 94.10 58 IAmb IAmb 04 54 21.8
comp=Z,40nm,1.4s
BAR IAMs_20 IAMs_20 05 27 50.8
comp=Z,2µm,22.0s
TKX **Tecate** 94.15 58 IAMs_20 IAMs_20 05 33 21.1
comp=Z,1µm,19.0s
QSM **Queen of Sheba** 94.16 54 IAMs_20 IAMs_20 05 29 33.9
comp=Z,2µm,21.0s
BMN **Battle Mountai** 94.16 50 IAmb IAmb 04 54 19.6
comp=Z,16nm,1.1s
BMN IAMs_20 IAMs_20 05 29 46.5
comp=Z,2µm,22.0s
GSC **Goldstone, Bar** 94.17 55 IAmb IAmb 04 54 20.7
comp=Z,46nm,1.5s
GSC IAMs_20 IAMs_20 05 31 11.2
comp=Z,2µm,19.0s
GSC **Goldstone, Bar** 94.17 55 P P 04 54 18.7 +0.9
baz=266,SNR=9.5
FURC **Furnace Creek,** 94.19 54 P P 04 54 19.2 +1.5
baz=266,SNR=18
MONP2 **Monument Peak** 94.33 58 P P 04 54 19.9 +1.2
baz=266,SNR=12
GWY **Greenwater Val** 94.33 54 IAmb IAmb 04 54 22.3
comp=Z,34nm,1.3s
PFO **Pinyon Flats O** 94.34 57 P P 04 54 18.1 -0.6
PFO IAmb IAmb 04 54 21.8
comp=Z,52nm,1.8s
PFO **Pinyon Flats O** 94.34 57 IAMs_20 IAMs_20 05 28 27.1
comp=Z,2µm,21.0s
PFO **Pinyon Flats O** 94.34 57 P P 04 54 20.1 +1.4
baz=266
PFO **Pinyon Flats O** 94.34 57 P P 04 54 20.4 +1.7
comp=Z,5.7nm,0.9s,baz=318,slow=3.0,SNR=6.2
PFO LR LR 05 29 02.0
comp=Z,2µm,21.5s,baz=280,slow=30
comp=Z,5.7nm,0.9s
TPFO **Pinon Flats** 94.35 57 P P 04 54 20.0 +1.3
baz=266
BMO **Blue Mountains** 94.37 46 IAMs_20 IAMs_20 05 30 37.7
comp=Z,2µm,20.0s
PMD **Palm Desert** 94.41 57 IAmb IAmb 04 54 22.0
comp=Z,35nm,1.5s
PMD IAMs_20 IAMs_20 05 28 30.9
comp=Z,2µm,21.0s
F10A **Beach Ranch, E** 94.49 44 IAmb IAmb 04 54 20.2
comp=Z,25nm,0.9s
F10A IAMs_20 IAMs_20 05 28 31.4
comp=Z,2µm,22.0s
HEC **Hector,Ludlow** 94.52 56 P P 04 54 20.7 +1.2
baz=266,SNR=8.3
IKP **In-Ko-Pah, Jac** 94.58 58 P P 04 54 21.5 +1.8
baz=266,SNR=5.1
RMX **La Rumorosa** 94.60 58 IAmb IAmb 04 54 24.8
comp=Z,23nm,1.1s
SHOC **Shoshone, Teco** 94.63 55 P P 04 54 20.9 +1.1
baz=267,SNR=19
ESJX **Sierra Juarez** 94.67 58 IAMs_20 IAMs_20 05 33 39.0
comp=Z,1µm,19.0s
NEW **Newport** 94.68 42 P P 04 54 18.8 -1.0
NEW IAmb IAmb 04 54 21.6
comp=Z,34nm,1.1s
NEW **Newport** 94.68 42 IAMs_20 IAMs_20 05 31 22.7
comp=Z,2µm,20.0s
NEW **Newport** 94.68 42 P P 04 54 20.6 +0.8
baz=267,SNR=14
NEW **Newport** 94.68 42 P P 04 54 18.8 -1.0
NEW pmax pmax
comp=Z,34nm,1.2s
NEW **Newport** 94.68 42 LR LR 05 31 53.4
comp=Z,1µm,19.9s,baz=273,slow=32
YUH **Yuha Desert** 94.73 58 IAmb IAmb 04 54 25.0
comp=Z,26nm,1.1s
YUH IAMs_20 IAMs_20 05 27 09.5
comp=Z,2µm,22.0s
BELC **Belle Mtn. Jos** 94.75 56 P P 04 54 21.7 +1.1
baz=267,SNR=13
VTX **Valle De La Tr** 94.78 59 IAMs_20 IAMs_20 05 31 15.7
comp=Z,1µm,20.0s
SWSC **Sam W. Stewart** 94.85 57 P P 04 54 22.5 +1.7
baz=267,SNR=6.2
TUQ **Turquoise Moun** 94.89 55 P P 04 54 22.6 +1.4
baz=267,SNR=20
GMRC **Granite Mounta** 95.07 56 P P 04 54 23.2 +1.2
baz=267,SNR=15
WSAR **Wadi Sarin** 95.14 293 LR LR 05 40 39.7
comp=Z,76nm,19.5s,baz=112,slow=38
BC3 **Big Chuckawall** 95.18 57 P P 04 54 24.0 +1.5
baz=267,SNR=12
RPN **Rapa Nui** 95.28 118 LR LR 05 28 58.4
comp=Z,552nm,21.9s,baz=280,slow=30
PLID **Pearl Lake** 95.30 45 P P 04 54 21.3 -1.6
PLID IAmb IAmb 04 54 24.3
comp=Z,17nm,1.1s
R11B **Troy Canyon, C** 95.31 52 IAmb IAmb 04 54 25.9
comp=Z,28nm,1.3s
R11B IAMs_20 IAMs_20 05 29 55.2
comp=Z,2µm,20.0s
R11B **Troy Canyon, C** 95.31 52 P P 04 54 24.4 +1.3
baz=267,SNR=25
MFID **Camas Ranch** 95.36 47 IAMs_20 IAMs_20 05 33 43.1
comp=Z,2µm,19.0s
AB31 **Akbulak array** 95.39 319 iP P 04 54 20.1 -2.8
GUVIX **Guadalupe Vict** 95.43 58 IAMs_20 IAMs_20 05 32 37.9
comp=Z,1µm,19.0s
IRM **Iron Mountain** 95.47 56 P P 04 54 25.1 +1.4
baz=267,SNR=13
SFX **San Felipe** 95.55 59 IAMs_20 IAMs_20 05 37 43.4
comp=Z,1µm,20.0s
SHPR **Sheep Range** 95.56 54 IAmb IAmb 04 54 27.5
comp=Z,50nm,1.7s
WTNK **Soaring Height** 95.67 54 IAmb IAmb 04 54 27.6
comp=Z,24nm,1.9s
GLA **Glamis** 95.67 57 P P 04 54 26.6 +1.9
baz=267
ELK **Elko** 95.69 50 IAMs_20 IAMs_20 05 32 44.0
comp=Z,1µm,20.0s
ELK **Elko** 95.69 50 LR LR 05 30 32.1
comp=Z,1µm,21.5s,baz=264,slow=31
NEE2 **Needles Airpor** 95.93 56 P P 04 54 27.3 +1.5
baz=269
Q12A **Willow Creek R** 95.93 51 IAmb IAmb 04 54 28.7
comp=Z,29nm,1.1s
Q12A IAMs_20 IAMs_20 05 33 25.6
comp=Z,2µm,20.0s
ELIB **Princess Elisa** 95.95 194 dP P 04 54 24.8 -0.4
comp=Z,5.8nm,1.4s
PDMCI **Parker Dam,Lak** 96.30 56 P P 04 54 29.5 +2.1
baz=268,SNR=7.4
GEYT **Alibeck** 96.32 307 P P 04 54 26.7 -0.8
comp=Z,1.6nm,0.4s,baz=91,slow=7.4,SNR=4.8
comp=Z,1.6nm,0.4s
ARU **Arti** 96.37 326 P P 04 54 24.6 -2.7
ARU **Arti** 96.37 326 cP P 04 54 23.9 -3.3
ARU 04 58 16.6
ARU S SKSac 05 04 57.5 -4.4
ARU pmax pmax
comp=Z,10.0nm,0.9s
ARU MLR MLR
comp=Z,3µm,22.0s

ARU Arti 96.37 326 LR LR 05 37 27.1
comp=Z,3µm,21.7s,baz=95,slow=35
HLID Hailey 96.39 47 IAMs_20 IAMs_20 05 36 32.4
comp=Z,2µm,20.0s
HLID Hailey 96.39 47 P P 04 54 27.7 -0.2
baz=269,SNR=21
YKA Yellowknife Ar 96.42 28 P P 04 54 27.8 +0.5
comp=Z,1.7nm,0.7s,baz=270,slow=4.9,SNR=20
YKA PKiKP PKiKP 04 59 05.3 +0.5
comp=Z,0.5nm,0.8s,baz=267,slow=1.4,SNR=5.9
YKA PKKPbc PKKPbc 05 11 11.1 -3.7
comp=Z,0.3nm,0.9s,baz=91,slow=3.1,SNR=4.5
YKA LR LR 05 32 21.2
comp=Z,940nm,21.8s,baz=286,slow=32
W13A Hualapai Mount 96.54 55 IAmb IAmb 04 54 32.1
comp=Z,20nm,1.1s
113A Mohawk Valley, 96.55 58 IAmb IAmb 04 54 46.9
comp=Z,23nm,1.8s
113A IAMs_20 IAMs_20 05 33 59.7
comp=Z,1µm,19.0s
AKTO Aktyubinsk 96.66 320 P P 04 54 25.0 -3.7
AKTO Aktyubinsk 96.66 320 LR LR 05 37 47.3
comp=Z,1µm,21.0s,baz=72,slow=35
CCUT Cedar City 97.04 53 P P 04 54 31.3 +0.2
CCUT IAmb IAmb 04 54 34.3
comp=Z,16nm,1.1s
Y14A Wickenburg 97.23 57 IAMs_20 IAMs_20 05 30 08.2
comp=Z,2µm,21.0s
SZCU Shurtz Canyon 97.26 53 IAmb IAmb 04 54 35.1
comp=Z,27nm,1.3s
214A Organ Pipe Nat 97.33 59 IAMs_20 IAMs_20 05 35 17.4
comp=Z,1µm,18.0s
214A Organ Pipe Nat 97.33 59 P P 04 54 31.8 -0.5
baz=268
KNB Kanab 97.46 53 IAMs_20 IAMs_20 05 31 52.2
comp=Z,1µm,19.0s
DUG Dugway, Tooele 97.52 50 P P 04 54 33.6 +0.6
DUG IAmb IAmb 04 54 51.1
comp=Z,12nm,1.4s
DUG IAMs_20 IAMs_20 05 34 38.6
comp=Z,1µm,19.0s
DUG Dugway, Tooele 97.52 50 P P 04 54 33.6 +0.6
baz=269
DUG Dugway, Tooele 97.52 50 P P 04 54 33.6 +0.6
DUG pmax pmax
comp=Z,12nm,1.4s
HVU Hansel Valley 97.57 49 IAmb IAmb 04 54 35.4
comp=Z,19nm,0.9s
HVU IAMs_20 IAMs_20 05 34 27.5
comp=Z,1µm,20.0s
U15A North Rim 97.87 54 IAmb IAmb 04 54 52.0
comp=Z,12nm,1.1s
U15A IAMs_20 IAMs_20 05 31 00.9
comp=Z,1µm,21.0s
MTPU Mount Pierson 97.98 52 P Pdif 04 54 36.6 +1.2
NLU North Lily Min 98.09 51 IAMs_20 IAMs_20 05 34 46.4
comp=Z,2µm,21.0s
BOZ Bozeman (W) 98.39 45 IAmb IAmb 04 54 38.3
comp=Z,8.1nm,0.9s
BOZ Bozeman (W) 98.39 45 P Pdif 04 54 37.9 +1.1
baz=271,SNR=6.1
MPU Maple Canyon 98.42 50 IAMs_20 IAMs_20 05 35 08.4
comp=Z,2µm,19.0s
HWUT Hardware Ranch 98.47 49 IAMs_20 IAMs_20 05 30 56.7
comp=Z,1µm,22.0s
X16A Lo Mia Camp, P 98.54 56 IAMs_20 IAMs_20 05 31 43.9
comp=Z,2µm,21.0s
WUAZ Wupatki 98.61 55 IAmb IAmb 04 54 41.7
comp=Z,15nm,1.1s
WUAZ IAMs_20 IAMs_20 05 31 20.6
comp=Z,1µm,21.0s
WUAZ Wupatki 98.61 55 P Pdif 04 54 38.9 +0.8
baz=269
YHL Hebgen Lake 98.72 46 IAmb IAmb 04 54 43.0
comp=Z,16nm,1.2s
Q16A Castle Valley 98.78 52 IAMs_20 IAMs_20 05 31 26.7
comp=Z,2µm,22.0s
AHID Auburn Hatcher 98.81 48 IAmb IAmb 04 54 40.6
comp=Z,11nm,1.1s
AHID IAMs_20 IAMs_20 05 32 41.5
comp=Z,1µm,21.0s
FXWY Fox Creek 98.85 47 IAMs_20 IAMs_20 05 34 50.2
comp=Z,1µm,20.0s
TPAW Teton Pass 98.91 47 IAmb IAmb 04 54 40.5
comp=Z,12nm,1.1s
YFT Old Faithful 98.98 46 IAmb IAmb 04 54 44.0
comp=Z,15nm,0.9s
SNOW Snow King Moun 99.05 47 P Pdif 04 54 39.0 -0.9
SNOW IAmb IAmb 04 54 42.2
comp=Z,16nm,1.2s
SNOW IAMs_20 IAMs_20 05 38 45.6
comp=Z,1µm,18.0s
MOOW Moose Ponds 99.06 47 IAMs_20 IAMs_20 05 35 09.6
comp=Z,2µm,21.0s
TUC Tucson 99.06 58 IAMs_20 IAMs_20 05 35 08.7
comp=Z,1µm,20.0s
TUC Tucson 99.06 58 P Pdif 04 54 41.7 +1.7
baz=269
FLWY Flagg Ranch 99.08 46 IAmb IAmb 04 54 42.4
FLWY IAMs_20 IAMs_20 05 32 59.2
comp=Z,8.9nm,0.8s
comp=Z,2µm,21.0s
YNR Norris Junctio 99.08 46 IAMs_20 IAMs_20 05 35 09.2
comp=Z,2µm,19.0s
P17A Butcher Ranch, 99.12 51 IAmb IAmb 04 54 42.6
comp=Z,11nm,1.0s
P17A IAMs_20 IAMs_20 05 32 11.4
comp=Z,2µm,22.0s
LOHW Long Hollow 99.16 47 IAMs_20 IAMs_20 05 35 11.1
comp=Z,1µm,20.0s
H17A Grant Village 99.16 46 IAmb IAmb 04 54 43.8
comp=Z,10nm,0.9s
H17A Grant Village 99.16 46 P Pdif 04 54 42.0 +1.5
baz=271,SNR=7.1
SRU San Rafael Swe 99.29 51 IAMs_20 IAMs_20 05 31 42.0
comp=Z,2µm,22.0s
LPIG La Paz 99.30 67 LR LR 05 32 47.0
comp=Z,1µm,20.0s,baz=262,slow=31
YMP Mirror Lake Pl 99.45 46 IAMs_20 IAMs_20 05 32 39.7
comp=Z,2µm,21.0s
P18A Preston Nutter 99.50 51 IAMs_20 IAMs_20 05 32 22.5
comp=Z,2µm,21.0s
EGMT Eagleton 99.61 42 P Pdif 04 54 43.0 +0.9
baz=273
SLBS Sierra La Lagu 99.62 67 IAMs_20 IAMs_20 05 42 10.5
comp=Z,2µm,20.0s
X18A Snowflake 99.77 56 IAMs_20 IAMs_20 05 32 53.3
comp=Z,1µm,20.0s
W18A Petrified Fore 99.94 55 IAMs_20 IAMs_20 05 31 49.9
comp=Z,1µm,21.0s
BW06 Boulder Array 99.95 48 P Pdif 04 54 44.5 +0.6
baz=272
PDAR Pinedale Array 99.95 48 P Pdif 04 54 44.1 +0.2
comp=Z,10.0nm,0.9s,baz=249,slow=2.4,SNR=50
PDAR PKKPbc PKKPbc 05 11 05.0 +0.3
comp=Z,0.2nm,0.7s,baz=101,slow=0.9,SNR=3.8
PDAR LR LR 05 33 41.1
comp=Z,1µm,21.2s,baz=287,slow=32
RLMT Red Lodge 100.07 45 IAMs_20 IAMs_20 05 32 22.6
comp=Z,2µm,20.0s
MVCO Mesa Verde 100.92 53 IAMs_20 IAMs_20 05 34 46.8
comp=Z,1µm,20.0s
MVCO Mesa Verde 100.92 53 P Pdif 04 54 49.2 +0.8
baz=271
O20A White River Ci 101.03 50 IAMs_20 IAMs_20 05 33 56.9
comp=Z,2µm,20.0s
O20A White River Ci 101.03 50 P Pdif 04 54 49.4 +0.7
baz=272
SNAA Sanae 101.25 188 PKKPbc PKKPbc 05 10 55.2 -6.2
comp=Z,2.8nm,0.8s,baz=76,slow=3.4,SNR=4.2
121A Cookes Peak, D 101.60 58 IAMs_20 IAMs_20 05 38 43.9
comp=Z,1µm,18.0s
SMCO Snowmass 102.04 51 IAMs_20 IAMs_20 05 34 06.9
comp=Z,2µm,21.0s
LAO LASA Array 102.09 44 P Pdif 04 54 54.2 +1.0
baz=275
K22A Casper 102.19 48 IAMs_20 IAMs_20 05 34 29.2
comp=Z,1µm,21.0s
K22A Casper 102.19 48 P Pdif 04 54 54.4 +0.6
baz=274
Y22D IRIS PASSCAL I 102.28 56 IAMs_20 IAMs_20 05 32 48.9
comp=Z,1µm,22.0s
Y22D IRIS PASSCAL I 102.28 56 P Pdif 04 54 55.2 +0.7
baz=272
Y22F Passcal Instru 102.28 56 P Pdif 04 54 54.9 +0.5
baz=272
ANMO Albuquerque 102.64 56 IAMs_20 IAMs_20 05 36 00.4
comp=Z,750nm,20.0s
ANMO Albuquerque 102.64 56 P Pdif 04 54 57.3 +1.3
baz=272
ANMO Albuquerque 102.64 56 P Pdif 04 54 58.2 +2.2
comp=Z,1.3nm,0.8s,baz=0.0,slow=0.0,SNR=3.7
EPT El Paso 102.70 59 IAMs_20 IAMs_20 05 38 57.1
comp=Z,1µm,19.0s
N23A Red Feather La 102.73 49 P Pdif 04 54 57.5 +1.0
baz=274
ISCO Idaho Springs 103.06 51 IAMs_20 IAMs_20 05 38 38.2
comp=Z,1µm,20.0s
ISCO Idaho Springs 103.06 51 P Pdif 04 54 58.9 +0.9
baz=274
PHWY Pilot Hill 103.07 49 IAMs_20 IAMs_20 05 40 08.9
comp=Z,898nm,18.0s
SDCO Great Sand Dun 103.28 53 IAMs_20 IAMs_20 05 36 18.0
comp=Z,2µm,20.0s
SDCO Great Sand Dun 103.28 53 P Pdif 04 54 59.5 +0.6
baz=273
DGMT Dagmar 103.28 42 IAMs_20 IAMs_20 05 38 38.1
comp=Z,1µm,18.0s
DGMT Dagmar 103.28 42 P Pdif 04 54 59.3 +1.0
baz=277
Q24A Divide 103.47 51 P Pdif 04 55 00.3 +0.5
baz=274
RSSD Black Hills 103.87 46 IAMs_20 IAMs_20 05 41 34.6
comp=Z,1µm,18.0s
RSSD Black Hills 103.87 46 P Pdif 04 55 01.1 -0.3
baz=276
T25A Trinidad 104.18 53 IAMs_20 IAMs_20 05 39 37.7
comp=Z,1µm,19.0s
T25A Trinidad 104.18 53 P Pdif 04 55 03.7 +0.8
baz=274
TXAR Lajitas Array 105.22 61 PKiKP PKiKP 04 59 22.9 +1.0
comp=Z,0.9nm,1.0s,baz=103,slow=2.9,SNR=3.7
TXAR PKKPbc PKKPbc 05 10 51.7 +3.2
comp=Z,0.3nm,0.7s,baz=128,slow=5.8,SNR=3.5
TXAR PKKPab PKKPab 05 11 05.5 +0.1
comp=Z,1.4nm,0.9s,baz=120,slow=5.3,SNR=6.8
KSCO Kaye Shedlock' 105.43 51 P PKiKP 04 59 22.5 +0.5
baz=276
OGNE Ogallala 105.68 49 IAMs_20 IAMs_20 05 38 35.5
comp=Z,1µm,19.0s
MSTX Muleshoe 105.73 56 IAMs_20 IAMs_20 05 36 23.2
comp=Z,990nm,20.0s
E28A Huff 105.89 43 IAMs_20 IAMs_20 05 35 43.7
comp=Z,1µm,22.0s
AMTX Amarillo 106.56 55 IAMs_20 IAMs_20 05 36 34.2
comp=Z,1µm,22.0s
ARCES ARCESS Array B 107.24 343 PKiKP PKiKP 04 59 23.5 -0.8
comp=Z,3.5nm,0.9s,baz=103,slow=1.4,SNR=14
SUSD Miller 107.44 45 IAMs_20 IAMs_20 05 35 53.0
comp=Z,2µm,22.0s
MOIG Morelia 107.72 71 IAMs_20 IAMs_20 05 36 15.4
comp=Z,2µm,20.0s
ELIS Ellis County 108.28 54 IAMs_20 IAMs_20 05 39 35.3
comp=Z,1µm,21.0s
ULM Lac du Bonnet 108.31 39 PKiKP PKiKP 04 59 26.2 -0.6
comp=Z,1.9nm,0.9s,baz=266,slow=3.1,SNR=4.3
ABTX Abilene, Hawle 108.45 58 IAMs_20 IAMs_20 05 45 45.4
comp=Z,947nm,18.0s
JCT Junction City 108.50 60 IAMs_20 IAMs_20 05 44 57.1
comp=Z,1µm,18.0s
BGNE Belgrade 108.52 48 IAMs_20 IAMs_20 05 49 45.0
comp=Z,1µm,18.0s
BGNE Belgrade 108.52 48 P PKiKP 04 59 27.1 -0.4
baz=279
U32A Winter Ranch, 108.58 54 IAMs_20 IAMs_20 05 42 06.1
comp=Z,1µm,19.0s
NOKA Waynoka 108.60 53 IAMs_20 IAMs_20 05 51 22.7
comp=Z,1µm,19.0s
OK035 E021 0 Rd and N 108.77 53 IAMs_20 IAMs_20 05 38 12.2
comp=Z,1µm,21.0s
AGMN Agassiz Nation 108.78 41 IAMs_20 IAMs_20 05 40 42.5
comp=Z,1µm,19.0s
OBN Obninsk 108.80 327 eP Pdif 04 55 21.6 -1.0
OBN e 04 59 56.2
OBN pmax pmax
comp=Z,3.0nm,0.9s
WMOK Wichita Mounta 108.95 55 IAMs_20 IAMs_20 05 38 19.5
comp=Z,1µm,22.0s
WMOK Wichita Mounta 108.95 55 P PKiKP 04 59 28.4 -0.1
baz=277
F33A 5 Mile Ranch, 109.03 43 IAMs_20 IAMs_20 05 36 39.7
comp=Z,1µm,21.0s
N33A J Bar K, Exete 109.15 49 IAMs_20 IAMs_20 05 50 59.8
comp=Z,1µm,19.0s
OK032 Salt Plains WL 109.15 53 IAMs_20 IAMs_20 05 38 49.3
comp=Z,1µm,20.0s
ECSD EROS Data Cent 109.23 46 IAMs_20 IAMs_20 05 37 42.9
comp=Z,1µm,22.0s
OK029 Liberty Lake 109.89 54 IAMs_20 IAMs_20 05 40 57.0
comp=Z,1µm,20.0s
FNO Franklin 110.01 55 IAMs_20 IAMs_20 05 38 04.2
comp=Z,1µm,21.0s
KSU1 Kansas State U 110.06 50 IAMs_20 IAMs_20 05 38 55.5
comp=Z,1µm,21.0s
KSU1 Kansas State U 110.06 50 P PKiKP 04 59 30.0 -0.4
baz=280
FW06 Azle 110.16 57 IAMs_20 IAMs_20 05 36 01.6
comp=Z,1µm,22.0s
TLIG Tlapa 110.22 73 IAMs_20 IAMs_20 05 39 30.0
comp=Z,1µm,20.0s
OK033 Mehan 110.27 54 IAMs_20 IAMs_20 05 42 12.1
comp=Z,1µm,18.0s
WHTX Lake Whitney, 110.36 58 IAMs_20 IAMs_20 05 41 15.9
comp=Z,950nm,19.0s
735A Kenedy 110.37 61 IAMs_20 IAMs_20 05 38 16.6
comp=Z,2µm,20.0s
Z35A Perchaven, San 110.37 57 IAMs_20 IAMs_20 05 44 26.1
comp=Z,1µm,18.0s
OK052 Battle Ridge R 110.39 54 IAMs_20 IAMs_20 05 42 54.2
comp=Z,971nm,20.0s
QUOK Quay 110.44 54 IAMs_20 IAMs_20 05 54 35.5
comp=Z,1µm,19.0s
N35A Tabor 110.48 48 IAMs_20 IAMs_20 05 42 43.9
comp=Z,1µm,20.0s
T35A Sooner Cattle 110.48 53 IAMs_20 IAMs_20 05 39 54.6
comp=Z,1µm,20.0s
ANN Anapa 111.11 316 i PKiKP PKiKP 04 59 29.8 -2.4
ANN pmax pmax
comp=Z,135nm,2.1s
ANN MLR MLR
comp=Z,1µm,24.0s
TUL3 Leonard 111.21 54 IAMs_20 IAMs_20 05 42 51.0
comp=Z,996nm,19.0s
TUL3 Leonard 111.21 54 P PKiKP 04 59 32.3 -0.4
baz=279
FINES FINESS Array B 111.29 335 c iPKiKP PKiKP 04 59 29.7 -2.3
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 111.29 335 PKiKP PKiKP 04 59 31.4 -0.7
comp=Z,2.2nm,0.6s,baz=97,slow=4.4,SNR=8.2
I37A Lemond, Waseca 111.44 45 IAMs_20 IAMs_20 05 37 51.7
comp=Z,2µm,22.0s
SPMN Marine on St. 111.56 43 IAMs_20 IAMs_20 05 42 50.6
comp=Z,1µm,21.0s
SPMN Marine on St. 111.56 43 P PKiKP 04 59 33.0 0.0
baz=285
EYMN Ely 111.69 40 P PKiKP 04 59 33.1 -0.1
baz=287
237A Washetta, Mont 111.75 58 IAMs_20 IAMs_20 05 42 10.7
comp=Z,1µm,19.0s
X37A Clayton 111.75 55 IAMs_20 IAMs_20 05 43 26.4
comp=Z,1µm,19.0s
SCIA State Center 112.06 47 IAMs_20 IAMs_20 05 40 40.9
comp=Z,2µm,22.0s
K38A Parkersburg 112.21 46 IAMs_20 IAMs_20 05 52 14.2
comp=Z,1µm,18.0s
U38A Gravette 112.25 53 IAMs_20 IAMs_20 05 40 25.3
comp=Z,871nm,20.0s
Z38A Mt. Pleasant 112.27 56 IAMs_20 IAMs_20 05 43 41.2
comp=Z,1µm,18.0s
P38A Dawn 112.31 49 IAMs_20 IAMs_20 05 43 47.4
comp=Z,1µm,19.0s
NATX Nacogdoches 112.75 58 IAMs_20 IAMs_20 05 40 01.3
comp=Z,1µm,22.0s
NATX Nacogdoches 112.75 58 P PKiKP 04 59 35.6 -0.1
baz=278
MIAR Mount Ida 113.22 55 IAMs_20 IAMs_20 05 45 14.6
comp=Z,1µm,19.0s
MIAR Mount Ida 113.22 55 P PKiKP 04 59 36.8 +0.3
baz=280
G40A Rib Lake 113.31 43 IAMs_20 IAMs_20 05 43 14.1
comp=Z,1µm,20.0s
I40A Norwalk 113.41 44 IAMs_20 IAMs_20 05 47 49.9
comp=Z,1µm,18.0s
MNK Minsk 113.69 328 i P Pdif 04 55 42.6 -1.8
MNK i 05 00 27.9
MNK i PPP PPP 05 02 51.8
MNK i 05 06 37.3
MNK i PS PS 05 09 59.9 -6.4
MNK i SS SS 05 16 12.3 -2.8
MNK i SSS SSS 05 20 26.0
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR
comp=N,335nm,20.0s
MNK MLR MLR
comp=Z,1µm,19.0s
MNK MLR MLR
comp=E,364nm,19.0s
WLAR White Oak Lake 113.75 56 IAMs_20 IAMs_20 05 45 49.3
comp=Z,1µm,20.0s
COWI Conover 113.78 42 IAMs_20 IAMs_20 05 41 31.0
comp=Z,1µm,20.0s
X40A Basin Creek Fa 113.84 55 IAMs_20 IAMs_20 05 45 23.6
comp=Z,1µm,19.0s
Z41A Richland Creek 114.07 56 IAMs_20 IAMs_20 05 41 15.0
comp=Z,1µm,21.0s
WHAR Wooly Hollow 114.13 54 IAMs_20 IAMs_20 05 44 32.2
comp=Z,951nm,20.0s
441A DeRidder 114.14 59 IAMs_20 IAMs_20 05 38 58.1
comp=Z,2µm,22.0s
FCAR Ozark Folk Cen 114.15 53 IAMs_20 IAMs_20 05 46 46.6
comp=Z,817nm,18.0s
CCM Cathedral Cave 114.39 51 P PKPdf 04 59 38.8 +0.1
baz=283
AKASG Malin Array Be 114.52 324 PKP PKiKP 04 59 37.6 -0.9
comp=Z,3.9nm,0.7s,baz=58,slow=2.4,SNR=7.9
AKBB Malin Array Si 114.52 324 IAMs_20 IAMs_20 05 48 11.8
comp=Z,1µm,22.0s
AKBB Malin Array Si 114.52 324 i PKiKP PKiKP 04 59 37.5 -1.0
KIEV Kiev 114.53 324 P PKiKP 04 59 37.8 -0.7
KIEV Kiev 114.53 324 IAMs_20 IAMs_20 05 48 10.8
comp=Z,1µm,22.0s
KIEV Kiev 114.53 324 PKiKP PKiKP 04 59 37.8 -0.7
F42A Maple Grove Fa 114.55 42 IAMs_20 IAMs_20 05 50 35.7
comp=Z,1µm,21.0s
I42A Draeger Farm, 114.59 44 IAMs_20 IAMs_20 05 50 12.1
comp=Z,1µm,20.0s
CCAR Cane Creek 114.81 55 IAMs_20 IAMs_20 05 53 02.3
comp=Z,993nm,18.0s
BR131 Keskin Array S 115.08 311 i PKiKP PKiKP 04 59 38.9 -1.2
BRTR Keskin Array B 115.08 311 PKP PKiKP 04 59 39.0 -1.2
comp=Z,3.1nm,0.7s,baz=123,slow=1.7,SNR=13
E43A Lone Tree Farm 115.10 41 IAMs_20 IAMs_20 05 48 33.0
comp=Z,1µm,20.0s
MMAI Mount Meron Ar 115.13 304 PKP PKPdf 04 59 40.8 +0.5
comp=Z,0.6nm,0.3s,baz=73,slow=4.8,SNR=2.1
H43A Windswept, Lux 115.20 43 IAMs_20 IAMs_20 05 44 13.1
comp=Z,1µm,19.0s
HDIL Hopedale 115.25 48 IAMs_20 IAMs_20 05 45 38.6
comp=Z,1µm,20.0s
HDIL Hopedale 115.25 48 P PKiKP 04 59 39.9 -0.4
baz=285
P43A Skaggs, Pawnee 115.32 49 IAMs_20 IAMs_20 05 42 56.0
comp=Z,1µm,20.0s
143A Socs Landing, 115.33 56 IAMs_20 IAMs_20 05 45 32.2
comp=Z,1µm,19.0s
GNAR Gosnell 115.81 53 IAMs_20 IAMs_20 05 45 53.4
comp=Z,984nm,19.0s
PEBM Pemiscott Bayo 115.90 52 IAMs_20 IAMs_20 05 45 56.8
comp=Z,1µm,20.0s
PVMO Portageville 115.96 52 IAMs_20 IAMs_20 05 42 10.3
comp=Z,2µm,21.0s
O44A Mansfield 115.97 48 IAMs_20 IAMs_20 05 41 32.0
comp=Z,2µm,22.0s
SORM Soroca 116.04 322 P PKiKP 04 59 40.8 -0.7
SORM Soroca 116.04 322 PKiKP PKiKP 04 59 40.8 -0.7
MET Memphis--Engin 116.05 54 IAMs_20 IAMs_20 05 45 56.1
comp=Z,1µm,20.0s
VBMS Vicksburg 116.15 57 IAMs_20 IAMs_20 05 45 39.3
comp=Z,1µm,19.0s
GLAT Glass 116.31 52 IAMs_20 IAMs_20 05 42 00.8
comp=Z,1µm,22.0s
HALT Halls 116.35 53 IAMs_20 IAMs_20 05 45 23.9
comp=Z,1µm,20.0s
SUW Suwalki 116.36 329 IAMs_20 IAMs_20 05 51 04.4
comp=Z,1µm,20.0s
OXF Oxford 116.61 54 IAMs_20 IAMs_20 05 49 48.1
comp=Z,1µm,18.0s
SFIN Lafayette 116.91 47 IAMs_20 IAMs_20 05 44 23.9
comp=Z,1µm,20.0s
HFS Hagfors 116.97 338 PKP PKPdf 04 59 41.3 -1.6
comp=Z,2.7nm,0.8s,baz=83,slow=3.4,SNR=5.5
HUEH Huehuetenango 117.05 76 IAMs_20 IAMs_20 05 39 15.9
comp=Z,1µm,20.0s
NB2 NORSAR Subarra 117.23 340 PKPdf PKPdf 04 59 42.5 -1.0
comp=Z,3.9nm,0.8s,baz=43,slow=1.8
NOA NORSAR Array B 117.23 340 PKP PKPdf 04 59 42.7 -0.9
comp=Z,2.0nm,0.7s,baz=47,slow=1.8,SNR=13
146A Union 117.28 56 IAMs_20 IAMs_20 05 51 40.0
comp=Z,959nm,18.0s
WVT Waverly 117.49 52 IAMs_20 IAMs_20 05 42 47.0
comp=Z,1µm,21.0s
WVT Waverly 117.49 52 P PKPdf 04 59 44.5 -0.2
baz=284
J47A Sunmer 117.62 44 IAMs_20 IAMs_20 05 40 29.2
comp=Z,1µm,22.0s
ISP Isparta 117.93 310 c iPKiKP PKPdf 04 59 44.7 -1.0
ISP pmax pmax
comp=Z,28nm,2.5s
VRI Vrincioaia 117.94 320 P PKPdf 04 59 44.6 -0.7
VRI Vrincioaia 117.94 320 PKiKP PKPdf 04 59 44.6 -0.7
WCI Wyandotte Cave 118.12 49 PKPdf PKPdf 04 59 44.3 -1.6
WCI Wyandotte Cave 118.12 49 P PKPdf 04 59 45.2 -0.6
baz=286
WCI Wyandotte Cave 118.12 49 PKiKP PKPdf 04 59 44.3 -1.6
L48A N Adams 118.33 45 IAMs_20 IAMs_20 05 44 20.1
comp=Z,1µm,21.0s
O48B Farmland 118.36 47 P PKPdf 04 59 46.0 -0.3
baz=288
V48A Smith Brothers 118.38 52 IAMs_20 IAMs_20 05 47 58.5
comp=Z,1µm,20.0s
P48A Milroy 118.41 48 IAMs_20 IAMs_20 05 45 40.7
comp=Z,1µm,20.0s
X48A Hartselle 118.52 54 IAMs_20 IAMs_20 05 47 53.4
comp=Z,901nm,20.0s
BOSA Boshof 118.52 233 PKP PKPdf 04 59 47.2 +0.1
comp=Z,5.9nm,1.1s,baz=11,slow=1.9,SNR=4.4
MLR Muntele Rosu 118.59 320 P PKiKP 04 59 47.6 +0.8
MLR Muntele Rosu 118.59 320 IAMs_20 IAMs_20 05 55 05.0
comp=Z,956nm,21.0s
MLR Muntele Rosu 118.59 320 PKiKP PKiKP 04 59 47.6 +0.8
CLTN Cedars of Leba 118.67 52 PKPdf PKPdf 04 59 45.0 -2.0
CLTN IAMs_20 IAMs_20 05 43 12.2
comp=Z,1µm,22.0s
AAM Ann Arbor 118.75 44 IAMs_20 IAMs_20 05 43 37.8
comp=Z,949nm,20.0s
AAM Ann Arbor 118.75 44 P PKPdf 04 59 46.4 -0.5
baz=291
LRAL Lakeview Retre 118.89 55 IAMs_20 IAMs_20 05 48 36.7
comp=Z,999nm,21.0s
P49A Miami Univ. Ec 118.91 48 IAMs_20 IAMs_20 05 49 43.9
comp=Z,1µm,19.0s
P49A Miami Univ. Ec 118.91 48 P PKPdf 04 59 47.2 -0.2
baz=288
O49A Covington 118.98 47 IAMs_20 IAMs_20 05 48 02.6
comp=Z,1µm,20.0s
ESQI Esquipulas 119.16 76 IAMs_20 IAMs_20 05 40 35.9
comp=Z,947nm,22.0s
VOIR 119.19 320 P PKPdf 04 59 47.1 -0.7
VOIR 119.19 320 PKiKP PKPdf 04 59 47.1 -0.7
SNET Serv Nac Est T 119.29 77 IAMs_20 IAMs_20 05 40 55.0
comp=Z,991nm,19.0s
KOLS Kolonicke sedl 119.34 324 ePKiKP PKPdf 04 59 48.1 +0.2
KOLS Kolonicke sedl 119.34 324 ePKP PKPdf 04 59 48.1 +0.2
ARR Arges 119.48 320 P PKiKP 04 59 48.9 +0.5
T50A Nancy 119.58 50 PKPdf PKPdf 04 59 46.8 -1.9
ELND Elena 119.63 317 P PKPdf 04 59 48.0 -0.7
FPAL Fort Paine 119.65 53 IAMs_20 IAMs_20 05 52 01.2
comp=Z,923nm,18.0s
W50A Signal Mountai 119.71 52 IAMs_20 IAMs_20 05 48 10.8
comp=Z,1µm,20.0s
250A Grady 119.73 56 IAMs_20 IAMs_20 05 51 22.8
comp=Z,955nm,20.0s
PLCA Paso Flores 119.77 144 PKP PKPdf 04 59 49.7 +0.5
comp=Z,2.4nm,0.6s,baz=258,slow=1.7,SNR=18
PLCA PKKPbc PKKPbc 05 09 58.8 -1.4
comp=Z,1.6nm,0.8s,baz=70,slow=4.7,SNR=7.3

CRVS	Cervenica-Dubn	119.82	325	ePKIKP	PKPdf	PKPdf	04 59 48.6	-0.2	
CRVS	Cervenica-Dubn	119.82	325	ePKP	PKPdf	PKPdf	04 59 48.6	-0.2	
P51A	Williamsport	120.14	47	IAMs_20	IAMs_20		05 56 36.3		
	comp=Z,1μm,18.0s								
X51A	Calhoun	120.24	53	IAMs_20	IAMs_20		05 48 17.9		
	comp=Z,1μm,19.0s								
CPCT	Cooper Cave	120.27	52	IAMs_20	IAMs_20		05 44 02.4		
	comp=Z,1μm,22.0s								
PLVB	Pleven	120.30	318	⇓P	PKPdf	PKPdf	04 59 48.4	-1.4	
VLDQ	Val d'Or	120.31	36	PKPdf	PKPdf	PKPdf	04 59 48.3	-1.4	
451A	Vernon	120.47	58	IAMs_20	IAMs_20		05 47 37.5		
	comp=Z,1μm,19.0s								
LSZ	Lusaka	120.58	249	PKPdf	PKPdf	PKPdf	04 59 50.3	-1.0	
LSZ	Lusaka	120.58	249	PKIKP	PKPdf	PKPdf	04 59 50.3	-1.0	
M52A	Chesterland	120.63	44	IAMs_20	IAMs_20		05 50 28.8		
	comp=Z,987nm,18.0s								
SADO	Sadowa	120.81	40	PKP	PKPdf	PKPdf	04 59 50.7	-0.1	
	comp=Z,7.3nm,0.7s,baz=329,slow=3.3,SNR=6.7								
O52A	Adamsville	120.81	46	IAMs_20	IAMs_20		05 56 18.8		
	comp=Z,941nm,21.0s								
W52A	Murphy	120.83	52	IAMs_20	IAMs_20		05 44 27.9		
	comp=Z,1μm,20.0s								
152A	Waverly Hall	120.84	55	IAMs_20	IAMs_20		05 48 37.1		
	comp=Z,1μm,20.0s								
V52A	Sevierville	120.88	51	PKPdf	PKPdf	PKPdf	04 59 50.3	-1.0	
Q52A	Bidwell	120.89	47	IAMs_20	IAMs_20		05 51 32.4		
	comp=Z,1μm,18.0s								
SURR	Surduc	120.91	321	⇑P	PKPdf	PKPdf	04 59 49.2	-1.7	
Y52A	Lilburn	121.06	54	IAMs_20	IAMs_20		05 48 40.7		
	comp=Z,1μm,20.0s								
M53A	WI Miller and	121.14	44	IAMs_20	IAMs_20		05 43 40.3		
	comp=Z,1μm,22.0s								
TGUH	Tegucigalpa,Un	121.18	77	IAMs_20	IAMs_20		05 47 36.4		
	comp=Z,760nm,18.0s								
PSZ	Piszkesteto	121.22	324	IAMs_20	IAMs_20		05 50 50.0		
	comp=Z,864nm,20.0s								
N53A	Lisbon	121.26	45	PKPdf	PKPdf	PKPdf	04 59 51.3	-0.6	
N53A				IAMs_20	IAMs_20		05 46 10.3		
	comp=Z,1μm,21.0s								
BZS	Buzias	121.28	321	⇑P	PKPdf	PKPdf	04 59 51.0	-0.7	
BZS	Buzias	121.28	321	⇑PKIKP	PKPdf	PKPdf	04 59 51.0	-0.7	
VYHS	Vyhne	121.53	325	ePKIKP	PKPdf	PKPdf	04 59 51.8	-0.3	
VYHS	Vyhne	121.53	325	ePKP	PKPdf	PKPdf	04 59 51.8	-0.3	
MORC	Moravsky Berou	121.56	327	⇓P	PKiKP	PKPdf	04 59 52.7	+0.3	
MORC	Moravsky Berou	121.56	327	IAMs_20	IAMs_20		05 52 34.8		
	comp=Z,1μm,22.0s								
MORC	Moravsky Berou	121.56	327	ePKP	PKPdf	PKPdf	04 59 52.4	+0.2	
MORC	Moravsky Berou	121.56	327	⇓PKIKP	PKiKP	PKPdf	04 59 52.7	+0.3	
MDVR	Moldovita	121.60	320	⇑P	PKPdf	PKPdf	04 59 51.8	-0.6	
MAUC	Maruska	121.63	327	ePKPDF	PKiKP	PKPdf	04 59 52.8	+0.3	
BG3	Lake Jocassee	121.64	52	IAMs_20	IAMs_20		05 44 42.9		
	comp=Z,1μm,22.0s								
GOGA	Godfrey	121.66	54	IAMs_20	IAMs_20		05 48 20.0		
	comp=Z,1μm,20.0s								
553A	Crawfordville	121.67	58	IAMs_20	IAMs_20		05 51 16.7		
	comp=Z,1μm,21.0s								
SCHQ	Schefferville	121.76	25	PKPdf	PKPdf	PKPdf	04 59 51.6	-0.8	
SCHQ	Schefferville	121.76	25	PKP	PKPdf	PKPdf	04 59 52.4	0.0	
	comp=Z,6.4nm,1.0s,baz=244,slow=1.9,SNR=7.8								
KRLC	Kraliky	121.80	328	ePKPDF	PKPdf	PKPdf	04 59 52.3	-0.4	
KRLC	Kraliky	121.80	328	ePKIKP	PKPdf	PKPdf	04 59 52.3	-0.4	
OSTC	Ostas	121.83	328	ePKPDF	PKPdf	PKPdf	04 59 52.6	-0.1	
OSTC				AMS	AMS		05 52 00.0		
	comp=Z,1μm,22.2s								
OSTC	Ostas	121.83	328	ePKIKP	PKPdf	PKPdf	04 59 52.6	-0.1	
OSTC				MLR	MLR				
	comp=Z,1μm,22.2s								
DPC	Dobruska-Polom	121.89	328	ePKPDF	PKPdf	PKPdf	04 59 53.0	+0.2	
DPC				AMS	AMS		05 53 00.0		
	comp=Z,1μm,22.2s								
DPC	Dobruska-Polom	121.89	328	ePKIKP	PKPdf	PKPdf	04 59 53.0	+0.2	
DPC				MLR	MLR				
	comp=Z,1μm,22.2s								
CHVC	Chvalec	121.89	328	ePKPDF	PKPdf	PKPdf	04 59 52.5	-0.3	
CHVC				AMS	AMS		05 52 30.0		
	comp=Z,2μm,21.4s								
CHVC	Chvalec	121.89	328	ePKIKP	PKPdf	PKPdf	04 59 52.5	-0.3	
CHVC				MLR	MLR				
	comp=Z,2μm,21.4s								
Q54A	Coxs Mills	121.93	47	IAMs_20	IAMs_20		05 50 33.3		
	comp=Z,962nm,20.0s								
UPC	Upice	121.96	328	ePKPDF	PKPdf	PKPdf	04 59 53.0	+0.1	
UPC				AMS	AMS		05 53 00.0		
	comp=Z,1μm,21.6s								
UPC	Upice	121.96	328	ePKIKP	PKPdf	PKPdf	04 59 53.0	+0.1	
UPC				MLR	MLR				
	comp=Z,1μm,21.6s								
JAVC	Velka Javorina	121.99	326	ePKP	PKiKP	PKPdf	04 59 53.9	+0.7	
S54A	Dingess, Beckl	122.00	48	PKPdf	PKPdf	PKPdf	04 59 52.3	-1.1	
BOVS	Bovan	122.12	319	⇑P	PKPdf	PKPdf	04 59 52.4	-1.0	
154A	Montrose	122.17	55	IAMs_20	IAMs_20		05 45 41.7		
	comp=Z,982nm,21.0s								
VRAC	Vranov	122.33	327	ePKP	PKPdf	PKPdf	04 59 53.7	0.0	
HODGE	Hodges	122.40	53	IAMs_20	IAMs_20		05 50 29.4		
	comp=Z,1μm,19.0s								
MODS	Modra-Piesok	122.47	326	ePKIKP	PKPdf	PKPdf	04 59 53.7	-0.3	
MODS	Modra-Piesok	122.47	326	ePKP	PKPdf	PKPdf	04 59 53.7	-0.3	
BSEG	Bad Segeberg	122.52	334	ePKPdf	PKPdf	PKPdf	04 59 54.2	+0.4	
	baz=50,slow=2.0								
KRUC	Moravsky	122.58	327	ePKP	PKPdf	PKPdf	04 59 53.8	-0.3	
ZST	Bratislava	122.67	326	ePKIKP	PKPdf	PKPdf	04 59 54.5	+0.2	
ZST	Bratislava	122.67	326	ePKP	PKPdf	PKPdf	04 59 54.5	+0.2	
PVCC	Panska Ves	122.69	329	ePKPDF	PKPdf	PKPdf	04 59 54.2	-0.1	
PVCC	Panska Ves	122.69	329	ePKIKP	PKPdf	PKPdf	04 59 54.2	-0.1	
R55A	Marlinton	122.71	48	IAMs_20	IAMs_20		05 55 13.9		
	comp=Z,1μm,19.0s								
BOAB	BOACO BROADBAND	122.79	79	IAMs_20	IAMs_20		05 41 25.9		
	comp=Z,1μm,21.0s								
BRG	Berggiesshubel	122.80	330	*i* PKP	PKPdf	PKPdf	04 59 54.4	-0.1	
BRG				Amp			04 59 55.4		
	comp=Z,7.3nm,0.7s								
BRG	Berggiesshubel	122.80	330	*i* PKIKP	PKPdf	PKPdf	04 59 54.4	-0.1	
BRG				pmax	pmax				
	comp=Z,7.0nm,0.7s								
BRG	Berggiesshubel	122.80	330	ePKPdf	PKPdf	PKPdf	04 59 54.6	+0.1	
	baz=50,slow=2.0								
MORH	Mrgy, Hungar	122.81	323	⇑P	PKiKP	PKPdf	04 59 55.6	+0.8	
RICC	Richard	122.92	329	AMS	AMS		05 54 30.0		
	comp=Z,1μm,18.4s								
TREC	Trest	122.94	327	AMS	AMS		05 54 00.0		
	comp=Z,2μm,22.3s								
GOPC	GO Pecny, Ondr	122.94	328	AMS	AMS		05 54 20.0		
	comp=Z,2μm,20.6s								
CLL	Collm	123.00	331	PKPdf	PKPdf	PKPdf	04 59 53.9	-1.0	
CLL				IAMs_20	IAMs_20		05 55 48.6		
	comp=Z,1μm,20.0s								
CLL	Collm	123.00	331	*i* PKIKP	PKPdf	PKPdf	04 59 54.6	-0.2	
CLL				*e*			05 00 02.0		
CLL				*e*			05 01 32.0		
CLL				pmax	pmax				
	comp=Z,13nm,0.8s								
CLL				MLR	MLR				
	comp=Z,1μm,20.0s								
CLL	Collm	123.00	331	ePKPdf	PKPdf	PKPdf	04 59 54.6	-0.2	
	baz=50,slow=2.0								
IDI	Anoyia	123.01	309	PKPdf	PKPdf	PKPdf	04 59 54.9	-0.5	
PRU	Pruhonice	123.03	329	ePKPDF	PKPdf	PKPdf	04 59 54.9	0.0	
PRU				AMS	AMS		05 54 00.0		
	comp=Z,1μm,19.8s								
PRU	Pruhonice	123.03	329	ePKIKP	PKPdf	PKPdf	04 59 54.9	0.0	
PRU				MLR	MLR				
	comp=Z,1μm,19.8s								
PRA	Prague	123.04	329	AMS	AMS		05 54 40.0		
	comp=Z,1μm,21.3s								
WBO	Williamsburg	123.14	38	PKPdf	PKPdf	PKPdf	04 59 53.4	-1.9	
JSC	Jenkinsville	123.17	52	IAMs_20	IAMs_20		05 51 01.9		
	comp=Z,1μm,20.0s								
FLTG	Flechtingen	123.18	332	ePKPdf	PKPdf	PKPdf	04 59 55.2	0.0	
	baz=50,slow=2.0								
HSKC	Hora Svate Kat	123.22	330	ePKPDF	PKPdf	PKPdf	04 59 54.7	-0.6	
HSKC				AMS	AMS		05 56 10.0		
	comp=Z,1μm,19.0s								
RONA	Rosalia, Austr	123.39	326	ePKiKP	PKPdf	PKPdf	04 59 55.6	-0.2	
	comp=Z,1.7nm,0.4s,SNR=4.8								
SSPA	Standing Stone	123.39	44	PKPdf	PKPdf	PKPdf	04 59 55.0	-1.0	
SSPA	Standing Stone	123.39	44	IAMs_20	IAMs_20		05 53 07.4		
	comp=Z,1μm,21.0s								
656A	Willston	123.46	58	IAMs_20	IAMs_20		05 52 14.5		
	comp=Z,1μm,20.0s								
CONA	Conrad Observa	123.51	326	*i* PKP	PKPdf	PKPdf	04 59 55.1	-1.0	
	comp=Z,8.4nm,0.7s,SNR=8.2								
JTS	Las Juntas de	123.52	81	PKP	PKPdf	PKPdf	04 59 57.1	+0.1	
	comp=Z,4.3nm,0.5s,baz=198,slow=5.5,SNR=4.4								
456A	Hilliard	123.56	57	IAMs_20	IAMs_20		05 53 35.7		
	comp=Z,899nm,21.0s								

FNA	Florina	123.57	316	PKPdf	PKPdf	PKPdf	04 59 54.8	-1.6	
FNA	Florina	123.57	316	PKIKP	PKPdf	PKPdf	04 59 54.8	-1.6	
NRDL	Niedersach Rie	123.59	333	ePKPdf	PKPdf	PKPdf	04 59 56.2	+0.4	
	baz=50,slow=2.0								
M57A	Sunshine Farm,	123.62	43	IAMs_20	IAMs_20		05 46 57.3		
	comp=Z,1μm,20.0s								
ARE1	Arenal 1	123.75	81	IAMs_20	IAMs_20		05 40 48.6		
	comp=Z,749nm,20.0s								
LONY	Lake Ozonia	123.75	39	IAMs_20	IAMs_20		05 54 24.5		
	comp=Z,1μm,20.0s								
P57A	Homestead Farm	123.77	45	IAMs_20	IAMs_20		05 55 31.7		
	comp=Z,1μm,19.0s								
TANN	Tannenbergstha	123.83	330	ePKPdf	PKPdf	PKPdf	04 59 56.3	-0.3	
	baz=50,slow=2.0								
CKRC	Cesky Krumlov	123.84	328	ePKPDF	PKPdf	PKPdf	04 59 56.6	0.0	
CKRC				AMS	AMS		05 53 50.0		
	comp=Z,2μm,20.9s								
CKRC	Cesky Krumlov	123.84	328	ePKIKP	PKPdf	PKPdf	04 59 56.6	0.0	
CKRC				MLR	MLR				
	comp=Z,2μm,20.9s								
CLZ	Clausthal	123.91	332	ePKPdf	PKPdf	PKPdf	04 59 56.9	+0.3	
	baz=50,slow=2.0								
J58A	Remsen	123.92	40	PKPdf	PKPdf	PKPdf	04 59 55.4	-1.5	
Y57A	Sumter	123.94	52	IAMs_20	IAMs_20		05 50 17.2		
	comp=Z,1μm,20.0s								
PUK	Puka	124.02	318	IAMs_20	IAMs_20		05 35 56.7		
	comp=Z,904nm,22.0s								
KHC	Kasperske Hory	124.05	328	PKPdf	PKPdf	PKPdf	04 59 55.9	-1.1	
KHC				IAMs_20	IAMs_20		05 55 03.4		
	comp=Z,1μm,20.0s								
KHC	Kasperske Hory	124.05	328	ePKPDF	PKPdf	PKPdf	04 59 56.5	-0.5	
KHC				AMS	AMS		05 54 30.0		
	comp=Z,1μm,19.9s								
KHC	Kasperske Hory	124.05	328	*c* iPKIKP	PKPdf	PKPdf	04 59 56.7	-0.3	
KHC				pmax	pmax				
	comp=Z,54nm,1.7s								
ARSA	Arzberg	124.08	325	ePKiKP	PKPdf	PKPdf	04 59 56.6	-0.5	
	comp=Z,6.4nm,1.0s								
MOX	Moxa	124.10	331	eL	L		05 55 11.6		
	comp=Z,1μm,22.0s								
N58A	Sunbury	124.11	43	IAMs_20	IAMs_20		05 56 53.4		
	comp=Z,969nm,20.0s								
GEC2	GERESS Array S	124.15	328	ePKPdf	PKPdf	PKPdf	04 59 57.0	-0.2	
	baz=50,slow=2.0								
GEC2				eL	L		05 54 24.5		
	comp=Z,2μm,21.5s								
GERES	GERESS Array B	124.15	328	PKPdf	PKPdf	PKPdf	04 59 55.9	-1.4	
GERES	GERESS Array B	124.15	328	PKP	PKPdf	PKPdf	04 59 56.9	-0.4	
	comp=Z,9.5nm,0.6s,baz=54,slow=3.0,SNR=28								
MANZ	Manzenberg	124.27	330	ePKPdf	PKPdf	PKPdf	04 59 57.6	+0.2	
	baz=50,slow=2.0								
HDC	Heredia	124.35	82	IAMs_20	IAMs_20		05 55 17.5		
	comp=Z,774nm,18.0s								
ROTZ	Rotzenmuhle	124.36	329	ePKPdf	PKPdf	PKPdf	04 59 57.4	-0.2	
	baz=50,slow=2.0								
WET	Wettzell	124.40	329	ePKPdf	PKPdf	PKPdf	04 59 57.7	0.0	
	baz=50,slow=2.0								
WET				eL	L		05 55 24.9		
	comp=Z,1μm,20.5s								
MOA	Molln	124.44	327	*i* PKP	PKPdf	PKPdf	04 59 56.9	-0.9	
	comp=Z,4.5nm,0.7s								
SOKA	Soboth	124.68	325	*i* PKiKP	PKPdf	PKPdf	04 59 57.8	-0.5	
	comp=Z,6.7nm,1.0s,SNR=7.2								
DWPF	Disney Wildern	124.70	60	IAMs_20	IAMs_20		05 50 17.5		
	comp=Z,918nm,20.0s								
CBN	Corbin Frederi	124.74	47	IAMs_20	IAMs_20		05 55 13.6		
	comp=Z,846nm,19.0s								
UBBA	Unterbirzbach	124.76	332	ePKPdf	PKPdf	PKPdf	04 59 58.4	+0.3	
	baz=50,slow=2.0								
GRF	Grafenberg Arr	124.90	330	ePKPdf	PKPdf	PKPdf	04 59 58.5	-0.1	
	baz=50,slow=2.0								
GRF				eL	L		05 54 16.8		
	comp=Z,841nm,22.0s								
OBKA	Obir	125.05	325	ePKiKP	PKPdf	PKPdf	04 59 58.6	-0.5	
	comp=Z,3.4nm,0.7s								
W59A	Clinton	125.07	50	IAMs_20	IAMs_20		05 47 58.9		
	comp=Z,1μm,21.0s								
KASTN	Kahler Asten	125.24	333	ePKPdf	PKPdf	PKPdf	04 59 59.6	+0.4	
	baz=50,slow=2.0								
WUPA	West Chester U	125.27	44	PKPdf	PKPdf	PKPdf	04 59 57.9	-1.6	
VISS	Visnje	125.28	324	*i* PKPdf	PKPdf	PKPdf	04 59 59.1	-0.3	
CNNC	Cliffs of the	125.47	50	IAMs_20	IAMs_20		05 47 40.4		
	comp=Z,1μm,22.0s								
CEY	Cerknica	125.55	324	*i* PKPdf	PKPdf	PKPdf	04 59 59.5	-0.4	
LESA	Schwarzleotal	125.55	327	*i* PKP	PKPdf	PKPdf	04 59 58.9	-1.1	
	comp=Z,11nm,0.8s								
060A	Indiantown	125.88	61	IAMs_20	IAMs_20		05 54 24.8		
	comp=Z,919nm,20.0s								
TNS	Taunus Mts	125.90	332	ePKPdf	PKPdf	PKPdf	05 00 00.9	+0.4	
	baz=50,slow=2.0								
PAL	Palisades	125.94	42	IAMs_20	IAMs_20		05 49 55.5		
	comp=Z,1μm,22.0s								
P61A	Hammonton	125.95	44	IAMs_20	IAMs_20		05 58 01.0		
	comp=Z,1μm,20.0s								
ABTA	Abfaltersbach	126.05	326	*i* PKP	PKPdf	PKPdf	04 59 59.7	-1.2	
	comp=Z,3.2nm,0.5s								
WATA	Waldheim	126.20	327	ePKP	PKPdf	PKPdf	05 00 00.6	-0.7	
	comp=Z,4.8nm,0.5s								
WTTA	Wattenberg	126.21	327	*i* PKP	PKPdf	PKPdf	05 00 00.6	-0.7	
	comp=Z,8.8nm,0.5s								
STAL	STALIGIAL	126.23	326	PKPdf	PKPdf	PKPdf	05 00 00.3	-1.0	
AHRW	Bad Neuenahr-A	126.31	333	ePKPdf	PKiKP	PKPdf	05 00 01.8	+0.2	
	baz=50,slow=2.0								
CIMO	Cimolais	126.35	326	IAMs_20	IAMs_20		05 55 53.5		
	comp=Z,2μm,21.0s								
EKA	Eskdalemuir Ar	126.41	343	PKP	PKPdf	PKPdf	05 00 00.8	-0.4	
	comp=Z,2.2nm,0.4s,baz=8.6,slow=2.7,SNR=19								
MOTA	Moosalm	126.45	328	*i* PKP	PKPdf	PKPdf	05 00 01.0	-0.8	
	comp=Z,12nm,0.6s,SNR=12								
PQI	Presque Isle	126.46	33	PKPdf	PKPdf	PKPdf	05 00 01.5	-0.1	
SQTA	Sankt Quirin	126.47	328	*i* PKiKP	PKPdf	PKPdf	05 00 01.4	-0.3	
	comp=Z,9.9nm,0.6s,SNR=7.4								
STU	Stuttgart	126.51	330	IAMs_20	IAMs_20		05 56 42.5		
	comp=Z,1μm,20.0s								
STU	Stuttgart	126.51	330	ePKPdf	PKPdf	PKPdf	05 00 01.8	+0.1	
	baz=50,slow=2.0								
BTNL	Ternell	126.70	333	dPKP	PKPdf	PKPdf	05 00 02.0	0.0	
MEM	Membach	126.74	334	dPKP	PKPdf	PKPdf	05 00 01.8	-0.3	
UBR	Ueberruh	126.76	329	ePKPdf	PKPdf	PKPdf	05 00 02.3	0.0	
	baz=50,slow=2.0								
FETA	Feichten	126.85	328	*i* PKiKP	PKPdf	PKPdf	05 00 02.3	-0.2	
	comp=Z,6.9nm,0.6s								
BSTI	Sart Tilman	126.95	334	dPKP	PKPdf	PKPdf	05 00 01.3	-1.1	
M63A	Gales Ferry	126.97	41	IAMs_20	IAMs_20		05 50 49.6		
	comp=Z,949nm,20.0s								
DAVA	Damuels	127.13	328	ePKiKP	PKPdf	PKPdf	05 00 03.0	-0.1	
	comp=Z,8.3nm,0.5s,SNR=6.9								
BCLA	Clavier	127.19	334	dPKP	PKPdf	PKPdf	05 00 02.9	0.0	
MCRA	Macar, Loja	127.28	100	PKPdf	PKPdf	PKPdf	05 00 03.0	-1.3	
FUORN	Ofenpass-Fuorn	127.35	327	PKPdf	PKPdf	PKPdf	05 00 02.3	-1.4	
TEOL	Teolo	127.35	325	IAMs_20	IAMs_20		05 38 41.0		
	comp=Z,1μm,20.0s								
WLF	Walferdange	127.35	333	dPKP	PKPdf	PKPdf	05 00 03.1	-0.1	
RCHB	Rochefort	127.41	334	dPcP	PKPdf	PKPdf	05 00 03.6	+0.3	
BMRD	Maredsous	127.51	334	dPKP	PKPdf	PKPdf	05 00 03.7	+0.2	
GUMA	Gualdo di Mace	127.70	322	IAMs_20	IAMs_20		05 54 12.5		
	comp=Z,712nm,22.0s								
NRCA	Norcia	127.96	322	IAMs_20	IAMs_20		06 04 17.5		
	comp=Z,798nm,20.0s								
PB12	IPOC Station P	131.98	121	PKPdf	PKPdf	PKPdf	05 00 10.9	-2.1	
GO01	Chusmiza	132.47	123	PKPdf	PKPdf	PKPdf	05 00 12.0	-2.5	
ROSC	El Rosal	133.96	89	PKP	PKPdf	PKPdf	05 00 18.6	+1.3	
	comp=Z,18nm,0.7s,baz=167,slow=5.5,SNR=12								
KEST	Kesra	134.28	316	PKP	PKPdf	PKPdf	05 00 16.4	-0.5	
	comp=Z,17nm,1.0s,baz=91,slow=2.1,SNR=8.3								
LPAZ	La Paz	134.87	119	PKPpre	PKPpre		05 00 07.5		
LPAZ	La Paz	134.87	119	PKHKP	PKPpre		05 00 07.5		
SDDR	Presa de Saban	135.83	68	IAMs_20	IAMs_20		05 59 34.0		
	comp=Z,691nm,20.0s								
CPUP	Villa Florida	137.54	139	PKP	PKPdf	PKPdf	05 00 23.4	+0.2	
	comp=Z,3.2nm,0.7s,baz=328,slow=2.6,SNR=9.0								
SDV	Santo Domingo	137.67	83	PKP	PKPdf	PKPdf	05 00 24.8	+0.8	
	comp=Z,34nm,0.7s,baz=173,slow=0.7,SNR=28								
ES18	SONSECA Array	139.55	331	IAMs_20	IAMs_20		06 05 10.5		
	comp=Z,1μm,21.0s								
ES07	SONSECA Array	139.57	331	IAMs_20	IAMs_20		06 05 28.0		
	comp=Z,996nm,20.0s								
ES17	SONSECA Array	139.57	331	IAMs_20	IAMs_20		06 05 12.0		
	comp=Z,1μm,21.0s								
ESDC	Sonseca Array	139.59	331	IAMs_20	IAMs_20		06 05 10.4		
	comp=Z,1μm,21.0s								
ESDC	Sonseca Array	139.59	331	PKhKP	PKPpre		05 00 18.2		
	comp=Z,1.1nm,0.9s,baz=32,slow=2.6,SNR=5.8								
ESDC				PKP	PKPdf	PKPdf	05 00 27.4	+0.8	
	comp=Z,1.5nm,0.7s,baz=4.2,slow=2.7,SNR=12								
ESDC				PP	PP		05 03 19.8	-1.0	
	comp=Z,2.3nm,0.8s,baz=42,slow=3.1,SNR=9.8								

MVO	Moncorvo	139.77	335	ePKP	PKPdf	PKPdf	05 00 27.9	+1.0	
POLO	Lamas de Olo	139.91	336	ePKP	PKPdf	PKPdf	05 00 22.5	-4.7	
BAUV	El Baul	140.22	83	PKPpre	PKPpre		05 00 19.6		
PVIS	Viseu	140.51	336	ePKP	PKPdf	PKPdf	05 00 21.7	-6.5	
MTE	Manteigas	140.62	335	ePKP	PKPdf	PKPdf	05 00 23.3	-5.2	
HUMP	Col San Antoni	141.04	68	PKPpre	PKPpre		05 00 21.1		
PCBR	Castelo Branco	141.06	334	ePKP	PKPdf	PKPdf	05 00 25.2	-4.0	
COI	Coimbra	141.15	336	ePKP	PKPdf	PKPdf	05 00 25.2	-4.1	
COI	Coimbra	141.15	336	IAMs_20	IAMs_20		06 05 15.3		
	comp=Z,989nm,20.0s								
PCAS	Casmilo, Conde	141.31	336	ePKP	PKPdf	PKPdf	05 00 26.5	-3.1	
PMRV	Marv??o	141.37	334	ePKP	PKPdf	PKPdf	05 00 25.2	-4.6	
PMTG	Montargil	142.02	335	ePKP	PKPdf	PKPdf	05 00 29.1	-1.8	
SAML	Samuel	142.19	112	PKPpre	PKPpre		05 00 24.6		
SAML	Samuel	142.19	112	PKHKP	PKPpre		05 00 24.6		
PBAR	Barrancos	142.23	332	ePKP	PKPdf	PKPdf	05 00 28.3	-3.0	
EVO	Evora	142.38	334	ePKP	PKPdf	PKPdf	05 00 28.5	-3.1	
PBEJ	Beja	142.73	333	ePKP	PKPdf	PKPdf	05 00 28.4	-3.8	
PTLB	Pontes e Lacer	142.88	124	PKPpre	PKPpre		05 00 26.6		
PNCL	Nicolau / Gran	142.95	334	ePKP	PKPdf	PKPdf	05 00 28.4	-4.2	
MESJ	Messejana	143.04	333	ePKP	PKPdf	PKPdf	05 00 29.5	-3.3	
TRCB	Terra Rica	143.05	140	PKPpre	PKPpre		05 00 27.0		
PVAQ	Vaqueiros	143.17	332	ePKP	PKPbc		05 00 31.5	+1.6	
TAM	Tamanrasset	143.28	301	PKPpre	PKPpre		05 00 27.1		
TAM	Tamanrasset	143.28	301	PKHKP	PKPpre		05 00 27.1		
SMRT	St. Maarten	143.62	67	IAMs_20	IAMs_20		06 00 04.6		
	comp=Z,725nm,21.0s								
AVE	Averroes	146.28	328	PKPdf	PKPdf	PKPdf	05 00 38.0	-0.5	
BIM

TKL Sn **Sn** **04 49 48.6 -8.0**
0.4nm,0.3s,baz=350,slow=16,SNR=2.8
AMTX Amarillo 11.91 319 Pn **Pn** **04 47 45.9 +1.0**
MSTX Muleshoe 12.00 313 Pn **Pn** **04 47 46.8 +0.7**
MTO3 Montecristo 12.03 167 Pn **Pn** **04 47 45.0 -1.6**
KAN06 Argonia West S 12.03 338 Pn **Pn** **04 47 44.5 -1.8**
KAN08 Anthony NE Sta 12.05 337 Pn **Pn** **04 47 48.0 +1.3**
PAULI Pauline 12.39 44 Pn **Pn** **04 47 50.6 -0.7**
TGUH Tegucigalpa,Un 12.92 158 Pn **Pn** **04 47 57.8 -0.9**
WCI Wyandotte Cave 12.99 21 Pn **Pn** **04 48 00.3 +0.9**
P38A Dawn 13.44 355 Pn **Pn** **04 48 06.2 +0.7**
RTBA Rita Blanca 13.62 321 Pn **Pn** **04 48 08.7 +0.5**
CBKS Cedar Bluff 14.10 335 Pn **Pn** **04 48 14.0 -0.7**
O44A Mansfield 14.26 12 Pn **Pn** **04 48 15.8 -1.0**
HDIL Hopedale 14.52 9 Pn **Pn** **04 48 19.6 -0.8**
SSFO Shawnee State 14.58 29 Pn **Pn** **04 48 18.6 -2.5**
SFIN Lafayette 14.77 15 Pn **Pn** **04 48 22.2 -1.5**
S54A Dingess, Beckl 14.78 36 Pn **Pn** **04 48 24.6 +0.7**
ANMO Albuquerque 15.07 309 **P** **04 48 33.9 +0.6**
ANMO IAmb IAmb 04 48 57.8
comp=Z,16nm,1.4s
ANMO Albuquerque 15.07 309 Pn **P** **04 48 37.3 +4.0**
comp=Z,0.1nm,0.3s,baz=190,slow=17,SNR=9.9
ANMO Sn **S** **04 51 26.8 -5.9**
comp=Z,0.1nm,0.3s,baz=196,slow=18,SNR=1.9
T25A Trinidad 15.07 319 IAmb IAmb 04 49 10.5
comp=Z,20nm,1.1s
P51A Williamsport 15.29 28 IAmb IAmb 04 48 53.1
comp=Z,26nm,1.2s
KSCO Kaye Shedlock' **15.50 328** Pn **Pn** **04 48 33.9 +0.2**
SCIA State Center 15.70 357 Pn **Pn** **04 48 34.9 -1.2**
SCIA IAmb IAmb 04 48 51.0
comp=Z,29nm,1.1s
BGNE Belgrade 15.96 343 **Pn** **04 48 38.9 -0.6**
L34A Svendsen Farm, 16.11 349 Pn **Pn** **04 48 41.8 +0.4**
L34A IAmb IAmb 04 48 54.1
comp=Z,29nm,0.8s
SDCO Great Sand Dun 16.12 319 Pn **Pn** **04 48 41.4 -0.4**
LPIG La Paz 16.55 267 LR LR 04 56 07.7
comp=Z,407nm,20.7s,baz=86,slow=42
OGNE Ogallala 16.83 333 Pn **Pn** **04 48 50.4 -0.2**
JTS Las Juntas de 17.23 155 LR LR 04 56 20.9
comp=Z,793nm,18.9s,baz=338,slow=39
TUC Tucson 17.34 295 **Pn** **04 48 57.5 +0.4**
X18A Snowflake 17.43 303 **Pn** **04 48 59.6 +1.4**
K30B Basset 17.53 342 Pn **Pn** **04 48 59.4 0.0**
BRIGG Briggsdale 17.54 328 **Pn** **04 49 00.1 +0.4**
BRIGG IAmb IAmb 04 49 08.0
comp=Z,17nm,0.8s
ISCO Idaho Springs 17.61 324 **Pn** **04 49 00.7 +0.1**
MVCO Mesa Verde 17.68 312 **Pn** **04 49 01.4 0.0**
I37A Lemond, Waseca 17.81 357 Pn **Pn** **04 49 01.4 -1.3**
I37A IAmb IAmb 04 49 13.4
comp=Z,22nm,0.8s
LCR2 La Lucha 2 18.10 153 **Pn** **04 49 04.4 -2.3**
LCR2 IAmb IAmb 04 49 21.3
comp=Z,22nm,1.3s
SPMN Marine on St. 19.00 359 P **P** **04 49 16.8 +0.3**
SPMN IAmb IAmb 04 49 32.1
comp=Z,11nm,0.7s
SUSD Miller 19.02 345 P **Pn** **04 49 18.2 +0.7**
SUSD IAmb IAmb 04 49 39.5
comp=Z,22nm,0.8s
F36A Milaca 19.66 357 P **P** **04 49 24.1 +0.4**
F36A IAmb IAmb 04 49 35.6
comp=Z,11nm,0.8s
SRU San Rafael Swe 20.07 314 P **P** **04 49 28.1 -0.4**
P18A Preston Nutter 20.19 316 P **P** **04 49 29.6 -0.4**
P18A IAmb IAmb 04 49 53.1
comp=Z,16nm,1.4s
RSSD Black Hills 20.31 335 P **P** **04 49 31.2 +0.1**
E38A The Farm, Brul 20.38 1 P **P** **04 49 31.4 -0.2**
Q16A Castle Valley 20.38 313 P **P** **04 49 31.2 -0.7**
Q16A IAmb IAmb 04 49 42.1
comp=Z,12nm,1.1s
PKCU Pink Cliffs 20.41 308 P **P** **04 49 32.2 -0.3**
D32A Dogwood Acres, 21.25 351 P **P** **04 49 40.8 -0.2**
MPU Maple Canyon 21.28 315 P **P** **04 49 41.9 +0.2**
SADO Sadowa 21.31 26 P **P** **04 49 45.7 +4.0**
comp=Z,11nm,1.0s,baz=221,slow=13,SNR=4.2
SADO LR LR 04 59 35.6
comp=Z,536nm,18.1s,baz=228,slow=41
comp=Z,11nm,1.0s
J57A Williamstown 21.65 33 P **P** **04 49 46.0 +0.7**
EYMN Ely 21.72 1 P **P** **04 49 43.3 -2.8**
PD31 Pinedale Array 21.81 324 P **P** **04 49 47.6 +0.3**
PDAR Pinedale Array 21.81 324 P **P** **04 49 46.9 -0.4**
PDAR Pinedale Array 21.81 324 P **P** **04 49 49.2 +1.9**
comp=Z,3.9nm,1.1s,baz=128,slow=9.6,SNR=13
B35A Bob, Littlefor 22.16 357 P **P** **04 49 50.8 0.0**
B35A IAmb IAmb 04 50 03.3
comp=Z,8.0nm,0.8s
AGMN Agassiz Nation 22.25 353 P **P** **04 49 51.1 -0.7**
AGMN IAmb IAmb 04 50 00.4
comp=Z,10nm,0.7s
MDND Maddock 22.39 347 P **P** **04 49 52.9 -0.4**
AHID Auburn Hatcher 22.65 322 P **P** **04 49 56.3 0.0**
SNOW Snow King Moun 22.92 323 P **P** **04 49 58.8 -0.5**
SNOW IAmb IAmb 04 50 26.0
comp=Z,16nm,1.1s
LOHW Long Hollow 22.94 324 P **P** **04 49 59.9 +0.4**
LOHW IAmb IAmb 04 50 40.5
comp=Z,20nm,1.5s
TPAW Teton Pass 23.05 323 P **P** **04 50 00.5 0.0**
TPAW IAmb IAmb 04 50 11.7
comp=Z,15nm,1.1s
MOOW Moose Ponds 23.11 324 P **P** **04 49 60.0 -1.2**
MOOW IAmb IAmb 04 50 12.6
comp=Z,6.5nm,0.9s
R11B Troy Canyon, C 23.14 307 P **P** **04 50 01.6 +0.1**
R11B IAmb IAmb 04 50 27.9
comp=Z,14nm,1.5s
FXWY Fox Creek 23.19 323 P **P** **04 50 01.3 -0.6**
FXWY IAmb IAmb 04 50 28.7
comp=Z,16nm,1.3s
FLWY Flagg Ranch 23.32 325 P **P** **04 50 04.2 +1.0**
FLWY IAmb IAmb 04 50 23.1
comp=Z,9.1nm,1.1s
ELK Elko 24.00 313 P **P** **04 50 12.9 +2.9**
comp=Z,0.6nm,0.8s,baz=95,slow=11,SNR=2.4
ULM Lac du Bonnet 24.19 354 P **P** **04 50 12.4 +1.1**
comp=Z,1.6nm,0.5s,baz=172,slow=15,SNR=2.9
comp=Z,1.6nm,0.5s
TPH Tonopah 24.21 305 P **P** **04 50 11.6 -0.4**
BOZ Bozeman (W) 24.85 326 P **P** **04 50 17.8 +0.3**
BOZ IAmb IAmb 04 50 30.7
comp=Z,8.2nm,1.1s
NV11 Mina Array Sit 25.03 306 P **P** **04 50 19.6 +0.3**
NV11 IAmb IAmb 04 50 37.5
comp=Z,6.5nm,1.1s
HLID Hailey 25.04 319 P **P** **04 50 20.4 +1.1**
HLID IAmb IAmb 04 50 47.0
comp=Z,4.7nm,1.1s
NVAR Mina Array Bea 25.14 305 P **P** **04 50 20.9 +0.6**
NVAR Mina Array Bea 25.14 305 P **P** **04 50 21.6 +1.3**
comp=Z,1.5nm,0.7s,baz=112,slow=9.9,SNR=11
KVN Kaiserville 25.22 307 P **P** **04 50 21.7 +0.7**
SDV Santo Domingo 26.72 126 P **P** **04 50 40.4 +5.5**
comp=Z,3.1nm,0.7s,baz=284,slow=12,SNR=5.5
comp=Z,3.1nm,0.7s
ROSC El Rosal 27.25 138 LR LR 05 04 58.9
comp=Z,394nm,19.0s,baz=5.5,slow=44
SCHQ Schefferville 34.12 26 LR LR 05 06 56.4
comp=Z,300nm,19.9s,baz=222,slow=38
ATAH Atahualpa 35.73 156 LR LR 05 06 16.2
comp=Z,414nm,21.1s,baz=326,slow=36
YKA Yellowknife Ar 39.24 344 P **P** **04 52 23.5 +0.3**
YKA Yellowknife Ar 39.24 344 P **P** **04 52 24.1 +1.0**
comp=Z,1.9nm,1.0s,baz=144,slow=8.1,SNR=13
comp=Z,1.9nm,1.0s
ETMB Extrema 43.80 141 P **P** **04 52 58.4 -2.7**
ETMB IAmb IAmb 04 53 20.6
comp=Z,3.7nm,0.8s
SFJD Kangerlussuaq 48.09 21 LR LR 05 16 10.8
comp=Z,225nm,19.1s,baz=233,slow=39
MCARA McCarthy VSAT 48.86 330 P **P** **04 53 40.3 0.0**
PTLB Pontes e Lacer 52.40 138 P **P** **04 54 05.2 -2.4**
PTLB IAmb IAmb 04 54 06.2
comp=Z,2.7nm,0.8s
BDFB Brasilia 59.78 129 P P 04 55 06.4 +5.9
comp=Z,1.9nm,0.7s,baz=162,slow=7.9,SNR=4.5
comp=Z,1.9nm,0.7s
CPUP Villa Florida 62.09 145 LR LR 05 25 27.6
comp=Z,94nm,19.3s,baz=310,slow=39
EKA Eskdalemuir Ar 68.34 38 P **P** **04 55 59.8 +3.6**
comp=Z,1.5nm,0.7s,baz=278,slow=4.9,SNR=4.7
comp=Z,1.5nm,0.7s
NB2 NORSAR Subarra 73.60 30 P **P** **04 56 32.0 +3.9**
comp=Z,1.5nm,0.8s,baz=293,slow=5.9
NOA NORSAR Array B 73.60 30 P **P** **04 56 30.9 +2.8**
comp=Z,1.3nm,0.7s,baz=298,slow=6.3,SNR=7.5
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 74.68 19 P P 04 56 39.5 +5.2
comp=Z,1.7nm,0.7s,baz=284,slow=3.6,SNR=5.8
comp=Z,1.7nm,0.7s
FINES FINESS Array B 79.59 25 P **P** **04 57 06.4 +4.5**
comp=Z,1.3nm,0.6s,baz=328,slow=4.9,SNR=4.2
comp=Z,1.3nm,0.6s
KIRV Kirov 89.70 19 LR LR 05 40 32.3
comp=Z,1µm,20.7s,baz=74,slow=37
PMSA Palmer Station 93.28 168 LR LR 05 34 44.0
comp=Z,251nm,20.1s,baz=220,slow=32
BELG Belogornoye 94.22 23 LR LR 05 43 12.8
comp=Z,531nm,20.2s,baz=101,slow=37
KVAR Kislovodsk Arr 98.86 31 LR LR 05 44 47.9
comp=Z,168nm,22.0s,baz=263,slow=36
KBZ Khabaz 99.13 31 LR LR 05 46 36.4
comp=Z,343nm,19.0s,baz=52,slow=37

*IPEC **26** 04:45:27.2±0.2,51°.59N×16°.18E,h1km,ML1.8/4,Error ellipse: s-maj=1.7km s-min=1.0km az=33.0*
*VIE **26** 04:45:27.6±0.8,51°.44N×15°.71E,h0km,mb2.6/1,ml2.2/3, Error ellipse: s-maj=5.3km s-min=4.3km az=3.0, Suspected Mining induced.*
*PRU **26** 04:45:29.9,51°.50N×16°.06E,h0km*
ISC 26 04:45:27.0±1.8,51°.55N±0°.08×16°.12E±0°.05,h0km,n20,
σ0s66/42,Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg		**Pb**	**04 45 42.0**	**-0.4**
KSP				*e*Sg		**Sb**	**04 45 51.7**	**-1.1**
CHVC	**Chvalec**	**0.97**	**182**	*e*PG		**Pb**	**04 45 46.6**	**0.0**
CHVC				*e*SG		**Sb**	**04 45 59.9**	**-0.1**
comp=Z,18nm,0.4s								
OSTC	**Ostas**	**1.00**	**176**	*e*SG		**Sb**	**04 46 00.6**	**-0.3**
comp=Z,12nm,0.3s								
UPC	**Upice**	**1.05**	**184**	*e*PG		**Pb**	**04 45 47.8**	**-0.2**
UPC				*e*SG		**Sb**	**04 46 02.0**	**-0.3**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG		**Pg**	**04 45 50.5**	**+0.3**
DPC				*e*SG		**Sb**	**04 46 06.5**	**-0.5**
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG		**Pb**	**04 45 54.5**	**+0.2**
PVCC				*e*SG		**Sn**	**04 46 13.3**	**-0.1**
comp=Z,40nm,0.3s								
BRG	**Berggiesshubel**	**1.53**	**244**	Pg		**Pg**	**04 45 56.5**	**+0.2**
BRG				Sg		**Sn**	**04 46 16.6**	**+0.5**
BRG				Amp			04 46 19.1	
comp=Z,21nm,0.3s								
KRLC	**Kraliky**	**1.54**	**164**	*e*PG		**Pn**	**04 45 55.9**	**+0.2**
KRLC				*e*SG		**Sn**	**04 46 17.1**	**+0.7**
comp=Z,13nm,0.5s								
PRU	**Pruhonice**	**1.86**	**213**	*e*PG		**Pg**	**04 46 02.9**	**+0.3**
PRU				*e*SG		**Sg**	**04 46 26.2**	**-0.5**
HSKC	**Hora Svate Kat**	**1.94**	**242**	*e*PG		**Pb**	**04 46 03.2**	**0.0**
HSKC				*e*SG		**Sg**	**04 46 28.8**	**-0.5**
comp=Z,13nm,0.2s								
CLL	**Collm**	**1.96**	**264**	*i* Pn		**Pn**	**04 46 00.8**	**-0.8**
comp=Z,5.0nm,0.5s								
CLL				*i* Pg		**Pb**	**04 46 03.8**	**+0.2**
CLL				*i* x		x	04 46 07.7	
CLL				*e*Sg		**Sg**	**04 46 30.0**	**-0.1**
comp=Z,4.0nm,0.5s								
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn		**Pn**	**04 46 02.2**	**+0.2**
baz=335								
MORC				*e*Sg		**Sb**	**04 46 29.9**	**+0.3**
comp=Z,7.9nm,0.3s,baz=335								
VRAC	**Vranov**	**2.27**	**172**	*e*Pn		**Pn**	**04 46 06.5**	**+0.8**
baz=354								
VRAC				*e*Sg		**Sg**	**04 46 39.1**	**-0.7**
comp=Z,3.2nm,0.3s,baz=354								
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn		**Pn**	**04 46 09.4**	**+0.5**
baz=357								
KRUC				*e*Sg		**Sg**	**04 46 46.8**	**-0.5**
comp=Z,3.8nm,0.4s,baz=357								
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN		**Pn**	**04 46 11.4**	**+0.1**
NKC				*e*PG		**Pg**	**04 46 17.6**	**-0.6**
NKC				*e*SG		**Sg**	**04 46 53.2**	**+0.4**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN		**Pn**	**04 46 16.3**	**+1.6**
KHC				*e*PG		**Pb**	**04 46 20.7**	**+0.8**
KHC				*e*SG		**Sg**	**04 47 00.3**	**-0.4**
CKRC	**Cesky Krumlov**	**2.97**	**204**	*e*PN		**Pn**	**04 46 16.2**	**+0.8**
CKRC				*e*PG		**Pb**	**04 46 22.3**	**+1.5**
CKRC				*e*SG		**Sg**	**04 47 01.4**	**-1.0**
CONA	**Conrad Observa**	**3.63**	**183**	*i* Pn		**Pn**	**04 46 24.1**	**-0.5**
comp=Z,0.3nm,0.2s								
CONA				*e*Sg		**Sg**	**04 47 22.5**	**-1.1**
comp=Z,0.8nm,0.2s								
MOA	**Molln**	**3.90**	**199**	*i* Pn		**Pn**	**04 46 26.9**	**-1.2**
comp=Z,1.7nm,0.3s								
MOA				*e*Sg		**Sg**	**04 47 31.2**	**-0.9**
comp=Z,1.1nm,0.2s								
ARSA	**Arzberg**	**4.32**	**185**	*e*Sg		**Sg**	**04 47 46.4**	**+0.5**
comp=Z,1.3nm,0.5s								

*IDC **26** 04:51:55.0±0.9,6°.01S×143°.10E,h0km,mb4.2/8, mbtmp4.2/10,ML1.8/1,Error ellipse: s-maj=42.4km s-min=19.2km az=79.0*
ISC 26 04:51:57.0±0.9,6°.1S±0°.1×142°.9E±0°.2,h10km,n11,
σ1s35/10,mb4.1/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.32**	**128**	Pn		**Pn**	**04 53 16.3**	**-0.3**
2.2nm,0.3s,baz=324,slow=14,SNR=2.1								
12nm,0.6s								
WRA	**Warramunga Arr**	**16.05**	**210**	Pn		**Pn**	**04 55 40.8**	**-2.2**
0.3nm,0.3s,baz=34,slow=12,SNR=4.5								
ASAR	**Alice Springs**	**19.46**	**206**	*P*		**P**	**04 56 26.0**	**+1.9**
34nm,0.9s,baz=34,slow=9.0,SNR=51								
STKA	**Stephens Creek**	**25.63**	**183**	P		**P**	**04 57 28.3**	**+1.4**
4.9nm,0.8s,baz=321,slow=6.9,SNR=3.2								
4.9nm,0.8s								
KSRS	**Korea Array**	**45.57**	**343**	P		**P**	**05 00 17.5**	**+0.3**
0.8nm,0.4s,baz=162,slow=11,SNR=7.1								
0.8nm,0.4s								
MKAR	**Makanchi Array**	**75.05**	**322**	P		**P**	**05 03 39.3**	**+0.2**
1.2nm,0.8s,baz=112,slow=6.9,SNR=8.6								
1.2nm,0.8s								
ZALV	**Zalesovo Beam**	**77.00**	**329**	P		**P**	**05 03 48.8**	**-1.2**
0.7nm,0.6s,baz=83,slow=4.5,SNR=2.4								
0.7nm,0.6s								
KURBB	**Kurchatov Arra**	**78.93**	**324**	P		**P**	**05 04 00.2**	**-0.6**
1.2nm,0.9s,baz=117,slow=4.8,SNR=5.5								
1.2nm,0.9s								
QSPA	**South Pole Qui**	**83.83**	**180**	P		**P**	**05 04 26.3**	**-0.4**
2.1nm,0.8s,baz=212,slow=0.5,SNR=7.4								
2.1nm,0.8s								
BVAR	**Borovoye Array**	**84.51**	**325**	P		**P**	**05 04 30.0**	**-0.2**
5.0nm,0.7s,baz=115,slow=6.9,SNR=16								
5.0nm,0.7s								
ILAR	**Eielson Array**	**87.23**	**24**	P		P	05 04 41.5	-1.9
1.0nm,0.7s,baz=254,slow=4.8,SNR=14								
1.0nm,0.7s								

*IDC **26** 04:53:54.8±0.8,6°.39S×143°.73E,h0km,mb4.3/14, mbtmp4.3/15,ML4.5/2,MS4.0/1,Error ellipse: s-maj=36.8km s-min=16.5km az=93.0*
*NEIC **26** 04:53:56.6±2.2,6°.37S±0°.08×143°.50E±0°.07,h10km±1km, mb4.8/37,Error ellipse: s-maj=13.4km s-min=12.1km az=12.0*
ISC 26 04:53:59.8±0.4,6°.47S±0°.05×143°.50E±0°.07,h35km,n82,
σ1s49/83,mb4.7/35,1C-3D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.65**	**129**	Pn		**Pn**	**04 55 08.8**	**+1.3**
PMG	**Port Moresby**	**4.65**	**129**	Pn		**Pn**	**04 55 09.4**	**+1.9**
11nm,0.3s,baz=313,slow=1.7,SNR=7.7								
PMG					Sn	**Sn**	**04 56 01.5**	**+1.2**
22nm,0.3s,baz=222,slow=22,SNR=5.0								
MANU	**Manus Island**	**5.85**	**41**			**Pn**	**04 55 23.4**	**-0.7**
COEN	**Coen**	**7.44**	**182**	Pn		**Pn**	**04 55 49.2**	**+3.2**
FAKI	**Fak Fak**	**11.76**	**287**	Pn		**Pn**	**04 56 44.0**	**-1.2**
MTN	**Manton Dam**	**13.74**	**242**	Pn		**Pn**	**04 57 09.5**	**-2.7**
CTA	**Charters Tower**	**13.79**	**169**	Sn		**Sn**	**04 59 37.7**	**-7.3**
0.1nm,0.3s,baz=216,slow=6.6,SNR=3.9								
CTA					Lg	Lg	05 01 24.3	
0.4nm,0.3s,baz=246,slow=19,SNR=2.3								
CTA					LR	LR	05 02 47.3	
comp=Z,649nm,21.0s,baz=326,slow=38								
WB0 Warramunga Arr		**15.91**	**213**	Pn		**Pn**	**04 57 39.8**	**-1.3**
WRAB Tennant Creek		**16.06**	**213**	Pn		**Pn**	**04 57 43.7**	**+0.5**
WB2 Warramunga Arr		**16.07**	**213**	Pn		**Pn**	**04 57 42.8**	**-0.5**
WRA Warramunga Arr		**16.08**	**213**	Pn		**Pn**	**04 57 42.4**	**-1.0**
WRA Warramunga Arr		**16.08**	**213**	Pn		**Pn**	**04 57 42.9**	**-0.4**
1.4nm,0.3s,baz=31,slow=13,SNR=14								
WRA					Sn	Sn	05 00 30.9	-10
0.2nm,0.3s,baz=30,slow=25,SNR=5.1								
WRA					Lg	Lg	05 02 25.4	
0.6nm,0.3s,baz=50,slow=22,SNR=2.4								
6.9nm,0.7s								
KNRA Kununurra		**17.10**	**236**	Pn		**Pn**	**04 57 55.4**	**-0.9**
SOEI Soe		**19.32**	**259**	P		**Pn**	**04 58 23.8**	**+0.3**
SOEI				IAmb		IAmb	04 58 31.4	
comp=Z,107nm,1.5s								
AS31 Alice Springs		**19.43**	**207**	P		**P**	**04 58 23.6**	**+0.3**
AS31				IAmb		IAmb	04 58 28.3	
comp=Z,30nm,0.8s								
ASAR Alice Springs		**19.43**	**207**	P		**Pn**	**04 58 25.1**	**+0.4**
ASAR Alice Springs		**19.43**	**207**	P		**Pn**	**04 58 26.9**	**+2.2**
comp=Z,2.6nm,0.3s,baz=37,slow=9.7,SNR=62								
EIDS Eidsvold		**20.14**	**160**	P		**P**	**04 58 30.9**	**-0.1**
FITZ Fitzroy Crossi		**20.91**	**235**	P		**P**	**04 58 39.9**	**+0.5**
KAPI Kappang		**23.68**	**272**	P		**P**	**04 59 09.6**	**+1.1**
KOUNC Koumac, New Ca		**24.53**	**127**	P		**P**	**04 59 14.8**	**-1.5**
KOUNC				IAmb		IAmb	04 59 20.8	
comp=Z,24nm,1.0s								
STKA Stephens Creek		**25.34**	**184**	P		**P**	**04 59 24.5**	**+1.0**
comp=Z,6.7nm,0.8s,baz=356,slow=6.9,SNR=3.9								
comp=Z,6.7nm,0.8s								
RTZ Ruatahuna		**44.03**	**142**	P		**P**	**05 02 04.8**	**+0.4**
TUWZ Tuamarina		**44.10**	**147**	P		**P**	**05 02 05.9**	**+1.2**
NJ2 Nanjing		**44.95**	**330**	*e*P		**P**	**05 02 13.0**	**+1.5**
NJ2				pmax		pmax		
comp=Z,13nm,0.5s								
KSRS Korea Array		**46.06**	**343**	P		**P**	**05 02 20.9**	**+0.6**
comp=Z,4.6nm,1.0s,baz=163,slow=9.4,SNR=12								
comp=Z,4.6nm,1.0s								
KSAR Wonju Array Be		**46.06**	**343**	P		**P**	**05 02 18.6**	**-1.6**
SLVN Son La		**47.68**	**307**	P		**P**	**05 02 30.4**	**-2.8**
SLVN				IAmb		IAmb	05 02 41.3	
comp=Z,7.0nm,0.7s								
CMAR Chiang Mai Arr		**50.45**	**300**	P		**P**	**05 02 53.4**	**-1.1**
CMAR Chiang Mai Arr		**50.45**	**300**	P		**P**	**05 02 55.5**	**+1.0**
comp=Z,0.9nm,0.3s,baz=123,slow=5.7,SNR=5.3								
comp=Z,0.9nm,0.3s								
HNS HongShan		**51.26**	**331**	⇑P		**P**	**05 03 00.3**	**0.0**
USA0B Ussuriysk Arra		**51.50**	**349**	P		**P**	**05 03 01.5**	**-0.4**
USA0B				IAmb		IAmb	05 03 15.7	
comp=Z,16nm,1.2s								
USRK Ussuriysk Ar.		**51.50**	**349**	P		**P**	**05 03 01.7**	**-0.3**
USRK Ussuriysk Ar.		**51.50**	**349**	P		**P**	**05 03 02.4**	**+0.4**
comp=Z,4.0nm,0.8s,baz=170,slow=8.5,SNR=6.4								
comp=Z,4.0nm,0.8s								
XAN Xi'an		**51.91**	**323**	P		**P**	**05 03 05.0**	**-0.2**
XAN				pP		sP	05 03 18.8	-1.7
XAN				pmax		pmax		
comp=Z,8.0nm,1.1s								
PZH PanZhiHua		**52.09**	**311**	P		**P**	**05 03 08.5**	**+1.7**
PZH				pmax		pmax		
comp=Z,10.0nm,0.5s								
PZH				pmax		pmax		
comp=Z,120nm,5.8s								
MDJ Mudanjiang		**52.38**	**347**	P		**P**	**05 03 10.5**	**+2.0**
MDJ				pmax		pmax		
comp=Z,6.0nm,1.6s								
MDJ				pmax		pmax		
comp=Z,260nm,4.8s								
BJT Baijiatuau		**52.69**	**334**	P		**P**	**05 03 09.5**	**-1.4**
BNX BinXian		**53.94**	**346**	⇓P		**P**	**05 03 20.0**	**+0.1**
BNX				pmax		pmax		
comp=Z,16nm,1.1s								
BNX				pmax		pmax		
comp=Z,68nm,4.5s								
LZH Lanzhou		**56.36**	**322**	*e*P		**P**	**05 03 41.0**	**+3.2**
LZH				pP		pP	05 03 50.5	+1.6
LZH				pmax		pmax		
comp=Z,9.0nm,1.0s								
KLR Kul'dur		**56.41**	**351**	P		**P**	**05 03 39.5**	**+1.8**
comp=Z,0.9nm,0.6s,baz=179,slow=7.1,SNR=4.3								
comp=Z,0.9nm,0.6s								
PETK Petropavlovsk-		**60.56**	**10**	P		**P**	**05 04 06.6**	**0.0**
comp=Z,4.5nm,0.8s,baz=212,slow=10,SNR=4.8								
comp=Z,4.5nm,0.8s								
ULN Ulaanbaatar		**62.91**	**333**	P		**P**	**05 04 23.1**	**+0.3**
ULN				IAmb		IAmb	05 04 32.7	
comp=Z,7.2nm,1.3s								
SONM Songino Array		**63.18**	**333**	P		**P**	**05 04 24.0**	**-0.5**
SONM Songino Array		**63.18**	**333**	P		**P**	**05 04 25.1**	**+0.6**
comp=Z,1.1nm,1.0s,baz=151,slow=6.9,SNR=3.9								
comp=Z,1.1nm,1.0s								
SEY Seymchan		**69.54**	**4**	P		**P**	**05 05 05.2**	**+0.5**
comp=Z,1.1nm,0.4s,baz=199,slow=8.6,SNR=4.5								
comp=Z,1.1nm,0.4s								
WMQ Urumqi		**70.92**	**321**	*e*P		**P**	**05 05 16.0**	**+2.3**
WMQ				LR		LR		
comp=N,760nm,17.7s								
WMQ				LR		LR		
comp=E,870nm,17.7s								
WMQ				LR		LR		
comp=Z,640nm,18.7s								
MK31 Makanchi Array		**75.68**	**322**	P		**P**	**05 05 41.5**	**-0.1**
MK31				IAmb		IAmb	05 05 53.0	
comp=Z,8.9nm,1.1s								
MKAR Makanchi Array		**75.68**	**322**	P		**P**	**05 05 41.5**	**-0.1**
MKAR Makanchi Array		**75.68**	**322**	P		**P**	**05 05 42.2**	**+0.6**
comp=Z,2.8nm,0.9s,baz=94,slow=9.4,SNR=14								
comp=Z,2.8nm,0.9s								
MAKZ Makanchi		**75.88**	**321**	P		**P**	**05 05 42.7**	**-0.1**
MAKZ				IAmb		IAmb	05 05 54.1	
comp=Z,14nm,1.1s								
NIL Nilore		**77.39**	**306**	P		**P**	**05 05 51.0**	**-0.7**
ZAA0 Zalesovo Array		**77.59**	**329**	P		**P**	**05 05 50.4**	**-1.8**
ZALV Zalesovo Beam		**77.59**	**329**	P		**P**	**05 05 50.5**	**-1.7**
BOOM Boomskoye usch		**78.16**	**316**	P		**P**	**05 05 55.8**	**-0.1**
BOOM				IAmb		IAmb	05 06 07.1	
comp=Z,5.8nm,0.8s								
KURK Kurchatov		**79.53**	**324**	P		**P**	**05 06 01.6**	**-1.4**
KURK				IAmb		IAmb	05 06 13.5	
comp=Z,10.0nm,1.2s								
KURBB Kurchatov Arra		**79.55**	**324**	P		**P**	**05 06 03.1**	**0.0**
comp=Z,0.9nm,0.8s,baz=115,slow=5.0,SNR=4.9								
comp=Z,0.9nm,0.8s								
SIMJ Simiganj		**82.05**	**310**	P		**P**	**05 06 15.4**	**-1.6**
SIMJ				IAmb		IAmb	05 06 29.2	
comp=Z,4.9nm,0.8s								
KK31 Karatay Array		**82.15**	**315**	P		**P**	**05 06 15.7**	**-1.5**
KK31				IAmb		IAmb	05

SNAA	**Sanae**	**98.94**	**190**	⇓P		**Pdif**	**05 07 36.9**	**+0.5**
	comp=Z,2.9nm,0.2s							
YKA	**Yellowknife Ar**	**101.20**	**28**	P		**Pdif**	**05 07 46.3**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=277,slow=5.3,SNR=3.1							
CPUP	**Villa Florida**	**141.63**	**149**	PKP		**PKPdf**	**05 13 28.9**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=153,slow=4.5,SNR=5.0							
SDV	**Santo Domingo**	**146.09**	**84**	PKPdf		**PKPdf**	**05 13 35.3**	**-1.4**
TRCB	**Terra Rica**	**146.90**	**152**	PKPdf		**PKPdf**	**05 13 36.2**	**-1.4**
DBIC	**Dimbokro**	**148.57**	**272**	PKPbc		**PKiKP**	**05 13 45.1**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=105,slow=4.6,SNR=5.5							
PTLB	**Pontes e Lacer**	**148.73**	**134**			**PKPdf**	**05 13 42.5**	**+1.8**

IDC 26 05:05:17.0±3.0, **54°.12N**×**86°.48E**, **h0**km, **mbtmp2.8**/2, **ML2.5**/2, **Error ellipse: s-maj=23.3km s-min=14.0km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**261**	I	I	05 12 10.0	
	baz=81,slow=339,SNR=5.6						
ZALV	**Zalesovo Beam**	**0.99**	**261**	Pg	Pg	05 05 35.2	-0.8
	0.5nm,0.3s,baz=81,slow=17,SNR=7.8						
KURBB	**Kurchatov Arra**	**5.99**	**238**	Pn	Pn	05 06 47.1	+0.3
	0.1nm,0.3s,baz=54,slow=14,SNR=2.9						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.80**	**202**	Pn	Pn	05 07 13.2	+1.5
	0.1nm,0.3s,baz=24,slow=13,SNR=4.2						
	0.2nm,0.3s						

*IDC **26** 05:07:04.5*±*2.6*, *5°.56S*×*142°.05E*, *h0km*, *mb3.9/5, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=95.1km s-min=24.0km az=100.0*

ISC 26 05:07:04.0±0.9, **5°.92S**±0°.09×**142°.2E**±0°.1, **h10**km, **n8**, σ3.9**50**/10, **mb3.9**/5, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.05**	**125**	Sn	**Sn**	**05 09 42.3**	**-0.8**
	2.1nm,0.3s,baz=237,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**15.87**	**208**	Pn	**Pn**	**05 10 51.3**	**+3.6**
	0.3nm,0.3s,baz=26,slow=13,SNR=7.2						
WRA				Sn	**Sn**	**05 13 37.5**	**-6.4**
	0.1nm,0.3s,baz=96,slow=27,SNR=2.7						
WRA				Lg	Lg	05 15 35.7	
	baz=30,slow=36,SNR=2.4						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**19.34**	**203**	P	**Pn**	**05 11 35.8**	**+4.9**
	0.1nm,0.3s,baz=33,slow=9.5,SNR=10						
ASAR				S	**Sn**	**05 15 07.1**	**-1.0**
	1.0nm,0.9s,baz=14,slow=28,SNR=3.9						
ASAR				Lg	Lg	05 17 32.1	
	baz=278,slow=18						
	2.3nm,0.7s						
KLR	**Kul'dur**	**55.67**	**352**	P	**P**	**05 16 39.9**	**-0.5**
	0.8nm,0.6s,baz=269,slow=3.8,SNR=4.7						
	0.8nm,0.6s						
SONM	**Songino Array**	**62.08**	**334**	P	**P**	**05 17 22.8**	**-2.4**
	0.4nm,0.8s,baz=158,slow=4.2,SNR=2.3						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**74.41**	**322**	P	**P**	**05 18 42.9**	**+0.5**
	0.7nm,0.6s,baz=98,slow=7.5,SNR=11						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**78.31**	**324**	P	**P**	**05 19 04.8**	**+0.4**
	0.5nm,0.2s,baz=130,slow=4.3,SNR=0.9						
	0.5nm,0.2s						
BVAR	**Borovoye Array**	**83.89**	**325**	P	**P**	**05 19 35.0**	**+0.9**
	2.0nm,0.8s,baz=125,slow=7.4,SNR=8.3						
	2.0nm,0.8s						

*IDC **26** 05:12:05.4*±*1.1*, *5°.95S*×*143°.12E*, *h0km*, *mb3.8/4, mbtmp3.9/6, ML1.6/1, Error ellipse: s-maj=44.9km s-min=24.8km az=83.0*

ISC 26 05:12:10.3±1.0, **6°.1S**±0°.1×**143°.2E**±0°.2, **h35**km, **n8**, σ0.**90**/7, **mb3.8**/4, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.17**	**130**	Pn	**Pn**	**05 13 24.7**	**-0.6**
	1.5nm,0.3s,baz=233,slow=9.3,SNR=1.6						
PMG				Sn	**Sn**	**05 14 24.0**	**+0.2**
	1.0nm,0.3s,baz=325,slow=16,SNR=1.4						
	3.9nm,0.3s						
CTA	**Charters Tower**	**14.25**	**168**	Lg	Lg	05 19 43.4	
	0.2nm,0.3s,baz=250,slow=18,SNR=0.9						
WRA	**Warramunga Arr**	**16.22**	**211**	Lg	Lg	05 20 31.2	
	0.1nm,0.3s,baz=35,slow=30,SNR=3.0						
ASAR	**Alice Springs**	**19.62**	**206**	P	**Pn**	**05 16 36.9**	**-0.6**
	12nm,0.7s,baz=32,slow=10.0,SNR=42						
ASAR				Lg	Lg	05 22 28.1	
	baz=8.6,slow=14						
STKA	**Stephens Creek**	**25.71**	**183**	P	**P**	**05 17 38.7**	**+1.3**
	1.0nm,0.3s,baz=341,slow=6.3,SNR=4.5						
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**75.15**	**322**	P	**P**	**05 23 49.4**	**+0.3**
	0.3nm,0.6s,baz=103,slow=6.2,SNR=2.9						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.59**	**325**	P	**P**	**05 24 39.3**	**-0.8**
	1.2nm,0.7s,baz=95,slow=6.4,SNR=6.1						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**87.08**	**24**	P	**P**	**05 24 52.6**	**+0.5**
	0.4nm,0.8s,baz=251,slow=5.6,SNR=6.9						
	0.4nm,0.8s						

IDC 26 05:15:06.0±2.0, **6°.27S**×**142°.38E**, **h0**km, **mb4.0**/3, **mbtmp3.9**/5, **ML3.8**/2, **Error ellipse: s-maj=73.7km s-min=24.1km az=92.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.24**	**165**	Lg	Lg	05 22 40.6	
	0.4nm,0.3s,baz=243,slow=21,SNR=2.0						
WRA	**Warramunga Arr**	**15.68**	**209**	Pn	Pn	05 18 46.5	-1.8
	0.4nm,0.3s,baz=30,slow=13,SNR=8.4						
WRA				Lg	Lg	05 23 22.6	
	0.1nm,0.3s,baz=33,slow=31,SNR=1.6						
	2.4nm,0.8s						
ASAR	**Alice Springs**	**19.12**	**204**	P	Pn	05 19 31.7	+0.2
	0.3nm,0.3s,baz=33,slow=9.4,SNR=6.3						
	2.9nm,0.8s						
STKA	**Stephens Creek**	**25.48**	**182**	P	P	05 20 35.9	-0.1
	3.0nm,0.9s,baz=347,slow=18,SNR=3.7						
	3.0nm,0.9s						
MKAR	**Makanchi Array**	**74.83**	**322**	P	P	05 26 48.6	+0.2
	0.7nm,0.8s,baz=99,slow=7.6,SNR=6.0						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**84.31**	**325**	P	P	05 27 39.7	-0.2
	1.8nm,0.9s,baz=110,slow=6.6,SNR=5.2						
	1.8nm,0.9s						

*IDC **26** 05:20:09.4*±*0.8*, *6°.14S*×*142°.87E*, *h0km*, *mb4.3/14, mbtmp4.4/16, ML1.8/1, Error ellipse: s-maj=30.0km s-min=16.6km az=84.0*

*NEIC **26** 05:20:10.1*±*1.4*, *6°.51S*±*0°.08*×*142°.57E*±*0°.10*, *h10km*±*1km, mb4.9/80, Error ellipse: s-maj=17.0km s-min=13.2km az=106.0*

*DJA **26** 05:20:18.5*±*0.4*, *6°.S*±*4°*×*14°.3E*±°, *h83km*±*8km, M4.8/9, mB5.3/5, mb4.7/9, MLv4.9/5, Mw(mB)4.7/5*

ISC 26 05:20:10.1±0.4, **6°.45S**±0°.05×**142°.63E**±0°.06, **h10**km, **n141**, σ1.9**70**/140, **mb4.8**/58, **1C-1D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**2.99**	**228**	P	**Pg**	**05 21 11.3**	**+3.8**
GENI	**Genyem**	**4.55**	**327**	P	**Pn**	**05 21 20.2**	**+1.2**
PMG	**Port Moresby**	**5.37**	**123**	Pn	**Pn**	**05 21 31.6**	**+1.3**
PMG	**Port Moresby**	**5.37**	**123**	Pn	**Pn**	**05 21 31.7**	**+1.4**
	2.2nm,0.3s,baz=309,slow=9.4,SNR=10						
PMG				Sn	**Sn**	**05 22 31.2**	**-1.0**
	7.6nm,0.3s,baz=298,slow=15,SNR=3.4						
	35nm,0.7s						
SMPI	**Sarmi**	**5.90**	**318**	P	**Pb**	**05 21 49.6**	**-3.6**
	111nm,1.3s,8μm1.0nm						
MANU	**Manus Island**	**6.44**	**47**	Pn	**Pn**	**05 21 47.3**	**+2.2**
COEN	**Coen**	**7.48**	**176**	Pn	**Pn**	**05 21 57.6**	**-1.8**
KDU	**Kakadu**	**11.77**	**237**	P	**Pn**	**05 23 00.7**	**+2.5**
MTN	**Manton Dam**	**12.99**	**240**	Pn	**Pn**	**05 23 14.8**	**-0.1**
MTN	**Manton Dam**	**12.99**	**240**	P	**Pn**	**05 23 16.5**	**+1.7**
TV1H	**Townsville Har**	**13.37**	**163**	P	**P**	**05 23 29.6**	**0.0**
CTA	**Charters Tower**	**14.01**	**166**	Lg	Lg	05 27 44.2	
	0.2nm,0.3s,baz=82,slow=21,SNR=2.3						
CTAO	**Charters Tower**	**14.01**	**166**	Pn	**Pn**	**05 23 26.7**	**-2.2**
WB0	**Warramunga Arr**	**15.47**	**210**	Pn	**Pn**	**05 23 47.5**	**-1.0**
WB0				lAmb	lAmb	05 24 04.2	
	comp=Z,58nm,1.1s						
WRAB	**Tennant Creek**	**15.63**	**210**		**Pn**	**05 23 50.0**	**-0.6**
WRAB				lAmb	lAmb	05 24 02.4	
	comp=Z,52nm,1.1s						
WB2	**Warramunga Arr**	**15.64**	**210**	Pn	**Pn**	**05 23 49.6**	**-1.1**
WB2				lAmb	lAmb	05 24 02.6	
	comp=Z,60nm,1.0s						
WRA	**Warramunga Arr**	**15.64**	**210**	Pn	**Pn**	**05 23 49.4**	**-1.4**
WRA	**Warramunga Arr**	**15.64**	**210**	Pn	**Pn**	**05 23 52.0**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=29,slow=13,SNR=17						
WRA				Sn	**Sn**	**05 26 38.1**	**-6.2**
	comp=Z,0.4nm,0.3s,baz=112,slow=36,SNR=1.4						
WRA				Lg	Lg	05 28 37.8	
	comp=Z,0.5nm,0.3s,baz=33,slow=26,SNR=5.8						
KNRA	**Kununurra**	**16.39**	**235**	Pn	**Pn**	**05 23 58.3**	**-2.2**
KNRA				lAmb	lAmb	05 24 21.8	
	comp=Z,118nm,1.3s						
KNRA	**Kununurra**	**16.39**	**235**	P	**Pn**	**05 24 01.6**	**+1.1**
SOEI	**Soe**	**18.47**	**259**	P	**P**	**05 24 26.1**	**-0.3**
SOEI				lAmb	lAmb	05 24 49.8	
	comp=Z,101nm,1.0s						
SOEI	**Soe**	**18.47**	**259**	P	**Pn**	**05 24 31.7**	**+5.2**
SOEI	**Soe**	**18.47**	**259**	P	**Pn**	**05 24 29.6**	**+3.1**
	comp=Z,106nm,1.1s,comp=Z,944nm						
AS01	**Alice Springs**	**19.04**	**205**	P	**Pn**	**05 24 39.4**	**+6.1**
AS31	**Alice Springs**	**19.06**	**205**	P	**P**	**05 24 31.5**	**-1.3**
ASAR	**Alice Springs**	**19.06**	**205**	P	**P**	**05 24 31.3**	**-1.5**
ASAR	**Alice Springs**	**19.06**	**205**	P	**Pn**	**05 24 36.8**	**+3.2**
	comp=Z,37nm,0.9s,baz=37,slow=8.3,SNR=45						
ASAR				S	**Sn**	**05 28 05.3**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=17,slow=28,SNR=4.6						
ASAR				Lg	Lg	05 30 25.7	
	baz=25,slow=30						
FITZ	**Fitzroy Crossi**	**20.21**	**234**	P	**P**	**05 24 44.8**	**-0.5**
GTOI	**Gorontalo**	**20.80**	**289**	P	Pn	05 24 57.6	+3.3
EDFI	**Ende, Flores**	**20.88**	**262**	P	Pn	05 24 54.5	-0.7
	comp=Z,31nm,1.1s,comp=Z,856nm						
OOD	**Oodnadatta**	**22.23**	**196**	P	**P**	**05 25 13.9**	**+6.9**
KAPI	**Kappang**	**22.80**	**272**	P	**P**	**05 25 11.6**	**-1.8**
TTSI	**Tana Toraja**	**22.98**	**277**	P	P	05 25 29.6	+14
WRKA	**Warakurna**	**23.02**	**215**	P	**P**	**05 25 18.8**	**+3.3**
TOLI2	**Tolitoli**	**23.06**	**288**	P	**P**	**05 25 12.4**	**-3.6**
STKA	**Stephens Creek**	**25.32**	**182**	P	**P**	**05 25 35.3**	**-1.7**
STKA	**Stephens Creek**	**25.32**	**182**	P	**P**	**05 25 41.7**	**+4.7**
	comp=Z,3.7nm,0.8s,baz=328,slow=6.2,SNR=3.9						
	comp=Z,3.7nm,0.8s						
MBWA	**Marble Bar**	**26.55**	**234**	P	**P**	**05 25 46.9**	**-1.5**
PSA00	**Pilbara Seismi**	**26.67**	**233**	P	**P**	**05 25 47.2**	**-2.2**
PSA00	**Pilbara Seismi**	**26.67**	**233**	P	**P**	**05 25 48.0**	**-1.5**
PSA00				lAmb	lAmb	05 25 56.8	
	comp=Z,16nm,1.0s						
BBOO	**Buckleboo**	**26.93**	**192**	P	**P**	**05 25 50.8**	**-0.9**
FORT	**Forrest**	**27.80**	**208**	P	**P**	**05 25 59.2**	**-0.3**
FORT				lAmb	lAmb	05 26 17.4	
	comp=Z,25nm,1.1s						
MJAR	**Matsushiro Arr**	**42.96**	**355**	P	**P**	**05 28 06.9**	**-2.6**
	comp=Z,2.5nm,0.7s,baz=196,slow=7.9,SNR=3.1						
	comp=Z,2.5nm,0.7s						
NJ2	**Nanjing**	**44.49**	**331**	*e*P	**P**	**05 28 23.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSAR	**Wonju Array Be**	**45.78**	**344**	P	**P**	**05 28 32.5**	**+0.5**
KSRS	**Korea Array**	**45.78**	**344**	P	**P**	**05 28 31.1**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=159,slow=9.8,SNR=12						
	comp=Z,3.4nm,0.9s						
JTM	**Tenmabayashi**	**47.02**	**358**	P	**P**	**05 28 40.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**49.68**	**301**	P	**P**	**05 29 03.8**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=128,slow=5.9,SNR=7.6						
	comp=Z,1.1nm,0.4s						
LYN	**LuoYang**	**49.74**	**327**	*e*P	**P**	**05 29 06.5**	**+3.7**
LYN				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**49.84**	**301**	P	**P**	**05 29 02.5**	**-1.3**
HNS	**HongShan**	**50.81**	**331**	⇓P	**P**	**05 29 11.3**	**+0.4**
HNS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
USA0B	**Ussuriysk Arra**	**51.32**	**350**	P	**P**	**05 29 14.1**	**-0.4**
USA0B				lAmb	lAmb	05 29 15.1	
	comp=Z,12nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.32**	**350**	P	**P**	**05 29 14.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**51.32**	**350**	P	**P**	**05 29 13.9**	**-0.6**
	comp=Z,6.1nm,0.9s,baz=154,slow=6.4,SNR=7.1						
	comp=Z,6.1nm,0.9s						
XAN	**Xi'an**	**51.37**	**324**	P	**P**	**05 29 15.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH	**PanZhiHua**	**51.41**	**311**	P	**P**	**05 29 17.5**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,140nm,7.2s						
MDJ	**Mudanjiang**	**52.17**	**348**	P	**P**	**05 29 20.3**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,180nm,5.2s						
BJI	**Beijing**	**52.30**	**334**	P	**P**	**05 29 21.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BNX	**BinXian**	**53.71**	**347**	⇑P	**P**	**05 29 31.0**	**-1.2**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,96nm,4.8s						
HHC	**Hu-ho-hao-te**	**55.03**	**331**	*e*P	**P**	**05 29 44.5**	**+2.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.3s						
HHC				LR	LR		
	comp=N,190nm,18.3s						
HHC				LR	LR		
	comp=E,160nm,18.3s						
HHC				LR	LR		
	comp=Z,130nm,17.6s						
LZH	**Lanzhou**	**55.80**	**322**	*e*P	**P**	**05 29 48.8**	**+1.0**
LZH				pP	sP	05 29 59.0	+6.6
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA	**Gaotai**	**60.38**	**323**	P	**P**	**05 30 21.0**	**+1.2**
GTA				pP	sP	05 30 31.8	+7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	**Petropavlovsk-**	**60.69**	**10**	P	**P**	**05 30 20.9**	**-0.6**
	comp=Z,8.0nm,0.9s,baz=185,slow=7.0,SNR=6.1						
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**62.77**	**333**	P	**P**	**05 30 36.1**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=150,slow=6.0,SNR=8.3						
	comp=Z,1.1nm,0.9s						
WMQ	**Urumqi**	**70.35**	**321**	*e*P	**P**	**05 31 25.8**	**+1.5**
MK31	**Makanchi Array**	**75.12**	**322**	P	**P**	**05 31 53.1**	**+0.6**
MKAR	**Makanchi Array**	**75.12**	**322**	P	**P**	**05 31 53.2**	**+0.7**
MKAR	**Makanchi Array**	**75.12**	**322**	P	**P**	**05 31 53.4**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=111,slow=6.9,SNR=21						
	comp=Z,1.6nm,0.6s						
MAKZ	**Makanchi**	**75.31**	**322**	P	**P**	**05 31 54.4**	**+0.7**
ZALV	**Zalesovo Beam**	**77.12**	**329**	P	**P**	**05 32 03.5**	**-0.2**
ZALV	**Zalesovo Beam**	**77.12**	**329**	P	**P**	**05 32 03.1**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=76,slow=6.3,SNR=4.2						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**79.00**	**324**	P	**P**	**05 32 13.9**	**-0.4**
KURBB	**Kurchatov Arra**	**79.02**	**324**	P	**P**	**05 32 14.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=119,slow=4.8,SNR=11						
	comp=Z,1.3nm,0.7s						
L14K	**Kuka Creek**	**79.68**	**24**	P	**P**	**05 32 18.0**	**+0.3**
L14K				lAmb	lAmb	05 32 19.2	
	comp=Z,17nm,1.1s						
O16K	**Kokwok River B**	**80.67**	**26**	P	**P**	**05 32 22.8**	**-0.3**
SIMJ	**Simiganj**	**81.37**	**311**	P	**P**	**05 32 27.6**	**+0.1**
KKAR	**Karatay Array**	**81.51**	**315**	P	**P**	**05 32 28.2**	**+0.2**
N17K	**Nushagak Hills**	**81.53**	**26**	P	**P**	**05 32 28.7**	**+1.1**
N17K				lAmb	lAmb	05 32 34.2	
	comp=Z,19nm,1.4s						
J16K	**Anvik River**	**81.57**	**22**	P	**P**	**05 32 27.3**	**-0.5**
J16K				lAmb	lAmb	05 32 44.1	
	comp=Z,18nm,1.4s						
N18K	**Kilae Creek**	**82.16**	**26**	P	**P**	**05 32 30.7**	**-0.3**
N18K				lAmb	lAmb	05 32 32.3	
	comp=Z,8.9nm,1.0s						
K17K	**Iditarod**	**82.16**	**24**	P	**P**	**05 32 31.0**	**0.0**
H17K	**Granite Mounta**	**82.72**	**21**	P	**P**	**05 32 34.5**	**+0.6**
H17K				lAmb	lAmb	05 32 35.4	
	comp=Z,6.7nm,1.0s						
N19K	**Bonanza Creek**	**82.84**	**26**	P	**P**	**05 32 34.6**	**0.0**
N19K				lAmb	lAmb	05 32 35.9	
	comp=Z,6.6nm,0.9s						
J18K	**Innoko River**	**83.17**	**23**	P	**P**	**05 32 36.0**	**-0.2**
J18K				lAmb	lAmb	05 32 36.6	
	comp=Z,12nm,1.5s						
TTA	**Tatalina**	**83.18**	**24**	P	**P**	**05 32 36.6**	**+0.2**
TTA				lAmb	lAmb	05 32 38.3	
	comp=Z,13nm,1.4s						
H18K	**Honhosa River**	**83.39**	**21**	P	**P**	**05 32 38.0**	**+0.6**
H18K				lAmb	lAmb	05 32 50.3	
	comp=Z,7.3nm,1.4s						
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**05 32 36.8**	**-1.4**
QSPA				lAmb	lAmb	05 33 04.3	
	comp=Z,8.0nm,1.3s						
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**05 32 40.4**	**+2.2**
	comp=Z,2.0nm,1.1s,baz=117,slow=12,SNR=3.3						
	comp=Z,2.0nm,1.1s						
G18K	**Tagagawik**	**83.67**	**21**	P	**P**	**05 32 39.1**	**+0.4**
J19K	**Poorman**	**83.85**	**23**	P	**P**	**05 32 40.1**	**+0.5**
J19K				lAmb	lAmb	05 32 48.7	
	comp=Z,11nm,1.4s						
M20K	**Styx River**	**83.90**	**25**	P	**P**	**05 32 40.2**	**+0.1**
M20K				lAmb	lAmb	05 32 41.3	
	comp=Z,9.4nm,1.1s						
K20K	**Telida**	**84.16**	**24**	P	**P**	**05 32 41.6**	**+0.3**
G19K	**Purcell Mounta**	**84.35**	**21**	P	**P**	**05 32 42.5**	**+0.3**
G19K				lAmb	lAmb	05 32 43.7	
	comp=Z,7.3nm,1.1s						
NRIK	**Noril'sk**	**84.40**	**343**	P	**P**	**05 32 42.5**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=124,slow=5.4,SNR=8.5						
	comp=Z,6.5nm,0.8s						
J20K	**Nowinta River**	**84.51**	**23**	P	**P**	**05 32 43.8**	**+0.8**
J20K				lAmb	lAmb	05 32 44.6	
	comp=Z,7.7nm,1.1s						
BVAR	**Borovoye Array**	**84.59**	**325**	P	**P**	**05 32 44.7**	**+1.0**
	comp=Z,12nm,0.9s,baz=114,slow=6.6,SNR=39						
	comp=Z,12nm,0.9s						
BRVK	**Borovoye**	**84.67**	**325**	P	**P**	**05 32 44.7**	**+0.7**
SUA	**Susitna One**	**84.75**	**26**	P	**P**	**05 32 43.8**	**-0.7**
CAST	**Castle Rocks**	**85.00**	**24**	P	**P**	**05 32 45.0**	**-0.5**
CAST				lAmb	lAmb	05 32 45.9	
	comp=Z,8.6nm,1.1s						
RC01	**Rabbit Creek A**	**85.06**	**27**	P	**P**	**05 32 45.8**	**0.0**
C19K	**Lookout Ridge**	**85.07**	**18**	P	**P**	**05 32 46.1**	**+0.3**
C19K				lAmb	lAmb	05 32 48.0	
	comp=Z,7.6nm,0.9s						
D19K	**Kuna River**	**85.21**	**19**	P	**P**	**05 32 47.1**	**+0.6**
F20K	**Avaraart Lake**	**85.27**	**20**	P	**P**	**05 32 47.1**	**+0.4**
F20K				lAmb	lAmb	05 32 48.9	
	comp=Z,8.4nm,1.4s						
IMAR	**Indian Mountai**	**85.48**	**22**	P	**P**	**05 32 47.8**	**-0.1**
PMR	**Palmer**	**85.52**	**26**	P	**P**	**05 32 47.9**	**-0.2**
KTH	**Kantishna Hill**	**85.53**	**24**	P	**P**	**05 32 47.8**	**-0.5**
KTH				lAmb	lAmb	05 32 48.1	
	comp=Z,14nm,1.3s						
BPAW	**Bear Paw Mtn.**	**85.72**	**24**	P	**P**	**05 32 48.0**	**-1.1**
BPAW				lAmb	lAmb	05 32 49.5	
	comp=Z,10nm,1.3s						
I21K	**Tanana**	**85.78**	**23**	P	**P**	**05 32 49.3**	**-0.1**
I21K				lAmb	lAmb	05 32 51.3	
	comp=Z,13nm,1.2s						
SML	**Sawmill**	**85.95**	**26**	P	**P**	**05 32 49.6**	**-0.8**
MLY	**Manley**	**86.20**	**23**	P	**P**	**05 32 51.2**	**-0.3**
MLY				lAmb	lAmb	05 32 52.4	
	comp=Z,6.4nm,1.0s						
RND	**Reindeer**	**86.32**	**25**	P	**P**	**05 32 51.0**	**-1.2**
I23K	**Minto, Yukon-K**	**86.78**	**23**	P	**P**	**05 32 54.3**	**0.0**
DHY	**Denali Highway**	**86.83**	**25**	P	**P**	**05 32 54.8**	**0.0**
DHY				lAmb	lAmb	05 32 55.4	
	comp=Z,8.1nm,1.0s						
WRH	**Wood River Hil**	**87.03**	**24**	P	**P**	**05 32 55.0**	**-0.5**
D22K	**Ayikyak River**	**87.14**	**19**	P	**P**	**05 32 56.9**	**+0.9**
G23K	**Bananza Creek**	**87.15**	**22**	P	**P**	**05 32 56.4**	**+0.2**
CCB	**Clear Creek Bu**	**87.21**	**24**	P	**P**	**05 32 55.3**	**-1.1**
CCB				lAmb	lAmb	05 32 56.0	
	comp=Z,6.7nm,0.9s						
COLA	**College**	**87.28**	**24**	P	**P**	**05 32 55.8**	**-0.9**
IL31		**87.62**	**24**	P	**P**	**05 32 57.2**	**-1.1**
IL31				lAmb	lAmb	05 32 57.7	
	comp=Z,4.6nm,0.8s						
ILAR	**Eielson Array**	**87.62**	**24**	P	**P**	**05 32 56.9**	**-1.5**
ILAR	**Eielson Array**	**87.62**	**24**	P	**P**	**05 32 56.5**	**-1.9**
	comp=Z,3.5nm,0.8s,baz=256,slow=5.1,SNR=32						
	comp=Z,3.5nm,0.8s						
GLB	**Gilahina Butte**	**87.86**	**27**	P	**P**	**05 32 59.6**	**-0.1**
J25K	**Salcha River,**	**88.19**	**24**	P	**P**	**05 33 00.8**	**-0.4**
F24K	**Squaw Lake**	**88.23**	**21**		**P**	**05 33 02.5**	**+1.2**
J26L	**Joseph Creek**	**88.89**	**25**	P	**P**	**05 33 04.7**	**+0.2**
J26L				lAmb	lAmb	05 33 05.6	
	comp=Z,12nm,1.3s						
M27K	**Edge Creek, AK**	**89.00**	**27**	P	**P**	**05 33 05.4**	**+0.2**
M27K				lAmb

1.8nm,0.8s,baz=335,slow=11,SNR=1.0
1.8nm,0.8s
KSRS Korea Array 34.48 359 P **P** 05 32 49.1 +2.9
1.1nm,0.6s,baz=176,slow=9.3,SNR=4.9
1.1nm,0.6s
MKAR Makanchi Array 59.38 325 P **P** 05 36 01.3 +0.7
0.5nm,0.4s,baz=114,slow=7.9,SNR=6.5
0.5nm,0.4s
KURBB Kurchatov Arra 63.53 327 P **P** 05 36 28.2 -0.3
1.0nm,0.2s,baz=125,slow=6.7,SNR=2.8
1.0nm,0.2s
BVAR Borovoye Array 69.11 327 P **P** 05 37 03.5 -0.7
1.1nm,0.8s,baz=114,slow=7.0,SNR=1.7
1.1nm,0.8s

IDC ***26*** *05:26:56.5±4.1, 11°.54N×93°.54E, h144km±33km, mb3.5/6, mbtmp4.0/8, Error ellipse: s-maj=53.0km s-min=31.0km az=146.0*

ISC 26 05:26:57.7±2.6, 11°.7N±0°.4×93°.4E±0°.3, h150km, n8, σ0s85/9, mb3.7/6, Andaman Islands region

Code	Station Name	Δ° AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.58 38**	P	**Pn**		**05 28 58.5**	**-0.3**
	3.9nm,0.7s,baz=227,slow=14,SNR=20						
PALK	**Pallekele**	**13.30 252**	P	**Pn**		**05 30 00.7**	**-0.2**
	6.7nm,0.9s,baz=105,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**36.24 347**	P	**P**		**05 33 47.1**	**+0.9**
	0.3nm,0.3s,baz=167,slow=9.0,SNR=8.4						
	0.3nm,0.3s						
SONM	**Songino Array**	**37.64 14**	P	**P**		**05 33 57.9**	**-0.3**
	0.2nm,0.3s,baz=198,slow=8.9,SNR=2.5						
SONM			PcP	**PcP**		**05 36 13.6**	**+1.0**
	0.4nm,0.8s,baz=168,slow=2.4,SNR=2.5						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**40.71 345**	P	**P**		**05 34 24.5**	**+1.1**
	0.9nm,0.3s,baz=144,slow=8.0,SNR=3.1						
	0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**42.71 352**	P	**P**		**05 34 40.5**	**+0.8**
	2.7nm,0.4s,baz=165,slow=8.8,SNR=8.5						
	2.7nm,0.4s						
BVAR	**Borovoye Array**	**45.19 341**	P	**P**		**05 34 59.3**	**-0.1**
	0.5nm,0.4s,baz=161,slow=6.1,SNR=2.6						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**71.47 340**	P	**P**		**05 38 00.9**	**-0.7**
	3.3nm,1.1s,baz=108,slow=7.7,SNR=2.3						
	3.3nm,1.1s						

IDC ***26*** *05:27:58.7±0.6, 6°.12S×143°.11E, h0km, mb4.6/18, mbtmp4.6/21, ML3.4/2, MS4.1/4, Error ellipse: s-maj=28.0km s-min=13.0km az=77.0*

MOS ***26*** *05:27:59.3±0.8, 6°.24S×142°.88E, h15km, mb5.1/33, Error ellipse: s-maj=10.5km s-min=5.9km az=112.1*

BJI ***26*** *05:28:00.0±0.0, 6°.30S×142°.90E, h10km, mb4.6/58, mB5.3/26, Ms4.7/16, Ms7 4.4/16*

NEIC ***26*** *05:28:01.7±2.0, 6°.24S±0°.07×142°.79E±0°.08, h10km±1km, mb5.1/117, Error ellipse: s-maj=13.7km s-min=12.1km az=241.0*

GCMT ***26*** *05:28:03.7±0.3, 6°.24S±0°.02×142°.72E±0°.03, h15km±1km, MW5.1/73, Moment Tensor Solution. s32,c37; s73,c109; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.37±.37; Mθθ-2.86±.23; Mφφ-2.51±.26; Mrθ-0.11±.43; Mrφ3.08±.15; Mθφ-1.21±.54; Best double couple: M05.70800×10^16 NP1:ϕs144.00000°, δ50.00000°, λ104.00000°. NP2: ϕs303.00000°, δ42.00000°, λ74.00000°. Principal axes: T 5.5960, Plg79.0000°, Azm114.0000°; N 0.2250, Plg10.0000°, Azm315.0000°; P -5.8210, Plg4.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *05:28:04.3±0.8, 6°.5S±4°×14°.4E±°, h35km±7km, M5.1/19, mB5.4/12, mb4.9/19, MLv5.6/4, Mw(mB)4.9/12*

ISC 26 05:28:01.3±0.3, 6°.25S±0°.04×142°.93E±0°.05, h10km, n287, σ1s42/253, mb5.0/118, MS4.4/8, 7C-15D, New Guinea

Code	Station Name	Δ° AZ°	Phase	Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.35 229**	P	**Pg**		**05 29 04.9**	**-0.6**
GENI	**Genyem**	**4.56 323**	P	**Pn**		**05 29 12.1**	**+1.7**
PMG	**Port Moresby**	**5.24 127**		**Pn**		**05 29 19.9**	**+0.2**
PMG	**Port Moresby**	**5.24 127**	*c i* P	**Pn**		**05 29 19.5**	**-0.2**
PMG	**Port Moresby**	**5.24 127**	Pn	**Pn**		**05 29 18.9**	**-0.8**
	21nm,0.3s,baz=333,slow=5.7,SNR=29						
PMG			Sn	**Sn**		**05 30 19.3**	**-0.9**
	12nm,0.3s,baz=39,slow=13,SNR=4.6						
PMG			LR	LR		05 31 36.3	
	comp=Z,2μm,20.4s,baz=282,slow=42						
	80nm,0.4s						
SMPI	**Sarmi**	**5.97 315**	P	**Pn**		**05 29 31.0**	**+1.3**
	255nm,1.4s,5μm1.6nm						
MANU	**Manus Island**	**6.09 47**	Pn	**Pn**		**05 29 34.5**	**+3.1**
COEN	**Coen**	**7.66 178**	P	**Pn**		**05 29 55.5**	**+2.5**
	baz=7.6,SNR=4.2						
COEN	**Coen**	**7.66 178**	Pn	**Pn**		**05 29 54.1**	**+1.0**
FAKI	**Fak Fak**	**11.14 287**	Pn	**Pn**		**05 30 39.4**	**-1.4**
KDU	**Kakadu**	**12.13 237**	P	**Pn**		**05 30 52.1**	**-2.2**
	baz=12,SNR=32						
SWI	**Sorong**	**12.81 294**	P	**Pn**		**05 31 06.1**	**+2.5**
	42nm,1.1s						
MTN	**Manton Dam**	**13.34 240**	P	**Pn**		**05 31 09.2**	**-1.7**
	baz=13,SNR=5.8						
MTN	**Manton Dam**	**13.34 240**	Pn	Pn		05 31 07.7	-3.2
CTA	**Charters Tower**	**14.13 167**	P	**Pn**		**05 31 22.2**	**+0.5**
CTA	**Charters Tower**	**14.13 167**	Pn	**Pn**		**05 31 22.2**	**+0.5**
	0.5nm,0.3s,baz=338,slow=14,SNR=4.4						
CTA			Lg	Lg		05 35 38.6	
	0.9nm,0.3s,baz=278,slow=20,SNR=3.8						
	2.5nm,0.6s						
CTAO	**Charters Tower**	**14.13 167**	Pn	**Pn**		**05 31 21.3**	**-0.3**
CTAO	**Charters Tower**	**14.13 167**	P	**Pn**		**05 31 21.3**	**-0.3**
QIS	**Mount Isa**	**14.58 192**	P	**Pn**		**05 31 28.6**	**+0.7**
	baz=14						
WB0	**Warramunga Arr**	**15.79 211**	Pn	**Pn**		**05 31 41.7**	**-2.2**
WRAB	**Tennant Creek**	**15.95 211**	Pn	**Pn**		**05 31 43.5**	**-2.5**
WRAB	**Tennant Creek**	**15.95 211**	P	**Pn**		**05 31 43.5**	**-2.5**
WRAB			pmax	pmax			
	comp=Z,29nm,0.8s						
WB2	**Warramunga Arr**	**15.96 211**	Pn	**Pn**		**05 31 44.6**	**-1.5**
WC3	**Warramunga Arr**	**15.96 211**	P	**Pn**		**05 31 45.0**	**-1.1**
	baz=16						
WRA	**Warramunga Arr**	**15.96 211**	Pn	**Pn**		**05 31 44.3**	**-1.9**
WRA	**Warramunga Arr**	**15.96 211**	*i* P	**Pn**		**05 31 44.0**	**-2.1**
WRA			pmax	pmax			
	comp=Z,7.0nm,0.5s						
WRA	**Warramunga Arr**	**15.96 211**	Pn	**Pn**		**05 31 44.0**	**-2.1**
	comp=Z,2.2nm,0.3s,baz=30,slow=13,SNR=15						
WRA			Sn	Sn		05 34 28.9	-14
	comp=Z,1.3nm,0.3s,baz=26,slow=22,SNR=2.1						
WRA			Lg	Lg		05 36 25.4	
	comp=Z,1.8nm,0.3s,baz=38,slow=28,SNR=5.8						
KNRA	**Kununurra**	**16.75 235**	P	**Pn**		**05 31 53.4**	**-2.8**
	baz=17						
KNRA	**Kununurra**	**16.75 235**	Pn	**Pn**		**05 31 53.1**	**-3.1**
SANI	**Sanana**	**17.40 283**	P	P		05 32 27.0	+21
SOEI	**Soe**	**18.80 258**		**P**		**05 32 20.6**	**-0.7**
SOEI	**Soe**	**18.80 258**	P	**Pn**		**05 32 28.9**	**+7.2**
	comp=Z,182nm,1.0s,comp=Z,3μm						
AS31	**Alice Springs**	**19.37 206**	P	**P**		**05 32 28.6**	**+1.2**
ASAR	**Alice Springs**	**19.37 206**	P	**P**		**05 32 28.7**	**+1.3**
ASAR	**Alice Springs**	**19.37 206**	P	**P**		**05 32 28.7**	**+1.3**
ASAR	**Alice Springs**	**19.37 206**	P	**P**		**05 32 28.6**	**+1.3**
	comp=Z,66nm,0.6s,baz=29,slow=12,SNR=101						
ASAR			Sn	Sn		05 35 53.2	-13
	comp=Z,0.3nm,0.3s,baz=32,slow=12,SNR=1.4						
ASAR			Lg	Lg		05 38 12.4	
	comp=Z,0.7nm,0.3s,baz=43,slow=24,SNR=4.2						
ASPA	**Alice Springs**	**19.37 206**	P	**P**		**05 32 28.9**	**+1.5**
	baz=19						
QLP	**Quilpie**	**20.26 177**	P	**P**		**05 32 40.1**	**+3.2**
	baz=20,SNR=3.6						
EIDS	**Eidsvold**	**20.55 159**	P	**P**		**05 32 42.9**	**+2.8**
	baz=21,SNR=5.4						
EIDS	**Eidsvold**	**20.55 159**	P	**P**		**05 32 42.4**	**+2.2**
FITZ	**Fitzroy Crossi**	**20.57 234**	P	**P**		**05 32 40.7**	**+0.3**
	baz=20,SNR=12						
FITZ	**Fitzroy Crossi**	**20.57 234**	P	**P**		**05 32 40.2**	**-0.2**
MMRI	**Maumere**	**20.65 262**	P	**P**		**05 32 40.7**	**-0.7**
MMRI			IAmb	IAmb		05 32 53.9	
	comp=Z,134nm,1.4s						
LUWI	**Luwuk**	**20.76 284**	P	**P**		**05 32 41.2**	**-1.3**
LUWI			IAmb	IAmb		05 32 55.4	
	comp=Z,77nm,1.1s						
LUWI	**Luwuk**	**20.76 284**	P	Pn		05 32 47.5	+2.5
	comp=Z,105nm,1.4s,comp=Z,2μm						
GTOI	**Gorontalo**	**21.02 288**	P			05 32 50.0	
	comp=Z,65nm,0.8s,comp=Z,747nm						
EDFI	**Ende, Flores**	**21.20 262**	P	**P**		**05 32 46.6**	**-0.8**
KAPI	**Kappang**	**23.09 272**	P	**P**		**05 33 06.7**	**-0.9**
KAPI	**Kappang**	**23.09 272**	P	**P**		**05 33 06.7**	**-0.9**
KAPI			pmax	pmax			
	comp=Z,173nm,1.7s						
TTSI	**Tana Toraja**	**23.25 277**	P	P		05 33 19.7	+11
	comp=Z,40nm,2.0s						
TOLI2	**Tolitoli**	**23.28 288**	P	**P**		**05 33 09.4**	**0.0**
TOLI2			IAmb	IAmb		05 33 15.4	
	comp=Z,117nm,1.6s						
WRKA	**Warakurna**	**23.35 215**	P	**P**		**05 33 09.8**	**-0.3**
	baz=23,SNR=21						
KOUNC	**Koumac, New Ca**	**25.12 126**	P	**P**		**05 33 27.5**	**+0.9**
KOUNC			IAmb	IAmb		05 33 29.4	
	comp=Z,45nm,1.2s						
CMSA	**Cobar Meteorol**	**25.29 174**	P	**P**		**05 33 29.2**	**+1.1**
	baz=25,SNR=5.1						
STKA	**Stephens Creek**	**25.52 183**	P	**P**		**05 33 30.1**	**-0.1**
	baz=26,SNR=7.0						
STKA	**Stephens Creek**	**25.52 183**	P	**P**		**05 33 29.8**	**-0.3**
STKA	**Stephens Creek**	**25.52 183**	*e*P	**P**		**05 33 29.6**	**-0.6**
STKA	**Stephens Creek**	**25.52 183**	P	**P**		**05 33 29.5**	**-0.6**
	comp=Z,7.2nm,0.5s,baz=348,slow=9.7,SNR=11						
STKA			Lg	Lg		05 41 42.5	
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=2.5						
	comp=Z,7.2nm,0.5s						
PSA00	**Pilbara Seismi**	**27.02 233**	P	**P**		**05 33 44.1**	**+0.2**
BBOO	**Buckleboo**	**27.19 193**	P	**P**		**05 33 44.8**	**-0.3**
	baz=27,SNR=7.3						
BBOO	**Buckleboo**	**27.19 193**	P	**P**		**05 33 44.9**	**-0.3**
BBOO			IAmb	IAmb		05 34 12.9	
	comp=Z,35nm,1.2s						
HTT	**Hallett**	**27.30 187**	P	**P**		**05 33 47.7**	**+1.4**
	baz=27,SNR=6.6						
DZM	**Mont Dzumac**	**27.63 127**	P	**P**		**05 33 49.7**	**+0.3**
DZM			IAmb	IAmb		05 34 02.4	
	comp=Z,54nm,1.4s						
DZM	**Mont Dzumac**	**27.63 127**	LR	LR		05 44 35.6	
	comp=Z,470nm,21.1s,baz=307,slow=36						
ARPS	**Mount Arapiles**	**30.39 182**	P	**P**		**05 34 14.2**	**+0.5**
	baz=30						
JNU	**Nakatsue**	**40.79 344**	P	P		05 35 41.0	-2.0
	comp=Z,7.6nm,0.9s,baz=350,slow=23,SNR=2.2						
	comp=Z,7.6nm,0.9s						
MJAR	**Matsushiro Arr**	**42.80 354**	P	P		05 35 55.3	-4.0
MJAR	**Matsushiro Arr**	**42.80 354**	P	P		05 35 55.3	-4.1
	comp=Z,1.2nm,0.5s,baz=180,slow=6.7,SNR=2.0						
	comp=Z,1.2nm,0.5s						
MAJO	**Matsushiro**	**42.80 354**	*e*P	P		05 35 57.8	-1.5
MAJO			pmax	pmax			
	comp=Z,6.0nm,1.1s						
RAO	**Raoul Island**	**43.43 127**	LR	LR		05 51 07.7	
	comp=Z,263nm,19.7s,baz=313,slow=32						
NJ2	**Nanjing**	**44.47 330**	*e*P	**P**		**05 36 13.3**	**+0.5**
NJ2			pmax	pmax			
	comp=Z,9.0nm,0.5s						
RTZ	**Ruatahuna**	**44.56 141**	P	**P**		**05 36 14.8**	**+1.1**
TUWZ	**Tuamarina**	**44.60 147**	P	**P**		**05 36 15.1**	**+1.3**
MLZ	**Mavora Lakes**	**44.69 155**	P	**P**		**05 36 16.6**	**+2.0**
BSWZ	**Blackbirch Sta**	**44.76 147**	P	**P**		**05 36 16.0**	**+0.9**
RPSI	**Rantau Prapat**	**44.82 280**	P	P		05 36 13.1	-3.0
RPSI			IAmb	IAmb		05 36 21.4	
	comp=Z,39nm,1.3s						
PSI	**Prapat**	**44.84 280**	P	P		05 36 13.1	-3.2
PSI			pmax	pmax			
	comp=Z,39nm,1.3s						
KSAR	**Wonju Array Be**	**45.68 343**	P	**P**		**05 36 21.6**	**-0.8**
KSAR	**Wonju Array Be**	**45.68 343**	P	**P**		**05 36 21.6**	**-0.8**
KSRS	**Korea Array**	**45.68 343**	P	**P**		**05 36 21.7**	**-0.7**
KSRS	**Korea Array**	**45.68 343**	P	**P**		**05 36 21.7**	**-0.7**
KSRS	**Korea Array**	**45.68 343**	P	**P**		**05 36 21.7**	**-0.7**
	comp=Z,6.2nm,1.0s,baz=161,slow=9.3,SNR=16						
	comp=Z,6.2nm,1.0s						
TIA	**Tai'an**	**48.68 332**	P	**P**		**05 36 50.3**	**+4.4**
TIA			pmax	pmax			
	comp=Z,4.0nm,1.9s						
CRAI	**Chiangrai**	**49.42 303**	P	**P**		**05 36 51.1**	**-0.6**
LYN	**LuoYang**	**49.74 327**	P	P		05 36 59.0	+5.0
LYN			pmax	pmax			
	comp=Z,17nm,1.2s						
LYN			pmax	pmax			
	comp=Z,210nm,10.3s						
CMAR	**Chiang Mai Arr**	**49.84 300**	P	**P**		**05 36 54.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**49.84 300**	*ce*P	**P**		**05 36 55.0**	**0.0**
CMAR			pmax	pmax			
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**49.84 300**	P	**P**		**05 36 54.4**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=129,slow=5.9,SNR=9.9						
	comp=Z,1.2nm,0.4s						
CHTO	**Chiang Mai**	**49.99 301**	P	**P**		**05 36 54.7**	**-1.5**
CHTO	**Chiang Mai**	**49.99 301**	P	**P**		**05 36 54.7**	**-1.5**
CHTO			pmax	pmax			
	comp=Z,27nm,2.0s						
HNS	**HongShan**	**50.79 331**	P	**P**		**05 37 01.3**	**-0.5**
HNS			S	**S**		**05 44 17.3**	**-0.4**
HNS			pmax	pmax			
	comp=Z,10.0nm,0.7s						
HNS			LR	LR			
	comp=Z,230nm,20.7s						
HNS			LR	LR			
	comp=Z,310nm,19.6s						
HNS			LR	LR			
	comp=Z,280nm,18.3s						
USA0B	**Ussuriysk Arra**	**51.18 350**	P	**P**		**05 37 03.9**	**-0.8**
USA0B	**Ussuriysk Arra**	**51.18 350**	*e*P	**P**		**05 37 04.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**51.18 350**	P	P		05 37 03.0	-1.6
USRK	**Ussuriysk Ar.**	**51.18 350**	P	P		05 37 03.1	-1.6
USRK	**Ussuriysk Ar.**	**51.18 350**	P	P		05 37 02.9	-1.7
	comp=Z,5.9nm,0.9s,baz=172,slow=8.8,SNR=7.9						
	comp=Z,5.9nm,0.9s						
XAN	**Xi'an**	**51.38 324**	P	**P**		**05 37 06.0**	**-0.5**
XAN			pP	pP		05 37 11.5	+1.3
XAN			pmax	pmax			
	comp=Z,18nm,1.7s						
PZH	**PanZhiHua**	**51.51 311**	P	**P**		**05 37 08.0**	**+0.4**
PZH			pmax	pmax			
	comp=Z,10.0nm,0.5s						
PZH			pmax	pmax			
	comp=Z,200nm,7.0s						
MDJ	**Mudanjiang**	**52.04 348**	P	**P**		**05 37 11.5**	**+0.4**
MDJ			pP	sP		05 37 21.8	+5.7
MDJ			sP	pP		05 37 26.5	+12
MDJ			PcP	**PcP**		**05 38 22.5**	**-0.8**
MDJ			PP	**PP**		**05 39 09.3**	**-0.1**
MDJ			ScP	**ScP**		**05 42 16.8**	**-3.7**
MDJ			PcS	**PcS**		**05 42 21.3**	**0.0**
MDJ			S	**S**		**05 44 34.5**	**-0.3**
MDJ			ScS	**ScS**		**05 46 57.8**	**-3.6**
MDJ			SS	**SS**		**05 48 12.0**	**-0.2**
MDJ			pmax	pmax			
	comp=Z,8.0nm,0.7s						
MDJ			pmax	pmax			
	comp=Z,300nm,6.9s						
MDJ			LR	LR			
	comp=Z,250nm,17.6s						
MDJ			LR	LR			
	comp=Z,360nm,16.8s						
MDJ			LR	LR			
	comp=Z,310nm,18.8s						
BJT	**Baijiatuan**	**52.23 334**	P	**P**		**05 37 12.2**	**-0.4**
BJT	**Baijiatuan**	**52.23 334**	P	**P**		**05 37 12.2**	**-0.4**
BJT			pmax	pmax			
	comp=Z,12nm,1.2s						
BJI	**Beijing**	**52.25 334**	P	**P**		**05 37 11.8**	**-0.9**
BJI			pmax	pmax			
	comp=Z,6.0nm,1.7s						
CN2	**Changchun**	**52.27 344**	P	P		05 37 10.0	-2.8
CN2			pmax	pmax			
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	**52.62 317**	P	**P**		**05 37 16.8**	**+1.1**
CD2			pmax	pmax			
	comp=Z,10.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**52.97 360**	*e*P	**P**		**05 37 16.6**	**-1.4**
YSS			pmax	pmax			
	comp=Z,7.0nm,1.0s						
TNCH	**TengChong**	**53.22 308**	*e*P	**P**		**05 37 22.5**	**+2.0**
TNCH			pP	pP		05 37 25.5	+1.4
TNCH			pmax	pmax			
	comp=Z,35nm,0.4s						
TNCH			pmax	pmax			
	comp=Z,190nm,3.4s						
BNX	**BinXian**	**53.59 347**	P	**P**		**05 37 22.0**	**-0.5**
BNX			pmax	pmax			
	comp=Z,13nm,1.0s						
BNX			pmax	pmax			
	comp=Z,230nm,3.9s						
HHC	**Hu-ho-hao-te**	**55.01 331**	*e*P	**P**		**05 37 35.5**	**+2.4**
HHC			pmax	pmax			
	comp=Z,11nm,0.8s						
HHC			pmax	pmax			
	comp=Z,120nm,6.9s						
HHC			LR	LR			
	comp=Z,270nm,15.3s						
HHC			LR	LR			
	comp=Z,240nm,15.5s						
HHC			LR	LR			
	comp=Z,240nm,16.8s						
BTO	**Baotou**	**55.57 330**	*e*P	**P**		**05 37 37.3**	**+0.1**
BTO			pP	**pP**		**05 37 41.8**	**+0.9**
BTO			sP	**sP**		**05 37 44.3**	**+2.0**
BTO			PP	**PP**		**05 39 43.5**	**+2.0**
BTO			S	**S**		**05 45 21.3**	**-1.8**
BTO			sS	**sS**		**05 45 32.0**	**+3.1**
BTO			SS	**SS**		**05 49 11.3**	**+2.9**
BTO			pmax	pmax			
	comp=Z,22nm,0.9s						
BTO			pmax	pmax			
	comp=Z,710nm,7.7s						
BTO			LR	LR			
	comp=Z,860nm,17.8s						
BTO			LR	LR			
	comp=Z,580nm,19.8s						
BTO			LR	LR			
	comp=Z,880nm,16.8s						
LZH	**Lanzhou**	**55.83 322**	P	**P**		**05 37 40.0**	**+0.8**
LZH			pP	sP		05 37 50.0	+5.7
LZH			pmax	pmax			
	comp=Z,25nm,1.1s						
KLR	**Kul'dur**	**56.11 351**	*e*P	**P**		**05 37 39.8**	**-0.9**
KLR			pmax	pmax			
	comp=Z,21nm,2.5s						
RAR	**Rarotonga**	**57.32 111**	LR	LR		05 59 57.5	
	comp=Z,123nm,20.7s,baz=322,slow=34						
HEH	**HeiHe**	**57.86 348**	*e*P	P		05 37 51.0	-2.1
HEH			pmax	pmax			
	comp=Z,6.0nm,0.7s						
SHL	**Shillong**	**58.79 305**	P	**P**		**05 38 00.2**	**-0.2**
SHL			IAmb	IAmb		05 38 06.9	
	comp=Z,34nm,1.4s						
SHL	**Shillong**	**58.79 305**	P	**P**		**05 38 00.2**	**-0.2**
SHL			pmax	pmax			
	comp=Z,34nm,1.4s						
GTA	**Gaotai**	**60.41 322**	P	**P**		**05 38 11.8**	**+0.6**
GTA			pP	pP		05 38 16.5	+1.6
GTA			pmax	pmax			
	comp=Z,5.0nm,1.2s						
LSA	**Lhasa**	**61.19 309**	P	**P**		**05 38 16.2**	**-1.0**
LSA			IAmb	IAmb		05 38 23.8	
	comp=Z,28nm,1.8s						
LSA	**Lhasa**	**61.19 309**	P	**P**		**05 38 16.2**	**-1.0**
LSA			pmax	pmax			
	comp=Z,28nm,1.8s						
ZEA	**Zeya**	**61.21 349**	*e*P	**P**		**05 38 16.1**	**-0.1**
ZEA			pmax	pmax			
	comp=Z,10.0nm,1.2s						
ULN	**Ulaanbaatar**	**62.45 334**	P	**P**		**05 38 24.9**	**0.0**
ULN	**Ulaanbaatar**	**62.45 334**	*ce*P	**P**		**05 38 24.6**	**-0.3**
ULN			pmax	pmax			
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**62.72 333**	P	**P**		**05 38 26.5**	**-0.2**
SONM	**Songino Array**	**62.72 333**	P	**P**		**05 38 26.5**	**-0.2**
SONM			pmax	pmax			
	comp=Z,11nm,1.6s						
SONM	**Songino Array**	**62.72 333**	P	**P**		**05 38 25.6**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=154,slow=6.8,SNR=11						
	comp=Z,1.6nm,0.8s						
PALK	**Pallekele**	**63.51 281**	*de*P	**P**		**05 38 30.2**	**-2.3**
PALK			pmax	pmax			
	comp=Z,28nm,1.2s						
MA2	**Magadan**	**65.92 4**	*e*P	**P**		**05 38 46.3**	**-0.9**
MA2			pmax	pmax			
	comp=Z,21nm,2.5s						
MA2	**Magadan**	**65.92 4**	P	P		05 38 45.6	-1.6
	comp=Z,2.1nm,0.3s,baz=2.2,slow=22,SNR=2.0						
	comp=Z,2.1nm,0.3s						
ZAK	**Zakamensk**	**65.98 333**	*e*P	P		05 38 45.9	-2.1
ZAK			pmax	pmax			
	comp=Z,8.0nm,1.2s						
MOY	**Mondy**	**67.92 333**	*e*P	**P**		**05 39 00.3**	**0.0**
MOY			pmax	pmax			
	comp=Z,29nm,2.3s						
SEY	**Seymchan**	**69.37 5**	*e*P	**P**		**05 39 08.3**	**-0.6**
SEY			pmax	pmax			
	comp=Z,18nm,2.3s						
SEY	**Seymchan**	**69.37 5**	P	P		05 39 07.0	-1.9
	comp=Z,0.9nm,0.3s,baz=16,slow=23,SNR=2.3						
	comp=Z,0.9nm,0.3s						
WMQ	**Urumqi**	**70.38 321**	*e*P	**P**		**05 39 15.5**	**-0.2**
WMQ			pP	pP		05 39 20.8	+1.3
WMQ			sP	sP		05 39 29.5	+8.6
WMQ			pmax	pmax			
	comp=Z,11nm,1.3s						
VNDA	**Vanda**	**71.93 176**	P	**P**		**05 39 25.4**	**+1.0**
VNDA	**Vanda**	**71.93 176**	P	**P**		**05 39 24.3**	**-0.1**
VNDA	**Vanda**	**71.93 176**	P	**P**		**05 39 24.2**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=1.9,slow=7.1,SNR=6.1						
	comp=Z,1.9nm,0.7s						
MK31	**Makanchi Array**	**75.15 322**	P	**P**		**05 39 43.6**	**-0.3**
MK31	**Makanchi Array**	**75.15 322**	*de*P	**P**		**05 39 43.4**	**-0.5**
MKAR	**Makanchi Array**	**75.15 322**	P	**P**		**05 39 43.5**	**-0.4**
MKAR	**Makanchi Array**	**75.15 322**	P	**P**		**05 39 43.5**	**-0.4**
MKAR	**Makanchi Array**	**75.15 322**	P	**P**		**05 39 43.5**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=108,slow=7.8,SNR=30						
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**75.35 322**	P	**P**		**05 39 44.0**	**-1.1**
MAKZ			IAmb	IAmb		05 39 45.8	
	comp=Z,20nm,1.2s						
MAKZ	**Makanchi**	**75.35 322**	P	**P**		**05 39 44.0**	**-1.1**
MAKZ			pmax	pmax			
	comp=Z,20nm,1.3s						
SHLS	**Shalkode**	**75.45 317**	*e*P	P		05 39 42.2	-3.7
	comp=Z,17nm,1.5s,baz=318						
SHLS	**Shalkode**	**75.45 317**	*e*P	P		05 39 42.1	-3.7
SHLS			pmax	pmax			
	comp=Z,17nm,1.5s						
UZB	**Uzynbulak**	**75.74 317**	*e*P	**P**		**05 39 46.4**	**-1.1**
	comp=Z,22nm,1.6s,baz=317						
UZB	**Uzynbulak**	**75.74 317**	*e*P	**P**		**05 39 46.4**	**-1.1**

ZALV	**Zalesovo Beam**	**77.10**	**329**	P		**P**	**05 39 53.1**	**-1.7**	
	comp=Z,2.0nm,0.6s,baz=114,slow=5.1,SNR=11								
	comp=Z,2.0nm,0.6s								
BOOM	**Boomskoye usch**	**77.60**	**316**	P		**P**	**05 39 57.8**	**-0.3**	
BOOM	**Boomskoye usch**	**77.60**	**316**	P		**P**	**05 39 57.8**	**-0.3**	
BOOM				pmax		pmax			
	comp=Z,15nm,1.5s								
KUU	**Kurty**	**77.83**	**317**	*e*P		**P**	**05 39 57.5**	**-1.7**	
	baz=317								
KUU	**Kurty**	**77.83**	**317**	*e*P		**P**	**05 39 57.4**	**-1.7**	
AAK	**Ala-Archa**	**78.66**	**316**	P		**P**	**05 40 03.3**	**-0.7**	
AAK	**Ala-Archa**	**78.66**	**316**	*de*P		**P**	**05 40 03.8**	**-0.2**	
AAK				pmax		pmax			
	comp=Z,10.0nm,1.5s								
KURK	**Kurchatov**	**79.02**	**324**	P		**P**	**05 40 04.1**	**-1.5**	
KURK				IAmb		IAmb	05 40 11.6		
	comp=Z,21nm,1.3s								
KURK	**Kurchatov**	**79.02**	**324**	*de*P		**P**	**05 40 05.1**	**-0.4**	
KURK				pmax		pmax			
	comp=Z,12nm,1.0s								
KURBB	**Kurchatov Arra**	**79.03**	**324**	P		**P**	**05 40 04.5**	**-1.1**	
	comp=Z,3.6nm,0.2s,baz=116,slow=5.0,SNR=20								
	comp=Z,3.6nm,0.2s								
ARSB	**Arslanbob**	**79.30**	**314**	P		**P**	**05 40 07.9**	**+0.4**	
ARSB	**Arslanbob**	**79.30**	**314**	P		**P**	**05 40 07.9**	**+0.4**	
ARSB				pmax		pmax			
	comp=Z,11nm,1.7s								
L14K	**Kuka Creek**	**79.38**	**24**	P		**P**	**05 40 07.8**	**+0.5**	
L14K				IAmb		IAmb	05 40 18.8		
	comp=Z,36nm,1.3s								
BTLS	**Baital**	**79.77**	**318**	*e*P		**P**	**05 40 08.4**	**-1.4**	
	comp=Z,22nm,1.8s,baz=318								
BTLS	**Baital**	**79.77**	**318**	*e*P		**P**	**05 40 08.3**	**-1.4**	
BTLS				pmax		pmax			
	comp=Z,21nm,1.8s								
ANM	**Nome**	**80.30**	**20**	P		**P**	**05 40 12.8**	**+0.6**	
ANM	**Nome**	**80.30**	**20**	P		**P**	**05 40 12.8**	**+0.6**	
ANM				pmax		pmax			
	comp=Z,18nm,1.3s								
DZA	**Taraz**	**80.95**	**315**	*e*P		**P**	**05 40 14.9**	**-1.4**	
	baz=315								
DZA	**Taraz**	**80.95**	**315**	*e*P		**P**	**05 40 14.8**	**-1.4**	
N17K	**Nushagak Hills**	**81.22**	**26**	P		**P**	**05 40 17.4**	**+0.2**	
N17K				IAmb		IAmb	05 40 23.4		
	comp=Z,30nm,1.3s								
F15K	**North Star Dit**	**81.24**	**19**	P		**P**	**05 40 17.4**	**+0.2**	
F15K				IAmb		IAmb	05 40 23.0		
	comp=Z,21nm,1.4s								
J16K	**Anvik River**	**81.28**	**22**	P		**P**	**05 40 17.9**	**+0.5**	
J16K				IAmb		IAmb	05 40 18.9		
	comp=Z,18nm,1.0s								
SIMJ	**Simiganj**	**81.47**	**310**	P		**P**	**05 40 18.1**	**-1.2**	
SIMJ				IAmb		IAmb	05 40 19.8		
	comp=Z,15nm,1.2s								
I17K	**Unalakleet**	**81.57**	**22**	P		**P**	**05 40 19.6**	**+0.7**	
I17K				IAmb		IAmb	05 40 30.9		
	comp=Z,23nm,1.2s								
KK31	**Karatay Array**	**81.58**	**315**	P		**P**	**05 40 19.6**	**0.0**	
KK31	**Karatay Array**	**81.58**	**315**	P		**P**	**05 40 19.6**	**0.0**	
KK31				pmax		pmax			
	comp=Z,15nm,1.4s								
KKAR	**Karatay Array**	**81.58**	**315**	P		**P**	**05 40 19.5**	**-0.1**	
KKAR	**Karatay Array**	**81.58**	**315**	P		**P**	**05 40 19.5**	**-0.1**	
G16K	**Koyuk River**	**81.83**	**20**	P		**P**	**05 40 20.7**	**+0.4**	
K17K	**Iditarod**	**81.86**	**23**			**P**	**05 40 20.9**	**+0.4**	
K17K				IAmb		IAmb	05 40 21.9		
	comp=Z,20nm,1.0s								
BRLS	**Boroldaу**	**82.04**	**315**	*e*P		**P**	**05 40 21.1**	**-1.0**	
	baz=315								
BRLS	**Boroldaу**	**82.04**	**315**	*e*P		**P**	**05 40 21.0**	**-1.0**	
BRZS	**Berezniki**	**82.28**	**322**	*e*P		**P**	**05 40 21.8**	**-1.4**	
	comp=Z,7.0nm,1.1s,baz=322								
BRZS	**Berezniki**	**82.28**	**322**	*e*P		**P**	**05 40 21.7**	**-1.4**	
BRZS				pmax		pmax			
	comp=Z,7.0nm,1.1s								
H17K	**Granite Mounta**	**82.43**	**21**	P		**P**	**05 40 23.8**	**+0.3**	
H17K				IAmb		IAmb	05 40 24.6		
	comp=Z,11nm,0.8s								
N19K	**Bonanza Creek**	**82.53**	**26**	P		**P**	**05 40 23.5**	**-0.7**	
N19K				IAmb		IAmb	05 40 30.4		
	comp=Z,28nm,1.4s								
C16K	**Lisburne Hills**	**82.60**	**17**	P		**P**	**05 40 25.9**	**+1.6**	
F17K	**Baldwin Pennin**	**82.80**	**20**	P		**P**	**05 40 25.7**	**+0.4**	
G18K	**Tagagawik**	**83.39**	**21**	P		**P**	**05 40 28.1**	**-0.4**	
G18K				IAmb		IAmb	05 40 28.9		
	comp=Z,9.1nm,0.9s								
J19K	**Poorman**	**83.55**	**23**	P		**P**	**05 40 29.6**	**+0.3**	
J19K				IAmb		IAmb	05 40 35.1		
	comp=Z,17nm,1.3s								
E18K	**Tukpahlearik C**	**83.56**	**19**	P		**P**	**05 40 29.3**	**0.0**	
E18K				IAmb		IAmb	05 40 30.1		
	comp=Z,12nm,1.0s								
M20K	**Styx River**	**83.59**	**25**	P		**P**	**05 40 29.7**	**0.0**	
QSPA	**South Pole Qui**	**83.72**	**180**	P		**P**	**05 40 30.1**	**-0.3**	
	comp=Z,7.2nm,0.6s,baz=330,slow=2.9,SNR=9.0								
	comp=Z,7.2nm,0.6s								
K20K	**Telida**	**83.86**	**24**	P		**P**	**05 40 31.4**	**+0.5**	
K20K				IAmb		IAmb	05 40 32.0		
	comp=Z,16nm,1.1s								
H19K	**Roundabout Mou**	**83.98**	**21**	P		**P**	**05 40 31.9**	**+0.4**	
H19K				IAmb		IAmb	05 40 32.4		
	comp=Z,13nm,1.0s								
C18K	**Utukok River**	**84.06**	**18**	P		**P**	**05 40 31.7**	**-0.2**	
G19K	**Purcell Mounta**	**84.06**	**21**	P		**P**	**05 40 32.3**	**+0.4**	
G19K				IAmb		IAmb	05 40 32.9		
	comp=Z,16nm,1.2s								
F19K	**Shaleruckik Mo**	**84.18**	**20**	P		**P**	**05 40 32.5**	**0.0**	
J20K	**Nowinta River**	**84.21**	**23**	P		**P**	**05 40 33.1**	**+0.4**	
J20K				IAmb		IAmb	05 40 33.8		
	comp=Z,12nm,0.9s								
NRIK	**Noril'sk**	**84.30**	**343**	P		**P**	**05 40 32.3**	**-0.7**	
NRIK				IAmb		IAmb	05 40 42.5		
	comp=Z,18nm,1.0s								
NRIK	**Noril'sk**	**84.30**	**343**	‖*e*P		**P**	**05 40 32.1**	**-0.9**	
NRIK				pmax		pmax			
	comp=Z,18nm,1.1s								
NRIK	**Noril'sk**	**84.30**	**343**	P		**P**	**05 40 32.4**	**-0.6**	
	comp=Z,9.7nm,0.8s,baz=118,slow=4.7,SNR=15								
	comp=Z,9.7nm,0.8s								
BVAR	**Borovoye Array**	**84.61**	**325**	P		**P**	**05 40 34.3**	**-0.7**	
BVAR	**Borovoye Array**	**84.61**	**325**	P		**P**	**05 40 34.3**	**-0.7**	
	comp=Z,29nm,0.8s,baz=112,slow=6.6,SNR=62								
	comp=Z,29nm,0.8s								
BRVK	**Borovoye**	**84.68**	**325**	P		**P**	**05 40 34.2**	**-1.1**	
BRVK	**Borovoye**	**84.68**	**325**	P		**P**	**05 40 34.2**	**-1.1**	
BRVK				pmax		pmax			
	comp=Z,23nm,1.0s								
E19K	**Redstone River**	**84.68**	**20**	P		**P**	**05 40 35.1**	**+0.1**	
E19K				IAmb		IAmb	05 40 35.9		
	comp=Z,12nm,0.8s								
CAST	**Castle Rocks**	**84.69**	**24**	P		**P**	**05 40 34.9**	**-0.4**	
CAST				IAmb		IAmb	05 40 35.1		
	comp=Z,10nm,1.0s								
RC01	**Rabbit Creek A**	**84.75**	**27**	P		**P**	**05 40 34.3**	**-1.2**	
C19K	**Lookout Ridge**	**84.80**	**18**	P		**P**	**05 40 35.8**	**+0.2**	
M22K	**Willow**	**84.84**	**26**	P		**P**	**05 40 35.0**	**-0.8**	
D19K	**Kuna River**	**84.92**	**18**	P		**P**	**05 40 36.4**	**+0.1**	
D19K				IAmb		IAmb	05 40 41.7		
	comp=Z,20nm,1.2s								
F20K	**Avaraart Lake**	**84.98**	**20**	P		**P**	**05 40 36.1**	**-0.4**	
F20K				IAmb		IAmb	05 40 37.6		
	comp=Z,9.5nm,1.1s								
IMAR	**Indian Mountai**	**85.18**	**22**	P		**P**	**05 40 37.0**	**-0.6**	
PMR	**Palmer**	**85.21**	**26**	P		**P**	**05 40 37.1**	**-0.6**	
PMR				IAmb		IAmb	05 40 37.5		
	comp=Z,13nm,1.0s								
PMR	**Palmer**	**85.21**	**26**	P		**P**	**05 40 37.1**	**-0.6**	
PMR				pmax		pmax			
	comp=Z,13nm,1.0s								
KTH	**Kantishna Hill**	**85.22**	**24**	P		**P**	**05 40 36.7**	**-1.2**	
KTH				IAmb		IAmb	05 40 37.3		
	comp=Z,15nm,1.1s								
BPAW	**Bear Paw Mtn.**	**85.42**	**24**	P		**P**	**05 40 38.4**	**-0.5**	
KNK	**Knik Glacier**	**85.44**	**27**	P		**P**	**05 40 38.8**	**-0.2**	
I21K	**Tanana**	**85.49**	**23**	IAmb		IAmb	05 40 45.0		
	comp=Z,22nm,1.4s								
SML	**Sawmill**	**85.64**	**26**	P		**P**	**05 40 39.5**	**-0.5**	
SML				IAmb		IAmb	05 40 40.5		
	comp=Z,15nm,0.8s								
MLY	**Manley**	**85.90**	**23**	IAmb		IAmb	05 40 41.5		
	comp=Z,13nm,1.1s								
RND	**Reindeer**	**86.02**	**25**	P		P	05 40 40.0	-1.9	
RND				IAmb		IAmb	05 40 41.7		
	comp=Z,14nm,0.9s								
RND	**Reindeer**	**86.02**	**25**	P		P	05 40 40.0	-1.9	
RND				pmax		pmax			
	comp=Z,15nm,0.9s								
NEA2	**Nenana**	**86.39**	**24**	IAmb		IAmb	05 40 47.8		
	comp=Z,24nm,1.6s								
WRH	**Wood River Hil**	**86.73**	**24**	IAmb		IAmb	05 40 44.5		
	comp=Z,17nm,1.1s								
E22K	**Anaktuvuk Pass**	**86.82**	**20**	P		**P**	**05 40 45.2**	**-0.5**	
E22K				IAmb		IAmb	05 40 47.2		
	comp=Z,7.0nm,0.8s								
G23K	**Bananza Creek**	**86.86**	**22**	IAmb		IAmb	05 40 46.7		
	comp=Z,7.1nm,0.8s								
CCB	**Clear Creek Bu**	**86.91**	**24**	IAmb		IAmb	05 40 45.3		
	comp=Z,12nm,0.9s								
COLA	**College**	**86.98**	**24**	P		P	05 40 44.7	-1.7	
COLA	**College**	**86.98**	**24**	P		P	05 40 44.7	-1.7	
COLA				pmax		pmax			
	comp=Z,13nm,0.2s								
IL31		**87.33**	**24**	P		P	05 40 46.1	-2.0	
IL31				IAmb		IAmb	05 40 46.9		
	comp=Z,7.4nm,0.8s								
ILAR	**Eielson Array**	**87.33**	**24**	P		P	05 40 46.6	-1.5	
ILAR	**Eielson Array**	**87.33**	**24**	P		P	05 40 46.6	-1.6	
ILAR	**Eielson Array**	**87.33**	**24**	P		P	05 40 45.6	-2.5	
	comp=Z,6.1nm,0.7s,baz=255,slow=4.6,SNR=61								
	comp=Z,6.1nm,0.7s								
SCRK	**Sand Creek**	**88.25**	**25**	P		**P**	**05 40 52.0**	**-0.7**	
BARN	**Barnard Glacie**	**88.44**	**28**	P		**P**	**05 40 54.2**	**+0.3**	
J26L	**Joseph Creek**	**88.59**	**25**	IAmb		IAmb	05 40 54.8		
	comp=Z,9.1nm,0.9s								
M27K	**Edge Creek, AK**	**88.69**	**27**	IAmb		IAmb	05 40 55.7		
	comp=Z,14nm,1.0s								
L27K	**Beaver Creek,**	**88.91**	**26**	P		**P**	**05 40 55.7**	**-0.1**	
L27K				IAmb		IAmb	05 41 09.1		
	comp=Z,19nm,1.4s								
BCAR	**Beaver Creek A**	**88.93**	**26**	P		**P**	**05 40 56.0**	**+0.1**	
E25K	**Arctic Village**	**88.97**	**21**	IAmb		IAmb	05 41 07.8		
	comp=Z,12nm,1.1s								
BMAR	**Burnt Mountain**	**89.10**	**22**	P		**P**	**05 40 56.1**	**-0.6**	
D25K	**Kavik River**	**89.11**	**20**	IAmb		IAmb	05 41 09.3		
	comp=Z,11nm,1.2s								
EGAK	**Eagle**	**89.66**	**25**	IAmb		IAmb	05 41 10.2		
	comp=Z,9.6nm,1.1s								
GEYT	**Alibeck**	**89.72**	**308**	P		**P**	**05 40 59.8**	**-0.4**	
GEYT	**Alibeck**	**89.72**	**308**	P		**P**	**05 40 59.8**	**-0.4**	
	comp=Z,1.1nm,0.4s,baz=72,slow=9.3,SNR=1.6								
	comp=Z,1.1nm,0.4s								
ABKAR	**Akbulak array**	**90.12**	**319**	P		**P**	**05 40 60.0**	**-1.7**	
DAWY	**Dawson**	**90.22**	**25**	P		**P**	**05 41 02.5**	**+0.5**	
DAWY				IAmb		IAmb	05 41 02.7		
	comp=Z,15nm,1.1s								
I28M	**Miner Creek**	**90.33**	**24**	P		**P**	**05 41 02.6**	**+0.1**	
I28M				IAmb		IAmb	05 41 27.3		
	comp=Z,17nm,1.4s								
L29M	**L29M**	**90.55**	**27**	IAmb		IAmb	05 41 04.5		
	comp=Z,14nm,1.1s								
K29M	**Barlow Dome**	**90.98**	**26**	IAmb		IAmb	05 41 06.4		
	comp=Z,13nm,1.1s								
J30M	**Hart River**	**91.64**	**25**	P		**P**	**05 41 08.7**	**+0.1**	
J30M				IAmb		IAmb	05 41 09.4		
	comp=Z,8.4nm,1.1s								
ARU	**Arti**	**92.05**	**326**	*c* iP		P	05 41 08.4	-2.1	
ARU							05 44 50.8		
ARU				S		**SKSac**	**05 51 39.0**	**-4.6**	
ARU				pmax		pmax			
	comp=Z,11nm,1.3s								
ELIB	**Princess Elisa**	**92.88**	**196**	*d*P		**P**	**05 41 14.4**	**+0.1**	
	comp=Z,3.8nm,1.1s								
BELG	**Belogornoye**	**98.15**	**322**	‖*e*P		P	05 41 36.1	-2.3	
BELG				pmax		pmax			
	comp=Z,3.0nm,1.0s								
YKA	**Yellowknife Ar**	**101.27**	**28**	P		**Pdif**	**05 41 50.3**	**-1.9**	
YKA	**Yellowknife Ar**	**101.27**	**28**	P		**Pdif**	**05 41 50.3**	**-1.9**	
	comp=Z,0.2nm,0.8s,baz=283,slow=5.5,SNR=4.0								
OBN	**Obninsk**	**104.44**	**325**	*e*P		**Pdif**	**05 42 03.0**	**-3.4**	
OBN				*e*PPP		PPP	05 48 33.1		
OBN				pmax		pmax			
	comp=Z,3.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**141.21**	**283**	PKhKP		PKPpre	05 47 26.4		
	comp=Z,1.8nm,0.3s,baz=73,slow=2.9,SNR=2.4								
TORD				PKP		**PKPdf**	**05 47 33.0**	**-0.3**	
	comp=Z,2.7nm,0.5s,baz=64,slow=3.4,SNR=2.3								
CPUP	**Villa Florida**	**142.12**	**150**	PKIKP		**PKPdf**	**05 47 34.1**	**-0.5**	
CPUP	**Villa Florida**	**142.12**	**150**	PKIKP		**PKPdf**	**05 47 33.3**	**-1.4**	
CPUP	**Villa Florida**	**142.12**	**150**	PKP		**PKPdf**	**05 47 33.3**	**-1.4**	
	comp=Z,1.6nm,0.7s,baz=228,slow=10,SNR=3.7								
ROSC	**El Rosal**	**142.91**	**90**	PKIKP		**PKPdf**	**05 47 33.9**	**-3.0**	
ROSC	**El Rosal**	**142.91**	**90**	PKP		**PKPdf**	**05 47 33.9**	**-3.0**	
	comp=Z,3.4nm,0.3s,baz=10,slow=3.9,SNR=7.2								
ETMB	**Extrema**	**146.87**	**119**	PKPdf		**PKPdf**	**05 47 40.5**	**-2.7**	
AQDB	**Aquidauana**	**147.74**	**146**	PKPbc		**PKPdf**	**05 47 45.1**	**+0.5**	
DBIC	**Dimbokro**	**147.99**	**273**	PKPbc		**PKPdf**	**05 47 46.8**	**+1.7**	
DBIC	**Dimbokro**	**147.99**	**273**	PKP2		**PKPdf**	**05 47 47.3**	**+2.2**	
DBIC	**Dimbokro**	**147.99**	**273**	PKPbc		**PKPdf**	**05 47 47.3**	**+2.2**	
	comp=Z,14nm,1.0s,baz=62,slow=2.6,SNR=9.2								
PTLB	**Pontes e Lacer**	**149.30**	**135**	PKPdf		**PKPdf**	**05 47 45.6**	**-1.6**	
HUMP	**Col San Antoni**	**149.55**	**65**	PKPbc		**PKPdf**	**05 47 50.0**	**+2.5**	
SAML	**Samuel**	**149.91**	**120**	PKPbc		**PKPdf**	**05 47 52.2**	**+4.0**	
SAML	**Samuel**	**149.91**	**120**	PKP2		**PKPdf**	**05 47 52.2**	**+4.0**	

WEL 26 05:31:38.7,38°S±25″×17°8E±1°5,h29km±16km,M2.0/8, ML2.2/12,MLv2.0/8,Error ellipse: s-maj=0.0km s-min=0.0km az=169.8,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKGZ	**Pakihiroa**	**0.17**	**205**	P	Pb	05 31 45.0	+0.4
WMGZ	**Waiomatatini S**	**0.21**	**113**	P	Pb	05 31 45.1	+0.2
HAZ	**Te Kaha**	**0.31**	**266**	P	Pb	05 31 45.9	-0.2
PUZ	**Puketiti**	**0.34**	**168**	P	Pb	05 31 46.5	-0.2
RUGZ	**Raukumara Rang**	**0.45**	**239**	P	Pn	05 31 49.2	-0.1
TWGZ	**Tauwhareparae**	**0.47**	**198**	P	Pn	05 31 49.6	+0.1
CNGZ	**Carnagh Statio**	**0.75**	**178**	P	Pb	05 31 51.2	-2.0
URZ	**Urewera**	**0.98**	**238**	P	Pn	05 31 55.1	-1.5
RIGZ	**Rimuhau**	**1.02**	**198**	P	Pb	05 31 58.3	+0.5
SNGZ	**Shannon Statio**	**1.23**	**212**	P	Pb	05 32 02.7	+1.4
RTZ	**Ruatahuna**	**1.28**	**226**	P	Pn	05 31 59.7	-1.1
MTHZ	**Maungataniwha**	**1.53**	**223**	P	Pb	05 32 06.3	-0.1
BKZ	**Black Stump Fm**	**1.94**	**222**	P	Pn	05 32 11.4	+1.6
NTVZ	**North Tongarir**	**2.38**	**234**	P	Pn	05 32 18.2	+2.3
OTVZ	**Oturere**	**2.43**	**233**	P	Pn	05 32 17.2	+0.7

*IDC **26** 05:33:33.8±1.1,6°.33S×143°.46E,h0km,mb4.0/5, mbtmp4.0/6,ML1.9/1,Error ellipse: s-maj=62.9km s-min=27.8km az=63.0*

ISC 26 05:33:39.2±1.0,6°.3S±0°.2×143°.6E±0°.3,h35km,n6,σ0s92/7, mb4.0/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.70**	**131**	Pn	**Pn**	**05 34 48.9**	**+1.2**
	3.4nm,0.3s,baz=273,slow=9.8,SNR=0.9						
PMG				Sn	**Sn**	**05 35 40.0**	**-1.0**
	2.9nm,0.3s,baz=356,slow=14,SNR=1.3						
	25nm,0.7s						
KSRS	**Korea Array**	**45.92**	**343**	P	**P**	**05 41 59.0**	**+0.5**
	1.3nm,0.8s,baz=159,slow=11,SNR=4.4						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**75.59**	**322**	P	**P**	**05 45 20.6**	**0.0**
	1.7nm,0.9s,baz=101,slow=6.9,SNR=4.6						
	1.7nm,0.9s						
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**05 46 03.8**	**-0.4**
	0.9nm,0.6s,baz=310,slow=0.3,SNR=5.9						
	0.9nm,0.6s						
BVAR	**Borovoye Array**	**85.03**	**325**	P	**P**	**05 46 11.2**	**0.0**
	0.9nm,0.6s,baz=114,slow=7.0,SNR=4.4						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**87.11**	**24**	P	**P**	**05 46 20.4**	**-0.8**
	0.5nm,0.5s,baz=266,slow=4.2,SNR=5.9						
	0.5nm,0.5s						

IDC 26 05:40:38.4±3.3,53°.57N×87°.83E,h0km,mbtmp3.0/2, ML2.7/2,Error ellipse: s-maj=32.3km s-min=18.3km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.83**	**283**	Pn	Pn	05 41 11.1	0.0
	1.6nm,0.3s,baz=101,slow=15,SNR=9.1						
ZALV				Lg	Lg	05 41 36.0	
	2.3nm,0.3s,baz=102,slow=26,SNR=12						
I46RU	**ZALESOVO INFRA**	**1.83**	**283**	I	I	05 52 40.0	
	0.1nm,0.8s,baz=100,slow=341,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.45**	**246**	Pn	Pn	05 42 15.1	+0.7
	0.1nm,0.3s,baz=66,slow=15,SNR=4.1						
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**7.66**	**210**	Pn	Pn	05 42 32.2	+1.1
	0.1nm,0.3s,baz=31,slow=13,SNR=4.2						
	0.2nm,0.3s						

IDC 26 05:45:11.9±3.2,53°.59N×87°.84E,h0km,mbtmp3.2/2, ML2.2/2,Error ellipse: s-maj=27.4km s-min=15.7km az=62.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**283**	I	I	05 56 50.0	
	0.2nm,0.8s,baz=100,slow=341,SNR=16						
ZALV	**Zalesovo Beam**	**1.83**	**283**	Pg	Pn	05 45 44.7	+0.1
	0.9nm,0.3s,baz=102,slow=15,SNR=10						
ZALV				Lg	Lg	05 46 09.9	
	1.7nm,0.3s,baz=104,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**6.46**	**246**	Pn	Pn	05 46 49.0	+0.9
	baz=64,slow=13,SNR=2.6						
KURBB				Lg	Lg	05 48 36.9	
	baz=63,slow=33						
	2.0nm,0.2s						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	Pn	05 47 05.8	+0.9
	0.1nm,0.3s,baz=28,slow=13,SNR=4.2						
MKAR				Sn	Sn	05 48 32.9	+0.4
	0.1nm,0.3s,baz=34,slow=21,SNR=3.7						
MKAR				Lg	Lg	05 49 09.3	
	baz=28,slow=31,SNR=1.8						
	0.2nm,0.4s						

*IDC **26** 05:47:53.0±0.7,6°.40S×143°.58E,h0km,mb4.0/12, mbtmp4.0/15,ML4.1/2,MS3.8/1,Error ellipse: s-maj=28.2km s-min=13.8km az=82.0*
*NEIC **26** 05:47:57.0±1.5,6°.4S±0°.1×143°.4E±0°.1,h19km±6km, mb4.2/14,Error ellipse: s-maj=17.7km s-min=15.0km az=57.0*

ISC 26 05:47:55.3±0.6,6°.49S±0°.07×143°.39E±0°.08,h10km,n35, σ1s75/34,mb4.0/14,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.72**	**128**		**Pn**	**05 49 07.0**	**+0.3**
PMG	**Port Moresby**	**4.72**	**128**	Pn	**Pn**	**05 49 06.1**	**-0.6**
	26nm,0.4s,baz=320,slow=6.7,SNR=9.1						
PMG				Sn	**Sn**	**05 49 58.5**	**-3.0**
	6.0nm,0.3s,baz=70,slow=22,SNR=6.7						
MTN	**Manton Dam**	**13.63**	**242**	Pn	**Pn**	**05 51 08.5**	**-0.3**
CTA	**Charters Tower**	**13.80**	**169**	Pn	**Pn**	**05 51 12.1**	**+1.0**
	0.2nm,0.3s,baz=240,slow=14,SNR=2.1						
CTA				Lg	Lg	05 55 12.7	
	0.2nm,0.3s,baz=234,slow=22,SNR=2.3						
	1.2nm,0.5s						
CTAO	**Charters Tower**	**13.80**	**169**	Pn	**Pn**	**05 51 12.6**	**+1.5**
WB0	**Warramunga Arr**	**15.83**	**213**	Pn	**Pn**	**05 51 38.9**	**+0.5**
WB0				IAmb	IAmb	05 51 46.6	
	comp=Z,9.9nm,1.0s						
WRAB	**Tennant Creek**	**15.99**	**212**	Pn	**Pn**	**05 51 41.1**	**+0.6**
WRAB				IAmb	IAmb	05 51 49.0	
	comp=Z,14nm,0.8s						
WB2	**Warramunga Arr**	**16.00**	**212**	Pn	**Pn**	**05 51 41.1**	**+0.5**
WB2				IAmb	IAmb	05 51 48.8	
	comp=Z,10.0nm,0.8s						
WRA	**Warramunga Arr**	**16.00**	**212**	Pn	**Pn**	**05 51 40.4**	**-0.3**
WRA	**Warramunga Arr**	**16.00**	**212**	Pn	**Pn**	**05 51 39.8**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=29,slow=13,SNR=12						
WRA				Sn	**Sn**	**05 54 32.2**	**-6.1**
	comp=Z,0.4nm,0.3s,baz=36,slow=23,SNR=1.5						
WRA				Lg	Lg	05 56 25.2	
	comp=Z,0.6nm,0.3s,baz=26,slow=29,SNR=6.5						
	comp=Z,3.0nm,0.6s						
KNRA	**Kununurra**	**17.00**	**236**	Pn	**Pn**	**05 51 52.7**	**-0.7**
KNRA				IAmb	IAmb	05 52 18.9	
	comp=Z,64nm,1.5s						
AS31	**Alice Springs**	**19.36**	**207**	P	**P**	**05 52 24.4**	**+3.1**
AS31				IAmb	IAmb	05 52 25.7	
	comp=Z,18nm,0.8s						
ASAR	**Alice Springs**	**19.36**	**207**	P	**P**	**05 52 24.2**	**+2.9**
	comp=Z,51nm,0.7s,baz=36,slow=9.6,SNR=217						
ASAR				S

*IDC **26** 06:03:54.3±1.3,6.06S×143.21E,h0km,mb3.8/3, mbtmp3.9/5,ML1.7/1,Error ellipse: s-maj=45.3km s-min=31.3km az=77.0*

ISC 26 06:03:59.3±1.0,6.3S±0.1×143.1E±0.1,h35km,n7,σ1s57/7, mb3.8/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.12**	**128**	Pn	**Pn**	**06 05 13.2**	**-0.4**
	1.7nm,0.3s,baz=269,slow=17,SNR=1.7						
PMG				Sn	**Sn**	**06 06 12.3**	**+0.7**
	0.9nm,0.3s,baz=215,slow=20,SNR=1.6						
	5.7nm,0.4s						
CTA	**Charters Tower**	**14.10**	**168**	Lg	Lg	06 11 26.9	
	0.2nm,0.3s,baz=356,slow=22,SNR=2.4						
WRA	**Warramunga Arr**	**16.03**	**211**	Pn	**Pn**	**06 07 40.3**	**-1.9**
	0.2nm,0.3s,baz=31,slow=13,SNR=4.8						
WRA				Lg	Lg	06 12 21.8	
	0.1nm,0.3s,baz=140,slow=17,SNR=2.6						
ASAR	**Alice Springs**	**19.42**	**206**	P	**P**	**06 08 24.5**	**+1.8**
	8.5nm,0.8s,baz=34,slow=10.0,SNR=20						
ASAR				Lg	Lg	06 14 07.1	
	baz=118,slow=19						
MKAR	**Makanchi Array**	**75.23**	**322**	P	**P**	**06 15 39.0**	**+0.5**
	0.3nm,0.6s,baz=120,slow=7.3,SNR=4.0						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.69**	**325**	P	**P**	**06 16 30.3**	**+0.8**
	1.4nm,0.7s,baz=121,slow=5.4,SNR=5.2						
	1.4nm,0.7s						
ILAR	**Eielson Array**	**87.27**	**24**	P	**P**	**06 16 40.8**	**-1.2**
	0.4nm,0.7s,baz=263,slow=4.9,SNR=5.5						
	0.4nm,0.7s						

IDC 26 06:05:45.2±2.6,54.15N×86.29E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=20.2km s-min=12.0km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.89**	**257**	I	I	06 10 30.0	
	baz=77,slow=341,SNR=5.0						
ZALV	**Zalesovo Beam**	**0.89**	**257**	Pg	Pg	06 06 00.7	-1.6
	1.5nm,0.3s,baz=75,slow=17,SNR=14						
ZALV				Lg	Lg	06 06 15.7	
	2.6nm,0.3s,baz=77,slow=30,SNR=15						
KURBB	**Kurchatov Arra**	**5.92**	**236**	Pn	Pn	06 07 15.2	+1.1
	0.1nm,0.3s,baz=52,slow=13,SNR=1.6						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.79**	**201**	Pn	Pn	06 07 41.2	+1.3
	0.1nm,0.3s,baz=23,slow=14,SNR=6.9						
	0.2nm,0.4s						

*NEIC **26** 06:06:16.4±2.8,18.7N×0.3±68.37W×0.07,h117km±12km, ML2.6/18,Md2.6/5(RSPR),Error ellipse: s-maj=42.2km s-min=8.9km az=184.0*
*SDD **26** 06:06:19.2±0.4,18.49N×68.37W,h162km±5km,MD3.4, ML2.3,MW2.9*
*RSPR **26** 06:06:21.1,18.33N×68.31W,h120km±2km,MD2.6/5*

ISC 26 06:06:20.0±1.6,18.0N±0.2×68.39W±0.06,h100km,n22, σ2s34/29,9C-2D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.47**	**1**	Pn	**Pn**	**06 06 32.2**	**-3.4**
PCDR				IAML		06 07 05.7	
	comp=E,114nm,1.7s						
PCDR				IAML		06 07 08.5	
	comp=N,240nm,2.2s						
MIDR	**Miches**	**1.13**	**326**	↑eP	**Pn**	**06 06 42.6**	**+0.7**
MIDR				↑eSg	**Sn**	**06 06 59.5**	**+1.2**
MIDR				IAML		06 07 00.0	
	comp=E,19nm,1.7s						
MIDR				IAML		06 07 44.5	
	comp=N,25nm,2.1s						
HATOM	**Hato Mayor del**	**1.20**	**309**	↑eP	**Pn**	**06 06 43.9**	**+1.2**
HATOM				IAML		06 07 01.1	
	comp=N,18nm,0.8s						
HATOM				↑eSg	**Sn**	**06 07 02.2**	**+2.3**
CRPR	**Cabo Rojo, PR**	**1.22**	**91**	↑eP	**Pn**	**06 06 44.9**	**+2.1**
CRPR	**Cabo Rojo, PR**	**1.22**	**91**	eS	**Sn**	**06 07 03.2**	**+3.1**
CRPR	**Cabo Rojo, PR**	**1.22**	**91**		**Pn**	**06 06 41.4**	**-1.5**
CRPR				Sn	**Sn**	**06 07 03.6**	**+3.5**
AOPR	**Arecibo Observ**	**1.58**	**79**	↑eP	**Pn**	**06 06 47.9**	**+0.6**
AOPR	**Arecibo Observ**	**1.58**	**79**	eS	**Sn**	**06 07 08.5**	**+0.5**
AOPR	**Arecibo Observ**	**1.58**	**79**		**Pn**	**06 06 44.4**	**-2.9**
AOPR					**Sn**	**06 07 03.5**	**-4.6**
AOPR				IAML		06 07 12.6	
	comp=E,42nm,0.4s						
AOPR				IAML		06 07 17.5	
	comp=N,38nm,1.6s						
AOPR	**Arecibo Observ**	**1.58**	**79**	↑eP	**Pn**	**06 06 48.5**	**+1.2**
AOPR				↑eSg	**Sn**	**06 07 10.5**	**+2.5**
AOPR				IAML		06 07 14.2	
	comp=E,38nm,0.3s						
AOPR				IAML		06 07 17.2	
	comp=N,36nm,1.4s						
UUPR	**Utuado, UPR, P**	**1.60**	**82**	↓eP	**Pn**	**06 06 48.8**	**+1.3**
UUPR	**Utuado, UPR, P**	**1.60**	**82**	eS	**Sn**	**06 07 09.9**	**+1.5**
UUPR	**Utuado, UPR, P**	**1.60**	**82**		Pn	06 06 43.5	-4.0
UUPR					**Sn**	**06 07 09.5**	**+1.1**
UUPR				IAML		06 07 12.9	
	comp=E,88nm,0.4s						
UUPR				IAML		06 07 14.0	
	comp=N,82nm,0.3s						
OBIP	**Obispado Ponce**	**1.69**	**90**	↓eP	**Pn**	**06 06 50.2**	**+1.5**
OBIP	**Obispado Ponce**	**1.69**	**90**	eS	**Sn**	**06 07 12.2**	**+1.7**
OBIP	**Obispado Ponce**	**1.69**	**90**		**Pn**	**06 06 46.8**	**-1.9**
OBIP					**Sn**	**06 07 11.4**	**+0.9**
OBIP				IAML		06 07 54.2	
	comp=N,23nm,2.3s						
CELP	**Cerrillos**	**1.72**	**88**	↑eP	**Pn**	**06 06 49.9**	**+0.9**
CELP	**Cerrillos**	**1.72**	**88**	eS	**Sn**	**06 07 13.1**	**+2.0**
CELP	**Cerrillos**	**1.72**	**88**		**Pn**	**06 06 45.9**	**-3.1**
CELP					**Sn**	**06 07 10.5**	**-0.6**
CELP				IAML		06 07 47.0	
	comp=N,24nm,2.9s						
EMPR	**Esperanza - Ma**	**1.82**	**76**	Pn	**Pn**	**06 06 47.9**	**-2.3**
GCPR	**Guaynabo City**	**2.21**	**83**	Pn	**Pn**	**06 06 51.6**	**-3.6**
GCPR				IAML		06 07 38.2	
	comp=N,21nm,3.0s						
GCPR				IAML		06 08 15.7	
	comp=E,32nm,3.5s						
PAPH	**Port-au-Prince**	**3.75**	**278**	Pn	**Pn**	**06 07 12.9**	**-2.9**

*IDC **26** 06:11:06.1±0.8,6.21S×143.77E,h0km,mb4.0/9, mbtmp4.0/11,ML2.0/1,Error ellipse: s-maj=39.2km s-min=18.5km az=73.0*

ISC 26 06:11:08.2±0.9,6.4S±0.1×143.5E±0.1,h10km,n13, σ1s54/11,mb4.0/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.68**	**130**	Pn	**Pn**	**06 12 18.4**	**-0.6**
	5.1nm,0.3s,baz=340,slow=5.0,SNR=5.6						
PMG				Sn	**Sn**	**06 13 13.7**	**+0.2**
	3.9nm,0.3s,baz=359,slow=11,SNR=3.5						
	21nm,0.5s						
CTA	**Charters Tower**	**13.88**	**169**	Lg	Lg	06 18 28.8	
	baz=255,slow=9.8						
WRA	**Warramunga Arr**	**16.16**	**213**	Pn	**Pn**	**06 14 53.1**	**-2.6**
	0.4nm,0.3s,baz=31,slow=13,SNR=4.2						
WRA				Sn	Sn	06 17 44.2	-11
	baz=4.8,slow=12						
WRA				Lg	Lg	06 19 41.7	
	0.3nm,0.3s,baz=29,slow=30,SNR=4.5						
ASAR	**Alice Springs**	**19.52**	**207**	P	**P**	**06 15 38.3**	**+2.4**
	12nm,0.7s,baz=33,slow=10,SNR=37						
ASAR				Lg	Lg	06 21 26.1	
	baz=104,slow=40						
STKA	**Stephens Creek**	**25.43**	**184**	P	**P**	**06 16 37.9**	**+1.7**
	1.0nm,0.6s,baz=7.2,slow=6.6,SNR=2.9						
	1.0nm,0.6s						
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**06 21 37.1**	**+0.8**
	0.4nm,0.7s,baz=147,slow=7.3,SNR=2.5						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**75.62**	**322**	P	**P**	**06 22 53.2**	**-0.3**
	1.2nm,0.9s,baz=106,slow=6.7,SNR=8.3						
	1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**77.53**	**329**	P	**P**	**06 23 04.5**	**+0.4**
	0.3nm,0.4s,baz=114,slow=7.0,SNR=1.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**79.49**	**324**	P	**P**	**06 23 13.7**	**-1.3**
	0.4nm,0.2s,baz=98,slow=4.0,SNR=1.4						
	0.4nm,0.2s						
QSPA	**South Pole Qui**	**83.58**	**180**	P	**P**	**06 23 36.3**	**-0.4**
	2.7nm,0.9s,baz=317,slow=1.5,SNR=9.8						
	2.7nm,0.9s						
NRIK	**Norilʹsk**	**84.60**	**343**	P	P	06 23 39.2	-2.3
	1.4nm,0.4s,baz=156,slow=8.7,SNR=4.7						
	1.4nm,0.4s						
BVAR	**Borovoye Array**	**85.06**	**325**	P	**P**	**06 23 43.5**	**-0.7**
	0.7nm,0.7s,baz=109,slow=8.0,SNR=4.2						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**87.21**	**24**	P	P	06 23 52.5	-2.0
	0.4nm,0.7s,baz=253,slow=4.6,SNR=6.1						
	0.4nm,0.7s						

*IDC **26** 06:15:25.7±1.6,25.05S×179.90E,h503km±16km, mb3.7/13,mbtmp4.5/16,Error ellipse: s-maj=21.0km s-min=14.9km az=166.0*
*NEIC **26** 06:15:27.4±1.4,25.0S±0.1×179.9E±0.1,h517km±5km, mb4.4/83,Error ellipse: s-maj=20.4km s-min=16.3km az=121.0*

ISC 26 06:15:25.4±0.4,25.09S±0.07×179.85E±0.08,h501km, n144,σ0s98/145,mb4.4/56,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.60**	**155**	P	**P**	**06 16 50.3**	**+1.5**
	218nm,0.3s,baz=85,slow=22,SNR=2.5						
RAO				S	**S**	**06 17 53.2**	**-3.8**
	123nm,0.2s,baz=258,slow=22,SNR=1.5						
MARNC	**Mare, Loyalty**	**11.44**	**286**	P	**P**	**06 17 59.5**	**+1.4**
PINNC	**Pines Island,**	**11.62**	**280**	P	**P**	**06 18 02.1**	**+2.1**
OUENC	**Ouen Island, N**	**12.21**	**280**	P	**P**	**06 18 07.7**	**+1.5**
LIFNC	**LIFOU**	**12.38**	**288**	P	**P**	**06 18 08.0**	**-0.1**
DZM	**Mont Dzumac**	**12.65**	**281**	P	**P**	**06 18 13.2**	**+2.1**
DZM	**Mont Dzumac**	**12.65**	**281**	P	**P**	**06 18 12.7**	**+1.6**
	17nm,0.9s,baz=193,slow=23,SNR=14						
URZ	**Urewera**	**13.34**	**189**	P	**P**	**06 18 17.2**	**-0.8**
	5.7nm,0.5s,baz=358,slow=5.4,SNR=10						
URZ				S	**S**	**06 20 40.3**	**+0.1**
	10.0nm,0.8s,baz=213,slow=15,SNR=2.6						
ARMA	**Armidale**	**25.50**	**252**	P	**P**	**06 20 15.8**	**+2.4**
EIDS	**Eidsvold**	**26.01**	**263**	P	**P**	**06 20 19.2**	**+1.3**
EIDS				IAmb	IAmb	06 20 45.6	
	comp=Z,17nm,1.4s						
CTA	**Charters Tower**	**31.36**	**272**	P	**P**	**06 21 05.1**	**+0.4**
	comp=Z,14nm,0.3s,baz=95,slow=10,SNR=22						
	comp=Z,14nm,0.3s						
CTAO	**Charters Tower**	**31.36**	**272**	P	**P**	**06 21 05.7**	**+1.0**
TOO	**Toolangi**	**31.70**	**239**	P	**P**	**06 21 09.0**	**+1.6**
TOO				IAmb	IAmb	06 21 19.7	
	comp=Z,10nm,1.2s						
STKA	**Stephens Creek**	**34.17**	**250**	P	**P**	**06 21 29.9**	**+1.6**
STKA	**Stephens Creek**	**34.17**	**250**	P	**P**	**06 21 29.1**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=91,slow=5.1,SNR=3.5						
	comp=Z,1.3nm,0.4s						
COEN	**Coen**	**36.18**	**281**	P	**P**	**06 21 45.9**	**+0.6**
COEN				IAmb	IAmb	06 21 46.7	
	comp=Z,9.9nm,0.9s						
BBOO	**Buckleboo**	**38.87**	**248**	P	**P**	**06 22 06.9**	**-0.3**
BBOO				IAmb	IAmb	06 22 08.4	
	comp=Z,7.2nm,0.8s						
AS31	**Alice Springs**	**41.72**	**262**	P	**P**	**06 22 30.9**	**+0.7**
ASAR	**Alice Springs**	**41.72**	**262**	P	**P**	**06 22 30.0**	**-0.2**
ASAR	**Alice Springs**	**41.72**	**262**	P	**P**	**06 22 31.1**	**+1.0**
	comp=Z,3.4nm,0.4s,baz=93,slow=7.5,SNR=12						
ASAR				PcP	**PcP**	**06 24 15.6**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=86,slow=4.8,SNR=2.0						
ASAR				S	**S**	**06 28 05.7**	**-5.0**
	comp=Z,0.5nm,0.8s,baz=330,slow=39,SNR=4.3						
	comp=Z,3.4nm,0.4s						
WB2	**Warramunga Arr**	**42.19**	**267**	P	**P**	**06 22 33.7**	**-0.2**
WB2				IAmb	IAmb	06 22 34.7	
	comp=Z,15nm,0.8s						
WRAB	**Tennant Creek**	**42.20**	**268**	P	**P**	**06 22 33.7**	**-0.3**
WRAB				IAmb	IAmb	06 22 41.5	
	comp=Z,8.9nm,0.9s						
WB0	**Warramunga Arr**	**42.20**	**268**	P	**P**	**06 22 33.9**	**-0.1**
WB0				IAmb	IAmb	06 22 34.6	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**06 22 33.8**	**-0.2**
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**06 22 33.5**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=100,slow=7.2,SNR=22						
WRA				S	S	06 28 06.7	-11
	comp=Z,0.6nm,0.6s,baz=32,slow=11,SNR=2.4						
	comp=Z,5.9nm,0.5s						
FORT	**Forrest**	**45.78**	**251**	P	**P**	**06 23 00.2**	**-1.4**
FORT				IAmb	IAmb	06 23 03.7	
	comp=Z,15nm,0.7s						
WAKE	**Wake Island**	**45.94**	**343**	P	**P**	**06 23 02.2**	**-0.6**
KNRA	**Kununurra**	**48.56**	**271**	P	**P**	**06 23 23.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**50.61**	**267**	P	**P**	**06 23 37.9**	**-0.1**
PSA00	**Pilbara Seismi**	**54.82**	**260**	P	**P**	**06 24 07.6**	**-0.4**
PSA00				IAmb	IAmb	06 24 17.3	
	comp=Z,15nm,1.2s						
TOLI2	**Tolitoli**	**62.75**	**285**	P	**P**	**06 25 00.6**	**-1.0**
TOLI2				IAmb	IAmb	06 25 02.4	
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**65.00**	**180**	P	**P**	**06 25 17.1**	**+1.9**
JMZ	**Minamidaito 2**	**69.05**	**314**	P	**P**	**06 25 40.3**	**-0.4**
JGF	**Kuroka**	**72.51**	**325**	P	**P**	**06 26 00.2**	**-0.8**
JGF				IAmb	IAmb	06 26 07.2	
	comp=Z,14nm,1.4s						
MJAR	**Matsushiro Arr**	**72.80**	**326**	P	**P**	**06 26 01.7**	**-0.9**
	comp=Z,4.9nm,0.7s,baz=166,slow=5.2,SNR=11						
	comp=Z,4.9nm,0.7s						
MAJO	**Matsushiro**	**72.80**	**326**	P	**P**	**06 26 02.5**	**-0.1**
MAJO				IAmb	IAmb	06 26 03.0	
	comp=Z,8.6nm,0.7s						
MJB9	**Matsu-Tunnel**	**72.80**	**326**	P	**P**	**06 26 03.5**	**+0.9**
MJB9				IAmb	IAmb	06 26 04.0	
	comp=Z,8.5nm,0.7s						
JNU	**Nakatsue**	**74.32**	**319**	P	**P**	**06 26 11.0**	**-0.4**
JNU				IAmb	IAmb	06 26 16.9	
	comp=Z,28nm,1.4s						
BELA	**Belgrano 2**	**75.28**	**173**	P	**P**	**06 26 16.7**	**+0.6**
ADK	**Adak**	**76.70**	**2**	P	**P**	**06 26 23.8**	**-0.3**
KSRS	**Korea Array**	**79.07**	**320**	P	**P**	**06 26 38.1**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=137,slow=6.2,SNR=11						
	comp=Z,2.5nm,0.7s						
KSAR	**Wonju Array Be**	**79.08**	**320**	P	**P**	**06 26 37.5**	**+0.1**
PEA0B	**Petropavlovsk-**	**80.22**	**347**	P	**P**	**06 26 43.3**	**+0.3**
PEA0B				IAmb	IAmb	06 26 43.9	
	comp=Z,39nm,1.5s						
PETK	**Petropavlovsk-**	**80.22**	**347**	P	**P**	**06 26 42.3**	**-0.7**
PETK	**Petropavlovsk-**	**80.22**	**347**	P	**P**	**06 26 42.9**	**-0.1**
	comp=Z,8.7nm,0.8s,baz=123,slow=6.7,SNR=16						
	comp=Z,8.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**81.68**	**327**	P	**P**	**06 26 51.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**81.68**	**327**	P	**P**	**06 26 51.4**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=124,slow=5.4,SNR=5.0						
	comp=Z,2.8nm,0.6s						
NVAR	**Mina Array Bea**	**85.70**	**44**	P	**P**	**06 27 11.9**	**+0.8**
NVAR	**Mina Array Bea**	**85.70**	**44**	P	**P**	**06 27 12.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=222,slow=8.6,SNR=8.0						
	comp=Z,0.7nm,0.6s						
NV11	**Mina Array Sit**	**85.79**	**44**	P	**P**	**06 27 12.3**	**+0.7**
KVN	**Kaiserville**	**86.20**	**44**	P	**P**	**06 27 14.1**	**+0.5**
N15K	**Kwethluk River**	**86.52**	**10**	P	**P**	**06 27 15.0**	**+0.7**
Q19K	**Cape Douglas,**	**86.54**	**13**	P	**P**	**06 27 14.3**	**-0.1**
O19K	**Port Alsworth**	**87.57**	**13**	P	**P**	**06 27 18.7**	**-0.5**
CNPM	**China Poot**	**87.61**	**14**	P	**P**	**06 27 19.6**	**+0.1**
ILSW	**Iliamna Southw**	**87.61**	**13**	P	**P**	**06 27 19.4**	**-0.1**
ILSW				IAmb	IAmb	06 27 20.0	
	comp=Z,8.1nm,0.8s						
N18K	**Kilae Creek**	**87.72**	**12**	P	**P**	**06 27 19.2**	**-0.7**
N18K				IAmb	IAmb	06 27 32.4	
	comp=Z,13nm,1.2s						
BRLK	**Bradley Lake**	**87.90**	**14**	P	**P**	**06 27 20.8**	**0.0**
M17K	**Holitna River**	**88.12**	**11**	P	**P**	**06 27 21.9**	**+0.1**
K15K	**Wolf Creek Mou**	**88.35**	**9**	P	**P**	**06 27 23.7**	**+1.0**
K15K				IAmb	IAmb	06 27 26.2	
	comp=Z,12nm,1.2s						
GNW	**Green Mountain**	**88.78**	**35**	P	**P**	**06 27 25.3**	**+0.2**
L18K	**Granite Mounta**	**89.01**	**11**	P	**P**	**06 27 26.4**	**+0.5**
M19K	**Big River Lodg**	**89.13**	**12**	P	**P**	**06 27 26.5**	**+0.1**
M19K				IAmb	IAmb	06 27 50.9	
	comp=Z,10nm,1.3s						
K17K	**Iditarod**	**89.22**	**10**	P	**P**	**06 27 27.5**	**+0.7**
L19K	**White Mountain**	**89.30**	**12**	P	**P**	**06 27 27.8**	**+0.5**
L19K				IAmb	IAmb	06 27 28.3	
	comp=Z,5.4nm,0.8s						
J16K	**Anvik River**	**89.42**	**9**	P	**P**	**06 27 28.3**	**+0.5**
J16K				IAmb	IAmb	06 27 55.0	
	comp=Z,14nm,1.5s						
SUA	**Susitna One**	**89.46**	**14**	P	**P**	**06 27 28.2**	**+0.1**
SUA				IAmb	IAmb	06 27 28.5	
	comp=Z,4.3nm,0.7s						
SKT	**Skwentna**	**89.76**	**13**	P	**P**	**06 27 28.8**	**-0.6**
SKT				IAmb	IAmb	06 27 32.7	
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	**89.81**	**290**	P	**P**	**06 27 32.5**	**+1.8**
	comp=Z,1.8nm,0.3s,baz=147,slow=3.2,SNR=11						
	comp=Z,1.8nm,0.3s						
KNK	**Knik Glacier**	**89.92**	**15**	P	**P**	**06 27 29.9**	**-0.3**
GHO	**Glory Hole Cre**	**90.13**	**14**	P	**P**	**06 27 31.3**	**+0.1**
J18K	**Innoko River**	**90.17**	**10**	P	**P**	**06 27 31.2**	**0.0**
J18K				IAmb	IAmb	06 27 32.0	
	comp=Z,6.3nm,0.9s						
K20K	**Telida**	**90.53**	**11**	P	**P**	**06 27 32.5**	**-0.4**
K20K				IAmb	IAmb	06 27 33.4	
	comp=Z,4.9nm,1.1s						
SCM	**Sheep Creek Mo**	**90.55**	**15**	P	**P**	**06 27 33.5**	**+0.4**
SCM				IAmb	IAmb	06 27 59.6	
	comp=Z,10nm,1.5s						
J19K	**Poorman**	**90.85**	**11**	P	**P**	**06 27 34.0**	**-0.4**
CAST	**Castle Rocks**	**90.95**	**12**	P	**P**	**06 27 33.4**	**-1.5**
CAST				IAmb	IAmb	06 27 35.9	
	comp=Z,3.9nm,1.1s						
N25K	**Chitina, Valde**	**91.02**	**16**	P	**P**	**06 27 35.0**	**-0.3**
TX31	**Lajitas Ar. Si**	**91.17**	**58**	P	**P**	**06 27 37.6**	**+0.8**
TXAR	**Lajitas Array**	**91.17**	**58**	P	**P**	**06 27 38.3**	**+1.5**
TXAR	**Lajitas Array**	**91.17**	**58**	P	**P**	**06 27 38.0**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=220,slow=7.2,SNR=8.9						
	comp=Z,1.0nm,0.8s						
G16K	**Koyuk River**	**91.23**	**7**	P	**P**	**06 27 35.9**	**-0.2**
G16K				IAmb	IAmb	06 27 53.2	
	comp=Z,7.8nm,1.5s						
J20K	**Nowinta River**	**91.27**	**11**	P	**P**	**06 27 36.2**	**-0.1**
F15K	**North Star Dit**	**91.28**	**6**	P	**P**	**06 27 36.3**	**0.0**
BARN	**Barnard Glacie**	**91.33**	**18**	P	**P**	**06 27 37.6**	**+0.7**
TRF	**Thorofare Moun**	**91.33**	**13**	P	**P**	**06 27 35.7**	**-1.1**
TRF				IAmb	IAmb	06 27 41.5	
	comp=Z,4.4nm,1.2s						
CTGM	**Chitina Glacie**	**91.34**	**18**	P	**P**	**06 27 37.3**	**+0.4**
RND	**Reindeer**	**91.59**	**14**	P	**P**	**06 27 37.5**	**-0.4**
RND				IAmb	IAmb	06 27 38.0	
	comp=Z,4.9nm,0.8s						
BSUT	**Blindstream Ca**	**91.70**	**46**	P	**P**	**06 27 40.1**	**+0.7**
BSUT				IAmb	IAmb	06 27 40.9	
	comp=Z,3.9nm,0.8s						
M27K	**Edge Creek, AK**	**92.35**	**17**	P	**P**	**06 27 41.9**	**+0.4**
M27K				IAmb	IAmb	06 27 54.1	
	comp=Z,3.8nm,1.1s						
F17K	**Baldwin Pennin**	**92.37**	**7**	P	**P**	**06 27 41.8**	**+0.5**
I21K	**Tanana**	**92.57**	**12**	P	**P**	**06 27 42.0**	**-0.2**
I21K				IAmb	IAmb	06 28 07.2	
	comp=Z,9.5nm,1.5s						
G19K	**Purcell Mounta**	**92.63**	**9**	P	**P**	**06 27 42.4**	**-0.1**
MLY	**Manley**	**92.67**	**12**	P	**P**	**06 27 41.1**	**-1.6**
WRH	**Wood River Hil**	**92.69**	**13**	P	**P**	**06 27 41.3**	**-1.6**
H21K	**Melozitna Rive**	**92.86**	**11**	P	**P**	**06 27 43.5**	**-0.1**
H21K				IAmb	IAmb	06 27 46.1	
	comp=Z,3.9nm,1.4s						
HDA	**Harding Lake**	**92.88**	**14**	P	**P**	**06 27 42.9**	**-0.8**
HDA				IAmb	IAmb	06 27 43.8	
	comp=Z,1.8nm,0.6s						
CCB	**Clear Creek Bu**	**92.91**	**13**	P	**P**	**06 27 42.8**	**-1.0**
IMAR	**Indian Mountai**	**93.00**	**11**	P	**P**	**06 27 44.0**	**-0.2**
F19K	**Shaleruckik Mo**	**93.18**	**9**	P	**P**	**06 27 45.0**	**0.0**
F19K				IAmb	IAmb	06 27 58.7	
	comp=Z,3.1nm,1.3s						
ILAR	**Eielson Array**	**93.21**	**14**	P	**P**	**06 27 44.0**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=221,slow=5.1,SNR=6.2						
	comp=Z,0.7nm,0.8s						
M29M	**Somme Creek**	**93.35**	**18**	P	**P**	**06 27 46.5**	**+0.5**
M29M				IAmb	IAmb	06 27 47.4	
	comp=Z,5.5nm,1.4s						
E18K	**Tukpahlearik C**	**93.38**	**7**	P	**P**	**06 27 46.2**	**+0.2**
E18K				IAmb	IAmb	06 28 11.5	
	comp=Z,5.7nm,1.5s						
PDAR	**Pinedale Array**	**93.64**	**44**	P	**P**	**06 27 48.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=251,slow=2.8,SNR=2.6						
	comp=Z,0.4nm,0.8s						
K27K	**Chicken**	**93.69**	**16**	P	**P**	**06 27 48.5**	**+1.0**
K27K				IAmb	IAmb	06 27 48.5	
	comp=Z,1.9nm,0.8s						
J26L	**Joseph Creek**	**93.72**	**15**	P	**P**	**06 27 48.1**	**+0.4**
J26L				IAmb	IAmb	06 27 48.6	
	comp=Z,2.0nm,0.8s						
E19K	**Redstone River**	**93.84**	**9**	P	**P**	**06 27 48.3**	**+0.3**
M30M	**Minto, Yukon**	**93.93**	**19**	P	**P**	**06 27 49.0**	**+0.5**
C18K	**Utukok River**	**94.49**	**7**	P	**P**	**06 27 51.0**	**0.0**
C18K				IAmb	IAmb	06 28 05.4	
	comp=Z,3.1nm,1.4s						
C19K	**Lookout Ridge**	**95.11**	**7**	P	**P**	**06 27 53.9**	**0.0**
C19K				IAmb	IAmb	06 27 54.2	
	comp=Z,1.3nm,0.7s						
I28M	**Miner Creek**	**95.38**	**16**	P	**P

mbtmp4.4/15,MS3.2/1,Error ellipse: s-maj=18.0km s-min=12.4km az=72.0

ISC 26 06:26:57.6±0.3,15°10S±0'04×71°42W±0'05,h133km, n230,σ1§75/236,mb4.6/43,Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
LPAZ	**La Paz**	**3.38**	**111**		**Pn**	**06 27 52.3**	**+2.4**
PB12	**IPOC Station P**	**3.65**	**164**		**Pn**	**06 27 52.0**	**-0.9**
PB12				Sn	**Sn**	**06 28 33.9**	**-1.9**
PB16	**IPOC Station P**	**3.71**	**151**		**Pn**	**06 27 54.8**	**+0.7**
PB16				Sn	**Sn**	**06 28 39.5**	**+1.8**
PB11	**IPOC Station P**	**4.94**	**160**		**Pn**	**06 28 08.3**	**-1.7**
GO01	**Chusmiza**	**5.02**	**155**		**Pn**	**06 28 11.8**	**+0.3**
TA02	**Huaiquique**	**5.29**	**167**		**Pn**	**06 28 12.9**	**-1.7**
PB08	**IPOC Station P**	**5.46**	**157**		**Pn**	**06 28 16.3**	**-0.9**
TA01	**Diego Aracena**	**5.57**	**168**	Pn	**Pn**	**06 28 16.4**	**-1.9**
PATCX	**Punta Patache**	**5.82**	**168**		**Pn**	**06 28 19.5**	**-2.3**
NNA	**Nana**	**6.11**	**300**		**Pn**	**06 28 25.7**	**0.0**
NNA	**Nana**	**6.11**	**300**	P	**Pn**	**06 28 25.9**	**+0.2**
	57nm,0.4s,baz=122,slow=11,SNR=21						
NNA				S	**Sn**	**06 29 31.3**	**-3.2**
	171nm,0.4s,baz=29,slow=10,SNR=22						
PB01	**IPOC Station P**	**6.19**	**163**		**Pn**	**06 28 24.6**	**-2.3**
PB02	**IPOC Station P**	**6.36**	**167**		**Pn**	**06 28 26.5**	**-2.6**
PB07	**IPOC Station P**	**6.75**	**168**		**Pn**	**06 28 32.3**	**-2.2**
PB09	**IPOC Station P**	**6.98**	**163**		**Pn**	**06 28 35.9**	**-1.5**
PB04	**IPOC Station P**	**7.30**	**171**		**Pn**	**06 28 39.0**	**-2.8**
ETMB	**Extrema**	**7.30**	**45**		**Pn**	**06 28 42.6**	**+0.9**
CZSB	**Cruzeiro do Su**	**7.43**	**350**		**Pn**	**06 28 42.6**	**-0.8**
CZSB	**Cruzeiro do Su**	**7.43**	**350**	*eS*	**Sn**	**06 30 01.4**	**-4.9**
PB06	**IPOC Station P**	**7.77**	**167**		**Pn**	**06 28 45.0**	**-3.0**
LVC	**Limon Verde**	**7.84**	**163**		**Pn**	**06 28 47.3**	**-1.9**
LVC	**Limon Verde**	**7.84**	**163**	P	**Pn**	**06 28 47.6**	**-1.6**
	156nm,0.4s,baz=337,slow=9.4,SNR=264						
LVC				S	**Sn**	**06 30 08.8**	**-8.0**
	22nm,0.4s,baz=213,slow=21,SNR=1.7						
LVC				LR	LR	06 32 11.2	
	comp=Z,151nm,19.7s,baz=5.0,slow=40						
LVC	**Limon Verde**	**7.84**	**163**	*eP*	Pn	06 28 38.8	-10
LVC				*eS*	**Sn**	**06 30 08.2**	**-8.5**
PB15	**IPOC Station P**	**8.28**	**167**		**Pn**	**06 28 51.9**	**-3.1**
AF01	**San Pedro de A**	**8.39**	**159**		**Pn**	**06 28 55.0**	**-1.6**
PB10	**IPOC Station P**	**8.41**	**175**		**Pn**	**06 28 53.4**	**-3.2**
PB14	**IPOC Station P**	**9.53**	**174**	Pn	**Pn**	**06 29 08.5**	**-3.4**
SIV	**San Ignacio**	**10.01**	**96**	P	**Pn**	**06 29 16.5**	**-1.6**
	15nm,0.8s,baz=274,slow=12,SNR=44						
SAML	**Samuel**	**10.11**	**54**	Pn	**Pn**	**06 29 18.1**	**-1.3**
SAML	**Samuel**	**10.11**	**54**	*eP*	Pn	06 29 12.8	-6.6
GO02	**Mina Guanaco**	**10.16**	**171**	Pn	**Pn**	**06 29 17.4**	**-3.0**
ATAH	**Atahualpa**	**10.46**	**318**	P	**Pn**	**06 29 27.4**	**+2.9**
	7.3nm,0.6s,baz=330,slow=21,SNR=6.7						
BBSD	**Serra de San D**	**10.59**	**103**	*eP*	Pn	06 29 19.3	-6.6
TBTG	**Tabatinga, AM**	**10.94**	**8**	Pn	**Pn**	**06 29 30.4**	**-0.1**
TBTG	**Tabatinga, AM**	**10.94**	**8**	*eS*	**Sn**	**06 31 26.6**	**-4.7**
AC01	**Pan de Azucar**	**11.02**	**176**	Pn	**Pn**	**06 29 28.2**	**-3.4**
VILB	**Vilhena**	**11.09**	**80**	Pn	**Pn**	**06 29 31.0**	**-1.6**
BBRB	**Robore, Bolivi**	**11.56**	**107**	*eP*	**Pn**	**06 29 34.4**	**-4.4**
PTLB	**Pontes e Lacer**	**11.86**	**93**	Pn	**Pn**	**06 29 41.4**	**-1.2**
AC02	**Maricunga**	**11.88**	**170**	Pn	**Pn**	**06 29 41.1**	**-2.1**
GO03	**Copiap**	**12.49**	**175**	Pn	**Pn**	**06 29 49.2**	**-1.6**
AC04	**Llanos de Chal**	**13.05**	**179**	Pn	**Pn**	**06 29 54.6**	**-3.4**
TEFE	**Tefe**	**13.31**	**31**	*eP*	Pn	06 29 58.2	-3.3
MCRA	**Macar, Loja**	**13.57**	**321**		**Pn**	**06 30 03.8**	**-1.1**
AC05	**El Transito**	**13.72**	**176**	Pn	**Pn**	**06 30 05.9**	**-0.8**
LCO	**Las Campanas**	**13.87**	**177**	Pn	**Pn**	**06 30 07.2**	**-1.6**
MURT	**Porto Murtinho**	**14.64**	**119**	*eP*	**Pn**	**06 30 15.9**	**-2.4**
PDRB	**Porto dos Gac**	**14.71**	**78**	*eP*	**Pn**	**06 30 16.1**	**-3.1**
COHC	**Cochancay**	**14.74**	**328**		**Pn**	**06 30 19.9**	**+0.3**
CO05	**La Serena**	**14.76**	**179**	Pn	**Pn**	**06 30 19.0**	**-0.7**
CO01	**Juntas del Tor**	**14.86**	**176**	Pn	**Pn**	**06 30 20.1**	**-1.2**
CO06	**Fray Jorge**	**15.51**	**181**	Pn	**Pn**	**06 30 27.6**	**-1.5**
CO06				IAmb	IAmb	06 30 32.3	
	comp=Z,30nm,0.8s						
CO03	**El Pedregal**	**15.69**	**178**	Pn	**Pn**	**06 30 30.2**	**-1.2**
CO03				IAmb	IAmb	06 30 35.0	
	comp=Z,40nm,0.8s						
MACA	**Manacapuru-AM**	**15.89**	**43**	Pn	**Pn**	**06 30 33.0**	**-1.0**
MACA				IAmb	IAmb	06 30 36.4	
	comp=Z,29nm,0.7s						
MACA	**Manacapuru-AM**	**15.89**	**43**	*eP*	**Pn**	**06 30 32.9**	**-1.1**
SLOR	**San Lorenzo -**	**15.89**	**333**	Pn	**Pn**	**06 30 32.6**	**-1.9**
CO02	**Combarbal**	**16.04**	**179**	Pn	**Pn**	**06 30 34.0**	**-1.7**
CO02				IAmb	IAmb	06 30 38.9	
	comp=Z,52nm,0.8s						
PULU	**Pululahua**	**16.57**	**334**	Pn	**Pn**	**06 30 40.1**	**-2.6**
PULU				IAmb	IAmb	06 30 54.4	
	comp=Z,44nm,0.9s						
IMBA	**Imbabura, San**	**16.68**	**336**	Pn	**P**	**06 30 39.2**	**-5.0**
IMBA				IAmb	IAmb	06 30 56.2	
	comp=Z,26nm,0.9s						
OTAV	**Otavalo**	**16.75**	**335**	Pn	**P**	**06 30 41.1**	**-3.8**
CPUP	**Villa Florida**	**17.26**	**133**	P	**Pn**	**06 30 50.4**	**-0.2**
CPUP	**Villa Florida**	**17.26**	**133**	P	**P**	**06 30 49.2**	**-0.8**
	comp=Z,7.7nm,0.7s,baz=305,slow=12,SNR=16						
VA06	**Catapilco**	**17.39**	**180**	P	**P**	**06 30 49.4**	**-1.9**
VA03	**San Esteban**	**17.61**	**178**	P	**P**	**06 30 52.4**	**-1.5**
VA03				IAmb	IAmb	06 30 56.9	
	comp=Z,25nm,0.8s						
NPGB	**Novo Progresso**	**17.66**	**65**	*eP*	**P**	**06 30 55.5**	**+1.0**
PEL	**Peldehue**	**17.98**	**178**	P	**Pn**	**06 30 57.9**	**-1.3**
MT02	**Curacav**	**18.09**	**179**	P	**Pn**	**06 30 59.2**	**-1.1**
MT05	**Renca**	**18.23**	**178**	P	**P**	**06 30 59.4**	**-1.2**
MT05				IAmb	IAmb	06 31 02.2	
	comp=Z,46nm,1.4s						
MT03	**Universidad Ad**	**18.34**	**178**	P	**P**	**06 30 59.9**	**-1.9**
VA05	**Santo Domingo**	**18.48**	**181**	P	**P**	**06 31 01.5**	**-1.8**
VA05				IAmb	IAmb	06 31 07.2	
	comp=Z,44nm,1.1s						
MT13	**San Alfonso**	**18.60**	**177**	P	**P**	**06 31 03.0**	**-1.6**
MT13				IAmb	IAmb	06 31 08.2	
	comp=Z,52nm,1.5s						
MT09	**Talagante**	**18.60**	**179**	P	**P**	**06 31 04.3**	**-0.5**
MT01	**Popeta**	**18.69**	**180**	P	**Pn**	**06 31 05.9**	**-1.5**
MT01				IAmb	IAmb	06 31 09.9	
	comp=Z,24nm,0.8s						
LMEL	**Las Melosas**	**18.70**	**177**	P	**Pn**	**06 31 07.5**	**-0.3**
LMEL				IAmb	IAmb	06 31 10.8	
	comp=Z,26nm,0.7s						
ITTB	**Itaituba**	**18.76**	**57**	*eP*	**P**	**06 31 07.3**	**+0.8**
ITTB				*eS*	**Sn**	**06 34 40.1**	**+0.6**
MCR1	**Marechal Candi**	**18.81**	**122**	*eP*	**Pn**	**06 31 07.8**	**-1.1**
BO04	**La Punta**	**18.83**	**178**	P	**Pn**	**06 31 07.9**	**-1.3**
BO01	**Tunca**	**19.22**	**179**	P	**Pn**	**06 31 12.0**	**-1.7**
TRCB	**Terra Rica**	**19.33**	**116**	P	**P**	**06 31 12.9**	**+0.2**
TRCB				IAmb	IAmb	06 31 15.1	
	comp=Z,16nm,0.6s						
TRCB	**Terra Rica**	**19.33**	**116**	*eP*	**P**	**06 31 12.6**	**-0.1**
TRCB				*eS*	**Sn**	**06 34 51.1**	**-2.1**
BO02	**Sierra Bellavi**	**19.62**	**178**	P	**Pn**	**06 31 17.2**	**-1.3**
BO02				IAmb	IAmb	06 31 18.1	
	comp=Z,23nm,0.8s						
VA04	**Juan Fernndez**	**19.65**	**199**	P	**P**	**06 31 16.5**	**+0.6**
VA04				IAmb	IAmb	06 31 17.5	
	comp=Z,36nm,0.8s						
SNDB	**Serra Nova Dou**	**19.81**	**83**	*eP*	**P**	**06 31 18.9**	**+1.0**
ITQB	**Itaqui**	**19.91**	**139**	P	**P**	**06 31 19.4**	**+0.6**
ITQB				IAmb	IAmb	06 31 20.2	
	comp=Z,39nm,1.1s						
PCMB	**Pacaembu**	**20.19**	**112**	*eP*	**P**	**06 31 21.6**	**-0.4**
FRBT	**Francisco Belt**	**20.29**	**125**	*eP*	**P**	**06 31 22.4**	**-0.6**
CRSM	**Crissiumal (Br**	**20.32**	**130**	*eP*	**P**	**06 31 23.2**	**-0.2**
CRSM				*eS*	Sn	06 35 08.8	-7.8
BOAV	**Boa Vista**	**20.45**	**33**	P	**P**	**06 31 26.2**	**+1.4**
BOAV				IAmb	IAmb	06 31 29.5	
	comp=Z,15nm,0.6s						
BOAV	**Boa Vista**	**20.45**	**33**	*eP*	**P**	**06 31 26.2**	**+1.4**
UNIS	**Unistalda (Bra**	**20.53**	**135**	*eP*	**P**	**06 31 25.3**	**-0.2**
PTGB	**Pitanga**	**20.54**	**121**	*eP*	**P**	**06 31 25.8**	**+0.1**
ML02	**Panimavida**	**20.58**	**180**	P	**P**	**06 31 26.3**	**+0.3**
ML02				IAmb	IAmb	06 31 31.4	
	comp=Z,25nm,0.8s						
ITRB	**Iturama**	**20.61**	**106**	*eP*	**P**	**06 31 26.6**	**+0.1**
LDASE	**Londrina, Braz**	**20.85**	**116**	*eP*	**P**	**06 31 28.7**	**-0.4**
RODS	**Rosario do Sul**	**21.27**	**138**	*eP*	**P**	**06 31 33.3**	**-0.2**
MALB	**Monte Alegre**	**21.44**	**54**	*eP*	**P**	**06 31 34.8**	**-0.6**
ITAB	**Concordia**	**21.63**	**127**	P	**P**	**06 31 36.0**	**-1.3**
ITAB				IAmb	IAmb	06 31 40.0	
	comp=Z,22nm,0.8s						
ITAB	**Concordia**	**21.63**	**127**	*eP*	**P**	**06 31 36.2**	**-1.1**
ITAB				*eS*	**S**	**06 35 35.7**	**+7.0**
TBOT	**Tacuaremb**	**21.74**	**142**	*eP*	**P**	**06 31 38.5**	**+0.1**
ALGR	**Alto Alegre (B**	**21.80**	**132**	*eP*	**P**	**06 31 37.6**	**-1.5**
FRTB	**Fartura**	**22.19**	**115**	*eP*	**P**	**06 31 42.4**	**-0.8**
CPSB	**Cacapava Do Su**	**22.47**	**136**	*eP*	**P**	**06 31 44.9**	**-0.9**
BB19B	**Bebedouro**	**22.54**	**109**	*eP*	**P**	**06 31 45.6**	**-1.1**
BDFB	**Brasilia**	**22.57**	**94**	P	**P**	**06 31 46.6**	**-0.5**
BDFB				IAmb	IAmb	06 31 48.4	
	comp=Z,12nm,0.5s						
BDFB	**Brasilia**	**22.57**	**94**	P	**P**	**06 31 46.6**	**-0.5**
	comp=Z,9.5nm,0.4s,baz=267,slow=11,SNR=45						
	comp=Z,9.5nm,0.4s						
PLTB	**Pedras Altas**	**23.23**	**139**	*eP*	**P**	**06 31 52.8**	**-0.3**
CNLB	**Canela**	**23.67**	**130**	*eP*	**P**	**06 31 56.9**	**-0.3**
RCLB	**Rio Claro- Sao**	**23.74**	**111**	*eP*	**P**	**06 31 59.0**	**+1.1**
SDV	**Santo Domingo**	**23.84**	**2**	P	**P**	**06 31 56.5**	**-2.4**
SDV	**Santo Domingo**	**23.84**	**2**	*eP*	**P**	**06 32 00.8**	**+1.9**
MCPB	**Macapa, AP**	**24.09**	**54**	*eP*	**P**	**06 32 02.9**	**+1.9**
SMTB	**Santa Maria do**	**24.11**	**78**	*eP*	**P**	**06 32 02.0**	**+0.9**
BAUV	**El Baul**	**24.12**	**8**	P	**P**	**06 32 01.8**	**+0.7**
SPB	**Sao Paulo**	**24.13**	**114**	P	**P**	**06 32 00.5**	**-0.8**
SPB	**Sao Paulo**	**24.13**	**114**	*eP*	**P**	**06 32 01.3**	**0.0**
PMNB	**Patos De Minas**	**24.15**	**102**	*eP*	**P**	**06 32 01.9**	**+0.3**
VAO	**Valinhos**	**24.39**	**113**	*eP*	**P**	**06 32 03.5**	**-0.3**
GO06	**Curarrehue**	**24.40**	**180**	P	**P**	**06 32 02.4**	**-1.3**
GO06				IAmb	IAmb	06 32 05.8	
	comp=Z,31nm,1.2s						
LR03	**Panguipulli**	**24.46**	**182**	P	**P**	**06 32 04.3**	**+0.2**
PET01	**Itanhaem-SP**	**24.47**	**116**	*eP*	**P**	**06 32 04.7**	**+0.4**
LR05	**Currie**	**25.05**	**181**	P	**P**	**06 32 08.7**	**-0.7**
LR05				IAmb	IAmb	06 32 10.9	
	comp=Z,23nm,0.8s						
PLCA	**Paso Flores**	**25.55**	**178**	P	**P**	**06 32 15.0**	**+0.8**
PLCA				IAmb	IAmb	06 32 15.8	
	comp=Z,19nm,1.1s						
PLCA	**Paso Flores**	**25.55**	**178**	P	**P**	**06 32 14.7**	**+0.6**
	comp=Z,7.4nm,0.8s,baz=357,slow=9.6,SNR=22						
PLCA				pP	**pP**	**06 32 44.0**	**+0.3**
	comp=Z,3.0nm,1.1s,baz=56,slow=5.8,SNR=1.8						
	comp=Z,7.4nm,0.8s						
PLCA	**Paso Flores**	**25.55**	**178**	*eP*	**P**	**06 32 14.9**	**+0.8**
PARB	**Paraibuna**	**25.67**	**113**	*eP*	**P**	**06 32 16.3**	**+0.9**
BSCB	**Bom Sucesso**	**25.98**	**107**	*eP*	**P**	**06 32 18.3**	**0.0**
TMAB	**Tom-Au,PA,Br**	**26.25**	**63**	*eP*	**P**	**06 32 22.9**	**+2.4**
DIAM	**Diamantina, MG**	**26.75**	**101**	*eP*	**P**	**06 32 25.2**	**0.0**
LL01	**San Ignacio de**	**27.20**	**182**	P	**P**	**06 32 28.5**	**-0.3**
VAS01	**Vassouras-RJ**	**27.42**	**109**	*eP*	**P**	**06 32 31.1**	**+0.1**
AY01	**Puyuhuapi**	**29.25**	**182**	P	**P**	**06 32 46.8**	**-0.1**
AY01				IAmb	IAmb	06 32 47.5	
	comp=Z,12nm,0.9s						
COYC	**Coyhaique**	**30.39**	**181**	P	**P**	**06 32 57.7**	**+0.7**
COYC				IAmb	IAmb	06 32 58.1	
	comp=Z,12nm,0.9s						
NBPB	**Pedra_Branca-C**	**32.68**	**76**	*eP*	**P**	**06 33 18.7**	**+1.2**
MLPR	**Magueyes Islan**	**33.14**	**8**	P	**P**	**06 33 20.6**	**-0.7**
MLPR				IAmb	IAmb	06 33 26.8	
	comp=Z,21nm,1.1s						
OBIP	**Obispado Ponce**	**33.27**	**8**	P	**P**	**06 33 21.2**	**-1.2**
CELP	**Cerrillos**	**33.30**	**8**	P	**P**	**06 33 22.0**	**-0.7**
CELP				IAmb	IAmb	06 33 30.4	
	comp=Z,25nm,1.2s						
UUPR	**Utuado, UPR, P**	**33.46**	**8**	P	**P**	**06 33 23.8**	**-0.3**
AOPR	**Arecibo Observ**	**33.55**	**8**	P	**P**	**06 33 24.1**	**-0.8**
GCPR	**Guaynabo City**	**33.61**	**9**	P	**P**	**06 33 24.3**	**-2.1**
AGPR	**Aguadilla, PR**	**33.62**	**7**	P	**P**	**06 33 24.1**	**-1.4**
ESQI	**Esquipulas**	**34.38**	**328**	P	**P**	**06 33 32.5**	**+0.2**
NBAN	**Anadia - AL**	**34.72**	**85**	*eP*	**P**	**06 33 34.2**	**-0.9**
RCBR	**Riachuelo**	**36.07**	**79**	P	**P**	**06 33 45.7**	**-1.0**
RCBR				IAmb	IAmb	06 34 09.8	
	comp=Z,14nm,1.2s						
NHSC	**New Hope**	**48.66**	**350**	P	**P**	**06 35 30.3**	**+2.2**
NHSC				IAmb	IAmb	06 35 48.1	
	comp=Z,21nm,1.1s						
GOGA	**Godfrey**	**49.59**	**347**	P	**P**	**06 35 36.5**	**+1.3**
GOGA				IAmb	IAmb	06 36 03.2	
	comp=Z,14nm,1.5s						
X58A	**Rowland**	**49.95**	**351**	P	**P**	**06 35 38.9**	**+1.0**
JSC	**Jenkinsville**	**49.99**	**349**	P	**P**	**06 35 39.6**	**+1.4**
JSC				IAmb	IAmb	06 36 05.3	
	comp=Z,11nm,1.5s						
HODGE	**Hodges**	**50.13**	**348**	P	**P**	**06 35 40.9**	**+1.5**
PAULI	**Pauline**	**50.61**	**349**	P	**P**	**06 35 44.7**	**+1.7**
PAULI				IAmb	IAmb	06 35 44.9	
	comp=Z,7.4nm,0.5s						
W57A	**Gilead**	**50.63**	**351**	P	**P**	**06 35 44.1**	**+1.1**
W57A				IAmb	IAmb	06 35 49.5	
	comp=Z,10nm,1.2s						
Y49A	**Blount Mountai**	**50.73**	**344**	P	**P**	**06 35 44.7**	**+0.8**
Y49A				IAmb	IAmb	06 35 56.7	
	comp=Z,5.1nm,0.9s						
KMSC	**Kings Mountain**	**50.84**	**350**	P	**P**	**06 35 45.1**	**+0.5**
KMSC				IAmb	IAmb	06 35 46.4	
	comp=Z,4.7nm,0.6s						
V58A	**Windy Hill, Pi**	**51.13**	**352**	P	**P**	**06 35 47.8**	**+1.0**
V58A				IAmb	IAmb	06 35 57.2	
	comp=Z,9.1nm,1.1s						
V55A	**Taylorsville**	**51.51**	**350**	P	**P**	**06 35 51.4**	**+1.7**
V55A				IAmb	IAmb	06 35 52.0	
	comp=Z,6.7nm,0.8s						
V53A	**Saluda**	**51.63**	**348**	P	**P**	**06 35 52.0**	**+1.4**
W50A	**Signal Mountai**	**51.73**	**345**	P	**P**	**06 35 51.4**	**0.0**
W50A				IAmb	IAmb	06 36 20.2	
	comp=Z,8.5nm,1.2s						
TKL	**Tuckaleechee C**	**51.81**	**347**	P	**P**	**06 35 51.2**	**-0.7**
TKL				IAmb	IAmb	06 35 55.1	
	comp=Z,16nm,1.4s						
HNDO	**Hondo**	**51.88**	**329**	P	**P**	**06 35 52.9**	**+0.4**
V52A	**Sevierville**	**51.95**	**347**	P	**P**	**06 35 54.0**	**+1.1**
V52A				IAmb	IAmb	06 35 55.1	
	comp=Z,14nm,1.1s						
T59A	**Double "B" Far**	**52.11**	**354**	P	**P**	**06 35 54.9**	**+0.9**
T59A				IAmb	IAmb	06 35 57.5	
	comp=Z,19nm,1.4s						
U54A	**Nelsons Funny**	**52.27**	**349**	P	**P**	**06 35 56.7**	**+1.4**
U54A				IAmb	IAmb	06 35 57.3	
	comp=Z,10nm,1.1s						
BLA	**Blacksburg**	**52.71**	**351**	P	**P**	**06 35 60.0**	**+1.4**
WVT	**Waverly**	**53.26**	**343**	P	**P**	**06 36 01.6**	**-1.0**
T50A	**Nancy**	**53.36**	**347**	P	**P**	**06 36 03.5**	**+0.2**
S54A	**Dingess, Beckl**	**53.43**	**350**	P	**P**	**06 36 05.0**	**+1.2**
TXAR	**Lajitas Array**	**54.04**	**325**	pP	pP	06 36 42.4	+1.4
	comp=Z,0.7nm,0.8s,baz=134,slow=5.2,SNR=4.7						
Q54A	**Coxs Mills**	**54.51**	**351**	P	**P**	**06 36 11.8**	**+0.2**
P53A	**Whipple**	**55.09**	**351**	P	**P**	**06 36 16.9**	**+1.1**
S44A	**Carbondale**	**55.12**	**343**	P	**P**	**06 36 17.2**	**+1.2**
SIUC	**Southern Illin**	**55.13**	**343**	P	**P**	**06 36 17.1**	**+1.0**
P52A	**Corning**	**55.35**	**350**	P	**P**	**06 36 18.6**	**+1.0**
P52A				IAmb	IAmb	06 36 19.3	
	comp=Z,9.1nm,0.8s						
FVM	**French Village**	**55.73**	**342**	P	**P**	**06 36 19.1**	**-1.3**
O52A	**Adamsville**	**55.78**	**350**	P	**P**	**06 36 21.7**	**+1.0**
O53A	**New Philadelph**	**55.81**	**351**	P	**P**	**06 36 22.1**	**+1.2**
O53A				IAmb	IAmb	06 36 22.3	
	comp=Z,7.0nm,0.6s						
N53A	**Lisbon**	**56.30**	**351**	P	**P**	**06 36 25.6**	**+1.3**
N51A	**Ashland**	**56.65**	**350**	P	**P**	**06 36 27.7**	**+0.9**
N51A				IAmb	IAmb	06 36 41.5	
	comp=Z,13nm,1.1s						
M53A	**WI Miller and**	**56.90**	**352**	P	**P**	**06 36 30.0**	**+1.4**
N49A	**Columbus Grove**	**56.98**	**348**	P	**P**	**06 36 30.5**	**+1.4**
P43A	**Skaggs, Pawnee**	**57.01**	**343**	P	**P**	**06 36 29.7**	**+0.3**
P43A				IAmb	IAmb	06 36 47.9	
	comp=Z,16nm,1.2s						
M52A	**Chesterland**	**57.09**	**351**	P	**P**	**06 36 31.1**	**+1.1**
ERPA	**Erie**	**57.47**	**352**	P	**P**	**06 36 34.2**	**+1.6**
WVNY	**West Valley, N**	**57.60**	**354**	P	**P**	**06 36 34.0**	**+0.5**
WVNY				IAmb	IAmb	06 36 41.0	
	comp=Z,14nm,1.1s						
HDIL	**Hopedale**	**57.80**	**344**	P	**P**	**06 36 35.5**	**+0.5**
L48A	**N Adams**	**58.01**	**349**	P	**P**	**06 36 36.5**	**+0.1**
J47A	**Sunmer**	**59.34**	**349**	P	**P**	**06 36 46.1**	**+0.6**
BELA	**Belgrano 2**	**65.39**	**172**	P	**P**	**06 37 27.0**	**+1.6**
BELA				IAmb	IAmb	06 37 27.8	
	comp=Z,14nm,1.4s						
B35A	**Bob, Littlefor**	**66.22**	**344**	P	**P**	**06 37 31.3**	**+0.2**
WCT	**Wildcat Mounta**	**66.92**	**322**	P	**P**	**06 37 35.7**	**-0.2**
PDAR	**Pinedale Array**	**67.40**	**330**	P	**P**	**06 37 37.9**	**-1.0**
ULM	**Lac du Bonnet**	**68.53**	**343**	P	**P**	**06 37 46.4**	**+0.9**
ULM	**Lac du Bonnet**	**68.53**	**343**	P	**P**	**06 37 45.9**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=168,slow=6.8,SNR=7.2						
	comp=Z,1.5nm,0.4s						
NVAR	**Mina Array Bea**	**69.00**	**322**	P	**P**	**06 37 49.0**	**0.0**
	comp=Z,0.2nm,0.5s,baz=130,slow=8.4,SNR=2.5						
	comp=Z,0.2nm,0.5s						
SNAA	**Sanae**	**69.08**	**162**	P	**P**	**06 37 49.9**	**+1.1**
SNAA	**Sanae**	**69.08**	**162**	P	**P**	**06 37 49.3**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=293,slow=6.7,SNR=7.3						
	comp=Z,3.8nm,0.8s						
DBIC	**Dimbokro**	**69.40**	**77**	P	**P**	**06 37 50.6**	**-1.1**
DBIC				IAmb	IAmb	06 38 11.6	
	comp=Z,21nm,1.5s						
DBIC	**Dimbokro**	**69.40**	**77**	P	**P**	**06 37 50.5**	**-1.2**
	comp=Z,4.7nm,0.5s,baz=239,slow=6.0,SNR=14						
	comp=Z,4.7nm,0.5s						
BOZ	**Bozeman (W)**	**70.51**	**331**	P	**P**	**06 37 57.5**	**-0.5**
QSPA	**South Pole Qui**	**75.06**	**180**	P	**P**	**06 38 26.2**	**+1.6**
QSPA				IAmb	IAmb	06 38 27.1	
	comp=Z,10nm,1.0s						
QSPA	**South Pole Qui**	**75.06**	**180**	P	**P**	**06 38 25.4**	**+0.8**
	comp=Z,6.0nm,0.8s,baz=180,slow=1.5,SNR=24						
	comp=Z,6.0nm,0.8s						
E07A	**Sunnyside**	**75.23**	**328**	P	**P**	**06 38 26.0**	**+0.3**
FCC	**Fort Churchill**	**75.90**	**348**	P	**P**	**06 38 30.5**	**+1.4**
G03D	**McMinnville, O**	**76.19**	**325**	P	**P**	**06 38 30.1**	**-1.0**
TOA0	**Torodi Ar. Sit**	**77.59**	**73**	P	**P**	**06 38 38.3**	**-1.4**
TOA0				IAmb	IAmb	06 38 41.2	
	comp=Z,9.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.59**	**73**	P	**P**	**06 38 40.5**	**+0.9**
TORD				IAmb	IAmb	06 38 41.1	
	comp=Z,8.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.59**	**73**	P	**P**	**06 38 40.2**	**+0.5**
	comp=Z,8.5nm,0.7s,baz=266,slow=5.3,SNR=4.6						
	comp=Z,8.5nm,0.7s						
VNDA	**Vanda**	**82.71**	**190**	P	**P**	**06 39 08.4**	**+2.5**
VNDA				IAmb	IAmb	06 39 20.0	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**82.71**	**190**	P	**P**	**06 39 08.0**	**+2.1**
	comp=Z,1.9nm,0.9s,baz=337,slow=6.8,SNR=2.3						
	comp=Z,1.9nm,0.9s						
ESDC	**Sonseca Array**	**83.03**	**46**	P	**P**	**06 39 08.7**	**+0.4**
ESDC	**Sonseca Array**	**83.03**	**46**	P	**P**	**06 39 09.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=259,slow=5.4,SNR=7.7						
	comp=Z,0.8nm,0.7s						
ESBB	**Sonseca Array**	**83.04**	**46**	P	**P**	**06 39 08.6**	**+0.2**
YKA	**Yellowknife Ar**	**84.39**	**341**	P	**P**	**06 39 15.4**	**+0.8**
YKA	**Yellowknife Ar**	**84.39**	**341**	P	**P**	**06 39 15.6**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=134,slow=5.0,SNR=18						
YKA				pP	**pP**	**06 39 51.4**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=135,slow=4.8,SNR=3.9						
	comp=Z,0.5nm,0.4s						
P33M	**Teslin, Yukon**	**89.62**	**334**	P	**P**	**06 39 40.5**	**+0.4**
SUMG	**Summit**	**90.15**	**9**	P	**P**	**06 39 44.2**	**+1.6**
SUMG		

PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,5.4s
LZH Lanzhou 55.63 322 *e*P **P 06 37 23.5 +0.5**
LZH pP sP 06 37 38.3 +11
LZH pmax pmax
comp=Z,14nm,1.1s
GTA Gaotai 60.21 323 *e*P **P 06 37 55.5 +0.4**
GTA pP sP 06 38 05.3 +5.6
GTA pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 62.58 333 P **P 06 38 09.1 -1.8**
comp=Z,0.4nm,0.4s,baz=154,slow=6.3,SNR=3.5
comp=Z,0.4nm,0.4s
PALK Pallekele 63.19 281 P **P 06 38 15.2 -0.4**
WMQ Urumqi 70.18 321 *e*P **P 06 39 02.0 +2.4**
MK31 Makanchi Array 74.95 322 P **P 06 39 28.3 +0.4**
MKAR Makanchi Array 74.95 322 P **P 06 39 28.0 +0.1**
MKAR Makanchi Array 74.95 322 P **P 06 39 28.0 +0.1**
comp=Z,3.1nm,0.8s,baz=117,slow=6.9,SNR=24
comp=Z,3.1nm,0.8s
TARG Taragay, Kyrgy 75.81 316 P **P 06 39 32.7 -0.8**
KSH Kashi 76.32 313 P **P 06 39 38.0 +1.9**
KSH pP PcP 06 39 48.5 +0.5
KSH pmax pmax
comp=Z,4.0nm,1.0s
ZALV Zalesovo Beam 76.94 329 P **P 06 39 37.7 -1.3**
ZALV Zalesovo Beam 76.94 329 P **P 06 39 37.3 -1.8**
comp=Z,1.3nm,0.7s,baz=107,slow=5.1,SNR=5.1
comp=Z,1.3nm,0.7s
BOOM Boomskoye usch 77.38 316 P **P 06 39 42.7 +0.7**
KURK Kurchatov 78.83 324 P **P 06 39 49.3 -0.3**
KURK IAmb IAmb 06 39 50.3
comp=Z,7.2nm,1.2s
KURBB Kurchatov Arra 78.84 324 P **P 06 39 49.3 -0.4**
comp=Z,2.1nm,0.9s,baz=115,slow=4.6,SNR=12
comp=Z,2.1nm,0.9s
ARSB Arslanbob 79.07 314 P **P 06 39 51.8 +0.3**
L14K Kuka Creek 79.52 24 P **P 06 39 52.7 -0.5**
L14K IAmb IAmb 06 40 12.8
comp=Z,14nm,1.2s
K15K Wolf Creek Mou 80.51 23 P **P 06 39 58.8 +0.2**
L16K Owhat River 81.02 24 P **P 06 40 01.4 +0.1**
L16K IAmb IAmb 06 40 06.6
comp=Z,15nm,1.4s
SIMJ Simiganj 81.22 311 P **P 06 40 02.5 -0.6**
SIMJ IAmb IAmb 06 40 04.5
comp=Z,5.8nm,1.1s
KK31 Karatay Array 81.36 315 P **P 06 40 03.4 -0.2**
KKAR Karatay Array 81.36 315 P **P 06 40 03.2 -0.3**
K17K Iditarod 82.01 24 P **P 06 40 06.8 +0.3**
K17K IAmb IAmb 06 40 27.1
comp=Z,12nm,1.4s
N18K Kilae Creek 82.01 26 P **P 06 40 06.5 -0.1**
SVW2 Sparrevohn 82.34 26 P **P 06 40 08.3 0.0**
L18K Granite Mounta 82.41 24 P **P 06 40 08.6 0.0**
L18K IAmb IAmb 06 40 09.8
comp=Z,5.1nm,1.1s
L19K White Mountain 83.15 25 P **P 06 40 12.9 +0.3**
L19K IAmb IAmb 06 40 20.7
comp=Z,10nm,1.4s
G18K Tagagawik 83.51 21 P **P 06 40 13.9 -0.4**
G18K IAmb IAmb 06 40 19.9
comp=Z,8.7nm,1.4s
J19K Poorman 83.69 23 P **P 06 40 15.2 0.0**
J19K IAmb IAmb 06 40 17.5
comp=Z,7.6nm,1.3s
QSPA South Pole Qui 83.71 180 P **P 06 40 16.6 +1.1**
QSPA South Pole Qui 83.71 180 P **P 06 40 16.3 +0.7**
comp=Z,1.9nm,0.8s,baz=114,slow=14,SNR=2.9
comp=Z,1.9nm,0.8s
M20K Styx River 83.74 25 P **P 06 40 15.7 0.0**
K20K Telida 84.01 24 P **P 06 40 17.0 +0.1**
K20K IAmb IAmb 06 40 18.0
comp=Z,5.4nm,1.1s
C18K Utukok River 84.17 18 P **P 06 40 17.5 -0.1**
C18K IAmb IAmb 06 40 18.9
comp=Z,4.3nm,1.2s
G19K Purcell Mounta 84.19 21 P **P 06 40 17.7 0.0**
G19K IAmb IAmb 06 40 18.3
comp=Z,5.5nm,1.2s
NRIK Noril'sk 84.21 343 P **P 06 40 16.9 -0.9**
NRIK Noril'sk 84.21 343 P **P 06 40 16.8 -0.9**
comp=Z,4.1nm,0.6s,baz=115,slow=4.6,SNR=11
comp=Z,4.1nm,0.6s
J20K Nowinta River 84.35 23 P **P 06 40 18.4 -0.2**
J20K IAmb IAmb 06 40 19.3
comp=Z,4.1nm,0.9s
BVAR Borovoye Array 84.42 325 P **P 06 40 19.2 0.0**
comp=Z,12nm,0.9s,baz=106,slow=5.3,SNR=39
comp=Z,12nm,0.9s
BRVK Borovoye 84.49 325 P **P 06 40 19.6 +0.1**
RC01 Rabbit Creek A 84.90 27 P **P 06 40 20.4 -1.1**
C19K Lookout Ridge 84.91 18 P **P 06 40 21.5 +0.1**
C19K IAmb IAmb 06 40 23.2
comp=Z,5.9nm,0.9s
D19K Kuna River 85.04 19 P **P 06 40 22.2 +0.1**
D19K IAmb IAmb 06 40 47.0
comp=Z,9.5nm,1.4s
CCB Clear Creek Bu 87.06 24 P **P 06 40 30.2 -1.8**
CCB IAmb IAmb 06 40 30.8
comp=Z,3.7nm,0.8s
IL31 87.47 24 P **P 06 40 31.9 -2.0**
IL31 IAmb IAmb 06 40 35.1
comp=Z,6.5nm,1.2s
ILAR Eielson Array 87.47 24 P **P 06 40 31.9 -2.1**
ILAR Eielson Array 87.47 24 P **P 06 40 31.8 -2.3**
comp=Z,2.4nm,0.8s,baz=259,slow=5.0,SNR=25
comp=Z,2.4nm,0.8s
IL03 Eielson Array 87.48 24 P **P 06 40 32.0 -2.1**
L26K Log Cabin Wild 88.39 26 P **P 06 40 38.7 +0.1**
J26L Joseph Creek 88.74 25 P **P 06 40 39.5 -0.7**
J26L IAmb IAmb 06 40 40.5
comp=Z,5.2nm,1.1s
L27K Beaver Creek, 89.07 26 P **P 06 40 41.4 -0.4**
L27K IAmb IAmb 06 40 46.7
comp=Z,2.4nm,1.0s
BCAR Beaver Creek A 89.09 26 P **P 06 40 42.0 +0.1**
E25K Arctic Village 89.10 21 P **P 06 40 42.3 +0.5**
E25K IAmb IAmb 06 40 43.8
comp=Z,3.1nm,1.1s
K27K Chicken 89.22 25 P **P 06 40 42.8 +0.4**
K27K IAmb IAmb 06 40 44.3
comp=Z,6.6nm,1.2s
BMAR Burnt Mountain 89.23 22 P **P 06 40 42.9 +0.4**
ABKAR Akbulak array 89.91 319 P **P 06 40 44.6 -1.3**
DAWY Dawson 90.38 25 P **P 06 40 47.7 -0.1**
DAWY IAmb IAmb 06 40 48.9
comp=Z,6.3nm,1.3s
M29M Somme Creek 90.42 27 P **P 06 40 48.1 -0.1**
I28M Miner Creek 90.48 24 P **P 06 40 48.0 -0.4**
HYT Haines Junctio 90.52 29 P **P 06 40 47.9 -0.8**
HYT IAmb IAmb 06 40 48.9
comp=Z,5.4nm,1.1s
L29M L29M 90.71 27 P **P 06 40 49.7 +0.3**
L29M IAmb IAmb 06 40 52.7
comp=Z,8.1nm,1.3s
K29M Barlow Dome 91.13 26 P **P 06 40 51.5 +0.1**
K29M IAmb IAmb 06 41 10.7
comp=Z,8.2nm,1.5s
J30M Hart River 91.79 25 P **P 06 40 54.8 +0.3**
J30M IAmb IAmb 06 40 58.1
comp=Z,2.3nm,1.2s

IDC 26 06:29:55.3±3.1, 53°.63N×87°.11E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=30.1km s-min=18.0km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**284**	I	I	06 39 10.0	
baz=103,slow=343,SNR=5.0							
ZALV	**Zalesovo Beam**	**1.40**	**284**	Pg	Pn	06 30 20.9	-1.1
0.2nm,0.3s,baz=104,slow=14,SNR=8.2							
ZALV				Lg	Lg	06 30 40.5	
0.4nm,0.3s,baz=101,slow=24,SNR=3.0							
KURBB	**Kurchatov Arra**	**6.08**	**244**	Pn	Pn	06 31 26.1	-0.3
baz=62,slow=14,SNR=1.9							
0.2nm,0.4s							
MKAR	**Makanchi Array**	**7.51**	**206**	Pn	Pn	06 31 48.0	+2.0
baz=31,slow=16,SNR=2.4							
0.1nm,0.3s							

IDC 26 06:34:53.1±3.1, 54°.30N×87°.16E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=26.0km s-min=17.4km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**257**	I	I	06 44 00.0	
0.3nm,0.9s,baz=78,slow=338,SNR=2.0							
ZALV	**Zalesovo Beam**	**1.42**	**257**	Pg	Pn	06 35 18.1	-2.0
1.5nm,0.3s,baz=79,slow=15,SNR=15							
ZALV				Lg	Lg	06 35 38.9	
1.5nm,0.3s,baz=79,slow=30,SNR=5.2							
KURBB	**Kurchatov Arra**	**6.43**	**239**	Pn	Pn	06 36 28.4	-0.6
baz=55,slow=13,SNR=2.1							
KURBB				Lg	Lg	06 38 16.9	
baz=54,slow=32,SNR=2.4							
0.4nm,0.4s							
MKAR	**Makanchi Array**	**8.12**	**204**	Pn	Pn	06 36 54.5	+2.2
0.1nm,0.3s,baz=18,slow=11,SNR=5.6							
MKAR				Sn	Sn	06 38 24.4	-0.4
baz=27,slow=27,SNR=3.6							
MKAR				Lg	Lg	06 39 14.8	
baz=358,slow=4.3							
0.1nm,0.3s							

IDC 26 06:47:23.0±1.8, 6°.34S×143°.52E, h0km, mb3.8/2, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=47.3km s-min=32.7km az=69.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.72**	**130**	Pn	Pn	06 48 36.4	+0.9
13nm,0.3s,baz=35,slow=5.5,SNR=5.1							
PMG				Sn	Sn	06 49 28.0	-3.0
1.3nm,0.3s,baz=230,slow=21,SNR=1.2							
WRA	**Warramunga Arr**	**16.20**	**213**	Pn	Pn	06 51 10.2	-2.0
0.2nm,0.3s,baz=31,slow=14,SNR=7.3							
WRA				Lg	Lg	06 55 53.5	
0.4nm,0.3s,baz=34,slow=28,SNR=3.0							
0.3nm,0.4s							
ASAR	**Alice Springs**	**19.56**	**207**	P	Pn	06 51 54.3	+0.5
0.2nm,0.3s,baz=38,slow=9.8,SNR=19							
2.2nm,0.7s							
MKAR	**Makanchi Array**	**75.58**	**322**	P	P	06 59 10.0	+0.3
0.3nm,0.7s,baz=103,slow=7.3,SNR=3.7							
0.3nm,0.7s							
QSPA	**South Pole Qui**	**83.63**	**180**	P	P	06 59 52.1	-1.2
1.4nm,1.0s,baz=336,slow=9.9,SNR=2.5							
1.4nm,1.0s							

*IDC **26** 06:48:20.2±0.9, 6°.19S×143°.25E, h0km, mb4.0/6, mbtmp4.1/8, ML1.9/1, Error ellipse: s-maj=37.8km s-min=20.2km az=71.0*
ISC 26 06:48:25.5±0.8, 6°.58S±0°.09×142°.90E±0°.10, h35km, n11, σ2°.66/13, mb3.9/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.07**	**124**	Pn	**Pn**	**06 49 37.2**	**-1.9**
2.9nm,0.3s,baz=341,slow=18,SNR=3.9							
PMG				Sn	**Sn**	**06 50 36.9**	**+0.5**
1.6nm,0.3s,baz=336,slow=22,SNR=1.5							
17nm,0.6s							
CTA	**Charters Tower**	**13.82**	**167**	Lg	Lg	06 55 53.0	
0.1nm,0.3s,baz=231,slow=21,SNR=1.7							
WRA	**Warramunga Arr**	**15.67**	**211**	Pn	**P**	**06 52 05.9**	**-1.7**
0.4nm,0.3s,baz=30,slow=13,SNR=7.5							
WRA				Sn	**Sn**	**06 54 52.3**	**-4.2**
0.4nm,0.3s,baz=26,slow=22,SNR=1.5							
WRA				Lg	Lg	06 56 46.1	
baz=170,slow=25							
ASAR	**Alice Springs**	**19.07**	**206**	P	**Pn**	**06 52 51.0**	**+5.0**
12nm,0.7s,baz=28,slow=13,SNR=30							
ASAR				S	**S**	**06 56 17.5**	**-2.1**
0.9nm,0.7s,baz=17,slow=28,SNR=1.6							
ASAR				Lg	Lg	06 58 35.0	
baz=32,slow=31							
STKA	**Stephens Creek**	**25.20**	**183**	P	**P**	**06 53 51.0**	**+3.0**
1.0nm,0.7s,baz=0.0,slow=11,SNR=2.0							
1.0nm,0.7s							
MKAR	**Makanchi Array**	**75.38**	**322**	P	**P**	**07 00 05.5**	**-0.1**
0.7nm,0.6s,baz=103,slow=7.4,SNR=7.6							
0.7nm,0.6s							
KURBB	**Kurchatov Arra**	**79.28**	**324**	P	**P**	**07 00 26.6**	**-0.7**
0.6nm,0.7s,baz=111,slow=4.3,SNR=5.1							
0.6nm,0.7s							
QSPA	**South Pole Qui**	**83.39**	**180**	P	**P**	**07 00 51.0**	**+2.0**
1.1nm,0.6s,baz=284,slow=1.1,SNR=8.9							
1.1nm,0.6s							
BVAR	**Borovoye Array**	**84.85**	**325**	P	**P**	**07 00 56.6**	**+0.1**
4.2nm,0.7s,baz=106,slow=6.6,SNR=16							
4.2nm,0.7s							
ILAR	**Eielson Array**	**87.63**	**24**	P	**P**	**07 01 08.1**	**-1.8**
0.7nm,0.7s,baz=261,slow=4.9,SNR=8.0							
0.7nm,0.7s							
DBIC	**Dimbokro**	**147.97**	**272**	PKPbc	**PKPbc**	**07 08 08.6**	**+0.3**
2.9nm,0.7s,baz=198,slow=3.2,SNR=3.5							

*NNC **26** 06:53:01.4±6.6, 37°.84N×71°.61E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=51.8km s-min=36.9km az=1.0*
*IDC **26** 06:53:05.2±6.5, 37°.62N×72°.29E, h160km±34km, mb3.2/2, mbtmp3.8/4, MS3.1/1, Error ellipse: s-maj=86.9km s-min=27.2km az=141.0*
ISC 26 06:53:07.1±1.7, 37°.9N±0°.1×71°.86E±0°.10, h150km, n9, σ1°.78/12, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.16**	**22**	P	**Pn**	**06 54 22.9**	**+0.1**
4.5nm,0.3s,baz=180,slow=20,SNR=13							
AAK				S	**Sn**	**06 55 23.6**	**+1.8**
6.3nm,0.5s,baz=142,slow=22,SNR=15							
KK31	**Karatay Array**	**5.32**	**349**	⇓P	**Pn**	**06 54 24.3**	**-0.4**
8.4nm,0.4s,baz=166,slow=11,SNR=63							
KK31				⇓S	**Sn**	**06 55 25.6**	**+0.2**
3.6nm,0.2s,baz=184,slow=26,SNR=16							
TKM2	**Tokmak 2**	**5.79**	**28**	⇑P	**Pn**	**06 54 29.6**	**-1.5**
1.3nm,0.7s							
TKM2				⇑S	**Sn**	**06 55 40.0**	**+3.3**
2.6nm,0.7s							
GEYT	**Alibeck**	**10.86**	**274**	P	**Pn**	**06 55 41.1**	**+2.6**
2.3nm,0.3s,baz=94,slow=11,SNR=4.1							
KURBB	**Kurchatov Arra**	**13.60**	**18**	P	**P**	**06 56 17.6**	**+0.1**
0.4nm,0.5s,baz=208,slow=10,SNR=4.1							
AB31	**Akbulak array**	**14.26**	**327**	P	**Pn**	**06 56 20.5**	**-1.6**
0.7nm,0.3s,baz=133,slow=15,SNR=60							
AB31				⇑S	**Sn**	**06 58 59.6**	**-0.5**
0.4nm,0.4s,baz=131,slow=25,SNR=5.1							
KBZ	**Khabaz**	**22.62**	**294**	LR	LR	07 08 12.4	
comp=Z,41nm,18.2s,baz=340,slow=39							
ARCES	**ARCESS Array B**	**40.14**	**337**	P	**P**	**07 00 27.9**	**0.0**
2.1nm,0.9s,baz=110,slow=7.8,SNR=5.1							
2.1nm,0.9s							
YKA	**Yellowknife Ar**	**79.84**	**3**	P	**P**	**07 04 56.8**	**-1.6**
0.1nm,0.5s,baz=354,slow=5.1,SNR=4.6							
0.1nm,0.5s							

IDC 26 06:55:24.0±3.1, 53°.38N×87°.35E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=29.9km s-min=16.5km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.61**	**292**	I	I	07 06 00.0	
0.1nm,0.7s,baz=108,slow=341,SNR=8.4							
ZALV	**Zalesovo Beam**	**1.61**	**292**	Pg	Pn	06 55 53.5	-0.1
0.7nm,0.3s,baz=108,slow=17,SNR=7.1							
ZALV				Lg	Lg	06 56 14.5	
0.7nm,0.3s,baz=114,slow=29,SNR=4.5							
KURBB	**Kurchatov Arra**	**6.11**	**247**	Pn	Pn	06 56 56.0	+0.6
0.1nm,0.3s,baz=62,slow=14,SNR=6.1							
0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.35**	**208**	Pn	Pn	06 57 13.7	+1.1
baz=28,slow=15,SNR=1.9							
0.1nm,0.3s							

*JMA **26** 06:56:08.9±0.1, 23°.4N±0°.7×12°.2E±°, h43km±2km, MV3.3/14, TAIWAN REGION*
*ASIES **26** 06:56:09.4, 23°.39N×121°.67E, h29km, ML4.1, Mw3.6, Moment Tensor Solution. Moment tensor: Scale 10^{21}Nm; M_{rr}1.49; $M_{\theta\theta}$-2.19; $M_{\phi\phi}$-0.70; $M_{r\theta}$-1.60; $M_{\theta\phi}$-2.28; $M_{\phi r}$1.45;*

Fault plane solution: M_o3.69641×10^{21} NP1: ϕ_s268.05000°, δ62.53000°, λ137.31000°. NP2: ϕ_s21.10000°, δ53.02000°, λ35.27000°. Principal axes: T Plg48.7220°, Azm230.0430°; N Plg40.7080°, Azm61.4820°; P Plg5.6920°, Azm326.5630°;
*TAP **26** 06:56:09.4, 23°.39N×121°.67E, h29km, ML4.1, C*
ISC 26 06:56:08.8±0.9, 23°.37N±0°.01×121°.71E±0°.02, h26km±6km, n168, σ0°.95/328, 2C-16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.25**	**257**	P	**Pb**	**06 56 15.7**	**+0.5**
baz=250							
ECBN				S	**Sb**	**06 56 20.1**	**+0.7**
baz=250							
HGSD	**Ruisui**	**0.29**	**294**	⇓P	**Pb**	**06 56 15.6**	**-0.2**
baz=296							
HGSD				S	**Sb**	**06 56 19.9**	**-0.6**
baz=296							
CHKH	**Chenggong**	**0.34**	**239**	P	**Pb**	**06 56 16.6**	**+0.1**
baz=224							
CHKH				S	**Sb**	**06 56 21.6**	**-0.1**
baz=224							
EHYH	**Wanrong**	**0.36**	**290**	P	**Pb**	**06 56 17.0**	**+0.2**
baz=290							
EHYH				S	**Sn**	**06 56 23.2**	**-1.5**
baz=290							
EYUL	**Yuli**	**0.36**	**266**	⇓P	**Pb**	**06 56 17.2**	**+0.4**
baz=255							
EYUL				S	**Sb**	**06 56 22.8**	**+0.5**
baz=255							
TWF1	**Yuli**	**0.38**	**267**	*e*P	**Pb**	**06 56 17.2**	**0.0**
baz=256							
TWF1				*i* S	**Sb**	**06 56 23.2**	**+0.4**
baz=256							
YULB	**Yu-li**	**0.38**	**273**	P	**Pb**	**06 56 17.5**	**+0.3**
YULB	**Yu-li**	**0.38**	**273**	P	**Pb**	**06 56 17.2**	**0.0**
baz=271							
YULB				S	**Sb**	**06 56 23.4**	**+0.5**
baz=271							
EGFH	**Guangfu**	**0.40**	**319**	P	**Pb**	**06 56 17.3**	**0.0**
baz=322							
EGFH				S	**Sb**	**06 56 23.1**	**-0.1**
baz=322							
CHKT	**Chengkung**	**0.42**	**230**	⇑*i*P	**Pb**	**06 56 17.6**	**-0.1**
baz=216							
CHKT				*i* S	**Sb**	**06 56 23.5**	**-0.3**
baz=216							
FULB	**Fuli**	**0.42**	**246**	P	**Pb**	**06 56 17.7**	**-0.1**
baz=234							
FULB				S	**Sn**	**06 56 24.9**	**-1.4**
baz=234							
SHUL	**Shoufeng**	**0.44**	**342**	⇓P	**Pb**	**06 56 18.4**	**+0.4**
baz=356							
SHUL				S	**Sb**	**06 56 25.2**	**+0.9**
baz=356							
WARBT	**Fenglin Townsh**	**0.46**	**319**	⇓P	**Pb**	**06 56 18.2**	**-0.1**
baz=328							
WARBT				S	**Sb**	**06 56 24.8**	**-0.1**
baz=328							
ESL	**Shilin**	**0.51**	**330**	*e*P	**Pb**	**06 56 18.9**	**-0.3**
baz=340							
ESL				*i* S	**Sb**	**06 56 25.8**	**-0.6**
baz=340							
EHD	**Haiduan**	**0.52**	**245**	P	**Pb**	**06 56 19.2**	**-0.1**
baz=241							
EHD				S	**Sb**	**06 56 26.4**	**-0.1**
baz=241							
ECS	**Chishang**	**0.53**	**239**	P	**Pn**	**06 56 20.2**	**-0.5**
baz=229							
ECS				S	**Sn**	**06 56 28.5**	**-0.5**
baz=229							
EDH	**Donghe**	**0.55**	**224**	P	**Pb**	**06 56 19.7**	**-0.1**
baz=211							
EDH				S	**Sb**	**06 56 27.3**	**0.0**
baz=211							
HWA	**Hwalien**	**0.61**	**351**	*i* P	**Pb**	**06 56 21.0**	**0.0**
baz=3.0							
HWA				S	**Sb**	**06 56 29.9**	**+0.8**
baz=3.0							
ETM	**Tongmen**	**0.63**	**341**	⇑P	**Pb**	**06 56 20.9**	**-0.3**
baz=334							
ETM				S	**Sb**	**06 56 29.3**	**-0.3**
baz=334							
VWDT	**VWDT**	**0.65**	**306**	⇓P	**Pb**	**06 56 21.4**	**-0.1**
baz=307							
VWDT				*e*S	**Sb**	**06 56 29.3**	**-0.9**
baz=307							
ELDTW	**Lidau**	**0.67**	**254**	*i* P	**Pb**	**06 56 21.1**	**-0.8**
baz=241							
ELDTW				*i* S	**Sb**	**06 56 29.2**	**-1.6**
baz=241							
LXIB	**Xiulin Townshi**	**0.70**	**337**	⇓P	**Pb**	**06 56 21.9**	**-0.7**
baz=340							
LXIB				S	**Sb**	**06 56 31.3**	**-0.6**
baz=340							
LONT	**Longtian**	**0.71**	**229**	P	**Pb**	**06 56 22.1**	**-0.4**
baz=237							
LONT				S	**Sb**	**06 56 31.9**	**0.0**
baz=237							
TWD	**Chiawan**	**0.71**	**351**	⇓*i*P	**Pb**	**06 56 22.1**	**-0.5**
baz=5.0							
TWD				*i* S	**Sb**	**06 56 31.5**	**-0.6**
baz=5.0							
LDUT	**Ludao**	**0.73**	**198**	P	**Pb**	**06 56 21.9**	**-1.0**
baz=194							
LDUT				S	**Sb**	**06 56 31.4**	**-1.0**
baz=194							
OWD	**Renai**	**0.76**	**320**	P	**Pb**	**06 56 23.0**	**-0.5**
baz=322							
OWD				S	**Sb**	**06 56 32.0**	**-1.6**
baz=322							
ETL	**Fush Village**	**0.79**	**354**	P	**Pb**	**06 56 23.3**	**-0.6**
baz=6.0							
ETL				S	**Sb**	**06 56 34.1**	**-0.1**
baz=6.0							
TWGBT	**Beinan**	**0.80**	**227**	P	**Pb**	**06 56 23.2**	**-1.0**
TWGBT	**Beinan**	**0.80**	**227**	P	**Pb**	**06 56 23.1**	**-1.0**
baz=234							
TWGBT				*e*S	**Sb**	**06 56 34.0**	**-0.6**
baz=234							
TWG	**Pinlang**	**0.81**	**227**	*i* P	**Pb**	**06 56 23.1**	**-1.1**
baz=234							
TWG				S	**Sb**	**06 56 33.6**	**-1.1**
baz=234							
TTN	**Taitung**	**0.81**	**220**	*i* P	**Pn**	**06 56 24.6**	**+0.1**
baz=208							
TTN				*i* S	**Sn**	**06 56 35.7**	**0.0**
baz=208							
NACB	**Ninganchiao**	**0.81**	**352**	P	**Pb**	**06 56 23.4**	**-0.8**
NACB	**Ninganchiao**	**0.81**	**352**	⇓P	**Pb**	**06 56 23.4**	**-0.8**
baz=342							
NACB				S	**Sb**	**06 56 33.6**	**-1.1**
baz=342							
SSLB	**Suanglung**	**0.81**	**301**	P	**Pb**	**06 56 23.7**	**-0.6**
SSLB	**Suanglung**	**0.81**	**301**	⇓P	**Pb**	**06 56 23.6**	**-0.7**
baz=294							
SSLB				S	**Sb**	**06 56 34.1**	**-0.8**
baz=294							
WUSB	**Renai**	**0.82**	**319**	⇓P	**Pb**	**06 56 24.1**	**-0.5**
baz=320							
WUSB				S	**Sb**	**06 56 34.0**	**-1.4**
baz=320							
ALS	**Alishan**	**0.85**	**280**	⇓*i*P	**Pb**	**06 56 25.0**	**-0.1**
baz=279							
ALS				*i* S	**Sb**	**06 56 35.6**	**-0.5**
baz=279							
CHGB	**Renai**	**0.85**	**324**	⇓P	**Pb**	**06 56 24.6**	**-0.5**
baz=326							
CHGB				S	**Sb**	**06 56 34.9**	**-1.2**
baz=326							
WHYT	**Xinyi Township**	**0.85**	**292**	P	**Pn**	**06 56 24.8**	**-0.4**
baz=296							
WHYT				S	**Sb**	**06 56 35.6**	**-0.5**
baz=296							
ETLH	**Xiulin Townshi**	**0.86**	**346**	P	**Pn**	**06 56 24.2**	**-1.1**
baz=348							
ETLH				S	**Sb**	**06 56 35.8**	**-0.5**
baz=348							
WHF	**Hehuan Shan**	**0.87**	**332**	*i* P	**Pn**	**06 56 24.7**	**-1.2**
baz=334							
WHF				*e*S	**Sb**	**06 56 36.3**	**-0.8**
baz=334							
STYH	**Taoyuan**	**0.89**	**257**	P	**Pn**	**06 56 25.1**	**-0.5**
baz=250							
STYH				S	**Sb**	**06 56 36.0**	**-0.9**
baz=250							
STYT	**Tauyuan**	**0.90**	**257**	*i* P	**Pn**	**06 56 25.4**	**-0.5**

baz=249
STYT *i* S **Sb** 06 56 36.7 -0.8
baz=249
SMLT **Sun Moon Lake** 0.90 305⇓*i* P **Pn** 06 56 25.4 -0.6
baz=305
SMLT S **Sb** 06 56 37.0 -0.6
baz=305
EOS4 **EOS4** 0.93 36 P **Pn** 06 56 26.0 +0.1
baz=39
EOS4 S **Sn** 06 56 37.9 -0.4
baz=39
WPL **Puli Township** 0.94 313 P **Pn** 06 56 24.6 -1.8
baz=321
WPL *e*S **Sn** 06 56 38.5 -0.6
baz=321
TYC **Yuchr** 0.95 304⇓*i* P **Pn** 06 56 26.1 -0.4
baz=305
TYC *e*S **Sn** 06 56 38.8 -0.4
baz=305
EAHA **Aohua** 0.95 1 P **Pn** 06 56 26.1 -0.5
baz=4.0
EAHA *e*S **Sn** 06 56 38.7 -0.7
baz=4.0
FUSS **Fushou** 0.97 334 P **Pn** 06 56 26.4 -0.6
baz=336
FUSS S **Sb** 06 56 39.1 -0.6
baz=336
DPDB **Guoxing** 0.98 313 P **Pn** 06 56 26.7 -0.3
baz=319
DPDB S **Sn** 06 56 40.0 -0.1
baz=319
TPUB **Ta-pu** 1.00 266 P **Pb** 06 56 27.6 +0.1
TPUB **Ta-pu** 1.00 266 P **Pb** 06 56 27.4 -0.1
baz=265
TPUB S **Sb** 06 56 40.1 -0.1
baz=265
WCS **Beigang Elemen** 1.00 313 P **Pn** 06 56 27.1 -0.2
baz=319
WCS S **Sb** 06 56 40.9 +0.6
baz=319
TWT **Tachien** 1.01 331 *i* P **Pn** 06 56 27.3 -0.2
baz=332
TWT *i* S **Sn** 06 56 39.2 -1.7
baz=332
WJS **Zhushan** 1.01 297 P **Pb** 06 56 27.9 +0.3
baz=297
WJS S **Sb** 06 56 41.3 +0.8
baz=297
TDCB **Techi** 1.01 330 P **Pn** 06 56 27.3 -0.3
baz=332
TDCB S **Sn** 06 56 39.2 -1.9
baz=332
WTP **Ta-pu** 1.02 263 *i* P **Pb** 06 56 27.9 +0.1
baz=262
WTP *i* S **Sb** 06 56 41.2 +0.3
baz=262
WCKO **Fanlu** 1.02 274 P **Pb** 06 56 28.4 +0.6
baz=273
WCKO S **Sb** 06 56 41.8 +0.9
baz=273
CHN4 **Tsaushan** 1.03 269⇓*i* P **Pb** 06 56 28.1 +0.1
baz=268
CHN4 *i* S **Sb** 06 56 42.2 +1.1
baz=268
ECL **Taimali** 1.04 222 P **Pn** 06 56 26.2 -1.6
baz=228
ECL S **Sn** 06 56 39.3 -2.2
baz=228
SLGT **Liugui** 1.05 249 P **Pb** 06 56 28.2 -0.1
baz=244
SLGT S **Sb** 06 56 41.7 -0.1
baz=244
ENA **Nanau** 1.05 1 *i* P **Pn** 06 56 27.4 -0.5
baz=4.0
ENA *e*S **Sn** 06 56 41.0 -0.8
baz=4.0
EOS3 **EOS3** 1.07 31 P **Pn** 06 56 28.3 +0.3
baz=29
EOS3 *e*S **Sn** 06 56 42.0 +0.1
baz=29
EWUT **Wuta** 1.07 3 P **Pn** 06 56 27.8 -0.4
baz=5.0
EWUT S **Sn** 06 56 41.5 -0.7
baz=5.0
WNT **Mingjian** 1.07 298 *i* P **Pb** 06 56 28.9 +0.2
baz=299
WNT S **Sb** 06 56 43.0 +0.8
baz=299
SGST **Jiashian** 1.08 255 *i* P **Pn** 06 56 28.1 -0.2
baz=246
SGST *i* S **Sb** 06 56 42.4 -0.1
baz=246
WNT1 **Nantou City** 1.09 300 P **Pb** 06 56 29.6 +0.6
baz=300
WNT1 S **Sb** 06 56 44.0 +1.3
baz=300
NNSB **Datong** 1.09 344 P **Pn** 06 56 28.1 -0.5
baz=346
NNSB *i* S **Sn** 06 56 41.6 -1.5
baz=346
WGK **Gukeng** 1.10 287 *i* P **Pb** 06 56 29.2 0.0
baz=287
WGK *i* S **Sb** 06 56 43.9 +0.8
baz=287
CHN1 **Nanshi** 1.11 261 *i* P **Pb** 06 56 29.5 +0.2
baz=259
CHN1 *i* S **Sb** 06 56 44.5 +1.2
baz=259
NNS **Nan Shan** 1.11 344 P **Pn** 06 56 28.5 -0.3
baz=346
NNS S **Sn** 06 56 42.2 -1.2
baz=346
WDLH **Douliu** 1.12 287 P **Pb** 06 56 29.5 0.0
baz=286
WDLH S **Sb** 06 56 44.6 +0.8
baz=286
SNST **Tainan City** 1.13 263 P **Pb** 06 56 29.9 +0.2
baz=261
SNST *i* S **Sb** 06 56 45.0 +1.1
baz=261
TWK **Hsinying** 1.13 265 *i* P **Pb** 06 56 29.8 +0.1
baz=264
TWK *i* S **Sb** 06 56 45.4 +1.4
baz=264
WHP **Taichung City** 1.14 322 P **Pn** 06 56 29.5 +0.2
baz=329
WHP S **Sb** 06 56 44.2 -0.3
baz=329
EOS2 **EOS2** 1.15 24 *e*P **Pn** 06 56 29.8 +0.7
baz=33
EOS2 *e*S **Sn** 06 56 42.7 -1.3
baz=33
WWF **Wufeng** 1.15 306 P **Pb** 06 56 30.3 +0.3
baz=307
WWF S **Sb** 06 56 46.0 +1.6
baz=307
LATG **Datong** 1.17 352 P **Pn** 06 56 29.1 -0.6
baz=341
LATG S **Sn** 06 56 43.8 -1.2
baz=341
TSMG **Majia** 1.19 236 P **Pn** 06 56 29.8 0.0
baz=231
TSMG *e*S **Sn** 06 56 44.9 -0.2
baz=231
CHY **Chiayi** 1.19 276 *e*P **Pb** 06 56 30.8 +0.1
baz=287
CHY S **Sb** 06 56 47.3 +1.6
baz=287
WYL **Yuanlin Townsh** 1.19 300 P **Pb** 06 56 30.7 0.0
baz=287
WYL S **Sb** 06 56 46.5 +0.7
baz=287
ESAO **Su ao** 1.21 6 P **Pn** 06 56 30.2 +0.2
baz=7.0
ESAO S **Sn** 06 56 45.1 -0.5
baz=7.0
SCST **Cishan** 1.22 247 P **Pb** 06 56 31.6 +0.4
baz=246
SCST S **Sb** 06 56 48.9 +2.3
baz=246
TCU **Taichung** 1.23 309 *i* P **Pb** 06 56 31.6 +0.3
baz=310
TCU *i* S **Sb** 06 56 47.9 +1.2
baz=310
TWC **Suao** 1.24 6 *i* P **Pn** 06 56 30.6 +0.1
baz=8.0
TWC S **Sn** 06 56 46.1 -0.3
baz=8.0

NDT **Datong Townshi** 1.24 352 P **Pn** 06 56 30.2 -0.3
baz=341
NDT S **Sn** 06 56 45.7 -0.8
baz=341
MASBT **Mashibuluo** 1.25 233 P **Pn** 06 56 30.3 -0.4
baz=229
MASBT *e*S **Sn** 06 56 46.6 -0.1
baz=229
WTK **Tuku** 1.26 285 P **Pb** 06 56 32.0 +0.1
baz=285
WTK S **Sb** 06 56 48.8 +1.2
baz=285
NDS **Dongshan** 1.26 0 P **Pn** 06 56 31.3 +0.5
baz=348
NDS S **Sn** 06 56 45.9 -1.0
baz=348
TAW **Tawu** 1.26 217 *i* P **Pn** 06 56 30.2 -0.6
baz=215
TAW *e*S **Sn** 06 56 45.7 -1.1
baz=215
EAST **Anshuo** 1.27 219 *i* P **Pn** 06 56 30.0 -1.0
baz=207
EAST *e*S **Sn** 06 56 46.3 -0.8
baz=207
ENTT **Nioudou** 1.27 354 *i* P **Pn** 06 56 31.1 +0.1
baz=344
ENTT S **Sn** 06 56 46.8 -0.4
baz=344
WCHH **Zhanghua** 1.27 304 P **Pb** 06 56 32.4 +0.3
baz=304
WCHH S **Sb** 06 56 49.5 +1.4
baz=304
CHN3 **Shinhua** 1.27 257 *e*P **Pb** 06 56 33.7 +1.6
baz=256
CHN3 S **Sb** 06 56 51.8 +3.7
baz=256
TAWH **Dawu Township** 1.28 217 P **Pn** 06 56 30.0 -1.0
baz=215
TAWH S **Sn** 06 56 45.9 -1.4
baz=215
SGLT **Jiouru** 1.30 241 P **Pb** 06 56 34.3 +1.8
baz=239
SGLT *e*S **Sb** 06 56 50.8 +2.1
baz=239
TWQ1 **Liyutan** 1.30 319⇓*i* P **Pb** 06 56 32.8 +0.2
baz=329
TWQ1 *i* S **Sb** 06 56 49.7 +0.9
baz=329
SHHT **Tainan City** 1.30 255 P **Pb** 06 56 34.5 +1.8
baz=254
SHHT S **Sb** 06 56 53.1 +4.1
baz=254
TWM1 **Shoushan** 1.31 246 *i* P **Pb** 06 56 33.8 +1.1
baz=244
TWM1 S **Sb** 06 56 51.6 +2.5
baz=244
ICHU **Yijhu** 1.32 270 P **Pb** 06 56 32.8 -0.1
baz=269
ICHU S **Sb** 06 56 50.3 +0.9
baz=269
YHNB **Yeheng** 1.33 347 P **Pn** 06 56 32.0 +0.2
YHNB **Yeheng** 1.33 347 P **Pn** 06 56 32.0 +0.2
baz=348
YHNB S **Sn** 06 56 47.9 -0.9
baz=348
SSHA **Shanhua** 1.33 260 *e*P **Pb** 06 56 32.6 -0.5
baz=259
SSHA S **Sb** 06 56 51.6 +1.9
baz=259
LAY **Lan-yu** 1.33 186 *i* P **Pn** 06 56 30.5 -1.3
baz=184
LAY S **Sn** 06 56 47.0 -1.8
baz=184
WRL **Guolierlin Hig** 1.33 294 P **Pb** 06 56 32.8 -0.4
baz=294
WRL S **Sb** 06 56 50.8 +0.9
baz=294
NSK **Sanguang** 1.34 346 *i* P **Pn** 06 56 32.0 0.0
baz=348
NSK *i* S **Sn** 06 56 47.7 -1.3
baz=348
TWE **Neicheng** 1.34 358 *i* P **Pn** 06 56 32.5 +0.6
baz=348
TWE *e*S **Sb** 06 56 50.5 +0.4
baz=348
NSY **Sanyi** 1.36 320 *i* P **Pb** 06 56 33.4 -0.1
baz=336
NSY *i* S **Sb** 06 56 51.9 +1.3
baz=336
LYUB **Lan-yu** 1.37 185 *i* P **Pn** 06 56 30.2 -2.0
baz=183
LYUB *e*S **Sn** 06 56 46.0 -3.6
baz=183
NFF **Wufeng Townshi** 1.37 337 P **Pn** 06 56 33.0 +0.7
baz=349
NFF S **Sn** 06 56 49.6 -0.1
baz=349
WSL **Shuilin Townsh** 1.37 277 P **Pb** 06 56 33.9 +0.1
baz=276
WSL S **Sb** 06 56 50.8 -0.1
baz=276
CHN8 **Yiju** 1.38 269 *i* P **Pb** 06 56 33.9 0.0
baz=269
CHN8 *i* S **Sb** 06 56 52.5 +1.3
baz=269
WDJ **Dajia District** 1.38 315 P **Pb** 06 56 34.6 +0.6
baz=316
WDJ S **Sb** 06 56 52.3 +1.0
baz=316
FUSB **Fushanzhiwuyua** 1.39 355 P **Pn** 06 56 32.7 +0.1
baz=346
FUSB *e*S **Sb** 06 56 51.4 0.0
baz=346
WSF **Szhu** 1.40 281 *e*P **Pb** 06 56 33.8 -0.4
baz=281
WSF S **Sb** 06 56 51.4 -0.2
baz=281
WTCT **Ta-ch'eng** 1.40 291 *e*P **Pb** 06 56 34.0 -0.4
baz=291
WTCT *i* S **Sb** 06 56 51.5 -0.3
baz=291
SNJT **Kaohsiung City** 1.41 244 P **Pb** 06 56 35.1 +0.6
baz=243
SNJT S **Sb** 06 56 55.4 +3.3
baz=243
NWLT **Wulai** 1.41 352 P **Pn** 06 56 33.3 +0.3
baz=344
NWLT *e*S **Sn** 06 56 50.4 -0.4
baz=344
NSTT **Nanjuang** 1.41 333 *e*P **Pb** 06 56 34.1 -0.4
baz=345
NSTT S **Sb** 06 56 51.3 -0.9
baz=345
SCZT **Fangliau** 1.42 226 P **Pb** 06 56 34.5 -0.1
baz=213
SCZT *e*S **Sb** 06 56 51.8 -0.4
baz=213
LIOB **Emei** 1.42 333 P **Pb** 06 56 34.5 -0.1
baz=334
LIOB *e*S **Sb** 06 56 52.4 0.0
baz=334
SLIU **Shizi** 1.43 216 P **Pn** 06 56 32.7 -0.3
baz=215
SLIU *e*S **Sn** 06 56 51.2 +0.2
baz=215
NMLH **Miaoli** 1.44 324 P **Pb** 06 56 34.4 -0.5
baz=325
NMLH S **Sb** 06 56 54.6 +1.8
baz=325
TSCK **Chigu Township** 1.51 262 P **Pb** 06 56 35.5 -0.7
baz=261
TSCK S **Sb** 06 56 55.1 +0.1
baz=261
WSSB **Gushan** 1.52 242 P **Pb** 06 56 36.9 +0.5
baz=241
WSSB S **Sb** 06 56 57.4 +2.1
baz=241
JYNG **Yonagunijimaku** 1.56 46 P **Pn** 06 56 35.4 +0.5
JYNG *e*S **Sn** 06 56 54.8 +0.5
SBCB **Hsinchu** 1.56 335 *e*P **Pb** 06 56 37.3 +0.2
baz=336
SBCB S **Sb** 06 56 57.8 +1.4
baz=336
SMST **Manzhou Townsh** 1.57 211 *e*P **Pn** 06 56 36.3 +1.3
baz=210
SMST S **Sn** 06 56 53.8 -0.7
baz=210
NHDH **Xindian Distri** 1.59 354 P **Pn** 06 56 36.1 +0.7

baz=355
NHDH S **Sb** 06 56 57.0 -0.4
baz=355
TIPB **Shuangxi** 1.60 4 P **Pn** 06 56 36.6 +1.2
baz=352
TIPB *e*S **Sb** 06 56 57.1 -0.3
baz=352
TWA **Mucha** 1.61 356 P **Pn** 06 56 34.7 -0.9
baz=357
TWA S **Sb** 06 56 58.6 +0.9
baz=357
YOJ **Yonaguni jima** 1.61 47 P **Pn** 06 56 36.8 +1.2
YOJ **Yonaguni jima** 1.61 47 P **Pn** 06 56 36.2 +0.7
baz=48
YOJ *e*S **Sn** 06 56 56.5 +1.0
baz=48
YOJ **Yonaguni jima** 1.61 47 P **Pn** 06 56 36.7 +1.1
YOJ *e*S **Sn** 06 56 55.9 +0.4
TATO **Taipei** 1.61 353 P **Pn** 06 56 36.7 +1.1
HEN **Hengchun** 1.63 214 *e*P **Pb** 06 56 37.6 -0.6
baz=199
HEN *e*S **Sn** 06 56 56.9 +0.9
baz=199
TSEB **Hengchuen, Pin** 1.65 207 *e*P **Pn** 06 56 37.4 +1.3
baz=207
TSEB *i* S **Sn** 06 56 57.3 +0.9
baz=207
TWB1 **Santiao Chiao** 1.65 9 P **Pn** 06 56 36.5 +0.4
baz=24
TWB1 S **Sn** 06 56 57.8 +1.3
baz=24
TWKBT **Hengchun** 1.65 210 P **Pn** 06 56 36.0 -0.1
baz=209
TWKBT S **Sn** 06 56 56.6 +0.1
baz=209
TWK1 **Hengchun** 1.65 211 *i* P **Pn** 06 56 36.3 +0.1
baz=209
TWK1 *i* S **Sn** 06 56 56.6 +0.1
baz=209
NCUH **Zhongli** 1.66 343 *e*P **Pb** 06 56 38.7 -0.1
baz=344
NCUH *e*S **Sb** 06 56 59.3 0.0
baz=344
NWF **Wu-fen Shan** 1.69 2 *i* P **Pb** 06 56 38.4 -0.9
baz=349
NWF *i* S **Sb** 06 56 59.8 -0.5
baz=349
WFSB **Wu-fen Shan** 1.69 2 P **Pb** 06 56 38.5 -0.8
baz=349
WFSB S **Sb** 06 56 59.9 -0.3
baz=349
SXI1 **Grass Mountain** 1.72 5 P **Pn** 06 56 38.5 +1.3
baz=350
SXI1 S **Sn** 06 56 59.1 +0.6
baz=350
TWS1 **Kuangyinshan** 1.74 351 P **Pb** 06 56 40.2 +0.1
baz=2.0
TWS1 *e*S **Sb** 06 57 02.6 +1.0
baz=2.0
YM01 **YM01** 1.77 356 P **Pb** 06 56 39.6 -1.0
baz=357
YM01 *e*S **Sn** 06 56 59.8 +0.2
baz=357
NTST **Danshui** 1.80 352 *e*P **Pb** 06 56 39.8 -1.3
baz=353
NTST *e*S **Sb** 06 57 01.6 -1.6
baz=353
WDGT **Dungji** 1.89 267 P **Pn** 06 56 39.4 0.0
baz=267
WDGT *i* S **Sn** 06 57 01.9 -0.5
baz=267
TWY **Chenhua** 1.90 357 *e*P **Pn** 06 56 41.2 +1.6
baz=358
TWY *e*S **Sn** 06 57 03.3 +0.6
baz=358
PHUB **P'eng-hu** 1.97 275 P **Pn** 06 56 40.3 -0.2
baz=275
PHUB S **Sn** 06 57 03.6 -0.9
baz=275
PNG **Penghu** 1.99 276 *i* P **Pn** 06 56 41.4 +0.6
baz=276
PNG *i* S **Sn** 06 57 04.2 -0.8
baz=276
HATJ **Hateruma jima** 2.04 70 P **Pn** 06 56 42.3 +0.8
HATJ *e*S **Sn** 06 57 06.1 +0.1
VCHM **Qimei** 2.11 266 P **Pn** 06 56 42.4 0.0
baz=266
VCHM S **Sn** 06 57 07.1 -0.7
baz=266
JKRS **Kuro-shima** 2.27 67 P **Pn** 06 56 45.9 +1.2
JKRS S **Sn** 06 57 12.6 +0.7
JIJ **Ishigaki jima** 2.43 66 P **Pn** 06 56 48.0 +1.0
JIJ S **Sn** 06 57 15.3 -0.6
VWUC **VWUC** 2.62 308 P **Pn** 06 56 48.9 -0.6
baz=310
VWUC S **Sn** 06 57 20.3 -0.2
baz=310
JISG **Ishigakijimahi** 2.67 62 P **Pn** 06 56 50.6 +0.5
JISG *e*S **Sn** 06 57 20.6 -1.0
PTMZ **Houxiangcun** 2.89 306 P **Pn** 06 56 53.9 +0.7
baz=307
PTMZ S **Sn** 06 57 25.8 -1.5
baz=307
JTJ **Tarama** 3.01 65 P **Pn** 06 56 56.2 +1.3
JTJ *e*S **Sn** 06 57 30.1 0.0
KNM **Kinmen** 3.18 290 *i* P **Pn** 06 56 59.7 +2.6
baz=290
KNM S **Sn** 06 57 35.5 +1.2
baz=290
MATB **Ma-tsu** 3.20 330 P **Pn** 06 56 58.0 +0.5
baz=331
MATB *e*S **Sn** 06 57 34.4 -0.5
baz=331
KNMB **Chin-men Tao** 3.23 290 P **Pn** 06 56 58.3 +0.4
baz=292
KNMB S **Sn** 06 57 33.4 -2.2
baz=292
LYJJ **Jianjiangzhen** 3.63 331 *e*P **Pn** 06 57 04.3 +0.9
baz=332
LYJJ S **Sn** 06 57 45.6 +0.2
baz=332
MHZQ **Yeshan** 3.65 319 P **Pn** 06 57 04.4 +0.7
baz=320
MHZQ *e*S **Sn** 06 57 44.6 -1.3
baz=320
ZPLA **Ao Xicun** 3.68 279 *e*P **Pn** 06 57 05.5 +1.5
baz=281
ZPLA S **Sn** 06 57 45.1 -1.5
baz=281
AXDP **Jialang** 3.74 295 P **Pn** 06 57 05.0 0.0
baz=296
AXDP *e*S **Sn** 06 57 47.7 -0.5
baz=296
XPSS **Dashiqiu** 3.80 339 *e*P **Pn** 06 57 06.2 +0.4
baz=340
XPSS *e*S **Sn** 06 57 49.3 -0.4
baz=340
DSXP **Dongshan** 3.95 276 *e*P **Pn** 06 57 08.3 +0.5
baz=277
DSXP S **Sn** 06 57 50.7 -2.6
baz=277

IDC 26 06:59:44.6±2.5, 53°.94N×86°.53E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=20.1km s-min=12.6km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**271**	I	I			07 07 03.7	
	baz=91,slow=339,SNR=7.5								
ZALV	**Zalesovo Beam**	**1.01**	**271**	Pg	Pg			07 00 03.2	-0.8
	1.1nm,0.3s,baz=89,slow=16,SNR=8.3								
ZALV				Lg	Lg			07 00 17.9	
	2.8nm,0.3s,baz=89,slow=29,SNR=17								
KURBB	**Kurchatov Arra**	**5.93**	**239**	Pn	Pn			07 01 14.8	+1.2
	0.1nm,0.3s,baz=55,slow=13,SNR=8.8								
KURBB				Sn	Sn			07 02 16.2	-5.9
	baz=77,slow=25,SNR=1.2								
KURBB				Lg	Lg			07 02 52.9	
	baz=59,slow=32,SNR=2.7								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**7.65**	**202**	Pn	Pn			07 01 38.0	+0.7
	0.2nm,0.3s,baz=22,slow=14,SNR=6.7								
	0.3nm,0.4s								

IDC ***26*** *07:01:43.5±0.6,5.°96S×142.°91E,h0km,mb4.6/18, mbtmp4.6/20,ML2.1/1,MS4.0/2,Error ellipse: s-maj=27.4km s-min=14.1km az=76.0*

BJI ***26*** *07:01:43.9±0.0,6.°13S×143.°28E,h30km,mb4.8/60, mB5.1/27,Ms4.6/7,Ms7 4.3/7*

MOS ***26*** *07:01:43.3±0.8,6.°07S×142.°84E,h13km,mb5.0/35,Error ellipse: s-maj=10.0km s-min=5.5km az=108.7*

NEIC ***26*** *07:01:45.2±2.0,6.°12S±0.°08×142.°64E±0.°07,h10km±1km, mb5.1/152,Error ellipse: s-maj=13.0km s-min=11.6km az=201.0*

DJA ***26*** *07:01:46.1±0.7,6.°S±4.°×14.°3E±.°,h35km±9km,M5.0/20, mB5.4/14,mb5.0/20,MLv5.6/5,Mw(mB)4.8/14*

ISC 26 07:01:47.7±0.3,6.°14S±0.°04×142.°69E±0.°05,h28km,n342,
σ1°48/331,mb5.0/129,MS4.1/3,19C-9D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.70**	**301**	P		**Pb**	**Pb**	**07 02 18.0**	**-0.3**
MMPI	**Merauke**	**3.25**	**225**	P		**Pn**	**Pn**	**07 02 39.7**	**+2.8**
GENI	**Genyem**	**4.33**	**324**	P		**Pb**	**Pb**	**07 02 59.6**	**-3.6**
GENI	**Genyem**	**4.33**	**324**	P		**Pn**	**Pn**	**07 02 52.7**	**+1.0**
PMG	**Port Moresby**	**5.49**	**127**	Pn		**Pn**	**Pn**	**07 03 07.5**	**-0.3**
PMG	**Port Moresby**	**5.49**	**127**	*c* P		**Pn**	**Pn**	**07 03 07.4**	**-0.3**
PMG					pmax	pmax			
	comp=Z,12nm,0.2s								
PMG	**Port Moresby**	**5.49**	**127**	Pn		**Pn**	**Pn**	**07 03 07.6**	**-0.1**
	comp=Z,4.0nm,0.3s,baz=349,slow=7.8,SNR=9.8								
PMG					Sn		**Sn**	**07 04 08.4**	**-1.5**
	comp=Z,12nm,0.3s,baz=215,slow=23,SNR=5.6								
	comp=Z,31nm,0.5s								
SMPI	**Sarmi**	**5.72**	**316**	P		Pn	Pn	07 03 06.0	-4.9
	comp=Z,245nm,1.3s,comp=Z,5μmcomp=Z,1.6nm								
COEN	**Coen**	**7.78**	**177**	P		**Pn**	**Pn**	**07 03 42.3**	**+3.1**
	baz=7.8								
COEN	**Coen**	**7.78**	**177**	Pn		**Pn**	**Pn**	**07 03 38.2**	**-1.0**
RABL	**Rabaul**	**9.63**	**79**	Pn		**Pn**	**Pn**	**07 04 04.6**	**0.0**
FAKI	**Fak Fak**	**10.89**	**287**	Pn		**Pn**	**Pn**	**07 04 19.6**	**-2.3**
FAKI	**Fak Fak**	**10.89**	**287**	P		**Pn**	**Pn**	**07 04 19.1**	**-2.7**
	comp=Z,90nm,0.9s,comp=Z,1μm								
SAUI	**Saumlaki**	**11.45**	**260**	Pn		**Pn**	**Pn**	**07 04 25.6**	**-3.9**
SAUI	**Saumlaki**	**11.45**	**260**	P		**Pn**	**Pn**	**07 04 29.7**	**+0.2**
	comp=Z,1μm,1.1s,comp=Z,10μm								
KDU	**Kakadu**	**11.99**	**236**	P		**Pn**	**Pn**	**07 04 36.5**	**-0.4**
	baz=12,SNR=19								
KDU	**Kakadu**	**11.99**	**236**	P		**Pn**	**Pn**	**07 04 37.7**	**+0.8**
MTSU	**Mount Surprise**	**12.03**	**173**	P		**Pn**	**Pn**	**07 04 41.1**	**+3.7**
	baz=12,SNR=5.0								
MTN	**Manton Dam**	**13.20**	**239**	P		**Pn**	**Pn**	**07 04 52.3**	**-1.1**
	baz=13,SNR=32								
MTN	**Manton Dam**	**13.20**	**239**	Pn		**Pn**	**Pn**	**07 04 52.2**	**-1.2**
MTN	**Manton Dam**	**13.20**	**239**	P		**Pn**	**Pn**	**07 04 52.8**	**-0.6**
DRS	**Darwin Rock St**	**13.21**	**241**	P		**Pn**	**Pn**	**07 04 54.2**	**+0.7**
CTA	**Charters Tower**	**14.29**	**166**	P		**P**	**P**	**07 05 12.7**	**-2.5**
	baz=14								
CTA	**Charters Tower**	**14.29**	**166**	Pn		**P**	**P**	**07 05 12.3**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=332,slow=13,SNR=3.2								
CTA					Lg		Lg	07 09 18.8	
	comp=Z,0.5nm,0.3s,baz=69,slow=20,SNR=4.2								
CTAO	**Charters Tower**	**14.29**	**166**	Pn		**Pn**	**Pn**	**07 05 05.1**	**-3.2**
CTAO	**Charters Tower**	**14.29**	**166**	P		**P**	**P**	**07 05 17.1**	**+1.9**
CTAO	**Charters Tower**	**14.29**	**166**	P		**Pn**	**Pn**	**07 05 05.1**	**-3.2**
QIS	**Mount Isa**	**14.64**	**192**	P		**Pn**	**Pn**	**07 05 14.1**	**+0.9**
	baz=15,SNR=18								
WB0	**Warramunga Arr**	**15.77**	**210**	Pn		**Pn**	**Pn**	**07 05 24.8**	**-3.1**
WRAB	**Tennant Creek**	**15.93**	**210**			**Pn**	**Pn**	**07 05 28.6**	**-1.4**
WRAB					IAmb		IAmb	07 05 36.5	
	comp=Z,212nm,1.9s								
WRAB	**Tennant Creek**	**15.93**	**210**	P		**Pn**	**Pn**	**07 05 28.6**	**-1.4**
WRAB					pmax	pmax			
	comp=Z,212nm,2.0s								
WB2	**Warramunga Arr**	**15.94**	**210**	P		**Pn**	**Pn**	**07 05 29.8**	**-0.3**
	baz=16								
WB2	**Warramunga Arr**	**15.94**	**210**	Pn		**Pn**	**Pn**	**07 05 28.3**	**-1.8**
WRA	**Warramunga Arr**	**15.94**	**210**			**Pn**	**Pn**	**07 05 28.7**	**-1.5**
WRA	**Warramunga Arr**	**15.94**	**210**	P		**Pn**	**Pn**	**07 05 28.7**	**-1.5**
WRA					pmax	pmax			
	comp=Z,10.0nm,2.0s								
WRA	**Warramunga Arr**	**15.94**	**210**	Pn		**Pn**	**Pn**	**07 05 28.9**	**-1.3**
	comp=Z,1.8nm,0.3s,baz=29,slow=14,SNR=27								
WRA					Sn		**Sn**	**07 08 20.6**	**-5.6**
	comp=Z,1.3nm,0.3s,baz=30,slow=22,SNR=2.3								
WRA					Lg		Lg	07 10 04.8	
	comp=Z,1.2nm,0.3s,baz=26,slow=29,SNR=9.0								
WRA					LR		LR	07 12 37.6	
	comp=Z,1μm,19.0s,baz=37,slow=40								
KNRA	**Kununurra**	**16.63**	**234**	P		**Pn**	**Pn**	**07 05 37.6**	**-1.3**
	baz=16								
KNRA	**Kununurra**	**16.63**	**234**	Pn		**Pn**	**Pn**	**07 05 37.5**	**-1.5**
KNRA					IAmb		IAmb	07 05 44.2	
	comp=Z,128nm,0.7s								
KNRA	**Kununurra**	**16.63**	**234**	P		**Pn**	**Pn**	**07 05 37.9**	**-1.0**
TNTI	**Ternate**	**16.77**	**294**	Pn		**Pn**	**Pn**	**07 05 38.3**	**-2.5**
SANI	**Sanana**	**17.14**	**283**	P		**Pn**	**Pn**	**07 05 46.1**	**+0.6**
	comp=Z,33nm,0.8s								
HNR	**Honiara**	**17.41**	**102**			**P**	**P**	**07 05 49.8**	**0.0**
HNR					IAmb		IAmb	07 05 58.6	
	comp=Z,170nm,1.2s								
HNR	**Honiara**	**17.41**	**102**	P		**P**	**P**	**07 05 49.8**	**0.0**
HNR					pmax	pmax			
	comp=Z,170nm,1.2s								
HNR	**Honiara**	**17.41**	**102**	P		**P**	**P**	**07 05 49.5**	**-0.4**
	comp=Z,446nm,0.4s,baz=202,slow=5.4,SNR=1.3								
SOEI	**Soe**	**18.59**	**258**	P		**Pn**	**Pn**	**07 06 04.3**	**+0.9**
SOEI	**Soe**	**18.59**	**258**	P		**Pn**	**Pn**	**07 06 05.3**	**+1.8**
SOEI	**Soe**	**18.59**	**258**	P		**Pn**	**Pn**	**07 06 04.4**	**+0.9**
	comp=Z,289nm,1.0s,comp=Z,3μm								
AS31	**Alice Springs**	**19.37**	**205**	P		**P**	**P**	**07 06 10.8**	**-0.6**
ASAR	**Alice Springs**	**19.37**	**205**	P		**P**	**P**	**07 06 11.3**	**-0.1**
ASAR	**Alice Springs**	**19.37**	**205**	P		**Pn**	**Pn**	**07 06 14.0**	**+1.3**
ASAR	**Alice Springs**	**19.37**	**205**	P		**Pn**	**Pn**	**07 06 14.0**	**+1.3**
	comp=Z,44nm,0.7s,baz=33,slow=9.9,SNR=105								
ASAR					S		**S**	**07 09 47.1**	**-2.0**
	comp=Z,7.2nm,0.9s,baz=22,slow=25,SNR=3.2								
ASAR					Lg		Lg	07 11 58.4	
	comp=Z,0.2nm,0.3s,baz=19,slow=27,SNR=4.1								
ASPA	**Alice Springs**	**19.37**	**205**	P		**Pn**	**Pn**	**07 06 14.0**	**+1.3**
	baz=19								
GUMO	**Guam**	**19.72**	**6**	P		**P**	**P**	**07 06 14.1**	**-1.2**
GUMO	**Guam**	**19.72**	**6**	P		**P**	**P**	**07 06 14.1**	**-1.2**
GUMO					pmax	pmax			
	comp=Z,254nm,1.3s								
QLP	**Quilpie**	**20.38**	**176**	P		Pn	Pn	07 06 26.1	+1.6
	baz=20,SNR=9.0								
QLP	**Quilpie**	**20.38**	**176**	P		Pn	Pn	07 06 30.6	+6.0
MMRI	**Maumere**	**20.43**	**262**	P		**P**	**P**	**07 06 20.7**	**-2.4**
MMRI					IAmb		IAmb	07 06 36.6	
	comp=Z,52nm,0.7s								
MMRI	**Maumere**	**20.43**	**262**	P		**P**	**P**	**07 06 22.6**	**-0.5**
	comp=Z,81nm,0.8s								
FITZ	**Fitzroy Crossi**	**20.45**	**233**	P		Pn	Pn	07 06 24.4	-1.0
	baz=20,SNR=34								
FITZ	**Fitzroy Crossi**	**20.45**	**233**	P		**P**	**P**	**07 06 23.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**20.45**	**233**	P		Pn	Pn	07 06 24.9	-0.5
LUWI	**Luwuk**	**20.51**	**284**	P		**P**	**P**	**07 06 23.4**	**-0.5**
LUWI					IAmb		IAmb	07 06 40.0	
	comp=Z,111nm,0.9s								
LUWI	**Luwuk**	**20.51**	**284**	P		**P**	**P**	**07 06 22.4**	**-1.5**
	comp=Z,132nm,0.8s,comp=Z,2μm								
EIDS	**Eidsvold**	**20.74**	**158**	P		Pn	Pn	07 06 29.4	+0.6
	baz=21,SNR=4.7								
EIDS	**Eidsvold**	**20.74**	**158**	P		**P**	**P**	**07 06 26.8**	**+0.5**
GTOI	**Gorontalo**	**20.77**	**288**	P		**P**	**P**	**07 06 25.1**	**-1.6**
	comp=Z,76nm,0.7s,comp=Z,498nm								
EDFI	**Ende, Flores**	**20.98**	**262**	P		**P**	**P**	**07 06 29.9**	**+0.8**
	comp=Z,80nm,1.1s,comp=Z,676nm								
INKA	**Innaminka**	**21.56**	**185**	P		P	P	07 06 42.3	+7.2
OOD	**Oodnadatta**	**22.54**	**196**	P		**P**	**P**	**07 06 49.8**	**+4.2**
KAPI	**Kappang**	**22.86**	**272**	P		**P**	**P**	**07 06 51.2**	**+2.1**
KAPI					IAmb		IAmb	07 07 04.5	
	comp=Z,83nm,1.1s								
KAPI	**Kappang**	**22.86**	**272**	P		**P**	**P**	**07 06 51.2**	**+2.1**
KAPI					pmax	pmax			
	comp=Z,83nm,1.1s								
TOLI2	**Tolitoli**	**23.03**	**288**	P		**P**	**P**	**07 06 48.6**	**-2.2**
TOLI2					IAmb		IAmb	07 07 04.5	
	comp=Z,48nm,1.0s								
TOLI2	**Tolitoli**	**23.03**	**288**	P		**P**	**P**	**07 06 54.0**	**+3.1**
WRKA	**Warakurna**	**23.31**	**215**	P		**P**	**P**	**07 06 54.8**	**+1.2**
	baz=23,SNR=19								
KOUNC	**Koumac, New Ca**	**25.38**	**126**	P		**P**	**P**	**07 07 11.8**	**-1.0**
CMSA	**Cobar Meteorol**	**25.42**	**174**	P		**P**	**P**	**07 07 17.3**	**+4.2**
	baz=26,SNR=8.4								
STKA	**Stephens Creek**	**25.62**	**182**	P		**P**	**P**	**07 07 17.0**	**+2.1**
	baz=26,SNR=10								
STKA	**Stephens Creek**	**25.62**	**182**	P		**P**	**P**	**07 07 13.9**	**-1.0**
STKA	**Stephens Creek**	**25.62**	**182**	⇑*e* P		**P**	**P**	**07 07 13.7**	**-1.2**
STKA	**Stephens Creek**	**25.62**	**182**	P		**P**	**P**	**07 07 16.9**	**+2.1**
	comp=Z,4.4nm,0.7s,baz=318,slow=10,SNR=5.0								
	comp=Z,4.4nm,0.7s								
MBWA	**Marble Bar**	**26.78**	**234**	P		**P**	**P**	**07 07 25.2**	**-0.3**
MBWA					IAmb		IAmb	07 08 04.7	
	comp=Z,33nm,0.8s								
PSA00	**Pilbara Seismi**	**26.90**	**233**	P		**P**	**P**	**07 07 27.0**	**+0.4**
PSA00					IAmb		IAmb	07 07 41.3	
	comp=Z,28nm,0.8s								
BBOO	**Buckleboo**	**27.25**	**192**	P		**P**	**P**	**07 07 31.9**	**+2.3**
	baz=27,SNR=6.3								
BBOO	**Buckleboo**	**27.25**	**192**	P		**P**	**P**	**07 07 28.3**	**-1.3**
BBOO					IAmb		IAmb	07 07 41.6	
	comp=Z,97nm,1.8s								
HTT	**Hallett**	**27.38**	**187**	P		**P**	**P**	**07 07 34.4**	**+3.6**
	baz=28,SNR=4.1								
DZM	**Mont Dzumac**	**27.88**	**127**	P		**P**	**P**	**07 07 36.2**	**+0.7**
FORT	**Forrest**	**28.10**	**207**	P		**P**	**P**	**07 07 35.9**	**-1.4**
SMRI	**Semarang**	**32.05**	**267**	P		**P**	**P**	**07 08 11.5**	**-0.9**
JMN	**Monobe**	**40.52**	**349**	P		**P**	**P**	**07 09 24.2**	**-0.3**
JMN					IAmb		IAmb	07 09 24.9	
	comp=Z,54nm,1.1s								
MJAR	**Matsushiro Arr**	**42.66**	**355**	P		**P**	**P**	**07 09 40.1**	**-1.9**
	comp=Z,5.6nm,0.8s,baz=191,slow=9.3,SNR=9.4								
	comp=Z,5.6nm,0.8s								
MAJO	**Matsushiro**	**42.67**	**355**	P		**P**	**P**	**07 09 40.1**	**-2.0**
MAJO					IAmb		IAmb	07 09 52.0	
	comp=Z,44nm,1.4s								
MAJO	**Matsushiro**	**42.67**	**355**	*de* P		**P**	**P**	**07 09 39.7**	**-2.3**
MAJO					pmax		pmax		
	comp=Z,12nm,1.0s								
MJB9	**Matsu-Tunnel**	**42.67**	**355**	P		**P**	**P**	**07 09 40.1**	**-2.0**
MJB9					IAmb		IAmb	07 09 53.0	
	comp=Z,43nm,1.4s								
NJ2	**Nanjing**	**44.26**	**331**	*e* P		**P**	**P**	**07 09 57.8**	**+2.9**
NJ2					sP		**pP**	**07 10 04.3**	**+0.6**
NJ2					pmax		pmax		
	comp=Z,11nm,0.6s								
RPSI	**Rantau Prapat**	**44.58**	**280**	P		**P**	**P**	**07 09 58.6**	**+0.8**
RPSI					IAmb		IAmb	07 10 09.1	
	comp=Z,29nm,0.9s								
PSI	**Prapat**	**44.60**	**280**	P		**P**	**P**	**07 09 58.6**	**+0.5**
PSI					pmax		pmax		
	comp=Z,29nm,0.9s								
RTZ	**Ruatahuna**	**44.80**	**141**	P		**P**	**P**	**07 10 02.4**	**+3.1**
TUWZ	**Tuamarina**	**44.83**	**146**	P		**P**	**P**	**07 10 02.4**	**+3.0**
WHN	**Wuhan**	**45.47**	**325**	P		**P**	**P**	**07 10 06.0**	**+1.4**
WHN					pP		**pP**	**07 10 13.8**	**+0.4**
KSAR	**Wonju Array Be**	**45.51**	**343**	P		**P**	**P**	**07 10 04.6**	**-0.2**
KSAR	**Wonju Array Be**	**45.51**	**343**	P		**P**	**P**	**07 10 04.6**	**-0.2**
KSRS	**Korea Array**	**45.51**	**343**	P		**P**	**P**	**07 10 04.4**	**-0.3**
	comp=Z,8.4nm,0.9s,baz=162,slow=9.2,SNR=28								
	comp=Z,8.4nm,0.9s								
MQZ	**McQueen's Vall**	**45.74**	**150**	P		**P**	**P**	**07 10 07.0**	**+0.4**
JTM	**Tenmabayashi**	**46.72**	**358**	P		**P**	**P**	**07 10 13.4**	**-0.8**
GYA	**Guiyang**	**47.64**	**314**	P		**P**	**P**	**07 10 23.5**	**+1.6**
GYA					pP		sP	07 10 35.3	+1.2
GYA					pmax		pmax		
	comp=Z,18nm,0.9s								
ERM	**Erimo**	**47.92**	**0**	⇑*e* P		**P**	**P**	**07 10 21.6**	**-2.0**
ERM					pmax		pmax		
	comp=Z,11nm,0.7s								
PHRA	**Phrae**	**48.50**	**301**	P		**P**	**P**	**07 10 27.3**	**-1.2**
CRAI	**Chiangrai**	**49.16**	**303**	P		**P**	**P**	**07 10 34.4**	**+0.8**
LYN	**LuoYang**	**49.52**	**327**	⇑P		**P**	**P**	**07 10 36.5**	**+0.5**
LYN					pmax		pmax		
	comp=Z,28nm,0.8s								
LYN					pmax		pmax		
	comp=Z,260nm,3.8s								
CMAR	**Chiang Mai Arr**	**49.58**	**300**	P		**P**	**P**	**07 10 37.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**49.58**	**300**	*i* P		**P**	**P**	**07 10 38.4**	**+1.6**
CMAR					pmax		pmax		
	comp=Z,2.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**49.58**	**300**	P		**P**	**P**	**07 10 37.7**	**+0.9**
	comp=Z,5.6nm,1.0s,baz=123,slow=5.9,SNR=21								
	comp=Z,5.6nm,1.0s								
CHTO	**Chiang Mai**	**49.73**	**301**	P		**P**	**P**	**07 10 38.7**	**+0.7**
CHTO	**Chiang Mai**	**49.73**	**301**	P		**P**	**P**	**07 10 38.7**	**+0.7**
CHTO					pmax		pmax		
	comp=Z,6.0nm,0.9s								
PSTR	**Posyet**	**49.75**	**349**	⇓*e* P		**P**	**P**	**07 10 36.9**	**-0.7**
ASAJ	**Asahikawa**	**50.02**	**360**	P		**P**	**P**	**07 10 39.0**	**-0.7**
ASAJ					pmax		pmax		
	comp=Z,34nm,1.2s								
JKA	**Kamikawa-asahi**	**50.02**	**360**	P		**P**	**P**	**07 10 39.0**	**-0.7**
JKA					IAmb		IAmb	07 10 50.4	
	comp=Z,34nm,1.2s								
HNS	**HongShan**	**50.58**	**331**	⇓P		**P**	**P**	**07 10 44.0**	**0.0**
HNS					pmax		pmax		
	comp=Z,10.0nm,1.2s								
USA0B	**Ussuriysk Arra**	**51.03**	**350**	P		**P**	**P**	**07 10 46.4**	**-0.9**
USA0B					IAmb		IAmb	07 10 48.0	
	comp=Z,42nm,1.4s								
USA0B	**Ussuriysk Arra**	**51.03**	**350**	*ce* P		**P**	**P**	**07 10 46.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**51.03**	**350**	P		**P**	**P**	**07 10 47.3**	**0.0**
USRK	**Ussuriysk Ar.**	**51.03**	**350**	P		**P**	**P**	**07 10 46.9**	**-0.4**
	comp=Z,12nm,0.9s,baz=161,slow=8.5,SNR=13								
	comp=Z,12nm,0.9s								
XAN	**Xi'an**	**51.16**	**324**	P		**P**	**P**	**07 10 49.0**	**+0.5**
XAN					pP		pP	07 10 55.8	-1.7
XAN					S		**S**	**07 18 06.0**	**+0.9**
XAN					pmax		pmax		
	comp=Z,20nm,1.2s								
XAN					pmax		pmax		
	comp=Z,220nm,4.8s								
PZH	**PanZhiHua**	**51.26**	**311**	P		**P**	**P**	**07 10 50.8**	**+1.3**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.8s								
PZH					pmax		pmax		
	comp=Z,70nm,5.1s								
MDJ	**Mudanjiang**	**51.88**	**348**	P		**P**	**P**	**07 10 56.3**	**+2.6**
MDJ					pP		sP	07 11 06.3	-0.1
MDJ					sP		pP	07 11 10.5	+7.6
MDJ					PP		**PP**	**07 12 54.0**	**+2.1**
MDJ					PcS		**PcS**	**07 16 04.0**	**-0.2**
MDJ					S		**S**	**07 18 21.5**	**+6.9**
MDJ					pmax		pmax		
	comp=Z,8.0nm,2.0s								
MDJ					pmax		pmax		
	comp=Z,200nm,4.8s								
MDJ					LR		LR		
	comp=Z,270nm,15.2s								
MDJ					LR		LR		
	comp=Z,180nm,15.8s								
MDJ					LR		LR		
	comp=Z,220nm,22.7s								
BJT	**Baijiatuan**	**52.03**	**334**	P		**P**	**P**	**07 10 54.8**	**-0.1**
BJT	**Baijiatuan**	**52.03**	**334**	P		**P**	**P**	**07 10 54.8**	**-0.1**
BJT					pmax		pmax		
	comp=Z,13nm,1.2s								
BJI	**Beijing**	**52.05**	**334**	P		**P**	**P**	**07 10 54.5**	**-0.5**
BJI					pmax		pmax		
	comp=Z,6.0nm,1.3s								
CN2	**Changchun**	**52.10**	**344**	P		**P**	**P**	**07 10 55.5**	**+0.2**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
CD2	**Chengdu**	**52.38**	**317**	P		**P**	**P**	**07 10 58.5**	**+0.8**
CD2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
PBA	**Port Blair**	**52.74**	**290**	P		**P**	**P**	**07 11 00.6**	**+0.1**
YSS	**Yuzh-Sakhalins**	**52.86**	**0**	P		**P**	**P**	**07 11 00.4**	**-0.5**
YSS	**Yuzh-Sakhalins**	**52.86**	**0**	*e* P		**P**	**P**	**07 11 00.0**	**-0.9**
YSS					pmax		pmax		
	comp=Z,30nm,0.7s								
YSS					MLR		MLR		
	comp=Z,300nm,16.0s								
BNX	**BinXian**	**53.42**	**347**	⇓P		**P**	**P**	**07 11 04.5**	**-0.6**
BNX					pmax		pmax		
	comp=Z,23nm,0.8s								
BNX					pmax		pmax		
	comp=Z,69nm,3.6s								
HHC	**Hu-ho-hao-te**	**54.80**	**331**	*e* P		**P**	**P**	**07 11 16.0**	**+0.7**
HHC					pmax		pmax		
	comp=Z,8.0nm,0.7s								
HHC					pmax		pmax		
	comp=Z,120nm,5.3s								
LZH	**Lanzhou**	**55.60**	**322**	*e* P		**P**	**P**	**07 11 22.5**	**+1.2**
LZH					pP		pP	07 11 32.0	+1.7
LZH					pmax		pmax		
	comp=Z,13nm,1.1s								
KLR	**Kul'dur**	**55.96**	**351**	*ce* P		**P**	**P**	**07 11 22.8**	**-0.6**
KLR					pmax		pmax		
	comp=Z,17nm,1.7s								
TYV	**Tymovskoe**	**56.77**	**360**	*e* P		**P**	**P**	**07 11 29.0**	**-0.1**
TYV					pmax		pmax		
	comp=Z,8.0nm,1.5s								
TYV					pmax		pmax		
	comp=Z,200nm,3.1s								
HEH	**HeiHe**	**57.71**	**348**	*e* P		**P**	**P**	**07 11 35.0**	**-0.7**
HEH					pmax		pmax		
	comp=Z,11nm,0.8s								
SHL	**Shillong**	**58.54**	**305**	P		**P**	**P**	**07 11 43.2**	**+0.9**
SHL	**Shillong**	**58.54**	**305**	P		**P**	**P**	**07 11 43.2**	**+0.9**
SHL					pmax		pmax		
	comp=Z,60nm,1.5s								
HIA	**Hailar**	**58.70**	**343**	P		**P**	**P**	**07 11 42.7**	**-0.1**
HIA	**Hailar**	**58.70**	**343**	P		**P**	**P**	**07 11 42.7**	**-0.1**
HIA					pmax		pmax		
	comp=Z,7.0nm,0.9s								
GTA	**Gaotai**	**60.18**	**323**	P		**P**	**P**	**07 11 54.5**	**+1.2**
GTA					pP		pP	07 12 01.5	-0.9
GTA					pmax		pmax		
	comp=Z,8.0nm,1.0s								
PEA0B	**Petropavlovsk-**	**60.38**	**10**	⇑*e* P		**P**	**P**	**07 11 52.8**	**-1.5**
PETK	**Petropavlovsk-**	**60.38**	**10**	P		**P**	**P**	**07 11 54.0**	**-0.2**
PETK	**Petropavlovsk-**	**60.38**	**10**	P		**P**	**P**	**07 11 53.6**	**-0.6**
	comp=Z,14nm,1.0s,baz=197,slow=4.6,SNR=8.1								
	comp=Z,14nm,1.0s								
PET	**Petropavlovsk**	**60.48**	**11**	P		**P**	**P**	**07 11 56.6**	**+1.7**
ZEA	**Zeya**	**61.06**	**350**	*e* P		**P**	**P**	**07 11 58.6**	**-0.3**
ZEA					pmax		pmax		
	comp=Z,20nm,0.8s								
GOMU	**GeErMu**	**61.51**	**317**	P		**P**	**P**	**07 12 04.0**	**+1.2**
GOMU					pP		pP	07 12 10.3	-1.6
GOMU					sP		sP	07 12 15.8	+0.6
GOMU					pmax		pmax		
	comp=Z,5.0nm,1.1s								
ULN	**Ulaanbaatar**	**62.25**	**334**	P		**P**	**P**	**07 12 08.0**	**+0.7**
ULN	**Ulaanbaatar**	**62.25**	**334**	⇓*e* P		**P**	**P**	**07 12 07.9**	**+0.7**
ULN					pmax		pmax		
	comp=Z,5.0nm,0.9s								
SONM	**Songino Array**	**62.52**	**333**	P		**P**	**P**	**07 12 09.6**	**+0.6**
SONM					IAmb		IAmb	07 12 26.1	
	comp=Z,16nm,1.8s								
SONM	**Songino Array**	**62.52**	**333**	P		**P**	**P**	**07 12 09.2**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=154,slow=7.5,SNR=13								
	comp=Z,1.4nm,0.6s								
PALK	**Pallekele**	**63.26**	**281**	P		**P**	**P**	**07 12 14.5**	**0.0**
PALK	**Pallekele**	**63.26**	**281**	P		**P**	**P**	**07 12 14.5**	**0.0**
PALK					pmax		pmax		
	comp=Z,33nm,1.4s								
ZAK	**Zakamensk**	**65.78**	**334**	*e* P		**P**	**P**	**07 12 29.8**	**-0.5**
ZAK					pmax		pmax		
	comp=Z,14nm,0.9s								
MA2	**Magadan**	**65.82**	**4**	P		**P**	**P**	**07 12 29.6**	**-0.7**
MA2					IAmb		IAmb	07 12 41.6	
	comp=Z,16nm,1.0s								
MA2	**Magadan**	**65.82**	**4**	⇑*e* P		**P**	**P**	**07 12 29.0**	**-1.3**
MA2					pmax		pmax		
	comp=Z,16nm,1.3s								
MOY	**Mondy**	**67.71**	**333**	*e* P		**P**	**P**	**07 12 43.4**	**+0.8**
MOY					pmax		pmax		
	comp=Z,4.0nm,1.1s								
YAK	**Yakutsk**	**68.71**	**353**	⇓*e* P		**P**	**P**	**07 12 48.1**	**-0.4**
YAK					pmax		pmax		
	comp=Z,7.0nm,0.8s								
SEY	**Seymchan**	**69.28**	**5**	⇑*e* P		**P**	**P**

comp=Z,6.4nm,1.0s,baz=115,slow=4.8,SNR=18
comp=Z,6.4nm,1.0s

ARSB	**Arslanbob**	**79.06**	**314**	P	**P**		**07 13 50.3**	**+0.5**
ARSB	**Arslanbob**	**79.06**	**314**	P	**P**		**07 13 50.3**	**+0.5**
ARSB				pmax	pmax			
	comp=Z,11nm,1.8s							
BTLS	**Baital**	**79.53**	**318**	*e*P	**P**		**07 13 51.9**	**-0.2**
	baz=318							
BTLS	**Baital**	**79.53**	**318**	*e*P	**P**		**07 13 51.8**	**-0.2**
KBL	**Kabul**	**80.15**	**306**	P	**P**		**07 13 55.0**	**-0.9**
KBL	**Kabul**	**80.15**	**306**	P	**P**		**07 13 55.0**	**-0.9**
KBL				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ANM	**Nome**	**80.28**	**20**	P	**P**		**07 13 56.0**	**+0.3**
ANM	**Nome**	**80.28**	**20**	P	**P**		**07 13 56.0**	**+0.3**
ANM				pmax	pmax			
	comp=Z,14nm,1.2s							
K15K	**Wolf Creek Mou**	**80.36**	**23**	P	**P**		**07 13 57.0**	**+0.8**
O16K	**Kokwok River B**	**80.36**	**26**	P	**P**		**07 13 55.4**	**-0.8**
O16K				IAmb	IAmb		07 14 11.7	
	comp=Z,30nm,1.3s							
DZA	**Taraz**	**80.71**	**315**	*e*P	**P**		**07 13 58.8**	**+0.2**
	baz=315							
DZA	**Taraz**	**80.71**	**315**	*e*P	**P**		**07 13 58.7**	**+0.2**
M16K	**Timber Creek**	**80.72**	**25**	P	**P**		**07 13 58.7**	**+0.6**
L16K	**Owhat River**	**80.86**	**24**	P	**P**		**07 13 59.0**	**+0.1**
L16K				IAmb	IAmb		07 14 14.7	
	comp=Z,28nm,1.3s							
F15K	**North Star Dit**	**81.21**	**19**	P	**P**		**07 14 01.0**	**+0.4**
SIMJ	**Simiganj**	**81.22**	**311**	P	**P**		**07 14 02.4**	**+0.9**
SIMJ				IAmb	IAmb		07 14 09.9	
	comp=Z,12nm,0.8s							
N17K	**Nushagak Hills**	**81.22**	**26**	P	**P**		**07 14 01.6**	**+0.8**
N17K				IAmb	IAmb		07 14 30.1	
	comp=Z,21nm,1.1s							
J16K	**Anvik River**	**81.26**	**22**	P	**P**		**07 14 01.4**	**+0.4**
J16K				IAmb	IAmb		07 14 02.5	
	comp=Z,49nm,1.6s							
KK31	**Karatay Array**	**81.34**	**315**	P	**P**		**07 14 02.6**	**+0.7**
KK31	**Karatay Array**	**81.34**	**315**	P	**P**		**07 14 02.6**	**+0.7**
KK31				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KKAR	**Karatay Array**	**81.34**	**315**	P	**P**		**07 14 02.4**	**+0.5**
KKAR	**Karatay Array**	**81.34**	**315**	P	**P**		**07 14 02.6**	**+0.7**
KKAR				IAmb	IAmb		07 14 18.6	
	comp=Z,4.5nm,0.9s							
KKAR	**Karatay Array**	**81.34**	**315**	P	**P**		**07 14 02.4**	**+0.5**
IUG	**Iuzhnay**	**81.41**	**314**	*e*P	**P**		**07 14 02.8**	**+0.3**
	baz=314							
IUG	**Iuzhnay**	**81.41**	**314**	*e*P	**P**		**07 14 02.7**	**+0.3**
I17K	**Unalakleet**	**81.56**	**22**	P	**P**		**07 14 01.8**	**-0.7**
I17K				IAmb	IAmb		07 16 01.8	
	comp=Z,48nm,1.7s							
BRLS	**Borolday**	**81.80**	**315**	*e*P	**P**		**07 14 04.6**	**+0.2**
	baz=315							
BRLS	**Borolday**	**81.80**	**315**	*e*P	**P**		**07 14 04.5**	**+0.2**
K17K	**Iditarod**	**81.86**	**24**	P	**P**		**07 14 04.9**	**+0.8**
K17K				IAmb	IAmb		07 14 05.5	
	comp=Z,27nm,1.1s							
BRZS	**Berezniki**	**82.05**	**322**	*e*P	**P**		**07 14 05.6**	**+0.1**
	baz=322							
BRZS	**Berezniki**	**82.05**	**322**	*e*P	**P**		**07 14 05.6**	**+0.1**
SVW2	**Sparrevohn**	**82.19**	**26**	P	**P**		**07 14 06.3**	**+0.4**
SVW2				IAmb	IAmb		07 14 59.1	
	comp=Z,30nm,1.5s							
H17K	**Granite Mounta**	**82.41**	**21**	P	**P**		**07 14 07.3**	**+0.3**
H17K				IAmb	IAmb		07 14 22.8	
	comp=Z,14nm,1.0s							
P19K	**Oil Pt**	**82.58**	**27**	P	**P**		**07 14 07.3**	**-0.8**
P19K				IAmb	IAmb		07 14 07.8	
	comp=Z,18nm,0.7s							
F17K	**Baldwin Pennin**	**82.77**	**20**	P	**P**		**07 14 08.6**	**-0.2**
F17K				IAmb	IAmb		07 14 21.4	
	comp=Z,24nm,1.5s							
J18K	**Innoko River**	**82.86**	**23**	P	**P**		**07 14 08.8**	**-0.6**
J18K				IAmb	IAmb		07 15 50.7	
	comp=Z,26nm,1.7s							
TTA	**Tatalina**	**82.88**	**24**	P	**P**		**07 14 09.7**	**+0.1**
TTA				IAmb	IAmb		07 14 38.2	
	comp=Z,44nm,1.8s							
TTA	**Tatalina**	**82.88**	**24**	P	**P**		**07 14 09.7**	**+0.1**
TTA				pmax	pmax			
	comp=Z,44nm,1.8s							
G18K	**Tagagawik**	**83.36**	**21**	P	**P**		**07 14 11.4**	**-0.6**
G18K				IAmb	IAmb		07 14 27.9	
	comp=Z,20nm,1.3s							
CNPM	**China Poot**	**83.45**	**28**	P	**P**		**07 14 17.7**	**-0.8**
E18K	**Tukpahlearik C**	**83.53**	**19**	P	**P**		**07 14 12.3**	**-0.4**
J19K	**Poorman**	**83.54**	**23**	P	**P**		**07 14 12.8**	**-0.4**
M20K	**Styx River**	**83.59**	**25**	P	**P**		**07 14 13.6**	**+0.2**
M20K				IAmb	IAmb		07 14 14.1	
	comp=Z,9.2nm,0.9s							
BRLK	**Bradley Lake**	**83.71**	**28**	P	**P**		**07 14 13.4**	**-0.5**
BRLK				IAmb	IAmb		07 14 31.9	
	comp=Z,20nm,1.1s							
QSPA	**South Pole Qui**	**83.83**	**180**	P	**P**		**07 14 14.9**	**+0.4**
QSPA				IAmb	IAmb		07 14 36.6	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**83.83**	**180**	P	**P**		**07 14 15.2**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=223,slow=1.2,SNR=13							
	comp=Z,2.4nm,0.8s							
K20K	**Telida**	**83.86**	**24**	P	**P**		**07 14 14.5**	**-0.1**
K20K				IAmb	IAmb		07 14 56.5	
	comp=Z,18nm,1.3s							
H19K	**Roundabout Mou**	**83.97**	**21**	P	**P**		**07 14 14.6**	**-0.4**
H19K				IAmb	IAmb		07 14 30.7	
	comp=Z,11nm,1.0s							
C18K	**Utukok River**	**84.02**	**18**	P	**P**		**07 14 14.8**	**-0.6**
NRIK	**Noril'sk**	**84.12**	**343**	P	**P**		**07 14 15.6**	**-0.1**
NRIK				IAmb	IAmb		07 14 28.0	
	comp=Z,14nm,0.8s							
NRIK	**Noril'sk**	**84.12**	**343**	*ce*P	**P**		**07 14 15.4**	**-0.3**
NRIK				pmax	pmax			
	comp=Z,17nm,0.9s							
NRIK	**Noril'sk**	**84.12**	**343**	P	**P**		**07 14 15.2**	**-0.5**
	comp=Z,10nm,0.8s,baz=120,slow=5.2,SNR=16							
	comp=Z,10nm,0.8s							
F19K	**Shaleruckik Mo**	**84.15**	**20**	P	**P**		**07 14 15.3**	**-0.6**
J20K	**Nowinta River**	**84.20**	**23**	P	**P**		**07 14 16.2**	**0.0**
J20K				IAmb	IAmb		07 14 17.5	
	comp=Z,12nm,1.1s							
SKT	**Skwentna**	**84.32**	**26**	P	**P**		**07 14 15.0**	**-1.9**
SKT				IAmb	IAmb		07 15 46.2	
	comp=Z,27nm,1.8s							
BVAR	**Borovoye Array**	**84.38**	**325**	P	**P**		**07 14 17.8**	**+0.4**
	comp=Z,28nm,0.8s,baz=104,slow=6.3,SNR=97							
	comp=Z,28nm,0.8s							
SUA	**Susitna One**	**84.45**	**26**	P	**P**		**07 14 16.6**	**-1.2**
BRVK	**Borovoye**	**84.45**	**325**	P	**P**		**07 14 18.1**	**+0.4**
BRVK	**Borovoye**	**84.45**	**325**	*ci*P	**P**		**07 14 17.8**	**0.0**
BRVK				pmax	pmax			
	comp=Z,30nm,1.0s							
E19K	**Redstone River**	**84.65**	**20**	P	**P**		**07 14 18.5**	**0.0**
E19K				IAmb	IAmb		07 14 39.0	
	comp=Z,11nm,0.8s							
CAST	**Castle Rocks**	**84.69**	**24**	P	**P**		**07 14 18.1**	**-0.7**
RC01	**Rabbit Creek A**	**84.75**	**27**	P	**P**		**07 14 18.2**	**-0.9**
RC01				IAmb	IAmb		07 14 20.5	
	comp=Z,16nm,1.0s							
C19K	**Lookout Ridge**	**84.76**	**18**	P	**P**		**07 14 19.3**	**+0.3**
M22K	**Willow**	**84.84**	**26**	P	**P**		**07 14 18.7**	**-0.8**
D19K	**Kuna River**	**84.89**	**19**	P	**P**		**07 14 19.0**	**-0.7**
F20K	**Avaraart Lake**	**84.96**	**20**	P	**P**		**07 14 20.0**	**0.0**
IMAR	**Indian Mountai**	**85.17**	**22**	P	**P**		**07 14 20.7**	**-0.4**
PMR	**Palmer**	**85.21**	**26**	P	**P**		**07 14 20.7**	**-0.7**
PMR				IAmb	IAmb		07 14 21.1	
	comp=Z,18nm,1.1s							
PMR	**Palmer**	**85.21**	**26**	P	**P**		**07 14 20.7**	**-0.7**
PMR				pmax	pmax			
	comp=Z,18nm,1.1s							
KTH	**Kantishna Hill**	**85.22**	**24**	P	**P**		**07 14 20.6**	**-0.9**
KTH				IAmb	IAmb		07 14 21.1	
	comp=Z,15nm,1.1s							
GHO	**Glory Hole Cre**	**85.37**	**26**	P	**P**		**07 14 21.5**	**-0.8**
GHO				IAmb	IAmb		07 15 14.3	
	comp=Z,26nm,1.4s							
BPAW	**Bear Paw Mtn.**	**85.42**	**24**	P	**P**		**07 14 21.7**	**-0.7**
BPAW				IAmb	IAmb		07 14 42.6	
	comp=Z,32nm,1.9s							
TRF	**Thorofare Moun**	**85.44**	**25**	P	**P**		**07 14 22.9**	**+0.2**
KNK	**Knik Glacier**	**85.45**	**27**	P	**P**		**07 14 21.7**	**-0.9**
KNK				IAmb	IAmb		07 14 32.8	
	comp=Z,16nm,0.9s							
I21K	**Tanana**	**85.48**	**23**	P	**P**		**07 14 22.1**	**-0.5**
SML	**Sawmill**	**85.65**	**26**	P	**P**		**07 14 22.6**	**-1.1**
SML				IAmb	IAmb		07 14 23.7	
	comp=Z,16nm,0.8s							
MLY	**Manley**	**85.89**	**23**	IAmb	IAmb		07 14 24.7	
	comp=Z,10nm,1.0s							
RND	**Reindeer**	**86.02**	**25**	P	**P**		**07 14 24.3**	**-1.2**
RND				IAmb	IAmb		07 14 39.6	
	comp=Z,16nm,0.9s							
RND	**Reindeer**	**86.02**	**25**	P	**P**		**07 14 24.3**	**-1.2**
RND				pmax	pmax			
	comp=Z,16nm,0.9s							
SCM	**Sheep Creek Mo**	**86.10**	**27**	P	**P**		**07 14 25.3**	**-0.6**
SCM				IAmb	IAmb		07 14 41.4	
	comp=Z,19nm,1.0s							
SCM	**Sheep Creek Mo**	**86.10**	**27**	P	**P**		**07 14 25.3**	**-0.6**
SCM				pmax	pmax			
	comp=Z,19nm,1.0s							
NEA2	**Nenana**	**86.38**	**24**	IAmb	IAmb		07 14 31.8	
	comp=Z,31nm,1.7s							
I23K	**Minto, Yukon-K**	**86.48**	**23**	IAmb	IAmb		07 14 43.9	
	comp=Z,26nm,1.7s							
DHY	**Denali Highway**	**86.52**	**25**	IAmb	IAmb		07 14 42.9	
	comp=Z,11nm,0.7s							
M24K	**Tolsona, Glenn**	**86.71**	**26**	P	**P**		**07 14 28.7**	**-0.2**
WRH	**Wood River Hil**	**86.73**	**24**	IAmb	IAmb		07 14 27.7	
	comp=Z,8.1nm,0.8s							
D22K	**Ayikyak River**	**86.83**	**19**	P	**P**		**07 14 29.7**	**+0.4**
MDM	**Murphy Dome**	**86.85**	**23**	IAmb	IAmb		07 17 45.9	
	comp=Z,32nm,2.0s							
CCB	**Clear Creek Bu**	**86.91**	**24**	IAmb	IAmb		07 14 28.9	
	comp=Z,13nm,0.8s							
COLD	**Coldfoot**	**86.98**	**21**	P	**P**		**07 14 30.3**	**+0.3**
HDA	**Harding Lake**	**87.17**	**24**	IAmb	IAmb		07 14 39.2	
	comp=Z,6.0nm,0.7s							
IL31		**87.32**	**24**	IAmb	IAmb		07 14 30.6	
	comp=Z,8.2nm,0.8s							
ILAR	**Eielson Array**	**87.32**	**24**	P	**P**		**07 14 29.8**	**-1.9**
ILAR	**Eielson Array**	**87.32**	**24**	P	**P**		**07 14 29.8**	**-1.9**
ILAR	**Eielson Array**	**87.32**	**24**	P	**P**		**07 14 29.4**	**-2.3**
	comp=Z,6.5nm,0.8s,baz=257,slow=5.1,SNR=57							
	comp=Z,6.5nm,0.8s							
GLB	**Gilahina Butte**	**87.56**	**27**	P	**P**		**07 14 32.6**	**-0.4**
GLB				IAmb	IAmb		07 14 33.4	
	comp=Z,7.5nm,0.8s							
G24K	**Hadweenzic Riv**	**87.77**	**22**	P	**P**		**07 14 33.5**	**-0.3**
J25K	**Salcha River,**	**87.88**	**24**	P	**P**		**07 14 33.7**	**-0.8**
J25K				IAmb	IAmb		07 14 34.3	
	comp=Z,13nm,1.1s							
F24K	**Squaw Lake**	**87.92**	**21**	IAmb	IAmb		07 14 36.1	
	comp=Z,9.3nm,0.9s							
BARN	**Barnard Glacie**	**88.45**	**28**	P	**P**		**07 14 37.6**	**+0.2**
FYU	**Fort Yukon**	**88.57**	**22**	P	**P**		**07 14 37.8**	**+0.3**
LOGN	**Logan Glacier**	**88.70**	**28**	P	**P**		**07 14 38.5**	**-0.1**
L27K	**Beaver Creek,**	**88.92**	**26**	IAmb	IAmb		07 14 55.7	
	comp=Z,28nm,1.6s							
BCAR	**Beaver Creek A**	**88.94**	**26**	P	**P**		**07 14 39.5**	**+0.1**
E25K	**Arctic Village**	**88.95**	**21**	P	**P**		**07 14 40.5**	**+1.0**
I26K	**Coal Creek Min**	**88.99**	**24**	P	**P**		**07 14 38.9**	**-0.8**
BMAR	**Burnt Mountain**	**89.09**	**22**	P	**P**		**07 14 40.7**	**+0.6**
EGAK	**Eagle**	**89.66**	**25**	P	**P**		**07 14 42.8**	**+0.1**
EGAK				IAmb	IAmb		07 14 54.4	
	comp=Z,8.0nm,0.8s							
ABKAR	**Akbulak array**	**89.89**	**319**	P	**P**		**07 14 43.9**	**-0.3**
DAWY	**Dawson**	**90.22**	**25**	P	**P**		**07 14 45.6**	**+0.1**
DAWY				IAmb	IAmb		07 15 04.0	
	comp=Z,18nm,1.4s							
I28M	**Miner Creek**	**90.33**	**24**	IAmb	IAmb		07 15 04.4	
	comp=Z,18nm,1.6s							
HYT	**Haines Junctio**	**90.37**	**29**	P	**P**		**07 14 46.7**	**+0.4**
L29M	**L29M**	**90.56**	**27**	IAmb	IAmb		07 14 48.2	
	comp=Z,11nm,0.9s							
K29M	**Barlow Dome**	**90.98**	**26**	IAmb	IAmb		07 14 50.3	
	comp=Z,8.4nm,0.9s							
O30N	**Mendenhall**	**91.04**	**29**	P	**P**		**07 14 49.2**	**-0.2**
M30M	**Minto, Yukon**	**91.05**	**27**	P	**P**		**07 14 49.3**	**-0.1**
M30M				IAmb	IAmb		07 15 45.1	
	comp=Z,29nm,1.9s							
AKTO	**Aktyubinsk**	**91.30**	**320**	P	**P**		**07 14 49.5**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=100,slow=4.7,SNR=5.5							
	comp=Z,2.0nm,0.8s							
WHY	**Whitehorse**	**91.60**	**29**	P	**P**		**07 14 52.3**	**+0.2**
J30M	**Hart River**	**91.64**	**25**	IAmb	IAmb		07 15 10.0	
	comp=Z,13nm,1.2s							
EPYK	**Eagle Plains**	**91.82**	**23**	P	**P**		**07 14 53.0**	**+0.1**
EPYK				IAmb	IAmb		07 14 53.4	
	comp=Z,7.4nm,0.9s							
ARU	**Arti**	**91.83**	**326**	P	**P**		**07 14 51.5**	**-1.5**
ARU				IAmb	IAmb		07 15 04.1	
	comp=Z,11nm,1.0s							
ARU	**Arti**	**91.83**	**326**	*ci*P	**P**		**07 14 51.6**	**-1.5**
ARU							07 18 30.4	
ARU				S	**SKSac**		**07 25 21.4**	**-2.5**
ARU				SS	**SS**		**07 31 55.6**	**-4.9**
ARU				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ARU	**Arti**	**91.83**	**326**	P	**P**		**07 14 51.9**	**-1.1**
	comp=Z,3.5nm,0.2s,baz=131,slow=2.3,SNR=8.4							
	comp=Z,3.5nm,0.2s							
BELG	**Belogornoye**	**97.92**	**322**	*e*P	**P**		**07 15 19.2**	**-1.7**
BELG				pmax	pmax			
	comp=Z,2.0nm,0.9s							
YKA	**Yellowknife Ar**	**101.28**	**28**	*i* P	**Pdif**		**07 15 35.4**	**-0.3**
YKA	**Yellowknife Ar**	**101.28**	**28**	P	**Pdif**		**07 15 34.7**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=282,slow=4.6,SNR=6.4							
OBN	**Obninsk**	**104.22**	**325**	*e*P	**Pdif**		**07 15 48.3**	**-0.6**
OBN				*e*			07 20 04.9	
OBN				*e*PPP	PPP		07 22 17.7	
OBN				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KIC	**Kosan Boka**	**147.63**	**272**	⇑*i*PKP1	**PKPab**		**07 21 39.8**	**+6.9**
	comp=Z,16nm,0.8s							
DBIC	**Dimbokro**	**147.75**	**273**	PKPbc	**PKPbc**		**07 21 31.6**	**+0.6**
	comp=Z,6.3nm,0.9s,baz=143,slow=5.1,SNR=5.0							
LIC	**Lamto**	**147.91**	**272**	⇑*e*PKP1	**PKPab**		**07 21 40.6**	**+6.6**
	comp=Z,48nm,0.8s							
TIC	**Toumodi**	**147.91**	**273**	⇑*i*PKP1	**PKPab**		**07 21 40.7**	**+6.6**
	comp=Z,16nm,0.8s							

NEIC 26 07:08:51.4±0.8, 31°.131N×0°.010×103°.43W±0°.02, h5km±1km, mb_Lg2.6/28, ML2.7/58, Error ellipse: s-maj=3.3km s-min=2.9km az=70.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECS	**Pecos**	**0.44**	**303**		Pg	07 09 00.1	+0.2
PECS				Sg	Sg	07 09 06.6	+0.9
PECS				IAML		07 09 09.4	
	611nm,0.4s						
PECS				IAML		07 09 14.4	
	648nm,0.5s						
MNHN	**Monahans**	**0.61**	**70**		Pg	07 09 03.2	0.0
ALPN	**Alpine**	**0.77**	**193**		Pg	07 09 06.3	0.0
ALPN				Sg	Sg	07 09 16.9	+0.6
ODSA	**Odessa**	**1.24**	**37**		Pg	07 09 14.6	-0.7
ODSA				Sg	Sg	07 09 31.5	+0.1
VHRN	**Van Horn**	**1.38**	**256**		Pn	07 09 16.9	-0.5
VHRN				Sg	Sg	07 09 35.4	-0.3
VHRN				IAML		07 09 38.8	
	103nm,0.4s						
VHRN				IAML		07 09 45.1	
	77nm,0.5s						
SAND	**Sanderson**	**1.63**	**136**		Pn	07 09 21.1	+0.3
SAND				IAML		07 09 49.9	
	58nm,0.5s						
TX31	**Lajitas Ar. Si**	**1.80**	**187**	Pn	Pb	07 09 24.7	-0.2
TXAR	**Lajitas Array**	**1.80**	**186**	Pn	Pb	07 09 24.8	-0.2
OZNA	**Ozona**	**1.99**	**95**	Pn	Pb	07 09 27.6	-0.6
SGCY	**Sterling City**	**2.12**	**68**	Pn	Pn	07 09 28.6	+1.0
SGCY				IAmb_Lg		07 10 02.8	
	comp=Z,31nm,1.1s						
POST	**Post**	**2.53**	**40**	Pn	Pn	07 09 34.5	+1.2
POST				IAmb_Lg		07 10 11.4	
	comp=Z,18nm,0.7s						
SN05	**Snyder 5**	**2.78**	**51**		Pn	07 09 38.2	+1.5
MSTX	**Muleshoe**	**2.89**	**11**	Pn	Pn	07 09 39.4	+1.2
SN07	**Snyder 07**	**2.91**	**47**		Pn	07 09 39.8	+1.4
DRIO	**Del Rio**	**2.97**	**124**	IAmb_Lg		07 10 26.4	
	comp=Z,24nm,0.9s						
JCT	**Junction City**	**3.19**	**101**	Pn	Pn	07 09 43.6	+1.3
ABTX	**Abilene, Hawle**	**3.55**	**64**		Pn	07 09 48.7	+1.4
ABTX				IAmb_Lg		07 10 52.4	
	comp=Z,16nm,0.7s						
APMT	**Aspermont**	**3.56**	**51**		Pn	07 09 48.6	+1.3
APMT				IAmb_Lg		07 10 50.9	
	comp=Z,13nm,0.8s						

BRDY	**Brady**	**3.80**	**87**	Pn	Pn		07 09 52.1	+1.4
BRDY				IAmb_Lg			07 10 59.6	
	comp=Z,16nm,0.9s							
HNDO	**Hondo**	**3.93**	**113**	Pn	Pn		07 09 54.7	+2.3
HNDO				IAmb_Lg			07 11 05.5	
	comp=Z,11nm,0.8s							
121A	**Cookes Peak, D**	**3.96**	**292**	Pn	Pn		07 09 53.4	+0.4
121A				IAML			07 11 09.5	
	comp=E,12nm,0.5s							
AMTX	**Amarillo**	**4.02**	**21**	Pn	Pn		07 09 55.0	+1.2
AMTX				IAmb_Lg			07 11 06.9	
	comp=Z,14nm,0.7s							
ANMO	**Albuquerque**	**4.57**	**327**	IAmb_Lg			07 11 22.0	
	comp=Z,6.6nm,0.7s							
ANMO				IAmb_Lg			07 11 22.1	
	comp=Z,6.7nm,0.7s							
PLPT	**Palo Pinto**	**4.66**	**68**	Pn	Pn		07 10 03.3	+0.8
SMWD	**Samnorwood**	**4.78**	**33**	IAmb_Lg			07 11 31.0	
	comp=Z,9.2nm,0.9s							
FW03	**Perrin-Whitt E**	**4.94**	**66**	IAmb_Lg			07 11 40.0	
	comp=Z,13nm,0.8s							
WTFS	**Witchita Falls**	**4.96**	**57**		Pn		07 10 07.5	+1.0
319A	**Douglas**	**5.01**	**274**	Pn	Pn		07 10 06.8	-0.6
FW07	**Weatherford**	**5.05**	**70**	Pn	Pn		07 10 06.5	-1.3
FW07				IAmb_Lg			07 11 45.5	
	comp=Z,11nm,0.9s							
WHTX	**Lake Whitney,**	**5.17**	**79**	Pn	Pn		07 10 08.5	-1.0
FW13	**Cleburne**	**5.26**	**75**	Pn	Pn		07 10 09.8	-0.9
WMOK	**Wichita Mounta**	**5.31**	**46**	IAML			07 11 52.7	
	comp=Z,6.6nm,2.2s							
WMOK	**Wichita Mounta**	**5.31**	**46**		Pn		07 10 12.7	+1.2
FW06	**Azle**	**5.32**	**68**		Pn		07 10 11.8	+0.3
Z35A	**Perchaven, San**	**5.68**	**66**	IAmb_Lg			07 12 01.2	
	comp=Z,9.5nm,1.0s							

IDC 26 07:09:42.1±3.1, 53°.49N×87°.73E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=29.7km s-min=16.2km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**286**	I	I	07 21 00.0	
	0.2nm,0.7s,baz=102,slow=342,SNR=62						
ZALV	**Zalesovo Beam**	**1.79**	**286**	Pg	Pn	07 10 14.2	0.0
	0.6nm,0.3s,baz=97,slow=16,SNR=6.0						
ZALV				Lg	Lg	07 10 39.3	
	1.1nm,0.3s,baz=104,slow=25,SNR=13						
KURBB	**Kurchatov Array**	**6.36**	**247**	Pn	Pn	07 11 17.7	+0.7
	baz=60,slow=14,SNR=4.4						
KURBB				Lg	Lg	07 13 01.6	
	baz=65,slow=29,SNR=5.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.55**	**210**	Pn	Pn	07 11 34.7	+1.3
	0.2nm,0.3s,baz=31,slow=15,SNR=8.5						
	0.3nm,0.3s						

*MEX **26** 07:11:57.1±0.7, 14°.76N×92°.16W, h100km±8km, MD3.7*
*GCG **26** 07:12:04.1±0.3, 14°.80N×91°.91W, h50km, MD3.4*

ISC 26 07:11:59.4±2.1, 14°.82N±0°.10×92°.28W±0°.09, h79km±11km, n9, σ1°00/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.09**	**11**	*i* P	**Pn**	**07 12 10.2**	**-0.5**
THIG				*e*S	**Sn**	**07 12 20.8**	**+1.9**
PATR	**El Naranjo**	**0.30**	**9**	*e*P	**Pn**	**07 12 10.6**	**-1.3**
PATR				*i* S	**Sn**	**07 12 21.2**	**+0.3**
CHUJ	**Union Juarez**	**0.32**	**32**	*e*P	**Pn**	**07 12 10.8**	**-1.2**
CHUJ				*i* S	**Sn**	**07 12 21.6**	**+0.4**
PAVE	**Pavencul**	**0.39**	**15**	*i* P	**Pn**	**07 12 11.8**	**-0.6**
PAVE				*e*S	**Sn**	**07 12 22.7**	**+0.7**
STG3	**Santiaguito 3,**	**0.70**	**99**	*e*P	**Pn**	**07 12 14.2**	**-0.9**
SULM	**Suchitepequez,**	**0.86**	**126**	*e*P	**Pn**	**07 12 16.4**	**-0.3**
PCIG		**1.26**	**314**	*e*P	**Pn**	**07 12 20.9**	**-0.7**
PCIG				*e*S	**Sn**	**07 12 38.9**	**+0.7**
FUG	**Fuego 3**	**1.44**	**105**	*e*P	**Pn**	**07 12 23.6**	**-0.4**
CCIG	**Comitan**	**1.46**	**5**	*e*P	**Pn**	**07 12 24.0**	**-0.3**
CCIG				*i* S	**Sn**	**07 12 44.3**	**+1.1**

*IDC **26** 07:14:53.0±1.2, 5°.35S×146°.71E, h0km, mb4.0/8, mbtmp4.1/10, ML4.2/1, MS3.6/3, Error ellipse: s-maj=53.6km s-min=17.8km az=85.0*
*NEIC **26** 07:14:54.9±2.0, 5°.3S±0°.1×146°.8E±0°.1, h10km±1km, mb4.2/12, Error ellipse: s-maj=22.8km s-min=16.9km az=64.0*

ISC 26 07:14:54.7±0.6, 5°.30S±0°.07×146°.75E±0°.09, h10km, n36, σ1°09/36, mb4.2/11, Eastern New Guinea region

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

comp=Z,2.1nm,0.6s,baz=289,slow=0.6,SNR=16
comp=Z,2.1nm,0.6s
BVAR Borovoye Array 86.06 324 P P 07 27 36.9 +1.3
comp=Z,0.5nm,0.6s,baz=76,slow=6.1,SNR=2.8
comp=Z,0.5nm,0.6s

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*NNC **26** 07:18:32.0±1.2, 49°.73N×81°.77E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=15.7km s-min=3.2km az=54.0, Suspected Mining explosion.*
*IDC **26** 07:18:34.6±1.3, 49°.74N×81°.54E, h0km, mbtmp2.4/2, ML2.3/1, Error ellipse: s-maj=17.0km s-min=8.5km az=58.0*
ISC 26 07:18:33.0±1.1, 49°.51N±0°.07×81°.3E±0°.1, h0km, n8, σ0s54/8, 6C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.13**	**303**	⇓Pg		**Pg**	**Pg**	**07 19 13.5**	**-0.3**
	9.3nm,0.8s								
KURBB				⇑Lg		Lg	Lg	07 19 43.9	
	23nm,0.5s								
KURBB	**Kurchatov Arra**	**2.13**	**303**	Pg		**Pb**	**Pb**	**07 19 12.9**	**+0.5**
	0.2nm,0.3s,baz=111,slow=19,SNR=29								
KURBB				Lg		Lg	Lg	07 19 42.3	
	0.5nm,0.3s,baz=113,slow=31,SNR=5.0								
KURK	**Kurchatov**	**2.13**	**306**	⇑Pg		**Pg**	**Pg**	**07 19 13.2**	**-0.6**
	7.6nm,0.7s								
KURK				⇑Lg		Lg	Lg	07 19 43.2	
	16nm,0.5s								
MAKZ	**Makanchi**	**2.73**	**171**	⇑Pg		**Pg**	**Pg**	**07 19 25.3**	**-0.1**
	2.6nm,1.2s								
MAKZ				⇑Lg		Lg	Lg	07 20 06.4	
	5.0nm,0.8s								
MK31	**Makanchi Array**	**2.79**	**166**	⇑Pg		**Pg**	**Pg**	**07 19 25.7**	**-0.7**
	0.3nm,0.3s,baz=354,slow=14,SNR=15								
MK31				⇓Lg		Lg	Lg	07 20 06.2	
	2.3nm,0.5s,baz=347,slow=27,SNR=5.4								
MKAR	**Makanchi Array**	**2.79**	**166**	Pn		**Pb**	**Pb**	**07 19 24.1**	**+0.5**
	0.4nm,0.3s,baz=356,slow=13,SNR=18								
MKAR				Sn		**Sg**	**Sg**	**07 20 02.5**	**0.0**
	0.7nm,0.3s,baz=355,slow=24,SNR=9.5								
MKAR				Lg		Lg	Lg	07 20 07.1	
	0.9nm,0.3s,baz=352,slow=29,SNR=10								
	0.8nm,0.4s								
ZALV	**Zalesovo Beam**	**4.95**	**25**	Pn		**Pn**	**Pn**	**07 19 48.5**	**0.0**
	0.3nm,0.3s,baz=193,slow=12,SNR=1.2								
ZALV				Lg		Lg	Lg	07 21 02.7	
	0.7nm,0.3s,baz=203,slow=26,SNR=6.3								
I46RU	**ZALESOVO INFRA**	**4.95**	**25**	I		I	I	07 47 40.0	
	baz=205,slow=335,SNR=1.3								

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*IDC **26** 07:21:36.7±1.5, 6°.17S×143°.27E, h0km, mb3.7/4, mbtmp3.9/5, ML4.4/1, Error ellipse: s-maj=71.7km s-min=27.5km az=95.0*
ISC 26 07:21:42.0±1.4, 6°.3S±0°.2×143°.1E±0°.4, h35km, n6, σ1s87/6, mb3.7/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.99**	**211**	Pn		**Pn**	**Pn**	**07 25 22.2**	**-2.3**
	0.3nm,0.3s,baz=30,slow=13,SNR=12								
ASAR	**Alice Springs**	**19.38**	**206**	P		**P**	**P**	**07 26 07.2**	**+2.1**
	1.0nm,0.3s,baz=32,slow=10,SNR=71								
	11nm,0.7s								
STKA	**Stephens Creek**	**25.48**	**183**	P		**P**	**P**	**07 27 07.4**	**+0.3**
	0.6nm,0.3s,baz=350,slow=17,SNR=2.2								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**75.26**	**322**	P		**P**	**P**	**07 33 21.6**	**+0.1**
	0.3nm,0.8s,baz=111,slow=7.9,SNR=2.3								
	0.3nm,0.8s								
BVAR	**Borovoye Array**	**84.72**	**325**	P		**P**	**P**	**07 34 12.9**	**+0.5**
	1.0nm,0.7s,baz=123,slow=7.6,SNR=5.0								
	1.0nm,0.7s								
ILAR	**Eielson Array**	**87.31**	**24**	P		**P**	**P**	**07 34 24.2**	**-0.7**
	0.4nm,0.8s,baz=260,slow=5.4,SNR=4.9								
	0.4nm,0.8s								

IDC 26 07:24:33.7±6.0, 5°.79S×142°.08E, h0km, mb3.5/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=208.8km s-min=36.6km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.95**	**207**	Pn		Pn	Pn	07 28 18.7	-1.0
	0.3nm,0.3s,baz=31,slow=13,SNR=2.3								
	0.9nm,0.6s								
ASAR	**Alice Springs**	**19.43**	**203**	P		P	P	07 29 02.5	+0.5
	0.3nm,0.3s,baz=33,slow=9.8,SNR=8.0								
	2.1nm,0.7s								
MKAR	**Makanchi Array**	**74.27**	**322**	P		P	P	07 36 12.8	0.0
	0.4nm,0.8s,baz=126,slow=6.0,SNR=3.6								
	0.4nm,0.8s								

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*NEIC **26** 07:26:31.1±2.4, 5°.6S±0°.1×143°.2E±0°.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=19.3km s-min=17.3km az=60.0*
*IDC **26** 07:26:40.7±0.9, 6°.26S×143°.27E, h0km, mb4.2/9, mbtmp4.2/11, ML1.9/1, MS3.5/1, Error ellipse: s-maj=32.8km s-min=20.0km az=86.0*
ISC 26 07:26:30.4±0.8, 5°.67S±0°.10×143°.24E±0°.09, h10km, n36, σ1s51/24, mb4.5/11, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.38**	**134**				**Pn**	**07 27 50.7**	**-0.1**
PMG	**Port Moresby**	**5.38**	**134**	Pn			Pb	07 27 58.6	-6.0
	3.5nm,0.3s,baz=324,slow=13,SNR=3.4								
PMG				Sn			**Sn**	**07 28 51.2**	**-1.6**
	7.6nm,0.3s,baz=193,slow=21,SNR=7.6								
	15nm,0.4s								
COEN	**Coen**	**8.24**	**180**				**Pn**	**07 28 28.9**	**-1.3**
SAUI	**Saumlaki**	**12.07**	**258**	Pn			**Pn**	**07 29 23.0**	**+0.3**
MTN	**Manton Dam**	**13.91**	**238**	Pn			**Pn**	**07 29 48.5**	**+0.7**
CTA	**Charters Tower**	**14.63**	**169**	LR			LR	07 35 38.6	
	comp=Z,182nm,20.7s,baz=262,slow=38								
WRAB	**Tennant Creek**	**16.61**	**211**	Pn			**Pn**	**07 30 22.1**	**-1.5**
WRAB				IAmb			IAmb	07 30 41.9	
	comp=Z,13nm,0.7s								
WB2	**Warramunga Arr**	**16.62**	**211**	Pn			**P**	**07 30 24.7**	**-1.4**
WB2				IAmb			IAmb	07 30 42.8	
	comp=Z,36nm,1.4s								
WRA	**Warramunga Arr**	**16.62**	**211**	Pn			**Pn**	**07 30 24.2**	**+0.5**
WRA	**Warramunga Arr**	**16.62**	**211**	Pn			**P**	**07 30 25.7**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=18,slow=13,SNR=5.4								
WRA				Sn			Sn	07 33 12.6	-16
	comp=Z,0.6nm,0.3s,baz=25,slow=23,SNR=2.5								
WRA				Lg			Lg	07 35 12.5	
	comp=Z,0.5nm,0.3s,baz=24,slow=29,SNR=2.8								
KNRA	**Kununurra**	**17.34**	**234**	P			**P**	**07 30 33.8**	**-0.4**
KNRA				IAmb			IAmb	07 30 55.9	
	comp=Z,34nm,0.8s								
SOEI	**Soe**	**19.23**	**257**	P			**P**	**07 30 54.6**	**-0.5**
SOEI				IAmb			IAmb	07 31 13.1	
	comp=Z,23nm,0.8s								
AS31	**Alice Springs**	**20.03**	**206**	P			**Pn**	**07 31 04.7**	**-0.7**
AS31				IAmb			IAmb	07 31 22.1	
	comp=Z,4.3nm,0.6s								
ASAR	**Alice Springs**	**20.03**	**206**	P			**Pn**	**07 31 04.7**	**-0.8**
ASAR	**Alice Springs**	**20.03**	**206**	P			**Pn**	**07 31 10.5**	**+5.0**
	comp=Z,4.4nm,0.6s,baz=33,slow=9.8,SNR=14								
ASAR				Lg			Lg	07 37 00.3	
	baz=28,slow=34								
FITZ	**Fitzroy Crossi**	**21.17**	**233**	P			**P**	**07 31 14.8**	**-1.2**
STKA	**Stephens Creek**	**26.12**	**183**	P			P	07 32 15.3	+11
	comp=Z,2.5nm,1.0s,baz=358,slow=7.4,SNR=4.3								
LHI	**Lord Howe Isla**	**29.69**	**152**	P			**P**	**07 32 38.9**	**+2.2**
KSAR	**Wonju Array Be**	**45.21**	**343**	P			**P**	**07 34 46.4**	**-1.4**
KSRS	**Korea Array**	**45.21**	**343**	P			P	07 35 04.1	+16
	comp=Z,1.6nm,0.8s,baz=156,slow=9.6,SNR=5.5								
	comp=Z,1.6nm,0.8s								
CMAR	**Chiang Mai Arr**	**49.81**	**300**	P			P	07 35 38.2	+14
	comp=Z,1.6nm,0.3s,baz=116,slow=6.1,SNR=4.3								
	comp=Z,1.6nm,0.3s								
PETK	**Petropavlovsk-**	**59.82**	**10**	P			P	07 36 52.0	+16
	comp=Z,3.9nm,0.8s,baz=157,slow=5.5,SNR=8.3								
	comp=Z,3.9nm,0.8s								
SONM	**Songino Array**	**62.34**	**333**	P			P	07 37 09.1	+16
	comp=Z,0.4nm,0.8s,baz=145,slow=4.6,SNR=3.6								
	comp=Z,0.4nm,0.8s								
MKAR	**Makanchi Array**	**74.88**	**322**	P			P	07 38 26.2	+15
	comp=Z,1.2nm,0.5s,baz=108,slow=7.9,SNR=12								
	comp=Z,1.2nm,0.5s								
NRIK	**Noril'sk**	**83.83**	**343**	P			P	07 39 14.9	+15

comp=Z,3.6nm,0.8s,baz=112,slow=6.0,SNR=6.6
comp=Z,3.6nm,0.8s
QSPA South Pole Qui 84.30 180 P P 07 39 03.2 +0.7
QSPA IAmb IAmb 07 39 11.8
comp=Z,8.2nm,1.5s
QSPA South Pole Qui 84.30 180 P P 07 39 10.5 +8.0
comp=Z,2.0nm,0.7s,baz=293,slow=0.7,SNR=8.0
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 84.31 325 P P 07 39 17.4 +15
comp=Z,3.7nm,0.7s,baz=97,slow=6.0,SNR=16
comp=Z,3.7nm,0.7s
IMAR Indian Mountai 84.53 21 P P 07 39 02.4 -1.1
KLU Klutina 85.95 27 P P 07 39 10.9 +0.2
WRH Wood River Hil 86.07 24 P P 07 39 11.0 -0.1
WRH IAmb IAmb 07 39 26.6
comp=Z,4.4nm,1.3s
HDA Harding Lake 86.51 24 P P 07 39 13.8 +0.4
ILAR Eielson Array 86.67 24 P P 07 39 27.6 +13
comp=Z,1.3nm,0.9s,baz=255,slow=5.1,SNR=8.3
comp=Z,1.3nm,0.9s
SCRK Sand Creek 87.59 25 P P 07 39 19.8 +1.0
BCAR Beaver Creek A 88.27 26 P P 07 39 22.6 +0.7
DBIC Dimbokro 148.26 274 PKPbc PKPab 07 46 30.1 +9.1
comp=Z,5.8nm,0.9s,baz=155,slow=7.2,SNR=4.8

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*SNET **26** 07:28:01.7±0.9, 12°.99N×90°.40W, h15km±8km, ML3.3*
*CATAC **26** 07:28:01.1±0.8, 13°.07N×90°.40W, h4km±4km, ML3.2*
*GCG **26** 07:28:19.5±0.3, 14°.61N×90°.77W, h41km±7km, MD3.5*
ISC 26 07:28:01.3±1.8, 13°.09N±0°.07×90°.36W±0°.04, h3km±10km, n42, σ0s68/68, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.98**	**35**	*eP*			**Pb**	**07 28 21.0**	**-0.1**
NUBE	**Las Nubes**	**0.98**	**35**	*i* P			**Pb**	**07 28 21.0**	**-0.1**
NUBE				*i* S			**Sb**	**07 28 34.5**	**0.0**
NUBE				IAML				07 28 42.3	
	comp=Z,260nm,1.0s								
CEVE	**Cerro Verde**	**1.02**	**44**	*eP*			**Pn**	**07 28 22.2**	**-0.6**
CEVE	**Cerro Verde**	**1.02**	**44**	*i* P			**Pb**	**07 28 21.9**	**+0.1**
CEVE				*i* S			**Sb**	**07 28 37.2**	**+1.4**
CEVE				IAML				07 28 41.1	
	comp=Z,1μm,1.0s								
JAYA	**Jayaque - finc**	**1.05**	**58**	*eP*			**Pb**	**07 28 22.2**	**0.0**
JAYA	**Jayaque - finc**	**1.05**	**58**	*i* P			**Pb**	**07 28 22.0**	**-0.2**
JAYA				*i* S			**Sb**	**07 28 37.6**	**+1.2**
JAYA				IAML				07 28 41.8	
	comp=Z,1μm,1.0s								
LOAL	**Lomas de Alarc**	**1.06**	**32**	*i* P			**Pb**	**07 28 22.3**	**-0.1**
LOAL				IAML				07 28 23.4	
	comp=Z,2μm,1.0s								
LOAL				*i* S			**Sg**	**07 28 36.4**	**+0.9**
SNJE	**San Jose**	**1.06**	**43**	*eP*			**Pn**	**07 28 22.6**	**-0.7**
SLOZ	**Alcaldia de Sa**	**1.08**	**31**	*eP*			**Pb**	**07 28 22.6**	**-0.2**
SLOZ				*eS*			**Sn**	**07 28 39.8**	**+0.7**
CEDA	**San Andres**	**1.17**	**53**	*eP*			**Pn**	**07 28 24.3**	**-0.4**
CEDA				IAML				07 28 50.7	
	comp=Z,529nm,0.4s								
UNIC	**Universidad Ca**	**1.18**	**42**	*i* P			**Pg**	**07 28 23.2**	**-0.8**
UNIC				*i* S			**Sg**	**07 28 39.9**	**+0.5**
UNIC				IAML				07 28 45.5	
	comp=Z,270nm,1.0s								
PMON	**Piamonte**	**1.19**	**59**	*i* P			**Pn**	**07 28 24.6**	**-0.4**
PMON				*i* S			**Sg**	**07 28 39.9**	**+0.4**
PMON				IAML				07 28 48.9	
	comp=Z,560nm,1.0s								
SNET	**Serv Nac Est T**	**1.25**	**62**	*i* P			**Pg**	**07 28 24.4**	**-0.8**
SNET				*i* S			**Sb**	**07 28 42.5**	**+0.5**
SNET				IAML				07 28 49.3	
	comp=Z,610nm,1.0s								
UEES	**Universidad Ev**	**1.25**	**60**	*eP*			**Pb**	**07 28 25.8**	**+0.1**
UEES	**Universidad Ev**	**1.25**	**60**	*i* P			**Pb**	**07 28 25.4**	**-0.3**
UEES				*i* S			**Sn**	**07 28 43.2**	**-0.1**
UEES				IAML				07 28 46.7	
	comp=Z,220nm,1.0s								
PANCS	**Alcalda de**	**1.26**	**66**	*i* P			**Pg**	**07 28 24.8**	**-0.6**
PANCS				*i* S			**Sg**	**07 28 41.2**	**-0.6**
PANCS				IAML				07 29 08.8	
	comp=Z,1μm,1.0s								
LOMA	**Loma Larga**	**1.28**	**64**	*eP*			**Pn**	**07 28 25.7**	**-0.5**
LOMA	**Loma Larga**	**1.28**	**64**	*i* P			**Pg**	**07 28 25.4**	**-0.4**
LOMA				*i* S			**Sn**	**07 28 44.2**	**+0.2**
LOMA				IAML				07 28 46.3	
	comp=Z,200nm,1.0s								
UDBS	**Universidad Do**	**1.32**	**62**	*i* P			**Pn**	**07 28 26.1**	**-0.7**
UDBS				IAML				07 28 42.1	
	comp=Z,250nm,1.0s								
UDBS				*i* S			**Sn**	**07 28 45.2**	**+0.2**
JUAM	**Asuncion Mita**	**1.39**	**27**	*i* P			**Pn**	**07 28 27.1**	**-0.6**
JUAM				IAML				07 28 28.7	
	comp=Z,280nm,1.0s								
JUAM				*i* S			**Sb**	**07 28 46.5**	**+0.3**
SJTE	**Alcalda de S**	**1.41**	**68**	*eP*			**Pn**	**07 28 27.6**	**-0.5**
SJTE	**Alcalda de S**	**1.41**	**68**	*i* P			**Pn**	**07 28 27.0**	**-1.0**
SJTE				*i* S			**Sg**	**07 28 47.5**	**+0.7**
SJTE				IAML				07 28 54.5	
	comp=Z,150nm,1.0s								
FUG	**Fuego 3**	**1.43**	**341**	*eP*			**Pn**	**07 28 27.3**	**-1.1**
NBG	**Las Nubes**	**1.49**	**0**	*eP*			**Pg**	**07 28 30.1**	**+0.2**
GUNB	**GUNB**	**1.50**	**0**	*i* P			**Pn**	**07 28 28.3**	**-1.1**
GUNB				*i* S			**Sn**	**07 28 48.8**	**-0.8**
GUNB				IAML				07 28 53.0	
	comp=Z,270nm,1.0s								
PAVA	**Las Pavas**	**1.51**	**66**	*eP*			**Pb**	**07 28 29.9**	**-0.2**
PAVA	**Las Pavas**	**1.51**	**66**	*i* P			**Pb**	**07 28 29.9**	**-0.2**
PAVA				*i* S			**Sg**	**07 28 50.6**	**+0.6**
PAVA				IAML				07 28 56.1	
	comp=Z,320nm,1.0s								
COEG	**Centro de Oper**	**1.53**	**70**	*eP*			**Pn**	**07 28 29.3**	**-0.4**
COEG	**Centro de Oper**	**1.53**	**70**	*i* P			**Pb**	**07 28 30.1**	**-0.3**
COEG				IAML				07 28 35.0	
	comp=Z,160nm,1.0s								
COEG				*i* S			**Sn**	**07 28 50.4**	**+0.3**
TECO	**Alcaldia de Te**	**1.60**	**74**	*eP*			**Pn**	**07 28 29.9**	**-0.6**
TECO	**Alcaldia de Te**	**1.60**	**74**	*i* P			**Pn**	**07 28 29.7**	**-0.8**
TECO				*i* S			**Sg**	**07 28 53.0**	**+0.3**
TECO				IAML				07 29 02.6	
	comp=Z,78nm,1.0s								
SULM	**Suchitepequez,**	**1.68**	**316**	*eP*			**Pg**	**07 28 34.5**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.70**	**69**	*eP*			**Pb**	**07 28 32.7**	**-0.5**
SCLA	**Alcaldia de Sa**	**1.70**	**69**	*i* P			**Pn**	**07 28 32.1**	**+0.2**
SCLA				*i* S			**Sg**	**07 28 57.0**	**+1.1**
SCLA				IAML				07 29 06.8	
	comp=Z,59nm,1.0s								
ESQI	**Esquipulas**	**1.76**	**34**	*i* P			**Pb**	**07 28 33.4**	**-1.0**
ESQI				*i* S			**Sn**	**07 28 56.0**	**+0.1**
ESQI				IAML				07 29 01.3	
	comp=Z,170nm,1.0s								
COEB	**Comit de Eme**	**1.82**	**77**	*eP*			**Pn**	**07 28 33.5**	**-0.3**
COEB				*eS*			**Sn**	**07 28 57.9**	**+0.5**
COEB	**Comit de Eme**	**1.82**	**77**	*i* P			**Pn**	**07 28 33.0**	**-0.7**
COEB				*i* S			**Sn**	**07 28 57.9**	**+0.5**
COEB				IAML				07 29 03.0	
	comp=Z,85nm,1.0s								
STG3	**Santiaguito 3,**	**1.99**	**324**	*eP*			**Pn**	**07 28 34.6**	**-1.5**
PACA	**Pacayal**	**2.02**	**79**	*i* P			**Pn**	**07 28 36.8**	**+0.4**
PACA				*i* S			**Sb**	**07 29 03.7**	**-0.6**
PACA				IAML				07 29 15.8	
	comp=Z,700nm,1.0s								
LCND	**La Caada**	**2.41**	**85**	*i* P			**Pn**	**07 28 40.8**	**-0.9**
LCND				*i* S			**Sn**	**07 29 12.4**	**+0.6**
LCND				IAML				07 29 26.4	
	comp=Z,66nm,1.0s								
AMPH	**Amapala**	**2.64**	**86**	*i* P			**Pn**	**07 28 44.1**	**-0.7**
AMPH				*i* S			**Sn**	**07 29 19.0**	**+1.7**
CCIG	**Comitan**	**3.61**	**332**	*i* P			**Pn**	**07 28 58.8**	**+0.5**
CCIG				*i* S			**Sn**	**07 29 41.2**	**-0.4**
CCIG				IAML				07 29 56.9	
	comp=Z,31nm,1.0s								

IDC 26 07:29:12.3±3.0, 53°.71N×86°.89E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=27.9km s-min=16.3km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**282**	I		I	I	07 37 40.0	
	0.1nm,0.6s,baz=101,slow=343,SNR=7.7								
ZALV	**Zalesovo Beam**	**1.25**	**282**	Pg		Pg	Pg	07 29 34.9	-1.4
	0.5nm,0.3s,baz=96,slow=15,SNR=5.9								
ZALV				Lg		Lg	Lg	07 29 53.1	
	0.9nm,0.3s,baz=105,slow=28,SNR=6.6								

KURBB Kurchatov Arra 6.00 242 Pn Pn 07 30 43.3 +1.0
0.1nm,0.3s,baz=58,slow=14,SNR=4.5
0.2nm,0.3s
MKAR Makanchi Array 7.53 205 Pn Pn 07 31 04.6 +1.3
0.1nm,0.3s,baz=25,slow=15,SNR=2.6
0.1nm,0.3s

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*IDC **26** 07:34:49.2±1.1, 5°.77S×142°.69E, h0km, mb3.9/4, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=34.0km s-min=22.9km az=79.0*
ISC 26 07:34:53.2±0.9, 6°.11S±0°.10×142°.4E±0°.1, h28km, n7, σ2s42/10, mb4.0/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.73**	**125**	Pn		**Pn**	**Pn**	**07 36 15.6**	**-0.9**
	3.7nm,0.4s,baz=330,slow=8.1,SNR=1.6								
PMG				Sn		**Sn**	**Sn**	**07 37 21.8**	**+0.4**
	2.1nm,0.3s,baz=227,slow=17,SNR=1.8								
WRA	**Warramunga Arr**	**15.84**	**209**	Pn		**P**	**P**	**07 38 37.5**	**-0.4**
	0.1nm,0.3s,baz=29,slow=14,SNR=1.4								
WRA				Sn		**Sn**	**Sn**	**07 41 25.4**	**-3.8**
	0.2nm,0.3s,baz=30,slow=24,SNR=5.4								
WRA				Lg		Lg	Lg	07 43 25.7	
	0.2nm,0.3s,baz=28,slow=30,SNR=3.6								
	1.0nm,0.6s								
ASAR	**Alice Springs**	**19.29**	**204**	P		**Pn**	**P**	**07 39 20.8**	**+3.6**
	0.2nm,0.3s,baz=33,slow=9.6,SNR=8.0								
ASAR				S		**Sn**	**Sn**	**07 42 51.0**	**-1.7**
	1.3nm,0.8s,baz=16,slow=28,SNR=4.1								
	3.8nm,0.8s								
MKAR	**Makanchi Array**	**74.72**	**322**	P		**P**	**P**	**07 46 30.6**	**0.0**
	0.5nm,0.8s,baz=99,slow=7.5,SNR=5.2								
	0.5nm,0.8s								
QSPA	**South Pole Qui**	**83.86**	**180**	P		**P**	**P**	**07 47 22.5**	**+2.3**
	1.6nm,0.9s,baz=20,slow=0.7,SNR=5.2								
	1.6nm,0.9s								
BVAR	**Borovoye Array**	**84.19**	**325**	P		**P**	**P**	**07 47 22.1**	**+0.1**
	1.3nm,0.8s,baz=119,slow=5.2,SNR=5.4								
	1.3nm,0.8s								
ILAR	**Eielson Array**	**87.40**	**24**	P		**P**	**P**	**07 47 35.5**	**-2.1**
	0.4nm,0.8s,baz=245,slow=5.5,SNR=3.0								
	0.4nm,0.8s								

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*NNC **26** 07:36:40.2±0.5, 50°.06N×78°.94E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=9.8km s-min=2.7km az=68.0, Suspected Mining explosion.*
*IDC **26** 07:36:41.6±0.9, 50°.06N×78°.79E, h0km, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=19.6km s-min=6.3km az=64.0*
ISC 26 07:36:41.4±1.0, 50°.02N±0°.05×78°.75E±0°.06, h0km, n18, σ0s77/30, 19C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**345**	⇑P			**Pg**	**07 36 51.6**	**-0.9**
KUR07				⇑S			**Sg**	**07 37 00.5**	**+0.5**
KUR06	**Kurchatov Arra**	**0.60**	**346**	⇑P			**Pg**	**07 36 52.2**	**-0.7**
KUR06				⇓S			**Sg**	**07 37 01.2**	**+0.6**
KUR14	**Kurchatov Arra**	**0.60**	**350**	⇑P			**Pg**	**07 36 52.0**	**-0.9**
KUR14				⇑S			**Sg**	**07 37 01.1**	**+0.4**
KUR15	**Kurchatov Arra**	**0.61**	**348**	⇑P			**Pg**	**07 36 52.1**	**-1.0**
KUR15				⇓S			**Sg**	**07 37 01.2**	**+0.3**
KURBB	**Kurchatov Arra**	**0.62**	**347**	⇑P			**Pg**	**07 36 52.2**	**-1.0**
	13nm,0.3s								
KURBB				⇑S			**Sg**	**07 37 01.5**	**+0.3**
	36nm,0.3s								
KURBB	**Kurchatov Arra**	**0.62**	**347**	Pg			**Pg**	**07 36 52.4**	**-0.8**
	2.3nm,0.3s,baz=167,slow=16,SNR=175								
KURBB				Lg			Lg	07 37 01.6	
	2.3nm,0.3s,baz=146,slow=44,SNR=17								
KUR16	**Kurchatov Arra**	**0.62**	**345**	⇑P			**Pg**	**07 36 52.4**	**-1.0**
KUR16				⇓S			**Sg**	**07 37 01.9**	**+0.4**
KUR05	**Kurchatov Arra**	**0.64**	**347**	⇑P			**Pg**	**07 36 52.7**	**-0.9**
KUR05				⇓S			**Sg**	**07 37 01.6**	**-0.2**
KUR17	**Kurchatov Arra**	**0.64**	**343**	⇓P			**Pg**	**07 36 52.8**	**-0.8**
KUR17				⇑S			**Sg**	**07 37 02.3**	**+0.5**
KUR04	**Kurchatov Arra**	**0.65**	**348**	⇓P			**Pg**	**07 36 53.0**	**-0.9**
KUR04				⇓S			**Sg**	**07 37 02.2**	**-0.2**
KURK	**Kurchatov**	**0.70**	**353**	⇑P			**Pg**	**07 36 53.7**	**-1.0**
	6.2nm,0.4s								
KURK				⇑S			**Sg**	**07 37 02.8**	**-1.0**
	7.5nm,0.4s								
MAKZ	**Makanchi**	**3.87**	**145**	⇓Pg			**Pb**	**07 37 50.2**	**-0.3**
	1.3nm,0.7s								
MAKZ				⇑Lg			Lg	07 38 40.6	
	1.8nm,0.4s								
MK31	**Makanchi Array**	**4.00**	**143**	⇓Pn			**Pn**	**07 37 44.4**	**+0.5**
	0.1nm,0.2s,baz=323,slow=10,SNR=33								
MK31				⇑Pg			**Pb**	**07 37 53.4**	**+0.7**
	0.3nm,0.2s,baz=328,slow=15,SNR=19								
MK31				⇑Lg			Lg	07 38 48.5	
	1.0nm,

ASAR	**Alice Springs**	**19.27**	**206**		**P**		07 45 26.3	-0.3
ASAR	**Alice Springs**	**19.27**	**206**	P	**Pn**		07 45 29.5	+1.7
	comp=Z,66nm,0.9s,baz=33,slow=10.0,SNR=4.3							
ASAR				S	**S**		07 48 57.0	-6.0
	comp=Z,3.3nm,0.7s,baz=12,slow=28,SNR=8.1							
ASAR				Lg	Lg		07 51 18.6	
	comp=Z,0.1nm,0.3s,baz=28,slow=30,SNR=4.2							
ASAR				LR	LR		07 53 39.6	
	comp=Z,300nm,21.1s,baz=31,slow=39							
QLP	**Quilpie**	**20.15**	**177**	P	Pn		07 45 39.4	+1.2
EIDS	**Eidsvold**	**20.46**	**158**	P	**P**		07 45 41.2	+1.6
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P	**P**		07 45 40.4	+0.5
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P	**P**		07 45 41.1	+1.1
INKA	**Innaminka**	**21.36**	**185**	P	**P**		07 45 52.7	+3.4
DAV	**Davao City (W)**	**21.84**	**307**	LR	LR		07 56 36.2	
	comp=Z,54nm,18.0s,baz=134,slow=43							
OOD	**Oodnadatta**	**22.39**	**197**	P	**P**		07 46 03.2	+2.9
WRKA	**Warakurna**	**23.26**	**215**	P	**P**		07 46 10.8	+1.4
TOLI2	**Tolitoli**	**23.30**	**288**	P	**P**		07 46 07.2	-2.7
TOLI2	**Tolitoli**	**23.30**	**288**	P	**P**		07 46 13.4	+3.5
LCRK	**Leigh Creek**	**24.37**	**190**	P	**P**		07 46 23.1	+3.4
MULG	**Mulgathing**	**25.21**	**198**	P	**P**		07 46 31.3	+3.9
STKA	**Stephens Creek**	**25.42**	**183**	P	**P**		07 46 30.0	+0.7
STKA	**Stephens Creek**	**25.42**	**183**	P	**P**		07 46 32.0	+2.7
STKA	**Stephens Creek**	**25.42**	**183**	P	**P**		07 46 32.4	+3.1
	comp=Z,4.5nm,0.8s,baz=6.8,slow=10,SNR=8.4							
	comp=Z,4.5nm,0.8s							
MBWA	**Marble Bar**	**26.83**	**234**	P	**P**		07 46 40.6	-1.6
MBWA				IAmb	IAmb		07 46 57.7	
	comp=Z,18nm,1.3s							
PSA00	**Pilbara Seismi**	**26.95**	**234**	P	**P**		07 46 42.2	-1.1
PSA00				IAmb	IAmb		07 46 47.0	
	comp=Z,16nm,1.2s							
PSA00	**Pilbara Seismi**	**26.95**	**234**	P	**P**		07 46 42.2	-1.1
PSA00				IAmb	IAmb		07 46 47.0	
	comp=Z,6.6nm,1.4s							
BBOO	**Buckleboo**	**27.08**	**193**	P	**P**		07 46 45.0	+0.7
BBOO				IAmb	IAmb		07 47 00.1	
	comp=Z,13nm,1.1s							
FORT	**Forrest**	**28.01**	**208**	P	**P**		07 46 52.6	0.0
FORT				IAmb	IAmb		07 46 59.1	
	comp=Z,14nm,0.8s							
MARNC	**Mare, Loyalty**	**28.57**	**124**	P	**P**		07 46 59.5	+1.8
LEM	**Lembang**	**35.06**	**267**	LR	LR		08 05 20.3	
	comp=Z,42nm,18.6s,baz=87,slow=41							
NWAO	**Narrogin (SRO)**	**35.62**	**219**	LR	LR		08 03 42.6	
	comp=Z,93nm,20.9s,baz=138,slow=38							
NJ2	**Nanjing**	**44.55**	**330**	*e*P	**P**		07 49 15.8	+2.4
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
KSRS	**Korea Array**	**45.78**	**343**	P	**P**		07 49 20.9	-2.2
	comp=Z,2.6nm,0.8s,baz=164,slow=9.3,SNR=7.6							
	comp=Z,2.6nm,0.8s							
JTM	**Tenmabayashi**	**46.94**	**358**	P	**P**		07 49 31.0	-1.2
CMAR	**Chiang Mai Arr**	**49.88**	**300**	P	**P**		07 49 54.0	-1.2
CMAR	**Chiang Mai Arr**	**49.88**	**300**	P	**P**		07 49 55.4	+0.2
	comp=Z,2.2nm,0.4s,baz=127,slow=6.1,SNR=7.8							
	comp=Z,2.2nm,0.4s							
XAN	**Xi'an**	**51.46**	**324**	P	**P**		07 50 08.3	+1.3
XAN				pmax	pmax			
	comp=Z,6.0nm,0.7s							
PZH	**PanZhiHua**	**51.56**	**311**	P	**P**		07 50 06.8	-1.2
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
PZH				pmax	pmax			
	comp=Z,90nm,4.9s							
MDJ	**Mudanjiang**	**52.14**	**348**	P	**P**		07 50 13.5	+1.8
MDJ				pmax	pmax			
	comp=Z,12nm,1.5s							
MDJ				pmax	pmax			
	comp=Z,210nm,3.9s							
HHC	**Hu-ho-hao-te**	**55.09**	**331**	*e*P	**P**		07 50 35.5	+1.9
HHC				pmax	pmax			
	comp=Z,12nm,0.8s							
HHC				pmax	pmax			
	comp=Z,120nm,5.3s							
GTA	**Gaotai**	**60.48**	**323**	*e*P	**P**		07 51 11.5	-0.1
GTA				pP	pP		07 51 20.5	-1.9
GTA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MA2	**Magadan**	**66.02**	**4**	P	**P**		07 51 45.0	-2.7
	comp=Z,6.0nm,0.9s,baz=120,slow=6.5,SNR=4.1							
	comp=Z,6.0nm,0.9s							
WMQ	**Urumqi**	**70.46**	**321**	*e*P	**P**		07 52 17.5	+1.6
MK31	**Makanchi Array**	**75.22**	**322**	P	**P**		07 52 43.8	-0.3
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**		07 52 43.8	-0.2
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**		07 52 43.5	-0.5
	comp=Z,1.6nm,0.7s,baz=106,slow=7.4,SNR=23							
	comp=Z,1.6nm,0.7s							
MAKZ	**Makanchi**	**75.42**	**322**	P	**P**		07 52 44.5	-0.7
BOOM	**Boomskoye usch**	**77.67**	**316**	P	**P**		07 52 58.0	-0.2
KURK	**Kurchatov**	**79.09**	**324**	P	**P**		07 53 05.0	-0.7
KURBB	**Kurchatov Arra**	**79.11**	**324**	P	**P**		07 53 05.0	-0.8
	comp=Z,1.6nm,0.9s,baz=116,slow=4.7,SNR=11							
	comp=Z,1.6nm,0.9s							
L14K	**Kuka Creek**	**79.49**	**23**	P	**P**		07 53 07.5	-0.1
L14K				IAmb	IAmb		07 53 22.8	
	comp=Z,11nm,1.1s							
J14K	**Nanvaranak Lak**	**79.97**	**22**	P	**P**		07 53 10.0	-0.1
ANM	**Nome**	**80.40**	**20**	P	**P**		07 53 12.2	-0.2
K15K	**Wolf Creek Mou**	**80.48**	**23**	P	**P**		07 53 12.6	-0.3
M16K	**Timber Creek**	**80.83**	**25**	P	**P**		07 53 14.8	0.0
L16K	**Owhat River**	**80.97**	**24**	P	**P**		07 53 15.1	-0.5
L16K				IAmb	IAmb		07 53 44.2	
	comp=Z,18nm,1.4s							
N17K	**Nushagak Hills**	**81.32**	**26**	P	**P**		07 53 16.9	-0.5
J16K	**Anvik River**	**81.38**	**22**	P	**P**		07 53 18.0	+0.3
J16K				IAmb	IAmb		07 53 22.4	
	comp=Z,11nm,1.4s							
OHAK	**Old Harbor**	**81.58**	**30**	P	**P**		07 53 19.2	+0.3
KKAR	**Karatay Array**	**81.65**	**315**	P	**P**		07 53 19.4	-0.3
M17K	**Holitna River**	**81.65**	**25**	P	**P**		07 53 18.5	-0.7
M17K				IAmb	IAmb		07 53 23.3	
	comp=Z,11nm,1.1s							
G16K	**Koyuk River**	**81.93**	**20**	P	**P**		07 53 19.6	-0.9
K17K	**Iditarod**	**81.97**	**23**	P	**P**		07 53 21.1	+0.2
K17K				IAmb	IAmb		07 53 24.8	
	comp=Z,8.3nm,0.9s							
L18K	**Granite Mounta**	**82.37**	**24**	P	**P**		07 53 23.1	+0.2
H17K	**Granite Mounta**	**82.53**	**21**	P	**P**		07 53 23.5	-0.3
H17K				IAmb	IAmb		07 53 25.0	
	comp=Z,4.4nm,0.8s							
N19K	**Bonanza Creek**	**82.63**	**26**	P	**P**		07 53 22.9	-1.5
P19K	**Oil Pt**	**82.67**	**27**	P	**P**		07 53 23.4	-1.2
C16K	**Lisburne Hills**	**82.70**	**17**	P	**P**		07 53 24.1	-0.4
F17K	**Baldwin Pennin**	**82.90**	**20**	P	**P**		07 53 25.5	-0.1
F17K				IAmb	IAmb		07 53 28.6	
	comp=Z,5.1nm,0.8s							
J18K	**Innoko River**	**82.97**	**23**	P	**P**		07 53 25.0	-1.1
TTA	**Tatalina**	**82.99**	**24**	P	**P**		07 53 24.6	-1.7
TTA				IAmb	IAmb		07 53 29.9	
	comp=Z,7.0nm,1.4s							
L19K	**White Mountain**	**83.11**	**25**	P	**P**		07 53 25.2	-1.6
L19K				IAmb	IAmb		07 53 40.3	
	comp=Z,11nm,1.2s							
M19K	**Big River Lodg**	**83.17**	**25**	P	**P**		07 53 26.6	-0.5
H18K	**Honhosa River**	**83.21**	**21**	P	**P**		07 53 26.3	-0.9
H18K				IAmb	IAmb		07 53 37.3	
	comp=Z,8.4nm,1.4s							
G18K	**Tagagawik**	**83.49**	**21**	P	**P**		07 53 27.4	-1.3
G18K				IAmb	IAmb		07 53 42.0	
	comp=Z,7.3nm,1.2s							
CNPM	**China Poot**	**83.54**	**28**	P	**P**		07 53 27.7	-1.4
QSPA	**South Pole Qui**	**83.61**	**180**	P	**P**		07 53 30.3	+0.8
QSPA				IAmb	IAmb		07 53 43.1	
	comp=Z,9.4nm,1.2s							
QSPA	**South Pole Qui**	**83.61**	**180**	P	**P**		07 53 30.1	+0.5
	comp=Z,1.4nm,0.7s,baz=264,slow=0.5,SNR=15							
	comp=Z,1.4nm,0.7s							
J19K	**Poorman**	**83.65**	**23**	P	**P**		07 53 29.1	-0.5
J19K				IAmb	IAmb		07 53 33.7	
	comp=Z,4.4nm,0.9s							
M20K	**Styx River**	**83.69**	**25**	P	**P**		07 53 29.5	-0.4
K20K	**Telida**	**83.97**	**24**	P	**P**		07 53 31.6	+0.4
K20K				IAmb	IAmb		07 53 34.9	
	comp=Z,5.8nm,1.1s							
H19K	**Roundabout Mou**	**84.09**	**21**	P	**P**		07 53 32.0	+0.3
H19K				IAmb	IAmb		07 53 54.8	
	comp=Z,6.5nm,1.2s							
C18K	**Utukok River**	**84.16**	**18**	P	**P**		07 53 32.2	0.0
C18K				IAmb	IAmb		07 53 35.2	
	comp=Z,8.1nm,1.4s							
G19K	**Purcell Mounta**	**84.17**	**21**	P	**P**		07 53 32.4	+0.2
G19K				IAmb	IAmb		07 53 36.3	
	comp=Z,3.5nm,0.9s							
NRIK	**Noril'sk**	**84.39**	**343**	P	**P**		07 53 32.0	-1.2
	comp=Z,1.6nm,0.4s,baz=108,slow=5.7,SNR=4.0							
	comp=Z,1.6nm,0.4s							
BVAR	**Borovoye Array**	**84.68**	**325**	P	**P**		07 53 34.3	-0.7
	comp=Z,7.5nm,0.7s,baz=112,slow=6.6,SNR=33							
	comp=Z,7.5nm,0.7s							
BRVK	**Borovoye**	**84.75**	**325**	P	**P**		07 53 34.0	-1.4
BRVK				IAmb	IAmb		07 53 35.9	
	comp=Z,5.6nm,0.8s							
E19K	**Redstone River**	**84.78**	**20**	P	**P**		07 53 34.8	-0.5
E19K				IAmb	IAmb		07 53 39.4	
	comp=Z,10nm,1.4s							
CAST	**Castle Rocks**	**84.80**	**24**	P	**P**		07 53 34.8	-0.7
CAST				IAmb	IAmb		07 53 57.0	
	comp=Z,6.9nm,1.4s							
C19K	**Lookout Ridge**	**84.90**	**18**	P	**P**		07 53 34.8	-1.0
D19K	**Kuna River**	**85.03**	**18**	P	**P**		07 53 36.0	-0.5
IMAR	**Indian Mountai**	**85.29**	**22**	P	**P**		07 53 37.4	-0.4
TRF	**Thorofare Moun**	**85.55**	**24**	P	**P**		07 53 39.2	-0.1
I21K	**Tanana**	**85.59**	**23**	P	**P**		07 53 38.5	-0.8
I21K				IAmb	IAmb		07 53 44.8	
	comp=Z,8.9nm,1.5s							
SML	**Sawmill**	**85.75**	**26**	P	**P**		07 53 39.2	-1.0
MLY	**Manley**	**86.01**	**23**	P	**P**		07 53 40.8	-0.7
MLY				IAmb	IAmb		07 53 45.5	
	comp=Z,4.0nm,1.0s							
RND	**Reindeer**	**86.12**	**25**	P	**P**		07 53 40.4	-1.7
DHY	**Denali Highway**	**86.62**	**25**	P	**P**		07 53 43.6	-1.0
DHY				IAmb	IAmb		07 54 11.7	
	comp=Z,8.2nm,1.1s							
WRH	**Wood River Hil**	**86.84**	**24**	P	**P**		07 53 44.3	-1.1
WRH				IAmb	IAmb		07 53 53.0	
	comp=Z,7.7nm,1.3s							
E22K	**Anaktuvuk Pass**	**86.92**	**20**	P	**P**		07 53 45.8	-0.1
E22K				IAmb	IAmb		07 53 52.8	
	comp=Z,3.2nm,0.8s							
D22K	**Ayikyak River**	**86.96**	**19**	P	**P**		07 53 46.2	+0.2
D22K				IAmb	IAmb		07 53 47.1	
	comp=Z,4.1nm,0.8s							
G23K	**Bananza Creek**	**86.96**	**22**	P	**P**		07 53 45.3	-0.8
G23K				IAmb	IAmb		07 53 47.5	
	comp=Z,3.0nm,0.8s							
CCB	**Clear Creek Bu**	**87.02**	**24**	P	**P**		07 53 44.4	-1.9
CCB				IAmb	IAmb		07 53 50.7	
	comp=Z,3.9nm,0.8s							
HDA	**Harding Lake**	**87.28**	**24**	P	**P**		07 53 46.3	-1.3
HDA				IAmb	IAmb		07 53 54.1	
	comp=Z,8.9nm,1.4s							
H24K	**Noodor Dome**	**87.42**	**23**	P	**P**		07 53 47.8	-0.5
H24K				IAmb	IAmb		07 53 56.0	
	comp=Z,5.7nm,1.5s							
IL31		**87.43**	**24**	P	**P**		07 53 45.7	-2.6
ILAR	**Eielson Array**	**87.43**	**24**	P	**P**		07 53 46.2	-2.1
ILAR	**Eielson Array**	**87.43**	**24**	P	**P**		07 53 45.9	-2.5
	comp=Z,1.7nm,0.6s,baz=255,slow=4.5,SNR=23							
	comp=Z,1.7nm,0.6s							
J25K	**Salcha River,**	**87.99**	**24**	P	**P**		07 53 50.1	-1.0
J25K				IAmb	IAmb		07 54 03.7	
	comp=Z,2.8nm,0.8s							
F24K	**Squaw Lake**	**88.04**	**21**	P	**P**		07 53 51.6	+0.3
F24K				IAmb	IAmb		07 53 59.8	
	comp=Z,6.2nm,1.1s							
D24K	**Happy Valley**	**88.34**	**19**	P	**P**		07 53 51.9	-0.6
BARN	**Barnard Glacie**	**88.54**	**28**	P	**P**		07 53 53.4	-0.2
J26L	**Joseph Creek**	**88.69**	**25**	P	**P**		07 53 54.3	-0.2
M27K	**Edge Creek, AK**	**88.80**	**27**	P	**P**		07 53 54.6	-0.5
BCAR	**Beaver Creek A**	**89.03**	**26**	P	**P**		07 53 55.1	-0.9
E25K	**Arctic Village**	**89.08**	**21**	P	**P**		07 53 56.7	+0.6
E25K				IAmb	IAmb		07 54 10.7	
	comp=Z,4.7nm,1.2s							
I26K	**Coal Creek Min**	**89.10**	**24**	P	**P**		07 53 57.0	+0.7
I26K				IAmb	IAmb		07 53 57.2	
	comp=Z,4.6nm,1.1s							
BMAR	**Burnt Mountain**	**89.21**	**22**	P	**P**		07 53 56.9	+0.1
ABKAR	**Akbulak array**	**90.19**	**319**	P	**P**		07 54 00.8	-0.9
DAWY	**Dawson**	**90.33**	**25**	P	**P**		07 54 01.9	-0.1
DAWY				IAmb	IAmb		07 54 25.3	
	comp=Z,5.1nm,1.3s							
M29M	**Somme Creek**	**90.36**	**27**	P	**P**		07 54 02.0	-0.3
M29M				IAmb	IAmb		07 54 02.5	
	comp=Z,8.0nm,1.2s							
I28M	**Miner Creek**	**90.44**	**24**	P	**P**		07 54 01.6	-1.0
L29M	**L29M**	**90.66**	**27**	P	**P**		07 54 03.3	-0.3
L29M				IAmb	IAmb		07 54 18.0	
	comp=Z,7.0nm,1.1s							
K29M	**Barlow Dome**	**91.08**	**26**	P	**P**		07 54 05.2	-0.5
K29M				IAmb	IAmb		07 54 27.6	
	comp=Z,4.4nm,1.1s							
G31M	**Satah River**	**92.99**	**23**	P	**P**		07 54 13.2	-1.0
DBIC	**Dimbokro**	**147.97**	**272**	PKPbc	**PKPbc**		08 00 48.0	+0.4
	comp=Z,5.2nm,0.9s,baz=70,slow=2.9,SNR=3.8							
DBIC				PP	**PP**		08 04 19.5	+3.8
	comp=Z,2.9nm,0.9s,baz=150,slow=6.2,SNR=3.1							

KRSC 26 07:50:14.8±1.7, 50.52N×157.77E, h40km±22km, MI4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
SKR	**Severo-Kuril's**	**1.06**	**279**	*e*P	Pn		07 50 34.1	+0.9
SKR				*e*S	Sn		07 50 46.8	0.0
PAU	**Pauzhetka**	**1.12**	**328**	*e*P	Pn		07 50 35.7	+1.6
PAU				*e*S	Sn		07 50 49.1	+0.8
KDTR	**Khodutka, Kamc**	**1.30**	**8**	*e*P	Pn		07 50 38.4	+1.9
KDTR				*e*S	Sn		07 50 54.1	+1.4
ASAK	**Asacha**	**1.87**	**2**	*e*P	Pn		07 50 46.6	+2.3
ASAK				*e*S	Sn		07 51 08.8	+2.0
RUS	**Russkaya**	**1.97**	**13**	*e*P	Pn		07 50 47.3	+1.7
RUS				*e*S	Sn		07 51 10.2	+1.1
MTVR	**Mutnovka**	**1.98**	**7**	*e*P	Pn		07 50 48.4	+2.4
MTVR				*e*S	Sn		07 51 11.5	+1.8
GRL	**Gorelyy**	**2.04**	**5**	*e*P	Pn		07 50 49.5	+2.7
GRL				*e*S	Sn		07 51 13.8	+2.7
KRMR	**Karymshinskiy**	**2.32**	**5**	*e*P	Pn		07 50 53.8	+3.3
KRMR				*e*S	Sn		07 51 22.2	+4.4
APC	**Apacha**	**2.44**	**351**	*e*P	Pn		07 50 54.9	+2.8
PET	**Petropavlovsk**	**2.57**	**12**	*e*P	Pn		07 50 56.7	+2.8
PET				*e*S	Sn		07 51 26.4	+2.6
DALK	**Dalny**	**2.59**	**13**	*e*P	Pn		07 50 57.1	+3.0
DALK				*e*S	Sn		07 51 26.8	+2.5
INSR	**Institute**	**2.60**	**11**	*e*S	Sn		07 51 28.1	+3.4
UGLR	**Uglovaya**	**2.77**	**13**	*e*P	Pn		07 51 00.6	+3.8
UGLR				*e*S	Sn		07 51 34.3	+5.3
AVH	**Avacha**	**2.81**	**12**	*e*P	Pn		07 51 01.5	+4.1
AVH				*e*S	Sn		07 51 35.3	+5.2
SMAR	**Somma**	**2.82**	**13**	*e*P	Pn		07 51 01.0	+3.5
SMAR				*e*S	Sn		07 51 35.6	+5.2
KOK	**Koryaka**	**2.83**	**11**	*e*P	Pn		07 51 01.8	+4.3
KOK				*e*S	Sn		07 51 35.6	+5.2
NLC	**Nalytchevo**	**2.83**	**20**	*e*P	Pn		07 50 59.0	+1.5
NLC				*e*S	Sn		07 51 31.0	+0.7
KRER	**Koryakskii**	**2.85**	**12**	*e*P	Pn		07 51 01.5	+3.5
KRER				*e*S	Sn		07 51 34.9	+3.7
KRX	**Arik**	**2.89**	**11**	*e*P	Pn		07 51 02.4	+3.9
KRX				*e*S	Sn		07 51 37.2	+5.1
SPN	**Mys Shipunski**	**2.94**	**28**	*e*P	Pn		07 51 02.5	+3.5
SPN				*e*S	Sn		07 51 36.0	+3.1
GNL	**Ganaly**	**3.18**	**2**	*e*P	Pn		07 51 05.8	+3.4
GNL				*e*S	Sn		07 51 44.9	+5.8
KII	**Karymskiy**	**3.67**	**16**	*e*P	Pn		07 51 14.1	+5.0
KII				*e*S	Sn		07 51 55.6	+4.6
TUMD	**Tumrok D**	**4.95**	**18**	*e*P	Pn		07 51 30.6	+3.9
TUMD				*e*S	Sn		07 52 27.1	+4.5
TUMR	**Tumrok**	**4.98**	**16**	*e*P	Pn		07 51 31.7	+4.6
KMNR	**Kamenistaya**	**5.45**	**15**	*e*P	Pn		07 51 38.9	+5.4

IDC 26 07:54:25.2±2.5, 53.71N×87.00E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=23.5km s-min=13.6km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**282**	I	I		08 02 45.8	
	0.1nm,0.7s,baz=101,slow=340,SNR=4.9							
ZALV	**Zalesovo Beam**	**1.31**	**282**	Pg	Pg		07 54 48.7	-1.7
	0.9nm,0.3s,baz=101,slow=15,SNR=10							
ZALV				Lg	Lg		07 55 07.4	
	1.2nm,0.3s,baz=101,slow=30,SNR=8.5							
KURBB	**Kurchatov Arra**	**6.06**	**243**	Pn	Pn		07 55 56.9	+0.9
	0.1nm,0.3s,baz=59,slow=14,SNR=6.2							
KURBB				Lg	Lg		07 57 38.1	
	baz=61,slow=36							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**7.55**	**205**	Pn	Pn		07 56 18.0	+1.6
	0.1nm,0.3s,baz=23,slow=12,SNR=7.7							
MKAR				Sn	Sn		07 57 42.2	-0.6
	baz=26,slow=27,SNR=2.2							
MKAR				Lg	Lg		07 58 25.8	
	baz=28,slow=31,SNR=3.6							
	0.2nm,0.3s							

IDC 26 07:54:36.2±7.4, 6.13S×142.19E, h0km, mb4.1/2, mbtmp3.9/4, ML3.5/2, Error ellipse: s-maj=280.7km s-min=32.7km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**15.70**	**208**	Pn	Pn		07 58 17.1	-1.9
	0.2nm,0.3s,baz=31,slow=13,SNR=5.6							
	1.0nm,0.7s							
ASAR	**Alice Springs**	**19.17**	**204**	P	Pn		07 59 02.4	+0.1
	0.2nm,0.3s,baz=30,slow=13,SNR=12							
	2.6nm,0.7s							
MKAR	**Makanchi Array**	**74.60**	**322**	P	P		08 06 17.6	+0.3
	1.1nm,0.8s,baz=107,slow=7.0,SNR=5.7							
	1.1nm,0.8s							
BVAR	**Borovoye Array**	**84.09**	**325**	P	P		08 07 08.5	-0.4
	1.4nm,0.7s,baz=93,slow=5.9,SNR=4.3							
	1.4nm,0.7s							

ISC 26 07:54:47.7±1.6, 49.17N±0.07×18.85E±0.05, h15km±15km, n5, σ1§00/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
VYHS	**Vyhne**	**0.68**	**181**	*e*PG	**Pg**		07 54 59.7	-1.2
VYHS				*e*SG	**Sb**		07 55 10.4	0.0
JAVC	**Velka Javorina**	**0.84**	**249**	*e*PG	**Pb**		07 55 04.3	+0.3
JAVC				*e*SG	**Sb**		07 55 15.2	+0.1
MORC	**Moravsky Berou**	**1.05**	**306**	*e*PG	**Pb**		07 55 07.5	-0.1
MORC				*e*SG	**Sb**		07 55 21.3	+0.2
KECS	**Kecovo**	**1.28**	**122**	*e*PG	**Pn**		07 55 11.1	+0.1
KECS				*e*SG	**Sg**		07 55 30.3	+1.3
MODS	**Modra-Piesok**	**1.31**	**233**	*e*PG	**Pn**		07 55 11.1	-0.4
MODS				*e*SG	**Sg**		07 55 31.6	+1.6

*IDC **26** 07:58:42.0±0.7, 6.41S×143.60E, h0km, mb4.2/10, mbtmp4.3/12, ML1.8/1, MS3.5/4, Error ellipse: s-maj=26.5km s-min=12.3km az=98.0*

ISC 26 07:58:47.4±0.6, 6.48S±0.07×143.36E±0.08, h35km, n28, σ2§18/29, mb4.3/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**4.75**	**128**	P	**Pn**		07 59 59.6	+2.9
PMG	**Port Moresby**	**4.75**	**128**	P	**Pn**		07 59 59.8	+3.1
PMG	**Port Moresby**	**4.75**	**128**	Pn	**Pn**		07 59 55.1	-1.5
	3.1nm,0.3s,baz=332,slow=6.3,SNR=6.1							
PMG				Sn	**Sn**		08 00 47.9	-2.7
	3.5nm,0.3s,baz=328,slow=19,SNR=3.3							
	10nm,0.3s							
COEN	**Coen**	**7.44**	**181**	P	**Pn**		08 00 34.8	+1.2
KDU	**Kakadu**	**12.38**	**239**	P	**Pn**		08 01 39.2	-2.1
MTN	**Manton Dam**	**13.61**	**241**	P	**Pn**		08 01 56.1	-2.1
CTA	**Charters Tower**	**13.82**	**169**	LR	LR		08 07 32.3	
	comp=Z,191nm,19.7s,baz=7.5,slow=38							
QIS	**Mount Isa**	**14.47**	**194**	P	**Pn**		08 02 09.9	+0.1
WRA	**Warramunga Arr**	**16.00**	**212**	Pn	**Pn**		08 02 26.9	-3.1
	1.2nm,0.3s,baz=30,slow=13,SNR=26							
WRA				Sn	**Sn**		08 05 21.4	-5.1
	0.8nm,0.3s,baz=30,slow=23,SNR=2.9							
WRA				Lg	Lg		08 07 10.9	
	0.4nm,0.3s,baz=34,slow=29,SNR=4.9							
KNRA	**Kununurra**	**16.99**	**236**	P	**Pn**		08 02 40.3	-2.2
AS01	**Alice Springs**	**19.34**	**207**	P	**Pn**		08 03 11.7	+0.4
ASAR	**Alice Springs**	**19.36**	**207**	P	**Pn**		08 03 12.5	+1.0
	37nm,0.8s,baz=36,slow=9.5,SNR=167							
ASAR				S	**Sn**		08 06 53.0	+5.2
	1.0nm,0.5s,baz=16,slow=28,SNR=2.5							
ASAR				Lg	Lg		08 09 02.9	
	0.2nm,0.3s,baz=18,slow=30,SNR=4.4							
ASAR				LR	LR		08 10 00.9	
	comp=Z,118nm,20.1s,baz=35,slow=35							
GUMO	**Guam**	**19.99**	**4**	LR	LR		08 09 33.0	
	comp=Z,70nm,21.4s,baz=190,slow=33							
FITZ	**Fitzroy Crossi**	**20.79**	**235**	P	**P**		08 03 26.3	+0.5
OOD	**Oodnadatta**	**22.42**	**198**	P	**P**		08 03 44.9	+1.7
WRKA	**Warakurna

0.6nm,0.3s,baz=33,slow=10,SNR=12
ASAR S **S** **08 15 09.3 -1.3**
2.0nm,0.8s,baz=23,slow=26,SNR=5.7
ASAR Lg Lg 08 17 26.1
baz=26,slow=30
8.4nm,0.8s
MKAR Makanchi Array 74.96 322 P **P** **08 18 54.1 +0.8**
0.5nm,0.8s,baz=111,slow=6.6,SNR=6.4
0.5nm,0.8s
KURBB Kurchatov Arra 78.86 324 P **P** **08 19 14.9 -0.3**
0.3nm,0.7s,baz=111,slow=5.1,SNR=2.3
0.3nm,0.7s
QSPA South Pole Qui 83.63 180 P **P** **08 19 42.1 +1.7**
1.4nm,0.9s,baz=330,slow=3.9,SNR=2.2
1.4nm,0.9s
BVAR Borovoye Array 84.44 325 P **P** **08 19 44.8 +0.2**
2.7nm,0.8s,baz=110,slow=6.5,SNR=12
2.7nm,0.8s
ILAR Eielson Array 87.58 24 P **P** **08 19 58.0 -1.9**
0.7nm,0.7s,baz=256,slow=4.6,SNR=13
0.7nm,0.7s

IDC 26 08:07:38.5±2.7, 53°.66N×86°.85E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=25.9km s-min=14.5km az=66.0, Southwestern Siberia

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24 284**	I	I		I	08 16 00.0	
	0.1nm,0.7s,baz=101,slow=341,SNR=7.2							
ZALV	**Zalesovo Beam**	**1.24 284**	Pg			Pn	08 08 03.0	0.0
	0.9nm,0.3s,baz=106,slow=11,SNR=11							
ZALV			Lg			Lg	08 08 19.5	
	0.7nm,0.3s,baz=105,slow=29,SNR=9.4							
KURBB	**Kurchatov Arra**	**5.95 243**	Pn			Pn	08 09 06.3	-1.5
	0.1nm,0.3s,baz=46,slow=11,SNR=7.2							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**7.46 205**	Pn			Pn	08 09 31.1	+2.4
	0.1nm,0.3s,baz=25,slow=13,SNR=8.2							
	0.2nm,0.2s							

IDC 26 08:23:12.2±2.1, 6°.27S×142°.27E, h0km, mb3.6/1, mbtmp3.5/3, ML3.3/2, Error ellipse: s-maj=121.8km s-min=35.6km az=115.0, New Guinea

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.62 209**	Pn			Pn	08 26 53.7	-0.1
	0.1nm,0.3s,baz=30,slow=11,SNR=2.4							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**19.07 204**	P			P	08 27 36.5	+0.1
	0.1nm,0.3s,baz=33,slow=9.9,SNR=9.2							
	1.3nm,0.9s							
ILAR	**Eielson Array**	**87.61 24**	P			P	08 36 02.0	0.0
	0.5nm,1.1s,baz=258,slow=4.5,SNR=2.3							
	0.5nm,1.1s							

IDC 26 08:26:42.3±1.6, 6°.80S×144°.24E, h0km, mb4.0/3, mbtmp4.0/5, ML1.9/1, Error ellipse: s-maj=53.4km s-min=31.9km az=61.0, New Guinea

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.88 132**	Pn			Pn	08 27 41.7	-1.5
	6.9nm,0.3s,baz=353,slow=6.3,SNR=21							
	42nm,0.5s							
WRA	**Warramunga Arr**	**16.22 215**	Pn			Pn	08 30 25.7	-6.0
	0.2nm,0.3s,baz=29,slow=13,SNR=5.7							
ASAR	**Alice Springs**	**19.49 210**	P			P	08 31 10.6	-0.5
	2.3nm,0.7s,baz=36,slow=9.6,SNR=14							
VNDA	**Vanda**	**71.29 176**	P			P	08 38 04.0	+0.8
	1.8nm,0.8s,baz=323,slow=6.8,SNR=3.6							
	1.8nm,0.8s							
MKAR	**Makanchi Array**	**76.39 321**	P			P	08 38 33.6	0.0
	0.4nm,0.7s,baz=126,slow=7.3,SNR=3.5							
	0.4nm,0.7s							
QSPA	**South Pole Qui**	**83.17 180**	P			P	08 39 10.3	+0.1
	1.8nm,0.8s,baz=347,slow=3.1,SNR=7.3							
	1.8nm,0.8s							

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*IDC **26** 08:26:55.0±0.4, 6°.35S×143°.43E, h0km, mb5.6/24, mbtmp5.5/28, ML4.5/3, MS5.4/46, Error ellipse: s-maj=19.9km s-min=11.0km az=82.0*

*BJI **26** 08:26:56.0±0.0, 6°.40S×143°.30E, h10km, mb5.3/95, mB5.8/66, Ms5.5/99, Ms7 5.4/96*

*NEIC **26** 08:26:56.9, 6°.45S×143°.29E, h8km*

*MOS **26** 08:26:56.6±1.0, 6°.35S×143°.29E, h21km, mb6.1/61, MS5.5/24, Error ellipse: s-maj=8.4km s-min=4.4km az=110.4*

*NEIC **26** 08:26:57.2, 6°.51S×142°.88E, h16km, Moment Tensor Solution. Duration: 4s2 Moment tensor: Scale 10^17^Nm; Mrr=6.46; Mθθ=-3.65; Mφφ=-2.81; Mrθ=5.69; Mθφ=2.85; Mφr=-4.11; Fault plane solution: M0=9.42000×10^17^ NP1: φs=127.18000°, δ=69.09000°, λ=87.59000°. NP2: φs=313.90000°, δ=21.05000°, λ=96.27000°. Principal axes: T 9.6071, Plg=66.0000°, Azm=33.0000°; N -0.3768, Plg=2.0000°, Azm=128.0000°; P -9.2303, Plg=24.0000°, Azm=219.0000°;*

*NEIC **26** 08:26:57.3±1.6, 6°.40S±0°.05×143°.26E±0°.07, h9km±1km, mb6.0/271, Ms_20 5.8/987, Mwb5.8/72, Mww5.9/31 Error ellipse: s-maj=11.0km s-min=9.2km az=283.0, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=2.28; Mθθ=-1.64; Mφφ=-0.64; Mrθ=2.88; Mθφ=1.09; Mφr=-4.55; Fault plane solution: M0=5.86000×10^17^ NP1: φs=145.17000°, δ=79.17000°, λ=98.60000°. NP2: φs=286.34000°, δ=13.80000°, λ=51.99000°. Principal axes: T 6.0054, Plg=55.0000°, Azm=66.0000°; N -0.3045, Plg=8.0000°, Azm=324.0000°; P -5.7009, Plg=34.0000°, Azm=228.0000°;*

*NEIC **26** 08:26:57.2, 6°.41S×143°.28E, h16km*
*DJA **26** 08:26:58.9±0.2, 6°.5±3°×14°.3E±°, h10km, M5.7/35, mB6.0/35, mb5.5/35, MLv6.5/3, Mw(mB)5.7/35, MwMwp5.6/27, Mwp5.8/27*

*IPGP **26** 08:26:59.0, 6°.43S×143°.27E, h25km, Mw5.8, Fault plane solution: NP1:φs=144.00000°, δ=78.00000°, λ=103.00000°. NP2:φs=276.00000°, δ=17.00000°, λ=43.00000°.*

*GCMT **26** 08:27:02.3±0.1, 6°.47S×143°.13E, h12km, MW5.8/166, Moment Tensor Solution. s155,c291; s166,c383; Duration: 2s0 Moment tensor: Scale 10^17^Nm; Mrr=4.95±.04; Mθθ=-2.64±.04; Mφφ=-2.31±.04; Mrθ=3.09±.10; Mθφ=2.88±.03; Mφr=-3.08±.10; Best double couple: M=6.75300×10^17^ NP1:φs=134.00000°, δ=65.00000°, λ=91.00000°. NP2:φs=312.00000°, δ=25.00000°, λ=88.00000°. Principal axes: T 6.5490, Plg=70.0000°, Azm=46.0000°; N 0.4080, Plg=1.0000°, Azm=314.0000°; P -6.9570, Plg=20.0000°, Azm=224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 08:26:57.8±0.3, 6°.40S±0°.03×143°.36E±0°.03, h15km±1km, h15km:pP-P, n1763, σ1°59/1432, mb6.0/249, MS5.7/575, 31C-33D, New Guinea

Code	Station Name	Δ° AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.60 235**	P			**Pn**	**08 27 55.0**	**+1.9**
PMG	**Port Moresby**	**4.80 129**	Pn			**Pn**	**08 28 11.3**	**+1.7**
PMG	**Port Moresby**	**4.80 129**	*de*P			**Pn**	**08 28 10.4**	**+0.8**
PMG	**Port Moresby**	**4.80 129**	Pn			**Pn**	**08 28 08.8**	**-0.8**
	235nm,0.8s,baz=322,slow=11,SNR=5.1							
PMG			Sn			**Sn**	**08 29 06.4**	**+1.4**
	33nm,0.3s,baz=266,slow=21,SNR=7.9							
GENI	**Genyem**	**4.95 320**	P			**Pn**	**08 28 11.7**	**0.0**
GENI	**Genyem**	**4.95 320**	P			**Pn**	**08 28 14.9**	**+3.2**
MANU	**Manus Island**	**5.89 43**				**Pn**	**08 28 25.1**	**+0.5**
SMPI	**Sarmi**	**6.38 313**	P			**Pn**	**08 28 35.0**	**+3.6**
COEN	**Coen**	**7.51 181**	P			**Pn**	**08 28 48.5**	**+1.6**
	baz=7.6,SNR=21							
COEN	**Coen**	**7.51 181**	Pn			**Pn**	**08 28 47.4**	**+0.5**
COEN	**Coen**	**7.51 181**	P			**Pn**	**08 28 49.5**	**+2.6**
KAVG	**Kavieng**	**8.33 63**	P			**Pn**	**08 29 02.1**	**+3.9**
I40PG	**Keravat**	**8.86 77**	I			I	09 22 38.8	
	baz=254,slow=315,SNR=0.9							
RABL	**Rabaul**	**9.03 76**	P			**Pn**	**08 29 09.0**	**+1.1**
FAKI	**Fak Fak**	**11.61 287**				**Pn**	**08 29 41.1**	**-2.0**
FAKI	**Fak Fak**	**11.61 287**	P			**Pn**	**08 29 41.8**	**-1.3**
FAKI	**Fak Fak**	**11.61 287**	P			**Pn**	**08 29 42.9**	**-0.2**
	365nm,0.8s,5μm17μm							
MTSU	**Mount Surprise**	**11.70 176**	P			**Pn**	**08 29 45.6**	**+1.3**
	baz=12,SNR=20							
MTSU	**Mount Surprise**	**11.70 176**	P			**Pn**	**08 29 45.7**	**+1.4**
SAUI	**Saumlaki**	**12.07 262**	Pn			**Pn**	**08 29 48.8**	**-0.6**
SAUI	**Saumlaki**	**12.07 262**	P			**Pn**	**08 29 49.3**	**-0.2**
SAUI	**Saumlaki**	**12.07 262**	P			**Pn**	**08 29 49.0**	**-0.5**
	3μm,0.8s,46μm28μm							
KDU	**Kakadu**	**12.42 239**	P			**Pn**	**08 29 50.6**	**-3.6**
	baz=12,SNR=45							
KDU	**Kakadu**	**12.42 239**	P			**Pn**	**08 29 50.8**	**-3.4**
TV1H	**Townsville Har**	**13.21 166**	P			**Pn**	**08 30 06.1**	**+1.1**
SWI	**Sorong**	**13.27 294**	P			**Pn**	**08 30 04.7**	**-1.2**
	325nm,1.4s,5μm13μm							
BNDI	**Bandanaira**	**13.53 277**	P			**Pn**	**08 30 10.0**	**+0.6**
BNDI	**Bandanaira**	**13.53 277**	P			**Pn**	**08 30 09.3**	**-0.1**
	1μm,1.5s,38μm14μm							
MTN	**Manton Dam**	**13.65 241**	P			**Pn**	**08 30 07.5**	**-3.5**
	baz=14,SNR=28							
MTN	**Manton Dam**	**13.65 241**	Pn			**Pn**	**08 30 07.0**	**-4.0**
MTN	**Manton Dam**	**13.65 241**	P			**Pn**	**08 30 10.6**	**-0.4**
DRS	**Darwin Rock St**	**13.67 243**	P			**Pn**	**08 30 08.1**	**-3.2**
AUAYR	**Ayr State High**	**13.68 164**	P			**Pn**	**08 30 13.8**	**+2.5**
CTA	**Charters Tower**	**13.89 169**	P			**Pn**	**08 30 17.7**	**+3.4**
CTA	**Charters Tower**	**13.89 169**	Pn			**Pn**	**08 30 14.8**	**+0.5**
	0.6nm,0.3s,baz=342,slow=13,SNR=17							
CTA			Lg			Lg	08 34 17.4	
	0.4nm,0.3s,baz=63,slow=18,SNR=3.6							
CTA			LR			LR	08 35 23.5	
	comp=Z,25μm,20.3s,baz=354,slow=36							
	30nm,1.2s							
CTAO	**Charters Tower**	**13.89 169**				**Pn**	**08 30 12.9**	**-1.4**
CTAO	**Charters Tower**	**13.89 169**	P			**Pn**	**08 30 17.5**	**+3.2**
CTAO	**Charters Tower**	**13.89 169**	P			**Pn**	**08 30 12.9**	**-1.4**
QIS	**Mount Isa**	**14.53 194**	P			**Pn**	**08 30 22.3**	**-0.9**
	baz=15,SNR=23							
QIS	**Mount Isa**	**14.53 194**	P			**Pn**	**08 30 22.5**	**-0.7**
WB0	**Warramunga Arr**	**15.89 212**				**Pn**	**08 30 39.1**	**-2.0**
WRAB	**Tennant Creek**	**16.05 212**				**Pn**	**08 30 39.4**	**-3.7**
WRAB	**Tennant Creek**	**16.05 212**	P			**Pn**	**08 30 39.4**	**-3.7**
WRAB			pmax			pmax		
	comp=Z,190nm,1.1s							
WB2	**Warramunga Arr**	**16.05 212**	P			**Pn**	**08 30 39.4**	**-3.9**
	baz=16							
WB2	**Warramunga Arr**	**16.05 212**				**Pn**	**08 30 39.5**	**-3.7**
I07AU	**WARRAMUNGA INF**	**16.06 212**	Lg			Lg	08 35 30.7	
	baz=33,slow=28							
I07AU			I			I	10 00 20.0	
	baz=30,slow=310,SNR=1.3							
WRA	**Warramunga Arr**	**16.06 212**				**Pn**	**08 30 39.5**	**-3.8**
WRA	**Warramunga Arr**	**16.06 212**	P			**Pn**	**08 30 39.5**	**-3.8**
WRA			pmax			pmax		
	comp=Z,37nm,1.3s							
WRA	**Warramunga Arr**	**16.06 212**	Pn			**Pn**	**08 30 38.9**	**-4.4**
	comp=Z,2.4nm,0.3s,baz=34,slow=13,SNR=56							
WRA			Sn			**Sn**	**08 33 38.4**	**-2.9**
	comp=Z,3.3nm,0.3s,baz=28,slow=23,SNR=3.3							
WRA			Lg			Lg	08 35 27.4	
	comp=Z,3.4nm,0.3s,baz=32,slow=30,SNR=7.1							
WRA			LR			LR	08 37 43.8	
	comp=Z,42μm,18.7s,baz=30,slow=40							
NLAI	**Namlea**	**16.51 280**	P			**P**	**08 30 50.5**	**-1.1**
	comp=Z,161nm,1.4s,comp=Z,5μm							
HNR	**Honiara**	**16.70 101**	Pn			**Pn**	**08 30 50.9**	**-0.5**
HNR			IAmb			IAmb	08 30 59.5	
	comp=Z,4μm,2.0s							
HNR	**Honiara**	**16.70 101**	P			**P**	**08 30 55.8**	**+2.1**
HNR	**Honiara**	**16.70 101**	P			**Pn**	**08 30 50.9**	**-0.5**
HNR			pmax			pmax		
	comp=Z,4μm,2.0s							
HNR	**Honiara**	**16.70 101**	Pn			**Pn**	**08 30 52.6**	**+1.1**
	comp=Z,66nm,0.3s,baz=214,slow=18,SNR=3.4							
LBMI	**Labuha**	**16.83 289**	P			**Pn**	**08 30 53.0**	**-0.2**
	comp=Z,407nm,1.6s,comp=Z,10μm							
KNRA	**Kununurra**	**17.02 236**				**Pn**	**08 30 51.8**	**-3.8**
KNRA	**Kununurra**	**17.02 236**	P			**Pn**	**08 30 52.6**	**-3.0**
TNTI	**Ternate**	**17.49 293**	Pn			**Pn**	**08 30 58.3**	**-3.1**
TNTI	**Ternate**	**17.49 293**	P			**Pn**	**08 31 00.8**	**-0.6**
TNTI	**Ternate**	**17.49 293**	P			**Pn**	**08 31 01.8**	**+0.4**
	comp=Z,127nm,1.0s,comp=Z,4μmcomp=Z,6μm							
SANI	**Sanana**	**17.86 283**	P			**Pn**	**08 31 05.7**	**-0.2**
SANI	**Sanana**	**17.86 283**	P			**Pn**	**08 31 03.4**	**-2.5**
	comp=Z,663nm,1.8s,comp=Z,12μmcomp=Z,14μm							
RK1H	**Rockhampton Ha**	**18.23 159**	P			**P**	**08 31 14.7**	**+4.1**
GD1S	**Gladstone Soft**	**18.89 157**	P			**Pn**	**08 31 20.9**	**+2.4**
SOEI	**Soe**	**19.20 259**	P			**P**	**08 31 18.5**	**-2.9**
SOEI			IAmb			IAmb	08 31 31.4	
	comp=Z,949nm,0.8s							
SOEI	**Soe**	**19.20 259**	P			**Pn**	**08 31 22.1**	**-0.3**
SOEI	**Soe**	**19.20 259**	P			**P**	**08 31 21.3**	**-0.2**
	comp=Z,2μm,0.9s,comp=Z,18μmcomp=Z,26μm							
AS01	**Alice Springs**	**19.40 207**	P			**Pn**	**08 31 25.5**	**+0.8**
AS31	**Alice Springs**	**19.42 207**				**P**	**08 31 24.1**	**+0.3**
ASAR	**Alice Springs**	**19.43 207**	P			**Pn**	**08 31 25.4**	**+0.4**
ASAR	**Alice Springs**	**19.43 207**	P			**Pn**	**08 31 25.4**	**+0.4**
ASAR	**Alice Springs**	**19.43 207**	P			**P**	**08 31 24.2**	**+0.4**
	comp=Z,2.5nm,0.3s,baz=32,slow=10,SNR=20							
ASAR			Lg			Lg	08 37 06.5	
	comp=Z,0.6nm,0.3s,baz=20,slow=31,SNR=5.8							
ASAR			LR			LR	08 39 24.3	
	comp=Z,42μm,20.2s,baz=34,slow=38							
	comp=Z,178nm,0.9s							
ASPA	**Alice Springs**	**19.43 207**	P			**Pn**	**08 31 24.5**	**-0.5**
	baz=20							
PATS	**Pohnpei**	**19.89 49**	P			**Pn**	**08 31 30.6**	**0.0**
	baz=20,SNR=11							
PATS	**Pohnpei**	**19.89 49**	P			**P**	**08 31 29.2**	**+0.3**
PATS			IAmb			IAmb	08 31 39.5	
	comp=Z,2μm,1.6s							
PATS	**Pohnpei**	**19.89 49**	P			**Pn**	**08 31 30.5**	**0.0**
GUMO	**Guam**	**19.92 4**	P			**P**	**08 31 28.5**	**-0.7**
GUMO	**Guam**	**19.92 4**	P			**Pn**	**08 31 31.3**	**+0.4**
GUMO	**Guam**	**19.92 4**	P			**P**	**08 31 28.5**	**-0.7**
GUMO			pmax			pmax		
	comp=Z,556nm,1.3s							
GUMO	**Guam**	**19.92 4**	P			**P**	**08 31 28.1**	**-1.1**
	comp=Z,4.1nm,0.3s,baz=207,slow=14,SNR=5.8							
GUMO			LR			LR	08 38 59.9	
	comp=Z,11μm,19.1s,baz=196,slow=36							
	comp=Z,154nm,0.8s							
QLP	**Quilpie**	**20.08 178**	P			Pn	08 31 33.9	+1.2
	baz=20,SNR=15							
QLP	**Quilpie**	**20.08 178**	P			Pn	08 31 33.7	+0.9
EIDS	**Eidsvold**	**20.25 159**	P			Pn	08 31 35.9	+1.1
	baz=20,SNR=4.8							
EIDS	**Eidsvold**	**20.25 159**	P			Pn	08 31 33.9	-0.8
EIDS			IAmb			IAmb	08 31 41.1	
	comp=Z,856nm,1.6s							
EIDS	**Eidsvold**	**20.25 159**	P			Pn	08 31 34.5	-0.3
SGSI	**Sangihe**	**20.43 299**	P			Pn	08 31 38.0	+1.0
	comp=Z,590nm,1.4s,comp=Z,10μmcomp=Z,9μm							
KMSI	**Cibinong**	**20.55 289**	P			**P**	**08 31 36.2**	**+0.1**
	comp=Z,1μm,1.0s,comp=Z,17μmcomp=Z,12μm							
RMQ	**Roma**	**20.62 166**	P			Pn	08 31 40.6	+1.5
	baz=21,SNR=9.7							
RMQ	**Roma**	**20.62 166**	P			Pn	08 31 40.1	+1.0
BBSI	**Bau Bau**	**20.70 271**	P			Pn	08 31 54.2	+14
FITZ	**Fitzroy Crossi**	**20.83 235**	P			**P**	**08 31 38.2**	**-0.9**
	baz=21,SNR=116							
FITZ	**Fitzroy Crossi**	**20.83 235**	P			**P**	**08 31 38.3**	**-0.9**
FITZ			IAmb			IAmb	08 31 45.7	
	comp=Z,790nm,1.6s							
FITZ	**Fitzroy Crossi**	**20.83 235**	P			**P**	**08 31 38.4**	**-0.7**
MMRI	**Maumere**	**21.06 263**	P			**P**	**08 31 41.4**	**-0.3**
MMRI			IAmb			IAmb	08 31 55.5	
	comp=Z,1μm,1.7s							
MMRI	**Maumere**	**21.06 263**	P			**P**	**08 31 43.7**	**+2.0**
MMRI	**Maumere**	**21.06 263**	P			**P**	**08 31 44.2**	**+2.5**
	comp=Z,467nm,1.9s,comp=Z,10μmcomp=Z,18μm							
LUWI	**Luwuk**	**21.22 284**	P			**P**	**08 31 43.4**	**0.0**
LUWI			IAmb			IAmb	08 31 55.5	
	comp=Z,916nm,1.0s							
LUWI	**Luwuk**	**21.22 284**	P			**P**	**08 31 45.3**	**+1.9**
LUWI	**Luwuk**	**21.22 284**	P			**P**	**08 31 45.8**	**+2.4**
	comp=Z,953nm,1.6s,comp=Z,17μmcomp=Z,22μm							
INKA	**Innaminka**	**21.37 186**	P			**P**	**08 31 46.4**	**+1.6**
GTOI	**Gorontalo**	**21.48 288**	P			**P**	**08 31 48.3**	**+2.1**
	comp=Z,305nm,1.1s,comp=Z,6μmcomp=Z,6μm							
EDFI	**Ende, Flores**	**21.61 262**	P			**P**	**08 31 47.2**	**-0.5**
	comp=Z,456nm,1.6s,comp=Z,7μmcomp=Z,20μm							
DAV	**Davao City (W)**	**22.23 307**	LR			LR	08 42 38.7	
	comp=Z,5μm,18.2s,baz=178,slow=42							
DAV	**Davao City (W)**	**22.23 307**	P			**P**	**08 31 59.0**	**+4.9**
DAV			S			Sn	08 36 11.4	+1.1
MRSI	**Marisa**	**22.45 287**	P			**P**	**08 31 57.7**	**+1.1**
	comp=Z,311nm,1.3s,comp=Z,4μmcomp=Z,12μm							
OOD	**Oodnadatta**	**22.49 198**	P			**P**	**08 31 57.6**	**+0.8**
BASI	**Baing, Sumba**	**22.86 259**	P			**P**	**08 32 05.1**	**+4.2**
AULRC	**Lightning Ridg**	**23.31 170**	P			**P**	**08 32 05.5**	**+0.1**
WRKA	**Warakurna**	**23.48 216**	P			**P**	**08 32 06.4**	**-0.8**
	baz=24,SNR=51							
WRKA	**Warakurna**	**23.48 216**	P			**P**	**08 32 06.8**	**-0.4**
KAPI	**Kappang**	**23.54 272**	P			**P**	**08 32 07.6**	**-0.2**
KAPI	**Kappang**	**23.54 272**	*di*P			**P**	**08 32 07.4**	**-0.4**
TTSI	**Tana Toraja**	**23.70 277**	P			**P**	**08 32 10.1**	**+0.7**
	comp=Z,617nm,1.8s,comp=Z,13μmcomp=Z,8μm							
TOLI2	**Tolitoli**	**23.75 288**	P			**P**	**08 32 08.5**	**-1.3**
TOLI2			IAmb			IAmb	08 32 14.5	
	comp=Z,378nm,1.0s							
TOLI2	**Tolitoli**	**23.75 288**	P			**P**	**08 32 08.5**	**-1.3**
LCRK	**Leigh Creek**	**24.40 191**	P			**P**	**08 32 15.1**	**-0.7**
KOUNC	**Koumac, New Ca**	**24.68 127**	P			**P**	**08 32 18.3**	**-0.2**
KOUNC	**Koumac, New Ca**	**24.68 127**	P			**P**	**08 32 18.8**	**+0.3**
CMSA	**Cobar Meteorol**	**25.10 175**	P			**P**	**08 32 23.5**	**+1.4**
	baz=25,SNR=36							
CMSA	**Cobar Meteorol**	**25.10 175**	P			**P**	**08 32 23.0**	**+0.9**
ARMA	**Armidale**	**25.12 163**	P			**P**	**08 32 24.9**	**+2.5**
	baz=25,SNR=9.7							
ARMA	**Armidale**	**25.12 163**	P			**P**	**08 32 21.6**	**-0.8**
ARMA			IAmb			IAmb	08 32 29.6	
	comp=Z,1μm,1.9s							
ARMA	**Armidale**	**25.12 163**	P			**P**	**08 32 24.5**	**+2.1**
MULG	**Mulgathing**	**25.31 199**	P			**P**	**08 32 23.8**	**-0.2**
STKA	**Stephens Creek**	**25.40 184**	P			**P**	**08 32 25.2**	**+0.4**
	baz=26,SNR=41							
STKA	**Stephens Creek**	**25.40 184**	P			**P**	**08 32 23.2**	**-1.6**
STKA	**Stephens Creek**	**25.40 184**	P			**P**	**08 32 23.9**	**-0.9**
STKA	**Stephens Creek**	**25.40 184**	*ie*P			**P**	**08 32 24.1**	**-0.7**
STKA	**Stephens Creek**	**25.40 184**	P			**P**	**08 32 24.3**	**-0.5**
	comp=Z,25nm,1.0s,baz=342,slow=8.1,SNR=18							
STKA			LR			LR	08 42 51.9	
	comp=Z,24μm,19.8s,baz=358,slow=38							
	comp=Z,25nm,1.0s							
PLAI	**Plampang**	**25.47 263**	P			**P**	**08 32 23.0**	**-2.7**
PLAI	**Plampang**	**25.47 263**	P			**P**	**08 32 24.4**	**-1.3**
	comp=Z,231nm,1.1s,comp=Z,3μmcomp=Z,6μm							
AUPHS	**Peel High Scho**	**25.56 165**	P			**P**	**08 32 28.7**	**+2.4**
AUDCS	**Dubbo College**	**26.16 170**	P			**P**	**08 32 33.5**	**+1.8**
TWSI	**Taliwang, Sumb**	**26.35 263**	P			**P**	**08 32 36.4**	**+2.8**
BKB	**Balikpapan**	**26.89 280**	P			**P**	**08 32 40.0**	**+1.5**
BKB	**Balikpapan**	**26.89 280**	P			**P**	**08 32 44.0**	**+5.5**
WHYH	**Whyalla**	**27.04 191**	P			**P**	**08 32 42.5**	**+2.9**
BBOO	**Buckleboo**	**27.14 194**	P			**P**	**08 32 42.0**	**+1.4**
	baz=27,SNR=18							
BBOO	**Buckleboo**	**27.14 194**	P			**P**	**08 32 39.5**	**-1.1**
BBOO			IAMs_20	IAMs_20		IAMs_20	08 43 42.7	
	comp=Z,18μm,19.0s							
BBOO	**Buckleboo**	**27.14 194**	P			**P**	**08 32 42.2**	**+1.6**
MBWA	**Marble Bar**	**27.18 235**	P			**P**	**08 32 37.8**	**-3.2**
MBWA	**Marble Bar**	**27.18 235**	P			**P**	**08 32 41.6**	**+0.6**
MBWA	**Marble Bar**	**27.18 235**	P			P	08 32 49.7	+8.7
MBWA			S			S	08 37 37.0	+18
DZM	**Mont Dzumac**	**27.19 127**	P			**P**	**08 32 41.0**	**-0.3**
DZM	**Mont Dzumac**	**27.19 127**	P			**P**	**08 32 42.6**	**+1.3**
LIFNC	**LIFOU**	**27.19 124**	P			**P**	**08 32 41.0**	**-0.2**
LIFNC			IAmb			IAmb	08 32 48.8	
	comp=Z,217nm,0.9s							
LIFNC			IAMs_20	IAMs_20		IAMs_20	08 42 42.7	
	comp=Z,17μm,19.0s							
LIFNC	**LIFOU**	**27.19 124**	P			**P**	**08 32 42.9**	**+1.8**
HTT	**Hallett**	**27.21 188**	P			**P**	**08 32 43.2**	**+2.0**
	baz=27,SNR=12							
HTT	**Hallett**	**27.21 188**	P			**P**	**08 32 42.7**	**+1.5**
PSA00	**Pilbara Seismi**	**27.29 234**	P			**P**	**08 32 38.6**	**-3.4**
PSA00	**Pilbara Seismi**	**27.29 234**	P			**P**	**08 32 39.0**	**-3.0**
PSA00			IAmb			IAmb	08 32 57.0	
	comp=Z,59nm,1.3s							
PSA00	**Pilbara Seismi**	**27.29 234**	P			**P**	**08 32 42.4**	**+0.4**
ONTNC	**Ouen Toro**	**27.32 128**	P			**P**	**08 32 39.1**	**-3.2**
ONTNC	**Ouen Toro**	**27.32 128**	P			**P**	**08 32 44.6**	**+2.3**
YATNC	**Mamie plateau,**	**27.54 127**	P			**P**	**08 32 44.3**	**0.0**
OUENC	**Ouen Island, N**	**27.69 127**	P			**P**	**08 32 43.5**	**-2.1**
SRBI	**Singaraja**	**27.97 265**	P			**P**	**08 32 51.5**	**+3.3**
IGBI	**Denpasar**	**28.07 263**	P			P	08 32 54.8	+5.7
SYDH	**Sydney Hard Ro**	**28.07 167**	P			**P**	**08 32 51.8**	**+3.0**
YNG	**Young**	**28.14 171**	P			**P**	**08 32 51.1**	**+1.5**
	baz=28,SNR=14							
YNG	**Young**	**28.14 171**	P			**P**	**08 32 50.8**	**+1.2**
MARNC	**Mare, Loyalty**	**28.18 125**	P			**P**

NWAO Narrogin (SRO) 35.87 219 P **P** **08 33 54.9 -2.5**
NWAO pmax pmax
comp=Z,89nm,1.4s
NWAO MLR MLR
comp=Z,15μm,20.0s
NWAO Narrogin (SRO) 35.87 219 LR LR 08 49 56.7
comp=Z,18μm,18.5s,baz=38,slow=38
NWAO Narrogin (SRO) 35.87 219 P **P** **08 34 02.0 +4.7**
NWAO S **S** **08 39 35.7 +0.9**
MUN Mundaring 35.91 221 P **P** **08 33 58.5 +0.8**
MOO Moorlands 36.05 175 P **P** **08 34 01.7 +3.0**
JOW Kunigami 36.13 337 LR LR 08 47 02.7
comp=Z,5μm,19.6s,baz=140,slow=33
TAU Tasmania Unive 36.52 175 IAMs_20 IAMs_20 08 47 44.8
comp=Z,12μm,19.0s
YOJ Yonaguni jima 36.53 328 P **P** **08 34 03.3 +0.3**
YULB Yu-li 36.63 325 P **P** **08 34 02.8 -1.2**
YULB Yu-li 36.63 325 P **P** **08 34 04.8 +0.9**
DGTI Dogotuki 36.93 109 P **P** **08 34 08.8 +2.2**
TPUB Ta-pu 36.95 324 P **P** **08 34 04.8 -1.9**
TPUB IAmb IAmb 08 34 11.2
comp=Z,404nm,1.7s
TPUB Ta-pu 36.95 324 P **P** **08 34 06.0 -0.7**
NACB Ninganchiao 37.07 326 P **P** **08 34 05.6 -2.1**
NACB Ninganchiao 37.07 326 P **P** **08 34 07.8 +0.1**
SSLB Suanglung 37.14 325 P **P** **08 34 07.9 -0.4**
SSLB Suanglung 37.14 325 P **P** **08 34 09.3 +1.1**
XMI Christmas Isla 37.47 261 P **P** **08 34 11.5 +0.3**
XMIS Christmas Isla 37.50 261 P **P** **08 34 10.2 -1.3**
XMIS Christmas Isla 37.50 261 P **P** **08 34 11.5 0.0**
YHNB Yeheng 37.59 326 P **P** **08 34 10.5 -1.6**
YHNB IAmb IAmb 08 34 18.7
comp=Z,304nm,1.3s
YHNB Yeheng 37.59 326 P **P** **08 34 13.3 +1.2**
TATO Taipei 37.77 326 P **P** **08 34 13.3 -0.2**
TATO IAmb IAmb 08 34 20.0
comp=Z,585nm,1.4s
TATO Taipei 37.77 326 P **P** **08 34 14.4 +0.9**
KNMB Chin-men Tao 39.16 322 P **P** **08 34 25.2 -0.1**
QZH Quanzhou 39.40 323⇑*i*P **P** **08 34 30.0 +2.7**
QZH PcS **PcS** **08 40 28.8 +3.3**
QZH S S 08 40 38.0 +9.4
QZH pmax pmax
comp=Z,1μm,3.5s
QZH LR LR
comp=Z,2μm,13.7s
QZH LR LR
comp=Z,4μm,15.5s
QZH LR LR
comp=Z,5μm,23.0s
MNAI Manna 40.27 271 P **P** **08 34 34.3 -0.5**
MNAI IAmb IAmb 08 34 39.6
comp=Z,732nm,2.0s
JMN Monobe 40.91 348 P **P** **08 34 40.0 +0.2**
JMN IAmb IAmb 08 34 43.9
comp=Z,330nm,1.5s
JMN Monobe 40.91 348 P **P** **08 34 41.1 +1.4**
JNU Nakatsue 41.06 344 P **P** **08 34 40.0 -0.9**
JNU IAmb IAmb 08 34 45.9
comp=Z,484nm,1.9s
JNU Nakatsue 41.06 344 P **P** **08 34 40.6 -0.4**
JNU Nakatsue 41.06 344 LR LR 08 48 49.8
comp=Z,3μm,22.0s,baz=163,slow=32
JSG Sagara 41.15 354 P **P** **08 34 41.6 0.0**
JSG IAmb IAmb 08 35 08.4
comp=Z,858nm,2.0s
GZH Guangzhou 41.48 316 P **P** **08 34 46.5 +2.0**
GZH S **S** **08 41 02.5 +2.9**
GZH pmax pmax
comp=Z,49nm,1.0s
GZH LR LR
comp=Z,1μm,12.0s
GZH LR LR
comp=Z,820nm,12.8s
QIZ Qiongzhong 41.59 308 P **P** **08 34 45.8 +0.3**
QIZ sP **sP** **08 34 53.8 +1.5**
QIZ PP **PP** **08 36 23.3 +1.5**
QIZ S **S** **08 41 02.3 +0.8**
QIZ sS **sS** **08 41 12.8 +3.2**
QIZ pmax pmax
comp=Z,62nm,1.7s
QIZ LR LR
comp=Z,3μm,19.1s
QIZ LR LR
comp=Z,2μm,19.1s
QIZ LR LR
comp=Z,3μm,20.6s
INU Inuyama 41.96 352 P **P** **08 34 47.7 -0.5**
INU Inuyama 41.96 352 P **P** **08 34 49.4 +1.2**
JGF Kuroka 42.16 353 P **P** **08 34 48.9 -1.1**
JGF Kuroka 42.16 353 P **P** **08 34 50.5 +0.5**
KUZ Kuaotunu 42.24 140 P **P** **08 34 52.8 +2.2**
KUZ Kuaotunu 42.24 140 P **P** **08 34 53.6 +3.0**
TOZ Tahuroa Road 42.71 142 P **P** **08 34 56.4 +1.9**
TOZ IAMs_20 IAMs_20 08 52 40.0
comp=Z,10μm,19.0s
TOZ Tahuroa Road 42.71 142 P **P** **08 34 58.0 +3.6**
BKNI Bangkinang 42.76 277 P **P** **08 34 56.1 +0.9**
JTU Tsushima 42.79 343 P **P** **08 34 54.5 -0.6**
HIZ Hauiti 42.81 143 P **P** **08 34 55.5 +0.2**
HIZ IAmb IAmb 08 35 03.8
comp=Z,260nm,1.2s
HIZ Hauiti 42.81 143 P **P** **08 34 59.0 +3.7**
SSE Sheshan 42.90 332 P **P** **08 34 56.0 0.0**
SSE S **S** **08 41 20.5 +0.1**
SSE pmax pmax
comp=Z,91nm,1.4s
SSE pmax pmax
comp=Z,550nm,7.0s
SSE LR LR
comp=Z,690nm,16.0s
SSE LR LR
comp=Z,690nm,15.7s
RAO Raoul Island 42.99 127 LR LR 08 52 10.0
comp=Z,2μm,19.9s,baz=296,slow=35
MJAR Matsushiro Arr 42.99 354 P **P** **08 34 55.1 -1.6**
comp=Z,24nm,1.0s,baz=182,slow=8.5,SNR=24
MJAR PcP **PcP** **08 36 46.4 -0.6**
comp=Z,24nm,1.1s,baz=188,slow=1.8,SNR=6.1
comp=Z,24nm,1.0s
MAJO Matsushiro 42.99 354 P **P** **08 34 57.3 +0.6**
MAJO Matsushiro 42.99 354 P **P** **08 34 56.8 +0.1**
MAJO Matsushiro 42.99 354*d*/P **P** **08 34 55.7 -1.0**
MAJO pmax pmax
comp=Z,42nm,1.2s
MJB9 Matsu-Tunnel 43.00 354 P **P** **08 34 58.1 +1.4**
DSZ Denniston Nort 43.33 149 P **P** **08 34 59.0 -0.4**
DSZ IAmb IAmb 08 35 41.2
comp=Z,408nm,1.7s
DSZ IAMs_20 IAMs_20 08 51 30.9
comp=Z,9μm,20.0s
TKNZ Takaka Hill 43.43 147 P **P** **08 34 59.9 -0.3**
WAN2 Wando-Q330s 43.53 340 P **P** **08 35 01.0 0.0**
SNR=14
WAN2 Wando-Q330s 43.53 340 P **P** **08 35 01.0 0.0**
SNR=14
KOHB KOHEUNG 43.54 341 P **P** **08 35 01.0 -0.1**
SNR=12
KOHB KOHEUNG 43.54 341 P **P** **08 35 01.0 -0.1**
SNR=12
MRNZ Matariki Terra 43.58 148 P **P** **08 35 00.4 -1.0**
JCZ Jackson Bay 43.63 153 P **P** **08 35 04.5 +2.6**
NNVZ North Ngauruho 43.67 143 P **P** **08 35 06.2 +3.8**
FOZ Fox Glacier 43.68 152 P **P** **08 35 02.8 +0.7**
FOZ IAmb IAmb 08 35 08.7
comp=Z,299nm,1.7s
BOSB Boseong-gun 43.69 341 P **P** **08 35 03.0 +0.7**
SNR=11
BOSB Boseong-gun 43.69 341 P **P** **08 35 03.0 +0.7**
SNR=11
TMVZ Te Maari 43.71 143 P **P** **08 35 06.1 +3.4**
OTVZ Oturere 43.72 143 P **P** **08 35 05.6 +2.9**
SNVZ South Ngauruho 43.72 143 P **P** **08 35 05.0 +2.2**
HANB Haenam 43.72 340 P **P** **08 35 04.0 +1.5**
SNR=11
HANB Haenam 43.72 340 P **P** **08 35 04.0 +1.5**
SNR=11
KSJAH Jangheung 43.72 340 P **P** **08 35 03.0 +0.4**
SNR=6.7
KSJAH Jangheung 43.72 340 P **P** **08 35 03.0 +0.4**
SNR=6.7
KSJDO Jindo 43.73 339 P **P** **08 35 04.0 +1.3**
SNR=12
KSJDO Jindo 43.73 339 P **P** **08 35 04.0 +1.3**
SNR=12

GGDB Gageodo 43.78 338 P P 08 35 08.0 +4.9
SNR=5.5
GGDB Gageodo 43.78 338 P P 08 35 08.0 +4.9
SNR=5.5
NNZ Nelson 43.78 147 P **P** **08 35 02.5 -0.5**
NNZ IAmb IAmb 08 35 09.6
comp=Z,481nm,1.6s
NNZ IAMs_20 IAMs_20 08 56 21.2
comp=Z,8μm,19.0s
YOA0 Yeongam 43.85 340 P **P** **08 35 06.0 +2.3**
SNR=14
YOA0 Yeongam 43.85 340 P **P** **08 35 06.0 +2.3**
SNR=14
INZ Inchbonnie 43.86 150 IAMs_20 IAMs_20 08 52 53.0
comp=Z,12μm,18.0s
EURB Uiryeong-eup 43.87 342 P **P** **08 35 04.1 +0.4**
SNR=11
EURB Uiryeong-eup 43.87 342 P **P** **08 35 04.1 +0.4**
SNR=11
THZ Tophouse 43.91 148 P **P** **08 35 03.9 -0.3**
THZ IAmb IAmb 08 35 34.3
comp=Z,321nm,1.9s
KSUSN Ulsan 43.97 343 P **P** **08 35 05.0 +0.4**
SNR=22
KSUSN Ulsan 43.97 343 P **P** **08 35 05.0 +0.4**
SNR=22
HACA Hapcheon Acc B 44.01 342 P **P** **08 35 06.0 +1.1**
SNR=8.5
HACA Hapcheon Acc B 44.01 342 P **P** **08 35 06.0 +1.1**
SNR=8.5
URZ Urewera 44.04 141 LR LR 08 55 45.2
comp=Z,8μm,18.1s,baz=41,slow=39
DCZ Deep Cove 44.05 156 P **P** **08 35 04.2 -0.9**
DCZ IAmb IAmb 08 35 16.0
comp=Z,311nm,1.4s
KSDAG Daegu 44.10 343 P **P** **08 35 07.0 +1.4**
SNR=11
KSDAG Daegu 44.10 343 P **P** **08 35 07.0 +1.4**
SNR=11
JMM Marumori 44.11 357 P **P** **08 35 05.4 -0.2**
JMM Marumori 44.11 357 P **P** **08 35 07.9 +2.3**
KSHAC HAPCHEON 44.12 342 P **P** **08 35 07.0 +1.2**
SNR=12
KSHAC HAPCHEON 44.12 342 P **P** **08 35 07.0 +1.2**
SNR=12
RTZ Ruatahuna 44.17 142 P **P** **08 35 06.6 +0.3**
RTZ IAmb IAmb 08 35 14.7
comp=Z,547nm,1.8s
RTZ IAMs_20 IAMs_20 08 54 52.7
comp=Z,9μm,18.0s
BKZ Black Stump Fm 44.22 142 P **P** **08 35 06.8 +0.2**
BKZ IAMs_20 IAMs_20 08 53 30.8
comp=Z,10μm,19.0s
BKZ Black Stump Fm 44.22 142 P **P** **08 35 08.5 +1.9**
HUK2 Heuksan-myeon 44.23 339 P P 08 35 12.0 +5.3
SNR=5.9
MTHZ Maungataniwha 44.23 142 P **P** **08 35 07.7 +0.9**
TUWZ Tuamarina 44.24 147 P **P** **08 35 07.0 +0.3**
YOCB Yeongcheon 44.28 343 P **P** **08 35 09.0 +2.0**
SNR=14
YOCB Yeongcheon 44.28 343 P **P** **08 35 09.0 +2.0**
SNR=14
LTZ Lake Taylor 44.31 149 P **P** **08 35 08.1 +0.8**
LTZ IAMs_20 IAMs_20 08 53 10.1
comp=Z,10μm,20.0s
WKZ Wanaka 44.33 154 IAmb IAmb 08 35 17.2
comp=Z,217nm,1.3s
MLZ Mavora Lakes 44.37 155 IAmb IAmb 08 35 15.4
comp=Z,318nm,1.4s
MXZ Matakaoa Point 44.38 139 IAMs_20 IAMs_20 08 52 29.4
comp=Z,8μm,19.0s
BSWZ Blackbirch Sta 44.40 147 P **P** **08 35 08.3 +0.4**
RPZ Rata Peaks 44.41 151 LR LR 08 53 00.2
comp=Z,13μm,19.9s,baz=312,slow=35
GOCB Gochang-gun 44.43 340 P **P** **08 35 13.0 +4.7**
SNR=9.3
PYZ Puysegur Point 44.44 157 P **P** **08 35 11.4 +3.2**
KSJEU Jeongeup 44.45 341 P **P** **08 35 13.0 +4.5**
SNR=5.7
JSD Sado 44.47 354 P **P** **08 35 08.9 +0.4**
SNGZ Shannon Statio 44.50 141 P **P** **08 35 10.5 +1.6**
KSCIG Chilgok 44.50 343 P **P** **08 35 13.1 +4.3**
SNR=6.3
LBZ Lake Benmore 44.51 153 IAmb IAmb 08 35 15.8
comp=Z,308nm,1.4s
TWGZ Tauwhareparae 44.54 140 P **P** **08 35 12.5 +3.3**
DUSB Deogyusan 44.55 342 P **P** **08 35 14.0 +4.7**
SNR=5.7
GUWB Gunwi 44.57 343 P **P** **08 35 14.0 +4.6**
SNR=6.9
OXZ Oxford 44.60 150 P **P** **08 35 09.2 -0.3**
OXZ IAMs_20 IAMs_20 08 53 16.5
comp=Z,10μm,19.0s
MRZ Mangatainoka R 44.64 145 IAmb IAmb 08 35 16.8
comp=Z,328nm,1.5s
MRZ IAMs_20 IAMs_20 08 54 08.8
comp=Z,12μm,18.0s
YODB Yeongdeok 44.67 344 P P 08 35 15.0 +4.8
SNR=6.2
EUSB Uiseong 44.71 343 P **P** **08 35 15.0 +4.5**
SNR=7.8
KHZ Kahutara 44.71 148 IAmb IAmb 08 35 16.8
comp=Z,187nm,1.3s
KHZ IAMs_20 IAMs_20 08 52 45.5
comp=Z,12μm,20.0s
KSGUM GUMI 44.71 343 P **P** **08 35 15.0 +4.5**
SNR=10
SKLT Songkhla 44.72 287 P **P** **08 35 11.9 +0.9**
WHZ Wether Hill Ro 44.72 156 P **P** **08 35 10.5 0.0**
WHZ IAmb IAmb 08 35 17.6
comp=Z,232nm,1.5s
KSJEO Jeonju 44.74 341 P P 08 35 16.1 +5.3
SNR=7.8
NJ2 Nanjing 44.82 330⇓*i*P **P** **08 35 13.5 +2.1**
NJ2 pP **sP** **08 35 22.5 +4.3**
NJ2 S **S** **08 41 55.5 +7.1**
NJ2 pmax pmax
comp=Z,110nm,1.4s
NJ2 pmax pmax
comp=Z,2μm,3.5s
NJ2 LR LR
comp=Z,3μm,18.0s
NJ2 LR LR
comp=Z,2μm,16.1s
NJ2 LR LR
comp=Z,3μm,15.2s
KSULJ Uljin 44.83 344 P P 08 35 17.0 +5.6
SNR=5.3
GVZ Greta Valley S 44.84 149 IAmb IAmb 08 35 18.6
comp=Z,221nm,1.2s
GVZ IAMs_20 IAMs_20 08 54 16.9
comp=Z,10μm,18.0s
YEYB Yeongyang 44.85 344 P P 08 35 17.0 +5.4
SNR=7.7
GULI GuiLin 44.97 316⇑P **P** **08 35 12.5 -0.2**
GULI S **S** **08 41 54.8 +3.9**
GULI pmax pmax
comp=Z,70nm,1.1s
GULI LR LR
comp=Z,3μm,22.1s
GULI LR LR
comp=Z,2μm,18.4s
GULI LR LR
comp=Z,2μm,21.6s
BFZ Birch Farm 45.03 144 P **P** **08 35 14.1 +1.0**
TJN Taejon 45.13 342 P **P** **08 35 12.1 -1.7**
TJN Taejon 45.13 342 P **P** **08 35 12.5 -1.3**
TJN Taejon 45.13 342*de*P **P** **08 35 12.7 -1.1**
CNSH ChangSha 45.22 321 P **P** **08 35 15.3 +0.6**
CNSH S **S** **08 41 59.3 +4.9**
CNSH pmax pmax
comp=Z,13nm,0.8s
CNSH LR LR
comp=Z,2μm,17.3s
CNSH LR LR
comp=Z,1μm,16.7s
CNSH LR LR
comp=Z,2μm,16.7s
RPSI Rantau Prapat 45.28 280 P **P** **08 35 14.1 -1.3**
PSI Prapat 45.30 280 P **P** **08 35 14.9 -0.8**
PSI Prapat 45.30 280 P **P** **08 35 14.1 -1.6**
PSI pmax pmax
comp=Z,119nm,1.0s
PSI MLR MLR
comp=Z,1μm,21.0s
KSAR Wonju Array Be 45.95 343 P **P** **08 35 19.7 -0.6**

KSAR Wonju Array Be 45.95 343 P **P** **08 35 19.7 -0.6**
KSRS Korea Array 45.95 343 P **P** **08 35 19.2 -1.0**
comp=Z,86nm,1.0s,baz=164,slow=9.3,SNR=105
KSRS PcP **PcP** **08 36 58.0 +0.9**
comp=Z,30nm,1.1s,baz=162,slow=3.9,SNR=4.5
comp=Z,86nm,1.0s
KS19 Wonju Array Si 46.01 343 P **P** **08 35 19.1 -1.7**
KS19 IAmb IAmb 08 35 25.0
comp=Z,273nm,1.4s
WHN Wuhan 46.07 324⇑P **P** **08 35 22.5 +1.2**
WHN PP **PP** **08 37 10.5 +0.9**
WHN S **S** **08 42 11.5 +5.0**
WHN pmax pmax
comp=Z,4μm,3.4s
WHN LR LR
comp=Z,10μm,18.5s
WHN LR LR
comp=Z,4μm,13.7s
WHN LR LR
comp=Z,10μm,15.2s
SRIT Nakonsritamara 46.10 288 P **P** **08 35 22.4 +0.5**
SURA Surathani 46.25 289 P **P** **08 35 23.5 +0.5**
GSI Gunungsitoli 46.34 278 P **P** **08 35 22.3 -1.5**
GSI IAmb IAmb 08 37 05.6
comp=Z,461nm,2.0s
GSI Gunungsitoli 46.34 278 P **P** **08 35 25.1 +1.3**
INCN Inchon 46.37 342 P **P** **08 35 23.2 -0.4**
INCN Inchon 46.37 342 P **P** **08 35 23.7 +0.1**
INCN Inchon 46.37 342 P **P** **08 35 23.2 -0.4**
INCN pmax pmax
comp=Z,411nm,1.5s
INCN MLR MLR
comp=Z,5μm,19.0s
INCN Inchon 46.37 342 P **P** **08 35 24.8 +1.1**
INCN P **P** **08 35 24.8 +1.1**
INCN S **S** **08 42 10.6 -0.2**
INCN S **S** **08 42 10.6 -0.2**
NAYO Nakonayok 46.51 297 P **P** **08 35 24.2 -0.9**
NONG Nongkai 46.54 302 P **P** **08 35 24.8 -0.5**
JTM Tenmabayashi 47.01 358 P **P** **08 35 28.8 +0.3**
JTM Tenmabayashi 47.01 358 P **P** **08 35 29.0 +0.5**
HJU Haeju 47.17 341 P **P** **08 35 30.7 +0.8**
HJU S **S** **08 42 23.0 +0.9**
HJU AmB
comp=Z,3μm,2.2s
SLVN Son La 47.52 307 P **P** **08 35 31.1 -1.9**
PYAG Pyongyang 48.08 342 P **P** **08 35 37.1 +0.2**
PYAG S **S** **08 42 36.3 +1.3**
PYAG AmB
comp=Z,1μm,2.3s
ERM Erimo 48.19 360 P **P** **08 35 37.5 -0.2**
ERM IAmb IAmb 08 35 42.1
comp=Z,205nm,1.8s
ERM Erimo 48.19 360 P **P** **08 35 37.5 -0.2**
ERM pmax pmax
comp=Z,205nm,1.8s
GYA Guiyang 48.30 314⇓*i*P **P** **08 35 40.5 +1.5**
GYA S **S** **08 42 39.8 +1.0**
GYA pmax pmax
comp=Z,71nm,1.0s
GYA pmax pmax
comp=Z,970nm,5.5s
GYA LR LR
comp=Z,1μm,21.4s
HHU Hamhung 48.36 344 P **P** **08 35 39.1 +0.1**
HHU AmB
comp=Z,1μm,2.2s
SRDT SRDT 48.49 295 P **P** **08 35 40.8 +0.3**
ENH Enshi 48.83 320 P **P** **08 35 42.2 -0.8**
ENH IAmb IAmb 08 35 47.5
comp=Z,197nm,1.3s
ENH Enshi 48.83 320 P **P** **08 35 42.6 -0.3**
TIA Tai'an 49.02 332 P **P** **08 35 42.8 -1.5**
TIA S **S** **08 42 53.8 +5.3**
TIA pmax pmax
comp=Z,31nm,1.8s
TIA pmax pmax
comp=Z,550nm,7.5s
TIA LR LR
comp=Z,1μm,19.1s
TIA LR LR
comp=Z,2μm,16.7s
TIA LR LR
comp=Z,1μm,20.5s
PHRA Phrae 49.21 301 P **P** **08 35 45.0 -1.0**
DL2 Dalian 49.38 338 P **P** **08 35 46.5 -0.4**
DL2 PP **PP** **08 37 38.0 -3.2**
DL2 S **S** **08 42 58.0 +4.6**
DL2 pmax pmax
comp=Z,60nm,1.5s
DL2 pmax pmax
comp=Z,850nm,5.6s
DL2 LR LR
comp=Z,2μm,20.1s
DL2 LR LR
comp=Z,2μm,16.9s
DL2 LR LR
comp=Z,3μm,18.4s
SUJ Sinuiju 49.44 341 P **P** **08 35 47.4 +0.1**
SUJ S **S** **08 42 54.8 +0.7**
SUJ AmB
comp=Z,2μm,2.2s
MCQ Macquarie Isla 49.58 168 P **P** **08 35 51.1 +2.9**
baz=50,SNR=4.7
MCQ Macquarie Isla 49.58 168 P **P** **08 35 49.0 +0.8**
MCQ IAMs_20 IAMs_20 08 54 56.4
comp=Z,7μm,20.0s
MCQ Macquarie Isla 49.58 168 P **P** **08 35 49.7 +1.5**
MCQ Macquarie Isla 49.58 168 P **P** **08 35 49.0 +0.8**
MCQ pmax pmax
comp=Z,676nm,1.4s
CRAI Chiangrai 49.87 303 P **P** **08 35 51.0 0.0**
CRAI IAmb IAmb 08 35 57.0
comp=Z,380nm,1.8s
LYN LuoYang 50.11 326⇑P **P** **08 35 52.5 0.0**
LYN sP sP 08 35 59.8 +0.4
LYN PP **PP** **08 37 45.0 -2.9**
LYN S **S** **08 43 03.8 +0.1**
LYN sS pS 08 43 09.8 +0.2
LYN SS **SS** **08 46 30.0 -7.2**
LYN pmax pmax
comp=Z,99nm,1.3s
LYN pmax pmax
comp=Z,670nm,5.7s
LYN LR LR
comp=Z,3μm,16.8s
LYN LR LR
comp=Z,3μm,17.2s
LYN LR LR
comp=Z,5μm,17.2s
PSTR Posyet 50.14 348*c*/P **P** **08 35 51.2 -1.4**
JKA Kamikawa-asahi 50.29 359 P **P** **08 35 52.9 -0.9**
ASAJ Asahikawa 50.29 359 P **P** **08 35 52.9 -0.8**
ASAJ pmax pmax
comp=Z,551nm,1.5s
ASAJ Asahikawa 50.29 359 LR LR 08 55 17.2
comp=Z,1μm,21.0s,baz=180,slow=34
CM31 Chiang Mai Arr 50.29 300 P **P** **08 35 54.7 +0.5**
CM31 IAmb IAmb 08 36 00.2
comp=Z,210nm,1.4s
CMAR Chiang Mai Arr 50.29 300 P **P** **08 35 53.9 -0.3**
CMAR Chiang Mai Arr 50.29 300 P **P** **08 35 53.9 -0.3**
CMAR Chiang Mai Arr 50.29 300 P **P** **08 35 54.6 +0.4**
comp=Z,16nm,0.8s,baz=126,slow=6.1,SNR=60
CMAR LR LR 08 57 58.0
comp=Z,1μm,20.4s,baz=135,slow=37
comp=Z,16nm,0.8s
VLA Vladivostok 50.38 349 *e*P **P** **08 35 55.7 +1.3**
VLA pmax pmax
comp=Z,103nm,1.1s
KMI Kunming 50.43 310⇑P **P** **08 35 56.8 +1.4**
KMI S **S** **08 43 12.0 +3.0**
KMI pmax pmax
comp=Z,150nm,1.7s
KMI LR LR
comp=Z,2μm,25.5s
KMI LR LR
comp=Z,2μm,24.6s
KMI LR LR
comp=Z,4μm,24.1s
CHTO Chiang Mai 50.44 301 P **P** **08 35 54.1 -1.3**
CHTO IAmb IAmb 08 36 00.3
comp=Z,333nm,1.9s
CHTO Chiang Mai 50.44 301 P **P** **08 35 54.8 -0.6**
CHTO Chiang Mai 50.44 301 P **P** **08 35 54.1 -1.3**

CHTO				pmax	pmax			
	comp=Z,333nm,2.0s							
CHTO	**Chiang Mai**	**50.44**	**301**	P	**P**	**08 35 52.5**	**-2.9**
CHTO				P	**P**	**08 35 52.5**	**-2.9**
CHTO				S	**S**	**08 43 04.9**	**-3.9**
CHTO				S	**S**	**08 43 04.9**	**-3.9**
HNS	**HongShan**	**51.13**	**331**	⇑P	P	08 35 52.3	-7.9
HNS				pP	pP	08 36 04.0	-1.2
HNS				S	S	08 43 06.0	-12
HNS				sS	pS	08 43 22.0	-1.7
HNS				pmax	pmax			
	comp=Z,8.0nm,1.0s							
HNS				LR	LR			
	comp=N,2μm,22.3s							
HNS				LR	LR			
	comp=E,3μm,19.1s							
HNS				LR	LR			
	comp=Z,3μm,19.6s							
SNY	**Shenyang**	**51.30**	**341**	⇑P	**P**	**08 36 01.0**	**-0.3**
SNY				S	**S**	**08 43 18.0**	**-1.9**
SNY				pmax	pmax			
	comp=Z,26nm,1.0s							
SNY				pmax	pmax			
	comp=Z,1μm,3.8s							
SNY				LR	LR			
	comp=Z,2μm,17.4s							
SNY				LR	LR			
	comp=Z,960nm,20.6s							
SNY				LR	LR			
	comp=Z,2μm,17.4s							
USA0B	**Ussuriysk Arra**	**51.41**	**350**	P	**P**	**08 36 01.4**	**-0.8**
USA0B				IAmb	IAmb	08 36 06.8		
	comp=Z,260nm,1.3s							
USA0B	**Ussuriysk Arra**	**51.41**	**350**	P	**P**	**08 36 01.4**	**-0.8**
USA0B				pmax	pmax			
	comp=Z,260nm,1.3s							
USRK	**Ussuriysk Ar.**	**51.41**	**350**	P	**P**	**08 36 01.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**51.41**	**350**	P	**P**	**08 36 01.7**	**-0.4**
	comp=Z,58nm,0.9s,baz=169,slow=7.5,SNR=57							
USRK				LR	LR	08 56 03.2		
	comp=Z,3μm,20.1s,baz=157,slow=34							
	comp=Z,58nm,0.9s							
KUR	**Kuril'sk**	**51.56**	**4**	*e*P	**P**	**08 36 02.1**	**-1.2**
KUR				S	**S**	**08 43 24.0**	**+0.6**
KUR				*e*SSS	SSS	08 48 39.6		
KUR				pmax	pmax			
	comp=Z,310nm,1.0s							
TEY	**Ternei**	**51.56**	**354**	⇓*e*P	**P**	**08 36 02.8**	**-0.5**
TEY				pmax	pmax			
	comp=N,10.0nm,1.2s							
TEY				pmax	pmax			
	comp=Z,10.0nm,1.2s							
XAN	**Xi'an**	**51.77**	**323**	P	**P**	**08 36 04.3**	**-0.8**
XAN				pP	pP	08 36 09.5	-0.6
XAN				sP	sP	08 36 13.0	+1.0
XAN				PP	**PP**	**08 37 59.5**	**-3.5**
XAN				S	**S**	**08 43 25.5**	**-1.3**
XAN				sS	pS	08 43 33.8	+1.0
XAN				SS	**SS**	**08 47 00.5**	**-3.2**
XAN				pmax	pmax			
	comp=Z,120nm,1.2s							
XAN				pmax	pmax			
	comp=Z,2μm,3.6s							
XAN				LR	LR			
	comp=Z,3μm,18.4s							
XAN				LR	LR			
	comp=Z,3μm,17.7s							
XAN				LR	LR			
	comp=Z,4μm,16.7s							
PZH	**PanZhiHua**	**51.93**	**311**	P	**P**	**08 36 07.0**	**+0.4**
PZH				pP	**sP**	**08 36 14.0**	**+0.6**
PZH				PcP	**PcP**	**08 37 21.8**	**+2.6**
PZH				PcS	**PcS**	**08 41 15.3**	**-2.3**
PZH				S	**S**	**08 43 27.5**	**-2.0**
PZH				pmax	pmax			
	comp=Z,60nm,1.7s							
PZH				pmax	pmax			
	comp=Z,980nm,7.8s							
PZH				LR	LR			
	comp=Z,2μm,18.0s							
PZH				LR	LR			
	comp=Z,2μm,20.2s							
PZH				LR	LR			
	comp=Z,3μm,21.8s							
JOHN	**Johnston Islan**	**51.94**	**63**	IAMs_20	IAMs_20	08 58 08.0		
	comp=Z,6μm,19.0s							
MDJ	**Mudanjiang**	**52.28**	**348**	P	**P**	**08 36 09.5**	**+0.8**
MDJ				PP	**PP**	**08 38 05.5**	**-1.9**
MDJ				S	**S**	**08 43 34.3**	**+0.9**
MDJ				pmax	pmax			
	comp=Z,63nm,0.9s							
MDJ				pmax	pmax			
	comp=Z,1μm,3.8s							
MDJ				LR	LR			
	comp=Z,2μm,18.9s							
MDJ				LR	LR			
	comp=Z,4μm,21.1s							
MDJ				LR	LR			
	comp=Z,5μm,21.6s							
MDJ	**Mudanjiang**	**52.28**	**348**	P	**P**	**08 36 08.4**	**-0.3**
MDJ				IAmb	IAmb	08 36 14.2		
	comp=Z,312nm,1.8s							
MDJ	**Mudanjiang**	**52.28**	**348**	P	**P**	**08 36 07.9**	**-0.8**
TIY	**Taiyuan**	**52.51**	**329**	⇑P	**P**	**08 36 12.8**	**+2.2**
TIY				PcP	**PcP**	**08 37 24.8**	**+3.8**
TIY				S	**S**	**08 43 43.0**	**+6.0**
TIY				pmax	pmax			
	comp=Z,66nm,1.5s							
TIY				pmax	pmax			
	comp=Z,770nm,4.8s							
TIY				LR	LR			
	comp=Z,3μm,19.4s							
TIY				LR	LR			
	comp=Z,2μm,18.2s							
TIY				LR	LR			
	comp=Z,3μm,18.0s							
CN2	**Changchun**	**52.53**	**344**	P	**P**	**08 36 10.8**	**+0.2**
CN2				PcP	**PcP**	**08 37 21.3**	**+0.4**
CN2				S	**S**	**08 43 34.0**	**-2.9**
CN2				pmax	pmax			
	comp=Z,80nm,1.4s							
CN2				pmax	pmax			
	comp=Z,1μm,3.0s							
CN2				LR	LR			
	comp=Z,3μm,17.0s							
CN2				LR	LR			
	comp=Z,2μm,17.0s							
CN2				LR	LR			
	comp=Z,3μm,17.0s							
BJT	**Baijiatuau**	**52.56**	**334**	P	**P**	**08 36 10.5**	**-0.4**
BJT				IAmb	IAmb	08 36 16.2		
	comp=Z,518nm,1.9s							
BJT	**Baijiatuau**	**52.56**	**334**	P	**P**	**08 36 10.0**	**-0.9**
BJT	**Baijiatuau**	**52.56**	**334**	P	**P**	**08 36 10.5**	**-0.4**
BJT				pmax	pmax			
	comp=Z,518nm,1.9s							
BJT				MLR	MLR			
	comp=Z,5μm,19.0s							
BJI	**Beijing**	**52.58**	**334**	P	**P**	**08 36 09.5**	**-1.4**
BJI				sP	**sP**	**08 36 22.5**	**+4.7**
BJI				S	**S**	**08 43 38.0**	**+0.4**
BJI				pmax	pmax			
	comp=Z,72nm,1.7s							
BJI				pmax	pmax			
	comp=Z,660nm,3.4s							
BJI				LR	LR			
	comp=Z,2μm,18.2s							
BJI				LR	LR			
	comp=Z,880nm,16.8s							
BJI				LR	LR			
	comp=Z,3μm,18.3s							
CD2	**Chengdu**	**53.02**	**317**	P	**P**	**08 36 14.3**	**-0.2**
CD2				S	**S**	**08 43 47.8**	**+3.6**
CD2				SS	**SS**	**08 47 21.8**	**-1.9**
CD2				pmax	pmax			
	comp=Z,120nm,0.8s							
CD2				pmax	pmax			
	comp=Z,780nm,4.9s							
CD2				LR	LR			
	comp=Z,850nm,13.1s							
CD2				LR	LR			
	comp=Z,910nm,14.6s							
CD2				LR	LR			
	comp=Z,2μm,17.9s							
YSS	**Yuzh-Sakhalins**	**53.13**	**359**	P	**P**	**08 36 14.6**	**-0.2**
YSS				IAmb	IAmb	08 36 22.4		
	comp=Z,196nm,1.3s							
YSS	**Yuzh-Sakhalins**	**53.13**	**359**	P	**P**	**08 36 15.0**	**+0.1**
YSS	**Yuzh-Sakhalins**	**53.13**	**359**	*e*P	**P**	**08 36 15.3**	**+0.4**
YSS				*e*S	**S**	**08 43 42.0**	**-2.8**
YSS				pmax	pmax			
	comp=Z,110nm,1.1s							
YSS				pmax	pmax			
	comp=Z,500nm,3.2s							
YSS				MLR	MLR			
	comp=Z,2μm,15.0s							
YSS				MLR	MLR			
	comp=N,1μm,17.0s							
PBA	**Port Blair**	**53.45**	**290**	P	**P**	**08 36 15.7**	**-2.1**
PBA				IAmb	IAmb	08 37 35.4		
	comp=Z,258nm,1.6s							
PBA	**Port Blair**	**53.45**	**290**	P	**P**	**08 36 17.3**	**-0.6**
TNCH	**TengChong**	**53.66**	**307**	P	**P**	**08 36 21.5**	**+2.1**
TNCH				pP	pP	08 36 25.0	+0.6
TNCH				sP	sP	08 36 27.3	+1.0
TNCH				PcS	**PcS**	**08 41 25.5**	**+0.3**
TNCH				S	**S**	**08 43 57.8**	**+4.6**
TNCH				ScS	**ScS**	**08 46 08.0**	**-1.2**
TNCH				pmax	pmax			
	comp=Z,200nm,1.4s							
TNCH				pmax	pmax			
	comp=Z,1μm,7.2s							
TNCH				LR	LR			
	comp=Z,660nm,14.7s							
TNCH				LR	LR			
	comp=Z,1μm,15.2s							
TNCH				LR	LR			
	comp=Z,3μm,22.1s							
BNX	**BinXian**	**53.84**	**346**	⇓P	**P**	**08 36 19.0**	**-1.1**
BNX				pP	**pP**	**08 36 23.5**	**-1.6**
BNX				sP	**sP**	**08 36 26.0**	**-1.0**
BNX				PP	**PP**	**08 38 22.0**	**+0.6**
BNX				S	**S**	**08 43 54.0**	**-0.5**
BNX				pmax	pmax			
	comp=Z,57nm,1.1s							
BNX				pmax	pmax			
	comp=Z,610nm,3.5s							
BNX				LR	LR			
	comp=Z,2μm,17.6s							
BNX				LR	LR			
	comp=Z,2μm,16.8s							
BNX				LR	LR			
	comp=Z,3μm,18.4s							
MND	**Mandalay**	**54.22**	**303**	P	**P**	**08 36 22.9**	**-0.4**
UGL	**Uglegorsk**	**55.26**	**359**	*e*P	**P**	**08 36 30.6**	**+0.2**
UGL				*e*S	**S**	**08 44 16.7**	**+3.2**
UGL				pmax	pmax			
	comp=N,700nm,2.6s							
UGL				pmax	pmax			
	comp=E,600nm,2.0s							
UGL				pmax	pmax			
	comp=Z,2μm,2.0s							
UGL				pmax	pmax			
	comp=Z,260nm,1.2s							
HHC	**Hu-ho-hao-te**	**55.35**	**331**	*e*P	**P**	**08 36 31.8**	**+0.4**
HHC				S	**S**	**08 44 12.5**	**-2.9**
HHC				SS	**SS**	**08 47 58.5**	**-1.7**
HHC				pmax	pmax			
	comp=Z,36nm,1.2s							
HHC				pmax	pmax			
	comp=Z,1μm,4.0s							
HHC				LR	LR			
	comp=Z,2μm,19.1s							
HHC				LR	LR			
	comp=Z,2μm,19.1s							
HHC				LR	LR			
	comp=Z,4μm,18.3s							
XLT	**XiLinHaoTe**	**55.81**	**336**	*e*P	**P**	**08 36 34.5**	**-0.1**
XLT				S	**S**	**08 44 26.0**	**+4.7**
XLT				sS	sS	08 44 31.5	+1.9
XLT				pmax	pmax			
	comp=Z,43nm,1.9s							
XLT				pmax	pmax			
	comp=Z,460nm,10.6s							
XLT				LR	LR			
	comp=Z,2μm,18.3s							
XLT				LR	LR			
	comp=Z,3μm,19.3s							
BTO	**Baotou**	**55.92**	**330**	*e*P	**P**	**08 36 35.0**	**-0.5**
BTO				pP	**pP**	**08 36 40.0**	**-0.5**
BTO				sP	**sP**	**08 36 42.8**	**+0.4**
BTO				PP	**PP**	**08 38 42.0**	**+1.6**
BTO				S	**S**	**08 44 24.0**	**+1.0**
BTO				sS	**sS**	**08 44 32.0**	**+0.7**
BTO				SS	**SS**	**08 48 08.8**	**-0.5**
BTO				pmax	pmax			
	comp=Z,27nm,1.4s							
BTO				pmax	pmax			
	comp=Z,2μm,9.5s							
BTO				LR	LR			
	comp=Z,8μm,18.7s							
BTO				LR	LR			
	comp=Z,5μm,18.2s							
BTO				LR	LR			
	comp=Z,10μm,19.4s							
LZH	**Lanzhou**	**56.22**	**322**	*e*P	**P**	**08 36 38.0**	**+0.2**
LZH				pP	sP	08 36 47.3	+2.6
LZH				sP	pP	08 36 51.8	+9.0
LZH				S	**S**	**08 44 26.8**	**-0.4**
LZH				SS	**SS**	**08 48 16.0**	**+1.8**
LZH				pmax	pmax			
	comp=Z,170nm,1.2s							
LZH				pmax	pmax			
	comp=Z,1μm,5.0s							
LZH				LR	LR			
	comp=Z,2μm,17.9s							
LZH				LR	LR			
	comp=Z,2μm,17.7s							
LZH				LR	LR			
	comp=Z,3μm,18.2s							
KLR	**Kul'dur**	**56.33**	**351**	*c i*P	**P**	**08 36 36.7**	**-1.3**
KLR				pmax	pmax			
	comp=Z,190nm,1.7s							
KLR	**Kul'dur**	**56.33**	**351**	P	**P**	**08 36 37.5**	**-0.5**
	comp=Z,52nm,1.0s,baz=190,slow=3.5,SNR=75							
KLR				LR	LR	08 56 54.4		
	comp=Z,3μm,21.7s,baz=166,slow=32							
	comp=Z,52nm,1.0s							
RAR	**Rarotonga**	**56.85**	**111**	LR	LR	08 58 33.7		
	comp=Z,3μm,21.6s,baz=273,slow=33							
SAIH	**SAIHA**	**57.04**	**302**	*e*P	**P**	**08 36 43.8**	**0.0**
TYV	**Tymovskoe**	**57.04**	**359**	*e*P	**P**	**08 36 43.5**	**+0.4**
TYV				*e*S	**S**	**08 44 39.3**	**+2.1**
TYV				pmax	pmax			
	comp=Z,77nm,1.0s							
TYV				pmax	pmax			
	comp=Z,800nm,4.0s							
TYV				smax	smax			
	comp=N,600nm,9.5s							
TYV				smax	smax			
	comp=E,500nm,9.5s							
IMP	**Imphal**	**57.24**	**305**	*e*P	**P**	**08 36 44.7**	**-0.4**
IMP				IAmb	IAmb	08 36 49.0		
	comp=Z,175nm,1.5s							
GRNR	**Gornyy**	**57.26**	**355**	⇓*i*P	**P**	**08 36 44.3**	**-0.4**
GRNR				*e*S	**S**	**08 44 40.7**	**+0.6**
GRNR				pmax	pmax			
	comp=N,10.0nm,0.9s							
GRNR				pmax	pmax			
	comp=E,3.0nm,0.9s							
GRNR				pmax	pmax			
	comp=Z,20nm,0.9s							
GRNR				smax	smax			
	comp=E,3.0nm,0.6s							
MOKO	**MOKOCHONG**	**57.45**	**307**	*e*P	**P**	**08 36 47.2**	**+0.6**
MOKO				IAmb	IAmb	08 36 50.8		
	comp=Z,527nm,2.0s							
KOHI	**KOHIMA**	**57.50**	**306**	*e*P	**P**	**08 36 45.7**	**-1.3**
KOHI				IAML		08 36 50.8		
	comp=Z,548nm,1.5s							
AZL	**Aizawl**	**57.80**	**303**	*e*P	**P**	**08 36 49.5**	**+0.4**
AZL				IAmb	IAmb	08 36 53.8		
	comp=Z,603nm,1.9s							
SKR	**Severo-Kuril's**	**57.92**	**10**	⇓*e*P	**P**	**08 36 48.0**	**-1.2**
HEH	**HeiHe**	**58.10**	**348**	*e*P	**P**	**08 36 49.0**	**-1.6**
HEH				pP	**pP**	**08 36 54.5**	**-1.1**
HEH				S	**S**	**08 44 51.5**	**+0.4**
HEH				pmax	pmax			
	comp=Z,140nm,1.6s							
HEH				pmax	pmax			
	comp=Z,2μm,3.9s							
HEH				LR	LR			
	comp=Z,2μm,18.6s							
HEH				LR	LR			
	comp=Z,3μm,18.2s							
HEH				LR	LR			
	comp=Z,3μm,23.4s							
ITAN	**ITANAGAR**	**58.45**	**307**	*e*P	**P**	**08 36 54.6**	**+1.1**
ITAN				IAmb	IAmb	08 36 58.8		
	comp=Z,224nm,0.9s							
BELO	**BELONIA**	**58.65**	**302**	*e*P	**P**	**08 36 56.9**	**+2.0**
AGT	**Agartala**	**59.07**	**303**	*e*P	**P**	**08 36 55.9**	**-1.9**
HIA	**Hailar**	**59.15**	**342**	P	**P**	**08 36 58.1**	**0.0**
HIA				IAmb	IAmb	08 37 02.6		
	comp=Z,134nm,1.2s							
HIA	**Hailar**	**59.15**	**342**	P	**P**	**08 36 58.0**	**0.0**
HIA	**Hailar**	**59.15**	**342**	*c i*P	**P**	**08 36 57.7**	**-0.3**
HIA				pmax	pmax			
	comp=Z,49nm,1.1s							
SHL	**Shillong**	**59.24**	**305**	P	**P**	**08 36 59.0**	**-0.2**
SHL	**Shillong**	**59.24**	**305**	P	**P**	**08 36 59.1**	**-0.2**
SHL				pmax	pmax			
	comp=Z,358nm,1.4s							
SHL	**Shillong**	**59.24**	**305**	*e*P	**P**	**08 36 58.4**	**-0.8**
SHL				IAmb	IAmb	08 37 03.8		
	comp=Z,424nm,1.7s							
SHL	**Shillong**	**59.24**	**305**	P	**P**	**08 36 58.7**	**-0.6**
	SNR=101							
NKL	**Nikolayevsk**	**59.37**	**358**	*e*P	**P**	**08 36 57.9**	**-1.4**
NKL				*e*S	**S**	**08 45 10.9**	**+3.4**
NKL				pmax	pmax			
	comp=E,310nm,1.3s							
NKL				pmax	pmax			
	comp=N,222nm,1.2s							
NKL				pmax	pmax			
	comp=Z,1μm,1.2s							
NKL				smax	smax			
	comp=E,206nm,3.2s							
NKL				smax	smax			
	comp=N,443nm,6.3s							
NKL				MLR	MLR			
	comp=E,5μm,18.0s							
NKL				MLR	MLR			
	comp=N,3μm,13.0s							
NKL				MLR	MLR			
	comp=Z,7μm,17.0s							
GUWA	**GUWAHATI**	**59.66**	**305**	*e*P	**P**	**08 37 01.8**	**-0.1**
GUWA				IAmb	IAmb	08 37 06.2		
	comp=Z,866nm,2.0s							
PEA0B	**Petropavlovsk-**	**60.52**	**10**	P	**P**	**08 37 07.6**	**+0.3**
PEA0B				IAmb	IAmb	08 37 12.2		
	comp=Z,237nm,1.2s							
PEA0B	**Petropavlovsk-**	**60.52**	**10**	P	**P**	**08 37 07.6**	**+0.3**
PEA0B				pmax	pmax			
	comp=Z,237nm,1.2s							
PETK	**Petropavlovsk-**	**60.52**	**10**	P	**P**	**08 37 07.0**	**-0.3**
PETK	**Petropavlovsk-**	**60.52**	**10**	P	**P**	**08 37 07.0**	**-0.3**
PETK	**Petropavlovsk-**	**60.52**	**10**	P	**P**	**08 37 06.7**	**-0.6**
	comp=Z,106nm,0.9s,baz=193,slow=5.9,SNR=57							
PETK				LR	LR	09 02 03.3		
	comp=Z,2μm,19.8s,baz=198,slow=35							
	comp=Z,106nm,0.9s							
PET	**Petropavlovsk**	**60.61**	**11**	P	**P**	**08 37 07.7**	**-0.1**
PET				IAmb	IAmb	08 37 12.2		
	comp=Z,341nm,1.9s							
PET	**Petropavlovsk**	**60.61**	**11**	P	**P**	**08 37 08.2**	**+0.4**
PET	**Petropavlovsk**	**60.61**	**11**	*e*P	**P**	**08 37 08.9**	**+1.1**
PET				*e*S	**S**	**08 45 24.7**	**+1.3**
PET				pmax	pmax			
	comp=Z,700nm,15.3s							
PET				pmax	pmax			
	comp=Z,92nm,1.0s							
PET				MLR	MLR			
	comp=Z,2μm,20.0s							
PET				MLR	MLR			
	comp=Z,2μm,19.0s							
GTA	**Gaotai**	**60.79**	**322**	P	**P**	**08 37 09.8**	**+0.2**
GTA				pP	pP	08 37 14.0	-0.7
GTA				S	**S**	**08 45 27.8**	**+1.1**
GTA				pmax	pmax			
	comp=Z,37nm,1.1s							
GTA				pmax	pmax			
	comp=Z,1μm,10.0s							
GTA				LR	LR			
	comp=Z,1μm,17.9s							
GTA				LR	LR			
	comp=Z,940nm,18.7s							
GTA				LR	LR			
	comp=Z,2μm,20.7s							
ZEA	**Zeya**	**61.44**	**349**	*e*P	**P**	**08 37 12.8**	**-0.7**
ZEA				*e*S	**S**	**08 45 33.5**	**-0.6**
ZEA				*e*		08 45 54.3		
ZEA				pmax	pmax			
	comp=E,200nm,2.0s							
ZEA				pmax	pmax			
	comp=N,500nm,1.6s							
ZEA				pmax	pmax			
	comp=Z,700nm,1.8s							
ZEA				pmax	pmax			
	comp=N,230nm,1.1s							
ZEA				pmax	pmax			
	comp=Z,270nm,1.4s							
ZEA				smax	smax			
	comp=N,200nm,6.6s							
ZEA				smax	smax			
	comp=E,400nm,6.5s							
LSA	**Lhasa**	**61.63**	**309**	P	**P**	**08 37 16.2**	**+0.4**
LSA	**Lhasa**	**61.63**	**309**	P	**P**	**08 37 16.3**	**+0.4**
LSA	**Lhasa**	**61.63**	**309**	P	**P**	**08 37 16.2**	**+0.4**
LSA				pmax	pmax			
	comp=Z,413nm,2.0s							
GOMU	**GeErMu**	**62.16**	**317**	P	**P**	**08 37 19.8**	**+0.6**
GOMU				pP	sP	08 37 25.5	-0.7
GOMU				sP	pP	08 37 27.5	+3.2
GOMU				SS	SS	08 49 44.0	-3.9
GOMU				pmax	pmax			
	comp=Z,39nm,1.1s							
GOMU				LR	LR			
	comp=Z,760nm,15.4s							
GOMU				LR	LR			
	comp=Z,1μm,18.1s							
GOMU				LR	LR			
	comp=Z,2μm,16.7s							
GTK	**Tadong**	**62.64**	**305**	*e*P	**P**	**08 37 22.6**	**+0.2**
GTK				IAmb	IAmb	08 37 27.4		
	comp=Z,188nm,1.2s							
ULN	**Ulaanbaatar**	**62.78**	**333**	P	**P**	**08 37 22.5**	**-0.4**
ULN				IAmb	IAmb	08 37 28.3		
	comp=Z,251nm,1.6s							
ULN	**Ulaanbaatar**	**62.78**	**333**	*ce*P	**P**	**08 37 22.4**	**-0.4**
ULN	**Ulaanbaatar**	**62.78**	**333**	P	**P**	**08 37 24.6**	**+1.8**
ULN				P	**P**	**08 37 24.6**	**+1.8**
ULN				S	**S**	**08 45 54.4**	**+2.7**
ULN				S	**S**	**08 45 54.4**	**+2.7**
SONM	**Songino Array**	**63.06**	**333**	P	**P**	**08 37 24.4**	**-0.3**
SONM				IAmb	IAmb	08 37 29.9		
	comp=Z,131nm,1.4s							
SONM	**Songino Array**	**63.06**	**333**	P	**P**	**08 37 24.4**	**-0.3**
SONM				pmax	pmax			
	comp=Z,131nm,1.4s							
SONM	**Songino Array**	**63.06**	**333**	P	**P**	**08 37 24.2**	**-0.4**
	comp=Z,38nm,1.1s,baz=153,slow=7.3,SNR=52							
	comp=Z,38nm,1.1s							
CIT	**Chita**	**63.53**	**340**	*e*P	**P**	**08 37 26.8**	**-0.8**
CIT				*e*		08 38 07.6		
CIT				pmax	pmax			
	comp=Z,695nm,2.6s							
BOK	**Bokaro**	**63.58**	**300**	*e*P	**P**	**08 37 29.4**	**+1.0**
BOK				IAmb	IAmb	08 37 35.4		
	comp=Z,326nm,1.6s							
KIP	**Kipapa**	**63.77**	**62**	P	**P**	**08 37 28.6**	**-1.1**
KIP	**Kipapa**	**63.77**	**62**	⇑*e*P	**P**	**08 37 28.9**	**-0.8**
KIP				pmax	pmax			
	comp=Z,83nm,1.1s							
VIS	**Vishakhapatnam**	**63.92**	**293**	*e*P	**P**	**08 37 32.2**	**+1.5**
VIS				IAmb	IAmb	08 37 35.9		
	comp=Z,412nm,1.9s							
CASY	**Casey**	**63.95**	**194**	P	**P**	**08 37 30.7**	**+0.6**
PALK	**Pallekele**	**63.97**	**281**	P	**P**	**08 37 27.5**	**-3.7**
PALK	**Pallekele**	**63.97**	**281**	⇓*e*P	**P**	**08 37 26.9**	**-4.3**
PALK				pmax	pmax			
	comp=Z,26nm,1.6s							
PALK	**Pallekele**	**63.97**	**281**	P	**P**	**08 37 31.5**	**+0.3**
	comp=Z,16nm,1.0s,baz=214,slow=7.9,SNR=6.0							
PALK				LR	LR	09 07 16.6		
	comp=Z,2μm,21.2s,baz=214,slow=38							
	comp=Z,16nm,1.0s							
PALK	**Pallekele**	**63.97**	**281**	P	**P**	**08 37 33.0**	**+1.7**

PALK P **P** **08 37 33.0 +1.7**
PALK S **S** **08 46 12.0 +4.6**
PALK S **S** **08 46 12.0 +4.6**
RAGD RAYAGADA 64.25 295⇑ *e*P **P** **08 37 34.8 +1.9**
SHEM Shemya Is, Ala 64.43 20 P **P** **08 37 32.0 -1.4**
comp=Z,165nm,0.8s,baz=261,slow=5.5,SNR=9.4
SHEM LR LR 09 01 56.9
comp=Z,7μm,20.7s,baz=212,slow=33
comp=Z,165nm,0.8s
JHSG JHARSUGUGA 64.74 298⇑ *e*P **P** **08 37 38.2 +2.2**
KHU Kahuku 65.25 66 IAMs_20 IAMs_20 09 00 14.9
comp=Z,5μm,22.0s
AMKA Amchitka 65.29 24 P **P** **08 37 39.1 +0.1**
HMH Humu'ula Sheep 65.47 65 IAMs_20 IAMs_20 09 00 21.8
comp=Z,7μm,21.0s
MLH Mauna Loa 65.53 65 IAMs_20 IAMs_20 09 07 18.2
comp=Z,4μm,18.0s
HLP Hilina Pali 65.55 66 IAMs_20 IAMs_20 09 00 23.6
comp=Z,5μm,21.0s
UWE Uwekahuna 65.59 65 IAMs_20 IAMs_20 09 00 13.0
comp=Z,5μm,22.0s
OBL Observatory Le 65.60 65 IAMs_20 IAMs_20 09 00 37.1
comp=Z,4μm,20.0s
RIM Rim 65.60 65 IAMs_20 IAMs_20 09 00 35.2
comp=Z,4μm,20.0s
MDRS Chennai 65.61 287 *e*P **P** **08 37 44.3 +2.5**
UWB Uwekahuna B 65.61 65 IAMs_20 IAMs_20 09 00 27.3
comp=Z,4μm,21.0s
KKO Keanakako`i 65.61 65 IAMs_20 IAMs_20 09 00 37.4
comp=Z,4μm,20.0s
MA2 Magadan 66.03 4 P **P** **08 37 43.8 +0.2**
MA2 Magadan 66.03 4 P **P** **08 37 43.9 +0.2**
MA2 Magadan 66.03 4 *de*P **P** **08 37 43.1 -0.6**
MA2 pmax pmax
comp=Z,365nm,1.3s
MA2 MLR MLR
comp=Z,1μm,20.0s
MA2 Magadan 66.03 4 P **P** **08 37 43.8 +0.2**
comp=Z,200nm,1.1s,baz=156,slow=8.3,SNR=38
MA2 LR LR 09 09 04.0
comp=Z,482nm,18.1s,baz=188,slow=38
comp=Z,200nm,1.1s
VJD Vijayawada 66.06 291 *e*P **P** **08 37 46.1 +1.4**
PPT Papeete 66.25 106 LR LR 09 03 02.1
comp=Z,2μm,21.7s,baz=268,slow=33
PPTF Pamatai, Papee 66.26 106 P **P** **08 37 44.0 -2.1**
ZAK Zakamensk 66.32 333 *e*P **P** **08 37 45.2 -0.6**
ZAK pmax pmax
comp=Z,144nm,1.4s
VLK Valmikinagar 66.53 303⇑ *e*P **P** **08 37 49.5 +2.0**
AIS Amsterdam Isla 67.02 232 P **P** **08 37 49.5 -1.1**
KIWB Kanaga Island 67.12 25 P **P** **08 37 50.5 -0.2**
IRK Irkutsk 67.24 335 *e*P **P** **08 37 52.2 +0.6**
IRK pmax pmax
comp=Z,319nm,2.5s
ADK Adak 67.34 26 P **P** **08 37 52.9 +0.7**
ADK Adak 67.34 26 P **P** **08 37 54.9 +2.7**
ADK Adak 67.34 26 P **P** **08 37 52.9 +0.7**
ADK pmax pmax
comp=Z,515nm,1.3s
ALBI Allahabad 67.58 301 *e*P **P** **08 37 53.5 -0.8**
ALBI IAmb IAmb 08 37 58.5
comp=Z,112nm,0.8s
KOD Kodaikanal 67.67 284 *e*P **P** **08 37 56.1 +0.7**
HYB Hyderabad 68.23 292 *e*P **P** **08 37 58.7 +0.1**
HYB *es*P **pP** **08 38 01.8 -1.8**
HYB *e*S **S** **08 46 58.5 -0.6**
HYB *e*SS **SS** **08 51 30.6 +8.2**
HYB IVMs_BB IVMs_BB 09 09 52.6
comp=Z,569nm,23.9s
HYB Hyderabad 68.23 292 *e*P **P** **08 37 58.3 -0.3**
HYB IAmb IAmb 08 38 02.4
comp=Z,271nm,1.8s
MOY Mondy 68.25 333 *e*P **P** **08 37 57.2 -0.9**
MOY pmax pmax
comp=Z,404nm,2.4s
BOD Bodaibo 68.29 344 *e*P **P** **08 37 56.8 -1.2**
BOD pmax pmax
comp=Z,203nm,2.0s
ATKA Atka Island 68.65 26 IAMs_20 IAMs_20 09 02 14.0
comp=Z,6μm,20.0s
ATKA Atka Island 68.65 26 P **P** **08 38 02.2 +1.8**
YAK Yakutsk 69.05 353 P **P** **08 38 02.2 -0.4**
YAK Yakutsk 69.05 353 *e*P **P** **08 38 02.5 -0.2**
YAK *e**PP **pP** **08 38 05.2 -2.6**
YAK *e* 08 40 31.7
YAK *e*S **S** **08 47 12.2 +5.1**
YAK *e**SS **PnS** **08 47 34.5 +1.9**
YAK pmax pmax
comp=Z,48nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=N,18nm,1.0s
YAK pmax pmax
comp=Z,214nm,2.5s
YAK pmax pmax
comp=N,283nm,2.7s
YAK pmax pmax
comp=E,92nm,2.2s
YAK smax smax
comp=E,370nm,3.3s
YAK smax smax
comp=N,410nm,3.8s
YAK Yakutsk 69.05 353 P **P** **08 38 02.1 -0.6**
comp=N,46nm,0.7s,baz=54,slow=2.2,SNR=21
YAK LR LR 09 06 55.2
comp=N,2μm,20.8s,baz=160,slow=35
comp=N,46nm,0.7s
SEY Seymchan 69.48 4⇓ *e*P **P** **08 38 04.7 -0.7**
SEY pmax pmax
comp=Z,160nm,1.3s
SEY MLR MLR
comp=Z,2μm,19.0s
SEY Seymchan 69.48 4 LR LR 09 11 13.3
comp=Z,1μm,18.0s,baz=182,slow=38
LGTI Lohaghat 70.26 304 *e*P **P** **08 38 09.6 -1.2**
PTH Pithoragarh 70.32 304⇑ *e*P **P** **08 38 11.2 -0.3**
JHNI Jhansi 70.44 300⇑ *e*P **P** **08 38 10.6 -1.4**
AKL Akola 70.47 295 *e*P **P** **08 38 12.0 -0.3**
AKL IAmb IAmb 08 38 16.1
comp=Z,66nm,1.0s
WMQ Urumqi 70.78 321⇑ *i*P **P** **08 38 14.3 +0.5**
WMQ sP sP 08 38 25.0 +4.1
WMQ PcP **PcP** **08 38 39.3 +4.7**
WMQ S **S** **08 47 27.3 -1.0**
WMQ pmax pmax
comp=Z,160nm,1.9s
WMQ pmax pmax
comp=Z,2μm,3.8s
WMQ LR LR
comp=Z,1μm,18.5s
WMQ LR LR
comp=Z,820nm,18.5s
WMQ LR LR
comp=Z,930nm,24.1s
HMDM Hanimaadhoo 71.24 279 P P 08 38 22.0 +4.9
MNCI Minicoy 71.60 281 P **P** **08 38 17.9 -1.4**
NIKH Nikolski High 71.60 28 P **P** **08 38 19.7 +1.2**
baz=231
VNDA Vanda 71.75 176 P **P** **08 38 19.0 -0.1**
VNDA IAMs_20 IAMs_20 09 07 17.3
comp=Z,4μm,19.0s
VNDA Vanda 71.75 176 P **P** **08 38 19.4 +0.3**
comp=Z,13nm,0.9s,baz=322,slow=6.1,SNR=10
VNDA LR LR 09 07 38.9
comp=Z,3μm,19.2s,baz=350,slow=34
comp=Z,13nm,0.9s
KAD Karad 72.26 290 *e*P **P** **08 38 23.0 -0.2**
DDI Dehra Dun 72.34 304 *e*P **P** **08 38 23.4 -0.2**
SBA Scott Base 72.45 175 IAMs_20 IAMs_20 09 07 09.9
comp=Z,4μm,18.0s
POO Poona 72.84 292 *e*P **P** **08 38 26.0 -0.7**
POO IAmb IAmb 08 38 32.3
comp=Z,292nm,1.5s
KUDL Kundal 72.98 302⇑ *e*P **P** **08 38 25.8 -1.5**
UNV Unalaska Valle 73.25 28 P **P** **08 38 30.4 +2.1**
UNV Unalaska Valle 73.25 28 P **P** **08 38 29.7 +1.4**
baz=233
SMLA Simla 73.32 305 *e*P **P** **08 38 28.6 -0.6**
P08K Saint George I 73.62 25 P **P** **08 38 31.7 +1.3**
baz=229
SPIA Saint Paul Isl 73.72 24 P **P** **08 38 32.2 +1.2**
baz=229
DGZ Jazzator, Alta 73.91 326⇓ *e*P **P** **08 38 31.0 -1.5**
DGZ pmax pmax
comp=Z,57nm,0.9s
DGZ MLR MLR
comp=Z,2μm,19.0s
BHK Bhakra 74.02 305⇑ *e*P **P** **08 38 34.0 +0.6**
ZSN Zaisan 74.27 323 *e*P **P** **08 38 33.5 -1.0**
comp=Z,42nm,1.1s,baz=323
ZSN *e*S **S** **08 48 05.5 -2.5**
baz=323
ZSN Zaisan 74.27 323 *e*P **P** **08 38 33.5 -1.0**
ZSN *e*S **S** **08 48 05.5 -2.5**
ZSN pmax pmax
comp=Z,42nm,1.1s
DHRM DHARAMSHALA 74.38 306 *e*P **P** **08 38 35.0 -0.7**
DHRM *e*P **pP** **08 38 35.2 -5.7**
DHRM IAmb IAmb 08 38 39.5
comp=Z,138nm,1.2s
DHRM IAmb IAmb 08 38 42.2
comp=N,442nm,1.5s
THN Thein Dam 74.90 306 *e*P **P** **08 38 38.2 -0.3**
FALS False Pass 75.31 29 P **P** **08 38 41.5 +1.2**
baz=235
MK31 Makanchi Array 75.54 322 P **P** **08 38 41.3 -0.5**
MK31 IAmb IAmb 08 38 47.0
comp=Z,256nm,1.4s
MK31 Makanchi Array 75.54 322 *c i*P **P** **08 38 41.0 -0.9**
MK31 pmax pmax
comp=Z,289nm,1.3s
MKAR Makanchi Array 75.54 322 P **P** **08 38 41.4 -0.4**
comp=Z,168nm,1.1s,baz=107,slow=5.5,SNR=210
MKAR LR LR 09 11 19.5
comp=Z,863nm,21.2s,baz=122,slow=35
comp=Z,168nm,1.1s
JMU Jammu 75.64 306 *e*P **P** **08 38 44.1 +1.4**
MAKZ Makanchi 75.74 322 P **P** **08 38 42.7 -0.3**
MAKZ Makanchi 75.74 322 P **P** **08 38 42.7 -0.3**
MAKZ pmax pmax
comp=Z,347nm,1.3s
MAKZ MLR MLR
comp=Z,1μm,18.0s
SHLS Shalkode 75.85 317 *e*P **P** **08 38 41.5 -2.5**
comp=Z,84nm,1.4s,baz=318
SHLS Shalkode 75.85 317 *e*P **P** **08 38 41.4 -2.5**
SHLS pmax pmax
comp=Z,84nm,1.4s
PDGK Podgornoye 75.90 318 P **P** **08 38 43.1 -1.1**
BILL Bilibino 76.02 9 P **P** **08 38 44.3 +0.2**
BILL IAmb IAmb 08 38 50.1
comp=Z,343nm,1.8s
BILL Bilibino 76.02 9 *e*P **P** **08 38 43.8 -0.3**
BILL pmax pmax
comp=Z,111nm,1.3s
UZB Uzynbulak 76.15 317 *e*P **P** **08 38 45.0 -0.7**
comp=Z,74nm,1.1s,baz=317
UZB Uzynbulak 76.15 317 *e*P **P** **08 38 44.9 -0.7**
UZB pmax pmax
comp=Z,74nm,1.1s
PRZ Przheval'sk 76.32 316 P **P** **08 38 47.4 +0.8**
PRZ Przheval'sk 76.32 316 P **P** **08 38 47.4 +0.8**
PRZ pmax pmax
comp=Z,778nm,1.6s
TARG Taragay, Kyrgy 76.45 315 P **P** **08 38 47.2 -0.5**
TARG IAmb IAmb 08 38 53.2
comp=Z,406nm,2.0s
TARG Taragay, Kyrgy 76.45 315 P **P** **08 38 47.2 -0.5**
KPKS Kokpek 76.50 317 *e*P **P** **08 38 46.8 -0.8**
comp=Z,62nm,1.3s,baz=317
KPKS Kokpek 76.50 317 *e*P **P** **08 38 46.7 -0.8**
KPKS pmax pmax
comp=Z,62nm,1.3s
SATY Saty 76.53 317 *e*P **P** **08 38 47.1 -0.6**
comp=Z,67nm,1.4s,baz=317
SATY *e*S **S** **08 48 31.5 -2.0**
baz=317
SATY Saty 76.53 317 *e*P **P** **08 38 47.1 -0.6**
SATY *e*S **S** **08 48 31.5 -2.0**
SATY pmax pmax
comp=Z,67nm,1.4s
ZHN Zhinishke 76.55 317 *e*P **P** **08 38 46.7 -1.2**
comp=Z,22nm,0.7s,baz=317
ZHN Zhinishke 76.55 317 *e*P **P** **08 38 46.7 -1.2**
ZHN pmax pmax
comp=Z,22nm,0.7s
KSH Kashi 76.98 313 P **P** **08 38 51.8 +1.4**
KSH S **S** **08 48 44.8 +6.3**
KSH pmax pmax
comp=Z,170nm,1.3s
KSH LR LR
comp=Z,900nm,18.2s
KSH LR LR
comp=Z,1μm,21.6s
KSH LR LR
comp=Z,2μm,20.6s
SDPT Sand Point 76.99 29 P **P** **08 38 50.2 +0.4**
SDPT IAmb IAmb 08 38 53.0
comp=Z,169nm,0.9s
SDPT Sand Point 76.99 29 P **P** **08 38 51.4 +1.6**
SDPT Sand Point 76.99 29 P **P** **08 38 50.9 +1.1**
baz=238
CNBA Chernabura Isl 77.14 30 P **P** **08 38 50.9 +0.1**
CNBA IAmb IAmb 08 38 53.4
comp=Z,451nm,2.0s
CHNA Chernabura Isl 77.15 30 P **P** **08 38 51.8 +1.0**
baz=239
NIL Nilore 77.24 306 P **P** **08 38 50.9 -0.9**
NIL Nilore 77.24 306 P **P** **08 38 50.9 -0.9**
NIL pmax pmax
comp=Z,349nm,1.3s
NIL Nilore 77.24 306 P **P** **08 38 52.7 +0.8**
TDK Taldyqorghan 77.27 319 *e*P **P** **08 38 51.1 -0.6**
baz=319
TDK LR LR 09 13 20.8
comp=Z,644nm,16.9s,baz=319
TDK Taldyqorghan 77.27 319 *e*P **P** **08 38 51.1 -0.6**
TDK MLR MLR
comp=Z,644nm,17.0s
M11K Mekoryuk 77.39 23 P **P** **08 38 53.3 +1.3**
baz=232
ZAA0 Zalesovo Array 77.46 329 P **P** **08 38 51.2 -1.3**
ZAA0 IAmb IAmb 08 38 56.4
comp=Z,211nm,1.7s
ZALV Zalesovo Beam 77.46 329 P **P** **08 38 50.6 -1.9**
ZALV Zalesovo Beam 77.46 329 P **P** **08 38 50.9 -1.6**
comp=Z,25nm,0.8s,baz=111,slow=5.4,SNR=60
ZALV LR LR 09 13 30.8
comp=Z,1μm,20.5s,baz=122,slow=36
comp=Z,25nm,0.8s
MDOK Medeo 77.49 317 *e*P **P** **08 38 52.6 -0.7**
baz=317
MDOK *e*S **S** **08 48 42.0 -2.1**
baz=317
MDOK Medeo 77.49 317 *e*P **P** **08 38 52.5 -0.7**
MDOK *e*S **S** **08 48 41.9 -2.1**
AAA Alma-Ata 77.60 317 *e*P **P** **08 38 53.2 -0.5**
baz=317
AAA Alma-Ata 77.60 317 *e*P **P** **08 38 53.2 -0.5**
GAMB Gambell 77.68 19 P **P** **08 38 54.7 +1.1**
baz=226
BHUJ Bhuj 77.71 295 *e*P **P** **08 38 56.0 +1.4**
ULHL Ulahol 77.72 316 P **P** **08 38 54.1 -0.4**
SNR=34
S14K Fog Glacier 77.92 29 P **P** **08 38 56.2 +1.0**
baz=239
KUU Kurty 78.23 317⇑ *i*P **P** **08 38 56.3 -0.9**
baz=317
KUU Kurty 78.23 317 *c i*P **P** **08 38 56.3 -0.9**
SEM Semipalatinsk 78.32 324 LR LR 09 14 37.4
comp=Z,457nm,16.8s,baz=324
TKM2 Tokmak 2 78.40 316 P **P** **08 38 58.7 +0.3**
SNR=40
TKM2 Tokmak 2 78.40 316 *i*P **P** **08 38 56.9 -1.4**
TKM2 pmax pmax
comp=Z,53nm,1.0s
ROCAM Rodrigues Isla 78.47 251 IAMs_20 IAMs_20 09 10 18.6
comp=Z,6μm,22.0s
CHGN Chignik 78.48 29 P **P** **08 38 58.4 +0.3**
CHGN IAmb IAmb 08 39 11.9
comp=Z,372nm,1.5s
CHGN Chignik 78.48 29 P **P** **08 38 58.7 +0.6**
baz=240,SNR=8.3
TIXI Tiksi 78.48 355 P **P** **08 38 56.9 -1.0**
TIXI Tiksi 78.48 355⇓ *e*P **P** **08 38 55.9 -2.0**
TIXI pmax pmax
comp=Z,49nm,1.3s
TIXI Tiksi 78.48 355 LR LR 09 15 53.4
comp=Z,1μm,18.3s,baz=170,slow=38
M13K Dall Lake 78.54 24 P **P** **08 38 59.6 +1.2**
baz=234
O14K Tigyukauivet M 78.75 26 P **P** **08 39 00.6 +1.0**
O14K IAmb IAmb 08 39 04.0
comp=Z,126nm,0.9s
O14K IAMs_20 IAMs_20 09 09 41.1
comp=Z,4μm,21.0s
O14K Tigyukauivet M 78.75 26 P **P** **08 39 00.8 +1.2**
baz=236
KBK Karagaybulak 78.76 316 P **P** **08 39 00.7 +0.4**
SNR=21
UCH Uchtor 78.92 315 P **P** **08 39 02.4 +0.9**
SNR=69
N14K Kuskokwak Cree 78.95 25 P **P** **08 39 01.6 +1.0**
baz=236
CHMS Chumysh 79.01 316 P **P** **08 39 01.1 -0.4**
SNR=38
AAK Ala-Archa 79.07 315 P **P** **08 39 01.6 -0.4**
SNR=66
AAK Ala-Archa 79.07 315 P **P** **08 39 01.6 -0.4**
AAK IAmb IAmb 08 39 07.2
comp=Z,263nm,1.4s
AAK Ala-Archa 79.07 315 *i* P **P** **08 39 01.5 -0.4**
SNR=33
AAK Ala-Archa 79.07 315 *de*P **P** **08 39 01.9 -0.1**
AAK pmax pmax
comp=Z,129nm,1.3s
AAK Ala-Archa 79.07 315 P **P** **08 39 03.7 +1.7**
AAK P **P** **08 39 03.7 +1.7**
AAK S **S** **08 49 06.0 +5.0**
AAK S **S** **08 49 06.0 +5.0**
USP Ospenovka 79.28 316 P **P** **08 39 02.3 -0.6**
SNR=97
M14K Bethel 79.30 24 P **P** **08 39 03.0 +0.5**
M14K IAmb IAmb 08 39 08.3
comp=Z,242nm,1.2s
M14K Bethel 79.30 24 P **P** **08 39 03.5 +1.0**
baz=236
O15K Ungalikthiuk R 79.33 26 P **P** **08 39 03.7 +0.9**
baz=238
L14K Kuka Creek 79.35 23 P **P** **08 39 02.7 -0.1**
L14K IAmb IAmb 08 39 08.5
comp=Z,168nm,1.1s
L14K IAMs_20 IAMs_20 09 10 25.7
comp=Z,4μm,20.0s
L14K Kuka Creek 79.35 23 P **P** **08 39 03.7 +0.9**
baz=235
KURK Kurchatov 79.39 324 P **P** **08 39 02.1 -1.2**
KURK IAmb IAmb 08 39 08.0
comp=Z,352nm,1.4s
KURK Kurchatov 79.39 324 *de*P **P** **08 39 02.5 -0.8**
KURK pmax pmax
comp=Z,193nm,1.3s
KURK Kurchatov 79.39 324 P **P** **08 39 04.2 +0.9**
KURK P **P** **08 39 04.2 +0.9**
KURK S **S** **08 49 01.4 -2.3**
KURK S **S** **08 49 01.4 -2.3**
KURBB Kurchatov Arra 79.41 324 P **P** **08 39 02.1 -1.3**
KURBB Kurchatov Arra 79.41 324 P **P** **08 39 02.7 -0.7**
comp=Z,101nm,1.1s,baz=114,slow=4.2,SNR=144
comp=Z,101nm,1.1s
EKS2 Erkin-Say 79.58 315 P **P** **08 39 05.4 +0.7**
SNR=63
N15K Kwethluk River 79.75 25 IAMs_20 IAMs_20 09 10 34.4
comp=Z,5μm,20.0s
N15K Kwethluk River 79.75 25 P **P** **08 39 06.0 +1.0**
baz=237
M15K Kasigluk River 79.79 24 P **P** **08 39 06.5 +1.3**
baz=237
J14K Nanvaranak Lak 79.84 22 IAMs_20 IAMs_20 09 10 20.6
comp=Z,4μm,21.0s
J14K Nanvaranak Lak 79.84 22 P **P** **08 39 07.1 +1.7**
baz=234
L15K Ungalak Mounta 80.01 23 P **P** **08 39 06.9 +0.5**
baz=236
P16K Nushagak River 80.06 27 P **P** **08 39 06.9 +0.2**
baz=240
TNA Tin City 80.09 19 P **P** **08 39 07.4 +0.7**
baz=229,SNR=15
BTLS Baital 80.17 318⇑ *i*P **P** **08 39 06.9 -0.9**
comp=Z,55nm,1.2s,baz=318
BTLS Baital 80.17 318 *c i*P **P** **08 39 06.8 -0.9**
BTLS pmax pmax
comp=Z,55nm,1.2s
ANM Nome 80.29 20 IAmb IAmb 08 39 14.6
comp=Z,305nm,1.6s
ANM IAMs_20 IAMs_20 09 09 20.5
comp=Z,5μm,22.0s
ANM Nome 80.29 20 P **P** **08 39 08.7 +0.8**
baz=232,SNR=40
O16K Kokwok River B 80.31 26 IAMs_20 IAMs_20 09 09 47.2
comp=Z,5μm,22.0s
O16K Kokwok River B 80.31 26 P **P** **08 39 08.6 +0.6**
baz=239
K15K Wolf Creek Mou 80.34 23 P **P** **08 39 09.0 +0.8**
baz=236
N16K Nishlik Lake 80.47 25 P **P** **08 39 10.1 +1.1**
baz=239
MAW Mawson 80.49 203 LR LR 09 13 32.3
comp=Z,2μm,20.3s,baz=72,slow=35
Q16K King Salmon 80.49 27 P **P** **08 39 10.2 +1.2**
baz=241
F14K Arctic Creek 80.55 19 P **P** **08 39 10.2 +1.0**
baz=231
Q17K Contact Creek 80.64 28 P **P** **08 39 10.5 +0.4**
baz=242,SNR=18
M16K Timber Creek 80.68 25 IAmb IAmb 08 39 15.8
comp=Z,308nm,1.4s
M16K IAMs_20 IAMs_20 09 12 33.0
comp=Z,4μm,20.0s
M16K Timber Creek 80.68 25 P **P** **08 39 10.8 +0.7**
baz=238
L16K Owhat River 80.83 24 P **P** **08 39 11.3 +0.5**
L16K IAmb IAmb 08 39 16.3
comp=Z,236nm,1.4s
L16K IAMs_20 IAMs_20 09 14 07.0
comp=Z,4μm,20.0s
L16K Owhat River 80.83 24 P **P** **08 39 11.6 +0.8**
baz=238,SNR=27
O17K Koliganek Bris 80.83 26 P **P** **08 39 11.6 +0.7**
baz=240
P17K Kvichak River 80.84 27 P **P** **08 39 11.3 +0.4**
baz=241
KBL Kabul 80.84 306 P **P** **08 39 10.4 -1.4**
KBL Kabul 80.84 306 P **P** **08 39 10.4 -1.4**
KBL pmax pmax
comp=Z,86nm,1.3s
KBL Kabul 80.84 306 P **P** **08 39 11.9 +0.1**
SNR=46
P **P** **08 39 11.9 +0.1**
SNR=46
KBL S **S** **08 49 16.1 -4.1**
KBL S **S** **08 49 16.1 -4.1**
BTK Batken 80.92 312 P **P** **08 39 11.5 -0.4**
BTK IAmb IAmb 08 39 16.8
comp=Z,332nm,1.9s
BTK Batken 80.92 312 P **P** **08 39 11.5 -0.4**
BTK pmax pmax
comp=Z,332nm,1.9s
G15K Niukluk 81.01 20 P **P** **08 39 12.8 +1.1**
baz=233,SNR=37
N17K Nushagak Hills 81.17 26 IAMs_20 IAMs_20 09 11 50.0
comp=Z,4μm,20.0s
N17K Nushagak Hills 81.17 26 P **P** **08 39 13.9 +1.2**
baz=240,SNR=21
F15K North Star Dit 81.24 19 IAMs_20 IAMs_20 09 11 52.1
comp=Z,4μm,20.0s
F15K North Star Dit 81.24 19 P **P** **08 39 14.6 +1.7**
baz=232
J16K Anvik River 81.25 22 IAMs_20 IAMs_20 09 11 02.9
comp=Z,4μm,20.0s
J16K Anvik River 81.25 22 P **P** **08 39 14.2 +1.2**
baz=237
DZA Taraz 81.36 315 *e*P **P** **08 39 13.5 -0.7**
baz=315
DZA Taraz 81.36 315 *e*P **P** **08 39 13.4 -0.7**
OHAK Old Harbor 81.40 29 IAmb IAmb 08 39 19.1
comp=Z,134nm,1.2s
OHAK Old Harbor 81.40 29 P **P** **08 39 14.9 +1.0**
OHAK Old Harbor 81.40 29 P **P** **08 39 15.2 +1.2**
baz=244,SNR=9.1
H16K Elim 81.42 21 P **P** **08 39 14.4 +0.5**
baz=235,SNR=42
M17K Holitna River 81.50 25 IAMs_20 IAMs_20 09 11 39.8
comp=Z,4μm,21.0s
M17K Holitna River 81.50 25 P **P** **08 39 15.0 +0.6**
baz=240

L17K Donlin 81.53 24 P P 08 39 15.7 +1.2
baz=239,SNR=16
I17K Unalakleet 81.55 22 IAmb IAmb 08 39 20.7
comp=Z,302nm,1.4s
I17K IAMs_20 IAMs_20 09 13 17.8
comp=Z,4µm,20.0s
I17K Unalakleet 81.55 22 P P 08 39 16.0 +1.4
baz=236,SNR=47
N18K Kilae Creek 81.80 26 P P 08 39 16.3 +0.2
N18K IAmb IAmb 08 39 22.0
comp=Z,184nm,1.4s
N18K IAMs_20 IAMs_20 09 11 47.8
comp=Z,4µm,20.0s
N18K Kilae Creek 81.80 26 P P 08 39 17.1 +1.0
baz=241,SNR=16
K17K Iditarod 81.83 23 P P 08 39 17.2 +1.1
baz=239,SNR=36
SIMJ Simiganj 81.90 310 P P 08 39 16.3 -0.9
SIMJ IAmb IAmb 08 39 21.9
comp=Z,242nm,1.2s
KDAK Kodiak Island 81.99 29 P P 08 39 17.6 +0.6
KDAK IAmb IAmb 08 39 22.3
comp=Z,195nm,1.2s
KDAK Kodiak Island 81.99 29 P P 08 39 17.6 +0.6
baz=244
KDAK Kodiak Island 81.99 29 P P 08 39 17.6 +0.6
KDAK pmax pmax
comp=Z,195nm,1.2s
KDAK Kodiak Island 81.99 29 LR LR 09 11 31.7
comp=Z,2µm,20.3s,baz=261,slow=33
Q19K Cape Douglas, 81.99 28 P P 08 39 17.3 +0.2
Q19K IAmb IAmb 08 39 28.2
comp=Z,286nm,1.6s
Q19K IAMs_20 IAMs_20 09 13 10.9
comp=Z,3µm,21.0s
Q19K Cape Douglas, 81.99 28 P P 08 39 17.6 +0.5
baz=243
KK31 Karatay Array 82.00 315 P P 08 39 17.4 -0.1
KK31 IAmb IAmb 08 39 23.2
comp=Z,380nm,1.7s
KK31 Karatay Array 82.00 315 *i* P P 08 39 16.7 -0.8
KKAR Karatay Array 82.00 315 P P 08 39 16.2 -1.3
KKAR Karatay Array 82.00 315 P P 08 39 16.2 -1.3
IUG luznay 82.07 314 *e*P P 08 39 17.0 -1.0
comp=Z,82nm,1.4s,baz=314
IUG luznay 82.07 314 *e*P P 08 39 17.0 -1.0
IUG pmax pmax
comp=Z,82nm,1.4s
SVW2 Sparrevohn 82.14 25 P P 08 39 18.5 +0.7
SVW2 IAmb IAmb 08 39 23.6
comp=Z,149nm,1.2s
SVW2 IAMs_20 IAMs_20 09 12 39.3
comp=Z,5µm,20.0s
SVW2 Sparrevohn 82.14 25 P P 08 39 19.0 +1.2
M18K Stony River 82.22 25 P P 08 39 18.7 +0.5
baz=241,SNR=28
L18K Granite Mounta 82.22 24 IAMs_20 IAMs_20 09 14 12.4
comp=Z,4µm,20.0s
L18K Granite Mounta 82.22 24 P P 08 39 18.8 +0.6
baz=240
O19K Port Alsworth 82.26 27 IAMs_20 IAMs_20 09 10 55.5
comp=Z,4µm,21.0s
O19K Port Alsworth 82.26 27 P P 08 39 19.1 +0.7
baz=243
OTUK Ortayu 82.32 320 P P 08 39 18.3 -0.8
H17K Granite Mounta 82.41 21 P P 08 39 19.4 +0.3
baz=237,SNR=42
Q20K Shuyak Island 82.44 28 P P 08 39 19.7 +0.3
baz=245
SYI Shuyak Island 82.44 28 IAmb IAmb 08 39 24.3
comp=Z,125nm,1.1s
BRLS Boroldav 82.45 315 *e*P P 08 39 18.9 -1.0
baz=315
BRLS Boroldav 82.45 315 *e*P P 08 39 18.9 -1.0
G17K Kiwalik Mounta 82.47 20 P P 08 39 20.0 +0.6
baz=236,SNR=51
N19K Bonanza Creek 82.47 26 IAMs_20 IAMs_20 09 11 58.3
comp=Z,5µm,21.0s
N19K Bonanza Creek 82.47 26 P P 08 39 19.9 +0.2
baz=242
P19K Oil Pt 82.50 27 IAMs_20 IAMs_20 09 09 10.4
comp=Z,3µm,22.0s
P19K Oil Pt 82.50 27 P P 08 39 19.6 -0.2
baz=244,SNR=12
C16K Lisburne Hills 82.61 17 P P 08 39 20.7 +0.6
baz=232
BRZS Berezniki 82.67 322 *e*P P 08 39 20.0 -0.9
comp=Z,43nm,1.3s,baz=322
BRZS Berezniki 82.67 322 *e*P P 08 39 19.9 -0.9
BRZS pmax pmax
comp=Z,43nm,1.3s
ILSW Iliamna Southw 82.69 27 IAMs_20 IAMs_20 09 10 13.4
comp=Z,4µm,22.0s
F17K Baldwin Pennin 82.79 19 IAMs_20 IAMs_20 09 11 08.2
comp=Z,3µm,20.0s
F17K Baldwin Pennin 82.79 19 P P 08 39 21.8 +0.7
baz=236
J18K Innoko River 82.83 23 P P 08 39 21.9 +0.5
baz=240,SNR=34
TTA Tatalina 82.85 24 IAmb IAmb 08 39 27.0
comp=Z,157nm,1.4s
TTA IAMs_20 IAMs_20 09 12 13.3
comp=Z,5µm,20.0s
TTA Tatalina 82.85 24 P P 08 39 22.5 +0.9
TTA Tatalina 82.85 24 P P 08 39 22.1 +0.5
baz=241,SNR=34
D17K Noatak River 82.94 18 P P 08 39 22.4 +0.6
baz=234,SNR=43
L19K White Mountain 82.96 25 IAMs_20 IAMs_20 09 14 54.8
comp=Z,4µm,20.0s
L19K White Mountain 82.96 25 P P 08 39 22.6 +0.5
baz=242
O20K Slope Mountain 82.97 27 P P 08 39 22.5 +0.3
baz=244
E17K Hotham Inlet 82.97 19 P P 08 39 22.5 +0.5
baz=235,SNR=62
M19K Big River Lodg 83.02 25 IAMs_20 IAMs_20 09 12 26.9
comp=Z,4µm,21.0s
M19K Big River Lodg 83.02 25 P P 08 39 23.0 +0.6
baz=242
H18K Honhosa River 83.08 21 IAmb IAmb 08 39 28.6
comp=Z,199nm,1.5s
H18K IAMs_20 IAMs_20 09 13 32.9
comp=Z,5µm,20.0s
H18K Honhosa River 83.08 21 P P 08 39 23.1 +0.5
baz=238,SNR=28
HOM Homer 83.23 28 P P 08 39 23.4 -0.1
HOM Homer 83.23 28 P P 08 39 23.9 +0.4
baz=245
CNPM China Poot 83.37 28 P P 08 39 24.3 +0.1
CNPM IAMs_20 IAMs_20 09 14 04.2
comp=Z,4µm,21.0s
C17K DeLong Mountai 83.37 17 P P 08 39 24.2 +0.1
baz=234,SNR=95
G18K Tagagawik 83.38 21 P P 08 39 24.0 -0.1
G18K IAmb IAmb 08 39 29.3
comp=Z,165nm,1.2s
G18K IAMs_20 IAMs_20 09 10 30.7
comp=Z,5µm,22.0s
G18K Tagagawik 83.38 21 P P 08 39 24.5 +0.4
baz=238,SNR=61
F18K Selawik 83.41 20 P P 08 39 24.7 +0.4
baz=237,SNR=14
GCSA Galena City Sc 83.42 22 P P 08 39 24.9 +0.6
baz=240,SNR=59
L20K Farewell, AK 83.50 25 P P 08 39 25.7 +0.8
baz=243
J19K Poorman 83.52 23 IAMs_20 IAMs_20 09 12 23.5
comp=Z,5µm,21.0s
J19K Poorman 83.52 23 P P 08 39 25.4 +0.5
baz=241
M20K Styx River 83.54 25 P P 08 39 25.6 +0.4
M20K IAMs_20 IAMs_20 09 12 43.7
comp=Z,5µm,21.0s
M20K Styx River 83.54 25 P P 08 39 25.8 +0.6
baz=244
E18K Tukpahlearik C 83.56 19 P P 08 39 25.5 +0.5
E18K IAMs_20 IAMs_20 09 11 08.7
comp=Z,3µm,22.0s
E18K Tukpahlearik C 83.56 19 P P 08 39 25.9 +0.8
baz=236
QSPA South Pole Qui 83.57 180 P P 08 39 25.4 0.0
QSPA South Pole Qui 83.57 180 P P 08 39 24.3 -1.0
comp=Z,73nm,1.1s,baz=337,slow=3.0,SNR=58
QSPA LR LR 09 16 04.3
comp=Z,8µm,19.8s,baz=14,slow=35
comp=Z,73nm,1.1s

BRLK Bradley Lake 83.63 28 P P 08 39 25.2 -0.4
BRLK IAmb IAmb 08 39 34.1
comp=Z,127nm,1.4s
N20K Mount Spurr 83.64 26 P P 08 39 25.6 -0.1
baz=244,SNR=14
BRSE Bradley Lake S 83.68 28 P P 08 39 25.9 +0.1
baz=246
K20K Telida 83.83 24 P P 08 39 26.9 +0.4
K20K IAmb IAmb 08 39 32.2
comp=Z,152nm,1.2s
K20K IAMs_20 IAMs_20 09 13 14.1
comp=Z,4µm,20.0s
K20K Telida 83.83 24 P P 08 39 27.2 +0.7
baz=243
CAPN Captain Cook N 83.92 27 IAMs_20 IAMs_20 09 10 28.9
comp=Z,5µm,21.0s
CAPN Captain Cook N 83.92 27 P P 08 39 27.8 +0.8
baz=245
H19K Roundabout Mou 83.97 21 IAMs_20 IAMs_20 09 14 41.7
comp=Z,5µm,20.0s
H19K Roundabout Mou 83.97 21 P P 08 39 27.0 -0.1
baz=240
G19K Purcell Mounta 84.05 21 P P 08 39 27.2 -0.4
baz=240,SNR=86
C18K Utukok River 84.07 18 IAmb IAmb 08 39 33.0
comp=Z,157nm,1.3s
C18K IAMs_20 IAMs_20 09 12 00.1
comp=Z,3µm,21.0s
C18K Utukok River 84.07 18 P P 08 39 27.4 -0.3
baz=235
F19K Shaleruckik Mo 84.17 20 IAMs_20 IAMs_20 09 11 50.7
comp=Z,4µm,21.0s
F19K Shaleruckik Mo 84.17 20 P P 08 39 28.2 0.0
baz=239
J20K Nowinta River 84.18 23 P P 08 39 28.0 -0.2
baz=242,SNR=107
SKT Skwentna 84.27 26 IAmb IAmb 08 39 32.2
comp=Z,82nm,1.2s
SKT IAMs_20 IAMs_20 09 13 05.9
comp=Z,5µm,21.0s
SKT Skwentna 84.27 26 P P 08 39 27.5 -1.3
baz=245,SNR=23
B18K Kokolik River 84.30 17 P P 08 39 28.9 +0.2
baz=235
I20K Naaghedeneel 84.34 22 IAMs_20 IAMs_20 09 11 56.4
comp=Z,4µm,22.0s
I20K Naaghedeneel 84.34 22 P P 08 39 29.7 +0.6
baz=242,SNR=18
PPLA Purkeypile 84.38 25 P P 08 39 29.2 -0.3
baz=244,SNR=24
SUA Susitna One 84.39 26 IAmb IAmb 08 39 33.4
comp=Z,182nm,1.4s
SUA IAMs_20 IAMs_20 09 11 10.2
comp=Z,4µm,22.0s
SUA Susitna One 84.39 26 P P 08 39 28.6 -0.9
baz=246,SNR=33
SEW Seward 84.42 28 P P 08 39 29.2 -0.4
baz=247,SNR=30
O22K Cooper Landing 84.45 27 IAMs_20 IAMs_20 09 12 36.8
comp=Z,4µm,21.0s
O22K Cooper Landing 84.45 27 P P 08 39 29.4 -0.2
baz=247,SNR=15
FIS Fire Island 84.49 27 IAMs_20 IAMs_20 09 11 25.5
comp=Z,3µm,21.0s
H20K Anotleneega Mo 84.52 22 P P 08 39 29.7 -0.3
baz=242
NRIK Noril'sk 84.57 343 P P 08 39 29.2 -1.0
NRIK Noril'sk 84.57 343 *de*P P 08 39 29.3 -0.8
NRIK pmax pmax
comp=Z,426nm,1.5s
NRIK Noril'sk 84.57 343 P P 08 39 29.5 -0.7
comp=Z,205nm,1.1s,baz=120,slow=4.8,SNR=125
NRIK LR LR 09 15 31.7
comp=Z,2µm,21.5s,baz=122,slow=34
comp=Z,205nm,1.1s
CAST Castle Rocks 84.66 24 P P 08 39 30.2 -0.6
CAST IAmb IAmb 08 39 35.3
comp=Z,160nm,1.2s
CAST IAMs_20 IAMs_20 09 15 39.1
comp=Z,3µm,20.0s
CAST Castle Rocks 84.66 24 P P 08 39 30.0 -0.7
baz=244,SNR=66
E19K Redstone River 84.67 19 P P 08 39 31.3 +0.6
E19K IAmb IAmb 08 39 36.3
comp=Z,227nm,1.4s
E19K IAMs_20 IAMs_20 09 11 56.3
comp=Z,4µm,22.0s
E19K Redstone River 84.67 19 P P 08 39 30.6 -0.2
baz=239
RC01 Rabbit Creek A 84.69 27 P P 08 39 29.9 -1.0
RC01 Rabbit Creek A 84.69 27 P P 08 39 30.5 -0.4
baz=247,SNR=68
CHUM Lake Minchumin 84.77 24 P P 08 39 30.9 -0.4
baz=244,SNR=102
M22K Willow 84.78 26 P P 08 39 30.4 -0.9
M22K IAMs_20 IAMs_20 09 11 11.6
comp=Z,4µm,22.0s
M22K Willow 84.78 26 P P 08 39 30.5 -0.9
baz=246,SNR=43
C19K Lookout Ridge 84.81 18 P P 08 39 32.3 +0.8
C19K IAMs_20 IAMs_20 09 12 45.6
comp=Z,3µm,21.0s
C19K Lookout Ridge 84.81 18 P P 08 39 31.9 +0.5
baz=237
D19K Kuna River 84.93 18 IAMs_20 IAMs_20 09 12 58.9
comp=Z,4µm,21.0s
D19K Kuna River 84.93 18 P P 08 39 32.5 +0.5
baz=238
F20K Avaraart Lake 84.98 20 P P 08 39 32.7 +0.5
F20K IAmb IAmb 08 39 38.0
comp=Z,174nm,1.4s
F20K Avaraart Lake 84.98 20 P P 08 39 32.5 +0.3
baz=241
BVA0 Borovoye Array 84.98 325 P P 08 39 32.1 -0.5
BVAR Borovoye Array 84.98 325 P P 08 39 32.0 -0.6
BVAR Borovoye Array 84.98 325 P P 08 39 32.0 -0.6
comp=Z,211nm,1.0s,baz=108,slow=4.8,SNR=200
BVAR LR LR 09 18 54.1
comp=Z,906nm,20.1s,baz=98,slow=37
comp=Z,211nm,1.0s
CUT Chulitna 84.98 25 P P 08 39 32.1 -0.2
CUT Chulitna 84.98 25 P P 08 39 31.8 -0.6
baz=246,SNR=15
BRVK Borovoye 85.05 325 P P 08 39 32.6 -0.3
BRVK Borovoye 85.05 325 *de*P P 08 39 32.4 -0.5
BRVK pmax pmax
comp=Z,390nm,1.3s
BRVK Borovoye 85.05 325 P P 08 39 32.7 -0.3
BRVK S S 08 50 02.4 +0.6
PMR Palmer 85.15 26 P P 08 39 32.5 -0.6
PMR IAMs_20 IAMs_20 09 10 34.4
comp=Z,3µm,22.0s
PMR Palmer 85.15 26 P P 08 39 32.6 -0.6
PMR Palmer 85.15 26 P P 08 39 32.6 -0.6
baz=247,SNR=60
PMR Palmer 85.15 26 P P 08 39 32.6 -0.6
PMR pmax pmax
comp=Z,228nm,1.2s
IMAR Indian Mountai 85.17 21 P P 08 39 33.3 +0.1
KTH Kantishna Hill 85.18 24 P P 08 39 33.4 -0.1
KTH IAMs_20 IAMs_20 09 12 10.0
comp=Z,4µm,22.0s
GHO Glory Hole Cre 85.31 26 IAMs_20 IAMs_20 09 12 22.6
comp=Z,4µm,21.0s
P23K Montague Islan 85.34 28 P P 08 39 33.6 -0.6
baz=248,SNR=6.4
H21K Melozitna Rive 85.36 22 IAMs_20 IAMs_20 09 13 53.6
comp=Z,4µm,20.0s
H21K Melozitna Rive 85.36 22 P P 08 39 33.9 -0.3
baz=244
KNK Knik Glacier 85.38 27 P P 08 39 34.0 -0.4
KNK IAMs_20 IAMs_20 09 14 02.4
comp=Z,3µm,20.0s
KNK Knik Glacier 85.38 27 P P 08 39 33.8 -0.6
baz=248,SNR=40
BPAW Bear Paw Mtn. 85.39 24 P P 08 39 33.8 -0.6
BPAW IAmb IAmb 08 39 38.8
comp=Z,162nm,1.2s
BPAW IAMs_20 IAMs_20 09 15 40.4
comp=Z,4µm,20.0s
BPAW Bear Paw Mtn. 85.39 24 P P 08 39 34.0 -0.4
baz=245,SNR=52
TRF Thorofare Moun 85.40 24 P P 08 39 34.5 -0.2
TRF IAmb IAmb 08 39 38.5
comp=Z,109nm,1.3s
TRF IAMs_20 IAMs_20 09 11 53.8
comp=Z,4µm,22.0s

TRF Thorofare Moun 85.40 24 P P 08 39 34.2 -0.5
baz=246,SNR=24
E20K Nigu River 85.42 19 P P 08 39 34.3 -0.3
baz=240
I21K Tanana 85.46 22 P P 08 39 34.7 0.0
baz=244,SNR=54
D20K Etivluk River 85.52 18 P P 08 39 35.3 +0.4
baz=240,SNR=51
SML Sawmill 85.59 26 P P 08 39 35.7 +0.2
SML IAMs_20 IAMs_20 09 11 59.8
comp=Z,3µm,22.0s
SML Sawmill 85.59 26 P P 08 39 35.5 0.0
baz=248,SNR=64
Q23K Middleton Isla 85.64 29 P P 08 39 35.6 -0.1
baz=250
NGCH Negor - Chabah 85.73 296 P P 08 39 41.8 +4.8
GLI Glacier Island 85.80 27 P P 08 39 36.6 +0.1
GLI Glacier Island 85.80 27 P P 08 39 36.3 -0.2
baz=249
F21K Alatna River 85.83 20 P P 08 39 37.5 +1.0
F21K IAMs_20 IAMs_20 09 12 19.6
comp=Z,5µm,22.0s
F21K Alatna River 85.83 20 P P 08 39 36.9 +0.3
baz=243
M23K Glacier View 85.85 26 P P 08 39 37.1 +0.3
baz=248,SNR=20
MLY Manley 85.87 23 P P 08 39 36.2 -0.6
MLY IAmb IAmb 08 39 41.8
comp=Z,230nm,1.2s
MLY IAMs_20 IAMs_20 09 14 08.1
comp=Z,4µm,21.0s
MLY Manley 85.87 23 P P 08 39 36.3 -0.6
baz=246,SNR=108
WAT1 Susitna Watana 85.88 25 P P 08 39 37.5 +0.6
baz=248
RND Reindeer 85.98 25 P P 08 39 36.5 -0.9
RND IAMs_20 IAMs_20 09 12 11.9
comp=Z,5µm,22.0s
RND Reindeer 85.98 25 P P 08 39 36.5 -0.9
RND pmax pmax
comp=Z,241nm,1.1s
H22K Ishtalitna Cre 86.00 22 P P 08 39 38.1 +0.8
baz=245
BWN Browne 86.03 24 IAMs_20 IAMs_20 09 14 04.1
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 86.04 26 P P 08 39 37.5 -0.2
SCM IAMs_20 IAMs_20 09 13 19.8
comp=Z,4µm,22.0s
SCM Sheep Creek Mo 86.04 26 P P 08 39 37.5 -0.2
baz=249,SNR=30
SCM Sheep Creek Mo 86.04 26 P P 08 39 37.5 -0.2
SCM pmax pmax
comp=Z,312nm,1.3s
MCK McKinley 86.07 24 P P 08 39 37.0 -0.8
baz=247,SNR=68
WAT6 Susitna Watana 86.13 26 P P 08 39 37.5 -0.8
baz=248,SNR=34
E21K Killik River 86.23 19 P P 08 39 38.7 +0.2
baz=242
EYAK Cordova Ski Ar 86.30 28 P P 08 39 41.7 +2.8
EYAK Cordova Ski Ar 86.30 28 P P 08 39 39.0 0.0
baz=250
C21K Knifeblade Rid 86.31 18 P P 08 39 38.8 -0.1
baz=242
NEA2 Nenana 86.35 24 IAMs_20 IAMs_20 09 14 20.8
comp=Z,4µm,21.0s
NEA2 Nenana 86.35 24 P P 08 39 39.0 -0.2
baz=247,SNR=65
G22K Bettles 86.39 21 P P 08 39 39.2 -0.1
baz=245
I23K Minto, Yukon-K 86.46 23 P P 08 39 40.0 +0.4
baz=247,SNR=37
DHY Denali Highway 86.47 25 IAmb IAmb 08 39 44.8
comp=Z,175nm,1.1s
DHY IAMs_20 IAMs_20 09 14 35.7
comp=Z,4µm,20.0s
DHY Denali Highway 86.47 25 P P 08 39 39.5 -0.5
baz=249,SNR=56
KLU Klutina 86.55 27 IAMs_20 IAMs_20 09 13 49.2
comp=Z,3µm,22.0s
KLU Klutina 86.55 27 P P 08 39 40.6 +0.3
baz=250,SNR=48
M24K Tolsona, Glenn 86.64 26 IAMs_20 IAMs_20 09 14 20.4
comp=Z,4µm,21.0s
M24K Tolsona, Glenn 86.64 26 P P 08 39 41.2 +0.5
baz=250,SNR=24
WRH Wood River Hil 86.69 24 IAMs_20 IAMs_20 09 16 41.5
comp=Z,3µm,20.0s
KAIM Kayak Island 86.72 29 P P 08 39 41.4 +0.3
baz=252
RAGM Ragged Mountai 86.75 28 IAMs_20 IAMs_20 09 13 48.4
comp=Z,4µm,20.0s
E22K Anaktuvuk Pass 86.81 20 IAMs_20 IAMs_20 09 13 02.7
comp=Z,4µm,22.0s
E22K Anaktuvuk Pass 86.81 20 P P 08 39 41.9 +0.5
baz=244
JLN Jalan Bani Buh 86.82 293 P P 08 39 43.3 +1.0
MDM Murphy Dome 86.82 23 IAMs_20 IAMs_20 09 14 34.9
comp=Z,3µm,21.0s
G23K Bananza Creek 86.84 21 P P 08 39 42.1 +0.6
G23K IAmb IAmb 08 39 47.1
comp=Z,82nm,1.1s
G23K Bananza Creek 86.84 21 P P 08 39 41.6 +0.1
baz=246,SNR=51
A21K Barrow 86.84 16 P P 08 39 41.8 +0.4
baz=240
D22K Ayikyak River 86.85 19 IAMs_20 IAMs_20 09 13 30.6
comp=Z,4µm,22.0s
D22K Ayikyak River 86.85 19 P P 08 39 42.5 +1.0
baz=244,SNR=68
CCB Clear Creek Bu 86.88 24 IAMs_20 IAMs_20 09 14 36.3
comp=Z,3µm,20.0s
HMT Hamilton 86.93 28 P P 08 39 42.3 +0.2
HMT IAMs_20 IAMs_20 09 13 30.1
comp=Z,5µm,21.0s
COLA College 86.94 23 IAMs_20 IAMs_20 09 14 38.3
comp=Z,4µm,21.0s
COLA College 86.94 23 P P 08 39 40.6 -1.4
COLA College 86.94 23 P P 08 39 41.9 0.0
baz=248
BMRM Bremner River 86.97 28 P P 08 39 42.5 +0.2
baz=251,SNR=39
COLD Coldfoot 86.98 21 P P 08 39 42.3 +0.1
baz=246,SNR=55
HDA Harding Lake 87.13 24 IAMs_20 IAMs_20 09 14 57.1
comp=Z,4µm,22.0s
HDA Harding Lake 87.13 24 P P 08 39 43.2 +0.2
baz=249,SNR=13
N25K Chitina, Valde 87.18 27 P P 08 39 43.9 +0.5
baz=251,SNR=26
HARP HAARP 87.19 26 P P 08 39 43.5 +0.2
baz=251
POKR Poker Plat Res 87.20 23 IAMs_20 IAMs_20 09 14 35.8
comp=Z,4µm,21.0s
POKR Poker Plat Res 87.20 23 P P 08 39 43.4 +0.1
baz=248,SNR=17
PAX Paxson 87.25 26 P P 08 39 43.9 +0.3
baz=250,SNR=32
WBK Wadi Bani Khal 87.28 293 P P 08 39 46.0 +1.4
WBK S S 08 50 18.6 -6.4
ILAR Eielson Array 87.29 24 P P 08 39 41.4 -2.3
ILAR Eielson Array 87.29 24 P P 08 39 42.2 -1.5
comp=Z,87nm,1.1s,baz=258,slow=4.3,SNR=95
ILAR PKKPbc PKKPbc 08 57 34.8 -2.6
comp=Z,0.9nm,1.0s,baz=18,slow=1.1,SNR=5.3
ILAR LR LR 09 17 09.2
comp=Z,2µm,19.4s,baz=248,slow=35
comp=Z,87nm,1.1s
H24K Noodor Dome 87.29 23 P P 08 39 44.2 +0.4
baz=248
BGLC Bering Glacier 87.33 29 P P 08 39 44.4 +0.5
baz=252
MSEY Mahe Island 87.39 266 *i* P P 08 39 49.5 +4.1
SNR=6.1
MSEY Mahe Island 87.39 266 P P 08 39 47.5 +2.1
MSEY S SKSac 08 50 14.0 +0.6
K24K Donnelly Dome 87.40 25 P P 08 39 44.8 +0.4
baz=250,SNR=22
GLB Gilahina Butte 87.49 27 P P 08 39 44.7 -0.1
E23K Chandalar 87.53 20 P P 08 39 45.4 +0.5
baz=246
D23K Nanushuk River 87.54 19 P P 08 39 45.6 +0.7
baz=245
SNH Sunshine Point 87.56 29 P P 08 39 45.9 +0.7
VRDI Verde Repeater 87.58 28 P P 08 39 44.9 -0.5
VRDI IAmb IAmb 08 39 50.5
comp=Z,155nm,1.3s

CRQM Cirque 87.59 28 P P 08 39 45.3 -0.2
CRQM IAMs_20 IAMs_20 09 13 52.0
comp=Z,3µm,21.0s
CRQE Cirque 87.61 28 P P 08 39 45.5 0.0
baz=253,SNR=31
WAX Waxell Ridge 87.63 28 P P 08 39 46.1 +0.5
WAX IAMs_20 IAMs_20 09 12 43.6
comp=Z,3µm,20.0s
WSAR Wadi Sarin 87.68 294 LR LR 09 26 24.3
comp=Z,793nm,18.7s,baz=122,slow=41
TGL Tana Glacier 87.73 28 IAMs_20 IAMs_20 09 14 06.3
comp=Z,3µm,21.0s
G24K Hadweenzic Riv 87.77 22 IAMs_20 IAMs_20 09 14 58.1
comp=Z,5µm,21.0s
G24K Hadweenzic Riv 87.77 22 P P 08 39 45.5 -0.5
baz=248
MCARA McCarthy VSAT 87.83 28 P P 08 39 46.2 -0.2
MCARA McCarthy VSAT 87.83 28 P P 08 39 46.1 -0.2
baz=253,SNR=19
J25K Salcha River, 87.84 24 IAMs_20 IAMs_20 09 14 02.3
comp=Z,3µm,22.0s
J25K Salcha River, 87.84 24 P P 08 39 45.8 -0.7
baz=250
F24K Squaw Lake 87.92 21 P P 08 39 46.7 0.0
baz=248
MESA MESA 87.98 29 P P 08 39 46.8 -0.6
baz=254
MHTO MHTO 87.99 291 P P 08 39 48.9 +0.9
SNR=31
MHTO S SKSac 08 50 18.1 +1.5
JMDO Jabal Madar 88.05 293 P P 08 39 49.2 +0.9
JMDO S SKSac 08 50 20.4 +3.4
PRP Porcupine Dome 88.09 23 IAMs_20 IAMs_20 09 14 30.3
comp=Z,3µm,22.0s
PRP Porcupine Dome 88.09 23 P P 08 39 47.6 -0.1
baz=250
BIDO Bidbid 88.18 294 P P 08 39 51.7 +2.8
SNR=9.3
L26K Log Cabin Wild 88.18 26 P P 08 39 48.3 +0.3
baz=252,SNR=15
SMDO Samad 88.19 293 P P 08 39 49.7 +0.6
SCRK Sand Creek 88.21 25 P P 08 39 48.0 -0.3
SCRK IAmb IAmb 08 39 53.1
comp=Z,91nm,1.4s
SCRK Sand Creek 88.21 25 P P 08 39 48.1 -0.1
baz=252,SNR=33
D24K Happy Valley 88.23 19 P P 08 39 48.9 +0.8
D24K IAMs_20 IAMs_20 09 14 36.0
comp=Z,4µm,21.0s
D24K Happy Valley 88.23 19 P P 08 39 48.3 +0.1
baz=247
DQM DQM 88.25 290 P P 08 39 50.3 +1.0
SNR=13
G25K Bearman Lake 88.30 22 P P 08 39 48.5 0.0
baz=250
TABL Table Mountain 88.44 29 P P 08 39 50.0 +0.4
CTG Chitna Glacier 88.49 28 P P 08 39 49.9 +0.2
baz=254,SNR=62
C24K Franklin Bluff 88.49 19 P P 08 39 49.4 +0.1
baz=247
J26L Joseph Creek 88.55 24 P P 08 39 50.0 +0.2
baz=252
FYU Fort Yukon 88.56 22 P P 08 39 49.8 +0.2
FYU IAMs_20 IAMs_20 09 15 41.6
comp=Z,4µm,21.0s
M27K Edge Creek, AK 88.63 27 P P 08 39 50.4 +0.1
M27K IAMs_20 IAMs_20 09 14 53.4
comp=Z,4µm,20.0s
M27K Edge Creek, AK 88.63 27 P P 08 39 50.5 +0.1
baz=254
JASK Jask - Hormozg 88.73 296 P P 08 39 53.8 +2.3
SNR=5.1
JASK S S 08 50 28.5 -10
F25K Christian Rive 88.75 21 P P 08 39 51.2 +0.5
baz=250,SNR=64
PINM Pinnacle 88.78 29 P P 08 39 51.1 +0.2
baz=255,SNR=12
L27K Beaver Creek, 88.86 26 P P 08 39 51.4 +0.2
baz=254
BCAR Beaver Creek A 88.88 26 P P 08 39 51.3 -0.1
BSY Bisya 88.92 293 P P 08 39 54.2 +1.7
SNR=5.3
HOQ Hoqain 88.93 294 P P 08 39 55.7 +3.3
SNR=8.0
HOQ S SKSac 08 50 24.4 +2.1
I26K Coal Creek Min 88.96 24 IAMs_20 IAMs_20 09 17 56.8
comp=Z,3µm,20.0s
I26K Coal Creek Min 88.96 24 P P 08 39 51.9 +0.3
baz=252
E25K Arctic Village 88.96 21 P P 08 39 52.3 +0.6
E25K Arctic Village 88.96 21 P P 08 39 52.1 +0.4
baz=250,SNR=80
K27K Chicken 89.03 25 P P 08 39 52.5 +0.6
K27K IAMs_20 IAMs_20 09 14 07.4
comp=Z,4µm,22.0s
K27K Chicken 89.03 25 P P 08 39 52.3 +0.3
baz=253,SNR=109
BCPM Bancas Point 89.04 29 P P 08 39 52.6 +0.5
BMAR Burnt Mountain 89.08 22 P P 08 39 52.7 +0.4
PNL Peninsula 89.09 30 P P 08 39 54.0 +1.6
PNL Peninsula 89.09 30 P P 08 39 51.8 -0.6
baz=256
D25K Kavik River 89.10 20 P P 08 39 52.9 +0.6
D25K Kavik River 89.10 20 P P 08 39 52.6 +0.3
baz=249
BVCY Beaver Creek 89.11 27 P P 08 39 52.5 0.0
baz=254,SNR=33
YUK3 Moose Creek 89.12 27 P P 08 39 52.7 0.0
baz=255,SNR=46
G26K Porcupine Rive 89.22 22 P P 08 39 53.1 +0.3
baz=252
YUK8 Steele Glacier 89.31 28 P P 08 39 53.6 -0.2
baz=256,SNR=16
F26K Sheenjek River 89.33 21 P P 08 39 53.2 -0.1
baz=252
ARQ Araqi 89.62 293 P P 08 39 57.0 +1.4
SNR=5.8
ARQ S SKSac 08 50 28.4 +2.1
EGAK Eagle 89.62 25 P P 08 39 54.6 -0.1
EGAK Eagle 89.62 25 P P 08 39 55.0 +0.3
baz=254,SNR=40
O29M Mount Kennedy 89.64 29 P P 08 39 54.5 -0.6
O29M IAmb IAmb 08 40 00.8
comp=Z,127nm,1.2s
O29M IAMs_20 IAMs_20 09 18 07.9
comp=Z,3µm,19.0s
O29M Mount Kennedy 89.64 29 P P 08 39 54.8 -0.3
baz=257
I27K Kandik River 89.66 24 P P 08 39 54.7 -0.3
baz=254
SOHO SOHO 89.70 294 *i* P P 08 39 55.2 -0.8
SNR=5.2
SOHO SOHO 89.70 294 P P 08 39 58.3 +2.3
SHAO Shalim 89.81 288 P P 08 39 57.7 +1.1
SHAO S SKSac 08 50 33.3 +5.7
YUK4 Talbot Arm 89.85 28 P P 08 39 56.3 +0.1
baz=257,SNR=26
H27K Steamboat Moun 89.87 23 P P 08 39 56.0 +0.1
baz=254
YUK6 Outpost Mounta 89.89 29 P P 08 39 56.0 -0.4
baz=257,SNR=9.3
P29M Windy Craggy 89.90 30 P P 08 39 56.5 +0.3
P29M Windy Craggy 89.90 30 P P 08 39 56.1 -0.1
baz=257
MDH Madha 90.06 295 P P 08 39 57.8 +0.1
MDH Madha 90.06 295 P P 08 40 00.3 +2.6
UOSS Minazif 90.10 295 P P 08 39 56.6 -1.3
UOSS Minazif 90.10 295 P P 08 39 56.0 -1.9
UOSS Minazif 90.10 295 P P 08 40 00.3 +2.4
UOSS S SKSac 08 50 32.4 +3.4
BANOM Banah 90.13 296 P P 08 39 57.7 -0.4
HATD Hatta, Dubai 90.15 295 *i* P P 08 39 58.2 0.0
SNR=5.2
HATD Hatta, Dubai 90.15 295 P P 08 39 58.1 -0.1
SNR=5.4
HATD S SKSac 08 50 32.0 +2.6
GEYT Alibeck 90.16 308 P P 08 39 56.8 -1.1
GEYT Alibeck 90.16 308 P P 08 39 57.3 -0.6
comp=Z,54nm,1.3s,baz=79,slow=7.7,SNR=19
comp=Z,54nm,1.3s
GYA0B ALIBECK ARRAY 90.16 308 P P 08 39 57.0 -1.0
GYA0B IAmb IAmb 08 40 03.4
comp=Z,134nm,1.5s
DAWY Dawson 90.17 25 P P 08 39 58.0 +0.6
DAWY Dawson 90.17 25 P P 08 39 57.3 -0.2
baz=256,SNR=54

M29M Somme Creek 90.19 27 IAMs_20 IAMs_20 09 13 59.7
comp=Z,4µm,22.0s
M29M Somme Creek 90.19 27 P P 08 39 57.2 -0.4
baz=257
ASHO Ashiyiah 90.20 295 P P 08 39 57.7 -0.8
ASHO Ashiyiah 90.20 295 P P 08 39 58.8 +0.3
SNR=6.3
HYT Haines Junctio 90.27 29 IAmb IAmb 08 40 03.6
comp=Z,89nm,1.1s
HYT Haines Junctio 90.27 29 P P 08 39 57.8 -0.2
baz=258,SNR=19
I28M Miner Creek 90.30 24 P P 08 39 57.9 -0.1
baz=255,SNR=30
S31K Pelican 90.31 32 P P 08 39 58.3 +0.2
baz=259
P30M Million Dollar 90.39 30 P P 08 39 58.9 +0.4
baz=258
ALNE Al Ain 90.41 294 *i* P P 08 39 58.5 -0.9
SNR=7.6
ALNE Al Ain 90.41 294 P P 08 39 58.7 -0.6
SNR=12
ALNE S SKSac 08 50 27.1 -3.7
DMTO DMTO 90.42 288 P P 08 40 00.2 +0.7
DMTO S SKSac 08 50 32.9 +1.8
L29M L29M 90.50 26 P P 08 39 58.9 -0.1
L29M IAMs_20 IAMs_20 09 16 29.6
comp=Z,4µm,22.0s
L29M L29M 90.50 26 P P 08 39 59.3 +0.4
baz=257
AB31 Akbulak array 90.52 319 *i* P P 08 39 57.3 -2.0
ABKAR Akbulak array 90.52 319 P P 08 39 57.2 -2.1
PLBC Pleasant Camp 90.54 30 P P 08 39 59.4 +0.3
baz=258
SIT Sitka 90.62 33 P P 08 40 00.1 +0.6
baz=259
FAQ Al Faqa, Dubai 90.63 295 *i* P P 08 39 58.5 -1.9
SNR=5.7
FAQ Al Faqa, Dubai 90.63 295 P P 08 40 02.8 +2.4
SNR=7.0
FAQ S SKSac 08 50 32.6 +0.5
R31K City Hall, Gus 90.66 31 P P 08 40 00.1 +0.5
baz=259
UMQ Umm Al-Quwin 90.66 295 P P 08 40 01.8 +1.4
J29N Klondike Camp 90.76 25 P P 08 40 01.1 +0.9
J29N IAmb IAmb 08 40 06.8
comp=Z,178nm,1.6s
J29N IAMs_20 IAMs_20 09 16 52.2
comp=Z,6µm,20.0s
J29N Klondike Camp 90.76 25 P P 08 40 00.5 +0.3
baz=257,SNR=27
UMZA Um Al Zommool 90.79 293 P P 08 40 00.5 -0.6
UMZA S SKSac 08 50 32.7 -0.3
ASUD Al Ashush, Dub 90.85 295 *i* P P 08 40 00.6 -0.8
SNR=5.7
ASUD Al Ashush, Dub 90.85 295 P P 08 40 01.1 -0.3
SNR=5.9
ASUD S SKSac 08 50 34.7 +1.4
F28M Old Crow 90.87 22 P P 08 40 01.0 +0.4
F28M IAmb IAmb 08 40 07.0
comp=Z,92nm,1.6s
F28M Old Crow 90.87 22 P P 08 40 01.0 +0.4
baz=255,SNR=17
K29M Barlow Dome 90.93 26 P P 08 40 01.4 +0.4
K29M IAmb IAmb 08 40 06.6
comp=Z,153nm,1.3s
K29M IAMs_20 IAMs_20 09 15 52.5
comp=Z,3µm,22.0s
K29M Barlow Dome 90.93 26 P P 08 40 00.6 -0.4
baz=258
O30N Mendenhall 90.94 29 P P 08 40 01.2 +0.2
O30N IAmb IAmb 08 40 06.4
comp=Z,100nm,1.4s
O30N Mendenhall 90.94 29 P P 08 40 01.1 +0.1
baz=259,SNR=16
M30M Minto, Yukon 90.98 27 P P 08 40 01.2 +0.1
M30M IAMs_20 IAMs_20 09 14 46.0
comp=Z,3µm,22.0s
M30M Minto, Yukon 90.98 27 P P 08 40 01.0 -0.2
baz=258,SNR=17
SKAG Skagway 91.06 30 P P 08 40 02.1 +0.5
SKAG Skagway 91.06 30 P P 08 40 03.2 +1.6
SKAG Skagway 91.06 30 P P 08 40 01.8 +0.2
baz=259,SNR=11
S32K Killisnoo 91.09 32 P P 08 40 03.2 +1.5
S32K IAmb IAmb 08 40 08.0
comp=Z,128nm,1.6s
S32K Killisnoo 91.09 32 P P 08 40 02.1 +0.3
baz=260
RBK Rabkut 91.10 287 P P 08 40 04.9 +2.2
SNR=16
H29M Whitestone 91.11 23 P P 08 40 03.7 +2.1
H29M IAmb IAmb 08 40 07.9
comp=Z,163nm,1.7s
H29M IAMs_20 IAMs_20 09 19 10.4
comp=Z,4µm,21.0s
H29M Whitestone 91.11 23 P P 08 40 02.0 +0.3
baz=257,SNR=18
AJN Ajban 91.16 294 *i* P P 08 40 01.0 -1.8
SNR=6.0
AJN Ajban 91.16 294 P P 08 40 05.1 +2.3
SNR=5.4
AJN S SKSac 08 50 38.0 +2.9
R32K Eaglecrest 91.26 32 P P 08 40 02.3 -0.2
baz=260
DOK Doka 91.29 288 P P 08 40 03.5 0.0
SNR=10
DOK S SKSac 08 50 39.2 +3.1
JIS Juneau Island 91.33 32 P P 08 40 04.6 +1.7
JIS IAmb IAmb 08 40 08.2
comp=Z,86nm,1.5s
JIS Juneau Island 91.33 32 P P 08 40 04.8 +2.0
SVE Sverdlovsk 91.34 327 *e*P P 08 40 01.8 -1.1
SVE pmax pmax
comp=Z,131nm,1.9s
SVE MLR MLR
comp=Z,2µm,20.0s
WHY Whitehorse 91.50 29 P P 08 40 04.2 +0.5
WHY IAmb IAmb 08 40 09.0
comp=Z,80nm,1.5s
WHY Whitehorse 91.50 29 P P 08 40 03.9 +0.1
baz=260,SNR=13
WHFO Al Wadi Hawf 91.56 288 P P 08 40 06.6 +1.8
SNR=11
WHFO S SKSac 08 50 36.7 -1.0
MAYO Mayo, Yukon 91.58 26 P P 08 40 04.5 +0.5
MAYO IAmb IAmb 08 40 09.4
comp=Z,130nm,1.1s
MAYO Mayo, Yukon 91.58 26 P P 08 40 04.0 0.0
baz=259,SNR=19
DIB Dawson Inlet, 91.59 37 P P 08 40 05.1 +1.0
DIB IAmb IAmb 08 40 11.6
comp=Z,107nm,1.2s
J30M Hart River 91.59 25 P P 08 40 04.8 +0.7
J30M IAmb IAmb 08 40 10.4
comp=Z,183nm,1.4s
J30M Hart River 91.59 25 P P 08 40 04.2 +0.1
baz=259
U33K Whale Pass 91.66 34 P P 08 40 03.9 -0.4
baz=261
I30M Mount Dempster 91.70 25 P P 08 40 04.3 -0.3
I30M IAmb IAmb 08 40 10.4
comp=Z,126nm,1.6s
I30M IAMs_20 IAMs_20 09 19 48.8
comp=Z,3µm,19.0s
I30M Mount Dempster 91.70 25 P P 08 40 04.3 -0.3
baz=259
E29M Blow River 91.78 21 P P 08 40 05.7 +1.0
E29M IAMs_20 IAMs_20 09 16 41.1
comp=Z,4µm,22.0s
E29M Blow River 91.78 21 P P 08 40 04.5 -0.2
baz=257
EPYK Eagle Plains 91.79 23 P P 08 40 04.2 -0.6
EPYK IAmb IAmb 08 40 09.7
EPYK comp=Z,107nm,1.4s IAMs_20 IAMs_20 09 18 27.2
comp=Z,4µm,21.0s
EPYK Eagle Plains 91.79 23 P P 08 40 04.3 -0.6
baz=258,SNR=33
T33K Petersburg 91.86 33 P P 08 40 04.9 -0.4
baz=261
P32M Atlin 91.90 30 P P 08 40 05.4 -0.1
P32M IAmb IAmb 08 40 10.6
comp=Z,68nm,1.4s
P32M Atlin 91.90 30 P P 08 40 05.5 0.0
baz=261
AKTO Aktyubinsk 91.93 320 P P 08 40 02.2 -3.6

ABTO Aybut 91.95 287 P P 08 40 07.5 +0.8
SNR=12
M31M Drury Creek, Y 92.01 28 P P 08 40 06.8 +0.9
M31M Drury Creek, Y 92.01 28 P P 08 40 05.3 -0.6
baz=260,SNR=7.6
G30M tAoh Zraii Nji 92.11 23 P P 08 40 05.6 -0.7
G30M IAmb IAmb 08 40 10.7
comp=Z,61nm,1.2s
G30M IAMs_20 IAMs_20 09 17 38.8
comp=Z,3µm,21.0s
G30M tAoh Zraii Nji 92.11 23 P P 08 40 06.0 -0.4
baz=259,SNR=31
WRAK Wrangell Islan 92.13 34 P P 08 40 05.8 -0.8
WRAK IAmb IAmb 08 40 11.9
comp=Z,83nm,1.3s
WRAK Wrangell Islan 92.13 34 P P 08 40 06.5 -0.1
baz=262
F30M Barrier River 92.40 22 P P 08 40 07.4 -0.2
baz=259
ARU Arti 92.41 326 P P 08 40 05.8 -2.1
ARU IAmb IAmb 08 40 10.9
comp=Z,118nm,1.3s
ARU Arti 92.41 326 *c* *i*P P 08 40 05.6 -2.3
ARU 08 43 46.6
ARU S SKSac 08 50 35.8 -5.0
ARU pmax pmax
comp=Z,55nm,1.0s
ARU MLR MLR
comp=Z,1µm,18.0s
ARU Arti 92.41 326 LR LR 09 23 56.0
comp=Z,1µm,19.5s,baz=100,slow=37
P33M Teslin, Yukon 92.44 30 P P 08 40 08.6 +0.5
P33M Teslin, Yukon 92.44 30 P P 08 40 08.1 0.0
baz=262,SNR=5.6
N32M Quiet Lake 92.45 29 P P 08 40 08.3 +0.2
baz=261,SNR=12
FARO Faro, Yukon 92.49 28 P P 08 40 08.3 +0.1
FARO IAmb IAmb 08 40 13.8
comp=Z,73nm,1.5s
FARO IAMs_20 IAMs_20 09 18 21.1
comp=Z,3µm,20.0s
FARO Faro, Yukon 92.49 28 P P 08 40 08.6 +0.4
baz=261,SNR=16
Q32M Nakina River 92.53 31 P P 08 40 08.3 -0.4
baz=262
ELIB Princess Elisa 92.85 196 *d*P P 08 40 09.9 0.0
comp=Z,23nm,1.2s
G31M Satah River 92.85 23 P P 08 40 09.4 -0.3
G31M IAmb IAmb 08 40 12.6
comp=Z,81nm,1.3s
G31M IAMs_20 IAMs_20 09 19 00.3
comp=Z,3µm,20.0s
G31M Satah River 92.85 23 P P 08 40 09.4 -0.3
baz=261,SNR=24
S34M Telegraph Cree 92.99 32 P P 08 40 11.1 +0.6
S34M Telegraph Cree 92.99 32 P P 08 40 10.4 -0.1
baz=263
F31M Tsiigehtchic 93.14 23 IAmb IAmb 08 40 16.1
comp=Z,157nm,1.6s
F31M IAMs_20 IAMs_20 09 17 38.8
comp=Z,4µm,21.0s
F31M Tsiigehtchic 93.14 23 P P 08 40 11.0 0.0
baz=261,SNR=30
R33M Jennings River 93.26 31 P P 08 40 12.0 +0.1
baz=263
T35M Bob Quinn 93.35 33 P P 08 40 12.6 +0.4
baz=264
INK Inuvik 93.36 22 IAmb IAmb 08 40 16.9
comp=Z,85nm,1.4s
INK IAMs_20 IAMs_20 09 19 16.4
comp=Z,4µm,21.0s
INK Inuvik 93.36 22 P P 08 40 12.0 0.0
baz=261,SNR=28
INK Inuvik 93.36 22 P P 08 40 10.9 -1.0
comp=Z,37nm,1.2s,baz=251,slow=5.9,SNR=21
INK LR LR 09 19 36.7
comp=Z,4µm,20.6s,baz=214,slow=34
comp=Z,37nm,1.2s
DLBC Dease Lake 93.63 32 P P 08 40 13.5 0.0
DLBC Dease Lake 93.63 32 P P 08 40 13.6 0.0
baz=264
DLBC Dease Lake 93.63 32 P P 08 40 13.2 -0.4
comp=Z,15nm,1.1s,baz=270,slow=6.3,SNR=7.8
DLBC LR LR 09 16 46.1
comp=Z,2µm,20.2s,baz=286,slow=32
comp=Z,15nm,1.1s
VOI Vohitsoka 93.70 248 P P 08 40 15.0 +0.2
VOI IAmb IAmb 08 40 19.5
comp=Z,94nm,1.5s
VOI IAMs_20 IAMs_20 09 20 34.6
comp=Z,4µm,20.0s
VOI Vohitsoka 93.70 248 P P 08 40 16.5 +1.7
VOI Vohitsoka 93.70 248 P P 08 40 18.0 +3.2
SNR=5.5
ABPO Ambohimpanom 93.70 250 IAMs_20 IAMs_20 09 19 00.8
comp=Z,3µm,20.0s
OPO Ambohitrampo 93.80 251 LR LR 09 20 18.8
comp=Z,388nm,20.4s,baz=318,slow=34
BBB Bella Bella 94.10 38 LR LR 09 14 36.2
comp=Z,2µm,21.9s,baz=274,slow=30
WTLY Watson Lake, Y 94.42 30 P P 08 40 17.2 +0.1
baz=265,SNR=20
TGTN Hyland Airport 94.80 29 P P 08 40 18.6 -0.2
baz=266,SNR=13
OZB Mount Ozzard 95.53 41 IAMs_20 IAMs_20 09 14 53.8
comp=Z,4µm,22.0s
CBB Campbell River 95.68 40 IAmb IAmb 08 40 28.6
comp=Z,60nm,1.4s
BELA Belgrano 2 95.83 180 IAmb IAmb 08 40 28.6
comp=Z,101nm,1.6s
KMPM Mount Pierce 96.02 50 IAMs_20 IAMs_20 09 13 49.6
comp=Z,3µm,20.0s
KRMB Red Mountain 96.24 49 IAMs_20 IAMs_20 09 13 57.3
comp=Z,3µm,22.0s
KSXB Camp Six Broad 96.28 49 IAMs_20 IAMs_20 09 15 52.3
comp=Z,3µm,21.0s
KMRM Mail Ridge 96.32 50 IAMs_20 IAMs_20 09 15 16.6
comp=Z,3µm,20.0s
KHMM Horse Mountain 96.34 50 IAMs_20 IAMs_20 09 14 48.0
comp=Z,4µm,21.0s
KCPM Cahto Peak 96.39 51 IAMs_20 IAMs_20 09 18 58.5
comp=Z,3µm,20.0s
A36M Sachs Harbour 96.48 18 IAMs_20 IAMs_20 09 20 14.6
comp=Z,3µm,22.0s
A36M Sachs Harbour 96.48 18 P P 08 40 25.7 -0.5
baz=269,SNR=12
K02D Willamette Mer 96.48 48 IAMs_20 IAMs_20 09 23 38.5
comp=Z,3µm,19.0s
L02F Cave Junction 96.52 48 IAMs_20 IAMs_20 09 20 23.7
comp=Z,3µm,20.0s
NVL N'lazarevskaya 96.54 194 *e*P P 08 40 28.6 +2.0
NVL *e*PS PS 08 53 11.8 +3.5
NVL pmax pmax
comp=Z,43nm,1.7s
NVL MLR MLR
comp=Z,6µm,16.0s
I03D Drain, OR 96.75 47 IAMs_20 IAMs_20 09 16 16.7
comp=Z,3µm,21.0s
KOTAN Kotaneelee Air 96.80 30 P P 08 40 28.0 +0.1
baz=269
DBO Dodson Butte 96.81 47 IAMs_20 IAMs_20 09 24 17.2
comp=Z,3µm,19.0s
B04A Port Angeles 96.81 42 IAMs_20 IAMs_20 09 17 02.8
comp=Z,4µm,22.0s
C36M Paulatuk 96.86 21 P P 08 40 26.5 -1.4
C36M IAmb IAmb 08 40 32.8
comp=Z,74nm,1.8s
C36M IAMs_20 IAMs_20 09 19 46.9
comp=Z,3µm,22.0s
C36M Paulatuk 96.86 21 P P 08 40 27.7 -0.2
baz=270
MCCM Marconi Confer 96.86 52 IAMs_20 IAMs_20 09 17 55.1
comp=Z,4µm,20.0s
PGC Sidney 96.87 42 IAMs_20 IAMs_20 09 19 12.2
comp=Z,2µm,19.0s
G03D McMinnville, O 96.88 45 IAMs_20 IAMs_20 09 14 52.7
comp=Z,4µm,20.0s
HUMO Hull Mountain 97.00 48 IAMs_20 IAMs_20 09 24 21.3
comp=Z,3µm,19.0s
FLDN Fort Liard 97.09 30 P Pdif 08 40 29.4 +0.1
FLDN IAmb IAmb 08 40 34.1
comp=Z,47nm,1.0s
FLDN Fort Liard 97.09 30 P Pdif 08 40 29.5 +0.2
baz=270
WRGLY Wrigley 97.11 27 IAMs_20 IAMs_20 09 22 19.1
comp=Z,2µm,19.0s
WRGLY Wrigley 97.11 27 P Pdif 08 40 29.8 +0.5
baz=270

YBH	Yreka Blue Hor	97.15	49	IAMs_20	IAMs_20	09 16 39.3			
	comp=Z,4µm,21.0s								
YBH	Yreka Blue Hor	97.15	49	LR	LR	09 15 58.7			
	comp=Z,3µm,21.8s,baz=301,slow=30								
GNW	Green Mountain	97.25	43	IAMs_20	IAMs_20	09 17 48.5			
	comp=Z,2µm,19.0s								
I04A	Tendick Farm,	97.44	47	IAMs_20	IAMs_20	09 16 10.8			
	comp=Z,3µm,22.0s								
L04D	Klamath Falls	97.47	48	IAMs_20	IAMs_20	09 15 36.7			
	comp=Z,3µm,22.0s								
KIRV	Kirov	97.48	328	*ce*P	P	08 40 30.1	-0.9		
KIRV	Kirov	97.48	328	LR	LR	09 26 25.9			
	comp=Z,1µm,20.4s,baz=87,slow=37								
F04A	Amboy	97.49	45	IAMs_20	IAMs_20	09 15 24.0			
	comp=Z,3µm,22.0s								
TROLL	Troll, Antarti	97.71	191	⇑P	Pdif	08 40 32.4	+0.3		
	comp=Z,537nm,0.9s								
K04D	Chiloquin, OR	97.89	48	IAMs_20	IAMs_20	09 25 00.8			
	comp=Z,2µm,18.0s								
HOOD	Mount Hood Mea	98.02	45	IAMs_20	IAMs_20	09 20 30.0			
	comp=Z,3µm,19.0s								
I05D	Terrebonne, OR	98.22	46	IAmb	IAmb	08 40 40.2			
	comp=Z,75nm,1.3s								
I05D				IAMs_20	IAMs_20	09 20 25.5			
	comp=Z,2µm,20.0s								
J05D	Fort Rock, OR	98.28	47	IAmb	IAmb	08 40 41.5			
	comp=Z,65nm,1.3s								
J05D				IAMs_20	IAMs_20	09 18 53.1			
	comp=Z,3µm,21.0s								
AFDM	Forest Hills D	98.39	52	P	P	08 40 35.4	-0.2		
AFDM				IAMs_20	IAMs_20	09 22 29.5			
	comp=Z,3µm,19.0s								
PMPB	Monarch Peak	98.45	54	IAMs_20	IAMs_20	09 17 52.2			
	comp=Z,3µm,20.0s								
PINE	Pine Mountain	98.50	47	IAmb	IAmb	08 40 41.9			
	comp=Z,75nm,1.4s								
PINE				IAMs_20	IAMs_20	09 25 25.9			
	comp=Z,3µm,19.0s								
K05A	Summer Lake	98.52	48	IAmb	IAmb	08 40 41.8			
	comp=Z,92nm,1.5s								
K05A				IAMs_20	IAMs_20	09 25 13.6			
	comp=Z,3µm,20.0s								
BELG	Belogornoye	98.54	322	*de*P	P	08 40 33.7	-2.2		
BELG				pmax	pmax				
	comp=Z,10.0nm,0.9s								
MAK	Makhachkala	98.61	312	*e*P	P	08 40 33.5	-2.9		
MAK				*e*		08 44 34.2			
MAK				*e*		08 51 08.8			
MAK				*e*SS	SS	08 58 51.5	+0.7		
MAK				*e*SSS	SSS	09 02 33.4			
MAK				pmax	pmax				
	comp=Z,35nm,0.3s								
CMB	Columbia Colle	98.83	53		Pdif	08 40 38.4	+0.7		
CMB				IAMs_20	IAMs_20	09 16 29.1			
	comp=Z,4µm,22.0s								
CMB	Columbia Colle	98.83	53	P	Pdif	08 40 38.4	+0.7		
CMB				pmax	pmax				
	comp=Z,44nm,2.0s								
MXC	Moxie City	98.97	44		P	08 40 37.4	-0.7		
MXC				IAmb	IAmb	08 40 43.5			
	comp=Z,45nm,1.4s								
SNAA	Sanae	98.98	190		Pdif	08 40 39.0	+1.3		
SNAA	Sanae	98.98	190	P	P	08 40 37.1	-0.5		
	comp=Z,3.3nm,1.0s,baz=109,slow=5.0,SNR=5.1								
SNAA				LR	LR	09 26 05.4			
	comp=Z,4µm,19.8s,baz=137,slow=36								
EMB	Emerald Bay	99.06	52	IAMs_20	IAMs_20	09 16 04.3			
	comp=Z,3.3nm,1.0s								
SMMC	Simmler	99.08	55	P	Pdif	08 40 38.4	-0.4		
	comp=Z,4µm,22.0s								
PKM	Mcpherson Peak	99.22	56	P	Pdif	08 40 39.4	-0.3		
	baz=269								
F07A	Phinny Hill Vi	99.23	45		Pdif	08 40 38.9	-0.3		
F07A				IAmb	IAmb	08 40 44.8			
	comp=Z,49nm,1.4s								
E07A	Sunnyside	99.28	44	IAmb	IAmb	08 40 45.0			
	comp=Z,66nm,1.3s								
SBC	Santa Barbara	99.29	56	P	Pdif	08 40 39.0	-0.7		
	baz=269								
SCZ2	Santa Cruz Isl	99.34	57	P	Pdif	08 40 39.6	-0.4		
	baz=269								
SNCC	San Nicolas Is	99.42	57	IAMs_20	IAMs_20	09 15 29.1			
	comp=Z,3µm,22.0s								
SNCC	San Nicolas Is	99.42	57	P	Pdif	08 40 40.3	-0.1		
	baz=268								
PNTR	Pine Nut	99.46	52	IAMs_20	IAMs_20	09 17 13.7			
	comp=Z,3µm,22.0s								
HAWA	Hanford	99.50	44		Pdif	08 40 41.1	+0.7		
HAWA				IAmb	IAmb	08 40 46.0			
	comp=Z,54nm,1.2s								
HAWA				IAMs_20	IAMs_20	09 16 53.1			
	comp=Z,3µm,22.0s								
I07A	Izee	99.54	46		Pdif	08 40 41.1	+0.3		
I07A				IAmb	IAmb	08 40 46.3			
	comp=Z,49nm,1.3s								
I07A				IAMs_20	IAMs_20	09 20 49.4			
	comp=Z,2µm,20.0s								
BCW	Bitter Crk WRg	99.55	56	IAMs_20	IAMs_20	09 23 52.5			
	comp=Z,3µm,19.0s								
WAKR	Walker	99.58	52	Pdif	Pdif	08 40 42.1	+0.9		
WAKR				IAMs_20	IAMs_20	09 16 09.0			
	comp=Z,4µm,22.0s								
VOG	Valley Oaks Go	99.60	54	P	Pdif	08 40 41.2	+0.1		
	baz=269								
PAHR	Pah Rah Range	99.63	51	Pdif	Pdif	08 40 41.6	+0.3		
PAHR				IAMs_20	IAMs_20	09 23 13.2			
	comp=Z,3µm,19.0s								
RAYN	Ar Rayn	99.71	293		Pdif	08 40 40.7	-1.2		
RAYN	Ar Rayn	99.71	293	P	Pdif	08 40 40.7	-1.2		
RAYN				pmax	pmax				
	comp=Z,39nm,1.5s								
YERR	Yerington	99.74	52	IAMs_20	IAMs_20	09 23 22.1			
	comp=Z,3µm,18.0s								
E08A	Dider Farm, El	99.83	44	IAMs_20	IAMs_20	09 25 38.7			
	comp=Z,2µm,19.0s								
VES	Vestal, Richgr	99.83	55	P	Pdif	08 40 41.8	-0.3		
	baz=269,SNR=12								
D08A	Wollman Farm,	99.91	43	IAmb	IAmb	08 40 47.7			
	comp=Z,89nm,1.9s								
D08A				IAMs_20	IAMs_20	09 20 27.8			
	comp=Z,2µm,19.0s								
G08A	Pilot Rock	99.92	45	IAMs_20	IAMs_20	09 21 18.2			
	comp=Z,2µm,20.0s								
ARVC	Arvin	100.03	56	P	Pdif	08 40 42.8	-0.2		
	baz=269								
OSI	Osito Audit: C	100.11	56	P	Pdif	08 40 42.9	-0.6		
	baz=269								
WVOR	Wild Horse Val	100.19	48	IAMs_20	IAMs_20	09 27 00.7			
	comp=Z,3µm,19.0s								
SCI2	San Clemente I	100.23	58	P	Pdif	08 40 43.8	-0.2		
	baz=269								
J08A	Circle Bar Ran	100.30	47	IAMs_20	IAMs_20	09 17 55.4			
	comp=Z,3µm,22.0s								
RYN	Ryan	100.30	52	IAMs_20	IAMs_20	09 16 43.0			
	comp=Z,3µm,22.0s								
LHV	Little Huntoon	100.31	52	IAMs_20	IAMs_20	09 17 40.4			
	comp=Z,4µm,22.0s								
ISA	Isabella, Lake	100.32	55	IAMs_20	IAMs_20	09 24 22.0			
	comp=Z,2µm,20.0s								
ISA	Isabella, Lake	100.32	55	P	Pdif	08 40 44.3	-0.2		
	baz=270,SNR=7.2								
C09A	Chrisman Ranch	100.33	43	IAMs_20	IAMs_20	09 21 00.8			
	comp=Z,2µm,21.0s								
CIS	Catalina Islan	100.35	57	P	Pdif	08 40 44.5	0.0		
	baz=269								
HILA	High Level	100.45	32	Pdif	Pdif	08 40 44.2	-0.1		
NVAR	Mina Array Bea	100.47	52	P	Pdif	08 40 44.0	-1.2		
	comp=Z,6.3nm,1.0s,baz=258,slow=5.3,SNR=18								
NVAR				PP	PP	08 44 50.0	-1.9		
	comp=Z,3.2nm,1.1s,baz=260,slow=7.7,SNR=6.7								
TIN	Tinemaha, Big	100.53	54	P	Pdif	08 40 45.4	0.0		
	baz=270								
NV11	Mina Array Sit	100.59	52	Pdif	Pdif	08 40 45.7	+0.1		
NV11				IAMs_20	IAMs_20	09 16 50.6			
	comp=Z,4µm,22.0s								
KVN	Kaiserville	100.63	52	IAMs_20	IAMs_20	09 17 28.6			
	comp=Z,3µm,22.0s								
CWC	Cottonwood Cre	100.65	54	P	Pdif	08 40 46.1	+0.1		
	baz=270								
CCAC	Calif City Air	100.69	56	IAMs_20	IAMs_20	09 24 19.8			
	comp=Z,3µm,20.0s								
EDW2	Edwards Air Fo	100.71	56	P	Pdif	08 40 46.5	+0.3		
	baz=270,SNR=11								
LRMC	Laurel Mtn Rad	100.97	55	P	Pdif	08 40 47.7	+0.3		
	baz=270								
BFSC	Mount Baldy Ra	100.98	56	P	Pdif	08 40 48.0	+0.6		
	baz=270								
NEW	Newport	101.08	42	IAMs_20	IAMs_20	09 23 53.7			
	comp=Z,2µm,19.0s								
NEW	Newport	101.08	42	P	Pdif	08 40 48.4	+1.0		
	baz=273								
NEW	Newport	101.08	42	P	Pdif	08 40 46.8	-0.6		
	comp=Z,5.9nm,1.0s,baz=218,slow=5.0,SNR=8.2								
BMO	Blue Mountains	101.10	46	IAMs_20	IAMs_20	09 20 55.5			
	comp=Z,3µm,20.0s								
F10A	Beach Ranch, E	101.11	45	IAMs_20	IAMs_20	09 18 25.8			
	comp=Z,3µm,22.0s								
MPMC	Manual Prospec	101.12	55	P	Pdif	08 40 48.4	+0.2		
	baz=270,SNR=23								
YKAW3	Yellowknife Wh	101.19	28	IAMs_20	IAMs_20	09 21 31.1			
	comp=Z,4µm,22.0s								
YKA	Yellowknife Ar	101.20	28	Pdif	Pdif	08 40 46.7	-0.9		
YKA	Yellowknife Ar	101.20	28	*i* P	Pdif	08 40 47.0	-0.6		
YKA				pmax	pmax				
	comp=Z,2.0nm,0.9s								
YKA	Yellowknife Ar	101.20	28	P	Pdif	08 40 46.0	-1.6		
	comp=Z,2.1nm,0.9s,baz=280,slow=4.7,SNR=24								
YKA				PP	PP	08 44 48.1	-8.3		
	comp=Z,2.7nm,1.0s,baz=281,slow=7.7,SNR=9.4								
GRAC	Grapevine Rang	101.22	54	IAMs_20	IAMs_20	09 17 54.6			
	comp=Z,4µm,22.0s								
GRAC	Grapevine Rang	101.22	54	P	Pdif	08 40 49.0	+0.6		
	baz=270								
YKAW1	Yellowknife Wh	101.26	28	IAMs_20	IAMs_20	09 27 15.9			
	comp=Z,3µm,20.0s								
BMN	Battle Mountai	101.28	50	Pdif	Pdif	08 40 46.9	-1.8		
BMN				IAMs_20	IAMs_20	09 24 12.9			
	comp=Z,3µm,19.0s								
BMN	Battle Mountai	101.28	50	*i* P	Pdif	08 40 46.9	-1.8		
BMN				MLR	MLR				
	comp=Z,3µm,19.0s								
TPH	Tonopah	101.32	53	Pdif	Pdif	08 40 48.6	-0.4		
TPH	Tonopah	101.32	53	*i* P	Pdif	08 40 48.6	-0.4		
Q09A	Carvers	101.34	52	IAMs_20	IAMs_20	09 18 02.7			
	comp=Z,3µm,22.0s								
MURC	Murrieta	101.37	57	P	Pdif	08 40 49.5	+0.5		
	baz=270								
109C	Camp Elliot, M	101.44	58	IAMs_20	IAMs_20	09 24 54.8			
	comp=Z,2µm,18.0s								
109C	Camp Elliot, M	101.44	58	P	Pdif	08 40 49.8	+0.5		
	baz=270								
TJX	Tijuana	101.48	58	IAMs_20	IAMs_20	09 21 22.9			
	comp=Z,2µm,20.0s								
RRX	Edison Barstow	101.53	56	P	Pdif	08 40 50.2	+0.5		
	baz=270								
BBRC	Big Bear Solar	101.60	56	P	Pdif	08 40 50.8	+0.5		
	baz=270								
AKH	Akhalkalaki	101.61	311	Pdif	Pdif	08 40 50.1	0.0		
AKH				IAMs_20	IAMs_20	09 35 18.7			
	comp=Z,3µm,19.0s								
AKH	Akhalkalaki	101.61	311	*i* P	Pdif	08 40 50.1	0.0		
FURC	Furnace Creek,	101.63	54	P	Pdif	08 40 50.7	+0.6		
	baz=271,SNR=7.2								
GSC	Goldstone, Bar	101.69	55	Pdif	Pdif	08 40 50.9	+0.4		
GSC	Goldstone, Bar	101.69	55	P	Pdif	08 40 50.8	+0.3		
	baz=270								
GSC	Goldstone, Bar	101.69	55	*i* P	Pdif	08 40 50.9	+0.4		
GSC				MLR	MLR				
	comp=Z,2µm,20.0s								
GWY	Greenwater Val	101.79	54	IAMs_20	IAMs_20	09 25 22.7			
	comp=Z,2µm,19.0s								
BAR	Barrett	101.81	58	IAMs_20	IAMs_20	09 21 20.5			
	comp=Z,2µm,20.0s								
WCT	Wildcat Mounta	101.81	54	IAMs_20	IAMs_20	09 30 31.3			
	comp=Z,2µm,18.0s								
TKX	Tecate	101.86	58	IAMs_20	IAMs_20	09 21 23.9			
	comp=Z,3µm,20.0s								
KBZ	Khabaz	101.96	313	⇑*e*P	Pdif	08 40 49.8	-1.5		
KBZ				pmax	pmax				
	comp=Z,16nm,1.8s								
KBZ	Khabaz	101.96	313	P	Pdif	08 40 50.7	-0.6		
	comp=Z,2.7nm,0.9s,baz=94,slow=5.0,SNR=5.7								
PFO	Pinyon Flats O	101.98	57	IAMs_20	IAMs_20	09 19 31.2			
	comp=Z,2µm,21.0s								
PFO	Pinyon Flats O	101.98	57	P	Pdif	08 40 52.1	+0.2		
	baz=270								
TPFO	Pinon Flats	101.99	57	P	Pdif	08 40 52.8	+0.9		
	baz=270								
PLID	Pearl Lake	102.01	45	IAMs_20	IAMs_20	09 21 47.7			
	comp=Z,2µm,20.0s								
MONP2	Monument Peak	102.02	58	P	Pdif	08 40 52.8	+0.6		
	baz=270								
HEC	Hector,Ludlow	102.08	56	P	Pdif	08 40 53.3	+1.0		
	baz=271								
KIV	Kislovodsk	102.10	313	*e*P	Pdif	08 40 48.8	-3.3		
KIV				*e*		08 45 00.8			
KIV				*e*SS	SS	08 59 35.2	-4.4		
KIV				pmax	pmax				
	comp=Z,6.0nm,1.1s								
SHOC	Shoshone, Teco	102.11	55	P	Pdif	08 40 52.8	+0.5		
	baz=271,SNR=8.2								
MFID	Camas Ranch	102.22	47	Pdif	Pdif	08 40 52.7	0.0		
VRH	Novokhopyorsk	102.26	321	*e*P	Pdif	08 40 50.6	-1.9		
VRH				pmax	pmax				
	comp=Z,18nm,0.4s								
IKP	In-Ko-Pah, Jac	102.28	58	P	Pdif	08 40 53.5	+0.3		
	baz=270								
KLMR	Klimovskoe	102.30	331	*e*P	Pdif	08 40 50.0	-2.5		
KLMR				*e*		08 45 01.6			
KLMR				pmax	pmax				
	comp=Z,42nm,1.5s								
KLMR				MLR	MLR				
	comp=Z,2µm,23.0s								
RMX	La Rumorosa	102.31	58	IAMs_20	IAMs_20	09 21 44.9			
	comp=Z,3µm,20.0s								
BELC	Belle Mtn. Jos	102.36	57	P	Pdif	08 40 54.2	+0.6		
	baz=271								
TUQ	Turquoise Moun	102.41	55	P	Pdif	08 40 54.3	+0.6		
	baz=271								
ESJX	Sierra Juarez	102.42	59	IAMs_20	IAMs_20	09 17 22.8			
	comp=Z,2µm,22.0s								
YUH	Yuha Desert	102.44	58	IAMs_20	IAMs_20	09 22 10.2			
	comp=Z,3µm,20.0s								
S11A	Rachel	102.50	53	IAMs_20	IAMs_20	09 18 36.4			
	comp=Z,3µm,21.0s								
SWSC	Sam W. Stewart	102.54	58	P	Pdif	08 40 55.3	+1.1		
	baz=270								
SMAI	San Martin Ant	102.60	169	IAMs_20	IAMs_20	09 22 29.7			
	comp=Z,3µm,18.0s								
R11B	Troy Canyon, C	102.61	52	IAMs_20	IAMs_20	09 19 16.1			
	comp=Z,3µm,22.0s								
R11B	Troy Canyon, C	102.61	52	P	Pdif	08 40 55.6	+1.0		
	baz=272								
GMRC	Granite Mounta	102.63	56	P	Pdif	08 40 56.0	+1.2		
	baz=271								
ELK	Elko	102.78	50	IAMs_20	IAMs_20	09 23 36.6			
	comp=Z,3µm,20.0s								
BC3	Big Chuckawall	102.82	57	P	Pdif	08 40 56.1	+0.5		
	baz=271								
UABX	UABC, Campus M	102.84	58	IAMs_20	IAMs_20	09 22 20.9			
	comp=Z,2µm,20.0s								
EDM	Edmonton	103.05	37	IAMs_20	IAMs_20	09 18 53.3			
	comp=Z,3µm,22.0s								
IRM	Iron Mountain	103.07	57	P	Pdif	08 40 56.9	+0.3		
	baz=271								
Q12A	Willow Creek R	103.17	52	IAMs_20	IAMs_20	09 25 05.0			
	comp=Z,3µm,20.0s								
HLID	Hailey	103.24	47	IAMs_20	IAMs_20	09 23 08.4			
	comp=Z,2µm,20.0s								
HLID	Hailey	103.24	47	P	Pdif	08 40 57.7	+0.4		
	baz=274,SNR=13								
V12A	Nelson	103.27	55	IAMs_20	IAMs_20	09 17 51.0			
	comp=Z,3µm,22.0s								
APA	Apatity	103.44	338	⇓*i* P	Pdif	08 40 55.7	-1.7		
APA				*i*		08 45 12.0			
APA				pmax	pmax				
	comp=Z,15nm,1.2s								
VORR	Voronezh	103.77	322	*e*P	Pdif	08 40 58.5	-0.7		
VORR				pmax	pmax				
	comp=Z,72nm,0.4s								
VORD	Divnogorie	103.81	321	*e*P	Pdif	08 40 57.4	-2.0		
VORD				pmax	pmax				
	comp=Z,10.0nm,1.0s								
LPSR	Galich'ya Gora	103.82	323	*e*P	Pdif	08 40 55.6	-3.8		
LPSR				pmax	pmax				
	comp=Z,20nm,1.0s								
VSR	Storozhevoye	103.85	321	*e*P	Pdif	08 40 57.1	-2.5		
VSR				pmax	pmax				
	comp=Z,10.0nm,1.1s								
PDMCI	Parker Dam,Lak	103.90	56	P	Pdif	08 41 00.4	+0.2		
	baz=272								
KOPT	Kop Dagi	103.94	310	Pdif	Pdif	08 40 59.5	-1.2		
MOS	Moscow	104.11	326	*e*P	Pdif	08 40 59.7	-0.9		
MOS				*e*		08 45 17.8			
RES	Resolute Bay	104.23	13	Pdif	Pdif	08 41 01.7	+0.9		
RES	Resolute Bay	104.23	13	*i* P	Pdif	08 41 01.7	+0.9		
113A	Mohawk Valley,	104.25	58	IAMs_20	IAMs_20	09 23 05.3			
	comp=Z,2µm,20.0s								
CCUT	Cedar City	104.39	53	Pdif	Pdif	08 41 03.1	+0.4		
CCUT				IAMs_20	IAMs_20	09 22 37.6			
	comp=Z,3µm,21.0s								
BGU	Big Grassy Mou	104.45	50	Pdif	Pdif	08 41 02.6	-0.1		
BGU				IAMs_20	IAMs_20	09 26 22.6			
	comp=Z,2µm,18.0s								
HVU	Hansel Valley	104.57	49	IAMs_20	IAMs_20	09 19 52.8			
	comp=Z,3µm,22.0s								
SZCU	Shurtz Canyon	104.61	53	IAMs_20	IAMs_20	09 22 56.3			
	comp=Z,3µm,20.0s								
DUG	Dugway, Tooele	104.66	50	Pdif	Pdif	08 41 02.9	-0.8		
DUG				IAMs_20	IAMs_20	09 27 12.3			
	comp=Z,2µm,19.0s								
DUG	Dugway, Tooele	104.66	50	P	Pdif	08 41 03.7	0.0		
	baz=274								
DUG	Dugway, Tooele	104.66	50	*i* P	Pdif	08 41 02.9	-0.8		
DUG				MLR	MLR				
	comp=Z,2µm,19.0s								
OBN	Obninsk	104.81	325	*e*P	Pdif	08 41 01.7	-2.0		
OBN				*e*		08 45 17.8			
OBN				*e*PPP	PPP	08 47 38.9			
OBN				pmax	pmax				
	comp=Z,14nm,1.2s								
OBN				MLR	MLR				
	comp=Z,2µm,21.0s								
KNB	Kanab	104.86	54	IAMs_20	IAMs_20	09 22 59.8			
	comp=Z,3µm,21.0s								
SPUT	South Promonto	104.86	49	IAMs_20	IAMs_20	09 20 34.3			
	comp=Z,3µm,22.0s								
KEV	Kevo	104.92	341	IAMs_20	IAMs_20	09 31 16.2			
	comp=Z,2µm,21.0s								
BOZ	Bozeman (W)	105.05	45	IAMs_20	IAMs_20	09 23 34.9			
	comp=Z,2µm,20.0s								
PKCU	Pink Cliffs	105.24	53	IAMs_20	IAMs_20	09 23 04.8			
	comp=Z,3µm,20.0s								
NLU	North Lily Min	105.25	50	IAMs_20	IAMs_20	09 27 21.8			
	comp=Z,2µm,18.0s								
MTPU	Mount Pierson	105.30	52	IAMs_20	IAMs_20	09 22 49.4			
	comp=Z,3µm,20.0s								
U15A	North Rim	105.31	54	IAMs_20	IAMs_20	09 22 23.0			
	comp=Z,2µm,21.0s								
FURI	Furi	105.42	277	IAMs_20	IAMs_20	09 26 36.1			
	comp=Z,3µm,22.0s								
CTU	Camp Tracy	105.43	50	IAMs_20	IAMs_20	09 27 21.7			
	comp=Z,2µm,18.0s								
YHL	Hebgen Lake	105.44	45	IAMs_20	IAMs_20	09 25 07.5			
	comp=Z,2µm,20.0s								
ARCES	ARCESS Array B	105.49	341	Pdiff	Pdif	08 41 05.3	-1.2		
	comp=Z,12nm,1.0s,baz=29,slow=5.5,SNR=9.0								
HWUT	Hardware Ranch	105.49	49	IAMs_20	IAMs_20	09 21 07.3			
	comp=Z,3µm,22.0s								
FXWY	Fox Creek	105.69	47	IAMs_20	IAMs_20	09 22 50.0			
	comp=Z,2µm,20.0s								
SRIG	Santa Rosalia	105.69	64	IAMs_20	IAMs_20	09 20 30.8			
	comp=Z,3µm,22.0s								
AHID	Auburn Hatcher	105.72	47	IAMs_20	IAMs_20	09 24 40.1			
	comp=Z,3µm,20.0s								
TPAW	Teton Pass	105.76	47	IAMs_20	IAMs_20	09 23 33.8			
	comp=Z,2µm,20.0s								
YNM	Yellowstone No	105.79	45	IAMs_20	IAMs_20	09 28 44.8			
	comp=Z,2µm,19.0s								
YNR	Norris Junctio	105.81	45	IAMs_20	IAMs_20	09 28 45.3			
	comp=Z,2µm,19.0s								
FLWY	Flagg Ranch	105.87	46	IAMs_20	IAMs_20	09 24 43.9			
	comp=Z,2µm,20.0s								
MOOW	Moose Ponds	105.88	46	IAMs_20	IAMs_20	09 30 03.1			
	comp=Z,2µm,18.0s								
KMBO	Kilima Mbogo	105.88	267	Pdif	Pdif	08 41 06.3	-3.5		
KMBO	Kilima Mbogo	105.88	267	*i* P	Pdif	08 41 06.3	-3.5		
KMBO				MLR	MLR				
	comp=Z,2µm,20.0s								
SNOW	Snow King Moun	105.90	47	IAMs_20	IAMs_20	09 23 29.5			
	comp=Z,3µm,22.0s								
H17A	Grant Village	105.92	46	IAMs_20	IAMs_20	09 29 45.2			
	comp=Z,3µm,20.0s								
LOHW	Long Hollow	105.99	47	IAMs_20	IAMs_20	09 23 10.2			
	comp=Z,2µm,20.0s								
Q16A	Castle Valley	106.03	51	IAMs_20	IAMs_20	09 21 29.5			
	comp=Z,2µm,22.0s								
LKWY	Lake	106.03	46	IAMs_20	IAMs_20	09 25 18.2			
	comp=Z,3µm,20.0s								
WUAZ	Wupatki	106.11	55	IAMs_20	IAMs_20	09 20 54.4			
	comp=Z,2µm,22.0s								
YMP	Mirror Lake Pl	106.18	45	IAMs_20	IAMs_20	09 29 26.0			
	comp=Z,2µm,20.0s								
BSUT	Blindstream Ca	106.20	50	IAMs_20	IAMs_20	09 28 12.9			
	comp=Z,2µm,18.0s								

comp=Z,9.0nm,0.8s,baz=72
SDCO **Great Sand Dun** 110.59 52 P PKiKP 08 45 30.3 -0.4
baz=278
RSSD **Black Hills** 110.61 45 IAMs_20 IAMs_20 09 28 13.3
comp=Z,2µm,21.0s
RSSD **Black Hills** 110.61 45 P PKiKP 08 45 30.5 0.0
baz=282
Q24A **Divide** 110.68 51 IAMs_20 IAMs_20 09 30 43.0
comp=Z,3µm,20.0s
Q24A **Divide** 110.68 51 P PKiKP 08 45 30.5 -0.4
baz=279
BRIGG **Briggsdale** 111.05 49 IAMs_20 IAMs_20 09 24 35.6
comp=Z,2µm,22.0s
MNTX **Cornudas Mount** 111.41 59 P PKiKP 08 45 31.9 -0.2
baz=276
T25A **Trinidad** 111.53 53 IAMs_20 IAMs_20 09 26 32.7
comp=Z,3µm,21.0s
HPIG 111.56 64 IAMs_20 IAMs_20 09 24 37.5
comp=Z,2µm,22.0s
LBTB **Lobatse** 111.93 240 IAMs_20 IAMs_20 09 29 20.2
comp=Z,2µm,20.0s
LSZ **Lusaka** 112.27 251 IAMs_20 IAMs_20 09 26 11.0
comp=Z,3µm,22.0s
E28A **Huff** 112.34 42 IAMs_20 IAMs_20 09 26 53.9
comp=Z,2µm,21.0s
KSCO **Kaye Shedlock'** 112.61 50 IAMs_20 IAMs_20 09 31 27.0
comp=Z,3µm,20.0s
OGNE **Ogallala** 112.69 48 IAMs_20 IAMs_20 09 24 35.8
comp=Z,2µm,22.0s
MDND **Maddock** 112.72 41 IAMs_20 IAMs_20 09 33 43.5
comp=Z,2µm,21.0s
TXAR **Lajitas Array** 113.12 61 PKiKP PKiKP 08 45 35.1 -0.4
comp=Z,2.1nm,0.9s,baz=338,slow=3.0,SNR=9.2
MSTX **Muleshoe** 113.31 56 P PKiKP 08 45 35.3 -0.6
baz=278
AMTX **Amarillo** 114.07 55 IAMs_20 IAMs_20 09 25 06.0
comp=Z,2µm,22.0s
K30B **Basset** 114.07 46 IAMs_20 IAMs_20 09 30 06.0
comp=Z,3µm,20.0s
ULM **Lac du Bonnet** 114.29 37 PKiKP PKPdf 08 45 36.4 -0.7
comp=Z,6.4nm,1.1s,baz=215,slow=0.9,SNR=5.0
D32A **Dogwood Acres,** 114.60 41 IAMs_20 IAMs_20 09 30 23.4
comp=Z,2µm,20.0s
ZAIG **Zacatecas** 114.63 68 IAMs_20 IAMs_20 09 24 30.2
comp=Z,3µm,22.0s
CBKS **Cedar Bluff** 114.86 50 IAMs_20 IAMs_20 09 26 49.5
comp=Z,3µm,22.0s
NOA **NORSAR Array B** 114.92 337 PP PP 08 46 35.5 -0.9
comp=Z,1.1nm,0.9s,baz=52,slow=7.7,SNR=2.6
AGMN **Agassiz Nation** 114.96 39 IAMs_20 IAMs_20 09 29 08.8
comp=Z,3µm,22.0s
AGMN **Agassiz Nation** 114.96 39 P PKPdf 08 45 38.8 +0.4
baz=290
BGNE **Belgrade** 115.44 47 IAMs_20 IAMs_20 09 33 37.4
comp=Z,2µm,21.0s
F33A **5 Mile Ranch,** 115.48 42 IAMs_20 IAMs_20 09 39 42.9
comp=Z,2µm,18.0s
ECSD **EROS Data Cent** 115.90 44 PKiKP 08 45 39.3 -1.1
ECSD IAMs_20 IAMs_20 09 29 44.2
comp=Z,2µm,21.0s
U32A **Winter Ranch,** 115.94 53 IAMs_20 IAMs_20 09 27 06.4
comp=Z,3µm,22.0s
MOIG **Morelia** 116.07 71 IAMs_20 IAMs_20 09 27 17.7
comp=Z,2µm,21.0s
ABTX **Abilene, Hawle** 116.11 57 IAMs_20 IAMs_20 09 34 41.4
comp=Z,2µm,19.0s
ABTX **Abilene, Hawle** 116.11 57 P PKPdf 08 45 40.6 -0.5
baz=280
N33A **J Bar K, Exete** 116.12 48 IAMs_20 IAMs_20 09 35 00.6
comp=Z,3µm,20.0s
OK038 **West end E0370** 116.13 53 IAMs_20 IAMs_20 09 27 24.2
comp=Z,3µm,22.0s
B35A **Bob, Littlefor** 116.28 39 IAMs_20 IAMs_20 09 33 35.5
comp=Z,3µm,20.0s
JCT **Junction City** 116.31 59 IAMs_20 IAMs_20 09 33 21.9
comp=Z,2µm,19.0s
JCT **Junction City** 116.31 59 P PKPdf 08 45 41.0 -0.6
baz=278,SNR=7.9
KONO **Kongsberg** 116.39 336 IAMs_20 IAMs_20 09 39 05.8
comp=Z,3µm,20.0s
WMOK **Wichita Mounta** 116.44 54 PKPdf 08 45 40.7 -1.0
WMOK **Wichita Mounta** 116.44 54 IAMs_20 IAMs_20 09 26 19.8
comp=Z,2µm,22.0s
WMOK **Wichita Mounta** 116.44 54 P PKPdf 08 45 41.1 -0.6
baz=281
WMOK **Wichita Mounta** 116.44 54 PKiKP PKPdf 08 45 40.7 -1.0
OK032 **Salt Plains WL** 116.47 52 IAMs_20 IAMs_20 09 28 05.4
comp=Z,3µm,22.0s
L34A **Svendsen Farm,** 116.57 46 IAMs_20 IAMs_20 09 30 53.2
comp=Z,3µm,21.0s
CROK **Carrier** 116.72 52 IAMs_20 IAMs_20 09 28 13.9
comp=Z,3µm,22.0s
833A **Chaparral WMA,** 116.96 62 P PKPdf 08 45 41.9 -0.9
baz=278
OKC **Ostrava-Krasne** 117.10 324 AMS AMS 09 40 50.0
comp=Z,2µm,17.0s
KSU1 **Kansas State U** 117.17 49 P PKPdf 08 45 42.0 -0.9
baz=285
BLOK **Blackwell** 117.26 52 PKPdf PKPdf 08 45 42.6 -0.6
OK029 **Liberty Lake** 117.29 53 IAMs_20 IAMs_20 09 27 47.1
comp=Z,3µm,22.0s
F36A **Milaca** 117.30 41 PKPdf PKPdf 08 45 42.2 -0.7
F36A IAMs_20 IAMs_20 09 36 24.9
comp=Z,2µm,19.0s
N35A **Tabor** 117.41 47 IAMs_20 IAMs_20 09 35 33.6
comp=Z,2µm,20.0s
FNO **Franklin** 117.45 54 IAMs_20 IAMs_20 09 27 18.3
comp=Z,2µm,22.0s
MORC **Moravsky Berou** 117.48 324 IAMs_20 IAMs_20 09 40 38.2
comp=Z,2µm,19.0s
MORC **Moravsky Berou** 117.48 324 *e*PKP PKiKP 08 45 45.6 +2.3
MAUC **Maruska** 117.48 323 *e*PKPDF PKiKP 08 45 46.4 +3.1
OK048 **Pawnee Station** 117.56 52 IAMs_20 IAMs_20 09 28 37.0
comp=Z,3µm,22.0s
OK051 **E0350 and S346** 117.62 52 PKPdf 08 45 43.1 -0.8
OK051 IAMs_20 IAMs_20 09 31 42.7
comp=Z,2µm,20.0s
T35A **Sooner Cattle** 117.78 52 IAMs_20 IAMs_20 09 31 58.8
comp=Z,2µm,20.0s
JAVC **Velka Javorina** 117.78 323 *e*PKP PKiKP 08 45 46.8 +2.9
QUOK **Quay** 117.80 52 PKPdf PKPdf 08 45 41.8 -2.4
KRLC **Kraliky** 117.80 324 *e*PKPDF PKiKP 08 45 44.8 +0.9
KRLC AMS AMS 09 40 00.0
comp=Z,1µm,19.0s
KRLC **Kraliky** 117.80 324 *e*PKIKP PKiKP 08 45 44.8 +0.9
KRLC MLR MLR
comp=Z,1µm,19.0s
EYMN **Ely** 117.81 38 IAMs_20 IAMs_20 09 35 36.1
comp=Z,2µm,19.0s
EYMN **Ely** 117.81 38 P PKPdf 08 45 43.8 -0.1
baz=293
W35A **Tecumseh** 117.89 54 IAMs_20 IAMs_20 09 26 56.1
comp=Z,3µm,22.0s
OSTC **Ostas** 117.91 325 *e*PKPDF PKiKP 08 45 44.3 +0.2
OSTC **Ostas** 117.91 325 *e*PKIKP PKiKP 08 45 44.3 +0.2
DPC **Dobruska-Polom** 117.94 325 *e*PKPDF PKiKP 08 45 45.0 +0.8
DPC AMS AMS 09 39 40.0
comp=Z,900nm,16.7s
DPC **Dobruska-Polom** 117.94 325 *e*PKIKP PKiKP 08 45 45.0 +0.8
DPC MLR MLR
comp=Z,900nm,16.7s
UNM **Universidad Na** 117.98 72 IAMs_20 IAMs_20 09 31 05.3
comp=Z,3µm,20.0s
CHVC **Chvalec** 117.99 325 AMS AMS 09 43 40.0
comp=Z,1µm,21.0s
SPMN **Marine on St.** 118.00 42 IAMs_20 IAMs_20 09 37 49.4
comp=Z,2µm,19.0s
SPMN **Marine on St.** 118.00 42 P PKPdf 08 45 44.2 -0.2
baz=291
I37A **Lemond, Waseca** 118.02 43 IAMs_20 IAMs_20 09 35 42.1
comp=Z,2µm,20.0s
WHTX **Lake Whitney,** 118.05 57 PKPdf PKPdf 08 45 42.4 -2.4
WHTX IAMs_20 IAMs_20 09 35 09.6
comp=Z,2µm,19.0s
WHTX **Lake Whitney,** 118.05 57 P PKPdf 08 45 44.3 -0.5
baz=281
435B **Jarrell** 118.15 59 IAMs_20 IAMs_20 09 27 08.5
comp=Z,2µm,22.0s
435B **Jarrell** 118.15 59 P PKPdf 08 45 44.5 -0.5
baz=280
VRAC **Vranov** 118.24 323 *e*PKP PKiKP 08 45 47.2 +2.5
VRAC **Vranov** 118.24 323 PKiKP PKiKP 08 45 45.0 +0.3
VRAC **Vranov** 118.24 323 PKP PKiKP 08 45 45.0 +0.3
comp=Z,2.5nm,0.4s,baz=61,slow=3.1,SNR=2.0
KVTX **Kingsville** 118.38 62 IAMs_20 IAMs_20 09 32 59.0
comp=Z,2µm,20.0s
KRUC **Moravsky** 118.46 323 *e*PKP PKiKP 08 45 46.5 +1.4
TUL3 **Leonard** 118.58 53 P PKPdf 08 45 45.4 -0.3
baz=284
TREC **Trest** 118.90 324 AMS AMS 09 41 40.0
comp=Z,2µm,20.9s
K38A **Parkersburg** 118.91 44 IAMs_20 IAMs_20 09 36 49.9
comp=Z,2µm,19.0s
GOPC **GO Pecny, Ondr** 119.02 325 AMS AMS 09 38 10.0
comp=Z,1µm,17.3s
BRG **Berggiesshubel** 119.05 326 *e*PKP PKiKP 08 45 46.5 +0.3
BRG Amp 08 45 53.7
comp=Z,10nm,1.1s
BRG **Berggiesshubel** 119.05 326 *e*PKIKP PKiKP 08 45 46.5 +0.3
BRG 08 47 10.6
BRG S SS 09 03 37.0 +12
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG pmax pmax
comp=Z,10.0nm,1.2s
BRG MLR MLR
comp=E,1µm,21.8s
BRG MLR MLR
comp=Z,2µm,19.7s
BRG MLR MLR
comp=N,2µm,18.8s
RONA **Rosalia, Austr** 119.10 322 *i* PKiKP PKiKP 08 45 47.2 +0.7
comp=N,11nm,1.3s
RICC **Richard** 119.12 326 AMS AMS 09 38 30.0
comp=N,2µm,23.7s
PRU **Pruhonice** 119.13 325 AMS AMS 09 38 00.0
comp=N,2µm,20.9s
PRA **Prague** 119.15 325 AMS AMS 09 38 10.0
comp=N,2µm,22.7s
N38A **Joes South For** 119.18 47 IAMs_20 IAMs_20 09 38 26.2
comp=Z,2µm,20.0s
CONA **Conrad Observa** 119.27 322 *e*PKiKP PKiKP 08 45 48.8 +2.0
comp=Z,9.6nm,1.2s
P38A **Dawn** 119.31 48 IAMs_20 IAMs_20 09 35 35.1
comp=Z,2µm,21.0s
CLL **Collm** 119.36 327 *e*P Pdif 08 42 13.0 +4.4
CLL *e* 08 45 47.0
CLL *i* 08 45 50.1
CLL *e* 08 47 06.0
HSKC **Hora Svate Kat** 119.46 326 AMS AMS 09 39 10.0
comp=Z,2µm,14.6s
U38A **Gravette** 119.55 52 IAMs_20 IAMs_20 09 37 16.8
comp=Z,2µm,20.0s
ARSA **Arzberg** 119.77 322 *i* PKP PKPdf 08 45 46.2 -1.5
comp=Z,6.0nm,1.1s
HKT **Hockley** 119.78 59 PKPdf PKPdf 08 45 45.9 -2.2
HKT **Hockley** 119.78 59 PKIKP PKPdf 08 45 45.9 -2.2
HKT MLR MLR
comp=Z,2µm,19.0s
CKRC **Cesky Krumlov** 119.80 324 *e*PKPDF PKiKP 08 45 48.7 +0.9
CKRC AMS AMS 09 42 10.0
comp=Z,1µm,18.0s
CKRC **Cesky Krumlov** 119.80 324 *e*PKIKP PKiKP 08 45 48.7 +0.9
CKRC MLR MLR
comp=Z,1µm,18.0s
Z38A **Mt. Pleasant** 119.83 55 IAMs_20 IAMs_20 09 37 51.7
comp=Z,2µm,20.0s
HHAR **Hobbs** 119.94 52 IAMs_20 IAMs_20 09 29 41.1
comp=Z,2µm,22.0s
I40A **Norwalk** 119.94 42 IAMs_20 IAMs_20 09 34 18.9
comp=Z,2µm,22.0s
D41A **Chassel** 119.99 38 IAMs_20 IAMs_20 09 37 46.7
comp=Z,2µm,20.0s
S39A **Bolivar** 120.03 50 PKPdf PKPdf 08 45 47.5 -1.0
KHC **Kasperske Hory** 120.08 324 *e*PKPDF PKPdf 08 45 48.3 0.0
KHC AMS AMS 09 46 40.0
comp=Z,1µm,19.3s
KHC **Kasperske Hory** 120.08 324 ⇓ *i* PKIKP PKPdf 08 45 46.8 -1.5
KHC pmax pmax
comp=Z,40nm,1.3s
GERES **GERESS Array B** 120.15 324 PKPdf PKPdf 08 45 48.1 -0.4
GERES **GERESS Array B** 120.15 324 PKP PKPdf 08 45 47.9 -0.6
comp=Z,3.3nm,0.8s,baz=35,slow=4.9,SNR=9.4
L40A **Anamosa** 120.19 45 IAMs_20 IAMs_20 09 38 50.7
comp=Z,2µm,20.0s
MOA **Molln** 120.27 323 *i* PKiKP PKPdf 08 45 48.3 -0.4
comp=Z,7.8nm,1.4s
NRDL **Niedersach Rie** 120.27 329 *e*PKPdf PKiKP 08 45 50.1 +1.6
baz=60
SOKA **Soboth** 120.31 321 *e*PKiKP PKiKP 08 45 49.1 +0.1
comp=Z,11nm,1.3s
NATX **Nacogdoches** 120.42 57 IAMs_20 IAMs_20 09 38 44.5
comp=Z,2µm,20.0s
NATX **Nacogdoches** 120.42 57 P PKPdf 08 45 49.1 -0.3
baz=282
P40A **Paris** 120.44 48 PKPdf PKPdf 08 45 46.4 -2.8
P40A IAMs_20 IAMs_20 09 37 16.7
comp=Z,2µm,19.0s
MOX **Moxa** 120.45 327 *e*L L 09 38 35.0
comp=Z,1µm,21.3s
WET **Wettzell** 120.48 325 *e*PKPdf PKiKP 08 45 51.7 +2.5
baz=60
CLZ **Clausthal** 120.49 328 *e*PKPdf PKiKP 08 45 51.7 +2.7
baz=60
MANZ **Manzenberg** 120.51 326 *e*PKPdf PKiKP 08 45 51.8 +2.7
baz=60
RETH **Rethem/Aller,** 120.52 329 *e*PKPdf PKiKP 08 45 51.4 +2.5
baz=60
JFWS **Jewell Farm** 120.55 43 IAMs_20 IAMs_20 09 31 59.2
comp=Z,2µm,22.0s
JFWS **Jewell Farm** 120.55 43 P PKPdf 08 45 48.8 -0.5
baz=292
R40A **Maddies Statio** 120.65 49 PKPdf PKPdf 08 45 47.9 -1.7
MIAR **Mount Ida** 120.67 54 PKPdf PKiKP 08 45 50.3 +0.4
MIAR **Mount Ida** 120.67 54 P PKPdf 08 45 49.5 -0.2
baz=285
MIAR **Mount Ida** 120.67 54 PKIKP PKiKP 08 45 50.3 +0.4
BIOA **Bad Ischl, Aus** 120.72 323 *e*PKiKP PKiKP 08 45 50.0 +0.3
comp=Z,4.5nm,0.8s
TSUM **Tsumeb** 120.86 243 IAMs_20 IAMs_20 09 32 17.9
comp=Z,2µm,22.0s
N41A **Harden Midland** 120.91 46 IAMs_20 IAMs_20 09 29 21.1
comp=Z,2µm,22.0s
MGMO **Mountain Grove** 120.99 50 PKPdf PKPdf 08 45 49.1 -1.2
MGMO IAMs_20 IAMs_20 09 33 44.7
comp=Z,2µm,20.0s
I42A **Draeger Farm,** 121.08 42 IAMs_20 IAMs_20 09 36 22.9
comp=Z,2µm,19.0s
GRF **Grafenberg Arr** 121.15 326 *e*L L 09 40 38.8
comp=Z,1µm,20.5s
KBA **Koelnbreinsper** 121.18 322 *e*PKiKP PKPdf 08 45 50.4 -0.2
comp=Z,10.0nm,1.1s
MYKA **Terra Mystica** 121.20 322 *e*PKiKP PKiKP 08 45 52.2 +1.5
comp=Z,10nm,1.1s
WLAR **White Oak Lake** 121.25 54 PKPdf PKPdf 08 45 49.8 -1.2
E43A **Lone Tree Farm** 121.26 39 IAMs_20 IAMs_20 09 36 07.3
comp=Z,2µm,20.0s
X40A **Basin Creek Fa** 121.28 53 IAMs_20 IAMs_20 09 30 31.7
comp=Z,2µm,22.0s
L42A **Oliver, Polo** 121.29 44 IAMs_20 IAMs_20 09 34 28.8
comp=Z,3µm,21.0s
LESA **Schwarzleotal** 121.42 323 *e*PKiKP PKiKP 08 45 51.5 +0.4
comp=Z,9.2nm,1.0s
FCAR **Ozark Folk Cen** 121.46 52 PKPdf PKPdf 08 45 49.6 -1.6
FCAR IAMs_20 IAMs_20 09 34 49.4
comp=Z,2µm,20.0s
CCM **Cathedral Cave** 121.49 49 PKPdf PKPdf 08 45 48.8 -2.5
CCM **Cathedral Cave** 121.49 49 P PKPdf 08 45 50.7 -0.5
baz=288
CCM **Cathedral Cave** 121.49 49 PKIKP PKPdf 08 45 48.8 -2.5
WHAR **Wooly Hollow** 121.50 52 PKPdf PKPdf 08 45 51.0 -0.3
WHAR IAMs_20 IAMs_20 09 34 39.4
comp=Z,2µm,20.0s
LL01 **San Ignacio de** 121.54 149 IAMs_20 IAMs_20 09 29 20.5
comp=Z,2µm,21.0s
H43A **Windswept, Lux** 121.59 41 IAMs_20 IAMs_20 09 35 09.4
comp=Z,2µm,22.0s
Z41A **Richland Creek** 121.61 55 IAMs_20 IAMs_20 09 38 44.7
comp=Z,2µm,20.0s
ABTA **Abfaltersbach** 121.83 322 *i* PKiKP PKPdf 08 45 51.8 +0.1
comp=Z,15nm,1.1s
KASTN **Kahler Asten** 121.86 328 *e*PKPdf PKiKP 08 45 54.2 +2.5
baz=60
441A **DeRidder** 121.87 58 IAMs_20 IAMs_20 09 34 00.9
comp=Z,2µm,19.0s
K43A **Burlington** 121.94 43 IAMs_20 IAMs_20 09 39 18.8
comp=Z,2µm,20.0s
STAL **STALIGIAL** 121.94 322 IAMs_20 IAMs_20 09 41 28.3
comp=Z,2µm,22.0s
SLM **Saint Louis** 122.06 48 IAMs_20 IAMs_20 09 40 08.7
comp=Z,2µm,20.0s
HDIL **Hopedale** 122.08 46 IAMs_20 IAMs_20 09 39 27.9
comp=Z,2µm,20.0s
HDIL **Hopedale** 122.08 46 P PKPdf 08 45 51.6 -0.7
baz=291
CIMO **Cimolais** 122.08 322 IAMs_20 IAMs_20 09 41 32.9
comp=Z,2µm,22.0s
WTTA **Wattenberg** 122.12 323 *e*PKiKP PKiKP 08 45 53.3 +0.7
comp=Z,33nm,1.3s
WATA **Walderalm** 122.12 323 *i* PKiKP PKiKP 08 45 52.8 +0.3
comp=Z,28nm,1.6s
FVM **French Village** 122.13 49 IAMs_20 IAMs_20 09 31 13.7
comp=Z,3µm,22.0s
LCAR **Lake Charles** 122.16 51 PKPdf PKPdf 08 45 51.4 -1.2
LCAR IAMs_20 IAMs_20 09 31 24.9
comp=Z,2µm,22.0s
P43A **Skaggs, Pawnee** 122.24 47 IAMs_20 IAMs_20 09 37 19.4
comp=Z,2µm,20.0s
CCAR **Cane Creek** 122.28 54 PKPdf PKPdf 08 45 52.7 -0.2
CCAR IAMs_20 IAMs_20 09 31 25.2
comp=Z,2µm,20.0s
SQTA **Sankt Quirin** 122.39 323 *i* PKiKP PKiKP 08 45 55.2 +2.1
comp=Z,20nm,1.2s
MOTA **Moosalm** 122.39 323 *i* PKiKP PKiKP 08 45 55.1 +2.0
comp=Z,41nm,1.5s
L44A **Lake County Fo** 122.43 43 IAMs_20 IAMs_20 09 40 34.9
comp=Z,2µm,20.0s
L44A **Lake County Fo** 122.43 43 P PKPdf 08 45 52.4 -0.5
baz=293
PBMO **Poplar Bluff** 122.51 50 IAMs_20 IAMs_20 09 33 32.9
comp=Z,2µm,20.0s
RETA **Reutte** 122.53 324 *i* PKiKP PKiKP 08 45 53.5 +0.3
comp=Z,12nm,1.4s
HQIL **Hanson Quary C** 122.62 44 IAMs_20 IAMs_20 09 39 28.0
comp=Z,2µm,20.0s
HBAR **Harrisburg** 122.70 52 IAMs_20 IAMs_20 09 34 58.2
comp=Z,2µm,21.0s
STU **Stuttgart** 122.77 326 IAMs_20 IAMs_20 09 44 05.9
comp=Z,1µm,19.0s
I45A **Fountain** 122.78 41 IAMs_20 IAMs_20 09 35 39.7
comp=Z,3µm,21.0s
FETA **Feichten** 122.78 323 *i* PKiKP PKPdf 08 45 53.4 -0.2
comp=Z,16nm,1.0s
O44A **Mansfield** 122.81 46 IAMs_20 IAMs_20 09 36 43.4
comp=Z,2µm,20.0s
Q44A **Meyer Farm, Va** 122.86 47 IAMs_20 IAMs_20 09 38 33.0
comp=Z,2µm,21.0s
143A **Socs Landing,** 122.89 55 IAMs_20 IAMs_20 09 38 52.6
comp=Z,2µm,19.0s
GNAR **Gosnell** 123.07 51 IAMs_20 IAMs_20 09 32 14.0
comp=Z,2µm,22.0s
SIUC **Southern Illin** 123.12 49 IAMs_20 IAMs_20 09 32 16.0
comp=Z,3µm,22.0s
DAVA **Damuels** 123.14 324 *i* PKiKP PKPdf 08 45 54.2 -0.1
comp=Z,14nm,1.0s
PEBM **Pemiscott Bayo** 123.15 51 IAMs_20 IAMs_20 09 31 54.9
comp=Z,3µm,22.0s
LR05 **Currie** 123.31 148 IAMs_20 IAMs_20 09 34 16.7
comp=Z,1µm,19.0s
MET **Memphis--Engin** 123.39 52 IAMs_20 IAMs_20 09 35 28.6
comp=Z,2µm,20.0s
BTNL **Ternell** 123.40 329 *d*PKP PKiKP 08 45 55.3 +0.5
DAVOX **Davos/Dischmat** 123.40 323 PKP PKPdf 08 45 54.6 -0.3
comp=Z,17nm,1.2s,baz=343,slow=2.6,SNR=6.5
LNXT **Lenox** 123.44 51 IAMs_20 IAMs_20 09 31 52.6
comp=Z,2µm,21.0s
MEM **Membach** 123.45 329 *d*PKP PKiKP 08 45 54.8 0.0
GLMI **Grayling** 123.45 39 P PKPdf 08 45 54.7 -0.1
baz=298
BFO **Black Forest** 123.49 326 IAMs_20 IAMs_20 09 43 49.0
comp=Z,2µm,20.0s
OLIL **Olney** 123.59 47 PKPdf PKPdf 08 45 54.5 -0.7
OLIL IAMs_20 IAMs_20 09 39 23.3
comp=Z,2µm,19.0s
BHOU **Houvegnez** 123.60 329 *d*PKP PKiKP 08 45 56.2 +1.0
HALT **Halls** 123.61 51 IAMs_20 IAMs_20 09 36 28.2
comp=Z,2µm,20.0s
PLCA **Paso Flores** 123.69 149 PKP PKPdf 08 45 55.4 -0.1
comp=Z,7.4nm,1.0s,baz=225,slow=4.9,SNR=8.8
SFIN **Lafayette** 123.70 45 IAMs_20 IAMs_20 09 37 15.7
comp=Z,2µm,20.0s
SFIN **Lafayette** 123.70 45 P PKPdf 08 45 54.8 -0.6
baz=293
VBMS **Vicksburg** 123.74 55 P PKPdf 08 45 55.1 -0.6
baz=285
TUE **Stuetta** 123.87 323 IAMs_20 IAMs_20 09 48 11.3
comp=Z,2µm,18.0s
P46A **Rosedale** 123.91 46 PKPdf PKPdf 08 45 56.2 +0.1
P46A IAMs_20 IAMs_20 09 36 32.5
comp=Z,3µm,22.0s
BCLA **Clavier** 123.92 329 *d*PKP PKiKP 08 45 59.3 +3.5
WLF **Walferdange** 123.93 328 *d*PKP PKiKP 08 46 00.8 +5.0
OXF **Oxford** 123.99 52 IAMs_20 IAMs_20 09 32 05.3
comp=Z,2µm,22.0s
OXF **Oxford** 123.99 52 P PKPdf 08 45 55.2 -0.9
baz=288
J47A **Sunmer** 124.05 41 IAMs_20 IAMs_20 09 36 51.4
comp=Z,3µm,22.0s
BGES **Gesves** 124.06 329 *d*PKP PKiKP 08 45 56.4 +0.3
Y45A **Yeager Farm, C** 124.07 53 IAMs_20 IAMs_20 09 32 29.7
comp=Z,2µm,21.0s
RCHB **Rochefort** 124.12 329 *d*PKP PKiKP 08 45 57.1 +0.9
USIN **University of** 124.19 48 IAMs_20 IAMs_20 09 40 14.1
comp=Z,2µm,20.0s
BMRD **Maredsous** 124.27 329 *d*PKP PKiKP 08 45 56.9 +0.4
EKA **Eskdalemuir Ar** 124.37 338 PKP PKiKP 08 45 56.7 +0.2
comp=Z,1.7nm,0.6s,baz=15,slow=3.8,SNR=4.8
EKA PP PP 08 47 39.4 -1.9
comp=Z,5.0nm,1.0s,baz=54,slow=8.4,SNR=4.1
N47A **Urbana** 124.48 44 PKPdf PKPdf 08 45 56.1 -0.8
N47A IAMs_20 IAMs_20 09 36 14.2
comp=Z,2µm,21.0s
DOU **Dourbes** 124.48 329 *d*PKP PKiKP 08 45 57.6 +0.7
BLO **Bloomington** 124.57 46 IAMs_20 IAMs_20 09 36 52.1
comp=Z,3µm,21.0s
WVT **Waverly** 124.70 50 P PKPdf 08 45 56.5 -1.0
baz=290
146A **Union** 124.81 55 IAMs_20 IAMs_20 09 40 37.4
comp=Z,1µm,18.0s
346A **Big Creek Wild** 124.82 56 IAMs_20 IAMs_20 09 40 55.8
comp=Z,1µm,20.0s
CCIG **Comitan** 124.85 75 IAMs_20 IAMs_20 09 31 30.6
comp=Z,2µm,21.0s
L48A **N Adams** 124.88 42 PKPdf PKPdf 08 45 56.6 -1.1
L48A IAMs_20 IAMs_20 09 39 13.6
comp=Z,2µm,20.0s
PLAL **Pickwick Lake** 124.89 52 IAMs_20 IAMs_20 09 36 34.0
comp=Z,1µm,20.0s
T47A **Sharon Grove** 124.95 49 PKPdf PKPdf 08 45 57.1 -0.8
T47A IAMs_20 IAMs_20 09 32 37.4
comp=Z,2µm,22.0s
WCI **Wyandotte Cave** 125.10 47 PKPdf PKPdf 08 45 57.0 -1.2
WCI **Wyandotte Cave** 125.10 47 IAMs_20 IAMs_20 09 38 57.1
comp=Z,2µm,20.0s
WCI **Wyandotte Cave** 125.10 47 P PKPdf 08 45 57.1 -1.0
baz=292
WCI **Wyandotte Cave** 125.10 47 PKIKP PKPdf 08 45 57.0 -1.2
WCI MLR MLR
comp=Z,2µm,20.0s
O48B **Farmland** 125.11 44 IAMs_20 IAMs_20 09 38 01.9
comp=Z,2µm,21.0s
O48B **Farmland** 125.11 44 P PKPdf 08 45 57.5 -0.7
baz=295
BI05 **Punta Hualpn** 125.11 144 IAMs_20 IAMs_20 09 31 51.1
comp=Z,2µm,21.0s
AAM **Ann Arbor** 125.24 42 P PKPdf 08 45 57.7 -0.6
baz=297
P48A **Milroy** 125.24 45 IAMs_20 IAMs_20 09 38 21.6
comp=Z,2µm,21.0s
Z47A **Carrollton** 125.44 54 IAMs_20 IAMs_20 09 33 56.0
comp=Z,2µm,21.0s
P49A **Miami Univ. Ec** 125.71 45 IAMs_20 IAMs_20 09 42 01.1
comp=Z,2µm,19.0s
P49A **Miami Univ. Ec** 125.71 45 P PKPdf 08 45 58.9 -0.5
baz=294
X48A **Hartselle** 125.86 52 IAMs_20 IAMs_20 09 41 03.9
comp=Z,1µm,21.0s
R49A **Shelbyville** 125.89 47 IAMs_20 IAMs_20 09 39 14.9
comp=Z,2µm,20.0s
SCHQ **Schefferville** 125.97 21 PKP PKPdf 08 45 59.0 -0.4
comp=Z,4.4nm,1.0s,baz=347,slow=2.9,SNR=4.8
M50A **Fremont** 126.05 42 IAMs_20 IAMs_20 09 39 58.7
comp=Z,2µm,21.0s
U49A **Red Boiling Sp** 126.12 49 IAMs_20 IAMs_20 09 38 08.3
comp=Z,2µm,20.0s
BNI **Bardonecchia** 126.21 323 PKPdf PKPdf 08 45 58.5 -1.8
BNI IAMs_20 IAMs_20 09 44 05.1
comp=Z,2µm,20.0s
BNI **Bardonecchia** 126.21 323 PKIKP PKPdf 08 45 58.5 -1.8
LRAL **Lakeview Retre** 126.35 53 PKPdf PKPdf 08 46 00.1 -0.7
LRAL IAMs_20 IAMs_20 09 34 22.0

	comp=Z,2µm,22.0s							
LRAL	**Lakeview Retre**	126.35	53	P	PKPdf	08 45 60.0	-0.7	
	baz=288,SNR=9.8							
SWET	**Sewanee**	126.46	51	IAMs_20	IAMs_20	09 38 16.7		
	comp=Z,2µm,20.0s							
R50A	**Paris**	126.50	46	IAMs_20	IAMs_20	09 39 52.1		
	comp=Z,2µm,20.0s							
Y49A	**Blount Mountai**	126.55	52	IAMs_20	IAMs_20	09 33 45.2		
	comp=Z,2µm,22.0s							
ACSO	**Alum Creek Sta**	126.62	44	IAMs_20	IAMs_20	09 35 23.0		
	comp=Z,2µm,22.0s							
ACSO	**Alum Creek Sta**	126.62	44	P	PKPdf	08 46 00.5	-0.6	
	baz=296							
T50A	**Nancy**	126.63	48	IAMs_20	IAMs_20	09 42 41.6		
	comp=Z,2µm,19.0s							
BRAL	**Brewton**	126.86	56	P	PKPdf	08 46 01.2	-0.6	
	baz=287							
P51A	**Williamsport**	126.90	45	IAMs_20	IAMs_20	09 39 24.3		
	comp=Z,2µm,21.0s							
FPAL	**Fort Paine**	126.94	51	IAMs_20	IAMs_20	09 34 01.5		
	comp=Z,2µm,22.0s							
250A	**Grady**	127.26	54	IAMs_20	IAMs_20	09 47 21.3		
	comp=Z,1µm,19.0s							
S51A	**Beattyville**	127.29	47	PKPdf	PKPdf	08 46 01.8	-0.6	
P52A	**Corning**	127.47	44	P	PKPdf	08 46 02.3	-0.4	
	baz=297							
X51A	**Calhoun**	127.52	51	IAMs_20	IAMs_20	09 34 31.7		
	comp=Z,2µm,22.0s							
M53A	**WI Miller and**	127.61	41	P	PKPdf	08 46 02.4	-0.5	
	baz=300							
Q52A	**Bidwell**	127.68	45	IAMs_20	IAMs_20	09 38 32.0		
	comp=Z,2µm,20.0s							
Z51A	**Franklin**	127.70	52	IAMs_20	IAMs_20	09 34 19.8		
	comp=Z,2µm,22.0s							
ERPA	**Erie**	127.71	40	IAMs_20	IAMs_20	09 43 32.4		
	comp=Z,2µm,19.0s							
ERPA	**Erie**	127.71	40	P	PKPdf	08 46 02.9	-0.2	
	baz=301							
TZTN	**Tazewell**	127.77	48	IAMs_20	IAMs_20	09 41 47.9		
	comp=Z,2µm,19.0s							
TZTN	**Tazewell**	127.77	48	P	PKPdf	08 46 02.9	-0.4	
	baz=294							
SNET	**Serv Nac Est T**	127.80	78	IAMs_20	IAMs_20	09 33 29.7		
	comp=Z,2µm,20.0s							
O53A	**New Philadelph**	127.82	43	IAMs_20	IAMs_20	09 41 34.4		
	comp=Z,2µm,20.0s							
O53A	**New Philadelph**	127.82	43	P	PKPdf	08 46 03.1	-0.2	
	baz=298							
DELO	**Deloro Mine**	127.89	36	IAMs_20	IAMs_20	09 33 45.4		
	comp=Z,2µm,22.0s							
BO01	**Tunca**	127.98	144	IAMs_20	IAMs_20	09 38 04.1		
	comp=Z,1µm,20.0s							
451A	**Vernon**	128.10	56	IAMs_20	IAMs_20	09 40 29.7		
	comp=Z,1µm,20.0s							
TEIG	**Tepich**	128.12	69	IAMs_20	IAMs_20	09 34 28.7		
	comp=Z,2µm,22.0s							
MT01	**Popeta**	128.25	143	IAMs_20	IAMs_20	09 33 49.3		
	comp=Z,2µm,20.0s							
152A	**Waverly Hall**	128.28	53	IAMs_20	IAMs_20	09 35 23.2		
	comp=Z,2µm,22.0s							
Y52A	**Lilburn**	128.38	51	IAMs_20	IAMs_20	09 43 33.6		
	comp=Z,2µm,20.0s							
WVNY	**West Valley, N**	128.44	39	PKPdf	PKPdf	08 46 03.8	-0.7	
WVNY				IAMs_20	IAMs_20	09 41 46.5		
	comp=Z,2µm,22.0s							
MT09	**Talagante**	128.47	143	IAMs_20	IAMs_20	09 33 46.0		
	comp=Z,2µm,20.0s							
KEST	**Kesra**	128.78	311	IAMs_20	IAMs_20	09 54 24.1		
	comp=Z,1µm,20.0s							
WBO	**Williamsburg**	128.97	35	IAMs_20	IAMs_20	09 40 05.6		
	comp=Z,2µm,21.0s							
GOGA	**Godfrey**	129.01	52	P	PKPdf	08 46 05.8	+0.1	
	baz=291,SNR=9.6							
MCWV	**Mont Chateau**	129.02	43	IAMs_20	IAMs_20	09 44 26.3		
	comp=Z,2µm,20.0s							
MCWV	**Mont Chateau**	129.02	43	P	PKPdf	08 46 05.3	-0.4	
	baz=299							
U54A	**Nelsons Funny**	129.04	47	IAMs_20	IAMs_20	09 38 34.6		
	comp=Z,2µm,20.0s							
LDAQ	**Lac Daran**	129.18	30	IAMs_20	IAMs_20	09 38 04.7		
	comp=Z,2µm,20.0s							
L56A	**Greenwood**	129.24	39	IAMs_20	IAMs_20	09 36 20.6		
	comp=Z,2µm,21.0s							
553A	**Crawfordville**	129.31	56	IAMs_20	IAMs_20	09 43 24.8		
	comp=Z,2µm,20.0s							
154A	**Montrose**	129.58	53	IAMs_20	IAMs_20	09 36 44.4		
	comp=Z,2µm,22.0s							
LONY	**Lake Ozonia**	129.59	35	IAMs_20	IAMs_20	09 41 54.3		
	comp=Z,1µm,20.0s							
LONY	**Lake Ozonia**	129.59	35	P	PKPdf	08 46 06.7	+0.2	
	baz=308							
TIGA	**Tifton**	129.60	54	IAMs_20	IAMs_20	09 37 48.1		
	comp=Z,2µm,21.0s							
TIGA	**Tifton**	129.60	54	P	PKPdf	08 46 06.8	-0.2	
	baz=290							
TGUH	**Tegucigalpa,Un**	129.68	77	IAMs_20	IAMs_20	09 36 35.5		
	comp=Z,1µm,20.0s							
BLA	**Blacksburg**	129.76	46	P	PKPdf	08 46 07.0	-0.1	
	baz=297							
SSPA	**Standing Stone**	129.83	41	P	PKPdf	08 46 07.4	+0.3	
	baz=302							
M57A	**Sunshine Farm,**	129.95	40	PKPdf	PKiKP	08 46 07.9	-0.3	
KMSC	**Kings Mountain**	129.98	49	P	PKPdf	08 46 07.3	-0.3	
	baz=294,SNR=6.9							
BINY	**Binghamton**	130.18	38	P	PKPdf	08 46 08.1	+0.3	
	baz=305							
CNGN	**Cerro Negro**	130.31	79	IAMs_20	IAMs_20	09 32 03.4		
	comp=Z,2µm,21.0s							
255A	**Hazlehurst**	130.32	53	IAMs_20	IAMs_20	09 35 05.1		
	comp=Z,2µm,22.0s							
J59A	**Piesco**	130.33	36	IAMs_20	IAMs_20	09 35 34.1		
	comp=Z,2µm,22.0s							
T57A	**Hurt**	130.69	46	PKPdf	PKPdf	08 46 07.8	-1.1	
ACCN	**Adirondack Com**	130.86	35	IAMs_20	IAMs_20	09 35 51.0		
	comp=Z,2µm,19.0s							
CO05	**La Serena**	130.94	139	IAMs_20	IAMs_20	09 38 49.9		
	comp=Z,1µm,19.0s							
W57A	**Gilead**	130.97	48	IAMs_20	IAMs_20	09 45 43.6		
	comp=Z,2µm,19.0s							
456A	**Hilliard**	131.10	54	IAMs_20	IAMs_20	09 46 02.0		
	comp=Z,2µm,20.0s							
656A	**Willston**	131.13	56	IAMs_20	IAMs_20	09 41 56.1		
	comp=Z,1µm,20.0s							
MVL	**Millersville**	131.16	41	PKPdf	PKPdf	08 46 09.4	-0.3	
LBNH	**Lisbon**	131.31	34	P	PKiKP	08 46 10.3	-0.5	
	baz=310							
CBN	**Corbin Frederi**	131.41	43	IAMs_20	IAMs_20	09 38 31.8		
	comp=Z,2µm,22.0s							
CBN	**Corbin Frederi**	131.41	43	P	PKPdf	08 46 10.3	+0.1	
	baz=300							
257A	**Skidaway Islan**	131.45	52	IAMs_20	IAMs_20	09 42 42.0		
	comp=Z,2µm,22.0s							
J61A	**Chester**	131.53	35	IAMs_20	IAMs_20	09 39 21.6		
	comp=Z,2µm,22.0s							
DUNO	**Dulce Nombre,**	131.54	82	IAMs_20	IAMs_20	09 32 32.2		
	comp=Z,2µm,22.0s							
NHSC	**New Hope**	131.68	51	IAMs_20	IAMs_20	09 37 20.7		
	comp=Z,2µm,22.0s							
NHSC	**New Hope**	131.68	51	P	PKPdf	08 46 10.7	-0.2	
	baz=294							
WUPA	**West Chester U**	131.68	40	IAMs_20	IAMs_20	09 41 44.3		
	comp=Z,2µm,21.0s							
X58A	**Rowland**	131.71	49	PKPdf	PKPdf	08 46 10.8	0.0	
TRNY	**Table Rock, Ra**	131.87	38	PKPdf	PKPdf	08 46 11.1	+0.1	
LCO	**Las Campanas**	131.89	139	PKPdf	PKPdf	08 46 10.1	-1.7	
LCO	**Las Campanas**	131.89	139	PKiKP	PKPdf	08 46 10.1	-1.7	
T59A	**Double "B" Far**	131.90	45	PKPdf	PKPdf	08 46 08.7	-2.5	
L61B	**Northampton**	132.01	36	P	PKPdf	08 46 10.8	-0.4	
	baz=308							
PKME	**Peaks-Kenny Pk**	132.02	31	P	PKPdf	08 46 11.5	+0.3	
	baz=314							
K62A	**Royalston**	132.13	35	IAMs_20	IAMs_20	09 39 42.8		
	comp=Z,2µm,22.0s							
PAL	**Palisades**	132.14	38	P	PKPdf	08 46 11.4	-0.1	
	baz=306							
AC05	**El Transito**	132.28	139	IAMs_20	IAMs_20	09 36 20.1		
	comp=Z,1µm,19.0s							
QUA2	**Belchertown**	132.31	36	IAMs_20	IAMs_20	09 40 01.4		
	comp=Z,2µm,20.0s							
WSPT	**Westport, CT**	132.40	38	IAMs_20	IAMs_20	09 46 00.9		
	comp=Z,2µm,20.0s							
DWPF	**Disney Wildern**	132.45	58	P	PKPdf	08 46 12.2	-0.3	
	baz=288							
CNNC	**Cliffs of the**	132.47	47	P	PKPdf	08 46 12.0	-0.3	
	baz=298							
SOR	**Soroa**	132.49	65	IAMs_20	IAMs_20	09 37 23.1		
	comp=Z,2µm,22.0s							
COVE	**Coope Vega, Sa**	132.61	81	IAMs_20	IAMs_20	09 33 25.3		
	comp=Z,2µm,22.0s							
HRV	**Adam Dziewonsk**	132.62	35	IAMs_20	IAMs_20	09 42 37.6		
	comp=Z,1µm,21.0s							
HRV	**Adam Dziewonsk**	132.62	35	P	PKPdf	08 46 12.6	+0.2	
	baz=310							
UCCT	**U. Connecticut**	132.68	36	IAMs_20	IAMs_20	09 39 50.3		
	comp=Z,2µm,20.0s							
BCX	**Boston College**	132.95	35	IAMs_20	IAMs_20	09 43 18.4		
	comp=Z,2µm,20.0s							
LCR2	**La Lucha 2**	133.01	83	IAMs_20	IAMs_20	09 33 26.0		
	comp=Z,2µm,22.0s							
PEZE	**Perez Zeledon,**	133.34	83	IAMs_20	IAMs_20	09 33 23.6		
	comp=Z,2µm,22.0s							
060A	**Indiantown**	133.69	58	IAMs_20	IAMs_20	09 39 36.0		
	comp=Z,2µm,22.0s							
CAMR	**Camarioca**	133.90	64	IAMs_20	IAMs_20	09 37 49.3		
	comp=Z,2µm,22.0s							
CDITO	**Canoas**	134.13	84	IAMs_20	IAMs_20	09 39 30.5		
	comp=Z,2µm,20.0s							
AC02	**Maricunga**	134.37	138	PKPdf	PKPdf	08 46 14.9	-1.9	
PB14	**IPOC Station P**	134.91	134	PKPdf	PKPdf	08 46 13.2	-4.4	
GO02	**Mina Guanaco**	135.14	136	PKPdf	PKPdf	08 46 15.7	-2.3	
MCRA	**Macar, Loja**	135.45	103	PKPdf	PKPdf	08 46 17.4	-1.1	
ESDC	**Sonseca Array**	135.74	323	PKPdf	PKiKP	08 46 22.4	+2.4	
ESDC	**Sonseca Array**	135.74	323	PKP	PKPdf	08 46 19.0	+0.6	
	comp=Z,4.0nm,1.2s,baz=34,slow=3.5,SNR=5.8							
ESDC				PP	PP	08 48 54.8	-1.0	
	comp=Z,3.2nm,1.2s,baz=41,slow=7.4,SNR=5.4							
NNA	**Nana**	136.04	115	PKPdf	PKPdf	08 46 19.2	-0.4	
NNA	**Nana**	136.04	115	IAMs_20	IAMs_20	09 42 21.4		
	comp=Z,1µm,19.0s							
NNA	**Nana**	136.04	115	*d* iPKIKP	PKPdf	08 46 19.3	-0.4	
PB15	**IPOC Station P**	136.46	134	PKPdf	PKPdf	08 46 19.7	-0.7	
MVO	**Moncorvo**	136.47	327	*e*LQ	LQ	09 27 02.3		
MVO				*e*LR	LR	09 36 54.2		
	comp=Z,892nm,18.0s							
PGAV	**Gavieira, Arco**	136.55	329	*e*LR	LR	09 35 29.7		
	comp=Z,792nm,20.0s							
BCIP	**Isla Barro Col**	137.13	83	IAMs_20	IAMs_20	09 35 18.1		
	comp=Z,2µm,22.0s							
LVC	**Limon Verde**	137.23	133	PKPdf	PKPdf	08 46 18.8	-3.3	
LVC	**Limon Verde**	137.23	133	PKIKP	PKPdf	08 46 18.8	-3.3	
MTE	**Manteigas**	137.29	327	*e*LQ	LQ	09 28 28.3		
MTE				*e*LR	LR	09 37 17.9		
	comp=Z,856nm,20.0s							
PB09	**IPOC Station P**	137.49	132	IAMs_20	IAMs_20	09 35 04.2		
	comp=Z,2µm,18.0s							
TA01	**Diego Aracena**	137.52	130	PKPdf	PKPdf	08 46 21.6	-0.5	
TA02	**Huaiquique**	137.73	130	PKPdf	PKiKP	08 46 23.7	-0.8	
PMRV	**Marv??o**	137.88	326	*e*LR	LR	09 36 45.5		
	comp=Z,994nm,20.0s							
PB12	**IPOC Station P**	138.51	127	PKPdf	PKPdf	08 46 22.0	-2.2	
GO01	**Chusmiza**	138.79	130	PKPdf	PKPdf	08 46 22.3	-2.8	
PB16	**IPOC Station P**	139.31	128	PKPdf	PKPdf	08 46 21.4	-4.8	
PVAQ	**Vaqueiros**	139.44	324	*e*LR	LR	09 37 10.6		
	comp=Z,1µm,20.0s							
GTBY	**Guantanamo Bay**	140.32	66	IAMs_20	IAMs_20	09 44 36.5		
	comp=Z,1µm,20.0s							
CZSB	**Cruzeiro do Su**	141.38	111	PKPdf	PKPdf	08 46 27.8	-1.6	
LPAZ	**La Paz**	141.53	126	PKIKP	PKPdf	08 46 25.3	-5.0	
TOA0	**Torodi Ar. Sit**	141.67	283	PKPdf	PKPdf	08 46 25.2	-4.6	
TORD	**Torodi Ar. Bea**	141.67	283	PKhKP	PKPpre	08 46 25.2		
	comp=Z,1nm,1.1s,baz=62,slow=4.4,SNR=24							
CPUP	**Villa Florida**	141.76	149	IAMs_20	IAMs_20	09 56 01.6		
	comp=Z,2µm,19.0s							
CPUP	**Villa Florida**	141.76	149	PKhKP	PKPpre	08 46 23.6		
	comp=Z,10nm,1.0s,baz=240,slow=4.8,SNR=5.2							
ROSC	**El Rosal**	142.47	90	PKPdf	PKPdf	08 46 30.3	-1.5	
ROSC	**El Rosal**	142.47	90	PKIKP	PKPdf	08 46 30.3	-1.5	
ROSC	**El Rosal**	142.47	90	PKP	PKPdf	08 46 30.6	-1.2	
	comp=Z,14nm,0.8s,baz=319,slow=2.9,SNR=10							
BBSR	**BB Station**	143.24	42	IAMs_20	IAMs_20	09 50 58.8		
	comp=Z,2µm,20.0s							
SDDR	**Presa de Saban**	144.04	66	PKPdf	PKPab	08 46 31.1	-0.3	
SC01	**Santiago de lo**	144.43	65	PKPdf	PKPab	08 46 32.6	-0.2	
TBTG	**Tabatinga, AM**	145.16	107		PKPbc	08 46 33.3	-2.3	
SDV	**Santo Domingo**	146.22	84	IAMs_20	IAMs_20	09 46 11.1		
	comp=Z,1µm,20.0s							
PCDR	**Punta Cana, DR**	146.82	66	IAMs_20	IAMs_20	09 57 00.7		
	comp=Z,2µm,20.0s							
TRCB	**Terra Rica**	147.03	152	PKPbc	PKPdf	08 46 39.8	+0.8	
AQDB	**Aquidauana**	147.37	145		PKPdf	08 46 40.4	+0.8	
CRPR	**Cabo Rojo, PR**	148.12	66		PKPdf	08 46 42.0	+1.2	
MLPR	**Magueyes Islan**	148.19	66	PKPdf	PKPdf	08 46 39.5	-1.4	
MLPR				IAMs_20	IAMs_20	09 46 31.1		
	comp=Z,1µm,22.0s							
KIC	**Kosan Boka**	148.31	272	*e*PKIKP	PKPbc	08 46 44.9	+0.2	
	comp=Z,351nm,1.1s							
AOPR	**Arecibo Observ**	148.34	65	PKPbc	PKPbc	08 46 43.5	-1.2	
SPB	**Sao Paulo**	148.38	161	IAMs_20	IAMs_20	09 57 18.1		
	comp=Z,2µm,19.0s							
DBIC	**Dimbokro**	148.43	272	PKPab	PKPbc	08 46 45.0	0.0	
DBIC				IAMs_20	IAMs_20	09 59 08.9		
	comp=Z,2µm,19.0s							
DBIC	**Dimbokro**	148.43	272	PKP2	PKPbc	08 46 45.0	0.0	
DBIC	**Dimbokro**	148.43	272	PKPbc	PKPbc	08 46 44.5	-0.6	
	comp=Z,190nm,1.1s,baz=86,slow=2.7,SNR=74							
LIC	**Lamto**	148.59	271	*e*PKIKP	PKPbc	08 46 44.7	-0.7	
	comp=Z,432nm,0.9s							
TIC	**Toumodi**	148.59	272	*e*PKIKP	PKPbc	08 46 44.7	-0.8	
	comp=Z,185nm,0.9s							
BAUV	**El Baul**	148.78	83	IAMs_20	IAMs_20	09 44 19.9		
	comp=Z,2µm,20.0s							
SAML	**Samuel**	149.46	120	PKPdf	PKPdf	08 46 42.4	-0.8	
SAML	**Samuel**	149.46	120	PKHKP	PKPpre	08 46 42.4		
VILB	**Vilhena**	149.70	129	PKPdf	PKPdf	08 46 43.3	-0.3	
VILB				IAMs_20	IAMs_20	10 04 26.2		
	comp=Z,1µm,19.0s							
SABA	**Saba**	151.74	64	IAMs_20	IAMs_20	09 56 28.8		
	comp=Z,1µm,20.0s							
SMRT	**St. Maarten**	151.74	63	IAMs_20	IAMs_20	09 53 00.7		
	comp=Z,1µm,21.0s							
SEUS	**St. Eustatius**	152.01	64	IAMs_20	IAMs_20	09 44 37.2		
	comp=Z,1µm,21.0s							
GDHS	**Morne Mazeau,**	153.51	66	PKPdf	PKPdf	08 46 47.0	-2.3	
GDHS				PKPab	PKPab	08 47 09.2	-0.1	
ABD	**La Joyeuse, An**	153.70	66	IAMs_20	IAMs_20	09 48 00.0		
	comp=Z,1µm,22.0s							
CBE	**Ff, Capester**	153.72	66	IAMs_20	IAMs_20	09 49 22.7		
	comp=Z,2µm,21.0s							
MAGL	**Barre de l'ile**	154.06	66	IAMs_20	IAMs_20	09 49 20.6		
	comp=Z,2µm,22.0s							
GDSD	**La Dsirade Is**	154.13	66	IAMs_20	IAMs_20	09 43 53.5		
	comp=Z,1µm,21.0s							
MACA	**Manacapuru-AM**	154.18	111	PKPdf	PKPdf	08 46 47.7	-2.6	
GRGR	**Grenville**	154.67	75	IAMs_20	IAMs_20	10 00 43.7		
	comp=Z,1µm,21.0s							
BIM	**Bigot**	154.68	69	IAMs_20	IAMs_20	09 51 02.5		
	comp=Z,2µm,22.0s							
ILAM	**Ilet Lapin Mar**	154.79	69	IAMs_20	IAMs_20	10 09 20.2		
	comp=Z,1µm,22.0s							
MPOM	**Morne Pois Mar**	154.89	70	IAMs_20	IAMs_20	09 51 18.1		
	comp=Z,1µm,22.0s							
BDFB	**Brasilia**	155.37	153	PKPdf	PKPdf	08 46 50.6	-1.4	
BDFB	**Brasilia**	155.37	153	PKIKP	PKPdf	08 46 50.6	-1.4	
BDFB	**Brasilia**	155.37	153	PKP	PKPdf	08 46 51.4	-0.6	
	comp=Z,21nm,1.2s,baz=120,slow=1.7,SNR=8.6							
BOAV	**Boa Vista**	155.86	98	PKPdf	PKPdf	08 46 50.1	-2.5	
SACV	**Santiago Islan**	164.63	305	PKPdf	PKPdf	08 46 58.7	-3.6	

NEIC ***26*** *08:34:47.9±1.0,56.4N±0.1×148.6W±0.0.05,h20km±10km, ML3.1/48,ML3.1(AEIC),Error ellipse: s-maj=16.3km s-min=3.6km az=173.0*

AEIC ***26*** *08:34:49.1±1.5,56.2N±0.1×148.6W±0.1,h6km±8km, Error ellipse: s-maj=15.8km s-min=9.2km az=172.0*

ISC 26 08:34:45.9±2.1,56.4N±0.1×148.64W±0.05,h10km,n105,
σ1§**01**/114,**Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
KDAK	**Kodiak Island**	**2.58**	**305**		**Pn**	**08**	**35**	**28.6**	**+1.0**
KDAK					**Sn**	**08**	**35**	**57.4**	**-1.6**
OHAK	**Old Harbor**	**2.70**	**290**		**Pn**	**08**	**35**	**29.3**	**+0.1**
OHAK					**Sn**	**08**	**36**	**00.9**	**-1.0**
OHAK	**Old Harbor**	**2.70**	**290**	P	**Pn**	**08**	**35**	**29.5**	**+0.3**
	baz=109								
OHAK				S	**Sn**	**08**	**36**	**00.0**	**-1.9**
	baz=109								
SYI	**Shuyak Island**	**3.03**	**320**		**Pn**	**08**	**35**	**34.4**	**+0.6**
SYI					**Sn**	**08**	**36**	**09.7**	**-0.3**
Q20K	**Shuyak Island**	**3.03**	**320**	P	**Pn**	**08**	**35**	**34.5**	**+0.7**
	baz=138								
Q20K				S	**Sn**	**08**	**36**	**09.5**	**-0.5**
	baz=138								

Q23K	**Middleton Isla**	**3.31**	**21**		**Pn**	**08 35 36.6**	**-1.0**	
Q23K				IAML		08 36 24.5		
	comp=N,83nm,1.1s							
Q23K	**Middleton Isla**	**3.31**	**21**	P	**Pn**	**08 35 38.1**	**+0.5**	
	baz=201							
CNPM	**China Poot**	**3.46**	**337**		**Pn**	**08 35 40.7**	**+0.9**	
CNPM					**Sn**	**08 36 21.1**	**+0.4**	
BRSE	**Bradley Lake S**	**3.56**	**343**		**Pn**	**08 35 41.9**	**+0.7**	
BRSE	**Bradley Lake S**	**3.56**	**343**	P	**Pn**	**08 35 41.9**	**+0.7**	
	baz=161							
BRLK	**Bradley Lake**	**3.61**	**342**		**Pn**	**08 35 42.2**	**+0.4**	
BRLK					**Sn**	**08 36 23.4**	**-1.1**	
P23K	**Montague Islan**	**3.70**	**10**		**Pn**	**08 35 43.3**	**+0.3**	
P23K					**Sn**	**08 36 24.4**	**-2.2**	
P23K	**Montague Islan**	**3.70**	**10**	P	**Pn**	**08 35 43.3**	**+0.3**	
	baz=190							
P23K				S	**Sn**	**08 36 24.4**	**-2.2**	
	baz=190							
Q19K	**Cape Douglas,**	**3.72**	**316**	Pn	**Pn**	**08 35 42.6**	**-0.7**	
SEW	**Seward**	**3.77**	**354**		**Pn**	**08 35 44.3**	**+0.3**	
SEW	**Seward**	**3.77**	**354**	P	**Pn**	**08 35 44.3**	**+0.3**	
	baz=173							
P19K	**Oil Pt**	**4.10**	**325**		**Pn**	**08 35 50.4**	**+1.9**	
P19K				IAML		08 36 41.9		
	comp=N,25nm,0.6s							
P19K				IAML		08 36 42.8		
	comp=E,29nm,1.1s							
P19K	**Oil Pt**	**4.10**	**325**	P	**Pn**	**08 35 50.3**	**+1.7**	
	baz=142							
O22K	**Cooper Landing**	**4.17**	**353**		**Pn**	**08 35 49.6**	**+0.1**	
O22K				IAML		08 36 49.4		
	comp=E,40nm,0.8s							
O22K	**Cooper Landing**	**4.17**	**353**	P	**Pn**	**08 35 50.1**	**+0.7**	
	baz=171							
HIN	**Hinchinbrook I**	**4.20**	**15**		**Pn**	**08 35 50.4**	**+0.5**	
HIN				IAML		08 36 49.7		
	comp=E,28nm,1.0s							
KAIM	**Kayak Island**	**4.21**	**30**		**Pn**	**08 35 50.7**	**+0.6**	
KAIM	**Kayak Island**	**4.21**	**30**	P	**Pn**	**08 35 50.3**	**+0.3**	
	baz=212							
SLKM	**Skilak Lake**	**4.24**	**349**		**Pn**	**08 35 51.0**	**+0.6**	
O20K	**Slope Mountain**	**4.28**	**332**		**Pn**	**08 35 51.8**	**+0.7**	
O20K	**Slope Mountain**	**4.28**	**332**	P	**Pn**	**08 35 51.8**	**+0.7**	
	baz=149							
IVE	**Iliamna Volcan**	**4.33**	**330**		**Pn**	**08 35 52.6**	**+0.8**	
ILSW	**Iliamna Southw**	**4.34**	**329**	Pn	**Pn**	**08 35 52.3**	**+0.3**	
ILSW				IAML		08 36 49.0		
	comp=N,11nm,1.0s							
EYAK	**Cordova Ski Ar**	**4.46**	**19**		**Pn**	**08 35 54.2**	**+0.7**	
EYAK	**Cordova Ski Ar**	**4.46**	**19**	P	**Pn**	**08 35 54.1**	**+0.6**	
	baz=200							
SUCK	**Suckling Hills**	**4.52**	**33**		**Pn**	**08 35 55.3**	**+1.0**	
SUCK				IAML		08 36 46.1		
	comp=E,16nm,1.1s							
SUCK				IAML		08 36 53.0		
	comp=N,15nm,0.5s							
FID	**Port Fidalgo**	**4.54**	**14**		**Pn**	**08 35 54.2**	**-0.4**	
FID				IAML		08 36 46.8		
	comp=N,15nm,0.8s							
FID				IAML		08 36 52.4		
	comp=E,17nm,1.1s							
RAGM	**Ragged Mountai**	**4.54**	**26**		**Pn**	**08 35 54.2**	**-0.4**	
NICHA	**Nichawak Mount**	**4.60**	**30**		**Pn**	**08 35 56.1**	**+0.7**	
GLI	**Glacier Island**	**4.60**	**9**		**Pn**	**08 35 55.9**	**+0.5**	
GLI				IAML		08 37 30.6		
	comp=N,24nm,1.0s							
GLI			

K17K	**Iditarod**	**8.03**	**326**	Pn		**Pn**	**08 36 43.7**	**+1.2**
WHY	**Whitehorse**	**8.38**	**53**	Pn		**Pn**	**08 36 48.6**	**+1.1**
J26L	**Joseph Creek**	**8.54**	**15**	Pn		**Pn**	**08 36 51.3**	**+1.9**
P32M	**Atlin**	**8.56**	**62**	Pn		**Pn**	**08 36 50.2**	**+0.5**
L29M	**L29M**	**8.59**	**34**	Pn		**Pn**	**08 36 52.1**	**+2.0**
DAWY	**Dawson**	**8.98**	**27**	Pn		**Pn**	**08 36 56.0**	**+0.5**
P33M	**Teslin, Yukon**	**9.17**	**59**	Pn		**Pn**	**08 36 58.7**	**+0.5**
H21K	**Melozitna Rive**	**9.54**	**350**	Pn		**Pn**	**08 37 05.1**	**+2.0**
IMAR	**Indian Mountai**	**9.96**	**348**	Pn		**Pn**	**08 37 09.9**	**+1.1**

*IDC **26** 08:35:48.4±0.8, 6°19S×143°05E, h0km, mb4.4/9, mbtmp4.4/12, ML4.3/1, Error ellipse: s-maj=30.0km s-min=18.4km az=79.0*
*NEIC **26** 08:35:51.5±1.1, 6°16S±0°05×143°03E±0°10, h10km±1km, mb4.8/45, Error ellipse: s-maj=18.2km s-min=5.3km az=114.0*

ISC 26 08:35:54.1±0.6, 6°36S±0°07×142°89E±0°07, h35km, n68, σ1^{s}43/71, mb4.8/30, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.20**	**126**	Pn		Pn	**Pn**	**08 37 09.5**	**+0.1**
PMG	**Port Moresby**	**5.20**	**126**	Pn		Pn	**Pn**	**08 37 09.1**	**-0.4**
	24nm,0.6s,baz=215,slow=16,SNR=2.6								
PMG				Sn		Sn	**Sn**	**08 38 08.4**	**+0.2**
	6.0nm,0.3s,baz=212,slow=22,SNR=2.0								
COEN	**Coen**	**7.55**	**178**	Pn		Pn	**Pn**	**08 37 43.0**	**+1.2**
WRAB	**Tennant Creek**	**15.84**	**211**			P	**P**	**08 39 39.9**	**+1.9**
WB2	**Warramunga Arr**	**15.84**	**211**			Pn	**Pn**	**08 39 37.1**	**+2.4**
WRA	**Warramunga Arr**	**15.85**	**211**			Pn	**Pn**	**08 39 37.2**	**+2.4**
WRA	**Warramunga Arr**	**15.85**	**211**			Pn	**Pn**	**08 39 34.6**	**-0.2**
	1.3nm,0.3s,baz=29,slow=13,SNR=6.2								
WRA				Sn		Sn	**Sn**	**08 42 23.0**	**-6.5**
	0.8nm,0.3s,baz=36,slow=24,SNR=1.3								
WRA				Lg		Lg	Lg	08 44 17.6	
	0.8nm,0.3s,baz=29,slow=28,SNR=4.3								
	11nm,0.8s								
KNRA	**Kununurra**	**16.66**	**235**	Pn		P	**P**	**08 39 48.0**	**+0.9**
SOEI	**Soe**	**18.74**	**258**	P		P	**Pn**	**08 40 13.1**	**+2.2**
AS31	**Alice Springs**	**19.25**	**206**	P		P	**Pn**	**08 40 18.9**	**+2.0**
AS31				IAmb		IAmb	IAmb	08 40 32.5	
	comp=Z,40nm,1.0s								
ASAR	**Alice Springs**	**19.25**	**206**	P		P	**Pn**	**08 40 18.8**	**+1.9**
ASAR	**Alice Springs**	**19.25**	**206**	P		P	**Pn**	**08 40 18.2**	**+1.3**
	comp=Z,51nm,0.8s,baz=33,slow=10.0,SNR=20								
ASAR				S		S	**S**	**08 43 46.7**	**-5.3**
	comp=Z,4.8nm,0.7s,baz=13,slow=27,SNR=4.1								
FITZ	**Fitzroy Crossi**	**20.48**	**234**	P		P	**P**	**08 40 30.9**	**+1.9**
KAPI	**Kappang**	**23.06**	**272**	P		P	**P**	**08 40 58.8**	**+2.1**
KAPI				IAmb		IAmb	IAmb	08 40 59.0	
	comp=Z,26nm,0.9s								
TOLI2	**Tolitoli**	**23.29**	**288**	P		P	**P**	**08 40 59.8**	**+0.8**
TOLI2				IAmb		IAmb	IAmb	08 41 00.4	
	comp=Z,16nm,0.9s								
TUWZ	**Tuamarina**	**44.53**	**146**	P		P	**P**	**08 44 04.1**	**+1.6**
KSRS	**Korea Array**	**45.78**	**343**	P		P	**P**	**08 44 11.1**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=152,slow=9.2,SNR=4.4								
	comp=Z,1.4nm,0.7s								
CMAR	**Chiang Mai Arr**	**49.86**	**300**	P		P	**P**	**08 44 44.3**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=123,slow=6.6,SNR=1.3								
	comp=Z,1.1nm,0.4s								
SONM	**Songino Array**	**62.81**	**333**	P		P	**P**	**08 46 15.8**	**-0.6**
	comp=Z,1.8nm,1.1s,baz=154,slow=8.0,SNR=2.2								
	comp=Z,1.8nm,1.1s								
MKAR	**Makanchi Array**	**75.21**	**322**	P		P	**P**	**08 47 33.4**	**+0.1**
MKAR	**Makanchi Array**	**75.21**	**322**	P		P	**P**	**08 47 33.0**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=104,slow=7.3,SNR=6.0								
	comp=Z,2.6nm,0.8s								
MAKZ	**Makanchi**	**75.41**	**322**	P		P	**P**	**08 47 34.8**	**+0.4**
MAKZ				IAmb		IAmb	IAmb	08 47 39.7	
	comp=Z,8.0nm,1.3s								
KURBB	**Kurchatov Arra**	**79.10**	**324**	P		P	**P**	**08 47 54.2**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=118,slow=4.8,SNR=4.5								
	comp=Z,2.1nm,0.9s								
K15K	**Wolf Creek Mou**	**80.49**	**23**	P		P	**P**	**08 48 02.4**	**+0.1**
K15K				IAmb		IAmb	IAmb	08 48 14.7	
	comp=Z,32nm,1.4s								
L16K	**Owhat River**	**80.99**	**24**	P		P	**P**	**08 48 04.9**	**0.0**
L16K				IAmb		IAmb	IAmb	08 48 15.2	
	comp=Z,19nm,1.4s								
N17K	**Nushagak Hills**	**81.34**	**26**	P		P	**P**	**08 48 06.0**	**-0.8**
N17K				IAmb		IAmb	IAmb	08 48 09.7	
	comp=Z,17nm,1.1s								
J16K	**Anvik River**	**81.39**	**22**	P		P	**P**	**08 48 07.5**	**+0.5**
J16K				IAmb		IAmb	IAmb	08 48 10.6	
	comp=Z,19nm,1.5s								
C16K	**Lisburne Hills**	**82.71**	**17**	P		P	**P**	**08 48 13.0**	**-0.9**
C16K				IAmb		IAmb	IAmb	08 48 20.4	
	comp=Z,6.9nm,1.2s								
F17K	**Baldwin Pennin**	**82.91**	**20**	P		P	**P**	**08 48 15.2**	**+0.3**
F17K				IAmb		IAmb	IAmb	08 48 25.2	
	comp=Z,13nm,1.4s								
J18K	**Innoko River**	**82.98**	**23**	P		P	**P**	**08 48 14.7**	**-0.7**
G18K	**Tagagawik**	**83.50**	**21**	P		P	**P**	**08 48 17.4**	**-0.7**
CNPM	**China Poot**	**83.55**	**28**	P		P	**P**	**08 48 18.0**	**-0.4**
QSPA	**South Pole Qui**	**83.61**	**180**	P		P	**P**	**08 48 19.3**	**+0.5**
QSPA				IAmb		IAmb	IAmb	08 48 21.6	
	comp=Z,5.9nm,1.0s								
QSPA	**South Pole Qui**	**83.61**	**180**	P		P	**P**	**08 48 19.1**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=311,slow=1.0,SNR=17								
	comp=Z,5.0nm,0.9s								
J19K	**Poorman**	**83.67**	**23**	P		P	**P**	**08 48 17.9**	**-1.0**
E18K	**Tukpahlearik C**	**83.67**	**19**	P		P	**P**	**08 48 19.1**	**+0.3**
C18K	**Utukok River**	**84.17**	**18**	P		P	**P**	**08 48 20.6**	**-0.8**
NRIK	**Noril'sk**	**84.39**	**343**	P		P	**P**	**08 48 21.4**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=139,slow=5.3,SNR=4.9								
	comp=Z,1.8nm,0.4s								
BVAR	**Borovoye Array**	**84.68**	**325**	P		P	**P**	**08 48 23.9**	**-0.4**
	comp=Z,14nm,0.8s,baz=108,slow=6.5,SNR=28								
	comp=Z,14nm,0.8s								
E19K	**Redstone River**	**84.79**	**20**	P		P	**P**	**08 48 24.5**	**0.0**
E19K				IAmb		IAmb	IAmb	08 48 32.7	
	comp=Z,5.6nm,1.1s								
D19K	**Kuna River**	**85.04**	**18**	P		P	**P**	**08 48 25.6**	**-0.2**
D19K				IAmb		IAmb	IAmb	08 48 32.1	
	comp=Z,18nm,1.4s								
F20K	**Avaraart Lake**	**85.10**	**20**	P		P	**P**	**08 48 26.0**	**0.0**
IMAR	**Indian Mountai**	**85.30**	**22**	P		P	**P**	**08 48 26.4**	**-0.7**
H21K	**Melozitna Rive**	**85.50**	**22**	P		P	**P**	**08 48 28.1**	**-0.1**
TRF	**Thorofare Moun**	**85.56**	**24**	P		P	**P**	**08 48 28.4**	**-0.3**
TRF				IAmb		IAmb	IAmb	08 48 42.8	
	comp=Z,12nm,1.4s								
I21K	**Tanana**	**85.60**	**23**	P		P	**P**	**08 48 28.1**	**-0.5**
I21K				IAmb		IAmb	IAmb	08 48 33.6	
	comp=Z,10nm,1.4s								
MLY	**Manley**	**86.02**	**23**	P		P	**P**	**08 48 30.1**	**-0.7**
SCM	**Sheep Creek Mo**	**86.21**	**27**	P		P	**P**	**08 48 31.3**	**-0.5**
E22K	**Anaktuvuk Pass**	**86.93**	**20**	P		P	**P**	**08 48 35.2**	**0.0**
D22K	**Ayikyak River**	**86.97**	**19**	P		P	**P**	**08 48 35.8**	**+0.5**
D22K				IAmb		IAmb	IAmb	08 48 50.3	
	comp=Z,7.9nm,1.2s								
G23K	**Bananza Creek**	**86.97**	**22**	P		P	**P**	**08 48 35.4**	**0.0**
CCB	**Clear Creek Bu**	**87.03**	**24**	P		P	**P**	**08 48 33.6**	**-2.0**
CCB				IAmb		IAmb	IAmb	08 48 41.5	
	comp=Z,4.9nm,0.9s								
H24K	**Noodor Dome**	**87.44**	**23**				**P**	**08 48 37.0**	**-0.6**
H24K				IAmb		IAmb	IAmb	08 48 37.6	
	comp=Z,5.4nm,1.1s								
ILAR	**Eielson Array**	**87.44**	**24**	P		P	**P**	**08 48 36.0**	**-1.7**
ILAR	**Eielson Array**	**87.44**	**24**	P		P	**P**	**08 48 35.6**	**-2.1**
	comp=Z,1.6nm,0.7s,baz=253,slow=4.9,SNR=12								
	comp=Z,1.6nm,0.7s								
CRQM	**Cirque**	**87.77**	**28**	P		P	**P**	**08 48 38.4**	**-1.1**
F24K	**Squaw Lake**	**88.05**	**21**	P		P	**P**	**08 48 40.9**	**+0.3**
BARN	**Barnard Glacie**	**88.55**	**28**	P		P	**P**	**08 48 43.3**	**0.0**
M27K	**Edge Creek, AK**	**88.81**	**27**	P		P	**P**	**08 48 44.3**	**-0.1**
M27K				IAmb		IAmb	IAmb	08 49 06.9	
	comp=Z,9.3nm,1.3s								
BCAR	**Beaver Creek A**	**89.05**	**26**	P		P	**P**	**08 48 45.6**	**+0.2**
K27K	**Chicken**	**89.19**	**25**	P		P	**P**	**08 48 46.2**	**+0.3**
K27K				IAmb		IAmb	IAmb	08 48 54.5	
	comp=Z,5.0nm,1.1s								
BMAR	**Burnt Mountain**	**89.22**	**22**	P		P	**P**	**08 48 46.5**	**+0.4**
ABKAR	**Akbulak array**	**90.18**	**319**	P		P	**P**	**08 48 49.4**	**-1.5**
DAWY	**Dawson**	**90.34**	**25**	P		P	**P**	**08 48 51.3**	**-0.1**
DAWY				IAmb		IAmb	IAmb	08 48 59.5	
	comp=Z,8.3nm,1.3s								
L29M	**L29M**	**90.67**	**27**	P		P	**P**	**08 48 53.0**	**+0.1**
K29M	**Barlow Dome**	**91.09**	**26**	P		P	**P**	**08 48 55.0**	**0.0**
K29M				IAmb		IAmb	IAmb	08 48 59.9	
	comp=Z,5.0nm,1.2s								
H29M	**Whitestone**	**91.26**	**23**	P		P	**P**	**08 48 55.6**	**0.0**
H29M				IAmb		IAmb	IAmb	08 49 12.4	
	comp=Z,5.9nm,1.5s								
DBIC	**Dimbokro**	**147.96**	**272**	PKPbc		PKPbc	**PKPbc**	**08 55 36.6**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=192,slow=3.6,SNR=3.6								

*IDC **26** 08:40:39.1±1.0, 6°11S×143°57E, h0km, mb4.3/5, mbtmp4.3/7, ML1.6/1, Error ellipse: s-maj=48.6km s-min=22.2km az=66.0*

ISC 26 08:40:40.6±0.9, 6°2S±0°1×143°4E±0°1, h10km, n8, σ0^{s}79/9, mb4.6/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.88**	**131**	Pn		Pn	**Pn**	**08 41 53.2**	**-0.9**
	1.6nm,0.3s,baz=266,slow=16,SNR=1.9								
PMG				Sn		Sn	**Sn**	**08 42 51.6**	**+0.9**
	2.5nm,0.3s,baz=59,slow=14,SNR=2.8								
	6.9nm,0.3s								
WRA	**Warramunga Arr**	**16.25**	**212**	Pn		Pn	**Pn**	**08 44 28.3**	**-0.8**
	1.2nm,0.3s,baz=27,slow=13,SNR=3.1								
WRA				Lg		Lg	Lg	08 49 16.4	
	0.3nm,0.3s,baz=37,slow=29,SNR=6.4								
ASAR	**Alice Springs**	**19.62**	**207**	P			**Pn**	**08 45 11.3**	**+0.6**
	13nm,0.8s,baz=33,slow=9.5,SNR=8.8								
MKAR	**Makanchi Array**	**75.42**	**322**	P			**P**	**08 52 25.0**	**+0.3**
	1.5nm,0.9s,baz=108,slow=6.5,SNR=6.3								
	1.5nm,0.9s								
KURBB	**Kurchatov Arra**	**79.28**	**324**	P			**P**	**08 52 47.0**	**+0.7**
	1.8nm,1.0s,baz=118,slow=4.8,SNR=5.7								
	1.8nm,1.0s								
QSPA	**South Pole Qui**	**83.76**	**180**	P			**P**	**08 53 10.3**	**+0.4**
	4.1nm,1.0s,baz=346,slow=6.3,SNR=7.9								
	4.1nm,1.0s								
NRIK	**Noril'sk**	**84.40**	**343**	P			**P**	**08 53 12.3**	**-0.5**
	2.1nm,0.5s,baz=101,slow=5.2,SNR=5.9								
	2.1nm,0.5s								
BVAR	**Borovoye Array**	**84.86**	**325**	P			**P**	**08 53 15.8**	**+0.3**
	4.7nm,0.9s,baz=101,slow=6.2,SNR=12								
	4.7nm,0.9s								

JMA 26 08:43:33.9±0.1, 33°2N±0°6×135°2E±0°4, h38km±1km, MV1.4/28, S OFF KII PENINSULA, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JWKM	**Wakayamakushim**	**0.52**	**65**	*e*P		Pn		08 43 44.8	-0.1
JWM	**Minabe**	**0.63**	**12**	S		Sn		08 43 56.2	+0.9
JTNC	**Tanabenakahech**	**0.68**	**31**	*e*P		Pn		08 43 47.2	0.0
JTNC				*e*S		Sn		08 43 56.0	-0.5
JAI	**Aioi**	**0.83**	**312**	P		Pn		08 43 49.3	+0.2
JAI				*e*S		Sn		08 43 59.4	-0.8
JWY	**Kouya**	**1.04**	**19**	*e*S		Sn		08 44 05.4	0.0
JKN2	**Miekihoku**	**1.35**	**42**	*e*S		Sn		08 44 13.2	+0.4

*IDC **26** 08:44:32.0±1.6, 36°36N×142°72E, h0km, mb3.8/7, mbtmp3.9/12, ML3.7/5, Error ellipse: s-maj=35.2km s-min=19.4km az=166.0*
*JMA **26** 08:44:34.6±0.3, 36°4N±0°6×14°3E±°, h64km, MV3.8/37, FAR E OFF KANTO*
*NEIC **26** 08:44:39.9±1.9, 36°7N±0°1×142°5E±0°1, h33km±9km, mb4.4/26, Error ellipse: s-maj=18.8km s-min=11.9km az=139.0*

ISC 26 08:44:37.0±0.8, 36°37N±0°06×142°65E±0°07, h35km, n78, σ1^{s}94/77, mb4.3/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.66**	**297**	P			**Pn**	**08 45 01.2**	**-2.5**
JHYU	**Hitachinakayam**	**1.67**	**270**	P			**Pn**	**08 45 01.6**	**-2.1**
JHYU				*e*S			**Sn**	**08 45 20.3**	**-3.5**
JHO	**Hitachi**	**1.69**	**279**	P			**Pn**	**08 45 01.6**	**-2.5**
JHO				S			**Sn**	**08 45 22.0**	**-2.6**
JFK	**Kawauchi**	**1.74**	**306**	P			**Pn**	**08 45 02.3**	**-2.5**
JYT	**Yasato**	**1.99**	**267**	*i* P			**Pn**	**08 45 05.7**	**-2.5**
JMM	**Marumori**	**2.11**	**316**				**Pn**	**08 45 06.9**	**-2.9**
JMM	**Marumori**	**2.11**	**316**	P			**Pn**	**08 45 07.2**	**-2.6**
JMM	**Marumori**	**2.11**	**316**	P			**Pn**	**08 45 07.3**	**-2.5**
BSO1	**Boso 1**	**2.19**	**219**	*e*P			**Pn**	**08 45 08.8**	**-1.6**
JOTO	**OTAMA OYAMA**	**2.21**	**303**	P			**Pn**	**08 45 09.7**	**-1.5**
JAG	**Ashikaga**	**2.58**	**272**	P			**Pn**	**08 45 14.2**	**-2.1**
JHU	**Hanno**	**2.78**	**260**	P			**Pn**	**08 45 16.7**	**-2.3**
JMK	**Ichinoseki**	**2.82**	**337**	P			**Pn**	**08 45 17.5**	**-2.1**
MJAR	**Matsushiro Arr**	**3.58**	**274**	Pn			**Pn**	**08 45 28.9**	**-1.2**
	1.3nm,0.3s,baz=84,slow=10,SNR=61								
MJAR				Sn			**Sn**	**08 46 13.2**	**+2.0**
	0.6nm,0.3s,baz=82,slow=13,SNR=4.4								
	13nm,0.4s								
MAJO	**Matsushiro**	**3.59**	**274**				**Pn**	**08 45 29.1**	**-1.0**
MAJO	**Matsushiro**	**3.59**	**274**	P			**Pn**	**08 45 29.4**	**-0.7**
MJB9	**Matsu-Tunnel**	**3.59**	**274**				**Pn**	**08 45 30.1**	**-0.1**
JSD	**Sado**	**3.88**	**297**				**Pn**	**08 45 32.6**	**-1.6**
JSD	**Sado**	**3.88**	**297**	P			**Pn**	**08 45 33.1**	**-1.1**
JHJ	**Hachijo jima 2**	**4.01**	**217**	Pn			**Pn**	**08 45 35.2**	**-0.7**
	16nm,0.3s,baz=61,slow=17,SNR=1.6								
JHJ				Sn			**Sn**	**08 46 16.1**	**-5.6**
	30nm,0.3s,baz=56,slow=24,SNR=1.7								
	96nm,0.3s								
JGF	**Kuroka**	**4.36**	**261**				**Pn**	**08 45 41.3**	**+0.5**
JGF	**Kuroka**	**4.36**	**261**	P			**Pn**	**08 45 41.0**	**+0.2**
JTM	**Tenmabayashi**	**4.58**	**345**	Pn			**Pn**	**08 45 40.7**	**-3.1**
JTM	**Tenmabayashi**	**4.58**	**345**	P			**Pn**	**08 45 42.0**	**-1.8**
INU	**Inuyama**	**4.69**	**259**				**Pn**	**08 45 44.5**	**-0.7**
INU	**Inuyama**	**4.69**	**259**	P			**Pn**	**08 45 46.1**	**+0.9**
ERM	**Erimo**	**5.66**	**4**				**Pn**	**08 45 55.8**	**-2.7**
ERM	**Erimo**	**5.66**	**4**	P			**Pn**	**08 45 55.4**	**-3.1**
JEM	**Erimo**	**5.66**	**4**	P			**Pn**	**08 45 55.4**	**-3.1**
ASAJ	**Asahikawa**	**7.74**	**360**	Pn			**Pn**	**08 46 25.5**	**-1.6**
	5.7nm,0.3s,baz=230,slow=11,SNR=24								
ASAJ				Sn			**Sn**	**08 47 49.3**	**-4.2**
	1.0nm,0.3s,baz=54,slow=24,SNR=2.1								
	17nm,0.4s								
JKA	**Kamikawa-asahi**	**7.74**	**360**				**Pn**	**08 46 25.6**	**-1.5**
USRK	**Ussuriysk Ar.**	**11.29**	**317**	Pn			**Pn**	**08 47 17.1**	**+1.4**
	0.3nm,0.3s,baz=121,slow=14,SNR=5.5								
	2.1nm,0.5s								
KSRS	**Korea Array**	**11.84**	**280**	Pn			**Pn**	**08 47 23.9**	**+0.5**
	0.1nm,0.3s,baz=96,slow=13,SNR=7.0								
	2.9nm,1.0s								
H11N2	**WAKE ISLAND Hy**	**26.95**	**121**	T			T	09 18 48.6	
	baz=313,slow=75,SNR=7.6								
H11N1	**WAKE ISLAND Hy**	**26.96**	**121**	T			T	09 18 38.1	
	baz=313,slow=75,SNR=5.1								
H11N3	**WAKE ISLAND Hy**	**26.97**	**121**	T			T	09 18 57.5	
	baz=313,slow=75,SNR=4.7								
H11S1	**WAKE ISLAND Hy**	**27.66**	**124**	T			T	09 19 26.7	
	baz=314,slow=74,SNR=5.0								
H11S3	**WAKE ISLAND Hy**	**27.66**	**124**	T			T	09 19 26.7	
	baz=314,slow=74,SNR=4.4								
H11S2	**WAKE ISLAND Hy**	**27.68**	**124**	T			T	09 19 25.6	
	baz=314								
SONM	**Songino Array**	**28.98**	**305**	P			**P**	**08 50 34.1**	**+0.8**
	1.4nm,0.5s,baz=110,slow=8.7,SNR=8.4								
	1.4nm,0.5s								
ZALV	**Zalesovo Beam**	**43.10**	**313**	P			**P**	**08 52 33.3**	**-0.2**
ZALV	**Zalesovo Beam**	**43.10**	**313**	P			**P**	**08 52 33.8**	**+0.3**
	1.4nm,0.5s,baz=78,slow=7.7,SNR=6.0								
	1.4nm,0.5s								
F17K	**Baldwin Pennin**	**43.82**	**29**	P			**P**	**08 52 41.2**	**+2.1**
F17K				IAmb			IAmb	08 53 16.0	
	comp=Z,13nm,1.4s								
E18K	**Tukpahlearik C**	**44.32**	**28**	P			**P**	**08 52 45.0**	**+1.9**
C18K	**Utukok River**	**44.44**	**26**	P			**P**	**08 52 45.6**	**+1.5**
H18K	**Honhosa River**	**44.70**	**31**	P			**P**	**08 52 48.0**	**+1.8**
H18K				IAmb			IAmb	08 53 16.0	
	comp=Z,8.4nm,1.3s								
G18K	**Tagagawik**	**44.72**	**30**	P			**P**	**08 52 47.9**	**+1.4**
G18K				IAmb			IAmb	08 53 06.2	
	comp=Z,7.2nm,1.4s								
C19K	**Lookout Ridge**	**45.13**	**25**	P			**P**	**08 52 51.3**	**+1.7**
C19K				IAmb			IAmb	08 53 22.8	
	comp=Z,11nm,1.3s								
F19K	**Shaleruckik Mo**	**45.26**	**29**	P			**P**	**08 52 51.2**	**+0.6**
F19K				IAmb			IAmb	08 53 30.2	
	comp=Z,5.2nm,1.4s								
MK31	**Makanchi Array**	**45.31**	**303**	P			**P**	**08 52 52.5**	**+1.1**
MKAR	**Makanchi Array**	**45.32**	**303**	P			**P**	**08 52 54.6**	**+3.2**
	comp=Z,1.3nm,0.6s,baz=83,slow=10,SNR=7.1								
G19K	**Purcell Mounta**	**45.40**	**30**	P			**P**	**08 52 51.8**	**0.0**
G19K				IAmb			IAmb	08 53 12.0	
	comp=Z,9.9nm,1.4s								
D19K	**Kuna River**	**45.49**	**26**	P			**P**	**08 52 53.9**	**+1.4**
D19K				IAmb			IAmb	08 53 36.2	
	comp=Z,8.7nm,1.2s								
E19K	**Redstone River**	**45.59**	**28**	P			**P**	**08 52 55.1**	**+1.8**
E19K				IAmb			IAmb	08 53 06.3	
	comp=Z,3.0nm,0.6s								
K20K	**Telida**	**46.32**	**34**	P			**P**	**08 53 01.9**	**+2.8**
IMAR	**Indian Mountai**	**46.72**	**30**	P			**P**	**08 53 04.0**	**+1.8**
H21K	**Melozitna Rive**	**47.07**	**31**	P			**P**	**08 53 05.6**	**+0.7**
H21K				IAmb			IAmb	08 53 11.9	
	comp=Z,11nm,1.5s								
KURK	**Kurchatov**	**47.12**	**309**	P			**P**	**08 53 05.4**	**-0.1**
KURK				IAmb			IAmb	08 53 17.0	
	comp=Z,3.4nm,0.7s								
KURBB	**Kurchatov Arra**	**47.20**	**309**	P			**P**	**08 53 05.8**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=83,slow=7.7,SNR=7.6								
	comp=Z,1.0nm,0.4s								
SKT	**Skwentna**	**47.43**	**36**	P			**P**	**08 53 09.2**	**+1.4**
D22K	**Ayikyak River**	**47.52**	**26**	P			**P**	**08 53 10.4**	**+2.0**
D22K				IAmb			IAmb	08 53 22.7	
	comp=Z,8.0nm,1.4s								
E22K	**Anaktuvuk Pass**	**47.73**	**27**	P			**P**	**08 53 12.0**	**+1.9**
E22K				IAmb			IAmb	08 53 45.2	
	comp=Z,2.8nm,0.8s								
MLY	**Manley**	**47.89**	**32**	P			**P**	**08 53 13.5**	**+2.2**
RC01	**Rabbit Creek A**	**48.29**	**37**	P			**P**	**08 53 15.4**	**+1.0**
ILAR	**Eielson Array**	**49.53**	**32**	P			**P**	**08 53 23.7**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=279,slow=8.6,SNR=4.7								
	comp=Z,0.8nm,1.0s								
BMAR	**Burnt Mountain**	**50.44**	**29**	P			**P**	**08 53 33.1**	**+2.3**
BCAR	**Beaver Creek A**	**51.89**	**34**	P			**P**	**08 53 42.9**	**+1.2**
EGAK	**Eagle**	**51.98**	**32**	P			**P**	**08 53 43.9**	**+1.6**
CTGM	**Chitina Glacie**	**52.38**	**37**	P			**P**	**08 53 44.5**	**-1.0**
I28M	**Miner Creek**	**52.42**	**31**	P			**P**	**08 53 47.3**	**+1.6**
G31M	**Satah River**	**54.49**	**29**	P			**P**	**08 54 00.7**	**0.0**
G31M				IAmb			IAmb	08 54 30.7	
	comp=Z,4.1nm,1.2s								
INK	**Inuvik**	**54.53**	**27**	P			**P**	**08 54 02.5**	**+1.6**
INK				IAmb			IAmb	08 54 43.6	
	comp=Z,5.9nm,1.3s								
F31M	**Tsiigehtchic**	**54.60**	**28**	P			**P**	**08 54 02.4**	**+0.9**
C36M	**Paulatuk**	**57.62**	**25**	P			**P**	**08 54 24.5**	**+1.5**
ABKAR	**Akbulak array**	**59.13**	**311**	P			**P**	**08 54 34.1**	**+0.2**
YKA	**Yellowknife Ar**	**63.88**	**30**	P			**P**	**08 55 06.2**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=301,slow=7.0,SNR=4.9								
	comp=Z,0.3nm,0.8s								
FINES	**FINESS Array B**	**69.86**	**333**	P			**P**	**08 55 44.2**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=350,slow=5.8,SNR=3.3								
	comp=Z,1.1nm,0.7s								
NVAR	**Mina Array Bea**	**74.59**	**54**	P			**P**	**08 56 13.2**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=282,slow=7.1,SNR=3.9								
	comp=Z,0.8nm,0.9s								

*SSNC **26** 08:44:52.7±1.2, 18°39N×74°19W, h5km, MD3.1, ML2.3, MW2.2*
*OSPL **26** 08:44:53.3±2.4, 18°63N×74°10W, h0km±25km, ML2.4*

TXIG	**Tlaxiaco**	**2.37**	**308**			**Pn**		08 56 41.8	+2.0
TXIG						**Sb**		08 57 16.2	+3.1
TXIG	**Tlaxiaco**	**2.37**	**308**	*eP*		**Pn**		08 56 41.8	+2.0
TXIG				*eS*		**Sb**		08 57 16.2	+3.1
PCIG		**2.49**	**92**			**Pn**		08 56 42.0	+0.9
PCIG						**Sn**		08 57 11.4	+0.6
PCIG		**2.49**	**92**	*eP*		**Pn**		08 56 42.0	+0.9
PCIG				*eS*		**Sn**		08 57 11.4	+0.6
TOIG	**Toxpalan**	**2.57**	**332**			**Pn**		08 56 44.5	+2.1
TOIG						**Sb**		08 57 19.8	+1.0
TOIG	**Toxpalan**	**2.57**	**332**	*eP*		**Pn**		08 56 44.5	+2.1
TOIG				*eS*		**Sb**		08 57 19.8	+1.0
TGIG		**2.75**	**69**			**Pn**		08 56 45.9	+1.1
TGIG						**Sn**		08 57 18.1	+0.8
TGIG		**2.75**	**69**	*eP*		**Pn**		08 56 45.9	+1.1
TGIG				*eS*		**Sn**		08 57 18.1	+0.8
HLIG	**Huajuapan de L**	**2.77**	**317**			**Pn**		08 56 48.2	+2.9
HLIG						**Sb**		08 57 27.1	+2.4
HLIG	**Huajuapan de L**	**2.77**	**317**	*eP*		**Pn**		08 56 48.2	+2.9
HLIG				*eS*		**Sb**		08 57 27.1	+2.4
PMUV	**Sontecomapan**	**2.79**	**13**	*eP*		**Pn**		08 56 43.3	-2.1
TLIG	**Tlapa**	**3.17**	**304**	Pn		**Pn**		08 56 51.1	+0.5
TLIG	**Tlapa**	**3.17**	**304**	*eP*		**Pb**		08 56 56.9	-0.8
TLIG				*eS*		**Sn**		08 57 30.9	+3.0
CRIG	**Cruz Grande**	**3.33**	**286**			**Pn**		08 56 52.3	-0.4
CRIG	**Cruz Grande**	**3.33**	**286**	*eP*		**Pn**		08 56 52.3	-0.4
CRIG				*eS*		**Sn**		08 57 25.3	-6.2
PATR	**El Naranjo**	**3.51**	**101**	*eP*		**Pn**		08 56 57.0	+1.6
PATR				*eS*		**Sn**		08 57 37.3	+0.9
PAVE	**Pavencul**	**3.55**	**100**	*eP*		**Pn**		08 56 58.1	+2.2
PAVE				*eS*		**Sn**		08 57 37.7	+0.4
CCIG	**Comitan**	**3.56**	**82**	Pn		**Pn**		08 56 57.4	+1.4
CCIG	**Comitan**	**3.56**	**82**	*eP*		**Pn**		08 56 57.2	+1.2
CCIG				*eS*		**Sn**		08 57 41.6	+4.2
CHUJ	**Union Juarez**	**3.63**	**101**	*eP*		**Pn**		08 56 58.9	+1.8
CHUJ				*eS*		**Sn**		08 57 38.7	-0.7
JAUV	**Jalcomulco**	**3.66**	**345**	*eP*		**Pn**		08 56 56.2	-1.2
RTAL	**Retalhuleu**	**4.17**	**107**	Pn		**Pn**		08 57 04.0	-0.3
HUEH	**Huehuetenango**	**4.17**	**96**	Pn		**Pn**		08 57 06.6	+2.1
PPM	**Popocatepetl**	**4.21**	**321**	*eP*		**Pb**		08 57 13.8	-1.9
PPM				*eS*		**Sn**		08 57 57.6	+3.5
PPIG	**Popocatepetl**	**4.21**	**321**			**Pb**		08 57 13.8	-1.9
PPIG						**Sn**		08 57 57.6	+3.5
UNM	**Universidad Na**	**4.75**	**318**	Pn		**Pn**		08 57 13.8	+1.2
PETF	**Flores**	**5.80**	**78**	Pn		**Pn**		08 57 28.3	+1.6
PETF	**Flores**	**5.80**	**78**	*eP*		**Pn**		08 57 27.5	+0.8
PETF				*eS*		**Sn**		08 58 28.5	-4.2
MTO3	**Montecristo**	**6.38**	**102**	Pn		**Pn**		08 57 35.7	+0.9
MOIG	**Morelia**	**6.41**	**308**	Pn		**Pn**		08 57 37.2	+1.9
TEIG	**Tepich**	**8.40**	**57**	Pn		**Pn**		08 58 01.1	-1.3
ESPN	**Las Esperanzas**	**11.73**	**106**	Pn		**Pn**		08 58 49.5	+1.5
833A	**Chaparral WMA,**	**12.89**	**346**	Pn		**Pn**		08 59 05.0	+1.2
LCR2	**La Lucha 2**	**12.99**	**116**	Pn		**Pn**		08 59 04.1	-1.4
RIMA	**Rio Macho**	**13.10**	**116**	Pn		**Pn**		08 59 04.9	-2.1
PEZE	**Perez Zeledon,**	**13.45**	**117**	Pn		**Pn**		08 59 11.0	-0.6
SOR	**Soroa**	**13.93**	**58**	Pn		**Pn**		08 59 15.3	-2.7
DRIO	**Del Rio**	**14.25**	**343**	Pn		**Pn**		08 59 23.5	+1.0
JCT	**Junction City**	**15.05**	**347**	Pn		**Pn**		08 59 32.5	-0.9
JCT					IAmb	IAmb		08 59 58.1	
	comp=Z,5.2nm,0.8s								
TXAR	**Lajitas Array**	**15.28**	**333**	Pn		**P**		08 59 48.0	+6.8
	comp=Z,0.1nm,0.3s,baz=146,slow=12,SNR=2.3								
	comp=Z,0.4nm,0.7s								
BRDY	**Brady**	**15.68**	**350**	Pn		**Pn**		08 59 43.0	+1.4
OZNA	**Ozona**	**15.81**	**343**	Pn		**Pn**		08 59 44.5	+1.2
OZNA					IAmb	IAmb		08 59 57.8	
	comp=Z,11nm,1.2s								
WHTX	**Lake Whitney,**	**16.18**	**355**	Pn		**Pn**		08 59 48.0	0.0
WHTX					IAmb	IAmb		09 00 00.3	
	comp=Z,27nm,1.4s								
ALPN	**Alpine**	**16.18**	**335**			**Pn**		08 59 49.3	+1.2
PLPT	**Palo Pinto**	**17.08**	**353**	P		**Pn**		09 00 00.1	+0.8
ABTX	**Abilene, Hawle**	**17.10**	**349**	P		**Pn**		09 00 00.3	+0.7
ABTX					IAmb	IAmb		09 00 14.8	
	comp=Z,11nm,1.1s								
PECS	**Pecos**	**17.15**	**336**			**Pn**		08 59 59.9	-0.4
FW06	**Azle**	**17.16**	**355**			**Pn**		08 59 59.5	-0.8
FW06					IAmb	IAmb		09 00 31.2	
	comp=Z,9.0nm,0.8s								
Z41A	**Richland Creek**	**17.58**	**8**			**Pn**		09 00 03.9	-1.6
SN07	**Snyder 07**	**17.81**	**346**			**Pn**		09 00 07.6	-0.9
APMT	**Aspermont**	**17.87**	**348**			**Pn**		09 00 08.5	-0.7
GDL2	**Guadalupe Moun**	**18.08**	**336**			**Pn**		09 00 10.9	-1.0
DKNS	**Dickens**	**18.37**	**346**	P		**P**		09 00 14.1	-1.2
CCAR	**Cane Creek**	**18.39**	**11**	P		**P**		09 00 15.1	-0.3
CCAR					IAmb	IAmb		09 00 56.7	
	comp=Z,13nm,1.0s								
X37A	**Clayton**	**18.70**	**1**	P		**P**		09 00 18.1	-0.7
X37A					IAmb	IAmb		09 00 42.5	
	comp=Z,21nm,1.3s								
MIAR	**Mount Ida**	**18.76**	**6**	P		**P**		09 00 18.9	-0.6
MIAR					IAmb	IAmb		09 00 37.7	
	comp=Z,8.1nm,0.8s								
WMOK	**Wichita Mounta**	**19.04**	**352**	P		**Pn**		09 00 23.9	+0.6
W35A	**Tecumseh**	**19.28**	**357**	P		**P**		09 00 24.9	-0.3
W35A					IAmb	IAmb		09 01 06.6	
	comp=Z,11nm,1.1s								
SMWD	**Samnorwood**	**19.62**	**349**	P		**P**		09 00 28.0	-1.0
SMWD					IAmb	IAmb		09 00 50.4	
	comp=Z,8.0nm,0.9s								
121A	**Cookes Peak, D**	**19.89**	**329**	P		**Pn**		09 00 33.3	-0.5
121A					IAmb	IAmb		09 00 44.8	
	comp=Z,8.1nm,0.9s								
OK052	**Battle Ridge R**	**20.12**	**358**	P		**P**		09 00 33.3	-1.0
HBAR	**Harrisburg**	**20.19**	**12**	P		**P**		09 00 34.0	-1.1
FCAR	**Ozark Folk Cen**	**20.26**	**9**	P		**P**		09 00 34.8	-1.1
FCAR					IAmb	IAmb		09 00 44.0	
	comp=Z,6.8nm,0.8s								
QUOK	**Quay**	**20.29**	**358**	P		**P**		09 00 34.7	-1.5
HHAR	**Hobbs**	**20.45**	**4**	P		**P**		09 00 37.1	-0.9
HHAR					IAmb	IAmb		09 00 51.2	
	comp=Z,12nm,1.3s								
U38A	**Gravette**	**20.58**	**3**	P		**P**		09 00 38.4	-1.0
U38A					IAmb	IAmb		09 00 53.4	
	comp=Z,9.2nm,1.1s								
OK032	**Salt Plains WL**	**21.02**	**355**	P		**P**		09 00 43.5	-0.6
T35A	**Sooner Cattle**	**21.03**	**358**	P		**P**		09 00 45.4	+1.2
ANMO	**Albuquerque**	**21.32**	**335**	P		**P**		09 00 47.8	+0.2
ANMO	**Albuquerque**	**21.32**	**335**	P		P		09 00 56.4	+8.8
	comp=Z,1.9nm,0.8s,baz=238,slow=12,SNR=7.9								
	comp=Z,1.9nm,0.8s								
TUC	**Tucson**	**21.33**	**323**	P		**P**		09 00 47.8	+0.1
TUC					IAmb	IAmb		09 00 58.9	
	comp=Z,6.8nm,1.1s								
PBMO	**Poplar Bluff**	**21.42**	**12**	P		**P**		09 00 47.0	-1.4
WVT	**Waverly**	**21.45**	**18**	P		**P**		09 00 48.6	-0.1
WVT					IAmb	IAmb		09 01 14.3	
	comp=Z,12nm,1.4s								
T42A	**Van Buren**	**21.54**	**10**	P		**P**		09 00 47.2	-2.5
T42A					IAmb	IAmb		09 00 58.3	
	comp=Z,5.3nm,1.0s								
CPCT	**Cooper Cave**	**22.01**	**25**	P		**P**		09 00 55.0	+0.2
CPCT					IAmb	IAmb		09 01 09.3	
	comp=Z,5.3nm,1.1s								
U49A	**Red Boiling Sp**	**22.46**	**22**	P		**P**		09 00 57.5	-2.2
U49A					IAmb	IAmb		09 01 11.9	
	comp=Z,5.8nm,0.7s								
R40A	**Maddies Statio**	**22.61**	**7**	P		**P**		09 01 00.6	-0.5
R40A					IAmb	IAmb		09 01 10.0	
	comp=Z,5.3nm,0.9s								
OTAV	**Otavalo**	**23.08**	**130**	P		**P**		09 01 07.2	+0.4
U54A	**Nelsons Funny**	**24.09**	**28**	P		**P**		09 01 13.6	-2.4
U54A					IAmb	IAmb		09 01 53.0	
	comp=Z,6.4nm,0.9s								
N38A	**Joes South For**	**24.99**	**5**	P		**P**		09 01 23.2	-0.9
PDAR	**Pinedale Array**	**29.34**	**339**	P		P		09 02 11.6	+8.3
	comp=Z,0.3nm,0.8s,baz=138,slow=11,SNR=3.0								
	comp=Z,0.3nm,0.8s								
SPMN	**Marine on St.**	**29.43**	**4**	P		**P**		09 02 02.5	-1.3
NVAR	**Mina Array Bea**	**29.99**	**323**	P		P		09 02 19.5	+10
	comp=Z,1.8nm,0.9s,baz=135,slow=9.7,SNR=8.7								
	comp=Z,1.8nm,0.9s								
ULM	**Lac du Bonnet**	**34.35**	**360**	P		P		09 02 52.4	+5.4
	comp=Z,2.5nm,0.7s,baz=183,slow=7.9,SNR=7.0								
	comp=Z,2.5nm,0.7s								
ETMB	**Extrema**	**38.82**	**129**	P		**P**		09 03 26.5	+1.0
YKA	**Yellowknife Ar**	**48.48**	**348**	P		P		09 04 48.7	+6.1
	comp=Z,0.7nm,0.8s,baz=155,slow=7.2,SNR=13								
	comp=Z,0.7nm,0.8s								
ILAR	**Eielson Array**	**59.75**	**337**	P		P		09 06 11.5	+6.7
	comp=Z,0.6nm,0.9s,baz=126,slow=5.7,SNR=5.5								
	comp=Z,0.6nm,0.9s								
BMAR	**Burnt Mountain**	**60.35**	**340**	P		**P**		09 06 08.4	-0.6
PLCA	**Paso Flores**	**60.95**	**158**	P		**P**		09 06 15.9	+2.5
PLCA	**Paso Flores**	**60.95**	**158**	P		**P**		09 06 15.0	+1.6
	comp=Z,2.1nm,0.7s,baz=315,slow=6.9,SNR=7.9								
	comp=Z,2.1nm,0.7s								

*IDC **26** 08:56:47.8±1.1, 6°.41S×143°.38E, h0km, mb4.1/4, mbtmp4.0/7, ML3.8/2, Error ellipse: s-maj=40.6km s-min=24.6km az=79.0*
ISC 26 08:56:53.0±0.9, 6°.5S±0°.1×143°.4E±0°.1, h35km, n7, σ1s 46/8, mb4.0/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.72**	**128**	Pn		**Pn**	**08 58 03.2**	**+1.6**
	9.6nm,0.3s,baz=3.5,slow=9.4,SNR=6.4							
PMG				Sn		**Sn**	**08 58 53.6**	**-1.6**
	1.2nm,0.3s,baz=170,slow=17,SNR=1.4							
WRA	**Warramunga Arr**	**15.98**	**212**	Pn		**Pn**	**09 00 33.7**	**-1.6**
	0.3nm,0.3s,baz=31,slow=13,SNR=4.5							
	0.9nm,0.5s							
ASAR	**Alice Springs**	**19.34**	**207**	P		**P**	**09 01 16.9**	**+1.3**
	0.4nm,0.3s,baz=37,slow=11,SNR=12							
	2.1nm,0.6s							
MKAR	**Makanchi Array**	**75.63**	**322**	P		**P**	**09 08 34.8**	**+0.2**
	1.7nm,0.8s,baz=108,slow=6.5,SNR=12							
	1.7nm,0.8s							
QSPA	**South Pole Qui**	**83.46**	**180**	P		**P**	**09 09 16.9**	**0.0**
	1.0nm,0.8s,baz=162,slow=1.7,SNR=9.4							
	1.0nm,0.8s							
BVAR	**Borovoye Array**	**85.08**	**325**	P		**P**	**09 09 25.5**	**+0.3**
	2.5nm,0.8s,baz=101,slow=7.7,SNR=10							
	2.5nm,0.8s							
ILAR	**Eielson Array**	**87.38**	**24**	P		**P**	**09 09 35.1**	**-1.1**
	0.5nm,0.9s,baz=253,slow=4.7,SNR=3.2							
	0.5nm,0.9s							

*NNC **26** 09:00:41.7±0.7, 51°.76N×75°.43E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=75.6km s-min=3.8km az=26.0, Suspected Mining explosion.*
*IDC **26** 09:00:42.7±1.3, 51°.82N×75°.64E, h0km, mbtmp2.6/2, ML2.2/1, Error ellipse: s-maj=30.7km s-min=10.1km az=30.0*
ISC 26 09:00:42.5±1.3, 51°.8N±0°.1×75°.52E±0°.08, h0km, n9, σ0s 70/8, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.23**	**121**	⇑Pg		**Pb**	**09 01 23.5**	**0.0**
	6.8nm,0.9s							
KURBB				⇓Lg		Lg	09 01 53.2	
	16nm,0.9s							
KURBB	**Kurchatov Arra**	**2.23**	**121**	Pg		**Pn**	**09 01 21.7**	**+1.0**
	0.1nm,0.3s,baz=305,slow=19,SNR=21							
KURBB				Lg		Lg	09 01 53.5	
	0.2nm,0.3s,baz=306,slow=32,SNR=6.8							
KURK	**Kurchatov**	**2.23**	**118**	⇑Pg		**Pb**	**09 01 22.6**	**-1.0**
	4.5nm,0.9s							
KURK				⇓Lg		Lg	09 01 53.5	
	14nm,1.1s							
BVA0	**Borovoye Array**	**3.38**	**293**	⇑Pg		**Pb**	**09 01 42.8**	**-0.4**
	1.6nm,0.8s							
BVA0				⇓Lg		Lg	09 02 26.0	
	6.2nm,1.0s,baz=112,slow=31,SNR=4.2							
BVAR	**Borovoye Array**	**3.38**	**293**	Pg		**Pb**	**09 01 43.1**	**0.0**
	baz=104,slow=17,SNR=4.0							
BVAR				Lg		Lg	09 02 28.6	
	0.1nm,0.3s,baz=118,slow=24,SNR=5.8							
BRVK	**Borovoye**	**3.45**	**294**	⇑Pg		**Pb**	**09 01 43.9**	**-0.5**
	1.4nm,0.9s							
BRVK				⇑Lg		Lg	09 02 30.8	
	3.0nm,0.8s							
I46RU	**ZALESOVO INFRA**	**6.03**	**65**	I		I	09 35 30.0	
	baz=250,slow=338,SNR=5.4							
ZALV	**Zalesovo Beam**	**6.03**	**65**	Pn		**Pn**	**09 02 13.1**	**+0.3**
	0.3nm,0.3s,baz=234,slow=14,SNR=1.3							
MKAR	**Makanchi Array**	**6.68**	**136**	Pn		**Pn**	**09 02 21.8**	**-0.1**
	0.1nm,0.3s,baz=330,slow=8.3,SNR=3.0							
MKAR				Lg		Lg	09 04 11.1	
	0.1nm,0.3s,baz=327,slow=24,SNR=7.2							
	0.3nm,0.8s							

*IDC **26** 09:04:58.4±0.7, 60°.45S×32°.12W, h0km, mb4.3/6, mbtmp4.4/7, ML4.7/1, MS4.8/1, Error ellipse: s-maj=33.0km s-min=23.5km az=76.0*
*NEIC **26** 09:04:58.3±2.6, 60°.6S±0°.1×32°.4W±0°.2, h10km±1km, mb4.6/17, Error ellipse: s-maj=21.0km s-min=16.2km az=208.0*
ISC 26 09:04:58.6±0.5, 60°.53S±0°.09×32°.3W±0°.1, h10km, n51, σ1s 50/40, mb4.6/13, 6C-3D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ORCD	**Orcadas**	**6.13**	**263**	Pn		Pn	09 06 23.0	-6.1
VNA3	**Neumayer Olymp**	**14.05**	**149**	⇑P		**Pn**	**09 08 14.7**	**-2.7**
	comp=Z,26nm,0.3s							
VNA3				⇑S		Sn	09 10 37.2	-16
	comp=Z,6.5nm,0.7s							
VNA1	**Neumayer--Stat**	**14.07**	**146**	⇑P		**Pn**	**09 08 16.3**	**-1.3**
	comp=Z,91nm,0.3s							
VNA2	**Neumayer--Watz**	**14.46**	**146**	⇑P		**Pn**	**09 08 20.8**	**-2.2**
	comp=Z,36nm,0.3s,baz=309,slow=15							
VNA2				⇓S		Sn	09 10 50.4	-13
	comp=Z,3.8nm,0.9s,baz=333,slow=17							
SNAA	**Sanae**	**16.11**	**146**	Pn		**Pn**	**09 08 44.8**	**0.0**
SNAA	**Sanae**	**16.11**	**146**	⇑P		**Pn**	**09 08 44.4**	**-0.4**
	comp=Z,234nm,0.4s							
SNAA				⇓S		Sn	09 11 29.5	-14
	comp=Z,58nm,1.0s							
SNAA	**Sanae**	**16.11**	**146**	Pn		**Pn**	**09 08 44.6**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=303,slow=12,SNR=46							
SNAA				Sn		Sn	09 11 30.3	-13
	comp=Z,0.1nm,0.3s,baz=37,slow=20,SNR=2.1							
	comp=Z,14nm,0.6s							
BELA	**Belgrano 2**	**17.45**	**182**			**Pn**	**09 09 02.0**	**+0.3**
TROLL	**Troll, Antarti**	**17.77**	**144**	⇑P		**Pn**	**09 09 06.2**	**+0.4**
	comp=Z,136nm,0.3s							
TROLL				⇓S		Sn	09 12 08.4	-15
	comp=Z,125nm,1.1s							
QSPA	**South Pole Qui**	**29.71**	**180**	P		**P**	**09 11 08.2**	**+3.6**
QSPA					IAmb	IAmb	09 11 24.3	
	comp=Z,13nm,1.4s							
QSPA	**South Pole Qui**	**29.71**	**180**	P		**P**	**09 11 08.1**	**+3.6**
	comp=Z,0.7nm,0.6s,baz=198,slow=2.9,SNR=5.4							
	comp=Z,0.7nm,0.6s							
PLTB	**Pedras Altas**	**32.03**	**324**	P		**P**	**09 11 21.0**	**-4.1**
MT09	**Talagante**	**36.64**	**299**	P		**P**	**09 12 03.9**	**-1.2**
MT09					IAmb	IAmb	09 12 09.0	
	comp=Z,16nm,1.4s							
MT02	**Curacav**	**37.14**	**299**	P		**P**	**09 12 09.2**	**0.0**
MT02					IAmb	IAmb	09 12 18.1	
	comp=Z,20nm,1.4s							
CPUP	**Villa Florida**	**38.23**	**322**	P		**P**	**09 12 18.9**	**+0.4**
CPUP	**Villa Florida**	**38.23**	**322**	P		**P**	**09 12 19.9**	**+1.5**
	comp=Z,3.1nm,0.8s,baz=174,slow=7.7,SNR=8.1							
	comp=Z,3.1nm,0.8s							
VNDA	**Vanda**	**41.92**	**185**	P		**P**	**09 12 45.4**	**-3.2**
VNDA					IAmb	IAmb	09 13 04.0	
	comp=Z,12nm,1.4s							
SUR	**Sutherland**	**44.40**	**75**	P		**P**	**09 13 09.1**	**-0.2**
GRHM	**Grahamstown, E**	**46.36**	**81**	P		**P**	**09 13 23.8**	**-1.0**
H04S2	**CROZET ISLANDS**	**48.20**	**114**	T		T	10 05 53.9	
	baz=222,slow=75,SNR=11							
H04S3	**CROZET ISLANDS**	**48.21**	**114**	T		T	10 05 56.2	
	baz=222,slow=75,SNR=11							
H04S1	**CROZET ISLANDS**	**48.22**	**114**	T		T	10 05 55.6	
	baz=222,slow=75,SNR=10.0							
PTLB	**Pontes e Lacer**	**49.04**	**325**	P		**P**	**09 13 45.7**	**+0.2**
PTLB					IAmb	IAmb	09 13 47.1	
	comp=Z,5.9nm,1.0s							
BOSA	**Boshof**	**49.65**	**77**	P		**P**	**09 13 49.8**	**-0.6**
BOSA					IAmb	IAmb	09 13 51.1	
	comp=Z,5.6nm,0.9s							
BOSA	**Boshof**	**49.65**	**77**	P		**P**	**09 13 51.0**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=161,slow=6.6,SNR=5.2							
	comp=Z,3.6nm,0.8s							
H10S2	**ASCENSION HYDR**	**53.12**	**22**	T		T	10 12 01.7	
	baz=30,slow=74,SNR=24							
H10S3	**ASCENSION HYDR**	**53.13**	**22**	T		T	10 12 07.1	
	baz=190,slow=74,SNR=33							
TSUM	**Tsumeb**	**54.17**	**63**	P		**P**	**09 14 22.9**	**-1.1**
TSUM					IAmb	IAmb	09 14 36.6	
	comp=Z,10nm,1.4s							
H10N1	**ASCENSION HYDR**	**54.24**	**22**	T		T	10 13 20.7	
	baz=190,slow=75,SNR=32							
H10N3	**ASCENSION HYDR**	**54.24**	**22**	T		T	10 13 23.2	
	baz=190,slow=75,SNR=89							
H10N2	**ASCENSION HYDR**	**54.26**	**22**	T		T	10 13 24.4	
	baz=190,slow=75,SNR=36							
SAML	**Samuel**	**56.39**	**322**	P		**P**	**09 14 39.7**	**-0.2**
SAML					IAmb	IAmb	09 14 41.5	
	comp=Z,4.4nm,0.9s							
NNA	**Nana**	**58.39**	**306**	LR		LR	09 39 08.4	
	comp=Z,839nm,20.2s,baz=234,slow=35							
BOAV	**Boa Vista**	**66.47**	**329**	P		**P**	**09 15 47.4**	**-0.7**
BOAV					IAmb	IAmb	09 16 01.5	
	comp=Z,6.7nm,1.4s							
MCRA	**Macar, Loja**	**66.55**	**307**	P		**P**	**09 15 49.1**	**+0.4**
DBIC	**Dimbokro**	**70.38**	**29**	P		**P**	**09 16 13.1**	**+0.6**
DBIC	**Dimbokro**	**70.38**	**29**	P		**P**	**09 16 13.6**	**+1.1**
	comp=Z,4.8nm,0.6s,baz=208,slow=6.7,SNR=7.5							
	comp=Z,4.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.29**	**34**	P		**P**	**09 17 00.1**	**+1.6**
	comp=Z,4.0nm,0.6s,baz=197,slow=5.6,SNR=4.3							
	comp=Z,4.0nm,0.6s							
ASAR	**Alice Springs**	**95.36**	**167**	P		**P**	**09 18 23.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=179,slow=4.6,SNR=3.2							
	comp=Z,0.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**125.66**	**119**	PKP		**PKiKP**	**09 24 01.6**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=242,slow=3.8,SNR=7.2							
NB2	**NORSAR Subarra**	**125.78**	**24**	PKPdf		**PKPdf**	**09 23 58.8**	**-0.1**
	comp=Z,9.1nm,2.0s,baz=202,slow=1.9							
NOA	**NORSAR Array B**	**125.78**	**24**	PKP		**PKiKP**	**09 23 59.7**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=207,slow=2.1,SNR=4.5							
FINES	**FINESS Array B**	**129.61**	**32**	PKP		**PKPdf**	**09 24 06.5**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=124,slow=0.7,SNR=9.2							
ARCES	**ARCESS Array B**	**136.13**	**25**	PKP		**PKPdf**	**09 24 17.2**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=222,slow=1.2,SNR=5.5							
YKA	**Yellowknife Ar**	**137.65**	**317**	PKP		**PKPdf**	**09 24 21.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=138,slow=2.0,SNR=9.2							
BVAR	**Borovoye Array**	**139.31**	**65**	PKhKP		PKPpre	09 24 18.9	
	comp=Z,0.3nm,0.5s,baz=208,slow=4.9,SNR=2.5							
BVAR				PKP		**PKPdf**	**09 24 25.2**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=281,slow=0.8,SNR=8.9							
MKAR	**Makanchi Array**	**140.61**	**80**	PKhKP		PKPpre	09 24 20.6	
	comp=Z,0.6nm,0.6s,baz=123,slow=0.8,SNR=8.3							
MKAR				PKP		**PKiKP**	**09 24 29.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=214,slow=0.9,SNR=4.5							
KURBB	**Kurchatov Arra**	**141.44**	**73**	PKhKP		PKPpre	09 24 23.2	
	comp=Z,0.3nm,0.3s,baz=231,slow=3.4,SNR=1.7							
KURBB				PKP		pPKPdf	09 24 30.1	-0.8
	comp=Z,0.3nm,0.3s,baz=236,slow=2.4,SNR=5.0							
ZALV	**Zalesovo Beam**	**146.54**	**73**	PKPbc		**PKPbc**	**09 24 39.0**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=237,slow=5.2,SNR=14							
ILAR	**Eielson Array**	**150.87**	**307**	PKPbc		**PKiKP**	**09 24 50.5**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=144,slow=1.6,SNR=34							
SONM	**Songino Array**	**153.19**	**99**	PKPbc		**PKiKP**	**09 24 56.5**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=202,slow=2.9,SNR=12							

*IDC **26** 09:12:33.6±1.2, 6°.23S×142°.89E, h0km, mb4.0/3, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=36.0km s-min=26.1km az=69.0*
ISC 26 09:12:38.8±1.0, 6°.3S±0°.1×142°.8E±0°.1, h35km, n6, σ1s 30/7, mb3.9/3, New Guinea

| Code | Station Name | Δ° | AZ°

TKNZ				S		Sn	09 17 02.6	-2.3
KHEZ	**Kahui Hut**	**0.96**	**22**	P		Pn	09 16 43.3	+1.2
KHEZ	**Kahui Hut**	**0.96**	**22**	P		Pn	09 16 43.4	+1.2
KHEZ				S		Sn	09 17 04.2	-0.8
PREZ	**Palmer Road**	**0.96**	**29**	P		Pn	09 16 43.2	+1.2
PREZ				S		Sn	09 17 05.2	+0.3
LREZ	**Lake Rotokare**	**0.98**	**42**	P		Pn	09 16 43.5	+1.5
LREZ				S		Sn	09 17 04.9	0.0
NEZ	**North Egmont**	**1.01**	**25**	P		Pn	09 16 43.4	+1.0
NEZ				S		Sn	09 17 04.9	-0.6
NNZ	**Nelson**	**1.04**	**187**	P		Pn	09 16 43.7	+1.3
NNZ				S		Sn	09 17 04.0	-1.9
PKE	**Pukeiti**	**1.05**	**19**	P		Pn	09 16 43.8	+1.2
PKE				S		Sn	09 17 05.0	-0.9
TCW	**Tory Channel**	**1.16**	**152**	P		Pn	09 16 45.3	+2.0
TCW				S		Sn	09 17 05.0	-2.4
WAZ	**Wanganui**	**1.18**	**69**	P		Pn	09 16 45.5	+2.0
WAZ				S		Sn	09 17 08.1	+0.5
KIW	**Kapiti Island**	**1.23**	**124**	P		Pn	09 16 45.4	+1.5
KIW				S		Sn	09 17 05.7	-2.7
TUWZ	**Tuamarina**	**1.27**	**167**	P		Pn	09 16 45.8	+1.6
TUWZ				S		Sn	09 17 07.1	-1.9
OHWZ	**Ohakea**	**1.35**	**91**	P		Pn	09 16 47.0	+2.2
OHWZ				S		Sn	09 17 09.9	+0.1
MRNZ	**Matariki Terra**	**1.35**	**206**	P		Pn	09 16 46.2	+1.3
MRNZ				S		Sn	09 17 07.9	-2.2
OGWZ	**Otaki Gorge**	**1.38**	**118**	P		Pn	09 16 46.8	+1.8
OGWZ				S		Sn	09 17 08.9	-1.6
VRZ	**Vera Road**	**1.41**	**42**	P		Pn	09 16 46.4	+1.0
VRZ				S		Sn	09 17 09.4	-1.5
SNZO	**South Karori**	**1.42**	**142**	P		Pn	09 16 47.2	+1.8
WEL	**Wellington**	**1.43**	**140**	P		Pn	09 16 47.3	+1.9
WEL				S		Sn	09 17 09.6	-1.6
CAW	**Cannon Point**	**1.47**	**129**	P		Pn	09 16 47.7	+1.8
CAW				S		Sn	09 17 09.8	-2.0
BSWZ	**Blackbirch Sta**	**1.54**	**171**	P		Pn	09 16 48.9	+2.4
BSWZ				S		Sn	09 17 12.3	-0.9
BHW	**Baring Head**	**1.57**	**141**	P		Pn	09 16 48.4	+1.7
BHW				S		Sn	09 17 11.5	-2.0
MRZ	**Mangatainoka R**	**1.61**	**108**	P		Pn	09 16 48.8	+1.7
MRZ				S		Sn	09 17 12.6	-1.5
PKVZ	**Pokaka**	**1.65**	**58**	P		Pn	09 16 48.8	+1.3
PKVZ				S		Sn	09 17 13.1	-1.7
THZ	**Tophouse**	**1.65**	**197**	P		Pn	09 16 49.1	+1.6
THZ				S		Sn	09 17 13.2	-1.7
HOWZ	**Holdsworth Sta**	**1.65**	**116**	P		Pn	09 16 49.3	+1.7
HOWZ				S		Sn	09 17 13.1	-1.8
MTVZ	**Mangateitei**	**1.68**	**62**	P		Pn	09 16 49.2	+1.3
MTVZ				S		Sn	09 17 14.0	-1.3
POWZ	**Post Office Ro**	**1.70**	**98**	P		Pn	09 16 49.6	+1.6
POWZ				S		Sn	09 17 14.3	-1.4
MTW	**Mount Morrison**	**1.77**	**124**	P		Pn	09 16 50.4	+1.8
MTW				S		Sn	09 17 14.9	-1.9
TRVZ	**Turoa**	**1.77**	**61**	P		Pn	09 16 50.2	+1.2
WNVZ	**Wahianoa**	**1.79**	**62**	P		Pn	09 16 50.4	+1.3
WNVZ				S		Sn	09 17 14.9	-2.6
MAVZ	**Matarangi**	**1.80**	**60**	P		Pn	09 16 50.6	+1.3
FWVZ	**Far West T-bar**	**1.80**	**59**	P		Pn	09 16 50.3	+1.1
FWVZ				S		Sn	09 17 15.1	-2.6
WHVZ	**Whangaehu Hut**	**1.81**	**61**	P		Pn	09 16 50.7	+1.4
COVZ	**Chateau Observ**	**1.82**	**58**	P		Pn	09 16 50.5	+1.2
TWVZ	**Taurewa**	**1.83**	**53**	P		Pn	09 16 50.4	+1.0
PAWZ	**Paruwai Farm**	**1.85**	**131**	P		Pn	09 16 51.2	+1.7
PAWZ				S		Sn	09 17 16.2	-2.1
TUVZ	**Tukino**	**1.86**	**61**	P		Pn	09 16 51.2	+1.5
TUVZ				S		Sn	09 17 16.8	-1.9
MOVZ	**Moawhango**	**1.86**	**66**	P		Pn	09 16 50.7	+1.0
MOVZ				S		Sn	09 17 15.7	-2.8
TIWZ	**Tintock**	**1.87**	**109**	P		Pn	09 16 51.5	+1.9
TIWZ				S		Sn	09 17 16.8	-1.8
NGZ	**Ngauruhoe**	**1.87**	**58**	P		Pn	09 16 51.1	+1.2
NGZ				S		Sn	09 17 17.6	-1.2
PRWZ	**Pori Road**	**1.88**	**102**	P		Pn	09 16 51.7	+2.0
PRWZ				S		Sn	09 17 17.6	-1.1
PLWZ	**Palliser**	**1.89**	**138**	P		Pn	09 16 51.4	+1.6
SNVZ	**South Ngauruho**	**1.89**	**59**	P		Pn	09 16 51.4	+1.3
SNVZ				S		Sn	09 17 19.5	+0.2
WTVZ	**West Tongariro**	**1.90**	**56**	P		Pn	09 16 51.3	+1.2
NNVZ	**North Ngauruho**	**1.91**	**57**	P		Pn	09 16 51.4	+1.2
OTVZ	**Oturere**	**1.92**	**59**	P		Pn	09 16 51.7	+1.4
KRVZ	**Karewarewa**	**1.94**	**57**	P		Pn	09 16 51.7	+1.1
HIZ	**Hauiti**	**1.95**	**31**	P		Pn	09 16 51.6	+1.1
HIZ	**Hauiti**	**1.95**	**31**	P		Pn	09 16 51.6	+1.1
NTVZ	**North Tongarir**	**1.96**	**57**	P		Pn	09 16 51.9	+1.2
ETVZ	**East Tongariro**	**1.97**	**58**	P		Pn	09 16 51.3	+0.5
TMVZ	**Te Maari**	**1.97**	**58**	P		Pn	09 16 52.4	+1.6
TMWZ	**Te Maipa**	**2.00**	**118**	P		Pn	09 16 52.8	+1.9
DVHZ	**Dannevirke**	**2.00**	**94**	P		Pn	09 16 52.5	+1.6
TRWZ	**Traveller**	**2.02**	**127**	P		Pn	09 16 52.9	+1.8
DSZ	**Denniston Nort**	**2.04**	**220**	P		Pn	09 16 53.0	+1.6
PNHZ	**Pukenui**	**2.05**	**83**	P		Pn	09 16 53.0	+1.6
KATZ	**Kakaramea**	**2.05**	**54**	P		Pn	09 16 53.0	+1.4
BHHZ	**Black Hill Sta**	**2.05**	**71**	P		Pn	09 16 52.4	+0.9
BFZ	**Birch Farm**	**2.11**	**104**	P		Pn	09 16 53.9	+1.8
BFZ	**Birch Farm**	**2.11**	**104**	P		Pn	09 16 53.9	+1.8
CPWZ	**Castlepoint**	**2.14**	**111**	P		Pn	09 16 54.8	+2.5
RITZ	**Rihia Road**	**2.15**	**57**	P		Pn	09 16 54.4	+1.8
WPHZ	**Waipukurau**	**2.21**	**88**	P		Pn	09 16 54.9	+1.7
KHZ	**Kahutara**	**2.23**	**180**	P		Pn	09 16 55.1	+1.8
KRHZ	**Kereru**	**2.23**	**77**	P		Pn	09 16 54.7	+1.3
WATZ	**Wairara**	**2.24**	**49**	P		Pn	09 16 55.2	+1.7
ANWZ	**Angora Road**	**2.25**	**98**	P		Pn	09 16 55.5	+2.0
KWHZ	**Kaweka Forest**	**2.34**	**72**	P		Pn	09 16 56.5	+1.9
PRHZ	**Porangahau**	**2.36**	**93**	P		Pn	09 16 56.6	+1.9
TLZ	**Tolley Road**	**2.41**	**40**	P		Pn	09 16 56.3	+0.9
BKZ	**Black Stump Fm**	**2.48**	**67**	P		Pn	09 16 57.3	+1.1
BKZ	**Black Stump Fm**	**2.48**	**67**	P		Pn	09 16 57.4	+1.1
MCHZ	**McNeill Hill**	**2.53**	**74**	P		Pn	09 16 58.6	+2.0
PXZ	**Pawanui**	**2.54**	**88**	P		Pn	09 16 58.5	+1.8
KAHZ	**Kahuranaki**	**2.58**	**82**	P		Pn	09 16 59.2	+1.9
NMHZ	**Naumai**	**2.74**	**68**	P		Pn	09 17 01.3	+2.3
GVZ	**Greta Valley S**	**2.81**	**188**	P		Pn	09 17 01.2	+1.5
ARHZ	**Aropaoanui**	**2.81**	**72**	P		Pn	09 17 02.0	+2.2
INZ	**Inchbonnie**	**2.99**	**211**	P		Pn	09 17 03.4	+1.6
RTZ	**Ruatahuna**	**3.08**	**60**	P		Pn	09 17 03.8	+0.7
SNGZ	**Shannon Statio**	**3.25**	**66**	P		Pn	09 17 06.3	+1.3
URZ	**Urewera**	**3.37**	**56**	P		Pn	09 17 07.4	+1.0
URZ	**Urewera**	**3.37**	**56**	P		Pn	09 17 06.9	+0.5
MHGZ	**Mahia Peninsul**	**3.51**	**74**	P		Pn	09 17 10.0	+1.8
PRGZ	**Paritu Road**	**3.58**	**71**	P		Pn	09 17 09.5	+0.5
RIGZ	**Rimuhau**	**3.58**	**67**	P		Pn	09 17 10.2	+1.2
MQZ	**McQueen's Vall**	**3.58**	**191**	P		Pn	09 17 10.2	+1.3
MWZ	**Matawai**	**3.60**	**60**	P		Pn	09 17 09.8	+0.6
TKGZ	**Te Karaka**	**3.76**	**64**	P		Pn	09 17 11.7	+0.5
RUGZ	**Raukumara Rang**	**3.90**	**57**	P		Pn	09 17 13.2	+0.1
TWGZ	**Tauwhareparae**	**3.98**	**61**	P		Pn	09 17 15.1	+1.1
CNGZ	**Carnagh Statio**	**3.99**	**66**	P		Pn	09 17 15.7	+1.6
HAZ	**Te Kaha**	**4.09**	**55**	P		Pn	09 17 15.2	-0.1
PKGZ	**Pakihiroa**	**4.20**	**58**	P		Pn	09 17 17.7	+0.9
WMGZ	**Waiomatatini S**	**4.46**	**60**	P		Pn	09 17 20.4	+0.4

IDC ***26*** *09:19:35.3±0.6, 6.˙19S×143.˙07E, h0km, mb4.8/18, mbtmp4.8/21, ML2.8/2, MS4.3/4, Error ellipse: s-maj=26.8km s-min=13.9km az=76.0*

MOS ***26*** *09:19:35.9±0.8, 6.˙16S×142.˙99E, h14km, mb5.1/31, Error ellipse: s-maj=12.8km s-min=6.1km az=113.4*

NEIC ***26*** *09:19:37.6±2.5, 6.˙23S±0.˙07×142.˙85E±0.˙06, h10km±1km, mb5.1/106, Error ellipse: s-maj=13.4km s-min=8.7km az=145.0*

BJI ***26*** *09:19:38.1±0.0, 6.˙22S×143.˙36E, h38km, mb4.8/60, mB5.2/18, Ms5.0/15, Ms7 4.7/15*

DJA ***26*** *09:19:43.3±0.3, 6˚S±3˙×14˙3E±˚, h43km±4km, M5.2/39, mB5.6/6, mb4.9/39, MLv5.5/7, Mw(mB)5.0/6*

ISC 26 09:19:40.7±0.3, 6.33S±0.04×142.89E±0.05, h35km, n421, σ1§12/389, mb5.0/116, MS4.8/7, 19C-4D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		ISC	h	m	s	ISC
TABU	**Tabubil**	**1.96**	**302**	P		**Pn**	**09 20**	**11.7**	**+0.1**
MMPI	**Merauke**	**3.27**	**229**	P		Pn	09 20	34.9	+5.4
GENI	**Genyem**	**4.60**	**324**	P		**Pn**	**09 20**	**48.8**	**+1.0**
GENI	**Genyem**	**4.60**	**324**	P		**Pn**	**09 20**	**47.8**	**0.0**
PMG	**Port Moresby**	**5.22**	**126**	Pn		**Pn**	**09 20**	**57.0**	**+0.7**
PMG	**Port Moresby**	**5.22**	**126**	P		**Pn**	**09 20**	**59.6**	**+3.2**
PMG	**Port Moresby**	**5.22**	**126**	P		**Pn**	**09 20**	**59.5**	**+3.2**
PMG	**Port Moresby**	**5.22**	**126**	*ce*P		**Pn**	**09 20**	**56.6**	**+0.2**
PMG					pmax	pmax			
	comp=Z,50nm,0.6s								
PMG	**Port Moresby**	**5.22**	**126**	Pn		**Pn**	**09 20**	**56.0**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=321,slow=16,SNR=8.4								
PMG					Sn	**Sn**	**09 21**	**54.6**	**-0.7**
	comp=Z,20nm,0.3s,baz=211,slow=21,SNR=6.8								
	comp=Z,75nm,0.5s								
SMPI	**Sarmi**	**6.00**	**316**	P		**Pn**	**09 21**	**07.0**	**0.0**
	comp=Z,128nm,0.8s,comp=Z,1.4nm								
MANU	**Manus Island**	**6.17**	**47**	Pn		**Pn**	**09 21**	**09.2**	**-0.3**
COEN	**Coen**	**7.59**	**178**	P		**Pn**	**09 21**	**32.0**	**+3.1**
	baz=7.6								
COEN	**Coen**	**7.59**	**178**	Pn		**Pn**	**09 21**	**31.8**	**+2.9**
COEN	**Coen**	**7.59**	**178**	P		**Pn**	**09 21**	**31.4**	**+2.5**
RABL	**Rabaul**	**9.48**	**78**			**Pn**	**09 21**	**56.6**	**+1.7**
FAKI	**Fak Fak**	**11.13**	**287**	P		**Pn**	**09 22**	**16.9**	**-0.6**
SAUI	**Saumlaki**	**11.62**	**261**	Pn		**Pn**	**09 22**	**23.9**	**-0.2**
SAUI	**Saumlaki**	**11.62**	**261**	P		**Pn**	**09 22**	**24.7**	**+0.5**
	comp=Z,602nm,1.2s,comp=Z,18µm								
MTSU	**Mount Surprise**	**11.82**	**173**	P		**Pn**	**09 22**	**30.0**	**+3.1**
	baz=12,SNR=4.3								
KDU	**Kakadu**	**12.06**	**238**	P		**Pn**	**09 22**	**29.6**	**-0.6**
	baz=12,SNR=12								
KDU	**Kakadu**	**12.06**	**238**	P		**Pn**	**09 22**	**29.3**	**-0.9**
MTN	**Manton Dam**	**13.27**	**240**	P		**Pn**	**09 22**	**45.1**	**-1.7**
	baz=13,SNR=4.2								
MTN	**Manton Dam**	**13.27**	**240**	Pn		**Pn**	**09 22**	**44.2**	**-2.6**
CTA	**Charters Tower**	**14.06**	**167**	Pn		**Pn**	**09 22**	**59.0**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=270,slow=7.1,SNR=2.1								
CTA					Lg	Lg	09 27	01.7	
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=4.2								
CTA					LR	LR	09 28	37.5	
	comp=Z,465nm,21.5s,baz=350,slow=38								
	comp=Z,1.0nm,0.3s								
CTAO	**Charters Tower**	**14.06**	**167**	Pn		**Pn**	**09 22**	**58.3**	**+0.7**
CTAO	**Charters Tower**	**14.06**	**167**	P		**Pn**	**09 22**	**58.3**	**+0.7**
QIS	**Mount Isa**	**14.50**	**192**	P		**Pn**	**09 23**	**03.9**	**+0.3**
	baz=14,SNR=4.8								
QIS	**Mount Isa**	**14.50**	**192**	P		**Pn**	**09 23**	**03.3**	**-0.2**
WB0	**Warramunga Arr**	**15.70**	**211**	Pn		**Pn**	**09 23**	**17.1**	**-2.4**
WB0				P		**Pn**	**09 23**	**17.2**	**-5.9**
WRAB	**Tennant Creek**	**15.87**	**211**	Pn		**Pn**	**09 23**	**19.2**	**-2.3**
WRAB	**Tennant Creek**	**15.87**	**211**	*ce*P		**Pn**	**09 23**	**18.9**	**-2.7**
WRAB					pmax	pmax			
	comp=Z,9.0nm,0.9s								
WB2	**Warramunga Arr**	**15.87**	**211**	Pn		**Pn**	**09 23**	**20.7**	**-1.0**
WC3	**Warramunga Arr**	**15.88**	**211**	P		**Pn**	**09 23**	**21.3**	**-0.4**
	baz=16								
WRA	**Warramunga Arr**	**15.88**	**211**	Pn		**Pn**	**09 23**	**21.6**	**-0.2**
WRA	**Warramunga Arr**	**15.88**	**211**	*i* P		**Pn**	**09 23**	**19.3**	**-2.5**
WRA					pmax	pmax			
	comp=Z,6.0nm,0.8s								
WRA	**Warramunga Arr**	**15.88**	**211**	Pn		**Pn**	**09 23**	**19.2**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=30,slow=13,SNR=13								
WRA					Sn	Sn	09 26	05.5	-11
	comp=Z,1.1nm,0.3s,baz=37,slow=22,SNR=6.6								
WRA					Lg	Lg	09 27	55.6	
	comp=Z,0.4nm,0.3s,baz=52,slow=30,SNR=2.2								
LBMI	**Labuha**	**16.36**	**290**	P		**Pn**	**09 23**	**28.7**	**+0.8**
	comp=Z,50nm,1.4s								
KNRA	**Kununurra**	**16.68**	**235**	P		**Pn**	**09 23**	**31.9**	**0.0**
	baz=16								
KNRA	**Kununurra**	**16.68**	**235**	Pn		**Pn**	**09 23**	**30.0**	**-1.9**
KNRA	**Kununurra**	**16.68**	**235**	P		**Pn**	**09 23**	**31.4**	**-0.5**
HNR	**Honiara**	**17.18**	**101**	LR		LR	09 30	09.0	
	comp=Z,6µm,21.0s,baz=290,slow=37								
SANI	**Sanana**	**17.38**	**283**	P		**P**	**09 23**	**42.6**	**+0.9**
	comp=Z,36nm,0.9s								
SOEI	**Soe**	**18.75**	**258**			**P**	**09 23**	**56.6**	**-0.4**
SOEI					IAmb	IAmb	09 24	02.8	
	comp=Z,74nm,0.8s								
SOEI	**Soe**	**18.75**	**258**	P		**Pn**	**09 23**	**59.9**	**+2.3**
	comp=Z,117nm,0.9s								
AS01	**Alice Springs**	**19.26**	**206**	P		**Pn**	**09 24**	**04.4**	**+0.8**
AS31	**Alice Springs**	**19.28**	**206**			**P**	**09 24**	**03.3**	**+0.7**
ASAR	**Alice Springs**	**19.28**	**206**	P		**P**	**09 24**	**03.4**	**+0.7**
ASAR	**Alice Springs**	**19.28**	**206**	P		**Pn**	**09 24**	**05.2**	**+1.3**
	comp=Z,74nm,0.7s,baz=31,slow=10,SNR=204								
ASAR					S	**S**	**09 27**	**33.0**	**-6.2**
	comp=Z,9.2nm,0.7s,baz=16,slow=28,SNR=5.7								
ASAR					Lg	Lg	09 29	48.9	
	comp=Z,0.2nm,0.3s,baz=30,slow=30,SNR=4.4								
ASAR					LR	LR	09 31	42.9	
	comp=Z,549nm,18.1s,baz=88,slow=37								
ASPA	**Alice Springs**	**19.29**	**206**	P		**Pn**	**09 24**	**04.5**	**+0.6**
	baz=19								
QLP	**Quilpie**	**20.18**	**177**	P		Pn	09 24	16.3	+1.9
	baz=20,SNR=7.6								
QLP	**Quilpie**	**20.18**	**177**	P		Pn	09 24	16.2	+1.7
EIDS	**Eidsvold**	**20.49**	**158**	P		Pn	09 24	18.7	+0.6
	baz=21,SNR=7.2								
EIDS	**Eidsvold**	**20.49**	**158**			Pn	09 24	18.1	0.0
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P		**P**	**09 24**	**16.2**	**+0.3**
	baz=20,SNR=24								
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P		**P**	**09 24**	**17.0**	**+1.1**
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P		**P**	**09 24**	**17.0**	**+1.1**
LUWI	**Luwuk**	**20.74**	**284**			**P**	**09 24**	**19.9**	**+1.2**
LUWI	**Luwuk**	**20.74**	**284**	P		**P**	**09 24**	**19.4**	**+0.8**
	comp=Z,179nm,1.1s								
GTOI	**Gorontalo**	**21.01**	**289**	P		**P**	**09 24**	**23.6**	**+2.1**
	comp=Z,120nm,0.9s,comp=Z,943nm								
EDFI	**Ende, Flores**	**21.15**	**262**	P		**P**	**09 24**	**23.5**	**+0.4**
	comp=Z,43nm,1.2s								
INKA	**Innaminka**	**21.39**	**185**	P		**P**	**09 24**	**28.8**	**+3.4**
OOD	**Oondadatta**	**22.42**	**197**	P		**P**	**09 24**	**39.2**	**+2.7**
KAPI	**Kappang**	**23.06**	**272**	P		**P**	**09 24**	**44.7**	**+1.3**
KAPI	**Kappang**	**23.06**	**272**	P		**P**	**09 24**	**44.7**	**+1.3**
KAPI					pmax	pmax			
	comp=Z,113nm,1.0s								
TTSI	**Tana Toraja**	**23.22**	**277**	P		**P**	**09 24**	**46.7**	**+1.7**
	comp=Z,24nm,0.8s								
WRKA	**Warakurna**	**23.27**	**215**	P		**P**	**09 24**	**46.0**	**+0.6**
	baz=23,SNR=67								
WRKA	**Warakurna**	**23.27**	**215**	P		**P**	**09 24**	**46.1**	**+0.7**
TOLI2	**Tolitoli**	**23.27**	**288**	P		**P**	**09 24**	**44.0**	**-1.5**
TOLI2	**Tolitoli**	**23.27**	**288**	P		**P**	**09 24**	**47.6**	**+2.1**
LCRK	**Leigh Creek**	**24.39**	**190**	P		**P**	**09 24**	**56.7**	**+0.8**
PLAI	**Plampang**	**25.01**	**263**	P		**P**	**09 25**	**01.4**	**-0.3**
PLAI	**Plampang**	**25.01**	**263**	P		**P**	**09 25**	**01.2**	**-0.5**
	comp=Z,52nm,1.0s								
KOUNC	**Koumac, New Ca**	**25.11**	**126**	P		**P**	**09 25**	**02.7**	**+0.2**
CMSA	**Cobar Meteorol**	**25.22**	**174**	P		**P**	**09 25**	**06.6**	**+3.2**
	baz=25,SNR=5.6								
MULG	**Mulgathing**	**25.23**	**198**	P		**P**	**09 25**	**04.3**	**+0.8**
STKA	**Stephens Creek**	**25.45**	**183**	P		**P**	**09 25**	**05.9**	**+0.5**
	baz=26,SNR=8.6								
STKA	**Stephens Creek**	**25.45**	**183**	P		**P**	**09 25**	**05.2**	**-0.2**
STKA	**Stephens Creek**	**25.45**	**183**	*i*eP		**P**	**09 25**	**04.9**	**-0.5**
STKA	**Stephens Creek**	**25.45**	**183**	P		**P**	**09 25**	**05.3**	**-0.1**
	comp=Z,6.4nm,0.9s,baz=354,slow=10,SNR=10								
	comp=Z,6.4nm,0.9s								
BBOO	**Buckleboo**	**27.11**	**193**	P		**P**	**09 25**	**20.6**	**+0.2**
	baz=27,SNR=6.4								
BBOO	**Buckleboo**	**27.11**	**193**	P		**P**	**09 25**	**20.4**	**-0.1**
FORT	**Forrest**	**28.02**	**208**	P		**P**	**09 25**	**28.0**	**-0.7**
	baz=28								
PWJI	**Pagerwojo**	**30.88**	**265**	P		**P**	**09 25**	**56.3**	**+2.1**
	comp=Z,24nm,1.0s								
KPJI	**Karang Pucung**	**33.73**	**266**	P		**P**	**09 26**	**19.4**	**+0.2**
	comp=Z,53nm,0.9s								
CMJI	**Cimerak**	**34.20**	**265**	P		**P**	**09 26**	**22.0**	**-1.3**
	comp=Z,109nm,1.0s								
CNJI	**Cibinong**	**35.51**	**266**	P		**P**	**09 26**	**33.0**	**-1.6**
	comp=Z,78nm,1.1s								
NWAO	**Narrogin (SRO)**	**35.63**	**219**	LR		LR	09 40	10.8	
	comp=Z,304nm,20.8s,baz=356,slow=34								
PPBI	**Pangkal Pinang**	**36.87**	**275**	P		**P**	**09 26**	**47.0**	**+0.7**
XMIS	**Christmas Isla**	**37.05**	**261**	P		**P**	**09 26**	**48.2**	**+0.4**
KRJI	**Kerinci**	**41.52**	**274**	P		**P**	**09 27**	**25.5**	**+0.3**
MJAR	**Matsushiro Arr**	**42.87**	**354**	P		**P**	**09 27**	**33.8**	**-2.0**
	comp=Z,1.1nm,0.5s,baz=169,slow=9.8,SNR=1.7								
MJAR					PcP	**PcP**	**09 29**	**26.1**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=169,slow=3.2,SNR=4.5								
	comp=Z,1.1nm,0.5s								
NJ2	**Nanjing**	**44.52**	**330**	*e*P		**P**	**09 27**	**50.8**	**+1.8**
NJ2					pmax	pmax			
	comp=Z,9.0nm,0.5s								
RPSI	**Rantau Prapat**	**44.80**	**280**	P		**P**	**09 27**	**50.8**	**-0.9**
RPSI					IAmb	IAmb	09 27	52.7	
	comp=Z,20nm,0.9s								
PSI	**Prapat**	**44.82**	**280**	P		**P**	**09 27**	**50.8**	**-1.2**
PSI					pmax	pmax			
	comp=Z,20nm,0.9s								
WHN	**Wuhan**	**45.74**	**325**	P		**P**	**09 28**	**01.0**	**+2.2**
KSAR	**Wonju Array Be**	**45.74**	**343**	P		**P**	**09 27**	**56.4**	**-2.3**
KSAR	**Wonju Array Be**	**45.74**	**343**	P		**P**	**09 27**	**56.4**	**-2.3**
KSRS	**Korea Array**	**45.74**	**343**	P		**P**	**09 27**	**57.8**	**-0.9**
KSRS					PcP	**PcP**	**09 29**	**36.8**	**+0.6**
	comp=Z,8.9nm,0.9s,baz=162,slow=9.5,SNR=30								
	comp=Z,2.5nm,0.8s,baz=185,slow=3.8,SNR=6.1								
	comp=Z,8.9nm,0.9s								
KS19	**Wonju Array Si**	**45.80**	**343**	P		**P**	**09 27**	**58.1**	**-1.1**
KS19					IAmb	IAmb	09 27	58.7	
	comp=Z,24nm,1.1s								
PHRA	**Phrae**	**48.77**	**301**	P		**P**	**09 28**	**21.2**	**-1.4**
LYN	**LuoYang**	**49.78**	**327**	⇑P		**P**	**09 28**	**30.0**	**-0.1**
LYN					pmax	pmax			
	comp=Z,40nm,0.9s								
LYN					LR	LR			
	comp=Z,660nm,17.9s								
LYN					LR	LR			
	comp=Z,690nm,18.6s								
LYN					LR	LR			
	comp=Z,600nm,14.8s								
CMAR	**Chiang Mai Arr**	**49.85**	**300**	P		**P**	**09 28**	**31.9**	**+1.0**
	comp=Z,4.1nm,0.7s,baz=127,slow=6.3,SNR=24								
	comp=Z,4.1nm,0.7s								
CHTO	**Chiang Mai**	**50.00**	**301**	P		**P**	**09 28**	**31.7**	**-0.3**
CHTO	**Chiang Mai**	**50.00**	**301**	P		**P**	**09 28**	**31.7**	**-0.3**
CHTO					pmax	pmax			
	comp=Z,5.0nm,0.9s								
HNS	**HongShan**	**50.84**	**331**	⇓P		**P**	**09 28**	**37.0**	**-1.0**
HNS					pmax	pmax			
	comp=Z,9.0nm,1.0s								
USA0B	**Ussuriysk Arra**	**51.25**	**350**	P		**P**	**09 28**	**39.4**	**-1.5**
USA0B	**Ussuriysk Arra**	**51.25**	**350**	*d* P		**P**	**09 28**	**40.4**	**-0.6**
USRK	**Ussuriysk Ar.**	**51.25**	**350**	P		**P**	**09 28**	**40.7**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=173,slow=9.1,SNR=14								
	comp=Z,7.1nm,0.9s								
XAN	**Xi'an**	**51.43**	**324**	P		**P**	**09 28**	**42.3**	**-0.3**
XAN					pP	pP	09 28	53.5	0.0
XAN					pmax	pmax			
	comp=Z,23nm,1.3s								
PZH	**PanZhiHua**	**51.53**	**311**	P		**P**	**09 28**	**44.0**	**+0.4**
PZH					pmax	pmax			
	comp=Z,10.0nm,1.1s								
PZH					pmax	pmax			
	comp=Z,120nm,4.7s								

MKAR **Makanchi Array** 75.19 322 P **P** 09 31 20.1 +0.3
comp=Z,12nm,0.8s,baz=110,slow=7.0,SNR=30
comp=Z,12nm,0.8s
MAKZ **Makanchi** 75.38 322 P **P** 09 31 20.9 0.0
MAKZ IAmb IAmb 09 31 22.2
comp=Z,20nm,1.0s
MAKZ **Makanchi** 75.38 322 P **P** 09 31 20.9 0.0
MAKZ pmax pmax
comp=Z,20nm,1.0s
SHLS **Shalkode** 75.48 317 *e*P **P** 09 31 19.7 -1.9
baz=318
SHLS **Shalkode** 75.48 317 *e*P **P** 09 31 19.7 -1.9
UZB **Uzynbulak** 75.77 317 *e*P **P** 09 31 23.7 +0.4
comp=Z,14nm,1.0s,baz=317
UZB **Uzynbulak** 75.77 317 *e*P **P** 09 31 23.7 +0.4
UZB pmax pmax
comp=Z,14nm,1.0s
PRZ **Przheval'sk** 75.94 317 P **P** 09 31 25.0 +0.6
PRZ IAmb IAmb 09 31 26.9
comp=Z,15nm,0.8s
PRZ **Przheval'sk** 75.94 317 P **P** 09 31 25.0 +0.6
PRZ pmax pmax
comp=Z,15nm,0.8s
BILL **Bilibino** 76.01 9⇑ *e*P **P** 09 31 23.8 -0.2
BILL pmax pmax
comp=Z,23nm,2.5s
KPKS **Kokpek** 76.12 318 *e*P **P** 09 31 25.6 +0.3
baz=318
KPKS **Kokpek** 76.12 318 *e*P **P** 09 31 25.6 +0.3
SATY **Saty** 76.15 317 *e*P **P** 09 31 26.0 +0.5
baz=317
SATY **Saty** 76.15 317 *e*P **P** 09 31 26.0 +0.5
KSH **Kashi** 76.58 313 P **P** 09 31 30.0 +2.0
KSH PcP **pP** 09 31 39.8 +0.6
KSH pmax pmax
comp=Z,14nm,1.0s
NIL **Nilore** 76.81 307 P **P** 09 31 29.4 +0.1
NIL **Nilore** 76.81 307 P **P** 09 31 29.4 +0.1
NIL pmax pmax
comp=Z,25nm,1.0s
TDK **Taldyqorghan** 76.90 319 *e*P **P** 09 31 29.9 +0.3
comp=Z,18nm,0.9s,baz=319
TDK **Taldyqorghan** 76.90 319 *e*P **P** 09 31 29.8 +0.3
TDK pmax pmax
comp=Z,18nm,0.9s
MDOK **Medeo** 77.11 317 *e*P **P** 09 31 31.2 +0.2
baz=317
MDOK **Medeo** 77.11 317 *e*P **P** 09 31 31.1 +0.2
ZALV **Zalesovo Beam** 77.15 329 P **P** 09 31 29.2 -1.5
comp=Z,2.2nm,0.3s,baz=118,slow=8.3,SNR=4.5
comp=Z,2.2nm,0.3s
GAMB **Gambell** 77.77 19 P **P** 09 31 35.2 +1.4
baz=226
KUU **Kurty** 77.86 317 *e*P **P** 09 31 35.2 +0.2
comp=Z,19nm,1.0s,baz=317
KUU **Kurty** 77.86 317 *e*P **P** 09 31 35.1 +0.2
KUU pmax pmax
comp=Z,19nm,1.0s
SEM **Semipalatinsk** 77.99 324 *e*P **P** 09 31 34.6 -1.2
baz=324
SEM **Semipalatinsk** 77.99 324 *e*P **P** 09 31 34.5 -1.2
TIXI **Tiksi** 78.37 356⇑ *e*P **P** 09 31 36.0 -1.1
TIXI pmax pmax
comp=Z,7.0nm,2.5s
TIXI **Tiksi** 78.37 356 P **P** 09 31 35.8 -1.3
comp=Z,3.0nm,0.3s,baz=319,slow=2.8,SNR=4.7
comp=Z,3.0nm,0.3s
AAK **Ala-Archa** 78.69 316 P **P** 09 31 39.3 -0.5
AAK **Ala-Archa** 78.69 316 P **P** 09 31 40.2 +0.5
comp=Z,6.3nm,1.1s,baz=121,slow=4.3,SNR=9.2
comp=Z,6.3nm,1.1s
KURK **Kurchatov** 79.06 324 P **P** 09 31 40.3 -1.0
KURK IAmb IAmb 09 31 42.3
comp=Z,20nm,1.0s
KURK **Kurchatov** 79.06 324 *c i*P **P** 09 31 41.2 -0.1
KURK pmax pmax
comp=Z,28nm,1.3s
KURBB **Kurchatov Arra** 79.07 324 P **P** 09 31 41.2 -0.2
comp=Z,11nm,0.9s,baz=116,slow=4.7,SNR=46
comp=Z,11nm,0.9s
N14K **Kuskokwak Cree** 79.08 25 P **P** 09 31 42.1 +0.9
baz=236
M14K **Bethel** 79.42 24 P **P** 09 31 43.7 +0.6
baz=236
L14K **Kuka Creek** 79.47 24 P **P** 09 31 43.8 +0.5
baz=235
BTLS **Baital** 79.80 318 *e*P **P** 09 31 45.7 +0.2
comp=Z,7.2nm,0.9s,baz=318
BTLS **Baital** 79.80 318 *e*P **P** 09 31 45.7 +0.2
BTLS pmax pmax
comp=Z,7.0nm,0.9s
M15K **Kasigluk River** 79.92 25 P **P** 09 31 46.0 +0.2
baz=237
L15K **Ungalak Mounta** 80.13 24 P **P** 09 31 47.3 +0.4
baz=236
TNA **Tin City** 80.17 19 P **P** 09 31 47.4 +0.3
baz=230
ANM **Nome** 80.38 20 P **P** 09 31 48.5 +0.3
ANM **Nome** 80.38 20 P **P** 09 31 48.5 +0.3
baz=232
ANM **Nome** 80.38 20 P **P** 09 31 48.6 +0.3
ANM pmax pmax
comp=Z,19nm,1.4s
O16K **Kokwok River B** 80.45 26 P **P** 09 31 49.1 +0.4
baz=240
K15K **Wolf Creek Mou** 80.46 23 P **P** 09 31 49.1 +0.4
baz=236
F14K **Arctic Creek** 80.63 19 P **P** 09 31 50.4 +0.9
baz=231
Q17K **Contact Creek** 80.80 28 P **P** 09 31 50.5 -0.3
baz=242
M16K **Timber Creek** 80.81 25 P **P** 09 31 50.6 0.0
baz=239
L16K **Owhat River** 80.96 24 P **P** 09 31 51.5 +0.1
baz=238
O17K **Koliganek Bris** 80.97 26 P **P** 09 31 51.4 -0.1
baz=241
DZA **Taraz** 80.98 315 *e*P **P** 09 31 52.4 +0.3
comp=Z,7.3nm,0.6s,baz=315
DZA **Taraz** 80.98 315 *e*P **P** 09 31 52.3 +0.3
DZA pmax pmax
comp=Z,7.0nm,0.6s
G15K **Niukluk** 81.10 20 P **P** 09 31 52.3 +0.3
baz=234
N17K **Nushagak Hills** 81.31 26 P **P** 09 31 53.4 +0.1
baz=240
F15K **North Star Dit** 81.33 19 P **P** 09 31 53.5 +0.2
baz=233
J16K **Anvik River** 81.36 22 P **P** 09 31 53.7 +0.2
baz=237
SIMJ **Simiganj** 81.49 310 P **P** 09 31 54.7 -0.3
SIMJ IAmb IAmb 09 31 56.2
comp=Z,19nm,1.0s
H16K **Elim** 81.52 21 P **P** 09 31 54.4 +0.1
baz=235
KK31 **Karatay Array** 81.61 315 P **P** 09 31 55.1 -0.2
KK31 IAmb IAmb 09 31 56.6
comp=Z,20nm,1.6s
KK31 **Karatay Array** 81.61 315 P **P** 09 31 55.1 -0.2
KK31 pmax pmax
comp=Z,20nm,1.6s
KKAR **Karatay Array** 81.61 315 IAmb IAmb 09 31 56.6
comp=Z,20nm,1.6s
M17K **Holitna River** 81.64 25 P **P** 09 31 55.0 0.0
baz=240
L17K **Donlin** 81.65 24 P **P** 09 31 55.3 +0.2
baz=239
I17K **Unalakleet** 81.66 22 IAmb IAmb 09 31 56.7
comp=Z,21nm,1.1s
I17K **Unalakleet** 81.66 22 P **P** 09 31 55.4 +0.4
baz=237
N18K **Kilae Creek** 81.94 26 P **P** 09 31 56.8 +0.2
baz=242
K17K **Iditarod** 81.95 23 IAmb IAmb 09 31 58.6
comp=Z,16nm,0.9s
K17K **Iditarod** 81.95 23 P **P** 09 31 56.9 +0.3
baz=239
BRLS **Boroldaу** 82.07 315 *e*P **P** 09 31 57.7 0.0
baz=315
BRLS **Boroldaу** 82.07 315 *e*P **P** 09 31 57.7 0.0
BRZS **Berezniki** 82.32 322 *e*P **P** 09 31 58.9 0.0
comp=Z,7.3nm,1.0s,baz=322
BRZS **Berezniki** 82.32 322 *e*P **P** 09 31 58.9 0.0
BRZS pmax pmax
comp=Z,7.0nm,1.0s
L18K **Granite Mounta** 82.35 24 P **P** 09 31 58.9 +0.2
baz=241

M18K **Stony River** 82.36 25 P **P** 09 31 58.9 +0.1
baz=242
H17K **Granite Mounta** 82.51 21 P **P** 09 31 59.8 +0.3
baz=237
G17K **Kiwalik Mounta** 82.56 21 P **P** 09 32 00.2 +0.4
baz=237
Q20K **Shuyak Island** 82.59 29 P **P** 09 32 00.3 +0.2
baz=245
N19K **Bonanza Creek** 82.61 26 P **P** 09 32 00.4 +0.1
baz=243
C16K **Lisburne Hills** 82.68 17 P **P** 09 32 00.6 +0.3
baz=232
F17K **Baldwin Pennin** 82.88 20 IAmb IAmb 09 32 02.4
comp=Z,10nm,0.8s
F17K **Baldwin Pennin** 82.88 20 P **P** 09 32 01.5 +0.2
baz=236
J18K **Innoko River** 82.95 23 P **P** 09 32 01.7 -0.1
baz=241
TTA **Tatalina** 82.97 24 P **P** 09 32 02.0 0.0
baz=241
D17K **Noatak River** 83.02 18 P **P** 09 32 02.2 +0.1
baz=234
E17K **Hotham Inlet** 83.05 19 P **P** 09 32 02.7 +0.4
baz=235
L19K **White Mountain** 83.09 25 P **P** 09 32 02.7 +0.1
baz=242
C17K **DeLong Mountai** 83.44 17 P **P** 09 32 04.5 +0.2
baz=234
G18K **Tagagawik** 83.47 21 IAmb IAmb 09 32 05.1
comp=Z,14nm,1.0s
G18K **Tagagawik** 83.47 21 P **P** 09 32 04.6 +0.1
baz=238
F18K **Selawik** 83.50 20 P **P** 09 32 04.5 0.0
baz=238
GCSA **Galena City Sc** 83.53 22 P **P** 09 32 04.9 +0.1
baz=240
L20K **Farewell, AK** 83.63 25 P **P** 09 32 05.2 -0.2
baz=243
J19K **Poorman** 83.64 23 IAmb IAmb 09 32 06.5
comp=Z,12nm,1.1s
J19K **Poorman** 83.64 23 P **P** 09 32 05.2 -0.2
baz=242
E18K **Tukpahlearik C** 83.64 19 IAmb IAmb 09 32 06.3
comp=Z,11nm,0.9s
E18K **Tukpahlearik C** 83.64 19 P **P** 09 32 05.6 +0.3
baz=236
QSPA **South Pole Qui** 83.64 180 P **P** 09 32 05.2 -0.4
QSPA IAmb IAmb 09 32 06.8
comp=Z,7.9nm,0.8s
QSPA **South Pole Qui** 83.64 180 P **P** 09 32 05.8 +0.2
comp=Z,8.7nm,0.8s,baz=324,slow=0.9,SNR=52
comp=Z,8.7nm,0.8s
M20K **Styx River** 83.68 25 P **P** 09 32 05.6 -0.2
baz=244
K20K **Telida** 83.95 24 IAmb IAmb 09 32 08.2
comp=Z,8.4nm,0.9s
K20K **Telida** 83.95 24 P **P** 09 32 06.9 -0.1
baz=243
H19K **Roundabout Mou** 84.07 21 IAmb IAmb 09 32 08.6
comp=Z,11nm,0.9s
H19K **Roundabout Mou** 84.07 21 P **P** 09 32 07.5 0.0
baz=241
C18K **Utukok River** 84.14 18 P **P** 09 32 07.6 -0.3
baz=236
G19K **Purcell Mounta** 84.15 21 IAmb IAmb 09 32 20.2
comp=Z,15nm,1.2s
G19K **Purcell Mounta** 84.15 21 P **P** 09 32 07.8 -0.1
baz=240
F19K **Shaleruckik Mo** 84.26 20 IAmb IAmb 09 32 22.0
comp=Z,18nm,1.6s
F19K **Shaleruckik Mo** 84.26 20 P **P** 09 32 08.5 +0.1
baz=239
J20K **Nowinta River** 84.29 23 IAmb IAmb 09 32 10.4
comp=Z,9.9nm,0.9s
J20K **Nowinta River** 84.29 23 P **P** 09 32 08.8 +0.1
baz=243
NRIK **Noril'sk** 84.36 343 *ce*P **P** 09 32 08.5 -0.4
NRIK pmax pmax
comp=Z,22nm,1.0s
NRIK **Noril'sk** 84.36 343 P **P** 09 32 08.3 -0.6
comp=Z,23nm,1.0s,baz=121,slow=4.7,SNR=22
comp=Z,23nm,1.0s
B18K **Kokolik River** 84.37 17 P **P** 09 32 09.2 +0.3
baz=235
I20K **Naaghedeneel** 84.45 22 P **P** 09 32 09.6 +0.2
baz=242
PPLA **Purkeypile** 84.51 25 P **P** 09 32 09.7 -0.3
baz=245
SUA **Susitna One** 84.53 26 P **P** 09 32 09.7 -0.4
baz=246
H20K **Jeneeega Mo** 84.63 22 P **P** 09 32 10.3 -0.1
baz=242
BVAR **Borovoye Array** 84.65 325 P **P** 09 32 10.9 +0.1
comp=Z,56nm,0.8s,baz=104,slow=6.3,SNR=204
comp=Z,56nm,0.8s
BRVK **Borovoye** 84.72 325 P **P** 09 32 11.0 0.0
BRVK **Borovoye** 84.72 325 *ce*P **P** 09 32 11.1 0.0
BRVK pmax pmax
comp=Z,54nm,1.0s
E19K **Redstone River** 84.76 20 IAmb IAmb 09 32 12.1
comp=Z,14nm,0.8s
E19K **Redstone River** 84.76 20 P **P** 09 32 10.9 -0.1
baz=240
CAST **Castle Rocks** 84.78 24 P **P** 09 32 10.2 -1.0
CAST **Castle Rocks** 84.78 24 P **P** 09 32 10.7 -0.5
baz=245
RC01 **Rabbit Creek A** 84.83 27 P **P** 09 32 10.8 -0.6
baz=247
C19K **Lookout Ridge** 84.88 18 P **P** 09 32 11.5 -0.1
baz=232
CHUM **Lake Minchumin** 84.89 24 P **P** 09 32 11.5 -0.2
baz=245
M22K **Willow** 84.92 26 P **P** 09 32 11.1 -0.8
baz=247
D19K **Kuna River** 85.01 18 P **P** 09 32 12.0 -0.2
baz=239
F20K **Avaraart Lake** 85.07 20 P **P** 09 32 12.5 -0.1
baz=241
PMR **Palmer** 85.29 26 P **P** 09 32 12.1 -1.6
PMR IAmb IAmb 09 32 13.6
comp=Z,11nm,0.9s
PMR **Palmer** 85.29 26 P **P** 09 32 13.2 -0.6
baz=248,SNR=6.7
PMR **Palmer** 85.29 26 P **P** 09 32 12.1 -1.6
PMR pmax pmax
comp=Z,11nm,0.9s
H21K **Melozitna Rive** 85.47 22 P **P** 09 32 14.1 -0.5
baz=244
E20K **Nigu River** 85.51 19 P **P** 09 32 14.5 -0.3
baz=241
BPAW **Bear Paw Mtn.** 85.51 24 P **P** 09 32 14.0 -0.9
BPAW **Bear Paw Mtn.** 85.51 24 P **P** 09 32 14.6 -0.3
baz=246
KNK **Knik Glacier** 85.53 27 P **P** 09 32 14.9 -0.1
baz=248
TRF **Thorofare Moun** 85.53 24 P **P** 09 32 14.8 -0.3
baz=246
I21K **Tanana** 85.57 23 IAmb IAmb 09 32 23.7
comp=Z,17nm,1.2s
I21K **Tanana** 85.57 23 P **P** 09 32 15.2 +0.1
baz=245
D20K **Etivluk River** 85.60 19 P **P** 09 32 15.3 +0.1
baz=240
SML **Sawmill** 85.73 26 P **P** 09 32 14.5 -1.5
SML **Sawmill** 85.73 26 P **P** 09 32 15.4 -0.7
baz=248
F21K **Alatna River** 85.93 20 P **P** 09 32 16.5 -0.4
baz=243
MLY **Manley** 85.99 23 IAmb IAmb 09 32 24.3
comp=Z,12nm,1.0s
MLY **Manley** 85.99 23 P **P** 09 32 16.7 -0.5
baz=246
M23K **Glacier View** 85.99 26 P **P** 09 32 16.6 -0.7
baz=249
WAT1 **Susitna Watana** 86.02 25 P **P** 09 32 16.4 -1.0
baz=248
H22K **Ishtalitna Cre** 86.11 22 P **P** 09 32 17.3 -0.5
baz=245
RND **Reindeer** 86.11 25 P **P** 09 32 16.4 -1.5
RND IAmb IAmb 09 32 17.4
comp=Z,15nm,0.8s
RND **Reindeer** 86.11 25 P **P** 09 32 16.4 -1.5
RND pmax pmax
comp=Z,15nm,0.8s
SCM **Sheep Creek Mo** 86.18 27 P **P** 09 32 17.7 -0.6
baz=249
MCK **McKinley** 86.20 24 P **P** 09 32 17.3 -0.9
baz=248,SNR=5.8

WAT6 **Susitna Watana** 86.27 26 P **P** 09 32 18.1 -0.7
baz=249
E21K **Killik River** 86.32 19 P **P** 09 32 19.0 +0.2
baz=243
C21K **Knifeblade Rid** 86.39 19 P **P** 09 32 19.2 +0.1
baz=242
NEA2 **Nenana** 86.47 24 IAmb IAmb 09 32 18.8
comp=Z,23nm,1.6s
NEA2 **Nenana** 86.47 24 P **P** 09 32 19.4 -0.1
baz=248
G22K **Bettles** 86.49 21 P **P** 09 32 19.5 -0.1
baz=245
I23K **Minto, Yukon-K** 86.57 23 IAmb IAmb 09 35 27.6
comp=Z,32nm,1.9s
I23K **Minto, Yukon-K** 86.57 23 P **P** 09 32 19.8 -0.2
baz=247
DHY **Denali Highway** 86.61 25 IAmb IAmb 09 32 20.8
comp=Z,13nm,0.9s
DHY **Denali Highway** 86.61 25 P **P** 09 32 20.1 -0.3
baz=249
KLU **Klutina** 86.69 27 IAmb IAmb 09 32 29.8
comp=Z,16nm,1.2s
KLU **Klutina** 86.69 27 P **P** 09 32 20.7 -0.1
baz=250
M24K **Tolsona, Glenn** 86.79 26 P **P** 09 32 21.4 +0.1
baz=250
WRH **Wood River Hil** 86.82 24 IAmb IAmb 09 32 20.8
comp=Z,13nm,1.0s
KAIM **Kayak Island** 86.89 29 P **P** 09 32 21.5 -0.2
baz=252
A21K **Barrow** 86.90 16 P **P** 09 32 21.7 +0.2
baz=240,SNR=9.8
E22K **Anaktuvuk Pass** 86.90 20 IAmb IAmb 09 32 23.8
comp=Z,8.2nm,0.8s
E22K **Anaktuvuk Pass** 86.90 20 P **P** 09 32 21.8 +0.1
baz=245
D22K **Ayikyak River** 86.94 19 IAmb IAmb 09 32 32.0
comp=Z,14nm,0.9s
D22K **Ayikyak River** 86.94 19 P **P** 09 32 21.9 +0.1
baz=244
G23K **Bananza Creek** 86.94 22 P **P** 09 32 21.8 -0.1
baz=246
CCB **Clear Creek Bu** 87.00 24 IAmb IAmb 09 32 21.4
comp=Z,12nm,0.8s
COLA **College** 87.06 24 P **P** 09 32 20.9 -1.5
COLA IAmb IAmb 09 32 28.3
comp=Z,9.4nm,0.8s
COLA **College** 87.06 24 P **P** 09 32 22.4 0.0
baz=249
COLA **College** 87.06 24 P **P** 09 32 20.9 -1.5
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLD **Coldfoot** 87.08 21 P **P** 09 32 22.7 +0.2
baz=246
BMRM **Bremner River** 87.12 28 P **P** 09 32 22.9 0.0
baz=252
HDA **Harding Lake** 87.26 24 P **P** 09 32 23.6 +0.2
baz=249
N25K **Chitina, Valde** 87.33 27 P **P** 09 32 24.0 +0.1
baz=252
PAX **Paxson** 87.39 26 P **P** 09 32 24.3 +0.2
baz=251
H24K **Noodor Dome** 87.41 23 IAmb IAmb 09 32 36.8
comp=Z,27nm,1.9s
H24K **Noodor Dome** 87.41 23 P **P** 09 32 24.4 +0.3
baz=248
ILAR **Eielson Array** 87.41 24 P **P** 09 32 22.7 -1.5
comp=Z,7.0nm,0.8s,baz=256,slow=5.1,SNR=49
comp=Z,7.0nm,0.8s
E23K **Chandalar** 87.62 20 P **P** 09 32 25.7 +0.5
baz=247
D23K **Nanushuk River** 87.63 19 P **P** 09 32 25.4 +0.3
baz=246
GLB **Gilahina Butte** 87.64 27 IAmb IAmb 09 32 33.7
comp=Z,18nm,1.3s
CRQE **Cirque** 87.77 28 P **P** 09 32 25.9 -0.1
baz=253
G24K **Hadweenzic Riv** 87.87 22 IAmb IAmb 09 32 27.4
comp=Z,15nm,1.1s
G24K **Hadweenzic Riv** 87.87 22 P **P** 09 32 26.1 -0.3
baz=249
J25K **Salcha River,** 87.97 24 IAmb IAmb 09 32 26.9
comp=Z,11nm,0.9s
J25K **Salcha River,** 87.97 24 P **P** 09 32 26.2 -0.7
baz=251
F24K **Squaw Lake** 88.02 21 P **P** 09 32 27.3 +0.3
baz=248
MESA **MESA** 88.14 29 P **P** 09 32 27.9 -0.1
baz=254
D24K **Happy Valley** 88.32 19 P **P** 09 32 28.7 +0.4
baz=248,SNR=16
SCRK **Sand Creek** 88.34 25 IAmb IAmb 09 34 30.8
comp=Z,26nm,1.9s
SCRK **Sand Creek** 88.34 25 P **P** 09 32 28.4 -0.3
baz=252
G25K **Bearman Lake** 88.41 22 P **P** 09 32 29.2 +0.3
baz=250
BARN **Barnard Glacie** 88.52 28 P **P** 09 32 29.7 0.0
C24K **Franklin Bluff** 88.57 19 P **P** 09 32 29.8 +0.2
baz=248
CTG **Chitna Glacier** 88.65 28 P **P** 09 32 30.1 -0.2
baz=255
J26L **Joseph Creek** 88.67 25 IAmb IAmb 09 32 31.0
comp=Z,7.4nm,0.8s
J26L **Joseph Creek** 88.67 25 P **P** 09 32 30.2 -0.1
baz=252
M27K **Edge Creek, AK** 88.78 27 P **P** 09 32 30.7 -0.1
baz=254
F25K **Christian Rive** 88.86 21 P **P** 09 32 31.1 +0.1
baz=250
L27K **Beaver Creek,** 89.00 26 IAmb IAmb 09 32 41.2
comp=Z,11nm,1.2s
L27K **Beaver Creek,** 89.00 26 P **P** 09 32 31.8 0.0
baz=254
BCAR **Beaver Creek A** 89.02 26 P **P** 09 32 31.5 -0.3
E25K **Arctic Village** 89.06 21 IAmb IAmb 09 32 44.7
comp=Z,13nm,1.3s
E25K **Arctic Village** 89.06 21 P **P** 09 32 32.3 +0.4
baz=251,SNR=6.5
I26K **Coal Creek Min** 89.08 24 P **P** 09 32 31.7 -0.3
baz=253
K27K **Chicken** 89.16 25 IAmb IAmb 09 32 34.0
comp=Z,15nm,1.1s
K27K **Chicken** 89.16 25 P **P** 09 32 33.2 +0.8
baz=254
BMAR **Burnt Mountain** 89.19 22 P **P** 09 32 33.0 +0.5
BVCY **Beaver Creek** 89.25 27 P **P** 09 32 33.5 +0.6
baz=255
YUK3 **Moose Creek** 89.27 28 P **P** 09 32 33.6 +0.3
baz=255
G26K **Porcupine Rive** 89.33 22 P **P** 09 32 34.4 +1.2
baz=252
F26K **Sheenjek River** 89.43 21 P **P** 09 32 34.7 +1.0
baz=252
YUK8 **Steele Glacier** 89.47 28 P **P** 09 32 34.7 +0.4
baz=256
EGAK **Eagle** 89.75 25 P **P** 09 32 35.5 +0.4
baz=255
I27K **Kandik River** 89.78 24 P **P** 09 32 36.0 +0.6
baz=254
H27K **Steamboat Moun** 89.99 23 P **P** 09 32 37.0 +0.6
baz=254
YUK4 **Talbot Arm** 90.01 28 P **P** 09 32 37.1 +0.4
baz=257
P29M **Windy Craggy** 90.07 30 P **P** 09 32 37.0 +0.2
baz=258
ABKAR **Akbulak array** 90.16 319 P **P** 09 32 36.6 -0.8
DAWY **Dawson** 90.31 25 P **P** 09 32 38.1 +0.2
DAWY IAmb IAmb 09 32 38.9
comp=Z,8.5nm,1.0s
DAWY **Dawson** 90.31 25 P **P** 09 32 38.2 +0.3
baz=256
M29M **Somme Creek** 90.34 27 P **P** 09 32 38.4 +0.2
baz=257
I28M **Miner Creek** 90.42 24 P **P** 09 32 38.7 +0.3
baz=256
HYT **Haines Junctio** 90.44 29 P **P** 09 32 38.9 +0.3
baz=258
P30M **Million Dollar** 90.55 30 P **P** 09 32 39.7 +0.6
baz=258
L29M **L29M** 90.64 27 IAmb IAmb 09 32 40.6
comp=Z,8.7nm,0.9s
L29M **L29M** 90.64 27 P **P** 09 32 39.9 +0.4
baz=257
J29N **Klondike Camp** 90.90 25 IAmb IAmb 09 32 42.1
comp=Z,13nm,1.2s
J29N **Klondike Camp** 90.90 25 P **P** 09 32 40.9 +0.3
baz=257

F28M	**Old Crow**	**90.98**	**22**	P		**P**	**09 32 41.2**	**+0.3**
	baz=256							
K29M	**Barlow Dome**	**91.06**	**26**	P		**P**	**09 32 41.6**	**+0.1**
	baz=258							
O30N	**Mendenhall**	**91.10**	**29**	P		**P**	**09 32 41.8**	**+0.1**
	baz=259							
M30M	**Minto, Yukon**	**91.13**	**27**	P		**P**	**09 32 41.9**	**+0.2**
	baz=259							
H29M	**Whitestone**	**91.23**	**23**	P		**P**	**09 32 42.1**	**+0.1**
	baz=257							
AKTO	**Aktyubinsk**	**91.57**	**320**	P		**P**	**09 32 43.1**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=77,slow=2.7,SNR=7.9							
	comp=Z,4.0nm,0.8s							
J30M	**Hart River**	**91.72**	**25**	IAmb		IAmb	09 33 05.6	
	comp=Z,18nm,1.6s							
J30M	**Hart River**	**91.72**	**25**	P		**P**	**09 32 44.6**	**+0.1**
	baz=259							
I30M	**Mount Dempster**	**91.83**	**25**	IAmb		IAmb	09 33 44.6	
	comp=Z,14nm,1.3s							
EPYK	**Eagle Plains**	**91.91**	**23**	IAmb		IAmb	09 32 52.9	
	comp=Z,8.5nm,1.1s							
EPYK	**Eagle Plains**	**91.91**	**23**	P		**P**	**09 32 44.9**	**-0.4**
	baz=259							
ARU	**Arti**	**92.09**	**326**	P		**P**	**09 32 44.1**	**-2.2**
ARU	**Arti**	**92.09**	**326** *c i*	P		**P**	**09 32 44.7**	**-1.5**
ARU							09 36 24.4	
ARU				S		**SKSac**	**09 43 14.4**	**-2.2**
ARU				SS		**SS**	**09 49 55.9**	**+0.2**
ARU				pmax	pmax			
	comp=Z,16nm,1.0s							
ARU	**Arti**	**92.09**	**326**	P		**P**	**09 32 44.6**	**-1.7**
	comp=Z,6.9nm,0.2s,baz=76,slow=3.6,SNR=10							
	comp=Z,6.9nm,0.2s							
G30M	**tAoh Zraii Nji**	**92.22**	**23**	P		**P**	**09 32 47.0**	**+0.3**
	baz=259							
F30M	**Barrier River**	**92.51**	**22**	P		**P**	**09 32 48.2**	**+0.2**
	baz=260							
FARO	**Faro, Yukon**	**92.65**	**28**	P		**P**	**09 32 48.8**	**0.0**
	baz=262							
H31M	**Peel River**	**92.76**	**24**	P		**P**	**09 32 48.6**	**-0.6**
	baz=261							
G31M	**Satah River**	**92.97**	**23**	P		**P**	**09 32 49.6**	**-0.4**
	baz=261							
S34M	**Telegraph Cree**	**93.18**	**32**	P		**P**	**09 32 51.3**	**+0.1**
	baz=263							
F31M	**Tsiigehtchic**	**93.25**	**23**	P		**P**	**09 32 51.5**	**+0.2**
	baz=262							
A36M	**Sachs Harbour**	**96.55**	**18**	P		**P**	**09 33 06.3**	**-0.1**
	baz=270							
BELG	**Belogornoye**	**98.19**	**322** *de*	P		**P**	**09 33 12.9**	**-1.2**
BELG				pmax	pmax			
	comp=Z,4.0nm,0.9s							
YKA	**Yellowknife Ar**	**101.36**	**28** *i*	P		**Pdif**	**09 33 28.2**	**+0.1**
YKA	**Yellowknife Ar**	**101.36**	**28**	P		**Pdif**	**09 33 25.9**	**-2.1**
	comp=Z,0.3nm,0.9s,baz=275,slow=4.8,SNR=4.9							
OBN	**Obninsk**	**104.48**	**325** *eP*			**Pdif**	**09 33 39.7**	**-2.4**
OBN				e			09 38 00.3	
OBN				*e*PPP		PPP	09 40 10.8	
OBN				pmax	pmax			
	comp=Z,4.0nm,1.0s							
PLCA	**Paso Flores**	**124.00**	**150**	PKP		**PKiKP**	**09 38 36.3**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=0.0,slow=5.1,SNR=3.1							
CPUP	**Villa Florida**	**142.07**	**150**	PKP		**PKPdf**	**09 39 10.6**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=153,slow=2.3,SNR=3.8							
SDV	**Santo Domingo**	**146.68**	**83**	PKPdf		**PKPdf**	**09 39 17.3**	**-1.3**
ETMB	**Extrema**	**146.87**	**119**	PKPdf		**PKPdf**	**09 39 18.6**	**-0.1**
KIC	**Kosan Boka**	**147.83**	**272**⇑ *e*PKP1			**PKPbc**	**09 39 23.8**	**+0.6**
	comp=Z,38nm,1.0s							
DBIC	**Dimbokro**	**147.95**	**272**			**PKPbc**	**09 39 24.5**	**+1.0**
DBIC	**Dimbokro**	**147.95**	**272**	PKP2		**PKPbc**	**09 39 24.5**	**+1.0**
DBIC	**Dimbokro**	**147.95**	**272**	PKPbc		**PKPbc**	**09 39 24.3**	**+0.8**
	comp=Z,19nm,0.9s,baz=104,slow=3.1,SNR=12							
LIC	**Lamto**	**148.11**	**272**⇑ *e*P			**PKPbc**	**09 39 24.7**	**+0.7**
	comp=Z,71nm,0.9s							
TIC	**Toumodi**	**148.12**	**272**⇑ *e*PKP1			**PKPbc**	**09 39 24.5**	**+0.5**
	comp=Z,36nm,1.0s							
PTLB	**Pontes e Lacer**	**149.27**	**135**	PKPdf		**PKPdf**	**09 39 22.3**	**-0.2**
SAML	**Samuel**	**149.91**	**120**			**PKPdf**	**09 39 24.8**	**+1.2**
SAML	**Samuel**	**149.91**	**120**	PKHKP		PKPpre	09 39 24.8	

*IDC **26** 09:28:11.4±0.7,6°.17S×143°.00E, h0km, mb4.4/14, mbtmp4.4/17, ML4.4/1, Error ellipse: s-maj=27.8km s-min=15.1km az=80.0*
*NEIC **26** 09:28:12.8±1.5,6°.29S±0°.08×142°.89E±0°.09, h10km±1km, mb4.9/58, Error ellipse: s-maj=15.2km s-min=13.0km az=105.0*
*DJA **26** 09:28:26.4±2.0,6°.5S±6°×14°.2E±2°.3, h39km±12km, M5.0/6, mB5.6/2, mb4.7/6, MLv5.1/3, Mw(mB)5.1/2*
ISC 26 09:28:13.7±0.5,6°.39S±0°.05×142°.90E±0°.06,h10km,n113, σ2s23/82,mb4.9/52,3C-2D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMPI	**Merauke**	**3.24**	**230**	P		**Pg**	**09 29 16.5**	**+0.7**
GENI	**Genyem**	**4.65**	**324**	P		**Pn**	**09 29 22.5**	**-1.6**
PMG	**Port Moresby**	**5.18**	**126**	Pn		**Pn**	**09 29 31.4**	**0.0**
PMG	**Port Moresby**	**5.18**	**126**	P		**Pn**	**09 29 33.6**	**+2.2**
PMG	**Port Moresby**	**5.18**	**126**	Pn		**Pn**	**09 29 32.5**	**+1.2**
	42nm,0.5s,baz=322,slow=3.9,SNR=12							
PMG				Sn		**Sn**	**09 30 31.9**	**+0.7**
	3.6nm,0.3s,baz=335,slow=9.4,SNR=3.8							
SMPI	**Sarmi**	**6.04**	**316**	P		Pn	09 29 39.9	-3.3
	100nm,1.0s,0.5nm							
MANU	**Manus Island**	**6.20**	**46**	Pn		**Pn**	**09 29 44.0**	**-1.5**
COEN	**Coen**	**7.53**	**178**	Pn		**Pn**	**09 30 03.2**	**-0.4**
SAUI	**Saumlaki**	**11.62**	**261**	Pn		**Pn**	**09 30 58.2**	**-1.5**
SAUI	**Saumlaki**	**11.62**	**261**	P		**Pn**	**09 31 03.1**	**+3.4**
	315nm,0.7s,18μm							
KDU	**Kakadu**	**12.03**	**238**	P		**Pn**	**09 31 05.2**	**-0.2**
MTN	**Manton Dam**	**13.25**	**240**	Pn		**Pn**	**09 31 21.3**	**-0.7**
MTN	**Manton Dam**	**13.25**	**240**	P		**Pn**	**09 31 22.0**	**-0.1**
DRS	**Darwin Rock St**	**13.27**	**242**	P		**Pn**	**09 31 21.9**	**-0.4**
CTA	**Charters Tower**	**14.00**	**167**	Lg		Lg	09 35 42.1	
	0.2nm,0.3s,baz=255,slow=20,SNR=2.1							
QIS	**Mount Isa**	**14.44**	**192**	P		**P**	**09 31 47.0**	**+1.7**
WB0	**Warramunga Arr**	**15.66**	**211**	Pn		**Pn**	**09 31 53.6**	**-1.0**
WRAB	**Tennant Creek**	**15.82**	**211**	Pn		**Pn**	**09 31 55.9**	**-0.8**
WB2	**Warramunga Arr**	**15.82**	**211**	Pn		**Pn**	**09 31 56.9**	**+0.1**
WRA	**Warramunga Arr**	**15.83**	**211**	Pn		**Pn**	**09 31 57.0**	**+0.1**
WRA	**Warramunga Arr**	**15.83**	**211**	Pn		**Pn**	**09 31 57.5**	**+0.6**
	1.4nm,0.3s,baz=30,slow=13,SNR=13							
WRA				Sn		**Sn**	**09 34 44.5**	**-8.1**
	0.7nm,0.3s,baz=33,slow=22,SNR=3.0							
WRA				Lg		Lg	09 36 35.3	
	0.5nm,0.3s,baz=30,slow=25,SNR=2.5							
	4.0nm,0.6s							
KNRA	**Kununurra**	**16.65**	**235**	Pn		**Pn**	**09 32 05.4**	**-2.0**
KNRA				IAmb		IAmb	09 32 13.0	
	comp=Z,122nm,1.4s							
KNRA	**Kununurra**	**16.65**	**235**	P		**Pn**	**09 32 06.3**	**-1.1**
SOEI	**Soe**	**18.74**	**259**	P		**P**	**09 32 32.0**	**-1.1**
SOEI				IAmb		IAmb	09 32 39.6	
	comp=Z,76nm,0.9s							
SOEI	**Soe**	**18.74**	**259**	P		**Pn**	**09 32 37.9**	**+4.4**
	comp=Z,79nm,1.0s							
AS01	**Alice Springs**	**19.21**	**206**	P		**Pn**	**09 32 42.0**	**+3.0**
ASAR	**Alice Springs**	**19.23**	**206**	Pn		**P**	**09 32 39.0**	**+0.7**
ASAR	**Alice Springs**	**19.23**	**206**	P		**P**	**09 32 41.5**	**+3.1**
	comp=Z,94nm,0.8s,baz=30,slow=12,SNR=67							
ASAR				S		**Sn**	**09 36 10.4**	**-4.7**
	comp=Z,5.3nm,0.9s,baz=22,slow=27,SNR=4.4							
ASAR				Lg		Lg	09 38 22.8	
	comp=Z,0.2nm,0.3s,baz=22,slow=28,SNR=4.6							
EIDS	**Eidsvold**	**20.43**	**158**	P		**P**	**09 32 51.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.46**	**234**	P		**P**	**09 32 51.1**	**-0.6**
GTOI	**Gorontalo**	**21.04**	**289**	P		**P**	**09 33 01.1**	**+3.1**
	comp=Z,31nm,0.7s,comp=Z,312nm							
EDFI	**Ende, Flores**	**21.15**	**262**	P		**P**	**09 33 02.8**	**+3.5**
	comp=Z,28nm,1.2s							
INKA	**Innaminka**	**21.34**	**185**	P		**P**	**09 33 05.6**	**+4.6**
OOD	**Oodnadatta**	**22.36**	**197**	P		**P**	**09 33 15.4**	**+3.3**
KAPI	**Kappang**	**23.07**	**272**	P		**P**	**09 33 19.1**	**-0.7**
KAPI				IAmb		IAmb	09 33 27.3	
	comp=Z,44nm,0.9s							
WRKA	**Warakurna**	**23.22**	**215**	P		**P**	**09 33 23.0**	**+1.7**
TOLI2	**Tolitoli**	**23.30**	**288**	P		**P**	**09 33 20.9**	**-1.2**
TOLI2				IAmb		IAmb	09 33 26.5	
	comp=Z,36nm,1.1s							
LCRK	**Leigh Creek**	**24.33**	**190**	P		**P**	**09 33 33.2**	**+1.4**
MULG	**Mulgathing**	**25.18**	**198**	P		**P**	**09 33 41.5**	**+2.0**
ARMA	**Armidale**	**25.27**	**162**	P		**P**	**09 33 38.1**	**-2.4**
STKA	**Stephens Creek**	**25.39**	**183**	P		**P**	**09 33 41.0**	**-0.4**
STKA	**Stephens Creek**	**25.39**	**183**	P		**P**	**09 33 43.9**	**+2.5**
STKA	**Stephens Creek**	**25.39**	**183**	P		**P**	**09 33 42.0**	**+0.6**
	comp=Z,10nm,1.0s,baz=2.5,slow=10,SNR=6.6							
	comp=Z,10nm,1.0s							
PSA00	**Pilbara Seismi**	**26.92**	**234**	P		**P**	**09 33 53.8**	**-1.6**
BBOO	**Buckleboo**	**27.05**	**193**	P		**P**	**09 33 55.6**	**-0.8**
BBOO				IAmb		IAmb	09 34 37.8	
	comp=Z,38nm,1.1s							
BBOO	**Buckleboo**	**27.05**	**193**	P		**P**	**09 33 58.5**	**+2.1**
XMIS	**Christmas Isla**	**37.05**	**261**	P		P	09 35 21.6	-2.7
MJAR	**Matsushiro Arr**	**42.93**	**354**	P		**P**	**09 36 11.5**	**-1.3**
	comp=Z,2.2nm,1.0s,baz=195,slow=9.1,SNR=4.7							
	comp=Z,2.2nm,1.0s							
NJ2	**Nanjing**	**44.57**	**330**	*e*P		**P**	**09 36 27.0**	**+0.9**
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.5s							
KSAR	**Wonju Array Be**	**45.80**	**343**	P		P	09 36 33.2	-2.6
KSRS	**Korea Array**	**45.80**	**343**	P		**P**	**09 36 34.0**	**-1.7**
	comp=Z,2.9nm,0.9s,baz=167,slow=11,SNR=6.8							
	comp=Z,2.9nm,0.9s							
LYN	**LuoYang**	**49.84**	**327**	*e*P		**P**	**09 37 10.3**	**+3.1**
LYN				pmax	pmax			
	comp=Z,13nm,0.6s							
CMAR	**Chiang Mai Arr**	**49.88**	**301**	P		**P**	**09 37 07.5**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=125,slow=6.1,SNR=7.1							
	comp=Z,1.6nm,0.3s							
HNS	**HongShan**	**50.89**	**331**	⇓P		**P**	**09 37 14.0**	**-1.1**
HNS				pmax	pmax			
	comp=Z,9.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**51.31**	**350**	P		**P**	**09 37 16.1**	**-2.0**
	comp=Z,2.1nm,0.8s,baz=164,slow=7.7,SNR=4.3							
	comp=Z,2.1nm,0.8s							
XAN	**Xi'an**	**51.48**	**324**	P		**P**	**09 37 18.0**	**-1.6**
XAN				pmax	pmax			
	comp=Z,9.0nm,1.2s							
PZH	**PanZhiHua**	**51.57**	**311**	P		**P**	**09 37 25.0**	**+4.4**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
PZH				pmax	pmax			
	comp=Z,130nm,5.3s							
MDJ	**Mudanjiang**	**52.16**	**348**	P		**P**	**09 37 26.8**	**+2.3**
MDJ				pmax	pmax			
	comp=Z,6.0nm,0.7s							
MDJ				pmax	pmax			
	comp=Z,310nm,11.0s							
BNX	**BinXian**	**53.71**	**347**	⇓P		**P**	**09 37 34.5**	**-1.4**
BNX				pmax	pmax			
	comp=Z,8.0nm,0.6s							
BNX				pmax	pmax			
	comp=Z,120nm,4.7s							
HHC	**Hu-ho-hao-te**	**55.11**	**331**	*e*P		**P**	**09 37 50.8**	**+4.5**
HHC				pmax	pmax			
	comp=Z,6.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,180nm,5.5s							
HHC				LR	LR			
	comp=N,390nm,15.3s							
HHC				LR	LR			
	comp=E,310nm,15.6s							
HHC				LR	LR			
	comp=Z,430nm,15.5s							
PETK	**Petropavlovsk-**	**60.59**	**10**	P		**P**	**09 38 22.6**	**-1.8**
	comp=Z,2.4nm,0.9s,baz=192,slow=13,SNR=5.0							
	comp=Z,2.4nm,0.9s							
SONM	**Songino Array**	**62.83**	**333**	P		P	09 38 36.9	-2.9
	comp=Z,0.6nm,0.8s,baz=151,slow=6.3,SNR=3.0							
	comp=Z,0.6nm,0.8s							
WMQ	**Urumqi**	**70.47**	**321**	*e*P		**P**	**09 39 29.8**	**+1.1**
WMQ				pP		PcP	09 39 45.0	-5.0
WMQ				pmax	pmax			
	comp=Z,14nm,0.7s							
WMQ				LR	LR			
	comp=N,580nm,16.1s							
WMQ				LR	LR			
	comp=E,360nm,15.3s							
WMQ				LR	LR			
	comp=Z,250nm,16.1s							
MKAR	**Makanchi Array**	**75.24**	**322**	P		**P**	**09 39 54.9**	**-1.9**
MKAR	**Makanchi Array**	**75.24**	**322**	P		**P**	**09 39 56.3**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=101,slow=7.5,SNR=5.0							
	comp=Z,2.9nm,0.8s							
KSH	**Kashi**	**76.63**	**313**	P		**P**	**09 40 05.8**	**+0.7**
KSH				pmax	pmax			
	comp=Z,3.0nm,0.6s							
ZALV	**Zalesovo Beam**	**77.20**	**329**	P		P	09 40 05.2	-2.7
	comp=Z,1.1nm,0.6s,baz=347,slow=6.1,SNR=4.9							
	comp=Z,1.1nm,0.6s							
KURK	**Kurchatov**	**79.11**	**324**	P		**P**	**09 40 16.9**	**-1.6**
KURBB	**Kurchatov Arra**	**79.12**	**324**	P		**P**	**09 40 16.4**	**-2.2**
	comp=Z,2.2nm,0.9s,baz=114,slow=4.8,SNR=5.9							
	comp=Z,2.2nm,0.9s							
SIMJ	**Simiganj**	**81.54**	**310**	P		P	09 40 28.9	-3.1
KKAR	**Karatay Array**	**81.66**	**315**	P		P	09 40 29.8	-2.7
G18K	**Tagagawik**	**83.52**	**21**	IAmb		IAmb	09 40 45.7	
	comp=Z,7.7nm,1.1s							
QSPA	**South Pole Qui**	**83.58**	**180**	P		**P**	**09 40 41.7**	**-0.5**
QSPA				IAmb		IAmb	09 40 47.3	
	comp=Z,10nm,0.9s							
QSPA	**South Pole Qui**	**83.58**	**180**	P		**P**	**09 40 42.7**	**+0.6**
	comp=Z,7.8nm,0.9s,baz=322,slow=1.0,SNR=22							
	comp=Z,7.8nm,0.9s							
H19K	**Roundabout Mou**	**84.12**	**21**	IAmb		IAmb	09 40 49.6	
	comp=Z,13nm,1.1s							
G19K	**Purcell Mounta**	**84.20**	**21**	IAmb		IAmb	09 40 50.2	
	comp=Z,7.6nm,1.1s							
J20K	**Nowita River**	**84.34**	**23**	IAmb		IAmb	09 40 50.4	
	comp=Z,10nm,1.0s							
NRIK	**Noril'sk**	**84.42**	**343**	P		**P**	**09 40 44.2**	**-1.9**
	comp=Z,2.6nm,0.4s,baz=119,slow=3.8,SNR=5.1							
	comp=Z,2.6nm,0.4s							
BVAR	**Borovoye Array**	**84.70**	**325**	P		**P**	**09 40 46.6**	**-1.3**
	comp=Z,13nm,0.8s,baz=104,slow=6.3,SNR=38							
	comp=Z,13nm,0.8s							
BRVK	**Borovoye**	**84.77**	**325**	P		P	09 40 45.0	-3.2
E19K	**Redstone River**	**84.82**	**20**	IAmb		IAmb	09 40 48.2	
	comp=Z,7.0nm,0.8s							
CAST	**Castle Rocks**	**84.83**	**24**	P		**P**	**09 40 47.0**	**-1.4**
C19K	**Lookout Ridge**	**84.93**	**18**	IAmb		IAmb	09 40 54.1	
	comp=Z,10nm,0.9s							
D19K	**Kuna River**	**85.06**	**18**	IAmb		IAmb	09 40 48.6	
	comp=Z,15nm,1.4s							
I21K	**Tanana**	**85.62**	**23**	IAmb		IAmb	09 40 53.6	
	comp=Z,9.9nm,1.1s							
SML	**Sawmill**	**85.78**	**26**	P		**P**	**09 40 51.4**	**-1.8**
MLY	**Manley**	**86.04**	**23**	P		**P**	**09 40 52.9**	**-1.5**
RND	**Reindeer**	**86.16**	**25**	IAmb		IAmb	09 40 53.5	
	comp=Z,13nm,1.0s							
DHY	**Denali Highway**	**86.66**	**25**	IAmb		IAmb	09 41 01.3	
	comp=Z,8.1nm,0.8s							
WRH	**Wood River Hil**	**86.87**	**24**	IAmb		IAmb	09 41 04.6	
	comp=Z,10nm,1.0s							
E22K	**Anaktuvuk Pass**	**86.95**	**20**	IAmb		IAmb	09 41 07.0	
	comp=Z,7.1nm,0.9s							
D22K	**Ayikyak River**	**86.99**	**19**	IAmb		IAmb	09 44 05.2	
	comp=Z,19nm,1.8s							
COLA	**College**	**87.11**	**24**	P		P	09 40 57.2	-2.3
COLA				IAmb		IAmb	09 41 01.9	
	comp=Z,7.5nm,0.8s							
IL31		**87.46**	**24**	IAmb		IAmb	09 40 59.6	
	comp=Z,7.2nm,0.9s							
ILAR	**Eielson Array**	**87.46**	**24**	P		P	09 40 58.4	-2.8
ILAR	**Eielson Array**	**87.46**	**24**	P		P	09 40 58.7	-2.6
	comp=Z,4.7nm,0.8s,baz=257,slow=4.8,SNR=44							
	comp=Z,4.7nm,0.8s							
J25K	**Salcha River,**	**88.02**	**24**	IAmb		IAmb	09 41 07.5	
	comp=Z,6.6nm,0.9s							
F24K	**Squaw Lake**	**88.08**	**21**	IAmb		IAmb	09 41 04.8	
	comp=Z,6.1nm,0.9s							
J26L	**Joseph Creek**	**88.72**	**25**	IAmb		IAmb	09 41 07.1	
	comp=Z,5.7nm,0.9s							
M27K	**Edge Creek, AK**	**88.83**	**27**	IAmb		IAmb	09 41 13.0	
	comp=Z,8.0nm,0.9s							
L27K	**Beaver Creek,**	**89.05**	**26**	IAmb		IAmb	09 41 13.5	
	comp=Z,9.5nm,1.2s							
E25K	**Arctic Village**	**89.11**	**21**	IAmb		IAmb	09 41 14.6	
	comp=Z,10nm,1.2s							
K27K	**Chicken**	**89.21**	**25**	IAmb		IAmb	09 41 10.2	
	comp=Z,8.9nm,1.0s							
BMAR	**Burnt Mountain**	**89.24**	**22**	P		**P**	**09 41 09.1**	**-0.6**
DAWY	**Dawson**	**90.36**	**25**	P		**P**	**09 41 13.2**	**-1.8**
I28M	**Miner Creek**	**90.47**	**24**	P		**P**	**09 41 13.5**	**-2.1**
K29M	**Barlow Dome**	**91.11**	**26**	IAmb		IAmb	09 41 18.7	
	comp=Z,5.5nm,0.9s							
YKA	**Yellowknife Ar**	**101.41**	**28**	P		**Pdif**	**09 42 02.8**	**-2.4**
	comp=Z,0.3nm,0.8s,baz=281,slow=4.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**141.22**	**283**	PKP		**PKPdf**	**09 47 46.4**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=83,slow=3.6,SNR=3.8							
KIC	**Kosan Boka**	**147.84**	**272**⇑ *e*PKP1			**PKPdf**	**09 47 59.8**	**+2.5**
	comp=Z,16nm,1.1s							
DBIC	**Dimbokro**	**147.96**	**272**	PKPbc		**PKPdf**	**09 48 00.2**	**+2.7**
	comp=Z,10nm,1.0s,baz=108,slow=1.1,SNR=4.3							
LIC	**Lamto**	**148.12**	**272**⇑ *e*PKP1			**PKPdf**	**09 48 00.8**	**+3.0**
	comp=Z,28nm,0.8s							
TIC	**Toumodi**	**148.12**	**272**⇑ *e*PKP1			**PKPdf**	**09 48 00.7**	**+2.9**
	comp=Z,20nm,0.9s							

*IDC **26** 09:32:59.0±0.7,36°.39S×52°.42E, h0km, mb4.2/11, mbtmp4.3/12, ML4.5/1, MS4.5/17, Error ellipse: s-maj=24.6km s-min=20.6km az=60.0*
*NEIC **26** 09:33:00.8±1.7,36°.3S±0°.1×52°.3E±0°.2, h10km±1km, mb4.6/25, Error ellipse: s-maj=22.0km s-min=18.3km az=248.0*
*GCMT **26** 09:33:03.8±0.2,36°.31S±0°.01×52°.42E±0°.02, h15km±1km, MW5.2/123, Moment Tensor Solution. s35,c40; s123,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.27±.26; $M_{\theta\theta}$2.58±.21; $M_{\phi\phi}$-0.30±.20; $M_{r\theta}$3.00±.61; $M_{\theta\phi}$5.96±.16; $M_{\phi r}$-0.55±.60; Best double couple: M_o7.03300×10^{16} NP1:φ272.00000°, δ77.00000°, λ-31.00000°. NP2:φ10.00000°, δ59.00000°, λ-165.00000°. Principal axes: T 7.6960, Plg12.0000°, Azm324.0000°; N -1.3170, Plg56.0000°, Azm72.0000°; P -6.3710, Plg31.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 09:33:00.6±0.6,36°.24S±0°.09×52°.3E±0°.1,h10km,n65, σ1s03/44,mb4.5/20,MS4.5/17,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H04N1	**CROZET ISLANDS**	**9.92**	**182**	T		T	09 45 10.5	
	baz=6.2,slow=75,SNR=1645							
H04N2	**CROZET ISLANDS**	**9.93**	**182**	T		T	09 45 16.8	
	baz=6.2,slow=75,SNR=1171							
H04N3	**CROZET ISLANDS**	**9.94**	**182**	T		T	09 45 14.5	
	baz=6.2,slow=75,SNR=2053							
FOMA	**Nahampoana Res**	**12.12**	**336**			**Pn**	**09 35 53.1**	**-0.3**
VOI	**Vohitsoka**	**15.06**	**340**			**Pn**	**09 36 34.2**	**+0.5**
RER	**Riviere de l'E**	**15.32**	**12**	Pn		**Pn**	**09 36 35.1**	**-2.0**
ABPO	**Ambohimpanom**	**17.73**	**344**			**P**	**09 37 08.5**	**-0.1**
OPO	**Ambohidratompo**	**18.17**	**344**	P		**P**	**09 37 15.9**	**+2.4**
	0.2nm,0.3s,baz=124,slow=15,SNR=10							
OPO				S		**Sn**	**09 40 34.3**	**-1.8**
	3.1nm,0.5s,baz=270,slow=20,SNR=2.5							
OPO				LR		LR	09 43 03.9	
	comp=Z,700nm,20.4s,baz=9.5,slow=33							
	5.9nm,0.5s							
SOE	**Somerset East**	**22.29**	**271**	P		**P**	**09 37 56.3**	**-2.0**
SOE				IAmb		IAmb	09 38 17.0	
	comp=Z,52nm,1.4s							
BOSA	**Boshof**	**24.01**	**281**	P		**P**	**09 38 15.0**	**-0.7**
BOSA	**Boshof**	**24.01**	**281**	PKIKP		**P**	**09 38 15.9**	**+0.2**
BOSA	**Boshof**	**24.01**	**281**	P		**P**	**09 38 15.9**	**+0.2**
	comp=Z,9.3nm,1.0s,baz=111,slow=7.8,SNR=6.9							
	comp=Z,9.3nm,1.0s							
LBTB	**Lobatse**	**25.47**	**289**	P		**P**	**09 38 28.4**	**-0.7**
LBTB				IAmb		IAmb	09 39 11.0	
	comp=Z,26nm,1.5s							
LBTB	**Lobatse**	**25.47**	**289**	LR		LR	09 47 27.5	
	comp=Z,1μm,19.0s,baz=128,slow=34							
SUR	**Sutherland**	**26.23**	**269**	LR		LR	09 47 01.9	
	comp=Z,1μm,19.1s,baz=124,slow=32							
LSZ	**Lusaka**	**29.97**	**308**	P		**P**	**09 39 08.3**	**-1.1**
LSZ				IAmb		IAmb	09 39 22.6	
	comp=Z,12nm,1.4s							
LSZ	**Lusaka**	**29.97**	**308**	LR		LR	09 49 54.4	
	comp=Z,1μm,18.5s,baz=142,slow=34							
MAW	**Mawson**	**31.99**	**172**	LR		LR	09 48 37.5	
	comp=Z,970nm,21.1s,baz=344,slow=30							
TSUM	**Tsumeb**	**34.87**	**290**	LR		LR	09 52 55.1	
	comp=Z,1μm,19.4s,baz=146,slow=34							
KMBO	**Kilima Mbogo**	**37.62**	**335**	P		**P**	**09 40 17.0**	**+1.0**
MBAR	**Mbarara**	**40.71**	**326**	LR		LR	09 57 04.6	
	comp=Z,613nm,18.8s,baz=152,slow=35

AKASG **Malin Array Be** 88.92 346 P P 09 45 55.1 +0.4
comp=Z,0.3nm,0.3s,baz=182,slow=5.4,SNR=5.8
comp=Z,0.3nm,0.3s
KURBB **Kurchatov Arra** 89.53 16 P P 09 45 58.2 +0.6
comp=Z,0.8nm,0.9s,baz=211,slow=5.9,SNR=4.7
comp=Z,0.8nm,0.9s
ILAR **Eielson Array** 149.21 16 PKPbc PKPbc 09 52 48.9 +0.5
comp=Z,2.7nm,1.0s,baz=311,slow=3.8,SNR=12
YKA **Yellowknife Ar** 152.48 347 PKPbc PKPbc 09 52 54.8 -1.4
comp=Z,1.3nm,1.0s,baz=11,slow=2.5,SNR=8.3

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*NNC **26** 09:35:59.7±0.9,51.84N×75.52E,h0km,mb3.1,mpv2.8, Error ellipse: s-maj=17.3km s-min=5.4km az=25.0, Suspected Mining explosion.*

*IDC **26** 09:36:01.0±1.0,51.53N×75.45E,h0km,mbtmp2.6/3, ML1.5/2,Error ellipse: s-maj=28.7km s-min=7.5km az=28.0*

ISC 26 09:36:00.9±1.1,**51.60N**±0.09×**75.36E**±0.05,**h0**km,**n11**, σ1s**71**/12,**6C-5D**,**Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra** 3.8nm,0.5s	**2.23**	**115**	⇓Pg		**Pb**	**09 36 41.8**	**-0.2**
KURBB	29nm,0.7s			⇑Lg		Lg	09 37 12.0	
KURBB	**Kurchatov Arra** 0.4nm,0.3s,baz=303,slow=18,SNR=25	**2.23**	**115**	Pg		**Pn**	**09 36 39.9**	**+0.9**
KURBB	0.5nm,0.3s,baz=296,slow=33,SNR=13			Lg		Lg	09 37 10.6	
KURK	**Kurchatov** 3.0nm,0.6s	**2.24**	**112**	⇓Pg		**Pn**	**09 36 40.0**	**+0.8**
KURK	26nm,1.1s			⇑Lg		Lg	09 37 08.6	
BVA0	**Borovoye Array** 1.6nm,0.8s,baz=106,slow=17,SNR=8.1	**3.37**	**297**	Pg		**Pb**	**09 37 01.4**	**0.0**
BVA0	8.9nm,0.8s,baz=102,slow=27,SNR=7.3			⇓Lg		Lg	09 37 46.1	
BVAR	**Borovoye Array** baz=104,slow=12,SNR=4.1	**3.37**	**297**	Pn		**Pn**	**09 36 56.5**	**+1.8**
BVAR	0.1nm,0.3s,baz=113,slow=17,SNR=8.1			Pg		**Pb**	**09 37 01.9**	**+0.5**
BVAR	0.3nm,0.3s,baz=99,slow=28,SNR=13			Lg		Lg	09 37 47.7	
BRVK	**Borovoye** 2.3nm,0.8s	**3.44**	**297**	⇓Pg		**Pb**	**09 37 01.7**	**-0.9**
BRVK	12nm,0.9s			⇑Lg		Lg	09 37 48.3	
OTUK	**Ortayu** 3.0nm,1.3s	**3.88**	**211**	⇑Pg		**Pg**	**09 37 15.8**	**+0.6**
OTUK	4.3nm,0.9s			⇑Lg		Lg	09 38 08.5	
I46RU	**ZALESOVO INFRA** baz=251,slow=343,SNR=6.1	**6.21**	**64**	I		I	10 11 00.0	
ZALV	**Zalesovo Beam** 1.2nm,0.4s,baz=253,slow=13,SNR=1.7	**6.21**	**64**	Pn		**Pn**	**09 37 32.9**	**-0.7**
MK31	**Makanchi Array** 1.1nm,0.6s	**6.62**	**134**	⇓Sn		**Sn**	**09 38 58.4**	**+3.0**
MK31	2.6nm,0.6s,baz=320,slow=27,SNR=6.1			⇑Lg		Lg	09 39 35.6	
MKAR	**Makanchi Array** baz=325,slow=12,SNR=1.6	**6.62**	**134**	Pn		**Pn**	**09 37 36.4**	**-3.0**
MKAR	baz=311,slow=23,SNR=1.9			Sn		**Sn**	**09 38 54.0**	**-1.4**
MKAR	0.2nm,0.3s,baz=324,slow=27,SNR=8.7 0.2nm,0.5s			Lg		Lg	09 39 29.0	

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*IDC **26** 09:36:24.5±1.1,36.19S×52.25E,h0km,mb4.2/5, mbtmp4.2/5,Error ellipse: s-maj=47.9km s-min=25.8km az=25.0*

ISC 26 09:36:26.2±1.1,**36.2S**±0.3×**52.2E**±0.2,**h10**km,**n6**,σ1s**36**/6, **mb4.3**/5,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BOSA	**Boshof** 6.1nm,0.8s,baz=111,slow=9.0,SNR=6.8 6.1nm,0.8s	**23.95**	**281**	P		**P**	**09 41 39.4**	**-1.4**
QSPA	**South Pole Qui** 2.6nm,0.9s,baz=270,slow=1.0,SNR=5.2 2.6nm,0.9s	**53.99**	**180**	P		**P**	**09 45 50.5**	**+0.3**
TORD	**Torodi Ar. Bea** 1.9nm,0.5s,baz=126,slow=4.4,SNR=4.1 1.9nm,0.5s	**68.42**	**306**	P		**P**	**09 47 29.7**	**+1.3**
ASAR	**Alice Springs** 1.2nm,0.6s,baz=230,slow=5.7,SNR=1.6 1.2nm,0.6s	**69.99**	**105**	P		**P**	**09 47 38.9**	**+0.6**
WRA	**Warramunga Arr** 1.9nm,0.7s,baz=231,slow=5.2,SNR=2.7 1.9nm,0.7s	**72.31**	**102**	P		**P**	**09 47 51.2**	**-1.1**
YKA	**Yellowknife Ar** 0.2nm,0.9s,baz=0.4,slow=1.8,SNR=3.0	**152.44**	**347**	PKPbc		**PKPbc**	**09 56 21.1**	**-0.5**

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*MAN **26** 09:39:16.0,13.34N×121.56E,h13km,mb5.5,ML4.4, MS4.7*

MAN INTENSITY V - CALAPAN CITY; GLORIA NAUJAN AND VICTORIA ORIENTAL MINDORO; BOAC MARINDUQUE; INTENSITY IV - BATANGAS CITY; PINAMALAYAN POLA AND SOCORRO ORIENTAL MINDORO; GASAN MARINDUQUE; INTENSITY III - LIPA CITY; BAUAN AND MALVAR BATANGAS; BUENAVISTA AND MOGPOG MARINDUQUE; PUERTO GALERA ORIENTAL MINDORO; CONCEPCION ROMBLON; INTENSITY II-BACO AND BANSUD ORIENTAL MINDORO; SANTA CRUZ MARINDUQUE; SAN ANDRES AND SANTA MARIA ROMBLON; MAGSAYSAY OCCIDENTAL MINDORO; CUENCA BATANGAS.

*BJI **26** 09:39:16.7±0.0,13.01N×121.36E,h30km,mb4.5/34, mB4.9/17,Ms4.5/8,Ms7.4 2/9*

*NEIC **26** 09:39:16.9±2.1,13.17N±0.04×121.34E±0.05,h10km±1km, mb4.8/48,Error ellipse: s-maj=9.4km s-min=6.8km az=113.0*

*IDC **26** 09:39:17.9±2.3,13.20N×121.21E,h23km±14km,mb4.2/26, mbtmp4.3/26,MS3.9/12,Error ellipse: s-maj=27.1km s-min=10.9km az=66.0*

*DJA **26** 09:39:20.4±0.7,14.4×12.2E±,h51km±7km,M5.0/37, mB5.5/9,mb5.0/37,Mw(mB)5.0/9*

ISC 26 09:39:17.5±0.8,**13.34N**±0.02×**121.51E**±0.02,**h16**km±5km, **n172**,σ2s**22**/192,**mb4.7**/72,**MS4.0**/13,**25C-19D**,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.35**	**70**	⇓*i*P		**Pg**	**09 39 23.0**	**-1.7**
BOAC				*e*S		**Sg**	**09 39 28.1**	**-1.6**
PGP	**Puerto Galera**	**0.56**	**287**	⇓*i*P		**Pb**	**09 39 27.3**	**-1.8**
PGP				*i* S		**Sb**	**09 39 35.8**	**-1.1**
LQP	**Lukban**	**0.77**	**2**	⇑*i*P		**Pb**	**09 39 30.4**	**-2.3**
LQP				*i* S		**Sb**	**09 39 41.9**	**-1.0**
TGY	**Tagaytay City** 4µm,0.3s,baz=172,slow=3.8,SNR=219	**0.94**	**324**	Pg		**Pb**	**09 39 34.8**	**-0.7**
TGY	6µm,0.3s,baz=319,slow=20,SNR=7.2			Lg		Lg	09 39 48.7	
TGY	comp=Z,6µm,21.2s,baz=287,slow=56			LR		LR	09 40 09.7	
TGY	**Tagaytay City**	**0.94**	**324**	⇓*e*P		**Pb**	**09 39 34.8**	**-0.7**
TGY				*e*S		**Sg**	**09 39 48.6**	**+0.5**
SJMP	**San Jose**	**0.95**	**204**	⇓*e*P		**Pb**	**09 39 34.8**	**-0.8**
SJMP				*e*S		**Sn**	**09 39 49.3**	**+0.2**
GQP	**Guinayangan**	**1.07**	**58**	⇑*i*P		**Pb**	**09 39 35.6**	**-2.0**
GQP				*i* S		**Sb**	**09 39 50.1**	**-1.4**
OTRP	**Odiongan**	**1.09**	**153**	⇑*e*P		**Pn**	**09 39 35.3**	**-2.9**
OTRP				*e*S		**Sb**	**09 39 51.0**	**-1.1**
MACP	**Maragondon, Ca**	**1.20**	**320**	⇑*e*P		**Pn**	**09 39 37.9**	**-1.7**
MACP				*e*S		**Sb**	**09 39 54.6**	**-0.5**
LUBP	**Lubang**	**1.29**	**288**	⇓*e*P		**Pn**	**09 39 39.3**	**-1.5**
LUBP				*e*S		**Sn**	**09 39 56.9**	**-0.9**
QVP	**Quezon City--P**	**1.37**	**339**	⇑*e*P		**Pn**	**09 39 41.0**	**-0.9**
QVP				*e*S		**Sb**	**09 40 00.2**	**+0.3**
QVP	**Quezon City--P**	**1.37**	**339**	⇑*e*P		**Pn**	**09 39 41.0**	**-0.9**
QVP				*i* S		**Sn**	**09 39 53.0**	**-6.8**
PCPS	**Palayan City**	**1.38**	**342**	⇑*e*P		Pg	09 39 53.8	+10
PCPS				*e*S		Sg	09 40 23.6	+22
JCNP	**Jose Panganiba**	**1.49**	**51**	⇓*i*P		**Pn**	**09 39 41.6**	**-2.0**
JCNP				*i* S		Sn	09 39 53.0	-10
JCNP	**Jose Panganiba**	**1.49**	**51**	⇓*e*P		**Pn**	**09 39 41.7**	**-2.0**
JCNP				*e*S		**Sn**	**09 40 00.8**	**-2.0**
IBAJ	**Ibajay, Aklan**	**1.64**	**157**	⇑*e*P		**Pn**	**09 39 43.9**	**-1.9**
IBAJ				*i* S		**Sb**	**09 40 09.7**	**+1.7**
BUSP	**Coron**	**1.84**	**224**	⇓*e*P		**Pn**	**09 39 47.7**	**-0.7**
BUSP				*e*S		**Sn**	**09 40 12.5**	**+1.1**
SCSP	**San Jose Seism**	**1.98**	**81**	⇓*e*P		**Pn**	**09 39 49.1**	**-1.3**
SCSP				*e*S		**Sn**	**09 40 16.5**	**+1.6**
MMPH	**Masbate**	**2.28**	**115**	⇓*i*P		**Pn**	**09 39 52.8**	**-1.8**
MMPH				*i* S		**Sg**	**09 40 33.5**	**+2.6**
BALP	**Baler**	**2.39**	**2**	⇑*e*P		**Pn**	**09 39 55.5**	**-0.6**
BALP				*e*S		**Sn**	**09 40 26.9**	**+2.0**
PVCP	**Virac**	**2.59**	**84**	⇓*e*P		**Pn**	**09 39 58.5**	**-0.3**
PVCP				*e*S		**Sb**	**09 40 35.8**	**+0.7**
GUIM	**Jordan**	**2.90**	**158**	⇓*e*P		**Pn**	**09 40 02.4**	**-0.6**
GUIM				*e*S		**Sn**	**09 40 40.1**	**+2.6**
SMPP	**San Manuel, Pa**	**2.91**	**344**	⇓*e*P		**Pn**	**09 40 02.7**	**-0.4**
SMPP				*e*S		**Sn**	**09 40 39.4**	**+1.6**
ENPP	**El Nido**	**2.94**	**224**	⇑*e*P		**Pn**	**09 40 03.8**	**+0.3**
ENPP				*e*S		**Sn**	**09 40 37.3**	**-1.2**
CAUP	**Cauayan**	**3.60**	**5**	⇑*e*P		**Pn**	**09 40 12.8**	**+0.1**
CAUP				*e*S		**Sn**	**09 40 56.3**	**+1.5**
CNOP	**Candoni, Negro**	**3.66**	**162**	⇑*e*P		**Pn**	**09 40 12.8**	**-0.7**
CNOP				*e*S		**Sn**	**09 40 55.6**	**-0.8**
SAMP	**Sagada Mountai**	**3.77**	**351**	⇑*e*P		**Pn**	**09 40 14.9**	**-0.1**
SAMP				*e*S		**Sn**	**09 41 03.6**	**+4.6**
OCLP	**Ormoc**	**3.79**	**127**	⇑*e*P		**Pn**	**09 40 15.3**	**0.0**
LLP	**Lapu-Lapu**	**3.85**	**141**	*e*P		**Pn**	**09 40 14.5**	**-1.6**
LLP				*e*S		**Sb**	**09 41 08.7**	**-2.8**
PLP	**Palo**	**4.02**	**122**	⇑*e*P		**Pn**	**09 40 17.3**	**-1.2**
PLP				*i* S		**Sn**	**09 40 58.2**	**-7.2**
BESP	**Borongan**	**4.21**	**114**	⇑*e*P		**Pn**	**09 40 20.3**	**-0.7**
SNPH	**Sibulan**	**4.32**	**157**	⇓*e*P		**Pn**	**09 40 24.3**	**+1.7**
SNPH				*e*S		**Sn**	**09 41 14.4**	**+1.7**
ABRA	**Dolores**	**4.35**	**350**	⇑*e*P		**Pn**	**09 40 23.5**	**+0.5**
ABRA				*e*S		**Sn**	**09 41 18.8**	**+5.3**
MSLP	**Maasin**	**4.57**	**134**	*e*P		**Pn**	**09 40 26.1**	**0.0**
MSLP				*i* S		**Pb**	**09 40 38.5**	**+1.1**
MSLP	**Maasin**	**4.57**	**134**	⇑*e*P		**Pn**	**09 40 26.5**	**+0.5**
MSLP				*e*S		**Sn**	**09 41 20.3**	**+1.4**
SGCP	**Gonzaga**	**4.90**	**6**	⇑*e*P		**Pn**	**09 40 30.9**	**+0.2**
PIP	**Pasuquin**	**5.03**	**350**	⇑*e*P		**Pn**	**09 40 35.1**	**+2.7**
DCPH	**Dipolog City**	**5.06**	**159**	⇑*e*P		**Pn**	**09 40 32.0**	**-0.7**
SCPH	**Surigao**	**5.26**	**132**	*e*P		**Pn**	**09 40 35.7**	**+0.2**
SCPH				*i* S		Pb	09 40 58.6	+9.4
GLSP	**General Luna,**	**5.74**	**127**	⇓*e*P		**Pn**	**09 40 45.3**	**+3.1**
PAGZ	**Pagadian**	**5.76**	**161**	⇑*e*P		**Pn**	**09 40 44.1**	**+1.7**
BATP	**Bataraza**	**5.80**	**219**	⇑*e*P		**Pn**	**09 40 44.0**	**+1.1**
BATP				*e*S		**Sn**	**09 41 47.9**	**-1.2**
BBP	**Basco**	**7.08**	**3**	⇑*e*P		**Pn**	**09 41 01.2**	**+0.7**
DAV	**Davao City (W)** comp=Z,1µm,18.2s,baz=343,slow=45	**7.41**	**147**	LR		LR	09 44 52.1	
SKMP	**Bagumbayan, Su**	**7.41**	**156**	⇓*e*P		**Pn**	**09 41 06.5**	**+1.5**
MATI	**Mati**	**7.89**	**143**	⇓*e*P		Pn	09 41 19.7	+8.1
DDMP	**Don Marcelino,**	**8.30**	**150**	⇓*e*P		**Pn**	**09 41 18.9**	**+1.7**
TPUB	**Ta-pu**	**9.94**	**355**	Pn		**Pn**	**09 41 43.0**	**+3.2**
YULB	**Yu-li**	**10.00**	**359**	Pn		**Pn**	**09 41 41.5**	**+0.9**
YHNB	**Yeheng**	**11.27**	**359**	Pn		**Pn**	**09 42 01.0**	**+2.9**
TOLI2	**Tolitoli**	**12.17**	**183**	Pn		**Pn**	**09 42 06.8**	**-3.6**
GTOI	**Gorontalo** 6.8nm,1.3s	**12.71**	**173**	P		**Pn**	**09 42 20.8**	**+3.1**
MRSI	**Marisa** 23nm,0.9s	**12.79**	**178**	P		P	09 42 24.8	-4.9
LUWI	**Luwuk**	**14.34**	**175**	Pn		Pn	09 42 34.0	-6.1
LUWI	**Luwuk** 175nm,0.9s,4µm	**14.34**	**175**	P		**P**	**09 42 49.1**	**+2.1**
JOW	**Kunigami** comp=Z,334nm,21.5s,baz=128,slow=34	**14.85**	**24**	LR		LR	09 47 59.1	
LBMI	**Labuha** 38nm,1.1s,1µm	**15.10**	**156**	P		**P**	**09 42 54.3**	**-1.2**
TTSI	**Tana Toraja** 20nm,0.7s,2µm	**16.36**	**186**	P		**P**	**09 43 12.8**	**+3.3**
STKI	**Sintang** 39nm,0.5s	**16.51**	**218**	P		**P**	**09 43 14.2**	**+3.0**
KAPI	**Kappang**	**18.32**	**186**	Pn		**Pn**	**09 43 26.3**	**-4.8**
SLVN	**Son La**	**18.58**	**298**	P		**P**	**09 43 32.5**	**-1.6**
FAKI	**Fak Fak**	**19.35**	**146**	P		**P**	**09 43 42.5**	**0.0**
FAKI	comp=Z,38nm,1.1s				lAmb	lAmb	09 43 53.3	
ENH	**Enshi**	**20.18**	**329**			**P**	**09 43 50.8**	**-0.8**
ENH	comp=Z,37nm,1.2s				lAmb	lAmb	09 44 04.2	
PHRA	**Phrae**	**21.09**	**287**	P		**P**	**09 44 01.6**	**+0.2**
CRAI	**Chiangrai**	**21.35**	**292**	P		**P**	**09 44 04.4**	**+0.1**
JNU	**Nakatsue** comp=Z,272nm,21.6s,baz=221,slow=36	**21.47**	**22**	LR		LR	09 52 12.7	
EDFI	**Emde, Flores** comp=Z,30nm,0.8s	**21.95**	**180**	P		**P**	**09 44 15.5**	**+4.8**
GRJI	**Gresik** comp=Z,97nm,1.0s	**22.03**	**205**	P		**P**	**09 44 17.1**	**+5.6**
SRBI	**Singaraja** comp=Z,61nm,1.0s	**22.18**	**197**	P		**P**	**09 44 18.5**	**+5.4**
CMAR	**Chiang Mai Arr** comp=Z,25nm,0.8s,baz=93,slow=7.8,SNR=110	**22.28**	**286**	P		**P**	**09 44 15.7**	**+1.4**
CMAR						LR	09 52 04.6	
PLAI	**Plampang** comp=Z,213nm,1.4s,comp=Z,2µm	**22.33**	**190**	P		**P**	**09 44 16.6**	**+1.9**
CHTO	**Chiang Mai**	**22.34**	**287**	P		**P**	**09 44 14.3**	**-0.6**
CHTO	comp=Z,19nm,0.8s				lAmb	lAmb	09 44 17.0	
TWSI	**Taliwang, Sumb** comp=Z,46nm,0.7s	**22.41**	**192**	P		**P**	**09 44 20.3**	**+4.7**
LYN	**LuoYang**	**22.65**	**340**	⇑P		**P**	**09 44 19.5**	**+1.5**
LYN				S		**S**	**09 48 23.8**	**-1.8**
LYN	comp=Z,19nm,0.7s			pmax		pmax		
LYN	comp=Z,220nm,4.5s			pmax		pmax		
LYN	comp=Z,670nm,17.5s			LR		LR		
LYN	comp=Z,730nm,17.2s			LR		LR		
LYN	comp=Z,1µm,14.8s			LR		LR		
GUMO	**Guam** comp=Z,117nm,19.2s,baz=272,slow=38	**22.72**	**87**	LR		LR	09 53 48.3	
NGJI	**Ngawi** comp=Z,70nm,1.0s	**22.86**	**206**	P		**P**	**09 44 26.5**	**+6.1**
JAGI	**Jajag, Banyuwa** comp=Z,45nm,0.9s	**22.86**	**199**	P		**P**	**09 44 18.4**	**-2.0**
JAGI					lAmb	lAmb	09 44 38.5	
JAGI	**Jajag, Banyuwa** comp=Z,75nm,1.6s,comp=Z,1µm	**22.86**	**199**	P		**P**	**09 44 25.6**	**+5.2**
SMPI	**Sarmi** comp=Z,80nm,1.0s	**22.87**	**130**	P		**P**	**09 44 20.3**	**-0.2**
GMJI	**Gumukmas** comp=Z,33nm,1.1s	**22.92**	**201**	P		**P**	**09 44 26.7**	**+5.8**
SOEI	**Soe**	**23.11**	**173**	P		**P**	**09 44 21.6**	**-1.4**
SOEI	**Soe** comp=Z,48nm,1.0s	**23.11**	**173**	P		**P**	**09 44 28.2**	**+5.2**
TIA	**Tai'an**	**23.11**	**351**	P		**P**	**09 44 24.5**	**+1.7**
TIA	comp=Z,5.0nm,1.6s			pmax		pmax		
PWJI	**Pagerwojo** comp=Z,69nm,0.9s	**23.31**	**205**	P		**P**	**09 44 28.1**	**+3.2**
XAN	**Xi'an**	**23.57**	**333**	P		**P**	**09 44 26.3**	**-1.2**
XAN				S		**S**	**09 48 39.5**	**-1.7**
XAN	comp=Z,15nm,1.1s			pmax		pmax		
XAN	comp=Z,160nm,4.3s			pmax		pmax		
XAN	comp=Z,730nm,12.9s			LR		LR		
XAN	comp=Z,630nm,13.9s			LR		LR		
XAN	comp=Z,660nm,16.0s			LR		LR		
JCJ	**Chichijima** comp=Z,131nm,18.0s,baz=106,slow=39	**23.69**	**52**	LR		LR	09 54 59.3	
UGM	**Wanagama** comp=Z,135nm,1.7s	**23.77**	**208**	P		**P**	**09 44 33.6**	**+4.1**
KPJI	**Karang Pucung** comp=Z,3nm,0.9s	**24.04**	**212**	P		**P**	**09 44 34.3**	**+2.3**
TNCH	**TengChong**	**24.59**	**302**	*e*P		**P**	**09 44 37.5**	**+0.3**
TNCH					pP	pP	09 44 40.8	-1.2
KSRS	**Korea Array** comp=Z,1.8nm,0.9s,baz=182,slow=9.2,SNR=7.5	**24.69**	**12**	P		**P**	**09 44 38.0**	**+0.3**
KSRS					LR	LR	09 54 16.4	
RPSI	comp=Z,224nm,20.6s,baz=30,slow=36 comp=Z,1.8nm,0.9s **Rantau Prapat**	**24.71**	**247**	P		**P**	**09 44 35.8**	**-2.4**
RPSI					lAmb	lAmb	09 44 38.9	
LWLI	comp=Z,16nm,1.0s **Liwa** comp=Z,248nm,0.7s	**25.16**	**225**	P		**P**	**09 44 45.1**	**+2.7**
KASI	**Kota Agung**	**25.23**	**223**	P		**P**	**09 44 42.6**	**-0.3**
	comp=Z,57nm,0.9s							
JHJ	**Hachijo jima 2** comp=Z,327nm,21.4s,baz=152,slow=32	**25.80**	**37**	LR		LR	09 52 59.8	
BJT	**Baijiatuau**	**26.99**	**351**	P		**P**	**09 44 57.9**	**-0.7**
LZH	**Lanzhou**	**27.66**	**328**	*e*P		**P**	**09 45 10.5**	**+5.6**
LZH					pP	sP	09 45 20.0	+8.3
LZH	comp=Z,40nm,1.2s				pmax	pmax		
BTO	**Baotou**	**28.97**	**342**	*e*P		**P**	**09 45 18.5**	**+2.1**
BTO					pP	**pP**	**09 45 23.0**	**+1.7**
BTO					PP	**PnPn**	**09 46 12.3**	**+4.0**
BTO					S	**S**	**09 50 09.3**	**+2.5**
BTO					SS	**SnSn**	**09 51 34.5**	**+4.4**
BTO	comp=Z,10.0nm,0.9s				pmax	pmax		
BTO	comp=Z,410nm,10.8s				pmax	pmax		
SHL	**Shillong**	**30.39**	**298**	P		**P**	**09 45 28.0**	**-1.3**
MDJ	**Mudanjiang**	**31.93**	**11**	P		**P**	**09 45 44.0**	**+1.6**
MDJ	comp=Z,12nm,1.3s				pmax	pmax		
MDJ	comp=Z,350nm,9.3s				pmax	pmax		
USA0B	**Ussuriysk Arra**	**32.04**	**14**	P		**P**	**09 45 44.6**	**+1.3**
USA0B					lAmb	lAmb	09 45 50.8	
USRK	**Ussuriysk Ar.**	**32.04**	**14**	P		**P**	**09 45 44.8**	**+1.4**
USRK	**Ussuriysk Ar.** comp=Z,7.1nm,0.7s,baz=202,slow=8.7,SNR=14 comp=Z,7.1nm,0.7s	**32.04**	**14**	P		**P**	**09 45 45.1**	**+1.8**
GTA	**Gaotai**	**32.26**	**328**	*e*P		**P**	**09 45 45.3**	**-0.3**
GTA					pP	pP	09 45 52.0	+1.6
GTA	comp=Z,4.0nm,1.0s				pmax	pmax		
LSA	**Lhasa**	**32.46**	**305**	P		**P**	**09 45 46.8**	**-1.0**
BNX	**BinXian**	**32.68**	**8**	⇓P		**P**	**09 45 50.5**	**+1.5**
BNX	comp=Z,6.0nm,0.4s				pmax	pmax		
BNX	comp=Z,54nm,3.6s				pmax	pmax		
MBWA	**Marble Bar**	**34.33**	**183**	P		**P**	**09 46 02.0**	**-1.5**
MBWA					lAmb	lAmb	09 46 08.0	
PSA00	**Pilbara Seismi** comp=Z,16nm,1.1s	**34.73**	**183**	P		**P**	**09 46 06.9**	**-0.2**
PSA00					lAmb	lAmb	09 46 23.7	
WRAB	**Tennant Creek** comp=Z,13nm,1.4s	**35.40**	**159**	P		**P**	**09 46 12.0**	**-0.8**
WRAB					lAmb	lAmb	09 46 23.2	
WRA	**Warramunga Arr** comp=Z,15nm,0.8s	**35.40**	**159**	P		**P**	**09 46 12.2**	**-0.7**
WRA	**Warramunga Arr** comp=Z,7.2nm,0.6s,baz=337,slow=9.8,SNR=15 comp=Z,7.2nm,0.6s	**35.40**	**159**	P		**P**	**09 46 11.9**	**-0.9**
WB2	**Warramunga Arr** comp=Z,20nm,0.8s	**35.41**	**159**	P		**P**	**09 46 12.3**	**-0.6**
WB2					lAmb	lAmb	09 46 23.3	
ULN	**Ulaanbaatar** comp=Z,12nm,1.1s	**36.47**	**344**	P		**P**	**09 46 23.8**	**+1.8**
ULN					lAmb	lAmb	09 46 43.5	
SONM	**Songino Array**	**36.63**	**343**	P		**P**	**09 46 24.6**	**+1.3**
SONM	**Songino Array** comp=Z,2.5nm,0.8s,baz=164,slow=6.7,SNR=13	**36.63**	**343**	P		**P**	**09 46 22.9**	**-0.4**
SONM					LR	LR	10 03 25.5	
HEH	**HeiHe** comp=Z,401nm,18.9s,baz=160,slow=40 comp=Z,2.5nm,0.8s	**37.13**	**6**	*e*P		**P**	**09 46 28.5**	**+1.2**
HEH	comp=Z,10.0nm,0.8s				pmax	pmax		
ASAR	**Alice Springs** comp=Z,12nm,0.7s,baz=339,slow=6.6,SNR=15 comp=Z,12nm,0.7s	**38.73**	**162**	P		**P**	**09 46 40.1**	**-1.0**
CTA	**Charters Tower** comp=Z,6.5nm,0.9s,baz=308,slow=15,SNR=4.8 comp=Z,6.5nm,0.9s	**41.18**	**143**	P		**P**	**09 47 01.5**	**-0.1**
FORT	**Forrest**	**44.31**	**172**	P		**P**	**09 47 25.5**	**-1.3**
MK31	**Makanchi Array**	**46.79**	**323**	P		**P**	**09 47 46.7**	**+0.3**
MKAR	**Makanchi Array**	**46.79**	**323**	P		**P**	**09 47 46.8**	**+0.4**
MKAR	**Makanchi Array** comp=Z,2.0nm,0.8s,baz=115,slow=8.2,SNR=13 comp=Z,2.0nm,0.8s	**46.79**	**323**	P		**P**	**09 47 45.9**	**-0.4**
MAKZ	**Makanchi**	**46.98**	**323**	P		**P**	**09 47 48.5**	**+0.7**
KSH	**Kashi**	**47.73**	**312**	P		**P**	**09 47 55.3**	**+1.4**
KSH					sP	sP	09 48 06.5	+5.7
KSH	comp=Z,3.0nm,0.8s				pmax	pmax		
KSH	comp=Z,310nm,18.2s				LR	LR		
KSH	comp=Z,260nm,16.1s				LR	LR		
KSH	comp=Z,320nm,18.6s				LR	LR		
BBOO	**Buckleboo**	**47.95**	**163**	P		**P**	**09 47 54.2**	**-1.3**
NIL	**Nilore**	**48.16**	**303**	P		**P**	**09 47 55.2**	**-2.0**
NRN	**Naryn** comp=Z,10nm,1.1s	**48.39**	**314**	lAmb		lAmb	09 48 11.6	
STKA	**Stephens Creek**	**48.91**	**157**	P		**P**	**09 48 01.2**	**-1.7**
STKA	**Stephens Creek** comp=Z,10nm,0.6s,baz=331,slow=7.9,SNR=20 comp=Z,10nm,0.6s	**48.91**	**157**	P		**P**	**09 48 01.9**	**-0.9**
PETK	**Petropavlovsk-** comp=Z,3.1nm,0.7s,baz=174,slow=1.4,SNR=2.2 comp=Z,3.1nm,0.7s	**48.97**	**28**	P		**P**	**09 48 04.6**	**+1.5**
ZALV	**Zalesovo Beam**	**49.74**	**332**	P		**P**	**09 48 10.1**	**+1.1**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.4s,baz=124,slow=7.9,SNR=3.6 comp=Z,1.0nm,0.4s	**49.74**	**332**	P		**P**	**09 48 07.5**	**-1.5**
KURK	**Kurchatov**	**50.92**	**326**	P		**P**	**09 48 17.5**	**-0.5**
KURBB	**Kurchatov Arra** comp=Z,5.0nm,0.8s,baz=122,slow=8.0,SNR=17 comp=Z,5.0nm,0.8s	**50.93**	**326**	P		**P**	**09 48 16.9**	**-1.1**
MA2	**Magadan** comp=Z,162nm,20.7s,baz=284,slow=36	**50.99**	**19**	LR		LR	10 09 53.5	
KBL	**Kabul** comp=Z,7.5nm,0.8s	**51.76**	**304**	P		**P**	**09 48 23.9**	**-0.9**
KBL					lAmb	lAmb	09 48 24.9	
SIMJ	**Simiganj**	**52.66**	**309**	P		**P**	**09 48 29.9**	**-1.4**
KK31	**Karatay Array** comp=Z,10nm,1.2s	**52.79**	**314**	lAmb		lAmb	09 48 43.7	
KKAR	**Karatay Array** comp=Z,10nm,1.2s	**52.79**	**314**	P		**P**	**09 48 31.2**	**-0.9**
KKAR					lAmb	lAmb	09 48 43.7	
DZM	**Mont Dzumac** comp=Z,11nm,0.7s	**56.39**	**128**	P		**P**	**09 48 56.5**	**-2.1**
DZM					lAmb	lAmb	09 48 59.0	
BVAR	**Borovoye Array** comp=Z,1.3nm,0.5s,baz=111,slow=8.1,SNR=9.5 comp=Z,1.3nm,0.5s	**56.51**	**326**	P		**P**	**09 48 58.0**	**-0.9**
BRVK	**Borovoye** comp=Z,9.4nm,0.9s	**56.59**	**326**	P		**P**	**09 48 58.0**	**-1.4**
BRVK					lAmb	lAmb	09 49 07.0	
TIXI	**Tiksi** comp=Z,217nm,18.2s,baz=246,slow=39	**58.45**	**3**	LR		LR	10 17 30.6	
NRIK	**Noril'sk** comp=Z,1.8nm,0.4s,baz=118,slow=4.8,SNR=2.1 comp=Z,1.8nm,0.4s	**59.94**	**347**	P		**P**	**09 49 21.9**	**-0.6**
GEYT	**Alibeck**	**60.98**	**306**	P		**P**	**09 49 29.5**	**-0.8**
GEYT	**Alibeck** comp=Z,4.3nm,0.9s,baz=153

comp=Z,3.1nm,0.9s
BRTR Keskin Array B 79.99 308 P **P** 09 51 24.4 -2.1
comp=Z,1.5nm,0.9s,baz=144,slow=2.3,SNR=4.7
comp=Z,1.5nm,0.9s
FINES FINESS Array B 80.98 331 P **P** 09 51 29.7 -1.5
comp=Z,2.1nm,0.9s,baz=44,slow=8.2,SNR=2.4
comp=Z,2.1nm,0.9s
AKASG Malin Array Be 81.24 320 P **P** 09 51 31.3 -1.5
comp=Z,0.2nm,0.3s,baz=72,slow=3.0,SNR=1.6
comp=Z,0.2nm,0.3s
BURAR Bucovina Array 84.45 317 P **P** 09 51 48.1 -1.6
BURAR IAmb IAmb 09 51 49.6
comp=Z,5.4nm,0.9s
C36M Paulatuk 85.90 19 IAmb IAmb 09 52 19.4
comp=Z,6.0nm,0.8s
CRVS Cervenica-Dubn 86.55 319 *e*P **P** 09 51 58.2 -1.8
HFS Hagfors 87.17 332 P **P** 09 52 01.2 -1.5
comp=Z,1.3nm,0.6s,baz=107,slow=7.7,SNR=1.8
comp=Z,1.3nm,0.6s
NB2 NORSAR Subarra 87.94 333 P **P** 09 52 04.1 -2.4
comp=Z,2.5nm,0.7s,baz=67,slow=5.1
NOA NORSAR Array B 87.94 333 P **P** 09 52 06.8 +0.3
comp=Z,0.8nm,0.6s,baz=67,slow=4.7,SNR=5.2
NOA LR LR 10 34 43.5
comp=Z,110nm,19.2s,baz=210,slow=38
comp=Z,0.8nm,0.6s
NEEM North Greenlan 89.28 358 *i* P **P** 09 52 16.1 +3.2
NEEM IAmb IAmb 09 52 22.3
comp=Z,13nm,1.0s
YKA Yellowknife Ar 92.81 23 P **P** 09 52 29.8 +0.6
comp=Z,0.3nm,0.8s,baz=306,slow=4.1,SNR=4.2
comp=Z,0.3nm,0.8s
SUMG Summit 93.26 354 *i* P P 09 52 37.0 +5.4
ICESG Greenland Ices 96.70 353 *e*P **P** 09 52 50.4 +3.1
DY2G Dye2 99.90 355 *i* P **Pdif** 09 53 07.2 +5.7
PLCA Paso Flores 150.74 161 PKPbc **PKPbc** 09 59 09.3 -0.2
comp=Z,1.8nm,0.8s,baz=261,slow=4.9,SNR=3.2

*IDC **26** 09:41:37.7±1.0,6°.39S×143°.30E,h0km,mb4.1/7, mbtmp4.1/10,ML4.1/2,Error ellipse: s-maj=36.5km s-min=19.9km az=89.0*
*NEIC **26** 09:41:39.6±2.2,6°.48S±0°.08×143°.2E±0°.1,h10km±1km, mb4.1/11,Error ellipse: s-maj=18.5km s-min=13.8km az=284.0*
ISC 26 09:41:42.2±0.6,6°.56S±0°.07×143°.24E±0°.08,h35km,n28, σ1s71/29,mb4.1/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.80**	**126**	Pn		**Pn**		**09 42 52.5**	**+0.4**
	12nm,0.3s,baz=359,slow=5.8,SNR=12								
PMG				Sn		**Sn**		**09 43 45.5**	**-1.1**
	7.0nm,0.3s,baz=245,slow=21,SNR=8.0								
MANU	**Manus Island**	**6.09**	**43**			**Pn**		**09 43 07.7**	**-2.2**
COEN	**Coen**	**7.35**	**180**	Pn		**Pn**		**09 43 26.9**	**-0.3**
MTN	**Manton Dam**	**13.46**	**241**			**Pn**		**09 44 50.6**	**-0.2**
CTA	**Charters Tower**	**13.76**	**168**	Lg		Lg		09 49 09.2	
	0.1nm,0.3s,baz=103,slow=18,SNR=1.7								
WB0	**Warramunga Arr**	**15.69**	**212**	Pn		**Pn**		**09 45 20.8**	**0.0**
WB0				IAmb		IAmb		09 45 39.6	
	comp=Z,11nm,1.1s								
WRAB	**Tennant Creek**	**15.85**	**212**	Pn		**Pn**		**09 45 24.1**	**+1.3**
WB2	**Warramunga Arr**	**15.86**	**212**	Pn		**Pn**		**09 45 24.6**	**+1.7**
WB2				IAmb		IAmb		09 45 34.6	
	comp=Z,14nm,1.1s								
WRA	**Warramunga Arr**	**15.86**	**212**	Pn		**Pn**		**09 45 25.0**	**+2.0**
WRA	**Warramunga Arr**	**15.86**	**212**	Pn		**Pn**		**09 45 23.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=22,slow=13,SNR=12								
WRA				Sn		**Sn**		**09 48 11.3**	**-6.5**
	comp=Z,0.3nm,0.3s,baz=26,slow=22,SNR=3.4								
WRA				Lg		Lg		09 50 05.8	
	comp=Z,0.1nm,0.3s,baz=30,slow=27,SNR=2.7								
	comp=Z,2.2nm,0.5s								
AS31	**Alice Springs**	**19.23**	**207**	P		**Pn**		**09 46 05.0**	**+0.3**
AS31				IAmb		IAmb		09 46 44.6	
	comp=Z,5.3nm,0.6s								
ASAR	**Alice Springs**	**19.23**	**207**	P		**P**		**09 46 04.5**	**+0.9**
ASAR	**Alice Springs**	**19.23**	**207**	P		**Pn**		**09 46 07.1**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=32,slow=11,SNR=26								
	comp=Z,3.7nm,0.5s								
FITZ	**Fitzroy Crossi**	**20.64**	**235**	P		**P**		**09 46 19.6**	**+0.7**
FITZ				IAmb		IAmb		09 46 23.3	
	comp=Z,8.9nm,1.5s								
LIFNC	**LIFOU**	**27.21**	**124**	P		**P**		**09 47 24.2**	**+1.2**
KSRS	**Korea Array**	**46.06**	**343**	P		**P**		**09 50 02.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=140,slow=7.9,SNR=4.2								
	comp=Z,0.9nm,0.7s								
PETK	**Petropavlovsk-**	**60.70**	**10**	P		**P**		**09 51 48.4**	**-1.5**
PETK	**Petropavlovsk-**	**60.70**	**10**	P		**P**		**09 51 49.1**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=168,slow=7.3,SNR=5.2								
	comp=Z,3.8nm,0.8s								
SONM	**Songino Array**	**63.14**	**333**	P		**P**		**09 52 06.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=137,slow=6.9,SNR=3.6								
	comp=Z,0.2nm,0.3s								
MK31	**Makanchi Array**	**75.58**	**322**	P		**P**		**09 53 24.5**	**+1.0**
MK31				IAmb		IAmb		09 53 24.9	
	comp=Z,2.2nm,1.1s								
MKAR	**Makanchi Array**	**75.58**	**322**	P		**P**		**09 53 23.8**	**+0.3**
MKAR	**Makanchi Array**	**75.58**	**322**	P		**P**		**09 53 24.1**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=108,slow=6.5,SNR=10								
	comp=Z,1.7nm,0.8s								
KURBB	**Kurchatov Arra**	**79.46**	**324**	P		**P**		**09 53 45.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=113,slow=4.0,SNR=4.4								
	comp=Z,1.0nm,0.8s								
QSPA	**South Pole Qui**	**83.41**	**180**	P		**P**		**09 54 07.4**	**+1.5**
QSPA				IAmb		IAmb		09 54 22.3	
	comp=Z,2.8nm,1.2s								
QSPA	**South Pole Qui**	**83.41**	**180**	P		**P**		**09 54 07.2**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=328,slow=1.8,SNR=3.5								
	comp=Z,1.4nm,0.6s								
E19K	**Redstone River**	**84.86**	**19**	P		**P**		**09 54 12.9**	**-0.2**
E19K				IAmb		IAmb		09 54 18.9	
	comp=Z,6.5nm,1.2s								
BVAR	**Borovoye Array**	**85.04**	**325**	P		**P**		**09 54 14.8**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=108,slow=9.5,SNR=9.8								
	comp=Z,2.4nm,0.7s								
D19K	**Kuna River**	**85.12**	**18**	P		**P**		**09 54 15.3**	**+1.0**

IDC 26 09:44:39.4±2.4,54°.23N×86°.06E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=18.8km s-min=11.7km az=51.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.79**	**249**	I		I		09 50 20.0	
	baz=68,slow=341,SNR=5.8								
ZALV	**Zalesovo Beam**	**0.79**	**249**	Pg		Pg		09 44 53.8	-0.7
	0.6nm,0.3s,baz=65,slow=18,SNR=5.3								
ZALV				Lg		Lg		09 45 05.7	
	2.8nm,0.3s,baz=71,slow=27,SNR=16								
KURBB	**Kurchatov Arra**	**5.85**	**235**	Pn		Pn		09 46 07.8	+0.5
	0.1nm,0.3s,baz=52,slow=14,SNR=7.2								
	0.9nm,0.5s								
MKAR	**Makanchi Array**	**7.82**	**199**	Pn		Pn		09 46 35.5	+1.1
	0.2nm,0.3s,baz=24,slow=13,SNR=11								
	0.3nm,0.4s								

KRSC 26 09:45:54.0±2.0,53°.91N×168°.23E,h18km±44km,MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.85**	**316**	*e*P		Pb		09 46 26.2	-1.0
BKI				*e*S		Sn		09 46 48.7	+1.1
TUMR	**Tumrok**	**4.90**	**290**	*e*P		Pn		09 47 11.6	+4.8
SPN	**Mys Shipunski**	**4.96**	**264**	*e*P		Pn		09 47 12.0	+4.3
SPN				*e*S		Sn		09 48 07.6	+3.1
KMNR	**Kamenistaya**	**4.98**	**295**	*e*P		Pn		09 47 12.8	+4.9
KMNR				*e*S		Sn		09 48 09.1	+4.1
AVH	**Avacha**	**5.69**	**267**	*e*P		Pn		09 47 22.0	+4.3
KRX	**Arik**	**5.73**	**268**	*e*P		Pn		09 47 22.4	+4.1
KOK	**Koryaka**	**5.75**	**268**	*e*P		Pn		09 47 21.9	+3.5
GNL	**Ganaly**	**6.10**	**272**	*e*P		Pn		09 47 28.3	+4.9
KRMR	**Karymshinskiy**	**6.14**	**264**	*e*P		Pn		09 47 30.4	+6.6
KRMR				*e*S		Sn		09 48 40.0	+6.5
MTVR	**Mutnovka**	**6.20**	**261**	*e*P		Pn		09 47 28.6	+3.8
MTVR				*e*S		Sn		09 48 40.6	+5.4
GRL	**Gorelyy**	**6.25**	**262**	*e*P		Pn		09 47 30.9	+5.5
ASAK	**Asacha**	**6.40**	**260**	*e*P		Pn		09 47 32.7	+5.3
ASAK				*e*S		Sn		09 48 46.8	+6.8
KDTR	**Khodutka, Kamc**	**6.50**	**255**	*e*P		Pn		09 47 33.1	+4.4
KDTR				*e*S		Sn		09 48 47.4	+5.1

*IDC **26** 09:46:39.6±1.7,6°.15S×143°.54E,h0km,mb4.1/9, mbtmp4.1/10,ML3.9/1,Error ellipse: s-maj=57.6km s-min=30.4km az=102.0*
ISC 26 09:46:44.9±1.5,6°.2S×143°.5E±0°.4,h35km,n11, σ0s35/11,mb4.0/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**19.68**	**207**	P		**P**		**09 51 11.2**	**+0.1**
	0.4nm,0.3s,baz=35,slow=10,SNR=14								
	4.7nm,0.7s								
KSRS	**Korea Array**	**45.79**	**343**	P		**P**		**09 55 03.4**	**+0.2**
	1.4nm,0.8s,baz=166,slow=10,SNR=5.1								
	1.4nm,0.8s								
CMAR	**Chiang Mai Arr**	**50.30**	**300**	P		**P**		**09 55 38.3**	**-0.2**
	1.1nm,0.3s,baz=121,slow=6.4,SNR=4.5								
	1.1nm,0.3s								
SONM	**Songino Array**	**62.93**	**333**	P		**P**		**09 57 08.0**	**+0.1**
	0.3nm,0.3s,baz=157,slow=7.0,SNR=5.4								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**75.45**	**322**	P		**P**		**09 58 25.6**	**+0.2**
	2.4nm,0.7s,baz=107,slow=7.0,SNR=20								
	2.4nm,0.7s								
ZALV	**Zalesovo Beam**	**77.34**	**329**	P		**P**		**09 58 35.2**	**-0.7**
	0.5nm,0.4s,baz=104,slow=11,SNR=3.9								
	0.5nm,0.4s								
KURBB	**Kurchatov Arra**	**79.32**	**324**	P		**P**		**09 58 46.9**	**0.0**
	1.1nm,0.8s,baz=113,slow=5.3,SNR=6.1								
	1.1nm,0.8s								
NRIK	**Noril'sk**	**84.41**	**343**	P		**P**		**09 59 13.4**	**+0.1**
	2.7nm,0.4s,baz=121,slow=5.3,SNR=4.9								
	2.7nm,0.4s								
BVAR	**Borovoye Array**	**84.89**	**325**	P		**P**		**09 59 16.7**	**+0.6**
	3.9nm,0.8s,baz=100,slow=6.5,SNR=16								
	3.9nm,0.8s								
ILAR	**Eielson Array**	**87.04**	**24**	P		**P**		**09 59 26.4**	**-0.1**
	0.4nm,0.7s,baz=279,slow=5.3,SNR=5.1								
	0.4nm,0.7s								
DBIC	**Dimbokro**	**148.55**	**273**	PKPbc		**PKPbc**		**10 06 29.1**	**-0.1**
	3.5nm,0.7s,baz=16,slow=2.1,SNR=4.1								

*KOLA **26** 09:49:33.6,80°.05N×20°.08E,h0km,ML2.2,Spitsbergen*
BER 26 09:49:32.3±1.9,80°.11N×20°.53E,h23km±8km,ML2.2, Confirmed Earthquake,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.97**	**237**	P		Pb		09 50 07.0	-0.3
KBS				S		Sb		09 50 31.5	0.0
KBS	**Kingsbay**	**1.97**	**237**	P		Pn		09 50 02.4	-1.8
KBS				S		Sn		09 50 22.6	-5.6
KBS	**Kingsbay**	**1.97**	**237**	*e*P		Pn		09 50 02.6	-1.6
KBS				*e*Pg		Pb		09 50 07.2	-0.2
KBS				*e*Sg		Sb		09 50 32.1	+0.6
KBS				IAML				09 50 34.6	
	comp=Z,46nm,0.2s								
SPA0	**Spitsbergen Ar**	**2.10**	**204**	*e*Pg		Pn		09 50 07.6	+1.6
SPA0				*e*Sg		Sb		09 50 33.3	-1.8
SPA0				IAML				09 50 40.3	
	comp=Z,32nm,0.3s								
SPITS	**Spitsbergen Ar**	**2.10**	**204**	P		Pb		09 50 09.0	-0.6
SPITS				S		Sb		09 50 34.1	-1.0
SPITS	**Spitsbergen Ar**	**2.10**	**204**	P		Pn		09 50 04.7	-1.3
SPITS				S		Sn		09 50 27.6	-3.8
BRBB	**Barentsburg B**	**2.36**	**214**	S		Sb		09 50 42.9	+0.3
BRBB	**Barentsburg B**	**2.36**	**214**	P		Pn		09 50 07.1	-2.4
BRBB				S		Sn		09 50 34.0	-3.7
BRBB	**Barentsburg B**	**2.36**	**214**	*e*P		Pn		09 50 07.2	-2.3
BRBB				*e*S		Sn		09 50 34.3	-3.3
BRBB				*e*Sg		Sb		09 50 42.8	+0.2
BRBA	**Barentsburg A**	**2.39**	**213**	*e*P		Pn		09 50 08.9	-1.1
BRBA				*e*S		Sn		09 50 35.2	-3.2
BRBA				*e*Sg		Sb		09 50 44.3	+0.9
BRBA				IAML				09 50 47.0	
	comp=Z,23nm,0.2s								
HSPB	**Hornsund (broa**	**3.28**	**200**	*e*Pg		Pb		09 50 28.8	-0.9
HSPB				*e*Sg		Sb		09 51 09.5	+0.3
HSPB				IAML				09 51 12.3	
	comp=Z,19nm,0.4s								
HOPEN	**Hopen**	**3.74**	**164**	*e*Pg		Pb		09 50 36.1	-1.3
HOPEN				*e*Sg		Sb		09 51 23.4	+1.2
HOPEN				IAML				09 51 26.6	
	comp=Z,16nm,0.4s								
ZFI2	**Zemlya Franca-**	**4.54**	**68**	*e*P		Pn		09 50 38.9	-0.5
ZFI2				*e*S		Sn		09 51 26.0	-5.3
	comp=Z,20nm,3.4s								
OMEGA	**Omega**	**4.55**	**68**	*e*P		Pn		09 50 38.7	-0.9
OMEGA				S		Sn		09 51 26.7	-4.9

*IDC **26** 09:57:31.2±4.9,6°.98S×106°.06E,h33km±35km,mb4.0/17, mbtmp4.2/17,Error ellipse: s-maj=38.8km s-min=15.4km az=55.0*
*DJA **26** 09:57:31.1±0.3,7°.3S±3°×10°.6E±°,h10km,M4.6/18,mb4.7/7, mB6.0/1,MLv4.5/18,Mw(mB)5.6/1*
*NEIC **26** 09:57:32.7±1.9,7°.45S±0°.07×105°.94E±0°.06,h66km±10km, mb4.2/18,Error ellipse: s-maj=10.5km s-min=8.1km az=220.0*
ISC 26 09:57:30.3±0.5,7°.37S±0°.05×105°.93E±0°.05,h35km,n76, σ1s97/71,mb4.3/23,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.72**	**60**	P		**Pn**		**09 57 45.0**	**+1.0**
SKJI				S		**Sn**		**09 57 53.6**	**-0.2**
DBJI	**Dramaga**	**1.15**	**45**	P		**Pn**		**09 57 51.6**	**+1.7**
CNJI	**Cibinong**	**1.19**	**87**	P		**Pn**		**09 57 51.2**	**+0.8**
SBJI	**Serang**	**1.26**	**9**	P		**Pn**		**09 57 54.1**	**+2.7**
TNG	**Tangerang**	**1.39**	**31**	P				09 57 56.2	
TNG				P		**Pn**		**09 57 55.3**	**+2.1**
LEM	**Lembang**	**1.76**	**72**	Pg		**Pn**		**09 58 01.1**	**+2.6**
	214nm,0.3s,baz=226,slow=4.5,SNR=161								
LEM				Lg		Lg		09 58 22.4	
	188nm,0.3s,baz=306,slow=21,SNR=9.3								
LEM	**Lembang**	**1.76**	**72**	P		**Pn**		**09 58 01.6**	**+3.2**
KASI	**Kota Agung**	**2.33**	**322**	P		**Pn**		**09 58 09.8**	**+3.7**
CMJI	**Cimerak**	**2.53**	**99**	P		**Pn**		**09 58 10.8**	**+1.9**
KPJI	**Karang Pucung**	**2.97**	**89**	P		**Pn**		**09 58 17.9**	**+2.9**
LWLI	**Liwa**	**2.99**	**321**	P		Pn		09 58 21.4	+6.0
XMI	**Christmas Isla**	**3.07**	**184**	P		Pn		09 58 18.6	+2.3
XMIS	**Christmas Isla**	**3.10**	**185**			**Pn**		**09 58 18.7**	**+1.9**
XMIS				Sn		**Sn**		**09 58 52.6**	**-0.1**
XMIS	**Christmas Isla**	**3.10**	**185**	P		**Pn**		**09 58 18.7**	**+1.9**
MNAI	**Manna**	**4.21**	**315**			Pn		09 58 36.1	+4.1
MNAI				Sn		**Sn**		**09 59 20.9**	**+0.9**
MNAI	**Manna**	**4.21**	**315**	P		Pn		09 58 37.9	+5.9
SMRI	**Semarang**	**4.48**	**86**	Pn		**Pn**		**09 58 39.3**	**+3.5**
SMRI				Sn		**Sn**		**09 59 27.3**	**+0.5**
UGM	**Wanagama**	**4.58**	**97**	Pn		**Pn**		**09 58 39.6**	**+2.5**
UGM	**Wanagama**	**4.58**	**97**	P		**Pn**		**09 58 39.7**	**+2.5**
PPBI	**Pangkal Pinang**	**5.18**	**2**	P		**Pn**		**09 58 48.5**	**+3.1**
	28nm,0.6s,13μm1.0nm								
PWJI	**Pagerwojo**	**5.86**	**97**	P		**Pn**		**09 58 58.5**	**+3.9**
	46nm,0.5s,0.5nm								
PPSI	**Pulau Pagai**	**7.47**	**308**	P		**Pn**		**09 59 19.5**	**+2.7**
	120nm,0.8s,0.5nm								
GMJI	**Gumukmas**	**7.50**	**97**	P		**Pn**		**09 59 19.4**	**+2.2**
JAGI	**Jajag, Banyuwa**	**8.21**	**98**			**Pn**		**09 59 28.6**	**+1.6**
JAGI	**Jajag, Banyuwa**	**8.21**	**98**	P		Pn		09 59 32.0	+4.9
JAGI	**Jajag, Banyuwa**	**8.21**	**98**	P		**Pn**		**09 59 30.2**	**+3.1**
SRBI	**Singaraja**	**9.22**	**95**	P		**Pn**		**09 59 43.9**	**+3.0**
	36nm,0.8s								
TWSI	**Taliwang, Sumb**	**10.93**	**98**	P		**Pn**		**10 00 06.7**	**+2.4**
	18nm,0.9s								
PLAI	**Plampang**	**11.81**	**98**	P		**Pn**		**10 00 20.0**	**+3.5**
PLAI	**Plampang**	**11.81**	**98**	P		**Pn**		**10 00 18.5**	**+2.0**
TOLI2	**Tolitoli**	**17.04**	**61**			**Pn**		**10 01 26.5**	**+0.5**
TOLI2				IAmb		IAmb		10 01 34.1	
	comp=Z,5.1nm,0.9s								
GIRL	**Giralia**	**17.16**	**153**			**P**		**10 01 26.5**	**-2.2**
GIRL	**Giralia**	**17.16**	**153**	P		**P**		**10 01 31.5**	**+2.7**
SOEI	**Soe**	**18.28**	**99**			**P**		**10 01 40.7**	**-0.7**
SOEI				IAmb		IAmb		10 02 20.9	
	comp=Z,22nm,0.8s								
MBWA	**Marble Bar**	**19.12**	**137**	P		**P**		**10 01 49.1**	**-1.4**
MBWA				IAmb		IAmb		10 02 20.7	
	comp=Z,9.8nm,1.1s								
PSA00	**Pilbara Seismi**	**19.49**	**138**	P		**P**		**10 01 53.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**21.95**	**121**	P		**P**		**10 02 20.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**26.58**	**345**	P		**P**		**10 03 02.1**	**-3.3**
	comp=Z,0.7nm,0.3s,baz=170,slow=5.5,SNR=1.4								
	comp=Z,0.7nm,0.3s								

H01W3	**Cape Leeuwin H**	**28.40**	**166**	T		T		10 33 02.0	
	baz=344,slow=76,SNR=63								
H01W1	**Cape Leeuwin H**	**28.41**	**166**	T		T		10 33 03.1	
	baz=344,slow=76,SNR=54								
H01W2	**Cape Leeuwin H**	**28.42**	**166**	T		T		10 33 01.2	
	baz=344,slow=76,SNR=96								
WB0	**Warramunga Arr**	**30.22**	**117**	P		**P**		**10 03 37.1**	**-0.9**
WB0				IAmb		IAmb		10 03 39.8	
	comp=Z,9.4nm,1.2s								
WRA	**Warramunga Arr**	**30.24**	**117**	P		**P**		**10 03 38.3**	**+0.2**
WRA	**Warramunga Arr**	**30.24**	**117**	P		**P**		**10 03 39.0**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=303,slow=9.3,SNR=7.3								
	comp=Z,1.8nm,0.6s								
WRAB	**Tennant Creek**	**30.24**	**117**	P		**P**		**10 03 37.3**	**-0.8**
WRAB				IAmb		IAmb		10 03 39.9	
	comp=Z,8.0nm,1.2s								
WB2	**Warramunga Arr**	**30.25**	**117**	P		**P**		**10 03 36.9**	**-1.2**
WB2				IAmb		IAmb		10 03 53.3	
	comp=Z,4.8nm,0.9s								
FORT	**Forrest**	**31.17**	**141**	P		**P**		**10 03 44.1**	**-2.0**
ASAR	**Alice Springs**	**31.34**	**124**	P		**P**		**10 03 46.5**	**-1.3**
ASAR	**Alice Springs**	**31.34**	**124**	P		**P**		**10 03 49.5**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=298,slow=7.9,SNR=4.9								
	comp=Z,0.9nm,0.8s								
BBOO	**Buckleboo**	**37.70**	**136**	P		**P**		**10 04 40.4**	**-2.3**
STKA	**Stephens Creek**	**41.19**	**131**	P		**P**		**10 05 08.9**	**-2.8**
STKA	**Stephens Creek**	**41.19**	**131**	P		**P**		**10 05 14.1**	**+2.4**
	comp=Z,1.0nm,0.5s,baz=315,slow=14,SNR=2.3								
	comp=Z,1.0nm,0.5s								
SONM	**Songino Array**	**54.97**	**0**	P		**P**		**10 06 56.7**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=171,slow=8.9,SNR=6.0								
SONM				PcP		**PcP**		**10 07 59.1**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=176,slow=4.2,SNR=18								
	comp=Z,0.8nm,0.7s								
MK31	**Makanchi Array**	**57.88**	**341**	P		**P**		**10 07 17.0**	**-1.7**
MK31				IAmb		IAmb		10 07 18.7	
	comp=Z,0.9nm,0.6s								
MKAR	**Makanchi Array**	**57.88**	**341**	P		**P**		**10 07 16.8**	**-1.9**
	comp=Z,1.3nm,0.5s,baz=154,slow=8.2,SNR=24								
	comp=Z,1.3nm,0.5s								
H04N2	**CROZET ISLANDS**	**60.29**	**220**	T		T		11 13 27.7	
	baz=67,slow=75,SNR=411								
H04N1	**CROZET ISLANDS**	**60.31**	**220**	T		T		11 13 29.4	
	baz=67,slow=75,SNR=338								
H04N3	**CROZET ISLANDS**	**60.31**	**220**	T		T		11 13 28.0	
	baz=67,slow=75,SNR=299								
KURBB	**Kurchatov Arra**	**62.44**	**341**	P		**P**		**10 07 48.1**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=158,slow=5.9,SNR=4.6								
KURBB				PcP		**PcP**		**10 08 29.2**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=145,slow=3.4,SNR=5.0								
	comp=Z,0.4nm,0.4s								
KURK	**Kurchatov**	**62.49**	**341**	P		**P**		**10 07 48.4**	**-1.7**
KURK				IAmb		IAmb		10 08 19.1	
	comp=Z,2.3nm,0.9s								
GEYT	**Alibeck**	**63.34**	**319**	P		**P**		**10 07 56.7**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=131,slow=4.5,SNR=4.8								
	comp=Z,3.7nm,0.8s								
BVAR	**Borovoye Array**	**67.30**	**338**	P		**P**		**10 08 20.4**	**-1.0**
	comp=Z,4.0nm,0.7s,baz=146,slow=8.3,SNR=20								
	comp=Z,4.0nm,0.7s								
BRVK	**Borovoye**	**67.37**	**338**	P		**P**		**10 08 20.6**	**-1.2**
BRVK				IAmb		IAmb		10 08 21.9	
	comp=Z,2.6nm,0.7s								
ABKAR	**Akbulak array**	**69.19**	**330**	P		**P**		**10 08 32.7**	**-0.6**
ABKAR	**Akbulak array**	**69.19**	**330**	P		**P**		**10 08 33.0**	**-0.4**
AKTO	**Aktyubinsk**	**70.91**	**330**	P		**P**		**10 08 43.4**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=118,slow=3.8,SNR=6.7								
	comp=Z,1.0nm,0.4s								
ARU	**Arti**	**74.50**	**335**	P		**P**		**10 09 04.5**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=327,slow=7.8,SNR=3.2								
	comp=Z,2.3nm,0.3s								
KBZ	**Khabaz**	**76.22**	**318**	P		**P**		**10 09 16.2**	**+1.0**
	comp=Z,3.8nm,0.9s,baz=186,slow=6.2,SNR=5.1								
	comp=Z,3.8nm,0.9s								
NRIK	**Noril'sk**	**77.59**	**353**	P		**P**		**10 09 21.4**	**-1.0**
	comp=Z,2.3nm,0.4s,baz=152,slow=4.7,SNR=4.5								
	comp=Z,2.3nm,0.4s								
BRTR	**Keskin Array B**	**81.29**	**312**	P		**P**		**10 09 43.8**	**+0.4

KURBB	**Kurchatov Arra**	**6.42**	**240**	Pn	Pn	10 00 07.8	-0.5
	0.2nm,0.3s,baz=54,slow=13,SNR=7.4						
KURBB				Lg	Lg	10 01 57.0	
	baz=56,slow=32,SNR=5.0						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**8.04**	**205**	Pn	Pn	10 00 31.8	+1.1
	0.3nm,0.3s,baz=28,slow=14,SNR=13						
MKAR				Sn	Sn	10 02 03.9	+1.6
	0.1nm,0.3s,baz=21,slow=25,SNR=2.4						
MKAR				Lg	Lg	10 02 50.8	
	baz=25,slow=31,SNR=1.8						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**10.09**	**270**	Pn	Pn	10 00 58.9	+0.3
	baz=65,slow=14,SNR=3.0						
	0.6nm,0.4s						

IDC ***26*** *10:07:42.6±0.7,6˚11S×143˚06E, h0km, mb4.2/12, mbtmp4.2/13, ML2.1/1, MS4.1/11, Error ellipse: s-maj=32.5km s-min=15.8km az=73.0*
NEIC ***26*** *10:07:44.6±2.6, 6˚30S±0˚.08×142˚.80E±0˚.03, h10km±1km, mb4.8/33, Error ellipse: s-maj=14.2km s-min=5.4km az=172.0*
DJA ***26*** *10:07:45.7±0.2,6˚S±3˚×14˚3E±˚, h10km, M4.8/18, mb4.6/18, mB5.2/7, MLv5.1/5, Mw(mB)4.5/7, MwMwp5.2/1, Mwp5.4/1*
GCMT ***26*** *10:07:47.6±0.3, 6˚.36S±0˚.03×142˚.71E±0˚.03, h21km±1km, MW5.1/83, Moment Tensor Solution. s23,c26; s83,c101; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.73±.39; Mθθ-2.55±.22; Mφφ-3.18±.24; Mrθ2.30±.37; Mrφ1.18±.11; Mθφ-1.80±.39; Best double couple: M0 5.70100×10^16 NP1:φs136.00000°, δ60.00000°, λ86.00000°. NP2: φs325.00000°, δ30.00000°, λ98.00000°. Principal axes: T 6.5470, Plg74.0000°, Azm34.0000°; N -1.6930, Plg4.0000°, Azm138.0000°; P -4.8540, Plg15.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 10:07:45.0±0.5,**6˚31S**±0˚.05×**142˚.89E**±0˚.06,**h10**km,**n93,** σ1§**48**/72,**mb4.6**/35,**MS4.0**/9,**2D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.28**	**229**	P	**Pn**	**10 08 38.7**	**+2.3**
GENI	**Genyem**	**4.58**	**324**	P	**Pn**	**10 09 54.7**	**+0.3**
PMG	**Port Moresby**	**5.23**	**126**	Pn	**Pn**	**10 09 03.4**	**0.0**
PMG	**Port Moresby**	**5.23**	**126**	Pn	**Pn**	**10 09 03.5**	**+0.2**
	4.3nm,0.3s,baz=62,slow=4.6,SNR=16						
PMG				Sn	**Sn**	**10 10 04.4**	**+0.7**
	7.7nm,0.3s,baz=311,slow=22,SNR=3.7						
	31nm,0.6s						
SMPI	**Sarmi**	**5.98**	**316**	P	**Pn**	**10 09 15.8**	**+2.2**
	174nm,1.1s,3μm1.1nm						
MANU	**Manus Island**	**6.16**	**47**	Pn	**Pn**	**10 09 17.8**	**+1.7**
COEN	**Coen**	**7.60**	**178**	Pn	**Pn**	**10 09 36.8**	**+0.9**
RABL	**Rabaul**	**9.48**	**78**		**Pn**	**10 10 02.1**	**+0.4**
SAUI	**Saumlaki**	**11.62**	**261**	P	**Pn**	**10 10 31.9**	**+0.9**
	295nm,1.2s						
KDU	**Kakadu**	**12.06**	**238**	P	**Pn**	**10 10 36.4**	**-0.7**
MTN	**Manton Dam**	**13.28**	**240**	Pn	**Pn**	**10 10 51.9**	**-1.8**
DRS	**Darwin Rock St**	**13.29**	**242**	P	**Pn**	**10 10 54.6**	**+0.7**
CTA	**Charters Tower**	**14.08**	**167**	Pn	Pn	10 11 10.6	+6.0
	baz=335,slow=14,SNR=3.0						
CTA				Lg	Lg	10 15 14.6	
	0.2nm,0.3s,baz=259,slow=18,SNR=4.1						
CTAO	**Charters Tower**	**14.08**	**167**	Pn	**Pn**	**10 11 04.0**	**-0.7**
QIS	**Mount Isa**	**14.52**	**192**	P	**Pn**	**10 11 11.8**	**+1.2**
WB0	**Warramunga Arr**	**15.72**	**211**	Pn	**Pn**	**10 11 25.9**	**-0.8**
WRAB	**Tennant Creek**	**15.88**	**211**	P	**Pn**	**10 11 29.5**	**+0.7**
WRAB				IAmb	IAmb	10 11 41.6	
	comp=Z,99nm,1.2s						
WB2	**Warramunga Arr**	**15.88**	**211**	Pn	**Pn**	**10 11 27.4**	**-1.4**
WB2				IAmb	IAmb	10 11 41.8	
	comp=Z,110nm,1.3s						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**10 11 29.3**	**+0.4**
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**10 11 27.5**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=32,slow=12,SNR=20						
WRA				Sn	**Sn**	**10 14 19.5**	**-5.7**
	comp=Z,0.6nm,0.3s,baz=26,slow=23,SNR=3.3						
WRA				Lg	Lg	10 16 07.3	
	comp=Z,0.4nm,0.3s,baz=35,slow=28,SNR=2.7						
KNRA	**Kununurra**	**16.69**	**235**		**Pn**	**10 11 38.6**	**-0.5**
KNRA				IAmb	IAmb	10 11 46.3	
	comp=Z,96nm,1.2s						
KNRA	**Kununurra**	**16.69**	**235**	P	**Pn**	**10 11 39.1**	**0.0**
SOEI	**Soe**	**18.75**	**258**		**P**	**10 12 03.3**	**-1.1**
SOEI				IAmb	IAmb	10 12 25.9	
	comp=Z,46nm,0.9s						
SOEI	**Soe**	**18.75**	**258**	P	**P**	**10 12 04.8**	**+0.4**
	comp=Z,59nm,1.1s,comp=Z,1μm						
AS01	**Alice Springs**	**19.28**	**206**	P	**P**	**10 12 12.1**	**+2.1**
AS31	**Alice Springs**	**19.30**	**206**	P	**P**	**10 12 10.9**	**+0.6**
AS31				IAmb	IAmb	10 12 18.1	
	comp=Z,36nm,1.0s						
ASAR	**Alice Springs**	**19.30**	**206**	P	**P**	**10 12 13.0**	**+2.8**
ASAR	**Alice Springs**	**19.30**	**206**	P	**P**	**10 12 12.4**	**+2.2**
	comp=Z,135nm,1.1s,baz=32,slow=9.7,SNR=73						
ASAR				Lg	Lg	10 17 56.2	
	baz=18,slow=30						
ASAR				LR	LR	10 20 10.8	
	comp=Z,3μm,20.1s,baz=33,slow=38						
GUMO	**Guam**	**19.87**	**6**	LR	LR	10 19 24.9	
	comp=Z,223nm,18.8s,baz=194,slow=36						
FITZ	**Fitzroy Crossi**	**20.50**	**234**	P	**P**	**10 12 23.9**	**+0.5**
EIDS	**Eidsvold**	**20.51**	**158**		**P**	**10 12 23.7**	**+0.2**
EIDS				IAmb	IAmb	10 12 29.6	
	comp=Z,32nm,1.2s						
LUWI	**Luwuk**	**20.74**	**284**	P	**P**	**10 12 28.1**	**+2.1**
	comp=Z,54nm,1.1s,comp=Z,3μm						
EDFI	**Ende, Flores**	**21.15**	**262**	P	**P**	**10 12 29.7**	**-0.9**
	comp=Z,20nm,1.3s						
INKA	**Innaminka**	**21.41**	**185**	P	**P**	**10 12 36.1**	**+3.0**
OOD	**Oodnadatta**	**22.43**	**197**	P	**P**	**10 12 45.8**	**+1.7**
KAPI	**Kappang**	**23.06**	**272**	P	**P**	**10 12 50.4**	**-0.4**
KAPI				IAmb	IAmb	10 12 56.8	
	comp=Z,63nm,1.4s						
TTSI	**Tana Toraja**	**23.21**	**277**	P	**P**	**10 12 50.6**	**-1.8**
	comp=Z,16nm,1.2s,comp=Z,1μm						
TOLI2	**Tolitoli**	**23.27**	**288**	P	**P**	**10 12 52.3**	**-0.6**
TOLI2				IAmb	IAmb	10 12 58.2	
	comp=Z,18nm,0.9s						
WRKA	**Warakurna**	**23.28**	**215**	P	**P**	**10 12 53.3**	**+0.2**
	comp=Z,110nm,1.2s						
LCRK	**Leigh Creek**	**24.41**	**190**	P	**P**	**10 13 05.0**	**+1.3**
MULG	**Mulgathing**	**25.25**	**198**	P	**P**	**10 13 12.8**	**+1.5**
STKA	**Stephens Creek**	**25.46**	**183**	P	**P**	**10 13 14.0**	**+0.8**
STKA	**Stephens Creek**	**25.46**	**183**	P	**P**	**10 13 14.3**	**+1.0**
	comp=Z,11nm,1.1s,baz=345,slow=8.4,SNR=7.8						
STKA				LR	LR	10 24 23.7	
	comp=Z,1μm,18.8s,baz=0.2,slow=39						
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**27.12**	**193**	P	**P**	**10 13 30.6**	**+2.3**
FORT	**Forrest**	**28.04**	**208**	P	**P**	**10 13 38.1**	**+1.6**
JCJ	**Chichijima**	**33.22**	**359**	LR	LR	10 26 06.3	
	comp=Z,88nm,20.7s,baz=134,slow=33						
NWAO	**Narrogin (SRO)**	**35.64**	**219**	LR	LR	10 30 13.0	
	comp=Z,1μm,18.7s,baz=44,slow=38						
MJAR	**Matsushiro Arr**	**42.85**	**354**	LR	LR	10 31 59.2	
	comp=Z,99nm,21.1s,baz=175,slow=34						
URZ	**Urewera**	**44.41**	**141**	LR	LR	10 35 29.7	
	comp=Z,171nm,18.0s,baz=310,slow=38						
NJ2	**Nanjing**	**44.50**	**330**	*e*P	**P**	**10 15 58.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WHN	**Wuhan**	**45.72**	**325**	P	P	10 16 14.0	+7.5
KSAR	**Wonju Array Be**	**45.73**	**343**	P	**P**	**10 16 04.9**	**-1.5**
KSRS	**Korea Array**	**45.73**	**343**	P	**P**	**10 16 05.2**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=161,slow=8.5,SNR=7.2						
KSRS				LR	LR	10 32 47.8	
	comp=Z,93nm,21.0s,baz=190,slow=33						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.83**	**300**	P	**P**	**10 16 38.5**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=115,slow=6.2,SNR=6.6						
	comp=Z,0.8nm,0.3s						
HNS	**HongShan**	**50.82**	**331**	*e*P	P	10 16 44.0	-1.8
USRK	**Ussuriysk Ar.**	**51.23**	**350**	P	**P**	**10 16 47.1**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=152,slow=8.6,SNR=4.5						
USRK				LR	LR	10 36 16.7	
	comp=Z,127nm,19.5s,baz=177,slow=34						
	comp=Z,0.8nm,0.6s						
XAN	**Xi'an**	**51.41**	**324**	P	**P**	**10 16 50.0**	**-0.4**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PZH	**PanZhiHua**	**51.51**	**311**	P	**P**	**10 16 52.0**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,140nm,6.0s						
CN2	**Changchun**	**52.31**	**344**	P	P	10 16 53.3	-3.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TNCH	**TengChong**	**53.22**	**308**	*e*P	**P**	**10 17 04.5**	**+0.3**
TNCH				pP	pP	10 17 07.5	-0.1
TNCH				pmax	pmax		
	comp=Z,94nm,0.4s						
BNX	**BinXian**	**53.63**	**347**	||P	**P**	**10 17 06.0**	**-0.6**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,140nm,5.4s						
HHC	**Hu-ho-hao-te**	**55.04**	**331**	*e*P	**P**	**10 17 19.3**	**+2.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.4s						
GTA	**Gaotai**	**60.43**	**323**	*e*P	P	10 17 53.0	-2.0
GTA				pP	sP	10 18 02.8	+3.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**62.76**	**333**	P	**P**	**10 18 10.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=152,slow=4.9,SNR=6.1						
	comp=Z,0.6nm,0.6s						
WMQ	**Urumqi**	**70.41**	**321**	*e*P	**P**	**10 18 59.8**	**+0.3**
VNDA	**Vanda**	**71.88**	**176**	LR	LR	10 49 00.2	
	comp=Z,146nm,19.9s,baz=192,slow=34						
MKAR	**Makanchi Array**	**75.17**	**322**		P	10 19 25.5	-2.2
MKAR	**Makanchi Array**	**75.17**	**322**	P	**P**	**10 19 26.6**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=108,slow=6.8,SNR=13						
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**75.37**	**322**		P	10 19 26.6	-2.2
KSH	**Kashi**	**76.57**	**313**	P	**P**	**10 19 36.0**	**0.0**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**77.13**	**329**	P	P	10 19 36.2	-2.4
	comp=Z,0.7nm,0.4s,baz=130,slow=3.0,SNR=4.9						
	comp=Z,0.7nm,0.4s						
AAK	**Ala-Archa**	**78.67**	**316**	P	**P**	**10 19 46.4**	**-1.4**
KURK	**Kurchatov**	**79.04**	**324**		**P**	**10 19 47.7**	**-1.6**
KURK				IAmb	IAmb	10 19 50.0	
	comp=Z,6.8nm,1.3s						
KURBB	**Kurchatov Arra**	**79.06**	**324**	P	**P**	**10 19 47.8**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=114,slow=4.5,SNR=9.0						
	comp=Z,1.9nm,0.9s						
QSPA	**South Pole Qui**	**83.66**	**180**		**P**	**10 20 13.4**	**-0.3**
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**10 20 13.6**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=226,slow=0.7,SNR=18						
	comp=Z,5.6nm,0.9s						
NRIK	**Noril'sk**	**84.34**	**343**	P	**P**	**10 20 15.8**	**-1.1**
	comp=Z,1.4nm,0.4s,baz=87,slow=0.9,SNR=7.3						
	comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**84.63**	**325**	P	**P**	**10 20 18.0**	**-0.8**
	comp=Z,5.4nm,0.6s,baz=109,slow=6.6,SNR=34						
	comp=Z,5.4nm,0.6s						
BRVK	**Borovoye**	**84.70**	**325**		**P**	**10 20 17.9**	**-1.2**
BRVK				IAmb	IAmb	10 20 20.1	
	comp=Z,9.5nm,1.1s						
C19K	**Lookout Ridge**	**84.86**	**18**		**P**	**10 20 19.2**	**-0.5**
C19K				IAmb	IAmb	10 20 28.6	
	comp=Z,9.8nm,1.1s						
D19K	**Kuna River**	**84.99**	**18**	P	**P**	**10 20 19.4**	**-0.9**
DHY	**Denali Highway**	**86.59**	**25**	P	**P**	**10 20 27.1**	**-1.4**
DHY				IAmb	IAmb	10 20 32.9	
	comp=Z,6.7nm,1.0s						
D22K	**Ayikyak River**	**86.92**	**19**	IAmb	IAmb	10 20 46.4	
	comp=Z,12nm,1.4s						
CCB	**Clear Creek Bu**	**86.98**	**24**	IAmb	IAmb	10 20 30.9	
	comp=Z,7.8nm,1.2s						
ILAR	**Eielson Array**	**87.40**	**24**	P	P	10 20 29.2	-2.9
	comp=Z,1.0nm,0.8s,baz=258,slow=3.9,SNR=11						
	comp=Z,1.0nm,0.8s						
J26L	**Joseph Creek**	**88.66**	**25**	IAmb	IAmb	10 20 44.8	
	comp=Z,11nm,1.4s						
E25K	**Arctic Village**	**89.04**	**21**	IAmb	IAmb	10 20 48.8	
	comp=Z,9.5nm,1.4s						
K27K	**Chicken**	**89.14**	**25**	IAmb	IAmb	10 20 46.3	
	comp=Z,9.7nm,1.2s						
BMAR	**Burnt Mountain**	**89.17**	**22**	P	**P**	**10 20 39.9**	**-0.7**
ABKAR	**Akbulak array**	**90.14**	**319**		P	10 20 42.8	-2.7
ELIB	**Princess Elisa**	**92.81**	**196**	*d*P	P	10 20 54.4	-3.2
OPO	**Ambohidratompo**	**93.39**	**251**	LR	LR	11 01 45.5	
	comp=Z,95nm,18.6s,baz=224,slow=35						
DBIC	**Dimbokro**	**147.95**	**272**	PKPbc	**PKPdf**	**10 27 31.5**	**+2.8**
	comp=Z,8.8nm,1.1s,baz=135,slow=1.4,SNR=3.5						

IDC ***26*** *10:19:54.5±0.8,6˚27S×143˚61E, h0km, mb4.4/10, mbtmp4.4/12, ML1.6/1, Error ellipse: s-maj=33.1km s-min=17.2km az=82.0*
NEIC ***26*** *10:19:55.9±2.1, 6˚44S±0˚.08×143˚.54E±0˚.10, h10km±1km, mb4.8/43, Error ellipse: s-maj=16.0km s-min=13.2km az=98.0*

ISC 26 10:19:56.4±0.5,**6˚45S**±0˚.07×**143˚48E**±0˚.08,**h10**km,**n71,** σ1§**31**/48,**mb4.7**/40,**1D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.68**	**129**		**Pn**	**10 21 08.3**	**+1.1**
PMG	**Port Moresby**	**4.68**	**129**	Pn	**Pn**	**10 21 08.6**	**+1.4**
	1.8nm,0.3s,baz=328,slow=9.0,SNR=6.8						
PMG				Sn	**Sn**	**10 22 01.0**	**-0.7**
	2.2nm,0.3s,baz=8.6,slow=19,SNR=7.5						
	12nm,0.3s						
MANU	**Manus Island**	**5.85**	**42**		Pn	10 21 20.4	-2.9
COEN	**Coen**	**7.46**	**182**	Pn	**Pn**	**10 21 44.9**	**-0.7**
FAKI	**Fak Fak**	**11.72**	**287**	Pn	**Pn**	**10 22 45.9**	**+1.9**
MTN	**Manton Dam**	**13.72**	**242**		**Pn**	**10 23 11.4**	**+0.1**
WB0	**Warramunga Arr**	**15.91**	**213**	Pn	**Pn**	**10 23 41.3**	**+0.7**
WRAB	**Tennant Creek**	**16.07**	**213**	Pn	**Pn**	**10 23 41.1**	**-1.5**
WB2	**Warramunga Arr**	**16.07**	**213**	Pn	**Pn**	**10 23 41.4**	**-1.3**
WRA	**Warramunga Arr**	**16.08**	**213**	Pn	**Pn**	**10 23 41.9**	**-0.9**
WRA	**Warramunga Arr**	**16.08**	**213**	Pn	**Pn**	**10 23 41.2**	**-1.7**
	0.3nm,0.3s,baz=32,slow=13,SNR=5.3						
WRA				Sn	Sn	10 26 31.3	-10
	0.2nm,0.3s,baz=30,slow=25,SNR=2.8						
WRA				Lg	Lg	10 28 30.3	
	0.3nm,0.3s,baz=33,slow=29,SNR=5.0						
KNRA	**Kununurra**	**17.09**	**236**		**Pn**	**10 23 53.6**	**-2.1**
SOEI	**Soe**	**19.30**	**259**	P	**P**	**10 24 22.1**	**+0.2**
SOEI				IAmb	IAmb	10 24 48.0	
	comp=Z,46nm,0.8s						
AS31	**Alice Springs**	**19.43**	**207**	P	**P**	**10 24 21.5**	**-1.7**
ASAR	**Alice Springs**	**19.43**	**207**	P	**P**	**10 24 23.1**	**-0.1**
ASAR	**Alice Springs**	**19.43**	**207**	P	**P**	**10 24 26.0**	**+2.8**
	comp=Z,12nm,0.8s,baz=36,slow=9.5,SNR=30						
ASAR				Lg	Lg	10 30 12.5	
	comp=Z,0.1nm,0.3s,baz=15,slow=30,SNR=3.3						
FITZ	**Fitzroy Crossi**	**20.89**	**235**	P	**P**	**10 24 38.5**	**-0.6**
TOLI2	**Tolitoli**	**23.87**	**288**	P	**P**	**10 25 09.4**	**-1.0**
STKA	**Stephens Creek**	**25.36**	**184**	P	**P**	**10 25 26.8**	**+3.0**
	comp=Z,1.2nm,0.6s,baz=0.0,slow=14,SNR=0.8						
	comp=Z,1.2nm,0.6s						
NJ2	**Nanjing**	**44.91**	**330**	*e*P	**P**	**10 28 13.5**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	**Korea Array**	**46.03**	**343**	P	**P**	**10 28 20.1**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=161,slow=9.4,SNR=13						
	comp=Z,4.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.41**	**300**	P	**P**	**10 28 54.8**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=117,slow=6.0,SNR=8.9						
	comp=Z,0.8nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.47**	**349**	P	P	10 29 00.3	-1.8
USRK	**Ussuriysk Ar.**	**51.47**	**349**	P	**P**	**10 29 01.5**	**-0.5**
	comp=Z,6.3nm,0.8s,baz=176,slow=8.5,SNR=20						
	comp=Z,6.3nm,0.8s						
XAN	**Xi'an**	**51.87**	**323**	P	**P**	**10 29 04.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MDJ	**Mudanjiang**	**52.35**	**348**	P	**P**	**10 29 11.3**	**+2.7**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,180nm,6.5s						
BNX	**BinXian**	**53.91**	**346**	||P	**P**	**10 29 19.0**	**-1.0**
BNX				pmax	pmax		
	comp=Z,20nm,0.7s						
BNX				pmax	pmax		
	comp=Z,130nm,4.9s						
HHC	**Hu-ho-hao-te**	**55.45**	**331**	*e*P	**P**	**10 29 34.5**	**+3.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,97nm,5.9s						
LZH	**Lanzhou**	**56.33**	**322**	*e*P	**P**	**10 29 38.0**	**+0.1**
LZH				pP	sP	10 29 46.0	+3.2
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**60.55**	**10**	P	**P**	**10 30 05.7**	**-1.2**
	comp=Z,7.2nm,0.8s,baz=180,slow=8.7,SNR=5.8						
	comp=Z,7.2nm,0.8s						
GTA	**Gaotai**	**60.90**	**322**	P	**P**	**10 30 09.8**	**+0.1**
GTA				pP	sP	10 30 18.8	+4.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	**Magadan**	**66.07**	**4**	P	**P**	**10 30 42.6**	**-0.8**
MA2				IAmb	IAmb	10 30 43.2	
	comp=Z,9.2nm,0.9s						
WMQ	**Urumqi**	**70.88**	**321**	*e*P	**P**	**10 31 14.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,18.3s						
MK31	**Makanchi Array**	**75.64**	**322**	P	P	10 31 40.3	-1.6
MK31				IAmb	IAmb	10 31 42.3	
	comp=Z,6.6nm,1.2s						
MKAR	**Makanchi Array**	**75.64**	**322**	P	P	10 31 40.2	-1.7
MKAR	**Makanchi Array**	**75.64**	**322**	P	**P**	**10 31 41.3**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=106,slow=7.1,SNR=30						
	comp=Z,3.7nm,0.8s						
MAKZ	**Makanchi**	**75.84**	**321**	P	**P**	**10 31 42.1**	**-0.9**
MAKZ				IAmb	IAmb	10 31 43.4	
	comp=Z,7.8nm,1.1s						
KSH	**Kashi**	**77.09**	**313**	P	**P**	**10 31 51.0**	**+0.6**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**77.55**	**329**	P	P	10 31 50.2	-2.3
ZALV	**Zalesovo Beam**	**77.55**	**329**	P	P	10 31 50.5	-2.0
	comp=Z,1.0nm,0.5s,baz=123,slow=5.5,SNR=6.5						
	comp=Z,1.0nm,0.5s						
ARSB	**Arslanbob**	**79.83**	**314**	P	**P**	**10 32 05.1**	**-0.5**
SIMJ	**Simiganj**	**82.02**	**310**	P	**P**	**10 32 16.1**	**-1.2**
SIMJ				IAmb	IAmb	10 32 17.4	
	comp=Z,4.6nm,1.0s						
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**10 32 23.7**	**-0.8**
QSPA				IAmb	IAmb	10 32 47.4	
	comp=Z,9.1nm,1.3s						
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**10 32 24.0**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=328,slow=1.3,SNR=16						
	comp=Z,3.9nm,0.9s						
M20K	**Styx River**	**83.54**	**25**	P	**P**	**10 32 23.8**	**-0.7**
E18K	**Tukpahlearik C**	**83.57**	**19**	IAmb	IAmb	10 32 24.7	
	comp=Z,4.5nm,1.0s						
H19K	**Roundabout Mou**	**83.97**	**21**	IAmb	IAmb	10 32 27.2	
	comp=Z,7.2nm,0.9s						
G19K	**Purcell Mounta**	**84.06**	**21**	IAmb	IAmb	10 32 27.6	
	comp=Z,9.3nm,1.1s						
NRIK	**Noril'sk**	**84.65**	**343**	P	**P**	**10 32 28.6**	**-1.3**
NRIK	**Noril'sk**	**84.65**	**343**	P	P	10 32 28.1	-1.8
	comp=Z,6.2nm,0.8s,baz=122,slow=4.7,SNR=9.8						
	comp=Z,6.2nm,0.8s						
E19K	**Redstone River**	**84.68**	**19**	IAmb	IAmb	10 32 31.2	
	comp=Z,6.8nm,0.9s						
F20K	**Avaraart Lake**	**84.98**	**20**	IAmb	IAmb	10 32 32.5	
	comp=Z,6.5nm,1.0s						
MLY	**Manley**	**85.88**	**23**	P	**P**	**10 32 35.5**	**-0.8**
MLY				IAmb	IAmb	10 32 36.8	
	comp=Z,15nm,1.5s						
RND	**Reindeer**	**85.97**	**25**	P	P	10 32 35.0	-1.8
DHY	**Denali Highway**	**86.47**	**25**	P	P	10 32 38.0	-1.4
DHY				IAmb	IAmb	10 32 40.9	
	comp=Z,7.2nm,0.8s						
WRH	**Wood River Hil**	**86.69**	**24**	P	P	10 32 38.4	-1.9
G23K	**Bananza Creek**	**86.84**	**21**	P	**P**	**10 32 40.2**	**-0.8**
G23K				IAmb	IAmb	10 32 41.4	
	comp=Z,3.1nm,0.8s						
D22K	**Ayikyak River**	**86.86**	**19**	P	**P**	**10 32 40.9**	**-0.1**
D22K				IAmb	IAmb	10 32 51.7	
	comp=Z,4.1nm,0.9s						
CCB	**Clear Creek Bu**	**86.87**	**24**	P	P	10 32 39.1	-2.0
CCB				IAmb	IAmb	10 32 39.9	
	comp=Z,8.6nm,1.1s						
IL31		**87.29**	**24**	P	P	10 32 41.0	-2.1
IL31				IAmb	IAmb	10 32 41.7	
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**87.29**	**24**	P	P	10 32 40.9	-2.2
ILAR	**Eielson Array**	**87.29**	**24**	P	P	10 32 40.8	-2.3
	comp=Z,3.2nm,0.9s,baz=260,slow=4.9,SNR=22						
	comp=Z,3.2nm,0.9s						
F24K	**Squaw Lake**	**87.93**	**21**	IAmb	IAmb	10 32 47.2	
	comp=Z,5.6nm,0.8s						
J26L	**Joseph Creek**	**88.54**	**24**	IAmb	IAmb	10 32 49.4	
	comp=Z,3.0nm,0.8s						
L27K	**Beaver Creek,**	**88.85**	**26**	IAmb	IAmb	10

TOLI2				IAmb	IAmb	10 33 09.1	
	comp=Z,9.2nm,0.8s						
STKA	**Stephens Creek**	**25.44 184**	P	**P**		**10 33 23.3**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=346,slow=12,SNR=3.2						
	comp=Z,1.7nm,0.7s						
BBOO	**Buckleboo**	**27.19 194**	P	**P**		**10 33 41.2**	**+1.4**
BBOO				IAmb	IAmb	10 34 08.7	
	comp=Z,13nm,1.2s						
FORT	**Forrest**	**28.25 209**	P	**P**		**10 33 48.7**	**-0.5**
FORT				IAmb	IAmb	10 34 17.7	
	comp=Z,17nm,0.8s						
KSRS	**Korea Array**	**45.92 343**	P	**P**		**10 36 18.8**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=156,slow=10.0,SNR=6.4						
	comp=Z,2.2nm,0.9s						
JTM	**Tenmabayashi**	**46.96 358**	P	**P**		**10 36 25.9**	**-0.9**
ERM	**Erimo**	**48.14 360**	P	**P**		**10 36 35.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**50.31 300**	P	**P**		**10 36 54.1**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=102,slow=6.3,SNR=4.9						
	comp=Z,0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.37 349**	P	**P**		**10 37 01.0**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=176,slow=8.7,SNR=6.5						
	comp=Z,1.8nm,0.7s						
PETK	**Petropavlovsk-**	**60.47 10**	P	**P**		**10 38 05.3**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=163,slow=10,SNR=2.4						
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**63.04 333**	P	**P**		**10 38 23.8**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=151,slow=6.1,SNR=6.2						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**71.79 176**	P	**P**		**10 39 16.2**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=353,slow=8.1,SNR=1.2						
	comp=Z,0.8nm,0.7s						
MK31	**Makanchi Array**	**75.53 322**	P	**P**		**10 39 40.8**	**+0.5**
MK31				IAmb	IAmb	10 39 41.4	
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**75.53 322**	P	**P**		**10 39 40.7**	**+0.4**
MKAR	**Makanchi Array**	**75.53 322**	P	**P**		**10 39 41.0**	**+0.6**
	comp=Z,4.7nm,0.7s,baz=103,slow=7.4,SNR=45						
	comp=Z,4.7nm,0.7s						
MAKZ	**Makanchi**	**75.73 322**	P	**P**		**10 39 42.0**	**+0.5**
MAKZ				IAmb	IAmb	10 39 42.9	
	comp=Z,7.8nm,1.1s						
ZALV	**Zalesovo Beam**	**77.45 329**	P	**P**		**10 39 50.7**	**-0.2**
ZALV	**Zalesovo Beam**	**77.45 329**	P	**P**		**10 39 50.1**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=109,slow=6.0,SNR=8.4						
	comp=Z,1.8nm,0.6s						
BOOM	**Boomskoye usch**	**78.02 316**	P	**P**		**10 39 55.5**	**+0.8**
BOOM				IAmb	IAmb	10 39 56.3	
	comp=Z,4.8nm,0.7s						
L14K	**Kuka Creek**	**79.29 23**	P	**P**		**10 40 01.7**	**+0.8**
KURK	**Kurchatov**	**79.39 324**	P	**P**		**10 40 01.7**	**-0.1**
KURK				IAmb	IAmb	10 40 02.9	
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**79.41 324**	P	**P**		**10 40 02.0**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=115,slow=4.5,SNR=10.0						
	comp=Z,1.2nm,0.5s						
K15K	**Wolf Creek Mou**	**80.28 23**	P	**P**		**10 40 07.4**	**+1.1**
M16K	**Timber Creek**	**80.62 25**	P	**P**		**10 40 09.2**	**+1.0**
KK31	**Karatay Array**	**82.01 315**	P	**P**		**10 40 16.2**	**+0.2**
KK31				IAmb	IAmb	10 40 16.5	
	comp=Z,1.6nm,0.7s						
KKAR	**Karatay Array**	**82.01 315**	P	**P**		**10 40 16.3**	**+0.3**
QSPA	**South Pole Qui**	**83.61 180**	P	**P**		**10 40 24.6**	**+0.6**
QSPA				IAmb	IAmb	10 40 48.0	
	comp=Z,4.8nm,1.4s						
QSPA	**South Pole Qui**	**83.61 180**	P	**P**		**10 40 24.6**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=337,slow=0.4,SNR=12						
	comp=Z,1.8nm,0.7s						
NRIK	**Noril'sk**	**84.54 343**	P	**P**		**10 40 28.2**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=116,slow=4.6,SNR=9.5						
	comp=Z,4.1nm,0.7s						
CAST	**Castle Rocks**	**84.59 24**	P	**P**		**10 40 29.1**	**+0.2**
CAST				IAmb	IAmb	10 40 55.1	
	comp=Z,5.5nm,1.4s						
BVAR	**Borovoye Array**	**84.98 325**	P	**P**		**10 40 31.1**	**+0.1**
	comp=Z,4.7nm,0.7s,baz=103,slow=6.4,SNR=27						
	comp=Z,4.7nm,0.7s						
IMAR	**Indian Mountai**	**85.11 21**	P	**P**		**10 40 31.1**	**-0.2**
MLY	**Manley**	**85.81 23**	P	**P**		**10 40 34.7**	**-0.3**
RND	**Reindeer**	**85.91 25**	P	**P**		**10 40 35.3**	**-0.2**
RND				IAmb	IAmb	10 40 35.5	
	comp=Z,5.3nm,0.9s						
ILAR	**Eielson Array**	**87.23 24**	P	**P**		**10 40 41.1**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=255,slow=4.8,SNR=13						
	comp=Z,1.8nm,0.8s						
BARN	**Barnard Glacie**	**88.30 28**	P	**P**		**10 40 48.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**141.71 283**	PKhKP	PKPpre		10 47 23.7	
	comp=Z,0.5nm,0.8s,baz=49,slow=2.3,SNR=2.3						
DBIC	**Dimbokro**	**148.48 272**	PKPbc	**PKPbc**		**10 47 42.5**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=65,slow=2.2,SNR=5.5						

IDC 26 10:28:44.0±2.1, 6°12S×143°25E, h0km, mb3.9/3, mbtmp4.1/4, ML4.2/1, MS3.1/1, Error ellipse: s-maj=85.9km s-min=38.2km az=105.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.07**	**130**	LR	LR	10 32 42.4	
	comp=Z,204nm,19.0s,baz=254,slow=47						
ASAR	**Alice Springs**	**19.63**	**206**	P	P	10 33 14.2	-0.1
	0.6nm,0.3s,baz=33,slow=9.9,SNR=5.7						
	11nm,0.8s						
MKAR	**Makanchi Array**	**75.25**	**322**	P	P	10 40 30.2	+1.4
	0.5nm,0.8s,baz=119,slow=5.3,SNR=1.0						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**84.69**	**325**	P	P	10 41 18.9	-0.8
	2.5nm,0.8s,baz=109,slow=8.2,SNR=4.4						
	2.5nm,0.8s						
ILAR	**Eielson Array**	**87.07**	**24**	P	P	10 41 30.7	-0.6
	0.4nm,0.6s,baz=261,slow=4.7,SNR=2.1						
	0.4nm,0.6s						

*IDC **26** 10:36:03.7±0.6, 6°32S×143°49E, h0km, mb4.3/14, mbtmp4.4/16, ML2.2/1, MS4.0/2, Error ellipse: s-maj=29.9km s-min=14.7km az=76.0*
*NEIC **26** 10:36:06.6±2.3, 6°35S±0°07×143°28E±0°08, h10km±1km, mb4.7/38, Error ellipse: s-maj=13.6km s-min=11.7km az=99.0*
*DJA **26** 10:36:09.4±1.3, 7°S±3°×14°3E±°, h26km±11km, M4.8/19, mB5.1/7, mb4.8/19, MLv5.1/6, Mw(mB)4.4/7*
ISC 26 10:36:09.3±0.4, 6°48S±0°05×143°28E±0°06, h35km, n96, σ1°58/94, mb4.5/28, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.48**	**235**	P	**Pn**	**10 37 01.3**	**+0.3**
PMG	**Port Moresby**	**4.82**	**127**		**Pn**	**10 37 19.5**	**+0.1**
PMG	**Port Moresby**	**4.82**	**127**	P	**Pn**	**10 37 19.8**	**+0.4**
PMG	**Port Moresby**	**4.82**	**127**	Pn	**Pn**	**10 37 18.3**	**-1.1**
	7.6nm,0.3s,baz=23,slow=7.4,SNR=15						
PMG				Sn	**Sn**	**10 38 12.5**	**-1.6**
	11nm,0.3s,baz=312,slow=13,SNR=3.7						
	16nm,0.3s						
GENI	**Genyem**	**4.95**	**321**	P	**Pn**	**10 37 22.4**	**+1.1**
MANU	**Manus Island**	**6.00**	**43**		**Pn**	**10 37 35.8**	**+0.1**
SMPI	**Sarmi**	**6.38**	**314**	P	**Pn**	**10 37 43.0**	**+2.2**
	73nm,0.9s,34µm2.1nm						
COEN	**Coen**	**7.43**	**181**		**Pn**	**10 37 57.6**	**+2.3**
COEN	**Coen**	**7.43**	**181**	P	**Pn**	**10 37 58.0**	**+2.7**
FAKI	**Fak Fak**	**11.55**	**287**	Pn	**Pn**	**10 38 49.3**	**-2.5**
FAKI	**Fak Fak**	**11.55**	**287**	P	**Pn**	**10 38 50.7**	**-1.1**
SAUI	**Saumlaki**	**11.98**	**262**	Pn	**Pn**	**10 38 57.5**	**-0.2**
SAUI	**Saumlaki**	**11.98**	**262**	P	**Pn**	**10 38 57.5**	**-0.2**
	161nm,0.8s						
KDU	**Kakadu**	**12.31**	**239**	P	**Pn**	**10 39 01.3**	**-0.8**
MTN	**Manton Dam**	**13.54**	**241**	Pn	**Pn**	**10 39 17.7**	**-1.2**
MTN	**Manton Dam**	**13.54**	**241**	P	**Pn**	**10 39 17.8**	**-1.2**
DRS	**Darwin Rock St**	**13.56**	**243**	P	**Pn**	**10 39 18.5**	**-0.8**
CTA	**Charters Tower**	**13.83**	**168**	Lg	Lg	10 43 30.1	
	0.2nm,0.3s,baz=252,slow=15,SNR=3.8						
CTA				LR	LR	10 45 05.5	
	comp=Z,214nm,19.6s,baz=334,slow=39						
QIS	**Mount Isa**	**14.44**	**194**	P	**Pn**	**10 39 32.6**	**+1.3**
WB0	**Warramunga Arr**	**15.78**	**212**		**Pn**	**10 39 48.6**	**-0.4**
WRAB	**Tennant Creek**	**15.94**	**212**		**Pn**	**10 39 50.0**	**-1.0**
WRAB				IAmb	IAmb	10 39 52.5	
	comp=Z,18nm,0.7s						
WB2	**Warramunga Arr**	**15.95**	**212**		**Pn**	**10 39 50.2**	**-1.0**
WB2				IAmb	IAmb	10 40 01.5	
	comp=Z,30nm,0.8s						
WRA	**Warramunga Arr**	**15.95**	**212**	Pn	**Pn**	**10 39 50.4**	**-0.8**
WRA	**Warramunga Arr**	**15.95**	**212**	Pn	**Pn**	**10 39 49.5**	**-1.8**
	comp=Z,3.5nm,0.3s,baz=35,slow=14,SNR=42						
WRA				Sn	**Sn**	**10 42 40.2**	**-6.9**
	comp=Z,1.1nm,0.3s,baz=24,slow=22,SNR=3.4						
WRA				Lg	Lg	10 44 33.6	
	comp=Z,1.4nm,0.3s,baz=32,slow=31,SNR=5.4						
KNRA	**Kununurra**	**16.91**	**236**	Pn	**Pn**	**10 40 02.6**	**-0.8**
KNRA				IAmb	IAmb	10 40 03.0	
	comp=Z,81nm,0.7s						
KNRA	**Kununurra**	**16.91**	**236**	P	**Pn**	**10 40 02.3**	**-1.1**
SANI	**Sanana**	**17.79**	**284**	P	**P**	**10 40 15.2**	**+0.3**
	comp=Z,35nm,0.8s						
SOEI	**Soe**	**19.10**	**259**	P	**P**	**10 40 29.6**	**+0.2**
SOEI				IAmb	IAmb	10 40 36.6	
	comp=Z,71nm,0.8s						
SOEI	**Soe**	**19.10**	**259**	P	**Pn**	**10 40 31.0**	**+0.6**
	comp=Z,94nm,0.9s,comp=Z,1µm						
AS31	**Alice Springs**	**19.32**	**207**	P	**Pn**	**10 40 34.5**	**+1.7**
AS31				IAmb	IAmb	10 40 36.5	
	comp=Z,16nm,0.7s						
ASAR	**Alice Springs**	**19.32**	**207**	P	**Pn**	**10 40 33.2**	**+0.4**
ASAR	**Alice Springs**	**19.32**	**207**	P	**Pn**	**10 40 34.2**	**+1.4**
	comp=Z,56nm,0.7s,baz=33,slow=9.9,SNR=127						
ASAR				S	**S**	**10 44 02.0**	**-6.6**
	comp=Z,2.5nm,0.7s,baz=20,slow=27,SNR=3.9						
ASAR				Lg	Lg	10 46 19.3	
	comp=Z,0.4nm,0.3s,baz=18,slow=27,SNR=2.3						
PATS	**Pohnpei**	**20.00**	**49**	P	**P**	**10 40 37.9**	**-1.1**
EIDS	**Eidsvold**	**20.21**	**159**	P	Pn	10 40 44.0	+0.6
KMSI	**Cibinong**	**20.50**	**289**	P	**P**	**10 40 45.3**	**+0.8**
	comp=Z,152nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.72**	**235**	P	**P**	**10 40 48.2**	**+1.4**
EDFI	**Ende, Flores**	**21.52**	**263**	P	**P**	**10 40 55.8**	**+0.2**
	comp=Z,25nm,0.9s,comp=Z,433nm						
OOD	**Oodnadatta**	**22.39**	**198**	P	**P**	**10 41 07.0**	**+2.3**
WRKA	**Warakurna**	**23.37**	**216**	P	**P**	**10 41 15.9**	**+0.9**
KAPI	**Kappang**	**23.45**	**272**	P	**P**	**10 41 17.3**	**+1.5**
KAPI				IAmb	IAmb	10 41 18.6	
	comp=Z,33nm,0.9s						
TTSI	**Tana Toraja**	**23.62**	**277**	P	**P**	**10 41 19.2**	**+1.8**
	comp=Z,29nm,1.4s,comp=Z,1µm						
TOLI2	**Tolitoli**	**23.69**	**288**	P	**P**	**10 41 17.7**	**-0.3**
TOLI2				IAmb	IAmb	10 41 19.8	
	comp=Z,15nm,0.7s						
TOLI2	**Tolitoli**	**23.69**	**288**	P	**P**	**10 41 17.5**	**-0.6**
LCRK	**Leigh Creek**	**24.31**	**191**	P	**P**	**10 41 24.3**	**+0.6**
CMSA	**Cobar Meteorol**	**25.03**	**175**	P	**P**	**10 41 32.5**	**+2.3**
ARMA	**Armidale**	**25.07**	**163**	P	**P**	**10 41 32.3**	**+1.6**
ARMA				IAmb	IAmb	10 41 51.1	
	comp=Z,29nm,1.2s						
MULG	**Mulgathing**	**25.21**	**199**	P	**P**	**10 41 32.8**	**+0.9**
STKA	**Stephens Creek**	**25.32**	**183**	P	**P**	**10 41 33.4**	**+0.6**
STKA	**Stephens Creek**	**25.32**	**183**	P	**P**	**10 41 32.6**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=336,slow=10,SNR=6.1						
	comp=Z,3.5nm,0.8s						
PLAI	**Plampang**	**25.38**	**263**	P	**P**	**10 41 32.9**	**-0.7**
BBOO	**Buckleboo**	**27.05**	**193**	P	**P**	**10 41 51.4**	**+2.9**
BBOO				IAmb	IAmb	10 41 54.6	
	comp=Z,7.2nm,0.6s						
BBOO	**Buckleboo**	**27.05**	**193**	P	**P**	**10 41 51.3**	**+2.9**
HTT	**Hallett**	**27.12**	**188**	P	**P**	**10 41 50.0**	**+0.9**
PSA00	**Pilbara Seismi**	**27.17**	**234**	P	**P**	**10 41 52.0**	**+2.3**
PSA00				IAmb	IAmb	10 41 54.2	
	comp=Z,11nm,0.7s						
FORT	**Forrest**	**28.07**	**209**	P	**P**	**10 41 58.5**	**+0.8**
FORT	**Forrest**	**28.07**	**209**	P	**P**	**10 41 58.3**	**+0.6**
CAN	**Canberra**	**29.18**	**170**	P	**P**	**10 42 09.1**	**+1.5**
XMIS	**Christmas Isla**	**37.41**	**261**	P	**P**	**10 43 20.0**	**+0.6**
RTZ	**Ruatahuna**	**44.17**	**141**	P	**P**	**10 44 17.1**	**+2.2**
KSRS	**Korea Array**	**46.00**	**343**	P	**P**	**10 44 27.9**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=172,slow=9.3,SNR=4.8						
	comp=Z,0.9nm,0.6s						
JTM	**Tenmabayashi**	**47.08**	**358**	P	**P**	**10 44 36.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**50.26**	**300**	P	**P**	**10 45 03.1**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=127,slow=5.8,SNR=4.8						
	comp=Z,1.6nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.47**	**350**	P	**P**	**10 45 11.4**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=163,slow=6.9,SNR=3.9						
USRK				ScP	**ScP**	**10 50 21.4**	**+2.1**
	comp=Z,2.6nm,0.7s,baz=149,slow=4.4,SNR=6.5						
	comp=Z,1.9nm,0.8s						
PETK	**Petropavlovsk-**	**60.61**	**10**	P	**P**	**10 46 14.7**	**-1.7**
PETK	**Petropavlovsk-**	**60.61**	**10**	P	**P**	**10 46 14.9**	**-1.5**
	comp=Z,7.0nm,0.9s,baz=155,slow=7.8,SNR=9.8						
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**63.09**	**333**	P	**P**	**10 46 33.7**	**+0.4**
SONM	**Songino Array**	**63.09**	**333**	P	**P**	**10 46 33.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=155,slow=7.0,SNR=4.5						
	comp=Z,0.4nm,0.6s						
SHEM	**Shemya Is, Ala**	**64.53**	**20**	LR	LR	11 10 05.3	
	comp=Z,395nm,20.8s,baz=78,slow=32						
VNDA	**Vanda**	**71.68**	**176**	P	**P**	**10 47 28.5**	**+1.4**
VNDA				IAmb	IAmb	10 47 51.7	
	comp=Z,11nm,1.4s						
VNDA	**Vanda**	**71.68**	**176**	P	**P**	**10 47 28.5**	**+1.4**
	comp=Z,2.5nm,0.9s,baz=313,slow=9.9,SNR=1.9						
	comp=Z,2.5nm,0.9s						
MK31	**Makanchi Array**	**75.54**	**322**	P	**P**	**10 47 50.4**	**0.0**
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	**10 47 50.8**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=108,slow=7.0,SNR=27						
	comp=Z,2.3nm,0.6s						
MAKZ	**Makanchi**	**75.74**	**322**	P	**P**	**10 47 51.6**	**+0.1**
MAKZ				IAmb	IAmb	10 47 58.5	
	comp=Z,4.6nm,0.9s						
ZALV	**Zalesovo Beam**	**77.48**	**329**	P	**P**	**10 48 00.5**	**-0.5**
ZALV	**Zalesovo Beam**	**77.48**	**329**	P	**P**	**10 47 59.6**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=115,slow=5.2,SNR=4.9						
	comp=Z,0.9nm,0.5s						
BOOM	**Boomskoye usch**	**78.01**	**316**	P	**P**	**10 48 05.3**	**+0.8**
BOOM				IAmb	IAmb	10 48 06.0	
	comp=Z,3.2nm,0.7s						
KURK	**Kurchatov**	**79.41**	**324**	P	**P**	**10 48 11.9**	**+0.1**
KURBB	**Kurchatov Arra**	**79.42**	**324**	P	**P**	**10 48 11.7**	**-0.2**
	comp=Z,0.9nm,0.2s,baz=117,slow=4.5,SNR=6.3						
	comp=Z,0.9nm,0.2s						
L14K	**Kuka Creek**	**79.45**	**23**	P	**P**	**10 48 11.7**	**-0.1**
KKAR	**Karatay Array**	**81.99**	**315**	P	**P**	**10 48 26.2**	**+0.3**
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**10 48 34.1**	**+0.7**
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**10 48 33.9**	**+0.5**
	comp=Z,6.5nm,0.6s,baz=258,slow=0.4,SNR=78						
	comp=Z,6.5nm,0.6s						
NRIK	**Noril'sk**	**84.62**	**343**	IAmb	IAmb	10 48 53.2	
	comp=Z,3.5nm,0.8s						
NRIK	**Noril'sk**	**84.62**	**343**	P	**P**	**10 48 38.0**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=111,slow=4.6,SNR=5.3						
	comp=Z,2.0nm,0.5s						
E19K	**Redstone River**	**84.78**	**19**	IAmb	IAmb	10 48 48.6	
	comp=Z,4.6nm,0.9s						
C19K	**Lookout Ridge**	**84.91**	**18**	P	**P**	**10 48 39.8**	**-0.6**
C19K				IAmb	IAmb	10 48 55.5	
	comp=Z,3.0nm,0.9s						
BVAR	**Borovoye Array**	**85.00**	**325**	P	**P**	**10 48 40.1**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=101,slow=7.7,SNR=15						
	comp=Z,3.1nm,0.7s						
BRVK	**Borovoye**	**85.07**	**325**	P	**P**	**10 48 40.8**	**-0.6**
BRVK				IAmb	IAmb	10 48 52.1	
	comp=Z,3.1nm,0.8s						
DHY	**Denali Highway**	**86.58**	**25**	P	**P**	**10 48 48.5**	**-0.3**
DHY				IAmb	IAmb	10 48 58.7	
	comp=Z,5.1nm,0.8s						
CCB	**Clear Creek Bu**	**86.98**	**24**	P	**P**	**10 48 49.2**	**-1.4**
CCB				IAmb	IAmb	10 49 13.7	
	comp=Z,4.8nm,1.1s						
ILAR	**Eielson Array**	**87.39**	**24**	P	**P**	**10 48 51.0**	**-1.6**
	comp=Z,2.0nm,0.9s,baz=261,slow=4.8,SNR=9.5						
	comp=Z,2.0nm,0.9s						
BARN	**Barnard Glacie**	**88.47**	**28**	P	**P**	**10 48 58.1**	**0.0**
ABKAR	**Akbulak array**	**90.52**	**319**	P	**P**	**10 49 06.7**	**-1.0**
PLCA	**Paso Flores**	**123.67**	**149**	PKP	**PKPdf**	**10 55 03.8**	**0.0**
	comp=Z,1.6nm,1.0s,baz=260,slow=2.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**141.61**	**283**	PKhKP	PKPpre	10 55 33.4	
	comp=Z,0.4nm,0.5s,baz=83,slow=4.5,SNR=2.8						
DBIC	**Dimbokro**	**148.35**	**272**	PKPbc	**PKPbc**	**10 55 54.0**	**+0.9**
	comp=Z,9.1nm,0.8s,baz=106,slow=1.9,SNR=7.9						

IDC 26 10:40:18.6±1.4, 6°20S×143°24E, h0km, mb4.0/4, mbtmp4.0/5, ML4.4/1, Error ellipse: s-maj=69.5km s-min=32.0km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**19.55**	**206**	P	P	10 44 47.7	-0.3
	1.0nm,0.3s,baz=23,slow=10,SNR=4.8						
	6.3nm,0.7s						
MKAR	**Makanchi Array**	**75.30**	**322**	P	P	10 52 03.5	-0.2
	0.6nm,0.7s,baz=103,slow=6.8,SNR=3.7						
	0.6nm,0.7s						
QSPA	**South Pole Qui**	**83.77**	**180**	P	P	10 52 49.8	+0.2
	0.8nm,0.8s,baz=211,slow=3.0,SNR=1.6						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**84.75**	**325**	P	P	10 52 55.0	+0.4
	2.3nm,0.6s,baz=103,slow=6.5,SNR=8.2						
	2.3nm,0.6s						
ILAR	**Eielson Array**	**87.16**	**24**	P	P	10 53 06.0	-0.2
	0.4nm,0.7s,baz=257,slow=5.0,SNR=5.8						
	0.4nm,0.7s						

IDC 26 10:41:21.0±1.9, 5°64S×142°80E, h0km, mb4.1/4, mbtmp4.2/5, ML4.5/1, Error ellipse: s-maj=71.8km s-min=33.4km az=101.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**19.86**	**205**	P	P	10 45 53.9	0.0
	1.2nm,0.3s,baz=34,slow=10,SNR=6.8						
	13nm,0.8s						
KSRS	**Korea Array**	**45.07**	**343**	P	P	10 49 38.6	-0.1
	0.5nm,0.3s,baz=150,slow=11,SNR=5.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**74.60**	**322**	P	P	10 53 02.0	0.0
	1.0nm,0.6s,baz=103,slow=7.3,SNR=7.4						
	1.0nm,0.6s						
BVAR	**Borovoye Array**	**84.04**	**325**	P	P	10 53 53.5	0.0
	2.5nm,0.8s,baz=115,slow=6.7,SNR=7.0						
	2.5nm,0.8s						
ILAR	**Eielson Array**	**86.82**	**24**	P	P	10 54 07.0	0.0
	1.4nm,0.8s,baz=253,slow=4.7,SNR=9.0						
	1.4nm,0.8s						

*IDC **26** 10:45:47.9±1.0, 6°34S×143°44E, h0km, mb3.9/5, mbtmp3.9/7, ML1.8/1, Error ellipse: s-maj=42.1km s-min=22.4km az=64.0*
ISC 26 10:45:53.3±0.8, 6°4S±0°2×143°4E±0°2, h35km, n7, σ0°40/8, mb4.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.78**	**130**	Pn	**Pn**	**10 47 03.0**	**+0.1**
	2.6nm,0.3s,baz=352,slow=5.2,SNR=5.1						
PMG				Sn	**Sn**	**10 47 57.3**	**+0.2**
	0.9nm,0.3s,baz=15,slow=20,SNR=1.4						
	10.0nm,0.4s						
ASAR	**Alice Springs**	**19.50**	**207**	P	**P**	**10 50 17.8**	**+0.1**
	1.8nm,0.6s,baz=34,slow=12,SNR=4.7						
SONM	**Songino Array**	**63.04**	**333**	P	**P**	**10 56 17.0**	**-0.1**
	0.3nm,0.7s,baz=155,slow=7.9,SNR=2.0						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	**10 57 34.6**	**+0.3**
	1.4nm,0.7s,baz=105,slow=6.7,SNR=14						
	1.4nm,0.7s						
QSPA	**South Pole Qui**	**83.62**	**180**	P	**P**	**10 58 17.5**	**-0.5**
	1.3nm,0.8s,baz=139,slow=0.9,SNR=7.7						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**84.98**	**325**	P	**P**	**10 58 25.4**	**+0.4**
	1.9nm,0.7s,baz=110,slow=8.2,SNR=8.6						
	1.9nm,0.7s						
ILAR	**Eielson Array**	**87.21**	**24**	P	**P**	**10 58 35.3**	**-0.4**
	0.4nm,0.7s,baz=258,slow=4.5,SNR=3.3						
	0.4nm,0.7s						

*IDC **26** 10:57:58.0±2.3, 1°19N×126°55E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=195.2km s-min=29.1km az=65.0*
*DJA **26** 10:58:02.3±0.8, 1°N±8°×12°5E±°, h10km, M2.9/5, MLv2.9/5*
ISC 26 10:58:01.1±1.6, 0°5N±0°2×124°80E±0°10, h10km, n6, σ2°39/7, mb3.4/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.81**	**273**	P	**Pg**	**10 58 15.8**	**-1.1**
GTOI	**Gorontalo**	**1.79**	**273**	P	**Pb**	**10 58 32.7**	**-1.3**
GTOI				S	**Sg**	**10 58 58.7**	**0.0**
LUWI	**Luwuk**	**2.56**	**232**	P	**Pn**	**10 58 45.3**	**+2.6**
WRA	**Warramunga Arr**	**22.40**	**156**	P	**P**	**11 02 56.6**	**-3.4**
	0.9nm,0.6s,baz=339,slow=11,SNR=6.0						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**25.63**	**160**	P	**P

SOEI	**Soe**	**19.08 259**			**P**	**11 04 36.4**	**-0.2**
SOEI			IAmb	IAmb		11 04 41.0	
	comp=Z,49nm,1.0s						
SOEI	**Soe**	**19.08 259**	P		**Pn**	**11 04 38.1**	**+0.5**
	comp=Z,96nm,0.9s						
AS01	**Alice Springs**	**19.26 207**	P		**Pn**	**11 04 41.6**	**+2.0**
AS31	**Alice Springs**	**19.28 207**			**P**	**11 04 40.1**	**+1.5**
ASAR	**Alice Springs**	**19.29 207**			**Pn**	**11 04 40.9**	**+1.0**
ASAR	**Alice Springs**	**19.29 207**	P		**Pn**	**11 04 41.1**	**+1.2**
	comp=Z,18nm,0.7s,baz=38,slow=9.2,SNR=42						
ASAR			Lg	Lg		11 10 26.8	
	baz=25,slow=28						
FITZ	**Fitzroy Crossi**	**20.69 235**			**P**	**11 04 54.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**20.69 235**	P		**P**	**11 04 52.8**	**-1.2**
EDFI	**Ende, Flores**	**21.50 263**	P		**P**	**11 05 05.3**	**+2.4**
	comp=Z,18nm,0.7s						
OOD	**Oodnadatta**	**22.36 198**	P		**P**	**11 05 14.7**	**+2.9**
WRKA	**Warakurna**	**23.34 216**	P		**P**	**11 05 23.0**	**+0.9**
KAPI	**Kappang**	**23.44 272**	P		**P**	**11 05 23.3**	**+0.2**
KAPI			IAmb	IAmb		11 05 26.8	
	comp=Z,82nm,1.4s						
TTSI	**Tana Toraja**	**23.62 277**	P		**P**	**11 05 25.4**	**+0.6**
	comp=Z,20nm,1.2s,comp=Z,1µm						
TOLI2	**Tolitoli**	**23.69 288**	P		**P**	**11 05 24.6**	**-0.9**
TOLI2			IAmb	IAmb		11 05 26.8	
	comp=Z,31nm,0.8s						
LCRK	**Leigh Creek**	**24.28 191**	P		**P**	**11 05 32.1**	**+1.3**
KOUNC	**Koumac, New Ca**	**24.70 126**	P		**P**	**11 05 36.1**	**+1.4**
KOUNC			IAmb	IAmb		11 05 38.5	
	comp=Z,55nm,2.0s						
ARMA	**Armidale**	**25.05 163**	P		**P**	**11 05 37.3**	**-0.6**
ARMA			IAmb	IAmb		11 05 39.6	
	comp=Z,84nm,1.9s						
MULG	**Mulgathing**	**25.18 199**	P		**P**	**11 05 41.5**	**+2.5**
STKA	**Stephens Creek**	**25.28 183**	P		**P**	**11 05 41.2**	**+1.3**
STKA	**Stephens Creek**	**25.28 183**	P		**P**	**11 05 41.4**	**+1.5**
	comp=Z,2.7nm,0.5s,baz=341,slow=8.4,SNR=8.7						
	comp=Z,2.7nm,0.5s						
BBOO	**Buckleboo**	**27.01 193**	P		**P**	**11 05 58.9**	**+3.4**
BBOO	**Buckleboo**	**27.01 193**	P		**P**	**11 05 58.4**	**+2.9**
LIFNC	**LIFOU**	**27.21 124**	P		**P**	**11 05 54.7**	**-2.7**
FORT	**Forrest**	**28.04 209**	P		**P**	**11 06 07.0**	**+2.2**
FORT			IAmb	IAmb		11 06 07.3	
	comp=Z,21nm,1.0s						
NJ2	**Nanjing**	**44.86 330**	*eP*		**P**	**11 08 29.8**	**+2.0**
NJ2			pmax	pmax			
	comp=Z,6.0nm,0.5s						
RPSI	**Rantau Prapat**	**45.21 280**	P		**P**	**11 08 30.5**	**-0.4**
KSAR	**Wonju Array Be**	**46.03 343**	P		**P**	**11 08 36.4**	**-0.5**
KSRS	**Korea Array**	**46.03 343**	P		**P**	**11 08 35.6**	**-1.2**
	comp=Z,3.0nm,0.8s,baz=165,slow=9.9,SNR=12						
	comp=Z,3.0nm,0.8s						
WHN	**Wuhan**	**46.10 325**	P		**P**	**11 08 38.0**	**+0.4**
PHRA	**Phrae**	**49.18 301**	P		**P**	**11 09 00.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**50.26 300**	P		**P**	**11 09 10.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**50.26 300**	P		**P**	**11 09 09.8**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=122,slow=6.0,SNR=12						
	comp=Z,1.8nm,0.6s						
HNS	**HongShan**	**51.18 331**	⇑P		**P**	**11 09 17.0**	**+0.5**
HNS			pmax	pmax			
	comp=Z,8.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**51.49 350**	P		**P**	**11 09 17.4**	**-1.4**
USRK	**Ussuriysk Ar.**	**51.49 350**	P		**P**	**11 09 17.5**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=202,slow=11,SNR=6.7						
	comp=Z,3.2nm,0.8s						
XAN	**Xi'an**	**51.80 323**	P		**P**	**11 09 20.8**	**-0.5**
XAN			pmax	pmax			
	comp=Z,11nm,1.0s						
PZH	**PanZhiHua**	**51.93 311**	P		**P**	**11 09 23.8**	**+1.2**
PZH			pmax	pmax			
	comp=Z,10.0nm,0.5s						
PZH			pmax	pmax			
	comp=Z,80nm,3.9s						
MDJ	**Mudanjiang**	**52.37 348**	P		**P**	**11 09 26.3**	**+1.0**
MDJ			pmax	pmax			
	comp=Z,11nm,1.9s						
MDJ			pmax	pmax			
	comp=Z,160nm,4.0s						
CD2	**Chengdu**	**53.04 317**	P		**P**	**11 09 31.0**	**+0.4**
TNCH	**TengChong**	**53.65 308**	*eP*		**P**	**11 09 37.0**	**+1.7**
TNCH			pmax	pmax			
	comp=Z,21nm,0.8s						
HHC	**Hu-ho-hao-te**	**55.40 331**	*eP*		**P**	**11 09 50.5**	**+2.8**
HHC			pmax	pmax			
	comp=Z,10.0nm,0.8s						
HHC			pmax	pmax			
	comp=Z,140nm,6.3s						
LZH	**Lanzhou**	**56.25 322**	*eP*		**P**	**11 09 54.8**	**+0.9**
LZH			pP	sP		11 10 07.3	-1.8
LZH			pmax	pmax			
	comp=Z,14nm,1.2s						
SHL	**Shillong**	**59.22 305**	P		**P**	**11 10 15.2**	**+0.2**
SHL			IAmb	IAmb		11 10 17.1	
	comp=Z,13nm,1.2s						
PETK	**Petropavlovsk-**	**60.64 10**	P		**P**	**11 10 22.7**	**-1.4**
	comp=Z,5.6nm,0.8s,baz=196,slow=9.0,SNR=4.7						
	comp=Z,5.6nm,0.8s						
GTA	**Gaotai**	**60.82 322**	P		**P**	**11 10 26.0**	**+0.3**
GTA			pP	pP		11 10 34.0	-2.7
GTA			pmax	pmax			
	comp=Z,5.0nm,1.6s						
SONM	**Songino Array**	**63.11 333**	P		**P**	**11 10 40.4**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=161,slow=6.8,SNR=10						
	comp=Z,1.2nm,0.6s						
MA2	**Magadan**	**66.15 4**	P		**P**	**11 10 59.4**	**-0.9**
MA2			IAmb	IAmb		11 11 00.7	
	comp=Z,11nm,0.9s						
WMQ	**Urumqi**	**70.80 321**	*eP*		**P**	**11 11 30.5**	**+0.6**
WMQ			PcP		**PcP**	**11 11 51.8**	**+1.4**
WMQ			pmax	pmax			
	comp=Z,15nm,1.1s						
VNDA	**Vanda**	**71.65 176**	P		**P**	**11 11 35.8**	**+1.5**
VNDA			IAmb	IAmb		11 11 46.7	
	comp=Z,43nm,1.9s						
MK31	**Makanchi Array**	**75.56 322**	P		**P**	**11 11 58.0**	**+0.1**
MK31			IAmb	IAmb		11 11 60.0	
	comp=Z,7.3nm,0.9s						
MKAR	**Makanchi Array**	**75.56 322**	P		**P**	**11 11 57.7**	**-0.2**
MKAR	**Makanchi Array**	**75.56 322**	P		**P**	**11 11 58.2**	**+0.3**
	comp=Z,7.1nm,0.7s,baz=112,slow=6.5,SNR=65						
	comp=Z,7.1nm,0.7s						
MAKZ	**Makanchi**	**75.76 322**	P		**P**	**11 11 58.3**	**-0.7**
MAKZ			IAmb	IAmb		11 12 01.0	
	comp=Z,11nm,0.8s						
KSH	**Kashi**	**76.98 313**	P		**P**	**11 12 08.0**	**+1.8**
KSH			pmax	pmax			
	comp=Z,7.0nm,0.8s						
NIL	**Nilore**	**77.23 307**	P		**P**	**11 12 07.0**	**-0.6**
NIL			IAmb	IAmb		11 12 09.9	
	comp=Z,13nm,0.8s						
ZAA0	**Zalesovo Array**	**77.50 329**	P		**P**	**11 12 07.8**	**-0.8**
ZALV	**Zalesovo Beam**	**77.50 329**	P		**P**	**11 12 07.6**	**-1.0**
ZALV	**Zalesovo Beam**	**77.50 329**	P		**P**	**11 12 07.9**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=106,slow=4.9,SNR=9.6						
	comp=Z,2.1nm,0.6s						
BOOM	**Boomskoye usch**	**78.03 316**	P		**P**	**11 12 11.5**	**-0.5**
BOOM			IAmb	IAmb		11 12 14.4	
	comp=Z,5.3nm,0.8s						
TIXI	**Tiksi**	**78.58 355**	P		**P**	**11 12 13.8**	**-0.4**
TIXI			IAmb	IAmb		11 12 16.3	
	comp=Z,20nm,2.0s						
AAK	**Ala-Archa**	**79.08 316**	P		**P**	**11 12 18.5**	**+0.6**
KURK	**Kurchatov**	**79.43 324**	P		**P**	**11 12 19.1**	**-0.2**
KURK			IAmb	IAmb		11 12 21.7	
	comp=Z,20nm,1.4s						
KURBB	**Kurchatov Arra**	**79.44 324**	P		**P**	**11 12 19.2**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=120,slow=4.4,SNR=18						
	comp=Z,2.0nm,0.7s						
ARSB	**Arslanbob**	**79.73 314**	P		**P**	**11 12 21.3**	**-0.1**
SIMJ	**Simiganj**	**81.90 310**	P		**P**	**11 12 32.7**	**-0.3**
SIMJ			IAmb	IAmb		11 12 35.5	
	comp=Z,10nm,1.1s						
KK31	**Karatay Array**	**82.01 315**	P		**P**	**11 12 32.4**	**-1.0**
KK31			IAmb	IAmb		11 12 35.2	
	comp=Z,10nm,1.3s						
KKAR	**Karatay Array**	**82.01 315**	P		**P**	**11 12 32.9**	**-0.5**
KKAR	**Karatay Array**	**82.01 315**	P		**P**	**11 12 33.3**	**-0.1**
KKAR			IAmb	IAmb		11 12 35.2	
	comp=Z,10nm,1.3s						
H17K	**Granite Mounta**	**82.55 21**	P		**P**	**11 12 35.6**	**-0.1**
QSPA	**South Pole Qui**	**83.46 180**	P		**P**	**11 12 41.6**	**+1.0**
QSPA			IAmb	IAmb		11 12 43.4	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**83.46 180**	P		**P**	**11 12 41.5**	**+1.0**
	comp=Z,7.2nm,1.0s,baz=351,slow=2.4,SNR=11						
	comp=Z,7.2nm,1.0s						

K20K	**Telida**	**83.96 24**			**P**	**P**	**11 12 42.0**	**-1.0**
G19K	**Purcell Mounta**	**84.19 21**			**P**	**P**	**11 12 44.3**	**+0.2**
G19K				IAmb	IAmb		11 12 45.5	
	comp=Z,14nm,1.6s							
J20K	**Nowinta River**	**84.31 23**			P	**P**	**11 12 44.4**	**-0.4**
NRIK	**Noril'sk**	**84.65 343**			P	**P**	**11 12 45.6**	**-0.8**
NRIK				IAmb	IAmb		11 12 48.4	
	comp=Z,19nm,1.2s							
NRIK	**Noril'sk**	**84.65 343**		P		**P**	**11 12 45.8**	**-0.6**
	comp=Z,7.3nm,0.7s,baz=111,slow=5.3,SNR=18							
	comp=Z,7.3nm,0.7s							
E19K	**Redstone River**	**84.81 19**			P	**P**	**11 12 47.6**	**+0.4**
E19K				IAmb	IAmb		11 12 50.3	
	comp=Z,21nm,1.8s							
C19K	**Lookout Ridge**	**84.94 18**			P	**P**	**11 12 48.3**	**+0.4**
C19K				IAmb	IAmb		11 13 19.8	
	comp=Z,28nm,1.8s							
BVAR	**Borovoye Array**	**85.02 325**			P	**P**	**11 12 49.0**	**+0.5**
	comp=Z,14nm,0.8s,baz=104,slow=6.3,SNR=36							
	comp=Z,14nm,0.8s							
BRVK	**Borovoye**	**85.09 325**			P	**P**	**11 12 49.3**	**+0.4**
DHY	**Denali Highway**	**86.61 25**			P	**P**	**11 12 55.8**	**-0.7**
DHY				IAmb	IAmb		11 12 59.4	
	comp=Z,7.5nm,0.8s							
CCB	**Clear Creek Bu**	**87.01 24**			P	**P**	**11 12 56.9**	**-1.2**
IL31		**87.42 24**			P	**P**	**11 12 58.8**	**-1.3**
ILAR	**Eielson Array**	**87.42 24**			P	**P**	**11 12 58.2**	**-1.9**
ILAR	**Eielson Array**	**87.42 24**			P	**P**	**11 12 58.8**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=259,slow=5.2,SNR=14							
	comp=Z,1.9nm,0.8s							
F24K	**Squaw Lake**	**88.06 21**			P	**P**	**11 13 04.2**	**+1.0**
D24K	**Happy Valley**	**88.36 19**			P	**P**	**11 13 04.6**	**+0.1**
D24K				IAmb	IAmb		11 13 10.3	
	comp=Z,10nm,0.9s							
CTGM	**Chitina Glacie**	**88.63 28**			P	**P**	**11 13 05.4**	**-0.8**
J26L	**Joseph Creek**	**88.68 24**			P	**P**	**11 13 07.0**	**+0.7**
M27K	**Edge Creek, AK**	**88.77 27**			P	**P**	**11 13 06.9**	**+0.1**
BMAR	**Burnt Mountain**	**89.22 22**			P	**P**	**11 13 09.7**	**+1.1**
ABKAR	**Akbulak array**	**90.54 319**			P	**P**	**11 13 12.7**	**-2.5**
L29M	**L29M**	**90.64 26**			P	**P**	**11 13 15.3**	**0.0**
TORD	**Torodi Ar. Bea**	**141.60 283**			PKhKP	PKPpre	11 19 40.6	
	comp=Z,0.9nm,0.8s,baz=116,slow=3.4,SNR=3.1							
KIC	**Kosan Boka**	**148.21 272**	⇓*eP*			**PKPbc**	**11 20 00.6**	**+0.4**
	comp=Z,28nm,0.9s							
DBIC	**Dimbokro**	**148.34 272**		PKPbc		**PKiKP**	**11 20 02.0**	**-0.1**
	comp=Z,18nm,0.8s,baz=72,slow=3.1,SNR=16							
LIC	**Lamto**	**148.49 271**	⇓*eP*			**PKiKP**	**11 20 02.0**	**-0.5**
	comp=Z,69nm,0.8s							
TIC	**Toumodi**	**148.50 272**	⇑*eP*			**PKPbc**	**11 20 01.2**	**+0.3**
	comp=Z,27nm,0.8s							

*SOME **26** 11:03:08.2,38°.82N×75°.17E,h10km*
*NNC **26** 11:03:13.6±1.7,39°.05N×75°.10E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=12.3km s-min=8.1km az=162.0
ISC 26 11:03:14.6±2.3,39°.1N±0°.1×75°.13E±0°.05,h10km,n27,
σ2s31/39,4C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**3.87**	**5**	⇑Pn		**Pn**	**11 04 15.9**	**+1.6**
	9.4nm,0.3s							
TKM2				⇑Lg		Lg	11 05 17.9	
	12nm,0.5s							
MRKS	**Merke**	**3.95**	**339**	Pg		**Pb**	**11 04 24.6**	**+0.3**
	5.0nm,0.3s							
MRKS				Lg		Lg	11 05 16.6	
	254nm,0.6s							
MRKS	**Merke**	**3.95**	**339**	*eP*		**Pb**	**11 04 25.4**	**+1.1**
	5.1nm,0.2s							
MRKS				*eS*		**Sg**	**11 05 21.1**	**-0.1**
	5.1nm,0.3s							
KST	**Kastek**	**4.02**	**9**	Pg		**Pb**	**11 04 28.1**	**+2.5**
KST				Lg		Lg	11 05 22.9	
KST	**Kastek**	**4.02**	**9**	*eP*		**Pb**	**11 04 26.7**	**+1.1**
	3.7nm,0.5s							
KST				*eS*		**Sg**	**11 05 23.4**	**-0.3**
	14nm,0.5s							
MTBS	**Maitube**	**4.18**	**13**	Pg		**Pb**	**11 04 30.6**	**+2.4**
	4.6nm,0.4s							
MTBS				Lg		Lg	11 05 27.2	
	10nm,0.3s							
MTBS	**Maitube**	**4.18**	**13**	*eP*		**Pb**	**11 04 29.9**	**+1.7**
	4.6nm,0.3s							
MTBS				*eS*		**Sg**	**11 05 28.3**	**-0.4**
	10nm,0.2s							
TNSS	**Tian-Shan**	**4.20**	**19**	Pg		**Pg**	**11 04 31.9**	**-3.1**
	4.1nm,0.3s							
TNSS				Lg		Lg	11 05 29.6	
	8.1nm,0.6s							
TNSS	**Tian-Shan**	**4.20**	**19**	*eP*		**Pg**	**11 04 31.4**	**-3.6**
	4.1nm,0.3s							
TNSS				*eS*		**Sg**	**11 05 31.6**	**+2.2**
	8.1nm,0.4s							
DGS	**Degeres**	**4.20**	**6**	Pg		**Pg**	**11 04 32.7**	**-2.3**
	9.3nm,0.8s							
DGS				Lg		Lg	11 05 30.5	
	16nm,0.6s							
DGS	**Degeres**	**4.20**	**6**	*eP*		**Pb**	**11 04 30.5**	**+1.9**
	9.2nm,0.3s							
DGS				*eS*		**Sg**	**11 05 29.8**	**+0.4**
	16nm,0.4s							
MDOK	**Medeo**	**4.34**	**19**	⇓Pg		**Pg**	**11 04 34.1**	**-3.7**
	5.1nm,0.7s							
MDOK				Lg		Lg	11 05 33.0	
	15nm,0.8s							
KOTS	**Kotyrbulak**	**4.42**	**19**	Pg		**Pb**	**11 04 35.1**	**+2.6**
	6.2nm,0.7s							
KOTS				Lg		Lg	11 05 35.1	
	37nm,0.7s							
KOTS	**Kotyrbulak**	**4.42**	**19**	*eP*		**Pb**	**11 04 34.1**	**+1.7**
	4.8nm,0.3s							
KOTS				*eS*		**Sg**	**11 05 35.6**	**-1.0**
	37nm,0.4s							
KRBS	**Karabastau**	**4.64**	**5**	Pg		**Pb**	**11 04 37.9**	**+1.8**
	4.4nm,0.5s							
KRBS				Lg		Lg	11 05 39.5	
	5.3nm,0.6s							
KRBS	**Karabastau**	**4.64**	**5**	*eP*		**Pb**	**11 04 38.2**	**+2.0**
	4.4nm,0.4s							
KRBS				*eS*		**Sg**	**11 05 43.1**	**-0.5**
	5.3nm,0.3s							
SATY	**Saty**	**4.70**	**31**	Pg		**Pb**	**11 04 38.1**	**+1.0**
	5.3nm,0.6s							
SATY				Lg		Lg	11 05 40.4	
	10nm,1.2s							
SATY	**Saty**	**4.70**	**31**	*eP*		**Pb**	**11 04 40.0**	**+2.9**
	5.3nm,0.6s							
SATY				*eS*		**Sg**	**11 05 46.1**	**+0.8**
	10nm,1.2s							
KTBS	**Karatobe**	**4.79**	**14**	Pg		**Pb**	**11 04 40.7**	**+2.2**
	6.1nm,0.8s							
KTBS				Lg		Lg	11 05 44.6	
	8.2nm,0.6s							
KTBS	**Karatobe**	**4.79**	**14**	*eP*		**Pb**	**11 04 40.5**	**+2.0**
	2.7nm,0.5s							
KTBS				*eS*		**Sg**	**11 05 47.2**	**-1.0**
	8.1nm,0.3s							
KUU	**Kurty**	**4.91**	**10**	Pg		**Pb**	**11 04 42.9**	**+2.3**
	5.1nm,0.5s							
KUU				Lg		Lg	11 05 48.8	
	20nm,0.7s							
KUU	**Kurty**	**4.91**	**10**	*eP*		**Pb**	**11 04 42.9**	**+2.3**
	3.6nm,0.2s							
KUU				*eS*		**Sg**	**11 05 50.9**	**-1.2**
	20nm,0.5s							
IUG	**Iuzhnay**	**4.95**	**310**	*eP*		**Pg**	**11 04 45.8**	**-3.6**
	9.8nm,0.2s							
IUG				*eS*		**Sg**	**11 05 56.0**	**+2.5**
	16nm,0.4s							
KK31	**Karatay Array**	**5.33**	**321**	Pn		**Pn**	**11 04 33.0**	**-1.2**
	0.4nm,0.3s,baz=132,slow=16,SNR=14							
KK31				⇑Sn		**Sn**	**11 05 38.8**	**+3.1**
	0.8nm,0.4s,baz=140,slow=25							
KK31				⇑Lg		Lg	11 06 04.8	
	2.0nm,0.6s							
PDGK	**Podgornoye**	**5.38**	**36**	Pg		**Pb**	**11 04 50.6**	**+1.9**
	0.9nm,0.5s							
PDGK				Lg		Lg	11 06 01.4	
	3.4nm,0.6s							
PDGK	**Podgornoye**	**5.38**	**36**	⇓Pg		**Pg**	**11 04 53.0**	**-4.6**
	4.0nm,0.8s							
PDGK				⇓Lg		Lg	11 06 04.0	
	15nm,0.8s							
DJR	**Jarkent**	**6.31**	**32**	Pg		**Pb**	**11 05 08.7**	**+4.1**
	1.3nm,0.6s							
DJR				Lg		Lg	11 06 32.7	

	2.9nm,0.4s						

*IDC **26** 11:04:08.6±0.8,6°.13S×143°.11E,h0km,mb4.6/13,*
mbtmp4.6/16,ML1.6/1,MS3.9/6,Error ellipse:
s-maj=28.1km s-min=15.4km az=87.0
*NEIC **26** 11:04:10.4±1.9,6°.2S±0°.1×143°.04E±0°.10,h10km±1km,*
mb4.7/35,Error ellipse: s-maj=19.1km s-min=14.2km
az=37.0
*DJA **26** 11:04:14.5±1.1,6°.S±5°.×14°.3E±1°.1,h10km,M4.8/7,*
mB5.3/5,mb4.9/7,Mw(mB)4.8/5
ISC 26 11:04:10.3±0.5,6°.15S±0°.06×143°.15E±0°.08,h10km,n86,
σ1s50/72,mb4.7/40,MS3.9/4,2D,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.58**	**230**		S	**Sb**	**11 06 01.0**	**+3.7**
PMG	**Port Moresby**	**5.12**	**129**		Pn	**Pn**	**11 05 29.1**	**+2.0**
PMG	**Port Moresby**	**5.12**	**129**		Pn	**Pn**	**11 05 27.9**	**+0.8**
	1.4nm,0.3s,baz=326,slow=11,SNR=2.3							
	20nm,0.6s							
FAKI	**Fak Fak**	**11.33**	**286**		Pn	**Pn**	**11 06 51.2**	**-1.2**
SAUI	**Saumlaki**	**11.90**	**261**			**Pn**	**11 06 58.2**	**-2.1**
MTN	**Manton Dam**	**13.59**	**240**		Pn	Pn	11 07 19.7	-3.6
CTA	**Charters Tower**	**14.18**	**168**		Lg	Lg	11 11 52.7	
	0.2nm,0.3s,baz=80,slow=12,SNR=5.0							
CTA					LR	LR	11 12 52.5	
	comp=Z,242nm,19.2s,baz=353,slow=37							
WRAB	**Tennant Creek**	**16.15**	**211**			**Pn**	**11 07 56.2**	**-1.3**
WB2	**Warramunga Arr**	**16.16**	**211**		Pn	**Pn**	**11 07 55.3**	**-2.4**
WB2					IAmb	IAmb	11 08 07.2	
	comp=Z,32nm,0.7s							
WRA	**Warramunga Arr**	**16.16**	**211**		Pn	**Pn**	**11 07 55.6**	**-2.1**
	comp=Z,8.3nm,0.9s,baz=27,slow=11,SNR=3.1							
WRA					Lg	Lg	11 12 40.3	
	comp=Z,0.6nm,0.3s,baz=31,slow=28,SNR=5.2							
KNRA	**Kununurra**	**16.99**	**235**		Pn	**Pn**	**11 08 05.5**	**-2.8**
KNRA					IAmb	IAmb	11 08 13.3	
	comp=Z,72nm,0.8s							
SANI	**Sanana**	**17.60**	**283**		P	**Pn**	**11 08 18.5**	**+2.6**
	comp=Z,31nm,1.1s							
SOEI	**Soe**	**19.04**	**258**		P	**P**	**11 08 33.5**	**+0.6**
	comp=Z,133nm,0.9s,comp=Z,1µm							
AS31	**Alice Springs**	**19.55**	**206**		P	**P**	**11 08 38.6**	**+0.2**
AS31					IAmb	IAmb	11 08 44.2	
	comp=Z,29nm,0.9s							
ASAR	**Alice Springs**	**19.55**	**206**		P	**P**	**11 08 38.7**	**+0.3**
ASAR	**Alice Springs**	**19.55**	**206**		P	**P**	**11 08 39.0**	**+0.6**
	comp=Z,103nm,0.9s,baz=32,slow=10,SNR=46							
ASAR					LR	LR	11 16 36.2	
	comp=Z,730nm,19.4s,baz=345,slow=38							
EIDS	**Eidsvold**	**20.56**	**159**		P	**P**	**11 08 50.4**	**+1.1**
EIDS					IAmb	IAmb	11 08 59.5	
	comp=Z,35nm,1.4s							
FITZ	**Fitzroy Crossi**	**20.81**	**234**		P	**P**	**11 08 50.8**	**-1.3**
LUWI	**Luwuk**	**20.96**	**283**		P	**P**	**11 08 57.0**	**+3.3**
	comp=Z,81nm,1.2s,comp=Z,6µm							
GTOI	**Gorontalo**	**21.21**	**288**		P	**P**	**11 09 00.3**	**+3.9**
	comp=Z,26nm,0.7s,comp=Z,310nm							
EDFI	**Ende, Flores**	**21.43**	**262**		P	**P**	**11 09 02.2**	**+3.2**
STKA	**Stephens Creek**	**25.63**	**183**		P	**P**	**11 09 40.7**	**+0.6**
	comp=Z,8.1nm,0.8s,baz=341,slow=7.9,SNR=8.3							
	comp=Z,8.1nm,0.8s							
PSA00	**Pilbara Seismi**	**27.26**	**234**		P	**P**	**11 09 53.4**	**-1.6**
BBOO	**Buckleboo**	**27.33**	**193**		P	**P**	**11 09 54.1**	**-1.4**
BBOO					IAmb	IAmb	11 10 01.5	
	comp=Z,12nm,0.9s							
FORT	**Forrest**	**28.30**	**208**		P	**P**	**11 10 02.9**	**-1.3**
LEM	**Lembang**	**35.31**	**267**		P	**P**	**11 11 04.4**	**-1.8**
	comp=Z,35nm,1.0s,baz=104,slow=12,SNR=3.8							
LEM					LR	LR	11 27 15.0	
	comp=Z,137nm,21.8s,baz=143,slow=39							
	comp=Z,35nm,1.0s							
NWAO	**Narrogin (SRO)**	**35.93**	**219**		LR	LR	11 26 29.1	
	comp=Z,359nm,19.5s,baz=47,slow=37							
XMIS	**Christmas Isla**	**37.34**	**261**		P	**P**	**11 11 21.4**	**-1.9**
JNU	**Nakatsue**	**40.76**	**344**		LR	LR	11 26 47.7	
	comp=Z,169nm,19.4s,baz=20,slow=33							
MJAR	**Matsushiro Arr**	**42.72**	**354**		P	P	11 12 06.7	-1.1
	comp=Z,3.0nm,0.9s,baz=122,slow=8.7,SNR=2.6							
	comp=Z,3.2nm,0.9s							
NJ2	**Nanjing**	**44.50**	**330**	*eP*		**P**	**11 12 23.5**	**+1.4**
NJ2				pmax	pmax			
	comp=Z,8.0nm,0.5s							
KSAR	**Wonju Array Be**	**45.65**	**343**		P	**P**	**11 12 30.3**	**-0.9**
KSRS	**Korea Array**	**45.65**	**343**		P	**P**	**11 12 31.0**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=164,slow=8.9,SNR=14							
	comp=Z,4.2nm,0.8s							
PHRA	**Phrae**	**48.90**	**301**		P	**P**	**11 12 55.5**	**-1.4**
LYN	**LuoYang**	**49.78**	**327**	*eP*		**P**	**11 13 03.3**	**0.0**
LYN				pmax	pmax			
	comp=Z,16nm,0.6s							
CMAR	**Chiang Mai Arr**	**49.98**	**300**		P	**P**

comp=Z,9.0nm,1.1s
KURBB Kurchatov Arra 79.08 324 P P 11 16 14.6 -0.3
comp=Z,5.4nm,1.0s,baz=118,slow=4.7,SNR=11
comp=Z,5.4nm,1.0s
ARSB Arslanbob 79.40 314 P P 11 16 13.0 -4.0
SIMJ Simiganj 81.58 310 P P 11 16 28.1 -0.7
SIMJ IAmb IAmb 11 16 29.8
comp=Z,7.6nm,0.9s
KK31 Karatay Array 81.68 315 P P 11 16 28.0 -1.1
KKAR Karatay Array 81.68 315 P P 11 16 28.7 -0.4
KKAR Karatay Array 81.68 315 P P 11 16 27.8 -1.3
KKAR IAmb IAmb 11 16 29.6
comp=Z,3.3nm,0.9s
E18K Tukpahlearik C 83.39 19 P P 11 16 38.6 +1.1
E18K IAmb IAmb 11 16 47.2
comp=Z,7.7nm,1.2s
QSPA South Pole Qui 83.81 180 P P 11 16 39.1 -0.8
QSPA IAmb IAmb 11 16 44.9
comp=Z,3.9nm,0.8s
QSPA South Pole Qui 83.81 180 P P 11 16 39.7 -0.2
comp=Z,4.1nm,0.8s,baz=329,slow=1.6,SNR=8.2
comp=Z,4.1nm,0.8s
NRIK Noril'sk 84.27 343 P P 11 16 40.7 -1.2
NRIK Noril'sk 84.27 343 P P 11 16 42.1 +0.2
comp=Z,6.1nm,0.8s,baz=84,slow=3.5,SNR=12
comp=Z,6.1nm,0.8s
C19K Lookout Ridge 84.63 18 P P 11 16 44.7 +0.8
BVAR Borovoye Array 84.66 325 P P 11 16 44.4 +0.1
comp=Z,25nm,0.8s,baz=104,slow=6.3,SNR=67
comp=Z,25nm,0.8s
BRVK Borovoye 84.73 325 P P 11 16 44.2 -0.3
IMAR Indian Mountai 85.01 21 P P 11 16 45.8 +0.1
MLY Manley 85.73 23 P P 11 16 49.5 +0.1
MLY IAmb IAmb 11 16 56.0
comp=Z,5.0nm,1.0s
RND Reindeer 85.84 25 P P 11 16 49.0 -1.1
RND IAmb IAmb 11 16 56.3
comp=Z,7.6nm,0.9s
DHY Denali Highway 86.33 25 P P 11 16 51.5 -1.1
DHY IAmb IAmb 11 17 06.8
comp=Z,5.8nm,0.9s
E22K Anaktuvuk Pass 86.65 20 P P 11 16 54.6 +0.7
E22K IAmb IAmb 11 16 56.5
comp=Z,5.1nm,0.9s
CCB Clear Creek Bu 86.73 24 P P 11 16 53.3 -1.0
CCB IAmb IAmb 11 16 54.6
comp=Z,4.9nm,0.8s
IL31 87.14 24 P P 11 16 54.6 -1.6
IL31 IAmb IAmb 11 16 56.3
comp=Z,5.2nm,0.8s
ILAR Eielson Array 87.14 24 P P 11 16 54.5 -1.8
ILAR Eielson Array 87.14 24 P P 11 16 55.0 -1.3
comp=Z,2.7nm,0.8s,baz=254,slow=4.6,SNR=26
comp=Z,2.7nm,0.8s
J25K Salcha River, 87.70 24 P P 11 16 58.8 -0.3
BMAR Burnt Mountain 88.93 22 P P 11 17 05.3 +0.5
ABKAR Akbulak array 90.20 319 P P 11 17 09.6 -1.5
TORD Torodi Ar. Bea 141.41 283 PKhKP PKPpre 11 23 36.8
comp=Z,0.7nm,0.7s,baz=101,slow=2.9,SNR=4.5
DBIC Dimbokro 148.21 273 PKPbc PKPdf 11 23 57.8 +3.3
comp=Z,13nm,1.0s,baz=113,slow=3.1,SNR=7.5

IDC 26 11:10:08.1±1.2,6˚46S×142˚69E,h0km,mb4.1/3, mbtmp4.0/5,ML1.5/1,Error ellipse: s-maj=41.8km s-min=27.5km az=51.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.31**	**124**	Pn	Pn	11 11 29.2	+0.5
	1.2nm,0.3s,baz=243,slow=6.8,SNR=2.0						
PMG				Sn	Sn	11 12 33.1	+2.6
	3.8nm,0.3s,baz=315,slow=10,SNR=17						
	4.8nm,0.5s						
ASAR	**Alice Springs**	**19.08**	**205**	P	P	11 14 31.6	-0.8
	3.7nm,0.8s,baz=35,slow=10.0,SNR=4.1						
MKAR	**Makanchi Array**	**75.17**	**322**	P	P	11 21 52.0	-0.5
	0.8nm,0.8s,baz=98,slow=8.7,SNR=5.9						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**84.64**	**325**	P	P	11 22 45.1	+1.5
	3.1nm,0.7s,baz=104,slow=6.3,SNR=12						
	3.1nm,0.7s						
ILAR	**Eielson Array**	**87.61**	**24**	P	P	11 22 56.9	-1.2
	0.6nm,0.7s,baz=267,slow=4.7,SNR=7.6						
	0.6nm,0.7s						

*IDC **26** 11:11:03.3±1.8,6˚13S×143˚83E,h0km,mb4.2/9, mbtmp4.3/10,ML4.3/1,Error ellipse: s-maj=60.7km s-min=30.6km az=101.0*
*NEIC **26** 11:11:06.6±1.8,6˚39S±0˚09×143˚2E±0˚1,h10km±1km, mb4.5/13,Error ellipse: s-maj=18.5km s-min=14.7km az=91.0*
ISC 26 11:11:09.4±0.6,6˚35S±0˚07×143˚3E±0˚1,h35km,n29, σ1ᵍ22/29,mb4.3/12,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.91**	**128**	Pn	**Pn**	**11 12 20.8**	**-0.1**
MANU	**Manus Island**	**5.92**	**44**		**Pn**	**11 12 36.6**	**+1.9**
MTN	**Manton Dam**	**13.58**	**241**	Pn	**Pn**	**11 14 18.9**	**-0.8**
WRAB	**Tennant Creek**	**16.04**	**212**	Pn	**Pn**	**11 14 52.4**	**-0.1**
WRAB				IAmb	IAmb	11 15 11.1	
	comp=Z,28nm,1.0s						
WB2	**Warramunga Arr**	**16.04**	**212**		**Pn**	**11 14 53.4**	**+0.8**
WB2				IAmb	IAmb	11 14 59.5	
	comp=Z,39nm,1.1s						
WRA	**Warramunga Arr**	**16.05**	**212**	Pn	**Pn**	**11 14 51.5**	**-1.1**
KNRA	**Kununurra**	**16.97**	**236**	Pn	**Pn**	**11 15 03.1**	**-1.2**
KNRA				IAmb	IAmb	11 15 03.4	
	comp=Z,67nm,0.9s						
AS31	**Alice Springs**	**19.42**	**207**	P	**Pn**	**11 15 36.1**	**+1.9**
ASAR	**Alice Springs**	**19.43**	**207**	P	**P**	**11 15 33.8**	**+0.8**
ASAR	**Alice Springs**	**19.43**	**207**	P	**Pn**	**11 15 36.3**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=32,slow=9.9,SNR=8.5						
	comp=Z,21nm,0.9s						
TOLI2	**Tolitoli**	**23.63**	**288**	P	**P**	**11 16 17.1**	**-0.5**
TOLI2				IAmb	IAmb	11 16 19.2	
	comp=Z,13nm,0.8s						
ARMA	**Armidale**	**25.20**	**163**	P	**P**	**11 16 31.1**	**-0.9**
KSAR	**Wonju Array Be**	**45.87**	**343**	P	**P**	**11 19 28.0**	**-0.4**
KSRS	**Korea Array**	**45.87**	**343**	P	**P**	**11 19 27.6**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=153,slow=11,SNR=5.6						
	comp=Z,1.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**50.17**	**300**	P	**P**	**11 20 02.7**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=119,slow=5.6,SNR=4.4						
	comp=Z,1.1nm,0.3s						
SONM	**Songino Array**	**62.96**	**333**	P	**P**	**11 21 32.2**	**-0.5**
	comp=Z,1.1nm,1.1s,baz=162,slow=6.5,SNR=5.3						
	comp=Z,1.1nm,1.1s						
VNDA	**Vanda**	**71.81**	**176**	P	**P**	**11 22 28.5**	**+0.5**
VNDA				IAmb	IAmb	11 22 40.0	
	comp=Z,8.1nm,1.2s						
MK31	**Makanchi Array**	**75.43**	**322**	P	**P**	**11 22 50.4**	**+0.5**
MKAR	**Makanchi Array**	**75.43**	**322**	P	**P**	**11 22 51.0**	**+1.2**
MKAR	**Makanchi Array**	**75.43**	**322**	P	**P**	**11 22 50.3**	**+0.5**
	comp=Z,3.5nm,1.0s,baz=115,slow=7.5,SNR=15						
	comp=Z,3.5nm,1.0s						
ZALV	**Zalesovo Beam**	**77.36**	**329**	P	**P**	**11 23 00.7**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=107,slow=7.8,SNR=4.1						
	comp=Z,0.5nm,0.4s						
BOOM	**Boomskoye usch**	**77.91**	**316**	P	**P**	**11 23 04.1**	**0.0**
BOOM				IAmb	IAmb	11 23 12.5	
	comp=Z,4.0nm,1.2s						
KURBB	**Kurchatov Arra**	**79.31**	**324**	P	**P**	**11 23 11.4**	**+0.1**
	comp=Z,0.8nm,0.2s,baz=113,slow=4.7,SNR=7.8						
	comp=Z,0.8nm,0.2s						
K15K	**Wolf Creek Mou**	**80.33**	**23**	P	**P**	**11 23 16.5**	**-0.2**
QSPA	**South Pole Qui**	**83.62**	**180**	P	**P**	**11 23 34.7**	**+0.6**
NRIK	**Noril'sk**	**84.49**	**343**	P	**P**	**11 23 37.4**	**-0.9**
	comp=Z,5.3nm,0.8s,baz=124,slow=4.9,SNR=9.5						
	comp=Z,5.3nm,0.8s						
BVAR	**Borovoye Array**	**84.88**	**325**	P	**P**	**11 23 41.8**	**+1.1**
	comp=Z,6.8nm,0.9s,baz=104,slow=6.3,SNR=17						
	comp=Z,6.8nm,0.9s						
ILAR	**Eielson Array**	**87.28**	**24**	P	**P**	**11 23 48.4**	**-3.9**
	comp=Z,0.7nm,0.8s,baz=258,slow=4.5,SNR=2.4						
	comp=Z,0.7nm,0.8s						
DBIC	**Dimbokro**	**148.32**	**272**	PKPbc	**PKPbc**	**11 30 54.2**	**+1.0**
	comp=Z,6.6nm,0.9s,baz=53,slow=4.6,SNR=5.7						

*AFAD **26** 11:12:09.6±0.0,38˚94N×26˚25E,h11km±2km,ML2.6*
*ISK **26** 11:12:09.4,38˚96N×26˚28E,h3km,ML2.7/20*
*THE **26** 11:12:10.2,38˚97N×26˚27E,h4km±1km,ML2.6/6,Error ellipse: s-maj=1.3km s-min=0.6km az=76.0*
ISC 26 11:12:10.2±0.9,38˚96N±0˚01×26˚27E±0˚02,h11km±7km, n51,σ0ᵍ55/90,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESV	**Lesvos island,**	**0.27**	**57**	P	**Pg**	**11 12 15.5**	**-0.2**
LESV				S	**Sg**	**11 12 19.4**	**+0.1**
PRK	**Paraskevi**	**0.28**	**360**	P	**Pg**	**11 12 15.6**	**-0.4**
PRK				S	**Sg**	**11 12 20.6**	**+0.8**
	1μm,0.4s						
KARB	**zmir-Karabur**	**0.32**	**160**	P	**Pg**	**11 12 16.4**	**-0.2**
KARB				S	**Sg**	**11 12 20.9**	**0.0**
KARB				*i* AML	AML	11 12 21.0	
	comp=E,642nm,0.2s						
SIGR	**SIGRI**	**0.41**	**307**	Pg	**Pg**	**11 12 18.1**	**-0.2**
SIGR				Sg	**Sg**	**11 12 24.2**	**+0.5**
SIGR	**SIGRI**	**0.41**	**307**	P	**Pg**	**11 12 18.1**	**-0.2**
SIGR				S	**Sg**	**11 12 24.1**	**+0.4**
	655nm,0.3s						
FOCM	**Foa**	**0.44**	**125**	Pg	**Pg**	**11 12 18.5**	**-0.3**
FOCM				Sg	**Sg**	**11 12 24.6**	**0.0**
AYVA	**Ayvalik**	**0.47**	**43**	P	**Pg**	**11 12 19.3**	**-0.2**
AYVA				*i* AML	AML	11 12 26.0	
	comp=E,368nm,0.4s						
AYVA				S	**Sg**	**11 12 26.1**	**+0.3**
AYVA				*i* AML	AML	11 12 27.0	
	comp=N,618nm,0.2s						
DKL	**Dikili**	**0.51**	**77**	Pg	**Pg**	**11 12 20.1**	**+0.1**
DKL				Sg	**Sg**	**11 12 27.4**	**+0.7**
IZMD	**zmir-Dikili-**	**0.51**	**87**	P	**Pg**	**11 12 20.0**	**-0.2**
IZMD				*i* AML	AML	11 12 29.0	
	comp=N,59nm,0.1s						
IZMD				*i* AML	AML	11 12 30.0	
	comp=E,88nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.55**	**349**	P	**Pg**	**11 12 20.6**	**-0.3**
KOCA				S	**Sb**	**11 12 29.2**	**-0.5**
CHOS	**Chios island**	**0.60**	**197**	Pg	**Pg**	**11 12 21.7**	**-0.2**
CHOS				Sg	**Sb**	**11 12 30.8**	**-0.4**
CHOS	**Chios island**	**0.60**	**197**	P	**Pg**	**11 12 21.7**	**-0.2**
CHOS				S	**Sb**	**11 12 30.9**	**-0.3**
	712nm,0.3s						
ZEDA	**zmir-Bergama**	**0.63**	**89**	P	**Pg**	**11 12 22.3**	**-0.1**
ZEDA				S	**Sb**	**11 12 32.1**	**+0.1**
ZEDA				*i* AML	AML	11 12 35.0	
	comp=N,182nm,0.5s						
URLA	**Izmir**	**0.65**	**157**	P	**Pg**	**11 12 22.2**	**-0.6**
URLA				S	**Sg**	**11 12 31.7**	**+0.2**
URLA				*i* AML	AML	11 12 35.0	
	comp=N,494nm,0.3s						
URLA				*i* AML	AML	11 12 35.0	
	comp=E,555nm,0.2s						
ZEYE	**Izmir, Urla-Ze**	**0.75**	**166**	P	**Pg**	**11 12 23.9**	**-0.7**
ZEYE				S	**Sb**	**11 12 36.2**	**+0.9**
ZEYE				*i* AML	AML	11 12 37.0	
	comp=N,713nm,0.5s						
ZEYE				*i* AML	AML	11 12 37.0	
	comp=E,1μm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.81**	**15**	P	**Pg**	**11 12 25.9**	**+0.2**
BAYC				S	**Sb**	**11 12 37.9**	**+0.8**
BAYC				*i* AML	AML	11 12 38.0	
	comp=E,549nm,0.4s						
BAYC				*i* AML	AML	11 12 40.0	
	comp=N,459nm,0.3s						
BUHA	**Balikesir, Bur**	**0.82**	**49**	P	**Pg**	**11 12 25.9**	**-0.2**
BUHA				S	**Sb**	**11 12 37.3**	**-0.3**
BUHA				*i* AML	AML	11 12 41.0	
	comp=E,501nm,0.3s						
BUHA				*i* AML	AML	11 12 43.0	
	comp=N,338nm,0.4s						
EZN	**Ezine**	**0.86**	**3**	Pg	**Pg**	**11 12 26.9**	**+0.1**
EZN				Sg	**Sb**	**11 12 39.5**	**+0.8**
EZN	**Ezine**	**0.86**	**3**	P	**Pb**	**11 12 27.2**	**0.0**
EZN				S	**Sb**	**11 12 38.6**	**-0.1**
	572nm,0.3s						
BOZC	**Bozcaada**	**0.89**	**349**	P	**Pg**	**11 12 26.9**	**-0.6**
BOZC				S	**Sg**	**11 12 38.9**	**-0.2**
BOZC				*i* AML	AML	11 12 41.0	
	comp=N,316nm,0.3s						
BOZC				*i* AML	AML	11 12 42.0	
	comp=E,213nm,0.3s						
GMLD	**Gumuldur**	**1.02**	**150**	Pg	**Pg**	**11 12 29.5**	**-0.3**
GMLD				Sg	**Sn**	**11 12 44.3**	**-0.3**
DGB	**zmir**	**1.03**	**152**	P	**Pg**	**11 12 29.0**	**-0.9**
DGB				S	**Sb**	**11 12 43.6**	**+0.2**
DGB				*i* AML	AML	11 12 45.0	
	comp=E,122nm,0.4s						
DGB				*i* AML	AML	11 12 46.0	
	comp=N,190nm,0.3s						
ECEA	**Canakkale, Ece**	**1.08**	**356**	P	**Pb**	**11 12 30.8**	**-0.1**
ECEA				S	**Sn**	**11 12 46.4**	**+0.2**
ECEA				*i* AML	AML	11 12 48.0	
	comp=E,341nm,0.6s						
ECEA				*i* AML	AML	11 12 50.0	
	comp=N,321nm,0.4s						
CNKL	**anakkale-Mer**	**1.10**	**5**	P	**Pg**	**11 12 31.5**	**0.0**
CNKL				S	**Sn**	**11 12 47.0**	**+0.2**
CNKL				*i* AML	AML	11 12 48.0	
	comp=N,232nm,0.3s						
CNKL				*i* AML	AML	11 12 52.0	
	comp=E,159nm,0.8s						
COMU	**Canakkale**	**1.15**	**8**	Pn	**Pb**	**11 12 31.8**	**-0.2**
COMU				Sn	**Sn**	**11 12 48.6**	**+0.7**
STEP	**BALIKESIR_Sava**	**1.20**	**69**	P	**Pg**	**11 12 33.1**	**-0.1**
STEP				S	**Sn**	**11 12 49.5**	**+0.4**
STEP				*i* AML	AML	11 12 51.0	
	comp=N,200nm,0.4s						
STEP				*i* AML	AML	11 12 52.0	
	comp=E,273nm,0.6s						
CANM	**Can-anakkale**	**1.21**	**30**	Pn	**Pn**	**11 12 31.1**	**-1.9**
LIA	**Limnos Island**	**1.26**	**318**	P	**Pn**	**11 12 33.4**	**-0.3**
LIA				S	**Sg**	**11 12 50.9**	**+0.2**
GADA	**Gvkgeada**	**1.26**	**347**	Pn	**Pn**	**11 12 33.5**	**-0.2**
BALY	**Balya**	**1.30**	**53**	P	**Pb**	**11 12 34.8**	**+0.2**
BALY				S	**Sg**	**11 12 52.3**	**+0.2**
BALY				*i* AML	AML	11 12 54.0	
	comp=N,151nm,0.8s						
BALY				*i* AML	AML	11 12 56.0	
	comp=E,129nm,0.3s						
SMG	**Samos**	**1.33**	**160**	P	**Pn**	**11 12 33.8**	**-0.9**
SMG				S	**Sg**	**11 12 53.7**	**+0.7**
	420nm,0.3s						
GELI	**Tayfur-Gelibol**	**1.44**	**6**	Pn	**Pn**	**11 12 36.5**	**+0.3**
LPK	**Lapseki**	**1.46**	**15**	Pn	**Pb**	**11 12 37.2**	**-0.1**
GCAM	**G?zelcaml?**	**1.47**	**149**	P	**Pb**	**11 12 37.5**	**-0.1**
GCAM				S	**Sn**	**11 12 56.1**	**+0.3**
GCAM				*i* AML	AML	11 12 59.0	
	comp=E,76nm,0.4s						
GCAM				*i* AML	AML	11 13 01.0	
	comp=N,122nm,0.5s						
BKES	**Balkesir-Mer**	**1.50**	**59**	P	**Pn**	**11 12 36.7**	**-0.3**
BKES				S	**Sn**	**11 12 55.6**	**-0.9**
BKES				*i* AML	AML	11 13 06.0	
	comp=N,70nm,0.6s						
BKES				*i* AML	AML	11 13 06.0	
	comp=E,68nm,0.4s						
GONE	**Gonen-Balikesi**	**1.54**	**45**	Pn	**Pb**	**11 12 38.5**	**-0.2**
GONE				Sn	**Sg**	**11 12 59.3**	**-0.4**
BLKS	**Balkesir-Sus**	**1.60**	**55**	P	**Pn**	**11 12 38.1**	**-0.3**
BLKS				S	**Sn**	**11 12 58.9**	**-0.2**
BLKS				*i* AML	AML	11 13 05.0	
	comp=E,40nm,0.6s						
BLKS				*i* AML	AML	11 13 12.0	
	comp=N,42nm,0.8s						
SMTH	**Samothraki Isl**	**1.61**	**339**	P	**Pn**	**11 12 38.6**	**0.0**
SMTH				S	**Sb**	**11 13 00.2**	**-0.1**
KRBG	**Karabiga-Canak**	**1.63**	**29**	Pn	**Pn**	**11 12 38.8**	**0.0**
ERIK	**Erikli-Kesan**	**1.71**	**6**	Pn	**Pn**	**11 12 40.6**	**+0.6**
ENEZ	**Enez**	**1.77**	**357**	Pn	**Pb**	**11 12 41.8**	**-0.9**
DURS	**Dursunbey**	**1.82**	**69**	P	**Pn**	**11 12 41.6**	**+0.1**
DURS				S	**Sb**	**11 13 05.9**	**-0.6**
DURS				*i* AML	AML	11 13 10.0	
	comp=N,45nm,0.4s						
DURS				*i* AML	AML	11 13 10.0	
	comp=E,86nm,0.5s						
KIRA	**zmir-Kiraz**	**1.84**	**114**	P	**Pg**	**11 12 44.9**	**-0.5**
KIRA				S	**Sg**	**11 13 09.7**	**+0.5**
KIRA				*i* AML	AML	11 13 12.0	
	comp=E,31nm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.86**	**22**	Pn	**Pn**	**11 12 43.1**	**+1.1**
RKY				Sn	**Sb**	**11 13 07.2**	**-0.2**
DEMI	**Demirci**	**1.91**	**87**	P	**Pg**	**11 12 46.1**	**-0.6**
DEMI				S	**Sb**	**11 13 09.3**	**+0.4**
DEMI				*i* AML	AML	11 13 14.0	
	comp=E,51nm,0.4s						
DEMI				*i* AML	AML	11 13 18.0	
	comp=N,26nm,0.4s						
MRMT	**Marmara Adasi**	**1.93**	**31**	Pn	**Pn**	**11 12 43.9**	**+0.9**
ALN	**Alexandroupoli**	**1.94**	**355**	Pn	**Pb**	**11 12 44.9**	**-0.6**
ALN				Sn	**Sb**	**11 13 09.9**	**+0.2**
ALN	**Alexandroupoli**	**1.94**	**355**	P	**Pn**	**11 12 42.7**	**-0.3**
APE	**Apeiranthos**	**1.98**	**197**	Pn	**Pn**	**11 12 44.9**	**+1.2**
APE	**Apeiranthos**	**1.98**	**197**	P	**Pn**	**11 12 42.5**	**-1.2**
BODT	**Bodrum**	**2.07**	**156**	Pn	**Pn**	**11 12 46.0**	**+1.2**
BODT				Sn	**Sn**	**11 13 12.1**	**+1.5**

*NEIC **26** 11:16:26.9±1.6,9˚3S±0˚2×146˚48E±0˚09,h45km±6km, mb4.6/9,Error ellipse: s-maj=23.8km s-min=9.9km az=158.0*
*IDC **26** 11:16:46.2±1.1,6˚51S×143˚88E,h0km,mb4.3/11, mbtmp4.3/13,ML3.9/2,MS3.5/1,Error ellipse: s-maj=40.4km s-min=20.8km az=98.0*
ISC 26 11:16:51.4±0.7,6˚6S±0˚1×143˚7E±0˚1,h35km,n24, σ0ᵍ88/20,mb4.5/13,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.43**	**130**	Sn	**Sn**	**11 18 46.8**	**+0.2**
	3.3nm,0.3s,baz=256,slow=17,SNR=1.6						
PMG				LR	LR	11 19 49.3	
	comp=Z,516nm,18.4s,baz=100,slow=42						
MTN	**Manton Dam**	**13.89**	**242**	Pn	Pn	11 19 59.9	-5.9
MTN				IAmb	IAmb	11 20 14.7	
	comp=Z,56nm,1.4s						
WRA	**Warramunga Arr**	**16.13**	**213**	Pn	**Pn**	**11 20 34.1**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=29,slow=13,SNR=2.2						
WRA				Lg	Lg	11 25 18.7	
	baz=33,slow=30,SNR=3.5						
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**19.46**	**208**	P	**Pn**	**11 21 17.6**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=37,slow=9.8,SNR=22						
ASAR				Lg	Lg	11 27 06.6	
	baz=33,slow=32,SNR=4.4						
	comp=Z,13nm,0.8s						
KSRS	**Korea Array**	**46.19**	**343**	P	**P**	**11 25 13.4**	**+0.5**
	comp=Z,6.8nm,0.9s,baz=161,slow=9.4,SNR=19						
	comp=Z,6.8nm,0.9s						
KSAR	**Wonju Array Be**	**46.20**	**342**	P	**P**	**11 25 12.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**50.67**	**300**	P	**P**	**11 25 47.7**	**0.0**
CMAR	**Chiang Mai Arr**	**50.67**	**300**	P	**P**	**11 25 48.6**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=125,slow=5.7,SNR=13						
	comp=Z,1.6nm,0.7s						
USA0B	**Ussuriysk Arra**	**51.61**	**349**	P	**P**	**11 25 52.1**	**-2.3**
USA0B				IAmb	IAmb	11 25 55.8	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.61**	**349**	P	**P**	**11 25 54.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**51.61**	**349**	P	**P**	**11 25 54.2**	**-0.1**
	comp=Z,10nm,0.8s,baz=173,slow=7.0,SNR=24						
	comp=Z,10nm,0.8s						
BJT	**Baijiatuau**	**52.85**	**334**	P	**P**	**11 26 03.2**	**-0.4**
BJT				IAmb	IAmb	11 26 04.5	
	comp=Z,6.0nm,1.0s						
PEA0B	**Petropavlovsk-**	**60.60**	**10**	P	P	11 26 46.0	-12
PETK	**Petropavlovsk-**	**60.60**	**10**	P	**P**	**11 26 59.4**	**+0.9**
	comp=Z,7.4nm,0.9s,baz=213,slow=11,SNR=6.4						
	comp=Z,7.4nm,0.9s						
SONM	**Songino Array**	**63.35**	**333**	P	**P**	**11 27 18.0**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=164,slow=6.1,SNR=6.7						
	comp=Z,0.4nm,0.5s						
MK31	**Makanchi Array**	**75.87**	**322**	P	P	11 28 20.2	-14
MKAR	**Makanchi Array**	**75.87**	**322**	P	P	11 28 20.2	-14
MKAR	**Makanchi Array**	**75.87**	**322**	P	**P**	**11 28 34.7**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=94,slow=8.2,SNR=14						
	comp=Z,2.1nm,0.9s						
KURBB	**Kurchatov Arra**	**79.73**	**324**	P	**P**	**11 28 55.5**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=110,slow=5.1,SNR=5.4						
	comp=Z,0.7nm,0.4s						
QSPA	**South Pole Qui**	**83.42**	**180**	P	**P**	**11 29 15.5**	**+0.4**
	comp=Z,2.7nm,1.1s,baz=320,slow=2.3,SNR=5.3						
	comp=Z,2.7nm,1.1s						
NRIK	**Noril'sk**	**84.81**	**343**	P	**P**	**11 29 21.6**	**-0.2**
	comp=Z,6.4nm,0.8s,baz=124,slow=4.5,SNR=13						
	comp=Z,6.4nm,0.8s						
BVAR	**Borovoye Array**	**85.30**	**325**	P	**P**	**11 29 24.6**	**0.0**
	comp=Z,4.6nm,0.9s,baz=104,slow=6.3,SNR=19						
	comp=Z,4.6nm,0.9s						
ILAR	**Eielson Array**	**87.28**	**24**	P	**P**	**11 29 33.1**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=261,slow=5.3,SNR=8.6						
	comp=Z,1.0nm,0.9s						
DBIC	**Dimbokro**	**148.78**	**272**	PKPbc	**PKiKP**	**11 36 37.2**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=80,slow=9.1,SNR=3.1						

*TEH **26** 11:19:52.7,32˚84N×47˚56E,h8km,ML3.3*
*ISN **26** 11:19:52.4±1.5,32˚81N×47˚62E,h14km±8km,ML3.0*
ISC 26 11:19:54.7±1.1,32˚86N±0˚05×47˚55E±0˚04,h15km,n22, σ1ᵍ12/26,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.71**	**21**	Pg	**Pg**	**11 20 06.8**	**-1.7**
IDOB	**Doab**	**1.06**	**30**	Pg	**Pb**	**11 20 13.7**	**-1.2**
ILBA	**Ilam Banvizeh**	**1.36**	**304**	Pg	**Pn**	**11 20 19.2**	**0.0**
IBDR	**Badra**	**1.38**	**281**	*e*Pg	**Pn**	**11 20 20.0**	**+0.6**
IBDR				*e*Sg	**Sn**	**11 20 38.0**	**+0.6**
KCHF	**Cheshme Sefid,**	**1.47**	**343**	Pg	**Pn**	**11 20 21.2**	**+0.4**
HSAM	**Samen**	**1.61**	**33**	Pg	**Pn**	**11 20 22.8**	**-0.1**
RAFI	**Al-Rafai**	**1.66**	**227**	*e*Pn	**Pn**	**11 20 23.0**	**-0.3**
RAFI				*e*Sn	**Sn**	**11 20 46.0**	**+1.7**
RAFI				AML	AML	11 20 50.7	
	comp=E,136nm,0.3s						
RAFI				AML	AML	11 21 04.6	
	comp=N,294nm,0.7s						
IGHG	**Ghaleghazi**	**1.68**	**331**	Pg	**Pn**	**11 20 25.4**	**+1.7**
IDHR	**Dehrash**	**2.07**	**333**	Pn	**Pn**	**11 20 30.4**	**+1.2**
HAGD	**Aghdareh**	**2.36**	**34**	Pn	**Pn**	**11 20 34.3**	**+1.1**
BHD	**Baghdad**	**2.69**	**280**	*e*Pn	**Pn**	**11 20 38.0**	**+0.6**
BHD				*e*Sn	**Sn**	**11 21 11.0**	**+1.3**
IPIR	**Pirpir**	**2.82**	**93**	Pn	**Pn**	**11 20 40.6**	**+1.1**

1.2nm,0.3s,baz=296,slow=14,SNR=2.8
PMG Sn **Sn** **11 25 12.4 -0.1**
2.0nm,0.3s,baz=240,slow=20,SNR=1.8
FAKI **Fak Fak** **11.18 287** Pn **Pn** **11 25 36.6 +0.5**
MTN **Manton Dam** **13.36 240** Pn **Pn** **11 26 03.2 -2.6**
WB0 **Warramunga Arr** **15.78 211** Pn **Pn** **11 26 36.8 -1.5**
WB0 IAmb IAmb 11 26 52.2
comp=Z,20nm,1.0s
WRAB **Tennant Creek** **15.94 211** Pn **P** **11 26 41.3 -2.3**
WRAB IAmb IAmb 11 26 48.7
comp=Z,27nm,1.0s
WB2 **Warramunga Arr** **15.95 211** Pn **P** **11 26 42.3 -1.4**
WB2 IAmb IAmb 11 26 53.4
comp=Z,22nm,0.8s
WRA **Warramunga Arr** **15.95 211** Pn **Pn** **11 26 38.9 -1.7**
comp=Z,0.4nm,0.3s,baz=27,slow=13,SNR=1.1
KNRA **Kununurra** **16.76 235** Pn **Pn** **11 26 48.8 -2.0**
AS31 **Alice Springs** **19.35 206** P **Pn** **11 27 22.7 +0.1**
ASAR **Alice Springs** **19.35 206** P **Pn** **11 27 22.4 -0.2**
ASAR **Alice Springs** **19.35 206** P **Pn** **11 27 23.2 +0.7**
comp=Z,0.9nm,0.3s,baz=30,slow=11,SNR=16
comp=Z,9.8nm,0.5s
FITZ **Fitzroy Crossi** **20.58 234** P **P** **11 27 34.6 0.0**
TOLI2 **Tolitoli** **23.32 288** P **P** **11 28 05.3 +1.4**
TOLI2 IAmb IAmb 11 28 09.8
comp=Z,11nm,0.9s
KOUNC **Koumac, New Ca** **25.08 126** P **P** **11 28 19.9 -0.2**
KOUNC IAmb IAmb 11 28 35.3
comp=Z,11nm,1.2s
STKA **Stephens Creek** **25.50 183** P **P** **11 28 26.7 +3.0**
STKA **Stephens Creek** **25.50 183** P **P** **11 28 26.9 +3.2**
comp=Z,2.0nm,0.6s,baz=5.8,slow=10,SNR=3.4
comp=Z,2.0nm,0.6s
BBOO **Buckleboo** **27.16 193** P **P** **11 28 39.3 +0.5**
BBOO IAmb IAmb 11 29 15.1
comp=Z,18nm,1.4s
KSRS **Korea Array** **45.72 343** P **P** **11 31 16.1 -0.2**
comp=Z,1.0nm,0.8s,baz=163,slow=8.9,SNR=3.2
comp=Z,1.0nm,0.8s
CMAR **Chiang Mai Arr** **49.88 300** P **P** **11 31 51.1 +2.1**
comp=Z,1.1nm,0.3s,baz=115,slow=6.1,SNR=5.0
comp=Z,1.1nm,0.3s
VNDA **Vanda** **71.90 176** P **P** **11 34 18.7 +0.9**
MKAR **Makanchi Array** **75.19 322** P **P** **11 34 37.6 0.0**
comp=Z,2.6nm,0.8s,baz=106,slow=6.4,SNR=18
comp=Z,2.6nm,0.8s
ZALV **Zalesovo Beam** **77.15 329** P **P** **11 34 47.5 -1.0**
comp=Z,0.8nm,0.5s,baz=84,slow=7.6,SNR=4.5
comp=Z,0.8nm,0.5s
KURBB **Kurchatov Arra** **79.08 324** P **P** **11 34 58.3 -1.0**
comp=Z,0.4nm,0.7s,baz=111,slow=4.7,SNR=3.8
comp=Z,0.4nm,0.7s
QSPA **South Pole Qui** **83.69 180** P **P** **11 35 24.6 +0.9**
QSPA **South Pole Qui** **83.69 180** P **P** **11 35 24.3 +0.6**
comp=Z,1.0nm,0.8s,baz=336,slow=1.7,SNR=6.3
comp=Z,1.0nm,0.8s
BVAR **Borovoye Array** **84.65 325** P **P** **11 35 28.7 +0.1**
comp=Z,6.5nm,0.8s,baz=114,slow=7.2,SNR=15
comp=Z,6.5nm,0.8s
ILAR **Eielson Array** **87.34 24** P **P** **11 35 39.1 -2.6**
comp=Z,1.1nm,0.8s,baz=244,slow=4.9,SNR=5.7
comp=Z,1.1nm,0.8s
DBIC **Dimbokro** **148.02 273** PKPbc **PKPab** **11 42 44.6 +0.3**
comp=Z,6.9nm,1.0s,baz=214,slow=4.1,SNR=4.5

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*IDC **26** 11:23:52.9±1.5,5.°85S×142.°81E, h0km, mb4.0/4, mbtmp4.0/6, ML4.0/2, Error ellipse: s-maj=70.8km s-min=29.7km az=98.0*
ISC 26 11:23:58.2±1.3,5.°9S±0.°2×142.°8E±0.°4, h35km, n6, σ1§52/6, mb4.0/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.14**	**210**	Pn	**Pn**	**11 27 40.7**	**-1.9**
	0.4nm,0.3s,baz=26,slow=13,SNR=1.5						
	3.8nm,0.9s						
ASAR	**Alice Springs**	**19.57**	**205**	P	**P**	**11 28 24.8**	**+1.5**
	0.7nm,0.3s,baz=31,slow=11,SNR=4.1						
	6.3nm,0.6s						
MKAR	**Makanchi Array**	**74.80**	**322**	P	**P**	**11 35 35.2**	**+0.3**
	0.6nm,0.8s,baz=110,slow=6.5,SNR=1.7						
	0.6nm,0.8s						
QSPA	**South Pole Qui**	**84.02**	**180**	P	**P**	**11 36 25.5**	**+0.6**
	1.0nm,0.7s,baz=230,slow=5.3,SNR=3.0						
	1.0nm,0.7s						
BVAR	**Borovoye Array**	**84.26**	**325**	P	**P**	**11 36 26.5**	**+0.3**
	2.1nm,0.8s,baz=122,slow=7.5,SNR=2.5						
	2.1nm,0.8s						
ILAR	**Eielson Array**	**87.11**	**24**	P	**P**	**11 36 39.3**	**-0.9**
	0.5nm,0.8s,baz=258,slow=4.8,SNR=1.9						
	0.5nm,0.8s						

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*SOME **26** 11:26:03.1,43.°38N×69.°41E*
NNC 26 11:26:03.6±1.1,43.°59N×69.°64E, h0km, mb3.5, mpv3.0, 1D, Error ellipse: s-maj=7.4km s-min=5.0km az=64.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.80**	**127**	P	Pg	11 26 19.1	+0.2
	4.6nm,0.7s,baz=307,slow=15,SNR=69						
KK31				⇓S	Sg	11 26 30.4	+1.1
	117nm,0.9s,baz=304,slow=32,SNR=123						
BTLS	**Baital**	**3.48**	**64**	Pg	Pg	11 27 08.8	-1.5
	8.2nm,0.7s						
BTLS				Lg	Lg	11 27 55.8	
	4.6nm,0.9s						
KRBS	**Karabastau**	**4.38**	**87**	Pg	Pb	11 27 23.7	+2.3
	4.1nm,0.7s						
KRBS				Lg	Lg	11 28 21.7	
	2.8nm,0.7s						
DGS	**Degeres**	**4.48**	**92**	Pg	Pb	11 27 24.2	+1.0
	1.3nm,0.4s						
DGS				Lg	Lg	11 28 22.7	
	6.5nm,0.9s						
KST	**Kastek**	**4.65**	**95**	Pg	Pb	11 27 26.8	+0.8
	1.6nm,0.8s						
KST				Lg	Lg	11 28 27.8	
	5.6nm,1.2s						
KUU	**Kurty**	**4.86**	**84**	Pg	Pb	11 27 32.1	+2.5
	2.0nm,0.8s						
KUU				Lg	Lg	11 28 36.0	
	6.1nm,0.5s						
KTBS	**Karatobe**	**5.11**	**86**	Pg	Pb	11 27 37.0	+3.1
	1.9nm,0.6s						
KTBS				Lg	Lg	11 28 44.6	
	7.4nm,0.8s						

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*IDC **26** 11:47:37.4±1.2,6.°19S×143.°10E, h0km, mb4.0/3, mbtmp3.9/6, ML3.3/1, Error ellipse: s-maj=36.5km s-min=25.5km az=67.0*
ISC 26 11:47:42.4±1.0,6.°3S±0.°1×143.°0E±0.°1, h35km, n6, σ0§62/7, mb3.8/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.12**	**127**	Pn	**Pn**	**11 48 56.2**	**-0.4**
	5.0nm,0.7s,baz=294,slow=19,SNR=1.8						
PMG				Sn	**Sn**	**11 49 54.9**	**+0.5**
	1.3nm,0.3s,baz=180,slow=20,SNR=1.6						
WRA	**Warramunga Arr**	**15.95**	**211**	Pn	**Pn**	**11 51 23.7**	**-0.6**
	0.1nm,0.3s,baz=32,slow=12,SNR=2.2						
WRA				Lg	Lg	11 56 04.2	
	baz=20,slow=27						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**19.35**	**206**	P	**Pn**	**11 52 06.8**	**+0.6**
	5.9nm,0.7s,baz=32,slow=10,SNR=42						
MKAR	**Makanchi Array**	**75.26**	**322**	P	**P**	**11 59 21.7**	**-0.1**
	0.7nm,0.7s,baz=111,slow=6.6,SNR=6.7						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**84.72**	**325**	P	**P**	**12 00 13.3**	**+0.6**
	2.9nm,0.7s,baz=115,slow=7.0,SNR=11						
	2.9nm,0.7s						
ILAR	**Eielson Array**	**87.35**	**24**	P	**P**	**12 00 25.1**	**-0.4**
	0.4nm,0.8s,baz=267,slow=4.5,SNR=4.4						
	0.4nm,0.8s						

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*IDC **26** 11:51:09.1±1.3,5.°76S×142.°63E, h0km, mb3.9/3, mbtmp3.8/6, ML3.5/2, Error ellipse: s-maj=45.0km s-min=29.6km az=92.0*
ISC 26 11:51:13.3±1.1,5.°9S±0.°1×142.°7E±0.°1, h28km, n6, σ0§89/7, mb4.0/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.61**	**129**	Pn	**Pn**	**11 52 35.9**	**+0.9**
	8.6nm,0.4s,baz=321,slow=6.5,SNR=3.2						
PMG				Sn	**Sn**	**11 53 37.3**	**-1.3**
	1.5nm,0.3s,baz=193,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**16.15**	**210**	Pn	**Pn**	**11 54 58.1**	**-0.5**
	0.2nm,0.3s,baz=27,slow=14,SNR=2.7						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**19.59**	**205**	P	**Pn**	**11 55 41.1**	**+0.2**
	0.2nm,0.3s,baz=34,slow=9.8,SNR=6.9						
	1.1nm,0.7s						
QSPA	**South Pole Qui**	**84.06**	**180**	P	**P**	**12 03 41.7**	**+0.4**
	2.5nm,1.2s,baz=322,slow=5.9,SNR=2.3						
	2.5nm,1.2s						
BVAR	**Borovoye Array**	**84.20**	**325**	P	**P**	**12 03 41.6**	**-0.5**
	0.7nm,0.7s,baz=102,slow=6.8,SNR=4.3						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**87.10**	**24**	P	**P**	**12 03 56.3**	**0.0**
	0.3nm,0.7s,baz=248,slow=4.7,SNR=4.2						
	0.3nm,0.7s						

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*IDC **26** 11:55:26.2±2.1,6.°60S×142.°56E, h0km, mb3.7/4, mbtmp3.8/6, ML4.1/2, Error ellipse: s-maj=79.2km s-min=30.4km az=104.0*
ISC 26 11:55:31.2±1.8,6.°7S±0.°2×142.°6E±0.°5, h35km, n6, σ1§36/6, mb3.6/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.36**	**211**	Pn	**Pn**	**11 59 04.3**	**-1.3**
	0.8nm,0.3s,baz=26,slow=13,SNR=7.7						
	1.6nm,0.4s						
ASAR	**Alice Springs**	**18.78**	**205**	P	**P**	**11 59 49.0**	**+1.3**
	0.6nm,0.3s,baz=36,slow=9.8,SNR=16						
	2.2nm,0.6s						
MKAR	**Makanchi Array**	**75.31**	**322**	P	**P**	**12 07 09.9**	**-1.0**
	0.5nm,0.7s,baz=106,slow=7.3,SNR=5.7						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**79.22**	**324**	P	**P**	**12 07 33.2**	**+0.5**
	0.3nm,0.6s,baz=102,slow=4.3,SNR=2.3						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.79**	**325**	P	**P**	**12 08 02.7**	**+0.8**
	0.7nm,0.6s,baz=101,slow=7.7,SNR=5.4						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**87.91**	**24**	P	**P**	**12 08 16.6**	**-0.5**
	0.2nm,0.7s,baz=243,slow=6.0,SNR=2.7						
	0.2nm,0.7s						

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*NNC **26** 11:55:41.8±4.1,52.°54N×62.°43E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=56.6km s-min=11.8km az=145.0, Suspected Mining explosion.*
*IDC **26** 11:55:45.6±4.1,52.°41N×62.°57E, h0km, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=54.5km s-min=34.3km az=161.0*
ISC 26 11:55:47.6±3.4,52.°0N±0.°4×63.°0E±0.°3, h0km, n8, σ1§19/9, 6C-2D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AB31	**Akbulak array**	**3.36**	**216**	Pn	**Pn**	**11 56 40.6**	**-0.8**
	0.2nm,0.3s,baz=29,slow=14,SNR=20						
AB31				⇓Pg	**Pb**	**11 56 48.6**	**+0.5**
	0.3nm,0.3s,baz=22,slow=12,SNR=13						
AB31				⇑Sn	**Sn**	**11 57 22.8**	**+0.8**
	0.7nm,0.3s,baz=66,slow=23,SNR=2.7						
AB31				⇑Lg	Lg	11 57 34.5	
	2.1nm,0.3s,baz=30,slow=24,SNR=14						
AKTO	**Aktyubinsk**	**3.48**	**245**	⇑Lg	Lg	11 57 34.3	
	5.1nm,0.8s						
I31KZ	**AKTYUBINSK INF**	**3.49**	**244**	I	I	12 19 15.0	
	0.1nm,1.4s,baz=55,slow=330,SNR=9.6						
BRVK	**Borovoye**	**4.60**	**74**	⇓Sn	**Sn**	**11 57 50.9**	**-1.5**
	1.3nm,0.7s						
BRVK				⇑Lg	Lg	11 58 12.8	
	2.5nm,0.7s						
BVA0	**Borovoye Array**	**4.65**	**75**	Pn	**Pn**	**11 56 59.0**	**-0.1**
	2.6nm,1.1s,baz=277,slow=13,SNR=15						
BVA0				⇑Sn	**Sn**	**11 57 54.7**	**+0.9**
	2.3nm,1.0s,baz=342,slow=38,SNR=4.1						
BVA0				⇑Lg	Lg	11 58 13.3	
	1.4nm,0.4s,baz=271,slow=30,SNR=4.2						
BVAR	**Borovoye Array**	**4.65**	**75**	Pn	**Pn**	**11 56 59.0**	**-0.1**
	0.1nm,0.3s,baz=263,slow=12,SNR=18						
BVAR				Sn	**Sn**	**11 57 55.7**	**+1.9**
	0.1nm,0.3s,baz=257,slow=24,SNR=2.7						
BVAR				Lg	Lg	11 58 18.2	
	0.1nm,0.3s,baz=252,slow=28,SNR=10.0						
	1.7nm,0.4s						
I46RU	**ZALESOVO INFRA**	**13.31**	**73**	I	I	13 12 50.0	
	baz=270,slow=324,SNR=1.5						
MKAR	**Makanchi Array**	**13.62**	**105**	Pn	**Pn**	**11 59 01.4**	**-0.5**
	baz=307,slow=10.0,SNR=2.9						
	0.2nm,0.6s						

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*BJI **26** 11:56:03.7±0.0,6.°50S×144.°26E, h23km, mb5.4/98, mB5.9/76, Ms5.6/99, Ms7 5.4/96*
*IDC **26** 11:56:04.7±0.4,6.°44S×143.°60E, h0km, mb5.5/21, mbtmp5.5/25, ML4.2/3, MS5.3/53, Error ellipse: s-maj=18.6km s-min=11.0km az=80.0*
*MOS **26** 11:56:04.9±0.9,6.°40S×143.°55E, h11km, mb5.9/71, MS5.5/16, Error ellipse: s-maj=8.0km s-min=4.3km az=110.9*
*NEIC **26** 11:56:05.8,6.°50S×143.°56E, h18km*
*NEIC **26** 11:56:05.8,6.°50S×143.°16E, h18km, Moment Tensor Solution. Duration: 3s8 Moment tensor: Scale 10^17^Nm; Mrr=5.86; Mθθ-4.87; Mφφ-0.99; Mrθ-2.21; Mθφ-2.24; Mφr-2.36; Fault plane solution: M0-6.71000×10^17^ NP1: φs=124.86000°, δ59.32000°, λ100.66000°. NP2: φs=284.61000°, δ32.31000°, λ72.68000°. Principal axes: T 6.7928, Plg73.0000°, Azm62.0000°; N -0.1639, Plg9.0000°, Azm299.0000°; P -6.6289, Plg14.0000°, Azm207.0000°;*
*NEIC **26** 11:56:06,6.°49S×143.°56E, h4km*
*IPGP **26** 11:56:07.0,6.°50S×143.°55E, h26km, Mw5.8, Fault plane solution: NP1:φs131.00000°, δ52.00000°, λ107.00000°. NP2:φs285.00000°, δ41.00000°, λ70.00000°.*
*DJA **26** 11:56:07.5±0.9,7.°S±2.°×14.°3E±.°, h12km±6km, M5.7/100, mb5.7/100, mB6.1/79, MLv6.4/7, Mw(mB)5.8/79, MwMwp5.6/50, Mwp5.7/50*
*NEIC **26** 11:56:09.0±1.8,6.°50S±0.°06×143.°55E±0.°03, h22km±1km, mb5.8/184, Ms_20 5.7/381, Mwb5.7/56, Mww5.8/29, Error ellipse: s-maj=10.7km s-min=4.5km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr3.48; Mθθ-3.46; Mφφ-0.02; Mrθ-0.11; Mθφ1.75; Mφr-1.48; Fault plane solution: M0 4.16000×10^17^ NP1: φs133.73000°, δ52.68000°, λ118.81000°. NP2: φs271.52000°, δ45.83000°, λ57.70000°. Principal axes: T 4.0933, Plg67.0000°, Azm105.0000°; N 0.1294, Plg23.0000°, Azm295.0000°; P -4.2227, Plg4.0000°, Azm204.0000°;*
*GCMT **26** 11:56:12.0±0.1,6.°56S×143.°49E, h13km, MW5.8/166, Moment Tensor Solution. s161,c312; s166,c388; Duration: 1s9 Moment tensor: Scale 10^17^Nm; Mrr4.44±.04; Mθθ-4.24±.03; Mφφ-0.20±.03; Mrθ 1.73±.08; Mθφ2.16±.03; Mφr-2.09±.09; Best double couple: M0 5.54500×10^17^ NP1:φs127.00000°, δ60.00000°, λ106.00000°. NP2:φs278.00000°, δ34.00000°, λ65.00000°. Principal axes: T 5.3260, Plg71.0000°, Azm73.0000°; N 0.4380, Plg14.0000°, Azm299.0000°; P -5.7640, Plg14.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 26 11:56:08.2±0.3,6.°58S±0.°03×143.°56E±0.°03, h22km±2km, h23km:pP-P, n1521, σ1§44/1418, mb5.8/224, MS5.7/300, 36C-34D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.67**	**239**	P	**Pn**	**11 57 05.3**	**+1.8**
PMG	**Port Moresby**	**4.53**	**128**	Pn	**Pn**	**11 57 15.6**	**+0.1**
PMG				Sn	**Sn**	**11 58 06.2**	**-1.4**
PMG	**Port Moresby**	**4.53**	**128**	P	**Pn**	**11 57 16.2**	**+0.7**
PMG	**Port Moresby**	**4.53**	**128**	*iP*	**Pn**	**11 57 15.9**	**+0.4**
PMG	**Port Moresby**	**4.53**	**128**	Pn	**Pn**	**11 57 16.3**	**+0.7**
	114nm,0.3s,baz=342,slow=3.4,SNR=226						

PMG				Sn	**Sn**	**11 58 05.2**	**-2.4**
	80nm,0.3s,baz=9.4,slow=17,SNR=14						
	723nm,0.6s						
GENI	**Genyem**	**5.21**	**319**	P	**Pn**	**11 57 25.6**	**+0.8**
GENI	**Genyem**	**5.21**	**319**	P	**Pn**	**11 57 26.5**	**+1.7**
	2μm,1.4s,47μm53μm32nm						
MANU	**Manus Island**	**5.89**	**40**	Pn	**Pn**	**11 57 34.6**	**+0.4**
MANU	**Manus Island**	**5.89**	**40**	P	**Pn**	**11 57 35.9**	**+1.7**
SMPI	**Sarmi**	**6.65**	**313**	P	**Pn**	**11 57 46.7**	**+2.1**
	1μm,1.3s,28μm43μm8.6nm						
BULU	**Kimbe**	**6.80**	**82**	P	**Pn**	**11 57 49.7**	**+3.1**
COEN	**Coen**	**7.34**	**183**	P	**Pn**	**11 57 56.5**	**+2.4**
	baz=7.5,SNR=21						
COEN	**Coen**	**7.34**	**183**	Pn	**Pn**	**11 57 55.9**	**+1.8**
COEN	**Coen**	**7.34**	**183**	P	**Pn**	**11 57 57.2**	**+3.1**
KAVG	**Kavieng**	**8.24**	**61**	P	**Pn**	**11 58 09.9**	**+3.5**
RABL	**Rabaul**	**8.89**	**75**		**Pn**	**11 58 15.7**	**+0.4**
RABL	**Rabaul**	**8.89**	**75**	P	**Pn**	**11 58 17.1**	**+1.8**
MTSU	**Mount Surprise**	**11.51**	**176**	P	**Pn**	**11 58 53.6**	**+2.4**
	baz=12,SNR=10.0						
MTSU	**Mount Surprise**	**11.51**	**176**	P	**Pn**	**11 58 54.4**	**+3.2**
FAKI	**Fak Fak**	**11.85**	**287**	Pn	**Pn**	**11 58 54.7**	**-1.2**
FAKI	**Fak Fak**	**11.85**	**287**	P	**Pn**	**11 58 54.5**	**-1.4**
FAKI	**Fak Fak**	**11.85**	**287**	P	**Pn**	**11 58 52.9**	**-3.0**
	263nm,0.8s,5μm10μm						
SAUI	**Saumlaki**	**12.24**	**263**	Pn	**Pn**	**11 59 01.7**	**+0.4**
SAUI	**Saumlaki**	**12.24**	**263**	P	**Pn**	**11 59 01.7**	**+0.4**
SAUI	**Saumlaki**	**12.24**	**263**	P	**Pn**	**11 59 02.0**	**+0.7**
	3μm,0.8s,30μm20μm						
KDU	**Kakadu**	**12.50**	**240**	P	**Pn**	**11 59 04.4**	**-0.4**
	baz=12,SNR=55						
KDU	**Kakadu**	**12.50**	**240**	P	**Pn**	**11 59 04.2**	**-0.6**
TV1H	**Townsville Har**	**12.99**	**166**	P	**Pn**	**11 59 15.2**	**+3.7**
AUAYR	**Ayr State High**	**13.45**	**164**	P	**Pn**	**11 59 20.8**	**+3.0**
SWI	**Sorong**	**13.52**	**294**	P	Pn	11 59 13.1	-5.7
	250nm,1.0s,3μm9μm						
CTA	**Charters Tower**	**13.68**	**169**	P	**Pn**	**11 59 24.1**	**+3.1**
CTA	**Charters Tower**	**13.68**	**169**	Pn	**Pn**	**11 59 23.5**	**+2.6**
	1.5nm,0.3s,baz=359,slow=14,SNR=15						
CTA				Lg	Lg	12 03 29.1	
	1.5nm,0.3s,baz=54,slow=19,SNR=3.8						
CTA				LR	LR	12 05 15.9	
	comp=Z,28μm,21.3s,baz=356,slow=40						
	30nm,1.1s						
CTAO	**Charters Tower**	**13.68**	**169**	Pn	**Pn**	**11 59 23.2**	**+2.3**
CTAO	**Charters Tower**	**13.68**	**169**	P	**Pn**	**11 59 24.0**	**+3.1**
CTAO	**Charters Tower**	**13.68**	**169**	P	**Pn**	**11 59 23.2**	**+2.3**
MTN	**Manton Dam**	**13.74**	**242**	P	**Pn**	**11 59 21.6**	**-0.1**
	baz=14,SNR=24						
MTN	**Manton Dam**	**13.74**	**242**	Pn	**Pn**	**11 59 20.6**	**-1.1**
MTN	**Manton Dam**	**13.74**	**242**	P	**Pn**	**11 59 20.4**	**-1.3**
BNDI	**Bandanaira**	**13.75**	**278**	P	**Pn**	**11 59 18.7**	**-3.2**
	1μm,1.2s,22μm14μm						
DRS	**Darwin Rock St**	**13.77**	**244**	P	**Pn**	**11 59 22.2**	**0.0**
QIS	**Mount Isa**	**14.41**	**195**	P	**Pn**	**11 59 32.0**	**+1.1**
	baz=15,SNR=12						
WB0	**Warramunga Arr**	**15.85**	**213**	Pn	**Pn**	**11 59 47.3**	**-2.7**
WRAB	**Tennant Creek**	**16.00**	**213**		**Pn**	**11 59 50.1**	**-2.0**
WRAB	**Tennant Creek**	**16.00**	**213**	P	**Pn**	**11 59 50.1**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,319nm,1.0s						
WB2	**Warramunga Arr**	**16.01**	**213**	Pn	**Pn**	**11 59 50.8**	**-1.3**
WC3	**Warramunga Arr**	**16.01**	**213**	P	**Pn**	**11 59 51.3**	**-0.9**
	baz=16						
I07AU	**WARRAMUNGA INF**	**16.02**	**213**	I	I	13 25 20.0	
	baz=33,slow=316,SNR=1.0						
WRA	**Warramunga Arr**	**16.02**	**213**	*i* P	**Pn**	**11 59 49.9**	**-2.3**
WRA				pmax	pmax		
	comp=Z,174nm,0.9s						
WRA	**Warramunga Arr**	**16.02**	**213**	Pn	**Pn**	**11 59 50.4**	**-1.9**
	comp=Z,7.9nm,0.3s,baz=32,slow=12,SNR=19						
WRA				Sn	**Sn**	**12 02 41.1**	**-8.2**
	comp=Z,6.3nm,0.3s,baz=32,slow=24,SNR=4.8						
WRA				Lg	Lg	12 04 35.4	
	comp=Z,5.0nm,0.3s,baz=44,slow=29,SNR=6.1						
WRA				LR	LR	12 07 02.5	
	comp=Z,22μm,20.4s,baz=38,slow=41						
HNR	**Honiara**	**16.47**	**101**		**Pn**	**11 59 58.5**	**+0.5**
HNR	**Honiara**	**16.47**	**101**	P	**Pn**	**11 59 58.4**	**+0.4**
HNR	**Honiara**	**16.47**	**101**	Pn	**Pn**	**11 59 57.9**	**-0.1**
	baz=231,slow=2.8						
NLAI	**Namlea**	**16.73**	**281**	P	**P**	**12 00 04.3**	**+0.8**
	comp=Z,221nm,2.0s,comp=Z,9μm						
LBMI	**Labuha**	**17.08**	**290**	P	**Pn**	**12 00 05.4**	**-0.3**
	comp=Z,678nm,1.9s,comp=Z,13μm						
KNRA	**Kununurra**	**17.09**	**237**	Pn	**Pn**	**12 00 04.9**	**-0.9**
KNRA				IAmb	IAmb	12 00 07.5	
	comp=Z,385nm,0.6s						
KNRA	**Kununurra**	**17.09**	**237**	P	**Pn**	**12 00 04.5**	**-1.3**
TNTI	**Ternate**	**17.74**	**294**	P	**P**	**12 00 14.5**	**-0.1**
TNTI	**Ternate**	**17.74**	**294**	P	**Pn**	**12 00 11.9**	**-2.0**
	comp=Z,173nm,1.8s,comp=Z,3μmcomp=Z,5μm						
RK1H	**Rockhampton Ha**	**17.99**	**159**	P	**P**	**12 00 21.0**	**+3.7**
SANI	**Sanana**	**18.09**	**284**	P	**P**	**12 00 19.4**	**+0.9**
SANI	**Sanana**	**18.09**	**284**	P	**Pn**	**12 00 16.0**	**-2.2**
	comp=Z,297nm,0.9s,comp=Z,10μmcomp=Z,11μm						
GD1S	**Gladstone Soft**	**18.65**	**158**	P	**Pn**	**12 00 28.1**	**+3.1**
AS01	**Alice Springs**	**19.34**	**208**	P	**Pn**	**12 00 34.9**	**+1.6**
SOEI	**Soe**	**19.36**	**259**	P	**P**	**12 00 32.9**	**+0.3**
SOEI				IAmb	IAmb	12 00 45.6	
	comp=Z,468nm,1.0s						
SOEI	**Soe**	**19.36**	**259**	P	**Pn**	**12 00 34.3**	**+0.6**
SOEI	**Soe**	**19.36**	**259**	P	**Pn**	**12 00 33.8**	**+0.1**
	comp=Z,782nm,0.9s,comp=Z,20μmcomp=Z,26μm						
AS31	**Alice Springs**	**19.36**	**208**		**Pn**	**12 00 35.3**	**+1.7**
ASAR	**Alice Springs**	**19.36**	**208**	P	**Pn**	**12 00 34.0**	**+0.4**
ASAR	**Alice Springs**	**19.36**	**208**	P	**Pn**	**12 00 35.3**	**+1.7**
	comp=Z,779nm,0.9s,baz=36,slow=9.7,SNR=702						
ASAR					**Sn**	**12 04 00.8**	**-9.4**
	comp=Z,31nm,1.0s,baz=32,slow=12,SNR=1.0						
ASAR				Lg	Lg	12 06 13.1	
	comp=Z,1.1nm,0.3s,baz=23,slow=29,SNR=5.0						
ASAR				LR	LR	12 08 01.7	
	comp=Z,8μm,21.1s,baz=39,slow=37						
ASPA	**Alice Springs**	**19.36**	**208**	P	**Pn**	**12 00 35.4**	**+1.7**
	baz=20						
PATS	**Pohnpei**	**19.86**	**48**	P	**P**	**12 00 38.0**	**+0.2**
	baz=20,SNR=16						
PATS	**Pohnpei**	**19.86**	**48**	P	**P**	**12 00 37.0**	**-0.9**
PATS	**Pohnpei**	**19.86**	**48**	P	**P**	**12 00 37.7**	**-0.2**
QLP	**Quilpie**	**19.90**	**178**	P	**Pn**	**12 00 41.1**	**+1.2**
	baz=20,SNR=45						
QLP	**Quilpie**	**19.90**	**178**	P	**Pn**	**12

DAV	Davao City (W)	22.49 307	LR	LR	12 10 15.9	
	comp=Z,3µm,18.9s,baz=128,slow=38					
BASI	Baing, Sumba	23.02 259	P	P	12 01 12.4	+0.5
	comp=Z,849nm,0.9s,comp=Z,11µmcomp=Z,12µm					
AULRC	Lightning Ridg	23.11 170	P	P	12 01 13.3	+0.7
GC1S	Gold Coast 1 S	23.44 157	P	P	12 01 17.9	+1.9
WRKA	Warakurna	23.46 217	P	P	12 01 16.8	+0.6
	baz=24,SNR=97					
WRKA	Warakurna	23.46 217	P	P	12 01 17.2	+0.9
KAPI	Kappang	23.74 272	P	P	12 01 18.7	-0.3
KAPI			IAmb	IAmb	12 01 32.5	
	comp=Z,473nm,1.1s					
KAPI	Kappang	23.74 272	P	P	12 01 18.7	-0.3
KAPI			pmax	pmax		
	comp=Z,473nm,1.2s					
TTSI	Tana Toraja	23.92 277	P	P	12 01 20.9	+0.2
	comp=Z,337nm,1.6s,comp=Z,11µm					
TOLI2	Tolitoli	23.99 288	P	P	12 01 20.7	-0.7
TOLI2	Tolitoli	23.99 288	P	P	12 01 20.9	-0.5
LCRK	Leigh Creek	24.27 191	P	P	12 01 24.5	+0.7
KOUNC	Koumac, New Ca	24.42 127	P	P	12 01 26.0	+0.7
KOUNC			IAMs_20	IAMs_20	12 11 32.7	
	comp=Z,17µm,18.0s					
KOUNC	Koumac, New Ca	24.42 127	P	P	12 01 26.4	+1.1
ARMA	Armidale	24.89 163	P	P	12 01 32.3	+2.6
	baz=25,SNR=10.0					
ARMA	Armidale	24.89 163	P	P	12 01 30.8	+1.1
ARMA			IAmb	IAmb	12 01 42.9	
	comp=Z,636nm,1.9s					
ARMA	Armidale	24.89 163	P	P	12 01 32.1	+2.5
CMSA	Cobar Meteorol	24.91 176	P	P	12 01 31.6	+2.1
	baz=25,SNR=20					
CMSA	Cobar Meteorol	24.91 176	P	P	12 01 31.7	+2.1
MULG	Mulgathing	25.21 200	P	P	12 01 32.7	+0.3
STKA	Stephens Creek	25.23 184	P	P	12 01 33.1	+0.6
	baz=26,SNR=13					
STKA	Stephens Creek	25.23 184	P	P	12 01 33.0	+0.5
STKA	Stephens Creek	25.23 184	P	P	12 01 32.8	+0.3
STKA	Stephens Creek	25.23 184	*c i* P	P	12 01 32.4	-0.1
STKA	Stephens Creek	25.23 184	P	P	12 01 33.1	+0.5
	comp=Z,39nm,0.8s,baz=350,slow=8.9,SNR=49					
STKA			LR	LR	12 13 23.0	
	comp=Z,13µm,19.9s,baz=352,slow=41					
	comp=Z,39nm,0.8s					
AUPHS	Peel High Scho	25.34 165	P	P	12 01 36.2	+2.7
PLAI	Plampang	25.65 263	P	P	12 01 35.0	-1.5
PLAI	Plampang	25.65 263	P	P	12 01 34.4	-2.1
	comp=Z,222nm,0.7s,comp=Z,3µmcomp=Z,5µm					
AUDCS	Dubbo College	25.95 170	P	P	12 01 40.9	+1.8
TWSI	Taliwang, Sumb	26.53 264	P	P	12 01 43.8	-0.7
	comp=Z,106nm,1.0s,comp=Z,2µmcomp=Z,4µm					
WHYH	Whyalla	26.90 191	P	P	12 01 48.2	+0.6
DZM	Mont Dzumac	26.93 127	P	P	12 01 48.4	+0.2
DZM	Mont Dzumac	26.93 127	P	P	12 01 48.8	+0.7
DZM	Mont Dzumac	26.93 127	LR	LR	12 12 24.6	
	comp=Z,3µm,20.4s,baz=307,slow=36					
LIFNC	LIFOU	26.93 124	P	P	12 01 49.0	+1.0
LIFNC	LIFOU	26.93 124	P	P	12 01 48.7	+0.7
BBOO	Buckleboo	27.02 194	P	P	12 01 49.2	+0.5
	baz=27,SNR=11					
BBOO	Buckleboo	27.02 194	P	P	12 01 49.0	+0.4
BBOO	Buckleboo	27.02 194	P	P	12 01 48.9	+0.2
ONTNC	Ouen Toro	27.06 128	P	P	12 01 49.6	+0.5
ONTNC	Ouen Toro	27.06 128	P	P	12 01 49.5	+0.3
HTT	Hallett	27.06 189	P	P	12 01 49.9	+0.7
	baz=27,SNR=12					
HTT	Hallett	27.06 189	P	P	12 01 49.7	+0.6
BKB	Balikpapan	27.11 280	P	P	12 01 49.6	-0.2
BKB			IAmb	IAmb	12 02 03.3	
	comp=Z,198nm,1.0s					
MBWA	Marble Bar	27.24 235	P	P	12 01 49.9	-0.9
MBWA	Marble Bar	27.24 235	IAMs_20	IAMs_20	12 13 50.8	
	comp=Z,19µm,18.0s					
MBWA	Marble Bar	27.24 235	P	P	12 01 49.7	-1.1
YATNC	Mamie plateau,	27.28 127	P	P	12 01 52.1	+0.9
PSA00	Pilbara Seismi	27.34 235	P	P	12 01 51.3	-0.4
PSA00	Pilbara Seismi	27.34 235	P	P	12 01 51.2	-0.6
OUENC	Ouen Island, N	27.42 127	P	P	12 01 52.1	-0.3
OUENC	Ouen Island, N	27.42 127	P	P	12 01 53.3	+0.9
MARNC	Mare, Loyalty	27.91 125	P	P	12 01 56.1	-0.7
MARNC	Mare, Loyalty	27.91 125	P	P	12 01 58.5	+1.7
YNG	Young	27.94 171	P	P	12 01 59.2	+2.2
	baz=28,SNR=12					
YNG	Young	27.94 171	P	P	12 01 58.8	+1.8
FORT	Forrest	28.12 209	P	P	12 01 59.1	+0.5
	baz=28,SNR=9.2					
FORT	Forrest	28.12 209	P	P	12 01 58.9	+0.3
FORT	Forrest	28.12 209	P	P	12 01 59.5	+0.9
SRBI	Singaraja	28.16 265	P	P	12 01 58.2	-0.9
	comp=Z,57nm,0.9s,comp=Z,2µmcomp=Z,4µm					
DNP	Denpasar	28.18 264	P	P	12 02 00.0	+0.7
	comp=Z,390nm,0.7s					
CAN	Canberra	29.04 171	P	P	12 02 08.1	+1.4
CAN	Canberra	29.04 171	P	P	12 02 09.1	+2.4
CAN	Canberra	29.04 171	P	P	12 02 08.1	+1.4
CAN			pmax	pmax		
	comp=Z,88nm,1.2s					
CAN			MLR	MLR		
	comp=Z,10µm,20.0s					
CNB	Canberra Magne	29.09 170	P	P	12 02 09.6	+2.3
ABJI	Asem Bagus	29.12 266	P	P	12 02 08.0	+0.3
	comp=Z,99nm,1.2s,comp=Z,2µmcomp=Z,5µm					
MTKI	Muara Teweh, K	29.14 280	P	P	12 02 07.9	0.0
	comp=Z,71nm,0.6s					
JAGI	Jajag, Banyuwa	29.21 264	P	P	12 02 06.2	-2.4
JAGI			IAmb	IAmb	12 02 18.2	
	comp=Z,241nm,1.5s					
JAGI	Jajag, Banyuwa	29.21 264	P	P	12 02 07.0	-1.5
JAGI	Jajag, Banyuwa	29.21 264	P	P	12 02 06.7	-1.8
	comp=Z,87nm,0.7s,comp=Z,2µmcomp=Z,3µm					
AUSMG	Snowy Mountain	30.05 172	P	P	12 02 17.9	+2.1
ARPS	Mount Arapiles	30.09 183	P	P	12 02 17.4	+1.3
	baz=30,SNR=21					
ARPS	Mount Arapiles	30.09 183	P	P	12 02 17.3	+1.3
TGY	Tagaytay City	30.44 313	LR	LR	12 15 32.8	
	comp=Z,3µm,18.4s,baz=112,slow=38					
BRAT	Ballarat	30.83 179	P	P	12 02 25.8	+3.3
TOO	Toolangi	30.90 177	P	P	12 02 24.5	+1.4
	baz=31,SNR=4.3					
TOO	Toolangi	30.90 177	P	P	12 02 25.1	+1.9
MEEK	Meekatharra	31.01 227	P	P	12 02 24.4	0.0
	baz=31,SNR=9.0					
MEEK	Meekatharra	31.01 227	P	P	12 02 24.2	-0.2
PWJI	Pagerwojo	31.53 265	P	P	12 02 27.4	-1.6
	comp=Z,59nm,1.5s					
KMBL	Kambalda	31.93 217	P	P	12 02 32.6	+0.2
	baz=32,SNR=12					
KMBL	Kambalda	31.93 217	P	P	12 02 32.6	+0.2
GIRL	Giralia	32.46 237	P	P	12 02 38.3	+1.2
	baz=32,SNR=3.1					
STKI	Sintang	32.69 280	P	P	12 02 39.8	+0.6
	comp=Z,76nm,1.0s					
UGM	Wanagama	32.80 266	P	P	12 02 39.3	-0.8
UGM	Wanagama	32.80 266	P	P	12 02 39.4	-0.8
UGM	Wanagama	32.80 266	P	P	12 02 39.4	-0.8
	comp=Z,177nm,1.6s,comp=Z,4µm					
SMRI	Semarang	32.89 267	P	P	12 02 40.2	-0.8
SMRI	Semarang	32.89 267	P	P	12 02 41.0	0.0
SMRI	Semarang	32.89 267	P	P	12 02 40.7	-0.3
	comp=Z,159nm,1.3s,comp=Z,4µm					
JCJ	Chichijima	33.51 358	LR	LR	12 16 36.7	
	comp=Z,3µm,18.1s,baz=136,slow=37					
MORW	Morawa	34.27 226	P	P	12 02 52.1	-0.8
MORW	Morawa	34.27 226	P	P	12 02 52.7	-0.2
KPJI	Karang Pucung	34.38 267	P	P	12 02 53.6	-0.3
	comp=Z,134nm,1.5s,comp=Z,2µm					
GLAD	Gladstone	34.48 174	P	P	12 02 56.6	+2.1
KLBR	Kellerberrin	34.65 221	P	P	12 02 56.0	-0.1
	baz=35,SNR=7.4					
KLBR	Kellerberrin	34.65 221	P	P	12 02 55.8	-0.3
AULHS	Lilydale High	34.67 175	P	P	12 02 59.3	+3.2
BLDU	Ballidu	34.73 223	P	P	12 02 56.2	-0.5
	baz=35,SNR=10					
YSA	Yasawairara	34.74 110	P	P	12 02 59.1	+2.1
CMJI	Cimerak	34.85 266	P	P	12 02 56.7	-1.3
	comp=Z,176nm,0.9s,comp=Z,2µmcomp=Z,3µm					
FUNA	Funafuti	35.37 95	P	P	12 03 02.1	-0.4
FUNA	Funafuti	35.37 95	P	P	12 03 02.9	+0.4
BBJI	Bungbulang	35.65 266	P	P	12 03 03.7	-1.3
LEM	Lembang	35.70 267	LR	LR	12 22 03.0	
	comp=Z,3µm,18.3s,baz=75,slow=44					
MOO	Moorlands	35.86 175	P	P	12 03 08.1	+1.8
	baz=36,SNR=4.5					
MOO	Moorlands	35.86 175	P	P	12 03 08.4	+2.1
NWAO	Narrogin (SRO)	35.86 220	P	P	12 03 06.2	-0.3
	comp=Z,11nm,0.7s,baz=45,slow=8.0,SNR=5.2					
NWAO			LR	LR	12 17 07.2	
	comp=Z,4µm,19.3s,baz=38,slow=35					
	comp=Z,11nm,0.7s					
MUN	Mundaring	35.91 222	P	P	12 03 06.7	-0.2
	baz=36,SNR=4.9					
CNJI	Cibinong	36.17 267	P	P	12 03 08.0	-1.3
	comp=Z,121nm,1.1s,comp=Z,5µm					
TAU	Tasmania Unive	36.33 175	P	P	12 03 12.6	+2.3
JOW	Kunigami	36.37 337	P	P	12 03 10.6	-0.3
JOW			IAmb	IAmb	12 03 13.3	
	comp=Z,265nm,1.3s					
JOW	Kunigami	36.37 337	P	P	12 03 11.7	+0.8
JOW	Kunigami	36.37 337	LR	LR	12 16 27.3	
	comp=Z,5µm,19.4s,baz=136,slow=34					
DGTI	Dogotuki	36.69 108	P	P	12 03 14.3	+0.5
YOJ	Yonaguni jima	36.79 328	IAMs_20	IAMs_20	12 18 05.2	
	comp=Z,9µm,19.0s					
YOJ	Yonaguni jima	36.79 328	P	P	12 03 15.3	+0.9
YULB	Yu-li	36.89 325	P	P	12 03 14.5	-0.8
YULB	Yu-li	36.89 325	P	P	12 03 15.7	+0.3
TAVE	Taveuni	37.10 109	P	P	12 03 18.9	+1.6
RKGY	Rocky Gully	37.14 218	P	P	12 03 18.5	+1.1
	baz=37,SNR=5.7					
TPUB	Ta-pu	37.21 324	P	P	12 03 17.2	-0.9
TPUB	Ta-pu	37.21 324	P	P	12 03 17.1	-0.9
NACB	Ninganchiao	37.33 326	P	P	12 03 18.7	-0.4
NACB	Ninganchiao	37.33 326	P	P	12 03 19.1	0.0
SSLB	Suanglung	37.39 325	P	P	12 03 19.0	-0.7
SSLB	Suanglung	37.39 325	P	P	12 03 20.1	+0.4
PPBI	Pangkal Pinang	37.56 275	P	P	12 03 21.6	+0.4
	comp=Z,41nm,0.7s,comp=Z,17µm					
XMI	Christmas Isla	37.63 261	P	P	12 03 22.4	+0.5
XMIS	Christmas Isla	37.67 261	P	P	12 03 22.0	-0.2
XMIS			IAmb	IAmb	12 03 23.6	
	comp=Z,118nm,1.0s					
XMIS	Christmas Isla	37.67 261	P	P	12 03 23.0	+0.8
YHNB	Yeheng	37.84 326	P	P	12 03 24.1	+0.6
YHNB	Yeheng	37.84 326	P	P	12 03 24.9	+1.4
TATO	Taipei	38.02 326	P	P	12 03 24.9	0.0
TATO	Taipei	38.02 326	P	P	12 03 25.6	+0.7
TATO	Taipei	38.02 326	P	P	12 03 26.0	+1.1
TATO			P	P	12 03 26.0	+1.1
KASI	Kota Agung	38.86 269	P	P	12 03 30.3	-1.8
	comp=Z,41nm,1.2s,comp=Z,1µm					
LWLI	Liwa	39.33 270	P	P	12 03 35.9	-0.3
	comp=Z,185nm,1.0s					
DSRI	Dabo	39.36 277	P	P	12 03 36.7	+0.3
	comp=Z,65nm,1.2s,comp=Z,3µm					
KNMB	Chin-men Tao	39.42 322	P	P	12 03 37.2	+0.5
KNMB			IAmb	IAmb	12 03 45.1	
	comp=Z,221nm,1.0s					
JHJ	Hachijo jima 2	39.65 355	LR	LR	12 17 46.4	
	comp=Z,5µm,19.6s,baz=178,slow=33					
QZH	Quanzhou	39.66 323	*i* P	P	12 03 39.0	+0.4
QZH			S	S	12 09 43.8	+2.9
QZH			SS	SS	12 12 35.5	-1.3
QZH			pmax	pmax		
	comp=Z,180nm,1.5s					
QZH			pmax	pmax		
	comp=Z,2µm,2.9s					
QZH			LR	LR		
	comp=Z,3µm,13.7s					
QZH			LR	LR		
	comp=Z,3µm,15.5s					
QZH			LR	LR		
	comp=Z,4µm,19.9s					
TPRI	Tanjung Pinang	39.67 279	P	P	12 03 39.8	+0.9
MNAI	Manna	40.47 271	P	P	12 03 43.9	-1.8
MNAI			IAmb	IAmb	12 03 48.0	
	comp=Z,150nm,0.7s					
JMN	Monobe	41.13 348	P	P	12 03 50.3	-0.4
JMN			IAmb	IAmb	12 03 58.1	
	comp=Z,175nm,1.2s					
JMN	Monobe	41.13 348	P	P	12 03 51.1	+0.4
JNU	Nakatsue	41.28 344	P	P	12 03 51.5	-0.5
JNU			IAmb	IAmb	12 04 02.0	
	comp=Z,222nm,1.4s					
JNU	Nakatsue	41.28 344	P	P	12 03 51.9	-0.1
JNU	Nakatsue	41.28 344	LR	LR	12 18 48.5	
	comp=Z,2µm,20.5s,baz=160,slow=33					
GZH	Guangzhou	41.74 316	P	P	12 03 57.8	+1.9
GZH			S	S	12 10 15.5	+3.5
GZH			pmax	pmax		
	comp=Z,77nm,1.3s					
GZH			LR	LR		
	comp=Z,1µm,16.0s					
GZH			LR	LR		
	comp=Z,850nm,11.0s					
QIZ	Qiongzhong	41.85 308	P	P	12 03 57.3	+0.4
QIZ			S	S	12 10 16.0	+2.2
QIZ			pmax	pmax		
	comp=Z,54nm,1.4s					
QIZ			LR	LR		
	comp=Z,2µm,15.2s					
QIZ			LR	LR		
	comp=Z,2µm,16.2s					
QIZ			LR	LR		
	comp=Z,3µm,17.5s					
QIZ	Qiongzhong	41.85 308	P	P	12 03 55.9	-1.0
QIZ	Qiongzhong	41.85 308	P	P	12 03 57.4	+0.5
INU	Inuyama	42.16 352	P	P	12 03 57.0	-2.1
INU	Inuyama	42.16 352	P	P	12 03 59.9	+0.8
KRJI	Kerinci	42.20 274	P	P	12 04 00.0	+0.1
	comp=Z,585nm,0.8s,comp=Z,4µm					
JGF	Kuroka	42.36 352	P	P	12 03 59.1	-1.7
JGF	Kuroka	42.36 352	P	P	12 03 59.6	-1.2
TOZ	Tahuroa Road	42.45 142	P	P	12 04 04.1	+2.6
TOZ			IAMs_20	IAMs_20	12 21 09.4	
	comp=Z,9µm,20.0s					
HIZ	Hauiti	42.55 143	IAMs_20	IAMs_20	12 21 58.2	
	comp=Z,8µm,18.0s					
RAO	Raoul Island	42.72 127	LR	LR	12 21 08.0	
	comp=Z,4µm,18.2s,baz=294,slow=35					
KSJJU	Jeju	42.95 339	P	P	12 04 07.0	+1.4
	SNR=7.6					
BKNI	Bangkinang	42.98 278	P	P	12 04 05.4	-0.8
BKNI			IAmb	IAmb	12 04 08.9	
	comp=Z,106nm,0.6s					
BKNI	Bangkinang	42.98 278	P	P	12 04 06.8	+0.6
BKNI	Bangkinang	42.98 278	P	P	12 04 06.3	+0.1
	comp=Z,174nm,0.7s,comp=Z,5µm					
JTU	Tsushima	43.02 343	P	P	12 04 06.1	0.0
DSZ	Denniston Nort	43.07 149	IAMs_20	IAMs_20	12 21 47.6	
	comp=Z,9µm,19.0s					
SSE	Sheshan	43.15 331	P	P	12 04 07.0	-0.2
SSE			S	S	12 10 32.5	0.0
SSE			pmax	pmax		
	comp=Z,150nm,1.2s					
SSE			pmax	pmax		
	comp=Z,700nm,10.3s					
SSE			LR	LR		
	comp=Z,1µm,14.6s					
SSE			LR	LR		
	comp=Z,1µm,15.2s					
TKNZ	Takaka Hill	43.17 147	P	P	12 04 09.5	+2.2
MJAR	Matsushiro Arr	43.19 354	P	P	12 04 04.8	-2.7
	comp=Z,15nm,0.7s,baz=182,slow=6.7,SNR=34					
MJAR			PcP	PcP	12 05 57.4	+0.7
	comp=Z,12nm,1.0s,baz=152,slow=3.7,SNR=4.0					
MJAR			LR	LR	12 21 05.9	
	comp=Z,4µm,18.3s,baz=150,slow=35					
	comp=Z,15nm,0.7s					
MAJO	Matsushiro	43.19 354	P	P	12 04 05.2	-2.3
MAJO	Matsushiro	43.19 354	P	P	12 04 05.6	-1.9
MAJO	Matsushiro	43.19 354	*c i* P	P	12 04 04.9	-2.6
MAJO			pmax	pmax		
	comp=Z,128nm,1.5s					
MJB9	Matsu-Tunnel	43.19 354	P	P	12 04 06.7	-0.9
WATZ	Wairara	43.21 143	P	P	12 04 12.8	+5.1
GRRZ	Galatos Road	43.21 142	P	P	12 04 10.9	+3.2
MRNZ	Matariki Terra	43.32 148	P	P	12 04 10.3	+1.8
HRRZ	Handcock Road	43.34 142	P	P	12 04 12.8	+4.0
PKVZ	Pokaka	43.35 143	P	P	12 04 12.1	+3.3
WPRZ	Whakapapatarin	43.35 142	P	P	12 04 12.8	+4.0
KATZ	Kakaramea	43.35 143	P	P	12 04 12.6	+3.6
WTVZ	West Tongariro	43.38 143	P	P	12 04 12.7	+3.6
JCZ	Jackson Bay	43.38 153	P	P	12 04 11.6	+2.5
KRVZ	Karewarewa	43.40 143	P	P	12 04 13.2	+3.9
COVZ	Chateau Observ	43.41 143	P	P	12 04 12.7	+3.3
NNVZ	North Ngauruho	43.41 143	P	P	12 04 13.2	+3.8
NTVZ	North Tongarir	43.42 143	P	P	12 04 13.1	+3.6
NGZ	Ngauruhoe	43.43 143	P	P	12 04 13.1	+3.5
FWVZ	Far West T-bar	43.45 143	P	P	12 04 13.2	+3.3
TMVZ	Te Maari	43.45 143	P	P	12 04 13.6	+3.9
SNVZ	South Ngauruho	43.46 143	P	P	12 04 13.5	+3.7
ETVZ	East Tongariro	43.47 143	P	P	12 04 14.2	+4.3
TRVZ	Turoa	43.47 143	P	P	12 04 13.5	+3.4
PRRZ	Plateau Road	43.48 142	P	P	12 04 13.3	+3.4
CSDB	Cheongsando	43.50 340	P	P	12 04 10.0	0.0
	SNR=18					
NNZ	Nelson	43.53 147	P	P	12 04 10.7	+0.5
NNZ			IAmb	IAmb	12 04 17.0	
	comp=Z,184nm,1.3s					
NNZ			IAMs_20	IAMs_20	12 22 31.7	
	comp=Z,6µm,18.0s					
PPSI	Pulau Pagai	43.56 273	P	P	12 04 10.1	-0.7
	comp=Z,198nm,0.8s,comp=Z,3µm					
INZ	Inchbonnie	43.61 150	IAMs_20	IAMs_20	12 20 52.7	
	comp=Z,9µm,20.0s					
WAN2	Wando-Q330s	43.76 340	P	P	12 04 13.0	+0.9
	SNR=12					
KOHB	KOHEUNG	43.77 340	P	P	12 04 12.0	-0.2
	SNR=15					
URZ	Urewera	43.78 141	LR	LR	12 22 18.6	
	comp=Z,5µm,18.8s,baz=45,slow=36					
URZ	Urewera	43.78 141	P	P	12 04 13.8	+1.6
DCZ	Deep Cove	43.81 156	P	P	12 04 13.8	+1.4
DCZ			IAmb	IAmb	12 04 16.4	
	comp=Z,161nm,1.2s					
HAZ	Te Kaha	43.90 140	P	P	12 04 14.2	+1.0
RTZ	Ruatahuna	43.91 142	P	P	12 04 15.4	+2.0
RTZ	Ruatahuna	43.91 142	P	P	12 04 15.2	+1.7
BOSB	Boseong-gun	43.93 340	P	P	12 04 13.1	-0.3
	SNR=19					
KSJAH	Jangheung	43.95 340	P	P	12 04 14.0	+0.4
	SNR=14					
BKZ	Black Stump Fm	43.96 142	P	P	12 04 15.4	+1.7
BKZ			IAmb	IAmb	12 04 16.7	
	comp=Z,112nm,0.9s					
BKZ	Black Stump Fm	43.96 142	P	P	12 04 15.8	+2.1
BKZ	Black Stump Fm	43.96 142	P	P	12 04 16.3	+2.5
TUWZ	Tuamarina	43.98 147	P	P	12 04 15.5	+1.7
TUWZ	Tuamarina	43.98 147	P	P	12 04 15.7	+1.9
TCW	Tory Channel	44.01 146	P	P	12 04 15.2	+1.1
GGDB	Gageodo	44.02 338	P	P	12 04 14.3	+0.1
	SNR=13					
JEJB	Jeongja	44.05 343	P	P	12 04 15.0	+0.6
	SNR=10					
LTZ	Lake Taylor	44.06 149	P	P	12 04 15.6	+1.1
LTZ			IAmb	IAmb	12 04 18.4	
	comp=Z,237nm,1.4s					
LTZ			IAMs_20	IAMs_20	12 22 49.8	
	comp=Z,8µm,19.0s					
MWZ	Matawai	44.08 141	P	P	12 04 17.2	+2.5
WKZ	Wanaka	44.08 154	P	P	12 04 15.8	+1.1
WKZ			IAmb	IAmb	12 04 47.5	
	comp=Z,167nm,1.3s					
WKZ			IAMs_20	IAMs_20	12 24 45.3	
	comp=Z,6µm,18.0s					
YOA0	Yeongam	44.09 340	P	P	12 04 16.0	+1.3
	SNR=22					
KSYSU	YEOSU	44.11 341	P	P	12 04 15.0	0.0
	SNR=12					
MXZ	Matakaoa Point	44.12 139	P	P	12 04 16.3	+1.3
MXZ			IAmb	IAmb	12 04 21.1	
	comp=Z,104nm,0.7s					
MXZ			IAMs_20	IAMs_20	12 22 39.7	
	comp=Z,8µm,18.0s					
MXZ	Matakaoa Point	44.12 139	P	P	12 04 18.3	+3.3
MLZ	Mavora Lakes	44.13 155	P	P	12 04 16.6	+1.6
MLZ			IAmb	IAmb	12 04 19.6	
	comp=Z,148nm,0.9s					
BSWZ	Blackbirch Sta	44.14 147	P	P	12 04 16.6	+1.4
RPZ	Rata Peaks	44.16 151	P	P	12 04 17.4	+2.2
RPZ			IAmb	IAmb	12 04 19.7	
	comp=Z,118nm,0.9s					
RPZ			IAMs_20	IAMs_20	12 24 30.2	
	comp=Z,7µm,18.0s					
RPZ	Rata Peaks	44.16 151	LR	LR	12 21 18.3	
	comp=Z,5µm,19.2s,baz=312,slow=34					
KSUSN	Ulsan	44.20 343	P	P	12 04 16.0	+0.4
	SNR=30					
PYZ	Puysegur Point	44.20 157	P	P	12 04 17.6	+2.1
PYZ			IAmb	IAmb	12 04 19.1	
	comp=Z,217nm,1.0s					
PYZ	Puysegur Point	44.20 157	P	P	12 04 18.2	+2.7
TSZ	Takapari Road	44.21 144	P	P	12 04 18.0	+2.2
LBZ	Lake Benmore	44.26 153	P	P	12 04 17.0	+0.9
LBZ			IAmb	IAmb	12 04 19.9	
	comp=Z,127nm,1.1s					
JMM	Marumori	44.29 357	P	P	12 04 14.2	-2.0
JMM	Marumori	44.29 357	P	P	12 04 15.7	-0.6
KSSAC	SANCHEONG	44.30 342	P	P	12 04 17.0	+0.6
	SNR=6.4					
SNZO	South Karori	44.32 146	IAMs_20	IAMs_20	12 24 02.6	
	comp=Z,8µm,18.0s					
KSDAG	Daegu	44.33 343	P	P	12 04 17.0	+0.3
	SNR=16					
OXZ	Oxford	44.34 150	P	P	12 04 17.6	+0.9
OXZ			IAMs_20	IAMs_20	12 23 50.2	
	comp=Z,7µm,18.0s					
CMWZ	Cape Campbell	44.35 147	P	P	12 04 17.7	+0.9
KSHAC	HAPCHEON	44.35 342	P	P	12 04 17.0	+0.2
	SNR=21					
MRZ	Mangatainoka R	44.38 145	P	P	12 04 17.7	+0.7
MRZ			IAmb	IAmb	12 04 20.7	
	comp=Z,258nm,1.4s					
HAMB	Hamyang	44.44 341	P	P	12 04 18.0	+0.5
	SNR=14					
KHZ	Kahutara	44.45 148	P	P	12 04 18.8	+1.2
KHZ			IAMs_20	IAMs_20	12 21 56.2	
	comp=Z,10µm,19.0s					
NAWB	Namwon	44.47 341	P	P	12 04 19.0	+1.2
	SNR=6.7					
HUK2	Heuksan-myeon	44.47 339	P	P	12 04 18.2	+0.4
	SNR=25					
BHW	Baring Head	44.48 146	P	P	12 04 17.9	+0.1
BHW			IAmb	IAmb	12 04 20.2	
	comp=Z,225nm,1.5s					
KSKCH	Geochang	44.48 342	P	P	12 04 18.1	+0.3
	SNR=24					
WHZ	Wether Hill Ro	44.48 156	P	P	12 04 18.3	+0.5
AFI	Afiamalu	44.49 103	P	P	12 04 18.7	+0.3
AFI			IAmb	IAmb	12 04 27.8	
	comp=Z,162nm,1.1s					
AFI	Afiamalu	44.49 103	P	P	12 04 19.4	+1.0
AFI	Afiamalu	44.49 103	P	P	12 04 18.7	+0.3
AFI			pmax	pmax		
	comp=Z,162nm,1.1s					
YOCB	Yeongcheon	44.51 343	P	P	12 04 19.0	+0.9
	SNR=12					
KSDAU	Deagu-acc	44.52 343	P	P	12 04 19.0	+0.9
	SNR=5.8					
GVZ	Greta Valley S	44.59 149	P	P	12 04

KSADO	**Andong**	**44.91**	**343**	P	**P**	**12 04 22.0**	**+0.7**
	SNR=35							
MQZ	**McQueen's Vall**	**44.93**	**150**	P	**P**	**12 04 22.5**	**+1.2**
MQZ				IAmb	IAmb	12 04 23.7		
	comp=Z,166nm,1.3s							
MQZ				IAMs_20	IAMs_20	12 24 24.7		
	comp=Z,9μm,18.0s							
EUSB	**Uiseong**	**44.94**	**343**	P	**P**	**12 04 22.0**	**+0.5**
	SNR=30							
KSGUM	**GUMI**	**44.94**	**342**	P	**P**	**12 04 23.2**	**+1.7**
	SNR=6.0							
KSJEO	**Jeonju**	**44.98**	**341**	P	**P**	**12 04 23.0**	**+1.2**
	SNR=6.6							
SMKB	**Mukjeong-gil**	**44.99**	**340**	P	**P**	**12 04 23.0**	**+1.1**
	SNR=8.4							
KSCPR	**CHUPUNGNYEONG**	**45.02**	**342**	P	**P**	**12 04 23.0**	**+0.8**
	SNR=11							
NJ2	**Nanjing**	**45.07**	**330**	⇓*i*P	**P**	**12 04 23.0**	**+0.4**
NJ2				pP	**pP**	**12 04 29.5**	**-0.3**
NJ2				S	**S**	**12 11 04.3**	**+3.8**
NJ2				pmax	pmax			
	comp=Z,91nm,2.0s							
NJ2				pmax	pmax			
	comp=Z,1μm,3.6s							
NJ2				LR	LR			
	comp=Z,3μm,14.2s							
NJ2				LR	LR			
	comp=Z,3μm,18.9s							
NJ2				LR	LR			
	comp=Z,4μm,17.1s							
GULI	**GuiLin**	**45.23**	**316**	⇑P	**P**	**12 04 24.3**	**+0.3**
GULI				S	**S**	**12 11 03.8**	**+0.7**
GULI				pmax	pmax			
	comp=Z,120nm,1.6s							
GULI				LR	LR			
	comp=Z,3μm,18.4s							
GULI				LR	LR			
	comp=Z,2μm,20.6s							
GULI				LR	LR			
	comp=Z,3μm,16.3s							
TJN	**Taejon**	**45.36**	**342**	P	**P**	**12 04 23.5**	**-1.3**
TJN	**Taejon**	**45.36**	**342**	P	**P**	**12 04 24.7**	**-0.1**
TJN	**Taejon**	**45.36**	**342**	*d*iP	**P**	**12 04 22.9**	**-1.9**
CNSH	**ChangSha**	**45.48**	**321**	⇑P	**P**	**12 04 27.0**	**+1.1**
CNSH				S	**S**	**12 11 08.0**	**+1.4**
CNSH				pmax	pmax			
	comp=Z,12nm,0.4s							
CNSH				LR	LR			
	comp=Z,2μm,21.7s							
CNSH				LR	LR			
	comp=Z,2μm,19.2s							
CNSH				LR	LR			
	comp=Z,3μm,22.2s							
RPSI	**Rantau Prapat**	**45.51**	**280**	P	**P**	**12 04 26.1**	**-0.3**
PSI	**Prapat**	**45.53**	**280**	P	**P**	**12 04 26.5**	**-0.2**
PSI	**Prapat**	**45.53**	**280**	P	**P**	**12 04 26.1**	**-0.6**
PSI				pmax	pmax			
	comp=Z,73nm,1.0s							
PSI				MLR	MLR			
	comp=Z,1μm,20.0s							
KSRS	**Korea Array**	**46.18**	**343**	P	**P**	**12 04 31.0**	**-0.3**
KSRS	**Korea Array**	**46.18**	**343**	P	**P**	**12 04 30.9**	**-0.3**
	comp=Z,80nm,0.9s,baz=162,slow=8.8,SNR=148							
KSRS				LR	LR	12 23 06.0		
	comp=Z,3μm,18.2s,baz=165,slow=35							
	comp=Z,80nm,0.9s							
KSAR	**Wonju Array Be**	**46.18**	**343**	P	**P**	**12 04 31.1**	**-0.2**
KSAR	**Wonju Array Be**	**46.18**	**343**	P	**P**	**12 04 31.1**	**-0.2**
KS19	**Wonju Array Si**	**46.24**	**343**	P	**P**	**12 04 31.7**	**-0.1**
WHN	**Wuhan**	**46.33**	**324**	⇑*i*P	**P**	**12 04 33.8**	**+1.2**
WHN				pP	**pP**	**12 04 41.0**	**+1.2**
WHN				sP	**sP**	**12 04 44.0**	**+1.4**
WHN				S	**S**	**12 11 23.5**	**+4.8**
WHN				pmax	pmax			
	comp=Z,710nm,1.4s							
WHN				pmax	pmax			
	comp=Z,3μm,2.7s							
WHN				LR	LR			
	comp=Z,7μm,15.6s							
WHN				LR	LR			
	comp=Z,4μm,15.9s							
WHN				LR	LR			
	comp=Z,9μm,18.2s							
SRIT	**Nakonsritamara**	**46.35**	**288**	P	**P**	**12 04 32.6**	**-0.4**
SRIT				IAmb	IAmb	12 04 34.8		
	comp=Z,225nm,1.8s							
SRIT	**Nakonsritamara**	**46.35**	**288**	P	**P**	**12 04 34.2**	**+1.2**
GSI	**Gunungsitoli**	**46.56**	**278**	P	**P**	**12 04 33.5**	**-1.2**
GSI	**Gunungsitoli**	**46.56**	**278**	P	**P**	**12 04 34.3**	**-0.5**
GSI	**Gunungsitoli**	**46.56**	**278**	P	**P**	**12 04 34.1**	**-0.7**
	comp=Z,61nm,0.7s,comp=Z,2μmcomp=Z,4μm							
INCN	**Inchon**	**46.60**	**341**	P	**P**	**12 04 35.0**	**+0.4**
INCN	**Inchon**	**46.60**	**341**	P	**P**	**12 04 35.3**	**+0.7**
INCN	**Inchon**	**46.60**	**341**	P	**P**	**12 04 35.0**	**+0.4**
INCN				pmax	pmax			
	comp=Z,317nm,1.2s							
INCN	**Inchon**	**46.60**	**341**	P	**P**	**12 04 35.3**	**+0.7**
NAYO	**Nakonayok**	**46.77**	**297**	P	**P**	**12 04 37.5**	**+1.2**
KCSI	**Kotacane, Aceh**	**46.80**	**281**	P	**P**	**12 04 35.6**	**-1.0**
	comp=Z,63nm,1.0s,comp=Z,2μm							
NONG	**Nongkai**	**46.80**	**302**	P	**P**	**12 04 36.5**	**0.0**
NIUE	**Niue**	**46.87**	**110**	P	**P**	**12 04 36.8**	**-0.2**
	baz=47,SNR=4.1							
NIUE	**Niue**	**46.87**	**110**	P	**P**	**12 04 37.8**	**+0.7**
NIUE	**Niue**	**46.87**	**110**	P	**P**	**12 04 39.0**	**+1.9**
JTM	**Tenmabayashi**	**47.19**	**357**	P	**P**	**12 04 38.1**	**-1.0**
JTM				IAmb	IAmb	12 04 50.0		
	comp=Z,155nm,1.1s							
JTM	**Tenmabayashi**	**47.19**	**357**	P	**P**	**12 04 39.3**	**+0.2**
SLVN	**Son La**	**47.79**	**307**	P	**P**	**12 04 44.6**	**+0.4**
SLVN				IAmb	IAmb	12 04 53.4		
	comp=Z,115nm,1.4s							
SNSI	**Sinabang, Aceh**	**47.99**	**279**	P	**P**	**12 04 46.5**	**+0.6**
	comp=Z,217nm,1.4s,comp=Z,4μmcomp=Z,5μm							
MLSI	**Meulaboh, Aceh**	**48.30**	**282**	P	**P**	**12 04 47.1**	**-1.1**
	comp=Z,107nm,1.1s							
PYAG	**Pyongyang**	**48.31**	**341**	P	**P**	**12 04 47.5**	**-0.3**
PYAG				S	**S**	**12 11 45.8**	**-0.8**
PYAG				AmB				
	comp=Z,790nm,1.9s							
GYA	**Guiyang**	**48.57**	**314**	⇑*i*P	**P**	**12 04 51.5**	**+1.3**
GYA				sP	sP	12 04 58.8	-1.5
GYA				S	**S**	**12 11 53.3**	**+2.3**
GYA				pmax	pmax			
	comp=Z,100nm,2.0s							
GYA				pmax	pmax			
	comp=Z,1μm,3.5s							
GYA				LR	LR			
	comp=Z,2μm,16.8s							
GYA				LR	LR			
	comp=Z,1μm,14.8s							
GYA				LR	LR			
	comp=Z,3μm,20.0s							
HHU	**Hamhung**	**48.59**	**344**	P	**P**	**12 04 49.4**	**-0.5**
HHU				S	**S**	**12 11 50.0**	**-0.6**
HHU				AmB				
	comp=Z,1μm,2.8s							
SRDT	**SRDT**	**48.74**	**295**	P	**P**	**12 04 52.9**	**+1.3**
ENH	**Enshi**	**49.10**	**320**	P	**P**	**12 04 53.7**	**-0.4**
ENH	**Enshi**	**49.10**	**320**	P	**P**	**12 04 54.2**	**+0.1**
TIA	**Tai'an**	**49.27**	**332**	P	**P**	**12 04 54.5**	**-0.8**
TIA				pP	**sP**	**12 05 05.5**	**+0.1**
TIA				S	**S**	**12 12 00.3**	**-0.1**
TIA				sS	**sS**	**12 12 17.5**	**+5.1**
TIA				pmax	pmax			
	comp=Z,26nm,1.4s							
TIA				pmax	pmax			
	comp=Z,400nm,3.2s							
TIA				LR	LR			
	comp=Z,1μm,16.9s							
TIA				LR	LR			
	comp=Z,2μm,14.9s							
TIA				LR	LR			
	comp=Z,2μm,18.3s							
MCQ	**Macquarie Isla**	**49.37**	**168**	P	**P**	**12 04 58.6**	**+2.8**
	baz=50,SNR=6.8							
MCQ	**Macquarie Isla**	**49.37**	**168**	P	**P**	**12 04 57.4**	**+1.6**
MCQ	**Macquarie Isla**	**49.37**	**168**	P	**P**	**12 04 58.1**	**+2.3**
MCQ	**Macquarie Isla**	**49.37**	**168**	P	**P**	**12 04 57.4**	**+1.6**
MCQ				pmax	pmax			
	comp=Z,304nm,1.1s							
PHRA	**Phrae**	**49.47**	**301**	P	**P**	**12 04 57.9**	**+0.8**
DL2	**Dalian**	**49.62**	**338**	⇑*i*P	**P**	**12 04 57.8**	**-0.1**
DL2				S	**S**	**12 12 05.0**	**-0.1**
DL2				pmax	pmax			
	comp=Z,68nm,1.5s							
DL2				pmax	pmax			
	comp=Z,700nm,4.6s							
DL2				LR	LR			
	comp=Z,2μm,19.0s							
DL2				LR	LR			
	comp=Z,2μm,16.5s							
DL2				LR	LR			
	comp=Z,4μm,17.4s							
SUJ	**Sinuiju**	**49.67**	**341**	P	**P**	**12 04 58.0**	**-0.3**
SUJ				S	**S**	**12 12 04.9**	**-0.9**
SUJ				AmB				
	comp=Z,1μm,1.6s							
CRAI	**Chiangrai**	**50.13**	**303**	P	**P**	**12 05 03.0**	**+0.9**
MSHR	**Mys Shultsa**	**50.22**	**348**	*de*P	**P**	**12 05 02.6**	**+0.2**
MSHR				pmax	pmax			
	comp=Z,65nm,1.0s							
PSTR	**Posyet**	**50.36**	**348**	*c*iP	**P**	**12 05 02.7**	**-0.7**
LYN	**LuoYang**	**50.36**	**326**	⇑P	**P**	**12 05 03.8**	**+0.1**
LYN				S	**S**	**12 12 14.8**	**-0.9**
LYN				pmax	pmax			
	comp=Z,160nm,1.4s							
LYN				pmax	pmax			
	comp=Z,2μm,7.2s							
LYN				LR	LR			
	comp=Z,4μm,17.9s							
LYN				LR	LR			
	comp=Z,1μm,17.9s							
LYN				LR	LR			
	comp=Z,5μm,17.2s							
YUK	**Yuzh-Kuril'sk**	**50.42**	**2**	⇑*e*P	**P**	**12 05 03.3**	**-0.6**
ASAJ	**Asahikawa**	**50.47**	**359**	P	**P**	**12 05 03.9**	**-0.4**
ASAJ				pmax	pmax			
	comp=Z,146nm,1.3s							
ASAJ	**Asahikawa**	**50.47**	**359**	LR	LR	12 24 04.5		
	comp=Z,1μm,21.0s,baz=189,slow=33							
JKA	**Kamikawa-asahi**	**50.47**	**359**	P	**P**	**12 05 03.9**	**-0.3**
JKA				IAmb	IAmb	12 05 05.2		
	comp=Z,146nm,1.3s							
CM31	**Chiang Mai Arr**	**50.55**	**300**	P	**P**	**12 05 06.1**	**+0.7**
CM31				IAmb	IAmb	12 05 08.0		
	comp=Z,187nm,1.4s							
CMAR	**Chiang Mai Arr**	**50.55**	**300**	P	**P**	**12 05 06.1**	**+0.7**
	comp=Z,55nm,1.1s,baz=124,slow=6.0,SNR=172							
CMAR				LR	LR	12 26 52.3		
	comp=Z,898nm,21.4s,baz=120,slow=37							
CMAR				PKP2ab		12 36 45.9		
	comp=Z,0.4nm,0.3s,baz=294,slow=5.1,SNR=4.7							
	comp=Z,55nm,1.1s							
VLA	**Vladivostok**	**50.59**	**349**	*i*P	**P**	**12 05 05.0**	**-0.2**
VLA				pmax	pmax			
	comp=Z,150nm,1.1s							
KMI	**Kunming**	**50.70**	**310**	⇑P	**P**	**12 05 08.3**	**+1.7**
KMI				sP	pP	12 05 15.0	+1.1
KMI				S	**S**	**12 12 24.0**	**+2.9**
KMI				pmax	pmax			
	comp=Z,99nm,1.5s							
KMI				pmax	pmax			
	comp=Z,1μm,6.5s							
KMI				LR	LR			
	comp=Z,1μm,21.2s							
KMI				LR	LR			
	comp=Z,2μm,21.2s							
KMI				LR	LR			
	comp=Z,3μm,17.5s							
CHTO	**Chiang Mai**	**50.70**	**301**	P	**P**	**12 05 07.3**	**+0.8**
CHTO	**Chiang Mai**	**50.70**	**301**	P	**P**	**12 05 07.1**	**+0.6**
CHTO	**Chiang Mai**	**50.70**	**301**	P	**P**	**12 05 07.3**	**+0.8**
CHTO				pmax	pmax			
	comp=Z,97nm,1.2s							
CHTO	**Chiang Mai**	**50.70**	**301**	P	**P**	**12 05 07.4**	**+0.9**
HNS	**HongShan**	**51.38**	**331**	⇑P	**P**	**12 05 11.0**	**-0.3**
HNS				S	**S**	**12 12 30.0**	**+0.3**
HNS				pmax	pmax			
	comp=Z,100nm,1.6s							
HNS				LR	LR			
	comp=Z,3μm,19.1s							
HNS				LR	LR			
	comp=Z,3μm,17.7s							
HNS				LR	LR			
	comp=Z,4μm,18.1s							
SNY	**Shenyang**	**51.53**	**341**	⇑P	**P**	**12 05 11.8**	**-0.5**
SNY				S	**S**	**12 12 26.3**	**-5.2**
SNY				pmax	pmax			
	comp=Z,61nm,1.2s							
SNY				pmax	pmax			
	comp=Z,960nm,4.6s							
SNY				LR	LR			
	comp=Z,960nm,17.1s							
SNY				LR	LR			
	comp=Z,2μm,16.1s							
SNY				LR	LR			
	comp=Z,3μm,17.3s							
USA0B	**Ussuriysk Arra**	**51.62**	**349**	P	**P**	**12 05 12.5**	**-0.4**
USA0B				IAmb	IAmb	12 05 15.1		
	comp=Z,120nm,0.7s							
USA0B	**Ussuriysk Arra**	**51.62**	**349**	*c*iP	**P**	**12 05 12.1**	**-0.8**
USRK	**Ussuriysk Ar.**	**51.62**	**349**	P	**P**	**12 05 12.3**	**-0.6**
	comp=Z,123nm,0.7s,baz=174,slow=6.2,SNR=110							
USRK				PcP	**PcP**	**12 06 25.3**	**-1.2**
	comp=Z,20nm,0.8s,baz=163,slow=6.0,SNR=1.6							
USRK				LR	LR	12 25 25.6		
	comp=Z,3μm,18.2s,baz=167,slow=34							
	comp=Z,123nm,0.7s							
KUR	**Kuril'sk**	**51.72**	**4**	*e*P	**P**	**12 05 13.2**	**-0.5**
KUR				*e*S	**S**	**12 12 34.8**	**+0.7**
KUR				*e*		12 14 58.9		
KUR				pmax	pmax			
	comp=Z,2μm,3.6s							
KUR				MLR	MLR			
	comp=Z,900nm,15.0s							
TEY	**Ternei**	**51.76**	**354**	⇓*e*P	**P**	**12 05 11.6**	**-2.3**
TEY				pmax	pmax			
	comp=Z,10.0nm,1.6s							
TEY				pmax	pmax			
	comp=Z,100nm,7.2s							
JOHN	**Johnston Islan**	**51.85**	**63**	IAMs_20	IAMs_20	12 24 23.9		
	comp=Z,6μm,21.0s							
XAN	**Xi'an**	**52.03**	**323**	⇑P	**P**	**12 05 16.0**	**-0.2**
XAN				pP	pP	12 05 23.0	-0.6
XAN				PcP	**PcP**	**12 06 31.3**	**+2.9**
XAN				S	**S**	**12 12 38.0**	**-0.8**
XAN				sS	sS	12 12 49.5	-1.4
XAN				SS	**SS**	**12 16 14.5**	**-1.8**
XAN				pmax	pmax			
	comp=Z,220nm,1.5s							
XAN				pmax	pmax			
	comp=Z,2μm,4.0s							
XAN				LR	LR			
	comp=Z,2μm,18.0s							
XAN				LR	LR			
	comp=Z,3μm,17.0s							
XAN				LR	LR			
	comp=Z,4μm,16.7s							
PZH	**PanZhiHua**	**52.20**	**311**	P	**P**	**12 05 18.3**	**+0.6**
PZH				pP	**pP**	**12 05 23.0**	**-2.1**
PZH				sP	**sP**	**12 05 25.5**	**-2.4**
PZH				S	**S**	**12 12 44.5**	**+2.9**
PZH				pmax	pmax			
	comp=Z,30nm,2.0s							
PZH				pmax	pmax			
	comp=Z,950nm,7.3s							
PZH				LR	LR			
	comp=Z,1μm,20.2s							
PZH				LR	LR			
	comp=Z,1μm,17.3s							
PZH				LR	LR			
	comp=Z,2μm,18.6s							
MDJ	**Mudanjiang**	**52.49**	**347**	P	**P**	**12 05 19.8**	**+0.4**
MDJ				pP	sP	12 05 29.3	-0.2
MDJ				sP	pP	12 05 34.3	+7.4
MDJ				S	**S**	**12 12 44.5**	**-0.2**
MDJ				pmax	pmax			
	comp=Z,74nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,1μm,7.9s							
MDJ				LR	LR			
	comp=Z,3μm,17.2s							
MDJ				LR	LR			
	comp=Z,2μm,19.4s							
MDJ				LR	LR			
	comp=Z,4μm,21.1s							
MDJ	**Mudanjiang**	**52.49**	**347**	P	**P**	**12 05 18.3**	**-1.1**
MDJ				IAmb	IAmb	12 05 20.4		
	comp=Z,224nm,1.7s							
MDJ	**Mudanjiang**	**52.49**	**347**	P	**P**	**12 05 18.9**	**-0.5**
CN2	**Changchun**	**52.76**	**344**	P	**P**	**12 05 20.8**	**-0.6**
CN2				PcP	**PcP**	**12 06 30.0**	**-0.8**
CN2				S	**S**	**12 12 46.3**	**-2.1**
CN2				pmax	pmax			
	comp=Z,70nm,1.4s							
CN2				pmax	pmax			
	comp=Z,800nm,3.0s							
CN2				LR	LR			
	comp=Z,3μm,17.0s							
CN2				LR	LR			
	comp=Z,3μm,17.0s							
CN2				LR	LR			
	comp=Z,3μm,16.0s							
TIY	**Taiyuan**	**52.76**	**329**	⇓P	**P**	**12 05 22.0**	**+0.3**
TIY				S	**S**	**12 12 52.3**	**+3.5**
TIY				SS	**SS**	**12 16 24.5**	**-3.4**
TIY				pmax	pmax			
	comp=Z,52nm,1.4s							
TIY				pmax	pmax			
	comp=Z,980nm,4.4s							
TIY				LR	LR			
	comp=Z,4μm,18.0s							
TIY				LR	LR			
	comp=Z,2μm,17.7s							
TIY				LR	LR			
	comp=Z,4μm,18.4s							
BJT	**Baijiatuau**	**52.81**	**334**	P	**P**	**12 05 21.5**	**-0.3**
BJT	**Baijiatuau**	**52.81**	**334**	P	**P**	**12 05 22.0**	**+0.1**
BJT	**Baijiatuau**	**52.81**	**334**	P	**P**	**12 05 21.5**	**-0.3**
BJT				pmax	pmax			
	comp=Z,277nm,1.2s							
BJI	**Beijing**	**52.82**	**334**	P	**P**	**12 05 21.5**	**-0.4**
BJI				sP	**pP**	**12 05 28.0**	**-1.3**
BJI				S	**S**	**12 12 50.8**	**+1.5**
BJI				sS	**sS**	**12 13 02.5**	**+1.1**
BJI				pmax	pmax			
	comp=Z,130nm,1.3s							
BJI				pmax	pmax			
	comp=Z,860nm,3.1s							
BJI				LR	LR			
	comp=Z,2μm,18.4s							
BJI				LR	LR			
	comp=Z,1μm,15.8s							
BJI				LR	LR			
	comp=Z,3μm,18.0s							
CD2	**Chengdu**	**53.29**	**317**	P	**P**	**12 05 26.3**	**+0.7**
CD2				S	**S**	**12 12 57.8**	**+1.6**
CD2				pmax	pmax			
	comp=Z,140nm,1.1s							
CD2				pmax	pmax			
	comp=Z,780nm,4.5s							
CD2				LR	LR			
	comp=Z,790nm,13.1s							
CD2				LR	LR			
	comp=Z,830nm,15.3s							
CD2				LR	LR			
	comp=Z,3μm,17.9s							
YSS	**Yuzh-Sakhalins**	**53.30**	**359**	P	**P**	**12 05 24.6**	**-0.7**
YSS	**Yuzh-Sakhalins**	**53.30**	**359**	P	**P**	**12 05 25.3**	**0.0**
YSS	**Yuzh-Sakhalins**	**53.30**	**359**	⇓*e*P	**P**	**12 05 24.8**	**-0.5**
YSS				*e*		12 06 31.9		
YSS				*e*		12 07 24.7		
YSS				*e*S	**S**	**12 12 52.8**	**-2.8**
YSS				pmax	pmax			
	comp=Z,70nm,1.0s							
YSS				pmax	pmax			
	comp=Z,1μm,3.9s							
YSS				MLR	MLR			
	comp=Z,2μm,16.0s							
YSS				MLR	MLR			
	comp=N,2μm,17.0s							
TNCH	**TengChong**	**53.92**	**307**	P	**P**	**12 05 31.3**	**+0.8**
TNCH				sP	pP	12 05 38.5	+0.6
TNCH				S	**S**	**12 13 05.8**	**+0.6**
TNCH				pmax	pmax			
	comp=N,79nm,2.1s							
TNCH				pmax	pmax			
	comp=N,990nm,4.1s							
TNCH				LR	LR			
	comp=N,610nm,12.1s							
TNCH				LR	LR			
	comp=N,610nm,18.2s							
TNCH				LR	LR			
	comp=N,2μm,20.6s							
DGPR	**DIGLIPUR**	**53.98**	**291**	*e*P	**P**	**12 05 30.3**	**-0.6**
BNX	**BinXian**	**54.06**	**346**	⇑P	**P**	**12 05 30.0**	**-0.9**
BNX				pP	**pP**	**12 05 36.5**	**-1.7**
BNX				sP	**sP**	**12 05 40.0**	**-1.0**
BNX				PP	**PP**	**12 07 34.5**	**+1.8**
BNX				S	**S**	**12 13 05.8**	**-0.1**
BNX				sS	**pS**	**12 13 14.8**	**-0.2**
BNX				pmax	pmax			
	comp=N,230nm,1.3s							
BNX				pmax	pmax			
	comp=N,2μm,3.6s							
BNX				LR	LR			
	comp=N,2μm,19.8s							
BNX				LR	LR			
	comp=N,1μm,16.4s							
BNX				LR	LR			
	comp=N,3μm,21.3s							
MND	**Mandalay**	**54.48**	**303**	P	**P**	**12 05 35.2**	**+0.8**
UGL	**Uglegorsk**	**55.44**	**359**	*e*P	**P**	**12 05 40.5**	**-0.3**
UGL				*e*S	**S**	**12 13 23.0**	**-1.4**
UGL				pmax	pmax			
	comp=Z,140nm,1.3s							
UGL				pmax	pmax			
	comp=Z,1μm,4.5s							
UGL				smax	smax			
	comp=E,670nm,7.5s							
UGL				smax	smax			
	comp=N,1μm,8.5s							
UGL				MLR	MLR			
	comp=N,1μm,16.0s							
UGL				MLR	MLR			
	comp=E,2μm,19.0s							
UGL				MLR	MLR			
	comp=Z,2μm,19.0s							
HHC	**Hu-ho-hao-te**	**55.60**	**331**	*e*P	**P**	**12 05 42.5**	**+0.1**
HHC				pP	pP	12 05 47.5	-2.2
HHC				sP	sP	12 05 49.5	-3.0
HHC				S	**S**	**12 13 29.0**	**+1.9**
HHC				sS	sS	12 13 41.0	+1.7
HHC				SS	**SS**	**12 17 15.5**	**+2.9**
HHC				pmax	pmax			
	comp=Z,65nm,1.0s							
HHC				LR	LR			
	comp=Z,4μm,18.8s							
XLT	**XiLinHaoTe**	**56.05**	**336**	*e*P	**P**	**12 05 44.5**	**-1.0**
XLT				pP	pP	12 05 50.5	-2.3
XLT				S	**S**	**12 13 30.3**	**-2.7**
XLT				sS	pS	12 13 41.0	-1.0
XLT				ScS	**ScS**	**12 15 32.8**	**-0.8**
XLT				pmax	pmax			
	comp=Z,28nm,1.3s							
XLT				pmax	pmax			
	comp=Z,970nm,7.2s							
XLT				LR	LR			
	comp=Z,2μm,18.1s							
XLT				LR	LR			
	comp=Z,2μm,18.2s							
BTO	**Baotou**	**56.18**	**330**	*e*P	**P**	**12 05 47.5**	**+1.0**
BTO				pP	**pP**	**12 05 53.8**	**0.0**
BTO				sP	**sP**	**12 05 56.3**	**-0.3**
BTO				PP	**PP**	**12 07 55.0**	**+3.1**
BTO				sS	**sS**	**12 13 46.8**	**-0.1**
BTO				SS	**SS**	**12 17 22.8**	**+1.1**
BTO				pmax	pmax			
	comp=Z,120nm,1.3s							
BTO				pmax	pmax			
	comp=Z,2μm,8.8s							
BTO				LR	LR			
	comp=Z,10μm,19.0s							
LZH	**Lanzhou**	**56.48**	**322**	⇑*i*P	**P**	**12 05 49.8**	**+1.0**
LZH				pP	pP	12 05 55.5	-0.7
LZH				S	**S**	**12 13 42.5**	**+3.4**
LZH				sS	sS	12 13 51.0	-0.3
LZH				SS	**SS**	**12 17 26.5**	**-0.3**
LZH				pmax	pmax			
	comp=Z,220nm,1.1s							
LZH				pmax	pmax			
	comp=Z,1μm,4.1s							
LZH				LR	LR			
	comp=Z,2μm,16.5s							
LZH				LR	LR			

LZH comp=Z,1μm,16.1s LR LR

KLR Kul'dur 56.53 351 *c i*P **P 12 05 48.1 -0.6**
KLR pmax pmax
comp=Z,254nm,1.7s

KLR Kul'dur 56.53 351 LR LR 12 27 11.3
comp=Z,3μm,21.9s,baz=166,slow=33

RAR Rarotonga 56.61 111 P **P 12 05 51.3 +1.5**
RAR Rarotonga 56.61 111 P **P 12 05 51.4 +1.5**
RAR Rarotonga 56.61 111 P **P 12 05 51.3 +1.5**
RAR pmax pmax
comp=Z,268nm,1.5s

RAR Rarotonga 56.61 111 LR LR 12 27 54.5
comp=Z,3μm,21.5s,baz=272,slow=34

TYV Tymovskoe 57.22 359 *e*P **P 12 05 52.9 -0.6**
TYV *e*S **S 12 13 51.0 +3.1**
TYV pmax pmax
comp=Z,34nm,1.3s

TYV pmax pmax
comp=Z,400nm,3.8s

TYV smax smax
comp=N,900nm,8.0s

TYV smax smax
comp=E,600nm,8.0s

SAIH SAIHA 57.30 302 *e*P **P 12 05 55.6 +0.8**
SAIH IAmb IAmb 12 06 04.4
comp=Z,581nm,1.7s

GRNR Gornyy 57.45 355⇑ *i*P **P 12 05 54.8 -0.4**
GRNR *e*S **S 12 13 56.1 +5.0**
GRNR pmax pmax
comp=E,3.0nm,1.1s

GRNR pmax pmax
comp=N,20nm,1.3s

GRNR pmax pmax
comp=Z,30nm,1.1s

GRNR smax smax
comp=E,1.0nm,0.9s

IMP Imphal 57.50 305 *e*P **P 12 05 55.6 -0.5**
IMP IAmb IAmb 12 06 04.3
comp=Z,55nm,1.2s

MOKO MOKOCHONG 57.71 307 *e*P **P 12 05 58.0 +0.4**
MOKO IAmb IAmb 12 06 06.2
comp=Z,101nm,1.0s

KOHI KOHIMA 57.76 306 *e*P **P 12 05 57.8 -0.2**
KOHI IAmb IAmb 12 06 06.3
comp=Z,258nm,1.1s

SKR Severo-Kuril's 58.06 9⇓ *e*P **P 12 05 59.2 -0.2**
HEH HeiHe 58.31 348 *e*P **P 12 05 59.5 -1.7**
HEH pP **pP 12 06 03.5 -5.1**
HEH ScP **ScP 12 10 47.8 -3.5**
HEH S **S 12 14 01.5 -0.8**
HEH pmax pmax
comp=Z,93nm,1.7s

HEH pmax pmax
comp=Z,2μm,4.0s

HEH LR LR
comp=Z,2μm,19.5s

HEH LR LR
comp=Z,2μm,19.9s

HEH LR LR
comp=Z,4μm,18.6s

ITAN ITANAGAR 58.72 307 *e*P **P 12 06 05.8 +1.3**
ITAN IAmb IAmb 12 06 14.2
comp=Z,295nm,1.1s

HIA Hailar 59.38 342 P **P 12 06 08.5 -0.3**
HIA IAmb IAmb 12 06 16.6
comp=Z,153nm,1.3s

HIA Hailar 59.38 342 P **P 12 06 08.6 -0.1**
HIA Hailar 59.38 342 *c i*P **P 12 06 08.1 -0.6**
HIA pmax pmax
comp=Z,46nm,1.3s

SHL Shillong 59.50 305 P **P 12 06 11.3 +1.1**
SHL Shillong 59.50 305 P **P 12 06 11.3 +1.1**
SHL pmax pmax
comp=Z,198nm,1.2s

SHL Shillong 59.50 305 *e*P **P 12 06 10.7 +0.4**
SHL IAmb IAmb 12 06 19.2
comp=Z,153nm,1.2s

SHL Shillong 59.50 305 P **P 12 06 11.4 +1.2**
SNR=64

XMAS Kiritimati 59.51 84 IAMs_20 IAMs_20 12 28 13.6
comp=Z,7μm,20.0s

NKL Nikolayevsk 59.55 358 *e*P **P 12 06 07.2 -2.5**
NKL *e*S **S 12 14 17.1 -1.1**
NKL pmax pmax
comp=N,69nm,1.3s

NKL pmax pmax
comp=E,244nm,1.4s

NKL pmax pmax
comp=Z,676nm,1.4s

NKL smax smax
comp=N,267nm,3.9s

NKL smax smax
comp=E,728nm,3.9s

NKL MLR MLR
comp=E,12μm,25.0s

NKL MLR MLR
comp=N,5μm,21.0s

NKL MLR MLR
comp=Z,3μm,17.0s

GUWA GUWAHATI 59.92 305 *e*P **P 12 06 13.2 +0.3**
GUWA IAmb IAmb 12 06 21.6
comp=Z,192nm,1.1s

PEA0B Petropavlovsk- 60.66 10 P **P 12 06 17.4 0.0**
PEA0B Petropavlovsk- 60.66 10⇓ *e*P **P 12 06 17.7 +0.3**
PETK Petropavlovsk- 60.66 10 P **P 12 06 17.2 -0.2**
PETK Petropavlovsk- 60.66 10 P **P 12 06 17.2 -0.2**
PETK Petropavlovsk- 60.66 10 P **P 12 06 16.9 -0.6**
comp=Z,47nm,0.8s,baz=164,slow=5.3,SNR=33

PETK LR LR 12 33 49.8
comp=Z,961nm,19.0s,baz=207,slow=37
comp=Z,47nm,0.8s

PET Petropavlovsk 60.75 10 P **P 12 06 17.5 -0.5**
PET IAmb IAmb 12 06 18.8
comp=Z,151nm,1.5s

PET Petropavlovsk 60.75 10 P **P 12 06 17.4 -0.5**
PET Petropavlovsk 60.75 10 *e*P **P 12 06 17.2 -0.7**
PET *e*S **S 12 14 32.3 -1.3**
PET *e*SS **SS 12 18 32.7 -0.1**
PET pmax pmax
comp=Z,82nm,1.6s

PET pmax pmax
comp=Z,2μm,8.6s

PET pmax pmax
comp=Z,1μm,16.8s

GTA Gaotai 61.05 322⇑ P **P 12 06 21.0 +0.5**
GTA sP pP 12 06 28.3 +0.3
GTA PP **PP 12 08 37.8 +2.5**
GTA S **S 12 14 40.3 +1.9**
GTA sS sS 12 14 49.8 -0.8
GTA pmax pmax
comp=Z,65nm,2.1s

GTA pmax pmax
comp=Z,1μm,8.8s

GTA LR LR
comp=Z,1μm,19.5s

GTA LR LR
comp=Z,1μm,18.3s

GTA LR LR
comp=Z,2μm,17.9s

CAL Calcutta 61.29 300⇓ *e*P **P 12 06 22.4 +0.1**
ZEA Zeya 61.65 349 *e*P **P 12 06 23.8 -0.3**
ZEA *e*S **S 12 14 49.4 +4.3**
ZEA pmax pmax
comp=N,500nm,6.6s

ZEA pmax pmax
comp=Z,1μm,7.2s

ZEA pmax pmax
comp=N,110nm,1.3s

ZEA pmax pmax
comp=Z,170nm,1.4s

ZEA smax smax
comp=E,300nm,12.4s

ZEA smax smax
comp=N,500nm,14.8s

ZEA MLR MLR
comp=E,1μm,16.0s

ZEA MLR MLR
comp=N,2μm,17.0s

ZEA MLR MLR
comp=Z,2μm,17.0s

LSA Lhasa 61.89 309 P **P 12 06 27.1 +0.3**
LSA IAmb IAmb 12 06 36.5
comp=Z,113nm,1.2s

LSA Lhasa 61.89 309 P **P 12 06 27.6 +0.8**
LSA pmax pmax
comp=Z,113nm,1.2s

GOMU GeErMu 62.42 317 P **P 12 06 30.8 +0.7**
GOMU pP pP 12 06 36.0 -1.6
GOMU sP sP 12 06 38.8 -1.6
GOMU S **S 12 14 57.8 +1.5**
GOMU pmax pmax
comp=E,35nm,1.3s

GOMU LR LR
comp=Z,1μm,17.4s

GOMU LR LR
comp=Z,610nm,18.1s

GOMU LR LR
comp=Z,2μm,20.2s

SLGI Shiliguri 62.80 304 *e*P **P 12 06 30.8 -1.6**
ULN Ulaanbaatar 63.03 333 P **P 12 06 34.0 +0.3**
ULN IAmb IAmb 12 06 42.4
comp=Z,132nm,1.4s

ULN Ulaanbaatar 63.03 333 *c e*P **P 12 06 33.8 +0.1**
ULN pmax pmax
comp=Z,119nm,1.4s

ULN Ulaanbaatar 63.03 333 P **P 12 06 34.4 +0.7**
SONM Songino Array 63.30 333 P **P 12 06 35.1 -0.3**
SONM IAmb IAmb 12 06 44.1
comp=Z,104nm,1.3s

SONM Songino Array 63.30 333 P **P 12 06 35.5 0.0**
comp=Z,18nm,1.0s,baz=156,slow=7.4,SNR=86

SONM LR LR 12 34 19.9
comp=Z,3μm,19.4s,baz=135,slow=36

SONM PKPPKP **P'P'df 12 35 35.6 +3.7**
comp=Z,12nm,1.3s,baz=331,slow=1.7,SNR=7.8
comp=Z,18nm,1.0s

KIP Kipapa 63.68 62 P **P 12 06 40.5 +2.2**
KIP Kipapa 63.68 62 P **P 12 06 39.4 +1.1**
KIP Kipapa 63.68 62 *de*P **P 12 06 40.3 +2.0**
KIP pmax pmax
comp=Z,413nm,2.5s

CIT Chita 63.76 340 *e*P **P 12 06 38.6 +0.3**
CIT *e* 12 07 13.4
CIT *e* 12 08 59.2
CIT pmax pmax
comp=Z,297nm,2.4s

CASY Casey 63.83 194 P **P 12 06 40.0 +1.5**
CASY Casey 63.83 194 IAMs_20 IAMs_20 12 35 41.8
comp=Z,5μm,18.0s

BOK Bokaro 63.84 300 *e*P **P 12 06 40.5 +1.2**
BOK IAmb IAmb 12 06 49.1
comp=Z,135nm,1.5s

PALK Pallekele 64.20 281 P **P 12 06 42.4 +0.5**
PALK Pallekele 64.20 281 *de*P **P 12 06 41.5 -0.4**
PALK pmax pmax
comp=Z,42nm,0.9s

PALK Pallekele 64.20 281 P **P 12 06 43.7 +1.8**
SHEM Shemya Is, Ala 64.53 20 LR LR 12 31 04.0
comp=Z,4μm,20.8s,baz=210,slow=33

JHSG JHARSUGUGA 64.99 298 *e*P **P 12 06 47.0 +0.1**
POHA Pohakuloa 65.37 65 IAMs_20 IAMs_20 12 31 19.3
comp=Z,5μm,21.0s

MDRS Chennai 65.85 287 *e*P **P 12 06 53.7 +1.2**
PPT Papeete 66.01 106 P **P 12 06 54.4 +0.9**
comp=Z,53nm,1.0s,baz=78,slow=14,SNR=4.5

PPT LR LR 12 33 10.1
comp=Z,2μm,19.3s,baz=268,slow=34
comp=Z,53nm,1.0s

MA2 Magadan 66.20 4 P **P 12 06 53.6 -0.3**
MA2 Magadan 66.20 4 P **P 12 06 53.1 -0.8**
MA2 Magadan 66.20 4 *c i*P **P 12 06 52.9 -1.0**
MA2 pmax pmax
comp=Z,136nm,1.3s

MA2 Magadan 66.20 4 LR LR 12 38 36.5
comp=Z,425nm,18.0s,baz=172,slow=39

VJD Vijayawada 66.31 291⇓ *e*P **P 12 06 54.7 -0.8**
ZAK Zakamensk 66.56 333 *e*P **P 12 06 56.1 -0.5**
ZAK pmax pmax
comp=Z,110nm,1.3s

VLK Valmikinagar 66.79 303 *e*P **P 12 06 58.0 -0.4**
VAR Varanasi 66.81 301⇓ *e*P **P 12 06 58.2 -0.3**
AIS Amsterdam Isla 67.06 232 IAMs_20 IAMs_20 12 35 43.5
comp=Z,4μm,18.0s

KIWB Kanaga Island 67.19 25 P **P 12 07 00.0 -0.4**
ADK Adak 67.41 25 P **P 12 07 01.7 -0.1**
ADK Adak 67.41 25 P **P 12 07 02.0 +0.2**
ADK Adak 67.41 25 P **P 12 07 01.7 -0.1**
ADK pmax pmax
comp=Z,594nm,1.7s

IRK Irkutsk 67.48 335 *e*P **P 12 07 02.0 -0.3**
IRK pmax pmax
comp=Z,197nm,2.9s

ALBI Allahabad 67.84 301 *e*P **P 12 07 03.8 -1.3**
KOD Kodaikanal 67.90 284 *e*P **P 12 07 05.2 -0.8**
TRD Trivandrum 68.07 282 *e*P **P 12 07 08.7 +1.9**
HYB Hyderabad 68.48 292 *e*P **P 12 07 09.2 -0.1**
HYB *e*pP **pP 12 07 16.6 -0.2**
HYB *e*PcP **PcP 12 07 34.4 -0.1**
HYB *e*PP **PP 12 09 40.1 -0.5**
MOY Mondy 68.50 333 *e*P **P 12 07 08.8 0.0**
MOY pmax pmax
comp=Z,200nm,2.5s

BOD Bodaibo 68.51 344 *e*P **P 12 07 07.4 -1.2**
BOD pmax pmax
comp=Z,87nm,1.5s

ATKA Atka Island 68.72 26 P **P 12 07 10.9 +0.9**
YAK Yakutsk 69.25 353 P **P 12 07 12.3 -0.8**
YAK Yakutsk 69.25 353 *c i*P **P 12 07 12.0 -1.1**
YAK *e**PP **pP 12 07 21.0 +0.4**
YAK *e*S **S 12 16 15.1 -2.7**
YAK pmax pmax
comp=Z,42nm,1.2s

YAK pmax pmax
comp=N,22nm,1.4s

YAK pmax pmax
comp=E,6.0nm,1.4s

YAK pmax pmax
comp=Z,153nm,2.5s

YAK pmax pmax
comp=E,39nm,1.8s

YAK pmax pmax
comp=N,74nm,2.0s

YAK smax smax
comp=E,206nm,3.5s

YAK smax smax
comp=N,905nm,4.8s

YAK Yakutsk 69.25 353 LR LR 12 36 45.7
comp=N,2μm,18.6s,baz=165,slow=35

SEY Seymchan 69.64 4 *de*P **P 12 07 15.4 -0.1**
SEY pmax pmax
comp=Z,135nm,1.7s

DGAR Diego Garcia 70.51 264 P **P 12 07 22.7 +0.9**
DGAR Diego Garcia 70.51 264 *ce*P **P 12 07 22.8 +0.9**
DGAR pmax pmax
comp=Z,154nm,1.1s

DGAR Diego Garcia 70.51 264 P **P 12 07 23.9 +2.0**
LGTI Lohaghat 70.52 304⇓ *e*P **P 12 07 20.7 -0.9**
PTH Pithoragarh 70.58 304 *e*P **P 12 07 20.0 -2.3**
AKL Akola 70.72 295⇓ *e*P **P 12 07 22.8 -0.2**
KAAM Kaadhehdhoo 70.76 273 P **P 12 07 25.6 +2.2**
WMQ Urumqi 71.04 321⇑ *i*P **P 12 07 25.3 +0.7**
WMQ sP pP 12 07 32.5 +0.4
WMQ PcP **sP 12 07 39.0 +4.1**
WMQ PP **PP 12 10 03.3 +1.0**
WMQ S **S 12 16 44.3 +4.6**
WMQ pmax pmax
comp=Z,94nm,1.3s

WMQ pmax pmax
comp=Z,930nm,4.1s

WMQ LR LR
comp=Z,1μm,16.3s

WMQ LR LR
comp=Z,1μm,14.7s

WMQ LR LR
comp=Z,1μm,15.9s

VNDA Vanda 71.56 176 P **P 12 07 27.8 +0.7**
VNDA IAmb IAmb 12 07 30.9
comp=Z,74nm,1.1s

VNDA Vanda 71.56 176 P **P 12 07 28.5 +1.4**
comp=Z,42nm,1.0s,baz=326,slow=6.3,SNR=42

VNDA LR LR 12 38 13.1
comp=Z,3μm,18.1s,baz=347,slow=35
comp=Z,42nm,1.0s

NIKH Nikolski High 71.66 28 P **P 12 07 27.3 -0.7**
baz=231

MNCI Minicoy 71.83 281 P **P 12 07 29.5 -0.3**
KAD Karad 72.51 290 *e*P **P 12 07 33.3 -0.6**
NDI New Delhi 72.79 303⇓ *e*P **P 12 07 32.6 -2.7**

POO Poona 73.09 292 *e*P **P 12 07 37.3 0.0**
POO IAmb IAmb 12 07 45.6
comp=Z,148nm,1.4s

UNV Unalaska Valle 73.31 28 P **P 12 07 36.6 -1.2**
baz=232

KKR Kurukshetra 73.51 304 *e*P **P 12 07 39.0 -0.6**
SMLA Simla 73.59 305 *e*P **P 12 07 40.2 +0.2**
SMLA IAmb IAmb 12 07 48.8
comp=Z,126nm,1.4s

SPIA Saint Paul Isl 73.80 24 P **P 12 07 39.3 -1.3**
baz=228

DGZ Jazzator, Alta 74.16 326 *c i*P **P 12 07 43.0 -0.2**
DGZ pmax pmax
comp=Z,69nm,1.1s

AJM Ajmer 74.35 300 *e*P **P 12 07 43.2 -1.4**
DHRM DHARAMSHALA 74.64 306 *e*P **P 12 07 46.4 0.0**
DHRM IAmb IAmb 12 07 56.1
comp=Z,96nm,1.1s

FALS False Pass 75.37 29 P **P 12 07 48.9 -0.8**
baz=235

MK31 Makanchi Array 75.80 322 P **P 12 07 52.5 0.0**
MK31 IAmb IAmb 12 07 54.3
comp=Z,142nm,1.3s

MK31 Makanchi Array 75.80 322 P **P 12 07 52.5 0.0**
MK31 pmax pmax
comp=Z,142nm,1.3s

MKAR Makanchi Array 75.80 322 P **P 12 07 52.5 0.0**
comp=Z,26nm,0.6s,baz=115,slow=5.5,SNR=228

MKAR PKPPKP **P'P'df 12 35 14.5 +3.1**
comp=Z,1.3nm,1.1s,baz=292,slow=3.6,SNR=5.3

MKAR LR LR 12 40 48.7
comp=Z,1μm,21.1s,baz=104,slow=36
comp=Z,26nm,0.6s

MAKZ Makanchi 76.00 321 P **P 12 07 52.9 -0.7**
MAKZ IAmb IAmb 12 07 55.3
comp=Z,184nm,1.2s

MAKZ Makanchi 76.00 321 P **P 12 07 52.9 -0.7**
MAKZ pmax pmax
comp=Z,184nm,1.3s

MAKZ MLR MLR
comp=Z,1μm,19.0s

SHLS Shalkode 76.12 317 *e*P **P 12 07 52.1 -2.4**
comp=Z,66nm,1.1s,baz=317

SHLS Shalkode 76.12 317 *e*P **P 12 07 52.1 -2.4**
SHLS pmax pmax
comp=Z,66nm,1.1s

BILL Bilibino 76.16 9 P **P 12 07 53.5 -0.5**
BILL IAmb IAmb 12 07 55.2
comp=Z,108nm,1.4s

BILL Bilibino 76.16 9 *e*P **P 12 07 53.6 -0.5**
BILL pmax pmax
comp=Z,84nm,1.3s

PDGK Podgornoye 76.17 317 P **P 12 07 54.3 -0.5**
UZB Uzynbulak 76.41 317 *e*P **P 12 07 55.1 -1.1**
comp=Z,102nm,1.4s,baz=317

UZB *e*S **S 12 17 40.6 +0.1**
baz=317

UZB Uzynbulak 76.41 317 *e*P **P 12 07 55.1 -1.1**
UZB *e*S **S 12 17 40.6 +0.1**
UZB pmax pmax
comp=Z,102nm,1.4s

PRZ Przheval'sk 76.58 316 P **P 12 07 58.1 +0.8**
PRZ Przheval'sk 76.58 316 P **P 12 07 58.1 +0.8**
PRZ pmax pmax
comp=Z,265nm,1.3s

TARG Taragay, Kyrgy 76.71 315 P **P 12 07 58.4 +0.1**
TARG Taragay, Kyrgy 76.71 315 P **P 12 07 58.4 +0.1**
TARG pmax pmax
comp=Z,49nm,1.1s

KPKS Kokpek 76.76 317 *e*P **P 12 07 57.0 -1.2**
comp=Z,104nm,1.7s,baz=317

KPKS Kokpek 76.76 317 *e*P **P 12 07 56.9 -1.2**
KPKS pmax pmax
comp=Z,104nm,1.7s

SATY Saty 76.79 317 *e*P **P 12 07 57.6 -0.8**
comp=Z,89nm,1.5s,baz=317

SATY *e*S **S 12 17 45.6 +0.8**
baz=317

SATY Saty 76.79 317 *e*P **P 12 07 57.5 -0.8**
SATY *e*S **S 12 17 45.5 +0.8**
SATY pmax pmax
comp=Z,89nm,1.5s

ZHN Zhinishke 76.81 317 *e*P **P 12 07 57.6 -0.9**
baz=317

ZHN Zhinishke 76.81 317 *e*P **P 12 07 57.5 -0.9**
SDPT Sand Point 77.05 29 P **P 12 07 58.7 -0.6**
SDPT Sand Point 77.05 29 P **P 12 07 59.3 0.0**
SDPT Sand Point 77.05 29 P **P 12 07 58.6 -0.6**
baz=238

CHNA Chernabura Isl 77.20 30 P **P 12 07 59.2 -1.0**
baz=238

KSH Kashi 77.24 313 P **P 12 08 02.5 +1.5**
KSH sP sP 12 08 09.8 -1.5
KSH S **S 12 17 53.5 +3.8**
KSH SS **SS 12 22 53.0 +4.8**
KSH pmax pmax
comp=Z,62nm,1.3s

KSH pmax pmax
comp=Z,1μm,7.0s

KSH LR LR
comp=Z,740nm,17.9s

KSH LR LR
comp=Z,2μm,18.6s

KSH LR LR
comp=Z,2μm,20.3s

NIL Nilore 77.50 306 P **P 12 08 02.2 -0.2**
NIL IAmb IAmb 12 08 04.3
comp=Z,144nm,1.0s

NIL Nilore 77.50 306 P **P 12 08 02.3 -0.2**
NIL pmax pmax
comp=Z,144nm,1.0s

TDK Taldyqorghan 77.53 319 *e*P **P 12 08 01.1 -1.2**
baz=319

TDK LR LR 12 42 56.3
comp=Z,618nm,15.9s,baz=319

TDK Taldyqorghan 77.53 319 *e*P **P 12 08 01.1 -1.2**
JASL Jaisalmer 77.70 299 *e*P **P 12 08 02.1 -1.5**
ZAA0 Zalesovo Array 77.71 329 P **P 12 08 01.8 -1.3**
ZALV Zalesovo Beam 77.71 329 P **P 12 08 01.4 -1.7**
ZALV Zalesovo Beam 77.71 329 *i* P **P 12 08 02.0 -1.1**
ZALV pmax pmax
comp=Z,28nm,0.7s

ZALV Zalesovo Beam 77.71 329 P **P 12 08 01.7 -1.4**
comp=Z,28nm,0.7s,baz=107,slow=5.0,SNR=82

ZALV PKPPKP **PKKPbc 12 27 05.9 -2.5**
comp=Z,0.5nm,0.4s,baz=321,slow=2.1,SNR=5.6

ZALV PKPPKP 12 35 06.3
comp=Z,0.3nm,0.3s,baz=305,slow=5.2,SNR=6.1

ZALV LR LR 12 41 47.8
comp=Z,2μm,20.9s,baz=128,slow=35
comp=Z,28nm,0.7s

MDOK Medeo 77.76 317 *e*P **P 12 08 03.1 -0.6**
baz=317

MDOK *e*S **S 12 17 55.7 +0.5**
baz=317

MDOK LR LR 12 42 57.5
baz=317

MDOK Medeo 77.76 317 P **P 12 08 03.2 -0.6**
GAMB Gambell 77.79 19 P **P 12 08 02.1 -1.1**
baz=226

AAA Alma-Ata 77.86 317 *e*P **P 12 08 03.8 -0.5**
baz=317

AAA Alma-Ata 77.86 317 *e*P **P 12 08 03.8 -0.5**
NRN Naryn 77.87 315 P **P 12 08 04.6 -0.1**
NRN Naryn 77.87 315 P **P 12 08 04.6 -0.1**
NRN pmax pmax
comp=Z,22nm,1.0s

ULHL Ulahol 77.99 316 P **P 12 08 05.6 +0.4**
SNR=24

BOOM Boomskoye usch 78.28 316 P **P 12 08 06.5 -0.3**
BOOM IAmb IAmb 12 08 08.7
comp=Z,157nm,1.6s

BOOM Boomskoye usch 78.28 316 P **P 12 08 06.5 -0.3**
BOOM pmax pmax
comp=Z,157nm,1.6s

KUU Kurty 78.50 317 *e*P **P 12 08 06.1 -1.6**
baz=317

KUU LR LR 12 43 18.6
comp=Z,1μm,15.6s,baz=317

KUU Kurty 78.50 317 *e*P **P 12 08 06.1 -1.6**
CHGN Chignik 78.54 29 P **P 12 08 06.8 -0.8**
baz=239

SEM Semipalatinsk 78.58 324 *e*P **P 12 08 06.3 -2.0**
comp=Z,77nm,1.6s,baz=324

SEM LR LR 12 42 13.2
baz=324

SEM	**Semipalatinsk**	**78.58**	**324**	*e*P		**P**		**12 08 06.2**	**-2.0**
SEM				pmax		pmax			
	comp=Z,77nm,1.6s								
ROCAM	**Rodrigues Isla**	**78.60**	**251**	IAMs_20	IAMs_20		12 40 34.2		
	comp=Z,3µm,20.0s								
M13K	**Dall Lake**	**78.62**	**24**	P		**P**		**12 08 07.5**	**-0.4**
	baz=234								
TKM2	**Tokmak 2**	**78.67**	**316**	P		**P**		**12 08 09.1**	**+0.2**
	SNR=40								
TKM2	**Tokmak 2**	**78.67**	**316**	*i* P		**P**		**12 08 08.8**	**-0.1**
TKM2				pmax		pmax			
	comp=Z,87nm,1.4s								
TIXI	**Tiksi**	**78.67**	**355**	P		**P**		**12 08 05.8**	**-2.2**
TIXI				IAmb		IAmb		12 08 16.7	
	comp=Z,143nm,1.9s								
TIXI	**Tiksi**	**78.67**	**355**	*c i* P		**P**		**12 08 05.9**	**-2.2**
TIXI				pmax		pmax			
	comp=Z,70nm,1.8s								
TIXI	**Tiksi**	**78.67**	**355**	LR		LR		12 43 41.0	
	comp=Z,732nm,19.1s,baz=174,slow=36								
O14K	**Tigyukauivet M**	**78.82**	**25**	P		**P**		**12 08 08.6**	**-0.5**
	baz=236								
N14K	**Kuskokwak Cree**	**79.02**	**25**	P		**P**		**12 08 10.3**	**+0.2**
	baz=236								
KBK	**Karagaybulak**	**79.03**	**316**	P		**P**		**12 08 11.8**	**+1.0**
	SNR=21								
UCH	**Uchtor**	**79.19**	**315**	P		**P**		**12 08 12.6**	**+0.5**
	SNR=96								
CHMS	**Chumysh**	**79.28**	**316**	P		**P**		**12 08 12.0**	**-0.1**
	SNR=26								
AAK	**Ala-Archa**	**79.34**	**315**	P		**P**		**12 08 12.8**	**+0.3**
	SNR=46								
AAK	**Ala-Archa**	**79.34**	**315**	P		**P**		**12 08 12.3**	**-0.2**
AAK	**Ala-Archa**	**79.34**	**315**	P		**P**		**12 08 13.0**	**+0.5**
AAK	**Ala-Archa**	**79.34**	**315**	*c i* P		**P**		**12 08 12.7**	**+0.2**
AAK				pmax		pmax			
	comp=Z,79nm,1.2s								
AAK	**Ala-Archa**	**79.34**	**315**	LR		LR		12 47 52.5	
	comp=Z,924nm,18.1s,baz=108,slow=39								
AAK	**Ala-Archa**	**79.34**	**315**	P		**P**		**12 08 13.1**	**+0.6**
M14K	**Bethel**	**79.38**	**24**	P		**P**		**12 08 12.1**	**0.0**
M14K				IAmb		IAmb		12 08 20.7	
	comp=Z,185nm,1.2s								
M14K	**Bethel**	**79.38**	**24**	P		**P**		**12 08 12.7**	**+0.6**
	baz=235,SNR=6.3								
O15K	**Ungalikthiuk R**	**79.40**	**26**	P		**P**		**12 08 12.1**	**-0.2**
	baz=238								
L14K	**Kuka Creek**	**79.43**	**23**	P		**P**		**12 08 12.3**	**-0.1**
L14K				IAmb		IAmb		12 08 20.9	
	comp=Z,124nm,1.1s								
L14K				IAMs_20	IAMs_20		12 37 55.8		
	comp=Z,4µm,22.0s								
L14K	**Kuka Creek**	**79.43**	**23**	P		**P**		**12 08 12.8**	**+0.4**
	baz=235,SNR=12								
SGDS	**Sogindy**	**79.51**	**316**	*e*P		**P**		**12 08 12.8**	**-0.5**
	baz=316								
SGDS	**Sogindy**	**79.51**	**316**	*e*P		**P**		**12 08 12.8**	**-0.5**
USP	**Ospenovka**	**79.54**	**316**	P		**P**		**12 08 13.7**	**+0.2**
	SNR=118								
R16K	**Pilot Point**	**79.58**	**28**	P		**P**		**12 08 13.3**	**+0.1**
	baz=240								
KURK	**Kurchatov**	**79.65**	**324**	P		**P**		**12 08 13.5**	**-0.3**
KURK				IAmb		IAmb		12 08 15.2	
	comp=Z,157nm,1.3s								
KURK	**Kurchatov**	**79.65**	**324**	P		**P**		**12 08 13.4**	**-0.4**
KURK	**Kurchatov**	**79.65**	**324**	P		**P**		**12 08 13.9**	**+0.1**
KURBB	**Kurchatov Arra**	**79.67**	**324**	P		**P**		**12 08 13.4**	**-0.5**
	comp=Z,43nm,1.0s,baz=114,slow=4.8,SNR=143								
KURBB				PKKPbc		**PKKPbc**		**12 27 00.1**	**-3.7**
	comp=Z,1.1nm,0.8s,baz=302,slow=2.6,SNR=10								
KURBB				PKPPKP		**P'P'df**		**12 35 05.2**	**+1.0**
	comp=Z,4.0nm,1.1s,baz=285,slow=2.7,SNR=6.6								
KURBB				LR		LR		12 44 42.8	
	comp=Z,2µm,19.6s,baz=139,slow=37								
	comp=Z,43nm,1.0s								
N15K	**Kwethluk River**	**79.83**	**25**	P		**P**		**12 08 14.4**	**-0.2**
N15K				IAmb		IAmb		12 08 16.2	
	comp=Z,114nm,1.1s								
N15K				IAMs_20	IAMs_20		12 40 30.3		
	comp=Z,4µm,20.0s								
N15K	**Kwethluk River**	**79.83**	**25**	P		**P**		**12 08 15.1**	**+0.5**
	baz=237								
EKS2	**Erkin-Say**	**79.84**	**315**	P		**P**		**12 08 15.8**	**+0.6**
	SNR=56								
M15K	**Kasigluk River**	**79.87**	**24**	P		**P**		**12 08 15.2**	**+0.4**
	baz=236								
J14K	**Nanvaranak Lak**	**79.93**	**22**	P		**P**		**12 08 16.0**	**+1.0**
	baz=234								
L15K	**Ungalak Mounta**	**80.10**	**23**	P		**P**		**12 08 15.8**	**-0.2**
	baz=236,SNR=6.1								
TNA	**Tin City**	**80.20**	**18**	P		**P**		**12 08 16.3**	**-0.2**
	baz=229								
O16K	**Kokwok River B**	**80.38**	**26**	IAMs_20	IAMs_20		12 39 23.9		
	comp=Z,4µm,21.0s								
O16K	**Kokwok River B**	**80.38**	**26**	P		**P**		**12 08 17.1**	**-0.5**
	baz=239,SNR=7.4								
ANM	**Nome**	**80.39**	**20**	P		**P**		**12 08 17.7**	**+0.1**
ANM				IAmb		IAmb		12 08 19.3	
	comp=Z,110nm,1.3s								
ANM				IAMs_20	IAMs_20		12 41 58.9		
	comp=Z,4µm,19.0s								
ANM	**Nome**	**80.39**	**20**	P		**P**		**12 08 17.9**	**+0.3**
	baz=232,SNR=26								
ANM	**Nome**	**80.39**	**20**	P		**P**		**12 08 17.7**	**+0.1**
ANM				pmax		pmax			
	comp=Z,110nm,1.3s								
MAW	**Mawson**	**80.40**	**203**	P		**P**		**12 08 18.0**	**+0.4**
MAW	**Mawson**	**80.40**	**203**	P		**P**		**12 08 18.0**	**+0.4**
	comp=Z,47nm,1.2s,baz=29,slow=5.7,SNR=6.8								
MAW				LR		LR		12 41 24.8	
	comp=Z,2µm,19.9s,baz=80,slow=34								
	comp=Z,47nm,1.2s								
K15K	**Wolf Creek Mou**	**80.43**	**23**	IAMs_20	IAMs_20		12 41 20.1		
	comp=Z,4µm,20.0s								
K15K	**Wolf Creek Mou**	**80.43**	**23**	P		**P**		**12 08 17.7**	**-0.1**
	baz=236,SNR=12								
BTLS	**Baital**	**80.43**	**318**	*e*P		**P**		**12 08 17.4**	**-0.9**
	comp=Z,62nm,1.2s,baz=318								
BTLS				*e*S		**S**		**12 18 23.8**	**+0.5**
	baz=318								
BTLS	**Baital**	**80.43**	**318**	*e*P		**P**		**12 08 17.3**	**-0.9**
BTLS				*e*S		**S**		**12 18 23.8**	**+0.5**
BTLS				pmax		pmax			
	comp=Z,62nm,1.2s								
N16K	**Nishlik Lake**	**80.55**	**25**	P		**P**		**12 08 18.8**	**+0.3**
	baz=238								
Q16K	**King Salmon**	**80.55**	**27**	P		**P**		**12 08 17.2**	**-1.3**
	baz=240								
F14K	**Arctic Creek**	**80.65**	**19**	P		**P**		**12 08 18.8**	**-0.1**
	baz=231								
Q17K	**Contact Creek**	**80.70**	**28**	P		**P**		**12 08 18.6**	**-0.9**
	baz=241								
M16K	**Timber Creek**	**80.76**	**25**	IAMs_20	IAMs_20		12 41 17.9		
	comp=Z,4µm,20.0s								
M16K	**Timber Creek**	**80.76**	**25**	P		**P**		**12 08 19.6**	**0.0**
	baz=238								
O17K	**Koliganek Bris**	**80.90**	**26**	P		**P**		**12 08 20.2**	**-0.1**
	baz=240								
L16K	**Owhat River**	**80.91**	**24**	P		**P**		**12 08 20.7**	**+0.3**
L16K				IAmb		IAmb		12 08 21.8	
	comp=Z,114nm,1.3s								
L16K				IAMs_20	IAMs_20		12 42 34.0		
	comp=Z,3µm,20.0s								
L16K	**Owhat River**	**80.91**	**24**	P		**P**		**12 08 20.2**	**-0.2**
	baz=238,SNR=11								
KBL	**Kabul**	**81.11**	**306**	P		**P**		**12 08 22.2**	**-0.2**
KBL	**Kabul**	**81.11**	**306**	P		**P**		**12 08 22.2**	**-0.2**
KBL				pmax		pmax			
	comp=Z,31nm,1.1s								
KBL	**Kabul**	**81.11**	**306**	P		**P**		**12 08 22.2**	**-0.2**
	SNR=18								
G15K	**Niukluk**	**81.11**	**20**	P		**P**		**12 08 21.2**	**-0.1**
	baz=233								
N17K	**Nushagak Hills**	**81.24**	**25**	P		**P**		**12 08 22.4**	**+0.2**
N17K				IAMs_20	IAMs_20		12 40 02.8		
	comp=Z,4µm,21.0s								
N17K	**Nushagak Hills**	**81.24**	**25**	P		**P**		**12 08 22.8**	**+0.6**
	baz=240								
J16K	**Anvik River**	**81.34**	**22**	IAMs_20	IAMs_20		12 40 10.1		
	comp=Z,3µm,20.0s								
J16K	**Anvik River**	**81.34**	**22**	P		**P**		**12 08 23.3**	**+0.6**
	baz=236								
OHAK	**Old Harbor**	**81.46**	**29**	P		**P**		**12 08 22.4**	**-0.9**
OHAK	**Old Harbor**	**81.46**	**29**	P		**P**		**12 08 23.7**	**+0.3**
OHAK	**Old Harbor**	**81.46**	**29**	P		**P**		**12 08 23.3**	**-0.1**
	baz=244								
H16K	**Elim**	**81.52**	**21**	P		**P**		**12 08 23.4**	**-0.1**
	baz=235,SNR=30								
M17K	**Holitna River**	**81.58**	**25**	IAMs_20	IAMs_20		12 41 33.7		
	comp=Z,3µm,20.0s								
M17K	**Holitna River**	**81.58**	**25**	P		**P**		**12 08 24.4**	**+0.4**
	baz=239								
L17K	**Donlin**	**81.61**	**24**	P		**P**		**12 08 24.4**	**+0.3**
	baz=238,SNR=7.8								
DZA	**Taraz**	**81.63**	**315**	*e*P		**P**		**12 08 23.0**	**-1.8**
	baz=315								
DZA	**Taraz**	**81.63**	**315**	*e*P		**P**		**12 08 22.9**	**-1.8**
I17K	**Unalakleet**	**81.64**	**22**	P		**P**		**12 08 24.2**	**+0.1**
I17K				IAmb		IAmb		12 08 26.3	
	comp=Z,115nm,1.2s								
I17K				IAMs_20	IAMs_20		12 41 13.1		
	comp=Z,3µm,20.0s								
I17K	**Unalakleet**	**81.64**	**22**	P		**P**		**12 08 24.6**	**+0.4**
	baz=236,SNR=26								
N18K	**Kilae Creek**	**81.88**	**26**	IAMs_20	IAMs_20		12 41 03.6		
	comp=Z,4µm,20.0s								
N18K	**Kilae Creek**	**81.88**	**26**	P		**P**		**12 08 25.7**	**+0.1**
	baz=241,SNR=5.7								
K17K	**Iditarod**	**81.92**	**23**	IAMs_20	IAMs_20		12 40 06.4		
	comp=Z,4µm,21.0s								
K17K	**Iditarod**	**81.92**	**23**	P		**P**		**12 08 25.0**	**-0.7**
	baz=238,SNR=20								
KDAK	**Kodiak Island**	**82.05**	**29**	P		**P**		**12 08 26.2**	**-0.2**
	baz=244								
KDAK	**Kodiak Island**	**82.05**	**29**	LR		LR		12 40 47.3	
	comp=Z,2µm,20.4s,baz=268,slow=33								
Q19K	**Cape Douglas,**	**82.06**	**28**	P		**P**		**12 08 25.7**	**-0.8**
	baz=243								
SIMJ	**Simiganj**	**82.17**	**310**	P		**P**		**12 08 27.1**	**-0.6**
SIMJ				IAmb		IAmb		12 08 29.8	
	comp=Z,94nm,1.1s								
KK31	**Karatay Array**	**82.27**	**315**	P		**P**		**12 08 27.8**	**-0.2**
KK31				IAmb		IAmb		12 08 29.5	
	comp=Z,116nm,1.4s								
KK31	**Karatay Array**	**82.27**	**315**	P		**P**		**12 08 27.8**	**-0.2**
KK31				pmax		pmax			
	comp=Z,116nm,1.5s								
KKAR	**Karatay Array**	**82.27**	**315**	P		**P**		**12 08 27.7**	**-0.3**
KKAR	**Karatay Array**	**82.27**	**315**	P		**P**		**12 08 27.8**	**-0.2**
KKAR				IAmb		IAmb		12 08 29.5	
	comp=Z,115nm,1.4s								
KKAR	**Karatay Array**	**82.27**	**315**	P		**P**		**12 08 27.8**	**-0.2**
KKAR				pmax		pmax			
	comp=Z,115nm,1.5s								
M18K	**Stony River**	**82.30**	**25**	P		**P**		**12 08 27.9**	**+0.2**
	baz=241,SNR=12								
L18K	**Granite Mounta**	**82.30**	**24**	IAMs_20	IAMs_20		12 42 06.8		
	comp=Z,4µm,20.0s								
L18K	**Granite Mounta**	**82.30**	**24**	P		**P**		**12 08 27.1**	**-0.6**
	baz=240								
O19K	**Port Alsworth**	**82.33**	**26**	P		**P**		**12 08 26.6**	**-1.3**
O19K				IAMs_20	IAMs_20		12 39 39.6		
	comp=Z,3µm,21.0s								
O19K	**Port Alsworth**	**82.33**	**26**	P		**P**		**12 08 27.1**	**-0.8**
	baz=242								
Q20K	**Shuyak Island**	**82.50**	**28**	P		**P**		**12 08 28.2**	**-0.6**
	baz=244								
SYI	**Shuyak Island**	**82.50**	**28**	IAMs_20	IAMs_20		12 39 45.1		
	comp=Z,4µm,21.0s								
H17K	**Granite Mounta**	**82.51**	**21**	P		**P**		**12 08 28.4**	**-0.4**
H17K				IAmb		IAmb		12 08 30.5	
	comp=Z,157nm,1.4s								
H17K	**Granite Mounta**	**82.51**	**21**	P		**P**		**12 08 28.6**	**-0.2**
	baz=237,SNR=30								
N19K	**Bonanza Creek**	**82.55**	**26**	IAMs_20	IAMs_20		12 40 42.3		
	comp=Z,3µm,21.0s								
N19K	**Bonanza Creek**	**82.55**	**26**	P		**P**		**12 08 29.0**	**-0.1**
	baz=242								
G17K	**Kiwalik Mounta**	**82.56**	**20**	P		**P**		**12 08 29.3**	**+0.3**
	baz=236,SNR=30								
P19K	**Oil Pt**	**82.57**	**27**	P		**P**		**12 08 28.2**	**-1.1**
	baz=243								
OTUK	**Ortayu**	**82.58**	**320**	P		**P**		**12 08 29.8**	**+0.2**
BRLS	**Borolday**	**82.72**	**315**	*e*P		**P**		**12 08 29.4**	**-1.1**
	comp=Z,60nm,2.2s,baz=314								
BRLS	**Borolday**	**82.72**	**315**	*e*P		**P**		**12 08 29.3**	**-1.1**
BRLS				pmax		pmax			
	comp=Z,60nm,2.2s								
C16K	**Lisburne Hills**	**82.73**	**17**	P		**P**		**12 08 29.5**	**-0.3**
	baz=231								
ILSW	**Iliamna Southw**	**82.76**	**27**	P		**P**		**12 08 28.7**	**-1.6**
ILSW				IAmb		IAmb		12 08 30.2	
	comp=Z,89nm,1.5s								
J18K	**Innoko River**	**82.92**	**23**	P		**P**		**12 08 30.7**	**-0.3**
J18K				IAMs_20	IAMs_20		12 42 58.0		
	comp=Z,4µm,20.0s								
J18K	**Innoko River**	**82.92**	**23**	P		**P**		**12 08 30.7**	**-0.3**
	baz=240,SNR=15								
TTA	**Tatalina**	**82.93**	**24**	P		**P**		**12 08 31.3**	**+0.2**
TTA	**Tatalina**	**82.93**	**24**	P		**P**		**12 08 31.3**	**+0.2**
TTA	**Tatalina**	**82.93**	**24**	P		**P**		**12 08 30.8**	**-0.3**
	baz=241,SNR=14								
TTA	**Tatalina**	**82.93**	**24**	P		**P**		**12 08 31.3**	**+0.2**
TTA				pmax		pmax			
	comp=Z,68nm,1.4s								
BRZS	**Berezniki**	**82.93**	**322**	*e*P		**P**		**12 08 30.3**	**-1.0**
	comp=Z,74nm,1.8s,baz=322								
BRZS				*e*S		**S**		**12 18 49.1**	**+0.1**
	baz=322								
BRZS	**Berezniki**	**82.93**	**322**	*e*P		**P**		**12 08 30.3**	**-1.0**
BRZS				*e*S		**S**		**12 18 49.1**	**+0.1**
BRZS				pmax		pmax			
	comp=Z,75nm,1.8s								
O20K	**Slope Mountain**	**83.04**	**27**	P		**P**		**12 08 30.6**	**-1.1**
	baz=244								
L19K	**White Mountain**	**83.04**	**25**	IAMs_20	IAMs_20		12 43 21.2		
	comp=Z,3µm,20.0s								
L19K	**White Mountain**	**83.04**	**25**	P		**P**		**12 08 31.7**	**+0.1**
	baz=242								
D17K	**Noatak River**	**83.05**	**18**	P		**P**		**12 08 31.8**	**+0.3**
	baz=233,SNR=48								
E17K	**Hotham Inlet**	**83.08**	**19**	P		**P**		**12 08 32.1**	**+0.4**
	baz=235								
M19K	**Big River Lodg**	**83.10**	**25**	IAMs_20	IAMs_20		12 43 11.8		
	comp=Z,3µm,21.0s								
M19K	**Big River Lodg**	**83.10**	**25**	P		**P**		**12 08 32.4**	**+0.5**
	baz=242								
RSO	**Redoubt South**	**83.15**	**27**	P		**P**		**12 08 31.4**	**-1.0**
H18K	**Honhosa River**	**83.18**	**21**	P		**P**		**12 08 31.9**	**-0.4**
	baz=238								
QSPA	**South Pole Qui**	**83.39**	**180**	P		**P**		**12 08 33.8**	**+0.3**
QSPA	**South Pole Qui**	**83.39**	**180**	P		**P**		**12 08 34.0**	**+0.4**
	comp=Z,127nm,1.1s,baz=342,slow=1.5,SNR=114								
QSPA				LR		LR		12 46 07.6	
	comp=Z,5µm,18.3s,baz=15,slow=36								
	comp=Z,127nm,1.1s								
CNPM	**China Poot**	**83.43**	**28**	P		**P**		**12 08 33.0**	**-0.7**
CNPM				IAmb		IAmb		12 08 34.5	
	comp=Z,135nm,1.4s								
CNPM				IAMs_20	IAMs_20		12 44 18.8		
	comp=Z,3µm,19.0s								
G18K	**Tagagawik**	**83.47**	**20**	P		**P**		**12 08 33.5**	**-0.2**
	baz=238								
C17K	**Long Mountai**	**83.48**	**17**	P		**P**		**12 08 33.7**	**-0.1**
	baz=233,SNR=81								
GCSA	**Galena City Sc**	**83.51**	**22**	P		**P**		**12 08 33.5**	**-0.4**
	baz=240,SNR=32								
F18K	**Selawik**	**83.51**	**20**	P		**P**		**12 08 34.1**	**+0.2**
	baz=237,SNR=12								
L20K	**Farewell, AK**	**83.58**	**25**	P		**P**		**12 08 34.3**	**-0.1**
	baz=243								
J19K	**Poorman**	**83.61**	**23**	IAMs_20	IAMs_20		12 40 57.1		
	comp=Z,3µm,21.0s								
J19K	**Poorman**	**83.61**	**23**	P		**P**		**12 08 34.3**	**-0.2**
	baz=241								
M20K	**Styx River**	**83.62**	**25**	IAMs_20	IAMs_20		12 41 58.6		
	comp=Z,4µm,20.0s								
M20K	**Styx River**	**83.62**	**25**	P		**P**		**12 08 34.5**	**-0.2**
	baz=243								
E18K	**Tukpahlearik C**	**83.66**	**19**	IAMs_20	IAMs_20		12 41 59.3		
	comp=Z,3µm,20.0s								
E18K	**Tukpahlearik C**	**83.66**	**19**	P		**P**		**12 08 34.3**	**-0.4**
	baz=236								
BRLK	**Bradley Lake**	**83.69**	**28**	IAMs_20	IAMs_20		12 44 56.3		
	comp=Z,3µm,18.0s								
N20K	**Mount Spurr**	**83.71**	**26**	P		**P**		**12 08 33.6**	**-1.6**
	baz=244,SNR=5.4								
BRSE	**Bradley Lake S**	**83.75**	**28**	P		**P**		**12 08 34.8**	**-0.5**
	baz=246								
K20K	**Telida**	**83.91**	**24**	IAMs_20	IAMs_20		12 43 19.2		
	comp=Z,4µm,20.0s								
K20K	**Telida**	**83.91**	**24**	P		**P**		**12 08 36.2**	**+0.1**
	baz=242,SNR=24								
CAPN	**Captain Cook N**	**83.99**	**27**	P		**P**		**12 08 36.6**	**+0.1**
	baz=245								
H19K	**Roundabout Mou**	**84.06**	**21**	P		**P**		**12 08 36.2**	**-0.5**
H19K	**Roundabout Mou**	**84.06**	**21**	P		**P**		**12 08 37.1**	**+0.3**
	baz=240								
G19K	**Purcell Mounta**	**84.15**	**21**	IAMs_20	IAMs_20		12 42 50.3		
	comp=Z,4µm,21.0s								
G19K	**Purcell Mounta**	**84.15**	**21**	P		**P**		**12 08 37.2**	**0.0**
	baz=238,SNR=86								
C18K	**Utukok River**	**84.18**	**18**	IAMs_20	IAMs_20		12 41 16.8		
	comp=Z,3µm,21.0s								
C18K	**Utukok River**	**84.18**	**18**	P		**P**		**12 08 37.4**	**+0.1**
	baz=235								
J20K	**Nowinta River**	**84.26**	**23**	IAMs_20	IAMs_20		12 41 17.5		
	comp=Z,4µm,21.0s								
J20K	**Nowinta River**	**84.26**	**23**	P		**P**		**12 08 37.8**	**0.0**
	baz=242,SNR=60								
F19K	**Shaleruckik Mo**	**84.27**	**20**	IAMs_20	IAMs_20		12 40 58.5		
	comp=Z,4µm,21.0s								
F19K	**Shaleruckik Mo**	**84.27**	**20**	P		**P**		**12 08 37.4**	**-0.3**
	baz=238								
SKT	**Skwentna**	**84.34**	**25**	IAMs_20	IAMs_20		12 41 38.7		
	comp=Z,3µm,21.0s								
SKT	**Skwentna**	**84.34**	**25**	P		**P**		**12 08 38.2**	**0.0**
	baz=245,SNR=5.6								
B18K	**Kokolik River**	**84.41**	**17**	P		**P**		**12 08 38.7**	**+0.3**
	baz=234								
I20K	**Naaghedeneel**	**84.43**	**22**	IAMs_20	IAMs_20		12 41 33.8		
	comp=Z,3µm,21.0s								
I20K	**Naaghedeneel**	**84.43**	**22**	P		**P**		**12 08 38.4**	**-0.2**
	baz=242								
SUA	**Susitna One**	**84.46**	**26**	P		**P**		**12 08 37.8**	**-1.2**
SUA				IAmb		IAmb		12 09 11.1	
	comp=Z,54nm,0.7s								
SUA				IAMs_20	IAMs_20		12 41 51.9		
	comp=Z,3µm,20.0s								
SUA	**Susitna One**	**84.46**	**26**	P		**P**		**12 08 37.4**	**-1.7**
	baz=246,SNR=16								
PPLA	**Purkeypile**	**84.46**	**24**	P		**P**		**12 08 38.0**	**-1.1**
	baz=244,SNR=11								
SEW	**Seward**	**84.49**	**28**	P		**P**		**12 08 38.2**	**-0.8**
	baz=247,SNR=9.4								
O22K	**Cooper Landing**	**84.52**	**27**	IAMs_20	IAMs_20		12 42 12.4		
	comp=Z,3µm,21.0s								
O22K	**Cooper Landing**	**84.52**	**27**	P		**P**		**12 08 37.5**	**-1.6**
	baz=246,SNR=6.0								
H20K	**Anotlesega Mo**	**84.61**	**22**	P		**P**		**12 08 39.5**	**-0.1**
	baz=241,SNR=33								
CAST	**Castle Rocks**	**84.74**	**24**	P		**P**		**12 08 39.2**	**-1.1**
CAST				IAmb		IAmb		12 08 40.7	
	comp=Z,71nm,1.2s								
CAST	**Castle Rocks**	**84.74**	**24**	P		**P**		**12 08 38.6**	**-1.6**
	baz=244,SNR=32								
RC01	**Rabbit Creek A**	**84.75**	**27**	P		**P**		**12 08 39.3**	**-1.1**
	baz=246,SNR=16								
E19K	**Redstone River**	**84.78**	**19**	IAMs_20	IAMs_20		12 41 01.8		
	comp=Z,3µm,22.0s								
E19K	**Redstone River**	**84.78**	**19**	P		**P**		**12 08 40.4**	**+0.1**
	baz=239								
NRIK	**Noril'sk**	**84.80**	**343**	*c i* P		**P**		**12 08 39.7**	**-0.7**
NRIK				pmax		pmax			
	comp=Z,261nm,1.2s								
NRIK	**Noril'sk**	**84.80**	**343**	P		**P**		**12 08 39.9**	**-0.5**
	comp=Z,114nm,0.9s,baz=122,slow=5.1,SNR=151								
NRIK				LR		LR		12 47 39.0	
	comp=Z,2µm,18.1s,baz=124,slow=36								
	comp=Z,114nm,0.9s								
CHUM	**Lake Minchumin**	**84.85**	**24**	P		**P**		**12 08 40.6**	**-0.2**
	baz=244,SNR=57								
M22K	**Willow**	**84.85**	**26**	P		**P**		**12 08 39.8**	**-1.1**
M22K	**Willow**	**84.85**	**26**	P		**P**		**12 08 39.5**	**-1.3**
	baz=246,SNR=24								
C19K	**Lookout Ridge**	**84.92**	**18**	IAMs_20	IAMs_20		12 41 41.4		
	comp=Z,3µm,21.0s								
C19K	**Lookout Ridge**	**84.92**	**18**	P		**P**		**12 08 41.4**	**+0.3**
	baz=237,SNR=92								
D19K	**Kuna River**	**85.04**	**18**	IAMs_20	IAMs_20		12 41 55.6		
	comp=Z,4µm,21.0s								
D19K	**Kuna River**	**85.04**	**18**	P		**P**		**12 08 41.5**	**-0.2**
	baz=238,SNR=64								
CUT	**Chulitna**	**85.06**	**25**	IAMs_20	IAMs_20		12 43 05.7		
	comp=Z,4µm,21.0s								
CUT	**Chulitna**	**85.06**	**25**	P		**P**		**12 08 40.0**	**-1.8**
	baz=246,SNR=10								
F20K	**Avaraart Lake**	**85.08**	**20**	IAMs_20	IAMs_20		12 41 11.7		
	comp=Z,4µm,22.0s								
F20K	**Avaraart Lake**	**85.08**	**20**	P		**P**		**12 08 42.0**	**+0.2**
	baz=240								
PMR	**Palmer**	**85.22**	**26**	P		**P**		**12 08 41.8**	**-0.

RND pmax pmax
comp=Z,82nm,1.0s
H22K Ishtalitna Cre 86.09 22 P **P** **12 08 46.5 -0.5**
baz=245
FID Port Fidalgo 86.10 28 IAMs_20 IAMs_20 12 48 46.7
comp=Z,2µm,19.0s
BWN Browne 86.11 24 P **P** **12 08 46.6 -0.4**
BWN IAMs_20 IAMs_20 12 44 59.1
comp=Z,3µm,20.0s
SCM Sheep Creek Mo 86.11 26 P **P** **12 08 47.1 -0.1**
SCM IAMs_20 IAMs_20 12 42 15.5
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 86.11 26 P **P** **12 08 46.5 -0.8**
baz=248,SNR=18
SCM Sheep Creek Mo 86.11 26 P **P** **12 08 47.1 -0.1**
SCM pmax pmax
comp=Z,132nm,1.2s
MCK McKinley 86.15 24 P **P** **12 08 45.7 -1.6**
baz=247,SNR=36
WAT6 Susitna Watana 86.21 26 P **P** **12 08 46.7 -1.1**
baz=248,SNR=19
E21K Killik River 86.33 19 P **P** **12 08 48.1 0.0**
baz=242
C21K Knifeblade Rid 86.42 18 P **P** **12 08 48.9 +0.4**
baz=241
NEA2 Nenana 86.43 24 IAMs_20 IAMs_20 12 44 55.9
comp=Z,4µm,20.0s
NEA2 Nenana 86.43 24 P **P** **12 08 47.1 -1.5**
baz=247,SNR=25
G22K Bettles 86.48 21 P **P** **12 08 48.3 -0.5**
baz=244
I23K Minto, Yukon-K 86.54 23 P **P** **12 08 48.6 -0.6**
baz=246,SNR=12
DHY Denali Highway 86.55 25 IAMs_20 IAMs_20 12 43 20.0
comp=Z,3µm,20.0s
DHY Denali Highway 86.55 25 P **P** **12 08 48.7 -0.7**
baz=248,SNR=31
KLU Klutina 86.61 27 P **P** **12 08 49.3 -0.4**
baz=250,SNR=22
M24K Tolsona, Glenn 86.72 26 P **P** **12 08 50.5 +0.3**
M24K IAmb IAmb 12 08 52.1
comp=Z,103nm,1.1s
M24K IAMs_20 IAMs_20 12 42 54.5
comp=Z,4µm,22.0s
M24K Tolsona, Glenn 86.72 26 P **P** **12 08 50.0 -0.2**
baz=250,SNR=11
WRH Wood River Hil 86.78 24 P **P** **12 08 48.7 -1.6**
WRH IAmb IAmb 12 08 50.2
comp=Z,120nm,1.3s
WRH IAMs_20 IAMs_20 12 45 06.0
comp=Z,3µm,21.0s
KAIM Kayak Island 86.78 29 P **P** **12 08 50.4 0.0**
baz=251
RAGM Ragged Mountai 86.81 28 IAMs_20 IAMs_20 12 44 06.2
comp=Z,3µm,20.0s
MDM Murphy Dome 86.91 23 IAMs_20 IAMs_20 12 44 59.4
comp=Z,3µm,20.0s
E22K Anaktuvuk Pass 86.91 20 IAMs_20 IAMs_20 12 43 05.2
comp=Z,4µm,22.0s
E22K Anaktuvuk Pass 86.91 20 P **P** **12 08 51.2 +0.2**
baz=244
G23K Bananza Creek 86.93 21 IAMs_20 IAMs_20 12 43 45.8
comp=Z,4µm,20.0s
G23K Bananza Creek 86.93 21 P **P** **12 08 51.0 -0.1**
baz=246
A21K Barrow 86.95 16 P **P** **12 08 50.8 -0.3**
baz=239,SNR=95
D22K Ayikyak River 86.96 19 IAMs_20 IAMs_20 12 42 14.4
comp=Z,3µm,21.0s
D22K Ayikyak River 86.96 19 P **P** **12 08 51.9 +0.8**
baz=243
CCB Clear Creek Bu 86.96 24 IAMs_20 IAMs_20 12 44 41.7
comp=Z,3µm,20.0s
HMT Hamilton 86.99 28 IAMs_20 IAMs_20 12 46 27.0
comp=Z,3µm,20.0s
COLA College 87.03 23 P **P** **12 08 50.0 -1.5**
COLA IAmb IAmb 12 08 51.2
comp=Z,109nm,1.3s
COLA College 87.03 23 IAMs_20 IAMs_20 12 46 22.4
comp=Z,3µm,20.0s
COLA College 87.03 23 P **P** **12 08 50.0 -1.5**
COLA College 87.03 23 P **P** **12 08 49.8 -1.7**
baz=248
COLA College 87.03 23 P **P** **12 08 50.0 -1.5**
COLA pmax pmax
comp=Z,109nm,1.3s
COLA MLR MLR
comp=Z,3µm,20.0s
BMRM Bremner River 87.04 28 P **P** **12 08 50.7 -1.0**
baz=251,SNR=16
JLN Jalan Bani Buh 87.07 293 P **P** **12 08 52.9 +0.3**
COLD Coldfoot 87.08 21 P **P** **12 08 51.9 +0.1**
baz=246,SNR=35
HDA Harding Lake 87.21 24 IAMs_20 IAMs_20 12 43 41.5
comp=Z,3µm,21.0s
HDA Harding Lake 87.21 24 P **P** **12 08 50.5 -2.0**
baz=249,SNR=12
N25K Chitina, Valde 87.25 27 P **P** **12 08 51.8 -1.0**
N25K IAmb IAmb 12 08 54.1
comp=Z,90nm,1.4s
N25K Chitina, Valde 87.25 27 P **P** **12 08 52.5 -0.4**
baz=251,SNR=13
HARP HAARP 87.26 26 P **P** **12 08 52.2 -0.6**
baz=250,SNR=6.1
BERG Berg Lake 87.27 28 P **P** **12 08 52.4 -0.4**
BERG IAMs_20 IAMs_20 12 47 15.4
comp=Z,3µm,20.0s
POKR Poker Plat Res 87.28 23 IAMs_20 IAMs_20 12 45 22.3
comp=Z,3µm,20.0s
POKR Poker Plat Res 87.28 23 P **P** **12 08 50.8 -2.0**
baz=248,SNR=9.5
PAX Paxson 87.32 26 P **P** **12 08 52.2 -0.9**
baz=250,SNR=14
IL31 87.37 24 P **P** **12 08 50.9 -2.3**
IL31 IAmb IAmb 12 08 52.6
comp=Z,71nm,1.2s
ILAR Eielson Array 87.37 24 P **P** **12 08 50.9 -2.3**
comp=Z,27nm,1.0s,baz=258,slow=4.0,SNR=112
ILAR PKKP **PKKPbc** **12 26 43.8 -2.6**
comp=Z,0.5nm,1.0s,baz=282,slow=1.6,SNR=4.5
ILAR LR LR 12 46 14.6
comp=Z,2µm,19.4s,baz=255,slow=34
comp=Z,27nm,1.0s
H24K Noodor Dome 87.38 23 P **P** **12 08 52.1 -1.2**
H24K IAMs_20 IAMs_20 12 43 56.8
comp=Z,3µm,21.0s
H24K Noodor Dome 87.38 23 P **P** **12 08 52.4 -0.9**
baz=248
K24K Donnelly Dome 87.48 25 P **P** **12 08 52.8 -1.1**
baz=250,SNR=8.4
WBK Wadi Bani Khal 87.54 293 P **P** **12 08 56.0 +1.0**
GLB Gilahina Butte 87.55 27 P **P** **12 08 54.1 -0.2**
GLB IAmb IAmb 12 08 55.2
comp=Z,101nm,1.2s
MSEY Mahe Island 87.57 266 P **P** **12 08 54.5 -0.9**
E23K Chandalar 87.62 20 P **P** **12 08 54.8 +0.3**
baz=246,SNR=62
D23K Nanushuk River 87.64 19 P **P** **12 08 55.4 +0.9**
baz=245
CRQM Cirque 87.65 28 IAMs_20 IAMs_20 12 47 09.9
comp=Z,2µm,20.0s
VRDI Verde Repeater 87.65 28 P **P** **12 08 54.0 -0.9**
VRDI IAmb IAmb 12 08 55.8
comp=Z,89nm,1.4s
CRQE Cirque 87.67 28 P **P** **12 08 54.6 -0.3**
baz=252,SNR=13
WAX Waxell Ridge 87.69 28 IAMs_20 IAMs_20 12 46 46.5
comp=Z,3µm,20.0s
TGL Tana Glacier 87.80 28 P **P** **12 08 54.9 -0.6**
G24K Hadweenzic Riv 87.86 22 P **P** **12 08 55.2 -0.3**
baz=248,SNR=46
MCARA McCarthy VSAT 87.89 27 P **P** **12 08 55.6 -0.2**
MCARA IAmb IAmb 12 08 57.0
comp=Z,74nm,1.2s
MCARA McCarthy VSAT 87.89 27 P **P** **12 08 55.3 -0.5**
baz=252,SNR=11
J25K Salcha River, 87.92 24 IAMs_20 IAMs_20 12 46 04.3
comp=Z,2µm,20.0s
J25K Salcha River, 87.92 24 P **P** **12 08 54.9 -1.1**
baz=250
WSAR Wadi Sarin 87.93 294 LR LR 12 55 41.2
comp=Z,435nm,18.2s,baz=122,slow=41
ISLE Juniper Island 87.98 28 IAMs_20 IAMs_20 12 46 56.1
comp=Z,2µm,19.0s
F24K Squaw Lake 88.02 21 P **P** **12 08 56.8 +0.4**
baz=248,SNR=77
MESA MESA 88.04 29 P **P** **12 08 55.9 -0.9**
baz=253
PRP Porcupine Dome 88.17 23 IAMs_20 IAMs_20 12 45 47.8
comp=Z,3µm,20.0s
PRP Porcupine Dome 88.17 23 P **P** **12 08 56.4 -0.9**
baz=250
MHTO MHTO 88.24 291 P **P** **12 08 58.3 0.0**
SNR=10.0
L26K Log Cabin Wild 88.26 26 P **P** **12 08 56.9 -0.6**
L26K IAmb IAmb 12 08 58.6
comp=Z,58nm,1.3s
L26K IAMs_20 IAMs_20 12 43 43.2
comp=Z,3µm,21.0s
L26K Log Cabin Wild 88.26 26 P **P** **12 08 57.0 -0.5**
baz=252,SNR=11
SCRK Sand Creek 88.28 25 P **P** **12 08 56.8 -1.0**
SCRK IAmb IAmb 12 08 58.6
comp=Z,64nm,1.4s
SCRK Sand Creek 88.28 25 P **P** **12 08 56.9 -0.8**
baz=251,SNR=18
D24K Happy Valley 88.33 19 IAMs_20 IAMs_20 12 43 31.8
comp=Z,3µm,22.0s
D24K Happy Valley 88.33 19 P **P** **12 08 58.3 +0.6**
baz=247
G25K Bearman Lake 88.39 22 P **P** **12 08 58.4 +0.4**
baz=249,SNR=18
BARN Barnard Glacie 88.43 28 P **P** **12 08 59.0 +0.4**
DQM DQM 88.50 290 P **P** **12 09 00.2 +0.7**
SNR=5.1
CTG Chitna Glacier 88.55 28 P **P** **12 08 59.0 -0.2**
baz=254,SNR=34
C24K Franklin Bluff 88.59 19 P **P** **12 08 59.0 +0.1**
baz=247
J26L Joseph Creek 88.63 24 P **P** **12 08 58.9 -0.4**
baz=252,SNR=54
FYU Fort Yukon 88.64 22 IAMs_20 IAMs_20 12 45 40.2
comp=Z,3µm,20.0s
M27K Edge Creek, AK 88.70 27 IAMs_20 IAMs_20 12 43 16.1
comp=Z,2µm,22.0s
M27K Edge Creek, AK 88.70 27 P **P** **12 08 59.8 0.0**
baz=253
PINM Pinnacle 88.83 29 P **P** **12 09 01.2 +0.8**
baz=255
F25K Christian Rive 88.85 21 P **P** **12 09 01.0 +0.8**
baz=250
L27K Beaver Creek, 88.93 26 IAMs_20 IAMs_20 12 43 40.0
comp=Z,4µm,22.0s
L27K Beaver Creek, 88.93 26 P **P** **12 09 01.0 +0.3**
baz=253
BCAR Beaver Creek A 88.95 26 P **P** **12 09 00.5 -0.3**
I26K Coal Creek Min 89.04 24 IAMs_20 IAMs_20 12 52 07.9
comp=Z,3µm,19.0s
I26K Coal Creek Min 89.04 24 P **P** **12 09 00.4 -0.7**
baz=252
E25K Arctic Village 89.06 21 IAMs_20 IAMs_20 12 47 07.0
comp=Z,3µm,20.0s
E25K Arctic Village 89.06 21 P **P** **12 09 01.6 +0.4**
baz=250,SNR=49
K27K Chicken 89.10 25 P **P** **12 09 01.7 +0.3**
baz=253
PNL Peninsula 89.14 30 P **P** **12 09 02.0 +0.2**
PNL Peninsula 89.14 30 P **P** **12 09 01.7 -0.1**
baz=256
BVCY Beaver Creek 89.17 27 P **P** **12 09 01.7 -0.1**
baz=254,SNR=23
BMAR Burnt Mountain 89.18 22 P **P** **12 09 01.3 -0.5**
HOQ Hoqain 89.18 294 P **P** **12 09 03.0 +0.2**
YUK3 Moose Creek 89.18 27 P **P** **12 09 01.9 -0.3**
baz=255,SNR=26
D25K Kavik River 89.20 20 IAMs_20 IAMs_20 12 43 24.8
comp=Z,2µm,22.0s
D25K Kavik River 89.20 20 P **P** **12 09 01.5 -0.4**
baz=249
G26K Porcupine Rive 89.31 22 P **P** **12 09 03.0 +0.6**
baz=252,SNR=129
YUK8 Steele Glacier 89.38 28 P **P** **12 09 03.1 0.0**
baz=255
F26K Sheenjek River 89.42 21 P **P** **12 09 03.3 +0.4**
baz=251
EGAK Eagle 89.70 24 P **P** **12 09 04.3 +0.1**
EGAK IAmb IAmb 12 09 05.3
comp=Z,92nm,1.4s
EGAK Eagle 89.70 24 P **P** **12 09 04.0 -0.3**
baz=254,SNR=25
O29M Mount Kennedy 89.70 29 P **P** **12 09 04.2 -0.3**
baz=256
I27K Kandik River 89.75 24 P **P** **12 09 04.2 -0.3**
baz=254,SNR=87
YUK4 Talbot Arm 89.91 28 P **P** **12 09 06.0 +0.4**
baz=256,SNR=17
P29M Windy Craggy 89.95 30 P **P** **12 09 05.2 -0.3**
baz=257
YUK6 Outpost Mounta 89.95 29 P **P** **12 09 05.5 -0.3**
baz=256
SOHO SOHO 89.96 294 P **P** **12 09 05.8 -0.6**
SOHO SOHO 89.96 294 P **P** **12 09 06.3 0.0**
H27K Steamboat Moun 89.96 23 P **P** **12 09 06.2 +0.7**
baz=254,SNR=78
SHAO Shalim 90.06 288 P **P** **12 09 05.2 -1.7**
DAWY Dawson 90.25 25 P **P** **12 09 06.9 0.0**
DAWY IAmb IAmb 12 09 08.3
comp=Z,98nm,1.3s
DAWY Dawson 90.25 25 P **P** **12 09 06.9 0.0**
baz=256,SNR=48
M29M Somme Creek 90.26 27 IAMs_20 IAMs_20 12 48 49.3
comp=Z,2µm,20.0s
M29M Somme Creek 90.26 27 P **P** **12 09 07.0 0.0**
baz=256,SNR=28
HYT Haines Junctio 90.33 29 P **P** **12 09 07.1 -0.4**
HYT IAmb IAmb 12 09 08.9
comp=Z,71nm,1.3s
HYT Haines Junctio 90.33 29 P **P** **12 09 07.2 -0.2**
baz=257,SNR=16
UOSS Minazif 90.36 295 P **P** **12 09 06.7 -1.5**
S31K Pelican 90.36 32 P **P** **12 09 07.4 0.0**
baz=258
I28M Mines Creek 90.38 24 P **P** **12 09 07.2 -0.3**
baz=255
HATD Hatta, Dubai 90.41 295 P **P** **12 09 08.3 -0.2**
GEYT Alibeck 90.42 308 P **P** **12 09 07.8 -0.5**
comp=Z,17nm,1.1s,baz=113,slow=3.4,SNR=22
GEYT LR LR 12 52 11.3
comp=Z,1µm,21.1s,baz=94,slow=37
comp=Z,17nm,1.1s
P30M Million Dollar 90.44 29 P **P** **12 09 07.9 0.0**
baz=258,SNR=7.0
MASF Masafi 90.45 295 P **P** **12 09 08.9 +0.2**
SNR=6.1
ASHO Ashiyiah 90.45 295 P **P** **12 09 08.0 -0.7**
ASHO Ashiyiah 90.45 295 P **P** **12 09 08.7 0.0**
ASHO P **PcP** **12 09 08.8 -1.0**
SHME Shamm 90.55 296 P **P** **12 09 08.8 -0.3**
SHME Shamm 90.55 296 P **P** **12 09 09.1 0.0**
L29M L29M 90.57 26 IAMs_20 IAMs_20 12 44 41.3
comp=Z,3µm,22.0s
L29M L29M 90.57 26 P **P** **12 09 08.5 +0.2**
baz=257
ALNE Al Ain 90.66 294 P **P** **12 09 09.6 0.0**
SNR=6.3
AB31 Akbulak array 90.78 319 *i* P **P** **12 09 08.0 -1.6**
ABKAR Akbulak array 90.78 319 P **P** **12 09 07.9 -1.7**
J29N Klondike Camp 90.84 25 P **P** **12 09 10.3 +0.7**
J29N IAmb IAmb 12 09 11.5
comp=Z,67nm,1.3s
J29N IAMs_20 IAMs_20 12 47 17.5
comp=Z,4µm,20.0s
J29N Klondike Camp 90.84 25 P **P** **12 09 09.9 +0.3**
baz=257,SNR=18
NAZ Nazwa, Dubai 90.85 295 P **P** **12 09 09.0 -1.5**
FAQ Al Faqa, Dubai 90.88 295 P **P** **12 09 10.3 -0.4**
F28M Old Crow 90.96 22 P **P** **12 09 10.1 0.0**
baz=255,SNR=17
K29M Barlow Dome 91.00 26 IAMs_20 IAMs_20 12 45 39.7
comp=Z,2µm,19.0s
K29M Barlow Dome 91.00 26 P **P** **12 09 10.1 -0.4**
baz=257
O30N Mendenhall 91.00 29 P **P** **12 09 10.7 +0.3**
O30N IAmb IAmb 12 09 11.7
comp=Z,57nm,1.4s
O30N Mendenhall 91.00 29 P **P** **12 09 10.1 -0.4**
baz=258,SNR=10
M30M Minto, Yukon 91.05 27 P **P** **12 09 10.2 -0.4**
baz=258,SNR=14
ASUD Al Ashush, Dub 91.11 295 P **P** **12 09 11.1 -0.5**
SKAG Skagway 91.12 30 P **P** **12 09 11.6 +0.7**
SKAG Skagway 91.12 30 P **P** **12 09 10.7 -0.2**
baz=259,SNR=7.8
H29M Whitestone 91.19 23 P **P** **12 09 11.1 -0.1**
baz=256
RBK Rabkut 91.34 287 P **P** **12 09 12.4 -0.6**
RBK P **PcP** **12 09 12.7 -1.2**
SNR=7.7
DOK Doka 91.54 288 P **P** **12 09 13.3 -0.5**
SNR=6.1
WHY Whitehorse 91.56 29 P **P** **12 09 12.7 -0.5**
baz=260,SNR=7.9
SVE Sverdlovsk 91.60 327 *de*P **P** **12 09 12.0 -1.2**
SVE *e*S **SKSac** **12 19 44.8 +0.4**
SVE pmax pmax
comp=Z,53nm,1.4s
SVE MLR MLR
comp=Z,2µm,19.0s
MAYO Mayo, Yukon 91.66 26 P **P** **12 09 13.3 0.0**
baz=259,SNR=5.9
J30M Hart River 91.66 25 P **P** **12 09 13.4 -0.2**
baz=258,SNR=33
U33K Whale Pass 91.69 34 P **P** **12 09 14.0 +0.3**
baz=261
I30M Mount Dempster 91.78 25 IAMs_20 IAMs_20 12 48 44.2
comp=Z,3µm,19.0s
I30M Mount Dempster 91.78 25 P **P** **12 09 14.1 +0.1**
baz=258,SNR=15
WHFO Wadi Hawf 91.80 288 P **P** **12 09 14.3 -0.7**
SNR=6.3
E29M Blow River 91.87 21 IAMs_20 IAMs_20 12 48 03.4
comp=Z,3µm,20.0s
E29M Blow River 91.87 21 P **P** **12 09 13.6 -0.6**
baz=257
EPYK Eagle Plains 91.88 23 P **P** **12 09 14.0 -0.4**
baz=258,SNR=28
P32M Atlin 91.95 30 P **P** **12 09 15.0 +0.1**
baz=260,SNR=6.2
M31M Drury Creek, Y 92.07 28 IAMs_20 IAMs_20 12 46 33.2
comp=Z,2µm,21.0s
M31M Drury Creek, Y 92.07 28 P **P** **12 09 15.1 -0.3**
baz=260,SNR=8.0
WRAK Wrangell Islan 92.17 34 P **P** **12 09 15.9 +0.1**
baz=262
ABTO Aybut 92.19 287 P **P** **12 09 16.3 -0.6**
SNR=5.9
AKTO Aktyubinsk 92.19 320 P **P** **12 09 13.4 -2.7**
AKTO Aktyubinsk 92.19 320 LR LR 12 54 42.4
comp=Z,716nm,18.1s,baz=58,slow=38
G30M tAoh Zrail Nji 92.19 23 IAMs_20 IAMs_20 12 49 02.1
comp=Z,3µm,20.0s
G30M tAoh Zrail Nji 92.19 23 P **P** **12 09 15.1 -0.7**
baz=258
MZWR Madinat Zayed 92.33 294 P **P** **12 09 17.2 -0.2**
V35K Ketchikan 92.42 35 P **P** **12 09 17.9 +0.9**
baz=262
F30M Barrier River 92.48 22 P **P** **12 09 16.9 -0.2**
baz=259,SNR=17
P33M Teslin, Yukon 92.50 30 P **P** **12 09 16.7 -0.7**
baz=261,SNR=5.8
N32M Quiet Lake 92.51 29 P **P** **12 09 17.2 -0.3**
baz=261
FARO Faro, Yukon 92.56 28 P **P** **12 09 17.4 -0.2**
baz=261,SNR=9.7
Q32M Nakina River 92.58 31 P **P** **12 09 17.4 -0.6**
baz=262
ARU Arti 92.67 326 *c i*P **P** **12 09 16.3 -1.9**
ARU 12 12 56.7
ARU S **SKSac** **12 19 49.1 -1.4**
ARU PS PnS 12 21 40.3 +3.1
ARU pmax pmax
comp=Z,59nm,1.2s
ARU MLR MLR
comp=Z,1µm,20.0s
ARU Arti 92.67 326 LR LR 12 53 17.2
comp=Z,1µm,19.5s,baz=92,slow=37
H31M Peel River 92.72 24 IAMs_20 IAMs_20 12 49 22.0
comp=Z,3µm,20.0s
H31M Peel River 92.72 24 P **P** **12 09 17.6 -0.6**
baz=260
ELIB Princess Elisa 92.73 196 *d*P **P** **12 09 18.2 -0.2**
comp=Z,33nm,1.2s
G31M Satah River 92.94 23 P **P** **12 09 18.3 -0.9**
baz=260,SNR=25
S34M Telegraph Cree 93.03 32 P **P** **12 09 19.9 +0.1**
baz=263
FOMA Nahampoana Res 93.19 245 IAMs_20 IAMs_20 12 49 01.5
comp=Z,2µm,18.0s
F31M Tsiigehtchic 93.23 23 IAMs_20 IAMs_20 12 47 06.4
comp=Z,2µm,20.0s
F31M Tsiigehtchic 93.23 23 P **P** **12 09 19.3 -1.2**
baz=261,SNR=17
R33M Jennings River 93.31 31 P **P** **12 09 20.9 -0.3**
baz=263,SNR=6.0
T35M Bob Quinn 93.39 33 P **P** **12 09 21.9 +0.3**
baz=263
INK Inuvik 93.45 22 P **P** **12 09 20.8 -0.7**
baz=261,SNR=37
INK Inuvik 93.45 22 LR LR 12 50 21.3
comp=Z,3µm,19.5s,baz=202,slow=35
DLBC Dease Lake 93.68 32 P **P** **12 09 22.6 -0.3**
baz=264
DLBC Dease Lake 93.68 32 LR LR 12 43 47.8
comp=Z,2µm,21.8s,baz=285,slow=31
VOI Vohitsoka 93.81 248 IAMs_20 IAMs_20 12 52 09.2
comp=Z,3µm,18.0s
VOI Vohitsoka 93.81 248 P **P** **12 09 24.7 +0.3**
VOI Vohitsoka 93.81 248 P **P** **12 09 24.2 -0.3**
BBB Bella Bella 94.12 38 LR LR 12 47 16.3
comp=Z,2µm,18.8s,baz=262,slow=33
WTLY Watson Lake, Y 94.48 30 P **P** **12 09 26.2 -0.3**
baz=265,SNR=14
TGTN Hyland Airport 94.86 29 P **P** **12 09 27.9 -0.4**
baz=265,SNR=8.6
NVL N'lazarevskaya 96.41 194 *e*P **P** **12 09 31.7 -3.4**
NVL *e*PS PS 12 22 14.8 -1.5
NVL pmax pmax
comp=Z,38nm,1.4s
NLWA Neilton Lookou 96.53 43 IAMs_20 IAMs_20 12 49 47.7
comp=Z,2µm,21.0s
A36M Sachs Harbour 96.58 18 P **P** **12 09 35.2 -0.6**
baz=269
KOTAN Kotaneelee Air 96.85 30 P **P** **12 09 36.0 -1.2**
baz=269
C36M Paulatuk 96.95 21 IAMs_20 IAMs_20 12 52 05.7
comp=Z,3µm,19.0s
C36M Paulatuk 96.95 21 P **P** **12 09 35.8 -1.7**
baz=270,SNR=17
HUMO Hull Mountain 96.97 48 IAMs_20 IAMs_20 12 45 20.7
comp=Z,3µm,21.0s
YBH Yreka Blue Hor 97.11 49 P Pdif 12 09 39.5 +0.4
comp=Z,13nm,1.1s,baz=224,slow=1.6,SNR=6.1
YBH LR LR 12 50 06.0
comp=Z,2µm,18.2s,baz=279,slow=33
comp=Z,13nm,1.1s
KIRV Kirov 97.74 328 ‖ *e*P **P** **12 09 39.7 -1.5**
KIRV Kirov 97.74 328 LR LR 12 56 07.7
comp=Z,1µm,19.9s,baz=90,slow=37
ORV Oroville 97.95 51 IAMs_20 IAMs_20 12 48 07.0
comp=Z,2µm,19.0s
BELG Belogornoye 98.80 322 *de*P **P** **12 09 44.9 -1.3**
BELG pmax pmax
comp=Z,10.0nm,0.8s
BELG Belogornoye 98.80 322 LR LR 12 57 26.6
comp=Z,623nm,18.4s,baz=110,slow=37
SNAA Sanae 98.85 190 ‖ *e*P **P** **12 09 45.7 -0.5**
SNAA pmax pmax
comp=Z,17nm,1.1s
SNAA Sanae 98.85 190 P **P** **12 09 45.9 -0.3**
comp=Z,13nm,1.1s,baz=135,slow=4.9,SNR=7.7
SNAA LR LR 12 56 57.2
comp=Z,4µm,18.1s,baz=138,slow=37
comp=Z,13nm,1.1s
MAK Makhachkala 98.88 312 *e*P P 12 09 39.1 -7.6
MAK *e*SS SS 12 27 55.6 -7.4
MAK pmax pmax
comp=Z,212nm,1.6s
SMMC Simmler 99.02 55 P **Pdif** **12 09 48.2 +0.6**
baz=268
PKM Mcpherson Peak 99.15 56 P **Pdif** **12 09 48.9 +0.4**
baz=268,SNR=7.9
HAWA Hanford 99.49 44 IAMs_20 IAMs_20 12 49 28.0
comp=Z,2µm,20.0s
VES Vestal, Richgr 99.77 55 P **Pdif** **12 09 51.2 +0.3**
baz=269,SNR=9.3
ARVC Arvin 99.96 56 P **Pdif** **12 09 51.9 +0.1**
baz=269
ISA Isabella, Lake 100.26 55 P **Pdif** **12 09 52.5 -0.7**
baz=269,SNR=8.0
CIS Catalina Islan 100.28 57 P **Pdif** **12 09 53.2 -0.1**
baz=269
NVAR Mina Array Bea 100.42 52 P **Pdif** **12 09 54.4 +0.3**

NVAR comp=Z,7.5nm,1.1s,baz=260,slow=6.1,SNR=32 PP **PP** **12 13 58.5 -2.2**

TIN comp=Z,3.3nm,1.1s,baz=253,slow=8.8,SNR=5.3 **Tinemaha, Big** **100.47 54** P **Pdif** **12 09 54.0 -0.2**

PASC baz=270 **Pasadena Art C** **100.48 57** IAMs_20 IAMs_20 12 48 42.5

CWC comp=Z,3µm,21.0s **Cottonwood Cre** **100.59 54** P **Pdif** **12 09 54.3 -0.5**

EDW2 baz=270 **Edwards Air Fo** **100.65 56** P **Pdif** **12 09 54.8 -0.2**

LRMC baz=270,SNR=7.9 **Laurel Mtn Rad** **100.91 55** P **Pdif** **12 09 55.7 -0.5**

BFSC baz=270 **Mount Baldy Ra** **100.92 56** P **Pdif** **12 09 55.5 -0.7**

MPMC baz=270,SNR=20 **Manual Prospec** **101.07 55** P **Pdif** **12 09 56.9 -0.1**

NEW comp=Z,3µm,20.0s **Newport** **101.08 42** IAMs_20 IAMs_20 12 49 40.8

NEW baz=273 **Newport** **101.08 42** P **Pdif** **12 09 56.9 +0.3**

NEW comp=Z,4.0nm,0.9s,baz=136,slow=2.9,SNR=5.7 **Newport** **101.08 42** P **Pdif** **12 09 55.8 -0.7**

NEW comp=Z,3.1nm,1.0s,baz=319,slow=7.0,SNR=3.6 PP **PP** **12 14 00.8 -4.4**

BMO comp=Z,µm,20.0s **Blue Mountains** **101.08 46** IAMs_20 IAMs_20 12 49 42.3

GRAC baz=270 **Grapevine Rang** **101.17 54** P **Pdif** **12 09 57.2 0.0**

YKA comp=Z,3.0nm,1.1s **Yellowknife Ar** **101.27 28** *i* P **Pdif** **12 09 56.2 -0.8**
YKA pmax pmax

YKA comp=Z,2.7nm,1.1s,baz=281,slow=4.6,SNR=22 **Yellowknife Ar** **101.27 28** P **Pdif** **12 09 55.7 -1.2**
YKA PP **PP** **12 14 00.8 -5.3**

YKA comp=Z,1.8nm,1.1s,baz=275,slow=8.1,SNR=5.8 PKKPbc **PKKPbc** **12 26 06.0 -3.2**

109C comp=Z,0.8nm,1.0s,baz=96,slow=3.0,SNR=7.0 **Camp Elliot, M** **101.37 58** IAMs_20 IAMs_20 12 49 26.2

FURC comp=Z,2µm,21.0s **Furnace Creek,** **101.57 54** P **Pdif** **12 09 58.9 0.0**

GSC baz=270,SNR=12 **Goldstone, Bar** **101.62 55** P **Pdif** **12 09 59.2 -0.1**

PFO baz=270 **Pinyon Flats O** **101.91 57** P **Pdif** **12 10 01.1 +0.4**

PFO baz=270 **Pinyon Flats O** **101.91 57**⇑ *e*P **Pdif** **12 09 59.9 -0.8**

TPFO baz=270 **Pinon Flats** **101.92 57** P **Pdif** **12 10 00.9 +0.2**

MONP2 baz=270 **Monument Peak** **101.94 58** P **Pdif** **12 10 01.0 0.0**

PLID comp=Z,3µm,21.0s **Pearl Lake** **102.00 45** IAMs_20 IAMs_20 12 50 12.5

HEC baz=270 **Hector,Ludlow** **102.01 56** P **Pdif** **12 10 01.0 -0.1**

SHOC baz=271 **Shoshone, Teco** **102.05 55** P **Pdif** **12 10 00.9 -0.2**

MFID comp=Z,2µm,20.0s **Camas Ranch** **102.20 47** IAMs_20 IAMs_20 12 52 24.0

IKP baz=270 **In-Ko-Pah, Jac** **102.20 58** P **Pdif** **12 10 02.3 +0.3**

KBZ comp=Z,1.4nm,0.7s,baz=180,slow=3.0,SNR=2.3 **Khabaz** **102.22 313** P **Pdif** **12 10 00.8 -0.9**

BELC baz=270,SNR=5.0 **Belle Mtn. Jos** **102.29 57** P **Pdif** **12 10 02.8 +0.4**

TUQ baz=271 **Turquoise Moun** **102.34 55** P **Pdif** **12 10 02.5 -0.1**

KIV **Kislovodsk** **102.37 313** *e*P **Pdif** **12 09 59.9 -2.5**
KIV *e* 12 14 12.3
KIV *e* 12 20 40.0
KIV *e*SS SS 12 28 50.7 -1.0
KIV pmax pmax

SWSC comp=Z,5.0nm,1.1s **Sam W. Stewart** **102.47 58** P **Pdif** **12 10 02.7 -0.2**

VRH baz=270 **Novokhopyorsk** **102.52 321** *e*P **Pdif** **12 10 00.6 -2.2**
VRH pmax pmax

KLMR comp=Z,24nm,1.0s **Klimovskoe** **102.55 331** *e*P **Pdif** **12 09 59.0 -3.7**
KLMR pmax pmax

R11B comp=Z,19nm,1.4s **Troy Canyon, C** **102.56 52** P **Pdif** **12 10 03.5 -0.1**

GMRC baz=272,SNR=8.2 **Granite Mounta** **102.57 56** P **Pdif** **12 10 03.5 -0.1**

ELK baz=271 **Elko** **102.75 50** IAMs_20 IAMs_20 12 51 24.8

ELK comp=Z,3µm,20.0s **Elko** **102.75 50** P **Pdif** **12 10 02.3 -2.1**
ELK comp=Z,1.9nm,0.8s,baz=212,slow=3.5,SNR=7.1 PP **PP** **12 14 15.2 -3.1**

BC3 comp=Z,1.0nm,0.8s,baz=268,slow=2.8,SNR=3.6 **Big Chuckawall** **102.75 57** P **Pdif** **12 10 04.7 +0.3**

IRM baz=271,SNR=5.5 **Iron Mountain** **103.00 57** P **Pdif** **12 10 05.6 +0.2**

HLID baz=271 **Hailey** **103.22 47** IAMs_20 IAMs_20 12 52 47.9

HLID comp=Z,2µm,20.0s **Hailey** **103.22 47** P **Pdif** **12 10 06.6 +0.2**

GLA baz=274,SNR=5.9 **Glamis** **103.28 58** IAMs_20 IAMs_20 12 50 32.8

GLA comp=Z,3µm,20.0s **Glamis** **103.28 58** P **Pdif** **12 10 07.4 +0.7**

APA baz=271 **Apatity** **103.68 338**⇓ *i*P **Pdif** **12 10 02.3 -5.3**
APA pmax pmax

APA comp=Z,8.0nm,1.1s MLR MLR

PDMCI comp=Z,2µm,17.0s **Parker Dam,Lak** **103.83 56** P **Pdif** **12 10 09.9 +0.9**

VORR baz=272 **Voronezh** **104.03 322** *e*P **Pdif** **12 10 07.1 -2.4**
VORR pmax pmax

VORD comp=Z,47nm,0.4s **Divnogorie** **104.07 321** *e*P **Pdif** **12 10 06.4 -3.3**
VORD pmax pmax

LPSR comp=Z,10.0nm,1.0s **Galich'ya Gora** **104.08 323** *e*P **Pdif** **12 10 06.1 -3.6**
LPSR *i* 12 14 26.6
LPSR pmax pmax

LPSR comp=Z,20nm,1.2s pmax pmax

VSR comp=Z,30nm,1.4s **Storozhevoye** **104.12 321** *e*P **Pdif** **12 10 06.4 -3.5**
VSR *i* 12 14 25.8
VSR pmax pmax

VSR comp=Z,10.0nm,1.3s pmax pmax

VSR comp=Z,20nm,1.5s MLR MLR

RES comp=Z,1µm,20.0s **Resolute Bay** **104.35 14** PKKP 12 26 16.1

MOS comp=Z,5.0nm,1.1s,baz=99,slow=2.3,SNR=6.7 **Moscow** **104.37 326** *e*P **Pdif** **12 10 07.4 -3.5**
MOS *e* 12 14 25.4

DUG comp=Z,µm,19.0s **Dugway, Tooele** **104.62 50** IAMs_20 IAMs_20 12 55 48.5

DUG baz=274 **Dugway, Tooele** **104.62 50** P **Pdif** **12 10 12.8 +0.2**

214A baz=272 **Organ Pipe Nat** **105.01 59** P **Pdif** **12 10 15.6 +1.2**

BOZ comp=Z,2µm,20.0s **Bozeman (W)** **105.03 45** IAMs_20 IAMs_20 12 51 38.7

BOZ baz=276,SNR=6.9 **Bozeman (W)** **105.03 45** P **Pdif** **12 10 15.1 +0.7**

OBN **Obninsk** **105.07 325** *i* P **Pdif** **12 10 11.4 -2.6**
OBN *e* 12 14 33.1
OBN *e*PPP PPP 12 16 47.9
OBN *e* 12 21 40.6
OBN *e*SS SS 12 29 29.8 +1.9
OBN pmax pmax

KEV comp=Z,10.0nm,1.1s **Kevo** **105.15 341** IAMs_20 IAMs_20 12 57 30.6

HWUT comp=Z,2µm,21.0s **Hardware Ranch** **105.46 49** IAMs_20 IAMs_20 12 52 26.5

AHID comp=Z,2µm,20.0s **Auburn Hatcher** **105.70 48** IAMs_20 IAMs_20 12 54 21.6

ARCES comp=Z,2µm,20.0s **ARCESS Array B** **105.72 341** Pdiff **Pdif** **12 10 16.1 -0.6**

TPAW comp=Z,11nm,1.0s,baz=76,slow=5.1,SNR=11 **Teton Pass** **105.73 47** IAMs_20 IAMs_20 12 54 18.4

MOOW comp=Z,3µm,20.0s **Moose Ponds** **105.86 46** IAMs_20 IAMs_20 12 54 14.7

EGMT comp=Z,2µm,20.0s **Eagleton** **106.01 42** P **PKiKP** **12 14 31.5 +0.8**

WUAZ baz=278 **Wupatki** **106.05 55** IAMs_20 IAMs_20 12 51 52.9

comp=Z,2µm,21.0s

WUAZ baz=274 **Wupatki** **106.05 55** P **PKiKP** **12 14 31.7 +0.4**

TUC comp=Z,2µm,20.0s **Tucson** **106.71 58** IAMs_20 IAMs_20 12 53 59.7

BW06 baz=277 **Boulder Array** **106.83 47** P **PKiKP** **12 14 32.0 -0.6**

PDAR comp=Z,2.8nm,1.1s,baz=225,slow=1.3,SNR=9.6 **Pinedale Array** **106.83 47** Pdiff **Pdif** **12 10 21.4 -1.1**
PDAR PKiKP **PKiKP** **12 14 31.9 -0.7**

SLBS comp=Z,2.6nm,1.1s,baz=224,slow=3.8,SNR=6.4 **Sierra La Lagu** **107.70 67** IAMs_20 IAMs_20 12 51 46.9

TULEG comp=Z,3µm,21.0s **Thule** **107.89 8** IAMs_20 IAMs_20 13 00 55.0

MVCO comp=Z,2µm,20.0s **Mesa Verde** **108.23 53** IAMs_20 IAMs_20 12 52 46.6

MVCO comp=Z,2µm,21.0s **Mesa Verde** **108.23 53** P **PKiKP** **12 14 35.7 +0.3**

LAO baz=276 **LASA Array** **108.60 43** IAMs_20 IAMs_20 13 04 47.8

LAO comp=Z,2µm,18.0s **LASA Array** **108.60 43** P **PKiKP** **12 14 36.3 +0.8**

FINES baz=280 **FINESS Array B** **108.67 333** Pdiff **Pdif** **12 10 29.0 -0.9**
FINES comp=Z,1.3nm,0.8s,baz=32,slow=18,SNR=5.3 PKiKP **PKiKP** **12 14 34.2 -0.9**

RWWY comp=Z,0.9nm,0.6s,baz=354,slow=4.2,SNR=3.5 **Rawlins** **108.69 48** IAMs_20 IAMs_20 12 54 52.0

NEEM comp=Z,2µm,19.0s **North Greenlan** **108.75 3** *i* P **PKiKP** **12 14 34.0 -1.3**

121A baz=275 **Cookes Peak, D** **109.23 58** P **PKiKP** **12 14 37.0 -0.2**

BRTR comp=Z,0.9nm,0.7s,baz=246,slow=3.2,SNR=3.9 **Keskin Array B** **109.49 310** PKKPbc PKKPbc 12 25 42.8 -0.7

DGMT comp=Z,2µm,20.0s **Dagmar** **109.59 41** IAMs_20 IAMs_20 12 58 20.8

DGMT baz=283 **Dagmar** **109.59 41** P **PKiKP** **12 14 37.6 +0.3**

Y22D comp=Z,2µm,20.0s **IRIS PASSCAL I** **109.82 56** IAMs_20 IAMs_20 12 54 34.7

PHWY comp=Z,2µm,20.0s **Pilot Hill** **110.05 48** IAMs_20 IAMs_20 12 55 04.0

MNK **Minsk** **110.10 326** *i* P **Pdif** **12 10 29.2 -7.2**
MNK *i* PS **PS** **12 24 43.2 +2.1**
MNK *i* SS SS 12 30 38.0 +2.1
MNK pmax pmax

MNK comp=E,7.0nm,0.8s pmax pmax

MNK comp=Z,13nm,0.7s pmax pmax

ANMO comp=N,23nm,0.9s **Albuquerque** **110.11 55** IAMs_20 IAMs_20 12 59 26.3

ISCO comp=Z,1µm,19.0s **Idaho Springs** **110.16 50** P **PKiKP** **12 14 38.6 -0.4**

EPT baz=278 **El Paso** **110.37 59** IAMs_20 IAMs_20 12 53 49.7

AKASG comp=Z,21.0s **Malin Array Be** **110.38 322** Pdiff **Pdif** **12 10 36.4 -1.4**
AKASG comp=Z,0.3nm,0.3s,baz=66,slow=3.7,SNR=5.2 PP **PP** **12 15 12.8 -0.8**
AKASG comp=Z,0.5nm,0.4s,baz=64,slow=5.6,SNR=10 PKKPbc **PKKPbc** **12 25 37.2 -3.5**

SDCO comp=Z,0.1nm,0.3s,baz=273,slow=3.4,SNR=5.4 **Great Sand Dun** **110.54 52** P **PKiKP** **12 14 39.3 -0.4**

RSSD baz=278 **Black Hills** **110.59 45** IAMs_20 IAMs_20 12 55 59.9

Q24A comp=Z,2µm,20.0s **Divide** **110.64 51** P **PKiKP** **12 14 39.7 -0.3**

BRIGG baz=278 **Briggsdale** **111.02 49** IAMs_20 IAMs_20 12 55 55.7

BOSA comp=Z,2µm,20.0s **Boshof** **111.10 236** PKKPbc PKKPbc 12 25 46.8 +8.9

MNTX comp=Z,5.3nm,1.1s,baz=319,slow=3.6,SNR=4.3 **Cornudas Mount** **111.33 59** P **PKiKP** **12 14 40.5 -0.6**

OGNE baz=276 **Ogallala** **112.66 48** IAMs_20 IAMs_20 12 57 39.1

TXAR comp=Z,2µm,20.0s **Lajitas Array** **113.03 61** PKiKP **PKiKP** **12 14 44.3 -0.1**
TXAR comp=Z,4.6nm,1.1s,baz=267,slow=1.8,SNR=12 PKKPbc **PKKPab** **12 25 40.2 +1.6**

MSTX comp=Z,2.3nm,0.8s,baz=115,slow=6.8,SNR=12 **Muleshoe** **113.25 56** P **PKiKP** **12 14 44.6 -0.1**

AMTX baz=278 **Amarillo** **114.01 55** IAMs_20 IAMs_20 12 54 56.5

SUMG comp=Z,2µm,22.0s **Summit** **114.06 1** *i* P **PKiKP** **12 14 46.7 +1.2**

ULM **Lac du Bonnet** **114.31 37** PKP PKPdf 12 14 45.2 -0.9
ULM comp=Z,6.7nm,0.8s,baz=292,slow=4.0,SNR=9.3 PKKPbc **PKKPbc** **12 25 23.2 -4.5**

CBKS comp=Z,2.6nm,0.9s,baz=37,slow=4.5,SNR=3.4 **Cedar Bluff** **114.82 50** IAMs_20 IAMs_20 12 58 55.5

AGMN comp=Z,2µm,20.0s **Agassiz Nation** **114.97 39** P **PKiKP** **12 14 47.0 -0.4**

NB2 comp=Z,2µm,20.0s **NORSAR Subarra** **115.16 337** PKPdf **PKPdf** **12 14 47.5 0.0**

NOA comp=Z,0.7nm,0.8s,baz=44,slow=1.9 **NORSAR Array B** **115.16 337** PKIKP **PKiKP** **12 14 47.0 -0.5**

NOA comp=Z,1.5nm,0.8s,baz=55,slow=1.9,SNR=4.9 **NORSAR Array B** **115.16 337** PKP **PKiKP** **12 14 47.0 -0.5**

BGNE **Belgrade** **115.42 47** **PKiKP** **12 14 47.3 -1.3**

F33A **5 Mile Ranch,** **115.48 42** **PKiKP** **12 14 47.6 -0.9**

SCO **Scoresbysund** **115.50 355** *i* P **PKPdf** **12 14 52.2 +4.3**

APMT **Aspermont** **115.53 56** **PKiKP** **12 14 47.8 -1.3**

ECSD **EROS Data Cent** **115.89 44** **PKiKP** **12 14 48.4 -1.0**

ABTX **Abilene, Hawle** **116.04 57** **PKPdf** **12 14 49.8 -0.2**

ABTX **Abilene, Hawle** **116.04 57** P **PKPdf** **12 14 49.0 -1.0**
baz=279,SNR=5.8

OK038 comp=Z,2µm,20.0s **West end E0370** **116.08 53** IAMs_20 IAMs_20 12 58 13.0

JCT **Junction City** **116.23 59** **PKPdf** **12 14 49.5 -0.9**

JCT baz=278 **Junction City** **116.23 59** P **PKPdf** **12 14 49.3 -1.2**

JCT **Junction City** **116.23 59** PKIKP **PKPdf** **12 14 49.6 -0.9**

OJC **Ojcow** **116.23 323** **PKiKP** **12 14 49.9 +0.1**

OJC **Ojcow** **116.23 323** PKIKP **PKiKP** **12 14 49.9 +0.1**

WMOK **Wichita Mounta** **116.38 55** **PKPdf** **12 14 49.6 -1.0**

WMOK comp=Z,2µm,20.0s **Wichita Mounta** **116.38 55** IAMs_20 IAMs_20 12 59 22.4

WMOK baz=281,SNR=7.3 **Wichita Mounta** **116.38 55** P **PKPdf** **12 14 49.4 -1.2**

WMOK **Wichita Mounta** **116.38 55** PKIKP **PKPdf** **12 14 49.6 -1.0**

BRDY **Brady** **116.79 58** PKPdf **PKPdf** **12 14 50.0 -1.5**

833A baz=277 **Chaparral WMA,** **116.87 62** P **PKPdf** **12 14 51.0 -0.7**

PSZ **Piszkesteto** **117.05 321** PKPdf **PKPdf** **12 14 51.0 -0.6**

PSZ **Piszkesteto** **117.05 321** PKIKP **PKPdf** **12 14 51.0 -0.6**

PLPT **Palo Pinto** **117.11 57** PKPdf **PKPdf** **12 14 51.5 -0.6**

KSU1 baz=285 **Kansas State U** **117.13 49** P **PKPdf** **12 14 50.9 -1.1**

F36A **Milaca** **117.30 41** PKPdf **PKPdf** **12 14 50.1 -2.0**

OKC **Ostrava-Krasne** **117.36 324** AMS AMS 13 09 10.0
comp=Z,2µm,18.8s

ICESG **Greenland Ices** **117.54 1** *i* P **PKPdf** **12 14 51.3 -1.0**

MORC **Moravsky Berou** **117.74 324** PKPdf **PKPdf** **12 14 52.6 -0.2**

MORC **Moravsky Berou** **117.74 324** *e*PKP **PKiKP** **12 14 53.9 +1.1**

MORC **Moravsky Berou** **117.74 324** PKIKP **PKPdf** **12 14 52.6 -0.2**

RGN comp=Z,2µm,19.0s **Rugen** **117.81 330** IAMs_20 IAMs_20 13 07 45.9

EYMN baz=293 **Ely** **117.83 39** P **PKPdf** **12 14 51.7 -1.3**

WHTX baz=280 **Lake Whitney,** **117.97 57** P **PKPdf** **12 14 52.8 -0.9**

SPMN baz=291 **Marine on St.** **118.00 42** P **PKPdf** **12 14 52.2 -1.2**

JAVC **Velka Javorina** **118.05 323** *e*PKP **PKiKP** **12 14 54.6 +1.1**

KRLC comp=Z,2µm,17.6s **Kraliky** **118.06 324** AMS AMS 13 10 10.0

OSTC comp=Z,2µm,20.5s **Ostas** **118.17 325** AMS AMS 13 09 10.0

DPC **Dobruska-Polom** **118.20 325** *e*PKPDF **PKiKP** **12 14 54.6 +0.9**
DPC AMS AMS 13 09 10.0

DPC comp=Z,2µm,19.0s **Dobruska-Polom** **118.20 325** *e*PKIKP **PKiKP** **12 14 54.6 +0.9**
DPC MLR MLR

CHVC comp=Z,2µm,19.0s **Chvalec** **118.25 325** AMS AMS 13 11 50.0

MODS comp=Z,2µm,18.9s **Modra-Piesok** **118.48 322** *e*PKIKP **PKPdf** **12 14 54.1 -0.2**

MODS **Modra-Piesok** **118.48 322** *e*PKP **PKPdf** **12 14 54.1 -0.2**

VRAC **Vranov** **118.50 323** *e*PKP **PKiKP** **12 14 54.9 +0.6**

TUL3 **Leonard** **118.53 53** P **PKPdf** **12 14 54.3 -0.4**
baz=284

KRUC **Moravsky** **118.72 323** *e*PKP **PKiKP** **12 14 55.5 +0.8**

SCIA comp=Z,2µm,19.0s **State Center** **118.82 45** IAMs_20 IAMs_20 13 09 27.7

TREC comp=Z,2µm,17.5s **Trest** **119.16 324** AMS AMS 13 10 20.0

GOPC comp=Z,2µm,22.2s **GO Pecny, Ondr** **119.28 325** AMS AMS 13 09 30.0

BRG **Berggiesshubel** **119.31 326** *e*PKP **PKPdf** **12 14 54.7 -1.0**
BRG Amp 12 14 57.8
BRG comp=Z,15nm,1.3s PP **PP** **12 16 17.8 +1.3**
BRG Amp 12 16 19.5

BRG comp=Z,15nm,1.4s **Berggiesshubel** **119.31 326** *e*PKIKP **PKPdf** **12 14 54.7 -1.0**
BRG 12 16 17.7
BRG 12 32 50.0
BRG pmax pmax

BRG comp=Z,15nm,1.3s pmax pmax

RONA comp=Z,15nm,1.4s **Rosalia, Austr** **119.36 322** *i* PKP **PKPdf** **12 14 55.8 -0.2**

PRU comp=Z,9.8nm,1.3s **Pruhonice** **119.39 325** AMS AMS 13 09 40.0

PRA comp=Z,1µm,20.1s **Prague** **119.41 325** AMS AMS 13 06 50.0

U38A comp=Z,2µm,19.1s **Gravette** **119.50 52** PKPdf **PKPdf** **12 14 55.6 -1.0**

CONA comp=Z,11nm,1.4s **Conrad Observa** **119.53 322** *i* PKP **PKiKP** **12 14 56.4 0.0**

CLL comp=Z,2µm,19.0s **Collm** **119.61 327** IAMs_20 IAMs_20 13 10 41.0

CLL **Collm** **119.61 327** *i* PKIKP **PKiKP** **12 14 56.5 +0.1**
CLL *e* 12 16 19.0
CLL pmax pmax

CLL comp=Z,29nm,1.6s pmax pmax

CLL comp=Z,14nm,1.4s MLR MLR

CLL comp=Z,2µm,18.9s **Collm** **119.61 327** *e*PKPdf **PKiKP** **12 14 56.4 +0.1**

BSEG baz=59 **Bad Segeberg** **119.62 330** *e*PKPdf **PKiKP** **12 14 57.7 +1.4**

HSKC comp=Z,2µm,17.4s **Hora Svate Kat** **119.72 326** AMS AMS 13 11 00.0

DY2G **Dye2** **119.82 5** *i* P **PKPdf** **12 14 54.6 -1.9**

HHAR **Hobbs** **119.89 52** PKPdf **PKPdf** **12 14 56.1 -1.2**

S39A **Bolivar** **119.99 50** PKPdf **PKPdf** **12 14 56.3 -1.2**

COWI comp=Z,2µm,21.0s **Conover** **120.05 40** IAMs_20 IAMs_20 13 03 34.3

CKRC comp=Z,2µm,18.0s **Cesky Krumlov** **120.06 324** *e*PKPDF **PKiKP** **12 14 57.6 +0.2**
CKRC AMS AMS 13 11 50.0

CKRC comp=Z,2µm,18.0s **Cesky Krumlov** **120.06 324** *e*PKIKP **PKiKP** **12 14 57.6 +0.2**
CKRC MLR MLR

L40A comp=Z,2µm,21.4s **Anamosa** **120.17 45** **PKPdf** **12 14 56.7 -1.0**

KHC comp=Z,2µm,21.4s **Kasperske Hory** **120.34 324** *e*PKPDF **PKiKP** **12 14 58.2 +0.3**
KHC AMS AMS 13 10 30.0

KHC comp=Z,2µm,21.4s **Kasperske Hory** **120.34 324** *e*PKIKP **PKiKP** **12 14 58.2 +0.3**
KHC MLR MLR

NATX comp=Z,1µm,19.0s **Nacogdoches** **120.35 57** IAMs_20 IAMs_20 13 02 40.8

NATX baz=282 **Nacogdoches** **120.35 57** P **PKPdf** **12 14 57.7 -0.6**

TANN baz=59 **Tannenbergstha** **120.36 326** *e*PKPdf **PKiKP** **12 14 58.1 +0.2**

GEC2 baz=59 **GERESS Array S** **120.41 324** PKPdf **PKiKP** **12 14 58.1 0.0**

GEC2 baz=59 **GERESS Array S** **120.41 324** *e*PKPdf **PKiKP** **12 14 58.1 0.0**

GERES **GERESS Array B** **120.41 324** PKPdf **PKiKP** **12 14 58.2 0.0**

GERES **GERESS Array B** **120.41 324** PKIKP **PKiKP** **12 14 58.2 0.0**

GERES **GERESS Array B** **120.41 324** PKP **PKiKP** **12 14 58.4 +0.2**

GERES comp=Z,2.0nm,0.6s,baz=29,slow=3.0,SNR=12 PKKPbc **PKKPab** **12 25 05.0 -0.8**

NKC comp=Z,0.4nm,0.5s,baz=157,slow=7.2,SNR=3.6 **Novy Kostel** **120.45 326** AMS AMS 13 14 00.0

NRDL comp=Z,2µm,17.5s **Niedersach Rie** **120.52 329** *e*PKPdf **PKiKP** **12 14 58.8 +0.8**

MOA baz=59 **Molln** **120.53 323** *e*PKiKP **PKiKP** **12 15 00.4 +2.1**

JFWS comp=Z,8.6nm,1.5s **Jewell Farm** **120.55 44** IAMs_20 IAMs_20 13 03 38.0

JFWS comp=Z,2µm,20.0s **Jewell Farm** **120.55 44** P **PKPdf** **12 14 57.5 -0.9**

SOKA baz=292,SNR=8.5 **Soboth** **120.58 321** *i* PKiKP **PKiKP** **12 14 58.7 +0.2**

MIAR comp=Z,16nm,1.2s **Mount Ida** **120.61 54** **PKPdf** **12 14 58.2 -0.6**

MIAR **Mount Ida** **120.61 54** P **PKPdf** **12 14 57.7 -1.0**
baz=284,SNR=8.7

MIAR **Mount Ida** **120.61 54** PKIKP **PKPdf** **12 14 58.2 -0.6**
MIAR MLR MLR

MOX comp=Z,2µm,19.0s **Moxa** **120.70 327** *e*L L 13 10 45.1
comp=Z,1µm,19.8s

CLZ baz=59 **Clausthal** **120.74 328** *e*PKPdf **PKiKP** **12 14 59.8 +1.2**

WET baz=59 **Wettzell** **120.74 325** *e*PKPdf **PKiKP** **12 14 59.3 +0.6**

MANZ baz=59 **Manzenberg** **120.77 326** *e*PKPdf **PKiKP** **12 14 59.4 +0.7**

TSUM comp=Z,2µm,19.0s **Tsumeb** **120.95 243** IAMs_20 IAMs_20 13 06 53.1

BIOA comp=Z,16nm,1.3s **Bad Ischl, Aus** **120.98 323** *i* PKiKP **PKiKP** **12 14 59.4 +0.2**

WLAR **White Oak Lake** **121.20 55** PKPdf **PKPdf** **12 14 58.9 -1.0**

L42A **Oliver, Polo** **121.28 44** **PKPdf** **12 14 59.1 -0.7**

GRF comp=Z,1µm,19.0s **Grafenberg Arr** **121.41 326** *e*L L 13 12 09.0

GRFO comp=Z,1µm,19.0s **Grafenberg** **121.41 326** IAMs_20 IAMs_20 13 12 17.7

FCAR **Ozark Folk Cen** **121.42 52** **PKPdf** **12 14 58.6 -1.6**

KBA comp=Z,18nm,1.4s **Koelnbreinsper** **121.44 322** *i* PKP **PKPdf** **12 14 59.4 -0.8**

WHAR **Wooly Hollow** **121.45 53** PKPdf **PKPdf** **12 14 59.4 -1.0**

MYKA comp=Z,9.3nm,1.2s **Terra Mystica** **121.46 322** *i* PKP **PKPdf** **12 14 59.6 -0.5**

CCM **Cathedral Cave** **121.46 49** PKPdf **PKPdf** **12 14 59.3 -1.0**

CCM baz=288 **Cathedral Cave** **121.46 49** P **PKPdf** **12 14 58.7 -1.6**

CCM **Cathedral Cave** **121.46 49** PKIKP **PKPdf** **12 14 59.3 -1.0**

NUUK **Nuuk** **121.47 8** *i* P **PKPdf** **12 14 55.5 -3.9**

LESA comp=Z,27nm,1.6s **Schwarzleotal** **121.68 323** *e*PKiKP **PKiKP** **12 15 00.6 -0.1**

IBBN baz=59 **Ibbenburen** **121.82 330** *e*PKPdf **PKPdf** **12 15 00.4 -0.1**

HDIL comp=Z,2µm,19.0s **Hopedale** **122.06 46** IAMs_20 IAMs_20 13 07 51.5

HDIL baz=291 **Hopedale** **122.06 46** P **PKPdf** **12 15 00.0 -1.3**

ABTA comp=Z,29nm,1.4s **Abfaltersbach** **122.10 322** *i* PKP **PKPdf** **12 14 59.5 -1.8**

LCAR **Lake Charles** **122.12 51** PKPdf **PKPdf** **12 15 00.6 -0.9**

STAL **STALIGAL** **122.20 322** **PKPdf** **12 15 01.2 -0.3**

WTTA comp=Z,57nm,1.4s **Wattenberg** **122.38 323** *i* PKiKP **PKiKP** **12 15 02.2 0.0**

WATA comp=Z,25nm,1.3s **Walderalm** **122.38 323** *i* PKiKP **PKiKP** **12 15 02.2 +0.1**

L44A baz=293 **Lake County Fo** **122.42 44** P **PKPdf** **12 15 00.9 -1.1**

HQIL comp=Z,2µm,21.0s **Hanson Quary C** **122.61 44** IAMs_20 IAMs_20 13 03 42.7

TNS baz=59 **Taunus Mts** **122.64 327** *e*PKPdf **PKiKP** **12 15 03.1 +0.7**

SQTA comp=Z,30nm,1.4s **Sankt Quirin** **122.65 323** *e*PKiKP **PKiKP** **12 15 03.1 +0.4**

MOTA comp=Z,36nm,1.4s **Moosalm** **122.65 323** *i* PKP **PKPdf** **12 15 02.3 -0.2**

RETA comp=Z,19nm,1.5s **Reutte** **122.78 324** *i* PKiKP **PKiKP** **12 15 03.0 +0.2**

STU baz=59 **Stuttgart** **123.02 326** *e*PKPdf **PKiKP** **12 15 04.1 +1.0**

FETA comp=Z,20nm,1.2s **Feichten** **123.04 323** *i* PKiKP **PKiKP** **12 15 03.7 +0.2**

UBR baz=59 **Ueberruh** **123.07 324** *e*PKPdf **PKiKP** **12 15 04.2 +0.8**

DAVA comp=Z,26nm,1.2s **Damuels** **123.40 324** *i* PKP **PKPdf** **12 15 03.9 -0.1**

PLCA comp=Z,23nm,1.1s,baz=208,slow=2.8,SNR=23 **Paso Flores** **123.44 149** PKPdf **PKPdf** **12 15 04.3 +0.1**

PLCA **Paso Flores** **123.44 149** PKIKP **PKPdf** **12 15 04.3 +0.1**

PLCA **Paso Flores** **123.44 149** PKP **PKiKP** **12 15 04.5 +0.1**

PLCA PKKPbc **PKKPab** **12 24 52.9 -1.2**

GLMI comp=Z,2.5nm,1.0s,baz=323,slow=5.1,SNR=3.7 **Grayling** **123.47 39** IAMs_20 IAMs_20 13 06 07.7
comp=Z,2µm,20.0s

GLMI baz=298 **Grayling** **123.47 39** P **PKPdf** **12 15 02.4 -1.5**

FUORN **Ofenpass-Fuorn** **123.51 323** PKPdf **PKPdf** **12 15 04.3 0.0**

FUORN					IAMs_20	IAMs_20	13 13 05.6		
	comp=Z,2μm,20.0s								
BTNL	**Ternell**	**123.65**	**329**	*d*PKP	**PKiKP**	**PKiKP**	**12 15 04.2**	**-0.1**	
VBMS	**Vicksburg**	**123.67**	**56**	IAMs_20	IAMs_20		13 02 28.5		
	comp=Z,2μm,21.0s								
VBMS	**Vicksburg**	**123.67**	**56**	P	**PKPdf**		**12 15 04.0**	**-0.6**	
	baz=285								
SFIN	**Lafayette**	**123.68**	**45**	P	**PKPdf**		**12 15 03.4**	**-1.0**	
	baz=293								
MEM	**Membach**	**123.70**	**329**	*d*PKP	**PKiKP**		**12 15 04.6**	**+0.2**	
BFO	**Black Forest**	**123.75**	**326**	*e*PKPdf	**PKPdf**		**12 15 03.7**	**-0.7**	
	baz=59								
BHOU	**Houvegnez**	**123.86**	**329**	*d*PKP	**PKiKP**		**12 15 05.7**	**+0.9**	
P46A	**Rosedale**	**123.89**	**46**	PKPdf	**PKPdf**		**12 15 04.5**	**-0.4**	
OXF	**Oxford**	**123.94**	**53**	P	**PKPdf**		**12 15 03.5**	**-1.6**	
	baz=287,SNR=5.4								
BSTI	**Sart Tilman**	**123.94**	**329**	*d*PKP	**PKPdf**		**12 15 04.6**	**0.0**	
BCLA	**Clavier**	**124.18**	**329**	*d*PKP	**PKiKP**		**12 15 05.5**	**+0.1**	
WLF	**Walferdange**	**124.18**	**328**	PKPdf	**PKiKP**		**12 15 06.2**	**+0.8**	
WLF				IAMs_20	IAMs_20		13 13 20.8		
	comp=Z,2μm,18.0s								
WLF	**Walferdange**	**124.18**	**328**	*d*PKP	**PKPdf**		**12 15 05.1**	**0.0**	
WLF	**Walferdange**	**124.18**	**328**	PKiKP	**PKiKP**		**12 15 06.2**	**+0.8**	
WLF	**Walferdange**	**124.18**	**328**	*e*PKPdf	**PKiKP**		**12 15 05.5**	**+0.1**	
	baz=59								
BGES	**Gesves**	**124.31**	**329**	*d*PKP	**PKiKP**		**12 15 06.1**	**+0.4**	
RCHB	**Rochefort**	**124.37**	**329**	*d*PKP	**PKiKP**		**12 15 06.0**	**+0.2**	
BMRD	**Maredsous**	**124.52**	**329**	*d*PKP	**PKPdf**		**12 15 05.2**	**-0.5**	
EKA	**Eskdalemuir Ar**	**124.61**	**338**	PKiKP	**PKiKP**		**12 15 06.0**	**-0.1**	
EKA	**Eskdalemuir Ar**	**124.61**	**338**	PKP	**PKiKP**		**12 15 06.0**	**-0.1**	
	comp=Z,6.9nm,0.8s,baz=31,slow=3.0,SNR=12								
WVT	**Waverly**	**124.66**	**50**	PKPdf	**PKPdf**		**12 15 05.1**	**-1.3**	
WVT	**Waverly**	**124.66**	**50**	P	**PKPdf**		**12 15 05.0**	**-1.5**	
	baz=290								
WVT	**Waverly**	**124.66**	**50**	PKiKP	**PKPdf**		**12 15 05.1**	**-1.3**	
DOU	**Dourbes**	**124.73**	**329**	*d*PKP	**PKiKP**		**12 15 06.7**	**+0.2**	
IVI	**Ivigtut**	**124.79**	**7**	*i* P	**PKPdf**		**12 15 03.7**	**-2.2**	
PLAL	**Pickwick Lake**	**124.84**	**52**	IAMs_20	IAMs_20		13 05 12.9		
	comp=Z,2μm,20.0s								
T47A	**Sharon Grove**	**124.92**	**49**	PKPdf	**PKPdf**		**12 15 06.0**	**-0.9**	
WCI	**Wyandotte Cave**	**125.07**	**47**		**PKPdf**		**12 15 06.5**	**-0.7**	
WCI	**Wyandotte Cave**	**125.07**	**47**	P	**PKPdf**		**12 15 06.2**	**-1.0**	
	baz=292								
WCI	**Wyandotte Cave**	**125.07**	**47**	PKiKP	**PKPdf**		**12 15 06.5**	**-0.7**	
O48B	**Farmland**	**125.09**	**45**	IAMs_20	IAMs_20		13 13 52.6		
	comp=Z,2μm,18.0s								
O48B	**Farmland**	**125.09**	**45**	P	**PKPdf**		**12 15 05.9**	**-1.3**	
	baz=294,SNR=13								
NRS	**Narsarsuaq**	**125.13**	**5**	*i* P	**PKPdf**		**12 15 05.6**	**-1.0**	
AAM	**Ann Arbor**	**125.24**	**42**	P	**PKPdf**		**12 15 06.4**	**-1.0**	
	baz=297								
P49A	**Miami Univ. Ec**	**125.70**	**45**		**PKPdf**		**12 15 07.7**	**-0.7**	
P49A				IAMs_20	IAMs_20		13 10 57.7		
	comp=Z,2μm,19.0s								
P49A	**Miami Univ. Ec**	**125.70**	**45**	P	**PKPdf**		**12 15 06.9**	**-1.5**	
	baz=294								
PAYG	**Puerto Ayora**	**125.78**	**96**	IAMs_20	IAMs_20		13 21 08.5		
	comp=Z,1μm,18.0s								
VLDQ	**Val d'Or**	**125.94**	**33**	PKPdf	**PKPdf**		**12 15 07.1**	**-1.5**	
SCHQ	**Schefferville**	**126.06**	**21**	PKPdf	**PKPdf**		**12 15 08.3**	**-0.3**	
SCHQ	**Schefferville**	**126.06**	**21**	PKP	**PKPdf**		**12 15 07.9**	**-0.7**	
	comp=Z,23nm,1.1s,baz=359,slow=3.8,SNR=14								
LRAL	**Lakeview Retre**	**126.30**	**54**	IAMs_20	IAMs_20		13 12 22.6		
	comp=Z,1μm,19.0s								
LRAL	**Lakeview Retre**	**126.30**	**54**	P	**PKPdf**		**12 15 08.2**	**-1.5**	
	baz=288								
SWET	**Sewanee**	**126.42**	**51**		**PKPdf**		**12 15 08.7**	**-1.3**	
ACSO	**Alum Creek Sta**	**126.61**	**44**	P	**PKPdf**		**12 15 09.0**	**-1.1**	
	baz=296,SNR=12								
BRAL	**Brewton**	**126.80**	**56**	IAMs_20	IAMs_20		13 07 18.4		
	comp=Z,2μm,20.0s								
SADO	**Sadowa**	**126.87**	**37**	PKP	**PKPdf**		**12 15 10.2**	**-0.3**	
	comp=Z,31nm,1.1s,baz=326,slow=5.4,SNR=6.7								
P52A	**Corning**	**127.46**	**44**	P	**PKPdf**		**12 15 10.6**	**-1.2**	
	baz=297,SNR=8.7								
M53A	**WI Miller and**	**127.61**	**41**	P	**PKPdf**		**12 15 10.6**	**-1.4**	
	baz=299,SNR=9.6								
SNET	**Serv Nac Est T**	**127.64**	**78**	IAMs_20	IAMs_20		13 00 12.0		
	comp=Z,2μm,21.0s								
ERPA	**Erie**	**127.72**	**40**	P	**PKPdf**		**12 15 11.0**	**-1.1**	
	baz=300								
TZTN	**Tazewell**	**127.73**	**48**	P	**PKPdf**		**12 15 11.5**	**-0.9**	
	baz=293,SNR=10.0								
O53A	**New Philadelph**	**127.81**	**43**	P	**PKPdf**		**12 15 11.9**	**-0.5**	
	baz=298,SNR=11								
TKL	**Tuckaleechee C**	**127.91**	**49**	PKPdf	**PKPdf**		**12 15 12.4**	**-0.3**	
TKL	**Tuckaleechee C**	**127.91**	**49**	PKiKP	**PKPdf**		**12 15 12.4**	**-0.3**	
TKL	**Tuckaleechee C**	**127.91**	**49**	PKP	**PKPdf**		**12 15 12.8**	**+0.1**	
	comp=Z,37nm,1.1s,baz=162,slow=3.2,SNR=16								
V52A	**Sevierville**	**127.97**	**49**	PKPdf	**PKPdf**		**12 15 12.4**	**-0.4**	
WVNY	**West Valley, N**	**128.46**	**39**	PKPdf	**PKPdf**		**12 15 12.5**	**-1.1**	
TRQ	**Mont Tremblant**	**128.65**	**33**		**PKPdf**		**12 15 13.5**	**-0.4**	
PEL	**Peldehue**	**128.83**	**143**		**PKPdf**		**12 15 14.6**	**-0.1**	
PEL	**Peldehue**	**128.83**	**143**	PKIKP	**PKPdf**		**12 15 14.6**	**-0.1**	
GOGA	**Godfrey**	**128.96**	**52**	IAMs_20	IAMs_20		13 07 30.1		
	comp=Z,2μm,20.0s								
WBO	**Williamsburg**	**129.00**	**35**	PKPdf	**PKPdf**		**12 15 13.3**	**-1.1**	
MCWV	**Mont Chateau**	**129.02**	**43**	P	**PKPdf**		**12 15 14.3**	**-0.4**	
	baz=299								
KEST	**Kesra**	**129.04**	**311**	PKP	**PKiKP**		**12 15 16.9**	**+1.2**	
	comp=Z,7.8nm,0.9s,baz=245,slow=2.3,SNR=4.6								
LDAQ	**Lac Daran**	**129.24**	**30**	PKPdf	**PKPdf**		**12 15 13.6**	**-1.4**	
R55A	**Marlinton**	**129.47**	**45**		**PKPdf**		**12 15 15.1**	**-0.6**	
TGUH	**Tegucigalpa,Un**	**129.52**	**77**	IAMs_20	IAMs_20		13 02 05.9		
	comp=Z,1μm,20.0s								
TIGA	**Tifton**	**129.54**	**54**	P	**PKPdf**		**12 15 15.0**	**-0.9**	
	baz=289								
MNTQ	**Montreal, Queb**	**129.61**	**33**		**PKPdf**		**12 15 15.2**	**-0.5**	
LONY	**Lake Ozonia**	**129.62**	**35**	IAMs_20	IAMs_20		13 09 28.0		
	comp=Z,2μm,22.0s								
LONY	**Lake Ozonia**	**129.62**	**35**	P	**PKPdf**		**12 15 14.8**	**-0.9**	
	baz=307,SNR=8.3								
BLA	**Blacksburg**	**129.74**	**46**	IAMs_20	IAMs_20		13 09 15.8		
	comp=Z,2μm,20.0s								
BLA	**Blacksburg**	**129.74**	**46**	P	**PKPdf**		**12 15 15.0**	**-1.2**	
	baz=296,SNR=8.2								
SSPA	**Standing Stone**	**129.83**	**41**		**PKPdf**		**12 15 15.6**	**-0.6**	
SSPA	**Standing Stone**	**129.83**	**41**	P	**PKPdf**		**12 15 15.3**	**-1.0**	
	baz=301								
KMSC	**Kings Mountain**	**129.94**	**49**		**PKPdf**		**12 15 16.5**	**-0.1**	
KMSC	**Kings Mountain**	**129.94**	**49**	P	**PKPdf**		**12 15 15.8**	**-0.8**	
	baz=294,SNR=6.2								
CO02	**Combarbal**	**129.97**	**141**	PKPdf	**PKiKP**		**12 15 17.6**	**-0.2**	
AAGR	**Agrelo**	**129.97**	**144**	*i* P	**PKiKP**		**12 15 17.5**	**-0.2**	
LMQ	**La Malbaie**	**129.97**	**30**	PKPdf	**PKPdf**		**12 15 15.6**	**-0.7**	
ARCO	**CERRO ARCO**	**130.09**	**144**	*e*P	**PKiKP**		**12 15 17.8**	**-0.3**	
BINY	**Binghamton**	**130.20**	**38**	P	**PKPdf**		**12 15 16.2**	**-0.7**	
	baz=304,SNR=6.4								
AUSP	**Uspallata**	**130.25**	**143**	*e*P	**PKiKP**		**12 15 18.2**	**-0.3**	
ASAL	**Salagasta**	**130.32**	**144**	*e*P	**PKiKP**		**12 15 18.2**	**-0.2**	
N58A	**Sunbury**	**130.49**	**40**		**PKPdf**		**12 15 17.1**	**-0.4**	
RTLS	**Leoncito**	**130.61**	**143**	*e*P	**PKiKP**		**12 15 18.9**	**-0.4**	
SDMD	**Soldier's Deli**	**131.16**	**42**		**PKPdf**		**12 15 18.3**	**-0.4**	
BOAB	**BOACO BROADBAN**	**131.16**	**79**	PKPdf	**PKPdf**		**12 15 18.4**	**-1.0**	
V58A	**Windy Hill, Pi**	**131.31**	**47**		**PKPdf**		**12 15 19.2**	**+0.1**	
LBNH	**Lisbon**	**131.35**	**34**	P	**PKPdf**		**12 15 18.4**	**-0.6**	
	baz=310								
CO01	**Juntas del Tor**	**131.37**	**140**		**PKiKP**		**12 15 20.3**	**-0.5**	
CBN	**Corbin Frederi**	**131.41**	**43**	P	**PKPdf**		**12 15 18.1**	**-1.1**	
	baz=300								
ACCO	**Cerro Coronel**	**131.60**	**142**	*e*P	**PKPdf**		**12 15 20.4**	**+0.1**	
AROD	**Rodeo**	**131.63**	**141**	*e*P	**PKiKP**		**12 15 21.3**	**-0.1**	
NHSC	**New Hope**	**131.63**	**51**	P	**PKPdf**		**12 15 19.3**	**-0.5**	
	baz=293								
ACDV	**Cuesta del Vie**	**131.85**	**141**	*e*P	**PKPdf**		**12 15 21.1**	**+0.5**	
TRNY	**Table Rock, Ra**	**131.88**	**38**		**PKPdf**		**12 15 20.3**	**+0.2**	
U59A	**Littleton**	**132.01**	**46**		**PKPdf**		**12 15 19.9**	**-0.5**	
L61B	**Northampton**	**132.04**	**36**	IAMs_20	IAMs_20		13 08 57.1		
	comp=Z,2μm,20.0s								
L61B	**Northampton**	**132.04**	**36**	P	**PKPdf**		**12 15 19.3**	**-1.1**	
	baz=308								
PKME	**Peaks-Kenny Pk**	**132.07**	**31**	P	**PKPdf**		**12 15 19.9**	**-0.4**	
	baz=314								
PAL	**Palisades**	**132.16**	**38**	PKPdf	**PKPdf**		**12 15 20.6**	**0.0**	
PAL	**Palisades**	**132.16**	**38**	P	**PKPdf**		**12 15 20.7**	**+0.2**	
	baz=306								
PAL	**Palisades**	**132.16**	**38**	PKIKP	**PKPdf**		**12 15 20.6**	**0.0**	
BATG	**Bathurst New B**	**132.18**	**27**	PKPdf	**PKiKP**		**12 15 21.7**	**+0.2**	
AVFE	**Valle Fertil**	**132.53**	**143**	*e*P	**PKPdf**		**12 15 22.0**	**+0.2**	
ACHE	**Chepes**	**132.63**	**144**	*e*P	**PKPdf**		**12 15 22.0**	**-0.1**	
HRV	**Adam Dziewonsk**	**132.65**	**35**	IAMs_20	IAMs_20		13 11 56.3		
	comp=Z,1μm,20.0s								
HDC	**Heredia**	**132.73**	**82**	IAMs_20	IAMs_20		13 04 22.3		
	comp=Z,2μm,21.0s								
MCRA	**Macar, Loja**	**135.22**	**103**	PKPdf	**PKPdf**		**12 15 27.2**	**0.0**	

MCRA	**Macar, Loja**	**135.22**	**103**	*e*P	**PKPdf**		**12 15 26.5**	**-0.7**	
ESDC	**Sonseca Array**	**136.00**	**323**	PKP	**PKiKP**		**12 15 29.0**	**-0.6**	
	comp=Z,1.4nm,1.0s,baz=56,slow=3.2,SNR=5.6								
ESDC				PP	**PP**		**12 18 06.3**	**-0.3**	
	comp=Z,1.6nm,1.0s,baz=55,slow=9.9,SNR=3.7								
PBRG	**Braganca**	**136.12**	**328**	*e*PP	**PP**		**12 18 11.1**	**+3.9**	
MVO	**Moncorvo**	**136.73**	**327**	*e*PKPdf	PKiKP		12 15 43.4	+12	
MVO	**Moncorvo**	**136.73**	**327**	*e*PP	PP		12 18 22.4	+11	
MVO	**Moncorvo**	**136.73**	**327**	*e*LR	LR		13 02 04.4		
	comp=Z,1μm,18.0s								
PGAV	**Gavieira, Arco**	**136.81**	**329**	*e*PKPdf	PKiKP		12 15 40.9	+10	
PGAV	**Gavieira, Arco**	**136.81**	**329**	*e*PP	PP		12 18 22.2	+11	
PGAV	**Gavieira, Arco**	**136.81**	**329**	*e*LR	LR		13 01 21.8		
	comp=Z,934nm,18.0s								
POLO	**Lamas de Olo**	**136.99**	**328**	*e*PP	**PP**		**12 18 19.4**	**+6.7**	
PB01	**IPOC Station P**	**137.50**	**131**		**PKPdf**		**12 15 31.1**	**-0.2**	
PVIS	**Viseu**	**137.51**	**327**	*e*PP	PP		12 18 27.6	+12	
MTE	**Manteigas**	**137.54**	**327**	*e*PP	PP		12 18 27.8	+12	
MTE	**Manteigas**	**137.54**	**327**	*e*LR	LR		13 02 38.5		
	comp=Z,920nm,20.0s								
OTAV	**Otavalo**	**137.61**	**97**	PKPdf	**PKPdf**		**12 15 31.2**	**-1.0**	
OTAV	**Otavalo**	**137.61**	**97**	PKiKP	**PKPdf**		**12 15 31.2**	**-1.0**	
OTAV	**Otavalo**	**137.61**	**97**	*e*P	**PKPdf**		**12 15 29.4**	**-2.7**	
PMRV	**Marv??o**	**138.14**	**326**	*e*PP	**PP**		**12 18 26.0**	**+6.2**	
PMRV	**Marv??o**	**138.14**	**326**	*e*LR	LR		13 03 09.0		
	comp=Z,951nm,20.0s								
COI	**Coimbra**	**138.15**	**327**	*e*PP	**PP**		**12 18 23.0**	**+3.2**	
PLTB	**Pedras Altas**	**138.50**	**158**	PKPdf	**PKPdf**		**12 15 32.4**	**-0.4**	
PESTR	**Estremoz**	**138.63**	**325**	*e*PP	PP		12 18 32.7	+10	
PBAR	**Barrancos**	**138.79**	**324**	*e*PKPdf	**PKPdf**		**12 15 33.3**	**+0.2**	
PBAR	**Barrancos**	**138.79**	**324**	*e*PP	**PP**		**12 18 27.8**	**+3.9**	
PMTG	**Montargil**	**138.85**	**326**	*e*PKPdf	**PKiKP**		**12 15 38.6**	**+3.3**	
PMTG	**Montargil**	**138.85**	**326**	*e*PP	PP		12 18 33.9	+10	
ITQB	**Itaqui**	**139.06**	**153**	PKPdf	**PKPdf**		**12 15 33.9**	**+0.1**	
EVO	**Evora**	**139.10**	**325**	*e*PKPdf	PKiKP		12 15 45.9	+10	
EVO	**Evora**	**139.10**	**325**	*e*PP	**PP**		**12 18 29.0**	**+3.2**	
PMAFR	**Mafra**	**139.51**	**327**	*e*PP	**PP**		**12 18 30.6**	**+2.3**	
LIS	**Lisbon**	**139.61**	**326**	*e*PP	**PP**		**12 18 29.6**	**+0.7**	
LIS				IAMs_20	IAMs_20		13 25 11.1		
	comp=Z,μm,14.3s								
PNCL	**Nicolau / Gran**	**139.69**	**325**	*e*PP	PP		12 18 41.2	+12	
MESJ	**Messejana**	**139.70**	**325**	*e*PKPdf	**PKiKP**		**12 15 40.8**	**+3.7**	
MESJ	**Messejana**	**139.70**	**325**	*e*PP	PP		12 18 38.1	+8.6	
MESJ	**Messejana**	**139.70**	**325**	*e*PP	**PP**		**12 18 30.0**	**+0.5**	
MESJ				IAMs_20	IAMs_20		13 20 20.0		
	comp=Z,1μm,23.2s								
POPC	**Popayan, Colom**	**139.70**	**94**	*e*P	PKPdf		12 15 27.4	-8.4	
PVAQ	**Vaqueiros**	**139.70**	**324**	*e*PKPdf	**PKPdf**		**12 15 33.1**	**-1.7**	
PVAQ	**Vaqueiros**	**139.70**	**324**	*e*PP	**PP**		**12 18 35.7**	**+6.2**	
PVAQ	**Vaqueiros**	**139.70**	**324**	*e*LR	LR		13 04 57.4		
	comp=Z,829nm,18.0s								
PCVE	**Castro Verde**	**139.74**	**324**	*e*PKPdf	**PKiKP**		**12 15 37.5**	**+0.3**	
PCVE	**Castro Verde**	**139.74**	**324**	*e*PP	**PP**		**12 18 36.6**	**+6.9**	
JAMC	**Jamundi, Valle**	**139.78**	**93**	*e*P	PKPdf		12 15 27.7	-8.2	
PBDV	**Barranco-do-Ve**	**139.94**	**324**	*e*PP	**PP**		**12 18 30.7**	**-0.3**	
MORF	**Marmelete**	**140.32**	**324**	*e*PP	PP		12 18 45.5	+12	
MORF	**Marmelete**	**140.32**	**324**	*e*PP	**PP**		**12 18 34.0**	**+0.6**	
MORF				IAMs_20	IAMs_20		13 20 44.3		
	comp=Z,2μm,35.5s								
PFVI	**Vila Bisbo**	**140.53**	**324**	*e*PP	PP		12 18 44.5	+10	
FLOC	**Florencia**	**140.59**	**96**	*e*P	**PKPdf**		**12 15 32.3**	**-4.8**	
ORTC	**Ortega, Tolima**	**141.27**	**92**	*e*P	**PKPdf**		**12 15 32.3**	**-6.1**	
CPUP	**Villa Florida**	**141.51**	**149**	PKhKP	PKPpre		12 15 31.8		
	comp=Z,12nm,1.2s,baz=243,slow=4.7,SNR=11								
CPUP				PKP	**PKPdf**		**12 15 38.7**	**+0.3**	
	comp=Z,37nm,1.1s,baz=247,slow=1.3,SNR=24								
NORC	**Norcasia**	**141.78**	**89**	*e*P	**PKPdf**		**12 15 35.8**	**-3.5**	
TORD	**Torodi Ar. Bea**	**141.91**	**283**	PKhKP	PKPpre		12 15 34.0		
	comp=Z,8.5nm,0.9s,baz=65,slow=4.5,SNR=36								
PTBC	**PUERTO BERRIO**	**142.24**	**88**	*e*P	**PKPdf**		**12 15 33.6**	**-6.4**	
ROSC	**El Rosal**	**142.27**	**91**	PKhKP	PKPpre		12 15 35.6		
	comp=Z,12nm,0.5s,baz=351,slow=2.2,SNR=6.3								
ITAB	**Concordia**	**143.11**	**156**	PKPdf	**PKPdf**		**12 15 41.8**	**+0.6**	
BBSR	**BB Station**	**143.24**	**42**	IAMs_20	IAMs_20		13 18 21.7		
	comp=Z,1μm,20.0s								
LL6C	**La Loma 6 Bece**	**143.42**	**83**	*e*P	PKPbc		12 15 38.9	-0.3	
BARC	**Barichara**	**143.50**	**88**	*e*P	PKPab		12 15 38.8	-0.1	
RUSC	**La Rusia**	**143.57**	**89**	*e*P	PKPab		12 15 39.3	-0.1	
CRJC	**Cerrejon, Guaj**	**143.73**	**80**	*e*P	PKPab		12 15 39.2	-0.3	
SDDR	**Presa de Saban**	**143.93**	**67**	IAMs_20	IAMs_20		13 23 37.7		
	comp=Z,1μm,18.0s								
PAMC	**Pamplona, Colo**	**144.00**	**87**	*e*P	**PKPab**		**12 15 41.2**	**+0.2**	
PTGC	**Puerto Gaitan,**	**144.39**	**92**	*e*P	**PKPab**		**12 15 41.1**	**-0.8**	
TAMC	**Tame, Arauca**	**144.88**	**88**	*e*P	PKPbc		12 15 44.0	+0.2	
TBTG	**Tabatinga, AM**	**144.91**	**107**		**PKPab**		**12 15 42.7**	**-1.2**	
SDV	**Santo Domingo**	**146.05**	**84**	PKPdf	**PKPdf**		**12 15 46.3**	**-0.5**	
SDV	**Santo Domingo**	**146.05**	**84**	*e*P	**PKPdf**		**12 15 46.2**	**-0.7**	
ETMB	**Extrema**	**146.16**	**118**		**PKPdf**		**12 15 46.0**	**-0.7**	
AQDB	**Aquidauana**	**147.11**	**145**		**PKPdf**		**12 15 49.1**	**+0.9**	
PMPST	**Porto Santo, M**	**147.69**	**327**	*e*PKPdf	**PKPab**		**12 15 56.1**	**+2.3**	
PMPS	**Porto Santo**	**147.71**	**327**	*e*PKPdf	**PKPdf**		**12 15 45.9**	**-3.0**	
CRPR	**Cabo Rojo, PR**	**148.01**	**66**		**PKPdf**		**12 15 49.6**	**-0.1**	
SPB	**Sao Paulo**	**148.15**	**161**	IAMs_20	IAMs_20		13 17 54.2		
	comp=Z,2μm,22.0s								
PMAR	**Madeira**	**148.27**	**328**	*e*PKPdf	**PKPab**		**12 16 01.8**	**+5.4**	
KIC	**Kosan Boka**	**148.51**	**271**	*e*PKIKP	**PKPbc**		**12 15 54.1**	**-0.2**	
	comp=Z,169nm,1.0s								
BAUV	**El Baul**	**148.60**	**84**		**PKPdf**		**12 15 49.4**	**-1.5**	
BAUV				PKPbc	**PKPbc**		**12 15 54.5**	**0.0**	
BAUV				PKPab	**PKPab**		**12 15 58.0**	**-0.1**	
PTLB	**Pontes e Lacer**	**148.62**	**134**	PKPdf	**PKPdf**		**12 15 50.7**	**-0.1**	
PTLB				PKPbc	**PKPbc**		**12 15 55.0**	**+0.6**	
PTLB				PKPab	**pPKPdf**		**12 15 58.7**	**+0.1**	
DBIC	**Dimbokro**	**148.63**	**272**		**PKPbc**		**12 15 54.7**	**+0.1**	
DBIC	**Dimbokro**	**148.63**	**272**	PKP2	**PKPbc**		**12 15 55.0**	**+0.4**	
DBIC	**Dimbokro**	**148.63**	**272**	PKPbc	**PKPbc**		**12 15 55.0**	**+0.4**	
	comp=Z,74nm,0.8s,baz=95,slow=3.0,SNR=61								
LIC	**Lamto**	**148.79**	**271**	*e*P	**PKPbc**		**12 15 54.3**	**-0.7**	
	comp=Z,325nm,1.1s								
TIC	**Toumodi**	**148.79**	**272**	*e*PKIKP	**PKPbc**		**12 15 54.8**	**-0.3**	
	comp=Z,152nm,1.1s								
SAML	**Samuel**	**149.20**	**120**	PKPdf	**PKPdf**		**12 15 51.2**	**-0.6**	
SAML				PKPbc	**PKPbc**		**12 15 56.6**	**+0.6**	
SAML				PKPab	**PKPab**		**12 16 01.1**	**+0.7**	
SAML	**Samuel**	**149.20**	**120**	IAMs_20	IAMs_20		13 11 51.8		
	comp=Z,1μm,21.0s								
SAML	**Samuel**	**149.20**	**120**	PKIKP	**PKPdf**		**12 15 51.2**	**-0.6**	
SMRT	**St. Maarten**	**151.64**	**64**	PKPdf	**PKPdf**		**12 15 54.5**	**-1.0**	
SMRT					**PKPbc**		**12 16 01.3**	**-0.5**	
SMRT				PKPab	**pPKPbc**		**12 16 08.9**	**-0.7**	
SMRT				IAMs_20	IAMs_20		13 19 50.4		
	comp=Z,1μm,22.0s								
CBE	**Ff, Capester**	**153.61**	**67**	IAMs_20	IAMs_20		13 27 42.0		
	comp=Z,1μm,19.0s								
GRGR	**Grenville**	**154.53**	**76**	IAMs_20	IAMs_20		13 32 04.3		
	comp=Z,1μm,21.0s								
ILAM	**Ilet Lapin Mar**	**154.67**	**69**	IAMs_20	IAMs_20		13 27 35.3		
	comp=Z,1μm,20.0s								
MPOM	**Morne Pois Mar**	**154.77**	**70**	IAMs_20	IAMs_20		13 22 44.2		
	comp=Z,993nm,20.0s								
BDFB	**Brasilia**	**155.12**	**153**	PKP	**PKPdf**		**12 16 01.7**	**+0.9**	
	comp=Z,24nm,1.1s,baz=22,slow=2.7,SNR=17								
BDFB				PKPab	**PKPab**		**12 16 25.7**	**+0.6**	
	comp=Z,41nm,1.2s,baz=130,slow=4.4,SNR=7.1								
BOAV	**Boa Vista**	**155.64**	**99**	PKPdf	**PKPdf**		**12 16 00.7**	**-0.7**	
BOAV				PKPab	**PKPab**		**12 16 26.9**	**-0.6**	

*IDC **26** 12:06:22.2±2.0, 6°23S×143°12E, h0km, **mb3.9**/3, **mbtmp4.1**/5, Error ellipse: s-maj=82.9km s-min=32.9km az=108.0, **New Guinea***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.08**	**211**	Pn	Pn	12 10 08.1	-1.9
	13nm,1.0s,baz=31,slow=14,SNR=1.3						
ASAR	**Alice Springs**	**19.47**	**206**	P	Pn	12 10 51.7	-0.3
	7.1nm,0.9s,baz=26,slow=13,SNR=1.6						
MKAR	**Makanchi Array**	**75.25**	**322**	P	**P**	12 18 07.1	0.0
	0.3nm,0.6s,baz=101,slow=7.6,SNR=1.7						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**84.70**	**325**	P	P	12 18 58.4	+0.3
	3.2nm,1.0s,baz=117,slow=5.2,SNR=5.4						
	3.2nm,1.0s						
ILAR	**Eielson Array**	**87.23**	**24**	P	**P**	12 19 10.0	-0.3
	0.3nm,0.7s,baz=259,slow=4.9,SNR=5.7						
	0.3nm,0.7s						

*IDC **26** 12:20:55.2±2.2, 6°45S×143°55E, h0km, mb3.4/2, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=95.1km s-min=32.3km az=110.0*

ISC 26 12:21:01.1±1.1, 6°64S±0°09×143°37E±0°09, h35km, n12, σ1§43/12, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**2.54**	**302**	P	**Pn**	**12 21 41.5**	**+1.6**
PMG	**Port Moresby**	**4.65**	**126**	P	**Pn**	**12 22 10.5**	**+1.7**
COEN	**Coen**	**7.27**	**182**	P	**Pn**	**12 22 45.1**	**+0.1**
KDU	**Kakadu**	**12.31**	**240**	P	**Pn**	**12 23 53.0**	**-1.0**
MTN	**Manton Dam**	**13.54**	**242**	P	**Pn**	**12 24 09.7**	**-1.2**
DRS	**Darwin Rock St**	**13.58**	**244**	P	**Pn**	**12 24 10.8**	**-0.5**
WRA	**Warramunga Arr**

comp=Z,72nm,0.8s
WRA Warramunga Arr 16.10 212 Pn **Pn** **12 33 09.7 -4.1**
WRA Warramunga Arr 16.10 212 *i* P **Pn** **12 33 10.6 -3.2**
WRA pmax pmax
comp=Z,61nm,0.8s
WRA Warramunga Arr 16.10 212 Pn **Pn** **12 33 10.7 -3.2**
comp=Z,3.3nm,0.3s,baz=33,slow=13,SNR=85
WRA Lg Lg 12 37 56.8
comp=Z,2.2nm,0.3s,baz=26,slow=23,SNR=6.9
LBMI Labuha 16.74 289 P P 12 33 44.8 +21
HNR Honiara 16.78 102 P **P** **12 33 24.6 +0.2**
HNR IAmb IAmb 12 33 26.8
comp=Z,390nm,1.6s
HNR Honiara 16.78 102 P **P** **12 33 24.6 +0.2**
HNR pmax pmax
comp=Z,390nm,1.7s
HNR Honiara 16.78 102 Pn **P** **12 33 25.8 +1.4**
comp=Z,73nm,0.3s,baz=220,slow=3.5,SNR=9.5
KNRA Kununurra 17.02 236 P **Pn** **12 33 23.0 -2.5**
baz=17
KNRA Kununurra 17.02 236 **Pn** **12 33 22.6 -2.8**
SANI Sanana 17.77 283 P **Pn** **12 33 32.8 -2.0**
comp=Z,46nm,0.8s
SOEI Soe 19.14 258 **P** **12 33 50.3 -0.3**
SOEI IAmb IAmb 12 33 58.9
comp=Z,140nm,0.8s
SOEI Soe 19.14 258 P **P** **12 33 50.7 +0.1**
comp=Z,295nm,1.0s,comp=Z,2µm
AS31 Alice Springs 19.47 207 **Pn** **12 33 55.7 +0.3**
AS31 IAmb IAmb 12 33 57.7
comp=Z,55nm,0.8s
ASAR Alice Springs 19.47 207 P **Pn** **12 33 55.9 +0.5**
ASAR Alice Springs 19.47 207 P **Pn** **12 33 56.0 +0.5**
comp=Z,6.9nm,0.3s,baz=39,slow=9.2,SNR=229
ASPA Alice Springs 19.48 207 P **Pn** **12 33 55.7 +0.2**
baz=20
GUMO Guam 19.84 5 LR LR 12 40 10.5
comp=Z,407nm,21.9s,baz=174,slow=33
PATS Pohnpei 19.88 49 P **P** **12 33 58.6 0.0**
baz=20,SNR=3.2
PATS Pohnpei 19.88 49 P **P** **12 33 58.5 0.0**
QLP Quilpie 20.18 178 P Pn 12 34 03.7 +0.1
baz=20,SNR=24
EIDS Eidsvold 20.36 159 P Pn 12 34 05.9 0.0
baz=20,SNR=4.8
EIDS Eidsvold 20.36 159 **P** **12 34 05.2 +1.5**
KMSI Cibinong 20.46 289 P Pn 12 34 15.8 +8.7
FITZ Fitzroy Crossi 20.83 234 P **P** **12 34 08.6 -0.2**
baz=21,SNR=64
MMRI Maumere 21.00 262 **P** **12 34 10.0 -0.8**
MMRI IAmb IAmb 12 34 21.4
comp=Z,47nm,0.9s
MMRI Maumere 21.00 262 P 12 34 21.3
LUWI Luwuk 21.13 284 P P 12 34 28.3 +16
EDFI Ende, Flores 21.55 262 P **P** **12 34 16.8 +0.1**
comp=Z,46nm,1.1s
KAPI Kappang 23.46 272 P **P** **12 34 36.5 -0.1**
KAPI IAmb IAmb 12 34 39.1
comp=Z,60nm,0.9s
KAPI Kappang 23.46 272 P **P** **12 34 36.5 -0.1**
KAPI pmax pmax
comp=Z,60nm,0.9s
WRKA Warakurna 23.51 216 P **P** **12 34 36.6 -0.5**
baz=24,SNR=52
TTSI Tana Toraja 23.62 277 P **P** **12 34 39.0 +0.9**
comp=Z,45nm,1.7s,comp=Z,2µm
TOLI2 Tolitoli 23.65 287 P **P** **12 34 37.9 -0.6**
TOLI2 IAmb IAmb 12 34 47.2
comp=Z,30nm,0.8s
CMSA Cobar Meteorol 25.19 175 P **P** **12 34 53.4 +1.0**
baz=25,SNR=7.7
STKA Stephens Creek 25.48 183 P **P** **12 34 56.0 +1.0**
baz=26,SNR=9.4
STKA Stephens Creek 25.48 183 P **P** **12 34 56.4 +1.4**
STKA Stephens Creek 25.48 183‖ *e* P **P** **12 34 54.8 -0.2**
STKA Stephens Creek 25.48 183 P **P** **12 34 54.6 -0.5**
comp=Z,9.9nm,0.8s,baz=359,slow=11,SNR=12
STKA LR LR 12 45 42.6
comp=Z,665nm,18.4s,baz=358,slow=38
comp=Z,9.9nm,0.8s
MBWA Marble Bar 27.17 235 P **P** **12 35 12.4 +1.9**
MBWA IAmb IAmb 12 35 31.0
comp=Z,27nm,1.1s
BBOO Buckleboo 27.21 193 P **P** **12 35 12.3 +1.7**
baz=27,SNR=6.1
BBOO Buckleboo 27.21 193 P **P** **12 35 10.3 -0.4**
BBOO IAmb IAmb 12 35 50.2
comp=Z,35nm,1.1s
PSA00 Pilbara Seismi 27.28 234 P **P** **12 35 12.5 +1.0**
HTT Hallett 27.28 188 P **P** **12 35 12.9 +1.6**
baz=28,SNR=7.1
FORT Forrest 28.23 209 P **P** **12 35 19.3 -0.5**
baz=28,SNR=6.8
FORT Forrest 28.23 209 P **P** **12 35 19.4 -0.4**
YNG Young 28.24 171 P **P** **12 35 19.9 -0.1**
baz=28
JAGI Jajag, Banyuwa 28.98 264 P **P** **12 35 24.0 -2.6**
JAGI IAmb IAmb 12 35 25.2
comp=Z,42nm,1.4s
ARPS Mount Arapiles 30.34 182 P **P** **12 35 38.6 +0.1**
baz=30
KMBL Kambalda 31.98 216 P **P** **12 35 52.1 -1.0**
baz=32
KPJI Karang Pucung 34.13 266 P P 12 36 22.6 +11
XMIS Christmas Isla 37.45 261 P **P** **12 36 39.9 -0.6**
XMIS IAmb IAmb 12 36 41.2
comp=Z,44nm,0.8s
JNU Nakatsue 40.95 344 P **P** **12 37 08.8 -0.7**
comp=Z,9.3nm,0.8s,baz=136,slow=6.5,SNR=5.4
comp=Z,9.3nm,0.8s
MJAR Matsushiro Arr 42.90 354 P **P** **12 37 23.1 -2.2**
comp=Z,2.0nm,0.8s,baz=186,slow=8.1,SNR=5.5
comp=Z,2.0nm,0.8s
NJ2 Nanjing 44.70 330 *e* P **P** **12 37 40.0 +0.1**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
TJN Taejon 45.02 342‖ *e* P **P** **12 37 41.2 -1.1**
KSAR Wonju Array Be 45.85 343 P **P** **12 37 48.6 -0.2**
KSAR Wonju Array Be 45.85 343 P **P** **12 37 48.6 -0.2**
KSRS Korea Array 45.85 343 P **P** **12 37 48.5 -0.3**
comp=Z,9.3nm,0.9s,baz=163,slow=9.7,SNR=31
comp=Z,9.3nm,0.9s
WHN Wuhan 45.96 324 P P 12 37 55.5 +5.7
ENH Enshi 48.72 320 P **P** **12 38 10.0 -1.4**
ENH IAmb IAmb 12 39 10.3
comp=Z,40nm,1.8s
PSTR Posyet 50.04 348‖ *e* P **P** **12 38 21.0 -0.2**
CMAR Chiang Mai Arr 50.19 300 *i* P **P** **12 38 23.2 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 50.19 300 P **P** **12 38 23.6 +0.9**
comp=Z,0.6nm,0.4s,baz=120,slow=6.5,SNR=6.3
comp=Z,0.6nm,0.4s
ASAJ Asahikawa 50.20 359 P **P** **12 38 20.6 -1.7**
comp=Z,6.3nm,0.9s,baz=158,slow=5.4,SNR=2.3
comp=Z,6.3nm,0.9s
USA0B Ussuriysk Arra 51.31 350 P **P** **12 38 29.7 -1.0**
USA0B IAmb IAmb 12 38 31.5
comp=Z,32nm,1.5s
USA0B Ussuriysk Arra 51.31 350 *de* P **P** **12 38 30.6 -0.1**
USRK Ussuriysk Ar. 51.31 350 P **P** **12 38 30.2 -0.6**
USRK Ussuriysk Ar. 51.31 350 P **P** **12 38 30.5 -0.2**
comp=Z,9.2nm,1.0s,baz=171,slow=8.7,SNR=9.8
comp=Z,9.2nm,1.0s
XAN Xi'an 51.66 323 P **P** **12 38 33.5 -0.1**
XAN pmax pmax
comp=Z,11nm,1.2s
PZH PanZhiHua 51.82 311 P **P** **12 38 36.3 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
MDJ Mudanjiang 52.18 348 P **P** **12 38 36.5 -0.7**
MDJ pmax pmax
comp=Z,8.0nm,1.0s
MDJ pmax pmax
comp=Z,1µm,10.2s
CN2 Changchun 52.43 344 P **P** **12 38 38.8 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 52.91 317 P **P** **12 38 44.0 +1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
YSS Yuzh-Sakhalins 53.04 360‖ *e* P **P** **12 38 42.8 -0.7**
YSS pmax pmax
comp=Z,8.0nm,0.9s
BNX BinXian 53.73 346 ‖P **P** **12 38 48.3 -0.4**
BNX pmax pmax
comp=Z,32nm,1.0s
BNX pmax pmax
comp=Z,770nm,11.8s
HHC Hu-ho-hao-te 55.24 331 *e* P **P** **12 39 02.3 +2.4**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,220nm,5.6s
BTO Baotou 55.81 330 *e* P **P** **12 39 07.8 +3.8**
BTO pP **sP** **12 39 20.5 +1.1**
BTO sP pP 12 39 26.0 +11
BTO PP **PP** **12 41 15.0 +6.1**
BTO pmax pmax
comp=Z,14nm,1.3s
BTO pmax pmax
comp=Z,1µm,9.5s
LZH Lanzhou 56.11 322 *e* P **P** **12 39 07.5 +1.2**
LZH pP pP 12 39 18.8 +1.4
LZH pmax pmax
comp=Z,14nm,1.1s
KLR Kul'dur 56.23 351 P **P** **12 39 06.3 -0.3**
comp=Z,5.3nm,0.9s,baz=185,slow=2.8,SNR=12
comp=Z,5.3nm,0.9s
TYV Tymovskoe 56.95 360 *e* P **P** **12 39 10.6 -1.1**
TYV *e* S **S** **12 47 04.6 +1.2**
TYV pmax pmax
comp=Z,200nm,4.7s
TYV pmax pmax
comp=Z,9.0nm,0.8s
TYV smax smax
comp=N,100nm,5.0s
TYV smax smax
comp=E,200nm,5.0s
HEH HeiHe 58.00 348 *e* P **P** **12 39 18.0 -1.1**
HEH pmax pmax
comp=E,8.0nm,0.9s
HIA Hailar 59.05 342 *ce* P **P** **12 39 27.4 +0.9**
HIA pmax pmax
comp=Z,9.0nm,1.0s
PETK Petropavlovsk- 60.45 10 P **P** **12 39 34.8 -1.2**
comp=Z,19nm,0.8s,baz=191,slow=7.6,SNR=17
comp=Z,19nm,0.8s
GTA Gaotai 60.68 322 P **P** **12 39 39.0 +0.9**
GTA pP pP 12 39 46.8 -2.5
GTA pmax pmax
comp=Z,5.0nm,1.0s
ZEA Zeya 61.34 349 *e* P **P** **12 39 42.0 -0.1**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,30nm,1.0s
ULN Ulaanbaatar 62.67 333 P **P** **12 39 51.5 +0.1**
ULN Ulaanbaatar 62.67 333 *ce* P **P** **12 39 51.7 +0.3**
ULN pmax pmax
comp=Z,6.0nm,1.2s
SONM Songino Array 62.95 333 P **P** **12 39 53.8 +0.6**
SONM Songino Array 62.95 333 P **P** **12 39 53.7 +0.5**
comp=Z,1.9nm,0.8s,baz=157,slow=6.8,SNR=9.5
comp=Z,1.9nm,0.8s
MA2 Magadan 65.95 4 P **P** **12 40 11.5 -0.9**
MA2 Magadan 65.95 4 *c i* P **P** **12 40 12.0 -0.4**
MA2 pmax pmax
comp=Z,35nm,1.0s
ZAK Zakamensk 66.21 333 *e* P **P** **12 40 13.6 -0.8**
ZAK pmax pmax
comp=Z,11nm,1.1s
MOY Mondy 68.14 333 *e* P **P** **12 40 27.1 +0.5**
MOY pmax pmax
comp=Z,20nm,2.1s
YAK Yakutsk 68.95 353 *e* P **P** **12 40 30.5 -0.8**
YAK pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 69.40 4‖ *i* P **P** **12 40 33.7 -0.4**
SEY pmax pmax
comp=Z,25nm,0.9s
WMQ Urumqi 70.66 321 *e* P **P** **12 40 43.3 +0.9**
WMQ PcP **PcP** **12 41 05.3 +2.1**
DGZ Jazzator, Alta 73.79 326 *ce* P **P** **12 41 01.2 +0.1**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 75.42 322 *c i* P **P** **12 41 10.4 0.0**
MKAR Makanchi Array 75.42 322 P **P** **12 41 10.8 +0.3**
comp=Z,6.8nm,0.7s,baz=107,slow=7.1,SNR=56
comp=Z,6.8nm,0.7s
MAKZ Makanchi 75.62 322 P **P** **12 41 10.8 -0.8**
MAKZ IAmb IAmb 12 41 12.8
comp=Z,13nm,0.9s
MAKZ Makanchi 75.62 322 P **P** **12 41 10.8 -0.8**
MAKZ pmax pmax
comp=Z,13nm,1.0s
BILL Bilibino 75.94 9 P **P** **12 41 12.3 -0.6**
BILL Bilibino 75.94 9‖ *e* P **P** **12 41 12.5 -0.4**
BILL pmax pmax
comp=Z,8.0nm,1.1s
KSH Kashi 76.87 313 P **P** **12 41 21.0 +2.1**
KSH pmax pmax
comp=Z,5.0nm,1.0s
KSH LR LR
comp=Z,350nm,16.5s
KSH LR LR
comp=Z,430nm,16.1s
KSH LR LR
comp=Z,340nm,15.5s
SDPT Sand Point 76.94 29 P **P** **12 41 18.6 -0.2**
baz=238
NIL Nilore 77.13 306 P **P** **12 41 19.8 -0.6**
NIL IAmb IAmb 12 41 25.7
comp=Z,11nm,0.8s
NIL Nilore 77.13 306 P **P** **12 41 19.8 -0.6**
NIL pmax pmax
comp=Z,11nm,0.9s
ZAA0 Zalesovo Array 77.34 329 P **P** **12 41 20.1 -1.0**
ZALV Zalesovo Beam 77.34 329 *i* P **P** **12 41 20.5 -0.6**
ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZALV Zalesovo Beam 77.34 329 P **P** **12 41 20.1 -1.0**
comp=Z,3.8nm,0.7s,baz=112,slow=5.7,SNR=21
comp=Z,3.8nm,0.7s
BOOM Boomskoye usch 77.90 316 P **P** **12 41 23.5 -1.2**
BOOM Boomskoye usch 77.90 316 P **P** **12 41 23.5 -1.2**
BOOM pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 78.39 355 P **P** **12 41 25.3 -1.2**
TIXI Tiksi 78.39 355‖ *e* P **P** **12 41 25.5 -1.0**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
CHGN Chignik 78.44 29 P **P** **12 41 26.6 -0.5**
baz=240
N14K Kuskokwak Cree 78.89 25 P **P** **12 41 29.1 -0.4**
baz=236
AAK Ala-Archa 78.96 315 P **P** **12 41 30.2 -0.3**
AAK Ala-Archa 78.96 315‖ *e* P **P** **12 41 31.1 +0.6**
M14K Bethel 79.25 24 P **P** **12 41 30.9 -0.5**
baz=236
KURK Kurchatov 79.28 324 P **P** **12 41 31.8 0.0**
KURK Kurchatov 79.28 324 *ce* P **P** **12 41 31.6 -0.3**
KURK pmax pmax
comp=Z,8.0nm,1.0s
L14K Kuka Creek 79.30 23 P **P** **12 41 31.7 0.0**
baz=235
KURBB Kurchatov Arra 79.30 324 P **P** **12 41 31.8 -0.1**
comp=Z,4.4nm,0.9s,baz=113,slow=4.7,SNR=33
comp=Z,4.4nm,0.9s
M15K Kasigluk River 79.74 24 P **P** **12 41 34.3 +0.1**
baz=237
J14K Nanvaranak Lak 79.78 22 P **P** **12 41 34.4 +0.1**
baz=234
L15K Ungalak Mounta 79.96 23 P **P** **12 41 35.7 +0.4**
baz=236
P16K Nushagak River 80.02 27 P **P** **12 41 36.1 +0.5**
baz=240
TNA Tin City 80.03 19 P **P** **12 41 35.5 -0.1**
baz=229
ANM Nome 80.23 20 P **P** **12 41 36.7 0.0**
baz=232
O16K Kokwok River B 80.26 26 P **P** **12 41 37.3 +0.3**
baz=239
K15K Wolf Creek Mou 80.29 23 P **P** **12 41 37.2 +0.1**
baz=236
N16K Nishlik Lake 80.42 25 P **P** **12 41 37.9 0.0**
baz=239
Q17K Contact Creek 80.60 28 P **P** **12 41 38.5 -0.5**
baz=242
M16K Timber Creek 80.63 25 P **P** **12 41 39.1 +0.2**
baz=238
L16K Owhat River 80.78 24 P **P** **12 41 39.8 +0.1**
baz=238
O17K Koliganek Bris 80.78 26 P **P** **12 41 39.9 +0.1**
baz=240
G15K Niukluk 80.95 20 P **P** **12 41 40.7 +0.2**
baz=233
N17K Nushagak Hills 81.12 26 P **P** **12 41 42.2 +0.6**
baz=240
J16K Anvik River 81.19 22 P **P** **12 41 41.8 -0.1**
J16K IAmb IAmb 12 41 43.8
comp=Z,21nm,1.1s
J16K Anvik River 81.19 22 P **P** **12 41 42.6 +0.7**
baz=237
OHAK Old Harbor 81.36 29 P **P** **12 41 42.8 -0.1**
baz=244
H16K Elim 81.36 21 P **P** **12 41 43.1 +0.4**
baz=235,SNR=5.1
M17K Holitna River 81.45 25 P **P** **12 41 43.9 +0.6**
M17K IAmb IAmb 12 41 45.4
comp=Z,19nm,0.9s
M17K Holitna River 81.45 25 P **P** **12 41 44.0 +0.6**
baz=240
L17K Donlin 81.48 24 P **P** **12 41 44.0 +0.5**
baz=239
I17K Unalakleet 81.49 22 P **P** **12 41 43.7 +0.2**
I17K Unalakleet 81.49 22 P **P** **12 41 44.1 +0.6**
baz=236
N18K Kilae Creek 81.75 26 P **P** **12 41 45.8 +0.8**
baz=241
K17K Iditarod 81.78 23 P **P** **12 41 45.8 +0.8**
baz=239
SIMJ Simiganj 81.79 310 P **P** **12 41 45.5 -0.3**
KKAR Karatay Array 81.89 315 P **P** **12 41 45.9 -0.2**
KKAR Karatay Array 81.89 315 P **P** **12 41 45.9 -0.2**
KDAK Kodiak Island 81.94 29 P **P** **12 41 46.3 +0.3**
baz=245
L18K Granite Mounta 82.17 24 P **P** **12 41 47.6 +0.5**
baz=240
M18K Stony River 82.17 25 P **P** **12 41 47.5 +0.4**
baz=241
H17K Granite Mounta 82.36 21 P **P** **12 41 48.3 +0.3**
baz=237
G17K Kiwalik Mounta 82.41 20 P **P** **12 41 48.8 +0.6**
baz=236
N19K Bonanza Creek 82.42 26 P **P** **12 41 48.7 +0.1**
baz=243
C16K Lisburne Hills 82.55 17 P **P** **12 41 48.4 -0.5**
C16K Lisburne Hills 82.55 17 P **P** **12 41 49.4 +0.5**
baz=232
J18K Innoko River 82.78 23 P **P** **12 41 50.7 +0.5**
baz=240
TTA Tatalina 82.80 24 P **P** **12 41 50.8 +0.4**
baz=241
D17K Noatak River 82.88 18 P **P** **12 41 51.2 +0.6**
baz=234,SNR=5.4
L19K White Mountain 82.91 25 P **P** **12 41 51.8 +0.9**
baz=242
E17K Hotham Inlet 82.91 19 P **P** **12 41 51.4 +0.6**
baz=235,SNR=8.0
M19K Big River Lodg 82.97 25 P **P** **12 41 51.5 +0.2**
baz=242
H18K Honhosa River 83.03 21 P **P** **12 41 52.0 +0.5**
baz=238
C17K DeLong Mountai 83.31 17 P **P** **12 41 53.7 +0.8**
baz=234
G18K Tagagawik 83.32 21 P **P** **12 41 52.9 -0.1**
baz=238
F18K Selawik 83.36 20 P **P** **12 41 53.5 +0.4**
baz=237
GCSA Galena City Sc 83.36 22 P **P** **12 41 53.7 +0.5**
baz=240,SNR=5.6
L20K Farewell, AK 83.45 25 P **P** **12 41 53.8 0.0**
baz=243
J19K Poorman 83.47 23 P **P** **12 41 54.1 +0.4**
baz=241
M20K Styx River 83.49 25 P **P** **12 41 54.4 +0.3**
baz=244
E18K Tukpahlearik C 83.50 19 P **P** **12 41 54.4 +0.5**
baz=236
QSPA South Pole Qui 83.65 180 P **P** **12 41 55.0 0.0**
QSPA IAmb IAmb 12 42 09.1
comp=Z,20nm,1.0s
QSPA South Pole Qui 83.65 180 P **P** **12 41 55.0 0.0**
comp=Z,9.2nm,0.8s,baz=236,slow=0.4,SNR=30
comp=Z,9.2nm,0.8s
K20K Telida 83.77 24 P **P** **12 41 55.7 +0.3**
K20K IAmb IAmb 12 41 57.0
comp=Z,11nm,1.0s
K20K Telida 83.77 24 P **P** **12 41 55.9 +0.5**
baz=243
CAPN Captain Cook N 83.87 27 P **P** **12 41 56.4 +0.5**
baz=246
H19K Roundabout Mou 83.91 21 P **P** **12 41 56.6 +0.6**
H19K IAmb IAmb 12 41 57.5
comp=Z,18nm,1.1s
H19K Roundabout Mou 83.91 21 P **P** **12 41 56.5 +0.5**
baz=240
G19K Purcell Mounta 83.99 21 P **P** **12 41 56.5 0.0**
G19K IAmb IAmb 12 41 58.0
comp=Z,21nm,1.2s
G19K Purcell Mounta 83.99 21 P **P** **12 41 56.8 +0.4**
baz=240
C18K Utukok River 84.00 18 P **P** **12 41 56.8 +0.2**
baz=236
F19K Shaleruckik Mo 84.11 20 P **P** **12 41 57.2 +0.2**
baz=239
J20K Nowinta River 84.12 23 P **P** **12 41 57.6 +0.5**
baz=242
SKT Skwentna 84.22 26 P **P** **12 41 58.0 +0.4**
baz=245
B18K Kokolik River 84.24 17 P **P** **12 41 58.8 +1.2**
baz=235
I20K Naaghedeneel 84.29 22 P **P** **12 41 57.8 -0.1**
baz=242
SUA Susitna One 84.34 26 P **P** **12 41 57.5 -1.0**
SUA Susitna One 84.34 26 P **P** **12 41 57.4 -1.0**
baz=246
SEW Seward 84.38 28 P **P** **12 41 58.2 -0.3**
baz=247
O22K Cooper Landing 84.40 27 P **P** **12 41 58.5 -0.1**
baz=247
H20K Anotleneega Mo 84.47 22 P **P** **12 41 58.7 -0.1**
baz=242
NRIK Noril'sk 84.47 343 P **P** **12 41 58.6 -0.2**
NRIK Noril'sk 84.47 343 *c i* P **P** **12 41 58.2 -0.6**
NRIK pmax pmax
comp=Z,20nm,0.9s
NRIK Noril'sk 84.47 343 P **P** **12 41 58.5 -0.3**
comp=Z,17nm,0.9s,baz=123,slow=4.8,SNR=32
comp=Z,17nm,0.9s
CAST Castle Rocks 84.60 24 P **P** **12 41 59.3 -0.3**
baz=244,SNR=8.2
E19K Redstone River 84.61 19 P **P** **12 41 59.9 +0.4**
baz=239
RC01 Rabbit Creek A 84.64 27 P **P** **12 41 59.2 -0.6**
baz=247,SNR=5.4
CHUM Lake Minchumin 84.71 24 P **P** **12 41 60.0 -0.1**
baz=244,SNR=11
M22K Willow 84.73 26 P **P** **12 41 59.5 -0.7**
M22K Willow 84.73 26 P **P** **12 41 59.9 -0.3**
baz=246,SNR=6.9
C19K Lookout Ridge 84.74 18 P **P** **12 42 01.0 +0.8**
baz=237
D19K Kuna River 84.87 18 P **P** **12 42 01.1 +0.2**
baz=238
BVAR Borovoye Array 84.87 325 P **P** **12 42 02.0 +0.8**
BVAR Borovoye Array 84.87 325 P **P** **12 42 01.9 +0.8**
comp=Z,16nm,0.8s,baz=104,slow=6.3,SNR=51
comp=Z,16nm,0.8s
F20K Avaraart Lake 84.92 20 P **P** **12 42 01.0 -0.1**
baz=241
CUT Chulitna 84.93 25 P **P** **12 41 59.9 -1.4**
CUT Chulitna 84.93 25 P **P** **12 42 00.3 -0.9**
baz=246
BRVK Borovoye 84.94 325 P **P** **12 42 01.8 +0.3**
BRVK IAmb IAmb 12 42 17.0
comp=Z,12nm,0.9s
BRVK Borovoye 84.94 325 *c i* P **P** **12 42 01.4 -0.1**
BRVK pmax pmax
comp=Z,14nm,1.1s
PMR Palmer 85.10 26 P **P** **12 42 01.1 -1.0**
PMR IAmb IAmb 12 42 02.2
comp=Z,17nm,1.1s
PMR Palmer 85.10 26 P **P** **12 42 01.8 -0.3**
baz=247
PMR Palmer 85.10 26 P **P** **12 42 01.1 -1.0**
PMR pmax pmax
comp=Z,17nm,1.1s

IMAR	Indian Mountai	85.11	21	P	P	12 42 02.0	-0.1	
KTH	Kantishna Hill	85.13	24	P	P	12 42 01.2	-1.1	
H21K	Melozitna Rive	85.31	22	P	P	12 42 02.7	-0.4	
	baz=244							
KNK	Knik Glacier	85.33	27	P	P	12 42 03.4	+0.1	
	baz=248,SNR=5.5							
BPAW	Bear Paw Mtn.	85.33	24	P	P	12 42 02.9	-0.3	
	baz=245							
TRF	Thorofare Moun	85.35	24	P	P	12 42 03.6	0.0	
	baz=246							
E20K	Nigu River	85.36	19	P	P	12 42 03.7	+0.3	
	baz=240,SNR=6.1							
I21K	Tanana	85.41	23	P	P	12 42 04.1	+0.5	
I21K				IAmb	IAmb	12 42 05.0		
	comp=Z,10.0nm,1.1s							
I21K	Tanana	85.41	23	P	P	12 42 03.6	+0.1	
	baz=244							
D20K	Etivluk River	85.45	19	P	P	12 42 04.1	+0.3	
	baz=240							
SML	Sawmill	85.54	26	P	P	12 42 04.3	-0.1	
SML	Sawmill	85.54	26	P	P	12 42 03.9	-0.4	
	baz=248,SNR=5.5							
F21K	Alatna River	85.77	20	P	P	12 42 05.9	+0.5	
	baz=243							
M23K	Glacier View	85.80	26	P	P	12 42 05.7	+0.1	
	baz=248							
MLY	Manley	85.82	23	P	P	12 42 05.4	-0.3	
MLY				IAmb	IAmb	12 42 06.5		
	comp=Z,17nm,1.2s							
MLY	Manley	85.82	23	P	P	12 42 05.5	-0.2	
	baz=246,SNR=8.4							
WAT1	Susitna Watana	85.83	25	P	P	12 42 05.5	-0.3	
	baz=248							
RND	Reindeer	85.92	25	P	P	12 42 05.5	-0.8	
RND				IAmb	IAmb	12 42 06.1		
	comp=Z,20nm,0.9s							
RND	Reindeer	85.92	25	P	P	12 42 05.5	-0.8	
RND				pmax	pmax			
	comp=Z,20nm,0.9s							
H22K	Ishtalitna Cre	85.94	22	P	P	12 42 06.0	-0.2	
	baz=245							
SCM	Sheep Creek Mo	85.99	26	P	P	12 42 06.4	-0.3	
	baz=249							
MCK	McKinley	86.02	24	P	P	12 42 06.2	-0.5	
	baz=247,SNR=6.3							
WAT6	Susitna Watana	86.08	26	P	P	12 42 06.6	-0.6	
	baz=248							
E21K	Killik River	86.17	19	P	P	12 42 07.1	-0.3	
	baz=242							
C21K	Knifeblade Rid	86.25	18	P	P	12 42 07.8	+0.1	
	baz=242							
EYAK	Cordova Ski Ar	86.26	28	P	P	12 42 07.8	0.0	
	baz=250							
NEA2	Nenana	86.30	24	P	P	12 42 08.0	0.0	
	baz=247							
G22K	Bettles	86.33	21	P	P	12 42 08.0	-0.2	
	baz=245							
I23K	Minto, Yukon-K	86.40	23	P	P	12 42 08.8	+0.3	
	baz=247							
DHY	Denali Highway	86.42	25	P	P	12 42 08.8	0.0	
DHY				IAmb	IAmb	12 42 09.4		
	comp=Z,14nm,0.9s							
DHY	Denali Highway	86.42	25	P	P	12 42 08.8	0.0	
	baz=249,SNR=12							
KLU	Klutina	86.50	27	P	P	12 42 09.2	0.0	
	baz=250,SNR=5.5							
M24K	Tolsona, Glenn	86.60	26	P	P	12 42 09.6	0.0	
	baz=250							
E22K	Anaktuvuk Pass	86.75	20	P	P	12 42 10.4	+0.2	
	baz=244							
A21K	Barrow	86.78	16	P	P	12 42 10.7	+0.5	
	baz=240,SNR=9.7							
G23K	Bananza Creek	86.78	21	P	P	12 42 10.8	+0.5	
	baz=246,SNR=5.3							
D22K	Ayikyak River	86.79	19	P	P	12 42 10.8	+0.4	
D22K				IAmb	IAmb	12 42 12.6		
	comp=Z,72nm,1.9s							
D22K	Ayikyak River	86.79	19	P	P	12 42 11.3	+0.9	
	baz=244,SNR=6.2							
COLA	College	86.89	24	P	P	12 42 10.8	-0.1	
	baz=248							
BMRM	Bremner River	86.93	28	P	P	12 42 11.0	-0.3	
	baz=251							
COLD	Coldfoot	86.93	21	P	P	12 42 11.9	+0.8	
	baz=246,SNR=5.6							
HDA	Harding Lake	87.08	24	P	P	12 42 11.7	-0.2	
	baz=249							
N25K	Chitina, Valde	87.14	27	P	P	12 42 13.2	+0.9	
	baz=251							
POKR	Poker Plat Res	87.14	23	P	P	12 42 12.1	0.0	
	baz=249							
PAX	Paxson	87.20	26	P	P	12 42 12.7	+0.1	
	baz=250							
IL31		87.23	24	P	P	12 42 10.3	-2.2	
IL31				IAmb	IAmb	12 42 11.9		
	comp=Z,7.4nm,0.8s							
ILAR	Eielson Array	87.23	24	P	P	12 42 10.8	-1.8	
ILAR	Eielson Array	87.23	24	P	P	12 42 10.8	-1.8	
ILAR	Eielson Array	87.23	24	P	P	12 42 10.9	-1.6	
	comp=Z,8.5nm,1.1s,baz=257,slow=4.8,SNR=40							
	comp=Z,8.5nm,1.1s							
H24K	Noodor Dome	87.24	23	P	P	12 42 12.9	+0.3	
	baz=248							
K24K	Donnelly Dome	87.35	25	P	P	12 42 13.4	+0.2	
	baz=250							
E23K	Chandalar	87.47	20	P	P	12 42 14.5	+0.7	
	baz=246							
D23K	Nanushuk River	87.48	19	P	P	12 42 14.8	+1.0	
	baz=245							
CRQE	Cirque	87.56	28	P	P	12 42 14.8	+0.4	
	baz=253,SNR=5.8							
G24K	Hadweenzic Riv	87.71	22	P	P	12 42 15.1	+0.3	
	baz=248							
MCARA	McCarthy VSAT	87.78	28	P	P	12 42 15.6	+0.3	
	baz=253							
J25K	Salcha River,	87.79	24	P	P	12 42 15.3	-0.1	
	baz=250							
F24K	Squaw Lake	87.86	21	P	P	12 42 16.6	+0.9	
	baz=248							
L26K	Log Cabin Wild	88.13	26	P	P	12 42 17.3	+0.3	
	baz=252							
SCRK	Sand Creek	88.16	25	P	P	12 42 16.9	-0.3	
	baz=252							
D24K	Happy Valley	88.17	19	P	P	12 42 17.8	+0.8	
	baz=247							
C24K	Franklin Bluff	88.43	19	P	P	12 42 18.8	+0.6	
	baz=247							
CTG	Chitna Glacier	88.45	28	P	P	12 42 18.9	+0.3	
	baz=254,SNR=6.9							
CTGM	Chitina Glacie	88.45	28	P	P	12 42 18.5	-0.1	
J26L	Joseph Creek	88.50	24	P	P	12 42 18.5	-0.2	
	baz=252							
FYU	Fort Yukon	88.50	22	P	P	12 42 18.3	-0.2	
LOGN	Logan Glacier	88.57	28	P	P	12 42 18.7	-0.6	
M27K	Edge Creek, AK	88.59	27	P	P	12 42 19.4	+0.1	
	baz=254							
F25K	Christian Rive	88.70	21	P	P	12 42 20.1	+0.5	
	baz=250,SNR=6.9							
PINM	Pinnacle	88.73	29	P	P	12 42 20.1	+0.1	
	baz=255							
L27K	Beaver Creek,	88.81	26	P	P	12 42 20.9	+0.7	
	baz=254							
BCAR	Beaver Creek A	88.83	26	P	P	12 42 20.7	+0.5	
E25K	Arctic Village	88.90	21	P	P	12 42 21.2	+0.7	
	baz=250,SNR=8.2							
I26K	Coal Creek Min	88.91	24	P	P	12 42 20.6	+0.1	
	baz=252							
K27K	Chicken	88.97	25	P	P	12 42 21.5	+0.7	
	baz=254							
BMAR	Burnt Mountain	89.03	22	P	P	12 42 21.6	+0.5	
D25K	Kavik River	89.04	20	P	P	12 42 21.3	+0.1	
	baz=250							
PNL	Peninsula	89.05	30	P	P	12 42 20.8	-0.5	
	baz=256							
BVCY	Beaver Creek	89.06	27	P	P	12 42 21.6	+0.2	
	baz=255							
YUK3	Moose Creek	89.07	28	P	P	12 42 21.6	0.0	
	baz=255							
G26K	Porcupine Rive	89.17	22	P	P	12 42 22.4	+0.7	
	baz=252							
EGAK	Eagle	89.57	25	P	P	12 42 23.9	+0.3	
EGAK				IAmb	IAmb	12 42 24.5		
	comp=Z,12nm,1.1s							
EGAK	Eagle	89.57	25	P	P	12 42 23.7	+0.1	
	baz=254							
O29M	Mount Kennedy	89.60	29	P	P	12 42 23.5	-0.5	
	baz=257							
I27K	Kandik River	89.61	24	P	P	12 42 24.4	+0.5	
	baz=254							
YUK4	Talbot Arm	89.81	28	P	P	12 42 25.4	+0.3	
	baz=257							
H27K	Steamboat Moun	89.82	23	P	P	12 42 25.1	+0.3	
	baz=254							
P29M	Windy Craggy	89.86	30	P	P	12 42 25.3	+0.1	
	baz=257							
DAWY	Dawson	90.12	25	P	P	12 42 26.5	+0.2	
	baz=256							
M29M	Somme Creek	90.15	27	P	P	12 42 26.7	+0.2	
	baz=257							
HYT	Haines Junctio	90.23	29	P	P	12 42 27.0	0.0	
	baz=258							
I28M	Miner Creek	90.24	24	P	P	12 42 27.1	+0.2	
	baz=255							
S31K	Pelican	90.27	32	P	P	12 42 27.0	0.0	
	baz=259							
ABKAR	Akbulak array	90.41	319	P	P	12 42 26.4	-1.5	
L29M	L29M	90.45	26	P	P	12 42 28.5	+0.6	
	baz=257							
PLBC	Pleasant Camp	90.50	30	P	P	12 42 28.3	+0.2	
	baz=259							
J29N	Klondike Camp	90.71	25	P	P	12 42 29.6	+0.5	
	baz=257							
F28M	Old Crow	90.81	22	P	P	12 42 30.1	+0.6	
	baz=256							
K29M	Barlow Dome	90.88	26	P	P	12 42 30.0	+0.1	
	baz=258							
O30N	Mendenhall	90.90	29	P	P	12 42 30.4	+0.5	
	baz=259							
M30M	Minto, Yukon	90.93	27	P	P	12 42 30.3	+0.2	
	baz=258							
SKAG	Skagway	91.02	30	P	P	12 42 31.0	+0.5	
	baz=259							
H29M	Whitestone	91.06	23	P	P	12 42 30.7	+0.1	
	baz=257							
S32K	Killisnoo	91.06	32	P	P	12 42 30.4	-0.3	
	baz=260							
WHY	Whitehorse	91.46	29	P	P	12 42 32.1	-0.6	
	baz=260							
CRAG	Craig	91.52	34	P	P	12 42 32.3	-0.6	
	baz=261							
MAYO	Mayo, Yukon	91.54	26	P	P	12 42 33.2	+0.3	
	baz=259							
J30M	Hart River	91.54	25	P	P	12 42 32.7	-0.3	
	baz=259							
I30M	Mount Dempster	91.65	25	P	P	12 42 33.0	-0.5	
	baz=259							
EPYK	Eagle Plains	91.74	23	P	P	12 42 33.5	-0.3	
	baz=258							
AKTO	Aktyubinsk	91.81	320	P	P	12 42 33.3	-1.1	
	comp=Z,1.3nm,0.8s,baz=34,slow=0.7,SNR=3.9							
	comp=Z,1.3nm,0.8s							
P32M	Attin	91.86	30	P	P	12 42 34.5	+0.1	
	baz=261							
M31M	Drury Creek, Y	91.96	28	P	P	12 42 34.9	0.0	
	baz=260							
G30M	tAoh Zraii Nji	92.05	23	P	P	12 42 35.0	-0.3	
	baz=259							
WRAK	Wrangell Islan	92.09	34	P	P	12 42 35.1	-0.5	
	baz=262							
ARU	Arti	92.30	326	*d* *i* P	P	12 42 34.2	-2.3	
ARU						12 46 15.3		
ARU				S	SKSac	12 53 04.4	-2.7	
ARU				pmax	pmax			
	comp=Z,4.0nm,0.9s							
F30M	Barrier River	92.34	22	P	P	12 42 36.6	+0.1	
	baz=259							
P33M	Teslin, Yukon	92.40	30	P	P	12 42 37.1	+0.1	
	baz=262							
FARO	Faro, Yukon	92.45	28	P	P	12 42 36.7	-0.5	
	baz=261							
H31M	Peel River	92.59	24	P	P	12 42 37.3	-0.4	
	baz=260							
G31M	Satah River	92.80	23	P	P	12 42 38.4	-0.2	
	baz=261							
S34M	Telegraph Cree	92.95	32	P	P	12 42 39.2	-0.3	
	baz=263							
F31M	Tsiigehtchic	93.09	23	P	P	12 42 40.4	+0.5	
	baz=261							
R33M	Jennings River	93.22	31	P	P	12 42 41.1	+0.2	
	baz=263							
INK	Inuvik	93.30	22	P	P	12 42 41.2	+0.4	
	baz=261							
DLBC	Dease Lake	93.59	32	P	P	12 42 42.0	-0.5	
	baz=264							
WTLY	Watson Lake, Y	94.38	30	P	P	12 42 45.9	-0.1	
	baz=265							
A36M	Sachs Harbour	96.42	18	P	P	12 42 54.8	-0.2	
	baz=270							
C36M	Paulatuk	96.80	21	P	P	12 42 57.4	+0.6	
	baz=270							
VES	Vestal, Richgr	99.83	55	P	Pdif	12 43 10.6	-0.6	
	baz=269							
NVAR	Mina Array Bea	100.47	52	P	Pdif	12 43 13.8	-0.5	
	comp=Z,1.3nm,0.7s,baz=273,slow=6.0,SNR=7.7							
CWC	Cottonwood Cre	100.65	54	P	Pdif	12 43 14.8	-0.3	
	baz=270							
MPMC	Manual Prospec	101.13	55	P	Pdif	12 43 16.7	-0.6	
	baz=270							
YKA	Yellowknife Ar	101.16	28	*i* P	Pdif	12 43 15.6	-0.9	
YKA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
YKA	Yellowknife Ar	101.16	28	P	Pdif	12 43 15.7	-0.8	
	comp=Z,0.5nm,0.9s,baz=284,slow=4.8,SNR=6.1							
GSC	Goldstone, Bar	101.69	55	P	Pdif	12 43 19.1	-0.6	
	baz=271							
PFO	Pinyon Flats O	101.99	57	P	Pdif	12 43 20.2	-0.9	
	baz=270							
TPFO	Pinon Flats	102.00	57	P	Pdif	12 43 20.2	-0.9	
	baz=270							
MONP2	Monument Peak	102.03	58	P	Pdif	12 43 20.4	-0.9	
	baz=270							
HLID	Hailey	103.23	47	P	Pdif	12 43 25.5	-0.9	
	baz=274							
OBN	Obninsk	104.70	325	*i* P	Pdif	12 43 29.7	-2.7	
OBN				*e*		12 47 51.7		
OBN				*e*PPP	PPP	12 50 06.4		
OBN				pmax	pmax			
	comp=Z,4.0nm,0.8s							
SDCO	Great Sand Dun	110.59	52	P	PKiKP	12 47 59.3	-0.4	
	baz=278							
Q24A	Divide	110.68	51	P	PKiKP	12 47 58.5	-1.5	
	baz=279							
MNTX	Cornudas Mount	111.42	59	P	PKiKP	12 48 00.3	-0.9	
	baz=276							
JFWS	Jewell Farm	120.54	43	P	PKPdf	12 48 16.7	-1.6	
	baz=292							
WVT	Waverly	124.70	50	P	PKPdf	12 48 25.3	-1.2	
	baz=290							
O48B	Farmland	125.09	44	P	PKPdf	12 48 26.3	-0.9	
	baz=295							
P49A	Miami Univ. Ec	125.70	45	P	PKPdf	12 48 27.1	-1.3	
	baz=295							
LRAL	Lakeview Retre	126.35	53	P	PKPdf	12 48 28.7	-1.1	
	baz=288							
ACSO	Alum Creek Sta	126.60	44	P	PKPdf	12 48 29.3	-0.7	
	baz=297							
SSPA	Standing Stone	129.81	41	P	PKPdf	12 48 34.9	-1.2	
	baz=302							
KMSC	Kings Mountain	129.97	49	P	PKPdf	12 48 35.5	-1.1	
	baz=294							
TORD	Torodi Ar. Bea	141.59	283	PKhKP	PKPpre	12 48 54.7		
	comp=Z,0.4nm,0.7s,baz=78,slow=3.7,SNR=2.3							
KIC	Kosan Boka	148.23	272	⇑*i* PKP1	PKPab	12 49 22.1	+5.5	
	comp=Z,29nm,0.9s							
DBIC	Dimbokro	148.35	272	PKP	PKPdf	12 49 10.1	-0.3	
	comp=Z,5.8nm,0.9s,baz=31,slow=5.9,SNR=1.8							
DBIC				PKPbc	PKiKP	12 49 14.8	-0.7	
	comp=Z,8.2nm,0.8s,baz=79,slow=4.2,SNR=7.4							
LIC	Lamto	148.51	272	⇑*e* PKP1	PKPab	12 49 22.8	+5.1	
	comp=Z,83nm,0.8s							
TIC	Toumodi	148.52	272	⇑*i* PKP1	PKPab	12 49 22.6	+4.8	
	comp=Z,30nm,0.8s							

IDC ***26*** *12:34:49.1±0.6,6.30S×143.52E,h0km,mb4.8/17, mbtmp4.8/20,ML4.8/2, Error ellipse: s-maj=27.0km s-min=14.4km az=84.0*

MOS ***26*** *12:34:50.1±0.7,6.25S×143.53E,h16km,mb5.2/41, Error ellipse: s-maj=12.8km s-min=5.7km az=109.6*

BJI ***26*** *12:34:52.4±0.0,6.34S×144.02E,h48km,mb5.0/68, mB5.5/16,Ms5.0/7,Ms7 4.8/7*

NEIC ***26*** *12:34:54.0±1.4,6.29S±0.08×143.44E±0.07,h25km±4km, mb5.1/78,Error ellipse: s-maj=12.2km s-min=9.0km*

az=216.0

ISC 26 12:34:54.5±0.3,6.39S±0.05×143.44E±0.06,h35km,n453, σ0993/461,mb5.0/102,20C-10D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.75	129	Pn	Pn	12 36 03.2	-0.4
PMG	Port Moresby	4.75	129	P	Pn	12 36 03.2	-0.4
PMG	Port Moresby	4.75	129	Pn	Pn	12 36 03.4	-0.2
	46nm,0.4s,baz=49,slow=2.5,SNR=9.3						
PMG				Sn	Sn	12 36 54.1	-3.4
	15nm,0.3s,baz=354,slow=23,SNR=6.7						
MANU	Manus Island	5.82	42		Pn	12 36 20.2	+1.8
RABL	Rabaul	8.95	76	Pn	Pn	12 37 03.8	+2.3
CTA	Charters Tower	13.89	169	Lg	Lg	12 42 23.0	
	0.4nm,0.3s,baz=86,slow=19,SNR=2.2						
WRA	Warramunga Arr	16.12	212	*i* P	Pn	12 38 41.0	+2.4
WRA				pmax	pmax		
	comp=Z,50nm,1.0s						
WRA	Warramunga Arr	16.12	212	Pn	Pn	12 38 37.5	-1.1
	comp=Z,2.8nm,0.3s,baz=30,slow=14,SNR=4.6						
WRA				Lg	Lg	12 43 21.0	
	comp=Z,0.6nm,0.3s,baz=33,slow=34,SNR=3.8						
	comp=Z,39nm,0.7s						
HNR	Honiara	16.62	102		P	12 38 47.6	+0.5
HNR				IAmb	IAmb	12 38 50.2	
	comp=Z,118nm,0.8s						
HNR	Honiara	16.62	102	P	P	12 38 47.7	+0.5
HNR				pmax	pmax		
	comp=Z,118nm,0.9s						
HNR	Honiara	16.62	102	Pn	Pn	12 38 45.8	+0.8
	comp=Z,60nm,0.3s,baz=172,slow=6.9,SNR=11						
AS31	Alice Springs	19.48	207	P	Pn	12 39 20.5	+0.5
ASAR	Alice Springs	19.48	207	P	P	12 39 20.3	+1.7
	comp=Z,3.9nm,0.3s,baz=37,slow=9.8,SNR=16						
ASAR				Lg	Lg	12 45 07.4	
	comp=Z,0.1nm,0.3s,baz=17,slow=28,SNR=2.3						
	comp=Z,52nm,0.7s						
PATS	Pohnpei	19.82	49	P	P	12 39 22.1	-0.2
EIDS	Eidsvold	20.24	160	P	P	12 39 28.6	+1.7
TOLI2	Tolitoli	23.82	287	P	P	12 40 04.0	-0.6
KOUNC	Koumac, New Ca	24.63	127	P	P	12 40 14.4	+2.5
STKA	Stephens Creek	25.42	184	P	P	12 40 19.6	+0.6
STKA	Stephens Creek	25.42	184	⇑*e* P	P	12 40 18.1	-0.9
STKA	Stephens Creek	25.42	184	P	P	12 40 19.8	+0.8
	comp=Z,4.0nm,0.9s,baz=343,slow=12,SNR=2.8						
	comp=Z,4.0nm,0.9s						
BBOO	Buckleboo	27.17	194	P	P	12 40 36.2	+1.4
MBWA	Marble Bar	27.25	235	P	P	12 40 35.2	-0.5
MBWA				IAmb	IAmb	12 41 11.8	
	comp=Z,85nm,2.0s						
PSA00	Pilbara Seismi	27.36	234	P	P	12 40 39.0	+2.4
FORT	Forrest	28.24	209	P	P	12 40 43.2	-1.2
FORT				IAmb	IAmb	12 41 32.3	
	comp=Z,47nm,0.8s						
CAN	Canberra	29.25	171	P	P	12 40 54.8	+1.5
CAN				IAmb	IAmb	12 41 43.5	
	comp=Z,59nm,1.6s						
CAN	Canberra	29.25	171	P	P	12 40 54.8	+1.5
CAN				pmax	pmax		
	comp=Z,59nm,1.6s						
JNU	Nakatsue	41.07	344	P	P	12 42 33.6	-1.3
	comp=Z,18nm,1.1s,baz=135,slow=5.7,SNR=4.4						
	comp=Z,18nm,1.1s						
MJAR	Matsushiro Arr	42.98	354	P	P	12 42 49.4	-1.1
	comp=Z,6.5nm,1.0s,baz=177,slow=8.8,SNR=9.3						
	comp=Z,6.5nm,1.0s						
MAJO	Matsushiro	42.99	354	*ce* P	P	12 42 49.4	-1.1
MAJO				pmax	pmax		
	comp=Z,12nm,1.2s						
TUWZ	Tuamarina	44.21	147	P	P	12 43 01.5	+1.2
MLZ	Mavora Lakes	44.35	155	P	P	12 43 02.6	+1.1
GVZ	Greta Valley S	44.81	149	P	P	12 43 06.6	+1.4
NJ2	Nanjing	44.84	330	*e* P	P	12 43 07.0	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TJN	Taejon	45.13	342	⇓*e* P	P	12 43 07.4	-0.3
KSAR	Wonju Array Be	45.96	343	P	P	12 43 13.7	-0.5
KSAR	Wonju Array Be	45.96	343	P	P	12 43 13.7	-0.5
KSRS	Korea Array	45.96	343	P	P	12 43 14.1	-0.1
	comp=Z,21nm,1.0s,baz=164,slow=9.5,SNR=47						
KSRS				PcP	PcP	12 44 51.6	+0.9
	comp=Z,2.7nm,0.9s,baz=148,slow=4.6,SNR=5.6						
	comp=Z,21nm,1.0s						
KS19	Wonju Array Si	46.02	343	P	P	12 43 13.1	-1.7
KS19				IAmb	IAmb	12 43 15.2	
	comp=Z,26nm,1.1s						
WHN	Wuhan	46.10	324	⇓P	P	12 43 17.0	+1.5
WHN				pmax	pmax		
	comp=Z,90nm,1.2s						
INCN	Inchon	46.38	341	P	P	12 43 16.8	-0.8
INCN	Inchon	46.38	341	P	P	12 43 16.8	-0.8
INCN				pmax	pmax		
	comp=Z,36nm,0.7s						
GYA	Guiyang	48.35	314	⇓*i* P	P	12 43 34.5	+1.3
GYA				pmax	pmax		
	comp=Z,16nm,1.0s						
ENH	Enshi	48.87	320	P	P	12 43 36.4	-0.6
ENH				IAmb	IAmb	12 43 38.1	
	comp=Z,15nm,0.8s						
TIA	Tai'an	49.05	332	P	P	12 43 37.5	-0.8
TIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PHRA	Phrae	49.27	301	P	P	12 43 40.5	+0.3
CRAI	Chiangrai	49.92	303	P	P	12 43 45.7	+0.4
LYN	LuoYang	50.14	326	⇓P	P	12 43 46.8	+0.2
LYN				pmax	pmax		
	comp=Z,31nm,1.4s						
PSTR	Posyet	50.14	348	⇑*e* P	P	12 43 45.9	-0.6
ASAJ	Asahikawa	50.27	359	P	P	12 43 47.1	-0.4
	comp=Z,6.0nm,0.8s,baz=225,slow=13,SNR=3.1						
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	50.35	300	P	P	12 43 49.2	+0.7
CMAR	Chiang Mai Arr	50.35	300	*i* P	P	12 43 44.2	-4.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	50.35	300	P	P	12 43 48.9	+0.3
	comp=Z,1.8nm,0.3s,baz=123,slow=5.9,SNR=14						
	comp=Z,1.8nm,0.3s						
VLA	Vladivostok	50.38	349	⇑*e* P	P	12 43 47.7	-0.5
VLA				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI	Kunming	50.48	310	⇑P	P	12 43 50.3	+0.6
KMI				pmax	pmax		
	comp=Z,14nm,1.3s						
CHTO	Chiang Mai	50.50	301	P	P	12 43 49.9	+0.2
CHTO	Chiang Mai	50.50	301	P	P	12 43 49.9	+0.2
CHTO				pmax	pmax		
	comp=Z,24nm,1.8s						
HNS	HongShan	51.16	331	⇑P	P	12 43 53.5	-0.7
HNS				pmax	pmax		
	comp=Z,22nm,1.0s						
USA0B	Ussuriysk Arra	51.41	349	P	P	12 43 55.3	-0.7
USA0B				IAmb	IAmb	12 43 56.6	
	comp=Z,28nm,0.8s						
USA0B	Ussuriysk Arra	51.41	349	*c* *i* P	P	12 43 55.2	-0.7
USRK	Ussuriysk Ar.	51.41	349	P	P	12 43 55.5	-0.4
	comp=Z,27nm,0.8s,baz=173,slow=7.3,SNR=39						
	comp=Z,27nm,0.8s						
XAN	Xi'an	51.80	323	P	P	12 43 58.8	-0.4
XAN				pP	pP	12 44 10.5	+0.3
XAN				pmax	pmax		
	comp=Z,31nm,1.2s						

comp=Z,14nm,0.8s
YSS Yuzh-Sakhalins 53.11 359 eP P 12 44 08.0 -0.6
YSS pmax pmax
comp=Z,20nm,0.6s
BNX BinXian 53.84 346 ⇓P P 12 44 13.5 -0.5
BNX pmax pmax
comp=Z,74nm,0.8s
BNX pmax pmax
comp=Z,760nm,11.7s
HHC Hu-ho-hao-te 55.38 331 eP P 12 44 25.5 +0.1
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,550nm,7.3s
BTO Baotou 55.95 330 eP P 12 44 30.8 +1.3
BTO pP **sP 12 44 43.5 -1.3**
BTO sP pP 12 44 48.8 +8.3
BTO PP **PP 12 46 37.5 +2.9**
BTO pmax pmax
comp=Z,28nm,0.8s
BTO pmax pmax
comp=Z,460nm,9.5s
LZH Lanzhou 56.26 322 eP P 12 44 32.0 +0.2
LZH pmax pmax
comp=Z,37nm,1.1s
KLR Kul'dur 56.32 351 c iP P 12 44 31.3 -0.5
KLR pmax pmax
comp=Z,39nm,1.7s
KLR Kul'dur 56.32 351 P P **12 44 31.5 -0.3**
comp=Z,13nm,0.9s,baz=189,slow=4.3,SNR=29
comp=Z,13nm,0.9s
TYV Tymovskoe 57.02 359 eP P 12 44 36.5 -0.3
TYV eS **S 12 52 29.1 +0.3**
TYV pmax pmax
comp=Z,200nm,5.2s
TYV pmax pmax
comp=Z,18nm,0.8s
TYV smax smax
comp=N,100nm,4.6s
TYV smax smax
comp=E,100nm,4.6s
GRNR Gornyy 57.25 355⇑ iP P 12 44 38.2 -0.2
GRNR pmax pmax
comp=Z,7.0nm,1.0s
HEH HeiHe 58.10 348 eP P 12 44 43.5 -0.8
HEH pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 59.16 342 P P **12 44 51.8 0.0**
HIA IAmb IAmb 12 44 53.2
comp=Z,12nm,0.9s
HIA Hailar 59.16 342 c iP P 12 44 50.8 -1.0
HIA pmax pmax
comp=Z,15nm,1.0s
SHL Shillong 59.29 305 P P **12 44 53.4 0.0**
SHL IAmb IAmb 12 44 54.6
comp=Z,19nm,1.0s
SHL Shillong 59.29 305 P P **12 44 53.4 0.0**
SHL pmax pmax
comp=Z,19nm,1.0s
PEA0B Petropavlovsk- 60.49 10⇑ eP P 12 45 01.4 +0.6
PETK Petropavlovsk- 60.49 10 P P **12 45 00.4 -0.4**
PETK Petropavlovsk- 60.49 10 P P **12 45 00.7 -0.2**
comp=Z,26nm,0.8s,baz=156,slow=6.3,SNR=26
comp=Z,26nm,0.8s
GTA Gaotai 60.83 322 P P **12 45 04.3 +0.7**
GTA pmax pmax
comp=Z,14nm,0.8s
ZEA Zeya 61.44 349 eP P 12 45 07.2 -0.1
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,40nm,1.0s
LSA Lhasa 61.68 309 P P **12 45 10.5 +0.5**
LSA IAmb IAmb 12 45 12.2
comp=Z,11nm,0.8s
LSA Lhasa 61.68 309 P P **12 45 10.5 +0.5**
LSA pmax pmax
comp=Z,11nm,0.8s
GOMU GeErMu 62.20 317 P P **12 45 13.8 +0.5**
GOMU pmax pmax
comp=Z,7.0nm,1.1s
ULN Ulaanbaatar 62.81 333 P P **12 45 17.3 +0.5**
ULN IAmb IAmb 12 45 18.3
comp=Z,11nm,0.9s
ULN Ulaanbaatar 62.81 333 c iP P 12 45 17.1 +0.3
ULN pmax pmax
comp=Z,8.0nm,0.7s
SONM Songino Array 63.08 333 P P **12 45 18.7 +0.1**
SONM IAmb IAmb 12 45 20.1
comp=Z,16nm,1.5s
SONM Songino Array 63.08 333 P P **12 45 18.7 +0.1**
SONM pmax pmax
comp=Z,16nm,1.5s
SONM Songino Array 63.08 333 P P **12 45 18.6 +0.1**
comp=Z,6.4nm,1.1s,baz=158,slow=6.5,SNR=21
comp=Z,6.4nm,1.1s
MA2 Magadan 66.01 4 P P **12 45 36.5 -0.8**
MA2 Magadan 66.01 4 ce P P 12 45 36.6 -0.7
MA2 pmax pmax
comp=Z,54nm,1.3s
ZAK Zakamensk 66.34 333 eP P 12 45 38.9 -0.8
ZAK pmax pmax
comp=Z,20nm,1.1s
YAK Yakutsk 69.05 353 eP P 12 45 55.5 -0.9
YAK pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 69.46 4⇓ eP P 12 45 58.9 0.0
SEY pmax pmax
comp=Z,34nm,1.7s
WMQ Urumqi 70.81 321 eP P 12 46 08.0 +0.2
WMQ sP sP 12 46 25.3 +1.9
WMQ PP **PP 12 48 51.8 +6.7**
WMQ SKS **SKSac 12 56 01.5 -6.1**
WMQ pmax pmax
comp=Z,25nm,0.9s
DGZ Jazzator, Ala 73.94 326 ce P P 12 46 26.4 0.0
DGZ pmax pmax
comp=Z,8.0nm,0.9s
ZSN Zaisan 74.31 323 eP P 12 46 28.7 +0.3
baz=323
ZSN Zaisan 74.31 323 eP P 12 46 28.7 +0.3
MK31 Makanchi Array 75.57 322 P P **12 46 36.0 +0.2**
MK31 IAmb IAmb 12 46 37.0
comp=Z,17nm,1.1s
MK31 Makanchi Array 75.57 322 c iP P 12 46 35.8 0.0
MKAR Makanchi Array 75.57 322 P P **12 46 35.6 -0.2**
MKAR Makanchi Array 75.57 322 P P **12 46 36.0 +0.2**
MKAR Makanchi Array 75.57 322 P P **12 46 36.0 +0.2**
comp=Z,14nm,0.9s,baz=108,slow=6.9,SNR=33
comp=Z,14nm,0.9s
MAKZ Makanchi 75.77 321 P P **12 46 37.0 +0.1**
MAKZ IAmb IAmb 12 46 38.1
comp=Z,21nm,1.1s
MAKZ Makanchi 75.77 321 P P **12 46 37.0 +0.1**
MAKZ pmax pmax
comp=Z,21nm,1.1s
SHLS Shalkode 75.89 317 eP P 12 46 36.6 -1.2
comp=Z,7.1nm,0.7s,baz=317
SHLS Shalkode 75.89 317 eP P 12 46 36.6 -1.2
SHLS pmax pmax
comp=Z,7.0nm,0.7s
BILL Bilibino 75.99 9 P P **12 46 37.9 +0.2**
BILL Bilibino 75.99 9⇓ eP P 12 46 37.7 +0.1
BILL pmax pmax
comp=Z,8.0nm,1.3s
UZB Uzynbulak 76.19 317 eP P 12 46 39.9 +0.4
comp=Z,10nm,0.8s,baz=317
UZB Uzynbulak 76.19 317 eP P 12 46 39.8 +0.3
UZB pmax pmax
comp=Z,10.0nm,0.8s
PRZ Przheval'sk 76.36 316 P P **12 46 41.3 +0.7**
PRZ IAmb IAmb 12 46 42.9
comp=Z,22nm,0.9s
PRZ Przheval'sk 76.36 316 P P **12 46 41.3 +0.7**
PRZ pmax pmax
comp=Z,22nm,0.9s
TARG Taragay, Kyrgy 76.49 315 P P **12 46 40.3 -1.3**
TARG Taragay, Kyrgy 76.49 315 P P **12 46 40.3 -1.3**
TARG pmax pmax
comp=Z,9.0nm,1.0s
KPKS Kokpek 76.54 317 eP P 12 46 41.7 +0.3
comp=Z,10nm,0.9s,baz=317
KPKS Kokpek 76.54 317 eP P 12 46 41.7 +0.3
KPKS pmax pmax
comp=Z,10.0nm,0.9s
SATY Saty 76.57 317 eP P 12 46 42.1 +0.4
baz=317
SATY Saty 76.57 317 eP P 12 46 42.0 +0.4
KSH Kashi 77.03 313 P P **12 46 45.8 +1.5**
KSH PcP **pP 12 46 56.8 +1.0**
KSH pmax pmax
comp=Z,12nm,1.0s
KSH LR LR
comp=Z,270nm,14.8s
KSH LR LR
comp=Z,370nm,14.8s
KSH LR LR
comp=Z,390nm,16.5s
NIL Nilore 77.29 306 P P **12 46 45.7 -0.1**
NIL Nilore 77.29 306 P P **12 46 45.7 -0.1**
NIL pmax pmax
comp=Z,32nm,1.0s
TDK Taldyqorghan 77.31 319 eP P 12 46 45.8 +0.2
comp=Z,13nm,0.7s,baz=319
TDK Taldyqorghan 77.31 319 eP P 12 46 45.8 +0.2
TDK pmax pmax
comp=Z,13nm,0.7s
ZAA0 Zalesovo Array 77.48 329 P P **12 46 45.3 -1.1**
ZALV Zalesovo Beam 77.48 329 P P **12 46 45.1 -1.3**
ZALV Zalesovo Beam 77.48 329 P P **12 46 45.2 -1.2**
comp=Z,4.4nm,0.7s,baz=112,slow=5.7,SNR=16
comp=Z,4.4nm,0.7s
MDOK Medeo 77.53 317 eP P 12 46 48.0 +0.8
baz=317
MDOK Medeo 77.53 317 eP P 12 46 47.9 +0.8
TNSS Tian-Shan 77.56 316 eP P 12 46 48.1 +0.5
baz=316
TNSS Tian-Shan 77.56 316 eP P 12 46 48.0 +0.5
GAMB Gambell 77.64 19 P P **12 46 47.7 +0.7**
baz=226
NRN Naryn 77.66 315 P P **12 46 47.8 -0.2**
NRN Naryn 77.66 315 P P **12 46 47.8 -0.2**
NRN pmax pmax
comp=Z,6.0nm,1.1s
BOOM Boomskoye usch 78.06 316 P P **12 46 49.5 -0.6**
BOOM IAmb IAmb 12 46 51.5
comp=Z,9.5nm,0.8s
BOOM Boomskoye usch 78.06 316 P P **12 46 49.5 -0.6**
BOOM pmax pmax
comp=Z,10.0nm,0.8s
KUU Kurty 78.28 317 eP P 12 46 51.0 0.0
comp=Z,17nm,0.8s,baz=317
KUU Kurty 78.28 317 eP P 12 46 51.0 0.0
KUU pmax pmax
comp=Z,17nm,0.8s
TKM2 Tokmak 2 78.45 316 P P **12 46 52.5 +0.3**
SNR=7.3
TIXI Tiksi 78.47 355⇑ eP P 12 46 50.5 -1.0
TIXI pmax pmax
comp=Z,9.0nm,2.3s
M13K Dall Lake 78.50 24 P P **12 46 52.7 +0.9**
baz=234
O14K Tigyukauivet M 78.70 26 P P **12 46 53.8 +0.8**
baz=236
N14K Kuskokwak Cree 78.90 25 P P **12 46 55.0 +0.9**
baz=236
UCH Uchtor 78.97 315 P P **12 46 56.2 +0.7**
SNR=15
CHMS Chumysh 79.06 316 P P **12 46 55.5 +0.1**
SNR=6.2
AAK Ala-Archa 79.11 315 P P **12 46 56.2 +0.3**
SNR=8.3
AAK Ala-Archa 79.11 315 P P **12 46 56.0 +0.1**
AAK Ala-Archa 79.11 315 P P **12 46 56.0 +0.1**
AAK pmax pmax
comp=Z,8.0nm,1.1s
M14K Bethel 79.25 24 P P **12 46 57.0 +1.1**
baz=236
O15K Ungalikthiuk R 79.28 26 P P **12 46 57.2 +1.0**
baz=238
L14K Kuka Creek 79.30 23 P P **12 46 56.8 +0.5**
L14K Kuka Creek 79.30 23 P P **12 46 56.7 +0.5**
baz=235
USP Ospenovka 79.32 316 P P **12 46 56.9 +0.1**
SNR=17
KURK Kurchatov 79.43 324 P P **12 46 56.7 -0.4**
KURK IAmb IAmb 12 46 58.0
comp=Z,16nm,1.2s
KURK Kurchatov 79.43 324 P P **12 46 56.9 -0.3**
KURBB Kurchatov Arra 79.44 324 P P **12 46 56.9 -0.4**
comp=Z,6.2nm,1.0s,baz=114,slow=4.5,SNR=24
comp=Z,6.2nm,1.0s
R16K Pilot Point 79.46 28 P P **12 46 58.2 +1.0**
baz=240
EKS2 Erkin-Say 79.62 315 P P **12 46 59.5 +0.9**
SNR=8.9
N15K Kwethluk River 79.70 25 P P **12 46 59.2 +0.7**
baz=237
M15K Kasigluk River 79.74 24 P P **12 46 59.3 +0.7**
baz=237
ARSB Arslanbob 79.77 314 P P **12 46 58.9 -0.5**
ARSB Arslanbob 79.77 314 P P **12 46 58.9 -0.5**
ARSB pmax pmax
comp=Z,7.0nm,1.4s
J14K Nanvaranak Lak 79.79 22 P P **12 46 59.7 +0.8**
baz=234
L15K Ungalak Mounta 79.97 23 P P **12 47 00.6 +0.8**
baz=236
TNA Tin City 80.05 18 P P **12 47 00.7 +0.5**
baz=229
BTLS Baital 80.21 318 eP P 12 47 01.5 -0.1
baz=318
BTLS Baital 80.21 318 eP P 12 47 01.5 -0.1
ANM Nome 80.25 20 P P **12 47 01.2 -0.1**
ANM Nome 80.25 20 P P **12 47 02.1 +0.8**
baz=232
ANM Nome 80.25 20 P P **12 47 01.2 -0.1**
ANM pmax pmax
comp=Z,12nm,1.0s
O16K Kokwok River B 80.25 26 P P **12 47 02.1 +0.6**
baz=239
K15K Wolf Creek Mou 80.30 23 P P **12 47 01.5 -0.2**
K15K IAmb IAmb 12 47 02.8
comp=Z,22nm,0.8s
K15K Wolf Creek Mou 80.30 23 P P **12 47 02.3 +0.7**
baz=236
N16K Nishlik Lake 80.42 25 P P **12 47 03.3 +0.9**
baz=238
Q17K Contact Creek 80.59 28 P P **12 47 02.5 -0.9**
baz=241
M16K Timber Creek 80.63 25 P P **12 47 04.2 +0.7**
baz=238
O17K Koliganek Bris 80.78 26 P P **12 47 04.8 +0.5**
baz=240
L16K Owhat River 80.78 24 P P **12 47 04.2 0.0**
baz=238
G15K Niukluk 80.97 20 P P **12 47 05.6 +0.5**
baz=233
N17K Nushagak Hills 81.12 26 P P **12 47 07.0 +0.9**
baz=240
J16K Anvik River 81.20 22 P P **12 47 06.8 +0.3**
J16K Anvik River 81.20 22 P P **12 47 07.2 +0.7**
baz=236
OHAK Old Harbor 81.35 29 P P **12 47 07.2 -0.1**
baz=244
H16K Elim 81.38 21 P P **12 47 07.6 +0.3**
baz=235,SNR=12
DZA Taraz 81.41 315 eP P 12 47 07.7 -0.4
baz=315
DZA Taraz 81.41 315 eP P 12 47 07.7 -0.4
M17K Holitna River 81.46 25 P P **12 47 08.8 +0.9**
baz=240
L17K Donlin 81.48 24 P P **12 47 08.6 +0.6**
baz=239
I17K Unalakleet 81.50 22 P P **12 47 08.2 +0.1**
I17K Unalakleet 81.50 22 P P **12 47 09.3 +1.3**
baz=236,SNR=8.4
N18K Kilae Creek 81.75 26 P P **12 47 10.0 +0.5**
baz=241
K17K Iditarod 81.78 23 P P **12 47 09.8 +0.3**
baz=239
KDAK Kodiak Island 81.94 29 P P **12 47 10.6 +0.2**
baz=244
SIMJ Simiganj 81.95 310 P P **12 47 11.3 +0.2**
SIMJ IAmb IAmb 12 47 12.0
comp=Z,13nm,1.0s
KK31 Karatay Array 82.05 315 P P **12 47 11.3 -0.1**
KK31 Karatay Array 82.05 315 P P **12 47 11.3 -0.1**
KK31 pmax pmax
comp=Z,17nm,1.6s
KKAR Karatay Array 82.05 315 P P **12 47 11.0 -0.4**
KKAR Karatay Array 82.05 315 P P **12 47 11.5 +0.1**
KKAR IAmb IAmb 12 47 12.3
comp=Z,17nm,1.6s
KKAR Karatay Array 82.05 315 P P **12 47 11.5 +0.1**
KKAR pmax pmax
comp=Z,17nm,1.6s
M18K Stony River 82.17 25 P P **12 47 12.2 +0.6**
baz=241
L18K Granite Mounta 82.18 24 P P **12 47 12.6 +1.0**
L18K IAmb IAmb 12 47 13.8
comp=Z,29nm,1.3s
L18K Granite Mounta 82.18 24 P P **12 47 12.3 +0.7**
baz=240
O19K Port Alsworth 82.21 26 P P **12 47 12.2 +0.4**
baz=243
H17K Granite Mounta 82.37 21 P P **12 47 12.5 -0.1**
H17K Granite Mounta 82.37 21 P P **12 47 13.2 +0.6**
baz=237
G17K Kiwalik Mounta 82.42 20 P P **12 47 13.7 +0.8**
baz=236
N19K Bonanza Creek 82.42 26 P P **12 47 13.8 +0.8**
baz=242
BRLS Borolday 82.50 315 eP P 12 47 13.6 -0.2
baz=314
BRLS Borolday 82.50 315 eP P 12 47 13.6 -0.2
C16K Lisburne Hills 82.58 17 P P **12 47 13.3 -0.2**
C16K IAmb IAmb 12 47 16.9
comp=Z,15nm,1.1s
C16K Lisburne Hills 82.58 17 P P **12 47 14.0 +0.5**
baz=231
BRZS Berezniki 82.71 322 eP P 12 47 14.6 -0.2
baz=322
BRZS Berezniki 82.71 322 eP P 12 47 14.5 -0.2
J18K Innoko River 82.79 23 P P **12 47 15.0 +0.2**
J18K IAmb IAmb 12 49 45.8
comp=Z,42nm,1.9s
J18K Innoko River 82.79 23 P P **12 47 14.7 -0.1**
baz=240
TTA Tatalina 82.80 24 P P **12 47 15.0 0.0**
TTA Tatalina 82.80 24 P P **12 47 15.2 +0.2**
baz=241
TTA Tatalina 82.80 24 P P **12 47 15.0 0.0**
TTA pmax pmax
comp=Z,7.0nm,0.9s
D17K Noatak River 82.90 18 P P **12 47 15.9 +0.7**
baz=234
L19K White Mountain 82.91 25 P P **12 47 15.9 +0.4**
baz=242
E17K Hotham Inlet 82.93 19 P P **12 47 16.3 +0.9**
baz=235
M19K Big River Lodg 82.97 25 P P **12 47 15.7 -0.1**
baz=242
H18K Honhosa River 83.04 21 P P **12 47 16.2 +0.1**
baz=238
G18K Tagagawik 83.33 21 P P **12 47 17.3 -0.2**
G18K IAmb IAmb 12 47 18.0
comp=Z,14nm,0.8s
G18K Tagagawik 83.33 21 P P **12 47 17.7 +0.1**
baz=238
C17K DeLong Mountai 83.33 17 P P **12 47 18.0 +0.5**
baz=233
F18K Selawik 83.37 20 P P **12 47 17.4 -0.3**
baz=237
GCSA Galena City Sc 83.37 22 P P **12 47 17.9 +0.2**
baz=240,SNR=16
L20K Farewell, AK 83.45 25 P P **12 47 18.7 +0.4**
baz=243
J19K Poorman 83.47 23 P P **12 47 18.6 +0.3**
J19K Poorman 83.47 23 P P **12 47 18.9 +0.5**
baz=241
M20K Styx River 83.49 25 P P **12 47 18.6 +0.1**
M20K Styx River 83.49 25 P P **12 47 18.8 +0.2**
baz=244
E18K Tukpahlearik C 83.52 19 P P **12 47 18.8 +0.4**
E18K IAmb IAmb 12 47 19.8
comp=Z,18nm,1.0s
E18K Tukpahlearik C 83.52 19 P P **12 47 18.8 +0.4**
baz=236
QSPA South Pole Qui 83.58 180 P P **12 47 18.7 -0.4**
QSPA IAmb IAmb 12 47 33.3
comp=Z,16nm,1.1s
QSPA South Pole Qui 83.58 180 P P **12 47 18.8 -0.2**
comp=Z,8.7nm,0.8s,baz=291,slow=1.8,SNR=13
comp=Z,8.7nm,0.8s
N20K Mount Spurr 83.59 26 P P **12 47 17.9 -1.2**
baz=244
BRSE Bradley Lake S 83.63 28 P P **12 47 19.6 +0.3**
baz=246
K20K Telida 83.78 24 P P **12 47 20.8 +0.8**
baz=242
CAPN Captain Cook N 83.87 27 P P **12 47 20.7 +0.3**
baz=245
H19K Roundabout Mou 83.92 21 P P **12 47 21.4 +0.8**
baz=240
G19K Purcell Mounta 84.01 21 P P **12 47 21.5 +0.4**
baz=239
C18K Utukok River 84.03 18 P P **12 47 20.9 -0.3**
baz=235
F19K Shaleruckik Mo 84.13 20 P P **12 47 21.4 -0.2**
F19K IAmb IAmb 12 47 22.4
comp=Z,13nm,1.1s
F19K Shaleruckik Mo 84.13 20 P P **12 47 21.6 0.0**
baz=239
J20K Nowinta River 84.13 23 P P **12 47 22.0 +0.3**
J20K Nowinta River 84.13 23 P P **12 47 22.0 +0.3**
baz=242
SKT Skwentna 84.22 25 P P **12 47 21.5 -0.7**
baz=245
B18K Kokolik River 84.26 17 P P **12 47 23.1 +0.8**
baz=235
I20K Naaghedeneel 84.30 22 P P **12 47 22.9 +0.5**
baz=242
PPLA Purkeypile 84.34 25 P P **12 47 21.9 -1.1**
baz=244
SUA Susitna One 84.34 26 P P **12 47 21.1 -1.8**
baz=246,SNR=6.6
SEW Seward 84.37 28 P P **12 47 22.4 -0.5**
baz=247
O22K Cooper Landing 84.40 27 P P **12 47 22.5 -0.5**
baz=247
H20K Anotleneega Mo 84.48 22 P P **12 47 23.9 +0.5**
baz=242
NRIK Noril'sk 84.58 343 c iP P 12 47 23.2 -0.6
NRIK pmax pmax
comp=Z,27nm,0.9s
NRIK Noril'sk 84.58 343 P P **12 47 23.4 -0.4**
comp=Z,21nm,0.9s,baz=123,slow=4.6,SNR=38
comp=Z,21nm,0.9s
CAST Castle Rocks 84.61 24 P P **12 47 23.5 -0.7**
baz=244,SNR=10
E19K Redstone River 84.63 19 P P **12 47 24.1 0.0**
baz=239,SNR=24
RC01 Rabbit Creek A 84.63 27 P P **12 47 23.6 -0.7**
baz=247,SNR=10
CHUM Lake Minchumin 84.72 24 P P **12 47 24.4 -0.3**
baz=244,SNR=20
M22K Willow 84.73 26 P P **12 47 23.3 -1.4**
baz=246,SNR=10
C19K Lookout Ridge 84.77 18 P P **12 47 24.9 0.0**
baz=237
D19K Kuna River 84.89 18 P P **12 47 25.3 -0.2**
baz=238
CUT Chulitna 84.93 25 P P **12 47 25.1 -0.6**
baz=246
F20K Avaraart Lake 84.93 20 P P **12 47 25.8 +0.1**
baz=241
BVAR Borovoye Array 85.02 325 P P **12 47 26.1 -0.3**
comp=Z,15nm,0.8s,baz=111,slow=6.7,SNR=46
comp=Z,15nm,0.8s
BRVK Borovoye 85.09 325 P P **12 47 26.8 +0.1**
BRVK IAmb IAmb 12 47 27.7
comp=Z,13nm,0.9s
BRVK Borovoye 85.09 325 P P **12 47 26.8 +0.1**
BRVK pmax pmax
comp=Z,13nm,0.9s
PMR Palmer 85.10 26 P P **12 47 25.6 -1.0**
baz=247,SNR=7.4
IMAR Indian Mountai 85.12 21 P P **12 47 26.5 -0.2**
KTH Kantishna Hill 85.14 24 P P **12 47 26.0 -0.9**
H21K Melozitna Rive 85.32 22 P P **12 47 27.3 -0.3**
baz=243
KNK Knik Glacier 85.33 27 P P **12 47 27.3 -0.6**
KNK Knik Glacier 85.33 27 P P **12 47 27.6 -0.2**
baz=248
BPAW Bear Paw Mtn. 85.34 24 P P **12 47 27.2 -0.6**
BPAW IAmb IAmb 12 47 27.9
comp=Z,8.2nm,0.8s
BPAW Bear Paw Mtn. 85.34 24 P P **12 47 27.0 -0.8**
baz=245,SNR=5.6

TRF	**Thorofare Moun**	**85.35**	**24**	P	**P**	12 47 27.0	-1.1
TRF				IAmb	IAmb	12 47 29.5	
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	**85.35**	**24**	P	**P**	12 47 27.2	-0.9
	baz=246						
E20K	**Nigu River**	**85.38**	**19**	P	**P**	12 47 28.2	+0.3
	baz=240,SNR=18						
I21K	**Tanana**	**85.42**	**22**	P	**P**	12 47 28.2	+0.1
I21K	**Tanana**	**85.42**	**22**	P	**P**	12 47 28.3	+0.1
	baz=244,SNR=11						
D20K	**Etivluk River**	**85.48**	**18**	P	**P**	12 47 28.2	-0.2
	baz=240						
SML	**Sawmill**	**85.54**	**26**	P	**P**	12 47 28.7	-0.2
SML	**Sawmill**	**85.54**	**26**	P	**P**	12 47 28.4	-0.4
	baz=248,SNR=8.2						
GLI	**Glacier Island**	**85.75**	**27**	P	**P**	12 47 29.5	-0.4
	baz=249						
F21K	**Alatna River**	**85.79**	**20**	P	**P**	12 47 30.0	0.0
	baz=243						
M23K	**Glacier View**	**85.80**	**26**	P	**P**	12 47 29.5	-0.6
	baz=248						
MLY	**Manley**	**85.83**	**23**	P	**P**	12 47 29.6	-0.6
	baz=245,SNR=18						
WAT1	**Susitna Watana**	**85.83**	**25**	P	**P**	12 47 29.4	-0.9
	baz=248						
H22K	**Ishtalitna Cre**	**85.95**	**22**	P	**P**	12 47 30.5	-0.3
	baz=245,SNR=8.7						
BWN	**Browne**	**85.98**	**24**	P	**P**	12 47 30.3	-0.7
SCM	**Sheep Creek Mo**	**85.99**	**26**	P	**P**	12 47 30.1	-1.1
	baz=249						
MCK	**McKinley**	**86.02**	**24**	P	**P**	12 47 30.2	-1.0
	baz=247,SNR=6.7						
WAT6	**Susitna Watana**	**86.08**	**26**	P	**P**	12 47 31.0	-0.7
	baz=248,SNR=5.4						
E21K	**Killik River**	**86.19**	**19**	P	**P**	12 47 31.8	-0.1
	baz=242						
C21K	**Knifeblade Rid**	**86.27**	**18**	P	**P**	12 47 32.7	+0.4
	baz=241						
NEA2	**Nenana**	**86.30**	**24**	P	**P**	12 47 31.4	-1.2
	baz=247,SNR=7.0						
G22K	**Bettles**	**86.35**	**21**	P	**P**	12 47 32.8	+0.2
	baz=245						
I23K	**Minto, Yukon-K**	**86.41**	**23**	P	**P**	12 47 32.5	-0.5
	baz=247						
DHY	**Denali Highway**	**86.42**	**25**	P	**P**	12 47 32.9	-0.4
	baz=249,SNR=20						
KLU	**Klutina**	**86.49**	**27**	P	**P**	12 47 33.7	+0.1
	baz=250,SNR=5.7						
M24K	**Tolsona, Glenn**	**86.59**	**26**	P	**P**	12 47 33.4	-0.7
	baz=250						
E22K	**Anaktuvuk Pass**	**86.77**	**20**	P	**P**	12 47 35.0	+0.2
	baz=244						
G23K	**Bananza Creek**	**86.79**	**21**	P	**P**	12 47 34.8	-0.2
	baz=246,SNR=12						
A21K	**Barrow**	**86.80**	**16**	P	**P**	12 47 35.0	+0.2
	baz=240,SNR=16						
D22K	**Ayikyak River**	**86.81**	**19**	P	**P**	12 47 35.5	+0.6
	baz=243						
COLA	**College**	**86.89**	**23**	P	**P**	12 47 34.4	-1.0
	baz=248						
BMRM	**Bremner River**	**86.92**	**28**	P	**P**	12 47 35.0	-0.7
	baz=251						
COLD	**Coldfoot**	**86.94**	**21**	P	**P**	12 47 35.5	-0.1
	baz=246,SNR=11						
HDA	**Harding Lake**	**87.08**	**24**	P	**P**	12 47 34.6	-1.8
	baz=249						
N25K	**Chitina, Valde**	**87.13**	**27**	P	**P**	12 47 36.1	-0.7
	baz=251						
HARP	**HAARP**	**87.14**	**26**	P	**P**	12 47 35.8	-0.9
	baz=251						
POKR	**Poker Plat Res**	**87.15**	**23**	P	**P**	12 47 35.6	-1.1
	baz=248						
PAX	**Paxson**	**87.20**	**26**	P	**P**	12 47 37.0	-0.1
	baz=250						
IL31		**87.24**	**24**	P	**P**	12 47 35.2	-1.9
IL31				IAmb	IAmb	12 47 36.3	
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**87.24**	**24**	P	**P**	12 47 35.2	-1.9
ILAR	**Eielson Array**	**87.24**	**24**	P	**P**	12 47 35.1	-2.0
	comp=Z,12nm,0.9s,baz=257,slow=4.8,SNR=61						
	comp=Z,12nm,0.9s						
H24K	**Noodor Dome**	**87.25**	**23**	P	**P**	12 47 36.9	-0.3
	baz=248						
BGLC	**Bering Glacier**	**87.27**	**29**	P	**P**	12 47 37.4	+0.1
	baz=252						
K24K	**Donnelly Dome**	**87.35**	**25**	P	**P**	12 47 38.0	+0.2
	baz=250						
E23K	**Chandalar**	**87.48**	**20**	P	**P**	12 47 39.1	+0.8
	baz=246						
D23K	**Nanushuk River**	**87.50**	**19**	P	**P**	12 47 39.4	+1.1
	baz=245						
CRQE	**Cirque**	**87.56**	**28**	P	**P**	12 47 38.8	-0.1
	baz=252,SNR=6.8						
G24K	**Hadweenzic Riv**	**87.72**	**22**	P	**P**	12 47 39.6	+0.2
	baz=248						
MCARA	**McCarthy VSAT**	**87.78**	**28**	P	**P**	12 47 39.2	-0.6
	baz=253						
J25K	**Salcha River,**	**87.80**	**24**	P	**P**	12 47 40.2	+0.3
	baz=250						
F24K	**Squaw Lake**	**87.88**	**21**	P	**P**	12 47 40.9	+0.7
	baz=248						
L26K	**Log Cabin Wild**	**88.13**	**26**	P	**P**	12 47 41.1	-0.3
L26K				IAmb	IAmb	12 47 42.2	
	comp=Z,9.1nm,0.7s						
L26K	**Log Cabin Wild**	**88.13**	**26**	P	**P**	12 47 41.5	0.0
	baz=252,SNR=6.2						
SCRK	**Sand Creek**	**88.16**	**25**	P	**P**	12 47 41.5	-0.1
	baz=252,SNR=6.2						
D24K	**Happy Valley**	**88.19**	**19**	P	**P**	12 47 42.3	+0.8
	baz=247						
G25K	**Bearman Lake**	**88.25**	**22**	P	**P**	12 47 42.5	+0.7
	baz=250						
CTG	**Chitna Glacier**	**88.44**	**28**	P	**P**	12 47 43.5	+0.4
	baz=254,SNR=9.7						
C24K	**Franklin Bluff**	**88.45**	**19**	P	**P**	12 47 43.2	+0.5
	baz=247						
J26L	**Joseph Creek**	**88.50**	**24**	P	**P**	12 47 43.0	-0.2
	baz=252						
M27K	**Edge Creek, AK**	**88.58**	**27**	P	**P**	12 47 44.2	+0.5
	baz=254,SNR=13						
F25K	**Christian Rive**	**88.71**	**21**	P	**P**	12 47 44.9	+0.8
	baz=250,SNR=15						
PINM	**Pinnacle**	**88.72**	**29**	P	**P**	12 47 44.3	0.0
	baz=255						
L27K	**Beaver Creek,**	**88.81**	**26**	P	**P**	12 47 44.5	-0.2
	baz=254						
I26K	**Coal Creek Min**	**88.91**	**24**	P	**P**	12 47 44.5	-0.6
	baz=252						
E25K	**Arctic Village**	**88.92**	**21**	P	**P**	12 47 45.4	+0.4
	baz=250,SNR=16						
K27K	**Chicken**	**88.98**	**25**	P	**P**	12 47 45.6	+0.2
	baz=253						
PNL	**Peninsula**	**89.03**	**30**	P	**P**	12 47 45.6	-0.1
	baz=256						
BMAR	**Burnt Mountain**	**89.04**	**22**	P	**P**	12 47 46.1	+0.5
BVCY	**Beaver Creek**	**89.06**	**27**	P	**P**	12 47 45.9	0.0
	baz=254,SNR=8.5						
D25K	**Kavik River**	**89.06**	**20**	P	**P**	12 47 46.3	+0.5
	baz=249						
YUK3	**Moose Creek**	**89.07**	**27**	P	**P**	12 47 46.1	0.0
	baz=255,SNR=8.6						
G26K	**Porcupine Rive**	**89.18**	**22**	P	**P**	12 47 46.7	+0.5
	baz=252						
YUK8	**Steele Glacier**	**89.26**	**28**	P	**P**	12 47 47.6	+0.5
	baz=255						
F26K	**Sheenjek River**	**89.28**	**21**	P	**P**	12 47 47.8	+1.0
	baz=251						
EGAK	**Eagle**	**89.57**	**24**	P	**P**	12 47 48.3	+0.2
EGAK				IAmb	IAmb	12 47 49.0	
	comp=Z,12nm,0.9s						
EGAK	**Eagle**	**89.57**	**24**	P	**P**	12 47 48.4	+0.2
	baz=254,SNR=9.0						
O29M	**Mount Kennedy**	**89.59**	**29**	P	**P**	12 47 48.6	+0.1
	baz=256						
I27K	**Kandik River**	**89.61**	**24**	P	**P**	12 47 48.9	+0.5
	baz=254						
YUK4	**Talbot Arm**	**89.80**	**28**	P	**P**	12 47 49.9	+0.3
	baz=256,SNR=7.6						
H27K	**Steamboat Moun**	**89.83**	**23**	P	**P**	12 47 49.9	+0.5
	baz=254						
P29M	**Windy Craggy**	**89.84**	**30**	P	**P**	12 47 49.8	+0.2
	baz=257						
DAWY	**Dawson**	**90.12**	**25**	P	**P**	12 47 51.0	+0.2
DAWY				IAmb	IAmb	12 47 51.9	
	comp=Z,15nm,0.9s						
DAWY	**Dawson**	**90.12**	**25**	P	**P**	12 47 51.1	+0.2
	baz=256,SNR=12						
M29M	**Somme Creek**	**90.14**	**27**	P	**P**	12 47 51.1	+0.1
M29M				IAmb	IAmb	12 47 52.1	
	comp=Z,11nm,0.8s						
M29M	**Somme Creek**	**90.14**	**27**	P	**P**	12 47 51.4	+0.3
	baz=257						
HYT	**Haines Junctio**	**90.22**	**29**	P	**P**	12 47 51.5	0.0
HYT				IAmb	IAmb	12 47 52.7	
	comp=Z,20nm,1.3s						
HYT	**Haines Junctio**	**90.22**	**29**	P	**P**	12 47 51.7	+0.3
	baz=257,SNR=5.3						
I28M	**Miner Creek**	**90.25**	**24**	P	**P**	12 47 51.8	+0.4
	baz=255,SNR=5.7						
L29M	**L29M**	**90.44**	**26**	P	**P**	12 47 53.1	+0.8
	baz=257						
ABKAR	**Akbulak array**	**90.56**	**319**	P	**P**	12 47 51.3	-1.8
J29N	**Klondike Camp**	**90.72**	**25**	P	**P**	12 47 54.1	+0.5
	baz=257						
F28M	**Old Crow**	**90.83**	**22**	P	**P**	12 47 54.3	+0.3
	baz=255						
K29M	**Barlow Dome**	**90.88**	**26**	P	**P**	12 47 54.4	0.0
	baz=257						
O30N	**Mendenhall**	**90.89**	**29**	P	**P**	12 47 54.3	-0.2
	baz=259						
M30M	**Minto, Yukon**	**90.93**	**27**	P	**P**	12 47 54.4	-0.2
	baz=258						
SKAG	**Skagway**	**91.01**	**30**	P	**P**	12 47 55.6	+0.7
	baz=259						
S32K	**Killisnoo**	**91.03**	**32**	P	**P**	12 47 55.0	-0.1
	baz=260						
H29M	**Whitestone**	**91.06**	**23**	P	**P**	12 47 54.9	-0.2
	baz=257						
WHY	**Whitehorse**	**91.45**	**29**	P	**P**	12 47 57.0	-0.2
	baz=260						
J30M	**Hart River**	**91.54**	**25**	P	**P**	12 47 57.8	+0.3
	baz=258						
I30M	**Mount Dempster**	**91.65**	**25**	P	**P**	12 47 58.0	0.0
	baz=258						
E29M	**Blow River**	**91.73**	**21**	P	**P**	12 47 58.1	0.0
	baz=257						
EPYK	**Eagle Plains**	**91.75**	**23**	P	**P**	12 47 58.4	+0.1
	baz=258,SNR=8.0						
M31M	**Drury Creek, Y**	**91.95**	**28**	P	**P**	12 47 59.3	-0.1
	baz=260						
G30M	**tAoh Zraii Nji**	**92.06**	**23**	P	**P**	12 47 59.4	-0.4
	baz=259						
F30M	**Barrier River**	**92.35**	**22**	P	**P**	12 48 01.0	0.0
	baz=262						
P33M	**Teslin, Yukon**	**92.39**	**30**	P	**P**	12 48 00.6	-0.9
	baz=262						
FARO	**Faro, Yukon**	**92.44**	**28**	P	**P**	12 48 01.6	0.0
	baz=261						
ARU	**Arti**	**92.44**	**326**	*d i* P	**P**	12 47 58.8	-2.9
ARU						12 51 39.9	
ARU				S	**SKSac**	**12 58 29.1**	**-3.3**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
H31M	**Peel River**	**92.59**	**24**	P	**P**	12 48 01.6	-0.6
	baz=260						
G31M	**Satah River**	**92.81**	**23**	P	**P**	12 48 02.8	-0.3
	baz=260,SNR=8.1						
ELIB	**Princess Elisa**	**92.89**	**196**	*d* P	**P**	12 48 03.5	-0.2
	comp=Z,3.6nm,1.0s						
F31M	**Tsiigehtchic**	**93.09**	**23**	P	**P**	12 48 03.7	-0.8
	baz=261						
INK	**Inuvik**	**93.31**	**22**	P	**P**	12 48 05.0	-0.4
	baz=261,SNR=6.3						
DLBC	**Lease Lake**	**93.58**	**32**	P	**P**	12 48 06.9	0.0
	baz=264						
WTLY	**Watson Lake, Y**	**94.37**	**30**	P	**P**	12 48 10.7	+0.1
	baz=265						
A36M	**Sachs Harbour**	**96.44**	**18**	P	**P**	12 48 18.6	-1.0
	baz=269,SNR=5.9						
C36M	**Paulatuk**	**96.81**	**21**	P	**P**	12 48 20.2	-1.1
	baz=270						
VES	**Vestal, Richgr**	**99.75**	**55**	P	**Pdif**	12 48 34.9	-0.4
	baz=269						
NVAR	**Mina Array Bea**	**100.40**	**52**	P	**Pdif**	12 48 38.1	-0.4
	comp=Z,0.5nm,0.7s,baz=259,slow=7.3,SNR=2.9						
CWC	**Cottonwood Cre**	**100.57**	**54**	P	**Pdif**	12 48 38.9	-0.3
	baz=270						
NEW	**Newport**	**101.02**	**42**	P	**Pdif**	12 48 40.9	+0.1
	baz=273						
YKA	**Yellowknife Ar**	**101.15**	**28**	*i* P	**Pdif**	12 48 39.7	-1.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**101.15**	**28**	P	**Pdif**	12 48 40.5	-0.5
	comp=Z,0.6nm,0.8s,baz=283,slow=4.9,SNR=7.6						
FURC	**Furnace Creek,**	**101.55**	**54**	P	**Pdif**	12 48 42.9	-0.4
	baz=271						
IKP	**In-Ko-Pah, Jac**	**102.20**	**58**	P	**Pdif**	12 48 46.0	-0.4
	baz=270						
BELC	**Belle Mtn. Jos**	**102.29**	**57**	P	**Pdif**	12 48 46.4	-0.5
	baz=271						
APA	**Apatity**	**103.46**	**338**	⇓ *i* P	**Pdif**	12 48 56.5	+5.4
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,500nm,12.0s						
ANMO	**Albuquerque**	**110.10**	**55**	P	**PKiKP**	12 53 22.5	-0.8
	baz=276						
MNTX	**Cornudas Mount**	**111.33**	**59**	P	**PKiKP**	12 53 24.7	-0.8
	baz=276						
WMOK	**Wichita Mounta**	**116.37**	**54**	P	**PKPdf**	12 53 34.2	-0.9
	baz=281						
BRDY	**Brady**	**116.79**	**58**	PKPdf	**PKPdf**	12 53 34.9	-1.1
S39A	**Bolivar**	**119.96**	**50**	PKPdf	**PKPdf**	12 53 40.2	-1.6
JFWS	**Jewell Farm**	**120.48**	**43**	P	**PKPdf**	12 53 41.2	-1.6
	baz=292						
MIAR	**Mount Ida**	**120.59**	**54**	P	**PKPdf**	12 53 42.4	-0.8
	baz=285						
CCM	**Cathedral Cave**	**121.42**	**49**	P	**PKPdf**	12 53 43.3	-1.3
	baz=288						
PLCA	**Paso Flores**	**123.67**	**149**	PKP	**PKPdf**	12 53 49.2	+0.1
	comp=Z,1.1nm,0.6s,baz=320,slow=2.3,SNR=7.9						
WVT	**Waverly**	**124.63**	**50**	P	**PKPdf**	12 53 49.6	-1.3
	baz=290						
T47A	**Sharon Grove**	**124.88**	**49**	PKPdf	**PKPdf**	12 53 50.0	-1.3
WCI	**Wyandotte Cave**	**125.03**	**47**	P	**PKPdf**	12 53 50.5	-1.1
	baz=292						
O48B	**Farmland**	**125.04**	**45**	P	**PKPdf**	12 53 50.5	-1.0
	baz=295						
P49A	**Miami Univ. Ec**	**125.64**	**45**	P	**PKPdf**	12 53 52.1	-0.6
	baz=294						
LRAL	**Lakeview Retre**	**126.28**	**53**	P	**PKPdf**	12 53 53.2	-0.9
	baz=288						
ACSO	**Alum Creek Sta**	**126.55**	**44**	P	**PKPdf**	12 53 54.0	-0.5
	baz=296						
S51A	**Beattyville**	**127.22**	**47**		**PKPdf**	12 53 54.8	-1.0
P52A	**Corning**	**127.40**	**44**	P	**PKPdf**	12 53 55.7	-0.4
	baz=297						
M53A	**WI Miller and**	**127.54**	**41**	P	**PKPdf**	12 53 55.6	-0.7
	baz=299						
TZTN	**Tazewell**	**127.69**	**48**	P	**PKPdf**	12 53 55.9	-0.8
	baz=294						
LONY	**Lake Ozonia**	**129.53**	**35**	P	**PKPdf**	12 53 59.7	-0.3
	baz=308						
BLA	**Blacksburg**	**129.69**	**46**	P	**PKPdf**	12 54 00.0	-0.6
	baz=297						
SSPA	**Standing Stone**	**129.76**	**41**	P	**PKPdf**	12 53 59.9	-0.7
	baz=302						
KMSC	**Kings Mountain**	**129.91**	**49**	P	**PKPdf**	12 54 00.6	-0.4
	baz=294						
BINY	**Binghamton**	**130.12**	**38**	P	**PKPdf**	12 54 00.6	-0.6
	baz=305						
LBNH	**Lisbon**	**131.25**	**34**	P	**PKPdf**	12 54 02.9	-0.3
	baz=310						
PKME	**Peaks-Kenny Pk**	**131.96**	**31**	P	**PKPdf**	12 54 04.8	+0.3
	baz=314						
CPUP	**Villa Florida**	**141.74**	**149**		**PKPdf**	12 54 23.2	0.0
CPUP	**Villa Florida**	**141.74**	**149**	PKIKP	**PKPdf**	12 54 23.2	0.0
CPUP	**Villa Florida**	**141.74**	**149**	PKP	**PKPdf**	12 54 24.0	+0.8
	comp=Z,1.6nm,0.6s,baz=354,slow=2.9,SNR=7.4						
TORD	**Toroidi Ar. Bea**	**141.75**	**283**	PKhKP	PKPpre	12 54 16.5	
	comp=Z,1.3nm,0.7s,baz=66,slow=4.2,SNR=6.5						
SDV	**Santo Domingo**	**146.14**	**84**		**PKPdf**	12 54 31.1	-0.4
ETMB	**Extrema**	**146.35**	**118**		**PKPdf**	12 54 31.1	-0.5
TRCB	**Terra Rica**	**147.00**	**152**		**PKPbc**	12 54 34.1	-0.4
AQDB	**Aquidauana**	**147.34**	**145**		**PKPbc**	12 54 34.9	-0.6
KIC	**Kosan Boka**	**148.38**	**272**	⇑ *i* PKP1	**PKPbc**	12 54 38.6	+0.1
	comp=Z,26nm,0.8s						
DBIC	**Dimbokro**	**148.51**	**272**	PKPbc	**PKPbc**	12 54 38.6	-0.2
	comp=Z,16nm,0.8s,baz=97,slow=3.0,SNR=17						
LIC	**Lamto**	**148.66**	**271**	⇑ *e* PKP1	**PKPbc**	12 54 39.3	+0.1
	comp=Z,68nm,0.8s						
TIC	**Toumodi**	**148.67**	**272**	⇑ *i* PKP1	**PKPbc**	12 54 39.2	0.0
	comp=Z,25nm,0.7s						
SAML	**Samuel**	**149.40**	**120**	PKPdf	**PKPdf**	12 54 35.2	-1.4
SAML	**Samuel**	**149.40**	**120**	PKIKP	**PKPdf**	12 54 35.2	-1.4

MEX ***26*** *12:37:37.6±0.5, 15°.02N×92°.53W, h105km±7km, MD3.9*
GCG ***26*** *12:37:38.1±0.3, 14°.66N×92°.76W, h60km±24km, MD3.6*

ISC 26 12:37:37.4±1.8,**14°.92N**±0°.09×**92°.68W**±0°.08,**h87**km±12km,
n12,σ0s**87**/21,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.40**	**92**	*e*P	**Pn**	**12 37 51.0**	**-0.1**
THIG				*e*S	**Sn**	**12 38 02.1**	**+0.7**
PATR	**El Naranjo**	**0.47**	**66**	*e*P	**Pn**	**12 37 51.5**	**-0.5**
PATR				*e*S	**Sn**	**12 38 02.1**	**-0.7**
PAVE	**Pavencul**	**0.56**	**61**	*e*P	**Pn**	**12 37 52.5**	**-0.2**
PAVE				*e*S	**Sn**	**12 38 04.1**	**+0.2**
CHUJ	**Union Juarez**	**0.58**	**73**	*e*P	**Pn**	**12 37 52.5**	**-0.4**
CHUJ				*e*S	**Sn**	**12 38 04.3**	**0.0**
PCIG		**0.93**	**326**	*e*P	**Pn**	**12 37 56.7**	**+0.6**
PCIG				*e*S	**Sn**	**12 38 11.6**	**+1.4**
RTAL	**Retalhuleu**	**1.03**	**112**	*e*S	**Sn**	**12 38 11.1**	**-1.2**
STG3	**Santiaguito 3,**	**1.10**	**101**	*e*P	**Pn**	**12 37 58.9**	**+0.6**
STG3				*e*S	**Sn**	**12 38 15.0**	**+1.1**
SULM	**Suchitepequez,**	**1.25**	**120**	*e*P	**Pn**	**12 37 59.0**	**-0.9**
CCIG	**Comitan**	**1.45**	**21**	*e*P	**Pn**	**12 38 03.4**	**+0.8**
CCIG				*e*S	**Sn**	**12 38 21.2**	**-0.3**
FUG	**Fuego 3**	**1.84**	**105**	*e*P	**Pn**	**12 38 08.5**	**+0.9**
TGIG		**1.89**	**347**	*e*P	**Pn**	**12 38 08.1**	**-0.1**
TGIG				*e*S	**Sn**	**12 38 29.7**	**-1.9**
CMIG	**Matias Romero**	**3.02**	**316**	*e*P	**Pn**	**12 38 23.4**	**+0.1**
CMIG				*e*S	**Sn**	**12 38 58.0**	**-0.5**

IDC ***26*** *12:46:40.0±1.3, 6°.48S×143°.20E, h0km, mb3.7/3, mbtmp3.9/6, ML3.8/2, Error ellipse: s-maj=40.3km s-min=29.2km az=85.0*

ISC 26 12:46:44.9±0.9,**6°.6S**±0°.1×**143°.3E**±0°.1,**h35**km,**n9**,
σ1s**91**/10,**mb3.8**/3,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.70**	**127**	P	**Pn**	**12 47 53.3**	**0.0**
PMG	**Port Moresby**	**4.70**	**127**	Pn	**Pn**	**12 47 53.1**	**-0.2**
	6.1nm,0.3s,baz=30,slow=5.4,SNR=11						
PMG				Sn	**Sn**	**12 48 44.9**	**-1.7**
	2.5nm,0.3s,baz=338,slow=19,SNR=2.5						
MTN	**Manton Dam**	**13.53**	**242**	P	**Pn**	**12 49 53.1**	**-1.4**
QIS	**Mount Isa**	**14.34**	**194**	P	**P**	**12 50 14.9**	**+2.8**
WRA	**Warramunga Arr**	**15.88**	**213**	Pn	**Pn**	**12 50 23.8**	**-2.1**
	0.3nm,0.3s,baz=31,slow=13,SNR=13						
	2.0nm,0.8s						
ASAR	**Alice Springs**	**19.24**	**207**	P	**P**	**12 51 08.1**	**+1.8**
	0.5nm,0.3s,baz=28,slow=13,SNR=37						
	9.7nm,0.7s						
MKAR	**Makanchi Array**	**75.68**	**322**	P	**P**	**12 58 25.4**	**-1.3**
	0.3nm,0.6s,baz=110,slow=6.4,SNR=4.3						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**85.13**	**325**	P	**P**	**12 59 16.8**	**-0.6**
	0.3nm,0.4s,baz=107,slow=5.0,SNR=2.5						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**87.48**	**24**	P	**P**	**12 59 30.4**	**+1.8**
	0.6nm,1.0s,baz=238,slow=5.0,SNR=3.4						
	0.6nm,1.0s						

IDC ***26*** *12:49:39.5±0.7, 6°.25S×143°.30E, h0km, mb4.2/14, mbtmp4.2/15, ML2.6/1, MS3.9/8, Error ellipse: s-maj=30.3km s-min=15.3km az=80.0*
NEIC ***26*** *12:49:42.0±2.9, 6°.36S±0°.07×143°.13E±0°.08, h10km±1km, mb4.9/36, Error ellipse: s-maj=12.9km s-min=12.3km az=257.0*
DJA ***26*** *12:49:43.3±0.2, 6°.5S±3°×144°.3E±°, h10km, M5.0/22, mB5.3/6, mb4.8/22, MLv5.2/5, Mw(mB)4.7/6*

ISC 26 12:49:45.6±0.4,**6°.45S**±0°.05×**143°.12E**±0°.05,**h35**km,**n124**,
σ1s**85**/119,**mb4.7**/36,**MS3.9**/6,**1D**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**2.22**	**302**	P	**Pn**	**12 50 20.7**	**+0.6**
MMPI	**Merauke**	**3.38**	**233**	P	**Pn**	**12 50 36.8**	**+0.9**
GENI	**Genyem**	**4.83**	**322**	P	**Pn**	**12 50 56.6**	**+0.7**
GENI	**Genyem**	**4.83**	**322**	P	**Pn**	**12 50 56.4**	**+0.5**
PMG	**Port Moresby**	**4.96**	**127**		**Pn**	**12 50 56.2**	**-1.5**
PMG	**Port Moresby**	**4.96**	**127**	P	**Pn**	**12 50 56.0**	**-1.7**
PMG	**Port Moresby**	**4.96**	**127**	Pn	**Pn**	**12 50 56.1**	**-1.7**
	15nm,0.3s,baz=267,slow=9.6,SNR=23						
PMG				Sn	**Sn**	**12 51 49.3**	**-4.6**
	27nm,0.3s,baz=348,slow=15,SNR=9.8						
	34nm,0.3s						
MANU	**Manus Island**	**6.09**	**44**		**Pn**	**12 51 11.8**	**-1.4**
SMPI	**Sarmi**	**6.24**	**315**	P	**Pn**	**12 51 16.0**	**+0.7**
	207nm,1.1s,3μm1.1nm						
COEN	**Coen**	**7.46**	**180**		**Pn**	**12 51 34.3**	**+2.2**
RABL	**Rabaul**	**9.28**	**76**	Pn	**Pn**	**12 51 59.3**	**+2.3**
FAKI	**Fak Fak**	**11.39**	**287**	Pn	**Pn**	**12 52 24.7**	**-1.2**
FAKI	**Fak Fak**	**11.39**	**287**	P	**Pn**	**12 52 25.4**	**-0.6**
FAKI	**Fak Fak**	**11.39**	**287**	P	**Pn**	**12 52 26.5**	**+0.5**
	68nm,0.9s						
SAUI	**Saumlaki**	**11.83**	**262**	Pn	**Pn**	**12 52 32.2**	**+0.3**
SAUI	**Saumlaki**	**11.83**	**262**	P	**Pn**	**12 52 32.4**	**+0.4**
	497nm,0.9s,9μm						
KDU	**Kakadu**	**12.19**	**239**	P	**Pn**	**12 52 36.8**	**-0.1**
BNDI	**Bandanaira**	**13.30**	**278**	P	**Pn**	**12 52 52.8**	**+0.8**
	351nm,1.2s						
MTN	**Manton Dam**	**

comp=Z,35nm,1.1s
OOD Oodnadatta 22.37 198 P **P** 12 54 42.6 +1.7
KAPI Kappang 23.30 272 P **P** 12 54 50.9 +0.3
KAPI IAmb IAmb 12 54 53.2
comp=Z,61nm,0.9s
WRKA Warakurna 23.31 216 P **P** 12 54 51.6 +0.9
TTSI Tana Toraja 23.46 277 P **P** 12 54 54.0 +1.7
comp=Z,26nm,1.7s,comp=Z,948nm
TOLI2 Tolitoli 23.53 288 P **P** 12 54 51.9 -1.0
TOLI2 IAmb IAmb 12 55 04.5
comp=Z,24nm,0.8s
TOLI2 Tolitoli 23.53 288 P **P** 12 54 54.5 +1.6
LCRK Leigh Creek 24.31 190 P **P** 12 55 00.2 +0.2
CMSA Cobar Meteorol 25.08 175 P **P** 12 55 09.1 +2.2
ARMA Armidale 25.15 163 P **P** 12 55 08.6 +0.9
ARMA IAmb IAmb 12 55 11.8
comp=Z,66nm,1.6s
MULG Mulgathing 25.19 199 P **P** 12 55 08.8 +0.8
STKA Stephens Creek 25.34 183 P **P** 12 55 09.0 -0.3
STKA Stephens Creek 25.34 183 P **P** 12 55 09.2 -0.2
comp=Z,9.1nm,0.8s,baz=342,slow=8.4,SNR=12
STKA LR LR 13 05 05.7
comp=Z,130nm,19.9s,baz=3.2,slow=36
comp=Z,9.1nm,0.8s
MBWA Marble Bar 26.95 235 P **P** 12 55 24.5 +0.4
MBWA IAmb IAmb 12 55 53.5
comp=Z,21nm,1.0s
BBOO Buckleboo 27.04 193 P **P** 12 55 24.5 -0.3
BBOO IAmb IAmb 12 55 55.4
comp=Z,21nm,0.9s
BBOO Buckleboo 27.04 193 P **P** 12 55 26.1 +1.4
PSA00 Pilbara Seismi 27.07 234 P **P** 12 55 28.4 +3.3
PSA00 IAmb IAmb 12 55 43.0
comp=Z,16nm,0.7s
PSA00 Pilbara Seismi 27.07 234 P **P** 12 55 24.9 -0.2
PSA00 IAmb IAmb 12 55 29.7
comp=Z,5.6nm,0.8s
PSA00 Pilbara Seismi 27.07 234 P **P** 12 55 27.2 +2.1
DZM Mont Dzumac 27.36 127 LR LR 13 06 02.4
comp=Z,702nm,18.4s,baz=290,slow=36
FORT Forrest 28.03 208 P **P** 12 55 33.8 +0.2
FORT Forrest 28.03 208 P **P** 12 55 34.9 +1.3
LHI Lord Howe Isla 29.06 151 P **P** 12 55 44.6 +1.8
CAN Canberra 29.24 170 P **P** 12 55 44.8 +0.4
MEEK Meekatharra 30.79 227 P **P** 12 55 59.6 +1.4
JOW Kunigami 36.08 337 LR LR 13 09 28.1
comp=Z,118nm,19.0s,baz=196,slow=33
XMIS Christmas Isla 37.26 261 P **P** 12 56 54.1 -0.3
JHJ Hachijo jima 2 39.48 356 LR LR 13 12 55.4
comp=Z,186nm,18.1s,baz=202,slow=36
JNU Nakatsue 41.04 344 LR LR 13 12 57.9
comp=Z,149nm,18.2s,baz=256,slow=34
MJAR Matsushiro Arr 43.01 354 P **P** 12 57 38.6 -3.2
comp=Z,0.9nm,0.5s,baz=186,slow=8.6,SNR=2.0
MJAR LR LR 13 15 01.6
comp=Z,166nm,18.1s,baz=116,slow=36
comp=Z,0.9nm,0.5s
RTZ Ruatahuna 44.29 141 P **P** 12 57 53.1 +0.9
TUWZ Tuamarina 44.33 147 P **P** 12 57 52.5 +0.1
KSAR Wonju Array Be 45.92 343 P **P** 12 58 03.0 -2.0
KSRS Korea Array 45.92 343 P **P** 12 58 03.2 -1.8
comp=Z,4.0nm,0.9s,baz=162,slow=9.7,SNR=11
comp=Z,4.0nm,0.9s
PHRA Phrae 49.03 301 P **P** 12 58 29.1 -0.4
CMAR Chiang Mai Arr 50.11 300 P **P** 12 58 37.5 -0.2
comp=Z,0.9nm,0.4s,baz=114,slow=6.4,SNR=6.0
comp=Z,0.9nm,0.4s
USRK Ussuriysk Ar. 51.41 350 P **P** 12 58 43.8 -3.3
comp=Z,3.1nm,0.8s,baz=152,slow=8.6,SNR=6.1
comp=Z,3.1nm,0.8s
XAN Xi'an 51.66 323 P **P** 12 58 51.0 +1.8
XAN pmax pmax
comp=Z,10.0nm,1.0s
PZH PanZhiHua 51.78 311 P **P** 12 58 51.5 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.7s
MDJ Mudanjiang 52.27 348 P **P** 12 58 55.5 +2.0
MDJ pmax pmax
comp=Z,10.0nm,1.8s
MDJ pmax pmax
comp=Z,280nm,11.7s
BNX BinXian 53.82 346 P **P** 12 59 03.5 -1.4
BNX pmax pmax
comp=Z,10.0nm,0.8s
BNX pmax pmax
comp=Z,400nm,11.6s
HHC Hu-ho-hao-te 55.27 331 *eP* **P** 12 59 18.5 +2.8
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,180nm,6.0s
LZH Lanzhou 56.11 322 *eP* **P** 12 59 24.0 +2.1
LZH pP sP 12 59 35.0 -1.8
LZH pmax pmax
comp=Z,12nm,1.1s
PETK Petropavlovsk- 60.61 10 P **P** 12 59 51.0 -1.7
PETK Petropavlovsk- 60.61 10 P **P** 12 59 50.5 -2.2
comp=Z,3.6nm,0.8s,baz=172,slow=5.8,SNR=7.0
comp=Z,3.6nm,0.8s
GTA Gaotai 60.68 322 *eP* **P** 12 59 56.8 +3.1
GTA pP sP 13 00 07.8 -0.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 62.99 333 P **P** 13 00 08.2 -0.8
comp=Z,0.8nm,1.0s,baz=164,slow=5.7,SNR=2.3
comp=Z,0.8nm,1.0s
MA2 Magadan 66.09 4 P **P** 13 00 27.0 -1.9
MA2 IAmb IAmb 13 00 37.0
comp=Z,13nm,0.9s
WMQ Urumqi 70.66 321 *eP* P 13 01 02.5 +4.6
WMQ pmax pmax
comp=Z,15nm,0.9s
VNDA Vanda 71.72 176 P **P** 13 01 04.2 +0.6
VNDA IAmb IAmb 13 02 16.6
comp=Z,18nm,1.5s
VNDA Vanda 71.72 176 P **P** 13 01 04.0 +0.4
comp=Z,2.6nm,0.7s,baz=346,slow=6.0,SNR=7.3
comp=Z,2.6nm,0.7s
MK31 Makanchi Array 75.42 322 P **P** 13 01 24.9 -1.1
MKAR Makanchi Array 75.42 322 P **P** 13 01 25.1 -0.9
MKAR Makanchi Array 75.42 322 P **P** 13 01 25.3 -0.7
comp=Z,1.0nm,0.5s,baz=104,slow=6.9,SNR=17
comp=Z,1.0nm,0.5s
MAKZ Makanchi 75.62 322 P **P** 13 01 26.4 -0.7
MAKZ IAmb IAmb 13 01 44.2
comp=Z,14nm,1.4s
KSH Kashi 76.83 313 P **P** 13 01 36.3 +2.0
KSH pP sP 13 01 47.5 -2.1
KSH pmax pmax
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 77.37 329 P **P** 13 01 35.2 -1.6
ZALV Zalesovo Beam 77.37 329 P **P** 13 01 35.1 -1.7
comp=Z,0.9nm,0.7s,baz=116,slow=6.6,SNR=4.6
comp=Z,0.9nm,0.7s
BOOM Boomskoye usch 77.88 316 P **P** 13 01 39.4 -0.8
TIXI Tiksi 78.51 355 P **P** 13 01 41.9 -0.8
KURBB Kurchatov Arra 79.31 324 P **P** 13 01 47.0 -0.5
comp=Z,0.6nm,0.4s,baz=132,slow=3.9,SNR=1.2
comp=Z,0.6nm,0.4s
KK31 Karatay Array 81.86 315 P **P** 13 02 00.3 -1.2
KKAR Karatay Array 81.86 315 P **P** 13 01 59.7 -1.8
NRIK Noril'sk 84.54 343 P **P** 13 02 16.1 +1.4
NRIK IAmb IAmb 13 02 23.2
comp=Z,12nm,1.1s
NRIK Noril'sk 84.54 343 P **P** 13 02 13.2 -1.6
comp=Z,3.6nm,0.8s,baz=118,slow=4.3,SNR=7.1
comp=Z,3.6nm,0.8s
BVAR Borovoye Array 84.88 325 P **P** 13 02 16.1 -0.8
comp=Z,2.2nm,0.5s,baz=105,slow=6.1,SNR=7.4
comp=Z,2.2nm,0.5s
RND Reindeer 86.12 25 P **P** 13 02 20.4 -2.5
DHY Denali Highway 86.61 25 P **P** 13 02 24.7 -0.7
CCB Clear Creek Bu 87.01 24 P **P** 13 02 26.4 -0.7
CCB IAmb IAmb 13 02 44.7
comp=Z,8.0nm,1.0s
IL31 87.42 24 P **P** 13 02 26.4 -2.7
IL31 IAmb IAmb 13 02 32.4
comp=Z,5.4nm,1.0s
ILAR Eielson Array 87.42 24 P **P** 13 02 27.2 -1.9
ILAR Eielson Array 87.42 24 P **P** 13 02 27.0 -2.1
comp=Z,3.9nm,1.1s,baz=253,slow=5.4,SNR=12
comp=Z,3.9nm,1.1s
BCAR Beaver Creek A 89.02 26 P **P** 13 02 34.5 -2.3
BMAR Burnt Mountain 89.21 22 P **P** 13 02 35.5 -2.0
ELIB Princess Elisa 92.74 196 *dP* **P** 13 02 54.3 +0.2
TORD Torodi Ar. Bea 141.45 283 PKhKP PKPpre 13 09 07.4
comp=Z,0.8nm,0.8s,baz=82,slow=2.7,SNR=3.9
SDV Santo Domingo 146.47 84 PKPbc **PKPdf** 13 09 23.5 +0.4
comp=Z,5.2nm,0.7s,baz=163,slow=0.8,SNR=5.7
DBIC Dimbokro 148.19 272 PKPbc **PKPbc** 13 09 28.9 -0.2
comp=Z,14nm,0.8s,baz=86,slow=2.4,SNR=15

IDC 26 12:55:39.2±5.0, 6.79S×144.49E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=139.5km s-min=88.2km az=5.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**46.65**	**342**	P	P	13 04 09.5	0.0
	1.3nm,0.9s,baz=149,slow=8.4,SNR=3.4						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**76.53**	**321**	P	P	13 07 30.8	-0.6
	0.6nm,0.8s,baz=117,slow=6.8,SNR=3.9						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**85.94**	**324**	P	P	13 08 21.9	+0.6
	1.1nm,0.8s,baz=120,slow=7.2,SNR=5.1						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**87.19**	**24**	P	P	13 08 26.9	-0.1
	0.5nm,0.9s,baz=232,slow=4.4,SNR=2.8						
	0.5nm,0.9s						

IDC 26 13:07:12.9±8.2, 16.43S×172.09W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=420.8km s-min=123.7km az=150.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**50.84**	**257**	P	P	13 16 15.4	-0.3
	0.4nm,0.9s,baz=95,slow=6.8,SNR=4.6						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**51.00**	**253**	P	P	13 16 17.0	+0.1
	0.4nm,0.3s,baz=89,slow=7.5,SNR=16						
	0.4nm,0.3s						
AKASG	**Malin Array Be**	**141.76**	**338**	PKP	PKPdf	13 26 45.7	-0.7
	0.5nm,0.5s,baz=50,slow=1.0,SNR=1.9						

*UCR **26** 13:14:59.8±0.6, 8.52N×83.33W, h12km±1km, MW5.3, MB4.9(NEIC), Fault plane solution: NP1:ϕs317.60000°, δ48.44000°, λ,48.07000°.*
*CATAC **26** 13:14:59.7±0.3, 8.53N×83.30W, h6km±2km, ML4.9*
*NEIC **26** 13:15:01.1±1.5, 8.6N±0.1×83.18W±0.04, h15km±4km, mb4.9/99, Error ellipse: s-maj=16.2km s-min=5.2km az=178.0*
*UPA **26** 13:15:01.1±2.2, 8.62N×83.21W, h0km±6km, MW4.8, Fault plane solution: NP1:ϕs120.00000°, δ18.00000°, λ-22.00000°.*
*IDC **26** 13:15:05.6±1.2, 8.77N×83.20W, h47km±11km, mb4.2/19, mbtmp4.5/25, ML3.2/4, Error ellipse: s-maj=20.0km s-min=8.5km az=40.0*

ISC 26 13:15:00.7±0.6, 8.58N±0.02×83.27W±0.02, h12km±3km, n520, σ1$26/531, mb4.9/72, 15C-56D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTJ1	**Puerto Jimnez**	**0.05**	**216**	*eP*	**Pg**	**13 15 02.0**	**-1.0**
JIME	**Puerto Jimenez**	**0.06**	**234**	*eP*	**Pg**	**13 15 02.0**	**-1.1**
JIME				*eS*	**Sg**	**13 15 04.4**	**-0.5**
FITO	**Golfito**	**0.13**	**67**	*eP*	**Pg**	**13 15 03.8**	**-0.1**
FITO				*eS*	**Sg**	**13 15 07.3**	**+1.1**
EDAD	**Golfito**	**0.13**	**54**	*eP*	**Pg**	**13 15 04.0**	**0.0**
EDAD				*eS*	**Sg**	**13 15 07.5**	**+1.1**
PIRO	**Carate, Puerto**	**0.18**	**200**	*eP*	**Pg**	**13 15 03.0**	**-1.7**
PIRO				*eS*	**Sg**	**13 15 05.6**	**-1.9**
CCOL	**Caracol de Cor**	**0.34**	**119**	*eP*	**Pg**	**13 15 07.6**	**0.0**
CCOL				*eS*	**Sb**	**13 15 14.5**	**+0.4**
CCOL	**Caracol de Cor**	**0.34**	**119**	*iP*	**Pg**	**13 15 07.5**	**0.0**
CCOL				IAML		13 15 18.1	
	comp=Z,240μm,1.0s						
VITO	**San Vito**	**0.39**	**51**	*eP*	**Pb**	**13 15 09.2**	**-0.4**
CDITO	**Canoas**	**0.40**	**90**	Pg	**Pb**	**13 15 08.4**	**-1.3**
CDITO	**Canoas**	**0.40**	**90**	*eP*	**Pb**	**13 15 08.5**	**-1.2**
CDITO	**Canoas**	**0.40**	**90**	*iP*	**Pb**	**13 15 08.5**	**-1.3**
CDITO	**Canoas**	**0.40**	**90**	*iP*	**Pb**	**13 15 08.3**	**-1.3**
CDITO				*iS*	**Sb**	**13 15 15.5**	**-0.2**
CDITO				IAML		13 15 22.4	
	comp=Z,76μm,1.0s						
PLAN	**Los Planes de**	**0.41**	**283**	*iP*	**Pg**	**13 15 08.1**	**-0.8**
PLAN				*iS*	**Sg**	**13 15 15.3**	**+0.8**
PLAN				IAML		13 15 15.9	
	comp=Z,100μm,1.0s						
EDPN	**Palmar Norte**	**0.42**	**335**	*eP*	**Pg**	**13 15 08.6**	**-0.6**
MLIR3	**Monte Lirio, C**	**0.49**	**64**	*eP*	**Pb**	**13 15 11.2**	**-0.2**
MLIR3				*iP*	**Pb**	**13 15 11.2**	**-0.2**
POTG	**Potrero Grande**	**0.50**	**18**	*iP*	**Pb**	**13 15 10.8**	**-0.7**
POTG	**Potrero Grande**	**0.50**	**18**	*iP*	**Pb**	**13 15 10.8**	**-0.7**
POTG				*iS*	**Sb**	**13 15 19.8**	**+1.0**
POTG				IAML		13 15 23.5	
	comp=Z,130μm,1.0s						
PTPM	**Petroterminale**	**0.54**	**133**	*eP*	**Pg**	**13 15 11.2**	**0.0**
PTPM				*eS*	**Sn**	**13 15 21.1**	**-2.0**
BURE	**Buenos Aires**	**0.60**	**354**	*eP*	**Pb**	**13 15 12.4**	**-0.8**
BRU2	**Volcan**	**0.61**	**69**	Pg	**Pb**	**13 15 12.8**	**-0.8**
BRU2				Sg	**Sb**	**13 15 21.5**	**-0.7**
BRU2	**Volcan**	**0.61**	**69**	*iP*	**Pb**	**13 15 12.8**	**-0.8**
BRU2				*eS*	**Sn**	**13 15 23.1**	**-2.3**
BRU2	**Volcan**	**0.61**	**69**	*iP*	**Pb**	**13 15 12.7**	**-0.8**
BRU2	**Volcan**	**0.61**	**69**	*iP*	**Pb**	**13 15 12.7**	**-0.8**
BRU2				*iS*	**Sn**	**13 15 22.8**	**-2.6**
BRU2				IAML		13 15 28.8	
	comp=Z,51μm,1.0s						
OCHAL	**Ojochal**	**0.64**	**325**	*iP*	**Pg**	**13 15 11.7**	**-1.4**
OCHAL				*iS*	**Sg**	**13 15 21.7**	**+0.2**
OCHAL				IAML		13 15 24.8	
	comp=Z,250nm,1.0s						
SRBA	**San Rafael, Bu**	**0.66**	**352**	*eP*	**Pg**	**13 15 12.8**	**-0.8**
SRBA	**San Rafael, Bu**	**0.66**	**352**	*iP*	**Pg**	**13 15 12.8**	**-0.8**
SRBA				*iS*	**Sb**	**13 15 23.2**	**-0.2**
SRBA				IAML		13 15 24.6	
	comp=Z,24μm,1.0s						
DRK0	**Durika**	**0.68**	**2**	*eP*	**Pb**	**13 15 13.4**	**-1.3**
BCO2	**Palmira**	**0.75**	**79**	*iP*	**Pb**	**13 15 15.0**	**-0.8**
BCO2				*eS*	**Sn**	**13 15 26.7**	**-2.0**
PTAR3	**Potrerillos Ar**	**0.78**	**81**	*iP*	**Pb**	**13 15 15.4**	**-0.9**
LNBQ3	**Los Naranjos,**	**0.85**	**75**	*iP*	**Pb**	**13 15 16.1**	**-1.4**
LNBQ3				*eS*	**Sn**	**13 15 29.7**	**-1.5**
LOCO3	**Loma Colorada,**	**0.86**	**101**	*iP*	**Pg**	**13 15 16.4**	**-1.0**
PEDE3	**Pedregal, Chir**	**0.86**	**103**	*iP*	**Pg**	**13 15 16.2**	**-1.2**
PEDE3				*eS*	**Sn**	**13 15 29.5**	**-1.8**
PEZE	**Perez Zeledon,**	**0.90**	**334**	*eP*	**Pg**	**13 15 16.4**	**-1.6**
PEZE	**Perez Zeledon,**	**0.90**	**334**	*iP*	**Pg**	**13 15 16.8**	**-1.3**
PEZE				*iS*	**Sb**	**13 15 30.0**	**-0.3**
PEZE				IAML		13 15 33.0	
	comp=Z,23μm,1.0s						
ZELE	**Perez Zeledon**	**0.90**	**332**	*eP*	**Pg**	**13 15 17.2**	**-1.0**
CDM	**Cerro de Muert**	**1.09**	**334**	*iP*	**Pg**	**13 15 19.7**	**-2.0**
CDM	**Cerro de Muert**	**1.09**	**334**	*iP*	**Pg**	**13 15 19.7**	**-2.0**
CDM				*iS*	**Sb**	**13 15 35.8**	**-0.3**
CDM				IAML		13 15 39.6	
	comp=Z,19μm,1.0s						
CNI2	**El Empalme, Bo**	**1.16**	**43**	*eP*	**Pn**	**13 15 21.5**	**-1.2**
CNI2				*eS*	**Sn**	**13 15 36.9**	**-1.6**
LLNJ	**Naranjito**	**1.21**	**318**	*eP*	**Pn**	**13 15 21.3**	**-2.2**
RIMA	**Rio Macho**	**1.32**	**334**	*eP*	**Pn**	**13 15 23.4**	**-1.8**
RIMA	**Rio Macho**	**1.32**	**334**	*iP*	**Pn**	**13 15 23.4**	**-1.8**
RIMA				*iS*	**Sn**	**13 15 42.5**	**-0.4**
RIMA				IAML		13 15 47.2	
	comp=Z,14μm,1.0s						
ABE2	**San Pablo**	**1.36**	**326**	*eP*	**Pn**	**13 15 24.7**	**-1.1**
LCR2	**La Lucha 2**	**1.37**	**328**	*eP*	**Pn**	**13 15 24.0**	**-1.8**
LCR2	**La Lucha 2**	**1.37**	**328**	*iP*	**Pn**	**13 15 24.3**	**-1.5**
LCR2				*iS*	**Sg**	**13 15 45.2**	**+0.4**
LCR2				IAML		13 15 48.9	
	comp=Z,12μm,1.0s						
REPA	**Paraso**	**1.38**	**335**	*eP*	**Pn**	**13 15 25.5**	**-0.4**
PCAYA	**Pacayas**	**1.44**	**338**	*eP*	**Pn**	**13 15 26.1**	**-0.7**
RVSTA	**Santa Teresita**	**1.44**	**345**	*eP*	**Pn**	**13 15 26.2**	**-0.5**
VTCV	**VTCV, Calle Va**	**1.47**	**342**	*iP*	**Pn**	**13 15 26.4**	**-0.8**
VTCV	**VTCV, Calle Va**	**1.47**	**342**	*iP*	**Pn**	**13 15 26.2**	**-1.1**
VTCV				IAML		13 15 53.0	
	comp=Z,16μm,1.0s						
OCM	**Ochomogo**	**1.48**	**333**	*eP*	**Pn**	**13 15 25.9**	**-1.4**
OCM	**Ochomogo**	**1.48**	**333**	*iP*	**Pn**	**13 15 26.0**	**-1.4**
OCM				IAML		13 15 52.0	
	comp=Z,13μm,1.0s						
CVTV	**Tajo**	**1.50**	**342**	*eP*	**Pn**	**13 15 26.9**	**-0.8**
ICR3	**Volcano Irazu**	**1.50**	**338**	*eP*	**Pn**	**13 15 26.9**	**-1.0**
CVTQ	**Turrialba Volc**	**1.50**	**341**	*eP*	**Pn**	**13 15 26.9**	**-0.9**
TRIO	**Tres Rios**	**1.50**	**332**	*eP*	**Pn**	**13 15 26.9**	**-0.8**
VTLA	**Turrialba Volc**	**1.50**	**341**	*eP*	**Pn**	**13 15 27.0**	**-0.9**
HAYA	**Volcan Irazu**	**1.50**	**338**	*iP*	**Pn**	**13 15 26.6**	**-1.3**
HAYA				IAML		13 15 55.7	
	comp=Z,22μm,1.0s						
VTRT	**Volcan Turrial**	**1.51**	**340**	*eP*	**Pn**	**13 15 27.0**	**-0.9**
VTRT	**Volcan Turrial**	**1.51**	**340**	*iP*	**Pn**	**13 15 26.8**	**-1.1**
VTRT				IAML		13 15 53.4	
	comp=Z,16μm,1.0s						
VICA	**Volcano Irazu**	**1.51**	**338**	*eP*	**Pn**	**13 15 27.0**	**-1.0**
VTR0	**Volcan Turrial**	**1.51**	**341**	*eP*	**Pn**	**13 15 27.2**	**-0.9**
CVTR	**Volcan Turrial**	**1.51**	**342**	*eP*	**Pn**	**13 15 27.0**	**-1.0**
VIRE	**VIRE**	**1.51**	**336**	*iP*	**Pn**	**13 15 27.1**	**-0.9**
VIRE				IAML		13 15 55.7	
	comp=Z,36μm,1.0s						
VTUN	**Crater Central**	**1.52**	**341**	*iP*	**Pn**	**13 15 27.3**	**-0.8**
VTUN				IAML		13 15 53.2	
	comp=Z,10μm,1.0s						
VTUC	**Crater, Volcan**	**1.52**	**342**	*iP*	**Pn**	**13 15 27.1**	**-1.0**
VTUC				IAML		13 15 53.2	
	comp=Z,7μm,1.0s						
VTLO	**VTLO**	**1.53**	**343**	*eP*	**Pn**	**13 15 27.4**	**-0.8**
IRES	**Siquirres**	**1.53**	**351**	*eP*	**Pb**	**13 15 27.9**	**-1.1**
RVLA	**Villa Bonita**	**1.56**	**348**	*eP*	**Pb**	**13 15 28.2**	**-1.3**
SJS3	**Mercedes San J**	**1.56**	**330**	*eP*	**Pn**	**13 15 27.8**	**-0.6**
SJS	**Escuela Geolog**	**1.56**	**330**	*eP*	**Pn**	**13 15 27.7**	**-0.7**
MEXI	**Barrio Mexico**	**1.58**	**329**	*eP*	**Pn**	**13 15 28.2**	**-0.5**
CVIMO	**Finca Echandi**	**1.58**	**335**	*eP*	**Pn**	**13 15 28.1**	**-0.8**
HDC	**Heredia**	**1.64**	**330**	*iP*	**Pn**	**13 15 29.3**	**-0.3**
HDC				*eS*	**Sg**	**13 15 52.9**	**-0.7**
HDC	**Heredia**	**1.64**	**330**	*eP*	**Pn**	**13 15 29.1**	**-0.4**
HDC	**Heredia**	**1.64**	**330**	*eP*	**Pn**	**13 15 28.9**	**-0.6**
HDC	**Heredia**	**1.64**	**330**	*iP*	**Pn**	**13 15 28.7**	**-0.9**
HDC				IAML		13 16 01.4	
	comp=Z,25μm,1.0s						
HDC3	**Heredia 3**	**1.64**	**330**	*eP*	**Pn**	**13 15 29.0**	**-0.6**
HDC3	**Heredia 3**	**1.64**	**330**	*iP*	**Pn**	**13 15 28.8**	**-0.8**
HDC3				IAML		13 16 01.4	
	comp=Z,25μm,1.0s						
JACO	**JACO, Garabito**	**1.74**	**308**	*eP*	**Pn**	**13 15 29.3**	**-1.5**
JACO	**JACO, Garabito**	**1.74**	**308**	*iP*	**Pn**	**13 15 29.2**	**-1.6**
JACO				IAML		13 16 07.1	
	comp=Z,7μm,1.0s						
RIFO	**Rio Frio, Sara**	**1.85**	**340**	*iP*	**Pn**	**13 15 32.3**	**0.0**
RIFO				IAML		13 16 17.5	
	comp=Z,11μm,1.0s						
CPMI	**Catarata Coope**	**2.02**	**327**	*eP*	**Pn**	**13 15 34.2**	**-0.6**
CPMI	**Catarata Coope**	**2.02**	**327**	*iP*	**Pn**	**13 15 34.3**	**-0.6**
CPMI				IAML		13 16 18.6	
	comp=Z,8μm,1.0s						
LAFE	**Finca La Fe, P**	**2.03**	**307**	*iP*	**Pn**	**13 15 35.8**	**+1.1**
LAFE				IAML		13 16 11.3	
	comp=Z,43nm,1.0s						
MESA3	**La Mesa, Verag**	**2.11**	**101**	*iP*	**Pn**	**13 15 36.4**	**+0.5**
SAFE3	**Santa Fe, Vera**	**2.17**	**91**	*eP*	**Pb**	**13 15 38.3**	**-1.7**
SAFE3				*eS*	**Sb**	**13 16 06.3**	**-0.6**
GMAL	**Guarumal, Vera**	**2.17**	**112**	*eP*	**Pn**	**13 15 35.8**	**-1.0**
GMAL				*eS*	**Sb**	**13 16 06.0**	**-1.0**
GMAL	**Guarumal, Vera**	**2.17**	**112**	*eP*	**Pn**	**13 15 35.6**	**-1.2**
SOCE	**Pocosol**	**2.23**	**324**		**Pn**	**13 15 38.1**	**+0.6**
SOCE	**Pocosol**	**2.23**	**324**	*iP*	**Pn**	**13 15 38.2**	**+0.6**
SOCE				IAML		13 16 14.1	
	comp=Z,10μm,1.0s						
STIA3	**Santiago, Vera**	**2.33**	**102**	*iP*	**Pn**	**13 15 39.2**	**+0.4**
STIA3				*eP*	**Pn**	**13 15 39.3**	**+0.4**
ARE1	**Arenal 1**	**2.35**	**323**	Pn	**Pn**	**13 15 40.5**	**+1.2**
JTS	**Las Juntas de**	**2.38**	**316**	Pn	**Pn**	**13 15 40.3**	**+0.7**
JTS	**Las Juntas de**	**2.38**	**316**	*iP*	**Pn**	**13 15 41.1**	**+1.5**
JTS				*eS*	**Sb**	**13 16 14.1**	**+1.2**
JTS	**Las Juntas de**	**2.38**	**316**	P	**Pn**	**13 15 40.6**	**+1.0**
	comp=Z,688nm,0.4s,baz=224,slow=2.8,SNR=241						
JTS				S	**Sn**	**13 16 08.7**	**0.0**
	comp=Z,510nm,0.4s,baz=331,slow=22,SNR=8.0						
JTS	**Las Juntas de**	**2.38**	**316**	*eP*	**Pn**	**13 15 41.3**	**+1.7**
JTS	**Las Juntas de**	**2.38**	**316**	*eP*	**Pn**	**13 15 39.1**	**-0.5**
COVE	**Coope Vega, Sa**	**2.40**	**333**		**Pn**	**13 15 40.7**	**+0.8**
COVE	**Coope Vega, Sa**	**2.40**	**333**	*iP*	**Pn**	**13 15 41.4**	**+1.5**
COVE				IAML		13 16 32.4	
	comp=Z,9μm,1.0s						
CALO3	**Calobre, Verag**	**2.42**	**96**	*eP*	**Pb**	**13 15 41.6**	**-2.7**
CALO3				*eS*	**Sb**	**13 16 13.6**	**-0.5**
MARI3	**Mariato, Verag**	**2.44**	**112**	*iP*	**Pn**	**13 15 41.5**	**+1.1**
INDI	**Punta indio, G**	**2.55**	**300**	*iP*	**Pn**	**13 15 40.7**	**-1.2**
INDI				IAML		13 16 34.8	
	comp=Z,3μm,1.0s						
DUNO	**Dulce Nombre,**	**2.65**	**304**		**Pn**	**13 15 43.9**	**+0.5**
CACAO	**El Cacao, Vera**	**2.68**	**117**	*iP*	**Pb**	**13 15 45.7**	**-3.0**
CACAO				*eS*	**Sb**	**13 16 18.7**	**-2.9**
CACAO	**El Cacao, Vera**	**2.68**	**117**	*eP*	**Pn**	**13 15 44.0**	**+0.3**
PESE3	**Pese, Herrera**	**2.71**	**104**	*eP*	**Pn**	**13 15 45.3**	**+1.1**
ORTG	**Ortega, Santa**	**2.79**	**310**		**Pn**	**13 15 45.8**	**+0.4**
SAJU	**San Juanillo,**	**2.83**	**302**	*iP*	**Pn**	**13 15 44.4**	**-1.3**
SAJU				IAML		13 16 40.5	
	comp=Z,4μm,1.0s						
VMAR	**Armenia, Volca**	**2.87**	**321**	*iP*	**Pn**	**13 15 48.6**	**+2.2**
VMAR				IAML		13 16 42.3	
	comp=Z,9μm,1.0s						
TOSI3	**Tonosi**	**3.04**	**112**	*iP*	**Pb**	**13 15 52.6**	**-2.1**
AZU	**Azuero**	**3.07**	**104**	*iP*	**Pn**	**13 15 51.1**	**+2.0**
AZU				*eS*	**Sb**	**13 16 29.6**	**-3.2**
AZU	**Azuero**	**3.07**	**104**	*eP*	**Pn**	**13 15 50.8**	**+1.7**
HZTE	**Horizontes, Gu**	**3.12**	**313**	Pn	**Pn**	**13 15 51.1**	**+1.2**
HZTE	**Horizontes, Gu**	**3.12**	**313**	*iP*	**Pn**	**13 15 51.7**	**+1.8**
HZTE				IAML		13 17 28.0	
	comp=Z,3μm,1.0s						
ZANG	**Zanguenga, Cho**	**3.39**	**83**	*eP*	**Pn**	**13 15 55.4**	**+1.9**
BLUN	**Bluefields**	**3.44**	**352**	*iP*	**Pn**	**13 15 53.5**	**-0.7**
BLUN				IAML		13 15 58.5	
	comp=Z,1μm,1.0s						
BCIP	**Isla Barro Col**	**3.44**	**80**	Pn	**Pn**	**13 15 53.2**	**-1.0**
BCIP	**Isla Barro Col**	**3.44**	**80**	*iP*	**Pn**	**13 15 55.9**	**+1.6**
BCIP				*eS*	**Sg**	**13 16 47.1**

CMIG S **Sn** 13 20 58.0 +0.3
comp=Z,1.4nm,0.8s,baz=53,slow=20,SNR=1.1
comp=Z,11nm,0.8s
ATAH Atahualpa 16.35 163 P **P** 13 18 55.8 +2.2
comp=Z,0.3nm,0.3s,baz=313,slow=7.1,SNR=6.4
comp=Z,9.0nm,0.9s
TBTG Tabatinga, AM 18.39 133 eP **P** 13 19 19.2 +3.4
PCRV Puerto La Cruz 18.46 84 P **Pn** 13 19 17.5 +0.9
comp=Z,25nm,1.0s,baz=230,slow=7.1,SNR=6.8
CZSB Cruzeiro do Su 19.32 147 eP **Pn** 13 19 28.4 +1.3
NNA Nana 21.41 163 P **P** 13 19 52.3 +3.6
comp=Z,7.1nm,0.6s,baz=342,slow=4.6,SNR=4.1
comp=Z,7.1nm,0.6s
TEFE Tefe 22.13 122 eP **P** 13 19 59.3 +2.8
BRAL Brewton 22.75 352 P **P** 13 20 03.7 +0.7
baz=170
BOAV Boa Vista 23.45 104 eP **P** 13 20 11.4 +1.1
152A Waverly Hall 24.01 357 P **P** 13 20 15.8 +0.2
VBMS Vicksburg 24.47 345 P **P** 13 20 20.4 +0.7
baz=162
146A Union 24.54 348 P **P** 13 20 20.2 -0.1
NHSC New Hope 24.58 6 P **P** 13 20 21.1 +0.4
baz=187
LRAL Lakeview Retre 24.58 352 P **P** 13 20 20.6 -0.2
LRAL IAmb IAmb 13 20 24.4
comp=Z,30nm,1.1s
LRAL Lakeview Retre 24.58 352 P **P** 13 20 21.2 +0.5
baz=171,SNR=11
GOGA Godfrey 24.72 360 P **P** 13 20 21.9 0.0
GOGA IAmb IAmb 13 20 25.6
comp=Z,42nm,1.1s
GOGA Godfrey 24.72 360 P **P** 13 20 22.5 +0.6
baz=179,SNR=11
833A Chaparral WMA, 24.84 324 P **P** 13 20 23.8 +0.7
baz=139
Z47A Carrollton 24.90 350 P **P** 13 20 23.1 -0.5
Z47A IAmb IAmb 13 20 29.7
comp=Z,37nm,0.9s
Y52A Lilburn 25.18 358 P **P** 13 20 27.0 +0.9
Y52A IAmb IAmb 13 20 30.2
comp=Z,35nm,1.0s
HODGE Hodges 25.55 2 P **P** 13 20 29.6 +0.1
HODGE IAmb IAmb 13 20 35.8
comp=Z,43nm,1.1s
JSC Jenkinsville 25.65 4 P **P** 13 20 30.4 0.0
JSC IAmb IAmb 13 20 36.4
comp=Z,35nm,1.0s
435B Jarrell 25.82 331 P **P** 13 20 33.1 +1.1
baz=146
Y45A Yeager Farm, C 25.82 348 P **P** 13 20 31.6 -0.4
OXF Oxford 26.42 349 P **P** 13 20 37.1 -0.3
OXF IAmb IAmb 13 20 44.0
comp=Z,40nm,1.1s
OXF Oxford 26.42 349 P **P** 13 20 38.6 +1.2
baz=166
KMSC Kings Mountain 26.50 4 P **P** 13 20 39.5 +1.4
baz=184,SNR=5.5
JCT Junction City 26.71 327 P **P** 13 20 40.4 +0.2
baz=141
V58A Windy Hill, Pi 27.36 7 IAmb IAmb 13 20 52.1
comp=Z,39nm,1.0s
MIAR Mount Ida 27.53 341 P **P** 13 20 47.0 -0.3
MIAR Mount Ida 27.53 341 P **P** 13 20 48.0 +0.7
baz=157
WVT Waverly 27.74 352 P **P** 13 20 49.2 -0.1
baz=170
PLPT Palo Pinto 27.85 332 P **P** 13 20 49.6 -0.7
TXAR Lajitas Array 28.16 320 P **P** 13 20 52.5 -0.7
comp=Z,0.6nm,0.7s,baz=134,slow=8.9,SNR=4.9
comp=Z,0.6nm,0.7s
ABTX Abilene, Hawle 28.33 330 P **P** 13 20 55.0 +0.4
baz=144
LOOK Love County 28.35 335 P **P** 13 20 53.4 -1.4
LOOK IAmb IAmb 13 20 57.6
comp=Z,16nm,1.0s
BLA Blacksburg 28.62 5 P **P** 13 20 57.8 +0.6
baz=186
CGM3 Cape Girardeau 29.17 350 IAmb IAmb 13 21 06.5
comp=Z,22nm,1.2s
MGMO Mountain Grove 29.60 345 IAmb IAmb 13 21 10.8
comp=Z,33nm,1.0s
R49A Shelbyville 29.64 357 IAmb IAmb 13 21 11.0
comp=Z,17nm,0.8s
WCI Wyandotte Cave 29.65 355 P **P** 13 21 06.5 +0.3
baz=174
WMOK Wichita Mounta 29.68 334 P **P** 13 21 06.7 +0.1
baz=148
CCM Cathedral Cave 30.22 347 P **P** 13 21 09.8 -1.4
CCM Cathedral Cave 30.22 347 P **P** 13 21 11.3 0.0
baz=164
ITTB Itaituba 30.32 114 eP **P** 13 21 13.6 +1.1
S39A Bolivar 30.38 344 P **P** 13 21 11.9 -0.8
S39A IAmb IAmb 13 21 13.8
comp=Z,16nm,1.0s
MALB Monte Alegre 30.72 108 eP **P** 13 21 17.3 +1.4
MNTX Cornudas Mount 30.86 321 P **P** 13 21 16.5 -0.5
baz=134
MCWV Mont Chateau 31.10 5 P **P** 13 21 20.4 +1.4
baz=186
VILB Vilhena 31.35 133 eP **P** 13 21 25.0 +3.5
P43A Skaggs, Pawnee 31.43 351 IAmb IAmb 13 21 27.0
comp=Z,22nm,1.1s
ACSO Alum Creek Sta 31.52 0 P **P** 13 21 23.3 +0.5
baz=180
O48B Farmland 31.59 357 P **P** 13 21 24.3 +1.0
baz=176,SNR=5.1
P40A Paris 31.81 347 IAmb IAmb 13 21 25.3
comp=Z,16nm,0.8s
SFIN Lafayette 31.85 354 P **P** 13 21 25.6 0.0
baz=173
P38A Dawn 32.25 345 IAmb IAmb 13 21 29.5
comp=Z,14nm,0.8s
SSPA Standing Stone 32.28 8 P **P** 13 21 30.0 +0.5
baz=190
HDIL Hopedale 32.30 351 P **P** 13 21 29.9 +0.4
baz=169
MCPB Macapa, AP 32.34 104 eP **P** 13 21 31.0 +0.7
LUPA Lehigh Univers 32.66 11 P **P** 13 21 32.7 0.0
LUPA IAmb IAmb 13 21 40.2
comp=Z,22nm,0.9s
KSU1 Kansas State U 32.67 341 P **P** 13 21 32.9 +0.1
baz=155
N41A Harden Midland 32.70 349 P **P** 13 21 31.8 -1.3
121A Cookes Peak, D 32.92 320 P **P** 13 21 35.6 +0.2
baz=131
PDRB Porto dos Gac 33.15 127 eP **P** 13 21 39.9 +2.5
PAL Palisades 33.35 13 P **P** 13 21 39.1 +0.3
baz=197
L44A Lake County Fo 33.72 354 P **P** 13 21 43.0 +1.1
baz=172
ANMO Albuquerque 33.77 324 P **P** 13 21 42.9 +0.1
baz=136
N35A Tabor 33.98 343 P **P** 13 21 43.0 -1.3
L40A Anamosa 34.08 349 P **P** 13 21 43.8 -1.4
BINY Binghamton 34.10 10 P **P** 13 21 46.5 +1.2
baz=193
T25A Trinidad 34.29 329 P **P** 13 21 47.9 +0.6
baz=141
SCIA State Center 34.34 347 P **P** 13 21 47.8 +0.4
baz=162
JFWS Jewell Farm 34.75 351 P **P** 13 21 52.0 +1.1
baz=168
TUC Tucson 34.76 317 P **P** 13 21 51.4 +0.1
baz=127
SDCO Great Sand Dun 35.31 329 P **P** 13 21 57.0 +0.8
baz=140
BBRB Robore, Bolivi 35.33 139 eP **P** 13 21 58.4 +2.2
W18A Petrified Fore 35.84 321 P **P** 13 22 01.7 +1.0
baz=131
214A Organ Pipe Nat 35.96 314 P **P** 13 22 02.0 +0.4
baz=124
MVCO Mesa Verde 36.54 325 P **P** 13 22 07.1 +0.5
baz=135
SALV Santo Antonio 36.57 132 eP **P** 13 22 09.5 +2.7
LONY Lake Ozonia 36.69 10 P **P** 13 22 09.0 +1.4
baz=194
LBNH Lisbon 36.88 14 P **P** 13 22 09.8 +0.7
baz=199
ECSD EROS Data Cent 36.91 344 IAmb IAmb 13 22 14.8
comp=Z,14nm,0.8s
ISCO Idaho Springs 36.95 331 P **P** 13 22 10.5 +0.3
baz=141
WUAZ Wupatki 37.12 320 P **P** 13 22 11.6 0.0
baz=130
Y14A Wickenburg 37.22 317 P **P** 13 22 11.7 -0.6
SPMN Marine on St. 37.43 349 P **P** 13 22 11.8 -2.0
SPMN IAmb IAmb 13 22 13.4
comp=Z,21nm,0.9s
SPMN Marine on St. 37.43 349 P **P** 13 22 13.6 -0.2
baz=164,SNR=5.5
N23A Red Feather La 37.96 332 P **P** 13 22 19.3 +0.5
baz=142
GLA Glamis 37.98 314 P **P** 13 22 18.3 -0.4
baz=123
BLYC Blythe 38.15 316 P **P** 13 22 19.5 -0.6
F36A Milaca 38.19 348 IAmb IAmb 13 22 19.6
comp=Z,15nm,0.9s
PDMCI Parker Dam,Lak 38.20 317 P **P** 13 22 20.8 +0.3
baz=125,SNR=9.7
SUSD Miller 38.24 342 P **P** 13 22 19.3 -1.4
SUSD Miller 38.24 342 P **P** 13 22 21.4 +0.7
baz=154
TRQ Mont Tremblant 38.25 10 IAmb IAmb 13 22 26.5
comp=Z,21nm,1.0s
O20A White River Ci 38.52 329 P **P** 13 22 23.8 +0.5
baz=138
IKP In-Ko-Pah, Jac 38.69 313 P **P** 13 22 25.2 +0.5
baz=121
BC3 Big Chuckawall 38.75 315 P **P** 13 22 25.9 +0.6
baz=123
F33A 5 Mile Ranch, 38.78 345 IAmb IAmb 13 22 25.7
comp=Z,17nm,0.8s
IRM Iron Mountain 38.81 316 P **P** 13 22 26.2 +0.5
baz=124
BDQN Bodoquena, MS 38.89 138 eP **P** 13 22 28.9 +2.4
MONP2 Monument Peak 39.04 313 P **P** 13 22 28.2 +0.4
baz=121
BELC Belle Mtn. Jos 39.32 315 P **P** 13 22 29.8 -0.2
baz=122,SNR=7.7
TPFO Pinon Flats 39.43 314 P **P** 13 22 31.2 +0.2
baz=122
PFO Pinyon Flats O 39.44 314 P **P** 13 22 31.7 +0.7
baz=122
GMRC Granite Mounta 39.51 316 P **P** 13 22 31.5 -0.2
baz=124
109C Camp Elliot, M 39.53 313 P **P** 13 22 31.8 +0.1
baz=120
SMTB Santa Maria do 39.54 115 eP **P** 13 22 32.0 0.0
AQDB Aquidauana 39.61 137 eP **P** 13 22 35.1 +2.7
RSSD Black Hills 39.76 336 P **P** 13 22 34.8 +1.2
baz=147
EYMN Ely 39.85 351 P **P** 13 22 36.3 +2.1
baz=167
MURC Murrieta 39.96 314 P **P** 13 22 35.3 +0.1
baz=121
HEC Hector,Ludlow 40.00 316 P **P** 13 22 36.2 +0.5
baz=123,SNR=9.0
TUQ Turquoise Moun 40.05 317 P **P** 13 22 36.8 +0.6
baz=124
LMQ La Malbaie 40.37 14 P **P** 13 22 37.6 -0.8
LMQ IAmb IAmb 13 22 43.9
comp=Z,29nm,1.0s
ANTJ Antonio Joao (40.48 139 eP **P** 13 22 42.1 +2.4
SHOC Shoshone, Teco 40.55 317 P **P** 13 22 41.2 +1.1
baz=124
LDAQ Lac Daran 40.56 12 P **P** 13 22 39.8 -0.3
LDAQ IAmb IAmb 13 22 45.7
comp=Z,26nm,1.0s
GSC Goldstone, Bar 40.58 316 P **P** 13 22 41.1 +0.6
baz=123
BFSC Mount Baldy Ra 40.62 314 P **P** 13 22 41.6 +0.7
baz=121
AGMN Agassiz Nation 40.99 347 P **P** 13 22 43.7 +0.2
baz=161,SNR=8.0
BW06 Boulder Array 41.13 330 P **P** 13 22 45.3 +0.2
baz=138
PDAR Pinedale Array 41.13 330 P **P** 13 22 43.5 -1.7
comp=Z,0.7nm,0.9s,baz=131,slow=12,SNR=4.4
PDAR PcP **PcP** 13 24 44.1 -0.4
comp=Z,1.6nm,1.0s,baz=125,slow=4.5,SNR=5.8
comp=Z,0.7nm,0.9s
EDW2 Edwards Air Fo 41.18 315 P **P** 13 22 45.5 0.0
baz=121
FURC Furnace Creek, 41.26 317 P **P** 13 22 45.7 -0.2
baz=124,SNR=8.6
LRMC Laurel Mtn Rad 41.28 316 P **P** 13 22 46.2 -0.1
baz=122
MPMC Manual Prospec 41.45 317 P **P** 13 22 48.0 +0.2
baz=123,SNR=7.8
MDND Maddock 41.52 343 P **P** 13 22 48.3 +0.4
baz=155
R11B Tryn Canyon, C 41.52 321 P **P** 13 22 48.7 +0.4
baz=127
ARVC Arvin 41.90 314 P **P** 13 22 51.5 +0.3
baz=121
ISA Isabella, Lake 41.92 315 P **P** 13 22 52.1 +0.6
baz=122
CWC Cottonwood Cre 42.06 317 P **P** 13 22 53.3 +0.5
baz=123
BDFB Brasilia 42.41 124 P **P** 13 22 55.5 -0.2
comp=Z,2.1nm,0.5s,baz=284,slow=12,SNR=3.6
comp=Z,2.1nm,0.5s
PKM Mcpherson Peak 42.48 314 P **P** 13 22 56.3 +0.2
baz=119
TIN Tinemaha, Big 42.50 317 P **P** 13 22 55.8 -0.4
baz=123
LAO LASA Array 42.75 337 P **P** 13 22 57.1 -0.9
baz=145
ELK Elko 42.80 324 P **P** 13 22 58.9 +0.2
SMMC Simmler 42.82 314 P **P** 13 22 57.7 -1.0
baz=120
ULM Lac du Bonnet 42.85 348 P **P** 13 22 56.3 -2.4
ULM IAmb IAmb 13 22 58.2
comp=Z,18nm,0.8s
ULM Lac du Bonnet 42.85 348 P **P** 13 22 56.5 -2.2
comp=Z,18nm,0.8s,baz=162,slow=8.0,SNR=38
comp=Z,18nm,0.8s
CPUP Villa Florida 42.88 145 P **P** 13 23 00.9 +1.6
comp=Z,1.1nm,0.5s,baz=336,slow=10.0,SNR=2.3
comp=Z,1.1nm,0.5s
CPUP Villa Florida 42.88 145 eP **P** 13 23 03.1 +3.9
NVAR Mina Array Bea 43.30 319 P **P** 13 23 03.4 +0.5
comp=Z,5.1nm,0.9s,baz=128,slow=6.7,SNR=27
NVAR PcP **PcP** 13 24 52.3 +0.6
comp=Z,0.6nm,0.7s,baz=123,slow=3.3,SNR=2.8
comp=Z,5.1nm,0.9s
SDBA SAO DESIDERIO 43.46 118 eP **P** 13 23 03.9 -0.3
DGMT Dagmar 43.50 340 P **P** 13 23 03.8 -0.3
DGMT IAmb IAmb 13 23 12.4
comp=Z,18nm,1.0s
DGMT Dagmar 43.50 340 P **P** 13 23 04.4 +0.4
baz=149
IPMB Ipameri, GO 43.53 127 eP **P** 13 23 06.3 +1.6
BMN Battle Mountai 43.79 322 P **P** 13 23 05.9 -0.8
HLID Hailey 44.19 327 P **P** 13 23 09.6 -0.2
baz=133
BOZ Bozeman (W) 44.23 331 P **P** 13 23 09.3 -0.8
BOZ Bozeman (W) 44.23 331 P **P** 13 23 10.1 -0.1
baz=138
JANB Januaria 45.20 121 eP **P** 13 23 20.6 +2.5
EGMT Eagleton 45.25 335 P **P** 13 23 18.3 +0.1
baz=142
CRSM Crissiumal (Br 45.68 143 eP **P** 13 23 24.2 +2.5
WVOR Wild Horse Val 45.84 323 P **P** 13 23 23.0 0.0
ITQB Itaqui 45.87 147 eP **P** 13 23 26.5 +3.4
DRLN Deer Lake 45.94 23 P **P** 13 23 23.4 0.0
DRLN IAmb IAmb 13 23 24.9
comp=Z,16nm,0.8s
UNIS Unistalda (Bra 46.26 145 eP **P** 13 23 29.5 +3.2
PSAL Palomas, Salto 46.48 149 eP **P** 13 23 29.0 +1.2
ALGR Alto Alegre (B 47.25 143 eP **P** 13 23 36.3 +2.3
DIAM Diamantina, MG 47.33 125 eP **P** 13 23 35.0 0.0
VAO Valinhos 47.41 132 eP **P** 13 23 38.3 +2.9
CPSB Cacapava Do Su 48.20 145 eP **P** 13 23 45.2 +3.8
FFC Flin Flon 48.39 346 P **P** 13 23 41.6 -0.8
FFC IAmb IAmb 13 23 42.8
comp=Z,9.8nm,1.0s
NEW Newport 48.77 330 P **P** 13 23 45.7 +0.1
baz=133
PLTB Pedras Altas 49.13 146 eP **P** 13 23 52.6 +4.1
GUA01 Guaratinga, BA 49.74 120 eP **P** 13 23 55.9 +2.5
PLCA Paso Flores 50.45 167 P **P** 13 23 59.2 +0.7
comp=Z,6.3nm,0.9s,baz=334,slow=9.1,SNR=7.9
comp=Z,6.3nm,0.9s
RIB01 Linhares ES 50.53 124 eP **P** 13 24 02.6 +3.2
EDM Edmonton 50.73 337 P **P** 13 23 59.1 -1.3
EDM IAmb IAmb 13 24 00.5
comp=Z,14nm,0.8s
FCC Fort Churchill 50.75 353 P **P** 13 23 59.0 -1.4
BRLDA Berland Lookou 52.99 336 P **P** 13 24 16.1 -1.3
BRLDA IAmb IAmb 13 24 17.7
comp=Z,12nm,0.8s
YKA Yellowknife Ar 58.44 344 P **P** 13 24 54.8 -1.3
YKA Yellowknife Ar 58.44 344 P **P** 13 24 55.3 -0.8
comp=Z,4.2nm,0.8s,baz=137,slow=6.9,SNR=76
YKA PcP **PcP** 13 25 48.1 +1.3
comp=Z,0.6nm,0.7s,baz=134,slow=3.9,SNR=4.8
comp=Z,4.2nm,0.8s
WRGLY Wrigley 61.69 341 P **P** 13 25 17.6 -0.9
WRGLY IAmb IAmb 13 25 24.4
comp=Z,8.8nm,1.0s
WRGLY Wrigley 61.69 341 P **P** 13 25 18.2 -0.2
baz=134
S31K Pelican 63.71 332 P **P** 13 25 31.7 -0.3
baz=118
SKAG Skagway 64.03 333 P **P** 13 25 33.7 -0.4
baz=120
O30N Mendenhall 65.01 334 P **P** 13 25 40.4 -0.3
baz=120
M29M Somme Creek 66.81 335 P **P** 13 25 52.0 -0.2
baz=118
H31M Peel River 66.98 340 P **P** 13 25 52.3 -0.8
baz=123
L29M L29M 67.00 336 P **P** 13 25 52.4 -1.0
baz=118
J30M Hart River 67.03 338 P **P** 13 25 52.6 -1.0
baz=121
K29M Barlow Dome 67.11 337 P **P** 13 25 53.3 -0.9
baz=119
I30M Mount Dempster 67.38 339 IAmb IAmb 13 26 02.2
comp=Z,8.3nm,1.0s
I30M Mount Dempster 67.38 339 P **P** 13 25 54.6 -1.2
baz=121,SNR=6.2
G31M Satah River 67.57 341 P **P** 13 25 56.1 -0.8
baz=124,SNR=11
J29N Klondike Camp 67.68 337 IAmb IAmb 13 26 05.5
comp=Z,32nm,1.6s
J29N Klondike Camp 67.68 337 P **P** 13 25 57.2 -0.5
baz=119
F31M Tsiigehtchic 67.69 341 IAmb IAmb 13 26 05.9
comp=Z,15nm,1.2s
F31M Tsiigehtchic 67.69 341 P **P** 13 25 57.5 -0.1
baz=124
BVCY Beaver Creek 67.80 335 P **P** 13 25 58.4 0.0
baz=116
EPYK Eagle Plains 68.10 340 IAmb IAmb 13 26 08.8
comp=Z,17nm,1.3s
EPYK Eagle Plains 68.10 340 P **P** 13 26 00.7 +0.5
baz=121
INK Inuvik 68.12 342 P **P** 13 26 00.1 -0.1
INK IAmb IAmb 13 26 02.7
comp=Z,15nm,1.1s
INK Inuvik 68.12 342 P **P** 13 26 00.9 +0.7
baz=125,SNR=10
A36M Sachs Harbour 68.31 347 P **P** 13 26 00.2 -1.2
A36M Sachs Harbour 68.31 347 P **P** 13 26 00.6 -0.8
baz=134,SNR=21
F30M Barrier River 68.44 341 P **P** 13 26 02.3 0.0
baz=122
BCAR Beaver Creek A 68.46 335 P **P** 13 26 02.4 -0.2
L27K Beaver Creek, 68.48 335 P **P** 13 26 02.5 -0.2
baz=115
H29M Whitestone 68.60 339 IAmb IAmb 13 26 06.4
comp=Z,6.1nm,0.9s
H29M Whitestone 68.60 339 P **P** 13 26 02.9 -0.4
baz=119
I28M Miner Creek 68.80 338 IAmb IAmb 13 26 26.5
comp=Z,7.9nm,1.1s
I28M Miner Creek 68.80 338 P **P** 13 26 04.7 0.0
baz=118
BMRM Bremner River 68.85 333 P **P** 13 26 04.7 -0.4
baz=112
EGAK Eagle 68.95 337 P **P** 13 26 06.2 +0.7
baz=116
K27K Chicken 68.99 336 P **P** 13 26 06.0 +0.2
baz=115
N25K Chitina, Valde 69.09 333 P **P** 13 26 06.9 +0.3
baz=112
L26K Log Cabin Wild 69.09 335 P **P** 13 26 06.3 -0.2
baz=113
SUMG Summit 69.35 13 P **P** 13 26 07.2 -1.2
I27K Kandik River 69.49 338 P **P** 13 26 09.1 +0.1
baz=116,SNR=9.6
E29M Blow River 69.53 341 P **P** 13 26 09.1 +0.1
baz=120
SCRK Sand Creek 69.74 336 P **P** 13 26 10.0 -0.6
baz=113
H27K Steamboat Moun 69.74 338 P **P** 13 26 10.4 -0.1
baz=116
J26L Joseph Creek 69.78 336 P **P** 13 26 10.1 -0.6
baz=114
F28M Old Crow 69.80 340 P **P** 13 26 10.2 -0.6
F28M IAmb IAmb 13 26 13.5
comp=Z,4.8nm,0.7s
F28M Old Crow 69.80 340 P **P** 13 26 10.9 +0.1
baz=118,SNR=8.2
I26K Coal Creek Min 69.95 337 P **P** 13 26 11.4 -0.3
baz=114
PAX Paxson 69.97 335 P **P** 13 26 11.8 -0.2
baz=111
SCM Sheep Creek Mo 70.39 333 P **P** 13 26 13.8 -0.7
baz=109
K24K Donnelly Dome 70.40 335 P **P** 13 26 13.8 -0.7
baz=111
J25K Salcha River, 70.54 336 P **P** 13 26 14.7 -0.8
baz=112
M23K Glacier View 70.55 333 P **P** 13 26 14.8 -0.7
baz=109
KNK Knik Glacier 70.76 332 P **P** 13 26 16.2 -0.6
baz=108
WAT6 Susitna Watana 70.81 334 P **P** 13 26 16.2 -1.1
baz=109
SML Sawmill 70.83 333 P **P** 13 26 16.5 -0.7
baz=108
SEW Seward 70.83 331 P **P** 13 26 16.4 -0.8
baz=107
HDA Harding Lake 71.10 336 P **P** 13 26 19.1 +0.4
HDA Harding Lake 71.10 336 P **P** 13 26 18.7 0.0
baz=110,SNR=7.8
IL31 71.20 336 P **P** 13 26 18.9 -0.4
IL31 IAmb IAmb 13 26 20.4
comp=Z,7.7nm,0.9s
ILAR Eielson Array 71.20 336 P **P** 13 26 19.1 -0.2
ILAR Eielson Array 71.20 336 P **P** 13 26 19.4 0.0
comp=Z,3.8nm,0.8s,baz=114,slow=4.6,SNR=40
comp=Z,3.8nm,0.8s
F26K Sheenjek River 71.30 339 P **P** 13 26 19.6 -0.3
baz=114
BRSE Bradley Lake S 71.36 330 P **P** 13 26 19.7 -0.8
baz=105
POKR Poker Plat Res 71.54 336 P **P** 13 26 21.3 -0.1
baz=110
RND Reindeer 71.56 334 P **P** 13 26 21.5 -0.1
M22K Willow 71.62 333 P **P** 13 26 20.7 -1.2
baz=107
COLA College 71.63 336 P **P** 13 26 21.0 -0.9
baz=110
G25K Bearman Lake 71.63 338 P **P** 13 26 21.5 -0.4
baz=112
F25K Christian Rive 71.78 339 P **P** 13 26 22.5 -0.4
baz=113
KDAK Kodiak Island 71.80 328 P **P** 13 26 22.9 -0.2
baz=103
MDM Murphy Dome 71.81 336 P **P** 13 26 22.7 -0.4
SUA Susitna One 71.83 332 P **P** 13 26 22.6 -0.7
baz=106
CUT Chulitna 71.88 333 P **P** 13 26 23.1 -0.3
baz=107
E25K Arctic Village 71.96 340 P **P** 13 26 24.3 +0.4
E25K Arctic Village 71.96 340 P **P** 13 26 23.9 0.0
baz=113,SNR=7.8
H24K Noodor Dome 71.97 337 P **P** 13 26 22.6 -1.5
baz=110
NEA2 Nenana 72.03 336 P **P** 13 26 23.5 -0.9
baz=108
G24K Hadweenzic Riv 72.11 338 P **P** 13 26 23.8 -1.0
baz=111
TRF Thorofare Moun 72.19 334 P **P** 13 26 24.7 -0.9
baz=107
I23K Minto, Yukon-K 72.32 336 P **P** 13 26 26.3 +0.3
I23K IAmb IAmb 13 26 45.5
comp=Z,10.0nm,1.1s
I23K Minto, Yukon-K 72.32 336 P **P** 13 26 25.6 -0.5
baz=108,SNR=5.4
SKT Skwentna 72.33 333 P **P** 13 26 25.6 -0.6
baz=105
F24K Squaw Lake 72.56 339 P **P** 13 26 26.1 -1.4
baz=110
BPAW Bear Paw Mtn. 72.67 335 P **P** 13 26 27.8 -0.5
BPAW Bear Paw Mtn. 72.67 335 P **P** 13 26 27.3 -0.9
baz=106
D25K Kavik River 72.70 341 IAmb IAmb 13 26 30.2

comp=Z,11nm,0.8s
D25K Kavik River 72.70 341 P **P** 13 26 27.7 -0.6
baz=112
MLY Manley 72.84 336 P **P** 13 26 29.1 -0.2
MLY Manley 72.84 336 P **P** 13 26 27.9 -1.4
baz=107,SNR=6.1
PPLA Purkeypile 72.86 333 P **P** 13 26 28.3 -1.2
baz=105
CAST Castle Rocks 72.96 334 P **P** 13 26 28.9 -1.1
baz=105
M20K Styx River 73.03 332 P **P** 13 26 29.2 -1.3
baz=104
G23K Bananza Creek 73.07 338 P **P** 13 26 30.0 -0.6
baz=108
COLD Coldfoot 73.30 338 P **P** 13 26 31.5 -0.4
baz=108,SNR=7.2
H22K Ishtalitna Cre 73.35 337 P **P** 13 26 31.6 -0.6
baz=107
E23K Chandalar 73.36 339 P **P** 13 26 31.7 -0.6
baz=109,SNR=8.4
I21K Tanana 73.39 336 P **P** 13 26 32.3 -0.1
baz=106
N19K Bonanza Creek 73.43 331 P **P** 13 26 31.9 -0.9
baz=102
D24K Happy Valley 73.45 340 P **P** 13 26 31.7 -1.0
baz=110
L20K Farewell, AK 73.52 333 P **P** 13 26 32.6 -0.7
baz=103
C24K Franklin Bluff 73.61 341 P **P** 13 26 33.0 -0.6
baz=110
G22K Bettles 73.70 338 P **P** 13 26 33.5 -0.7
baz=107
K20K Telida 73.81 334 P **P** 13 26 34.0 -1.0
baz=103
H21K Melozitna Rive 73.85 336 P **P** 13 26 34.6 -0.6
baz=105
L19K White Mountain 73.89 332 P **P** 13 26 35.5 0.0
baz=102
D23K Nanushuk River 74.02 340 P **P** 13 26 35.7 -0.4
baz=108
J20K Nowinta River 74.03 335 P **P** 13 26 35.5 -0.7
baz=104
E22K Anaktuvuk Pass 74.16 339 IAmb IAmb 13 28 26.7
comp=Z,23nm,1.8s
E22K Anaktuvuk Pass 74.16 339 P **P** 13 26 36.8 -0.2
baz=107
M18K Stony River 74.20 332 P **P** 13 26 36.7 -0.6
baz=101
O17K Koliganek Bris 74.50 330 P **P** 13 26 39.0 0.0
baz=100
F21K Alatna River 74.53 338 IAmb IAmb 13 26 41.0
comp=Z,8.5nm,0.8s
F21K Alatna River 74.53 338 P **P** 13 26 38.6 -0.5
baz=105
TTA Tatalina 74.58 333 P **P** 13 26 39.3 -0.2
baz=102
J19K Poorman 74.62 334 P **P** 13 26 38.5 -1.2
baz=102
H20K Anotleneega Mo 74.64 336 P **P** 13 26 39.4 -0.4
baz=103
N17K Nushagak Hills 74.68 330 P **P** 13 26 38.6 -1.4
baz=100
D22K Ayikyak River 74.69 339 IAmb IAmb 13 28 45.9
comp=Z,25nm,1.9s
D22K Ayikyak River 74.69 339 P **P** 13 26 38.4 -1.6
baz=106
J18K Innoko River 74.99 334 P **P** 13 26 41.2 -0.7
baz=101
E21K Killik River 75.02 339 P **P** 13 26 41.4 -0.6
baz=105
H19K Roundabout Mou 75.29 336 P **P** 13 26 43.1 -0.3
baz=102
GCSA Galena City Sc 75.31 335 P **P** 13 26 43.3 -0.2
baz=101
F20K Avaraart Lake 75.33 337 P **P** 13 26 43.1 -0.5
baz=103
C21K Knifeblade Rid 75.49 339 P **P** 13 26 44.3 -0.3
baz=104
G19K Purcell Mounta 75.67 336 IAmb IAmb 13 26 54.4
comp=Z,11nm,1.1s
G19K Purcell Mounta 75.67 336 P **P** 13 26 45.4 -0.3
baz=101
E20K Nigu River 75.78 338 P **P** 13 26 45.8 -0.5
baz=103
O15K Ungalikthiuk R 75.79 329 P **P** 13 26 46.0 -0.5
baz=97
L16K Owhat River 75.96 332 P **P** 13 26 46.3 -1.1
baz=98
E19K Redstone River 75.99 338 P **P** 13 26 46.5 -1.0
baz=102
H18K Honhosa River 76.01 335 P **P** 13 26 47.1 -0.6
baz=100
D20K Etivluk River 76.03 339 P **P** 13 26 48.0 +0.3
baz=102
N15K Kwethluk River 76.05 330 P **P** 13 26 47.1 -0.9
baz=97
F19K Shaleruckik Mo 76.08 337 IAmb IAmb 13 26 56.3
comp=Z,22nm,1.6s
F19K Shaleruckik Mo 76.08 337 P **P** 13 26 47.1 -0.8
baz=101
G18K Tagagawik 76.26 336 IAmb IAmb 13 26 50.8
comp=Z,11nm,1.1s
G18K Tagagawik 76.26 336 P **P** 13 26 48.8 -0.2
baz=100
ESDC Sonseca Array 76.36 51 P **P** 13 26 50.1 -0.1
comp=Z,7.4nm,1.0s,baz=277,slow=5.7,SNR=18
comp=Z,7.4nm,1.0s
M15K Kasigluk River 76.41 330 P **P** 13 26 49.5 -0.4
baz=97
D19K Kuna River 76.52 339 IAmb IAmb 13 27 14.9
comp=Z,21nm,1.4s
D19K Kuna River 76.52 339 P **P** 13 26 50.4 -0.1
baz=101
A21K Barrow 76.61 342 P **P** 13 26 50.7 -0.2
baz=103
J16K Anvik River 76.69 333 P **P** 13 26 50.7 -0.8
baz=97
F18K Selawik 76.77 336 P **P** 13 26 51.7 -0.1
baz=99
I17K Unalakleet 76.81 334 P **P** 13 26 51.7 -0.5
baz=98
L15K Ungalak Mounta 76.91 331 P **P** 13 26 52.8 0.0
baz=96
K15K Wolf Creek Mou 77.00 332 P **P** 13 26 53.2 -0.1
baz=96
G17K Kiwalik Mounta 77.01 335 P **P** 13 26 53.1 -0.2
baz=98
C19K Lookout Ridge 77.16 339 IAmb IAmb 13 27 02.9
comp=Z,11nm,1.1s
C19K Lookout Ridge 77.16 339 P **P** 13 26 54.0 -0.1
baz=100
E18K Tukpahlearik C 77.27 337 P **P** 13 26 53.9 -0.8
baz=98
EKA Eskdalemuir Ar 77.37 35 P **P** 13 26 54.6 -1.0
comp=Z,7.1nm,1.0s,baz=268,slow=5.0,SNR=4.9
comp=Z,7.1nm,1.0s
TIC Toumodi 77.47 85↑ *e*P **P** 13 26 57.1 +0.2
comp=Z,37nm,0.8s
LIC Lamto 77.51 86↑ *e*P **P** 13 26 57.4 +0.3
comp=Z,102nm,0.8s
H16K Elim 77.57 334 P **P** 13 26 56.1 -0.4
baz=96
DBIC Dimbokro 77.62 85 P **P** 13 26 57.7 -0.1
DBIC Dimbokro 77.62 85 P **P** 13 26 57.6 -0.1
comp=Z,23nm,0.9s,baz=278,slow=5.9,SNR=24
comp=Z,23nm,0.9s
C18K Utukok River 77.67 338 P **P** 13 26 56.4 -0.6
baz=98
E17K Hotham Inlet 77.69 337 P **P** 13 26 56.3 -0.8
baz=97,SNR=10
KIC Kosan Boka 77.78 85↑ *e*P **P** 13 26 59.0 +0.4
comp=Z,49nm,0.7s
J14K Nanvaranak Lak 77.97 332 P **P** 13 26 58.4 -0.3
baz=95
B18K Kokolik River 77.98 339 P **P** 13 26 58.3 -0.3
baz=98
D17K Noatak River 78.25 337 P **P** 13 26 59.6 -0.6
baz=96
C17K DeLong Mountai 78.37 338 P **P** 13 27 00.1 -0.7
baz=96
G15K Niukluk 78.37 335 P **P** 13 27 00.2 -0.6
baz=95
ANM Nome 78.91 334 P **P** 13 27 03.3 -0.6
baz=93
C16K Lisburne Hills 79.15 338 IAmb IAmb 13 27 06.8
comp=Z,13nm,0.9s
C16K Lisburne Hills 79.15 338 P **P** 13 27 04.8 -0.2
baz=94
TNA Tin City 80.03 335 P **P** 13 27 09.3 -0.7
baz=91
TORD Torodi Ar. Bea 83.22 78 P **P** 13 27 27.1 -0.8
comp=Z,1.8nm,0.8s,baz=286,slow=3.4,SNR=10
comp=Z,1.8nm,0.8s
NB2 NORSAR Subarra 84.74 29 P **P** 13 27 34.0 -0.7
comp=Z,5.2nm,1.0s,baz=278,slow=5.3
NOA NORSAR Array B 84.74 29 P **P** 13 27 34.1 -0.7
comp=Z,3.2nm,0.8s,baz=276,slow=4.9,SNR=8.3
comp=Z,3.2nm,0.8s
HFS Hagfors 86.09 30 P **P** 13 27 39.9 -1.5
comp=Z,4.2nm,0.8s,baz=318,slow=2.0,SNR=5.1
comp=Z,4.2nm,0.8s
CLL Collm 87.28 39 *i* P **P** 13 27 47.5 +0.1
comp=Z,10.10nm,1.1s
CLL *i* pP **sP** 13 27 51.7 -1.1
CLL *e*PP **PP** 13 31 12.0 +0.7
KHC Kasperske Hory 88.04 41 *e*P **P** 13 27 51.5 +0.3
GERES GERESS Array B 88.17 41 P **P** 13 27 50.8 -1.1
comp=Z,1.8nm,0.7s,baz=207,slow=0.9,SNR=5.1
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 88.47 19 P **P** 13 27 50.9 -1.9
comp=Z,2.0nm,0.7s,baz=302,slow=2.7,SNR=7.8
comp=Z,2.0nm,0.7s
CHVC Chvalec 89.31 39 *e*P **P** 13 27 57.4 +0.3
DPC Dobruska-Polom 89.53 39 *e*P **P** 13 27 58.7 +0.5
FINES FINESS Array B 91.58 27 P **P** 13 28 06.0 -1.4
comp=Z,3.0nm,0.9s,baz=11,slow=1.9,SNR=4.8
comp=Z,3.0nm,0.9s
KURBB Kurchatov Arra 118.96 13 PKP **PKPdf** 13 33 48.2 -1.3
comp=Z,0.4nm,0.7s,baz=334,slow=2.3,SNR=3.0
SONM Songino Array 123.19 352 PKP **PKPdf** 13 33 56.6 -1.2
comp=Z,0.8nm,0.8s,baz=45,slow=0.8,SNR=5.8
MKAR Makanchi Array 123.39 12 PKP **PKPdf** 13 33 55.6 -2.5
comp=Z,0.2nm,0.7s,baz=2.6,slow=2.7,SNR=1.9
KSRS Korea Array 125.70 329 PKP **PKPdf** 13 34 00.5 -2.3
comp=Z,2.3nm,0.7s,baz=5.8,slow=1.5,SNR=11
WMQ Urumqi 127.21 8 *e*P **PKiKP** 13 34 07.3 +1.2
WMQ SKS **SKSac** 13 41 10.0 -2.1
HHC Hu-ho-hao-te 128.95 346 *e*P **PKPdf** 13 34 04.0 -5.1
NJ2 Nanjing 134.40 333 *e*P **PKPdf** 13 34 18.5 -0.9
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
ASAR Alice Springs 141.41 243 PKhKP PKPpre 13 34 25.1
comp=Z,0.8nm,0.8s,baz=139,slow=4.4,SNR=5.0
ASAR PKP **PKPdf** 13 34 31.2 -1.4
comp=Z,1.6nm,0.7s,baz=119,slow=3.3,SNR=8.8
WRA Warramunga Arr 141.93 249 PKhKP PKPpre 13 34 25.1
comp=Z,0.4nm,0.4s,baz=83,slow=8.7,SNR=5.9
WRA PKP **PKPdf** 13 34 32.2 -1.4
comp=Z,1.7nm,0.9s,baz=97,slow=2.9,SNR=5.7
CMAR Chiang Mai Arr 153.05 355 PKP **PKPdf** 13 34 50.4 -1.6
comp=Z,0.6nm,0.3s,baz=323,slow=2.3,SNR=7.9
CMAR PKPbc **PKiKP** 13 34 59.2 -0.2
comp=Z,3.4nm,0.8s,baz=333,slow=3.1,SNR=6.8

IDC 26 13:16:33.5±2.0, 4°.24S×140°.99E, h0km, mb3.2/2, mbtmp3.5/4, ML2.6/2, Error ellipse: s-maj=54.8km s-min=30.9km az=78.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.99**	**130**	Pn	Pn	13 18 31.5	+0.5
	0.8nm,0.3s,baz=143,slow=13,SNR=3.1						
	11nm,0.7s						
WRA	**Warramunga Arr**	**16.90**	**202**	Pn	Pn	13 20 30.4	-1.3
	0.1nm,0.3s,baz=26,slow=13,SNR=2.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**20.49**	**199**	P	P	13 21 13.7	+0.4
	1.0nm,0.8s,baz=33,slow=10,SNR=6.1						
	1.0nm,0.8s						
SONM	**Songino Array**	**60.07**	**334**	P	P	13 26 42.5	-0.1
	0.2nm,0.6s,baz=120,slow=8.5,SNR=2.1						
	0.2nm,0.6s						

*IDC **26** 13:18:41.7±0.8, 6°.16S×143°.56E, h0km, mb4.2/9, mbtmp4.2/12, ML2.6/2, Error ellipse: s-maj=33.2km s-min=16.6km az=72.0*
*NEIC **26** 13:18:44.6±1.7, 6°.32S±0°.05×143°.23E±0°.1, h10km±1km, mb4.2/16, Error ellipse: s-maj=18.4km s-min=4.2km az=114.0*

ISC 26 13:18:47.5±0.5, 6°.51S±0°.06×143°.23E±0°.07, h35km, n42, σ1§90/45, mb4.3/17, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.84**	**127**		**Pn**	**13 19 58.7**	**+0.8**
PMG	**Port Moresby**	**4.84**	**127**	Pn	**Pn**	**13 19 57.4**	**-0.5**
	4.2nm,0.3s,baz=30,slow=3.8,SNR=12						
PMG				Sn	**Sn**	13 20 51.9	-0.9
	7.9nm,0.3s,baz=48,slow=18,SNR=8.7						
	13nm,0.4s						
MANU	**Manus Island**	**6.06**	**43**	Pn	**Pn**	13 20 14.1	-0.6
COEN	**Coen**	**7.40**	**180**	Pn	**Pn**	13 20 36.7	+3.6
MTN	**Manton Dam**	**13.48**	**241**	Pn	**Pn**	13 21 55.3	-1.2
CTA	**Charters Tower**	**13.81**	**168**	Pn	**Pn**	13 22 01.6	+0.6
	0.1nm,0.3s,baz=326,slow=7.3,SNR=1.8						
CTA				Lg	Lg	13 26 10.1	
	0.1nm,0.3s,baz=358,slow=13,SNR=1.6						
	1.8nm,0.8s						
WB0	**Warramunga Arr**	**15.73**	**212**	Pn	**Pn**	13 22 27.9	+1.3
WB0				IAmb	IAmb	13 22 40.1	
	comp=Z,17nm,1.4s						
WRAB	**Tennant Creek**	**15.89**	**212**		**Pn**	13 22 28.9	+0.3
WB2	**Warramunga Arr**	**15.89**	**212**	Pn	**Pn**	13 22 28.7	0.0
WB2				IAmb	IAmb	13 22 43.1	
	comp=Z,6.2nm,0.7s						
WRA	**Warramunga Arr**	**15.90**	**212**	Pn	**Pn**	13 22 29.4	+0.6
	comp=Z,0.3nm,0.3s,baz=32,slow=13,SNR=11						
WRA				Sn	**Sn**	13 25 20.3	-3.8
	comp=Z,0.4nm,0.3s,baz=34,slow=23,SNR=2.7						
WRA				Lg	Lg	13 27 20.9	
	comp=Z,0.2nm,0.3s,baz=12,slow=24,SNR=5.1						
KNRA	**Kununurra**	**16.86**	**236**		**Pn**	13 22 40.7	-0.3
KNRA				IAmb	IAmb	13 22 59.4	
	comp=Z,13nm,0.8s						
AS31	**Alice Springs**	**19.27**	**207**		**Pn**	13 23 13.5	+3.0
ASAR	**Alice Springs**	**19.27**	**207**		**Pn**	13 23 13.6	+3.0
ASAR	**Alice Springs**	**19.27**	**207**	P	**Pn**	13 23 14.1	+3.5
	comp=Z,15nm,0.9s,baz=27,slow=14,SNR=81						
ASAR				S	**S**	13 26 39.1	-6.7
	comp=Z,0.5nm,0.7s,baz=20,slow=27,SNR=2.0						
ASAR				Lg	Lg	13 29 07.8	
	baz=91,slow=34						
FITZ	**Fitzroy Crossi**	**20.66**	**235**		**P**	13 23 25.7	+1.2
STKA	**Stephens Creek**	**25.28**	**183**	P	**P**	13 24 11.1	+0.3
TARA	**Tarawa**	**30.65**	**76**	P	**P**	13 24 58.8	-0.2
CMAR	**Chiang Mai Arr**	**50.23**	**300**	P	**P**	13 27 40.8	+0.2
	comp=Z,0.4nm,0.3s,baz=127,slow=6.0,SNR=4.1						
	comp=Z,0.4nm,0.3s						
PZH	**PanZhiHua**	**51.90**	**311**	P	**P**	13 27 55.0	+1.8
PZH				PKP		13 34 36.5	
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,40nm,5.6s						
HHC	**Hu-ho-hao-te**	**55.38**	**331**	*e*P	**P**	13 28 22.0	+3.6
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,6.4s						
ULN	**Ulaanbaatar**	**62.82**	**333**	P	**P**	13 29 08.5	-1.4
ULN				IAmb	IAmb	13 29 10.4	
	comp=Z,3.3nm,1.2s						
SONM	**Songino Array**	**63.09**	**333**	P	**P**	13 29 10.7	-0.9
SONM				IAmb	IAmb	13 29 12.6	
	comp=Z,2.0nm,1.3s						
SONM	**Songino Array**	**63.09**	**333**	P	**P**	13 29 10.0	-1.7
	comp=Z,0.4nm,0.8s,baz=159,slow=4.8,SNR=2.7						
	comp=Z,0.4nm,0.8s						
WMQ	**Urumqi**	**70.77**	**321**	*e*P	**P**	13 30 00.8	+0.3
WMQ				pP	pP	13 30 09.5	-2.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
MK31	**Makanchi Array**	**75.54**	**322**	P	**P**	13 30 27.9	-0.7
MK31				IAmb	IAmb	13 30 29.2	
	comp=Z,3.3nm,1.1s						
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	13 30 27.8	-0.8
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	13 30 28.2	-0.4
	comp=Z,2.4nm,0.7s,baz=104,slow=7.6,SNR=21						
	comp=Z,2.4nm,0.7s						
MAKZ	**Makanchi**	**75.74**	**322**	P	**P**	13 30 29.1	-0.7
MAKZ				IAmb	IAmb	13 30 30.2	
	comp=Z,4.5nm,1.1s						
KSH	**Kashi**	**76.95**	**313**	P	**P**	13 30 38.5	+1.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**77.48**	**329**	P	**P**	13 30 37.7	-1.6
	comp=Z,0.9nm,0.5s,baz=104,slow=6.3,SNR=5.3						
	comp=Z,0.9nm,0.5s						
BOOM	**Boomskoye usch**	**78.00**	**316**	P	**P**	13 30 42.6	-0.2
BOOM				IAmb	IAmb	13 30 43.6	
	comp=Z,1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**79.42**	**324**	P	**P**	13 30 49.1	-1.0
	comp=Z,1.0nm,0.3s,baz=118,slow=4.1,SNR=5.0						
	comp=Z,1.0nm,0.3s						
N19K	**Bonanza Creek**	**82.63**	**26**	P	**P**	13 31 07.0	-0.1
QSPA	**South Pole Qui**	**83.46**	**180**	P	**P**	13 31 12.1	+0.6
	comp=Z,5.8nm,0.9s,baz=226,slow=0.3,SNR=21						
	comp=Z,5.8nm,0.9s						
G18K	**Tagagawik**	**83.52**	**21**	P	**P**	13 31 10.7	-0.9
NRIK	**Noril'sk**	**84.63**	**343**	P	**P**	13 31 15.8	-1.3
	comp=Z,2.0nm,0.4s,baz=83,slow=4.1,SNR=5.9						
	comp=Z,2.0nm,0.4s						
BVAR	**Borovoye Array**	**84.99**	**325**	P	**P**	13 31 18.9	-0.4
	comp=Z,4.4nm,0.8s,baz=104,slow=6.3,SNR=18						
	comp=Z,4.4nm,0.8s						
D19K	**Kuna River**	**85.07**	**18**	P	**P**	13 31 18.2	-1.2
ILAR	**Eielson Array**	**87.44**	**24**	P	**P**	13 31 28.4	-2.6
	comp=Z,0.8nm,0.8s,baz=251,slow=5.3,SNR=5.3						
	comp=Z,0.8nm,0.8s						
CTGM	**Chitina Glacie**	**88.65**	**28**	P	**P**	13 31 37.1	0.0
BCAR	**Beaver Creek A**	**89.03**	**26**	P	**P**	13 31 38.6	-0.1
DBIC	**Dimbokro**	**148.30**	**272**	PKPbc	**PKPbc**	13 38 31.9	+0.6
	comp=Z,4.4nm,0.9s,baz=90,slow=5.6,SNR=5.7						

*IDC **26** 13:21:26.2±3.3, 35°.96S×53°.16E, h0km, mb3.9/2, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=159.5km s-min=36.2km az=45.0*
*NEIC **26** 13:21:27.0±2.1, 35°.7S±0°.2×53°.4E±0°.3, h10km±2km, mb4.5/3, Error ellipse: s-maj=44.9km s-min=29.8km az=255.0*

ISC 26 13:21:28.5±1.4, 35°.5S±0°.2×53°.6E±0°.2, h10km, n14, σ1§29/11, mb4.3/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N1	**CROZET ISLANDS**	**10.70**	**187**	T	T	13 34 57.6	
	baz=9.0,slow=75,SNR=116						
H04N2	**CROZET ISLANDS**	**10.70**	**187**	T	T	13 34 55.7	
	baz=9.0,slow=75,SNR=161						
H04N3	**CROZET ISLANDS**	**10.72**	**187**	T	T	13 34 56.6	
	baz=9.0,slow=75,SNR=125						
FOMA	**Nahampoana Res**	**11.98**	**330**	Pn	**Pn**	13 24 18.3	-1.1
RER	**Riviere de l'E**	**14.45**	**8**	Pn	**Pn**	13 24 52.4	-0.9
VOI	**Vohitsoka**	**14.84**	**334**	Pn	**Pn**	13 24 57.8	-0.8
ABPO	**Ambohimpanom**	**17.40**	**339**		**P**	13 25 33.5	+0.6
ABPO				IAmb	IAmb	13 26 15.5	
	comp=Z,12nm,1.4s						
OPO	**Ambohidratompo**	**17.84**	**340**	P	**P**	13 25 39.5	+1.8
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=2.6						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**69.08**	**105**	P	**P**	13 32 36.4	+1.4
	comp=Z,0.5nm,0.6s,baz=231,slow=6.6,SNR=5.0						
	comp=Z,0.5nm,0.6s						
HRA	**Herat**	**70.03**	**8**	P	**P**	13 32 41.6	+1.0
HRA				IAmb	IAmb	13 32 52.3	
	comp=Z,2.5nm,0.5s						
WRA	**Warramunga Arr**	**71.34**	**101**	P	**P**	13 32 49.4	+0.5
	comp=Z,1.3nm,0.8s,baz=233,slow=4.9,SNR=4.7						
	comp=Z,1.3nm,0.8s						
COEN	**Coen**	**81.68**	**101**	P	**P**	13 33 45.5	-1.9
COEN				IAmb	IAmb	13 33 57.2	
	comp=Z,14nm,1.4s						
ILAR	**Eielson Array**	**148.24**	**17**	PKPbc	**PKPbc**	13 41 13.6	-0.3
	comp=Z,0.8nm,1.0s,baz=302,slow=2.9,SNR=5.2						
YKA	**Yellowknife Ar**	**152.03**	**348**	PKPbc	**PKPbc**	13 41 23.3	+0.2
	comp=Z,0.3nm,0.7s,baz=14,slow=1.7,SNR=4.3						

*IDC **26** 13:28:18.0±3.5, 10°.75S×165°.95E, h167km±31km, mb3.6/5, mbtmp4.3/7, Error ellipse: s-maj=35.5km s-min=22.2km az=65.0*

ISC 26 13:28:16.5±1.0, 10°.73S±0°.10×166°.0E±0°.2, h150km, n17, σ1§40/18, mb3.5/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.10**	**282**	P	**Pn**	**13 29 45.4**	**+0.9**
	1µm,0.7s,baz=138,slow=3.1,SNR=7.9						
DZM	**Mont Dzumac**	**11.28**	**178**	P	**Pn**	13 30 55.3	+1.8
	7.5nm,0.4s,baz=23,slow=15,SNR=7.3						
DZM				S	**Sn**	13 32 55.7	-2.6
	3.3nm,0.3s,baz=150,slow=21,SNR=9.4						
NGRZ	**Ngongotaha**	**28.75**	**163**	P	P	13 34 08.0	+8.0
URZ	**Urewera**	**29.16**	**162**	P	**P**	13 34 03.1	-0.5
	5.9nm,0.5s,baz=315,slow=1.4,SNR=2.6						
	5.9nm,0.5s						
URZ	**Urewera**	**29.16**	**162**	P	**P**	13 34 03.8	+0.2
MWZ	**Matawai**	**29.36**	**161**	P	**P**	13 34 05.8	+0.3
RTZ	**Ruatahuna**	**29.45**	**162**	P	**P**	13 34 06.5	+0.2
OTVZ	**Oturere**	**29.60**	**165**	P	**P**	13 34 11.1	+3.4
MTHZ	**Maungataniwha**	**29.63**	**163**	P	**P**	13 34 07.7	-0.1
BKZ	**Black Stump Fm**	**29.82**	**163**	P	**P**	13 34 10.1	+0.6
NMHZ	**Naumai**	**29.85**	**163**	P	**P**	13 34 11.0	+1.3
BHHZ	**Black Hill Sta**	**30.01**	**164**	P	**P**	13 34 12.1	+1.0
KWHZ	**Kaweka Forest**	**30.04**	**164**	P	**P**	13 34 12.5	+1.1
ASAR	**Alice Springs**	**33.15**	**243**	P	**P**	13 34 37.8	-1.1
	1.0nm,0.9s,baz=72,slow=11,SNR=4.4						
ASAR				PcP	**PcP**	13 37 18.0	-0.5
	0.3nm,0.9s,baz=84,slow=2.4,SNR=1.9						
	1.0nm,0.9s						
SONM	**Songino Array**	**78.56**	**324**	P	**P**	13 40 01.3	-0.2
	0.4nm,0.5s,baz=140,slow=5.1,SNR=4.0						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**83.14**	**18**	P	**P**	13 40 24.6	-0.7
	0.4nm,0.6s,baz=232,slow=5.3,SNR=9.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**93.46**	**317**	P	**P**	13 41 14.8	-0.3
	0.6nm,0.6s,baz=99,slow=6.1,SNR=8.9						
	0.6nm,0.6s						

*STR **26** 13:31:35.9±1.4, 47°N±7°×1°2E±1°1, h10km, MLv3.4/17, Error ellipse: s-maj=0.0km s-min=0.0km az=100.0, preliminary*
*VIE **26** 13:31:36.3±0.1, 47°.29N×11°.42E, h4km, mb2.3/20, ml2.8/21, Error ellipse: s-maj=1.1km s-min=0.8km az=178.0, felt 4 ems98 at Innsbruck / Tyrol*
*LDG **26** 13:31:36.7±0.2, 47°.28N×11°.46E, h10km, Ml3.0/12, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*BGR **26** 13:31:37.5±0.2, 47°.30N×11°.46E, h10km, ML2.7/16, Error ellipse: s-maj=3.3km s-min=2.2km az=162.0*
*PRU **26** 13:31:38.4, 47°.34N×11°.55E, h1km, Innsbruck*
*ROM **26** 13:31:38.6±0.5, 47°.20N±0°.03×11°.41E±0°.03, h10km, ML2.5/59, Error ellipse: s-maj=3.5km s-min=2.1km az=357.0*

ISC 26 13:31:36.4±0.8, 47°.31N±0°.02×11°.42E±0°.01, h8km±6km, n138, σ1§46/194, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATA	**Walderalm**	**0.11**	**76**	*e*Pg	**Pg**	**13 31 38.7**	**-0.4**
	87nm,0.1s,SNR=1958						
WATA				*e*Sg	**Sg**	13 31 40.7	-0.3
	2µm,0.2s						
WTTA	**Wattenberg**	**0.16**	**107**	*e*Pg	**Pg**	13 31 39.6	-0.2
	186nm,0.1s,SNR=788						
WTTA				*i* Sg	**Sg**	13 31 42.0	-0.2
	413nm,0.2s						
WTTA	**Wattenberg**	**0.16**	**107**	AML	AML		
	comp=E,3860µm,0.6s						
WTTA				AML	AML		
	comp=N,2090µm,0.9s						
WTTA	**Wattenberg**	**0.16**	**107**	*e*Pg	**Pg**	13 31 39.7	-0.2
	SNR=487						
WTTA				*e*Sg	**Sg**	13 31 42.0	-0.2
	SNR=7.6						
SQTA	**Sankt Quirin**	**0.17**	**238**	*i* Pg	**Pg**	13 31 39.6	-0.3
	comp=N,98nm,0.1s,SNR=627						
SQTA				*i* Sg	**Sg**	13 31 42.1	-0.3
	comp=N,772nm,0.2s						
MOTA	**Moosalm**	**0.22**	**280**	*i* Pg	**Pg**	13 31 40.4	-0.4
	comp=N,39nm,0.1s,SNR=280						
MOTA				*i* Sg	**Sg**	13 31 44.0	+0.1
	comp=N,161nm,0.1s						
PART	**Garmisch-Parte**	**0.28**	**312**	*e*Pg	**Pg**	13 31 41.5	-0.5
	SNR=30						
PART				*e*Sg	**Sg**	13 31 46.2	+0.5
	SNR=3.9						

ROSI	**Rosskopf**	**0.38**	**181**	P	**Pg**	13 31 43.7	**-0.3**
ROSI				S	**Sg**	13 31 49.0	**0.0**
ROSI				AML	AML		
	comp=N,1445µm,0.4s						
ROSI				AML	AML		
	comp=E,569µm,0.6s						
ROSI				AML	AML		
	comp=N,1445µm,1.6s						
RETA	**Reutte**	**0.48**	**292**	*e*Pg	**Pg**	13 31 44.7	**-1.0**
	comp=N,13nm,0.2s,SNR=35						
RETA				*i* Sg	**Sg**	13 31 52.6	**+0.6**
	comp=N,37nm,0.1s						
FETA	**Feichten**	**0.55**	**239**	*e*Pg	**Pg**	13 31 46.5	**-0.6**
	comp=N,5.7nm,0.1s,SNR=54						
FETA				*e*Sg	**Sg**	13 31 53.9	**-0.5**
	comp=N,16nm,0.1s						
OBER	**Oberstdorf**	**0.77**	**278**	*e*Sg	**Sb**	13 32 03.3	**+0.6**
	SNR=2.3						
LESA	**Schwarzleotal**	**0.86**	**82**	*i* Pg	**Pg**	13 31 52.4	**-0.6**
	comp=N,2.6nm,0.2s						
LESA				*e*Sg	**Sb**	13 32 05.5	**+0.1**
	comp=N,6.2nm,0.1s						
MOSI	**Grossmontoni**	**0.91**	**221**	P	**Pg**	13 31 53.8	**-0.2**
MOSI				AML	AML		
	comp=E,341µm,0.3s						
MOSI				AML	AML		
	comp=N,373µm,1.2s						
MOSI				AML	AML		
	comp=N,373µm,0.8s						
ABTA	**Abfaltersbach**	**0.94**	**126**	*i* Pg	**Pg**	13 31 53.9	**-0.5**
	comp=N,0.8nm,0.1s						
ABTA				*i* Sg	**Sg**	13 32 05.9	**-0.6**
	comp=N,10.0nm,0.2s,SNR=6.5						
OZOL	**Ozolo**	**0.94**	**196**	P	**Pg**	13 31 54.2	**-0.2**
OZOL				AML	AML		
	comp=E,583µm,1.6s						
OZOL				AML	AML		
	comp=E,584µm,1.6s						
OZOL				AML	AML		
	comp=N,294µm,0.4s						
OZOL				AML	AML		
	comp=E,584µm,0.4s						
UBR	**Ueberruh**	**0.96**	**293**	*e*Pg	**Pn**	13 31 57.4	**+1.1**
	SNR=38						
UBR				*e*Sg	**Sn**	13 32 10.2	**+0.1**
	SNR=3.3						
CARE	**Lago del Cares**	**1.01**	**210**	P	**Pg**	13 31 55.2	**-0.7**
CARE				AML	AML		
	comp=E,115µm,1.5s						
CARE				AML	AML		
	comp=N,135µm,0.2s						
CARE				AML	AML		
	comp=E,114µm,1.5s						
CARE				AML	AML		
	comp=N,134µm,0.2s						
CARE				AML	AML		
	comp=E,114µm,0.5s						
DAVA	**Damuels**	**1.05**	**269**	*i* Pg	**Pg**	13 31 56.3	**-0.2**
	comp=E,76nm,0.1s						
DAVA				*e*Sg	**Sn**	13 32 12.5	**+0.1**
	comp=E,54nm,0.2s						
DAVA	**Damuels**	**1.05**	**269**	*e*Pn	**Pb**	13 31 57.3	**+0.5**
	SNR=72						
DAVA				*e*Pg	**Pn**	13 31 59.2	**+1.7**
	SNR=72						
FUORN	**Ofenpass-Fuorn**	**1.05**	**229**	AML	AML		
	comp=E,184µm,0.3s						
FUORN				AML	AML		
	comp=N,114µm,0.2s						
BRMO	**Bormio**	**1.10**	**221**	P	**Pg**	13 31 56.7	**-0.8**
BRMO				AML	AML		
	comp=E,132µm,0.2s						
BRMO				AML	AML		
	comp=N,228µm,0.2s						
FVI	**Forni Avoltri**	**1.18**	**127**	P	**Pg**	13 31 58.5	**-0.4**
FVI				AML	AML		
	comp=N,136µm,1.2s						
FVI				AML	AML		
	comp=E,168µm,0.5s						
FVI				AML	AML		
	comp=N,136µm,0.8s						
DAVOX	**Davos/Dischmat**	**1.18**	**244**	AML	AML		
	comp=N,682µm,0.5s						
DAVOX				AML	AML		
	comp=E,650µm,0.2s						
CIMO	**Cimolais**	**1.22**	**145**	AML	AML		
	comp=E,56µm,0.4s						
CIMO				AML	AML		
	comp=N,85µm,0.7s						
PANI	**Panarotta**	**1.26**	**183**	*e*P	**Pg**	13 32 00.3	**-0.3**
PANI	**Panarotta**	**1.26**	**183**	P	**Pg**	13 32 00.3	**-0.3**
PANI				AML	AML		
	comp=E,146µm,1.2s						
PANI				AML	AML		
	comp=N,172µm,0.2s						
PANI				AML	AML		
	comp=E,146µm,1.2s						
PANI				AML	AML		
	comp=N,172µm,0.2s						
GAGG	**Gaggia**	**1.27**	**195**	P	**Pn**	13 32 00.0	**-0.5**
GAGG				AML	AML		
	comp=E,122µm,1.4s						
GAGG				AML	AML		
	comp=N,102µm,1.0s						
GAGG				AML	AML		
	comp=E,122µm,0.6s						
CTI	**Castel Tesino**	**1.27**	**173**	P	**Pn**	13 32 00.3	**-0.2**
CTI				AML	AML		
	comp=E,310µm,0.2s						
CTI				AML	AML		
	comp=N,424µm,0.2s						
ZOU	**Zoufplan**	**1.30**	**125**	AML	AML		
	comp=E,200µm,1.4s						
ZOU				AML	AML		
	comp=N,129µm,0.4s						
CLUD	**Cludinico**	**1.32**	**130**	AML	AML		
	comp=E,64µm,1.3s						
CLUD				AML	AML		
	comp=E,64µm,0.7s						
CLUD				AML	AML		
	comp=N,82µm,0.6s						
KBA	**Koelnbreinsper**	**1.33**	**99**	*e*Pg	**Pn**	13 32 01.2	**-0.2**
	comp=N,4.4nm,0.2s,SNR=14						
KBA				*e*Sg	**Sn**	13 32 19.9	**+0.4**
	comp=N,9.8nm,0.2s						
KBA	**Koelnbreinsper**	**1.33**	**99**	*e*Pn	**Pn**	13 32 01.2	**-0.2**
	SNR=7.6						
STAL	**STALIGIAL**	**1.38**	**139**	P	**Pb**	13 32 02.7	**+0.3**
STAL				AML	AML		
	comp=E,262µm,1.3s						
STAL				AML	AML		
	comp=N,362µm,0.2s						
STAL				AML	AML		
	comp=N,226µm,0.2s						
STAL				AML	AML		
	comp=E,254µm,0.3s						
LUSI	**Trento, Gardas**	**1.39**	**194**	P	**Pn**	13 32 02.7	**+0.6**
LUSI				AML	AML		
	comp=N,233µm,0.2s						
LUSI				AML	AML		
	comp=E,120µm,0.2s						
MABI	**Malga Bissina**	**1.40**	**207**	P	**Pn**	13 32 02.2	**-0.1**
MABI				AML	AML		
	comp=E,66µm,0.8s						
MABI				AML	AML		
	comp=N,160µm,0.7s						
MABI				AML	AML		
	comp=N,160µm,1.3s						
MABI				AML	AML		
	comp=E,66µm,1.2s						
PLONS	**Plons/SG**	**1.41**	**260**	AML	AML		
	comp=E,150µm,0.9s						
PLONS				AML	AML		
	comp=N,192µm,0.4s						
PLONS				AML	AML		
	comp=N,192µm,0.4s						
PLONS	**Plons/SG**	**1.41**	**260**	*e*Pg	**Pg**	13 32 04.4	**+0.9**
	SNR=2.5						
PLONS				*e*Sg	**Sg**	13 32 24.4	**+2.5**
	SNR=6.1						
DOSS	**Dosso del Somm**	**1.44**	**186**	P	**Pn**	13 32 03.3	**+0.5**
DOSS				AML	AML		
	comp=E,252µm,0.9s						
DOSS				AML	AML		
	comp=N,370µm,1.4s						
DOSS				AML	AML		
	comp=E,334µm,0.3s						
DOSS				AML	AML		
	comp=N,210µm,0.9s						
RONC	**Roncone**	**1.44**	**203**	P	**Pn**	13 32 03.4	**+0.5**
NORI	**Noerdlinger Ri**	**1.51**	**340**	*e*Pn	**Pn**	13 32 03.6	**-0.2**
	SNR=3.6						
NORI				*e*Pg	**Pb**	13 32 05.4	**+0.7**
	SNR=26						
NORI				*e*Sn	**Sn**	13 32 23.9	**+0.3**
	SNR=1.4						
NORI				*e*Sg	**Sg**	13 32 26.1	**+1.2**
	SNR=9.6						
VARA	**Varagna**	**1.53**	**194**	P	**Pb**	13 32 05.5	**+0.5**
VARA				AML	AML		
	comp=E,179µm,1.3s						
VARA				AML	AML		
	comp=N,376µm,0.3s						
VARA				AML	AML		
	comp=E,388µm,0.3s						
VARA				AML	AML		
	comp=N,154µm,1.3s						
VARA				AML	AML		
	comp=N,154µm,0.7s						
VARA				AML	AML		
	comp=E,388µm,0.3s						
BIOA	**Bad Ischl, Aus**	**1.55**	**75**	*i* Pg	**Pg**	13 32 06.3	**+0.1**
	comp=E,4.9nm,0.3s						
BIOA				*e*Sg	**Sg**	13 32 28.2	**+1.8**
	comp=E,5.7nm,0.2s						
ACOM	**Acomizza, Ital**	**1.63**	**117**	P	**Pg**	13 32 07.4	**-0.1**
ACOM				AML	AML		
	comp=N,196µm,0.8s						
ACOM				AML	AML		
	comp=E,219µm,1.2s						
ACOM				AML	AML		
	comp=N,196µm,0.8s						
ACOM				AML	AML		
	comp=N,194µm,0.8s						
ACOM				AML	AML		
	comp=E,219µm,0.8s						
ACOM				AML	AML		
	comp=E,204µm,0.2s						
TUE	**Stuetta**	**1.65**	**240**	P	**Pn**	13 32 06.8	**+1.0**
TUE				AML	AML		
	comp=E,138µm,1.5s						
TUE				AML	AML		
	comp=N,121µm,1.3s						
TUE				AML	AML		
	comp=N,121µm,1.3s						
TUE				AML	AML		
	comp=N,144µm,0.3s						
TUE				AML	AML		
	comp=E,154µm,1.5s						
TUE				AML	AML		
	comp=N,144µm,1.7s						
MBAL	**Monte Baldo -**	**1.66**	**194**	P	**Pb**	13 32 07.0	**-0.2**
MBAL				AML	AML		
	comp=E,128µm,0.1s						
MBAL				AML	AML		
	comp=N,152µm,0.9s						
MBAL				AML	AML		
	comp=E,128µm,0.1s						
MYKA	**Terra Mystica**	**1.67**	**113**	*i* Pg	**Pg**	13 32 09.0	**+0.6**
	comp=E,6.2nm,0.2s						
MYKA				*e*Sg	**Sg**	13 32 30.6	**+0.7**
	comp=E,27nm,0.4s						
ROVR	**Rover Verones**	**1.68**	**188**	P	**Pb**	13 32 07.5	**-0.1**
ROVR				AML	AML		
	comp=E,44µm,1.6s						
ROVR				AML	AML		
	comp=E,44µm,0.4s						
ROVR				AML	AML		
	comp=N,92µm,0.2s						
WILA	**Wila**	**1.71**	**274**	*e*Sg	**Sg**	13 32 32.7	**+1.4**
	SNR=6.7						
GUT	**Gutenstein**	**1.73**	**297**	P	**Pb**	13 32 08.5	**0.0**
GUT	**Gutenstein**	**1.73**	**297**	S	**Sg**	13 32 33.0	**+1.0**
SALO	**Salr**	**1.80**	**200**	P	**Pg**	13 32 10.8	**-0.1**
ZUR	**Degenried**	**1.93**	**273**	S	**Sg**	13 32 39.5	**+1.1**
MDI	**Monti di Nese**	**1.93**	**218**	P	**Pb**	13 32 12.9	**+1.0**
MOA	**Molln**	**2.00**	**73**	*e*Pg	**Pb**	13 32 13.5	**+0.4**
	comp=N,1.0nm,0.1s						
MOA				*e*Sn	**Sn**	13 32 35.9	**+0.1**
	comp=N,5.0nm,0.1s						
MOA	**Molln**	**2.00**	**73**	*e*Pg	**Pb**	13 32 13.6	**+0.5**
	SNR=12						
MOA				*e*Sg	**Sg**	13 32 41.9	**+1.1**
	SNR=4.8						
SLE	**Schleitheim**	**2.03**	**284**	S	**Sg**	13 32 42.4	**+0.7**
SLE	**Schleitheim**	**2.03**	**284**	P	**Pb**	13 32 14.6	**+1.0**
SLE	**Schleitheim**	**2.03**	**284**	*e*Sg	**Sg**	13 32 42.0	**+0.3**
	SNR=3.9						
FUSIO	**Fusio**	**2.07**	**247**	AML	AML		
	comp=N,121µm,1.0s						
FUSIO				AML	AML		
	comp=E,101µm,0.3s						
WET	**Wetzell**	**2.08**	**27**	*e*Pn	**Pn**	13 32 11.9	**+0.3**
	SNR=20						
WET				*e*Sg	**Sg**	13 32 43.0	**-0.2**
	SNR=1.1						
BNALP	**Bannalp**	**2.09**	**259**	AML	AML		
	comp=N,123µm,0.4s						
BNALP				AML	AML		
	comp=E,68µm,0.5s						
GEC2	**GERESS Array S**	**2.17**	**44**	*e*Pn	**Pn**	13 32 13.3	**+0.5**
	SNR=4.7						
GEC2				*e*Sg	**Sg**	13 32 46.1	**0.0**
	SNR=2.7						
SULZ	**Cheisacher**	**2.25**	**277**	P	**Pn**	13 32 14.3	**+0.3**
SULZ	**Cheisacher**	**2.25**	**277**	S	**Sg**	13 32 48.7	**-0.2**
SULZ	**Cheisacher**	**2.25**	**277**	*e*Sg	**Sg**	13 32 49.0	**+0.2**
	SNR=2.5						
OBKA	**Obir**	**2.29**	**109**	Pg	**Pb**	13 32 18.5	**+0.4**
	comp=E,6.3nm,0.3s						
OBKA				*e*Sg	**Sg**	13 32 49.0	**-1.0**
	comp=E,18nm,0.5s						
OBKA	**Obir**	**2.29**	**109**	*e*Pg	**Pb**	13 32 19.3	**+1.3**
	SNR=4.0						
OBKA				*e*Sg	**Sg**	13 32 49.5	**-0.5**
	SNR=2.2						
BFO	**Black Forest**	**2.32**	**297**	*e*Pn	**Pn**	13 32 16.1	**+1.3**
	SNR=2.9						
BFO				*e*Sn	**Sn**	13 32 42.5	**-1.0**
	SNR=1.2						
BFO				*e*Sg	**Sg**	13 32 51.7	**+0.8**
	SNR=1.7						
KHC	**Kasperske Hory**	**2.33**	**38**	*e*PN	**Pn**	13 32 16.0	**+1.0**
KHC				*e*SG	**Sg**	13 32 50.7	**-0.4**
	comp=E,36nm,0.4s						
VARE	**Varese**	**2.33**	**233**	P	**Pb**	13 32 18.1	**-0.5**
VARE				AML	AML		
	comp=E,61µm,0.7s						
VARE				AML	AML		
	comp=N,86µm,0.5s						
FELD	**Feldberg im Sc**	**2.38**	**285**	P	**Pn**	13 32 17.2	**+1.4**
GRF	**Grafenberg Arr**	**2.39**	**357**	*e*Pg	**Pg**	13 32 23.0	**+0.9**
	SNR=3.0						
GRF				*e*Sg	**Sg**	13 32 52.1	**-1.0**
	SNR=4.4						
KIZ	**Kirchzarten**	**2.45**	**287**	P	**Pn**	13 32 17.8	**+1.1**
KIZ	**Kirchzarten**	**2.45**	**287**	S	**Sg**	13 32 55.2	**0.0**
CKRC	**Cesky Krumlov**	**2.46**	**51**	*e*SG	**Sg**	13 32 54.4	**-1.0**
OPP	**Oppenau**	**2.48**	**300**	P	**Pn**	13 32 17.6	**+0.6**
ROTZ	**Rotzenmuhle**	**2.52**	**12**	*e*Pn	**Pn**	13 32 16.6	**-0.9**
	SNR=7.2						
ROTZ				*e*Sn	**Sn**	13 32 47.6	**-0.7**
	SNR=1.9						
ROTZ				*e*Sg	**Sg**	13 32 56.4	**-0.8**
	SNR=5.6						
ENDD	**Endenburg**	**2.53**	**281**	P	**Pn**	13 32 19.1	**+1.4**
ENDD	**Endenburg**	**2.53**	**281**	S	**Sg**	13 32 57.0	**-0.5**
BALST	**Balsthal**	**2.53**	**272**	P	**Pn**	13 32 19.8	**+2.0**
BALST	**Balsthal**	**2.53**	**272**	S	**Sn**	13 32 50.5	**+1.6**
BALST	**Balsthal**	**2.53**	**272**	*e*Pn	**Pn**	13 32 19.8	**+2.0**
	SNR=2.1						
BALST				*e*Sg	**Sg**	13 32 58.0	**+0.3**
	SNR=2.7						
SOKA	**Soboth**	**2.55**	**103**	*e*Pn	**Pn**	13 32 18.2	**+0.1**
	comp=N,1.5nm,0.2s						
SOKA				*e*Sn	**Sn**	13 32 51.2	**+1.8**
	comp=N,2.9nm,0.4s						
BABA	**Baden-Baden-Ne**	**2.58**	**304**	P	**Pn**	13 32 18.2	**-0.3**
MANZ	**Manzenberg**	**2.72**	**9**	*e*Pn	**Pn**	13 32 19.3	**-1.1**
	SNR=2.1						
MANZ				*e*Sn	**Sn**	13 32 52.6	**-0.8**
	SNR=2.8						
MANZ				*e*Sg	**Sg**	13 33 04.1	**+0.4**
	SNR=1.5						
ARSA	**Arzberg**	**2.80**	**90**	*e*Pn	**Pn**	13 32 21.6	**+0.2**
	comp=N,1.2nm,0.2s						
ARSA				*e*Sn	**Sn**	13 32 56.7	**+1.4**
	comp=N,1.3nm,0.2s						
CDF	**Champ du Feu**	**3.00**	**293**	*e*P	**Pn**	13 32 25.3	**+1.0**
CDF	**Champ du Feu**	**3.00**	**293**	*e*Pg	**Pg**	13 32 34.6	**+0.8**
CDF				*e*Sg	**Sg**	13 33 12.3	**-0.4**
	comp=N,10nm,0.3s						
NKC	**Novy Kostel**	**3.00**	**13**	*e*PN	**Pn**	13 32 27.4	**+3.1**
NKC				*e*SG	**Sg**	13 33 12.5	**-0.4**
	comp=N,29nm,0.4s						
NKC	**Novy Kostel**	**3.00**	**13**	*e*Pn	**Pn**	13 32 23.4	**-0.8**
	SNR=1.9						
NKC				*e*Sg	**Sg**	13 33 12.6	**-0.3**
	SNR=3.3						
ECH	**Echery**	**3.01**	**289**	P	**Pn**	13 32 25.0	**+0.6**
DIX	**Grande Dixence**	**3.02**	**247**	P	**Pn**	13 32 27.2	**+2.5**
WERN	**Wernitzgruen**	**3.05**	**12**	*e*Pn	**Pn**	13 32 23.8	**-1.1**
	SNR=1.7						
WERN				*e*Sg	**Sg**	13 33 13.4	**-0.8**
	SNR=3.4						
CONA	**Conrad Observa**	**3.07**	**77**	*i* Pn	**Pn**	13 32 25.3	**+0.1**
	comp=N,0.5nm,0.2s						
CONA				*i* Sn	**Sn**	13 33 04.3	**+2.1**
	comp=N,2.1nm,0.2s						
TRIB	**Obertriebel**	**3.08**	**9**	*e*Sn	**Sn**	13 33 01.4	**-0.9**
	SNR=2.5						
TRIB				*e*Sg	**Sg**	13 33 15.4	**0.0**
	SNR=3.5						
GUNZ	**Gunzen**	**3.12**	**11**	*e*Pn	**Pn**	13 32 24.7	**-1.1**
	SNR=1.9						
GUNZ				*e*Sn	**Sn**	13 33 01.9	**-1.3**
	SNR=1.8						
GUNZ				*e*Sg	**Sg**	13 33 17.0	**+0.5**
	SNR=4.1						
HINF	**Hinteralfeld**	**3.13**	**281**	*e*P	**Pn**	13 32 27.1	**+1.1**
HINF				*e*Sn	**Sn**	13 33 01.3	**-2.3**
HINF				*e*Sg	**Sg**	13 33 16.5	**-0.5**
	comp=N,6.2nm,0.2s						
MULD	**Muldenberg**	**3.17**	**11**	*e*Sg	**Sg**	13 33 19.4	**+1.2**
	SNR=2.9						
TANN	**Tannenbergstha**	**3.18**	**12**	*e*Sg	**Sg**	13 33 18.5	**-0.1**
	SNR=3.5						
AIGLE	**Aigle**	**3.21**	**254**	P	**Pn**	13 32 28.7	**+1.6**
AIGLE	**Aigle**	**3.21**	**254**	S	**Sn**	13 33 06.7	**+1.0**
PLN	**Plauen**	**3.22**	**8**	*e*Pn	**Pn**	13 32 27.4	**+0.3**
	SNR=1.5						
PLN				*e*Sg	**Sg**	13 33 19.6	**0.0**
	SNR=2.5						
CHMF	**Charmoille**	**3.25**	**271**	P	**Pn**	13 32 29.3	**+1.7**
CHMF				S	**Sn**	13 33 09.9	**+3.5**
RONF	**Ronchamp**	**3.26**	**279**	P	**Pn**	13 32 29.1	**+1.3**
HWTS	**Hohenwarte Tal**	**3.29**	**1**	*e*Sn	**Sn**	13 33 06.4	**-1.0**
	SNR=3.0						
RONA	**Rosalia, Austr**	**3.33**	**81**	*i* Pn	**Pn**	13 32 30.7	**+2.0**
	comp=N,1.0nm,0.2s						
RONA				*i* Sn	**Sn**	13 33 10.9	**+2.4**
	comp=N,2.9nm,0.3s						
MOX	**Moxa**	**3.34**	**2**	*e*Pn	**Pn**	13 32 27.9	**-1.0**
	SNR=1.8						
PRU	**Pruhonice**	**3.39**	**37**	*e*SG	**Sg**	13 33 22.1	**-3.1**
	comp=N,11nm,0.6s						
LSD	**Lago del Serru**	**3.49**	**240**	P	**Pn**	13 32 35.0	**+3.8**
HAU	**Haudompre**	**3.50**	**283**	*e*P	**Pn**	13 32 32.4	**+1.4**
HAU				*e*Sg	**Sg**	13 33 28.2	**-0.4**
	comp=N,17nm,0.4s						
BOUC	**Bouclans**	**3.51**	**271**	P	**Pn**	13 32 32.5	**+1.2**
TNS	**Taunus Mts**	**3.52**	**327**	*e*Pn	**Pn**	13 32 32.4	**+1.1**
	SNR=3.7						
HSKC	**Hora Svate Kat**	**3.56**	**21**	*e*SG	**Sg**	13 33 29.6	**-1.0**
	comp=N,17nm,0.4s						
GIMEL	**St. Georges /**	**3.61**	**260**	P	**Pn**	13 32 34.7	**+1.9**
UBBA	**Unterbreizbach**	**3.63**	**346**	*e*Pn	**Pn**	13 32 33.3	**+0.6**
	SNR=2.2						
ABH	**Alteburg**	**3.63**	**316**	P	**Pn**	13 32 33.6	**+0.6**
RSL	**Roselend**	**3.69**	**246**	P	**Pn**	13 32 36.4	**+2.7**
RSL				S	**Sn**	13 33 19.1	**+1.7**
CABF	**La Chapelle**	**3.72**	**261**	*e*P	**Pn**	13 32 35.9	**+1.8**
CABF				*e*Sg	**Sg**	13 33 34.7	**-1.0**
	comp=N,5.2nm,0.3s						
KRUC	**Moravsky**	**3.76**	**60**	*e*PN	**Pn**	13 32 35.6	**+0.9**
KRUC				*e*SG	**Sg**	13 33 34.5	**-2.7**
CANO	**Canova, Maglio**	**3.82**	**217**	P	**Pn**	13 32 38.3	**+2.8**
BRG	**Berggiesshubel**	**3.93**	**24**	Pn	**Pn**	13 32 38.1	**+1.1**
BRG				Amp		13 32 38.5	
	comp=Z,2.7nm,0.6s						
BRG	**Berggiesshubel**	**3.93**	**24**	Sn	**Sn**	13 33 23.4	**+0.1**
BRG				Sg	**Sg**	13 33 42.0	**-0.7**
BRG				Amp		13 33 47.3	
	comp=Z,7.5nm,0.5s						
GBOS	**Grotte di Boss**	**3.96**	**221**	P	**Pn**	13 32 40.5	**+3.0**
VRAC	**Vranov**	**3.99**	**58**	*e*SG	**Sg**	13 33 42.1	**-2.4**
CLL	**Collm**	**4.13**	**14**	*e*Pn	**Pn**	13 32 39.0	**-0.8**
CLL				*e*Sg	**Sg**	13 33 48.0	**-1.1**
	comp=Z,9.0nm,0.6s						
MBDF	**Montbardon**	**4.14**	**233**	*e*P	**Pn**	13 32 41.6	**+1.6**
MBDF				*e*Sn	**Sn**	13 33 24.6	**-4.0**
	comp=Z,5.5nm,0.4s						
SBF	**Sospel**	**4.44**	**220**	*e*P	**Pn**	13 32 46.5	**+2.5**
DPC	**Dobruska-Polom**	**4.44**	**45**	*e*SG	**Sg**	13 33 57.2	**-1.8**
ORIF	**Oris-en-Rattie**	**4.53**	**240**	*e*P	**Pn**	13 32 47.8	**+2.5**
ORIF				*e*Sn	**Sn**	13 33 33.9	**-4.3**
	comp=Z,3.5nm,0.3s						
LOR	**Lormes**	**5.14**	**272**	*e*Pg	**Pg**	13 33 12.8	**-2.1**
LOR				*e*Sg	**Sg**	13 34 19.3	**-2.2**
	comp=Z,3.6nm,0.3s						
SMF	**Signal de Mont**	**5.23**	**265**	*e*P	**Pn**	13 32 55.6	**+0.8**
SMF				*e*Sn	**Sn**	13 33 50.6	**-4.6**
SMF				*e*Sg	**Sg**	13 34 21.5	**-2.7**
	comp=Z,2.9nm,0.4s						
LMR	**La Mourre**	**5.27**	**223**	*e*P	**Pn**	13 32 58.0	**+2.6**
VIVF	**Saint-Julien-l**	**5.29**	**245**	*e*P	**Pn**	13 32 56.9	**+1.2**
VIVF				*e*Sn	**Sn**	13 33 52.2	**-4.7**
	comp=Z,3.8nm,0.3s						
SSF	**Saint Saulge**	**5.40**	**270**	*e*Sn	**Sn**	13 33 54.6	**-4.8**
SSF				*e*Sg	**Sg**	13 34 27.1	**-2.6**
	comp=Z,6.6nm,0.6s						
AVF	**Avril sur Loir**	**5.54**	**268**	*e*P	**Pn**	13 33 00.3	**+1.3**
BGF	**Bois d'Agland**	**5.92**	**266**	*e*P	**Pn**	13 33 05.6	**+1.3**
LASF	**Ste Croix**	**6.20**	**241**	*e*P	**Pn**	13 33 10.1	**+1.9**
LASF				*e*Sn	**Sn**	13 34 14.5	**-4.8**
	comp=Z,7.4nm,0.4s						
TCF	**Toulx Ste Croi**	**6.40**	**264**	*e*P	**Pn**	13 33 12.1	**+1.1**

*NOU **26** 13:31:55.6, 17°.66S×177°.52W, h693km, mb4.4/15, Fiji Islands Region*
*IDC **26** 13:31:57.8±2.9, 18°.05S×178°.18W, h601km±35km, mb3.6/17, mbtmp4.5/18, Error ellipse: s-maj=18.3km s-min=13.6km az=73.0*
*NEIC **26** 13:31:59±2.6, 18°.2S±0°.1×178°.2W±0°.1, h609km±7km, mb4.3/93, Error ellipse: s-maj=18.5km s-min=14.6km az=126.0*

ISC 26 13:31:58.4±0.4, 18°.07S±0°.08×178°.29W±0°.08, h600km, n193, σ1°07/186, mb4.3/63, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**2.06**	**311**	P	P	13 33 20.1	+7.1
DGTI	**Dogotuki**	**2.58**	**313**	P	P	13 33 21.9	+6.5
AFI	**Afiamalu**	**7.50**	**57**	P	**P**	13 33 54.6	**+1.4**
NIUE	**Niue**	**7.99**	**99**	P	**P**	13 34 00.7	**+3.0**
FUNA	**Funafuti**	**9.80**	**345**	P	**P**	13 34 17.0	**+1.7**
LIFNC	**LIFOU**	**13.92**	**257**	P	**P**	13 34 58.2	**+1.7**
PINNC	**Pines Island,**	**14.12**	**249**	P	**P**	13 35 00.4	**+1.9**
DZM	**Mont Dzumac**	**14.89**	**252**	P	**P**	13 35 07.3	**+1.7**
DZM	**Mont Dzumac**	**14.89**	**252**	P	**P**	13 35 09.0	**+3.3**
DZM	**Mont Dzumac**	**14.89**	**252**	P	**P**	13 35 06.8	**+1.1**
	15nm,0.8s,baz=88,slow=16,SNR=11						
ONTNC	**Ouen Toro**	**14.93**	**251**	P	**P**	13 35 07.7	**+1.7**
KOUNC	**Ko

KHZ	Kahutara	25.25	194	P		P	13 36 37.4	-1.1
	comp=Z,30nm,0.7s							
MQZ	McQueen's Vall	26.68	195	P		P	13 36 50.7	-0.4
JCZ	Jackson Bay	28.12	200	P		P	13 37 03.5	-0.3
	comp=Z,54nm,1.4s							
WKZ	Wanaka	28.72	199	P		P	13 37 08.6	-0.4
EIDS	Eidsvold	29.32	250	P		P	13 37 14.5	+0.1
EIDS	Eidsvold	29.32	250	P		P	13 37 15.1	+0.7
	comp=Z,28nm,2.0s							
ARMA	Armidale	29.96	240	P		P	13 37 21.2	+1.2
ARMA	Armidale	29.96	240	P		P	13 37 20.7	+0.7
MGCD	Mangrove Creek	31.30	235	P		P	13 37 31.7	+0.5
CNB	Canberra Magne	33.42	233	P		P	13 37 50.0	+0.8
CTA	Charters Tower	33.53	261	P		P	13 37 50.6	+0.3
	comp=Z,12nm,0.6s,baz=98,slow=9.7,SNR=24							
	comp=Z,12nm,0.6s							
CTAO	Charters Tower	33.53	261	P		P	13 37 50.6	+0.3
CTAO				IAmb	IAmb		13 37 51.8	
	comp=Z,13nm,0.8s							
CAN	Canberra	33.70	233	P		P	13 37 52.5	+1.1
CAN	Canberra	33.70	233	P		P	13 37 52.2	+0.7
PMG	Port Moresby	34.60	280	P		P	13 37 59.8	+0.6
PMG	Port Moresby	34.60	280	P		P	13 37 59.6	+0.4
	comp=Z,25nm,0.9s,baz=88,slow=5.7,SNR=9.4							
	comp=Z,25nm,0.9s							
CMSA	Cobar Meteorol	35.17	241	P		P	13 38 02.5	-1.2
MTSU	Mount Surprise	35.51	264	P		P	13 38 05.7	-1.0
TOO	Toolangi	37.16	231	P		P	13 38 21.1	+1.1
TOO				IAmb	IAmb		13 38 21.6	
	comp=Z,11nm,0.8s							
COEN	Coen	37.22	271	P		P	13 38 21.9	+1.1
MANU	Manus Island	37.27	291	P		P	13 38 22.6	+1.5
MANU				IAmb	IAmb		13 38 22.9	
	comp=Z,9.7nm,0.8s							
STKA	Stephens Creek	38.65	241	P		P	13 38 33.1	+1.0
STKA	Stephens Creek	38.65	241	P		P	13 38 32.8	+0.7
	comp=Z,9.9nm,0.5s,baz=90,slow=9.5,SNR=31							
	comp=Z,9.9nm,0.5s							
BBOO	Buckleboo	43.43	241	P		P	13 39 10.0	+0.2
JCUZ	Jacuzzi	43.63	33	P		P	13 39 12.2	+0.6
ASAR	Alice Springs	44.86	254	P		P	13 39 21.1	+0.1
	comp=Z,24nm,0.4s,baz=91,slow=8.1,SNR=628							
	comp=Z,24nm,0.4s							
FORT	Forrest	50.04	245	P		P	13 39 58.8	-0.7
MBWA	Marble Bar	58.15	256	P		P	13 40 55.7	-0.7
MMRI	Maumere	58.42	271	P		P	13 40 57.4	-0.9
VNDA	Vanda	60.29	185	P		P	13 41 10.6	+0.9
VNDA	Vanda	60.29	185	P		P	13 41 10.2	+0.5
	comp=Z,1.3nm,0.9s,baz=23,slow=8.0,SNR=1.6							
	comp=Z,1.3nm,0.9s							
MJAR	Matsushiro Arr	68.11	323	P		P	13 41 59.1	-0.6
	comp=Z,1.8nm,0.6s,baz=146,slow=6.0,SNR=4.1							
	comp=Z,1.8nm,0.6s							
UGM	Wanagama	69.76	268	P		P	13 42 09.4	-0.7
ASAJ	Asahikawa	71.47	331	P		P	13 42 19.4	-0.1
	comp=Z,4.8nm,0.9s,baz=334,slow=18,SNR=1.9							
	comp=Z,4.8nm,0.9s							
QSPA	South Pole Qui	71.98	180	P		P	13 42 22.2	-0.2
QSPA	South Pole Qui	71.98	180	P		P	13 42 22.1	-0.2
	comp=Z,3.9nm,0.7s,baz=7.7,slow=0.5,SNR=25							
	comp=Z,3.9nm,0.7s							
PEA0B	Petropavlovsk-	73.86	345	P		P	13 42 33.0	+0.1
PEA0B				IAmb	IAmb		13 42 36.8	
	comp=Z,30nm,1.4s							
PETK	Petropavlovsk-	73.86	345	P		P	13 42 32.9	0.0
PETK	Petropavlovsk-	73.86	345	P		P	13 42 31.6	-1.4
	comp=Z,4.7nm,0.8s,baz=106,slow=7.8,SNR=12							
	comp=Z,4.7nm,0.8s							
YBH	Yreka Blue Hor	78.58	39	P		P	13 43 00.0	+0.9
YBH				IAmb	IAmb		13 43 43.5	
	comp=Z,12nm,1.5s							
DSP	Deep Springs	79.11	45	P		P	13 43 02.5	+0.6
L04D	Klamath Falls	79.11	39	P		P	13 43 02.7	+0.6
L04D				IAmb	IAmb		13 43 24.3	
	comp=Z,14nm,1.3s							
LCH	Last Change Ra	79.25	45	P		P	13 43 03.4	+0.5
N15K	Kwethluk River	79.35	9	P		P	13 43 02.8	+0.1
NVAR	Mina Array Bea	79.46	44	P		P	13 43 04.5	+0.5
NVAR	Mina Array Bea	79.46	44	P		P	13 43 03.2	-0.8
	comp=Z,1.6nm,0.7s,baz=224,slow=9.0,SNR=14							
	comp=Z,1.6nm,0.7s							
KVN	Kaiserville	79.93	43	P		P	13 43 06.6	+0.1
K05A	Summer Lake	80.25	39	P		P	13 43 08.8	+0.7
K05A				IAmb	IAmb		13 43 14.4	
	comp=Z,21nm,1.4s							
M16K	Timber Creek	80.34	9	P		P	13 43 08.3	+0.5
J05D	Fort Rock, OR	80.38	38	P		P	13 43 09.2	+0.6
J05D				IAmb	IAmb		13 43 10.2	
	comp=Z,10nm,0.9s							
ILSW	Iliamna Southw	80.42	13	P		P	13 43 07.7	-0.7
ILSW				IAmb	IAmb		13 43 11.1	
	comp=Z,25nm,1.5s							
H04A	Detroit Lake	80.65	37	P		P	13 43 09.9	+0.1
H04A				IAmb	IAmb		13 43 30.9	
	comp=Z,19nm,1.4s							
PINE	Pine Mountain	80.85	38	P		P	13 43 11.5	+0.4
PINE				IAmb	IAmb		13 43 13.2	
	comp=Z,8.0nm,1.1s							
M17K	Holitna River	80.94	10	P		P	13 43 11.4	+0.5
K15K	Wolf Creek Mou	81.19	8	P		P	13 43 12.4	+0.3
K15K				IAmb	IAmb		13 43 14.1	
	comp=Z,17nm,1.2s							
L18K	Granite Mounta	81.83	10	P		P	13 43 15.5	+0.1
I07A	Izee	81.86	39	P		P	13 43 16.4	+0.3
BELA	Belgrano 2	81.99	173	P		P	13 43 15.2	-1.0
BELA				IAmb	IAmb		13 43 16.1	
	comp=Z,7.1nm,0.8s							
K17K	Iditarod	82.05	9	P		P	13 43 16.7	+0.2
K17K				IAmb	IAmb		13 43 46.5	
	comp=Z,23nm,1.4s							
J08A	Circle Bar Ran	82.07	40	P		P	13 43 17.4	+0.1
J08A				IAmb	IAmb		13 43 18.4	
	comp=Z,6.7nm,1.3s							
L19K	White Mountain	82.11	11	P		P	13 43 16.9	0.0
J16K	Anvik River	82.26	8	P		P	13 43 17.8	+0.2
J16K				IAmb	IAmb		13 43 28.1	
	comp=Z,13nm,1.4s							
U15A	North Rim	82.54	48	P		P	13 43 20.4	+0.4
U15A				IAmb	IAmb		13 43 21.8	
	comp=Z,5.2nm,0.9s							
TTA	Tatalina	82.61	10	P		P	13 43 19.1	-0.4
G08A	Pilot Rock	82.87	38	P		P	13 43 21.6	+0.4
GHO	Glory Hole Cre	82.94	14	P		P	13 43 20.3	-0.8
GHO				IAmb	IAmb		13 43 21.0	
	comp=Z,10.0nm,0.8s							
J18K	Innoko River	83.00	10	P		P	13 43 21.1	-0.2
J18K				IAmb	IAmb		13 43 22.1	
	comp=Z,5.0nm,0.9s							
WAX	Waxell Ridge	83.31	17	P		P	13 43 22.8	-0.2
MESA	MESA	83.34	17	P		P	13 43 23.0	-0.3
SCM	Sheep Creek Mo	83.36	14	P		P	13 43 22.4	-0.8
SCM				IAmb	IAmb		13 43 56.1	
	comp=Z,25nm,1.4s							
J19K	Poorman	83.67	10	P		P	13 43 24.5	-0.1
J19K				IAmb	IAmb		13 43 59.9	
	comp=Z,7.1nm,1.4s							
CAST	Castle Rocks	83.76	12	P		P	13 43 22.9	-2.2
CAST				IAmb	IAmb		13 43 24.2	
	comp=Z,6.5nm,0.8s							
N25K	Chitina, Valde	83.83	15	P		P	13 43 24.9	-0.7
N25K				IAmb	IAmb		13 43 25.6	
	comp=Z,5.8nm,0.8s							
GRNC	Granite Creek	83.85	17	P		P	13 43 25.1	-0.8
GRNC				IAmb	IAmb		13 43 46.1	
	comp=Z,16nm,1.2s							
GLB	Gilahina Butte	83.89	16	P		P	13 43 25.3	-0.5
GLB				IAmb	IAmb		13 43 26.2	
	comp=Z,8.7nm,1.2s							
SEY	Seymchan	83.96	347	P		P	13 43 25.1	-1.0
	comp=Z,3.6nm,0.8s,baz=64,slow=23,SNR=15							
	comp=Z,3.6nm,0.8s							
LOGN	Logan Glacier	84.14	17	P		P	13 43 26.8	-0.4
LOGN				IAmb	IAmb		13 44 10.4	
	comp=Z,14nm,1.2s							
TRF	Thorofare Moun	84.14	12	P		P	13 43 26.0	-1.2
TRF				IAmb	IAmb		13 43 27.1	
	comp=Z,8.3nm,0.8s							
CTGM	Chitina Glacie	84.16	17	P		P	13 43 26.7	-0.6
CTGM				IAmb	IAmb		13 43 56.4	
	comp=Z,19nm,1.5s							
RND	Reindeer	84.40	13	P		P	13 43 28.2	-0.1
RND				IAmb	IAmb		13 43 28.5	
	comp=Z,7.6nm,0.9s							
HLID	Hailey	84.67	41	P		P	13 43 31.1	+0.8
H19K	Roundabout Mou	84.98	9	P		P	13 43 30.6	-0.4

G18K	Tagagawik	85.02	8	P		P	13 43 30.0	-1.2
M27K	Edge Creek, AK	85.16	16	P		P	13 43 32.0	-0.1
M27K				IAmb	IAmb		13 43 37.0	
	comp=Z,14nm,1.5s							
G19K	Purcell Mounta	85.46	8	P		P	13 43 32.6	-0.7
Q32M	Nakina River	85.49	22	P		P	13 43 33.4	-0.4
Q32M				IAmb	IAmb		13 44 00.2	
	comp=Z,12nm,1.4s							
HDA	Harding Lake	85.69	13	P		P	13 43 33.3	-1.1
HDA				IAmb	IAmb		13 43 40.5	
	comp=Z,9.2nm,1.5s							
CCB	Clear Creek Bu	85.72	13	P		P	13 43 32.9	-1.6
CCB				IAmb	IAmb		13 43 35.6	
	comp=Z,12nm,1.5s							
IMAR	Indian Mountai	85.82	10	P		P	13 43 34.1	-0.9
TX31	Lajitas Ar. Si	85.98	58			P	13 43 37.9	+1.2
TX31				IAmb	IAmb		13 43 38.8	
	comp=Z,4.7nm,0.9s							
TXAR	Lajitas Array	85.98	58			P	13 43 37.9	+1.2
TXAR	Lajitas Array	85.98	58	P		P	13 43 37.3	+0.6
	comp=Z,3.0nm,0.8s,baz=216,slow=6.3,SNR=22							
	comp=Z,3.0nm,0.8s							
IL31		86.02	13	P		P	13 43 34.5	-1.4
IL31				IAmb	IAmb		13 43 40.7	
	comp=Z,7.0nm,1.4s							
ILAR	Eielson Array	86.02	13	P		P	13 43 34.6	-1.4
ILAR	Eielson Array	86.02	13	P		P	13 43 34.2	-1.7
	comp=Z,1.5nm,0.7s,baz=223,slow=4.8,SNR=22							
	comp=Z,1.5nm,0.7s							
F19K	Shaleruckik Mo	86.02	8	P		P	13 43 34.8	-1.1
J25K	Salcha River,	86.21	14	P		P	13 43 36.0	-0.9
J25K				IAmb	IAmb		13 43 36.5	
	comp=Z,3.1nm,0.6s							
E18K	Tukpahleark C	86.24	7	P		P	13 43 36.1	-0.8
J26L	Joseph Creek	86.53	14	P		P	13 43 38.4	-0.1
J26L				IAmb	IAmb		13 43 39.0	
	comp=Z,2.9nm,0.7s							
E19K	Redstone River	86.68	8	P		P	13 43 38.3	-0.7
BPMT	Black Pine Rid	86.73	39	P		P	13 43 39.9	-0.2
L29M	L29M	86.79	17	P		P	13 43 39.7	0.0
L29M				IAmb	IAmb		13 44 19.6	
	comp=Z,8.1nm,1.4s							
DAWY	Dawson	87.21	16	P		P	13 43 41.3	-0.4
PD31	Pinedale Array	87.39	43	P		P	13 43 42.9	-0.3
PDAR	Pinedale Array	87.39	43	P		P	13 43 43.0	-0.3
PDAR	Pinedale Array	87.39	43	P		P	13 43 42.0	-1.3
	comp=Z,1.3nm,0.6s,baz=223,slow=3.7,SNR=15							
	comp=Z,1.3nm,0.6s							
SAND	Sanderson	87.46	58	P		P	13 43 43.7	+0.1
K29M	Barlow Dome	87.54	17	P		P	13 43 42.8	-0.5
K29M				IAmb	IAmb		13 43 47.9	
	comp=Z,3.3nm,1.2s							
C19K	Lookout Ridge	87.97	7	P		P	13 43 44.5	-0.6
E22K	Anaktuvuk Pass	88.10	10	P		P	13 43 44.7	-1.0
E22K				IAmb	IAmb		13 43 45.7	
	comp=Z,2.7nm,0.9s							
I28M	Miner Creek	88.19	15	P		P	13 43 45.7	-0.5
I28M				IAmb	IAmb		13 43 48.9	
	comp=Z,3.6nm,1.2s							
D22K	Ayikyak River	88.65	9	P		P	13 43 47.8	-0.4
D22K				IAmb	IAmb		13 44 27.2	
	comp=Z,3.3nm,1.4s							
BMAR	Burnt Mountain	88.79	12	P		P	13 43 48.8	-0.1
E25K	Arctic Village	89.19	12	P		P	13 43 50.0	-0.7
H29M	Whitestone	89.19	15	P		P	13 43 50.4	-0.4
H29M				IAmb	IAmb		13 43 51.3	
	comp=Z,9.5nm,1.4s							
G30M	tAoh Zraii Nji	90.33	15	P		P	13 43 55.0	-1.0
G30M				IAmb	IAmb		13 43 55.9	
	comp=Z,4.0nm,0.8s							
SNAA	Sanae	90.43	179	P		P	13 43 55.1	-1.5
	comp=Z,1.9nm,0.8s,baz=193,slow=12,SNR=8.9							
	comp=Z,1.9nm,0.8s							
F31M	Tsiigehtchic	91.31	16	P		P	13 43 59.4	-1.0
F31M				IAmb	IAmb		13 44 00.3	
	comp=Z,4.7nm,0.7s							
YKA	Yellowknife Ar	94.43	25	P		P	13 44 13.9	-1.0
	comp=Z,0.3nm,0.7s,baz=245,slow=4.6,SNR=5.2							
	comp=Z,0.3nm,0.7s							
ARCES	ARCESS Array B	126.49	350	PKP		PKPdf	13 49 52.1	-1.4
	comp=Z,6.4nm,1.0s,baz=70,slow=1.1,SNR=5.8							
NOA	NORSAR Array B	136.55	353	PKP		PKPdf	13 50 12.0	-0.8
	comp=Z,0.4nm,0.5s,baz=14,slow=3.7,SNR=1.8							
HFS	Hagfors	137.11	351	PKhKP		PKPpre	13 50 05.5	
	comp=Z,1.2nm,0.5s,baz=42,slow=2.3,SNR=4.9							
HARA	HARA	138.76	263	*e*P		Pdif	13 47 37.9	+4.4
AKASG	Malin Array Be	140.76	332	PKhKP		PKPpre	13 50 13.6	
	comp=Z,1.2nm,0.3s,baz=40,slow=3.9,SNR=6.3							
AKASG				PKP		PKPdf	13 50 21.2	+0.5
	comp=Z,0.8nm,0.5s,baz=45,slow=1.4,SNR=1.7							
EKA	Eskdalemuir Ar	142.62	5	PKhKP		PKPpre	13 50 17.4	
	comp=Z,1.1nm,0.6s,baz=15,slow=20,SNR=2.9							
BSEG	Bad Segeberg	143.59	351	*e*PKPbc		PKPab	13 50 23.7	-0.9
	baz=17,slow=2.6							
OJC	Ojcow	144.80	340			PKPbc	13 50 27.5	-1.0
BRTR	Keskin Array B	144.98	315	PKPbc		PKPdf	13 50 28.3	-0.4
	comp=Z,5.5nm,0.6s,baz=140,slow=8.1,SNR=4.2							
FLTG	Flechtingen	145.00	350	*e*PKPbc		PKPdf	13 50 27.5	-0.6
	baz=17,slow=2.6							
OSTC	Ostas	145.58	344	*e*PKP		PKPbc	13 50 30.3	-0.5
CLL	Collm	145.65	347			PKPbc	13 50 30.2	-0.6
CLL	Collm	145.65	347	*i*PKPbc		PKPbc	13 50 30.1	-0.8
	comp=Z,24nm,0.8s							
CLL	Collm	145.65	347	*e*PKPbc		PKPbc	13 50 29.9	-1.0
	baz=17,slow=2.6							
DPC	Dobruska-Polom	145.74	343	*e*PKP		PKPbc	13 50 30.6	-0.7
BRG	Berggiesshubel	145.85	346	*e*PKPbc		PKPbc	13 50 30.4	-1.0
	baz=17,slow=2.6							
BRG	Berggiesshubel	145.85	346	*i* P		PKPbc	13 50 30.9	-0.6
BRG	Berggiesshubel	145.85	346	Amp			13 50 31.3	
	comp=Z,8.2nm,0.7s							
KRLC	Kraliky	145.86	343	*e*PKP		PKPbc	13 50 30.7	-0.9
PVCC	Panska Ves	146.02	345	*e*PKP		PKPbc	13 50 31.3	-0.7
MLR	Muntele Rosu	146.03	329	PKPbc		PKPbc	13 50 30.9	-1.5
	comp=Z,5.6nm,0.6s,baz=321,slow=6.8,SNR=4.0							
HSKC	Hora Svate Kat	146.21	347	*e*PKP		PKPbc	13 50 31.9	-0.6
MMAI	Mount Meron Ar	146.33	303	PKPbc		PKPdf	13 50 31.3	+0.3
	comp=Z,4.5nm,0.4s,baz=70,slow=5.8,SNR=6.9							
PRU	Pruhonice	146.53	345	*e*PKP		PKPbc	13 50 32.4	-1.0
PLN	Plauen	146.60	348	*e*PKPbc		PKPbc	13 50 32.5	-1.0
	baz=17,slow=2.6							
TANN	Tannenbergstha	146.60	347	*e*PKPbc		PKPbc	13 50 33.0	-0.7
	baz=17,slow=2.6							
ROTZ	Rotzenmuhle	147.27	347	*e*PKPbc		PKPbc	13 50 34.7	-0.6
	baz=17,slow=2.6							
TNS	Taunus Mts	147.47	352	*e*PKPbc		PKPbc	13 50 34.9	-1.0
	baz=17,slow=2.6							
KHC	Kasperske Hory	147.56	345			PKPbc	13 50 35.3	-0.8
KHC	Kasperske Hory	147.56	345	*e*PKP		PKPbc	13 50 35.4	-0.8
CKRC	Cesky Krumlov	147.67	344	*e*PKP		PKPbc	13 50 35.6	-0.8
GEC2	GERESS Array S	147.80	345	*e*PKPbc		PKPbc	13 50 35.2	-1.6
	baz=17,slow=2.6							
GERES	GERESS Array B	147.80	345	PKPbc		PKPbc	13 50 35.8	-1.1
	comp=Z,4.1nm,0.6s,baz=24,slow=4.7,SNR=6.9							
CONA	Conrad Observa	148.05	342	*e*PKP		PKPbc	13 50 35.3	-2.3
	comp=Z,5.7nm,1.3s							
RONA	Rosalia, Austr	148.13	341	*i* PKP		PKPbc	13 50 35.9	-1.7
	comp=Z,10nm,0.9s							
MOA	Molln	148.57	344	*i* PKP		PKPbc	13 50 37.3	-1.4
	comp=Z,5.1nm,1.2s							
BIOA	Bad Ischl, Aus	148.88	344	*i* PKP		PKPbc	13 50 38.3	-1.2
	comp=Z,2.2nm,0.5s							
LESA	Schwarzleotal	149.37	345	*e*PKP		PKPbc	13 50 39.6	-1.1
	comp=Z,4.4nm,0.8s							
SOKA	Soboth	149.42	342	*e*PKP		PKPbc	13 50 39.0	-1.9
	comp=Z,12nm,1.3s							
KBA	Konbreinsper	149.53	344	*e*PKP		PKPbc	13 50 39.1	-2.2
	comp=Z,14nm,1.1s							
UBR	Ueberruh	149.68	349	*e*PKPbc		PKPbc	13 50 40.5	-1.0
	baz=17,slow=2.6							
WATA	Walderalm	149.71	347	*i* PKP		PKPbc	13 50 40.1	-1.5
	comp=Z,10nm,1.1s							
RETA	Reutte	149.74	348	*e*PKP		PKPbc	13 50 40.4	-1.2
	comp=Z,8.0nm,1.1s							
WTTA	Wattenberg	149.76	347	*i* PKP		PKPbc	13 50 40.7	-1.1
	comp=Z,13nm,0.6s							
MOTA	Moosalm	149.80	347	*e*PKP		PKPbc	13 50 40.0	-1.9
	comp=Z,11nm,0.9s							
MYKA	Terra Mystica	149.86	344	*i* PKP		PKPbc	13 50 40.5	-1.4
	comp=Z,21nm,0.6s							
SQTA	Sankt Quirin	149.90	347	*i* PKP		PKPbc	13 50 40.7	-1.4
	comp=Z,9.8nm,0.7s							
ABTA	Abfaltersbach	150.04	345	*e*PKP		PKPbc	13 50 40.3	-2.1
	comp=Z,9.7nm,0.6s							
DAVA	Damuels	150.10	349	*e*PKP		PKPbc	13 50 41.9	-0.7
	comp=Z,11nm,1.0s							

FETA	Feichten	150.19	348	*i* PKP		PKPbc	13 50 41.9	-0.9
	comp=Z,15nm,1.2s							
DAVOX	Davos/Dischmat	150.59	349	PKPbc		PKPbc	13 50 43.0	-0.8
	comp=Z,15nm,0.9s,baz=350,slow=1.8,SNR=9.4							
FUORN	Ofenpass-Fuorn	150.66	348			PKPbc	13 50 43.0	-1.0
FNA	Florina	151.74	327			PKPbc	13 50 44.5	-1.9

IDC ***26*** *13:34:51.2±0.3,2˙81S×126˙72E,h0km,mb5.7/49, mbtmp5.7/52,ML5.4/3,MS5.4/53,Error ellipse: s-maj=14.0km s-min=8.2km az=62.0*

BJI ***26*** *13:34:52.3±0.0,3˙00S×127˙29E,h37km,mb5.7/96, mB5.9/80,Ms5.7/99,Ms7 5.4/96*

MOS ***26*** *13:34:52.2±0.8,2˙75S×126˙75E,h16km,mb6.2/85, MS5.5/20,Error ellipse: s-maj=7.0km s-min=3.9km az=112.3*

NEIC ***26*** *13:34:52.7,2˙78S×126˙68E,h3km*

NEIC ***26*** *13:34:53.5±1.6,2˙78S±0˙06×126˙69E±0˙06,h9km±1km, mb6.2/278,Ms_20 5.8/994,Mwb5.9/60,Mww6.1/41,Error ellipse: s-maj=10.8km s-min=9.7km az=216.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.76; Mθθ-0.24; Mφφ-0.52; Mrθ0.38; Mθφ0.41; Mφr-0.50; Fault plane solution: M₀1.01000×10¹⁸ NP1: φs143.61000°,δ64.33000°,λ89.35000°. NP2: φs325.12000°,δ25.68000°,λ91.36000°. Principal axes: T 0.9821, Plg71.0000°, Azm52.0000°; N 0.0522, Plg1.0000°, Azm144.0000°; P -1.0343, Plg19.0000°, Azm234.0000°;*

NEIC ***26*** *13:34:53.5,2˙78S×126˙68E,h20km*

NEIC ***26*** *13:34:53.5,2˙68S×126˙78E,h20km,Moment Tensor Solution. Duration: 6s1 Moment tensor: Scale 10¹⁸Nm; Mrr1.26; Mθθ-0.30; Mφφ-0.96; Mrθ0.38; Mθφ0.68; Mφr-1.07; Fault plane solution: M₀1.75000×10¹⁸ NP1: φs156.28000°,δ65.40000°,λ97.63000°. NP2: φs318.43000°,δ25.68000°,λ73.82000°. Principal axes: T 1.6982, Plg69.0000°, Azm81.0000°; N 0.0938, Plg7.0000°, Azm333.0000°; P -1.7920, Plg20.0000°, Azm241.0000°;*

IPGP ***26*** *13:34:54.0,2˙77S×126˙68E,h12km,Mw6.0,Fault plane solution: NP1:φs153.00000°,δ65.00000°,λ92.00000°. NP2:φs328.00000°,δ25.00000°,λ85.00000°.*

DJA ***26*** *13:34:55.8±0.2,3˙S±1˙×12˙7E±˙,h28km±2km,M6.1/122, mb6.0/122,mB6.4/110,MLv6.1/24,Mw6.0/91, Mw(mB)6.2/110,MwMwp5.9/79,Mwp6.0/79*

GCMT ***26*** *13:34:58.5±0.1,2˙65S×126˙82E,h13km,MW6.0/168, Moment Tensor Solution. s168,c369; s162,c472; Duration: 2s4 Moment tensor: Scale 10¹⁸Nm; Mrr0.84±.01; Mθθ-0.16±.01; Mφφ-0.68±.01; Mrθ0.31±.02; Mθφ0.61±.01; Mφr-0.74±.02; Best double couple: M₀1.25800×10¹⁸ NP1:φs155.00000°,δ65.00000°, λ99.00000°. NP2:φs315.00000°,δ26.00000°,λ72.00000°. Principal axes: T 1.1470, Plg69.0000°, Azm82.0000°; N 0.2230, Plg8.0000°, Azm331.0000°; P -1.3690, Plg20.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 13:34:54.7±0.3,2.75S±0˙03×126˙73E±0˙03,h19km±1km, h20km:pP-P,n2186,σ1ˢ52/1815,mb6.1/296,MS5.8/603, 116C-47D,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
NLAI	Namlea	0.61	143	P		Pn	13 35 08.6	+0.2
SANI	Sanana	1.01	313	P		Pb	13 35 11.8	-1.8
SANI	Sanana	1.01	313	S		Sb	13 35 22.8	-3.7
SANI				P		Pb	13 35 08.5	-5.1
SANI	Sanana	1.01	313	↑P		Pb	13 35 10.5	-3.1
SANI	Sanana	1.01	313	P		Pb	13 35 11.3	-2.3
LBMI	Labuha	2.23	20	P		Pn	13 35 31.6	+0.9
TNTI	Ternate	3.55	10	Pn		Pn	13 35 49.1	+0.3
TNTI	Ternate	3.55	10	P		Pn	13 35 50.2	+1.4
TNTI	Ternate	3.55	10	↓P		Pn	13 35 48.0	-0.9
TNTI	Ternate	3.55	10	P		Pn	13 35 49.2	+0.3
BNDI	Bandanaira	3.63	119	P		Pn	13 35 51.3	+1.4
BNDI	Bandanaira	3.63	119	↑P		Pn	13 35 51.5	+1.6
BNDI	Bandanaira	3.63	119	P		Pn	13 35 52.1	+2.2
KMSI	Cibinong	4.29	320	P		Pn	13 35 57.9	-1.1
LUWI	Luwuk	4.30	293	Pn		Pn	13 35 58.3	-0.8
LUWI	Luwuk	4.30	293	P		Pn	13 35 58.8	-0.3
LUWI	Luwuk	4.30	293	P		Pn	13 35 55.2

KNRA **Kununurra** 13.00 171 P Pn 13 37 59.7 +1.2
ABJI **Asem Bagus** 13.41 248 P Pn 13 38 07.0 +2.9
2µm,1.2s,19µm55µm
GENI **Genyem** 13.43 90 P Pn 13 38 05.0 +0.6
GENI **Genyem** 13.43 90 ⇑P Pn 13 38 03.7 -0.7
GENI **Genyem** 13.43 90 P Pn 13 38 03.6 -0.7
1µm,0.9s,16µm53µm
JAGI **Jajag, Banyuwa** 13.74 245 P Pn 13 38 11.2 +2.6
JAGI **Jajag, Banyuwa** 13.74 245 ⇓P Pn 13 38 10.7 +2.1
JAGI **Jajag, Banyuwa** 13.74 245 P Pn 13 38 10.6 +2.0
1µm,1.1s,37µm52µm
BLJI **Banyuglugur** 13.98 249 P Pn 13 38 13.6 +1.7
2µm,1.3s,20µm54µm
GMJI **Gumukmas** 14.31 247 P Pn 13 38 19.2 +2.8
2µm,1.5s
BWJI **Bawean** 14.36 257 P Pn 13 38 19.6 +2.5
4µm,1.3s,41µm42µm
MMPI **Merauke** 14.73 113 P Pn 13 38 18.9 -3.2
2µm,1.3s,18µm26µm
GRJI **Gresik** 14.78 253 P Pn 13 38 24.6 +1.7
2µm,1.3s,21µm39µm
FITZ **Fitzroy Crossi** 15.29 184 P Pn 13 38 29.1 -0.5
baz=15,SNR=96
FITZ **Fitzroy Crossi** 15.29 184 Pn 13 38 28.2 -1.4
FITZ **Fitzroy Crossi** 15.29 184 P Pn 13 38 29.1 -0.5
FITZ **Fitzroy Crossi** 15.29 184 ⇓P Pn 13 38 27.7 -1.9
STKI **Sintang** 15.50 280 P Pn 13 38 33.5 +1.2
531nm,2.4s,23µm27µm
PWJI **Pagerwojo** 15.75 250 P P 13 38 37.6 -1.8
2µm,1.8s,52µm57µm
NGJI **Ngawi** 15.88 253 P P 13 38 39.6 -1.3
1µm,1.2s,36µm70µm
SMRI **Semarang** 16.77 255 P P 13 38 50.9 0.0
SMRI IAmb IAmb 13 38 56.1
comp=Z,2µm,1.4s
SMRI **Semarang** 16.77 255 P P 13 38 51.2 +0.3
SMRI **Semarang** 16.77 255 ⇓P P 13 38 51.7 +0.8
SMRI **Semarang** 16.77 255 P P 13 38 50.1 -0.8
comp=Z,2µm,1.7s,comp=Z,46µmcomp=Z,72µm
SMRI pP **sP** 13 38 57.7 0.0
comp=Z,2µm,1.7s,comp=Z,46µmcomp=Z,72µm
UGM **Wanagama** 16.92 252 P P 13 38 52.6 +0.1
UGM **Wanagama** 16.92 252 P P 13 38 52.3 -0.2
UGM **Wanagama** 16.92 252 P P 13 38 52.8 +0.3
comp=Z,3µm,2.1s,comp=Z,78µmcomp=Z,68µm
TGY **Tagaytay City** 17.70 341 P Pn 13 39 00.3 0.0
comp=Z,56nm,0.3s,baz=270,slow=21,SNR=5.4
TGY LR LR 13 47 40.8
comp=Z,6µm,20.6s,baz=146,slow=43
comp=Z,202nm,0.4s
KPJI **Karang Pucung** 18.30 255 pP pP 13 39 14.5 +2.1
comp=Z,1µm,1.6s,comp=Z,37µmcomp=Z,81µm
WB0 **Warramunga Arr** 18.50 157 P P 13 39 08.9 -1.0
WRAB **Tennant Creek** 18.63 157 P P 13 39 10.4 -1.0
WRAB **Tennant Creek** 18.63 157*c i* P P 13 39 09.2 -2.2
WRAB pmax pmax
comp=Z,191nm,0.9s
WRA **Warramunga Arr** 18.64 157 P P 13 39 10.3 -1.1
WRA **Warramunga Arr** 18.64 157 *i* P P 13 39 07.6 -3.8
WRA pmax pmax
comp=Z,123nm,0.8s
WRA **Warramunga Arr** 18.64 157 P P 13 39 10.6 -0.8
comp=Z,5.5nm,0.3s,baz=339,slow=11,SNR=104
WRA S **Sn** 13 42 36.9 -3.0
comp=Z,50nm,0.8s,baz=336,slow=21,SNR=7.5
WRA ScP **ScP** 13 47 16.8 +2.0
comp=Z,23nm,1.1s,baz=331,slow=2.9,SNR=5.7
comp=Z,108nm,0.5s
WB2 **Warramunga Arr** 18.64 157 P P 13 39 10.3 -1.1
WC3 **Warramunga Arr** 18.66 157 P P 13 39 10.9 -0.8
baz=19
JCJI **Jatiwangi** 18.76 258 P Pn 13 39 14.6 +1.3
comp=Z,2µm,1.6s,comp=Z,54µmcomp=Z,60µm
JCJI pP **sP** 13 39 20.2 +0.6
comp=Z,2µm,1.6s,comp=Z,54µmcomp=Z,60µm
CMJI **Cimerak** 18.87 254 P P 13 39 13.6 -0.4
comp=Z,928nm,1.3s,comp=Z,15µmcomp=Z,47µm
LEM **Lembang** 19.46 257 P Pn 13 39 22.4 +0.5
comp=Z,327nm,0.7s,baz=73,slow=9.8,SNR=49
LEM LR LR 13 48 09.9
comp=Z,26µm,20.2s,baz=83,slow=41
LEM **Lembang** 19.46 257 P Pn 13 39 21.6 -0.3
comp=Z,705nm,1.7s,comp=Z,23µmcomp=Z,56µm
MBWA **Marble Bar** 19.53 200 P P 13 39 20.5 -0.7
MBWA **Marble Bar** 19.53 200 P P 13 39 21.3 +0.2
MBWA **Marble Bar** 19.53 200 ⇑P P 13 39 20.4 -0.7
MBWA **Marble Bar** 19.53 200 P P 13 39 21.3 +0.2
MBWA P P 13 39 21.3 +0.2
BBJI **Bungbulang** 19.56 255 P Pn 13 39 22.8 -0.2
COEN **Coen** 19.70 125 P P 13 39 21.9 -1.2
baz=20,SNR=655
COEN **Coen** 19.70 125 P P 13 39 21.9 -1.2
COEN IAmb IAmb 13 39 26.7
comp=Z,1µm,0.9s
COEN **Coen** 19.70 125 P P 13 39 22.4 -0.7
COEN **Coen** 19.70 125 ⇑P P 13 39 21.9 -1.2
PSA00 **Pilbara Seismi** 19.87 199 P P 13 39 24.0 -0.9
PSA00 **Pilbara Seismi** 19.87 199 P P 13 39 23.8 -1.1
PSA00 IAmb IAmb 13 39 31.5
comp=Z,325nm,1.2s
PSA00 **Pilbara Seismi** 19.87 199 P P 13 39 25.2 +0.3
CNJI **Cibinong** 20.03 256 P P 13 39 26.6 -0.1
comp=Z,648nm,1.2s,comp=Z,8µmcomp=Z,15µm
CBJI **Citeko** 20.14 259 P P 13 39 27.9 0.0
comp=Z,996nm,1.1s,comp=Z,24µmcomp=Z,52µm
DBJI **Dramaga** 20.26 259 P P 13 39 29.4 +0.2
comp=Z,733nm,1.7s,comp=Z,23µmcomp=Z,45µm
TNG **Tangerang** 20.30 260 P P 13 39 30.3 +0.6
comp=Z,123nm,0.6s,comp=Z,2µm
TNG P P 13 39 30.3 +0.6
comp=Z,3µm,1.8s,comp=Z,46µm
SKJI **Sukabumi** 20.53 257 P P 13 39 31.6 -0.6
comp=Z,1µm,2.1s,comp=Z,23µmcomp=Z,33µm
SKJI pP **pwP** 13 39 43.0 +2.9
comp=Z,1µm,2.1s,comp=Z,23µmcomp=Z,33µm
PPBI **Pangkal Pinang** 20.58 271 P P 13 39 33.8 +1.1
comp=Z,339nm,1.4s,comp=Z,26µmcomp=Z,36µm
MANU **Manus Island** 20.64 89 P 13 39 33.5 +0.2
MANU IAmb IAmb 13 39 39.2
comp=Z,965nm,1.4s
MANU **Manus Island** 20.64 89 P Pn 13 39 35.2 -0.4
MANU **Manus Island** 20.64 89 ⇑P Pn 13 39 34.8 -0.9
SBJI **Serang** 20.80 260 P P 13 39 35.8 +0.7
comp=Z,1µm,0.9s,comp=Z,18µm
SBJI pP **pwP** 13 39 45.8 +2.9
comp=Z,1µm,0.9s,comp=Z,18µm
SZP **Santa** 21.10 343 P P 13 39 41.6 +3.4
PMG **Port Moresby** 21.36 109 P P 13 39 39.9 -1.2
PMG IAmb IAmb 13 39 44.2
comp=Z,881nm,1.1s
PMG **Port Moresby** 21.36 109 P P 13 39 40.0 -1.1
PMG **Port Moresby** 21.36 109 P P 13 39 40.2 -0.9
PMG **Port Moresby** 21.36 109 ⇑P P 13 39 38.6 -2.5
PMG **Port Moresby** 21.36 109*c i* P P 13 39 38.0 -3.1
PMG pmax pmax
comp=Z,333nm,1.4s
PMG **Port Moresby** 21.36 109 P P 13 39 39.9 -1.2
comp=Z,655nm,1.0s,baz=320,slow=7.3,SNR=78
PMG LR LR 13 49 47.4
comp=Z,9µm,21.9s,baz=294,slow=42
comp=Z,655nm,1.0s
QIS **Mount Isa** 21.70 146 P P 13 39 43.6 -1.2
baz=22,SNR=285
QIS **Mount Isa** 21.70 146 P P 13 39 43.5 -1.3
AS31 **Alice Springs** 21.93 162 P P 13 39 45.9 -1.3
ASAR **Alice Springs** 21.93 162 P P 13 39 45.9 -1.2
comp=Z,146nm,0.8s,baz=339,slow=9.9,SNR=242
ASAR S **S** 13 43 44.7 -3.9
comp=Z,80nm,1.0s,baz=345,slow=22,SNR=8.4
ASAR ScP **ScP** 13 47 23.3 +0.7
comp=Z,13nm,1.0s,baz=24,slow=2.5,SNR=6.0
comp=Z,146nm,0.8s
PMBI **Palembang** 21.93 269 P P 13 39 47.8 +0.6
PMBI IAmb IAmb 13 40 04.5
comp=Z,2µm,1.4s
PMBI **Palembang** 21.93 269 P P 13 39 50.6 +3.4
PMBI **Palembang** 21.93 269 P P 13 39 49.4 +2.2
comp=Z,1µm,1.4s,comp=Z,18µmcomp=Z,27µm
AS01 **Alice Springs** 21.94 162 P P 13 39 46.7 -0.6
WRKA **Warakurna** 22.21 176 P P 13 39 49.5 -0.7
baz=22,SNR=443
WRKA **Warakurna** 22.21 176 P P 13 39 49.7 -0.5
WRKA **Warakurna** 22.21 176 ⇑P P 13 39 49.5 -0.7
XMI **Christmas Isla** 22.24 249 P P 13 39 50.1 -0.5
XMI **Christmas Isla** 22.24 249 ⇓P P 13 39 49.5 -1.1
DSRI **Dabo** 22.25 275 P P 13 39 51.3 +0.6
comp=Z,310nm,2.1s,comp=Z,6µmcomp=Z,21µm
XMIS **Christmas Isla** 22.28 249 P P 13 39 50.1 -1.0
XMIS IAmb IAmb 13 39 53.6
comp=Z,808nm,1.1s
XMIS **Christmas Isla** 22.28 249 P P 13 39 51.1 +0.1
KASI **Kota Agung** 22.34 262 P P 13 39 51.5 -0.1
comp=Z,554nm,1.2s,comp=Z,8µmcomp=Z,28µm
TPRI **Tanjung Pinang** 22.49 279 P P 13 39 53.7 +0.5
comp=Z,404nm,1.4s,comp=Z,8µmcomp=Z,19µm
LWLI **Liwa** 22.73 264 P P 13 39 56.4 +0.5
comp=Z,1µm,1.9s,comp=Z,27µmcomp=Z,25µm
MTSU **Mount Surprise** 23.05 133 P P 13 39 58.6 -0.5
baz=23,SNR=61
MTSU **Mount Surprise** 23.05 133 P P 13 39 59.3 +0.2
JMBI **JAMBI** 23.09 272 P P 13 40 01.2 +1.6
comp=Z,1µm,1.5s,comp=Z,18µm
GIRL **Giralia** 23.20 210 P P 13 40 00.5 0.0
baz=23,SNR=33
GIRL **Giralia** 23.20 210 P P 13 40 00.1 -0.4
GIRL **Giralia** 23.20 210 P P 13 39 59.6 -0.9
GIRL **Giralia** 23.20 210 ⇓P P 13 40 00.4 -0.1
MNAI **Manna** 23.78 265 P P 13 40 06.2 -0.1
MNAI **Manna** 23.78 265 P P 13 40 07.6 +1.2
MNAI **Manna** 23.78 265 ⇓P P 13 40 06.5 +0.1
MNAI **Manna** 23.78 265 P P 13 40 06.4 +0.1
comp=Z,3µm,1.5s,comp=Z,37µmcomp=Z,25µm
KAVG **Kavieng** 24.06 90 P P 13 40 09.2 +0.2
GUMO **Guam** 24.24 48 P P 13 40 09.7 -0.9
GUMO IAmb IAmb 13 40 12.4
comp=Z,737nm,1.1s
GUMO **Guam** 24.24 48 P P 13 40 10.8 +0.2
GUMO **Guam** 24.24 48 ⇑P P 13 40 09.5 -1.1
GUMO **Guam** 24.24 48 P P 13 40 09.8 -0.8
comp=Z,413nm,1.0s,baz=183,slow=6.1,SNR=8.8
GUMO LR LR 13 48 27.0
comp=Z,11µm,21.9s,baz=210,slow=34
comp=Z,413nm,1.0s
MEEK **Meekatharra** 25.00 197 P P 13 40 15.6 -1.8
baz=25,SNR=177
MEEK **Meekatharra** 25.00 197 P P 13 40 15.9 -1.5
KRJI **Kerinci** 25.25 271 P P 13 40 21.2 +1.2
comp=Z,2µm,1.2s,comp=Z,38µmcomp=Z,18µm
RABL **Rabaul** 25.43 94 P P 13 40 21.8 +0.2
RABL **Rabaul** 25.43 94 P P 13 40 22.7 +1.2
RABL **Rabaul** 25.43 94 ⇑P P 13 40 21.8 +0.2
TV1H **Townsville Har** 25.59 131 P P 13 40 23.5 +0.7
CTA **Charters Tower** 25.70 134 P P 13 40 24.3 +0.4
comp=Z,327nm,1.1s,baz=311,slow=10.0,SNR=71
CTA S **S** 13 44 47.5 -4.3
comp=Z,17nm,1.0s,baz=207,slow=9.0,SNR=2.0
comp=Z,327nm,1.1s
CTAO **Charters Tower** 25.70 134 P P 13 40 23.5 -0.4
CTAO IAmb IAmb 13 40 27.8
comp=Z,671nm,1.4s
CTAO **Charters Tower** 25.70 134 P P 13 40 25.3 +1.4
CTAO **Charters Tower** 25.70 134 ⇑P P 13 40 23.4 -0.4
CTAO **Charters Tower** 25.70 134 P P 13 40 23.5 -0.4
CTAO pmax pmax
comp=Z,671nm,1.4s
BKNI **Bangkinang** 25.86 276 P P 13 40 25.9 +0.5
BKNI **Bangkinang** 25.86 276 P P 13 40 28.0 +2.6
BKNI **Bangkinang** 25.86 276 P P 13 40 22.4 -3.0
BKNI S **S** 13 44 55.2 +0.7
BKNI **Bangkinang** 25.86 276 P P 13 40 26.6 +1.2
comp=Z,1µm,1.4s,comp=Z,15µmcomp=Z,15µm
TWG **Pinlang** 26.00 348 P P 13 40 24.7 -1.8
AUAYR **Ayr State High** 26.24 131 P P 13 40 29.6 +0.9
OOD **Oodnadatta** 26.34 162 P P 13 40 28.2 -1.3
YULB **Yu-li** 26.52 349 P P 13 40 30.0 -1.2
YULB IAmb IAmb 13 40 59.8
comp=Z,591nm,1.9s
YULB **Yu-li** 26.52 349 P P 13 40 33.0 +1.8
TPUB **Ta-pu** 26.56 347 P P 13 40 31.1 -0.5
TPUB IAmb IAmb 13 40 47.4
comp=Z,532nm,0.9s
TPUB **Ta-pu** 26.56 347 P P 13 40 33.9 +2.3
PPSI **Pulau Pagai** 26.68 269 P P 13 40 32.0 -0.9
comp=Z,1µm,1.7s,comp=Z,16µm
SSLB **Suanglung** 26.97 348 P P 13 40 34.5 -0.8
SSLB **Suanglung** 26.97 348 P P 13 40 36.6 +1.3
NACB **Ninganchiao** 27.22 350 P P 13 40 36.4 -1.1
NACB **Ninganchiao** 27.22 350 P P 13 40 37.8 +0.3
QIZ **Qiongzhong** 27.28 323 P P 13 40 40.0 +1.9
QIZ S **S** 13 45 18.3 +1.6
QIZ pmax pmax
comp=Z,45nm,1.1s
QIZ pmax pmax
comp=Z,680nm,4.3s
QIZ LR LR
comp=Z,5µm,16.1s
QIZ LR LR
comp=Z,4µm,14.7s
QIZ LR LR
comp=Z,7µm,14.7s
QIZ **Qiongzhong** 27.28 323 P P 13 40 37.4 -0.7
QIZ **Qiongzhong** 27.28 323 P P 13 40 40.0 +1.9
YOJ **Yonaguni jima** 27.29 353 P P 13 40 37.9 -0.2
YOJ **Yonaguni jima** 27.29 353 P P 13 40 41.5 +3.4
YOJ **Yonaguni jima** 27.29 353 ⇓P P 13 40 40.6 +2.6
YOJ **Yonaguni jima** 27.29 353 P P 13 40 37.9 -0.2
YOJ pmax pmax
comp=Z,2µm,1.8s
SISI **Saibi** 27.65 272 P P 13 40 41.2 -0.4
comp=Z,541nm,2.0s,comp=Z,10µmcomp=Z,12µm
YHNB **Yeheng** 27.74 350 P P 13 40 42.2 -0.1
YHNB **Yeheng** 27.74 350 P P 13 40 42.9 +0.6
HKPS **Hong Kong Po S** 27.75 334 P P 13 40 45.5 +3.2
HKC **Hong Kong Obse** 27.75 334 ⇑P P 13 40 45.0 +2.7
SKLT **Songkhla** 27.85 291 P P 13 40 45.6 +2.3
FORT **Forrest** 27.91 178 P P 13 40 42.0 -1.6
baz=28,SNR=11
FORT **Forrest** 27.91 178 P P 13 40 41.8 -1.9
FORT IAmb IAmb 13 40 47.6
comp=Z,229nm,0.7s
FORT IAMs_20 IAMs_20 13 53 17.9
comp=Z,19µm,20.0s
FORT **Forrest** 27.91 178 P P 13 40 44.3 +0.7
TATO **Taipei** 28.02 350 P P 13 40 43.5 -1.1
TATO IAmb IAmb 13 40 52.3
comp=Z,995nm,1.9s
TATO **Taipei** 28.02 350 P P 13 40 46.1 +1.4
TATO **Taipei** 28.02 350 P P 13 40 45.8 +1.2
TATO P P 13 40 45.8 +1.2
MORW **Morawa** 28.08 200 P P 13 40 43.1 -2.1
baz=28,SNR=4.4
MORW **Morawa** 28.08 200 P P 13 40 42.9 -2.3
MORW IAMs_20 IAMs_20 13 52 59.2
comp=Z,22µm,20.0s
MORW **Morawa** 28.08 200 P P 13 40 45.3 +0.1
MORW **Morawa** 28.08 200 ⇓P P 13 40 43.4 -1.8
INKA **Innaminka** 28.24 153 P P 13 40 48.4 +1.8
KNMB **Chin-men Tao** 28.24 344 P P 13 40 46.4 -0.2
KNMB IAmb IAmb 13 41 04.9
comp=Z,250nm,1.2s
MULG **Mulgathing** 28.25 167 P P 13 40 47.1 +0.4
RPSI **Rantau Prapat** 28.31 281 P P 13 40 47.3 -0.2
RPSI IAmb IAmb 13 41 00.5
comp=Z,756nm,1.9s
PSI **Prapat** 28.33 281 P P 13 40 49.0 +1.2
PSI **Prapat** 28.33 281 P P 13 40 47.3 -0.5
PSI pmax pmax
comp=Z,756nm,1.9s
PBSI **Pulau Batu** 28.56 275 P P 13 40 49.1 -0.6
comp=Z,311nm,1.6s,comp=Z,5µmcomp=Z,10µm
QZH **Quanzhou** 28.64 344 ⇑*iP* P 13 40 50.3 +0.2
QZH S **S** 13 45 39.0 +1.0
QZH pmax pmax
comp=Z,190nm,0.8s
QZH pmax pmax
comp=Z,4µm,7.7s
QZH LR LR
comp=Z,6µm,17.9s
QZH LR LR
comp=Z,4µm,15.1s
QZH LR LR
comp=Z,6µm,17.9s
GZH **Guangzhou** 28.80 334 P P 13 40 54.8 +3.1
GZH S **S** 13 45 47.0 +6.4
GZH pmax pmax
comp=Z,110nm,1.3s
GZH LR LR
comp=Z,3µm,11.8s
GZH LR LR
comp=Z,2µm,10.6s
KMBL **Kambalda** 28.83 189 P P 13 40 50.0 -1.9
baz=29,SNR=12
KMBL **Kambalda** 28.83 189 P P 13 40 50.7 -1.2
QLP **Quilpie** 29.05 146 P P 13 40 52.9 -0.9
baz=29,SNR=6.8
QLP **Quilpie** 29.05 146 P P 13 40 54.5 +0.7
QLP **Quilpie** 29.05 146 ⇑P P 13 40 51.5 -2.3
BLDU **Ballidu** 29.29 198 P P 13 40 54.2 -1.8
baz=29,SNR=7.4
BLDU **Ballidu** 29.29 198 P P 13 40 54.7 -1.3
SRIT **Nakonsritamara** 29.30 293 P P 13 40 56.2 0.0
SRIT **Nakonsritamara** 29.30 293 P P 13 40 57.6 +1.4
GSI **Gunungsitoli** 29.42 278 P P 13 40 57.0 -0.3
GSI IAmb IAmb 13 41 10.5
comp=Z,563nm,1.0s
GSI **Gunungsitoli** 29.42 278 P P 13 40 59.0 +1.7
GSI **Gunungsitoli** 29.42 278 ⇑P P 13 40 56.7 -0.6
GSI **Gunungsitoli** 29.42 278 P P 13 40 56.8 -0.6
comp=Z,620nm,1.4s,comp=Z,8µmcomp=Z,9µm
JOW **Kunigami** 29.45 3 P P 13 40 57.2 -0.1
JOW **Kunigami** 29.45 3 P P 13 40 59.8 +2.5
JOW **Kunigami** 29.45 3 ⇑P P 13 40 58.0 +0.7
JOW **Kunigami** 29.45 3 LR LR 13 52 19.9
comp=Z,7µm,20.5s,baz=171,slow=36
SURA **Surathani** 29.48 294 P P 13 41 00.7 +2.9
KCSI **Kotacane, Aceh** 29.60 282 P P 13 40 58.4 -0.5
comp=Z,155nm,1.6s,comp=Z,3µm
LCRK **Leigh Creek** 29.62 160 P P 13 40 58.7 -0.2
KLBR **Kellerberrin** 29.91 195 P P 13 41 00.3 -1.2
baz=30,SNR=14
KLBR **Kellerberrin** 29.91 195 P P 13 41 00.5 -1.0
NAYO **Nakonayok** 30.35 305 P P 13 41 07.6 +2.1
MUN **Mundaring** 30.72 198 P P 13 41 07.2 -1.4
baz=31,SNR=5.0
MUN **Mundaring** 30.72 198 P P 13 41 08.1 -0.5
LHMI **Lhok Sumawe** 30.78 285 P P 13 41 11.3 +1.9
LHMI **Lhok Sumawe** 30.78 285 P P 13 41 10.0 +0.6
comp=Z,878nm,1.5s,comp=Z,13µmcomp=Z,7µm
SNSI **Sinabang, Aceh** 30.82 279 P P 13 41 09.8 +0.1
comp=Z,321nm,1.6s,comp=Z,6µm
RK1H **Rockhampton Ha** 30.83 134 P P 13 41 09.3 -0.3
COCO **West Island** 31.05 251 P P 13 41 10.9 -0.8
COCO **West Island** 31.05 251 P P 13 41 10.9 -0.8
COCO pmax pmax
comp=Z,140nm,1.1s
COCO MLR MLR
comp=Z,10µm,21.0s
MLSI **Meulaboh, Aceh** 31.09 283 P P 13 41 12.2 +0.1
comp=Z,352nm,1.3s,comp=Z,4µm
NONG **Nongkai** 31.10 313 P P 13 41 13.1 +1.0
BBOO **Buckleboo** 31.16 165 P P 13 41 10.6 -1.9
baz=31,SNR=54
BBOO **Buckleboo** 31.16 165 P P 13 41 10.4 -2.1
BBOO **Buckleboo** 31.16 165 P P 13 41 10.9 -1.6
NWAO **Narrogin (SRO)** 31.31 195 P P 13 41 12.8 -1.1
baz=31,SNR=7.6
NWAO P P 13 41 12.8 -1.1
baz=31,SNR=7.6
NWAO **Narrogin (SRO)** 31.31 195 P P 13 41 12.4 -1.4
NWAO IAmb IAmb 13 42 19.5
comp=Z,425nm,1.7s
NWAO **Narrogin (SRO)** 31.31 195 IAMs_20 IAMs_20 13 55 16.8
comp=Z,16µm,19.0s
NWAO **Narrogin (SRO)** 31.31 195 P P 13 41 14.7 +0.9
NWAO **Narrogin (SRO)** 31.31 195 P P 13 41 12.4 -1.4
NWAO pmax pmax
comp=Z,425nm,1.7s
NWAO MLR MLR
comp=Z,16µm,19.0s
NWAO **Narrogin (SRO)** 31.31 195 LR LR 13 55 37.3
comp=Z,16µm,18.1s,baz=9.0,slow=40
NWAO **Narrogin (SRO)** 31.31 195 P P 13 41 12.7 -1.1
NWAO P P 13 41 12.7 -1.1
GD1S **Gladstone Soft** 31.59 134 P P 13 41 17.3 +0.9
WHYH **Whyalla** 31.80 163 P P 13 41 17.2 -0.9
GULI **GuiLin** 32.07 331 ⇓P P 13 41 21.0 +0.4
GULI S **S** 13 46 32.8 +0.9
GULI pmax pmax
comp=Z,70nm,1.1s
GULI LR LR
comp=Z,3µm,18.4s
GULI LR LR
comp=Z,3µm,18.4s
GULI LR LR
comp=Z,6µm,16.3s
STKA **Stephens Creek** 32.18 156 P P 13 41 20.0 -1.4
baz=32,SNR=54
STKA **Stephens Creek** 32.18 156 P P 13 41 19.6 -1.9
STKA **Stephens Creek** 32.18 156 P P 13 41 20.3 -1.2
STKA **Stephens Creek** 32.18 156*c i* P P 13 41 19.7 -1.8
STKA **Stephens Creek** 32.18 156 P P 13 41 19.9 -1.6
comp=Z,31nm,0.5s,baz=332,slow=9.2,SNR=47
STKA S S 13 46 18.3 -15
comp=Z,11nm,0.9s,baz=96,slow=19,SNR=2.0
comp=Z,31nm,0.5s
SRDT **SRDT** 32.20 303 P P 13 41 24.6 +2.8
EIDS **Eidsvold** 32.49 136 P P 13 41 23.2 -1.1
baz=32,SNR=9.3
EIDS **Eidsvold** 32.49 136 P P 13 41 22.6 -1.6
EIDS **Eidsvold** 32.49 136 P P 13 41 23.6 -0.7
EIDS **Eidsvold** 32.49 136 ⇑P P 13 41 22.3 -2.0
HTT **Hallett** 32.59 161 P P 13 41 24.0 -1.1
baz=33,SNR=52
HTT **Hallett** 32.59 161 P P 13 41 24.8 -0.3
HTT **Hallett** 32.59 161 ⇑P P 13 41 23.4 -1.6
SLVN **Son La** 32.74 318 P P 13 41 25.7 -0.8
PATS **Pohnpei** 32.94 73 P P 13 41 27.7 -0.6
baz=33,SNR=12
PATS **Pohnpei** 32.94 73 P P 13 41 30.3 +2.0
RKGY **Rocky Gully** 32.97 195 P P 13 41 28.9 +0.6
baz=33,SNR=5.9
JCJ **Chichijima** 33.21 26 P P 13 41 30.2 -0.3
JCJ IAmb IAmb 13 41 35.1
comp=Z,509nm,1.1s
JCJ **Chichijima** 33.21 26 LR LR 13 52 15.7
comp=Z,7µm,21.6s,baz=210,slow=31
AULRC **Lightning Ridg** 33.34 145 P P 13 41 31.6 -0.1
CNSH **ChangSha** 33.49 338 P P 13 41 34.5 +1.6
CNSH S **S** 13 46 53.5 -0.4
CNSH pmax pmax
comp=Z,35nm,1.2s
CNSH LR LR
comp=Z,3µm,10.2s
CNSH LR LR
comp=Z,3µm,12.0s
CNSH LR LR
comp=Z,5µm,15.1s
PHRA **Phrae** 33.56 310 P P 13 41 34.3 +0.6
HNR **Honiara** 33.67 103 P P 13 41 34.3 -0.5
HNR **Honiara** 33.67 103 P P 13 41 35.3 +0.5
HNR **Honiara** 33.67 103 ⇑P P 13 41 34.5 -0.2
HNR **Honiara** 33.67 103 P P 13 41 34.3 -0.5
HNR pmax pmax
comp=Z,926nm,1.2s
HNR MLR MLR
comp=Z,8µm,20.0s
HNR **Honiara** 33.67 103 P P 13 41 34.3 -0.5
comp=Z,6µm,1.0s,baz=184,slow=5.2,SNR=60
HNR LR LR 13 57 16.2
comp=Z,101µm,20.2s,baz=262,slow=40
CMSA **Cobar Meteorol** 33.76 150 P P 13 41 34.1 -1.2
baz=34,SNR=152
CMSA **Cobar Meteorol** 33.76 150 P P 13 41 34.9 -0.4
SSE **Sheshan** 34.07 352 P P 13 41 38.8 +0.9
SSE S **S** 13 47 06.0 +3.3
SSE pmax pmax
comp=Z,57nm,1.4s
SSE pmax pmax
comp=Z,1µm,8.9s
SSE LR LR
comp=Z,1µm,15.2s
SSE LR LR
comp=Z,1µm,16.0s
CRAI **Chiangrai** 34.50 313 P P 13 41 40.6 -1.3
CM31 **Chiang Mai Arr** 34.53 309 P P 13 41 42.0 -0.1
CMAR **Chiang Mai Arr** 34.53 309 P P 13 41 42.6 +0.5
CMAR **Chiang Mai Arr** 34.53 309 P P 13 41 43.3 +1.2
comp=Z,26nm,1.0s,baz=140,slow=7.6,SNR=102
CMAR PcP **PcP** 13 44 16.0 -1.0
comp=Z,9.4nm,0.9s,baz=166,slow=2.6,SNR=4.8
CMAR ScP **ScP** 13 48 03.5 +2.1
comp=Z,8.5nm,1.2s,baz=132,slow=2.6,SNR=6.0
CMAR LR LR 13 57 59.1
comp=Z,6µm,20.5s,baz=120,slow=40
comp=Z,26nm,1.0s
CHTO **Chiang Mai** 34.73 309 P P 13 41 44.7 +0.8

CHTO	**Chiang Mai**	**34.73**	**309**	P	**P**	**13 41 45.6**	**+1.7**
CHTO	**Chiang Mai**	**34.73**	**309**	⇑P	**P**	**13 41 43.9**	**0.0**
CHTO	**Chiang Mai**	**34.73**	**309**	P	**P**	**13 41 44.7**	**+0.8**
CHTO	comp=Z,115nm,1.1s			pmax	pmax		
CHTO	comp=Z,8μm,20.0s			MLR	MLR		
CHTO	**Chiang Mai**	**34.73**	**309**	P	**P**	**13 41 45.7**	**+1.8**
CHTO				P	**P**	**13 41 45.7**	**+1.8**
GYA	**Guiyang**	**34.91**	**328**	⇑*i*P	**P**	**13 41 47.0**	**+1.5**
GYA				PcP	**PcP**	**13 44 20.0**	**+1.9**
GYA				S	**S**	**13 47 18.8**	**+2.6**
GYA	comp=Z,140nm,1.0s			pmax	pmax		
GYA	comp=Z,2μm,5.8s			pmax	pmax		
GYA	comp=Z,3μm,15.4s			LR	LR		
GYA	comp=Z,2μm,11.5s			LR	LR		
GYA	comp=Z,5μm,19.5s			LR	LR		
WHN	**Wuhan**	**35.15**	**341**	⇑*i*P	**P**	**13 41 49.0**	**+1.7**
WHN				pP	**sP**	**13 41 55.3**	**+0.2**
WHN				sP	**pwP**	**13 41 58.3**	**+0.3**
WHN				PcP	**PcP**	**13 44 21.0**	**+2.5**
WHN				S	**S**	**13 47 22.8**	**+3.4**
WHN	comp=Z,17μm,20.2s			LR	LR		
NJ2	**Nanjing**	**35.41**	**348**	⇓P	**P**	**13 41 50.5**	**+1.0**
NJ2				S	**S**	**13 47 26.5**	**+3.1**
NJ2				sS	sS	13 47 40.5	+7.2
NJ2				ScS	**ScS**	**13 52 04.0**	**-4.7**
NJ2	comp=Z,170nm,1.7s			pmax	pmax		
NJ2	comp=Z,740nm,3.5s			pmax	pmax		
NJ2	comp=Z,3μm,18.9s			LR	LR		
NJ2	comp=Z,3μm,16.1s			LR	LR		
NJ2	comp=Z,4μm,16.1s			LR	LR		
KSSGP	**Seogwipo**	**35.81**	**360**	P	**P**	**13 41 56.0**	**+3.0**
KSSGP	**Seogwipo** SNR=7.0	**35.81**	**360**	P	**P**	**13 41 56.0**	**+3.0**
AUDCS	**Dubbo College**	**35.83**	**147**	P	**P**	**13 41 52.9**	**-0.3**
GOS2	**Gosang-Q330s** SNR=7.9	**35.86**	**359**	P	**P**	**13 41 56.1**	**+2.8**
GOS2	**Gosang-Q330s** SNR=7.9	**35.86**	**359**	P	**P**	**13 41 56.1**	**+2.8**
JNU	**Nakatsue**	**35.89**	**6**	P	**P**	**13 41 53.2**	**-0.5**
JNU	comp=Z,276nm,1.4s			IAmb	IAmb	13 41 55.9	
JNU	comp=Z,13μm,20.0s			IAMs_20	IAMs_20	13 55 29.4	
JNU	**Nakatsue**	**35.89**	**6**	P	**P**	**13 41 54.1**	**+0.4**
JNU	**Nakatsue**	**35.89**	**6**	⇓P	**P**	**13 41 53.1**	**-0.5**
JNU	**Nakatsue** comp=Z,82nm,1.1s,baz=179,slow=5.9,SNR=19	**35.89**	**6**	P	**P**	**13 41 53.1**	**-0.5**
JNU	comp=Z,12μm,21.5s,baz=176,slow=34 comp=Z,82nm,1.1s			LR	LR	13 54 57.5	
HALB	**Hallimjungang-** SNR=23	**35.96**	**359**	P	**P**	**13 41 56.0**	**+1.8**
HALB	**Hallimjungang-** SNR=23	**35.96**	**359**	P	**P**	**13 41 56.0**	**+1.8**
KSJJU	**Jeju** SNR=16	**35.98**	**360**	P	**P**	**13 41 56.0**	**+1.5**
KSJJU	**Jeju** SNR=13	**35.98**	**360**	P	**P**	**13 41 57.0**	**+2.5**
KMI	**Kunming**	**36.18**	**321**	⇑P	**P**	**13 41 59.0**	**+2.5**
KMI				PcP	**PcP**	**13 44 24.8**	**+2.8**
KMI				S	**S**	**13 47 37.5**	**+1.6**
KMI				ScS	**ScS**	**13 52 07.3**	**-6.5**
KMI	comp=Z,82nm,1.5s			pmax	pmax		
KMI	comp=Z,890nm,5.8s			pmax	pmax		
KMI	comp=Z,3μm,15.6s			LR	LR		
KMI	comp=Z,3μm,15.3s			LR	LR		
KMI	comp=Z,6μm,17.9s			LR	LR		
ARMA	**Armidale**	**36.23**	**142**	P	**P**	**13 41 56.4**	**-0.4**
ARMA	**Armidale** baz=36,SNR=27	**36.23**	**142**	P	**P**	**13 41 56.6**	**-0.2**
ARMA	**Armidale**	**36.23**	**142**	P	**P**	**13 41 57.2**	**+0.4**
ARMA	**Armidale**	**36.23**	**142**	⇑P	**P**	**13 41 56.3**	**-0.5**
CJD	**Chujado** SNR=6.6	**36.51**	**359**	P	**P**	**13 42 01.0**	**+2.0**
CJD	**Chujado** SNR=6.6	**36.51**	**359**	P	**P**	**13 42 01.0**	**+2.0**
ARPS	**Mount Arapiles** baz=37,SNR=103	**36.61**	**159**	P	**P**	**13 41 59.4**	**-0.4**
ARPS	**Mount Arapiles**	**36.61**	**159**	P	**P**	**13 42 00.0**	**+0.2**
CSDB	**Cheongsando** SNR=36	**36.73**	**0**	P	**P**	**13 42 01.0**	**+0.2**
CSDB	**Cheongsando** SNR=36	**36.73**	**0**	P	**P**	**13 42 01.0**	**+0.2**
ENH	**Enshi** comp=Z,489nm,1.1s	**36.73**	**335**	IAmb	IAmb	13 42 05.3	
ENH	**Enshi**	**36.73**	**335**	P	**P**	**13 42 01.9**	**+1.0**
JMN	**Monobe**	**36.90**	**10**	P	**P**	**13 42 02.6**	**+0.2**
JMN	**Monobe**	**36.90**	**10**	P	**P**	**13 42 03.5**	**+1.2**
JMN	**Monobe**	**36.90**	**10**	⇑P	**P**	**13 42 02.3**	**0.0**
WAN2	**Wando-Q330s** SNR=51	**36.95**	**360**	P	**P**	**13 42 03.0**	**+0.4**
WAN2	**Wando-Q330s** SNR=14	**36.95**	**360**	P	**P**	**13 42 05.0**	**+2.4**
WAN2	**Wando-Q330s** SNR=51	**36.95**	**360**	P	**P**	**13 42 03.0**	**+0.4**
WAN2	**Wando-Q330s** SNR=14	**36.95**	**360**	P	**P**	**13 42 05.0**	**+2.4**
KSJDO	**Jindo** SNR=15	**37.02**	**359**	P	**P**	**13 42 05.0**	**+1.7**
KSJDO	**Jindo** SNR=15	**37.02**	**359**	P	**P**	**13 42 05.0**	**+1.7**
DGPR	**DIGLIPUR**	**37.09**	**296**	*e*P	**P**	**13 42 04.1**	**+0.1**
DGPR	comp=Z,514nm,2.1s			IAmb	IAmb	13 42 24.4	
DGPR	comp=Z,7μm,19.4s			IAMs_20	IAMs_20	13 59 36.0	
HANB	**Haenam** SNR=6.3	**37.10**	**360**	P	**P**	**13 42 05.0**	**+1.0**
HANB	**Haenam** SNR=6.3	**37.10**	**360**	P	**P**	**13 42 05.0**	**+1.0**
AUMAG	**Moama Anglican**	**37.14**	**155**	P	**P**	**13 42 04.8**	**+0.5**
JTU	**Tsushima**	**37.16**	**4**	P	**P**	**13 42 03.9**	**-0.5**
JTU	**Tsushima**	**37.16**	**4**	P	**P**	**13 42 05.6**	**+1.2**
KOHB	**KOHEUNG** SNR=36	**37.17**	**1**	P	**P**	**13 42 05.0**	**+0.5**
KOHB	**KOHEUNG** SNR=36	**37.17**	**1**	P	**P**	**13 42 05.0**	**+0.5**
KSJAH	**Jangheung** SNR=14	**37.23**	**0**	P	**P**	**13 42 06.0**	**+0.9**
KSJAH	**Jangheung** SNR=14	**37.23**	**0**	P	**P**	**13 42 06.0**	**+0.9**
BOSB	**Boseong-gun** SNR=36	**37.31**	**1**	P	**P**	**13 42 06.0**	**+0.3**
BOSB	**Boseong-gun** SNR=36	**37.31**	**1**	P	**P**	**13 42 06.0**	**+0.3**
YOA0	**Yeongam** SNR=28	**37.31**	**0**	P	**P**	**13 42 07.0**	**+1.2**
YOA0	**Yeongam** SNR=28	**37.31**	**0**	P	**P**	**13 42 07.0**	**+1.2**
YNG	**Young** baz=37,SNR=55	**37.33**	**150**	P	**P**	**13 42 05.6**	**-0.3**
YNG	**Young**	**37.33**	**150**	P	**P**	**13 42 05.9**	**0.0**
KSNAJ	**Naju** SNR=6.8	**37.59**	**2**	P	**P**	**13 42 10.0**	**+1.9**
KSNAJ	**Naju** SNR=6.8	**37.59**	**2**	P	**P**	**13 42 10.0**	**+1.9**
KSSCH	**SUNCHEON** SNR=14	**37.62**	**1**	P	**P**	**13 42 09.0**	**+0.7**
KSSCH	**SUNCHEON** SNR=14	**37.62**	**1**	P	**P**	**13 42 09.0**	**+0.7**
KSHAD	**HADONG** SNR=11	**37.64**	**1**	P	**P**	**13 42 10.0**	**+1.5**
KSHAD	**HADONG** SNR=11	**37.64**	**1**	P	**P**	**13 42 10.0**	**+1.5**
KSYSU	**YEOSU** SNR=8.0	**37.66**	**1**	P	**P**	**13 42 10.0**	**+1.2**
KSYSU	**YEOSU**	**37.66**	**1**	P	**P**	**13 42 10.0**	**+1.2**
KSKWJ	**Gwangju** SNR=8.0	**37.71**	**0**	P	**P**	**13 42 10.0**	**+0.9**
KSKWJ	**Gwangju** SNR=29	**37.71**	**0**	P	**P**	**13 42 10.1**	**+1.0**
KSKWJ	**Gwangju** SNR=6.0	**37.71**	**0**	P	**P**	**13 42 10.0**	**+0.9**
KSKWJ	**Gwangju** SNR=29	**37.71**	**0**	P	**P**	**13 42 10.1**	**+1.0**
KSJIN	**Jinju** SNR=9.6	**37.73**	**2**	P	**P**	**13 42 11.0**	**+1.7**
JHJ	**Hachijo jima 2** comp=Z,13μm,19.0s,baz=184,slow=36	**37.75**	**18**	LR	LR	13 57 30.0	
JHJ2	**Mitsune** comp=Z,13μm,20.0s	**37.75**	**18**	IAMs_20	IAMs_20	13 55 25.6	
PZH	**PanZhiHua**	**37.80**	**322**	P	**P**	**13 42 11.3**	**+1.2**
PZH				PcP	**PcP**	**13 44 23.8**	**-3.0**
PZH				S	**S**	**13 47 59.5**	**-0.8**
PZH	comp=Z,100nm,1.1s			pmax	pmax		
PZH	comp=Z,880nm,3.9s			pmax	pmax		
PZH	comp=Z,2μm,15.5s			LR	LR		
PZH	comp=Z,3μm,16.5s			LR	LR		
PZH	comp=Z,3μm,17.8s			LR	LR		
KSBUS	**Busan** SNR=19	**37.86**	**3**	P	**P**	**13 42 11.0**	**+0.6**
KSBUS	**Busan** SNR=19	**37.86**	**3**	P	**P**	**13 42 11.0**	**+0.6**
EURB	**Uiryeong-eup** SNR=9.9	**37.90**	**2**	P	**P**	**13 42 12.0**	**+1.3**
EURB	**Uiryeong-eup** SNR=9.9	**37.90**	**2**	P	**P**	**13 42 12.0**	**+1.3**
SUCA	**Sunchang** SNR=11	**37.92**	**1**	P	**P**	**13 42 12.0**	**+1.1**
SUCA	**Sunchang** SNR=11	**37.92**	**1**	P	**P**	**13 42 12.0**	**+1.1**
MGCD	**Mangrove Creek** baz=38,SNR=14	**37.94**	**146**	P	**P**	**13 42 11.3**	**+0.2**
KSSAC	**SANCHEONG** SNR=13	**37.97**	**2**	P	**P**	**13 42 13.0**	**+1.7**
KSSAC	**SANCHEONG** SNR=13	**37.97**	**2**	P	**P**	**13 42 13.0**	**+1.7**
NAWB	**Namwon** SNR=58	**37.97**	**1**	P	**P**	**13 42 12.0**	**+0.7**
NAWB	**Namwon** SNR=58	**37.97**	**1**	P	**P**	**13 42 12.0**	**+0.7**
HACA	**Hapcheon Acc B** SNR=6.9	**37.98**	**2**	P	**P**	**13 42 13.0**	**+1.6**
HACA	**Hapcheon Acc B** SNR=7.3	**37.98**	**2**	P	**P**	**13 42 13.0**	**+1.6**
KSJEU	**Jeongeup** SNR=12	**38.04**	**0**	P	**P**	**13 42 14.0**	**+2.1**
KSJEU	**Jeongeup** SNR=12	**38.04**	**0**	P	**P**	**13 42 14.0**	**+2.1**
BRAT	**Ballarat**	**38.07**	**158**	P	**P**	**13 42 12.7**	**+0.6**
HAMB	**Hamyang** SNR=44	**38.07**	**1**	P	**P**	**13 42 13.0**	**+0.8**
HAMB	**Hamyang** SNR=11	**38.07**	**1**	P	**P**	**13 42 14.0**	**+1.8**
HAMB	**Hamyang** SNR=44	**38.07**	**1**	P	**P**	**13 42 13.0**	**+0.8**
HAMB	**Hamyang** SNR=11	**38.07**	**1**	P	**P**	**13 42 14.0**	**+1.8**
MIYA	**Miryang-si** SNR=7.5	**38.09**	**3**	P	**P**	**13 42 14.0**	**+1.7**
KSHAC	**HAPCHEON** SNR=6.9	**38.13**	**2**	P	**P**	**13 42 15.0**	**+2.4**
KSHAC	**HAPCHEON** SNR=6.9	**38.13**	**2**	P	**P**	**13 42 15.0**	**+2.4**
KSIMS	**Imsil** SNR=8.4	**38.16**	**1**	P	**P**	**13 42 15.0**	**+2.1**
KSIMS	**Imsil** SNR=8.4	**38.16**	**1**	P	**P**	**13 42 15.0**	**+2.1**
KSKCH	**Geochang** SNR=30	**38.18**	**2**	P	**P**	**13 42 14.0**	**+0.9**
KSKCH	**Geochang** SNR=7.6	**38.18**	**2**	P	**P**	**13 42 15.1**	**+2.0**
KSKCH	**Geochang** SNR=30	**38.18**	**2**	P	**P**	**13 42 14.0**	**+0.9**
KSKCH	**Geochang** SNR=7.6	**38.18**	**2**	P	**P**	**13 42 15.1**	**+2.0**
KSJAS	**Jangsu** SNR=18	**38.21**	**1**	P	**P**	**13 42 15.0**	**+1.6**
KSJAS	**Jangsu** SNR=18	**38.21**	**1**	P	**P**	**13 42 15.0**	**+1.6**
JEJB	**Jeongja** SNR=7.2	**38.27**	**4**	P	**P**	**13 42 16.0**	**+2.2**
JEJB	**Jeongja** SNR=7.2	**38.27**	**4**	P	**P**	**13 42 16.0**	**+2.2**
JEJB	**Jeongja** SNR=5.3	**38.27**	**4**	P	**P**	**13 42 17.0**	**+3.2**
KSUSN	**Ulsan** SNR=26	**38.31**	**3**	P	**P**	**13 42 15.0**	**+0.8**
KSUSN	**Ulsan** SNR=26	**38.31**	**3**	P	**P**	**13 42 15.0**	**+0.8**
KSUSN	**Ulsan** SNR=6.3	**38.31**	**3**	P	**P**	**13 42 17.0**	**+2.8**
KSCHO	**Jeoju** SNR=6.9	**38.37**	**1**	P	**P**	**13 42 18.0**	**+3.4**
KSDAG	**Daegu** SNR=24	**38.37**	**3**	P	**P**	**13 42 15.0**	**+0.3**
KSDAG	**Daegu** SNR=24	**38.37**	**3**	P	**P**	**13 42 15.0**	**+0.3**
KSDAG	**Daegu** SNR=5.6	**38.37**	**3**	P	**P**	**13 42 18.0**	**+3.3**
CAN	**Canberra**	**38.44**	**150**	P	**P**	**13 42 14.9**	**-0.5**
CAN	comp=Z,1μm,1.8s			IAmb	IAmb	13 42 17.4	
CAN	**Canberra**	**38.44**	**150**	P	**P**	**13 42 15.3**	**-0.1**
CAN	**Canberra**	**38.44**	**150**	⇑P	**P**	**13 42 15.1**	**-0.3**
CAN	**Canberra**	**38.44**	**150**	P	**P**	**13 42 14.9**	**-0.5**
CAN	comp=Z,1μm,1.8s			pmax	pmax		
DUSB	**Deogyusan** SNR=28	**38.45**	**1**	P	**P**	**13 42 16.0**	**+0.5**
DUSB	**Deogyusan** SNR=7.5	**38.45**	**1**	P	**P**	**13 42 17.0**	**+1.5**
KSDAU	**Deagu-acc** SNR=8.8	**38.47**	**2**	P	**P**	**13 42 17.0**	**+1.5**
KSDAU	**Deagu-acc** SNR=8.8	**38.47**	**2**	P	**P**	**13 42 17.0**	**+1.5**
YOCB	**Yeongcheon** SNR=13	**38.58**	**3**	P	**P**	**13 42 17.0**	**+0.6**
YOCB	**Yeongcheon** SNR=5.9	**38.58**	**3**	P	**P**	**13 42 18.0**	**+1.6**
CNB	**Canberra Magne** baz=39,SNR=7.3	**38.62**	**150**	P	**P**	**13 42 16.9**	**0.0**
CNB	**Canberra Magne**	**38.62**	**150**	P	**P**	**13 42 17.2**	**+0.3**
KSCIG	**Chilgok** SNR=5.7	**38.62**	**2**	P	**P**	**13 42 19.0**	**+2.3**
KSCIG	**Chilgok** SNR=5.7	**38.62**	**2**	P	**P**	**13 42 19.0**	**+2.3**
MLBS	**Spotswood, Mel**	**38.69**	**157**	P	**P**	**13 42 18.4**	**+1.1**
TOO	**Toolangi** baz=39,SNR=17	**38.70**	**156**	P	**P**	**13 42 17.5**	**-0.1**
TOO	**Toolangi** comp=Z,393nm,1.5s	**38.70**	**156**	P	**P**	**13 42 17.2**	**-0.3**
TOO				IAmb	IAmb	13 42 19.8	
TOO	**Toolangi**	**38.70**	**156**	P	**P**	**13 42 17.4**	**-0.1**
TOO	**Toolangi**	**38.70**	**156**	⇑P	**P**	**13 42 17.4**	**-0.1**
TOO	**Toolangi**	**38.70**	**156**	P	**P**	**13 42 17.2**	**-0.3**
TOO	comp=Z,393nm,1.5s			pmax	pmax		
TOO	comp=Z,11μm,22.0s			MLR	MLR		
WOLH	**Wollongong Har**	**38.70**	**147**	P	**P**	**13 42 18.4**	**+0.9**
MND	**Mandalay**	**38.74**	**311**	P	**P**	**13 42 19.1**	**+1.1**
GUWB	**Gunwi** SNR=9.2	**38.77**	**2**	P	**P**	**13 42 20.0**	**+2.0**
GUWB	**Gunwi** SNR=7.1	**38.77**	**2**	P	**P**	**13 42 20.1**	**+2.1**
GEXS	**Deakin Univers**	**38.78**	**158**	P	**P**	**13 42 18.9**	**+0.9**
KSCPR	**CHUPUNGNYEONG** SNR=7.5	**38.78**	**2**	P	**P**	**13 42 21.1**	**+3.0**
KSGUM	**GUMI** SNR=6.2	**38.81**	**2**	P	**P**	**13 42 21.0**	**+2.7**
KSPHA	**Pohang** SNR=6.7	**38.82**	**3**	P	**P**	**13 42 21.0**	**+2.6**
TNCH	**TengChong**	**38.88**	**317**	P	**P**	**13 42 21.0**	**+1.7**
TNCH				PP	**PnPn**	**13 43 53.5**	**+2.6**
TNCH				PcP	**PcP**	**13 44 32.0**	**+1.8**
TNCH				S	**S**	**13 48 19.3**	**+2.5**
TNCH				SS	**SnSn**	**13 51 02.8**	**-4.7**
TNCH	comp=Z,120nm,1.0s			pmax	pmax		
TNCH	comp=Z,1μm,7.8s			pmax	pmax		
TNCH	comp=Z,2μm,17.3s			LR	LR		
TNCH	comp=Z,2μm,14.7s			LR	LR		
TNCH	comp=Z,4μm,22.6s			LR	LR		
TJN	**Taejon**	**38.93**	**1**	P	**P**	**13 42 18.6**	**-0.7**
TJN	comp=Z,529nm,1.1s			IAmb	IAmb	13 42 21.5	
TJN	**Taejon**	**38.93**	**1**	P	**P**	**13 42 19.2**	**-0.1**
TJN	**Taejon**	**38.93**	**1**	*ce*P	**P**	**13 42 18.9**	**-0.4**
EUSB	**Uiseong** SNR=8.0	**38.95**	**3**	P	**P**	**13 42 22.0**	**+2.5**
INU	**Inuyama**	**39.11**	**13**	P	**P**	**13 42 20.0**	**-0.8**
INU	**Inuyama**	**39.11**	**13**	P	**P**	**13 42 21.7**	**+0.9**
INU	**Inuyama**	**39.11**	**13**	⇑P	**P**	**13 42 20.6**	**-0.2**
AUSMG	**Snowy Mountain**	**39.13**	**152**	P	**P**	**13 42 21.4**	**+0.2**
AUUHS	**Ulladulla High**	**39.22**	**149**	P	**P**	**13 42 23.8**	**+2.0**
JGF	**Kuroka**	**39.43**	**14**	P	**P**	**13 42 22.6**	**-0.9**
JGF	**Kuroka**	**39.43**	**14**	P	**P**	**13 42 25.9**	**+2.3**
JGF	**Kuroka**	**39.43**	**14**	⇑P	**P**	**13 42 22.9**	**-0.7**
LYN	**LuoYang**	**39.45**	**341**	⇑P	**P**	**13 42 24.5**	**+0.8**
LYN				PP	**PP**	**13 43 59.0**	**+4.5**
LYN				S	**S**	**13 48 26.0**	**+1.2**
LYN				SS	**SnSn**	**13 51 21.3**	**+0.4**
LYN	comp=Z,480nm,1.0s			pmax	pmax		
LYN	comp=Z,4μm,7.7s			pmax	pmax		
LYN	comp=Z,2μm,17.2s			LR	LR		
LYN	comp=Z,3μm,13.7s			LR	LR		
LYN	comp=Z,5μm,19.2s			LR	LR		
TIA	**Tai'an**	**39.78**	**348**	P	**P**	**13 42 26.0**	**-0.5**
TIA				S	**S**	**13 48 25.5**	**-4.3**
TIA	comp=Z,73nm,0.9s			pmax	pmax		
TIA	comp=Z,1μm,6.6s			pmax	pmax		
TIA	comp=Z,2μm,13.7s			LR	LR		
TIA	comp=Z,1μm,17.2s			LR	LR		
TIA	comp=Z,2μm,14.2s			LR	LR		
MILA	**Mila** baz=40,SNR=8.6	**39.90**	**152**	P	**P**	**13 42 27.2**	**-0.4**
MILA	**Mila**	**39.90**	**152**	P	**P**	**13 42 28.2**	**+0.7**
MILA	**Mila**	**39.90**	**152**	⇑P	**P**	**13 42 27.2**	**-0.4**
CD2	**Chengdu**	**39.99**	**329**	P	**P**	**13 42 29.3**	**+0.9**
CD2				S	**S**	**13 48 32.5**	**-0.7**
CD2				ScS	**ScS**	**13 52 34.8**	**-0.2**
CD2	comp=Z,270nm,1.2s			pmax	pmax		
CD2	comp=Z,2μm,6.3s			pmax	pmax		
CD2	comp=Z,1μm,12.8s			LR	LR		
CD2	comp=Z,2μm,14.5s			LR	LR		
CD2	comp=Z,5μm,14.5s			LR	LR		
KSAR	**Wonju Array Be**	**40.00**	**1**	P	**P**	**13 42 28.0**	**-0.3**
KSAR	**Wonju Array Be**	**40.00**	**1**	P	**P**	**13 42 28.0**	**-0.3**
KSRS	**Korea Array** comp=Z,104nm,0.8s,baz=178,slow=11,SNR=150	**40.01**	**1**	P	**P**	**13 42 28.4**	**0.0**
KSRS	comp=Z,10nm,0.9s,baz=189,slow=3.6,SNR=8.0			PcP	**PcP**	**13 44 34.3**	**+1.0**
KSRS	comp=Z,7μm,21.0s,baz=165,slow=35 comp=Z,104nm,0.8s			LR	LR	13 58 02.2	
INCN	**Inchon**	**40.03**	**360**	P	**P**	**13 42 28.2**	**-0.2**
INCN	comp=Z,306nm,0.9s			IAmb	IAmb	13 42 31.6	
INCN	**Inchon**	**40.03**	**360**	P	**P**	**13 42 29.2**	**+0.7**
INCN	**Inchon**	**40.03**	**360**	⇑P	**P**	**13 42 28.8**	**+0.2**
INCN	**Inchon**	**40.03**	**360**	P	**P**	**13 42 28.3**	**-0.2**
INCN	comp=Z,306nm,0.9s			pmax	pmax		
INCN	comp=Z,10μm,20.0s			MLR	MLR		
INCN	**Inchon**	**40.03**	**360**	P	**P**	**13 42 29.2**	**+0.7**
INCN				P	**P**	**13 42 29.2**	**+0.7**
KS19	**Wonju Array Si**	**40.06**	**1**	P	**P**	**13 42 28.0**	**-0.8**
XAN	**Xi'an**	**40.25**	**337**	⇑P	**P**	**13 42 30.5**	**0.0**
XAN				PP	**PnPn**	**13 44 07.5**	**+0.5**
XAN				PcP	**PcP**	**13 44 37.0**	**+2.8**
XAN				S	**S**	**13 48 38.3**	**+1.3**
XAN				SS	**SS**	**13 51 34.3**	**-1.4**
XAN				ScS	**ScS**	**13 52 34.8**	**-1.6**
XAN	comp=Z,500nm,1.0s			pmax	pmax		
XAN	comp=Z,4μm,5.7s			pmax	pmax		
XAN	comp=Z,5μm,15.1s			LR	LR		
XAN	comp=Z,3μm,13.2s			LR	LR		
XAN	comp=Z,6μm,15.3s			LR	LR		
MJAR	**Matsushiro Arr** comp=Z,31nm,0.8s,baz=187,slow=7.6,SNR=35	**40.53**	**14**	P	**P**	**13 42 31.6**	**-1.1**
MJAR	comp=Z,38nm,1.1s,baz=184,slow=2.3,SNR=8.8			PcP	**PcP**	**13 44 35.7**	**+0.7**
MJAR	comp=Z,18μm,20.2s,baz=182,slow=33 comp=Z,31nm,0.8s			LR	LR	13 57 24.8	
MAJO	**Matsushiro**	**40.53**	**14**	P	**P**	**13 42 31.9**	**-0.8**
MAJO	**Matsushiro** comp=Z,17μm,21.0s	**40.53**	**14**	IAMs_20	IAMs_20	13 57 02.1	
MAJO	**Matsushiro**	**40.53**	**14**	P	**P**	**13 42 32.3**	**-0.4**
MAJO	**Matsushiro**	**40.53**	**14**	⇑P	**P**	**13 42 31.0**	**-1.7**
MAJO	**Matsushiro**	**40.53**	**14**	*ce*P	**P**	**13 42 31.2**	**-1.5**
MAJO	comp=Z,177nm,1.3s			pmax	pmax		
MJB9	**Matsu-Tunnel**	**40.53**	**14**	P	**P**	**13 42 32.2**	**-0.5**
HJU	**Haeju**	**40.60**	**359**	P	**P**	**13 42 35.4**	**+2.2**
HJU				S	**S**	**13 48 42.8**	**+0.9**
HJU	comp=Z,729nm,1.5s			AmB			
HJU	comp=Z,5μm,16.5s			AMS	AMS		
KOUNC	**Koumac, New Ca**	**40.66**	**119**	P	**P**	**13 42 33.2**	**-0.7**
KOUNC	**Koumac, New Ca**	**40.66**	**119**	P	**P**	**13 42 34.2**	**+0.2**
KOUNC	**Koumac, New Ca**	**40.66**	**119**	⇑P	**P**	**13 42 33.7**	**-0.3**
SAIH	**SAIHA**	**41.40**	**309**	*e*P	**P**	**13 42 41.0**	**+0.7**
SAIH				*e*P	**pP**	**13 42 41.5**	**-3.7**
SAIH				*e*P	**sP**	**13 42 42.5**	**-5.1**
SAIH	comp=Z,333nm,1.3s			IAmb	IAmb	13 42 45.2	
HNS	**HongShan**	**41.47**	**346**	⇑P	**P**	**13 42 40.8**	**+0.4**
HNS				S	**S**	**13 48 57.3**	**+2.4**
HNS				SS	**SS**	**13 52 02.0**	**+2.2**
HNS	comp=Z,430nm,1.0s			pmax	pmax		
HNS	comp=Z,2μm,5.1s			pmax	pmax		
HNS	comp=Z,3μm,19.1s			LR	LR		
HNS	comp=Z,3μm,17.5s			LR	LR		
HNS	comp=Z,3μm,15.9s			LR	LR		
PYAG	**Pyongyang**	**41.60**	**359**	P	**P**	**13 42 41.8**	**+0.4**
PYAG				S	**S**	**13 48 57.9**	**+1.1**
PYAG	comp=Z,728nm,2.1s			AmB			
PYAG	comp=Z,7μm,22.0s			AMS	AMS		
DL2	**Dalian**	**41.71**	**354**	P	**P**	**13 42 41.5**	**-0.9**
DL2				S	**S**	**13 49 00.0**	**+1.6**
DL2	comp=Z,260nm,1.1s			pmax	pmax		
DL2	comp=Z,2μm,6.5s			pmax	pmax		
DL2	comp=Z,4μm,15.9s			LR	LR		
DL2	comp=Z,2μm,15.5s			LR	LR		

DL2 LR LR
comp=Z,4µm,16.4s
JSD Sado 41.96 14 P **P** **13 42 43.5 -0.9**
JSD Sado 41.96 14 P **P** **13 42 46.3 +1.9**
JSD Sado 41.96 14 ⇑P **P** **13 42 43.5 -0.9**
IMP Imphal 42.00 313 *e*P **P** **13 42 45.3 +0.3**
IMP *e*P **pP** **13 42 45.7 -4.3**
IMP *e*P **sP** **13 42 47.2 -5.2**
IMP IAmb IAmb 13 42 48.3
comp=Z,95nm,1.1s
TIY Taiyuan 42.38 343 ⇑P **P** **13 42 48.8 +0.8**
TIY PcP **PcP** **13 44 43.8 +2.6**
TIY S **S** **13 49 10.5 +1.9**
TIY pmax pmax
comp=Z,190nm,0.8s
TIY pmax pmax
comp=Z,2µm,6.5s
TIY LR LR
comp=Z,2µm,13.5s
TIY LR LR
comp=Z,2µm,12.7s
TIY LR LR
comp=Z,3µm,16.9s
KOHI KOHIMA 42.41 314 *e*P **P** **13 42 48.3 -0.2**
KOHI *e*P **pP** **13 42 49.3 -4.1**
KOHI *e*P **sP** **13 42 49.9 -6.0**
KOHI IAmb IAmb 13 42 51.9
comp=Z,311nm,1.2s
KOHI IAMs_20 IAMs_20 14 01 31.9
comp=Z,3µm,21.9s
JMM Marumori 42.46 17 P **P** **13 42 48.1 -0.4**
JMM IAMs_20 IAMs_20 13 59 16.2
comp=Z,10µm,20.0s
JMM Marumori 42.46 17 P **P** **13 42 49.6 +1.1**
JMM Marumori 42.46 17 ⇑P **P** **13 42 48.1 -0.4**
HHU Hamhung 42.47 1 P **P** **13 42 48.7 +0.1**
MOKO MOKOCHONG 42.48 315 *e*P **P** **13 42 49.9 +0.8**
MOKO *e*P **P** **13 42 49.9 +0.8**
MOKO *e*P **pP** **13 42 50.9 -3.1**
MOKO IAmb IAmb 13 43 08.0
comp=Z,621nm,1.7s
AULHS Lilydale High 42.54 157 P **P** **13 42 49.1 0.0**
GLAD Gladstone 42.63 156 P **P** **13 42 48.7 -1.2**
CORO Coronation Par 42.69 157 P **P** **13 42 50.4 +0.1**
SUJ Sinuiju 42.69 357 P **P** **13 42 50.6 +0.3**
SUJ S **S** **13 49 13.8 +1.0**
SUJ AmB
comp=Z,1µm,1.6s
SUJ AMS AMS
comp=Z,5µm,13.6s
BELO BELONIA 43.00 309 *e*P **P** **13 42 55.1 +1.9**
BELO *e*P **pP** **13 42 58.7 +0.7**
BELO ⇑*e*P **sP** **13 42 59.3 -1.3**
DZM Mont Dzumac 43.07 120 P **P** **13 42 53.3 -0.6**
DZM IAmb IAmb 13 42 56.7
comp=Z,303nm,1.1s
DZM Mont Dzumac 43.07 120 P **P** **13 42 54.2 +0.3**
DZM Mont Dzumac 43.07 120 ⇑P **P** **13 42 53.7 -0.2**
DZM Mont Dzumac 43.07 120 P **P** **13 42 53.8 0.0**
comp=Z,187nm,1.0s,baz=291,slow=8.3,SNR=66
comp=Z,187nm,1.0s
ONTNC Ouen Toro 43.17 120 P **P** **13 42 53.9 -0.6**
ONTNC Ouen Toro 43.17 120 P **P** **13 42 54.6 +0.1**
ONTNC Ouen Toro 43.17 120 ⇑P **P** **13 42 54.1 -0.4**
LIFNC LIFOU 43.33 118 P **P** **13 42 55.6 -0.3**
LIFNC IAmb IAmb 13 42 57.3
comp=Z,517nm,0.9s
LIFNC LIFOU 43.33 118 P **P** **13 42 56.1 +0.2**
YATNC Mamie plateau, 43.46 120 P **P** **13 42 58.1 +1.2**
AGT Agartala 43.49 309 ⇓*e*P **P** **13 42 59.8 +2.7**
AGT *e*P **pP** **13 43 02.9 +0.9**
AGT *e*P **sP** **13 43 04.0 -0.6**
AGT IAMs_20 IAMs_20 13 58 23.4
comp=Z,4µm,21.6s
ITAN ITANAGAR 43.54 315 *e*P **P** **13 42 59.5 +2.1**
ITAN *e*P **pP** **13 43 00.3 -2.3**
ITAN *e*P **sP** **13 43 00.8 -4.1**
MOO Moorlands 43.55 158 P **P** **13 42 57.5 +0.1**
baz=44,SNR=5.9
MOO Moorlands 43.55 158 P **P** **13 42 57.6 +0.3**
BJT Baijiatuan 43.65 348 P **P** **13 42 57.8 -0.3**
BJT IAmb IAmb 13 43 01.1
comp=Z,373nm,1.2s
BJT Baijiatuan 43.65 348 P **P** **13 42 58.6 +0.5**
BJT Baijiatuan 43.65 348 P **P** **13 42 57.8 -0.3**
BJT pmax pmax
comp=Z,373nm,1.2s
BJI Beijing 43.67 348 P **P** **13 42 57.8 -0.4**
BJI PcP **PcP** **13 44 47.5 +2.2**
BJI PcS **PcS** **13 48 36.8 -1.2**
BJI S **S** **13 49 24.0 -3.1**
BJI pmax pmax
comp=Z,170nm,1.1s
BJI pmax pmax
comp=Z,1µm,6.3s
BJI LR LR
comp=Z,2µm,18.5s
BJI LR LR
comp=Z,1µm,22.0s
BJI LR LR
comp=Z,2µm,17.2s
SHL Shillong 43.94 312 P **P** **13 43 01.1 +0.2**
SHL Shillong 43.94 312 P **P** **13 43 01.1 +0.2**
SHL pmax pmax
comp=Z,179nm,1.0s
SHL Shillong 43.94 312 *e*P **P** **13 43 01.7 +0.7**
SHL IAmb IAmb 13 43 12.9
comp=Z,191nm,1.1s
SHL Shillong 43.94 312 P **P** **13 43 02.4 +1.5**
SNR=82
TAU Tasmania Unive 44.01 158 P **P** **13 43 00.6 -0.4**
TAU Tasmania Unive 44.01 158 IAMs_20 IAMs_20 14 03 34.8
comp=Z,13µm,19.0s
TAU Tasmania Unive 44.01 158 P **P** **13 43 01.7 +0.8**
TAU Tasmania Unive 44.01 158 ⇓P **P** **13 43 00.9 0.0**
TAU Tasmania Unive 44.01 158 P **P** **13 43 00.6 -0.4**
TAU pmax pmax
comp=Z,203nm,1.7s
TAU MLR MLR
comp=Z,13µm,19.0s
PINNC Pines Island, 44.13 120 P **P** **13 43 02.1 -0.1**
PINNC IAmb IAmb 13 43 05.7
comp=Z,522nm,1.2s
PINNC Pines Island, 44.13 120 P **P** **13 43 03.5 +1.2**
LZH Lanzhou 44.15 333 ⇑*i*P **P** **13 43 04.0 +1.6**
LZH pP sP 13 43 09.3 -0.5
LZH PP **PcP** **13 44 50.5 +3.2**
LZH PcS **PcS** **13 48 42.0 +1.4**
LZH S **S** **13 49 36.0 +1.3**
LZH sS sS 13 49 54.0 +10
LZH SS **SS** **13 52 52.0 -0.9**
LZH pmax pmax
comp=Z,910nm,1.2s
LZH pmax pmax
comp=Z,4µm,5.5s
LZH LR LR
comp=Z,3µm,13.6s
LZH LR LR
comp=Z,2µm,14.1s
LZH LR LR
comp=Z,5µm,16.5s
MARNC Mare, Loyalty 44.26 118 P **P** **13 43 03.0 -0.3**
MARNC Mare, Loyalty 44.26 118 P **P** **13 43 04.4 +1.1**
GUWA GUWAHATI 44.44 313 *e*P **P** **13 43 05.5 +0.8**
GUWA ⇑*e*P **pP** **13 43 06.0 -3.6**
GUWA *e*P **pP** **13 43 06.1 -3.6**
GUWA IAmb IAmb 13 43 18.4
comp=Z,433nm,1.4s
GUWA IAMs_20 IAMs_20 14 01 32.3
comp=Z,2µm,21.5s
SNY Shenyang 44.46 357 ⇑P **P** **13 43 03.8 -0.7**
SNY S **S** **13 49 37.0 -1.6**
SNY pmax pmax
comp=Z,78nm,1.1s
SNY pmax pmax
comp=Z,600nm,3.5s
SNY LR LR
comp=Z,3µm,17.1s
SNY LR LR
comp=Z,2µm,15.7s
SNY LR LR
comp=Z,5µm,18.4s
WAKE Wake Island 44.94 59 P **P** **13 43 11.2 +2.5**
WAKE Wake Island 44.94 59 ⇑P **P** **13 43 09.8 +1.1**

JTM Tenmabayashi 45.27 15 P **P** **13 43 11.1 +0.1**
JTM IAmb IAmb 13 43 14.6
comp=Z,522nm,1.1s
JTM IAMs_20 IAMs_20 13 59 43.4
comp=Z,12µm,21.0s
JTM Tenmabayashi 45.27 15 P **P** **13 43 12.7 +1.7**
JTM Tenmabayashi 45.27 15 ⇑P **P** **13 43 11.2 +0.2**
MSHR Mys Shultsa 45.30 5*c i*P **P** **13 43 11.3 +0.1**
MSHR pmax pmax
comp=Z,197nm,0.9s
PSTR Posyet 45.34 4*d i*P **P** **13 43 12.0 +0.5**
HHC Hu-ho-hao-te 45.55 344 *e*P **P** **13 43 13.8 +0.4**
HHC S **S** **13 49 54.5 -0.2**
HHC SS **ScS** **13 53 07.3 -1.8**
HHC pmax pmax
comp=Z,150nm,1.1s
HHC pmax pmax
comp=Z,2µm,5.8s
HHC LR LR
comp=Z,2µm,17.6s
HHC LR LR
comp=Z,2µm,18.6s
HHC LR LR
comp=Z,3µm,18.3s
BTO Baotou 45.77 342 *e*P **P** **13 43 16.3 +1.2**
BTO PP **PP** **13 45 05.0 +2.4**
BTO S **S** **13 50 02.8 +4.9**
BTO SS **SS** **13 53 18.5 -4.1**
BTO pmax pmax
comp=Z,81nm,2.0s
BTO pmax pmax
comp=Z,5µm,7.9s
BTO LR LR
comp=Z,7µm,22.0s
BTO LR LR
comp=Z,4µm,17.1s
BTO LR LR
comp=Z,7µm,24.1s
VLA Vladivostok 45.89 5 *i*P **P** **13 43 16.6 +0.7**
VLA pmax pmax
comp=Z,271nm,1.1s
CN2 Changchun 46.35 359 ⇑*i*P **P** **13 43 18.5 -1.0**
CN2 pP pP 13 43 24.5 -0.2
CN2 PcP **PcP** **13 44 55.5 +1.0**
CN2 S **S** **13 50 04.5 -1.5**
CN2 SS **SS** **13 53 24.5 -7.4**
CN2 pmax pmax
comp=Z,80nm,1.1s
CN2 pmax pmax
comp=Z,2µm,7.0s
CN2 LR LR
comp=Z,4µm,18.0s
CN2 LR LR
comp=Z,4µm,18.0s
CN2 LR LR
comp=Z,6µm,19.0s
TARA Tarawa 46.36 86 P **P** **13 43 19.8 -0.4**
TARA IAmb IAmb 13 43 22.9
comp=Z,311nm,1.2s
TARA Tarawa 46.36 86 P **P** **13 43 21.2 +1.0**
HALK Hakmana 46.81 281 ⇑P **P** **13 43 26.3 +2.7**
LSA Lhasa 46.89 316 IAmb IAmb 13 43 30.3
comp=Z,314nm,0.9s
LSA Lhasa 46.89 316 P **P** **13 43 26.5 +1.9**
USA0B Ussuriysk Arra 46.98 5 P **P** **13 43 24.1 -0.2**
USA0B IAmb IAmb 13 43 27.5
comp=Z,242nm,0.9s
USA0B IAMs_20 IAMs_20 14 03 23.7
comp=Z,8µm,20.0s
USA0B Ussuriysk Arra 46.98 5*c i*P **P** **13 43 24.2 -0.2**
USRK Ussuriysk Ar. 46.98 5 P **P** **13 43 24.3 -0.1**
comp=Z,163nm,0.8s,baz=188,slow=6.2,SNR=125
USRK LR LR 14 03 56.2
comp=Z,4µm,21.4s,baz=168,slow=37
comp=Z,163nm,0.8s
ERM Erimo 46.98 17 P **P** **13 43 24.2 -0.3**
ERM IAmb IAmb 13 43 31.0
comp=Z,188nm,1.1s
ERM Erimo 46.98 17 IAMs_20 IAMs_20 14 00 46.9
comp=Z,10µm,21.0s
ERM Erimo 46.98 17 P **P** **13 43 26.5 +2.0**
ERM Erimo 46.98 17*ce*P **P** **13 43 24.9 +0.4**
ERM pmax pmax
comp=Z,116nm,1.2s
JEM Erimo 46.98 17 IAMs_20 IAMs_20 14 00 49.4
comp=Z,9µm,21.0s
JEM Erimo 46.98 17 P **P** **13 43 26.2 +1.7**
PALK Pallekele 46.99 283*d i*P **P** **13 43 25.3 +0.2**
PALK pmax pmax
comp=Z,196nm,1.7s
PALK Pallekele 46.99 283 LR LR 14 06 24.9
comp=Z,4µm,18.5s,baz=205,slow=40
PALK Pallekele 46.99 283 P **P** **13 43 26.5 +1.4**
NFK Norfolk Island 47.08 128 P **P** **13 43 24.6 -0.9**
baz=47,SNR=5.3
NFK Norfolk Island 47.08 128 P **P** **13 43 27.2 +1.6**
SLGI Shiliguri 47.16 311 IAMs_20 IAMs_20 14 00 30.4
comp=Z,3µm,21.8s
MDJ Mudanjiang 47.22 3 P **P** **13 43 26.8 +0.5**
MDJ PP **PP** **13 45 14.5 -3.0**
MDJ pmax pmax
comp=Z,160nm,1.2s
MDJ pmax pmax
comp=Z,3µm,7.3s
MDJ LR LR
comp=Z,6µm,20.6s
MDJ LR LR
comp=Z,2µm,18.1s
MDJ LR LR
comp=Z,9µm,21.3s
MDJ Mudanjiang 47.22 3 IAMs_20 IAMs_20 14 01 45.6
comp=Z,9µm,20.0s
MDJ Mudanjiang 47.22 3 P **P** **13 43 27.2 +0.9**
GTK Tadong 47.36 312 *e*P **P** **13 43 29.6 +1.7**
GTK *e*P **P** **13 43 29.6 +1.7**
GTK *e*P **pP** **13 43 30.1 -2.8**
GTK IAmb IAmb 13 43 32.5
comp=Z,219nm,0.9s
GTK IAMs_20 IAMs_20 14 03 18.7
comp=Z,2µm,18.2s
MALK Mahakanadarawa 47.36 284 P **P** **13 43 23.5 -4.5**
MALK S **S** **13 50 21.1 -0.2**
XLT XiLinHaoTe 47.41 350 *e*P **P** **13 43 27.8 -0.1**
XLT PcS **PcS** **13 48 52.3 -1.3**
XLT S **S** **13 50 23.5 +2.2**
XLT ScS **ScS** **13 53 18.5 -2.6**
XLT SS SS 13 53 38.0 -11
XLT pmax pmax
comp=Z,320nm,1.2s
XLT pmax pmax
comp=Z,2µm,7.2s
XLT LR LR
comp=Z,360nm,18.2s
XLT LR LR
comp=Z,2µm,15.3s
XLT LR LR
comp=Z,4µm,18.4s
BOK Bokaro 47.69 306 *e*P **P** **13 43 32.3 +1.9**
BOK IAmb IAmb 13 43 44.9
comp=Z,567nm,1.7s
BNX BinXian 48.28 1 ⇓P **P** **13 43 34.0 -0.5**
BNX S **S** **13 50 33.3 0.0**
BNX pmax pmax
comp=Z,70nm,1.3s
BNX pmax pmax
comp=Z,2µm,6.9s
BNX LR LR
comp=Z,7µm,20.9s
BNX LR LR
comp=Z,2µm,22.8s
BNX LR LR
comp=Z,10µm,21.1s
TEY Ternei 48.38 9 ⇓*e*P **P** **13 43 34.8 -0.5**
TEY *e* 13 50 31.0
TEY pmax pmax
comp=N,50nm,1.2s
TEY pmax pmax
comp=Z,100nm,1.1s
TEY pmax pmax
comp=E,10.0nm,1.1s
JHSG JHARSUGUGA 48.54 302 *e*P **P** **13 43 37.8 +0.9**
JHSG IAmb IAmb 13 43 51.3
comp=Z,1µm,1.4s
JHSG IAMs_20 IAMs_20 14 01 14.5
comp=Z,2µm,22.3s
GTA Gaotai 48.71 332 ⇑P **P** **13 43 39.3 +1.2**

GTA sP pwP 13 43 49.0 +1.8
GTA PcP **PcP** **13 45 06.0 +2.8**
GTA PcS **PcS** **13 48 58.0 -1.4**
GTA S **S** **13 50 37.0 -2.9**
GTA pmax pmax
comp=Z,180nm,1.9s
GTA pmax pmax
comp=Z,2µm,9.6s
GTA LR LR
comp=Z,2µm,19.5s
GTA LR LR
comp=Z,2µm,16.7s
GTA LR LR
comp=Z,4µm,19.1s
MDRS Chennai 48.73 290 *e*P **P** **13 43 40.1 +1.6**
MDRS IAmb IAmb 13 43 52.4
comp=Z,619nm,1.5s
ASAJ Asahikawa 48.78 15 P **P** **13 43 39.0 +0.6**
ASAJ Asahikawa 48.78 15 P **P** **13 43 39.0 +0.6**
comp=Z,203nm,0.8s,baz=229,slow=9.9,SNR=62
ASAJ LR LR 14 03 15.5
comp=Z,15µm,20.2s,baz=207,slow=35
comp=Z,203nm,0.8s
JKA Kamikawa-asahi 48.78 15 P **P** **13 43 38.7 +0.3**
JKA IAmb IAmb 13 43 42.0
comp=Z,399nm,1.0s
GOMU GeErMu 48.86 325 P **P** **13 43 41.3 +1.6**
GOMU pP pwP 13 43 51.0 +2.2
GOMU sP sP 13 43 53.5 +6.4
GOMU S **S** **13 50 39.8 -2.9**
GOMU pmax pmax
comp=Z,160nm,1.7s
GOMU LR LR
comp=Z,2µm,15.7s
GOMU LR LR
comp=Z,2µm,15.6s
GOMU LR LR
comp=Z,5µm,17.5s
VJD Vijayawada 49.37 294 *e*P **P** **13 43 44.4 +1.1**
VJD IAMs_20 IAMs_20 14 03 25.8
comp=Z,5µm,21.4s
YUK Yuzh-Kuril'sk 49.64 18 *e*P **P** **13 43 42.5 -2.4**
YUK *e* 13 45 03.7
YUK *e* 13 45 37.3
YUK *e*PPP PPP 13 46 29.8
YUK *e*S **S** **13 50 51.1 -1.3**
YUK *e* 13 53 33.6
YUK *e*SS **SS** **13 54 25.0 0.0**
YUK *e*SSS SSS 13 55 44.9
YUK pmax pmax
comp=Z,895nm,1.4s
YUK pmax pmax
comp=Z,1µm,1.1s
YUK pmax pmax
comp=E,276nm,1.2s
YUK pmax pmax
comp=N,468nm,1.4s
YUK MLR MLR
comp=E,3µm,18.0s
YUK MLR MLR
comp=Z,3µm,18.0s
YUK MLR MLR
comp=N,935nm,16.0s
VAR Varanasi 50.70 306 IAMs_20 IAMs_20 14 03 17.6
comp=Z,2µm,18.8s
KOD Kodaikanal 50.71 286 *e*P **P** **13 43 54.7 +0.7**
KOD IAMs_20 IAMs_20 14 00 57.5
comp=Z,4µm,21.1s
KUR Kuril'sk 51.35 19*c i*P **P** **13 43 56.9 -0.9**
KUR *e*PPP PPP 13 46 54.2
KUR *e*S **S** **13 51 17.3 +1.1**
KUR *e* 13 53 49.0
KUR *e*SSS SSS 13 56 32.6
KUR pmax pmax
comp=Z,963nm,1.3s
KUR pmax pmax
comp=Z,4µm,7.6s
YSS Yuzh-Sakhalins 51.47 14 P **P** **13 43 58.7 0.0**
YSS IAmb IAmb 13 44 01.7
comp=Z,184nm,1.0s
YSS Yuzh-Sakhalins 51.47 14 P **P** **13 43 59.4 +0.7**
YSS Yuzh-Sakhalins 51.47 14 ⇑P **P** **13 43 58.6 -0.1**
YSS Yuzh-Sakhalins 51.47 14*ce*P **P** **13 43 58.6 -0.1**
YSS *e* 13 45 14.2
YSS *e*S **S** **13 51 14.6 -3.2**
YSS *e*SS **ScS** **13 53 49.5 +1.4**
YSS pmax pmax
comp=N,80nm,0.8s
YSS pmax pmax
comp=Z,180nm,0.8s
YSS pmax pmax
comp=Z,3µm,9.3s
YSS pmax pmax
comp=N,1µm,10.4s
YSS smax smax
comp=N,2µm,10.7s
YSS MLR MLR
comp=Z,5µm,18.0s
YSS MLR MLR
comp=E,2µm,17.0s
HYB Hyderabad 51.55 295 *e*P **P** **13 43 59.7 -0.2**
HYB *e*sP **pP** **13 44 03.6 -1.3**
HYB IVmB_BB 13 44 11.8
comp=Z,5µm,1.8s
HYB *e*PcP **PcP** **13 45 14.6 +0.7**
HYB *e*PP **PP** **13 45 57.1 -0.4**
HYB *e*ScP **ScP** **13 49 10.6 +0.7**
HYB *e*ScS **ScS** **13 53 50.3 +0.2**
HYB IVmS_BB IVmS_BB 14 04 08.9
comp=Z,2µm,20.8s
HYB Hyderabad 51.55 295 *e*P **P** **13 44 00.4 +0.5**
ALBI Allahabad 51.69 305 *e*P **P** **13 44 01.5 +0.7**
ALBI IAMs_20 IAMs_20 13 57 56.8
comp=Z,3µm,18.1s
YSA Yasawairara 51.83 109 P **P** **13 44 04.7 +2.7**
KLR Kul'dur 51.95 4*c i*P **P** **13 44 02.0 -0.3**
KLR pmax pmax
comp=Z,214nm,1.0s
KLR Kul'dur 51.95 4 P **P** **13 44 02.1 -0.3**
comp=Z,153nm,0.9s,baz=188,slow=6.7,SNR=81
KLR LR LR 14 03 42.7
comp=Z,3µm,21.1s,baz=158,slow=33
comp=Z,153nm,0.9s
HIA Hailar 52.16 354 IAmb IAmb 13 44 08.3
comp=Z,514nm,1.8s
HIA Hailar 52.16 354 P **P** **13 44 04.9 +1.0**
FUNA Funafuti 52.49 99 P **P** **13 44 08.3 +1.3**
HEH HeiHe 52.80 1 *e*P **P** **13 44 08.0 -0.6**
HEH pP **pP** **13 44 14.0 +0.3**
HEH PcP **PcP** **13 45 19.3 +1.5**
HEH S **S** **13 51 35.0 -1.0**
HEH SS **SS** **13 55 15.0 0.0**
HEH pmax pmax
comp=Z,350nm,1.2s
HEH pmax pmax
comp=Z,3µm,4.0s
HEH LR LR
comp=Z,5µm,20.6s
HEH LR LR
comp=Z,4µm,21.6s
HEH LR LR
comp=Z,14µm,20.1s
ULN Ulaanbaatar 53.26 344 P **P** **13 44 12.7 +0.4**
ULN IAmb IAmb 13 44 16.1
comp=Z,433nm,0.9s
ULN Ulaanbaatar 53.26 344 ⇑P **P** **13 44 12.8 +0.5**
ULN Ulaanbaatar 53.26 344*c i*P **P** **13 44 12.5 +0.2**
ULN pmax pmax
comp=Z,409nm,1.0s
ULN Ulaanbaatar 53.26 344 P **P** **13 44 13.4 +1.1**
UGL Uglegorsk 53.31 13 ⇑*i*P **P** **13 44 13.1 +0.8**
UGL *e* 13 45 13.3
UGL *e*S **S** **13 51 41.8 -1.1**
UGL pmax pmax
comp=E,380nm,0.9s
UGL pmax pmax
comp=N,150nm,1.1s
UGL pmax pmax
comp=Z,790nm,1.1s
UGL pmax pmax
comp=N,2µm,5.0s
UGL pmax pmax
comp=E,2µm,5.0s
UGL pmax pmax
comp=Z,3µm,5.0s

UGL					smax	smax		
	comp=E,4μm,11.0s							
UGL					smax	smax		
	comp=N,2μm,14.0s							
UGL					MLR	MLR		
	comp=N,8μm,18.0s							
UGL					MLR	MLR		
	comp=E,3μm,18.0s							
UGL					MLR	MLR		
	comp=Z,6μm,18.0s							
SONM	**Songino Array**	**53.42**	**343**		P	**P**	**13 44 13.7**	**+0.2**
SONM					IAmb	IAmb	13 44 17.2	
	comp=Z,363nm,1.1s							
SONM	**Songino Array**	**53.42**	**343**		P	**P**	**13 44 13.8**	**+0.3**
	comp=Z,182nm,1.0s,baz=158,slow=7.2,SNR=196							
SONM					PcP	**PcP**	**13 45 22.3**	**+1.8**
	comp=Z,24nm,0.9s,baz=151,slow=2.9,SNR=4.2							
SONM					LR	LR	14 08 35.5	
	comp=Z,3μm,21.1s,baz=144,slow=38							
SONM					PKPPKP		14 14 33.6	
	comp=Z,0.4nm,0.6s,baz=270,slow=0.3,SNR=4.3							
	comp=Z,182nm,1.0s							
DGTI	**Dogotuki**	**53.81**	**108**		P	**P**	**13 44 18.1**	**+1.4**
GRNR	**Gornyy**	**53.95**	**8**	⇑	*i*P	**P**	**13 44 17.8**	**+0.7**
GRNR					*e*S	**S**	**13 51 56.6**	**+4.9**
GRNR					pmax	pmax		
	comp=E,8.0nm,1.1s							
GRNR					pmax	pmax		
	comp=N,80nm,1.3s							
GRNR					pmax	pmax		
	comp=Z,140nm,1.2s							
GRNR					smax	smax		
	comp=N,2.0nm,1.1s							
AKL	**Akola**	**53.99**	**298**		*e*P	**P**	**13 44 19.0**	**+1.1**
AKL					IAMs_20	IAMs_20	13 56 39.7	
	comp=Z,2μm,19.2s							
TAVE	**Taveuni**	**54.22**	**109**		P	**P**	**13 44 22.0**	**+2.4**
DGAR	**Diego Garcia**	**54.23**	**263**		P	**P**	**13 44 19.1**	**-0.6**
DGAR					IAmb	IAmb	13 44 23.9	
	comp=Z,528nm,1.6s							
DGAR	**Diego Garcia**	**54.23**	**263**		IAMs_20	IAMs_20	14 06 09.2	
	comp=Z,7μm,19.0s							
DGAR	**Diego Garcia**	**54.23**	**263**	*de*	P	**P**	**13 44 19.9**	**+0.2**
DGAR					pmax	pmax		
	comp=Z,148nm,1.3s							
DGAR	**Diego Garcia**	**54.23**	**263**		P	**P**	**13 44 23.2**	**+3.4**
JHNI	**Jhansi**	**54.43**	**304**	*e*	P	**P**	**13 44 20.3**	**-0.8**
MNCY	**Minicoy**	**54.65**	**282**	*e*	P	**P**	**13 44 25.7**	**+2.9**
LGTI	**Lohaghat**	**54.78**	**309**	*e*	P	**P**	**13 44 24.4**	**+0.9**
PTH	**Pithoragarh**	**54.85**	**309**	*e*	P	**P**	**13 44 24.9**	**+0.6**
TYV	**Tymovskoe**	**55.12**	**12**	*e*	P	**P**	**13 44 26.7**	**+1.2**
TYV					*e*S	**S**	**13 52 10.4**	**+3.0**
TYV					pmax	pmax		
	comp=Z,2μm,4.8s							
TYV					pmax	pmax		
	comp=Z,105nm,1.1s							
TYV					smax	smax		
	comp=N,1μm,9.1s							
TYV					smax	smax		
	comp=E,3μm,9.1s							
DCZ	**Deep Cove**	**55.33**	**146**		P	**P**	**13 44 26.8**	**-0.3**
DCZ					IAmb	IAmb	13 44 29.6	
	comp=Z,183nm,1.5s							
JCZ	**Jackson Bay**	**55.42**	**144**		P	**P**	**13 44 29.9**	**+1.9**
PYZ	**Puysegur Point**	**55.50**	**147**		IAMs_20	IAMs_20	14 08 50.2	
	comp=Z,6μm,20.0s							
KAD	**Karad**	**55.51**	**293**	*e*	P	**P**	**13 44 29.3**	**+0.3**
CIT	**Chita**	**55.70**	**350**	*e*	P	**P**	**13 44 30.3**	**+0.5**
CIT				*e*			13 44 41.7	
CIT				*e*			13 45 30.9	
CIT				*e*			13 46 30.3	
CIT					pmax	pmax		
	comp=Z,636nm,1.8s							
FOZ	**Fox Glacier**	**55.72**	**143**		IAMs_20	IAMs_20	14 08 36.3	
	comp=Z,7μm,21.0s							
MLZ	**Mavora Lakes**	**55.80**	**146**		IAMs_20	IAMs_20	14 09 02.2	
	comp=Z,7μm,21.0s							
DSZ	**Denniston Nort**	**55.99**	**140**		IAmb	IAmb	13 44 35.6	
	comp=Z,485nm,1.4s							
DSZ					IAMs_20	IAMs_20	14 09 01.1	
	comp=Z,8μm,20.0s							
POO	**Poona**	**56.16**	**294**	*e*	P	**P**	**13 44 33.1**	**-0.6**
INZ	**Inchbonnie**	**56.27**	**141**		IAMs_20	IAMs_20	14 08 58.8	
	comp=Z,8μm,22.0s							
ZEA	**Zeya**	**56.28**	**0**	*e*	P	**P**	**13 44 33.7**	**-0.2**
ZEA				*e*	S	**S**	**13 52 16.5**	**-6.3**
ZEA				*e*			13 54 22.8	
ZEA					pmax	pmax		
	comp=E,100nm,3.7s							
ZEA					pmax	pmax		
	comp=N,700nm,4.5s							
ZEA					pmax	pmax		
	comp=Z,1μm,4.5s							
ZEA					pmax	pmax		
	comp=N,140nm,1.1s							
ZEA					pmax	pmax		
	comp=Z,300nm,1.1s							
ZEA					smax	smax		
	comp=E,800nm,17.6s							
TOZ	**Tahuroa Road**	**56.57**	**134**		IAmb	IAmb	13 44 39.7	
	comp=Z,197nm,1.1s							
TOZ					IAMs_20	IAMs_20	14 10 48.7	
	comp=Z,6μm,20.0s							
RPZ	**Rata Peaks**	**56.57**	**143**		IAmb	IAmb	13 44 38.5	
	comp=Z,291nm,1.3s							
RPZ					IAMs_20	IAMs_20	14 08 30.6	
	comp=Z,8μm,22.0s							
RPZ	**Rata Peaks**	**56.57**	**143**		LR	LR	14 08 41.2	
	comp=Z,6μm,21.1s,baz=308,slow=36							
ZAK	**Zakamensk**	**56.62**	**342**	*e*	P	**P**	**13 44 36.3**	**-0.2**
ZAK					pmax	pmax		
	comp=Z,144nm,1.3s							
THZ	**Tophouse**	**56.70**	**140**		IAmb	IAmb	13 44 38.0	
	comp=Z,273nm,1.8s							
THZ					IAMs_20	IAMs_20	14 09 15.1	
	comp=Z,7μm,20.0s							
NNZ	**Nelson**	**56.74**	**139**		IAMs_20	IAMs_20	14 13 20.0	
	comp=Z,7μm,19.0s							
LTZ	**Lake Taylor**	**56.82**	**141**		IAmb	IAmb	13 44 47.8	
	comp=Z,393nm,1.8s							
LTZ					IAMs_20	IAMs_20	14 11 52.2	
	comp=Z,7μm,19.0s							
NDI	**New Delhi**	**56.83**	**307**	*e*	P	**P**	**13 44 37.9**	**-0.3**
NKL	**Nikolayevsk**	**56.92**	**10**	*e*	P	**P**	**13 44 37.3**	**-1.0**
NKL				*e*	S	**S**	**13 52 32.5**	**+1.3**
NKL					pmax	pmax		
	comp=N,325nm,0.8s							
NKL					pmax	pmax		
	comp=E,560nm,1.1s							
NKL					pmax	pmax		
	comp=Z,2μm,1.1s							
NKL					smax	smax		
	comp=N,1μm,5.0s							
NKL					smax	smax		
	comp=E,245nm,5.0s							
OXZ	**Oxford**	**56.96**	**142**		IAMs_20	IAMs_20	14 10 13.0	
	comp=Z,7μm,21.0s							
ODZ	**Otahua Downs**	**57.07**	**144**		IAMs_20	IAMs_20	14 09 40.6	
	comp=Z,7μm,19.0s							
ODZ	**Otahua Downs**	**57.07**	**144**		P	**P**	**13 44 39.8**	**+0.2**
WAZ	**Wanganui**	**57.11**	**137**		P	**P**	**13 44 41.3**	**+1.2**
PKVZ	**Pokaka**	**57.15**	**136**		P	**P**	**13 44 42.1**	**+1.7**
PKVZ					PcP	**PcP**	**13 45 31.8**	**-3.2**
KUDL	**Kundal**	**57.19**	**306**	*e*	P	**P**	**13 44 40.4**	**-0.3**
WTVZ	**West Tongariro**	**57.24**	**136**		P	**P**	**13 44 42.8**	**+1.6**
COVZ	**Chateau Observ**	**57.25**	**136**		P	**P**	**13 44 42.6**	**+1.4**
NNVZ	**North Ngauruho**	**57.27**	**136**		P	**P**	**13 44 43.5**	**+2.2**
NGZ	**Ngauruhoe**	**57.28**	**136**		P	**P**	**13 44 42.5**	**+1.1**
FWVZ	**Far West T-bar**	**57.28**	**136**		P	**P**	**13 44 43.4**	**+1.8**
SNVZ	**South Ngauruho**	**57.31**	**136**		P	**P**	**13 44 43.6**	**+2.0**
OTVZ	**Oturere**	**57.31**	**136**		P	**P**	**13 44 43.0**	**+1.3**
TMVZ	**Te Maari**	**57.32**	**136**		P	**P**	**13 44 42.9**	**+1.2**
ETVZ	**East Tongariro**	**57.34**	**136**		P	**P**	**13 44 43.0**	**+1.2**
WNVZ	**Wahianoa**	**57.34**	**136**		P	**P**	**13 44 42.4**	**+0.5**
GVZ	**Greta Valley S**	**57.40**	**141**		IAmb	IAmb	13 44 58.9	
	comp=Z,427nm,1.6s							
GVZ					IAMs_20	IAMs_20	14 09 44.5	
	comp=Z,6μm,19.0s							
HLRZ	**Highlands Stat**	**57.40**	**135**		P	**P**	**13 44 44.9**	**+2.7**
MOVZ	**Moawhango**	**57.48**	**136**		P	**P**	**13 44 42.7**	**-0.1**
SNZO	**South Karori**	**57.66**	**139**		P	**P**	**13 44 45.4**	**+1.6**
BHHZ	**Black Hill Sta**	**57.74**	**136**		P	**P**	**13 44 44.0**	**-0.6**
MCQ	**Macquarie Isla**	**57.89**	**158**		P	**P**	**13 44 45.2**	**0.0**
	baz=58,SNR=3.3							
BKZ	**Black Stump Fm**	**57.89**	**136**		P	**P**	**13 44 44.6**	**-1.1**
BKZ	**Black Stump Fm**	**57.89**	**136**		P	**P**	**13 44 45.5**	**-0.2**
BKZ	**Black Stump Fm**	**57.89**	**136**		P	**P**	**13 44 45.4**	**-0.3**
SMLA	**Simla**	**57.92**	**310**	*e*	P	**P**	**13 44 47.0**	**+1.2**
TSZ	**Takapari Road**	**57.92**	**137**		P	**P**	**13 44 45.4**	**-0.4**
MRZ	**Mangatainoka R**	**57.93**	**137**		IAMs_20	IAMs_20	14 10 53.9	
	comp=Z,9μm,20.0s							
MRZ	**Mangatainoka R**	**57.93**	**137**		P	**P**	**13 44 44.7**	**-1.1**
POWZ	**Post Office Ro**	**57.94**	**137**		P	**P**	**13 44 45.2**	**-0.7**
URZ	**Urewera**	**57.94**	**134**		P	**P**	**13 44 45.0**	**-1.0**
	comp=Z,68nm,0.7s,baz=340,slow=1.9,SNR=16							
URZ					LR	LR	14 12 14.3	
	comp=Z,5μm,19.1s,baz=44,slow=39							
	comp=Z,68nm,0.7s							
URZ	**Urewera**	**57.94**	**134**		P	**P**	**13 44 45.1**	**-0.8**
KWHZ	**Kaweka Forest**	**57.96**	**136**		P	**P**	**13 44 46.1**	**0.0**
IRK	**Irkutsk**	**57.99**	**344**	*e*	P	**P**	**13 44 46.1**	**+0.1**
IRK					pmax	pmax		
	comp=Z,471nm,1.7s							
HOWZ	**Holdsworth Sta**	**58.00**	**138**		P	**P**	**13 44 45.6**	**-0.7**
RTZ	**Ruatahuna**	**58.00**	**135**		P	**P**	**13 44 45.1**	**-1.3**
RTZ					IAmb	IAmb	13 44 48.1	
	comp=Z,402nm,1.1s							
MTHZ	**Maungataniwha**	**58.00**	**135**		P	**P**	**13 44 45.9**	**-0.5**
KRHZ	**Kereru**	**58.02**	**136**		P	**P**	**13 44 46.1**	**-0.4**
PNHZ	**Pukenui**	**58.02**	**136**		P	**P**	**13 44 46.5**	**0.0**
AJM	**Ajmer**	**58.06**	**304**	*e*	P	**P**	**13 44 47.4**	**+0.4**
WMQ	**Urumqi**	**58.08**	**328**	*e*	P	**P**	**13 44 47.8**	**+1.0**
WMQ					S	**S**	**13 52 49.0**	**+2.0**
WMQ					ScS	**ScS**	**13 54 35.3**	**-0.4**
WMQ					pmax	pmax		
	comp=Z,710nm,1.1s							
WMQ					pmax	pmax		
	comp=Z,3μm,3.7s							
WMQ					LR	LR		
	comp=Z,3μm,15.1s							
WMQ					LR	LR		
	comp=Z,2μm,24.2s							
WMQ					LR	LR		
	comp=Z,2μm,18.1s							
NMHZ	**Naumai**	**58.08**	**135**		P	**P**	**13 44 47.5**	**+0.5**
MTW	**Mount Morrison**	**58.11**	**138**		P	**P**	**13 44 46.3**	**-0.8**
PRWZ	**Pori Road**	**58.15**	**137**		P	**P**	**13 44 46.6**	**-0.7**
RUGZ	**Raukumara Rang**	**58.23**	**134**		P	**P**	**13 44 46.8**	**-1.3**
WPHZ	**Waipukurau**	**58.25**	**136**		P	**P**	**13 44 47.9**	**-0.1**
RAGZ	**Rawiri**	**58.26**	**134**		P	**P**	**13 44 48.3**	**0.0**
MWZ	**Matawai**	**58.27**	**134**		P	**P**	**13 44 47.9**	**-0.4**
ARHZ	**Aropaoanui**	**58.29**	**135**		P	**P**	**13 44 48.3**	**0.0**
SNGZ	**Shannon Statio**	**58.33**	**135**		P	**P**	**13 44 48.6**	**0.0**
BFZ	**Birch Farm**	**58.40**	**137**		P	**P**	**13 44 48.2**	**-0.8**
BFZ					IAmb	IAmb	13 44 49.7	
	comp=Z,153nm,1.1s							
BFZ					IAMs_20	IAMs_20	14 08 19.1	
	comp=Z,8μm,22.0s							
BFZ	**Birch Farm**	**58.40**	**137**		P	**P**	**13 44 49.6**	**+0.5**
BFZ	**Birch Farm**	**58.40**	**137**		P	**P**	**13 44 48.4**	**-0.7**
KAHZ	**Kahuranaki**	**58.44**	**136**		P	**P**	**13 44 49.2**	**-0.2**
ANWZ	**Angora Road**	**58.45**	**137**		P	**P**	**13 44 48.9**	**-0.5**
MXZ	**Matakaoa Point**	**58.52**	**133**		P	**P**	**13 44 49.7**	**-0.3**
MXZ					IAmb	IAmb	13 44 59.9	
	comp=Z,516nm,1.8s							
MXZ					IAMs_20	IAMs_20	14 09 57.7	
	comp=Z,8μm,22.0s							
MXZ	**Matakaoa Point**	**58.52**	**133**		P	**P**	**13 44 52.2**	**+2.2**
TWGZ	**Tauwhareparae**	**58.53**	**134**		P	**P**	**13 44 50.3**	**+0.2**
RIGZ	**Rimuhau**	**58.59**	**135**		P	**P**	**13 44 50.3**	**-0.2**
BHK	**Bhakra**	**58.62**	**310**	*e*	P	**P**	**13 44 51.8**	**+1.0**
SKR	**Severo-Kuril's**	**58.88**	**21**	*e*	P	**P**	**13 44 50.8**	**-1.3**
SKR				*e*	PPP	PPP	13 47 01.6	
SKR				*e*	S	**S**	**13 52 52.5**	**-4.4**
SKR					pmax	pmax		
	comp=Z,2μm,9.2s							
SKR					MLR	MLR		
	comp=Z,4μm,19.0s							
DHRM	**DHARAMSHALA**	**59.07**	**310**	*e*	P	**P**	**13 44 54.8**	**+0.6**
DHRM					IAmb	IAmb	13 45 08.8	
	comp=Z,654nm,0.9s							
THN	**Thein Dam**	**59.60**	**310**	*e*	P	**P**	**13 44 58.4**	**+0.9**
JMU	**Jammu**	**60.34**	**310**	*e*	P	**P**	**13 45 04.2**	**+1.6**
BOD	**Bodaibo**	**61.24**	**352**	*e*	P	**P**	**13 45 08.1**	**-0.1**
BOD					pmax	pmax		
	comp=Z,2μm,1.6s							
PEA0B	**Petropavlovsk-**	**61.42**	**21**		P	**P**	**13 45 09.8**	**+0.2**
PEA0B					IAmb	IAmb	13 45 12.9	
	comp=Z,149nm,0.9s							
PEA0B	**Petropavlovsk-**	**61.42**	**21**	*ce*	P	**P**	**13 45 10.4**	**+0.8**
PETK	**Petropavlovsk-**	**61.42**	**21**		P	**P**	**13 45 09.8**	**+0.2**
	comp=Z,100nm,0.8s,baz=144,slow=3.3,SNR=54							
PETK					PcP	**PcP**	**13 45 52.0**	**+0.5**
	comp=Z,35nm,0.9s,baz=208,slow=2.5,SNR=7.6							
PETK					LR	LR	14 10 49.8	
	comp=Z,2μm,20.1s,baz=209,slow=35							
	comp=Z,100nm,0.8s							
AFI	**Afiamalu**	**61.69**	**104**		P	**P**	**13 45 11.1**	**-1.1**
AFI					IAmb	IAmb	13 45 15.2	
	comp=Z,247nm,1.2s							
AFI	**Afiamalu**	**61.69**	**104**		P	**P**	**13 45 13.2**	**+1.0**
AFI	**Afiamalu**	**61.69**	**104**		P	**P**	**13 45 11.1**	**-1.1**
AFI					pmax	pmax		
	comp=Z,247nm,1.3s							
AFI					MLR	MLR		
	comp=Z,3μm,20.0s							
PET	**Petropavlovsk**	**61.70**	**21**		P	**P**	**13 45 11.7**	**+0.3**
PET	**Petropavlovsk**	**61.70**	**21**		P	**P**	**13 45 12.7**	**+1.3**
PET	**Petropavlovsk**	**61.70**	**21**	*e*	P	**P**	**13 45 11.9**	**+0.5**
PET				*e*			13 45 50.7	
PET				*e*	S	**S**	**13 53 33.4**	**+0.4**
PET				*e*	SS	**SS**	**13 57 35.7**	**+0.8**
PET					pmax	pmax		
	comp=Z,472nm,1.3s							
PET					pmax	pmax		
	comp=Z,3μm,8.1s							
PET					pmax	pmax		
	comp=Z,2μm,16.7s							
ZSN	**Zaisan**	**61.97**	**329**	⇑	*i*P	**P**	**13 45 13.8**	**+0.4**
	comp=Z,151nm,1.2s,baz=329							
ZSN					*i* S	**S**	**13 53 38.5**	**+1.7**
	baz=329							
ZSN	**Zaisan**	**61.97**	**329**	*c*	*i*P	**P**	**13 45 13.8**	**+0.4**
ZSN					*i* S	**S**	**13 53 38.5**	**+1.7**
ZSN					pmax	pmax		
	comp=Z,151nm,1.2s							
NIL	**Nilore**	**61.99**	**311**		P	**P**	**13 45 14.0**	**+0.1**
NIL	**Nilore**	**61.99**	**311**		P	**P**	**13 45 14.0**	**+0.1**
NIL					pmax	pmax		
	comp=Z,1μm,1.9s							
NIL					MLR	MLR		
	comp=Z,3μm,21.0s							
NIL	**Nilore**	**61.99**	**311**		P	**P**	**13 45 14.9**	**+1.0**
DGZ	**Jazzator, Alta**	**62.24**	**332**	*c*	*i*P	**P**	**13 45 15.9**	**+0.5**
DGZ					pmax	pmax		
	comp=Z,274nm,1.1s							
SHLS	**Shalkode**	**62.38**	**323**	⇑	*i*P	**P**	**13 45 15.8**	**-0.7**
	comp=Z,249nm,1.2s,baz=323							
SHLS	**Shalkode**	**62.38**	**323**	*c*	*i*P	**P**	**13 45 15.7**	**-0.7**
SHLS					pmax	pmax		
	comp=Z,249nm,1.2s							
PDGK	**Podgornoye**	**62.46**	**323**		P	**P**	**13 45 16.8**	**-0.2**
UZB	**Uzynbulak**	**62.64**	**322**	‖	*e*P	**P**	**13 45 19.0**	**+0.7**
	comp=Z,252nm,1.4s,baz=322							
UZB					*e*S	**S**	**13 53 47.2**	**+1.4**
	baz=322							
UZB	**Uzynbulak**	**62.64**	**322**	*ce*	P	**P**	**13 45 18.9**	**+0.7**
UZB					*e*S	**S**	**13 53 47.1**	**+1.4**
UZB					pmax	pmax		
	comp=Z,252nm,1.4s							
KSH	**Kashi**	**62.70**	**318**		P	**P**	**13 45 20.3**	**+1.7**
KSH					S	**S**	**13 53 49.8**	**+3.3**
KSH					pmax	pmax		
	comp=Z,210nm,1.2s							
KSH					LR	LR		
	comp=Z,2μm,18.2s							
KSH					LR	LR		
	comp=Z,2μm,14.1s							
KSH					LR	LR		
	comp=Z,3μm,20.3s							
MK31	**Makanchi Array**	**62.91**	**327**		P	**P**	**13 45 20.0**	**+0.2**
MK31	**Makanchi Array**	**62.91**	**327**		P	**P**	**13 45 19.9**	**+0.2**
MKAR	**Makanchi Array**	**62.91**	**327**		P	**P**	**13 45 20.0**	**+0.3**
MKAR	**Makanchi Array**	**62.91**	**327**		P	**P**	**13 45 20.2**	**+0.4**
	comp=Z,295nm,1.0s,baz=117,slow=7.3,SNR=626							
MKAR					LR	LR	14 13 53.0	
	comp=Z,2μm,21.9s,baz=133,slow=37							
MKAR					PKPPKP	**P'P'df**	**14 14 19.0**	**-1.7**
	comp=Z,1.9nm,1.1s,baz=297,slow=3.7,SNR=4.8							
	comp=Z,295nm,1.0s							
SATY	**Saty**	**62.97**	**322**	*i*	P	**P**	**13 45 21.6**	**+1.2**
	comp=Z,204nm,1.1s,baz=322							
SATY					*e*S	**S**	**13 53 51.7**	**+1.8**
	baz=322							
SATY	**Saty**	**62.97**	**322**	*i*	P	**P**	**13 45 21.5**	**+1.2**
SATY					*e*S	**S**	**13 53 51.6**	**+1.8**
SATY					pmax	pmax		
	comp=Z,204nm,1.1s							
ZHN	**Zhinishke**	**63.01**	**322**	⇑	*i*P	**P**	**13 45 21.6**	**+0.9**
	comp=Z,129nm,1.1s,baz=322							
ZHN					*e*S	**S**	**13 53 51.6**	**+1.3**
	baz=322							
ZHN	**Zhinishke**	**63.01**	**322**	*c*	*i*P	**P**	**13 45 21.5**	**+0.9**
ZHN					*e*S	**S**	**13 53 51.6**	**+1.3**
ZHN					pmax	pmax		
	comp=Z,129nm,1.1s							
KPKS	**Kokpek**	**63.02**	**323**	⇑	*i*P	**P**	**13 45 21.6**	**+0.9**
	comp=Z,179nm,1.1s,baz=322							
KPKS					*e*S	**S**	**13 53 52.1**	**+1.7**
	baz=322							
KPKS	**Kokpek**	**63.02**	**323**	*c*	*i*P	**P**	**13 45 21.6**	**+0.9**
KPKS					*e*S	**S**	**13 53 52.1**	**+1.7**
KPKS					pmax	pmax		
	comp=Z,179nm,1.1s							
MAKZ	**Makanchi**	**63.09**	**327**		P	**P**	**13 45 21.2**	**+0.3**
MAKZ	**Makanchi**	**63.09**	**327**		P	**P**	**13 45 21.2**	**+0.3**
MAKZ					pmax	pmax		
	comp=Z,493nm,1.2s							
MAKZ					MLR	MLR		
	comp=Z,2μm,20.0s							
NRN	**Naryn**	**63.64**	**319**		P	**P**	**13 45 25.3**	**+0.3**
NRN					IAmb	IAmb	13 45 29.2	
	comp=Z,144nm,1.2s							
NRN	**Naryn**	**63.64**	**319**		P	**P**	**13 45 25.3**	**+0.3**
NRN					pmax	pmax		
	comp=Z,144nm,1.2s							
MDOK	**Medeo**	**63.87**	**322**	*i*	P	**P**	**13 45 27.4**	**+1.1**
	baz=322							
MDOK					*e*S	**S**	**13 54 03.5**	**+2.5**
	baz=322							
MDOK				*i*	LR	LR	14 13 38.5	
	baz=322							
MDOK				*i*	LRM	MLR	14 15 45.9	
	baz=322							
MDOK	**Medeo**	**63.87**	**322**	*i*	P	**P**	**13 45 27.4**	**+1.1**
MDOK					*e*S	**S**	**13 54 03.5**	**+2.5**
ULHL	**Ulahol**	**63.89**	**320**		P	**P**	**13 45 27.6**	**+1.0**
	SNR=85							
NIUE	**Niue**	**63.95**	**110**		P	**P**	**13 45 27.1**	**+0.1**
NIUE	**Niue**	**63.95**	**110**		P	**P**	**13 45 29.7**	**+2.6**
ARXS	**Arharly**	**63.95**	**323**	*e*	P	**P**	**13 45 27.2**	**+0.4**
AAA	**Alma-Ata**	**63.97**	**322**	*e*	P	**P**	**13 45 28.0**	**+1.0**
	baz=322							
AAA	**Alma-Ata**	**63.97**	**322**	*e*	P	**P**	**13 45 27.9**	**+1.0**
TDK	**Taldyqorghan**	**64.04**	**324**	⇑	*i*P	**P**	**13 45 28.2**	**+0.8**
	baz=324							
TDK					*e*S	**S**	**13 54 04.1**	**+1.2**
	baz=324							
TDK	**Taldyqorghan**	**64.04**	**324**	*c*	*i*P	**P**	**13 45 28.1**	**+0.8**
TDK					*e*S	**S**	**13 54 04.1**	**+1.2**
CTZ	**Chatham Island**	**64.48**	**138**		IAMs_20	IAMs_20	14 13 39.3	
	comp=Z,7μm,19.0s							
YAK	**Yakutsk**	**64.64**	**2**		P	**P**	**13 45 30.7**	**-0.1**
YAK	**Yakutsk**	**64.64**	**2**	*c*	*i*P	**P**	**13 45 30.9**	**+0.2**
YAK					*e**PP	**pwP**	**13 45 42.0**	**+1.8**
YAK					*e*S	**S**	**13 54 07.6**	**-1.9**
YAK					*e**SS	**sS**	**13 54 23.4**	**+4.0**
YAK					*e*		13 55 23.7	
YAK					*e*SSS	SSS	14 01 10.7	
YAK					pmax	pmax		
	comp=Z,228nm,1.1s							
YAK					pmax	pmax		
	comp=N,190nm,1.4s							
YAK					pmax	pmax		
	comp=E,40nm,1.3s							
YAK					pmax	pmax		
	comp=Z,127nm,1.9s							
YAK					smax	smax		
	comp=N,730nm,5.0s							
YAK					smax	smax		
	comp=E,3μm,8.3s							
YAK					MLR	MLR		
	comp=Z,7μm,17.0s							
YAK					MLR	MLR		
	comp=N,6μm,19.0s							
YAK					MLR	MLR		
	comp=E,1μm,17.0s							
YAK	**Yakutsk**	**64.64**	**2**		P	**P**	**13 45 30.9**	**+0.2**
	comp=E,458nm,0.8s,baz=178,slow=2.6,SNR=149							
YAK					LR	LR	14 16 18.3	
	comp=E,5μm,18.9s,baz=170,slow=38							
	comp=E,458nm,0.8s							
TKM2	**Tokmak 2**	**64.65**	**321**		P	**P**	**13 45 32.5**	**+0.9**
	SNR=108							
TKM2	**Tokmak 2**	**64.65**	**321**		P	**P**	**13 45 32.2**	**+0.7**
KUU	**Kurty**	**64.69**	**322**	⇑	*i*P	**P**	**13 45 32.3**	**+0.7**
	baz=322							
KUU					*e*S	**S**	**13 54 12.1**	**+1.1**
	baz=322							
KUU	**Kurty**	**64.69**	**322**	*c*	*i*P	**P**	**13 45 32.2**	**+0.7**
KUU					*e*S	**S**	**13 54 12.0**	**+1.1**
KBK	**Karagaybulak**	**64.93**	**320**		P	**P**	**13 45 34.6**	**+1.3**
	SNR=93							
MA2	**Magadan**	**64.96**	**13**		P	**P**	**13 45 33.3**	**+0.3**
MA2					IAMs_20	IAMs_20	14 10 55.5	
	comp=Z,6μm,21.0s							
MA2	**Magadan**	**64.96**	**13**		P	**P**	**13 45 33.7**	**+0.8**
MA2	**Magadan**	**64.96**	**13**	*ce*	P	**P**	**13 45 33.9**	**+1.0**
MA2					pmax	pmax		
	comp=Z,205nm,1.1s							
MA2	**Magadan**	**64.96**	**13**		P	**P**	**13 45 34.0**	**+1.0**
	comp=Z,105nm,0.9s,baz=204,

comp=Z,0.3nm,0.4s,baz=247,slow=3.0,SNR=2.6
ZALV PKP2bc 14 14 22.9
comp=Z,1.9nm,0.8s,baz=251,slow=4.5,SNR=6.5
comp=Z,203nm,1.1s
BTK Batken 66.47 316 P **P** **13 45 43.4 +0.2**
BTK Batken 66.47 316 P **P** **13 45 43.4 +0.2**
BTK pmax pmax
comp=Z,666nm,1.7s
BTK MLR MLR
comp=Z,2µm,21.0s
PAF Port-aux-Franc 66.64 216 IAMs_20 IAMs_20 14 09 39.7
comp=Z,5µm,20.0s
BTLS Baital 66.69 322⇑ *i*P **P** **13 45 44.6 +0.2**
comp=Z,129nm,1.5s,baz=322
BTLS Baital 66.69 322*c i*P **P** **13 45 44.6 +0.2**
BTLS pmax pmax
comp=Z,129nm,1.5s
SIMJ Simiganj 67.17 314 P **P** **13 45 47.6 -0.1**
KURBB Kurchatov Arra 67.21 329 P **P** **13 45 47.8 +0.3**
KURBB Kurchatov Arra 67.21 329 P **P** **13 45 47.5 0.0**
comp=Z,259nm,1.1s,baz=138,slow=6.2,SNR=399
comp=Z,259nm,1.1s
KURK Kurchatov 67.22 329 P **P** **13 45 47.6 0.0**
KURK Kurchatov 67.22 329 P **P** **13 45 47.6 0.0**
KURK pmax pmax
comp=Z,515nm,1.0s
KURK Kurchatov 67.22 329 P **P** **13 45 48.2 +0.6**
DZA Taraz 67.38 319 *e*P **P** **13 45 49.3 +0.4**
baz=319
DZA Taraz 67.38 319 *e*P **P** **13 45 49.3 +0.4**
KK31 Karatay Array 68.01 319 P **P** **13 45 52.6 -0.3**
KK31 IAmb IAmb 13 45 56.6
comp=Z,239nm,1.3s
KK31 Karatay Array 68.01 319 *i*P **P** **13 45 52.9 +0.1**
KKAR Karatay Array 68.01 319 P **P** **13 45 52.8 -0.1**
KKAR Karatay Array 68.01 319 P **P** **13 45 52.8 -0.1**
SHEM Shemya Is, Ala 68.06 29 LR LR 14 11 55.6
comp=Z,4µm,20.8s,baz=235,slow=33
SEY Seymchan 68.31 12*ce*P **P** **13 45 55.4 +1.1**
SEY pmax pmax
comp=Z,422nm,1.1s
SEY Seymchan 68.31 12 P **P** **13 45 55.6 +1.3**
comp=Z,239nm,1.0s,baz=212,slow=5.7,SNR=120
SEY LR LR 14 14 05.7
comp=Z,3µm,20.6s,baz=204,slow=34
comp=Z,239nm,1.0s
BRLS Borolday 68.42 319⇑ *i*P **P** **13 45 55.7 +0.2**
baz=318
BRLS *e*S **S** **13 54 57.0 +0.8**
baz=318
BRLS Borolday 68.42 319*c i*P **P** **13 45 55.6 +0.2**
BRLS *e*S **S** **13 54 57.0 +0.8**
OTUK Ortayu 69.31 324 P **P** **13 46 00.7 -0.1**
NGCH Negor - Chabah 69.32 298 P **P** **13 46 04.8 +3.5**
SNR=6.9
BRZS Berezniki 69.99 326⇑ *i*P **P** **13 46 05.2 +0.3**
comp=Z,182nm,1.5s,baz=326
BRZS Berezniki 69.99 326*c i*P **P** **13 46 05.2 +0.3**
BRZS pmax pmax
comp=Z,182nm,1.5s
JLN Jalan Bani Buh 70.17 295 P **P** **13 46 08.3 +1.7**
SNR=24
WBK Wadi Bani Khal 70.66 295 P **P** **13 46 12.6 +2.9**
SNR=18
MSEY Mahe Island 71.10 266 IAMs_20 IAMs_20 14 14 37.4
comp=Z,4µm,20.0s
MHTO MHTO 71.26 293 P **P** **13 46 13.5 +0.2**
SNR=47
RER Riviere de l'E 71.28 249 IAmb IAmb 13 46 19.5
comp=Z,106nm,1.0s
RER Riviere de l'E 71.28 249 P **P** **13 46 17.4 +3.9**
JMDO Jabal Madar 71.40 295 P **P** **13 46 15.1 +1.0**
SNR=27
DQM DQM 71.47 292 P **P** **13 46 15.6 +1.0**
SNR=23
SMDO Samad 71.58 295 P **P** **13 46 16.8 +1.4**
SNR=13
BIDO Bidbid 71.60 296 P **P** **13 46 18.0 +2.7**
SNR=37
BSY Bisya 72.29 295 P **P** **13 46 19.9 +0.4**
SNR=40
JASK Jask - Hormozg 72.31 298 P P 13 46 24.4 +4.9
SNR=8.4
ADK Adak 72.33 33 P **P** **13 46 19.6 +0.5**
ADK Adak 72.33 33 P **P** **13 46 21.3 +2.2**
ADK Adak 72.33 33 P **P** **13 46 19.6 +0.5**
ADK pmax pmax
comp=Z,823nm,1.9s
HOQ Hoqain 72.34 296 P **P** **13 46 21.7 +1.9**
SNR=59
BVAR Borovoye Array 72.75 328 P **P** **13 46 21.5 -0.1**
comp=Z,64nm,0.7s,baz=131,slow=8.1,SNR=136
BVAR PKPPKP **P'P'df** **14 14 03.3 -0.7**
comp=Z,0.4nm,0.5s,baz=149,slow=0.8,SNR=2.9
BVAR LR LR 14 22 34.4
comp=Z,1µm,19.3s,baz=122,slow=39
comp=Z,64nm,0.7s
BRVK Borovoye 72.82 328*c i*P **P** **13 46 21.9 -0.1**
BRVK pmax pmax
comp=Z,237nm,1.3s
BRVK Borovoye 72.82 328 P **P** **13 46 22.6 +0.6**
SHAO Shalim 72.95 290 *i*P **P** **13 46 25.0 +1.6**
SNR=9.5
SHAO Shalim 72.95 290 P **P** **13 46 24.7 +1.2**
ARQ Araqi 73.01 295 P **P** **13 46 24.3 +0.5**
SNR=36
SOHO SOHO 73.15 296 *i*P **P** **13 46 25.2 +0.6**
SNR=15
SOHO SOHO 73.15 296 P **P** **13 46 25.3 +0.8**
DMTO DMTO 73.54 289 P **P** **13 46 29.6 +2.7**
SNR=6.2
MDH Madha 73.58 297 *i*P **P** **13 46 28.3 +1.2**
SNR=11
MDH Madha 73.58 297 P **P** **13 46 29.2 +2.2**
SNR=8.8
UOSS Minazif 73.60 297 P **P** **13 46 26.7 -0.5**
UOSS IAmb IAmb 13 46 39.8
comp=Z,175nm,1.1s
UOSS Minazif 73.60 297 *i*P **P** **13 46 27.6 +0.4**
SNR=10
UOSS Minazif 73.60 297 P **P** **13 46 27.8 +0.6**
RAR Rarotonga 73.63 111 P **P** **13 46 28.0 +0.6**
RAR Rarotonga 73.63 111 P **P** **13 46 28.7 +1.3**
RAR Rarotonga 73.63 111 P **P** **13 46 28.0 +0.6**
RAR pmax pmax
comp=Z,141nm,1.5s
RAR Rarotonga 73.63 111 P **P** **13 46 26.5 -0.9**
comp=Z,42nm,1.1s,baz=246,slow=6.0,SNR=5.7
RAR LR LR 14 19 40.0
comp=Z,949nm,19.4s,baz=270,slow=36
comp=Z,42nm,1.1s
HATD Hatta, Dubai 73.64 297 *i*P **P** **13 46 27.7 +0.2**
SNR=61
HATD Hatta, Dubai 73.64 297 P **P** **13 46 29.0 +1.5**
SNR=68
ASHO Ashiyiah 73.68 297 *i*P **P** **13 46 28.3 +0.6**
SNR=46
ASHO Ashiyiah 73.68 297 P **P** **13 46 28.7 +1.0**
SNR=50
MSFE Esma-Masafi 73.72 297 *i*P **P** **13 46 29.4 +1.5**
SNR=39
MASF Masafi 73.72 297 P **P** **13 46 30.3 +2.3**
SNR=45
ALNE Al Ain 73.84 296 *i*P **P** **13 46 30.3 +1.7**
SNR=90
ALNE Al Ain 73.84 296 P **P** **13 46 30.3 +1.7**
SNR=142
ATKA Atka Island 73.84 33 P **P** **13 46 29.8 +1.8**
SHME Shamm 73.86 298 *i*P **P** **13 46 29.6 +0.9**
SNR=14
SHME Shamm 73.86 298 P **P** **13 46 30.3 +1.6**
SNR=48
NAZ Nazwa, Dubai 74.09 297 *i*P **P** **13 46 32.0 +1.9**
SNR=37
NAZ Nazwa, Dubai 74.09 297 P **P** **13 46 33.3 +3.2**
SNR=41
FAQ Al Faqa, Dubai 74.11 297 *i*P **P** **13 46 32.0 +1.8**
SNR=58
FAQ Al Faqa, Dubai 74.11 297 P **P** **13 46 32.0 +1.8**
SNR=55
UMZA Um Al Zommool 74.13 294 P **P** **13 46 31.6 +1.2**
UMQ Umm Al-Quwin 74.19 297 *i*P **P** **13 46 31.1 +0.5**
SNR=18
RBK Rabkut 74.21 289 P **P** **13 46 34.0 +3.0**
SNR=26
TIXI Tiksi 74.28 1 P **P** **13 46 29.2 -1.0**
TIXI IAmb IAmb 13 46 32.8
comp=Z,368nm,1.4s
TIXI Tiksi 74.28 1 P **P** **13 46 29.4 -0.7**
comp=Z,141nm,1.0s,baz=158,slow=5.1,SNR=117
TIXI LR LR 14 21 31.7
comp=Z,8µm,18.4s,baz=162,slow=38
comp=Z,141nm,1.0s
ASUD Al Ashush, Dub 74.32 296 *i*P **P** **13 46 31.4 0.0**
SNR=40
ASUD Al Ashush, Dub 74.32 296 P **P** **13 46 32.4 +1.0**
SNR=30
DOK Doka 74.44 290 P **P** **13 46 31.8 -0.4**
SNR=26
AJN Ajban 74.61 296 *i*P **P** **13 46 34.0 +0.9**
SNR=29
WHFO Wadi Hawf 74.68 289 P **P** **13 46 32.9 -0.8**
SNR=26
GEYT Alibeck 74.99 310 P **P** **13 46 34.6 -0.4**
GEYT IAmb IAmb 13 46 48.8
comp=Z,187nm,1.1s
GEYT Alibeck 74.99 310 P **P** **13 46 34.7 -0.4**
GEYT pmax pmax
comp=Z,187nm,1.2s
GEYT Alibeck 74.99 310 P **P** **13 46 35.9 +0.8**
comp=Z,40nm,1.0s,baz=146,slow=2.9,SNR=38
GEYT LR LR 14 25 45.8
comp=Z,1µm,20.1s,baz=114,slow=41
comp=Z,40nm,1.0s
GYA0B ALIBECK ARRAY 74.99 310 IAmb IAmb 13 46 46.5
comp=Z,198nm,1.3s
ABTO Aybut 75.05 289 P **P** **13 46 36.2 +0.4**
SNR=38
MZWR Madinat Zayed 75.47 295 P **P** **13 46 41.0 +2.9**
BILL Bilibino 75.78 14 P **P** **13 46 38.5 -0.5**
BILL IAMs_20 IAMs_20 14 18 37.8
comp=Z,4µm,20.0s
BILL Bilibino 75.78 14 *e*P **P** **13 46 38.8 -0.1**
BILL pmax pmax
comp=Z,39nm,1.2s
XMAS Kiritimati 75.95 87 IAMs_20 IAMs_20 14 15 35.2
comp=Z,4µm,19.0s
XMAS Kiritimati 75.95 87 P **P** **13 46 42.9 +1.8**
GHWR Ruwais 76.41 295 P **P** **13 46 44.1 +0.7**
JRN Qarnain Island 76.59 296 P **P** **13 46 47.3 +2.8**
SNR=6.5
NRIK Noril'sk 76.68 347 IAMs_20 IAMs_20 14 25 55.2
comp=Z,4µm,19.0s
NRIK Noril'sk 76.68 347*c i*P **P** **13 46 44.2 +0.2**
NRIK pmax pmax
comp=Z,257nm,1.3s
NRIK Noril'sk 76.68 347 P **P** **13 46 43.4 -0.6**
comp=Z,128nm,0.8s,baz=140,slow=6.0,SNR=64
NRIK LR LR 14 25 21.2
comp=Z,3µm,18.1s,baz=124,slow=40
comp=Z,128nm,0.8s
VNDA Vanda 77.05 173 P **P** **13 46 43.8 -2.2**
VNDA Vanda 77.05 173 P **P** **13 46 44.4 -1.6**
comp=Z,10nm,0.7s,baz=313,slow=7.3,SNR=25
VNDA LR LR 14 19 38.7
comp=Z,6µm,20.4s,baz=338,slow=35
comp=Z,10nm,0.7s
AB31 Akbulak array 77.17 322 P **P** **13 46 46.5 -0.7**
ABKAR Akbulak array 77.17 322 P **P** **13 46 46.4 -0.8**
KIP Kipapa 77.32 67 P **P** **13 46 51.0 +2.4**
KIP Kipapa 77.32 67‖ *e*P **P** **13 46 49.5 +0.9**
KIP pmax pmax
comp=Z,436nm,1.3s
SLWR Sila 77.50 295 P **P** **13 46 52.0 +2.4**
MAW Mawson 77.72 201 LR LR 14 18 24.1
comp=Z,4µm,20.5s,baz=62,slow=34
SBA Scott Base 77.96 172 IAMs_20 IAMs_20 14 20 04.2
comp=Z,4µm,20.0s
TRNA Turayna 78.03 296 P **P** **13 46 53.7 +1.2**
SNR=8.4
SPIA Saint Paul Isl 78.06 30 P **P** **13 46 51.8 -0.2**
baz=245
P08K Saint George I 78.18 30 P **P** **13 46 52.8 +0.2**
baz=246
SMRA Abu-Samra 78.38 296 P **P** **13 46 56.7 +2.3**
SNR=21
SHMA Al-Shehemyia 78.42 297 P **P** **13 46 57.4 +2.8**
SNR=7.1
AKTO Aktyubinsk 78.73 323 P **P** **13 46 55.1 -0.8**
AKTO Aktyubinsk 78.73 323 P **P** **13 46 55.0 -0.9**
comp=Z,72nm,0.9s,baz=113,slow=4.3,SNR=66
AKTO LR LR 14 25 25.2
comp=Z,1µm,19.7s,baz=112,slow=38
comp=Z,72nm,0.9s
UNV Unalaska Valle 78.75 34 P **P** **13 46 57.1 +1.3**
UNV Unalaska Valle 78.75 34 P **P** **13 46 56.7 +0.8**
baz=249
SAKB Bahrain 78.82 297 P **P** **13 46 59.3 +2.5**
HLK Haleakala 78.87 68 IAMs_20 IAMs_20 14 19 38.2
comp=Z,5µm,19.0s
KHLU Kahalu`u 79.06 70 IAMs_20 IAMs_20 14 16 31.3
comp=Z,4µm,21.0s
ABPO Ambohimpanom 79.18 251 P **P** **13 46 58.4 -0.8**
ABPO Ambohimpanom 79.18 251 P **P** **13 46 58.4 -0.8**
ABPO pmax pmax
comp=Z,88nm,1.6s
OPO Ambohidratompo 79.21 252 LR LR 14 16 15.7
comp=Z,434nm,21.9s,baz=210,slow=31
AKUT Akutan 79.26 34 P **P** **13 46 59.7 +1.1**
HPAH Hawaii Prepara 79.29 69 IAMs_20 IAMs_20 14 20 11.5
comp=Z,4µm,18.0s
POHA Pohakuloa 79.41 69 IAMs_20 IAMs_20 14 16 21.7
comp=Z,5µm,20.0s
POHA Pohakuloa 79.41 69 P **P** **13 47 02.3 +1.8**
SVE Sverdlovsk 79.47 329*d i*P **P** **13 46 59.5 -0.2**
SVE *e*S **S** **13 56 55.1 -4.9**
SVE *e* 14 02 06.3
SVE pmax pmax
comp=Z,284nm,1.6s
MLH Mauna Loa 79.52 70 IAMs_20 IAMs_20 14 14 11.5
comp=Z,5µm,20.0s
UWE Uwekahuna 79.60 70 IAMs_20 IAMs_20 14 17 07.7
comp=Z,4µm,21.0s
OBL Observatory Le 79.61 70 IAMs_20 IAMs_20 14 16 35.8
comp=Z,4µm,20.0s
NPH North Pit 79.61 70 IAMs_20 IAMs_20 14 16 33.9
comp=Z,5µm,21.0s
UWB Uwekahuna B 79.61 70 IAMs_20 IAMs_20 14 16 48.0
comp=Z,4µm,21.0s
KKO Keanakako`i 79.62 70 IAMs_20 IAMs_20 14 16 47.2
comp=Z,5µm,20.0s
SBLHI Steaming Bluff 79.62 70 IAMs_20 IAMs_20 14 16 47.3
comp=Z,4µm,19.0s
BYL Byron's Ledge 79.63 70 IAMs_20 IAMs_20 14 16 34.4
comp=Z,5µm,20.0s
HATHI Halema'uma'u T 79.63 70 IAMs_20 IAMs_20 14 16 47.4
comp=Z,5µm,19.0s
VOI Vohitsoka 79.64 248 P **P** **13 47 04.0 +2.4**
VOI Vohitsoka 79.64 248 P **P** **13 47 03.5 +1.9**
SNR=6.2
PUH Pauahi 79.67 70 IAMs_20 IAMs_20 14 16 48.4
comp=Z,5µm,19.0s
STCH Steam Cracks 79.75 70 IAmb IAmb 13 47 06.1
comp=Z,440nm,1.1s
GAMB Gambell 80.29 23 P **P** **13 47 05.2 +1.2**
baz=243,SNR=16
ARU Arti 80.40 328 P **P** **13 47 03.3 -1.4**
ARU IAmb IAmb 13 47 16.8
comp=Z,166nm,1.2s
ARU Arti 80.40 328*c i*P **P** **13 47 03.7 -1.1**
ARU 13 50 04.5
ARU S **S** **13 57 09.9 +0.1**
ARU pmax pmax
comp=Z,148nm,1.3s
ARU Arti 80.40 328 P **P** **13 47 03.0 -1.8**
comp=Z,34nm,0.9s,baz=107,slow=3.5,SNR=45
comp=Z,34nm,0.9s
FALS False Pass 80.79 33 P **P** **13 47 10.1 +3.2**
FALS False Pass 80.79 33 P **P** **13 47 06.9 0.0**
baz=252
M11K Mekoryuk 81.26 28 P **P** **13 47 09.2 -0.1**
baz=248
TNA Tin City 82.53 22 P **P** **13 47 16.7 +0.9**
baz=246,SNR=46
SDPT Sand Point 82.55 33 P **P** **13 47 16.4 +0.2**
SDPT Sand Point 82.55 33 P **P** **13 47 17.0 +0.8**
SDPT Sand Point 82.55 33 P **P** **13 47 18.1 +1.9**
SDPT Sand Point 82.55 33 P **P** **13 47 16.8 +0.6**
baz=254,SNR=11
M13K Dall Lake 82.60 28 P **P** **13 47 17.6 +1.3**
baz=251
CNBA Chernabura Isl 82.90 34 IAMs_20 IAMs_20 14 20 22.4
comp=Z,4µm,20.0s
CHNA Chernabura Isl 82.91 34 P **P** **13 47 17.5 -0.5**
baz=255
RAYN Ar Rayn 83.05 294 P **P** **13 47 19.0 -0.6**
RAYN IAmb IAmb 13 47 32.5
comp=Z,431nm,1.9s
RAYN Ar Rayn 83.05 294 IAMs_20 IAMs_20 14 29 07.4
comp=Z,3µm,18.0s
RAYN Ar Rayn 83.05 294 *i*P **P** **13 47 20.3 +0.7**
SNR=22
RAYN Ar Rayn 83.05 294 P **P** **13 47 19.0 -0.6**
RAYN pmax pmax
comp=Z,431nm,1.9s
ANM Nome 83.15 24 P **P** **13 47 20.3 +1.2**
ANM IAmb IAmb 13 47 23.1
comp=Z,173nm,1.1s
ANM Nome 83.15 24 P **P** **13 47 20.7 +1.6**
baz=249,SNR=54
ANM Nome 83.15 24 P **P** **13 47 20.3 +1.2**
ANM pmax pmax
comp=Z,173nm,1.1s
PPT Papeete 83.17 107 P **P** **13 47 20.1 -0.2**
comp=Z,28nm,0.9s,baz=204,slow=6.8,SNR=3.6
PPT LR LR 14 24 37.2
comp=Z,848nm,18.7s,baz=266,slow=36
comp=Z,28nm,0.9s
L14K Kuka Creek 83.21 27 P **P** **13 47 21.0 +1.6**
baz=252
N14K Kuskokwak Cree 83.24 29 P **P** **13 47 20.5 +0.8**
baz=253,SNR=10
O14K Tigyukauivet M 83.24 29 IAmb IAmb 13 47 23.8
comp=Z,190nm,1.0s
O14K IAMs_20 IAMs_20 14 18 07.3
comp=Z,4µm,22.0s
O14K Tigyukauivet M 83.24 29 P **P** **13 47 20.7 +1.0**
baz=253,SNR=9.4
J14K Nanvaranak Lak 83.28 26 P **P** **13 47 21.6 +1.8**
baz=251
S14K Fog Glacier 83.30 33 P **P** **13 47 20.8 +0.6**
baz=255,SNR=5.6
M14K Bethel 83.36 28 P **P** **13 47 21.3 +1.0**
M14K IAMs_20 IAMs_20 14 15 41.0
comp=Z,4µm,18.0s
M14K Bethel 83.36 28 P **P** **13 47 21.1 +0.9**
baz=252,SNR=21
G15K Niukluk 83.83 24 P **P** **13 47 23.4 +0.8**
baz=250
L15K Ungalak Mounta 83.86 27 P **P** **13 47 24.2 +1.4**
baz=253
CHGN Chignik 83.92 33 IAMs_20 IAMs_20 14 18 50.2
comp=Z,4µm,22.0s
CHGN Chignik 83.92 33 P **P** **13 47 23.3 0.0**
baz=256,SNR=5.6
O15K Ungalikthiuk R 83.93 30 P **P** **13 47 24.6 +1.3**
baz=254
M15K Kasigluk River 83.94 28 P **P** **13 47 24.2 +0.9**
baz=253
MAK Makhachkala 83.98 314 *e*P **P** **13 47 21.8 -2.1**
MAK *e* 13 50 37.1
MAK *e* 13 57 41.6
MAK *e*SS SS 14 03 10.3 -5.3
MAK *e*SSS SSS 14 06 46.1
MAK pmax pmax
comp=Z,329nm,1.2s
K15K Wolf Creek Mou 84.02 27 IAMs_20 IAMs_20 14 20 44.7
comp=Z,3µm,20.0s
K15K Wolf Creek Mou 84.02 27 P **P** **13 47 25.3 +1.6**
baz=252
N15K Kwethluk River 84.07 29 P **P** **13 47 24.8 +0.9**
baz=254,SNR=29
H16K Elim 84.44 24 P **P** **13 47 26.4 +0.6**
baz=252,SNR=99
C16K Lisburne Hills 84.52 20 IAmb IAmb 13 47 30.4
comp=Z,321nm,1.2s
C16K IAMs_20 IAMs_20 14 20 31.5
comp=Z,3µm,22.0s
C16K Lisburne Hills 84.52 20 P **P** **13 47 27.4 +1.4**
baz=248
ATD Arta Tunnel 84.55 282 LR LR 14 23 29.2
comp=Z,56nm,19.4s,baz=88,slow=34
ATD Arta Tunnel 84.55 282 *e*P **P** **13 47 29.6 +2.2**
ATD *e*S **SKSac** **13 57 46.7 -4.5**
J16K Anvik River 84.72 26 P **P** **13 47 29.0 +1.8**
baz=253
L16K Owhat River 84.78 27 P **P** **13 47 28.8 +1.3**
baz=254,SNR=98
N16K Nishlik Lake 84.79 29 P **P** **13 47 29.3 +1.7**
baz=255
P16K Nushagak River 84.81 30 P **P** **13 47 28.8 +1.1**
baz=256,SNR=31
M16K Timber Creek 84.84 28 IAMs_20 IAMs_20 14 22 40.5
comp=Z,3µm,21.0s
M16K Timber Creek 84.84 28 P **P** **13 47 28.9 +1.1**
baz=255,SNR=43
I17K Unalakleet 84.86 25 P **P** **13 47 29.1 +1.3**
baz=253,SNR=44
O16K Kokwok River B 84.90 30 IAMs_20 IAMs_20 14 19 33.1
comp=Z,4µm,22.0s
O16K Kokwok River B 84.90 30 P **P** **13 47 29.5 +1.4**
baz=256
D17K Noatak River 85.11 21 P **P** **13 47 30.4 +1.4**
baz=251,SNR=73
C17K DeLong Mountai 85.34 20 P **P** **13 47 31.1 +0.9**
baz=250
G17K Kiwalik Mounta 85.35 24 P **P** **13 47 31.5 +1.2**
baz=253
E17K Hotham Inlet 85.37 22 P **P** **13 47 31.6 +1.2**
baz=252,SNR=60
Q16K King Salmon 85.40 31 P **P** **13 47 30.0 -0.6**
baz=257,SNR=5.6
O17K Koliganek Bris 85.43 30 P **P** **13 47 32.2 +1.4**
baz=257
L17K Donlin 85.43 27 P **P** **13 47 32.2 +1.4**
baz=255
H17K Granite Mounta 85.48 24 IAmb IAmb 13 47 36.6
comp=Z,113nm,1.2s
H17K Granite Mounta 85.48 24 P **P** **13 47 32.2 +1.3**
baz=254
BELG Belogornoye 85.52 323*ce*P **P** **13 47 31.0 -0.3**
BELG pmax pmax
comp=Z,70nm,1.0s
BELG Belogornoye 85.52 323 P **P** **13 47 31.1 -0.3**
comp=Z,307nm,1.0s,baz=158,slow=5.4,SNR=52
comp=Z,307nm,1.0s
N17K Nushagak Hills 85.56 29 IAMs_20 IAMs_20 14 19 32.5
comp=Z,3µm,22.0s
N17K Nushagak Hills 85.56 29 P **P** **13 47 33.2 +1.7**
baz=256,SNR=32
K17K Iditarod 85.58 27 IAmb IAmb 13 47 36.8
comp=Z,306nm,1.1s
K17K Iditarod 85.58 27 P **P** **13 47 32.9 +1.4**
baz=255
P17K Kvichak River 85.63 30 P **P** **13 47 32.5 +0.7**
baz=257
GNI Garni 85.63 310 P **P** **13 47 32.1 -0.4**
GNI Garni 85.63 310*ce*P **P** **13 47 32.7 +0.2**
GNI pmax pmax
comp=Z,25nm,1.3s
GNI Garni 85.63 310 P **P** **13 47 32.9 +0.5**
comp=Z,6.8nm,0.7s,baz=135,slow=1.2,SNR=9.8
comp=Z,6.8nm,0.7s
M17K Holitna River 85.65 28 IAmb IAmb 13 47 36.6
comp=Z,230nm,1.1s
M17K Holitna River 85.65 28 P **P** **13 47 33.3 +1.4**
baz=256,SNR=24
Q17K Contact Creek 85.71 31 P **P** **13 47 32.5 +0.1**
baz=258,SNR=48
KIRV Kirov 85.73 329*c i*P **P** **13 47 31.7 -0.6**
KIRV Kirov 85.73 329 P **P** **13 47 32.0 -0.3**
comp=Z,64nm,1.0s,baz=102,slow=4.7,SNR=50
comp=Z,64nm,1.0s
E18K Tukpahlearik C 85.93 22 IAmb IAmb 13 47 38.2
comp=Z,113nm,0.9s
E18K Tukpahlearik C 85.93 22 P **P** **13 47 34.1 +1.0**
baz=253
F18K Selawik 86.05 23 P **P** **13 47 34.5 +0.8**
baz=254,SNR=22
C18K Utukok River 86.09 20 P **P** **13 47 35.0 +1.0**
baz=252
B18K Kokolik River 86.10 20 P **P** **13 47 35.6 +1.7**
baz=252
H18K Honhosa River 86.17 24 P **P** **13 47 34.8 +0.4**
baz=255
L18K Granite Mounta 86.19 27 IAMs_20 IAMs_20 14 20 38.9
comp=Z,3µm,22.0s
L18K Granite Mounta 86.19 27 P **P** **13 47 35.4 +0.8**
baz=257
N18K Kilae Creek 86.22 29 IAmb IAmb 13 47 39.3
comp=Z,401nm,1.4s
N18K Kilae Creek 86.22 29 P **P** **13 47 35.9 +1.1**

baz=258
G18K Tagagawik 86.25 23 P P 13 47 35.0 +0.2
baz=255
P18K Big Mountain, 86.28 30 IAMs_20 IAMs_20 14 20 02.5
comp=Z,5µm,22.0s
P18K Big Mountain, 86.28 30 P P 13 47 35.1 0.0
baz=258
M18K Stony River 86.42 28 P P 13 47 36.4 +0.7
baz=258,SNR=36
SVW2 Sparrevohn 86.46 28 P P 13 47 36.2 +0.4
SVW2 IAmb IAmb 13 47 40.2
comp=Z,210nm,1.3s
SVW2 Sparrevohn 86.46 28 P P 13 47 38.8 +2.9
J18K Innoko River 86.46 26 P P 13 47 36.6 +0.7
baz=257
TTA Tatalina 86.65 27 P P 13 47 39.5 +2.6
TTA Tatalina 86.65 27 P P 13 47 37.3 +0.4
baz=257,SNR=26
GCSA Galena City Sc 86.69 25 P P 13 47 37.4 +0.6
baz=256,SNR=41
AKH Akhalkalaki 86.72 312 P P 13 47 37.9 0.0
AKH Akhalkalaki 86.72 312 P P 13 47 37.9 0.0
AKH pmax pmax
comp=Z,873nm,1.3s
C19K Lookout Ridge 86.78 20 IAmb IAmb 13 47 41.4
comp=Z,123nm,0.8s
C19K IAMs_20 IAMs_20 14 29 03.2
comp=Z,3µm,19.0s
C19K Lookout Ridge 86.78 20 P P 13 47 38.7 +1.3
baz=254
F19K Shaleruckik Mo 86.84 23 P P 13 47 37.7 +0.1
baz=256
OHAK Old Harbor 86.88 32 P P 13 47 38.6 +0.7
OHAK Old Harbor 86.88 32 P P 13 47 40.6 +2.6
OHAK Old Harbor 86.88 32 P P 13 47 38.5 +0.5
baz=260,SNR=32
O19K Port Alsworth 86.89 29 P P 13 47 38.0 0.0
O19K IAmb IAmb 13 47 40.8
O19K IAMs_20 IAMs_20 14 20 45.3
comp=Z,265nm,1.6s
comp=Z,4µm,22.0s
O19K Port Alsworth 86.89 29 P P 13 47 38.4 +0.5
baz=259
NCK Nalchik 86.89 314 ||| *e*P P 13 47 38.9 +0.5
NCK pmax pmax
comp=Z,54nm,1.2s
ONI Oni 86.89 313 P P 13 47 38.5 0.0
ONI IAmb IAmb 13 47 52.4
comp=Z,192nm,1.9s
ONI Oni 86.89 313 P P 13 47 38.5 0.0
ONI pmax pmax
comp=Z,191nm,1.9s
N19K Bonanza Creek 86.92 29 P P 13 47 39.5 +1.2
baz=259
G19K Purcell Mounta 86.93 23 IAmb IAmb 13 47 41.7
comp=Z,182nm,0.9s
G19K Purcell Mounta 86.93 23 P P 13 47 38.7 +0.5
baz=256
Q19K Cape Douglas, 86.99 31 IAMs_20 IAMs_20 14 22 31.2
comp=Z,3µm,20.0s
Q19K Cape Douglas, 86.99 31 P P 13 47 38.3 -0.2
baz=260
L19K White Mountain 87.02 27 P P 13 47 39.5 +0.9
baz=258
H19K Roundabout Mou 87.05 24 IAmb IAmb 13 47 42.3
comp=Z,149nm,0.9s
H19K Roundabout Mou 87.05 24 P P 13 47 39.2 +0.6
baz=257
J19K Poorman 87.05 26 IAmb IAmb 13 47 42.3
comp=Z,107nm,1.1s
J19K Poorman 87.05 26 P P 13 47 39.1 +0.4
baz=258
D19K Kuna River 87.13 21 IAmb IAmb 13 47 42.5
comp=Z,137nm,0.8s
D19K Kuna River 87.13 21 P P 13 47 39.4 +0.3
baz=255
M19K Big River Lodg 87.18 28 P P 13 47 40.5 +1.1
baz=259
E19K Redstone River 87.19 22 P P 13 47 40.0 +0.7
baz=256
QSPA South Pole Qui 87.20 180 P P 13 47 38.0 -1.6
comp=Z,7.0nm,0.6s,baz=296,slow=1.1,SNR=43
QSPA LR LR 14 27 14.2
comp=Z,4µm,18.1s,baz=350,slow=36
comp=Z,7.0nm,0.6s
P19K Oil Pt 87.33 30 IAMs_20 IAMs_20 14 21 09.0
comp=Z,5µm,22.0s
P19K Oil Pt 87.33 30 P P 13 47 40.1 -0.1
baz=260
KDAK Kodiak Island 87.34 32 P P 13 47 40.7 +0.5
KDAK Kodiak Island 87.34 32 IAMs_20 IAMs_20 14 20 51.6
comp=Z,5µm,22.0s
KDAK Kodiak Island 87.34 32 P P 13 47 40.8 +0.6
baz=261
KDAK Kodiak Island 87.34 32 P P 13 47 40.7 +0.5
KDAK pmax pmax
comp=Z,388nm,1.1s
KDAK Kodiak Island 87.34 32 P P 13 47 39.5 -0.7
comp=Z,313nm,1.1s,baz=252,slow=4.1,SNR=22
KDAK LR LR 14 21 13.8
comp=Z,4µm,22.0s,baz=268,slow=32
comp=Z,313nm,1.1s
KBZ Khabaz 87.42 314 *ce*P P 13 47 40.8 -0.1
KBZ pmax pmax
comp=Z,30nm,1.3s
KBZ Khabaz 87.42 314 P P 13 47 40.9 0.0
comp=Z,21nm,1.2s,baz=84,slow=4.0,SNR=22
KBZ SKKP 14 08 47.2
comp=Z,0.9nm,0.7s,baz=249,slow=7.2,SNR=3.5
KBZ LR LR 14 32 04.5
comp=Z,504nm,20.5s,baz=82,slow=39
comp=Z,21nm,1.2s
GOF Gofitskoye 87.46 315 *ce*P P 13 47 41.3 +0.2
L20K Farewell, AK 87.52 27 P P 13 47 41.6 +0.5
baz=259,SNR=23
GURO Guroymak-BITLI 87.54 309 P P 13 47 42.1 +0.3
GURO IAmb IAmb 13 47 55.7
comp=Z,222nm,1.1s
Q20K Shuyak Island 87.58 31 P P 13 47 41.0 -0.3
baz=261,SNR=9.4
SYI Shuyak Island 87.58 31 IAmb IAmb 13 47 47.0
comp=Z,176nm,1.1s
KIV Kislovodsk 87.59 314 P P 13 47 41.3 -0.6
KIV IAmb IAmb 13 47 54.8
comp=Z,142nm,1.5s
KIV Kislovodsk 87.59 314 *i* P P 13 47 42.4 +0.4
SNR=21
KIV Kislovodsk 87.59 314 *e*P P 13 47 41.6 -0.3
KIV *e* 13 58 08.8
KIV *e*SS SS 14 04 10.7 +1.8
KIV *e*SSS SSS 14 07 35.4
KIV pmax pmax
comp=Z,10.0nm,1.0s
K20K Telida 87.60 26 IAmb IAmb 13 47 45.2
comp=Z,206nm,1.2s
K20K Telida 87.60 26 P P 13 47 42.2 +0.8
baz=259
F20K Avaraart Lake 87.67 23 P P 13 47 42.2 +0.6
baz=257
H20K Anotleneega Mo 87.68 24 P P 13 47 42.4 +0.7
baz=258
O20K Slope Mountain 87.70 30 P P 13 47 41.7 -0.3
baz=260
I20K Naaghedeneel 87.70 25 IAmb IAmb 13 47 45.5
comp=Z,165nm,1.1s
I20K Naaghedeneel 87.70 25 P P 13 47 42.3 +0.5
baz=259
D20K Etivluk River 87.72 21 P P 13 47 42.3 +0.4
baz=257
J20K Nowinta River 87.72 25 IAmb IAmb 13 47 45.8
comp=Z,159nm,1.2s
J20K Nowinta River 87.72 25 P P 13 47 42.4 +0.5
baz=259
M20K Styx River 87.76 28 P P 13 47 42.9 +0.6
baz=260
E20K Nigu River 87.77 21 P P 13 47 42.6 +0.5
baz=257,SNR=261
N20K Mount Spurr 88.08 29 P P 13 47 43.2 -0.6
baz=261,SNR=28
HOM Homer 88.12 30 IAMs_20 IAMs_20 14 21 32.0
comp=Z,5µm,22.0s
HOM Homer 88.12 30 P P 13 47 43.1 -0.8
baz=261
IMAR Indian Mountai 88.23 24 P P 13 47 44.4 0.0
CNPM China Poot 88.31 30 IAMs_20 IAMs_20 14 22 20.0
comp=Z,4µm,22.0s
A21K Barrow 88.33 18 P P 13 47 45.2 +0.5
baz=256,SNR=51
PPLA Purkeypile 88.36 27 P P 13 47 45.0 -0.2
baz=261,SNR=17
C21K Knifeblade Rid 88.46 21 P P 13 47 46.0 +0.6
baz=258
CHUM Lake Minchumin 88.47 26 P P 13 47 46.1 +0.7
baz=261,SNR=36
CAST Castle Rocks 88.49 26 P P 13 47 45.4 -0.3
baz=261,SNR=16
BRLK Bradley Lake 88.52 30 IAmb IAmb 13 47 51.1
comp=Z,166nm,1.2s
BRLK IAMs_20 IAMs_20 14 22 15.2
comp=Z,3µm,21.0s
SKT Skwentna 88.52 28 IAmb IAmb 13 47 49.3
comp=Z,79nm,1.1s
SKT Skwentna 88.52 28 P P 13 47 44.9 -0.9
baz=261,SNR=22
CAPN Captain Cook N 88.53 29 P P 13 47 47.0 +1.2
baz=262,SNR=8.2
H21K Melozitna Rive 88.56 24 P P 13 47 46.1 +0.2
baz=260
F21K Alatna River 88.56 23 P P 13 47 46.3 +0.3
baz=260
KIBK Kibwezi 88.57 268 IAmb IAmb 13 48 01.1
comp=Z,162nm,1.5s
KIBK Kibwezi 88.57 268 P P 13 47 47.1 -0.1
KIBK Kibwezi 88.57 268 P P 13 47 47.9 +0.7
SNR=65
BRSE Bradley Lake S 88.59 30 P P 13 47 46.1 -0.1
baz=262,SNR=6.2
E21K Killik River 88.61 21 P P 13 47 46.4 +0.2
baz=259
DILA Dilla 88.75 276 *e*P P 13 47 45.1 -3.0
I21K Tanana 88.82 25 IAmb IAmb 13 47 50.7
comp=Z,80nm,1.1s
I21K Tanana 88.82 25 P P 13 47 47.8 +0.7
baz=261,SNR=33
SUA Susitna One 88.82 28 IAmb IAmb 13 47 51.1
comp=Z,187nm,1.0s
SUA Susitna One 88.82 28 P P 13 47 46.7 -0.7
baz=262,SNR=43
VRH Novokhopyorsk 88.98 321 *e*P P 13 47 47.6 -0.6
VRH pmax pmax
comp=Z,60nm,1.0s
FIS Fire Island 89.03 29 IAmb IAmb 13 47 51.2
comp=Z,137nm,1.0s
LABN Labinsk 89.06 315 *e*P P 13 47 48.2 -0.5
LABN *e* 13 51 23.4
LABN *e* 13 58 17.6
LABN *e* 13 58 32.9
LABN pmax pmax
comp=Z,169nm,2.0s
BPAW Bear Paw Mtn. 89.08 26 IAmb IAmb 13 47 52.6
comp=Z,156nm,1.8s
BPAW Bear Paw Mtn. 89.08 26 P P 13 47 48.5 +0.1
baz=262,SNR=19
D22K Ayikyak River 89.15 21 IAmb IAmb 13 47 52.6
comp=Z,169nm,1.4s
D22K Ayikyak River 89.15 21 P P 13 47 49.2 +0.6
baz=260
M22K Willow 89.15 28 P P 13 47 48.0 -0.7
baz=263,SNR=29
CUT Chulitna 89.17 28 IAmb IAmb 13 47 51.2
comp=Z,217nm,1.3s
CUT Chulitna 89.17 28 P P 13 47 48.4 -0.4
baz=262,SNR=12
H22K Ishtalitna Cre 89.17 24 P P 13 47 49.4 +0.5
baz=262,SNR=42
O22K Cooper Landing 89.19 29 IAMs_20 IAMs_20 14 22 19.2
comp=Z,5µm,22.0s
O22K Cooper Landing 89.19 29 P P 13 47 48.7 -0.2
baz=263
RC01 Rabbit Creek A 89.25 29 IAMs_20 IAMs_20 14 22 16.9
comp=Z,3µm,22.0s
RC01 Rabbit Creek A 89.25 29 P P 13 47 48.7 -0.6
baz=263,SNR=20
SEW Seward 89.28 30 P P 13 47 49.4 0.0
baz=263,SNR=14
G22K Bettles 89.28 23 P P 13 47 48.7 -0.5
baz=261
TRF Thorofare Moun 89.30 26 P P 13 47 48.7 -1.0
baz=262,SNR=23
MLY Manley 89.31 25 P P 13 47 49.4 -0.2
MLY IAmb IAmb 13 47 53.1
comp=Z,83nm,1.0s
MLY Manley 89.31 25 P P 13 47 49.5 0.0
baz=262,SNR=64
ERBR Yeremizino-Bor 89.32 316 *e*P P 13 47 49.2 -0.7
ERBR *e**PP pP 13 47 54.2 -1.0
ERBR *e* 13 58 17.0
ERBR *e* 13 58 28.9
ERBR *e*SP SP 13 59 49.2 +6.0
ERBR pmax pmax
comp=E,15nm,0.8s
ERBR pmax pmax
comp=Z,101nm,1.5s
ERBR pmax pmax
comp=N,67nm,1.4s
E22K Anaktuvuk Pass 89.35 22 IAmb IAmb 13 47 53.3
comp=Z,201nm,1.1s
E22K Anaktuvuk Pass 89.35 22 P P 13 47 49.9 +0.3
baz=261,SNR=118
KMBO Kilima Mbogo 89.42 269 P P 13 47 51.6 +0.2
KMBO IAmb IAmb 13 48 05.5
comp=Z,182nm,1.6s
KMBO Kilima Mbogo 89.42 269 *i* P P 13 47 53.5 +2.1
SNR=7.6
KMBO Kilima Mbogo 89.42 269 P P 13 47 51.6 +0.2
KMBO pmax pmax
comp=Z,182nm,1.6s
KMBO Kilima Mbogo 89.42 269 *e*P P 13 47 56.0 +4.6
KMBO *e*S SKSac 13 58 27.0 +5.4
PMR Palmer 89.60 28 P P 13 47 49.9 -0.9
PMR IAmb IAmb 13 47 53.4
comp=Z,108nm,1.2s
PMR Palmer 89.60 28 P P 13 47 52.4 +1.6
PMR Palmer 89.60 28 P P 13 47 50.3 -0.5
baz=264,SNR=19
PMR Palmer 89.60 28 P P 13 47 49.9 -0.9
PMR pmax pmax
comp=Z,108nm,1.2s
PMR MLR MLR
comp=Z,2µm,21.0s
GHO Glory Hole Cre 89.72 28 P P 13 47 51.0 -0.6
GHO IAmb IAmb 13 51 23.1
comp=Z,114nm,1.4s
BWN Browne 89.75 26 IAmb IAmb 13 47 55.1
comp=Z,229nm,1.1s
COLD Coldfoot 89.83 23 P P 13 47 52.5 +0.7
baz=262,SNR=61
G23K Bananza Creek 89.83 23 IAmb IAmb 13 47 55.6
comp=Z,109nm,1.1s
G23K Bananza Creek 89.83 23 P P 13 47 52.6 +0.7
baz=263,SNR=98
D23K Nanushuk River 89.88 21 P P 13 47 53.2 +1.1
baz=262
KNK Knik Glacier 89.91 29 IAmb IAmb 13 47 55.5
comp=Z,261nm,1.2s
KNK Knik Glacier 89.91 29 P P 13 47 52.4 +0.1
baz=264,SNR=32
I23K Minto, Yukon-K 89.91 25 IAmb IAmb 13 47 55.5
comp=Z,272nm,1.1s
I23K Minto, Yukon-K 89.91 25 P P 13 47 52.5 +0.3
baz=263,SNR=100
MCK McKinley 89.93 26 P P 13 47 51.8 -0.6
baz=264,SNR=44
RND Reindeer 89.93 27 IAmb IAmb 13 47 54.5
comp=Z,134nm,1.0s
NEA2 Nenana 89.97 25 P P 13 47 52.2 -0.4
baz=264,SNR=11
SML Sawmill 90.00 28 IAmb IAmb 13 47 55.7
comp=Z,212nm,1.0s
SML Sawmill 90.00 28 P P 13 47 53.0 +0.1
baz=264,SNR=37
WAT1 Susitna Watana 90.01 27 P P 13 47 52.4 -0.4
baz=264
E23K Chandalar 90.15 22 P P 13 47 54.1 +0.7
baz=263
P23K Montague Islan 90.29 30 P P 13 47 54.3 +0.2
baz=265,SNR=7.4
M23K Glacier View 90.29 28 P P 13 47 53.9 -0.2
baz=265,SNR=16
WAT6 Susitna Watana 90.36 27 P P 13 47 54.0 -0.6
baz=265,SNR=38
MDM Murphy Dome 90.36 25 IAmb IAmb 13 51 28.9
comp=Z,108nm,1.3s
WRH Wood River Hil 90.38 26 IAmb IAmb 13 47 56.6
comp=Z,159nm,1.1s
ARPR Arapgir-MALATY 90.46 309 IAmb IAmb 13 48 07.3
comp=Z,134nm,1.3s
SCM Sheep Creek Mo 90.48 28 IAmb IAmb 13 47 58.3
comp=Z,258nm,1.3s
SCM Sheep Creek Mo 90.48 28 P P 13 47 54.9 -0.1
baz=265,SNR=24
VORD Divnogorie 90.49 321 *e*P P 13 47 53.8 -1.4
VORD pmax pmax
comp=Z,70nm,1.2s
GLI Glacier Island 90.51 29 IAMs_20 IAMs_20 14 22 53.3
comp=Z,4µm,22.0s
GLI Glacier Island 90.51 29 P P 13 47 55.2 0.0
baz=265
COLA College 90.52 25 IAMs_20 IAMs_20 14 28 46.0
comp=Z,3µm,19.0s
COLA College 90.52 25 P P 13 47 55.8 +0.8
COLA College 90.52 25 P P 13 47 54.1 -1.0
baz=265
COLA College 90.52 25 P P 13 47 54.3 -0.7
DHY Denali Highway 90.57 27 IAMs_20 IAMs_20 14 23 28.5
comp=Z,3µm,20.0s
DHY Denali Highway 90.57 27 P P 13 47 55.2 -0.3
baz=265,SNR=15
D24K Happy Valley 90.57 21 IAmb IAmb 13 47 58.4
comp=Z,189nm,1.2s
D24K IAMs_20 IAMs_20 14 31 16.1
comp=Z,3µm,18.0s
D24K Happy Valley 90.57 21 P P 13 47 55.5 +0.2
baz=264
VSR Storozhevoye 90.59 321 *e*P P 13 47 53.7 -2.0
VSR pmax pmax
comp=Z,60nm,1.2s
VORR Voronezh 90.59 322 *e*P P 13 47 55.0 -0.7
VORR pmax pmax
comp=Z,89nm,0.5s
H24K Noodor Dome 90.60 24 IAmb IAmb 13 47 59.0
comp=Z,117nm,1.0s
H24K Noodor Dome 90.60 24 P P 13 47 55.9 +0.4
baz=265,SNR=67
C24K Franklin Bluff 90.67 20 P P 13 47 55.9 +0.3
baz=264
POKR Poker Plat Res 90.72 25 P P 13 47 54.8 -1.3
baz=265,SNR=6.4
F24K Squaw Lake 90.75 23 IAmb IAmb 13 47 59.5
comp=Z,137nm,1.3s
F24K Squaw Lake 90.75 23 P P 13 47 56.5 +0.3
baz=265
Q23K Middleton Isla 90.78 31 IAMs_20 IAMs_20 14 25 46.4
comp=Z,2µm,18.0s
Q23K Middleton Isla 90.78 31 P P 13 47 56.7 +0.3
baz=266
LPSR Galich'ya Gora 90.82 322 *e*P P 13 47 55.0 -1.7
LPSR pmax pmax
comp=Z,70nm,1.1s
G24K Hadweenzic Riv 90.84 23 IAmb IAmb 13 47 59.6
comp=Z,108nm,1.1s
G24K Hadweenzic Riv 90.84 23 P P 13 47 57.2 +0.6
baz=265
HDA Harding Lake 90.86 26 IAMs_20 IAMs_20 14 28 57.3
comp=Z,3µm,20.0s
HDA Harding Lake 90.86 26 P P 13 47 55.4 -1.3
baz=266,SNR=46
ILAR Eielson Array 90.92 25 P P 13 47 55.2 -1.8
ILAR Eielson Array 90.92 25 P P 13 47 55.8 -1.2
comp=Z,22nm,0.9s,baz=260,slow=4.3,SNR=60
ILAR PP PP 13 51 30.1 -3.0
comp=Z,25nm,1.1s,baz=261,slow=5.8,SNR=17
ILAR PKPPKP 14 13 32.6
comp=Z,0.2nm,0.9s,baz=175,slow=6.3,SNR=1.9
ILAR LR LR 14 24 41.2
comp=Z,2µm,22.0s,baz=240,slow=33
comp=Z,22nm,0.9s
KLMR Klimovskoe 91.01 331 *e*P P 13 47 53.6 -3.8
KLMR S SKSac 13 58 23.8 -4.5
KLMR pmax pmax
comp=Z,162nm,1.8s
M24K Tolsona, Glenn 91.05 28 IAMs_20 IAMs_20 14 19 32.2
comp=Z,3µm,18.0s
M24K Tolsona, Glenn 91.05 28 P P 13 47 57.9 +0.2
baz=266,SNR=18
KLU Klutina 91.13 29 IAMs_20 IAMs_20 14 23 02.4
comp=Z,3µm,22.0s
KLU Klutina 91.13 29 P P 13 47 58.4 +0.3
baz=266,SNR=8.5
EYAK Cordova Ski Ar 91.15 30 P P 13 47 57.6 -0.5
baz=266
GAZ Gaziantep 91.25 307 IAmb IAmb 13 48 12.4
comp=Z,70nm,1.0s
ASF Jabal al Asfar 91.30 302 LR LR 14 34 23.4
comp=Z,1µm,20.4s,baz=240,slow=39
K24K Donnelly Dome 91.33 26 P P 13 47 58.7 -0.3
baz=266,SNR=17
G25K Bearman Lake 91.39 23 P P 13 47 59.9 +0.8
baz=266,SNR=24
ANN Anapa 91.41 315 *e*P P 13 47 58.3 -1.4
ANN *e**PP pP 13 48 03.1 -1.8
ANN *e* 13 51 33.5
ANN *e* 13 58 29.8
ANN *e* 13 58 53.3
ANN *e*PS PnS 14 00 09.8 -0.1
ANN *e*SS SS 14 05 06.2 +2.2
ANN pmax pmax
comp=E,66nm,1.3s
ANN pmax pmax
comp=Z,126nm,1.2s
ANN pmax pmax
comp=N,23nm,1.0s
PAX Paxson 91.43 27 P P 13 47 59.7 +0.2
baz=267,SNR=47
D25K Kavik River 91.45 21 IAMs_20 IAMs_20 14 32 38.8
comp=Z,3µm,20.0s
D25K Kavik River 91.45 21 P P 13 47 59.5 +0.1
baz=266
LODK Lodwar 91.52 273 P P 13 48 02.1 +1.2
SNR=21
ELIB Princess Elisa 91.54 198 *d*P P 13 47 59.0 -0.9
comp=Z,15nm,1.2s
HARP HAARP 91.54 28 P P 13 47 59.7 -0.2
baz=267,SNR=10
PRP Porcupine Dome 91.54 25 P P 13 47 59.6 -0.4
baz=267,SNR=8.7
J25K Salcha River, 91.56 26 P P 13 47 59.5 -0.6
baz=267
F25K Christian Rive 91.61 23 P P 13 48 01.1 +0.9
baz=267,SNR=33
E25K Arctic Village 91.67 22 IAMs_20 IAMs_20 14 32 09.4
comp=Z,3µm,20.0s
E25K Arctic Village 91.67 22 P P 13 48 01.3 +0.8
baz=267,SNR=100
RAGM Ragged Mountai 91.67 30 IAMs_20 IAMs_20 14 26 30.9
comp=Z,4µm,19.0s
BMRM Bremner River 91.73 29 P P 13 48 01.1 +0.2
baz=268,SNR=9.3
MOS Moscow 91.74 326 *e*P P 13 47 58.7 -2.2
MOS *e* 13 51 36.7
MOS *e* 13 58 29.3
MOS *e*S S 13 58 56.3 -4.4
MOS pmax pmax
comp=Z,110nm,1.4s
N25K Chitina, Valde 91.77 29 P P 13 48 01.3 +0.2
baz=268,SNR=18
KAIM Kayak Island 91.78 30 P P 13 48 02.2 +1.1
baz=268,SNR=7.0
HMT Hamilton 91.88 30 IAMs_20 IAMs_20 14 24 02.3
comp=Z,4µm,22.0s
BMAR Burnt Mountain 92.01 23 P P 13 48 02.5 +0.5
SUCK Suckling Hills 92.11 30 IAMs_20 IAMs_20 14 23 18.5
comp=Z,4µm,22.0s
SCRK Sand Creek 92.14 26 IAMs_20 IAMs_20 14 23 54.9
comp=Z,3µm,22.0s
SCRK Sand Creek 92.14 26 P P 13 48 02.8 +0.1
baz=268,SNR=30
F26K Sheenjek River 92.19 22 P P 13 48 03.9 +1.0
baz=268,SNR=49
VRDI Verde Repeater 92.30 29 IAmb IAmb 13 48 06.4
comp=Z,99nm,1.2s
G26K Porcupine Rive 92.31 23 P P 13 48 03.8 +0.5
baz=268,SNR=61
OBN Obninsk 92.32 325 *de*P P 13 48 02.9 -0.7
OBN pmax pmax
comp=Z,60nm,1.2s
OBN Obninsk 92.32 325 P P 13 48 03.2 -0.4
comp=Z,14nm,0.4s,baz=65,slow=1.6,SNR=19
comp=Z,14nm,0.4s
J26L Joseph Creek 92.33 26 IAMs_20 IAMs_20 14 29 41.5
comp=Z,3µm,20.0s

J26L	**Joseph Creek**	**92.33**	**26**	P	**P**	13 48 03.8	**+0.2**		
	baz=269								
BGLC	**Bering Glacier**	**92.36**	**30**	P	**P**	**13 48 04.5**	**+0.8**		
	baz=269								
BALJ	**Balqa**	**92.36**	**302**	IAMs_20	IAMs_20	14 36 28.7			
	comp=Z,1µm,20.0s								
BNN	**Bunyan**	**92.39**	**309**	IAmb	IAmb	13 48 17.2			
BNN	comp=Z,181nm,1.4s			IAMs_20	IAMs_20	14 37 39.4			
	comp=Z,3µm,19.0s								
L26K	**Log Cabin Wild**	**92.40**	**27**	IAmb	IAmb	13 48 07.4			
L26K	comp=Z,113nm,1.4s			IAMs_20	IAMs_20	14 25 48.9			
	comp=Z,3µm,20.0s								
L26K	**Log Cabin Wild**	**92.40**	**27**	P	**P**	**13 48 04.1**	**+0.2**		
	baz=269,SNR=22								
GHAJ	**Ghor Haditha**	**92.40**	**301**	IAMs_20	IAMs_20	14 37 58.8			
	comp=Z,3µm,19.0s								
CRQM	**Cirque**	**92.44**	**29**	IAMs_20	IAMs_20	14 24 25.9			
	comp=Z,4µm,22.0s								
CRQE	**Cirque**	**92.47**	**29**	P	**P**	**13 48 04.4**	**0.0**		
	baz=269,SNR=13								
MCARA	**McCarthy VSAT**	**92.51**	**29**	IAMs_20	IAMs_20	14 25 00.1			
	comp=Z,4µm,22.0s								
MCARA	**McCarthy VSAT**	**92.51**	**29**	P	**P**	**13 48 04.9**	**+0.4**		
	baz=269,SNR=14								
I26K	**Coal Creek Min**	**92.53**	**25**	P	**P**	**13 48 04.4**	**0.0**		
	baz=269								
SNH	**Sunshine Point**	**92.58**	**30**	IAMs_20	IAMs_20	14 24 09.0			
	comp=Z,3µm,22.0s								
MMAI	**Mount Meron Ar**	**92.59**	**303**	P	**P**	**13 48 06.0**	**+0.4**		
MMAI	comp=Z,0.8nm,0.2s,baz=81,slow=11,SNR=5.9			LR	LR	14 36 10.5			
	comp=Z,2µm,19.7s,baz=71,slow=40								
EIL	**Elat**	**92.89**	**299**	LR	LR	14 36 17.7			
	comp=Z,2µm,18.3s,baz=104,slow=40								
K27K	**Chicken**	**92.98**	**26**	IAMs_20	IAMs_20	14 25 13.5			
	comp=Z,4µm,22.0s								
K27K	**Chicken**	**92.98**	**26**	P	**P**	**13 48 07.8**	**+1.3**		
	baz=270								
MESA	**MESA**	**93.03**	**30**	P	**P**	**13 48 07.8**	**+0.7**		
	baz=270,SNR=10								
M27K	**Edge Creek, AK**	**93.07**	**28**	IAmb	IAmb	13 48 10.3			
M27K	comp=Z,108nm,1.2s			IAMs_20	IAMs_20	14 24 47.8			
	comp=Z,3µm,22.0s								
M27K	**Edge Creek, AK**	**93.07**	**28**	P	**P**	**13 48 07.6**	**+0.5**		
	baz=270,SNR=28								
L27K	**Beaver Creek,**	**93.09**	**27**	IAmb	IAmb	13 48 10.4			
L27K	comp=Z,141nm,1.2s			IAMs_20	IAMs_20	14 26 19.3			
	comp=Z,3µm,21.0s								
L27K	**Beaver Creek,**	**93.09**	**27**	P	**P**	**13 48 07.9**	**+0.8**		
	baz=270								
BCAR	**Beaver Creek A**	**93.11**	**27**	P	**P**	**13 48 07.7**	**+0.5**		
I27K	**Kandik River**	**93.17**	**25**	P	**P**	**13 48 08.0**	**+0.5**		
	baz=270								
H27K	**Steamboat Moun**	**93.20**	**24**	P	**P**	**13 48 08.4**	**+0.8**		
	baz=270								
LVZ	**Lovozero**	**93.31**	**338**	P	**P**	**13 48 06.9**	**-1.1**		
LVZ	**Lovozero**	**93.31**	**338**	*de*P	**P**	**13 48 06.8**	**-1.2**		
LVZ	comp=Z,59nm,1.2s			pmax	pmax				
CTG	**Chitna Glacier**	**93.33**	**29**	P	**P**	**13 48 09.4**	**+1.0**		
	baz=270,SNR=65								
EGAK	**Eagle**	**93.37**	**25**	P	**P**	**13 48 08.4**	**+0.1**		
	baz=271,SNR=47								
LOGN	**Logan Glacier**	**93.49**	**29**	IAMs_20	IAMs_20	14 25 50.2			
	comp=Z,3µm,22.0s								
BVCY	**Beaver Creek**	**93.54**	**28**	P	**P**	**13 48 09.7**	**+0.5**		
	baz=271,SNR=30								
YUK3	**Moose Creek**	**93.74**	**28**	P	**P**	**13 48 11.2**	**+0.8**		
	baz=271,SNR=51								
SIM	**Simferopol'**	**93.77**	**315**	*e*P	P	13 48 20.3	+10		
SIM				*e*		13 51 57.0			
SIM	comp=Z,47nm,0.9s			pmax	pmax				
APA	**Apatity**	**93.79**	**337**	⇓*i*P	P	13 48 04.0	-6.2		
APA				*i*		13 51 58.0			
APA	comp=Z,14nm,1.0s			pmax	pmax				
F28M	**Old Crow**	**93.82**	**23**	IAmb	IAmb	13 48 13.2			
	comp=Z,118nm,1.2s								
F28M	**Old Crow**	**93.82**	**23**	P	**P**	**13 48 11.0**	**+0.6**		
	baz=272,SNR=64								
I28M	**Miner Creek**	**93.88**	**25**	P	**P**	**13 48 11.1**	**+0.3**		
	baz=272,SNR=164								
PINM	**Pinnacle**	**93.88**	**30**	P	**P**	**13 48 11.3**	**+0.5**		
	baz=271,SNR=23								
YUK8	**Steele Glacier**	**94.08**	**29**	P	**P**	**13 48 12.8**	**+0.8**		
	baz=272								
BR131	**Keskin Array S**	**94.12**	**309**	⇑*e*P	**P**	**13 48 12.4**	**-0.1**		
BRTR	**Keskin Array B**	**94.12**	**309**	P	**P**	**13 48 12.2**	**-0.3**		
BRTR	**Keskin Array B**	**94.12**	**309**	P	**P**	**13 48 12.2**	**-0.3**		
BRTR	**Keskin Array B**	**94.12**	**309**	P	**P**	**13 48 10.9**	**-1.6**		
BRTR	comp=Z,3.7nm,1.0s,baz=116,slow=7.0,SNR=9.9			PP	**PP**	**13 51 57.9**	**-1.2**		
BRTR	comp=Z,6.8nm,1.1s,baz=91,slow=5.4,SNR=5.0			LR	LR	14 39 14.5			
	comp=Z,874nm,19.2s,baz=102,slow=41								
	comp=Z,3.7nm,1.0s								
DAWY	**Dawson**	**94.16**	**26**	P	**P**	**13 48 12.7**	**+0.7**		
	baz=272,SNR=120								
BCPM	**Bancas Point**	**94.19**	**30**	IAMs_20	IAMs_20	14 24 10.5			
	comp=Z,3µm,22.0s								
PNL	**Peninsula**	**94.32**	**31**	P	**P**	**13 48 15.8**	**+3.0**		
PNL	**Peninsula**	**94.32**	**31**	P	**P**	**13 48 13.5**	**+0.7**		
	baz=272,SNR=8.4								
H29M	**Whitestone**	**94.48**	**24**	IAmb	IAmb	13 48 16.8			
	comp=Z,166nm,1.4s								
H29M	**Whitestone**	**94.48**	**24**	P	**P**	**13 48 13.8**	**+0.4**		
	baz=273,SNR=36								
E29M	**Blow River**	**94.53**	**22**	P	**P**	**13 48 13.7**	**+0.2**		
	baz=274								
YUK4	**Talbot Arm**	**94.62**	**29**	P	**P**	**13 48 15.2**	**+0.8**		
	baz=273,SNR=19								
J29N	**Klondike Camp**	**94.65**	**26**	IAmb	IAmb	13 48 18.4			
	comp=Z,236nm,1.3s								
J29N				IAMs_20	IAMs_20	14 30 43.4			
	comp=Z,3µm,20.0s								
J29N	**Klondike Camp**	**94.65**	**26**	P	**P**	**13 48 15.1**	**+0.8**		
	baz=273,SNR=44								
M29M	**Somme Creek**	**94.65**	**28**	IAmb	IAmb	13 48 18.0			
	comp=Z,208nm,1.4s								
M29M				IAMs_20	IAMs_20	14 27 10.8			
	comp=Z,2µm,19.0s								
M29M	**Somme Creek**	**94.65**	**28**	P	**P**	**13 48 15.2**	**+0.8**		
	baz=273								
O29M	**Mount Kennedy**	**94.71**	**30**	IAMs_20	IAMs_20	14 24 30.3			
	comp=Z,4µm,22.0s								
O29M	**Mount Kennedy**	**94.71**	**30**	P	**P**	**13 48 15.8**	**+1.1**		
	baz=273								
L29M	**L29M**	**94.77**	**27**	IAMs_20	IAMs_20	14 28 11.8			
	comp=Z,4µm,22.0s								
L29M	**L29M**	**94.77**	**27**	P	**P**	**13 48 15.9**	**+1.1**		
	baz=273								
YUK6	**Outpost Mounta**	**94.78**	**29**	P	**P**	**13 48 15.8**	**+0.6**		
	baz=273,SNR=17								
K29M	**Barlow Dome**	**95.00**	**26**	IAMs_20	IAMs_20	14 26 24.6			
	comp=Z,4µm,22.0s								
K29M	**Barlow Dome**	**95.00**	**26**	P	**P**	**13 48 16.8**	**+0.9**		
	baz=274								
VADS	**Vadso**	**95.08**	**340**	*e*P	**P**	**13 48 16.6**	**+0.6**		
VADS				IVmB_BB		13 48 24.1			
VADS	comp=Z,2µm,3.5s			*e*SKSac	**SKSac**	**13 58 51.1**	**+0.6**		
EPYK	**Eagle Plains**	**95.14**	**24**	P	**P**	**13 48 16.3**	**-0.1**		
	baz=275,SNR=71								
P29M	**Windy Craggy**	**95.16**	**31**	IAMs_20	IAMs_20	14 25 09.6			
	comp=Z,3µm,22.0s								
P29M	**Windy Craggy**	**95.16**	**31**	P	**P**	**13 48 17.6**	**+0.9**		
	baz=273								
VALR	**Valaam**	**95.20**	**331**	*de*P	**P**	**13 48 15.3**	**-1.4**		
VALR	comp=Z,37nm,1.1s			pmax	pmax				
HYT	**Haines Junctio**	**95.20**	**29**	P	**P**	**13 48 17.2**	**+0.3**		
	baz=274,SNR=37								
G30M	**tAoh Zraii Nji**	**95.28**	**23**	IAmb	IAmb	13 48 19.7			
	comp=Z,179nm,1.2s								
G30M	**tAoh Zraii Nji**	**95.28**	**23**	P	**P**	**13 48 16.8**	**-0.3**		
	baz=275								
I30M	**Mount Dempster**	**95.38**	**25**	P	**P**	**13 48 17.8**	**+0.1**		
	baz=275								
F30M	**Barrier River**	**95.39**	**22**	P	**P**	**13 48 17.7**	**+0.2**		
	baz=276								
M30M	**Minto, Yukon**	**95.42**	**28**	IAMs_20	IAMs_20	14 27 41.8			
	comp=Z,3µm,20.0s								
M30M	**Minto, Yukon**	**95.42**	**28**	P	**P**	**13 48 18.9**	**+1.1**		
	baz=274,SNR=50								
J30M	**Hart River**	**95.46**	**25**	IAMs_20	IAMs_20	14 31 18.8			
	comp=Z,3µm,19.0s								
J30M	**Hart River**	**95.46**	**25**	P	**P**	**13 48 18.6**	**+0.5**		
	baz=275								
P30M	**Million Dollar**	**95.52**	**30**	P	**P**	**13 48 19.3**	**+1.0**		
	baz=274								
MAYO	**Mayo, Yukon**	**95.74**	**26**	P	**P**	**13 48 20.1**	**+0.9**		
	baz=275,SNR=28								
PLBC	**Pleasant Camp**	**95.87**	**31**	P	**P**	**13 48 20.4**	**+0.5**		
	baz=275								
O30N	**Mendenhall**	**95.90**	**29**	IAmb	IAmb	13 48 23.9			
O30N	comp=Z,121nm,1.1s			IAMs_20	IAMs_20	14 26 06.7			
	comp=Z,3µm,22.0s								
O30N	**Mendenhall**	**95.90**	**29**	P	**P**	**13 48 20.7**	**+0.7**		
	baz=275,SNR=26								
KEV	**Kevo**	**95.93**	**340**	IAMs_20	IAMs_20	14 38 39.4			
	comp=Z,3µm,22.0s								
MBAR	**Mbarara**	**95.95**	**269**	LR	LR	14 30 08.8			
	comp=Z,2µm,18.9s,baz=76,slow=35								
G31M	**Satah River**	**96.05**	**23**	P	**P**	**13 48 20.3**	**-0.2**		
	baz=277,SNR=79								
S31K	**Pelican**	**96.06**	**32**	P	**P**	**13 48 20.3**	**-0.4**		
	baz=274								
INK	**Inuvik**	**96.15**	**22**	IAmb	IAmb	13 48 23.6			
INK	comp=Z,157nm,1.2s			IAMs_20	IAMs_20	14 35 33.7			
	comp=Z,3µm,19.0s								
INK	**Inuvik**	**96.15**	**22**	P	**P**	**13 48 20.5**	**-0.4**		
	baz=278,SNR=99								
INK	**Inuvik**	**96.15**	**22**	LR	LR	14 34 38.3			
	comp=Z,2µm,19.4s,baz=288,slow=37								
H31M	**Peel River**	**96.16**	**24**	P	**P**	**13 48 20.7**	**-0.4**		
	baz=277								
F31M	**Tsiigehtchic**	**96.19**	**23**	P	**P**	**13 48 20.6**	**-0.5**		
	baz=278,SNR=100								
R31K	**City Hall, Gus**	**96.28**	**32**	P	**P**	**13 48 21.4**	**-0.3**		
	baz=275								
SKAG	**Skagway**	**96.40**	**31**	IAMs_20	IAMs_20	14 31 27.0			
	comp=Z,3µm,19.0s								
SKAG	**Skagway**	**96.40**	**31**	P	**P**	**13 48 24.2**	**+2.0**		
SKAG	**Skagway**	**96.40**	**31**	P	**P**	**13 48 22.6**	**+0.4**		
	baz=275,SNR=15								
ARA0	**ARCESS Array S**	**96.48**	**340**	*e*P	**P**	**13 48 21.5**	**-1.0**		
ARA0	comp=Z,799nm,1.9s			IVmB_BB		13 48 23.5			
ARA0				*e*SKSac	**SKSac**	**13 58 58.7**	**+0.8**		
ARCES	**ARCESS Array B**	**96.48**	**340**	P	**P**	**13 48 21.0**	**-1.5**		
ARCES				IAmb	IAmb	13 48 24.4			
ARCES	comp=Z,70nm,1.1s **ARCESS Array B**	**96.48**	**340**	P	**P**	**13 48 21.0**	**-1.5**		
ARCES	comp=Z,70nm,1.2s			pmax	pmax				
ARCES	**ARCESS Array B**	**96.48**	**340**	P	**P**	**13 48 20.9**	**-1.5**		
ARCES	comp=Z,21nm,0.8s,baz=83,slow=3.9,SNR=46			PKKP	**PKKPbc**	**14 05 05.9**	**-4.0**		
ARCES	comp=Z,2.1nm,0.9s,baz=300,slow=1.0,SNR=7.2			LR	LR	14 39 55.5			
	comp=Z,2µm,18.4s,baz=70,slow=40								
	comp=Z,21nm,0.8s								
WHY	**Whitehorse**	**96.50**	**29**	IAMs_20	IAMs_20	14 26 11.6			
	comp=Z,4µm,21.0s								
WHY	**Whitehorse**	**96.50**	**29**	P	**P**	**13 48 23.1**	**+0.2**		
	baz=276,SNR=36								
M31M	**Drury Creek, Y**	**96.57**	**28**	P	**P**	**13 48 23.1**	**+0.1**		
	baz=277,SNR=23								
SIT	**Sitka**	**96.62**	**33**	IAmb	IAmb	13 48 26.6			
	comp=Z,174nm,1.4s								
SIT	**Sitka**	**96.62**	**33**	P	**P**	**13 48 25.6**	**+2.3**		
SIT	**Sitka**	**96.62**	**33**	P	**P**	**13 48 24.2**	**+0.9**		
	baz=275								
SPA0	**Spitsbergen Ar**	**96.79**	**349**	*e*P	**P**	**13 48 23.3**	**-0.4**		
SPA0				*e*SKSac	**SKSac**	**13 59 01.5**	**+2.2**		
SPITS	**Spitsbergen Ar**	**96.79**	**349**	P	**P**	**13 48 22.9**	**-0.8**		
SPITS	comp=Z,292nm,1.3s			pmax	pmax				
SPITS	**Spitsbergen Ar**	**96.79**	**349**	P	**P**	**13 48 22.7**	**-1.0**		
	comp=Z,163nm,1.2s,baz=89,slow=8.7,SNR=15								
SPITS	comp=Z,2µm,21.1s,baz=25,slow=38			LR	LR	14 35 35.9			
	comp=Z,163nm,1.2s								
AKASG	**Malin Array Be**	**96.87**	**321**	P	**P**	**13 48 23.6**	**-1.0**		
AKASG	**Malin Array Be**	**96.87**	**321**	P	**P**	**13 48 23.6**	**-1.0**		
AKASG	comp=Z,28nm,1.4s			pmax	pmax				
AKASG	**Malin Array Be**	**96.87**	**321**	P	**P**	**13 48 23.2**	**-1.4**		
	comp=Z,5.2nm,1.0s,baz=78,slow=3.8,SNR=17								
AKASG				PP	**PP**	**13 52 18.6**	**-1.2**		
	comp=Z,1.9nm,0.8s,baz=69,slow=8.5,SNR=2.6								
	comp=Z,5.2nm,1.0s								
AKBB	**Malin Array Si**	**96.87**	**321**	⇓*e*P	**P**	**13 48 24.0**	**-0.6**		
KIEV	**Kiev**	**96.88**	**321**	⇓P	**P**	**13 48 24.6**	**-0.1**		
KIEV	**Kiev**	**96.88**	**321**	P	**P**	**13 48 24.5**	**-0.1**		
HAMF	**Hammerfest**	**96.89**	**341**	*e*P	**P**	**13 48 23.2**	**-1.1**		
HAMF				*e*SKSac	**SKSac**	**13 59 01.2**	**+1.2**		
R32K	**Eaglecrest**	**96.94**	**32**	IAMs_20	IAMs_20	14 25 21.3			
	comp=Z,4µm,21.0s								
R32K	**Eaglecrest**	**96.94**	**32**	P	**P**	**13 48 25.0**	**+0.3**		
	baz=276								
S32K	**Killisnoo**	**96.99**	**33**	P	**P**	**13 48 25.0**	**+0.1**		
	baz=276								
JIS	**Juneau Island**	**97.01**	**32**	IAmb	IAmb	13 48 28.8			
JIS	comp=Z,67nm,1.0s			IAMs_20	IAMs_20	14 25 12.1			
	comp=Z,4µm,21.0s								
JIS	**Juneau Island**	**97.01**	**32**	P	Pdif	13 48 27.9	+2.8		
FARO	**Faro, Yukon**	**97.05**	**28**	IAMs_20	IAMs_20	14 27 18.0			
	comp=Z,4µm,22.0s								
FARO	**Faro, Yukon**	**97.05**	**28**	P	Pdif	13 48 25.6	+0.3		
	baz=278,SNR=64								
P32M	**Atlin**	**97.20**	**30**	IAmb	IAmb	13 48 29.7			
P32M	comp=Z,79nm,1.2s			IAMs_20	IAMs_20	14 24 09.2			
	comp=Z,3µm,19.0s								
P32M	**Atlin**	**97.20**	**30**	P	Pdif	13 48 26.2	+0.1		
	baz=277,SNR=12								
N32M	**Quiet Lake**	**97.32**	**29**	IAMs_20	IAMs_20	14 33 16.3			
	comp=Z,3µm,20.0s								
N32M	**Quiet Lake**	**97.32**	**29**	P	Pdif	13 48 27.3	+0.7		
	baz=278								
KBS	**Kingsbay**	**97.33**	**350**	IAMs_20	IAMs_20	14 32 26.4			
	comp=Z,3µm,22.0s								
KBS	**Kingsbay**	**97.33**	**350**	*e*P	Pdif	13 48 27.0	+0.8		
HSPB	**Hornsund (broa**	**97.36**	**348**	*e*P	**P**	**13 48 25.6**	**-0.7**		
HSPB				*e*PP	**PP**	**13 52 27.4**	**+4.5**		
HSPB	comp=Z,3µm,25.8s			*e*L	L	14 30 53.1			
MNK	**Minsk**	**97.37**	**324**	*i* P	Pdif	13 48 27.4	+0.6		
MNK				*i*		13 52 24.3			
MNK				*i* PPP	PPP	13 54 28.5			
MNK				*i* S	**SKSac**	**13 59 04.0**	**+0.9**		
MNK				*i* SS	**SS**	**14 06 31.3**	**+3.0**		
MNK	comp=N,15nm,1.0s			pmax	pmax				
MNK	comp=E,6.0nm,0.9s			pmax	pmax				
MNK	comp=Z,35nm,1.0s			MLR	MLR				
MNK	comp=N,2µm,20.0s			MLR	MLR				
MNK	comp=Z,1µm,20.0s								
KTK1	**Kautokeino**	**97.38**	**339**	*e*P	**P**	**13 48 26.0**	**-0.5**		
KTK1	comp=Z,829nm,3.8s			IVmB_BB		13 48 46.6			
KTK1				*e*SKSac	**SKSac**	**13 59 05.4**	**+2.8**		
KIS	**Kishinev**	**97.40**	**317**	*e*PS	PS	14 01 10.0	-5.1		
MILM	**Milestii Mici**	**97.41**	**317**	*e*P	**P**	**13 48 27.0**	**-0.1**		
MILM				*e*		13 52 27.0			
MILM				*e*S	**S**	**13 59 43.0**	**-7.6**		
MILM				*e*PS	**PS**	**14 01 16.0**	**+0.8**		
FIA1	**FINESS Array S**	**97.49**	**332**	IAmb	IAmb	13 48 27.9			
	comp=Z,78nm,1.3s								
FINES	**FINESS Array B**	**97.50**	**332**	P	**P**	**13 48 26.0**	**-1.1**		
	comp=Z,6.0nm,0.9s,baz=90,slow=8.0,SNR=12								
	comp=Z,6.0nm,0.9s								
LSZ	**Lusaka**	**97.51**	**254**	P	**P**	**13 48 27.4**	**-1.0**		
LSZ	comp=Z,45nm,1.2s			IAmb	IAmb	13 48 36.0			
LSZ	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	14 26 31.2			
LSZ	**Lusaka**	**97.51**	**254**	P	**P**	**13 48 27.4**	**-1.0**		
LSZ	comp=Z,45nm,1.2s			pmax	pmax				
LSZ	**Lusaka**	**97.51**	**254**	LR	LR	14 30 23.2			
	comp=Z,2µm,19.7s,baz=104,slow=34								
P33M	**Teslin, Yukon**	**97.57**	**30**	IAmb	IAmb	13 48 31.1			
	comp=Z,63nm,1.1s								
P33M	comp=Z,3µm,21.0s			IAMs_20	IAMs_20	14 27 16.9			
P33M	**Teslin, Yukon**	**97.57**	**30**	P	Pdif	13 48 28.2	+0.4		
	baz=278,SNR=12								
SORM	**Soroca**	**97.63**	**318**	⇓P	Pdif	13 48 28.5	+0.4		
SORM	**Soroca**	**97.63**	**318**	P	Pdif	13 48 28.5	+0.4		
U33K	**Whale Pass**	**97.94**	**34**	P	**P**	**13 48 28.8**	**-0.4**		
	baz=277								
CRAG	**Craig**	**98.01**	**34**	P	**P**	**13 48 29.5**	**-0.1**		
	baz=277								
Q32M	**Nakina River**	**98.02**	**31**	IAmb	IAmb	13 48 37.9			
	comp=Z,103nm,1.6s								
Q32M				IAMs_20	IAMs_20	14 26 10.0			
	comp=Z,4µm,22.0s								
Q32M	**Nakina River**	**98.02**	**31**	P	**P**	**13 48 29.8**	**0.0**		
	baz=278								
A36M	**Sachs Harbour**	**98.13**	**17**	IAmb	IAmb	13 48 32.6			
	comp=Z,34nm,1.1s								
A36M	**Sachs Harbour**	**98.13**	**17**	P	**P**	**13 48 29.7**	**-0.1**		
	baz=286,SNR=31								
JETT	**Jettan, Norway**	**98.23**	**340**	*e*P	**P**	**13 48 29.0**	**-1.4**		
JETT	comp=Z,1µm,1.5s			IVmBBB		13 48 31.3			
JETT				*e*SKSac	**SKSac**	**13 59 10.5**	**+3.4**		
WRAK	**Wrangell Islan**	**98.33**	**33**	IAmb	IAmb	13 48 34.5			
	comp=Z,64nm,0.9s								
WRAK	**Wrangell Islan**	**98.33**	**33**	P	Pdif	13 48 31.4	+0.4		
	baz=276,SNR=10								
R33M	**Jennings River**	**98.62**	**30**	IAmb	IAmb	13 48 36.5			
	comp=Z,97nm,1.4s								
R33M	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	14 30 18.7			
R33M	**Jennings River**	**98.62**	**30**	P	Pdif	13 48 33.3	+0.8		
	baz=279								
TRO	**Tromso**	**98.71**	**340**	*e*P	**P**	**13 48 30.6**	**-1.8**		
TRO				*e*SKSac	**SKSac**	**13 59 10.6**	**+1.4**		
BOSA	**Boshof**	**98.74**	**241**	IAMs_20	IAMs_20	14 32 11.9			
	comp=Z,3µm,18.0s								
BOSA	**Boshof**	**98.74**	**241**	P	**P**	**13 48 33.3**	**-0.4**		
	comp=Z,10.0nm,1.2s,baz=90,slow=4.0,SNR=4.6								
BOSA				LR	LR	14 31 36.3			
	comp=Z,2µm,18.6s,baz=94,slow=34								
	comp=Z,10.0nm,1.2s								
S34M	**Telegraph Cree**	**98.77**	**32**	IAmb	IAmb	13 48 36.9			
	comp=Z,65nm,1.2s								
S34M	**Telegraph Cree**	**98.77**	**32**	P	Pdif	13 48 33.8	+0.8		
	baz=279,SNR=10								
LBTB	**Lobatse**	**98.91**	**244**	IAMs_20	IAMs_20	14 30 37.7			
	comp=Z,2µm,20.0s								
LBTB	**Lobatse**	**98.91**	**244**	LR	LR	14 26 26.9			
	comp=Z,2µm,22.0s,baz=96,slow=31								
TESR	**Tescani**	**98.92**	**317**	⇑P	Pdif	13 48 34.2	+0.3		
VRI	**Vrincioaia**	**98.93**	**316**	⇓P	Pdif	13 48 34.6	+0.5		
VRI	**Vrincioaia**	**98.93**	**316**	P	Pdif	13 48 34.5	+0.5		
SNAA	**Sanae**	**98.98**	**194**	IAMs_20	IAMs_20	14 36 21.0			
	comp=Z,4µm,19.0s								
SNAA	**Sanae**	**98.98**	**194**	P	**P**	**13 48 32.8**	**-0.9**		
	comp=Z,1.3nm,0.7s,baz=135,slow=4.3,SNR=1.6								
SNAA				LR	LR	14 30 02.9			
	comp=Z,4µm,21.9s,baz=108,slow=34								
	comp=Z,1.3nm,0.7s								
DLBC	**Dease Lake**	**99.26**	**31**	IAmb	IAmb	13 48 38.5			
	comp=Z,36nm,1.1s								
DLBC	**Dease Lake**	**99.26**	**31**	P	**Pdif**	**13 48 35.4**	**+0.1**		
	baz=280,SNR=9.0								
DLBC	**Dease Lake**	**99.26**	**31**	P	**Pdif**	**13 48 35.5**	**+0.3**		
	comp=Z,14nm,0.8s,baz=292,slow=6.3,SNR=14								
DLBC				PP	**PP**	**13 52 37.1**	**-0.9**		
	comp=Z,20nm,1.2s,baz=243,slow=4.5,SNR=7.1								
DLBC				LR	LR	14 27 54.8			
	comp=Z,2µm,22.0s,baz=292,slow=32								
	comp=Z,14nm,0.8s								
C36M	**Paulatuk**	**99.27**	**20**	P	**Pdif**	**13 48 34.8**	**-0.1**		
	baz=287,SNR=61								
T35M	**Bob Quinn**	**99.39**	**33**	P	**Pdif**	**13 48 36.2**	**+0.4**		
	baz=280,SNR=5.9								
MLR	**Muntele Rosu**	**99.51**	**316**	⇓P	**Pdif**	**13 48 36.8**	**0.0**		
MLR	**Muntele Rosu**	**99.51**	**316**	IAmb	IAmb	13 52 36.4			
	comp=Z,73nm,1.6s								
MLR	**Muntele Rosu**	**99.51**	**316**	P	**Pdif**	**13 48 36.8**	**0.0**		
MLR	**Muntele Rosu**	**99.51**	**316**	P	**Pdif**	**13 48 37.6**	**+0.8**		
	comp=Z,12nm,1.1s,baz=213,slow=0.3,SNR=4.1								
MLR				PP	**PP**	**13 52 39.8**	**-0.6**		
	comp=Z,5.0nm,0.8s,baz=315,slow=4.4,SNR=4.0								
MLR				LR	LR	14 37 48.7			
	comp=Z,795nm,21.8s,baz=60,slow=38								
	comp=Z,12nm,1.1s								
TGTN	**Hyland Airport**	**99.54**	**28**	P	**Pdif**	**13 48 37.4**	**+1.0**		
	baz=282,SNR=23								
WTLY	**Watson Lake, Y**	**99.57**

NB2	**NORSAR Subarra**	104.53	333	P		**Pdif**		**13 48 58.8**	**+0.2**	
	comp=Z,24nm,1.4s,baz=72,slow=4.4									
NB2				PP		**PKiKP**		**13 53 07.8**	**-6.8**	
	comp=Z,80nm,2.0s,baz=68,slow=6.9									
NB2	**NORSAR Subarra**	104.53	333	P		**Pdif**		**13 48 58.8**	**+0.2**	
	baz=72,slow=4.4									
NOA	**NORSAR Array B**	104.53	333	Pdiff		**Pdif**		**13 48 57.1**	**-1.5**	
	comp=Z,5.9nm,1.0s,baz=68,slow=4.5,SNR=8.0									
NOA				PKiKP		**PKiKP**		**13 53 13.8**	**-0.7**	
	comp=Z,7.4nm,1.1s,baz=88,slow=1.1,SNR=5.7									
JAVC	**Velka Javorina**	104.54	320	*e*PDIFF		**Pdif**		**13 49 00.1**	**+1.1**	
CLRS	**Cowichan Lake**	104.61	40	IAMs_20	IAMs_20			14 28 14.6		
	comp=Z,2µm,20.0s									
KRLC	**Kraliky**	104.83	321	*e*PDIFF		**Pdif**		**13 49 03.4**	**+3.2**	
KRLC				*e*PP		**PKiKP**		**13 53 17.5**	**+2.1**	
MODS	**Modra-Piesok**	104.91	319	*e*PP		**PKiKP**		**13 53 21.1**	**+5.5**	
KSP	**Ksiaz**	104.94	322	*e*Pdif		**Pdif**		**13 49 01.7**	**+1.1**	
KSP				*e*PP		**PP**		**13 53 23.6**	**+2.8**	
KSP				*e*L		L		14 42 05.5		
	comp=Z,2µm,22.1s									
DPC	**Dobruska-Polom**	105.05	322	*e*PP		**PKiKP**		**13 53 19.2**	**+3.4**	
DPC				AMS	AMS			14 50 10.0		
	comp=Z,2µm,18.9s									
OSTC	**Ostas**	105.06	322	AMS	AMS			14 49 20.0		
	comp=Z,2µm,18.4s									
PGC	**Sidney**	105.09	40	IAMs_20	IAMs_20			14 27 36.2		
	comp=Z,3µm,22.0s									
VRAC	**Vranov**	105.13	320	*e*PDIFF		**Pdif**		**13 49 02.1**	**+0.6**	
VRAC				*e*PP		**PP**		**13 53 21.0**	**-1.3**	
CHVC	**Chvalec**	105.16	322	AMS	AMS			14 49 10.0		
	comp=Z,2µm,17.5s									
UPC	**Upice**	105.20	322	AMS	AMS			14 49 10.0		
	comp=Z,2µm,16.8s									
KRUC	**Moravsky**	105.31	320	*e*PDIFF		**Pdif**		**13 49 03.4**	**+1.1**	
KRUC				*e*PP		**PKiKP**		**13 53 17.5**	**+1.2**	
YKAW3	**Yellowknife Wh**	105.32	25	IAMs_20	IAMs_20			14 46 09.1		
	comp=Z,2µm,20.0s									
YKA	**Yellowknife Ar**	105.35	25	Pdiff		**Pdif**		**13 49 02.4**	**+0.2**	
	comp=Z,13nm,1.2s,baz=295,slow=4.7,SNR=42									
YKA				PKiKP		**PKiKP**		**13 53 14.6**	**-1.3**	
	comp=Z,2.4nm,0.8s,baz=306,slow=2.1,SNR=11									
YKA				PKKPbc		**PKKPbc**		**14 04 40.4**	**-3.6**	
	comp=Z,0.5nm,0.7s,baz=111,slow=2.3,SNR=6.5									
YKA				PKKP		**PKKPdf**		**14 04 50.7**	**-3.7**	
	comp=Z,0.7nm,0.8s,baz=111,slow=2.9,SNR=6.2									
YKAW1	**Yellowknife Wh**	105.40	25	IAMs_20	IAMs_20			14 37 07.4		
	comp=Z,2µm,21.0s									
RONA	**Rosalia, Austr**	105.70	319	*e*PP		**PP**		**13 53 26.8**	**+0.2**	
	comp=Z,19nm,1.4s									
GNW	**Green Mountain**	105.75	41	IAMs_20	IAMs_20			14 31 25.8		
	comp=Z,3µm,20.0s									
TULEG	**Thule**	105.77	4	IAMs_20	IAMs_20			14 35 41.4		
	comp=Z,3µm,21.0s									
KONO	**Kongsberg**	105.80	332	IAMs_20	IAMs_20			14 46 49.7		
	comp=Z,3µm,21.0s									
KONO	**Kongsberg**	105.80	332	*e*Pdif		**Pdif**		**13 49 03.3**	**-0.9**	
KONO				*e*PP		**PP**		**13 53 28.8**	**+1.9**	
KONO				*e*SKSac		**SKSac**		**13 59 44.8**	**+1.5**	
TREC	**Trest**	105.83	321	AMS	AMS			14 54 30.0		
	comp=Z,2µm,16.5s									
CONA	**Conrad Observa**	105.93	319	*e*PP		**PP**		**13 53 28.7**	**+0.3**	
	comp=Z,18nm,1.2s									
SKAR	**Skarslia**	105.99	333	*e*PP		**PP**		**13 53 26.8**	**-1.5**	
SKAR				*e*SKSac		**SKSac**		**13 59 47.2**	**+2.9**	
GOPC	**GO Pecny, Ondr**	106.12	321	AMS	AMS			14 51 40.0		
	comp=Z,2µm,17.5s									
PRU	**Pruhonice**	106.25	321	AMS	AMS			14 52 00.0		
	comp=Z,2µm,19.2s									
PRA	**Prague**	106.29	322	AMS	AMS			14 50 20.0		
	comp=Z,2µm,17.8s									
ARSA	**Arzberg**	106.32	319	*i* PP		**PP**		**13 53 31.1**	**0.0**	
	comp=Z,8.2nm,1.0s									
RICC	**Richard**	106.37	322	AMS	AMS			14 49 00.0		
	comp=Z,3µm,18.0s									
BRG	**Berggiesshubel**	106.37	322	Amp				13 53 39.0		
	comp=Z,24nm,1.4s									
BRG	**Berggiesshubel**	106.37	322	SP	SP			14 02 41.0	-6.1	
BRG	**Berggiesshubel**	106.37	322	*i* P		**Pdif**		**13 49 07.8**	**+0.8**	
BRG				pmax	pmax					
	comp=Z,7.0nm,1.1s									
BRG	**Berggiesshubel**	106.37	322	*e*PP		**PP**		**13 53 34.3**	**+2.9**	
BRG	**Berggiesshubel**	106.37	322	*e*Pif				13 49 07.8		
BRG	**Berggiesshubel**	106.37	322	Amp				13 49 10.2		
	comp=Z,7.1nm,1.1s									
BRG	**Berggiesshubel**	106.37	322	PKiKP	PKiKP			13 53 07.0	-11	
BRG	**Berggiesshubel**	106.37	322	Amp				13 53 08.3		
	comp=Z,10nm,1.3s									
BRG	**Berggiesshubel**	106.37	322	PP	PP			**13 53 32.6**	**+1.3**	
F04A	**Amboy**	106.40	43	IAMs_20	IAMs_20			14 32 35.1		
	comp=Z,3µm,21.0s									
DBO	**Dodson Butte**	106.44	46	IAMs_20	IAMs_20			14 29 03.5		
	comp=Z,3µm,21.0s									
CKRC	**Cesky Krumlov**	106.71	320	*e*PP		**PP**		**13 53 37.2**	**+3.3**	
CKRC				*e*SKS		**SKSac**		**13 59 49.9**	**+2.0**	
CKRC				AMS	AMS			14 50 20.0		
	comp=Z,2µm,17.8s									
HSKC	**Hora Svate Kat**	106.76	322	AMS	AMS			14 49 50.0		
	comp=Z,2µm,18.7s									
SOKA	**Soboth**	106.78	318	*i* PP		**PP**		**13 53 33.4**	**-1.2**	
	comp=Z,20nm,1.5s									
CLL	**Collm**	106.82	323	IAMs_20	IAMs_20			14 47 22.5		
	comp=Z,3µm,20.0s									
CLL	**Collm**	106.82	323	*e*P		**Pdif**		**13 49 09.0**	**+0.1**	
CLL				*e*				13 53 36.0		
CLL				*e*				13 59 48.0		
CLL				pmax	pmax					
	comp=Z,88nm,2.7s									
CLL				pmax	pmax					
	comp=Z,96nm,1.9s									
CLL				MLR	MLR					
	comp=Z,2µm,19.1s									
CLL	**Collm**	106.82	323	*e*PP		**PP**		**13 53 37.6**	**+3.0**	
MOA	**Molln**	106.99	319	*i* PP		**PP**		**13 53 33.6**	**-2.4**	
	comp=Z,6.8nm,1.1s									
HOOD	**Mount Hood Mea**	107.06	43	IAMs_20	IAMs_20			14 33 45.3		
	comp=Z,3µm,19.0s									
KHC	**Kasperske Hory**	107.09	321	*e*SKS		**SKSac**		**13 59 45.3**	**-4.3**	
KHC				*e*SDIF		SKKSac		14 01 03.6	+23	
KHC				AMS	AMS			14 51 00.0		
	comp=Z,2µm,18.0s									
GERES	**GERESS Array B**	107.09	321	PKiKP		**PKiKP**		**13 53 17.7**	**-2.0**	
	comp=Z,1.3nm,0.5s,baz=72,slow=3.2,SNR=2.4									
TSUM	**Tsumeb**	107.09	249	IAMs_20	IAMs_20			14 31 50.6		
	comp=Z,3µm,22.0s									
BRLDA	**Berland Lookou**	107.17	34	IAMs_20	IAMs_20			14 29 16.2		
	comp=Z,3µm,22.0s									
LTY	**Liberty**	107.24	41	IAMs_20	IAMs_20			14 31 43.8		
	comp=Z,3µm,21.0s									
HOPS	**Hopland Field**	107.38	50	IAMs_20	IAMs_20			14 29 04.2		
	comp=Z,3µm,21.0s									
TANN	**Tannenbergstha**	107.41	322	*e*PP		**PP**		**13 53 40.5**	**+1.4**	
BIOA	**Bad Ischl, Aus**	107.44	319	*e*PP		**PP**		**13 53 37.1**	**-2.2**	
	comp=Z,6.4nm,0.7s									
NKC	**Novy Kostel**	107.47	322	AMS	AMS			14 51 00.0		
	comp=Z,3µm,20.2s									
I05D	**Terrebonne, OR**	107.51	44	IAMs_20	IAMs_20			14 32 55.2		
	comp=Z,2µm,19.0s									
WET	**Wettzell**	107.52	321	*e*PP		**PP**		**13 53 43.8**	**+3.9**	
PLN	**Plauen**	107.57	322	*e*PP		**PP**		**13 53 43.6**	**+3.4**	
GDXM	**Geysers**	107.62	50	IAMs_20	IAMs_20			14 31 20.7		
	comp=Z,2µm,20.0s									
MCCM	**Marconi Confer**	107.68	51	IAMs_20	IAMs_20			14 47 08.3		
	comp=Z,3µm,19.0s									
MYKA	**Terra Mystica**	107.72	318	*i* PP		**PP**		**13 53 37.5**	**-4.0**	
	comp=Z,13nm,1.2s									
ROTZ	**Rotzenmuhle**	107.76	322	*e*PP		**PP**		**13 53 44.6**	**+3.0**	
G06A	**Carlson Farm,**	107.78	43	IAMs_20	IAMs_20			14 33 26.2		
	comp=Z,2µm,19.0s									
KBA	**Koelnbreinsper**	107.80	319	*i* PP		**PP**		**13 53 39.4**	**-2.8**	
	comp=Z,11nm,1.2s									
MOX	**Moxa**	107.85	323	*e*PP		**PP**		**13 53 45.5**	**+3.3**	
MOX				*e*L		L		14 45 01.0		
	comp=Z,1µm,19.9s									
PINE	**Pine Mountain**	107.92	45	IAMs_20	IAMs_20			14 39 35.1		
	comp=Z,2µm,20.0s									
E07A	**Sunnyside**	107.96	42	IAMs_20	IAMs_20			14 32 38.0		
	comp=Z,3µm,21.0s									
NRDL	**Niedersach Rie**	108.14	325	*e*PP		**PP**		**13 53 46.8**	**+2.7**	
LESA	**Schwarzleotal**	108.14	319	*e*PKiKP		**PKiKP**		**13 53 21.9**	**+0.2**	
	comp=Z,12nm,1.4s									
K05A	**Summer Lake**	108.21	46	IAMs_20	IAMs_20			14 30 11.8		
	comp=Z,3µm,21.0s									
HAWA	**Hanford**	108.22	42	IAMs_20	IAMs_20			14 32 24.8		
	comp=Z,3µm,20.0s									
GRF	**Grafenberg Arr**	108.39	322	*e*L		L		14 48 38.7		
	comp=Z,2µm,21.6s									
ABTA	**Abfaltersbach**	108.44	319	*e*pPKiKP		**PKiKP**		**13 53 25.4**	**+3.1**	
	comp=Z,8.9nm,1.0s									
D08A	**Wollman Farm,**	108.44	41	IAMs_20	IAMs_20			14 32 29.6		
	comp=Z,3µm,21.0s									
E08A	**Dider Farm, El**	108.51	42	IAMs_20	IAMs_20			14 32 23.4		
	comp=Z,3µm,20.0s									
C09A	**Chrisman Ranch**	108.65	40	IAMs_20	IAMs_20			14 25 35.9		
	comp=Z,3µm,21.0s									
I07A	**Izee**	108.86	44	IAMs_20	IAMs_20			14 36 02.7		
	comp=Z,2µm,20.0s									
WTTA	**Wattenberg**	108.86	319	*e*PKiKP		**PKiKP**		**13 53 22.6**	**-0.6**	
	comp=Z,34nm,1.2s									
WATA	**Walderalm**	108.88	319	*i* pPKiKP		**PKiKP**		**13 53 24.9**	**+1.7**	
	comp=Z,23nm,1.3s									
G08A	**Pilot Rock**	108.91	43	IAMs_20	IAMs_20			14 34 22.0		
	comp=Z,2µm,20.0s									
SAO	**San Andreas Ge**	109.06	52	IAMs_20	IAMs_20			14 39 21.0		
	comp=Z,3µm,20.0s									
E09A	**Wood Farm, Sta**	109.11	41	IAMs_20	IAMs_20			14 32 50.2		
	comp=Z,3µm,20.0s									
SQTA	**Sankt Quirin**	109.16	319	*i* pPKiKP		**PKiKP**		**13 53 25.4**	**+1.8**	
	comp=Z,23nm,1.3s									
MOTA	**Moosalm**	109.19	320	*e*pPKiKP		**PKiKP**		**13 53 26.2**	**+2.4**	
	comp=Z,14nm,1.2s									
RETA	**Reutte**	109.36	320	*e*pPKiKP		**PKiKP**		**13 53 28.3**	**+4.3**	
	comp=Z,13nm,1.3s									
FETA	**Feichten**	109.53	319	*e*pPKiKP		**PKiKP**		**13 53 25.5**	**+1.1**	
	comp=Z,14nm,1.3s									
MPK	**Martis Peak**	109.63	49	IAMs_20	IAMs_20			14 29 54.6		
	comp=Z,3µm,22.0s									
CMB	**Columbia Colle**	109.63	51	IAMs_20	IAMs_20			14 36 49.9		
	comp=Z,2µm,20.0s									
SUMG	**Summit**	109.65	355	IAMs_20	IAMs_20			14 40 30.0		
	comp=Z,3µm,20.0s									
PMPB	**Monarch Peak**	109.68	53	IAMs_20	IAMs_20			14 34 05.4		
	comp=Z,3µm,20.0s									
EDM	**Edmonton**	109.73	34	IAMs_20	IAMs_20			14 31 09.0		
	comp=Z,3µm,21.0s									
F10A	**Beach Ranch, E**	109.88	42	IAMs_20	IAMs_20			14 33 14.6		
	comp=Z,3µm,20.0s									
DAVA	**Damuels**	110.00	320	*e*PKiKP		**PKiKP**		**13 53 25.5**	**+0.2**	
	comp=Z,26nm,1.3s									
PAHR	**Pah Rah Range**	110.02	49	IAMs_20	IAMs_20			14 31 05.0		
	comp=Z,3µm,22.0s									
BUG	**Bochum--Univer**	110.16	325	*e*PP		**PP**		**13 54 01.5**	**+2.6**	
WAKR	**Walker**	110.26	50	IAMs_20	IAMs_20			14 32 45.4		
	comp=Z,2µm,20.0s									
MDPB	**Devils Postpil**	110.73	51	IAMs_20	IAMs_20			14 33 57.0		
	comp=Z,2µm,20.0s									
PKM	**Mcpherson Peak**	110.73	54	P		**PKiKP**		**13 53 27.7**	**+0.6**	
	baz=282									
PLID	**Pearl Lake**	110.97	42	IAMs_20	IAMs_20			14 35 49.5		
	comp=Z,2µm,19.0s									
LHV	**Little Huntoon**	111.03	50	IAMs_20	IAMs_20			14 34 19.9		
	comp=Z,3µm,20.0s									
NVAR	**Mina Array Bea**	111.14	50	Pdiff		**Pdif**		**13 49 28.8**	**0.0**	
	comp=Z,1.3nm,0.9s,baz=285,slow=3.5,SNR=8.2									
NVAR				PKiKP		**PKiKP**		**13 53 26.2**	**-1.6**	
	comp=Z,4.6nm,1.0s,baz=242,slow=1.9,SNR=7.9									
NVAR				PKKPbc		**PKKPbc**		**14 04 21.9**	**-3.4**	
	comp=Z,0.3nm,0.7s,baz=248,slow=4.8,SNR=1.5									
NVAR				PKKPab		**PKKPab**		**14 04 32.0**	**-2.3**	
	comp=Z,1.0nm,0.9s,baz=113,slow=5.9,SNR=4.2									
BTNL	**Ternell**	111.15	324	*d*PP		**PP**		**13 54 10.3**	**+4.2**	
MEM	**Membach**	111.21	324	*d*PP		**PP**		**13 54 06.9**	**+0.4**	
NV11	**Mina Array Sit**	111.25	50	IAMs_20	IAMs_20			14 38 43.8		
	comp=Z,2µm,18.0s									
BMN	**Battle Mountai**	111.45	47	IAMs_20	IAMs_20			14 31 16.7		
	comp=Z,3µm,22.0s									
ARVC	**Arvin**	111.47	53	P		**PKiKP**		**13 53 28.4**	**+0.2**	
	baz=282									
BSTI	**Sart Tilman**	111.48	324	*d*PP		PP		13 54 21.6	+13	
WLF	**Walferdange**	111.49	323	*d*PP		**PP**		**13 54 08.5**	**-0.1**	
WLF	**Walferdange**	111.49	323	*e*PP		**PP**		**13 54 09.0**	**+0.5**	
ISA	**Isabella, Lake**	111.64	53	IAMs_20	IAMs_20			14 40 11.4		
	comp=Z,3µm,20.0s									
ISA	**Isabella, Lake**	111.64	53	P		**PKiKP**		**13 53 29.3**	**+0.7**	
	baz=283									
BCLA	**Clavier**	111.70	324	*d*PP		**PP**		**13 54 11.0**	**+1.0**	
CWC	**Cottonwood Cre**	111.78	52	P		**PKiKP**		**13 53 30.0**	**+1.0**	
	baz=283									
BGES	**Gesves**	111.84	324	*d*PP		**PP**		**13 54 17.0**	**+6.0**	
RCHB	**Rochefort**	111.85	324	*d*PP		**PP**		**13 54 15.7**	**+4.6**	
Q09A	**Carvers**	111.89	49	IAMs_20	IAMs_20			14 33 55.6		
	comp=Z,2µm,21.0s									
LCH	**La Change Ra**	111.93	51	IAMs_20	IAMs_20			14 49 24.9		
	comp=Z,2µm,19.0s									
BMRD	**Maredsous**	112.06	324	*d*PP		**PP**		**13 54 15.0**	**+2.5**	
CIS	**Catalina Islan**	112.17	55	P		**PKiKP**		**13 53 30.1**	**+0.5**	
	baz=282									
EDW2	**Edwards Air Fo**	112.20	53	P		**PKiKP**		**13 53 30.1**	**+0.3**	
	baz=283,SNR=9.1									
GRAC	**Grapevine Rang**	112.21	51	IAMs_20	IAMs_20			14 49 32.1		
	comp=Z,2µm,18.0s									
DOU	**Dourbes**	112.25	324	*d*PP		**PP**		**13 54 19.4**	**+5.5**	
MPMC	**Manual Prospec**	112.33	52	P		**PKiKP**		**13 53 31.1**	**+1.0**	
	baz=284,SNR=7.7									
HLID	**Hailey**	112.53	44	P		**PKiKP**		**13 53 31.2**	**+1.0**	
	baz=289									
BFSC	**Mount Baldy Ra**	112.61	54	P		**PKiKP**		**13 53 31.5**	**+0.9**	
	baz=283									
FURC	**Furnace Creek,**	112.73	52	P		**PKiKP**		**13 53 31.8**	**+1.3**	
	baz=284									
BNI	**Bardonecchia**	112.84	318	IAMs_20	IAMs_20			14 46 56.2		
	comp=Z,2µm,21.0s									
QSM	**Queen of Sheba**	112.84	52	IAMs_20	IAMs_20			14 37 02.1		
	comp=Z,3µm,21.0s									
GSC	**Goldstone, Bar**	113.05	53	P		**PKiKP**		**13 53 32.0**	**+0.6**	
	baz=284,SNR=7.4									
MURC	**Murrieta**	113.12	55	P		**PKiKP**		**13 53 32.3**	**+0.8**	
	baz=283									
BBRC	**Big Bear Solar**	113.20	54	P		**PKiKP**		**13 53 32.3**	**+0.4**	
	baz=283									
R11B	**Troy Canyon, C**	113.23	49	IAMs_20	IAMs_20			14 36 54.9		
	comp=Z,2µm,20.0s									
R11B	**Troy Canyon, C**	113.23	49	P		**PKiKP**		**13 53 32.6**	**+0.8**	
	baz=286,SNR=10									
S11A	**Rachel**	113.29	50	IAMs_20	IAMs_20			14 34 58.8		
	comp=Z,3µm,22.0s									
SHOC	**Shoshone, Teco**	113.33	52	P		**PKiKP**		**13 53 32.8**	**+1.0**	
	baz=284									
109C	**Camp Elliot, M**	113.35	55	P		**PKiKP**		**13 53 32.4**	**+0.5**	
	baz=282									
HEC	**Hector,Ludlow**	113.54	53	P		**PKiKP**		**13 53 32.6**	**+0.3**	
	baz=284									
KEST	**Kesra**	113.67	308	PP	PP			**13 54 24.6**	**-0.1**	
	comp=Z,12nm,0.8s,baz=51,slow=2.9,SNR=4.3									
BOZ	**Bozeman (W)**	113.69	41	P		**PKiKP**		**13 53 33.4**	**+1.0**	
	baz=292									
TUQ	**Turquoise Moun**	113.72	52	P		**PKiKP**		**13 53 33.5**	**+0.8**	
	baz=284									
PFO	**Pinyon Flats O**	113.72	54	P		**PKiKP**		**13 53 34.0**	**+1.2**	
	baz=283,SNR=8.5									
TPFO	**Pinon Flats**	113.73	54	P		**PKiKP**		**13 53 33.5**	**+0.8**	
	baz=283,SNR=10									
EKA	**Eskdalemuir Ar**	113.89	331	PKiKP		**PKiKP**		**13 53 32.3**	**+0.1**	
	comp=Z,2.9nm,0.8s,baz=41,slow=4.9,SNR=4.5									
EKA				PP		**PP**		**13 54 24.5**	**-0.9**	
	comp=Z,3.9nm,0.8s,baz=57,slow=7.9,SNR=5.2									
MONP2	**Monument Peak**	113.91	55	P		**PKiKP**		**13 53 33.6**	**+0.3**	
	baz=283,SNR=6.2									
EGMT	**Egleton**	113.93	38	IAMs_20	IAMs_20			14 37 57.3		
	comp=Z,3µm,19.0s									
EGMT	**Eagleton**	113.93	38	P		**PKiKP**		**13 53 33.1**	**+0.4**	
	baz=294									
CCX	**Cicese**	113.94	56	IAMs_20	IAMs_20			14 34 39.4		
	comp=Z,2µm,19.0s									
BELC	**Belle Mtn. Jos**	114.00	54	P		**PKiKP**		**13 53 34.0**	**+0.7**	
	baz=284,SNR=13									
GMRC	**Granite Mounta**	114.09	53	P		**PKiKP**		**13 53 34.3**	**+0.9**	
	baz=283,SNR=10									
IKP	**In-Ko-Pah, Jac**	114.22	55	P		**PKiKP**		**13 53 34.5**	**+0.8**	
	baz=283,SNR=8.4									
SWSC	**Sam W. Stewart**	114.41	55	P		**PKiKP**		**13 53 35.2**	**+1.3**	
	baz=283									
V12A	**Nelson**	114.49	52	IAMs_20	IAMs_20			14 37 35.7		
	comp=Z,3µm,20.0s									
CLF	**Chambon-Foret**	114.50	323	IAMs_20	IAMs_20			14 51 49.9		
	comp=Z,3µm,21.0s									
BC3	**Big Chuckawall**	114.53	54	P		**PKiKP**		**13 53 35.3**	**+1.0**	
	baz=284,SNR=10									
YNM	**Yellowstone No**	114.63	41	IAMs_20	IAMs_20			14 35 43.2		
	comp=Z,2µm,22.0s									
SPUT	**South Promonto**	114.64	45	IAMs_20	IAMs_20			14 34 10.0		
	comp=Z,2µm,21.0s									
YNR	**Norris Junctio**	114.65	41	IAMs_20	IAMs_20			14 35 55.7		
	comp=Z,3µm,22.0s									
IRM	**Iron Mountain**	114.65	54	P		**PKiKP**		**13 53 35.9**	**+1.5**	
	baz=284,SNR=7.1									
DUG	**Dugway, Tooele**	114.74	47	IAMs_20	IAMs_20			14 40 01.7		
	comp=Z,3µm,19.0s									
DUG	**Dugway, Tooele**	114.74	47	P		PKPdf		13 53 35.3	+0.8	
	baz=289,SNR=14									
VTX	**Valle De La Tr**	114.77	57	IAMs_20	IAMs_20			14 31 11.5		
	comp=Z,2µm,21.0s									
H17A	**Grant Village**	114.84	42	P		PKPdf		13 53 35.6	+0.9	
	baz=292									
NEE2	**Needles Airpor**	114.92	53	P		**PKiKP**		**13 53 35.8**	**+1.0**	
	baz=285									
CPBX	**Cerro Prieto**	114.94	55	IAMs_20	IAMs_20			14 35 09.8		
	comp=Z,3µm,20.0s									
MOOW	**Moose Ponds**	114.97	42	IAMs_20	IAMs_20			14 35 38.3		
	comp=Z,3µm,22.0s									
YMP	**Mirror Lake Pl**	114.98	41	IAMs_20	IAMs_20			14 35 04.6		
	comp=Z,2µm,22.0s									
LOHW	**Long Hollow**	115.11	42	IAMs_20	IAMs_20			14 35 43.1		
	comp=Z,3µm,22.0s									
CCUT	**Cedar City**	115.14	50	IAMs_20	IAMs_20			14 41 14.5		
	comp=Z,2µm,19.0s									
HWUT	**Hardware Ranch**	115.17	45	IAMs_20	IAMs_20			14 34 05.8		
	comp=Z,2µm,22.0s									
GLA	**Glamis**	115.18	55	P		**PKiKP**		**13 53 36.4**	**+1.0**	
	baz=284									
SZCU	**Shurtz Canyon**	115.33	49	IAMs_20	IAMs_20			14 41 20.7		
	comp=Z,2µm,19.0s									
CTU	**Camp Tracy**	115.34	46	IAMs_20	IAMs_20			14 34 48.6		
	comp=Z,2µm,21.0s									
NLU	**North Lily Min**	115.35	47	IAMs_20	IAMs_20			14 33 32.0		
	comp=Z,3µm,22.0s									
RLMT	**Red Lodge**	115.41	41	IAMs_20	IAMs_20			14 33 16.9		
	comp=Z,2µm,22.0s									
RLMT	**Red Lodge**	115.41	41	P		**PKPdf

ESDC PP **PP** **13 55 22.6 -1.1**
comp=Z,5.7nm,1.0s,baz=57,slow=4.9,SNR=3.7
ESDC PKKPbc **PKKPab** **14 03 45.6 +0.1**
comp=Z,4.2nm,1.1s,baz=256,slow=3.6,SNR=7.4
SUSD Miller 122.22 37 IAMs_20 IAMs_20 14 42 48.6
comp=Z,2µm,21.0s
SUSD Miller 122.22 37 P **PKPdf** **13 53 48.3 -0.3**
baz=302
KSCO Kaye Shedlock' 122.47 44 IAMs_20 IAMs_20 14 43 02.0
comp=Z,2µm,20.0s
KSCO Kaye Shedlock' 122.47 44 P **PKPdf** **13 53 49.2 -0.3**
baz=296,SNR=5.9
K30B Basset 122.73 39 IAMs_20 IAMs_20 14 46 51.5
comp=Z,2µm,20.0s
B35A Bob, Littlefor 122.85 31 IAMs_20 IAMs_20 14 54 23.6
comp=Z,1µm,19.0s
MNTX Cornudas Mount 123.22 54 P **PKPdf** **13 53 50.9 -0.1**
baz=290,SNR=69
MVO Moncorvo 123.56 319 *e*PKP **PKiKP** **13 53 54.8 +3.2**
MVO Moncorvo 123.56 319 *e*SS SS 14 12 29.0 +10
MVO Moncorvo 123.56 319 *e*LQ LQ 14 43 45.6
MVO *e*LR LR 14 49 15.8
comp=Z,2µm,20.0s
POLO Lamas de Olo 123.95 320 *e*PKP **PKiKP** **13 53 53.4 +1.0**
ECSD EROS Data Cent 124.02 37 IAMs_20 IAMs_20 14 41 01.1
comp=Z,2µm,22.0s
EYMN Ely 124.25 30 IAMs_20 IAMs_20 14 53 55.7
comp=Z,2µm,19.0s
EYMN Ely 124.25 30 P **PKPdf** **13 53 52.3 -0.2**
baz=312
MTE Manteigas 124.28 319 *e*PKP **PKiKP** **13 53 57.2 +4.1**
MTE Manteigas 124.28 319 *e*SS SS 14 12 37.6 +9.3
MTE Manteigas 124.28 319 *e*LQ LQ 14 40 14.7
MTE *e*LR LR 14 47 18.0
comp=Z,2µm,20.0s
BGNE Belgrade 124.32 40 IAMs_20 IAMs_20 14 39 21.6
comp=Z,2µm,22.0s
BGNE Belgrade 124.32 40 P **PKPdf** **13 53 52.2 -0.6**
baz=302,SNR=16
MSTX Muleshoe 124.45 50 P **PKPdf** **13 53 53.0 -0.4**
baz=293
PCBR Castelo Branco 124.51 318 *e*PKP **PKiKP** **13 53 57.0 +3.6**
F36A Milaca 124.53 33 IAMs_20 IAMs_20 14 42 05.3
comp=Z,2µm,22.0s
CBKS Cedar Bluff 124.56 43 IAMs_20 IAMs_20 14 40 24.3
comp=Z,2µm,21.0s
CBKS Cedar Bluff 124.56 43 P **PKiKP** **13 53 53.6 -0.1**
baz=298
PMRV Marv??o 124.66 317 *e*PKP **PKPdf** **13 53 52.5 -1.0**
PMRV Marv??o 124.66 317 *e*SS SS 14 12 41.5 +8.4
PMRV Marv??o 124.66 317 *e*LR LR 14 49 41.5
comp=Z,1µm,22.0s
TORD Torodi Ar. Bea 124.70 284 PKP **PKPdf** **13 53 54.3 +0.1**
comp=Z,15nn,0.9s,baz=44,slow=3.4,SNR=37
TORD PKKPbc **PKKPab** **14 03 35.1 -0.2**
comp=Z,15nn,1.2s,baz=319,slow=2.7,SNR=17
AMTX Amarillo 124.91 49 IAMs_20 IAMs_20 14 49 30.1
comp=Z,2µm,18.0s
AMTX Amarillo 124.91 49 P **PKPdf** **13 53 54.0 -0.1**
baz=294
COI Coimbra 124.95 319 IAMs_20 IAMs_20 14 56 21.6
comp=Z,2µm,20.0s
PBAR Barrancos 125.02 316 *e*PKP **PKiKP** **13 53 55.8 +1.3**
PESTR Estremoz 125.06 317 *e*PKP **PKiKP** **13 53 56.3 +1.7**
E38A The Farm, Brul 125.11 31 IAMs_20 IAMs_20 14 46 09.4
comp=Z,2µm,20.0s
N33A J Bar K, Exete 125.12 40 IAMs_20 IAMs_20 14 45 19.8
comp=Z,2µm,21.0s
L34A Svendsen Farm, 125.14 39 IAMs_20 IAMs_20 14 38 20.2
comp=Z,2µm,22.0s
SPMN Marine on St. 125.32 33 IAMs_20 IAMs_20 14 42 07.3
comp=Z,2µm,22.0s
SPMN Marine on St. 125.32 33 P **PKiKP** **13 53 54.9 0.0**
baz=309,SNR=12
TXAR Lajitas Array 125.40 56 PKP **PKiKP** **13 53 55.6 -0.1**
comp=Z,8.1nm,0.9s,baz=264,slow=1.3,SNR=34
R32A Long Quarter, 125.45 43 IAMs_20 IAMs_20 14 40 51.9
comp=Z,2µm,20.0s
MDT Midelt 125.53 309 PKP **PKiKP** **13 53 56.0 +0.1**
comp=Z,18nm,1.1s,baz=11,slow=3.8,SNR=9.9
PBEJ Beja 125.66 316 *e*PKP **PKiKP** **13 53 58.8 +3.0**
I37A Lemond, Waseca 125.73 35 IAMs_20 IAMs_20 14 43 29.4
comp=Z,3µm,22.0s
PVAQ Vaqueiros 125.86 315 *e*PKP **PKiKP** **13 53 58.5 +2.3**
PVAQ Vaqueiros 125.86 315 *e*SS SS 14 12 53.3 +5.0
PVAQ Vaqueiros 125.86 315 *e*LQ LQ 14 36 00.0
PVAQ Vaqueiros 125.86 315 *e*LR LR 14 50 18.5
comp=Z,2µm,18.0s
MESJ Messejana 126.00 316 *e*PKP **PKiKP** **13 53 59.1 +2.6**
ELIS Ellis County 126.06 46 IAMs_20 IAMs_20 14 43 11.4
comp=Z,2µm,18.0s
PNCL Nicolau / Gran 126.08 317 *e*PKP **PKiKP** **13 54 00.2 +3.6**
N35A Tabor 126.21 39 IAMs_20 IAMs_20 14 45 59.6
comp=Z,2µm,21.0s
U32A Winter Ranch, 126.22 46 IAMs_20 IAMs_20 14 44 29.4
comp=Z,2µm,20.0s
OK035 E0210 Rd and N 126.27 45 IAMs_20 IAMs_20 14 46 51.8
comp=Z,2µm,20.0s
OK038 West end 0370 126.36 46 IAMs_20 IAMs_20 14 56 43.1
comp=Z,1µm,18.0s
KSU1 Kansas State U 126.53 42 IAMs_20 IAMs_20 14 51 01.2
comp=Z,2µm,20.0s
KSU1 Kansas State U 126.53 42 P **PKPdf** **13 53 56.9 -0.2**
baz=302,SNR=12
MORF Marmelete 126.56 316 *e*PKP **PKiKP** **13 54 00.9 +3.3**
COWI Conover 126.69 31 IAMs_20 IAMs_20 14 43 25.2
comp=Z,2µm,20.0s
G40A Rib Lake 126.70 32 IAMs_20 IAMs_20 14 46 25.6
comp=Z,2µm,20.0s
CROK Carrier 126.88 45 IAMs_20 IAMs_20 14 47 30.0
comp=Z,2µm,20.0s
SCHQ Schefferville 126.92 10 PKP **PKiKP** **13 53 57.7 -0.1**
comp=Z,37nm,1.1s,baz=16,slow=2.8,SNR=20
K38A Parkersburg 126.93 36 IAMs_20 IAMs_20 14 45 37.2
comp=Z,2µm,20.0s
SCIA State Center 127.11 37 P **PKPdf** **13 53 57.7 -0.3**
baz=307
WMOK Wichita Mounta 127.12 47 IAMs_20 IAMs_20 14 44 21.6
comp=Z,2µm,21.0s
WMOK Wichita Mounta 127.12 47 P **PKPdf** **13 53 58.4 0.0**
baz=297,SNR=24
ABTX Abilene, Hawle 127.39 50 IAMs_20 IAMs_20 14 49 20.9
comp=Z,2µm,19.0s
ABTX Abilene, Hawle 127.39 50 P **PKiKP** **13 53 59.2 -0.2**
baz=295,SNR=12
F42A Maple Grove Fa 127.43 30 IAMs_20 IAMs_20 14 56 18.8
comp=Z,2µm,19.0s
E43A Lone Tree Farm 127.56 29 IAMs_20 IAMs_20 14 44 33.0
comp=Z,2µm,22.0s
OK029 Liberty Lake 127.60 46 IAMs_20 IAMs_20 14 44 59.9
comp=Z,2µm,20.0s
OK048 Pawnee Station 127.66 45 IAMs_20 IAMs_20 14 49 00.5
comp=Z,2µm,19.0s
T35A Sooner Cattle 127.71 44 IAMs_20 IAMs_20 14 41 39.8
comp=Z,3µm,22.0s
N38A Joes South For 127.75 38 IAMs_20 IAMs_20 14 47 18.2
comp=Z,2µm,20.0s
OK033 Mehan 127.84 45 IAMs_20 IAMs_20 14 47 49.4
comp=Z,2µm,18.0s
OK052 Battle Ridge R 127.96 45 IAMs_20 IAMs_20 14 47 52.6
comp=Z,2µm,20.0s
JCT Junction City 128.12 53 P **PKPdf** **13 54 00.5 +0.1**
baz=293,SNR=23
L40A Anamosa 128.19 36 IAMs_20 IAMs_20 14 43 23.6
comp=Z,2µm,22.0s
JFWS Jewell Farm 128.21 34 IAMs_20 IAMs_20 14 46 24.9
comp=Z,2µm,19.0s
JFWS Jewell Farm 128.21 34 P **PKPdf** **13 53 59.6 -0.6**
baz=310,SNR=17
P38A Dawn 128.24 39 IAMs_20 IAMs_20 14 53 29.3
comp=Z,2µm,20.0s
ZAIG Zacatecas 128.29 63 IAMs_20 IAMs_20 14 42 19.1
comp=Z,2µm,20.0s
I42A Draeger Farm, 128.30 32 IAMs_20 IAMs_20 14 43 43.1
comp=Z,2µm,22.0s
FW03 Perrin-Whitt E 128.41 49 IAMs_20 IAMs_20 14 43 11.9
comp=Z,2µm,20.0s
H43A Windswept, Lux 128.51 31 IAMs_20 IAMs_20 14 48 02.5
comp=Z,2µm,20.0s
TUL3 Leonard 128.72 45 P **PKPdf** **13 54 01.6 +0.3**
baz=300,SNR=8.3
RLO Rose Lookout 129.13 44 IAMs_20 IAMs_20 14 42 23.1
comp=Z,4µm,22.0s
G45A Suttons Bay 129.17 29 IAMs_20 IAMs_20 14 50 43.7
comp=Z,2µm,22.0s
P40A Paris 129.23 39 IAMs_20 IAMs_20 14 47 25.4
comp=Z,2µm,20.0s

N41A Harden Midland 129.25 37 IAMs_20 IAMs_20 14 53 04.7
comp=Z,2µm,20.0s
833A Chaparral WMA, 129.26 55 P **PKiKP** **13 54 03.1 -0.1**
baz=292
WHTX Lake Whitney, 129.33 50 IAMs_20 IAMs_20 14 45 38.3
comp=Z,2µm,20.0s
WHTX Lake Whitney, 129.33 50 P **PKPdf** **13 54 02.9 +0.3**
baz=296,SNR=16
K43A Burlington 129.41 33 IAMs_20 IAMs_20 14 47 31.5
comp=Z,2µm,20.0s
S39A Bolivar 129.46 41 IAMs_20 IAMs_20 14 49 46.8
comp=Z,2µm,20.0s
I45A Fountain 129.60 31 IAMs_20 IAMs_20 14 56 49.3
comp=Z,2µm,19.0s
435B Jarrell 129.75 51 P **PKPdf** **13 54 03.7 +0.3**
baz=295
GLMI Grayling 129.83 29 IAMs_20 IAMs_20 14 51 23.2
comp=Z,2µm,21.0s
GLMI Grayling 129.83 29 P **PKPdf** **13 54 03.4 +0.2**
baz=318
AY01 Puyuhuapi 129.94 162 IAMs_20 IAMs_20 14 48 48.8
comp=Z,2µm,21.0s
L44A Lake County Fo 130.00 33 IAMs_20 IAMs_20 14 47 50.0
comp=Z,2µm,20.0s
L44A Lake County Fo 130.00 33 P **PKPdf** **13 54 03.4 -0.2**
baz=312
VLDQ Val d'Or 130.24 21 IAMs_20 IAMs_20 14 48 55.7
comp=Z,2µm,21.0s
HDIL Hopedale 130.27 36 IAMs_20 IAMs_20 14 43 53.6
comp=Z,2µm,21.0s
HDIL Hopedale 130.27 36 P **PKPdf** **13 54 03.9 -0.2**
baz=310,SNR=8.0
MGMO Mountain Grove 130.46 41 IAMs_20 IAMs_20 14 53 31.2
comp=Z,2µm,20.0s
CCM Cathedral Cave 130.61 40 **PKPdf** **13 54 04.7 -0.1**
CCM Cathedral Cave 130.61 40 IAMs_20 IAMs_20 14 55 54.9
comp=Z,2µm,20.0s
CCM Cathedral Cave 130.61 40 P **PKPdf** **13 54 04.9 +0.1**
baz=306
CCM Cathedral Cave 130.61 40 PKIKP **PKPdf** **13 54 04.7 -0.1**
P43A Skaggs, Pawnee 130.71 37 IAMs_20 IAMs_20 14 42 43.4
comp=Z,2µm,22.0s
J47A Sunmer 130.89 30 IAMs_20 IAMs_20 14 48 58.3
comp=Z,2µm,21.0s
MIAR Mount Ida 130.97 45 P **PKPdf** **13 54 05.7 +0.1**
baz=305,SNR=21
L46A Eue Claire 130.99 33 IAMs_20 IAMs_20 14 45 33.2
comp=Z,2µm,21.0s
O44A Mansfield 131.01 36 IAMs_20 IAMs_20 14 46 19.2
comp=Z,2µm,21.0s
FCAR Ozark Folk Cen 131.26 43 IAMs_20 IAMs_20 14 45 35.5
comp=Z,3µm,22.0s
LL02 Futaleuf 131.30 162 IAMs_20 IAMs_20 14 47 43.8
comp=Z,2µm,22.0s
I49A Point Hope 131.35 28 IAMs_20 IAMs_20 14 52 57.3
comp=Z,2µm,20.0s
WHAR Wooly Hollow 131.47 43 IAMs_20 IAMs_20 14 45 10.3
comp=Z,3µm,22.0s
Q44A Meyer Farm, Va 131.48 37 IAMs_20 IAMs_20 14 54 04.8
comp=Z,2µm,20.0s
KIC Kosan Boka 131.50 276⇑ *e*P **PKiKP** **13 54 08.7 +0.5**
comp=Z,28nn,0.8s
NATX Nacogdoches 131.55 49 P **PKPdf** **13 54 07.2 +0.4**
baz=308
DBIC Dimbokro 131.60 276 **PKPdf** **13 54 06.0 -1.4**
DBIC Dimbokro 131.60 276 PKIKP **PKPdf** **13 54 06.0 -1.4**
DBIC Dimbokro 131.60 276 PKP **PKPdf** **13 54 07.5 +0.1**
comp=Z,12nn,0.9s,baz=154,slow=2.4,SNR=9.2
DBIC SKPbc **SKPab** **13 57 34.8 +2.2**
comp=Z,12nn,1.0s,baz=130,slow=20,SNR=9.1
SFIN Lafayette 131.66 35 IAMs_20 IAMs_20 14 45 53.1
comp=Z,3µm,22.0s
SFIN Lafayette 131.66 35 P **PKiKP** **13 54 07.3 -0.4**
baz=312
TIC Toumodi 131.77 276⇑ *e*P **PKiKP** **13 54 11.0 +2.3**
comp=Z,29nn,1.0s
LIC Lamto 131.79 276⇑ *e*P **PKiKP** **13 54 08.5 -0.2**
comp=Z,37nn,0.9s
LCAR Lake Charles 131.81 42 **PKPdf** **13 54 06.2 -0.9**
PBMO Poplar Bluff 131.88 41 **PKPdf** **13 54 06.3 -0.9**
L48A N Adams 132.02 31 IAMs_20 IAMs_20 14 51 42.4
comp=Z,2µm,20.0s
CGM3 Cape Girardeau 132.07 40 IAMs_20 IAMs_20 14 51 26.6
comp=Z,2µm,20.0s
S44A Carbondale 132.08 39 IAMs_20 IAMs_20 14 47 30.9
comp=Z,2µm,20.0s
SIUC Southern Illin 132.09 39 IAMs_20 IAMs_20 14 47 09.2
comp=Z,2µm,22.0s
P46A Rosedale 132.10 36 IAMs_20 IAMs_20 14 55 33.9
comp=Z,2µm,20.0s
N47A Urbana 132.10 33 IAMs_20 IAMs_20 14 49 33.6
comp=Z,2µm,20.0s
OLIL Olney 132.14 37 IAMs_20 IAMs_20 14 54 53.3
comp=Z,2µm,19.0s
AAM Ann Arbor 132.16 30 IAMs_20 IAMs_20 14 49 24.9
comp=Z,2µm,21.0s
AAM Ann Arbor 132.16 30 P **PKPdf** **13 54 07.7 +0.1**
baz=317
K50A Casco 132.32 29 IAMs_20 IAMs_20 14 52 17.1
comp=Z,2µm,20.0s
SADO Sadowa 132.35 25 IAMs_20 IAMs_20 14 45 56.4
comp=Z,2µm,22.0s
LDAQ Lac Daran 132.36 16 IAMs_20 IAMs_20 14 58 49.0
comp=Z,2µm,20.0s
HBAR Harrisburg 132.44 42 IAMs_20 IAMs_20 14 48 56.6
comp=Z,2µm,20.0s
PVMO Portageville 132.57 41 IAMs_20 IAMs_20 14 56 15.9
comp=Z,2µm,20.0s
GNAR Gosnell 132.62 41 IAMs_20 IAMs_20 14 51 52.5
comp=Z,2µm,20.0s
PEBM Pemiscott Bayo 132.64 41 IAMs_20 IAMs_20 15 00 37.9
comp=Z,2µm,19.0s
BLO Bloomington 132.79 36 IAMs_20 IAMs_20 14 54 50.2
comp=Z,2µm,18.0s
HICK Hickman 132.80 40 IAMs_20 IAMs_20 14 54 23.9
comp=Z,2µm,21.0s
O48B Farmland 132.82 33 **PKPdf** **13 54 08.3 -0.7**
O48B Farmland 132.82 33 P **PKPdf** **13 54 09.0 +0.1**
baz=314
T45A Paducah 132.88 39 IAMs_20 IAMs_20 14 55 02.0
comp=Z,2µm,21.0s
TRQ Mont Tremblant 132.88 20 IAMs_20 IAMs_20 14 52 57.2
comp=Z,2µm,21.0s
N49A Columbus Grove 132.88 32 IAMs_20 IAMs_20 15 03 03.3
comp=Z,2µm,18.0s
LNXT Lenox 132.89 41 IAMs_20 IAMs_20 15 00 55.5
comp=Z,2µm,18.0s
USIN University of 132.90 38 IAMs_20 IAMs_20 14 52 46.2
comp=Z,2µm,19.0s
GLAT Glass 132.92 40 IAMs_20 IAMs_20 14 57 43.3
comp=Z,1µm,19.0s
LL03 Petrohue 132.97 160 IAMs_20 IAMs_20 15 00 19.0
comp=Z,2µm,20.0s
LMQ La Malbaie 133.00 16 IAMs_20 IAMs_20 14 54 03.7
comp=Z,2µm,20.0s
HALT Halls 133.10 41 IAMs_20 IAMs_20 14 52 19.1
comp=Z,2µm,19.0s
M50A Fremont 133.13 31 IAMs_20 IAMs_20 14 57 17.6
comp=Z,2µm,20.0s
441A DeRidder 133.14 49 IAMs_20 IAMs_20 14 53 18.2
comp=Z,2µm,19.0s
UTMT University of 133.15 40 IAMs_20 IAMs_20 14 56 08.2
comp=Z,1µm,20.0s
MET Memphis--Engin 133.17 42 IAMs_20 IAMs_20 14 48 29.0
comp=Z,2µm,22.0s
DELO Deloro Mine 133.18 24 IAMs_20 IAMs_20 14 48 21.3
comp=Z,2µm,21.0s
P48A Milroy 133.22 34 IAMs_20 IAMs_20 14 45 28.5
comp=Z,2µm,22.0s
DRLN Deer Lake 133.52 4 IAMs_20 IAMs_20 14 51 33.1
comp=Z,2µm,22.0s
WCI Wyandotte Cave 133.55 36 IAMs_20 IAMs_20 14 57 17.4
comp=Z,2µm,19.0s
WCI Wyandotte Cave 133.55 36 P **PKPdf** **13 54 10.5 +0.1**
baz=311
P49A Miami Univ. Ec 133.57 34 IAMs_20 IAMs_20 14 50 16.7
comp=Z,2µm,20.0s
P49A Miami Univ. Ec 133.57 34 P **PKPdf** **13 54 10.4 0.0**
baz=314
WBO Williamsburg 133.68 22 IAMs_20 IAMs_20 14 50 53.2
comp=Z,2µm,22.0s
N51A Ashland 133.83 31 IAMs_20 IAMs_20 14 47 13.1
comp=Z,2µm,21.0s
MNTQ Montreal, Queb 133.83 20 IAMs_20 IAMs_20 14 54 14.1
comp=Z,2µm,21.0s
T47A Sharon Grove 133.86 38 IAMs_20 IAMs_20 14 48 43.9
comp=Z,2µm,21.0s
OXF Oxford 133.87 42 P **PKPdf** **13 54 11.0 -0.1**

baz=305
PLCA Paso Flores 133.94 162 PKP **PKPdf** **13 54 11.4 +0.2**
comp=Z,6.9nm,0.8s,baz=206,slow=3.7,SNR=15
PLCA SKPbc **SKPab** **13 57 41.8 -0.2**
comp=Z,2.5nm,0.9s,baz=249,slow=6.9,SNR=2.8
PLCA Paso Flores 133.94 162 *e*P **PKiKP** **13 54 12.1 -0.3**
WVT Waverly 133.94 40 IAMs_20 IAMs_20 14 52 51.2
comp=Z,2µm,20.0s
WVT Waverly 133.94 40 P **PKPdf** **13 54 10.9 -0.3**
baz=308
ACSO Alum Creek Sta 134.01 32 IAMs_20 IAMs_20 14 55 00.2
comp=Z,2µm,20.0s
ACSO Alum Creek Sta 134.01 32 P **PKPdf** **13 54 11.1 -0.1**
baz=317
ERPA Erie 134.08 28 P **PKPdf** **13 54 11.1 -0.2**
baz=321
LONY Lake Ozonia 134.26 21 IAMs_20 IAMs_20 14 54 36.6
comp=Z,2µm,21.0s
LONY Lake Ozonia 134.26 21 P **PKPdf** **13 54 11.4 -0.1**
baz=330
M53A WI Miller and 134.28 29 IAMs_20 IAMs_20 14 53 07.9
comp=Z,2µm,20.0s
M53A WI Miller and 134.28 29 P **PKPdf** **13 54 11.1 -0.5**
baz=320,SNR=6.4
LR03 Panguipulli 134.33 159 IAMs_20 IAMs_20 14 58 15.1
comp=Z,2µm,20.0s
VBMS Vicksburg 134.37 46 P **PKPdf** **13 54 12.0 -0.1**
baz=302
FRNY Flat Rock 134.42 20 IAMs_20 IAMs_20 14 52 47.8
comp=Z,2µm,22.0s
PLAL Pickwick Lake 134.48 41 IAMs_20 IAMs_20 14 54 36.7
comp=Z,2µm,19.0s
P51A Williamsport 134.51 33 IAMs_20 IAMs_20 14 50 30.5
comp=Z,2µm,20.0s
R50A Paris 134.65 35 IAMs_20 IAMs_20 14 50 10.5
comp=Z,2µm,20.0s
N53A Lisbon 134.68 30 IAMs_20 IAMs_20 14 51 44.6
comp=Z,2µm,21.0s
O52A Adamsville 134.70 31 IAMs_20 IAMs_20 14 52 34.1
comp=Z,2µm,21.0s
V48A Smith Brothers 134.82 39 IAMs_20 IAMs_20 14 53 26.5
comp=Z,2µm,20.0s
P52A Corning 134.90 32 IAMs_20 IAMs_20 14 56 26.5
comp=Z,2µm,21.0s
P52A Corning 134.90 32 P **PKPdf** **13 54 12.7 -0.1**
baz=317,SNR=5.3
CLTN Cedars of Leba 134.91 39 IAMs_20 IAMs_20 14 49 02.7
comp=Z,2µm,22.0s
O53A New Philadelph 134.91 30 IAMs_20 IAMs_20 14 55 35.9
comp=Z,2µm,20.0s
O53A New Philadelph 134.91 30 P **PKPdf** **13 54 12.8 -0.1**
baz=319,SNR=8.7
F63A Nahmakanta, Br 135.03 16 IAMs_20 IAMs_20 14 51 51.4
comp=Z,2µm,22.0s
K57A Scipio Center 135.11 24 IAMs_20 IAMs_20 14 56 25.3
comp=Z,2µm,20.0s
VT1 Waterbury 135.15 20 IAMs_20 IAMs_20 15 00 51.3
comp=Z,2µm,19.0s
M55A Ridgway 135.16 27 IAMs_20 IAMs_20 14 58 16.9
comp=Z,2µm,20.0s
T50A Nancy 135.21 36 IAMs_20 IAMs_20 14 47 32.5
comp=Z,2µm,22.0s
J59A Piesco 135.28 22 IAMs_20 IAMs_20 14 51 38.7
comp=Z,2µm,22.0s
PKME Peaks-Kenny Pk 135.38 16 P **PKPdf** **13 54 13.6 0.0**
baz=337
O54A Avella 135.38 30 IAMs_20 IAMs_20 14 52 05.2
comp=Z,2µm,21.0s
P53A Whipple 135.39 31 IAMs_20 IAMs_20 14 52 44.6
comp=Z,2µm,20.0s
H62A Milan 135.46 18 IAMs_20 IAMs_20 14 50 26.0
comp=Z,2µm,22.0s
X48A Hartselle 135.48 41 IAMs_20 IAMs_20 14 58 18.0
comp=Z,2µm,19.0s
LBNH Lisbon 135.51 19 IAMs_20 IAMs_20 14 54 54.4
comp=Z,2µm,21.0s
LBNH Lisbon 135.51 19 P **PKPdf** **13 54 14.1 +0.3**
baz=333
S51A Beattyville 135.52 35 IAMs_20 IAMs_20 15 00 18.3
comp=Z,1µm,20.0s
Z47A Carrollton 135.54 43 IAMs_20 IAMs_20 14 50 40.9
comp=Z,2µm,20.0s
SWET Sewanee 135.72 39 IAMs_20 IAMs_20 14 56 45.2
comp=Z,2µm,20.0s
BINY Binghamton 135.77 24 IAMs_20 IAMs_20 14 58 00.8
comp=Z,2µm,20.0s
BINY Binghamton 135.77 24 P **PKPdf** **13 54 14.7 +0.2**
baz=326
HNH Hanover 135.86 20 IAMs_20 IAMs_20 15 00 33.9
comp=Z,2µm,20.0s
WVL Waterville 135.91 17 IAMs_20 IAMs_20 14 54 29.0
comp=Z,2µm,20.0s
M57A Sunshine Farm, 135.99 26 IAMs_20 IAMs_20 14 49 54.9
comp=Z,2µm,22.0s
I62A Tamworth 136.03 19 IAMs_20 IAMs_20 14 52 43.1
comp=Z,2µm,22.0s
MCWV Mont Chateau 136.05 30 IAMs_20 IAMs_20 15 02 21.8
comp=Z,2µm,20.0s
MCWV Mont Chateau 136.05 30 P **PKPdf** **13 54 15.2 +0.2**
baz=328
Q54A Coxs Mills 136.06 31 IAMs_20 IAMs_20 14 53 15.1
comp=Z,2µm,21.0s
J61A Chester 136.09 20 IAMs_20 IAMs_20 14 51 50.9
comp=Z,2µm,22.0s
I63A Otisfield 136.11 18 IAMs_20 IAMs_20 14 58 24.2
comp=Z,2µm,20.0s
W50A Signal Mountai 136.12 39 IAMs_20 IAMs_20 14 58 39.7
comp=Z,2µm,20.0s
GGN Saint George 136.15 14 IAMs_20 IAMs_20 14 57 59.9
comp=Z,2µm,19.0s
SSPA Standing Stone 136.22 27 P **PKPdf** **13 54 15.3 0.0**
baz=323
TRY Troy 136.22 22 IAMs_20 IAMs_20 14 52 17.6
comp=Z,2µm,20.0s
Y49A Blount Mountai 136.26 41 IAMs_20 IAMs_20 14 58 47.6
comp=Z,2µm,19.0s
TZTN Tazewell 136.30 36 P **PKPdf** **13 54 15.7 +0.1**
baz=313
V51A Loudon 136.32 37 IAMs_20 IAMs_20 15 06 11.8
comp=Z,2µm,18.0s
FPAL Fort Paine 136.35 40 IAMs_20 IAMs_20 14 57 28.0
comp=Z,2µm,20.0s
LRAL Lakeview Retre 136.36 43 IAMs_20 IAMs_20 14 58 12.5
comp=Z,2µm,19.0s
LRAL Lakeview Retre 136.36 43 P **PKPdf** **13 54 15.8 +0.1**
baz=307
CPCT Cooper Cave 136.45 38 **PKPdf** **13 54 15.5 -0.4**
CPCT IAMs_20 IAMs_20 14 54 05.3
comp=Z,2µm,21.0s
N58A Sunbury 136.58 26 IAMs_20 IAMs_20 14 58 36.4
comp=Z,2µm,19.0s
V52A Sevierville 136.75 37 IAMs_20 IAMs_20 14 46 21.1
comp=Z,2µm,22.0s
TKL Tuckaleechee C 136.76 37 IAMs_20 IAMs_20 14 46 55.6
comp=Z,2µm,22.0s
X51A Calhoun 136.81 39 IAMs_20 IAMs_20 14 57 12.1
comp=Z,2µm,19.0s
L61B Northampton 136.83 21 P **PKPdf** **13 54 16.8 +0.4**
baz=331
W52A Murphy 137.05 38 IAMs_20 IAMs_20 14 51 40.1
comp=Z,2µm,22.0s
P57A Homestead Farm 137.07 28 IAMs_20 IAMs_20 14 54 14.8
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 137.17 20 IAMs_20 IAMs_20 14 55 11.5
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 137.17 20 P **PKPdf** **13 54 17.1 +0.1**
baz=333
ODNJ Ogdensburg 137.27 24 IAMs_20 IAMs_20 14 54 31.4
comp=Z,2µm,21.0s
U54A Nelsons Funny 137.31 35 IAMs_20 IAMs_20 15 00 40.7
comp=Z,2µm,19.0s
V53A Saluda 137.33 36 IAMs_20 IAMs_20 14 46 51.5
comp=Z,2µm,22.0s
BRAL Brewton 137.41 45 P **PKPdf** **13 54 17.9 +0.1**
baz=305
UCCT U. Connecticut 137.56 21 IAMs_20 IAMs_20 14 53 51.1
comp=Z,2µm,22.0s
BLA Blacksburg 137.59 33 IAMs_20 IAMs_20 14 52 15.8
comp=Z,2µm,21.0s
BLA Blacksburg 137.59 33 P **PKPdf** **13 54 18.1 +0.1**
baz=318
PAL Palisades 137.61 23 P **PKPdf** **13 54 18.1 +0.3**
baz=329
WSPT Westport, CT 137.70 23 IAMs_20 IAMs_20 14 52 38.7
comp=Z,2µm,22.0s
BG3 Lake Jocassee 137.72 37 IAMs_20 IAMs_20 14 47 23.9
comp=Z,2µm,22.0s
CPNY Central Park 137.77 24 IAMs_20 IAMs_20 14 52 09.8

	comp=Z,2µm,20.0s								
WUPA	West Chester U	137.81	26		IAMs_20	IAMs_20	15 00 58.9		
	comp=Z,1µm,19.0s								
ML02	Panimavida	138.10	158		IAMs_20	IAMs_20	14 54 39.0		
	comp=Z,2µm,21.0s								
152A	Waverly Hall	138.10	41		IAMs_20	IAMs_20	14 56 16.6		
	comp=Z,2µm,20.0s								
V55A	Taylorsville	138.13	35		IAMs_20	IAMs_20	14 58 51.5		
	comp=Z,2µm,19.0s								
M65A	Busby, Falmout	138.32	20	P		PKPdf	13 54 19.8	+0.7	
	baz=333								
P61A	Hammonton	138.37	25		IAMs_20	IAMs_20	14 57 44.8		
	comp=Z,2µm,19.0s								
CBN	Corbin Frederi	138.39	29	P		PKPdf	13 54 19.6	+0.2	
	baz=322								
GOGA	Godfrey	138.44	39	P		PKPdf	13 54 20.0	+0.4	
	baz=311								
GO05	Huala	138.56	157		IAMs_20	IAMs_20	14 54 33.4		
	comp=Z,2µm,22.0s								
KMSC	Kings Mountain	138.56	36		IAMs_20	IAMs_20	14 48 24.0		
	comp=Z,2µm,21.0s								
KMSC	Kings Mountain	138.56	36	P		PKPdf	13 54 20.1	+0.3	
	baz=315								
HODGE	Hodges	138.64	37		IAMs_20	IAMs_20	14 53 16.4		
	comp=Z,2µm,21.0s								
154A	Montrose	139.19	40		IAMs_20	IAMs_20	15 00 58.1		
	comp=Z,2µm,20.0s								
BO02	Sierra Bellavi	139.20	158		IAMs_20	IAMs_20	14 57 29.1		
	comp=Z,2µm,20.0s								
W57A	Gilead	139.32	34		IAMs_20	IAMs_20	14 49 16.0		
	comp=Z,2µm,22.0s								
BIRD	Birdtown, Kers	139.42	35		IAMs_20	IAMs_20	14 54 53.7		
	comp=Z,2µm,20.0s								
BO01	Tunca	139.43	157		IAMs_20	IAMs_20	14 59 20.5		
	comp=Z,2µm,20.0s								
CCIG	Comitan	139.49	68		IAMs_20	IAMs_20	14 48 03.2		
	comp=Z,2µm,21.0s								
TIGA	Tifton	139.62	42		IAMs_20	IAMs_20	14 57 58.8		
	comp=Z,2µm,19.0s								
TIGA	Tifton	139.62	42	P		PKPdf	13 54 21.8	0.0	
	baz=309								
Y57A	Sumter	139.91	36		IAMs_20	IAMs_20	14 48 29.6		
	comp=Z,2µm,22.0s								
MT09	Talagante	140.01	157		IAMs_20	IAMs_20	14 59 58.9		
	comp=Z,2µm,20.0s								
255A	Hazlehurst	140.04	40		IAMs_20	IAMs_20	14 56 36.7		
	comp=Z,2µm,21.0s								
W59A	Clinton	140.17	33		IAMs_20	IAMs_20	14 55 18.3		
	comp=Z,2µm,22.0s								
VA01	Torpederas	140.41	155		IAMs_20	IAMs_20	14 55 30.5		
	comp=Z,2µm,22.0s								
CNNC	Cliffs of the	140.42	32	P		PKPdf	13 54 23.5	+0.4	
	baz=319								
MT03	Universidad Ad	140.45	157		IAMs_20	IAMs_20	14 56 28.4		
	comp=Z,2µm,22.0s								
NHSC	New Hope	140.67	37	P		PKPdf	13 54 23.7	+0.1	
	baz=315								
V61A	Roper	140.68	30		IAMs_20	IAMs_20	14 55 58.4		
	comp=Z,2µm,20.0s								
257A	Skidaway Islan	140.93	39		IAMs_20	IAMs_20	14 58 23.1		
	comp=Z,2µm,20.0s								
VA03	San Esteban	141.08	157		IAMs_20	IAMs_20	14 56 49.0		
	comp=Z,2µm,20.0s								
Y60A	Bolivia	141.16	34		IAMs_20	IAMs_20	15 01 54.6		
	comp=Z,2µm,19.0s								
PETF	Flores	141.40	66		IAMs_20	IAMs_20	14 46 40.7		
	comp=Z,2µm,22.0s								
AAGR	Agrelo	141.44	159	*e*P		PKPdf	13 54 20.3	-4.9	
TEIG	Tepich	141.70	60		IAMs_20	IAMs_20	14 50 14.1		
	comp=Z,1µm,21.0s								
ASAL	Salagasta	141.89	158	*e*P		PKPdf	13 54 20.5	-5.5	
AUSP	Uspallata	142.01	158	*e*P		PKPdf	13 54 20.8	-5.7	
RTLS	Leoncito	142.42	157	*e*P		PKPdf	13 54 22.3	-5.0	
ESQI	Esquipulas	142.53	70		IAMs_20	IAMs_20	14 50 19.1		
	comp=Z,2µm,21.0s								
MTO3	Montecristo	142.56	70		IAMs_20	IAMs_20	14 50 09.8		
	comp=Z,2µm,22.0s								
CO03	El Pedregal	142.70	155		IAMs_20	IAMs_20	14 58 32.2		
	comp=Z,2µm,20.0s								
PAYG	Puerto Ayora	142.84	95		IAMs_20	IAMs_20	14 55 47.0		
	comp=Z,2µm,20.0s								
SNET	Serv Nac Est T	142.85	71		IAMs_20	IAMs_20	14 54 15.7		
	comp=Z,1µm,19.0s								
DWPF	Disney Wildern	143.15	44	P		PKPdf	13 54 27.8	-0.4	
	baz=308								
CO05	La Serena	143.25	153		IAMs_20	IAMs_20	15 01 36.0		
	comp=Z,2µm,19.0s								
ACCO	Cerro Coronel	143.59	157	*e*P		PKPab	13 54 26.3	+0.4	
AROD	Rodeo	143.79	156	*e*P		PKPbc	13 54 27.5	+0.2	
ACDV	Cuesta del Vie	143.93	156	*e*P		PKPbc	13 54 27.5	-0.1	
ACHE	Chepes	143.95	160	*e*P		PKPab	13 54 26.7	-0.3	
AVFE	Valle Fertil	144.13	159	*i* P		PKPab	13 54 27.2	-0.3	
LCO	Las Campanas	144.27	153		IAMs_20	IAMs_20	14 57 30.0		
	comp=Z,2µm,21.0s								
TGUH	Tegucigalpa,Un	144.60	70		IAMs_20	IAMs_20	14 52 21.9		
	comp=Z,1µm,19.0s								
AC04	Llanos de Chal	144.78	152		IAMs_20	IAMs_20	14 55 21.8		
	comp=Z,2µm,20.0s								
SOR	Soroa	144.96	53		IAMs_20	IAMs_20	14 57 51.7		
	comp=Z,1µm,19.0s								
CRIN	San Cristobal	145.15	72	*e*P		PKPdf	13 54 32.2	+0.1	
ACLC	CERRO LA CRUZ	145.43	159	*i* P		PKPbc	13 54 31.5	-0.8	
CNGN	Cerro Negro	145.53	72	*e*P		PKPab	13 54 33.2	+0.1	
VCA	Vinchina	145.57	156	*i* P		PKPbc	13 54 32.8	0.0	
GO03	Copiap	145.69	153		IAMs_20	IAMs_20	14 56 59.7		
	comp=Z,2µm,22.0s								
GO03	Copiap	145.69	153	*i* P		PKPbc	13 54 33.0	0.0	
CAMR	Camarioca	146.11	51		IAMs_20	IAMs_20	15 06 48.9		
	comp=Z,1µm,22.0s								
MATN	Matagalpa	146.16	71	PKPbc		PKPbc	13 54 34.5	-0.3	
MATN	Matagalpa	146.16	71	*e*P		PKPdf	13 54 34.0	+0.1	
TINO	Tinogasta	146.42	157	*e*P		PKPbc	13 54 35.1	-0.3	
CYA	Choya	146.73	160	*i* P		PKPdf	13 54 35.3	+0.8	
AC01	Pan de Azucar	146.74	151		IAMs_20	IAMs_20	15 00 31.7		
	comp=Z,1µm,20.0s								
AC02	Maricunga	146.84	153	PKPab		PKPbc	13 54 37.4	+0.3	
AC02	Maricunga	146.84	153	*i* P		PKPbc	13 54 36.7	-0.4	
HZTE	Horizontes, Gu	146.97	75		IAMs_20	IAMs_20	14 59 30.1		
	comp=Z,1µm,19.0s								
HZTE	Horizontes, Gu	146.97	75	*e*P		PKPab	13 54 38.2	-0.4	
ELI1	Hacienda Flor	147.03	75	*e*P		PKPab	13 54 39.0	+0.2	
ALIBA	Liberia Airpor	147.04	75	*e*P		PKPab	13 54 38.2	-0.7	
ACON	Acoyapa	147.10	72	*e*P		PKPdf	13 54 35.8	+0.4	
JUD3	Juan Diaz 3	147.13	76	*e*P		PKPdf	13 54 36.5	+1.0	
GB1A	Boringuen Arri	147.14	74	*e*P		PKPbc	13 54 37.1	-0.6	
ORTG	Ortega, Santa	147.17	75		IAMs_20	IAMs_20	14 58 29.4		
	comp=Z,1µm,20.0s								
ORTG	Ortega, Santa	147.17	75	*e*P		PKPdf	13 54 36.7	+1.0	
VRLE	La Escondida,	147.18	74	*e*P		PKPdf	13 54 36.3	+0.6	
INDI	Punta indio, G	147.22	76	*e*P		PKPbc	13 54 37.3	-0.6	
NICO	Nicoya	147.22	76	*e*P		PKPbc	13 54 37.1	-0.7	
CMARA	Lajas Hojancha	147.27	76	*e*P		PKPdf	13 54 36.9	+1.1	
PLVR	Palo Verde	147.28	75	*e*P		PKPdf	13 54 36.7	+0.7	
COLC	Colonia	147.36	75	*e*P		PKPbc	13 54 38.6	+0.3	
VMAR	Armenia, Volca	147.41	74	*e*P		PKPdf	13 54 35.4	-0.6	
ACAL	Aguas Claras	147.53	75	*e*P		PKPbc	13 54 39.2	+0.4	
ITQB	Itaqui	147.60	175			PKPdf	13 54 35.8	-0.1	
ITQB					IAMs_20	IAMs_20	15 00 17.8		
	comp=Z,2µm,20.0s								
VERA	Finca Concepci	147.64	74	*e*P		PKPdf	13 54 37.2	+0.9	
JTS	Las Juntas de	147.67	75	PKPdf		PKPdf	13 54 35.9	-0.5	
JTS	Las Juntas de	147.67	75		IAMs_20	IAMs_20	14 53 48.7		
	comp=Z,2µm,20.0s								
JTS	Las Juntas de	147.67	75	PKIKP		PKPdf	13 54 35.9	-0.5	
JTS	Las Juntas de	147.67	75	*e*P		PKPbc	13 54 39.0	-0.1	
JTS	Las Juntas de	147.67	75	*e*P		PKPdf	13 54 36.3	-0.1	
LAFE	Finca La Fe, P	147.80	76	*e*P		PKPbc	13 54 38.2	-1.2	
ARE1	Arenal 1	147.87	75		IAMs_20	IAMs_20	15 01 14.8		
	comp=Z,1µm,20.0s								
ARE1	Arenal 1	147.87	75	*e*P		PKPbc	13 54 38.7	-1.0	
CEDE	Laguna Cedeo	147.87	75	*e*P		PKPbc	13 54 40.2	+0.5	
VACR	Volcan Arenal	147.90	75	*e*P		PKPbc	13 54 39.2	-0.6	
SOCE	Pocosol	147.98	75	*e*P		PKPbc	13 54 40.0	0.0	
GO02	Mina Guanaco	148.06	151		IAMs_20	IAMs_20	15 06 27.5		
	comp=Z,2µm,20.0s								
GO02	Mina Guanaco	148.06	151	*e*P		PKPdf	13 54 38.6	+1.5	
JACO	JACO, Garabito	148.07	76		IAMs_20	IAMs_20	14 54 27.4		
	comp=Z,2µm,20.0s								
JACO	JACO, Garabito	148.07	76	*e*P		PKPdf	13 54 38.2	+1.2	
PB14	IPOC Station P	148.10	150		IAMs_20	IAMs_20	15 05 19.0		
	comp=Z,2µm,21.0s								
COVE	Coope Vega, Sa	148.12	74		IAMs_20	IAMs_20	15 01 08.4		
	comp=Z,1µm,19.0s								
COVE	Coope Vega, Sa	148.12	74	*e*P		PKPdf	13 54 38.1	+1.0	
CPMI	Catarata Coope	148.22	75	*e*P		PKPdf	13 54 37.3	-0.3	
TRB2	Turrubares	148.23	76	*e*P		PKPab	13 54 43.1	-0.5	
AHML	Horco Molle	148.41	159	*i* P		PKPdf	13 54 38.5	+1.1	
RITA	Parrita	148.42	76	*e*P		PKPdf	13 54 34.6	-2.9	
SANTA	Santa Ana	148.48	75	*e*P		PKiKP	13 54 43.3	+0.4	
ACOS	Acosta	148.53	76	*e*P		PKPdf	13 54 39.7	+1.7	
HDC	Heredia	148.54	75		IAMs_20	IAMs_20	14 54 16.7		
	comp=Z,2µm,22.0s								
HDC	Heredia	148.54	75	*e*P		PKPdf	13 54 38.2	+0.2	
HDC	Heredia	148.54	75	*e*P		PKPbc	13 54 42.2	+0.6	
HDC3	Heredia 3	148.54	75	*e*P		PKPbc	13 54 41.4	-0.2	
LLNJ	Naranjito	148.65	76	*e*P		PKiKP	13 54 42.9	-0.3	
ABE2	San Pablo	148.65	76	*e*P		PKiKP	13 54 43.8	+0.3	
LCR2	La Lucha 2	148.69	76	*e*P		PKPdf	13 54 39.2	+0.9	
CVIMO	Finca Echandi	148.70	75	*e*P		PKPdf	13 54 39.8	+1.5	
OCM	Ochomogo	148.71	75	*e*P		PKPdf	13 54 39.5	+1.1	
FSA	Cafayete	148.79	158	*e*P		PKPdf	13 54 39.6	+1.5	
VICA	Volcano Irazu	148.80	75	*e*P		PKPdf	13 54 39.9	+1.2	
ICR3	Volcano Irazu	148.81	75	*e*P		PKPdf	13 54 40.2	+1.5	
RIMA	Rio Macho	148.82	76		IAMs_20	IAMs_20	14 52 13.3		
	comp=Z,1µm,21.0s								
RIMA	Rio Macho	148.82	76	*e*P		PKPdf	13 54 39.4	+0.9	
RAFA	San Farael, Vo	148.84	75	*e*P		PKiKP	13 54 44.7	+0.7	
VTLA	Turrialba Volc	148.87	75	*e*P		PKPdf	13 54 39.8	+1.0	
CVTQ	Turrialba Volc	148.87	75	*e*P		PKPdf	13 54 39.7	+0.9	
VTR0	Volcan Turrial	148.88	75	*e*P		PKPdf	13 54 39.9	+1.0	
CVTR	Volcan Turrial	148.88	75	*e*P		PKPdf	13 54 40.1	+1.2	
CVTV	Tajo	148.89	75	*e*P		PKPdf	13 54 39.9	+1.2	
VTLO	VTLO	148.90	75	*e*P		PKPdf	13 54 39.4	+0.6	
VINA	Juan Vinas	148.91	75	*e*P		PKiKP	13 54 44.4	+0.5	
VTCV	VTCV, Calle Va	148.92	75	*e*P		PKPdf	13 54 39.5	+0.9	
VERB	Verbena	148.95	75	*e*P		PKiKP	13 54 44.0	0.0	
CDM	Cerro de Muert	148.96	76	*e*P		PKPdf	13 54 40.1	+1.1	
RVSTA	Santa Teresita	148.99	75	*e*P		PKiKP	13 54 44.3	+0.3	
RVLA	Villa Bonita	149.03	75	*e*P		PKiKP	13 54 44.5	+0.6	
LCOCO	El Coco	149.06	75	*e*P		PKiKP	13 54 44.4	+0.4	
PEZE	Perez Zeledon,	149.08	76		IAMs_20	IAMs_20	14 53 10.0		
	comp=Z,2µm,20.0s								
PEZE	Perez Zeledon,	149.08	76	*e*P		PKiKP	13 54 44.9	+0.7	
IRES	Siquirres	149.11	75	*e*P		PKiKP	13 54 44.9	+0.8	
TAAN	Batan	149.26	75	*e*P		PKiKP	13 54 44.9	+0.5	
EDPN	Palmar Norte	149.36	77	*e*P		PKiKP	13 54 46.3	+1.7	
SRBA	San Rafael, Bu	149.41	77		IAMs_20	IAMs_20	14 55 18.9		
	comp=Z,2µm,21.0s								
SRBA	San Rafael, Bu	149.41	77	*e*P		PKPdf	13 54 40.1	+0.8	
JIME	Puerto Jimenez	149.56	78	*e*P		PKPab	13 54 47.2	-1.8	
PIRO	Carate, Puerto	149.57	78	*e*P		PKPdf	13 54 39.9	+0.4	
POTG	Potrero Grande	149.68	77	*e*P		PKPdf	13 54 41.1	+1.4	
EDAD	Golfito	149.70	78	*e*P		PKPdf	13 54 41.7	+1.9	
PB15	IPOC Station P	149.75	149		IAMs_20	IAMs_20	14 55 57.7		
	comp=Z,2µm,22.0s								
PB15	IPOC Station P	149.75	149	*e*P		PKPdf	13 54 41.5	+1.6	
CCOL	Caracol de Cor	149.93	78	*e*P		PKPdf	13 54 41.7	+1.6	
CDITO	Canoas	150.00	78		IAMs_20	IAMs_20	14 55 36.5		
	comp=Z,2µm,22.0s								
PB04	IPOC Station P	150.11	147		IAMs_20	IAMs_20	15 03 30.5		
	comp=Z,1µm,19.0s								
PB06	IPOC Station P	150.12	149		IAMs_20	IAMs_20	15 05 28.4		
	comp=Z,2µm,20.0s								
BRU2	Volcan	150.14	77	*e*P		PKPdf	13 54 41.4	+0.9	
SLA	San Lorenzo	150.22	157	*e*P		PKPdf	13 54 40.9	+0.5	
PRVC	Isla de Provid	150.29	68	*e*P		PKPbc	13 54 45.0	-0.7	
LVC	Limon Verde	150.53	150		IAMs_20	IAMs_20	15 09 09.3		
	comp=Z,2µm,20.0s								
LVC	Limon Verde	150.53	150	*e*P		PKPdf	13 54 43.3	+2.0	
LVC	Limon Verde	150.53	150	*e*P		PKPdf	13 54 42.5	+1.3	
PB07	IPOC Station P	150.75	147		IAMs_20	IAMs_20	15 03 14.3		
	comp=Z,2µm,20.0s								
CPUP	Villa Florida	150.83	173	PKP		PKPdf	13 54 41.0	-0.2	
	comp=Z,24nm,1.1s,baz=131,slow=0.7,SNR=18								
CPUP					PKPbc	PKPbc	13 54 46.1	-0.6	
	comp=Z,34nm,0.9s,baz=162,slow=1.4,SNR=18								
PB02	IPOC Station P	151.07	147		IAMs_20	IAMs_20	14 54 43.9		
	comp=Z,2µm,21.0s								
PATCX	Punta Patache	151.32	146		IAMs_20	IAMs_20	15 00 28.8		
	comp=Z,1µm,21.0s								
PB01	IPOC Station P	151.52	147		IAMs_20	IAMs_20	15 06 19.7		
	comp=Z,2µm,22.0s								
SALI	Salinas	151.86	100		IAMs_20	IAMs_20	15 09 57.6		
	comp=Z,1µm,20.0s								
CACAO	El Cacao, Vera	152.15	80	*e*P		PKPdf	13 54 45.6	+2.2	
NNA	Nana	152.38	122		IAMs_20	IAMs_20	14 55 47.0		
	comp=Z,1µm,20.0s								
NNA	Nana	152.38	122	*e*P		PKPbc	13 54 50.7	+0.1	
PB08	IPOC Station P	152.43	146		IAMs_20	IAMs_20	15 03 42.9		
	comp=Z,2µm,21.0s								
PB11	IPOC Station P	152.45	145		IAMs_20	IAMs_20	15 06 56.6		
	comp=Z,1µm,19.0s								
YJA	Yavi	152.49	155	*e*P		PKPdf	13 54 46.3	+2.0	
ARNL	Arenillas	152.50	103		IAMs_20	IAMs_20	15 09 50.4		
	comp=Z,1µm,20.0s								
AZU	Azuero	152.66	78	*e*P		PKPbc	13 54 51.9	+0.4	
GTBY	Guantanamo Bay	152.69	50		IAMs_20	IAMs_20	14 59 52.8		
	comp=Z,2µm,22.0s								
GO01	Chusmiza	152.78	146		IAMs_20	IAMs_20	15 07 15.4		
	comp=Z,2µm,19.0s								
BCIP	Isla Barro Col	152.84	75	*e*P		PKiKP	13 54 52.3	+0.5	
BCIP	Isla Barro Col	152.84	75	*e*P		PKPdf	13 54 42.4	-2.1	
PB12	IPOC Station P	152.94	142		IAMs_20	IAMs_20	15 02 09.0		
	comp=Z,1µm,22.0s								
MCR1	Marechal Candi	152.95	178	*e*P		PKPdf	13 54 45.0	+0.6	
DUB01	Friburgo-RJ	153.12	203	*e*P		PKPdf	13 54 45.3	+0.6	
SPB	Sao Paulo	153.21	192	*e*P		PKPdf	13 54 44.4	-0.4	
VAS01	Vassouras-RJ	153.33	201	*e*P		PKPdf	13 54 46.2	+1.2	
PB16	IPOC Station P	153.65	143		IAMs_20	IAMs_20	14 54 54.6		
	comp=Z,1µm,21.0s								
CHSH	Refugio Sur-Vo	154.07	99		IAMs_20	IAMs_20	15 04 19.1		
	comp=Z,1µm,19.0s								
RIB01	Linhares ES	154.68	209	*e*P		PKPdf	13 54 46.9	-0.1	
OTAV	Otavalo	154.71	95		IAMs_20	IAMs_20	14 55 06.4		
	comp=Z,2µm,21.0s								
OTAV	Otavalo	154.71	95	*e*P		PKPdf	13 54 47.8	0.0	
OTAV	Otavalo	154.71	95	*e*P		PKPdf	13 54 49.2	+1.4	
PIAT	Ana Tenorio	154.75	98	*e*P		PKPdf	13 54 48.7	+1.0	
IMBA	Imbabura, San	154.97	95		IAMs_20	IAMs_20	14 56 21.1		
	comp=Z,2µm,21.0s								
TULM	Tulcn-Chalpat	155.42	94		IAMs_20	IAMs_20	15 01 15.1		
	comp=Z,2µm,22.0s								
BONI	La Bonita	155.65	95	*e*P		PKPdf	13 54 49.8	+1.0	
GCUF	Volcan Galeras	155.90	93	*e*P		PKPdf	13 54 48.7	-0.7	
MALC	Bahia Malaga	155.95	86	*e*P		PKPdf	13 54 50.1	+1.2	
POPC	Popayan, Colom	156.62	90	*e*P		PKPdf	13 54 49.7	-0.3	
YOTC	Yotoco, Valle	156.94	86	*e*P		PKPdf	13 54 50.9	+0.6	
SJCC	San Jacinto, C	157.11	71	*e*P		PKPdf	13 54 49.5	-0.8	
UREC	San Jos de Ur	157.29	76	*e*P		PKPdf	13 54 50.5	-0.1	
CZSB	Cruzeiro do Su	158.00	118		IAMs_20	IAMs_20	15 20 24.5		
	comp=Z,2µm,21.0s								
CZSB	Cruzeiro do Su	158.00	118	*e*P		PKPdf	13 54 51.8	+0.4	
ORTC	Ortega, Tolima	158.04	86	*e*P		PKPdf	13 54 50.7	-0.8	
NORC	Norcasia	158.28	82	*e*P		PKPdf	13 54 52.3	+0.4	
PTBC	PUERTO BERRIO	158.56	79	*e*P		PKPdf	13 54 52.1	-0.1	
ROSC	El Rosal	158.90	84	PKP		PKPdf	13 54 54.1	+1.1	
	comp=Z,27nm,1.0s,baz=62,slow=4.4,SNR=15								
ROSC					PKPab	PKPab	13 55 28.6	-0.5	
	comp=Z,34nm,0.5s,baz=359,slow=3.8,SNR=11								
SPBC	San Pablo de B	159.06	81	*e*P		PKPdf	13 54 53.0	+0.1	
URIC	Uribia, Colomb	159.43	63	*e*P		PKPdf	13 54 52.6	-0.4	
CRPR	Cabo Rojo, PR	159.65	41		IAMs_20	IAMs_20	15 20 07.2		
	comp=Z,1µm,20.0s								
MLPR	Magueyes Islan	159.72	41		IAMs_20	IAMs_20	15 19 25.0		
	comp=Z,1µm,20.0s								
BARC	Barichara	159.80	78	*e*P		PKPdf	13 54 52.3	-1.6	
CELP	Cerrillos	159.95	40			PKPdf	13 54 53.0	-0.6	
OBIP	Obispado Ponce	159.95	40			PKPab	13 55 31.8	-1.1	
RUSC	La Rusia	160.00	80	*e*P		PKPdf	13 54 54.2	-0.2	
PAMC	Pamplona, Colo	160.12	76	*e*P		PKPdf	13 54 54.3	-0.2	
RCBR	Riachuelo	160.67	244	*e*P		PKPdf	13 54 54.9	+0.3	
BDFB	Brasilia	161.00	196	PKP		PKPdf	13 54 55.8	+0.8	
	comp=Z,16nm,1.0s,baz=327,slow=0.7,SNR=10								
SDV	Santo Domingo	161.69	70	*e*P		PKPdf	13 54 56.2	+0.3	
SDV	Santo Domingo	161.69	70	*e*P		PKPdf	13 54 55.1	-0.8	
ETMB	Extrema	162.06	134			PKPab	13 55 41.5	-0.7	
SAML	Samuel	164.75	140	*e*P		PKPdf	13 54 59.0	+0.4	
BOAV	Boa Vista	172.75	93			PKPdf	13 55 02.7	-1.0	

NEIC **26** *13:43:13.8±1.0,56.04N±0.10×149.99W±0.08, h10km±2km, ML3.4/28, ML2.9(AEIC), Error ellipse: s-maj=16.6km s-min=7.6km az=175.0*

AEIC 26 13:43:17.1±0.9, 55.9N±0.1×149.99W±0.10, h12km±9km, Error ellipse: s-maj=18.6km s-min=7.9km az=180.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.25	307		Pn	13 43 49.5	-4.6
OHAK					Sn	13 44 14.5	-7.4
KDAK	Kodiak Island	2.36	324		Pn	13 43 50.9	-4.7
KDAK					Sn	13 44 17.5	-7.0
SYI	Shuyak Island	3.01	335		Pn	13 43 59.8	-4.7
SYI					Sn	13 44 34.2	-6.3
Q19K	Cape Douglas,	3.62	328		Pn	13 44 08.0	-5.0
Q19K				IAML		13 45 53.9	
	comp=E,159nm,1.4s						
Q19K				IAML		13 45 54.5	
	comp=N,79nm,1.4s						
CNPM	China Poot	3.69	350		Pn	13 44 08.4	-5.6
CNPM					Sn	13 44 50.5	-6.9
CNPM	China Poot	3.69	350	IAML		13 45 42.0	
	comp=E,13nm,1.3s						
BRSE	Bradley Lake S	3.87	354		Pn	13 44 10.7	-5.7
BRSE					Sn	13 44 53.6	-8.1
BRLK	Bradley Lake	3.90	353	Pn	Pn	13 44 11.0	-5.8
BRLK				IAML		13 46 41.1	
	comp=E,11nm,1.4s						
BRLK				IAML		13 46 42.2	
	comp=N,15nm,1.4s						
CNTC	Contact Creek	3.99	309		Pn	13 44 13.8	-4.3
Q23K	Middleton Isla	4.04	27	Pn	Pn	13 44 13.1	-5.5
Q23K				IAML		13 45 15.3	
	comp=E,146nm,1.3s						
MID	Middleton Isla	4.04	28	Pn	Pn	13 44 13.0	-5.6
MID				IAML		13 45 57.0	
	comp=N,120nm,1.5s						
MID				IAML		13 46 33.8	
	comp=E,134nm,1.5s						
P23K	Montague Islan	4.33	17		Pn	13 44 17.6	-5.1
O20K	Slope Mountain	4.42	343		Pn	13 44 19.9	-4.0
ILSW	Iliamna Southw	4.42	339	Pn	Pn	13 44 18.8	-5.3
ILSW				IAML		13 45 10.6	
	comp=N,9.6nm,1.3s						
ILSW				IAML		13 45 16.9	
	comp=E,13nm,1.2s						
IVE	Iliamna Volcan	4.43	340		Pn	13 44 20.0	-4.1
RS

MID	**Middleton Isla**	**3.22**	**25**			Pn	13 46 35.5	+0.2
MID						**Sn**	**13 47 11.9**	**-1.8**
MID	**Middleton Isla**	**3.22**	**25**		IAML		13 47 30.5	
	comp=E,144nm,1.4s							
MID					IAML		13 47 55.7	
	comp=N,113nm,1.5s							
MID	**Middleton Isla**	**3.22**	**25**	P		Pn	13 46 35.5	+0.2
BRLK	**Bradley Lake**	**3.37**	**344**			**Sn**	**13 47 16.2**	**-1.3**
BRLK	**Bradley Lake**	**3.37**	**344**			Pn	13 46 38.2	+0.7
HOM	**Homer**	**3.41**	**337**	Pn		**Pn**	**13 46 39.3**	**+1.3**
HOM					IAML		13 48 19.5	
	comp=E,237nm,1.4s							
HOM					IAML		13 48 24.4	
	comp=N,243nm,1.2s							
Q19K	**Cape Douglas,**	**3.44**	**316**	Pn		**Pn**	**13 46 39.5**	**+1.2**
Q19K					IAML		13 47 43.8	
	comp=N,296nm,1.2s							
P23K	**Montague Islan**	**3.56**	**13**			Pn	13 46 40.5	+0.5
P23K						**Sn**	**13 47 20.4**	**-1.7**
P23K	**Montague Islan**	**3.56**	**13**	P		Pn	13 46 40.4	+0.4
	baz=194							
P23K					S	**Sn**	**13 47 20.4**	**-1.7**
	baz=194							
SEW	**Seward**	**3.57**	**357**			Pn	13 46 40.4	+0.3
SEW	**Seward**	**3.57**	**357**			**Sn**	**13 47 20.3**	**-2.0**
SEW	**Seward**	**3.57**	**357**	P		Pn	13 46 40.5	+0.3
	baz=176							
SEW					S	**Sn**	**13 47 20.3**	**-2.0**
	baz=176							
O22K	**Cooper Landing**	**3.96**	**355**	Pn		Pn	13 46 46.1	+0.7
O22K	**Cooper Landing**	**3.96**	**355**	P		Pn	13 46 46.2	+0.7
	baz=174							
O20K	**Slope Mountain**	**4.02**	**333**	P		Pn	13 46 46.9	+0.5
	baz=151							
ILSW	**Iliamna Southw**	**4.07**	**329**	Pn		**Pn**	**13 46 48.2**	**+1.1**
HIN	**Hinchinbrook I**	**4.08**	**18**	Pn		Pn	13 46 47.7	+0.5
HIN					IAML		13 47 34.0	
	comp=N,150nm,0.4s							
HIN					IAML		13 47 35.1	
	comp=E,95nm,0.7s							
KAIM	**Kayak Island**	**4.17**	**34**	Pn		Pn	13 46 48.8	+0.4
KAIM					IAML		13 48 06.7	
	comp=N,140nm,1.5s							
KAIM					IAML		13 48 32.7	
	comp=E,101nm,1.5s							
KAIM	**Kayak Island**	**4.17**	**34**	P		Pn	13 46 48.9	+0.5
	baz=217							
EYAK	**Cordova Ski Ar**	**4.36**	**22**			Pn	13 46 51.6	+0.6
EYAK	**Cordova Ski Ar**	**4.36**	**22**	P		**Pn**	**13 46 52.1**	**+1.1**
EYAK	**Cordova Ski Ar**	**4.36**	**22**	P		Pn	13 46 51.7	+0.7
	baz=204							
RSO	**Redoubt South**	**4.38**	**335**	Pn		Pn	13 46 52.2	+0.7
FID	**Port Fidalgo**	**4.42**	**16**			Pn	13 46 52.0	+0.2
FID					IAML		13 47 41.6	
	comp=E,44nm,0.6s							
FID					IAML		13 47 46.0	
	comp=N,49nm,0.8s							
GLI	**Glacier Island**	**4.46**	**12**	Pn		Pn	13 46 52.8	+0.4
GLI					IAML		13 47 58.3	
	comp=E,77nm,1.3s							
GLI	**Glacier Island**	**4.46**	**12**	P		Pn	13 46 52.9	+0.5
	baz=194							
NICHA	**Nichawak Mount**	**4.55**	**34**			**Pn**	**13 46 54.6**	**+0.9**
GOAT	**Goat Mountain**	**4.63**	**27**			**Pn**	**13 46 56.5**	**+1.8**
BERG	**Berg Lake**	**4.76**	**34**	Pn		Pn	13 46 57.0	+0.5
GRIN	**Grindle Hills**	**4.79**	**36**			**Pn**	**13 46 58.0**	**+0.9**
SNH	**Sunshine Point**	**4.88**	**39**	Pn		Pn	13 46 58.6	+0.4
SNH					IAML		13 48 09.2	
	comp=E,68nm,1.4s							
KNK	**Knik Glacier**	**4.89**	**3**			Pn	13 46 58.8	+0.6
KNK					IAML		13 47 58.3	
	comp=N,66nm,1.2s							
KNK					IAML		13 48 05.5	
	comp=E,59nm,1.4s							
KNK	**Knik Glacier**	**4.89**	**3**	P		Pn	13 46 59.1	+0.8
	baz=184							
DIV	**Divide**	**4.89**	**19**			Pn	13 46 58.5	+0.1
KHIT	**Khitrov Hills**	**4.94**	**35**			Pn	13 46 59.5	+0.5
BMRM	**Bremner River**	**4.99**	**26**			Pn	13 47 00.6	+0.8
BMRM	**Bremner River**	**4.99**	**26**	P		Pn	13 47 00.2	+0.5
	baz=209							
SUA	**Susitna One**	**5.01**	**350**	Pn		Pn	13 47 00.2	+0.2
SUA					IAML		13 47 52.1	
	comp=N,30nm,1.4s							
PMR	**Palmer**	**5.06**	**359**	Pn		Pn	13 47 01.1	+0.6
PMR	**Palmer**	**5.06**	**359**	P		**Pn**	**13 47 02.1**	**+1.5**
WAX	**Waxell Ridge**	**5.08**	**37**			Pn	13 47 01.2	+0.3
WAX					IAML		13 48 08.3	
	comp=E,66nm,1.4s							
MESA	**MESA**	**5.21**	**43**	Pn		Pn	13 47 01.7	-1.2
MESA					IAML		13 48 15.1	
	comp=N,68nm,1.3s							
KLU	**Klutina**	**5.21**	**17**			**Pn**	**13 47 03.7**	**+1.0**
KLU					IAML		13 48 01.9	
	comp=N,47nm,0.3s							
KLU					IAML		13 48 02.8	
	comp=E,35nm,0.6s							
KLU	**Klutina**	**5.21**	**17**	P		Pn	13 47 03.3	+0.6
	baz=199							
CHGN	**Chignik**	**5.22**	**271**	Pn		**Pn**	**13 47 03.3**	**+0.6**
CRQM	**Cirque**	**5.22**	**34**			Pn	13 47 03.6	+0.6
CRQM					IAML		13 48 10.5	
	comp=N,88nm,1.5s							
CRQM					IAML		13 48 17.3	
	comp=E,87nm,1.5s							
CRQE	**Cirque**	**5.23**	**34**	P		Pn	13 47 03.6	+0.5
	baz=219							
SML	**Sawmill**	**5.29**	**4**			**Pn**	**13 47 04.9**	**+1.2**
SML					IAML		13 48 08.7	
	comp=E,59nm,1.2s							
SML	**Sawmill**	**5.29**	**4**	P		**Pn**	**13 47 04.9**	**+1.2**
	baz=184							
M23K	**Glacier View**	**5.30**	**7**			**Pn**	**13 47 05.5**	**+1.6**
M23K	**Glacier View**	**5.30**	**7**	P		**Pn**	**13 47 05.2**	**+1.3**
	baz=188							
TGL	**Tana Glacier**	**5.31**	**35**			Pn	13 47 04.9	+0.7
TGL					IAML		13 48 15.5	
	comp=N,64nm,1.4s							
ISLE	**Juniper Island**	**5.36**	**38**			Pn	13 47 05.4	+0.5
BAGL	**Bagley Icefiel**	**5.37**	**40**			Pn	13 47 05.5	+0.7
SCM	**Sheep Creek Mo**	**5.37**	**9**	Pn		Pn	13 47 05.2	+0.2
SCM					IAML		13 48 04.9	
	comp=N,65nm,1.4s							
SCM					IAML		13 48 15.1	
	comp=E,47nm,1.5s							
SCM	**Sheep Creek Mo**	**5.37**	**9**	P		**Pn**	**13 47 06.4**	**+1.4**
	baz=190							
VRDI	**Verde Repeater**	**5.51**	**29**			Pn	13 47 07.5	+0.5
N25K	**Chitina, Valde**	**5.56**	**22**			Pn	13 47 08.3	+0.7
N25K	**Chitina, Valde**	**5.56**	**22**	P		Pn	13 47 08.5	+0.9
	baz=206							
KIAG	**Kiagna River**	**5.59**	**36**			Pn	13 47 08.5	+0.4
SKT	**Skwentna**	**5.59**	**348**	Pn		**Pn**	**13 47 09.0**	**+1.0**
GLB	**Gilahina Butte**	**5.60**	**27**			Pn	13 47 08.8	+0.8
SAMH	**Samovar Hills**	**5.63**	**47**			**Pn**	**13 47 09.9**	**+1.3**
GRNC	**Granite Creek**	**5.66**	**39**			Pn	13 47 09.5	+0.5
TABL	**Table Mountain**	**5.68**	**43**			Pn	13 47 09.9	+0.6
O16K	**Kokwok River B**	**5.70**	**306**	Pn		**Pn**	**13 47 10.9**	**+1.5**
MCARA	**McCarthy VSAT**	**5.75**	**30**			Pn	13 47 10.9	+0.8
MCARA	**McCarthy VSAT**	**5.75**	**30**	P		**Pn**	**13 47 11.1**	**+0.9**
	baz=215							
M24K	**Tolsona, Glenn**	**5.76**	**13**	Pn		Pn	13 47 11.3	+1.0
M24K	**Tolsona, Glenn**	**5.76**	**13**	P		**Pn**	**13 47 12.0**	**+1.7**
	baz=196							
PTPK	**Patty Peak**	**5.76**	**33**			**Pn**	**13 47 11.9**	**+1.5**
YKU2	**Yakutat**	**5.79**	**55**	Pn		Pn	13 47 11.1	+0.5
PCA	**Pinnacle**	**5.83**	**49**			Pn	13 47 11.9	+0.7
PINM	**Pinnacle**	**5.83**	**49**	P		Pn	13 47 11.8	+0.6
	baz=236							
BARN	**Barnard Glacie**	**5.92**	**37**			Pn	13 47 13.2	+0.6
CTG	**Chitna Glacier**	**5.96**	**39**	P		Pn	13 47 13.7	+0.6
	baz=225							
CTGM	**Chitina Glacie**	**5.97**	**39**			Pn	13 47 13.9	+0.7
PNL	**Peninsula**	**5.98**	**55**			Pn	13 47 13.9	+0.6
PNL	**Peninsula**	**5.98**	**55**	P		**Pn**	**13 47 14.1**	**+0.8**
PNL	**Peninsula**	**5.98**	**55**	P		Pn	13 47 13.8	+0.5
	baz=242							
LOGN	**Logan Glacier**	**5.99**	**41**			Pn	13 47 13.8	+0.3
BCPM	**Bancas Point**	**6.02**	**52**			Pn	13 47 14.5	+0.7
HARP	**HAARP**	**6.19**	**17**			**Pn**	**13 47 18.9**	**+2.7**
HARP	**HAARP**	**6.19**	**17**	P		**Pn**	**13 47 17.6**	**+1.5**
	baz=200							
O29M	**Mount Kennedy**	**6.65**	**51**			Pn	13 47 23.1	+0.6
O29M	**Mount Kennedy**	**6.65**	**51**	P		Pn	13 47 23.3	+0.7
	baz=240							
YUK2	**White River**	**6.72**	**35**			**Pn**	**13 47 25.5**	**+2.0**
P29M	**Windy Craggy**	**6.73**	**58**	P		Pn	13 47 23.7	+0.1
	baz=247							
YUK3	**Moose Creek**	**6.84**	**36**			**Pn**	**13 47 27.4**	**+2.1**
M27K	**Edge Creek, AK**	**6.87**	**29**			Pn	13 47 26.2	+0.7
M27K	**Edge Creek, AK**	**6.87**	**29**	P		**Pn**	**13 47 27.0**	**+1.5**
	baz=215							
RND	**Reindeer**	**6.88**	**1**	Pn		**Pn**	**13 47 26.7**	**+1.1**
TRF	**Thorofare Moun**	**6.95**	**355**	Pn		Pn	13 47 27.2	+0.5
P30M	**Million Dollar**	**7.29**	**56**	P		**Pn**	**13 47 32.1**	**+0.9**
	baz=246							
HYT	**Haines Junctio**	**7.37**	**50**	Pn		**Pn**	**13 47 33.5**	**+1.0**
L27K	**Beaver Creek,**	**7.47**	**26**	Pn		Pn	13 47 34.4	+0.7
L27K	**Beaver Creek,**	**7.47**	**26**	P		**Pn**	**13 47 34.9**	**+1.2**
	baz=212							
SIT	**Sitka**	**7.54**	**80**	P		Pn	13 47 31.9	-2.7
BPAW	**Bear Paw Mtn.**	**7.64**	**354**	Pn		Pn	13 47 36.7	+0.7
SKAG	**Skagway**	**7.84**	**62**	Pn		Pn	13 47 39.0	+0.3
SKAG	**Skagway**	**7.84**	**62**	P		Pn	13 47 39.1	+0.4
O30N	**Mendenhall**	**7.96**	**53**	Pn		**Pn**	**13 47 41.2**	**+0.8**
O30N	**Mendenhall**	**7.96**	**53**	P		Pn	13 47 41.0	+0.6
	baz=243							
M29M	**Somme Creek**	**7.98**	**38**			**Pn**	**13 47 42.2**	**+1.4**
M29M	**Somme Creek**	**7.98**	**38**	P		**Pn**	**13 47 42.4**	**+1.6**
	baz=227							
JIS	**Juneau Island**	**8.09**	**72**	Pn		Pn	13 47 41.5	-0.7
JIS	**Juneau Island**	**8.09**	**72**	P		Pn	13 47 41.5	-0.7
J26L	**Joseph Creek**	**8.41**	**16**			**Pn**	**13 47 47.9**	**+1.1**
WHY	**Whitehorse**	**8.45**	**55**			**Pn**	**13 47 48.1**	**+0.9**
L29M	**L29M**	**8.55**	**35**			**Pn**	**13 47 49.8**	**+1.2**
P32M	**Atlin**	**8.67**	**63**	Pn		Pn	13 47 50.3	+0.2
P33M	**Teslin, Yukon**	**9.27**	**60**			Pn	13 47 58.5	+0.1
S34M	**Telegraph Cree**	**9.80**	**75**	Pn		Pn	13 48 04.9	-0.7
R33M	**Jennings River**	**10.00**	**66**	Pn		Pn	13 48 08.6	+0.1
DLBC	**Dease Lake**	**10.40**	**72**	Pn		Pn	13 48 13.9	+0.1

IDC 26 13:53:15.1±4.9,5°92S×141°83E,h0km,mb3.6/1,
mbtmp3.6/3,ML3.4/2,Error ellipse: s-maj=163.5km
s-min=20.1km az=101.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.73**	**207**	Pn	Pn	13 56 56.7	-1.5
	0.1nm,0.3s,baz=33,slow=12,SNR=2.7						
WRA				Sn	Sn	13 59 43.2	-10
	baz=23,slow=34,SNR=2.0						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**19.22**	**203**	P	P	13 57 39.6	-1.4
	0.2nm,0.3s,baz=32,slow=11,SNR=7.9						
ASAR				S	S	14 01 19.7	-0.1
	0.8nm,1.0s,baz=15,slow=29,SNR=2.4						
	2.6nm,0.8s						
MKAR	**Makanchi Array**	**74.21**	**322**	P	P	14 04 54.5	+0.5
	0.4nm,0.7s,baz=109,slow=7.0,SNR=2.2						
	0.4nm,0.7s						

*IDC **26** 13:53:13.5±1.3,56°.13N×149°.80W,h0km,mb3.8/8,*
mbtmp3.8/12,ML3.6/4,MS3.5/1,Error ellipse:
s-maj=36.1km s-min=17.1km az=25.0
*NEIC **26** 13:53:15.8±1.6,56°.18N±0°.09×149°.87W±0°.10,h16km±6km,*
mb4.3/10,ML4.1/52,ML4.0(AEIC),Error ellipse:
s-maj=13.2km s-min=7.8km az=178.0
*AEIC **26** 13:53:18.6±1.6,56°.11N±0°.09×149°.8W±0°.1,h7km±5km,*
Error ellipse: s-maj=13.0km s-min=8.8km az=177.0
ISC 26 13:53:15.5±0.7,56°.21N±0°.07×149°.78W±0°.05,h10km,
n330,σ0°85/330,mb4.1/13,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.18**	**299**	Pn	Pn	**13 53 50.2**	**-1.6**
OHAK	**Old Harbor**	**2.18**	**299**		**Sn**	**13 54 15.6**	**-3.2**
OHAK	**Old Harbor**	**2.18**	**299**	IAML		13 54 17.1	
	comp=N,430nm,0.9s						
OHAK				IAML		13 54 18.7	
	comp=E,395nm,0.5s						
OHAK	**Old Harbor**	**2.18**	**299**	P	Pn	**13 53 50.2**	**-1.6**
OHAK	**Old Harbor**	**2.18**	**299**	P	Pn	**13 53 50.3**	**-1.5**
	baz=118						
OHAK				S	**Sn**	**13 54 16.0**	**-2.8**
	baz=118						
KDAK	**Kodiak Island**	**2.20**	**317**	Pn	**Pn**	**13 53 51.4**	**-0.6**
KDAK	**Kodiak Island**	**2.20**	**317**		**Sn**	**13 54 17.3**	**-1.9**
KDAK	**Kodiak Island**	**2.20**	**317**	Pn	**Pn**	**13 53 51.5**	**-0.6**
	comp=E,31nm,0.3s,baz=151,slow=4.6,SNR=336						
KDAK				Sn	**Sn**	**13 54 17.9**	**-1.3**
	comp=E,34nm,0.3s,baz=17,slow=22,SNR=18						
KDAK				LR	LR	13 55 02.9	
	comp=E,1μm,19.4s,baz=224,slow=49						
	comp=E,72nm,0.3s						
SYI	**Shuyak Island**	**2.79**	**331**	Pn	**Pn**	**13 53 59.9**	**-0.2**
SYI	**Shuyak Island**	**2.79**	**331**		**Sn**	**13 54 33.9**	**+0.2**
SYI	**Shuyak Island**	**2.79**	**331**	IAML		13 54 35.4	
	comp=E,270nm,0.6s						
SYI				IAML		13 54 36.9	
	comp=N,219nm,0.6s						
Q20K	**Shuyak Island**	**2.79**	**331**	P	**Pn**	**13 53 60.0**	**-0.1**
	baz=149						
Q20K				S	**Sn**	**13 54 34.6**	**+0.8**
	baz=149						
CNPM	**China Poot**	**3.41**	**347**		**Pn**	**13 54 08.3**	**-0.4**
CNPM	**China Poot**	**3.41**	**347**		**Sn**	**13 54 49.4**	**+0.2**
CNPM	**China Poot**	**3.41**	**347**	IAML		13 54 50.4	
	comp=E,282nm,0.8s						
CNPM				IAML		13 54 51.5	
	comp=N,302nm,0.5s						
Q19K	**Cape Douglas,**	**3.43**	**324**		**Pn**	**13 54 09.3**	**+0.3**
Q19K	**Cape Douglas,**	**3.43**	**324**	P	**Pn**	**13 54 09.3**	**+0.3**
	baz=142						
KAPH	**Katmai Pasha**	**3.44**	**316**		**Pn**	**13 54 09.6**	**+0.5**
KAPH					**Sn**	**13 54 50.9**	**+1.0**
KCE	**Katmai Mt Cerb**	**3.57**	**307**		**Pn**	**13 54 12.1**	**+1.2**
BRSE	**Bradley Lake S**	**3.58**	**352**		**Pn**	**13 54 10.5**	**-0.5**
BRSE					**Sn**	**13 54 53.1**	**-0.1**
BRSE	**Bradley Lake S**	**3.58**	**352**	P	**Pn**	**13 54 10.5**	**-0.5**
	baz=171						
BRSE				S	**Sn**	**13 54 53.1**	**-0.1**
	baz=171						
HOM	**Homer**	**3.59**	**345**		**Pn**	**13 54 11.9**	**+0.7**
HOM					**Sn**	**13 54 55.7**	**+2.0**
HOM	**Homer**	**3.59**	**345**	IAML		13 54 57.5	
	comp=N,590nm,0.4s						
HOM				IAML		13 54 59.2	
	comp=E,464nm,0.8s						
HOM	**Homer**	**3.59**	**345**	P	**Pn**	**13 54 11.4**	**+0.2**
	baz=163						
BRLK	**Bradley Lake**	**3.61**	**351**		**Pn**	**13 54 10.7**	**-0.8**
BRLK				IAML		13 54 57.6	
	comp=N,254nm,0.9s						
ACHA	**Angle Creek He**	**3.62**	**306**		**Pn**	**13 54 11.8**	**+0.1**
ANCK	**Angle Creek**	**3.69**	**305**		**Pn**	**13 54 12.6**	**0.0**
KVTA	**Katmai Vly 10**	**3.70**	**308**		**Pn**	**13 54 13.1**	**+0.4**
Q23K	**Middleton Isla**	**3.71**	**28**	Pn	**Pn**	**13 54 12.1**	**-0.6**
Q23K				IAML		13 55 01.1	
	comp=N,236nm,0.9s						
Q23K				IAML		13 55 03.3	
	comp=E,272nm,1.2s						
Q23K	**Middleton Isla**	**3.71**	**28**	P	**Pn**	**13 54 12.2**	**-0.6**
	baz=210						
MID	**Middleton Isla**	**3.71**	**28**	Pn	**Pn**	**13 54 12.1**	**-0.6**
MID				IAML		13 55 03.3	
	comp=E,237nm,1.3s						
MID				IAML		13 55 03.8	
	comp=N,229nm,0.9s						
MID	**Middleton Isla**	**3.71**	**28**	P	**Pn**	**13 54 12.2**	**-0.6**
AUCH	**Augustine Cone**	**3.72**	**330**		**Pn**	**13 54 13.5**	**+0.5**
AUL	**Augustine Lava**	**3.73**	**330**		**Pn**	**13 54 14.1**	**+1.0**
KAHC	**Katmai Hardscr**	**3.73**	**313**		**Pn**	**13 54 14.1**	**+0.9**
PLK3	**Peulik 3**	**3.85**	**295**		**Pn**	**13 54 15.0**	**+0.3**
CNTC	**Contact Creek**	**3.90**	**304**		**Pn**	**13 54 15.4**	**-0.2**
Q17K	**Contact Creek**	**3.90**	**304**	P	**Pn**	**13 54 15.4**	**-0.2**
	baz=120						
SEW	**Seward**	**3.91**	**2**		**Pn**	**13 54 14.7**	**-0.8**
SEW	**Seward**	**3.91**	**2**	P	**Pn**	**13 54 14.7**	**-0.8**
	baz=182						
P19K	**Oil Pt**	**3.91**	**333**		**Pn**	**13 54 15.5**	**0.0**
P19K	**Oil Pt**	**3.91**	**333**	P	**Pn**	**13 54 15.6**	**0.0**
	baz=151						
KELA	**Mount Kelaz**	**3.93**	**307**		**Pn**	**13 54 16.2**	**+0.3**
P23K	**Montague Islan**	**4.00**	**17**		**Pn**	**13 54 16.4**	**-0.4**
P23K	**Montague Islan**	**4.00**	**17**	P	**Pn**	**13 54 16.4**	**-0.4**
	baz=199						
O20K	**Slope Mountain**	**4.16**	**340**		**Pn**	**13 54 18.6**	**-0.5**
O20K	**Slope Mountain**	**4.16**	**340**	P	**Pn**	**13 54 18.6**	**-0.5**
	baz=158						
ILSW	**Iliamna Southw**	**4.18**	**336**		**Pn**	**13 54 18.7**	**-0.7**
ILSW				IAML		13 55 10.1	
	comp=N,179nm,0.4s						
ILSW				IAML		13 55 16.2	
	comp=E,156nm,0.7s						
IVE	**Iliamna Volcan**	**4.18**	**337**		**Pn**	**13 54 18.7**	**-0.7**
O22K	**Cooper Landing**	**4.28**	**0**		**Pn**	**13 54 20.2**	**-0.4**
O22K	**Cooper Landing**	**4.28**	**0**	P	**Pn**	**13 54 19.9**	**-0.7**
	baz=180						
SLKM	**Skilak Lake**	**4.31**	**357**		**Pn**	**13 54 20.3**	**-0.9**
P18K	**Big Mountain,**	**4.32**	**320**		**Pn**	**13 54 20.7**	**-0.5**
P18K	**Big Mountain,**	**4.32**	**320**	P	**Pn**	**13 54 20.7**	**-0.5**
	baz=136						
Q16K	**King Salmon**	**4.46**	**306**		**Pn**	**13 54 23.2**	**+0.1**
Q16K	**King Salmon**	**4.46**	**306**	P	**Pn**	**13 54 23.2**	**+0.1**
	baz=122						
RED	**Redoubt Volcan**	**4.50**	**341**		**Pn**	**13 54 23.6**	**-0.2**
HIN	**Hinchinbrook I**	**4.54**	**21**		**Pn**	**13 54 24.1**	**-0.1**
HIN				IAML		13 55 17.4	
	comp=N,234nm,0.5s						
HIN				IAML		13 55 21.4	
	comp=E,220nm,1.4s						
RSO	**Redoubt South**	**4.54**	**341**	Pn	**Pn**	**13 54 23.8**	**-0.6**
RDWB	**Redoubt West**	**4.58**	**341**		**Pn**	**13 54 23.7**	**-1.1**
CAPN	**Captain Cook N**	**4.62**	**352**	Pn	**Pn**	**13 54 25.6**	**+0.3**
CAPN	**Captain Cook N**	**4.62**	**352**	P	**Pn**	**13 54 26.4**	**+1.1**
	baz=170						
P17K	**Kvichak River**	**4.66**	**313**		**Pn**	**13 54 25.9**	**+0.2**
P17K	**Kvichak River**	**4.66**	**313**	P	**Pn**	**13 54 26.0**	**+0.2**
	baz=128						
O19K	**Port Alsworth**	**4.66**	**331**		**Pn**	**13 54 25.1**	**-0.7**
NCT	**North Crescent**	**4.67**	**341**		**Pn**	**13 54 24.9**	**-1.1**
KAIM	**Kayak Island**	**4.69**	**35**	Pn	**Pn**	**13 54 26.3**	**+0.1**
KAIM				IAML		13 55 27.4	
	comp=N,268nm,1.1s						
KAIM				IAML		13 55 31.9	
	comp=E,249nm,1.1s						
KAIM	**Kayak Island**	**4.69**	**35**	P	**Pn**	**13 54 26.2**	**0.0**
	baz=219						
CHGN	**Chignik**	**4.81**	**275**	Pn	**Pn**	**13 54 26.9**	**-1.0**
CHGN				IAML		13 55 36.3	
	comp=N,229nm,0.1s						
CHGN				IAML		13 55 36.4	
	comp=E,255nm,0.1s						
EYAK	**Cordova Ski Ar**	**4.84**	**24**		**Pn**	**13 54 28.2**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.84**	**24**	P	**Pn**	**13 54 28.5**	**+0.2**
EYAK	**Cordova Ski Ar**	**4.84**	**24**	P	**Pn**	**13 54 28.2**	**-0.1**
	baz=207						
FID	**Port Fidalgo**	**4.87**	**19**		**Pn**	**13 54 28.3**	**-0.5**
FID				IAML		13 55 23.6	
	comp=E,193nm,0.6s						
FID				IAML		13 55 26.2	
	comp=N,204nm,0.4s						
GLI	**Glacier Island**	**4.89**	**16**	Pn	**Pn**	**13 54 29.2**	**+0.2**
GLI				IAML		13 55 27.2	
	comp=N,112nm,0.7s						
GLI				IAML		13 55 28.1	
	comp=E,146nm,0.4s						
GLI	**Glacier Island**	**4.89**	**16**	P	**Pn**	**13 54 28.9**	**-0.1**
	baz=197						
RC01	**Rabbit Creek A**	**4.89**	**0**		**Pn**	**13 54 28.6**	**-0.4**
RC01				IAML		13 55 27.6	
	comp=E,155nm,0.6s						
RC01				IAML		13 55 30.7	
	comp=N,104nm,0.4s						
RC01	**Rabbit Creek A**	**4.89**	**0**	P	**Pn**	**13 54 28.7**	**-0.3**
	baz=180						
FIS	**Fire Island**	**4.95**	**358**		**Pn**	**13 54 29.9**	**0.0**
SUCK	**Suckling Hills**	**5.01**	**37**	Pn	**Pn**	**13 54 30.7**	**+0.1**
SUCK				IAML		13 55 30.8	
	comp=E,206nm,1.2s						
GOAT	**Goat Mountain**	**5.12**	**29**		**Pn**	**13 54 32.4**	**+0.2**
N20K	**Mount Spurr**	**5.16**	**347**	P	**Pn**	**13 54 31.8**	**-1.0**
	baz=165						
SPCR	**Spurr Chakacha**	**5.16**	**347**		**Pn**	**13 54 31.8**	**-1.0**
SPCP	**Crater Peak Br**	**5.22**	**347**		**Pn**	**13 54 32.9**	**-0.7**
N19K	**Bonanza Creek**	**5.23**	**334**		**Pn**	**13 54 32.9**	**-0.8**
N19K	**Bonanza Creek**	**5.23**	**334**	P	**Pn**	**13 54 33.2**	**-0.6**
	baz=150						
P16K	**Nushagak River**	**5.24**	**306**		**Pn**	**13 54 33.8**	**0.0**
P16K	**Nushagak River**	**5.24**	**306**	P	**Pn**	**13 54 33.8**	**0.0**
	baz=120						
KNK	**Knik Glacier**	**5.26**	**7**		**Pn**	**13 54 34.1**	**0.0**
KNK				IAML		13 55 42.0	
	comp=N,82nm,0.5s						
KNK				IAML		13 55 43.2	
	comp=E,115nm,0.7s						
KNK	**Knik Glacier**	**5.26**	**7**	P	**Pn**	**13 54 33.8**	**-0.3**
	baz=188						
O17K	**Koliganek Bris**	**5.28**	**316**		**Pn**	**13 54 34.2**	**-0.1**
O17K	**Koliganek Bris**	**5.28**	**316**	P	**Pn**	**13 54 34.2**	**-0.1**
	baz=130						
SUA	**Susitna One**	**5.29**	**355**	Pn	**Pn**	**13 54 33.8**	**-0.8**

M24K	Tolsona, Glenn	6.20	16	P		Pn	13 54 48.1 +1.1
	baz=199						
CUT	Chulitna	6.22	358	Pn		Pn	13 54 47.0 -0.2
TABL	Table Mountain	6.22	43			Pn	13 54 47.2 -0.2
MCARA	McCarthy VSAT	6.26	31			Pn	13 54 48.0 +0.2
MCARA	McCarthy VSAT	6.26	31	P		Pn	13 54 48.0 +0.2
	baz=216						
PTPK	Patty Peak	6.28	34			Pn	13 54 48.3 +0.1
PCA	Pinnacle	6.37	48			Pn	13 54 49.6 +0.3
PINM	Pinnacle	6.37	48	P		Pn	13 54 49.6 +0.3
	baz=236						
N16K	Nishlik Lake	6.37	316			Pn	13 54 49.5 +0.1
N16K	Nishlik Lake	6.37	316	P		Pn	13 54 49.5 +0.1
	baz=129						
WACK	Wrangell Chich	6.43	24			Pn	13 54 51.5 +1.1
BARN	Barnard Glacie	6.45	38			Pn	13 54 50.6 +0.1
WAT6	Susitna Watana	6.47	8			Pn	13 54 51.6 +0.7
WAT6	Susitna Watana	6.47	8	P		Pn	13 54 51.6 +0.7
	baz=190						
CTG	Chitna Glacier	6.49	39	P		Pn	13 54 50.9 -0.2
	baz=226						
CTGM	Chitina Glacie	6.49	39			Pn	13 54 51.0 -0.1
LOGN	Logan Glacier	6.52	41			Pn	13 54 51.3 -0.2
PNL	Peninsula	6.52	54			Pn	13 54 51.5 +0.1
PNL	Peninsula	6.52	54	P		Pn	13 54 51.1 -0.3
PNL	Peninsula	6.52	54	P		Pn	13 54 51.5 +0.1
	baz=242						
L19K	White Mountain	6.53	339	Pn		Pn	13 54 50.6 -0.9
L19K	White Mountain	6.53	339	P		Pn	13 54 50.3 -1.2
	baz=154						
M17K	Holitna River	6.54	326			Pn	13 54 51.3 -0.4
M17K	Holitna River	6.54	326	P		Pn	13 54 51.5 -0.2
	baz=140						
BCPM	Bancas Point	6.56	51			Pn	13 54 51.8 0.0
HARP	HAARP	6.64	19			Pn	13 54 54.2 +1.2
HARP	HAARP	6.64	19	P		Pn	13 54 54.2 +1.2
	baz=202						
WAT7	Susitna Watana	6.66	4			Pn	13 54 53.6 +0.3
WAT1	Susitna Watana	6.67	5			Pn	13 54 53.8 +0.3
WAT1	Susitna Watana	6.67	5	P		Pn	13 54 53.8 +0.3
	baz=186						
N15K	Kwethluk River	6.74	310	P		Pn	13 54 55.1 +0.8
	baz=122						
M16K	Timber Creek	6.79	319			Pn	13 54 55.0 -0.1
M16K	Timber Creek	6.79	319	P		Pn	13 54 55.3 +0.1
	baz=132						
O14K	Tigyukauivet M	6.86	301			Pn	13 54 56.4 +0.4
O14K	Tigyukauivet M	6.86	301	P		Pn	13 54 56.4 +0.4
	baz=112						
L18K	Granite Mounta	6.99	332	Pn		Pn	13 54 56.9 -0.9
L18K	Granite Mounta	6.99	332	P		Pn	13 54 56.9 -0.9
	baz=147						
PAX	Paxson	7.12	16			Pn	13 55 00.3 +0.6
PAX	Paxson	7.12	16	P		Pn	13 55 00.3 +0.6
	baz=199						
O29M	Mount Kennedy	7.19	51			Pn	13 55 00.7 0.0
O29M	Mount Kennedy	7.19	51	P		Pn	13 55 01.0 +0.3
	baz=239						
RND	Reindeer	7.23	3	Pn		Pn	13 55 01.2 0.0
P29M	Windy Craggy	7.27	57			Pn	13 55 01.1 -0.6
P29M	Windy Craggy	7.27	57	P		Pn	13 55 01.1 -0.6
	baz=246						
M15K	Kasigluk River	7.27	313			Pn	13 55 02.1 +0.5
M15K	Kasigluk River	7.27	313	P		Pn	13 55 02.1 +0.5
	baz=124						
YUK8	Steele Glacier	7.28	42			Pn	13 55 02.8 +0.9
YUK8	Steele Glacier	7.28	42	P		Pn	13 55 02.8 +0.9
	baz=230						
CAST	Castle Rocks	7.32	352	Pn		Pn	13 55 02.2 -0.2
CAST	Castle Rocks	7.32	352	P		Pn	13 55 02.4 +0.1
	baz=170						
N14K	Kuskokwak Cree	7.32	305			Pn	13 55 02.7 +0.3
N14K	Kuskokwak Cree	7.32	305	P		Pn	13 55 02.7 +0.3
	baz=116						
YUK3	Moose Creek	7.36	37			Pn	13 55 04.1 +1.0
YUK3	Moose Creek	7.36	37	P		Pn	13 55 04.1 +1.0
	baz=224						
M27K	Edge Creek, AK	7.37	30			Pn	13 55 03.8 +0.7
M27K	Edge Creek, AK	7.37	30	P		Pn	13 55 03.8 +0.7
	baz=216						
L17K	Donlin	7.37	327			Pn	13 55 03.3 +0.3
L17K	Donlin	7.37	327	P		Pn	13 55 03.3 +0.3
	baz=140						
KTH	Kantishna Hill	7.39	356			Pn	13 55 03.2 -0.1
TTA	Tatalina	7.44	337			Pn	13 55 02.8 -1.3
TTA	Tatalina	7.44	337	P		Pn	13 55 02.8 -1.3
TTA	Tatalina	7.44	337	P		Pn	13 55 02.7 -1.3
	baz=152						
L16K	Owhat River	7.44	322	Pn		Pn	13 55 03.5 -0.5
L16K	Owhat River	7.44	322	P		Pn	13 55 04.0 0.0
	baz=134						
K20K	Telida	7.48	345			Pn	13 55 03.4 -1.2
K20K	Telida	7.48	345	P		Pn	13 55 03.7 -0.9
	baz=161						
MCK	McKinley	7.56	3			Pn	13 55 06.7 +1.1
MCK	McKinley	7.56	3	P		Pn	13 55 06.7 +1.1
	baz=183						
L26K	Log Cabin Wild	7.57	23	Pn		Pn	13 55 06.0 +0.2
YUK6	Outpost Mounta	7.62	47			Pn	13 55 07.5 +0.9
YUK6	Outpost Mounta	7.62	47	P		Pn	13 55 07.5 +0.9
	baz=236						
BVCY	Beaver Creek	7.71	33			Pn	13 55 08.8 +1.1
BVCY	Beaver Creek	7.71	33	P		Pn	13 55 08.8 +1.1
	baz=220						
CHUM	Lake Minchumin	7.80	352			Pn	13 55 10.1 +1.2
CHUM	Lake Minchumin	7.80	352	P		Pn	13 55 10.1 +1.2
	baz=170						
P30M	Million Dollar	7.83	55			Pn	13 55 09.9 +0.6
P30M	Million Dollar	7.83	55	P		Pn	13 55 09.9 +0.6
	baz=245						
K17K	Iditarod	7.83	330	Pn		Pn	13 55 08.0 -1.2
K17K	Iditarod	7.83	330	P		Pn	13 55 08.8 -0.5
	baz=143						
M14K	Bethel	7.83	311	P		Pn	13 55 09.6 +0.3
	baz=121						
HYT	Haines Junctio	7.91	49	Pn		Pn	13 55 10.8 +0.3
BPAW	Bear Paw Mtn.	7.94	356	Pn		Pn	13 55 09.9 -0.9
BPAW	Bear Paw Mtn.	7.94	356	P		Pn	13 55 09.9 -0.9
	baz=175						
L27K	Beaver Creek,	7.96	27	Pn		Pn	13 55 11.5 +0.4
L27K	Beaver Creek,	7.96	27	P		Pn	13 55 11.5 +0.4
	baz=214						
BCAR	Beaver Creek A	7.97	27	Pn		Pn	13 55 11.5 +0.2
SIT	Sitka	8.02	78	P		Pn	13 55 08.2 -3.7
J18K	Innoko River	8.06	337			Pn	13 55 11.3 -1.2
J18K	Innoko River	8.06	337	P		Pn	13 55 12.1 -0.5
	baz=152						
L15K	Ungalak Mounta	8.16	317			Pn	13 55 13.8 0.0
L15K	Ungalak Mounta	8.16	317	P		Pn	13 55 13.8 0.0
	baz=127						
J20K	Nowinta River	8.28	347			Pn	13 55 14.5 -1.0
J20K	Nowinta River	8.28	347	P		Pn	13 55 14.8 -0.7
	baz=163						
M13K	Dall Lake	8.29	306			Pn	13 55 15.8 +0.3
M13K	Dall Lake	8.29	306	P		Pn	13 55 15.8 +0.3
	baz=115						
J19K	Poorman	8.33	342	Pn		Pn	13 55 15.6 -0.6
SKAG	Skagway	8.37	61	P		Pn	13 55 16.6 -0.1
NEA2	Nenana	8.41	2			Pn	13 55 16.9 -0.4
L14K	Kuka Creek	8.44	313	Pn		Pn	13 55 17.6 0.0
L14K	Kuka Creek	8.44	313	P		Pn	13 55 18.3 +0.6
	baz=122						
O30N	Mendenhall	8.49	52	Pn		Pn	13 55 18.4 -0.1
O30N	Mendenhall	8.49	52	P		Pn	13 55 18.4 -0.1
	baz=243						
M29M	Somme Creek	8.51	38			Pn	13 55 19.0 +0.3
M29M	Somme Creek	8.51	38	P		Pn	13 55 19.3 +0.7
	baz=227						
CCB	Clear Creek Bu	8.52	6			Pn	13 55 19.6 +0.8
K15K	Wolf Creek Mou	8.56	320	Pn		Pn	13 55 19.6 +0.3
K15K	Wolf Creek Mou	8.56	320	P		Pn	13 55 19.8 +0.5
	baz=130						
JIS	Juneau Island	8.60	70	P		Pn	13 55 18.7 -1.2
J25K	Salcha River,	8.70	13			Pn	13 55 22.0 +0.7
J25K	Salcha River,	8.70	13	P		Pn	13 55 22.0 +0.7
	baz=196						
IL31		8.70	8			Pn	13 55 21.7 +0.4
ILAR	Eielson Array	8.70	8	Pn		Pn	13 55 21.6 +0.4
	comp=E,0.9nm,0.3s,baz=189,slow=14,SNR=46						
ILAR				Sn		Sn	13 56 55.8 -3.6
	comp=E,1.5nm,0.3s,baz=200,slow=22,SNR=10						
K27K	Chicken	8.73	23			Pn	13 55 22.6 +1.0
K27K	Chicken	8.73	23	P		Pn	13 55 22.6 +1.0
	baz=209						
COLA	College	8.74	5			Pn	13 55 22.5 +0.7
COLA	College	8.74	5	P		Pn	13 55 23.5 +1.7
MDM	Murphy Dome	8.81	4			Pn	13 55 22.2 -0.6
MLY	Manley	8.86	357	Pn		Pn	13 55 22.9 -0.6
MLY	Manley	8.86	357	P		Pn	13 55 23.7 +0.2
	baz=176						
J16K	Anvik River	8.94	327	Pn		Pn	13 55 24.0 -0.5
J16K	Anvik River	8.94	327	P		Pn	13 55 24.3 -0.2
	baz=138						
I23K	Minto, Yukon-K	8.97	1			Pn	13 55 24.7 -0.2
I23K	Minto, Yukon-K	8.97	1	P		Pn	13 55 25.1 +0.3
	baz=181						
WHY	Whitehorse	8.99	54			Pn	13 55 24.9 -0.4
I21K	Tanana	9.06	354			Pn	13 55 25.4 -0.8
I21K	Tanana	9.06	354	P		Pn	13 55 26.7 +0.6
	baz=172						
L29M	L29M	9.07	36	Pn		Pn	13 55 27.1 +0.7
L29M	L29M	9.07	36	P		Pn	13 55 27.3 +0.9
	baz=225						
M30M	Minto, Yukon	9.18	41	Pn		Pn	13 55 28.3 +0.4
M30M	Minto, Yukon	9.18	41	P		Pn	13 55 28.2 +0.3
	baz=231						
P32M	Atlin	9.19	62	Pn		Pn	13 55 27.3 -0.8
P32M	Atlin	9.19	62	P		Pn	13 55 27.2 -0.8
	baz=255						
DAWY	Dawson	9.41	29	Pn		Pn	13 55 31.1 +0.1
EGAK	Eagle	9.58	23	Pn		Pn	13 55 34.0 +0.8
J14K	Nanvaranak Lak	9.58	319	Pn		Pn	13 55 33.5 +0.3
H24K	Noodor Dome	9.70	5	Pn		Pn	13 55 35.5 +0.5
K29M	Barlow Dome	9.79	34			Pn	13 55 37.0 +0.7
P33M	Teslin, Yukon	9.80	59	Pn		Pn	13 55 35.5 -0.9
P33M	Teslin, Yukon	9.80	59	P		Pn	13 55 35.7 -0.7
	baz=253						
H18K	Honhosa River	9.89	338	Pn		Pn	13 55 36.4 -1.2
M31M	Drury Creek, Y	9.90	46			Pn	13 55 38.0 +0.3
IMAR	Indian Mountai	9.99	351	Pn		Pn	13 55 37.9 -0.9
FARO	Faro, Yukon	10.34	48	Pn		Pn	13 55 44.7 +1.0
G23K	Bananza Creek	10.54	359	Pn		Pn	13 55 46.2 -0.2
FYU	Fort Yukon	10.61	10	Pn		Pn	13 55 47.9 +0.6
J30M	Hart River	10.68	33	Pn		Pn	13 55 49.3 +0.8
DLBC	Dease Lake	10.90	70	Pn		Pn	13 55 51.3 -0.2
	comp=E,0.5nm,0.3s,baz=256,slow=7.4,SNR=12						
DLBC				Sn		Sn	13 57 49.3 -4.1
	comp=E,0.1nm,0.3s,baz=299,slow=19,SNR=1.8						
	comp=E,1.4nm,0.4s						
ANM	Nome	11.35	324	Pn		Pn	13 55 57.6 +0.2
BMAR	Burnt Mountain	11.52	10	Pn		Pn	13 56 01.1 +1.3
E25K	Arctic Village	12.11	8	Pn		Pn	13 56 08.8 +0.9
D22K	Ayikyak River	12.78	355	Pn		Pn	13 56 17.5 +0.5
G31M	Satah River	12.98	28			Pn	13 56 20.4 +0.6
F31M	Tsiigehtchic	13.51	27	Pn		Pn	13 56 27.7 +0.8
INK	Inuvik	14.22	25	Pn		Pn	13 56 37.4 +0.7
INK	Inuvik	14.22	25	Pn		Pn	13 56 37.5 +0.8
	comp=E,0.1nm,0.3s,baz=209,slow=16,SNR=5.1						
	comp=E,3.8nm,1.0s						
C36M	Paulatuk	17.44	31	P		P	13 57 20.8 +1.0
WISH	Wishkah	18.43	109	P		Pn	13 57 32.4 +1.7
YKA	Yellowknife Ar	18.81	56	P		P	13 57 35.8 +0.9
	comp=E,0.1nm,0.3s,baz=263,slow=11,SNR=11						
	comp=E,3.2nm,1.0s						
A36M	Sachs Harbour	18.86	24			P	13 57 36.4 +1.1
A36M				IAmb		IAmb	13 57 47.5
	comp=Z,14nm,0.8s						
NVAR	Mina Array Bea	27.43	117	P		P	13 59 00.6 -0.8
	comp=Z,0.4nm,0.7s,baz=313,slow=8.5,SNR=2.6						
	comp=Z,0.4nm,0.7s						
RLMT	Red Lodge	27.57	96	P		P	13 59 03.2 +0.5
E43A	Lone Tree Farm	39.16	77	P		P	14 00 43.9 +0.8
E43A				IAmb		IAmb	14 01 06.6
	comp=Z,14nm,1.3s						
TXAR	Lajitas Array	42.06	110	P		P	14 01 06.9 -0.4
	comp=Z,0.6nm,0.9s,baz=339,slow=7.2,SNR=2.3						
	comp=Z,0.6nm,0.9s						
H11N2	WAKE ISLAND Hy	48.61	239	T		T	14 54 24.3
	baz=31,slow=76						
H11N3	WAKE ISLAND Hy	48.61	239	T		T	14 54 15.7
	baz=31,slow=76						
H11N1	WAKE ISLAND Hy	48.62	239	T		T	14 54 24.6
	baz=31,slow=76						
H11S1	WAKE ISLAND Hy	49.75	239	T		T	14 56 13.0
	baz=30,slow=76						
H11S2	WAKE ISLAND Hy	49.76	239	T		T	14 55 58.0
	baz=30,slow=76						
H11S3	WAKE ISLAND Hy	49.77	239	T		T	14 56 05.9
	baz=30,slow=76						
SONM	Songino Array	58.47	310	P		P	14 03 12.1 +0.6
SONM	Songino Array	58.47	310	P		P	14 03 11.5 +0.1
	comp=Z,1.3nm,0.8s,baz=51,slow=4.8,SNR=8.4						
	comp=Z,1.3nm,0.8s						
ZALV	Zalesovo Beam	61.47	327	P		P	14 03 32.2 +0.5
	comp=Z,0.8nm,0.5s,baz=34,slow=5.5,SNR=5.2						
	comp=Z,0.8nm,0.5s						
HHC	Hu-ho-hao-te	61.54	301	*e*P		P	14 03 31.3 -1.2
HHC				pmax		pmax	
	comp=Z,14nm,0.7s						
HHC				pmax		pmax	
	comp=Z,350nm,5.0s						
FINES	FINESS Array B	62.64	2	P		P	14 03 39.5 +0.1
	comp=Z,1.2nm,0.8s,baz=341,slow=8.0,SNR=1.6						
	comp=Z,1.2nm,0.8s						
BRVK	Borovoye	66.22	335	P		P	14 04 02.8 -0.2
BRVK				IAmb		IAmb	14 04 43.6
	comp=Z,3.1nm,1.2s						
BVAR	Borovoye Array	66.23	335	P		P	14 04 02.7 -0.4
	comp=Z,1.5nm,0.7s,baz=46,slow=8.5,SNR=8.6						
	comp=Z,1.5nm,0.7s						
KURBB	Kurchatov Arra	66.25	329	P		P	14 04 03.1 -0.1
	comp=Z,0.6nm,0.7s,baz=28,slow=6.5,SNR=5.3						
	comp=Z,0.6nm,0.7s						
MK31	Makanchi Array	68.49	324	P		P	14 04 17.2 -0.3
MK31				IAmb		IAmb	14 04 21.1
	comp=Z,2.2nm,1.4s						
MKAR	Makanchi Array	68.49	324	P		P	14 04 17.1 -0.4
MKAR	Makanchi Array	68.49	324	P		P	14 04 16.8 -0.7
	comp=Z,0.4nm,0.5s,baz=39,slow=6.4,SNR=8.0						
	comp=Z,0.4nm,0.5s						
WMQ	Urumqi	69.22	319	*e*P		P	14 04 24.0 +1.8
WMQ				ScS		SKiKP	14 14 17.5 +5.7
ABKAR	Akbulak array	72.02	340	P		P	14 04 39.6 +0.5
GRA1	Grafenberg Arr	73.28	13	P		P	14 04 45.3 -1.3
GRFO	Grafenberg	73.28	13	P		P	14 04 45.4 -1.2
PZH	PanZhiHua	77.91	300	P		P	14 05 12.8 -0.8
PZH				pmax		pmax	
	comp=Z,10.0nm,0.6s						

IDC 26 13:57:12.7±2.7, 2°80S×126°75E, h0km, mb3.5/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=374.7km s-min=24.8km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.58	157	P	Pn	14 01 31.6	0.0
	0.1nm,0.3s,baz=333,slow=12,SNR=2.1						
	0.4nm,0.4s						
ASAR	Alice Springs	21.87	162	P	P	14 02 07.2	-0.1
	0.6nm,0.3s,baz=345,slow=12,SNR=8.7						
	0.6nm,0.3s						
MKAR	Makanchi Array	62.97	327	P	P	14 07 41.6	+0.3
	0.5nm,0.7s,baz=128,slow=7.9,SNR=4.5						
	0.5nm,0.7s						
KURBB	Kurchatov Arra	67.27	329	P	P	14 08 08.6	-0.4
	0.4nm,0.8s,baz=127,slow=4.5,SNR=2.0						
	0.4nm,0.8s						

*ISN **26** 13:59:34.8±1.0, 34°.46N×45°.40E, h14km±21km, ML2.8*
*TEH **26** 13:59:35.3, 34°.46N×45°.41E, h13km±40km, ML2.7*

ISC 26 13:59:35.1±1.2, 34°.47N±0°.04×45°.43E±0°.04, h20km±8km, n10, σ0°59/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGS1	Ghasr-e-Shirin	0.14	74	Pg	Pg	13 59 39.3	-0.2
IDHR	Dehrash	0.83	73	Pg	Pg	13 59 50.9	-0.4
IGHG	Ghaleghazi	0.95	98	Pg	Pb	13 59 53.9	+0.8
ILBA	Ilam Banvizeh	1.06	142	Pg	Pg	13 59 55.6	-0.2
IKRK	Kirkuk	1.29	317	*e*Pg	Pg	14 00 00.0	-0.1
IKRK				*e*Sg	Sg	14 00 17.0	0.0
IKRK				AML	AML	14 00 20.8	
	comp=N,207nm,0.3s						
IKRK				AML	AML	14 00 21.3	
	comp=E,200nm,0.4s						
ILIN	Lien	1.34	70	Pg	Pg	14 00 01.2	0.0
KCHF	Cheshme Sefid,	1.35	98	Pg	Pg	14 00 01.2	-0.1
IBDR	Badra	1.42	163	*e*Pn	Pg	14 00 02.0	-0.5
IBDR				*e*Sn	Sg	14 00 22.0	+1.0
BHD	Baghdad	1.48	216	*e*Pn	Pb	14 00 02.0	+0.1
BHD				*e*Sn	Sg	14 00 23.0	+0.1
IKFM	Kafar-mosalman	2.22	114	Pn	Pb	14 00 13.5	-1.0

*NEIC **26** 14:00:55.9±1.2, 56°.02N±0°.08×150°.0W±0°.1, h10km±2km, ML3.7/36, ML3.6(AEIC), Error ellipse: s-maj=14.2km s-min=10.6km az=177.0*
*IDC **26** 14:00:57.5±1.2, 56°.03N×150°.02W, h0km, mb3.5/7, mbtmp3.5/11, ML3.0/4, MS3.8/1, Error ellipse: s-maj=29.1km s-min=17.9km az=41.0*
*AEIC **26** 14:00:58.6±0.9, 56°.0N±0°.1×149°.91W±0°.09, h2km±8km, Error ellipse: s-maj=15.8km s-min=7.5km az=174.0*

ISC 26 14:00:58.5±0.9, 56°.19N±0°.08×149°.96W±0°.05, h10km, n165, σ1s03/160, mb3.6/7, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.11	301	Pn	Pn	14 01 31.7	-2.0
OHAK	Old Harbor	2.11	301		Sn	14 01 57.3	-2.7
OHAK	Old Harbor	2.11	301	P	Pn	14 01 31.8	-1.9
	baz=123						
OHAK				S	Sn	14 01 57.3	-2.7
	baz=123						
KDAK	Kodiak Island	2.15	319	Pn	Pn	14 01 33.2	-1.1
KDAK	Kodiak Island	2.15	319		Sn	14 02 00.4	-0.6
KDAK	Kodiak Island	2.15	319	Pn	Pn	14 01 33.3	-1.0
	4.4nm,0.3s,baz=119,slow=4.7,SNR=308						
KDAK				Sn	Sn	14 01 58.2	-2.7
	11nm,0.3s,baz=123,slow=24,SNR=7.4						
	23nm,0.5s						
SYI	Shuyak Island	2.76	333	Pn	Pn	14 01 42.0	-0.7
SYI	Shuyak Island	2.76	333		Sn	14 02 16.1	+0.1
Q20K	Shuyak Island	2.76	332	P	Pn	14 01 42.2	-0.5
	baz=152						
Q20K				S	Sn	14 02 16.1	0.0
	baz=152						
Q19K	Cape Douglas,	3.39	326		Pn	14 01 51.4	0.0
Q19K	Cape Douglas,	3.39	326	P	Pn	14 01 51.4	0.0
	baz=144						
CNPM	China Poot	3.41	349		Pn	14 01 50.8	-0.9
CNPM	China Poot	3.41	349		Sn	14 02 32.2	0.0
CNPM	China Poot	3.41	349	IAML		14 02 50.4	
	comp=E,88nm,0.6s						
ACHA	Angle Creek He	3.55	307		Pn	14 01 53.2	-0.5
BRSE	Bradley Lake S	3.59	354		Pn	14 01 52.9	-1.2
BRSE	Bradley Lake S	3.59	354	P	Pn	14 01 52.9	-1.2
	baz=173						
BRLK	Bradley Lake	3.62	353	Pn	Pn	14 01 53.6	-1.0
BRLK	Bradley Lake	3.62	353		Sn	14 02 36.6	-0.7
BRLK	Bradley Lake	3.62	353	IAML		14 02 46.7	
	comp=N,72nm,1.2s						
Q23K	Middleton Isla	3.78	29	Pn	Pn	14 01 55.2	-1.5
Q23K				IAML		14 02 37.0	
	comp=N,116nm,1.2s						
Q23K				IAML		14 04 15.4	
	comp=E,149nm,1.3s						
Q23K	Middleton Isla	3.78	29	P	Pn	14 01 55.6	-1.0
	baz=210						
MID	Middleton Isla	3.78	29	Pn	Pn	14 01 55.2	-1.4
MID				IAML		14 02 45.4	
	comp=E,162nm,1.4s						
MID				IAML		14 02 54.4	
	comp=N,158nm,1.4s						
CNTC	Contact Creek	3.83	305		Pn	14 01 56.8	-0.8
Q17K	Contact Creek	3.83	305	P	Pn	14 01 56.7	-0.8
	baz=123						
P19K	Oil Pt	3.89	335	Pn	Pn	14 01 55.6	-2.6
SEW	Seward	3.93	4		Pn	14 01 57.6	-1.2
SEW	Seward	3.93	4	P	Pn	14 01 57.6	-1.2
	baz=184						
P23K	Montague Islan	4.05	18		Pn	14 01 59.2	-1.2
P23K	Montague Islan	4.05	18	P	Pn	14 01 59.2	-1.2
	baz=199						
O20K	Slope Mountain	4.15	341		Pn	14 02 01.1	-0.7
O20K	Slope Mountain	4.15	341	P	Pn	14 02 01.2	-0.7
	baz=160						
ILSW	Iliamna Southw	4.16	337		Pn	14 02 00.5	-1.6
ILSW				IAML		14 03 10.9	
	comp=E,49nm,0.6s						
ILSW				IAML		14 03 12.8	
	comp=N,61nm,1.0s						
IVE	Iliamna Volcan	4.17	338		Pn	14 02 00.2	-1.9
O22K	Cooper Landing	4.30	2		Pn	14 02 02.8	-1.1
SLKM	Skilak Lake	4.33	358		Pn	14 02 03.0	-1.3
RSO	Redoubt South	4.53	342		Pn	14 02 05.7	-1.5
HIN	Hinchinbrook I	4.59	22	Pn	Pn	14 02 07.1	-0.9
HIN				IAML		14 03 19.4	
	comp=E,101nm,1.1s						
HIN				IAML		14 03 27.9	
	comp=N,77nm,1.1s						
P17K	Kvichak River	4.60	314		Pn	14 02 07.4	-0.6
P17K	Kvichak River	4.60	314	P	Pn	14 02 07.4	-0.6
	baz=130						
CHGN	Chignik	4.72	275	Pn	Pn	14 02 06.5	-3.1
KAIM	Kayak Island	4.76	36	Pn	Pn	14 02 09.2	-1.0
KAIM				IAML		14 05 03.0	
	comp=E,101nm,1.4s						
KAIM	Kayak Island	4.76	36	P	Pn	14 02 09.3	-0.9
	baz=219						
EYAK	Cordova Ski Ar	4.90	25		Pn	14 02 11.3	-0.8
EYAK	Cordova Ski Ar	4.90	25	P	Pn	14 02 11.3	-0.8
	baz=207						
RC01	Rabbit Creek A	4.92	1	Pn	Pn	14 02 11.6	-0.7
RC01				IAML		14 03 25.8	
	comp=E,38nm,0.6s						
RC01				IAML		14 03 28.4	
	comp=N,44nm,0.5s						
FID	Port Fidalgo	4.92	20	Pn	Pn	14 02 11.7	-0.8
FID				IAML		14 03 24.1	
	comp=E,51nm,1.0s						
FID			

N17K	Nushagak Hills	5.78	322	Pn		Pn	14 02 24.0	-0.2
N17K	Nushagak Hills baz=137	5.78	322	P		Pn	14 02 23.7	-0.4
CRQM	Cirque	5.81	35			Pn	14 02 23.9	-0.8
CRQE	Cirque baz=220	5.82	35	P		Pn	14 02 23.6	-1.2
SCM	Sheep Creek Mo	5.82	12	Pn		Pn	14 02 25.1	+0.3
SCM	Sheep Creek Mo baz=194	5.82	12	P		Pn	14 02 24.8	0.0
TGL	Tana Glacier	5.91	36			Pn	14 02 25.2	-0.8
ISLE	Juniper Island	5.96	39	Pn		Pn	14 02 26.2	-0.7
BAGL	Bagley Icefiel	5.98	41			Pn	14 02 25.7	-1.2
O15K	Ungalikthiuk R	6.08	304			Pn	14 02 27.2	-1.1
O15K	Ungalikthiuk R baz=117	6.08	304	P		Pn	14 02 27.2	-1.1
VRDI	Verde Repeater	6.08	31	Pn		Pn	14 02 27.7	-0.8
N25K	Chitina, Valde	6.10	25			Pn	14 02 28.3	-0.3
N25K	Chitina, Valde baz=208	6.10	25	P		Pn	14 02 28.3	-0.3
M18K	Stony River	6.12	333			Pn	14 02 27.9	-1.0
M18K	Stony River baz=148	6.12	333	P		Pn	14 02 27.9	-1.0
GLB	Gilahina Butte	6.16	29			Pn	14 02 28.9	-0.5
KIAG	Kiagna River	6.19	37			Pn	14 02 29.0	-1.0
M24K	Tolsona, Glenn	6.24	17			Pn	14 02 30.6	0.0
M24K	Tolsona, Glenn baz=199	6.24	17	P		Pn	14 02 30.6	0.0
SAMH	Samovar Hills	6.26	47			Pn	14 02 29.7	-1.1
GRNC	Granite Creek	6.26	40			Pn	14 02 29.3	-1.7
TABL	Table Mountain	6.30	44			Pn	14 02 30.8	-0.8
N16K	Nishlik Lake	6.32	316			Pn	14 02 31.1	-0.5
N16K	Nishlik Lake baz=130	6.32	316	P		Pn	14 02 31.1	-0.5
MCARA	McCarthy VSAT	6.33	32			Pn	14 02 31.4	-0.3
MCARA	McCarthy VSAT baz=216	6.33	32	P		Pn	14 02 31.2	-0.5
PTPK	Patty Peak	6.35	35			Pn	14 02 31.5	-0.6
M17K	Holitna River	6.51	326			Pn	14 02 33.9	-0.3
M17K	Holitna River baz=141	6.51	326	P		Pn	14 02 34.1	-0.1
L19K	White Mountain	6.51	339			Pn	14 02 33.3	-0.9
BARN	Barnard Glacie	6.53	38			Pn	14 02 33.6	-1.0
CTG	Chitna Glacier baz=226	6.57	40	P		Pn	14 02 34.2	-0.9
CTGM	Chitina Glacie	6.57	40			Pn	14 02 34.2	-1.0
LOGN	Logan Glacier	6.60	42			Pn	14 02 34.5	-1.1
PNL	Peninsula	6.62	54			Pn	14 02 34.6	-1.1
PNL	Peninsula baz=241	6.62	54	P		Pn	14 02 34.6	-1.1
BCPM	Bancas Point	6.65	51			Pn	14 02 34.8	-1.2
N15K	Kwethluk River	6.68	311			Pn	14 02 36.7	+0.2
N15K	Kwethluk River baz=124	6.68	311	P		Pn	14 02 36.3	-0.2
HARP	HAARP	6.69	20			Pn	14 02 36.9	+0.2
HARP	HAARP baz=203	6.69	20	P		Pn	14 02 36.9	+0.2
M16K	Timber Creek	6.75	320			Pn	14 02 37.1	-0.4
M16K	Timber Creek baz=133	6.75	320	P		Pn	14 02 37.1	-0.4
N14K	Kuskokwak Cree	7.26	306			Pn	14 02 43.2	-1.2
N14K	Kuskokwak Cree baz=117	7.26	306	P		Pn	14 02 43.2	-1.2
O29M	Mount Kennedy	7.28	51			Pn	14 02 44.4	-0.5
O29M	Mount Kennedy baz=239	7.28	51	P		Pn	14 02 43.7	-1.2
L17K	Donlin	7.34	328			Pn	14 02 45.4	-0.2
L17K	Donlin baz=141	7.34	328	P		Pn	14 02 45.3	-0.2
P29M	Windy Craggy	7.36	57			Pn	14 02 44.5	-1.5
P29M	Windy Craggy baz=246	7.36	57	P		Pn	14 02 44.5	-1.5
L16K	Owhat River	7.40	322			Pn	14 02 45.8	-0.6
L16K	Owhat River baz=135	7.40	322	P		Pn	14 02 45.8	-0.6
M27K	Edge Creek, AK	7.44	30			Pn	14 02 46.4	-0.6
M27K	Edge Creek, AK baz=216	7.44	30	P		Pn	14 02 46.4	-0.6
K17K	Iditarod	7.80	330			Pn	14 02 51.9	+0.1
K17K	Iditarod baz=144	7.80	330	P		Pn	14 02 51.9	+0.1
HDA	Harding Lake	8.38	9			Pn	14 03 00.1	+0.3
L14K	Kuka Creek	8.38	313			Pn	14 03 00.2	+0.4
M29M	Somme Creek	8.58	38			Pn	14 03 02.4	-0.3
M29M	Somme Creek baz=227	8.58	38	P		Pn	14 03 02.2	-0.5
IL31		8.74	9			Pn	14 03 04.5	-0.2
ILAR	Eielson Array comp=N,0.2nm,0.3s,baz=188,slow=14,SNR=6.8	8.74	9	Pn		Pn	14 03 05.5	+0.8
ILAR	comp=N,0.2nm,0.3s,baz=186,slow=23,SNR=5.5			Sn		Sn	14 04 39.7	-3.5
ILAR	comp=N,656nm,20.8s,baz=68,slow=33 comp=N,0.5nm,0.4s			LR		LR	14 05 49.3	
L29M	L29M	9.15	36			Pn	14 03 09.6	-0.8
P33M	Teslin, Yukon	9.89	59	Pn		Pn	14 03 18.8	-1.9
DLBC	Dease Lake comp=N,0.1nm,0.3s,baz=260,slow=9.2,SNR=1.5	11.00	70	Pn		Pn	14 03 34.9	-1.0
G31M	Satah River	13.05	28			Pn	14 04 03.6	0.0
INK	Inuvik baz=234,slow=5.6,SNR=7.9 comp=N,6.6nm,1.2s	14.29	25	Pn		Pn	14 04 22.4	+2.0
YKA	Yellowknife Ar baz=261,slow=11,SNR=7.1 comp=N,2.4nm,1.1s	18.90	56	P		Pn	14 05 18.9	-0.5
A36M	Sachs Harbour	18.91	24	P		P	14 05 18.0	-0.9
NVAR	Mina Array Bea comp=N,0.4nm,0.9s,baz=303,slow=8.3,SNR=1.6 comp=N,0.4nm,0.9s	27.50	117	P		P	14 06 43.8	-1.3
PDAR	Pinedale Array comp=N,0.3nm,0.7s,baz=320,slow=8.3,SNR=2.5 comp=N,0.3nm,0.7s	29.02	100	P		P	14 07 00.6	+2.0
TXAR	Lajitas Array comp=N,0.4nm,1.0s,baz=332,slow=9.6,SNR=3.1 comp=N,0.4nm,1.0s	42.15	110	P		P	14 08 51.8	+0.8
H11N2	WAKE ISLAND Hy baz=31,slow=76,SNR=15	48.51	239	T		T	15 02 21.8	
H11N3	WAKE ISLAND Hy baz=31,slow=76,SNR=17	48.52	239	T		T	15 01 46.9	
H11N1	WAKE ISLAND Hy baz=31,slow=76,SNR=16	48.53	239	T		T	15 02 21.8	
H11S1	WAKE ISLAND Hy baz=30,slow=76,SNR=19	49.65	239	T		T	15 03 40.4	
H11S2	WAKE ISLAND Hy baz=30,slow=76,SNR=16	49.67	239	T		T	15 03 40.4	
H11S3	WAKE ISLAND Hy baz=30,slow=76,SNR=18	49.67	239	T		T	15 03 40.4	
SONM	Songino Array comp=N,0.3nm,0.5s,baz=47,slow=8.0,SNR=3.7 comp=N,0.3nm,0.5s	58.41	310	P		P	14 10 54.8	+0.9
ZALV	Zalesovo Beam comp=N,0.6nm,0.6s,baz=15,slow=6.0,SNR=2.6 comp=N,0.6nm,0.6s	61.43	327	P		P	14 11 15.3	+0.8
BVAR	Borovoye Array comp=N,0.6nm,0.8s,baz=27,slow=9.9,SNR=3.1 comp=N,0.6nm,0.8s	66.21	335	P		P	14 11 48.6	+2.7
MKAR	Makanchi Array comp=N,0.4nm,0.8s,baz=39,slow=5.5,SNR=4.7 comp=N,0.4nm,0.8s	68.45	324	P		P	14 12 01.2	+1.0

*NEIC **26** 14:01:09.3±1.3,55.8N±0.1×149.9W±0.1, h8km±8km, ML3.7/20,ML3.4(AEIC),Error ellipse: s-maj=15.6km s-min=10.7km az=165.0*

AEIC 26 14:01:15.6±1.5,55.9N±0.1×149.9W±0.2,h12km±8km, Error ellipse: s-maj=16.0km s-min=11.7km az=158.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.30	307	Pn		14 01 48.5	-4.8
OHAK				Sn		14 02 14.4	-7.0
OHAK	Old Harbor comp=N,93nm,1.1s	2.30	307	IAML		14 02 19.9	
OHAK	comp=E,95nm,0.7s			IAML		14 02 22.5	
KDAK	Kodiak Island	2.41	324			Pn	14 01 49.7	-5.1
KDAK						Sn	14 02 16.7	-7.5
SYI	Shuyak Island	3.05	335			Pn	14 01 58.9	-4.8
SYI						Sn	14 02 33.3	-6.8
SYI	Shuyak Island comp=E,97nm,0.6s	3.05	335	IAML		14 02 33.6	
SYI	comp=N,94nm,0.6s			IAML		14 02 34.3	
Q19K	Cape Douglas,	3.67	328			Pn	14 02 08.5	-3.6
CNPM	China Poot	3.73	350			Pn	14 02 07.9	-5.1
CNPM				IAML		14 02 42.6		
	comp=N,65nm,1.1s							
CNPM	China Poot	3.73	350			Sn	14 02 49.2	-7.6
BRSE	Bradley Lake S	3.91	354			Pn	14 02 11.4	-4.0
CNTC	Contact Creek	4.04	309			Pn	14 02 13.5	-3.8
Q23K	Middleton Isla	4.05	27			Pn	14 02 11.8	-5.5
Q23K	Middleton Isla comp=N,135nm,1.4s	4.05	27	IAML		14 04 51.5		
MID	Middleton Isla	4.05	27	Pn		Pn	14 02 11.8	-5.6
P23K	Montague Islan	4.35	17			Pn	14 02 16.4	-5.1
P18K	Big Mountain,	4.53	323	Pn		Pn	14 02 19.5	-4.6
P18K	comp=E,37nm,1.4s			IAML		14 03 11.3		
P18K	comp=N,34nm,1.4s			IAML		14 03 12.2		
P17K	Kvichak River	4.84	316			Pn	14 02 24.7	-3.4
HIN	Hinchinbrook I	4.89	20			Pn	14 02 23.8	-5.1
KAIM	Kayak Island	5.02	34			Pn	14 02 25.9	-4.8
EYAK	Cordova Ski Ar	5.18	24			Pn	14 02 28.0	-4.9
NICHA	Nichawak Mount	5.40	33			Pn	14 02 31.6	-4.3
GOAT	Goat Mountain	5.46	28			Pn	14 02 32.5	-4.3
N19K	Bonanza Creek	5.50	336	Pn		Pn	14 02 33.0	-4.4
CNBA	Chernabura Isl	5.61	263	Pn		Pn	14 02 33.3	-5.5
N18K	Kilae Creek	5.75	329	Pn		Pn	14 02 36.2	-4.6
M22K	Willow	5.90	359	Pn		Pn	14 02 38.3	-4.4
TGL	Tana Glacier	6.16	34	Pn		Pn	14 02 41.4	-5.1
VRDI	Verde Repeater	6.35	30	Pn		Pn	14 02 43.8	-5.3
N25K	Chitina, Valde	6.38	24	Pn		Pn	14 02 44.6	-4.9
GRNC	Granite Creek	6.50	38	Pn		Pn	14 02 45.6	-5.6
TABL	Table Mountain	6.53	42	Pn		Pn	14 02 45.6	-5.9
M17K	Holitna River	6.79	328	Pn		Pn	14 02 50.6	-4.3
LOGN	Logan Glacier	6.83	40	Pn		Pn	14 02 50.9	-4.8
M16K	Timber Creek	7.00	321	Pn		Pn	14 02 53.8	-4.1
L16K	Owhat River	7.67	324	Pn		Pn	14 03 02.8	-4.2

*IDC **26** 14:01:27.8±0.8,21.66S±0.08×174.94W,h0km,mb4.0/10, mbtmp4.0/11,ML3.6/1,Error ellipse: s-maj=31.5km s-min=22.0km az=121.0*

*NEIC **26** 14:01:28.2±1.7,21.6S±0.1×174.7W±0.2,h10km±1km, mb4.6/7,Error ellipse: s-maj=31.0km s-min=12.3km az=122.0*

ISC 26 14:01:28.3±0.6,21.66S±0.08×174.8W±0.1,h10km,n36, σ1875/34,mb4.4/17,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.28	62	Pn	Pn	14 02 37.2	-10
NIUE					Sn	14 03 22.8	-25
RAO	Raoul Island	8.05	200	Pn	Pn	14 03 23.7	-1.6
AFI	Afiamalu	8.24	21	Pn	Pn	14 03 24.1	-4.0
PINNC	Pines Island,	16.44	263	P	P	14 05 23.6	+1.7
PINNC	comp=Z,39nm,1.1s			IAmb	IAmb	14 05 26.4	
URZ	Urewera comp=Z,0.2nm,0.3s,baz=26,slow=16,SNR=0.9	17.94	201	P	Pn	14 05 38.9	+1.1
URZ	comp=Z,5.7nm,0.9s,baz=240,slow=14,SNR=1.8 comp=Z,4.6nm,0.9s			S	Sn	14 08 52.7	-5.1
LTZ	Lake Taylor	23.66	204	P	P	14 06 40.7	+0.8
LTZ	comp=Z,42nm,1.4s			IAmb	IAmb	14 07 14.2	
BBOO	Buckleboo	44.70	245	P	P	14 09 41.3	-0.4
BBOO	comp=Z,11nm,1.2s			IAmb	IAmb	14 10 07.0	
AS31	Alice Springs	47.14	257	P	P	14 10 01.9	+0.8
ASAR	Alice Springs	47.14	257	P	P	14 10 01.1	0.0
ASAR	Alice Springs comp=Z,0.5nm,0.4s,baz=96,slow=7.8,SNR=7.6	47.14	257	P	P	14 10 02.2	+1.1
ASAR	comp=Z,0.7nm,0.8s,baz=103,slow=2.7,SNR=4.5 comp=Z,0.5nm,0.4s			PcP	PcP	14 11 34.9	+2.0
WB0	Warramunga Arr comp=Z,5.2nm,0.8s	47.35	263	P	P	14 10 01.7	-1.2
WB0				IAmb	IAmb	14 10 12.4	
WRA	Warramunga Arr comp=Z,1.5nm,0.9s,baz=93,slow=8.1,SNR=8.6	47.37	262	P	P	14 10 01.8	-1.2
WRA	comp=Z,0.7nm,0.8s,baz=93,slow=3.6,SNR=2.3 comp=Z,1.5nm,0.9s			PcP	PcP	14 11 34.8	+1.1
QSPA	South Pole Qui	68.41	180	P	P	14 12 31.7	+1.6
QSPA	South Pole Qui comp=Z,2.0nm,0.8s,baz=58,slow=2.5,SNR=8.3 comp=Z,2.0nm,0.8s	68.41	180	P	P	14 12 31.8	+1.6
MJAR	Matsushiro Arr comp=Z,1.0nm,0.6s,baz=159,slow=5.4,SNR=2.7 comp=Z,1.0nm,0.6s	72.92	322	P	P	14 12 57.7	-0.1
KIWB	Kanaga Island	73.22	359	P	P	14 12 58.9	-0.4
BELA	Belgrano 2	78.02	172	P	P	14 13 26.8	+0.2
BELA	comp=Z,8.4nm,1.5s			IAmb	IAmb	14 13 54.0	
PETK	Petropavlovsk-	78.18	343	P	P	14 13 29.1	+1.4
PETK	Petropavlovsk- comp=Z,2.6nm,0.7s,baz=118,slow=8.7,SNR=8.1 comp=Z,2.6nm,0.7s	78.18	343	P	P	14 13 28.1	+0.5
KSRS	Kosa Array comp=Z,0.7nm,0.6s,baz=125,slow=7.4,SNR=2.9 comp=Z,0.7nm,0.6s	79.73	317	P	P	14 13 38.1	+1.7
NVAR	Mina Array Bea comp=Z,0.7nm,0.6s,baz=221,slow=8.0,SNR=7.2 comp=Z,0.7nm,0.6s	79.88	42	P	P	14 13 38.0	+0.4
H03S2	Juan Fernandez baz=247,slow=74,SNR=2.7	82.90	123	T	T	15 46 04.3	
H03S1	Juan Fernandez baz=247,slow=74,SNR=3.4	82.91	123	T	T	15 45 57.9	
H03S3	Juan Fernandez baz=247,slow=74,SNR=5.4	82.91	123	T	T	15 45 57.5	
HEH	HeiHe	87.87	327	eP	P	14 14 09.5	-8.3
HEH	comp=Z,3.0nm,0.6s			pmax	pmax		
ILAR	Eielson Array comp=Z,0.4nm,0.9s,baz=198,slow=5.7,SNR=2.0 comp=Z,0.4nm,0.9s	88.82	12	P	P	14 14 22.1	+0.1
XAN	Xi'an	91.19	306	P	P	14 14 32.0	-1.9
XAN	comp=Z,12nm,0.7s			pmax	pmax		
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.6s,baz=130,slow=3.3,SNR=6.8 comp=Z,0.8nm,0.6s	93.28	288	P	P	14 14 44.2	+0.4
LZH	Lanzhou	95.83	306	eP	P	14 14 51.5	-3.8
LZH				pP	pwP	14 15 02.5	+2.2
LZH	comp=Z,23nm,1.5s			pmax	pmax		
YKA	Yellowknife Ar comp=Z,0.2nm,0.8s,baz=236,slow=4.4,SNR=4.3 comp=Z,0.2nm,0.8s	96.35	24	P	P	14 14 59.2	+2.4
MKAR	Makanchi Array comp=Z,0.2nm,0.6s,baz=81,slow=1.6,SNR=1.9	114.14	313	PKiKP	PKiKP	14 20 08.6	+0.7
BVAR	Borovoye Array comp=Z,0.6nm,0.6s,baz=117,slow=1.6,SNR=3.6	121.87	320	PKP	PKiKP	14 20 23.2	+0.6
ARCES	ARCESS Array B comp=Z,1.6nm,0.9s,baz=22,slow=0.5,SNR=4.7	130.56	351	PKP	PKiKP	14 20 39.8	+0.3
AKASG	Malin Array Be comp=Z,1.0nm,0.5s,baz=37,slow=4.1,SNR=8.6	145.42	333	PKPbc	PKPbc	14 21 06.0	-0.3
EKA	Eskdalemuir Ar comp=Z,2.1nm,0.9s,baz=343,slow=2.2,SNR=1.6	145.80	8	PKPbc	PKPab	14 21 07.8	+0.1
BRTR	Keskin Array B comp=Z,1.7nm,0.7s,baz=130,slow=4.4,SNR=6.3	149.79	313	PKPbc	PKPbc	14 21 19.2	+0.3

*JMA **26** 14:10:38.4±0.1,24.0N±0.3×12.2E±, h0km,MV2.9/12, TAIWAN REGION*

*ASIES **26** 14:10:39.0,23.96N×121.60E,h7km,ML3.6,Mw4.0, Moment Tensor Solution. Moment tensor: Scale 10^21Nm; Mrr2.58; Mθθ4.09; Mϕϕ-6.67; Mrθ-4.47; Mθϕ 1.07; Mϕr-8.88; Fault plane solution: M0 11.57570×10^21 NP1: ϕs207.19000°,δ81.93000°,λ115.37000°. NP2: ϕs313.68000°,δ26.54000°,λ18.31000°. Principal axes: T Plg47.0420°, Azm143.5850°; N Plg25.1000°, Azm23.3810°; P Plg32.2310°, Azm276.2030°;*

*TAP **26** 14:10:39.0,23.96N×121.60E,h7km,ML3.6,B*

ISC 26 14:10:39.2±0.8,23.96N±0.01×121.61E±0.01,h7km±5km, n149,σ690/287,1C-19D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien baz=44	0.02	333	⇓iP	Pg	14 10 40.8	+0.3
HWA				i S	Sg	14 10 42.1	+0.8
ETM	Tongmen baz=272	0.11	272	P	Pg	14 10 41.4	-0.2
ETM	baz=272			S	Sg	14 10 43.0	-0.4
TWD	Chiawan baz=2.0	0.12	352	⇓iP	Pg	14 10 42.0	+0.2
TWD	baz=2.0			i S	Sg	14 10 44.0	+0.4
SHUL	Shoufeng baz=199	0.18	195	P	Pg	14 10 43.4	+0.6
SHUL	baz=199			S	Sg	14 10 46.9	+1.6
LXIB	Xiulin Townshi baz=283	0.19	288	⇓P	Pg	14 10 43.0	-0.1
LXIB	baz=283			S	Sg	14 10 45.7	-0.1
ETL	Fush Village baz=6.0	0.20	2	P	Pg	14 10 43.4	+0.2
ETL	baz=6.0			S	Sg	14 10 46.1	+0.2
NACB	Ninganchiao	0.21	355	P	Pg	14 10 43.4	0.0
NACB	Ninganchiao baz=358	0.21	355	⇓P	Pg	14 10 43.5	0.0
NACB	baz=358			S	Sg	14 10 46.6	+0.2
ESL	Shilin baz=231	0.22	229	⇑iP	Pg	14 10 43.2	-0.4
ESL	baz=231			S	Sg	14 10 46.4	-0.2
ETLH	Xiulin Townshi baz=336	0.27	334	⇓P	Pg	14 10 44.6	0.0
ETLH	baz=336			S	Sg	14 10 48.5	+0.2
WARBT	Fenglin Townsh baz=229	0.32	221	P	Pg	14 10 45.1	-0.4
WARBT	baz=229			S	Sg	14 10 49.2	-0.4
EGFH	Guangfu baz=222	0.34	211	P	Pg	14 10 45.6	-0.2
EGFH	baz=222			S	Sg	14 10 50.6	+0.4
WHF	Hehuan Shan baz=301	0.37	300	i P	Pg	14 10 46.4	-0.2
WHF	baz=301			i S	Sg	14 10 51.6	+0.1
EAHA	Aohua baz=26	0.38	17	P	Pg	14 10 46.7	0.0
EAHA	baz=26			S	Sg	14 10 52.3	+0.6
OWD	Renai baz=270	0.40	269	P	Pg	14 10 47.0	0.0
OWD	baz=270			S	Sg	14 10 52.6	+0.2
CHGB	Renai baz=285	0.41	284	⇓P	Pg	14 10 47.5	+0.2
CHGB	baz=285			S	Sg	14 10 53.1	+0.4
FUSS	Fushou baz=311	0.44	310	⇓P	Pg	14 10 48.1	+0.2
FUSS	baz=311			S	Sb	14 10 54.5	-1.9
WUSB	Renai baz=284	0.46	274	P	Pg	14 10 48.3	+0.2
WUSB	baz=284			S	Sg	14 10 54.6	+0.6
ENA	Nanau baz=24	0.48	14	⇓iP	Pg	14 10 48.5	+0.1
ENA	baz=24			S	Sg	14 10 55.4	+0.6
VWDT	VWDT baz=246	0.48	245	P	Pg	14 10 48.6	+0.2
VWDT	baz=246			S	Sg	14 10 55.3	+0.6
TWT	Tachien baz=306	0.49	306	i P	Pb	14 10 49.4	-1.0
TWT	baz=306			S	Sb	14 10 56.5	-1.4
HGSD	Ruisui baz=211	0.50	201	P	Pb	14 10 49.9	-0.4
HGSD	baz=211			eS	Sb	14 10 58.7	+0.9
EWUT	Wuta baz=18	0.51	17	P	Pg	14 10 49.1	+0.1
EWUT	baz=18			S	Sg	14 10 56.1	+0.6
TDCB	Techi baz=306	0.51	305	P	Pb	14 10 49.4	-1.2
TDCB	baz=306			S	Sb	14 10 56.6	-1.6
NNSB	Datong baz=328	0.51	336	P	Pg	14 10 49.3	+0.2
NNSB	baz=328			S	Sg	14 10 56.3	+0.5
NNSH	Datong baz=336	0.51	336	P	Pg	14 10 49.4	+0.3
NNSH	baz=336			S	Sg	14 10 56.2	+0.4
NNS	Nan Shan baz=329	0.53	335	⇓iP	Pg	14 10 49.6	+0.2
NNS	baz=329			i S	Sg	14 10 56.8	+0.5
LATG	Datong baz=353	0.58	352	⇓P	Pg	14 10 50.3	0.0
LATG	baz=353			S	Sb	14 10 58.9	-1.3
WPL	Puli Township baz=276	0.60	275	P	Pb	14 10 51.3	-0.8
WPL	baz=276			S	Sg	14 10 58.6	-0.1
SSLB	Suanglung	0.63	254	P	Pg	14 10 51.4	+0.1
SSLB	Suanglung baz=255	0.63	254	P	Pg	14 10 51.3	0.0
SSLB	baz=255			S	Sg	14 10 58.8	-0.8
DPDB	Guoxing baz=277	0.63	277	P	Pb	14 10 52.0	-0.6
DPDB	baz=277			S	Sb	14 11 00.4	-1.3
YULB	Yu-li	0.64	207	P	Pg	14 10 51.4	0.0
YULB	Yu-li baz=218	0.64	207	P	Pg	14 10 51.2	-0.2
YULB	baz=218			S	Sb	14 11 00.6	-1.2
NDT	Datong Townshi baz=343	0.65	352	P	Pb	14 10 52.0	-0.8
NDT	baz=343			S	Sg	14 11 00.7	+0.6
ESAO	Su ao baz=20	0.65	19	P	Pg	14 10 52.1	+0.4
ESAO	baz=20			S	Sg	14 11 00.7	+0.6
WCS	Beigang Elemen baz=279	0.65	279	P	Pb	14 10 52.2	-0.6
WCS	baz=279			S	Sg	14 11 00.4	+0.3
SMLT	Sun Moon Lake baz=264	0.66	263	⇓iP	Pb	14 10 52.2	-0.9
SMLT	baz=264			i S	Sg	14 11 00.9	+0.4
ECBN	Changbin baz=181	0.66	193	P	Pb	14 10 53.3	+0.3
ECBN	baz=181			eS	Sb	14 11 03.0	+0.6
EOS4	EOS4 baz=96	0.66	76	eP	Pn	14 10 54.6	-0.1
EOS4	baz=96			eS	Sn	14 11 04.8	-0.3
EYUL	Yuli baz=216	0.67	204	P	Pg	14 10 52.0	0.0
EYUL	baz=216			S	Sb	14 11 02.6	-0.1
TWF1	Yuli baz=217	0.67	206	i P	Pg	14 10 51.8	-0.3
TWF1	baz=217			S	Sb	14 11 02.4	-0.4
NDS	Dongshan baz=8.0	0.68	8	P	Pg	14 10 52.5	+0.3
NDS	baz=8.0			S	Sb	14 11 02.6	-0.4
ENTT	Nioudou baz=357	0.68	356	⇓iP	Pg	14 10 52.5	+0.3
ENTT	baz=357			i S	Sb	14 11 02.5	-0.5
TWC	Suao baz=10.0	0.68	18	i P	Pg	14 10 52.5	+0.2
TWC	baz=10.0			i S	Sb	14 11 02.2	-0.8
WHP	Taichung City baz=289	0.69	297	⇓P	Pb	14 10 53.1	-0.5
WHP	baz=289			S	Sb	14 11 03.3	0.0
TYC	Yuchr	0.69	265	i P	Pg	14 10 52.6	+0.1

baz=266
TYC S Sg 14 11 01.6 0.0
baz=266
YHNB Yeheng 0.74 343 P Pb 14 10 54.0 -0.4
YHNB Yeheng 0.74 343 ⥥P Pb 14 10 53.8 -0.7
baz=344
YHNB S Sb 14 11 04.5 -0.4
baz=344
WHYT Xinyi Township 0.74 249 P Pg 14 10 52.5 -1.0
baz=259
WHYT S Sb 14 11 04.8 -0.1
baz=259
NSK Sanguang 0.75 342⥥iP Pb 14 10 54.0 -0.6
baz=343
NSK iS Sb 14 11 04.1 -1.0
baz=343
TWE Neicheng 0.76 4⥥iP Pg 14 10 54.0 +0.2
baz=5.0
TWE iS Sb 14 11 05.3 0.0
baz=5.0
CHKH Chenggong 0.79 195 P Pb 14 10 55.1 -0.2
baz=183
CHKH S Sn 14 11 08.8 -0.1
baz=183
FUSB Fushanzhiwuyua 0.80 358 ⥥P Pg 14 10 54.7 +0.2
baz=359
FUSB eS Sb 14 11 06.6 +0.1
baz=359
NFF Wufeng Townshi 0.81 326 P Pb 14 10 55.3 -0.3
baz=327
NFF S Sb 14 11 06.1 -0.6
baz=327
ILA Ilan 0.81 9 eP Pb 14 10 55.4 -0.2
baz=9.0
ILA S Sb 14 11 07.5 +0.8
baz=9.0
FULB Fuli 0.81 201 P Pb 14 10 55.6 -0.1
baz=218
FULB eS Sn 14 11 08.0 -1.5
baz=218
NWLT Wulai 0.82 353 P Pb 14 10 55.3 -0.5
baz=353
NWLT S Sb 14 11 06.9 -0.2
baz=353
WJS Zhushan 0.82 261 P Pn 14 10 56.2 -1.1
baz=261
WJS S Sb 14 11 07.4 +0.3
baz=261
WWF Wufeng 0.84 276 P Pn 14 10 56.6 -0.9
baz=277
WWF eS Sn 14 11 08.4 -1.7
baz=277
WNT Mingjian 0.85 265 iP Pn 14 10 57.0 -0.7
baz=265
WNT iS Sn 14 11 09.7 -0.7
baz=265
WNT1 Nantou City 0.86 267 P Pn 14 10 57.2 -0.4
baz=268
WNT1 S Sn 14 11 08.9 -1.5
baz=268
TWQ1 Liyutan 0.86 297 iP Pn 14 10 56.8 -0.9
baz=298
TWQ1 S Sb 14 11 08.7 +0.5
baz=298
ALS Alishan 0.87 239 iP Pb 14 10 56.1 -0.6
baz=241
ALS S Sb 14 11 08.3 -0.4
baz=241
NSTT Nanjuang 0.87 320 iP Pb 14 10 56.6 0.0
baz=321
NSTT S Sb 14 11 08.0 -0.5
baz=321
LIOB Emei 0.87 321 P Pn 14 10 57.0 -0.9
baz=322
LIOB S Sb 14 11 08.3 -0.3
baz=322
TCU Taichung 0.88 282 iP Pn 14 10 57.7 -0.3
baz=278
TCU eS Sn 14 11 09.8 -1.2
baz=278
CHKT Chengkung 0.89 195 iP Pg 14 10 56.2 -0.1
baz=185
CHKT iS Sn 14 11 11.6 +0.4
baz=185
EHD Haiduan 0.89 205 P Pg 14 10 56.1 -0.2
baz=218
EHD S Sb 14 11 08.4 -0.7
baz=218
NSY Sanyi 0.90 300 iP Pn 14 10 58.1 -0.3
baz=301
NSY eS Sn 14 11 10.3 -1.4
baz=301
NJD Zhudong 0.91 328 eP Pb 14 10 56.9 -0.4
baz=329
NJD eS Sb 14 11 09.6 0.0
baz=329
ECS Chishang 0.94 203 P Pn 14 10 58.0 -0.7
baz=217
ECS eS Sn 14 11 11.4 -1.0
baz=217
ELDTW Lidau 0.94 216 iP Pb 14 10 56.9 -0.4
baz=209
ELDTW S Sb 14 11 11.4 +0.6
baz=209
NMLH Miaoli 0.94 308 P Pn 14 10 59.0 +0.1
baz=308
NMLH eS Sn 14 11 13.1 +0.4
baz=308
WYL Yuanlin Townsh 0.95 270 eP Pn 14 10 58.6 -0.3
baz=258
WYL eS Sn 14 11 14.3 +1.6
baz=258
WDJ Dajia District 0.97 294 P Pn 14 10 59.6 +0.4
baz=294
WDJ eS Sn 14 11 12.2 -1.1
baz=294
WCHH Zhanghua 0.97 277 P Pn 14 10 59.4 +0.1
baz=278
WCHH S Sn 14 11 13.8 +0.5
baz=278
HSN1 Hsinchu 0.98 326 eP Pn 14 10 59.0 -0.3
baz=327
HSN1 eS Sn 14 11 12.4 -1.1
baz=327
NJN Zhunan 0.99 317 eP Pn 14 10 59.4 -0.1
baz=325
NJN eS Sb 14 11 12.1 +0.2
baz=325
WGK Gukeng 1.00 254 iP Pn 14 10 59.8 +0.1
baz=257
WGK iS Sn 14 11 14.8 +0.8
baz=257
SBCB Hsinchu 1.01 325 P Pn 14 11 00.4 +0.7
baz=326
SBCB eS Sn 14 11 14.2 0.0
baz=326
TWA Mucha 1.01 358 eS Sb 14 11 12.4 -0.3
baz=348
TATO Taipei 1.02 354 P Pn 14 10 59.4 -0.5
TATO Taipei 1.02 354 P Pn 14 10 59.3 -0.6
baz=354
TATO S Sb 14 11 13.2 +0.5
baz=354
WDLH Douliu 1.02 255 P Pn 14 11 00.1 +0.2
baz=257
WDLH S Sn 14 11 15.2 +0.6
baz=257
HSN Hsinchu 1.02 325 iP Pn 14 11 00.2 +0.3
baz=328
HSN eS Sn 14 11 14.7 +0.1
baz=328
EDH Donghe 1.02 196 P Pg 14 10 57.8 -1.0
baz=175
EDH S Sn 14 11 15.1 +0.5
baz=175
TIPB Shuangxi 1.02 11 P Pb 14 10 59.0 -0.3
baz=2.0
TIPB S Sg 14 11 11.7 -0.5
baz=2.0
WCKO Fanlu 1.06 241 P Pn 14 11 00.3 -0.2
baz=244
WCKO S Sn 14 11 14.8 -0.8
baz=244
NCUH Zhongli 1.08 339 P Pn 14 11 00.9 +0.2
baz=349
NCUH S Sn 14 11 16.6 +0.7
baz=349
NCU National Centr 1.08 339 eP Pn 14 11 01.7 +1.0

baz=349
NCU eS Sn 14 11 16.5 +0.6
baz=349
TWB1 Santiao Chiao 1.10 18 iP Pb 14 11 00.3 -0.2
baz=10.0
TWB1 S Sn 14 11 15.9 -0.5
baz=10.0
STYH Taoyuan 1.10 225 iP Pg 14 11 00.1 -0.2
baz=228
STYH iS Sn 14 11 16.3 -0.1
baz=228
CHN4 Tsaushan 1.12 237 iP Pn 14 11 01.4 +0.1
baz=227
CHN4 iS Sn 14 11 18.7 +1.8
baz=227
NWF Wu-fen Shan 1.12 8 iP Pn 14 11 02.6 +1.3
baz=8.0
NWF S Sn 14 11 16.2 -0.8
baz=8.0
WFSB Wu-fen Shan 1.12 8 eP Pn 14 11 01.3 0.0
baz=7.0
WFSB S Sn 14 11 17.0 +0.1
baz=7.0
TPUB Ta-pu 1.12 234 P Pn 14 11 01.0 -0.3
TPUB Ta-pu 1.12 234 P Pn 14 11 01.0 -0.3
baz=237
TPUB S Sn 14 11 16.2 -0.7
baz=237
WRL Guolierlin Hig 1.13 267 P Pn 14 11 01.5 0.0
baz=269
WRL S Sn 14 11 18.2 +0.9
baz=269
LONT Longtian 1.14 203 P Pg 14 11 00.1 -0.9
baz=207
LONT eS Sn 14 11 17.9 +0.4
baz=207
TWS1 Kuangyinshan 1.15 351 iP Pn 14 11 02.5 +0.8
baz=360
TWS1 eS Sn 14 11 18.1 +0.3
baz=360
RLNB Erlin 1.15 267 P Pn 14 11 02.2 +0.5
baz=269
RLNB S Sn 14 11 18.2 +0.6
baz=269
SXI1 Grass Mountain 1.15 12 P Pn 14 11 01.6 -0.2
baz=352
SXI1 S Sn 14 11 18.8 +0.8
baz=352
WTK Tuku 1.16 257 P Pn 14 11 02.2 +0.4
baz=259
WTK S Sn 14 11 18.9 +1.1
baz=259
WTP Ta-pu 1.16 232⥥iP Pn 14 11 02.0 +0.1
baz=236
WTP iS Sn 14 11 19.2 +1.1
baz=236
YM01 YM01 1.18 358 P Pn 14 11 02.5 +0.3
baz=357
YM01 eS Sn 14 11 18.0 -0.6
baz=357
TNOU National Taiwa 1.19 7 P Pn 14 11 02.0 -0.3
baz=6.0
TNOU S Sn 14 11 20.1 +1.3
baz=6.0
NTST Danshui 1.21 353 P Pn 14 11 03.1 +0.6
baz=2.0
NTST S Sn 14 11 19.9 +0.8
baz=2.0
YM08 YM08 1.22 359 P Pn 14 11 02.9 +0.1
baz=345
YM08 eS Sn 14 11 19.3 -0.2
baz=345
ANP Anpu 1.22 356 P Pn 14 11 03.0 +0.2
baz=356
ANP eS Sn 14 11 19.3 -0.4
baz=356
TWG Pinlang 1.24 204 iP Pb 14 11 01.5 -1.4
baz=208
TWG eS Sb 14 11 19.1 0.0
baz=208
TWGBT Beinan 1.24 203 P Pb 14 11 01.5 -1.4
baz=208
TWGBT eS Sn 14 11 19.5 -0.5
baz=208
TWK Hsinying 1.24 236⥥iP Pn 14 11 03.6 +0.6
baz=240
TWK iS Sn 14 11 22.3 +2.2
baz=240
CHN1 Nanshi 1.26 232 iP Pg 14 11 03.8 +0.4
baz=236
CHN1 iS Sn 14 11 22.9 +2.4
baz=236
SNST Tainan City 1.26 234 P Pg 14 11 03.8 +0.4
baz=239
SNST S Sn 14 11 23.0 +2.5
baz=239
LDUT Ludao 1.29 186 P Pn 14 11 00.9 -2.7
baz=172
LDUT eS Sn 14 11 20.9 -0.2
baz=172
SGST Jiashian 1.29 227 iP Pn 14 11 03.1 -0.6
baz=231
SGST iS Sn 14 11 22.8 +1.7
baz=231
TWY Chenhua 1.31 359 eP Pg 14 11 05.1 +0.8
baz=346
TWY eS Sn 14 11 22.0 +0.4
baz=346
JYNG Yonagunijimaku 1.31 68 eS Sn 14 11 23.4 +1.7
SLGT Liugui 1.31 223 P Pg 14 11 04.2 -0.1
baz=228
SLGT S Sn 14 11 23.7 +2.0
baz=228
WSF Szhu 1.31 256 eP Pg 14 11 05.0 +0.6
baz=259
WSF S Sn 14 11 23.9 +2.2
baz=259
WSL Shuilin Townsh 1.34 251 P Pg 14 11 06.1 +1.2
baz=267
WSL S Sn 14 11 24.6 +2.1
baz=267
ICHU Yijhu 1.36 244 P Pg 14 11 05.5 +0.2
baz=249
ICHU S Sg 14 11 25.6 +2.6
baz=249
YOJ Yonaguni jima 1.37 68 P Pg 14 11 05.8 +0.3
YOJ Yonaguni jima 1.37 68 P Pb 14 11 05.3 +0.2
baz=65
YOJ eS Sg 14 11 23.4 +0.2
baz=65
YOJ Yonaguni jima 1.37 68 eP Pn 14 11 04.8 +0.1
CHN8 Yiju 1.43 245 eP Pg 14 11 06.8 +0.2
baz=249
CHN8 S Sg 14 11 26.9 +1.9
baz=249
CHN3 Shinhua 1.45 233 iP Pg 14 11 08.4 +1.5
baz=238
CHN3 S Sg 14 11 28.9 +3.2
baz=238
SCST Cishan 1.48 224 P Pg 14 11 08.0 +0.3
baz=231
SCST S Sg 14 11 30.4 +3.5
baz=231
ECL Taimali 1.49 204 iP Pn 14 11 04.3 -2.0
baz=193
ECL eS Sb 14 11 26.0 -0.3
baz=193
SHHT Tainan City 1.49 231 P Pg 14 11 08.2 +0.4
baz=237
SHHT eS Sg 14 11 29.7 +2.6
baz=237
TSMG Majia 1.54 216 P Pb 14 11 07.5 -0.4
baz=222
TSMG S Sg 14 11 29.6 +1.0
baz=222
TWM1 Shoushan 1.57 224 iP Pg 14 11 09.9 +0.6
baz=231
TWM1 eS Sg 14 11 32.1 +2.3
baz=231
SGLT Jiouru 1.61 220 eP Pg 14 11 10.3 +0.4
baz=227
SGLT eS Sg 14 11 33.3 +2.5
baz=227
MASBT Mashibuluo 1.62 214 P Pn 14 11 07.7 -0.5
baz=222
MASBT S Sg 14 11 32.9 +1.7
baz=222
TSCK Chigu Township 1.62 240 P Pg 14 11 09.4 -0.8

baz=246
TSCK S Sg 14 11 32.0 +0.8
baz=246
EAST Anshuo 1.72 204 P Pn 14 11 09.7 +0.1
baz=195
EAST eS Sn 14 11 31.7 -0.2
baz=195
TAWH Dawu Township 1.75 203 eP Pb 14 11 10.9 -0.7
baz=194
TAWH eS Sb 14 11 32.8 -0.9
baz=194
WSSB Gushan 1.81 224 eP Pb 14 11 12.8 +0.2
baz=233
WSSB eS Sg 14 11 38.5 +1.2
baz=233
SCZT Fangliau 1.83 210 iP Pb 14 11 12.4 -0.6
baz=238
SCZT eS Sg 14 11 38.9 +1.0
baz=238
SLIU Shizi 1.89 204 P Pb 14 11 13.3 -0.7
baz=191
SLIU eS Sb 14 11 36.8 -1.2
baz=191
WDGT Dungji 1.92 249 eP Pn 14 11 12.9 +0.6
baz=254
WDGT eS Sn 14 11 37.0 +0.2
baz=254
PHUB P'eng-hu 1.92 257 P Pb 14 11 13.1 -1.5
baz=260
PHUB S Sb 14 11 38.2 -0.6
baz=260
PNG Penghu 1.93 259 iP Pb 14 11 13.3 -1.4
baz=263
PNG iS Sb 14 11 38.5 -0.4
baz=263
LYUB Lan-yu 1.95 181 eP Pn 14 11 09.7 -3.0
baz=165
LYUB eS Sn 14 11 35.3 -2.2
baz=165
VCHM Qimei 2.14 250 eP Pn 14 11 16.3 +1.0
baz=241
VCHM eS Sb 14 11 45.5 +0.5
baz=241
JKRS Kuro-shima 2.21 82 P Pn 14 11 16.4 +0.2
JKRS eS Sn 14 11 44.9 +1.1
JIJ Ishigaki jima 2.34 80 eS Sn 14 11 46.5 -0.7
JISG Ishigakijimahi 2.54 75 P Pn 14 11 20.3 -0.6
JISG eS Sn 14 11 51.2 -0.8

IDC 26 14:18:45.2±0.9, 6°.28S×143°.72E, h0km, mb3.8/9, mbtmp3.8/11, ML1.2/1, Error ellipse: s-maj=37.4km s-min=20.3km az=79.0
ISC 26 14:18:47.7±0.7, 6°.36S±0°.08×143°.29E±0°.08, h10km, n18, σ1°66/18, mb3.7/9, New Guinea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TABU Tabubil 2.32 298 P Pn 14 19 28.1 +2.0
PMG Port Moresby 4.88 129 P Pn 14 20 03.2 +2.0
PMG Port Moresby 4.88 129 P Pn 14 20 03.3 +2.0
PMG Port Moresby 4.88 129 Pn Pn 14 19 54.0 -7.3
0.8nm,0.3s,baz=76,slow=21,SNR=2.1
PMG Sn **Sn 14 20 56.2 -1.7**
2.5nm,0.3s,baz=339,slow=11,SNR=3.8
3.1nm,0.4s
COEN Coen 7.55 181 P Pn 14 20 40.4 +2.4
KDU Kakadu 12.38 239 P Pn 14 21 42.3 -1.9
MTN Manton Dam 13.61 241 P Pn 14 21 58.6 -2.3
WRA Warramunga Arr 16.06 212 Pn Pn 14 22 31.4 -2.4
0.5nm,0.3s,baz=28,slow=13,SNR=23
WRA Sn Sn 14 25 21.0 -11
0.6nm,0.3s,baz=27,slow=24,SNR=4.7
WRA Lg Lg 14 27 25.4
0.4nm,0.3s,baz=36,slow=30,SNR=5.9
ASAR Alice Springs 19.43 207 P Pn 14 23 16.9 +1.2
4.6nm,0.6s,baz=32,slow=10,SNR=61
ASAR Lg Lg 14 29 09.3
baz=22,slow=30
KSRS Korea Array 45.88 343 P P 14 27 10.1 -0.3
0.5nm,0.7s,baz=160,slow=8.4,SNR=1.7
0.5nm,0.7s
CMAR Chiang Mai Arr 50.20 300 P P 14 27 45.1 +0.9
0.3nm,0.3s,baz=125,slow=5.8,SNR=1.3
0.3nm,0.3s
SONM Songino Array 62.98 333 P P 14 29 15.6 +0.7
0.2nm,0.4s,baz=133,slow=8.1,SNR=1.6
0.2nm,0.4s
MKAR Makanchi Array 75.45 322 P P 14 30 32.3 +0.2
1.1nm,0.7s,baz=105,slow=6.6,SNR=14
1.1nm,0.7s
ZALV Zalesovo Beam 77.38 329 P P 14 30 41.8 -1.0
0.4nm,0.5s,baz=114,slow=7.0,SNR=2.1
0.4nm,0.5s
KURBB Kurchatov Arra 79.33 324 P P 14 30 52.9 -0.7
0.4nm,0.6s,baz=119,slow=4.7,SNR=4.6
0.4nm,0.6s
QSPA South Pole Qui 83.61 180 P P 14 31 16.3 0.0
3.3nm,0.9s,baz=293,slow=1.1,SNR=21
3.3nm,0.9s
BVAR Borovoye Array 84.90 325 P P 14 31 23.2 +0.3
2.0nm,0.7s,baz=109,slow=8.0,SNR=14
2.0nm,0.7s
ILAR Eielson Array 87.27 24 P P 14 31 33.0 -1.3
0.6nm,0.9s,baz=250,slow=4.9,SNR=5.0
0.6nm,0.9s

IDC 26 14:22:20.6±1.3, 6°.24S×142°.69E, h0km, mb3.7/3, mbtmp3.8/6, ML3.8/1, MS4.0/1, Error ellipse: s-maj=41.5km s-min=29.5km az=88.0
ISC 26 14:22:25.6±1.0, 6°.4S±0°.1×142°.7E±0°.1, h35km, n7, σ1°23/7, mb3.8/3, New Guinea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 5.33 125 Pn Pn 14 23 43.9 +1.1
4.7nm,0.5s,baz=30,slow=14,SNR=1.0
PMG Sn **Sn 14 24 42.2 -0.9**
0.8nm,0.3s,baz=275,slow=8.8,SNR=1.5
WRA Warramunga Arr 15.75 210 Pn Pn 14 26 05.0 +0.1
0.4nm,0.3s,baz=25,slow=13,SNR=2.4
2.5nm,0.7s
ASAR Alice Springs 19.16 205 P Pn 14 26 46.5 -0.8
2.9nm,0.4s,baz=32,slow=11,SNR=11
DAV Davao City (W) 21.70 308 LR LR 14 35 52.7
comp=Z,374nm,19.0s,baz=116,slow=38
MKAR Makanchi Array 75.12 322 P P 14 34 04.0 -0.2
0.2nm,0.7s,baz=103,slow=6.5,SNR=2.0
0.2nm,0.7s
BVAR Borovoye Array 84.59 325 P P 14 34 56.6 +1.3
0.9nm,0.7s,baz=120,slow=5.7,SNR=5.5
0.9nm,0.7s
ILAR Eielson Array 87.53 24 P P 14 35 08.3 -1.3
0.4nm,0.7s,baz=249,slow=4.6,SNR=5.7
0.4nm,0.7s

IDC 26 14:24:49.1±8.2, 18°.16S×178°.18W, h552km±80km, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=79.4km s-min=27.6km az=134.0
NEIC 26 14:24:51.8±1.0, 18°.2S±0°.2×178°.2W±0°.2, h581km±12km, mb4.2/35, Error ellipse: s-maj=33.3km s-min=21.4km az=140.0
ISC 26 14:24:53.5±0.9, 18°.2S±0°.2×178°.4W±0°.2, h600km, n50, σ0°64/52, mb4.1/24, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PINNC Pines Island, 14.00 249 P P 14 27 52.4 +0.1
KOUNC Koumac, New Ca 16.53 259 P P 14 28 17.1 +1.4
KOUNC IAmb IAmb 14 28 38.5
comp=Z,17nm,1.3s
ARMA Armidale 29.82 240 P P 14 30 11.9 -2.0
BBOO Buckleboo 43.29 241 P P 14 32 04.6 +0.7
WB0 Warramunga Arr 44.58 260 P P 14 32 14.3 +0.4
WB0 IAmb IAmb 14 32 23.7
comp=Z,4.6nm,1.0s
WRAB Tennant Creek 44.60 260 P P 14 32 14.5 +0.4
WRAB IAmb IAmb 14 32 30.4
comp=Z,14nm,1.5s
WRA Warramunga Arr 44.61 260 P P 14 32 14.5 +0.3
WRA Warramunga Arr 44.61 260 P P 14 32 14.1 -0.1
comp=Z,0.9nm,0.7s,baz=97,slow=7.3,SNR=4.5
WRA PcP **PcP 14 33 43.7 0.0**
comp=Z,0.2nm,0.4s,baz=90,slow=3.6,SNR=1.6
comp=Z,0.9nm,0.7s

AS31	**Alice Springs**	**44.74**	**255**	P	**P**	**14 32 15.2**	**0.0**		
ASAR	**Alice Springs**	**44.74**	**255**	P	**P**	**14 32 15.2**	**0.0**		
ASAR	**Alice Springs**	**44.74**	**255**	P	**P**	**14 32 15.5**	**+0.3**		
	comp=Z,3.1nm,0.6s,baz=86,slow=8.6,SNR=16								
ASAR				PcP	**PcP**	**14 33 43.6**	**-0.6**		
	comp=Z,0.6nm,0.5s,baz=101,slow=4.0,SNR=6.4								
	comp=Z,3.1nm,0.6s								
UGM	**Wanagama**	**69.67**	**268**	P	**P**	**14 35 04.5**	**-0.1**		
PETK	**Petropavlovsk-**	**73.96**	**345**	P	**P**	**14 35 28.5**	**-0.1**		
PETK	**Petropavlovsk-**	**73.96**	**345**	P	**P**	**14 35 27.9**	**-0.7**		
	comp=Z,2.5nm,0.8s,baz=175,slow=6.8,SNR=5.5								
	comp=Z,2.5nm,0.8s								
K15K	**Wolf Creek Mou**	**81.32**	**8**	P	**P**	**14 36 08.6**	**+0.6**		
BELA	**Belgrano 2**	**81.88**	**173**	P	**P**	**14 36 11.5**	**+0.8**		
BELA				IAmb	IAmb	14 36 55.0			
	comp=Z,8.1nm,1.5s								
L18K	**Granite Mounta**	**81.97**	**10**	P	**P**	**14 36 11.8**	**+0.6**		
L18K				IAmb	IAmb	14 36 34.3			
	comp=Z,12nm,1.5s								
K17K	**Iditarod**	**82.18**	**9**	P	**P**	**14 36 12.4**	**+0.1**		
J16K	**Anvik River**	**82.40**	**8**	P	**P**	**14 36 13.7**	**+0.3**		
J16K				IAmb	IAmb	14 36 31.5			
	comp=Z,14nm,1.5s								
SUA	**Susitna One**	**82.41**	**13**	P	**P**	**14 36 13.1**	**-0.5**		
SUA				IAmb	IAmb	14 36 51.3			
	comp=Z,13nm,1.4s								
J18K	**Innoko River**	**83.14**	**10**	P	**P**	**14 36 17.0**	**-0.1**		
J18K				IAmb	IAmb	14 36 42.1			
	comp=Z,10.0nm,1.5s								
CUT	**Chulitna**	**83.35**	**13**	P	**P**	**14 36 17.7**	**-0.4**		
K20K	**Telida**	**83.48**	**11**	P	**P**	**14 36 18.7**	**-0.1**		
K20K				IAmb	IAmb	14 36 59.1			
	comp=Z,9.4nm,1.4s								
SCM	**Sheep Creek Mo**	**83.50**	**14**	P	**P**	**14 36 18.6**	**-0.4**		
CAST	**Castle Rocks**	**83.90**	**12**	P	**P**	**14 36 20.4**	**-0.4**		
CAST				IAmb	IAmb	14 36 27.3			
	comp=Z,4.3nm,1.3s								
N25K	**Chitina, Valde**	**83.97**	**16**	P	**P**	**14 36 21.4**	**+0.1**		
N25K				IAmb	IAmb	14 37 05.6			
	comp=Z,13nm,1.4s								
J20K	**Nowinta River**	**84.22**	**10**	P	**P**	**14 36 22.4**	**0.0**		
J20K				IAmb	IAmb	14 36 25.3			
	comp=Z,9.1nm,1.4s								
TRF	**Thorofare Moun**	**84.28**	**12**	P	**P**	**14 36 22.9**	**0.0**		
G18K	**Tagagawik**	**85.15**	**8**	P	**P**	**14 36 26.0**	**-0.9**		
MLY	**Manley**	**85.62**	**11**	P	**P**	**14 36 28.3**	**-0.9**		
Q32M	**Nakina River**	**85.64**	**22**		**P**	**14 36 30.4**	**+0.8**		
Q32M				IAmb	IAmb	14 36 40.7			
	comp=Z,10nm,1.2s								
CCB	**Clear Creek Bu**	**85.86**	**13**	P	**P**	**14 36 29.3**	**-0.9**		
IMAR	**Indian Mountai**	**85.96**	**10**	P	**P**	**14 36 30.2**	**-0.5**		
F19K	**Shaleruckik Mo**	**86.16**	**8**	P	**P**	**14 36 31.1**	**-0.4**		
ILAR	**Eielson Array**	**86.16**	**13**	P	**P**	**14 36 30.5**	**-1.2**		
ILAR	**Eielson Array**	**86.16**	**13**	P	**P**	**14 36 30.8**	**-0.9**		
	comp=Z,0.3nm,0.4s,baz=228,slow=4.4,SNR=10								
	comp=Z,0.3nm,0.4s								
J25K	**Salcha River,**	**86.35**	**14**	P	**P**	**14 36 32.6**	**-0.1**		
J25K				IAmb	IAmb	14 37 14.5			
	comp=Z,4.7nm,1.4s								
J26L	**Joseph Creek**	**86.67**	**14**	P	**P**	**14 36 34.6**	**+0.4**		
J26L				IAmb	IAmb	14 37 06.3			
	comp=Z,4.0nm,1.4s								
M30M	**Minto, Yukon**	**86.90**	**18**	P	**P**	**14 36 35.1**	**-0.2**		
M30M				IAmb	IAmb	14 36 43.9			
	comp=Z,7.4nm,1.5s								
PDAR	**Pinedale Array**	**87.54**	**43**	P	**P**	**14 36 38.8**	**-0.2**		
	comp=Z,0.2nm,0.6s,baz=219,slow=6.9,SNR=2.7								
	comp=Z,0.2nm,0.6s								
E22K	**Anaktuvuk Pass**	**88.24**	**10**	P	**P**	**14 36 41.1**	**-0.3**		
I28M	**Miner Creek**	**88.33**	**15**	P	**P**	**14 36 41.7**	**-0.2**		
I28M				IAmb	IAmb	14 37 05.9			
	comp=Z,2.9nm,1.4s								
F24K	**Squaw Lake**	**88.36**	**11**	P	**P**	**14 36 42.0**	**0.0**		
D22K	**Ayikyak River**	**88.79**	**9**	P	**P**	**14 36 43.8**	**-0.1**		
D22K				IAmb	IAmb	14 37 23.7			
	comp=Z,6.9nm,1.4s								
BMAR	**Burnt Mountain**	**88.93**	**12**	P	**P**	**14 36 45.1**	**+0.4**		
CMAR	**Chiang Mai Arr**	**89.01**	**290**	P	**P**	**14 36 47.5**	**+1.4**		
	comp=Z,0.3nm,0.3s,baz=108,slow=2.9,SNR=4.2								
	comp=Z,0.3nm,0.3s								
H29M	**Whitestone**	**89.34**	**15**	P	**P**	**14 36 46.6**	**+0.1**		
H29M				IAmb	IAmb	14 37 30.2			
	comp=Z,3.9nm,1.4s								
BRTR	**Keskin Array B**	**145.00**	**315**	PKPbc	**PKPab**	**14 43 25.2**	**-0.6**		
	comp=Z,0.7nm,0.7s,baz=59,slow=4.3,SNR=2.4								
MMAI	**Mount Meron Ar**	**146.32**	**303**	PKPbc	**PKPbc**	**14 43 28.9**	**+0.3**		
	comp=Z,0.5nm,0.3s,baz=49,slow=4.4,SNR=1.9								
GERES	**GERESS Array B**	**147.90**	**345**	PKPbc	**PKiKP**	**14 43 32.3**	**-1.3**		
	comp=Z,0.6nm,0.7s,baz=46,slow=4.2,SNR=3.5								

TAP ***26*** *14:30:58.5,24.˝19N×121.˝86E,h9km, ML2.6,D*
ISC 26 14:30:58.0±1.3, 24.˝20N±0.˝02×121.˝92E±0.˝04, h4km±9km, n76, σ0§89/124, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.21**	**309**	*i* P	**Pg**	**14 31 02.5**	**+0.4**
	baz=321						
EAHA				*i* S	**Sg**	**14 31 06.0**	**+1.2**
	baz=321						
ETL	**Fush Village**	**0.27**	**262**	*i* P	**Pg**	**14 31 02.8**	**-0.4**
	baz=274						
ETL				*i* S	**Sg**	**14 31 06.0**	**-0.8**
	baz=274						
EWUT	**Wuta**	**0.28**	**333**	*i* P	**Pb**	**14 31 04.7**	**-0.8**
	baz=335						
EWUT				*i* S	**Sb**	**14 31 09.0**	**-1.4**
	baz=335						
ENA	**Nanau**	**0.28**	**325**	*i* P	**Pb**	**14 31 04.4**	**-1.1**
	baz=333						
ENA				*i* S	**Sg**	**14 31 08.1**	**+1.0**
	baz=333						
NACB	**Ninganchiao**	**0.30**	**265**	*i* P	**Pg**	**14 31 03.2**	**-0.5**
	baz=269						
NACB				*i* S	**Sg**	**14 31 07.6**	**0.0**
	baz=269						
TWD	**Chiawan**	**0.32**	**248**	*i* P	**Pg**	**14 31 03.8**	**-0.3**
	baz=258						
TWD				*i* S	**Sb**	**14 31 10.7**	**-0.9**
	baz=258						
HWA	**Hwalien**	**0.36**	**232**	*i* P	**Pb**	**14 31 06.5**	**-0.4**
	baz=242						
ESAO	**Su ao**	**0.38**	**350**	P	**Pb**	**14 31 06.7**	**-0.6**
	baz=347						
ESAO				S	**Sb**	**14 31 12.7**	**-0.8**
	baz=347						
ETLH	**Xiulin Townshi**	**0.40**	**271**	*i* P	**Pg**	**14 31 05.5**	**-0.2**
	baz=274						
ETLH				*i* S	**Sg**	**14 31 10.1**	**-0.8**
	baz=274						
TWC	**Suao**	**0.41**	**351**	P	**Pb**	**14 31 07.6**	**-0.2**
	baz=349						
TWC				S	**Sb**	**14 31 14.5**	**+0.1**
	baz=349						
ETM	**Tongmen**	**0.45**	**239**	*i* P	**Pg**	**14 31 06.4**	**-0.2**
	baz=247						
ETM				*i* S	**Sb**	**14 31 14.5**	**-1.1**
	baz=247						
NDS	**Dongshan**	**0.47**	**337**	P	**Pb**	**14 31 08.5**	**-0.3**
	baz=340						
LATG	**Datong**	**0.49**	**313**	P	**Pb**	**14 31 08.0**	**-1.2**
	baz=317						
LXIB	**Xiulin Townshi**	**0.49**	**249**	*i* P	**Pg**	**14 31 06.9**	**-0.6**
	baz=263						
LXIB				*i* S	**Sg**	**14 31 14.2**	**+0.3**
	baz=263						
SHUL	**Shoufeng**	**0.52**	**218**	*i* P	**Pb**	**14 31 09.1**	**-0.5**
	baz=221						
SHUL				*i* S	**Sn**	**14 31 20.2**	**-1.2**
	baz=221						
NNSB	**Datong**	**0.54**	**295**	*i* P	**Pg**	**14 31 08.5**	**+0.2**
	baz=298						
NNSB				*i* S	**Sg**	**14 31 15.8**	**+0.5**
	baz=298						
ENTT	**Nioudou**	**0.54**	**324**	P	**Pb**	**14 31 09.5**	**-0.5**
	baz=327						
NDT	**Datong Townshi**	**0.55**	**318**	P	**Pb**	**14 31 09.5**	**-0.6**
	baz=320						
NDT				S	**Sb**	**14 31 17.5**	**-0.7**
	baz=320						
NNS	**Nan Shan**	**0.55**	**296**	*i* P	**Pg**	**14 31 08.9**	**+0.3**
	baz=299						
NNS				*i* S	**Sb**	**14 31 16.8**	**-1.8**
	baz=299						
TWE	**Neicheng**	**0.57**	**336**	P	**Pb**	**14 31 10.4**	**0.0**
	baz=339						
ESL	**Shilin**	**0.59**	**229**	*i* P	**Pg**	**14 31 08.9**	**-0.4**
	baz=239						
ESL				*i* S	**Sb**	**14 31 19.2**	**-0.1**
	baz=239						
WHF	**Hehuan Shan**	**0.60**	**265**	*i* P	**Pg**	**14 31 09.5**	**-0.1**
	baz=269						
WHF				*i* S	**Sg**	**14 31 16.2**	**-1.1**
	baz=269						
FUSS	**Fushou**	**0.62**	**275**	*i* P	**Pg**	**14 31 09.7**	**-0.1**
	baz=279						
FUSB	**Fushanzhiwuyua**	**0.63**	**332**	P	**Pb**	**14 31 11.5**	**-0.1**
	baz=324						
FUSB				S	**Sb**	**14 31 20.2**	**-0.7**
	baz=324						
TWT	**Tachien**	**0.68**	**275**	P	**Pb**	**14 31 12.3**	**-0.1**
	baz=277						
TWT				S	**Sb**	**14 31 21.2**	**-1.0**
	baz=277						
YHNB	**Yeheng**	**0.68**	**314**	P	**Pb**	**14 31 11.9**	**-0.5**
YHNB	**Yeheng**	**0.68**	**314**	P	**Pb**	**14 31 11.6**	**-0.8**
	baz=316						
WARBT	**Fenglin Townsh**	**0.68**	**226**	*i* P	**Pg**	**14 31 11.2**	**+0.1**
	baz=236						
WARBT				*i* S	**Sb**	**14 31 21.2**	**-1.0**
	baz=236						
NWLT	**Wulai**	**0.69**	**327**	P	**Pb**	**14 31 12.4**	**-0.1**
	baz=329						
NWLT				S	**Sb**	**14 31 22.3**	**-0.1**
	baz=329						
CHGB	**Renai**	**0.69**	**259**	*i* P	**Pg**	**14 31 10.9**	**-0.4**
	baz=261						
CHGB				*i* S	**Sb**	**14 31 22.0**	**-0.7**
	baz=261						
EGFH	**Guangfu**	**0.69**	**220**	P	**Pg**	**14 31 11.5**	**+0.3**
	baz=240						
EGFH				S	**Sn**	**14 31 24.2**	**-1.4**
	baz=240						
TDCB	**Techi**	**0.69**	**275**	P	**Pb**	**14 31 12.1**	**-0.6**
	baz=277						
TDCB				S	**Sg**	**14 31 19.3**	**-1.0**
	baz=277						
NSK	**Sanguang**	**0.70**	**313**	P	**Pb**	**14 31 12.0**	**-0.7**
	baz=315						
OWD	**Renai**	**0.72**	**250**	*i* P	**Pg**	**14 31 12.3**	**+0.5**
	baz=259						
WUSB	**Renai**	**0.76**	**254**	P	**Pg**	**14 31 12.4**	**-0.2**
	baz=257						
WUSB				S	**Sb**	**14 31 24.8**	**+0.3**
	baz=257						
TIPB	**Shuangxi**	**0.77**	**354**	*i* P	**Pn**	**14 31 14.7**	**-0.9**
	baz=353						
TIPB				*i* S	**Sn**	**14 31 28.8**	**+1.1**
	baz=353						
HGSD	**Ruisui**	**0.84**	**213**	P	**Pb**	**14 31 15.1**	**+0.1**
	baz=202						
VWDT	**VWDT**	**0.84**	**238**	P	**Pg**	**14 31 14.3**	**+0.2**
	baz=249						
VWDT				S	**Sb**	**14 31 26.6**	**0.0**
	baz=249						
NFF	**Wufeng Townshi**	**0.85**	**301**	*i* P	**Pb**	**14 31 15.0**	**-0.2**
	baz=302						
NFF				*i* S	**Sb**	**14 31 26.3**	**-0.7**
	baz=302						
TATO	**Taipei**	**0.87**	**333**	P	**Pn**	**14 31 17.9**	**+1.0**
WHP	**Taichung City**	**0.89**	**275**	P	**Pb**	**14 31 15.7**	**-0.3**
	baz=278						
WHP				S	**Sb**	**14 31 27.3**	**-0.9**
	baz=278						
SXI1	**Grass Mountain**	**0.89**	**358**	P	**Pn**	**14 31 17.1**	**-0.2**
	baz=1.0						
WCS	**Beigang Elemen**	**0.93**	**261**	P	**Pb**	**14 31 16.2**	**-0.4**
	baz=265						
LIOB	**Emei**	**0.93**	**299**	*i* P	**Pn**	**14 31 16.8**	**-1.1**
	baz=300						
NSTT	**Nanjuang**	**0.94**	**297**	*i* P	**Pn**	**14 31 16.8**	**-1.1**
	baz=299						
NSTT				*i* S	**Sg**	**14 31 28.2**	**0.0**
	baz=299						
SSLB	**Suanglung**	**0.97**	**245**	P	**Pb**	**14 31 17.4**	**+0.1**
SSLB	**Suanglung**	**0.97**	**245**	P	**Pg**	**14 31 16.3**	**-0.3**
	baz=258						
SSLB				S	**Sg**	**14 31 29.5**	**+0.3**
	baz=258						
SMLT	**Sun Moon Lake**	**0.98**	**252**	P	**Pb**	**14 31 17.4**	**-0.2**
	baz=255						
SMLT				S	**Sn**	**14 31 31.6**	**-1.3**
	baz=255						
YULB	**Yu-li**	**0.98**	**215**	P	**Pg**	**14 31 17.1**	**+0.3**
YULB	**Yu-li**	**0.98**	**215**	*i* P	**Pg**	**14 31 16.6**	**-0.3**
	baz=220						
EYUL	**Yuli**	**1.01**	**213**	*i* P	**Pn**	**14 31 19.3**	**+0.5**
	baz=231						
TYC	**Yuchr**	**1.01**	**253**	*i* P	**Pb**	**14 31 17.8**	**-0.2**
	baz=257						
TYC				*i* S	**Sb**	**14 31 31.7**	**0.0**
	baz=257						
TWF1	**Yuli**	**1.02**	**214**	*i* P	**Pg**	**14 31 17.4**	**-0.1**
	baz=234						
YOJ	**Yonaguni jima**	**1.03**	**75**	P	Pn	14 31 25.7	+6.6
TWQ1	**Liyutan**	**1.05**	**278**	*i* P	**Pn**	**14 31 20.6**	**+1.1**
	baz=281						
TWQ1				*i* S	**Sn**	**14 31 36.2**	**+1.5**
	baz=281						
NMLH	**Miaoli**	**1.08**	**288**	*i* P	**Pn**	**14 31 21.4**	**+1.6**
	baz=302						
NMLH				S	**Sn**	**14 31 38.2**	**+3.0**
	baz=302						
WHYT	**Xinyi Township**	**1.09**	**243**	*i* P	**Pn**	**14 31 19.4**	**-0.6**
	baz=254						
WHYT				*i* S	**Sn**	**14 31 35.7**	**0.0**
	baz=254						
FULB	**Fuli**	**1.15**	**210**	P	**Pn**	**14 31 20.6**	**-0.2**
	baz=233						
WJS	**Zhushan**	**1.15**	**251**	*i* P	**Pn**	**14 31 21.0**	**+0.2**
	baz=255						
WJS				*i* S	**Sn**	**14 31 37.6**	**+0.6**
	baz=255						
WNT	**Mingjian**	**1.17**	**254**	P	**Pn**	**14 31 21.4**	**+0.3**
	baz=243						
WNT				S	**Sn**	**14 31 38.2**	**+0.8**
	baz=243						
ALS	**Alishan**	**1.23**	**236**	P	**Pb**	**14 31 21.4**	**-0.5**
	baz=241						
EHD	**Haiduan**	**1.23**	**212**	P	**Pn**	**14 31 21.0**	**-0.9**
	baz=217						
ELDTW	**Lidau**	**1.30**	**220**	P	**Pn**	**14 31 22.0**	**-0.9**
	baz=224						
WCKO	**Fanlu**	**1.42**	**238**	*eP*	**Pb**	**14 31 24.8**	**-0.2**
	baz=245						
WCKO				*eS*	**Sg**	**14 31 45.6**	**+2.0**
	baz=245						
WRL	**Guolierlin Hig**	**1.44**	**258**	*eP*	**Pg**	**14 31 25.5**	**-0.1**
	baz=264						
WRL				*eS*	**Sg**	**14 31 47.1**	**+2.9**
	baz=264						
STYH	**Taoyuan**	**1.46**	**226**	*eP*	**Pn**	**14 31 24.9**	**-0.1**
	baz=222						
STYH				*eS*	**Sg**	**14 31 46.8**	**+1.8**
	baz=222						
TPUB	**Ta-pu**	**1.48**	**233**	P	**Pb**	**14 31 25.9**	**-0.1**
TPUB	**Ta-pu**	**1.48**	**233**	*eP*	**Pb**	**14 31 25.7**	**-0.3**
	baz=226						
TPUB				*eS*	**Sg**	**14 31 46.4**	**+0.8**
	baz=226						
WTK	**Tuku**	**1.49**	**250**	*eP*	**Pg**	**14 31 26.9**	**+0.4**
	baz=257						
WTK				*eS*	**Sg**	**14 31 47.4**	**+1.6**
	baz=257						
WTP	**Ta-pu**	**1.53**	**232**	*eP*	**Pb**	**14 31 26.4**	**-0.4**
	baz=239						
WTP				*eS*	**Sg**	**14 31 50.1**	**+3.1**
	baz=239						
TWK	**Hsinying**	**1.61**	**235**	*eP*	**Pb**	**14 31 27.8**	**-0.4**
	baz=242						
TWK				*eS*	**Sg**	**14 31 51.9**	**+2.3**
	baz=242						
CHN1	**Nanshi**	**1.62**	**232**	*eP*	**Pg**	**14 31 28.9**	**-0.3**
	baz=239						
CHN1				*eS*	**Sg**	**14 31 50.7**	**+0.5**
	baz=239						
SNST	**Tainan City**	**1.63**	**233**	*eP*	**Pb**	**14 31 28.3**	**-0.2**
	baz=239						
SGST	**Jiashian**	**1.65**	**228**	*eP*	**Pb**	**14 31 28.4**	**-0.6**
	baz=236						
SGST				*eS*	**Sg**	**14 31 51.8**	**+0.6**
	baz=236						
SLGT	**Liugui**	**1.67**	**224**	*eP*	**Pb**	**14 31 29.4**	**+0.1**
	baz=232						
SLGT				*eS*	**Sg**	**14 31 53.0**	**+1.3**
	baz=232						
TSMG	**Majia**	**1.89**	**218**	*eP*	**Pb**	**14 31 32.5**	**-0.5**
	baz=227						
TSMG				*eS*	**Sb**	**14 31 56.9**	**-0.1**
	baz=227						

IDC ***26*** *14:36:54.0±1.4,5.˝64S×142.˝32E,h0km,mb3.5/3, mbtmp3.6/6,ML3.4/1,Error ellipse: s-maj=43.6km s-min=28.9km az=87.0*
ISC 26 14:36:59.1±0.9, 5.˝8S±0.˝1×142.˝37E±0.˝09, h35km, n13, σ1§53/13, mb3.5/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.96**	**128**	Pn	**Pn**	**14 38 26.4**	**+1.6**
	2.3nm,0.4s,baz=234,slow=22,SNR=1.6						
PMG				Sn	**Sn**	**14 39 29.4**	**-2.5**
	0.8nm,0.3s,baz=286,slow=23,SNR=1.9						
ALOT	**Alotau**	**9.18**	**120**	P	Pn	14 39 16.4	+7.2
KDU	**Kakadu**	**11.94**	**234**	P	**Pn**	**14 39 46.3**	**-0.7**
MTN	**Manton Dam**	**13.12**	**237**	P	**Pn**	**14 40 02.2**	**-1.0**
WRA	**Warramunga Arr**	**16.10**	**208**	Pn	**Pn**	**14 40 41.2**	**-1.7**
	0.1nm,0.3s,baz=25,slow=13,SNR=7.2						
WRA				Sn	Sn	14 43 26.7	-14
	0.2nm,0.3s,baz=24,slow=21,SNR=4.6						
	0.5nm,0.6s						
KNRA	**Kununurra**	**16.59**	**233**	P	**Pn**	**14 40 47.1**	**-2.1**
HNR	**Honiara**	**17.79**	**103**	P	**P**	**14 41 05.8**	**+1.1**
AS01	**Alice Springs**	**19.55**	**204**	P	**Pn**	**14 41 26.6**	**+1.2**
ASAR	**Alice Springs**	**19.57**	**204**	P	**P**	**14 41 25.1**	**+0.9**
	4.1nm,0.7s,baz=32,slow=11,SNR=41						
WRKA	**Warakurna**	**23.43**	**214**	P	**P**	**14 42 05.7**	**+0.3**
MKAR	**Makanchi Array**	**74.44**	**322**	P	**P**	**14 48 34.0**	**+0.2**
	0.3nm,0.5s,baz=110,slow=6.1,SNR=2.7						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**83.91**	**325**	P	**P**	**14 49 25.7**	**+0.3**
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.4						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**87.12**	**24**	P	**P**	**14 49 39.6**	**-1.5**
	0.2nm,0.9s,baz=245,slow=5.9,SNR=1.7						
	0.2nm,0.9s						

IDC 26 14:39:27.2±2.0, 6.˝42S×143.˝83E, h0km, mb3.4/2, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=92.0km s-min=32.1km az=111.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.30**	**214**	Pn	Pn	14 43 16.4	-1.4
	0.1nm,0.3s,baz=34,slow=12,SNR=2.1						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**19.63**	**208**	P	P	14 43 58.0	+0.5
	0.4nm,0.3s,baz=39,slow=7.8,SNR=13						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**75.84**	**321**	P	P	14 51 15.5	0.0
	0.3nm,0.9s,baz=103,slow=4.6,SNR=2.2						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**87.11**	**24**	P	P	14 52 14.8	0.0
	0.2nm,0.6s,baz=250,slow=5.2,SNR=4.5						
	0.2nm,0.6s						

IDC ***26*** *14:44:27.3±1.4,32.˝84S×178.˝49W,h0km,mb4.0/3, mbtmp4.0/4,ML4.0/1,MS3.7/1,Error ellipse: s-maj=38.3km s-min=33.1km az=76.0*
NEIC ***26*** *14:44:29.9±0.9,33.˝0S±0.˝2×178.˝6W±0.˝2,h10km±2km, mb4.4/5,Error ellipse: s-maj=37.9km s-min=23.5km az=121.0*
WEL ***26*** *14:45:45.1,38.˚S±22.˝×17.˚8E±1.˝4,h36km±15km,M2.2/12, MLv2.2/12,Error ellipse: s-maj=0.0km s-min=0.0km az=160.6*
ISC 26 14:44:31.5±1.2, 32.˚9S±0.˝1×178.˚6W±0.˝2, h32km, n37, σ1§18/37, mb4.2/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.70**	**9**	Pn	**Pn**	**14 45 24.2**	**-2.2**
MXZ	**Matakaoa Point**	**5.29**	**208**	Pn	**Pn**	**14 45 46.7**	**-1.6**
WMGZ	**Waiomatatini S**	**5.48**	**206**	P	**Pn**	**14 45 51.6**	**+0.8**
PKGZ	**Pakihiroa**	**5.67**	**208**	P	**Pn**	**14 45 52.3**	**-1.2**
HAZ	**Te Kaha**	**5.67**	**211**	P	**Pn**	**14 45 53.2**	**-0.3**
PUZ	**Puketiti**	**5.76**	**206**	P	**Pn**	**14 45 53.6**	**-1.2**
RUGZ	**Raukumara Rang**	**5.89**	**210**	P	**Pn**	**14 45 56.1**	**-0.6**
GRZ	**Great Barrier**	**5.94**	**234**	P	Pb	14 46 09.7	-4.6
TWGZ	**Tauwhareparae**	**5.95**	**207**	P	**Pn**	**14 45 57.6**	**+0.1**
CNGZ	**Carnagh Statio**	**6.14**	**204**	P	**Pn**	**14 45 58.4**	**-1.6**
TKGZ	**Te Karaka**	**6.23**	**207**	P	**Pn**	**14 46 01.0**	**-0.2**
MWZ	**Matawai**	**6.27**	**209**	P	**Pn**	**14 46 00.2**	**-1.6**
URZ	**Urewera**	**6.39**	**212**	Pn	**Pn**	**14 46 02.4**	**-0.9**
	3.2nm,0.3s,baz=329,slow=4.3,SNR=28						
URZ				Sn	**Sn**	**14 47 13.3**	**-1.8**
	2.4nm,0.3s,baz=234,slow=20,SNR=2.8						
	6.8nm,0.3s						
URZ	**Urewera**	**6.39**	**212**	P	**Pn**	**14 46 03.0**	**-0.3**
RIGZ	**Rimuhau**	**6.50**	**206**	P	**Pn**	**14 46 03.6**	**-1.3**
PRGZ	**Paritu Road**	**6.65**	**205**	P	**Pn**	**14 46 05.6**	**-1.4**
SNGZ	**Shannon Statio**	**6.73**	**208**	P	**Pn**	**14 46 07.8**	**-0.3**
RTZ	**Ruatahuna**	**6.74**	**211**	Pn	**Pn**	**14 46 07.1**	**-1.2**
RTZ	**Ruatahuna**	**6.74**	**211**	P	**Pn**	**14 46 07.3**	**-1.0**
RAHZ	**Arahi**	**6.95**	**209**	P	**Pn**	**14 46 08.5**	**-2.5**
MTHZ	**Maungataniwha**	**7.00**	**211**	P	**Pn**	**14 46 11.4**	**-0.4**
BKZ	**Black Stump Fm**	**7.41**	**211**	Pn	**Pn**	**14 46 16.7**	**-0.7**
MCHZ	**McNeill Hill**	**7.55**	**209**	P	**Pn**	**14 46 18.6**	**-0.8**
CMWZ	**Cape Campbell**	**10.52**	**211**	Pn	**Pn**	**14 46 59.6**	**-0.4**
RAR	**Rarotonga**	**20.36**	**60**	LR	LR	14 56 39.6	
	comp=Z,227nm,18.9s,baz=292,slow=36						
AS31	**Alice Springs**	**42.55**	**270**	P	**P**	**14 52 25.3**	**+0.8**
ASAR	**Alice Springs**	**42.55**	**270**	P	**P**	**14 52 25.3**	**+0.8**
ASAR	**Alice Springs**	**42.55**	**270**	P	**P**	**14 52 25.7**	**+1.2**
	1.1nm,0.7s,baz=108,slow=7.7,SNR=14						
ASAR				PcP	**PcP**	**14 54 17.3**	**+0.6**
	0.5nm,1.1s,baz=100,slow=4.8,SNR=1.1						
	1.1nm,0.7s	

n317, σ2°05/432, mb4.2/19, 44C-22D, Albania

Code	Station Name	Δ°	ΔZ°	Phase	ID	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.31**	**28**	Op		ISC		
PUK				Sg		**Sb**	**15 04 29.1**	**-1.1**
PUK	**Puka**	**0.31**	**28**	P		**Pg**	**15 04 24.1**	**+0.7**
	baz=41							
PUK				S		**Sg**	**15 04 28.5**	**+0.9**
	baz=41							
PUK				AMP				
	comp=E,613nm,0.3s,baz=41							
ULC	**Ulcinj**	**0.39**	**300**	⇓*i*	Pg	**Pb**	**15 04 26.2**	**-0.1**
ULC				*i*	Sg	**Sb**	**15 04 32.9**	**+0.4**
TIR	**Tirane**	**0.44**	**164**	Pg		**Pg**	**15 04 26.6**	**+0.8**
TIR				Sg		**Sb**	**15 04 33.5**	**-0.2**
TIR	**Tirane**	**0.44**	**164**	P		**Pb**	**15 04 26.7**	**-0.4**
	baz=158							
TIR				S		**Sb**	**15 04 34.6**	**+0.9**
	baz=158							
TIR				AMP				
	comp=E,8.3nm,0.8s,baz=158							
TIR	**Tirane**	**0.44**	**164**	P		**Pb**	**15 04 26.7**	**-0.4**
	baz=167							
TIR				S		**Sb**	**15 04 34.1**	**+0.4**
	baz=167							
TIR				AMP				
	comp=N,11nm,0.6s,baz=167							
TIR	**Tirane**	**0.44**	**164**	P		**Pg**	**15 04 26.6**	**+0.8**
TIR				S		**Sb**	**15 04 33.9**	**+0.2**
TIR	**Tirane**	**0.44**	**164**	*e*Pg		**Pg**	**15 04 26.4**	**+0.6**
TIR				*e*Sg		**Sb**	**15 04 33.3**	**-0.4**
TIR	**Tirane**	**0.44**	**164**	P		**Pg**	**15 04 26.6**	**+0.8**
PHP	**Peshkopia**	**0.56**	**98**	P		**Pg**	**15 04 28.1**	**-0.1**
	baz=101							
PHP				S		**Sb**	**15 04 37.1**	**-0.2**
	baz=101							
PHP				AMP				
	comp=N,44nm,0.4s,baz=101							
PHP	**Peshkopia**	**0.56**	**98**	P		**Pg**	**15 04 27.8**	**-0.3**
	baz=102							
PHP				S		**Sb**	**15 04 36.5**	**-0.8**
	baz=102							
PHP				AMP				
	comp=N,45nm,0.4s,baz=102							
PHP	**Peshkopia**	**0.56**	**98**	P		**Pg**	**15 04 27.7**	**-0.4**
PHP				S		**Sg**	**15 04 36.2**	**+0.7**
DRME	**Dracevica, Mon**	**0.57**	**318**	⇓*i*	Pg	**Pb**	**15 04 29.0**	**-0.3**
DRME				*i*	Sg	**Sb**	**15 04 38.5**	**+1.0**
DRME	**Dracevica, Mon**	**0.57**	**318**	⇓*i*	Pg	**Pb**	**15 04 29.1**	**-0.3**
DRME				*e*Sg		**Sb**	**15 04 38.4**	**+1.0**
BCI	**Bajram Curri**	**0.66**	**24**	P		**Pg**	**15 04 29.9**	**-0.1**
	baz=30							
BCI				S		**Sb**	**15 04 39.4**	**-0.7**
	baz=30							
BCI				AMP				
	comp=E,56nm,0.3s,baz=30							
BCI	**Bajram Curri**	**0.66**	**24**	P		**Pg**	**15 04 29.9**	**-0.1**
	baz=23							
BCI				S		**Sg**	**15 04 39.2**	**+0.6**
	baz=23							
BCI				AMP				
	comp=N,52nm,0.4s,baz=23							
BUM	**Brajici-Budva**	**0.80**	**312**	⇑*i*	Pg	**Pb**	**15 04 33.4**	**0.0**
BUM				*i*	Sg	**Sn**	**15 04 46.3**	**-0.5**
PVY	**Plav**	**0.85**	**13**	⇓*i*	Pg	**Pg**	**15 04 33.3**	**-0.3**
PVY				*i*	Sg	**Sb**	**15 04 46.0**	**+0.3**
CEME	**Cevo**	**0.97**	**323**	⇑*i*	Pg	**Pb**	**15 04 36.3**	**+0.1**
CEME				*i*	Sg	**Sn**	**15 04 51.8**	**+0.8**
OHR	**Ohrid**	**1.05**	**128**	*e*Pg		**Pg**	**15 04 37.2**	**-0.3**
OHR				*e*Sg		**Sn**	**15 04 52.5**	**-0.5**
OHR	**Ohrid**	**1.05**	**128**	*i*	Pg	**Pg**	**15 04 37.1**	**-0.3**
OHR				*i*	Sg	**Sn**	**15 04 52.9**	**-0.1**
KOME	**Kolasin**	**1.09**	**353**	⇓*i*	Pg	**Pb**	**15 04 38.1**	**-0.2**
KOME				*i*	Sg	**Sn**	**15 04 55.0**	**+1.1**
IVA	**Berane**	**1.11**	**7**	⇑*i*	Pg	**Pb**	**15 04 38.3**	**-0.3**
IVA				*i*	Sg	**Sn**	**15 04 55.5**	**+1.0**
HCY	**Herceg Novi**	**1.12**	**307**	⇑*i*	Pg	**Pb**	**15 04 38.9**	**+0.1**
HCY				*i*	Sg	**Sn**	**15 04 57.5**	**+2.8**
HCY	**Herceg Novi**	**1.12**	**307**	*i*	Pg	**Pb**	**15 04 38.9**	**+0.1**
HCY				*e*Sg		**Sn**	**15 04 55.9**	**+1.2**
VLO	**Vlora**	**1.31**	**187**	P		**Pg**	**15 04 43.2**	**+0.9**
VLO	**Vlora**	**1.31**	**187**	P		**Pg**	**15 04 43.3**	**+0.9**
	baz=185							
VLO				S		**Sg**	**15 05 00.8**	**+1.6**
	baz=185							
VLO	**Vlora**	**1.31**	**187**	P		**Pg**	**15 04 43.9**	**+1.6**
VLO				S		**Sg**	**15 05 04.0**	**+4.7**
	comp=N,3μm,0.8s							
VLO	**Vlora**	**1.31**	**187**	P		**Pg**	**15 04 43.2**	**+0.9**
SKO	**Skopje**	**1.31**	**81**	*e*Pg		**Pn**	**15 04 40.7**	**-1.0**
SKO				*e*Sg		**Sb**	**15 04 56.1**	**-2.9**
SKO	**Skopje**	**1.31**	**81**	*i*	Pg	**Pn**	**15 04 41.0**	**-0.7**
SKO				*i*	Sg	**Sb**	**15 04 58.7**	**-0.3**
TREB	**Trebinje**	**1.38**	**314**	*e*Pg		**Pg**	**15 04 43.7**	**0.0**
TREB				*e*Sg		**Sg**	**15 05 03.4**	**+1.8**
KBN	**Korca**	**1.41**	**144**	P		**Pg**	**15 04 45.1**	**+0.9**
KBN	**Korca**	**1.41**	**144**	P		**Pg**	**15 04 45.5**	**+1.2**
	baz=143							
KBN				S		**Sg**	**15 05 05.0**	**+2.6**
	baz=143							
KBN	**Korca**	**1.41**	**144**	P		**Pg**	**15 04 44.3**	**0.0**
	baz=145							
KBN				S		**Sg**	**15 05 05.1**	**+2.6**
	baz=145							
KBN				AMP				
	comp=E,4.6nm,0.9s,baz=145							
KBN	**Korca**	**1.41**	**144**	P		**Pg**	**15 04 45.1**	**+0.9**
KBN				S		**Sg**	**15 05 05.9**	**+3.4**
	comp=E,2μm,0.8s							
KBN	**Korca**	**1.41**	**144**	P		**Pg**	**15 04 45.1**	**+0.9**
BRY	**Bratogost**	**1.42**	**323**	⇑*i*	Pg	**Pg**	**15 04 44.6**	**0.0**
BRY				*i*	Sg	**Sg**	**15 05 06.4**	**+3.4**
BRY	**Bratogost**	**1.42**	**323**	⇓*i*	Pg	**Pb**	**15 04 44.1**	**+0.1**
BRY				*e*Sg		**Sg**	**15 05 05.4**	**+2.4**
SJES	**Sjenica**	**1.51**	**8**	*e*Pg		**Pb**	**15 04 45.3**	**-0.1**
SJES				*e*Sg		**Sg**	**15 05 06.0**	**+0.3**
SJES	**Sjenica**	**1.51**	**8**	⇓*i*	Pn	**Pb**	**15 04 45.1**	**-0.3**
SJES				*e*Sn		**Sg**	**15 05 05.9**	**+0.3**
UPM	**Unac-Piva**	**1.55**	**338**	⇑*i*	Pg	**Pb**	**15 04 46.5**	**+0.3**
UPM				*i*	Sg	**Sg**	**15 05 09.2**	**+2.1**
UPM	**Unac-Piva**	**1.55**	**338**	⇑*i*	Pn	**Pb**	**15 04 46.7**	**+0.5**
PLE	**Pljevlja**	**1.58**	**352**	⇑*i*	Pg	**Pb**	**15 04 46.7**	**+0.1**
PLE				*i*	Sg	**Sg**	**15 05 09.5**	**+1.5**
FNA	**Florina**	**1.60**	**127**	Pn		**Pb**	**15 04 46.4**	**-0.5**
FNA	**Florina**	**1.60**	**127**	P		**Pb**	**15 04 46.5**	**-0.4**
	baz=127							
FNA				S		**Sg**	**15 05 10.6**	**+1.8**
	baz=127							
FNA	**Florina**	**1.60**	**127**	P		**Pb**	**15 04 47.2**	**+0.3**
	baz=128							
FNA				S		**Sg**	**15 05 11.2**	**+2.4**
	baz=128							
FNA				AMP				
	comp=N,1.8nm,0.5s,baz=128							
FNA	**Florina**	**1.60**	**127**	P		**Pb**	**15 04 46.5**	**-0.4**
FNA				S		**Sg**	**15 05 10.0**	**+1.3**
	comp=N,1μm,0.6s							
FNA	**Florina**	**1.60**	**127**	P		**Pb**	**15 04 46.4**	**-0.5**
FNA	**Florina**	**1.60**	**127**	*i*	Pg	**Pb**	**15 04 46.4**	**-0.5**
FNA				*i*	Sg	**Sg**	**15 05 09.2**	**+0.5**
NEST	**Nestorio**	**1.69**	**143**	P		**Pg**	**15 04 49.4**	**-0.3**
NEST				S		**Sg**	**15 05 13.2**	**+1.5**
LSK	**Leskovik**	**1.75**	**157**	P		**Pb**	**15 04 49.6**	**+0.1**
	baz=155							
LSK	**Leskovik**	**1.75**	**157**	P		**Pb**	**15 04 49.2**	**-0.4**
LSK				S		**Sg**	**15 05 13.6**	**0.0**
	comp=N,1μm,0.9s							
SELS	**Selova**	**1.79**	**35**	*e*Pn		**Pn**	**15 04 48.7**	**+0.4**
SELS				*e*Sn		**Sb**	**15 05 11.9**	**-0.8**
IVAS	**Ivanjica**	**1.84**	**10**	*e*Pn		**Pb**	**15 04 50.4**	**-0.6**
IVAS				*e*Sn		**Sb**	**15 05 14.0**	**-0.1**
STON	**Ston**	**1.85**	**307**	⇑*i*	Pn	**Pn**	**15 04 49.9**	**+0.9**
STON				*e*Sn		**Sg**	**15 05 15.7**	**-0.9**
RUDO	**Rudo**	**1.86**	**353**	⇓*i*	Pn	**Pb**	**15 04 50.8**	**-0.6**
RUDO				*e*Sn		**Sb**	**15 05 14.9**	**+0.1**
BARS	**Barje**	**1.89**	**56**	*e*Pg		**Pn**	**15 04 50.2**	**+0.6**
BARS				*e*Sg		**Sb**	**15 05 14.5**	**-0.9**
BARS	**Barje**	**1.89**	**56**	*i*	Pg	**Pn**	**15 04 50.1**	**+0.6**
BARS				*i*	Sg	**Sb**	**15 05 14.4**	**-1.1**
SRN	**Sarande**	**1.90**	**173**	P		**Pb**	**15 04 51.2**	**-0.7**
	baz=171							
SRN	**Sarande**	**1.90**	**173**	P		**Pb**	**15 04 51.0**	**-1.0**
SRN				S		**Sg**	**15 05 17.3**	**-1.0**
	comp=N,1μm,1.1s							
PENT	**Pentalofos**	**1.91**	**145**	P		**Pb**	**15 04 52.5**	**+0.2**
PRVS	**Prvonek**	**1.92**	**67**	*e*Pg		**Pn**	**15 04 50.4**	**+0.4**
PRVS				*e*Sg		**Sb**	**15 05 16.0**	**-0.3**
NEVS	**Nevesinje**	**1.93**	**323**	*e*Pn		**Pb**	**15 04 52.1**	**-0.5**
NEVS				*e*Sn		**Sb**	**15 05 17.2**	**+0.4**
SCTE	**Santa Cesarea**	**1.94**	**209**			**Pn**	**15 04 50.2**	**0.0**
SCTE	**Santa Cesarea**	**1.94**	**209**	P		**Pn**	**15 04 51.1**	**+0.9**
	baz=208							
KEK	**Kerkira**	**2.06**	**178**			**Pn**	**15 04 50.2**	**-1.7**
BBLS	**Lazići**	**2.11**	**354**	*e*Pn		**Pb**	**15 04 54.6**	**-1.0**
BBLS				*e*Sn		**Sn**	**15 05 20.3**	**+1.3**
BBLS	**Lazići**	**2.11**	**354**	⇑*i*	Pn	**Pb**	**15 04 54.3**	**-1.3**
BBLS				*e*Sn		**Sn**	**15 05 20.3**	**+1.3**
GRG	**Griva**	**2.19**	**111**	*i*	Pn	**Pn**	**15 04 55.0**	**+1.3**
BOSS	**Bosilegrad**	**2.19**	**70**	*e*Pn		**Pn**	**15 04 53.5**	**-0.3**
VAY	**Valandovo**	**2.20**	**101**	*e*Pn		**Pb**	**15 04 55.5**	**-1.6**
VAY				*e*Sn		**Sn**	**15 05 21.7**	**+0.6**
VAY	**Valandovo**	**2.20**	**101**	*i*	Pn	**Pb**	**15 04 55.7**	**-1.4**
NOCI	**Noci**	**2.21**	**245**	P		**Pn**	**15 04 54.0**	**-0.1**
	baz=243							
GRUS	**Gruza**	**2.25**	**19**	*e*Pn		**Pn**	**15 04 55.8**	**+1.3**
GRUS				*e*Sn		**Sn**	**15 05 22.1**	**-0.2**
IGT	**Igoumenitsa**	**2.29**	**168**	P		**Pn**	**15 04 56.3**	**+1.2**
	baz=166							
DIVS	**Divibare**	**2.34**	**5**	*e*Pn		**Pn**	**15 04 57.4**	**+1.5**
DIVS				*e*Sn		**Sn**	**15 05 25.2**	**+0.5**
BOVS	**Bovan**	**2.38**	**38**	⇑P		**Pn**	**15 04 57.3**	**+1.0**
BOVS	**Bovan**	**2.38**	**38**			**Pn**	**15 04 57.3**	**+1.0**
BOVS	**Bovan**	**2.38**	**38**	*e*Sn		**Pn**	**15 04 56.2**	**-0.1**
BOVS	**Bovan**	**2.38**	**38**	*e*Pn		**Sn**	**15 05 24.6**	**-1.0**
HAPS	**Han Pijesak,Bl**	**2.38**	**347**	⇑*i*	Pn	**Pn**	**15 04 58.3**	**+1.8**
HAPS				*e*Sn		**Sb**	**15 05 28.0**	**-1.8**
PEHC	**Pehcevo**	**2.39**	**89**	*i*	Pn	**Pb**	**15 05 01.6**	**+1.1**
KNT	**Kendrikon**	**2.48**	**103**	*i*	Pn	**Pn**	**15 04 58.7**	**+1.0**
TRUS	**Trudelj**	**2.51**	**12**	*e*Pn		**Pn**	**15 04 59.6**	**+1.5**
MATE	**Matera**	**2.52**	**245**	⇓P		**Pb**	**15 05 01.0**	**-1.6**
MATE	**Matera**	**2.52**	**245**			**Pb**	**15 05 01.0**	**-1.6**
KKB	**Krupnik**	**2.56**	**87**	*i*	Pn	**Pn**	**15 05 00.8**	**+1.9**
ZAPS	**Zavoj**	**2.64**	**54**	*e*Pn		**Pn**	**15 05 02.0**	**+2.1**
ZAPS				*e*Sn		**Sn**	**15 05 29.9**	**-2.2**
LIT	**Litokhoron**	**2.69**	**127**			**Pn**	**15 05 02.5**	**+1.9**
LIT	**Litokhoron**	**2.69**	**127**	P		**Pn**	**15 05 02.5**	**+1.9**
THE	**Thessaloniki**	**2.71**	**114**	*i*	Pn	**Pn**	**15 05 02.5**	**+1.6**
SVIS	**Svilajnac**	**2.73**	**23**	*e*Pn		**Pn**	**15 05 00.4**	**-0.8**
ZAGS	**Zajecar**	**2.77**	**42**	*e*Pn		**Pn**	**15 05 02.2**	**+0.6**
ZAGS				*e*Sn		**Sn**	**15 05 35.5**	**+0.4**
TEKS	**Tekeris**	**2.78**	**357**	*e*Pn		**Pn**	**15 05 03.0**	**+1.1**
TEKS				*e*Sn		**Sn**	**15 05 37.6**	**+2.0**
TEKS	**Tekeris**	**2.78**	**357**	⇑*i*	Pn	**Pn**	**15 05 02.9**	**+1.1**
TEKS				*e*Sn		**Sn**	**15 05 37.0**	**+1.4**
BLKB	**Belogradchik**	**2.87**	**49**	⇑P		**Pn**	**15 05 05.7**	**+2.5**
BLKB				⇑S		**Sn**	**15 05 39.7**	**+1.9**
BLKB	**Belogradchik**	**2.87**	**49**			**Pn**	**15 05 05.7**	**+2.5**
BLKB						**Sn**	**15 05 39.7**	**+1.9**
SOH	**Sokhos**	**2.91**	**108**	*i*	Pn	**Pn**	**15 05 06.0**	**+2.3**
SGRT	**San Giovanni R**	**2.96**	**271**	Pn		**Pn**	**15 05 04.8**	**+0.4**
SGRT	**San Giovanni R**	**2.96**	**271**	P		**Pn**	**15 05 04.8**	**+0.4**
	baz=271							
SRS	**Serrai**	**3.00**	**101**	*i*	Pn	**Pn**	**15 05 06.6**	**+1.8**
KUBS	**Kucevo**	**3.01**	**28**	*e*Pn		**Pn**	**15 05 06.1**	**+1.1**
KUBS				*e*Sn		**Sn**	**15 05 41.8**	**+0.6**
BLJ	**Bijeljina**	**3.03**	**354**	*e*Sn		**Sn**	**15 05 42.5**	**+0.9**
MMB	**Musomishta**	**3.04**	**93**	*i*	Pn	**Pn**	**15 05 08.0**	**+2.5**
LKD2	**Lefkada island**	**3.06**	**166**	P		**Pn**	**15 05 06.8**	**+1.0**
	baz=164							
MGRS	**Mrkonjic Grad**	**3.27**	**325**	*e*Pn		**Pn**	**15 05 10.1**	**+1.5**
MGRS				*e*Sn		**Sn**	**15 05 49.4**	**+1.9**
MDVR	**Moldovita**	**3.35**	**25**	⇑P		**Pn**	**15 05 11.4**	**+1.7**
FRGS	**Fruska Gora**	**3.39**	**1**	⇑P		**Pn**	**15 05 11.5**	**+1.3**
FRGS	**Fruska Gora**	**3.39**	**1**	*e*Pn		**Pn**	**15 05 11.3**	**+1.0**
FRGS				*e*Sn		**Sn**	**15 05 51.5**	**+1.0**
FRGS	**Fruska Gora**	**3.39**	**1**	*e*Pn		**Pn**	**15 05 11.2**	**+1.0**
FRGS				*e*Sn		**Sn**	**15 05 51.2**	**+0.7**
AGG	**Agios Georgios**	**3.40**	**143**	Pn		**Pn**	**15 05 11.6**	**+1.2**
AGG	**Agios Georgios**	**3.40**	**143**	P		**Pn**	**15 05 11.6**	**+1.2**
TIP	**Timpagrande**	**3.42**	**222**	Pn		**Pn**	**15 05 10.9**	**+0.1**
CUC	**Castrocucco**	**3.44**	**240**			**Pn**	**15 05 12.0**	**+1.1**
PUNG	**Punghina**	**3.45**	**42**	⇑P		**Pn**	**15 05 13.3**	**+2.3**
BLY	**Banja Luka**	**3.50**	**329**	⇑*i*	Pn	**Pn**	**15 05 13.8**	**+2.1**
BLY				*e*Sn		**Sn**	**15 05 55.1**	**+1.9**
ZIRJ	**Zirje**	**3.53**	**304**	*e*Pn		**Pn**	**15 05 13.9**	**+1.7**
ZIRJ				Sn		**Sn**	**15 05 55.1**	**+1.1**
DJES	**Djerdap**	**3.56**	**34**	⇑P		**Pn**	**15 05 14.8**	**+2.3**
DJES				⇑S		**Sn**	**15 05 55.5**	**+1.0**
DJES	**Djerdap**	**3.56**	**34**			**Pn**	**15 05 13.3**	**+0.8**
A050A	**Klekovaca**	**3.57**	**321**	⇑*i*	Pn	**Pn**	**15 05 14.4**	**+1.6**
A050A				*e*Sn		**Sn**	**15 05 56.3**	**+1.3**
HERR	**Herculane**	**3.69**	**32**	⇑P		**Pn**	**15 05 15.6**	**+1.3**
HERR				⇑S		**Sn**	**15 05 59.9**	**+2.1**
A051A	**Mrakovica**	**3.83**	**329**	⇑*i*	Pn	**Pn**	**15 05 19.0**	**+1.7**
A051A				*e*Sn		**Sn**	**15 06 02.7**	**+1.3**
SRE	**Strehaia**	**3.86**	**40**	⇑P		**Pn**	**15 05 18.8**	**+2.0**
SRE	**Strehaia**	**3.86**	**40**	P		**Pn**	**15 05 18.7**	**+2.0**
PLVB	**Pleven**	**3.98**	**64**	⇑P		**Pn**	**15 05 20.3**	**+2.0**
PLVB	**Pleven**	**3.98**	**64**			**Pn**	**15 05 20.3**	**+2.0**
UDBI	**Udbina**	**3.99**	**315**	*e*Pn		**Pn**	**15 05 21.0**	**+2.5**
DUGI	**Dugi Otok**	**4.07**	**305**	*e*Pn		**Pn**	**15 05 21.2**	**+1.6**
DUGI				Sn		**Sn**	**15 06 08.2**	**+0.9**
BZS	**Buzias**	**4.09**	**19**	⇓P		**Pn**	**15 05 21.1**	**+1.3**
BZS				⇑S		**Sn**	**15 06 07.8**	**0.0**
BZS	**Buzias**	**4.09**	**19**	P		**Pn**	**15 05 21.1**	**+1.3**
VIRC	**Vir**	**4.24**	**308**	*e*Pn		**Pn**	**15 05 23.3**	**+1.5**
GZR	**Gura Zlata**	**4.26**	**31**	⇓P		**Pn**	**15 05 23.9**	**+1.7**
GZR	**Gura Zlata**	**4.26**	**31**	P		**Pn**	**15 05 23.7**	**+1.5**
PLIT	**Plitvice**	**4.30**	**318**	*e*Pn		**Pn**	**15 05 24.7**	**+1.9**
INTR	**Introdacqua**	**4.33**	**275**	Pn		**Pn**	**15 05 24.4**	**+1.2**
MOSL	**Moslavina**	**4.40**	**332**	*e*Pn		**Pn**	**15 05 25.6**	**+1.6**
RDO	**Rodhopi**	**4.43**	**96**	Pn		**Pn**	**15 05 25.3**	**+0.8**
NVLJ	**Novalja**	**4.50**	**310**	*e*Pn		**Pn**	**15 05 26.8**	**+1.3**
MORH	**Mrgy. Hungar**	**4.51**	**351**	⇓P		**Pn**	**15 05 26.9**	**+1.3**
CEL	**Celeste**	**4.56**	**221**	Pn		**Pn**	**15 05 26.4**	**0.0**
RABC	**Rab**	**4.67**	**311**	*e*Pn		**Pn**	**15 05 29.3**	**+1.5**
SIRR	**Siria**	**4.71**	**17**	⇓P		**Pn**	**15 05 30.0**	**+1.5**
SIRR				⇑S		**Sn**	**15 06 23.6**	**+0.4**
DEV	**Deva**	**4.72**	**28**	⇑P		**Pn**	**15 05 30.1**	**+1.6**
DEV	**Deva**	**4.72**	**28**	P		**Pn**	**15 05 30.1**	**+1.6**
ELND	**Elena**	**4.72**	**74**	⇑P		**Pn**	**15 05 30.9**	**+2.4**
ELND	**Elena**	**4.72**	**74**			**Pn**	**15 05 30.9**	**+2.4**
CAMP	**Campotosto**	**4.74**	**281**			**Pn**	**15 05 30.0**	**+1.1**
ALN	**Alexandroupoli**	**4.86**	**98**	Pn		**Pn**	**15 05 32.1**	**+1.7**
ALN	**Alexandroupoli**	**4.86**	**98**	P		**Pn**	**15 05 32.1**	**+1.7**
GUMA	**Gualdo di Mace**	**4.89**	**287**	Pn		**Pn**	**15 05 32.0**	**+1.2**
BOJS	**Bojanci**	**4.94**	**321**	*i*	Pn	**Pn**	**15 05 33.3**	**+1.8**
BOJS				*i*	Sn	**Sn**	**15 06 27.0**	**-1.6**
BOJS	**Bojanci**	**4.94**	**321**	*e*Pn		**Pn**	**15 05 32.4**	**+0.9**
BOJS				*e*Sn		**Sn**	**15 06 28.6**	**0.0**
NRCA	**Norcia**	**5.00**	**284**			**Pn**	**15 05 33.8**	**+1.3**
CRES	**Cresnjev**	**5.09**	**324**	*e*Pn		**Pn**	**15 05 35.0**	**+1.4**
CRES				*e*Sn		**Sn**	**15 06 33.1**	**+0.7**
GBRS	**Gornja Briga**	**5.17**	**318**	*e*Pn		**Pn**	**15 05 37.0**	**+2.2**
MTUR	**Matau**	**5.21**	**47**	⇑P		**Pn**	**15 05 38.2**	**+2.8**
MTUR	**Matau**	**5.21**	**47**			**Pn**	**15 05 38.2**	**+2.8**
MTUR	**Matau**	**5.21**	**47**	P		**Pn**	**15 05 38.2**	**+2.8**
VOIR		**5.34**	**45**	⇑P		**Pn**	**15 05 39.6**	**+2.5**
VOIR		**5.34**	**45**	P		**Pn**	**15 05 39.6**	**+2.5**
VISS	**Visnje**	**5.35**	**321**	*e*Pn		**Pn**	**15 05 39.7**	**+2.5**
BRJN	**Brijuni**	**5.35**	**308**	*e*Pn		**Pn**	**15 05 38.5**	**+1.4**
CESX	**Cesi**	**5.36**	**281**	Pn		**Pn**	**15 05 38.3**	**+1.1**
DRGR		**5.47**	**22**	⇑P		**Pn**	**15 05 40.3**	**+1.5**
DRGR				⇓S		**Sn**	**15 06 40.8**	**-1.0**
DRGR		**5.47**	**22**	P		**Pn**	**15 05 40.3**	**+1.5**
MARR	**Marisel-Cluj**	**5.49**	**25**	⇑P		**Pn**	**15 05 40.9**	**+1.7**
MARR	**Marisel-Cluj**	**5.49**	**25**			**Pn**	**15 05 40.9**	**+1.7**
CEY	**Cerknica**	**5.51**	**318**	*e*Pn		**Pn**	**15 05 40.1**	**+0.8**
CEY				*e*Sn		**Sn**	**15 06 42.7**	**0.0**
SKDS	**Skadanscina**	**5.59**	**314**	*e*Pn		**Pn**	**15 05 41.5**	**+1.0**
SKDS				*e*Sn		**Sn**	**15 06 44.1**	**-0.7**
CJR	**Cluj-Napoca**	**5.68**	**28**	⇑P		**Pn**	**15 05 44.6**	**+2.9**
CJR	**Cluj-Napoca**	**5.68**	**28**	P		**Pn**	**15 05 44.6**	**+2.9**
MLR	**Muntele Rosu**	**5.86**	**49**	⇑P		**Pn**	**15 05 46.0**	**+1.6**
MLR	**Muntele Rosu**	**5.86**	**49**			**Pn**	**15 05 46.3**	**+2.0**
MLR	**Muntele Rosu**	**5.86**	**49**	P		**Pn**	**15 05 46.8**	**+2.5**
MLR				S		**Sn**	**15 06 53.6**	**+2.0**
MLR	**Muntele Rosu**	**5.86**	**49**	P		**Pn**	**15 05 46.8**	**+2.5**
	comp=N,10nm,0.5s,baz=142,slow=10.0,SNR=14							
MLR				S		**Sn**	**15 06 53.6**	**+2.0**
	comp=N,19nm,0.7s,baz=168,slow=19,SNR=5.1							
SOKA	**Soboth**	**5.94**	**327**	*i*	Pn	**Pn**	**15 05 47.4**	**+2.0**
	comp=N,3.4nm,0.5s							
SOKA				*e*Sn		**Sn**	**15 06 55.1**	**+1.5**
	comp=N,2.4nm,0.3s							
OBKA	**Obir**	**6.02**	**324**	*i*	Pn	**Pn**	**15 05 47.3**	**+1.0**
	comp=N,1.7nm,0.2s							
OBKA				*e*Sn		**Sn**	**15 06 57.7**	**+2.4**
	comp=N,10.0nm,0.5s							
OBKA	**Obir**	**6.02**	**324**	*e*Pn		**Pn**	**15 05 47.8**	**+1.4**
SABO	**M.te Sabotino**	**6.09**	**316**	Pn		**Pn**	**15 05 48.5**	**+1.0**
PSZ	**Piszkesteto**	**6.15**	**1**	⇓P		**Pn**	**15 05 49.6**	**+1.4**
PSZ	**Piszkesteto**	**6.15**	**1**			**Pn**	**15 05 49.4**	**+1.1**
PSZ	**Piszkesteto**	**6.15**	**1**			**Pn**	**15 05 49.6**	**+1.4**
PSZ	**Piszkesteto**	**6.15**	**1**	P		**Pn**	**15 05 49.6**	**+1.4**
OZUR		**6.17**	**43**	⇓P		**Pn**	**15 05 50.8**	**+2.4**
ARSA	**Arzberg**	**6.24**	**333**	*e*Pn		**Pn**	**15 05 52.2**	**+2.8**
	comp=N,6.4nm,0.4s							
ARSA				*e*Sn		**Sn**	**15 07 03.4**	**+2.6**
	comp=N,6.5nm,0.4s							
RONA	**Rosalia, Austr**	**6.41**	**339**	*e*Pn		**Pn**	**15 05 55.9**	**+4.3**
	comp=N,3.7nm,0.5s							
RONA				*i*	Sn	**Sn**	**15 07 03.5**	**-1.4**
	comp=N,3.4nm,0.3s							
PRED	**Cave del Predi**	**6.43**	**319**	Pn		**Pn**	**15 05 53.5**	**+1.5**
PLOR	**Plostina**	**6.47**	**49**	⇑P		**Pn**	**15 05 55.7**	**+3.0**
PLOR	**Plostina**	**6.47**	**49**	P		**Pn**	**15 05 55.6**	**+3.0**
OSSC	**Osservatorio P**	**6.48**	**289**	Pn		**Pn**	**15 05 53.7**	**+1.1**
MYKA	**Terra Mystica**	**6.52**	**320**	*i*	Pn	**Pn**	**15 05 56.2**	**+2.8**
	comp=N,2.4nm,0.5s							
MYKA				*i*	Sn	**Sn**	**15 07 05.9**	**-1.9**
	comp=N,2.7nm,0.3s							
VRI	**Vrincioaia**	**6.53**	**49**	⇑P		**Pn**	**15 05 56.6**	**+3.2**
VRI	**Vrincioaia**	**6.53**	**49**	P		**Pn**	**15 05 56.5**	**+3.2**
CASP	**Castiglione de**	**6.63**	**282**	Pn		**Pn**	**15 05 55.2**	**+0.5**
ZST	**Bratislava**	**6.69**	**345**	*e*SN		Sn	15 07 00.0	-12
CONA	**Conrad Observ

	comp=Z,0.3nm,0.2s,baz=222,slow=12,SNR=5.9							
AKBB	**Malin Array Si**	**11.10**	**33**	*e*P		**Pn**	**15 06 57.4**	**+1.5**
HAU	**Haudompre**	**11.33**	**308**	*e*Pn		**Pn**	**15 06 57.0**	**-2.2**
HAU				*e*Sn		**Sn**	**15 08 57.2**	**-8.7**
	comp=Z,14nm,0.4s							
SMF	**Signal de Mont**	**12.38**	**299**	*e*Pn		**Pn**	**15 07 11.2**	**-2.2**
SMF				*e*Sn		Sn	15 09 22.3	-9.1
	comp=Z,13nm,0.6s							
LOR	**Lormes**	**12.56**	**301**	*e*Pn		**Pn**	**15 07 14.7**	**-1.3**
	baz=109							
LOR				*e*Sn		Sn	15 09 26.6	-9.4
	comp=Z,7.2nm,0.3s							
AVF	**Avril sur Loir**	**12.74**	**299**	*e*Pn		**Pn**	**15 07 17.1**	**-1.3**
AVF				*e*Sn		**Sn**	**15 09 31.7**	**-8.5**
	comp=Z,2.2nm,0.5s							
ANN	**Anapa**	**13.27**	**71**	*e*P		**P**	**15 07 31.2**	**-4.3**
ANN				pmax		pmax		
	comp=Z,46nm,0.9s							
KBZ	**Khabaz**	**17.14**	**76**↑	*e*P		**Pn**	**15 08 17.2**	**+0.4**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KBZ	**Khabaz**	**17.14**	**76**	P		**P**	**15 08 20.6**	**+2.1**
	comp=Z,1.8nm,0.8s,baz=296,slow=12,SNR=4.8							
OBN	**Obninsk**	**17.36**	**34**	*e*P		**Pn**	**15 08 18.4**	**-1.0**
OBN				pmax		pmax		
	comp=Z,9.0nm,0.5s							
ESDC	**Sonseca Array**	**18.05**	**271**	P		**P**	**15 08 29.5**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=72,slow=12,SNR=2.7							
HFS	**Hagfors**	**18.76**	**351**	P		**P**	**15 08 35.3**	**-0.9**
HFS	**Hagfors**	**18.76**	**351**	P		**P**	**15 08 35.3**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=156,slow=11,SNR=5.8							
NC405	**NORSAR Array S**	**19.97**	**349**	P		**P**	**15 08 48.6**	**-0.8**
NB2	**NORSAR Subarra**	**19.98**	**348**	P		**P**	**15 08 48.4**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=160,slow=10							
NOA	**NORSAR Array B**	**19.98**	**348**	*e*P		**Pn**	**15 08 52.7**	**+1.4**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
NOA	**NORSAR Array B**	**19.98**	**348**	P		**P**	**15 08 49.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=156,slow=10,SNR=4.5							
FINES	**FINESS Array B**	**20.08**	**9**	P		**P**	**15 08 49.2**	**-1.4**
FINES	**FINESS Array B**	**20.08**	**9**	*e*P		**P**	**15 08 50.0**	**-0.6**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.5s							
FINES	**FINESS Array B**	**20.08**	**9**	P		**P**	**15 08 49.0**	**-1.6**
	comp=Z,1.9nm,0.5s,baz=185,slow=10.0,SNR=14							
EKA	**Eskdalemuir Ar**	**20.20**	**320**	P		**P**	**15 08 52.0**	**+0.1**
EKA	**Eskdalemuir Ar**	**20.20**	**320**	P		**P**	**15 08 52.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=111,slow=10.0,SNR=1.9							
	comp=Z,0.2nm,0.3s							
NC204	**NORSAR Array S**	**20.27**	**347**	P		**P**	**15 08 50.9**	**-1.9**
NC204				IAmb		IAmb	15 09 34.4	
	comp=Z,14nm,1.3s							
BELG	**Belogornoye**	**21.65**	**51**↓	*e*P		**P**	**15 09 08.2**	**+0.6**
BELG				pmax		pmax		
	comp=Z,3.0nm,0.9s							
KLMR	**Klimovskoe**	**22.60**	**26**	*e*P		**P**	**15 09 15.9**	**-1.9**
KLMR				pmax		pmax		
	comp=Z,17nm,1.7s							
ARCES	**ARCESS Array B**	**28.00**	**4**	P		**P**	**15 10 05.4**	**-2.5**
ARCES	**ARCESS Array B**	**28.00**	**4**	P		**P**	**15 10 05.4**	**-2.5**
	comp=Z,3.2nm,1.2s,baz=197,slow=11,SNR=4.5							
	comp=Z,3.2nm,1.2s							
ABKAR	**Akbulak array**	**28.90**	**61**	P		**P**	**15 10 15.0**	**-1.1**
BRVK	**Borovoye**	**35.33**	**54**	P		**P**	**15 11 12.2**	**-0.3**
BRVK				IAmb		IAmb	15 11 13.1	
	comp=Z,3.2nm,0.6s							
BRVK	**Borovoye**	**35.33**	**54**	*d* i P		**P**	**15 11 12.4**	**-0.1**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BVAR	**Borovoye Array**	**35.40**	**54**	P		**P**	**15 11 12.9**	**-0.1**
BVAR	**Borovoye Array**	**35.40**	**54**	P		**P**	**15 11 12.9**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=269,slow=5.9,SNR=11							
	comp=Z,1.7nm,0.8s							
ZAA0	**Zalesovo Array**	**43.84**	**51**	P		**P**	**15 12 22.4**	**-0.9**
ZAA0				IAmb		IAmb	15 12 23.2	
	comp=Z,3.3nm,0.7s							
ZALV	**Zalesovo Beam**	**43.84**	**51**	P		**P**	**15 12 22.4**	**-0.8**
ZALV	**Zalesovo Beam**	**43.84**	**51**	*i* P		**P**	**15 12 22.6**	**-0.7**
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.6s							
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.6s							
ZALV	**Zalesovo Beam**	**43.84**	**51**	P		**P**	**15 12 22.3**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=281,slow=8.6,SNR=19							
	comp=Z,3.1nm,0.6s							
MK31	**Makanchi Array**	**44.05**	**61**	P		**P**	**15 12 24.5**	**-0.6**
MK31	**Makanchi Array**	**44.05**	**61**	*de*P		**P**	**15 12 24.3**	**-0.8**
MKAR	**Makanchi Array**	**44.05**	**61**	P		**P**	**15 12 24.1**	**-1.0**
MKAR	**Makanchi Array**	**44.05**	**61**	*e*P		**P**	**15 12 24.3**	**-0.8**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**44.05**	**61**	P		**P**	**15 12 24.4**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=263,slow=6.5,SNR=14							
MKAR				PcP		**PP**	**15 14 08.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=289,slow=3.7,SNR=3.6							
	comp=Z,0.9nm,0.5s							
DGZ	**Jazzator, Alta**	**46.47**	**56**↑	*e*P		**P**	**15 12 44.1**	**-0.3**
DGZ				pmax		pmax		
	comp=Z,2.0nm,0.9s							
WMQ	**Urumqi**	**48.64**	**63**	*e*P		**P**	**15 13 06.0**	**+4.7**
WMQ				PcS		**PcS**	**15 18 27.5**	**+4.8**
WMQ				ScP		**ScP**	**15 18 31.0**	**+10**
WMQ				pmax		pmax		
	comp=Z,15nm,0.7s							
SONM	**Songino Array**	**58.70**	**52**	P		**P**	**15 14 14.7**	**-0.4**
SONM				IAmb		IAmb	15 14 16.1	
	comp=Z,3.3nm,1.3s							
SONM	**Songino Array**	**58.70**	**52**	*e*P		**P**	**15 14 14.8**	**-0.3**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**58.70**	**52**	P		**P**	**15 14 14.3**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=297,slow=7.6,SNR=9.4							
	comp=Z,1.3nm,0.8s							
ULN	**Ulaanbaatar**	**59.08**	**52**	*de*P		**P**	**15 14 17.4**	**-0.3**
ULN				pmax		pmax		
	comp=Z,6.0nm,2.5s							
HHC	**Hu-ho-hao-te**	**65.55**	**56**	*e*P		**P**	**15 15 02.3**	**+1.2**
HHC				pmax		pmax		
	comp=Z,13nm,0.7s							
HHC				pmax		pmax		
	comp=Z,160nm,6.2s							
PZH	**PanZhiHua**	**67.21**	**74**	P		**P**	**15 15 15.0**	**+3.0**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
YKA	**Yellowknife Ar**	**69.81**	**339**	*i* P		**P**	**15 15 26.1**	**-1.3**
YKA	**Yellowknife Ar**	**69.81**	**339**	P		**P**	**15 15 26.6**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=28,slow=5.5,SNR=4.5							
	comp=Z,0.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**70.04**	**83**	*e*P		**P**	**15 15 28.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**70.04**	**83**	P		**P**	**15 15 27.7**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=312,slow=7.4,SNR=5.3							
	comp=Z,0.4nm,0.3s							
D19K	**Kuna River**	**70.05**	**359**	P		**P**	**15 15 28.9**	**0.0**
D19K				IAmb		IAmb	15 15 57.9	
	comp=Z,2.5nm,1.1s							
J30M	**Hart River**	**72.33**	**349**	P		**P**	**15 15 42.8**	**0.0**
IMAR	**Indian Mountai**	**72.46**	**357**	P		**P**	**15 15 43.5**	**+0.1**
I23K	**Minto, Yukon-K**	**73.08**	**355**	P		**P**	**15 15 47.2**	**+0.1**
ILAR	**Eielson Array**	**73.28**	**354**	P		**P**	**15 15 47.3**	**-1.0**
ILAR	**Eielson Array**	**73.28**	**354**	P		**P**	**15 15 47.3**	**-1.0**
	comp=Z,0.1nm,0.6s,baz=1.6,slow=5.3,SNR=5.0							
	comp=Z,0.1nm,0.6s							
KSRS	**Korea Array**	**77.54**	**51**	*e*P		**P**	**15 16 12.2**	**-1.1**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.8s							
KSRS	**Korea Array**	**77.54**	**51**	P		**P**	**15 16 12.4**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=305,slow=4.8,SNR=4.7							
	comp=Z,1.3nm,0.8s							

*GRAL **26** 15:04:36.5±0.4, 33.˚13N×35.˚48E, h5km±5km, MD2.5*
*GII **26** 15:04:37.5±0.2, 33.˚227N±0.˚001×35.˚486E±0.˚001, h8km, Md1.5/4, Mws1.7/9, confirmed*

ISC 26 15:04:37.1±0.9, 33.˚22N±0.˚03×35.˚50E±0.˚04, h16km±6km, n32, σ0°48/34, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEM	**Giv'at Ha'Em**	**0.14**	**95**	S	**Sg**	**15 04 43.6**	**+0.1**
GEM	**Giv'at Ha'Em**	**0.14**	**95**	P	**Pb**	**15 04 41.0**	**-0.3**
NATI	**Neve Ativ**	**0.20**	**79**	S	**Sg**	**15 04 45.6**	**+0.5**
NATI	**Neve Ativ**	**0.20**	**79**	P	**Pb**	**15 04 42.0**	**-0.5**
MMA0B	**Mount Meron ar**	**0.22**	**201**	S	**Sg**	**15 04 45.9**	**+0.2**
MMA0B	**Mount Meron ar**	**0.22**	**201**	P	**Pb**	**15 04 42.1**	**-0.7**
HNTI	**Hanita**	**0.31**	**243**	S	**Sg**	**15 04 48.1**	**+0.1**
HNTI	**Hanita**	**0.31**	**243**	P	**Pg**	**15 04 43.5**	**-0.1**
KSHT	**Keshet**	**0.35**	**132**	S	**Sb**	**15 04 50.3**	**-0.2**
KSHT	**Keshet**	**0.35**	**132**	P	**Pb**	**15 04 44.9**	**-0.2**
QRWL	**Qaraoun**	**0.36**	**25**	*e*P	**Pb**	**15 04 44.7**	**-0.6**
RCY	**Rachaya**	**0.39**	**46**	*e*P	**Pb**	**15 04 45.1**	**-0.8**
RCY				*e*S	**Sb**	**15 04 51.2**	**-0.5**
DQRL	**Deir Qamar**	**0.49**	**7**	*e*P	**Pg**	**15 04 46.8**	**-0.1**
DQRL				*e*S	**Sb**	**15 04 54.7**	**+0.4**
BLGI	**Bet Lehem HaGe**	**0.55**	**208**	P	**Pg**	**15 04 47.6**	**-0.4**
BLGI	**Bet Lehem HaGe**	**0.55**	**208**	S	**Sb**	**15 04 56.0**	**-0.1**
BHL	**Bhannes**	**0.69**	**11**	*e*P	**Pb**	**15 04 50.6**	**-0.3**
ZAHL	**Zahle**	**0.71**	**27**	*e*P	**Pb**	**15 04 51.1**	**-0.1**
OFRI	**`Ofer**	**0.74**	**216**	S	**Sb**	**15 05 01.6**	**+0.1**
OFRI	**`Ofer**	**0.74**	**216**	P	**Pb**	**15 04 51.4**	**-0.2**
MMLI	**Mount Malkishu**	**0.79**	**185**	S	**Sb**	**15 05 03.1**	**+0.2**
MMLI	**Mount Malkishu**	**0.79**	**185**	P	**Pb**	**15 04 52.1**	**-0.3**
HMDT	**Nahal Hemdat**	**0.97**	**179**	S	**Sn**	**15 05 09.0**	**-0.5**
HMDT	**Nahal Hemdat**	**0.97**	**179**	P	**Pb**	**15 04 55.4**	**-0.1**
SLTI	**Sal'it**	**1.05**	**202**	S	**Sn**	**15 05 11.5**	**-0.1**
SLTI	**Sal'it**	**1.05**	**202**	P	**Pn**	**15 04 57.2**	**-0.1**
HWQ	**Hawqa**	**1.12**	**19**	*e*P	**Pb**	**15 04 57.9**	**-0.2**
DSI	**Dead Sea**	**1.65**	**184**	P	**Pn**	**15 05 05.9**	**+0.5**
DSI	**Dead Sea**	**1.65**	**184**	S	**Sb**	**15 05 27.4**	**-0.3**
YTIR	**Yattir**	**1.88**	**190**	S	**Sb**	**15 05 33.6**	**-0.9**
YTIR	**Yattir**	**1.88**	**190**	P	**Pn**	**15 05 09.7**	**+1.0**
MSBI	**Mazada**	**1.91**	**184**	P	**Pn**	**15 05 09.4**	**+0.5**
MSBI	**Mazada**	**1.91**	**184**	S	**Sn**	**15 05 33.7**	**+1.1**

IDC 26 15:08:42.4±3.7, 5.˚79S×141.˚96E, h0km, mb3.5/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=117.6km s-min=27.5km az=100.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.90**	**207**	Pn	Pn	15 12 26.3	-1.4
	0.1nm,0.3s,baz=29,slow=14,SNR=2.4						
WRA				Sn	Sn	15 15 12.4	-12
	0.1nm,0.3s,baz=38,slow=17,SNR=2.4						
WRA				Lg	Lg	15 17 06.6	
	0.1nm,0.3s,baz=29,slow=26,SNR=4.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**19.39**	**203**	P	P	15 13 10.3	+0.2
	0.1nm,0.3s,baz=33,slow=9.2,SNR=13						
ASAR				S	Sn	15 16 38.1	-11
	0.2nm,0.5s,baz=17,slow=26,SNR=1.8						
ASAR				Lg	Lg	15 19 00.5	
	baz=23,slow=31,SNR=2.6						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**74.20**	**322**	P	P	15 20 21.3	+0.2
	0.4nm,0.8s,baz=116,slow=5.8,SNR=4.0						
	0.4nm,0.8s						

*IDC **26** 15:16:25.1±0.8, 6.˚14S×142.˚92E, h0km, mb4.1/10, mbtmp4.1/12, ML1.6/1, Error ellipse: s-maj=34.1km s-min=18.0km az=70.0*

ISC 26 15:16:26.7±0.7, 6.˚2S±0.˚1×142.˚8E±0.˚1, h10km, n13, σ0°97/13, mb4.1/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.37**	**126**	Pn	**Pn**	**15 17 47.2**	**+0.3**
	1.4nm,0.3s,baz=323,slow=3.1,SNR=10						
PMG				Sn	**Sn**	**15 18 48.3**	**-0.6**
	1.6nm,0.3s,baz=322,slow=23,SNR=1.4						
	14nm,0.6s						
WRA	**Warramunga Arr**	**15.90**	**210**	Pn	**Pn**	**15 20 08.7**	**-2.1**
	0.4nm,0.3s,baz=31,slow=13,SNR=12						
ASAR	**Alice Springs**	**19.32**	**205**	P	**P**	**15 20 53.6**	**+1.4**
	16nm,0.9s,baz=30,slow=12,SNR=32						
STKA	**Stephens Creek**	**25.53**	**182**	P	**P**	**15 21 56.8**	**+1.1**
	2.8nm,1.1s,baz=4.1,slow=14,SNR=2.9						
	2.8nm,1.1s						
KSRS	**Korea Array**	**45.62**	**343**	P	**P**	**15 24 46.4**	**-0.9**
	0.3nm,0.3s,baz=173,slow=11,SNR=1.7						
	0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**49.70**	**300**	P	**P**	**15 25 19.7**	**+0.3**
	0.5nm,0.3s,baz=129,slow=5.5,SNR=4.2						
	0.5nm,0.3s						
SONM	**Songino Array**	**62.64**	**333**	P	**P**	**15 26 51.4**	**-0.2**
	0.2nm,0.5s,baz=160,slow=5.7,SNR=2.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**75.04**	**322**	P	**P**	**15 28 08.9**	**+0.2**
	0.9nm,0.8s,baz=111,slow=6.8,SNR=7.7						
	0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**78.93**	**324**	P	**P**	**15 28 30.7**	**+0.2**
	1.5nm,0.2s,baz=101,slow=4.8,SNR=1.9						
	1.5nm,0.2s						
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**15 28 55.7**	**-0.2**
	1.8nm,0.8s,baz=343,slow=2.8,SNR=6.2						
	1.8nm,0.8s						
NRIK	**Nord'sk**	**84.24**	**343**	P	**P**	**15 28 58.4**	**+0.3**
	1.2nm,0.5s,baz=133,slow=7.1,SNR=3.8						
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**84.51**	**325**	P	**P**	**15 29 00.3**	**+0.4**
	4.0nm,0.8s,baz=110,slow=6.8,SNR=23						
	4.0nm,0.8s						
ILAR	**Eielson Array**	**87.37**	**24**	P	P	15 29 12.5	-1.4
	1.2nm,0.8s,baz=256,slow=5.1,SNR=11						
	1.2nm,0.8s						

*BJI **26** 15:17:56.5±0.0, 6.˚40S×143.˚39E, h15km, mb5.6/86, mB5.8/84, Ms6.0/99, Ms7 5.9/97*
*IDC **26** 15:17:57.1±0.4, 6.˚33S×143.˚11E, h0km, mb5.5/27, mbtmp5.4/30, ML4.7/3, MS6.1/38, Error ellipse: s-maj=20.2km s-min=11.0km az=80.0*
*IPGP **26** 15:17:57.0, 6.˚50S×143.˚26E, h6km, Mw6.4, Fault plane solution: NP1:ϕs136.00000°, δ74.00000°, λ91.00000°. NP2:ϕs311.00000°, δ17.00000°, λ85.00000°.*
*MOS **26** 15:17:58.5±1.2, 6.˚26S×143.˚18E, h15km, mb5.9/52, MS6.0/19, Error ellipse: s-maj=9.7km s-min=4.8km az=110.3*
*NEIC **26** 15:17:59.5, 6.˚50S×143.˚06E, h12km, Moment Tensor Solution. Duration: 7s2 Moment tensor: Scale 10¹⁸Nm; Mrr2.23; Mθθ-1.50; Mϕϕ-0.73; Mrθ2.78; Mθϕ0.74; Mϕr-1.26; Fault plane solution: Mo3.70000×10¹⁸ NP1: ϕs115.76000°, δ72.84000°, λ87.33000°. NP2: ϕs304.75000°, δ17.36000°, λ98.59000°. Principal axes: T 3.8525, Plg62.0000°, Azm22.0000°; N -0.3033, Plg3.0000°, Azm117.0000°; P -3.5491, Plg28.0000°, Azm208.0000°;*
*NEIC **26** 15:17:59.5, 6.˚50S×143.˚26E, h14km*
*NEIC **26** 15:17:59.5, 6.˚50S×143.˚26E, h12km*
*DJA **26** 15:17:59.4±0.2, 6.˚S±2.˚×14.˚3E±.˚, h10km, M6.0/97, mb5.7/97, mB6.3/91, MLv6.5/7, Mww6.1/40, Mw(mB)6.0/91, MwMwp5.9/71, Mwp6.0/71*
*NEIC **26** 15:18:00.3±1.8, 6.˚51S±0.˚06×143.˚26E±0.˚06, h19km±1km, mb5.8/209, Ms_20 6.4/1204, Mwb6.1/86, Mww6.3/28, Error ellipse: s-maj=11.5km s-min=8.7km az=128.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.87; Mθθ-0.87; Mϕϕ0.00; Mrθ1.07; Mθϕ0.36; Mϕr-1.31; Fault plane solution: Mo1.94000×10¹⁸ NP1: ϕs136.18000°, δ76.97000°, λ103.98000°. NP2: ϕs268.33000°, δ19.02000°, λ43.76000°. Principal axes: T 1.9845, Plg56.0000°, Azm64.0000°; N -0.0997, Plg14.0000°, Azm313.0000°; P -1.8848, Plg31.0000°, Azm215.0000°;*
*GCMT **26** 15:18:04.3±0.0, 6.˚58S×143.˚18E, h12km, MW6.2/171, Moment Tensor Solution. s163,c370; s171,c653; Duration: 3s2 Moment tensor: Scale 10¹⁸Nm; Mrr1.95±.01; Mθθ-1.33±.01; Mϕϕ-0.62±.01; Mrθ1.52±.03; Mθϕ1.11±.01; Mϕr-1.23±.03; Best double couple: Mo2.83000×10¹⁸ NP1:ϕs128.00000°, δ67.00000°, λ92.00000°. NP2:ϕs304.00000°, δ23.00000°, λ86.00000°. Principal axes: T 2.7360, Plg68.0000°, Azm42.0000°; N 0.1860, Plg2.0000°, Azm308.0000°; P -2.9240, Plg22.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 15:18:00.3±0.4, 6.˚51S±0.˚03×143.˚22E±0.˚03, h20km±1km, h20km:pP-P, n1717, σ1°67/1136, mb5.8/243, MS6.4/683, 66C-36D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**2.33**	**302**	P	**Pb**	**15 18 40.5**	**-1.3**
MMPI	**Merauke**	**3.42**	**235**	P	**Pn**	**15 18 52.1**	**-0.5**
PMG	**Port Moresby**	**4.85**	**127**	Pn	**Pn**	**15 19 09.4**	**-2.9**
PMG	**Port Moresby**	**4.85**	**127**	*c* iP	**Pn**	**15 19 09.4**	**-2.9**
PMG	**Port Moresby**	**4.85**	**127**	Pn	**Pn**	**15 19 09.6**	**-2.7**
	24nm,0.3s,baz=335,slow=12,SNR=4.3						
PMG				Sn	**Sn**	**15 20 06.5**	**-1.4**
	58nm,0.3s,baz=60,slow=19,SNR=6.4						
GENI	**Genyem**	**4.94**	**322**	P	**Pn**	**15 19 13.9**	**+0.4**
GENI	**Genyem**	**4.94**	**322**	↑P	**Pn**	**15 19 14.2**	**+0.7**
GENI	**Genyem**	**4.94**	**322**	P	**Pn**	**15 19 13.0**	**-0.5**
MANU	**Manus Island**	**6.06**	**43**	Pn	**Pn**	**15 19 28.0**	**-1.0**
MANU	**Manus Island**	**6.06**	**43**	P	**Pn**	**15 19 29.5**	**+0.5**
MANU	**Manus Island**	**6.06**	**43**	↑P	**Pn**	**15 19 29.1**	**+0.1**
SMPI	**Sarmi**	**6.35**	**315**	P	**Pn**	**15 19 32.7**	**-0.2**
	2μm,1.6s,41μm97μm19nm						
BULU	**Kimbe**	**7.12**	**83**	P	**Pn**	**15 19 46.3**	**+2.8**
COEN	**Coen**	**7.40**	**180**	P	**Pn**	**15 19 48.1**	**+0.6**
	baz=7.5,SNR=7.8						
COEN	**Coen**	**7.40**	**180**	Pn	**Pn**	**15 19 46.7**	**-0.7**
COEN	**Coen**	**7.40**	**180**	P	**Pn**	**15 19 49.4**	**+2.0**
COEN	**Coen**	**7.40**	**180**	↑P	**Pn**	**15 19 48.2**	**+0.8**
KAVG	**Kavieng**	**8.51**	**63**	P	**Pn**	**15 20 04.7**	**+2.1**
I40PG	**Keravat**	**9.02**	**76**	I	I	16 15 10.0	
	baz=262,slow=317,SNR=0.6						
RABL	**Rabaul**	**9.20**	**76**	Pn	**Pn**	**15 20 10.9**	**-1.2**
RABL	**Rabaul**	**9.20**	**76**	P	**Pn**	**15 20 13.8**	**+1.8**
RABL	**Rabaul**	**9.20**	**76**	↑P	**Pn**	**15 20 09.5**	**-2.5**
FAKI	**Fak Fak**	**11.50**	**288**	Pn	**Pn**	**15 20 42.4**	**-1.1**
FAKI	**Fak Fak**	**11.50**	**288**	P	**Pn**	**15 20 45.2**	**+1.6**
FAKI	**Fak Fak**	**11.50**	**288**	↓P	**Pn**	**15 20 40.8**	**-2.7**
FAKI	**Fak Fak**	**11.50**	**288**	P	**Pn**	**15 20 41.7**	**-1.9**
	292nm,0.7s,7μm49μm						
MTSU	**Mount Surprise**	**11.61**	**175**	P	**Pn**	**15 20 45.8**	**+0.8**
	baz=12,SNR=28						
MTSU	**Mount Surprise**	**11.61**	**175**	P	**Pn**	**15 20 48.8**	**+3.7**
SAUI	**Saumlaki**	**11.91**	**262**	Pn	**Pn**	**15 20 48.6**	**-0.6**
SAUI	**Saumlaki**	**11.91**	**262**	P	**Pn**	**15 20 51.0**	**+1.7**
SAUI	**Saumlaki**	**11.91**	**262**	↓P	**Pn**	**15 20 47.7**	**-1.6**
SAUI	**Saumlaki**	**11.91**	**262**	P	**Pn**	**15 20 48.8**	**-0.5**
	3μm,1.1s,40μm110μm						
KDU	**Kakadu**	**12.24**	**239**	P	**Pn**	**15 20 51.5**	**-2.3**
	baz=12,SNR=88						
KDU	**Kakadu**	**12.24**	**239**	P	**Pn**	**15 20 52.6**	**-1.1**
KDU	**Kakadu**	**12.24**	**239**	↓P	**Pn**	**15 20 51.1**	**-2.7**
TV1H	**Townsville Har**	**13.15**	**165**	P	**Pn**	**15 21 09.0**	**+2.9**
SWI	**Sorong**	**13.18**	**295**	P	**Pn**	**15 21 02.9**	**-3.7**
	365nm,1.4s,6μm36μm						
BNDI	**Bandanaira**	**13.40**	**278**	P	**Pn**	**15 21 11.7**	**+2.2**
BNDI	**Bandanaira**	**13.40**	**278**	↓P	**Pn**	**15 21 06.4**	**-3.2**
BNDI	**Bandanaira**	**13.40**	**278**	P	**Pn**	**15 21 08.6**	**-0.9**
	1μm,2.1s,29μm48μm						
MTN	**Manton Dam**	**13.47**	**241**	P	**Pn**	**15 21 08.2**	**-2.3**
	baz=13,SNR=31						
MTN	**Manton Dam**	**13.47**	**241**	Pn	**Pn**	**15 21 08.1**	**-2.4**
MTN	**Manton Dam**	**13.47**	**241**	P	**Pn**	**15 21 08.4**	**-2.1**
DRS	**Darwin Rock St**	**13.50**	**243**	P	**Pn**	**15 21 09.6**	**-1.3**
AUAYR	**Ayr State High**	**13.62**	**163**	P	**Pn**	**15 21 15.8**	**+3.3**
CTA	**Charters Tower**	**13.82**	**168**	Pn	**Pn**	**15 21 17.2**	**+1.9**
	0.4nm,0.3s,baz=347,slow=14,SNR=18						
CTA				Sn	**Sn**	**15 23 41.5**	**-6.8**
	1.0nm,0.3s,baz=290,slow=15,SNR=1.1						
CTA				Lg	Lg	15 25 21.4	
	2.3nm,0.3s,baz=281,slow=9.2,SNR=3.9						
CTA				LR	LR	15 26 42.1	
	comp=Z,177μm,18.7s,baz=354,slow=38						
	11nm,0.9s						
CTAO	**Charters Tower**	**13.82**	**168**	Pn	**Pn**	**15 21 13.7**	**-1.6**
CTAO	**Charters Tower**	**13.82**	**168**	P	**P**	**15 21 21.1**	**-2.5**
CTAO	**Charters Tower**	**13.82**	**168**	↑P	**Pn**	**15 21 18.0**	**+2.7**
CTAO	**Charters Tower**	**13.82**	**168**	P	**Pn**	**15 21 13.7**	**-1.6**
QIS	**Mount Isa**	**14.40**	**194**	P	**Pn**	**15 21 23.7**	**+0.5**
	baz=14,SNR=23						
QIS	**Mount Isa**	**14.40**	**194**	P	**Pn**	**15 21 23.6**	**+0.3**
WB0	**Warramunga Arr**	**15.73**	**212**		**Pn**	**15 21 39.5**	**-1.5**
WRAB	**Tennant Creek**	**15.88**	**212**		**Pn**	**15 21 40.8**	**-2.1**
WRAB	**Tennant Creek**	**15.88**	**212**	*d* iP	**Pn**	**15 21 40.6**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,541nm,1.1s						
WB2	**War

baz=20,SNR=22
EIDS Eidsvold 20.21 159 P Pn 15 22 37.8 +1.7
EIDS Eidsvold 20.21 159 ⇑P Pn 15 22 36.2 +0.1
SGSI Sangihe 20.36 299 P Pn 15 22 43.0 +5.0
KMSI Cibinong 20.45 289 P P 15 22 37.2 +0.4
comp=Z,2µm,1.1s,comp=Z,21µmcomp=Z,32µm
RMQ Roma 20.56 166 P Pn 15 22 41.2 +1.0
baz=21,SNR=6.8
RMQ Roma 20.56 166 P Pn 15 22 43.6 +3.4
FITZ Fitzroy Crossi 20.66 235 P P 15 22 39.1 0.0
baz=21,SNR=87
FITZ Fitzroy Crossi 20.66 235 P P 15 22 38.8 -0.2
FITZ IAmb IAmb 15 22 46.5
comp=Z,349nm,1.1s
FITZ Fitzroy Crossi 20.66 235 P P 15 22 39.9 +0.9
MMRI Maumere 20.91 263 P P 15 22 41.5 -0.3
MMRI Maumere 20.91 263 P Pn 15 22 43.5 -0.9
MMRI Maumere 20.91 263 ⇓P P 15 22 40.3 -1.5
MMRI Maumere 20.91 263 P P 15 22 42.7 +0.9
comp=Z,501nm,1.4s,comp=Z,14µmcomp=Z,55µm
LUWI Luwuk 21.11 284 P P 15 22 44.2 +0.2
LUWI Luwuk 21.11 284 P P 15 22 44.9 +0.9
LUWI Luwuk 21.11 284 P P 15 22 43.2 -0.7
LUWI S Sn 15 26 45.9 +0.9
LUWI Luwuk 21.11 284 ⇓P P 15 22 44.4 +0.5
LUWI Luwuk 21.11 284 P P 15 22 43.9 -0.1
comp=Z,829nm,1.4s,comp=Z,18µmcomp=Z,50µm
INKA Innaminka 21.25 186 P P 15 22 48.9 +3.5
GTOI Gorontalo 21.38 289 P P 15 22 50.5 +3.6
comp=Z,344nm,0.9s,comp=Z,8µmcomp=Z,17µm
EDFI Ende, Flores 21.45 263 P P 15 22 48.3 +0.5
comp=Z,303nm,1.7s,comp=Z,10µmcomp=Z,58µm
DAV Davao City (W) 22.17 307 P P 15 22 59.2 +3.8
DAV Davao City (W) 22.17 307 P P 15 22 53.6 -1.8
comp=Z,106nm,0.3s,baz=106,slow=13,SNR=2.2
DAV LR LR 15 33 22.6
comp=Z,19µm,18.7s,baz=166,slow=42
comp=Z,106nm,0.3s
MRSI Marisa 22.34 287 P P 15 22 58.8 +1.6
comp=Z,190nm,1.2s,comp=Z,6µmcomp=Z,30µm
OOD Oodnadatta 22.35 198 P P 15 22 59.6 +2.5
BASI Baing, Sumba 22.70 259 P P 15 23 00.7 -0.3
comp=Z,922nm,1.4s,comp=Z,13µmcomp=Z,57µm
AULRC Lightning Ridg 23.24 169 P P 15 23 06.4 -0.1
WRKA Warakurna 23.32 216 P P 15 23 07.0 -0.3
baz=23,SNR=77
WRKA Warakurna 23.32 216 P P 15 23 08.3 +0.9
KAPI Kappang 23.39 272 P P 15 23 09.0 +0.8
KAPI Kappang 23.39 272 P P 15 23 09.0 +0.8
KAPI pmax pmax
comp=Z,1µm,1.5s
TTSI Tana Toraja 23.57 277 P P 15 23 12.2 +2.3
comp=Z,664nm,1.7s,comp=Z,16µmcomp=Z,25µm
TOLI2 Tolitoli 23.64 288 P P 15 23 09.8 -0.8
TOLI2 IAmb IAmb 15 23 26.4
comp=Z,624nm,1.4s
TOLI2 Tolitoli 23.64 288 P P 15 23 10.6 0.0
LCRK Leigh Creek 24.28 191 P P 15 23 17.2 +0.8
KOUNC Koumac, New Ca 24.74 126 P P 15 23 19.3 -1.4
KOUNC Koumac, New Ca 24.74 126 P P 15 23 23.2 +2.5
KOUNC Koumac, New Ca 24.74 126 ⇓P P 15 23 20.7 0.0
CMSA Cobar Meteorol 25.01 175 P P 15 23 25.2 +2.1
baz=25,SNR=15
CMSA Cobar Meteorol 25.01 175 P P 15 23 26.2 +3.1
ARMA Armidale 25.07 163 P P 15 23 25.8 +2.1
baz=25,SNR=5.5
ARMA Armidale 25.07 163 P P 15 23 23.2 -0.5
ARMA IAmb IAmb 15 23 29.0
comp=Z,607nm,2.0s
ARMA Armidale 25.07 163 P P 15 23 27.3 +3.6
ARMA Armidale 25.07 163 ⇑P P 15 23 27.0 +3.3
MULG Mulgathing 25.17 199 P P 15 23 27.6 +3.1
STKA Stephens Creek 25.29 183 P P 15 23 26.7 +1.1
baz=25,SNR=35
STKA Stephens Creek 25.29 183 P P 15 23 23.8 -1.8
STKA Stephens Creek 25.29 183 P P 15 23 26.8 +1.2
STKA Stephens Creek 25.29 183 PKIKP P 15 23 23.8 -1.8
STKA Stephens Creek 25.29 183 *ce*P P 15 23 25.0 -0.6
STKA Stephens Creek 25.29 183 P P 15 23 25.8 +0.2
comp=Z,34nm,0.9s,baz=3.1,slow=10,SNR=18
STKA LR LR 15 34 48.9
comp=Z,145µm,18.2s,baz=358,slow=40
comp=Z,34nm,0.9s
STKA Stephens Creek 25.29 183 pmax pmax
comp=Z,32nm,1.3s
PLAI Plampang 25.32 263 P P 15 23 24.4 -1.7
PLAI Plampang 25.32 263 P P 15 23 23.4 -2.7
comp=Z,235nm,0.9s,comp=Z,4µmcomp=Z,16µm
AUPHS Peel High Scho 25.50 165 P P 15 23 30.8 +3.3
AUDCS Dubbo College 26.09 170 P P 15 23 35.5 +2.7
TWSI Taliwang, Sumb 26.20 263 P P 15 23 32.1 -1.9
comp=Z,62nm,0.7s,comp=Z,3µmcomp=Z,15µm
BKB Balikpapan 26.77 280 P P 15 23 40.2 +1.0
BKB Balikpapan 26.77 280 P P 15 23 41.1 +1.9
comp=Z,251nm,1.7s,comp=Z,8µmcomp=Z,29µm
WHYH Whyalla 26.91 191 P P 15 23 41.7 +1.5
MBWA Marble Bar 27.00 235 P P 15 23 40.6 -0.6
MBWA Marble Bar 27.00 235 IAMs_20 IAMs_20 15 34 58.5
comp=Z,153µm,22.0s
MBWA Marble Bar 27.00 235 P P 15 23 43.3 +2.1
MBWA Marble Bar 27.00 235 ⇓P P 15 23 41.1 -0.1
BBOO Buckleboo 27.01 193 P P 15 23 41.9 +0.7
baz=27,SNR=22
BBOO Buckleboo 27.01 193 P P 15 23 41.4 +0.3
BBOO Buckleboo 27.01 193 P P 15 23 43.5 +2.4
HTT Hallett 27.09 188 P P 15 23 42.6 +0.7
baz=27,SNR=8.9
HTT Hallett 27.09 188 P P 15 23 43.0 +1.1
HTT Hallett 27.09 188 ⇓P P 15 23 42.8 +0.9
PSA00 Pilbara Seismi 27.11 234 IAmb IAmb 15 23 55.9
comp=Z,49nm,0.8s
PSA00 Pilbara Seismi 27.11 234 P P 15 23 43.7 +1.5
DZM Mont Dzumac 27.25 127 LR LR 15 34 45.8
comp=Z,53µm,20.6s,baz=302,slow=37
LIFNC LIFOU 27.25 124 IAMs_20 IAMs_20 15 33 42.7
comp=Z,77µm,21.0s
LIFNC LIFOU 27.25 124 P P 15 23 46.1 +2.6
SRBI Singaraja 27.82 265 P P 15 23 46.6 -2.0
comp=Z,90nm,1.1s,comp=Z,3µmcomp=Z,13µm
SYDH Sydney Hard Ro 28.00 167 P P 15 23 52.7 +2.7
FORT Forrest 28.02 209 P P 15 23 49.5 -0.8
baz=28,SNR=13
FORT Forrest 28.02 209 P P 15 23 49.3 -1.0
FORT IAmb IAmb 15 24 32.9
comp=Z,239nm,0.9s
FORT Forrest 28.02 209 P P 15 23 50.1 -0.2
FORT Forrest 28.02 209 ⇑P P 15 23 49.4 -0.8
YNG Young 28.07 171 P P 15 23 51.7 +1.1
baz=28,SNR=26
YNG Young 28.07 171 P P 15 23 52.8 +2.2
WOLH Wollongong Har 28.65 167 P P 15 24 01.2 +5.4
MTKI Muara Teweh, K 28.79 280 P P 15 23 59.4 +2.1
comp=Z,79nm,1.2s,comp=Z,8µmcomp=Z,10µm
JAGI Jajag, Banyuwa 28.88 264 P P 15 23 56.2 -1.9
JAGI Jajag, Banyuwa 28.88 264 ⇑P P 15 23 56.0 -2.1
JAGI Jajag, Banyuwa 28.88 264 P P 15 23 56.9 -1.2
comp=Z,111nm,1.1s,comp=Z,2µmcomp=Z,11µm
CAN Canberra 29.17 170 P P 15 23 59.8 -0.7
CAN IAMs_20 IAMs_20 15 37 18.8
comp=Z,85µm,19.0s
CAN Canberra 29.17 170 P P 15 24 04.0 +3.6
CAN Canberra 29.17 170 ⇑P P 15 24 04.3 +3.9
CAN Canberra 29.17 170 P P 15 23 59.8 -0.7
CAN pmax pmax
comp=Z,47nm,0.9s
CAN MLR MLR
comp=Z,86µm,19.0s
CNB Canberra Magne 29.22 170 P P 15 24 02.7 +1.7
baz=29,SNR=5.2
CNB Canberra Magne 29.22 170 P P 15 24 04.8 +3.8
BLJI Banyuglugur 29.42 266 P P 15 24 02.0 -0.9
comp=Z,59nm,0.8s,comp=Z,3µmcomp=Z,10µm
ARPS Mount Arapiles 30.15 182 P P 15 24 10.6 +1.5
baz=30,SNR=10
ARPS Mount Arapiles 30.15 182 P P 15 24 09.4 +0.3
GRJI Gresik 30.53 267 P P 15 24 12.9 -0.2
comp=Z,80nm,1.0s,comp=Z,3µmcomp=Z,10µm
MEEK Meekatharra 30.82 227 P P 15 24 16.1 +0.9
baz=31,SNR=12
MEEK Meekatharra 30.82 227 P P 15 24 17.6 +2.4
BRAT Ballarat 30.91 179 P P 15 24 18.3 +2.6
TOO Toolangi 30.99 176 P P 15 24 19.0 +2.4
PWJI Pagerwojo 31.20 265 P P 15 24 17.8 -0.8
comp=Z,58nm,1.3s,comp=Z,2µm
AUHPC Hawkesdale P12 31.47 181 P P 15 24 24.6 +3.9

KMBL Kambalda 31.79 216 P P 15 24 24.9 +1.3
baz=32,SNR=20
KMBL Kambalda 31.79 216 P P 15 24 24.5 +0.9
STKI Sintang 32.34 280 P P 15 24 30.5 +1.8
comp=Z,76nm,1.3s,comp=Z,6µm
UGM Wanagama 32.46 266 P P 15 24 31.1 +1.3
UGM Wanagama 32.46 266 P P 15 24 30.5 +0.7
comp=Z,357nm,2.0s,comp=Z,7µmcomp=Z,8µm
SMRI Semarang 32.55 267 P P 15 24 32.7 +2.1
SMRI Semarang 32.55 267 P P 15 24 31.6 +1.1
comp=Z,374nm,1.8s,comp=Z,9µmcomp=Z,11µm
JCJ Chichijima 33.42 358 P P 15 24 33.7 -4.2
comp=Z,262nm,1.0s,baz=278,slow=20,SNR=3.1
JCJ LR LR 15 37 47.9
comp=Z,9µm,20.3s,baz=171,slow=36
KPJI Karang Pucung 34.04 267 P P 15 24 43.9 +0.3
comp=Z,175nm,1.1s,comp=Z,3µm
MORW Morawa 34.08 226 P P 15 24 46.7 +2.9
baz=34,SNR=8.1
MORW Morawa 34.08 226 P P 15 24 42.9 -0.9
MORW Morawa 34.08 226 P P 15 24 47.9 +4.2
MORW Morawa 34.08 226 ⇑P P 15 24 47.7 +3.9
JMZ Minamidaito 2 34.18 341 IAMs_20 IAMs_20 15 36 11.9
comp=Z,66µm,20.0s
KLBR Kellerberrin 34.49 220 P P 15 24 48.8 +1.6
baz=34,SNR=6.4
KLBR Kellerberrin 34.49 220 P P 15 24 48.5 +1.3
CMJI Cimerak 34.52 266 P P 15 24 48.3 +0.6
comp=Z,280nm,1.4s,comp=Z,5µmcomp=Z,8µm
BLDU Ballidu 34.55 223 P P 15 24 49.0 +1.2
baz=35,SNR=12
BLDU Ballidu 34.55 223 P P 15 24 50.9 +3.1
AULHS Lilydale High 34.78 175 P P 15 24 54.3 +4.7
BBJI Bungbulang 35.31 266 P P 15 24 52.9 -1.7
LEM Lembang 35.36 267 LR LR 15 42 39.6
comp=Z,26µm,21.3s,baz=104,slow=42
LEM Lembang 35.36 267 P P 15 24 55.9 +0.8
comp=Z,200nm,1.3s,comp=Z,3µmcomp=Z,7µm
NWAO Narrogin (SRO) 35.70 219 LR LR 15 40 38.9
comp=Z,137µm,18.6s,baz=38,slow=38
FUNA Funafuti 35.72 96 P P 15 24 57.3 -0.7
FUNA Funafuti 35.72 96 P P 15 25 00.5 +2.5
MUN Mundaring 35.74 221 P P 15 25 00.1 +2.1
baz=36,SNR=6.4
CNJI Cibinong 35.83 267 P P 15 24 58.5 -0.5
comp=Z,158nm,1.1s,comp=Z,2µmcomp=Z,3µm
MOO Moorlands 35.96 175 P P 15 25 03.0 +3.3
baz=36,SNR=5.4
CBJI Citeko 36.13 268 P P 15 25 00.9 -0.7
JOW Kunigami 36.17 337 P P 15 25 02.5 +0.8
JOW Kunigami 36.17 337 P P 15 24 59.8 -1.9
comp=Z,47nm,0.9s,baz=166,slow=8.3,SNR=7.3
JOW LR LR 15 38 26.1
comp=Z,17µm,19.7s,baz=160,slow=34
comp=Z,47nm,0.9s
DBJI Dramaga 36.23 268 P P 15 25 02.5 +0.1
comp=Z,113nm,1.9s,comp=Z,9µmcomp=Z,7µm
SKJI Sukabumi 36.41 267 P P 15 25 04.1 +0.2
comp=Z,284nm,1.0s,comp=Z,5µmcomp=Z,7µm
TAU Tasmania Unive 36.44 175 IAMs_20 IAMs_20 15 38 43.4
comp=Z,63µm,21.0s
YULB Yu-li 36.63 325 P P 15 25 05.5 -0.2
YULB IAmb IAmb 15 25 43.7
comp=Z,233nm,1.6s
YULB Yu-li 36.63 325 P P 15 25 06.4 +0.7
TPUB Ta-pu 36.95 324 P P 15 25 07.6 -0.8
DGTI Dogotuki 37.03 108 P P 15 25 08.3 -1.0
NACB Ninganchiao 37.08 326 P P 15 25 09.7 +0.2
SSLB Suanglung 37.14 325 P P 15 25 08.6 -1.4
PPBI Pangkal Pinang 37.22 275 P P 15 25 10.9 +0.1
comp=Z,197nm,1.3s,comp=Z,5µm
XMI Christmas Isla 37.31 261 P P 15 25 14.0 +2.4
XMI Christmas Isla 37.31 261 ⇑P P 15 25 13.1 +1.4
XMIS Christmas Isla 37.35 261 P P 15 25 11.5 -0.5
XMIS Christmas Isla 37.35 261 P P 15 25 12.9 +0.9
YHNB Yeheng 37.59 326 IAmb IAmb 15 25 42.5
comp=Z,167nm,1.1s
YHNB Yeheng 37.59 326 P P 15 25 15.7 +1.8
TATO Taipei 37.77 327 P P 15 25 13.6 -1.7
TATO Taipei 37.77 327 P P 15 25 16.8 +1.5
PMBI Palembang 38.47 273 P P 15 25 24.7 +3.2
KASI Kota Agung 38.52 269 P P 15 25 21.1 -0.7
comp=Z,97nm,1.1s,comp=Z,2µmcomp=Z,8µm
LWLI Liwa 38.98 270 P P 15 25 25.9 0.0
comp=Z,221nm,1.0s,comp=Z,8µmcomp=Z,8µm
DSRI Dano 39.01 277 P P 15 25 26.1 +0.1
comp=Z,104nm,1.4s,comp=Z,4µm
KNMB Chin-men Tao 39.16 323 P P 15 25 26.7 -0.3
KNMB IAmb IAmb 15 25 42.2
comp=Z,197nm,1.2s
TPRI Tanjung Pinang 39.32 279 P P 15 25 28.7 +0.2
comp=Z,164nm,1.3s,comp=Z,5µmcomp=Z,11µm
QZH Quanzhou 39.40 323 ⇑*i*P P 15 25 29.0 0.0
QZH S S 15 31 30.8 +1.1
QZH pmax pmax
comp=Z,110nm,1.1s
QZH pmax pmax
comp=Z,2µm,6.5s
QZH LR LR
comp=Z,9µm,16.1s
QZH LR LR
comp=Z,15µm,18.9s
QZH LR LR
comp=Z,21µm,27.5s
JHJ Hachijo jima 2 39.54 355 LR LR 15 41 49.4
comp=Z,24µm,18.5s,baz=179,slow=36
JSU Suzuyama 39.72 343 P P 15 25 32.5 +0.9
JMBI JAMBI 39.76 275 P P 15 25 32.3 +0.1
comp=Z,304nm,1.2s,comp=Z,5µm
OUZ Omahuta 39.96 140 ⇑P P 15 25 34.6 +1.0
MNAI Manna 40.13 271 P P 15 25 37.0 +1.7
MNAI Manna 40.13 271 P P 15 25 35.5 +0.2
comp=Z,164nm,1.1s,comp=Z,6µm
JMN Monobe 40.98 348 IAmb IAmb 15 25 54.3
comp=Z,173nm,1.2s
JMN Monobe 40.98 348 P P 15 25 43.0 +1.0
JNU Nakatsue 41.12 344 P P 15 25 42.3 -0.9
JNU Nakatsue 41.12 344 ⇑P P 15 25 42.4 -0.9
JNU Nakatsue 41.12 344 P P 15 25 43.5 +0.3
JNU Nakatsue 41.12 344 P P 15 25 41.1 -2.1
comp=Z,70nm,0.9s,baz=143,slow=3.9,SNR=35
comp=Z,70nm,0.9s
JFU Fukue jima 2 41.31 341 P P 15 25 43.7 -1.0
GZH Guangzhou 41.45 316 P P 15 25 49.0 +3.0
GZH S S 15 32 06.8 +6.3
GZH pmax pmax
comp=Z,60nm,1.0s
GZH LR LR
comp=Z,4µm,11.1s
GZH LR LR
comp=Z,2µm,10.7s
QIZ Qiongzhong 41.54 308 P P 15 25 47.5 +0.7
QIZ S S 15 32 05.3 +3.3
QIZ pmax pmax
comp=Z,610nm,5.5s
QIZ LR LR
comp=Z,9µm,23.5s
QIZ LR LR
comp=Z,7µm,21.6s
QIZ LR LR
comp=Z,10µm,17.5s
KRJI Kerinci 41.86 274 P P 15 25 49.7 0.0
comp=Z,1µm,1.1s,comp=Z,15µm
INU Inuyama 42.04 352 IAmb IAmb 15 25 59.4
comp=Z,339nm,1.9s
INU Inuyama 42.04 352 P P 15 25 49.9 -0.7
INU Inuyama 42.04 352 ⇑P P 15 25 48.8 -1.9
JAD Aida 42.10 349 P P 15 25 51.7 +0.6
JWT Wachi 42.21 350 P P 15 25 51.6 -0.5
JGF Kuroka 42.24 353 P P 15 25 52.0 -0.4
JGF Kuroka 42.24 353 ⇑P P 15 25 51.8 -0.7
JGF Kuroka 42.24 353 P P 15 25 51.7 -0.7
JHS Saijyo 42.37 348 P P 15 25 52.2 -1.2
JRY Ryogami san 42.49 355 P P 15 25 52.0 -2.4
BKNI Bangkinang 42.63 278 P P 15 25 57.5 +1.6
BKNI Bangkinang 42.63 278 P P 15 25 55.2 -0.7
BKNI S S 15 32 18.2 -0.2
BKNI Bangkinang 42.63 278 P P 15 25 56.5 +0.6
comp=Z,266nm,1.1s,comp=Z,6µmcomp=Z,13µm
JGN Niukaw 42.86 353 P P 15 25 56.0 -1.5
SSE Sheshan 42.92 332 P P 15 25 59.8 +1.9
SSE S S 15 32 24.5 +2.5
SSE pmax pmax
comp=Z,53nm,1.0s
SSE pmax pmax
comp=Z,670nm,9.2s
SSE LR LR
comp=Z,3µm,18.4s
SSE LR LR
comp=Z,3µm,18.4s
RAO Raoul Island 43.04 127 LR LR 15 43 47.5
comp=Z,13µm,18.2s,baz=297,slow=36
MJAR Matsushiro Arr 43.08 354 P P 15 25 56.6 -2.6
comp=Z,24nm,0.9s,baz=181,slow=7.6,SNR=30
comp=Z,24nm,0.9s
MAJO Matsushiro 43.08 354 P P 15 25 57.6 -1.5
MAJO IAmb IAmb 15 26 03.6
comp=Z,404nm,1.9s
MAJO Matsushiro 43.08 354 P P 15 25 57.3 -1.8
MAJO Matsushiro 43.08 354 ⇑P P 15 25 56.5 -2.7
MAJO Matsushiro 43.08 354 *de*P P 15 25 56.6 -2.5
MAJO pmax pmax
comp=Z,167nm,1.8s
MAT Matsushiro 43.08 354 P P 15 25 58.0 -1.2
MJB9 Matsu-Tunnel 43.08 354 IAmb IAmb 15 26 04.6
comp=Z,409nm,1.9s
PPSI Pulau Pagai 43.22 273 P P 15 26 01.2 +0.6
comp=Z,263nm,1.3s,comp=Z,4µm
DSZ Denniston Nort 43.31 149 IAMs_20 IAMs_20 15 43 41.0
comp=Z,38µm,19.0s
MRNZ Matariki Terra 43.57 147 P P 15 26 04.5 +1.4
JCZ Jackson Bay 43.61 153 P P 15 26 04.6 +1.2
NNZ Nelson 43.78 147 P P 15 26 04.4 -0.3
INZ Inchbonnie 43.84 150 IAMs_20 IAMs_20 15 46 22.0
comp=Z,34µm,19.0s
INZ Inchbonnie 43.84 150 P P 15 26 08.7 +3.5
THZ Tophouse 43.90 148 P P 15 26 07.2 +1.4
URZ Urewera 44.05 141 ⇑P P 15 26 11.2 +4.2
URZ Urewera 44.05 141 LR LR 15 46 35.6
comp=Z,44µm,18.0s,baz=42,slow=39
RTZ Ruatahuna 44.18 141 IAmb IAmb 15 26 20.0
comp=Z,122nm,0.9s
JMM Marumori 44.20 357 IAmb IAmb 15 26 17.3
comp=Z,136nm,1.1s
JMM Marumori 44.20 357 P P 15 26 09.1 +1.0
JMM Marumori 44.20 357 ⇑P P 15 26 08.5 +0.4
JMM Marumori 44.20 357 P P 15 26 09.0 +0.9
BKZ Black Stump Fm 44.22 142 IAMs_20 IAMs_20 15 44 21.1
comp=Z,47µm,18.0s
BKZ Black Stump Fm 44.22 142 P P 15 26 11.5 +3.1
TUWZ Tuamarina 44.23 147 P P 15 26 08.0 -0.4
TCW Tory Channel 44.27 146 P P 15 26 11.3 +2.7
LTZ Lake Taylor 44.30 149 IAmb IAmb 15 26 19.7
comp=Z,171nm,1.3s
LTZ IAMs_20 IAMs_20 15 44 00.2
comp=Z,36µm,20.0s
LTZ Lake Taylor 44.30 149 P P 15 26 08.5 -0.5
SISI Saibi 44.31 275 P P 15 26 08.7 -0.7
comp=Z,110nm,1.4s,comp=Z,3µmcomp=Z,8µm
MLZ Mavora Lakes 44.34 155 P P 15 26 08.7 -0.6
RPZ Rata Peaks 44.39 151 P P 15 26 08.4 -1.2
RPZ IAmb IAmb 15 26 15.5
comp=Z,107nm,0.9s
RPZ IAMs_20 IAMs_20 15 43 28.4
comp=Z,49µm,20.0s
RPZ Rata Peaks 44.39 151 LR LR 15 43 49.5
comp=Z,49µm,20.1s,baz=311,slow=35
BSWZ Blackbirch Sta 44.39 147 P P 15 26 08.3 -1.3
MXZ Matakaoa Point 44.40 139 IAMs_20 IAMs_20 15 43 27.7
comp=Z,37µm,19.0s
PYZ Puysegur Point 44.41 157 P P 15 26 13.3 +3.6
LBZ Lake Benmore 44.48 152 P P 15 26 10.4 0.0
LBZ IAmb IAmb 15 26 14.4
comp=Z,212nm,1.6s
JSD Sado 44.55 354 IAmb IAmb 15 26 16.2
comp=Z,94nm,0.9s
JSD Sado 44.55 354 P P 15 26 09.6 -1.3
JSD Sado 44.55 354 ⇑P P 15 26 09.7 -1.3
JSD Sado 44.55 354 P P 15 26 07.6 -3.3
OXZ Oxford 44.58 150 IAMs_20 IAMs_20 15 46 54.5
comp=Z,31µm,18.0s
OXZ Oxford 44.58 150 P P 15 26 13.3 +2.1
SKLT Songkhla 44.62 287 P P 15 26 15.2 +3.4
MRZ Mangatainoka R 44.64 145 IAmb IAmb 15 26 21.0
comp=Z,141nm,1.2s
KHZ Kahutara 44.70 148 IAMs_20 IAMs_20 15 43 35.7
comp=Z,38µm,20.0s
KHZ Kahutara 44.70 148 ⇑P P 15 26 15.8 +3.7
KHZ Kahutara 44.70 148 P P 15 26 11.3 -0.8
GVZ Greta Valley S 44.83 149 P P 15 26 13.2 +0.1
NJ2 Nanjing 44.83 330 ⇓P P 15 26 15.0 +1.7
NJ2 pmax pmax
comp=Z,49nm,1.5s
NJ2 pmax pmax
comp=Z,640nm,3.5s
NJ2 LR LR
comp=Z,9µm,18.0s
NJ2 LR LR
comp=Z,8µm,21.8s
NJ2 LR LR
comp=Z,10µm,22.7s
GULI GuiLin 44.94 316 P P 15 26 16.3 +2.0
GULI S S 15 32 54.0 +2.3
GULI pmax pmax
comp=Z,60nm,1.1s
GULI LR LR
comp=Z,9µm,22.8s
GULI LR LR
comp=Z,7µm,19.5s
GULI LR LR
comp=Z,9µm,21.7s
JYA Atsumi 44.99 356 P P 15 26 13.6 -0.8
BFZ Birch Farm 45.04 144 P P 15 26 19.1 +4.3
RPSI Rantau Prapat 45.16 280 P P 15 26 15.6 -0.5
RPSI IAmb IAmb 15 26 34.5
comp=Z,225nm,1.5s
MQZ McQueen's Vall 45.16 150 P P 15 26 19.9 +4.1
TJN Taejon 45.18 342 P P 15 26 15.3 -0.6
TJN Taejon 45.18 342 ⇓*e*P P 15 26 14.8 -1.1
PSI Prapat 45.18 280 P P 15 26 17.9 +1.4
PSI Prapat 45.18 280 P P 15 26 15.6 -0.9
PSI pmax pmax
comp=Z,225nm,1.5s
PSI MLR MLR
comp=Z,4µm,20.0s
CNSH ChangSha 45.21 321 ⇓P P 15 26 19.0 +2.7
CNSH pmax pmax
comp=Z,20nm,0.7s
CNSH LR LR
comp=Z,9µm,18.8s
CNSH LR LR
comp=Z,4µm,14.6s
CNSH LR LR
comp=Z,7µm,26.7s
JOM Ohasama 45.78 358 P P 15 26 20.4 -0.2
SRIT Nakonsritamara 46.00 288 P P 15 26 24.1 +1.3
KSRS Korea Array 46.01 343 P P 15 26 19.8 -2.7
comp=Z,78nm,0.9s,baz=165,slow=8.8,SNR=87
comp=Z,78nm,0.9s
KS19 Wonju Array Si 46.07 343 IAmb IAmb 15 26 32.6
comp=Z,136nm,1.1s
WHN Wuhan 46.07 325 P P 15 26 25.8 +2.7
WHN sP *sP* 15 26 32.0 +0.1
WHN pmax pmax
comp=Z,170nm,1.1s
WHN pmax pmax
comp=Z,4µm,5.2s
WHN LR LR
comp=Z,27µm,19.0s
WHN LR LR
comp=Z,9µm,14.4s
WHN LR LR
comp=Z,26µm,19.1s
SURA Surathani 46.15 289 P P 15 26 26.2 +2.2
GSI Gunungsitoli 46.22 278 P P 15 26 24.1 -0.4
GSI IAmb IAmb 15 26 56.9
comp=Z,79nm,1.1s
GSI Gunungsitoli 46.22 278 P P 15 26 25.0 +0.4
GSI Gunungsitoli 46.22 278 ⇑P P 15 26 25.7 +1.2
GSI Gunungsitoli 46.22 278 P P 15 26 26.5 +1.9
comp=Z,58nm,1.2s,comp=Z,3µmcomp=Z,11µm
INCN Inchon 46.42 342 P P 15 26 25.4 -0.4
INCN IAmb IAmb 15 26 28.6
comp=Z,148nm,0.9s
INCN Inchon 46.42 342 P P 15 26 26.9 +1.1
INCN Inchon 46.42 342 ⇑P P 15 26 25.3 -0.5
INCN Inchon 46.42 342 P P 15 26 25.4 -0.4
INCN pmax pmax
comp=Z,148nm,1.0s
INCN MLR MLR

comp=Z,15µm,19.0s
NAYO Nakonayok 46.43 297 P P 15 26 27.9 +1.7
KCSI Kotacane, Aceh 46.45 281 P P 15 26 25.9 -0.6
comp=Z,56nm,1.0s,comp=Z,2µm
NONG Nongkai 46.48 302 P P 15 26 27.5 +1.0
JTM Tenmabayashi 47.10 358 P P 15 26 31.8 +0.8
JTM Tenmabayashi 47.10 358 ⇑P P 15 26 29.4 -1.6
JTM Tenmabayashi 47.10 358 P P 15 26 31.1 +0.1
HJU Haeju 47.22 341 P P 15 26 31.8 -0.2
HJU S S 15 33 26.2 +2.2
HJU AmB
comp=Z,1µm,2.3s
HJU AMS AMS
comp=Z,16µm,19.0s
SNSI Sinabang, Aceh 47.64 279 P P 15 26 36.4 +0.7
comp=Z,208nm,1.1s,comp=Z,5µmcomp=Z,9µm
JOT Ohata 47.70 358 P P 15 26 36.4 +0.8
MLSI Meulaboh, Aceh 47.95 282 P P 15 26 39.0 +0.9
comp=Z,113nm,0.8s
PYAG Pyongyang 48.13 342 P P 15 26 40.2 +1.2
PYAG S S 15 33 39.3 +2.4
PYAG AmB
comp=Z,955nm,2.8s
PYAG AMS AMS
comp=Z,13µm,17.5s
GYA Guiyang 48.27 314 ⇓*i*P P 15 26 41.5 +1.0
GYA S S 15 33 41.8 +2.2
GYA pmax pmax
comp=Z,53nm,0.9s
GYA pmax pmax
comp=Z,2µm,8.8s
GYA LR LR
comp=Z,4µm,17.7s
GYA LR LR
comp=Z,2µm,15.2s
GYA LR LR
comp=Z,7µm,25.6s
ERM Erimo 48.29 360 ⇓*e*P P 15 26 39.5 -0.7
ERM pmax pmax
comp=Z,123nm,1.8s
SRDT SRDT 48.40 296 P P 15 26 43.9 +2.4
HHU Hamhung 48.42 344 P P 15 26 40.8 -0.4
ENH Enshi 48.82 320 P P 15 26 45.1 +0.5
JSH Shimam 49.00 357 P P 15 26 44.7 -1.0
TIA Tai'an 49.05 332 P P 15 26 46.8 +0.6
TIA S S 15 33 52.5 +2.5
TIA pmax pmax
comp=Z,520nm,10.2s
TIA LR LR
comp=Z,5µm,19.1s
TIA LR LR
comp=Z,5µm,18.4s
TIA LR LR
comp=Z,5µm,19.2s
JEW Eniwo 49.14 358 P P 15 26 47.6 +0.9
DL2 Dalian 49.42 338 P P 15 26 51.5 +2.5
DL2 PP PP 15 28 45.3 +2.0
DL2 S S 15 33 56.8 +1.7
DL2 pmax pmax
comp=Z,72nm,1.5s
DL2 pmax pmax
comp=Z,1µm,7.3s
DL2 LR LR
comp=Z,8µm,16.5s
DL2 LR LR
comp=Z,7µm,18.7s
DL2 LR LR
comp=Z,12µm,18.5s
SUJ Sinuiju 49.49 341 P P 15 26 50.6 +1.1
SUJ S S 15 33 58.1 +2.0
SUJ AmB
comp=Z,1µm,2.6s
SUJ AMS AMS
comp=Z,13µm,18.0s
MCQ Macquarie Isla 49.51 168 P P 15 26 51.5 +2.1
baz=50,SNR=4.9
MCQ Macquarie Isla 49.51 168 IAMs_20 IAMs_20 15 47 35.2
comp=Z,41µm,18.0s
MCQ Macquarie Isla 49.51 168 P P 15 26 53.0 +3.6
CRAI Chiangrai 49.80 303 P P 15 26 51.7 -0.5
CRAI IAmb IAmb 15 27 09.1
comp=Z,202nm,1.8s
MSHR Mys Shultsa 50.07 348 ⇑*e*P P 15 26 53.5 -0.3
MSHR pmax pmax
comp=Z,56nm,1.0s
LYN LuoYang 50.11 327 ⇓P P 15 26 54.0 -0.3
LYN S S 15 34 05.3 +0.3
LYN sS pS 15 34 12.5 -0.3
LYN SS SS 15 37 36.8 -1.8
LYN pmax pmax
comp=Z,110nm,1.1s
LYN pmax pmax
comp=Z,2µm,8.9s
LYN LR LR
comp=Z,6µm,17.9s
LYN LR LR
comp=Z,10µm,17.2s
LYN LR LR
comp=Z,18µm,19.2s
PSTR Posyet 50.21 348 *ce*P P 15 26 54.4 -0.5
CMAR Chiang Mai Arr 50.22 300 *i* P P 15 26 57.2 +1.8
CMAR pmax pmax
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 50.22 300 P P 15 26 54.3 -1.1
comp=Z,9.9nm,0.7s,baz=121,slow=5.9,SNR=60
comp=Z,9.9nm,0.7s
JMP Maruseppu 50.28 0 P P 15 26 54.7 -0.7
YUK Yuzh-Kuril'sk 50.36 2 *e*P P 15 26 53.1 -2.9
YUK *e* 15 28 11.6
YUK *e* 15 28 48.4
YUK *e*PPP PPP 15 29 44.2
YUK *e*S S 15 34 06.8 -1.3
YUK *e* 15 36 44.7
YUK *e*SS SS 15 37 42.0 -0.2
YUK *e*SSS SSS 15 39 08.9
YUK pmax pmax
comp=Z,221nm,0.9s
YUK pmax pmax
comp=N,127nm,1.0s
YUK pmax pmax
comp=E,75nm,1.0s
YUK pmax pmax
comp=Z,382nm,1.4s
YUK MLR MLR
comp=N,4µm,17.0s
YUK MLR MLR
comp=Z,7µm,17.0s
YUK MLR MLR
comp=E,1µm,12.0s
CHTO Chiang Mai 50.37 301 P P 15 26 56.8 +0.2
CHTO Chiang Mai 50.37 301 P P 15 26 58.1 +1.5
CHTO Chiang Mai 50.37 301 ⇑P P 15 26 58.2 +1.6
CHTO Chiang Mai 50.37 301 P P 15 26 56.8 +0.2
CHTO pmax pmax
comp=Z,43nm,1.0s
CHTO MLR MLR
comp=Z,9µm,22.0s
KMI Kunming 50.39 310 ⇑P P 15 26 57.5 +0.6
KMI S S 15 34 12.5 +2.9
KMI pmax pmax
comp=Z,100nm,1.5s
KMI pmax pmax
comp=Z,1µm,12.1s
KMI LR LR
comp=Z,8µm,23.5s
KMI LR LR
comp=Z,7µm,24.9s
KMI LR LR
comp=Z,13µm,23.6s
ASAJ Asahikawa 50.39 359 P P 15 26 55.5 -0.7
ASAJ Asahikawa 50.39 359 P P 15 26 55.3 -0.9
comp=Z,60nm,1.0s,baz=239,slow=18,SNR=23
comp=Z,60nm,1.0s
VLA Vladivostok 50.45 349 *e*P P 15 26 56.9 +0.2
VLA pmax pmax
comp=Z,138nm,1.2s
HNS HongShan 51.15 331 ⇓P P 15 27 03.0 +0.9
HNS S S 15 34 21.0 +1.8
HNS SS SS 15 37 46.5 -8.5
HNS pmax pmax
comp=Z,68nm,1.7s
HNS pmax pmax
comp=Z,2µm,8.0s
HNS LR LR
comp=Z,6µm,20.7s
HNS LR LR
comp=Z,9µm,21.4s
HNS LR LR
comp=Z,9µm,21.5s
SNY Shenyang 51.34 341 ⇑P P 15 26 59.3 -4.2
SNY S S 15 34 21.8 0.0
SNY pmax pmax
comp=Z,280nm,4.7s
SNY LR LR
comp=Z,5µm,18.0s
SNY LR LR
comp=Z,7µm,21.4s
SNY LR LR
comp=Z,11µm,22.1s
USA0B Ussuriysk Arra 51.48 350 IAmb IAmb 15 27 12.7
comp=Z,111nm,0.9s
USA0B Ussuriysk Arra 51.48 350 *d* P P 15 27 03.4 -1.0
USRK Ussuriysk Ar. 51.48 350 P P 15 27 03.1 -1.3
comp=Z,98nm,0.8s,baz=174,slow=8.5,SNR=68
USRK LR LR 15 47 08.9
comp=Z,8µm,19.8s,baz=155,slow=34
comp=Z,98nm,0.8s
TEY Ternei 51.65 354 ⇓*e*P P 15 27 02.9 -2.8
TEY *e* 15 34 30.8
TEY pmax pmax
comp=Z,10.0nm,1.1s
KUR Kuril'sk 51.67 4 *e*P P 15 27 07.1 +1.3
KUR *e* 15 28 59.8
KUR *e*PPP PPP 15 30 01.9
KUR *e*S S 15 34 29.4 +3.2
KUR *e* 15 36 53.5
KUR pmax pmax
comp=Z,319nm,1.2s
KUR pmax pmax
comp=Z,3µm,14.7s
XAN Xi'an 51.76 323 ⇓P P 15 27 06.3 -0.5
XAN sP pP 15 27 13.0 -0.3
XAN PP PP 15 29 06.0 +1.2
XAN S S 15 34 28.0 0.0
XAN sS pS 15 34 33.8 -2.0
XAN SS SS 15 38 01.3 -3.6
XAN pmax pmax
comp=Z,160nm,1.4s
XAN pmax pmax
comp=Z,2µm,6.5s
XAN LR LR
comp=Z,8µm,18.2s
XAN LR LR
comp=Z,10µm,18.5s
XAN LR LR
comp=Z,13µm,17.4s
PZH PanZhiHua 51.89 311 P P 15 27 10.0 +2.0
PZH sP sP 15 27 18.5 +1.6
PZH PP PP 15 29 09.0 +2.9
PZH S S 15 34 29.3 -0.8
PZH pmax pmax
comp=Z,40nm,1.7s
PZH pmax pmax
comp=Z,1µm,10.2s
PZH LR LR
comp=Z,7µm,23.3s
PZH LR LR
comp=Z,6µm,18.2s
PZH LR LR
comp=Z,8µm,22.6s
MDJ Mudanjiang 52.35 348 P P 15 27 12.0 +1.1
MDJ PP PP 15 29 11.3 +1.5
MDJ pmax pmax
comp=Z,85nm,0.9s
MDJ pmax pmax
comp=Z,1µm,6.5s
MDJ LR LR
comp=Z,10µm,21.5s
MDJ LR LR
comp=Z,18µm,21.5s
MDJ LR LR
comp=Z,19µm,21.6s
MDJ Mudanjiang 52.35 348 P P 15 27 09.8 -1.1
TIY Taiyuan 52.52 329 ⇑P P 15 27 15.5 +3.0
TIY pmax pmax
comp=Z,34nm,1.0s
TIY pmax pmax
comp=Z,910nm,6.3s
TIY LR LR
comp=Z,8µm,19.6s
TIY LR LR
comp=Z,6µm,17.7s
TIY LR LR
comp=Z,12µm,20.0s
BJT Baijiatuau 52.59 334 P P 15 27 12.1 -0.7
CN2 Changchun 52.59 344 P P 15 27 12.3 -0.4
CN2 sP sP 15 27 20.5 -1.1
CN2 PcP PcP 15 28 21.3 -1.5
CN2 S S 15 34 38.0 -0.9
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,1µm,5.0s
CN2 LR LR
comp=Z,10µm,17.0s
CN2 LR LR
comp=Z,9µm,17.0s
CN2 LR LR
comp=Z,11µm,19.0s
BJI Beijing 52.61 334 P P 15 27 12.3 -0.6
BJI S S 15 34 38.0 -1.2
BJI pmax pmax
comp=Z,57nm,1.5s
BJI pmax pmax
comp=Z,1µm,10.4s
BJI LR LR
comp=Z,9µm,18.5s
BJI LR LR
comp=Z,4µm,19.3s
BJI LR LR
comp=Z,13µm,19.0s
CD2 Chengdu 53.00 317 P P 15 27 16.5 +0.4
CD2 S S 15 34 48.0 +3.0
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,620nm,6.1s
CD2 LR LR
comp=Z,2µm,15.5s
CD2 LR LR
comp=Z,3µm,15.3s
CD2 LR LR
comp=Z,8µm,16.7s
YSS Yuzh-Sakhalins 53.23 360 P P 15 27 16.5 -0.8
YSS IAmb IAmb 15 27 25.8
comp=Z,88nm,0.9s
YSS Yuzh-Sakhalins 53.23 360 P P 15 27 16.7 -0.6
YSS Yuzh-Sakhalins 53.23 360 ⇑P P 15 27 16.4 -1.0
YSS Yuzh-Sakhalins 53.23 360 *e*P P 15 27 16.2 -1.1
YSS *e*S S 15 34 43.0 -4.4
YSS *e*SS SS 15 38 30.0 +2.5
YSS pmax pmax
comp=Z,90nm,0.8s
YSS pmax pmax
comp=Z,900nm,5.3s
YSS MLR MLR
comp=Z,10µm,19.0s
YSS MLR MLR
comp=N,6µm,18.0s
YSS MLR MLR
comp=E,5µm,18.0s
TNCH TengChong 53.60 308 P P 15 27 23.3 +2.5
TNCH pP pP 15 27 27.8 +0.6
TNCH sP sP 15 27 30.0 +0.4
TNCH PP PP 15 29 25.8 +4.1
TNCH S S 15 34 55.5 +1.8
TNCH sS sS 15 35 03.0 -1.4
TNCH pmax pmax
comp=E,110nm,1.6s
TNCH pmax pmax
comp=E,810nm,5.3s
TNCH LR LR
comp=E,3µm,18.7s
TNCH LR LR
comp=E,2µm,23.9s
TNCH LR LR
comp=E,10µm,22.3s
BNX BinXian 53.90 346 ⇑P P 15 27 23.5 +1.2
BNX pP pP 15 27 28.0 -0.8
BNX sS sS 15 35 05.5 -1.7
BNX pmax pmax
comp=E,210nm,1.0s
BNX pmax pmax
comp=E,990nm,3.8s
BNX LR LR
comp=E,7µm,21.6s
BNX LR LR
comp=E,6µm,21.5s
BNX LR LR
comp=E,10µm,21.4s
MND Mandalay 54.15 303 P P 15 27 26.6 +2.0
UGL Uglegorsk 55.36 359 *e*P P 15 27 32.6 -0.2
UGL *e*S S 15 35 18.4 +2.3
UGL pmax pmax
comp=Z,2µm,5.5s
UGL pmax pmax
comp=Z,240nm,1.0s
UGL smax smax
comp=E,3µm,12.0s
UGL smax smax
comp=N,5µm,21.0s
HHC Hu-ho-hao-te 55.37 331 *e*P P 15 27 34.5 +1.3
HHC sP sP 15 27 42.3 +0.2
HHC S S 15 35 18.5 +1.7
HHC SS SS 15 39 03.3 +1.5
HHC pmax pmax
comp=N,60nm,0.9s
HHC pmax pmax
comp=N,780nm,5.3s
HHC LR LR
comp=N,5µm,19.1s
HHC LR LR
comp=N,5µm,18.3s
HHC LR LR
comp=N,10µm,19.2s
XLT XiLinHaoTe 55.85 337 *e*P P 15 27 37.3 +0.7
XLT pP pP 15 27 41.0 -2.1
XLT S S 15 35 21.3 -1.7
XLT sS pS 15 35 28.0 -2.9
XLT pmax pmax
comp=N,19nm,1.3s
XLT pmax pmax
comp=N,990nm,8.4s
XLT LR LR
comp=N,8µm,21.0s
XLT LR LR
comp=N,10µm,20.1s
BTO Baotou 55.94 330 *e*P P 15 27 40.3 +3.0
BTO pP **pP** 15 27 45.0 +1.1
BTO sP **sP** 15 27 47.3 +1.1
BTO PP **PP** 15 29 47.0 +4.7
BTO sS **sS** 15 35 35.0 0.0
BTO pmax pmax
comp=N,91nm,1.2s
BTO pmax pmax
comp=N,2µm,11.4s
BTO LR LR
comp=N,28µm,18.9s
LZH Lanzhou 56.21 322 *e*P P 15 27 40.0 +0.6
LZH pP pP 15 27 46.3 +0.3
LZH sP sP 15 27 49.5 +1.2
LZH SS SKiKP 15 39 17.0 +39
LZH pmax pmax
comp=N,160nm,1.0s
LZH pmax pmax
comp=N,2µm,5.2s
LZH LR LR
comp=N,6µm,17.0s
LZH LR LR
comp=N,5µm,16.5s
LZH LR LR
comp=N,11µm,18.7s
KLR Kul'dur 56.40 351 *ce*P P 15 27 38.6 -1.7
KLR pmax pmax
comp=Z,222nm,1.3s
KLR Kul'dur 56.40 351 LR LR 15 47 59.3
comp=Z,14µm,21.9s,baz=166,slow=32
RAR Rarotonga 56.95 111 P P 15 27 47.7 +2.9
RAR Rarotonga 56.95 111 LR LR 15 49 54.5
comp=Z,14µm,21.4s,baz=272,slow=34
SAIH SAIHA 56.97 302 *e*P P 15 27 45.6 +0.5
SAIH IAmb IAmb 15 27 54.4
comp=Z,105nm,0.7s
SAIH IAMs_20 IAMs_20 15 37 34.2
comp=Z,3µm,20.7s
TYV Tymovskoe 57.14 360 *e*P P 15 27 44.8 -0.7
TYV *e*S S 15 35 42.4 +2.7
TYV pmax pmax
comp=Z,74nm,0.8s
TYV pmax pmax
comp=Z,600nm,4.3s
TYV smax smax
comp=N,1µm,10.0s
TYV smax smax
comp=E,2µm,10.0s
IMP Imphal 57.18 305 *e*P P 15 27 47.1 +0.7
IMP IAmb IAmb 15 28 01.2
comp=Z,36nm,1.0s
IMP IAMs_20 IAMs_20 15 44 47.2
comp=Z,2µm,18.4s
GRNR Gornyy 57.35 355 ⇑*i*P P 15 27 45.6 -1.4
GRNR pmax pmax
comp=Z,30nm,1.1s
KOHI KOHIMA 57.44 306 *e*P P 15 27 47.9 -0.4
KOHI IAmb IAmb 15 27 59.5
comp=Z,300nm,1.2s
KOHI IAMs_20 IAMs_20 15 43 06.6
comp=Z,3µm,21.6s
SKR Severo-Kuril's 58.04 10 ⇑*e*P P 15 27 50.3 -1.5
HEH HeiHe 58.17 348 *e*P P 15 27 50.3 -2.5
HEH pP **pP** 15 27 55.0 -4.3
HEH PcP **PcP** 15 28 39.3 -4.8
HEH S S 15 35 53.3 +0.1
HEH sS **sS** 15 36 04.8 +0.9
HEH SS SS 15 39 45.8 +0.5
HEH pmax pmax
comp=Z,61nm,1.1s
HEH pmax pmax
comp=Z,1µm,4.1s
HEH LR LR
comp=Z,9µm,19.0s
HEH LR LR
comp=Z,10µm,18.6s
HEH LR LR
comp=Z,18µm,22.2s
BELO BELONIA 58.58 302 *e*P P 15 27 59.4 +3.2
AGT Agartala 59.00 303 *e*P P 15 28 02.5 +3.4
AGT IAMs_20 IAMs_20 15 44 15.5
comp=Z,4µm,19.5s
SHL Shillong 59.18 305 IAmb IAmb 15 28 12.2
comp=Z,124nm,1.0s
SHL Shillong 59.18 305 *e*P P 15 28 03.2 +2.6
SHL IAmb IAmb 15 28 12.4
comp=Z,100nm,1.0s
HIA Hailar 59.21 342 P P 15 28 01.6 +1.5
NKL Nikolayevsk 59.47 358 *e*P P 15 27 59.2 -2.5
NKL *e*S S 15 36 09.9 0.0
NKL pmax pmax
comp=N,63nm,1.1s
NKL pmax pmax
comp=E,251nm,1.1s
NKL pmax pmax
comp=Z,757nm,1.1s
NKL smax smax
comp=E,810nm,8.8s
NKL smax smax
comp=N,972nm,4.7s
PEA0B Petropavlovsk- 60.65 10 P P 15 28 08.2 -1.6
PEA0B Petropavlovsk- 60.65 10 *ce*P P 15 28 11.2 +1.3
PETK Petropavlovsk- 60.65 10 P P 15 28 08.2 -1.6
comp=N,106nm,0.9s,baz=190,slow=6.6,SNR=42
PETK LR LR 15 53 27.5
comp=N,13µm,19.9s,baz=201,slow=35
comp=N,106nm,0.9s
PET Petropavlovsk 60.73 11 P P 15 28 09.3 -1.1
PET IAmb IAmb 15 28 17.6
comp=Z,114nm,1.3s
PET Petropavlovsk 60.73 11 P P 15 28 11.7 +1.3
PET Petropavlovsk 60.73 11 ⇓P P 15 28 11.7 +1.3
PET Petropavlovsk 60.73 11 *e*P P 15 28 11.6 +1.2
PET *e* 15 28 51.8
PET *e*S S 15 36 27.4 +1.2
PET *e*SS SS 15 40 24.0 -1.4
PET pmax pmax
comp=Z,53nm,0.8s
PET pmax pmax
comp=Z,1µm,14.1s

PET pmax pmax
comp=Z,1μm,8.3s
GTA Gaotai 60.78 322 P P 15 28 10.5 -0.8
GTA pP pP 15 28 13.8 -4.1
GTA sS sS 15 36 43.0 +4.3
GTA pmax pmax
comp=Z,1μm,10.8s
GTA LR LR
comp=Z,4μm,19.1s
GTA LR LR
comp=Z,3μm,23.9s
GTA LR LR
comp=Z,5μm,23.1s
ZEA Zeya 61.51 349 eP P 15 28 15.2 -0.5
ZEA e 15 28 23.3
ZEA e 15 29 04.1
ZEA eS S 15 36 25.2 -11
ZEA eSS **SS 15 40 38.1 +0.4**
ZEA pmax pmax
comp=N,100nm,1.0s
ZEA pmax pmax
comp=Z,180nm,1.0s
ZEA pmax pmax
comp=N,300nm,5.0s
ZEA pmax pmax
comp=Z,400nm,6.4s
ZEA pmax pmax
comp=N,200nm,4.3s
ZEA pmax pmax
comp=Z,700nm,8.2s
ZEA smax smax
comp=E,1μm,15.2s
GOMU GeErMu 62.14 317 P P 15 28 21.3 +0.5
GOMU pP pP 15 28 27.5 +0.1
GOMU sP sP 15 28 29.0 -0.7
GOMU PP **PP 15 30 41.8 +4.1**
GOMU sS sS 15 37 01.5 +5.1
GOMU pmax pmax
comp=E,29nm,1.2s
GOMU LR LR
comp=E,4μm,20.5s
GOMU LR LR
comp=E,3μm,20.4s
GOMU LR LR
comp=E,6μm,20.3s
SLGI Shiliguri 62.48 304 eP P 15 28 25.1 +2.3
GTK Tadong 62.58 305 eP P 15 28 26.0 +2.4
GTK lAmb lAmb 15 28 32.7
comp=Z,117nm,1.1s
GTK lAMs_20 lAMs_20 15 43 09.8
comp=Z,2μm,21.8s
ULN Ulaanbaatar 62.81 333 P P 15 28 24.1 -0.6
ULN Ulaanbaatar 62.81 333 ⇑P P 15 28 24.5 -0.3
ULN Ulaanbaatar 62.81 333 ceP P 15 28 24.4 -0.3
ULN pmax pmax
comp=Z,63nm,1.3s
SONM Songino Array 63.08 333 lAmb lAmb 15 28 39.8
comp=Z,74nm,1.4s
SONM Songino Array 63.08 333 P P 15 28 25.4 -1.1
comp=Z,22nm,1.0s,baz=149,slow=6.8,SNR=62
SONM PKP2bc 15 57 34.0
comp=Z,1.2nm,1.0s,baz=297,slow=1.3,SNR=6.7
comp=Z,22nm,1.0s
BOK Bokaro 63.51 301 eP P 15 28 32.8 +3.1
BOK lAmb lAmb 15 28 42.2
comp=Z,40nm,0.9s
CIT Chita 63.58 340 eP P 15 28 31.2 +1.6
CIT e 15 29 00.4
CIT e 15 30 43.2
CIT pmax pmax
comp=Z,212nm,2.6s
CASY Casey 63.81 194 P P 15 28 31.1 +0.2
CASY Casey 63.81 194 lAMs_20 lAMs_20 15 54 16.9
comp=Z,20μm,21.0s
CASY Casey 63.81 194 ⇑P P 15 28 33.0 +2.1
PALK Pallekele 63.85 281 P P 15 28 31.5 -0.6
PALK Pallekele 63.85 281 ⇑eP P 15 28 31.0 -1.2
PALK pmax pmax
comp=Z,59nm,1.1s
PALK Pallekele 63.85 281 LR LR 15 58 18.6
comp=Z,9μm,20.9s,baz=215,slow=38
KIP Kipapa 63.95 62 ⇑eP P 15 28 33.4 +0.8
KIP pmax pmax
comp=Z,223nm,1.3s
MALK Mahakanadarawa 64.22 283 P P 15 28 35.9 +1.3
MALK S **S 15 37 05.0 -6.6**
SHEM Shemya Is, Ala 64.58 20 LR LR 15 52 51.5
comp=Z,43μm,20.7s,baz=214,slow=32
JHSG JHARSUGUGA 64.66 298 ⇑eP P 15 28 39.1 +1.8
JHSG lAmb lAmb 15 28 49.7
comp=Z,297nm,1.3s
MLOA Mauna Loa Obse 65.55 65 lAMs_20 lAMs_20 15 51 20.9
comp=Z,18μm,21.0s
HMH Humu'ula Sheep 65.65 65 lAMs_20 lAMs_20 15 51 33.6
comp=Z,18μm,22.0s
POHA Pohakuloa 65.65 65 lAMs_20 lAMs_20 15 51 22.6
comp=Z,18μm,22.0s
HLP Hilina Pali 65.72 66 lAMs_20 lAMs_20 15 51 25.5
comp=Z,19μm,22.0s
OBL Observatory Le 65.77 65 lAMs_20 lAMs_20 15 51 27.0
comp=Z,18μm,22.0s
NPOC North of Pu'u 65.92 66 lAMs_20 lAMs_20 15 53 56.0
comp=Z,16μm,19.0s
VJD Vijayawada 65.97 291 ⇑eP P 15 28 49.2 +3.5
VJD lAMs_20 lAMs_20 15 43 17.0
comp=Z,2μm,22.1s
MA2 Magadan 66.14 4 P P 15 28 45.4 -0.8
MA2 Magadan 66.14 4 P P 15 28 45.4 -0.8
MA2 Magadan 66.14 4 ⇓P P 15 28 45.1 -1.0
MA2 Magadan 66.14 4 deP P 15 28 44.9 -1.2
MA2 pmax pmax
comp=Z,145nm,1.0s
ZAK Zakamensk 66.34 333 eP P 15 28 46.9 -0.8
ZAK pmax pmax
comp=Z,93nm,1.2s
PPT Papeete 66.36 106 LR LR 15 54 01.7
comp=Z,8μm,21.4s,baz=268,slow=32
VAR Varanasi 66.48 301 ⇑eP P 15 28 51.5 +2.6
VAR lAMs_20 lAMs_20 15 40 55.0
comp=Z,2μm,21.2s
AIS Amsterdam Isla 66.84 232 lAMs_20 lAMs_20 15 56 46.9
comp=Z,28μm,21.0s
IRK Irkutsk 67.27 335 eP P 15 28 55.0 +1.5
IRK pmax pmax
comp=Z,171nm,2.3s
ALBI Allahabad 67.51 301 eP P 15 28 57.2 +1.6
ALBI lAmb lAmb 15 29 04.0
comp=Z,266nm,1.2s
ALBI lAMs_20 lAMs_20 15 44 06.8
comp=Z,2μm,18.3s
KOD Kodaikanal 67.56 284 eP P 15 28 57.5 +1.1
KOD lAMs_20 lAMs_20 15 39 32.6
comp=Z,2μm,19.9s
TRD Trivandrum 67.72 282 eP P 15 29 00.4 +3.4
HYB Hyderabad 68.13 292 eP P 15 28 59.8 +0.2
HYB esP **sP 15 29 08.1 -0.5**
HYB lVmB_BB 15 29 10.3
comp=Z,1μm,4.6s
HYB ePP **PP 15 31 29.9 -0.3**
HYB eS **S 15 37 59.4 +0.2**
HYB lVMs_BB lVMs_BB 16 01 05.8
comp=Z,2μm,27.8s
MOY Mondy 68.27 333 eP P 15 29 00.0 0.0
MOY pmax pmax
comp=Z,177nm,2.3s
BOD Bodaibo 68.34 344 eP P 15 29 00.4 +0.3
BOD pmax pmax
comp=Z,94nm,1.6s
ATKA Atka Island 68.81 27 lAMs_20 lAMs_20 15 53 41.5
comp=Z,25μm,22.0s
ATKA Atka Island 68.81 27 ⇓P P 15 29 06.7 +3.6
YAK Yakutsk 69.14 353 P P 15 29 04.8 -0.2
YAK lAmb lAmb 15 29 12.1
comp=Z,80nm,0.9s
YAK Yakutsk 69.14 353 ⇑P P 15 29 02.7 -2.2
YAK Yakutsk 69.14 353 eP P 15 29 04.6 -0.3
YAK e*PP **pP 15 29 08.7 -2.9**
YAK eS **S 15 38 08.9 -0.4**
YAK e*SS sS 15 38 34.6 +14
YAK pmax pmax
comp=Z,51nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=N,18nm,1.2s

YAK pmax pmax
comp=Z,317nm,3.5s
YAK pmax pmax
comp=N,175nm,3.5s
YAK pmax pmax
comp=E,84nm,2.6s
YAK smax smax
comp=E,2μm,4.9s
YAK smax smax
comp=N,608nm,5.2s
YAK Yakutsk 69.14 353 LR LR 15 58 09.5
comp=N,7μm,20.0s,baz=163,slow=35
SEY Seymchan 69.59 4 ⇓eP P 15 29 06.9 -0.9
SEY pmax pmax
comp=Z,119nm,1.3s
LGTI Lohaghat 70.20 304 eP P 15 29 13.4 +1.2
PTH Pithoragarh 70.26 304 eP P 15 29 14.7 +1.8
AKL Akola 70.38 295 eP P 15 29 13.8 +0.3
AKL lAmb lAmb 15 29 23.6
comp=Z,52nm,0.8s
AKL lAMs_20 lAMs_20 15 46 49.9
comp=Z,2μm,21.7s
WMQ Urumqi 70.76 321 eP P 15 29 15.3 -0.2
WMQ PcP **PcP 15 29 33.5 -2.7**
WMQ pmax pmax
comp=Z,82nm,3.7s
WMQ LR LR
comp=Z,4μm,13.9s
WMQ LR LR
comp=Z,4μm,19.3s
WMQ LR LR
comp=Z,3μm,23.9s
CLES Cleveland East 71.18 28 lAMs_20 lAMs_20 15 58 36.3
comp=Z,16μm,21.0s
VNDA Vanda 71.66 176 P P 15 29 19.9 -0.3
VNDA lAmb lAmb 15 29 28.1
comp=Z,101nm,1.6s
VNDA lAMs_20 lAMs_20 15 58 15.6
comp=Z,18μm,19.0s
VNDA Vanda 71.66 176 P P 15 29 21.4 +1.1
comp=Z,40nm,1.1s,baz=332,slow=7.2,SNR=14
VNDA LR LR 16 00 09.0
comp=Z,16μm,18.6s,baz=349,slow=35
comp=Z,40nm,1.1s
NIKH Nikolski High 71.76 28 P P 15 29 21.5 +0.4
baz=231
KAD Karad 72.16 290 eP P 15 29 25.5 +1.1
KAD lAmb lAmb 15 29 31.4
comp=Z,76nm,1.0s
DDI Dehra Dun 72.28 305 eP P 15 29 27.0 +2.1
SBA Scott Base 72.36 175 P P 15 29 25.2 +0.8
SBA lAmb lAmb 15 29 42.5
comp=Z,94nm,1.3s
SBA Scott Base 72.36 175 lAMs_20 lAMs_20 15 58 09.3
comp=Z,21μm,20.0s
SBA Scott Base 72.36 175 P P 15 29 25.2 +0.8
SBA pmax pmax
comp=Z,94nm,1.3s
NDI New Delhi 72.46 303 ⇑eP P 15 29 26.6 +0.7
NDI lAmb lAmb 15 29 35.3
comp=Z,55nm,1.0s
NDI lAMs_20 lAMs_20 15 42 08.2
comp=Z,1μm,19.9s
POO Poona 72.75 292 eP P 15 29 29.2 +1.4
POO lAmb lAmb 15 29 34.9
comp=Z,81nm,1.0s
KUDL Kundal 72.91 302 ⇑eP P 15 29 29.6 +1.0
SMLA Simla 73.26 305 eP P 15 29 31.7 +1.1
SMLA lAmb lAmb 15 29 38.0
comp=Z,158nm,1.4s
UNV Unalaska Valle 73.41 28 P P 15 29 31.1 +0.1
baz=233
P08K Saint George I 73.78 25 P P 15 29 32.6 -0.5
baz=229
SPIA Saint Paul Isl 73.87 24 P P 15 29 34.0 +0.5
baz=229
DGZ Jazzator, Alta 73.91 326 ⇑eP P 15 29 33.0 -1.2
DGZ pmax pmax
comp=Z,71nm,0.9s
AKUT Akutan 73.92 28 lAMs_20 lAMs_20 15 56 45.0
comp=Z,15μm,22.0s
BHK Bhakra 73.96 305 eP P 15 29 37.1 +2.4
BHK lAmb lAmb 15 29 45.0
comp=Z,49nm,0.7s
AJM Ajmer 74.02 300 eP P 15 29 36.6 +1.4
AJM eS **S 15 39 07.0 -0.2**
AJM lAMs_20 lAMs_20 15 46 23.6
comp=Z,1μm,17.8s
ZSN Zaisan 74.27 323 eP P 15 29 35.9 -0.4
comp=Z,58nm,1.3s,baz=323
ZSN eS **S 15 39 10.8 +1.6**
baz=323
ZSN Zaisan 74.27 323 eP P 15 29 35.8 -0.4
ZSN eS **S 15 39 10.7 +1.6**
ZSN pmax pmax
comp=Z,58nm,1.3s
DHRM DHARAMSHALA 74.32 306 eP P 15 29 36.2 -0.9
DHRM lAmb lAmb 15 29 48.7
comp=Z,75nm,0.7s
THN Thein Dam 74.84 306 eP P 15 29 39.6 -0.2
THN lAmb lAmb 15 29 50.0
comp=Z,70nm,0.9s
FALS False Pass 75.46 29 P P 15 29 43.2 +0.3
baz=235
MK31 Makanchi Array 75.53 322 lAmb lAmb 15 29 56.9
comp=Z,139nm,1.2s
MK31 Makanchi Array 75.53 322 ciP P 15 29 42.5 -1.0
MKAR Makanchi Array 75.53 322 iP P 15 29 42.5 -1.0
MKAR pmax pmax
comp=Z,59nm,0.8s
MKAR Makanchi Array 75.53 322 P P 15 29 42.3 -1.2
comp=Z,59nm,0.8s,baz=109,slow=6.9,SNR=86
comp=Z,59nm,0.8s
MAKZ Makanchi 75.73 322 P P 15 29 43.6 -1.1
MAKZ Makanchi 75.73 322 P P 15 29 43.5 -1.2
SHLS Shalkode 75.83 317 eP P 15 29 43.6 -1.9
baz=318
SHLS Shalkode 75.83 317 eP P 15 29 43.5 -1.9
PDGK Podgornoye 75.88 318 P P 15 29 45.2 -0.6
UZB Uzynbulak 76.12 317 eP P 15 29 47.0 -0.2
comp=Z,50nm,0.8s,baz=317
UZB eS **S 15 39 32.1 +1.9**
baz=317
UZB Uzynbulak 76.12 317 eP P 15 29 46.9 -0.2
UZB eS **S 15 39 32.1 +1.9**
UZB pmax pmax
comp=Z,50nm,0.8s
BILL Bilibino 76.14 9 P P 15 29 45.1 -1.4
BILL lAmb lAmb 15 29 57.2
comp=Z,118nm,1.7s
BILL Bilibino 76.14 9 eP P 15 29 46.1 -0.4
BILL pmax pmax
comp=Z,73nm,1.7s
PRZ Przheval'sk 76.29 316 lAmb lAmb 15 29 57.6
comp=Z,151nm,1.1s
KPKS Kokpek 76.47 317 eP P 15 29 48.3 -0.9
comp=Z,82nm,1.4s,baz=317
KPKS Kokpek 76.47 317 eP P 15 29 48.2 -0.9
KPKS pmax pmax
comp=Z,82nm,1.4s
SATY Saty 76.50 317 eP P 15 29 48.9 -0.5
comp=Z,107nm,2.0s,baz=317
SATY eS **S 15 39 36.3 +1.8**
baz=317
SATY Saty 76.50 317 eP P 15 29 48.8 -0.5
SATY eS **S 15 39 36.2 +1.8**
SATY pmax pmax
comp=Z,107nm,2.0s
ZHN Zhinishke 76.53 317 eP P 15 29 49.2 -0.2
baz=317
ZHN Zhinishke 76.53 317 eP P 15 29 49.2 -0.2
KSH Kashi 76.94 313 P P 15 29 53.3 +1.4
KSH sP sP 15 30 00.5 -0.4
KSH S **S 15 39 42.0 +2.7**
KSH pmax pmax
comp=Z,60nm,0.9s
KSH pmax pmax
comp=Z,1μm,7.2s
KSH LR LR
comp=Z,4μm,18.5s
KSH LR LR
comp=Z,7μm,21.3s
KSH LR LR
comp=Z,7μm,21.3s
SDPT Sand Point 77.15 29 P P 15 29 53.1 +0.6
baz=238

NIL Nilore 77.18 307 P P 15 29 52.0 -1.2
NIL Nilore 77.18 307 P P 15 29 52.0 -1.2
NIL pmax pmax
comp=Z,130nm,0.8s
TDK Taldyqorghan 77.25 319 eP P 15 29 53.1 -0.3
comp=Z,77nm,0.9s,baz=319
TDK LR LR 16 04 38.4
comp=Z,3μm,19.6s,baz=319
TDK Taldyqorghan 77.25 319 eP P 15 29 53.0 -0.3
TDK pmax pmax
comp=Z,77nm,0.9s
TDK MLR MLR
comp=Z,3μm,20.0s
CNBA Chernabura Isl 77.30 30 lAMs_20 lAMs_20 15 59 48.5
comp=Z,14μm,20.0s
CHNA Chernabura Isl 77.31 30 P P 15 29 53.3 -0.1
baz=239
ARXS Arharly 77.33 318 eP P 15 29 54.9 +1.0
JASL Jaisalmer 77.36 299 ⇑eP P 15 29 55.7 +1.4
MDOK Medeo 77.47 317 eP P 15 29 54.3 -0.5
baz=317
MDOK eS **S 15 39 46.2 +1.3**
baz=317
MDOK Medeo 77.47 317 eP P 15 29 54.3 -0.5
MDOK eS **S 15 39 46.2 +1.3**
ZAA0 Zalesovo Array 77.47 329 lAmb lAmb 15 30 01.3
comp=Z,136nm,1.6s
ZALV Zalesovo Beam 77.47 329 P P 15 29 52.3 -2.0
comp=Z,26nm,0.8s,baz=114,slow=6.3,SNR=57
ZALV LR LR 16 04 33.7
comp=Z,4μm,20.4s,baz=119,slow=36
comp=Z,26nm,0.8s
TNSS Tian-Shan 77.49 317 eP P 15 29 55.5 +0.2
baz=316
TNSS Tian-Shan 77.49 317 eP P 15 29 55.4 +0.2
M11K Mekoryuk 77.54 23 P P 15 29 54.4 -0.1
baz=232
AAA Alma-Ata 77.57 317 eP P 15 29 55.2 -0.1
comp=Z,81nm,1.4s,baz=317
AAA Alma-Ata 77.57 317 eP P 15 29 55.1 -0.1
AAA pmax pmax
comp=Z,81nm,1.4s
ULHL Ulahol 77.69 316 P P 15 29 58.2 +2.1
SNR=22
GAMB Gambell 77.83 19 P P 15 29 57.2 +1.1
baz=226
S14K Fog Glacier 78.08 29 P P 15 29 58.4 +0.6
baz=239
KUU Kurty 78.21 317 eP P 15 29 58.1 -0.7
comp=Z,95nm,0.9s,baz=317
KUU eS **S 15 39 53.8 +1.2**
baz=317
KUU LR LR 16 05 26.2
comp=Z,2μm,16.1s,baz=317
KUU Kurty 78.21 317 eP P 15 29 58.0 -0.7
KUU eS **S 15 39 53.8 +1.2**
KUU pmax pmax
comp=Z,95nm,0.9s
ROCAM Rodrigues Isla 78.30 251 lAMs_20 lAMs_20 16 01 19.1
comp=Z,23μm,21.0s
SEM Semipalatinsk 78.32 324 eP P 15 29 57.9 -1.5
baz=324
SEM LR LR 16 05 48.7
comp=Z,2μm,16.4s,baz=324
SEM Semipalatinsk 78.32 324 eP P 15 29 57.8 -1.6
SEM MLR MLR
comp=Z,2μm,16.0s
TKM2 Tokmak 2 78.38 316 P P 15 30 01.9 +1.9
SNR=28
TKM2 Tokmak 2 78.38 316 P P 15 29 59.2 -0.7
TIXI Tiksi 78.57 355 P P 15 29 59.4 -0.7
TIXI Tiksi 78.57 355 ⇓eP P 15 29 58.5 -1.6
TIXI pmax pmax
comp=Z,22nm,1.7s
CHGN Chignik 78.64 29 lAmb lAmb 15 30 04.1
comp=Z,104nm,0.8s
CHGN lAMs_20 lAMs_20 16 01 06.6
comp=Z,14μm,21.0s
CHGN Chignik 78.64 29 P P 15 30 01.6 +0.9
baz=240
M13K Dall Lake 78.69 24 P P 15 30 02.2 +1.3
baz=234
KBK Karagaybulak 78.73 316 P P 15 30 04.3 +2.5
SNR=18
UCH Uchtor 78.89 315 P P 15 30 05.7 +2.6
SNR=65
O14K Tigyukauivet M 78.90 26 lAMs_20 lAMs_20 16 01 16.6
comp=Z,17μm,20.0s
O14K Tigyukauivet M 78.90 26 P P 15 30 03.6 +1.5
baz=236
CHMS Chumysh 78.98 316 P P 15 30 05.2 +2.1
SNR=22
AAK Ala-Archa 79.04 316 P P 15 30 06.0 +2.5
SNR=32
AAK Ala-Archa 79.04 316 P P 15 30 03.0 -0.5
AAK lAmb lAmb 15 30 17.7
comp=Z,116nm,1.4s
AAK Ala-Archa 79.04 316 ceP P 15 30 03.2 -0.3
AAK pmax pmax
comp=Z,99nm,1.3s
AAK Ala-Archa 79.04 316 P P 15 30 02.2 -1.3
comp=Z,24nm,0.9s,baz=119,slow=4.9,SNR=48
comp=Z,24nm,0.9s
N14K Kuskokwak Cree 79.10 25 P P 15 30 04.0 +0.8
baz=236
USP Ospenovka 79.25 316 P P 15 30 06.5 +2.0
SNR=93
KURK Kurchatov 79.39 324 P P 15 30 04.3 -0.7
KURK lAmb lAmb 15 30 17.9
comp=Z,151nm,1.2s
KURK Kurchatov 79.39 324 deP P 15 30 04.7 -0.3
KURK pmax pmax
comp=Z,119nm,1.2s
KURBB Kurchatov Arra 79.41 324 P P 15 30 03.2 -1.8
comp=Z,36nm,0.9s,baz=114,slow=4.7,SNR=62
comp=Z,36nm,0.9s
M14K Bethel 79.45 24 P P 15 30 06.5 +1.4
baz=236
O15K Ungalikthiuk R 79.48 26 P P 15 30 06.5 +1.1
baz=238
L14K Kuka Creek 79.50 23 lAMs_20 lAMs_20 16 01 39.2
comp=Z,21μm,20.0s
L14K Kuka Creek 79.50 23 P P 15 30 07.3 +2.0
baz=235
EKS2 Erkin-Say 79.55 315 P P 15 30 08.7 +2.4
SNR=82
N15K Kwethluk River 79.90 25 P P 15 30 09.2 +1.7
baz=237
M15K Kasigluk River 79.94 24 P P 15 30 09.3 +1.6
baz=237
J14K Nanvaranak Lak 79.99 22 lAMs_20 lAMs_20 16 01 36.8
comp=Z,18μm,21.0s
J14K Nanvaranak Lak 79.99 22 P P 15 30 09.7 +1.8
baz=234
BTLS Baital 80.15 318 eP P 15 30 08.2 -1.1
baz=318
BTLS eS **S 15 40 14.9 +1.7**
baz=318
BTLS Baital 80.15 318 eP P 15 30 08.1 -1.1
BTLS eS **S 15 40 14.9 +1.7**
L15K Ungalak Mounta 80.16 23 P P 15 30 10.2 +1.3
baz=236
P16K Nushagak River 80.22 27 P P 15 30 11.2 +1.9
baz=240
TNA Tin City 80.23 19 P P 15 30 11.3 +2.1
baz=229,SNR=16
MAW Mawson 80.34 203 LR LR 16 05 10.6
comp=Z,11μm,18.1s,baz=68,slow=35
ANM Nome 80.44 20 lAmb lAmb 15 30 17.9
comp=Z,87nm,1.1s
ANM Nome 80.44 20 P P 15 30 12.5 +2.1
baz=232,SNR=18
O16K Kokwok River B 80.46 26 lAMs_20 lAMs_20 16 03 04.6
comp=Z,22μm,20.0s
O16K Kokwok River B 80.46 26 P P 15 30 11.6 +1.1
baz=239
K15K Wolf Creek Mou 80.49 23 P P 15 30 12.7 +2.0
baz=236
N16K Nishlik Lake 80.62 25 P P 15 30 13.0 +1.5
baz=239
Q16K King Salmon 80.64 27 P P 15 30 12.6 +1.1
baz=241
KBU Kabul Universi 80.71 306 P P 15 30 13.1 +0.3
KBU S **S 15 40 19.9 0.0**
KBL Kabul 80.78 306 P P 15 30 11.7 -1.5
KBL Kabul 80.78 306 P P 15 30 11.7 -1.5
KBL pmax pmax

	comp=Z,21nm,0.8s								
Q17K	**Contact Creek**	80.80	28	P	P	15 30 13.8	+1.2		
	baz=242								
M16K	**Timber Creek**	80.83	25	P	P	15 30 14.0	+1.4		
	baz=238								
L16K	**Owhat River**	80.98	24	IAmb	IAmb	15 30 19.8			
	comp=Z,61nm,0.8s								
L16K	**Owhat River**	80.98	24	P	P	15 30 14.8	+1.4		
	baz=238								
O17K	**Koliganek Bris**	80.99	26	P	P	15 30 14.9	+1.5		
	baz=240								
P17K	**Kvichak River**	80.99	27	P	P	15 30 14.5	+1.0		
	baz=241								
G15K	**Niukluk**	81.15	20	P	P	15 30 15.5	+1.3		
	baz=233								
N17K	**Nushagak Hills**	81.32	26	P	P	15 30 16.6	+1.4		
	baz=240								
DZA	**Taraz**	81.33	315	*e*P	P	15 30 15.2	-0.6		
	baz=315								
DZA	**Taraz**	81.33	315	*e*P	P	15 30 15.1	-0.6		
J16K	**Anvik River**	81.40	22	IAMs_20	IAMs_20	16 02 40.1			
	comp=Z,21µm,21.0s								
J16K	**Anvik River**	81.40	22	P	P	15 30 17.2	+1.7		
	baz=236								
OHAK	**Old Harbor**	81.56	29	P	P	15 30 17.0	+0.5		
OHAK	**Old Harbor**	81.56	29	P	P	15 30 17.5	+1.0		
	baz=244								
H16K	**Elim**	81.57	21	P	P	15 30 17.7	+1.3		
	baz=235,SNR=62								
P18K	**Big Mountain,**	81.63	27	IAMs_20	IAMs_20	16 00 30.4			
	comp=Z,17µm,22.0s								
P18K	**Big Mountain,**	81.63	27	P	P	15 30 14.9	-2.0		
	baz=242								
M17K	**Holitna River**	81.66	25	IAMs_20	IAMs_20	16 02 43.0			
	comp=Z,21µm,20.0s								
M17K	**Holitna River**	81.66	25	P	P	15 30 16.7	-0.2		
	baz=240								
L17K	**Donlin**	81.68	24	P	P	15 30 16.5	-0.5		
	baz=239,SNR=8.8								
I17K	**Unalakleet**	81.70	22	IAmb	IAmb	15 30 24.9			
	comp=Z,166nm,1.2s								
I17K	**Unalakleet**	81.70	22	P	P	15 30 17.2	+0.1		
	baz=236,SNR=28								
SIMJ	**Simiganj**	81.86	310	P	P	15 30 17.4	-1.3		
SIMJ				IAmb	IAmb	15 30 26.6			
	comp=Z,84nm,1.0s								
O18K	**Koktuh Hills**	81.86	27	IAMs_20	IAMs_20	16 01 43.4			
	comp=Z,17µm,22.0s								
O18K	**Koktuh Hills**	81.86	27	P	P	15 30 15.9	-2.2		
	baz=242								
N18K	**Kilae Creek**	81.96	26	IAMs_20	IAMs_20	16 02 52.3			
	comp=Z,22µm,20.0s								
N18K	**Kilae Creek**	81.96	26	P	P	15 30 17.3	-1.3		
	baz=241								
KK31	**Karatay Array**	81.97	315	IAmb	IAmb	15 30 27.1			
	comp=Z,117nm,1.6s								
KK31	**Karatay Array**	81.97	315	*i* P	P	15 30 17.7	-1.4		
KKAR	**Karatay Array**	81.97	315	IAmb	IAmb	15 30 27.1			
	comp=Z,116nm,1.6s								
K17K	**Iditarod**	81.98	23	P	P	15 30 17.7	-0.9		
	baz=239								
KDAK	**Kodiak Island**	82.15	29	P	P	15 30 18.1	-1.5		
KDAK				IAmb	IAmb	15 30 29.3			
	comp=Z,69nm,0.9s								
KDAK	**Kodiak Island**	82.15	29	IAMs_20	IAMs_20	16 02 44.4			
	comp=Z,12µm,20.0s								
KDAK	**Kodiak Island**	82.15	29	P	P	15 30 18.3	-1.3		
	baz=244								
KDAK	**Kodiak Island**	82.15	29‖	*e*P	P	15 30 18.6	-1.0		
KDAK				pmax	pmax				
	comp=Z,61nm,1.0s								
KDAK	**Kodiak Island**	82.15	29	LR	LR	16 02 56.2			
	comp=Z,13µm,20.6s,baz=265,slow=33								
Q19K	**Cape Douglas,**	82.15	28	IAmb	IAmb	15 30 34.9			
Q19K				IAMs_20	IAMs_20	16 04 25.4			
	comp=Z,15µm,20.0s								
Q19K	**Cape Douglas,**	82.15	28	P	P	15 30 19.7	+0.1		
	baz=243								
SVW2	**Sparrevohn**	82.29	25	IAmb	IAmb	15 30 26.7			
	comp=Z,49nm,0.8s								
SVW2	**Sparrevohn**	82.29	25	P	P	15 30 20.5	+0.2		
OTUK	**Ortayu**	82.31	320	P	P	15 30 20.1	-0.6		
L18K	**Granite Mounta**	82.38	24	IAmb	IAmb	15 30 28.4			
	comp=Z,99nm,1.2s								
L18K	**Granite Mounta**	82.38	24	P	P	15 30 20.0	-0.7		
	baz=240,SNR=13								
M18K	**Stony River**	82.38	25	P	P	15 30 19.8	-1.0		
	baz=241								
O19K	**Port Alsworth**	82.42	27	IAMs_20	IAMs_20	16 01 59.4			
	comp=Z,18µm,21.0s								
O19K	**Port Alsworth**	82.42	27	P	P	15 30 20.2	-0.7		
	baz=243								
BRLS	**Boroldoy**	82.42	315	*e*P	P	15 30 20.9	-0.5		
	baz=315								
BRLS	**Boroldoy**	82.42	315	*e*P	P	15 30 20.9	-0.5		
H17K	**Granite Mounta**	82.56	21	P	P	15 30 20.7	-0.9		
	baz=237								
Q20K	**Shuyak Island**	82.59	28	P	P	15 30 21.0	-0.9		
	baz=245								
G17K	**Kiwalik Mounta**	82.61	20	P	P	15 30 21.5	-0.3		
	baz=236								
N19K	**Bonanza Creek**	82.63	26	IAMs_20	IAMs_20	16 02 50.7			
	comp=Z,22µm,21.0s								
N19K	**Bonanza Creek**	82.63	26	P	P	15 30 21.3	-0.9		
	baz=242								
P19K	**Oil Pt**	82.66	27	IAMs_20	IAMs_20	16 05 08.9			
	comp=Z,13µm,20.0s								
P19K	**Oil Pt**	82.66	27	P	P	15 30 21.7	-0.6		
	baz=244								
BRZS	**Berezniki**	82.66	322	*e*P	P	15 30 21.8	-0.7		
	comp=Z,101nm,2.2s,baz=322								
BRZS				*e*S	S	15 40 40.8	+1.7		
	baz=322								
BRZS	**Berezniki**	82.66	322	*e*P	P	15 30 21.8	-0.7		
BRZS				*e*S	S	15 40 40.7	+1.7		
BRZS				pmax	pmax				
	comp=Z,101nm,2.2s								
C16K	**Lisburne Hills**	82.75	17	IAmb	IAmb	15 30 39.4			
	comp=Z,108nm,1.4s								
C16K	**Lisburne Hills**	82.75	17	P	P	15 30 22.0	-0.5		
	baz=232								
ILSW	**Iliamna Southw**	82.85	27	IAMs_20	IAMs_20	16 01 17.5			
	comp=Z,17µm,22.0s								
J18K	**Innoko River**	82.98	23	P	P	15 30 22.4	-1.5		
	baz=240								
TTA	**Tatalina**	83.00	24	IAmb	IAmb	15 30 31.1			
	comp=Z,138nm,1.7s								
TTA	**Tatalina**	83.00	24	P	P	15 30 23.5	-0.5		
TTA	**Tatalina**	83.00	24	P	P	15 30 23.1	-0.9		
	baz=241,SNR=8.8								
D17K	**Noatak River**	83.08	18	P	P	15 30 24.0	-0.2		
	baz=234,SNR=48								
L19K	**White Mountain**	83.11	25	IAMs_20	IAMs_20	16 03 49.1			
	comp=Z,21µm,21.0s								
L19K	**White Mountain**	83.11	25	P	P	15 30 23.5	-1.0		
	baz=242								
E17K	**Hotham Inlet**	83.11	19	P	P	15 30 23.1	-1.3		
	baz=235,SNR=55								
O20K	**Slope Mountain**	83.12	27	P	P	15 30 23.6	-1.1		
	baz=244								
M19K	**Big River Lodg**	83.17	25	P	P	15 30 23.1	-1.8		
	baz=242,SNR=6.7								
H18K	**Honhosa River**	83.23	21	IAmb	IAmb	15 30 41.0			
	comp=Z,114nm,1.6s								
H18K	**Honhosa River**	83.23	21	P	P	15 30 24.2	-0.9		
	baz=238								
HOM	**Homer**	83.39	28	IAMs_20	IAMs_20	16 05 14.1			
	comp=Z,12µm,20.0s								
HOM	**Homer**	83.39	28	P	P	15 30 24.8	-1.2		
	baz=245								
QSPA	**South Pole Qui**	83.46	180	P	P	15 30 25.9	-0.6		
	comp=Z,96nm,1.2s,baz=351,slow=2.1,SNR=40								
QSPA				LR	LR	16 08 20.4			
	comp=Z,69µm,18.3s,baz=15,slow=36 comp=Z,96nm,1.2s								
C17K	**DeLong Mountai**	83.51	17	P	P	15 30 25.7	-0.8		
	baz=234								
G18K	**Tagagawik**	83.52	21	IAmb	IAmb	15 30 32.8			
	comp=Z,53nm,0.8s								
G18K	**Tagagawik**	83.52	21	P	P	15 30 25.6	-1.0		
	baz=238								
CNPM	**China Poot**	83.52	28	IAMs_20	IAMs_20	16 05 08.7			
	comp=Z,19µm,20.0s								
F18K	**Selawik**	83.56	20	P	P	15 30 27.0	+0.3		
	baz=237,SNR=12								
GCSA	**Galena City Sc**	83.56	22	P	P	15 30 26.7	0.0		
	baz=240,SNR=14								
L20K	**Farewell, AK**	83.65	25	P	P	15 30 27.3	0.0		
	baz=243								
J19K	**Poorman**	83.67	23	IAmb	IAmb	15 30 34.7			
	comp=Z,92nm,1.2s								
J19K	**Poorman**	83.67	23	P	P	15 30 26.5	-0.8		
	baz=241,SNR=23								
M20K	**Styx River**	83.69	25	P	P	15 30 27.3	-0.4		
	baz=244								
E18K	**Tukpahlearik C**	83.70	19	IAMs_20	IAMs_20	16 03 17.8			
	comp=Z,21µm,21.0s								
E18K	**Tukpahlearik C**	83.70	19	P	P	15 30 26.6	-0.8		
	baz=236								
BRLK	**Bradley Lake**	83.78	28	IAmb	IAmb	15 30 35.9			
	comp=Z,39nm,0.8s								
BRLK				IAMs_20	IAMs_20	16 05 26.2			
	comp=Z,14µm,20.0s								
N20K	**Mount Spurr**	83.79	26	P	P	15 30 27.1	-1.1		
	baz=244,SNR=8.9								
BRSE	**Bradley Lake S**	83.84	28	P	P	15 30 26.8	-1.5		
	baz=246								
K20K	**Telida**	83.98	24	P	P	15 30 27.8	-1.2		
	baz=243								
CAPN	**Captain Cook N**	84.08	27	IAMs_20	IAMs_20	16 07 34.4			
	comp=Z,12µm,20.0s								
CAPN	**Captain Cook N**	84.08	27	P	P	15 30 28.4	-1.0		
	baz=245								
H19K	**Roundabout Mou**	84.11	21	P	P	15 30 28.7	-0.9		
	baz=240								
G19K	**Purcell Mounta**	84.20	21	P	P	15 30 29.6	-0.4		
	baz=240								
C18K	**Utukok River**	84.21	18	IAMs_20	IAMs_20	16 02 53.2			
	comp=Z,22µm,22.0s								
C18K	**Utukok River**	84.21	18	P	P	15 30 29.4	-0.7		
	baz=235								
F19K	**Shaleruckik Mo**	84.32	20	P	P	15 30 30.5	-0.1		
	baz=232								
J20K	**Nowinta River**	84.33	23	P	P	15 30 30.5	-0.2		
	baz=242								
SKT	**Skwentna**	84.42	26	IAmb	IAmb	15 31 05.1			
	comp=Z,61nm,1.2s								
SKT	**Skwentna**	84.42	26	P	P	15 30 30.6	-0.7		
	baz=245,SNR=8.9								
B18K	**Kokolik River**	84.44	17	P	P	15 30 31.8	+0.6		
	baz=235								
I20K	**Naaghedeneel**	84.49	22	IAMs_20	IAMs_20	16 04 14.8			
	comp=Z,16µm,20.0s								
I20K	**Naaghedeneel**	84.49	22	P	P	15 30 30.3	-1.2		
	baz=242								
PPLA	**Purkeypile**	84.54	25	P	P	15 30 29.9	-2.1		
	baz=244								
SUA	**Susitna One**	84.54	26	IAmb	IAmb	15 30 36.9			
	comp=Z,62nm,0.8s								
SUA				IAMs_20	IAMs_20	16 02 25.7			
	comp=Z,17µm,22.0s								
SUA	**Susitna One**	84.54	26	P	P	15 30 30.2	-1.9		
	baz=246,SNR=22								
SEW	**Seward**	84.58	28	P	P	15 30 30.7	-1.3		
	baz=247								
O22K	**Cooper Landing**	84.61	27	IAMs_20	IAMs_20	16 02 48.3			
	comp=Z,15µm,22.0s								
O22K	**Cooper Landing**	84.61	27	P	P	15 30 30.2	-2.0		
	baz=247								
NRIK	**Noril'sk**	84.62	343	*ce*P	P	15 30 30.3	-1.8		
NRIK				pmax	pmax				
	comp=Z,159nm,1.0s								
NRIK	**Noril'sk**	84.62	343	P	P	15 30 30.1	-2.0		
	comp=Z,89nm,0.8s,baz=123,slow=4.8,SNR=58								
NRIK				LR	LR	16 06 15.3			
	comp=Z,8µm,21.7s,baz=121,slow=34 comp=Z,89nm,0.8s								
FIS	**Fire Island**	84.65	27	IAMs_20	IAMs_20	16 01 30.4			
	comp=Z,13µm,22.0s								
H20K	**Aneega Mo**	84.67	22	P	P	15 30 31.9	-0.6		
	baz=242,SNR=48								
CAST	**Castle Rocks**	84.81	24	IAmb	IAmb	15 30 38.1			
	comp=Z,53nm,0.8s								
CAST				IAMs_20	IAMs_20	16 07 31.6			
	comp=Z,17µm,20.0s								
CAST	**Castle Rocks**	84.81	24	P	P	15 30 31.6	-1.6		
	baz=244,SNR=45								
E19K	**Redstone River**	84.82	19	P	P	15 30 31.7	-1.4		
	baz=239								
RC01	**Rabbit Creek A**	84.84	27	IAmb	IAmb	15 30 37.8			
	comp=Z,72nm,0.7s								
RC01	**Rabbit Creek A**	84.84	27	P	P	15 30 32.1	-1.2		
	baz=247,SNR=22								
CHUM	**Lake Minchumin**	84.92	24	P	P	15 30 32.0	-1.6		
	baz=244,SNR=14								
M22K	**Willow**	84.94	26	IAMs_20	IAMs_20	16 03 22.0			
	comp=Z,16µm,21.0s								
M22K	**Willow**	84.94	26	P	P	15 30 31.8	-1.9		
	baz=246,SNR=11								
C19K	**Lookout Ridge**	84.95	18	IAMs_20	IAMs_20	16 03 38.9			
	comp=Z,20µm,21.0s								
C19K	**Lookout Ridge**	84.95	18	P	P	15 30 32.6	-1.2		
	baz=237								
BVA0	**Borovoye Array**	84.98	325	*i* P	P	15 30 36.1	+1.8		
BVAR	**Borovoye Array**	84.98	325	P	P	15 30 32.1	-2.2		
	comp=Z,109nm,0.8s,baz=104,slow=6.3,SNR=95 comp=Z,109nm,0.8s								
BRVK	**Borovoye**	85.05	325	P	P	15 30 33.3	-1.4		
BRVK				IAmb	IAmb	15 30 37.8			
	comp=Z,95nm,0.9s								
BRVK	**Borovoye**	85.05	325	*c* P	P	15 30 33.6	-1.0		
BRVK				pmax	pmax				
	comp=Z,138nm,1.2s								
D19K	**Kuna River**	85.07	18	P	P	15 30 33.0	-1.5		
	baz=238								
F20K	**Avaraart Lake**	85.12	20	P	P	15 30 33.2	-1.4		
	baz=241								
CUT	**Chulitna**	85.14	25	P	P	15 30 33.3	-1.5		
	baz=246								
PMR	**Palmer**	85.31	26	IAmb	IAmb	15 30 38.7			
	comp=Z,63nm,0.8s								
PMR				IAMs_20	IAMs_20	16 03 00.8			
	comp=Z,13µm,21.0s								
PMR	**Palmer**	85.31	26	P	P	15 30 36.9	+1.2		
PMR	**Palmer**	85.31	26	P	P	15 30 34.2	-1.5		
	baz=247,SNR=13								
KTH	**Kantishna Hill**	85.34	24	IAmb	IAmb	15 30 40.2			
	comp=Z,73nm,1.0s								
KTH				IAMs_20	IAMs_20	16 05 51.5			
	comp=Z,19µm,20.0s								
GHO	**Glory Hole Cre**	85.47	26	IAmb	IAmb	15 30 40.2			
	comp=Z,73nm,0.8s								
GHO				IAMs_20	IAMs_20	16 02 54.0			
	comp=Z,17µm,22.0s								
P23K	**Montague Islan**	85.49	28	P	P	15 30 33.8	-2.8		
	baz=248								
H21K	**Melozitna Rive**	85.51	22	P	P	15 30 35.3	-1.4		
	baz=244								
KNK	**Knik Glacier**	85.53	27	IAMs_20	IAMs_20	16 04 33.9			
	comp=Z,12µm,21.0s								
KNK	**Knik Glacier**	85.53	27	P	P	15 30 35.6	-1.3		
	baz=248,SNR=27								
BPAW	**Bear Paw Mtn.**	85.54	24	P	P	15 30 35.9	-1.0		
	baz=245,SNR=15								
TRF	**Thorofare Moun**	85.55	24	IAmb	IAmb	15 30 42.8			
	comp=Z,48nm,0.8s								
TRF				IAMs_20	IAMs_20	16 06 19.3			
	comp=Z,20µm,20.0s								
TRF	**Thorofare Moun**	85.55	24	P	P	15 30 36.0	-1.2		
	baz=246,SNR=28								
E20K	**Nigu River**	85.56	19	P	P	15 30 35.3	-1.7		
	baz=240								
I21K	**Tanana**	85.61	23	IAmb	IAmb	15 30 47.9			
	comp=Z,77nm,1.1s								
I21K	**Tanana**	85.61	23	P	P	15 30 36.8	-0.3		
	baz=244,SNR=21								
D20K	**Etivluk River**	85.66	19	P	P	15 30 36.3	-1.1		
	baz=240								
SML	**Sawmill**	85.74	26	IAMs_20	IAMs_20	16 03 14.3			
	comp=Z,12µm,21.0s								
SML	**Sawmill**	85.74	26	P	P	15 30 36.1	-1.9		
	baz=248,SNR=37								
Q23K	**Middleton Isla**	85.79	29	IAMs_20	IAMs_20	16 06 35.9			
	comp=Z,11µm,20.0s								
GLI	**Glacier Island**	85.95	27	IAMs_20	IAMs_20	16 05 17.0			
	comp=Z,12µm,20.0s								
GLI	**Glacier Island**	85.95	27	P	P	15 30 37.4	-1.6		
	baz=249,SNR=10								
F21K	**Alatna River**	85.98	20	P	P	15 30 38.2	-0.8		
	baz=243								
M23K	**Glacier View**	86.00	26	P	P	15 30 37.4	-1.8		
	baz=248,SNR=18								
MLY	**Manley**	86.02	23	IAmb	IAmb	15 30 49.4			
	comp=Z,64nm,1.0s								
MLY	**Manley**	86.02	23	P	P	15 30 37.4	-1.9		
	baz=246,SNR=35								
WAT1	**Susitna Watana**	86.03	25	P	P	15 30 37.8	-1.5		
	baz=248								
HIN	**Hinchinbrook I**	86.06	28	IAmb	IAmb	15 30 45.3			
	comp=Z,76nm,0.8s								
HIN				IAMs_20	IAMs_20	16 06 49.7			
	comp=Z,17µm,20.0s								
H22K	**Ishtalitna Cre**	86.14	22	P	P	15 30 38.5	-1.3		
	baz=245								
BWN	**Browne**	86.18	24	IAMs_20	IAMs_20	16 08 05.6			
	comp=Z,18µm,19.0s								
FID	**Port Fidalgo**	86.19	28	IAmb	IAmb	15 30 56.4			
	comp=Z,66nm,0.9s								
SCM	**Sheep Creek Mo**	86.19	26	IAMs_20	IAMs_20	16 03 18.3			
	comp=Z,16µm,22.0s								
SCM	**Sheep Creek Mo**	86.19	26	P	P	15 30 39.4	-0.9		
	baz=249,SNR=12								
MCK	**McKinley**	86.22	24	P	P	15 30 38.5	-1.8		
	baz=247,SNR=19								
WAT6	**Susitna Watana**	86.29	26	P	P	15 30 39.3	-1.5		
	baz=248,SNR=16								
E21K	**Killik River**	86.38	19	IAMs_20	IAMs_20	16 03 41.5			
	comp=Z,17µm,22.0s								
E21K	**Killik River**	86.38	19	P	P	15 30 40.0	-0.9		
	baz=242								
C21K	**Knifeblade Rid**	86.45	18	P	P	15 30 39.4	-1.9		
	baz=242								
EYAK	**Cordova Ski Ar**	86.46	28	P	P	15 30 43.2	+1.8		
EYAK	**Cordova Ski Ar**	86.46	28	P	P	15 30 40.9	-0.5		
	baz=250								
NEA2	**Nenana**	86.50	24	IAmb	IAmb	15 30 47.4			
	comp=Z,36nm,0.9s								
NEA2				IAMs_20	IAMs_20	16 07 33.4			
	comp=Z,20µm,20.0s								
NEA2	**Nenana**	86.50	24	P	P	15 30 38.8	-2.8		
	baz=247,SNR=24								
G22K	**Bettles**	86.54	21	P	P	15 30 41.7	+0.1		
	baz=245								
I23K	**Minto, Yukon-K**	86.61	23	IAmb	IAmb	15 30 57.8			
	comp=Z,56nm,1.1s								
I23K	**Minto, Yukon-K**	86.61	23	P	P	15 30 41.7	-0.4		
	baz=247,SNR=16								
DHY	**Denali Highway**	86.62	25	P	P	15 30 40.3	-2.1		
	baz=249,SNR=77								
KLU	**Klutina**	86.70	27	IAmb	IAmb	15 30 53.1			
KLU				IAMs_20	IAMs_20	16 04 53.7			
	comp=Z,12µm,21.0s								
KLU	**Klutina**	86.70	27	P	P	15 30 41.6	-1.1		
	baz=250,SNR=18								
M24K	**Tolsona, Glenn**	86.80	26	IAmb	IAmb	15 30 48.2			
	comp=Z,67nm,0.8s								
M24K				IAMs_20	IAMs_20	16 05 14.3			
	comp=Z,18µm,20.0s								
M24K	**Tolsona, Glenn**	86.80	26	P	P	15 30 41.8	-1.4		
	baz=250,SNR=9.9								
WRH	**Wood River Hil**	86.85	24	IAmb	IAmb	15 30 51.9			
	comp=Z,72nm,0.9s								
WRH				IAMs_20	IAMs_20	16 07 55.5			
	comp=Z,18µm,20.0s								
KAIM	**Kayak Island**	86.88	29	IAMs_20	IAMs_20	16 08 31.6			
	comp=Z,14µm,20.0s								
KAIM	**Kayak Island**	86.88	29	P	P	15 30 42.4	-1.1		
	baz=251								
E22K	**Anaktuvuk Pass**	86.95	20	P	P	15 30 42.7	-1.1		
	baz=244								
MDM	**Murphy Dome**	86.97	23	IAMs_20	IAMs_20	16 08 26.9			
	comp=Z,18µm,20.0s								
A21K	**Barrow**	86.98	16	P	P	15 30 42.5	-1.3		
	baz=240,SNR=46								
G23K	**Bananza Creek**	86.98	21	IAmb	IAmb	15 30 50.9			
	comp=Z,56nm,0.8s								
G23K	**Bananza Creek**	86.98	21	P	P	15 30 41.7	-2.3		
	baz=246								
D22K	**Ayikyak River**	87.00	19	P	P	15 30 41.5	-2.4		
	baz=244								
CCB	**Clear Creek Bu**	87.03	24	IAmb	IAmb	15 30 52.6			
	comp=Z,66nm,0.9s								
CCB				IAMs_20	IAMs_20	16 08 09.2			
	comp=Z,19µm,20.0s								
HMT	**Hamilton**	87.09	28	IAMs_20	IAMs_20	16 04 35.0			
	comp=Z,20µm,21.0s								
COLA	**College**	87.09	24	IAMs_20	IAMs_20	16 08 01.9			
	comp=Z,19µm,20.0s								
COLA	**College**	87.09	24	P	P	15 30 41.9	-2.5		
	baz=248								
BMRM	**Bremner River**	87.13	28	P	P	15 30 43.1	-1.7		
	baz=251,SNR=12								
COLD	**Coldfoot**	87.13	21	P	P	15 30 44.1	-0.5		
	baz=246								
SUCK	**Suckling Hills**	87.23	29	IAMs_20	IAMs_20	16 03 31.9			
	comp=Z,16µm,22.0s								
HDA	**Harding Lake**	87.28	24	IAMs_20	IAMs_20	16 07 02.1			
	comp=Z,19µm,20.0s								
HDA	**Harding Lake**	87.28	24	P	P	15 30 44.1	-1.2		
	baz=249,SNR=12								
N25K	**Chitina, Valde**	87.34	27	IAmb	IAmb	15 31 01.0			
	comp=Z,63nm,1.2s								
N25K	**Chitina, Valde**	87.34	27	P	P	15 30 44.4	-1.4		
	baz=251,SNR=9.5								
HARP	**HAARP**	87.35	26	P	P	15 30 43.4	-2.4		
	baz=251								
POKR	**Poker Plat Res**	87.35	23	P	P	15 30 44.6	-1.1		
	baz=248								
BERG	**Berg Lake**	87.37	28	IAMs_20	IAMs_20	16 04 32.1			
	comp=Z,17µm,22.0s								
PAX	**Paxson**	87.40	26	P	P	15 30 45.0	-1.2		
	baz=250,SNR=13								
IL31		87.44	24	IAmb	IAmb	15 30 48.4			
	comp=Z,56nm,0.9s								
ILAR	**Eielson Array**	87.44	24	P	P	15 30 43.7	-2.4		
	comp=Z,43nm,0.9s,baz=258,slow=4.8,SNR=43								
ILAR				PKKPbc	PKKPbc	15 48 37.1	-1.6		
	comp=Z,0.7nm,0.9s,baz=50,slow=0

comp=Z,36nm,0.8s
L26K **Log Cabin Wild** 88.34 26 P P 15 30 50.2 -0.3
baz=252,SNR=13
SCRK **Sand Creek** 88.36 25 P P 15 30 48.4 -2.3
baz=252,SNR=17
D24K **Happy Valley** 88.37 19 P P 15 30 50.1 -0.4
baz=247
G25K **Bearman Lake** 88.45 22 P P 15 30 49.1 -1.7
baz=250
TABL **Table Mountain** 88.60 29 IAMs_20 IAMs_20 16 08 55.9
comp=Z,15µm,20.0s
C24K **Franklin Bluff** 88.64 19 P P 15 30 52.0 +0.3
baz=247
CTG **Chitna Glacier** 88.65 28 P P 15 30 51.7 -0.5
baz=254,SNR=16
J26L **Joseph Creek** 88.70 24 P P 15 30 52.2 0.0
baz=252
LOGN **Logan Glacier** 88.77 28 IAmb IAmb 15 30 56.9
comp=Z,60nm,0.9s
M27K **Edge Creek, AK** 88.79 27 IAMs_20 IAMs_20 16 05 47.6
comp=Z,15µm,21.0s
M27K **Edge Creek, AK** 88.79 27 P P 15 30 51.6 -1.2
baz=254
F25K **Christian Rive** 88.90 21 P P 15 30 52.9 -0.2
baz=250
PINM **Pinnacle** 88.94 29 P P 15 30 52.4 -1.0
baz=255,SNR=8.2
L27K **Beaver Creek,** 89.01 26 IAmb IAmb 15 31 05.9
comp=Z,81nm,1.2s
L27K **Beaver Creek,** 89.01 26 P P 15 30 52.3 -1.4
baz=254,SNR=40
E25K **Arctic Village** 89.11 21 IAmb IAmb 15 30 58.9
comp=Z,53nm,0.9s
E25K **Arctic Village** 89.11 21 P P 15 30 53.2 -0.9
baz=250
I26K **Coal Creek Min** 89.11 24 IAMs_20 IAMs_20 16 15 34.0
comp=Z,14µm,19.0s
I26K **Coal Creek Min** 89.11 24 P P 15 30 53.4 -0.6
baz=252
K27K **Chicken** 89.18 25 IAMs_20 IAMs_20 16 05 34.0
comp=Z,17µm,22.0s
K27K **Chicken** 89.18 25 P P 15 30 54.2 -0.2
baz=253
BCPM **Bancas Point** 89.20 29 IAMs_20 IAMs_20 16 06 38.9
comp=Z,10µm,20.0s
PNL **Peninsula** 89.25 30 P P 15 30 56.9 +2.1
PNL **Peninsula** 89.25 30 P P 15 30 53.9 -1.0
baz=256,SNR=6.5
D25K **Kavik River** 89.25 20 IAMs_20 IAMs_20 16 05 45.5
comp=Z,17µm,22.0s
D25K **Kavik River** 89.25 20 P P 15 30 54.1 -0.6
baz=249
BVCY **Beaver Creek** 89.26 27 P P 15 30 54.9 +0.1
baz=254,SNR=20
YUK3 **Moose Creek** 89.27 28 P P 15 30 53.9 -1.3
baz=255,SNR=18
G26K **Porcupine Rive** 89.37 22 P P 15 30 55.1 -0.1
baz=252
YUK8 **Steele Glacier** 89.47 28 P P 15 30 55.4 -0.8
baz=256,SNR=10
F26K **Sheenjek River** 89.47 21 P P 15 30 55.1 -0.7
baz=252
EGAK **Eagle** 89.77 25 IAmb IAmb 15 31 07.5
comp=Z,49nm,0.8s
EGAK **Eagle** 89.77 25 P P 15 30 56.7 -0.4
baz=254
O29M **Mount Kennedy** 89.80 29 IAMs_20 IAMs_20 16 09 03.3
comp=Z,13µm,21.0s
O29M **Mount Kennedy** 89.80 29 P P 15 30 56.3 -1.2
baz=256
I27K **Kandik River** 89.81 24 P P 15 30 56.4 -1.0
baz=254
YUK4 **Talbot Arm** 90.01 28 P P 15 30 58.0 -0.6
baz=257,SNR=15
H27K **Steamboat Moun** 90.02 23 P P 15 30 57.1 -1.2
baz=254
YUK6 **Outpost Mounta** 90.05 29 P P 15 30 57.5 -1.4
baz=257
P29M **Windy Craggy** 90.06 30 P P 15 30 58.2 -0.4
baz=257
GEYT **Alibeck** 90.10 308 P P 15 30 58.3 -1.0
comp=Z,8.1nm,1.1s,baz=113,slow=3.4,SNR=15
comp=Z,8.1nm,1.1s
DAWY **Dawson** 90.33 25 IAmb IAmb 15 31 10.4
comp=Z,71nm,1.1s
DAWY **Dawson** 90.33 25 P P 15 30 59.0 -0.8
baz=256,SNR=40
M29M **Somme Creek** 90.35 27 IAMs_20 IAMs_20 16 05 26.9
comp=Z,16µm,22.0s
M29M **Somme Creek** 90.35 27 P P 15 30 59.1 -0.9
baz=257
HYT **Haines Junctio** 90.43 29 P P 15 31 00.2 -0.3
baz=258,SNR=12
I28M **Miner Creek** 90.45 24 P P 15 30 59.6 -0.8
baz=255
S31K **Pelican** 90.47 32 P P 15 30 59.8 -0.7
baz=258
AB31 **Akbulak array** 90.50 319 *i* P P 15 31 00.5 -0.4
P30M **Million Dollar** 90.55 30 P P 15 31 00.1 -0.8
baz=258
L29M **L29M** 90.65 26 IAMs_20 IAMs_20 16 07 33.1
comp=Z,19µm,21.0s
L29M **L29M** 90.65 26 P P 15 31 00.8 -0.6
baz=257
PLBC **Pleasant Camp** 90.70 30 P P 15 31 00.9 -0.7
baz=258
SIT **Sitka** 90.78 33 IAMs_20 IAMs_20 16 04 54.8
comp=Z,11µm,20.0s
SIT **Sitka** 90.78 33 P P 15 31 01.2 -0.8
baz=259
R31K **City Hall, Gus** 90.82 31 P P 15 31 01.0 -1.1
baz=259
J29N **Klondike Camp** 90.92 25 IAmb IAmb 15 31 17.6
comp=Z,96nm,1.6s
J29N IAMs_20 IAMs_20 16 08 56.1
comp=Z,31µm,20.0s
J29N **Klondike Camp** 90.92 25 P P 15 31 02.0 -0.6
baz=257,SNR=12
F28M **Old Crow** 91.02 22 P P 15 31 02.0 -1.0
baz=255
K29M **Barlow Dome** 91.08 26 IAmb IAmb 15 31 14.1
comp=Z,57nm,0.9s
K29M IAMs_20 IAMs_20 16 09 01.2
comp=Z,13µm,20.0s
K29M **Barlow Dome** 91.08 26 P P 15 31 02.2 -1.2
baz=258,SNR=34
O30N **Mendenhall** 91.10 29 IAmb IAmb 15 31 10.4
comp=Z,74nm,1.6s
O30N IAMs_20 IAMs_20 16 10 16.1
comp=Z,11µm,21.0s
O30N **Mendenhall** 91.10 29 P P 15 31 02.0 -1.5
baz=259,SNR=7.1
M30M **Minto, Yukon** 91.13 27 IAMs_20 IAMs_20 16 05 25.9
comp=Z,12µm,22.0s
M30M **Minto, Yukon** 91.13 27 P P 15 31 02.3 -1.3
baz=258
SKAG **Skagway** 91.22 30 IAMs_20 IAMs_20 16 14 29.4
comp=Z,10µm,19.0s
SKAG **Skagway** 91.22 30 P P 15 31 02.7 -1.3
baz=259
S32K **Killisnoo** 91.25 32 IAmb IAmb 15 32 01.6
comp=Z,59nm,1.3s
S32K IAMs_20 IAMs_20 16 06 47.3
comp=Z,14µm,20.0s
S32K **Killisnoo** 91.25 32 P P 15 31 03.2 -1.0
baz=260
H29M **Whitestone** 91.26 23 IAMs_20 IAMs_20 16 10 27.0
comp=Z,14µm,20.0s
H29M **Whitestone** 91.26 23 P P 15 31 03.3 -0.7
baz=257
SVE **Sverdlovsk** 91.35 327‖ *e*P P 15 31 05.3 +0.7
SVE *e*S **SKSac** 15 41 38.1 +2.2
SVE pmax pmax
comp=Z,49nm,1.5s
SVE MLR MLR
comp=E,6µm,21.0s
SVE MLR MLR
comp=Z,5µm,20.0s
R32K **Eaglecrest** 91.43 32 P P 15 31 04.2 -0.8
baz=260
JIS **Juneau Island** 91.50 32 P P 15 31 07.7 +2.4
WHY **Whitehorse** 91.66 29 IAMs_20 IAMs_20 16 08 08.0
comp=Z,11µm,21.0s
WHY **Whitehorse** 91.66 29 P P 15 31 05.4 -0.8
baz=260
MAYO **Mayo, Yukon** 91.74 26 P P 15 31 05.7 -0.7
baz=259
J30M **Hart River** 91.74 25 P P 15 31 05.8 -0.7
baz=259
U33K **Whale Pass** 91.82 34 P P 15 31 06.1 -0.7
baz=261
I30M **Mount Dempster** 91.85 25 IAmb IAmb 15 31 13.4
comp=Z,27nm,0.9s
I30M IAMs_20 IAMs_20 16 11 02.5
comp=Z,17µm,20.0s
I30M **Mount Dempster** 91.85 25 P P 15 31 05.8 -1.2
baz=259,SNR=17
AKTO **Aktyubinsk** 91.91 320 P P 15 31 06.5 -0.9
comp=Z,6.9nm,0.8s,baz=103,slow=4.2,SNR=22
comp=Z,6.9nm,0.8s
E29M **Blow River** 91.92 21 P P 15 31 06.7 -0.4
baz=257
EPYK **Eagle Plains** 91.94 23 IAmb IAmb 15 31 11.0
comp=Z,55nm,0.9s
EPYK IAMs_20 IAMs_20 16 09 32.2
comp=Z,13µm,21.0s
EPYK **Eagle Plains** 91.94 23 P P 15 31 06.7 -0.5
baz=258,SNR=36
P32M **Atlin** 92.06 30 IAmb IAmb 15 31 19.8
comp=Z,36nm,1.2s
P32M IAMs_20 IAMs_20 16 07 11.5
comp=Z,11µm,21.0s
P32M **Atlin** 92.06 30 P P 15 31 06.9 -1.1
baz=261
M31M **Drury Creek, Y** 92.16 28 IAMs_20 IAMs_20 16 10 22.2
comp=Z,14µm,20.0s
M31M **Drury Creek, Y** 92.16 28 P P 15 31 08.0 -0.4
baz=260
G30M **tAoh Zraii Nji** 92.26 23 IAMs_20 IAMs_20 16 08 22.4
comp=Z,11µm,21.0s
G30M **tAoh Zraii Nji** 92.26 23 P P 15 31 07.4 -1.3
baz=259
WRAK **Wrangell Islan** 92.29 34 P P 15 31 08.5 -0.5
baz=262
ARU **Arti** 92.42 326 *c i* P P 15 31 09.1 -0.5
ARU 15 34 50.0
ARU S **SKSac** 15 41 42.2 +0.3
ARU SP SPn 15 43 24.5 +0.8
ARU SSS SSS 15 52 00.3
ARU pmax pmax
comp=Z,31nm,1.0s
ARU **Arti** 92.42 326 P P 15 31 09.2 -0.5
comp=Z,17nm,0.8s,baz=99,slow=19,SNR=22
ARU LR LR 16 13 59.5
comp=Z,4µm,20.9s,baz=96,slow=36
comp=Z,17nm,0.8s
F30M **Barrier River** 92.55 22 P P 15 31 10.3 +0.3
baz=259
V35K **Ketchikan** 92.55 35 P P 15 31 09.6 -0.6
baz=262
P33M **Teslin, Yukon** 92.60 30 IAmb IAmb 15 32 06.8
comp=Z,69nm,2.0s
P33M IAMs_20 IAMs_20 16 07 30.8
comp=Z,14µm,22.0s
P33M **Teslin, Yukon** 92.60 30 P P 15 31 10.8 +0.3
baz=262
N32M **Quiet Lake** 92.61 29 P P 15 31 10.4 -0.1
baz=261
FARO **Faro, Yukon** 92.65 28 P P 15 31 10.2 -0.4
baz=261
Q32M **Nakina River** 92.70 31 IAMs_20 IAMs_20 16 06 55.8
comp=Z,22µm,22.0s
Q32M **Nakina River** 92.70 31 P P 15 31 10.3 -0.9
baz=262
ELIB **Princess Elisa** 92.71 196 *d* P P 15 31 12.2 +1.3
comp=Z,18nm,1.0s
H31M **Peel River** 92.79 24 IAMs_20 IAMs_20 16 12 00.2
comp=Z,13µm,20.0s
H31M **Peel River** 92.79 24 P P 15 31 11.0 -0.2
baz=260
FOMA **Nahampoana Res** 92.91 245 IAMs_20 IAMs_20 16 12 59.7
comp=Z,16µm,18.0s
G31M **Satah River** 93.00 23 IAmb IAmb 15 31 15.4
comp=Z,35nm,0.9s
G31M IAMs_20 IAMs_20 16 09 20.2
comp=Z,11µm,21.0s
G31M **Satah River** 93.00 23 P P 15 31 11.8 -0.2
baz=260,SNR=21
S34M **Telegraph Cree** 93.15 32 P P 15 31 12.5 -0.5
baz=263
F31M **Tsiigehtchic** 93.29 23 IAMs_20 IAMs_20 16 09 15.8
comp=Z,18µm,21.0s
F31M **Tsiigehtchic** 93.29 23 P P 15 31 13.1 -0.2
baz=261,SNR=13
R33M **Jennings River** 93.42 31 IAMs_20 IAMs_20 16 08 12.8
comp=Z,11µm,22.0s
R33M **Jennings River** 93.42 31 P P 15 31 14.5 +0.1
baz=263
INK **Inuvik** 93.50 22 IAmb IAmb 15 31 26.0
comp=Z,33nm,1.1s
INK **Inuvik** 93.50 22 P P 15 31 14.7 +0.4
baz=261,SNR=12
INK **Inuvik** 93.50 22 LR LR 16 10 50.7
comp=Z,22µm,20.3s,baz=248,slow=34
T35M **Bob Quinn** 93.51 33 P P 15 31 14.4 -0.3
baz=264
VOI **Vohitsoka** 93.53 248 IAMs_20 IAMs_20 16 11 46.3
comp=Z,13µm,20.0s
VOI **Vohitsoka** 93.53 248 P P 15 31 20.2 +4.5
ABPO **Ambohimpanom** 93.53 251 IAMs_20 IAMs_20 16 10 02.7
comp=Z,10µm,20.0s
DLBC **Dease Lake** 93.79 32 IAMs_20 IAMs_20 16 07 19.4
comp=Z,14µm,22.0s
DLBC **Dease Lake** 93.79 32 P P 15 31 15.8 -0.3
baz=264
DLBC **Dease Lake** 93.79 32 LR LR 16 08 00.3
comp=Z,9µm,20.2s,baz=285,slow=32
HOLB **Holberg** 94.12 40 IAMs_20 IAMs_20 16 04 33.5
comp=Z,12µm,22.0s
BBB **Bella Bella** 94.27 38 IAMs_20 IAMs_20 16 05 05.4
comp=Z,14µm,22.0s
BBB **Bella Bella** 94.27 38 LR LR 16 05 27.8
comp=Z,12µm,21.8s,baz=270,slow=30
WTLY **Watson Lake, Y** 94.58 30 IAmb IAmb 15 31 29.8
comp=Z,42nm,1.0s
WTLY **Watson Lake, Y** 94.58 30 P P 15 31 19.6 0.0
baz=265
TGTN **Hyland Airport** 94.96 29 P P 15 31 21.7 +0.5
baz=266
OZB **Mount Ozzard** 95.70 41 IAMs_20 IAMs_20 16 09 24.4
comp=Z,11µm,20.0s
CBB **Campbell River** 95.85 40 IAMs_20 IAMs_20 16 10 47.2
comp=Z,15µm,20.0s
KEBM **Edson Butte** 96.17 48 IAMs_20 IAMs_20 16 06 43.2
comp=Z,12µm,21.0s
KMPM **Mount Pierce** 96.19 50 IAMs_20 IAMs_20 16 12 23.0
comp=Z,11µm,18.0s
KBO **Bosley Butte** 96.22 48 IAMs_20 IAMs_20 16 15 33.4
comp=Z,10µm,18.0s
C03A **Quillayute Air** 96.27 43 IAMs_20 IAMs_20 16 08 14.4
comp=Z,15µm,20.0s
JCC **Jacoby Creek,** 96.29 50 IAMs_20 IAMs_20 16 10 26.4
comp=Z,12µm,20.0s
KRPM **Rodgers** 96.31 49 IAMs_20 IAMs_20 16 05 10.0
comp=Z,13µm,21.0s
NVL **N'lazarevskaya** 96.40 194 *e*P P 15 31 24.1 -3.5
NVL *e*S **SKSac** 15 41 57.7 -5.4
NVL *e*PS PS 15 44 08.6 -0.1
NVL pmax pmax
comp=Z,27nm,1.6s
NVL smax smax
comp=E,2µm,15.1s
NVL MLR MLR
comp=Z,31µm,17.0s
KRMB **Red Mountain** 96.42 49 IAMs_20 IAMs_20 16 05 35.8
comp=Z,17µm,22.0s
KSXB **Camp Six Broad** 96.45 49 IAMs_20 IAMs_20 16 05 25.8
comp=Z,15µm,22.0s
J01E **Myrtle Point** 96.48 47 IAMs_20 IAMs_20 16 06 53.0
comp=Z,12µm,21.0s
KMRM **Mail Ridge** 96.50 50 IAMs_20 IAMs_20 16 11 45.0
comp=Z,14µm,19.0s
KHMM **Horse Mountain** 96.52 50 IAMs_20 IAMs_20 16 10 34.4
comp=Z,14µm,20.0s
CLRS **Cowichan Lake** 96.59 42 IAMs_20 IAMs_20 16 10 30.0
comp=Z,9µm,20.0s
A36M **Sachs Harbour** 96.62 18 IAmb IAmb 15 31 34.9
comp=Z,22nm,0.8s
A36M IAMs_20 IAMs_20 16 12 47.6
comp=Z,13µm,21.0s
A36M **Sachs Harbour** 96.62 18 P P 15 31 28.9 +0.4
baz=269
K02D **Willamette Mer** 96.65 48 IAMs_20 IAMs_20 16 14 56.0
comp=Z,13µm,18.0s
L02F **Cave Junction** 96.70 48 IAMs_20 IAMs_20 16 05 57.2
comp=Z,15µm,22.0s
HEBO **Mount Hebo** 96.70 45 IAMs_20 IAMs_20 16 10 15.1
comp=Z,11µm,18.0s
RADR **Rader Ridge** 96.72 44 IAMs_20 IAMs_20 16 13 11.6
comp=Z,12µm,19.0s
WISH **Wishkah** 96.77 43 IAMs_20 IAMs_20 16 11 53.8
comp=Z,10µm,20.0s
F03A **Seaside** 96.87 45 IAMs_20 IAMs_20 16 19 07.5
comp=Z,11µm,19.0s
E03A **Lebam** 96.89 44 IAMs_20 IAMs_20 16 13 18.0
comp=Z,10µm,20.0s
HOPS **Hopland Field** 96.93 52 IAMs_20 IAMs_20 16 12 50.5
comp=Z,16µm,19.0s
I03D **Drain, OR** 96.93 47 IAMs_20 IAMs_20 16 07 16.2
comp=Z,12µm,22.0s
KOTAN **Kotaneelee Air** 96.96 30 P P 15 31 30.6 +0.3
baz=269
DBO **Dodson Butte** 96.98 47 IAMs_20 IAMs_20 16 08 59.6
comp=Z,14µm,20.0s
COR **Corvallis** 97.00 46 IAMs_20 IAMs_20 16 10 03.9
comp=Z,13µm,20.0s
C36M **Paulatuk** 97.00 21 IAmb IAmb 15 31 35.5
comp=Z,77nm,1.9s
C36M **Paulatuk** 97.00 21 P Pdif 15 31 30.5 +0.1
baz=270
MCCM **Marconi Confer** 97.04 52 IAMs_20 IAMs_20 16 06 42.5
comp=Z,15µm,22.0s
PGC **Sidney** 97.04 42 IAMs_20 IAMs_20 16 08 35.8
comp=Z,10µm,21.0s
G03D **McMinnville, O** 97.05 45 IAMs_20 IAMs_20 16 10 45.3
comp=Z,13µm,20.0s
HUMO **Hull Mountain** 97.17 48 IAMs_20 IAMs_20 16 06 11.7
comp=Z,15µm,22.0s
BUCK **Buck Mountain** 97.21 46 IAMs_20 IAMs_20 16 11 08.6
comp=Z,13µm,20.0s
F04D **Rainier, OR** 97.26 44 IAMs_20 IAMs_20 16 09 44.7
comp=Z,10µm,20.0s
WRGLY **Wrigley** 97.26 27 IAMs_20 IAMs_20 16 13 43.0
comp=Z,11µm,19.0s
YBH **Yreka Blue Hor** 97.32 49 P Pdif 15 31 32.7 0.0
comp=Z,2.6nm,0.7s,baz=270,slow=6.1,SNR=6.1
YBH LR LR 16 08 26.2
comp=Z,13µm,21.2s,baz=296,slow=31
comp=Z,2.6nm,0.7s
H04D **Lebanon** 97.40 46 IAMs_20 IAMs_20 16 11 14.6
comp=Z,11µm,20.0s
GNW **Green Mountain** 97.43 43 IAMs_20 IAMs_20 16 08 52.1
comp=Z,9µm,21.0s
KIRV **Kirov** 97.49 328 *ce* P P 15 31 32.5 -0.2
KIRV **Kirov** 97.49 328 LR LR 16 17 19.7
comp=Z,5µm,20.6s,baz=86,slow=37
TROLL **Troll, Antarti** 97.58 191 ⇑P Pdif 15 31 35.4 +2.2
comp=Z,554nm,0.7s
L04D **Klamath Falls** 97.64 48 IAMs_20 IAMs_20 16 06 03.2
comp=Z,13µm,22.0s
F04A **Amboy** 97.66 45 IAMs_20 IAMs_20 16 09 46.5
comp=Z,10µm,22.0s
H04A **Detroit Lake** 97.80 46 IAMs_20 IAMs_20 16 07 39.1
comp=Z,12µm,22.0s
K04D **Chiloquin, OR** 98.06 48 IAMs_20 IAMs_20 16 15 41.2
comp=Z,12µm,19.0s
SAO **San Andreas Ge** 98.12 54 IAMs_20 IAMs_20 16 07 26.2
comp=Z,13µm,22.0s
ORV **Oroville** 98.17 51 IAMs_20 IAMs_20 16 06 58.3
comp=Z,10µm,22.0s
HOOD **Mount Hood Mea** 98.19 45 IAMs_20 IAMs_20 16 07 41.5
comp=Z,12µm,22.0s
G05A **Wamic** 98.42 45 IAMs_20 IAMs_20 16 11 49.7
comp=Z,12µm,20.0s
BBGB **Big Mountain B** 98.44 54 IAMs_20 IAMs_20 16 07 37.7
comp=Z,14µm,22.0s
J05D **Fort Rock, OR** 98.45 47 IAMs_20 IAMs_20 16 08 16.6
comp=Z,14µm,21.0s
BELG **Belogorye** 98.53 322 P P 15 31 37.1 -0.4
comp=Z,43nm,0.8s,baz=114,slow=20,SNR=16
comp=Z,43nm,0.8s
AFDM **Forest Hills D** 98.56 52 P P 15 31 37.1 -1.0
AFDM IAmb IAmb 15 32 11.4
comp=Z,33nm,1.6s
AFDM IAMs_20 IAMs_20 16 07 09.8
comp=Z,13µm,22.0s
MAK **Makhachkala** 98.57 312 *e* P P 15 31 32.5 -5.5
MAK *e* 15 35 34.7
MAK *e* 15 42 07.8
MAK *e*SS SS 15 49 49.5 -2.0
MAK *e*SSS SSS 15 53 39.3
MAK pmax pmax
comp=Z,287nm,1.4s
PMPB **Monarch Peak** 98.62 54 IAMs_20 IAMs_20 16 13 15.5
comp=Z,10µm,20.0s
PINE **Pine Mountain** 98.68 47 IAMs_20 IAMs_20 16 08 33.4
comp=Z,11µm,22.0s
K05A **Summer Lake** 98.70 48 P P 15 31 37.4 -1.4
K05A IAMs_20 IAMs_20 16 16 12.1
comp=Z,13µm,18.0s
SNAA **Sanae** 98.86 190 ⇑P Pdif 15 31 41.4 +2.5
comp=Z,133nm,0.9s
SNAA **Sanae** 98.86 190⇑ *e*P Pdif 15 31 39.9 +1.1
SNAA pmax pmax
comp=Z,17nm,1.3s
SNAA **Sanae** 98.86 190 P Pdif 15 31 39.3 +0.5
comp=Z,7.3nm,1.0s,baz=150,slow=5.0,SNR=4.1
SNAA LR LR 16 18 34.8
comp=Z,15µm,18.1s,baz=138,slow=37
comp=Z,7.3nm,1.0s
G06A **Carlson Farm,** 98.91 45 IAMs_20 IAMs_20 16 11 54.4
comp=Z,11µm,20.0s
CMB **Columbia Colle** 99.00 53 IAMs_20 IAMs_20 16 07 54.4
comp=Z,15µm,22.0s
MXC **Moxie City** 99.15 44 IAMs_20 IAMs_20 16 16 43.6
comp=Z,11µm,18.0s
EMB **Emerald Bay** 99.24 52 IAMs_20 IAMs_20 16 07 52.7
comp=Z,17µm,22.0s
SMMC **Simmler** 99.25 55 P Pdif 15 31 40.9 -0.4
baz=269
MPK **Martis Peak** 99.30 51 IAMs_20 IAMs_20 16 14 15.2
comp=Z,15µm,19.0s
PKM **Mcpherson Peak** 99.39 56 P Pdif 15 31 41.0 -1.2
baz=269
F07A **Phinny Hill Vi** 99.40 45 IAMs_20 IAMs_20 16 08 08.5
comp=Z,12µm,22.0s
E07A **Sunnyside** 99.45 44 IAMs_20 IAMs_20 16 15 07.7
comp=Z,11µm,20.0s
SBC **Santa Barbara** 99.46 56 P Pdif 15 31 41.1 -1.1
baz=269
SCZ2 **Santa Cruz Isl** 99.52 57 P Pdif 15 31 41.9 -0.6
baz=268
SNCC **San Nicolas Is** 99.59 57 IAMs_20 IAMs_20 16 06 56.3
comp=Z,9µm,22.0s
SNCC **San Nicolas Is** 99.59 57 P Pdif 15 31 42.5 -0.3
baz=268
PNTR **Pine Nut** 99.63 52 IAMs_20 IAMs_20 16 07 09.1
comp=Z,14µm,22.0s
HAWA **Hanford** 99.67 44 IAMs_20 IAMs_20 16 15 03.6
comp=Z,9µm,19.0s
I07A **Izee** 99.72 46 IAMs_20 IAMs_20 16 12 39.9
comp=Z,10µm,20.0s
WAKR **Walker** 99.75 52 IAMs_20 IAMs_20 16 07 34.3
comp=Z,15µm,22.0s
PAHR **Pah Rah Range** 99.81 51 IAMs_20 IAMs_20 16 14 44.6
comp=Z,13µm,19.0s
YERR **Yerington** 99.91 52 IAMs_20 IAMs_20 16 08 25.5
comp=Z,12µm,22.0s
E08A **Dider Farm, El** 100.00 44 IAMs_20 IAMs_20 16 08 40.3
comp=Z,12µm,22.0s
MDPB **Devils Postpil** 100.03 53 IAMs_20 IAMs_20 16 08 36.7
comp=Z,17µm,22.0s
D08A **Wollman Farm,** 100.08 43 IAMs_20 IAMs_20 16 15 48.4
comp=Z,10µm,20.0s
G08A **Pilot Rock** 100.09 45 IAMs_20 IAMs_20 16 12 40.7
comp=Z,9µm,20.0s
WVOR **Wild Horse Val** 100.36 48 IAMs_20 IAMs_20 16 08 05.7
comp=Z,12µm,22.0s
J08A **Circle Bar Ran** 100.47 47 IAMs_20 IAMs_20 16 09 09.9
comp=Z,11µm,22.0s
RYN **Ryan** 100.47 52 IAMs_20 IAMs_20 16 07 46.4
comp=Z,14µm,22.0s
LHV **Little Huntoon** 100.49 52 IAMs_20 IAMs_20 16 08 42.7
comp=Z,14µm,22.0s
C09A **Chrisman Ranch** 100.50 43 IAMs_20 IAMs_20 16 10 56.9
comp=Z,10µm,21.0s
ISA **Isabella, Lake** 100.50 55 IAMs_20 IAMs_20 16 14 31.3
comp=Z,11µm,20.0s
ISA **Isabella, Lake** 100.50 55 P Pdif 15 31 46.8 -0.1
baz=270
CIS **Catalina Islan** 100.52 57 P Pdif 15 31 46.4 -0.6
baz=269
E09A **Wood Farm, Sta** 100.63 44 IAMs_20 IAMs_20 16 08 57.9
comp=Z,11µm,22.0s

NVAR	**Mina Array Bea**	**100.64**	**52**	P	**Pdif**	**15 31 47.0**	**-0.7**		
	comp=Z,2.4nm,0.7s,baz=252,slow=5.3,SNR=17								
NVAR				PP	**PP**	**15 35 55.0**	**0.0**		
	comp=Z,1.5nm,0.9s,baz=250,slow=7.6,SNR=4.8								
TIN	**Tinemaha, Big**	**100.70**	**54**	P	**Pdif**	**15 31 47.4**	**-0.4**		
	baz=270								
PASC	**Pasadena Art C**	**100.72**	**57**	IAMs_20	IAMs_20	16 18 38.8			
	comp=Z,10µm,18.0s								
BRLDA	**Berland Lookou**	**100.74**	**36**	IAMs_20	IAMs_20	16 17 44.8			
	comp=Z,12µm,20.0s								
NV11	**Mina Array Sit**	**100.76**	**52**	IAMs_20	IAMs_20	16 07 42.5			
	comp=Z,15µm,22.0s								
KVN	**Kaiserville**	**100.80**	**52**	IAMs_20	IAMs_20	16 07 57.5			
	comp=Z,11µm,22.0s								
CWC	**Cottonwood Cre**	**100.82**	**54**	P	**Pdif**	**15 31 48.1**	**-0.3**		
	baz=270								
EDW2	**Edwards Air Fo**	**100.89**	**56**	P	**Pdif**	**15 31 48.6**	**0.0**		
	baz=270								
BFSC	**Mount Baldy Ra**	**101.16**	**56**	P	**Pdif**	**15 31 49.5**	**-0.5**		
	baz=270								
LCH	**Last Change Ra**	**101.17**	**53**	IAMs_20	IAMs_20	16 09 26.4			
	comp=Z,17µm,22.0s								
NEW	**Newport**	**101.25**	**42**	IAMs_20	IAMs_20	16 11 18.8			
	comp=Z,10µm,21.0s								
NEW	**Newport**	**101.25**	**42**	P	**Pdif**	**15 31 50.0**	**+0.1**		
	baz=273								
NEW	**Newport**	**101.25**	**42**	P	**Pdif**	**15 31 50.4**	**+0.5**		
	comp=Z,5.5nm,0.9s,baz=294,slow=5.8,SNR=5.6								
BMO	**Blue Mountains**	**101.27**	**46**	IAMs_20	IAMs_20	16 13 27.5			
	comp=Z,10µm,20.0s								
F10A	**Beach Ranch, E**	**101.28**	**45**	IAMs_20	IAMs_20	16 09 40.8			
	comp=Z,12µm,22.0s								
MPMC	**Manual Prospec**	**101.30**	**55**	P	**Pdif**	**15 31 50.4**	**-0.2**		
	baz=270								
YKAW3	**Yellowknife Wh**	**101.35**	**28**	IAMs_20	IAMs_20	16 18 16.4			
	comp=Z,17µm,20.0s								
YKA	**Yellowknife Ar**	**101.36**	**28**	P	**Pdif**	**15 31 49.5**	**-0.4**		
	comp=Z,2.6nm,0.8s,baz=282,slow=4.6,SNR=20								
YKA				PP	**PP**	**15 35 56.8**	**-2.6**		
YKA	comp=Z,1.2nm,0.9s,baz=275,slow=7.5,SNR=5.0			PKKPbc	**PKKPbc**	**15 47 59.9**	**-1.6**		
	comp=Z,0.7nm,0.7s,baz=100,slow=3.2,SNR=7.5								
GRAC	**Grapevine Rang**	**101.39**	**54**	IAMs_20	IAMs_20	16 09 08.4			
	comp=Z,13µm,22.0s								
GRAC	**Grapevine Rang**	**101.39**	**54**	P	**Pdif**	**15 31 50.6**	**-0.2**		
	baz=270								
YKAW1	**Yellowknife Wh**	**101.42**	**28**	IAMs_20	IAMs_20	16 18 18.2			
	comp=Z,17µm,20.0s								
BMN	**Battle Mountai**	**101.46**	**50**	IAMs_20	IAMs_20	16 15 33.8			
	comp=Z,10µm,19.0s								
Q09A	**Carvers**	**101.52**	**52**	IAMs_20	IAMs_20	16 09 29.6			
	comp=Z,13µm,22.0s								
AKH	**Akhalkalaki**	**101.56**	**311**	IAMs_20	IAMs_20	16 26 23.8			
	comp=Z,12µm,20.0s								
109C	**Camp Elliot, M**	**101.62**	**58**	IAMs_20	IAMs_20	16 16 49.5			
	comp=Z,8µm,18.0s								
109C	**Camp Elliot, M**	**101.62**	**58**	P	**Pdif**	**15 31 51.6**	**-0.2**		
	baz=270								
TJX	**Tijuana**	**101.66**	**58**	IAMs_20	IAMs_20	16 12 10.6			
	comp=Z,10µm,21.0s								
BBRC	**Big Bear Solar**	**101.77**	**56**	P	**Pdif**	**15 31 51.8**	**-1.0**		
	baz=270								
FURC	**Furnace Creek,**	**101.80**	**54**	P	**Pdif**	**15 31 52.2**	**-0.4**		
	baz=271								
QSM	**Queen of Sheba**	**101.81**	**55**	IAMs_20	IAMs_20	16 15 57.3			
	comp=Z,8µm,20.0s								
GSC	**Goldstone, Bar**	**101.86**	**55**	IAMs_20	IAMs_20	16 16 00.8			
	comp=Z,14µm,19.0s								
GSC	**Goldstone, Bar**	**101.86**	**55**	P	**Pdif**	**15 31 52.4**	**-0.6**		
	baz=270								
KBZ	**Khabaz**	**101.92**	**313**	*e*P	**Pdif**	**15 31 51.9**	**-1.0**		
KBZ				pmax	pmax				
	comp=Z,11nm,2.1s								
KBZ	**Khabaz**	**101.92**	**313**	P	**Pdif**	**15 31 52.0**	**-0.8**		
	comp=Z,1.8nm,0.7s,baz=110,slow=6.6,SNR=3.8								
BAR	**Barrett**	**101.98**	**58**	IAMs_20	IAMs_20	16 12 21.2			
	comp=Z,9µm,21.0s								
KIV	**Kislovodsk**	**102.07**	**313**	*e*P	**Pdif**	**15 31 51.0**	**-2.7**		
KIV				*e*		15 36 03.2			
KIV				*e*		15 42 30.6			
KIV				*e*SS	SS	15 50 40.5	+0.1		
KIV				pmax	pmax				
	comp=Z,5.0nm,1.0s								
PFO	**Pinyon Flats O**	**102.16**	**57**	IAMs_20	IAMs_20	16 10 20.9			
	comp=Z,8µm,20.0s								
PFO	**Pinyon Flats O**	**102.16**	**57**	P	**Pdif**	**15 31 53.4**	**-1.0**		
	baz=270								
TPFO	**Pinon Flats**	**102.16**	**57**	P	**Pdif**	**15 31 53.4**	**-1.0**		
	baz=270								
PLID	**Pearl Lake**	**102.19**	**45**	IAMs_20	IAMs_20	16 11 41.7			
	comp=Z,10µm,21.0s								
MONP2	**Monument Peak**	**102.19**	**58**	P	**Pdif**	**15 31 53.2**	**-1.5**		
	baz=270								
PMD	**Palm Desert**	**102.22**	**57**	IAMs_20	IAMs_20	16 10 24.6			
	comp=Z,9µm,21.0s								
VRH	**Novokhopyorsk**	**102.25**	**321**	*e*P	**Pdif**	**15 31 52.3**	**-1.8**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
HEC	**Hector,Ludlow**	**102.25**	**56**	P	**Pdif**	**15 31 53.9**	**-0.8**		
	baz=271								
SHOC	**Shoshone, Teco**	**102.29**	**55**	P	**Pdif**	**15 31 54.0**	**-0.8**		
	baz=271								
KLMR	**Klimovskoe**	**102.32**	**331**	*e*P	**Pdif**	**15 31 52.6**	**-1.6**		
KLMR				*e*		15 36 03.8			
KLMR				S	**SKSac**	**15 42 32.4**	**-0.3**		
KLMR				SS	**SS**	**15 50 36.9**	**-5.7**		
KLMR				pmax	pmax				
	comp=Z,19nm,1.3s								
KLMR				MLR	MLR				
	comp=Z,6µm,20.0s								
MFID	**Camas Ranch**	**102.40**	**47**	IAMs_20	IAMs_20	16 18 52.4			
	comp=Z,11µm,19.0s								
IKP	**In-Ko-Pah, Jac**	**102.45**	**58**	P	**Pdif**	**15 31 54.7**	**-1.0**		
	baz=270								
RMX	**La Rumorosa**	**102.48**	**58**	IAMs_20	IAMs_20	16 13 09.6			
	comp=Z,12µm,20.0s								
SMAI	**San Martin Ant**	**102.53**	**169**	IAMs_20	IAMs_20	16 18 01.7			
	comp=Z,12µm,18.0s								
BELC	**Belle Mtn. Jos**	**102.54**	**57**	P	**Pdif**	**15 31 55.2**	**-0.9**		
	baz=271								
TUQ	**Turquoise Moun**	**102.58**	**55**	P	**Pdif**	**15 31 55.5**	**-0.7**		
	baz=271								
ESJX	**Sierra Juarez**	**102.59**	**59**	IAMs_20	IAMs_20	16 18 30.5			
	comp=Z,8µm,19.0s								
YUH	**Yuha Desert**	**102.61**	**58**	IAMs_20	IAMs_20	16 13 22.9			
	comp=Z,11µm,20.0s								
S11A	**Rachel**	**102.67**	**53**	IAMs_20	IAMs_20	16 10 02.2			
	comp=Z,14µm,22.0s								
SWSC	**Sam W. Stewart**	**102.71**	**58**	P	**Pdif**	**15 31 56.3**	**-0.3**		
	baz=270								
VTX	**Valle De La Tr**	**102.73**	**59**	IAMs_20	IAMs_20	16 14 00.3			
	comp=Z,9µm,20.0s								
R11B	**Troy Canyon, C**	**102.78**	**52**	IAMs_20	IAMs_20	16 18 18.0			
	comp=Z,11µm,19.0s								
R11B	**Troy Canyon, C**	**102.78**	**52**	P	**Pdif**	**15 31 56.9**	**-0.2**		
	baz=272								
GMRC	**Granite Mounta**	**102.81**	**56**	P	**Pdif**	**15 31 57.1**	**-0.1**		
	baz=271								
ELK	**Elko**	**102.96**	**50**	IAMs_20	IAMs_20	16 16 59.5			
	comp=Z,13µm,18.0s								
ELK	**Elko**	**102.96**	**50**	P	**Pdif**	**15 31 58.5**	**+0.6**		
	comp=Z,1.5nm,0.7s,baz=262,slow=3.7,SNR=4.4								
BC3	**Big Chuckawall**	**103.00**	**57**	P	**Pdif**	**15 31 56.9**	**-1.2**		
	baz=271								
EDM	**Edmonton**	**103.22**	**37**	IAMs_20	IAMs_20	16 10 20.5			
	comp=Z,15µm,22.0s								
IRM	**Iron Mountain**	**103.24**	**57**	P	**Pdif**	**15 31 58.8**	**-0.3**		
	baz=271								
Q12A	**Willow Creek R**	**103.35**	**52**	IAMs_20	IAMs_20	16 10 49.9			
	comp=Z,12µm,22.0s								
HLID	**Hailey**	**103.42**	**47**	IAMs_20	IAMs_20	16 15 59.3			
	comp=Z,9µm,20.0s								
HLID	**Hailey**	**103.42**	**47**	P	**Pdif**	**15 31 59.3**	**-0.5**		
	baz=274								
V12A	**Nelson**	**103.45**	**55**	IAMs_20	IAMs_20	16 16 52.8			
	comp=Z,13µm,20.0s								
APA	**Apatity**	**103.49**	**338**	*i*P	**Pdif**	**15 32 05.4**	**+6.1**		
APA				*i*		15 36 21.0			
APA				pmax	pmax				
	comp=Z,9.0nm,1.1s								
GLA	**Glamis**	**103.53**	**58**	P	**Pdif**	**15 31 59.3**	**-1.1**		
	baz=271								
SFX	**San Felipe**	**103.54**	**60**	IAMs_20	IAMs_20	16 16 53.5			
	comp=Z,9µm,19.0s								
NEE2	**Needles Airpor**	**103.67**	**56**	P	**Pdif**	**15 32 00.1**	**-0.8**		
	baz=272								
VORR	**Voronezh**	**103.76**	**322**	*e*P	**Pdif**	**15 32 01.2**	**+0.3**		
VORR				pmax	pmax				
	comp=Z,71nm,0.5s								
BLYC	**Blythe**	**103.77**	**57**	IAMs_20	IAMs_20	16 20 22.5			
	comp=Z,7µm,18.0s								
LPSR	**Galich'ya Gora**	**103.82**	**323**	*e*P	**Pdif**	**15 32 00.4**	**-0.7**		
LPSR				pmax	pmax				
	comp=Z,20nm,1.7s								
LPSR				MLR	MLR				
	comp=Z,4µm,22.0s								
VSR	**Storozhevoye**	**103.84**	**321**	*e*P	**Pdif**	**15 31 59.2**	**-2.1**		
VSR				pmax	pmax				
	comp=Z,10.0nm,1.5s								
VSR				MLR	MLR				
	comp=Z,4µm,18.0s								
PDMCI	**Parker Dam,Lak**	**104.07**	**56**	P	**Pdif**	**15 32 02.8**	**+0.1**		
	baz=272								
MOS	**Moscow**	**104.12**	**326**	*e*P	**Pdif**	**15 32 03.0**	**+0.7**		
MOS				*e*		15 36 20.7			
113A	**Mohawk Valley,**	**104.43**	**58**	IAMs_20	IAMs_20	16 17 50.0			
	comp=Z,9µm,19.0s								
CCUT	**Cedar City**	**104.57**	**53**	IAMs_20	IAMs_20	16 10 51.4			
	comp=Z,10µm,21.0s								
BGU	**Big Grassy Mou**	**104.62**	**50**	IAMs_20	IAMs_20	16 17 34.5			
	comp=Z,13µm,19.0s								
HVU	**Hansel Valley**	**104.75**	**49**	IAMs_20	IAMs_20	16 10 44.8			
	comp=Z,16µm,22.0s								
SZCU	**Shurtz Canyon**	**104.79**	**53**	IAMs_20	IAMs_20	16 11 32.1			
	comp=Z,12µm,22.0s								
KIBK	**Kibwezi**	**104.79**	**266**	PKP	**PKiKP**	**15 36 22.6**	**+0.6**		
OBN	**Obninsk**	**104.81**	**325**	*i*P	**Pdif**	**15 32 04.1**	**-1.4**		
OBN				*e*		15 36 24.9			
OBN				*e*		15 43 25.2			
OBN				*e*SS	SS	15 51 17.6	+0.4		
OBN				pmax	pmax				
	comp=Z,6.0nm,1.1s								
OBN				MLR	MLR				
	comp=Z,5µm,21.0s								
DUG	**Dugway, Tooele**	**104.84**	**50**	IAMs_20	IAMs_20	16 18 15.2			
	comp=Z,10µm,19.0s								
DUG	**Dugway, Tooele**	**104.84**	**50**	P	**Pdif**	**15 32 05.6**	**-0.6**		
	baz=274								
KEV	**Kevo**	**104.97**	**341**	IAMs_20	IAMs_20	16 22 10.2			
	comp=Z,10µm,22.0s								
Y14A	**Wickenburg**	**105.03**	**57**	IAMs_20	IAMs_20	16 12 12.7			
	comp=Z,8µm,21.0s								
KNB	**Kanab**	**105.03**	**54**	IAMs_20	IAMs_20	16 17 23.6			
	comp=Z,9µm,20.0s								
SPUT	**South Promonto**	**105.03**	**49**	IAMs_20	IAMs_20	16 11 26.2			
	comp=Z,13µm,22.0s								
BOZ	**Bozeman (W)**	**105.22**	**45**	IAMs_20	IAMs_20	16 14 47.9			
	comp=Z,10µm,21.0s								
214A	**Organ Pipe Nat**	**105.26**	**59**	IAMs_20	IAMs_20	16 18 00.1			
	comp=Z,8µm,20.0s								
214A	**Organ Pipe Nat**	**105.26**	**59**	P	**PKiKP**	**15 36 21.5**	**-0.8**		
	baz=272								
FURI	**Furi**	**105.30**	**277**	IAMs_20	IAMs_20	16 26 49.9			
	comp=Z,10µm,19.0s								
PKCU	**Pink Cliffs**	**105.41**	**53**	IAMs_20	IAMs_20	16 11 40.7			
	comp=Z,12µm,22.0s								
NLU	**North Lily Min**	**105.42**	**50**	IAMs_20	IAMs_20	16 18 34.7			
	comp=Z,9µm,19.0s								
MTPU	**Mount Pierson**	**105.47**	**52**	IAMs_20	IAMs_20	16 11 21.3			
	comp=Z,11µm,22.0s								
U15A	**North Rim**	**105.49**	**54**	IAMs_20	IAMs_20	16 18 22.8			
	comp=Z,10µm,20.0s								
ARCES	**ARCESS Array B**	**105.54**	**341**	Pdiff	**Pdif**	**15 32 08.0**	**-0.5**		
	comp=Z,7.2nm,0.9s,baz=48,slow=7.4,SNR=11								
CTU	**Camp Tracy**	**105.61**	**50**	IAMs_20	IAMs_20	16 18 42.6			
	comp=Z,11µm,19.0s								
HWUT	**Hardware Ranch**	**105.67**	**49**	IAMs_20	IAMs_20	16 12 22.2			
	comp=Z,15µm,21.0s								
KMBO	**Kilima Mbogo**	**105.73**	**267**	*e*P	**PKiKP**	**15 36 26.1**	**+2.1**		
MPU	**Maple Canyon**	**105.75**	**50**	IAMs_20	IAMs_20	16 18 54.5			
	comp=Z,7µm,19.0s								
SRIG	**Santa Rosalia**	**105.86**	**64**	IAMs_20	IAMs_20	16 11 45.4			
	comp=Z,10µm,22.0s								
AHID	**Auburn Hatcher**	**105.90**	**47**	IAMs_20	IAMs_20	16 20 46.3			
	comp=Z,8µm,19.0s								
TPAW	**Teton Pass**	**105.93**	**47**	IAMs_20	IAMs_20	16 14 27.8			
	comp=Z,9µm,21.0s								
YNM	**Yellowstone No**	**105.97**	**45**	IAMs_20	IAMs_20	16 20 30.8			
	comp=Z,10µm,19.0s								
YNR	**Norris Junctio**	**105.99**	**45**	IAMs_20	IAMs_20	16 20 31.3			
	comp=Z,10µm,20.0s								
MOOW	**Moose Ponds**	**106.05**	**46**	IAMs_20	IAMs_20	16 17 25.0			
	comp=Z,8µm,20.0s								
PMSA	**Palmer Station**	**106.07**	**168**	IAMs_20	IAMs_20	16 26 14.2			
	comp=Z,9µm,18.0s								
SNOW	**Snow King Moun**	**106.08**	**47**	IAMs_20	IAMs_20	16 14 22.7			
	comp=Z,10µm,21.0s								
H17A	**Grant Village**	**106.10**	**46**	IAMs_20	IAMs_20	16 15 50.2			
	comp=Z,10µm,20.0s								
H17A	**Grant Village**	**106.10**	**46**	P	**PKiKP**	**15 36 23.6**	**-0.2**		
	baz=277								
LOHW	**Long Hollow**	**106.17**	**47**	IAMs_20	IAMs_20	16 17 19.2			
	comp=Z,9µm,20.0s								
EGMT	**Eagleton**	**106.19**	**42**	P	**PKiKP**	**15 36 23.3**	**-0.3**		
	baz=278								
Q16A	**Castle Valley**	**106.20**	**51**	IAMs_20	IAMs_20	16 12 31.8			
	comp=Z,12µm,22.0s								
LKWY	**Lake**	**106.20**	**46**	IAMs_20	IAMs_20	16 24 18.1			
	comp=Z,12µm,19.0s								
WUAZ	**Wupatki**	**106.29**	**55**	IAMs_20	IAMs_20	16 11 36.2			
	comp=Z,10µm,22.0s								
WUAZ	**Wupatki**	**106.29**	**55**	P	**PKiKP**	**15 36 23.9**	**-0.4**		
	baz=274								
X16A	**Lo Mia Camp, P**	**106.30**	**56**	IAMs_20	IAMs_20	16 13 04.5			
	comp=Z,9µm,22.0s								
YMP	**Mirror Lake Pl**	**106.35**	**45**	IAMs_20	IAMs_20	16 20 08.0			
	comp=Z,11µm,20.0s								
BSUT	**Blindstream Ca**	**106.37**	**50**	IAMs_20	IAMs_20	16 19 17.8			
	comp=Z,12µm,19.0s								
P17A	**Butcher Ranch,**	**106.49**	**51**	IAMs_20	IAMs_20	16 20 45.0			
	comp=Z,7µm,19.0s								
HMU	**Henry Mountain**	**106.62**	**52**	IAMs_20	IAMs_20	16 12 43.5			
	comp=Z,12µm,22.0s								
P18A	**Preston Nutter**	**106.85**	**51**	IAMs_20	IAMs_20	16 21 34.6			
	comp=Z,7µm,19.0s								
RLMT	**Red Lodge**	**106.93**	**45**	IAMs_20	IAMs_20	16 12 02.3			
	comp=Z,9µm,22.0s								
RLMT	**Red Lodge**	**106.93**	**45**	P	**PKiKP**	**15 36 24.9**	**-0.4**		
	baz=278								
TUC	**Tucson**	**106.96**	**58**	IAMs_20	IAMs_20	16 20 37.1			
	comp=Z,9µm,18.0s								
TUC	**Tucson**	**106.96**	**58**	P	**PKiKP**	**15 36 24.7**	**-0.8**		
	baz=273								
BW06	**Boulder Array**	**107.03**	**47**	P	**PKiKP**	**15 36 25.4**	**-0.1**		
	baz=277								
PDAR	**Pinedale Array**	**107.03**	**47**	Pdiff	**Pdif**	**15 32 16.1**	**+0.1**		
	comp=Z,1.1nm,0.9s,baz=242,slow=3.2,SNR=5.9								
PDAR				PKiKP	**PKiKP**	**15 36 26.2**	**+0.6**		
	comp=Z,0.8nm,0.7s,baz=299,slow=1.9,SNR=2.2								
RDMU	**Red Mountain**	**107.27**	**50**	IAMs_20	IAMs_20	16 19 57.6			
	comp=Z,10µm,19.0s								
X18A	**Snowflake**	**107.52**	**56**	IAMs_20	IAMs_20	16 13 54.8			
	comp=Z,8µm,22.0s								
W18A	**Petrified Fore**	**107.65**	**55**	IAMs_20	IAMs_20	16 19 43.2			
	comp=Z,8µm,20.0s								
W18A	**Petrified Fore**	**107.65**	**55**	P	**PKiKP**	**15 36 26.2**	**-0.6**		
	baz=274								
319A	**Douglas**	**108.29**	**59**	IAMs_20	IAMs_20	16 17 38.6			
	comp=Z,10µm,20.0s								
BALJ	**Balqa**	**108.31**	**302**	IAMs_20	IAMs_20	16 27 35.7			
	comp=Z,4µm,21.0s								
O20A	**White River Ci**	**108.33**	**50**	IAMs_20	IAMs_20	16 20 40.8			
	comp=Z,11µm,19.0s								
O20A	**White River Ci**	**108.33**	**50**	P	**PKiKP**	**15 36 26.3**	**-1.7**		
	baz=277								
FIA1	**FINESS Array S**	**108.45**	**333**	IAMs_20	IAMs_20	16 24 27.3			
	comp=Z,9µm,20.0s								
FINES	**FINESS Array B**	**108.45**	**333**	Pdiff	**Pdif**	**15 32 20.7**	**-0.8**		
	comp=Z,1.9nm,0.8s,baz=104,slow=6.1,SNR=4.9								
MVCO	**Mesa Verde**	**108.46**	**53**	IAMs_20	IAMs_20	16 12 21.7			
	comp=Z,8µm,22.0s								
MVCO	**Mesa Verde**	**108.46**	**53**	P	**PKiKP**	**15 36 26.7**	**-1.7**		
	baz=276								
LAO	**LASA Array**	**108.78**	**43**	IAMs_20	IAMs_20	16 22 37.9			
	comp=Z,11µm,20.0s								
LAO	**LASA Array**	**108.78**	**43**	P	**PKiKP**	**15 36 27.3**	**-1.1**		
	baz=281								
RWWY	**Rawlins**	**108.90**	**48**	IAMs_20	IAMs_20	16 15 18.7			
	comp=Z,13µm,20.0s								
K22A	**Casper**	**109.26**	**47**	IAMs_20	IAMs_20	16 19 06.1			
	comp=Z,9µm,20.0s								
K22A	**Casper**	**109.26**	**47**	P	**PKiKP**	**15 36 28.7**	**-0.9**		
	baz=279								
SMCO	**Snowmass**	**109.42**	**51**	IAMs_20	IAMs_20	16 22 28.8			
	comp=Z,10µm,19.0s								
121A	**Cookes Peak, D**	**109.48**	**58**	IAMs_20	IAMs_20	16 22 16.8			
	comp=Z,9µm,18.0s								
121A	**Cookes Peak, D**	**109.48**	**58**	P	**PKiKP**	**15 36 29.3**	**-1.1**		
	baz=275								
DGMT	**Dagmar**	**109.75**	**41**	IAMs_20	IAMs_20	16 19 04.8			
	comp=Z,10µm,22.0s								
DGMT	**Dagmar**	**109.75**	**41**	P	**PKiKP**	**15 36 29.9**	**-0.3**		
	baz=283								
MNK	**Minsk**	**109.84**	**326**	*i*P	**Pdif**	**15 32 28.0**	**+0.1**		
MNK				*i*		15 37 00.9			
MNK				*i*SP	SP	15 46 30.5	+2.6		
MNK				*i*SS	**SS**	**15 52 16.4**	**-8.9**		
MNK				pmax	pmax				
	comp=E,8.0nm,0.8s								
MNK				pmax	pmax				
	comp=E,5.0nm,0.9s								
MNK				pmax	pmax				
	comp=N,13nm,0.9s								
N23A	**Red Feather La**	**109.96**	**49**	IAMs_20	IAMs_20	16 21 47.0			
	comp=Z,11µm,20.0s								
Y22D	**IRIS PASSCAL I**	**110.06**	**56**	IAMs_20	IAMs_20	16 22 10.1			
	comp=Z,7µm,19.0s								
Y22D	**IRIS PASSCAL I**	**110.06**	**56**	P	**PKiKP**	**15 36 30.7**	**-0.6**		
	baz=276								
Y22F	**Passcal Instru**	**110.06**	**56**	P	**PKiKP**	**15 36 31.0**	**-0.4**		
	baz=276								
AKASG	**Malin Array Be**	**110.11**	**322**	PP	**PP**	**15 37 06.2**	**+2.0**		
	comp=Z,1.2nm,0.6s,baz=59,slow=7.4,SNR=6.1								
ANMO	**Albuquerque**	**110.35**	**55**	IAMs_20	IAMs_20	16 16 11.7			
	comp=Z,7µm,22.0s								
ANMO	**Albuquerque**	**110.35**	**55**	P	**PKiKP**	**15 36 31.2**	**-0.8**		
	baz=276								
ISCO	**Idaho Springs**	**110.38**	**50**	IAMs_20	IAMs_20	16 22 50.1			
	comp=Z,10µm,19.0s								
ISCO	**Idaho Springs**	**110.38**	**50**	P	**PKiKP**	**15 36 31.8**	**-0.2**		
	baz=279								
EPT	**El Paso**	**110.62**	**59**	IAMs_20	IAMs_20	16 21 17.3			
	comp=Z,9µm,19.0s								
SDCO	**Great Sand Dun**	**110.76**	**52**	IAMs_20	IAMs_20	16 15 21.5			
	comp=Z,15µm,22.0s								
SDCO	**Great Sand Dun**	**110.76**	**52**	P	**PKiKP**	**15 36 32.3**	**-0.5**		
	baz=278								
RSSD	**Black Hills**	**110.78**	**45**	IAMs_20	IAMs_20	16 19 06.3			
	comp=Z,7µm,20.0s								
RSSD	**Black Hills**	**110.78**	**45**	P	**PKiKP**	**15 36 32.3**	**-0.2**		
	baz=281								
Q24A	**Divide**	**110.86**	**51**	IAMs_20	IAMs_20	16 13 55.9			
	comp=Z,8µm,22.0s								
Q24A	**Divide**	**110.86**	**51**	P	**PKiKP**	**15 36 32.2**	**-0.7**		
	baz=279								
MDUB	**Mudurnu**	**110.92**	**311**	IAMs_20	IAMs_20	16 32 33.7			
	comp=Z,9µm,21.0s								
BRIGG	**Briggsdale**	**111.23**	**49**	IAMs_20	IAMs_20	16 16 00.6			
	comp=Z,12µm,22.0s								
MNTX	**Cornudas Mount**	**111.58**	**59**	P	**PKiKP**	**15 36 33.9**	**-0.3**		
	baz=276								
T25A	**Trinidad**	**111.71**	**53**	IAMs_20	IAMs_20	16 17 57.4			
	comp=Z,10µm,21.0s								
T25A	**Trinidad**	**111.71**	**53**	P	**PKiKP**	**15 36 34.3**	**-0.1**		
	baz=278								
HPIG		**111.73**	**64**	IAMs_20	IAMs_20	16 14 02.0			
	comp=Z,9µm,22.0s								
LBTB	**Lobatse**	**111.75**	**240**	IAMs_20	IAMs_20	16 20 20.5			
	comp=Z,11µm,21.0s								
LSZ	**Lusaka**	**112.10**	**251**	IAMs_20	IAMs_20	16 17 58.7			
	comp=Z,11µm,22.0s								
TIRR	**Tirgusor**	**112.15**

baz=281
OK032 Salt Plains WL 116.65 52 IAMs_20 IAMs_20 16 19 32.3
comp=Z,12µm,22.0s
CROK Carrier 116.89 52 IAMs_20 IAMs_20 16 18 55.8
comp=Z,12µm,22.0s
GO08 Villa O'Higgin 116.91 154 IAMs_20 IAMs_20 16 19 26.2
comp=Z,11µm,21.0s
OKC Ostrava-Krasne 117.09 323 AMS AMS 16 31 10.0
comp=Z,4µm,18.4s
833A Chaparral WMA, 117.14 62 IAMs_20 IAMs_20 16 23 56.9
comp=Z,9µm,20.0s
833A Chaparral WMA, 117.14 62 P **PKPdf 15 36 44.6 -0.2**
baz=278
VYHS Vyhne 117.21 322 *e*PKIKP **PKiKP 15 36 45.6 +1.2**
VYHS *e* 15 37 55.3
VYHS Vyhne 117.21 322 *e*PKP **PKiKP 15 36 45.6 +1.2**
VYHS *e*PP **PP 15 37 55.2 +0.5**
KSU1 Kansas State U 117.34 49 P **PKPdf 15 36 44.5 -0.5**
baz=285
X34A Smith Ranch, M 117.41 54 IAMs_20 IAMs_20 16 27 10.6
comp=Z,11µm,22.0s
BLOK Blackwell 117.44 52 IAMs_20 IAMs_20 16 20 20.2
comp=Z,9µm,21.0s
OK029 Liberty Lake 117.46 53 IAMs_20 IAMs_20 16 19 01.9
comp=Z,11µm,22.0s
F36A Milaca 117.47 41 IAMs_20 IAMs_20 16 21 29.0
comp=Z,11µm,22.0s
MORC Moravsky Berou 117.48 324 *e*PKP **PKiKP 15 36 46.4 +1.5**
OKCSW OKLAHOMA CITY 117.56 53 IAMs_20 IAMs_20 16 18 23.5
comp=Z,11µm,21.0s
N35A Tabor 117.59 47 IAMs_20 IAMs_20 16 26 33.6
comp=Z,11µm,20.0s
FNO Franklin 117.62 54 IAMs_20 IAMs_20 16 33 42.2
comp=Z,8µm,20.0s
OK048 Pawnee Station 117.73 52 IAMs_20 IAMs_20 16 21 56.9
comp=Z,11µm,20.0s
JAVC Velka Javorina 117.78 323 *e*PKP **PKiKP 15 36 48.1 +2.5**
OK051 E0350 and S346 117.79 52 IAMs_20 IAMs_20 16 22 00.6
comp=Z,11µm,20.0s
KRLC Kraliky 117.80 324 *e*PKPDF **PKiKP 15 36 47.8 +2.3**
KRLC AMS AMS 16 30 50.0
comp=Z,5µm,19.1s
KRLC Kraliky 117.80 324 *e*PKIKP **PKiKP 15 36 47.8 +2.3**
KRLC MLR MLR
comp=Z,5µm,19.1s
AY03 Cochrane 117.81 153 IAMs_20 IAMs_20 16 18 30.1
comp=Z,9µm,21.0s
FW07 Weatherford 117.81 56 IAMs_20 IAMs_20 16 23 10.5
comp=Z,7µm,21.0s
OSTC Ostas 117.92 325 AMS AMS 16 33 00.0
comp=Z,4µm,17.6s
DPC Dobruska-Polom 117.94 325 *e*PKPDF **PKiKP 15 36 46.9 +1.1**
DPC AMS AMS 16 30 40.0
comp=Z,5µm,22.0s
DPC Dobruska-Polom 117.94 325 *e*PKIKP **PKiKP 15 36 46.9 +1.1**
DPC MLR MLR
comp=Z,5µm,22.0s
T35A Sooner Cattle 117.95 52 IAMs_20 IAMs_20 16 22 23.7
comp=Z,7µm,20.0s
FW06 Azle 117.95 56 IAMs_20 IAMs_20 16 25 43.2
comp=Z,8µm,20.0s
EYMN Ely 117.98 38 P **PKiKP 15 36 46.0 +0.1**
baz=293
CHVC Chvalec 117.99 325 AMS AMS 16 33 10.0
comp=Z,4µm,18.0s
UPC Upice 118.05 325 AMS AMS 16 33 00.0
comp=Z,4µm,18.9s
LOOK Love County 118.06 55 IAMs_20 IAMs_20 16 17 56.0
comp=Z,9µm,21.0s
FNA Florina 118.12 313 PKPdf **PKPdf 15 36 45.1 -1.3**
FNA Florina 118.12 313 PKIKP **PKPdf 15 36 45.1 -1.3**
Z35A Perchaven, San 118.14 56 IAMs_20 IAMs_20 16 25 11.9
comp=Z,8µm,20.0s
UNM Universidad Na 118.15 72 IAMs_20 IAMs_20 16 20 33.5
comp=Z,9µm,20.0s
SPMN Marine on St. 118.17 42 IAMs_20 IAMs_20 16 26 27.6
comp=Z,8µm,20.0s
SPMN Marine on St. 118.17 42 P **PKiKP 15 36 46.6 +0.3**
baz=291
I37A Lemond, Waseca 118.19 43 IAMs_20 IAMs_20 16 32 49.2
comp=Z,10µm,18.0s
DEOK Depew 118.21 53 IAMs_20 IAMs_20 16 20 07.7
comp=Z,10µm,21.0s
MODS Modra-Piesok 118.21 322 *e*PKIKP **PKPdf 15 36 46.1 -0.2**
MODS Modra-Piesok 118.21 322 *e*PKP **PKPdf 15 36 46.1 -0.2**
WHTX Lake Whitney, 118.22 57 IAMs_20 IAMs_20 16 23 59.3
comp=Z,9µm,20.0s
WHTX Lake Whitney, 118.22 57 P **PKiKP 15 36 47.2 +0.4**
baz=281
VRAC Vranov 118.23 323 *e*PKP **PKiKP 15 36 47.3 +0.9**
435B Jarrell 118.33 59 IAMs_20 IAMs_20 16 21 16.2
comp=Z,8µm,20.0s
435B Jarrell 118.33 59 P **PKiKP 15 36 47.1 0.0**
baz=280
ZST Bratislava 118.39 322 *e*PKIKP **PKiKP 15 36 48.0 +1.3**
ZST Bratislava 118.39 322 *e*PKP **PKiKP 15 36 48.0 +1.3**
735A Kenedy 118.44 61 IAMs_20 IAMs_20 16 26 33.5
comp=Z,7µm,20.0s
KRUC Moravsky 118.46 323 *e*PKP **PKiKP 15 36 48.0 +1.2**
KVTX Kingsville 118.56 62 IAMs_20 IAMs_20 16 25 56.6
comp=Z,9µm,19.0s
TUL3 Leonard 118.75 53 P **PKiKP 15 36 48.0 +0.2**
baz=284
SFJD Kangerlussuaq 118.86 6 IAMs_20 IAMs_20 16 26 11.8
comp=Z,8µm,21.0s
PVCC Panska Ves 118.86 325 AMS AMS 16 29 20.0
comp=Z,6µm,21.9s
TREC Trest 118.89 324 AMS AMS 16 32 40.0
comp=Z,5µm,19.9s
SCIA State Center 119.01 45 IAMs_20 IAMs_20 16 28 30.3
comp=Z,12µm,20.0s
SCIA State Center 119.01 45 P **PKiKP 15 36 48.5 +0.4**
baz=289
GOPC GO Pecny, Ondr 119.02 325 AMS AMS 16 29 10.0
comp=Z,6µm,21.9s
BRG Berggiesshubel 119.05 326 *e*PKP **PKiKP 15 36 49.9 +2.0**
BRG Amp 15 36 52.5
comp=Z,4.8nm,0.8s
BRG Berggiesshubel 119.05 326 SP SP 15 48 02.0 +10
BRG Berggiesshubel 119.05 326 *e*PKIKP **PKiKP 15 36 49.9 +2.0**
BRG 15 38 09.8
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG pmax pmax
comp=Z,24nm,1.6s
BRG pmax pmax
comp=Z,15nm,1.4s
K38A Parkersburg 119.08 44 IAMs_20 IAMs_20 16 22 51.9
comp=Z,9µm,21.0s
RONA Rosalia, Austr 119.09 322 *ep*PKP pPKPdf 15 36 51.8 -3.4
comp=Z,14nm,1.5s
RICC Richard 119.12 325 AMS AMS 16 29 40.0
comp=Z,6µm,21.8s
PRU Pruhonice 119.13 325 *e*PKPDF **PKiKP 15 36 49.2 +1.1**
PRU AMS AMS 16 29 10.0
comp=Z,6µm,20.8s
PRU Pruhonice 119.13 325 *e*PKIKP **PKiKP 15 36 49.2 +1.1**
PRU MLR MLR
comp=Z,6µm,20.8s
PRA Prague 119.15 325 AMS AMS 16 29 00.0
comp=Z,6µm,20.4s
CONA Conrad Observa 119.26 322 *i* pPKP **PKiKP 15 36 51.7 +3.2**
comp=Z,6.5nm,1.0s
RLO Rose Lookout 119.30 52 IAMs_20 IAMs_20 16 20 18.3
comp=Z,12µm,22.0s
COYC Coyhaique 119.31 152 IAMs_20 IAMs_20 16 21 33.8
comp=Z,8µm,21.0s
N38A Joes South For 119.35 47 IAMs_20 IAMs_20 16 28 47.3
comp=Z,12µm,21.0s
CLL Collm 119.36 327 IAMs_20 IAMs_20 16 30 24.4
comp=Z,8µm,21.0s
CLL Collm 119.36 327 *e*PKIKP **PKiKP 15 36 49.0 +0.5**
CLL *e* 15 38 11.0
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL MLR MLR
comp=Z,8µm,21.5s
X37A Clayton 119.40 54 IAMs_20 IAMs_20 16 34 39.2
comp=Z,6µm,19.0s
HSKC Hora Svate Kat 119.47 326 AMS AMS 16 29 50.0
comp=Z,6µm,19.9s
237A Washetta, Mont 119.59 57 IAMs_20 IAMs_20 16 25 03.6
comp=Z,8µm,20.0s
U38A Gravette 119.73 52 PKPdf **PKPdf 15 36 48.7 -0.9**
U38A IAMs_20 IAMs_20 16 29 41.7
comp=Z,9µm,20.0s
CKRC Cesky Krumlov 119.80 324 *e*PKPDF **PKiKP 15 36 51.1 +1.6**
CKRC *e*SDIF 15 46 08.7
CKRC AMS AMS 16 31 40.0
comp=Z,5µm,20.6s
CKRC Cesky Krumlov 119.80 324 *e*PKIKP **PKiKP 15 36 51.1 +1.6**
CKRC MLR MLR
comp=Z,5µm,20.6s
G40A Rib Lake 119.86 41 IAMs_20 IAMs_20 16 29 54.2
comp=Z,11µm,19.0s
AY01 Puyuhuapi 119.90 151 IAMs_20 IAMs_20 16 19 18.6
comp=Z,8µm,22.0s
Z38A Mt. Pleasant 120.01 55 IAMs_20 IAMs_20 16 36 04.5
comp=Z,9µm,19.0s
KHC Kasperske Hory 120.08 324 *e*PKPDF **PKiKP 15 36 51.5 +1.5**
KHC *e*SDIF 15 46 15.5
KHC AMS AMS 16 32 10.0
comp=Z,5µm,21.6s
KHC Kasperske Hory 120.08 324 *i* PKIKP **PKiKP 15 36 51.6 +1.5**
I40A Norwalk 120.11 42 IAMs_20 IAMs_20 16 23 03.0
comp=Z,10µm,22.0s
HHAR Hobbs 120.11 52 IAMs_20 IAMs_20 16 29 53.0
comp=Z,10µm,20.0s
GERES GERESS Array B 120.14 324 PKP **PKiKP 15 36 50.5 +0.3**
comp=Z,1.8nm,0.7s,baz=48,slow=2.0,SNR=5.1
NKC Novy Kostel 120.20 326 AMS AMS 16 30 30.0
comp=Z,7µm,22.0s
GO07 Milladeo Hill, 120.35 149 IAMs_20 IAMs_20 16 23 25.8
comp=Z,8µm,20.0s
NATX Nacogdoches 120.60 57 IAMs_20 IAMs_20 16 29 37.4
comp=Z,8µm,19.0s
NATX Nacogdoches 120.60 57 P **PKPdf 15 36 51.2 -0.2**
baz=282
P40A Paris 120.61 48 IAMs_20 IAMs_20 16 27 58.7
comp=Z,12µm,20.0s
LL07 Hotel Espejo d 120.65 149 IAMs_20 IAMs_20 16 23 52.7
comp=Z,7µm,19.0s
BIOA Bad Ischl, Aus 120.71 323 *e*PKP **PKPdf 15 36 50.7 -0.5**
comp=Z,12nm,1.4s
JFWS Jewell Farm 120.72 43 IAMs_20 IAMs_20 16 25 51.5
comp=Z,12µm,22.0s
JFWS Jewell Farm 120.72 43 P **PKPdf 15 36 51.3 -0.1**
baz=292
MIAR Mount Ida 120.84 54 P **PKPdf 15 36 51.5 -0.3**
baz=284
LL06 Loncomilla 121.02 149 IAMs_20 IAMs_20 16 26 13.5
comp=Z,6µm,20.0s
N41A Harden Midland 121.09 46 IAMs_20 IAMs_20 16 29 43.2
comp=Z,8µm,20.0s
MGMO Mountain Grove 121.16 50 IAMs_20 IAMs_20 16 24 38.6
comp=Z,9µm,20.0s
LL02 Futaleuf 121.20 151 IAMs_20 IAMs_20 16 20 32.1
comp=Z,8µm,22.0s
LESA Schwarzleotal 121.41 323 *i* PKIKP **PKPdf 15 36 52.4 -0.2**
comp=Z,12nm,1.2s
WLAR White Oak Lake 121.43 54 IAMs_20 IAMs_20 16 29 34.1
comp=Z,10µm,21.0s
X40A Basin Creek Fa 121.45 53 IAMs_20 IAMs_20 16 22 07.6
comp=Z,10µm,22.0s
L42A Oliver, Polo 121.46 44 IAMs_20 IAMs_20 16 25 32.1
comp=Z,11µm,21.0s
LL01 San Ignacio de 121.52 150 IAMs_20 IAMs_20 16 24 50.7
comp=Z,7µm,20.0s
FCAR Ozark Folk Cen 121.64 52 IAMs_20 IAMs_20 16 31 49.3
comp=Z,10µm,19.0s
CCM Cathedral Cave 121.67 49 PKPdf **PKPdf 15 36 50.7 -2.6**
CCM Cathedral Cave 121.67 49 P **PKPdf 15 36 53.2 -0.1**
baz=288
CCM Cathedral Cave 121.67 49 PKIKP **PKPdf 15 36 50.7 -2.6**
WHAR Wooly Hollow 121.67 52 IAMs_20 IAMs_20 16 24 28.3
comp=Z,9µm,20.0s
LL05 Los Muermos 121.68 148 IAMs_20 IAMs_20 16 25 01.0
comp=Z,7µm,18.0s
H43A Windswept, Lux 121.76 41 IAMs_20 IAMs_20 16 32 13.7
comp=Z,8µm,20.0s
Z41A Richland Creek 121.79 55 IAMs_20 IAMs_20 16 30 26.7
comp=Z,6µm,21.0s
ABTA Abfaltersbach 121.83 322 *e*PKP **PKPdf 15 36 52.9 -0.5**
comp=Z,8.6nm,0.9s
441A DeRidder 122.04 58 IAMs_20 IAMs_20 16 30 43.7
comp=Z,8µm,19.0s
CIMO Cimolais 122.07 322 IAMs_20 IAMs_20 16 34 14.9
comp=Z,4µm,20.0s
K43A Burlington 122.11 43 IAMs_20 IAMs_20 16 30 21.0
comp=Z,10µm,20.0s
WTTA Wattenberg 122.11 323 *e*PKiKP **PKiKP 15 36 55.5 +1.2**
comp=Z,25nm,1.3s
WATA Walderalm 122.11 323 *ep*PKP **PKiKP 15 36 56.9 +2.7**
comp=Z,8.2nm,1.1s
SLM Saint Louis 122.23 48 IAMs_20 IAMs_20 16 27 58.7
comp=Z,11µm,20.0s
HDIL Hopedale 122.25 46 IAMs_20 IAMs_20 16 30 30.1
comp=Z,7µm,21.0s
HDIL Hopedale 122.25 46 P **PKiKP 15 36 54.4 -0.1**
baz=291
LCAR Lake Charles 122.34 51 IAMs_20 IAMs_20 16 26 53.9
comp=Z,9µm,20.0s
SQTA Sankt Quirin 122.39 323 *i* pPKP **PKiKP 15 36 56.5 +1.7**
comp=Z,14nm,1.7s
MOTA Moosalm 122.39 323 *i* PKiKP **PKiKP 15 36 55.8 +1.1**
comp=Z,6.7nm,0.9s
P43A Skaggs, Pawnee 122.42 47 IAMs_20 IAMs_20 16 28 31.5
comp=Z,10µm,20.0s
LL03 Petrohue 122.43 149 IAMs_20 IAMs_20 16 27 17.0
comp=Z,6µm,19.0s
CCAR Cane Creek 122.45 54 IAMs_20 IAMs_20 16 28 16.2
comp=Z,6µm,20.0s
L44A Lake County Fo 122.60 43 IAMs_20 IAMs_20 16 27 25.1
comp=Z,10µm,21.0s
L44A Lake County Fo 122.60 43 P **PKPdf 15 36 54.8 -0.1**
baz=293
PBMO Poplar Bluff 122.68 50 IAMs_20 IAMs_20 16 22 40.9
comp=Z,11µm,22.0s
FETA Feichten 122.77 323 *ep*PKP **PKiKP 15 36 57.4 +1.9**
comp=Z,9.1nm,1.3s
M44A Midewin, Midew 122.82 44 IAMs_20 IAMs_20 16 25 16.0
comp=Z,10µm,21.0s
HBAR Harrisburg 122.88 52 IAMs_20 IAMs_20 16 32 01.2
comp=Z,7µm,19.0s
GUMA Gualdo di Mace 122.93 318 IAMs_20 IAMs_20 16 36 26.0
comp=Z,5µm,21.0s
I45A Fountain 122.94 41 IAMs_20 IAMs_20 16 27 08.0
comp=Z,10µm,22.0s
O44A Mansfield 122.99 46 IAMs_20 IAMs_20 16 31 11.6
comp=Z,8µm,20.0s
Q44A Meyer Farm, Va 123.04 47 IAMs_20 IAMs_20 16 29 34.1
comp=Z,9µm,19.0s
143A Socs Landing, 123.06 55 IAMs_20 IAMs_20 16 29 43.5
comp=Z,10µm,20.0s
DAVA Damuels 123.14 324 *e*PKiKP **PKiKP 15 36 57.1 +0.8**
comp=Z,7.9nm,0.8s
GNAR Gosnell 123.25 51 IAMs_20 IAMs_20 16 28 01.0
comp=Z,7µm,20.0s
LR05 Currie 123.30 148 IAMs_20 IAMs_20 16 25 51.1
comp=Z,6µm,19.0s
PEBM Pemiscott Bayo 123.32 51 IAMs_20 IAMs_20 16 28 03.0
comp=Z,8µm,20.0s
DAVOX Davos/Dischmat 123.40 323 PKP **PKiKP 15 36 57.1 +0.3**
comp=Z,5.5nm,0.7s,baz=341,slow=6.3,SNR=5.3
HDBT Hernando Bridge 123.46 52 IAMs_20 IAMs_20 16 32 16.8
comp=Z,8µm,20.0s
LR03 Panguipulli 123.55 147 IAMs_20 IAMs_20 16 25 47.8
comp=Z,8µm,18.0s
MET Memphis--Engin 123.57 52 IAMs_20 IAMs_20 16 32 40.6
comp=Z,8µm,20.0s
LNXT Lenox 123.61 51 IAMs_20 IAMs_20 16 28 42.6
comp=Z,9µm,20.0s
PLCA Paso Flores 123.68 149 IAMs_20 IAMs_20 16 28 33.9
comp=Z,6µm,19.0s
PLCA Paso Flores 123.68 149 PKP **PKiKP 15 36 58.3 +0.8**
comp=Z,5.0nm,0.9s,baz=188,slow=4.5,SNR=8.1
L46A Eue Claire 123.77 43 IAMs_20 IAMs_20 16 31 35.0
comp=Z,11µm,20.0s
OLIL Olney 123.77 47 IAMs_20 IAMs_20 16 30 16.4
comp=Z,9µm,19.0s
HALT Halls 123.79 51 IAMs_20 IAMs_20 16 27 30.3
comp=Z,8µm,20.0s
TUE Stuetta 123.87 323 IAMs_20 IAMs_20 16 35 30.3
comp=Z,7µm,20.0s
SFIN Lafayette 123.87 45 IAMs_20 IAMs_20 16 28 18.0
comp=Z,10µm,22.0s
SFIN Lafayette 123.87 45 P **PKPdf 15 36 57.3 -0.2**
baz=293
VBMS Vicksburg 123.91 55 IAMs_20 IAMs_20 16 28 14.0
comp=Z,6µm,20.0s
VBMS Vicksburg 123.91 55 P **PKPdf 15 36 57.1 -0.6**
baz=285
WLF Walferdange 123.94 328 IAMs_20 IAMs_20 16 35 20.6
comp=Z,6µm,20.0s
GO06 Curarrehue 124.05 148 IAMs_20 IAMs_20 16 26 25.0
comp=Z,8µm,19.0s
OXF Oxford 124.16 52 IAMs_20 IAMs_20 16 26 35.4
comp=Z,9µm,21.0s
OXF Oxford 124.16 52 P **PKPdf 15 36 57.8 -0.3**
baz=287
J47A Sumner 124.22 41 IAMs_20 IAMs_20 16 27 56.7
comp=Z,8µm,21.0s
Y45A Yeager Farm, C 124.25 53 IAMs_20 IAMs_20 16 26 08.6
comp=Z,10µm,20.0s
USIN University of 124.36 48 IAMs_20 IAMs_20 16 29 04.2
comp=Z,11µm,21.0s
EKA Eskdalemuir Ar 124.41 337 PKP **PKiKP 15 36 59.5 +1.2**
comp=Z,2.6nm,0.6s,baz=42,slow=3.6,SNR=6.3
N47A Urbana 124.65 44 IAMs_20 IAMs_20 16 32 13.4
comp=Z,10µm,20.0s
BLO Bloomington 124.75 46 IAMs_20 IAMs_20 16 27 53.2
comp=Z,11µm,21.0s
MSSA Maissana 124.83 321 IAMs_20 IAMs_20 16 34 55.1
comp=Z,7µm,22.0s
WVT Waverly 124.88 50 PKPdf **PKPdf 15 36 58.0 -1.5**
WVT Waverly 124.88 50 P **PKPdf 15 36 58.9 -0.5**
baz=290
WVT Waverly 124.88 50 PKIKP **PKPdf 15 36 58.0 -1.5**
WVT MLR MLR
comp=Z,19µm,22.0s
146A Union 124.99 55 IAMs_20 IAMs_20 16 30 29.4
comp=Z,7µm,19.0s
346A Big Creek Wild 124.99 56 IAMs_20 IAMs_20 16 28 56.7
comp=Z,7µm,20.0s
PLAL Pickwick Lake 125.06 52 IAMs_20 IAMs_20 16 33 26.8
comp=Z,8µm,20.0s
BI05 Punta Hualpn 125.12 144 IAMs_20 IAMs_20 16 22 51.5
comp=Z,6µm,20.0s
T47A Sharon Grove 125.13 49 IAMs_20 IAMs_20 16 23 40.5
comp=Z,11µm,22.0s
WCI Wyandotte Cave 125.27 47 P **PKPdf 15 36 59.9 -0.2**
baz=292
O48B Farmland 125.28 44 IAMs_20 IAMs_20 16 32 34.2
comp=Z,10µm,19.0s
O48B Farmland 125.28 44 P **PKPdf 15 36 59.9 -0.2**
baz=295
AAM Ann Arbor 125.41 42 IAMs_20 IAMs_20 16 30 56.2
comp=Z,9µm,20.0s
P48A Milroy 125.42 45 IAMs_20 IAMs_20 16 28 53.8
comp=Z,9µm,20.0s
Z47A Carrollton 125.62 54 IAMs_20 IAMs_20 16 25 10.0
comp=Z,9µm,21.0s
O49A Covington 125.88 44 IAMs_20 IAMs_20 16 29 42.0
comp=Z,10µm,21.0s
P49A Miami Univ. Ec 125.89 45 IAMs_20 IAMs_20 16 32 08.3
comp=Z,8µm,19.0s
P49A Miami Univ. Ec 125.89 45 P **PKPdf 15 37 01.2 -0.1**
baz=294
X48A Hartselle 126.04 52 IAMs_20 IAMs_20 16 34 06.9
comp=Z,8µm,19.0s
VLDQ Val d'Or 126.06 33 PKPdf **PKPdf 15 37 00.4 -1.0**
SCHQ Schefferville 126.11 21 PKP **PKiKP 15 37 01.9 +0.1**
comp=Z,6.2nm,0.8s,baz=359,slow=4.5,SNR=7.3
BNI Bardonecchia 126.20 323 IAMs_20 IAMs_20 16 35 19.1
comp=Z,9µm,21.0s
U49A Red Boiling Sp 126.29 49 IAMs_20 IAMs_20 16 24 16.4
comp=Z,10µm,22.0s
LRAL Lakeview Retre 126.53 53 P **PKiKP 15 37 03.1 -0.1**
baz=288
SWET Sewanee 126.64 51 IAMs_20 IAMs_20 16 25 47.7
comp=Z,10µm,21.0s
Y49A Blount Mountai 126.73 52 IAMs_20 IAMs_20 16 34 28.2
comp=Z,10µm,20.0s
ACSO Alum Creek Sta 126.79 44 P **PKPdf 15 37 03.0 0.0**
baz=296
T50A Nancy 126.80 48 IAMs_20 IAMs_20 16 33 23.8
comp=Z,7µm,20.0s
N51A Ashland 126.89 43 IAMs_20 IAMs_20 16 28 41.7
comp=Z,10µm,22.0s
CLF Chambon-Foret 126.98 328 IAMs_20 IAMs_20 16 36 13.0
comp=Z,8µm,20.0s
GO05 Huala 127.06 144 IAMs_20 IAMs_20 16 28 17.0
comp=Z,9µm,18.0s
P51A Williamsport 127.07 45 IAMs_20 IAMs_20 16 29 23.5
comp=Z,9µm,21.0s
W50A Signal Mountai 127.12 50 IAMs_20 IAMs_20 16 25 38.4
comp=Z,12µm,22.0s
FPAL Fort Paine 127.12 51 IAMs_20 IAMs_20 16 33 24.6
comp=Z,9µm,20.0s
250A Grady 127.44 54 IAMs_20 IAMs_20 16 38 13.3
comp=Z,8µm,19.0s
P52A Corning 127.64 44 P **PKPdf 15 37 04.9 +0.2**
baz=297
X51A Calhoun 127.69 51 IAMs_20 IAMs_20 16 26 08.7
comp=Z,10µm,22.0s
M53A WI Miller and 127.78 41 P **PKiKP 15 37 05.4 -0.1**
baz=299
MTO3 Montecristo 127.80 77 IAMs_20 IAMs_20 16 26 00.5
comp=Z,10µm,20.0s
Q52A Bidwell 127.85 45 IAMs_20 IAMs_20 16 34 57.2
comp=Z,8µm,19.0s
Z51A Franklin 127.88 52 IAMs_20 IAMs_20 16 26 06.8
comp=Z,10µm,22.0s
BO02 Sierra Bellavi 127.88 144 IAMs_20 IAMs_20 16 29 10.7
comp=Z,6µm,19.0s
ERPA Erie 127.88 40 P **PKPdf 15 37 04.6 -0.5**
baz=300
TZTN Tazewell 127.94 48 IAMs_20 IAMs_20 16 37 52.9
comp=Z,7µm,20.0s
TZTN Tazewell 127.94 48 P **PKPdf 15 37 04.9 -0.5**
baz=293
SNET Serv Nac Est T 127.96 78 IAMs_20 IAMs_20 16 26 26.8
comp=Z,8µm,20.0s
BO01 Tunca 127.99 144 IAMs_20 IAMs_20 16 29 03.6
comp=Z,10µm,19.0s
O53A New Philadelph 127.99 43 P **PKPdf 15 37 04.7 -0.6**
baz=298
VA05 Santo Domingo 128.18 143 IAMs_20 IAMs_20 16 28 15.9
comp=Z,9µm,18.0s
MT01 Popeta 128.26 143 IAMs_20 IAMs_20 16 28 26.8
comp=Z,7µm,18.0s
451A Vernon 128.27 56 IAMs_20 IAMs_20 16 31 31.6
comp=Z,6µm,20.0s
TEIG Tepich 128.29 69 IAMs_20 IAMs_20 16 27 11.1
comp=Z,6µm,20.0s
152A Waverly Hall 128.46 53 IAMs_20 IAMs_20 16 35 44.1
comp=Z,10µm,19.0s
MT09 Talagante 128.47 143 IAMs_20 IAMs_20 16 29 08.5
comp=Z,7µm,18.0s
BO04 La Punta 128.55 144 IAMs_20 IAMs_20 16 29 20.5
comp=Z,8µm,19.0s
Y52A Lilburn 128.56 51 IAMs_20 IAMs_20 16 34 26.7
comp=Z,9µm,20.0s
O54A Avella 128.58 43 IAMs_20 IAMs_20 16 33 11.4
comp=Z,10µm,20.0s
WVNY West Valley, N 128.61 39 IAMs_20 IAMs_20 16 32 49.8
comp=Z,10µm,22.0s
352A Blakely 128.68 55 IAMs_20 IAMs_20 16 36 35.1
comp=Z,6µm,20.0s
MT02 Curacav 128.75 143 IAMs_20 IAMs_20 16 28 40.7
comp=Z,9µm,19.0s
LMEL Las Melosas 128.89 144 IAMs_20 IAMs_20 16 29 14.3
comp=Z,9µm,19.0s
MT05 Renca 128.89 143 IAMs_20 IAMs_20 16 29 03.6
comp=Z,9µm,18.0s
MT13 San Alfonso 128.91 144 IAMs_20 IAMs_20 16 29 15.1
comp=Z,8µm,19.0s
MT03 Universidad Ad 128.96 143 IAMs_20 IAMs_20 16 28 40.3
comp=Z,7µm,18.0s
MT16 CCHEN 129.00 143 IAMs_20 IAMs_20 16 28 59.3
comp=Z,7µm,18.0s
PEL Peldehue 129.10 143 IAMs_20 IAMs_20 16 29 10.2
comp=Z,9µm,18.0s
WBO Williamsburg 129.13 35 IAMs_20 IAMs_20 16 29 09.1
comp=Z,8µm,21.0s
GOGA Godfrey 129.19 52 IAMs_20 IAMs_20 16 35 17.3
comp=Z,7µm,21.0s
GOGA Godfrey 129.19 52 P **PKPdf 15 37 07.4 -0.4**
baz=291
MCWV Mont Chateau 129.19 43 IAMs_20 IAMs_20 16 33 42.6
comp=Z,10µm,20.0s
MCWV Mont Chateau 129.19 43 P **PKPdf 15 37 07.6 -0.1**
baz=299
U54A Nelsons Funny 129.22 47 IAMs_20 IAMs_20 16 35 17.7
comp=Z,9µm,19.0s
LDAQ Lac Daran 129.34 29 IAMs_20 IAMs_20 16 28 48.2
comp=Z,10µm,22.0s
L56A Greenwood 129.41 39 PKPdf **PKPdf 15 37 06.8 -1.2**
L56A IAMs_20 IAMs_20 16 27 11.9
comp=Z,11µm,22.0s
VA03 San Esteban 129.44 143 IAMs_20 IAMs_20 16 29 38.2

	comp=Z,6µm,19.0s								
553A	**Crawfordville**	129.49	56	IAMs_20	IAMs_20	16 32 18.7			
	comp=Z,6µm,20.0s								
LONY	**Lake Ozonia**	129.75	35	IAMs_20	IAMs_20	16 32 43.6			
	comp=Z,6µm,21.0s								
LONY	**Lake Ozonia**	129.75	35	P	PKPdf	15 37 08.2	-0.3		
	baz=308								
TIGA	**Tifton**	129.77	54	IAMs_20	IAMs_20	16 28 52.0			
	comp=Z,6µm,20.0s								
TIGA	**Tifton**	129.77	54	P	PKPdf	15 37 08.7	-0.3		
	baz=290								
TGUH	**Tegucigalpa,Un**	129.84	77	IAMs_20	IAMs_20	16 27 36.6			
	comp=Z,9µm,20.0s								
BLA	**Blacksburg**	129.93	46	IAMs_20	IAMs_20	16 32 58.5			
	comp=Z,10µm,20.0s								
BLA	**Blacksburg**	129.93	46	P	PKPdf	15 37 09.5	+0.3		
	baz=297								
SSPA	**Standing Stone**	130.00	41	IAMs_20	IAMs_20	16 36 33.7			
	comp=Z,10µm,20.0s								
SSPA	**Standing Stone**	130.00	41	P	PKiKP	15 37 09.6	-0.3		
	baz=302								
M57A	**Sunshine Farm,**	130.12	40	PKPdf	PKPdf	15 37 08.8	-0.6		
CRIN	**San Cristobal**	130.12	79	IAMs_20	IAMs_20	16 22 24.1			
	comp=Z,8µm,22.0s								
CO06	**Fray Jorge**	130.19	140	IAMs_20	IAMs_20	16 32 30.4			
	comp=Z,5µm,18.0s								
U56A	**King**	130.34	47	IAMs_20	IAMs_20	16 33 23.4			
	comp=Z,9µm,20.0s								
BINY	**Binghamton**	130.35	38	P	PKiKP	15 37 10.2	-0.4		
	baz=305								
CNGN	**Cerro Negro**	130.47	79	IAMs_20	IAMs_20	16 22 31.4			
	comp=Z,9µm,22.0s								
255A	**Hazlehurst**	130.50	53	IAMs_20	IAMs_20	16 34 10.1			
	comp=Z,8µm,20.0s								
N58A	**Sunbury**	130.65	40	IAMs_20	IAMs_20	16 31 50.7			
	comp=Z,11µm,21.0s								
ACCN	**Adirondack Com**	131.03	35	IAMs_20	IAMs_20	16 30 40.4			
	comp=Z,10µm,22.0s								
456A	**Hilliard**	131.28	54	IAMs_20	IAMs_20	16 29 60.0			
	comp=Z,8µm,21.0s								
656A	**Willston**	131.31	56	IAMs_20	IAMs_20	16 36 42.9			
	comp=Z,7µm,20.0s								
SDMD	**Soldier's Deli**	131.33	42	IAMs_20	IAMs_20	16 33 06.9			
	comp=Z,5µm,20.0s								
ETOS	**Mallorca**	131.44	319	PKP	PKPdf	15 37 09.5	-2.5		
LBNH	**Lisbon**	131.47	34	P	PKiKP	15 37 12.3	-0.5		
	baz=310								
BOAB	**BOACO BROADBAN**	131.48	79	PKP	PKiKP	15 37 14.6	+1.0		
CBN	**Corbin Frederi**	131.59	43	IAMs_20	IAMs_20	16 33 37.0			
	comp=Z,10µm,20.0s								
CBN	**Corbin Frederi**	131.59	43	P	PKPdf	15 37 12.3	+0.1		
	baz=300								
CO01	**Juntas del Tor**	131.65	140	IAMs_20	IAMs_20	16 24 25.8			
	comp=Z,6µm,22.0s								
DUNO	**Dulce Nombre,**	131.70	82	IAMs_20	IAMs_20	16 23 34.1			
	comp=Z,8µm,22.0s								
NHSC	**New Hope**	131.85	51	P	PKPdf	15 37 13.1	+0.2		
	baz=294								
WUPA	**West Chester U**	131.85	40	IAMs_20	IAMs_20	16 35 24.6			
	comp=Z,9µm,20.0s								
ACON	**Acoyapa**	131.98	80	IAMs_20	IAMs_20	16 27 18.4			
	comp=Z,8µm,20.0s								
L61B	**Northampton**	132.18	36	P	PKPdf	15 37 13.4	+0.2		
	baz=308								
PKME	**Peaks-Kenny Pk**	132.18	31	P	PKPdf	15 37 13.5	+0.4		
	baz=314								
PAL	**Palisades**	132.31	38	P	PKPdf	15 37 13.4	-0.1		
	baz=306								
QUA2	**Belchertown**	132.47	36	IAMs_20	IAMs_20	16 29 36.7			
	comp=Z,11µm,22.0s								
DWPF	**Disney Wildern**	132.62	58	IAMs_20	IAMs_20	16 35 51.9			
	comp=Z,7µm,21.0s								
DWPF	**Disney Wildern**	132.62	58	P	PKPdf	15 37 14.3	-0.1		
	baz=288								
COVE	**Coope Vega, Sa**	132.77	81	IAMs_20	IAMs_20	16 23 55.4			
	comp=Z,10µm,21.0s								
HRV	**Adam Dziewonsk**	132.79	35	IAMs_20	IAMs_20	16 34 12.9			
	comp=Z,7µm,20.0s								
HRV	**Adam Dziewonsk**	132.79	35	P	PKPdf	15 37 14.5	+0.2		
	baz=310								
S61A	**Accomac**	133.01	43	IAMs_20	IAMs_20	16 33 39.6			
	comp=Z,9µm,22.0s								
PEZE	**Perez Zeledon,**	133.49	83	IAMs_20	IAMs_20	16 24 24.6			
	comp=Z,10µm,22.0s								
SRBA	**San Rafael, Bu**	133.80	83	IAMs_20	IAMs_20	16 25 24.9			
	comp=Z,10µm,22.0s								
060A	**Indiantown**	133.86	59	IAMs_20	IAMs_20	16 30 38.8			
	comp=Z,8µm,22.0s								
DRLN	**Deer Lake**	133.94	19	IAMs_20	IAMs_20	16 31 38.2			
	comp=Z,10µm,22.0s								
CAMR	**Camarioca**	134.07	64	IAMs_20	IAMs_20	16 28 51.9			
	comp=Z,9µm,21.0s								
CDITO	**Canoas**	134.28	84	IAMs_20	IAMs_20	16 25 27.6			
	comp=Z,9µm,22.0s								
BRU2	**Volcan**	134.46	84	IAMs_20	IAMs_20	16 25 33.5			
	comp=Z,10µm,22.0s								
SALI	**Salinas**	135.03	100	IAMs_20	IAMs_20	16 27 10.2			
	comp=Z,5µm,20.0s								
MCRA	**Macar, Loja**	135.57	103	*e*P	PKPdf	15 37 21.1	+0.7		
ES19	**SONSECA Array**	135.68	323	IAMs_20	IAMs_20	16 46 43.7			
	comp=Z,5µm,20.0s								
ES09	**SONSECA Array**	135.69	323	IAMs_20	IAMs_20	16 46 38.1			
	comp=Z,5µm,20.0s								
ES08	**SONSECA Array**	135.70	323	IAMs_20	IAMs_20	16 46 46.3			
	comp=Z,5µm,20.0s								
ES18	**SONSECA Array**	135.70	323	IAMs_20	IAMs_20	16 46 47.4			
	comp=Z,5µm,20.0s								
ES10	**SONSECA Array**	135.71	323	IAMs_20	IAMs_20	16 46 37.5			
	comp=Z,5µm,20.0s								
ES07	**SONSECA Array**	135.72	323	IAMs_20	IAMs_20	16 46 54.8			
	comp=Z,5µm,21.0s								
ES03	**SONSECA Array**	135.72	323	IAMs_20	IAMs_20	16 46 56.9			
	comp=Z,5µm,20.0s								
ES06	**SONSECA Array**	135.72	323	IAMs_20	IAMs_20	16 46 56.0			
	comp=Z,5µm,21.0s								
ESDC	**Sonseca Array**	135.73	323	PKP	PKPdf	15 37 20.1	+0.1		
	comp=Z,0.7nm,0.3s,baz=49,slow=1.5,SNR=4.0								
ESDC				PP	PP	15 39 58.3	+0.8		
	comp=Z,0.9nm,0.9s,baz=38,slow=7.1,SNR=4.4								
ES05	**SONSECA Array**	135.74	323	IAMs_20	IAMs_20	16 40 19.3			
	comp=Z,7µm,22.0s								
ES16	**SONSECA Array**	135.74	323	IAMs_20	IAMs_20	16 46 56.5			
	comp=Z,5µm,20.0s								
ES13	**SONSECA Array**	135.75	323	IAMs_20	IAMs_20	16 46 57.6			
	comp=Z,5µm,20.0s								
ES15	**SONSECA Array**	135.76	323	IAMs_20	IAMs_20	16 46 57.9			
	comp=Z,5µm,20.0s								
NNA	**Nana**	136.13	115	IAMs_20	IAMs_20	16 33 03.3			
	comp=Z,5µm,19.0s								
MVO	**Moncorvo**	136.48	327	*e*PP	PP	15 40 13.7	+12		
MVO	**Moncorvo**	136.48	327	*e*SS	SS	15 58 09.9	+6.8		
MVO	**Moncorvo**	136.48	327	*e*LQ	LQ	16 18 17.2			
MVO				*e*LR	LR	16 23 08.8			
	comp=Z,4µm,20.0s								
PGAV	**Gavieira, Arco**	136.56	329	*e*PP	PP	15 40 05.3	+2.7		
PGAV	**Gavieira, Arco**	136.56	329	*e*SS	SS	15 58 18.7	+15		
PGAV	**Gavieira, Arco**	136.56	329	*e*LQ	LQ	16 16 16.1			
PGAV				*e*LR	LR	16 25 08.9			
	comp=Z,3µm,22.0s								
LVC	**Limon Verde**	137.27	134	PKPdf	PKPdf	15 37 20.3	-3.5		
LVC	**Limon Verde**	137.27	134	PKiKP	PKPdf	15 37 20.3	-3.5		
LVC				MLR	MLR				
	comp=Z,5µm,21.0s								
BCIP	**Isla Barro Col**	137.28	84	IAMs_20	IAMs_20	16 26 20.1			
	comp=Z,8µm,22.0s								
MTE	**Manteigas**	137.29	327	*e*PP	PP	15 40 12.4	+5.2		
MTE	**Manteigas**	137.29	327	*e*SS	SS	15 58 25.6	+13		
MTE	**Manteigas**	137.29	327	*e*LQ	LQ	16 19 03.5			
MTE				*e*LR	LR	16 27 29.5			
	comp=Z,3µm,22.0s								
MTE	**Manteigas**	137.29	327	IAMs_20	IAMs_20	16 39 32.1			
	comp=Z,5µm,22.0s								
PB01	**IPOC Station P**	137.80	131	IAMs_20	IAMs_20	16 47 30.9			
	comp=Z,5µm,19.0s								
PMRV	**Marv??o**	137.88	325	*e*PP	PP	15 40 27.2	+16		
PMRV	**Marv??o**	137.88	325	*e*SS	SS	15 58 42.7	+23		
PMRV	**Marv??o**	137.88	325	*e*LQ	LQ	16 19 23.8			
PMRV				*e*LR	LR	16 25 18.2			
	comp=Z,4µm,22.0s								
PIAT	**Ana Tenorio**	137.93	99	*e*P	PKiKP	15 37 28.4	+1.1		
TULM	**Tulcn-Chalpat**	138.69	96	IAMs_20	IAMs_20	16 30 12.3			
	comp=Z,5µm,20.0s								
PLTB	**Pedras Altas**	138.69	158	PKPdf	PKPdf	15 37 23.8	-2.0		
SFS	**San Fernando**	139.13	321	IAMs_20	IAMs_20	16 45 37.5			
	comp=Z,5µm,20.0s								
LIS	**Lisbon**	139.36	326	*e*PKPdf	PKPdf	15 37 26.6	0.0		
LIS				IAMs_20	IAMs_20	16 43 48.6			
	comp=Z,6µm,21.9s								
LIS	**Lisbon**	139.36	326	*e*PKIKP	PKPdf	15 37 26.6	0.0		
MESJ	**Messejana**	139.44	324	*e*PKPdf	PKPdf	15 37 26.6	-0.2		
MESJ				IAMs_20	IAMs_20	16 39 37.3			
	comp=Z,6µm,22.4s								
MESJ	**Messejana**	139.44	324	*e*PKIKP	PKPdf	15 37 26.7	-0.2		
PVAQ	**Vaqueiros**	139.44	323	*e*PP	PP	15 40 29.6	+9.1		
PVAQ	**Vaqueiros**	139.44	323	*e*SS	SS	15 58 44.6	+6.4		
PVAQ	**Vaqueiros**	139.44	323	*e*LQ	LQ	16 20 06.0			
PVAQ				*e*LR	LR	16 27 25.4			
	comp=Z,4µm,22.0s								
POPC	**Popayan, Colom**	140.05	94	*e*P	PKPdf	15 37 28.6	-0.3		
MORF	**Marmelete**	140.06	324	*e*PKPdf	PKPdf	15 37 27.6	-0.5		
MORF				IAMs_20	IAMs_20	16 40 33.8			
	comp=Z,6µm,25.9s								
MORF	**Marmelete**	140.06	324	*e*PKIKP	PKPdf	15 37 27.6	-0.5		
JAMC	**Jamundi, Valle**	140.13	93	*e*P	PKPdf	15 37 27.9	-1.2		
GTBY	**Guantanamo Bay**	140.49	67	IAMs_20	IAMs_20	16 42 47.1			
	comp=Z,5µm,19.0s								
FLOC	**Florencia**	140.93	95	*e*P	PKPdf	15 37 25.1	-5.2		
CZSB	**Cruzeiro do Su**	141.48	111	IAMs_20	IAMs_20	16 31 27.5			
	comp=Z,5µm,21.0s								
TORD	**Torodi Ar. Bea**	141.56	283	PKhKP	PKPpre	15 37 27.1			
	comp=Z,6.8nm,0.8s,baz=67,slow=4.0,SNR=18								
GUY2C	**Guyana, Caldas**	141.60	90	*e*P	PKPdf	15 37 29.1	-3.0		
ORTC	**Ortega, Tolima**	141.61	92	*e*P	PKPdf	15 37 28.4	-3.2		
CPUP	**Villa Florida**	141.75	149	PKP	PKPdf	15 37 30.4	-1.0		
	comp=Z,7.8nm,1.0s,baz=222,slow=6.1,SNR=8.4								
NORC	**Norcasia**	142.12	89	*e*P	PKPdf	15 37 30.9	-1.5		
ROSC	**El Rosal**	142.61	91	IAMs_20	IAMs_20	16 31 36.4			
	comp=Z,7µm,20.0s								
ROSC	**El Rosal**	142.61	91	PKP	PKPdf	15 37 33.0	-0.7		
	comp=Z,15nm,0.4s,baz=239,slow=7.6,SNR=7.6								
CVER	**Cruz Verde, Cu**	142.83	91	*e*P	PKPdf	15 37 33.0	-1.2		
SPBC	**San Pablo de B**	142.91	89	*e*P	PKPdf	15 37 31.6	-2.3		
VILC	**Villavicencio,**	143.18	92	*e*P	PKPdf	15 37 34.5	+0.1		
OCAC	**Ocana**	143.73	85	*e*P	PKPdf	15 37 34.9	-0.5		
BARC	**Barichara**	143.84	88	*e*P	PKPab	15 37 31.3	-1.5		
RUSC	**La Rusia**	143.91	89	*e*P	PKPab	15 37 31.6	-1.7		
CRJC	**Cerrejon, Guaj**	144.06	80	*e*P	PKPdf	15 37 35.0	-0.8		
PAMC	**Pamplona, Colo**	144.34	86	*e*P	PKPbc	15 37 35.8	+0.5		
PTGC	**Puerto Gaitan,**	144.73	92	*e*P	PKPab	15 37 34.8	-1.0		
URIC	**Uribia, Colomb**	144.87	79	*e*P	PKiKP	15 37 39.1	-1.8		
TAMC	**Tame, Arauca**	145.22	88	*e*P	PKPdf	15 37 39.3	+1.4		
SDV	**Santo Domingo**	146.38	84	PKPbc	PKPdf	15 37 39.2	-0.8		
SDV				IAMs_20	IAMs_20	16 37 01.9			
	comp=Z,5µm,20.0s								
SDV	**Santo Domingo**	146.38	84	*e*P	PKPdf	15 37 40.2	+0.2		
ETMB	**Extrema**	146.49	119	IAMs_20	IAMs_20	16 43 25.5			
	comp=Z,5µm,20.0s								
PCDR	**Punta Cana, DR**	146.99	66	IAMs_20	IAMs_20	16 47 55.1			
	comp=Z,7µm,20.0s								
AGPR	**Aguadilla, PR**	148.15	65	IAMs_20	IAMs_20	16 38 51.9			
	comp=Z,5µm,20.0s								
KIC	**Kosan Boka**	148.16	272	*e*P	PKPdf	15 37 44.3	+1.5		
	comp=Z,130nm,0.8s								
DBIC	**Dimbokro**	148.29	272	PKPbc	PKPbc	15 37 45.2	-1.2		
DBIC				IAMs_20	IAMs_20	16 56 08.7			
	comp=Z,7µm,20.0s								
DBIC	**Dimbokro**	148.29	272	PKPbc	PKPbc	15 37 46.4	0.0		
	comp=Z,88nm,0.8s,baz=83,slow=2.6,SNR=63								
CRPR	**Cabo Rojo, PR**	148.29	66	PKPdf	PKPdf	15 37 41.0	-1.7		
MLPR	**Magueyes Islan**	148.37	66	PKPdf	PKPdf	15 37 40.1	-2.8		
MLPR				IAMs_20	IAMs_20	16 41 05.6			
	comp=Z,5µm,20.0s								
LIC	**Lamto**	148.44	271	*e*P	PKPbc	15 37 46.3	-0.5		
	comp=Z,345nm,0.8s								
TIC	**Toumodi**	148.45	272	*e*P	PKPbc	15 37 46.3	-0.5		
	comp=Z,155nm,0.8s								
AOPR	**Arecibo Observ**	148.51	65	PKPbc	PKPbc	15 37 45.6	-1.2		
UUPR	**Utuado, UPR, P**	148.57	65	IAMs_20	IAMs_20	16 38 30.0			
	comp=Z,5µm,20.0s								
EMPR	**Esperanza - Ma**	148.68	65	IAMs_20	IAMs_20	16 39 25.7			
	comp=Z,5µm,19.0s								
OBIP	**Obispado Ponce**	148.74	66	IAMs_20	IAMs_20	16 43 49.5			
	comp=Z,5µm,22.0s								
PTLB	**Pontes e Lacer**	148.91	135		PKPdf	15 37 45.7	+1.8		
BAUV	**El Baul**	148.94	84	PKPdf	PKPdf	15 37 41.0	-3.0		
GCPR	**Guaynabo City**	149.13	65	IAMs_20	IAMs_20	16 51 07.7			
	comp=Z,5µm,20.0s								
IGPR	**InterUniversit**	149.22	66	IAMs_20	IAMs_20	16 44 33.1			
	comp=Z,8µm,22.0s								
HUMP	**Col San Antoni**	149.39	65	IAMs_20	IAMs_20	16 49 05.7			
	comp=Z,5µm,20.0s								
SAML	**Samuel**	149.53	120		PKPdf	15 37 46.8	+1.8		
SAML	**Samuel**	149.53	120	IAMs_20	IAMs_20	16 58 39.9			
	comp=Z,6µm,20.0s								
SAML	**Samuel**	149.53	120	PKHKP	PKPpre	15 37 46.8			
SAML				MLR	MLR				
	comp=Z,6µm,20.0s								
VILB	**Vilhena**	149.75	130		PKPdf	15 37 47.3	+2.0		
SABA	**Saba**	151.91	64	IAMs_20	IAMs_20	16 44 05.3			
	comp=Z,7µm,22.0s								
SMRT	**St. Maarten**	151.91	64	IAMs_20	IAMs_20	16 43 44.2			
	comp=Z,7µm,22.0s								
SEUS	**St. Eustatius**	152.19	65	IAMs_20	IAMs_20	16 45 33.6			
	comp=Z,6µm,21.0s								
GDHS	**Morne Mazeau,**	153.69	66	IAMs_20	IAMs_20	16 40 59.4			
	comp=Z,5µm,22.0s								
ABD	**La Joyeuse, An**	153.87	66	IAMs_20	IAMs_20	16 39 00.4			
	comp=Z,5µm,20.0s								
CBE	**Ff, Capester**	153.90	67	IAMs_20	IAMs_20	16 40 14.1			
	comp=Z,8µm,22.0s								
MAGL	**Barre de l'ile**	154.23	67	IAMs_20	IAMs_20	16 40 23.0			
	comp=Z,8µm,22.0s								
GDSD	**La Dsirade Is**	154.31	66	IAMs_20	IAMs_20	16 46 33.0			
	comp=Z,6µm,22.0s								
FDF	**Fort de France**	154.71	69	IAMs_20	IAMs_20	16 55 51.1			
	comp=Z,7µm,22.0s								
GRGR	**Grenville**	154.84	75	IAMs_20	IAMs_20	16 52 21.8			
	comp=Z,7µm,21.0s								
BIM	**Bigot**	154.85	70	IAMs_20	IAMs_20	16 43 54.7			
	comp=Z,6µm,22.0s								
ILAM	**Ilet Lapin Mar**	154.96	69	IAMs_20	IAMs_20	16 47 52.5			
	comp=Z,6µm,22.0s								
MPOM	**Morne Pois Mar**	155.06	70	IAMs_20	IAMs_20	16 42 10.4			
	comp=Z,5µm,22.0s								
BDFB	**Brasilia**	155.34	153	PKP	PKPdf	15 37 54.7	+1.1		
	comp=Z,0.9nm,0.3s,baz=218,slow=3.0,SNR=1.6								
BOAV	**Boa Vista**	155.99	99	PKPdf	PKPdf	15 37 52.4	-2.0		
BOAV				IAMs_20	IAMs_20	16 52 19.5			
	comp=Z,6µm,19.0s								
NGRK	**Negar Kerman**	2.98	45	Pn	Pn	15 28 26.9	+1.3		
FAQ	**Al Faqa, Dubai**	3.01	157	P	Pn	15 28 28.6	+2.9		
FAQ				S	Sn	15 29 04.8	+3.6		
ASUD	**Al Ashush, Dub**	3.04	162	P	Pn	15 28 29.5	+3.5		
ASUD	**Al Ashush, Dub**	3.04	162	P	Pb	15 28 29.9	-2.5		
ASUD				S	Sn	15 29 06.2	+4.1		
UOSS	**Minazif**	3.09	146	Pn	Pn	15 28 24.1	-2.6		
UOSS	**Minazif**	3.09	146	P	Pn	15 28 28.9	+2.2		
UOSS	**Minazif**	3.09	146	P	Pn	15 28 29.4	+2.7		
UOSS				S	Sn	15 29 04.2	+1.0		
HATD	**Hatta, Dubai**	3.15	149	P	Pn	15 28 31.1	+3.5		
HATD				S	Sn	15 29 08.0	+3.2		
HATD	**Hatta, Dubai**	3.15	149	P	Pb	15 28 32.5	-1.9		
HATD				S	Sn	15 29 08.1	+3.2		
TVBK	**TV Kerman**	3.24	41	Pn	Pn	15 28 31.2	+2.0		
ASHO	**Ashiyiah**	3.25	151	P	Pn	15 28 31.6	+2.6		
ASHO	**Ashiyiah**	3.25	151	P	Pn	15 28 31.7	+2.8		
ASHO				S	Sn	15 29 10.0	+2.9		
KHGB	**Koh Gabri**	3.40	33	Pn	Pn	15 28 32.8	+1.6		
SHMA	**Al-Shehemyia**	3.44	242	P	Pn	15 28 33.9	+2.4		
SHMA				S	Sn	15 29 13.8	+1.9		
JASK	**Jask - Hormozg**	3.58	117	Pn	Pn	15 28 34.9	+1.4		
JASK	**Jask - Hormozg**	3.58	117	S	Sn	15 29 17.8	+2.4		
ALNE	**Al Ain**	3.70	159	P	Pn	15 28 38.3	+3.2		
ALNE				S	Sn	15 29 21.1	+2.7		
SAKB	**Bahrain**	3.73	246	P	Pn	15 28 38.2	+2.7		
SAKB				S	Sn	15 29 21.0	+2.1		
GHWR	**Ruwais**	3.79	200	P	Pn	15 28 37.9	+1.5		
GHWR				S	Sn	15 29 21.5	+0.9		
IMEH	**Mehriz**	3.84	4	Pn	Pn	15 28 38.9	+1.6		
SOHO	**SOHO**	3.93	149	P	Pn	15 28 40.2	+1.9		
SOHO	**SOHO**	3.93	149	P	Pn	15 28 40.8	+2.5		
SOHO				S	Sn	15 29 26.2	+2.1		
TRNA	**Turayna**	3.95	226	P	Pn	15 28 40.2	+1.6		
TRNA				S	Sn	15 29 25.7	+1.2		
KBAM	**BAM**	3.97	65	Pn	Pn	15 28 41.6	+2.6		
IRAM	**Ramesheh**	4.58	339	Pn	Pn	15 28 48.8	+1.4		
ARQ	**Araqi**	4.63	154	P	Pn	15 28 50.3	+2.3		
ARQ				S	Sn	15 29 43.9	+2.5		
UMZA	**Um Al Zommool**	4.87	171	P	Pn	15 28 53.5	+2.4		
UMZA				S	Sn	15 29 46.9	-0.2		
BSY	**Bisya**	5.44	151	P	Pn	15 29 01.9	+2.8		
BSY				S	Sn	15 30 03.0	+1.7		
SMDO	**Samad**	5.59	142	S	Sn	15 30 05.7	+0.5		
JMDO	**Jabal Madar**	6.19	146	S	Sn	15 30 19.6	-0.1		
WBK	**Wadi Bani Khal**	6.47	138	S	Sn	15 30 27.4	+0.8		
DOK	**Doka**	8.88	181	P	Pn	15 29 47.5	+1.2		
RAYN	**Ar Rayn**	8.91	245		Pn	15 29 45.2	-1.6		
WHFO	**Wadi Hawf**	9.59	183	P	Pn	15 29 57.0	+0.9		
	SNR=35								
ABTO	**Aybut**	10.18	186	P	Pn	15 30 04.2	-0.1		
ABTO				P	Pn	15 30 04.2	-0.1		
GNI	**Garni**	14.87	330	LR	LR	15 37 15.5			
	comp=Z,377nm,21.0s,baz=253,slow=39								
ARSB	**Arslanbob**	20.58	43	Pn	P	15 32 17.0	+0.1		
ARSB				IAmb	IAmb	15 32 28.9			
	comp=Z,24nm,1.5s								
BRTR	**Keskin Array B**	21.02	311	Pn	P	15 32 22.6	+1.0		
BRTR	**Keskin Array B**	21.02	311	P	P	15 32 22.7	+1.0		
BRTR	**Keskin Array B**	21.02	311	P	P	15 32 21.9	+0.3		
	comp=Z,1.2nm,0.8s,baz=133,slow=12,SNR=4.8								
	comp=Z,1.2nm,0.8s								
BR131	**Keskin Array S**	21.02	311		P	15 32 21.4	-0.3		
BR131	**Keskin Array S**	21.02	311	pmax	pmax				
	comp=Z,13nm,1.4s								
BR131	**Keskin Array S**	21.02	311	P	P	15 32 21.4	-0.3		
ABKAR	**Akbulak array**	22.11	10	P	P	15 32 32.8	-0.3		
BVAR	**Borovoye Array**	28.12	21	P	P	15 33 29.1	-0.5		
	comp=Z,4.5nm,0.9s,baz=201,slow=7.7,SNR=1.0								
	comp=Z,4.5nm,0.9s								
MK31	**Makanchi Array**	29.19	41	P	P	15 33 39.4	+0.2		
MK31				IAmb	IAmb	15 33 43.9			
	comp=Z,12nm,1.2s								
MKAR	**Makanchi Array**	29.19	41	P	P	15 33 39.0	-0.3		
	comp=Z,3.5nm,1.0s,baz=229,slow=10,SNR=1.6								
	comp=Z,3.5nm,1.0s								
ZALV	**Zalesovo Beam**	34.59	32	P	P	15 34 25.9	-0.6		
	comp=Z,0.8nm,0.4s,baz=250,slow=9.5,SNR=1.5								
	comp=Z,0.8nm,0.4s								
FIA1	**FINESS Array S**	38.81	339	P	P	15 35 00.2	-2.1		
FINES	**FINESS Array B**	38.81	339	P	P	15 34 59.9	-2.4		
FINES	**FINESS Array B**	38.81	339	P	P	15 35 00.3	-2.1		
	comp=Z,0.9nm,0.5s,baz=145,slow=9.4,SNR=8.2								
	comp=Z,0.9nm,0.5s								
ARCES	**ARCESS Array B**	45.24	346	P	P	15 35 53.9	-0.8

1.0nm,0.6s,baz=0.0,slow=2.0,SNR=6.8
1.0nm,0.6s
NRIK Noril'sk 84.71 343 P **P** **15 41 28.6 +0.3**
1.7nm,0.5s,baz=135,slow=4.4,SNR=5.4
1.7nm,0.5s
BVAR Borovoye Array 85.12 325 P **P** **15 41 31.1 +0.4**
1.1nm,0.6s,baz=116,slow=6.8,SNR=5.9
1.1nm,0.6s
ILAR Eielson Array 87.37 24 P **P** **15 41 40.3 -1.3**
1.9nm,1.1s,baz=264,slow=4.1,SNR=8.6
1.9nm,1.1s
TORD Torodi Ar. Bea 141.76 283 PKP **PKPdf** **15 48 28.3 +0.9**
0.8nm,1.0s,baz=66,slow=4.1,SNR=1.9
DBIC Dimbokro 148.50 272 PKPbc **PKPbc** **15 48 43.4 +0.8**
2.7nm,0.6s,baz=63,slow=4.5,SNR=4.5

*IDC **26** 15:31:51.6±0.9,6°25S×143°20E,h0km,mb4.1/10, mbtmp4.1/13,ML4.2/2,Error ellipse: s-maj=33.0km s-min=20.2km az=69.0*
*NEIC **26** 15:31:53.2±1.9,6°4S±0°1×143°1E±0°2,h10km±1km, mb4.6/15,Error ellipse: s-maj=27.8km s-min=19.6km az=238.0*
ISC 26 15:31:56.7±0.6,6°41S±0°09×143°1E±0°1,h35km,n33, σ0s56/34,mb4.2/15,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.02**	**127**	Pn	**Pn**	**15 33 10.2**	**+0.6**
PMG	**Port Moresby**	**5.02**	**127**	Pn	**Pn**	**15 33 09.9**	**+0.3**
	19nm,0.7s,baz=299,slow=10,SNR=1.1						
PMG				Sn	**Sn**	**15 34 06.0**	**-0.5**
	5.1nm,0.3s,baz=342,slow=20,SNR=2.2						
WB0	**Warramunga Arr**	**15.73**	**212**	P	**P**	**15 35 38.7**	**-0.7**
WB0				IAmb	IAmb	15 35 58.1	
	comp=Z,85nm,1.4s						
WRAB	**Tennant Creek**	**15.89**	**211**	P	**P**	**15 35 40.5**	**-0.6**
WRAB				IAmb	IAmb	15 36 13.9	
	comp=Z,42nm,1.1s						
WB2	**Warramunga Arr**	**15.89**	**211**	P	**P**	**15 35 41.2**	**0.0**
WB2				IAmb	IAmb	15 35 43.1	
	comp=Z,81nm,1.3s						
WRA	**Warramunga Arr**	**15.90**	**211**	Pn	**P**	**15 35 41.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=30,slow=11,SNR=2.8						
	comp=Z,6.3nm,0.8s						
ASAR	**Alice Springs**	**19.29**	**206**	P	**Pn**	**15 36 20.3**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=33,slow=9.9,SNR=6.9						
	comp=Z,5.2nm,0.6s						
PSA00	**Pilbara Seismi**	**27.05**	**234**	P	**P**	**15 37 35.3**	**-0.6**
KSRS	**Korea Array**	**45.88**	**343**	P	**P**	**15 40 16.0**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=165,slow=6.5,SNR=4.2						
	comp=Z,1.5nm,0.9s						
CM31	**Chiang Mai Arr**	**50.05**	**300**	P	**P**	**15 40 48.6**	**+0.3**
CM31				IAmb	IAmb	15 40 51.0	
	comp=Z,7.3nm,1.5s						
CMAR	**Chiang Mai Arr**	**50.05**	**300**	P	**P**	**15 40 48.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**50.05**	**300**	P	**P**	**15 40 48.0**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=122,slow=5.7,SNR=6.7						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**62.93**	**333**	P	**P**	**15 42 19.9**	**+0.1**
SONM	**Songino Array**	**62.93**	**333**	P	**P**	**15 42 20.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=148,slow=7.1,SNR=5.2						
	comp=Z,0.9nm,0.7s						
MK31	**Makanchi Array**	**75.36**	**322**	P	**P**	**15 43 36.5**	**-0.2**
MKAR	**Makanchi Array**	**75.36**	**322**	P	**P**	**15 43 36.9**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=110,slow=6.6,SNR=6.8						
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**77.31**	**329**	P	**P**	**15 43 47.2**	**-0.4**
ZALV	**Zalesovo Beam**	**77.31**	**329**	P	**P**	**15 43 46.8**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=118,slow=5.7,SNR=4.9						
	comp=Z,0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**79.25**	**324**	P	**P**	**15 43 58.3**	**0.0**
	comp=Z,2.0nm,0.9s,baz=111,slow=4.4,SNR=5.3						
	comp=Z,2.0nm,0.9s						
J16K	**Anvik River**	**81.37**	**22**	P	**P**	**15 44 08.5**	**-0.9**
J16K				IAmb	IAmb	15 44 41.6	
	comp=Z,7.3nm,1.2s						
P18K	**Big Mountain,**	**81.62**	**27**	P	**P**	**15 44 09.9**	**-1.0**
G18K	**Tagagawik**	**83.48**	**21**	P	**P**	**15 44 20.5**	**0.0**
G18K				IAmb	IAmb	15 44 21.8	
	comp=Z,2.9nm,1.1s						
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**15 44 20.9**	**-0.2**
QSPA	**South Pole Qui**	**83.56**	**180**	P	**P**	**15 44 22.2**	**+1.1**
	comp=Z,2.2nm,1.0s,baz=330,slow=3.5,SNR=2.8						
	comp=Z,2.2nm,1.0s						
NRIK	**Noril'sk**	**84.49**	**343**	P	**P**	**15 44 25.5**	**0.0**
	comp=Z,2.4nm,0.5s,baz=114,slow=4.2,SNR=6.8						
	comp=Z,2.4nm,0.5s						
E19K	**Redstone River**	**84.78**	**20**	P	**P**	**15 44 27.8**	**+0.8**
BVAR	**Borovoye Array**	**84.82**	**325**	P	**P**	**15 44 27.9**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=113,slow=7.2,SNR=26						
	comp=Z,5.3nm,0.8s						
BRVK	**Borovoye**	**84.89**	**325**	P	**P**	**15 44 28.1**	**+0.2**
IMAR	**Indian Mountai**	**85.28**	**22**	P	**P**	**15 44 29.3**	**-0.2**
RND	**Reindeer**	**86.11**	**25**	P	**P**	**15 44 33.2**	**-0.6**
RND				IAmb	IAmb	15 44 41.0	
	comp=Z,9.4nm,1.3s						
CCB	**Clear Creek Bu**	**87.00**	**24**	P	**P**	**15 44 37.4**	**-0.6**
CCB				IAmb	IAmb	15 44 38.3	
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**87.41**	**24**	P	**P**	**15 44 39.5**	**-0.6**
ILAR	**Eielson Array**	**87.41**	**24**	P	**P**	**15 44 38.9**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=264,slow=4.8,SNR=8.9						
	comp=Z,0.9nm,0.7s						

*IDC **26** 15:40:05.9±1.1,6°28S×143°08E,h0km,mb3.8/6, mbtmp3.8/8,ML1.3/1,Error ellipse: s-maj=40.0km s-min=25.1km az=58.0*
ISC 26 15:40:10.4±0.9,6°64S±0°10×142°8E±0°1,h35km,n9, σ1s78/11,mb3.7/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.14**	**123**	Pn	**Pn**	**15 41 25.6**	**+0.7**
	0.7nm,0.3s,baz=99,slow=17,SNR=2.5						
PMG				Sn	**Sn**	**15 42 22.3**	**-0.6**
	0.5nm,0.3s,baz=71,slow=24,SNR=2.2						
	6.1nm,0.7s						
WRA	**Warramunga Arr**	**15.56**	**211**	Pn	**P**	**15 43 49.0**	**-2.2**
	0.2nm,0.3s,baz=31,slow=13,SNR=4.7						
WRA				Sn	**Sn**	**15 46 36.9**	**-1.7**
	0.1nm,0.3s,baz=27,slow=23,SNR=3.1						
WRA				Lg	Lg	15 48 25.6	
	0.2nm,0.3s,baz=11,slow=28,SNR=4.8						
ASAR	**Alice Springs**	**18.96**	**206**	P	**Pn**	**15 44 33.3**	**+3.6**
	2.8nm,0.6s,baz=40,slow=7.3,SNR=11						
SONM	**Songino Array**	**63.00**	**333**	P	**P**	**15 50 34.5**	**+0.6**
	0.2nm,0.4s,baz=130,slow=7.8,SNR=2.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**75.36**	**322**	P	**P**	**15 51 51.1**	**+0.7**
	0.3nm,0.6s,baz=105,slow=7.4,SNR=5.2						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**77.36**	**329**	P	**P**	**15 52 01.1**	**-0.5**
	0.7nm,0.6s,baz=104,slow=6.1,SNR=2.4						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**79.26**	**324**	P	**P**	**15 52 12.2**	**0.0**
	0.5nm,0.8s,baz=120,slow=4.6,SNR=2.0						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**84.84**	**325**	P	**P**	**15 52 42.0**	**+0.7**
	2.7nm,0.8s,baz=111,slow=6.9,SNR=10						
	2.7nm,0.8s						
ILAR	**Eielson Array**	**87.73**	**24**	P	**P**	**15 52 53.9**	**-1.5**
	0.9nm,0.8s,baz=255,slow=4.9,SNR=16						
	0.9nm,0.8s						

*NEIC **26** 15:46:58.8±1.7,20°22N±0°04×146°4E±0°1,h35km±2km, mb4.7/36,Error ellipse: s-maj=19.5km s-min=3.4km az=72.0*
*IDC **26** 15:47:02.6±3.2,19°99N×146°21E,h82km±30km,mb3.9/20, mbtmp4.2/23,Error ellipse: s-maj=20.7km s-min=13.4km az=74.0*
ISC 26 15:46:58.2±0.5,20°22N±0°05×146°3E±0°1,h35km,n75, σ1s41/72,mb4.5/34,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.74**	**192**	Pn	**Pn**	**15 48 37.0**	**+2.4**
GUMO	**Guam**	**6.74**	**192**	P	**Pn**	**15 48 36.2**	**+1.6**
	60nm,0.8s,baz=352,slow=23,SNR=2.0						
GUMO				S	**Sn**	**15 49 50.6**	**+0.4**
	43nm,0.5s,baz=194,slow=22,SNR=1.7						
JCJ	**Chichijima**	**7.83**	**332**	Pn	**Pn**	**15 48 51.6**	**+1.9**
JCJ	**Chichijima**	**7.83**	**332**	P	**Pn**	**15 48 47.6**	**-2.1**
	61nm,0.7s,baz=245,slow=19,SNR=1.7						
JCJ				S	**Sn**	**15 50 12.9**	**-4.2**
	48nm,0.6s,baz=264,slow=22,SNR=1.4						
JGF	**Kuroka**	**17.24**	**335**	P	**P**	**15 50 58.7**	**+1.2**
JMN	**Monobe**	**17.43**	**323**	P	**P**	**15 51 00.9**	**+1.3**
MJAR	**Matsushiro Arr**	**17.75**	**338**	P	**P**	**15 51 06.6**	**+3.4**
	2.2nm,0.8s,baz=160,slow=18,SNR=1.4						
JNU	**Nakatsue**	**18.84**	**316**	Pn	**Pn**	**15 51 17.1**	**+1.2**
JNU	**Nakatsue**	**18.84**	**316**	P	**P**	**15 51 16.1**	**+1.0**
	5.2nm,0.8s,baz=139,slow=9.3,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	**19.28**	**92**	T	T	16 11 02.3	
	baz=279,slow=74,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**19.29**	**92**	T	T	16 11 04.9	
	baz=279,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**19.30**	**92**	T	T	16 11 10.2	
	baz=279,slow=74,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**19.33**	**88**	T	T	16 11 09.6	
	baz=274,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**19.33**	**88**	T	T	16 11 07.4	
	baz=274,slow=75,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**19.35**	**88**	T	T	16 11 12.3	
	baz=274,slow=75,SNR=13						
JTM	**Tenmabayashi**	**20.99**	**349**	P	**P**	**15 51 39.5**	**+1.0**
JTM				IAmb	IAmb	15 52 09.5	
	comp=Z,42nm,1.1s						
ERM	**Erimo**	**21.90**	**354**	P	**P**	**15 51 44.8**	**-3.4**
ERM				IAmb	IAmb	15 52 07.9	
	comp=Z,26nm,0.9s						
MANU	**Manus Island**	**22.14**	**177**	P	**P**	**15 51 49.9**	**-1.2**
MANU				IAmb	IAmb	15 51 51.4	
	comp=Z,17nm,0.7s						
KSRS	**Korea Array**	**23.49**	**321**	P	**P**	**15 52 05.6**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=149,slow=9.0,SNR=12						
	comp=Z,2.3nm,0.5s						
KSAR	**Wonju Array Be**	**23.50**	**321**	P	**P**	**15 52 06.8**	**+1.9**
KS19	**Wonju Array Si**	**23.55**	**321**	P	**P**	**15 52 06.5**	**+1.1**
KS19				IAmb	IAmb	15 52 19.1	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**26.74**	**337**	P	**P**	**15 52 35.3**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=124,slow=7.2,SNR=1.5						
	comp=Z,1.9nm,0.7s						
PMG	**Port Moresby**	**29.45**	**178**	P	**P**	**15 52 56.0**	**-2.8**
	comp=Z,11nm,1.0s,baz=323,slow=10,SNR=2.8						
	comp=Z,11nm,1.0s						
TOLI2	**Tolitoli**	**31.38**	**236**	P	**P**	**15 53 16.5**	**+0.5**
HEH	**HeiHe**	**33.52**	**338**	*eP*	**P**	**15 53 36.0**	**+1.7**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WB0	**Warramunga Arr**	**41.42**	**197**	P	**P**	**15 54 41.1**	**-0.4**
WB0				IAmb	IAmb	15 54 45.5	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**41.59**	**197**	P	**P**	**15 54 42.2**	**-0.7**
WRAB				IAmb	IAmb	15 54 56.8	
	comp=Z,10.0nm,0.9s						
WB2	**Warramunga Arr**	**41.60**	**197**	P	**P**	**15 54 42.2**	**-0.7**
WB2				IAmb	IAmb	15 54 47.5	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**41.60**	**197**	P	**P**	**15 54 38.9**	**-4.1**
	comp=Z,1.9nm,0.6s,baz=13,slow=9.1,SNR=4.6						
WRA				PcP	**PcP**	**15 56 37.9**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=13,slow=3.2,SNR=2.3						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**42.36**	**320**	P	**P**	**15 54 49.0**	**0.0**
SONM	**Songino Array**	**42.36**	**320**	P	**P**	**15 54 48.5**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=134,slow=7.5,SNR=8.5						
	comp=Z,1.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**44.64**	**276**	P	**P**	**15 55 08.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**44.64**	**276**	P	**P**	**15 55 06.9**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=70,slow=6.4,SNR=10						
	comp=Z,1.3nm,0.8s						
AS31	**Alice Springs**	**45.27**	**196**	P	**P**	**15 55 13.1**	**+0.6**
ASAR	**Alice Springs**	**45.27**	**196**	P	**P**	**15 55 10.0**	**-2.5**
	comp=Z,0.5nm,0.4s,baz=12,slow=7.2,SNR=2.8						
	comp=Z,0.5nm,0.4s						
MBWA	**Marble Bar**	**48.66**	**214**	P	**P**	**15 55 37.8**	**-1.2**
MBWA				IAmb	IAmb	15 56 14.7	
	comp=Z,15nm,1.4s						
XMIS	**Christmas Isla**	**50.33**	**236**	P	**P**	**15 55 52.3**	**+0.4**
LSA	**Lhasa**	**50.52**	**292**	P	**P**	**15 55 54.2**	**+0.4**
LSA				IAmb	IAmb	15 55 59.8	
	comp=Z,4.7nm,0.5s						
GSI	**Gunungsitoli**	**51.19**	**255**	P	**P**	**15 55 58.3**	**-0.2**
L16K	**Owhat River**	**55.68**	**28**	P	**P**	**15 56 32.1**	**+1.4**
ZAA0	**Zalesovo Array**	**57.19**	**322**	P	**P**	**15 56 41.5**	**-0.1**
ZAA0				IAmb	IAmb	15 56 42.6	
	comp=Z,3.3nm,0.8s						
ZALV	**Zalesovo Beam**	**57.19**	**322**	P	**P**	**15 56 41.5**	**-0.2**
ZALV	**Zalesovo Beam**	**57.19**	**322**	P	**P**	**15 56 41.3**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=97,slow=6.9,SNR=12						
	comp=Z,2.7nm,0.7s						
MK31	**Makanchi Array**	**57.86**	**313**	P	**P**	**15 56 46.7**	**+0.2**
MKAR	**Makanchi Array**	**57.86**	**313**	P	**P**	**15 56 46.7**	**+0.2**
MKAR	**Makanchi Array**	**57.86**	**313**	P	**P**	**15 56 47.0**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=89,slow=8.7,SNR=16						
	comp=Z,1.3nm,0.6s						
MAKZ	**Makanchi**	**58.08**	**313**	P	**P**	**15 56 48.5**	**+0.5**
BPAW	**Bear Paw Mtn.**	**60.14**	**27**	P	**P**	**15 57 03.5**	**+1.6**
BPAW				IAmb	IAmb	15 57 09.7	
	comp=Z,7.6nm,1.2s						
NRIK	**Noril'sk**	**60.40**	**340**	P	**P**	**15 57 04.7**	**+1.0**
NRIK				IAmb	IAmb	15 57 07.0	
	comp=Z,11nm,1.3s						
NRIK	**Noril'sk**	**60.40**	**340**	P	**P**	**15 57 03.8**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=112,slow=7.7,SNR=5.7						
	comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**60.56**	**318**	P	**P**	**15 57 05.5**	**+0.5**
KURK				IAmb	IAmb	15 57 05.8	
	comp=Z,4.4nm,0.8s						
KURBB	**Kurchatov Arra**	**60.61**	**317**	P	**P**	**15 57 05.2**	**-0.1**
	comp=Z,4.8nm,0.5s,baz=92,slow=7.6,SNR=62						
	comp=Z,4.8nm,0.5s						
FID	**Port Fidalgo**	**61.44**	**31**	P	**P**	**15 57 10.4**	**-0.5**
ILAR	**Eielson Array**	**62.03**	**26**	P	**P**	**15 57 15.3**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=248,slow=5.4,SNR=8.5						
	comp=Z,1.4nm,1.0s						
ARSB	**Arslanbob**	**64.62**	**307**	P	**P**	**15 57 32.9**	**+0.3**
BKZ	**Black Stump Fm**	**65.47**	**155**	P	**P**	**15 57 38.5**	**+0.8**
BVAR	**Borovoye Array**	**65.70**	**320**	P	**P**	**15 57 39.8**	**+0.6**
	comp=Z,11nm,0.7s,baz=87,slow=7.5,SNR=62						
	comp=Z,11nm,0.7s						
BRVK	**Borovoye**	**65.76**	**320**	P	**P**	**15 57 40.1**	**+0.6**
BRVK				IAmb	IAmb	15 57 41.1	
	comp=Z,6.6nm,0.8s						
KK31	**Karatay Array**	**66.28**	**309**	P	**P**	**15 57 42.8**	**-0.2**
KK31				IAmb	IAmb	15 57 44.7	
	comp=Z,3.9nm,0.8s						
KKAR	**Karatay Array**	**66.28**	**309**	P	**P**	**15 57 43.0**	**-0.1**
SIMJ	**Simiganj**	**67.97**	**305**	P	**P**	**15 57 54.4**	**+0.3**
KBL	**Kabul**	**68.63**	**300**	P	**P**	**15 57 58.5**	**+0.1**
DIB	**Dawson Inlet,**	**68.84**	**40**	P	**P**	**15 57 58.4**	**-0.6**
ABKAR	**Akbulak array**	**72.65**	**317**	P	**P**	**15 58 22.2**	**-0.1**
YKA	**Yellowknife Ar**	**76.38**	**28**	P	**P**	**15 58 44.8**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=289,slow=5.6,SNR=13						
	comp=Z,1.0nm,0.8s						
GEYT	**Alibeck**	**76.50**	**306**	P	**P**	**15 58 46.2**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=82,slow=15,SNR=2.6						
	comp=Z,2.8nm,0.8s						
ARCES	**ARCESS Array B**	**81.24**	**342**	P	**P**	**15 59 10.0**	**-0.3**
ARCES				IAmb	IAmb	15 59 46.7	
	comp=Z,16nm,1.4s						
ARCES	**ARCESS Array B**	**81.24**	**342**	P	**P**	**15 59 09.9**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=67,slow=9.3,SNR=6.7						
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**81.74**	**52**	P	**P**	**15 59 14.6**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=259,slow=5.5,SNR=7.4						
	comp=Z,1.1nm,0.8s						
KBZ	**Khabaz**	**85.50**	**315**	P	**P**	**15 59 32.0**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=58,slow=15,SNR=3.4						
	comp=Z,1.9nm,0.9s						
FIA1	**FINESS Array S**	**85.76**	**335**	P	**P**	**15 59 33.0**	**-0.5**
FINES	**FINESS Array B**	**85.76**	**335**	P	**P**	**15 59 33.0**	**-0.6**
FINES	**FINESS Array B**	**85.76**	**335**	P	**P**	**15 59 33.3**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=74,slow=4.2,SNR=13						
	comp=Z,1.2nm,0.4s						
MSU	**Marysvale**	**86.20**	**50**	P	**P**	**15 59 33.5**	**-3.1**
PDAR	**Pinedale Array**	**86.34**	**46**	P	**P**	**15 59 37.6**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=306,slow=2.1,SNR=2.8						
	comp=Z,0.3nm,0.7s						

*HEL **26** 15:52:07.8±0.4,67°18N×20°70E,h0km,ML1.0,Suspected explosion*
UPP 26 15:52:06.9±0.0,67°19N×20°66E,h0km,ML2.0, Confirmed Induced event,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.08**	**208**	P	Pg	15 52 08.7	+0.3
DUNU				S	Sg	15 52 09.8	+0.5
MASU	**Masugnsbyn**	**0.58**	**62**	P	Pg	15 52 18.1	0.0
MASU				S	Sg	15 52 26.0	+0.3
RATU	**Laukkuluspa**	**0.76**	**328**	P	Pg	15 52 21.1	-0.3
KUA	**Kurravaara**	**0.78**	**351**	P	Pg	15 52 21.5	-0.3
SALU	**Saltoluokta**	**0.86**	**284**	P	Pg	15 52 23.1	-0.2
PAJU	**Pajala**	**0.97**	**99**	P	Pg	15 52 24.9	-0.6
PAJU	**Pajala**	**0.97**	**99**	PG	Pg	15 52 24.7	-0.8
PAJU				SB	Sg	15 52 38.1	0.0
LANU	**Lannavaara**	**1.00**	**30**	P	Pg	15 52 25.6	-0.6
LANU	**Lannavaara**	**1.00**	**30**	PG	Pg	15 52 25.6	-0.5
KOVU	**Salmi**	**1.06**	**350**	P	Pg	15 52 27.0	-0.2
KLF	**Kolari**	**1.29**	**86**	PG	Pg	15 52 30.5	-1.1
KLF				MSG		15 52 46.2	
	comp=Z,0.7nm,0.2s						
KLF				SG	Sg	15 52 47.6	-0.6
HEF	**Hetta**	**1.67**	**42**	PG	Pn	15 52 37.2	-0.2
HEF				MSG		15 52 57.6	
	comp=Z,1.1nm,0.2s						
HEF				SN	Sb	15 53 00.2	+0.1
KALU	**Kalix**	**1.72**	**140**	P	Pn	15 52 38.2	+0.3
KALU	**Kalix**	**1.72**	**140**	PG	Pn	15 52 38.3	+0.4
KALU				SN	Sg	15 53 02.0	+0.1
SJUU	**Sjulsmark**	**1.73**	**167**	P	Pn	15 52 38.0	-0.1
KIF	**Kilpisjarvi**	**1.83**	**2**	PG	Pg	15 52 41.6	-0.3
KIF				MSG		15 53 03.5	
	comp=Z,1.2nm,0.2s						
KIF				SN	Sg	15 53 06.2	+0.7
TOF	**Tornio**	**1.84**	**126**	PG	Pn	15 52 40.4	+0.8
TOF				MSG		15 53 02.2	
	comp=Z,0.8nm,0.2s						
TOF				SG	Sb	15 53 04.7	0.0
RNF	**Rovaniemi**	**2.19**	**103**	PG	Pn	15 52 45.8	+1.3
RNF				SG	Sb	15 53 15.0	+0.1
SGF	**Sodankyl**	**2.29**	**81**	SG	Sb	15 53 18.1	+0.3
RANF	**Ranua**	**2.71**	**113**	SG	Sb	15 53 29.8	-0.2
KEV	**Kevo**	**3.48**	**39**	SN	Sn	15 53 40.8	-3.2

HEL 26 15:52:57.3±0.5,69°41N×30°71E,h0km,ML1.0, Suspected explosion,Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**1.27**	**224**	SN	Sg	15 53 36.8	-1.4
RAJF	**Raja-Jooseppi**	**1.27**	**224**	PG	Pg	15 53 20.1	-1.6
RAJF				SB	Sg	15 53 36.8	-1.4
KEV	**Kevo**	**1.35**	**287**	PG	Pg	15 53 21.6	-1.5
	baz=101						
KEV				MSG		15 53 38.0	
	comp=Z,0.7nm,0.2s						
KEV				SG	Sg	15 53 39.2	-1.2
KMNF	**Kaamanen**	**1.35**	**261**	PG	Pg	15 53 21.6	-1.5
KMNF				SG	Sg	15 53 38.9	-1.5
VRF	**Varrio**	**1.71**	**194**	SB	Sn	15 53 50.0	-0.9
VRF	**Varrio**	**1.71**	**194**	MSG		15 53 48.4	
	comp=Z,0.8nm,0.2s						
VRF				SG	Sn	15 53 50.0	-0.9
ARA0	**ARCESS Array S**	**1.84**	**277**	SN	Pn	15 53 29.8	-0.3
ARA0	**ARCESS Array S**	**1.84**	**277**	PG	Pn	15 53 29.8	-0.3
	baz=97						
ARA0				SG	Sn	15 53 53.4	-0.6
HEF	**Hetta**	**2.74**	**252**	MSG		15 54 17.9	
	comp=Z,0.5nm,0.2s						
HEF				SB	Sb	15 54 19.2	-2.0

*IDC **26** 15:58:07.0±1.2,6°12S×143°11E,h0km,mb3.8/3, mbtmp3.8/5,ML1.3/1,Error ellipse: s-maj=41.3km s-min=26.9km az=60.0*
ISC 26 15:58:11.9±1.0,6°3S±0°1×142°9E±0°1,h35km,n6,σ1s86/7, mb3.8/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.19**	**126**	Pn	**Pn**	**15 59 26.9**	**-0.2**
	0.8nm,0.3s,baz=87,slow=18,SNR=2.5						
PMG				Sn	**Sn**	**16 00 26.2**	**+0.5**
	3.6nm,0.3s,baz=45,slow=23,SNR=8.3						
	4.2nm,0.5s						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**16 01 50.6**	**-2.4**
	0.3nm,0.3s,baz=31,slow=13,SNR=7.9						
WRA				Lg	Lg	16 06 42.3	
	0.1nm,0.3s,baz=26,slow=28,SNR=3.2						
ASAR	**Alice Springs**	**19.29**	**206**	P	**P**	**16 02 36.3**	**+2.4**
	1.2nm,0.4s,baz=34,slow=10,SNR=45						
MKAR	**Makanchi Array**	**75.21**	**322**	P	**P**	**16 09 52.0**	**+1.0**
	0.6nm,0.9s,baz=98,slow=7.7,SNR=4.5						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**84.67**	**325**	P	**P**	**16 10 42.0**	**+0.1**
	0.9nm,0.6s						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**16 10 54.1**	**-1.1

WRA	**Warramunga Arr**	**15.73**	**210**	Pn		**Pn**	**16 20 07.3**	**-0.6**
	0.9nm,0.3s,baz=30,slow=14,SNR=28							
WRA				Sn		**Sn**	**16 22 54.5**	**-6.7**
	0.4nm,0.3s,baz=30,slow=23,SNR=1.6							
WRA				Lg		Lg	16 24 48.5	
	0.3nm,0.3s,baz=29,slow=26,SNR=6.0							
KNRA	**Kununurra**	**16.50**	**235**	Pn		**Pn**	**16 20 17.1**	**-0.7**
KNRA	**Kununurra**	**16.50**	**235**	P		**Pn**	**16 20 17.2**	**-0.5**
SOEI	**Soe**	**18.57**	**258**			**P**	**16 20 41.4**	**-1.7**
SOEI				IAmb		IAmb	16 21 26.4	
	comp=Z,28nm,0.8s							
ASAR	**Alice Springs**	**19.14**	**205**			**Pn**	**16 20 50.1**	**-0.2**
ASAR	**Alice Springs**	**19.14**	**205**	P		**Pn**	**16 20 53.1**	**+2.8**
	comp=Z,31nm,0.7s,baz=30,slow=12,SNR=131							
ASAR				S		**Sn**	**16 24 21.2**	**-2.7**
	comp=Z,3.4nm,0.8s,baz=17,slow=28,SNR=7.0							
ASAR				Lg		Lg	16 26 37.9	
	comp=Z,0.1nm,0.3s,baz=26,slow=29,SNR=2.4							
FITZ	**Fitzroy Crossi**	**20.32**	**234**	Pn		Pn	16 21 03.7	-0.5
TOLI2	**Tolitoli**	**23.14**	**288**	P		**P**	**16 21 32.5**	**+0.2**
STKA	**Stephens Creek**	**25.36**	**182**	P		**P**	**16 21 52.4**	**-0.4**
STKA	**Stephens Creek**	**25.36**	**182**	P		**P**	**16 21 54.8**	**+2.0**
	comp=Z,4.3nm,0.7s,baz=352,slow=8.0,SNR=7.3							
	comp=Z,4.3nm,0.7s							
MJAR	**Matsushiro Arr**	**42.93**	**355**	P		**P**	**16 24 21.6**	**-2.8**
	comp=Z,1.7nm,0.8s,baz=170,slow=11,SNR=1.9							
	comp=Z,1.7nm,0.8s							
KSRS	**Korea Array**	**45.77**	**344**	P		**P**	**16 24 47.1**	**0.0**
	comp=Z,1.4nm,0.9s,baz=159,slow=8.3,SNR=3.7							
	comp=Z,1.4nm,0.9s							
JTM	**Tenmabayashi**	**46.99**	**358**	P		**P**	**16 24 55.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**49.74**	**301**	P		**P**	**16 25 18.1**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=120,slow=7.6,SNR=1.9							
	comp=Z,0.3nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.30**	**350**	P		**P**	**16 25 27.4**	**-2.1**
	comp=Z,1.1nm,0.6s,baz=157,slow=7.5,SNR=5.7							
	comp=Z,1.1nm,0.6s							
SONM	**Songino Array**	**62.77**	**333**	P		**P**	**16 26 50.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=144,slow=6.2,SNR=2.8							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**75.14**	**322**	P		**P**	**16 28 08.0**	**+0.4**
MKAR	**Makanchi Array**	**75.14**	**322**	P		**P**	**16 28 08.6**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=101,slow=7.4,SNR=12							
	comp=Z,1.7nm,0.9s							
MAKZ	**Makanchi**	**75.34**	**322**	P		**P**	**16 28 09.1**	**+0.3**
KSH	**Kashi**	**76.51**	**313**	P		P	16 28 20.8	+5.1
KSH				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**77.13**	**329**	P		**P**	**16 28 18.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=132,slow=4.1,SNR=2.1							
	comp=Z,0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**79.04**	**324**	P		**P**	**16 28 28.6**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=118,slow=5.1,SNR=5.1							
	comp=Z,0.5nm,0.3s							
M14K	**Bethel**	**79.56**	**24**	P		**P**	**16 28 32.5**	**+0.6**
L14K	**Kuka Creek**	**79.60**	**24**	P		**P**	**16 28 33.0**	**+0.9**
L14K				IAmb		IAmb	16 28 47.0	
	comp=Z,22nm,1.5s							
K15K	**Wolf Creek Mou**	**80.59**	**23**	P		**P**	**16 28 37.9**	**+0.3**
M16K	**Timber Creek**	**80.95**	**25**	P		**P**	**16 28 40.4**	**+1.0**
L16K	**Owhat River**	**81.09**	**24**	P		**P**	**16 28 40.9**	**+0.7**
K17K	**Iditarod**	**82.09**	**23**	P		**P**	**16 28 46.4**	**+0.9**
K17K				IAmb		IAmb	16 28 51.5	
	comp=Z,13nm,1.1s							
H17K	**Granite Mounta**	**82.65**	**21**	P		**P**	**16 28 49.0**	**+0.6**
H17K				IAmb		IAmb	16 29 09.1	
	comp=Z,8.9nm,1.4s							
J18K	**Innoko River**	**83.09**	**23**	P		**P**	**16 28 51.1**	**+0.4**
J18K				IAmb		IAmb	16 29 11.5	
	comp=Z,7.4nm,1.3s							
TTA	**Tatalina**	**83.11**	**24**	P		**P**	**16 28 50.8**	**0.0**
TTA				IAmb		IAmb	16 29 04.4	
	comp=Z,11nm,1.4s							
H18K	**Honhosa River**	**83.32**	**21**	P		**P**	**16 28 52.1**	**+0.3**
H18K				IAmb		IAmb	16 28 53.3	
	comp=Z,8.8nm,1.4s							
QSPA	**South Pole Qui**	**83.56**	**180**	P		**P**	**16 28 55.1**	**+1.8**
	comp=Z,3.4nm,1.1s,baz=151,slow=2.1,SNR=10							
	comp=Z,3.4nm,1.1s							
G18K	**Tagagawik**	**83.60**	**21**	P		**P**	**16 28 53.5**	**+0.2**
G18K				IAmb		IAmb	16 29 02.6	
	comp=Z,4.2nm,1.1s							
E18K	**Tukpahlearik C**	**83.77**	**19**	P		**P**	**16 28 54.2**	**+0.1**
E18K				IAmb		IAmb	16 29 12.2	
	comp=Z,9.5nm,1.5s							
K20K	**Telida**	**84.09**	**24**	P		**P**	**16 28 56.1**	**+0.3**
K20K				IAmb		IAmb	16 28 57.2	
	comp=Z,5.1nm,1.0s							
H19K	**Roundabout Mou**	**84.20**	**21**	P		**P**	**16 28 57.1**	**+0.8**
H19K				IAmb		IAmb	16 29 06.4	
	comp=Z,6.7nm,1.3s							
C18K	**Utukok River**	**84.27**	**18**	P		**P**	**16 28 56.8**	**+0.1**
NRIK	**Noril'sk**	**84.39**	**343**	P		**P**	**16 28 57.5**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=129,slow=9.0,SNR=2.8							
	comp=Z,1.8nm,0.6s							
BVAR	**Borovoye Array**	**84.62**	**325**	P		**P**	**16 28 59.8**	**+1.1**
	comp=Z,7.7nm,0.9s,baz=111,slow=6.9,SNR=20							
	comp=Z,7.7nm,0.9s							
SUA	**Susitna One**	**84.67**	**26**	P		**P**	**16 28 58.8**	**-0.2**
E19K	**Redstone River**	**84.89**	**20**	P		**P**	**16 29 00.1**	**+0.3**
E19K				IAmb		IAmb	16 29 33.2	
	comp=Z,8.1nm,1.2s							
CAST	**Castle Rocks**	**84.92**	**24**	P		**P**	**16 29 00.1**	**+0.1**
CAST				IAmb		IAmb	16 29 03.9	
	comp=Z,4.3nm,1.3s							
C19K	**Lookout Ridge**	**85.00**	**18**	P		**P**	**16 29 00.9**	**+0.6**
C19K				IAmb		IAmb	16 29 06.4	
	comp=Z,6.4nm,1.0s							
F20K	**Avaraart Lake**	**85.20**	**20**	P		**P**	**16 29 02.2**	**+0.9**
F20K				IAmb		IAmb	16 29 05.8	
	comp=Z,4.0nm,1.1s							
IMAR	**Indian Mountai**	**85.40**	**22**	P		**P**	**16 29 02.7**	**+0.3**
BPAW	**Bear Paw Mtn.**	**85.65**	**24**	P		**P**	**16 29 03.8**	**+0.2**
BPAW				IAmb		IAmb	16 29 33.5	
	comp=Z,5.9nm,1.2s							
I21K	**Tanana**	**85.71**	**23**	P		**P**	**16 29 04.8**	**+1.0**
I21K				IAmb		IAmb	16 29 17.6	
	comp=Z,4.3nm,1.0s							
SML	**Sawmill**	**85.87**	**26**	P		**P**	**16 29 04.9**	**+0.1**
MLY	**Manley**	**86.12**	**23**	P		**P**	**16 29 06.0**	**0.0**
MLY				IAmb		IAmb	16 29 10.8	
	comp=Z,3.1nm,0.8s							
SCM	**Sheep Creek Mo**	**86.33**	**27**	P		**P**	**16 29 07.1**	**0.0**
I23K	**Minto, Yukon-K**	**86.71**	**23**	P		**P**	**16 29 08.8**	**0.0**
I23K				IAmb		IAmb	16 29 09.2	
	comp=Z,6.9nm,1.4s							
DHY	**Denali Highway**	**86.75**	**25**	P		**P**	**16 29 09.7**	**+0.4**
DHY				IAmb		IAmb	16 29 15.5	
	comp=Z,4.0nm,0.7s							
M24K	**Tolsona, Glenn**	**86.93**	**26**	P		**P**	**16 29 10.8**	**+0.7**
E22K	**Anaktuvuk Pass**	**87.03**	**20**	P		**P**	**16 29 10.9**	**+0.5**
E22K				IAmb		IAmb	16 29 16.8	
	comp=Z,4.1nm,1.0s							
D22K	**Ayikyak River**	**87.06**	**19**	P		**P**	**16 29 11.4**	**+0.9**
G23K	**Bananza Creek**	**87.07**	**22**	P		**P**	**16 29 11.1**	**+0.5**
G23K				IAmb		IAmb	16 29 40.8	
	comp=Z,7.3nm,1.4s							
H24K	**Noodor Dome**	**87.54**	**23**	P		**P**	**16 29 13.2**	**+0.2**
IL31		**87.55**	**24**	P		**P**	**16 29 11.8**	**-1.1**
IL31				IAmb		IAmb	16 29 12.4	
	comp=Z,3.4nm,0.8s							
ILAR	**Eielson Array**	**87.55**	**24**	P		**P**	**16 29 12.0**	**-0.9**
ILAR	**Eielson Array**	**87.55**	**24**	P		**P**	**16 29 11.8**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=255,slow=4.9,SNR=34							
	comp=Z,2.2nm,0.6s							
CRQM	**Cirque**	**87.89**	**28**	P		**P**	**16 29 15.2**	**+0.3**
G24K	**Hadweenzic Riv**	**88.01**	**22**	P		**P**	**16 29 15.7**	**+0.6**
MENT	**Mentasta**	**88.28**	**26**	P		**P**	**16 29 16.9**	**+0.4**
MENT				IAmb		IAmb	16 29 17.4	
	comp=Z,3.4nm,0.8s							
J26L	**Joseph Creek**	**88.81**	**25**	P		**P**	**16 29 19.5**	**+0.4**
J26L				IAmb		IAmb	16 29 43.4	
	comp=Z,7.9nm,1.5s							
L27K	**Beaver Creek,**	**89.14**	**26**	P		**P**	**16 29 21.3**	**+0.8**
L27K				IAmb		IAmb	16 29 38.3	
	comp=Z,7.2nm,1.5s							
D25K	**Kavik River**	**89.32**	**20**	P		**P**	**16 29 21.7**	**+0.5**
BMAR	**Burnt Mountain**	**89.32**	**22**	P		**P**	**16 29 22.4**	**+1.1**
DBIC	**Dimbokro**	**147.79**	**272**	PKPbc		**PKiKP**	**16 36 13.3**	**+0.2**
	comp=Z,5.4nm,1.0s,baz=66,slow=4.1,SNR=3.8							

*UCR **26** 16:17:41.8±1.0,8.°50N×83.°30W,h11km±2km,MW3.8*
*CATAC **26** 16:17:41.7±0.5,8.°50N×83.°33W,h2km±3km,ML3.0*
ISC 26 16:17:42.2±1.0,**8.°53N**±0.°04×**83.°32W**±0.°03,**h11**km±6km,
n33,σ0**°76/40,1C-6D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIME	**Puerto Jimenez**	**0.01**	**313**	*i* P		**Pg**	**16 17 43.8**	**-0.4**
JIME				*e*S		**Sg**	**16 17 46.1**	**+0.6**
PIRO	**Carate, Puerto**	**0.13**	**188**	⇑*i* P		**Pg**	**16 17 44.7**	**-0.6**
FITO	**Golfito**	**0.19**	**60**	⇓*e*P		**Pg**	**16 17 45.7**	**-0.6**
FITO				*e*S		**Sg**	**16 17 49.0**	**-0.1**
EDAD	**Golfito**	**0.19**	**52**	⇓*i*P		**Pg**	**16 17 45.9**	**-0.5**
CCOL	**Caracol de Cor**	**0.36**	**110**	⇓*i*P		**Pg**	**16 17 49.4**	**0.0**
CCOL	**Caracol de Cor**	**0.36**	**110**	*i* P		**Pg**	**16 17 48.4**	**-1.0**
CCOL				IAML			16 17 59.4	
	comp=Z,4μm,1.0s							
PLAN	**Los Planes de**	**0.38**	**291**	*i* P		**Pg**	**16 17 49.7**	**-0.1**
PLAN				IAML			16 17 59.4	
	comp=Z,3μm,1.0s							
CDITO	**Canoas**	**0.44**	**85**	*e*P		**Pg**	**16 17 50.3**	**-0.7**
CDITO	**Canoas**	**0.44**	**85**	*i* P		**Pg**	**16 17 50.2**	**-0.7**
CDITO				*i* S		**Sg**	**16 17 57.3**	**+0.5**
CDITO				IAML			16 18 01.5	
	comp=Z,930nm,1.0s							
EDPN	**Palmar Norte**	**0.45**	**342**	⇓*i*P		**Pg**	**16 17 50.6**	**-0.4**
EDP2	**Potrero Grande**	**0.50**	**16**	*e*P		**Pg**	**16 17 51.9**	**-0.1**
BURE	**Buenos Aires**	**0.64**	**358**	*e*P		**Pg**	**16 17 54.3**	**-0.3**
BRU2	**Volcan**	**0.67**	**67**	*e*P		**Pb**	**16 17 55.8**	**-0.2**
BRU2	**Volcan**	**0.67**	**67**	*i* P		**Pb**	**16 17 55.8**	**-0.2**
BRU2				*i* S		**Sg**	**16 18 04.6**	**+0.4**
BRU2				IAML			16 18 10.4	
	comp=Z,760nm,1.0s							
SRBA	**San Rafael, Bu**	**0.70**	**357**	⇓*e*P		**Pg**	**16 17 54.9**	**-0.9**
SRBA	**San Rafael, Bu**	**0.70**	**357**	*i* P		**Pg**	**16 17 54.7**	**-1.0**
SRBA				*i* S		**Sg**	**16 18 05.1**	**+0.2**
SRBA				IAML			16 18 09.6	
	comp=Z,480nm,1.0s							
DRK0	**Durika**	**0.73**	**6**	*e*P		**Pg**	**16 17 55.5**	**-0.9**
CDM	**Cerro de Muert**	**1.11**	**337**	*e*P		**Pg**	**16 18 02.2**	**-1.4**
CDM	**Cerro de Muert**	**1.11**	**337**	*i* P		**Pg**	**16 18 02.0**	**-1.6**
CDM				IAML			16 18 23.5	
	comp=Z,200nm,1.0s							
RIMA	**Rio Macho**	**1.34**	**336**	*e*P		**Pn**	**16 18 05.5**	**-1.5**
RIMA	**Rio Macho**	**1.34**	**336**	*i* P		**Pn**	**16 18 05.4**	**-1.6**
RIMA				*i* S		**Sb**	**16 18 25.8**	**+1.1**
RIMA				IAML			16 18 27.5	
	comp=Z,130nm,1.0s							
LCR2	**La Lucha 2**	**1.38**	**331**	*e*P		**Pn**	**16 18 07.7**	**+0.1**
LCR2	**La Lucha 2**	**1.38**	**331**	*i* P		**Pn**	**16 18 07.0**	**-0.6**
LCR2				*i* S		**Sn**	**16 18 27.1**	**+1.1**
LCR2				IAML			16 18 31.0	
	comp=Z,140nm,1.0s							
OCM	**Ochomogo**	**1.50**	**335**	*i* P		**Pn**	**16 18 09.3**	**+0.1**
OCM				IAML			16 18 36.2	
	comp=Z,170nm,1.0s							
VTCV	**VTCV, Calle Va**	**1.50**	**344**	*e*P		**Pn**	**16 18 09.8**	**+0.6**
VTCV	**VTCV, Calle Va**	**1.50**	**344**	*i* P		**Pn**	**16 18 09.7**	**+0.5**
VTCV				IAML			16 18 33.6	
	comp=Z,320nm,1.0s							
CVTV	**Tajo**	**1.52**	**344**	*e*P		**Pn**	**16 18 10.3**	**+0.6**
CVTQ	**Turrialba Volc**	**1.53**	**343**	*e*P		**Pn**	**16 18 10.3**	**+0.5**
HAYA	**Volcan Irazu**	**1.53**	**340**	*i* P		**Pn**	**16 18 09.9**	**+0.1**
HAYA				IAML			16 18 35.0	
	comp=Z,360nm,1.0s							
VTLA	**Turrialba Volc**	**1.53**	**343**	*e*P		**Pn**	**16 18 09.8**	**+0.1**
VICA	**Volcano Irazu**	**1.53**	**340**	*e*P		**Pn**	**16 18 09.7**	**-0.2**
VTUC	**Crater, Volcan**	**1.55**	**344**	*i* P		**Pb**	**16 18 11.4**	**+0.3**
VTUC				IAML			16 18 37.4	
	comp=Z,130nm,1.0s							
JACO	**JACO, Garabito**	**1.74**	**310**	*i* P		**Pb**	**16 18 13.8**	**-0.3**
JACO				IAML			16 18 51.9	
	comp=Z,71nm,1.0s							

*IDC **26** 16:28:20.0±1.0,5.°90S×142.°99E,h0km,mb4.0/4,*
mbtmp3.9/7,ML1.2/1,Error ellipse: s-maj=40.2km
s-min=22.7km az=67.0
ISC 26 16:28:25.0±0.9,**6.°31S**±0.°09×**142.°60E**±0.°10,**h35**km,**n8,**
σ2°93/11,mb3.9/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**5.47**	**125**	Pn		**Pn**	**16 29 42.7**	**-1.3**
	0.5nm,0.3s,baz=241,slow=9.4,SNR=2.1							
PMG				Sn		**Sn**	**16 30 45.4**	**-0.3**
	2.3nm,0.3s,baz=218,slow=21,SNR=10							
	3.7nm,0.6s							
CTA	**Charters Tower**	**14.15**	**166**	Pn		**Pn**	**16 31 44.9**	**+1.8**
	2.0nm,0.6s,baz=16,slow=18,SNR=1.9							
WRA	**Warramunga Arr**	**15.75**	**210**	Pn		**P**	**16 32 06.2**	**-1.7**
	0.2nm,0.3s,baz=29,slow=14,SNR=9.0							
WRA				Sn		**Sn**	**16 34 53.0**	**-4.9**
	0.2nm,0.3s,baz=32,slow=19,SNR=1.5							
WRA				Lg		Lg	16 36 53.9	
	0.1nm,0.3s,baz=33,slow=29,SNR=4.6							
ASAR	**Alice Springs**	**19.18**	**205**	P		**Pn**	**16 32 51.8**	**+4.9**
	4.9nm,0.8s,baz=30,slow=12,SNR=48							
ASAR				S		**S**	**16 36 19.9**	**-1.4**
	0.5nm,0.7s,baz=26,slow=28,SNR=3.4							
ASAR				Lg		Lg	16 38 41.3	
	baz=13,slow=28							
MKAR	**Makanchi Array**	**74.99**	**322**	P		**P**	**16 40 03.1**	**+0.3**
	0.3nm,0.4s,baz=115,slow=7.3,SNR=6.4							
	0.3nm,0.4s							
QSPA	**South Pole Qui**	**83.66**	**180**	P		**P**	**16 40 51.8**	**+1.9**
	0.9nm,0.8s,baz=72,slow=9.6,SNR=2.1							
	0.9nm,0.8s							
BVAR	**Borovoye Array**	**84.46**	**325**	P		**P**	**16 40 54.4**	**+0.3**
	2.2nm,0.6s,baz=101,slow=7.5,SNR=11							
	2.2nm,0.6s							
ILAR	**Eielson Array**	**87.51**	**24**	P		**P**	**16 41 06.4**	**-2.5**
	0.5nm,0.7s,baz=268,slow=4.9,SNR=6.6							
	0.5nm,0.7s							

*IDC **26** 16:36:06.8±3.2,41.°67N×19.°23E,h0km,mb3.5/3,*
mbtmp3.5/8,ML3.3/5,Error ellipse: s-maj=48.1km
s-min=14.4km az=35.0
*TIR **26** 16:36:12.3,41.°86N×19.°77E,h27km±1km,Ml3.6*
*RHSSO **26** 16:36:12.1±0.6,41.°67N×19.°76E,h8km±2km,ML3.5/15*
*THE **26** 16:36:13.3,41.°81N×19.°73E,h0km±2km,ML3.3/3,Error*
ellipse: s-maj=4.5km s-min=1.5km az=319.0
*SKO **26** 16:36:13.7,41.°89N×19.°83E,h0km*
*PDG **26** 16:36:13.2±0.0,41.°81N×19.°78E,h13km,MD3.5/8,*
ML3.4/12,Error ellipse: s-maj=0.0km s-min=0.1km az=0.0
*BEO **26** 16:36:14.0±0.3,41.°87N×19.°88E,h0km,ML3.1/17*
ISC 26 16:36:13.7±0.8,**41.°82N**±0.°02×**19.°77E**±0.°02,**h13**km±6km,
n132,σ1**°50/208,27C-15D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PUK	**Puka**	**0.24**	**22**	P		**Pg**	**16 36 19.1**	**+0.2**
	baz=25							
PUK				S		**Sb**	**16 36 23.6**	**-0.7**
	baz=25							
PUK				AMP				
	comp=E,102nm,0.2s,baz=25							
ULC	**Ulcinj**	**0.42**	**290**	⇑*i*Pg		**Pg**	**16 36 21.3**	**-0.8**
ULC				*i* Sg		**Sg**	**16 36 28.2**	**+0.5**
TIR	**Tirane**	**0.48**	**171**	P		**Pg**	**16 36 22.3**	**-0.8**
	baz=172							
TIR				S		**Sb**	**16 36 30.7**	**-0.2**
	baz=172							
TIR				AMP				
	comp=E,5.5nm,0.5s,baz=172							
TIR	**Tirane**	**0.48**	**171**	P		**Pg**	**16 36 21.9**	**-1.2**
TIR				S		**Sg**	**16 36 28.9**	**-0.5**
TIR	**Tirane**	**0.48**	**171**	*e*Pg		**Pg**	**16 36 22.5**	**-0.6**
TIR				*e*Sg		**Sb**	**16 36 30.2**	**-0.7**
PHP	**Peshkopia**	**0.52**	**105**	P		**Pg**	**16 36 23.0**	**-0.9**
	baz=108							
PHP				S		**Sg**	**16 36 31.4**	**+0.6**
	baz=108							
PHP				AMP				
	comp=N,43nm,0.1s,baz=108							
PHP	**Peshkopia**	**0.52**	**105**	P		**Pg**	**16 36 23.1**	**-0.8**
PHP				S		**Sb**	**16 36 31.9**	**-0.3**
DRME	**Dracevica, Mon**	**0.57**	**310**	⇑*i*Pg		**Pg**	**16 36 24.1**	**-0.8**
DRME				*i* Sg		**Sg**	**16 36 33.3**	**+0.8**
DRME	**Dracevica, Mon**	**0.57**	**310**	⇓*i*Pg		**Pg**	**16 36 24.0**	**-0.8**
DRME				*e*Sg		**Sb**	**16 36 33.7**	**0.0**
BCI	**Bajram Curri**	**0.59**	**22**	P		**Pg**	**16 36 24.7**	**-0.6**
	baz=23							
BCI				S		**Sg**	**16 36 31.8**	**-1.3**
	baz=23							
BCI				AMP				
	comp=N,12nm,0.4s,baz=23							
PVY	**Plav**	**0.79**	**10**	⇓*i*Pg		**Pg**	**16 36 28.1**	**-0.9**
PVY				*i* Sg		**Sb**	**16 36 40.6**	**+0.6**
BUM	**Brajici-Budva**	**0.81**	**307**	⇓*i*Pg		**Pg**	**16 36 28.4**	**-1.0**
BUM				*i* Sg		**Sb**	**16 36 41.4**	**+0.7**
CEME	**Cevo**	**0.96**	**319**	⇓*i*Pg		**Pg**	**16 36 31.1**	**-1.3**
CEME				*i* Sg		**Sb**	**16 36 46.5**	**+1.4**
OHR	**Ohrid**	**1.05**	**132**	*e*Pg		**Pg**	**16 36 32.9**	**-1.0**
OHR				*e*Sg		**Sg**	**16 36 47.0**	**-0.5**
OHR	**Ohrid**	**1.05**	**132**	*i* Pg		**Pg**	**16 36 32.4**	**-1.5**
OHR				*i* Sg		**Sb**	**16 36 48.5**	**+1.2**
KOME	**Kolasin**	**1.05**	**350**	⇑*i*Pg		**Pg**	**16 36 33.0**	**-0.9**
KOME				*i* Sg		**Sb**	**16 36 49.3**	**+1.8**
IVA	**Berane**	**1.06**	**5**	⇑*i*Pg		**Pg**	**16 36 33.0**	**-1.1**
IVA				*i* Sg		**Sb**	**16 36 49.7**	**+2.0**
NKME	**Niksic**	**1.12**	**328**	⇓*i*Pg		**Pg**	**16 36 34.2**	**-1.2**
NKME				*i* Sg		**Sn**	**16 36 52.0**	**+1.4**
HCY	**Herceg Novi**	**1.14**	**304**	⇑*i*Pg		**Pg**	**16 36 34.4**	**-1.2**
HCY				*i* Sg		**Sn**	**16 36 52.4**	**+1.5**
HCY	**Herceg Novi**	**1.14**	**304**	⇓*i*Pg		**Pg**	**16 36 33.3**	**-2.3**
HCY				*e*Sg		**Sb**	**16 36 51.1**	**+1.1**
SKO	**Skopje**	**1.25**	**82**	*e*Pg		**Pg**	**16 36 35.9**	**-1.9**
SKO				*e*Sg		**Sg**	**16 36 50.0**	**-4.2**
VLO	**Vlora**	**1.36**	**189**	P		**Pb**	**16 36 40.9**	**+1.8**
	baz=189							
TREB	**Trebinje**	**1.39**	**311**	*e*Pg		**Pg**	**16 36 38.6**	**-1.7**
TREB				*e*Sg		**Sn**	**16 36 58.9**	**+1.9**
BRY	**Bratogost**	**1.42**	**320**	⇑*i*Pg		**Pg**	**16 36 39.5**	**+0.2**
BRY				*i* Sg		**Sn**	**16 37 01.0**	**+3.1**
BRY	**Bratogost**	**1.42**	**320**	⇑*i*Pn		**Pn**	**16 36 38.9**	**-0.4**
BRY				*e*Sg		**Sn**	**16 37 01.2**	**+3.3**
KBN	**Korca**	**1.42**	**147**	P		**Pn**	**16 36 39.9**	**+0.6**
	baz=147							
KBN				S		**Sn**	**16 37 01.3**	**+3.4**
	baz=147							
KBN				AMP				
	comp=E,2.7nm,0.8s,baz=147							
SJES	**Sjenica**	**1.45**	**6**	*e*Pg		**Pn**	**16 36 39.7**	**-0.1**
SJES				*e*Sg		**Sg**	**16 36 58.7**	**-1.7**
SJES	**Sjenica**	**1.45**	**6**	*e*Pn		**Pn**	**16 36 40.4**	**+0.6**
SJES				*e*Sn		**Sn**	**16 37 01.7**	**+3.0**
DBRK	**Dubrovnik**	**1.48**	**306**	*e*Pn		**Pn**	**16 36 39.2**	**-0.8**
DBRK				Sn		**Sn**	**16 37 01.4**	**+2.2**
UPM	**Unac-Piva**	**1.52**	**335**	⇓*i*Pg		**Pn**	**16 36 41.4**	**+0.5**
UPM				*i* Sg		**Sn**	**16 37 03.8**	**+3.1**
UPM	**Unac-Piva**	**1.52**	**335**	⇑*i*Pn		**Pn**	**16 36 40.9**	**0.0**
UPM				*e*Sn		**Sn**	**16 37 03.1**	**+2.4**
PLE	**Pljevlja**	**1.54**	**350**	⇑*i*Pg		**Pn**	**16 36 41.5**	**+0.5**
PLE				*i* Sg		**Sb**	**16 37 03.8**	**+2.2**
FNA	**Florina**	**1.59**	**130**	P		**Pn**	**16 36 41.5**	**-0.1**
	baz=130							
FNA				S		**Sg**	**16 37 05.1**	**+0.2**
	baz=130							
FNA	**Florina**	**1.59**	**130**	P		**Pn**	**16 36 41.6**	**-0.1**
FNA				S		**Sg**	**16 37 04.3**	**-0.6**
	comp=E,2μm,0.3s							
FNA	**Florina**	**1.59**	**130**	*i* Pg		**Pn**	**16 36 41.8**	**+0.1**
FNA				*i* Sg		**Sg**	**16 37 04.6**	**-0.3**
KLINJ	**Klinje**	**1.61**	**327**	*e*Pn		**Pn**	**16 36 42.2**	**+0.2**
KLINJ				*e*Sn		**Sb**	**16 37 05.0**	**+1.3**
NEST	**Nestorio**	**1.70**	**145**	P		**Pn**	**16 36 44.5**	**+1.3**
NEST				S		**Sg**	**16 37 07.6**	**-0.9**
	comp=E,368nm,0.5s							
SELS	**Selova**	**1.72**	**35**	*e*Pg		**Pn**	**16 36 44.2**	**+0.8**
SELS				*e*Sg		**Sn**	**16 37 06.7**	**+1.5**
IVAS	**Ivanjica**	**1.78**	**9**	*e*Pg		**Pn**	**16 36 45.6**	**+1.3**
IVAS		

VIRC	**Vir**	**4.25**	**307**	*e*Pn		**Pn**	**16 37 18.3**	**+0.2**
MORH	**Mrgy, Hungar**	**4.47**	**350**	⇓P		**Pn**	**16 37 22.2**	**+1.0**
MORH				⇑S		**Sn**	**16 38 11.9**	**-1.1**
NVLJ	**Novalja**	**4.51**	**309**	*e*Pn		**Pn**	**16 37 21.2**	**-0.5**
SIRR	**Siria**	**4.65**	**16**	⇓P		**Pn**	**16 37 24.9**	**+1.3**
ELND	**Elena**	**4.66**	**74**	⇑P		**Pn**	**16 37 26.0**	**+2.3**
BOJS	**Bojanci**	**4.93**	**320**	*e*Pn		**Pn**	**16 37 27.1**	**-0.4**
BOJS				*e*Sn		**Sn**	**16 38 23.7**	**-0.7**
CRES	**Cresnjev**	**5.08**	**324**	*e*Pn		**Pn**	**16 37 29.7**	**+0.2**
CRES				*e*Sn		**Sn**	**16 38 27.7**	**-0.3**
VOIR		**5.27**	**45**	⇑P		**Pn**	**16 37 34.0**	**+1.8**
BRJN	**Brijuni**	**5.37**	**307**	*e*Pn		**Pn**	**16 37 33.9**	**+0.5**
MARR	**Marisel-Cluj**	**5.42**	**25**	⇓P		**Pn**	**16 37 35.4**	**+1.1**
CEY	**Cerknica**	**5.51**	**317**	*e*Pn		**Pn**	**16 37 35.2**	**-0.2**
CEY				*e*Sn		**Sn**	**16 38 38.0**	**-0.6**
SKDS	**Skadanscina**	**5.59**	**314**	*e*Pn		**Pn**	**16 37 36.5**	**-0.1**
SKDS				*e*Sn		**Sn**	**16 38 39.4**	**-1.4**
MLR	**Muntele Rosu**	**5.79**	**49**	⇑P		**Pn**	**16 37 42.3**	**+2.9**
MLR	**Muntele Rosu**	**5.79**	**49**	Pn		**Pn**	**16 37 41.3**	**+1.9**
	comp=E,1.6nm,0.3s,baz=153,slow=8.1,SNR=10							
MLR				Sn		**Sn**	**16 38 47.4**	**+1.7**
	comp=E,0.7nm,0.3s,baz=188,slow=18,SNR=1.9							
	comp=E,3.7nm,0.4s							
SOKA	**Soboth**	**5.93**	**327**	*e*Pn		**Pn**	**16 37 44.5**	**+3.2**
	comp=E,0.5nm,0.2s							
OBKA	**Obir**	**6.01**	**323**	*e*Pn		**Pn**	**16 37 44.5**	**+2.1**
	comp=E,0.2nm,0.2s							
PSZ	**Piszkesteto**	**6.10**	**1**	⇓P		**Pn**	**16 37 44.4**	**+0.8**
ARSA	**Arzberg**	**6.22**	**332**	*i* Pn		**Pn**	**16 37 48.5**	**+3.2**
	comp=E,2.1nm,0.5s							
PLOR	**Plostina**	**6.40**	**49**	⇑P		**Pn**	**16 37 49.9**	**+2.1**
VRI	**Vrincioaia**	**6.45**	**49**	⇑P		**Pn**	**16 37 50.7**	**+2.3**
KECS	**Kecovo**	**6.68**	**4**	*e*PN		**Pn**	**16 37 53.2**	**+1.6**
KECS				*e*SN		**Sn**	**16 39 06.8**	**-0.8**
KECS				*e*LG	Lg	16 39 10.7		
VYHS	**Vyhne**	**6.71**	**355**	*e*PN	Pn	16 37 58.4	+6.5	
VYHS				*e*SN	**Sn**	**16 39 06.3**	**-1.9**	
CONA	**Conrad Observa**	**6.71**	**337**	*e*Pn	Pn	16 38 00.8	+8.8	
	comp=E,0.7nm,0.3s							
MODS	**Modra-Piesok**	**6.79**	**346**	*e*PN	**Pn**	**16 37 56.2**	**+3.2**	
MODS				*e*SN	**Sn**	**16 39 10.8**	**+0.7**	
BURAR	**Bucovina Array**	**6.97**	**32**	⇑P	**Pn**	**16 37 56.8**	**+1.2**	
KOLS	**Kolonicke sedl**	**7.33**	**13**	*e*PN	**Pn**	**16 38 02.3**	**+1.9**	
LESA	**Schwarzleotal**	**7.55**	**320**	*e*Pn	Pn	16 38 08.7	+5.2	
	comp=E,0.9nm,0.3s							
WTTA	**Wattenberg**	**7.96**	**316**	*e*Pn	**Pn**	**16 38 10.9**	**+1.7**	
	comp=E,0.6nm,0.2s							
SQTA	**Sankt Quirin**	**8.16**	**314**	*e*Pn	**Pn**	**16 38 16.2**	**+4.2**	
	comp=E,0.9nm,0.3s							
GERES	**GERESS Array B**	**8.22**	**331**	Pn	Pn	16 38 07.2	-5.5	
	comp=E,0.2nm,0.3s,baz=147,slow=9.4,SNR=1.6							
GERES				Sn	**Sn**	**16 39 39.4**	**-6.1**	
	comp=E,0.1nm,0.3s,baz=144,slow=27,SNR=1.0							
	comp=E,0.3nm,0.3s							
MOTA	**Moosalm**	**8.29**	**315**	*e*Pn	Pn	16 38 21.8	+8.0	
	comp=E,1.3nm,0.4s							
BRTR	**Keskin Array B**	**10.72**	**97**	Pn	**Pn**	**16 38 48.5**	**+1.4**	
	baz=282,slow=15,SNR=2.4							
	comp=E,1.3nm,1.0s							
KBZ	**Khabaz**	**17.08**	**76**	P	**Pn**	**16 40 13.1**	**+1.0**	
	baz=280,slow=12,SNR=1.6							
	comp=E,1.0nm,0.8s							
HFS	**Hagfors**	**18.72**	**350**	P	**P**	**16 40 29.3**	**-2.5**	
	comp=E,0.2nm,0.3s,baz=159,slow=12,SNR=2.1							
	comp=E,3.4nm,0.9s							
FINES	**FINESS Array B**	**20.02**	**9**	P	**P**	**16 40 43.7**	**-2.2**	
	comp=E,0.5nm,0.5s,baz=202,slow=9.7,SNR=5.7							
	comp=E,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**43.76**	**51**	P	**P**	**16 44 17.1**	**-1.6**	
	comp=E,0.8nm,0.4s,baz=280,slow=9.1,SNR=4.9							
	comp=E,0.8nm,0.4s							
MKAR	**Makanchi Array**	**43.97**	**61**	P	**P**	**16 44 18.8**	**-1.8**	
	comp=E,0.3nm,0.4s,baz=280,slow=7.7,SNR=13							
	comp=E,0.3nm,0.4s							

IDC 26 16:37:04.5±1.5, 6°25S×142°71E, h0km, mb3.3/2, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=37.0km s-min=29.2km az=68.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.41**	**126**	Pn	Pn	16 38 27.9	+1.4
	2.4nm,0.5s,baz=312,slow=10,SNR=1.5						
PMG				Sn	Sn	16 39 30.4	+0.9
	0.6nm,0.3s,baz=251,slow=6.6,SNR=2.6						
WRA	**Warramunga Arr**	**15.85**	**210**	Pn	Pn	16 40 48.7	-0.6
	0.1nm,0.3s,baz=27,slow=13,SNR=2.2						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**19.28**	**205**	P	P	16 41 30.4	-0.6
	0.1nm,0.3s,baz=34,slow=10,SNR=10						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**75.01**	**322**	P	P	16 48 49.3	+1.3
	0.1nm,0.3s,baz=120,slow=7.2,SNR=1.7						
	0.1nm,0.3s						
ILAR	**Eielson Array**	**87.41**	**24**	P	P	16 49 52.0	-1.4
	0.3nm,0.8s,baz=238,slow=5.2,SNR=2.6						
	0.3nm,0.8s						

IDC 26 16:42:05.2±1.6, 6°27S×142°88E, h0km, mb3.7/2, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=45.8km s-min=30.3km az=72.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.26**	**127**	Pn	Pn	16 43 23.8	-1.3
	1.5nm,0.3s,baz=302,slow=15,SNR=1.2						
PMG				Sn	Sn	16 44 19.6	-6.9
	2.3nm,0.3s,baz=252,slow=22,SNR=6.1						
WRA	**Warramunga Arr**	**15.92**	**211**	Pn	Pn	16 45 49.3	-1.5
	0.2nm,0.3s,baz=31,slow=12,SNR=2.3						
WRA				Sn	Sn	16 48 37.5	-11
	0.1nm,0.3s,baz=21,slow=22,SNR=2.9						
WRA				Lg	Lg	16 50 26.2	
	baz=28,slow=28,SNR=2.7						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**19.33**	**206**	P	Pn	16 46 33.1	-0.1
	1.4nm,0.5s,baz=28,slow=12,SNR=14						
MKAR	**Makanchi Array**	**75.13**	**322**	P	P	16 53 49.3	0.0
	0.3nm,0.9s,baz=109,slow=6.2,SNR=2.2						
	0.3nm,0.9s						
BVAR	**Borovoye Array**	**84.59**	**325**	P	P	16 54 40.7	+0.3
	0.6nm,0.6s,baz=112,slow=7.2,SNR=3.8						
	0.6nm,0.6s						

IDC 26 16:47:52.3±1.4, 5°94S×142°97E, h0km, mb3.6/2, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=44.0km s-min=30.6km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.39**	**130**	Pn	Pn	16 49 15.0	+0.8
	2.9nm,0.4s,baz=344,slow=4.2,SNR=2.4						
PMG				Sn	Sn	16 50 13.9	-3.1
	0.6nm,0.3s,baz=52,slow=23,SNR=2.1						
WRA	**Warramunga Arr**	**16.25**	**210**	Pn	Pn	16 51 40.0	-2.1
	0.3nm,0.3s,baz=30,slow=13,SNR=7.3						
WRA				Sn	Sn	16 54 28.2	-15
	0.1nm,0.3s,baz=24,slow=22,SNR=2.8						
WRA				Lg	Lg	16 56 20.7	
	0.1nm,0.3s,baz=36,slow=28,SNR=4.9						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**19.66**	**205**	P	P	16 52 23.6	+0.5
	baz=35,slow=11,SNR=6.9						
ASAR				Lg	Lg	16 58 13.6	
	baz=19,slow=31,SNR=3.3						
	9.3nm,0.8s						
MKAR	**Makanchi Array**	**74.93**	**322**	P	P	16 59 36.2	+0.9
	0.3nm,0.8s,baz=104,slow=4.6,SNR=2.6						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**87.03**	**24**	P	P	17 00 38.6	-0.8
	0.5nm,0.8s,baz=238,slow=5.2,SNR=5.2						
	0.5nm,0.8s						

IDC 26 16:51:01.9±5.4, 6°01S×142°01E, h0km, mb3.3/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=186.0km s-min=36.8km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.73**	**208**	Pn	Pn	16 54 44.4	-0.6
	0.1nm,0.3s,baz=25,slow=14,SNR=2.3						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**19.21**	**203**	P	P	16 55 28.1	+0.4
	0.2nm,0.3s,baz=35,slow=10.0,SNR=9.9						
	2.1nm,0.7s						
MKAR	**Makanchi Array**	**74.40**	**322**	P	P	17 02 41.7	-0.1
	0.2nm,0.6s,baz=113,slow=5.7,SNR=2.5						
	0.2nm,0.6s						

IDC 26 16:51:53.0±2.2, 6°21S×143°59E, h0km, mb3.4/2, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=96.0km s-min=33.6km az=110.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.34**	**213**	Pn	Pn	16 55 43.0	-1.0
	0.1nm,0.3s,baz=31,slow=13,SNR=1.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**19.70**	**207**	P	P	16 56 24.6	+0.5
	0.1nm,0.3s,baz=42,slow=8.8,SNR=4.5						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**75.52**	**322**	P	P	17 03 39.4	0.0
	0.2nm,0.7s,baz=114,slow=6.3,SNR=1.9						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**87.02**	**24**	P	P	17 04 40.1	+0.1
	0.2nm,0.6s,baz=248,slow=4.8,SNR=2.2						
	0.2nm,0.6s						

IDC 26 16:58:06.4±1.6, 6°21S×142°94E, h0km, mb3.6/2, mbtmp3.6/5, ML3.0/1, Error ellipse: s-maj=46.0km s-min=30.0km az=73.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.25**	**127**	Pn	Pn	16 59 25.2	-1.1
	4.2nm,0.7s,baz=317,slow=10,SNR=3.7						
PMG				Sn	Sn	17 00 23.2	-4.4
	0.3nm,0.3s,baz=232,slow=15,SNR=1.3						
WRA	**Warramunga Arr**	**16.01**	**211**	Pn	Pn	17 01 51.1	-2.0
	0.1nm,0.3s,baz=31,slow=12,SNR=2.7						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**19.41**	**206**	P	Pn	17 02 35.3	-0.1
	4.2nm,0.9s,baz=32,slow=11,SNR=19						
MKAR	**Makanchi Array**	**75.12**	**322**	P	P	17 09 50.9	+0.4
	0.1nm,0.4s,baz=101,slow=6.0,SNR=2.1						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**84.58**	**325**	P	P	17 10 41.5	-0.1
	0.8nm,0.7s,baz=103,slow=6.7,SNR=4.7						
	0.8nm,0.7s						

*IDC **26** 17:02:25.3±1.3, 6°34S×142°85E, h0km, mb3.5/3, mbtmp3.4/5, ML0.9/1, Error ellipse: s-maj=41.6km s-min=28.2km az=57.0*

ISC 26 17:02:26.6±1.0, 6°55S±0°1×142°7E±0°1, h10km, n6, σ1s55/7, mb3.3/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.32**	**124**	Pn	**Pn**	**17 03 45.2**	**-1.0**
	0.3nm,0.3s,baz=126,slow=23,SNR=1.4						
PMG				Sn	**Sn**	**17 04 49.3**	**+1.6**
	0.3nm,0.3s,baz=142,slow=22,SNR=2.0						
	2.0nm,0.6s						
WRA	**Warramunga Arr**	**15.65**	**210**	Pn	**Pn**	**17 06 06.2**	**-1.2**
	0.2nm,0.3s,baz=26,slow=13,SNR=10						
ASAR	**Alice Springs**	**19.06**	**205**	P	**Pn**	**17 06 51.0**	**+0.8**
	0.6nm,0.5s,baz=33,slow=10,SNR=17						
MKAR	**Makanchi Array**	**75.15**	**322**	P	**P**	**17 14 10.4**	**+1.1**
	0.2nm,0.6s,baz=115,slow=7.6,SNR=2.7						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**84.63**	**325**	P	**P**	**17 15 01.1**	**+0.7**
	0.6nm,0.8s,baz=107,slow=5.0,SNR=3.0						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**87.62**	**24**	P	**P**	**17 15 13.5**	**-1.4**
	0.1nm,0.6s,baz=235,slow=4.4,SNR=1.8						
	0.1nm,0.6s						

DJA 26 17:03:57.5±0.4, 3°S±4°×12°7E±°, h10km, M3.5/7, mb3.7/3, MLv3.3/7, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.75**	**134**	P	Pg	17 04 12.1	0.0
NLAI				S	Sb	17 04 22.5	-0.5
SANI	**Sanana**	**0.87**	**319**	P	Pg	17 04 14.2	-0.1
SANI				S	Sg	17 04 25.6	0.0
LBMI	**Labuha**	**2.26**	**25**	P	Pn	17 04 34.9	-0.1
LUWI	**Luwuk**	**4.13**	**294**	P	Pn	17 05 01.4	+0.7
SWI	**Sorong**	**5.04**	**69**	P	Pn	17 05 13.6	+0.3
	21nm,1.1s,0.1nm						

IDC 26 17:04:04.6±6.9, 6°03S×142°69E, h0km, mb3.5/2, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=258.7km s-min=33.8km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.03**	**210**	Pn	Pn	17 07 50.0	-1.6
	baz=33,slow=13,SNR=1.2						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**19.46**	**205**	P	P	17 08 33.6	+0.5
	0.2nm,0.3s,baz=34,slow=10,SNR=14						
	2.4nm,0.7s						
MKAR	**Makanchi Array**	**74.83**	**322**	P	P	17 15 46.8	-0.2
	0.3nm,0.9s,baz=107,slow=5.0,SNR=2.2						
	0.3nm,0.9s						
BVAR	**Borovoye Array**	**84.29**	**325**	P	P	17 16 38.6	+0.3
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.4						
	0.3nm,0.5s						

*IDC **26** 17:07:55.3±2.3, 9°64S×124°47E, h0km, mb3.3/1, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=233.4km s-min=34.4km az=56.0*
*DJA **26** 17:07:59.8±1.1, 9°S±6°×12°5E±°, h13km±5km, M3.4/6, MLv3.4/6*

ISC 26 17:07:57.2±1.3, 9°3S±0°1×125°21E±0°09, h10km, n13, σ2s82/14, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.03**	**245**	P	**Pg**	**17 08 16.7**	**-0.3**
SOEI	**Soe**	**1.03**	**245**	P	**Pg**	**17 08 16.4**	**-0.6**
MMRI	**Maumere**	**3.02**	**283**	P	**Pn**	**17 08 46.7**	**+1.7**
MMRI	**Maumere**	**3.02**	**283**	P	**Pn**	**17 08 44.2**	**-0.8**
MMRI				S	**Sn**	**17 09 18.6**	**-2.6**
EDFI	**Ende, Flores**	**3.52**	**279**	P	**Pn**	**17 08 52.2**	**+0.1**
MTN	**Manton Dam**	**6.79**	**122**	P	Pn	17 09 44.6	+7.7
KNRA	**Kununurra**	**7.21**	**152**	P	Pn	17 09 48.6	+5.9
PLAI	**Plampang**	**7.36**	**273**	P	**Pn**	**17 09 46.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**8.74**	**177**	P	**Pn**	**17 10 06.5**	**+2.8**
WRA	**Warramunga Arr**	**13.76**	**141**	Pn	**Pn**	**17 11 13.7**	**+1.2**
	0.3nm,0.3s,baz=314,slow=13,SNR=5.0						
WRA				Sn	**Sn**	**17 13 42.4**	**-3.2**
	0.2nm,0.3s,baz=316,slow=27,SNR=3.4						
	2.2nm,0.8s						
ASAR	**Alice Springs**	**16.52**	**151**	Pn	**Pn**	**17 11 50.9**	**+1.8**
	0.1nm,0.3s,baz=321,slow=12,SNR=8.0						
ASAR				Sn	**Sn**	**17 14 45.8**	**-6.8**
	baz=326,slow=18,SNR=2.7						
	0.4nm,0.4s						
AS01	**Alice Springs**	**16.54**	**151**	P	**P**	**17 11 54.4**	**+2.4**
MKAR	**Makanchi Array**	**67.68**	**330**	P	**P**	**17 18 53.8**	**-0.8**
	0.2nm,0.5s,baz=135,slow=7.9,SNR=2.2						
	0.2nm,0.5s						

IDC 26 17:08:33.0±1.9, 6°13S×142°82E, h0km, mb3.5/1, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=53.0km s-min=34.1km az=114.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.39**	**127**	Pn	Pn	17 09 54.6	-0.2
	4.3nm,0.6s,baz=309,slow=14,SNR=2.9						
PMG				Sn	Sn	17 10 53.2	-4.4
	1.0nm,0.3s,baz=232,slow=22,SNR=7.9						
WRA	**Warramunga Arr**	**16.01**	**210**	Pn	Pn	17 12 18.0	-1.7
	0.1nm,0.3s,baz=31,slow=13,SNR=1.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**19.43**	**205**	P	Pn	17 13 01.9	-0.3
	2.7nm,0.5s,baz=28,slow=12,SNR=23						
ILAR	**Eielson Array**	**87.26**	**24**	P	P	17 21 21.2	-0.1
	0.2nm,0.7s,baz=251,slow=4.8,SNR=4.3						
	0.2nm,0.7s						

IDC 26 17:14:56.7±1.7, 6°12S×143°27E, h0km, mb3.5/2, mbtmp3.3/5, ML3.6/2, Error ellipse: s-maj=49.3km s-min=30.9km az=77.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.05**	**130**	Pn	Pn	17 16 13.0	-0.8
	1.3nm,0.4s,baz=278,slow=15,SNR=1.1						
WRA	**Warramunga Arr**	**16.25**	**211**	Pn	Pn	17 18 44.5	-2.0
	0.2nm,0.3s,baz=28,slow=14,SNR=7.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**19.63**	**206**	P	Pn	17 19 28.1	-0.3
	0.2nm,0.3s,baz=34,slow=9.0,SNR=8.5						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**75.26**	**322**	P	P	17 26 41.3	-0.3
	0.1nm,0.4s,baz=104,slow=6.1,SNR=1.9						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**84.70**	**325**	P	P	17 27 33.0	+0.5
	0.3nm,0.5s,baz=108,slow=5.8,SNR=2.7						
	0.3nm,0.5s						

IDC 26 17:18:11.9±7.0, 6°16S×142°48E, h0km, mb3.5/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=260.9km s-min=35.1km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.82**	**209**	Pn	Pn	17 21 55.4	-0.9
	0.1nm,0.3s,baz=29,slow=13,SNR=2.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**19.27**	**204**	P	P	17 22 38.6	+0.3
	baz=36,slow=9.2,SNR=4.1						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**74.80**	**322**	P	P	17 29 54.2	0.0
	0.2nm,0.5s,baz=109,slow=6.6,SNR=2.5						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**84.27**	**325**	P	P	17 30 45.6	0.0
	0.3nm,0.7s,baz=95,slow=3.0,SNR=2.4						
	0.3nm,0.7s						

IDC 26 17:22:28.9±2.1, 6°19S×143°38E, h0km, mb3.4/1, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=50.6km s-min=35.2km az=72.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.92**	**131**	Pn	Pn	17 23 43.9	-0.2
	1.4nm,0.3s,baz=332,slow=14,SNR=1.6						
PMG				Sn	Sn	17 24 33.3	-8.6
	0.5nm,0.3s,baz=313,slow=18,SNR=1.5						
WRA	**Warramunga Arr**	**16.25**	**212**	Pn	Pn	17 26 16.8	-1.9
	0.1nm,0.3s,baz=34,slow=13,SNR=1.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**19.63**	**207**	P	Pn	17 27 00.1	-0.3
	0.1nm,0.3s,baz=36,slow=9.6,SNR=5.6						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**75.38**	**322**	P	P	17 34 14.5	0.0
	0.1nm,0.4s,baz=113,slow=6.6,SNR=2.8						
	0.1nm,0.4s						

*IDC **26** 17:25:50.1±2.0, 6°73S×149°95E, h0km, mb3.8/4, mbtmp3.9/5, ML2.3/1, Error ellipse: s-maj=104.5km s-min=22.4km az=122.0*

ISC 26 17:25:51.6±2.3, 6°8S±0°5×150°0E±0°7, h10km, n6, σ2s06/7, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.79**	**227**	Pn	**Pn**	**17 26 52.3**	**+2.3**
	16nm,0.3s,baz=17,slow=7.4,SNR=12						
PMG				Sn	**Sn**	**17 27 32.3**	**-2.3**
	41nm,0.3s,baz=27,slow=21,SNR=11						
	47nm,0.4s						
WRA	**Warramunga Arr**	**20.01**	**228**	P	**P**	**17 30 23.8**	**-0.8**
	2.3nm,0.4s,baz=52,slow=11,SNR=11						
	2.3nm,0.4s						
ASAR	**Alice Springs**	**22.78**	**221**	P	**P**	**17 30 55.1**	**+0.7**
	1.7nm,0.8s,baz=56,slow=9.3,SNR=9.0						
	1.7nm,0.8s						
PETK	**Petropavlovsk-**	**60.07**	**5**	P	**P**	**17 35 59.9**	**+1.3**
	2.0nm,0.9s,baz=139,slow=4.4,SNR=4.7						
	2.0nm,0.9s						
ILAR	**Eielson Array**	**85.09**	**23**	P	**P**	**17 38 25.8**	**-1.6**
	0.3nm,0.8s,baz=248,slow=4.8,SNR=2.0						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**148.16**	**284**	PKPbc	**PKPbc**	**17 45 37.7**	**-1.1**
	0.6nm,0.5s,baz=54,slow=3.7,SNR=7.7						

IDC 26 17:27:57.1±2.1, 5°99S×142°67E, h0km, mb3.5/1, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=107.7km s-min=35.8km az=115.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.06**	**210**	Pn	Pn	17 31 43.4	-1.2
	0.2nm,0.3s,baz=31,slow=12,SNR=2.3						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**19.50**	**205**	P	Pn	17 32 26.6	-0.6
	0.1nm,0.3s,baz=34,slow=9.9,SNR=6.1						
	2.1nm,0.7s						
ILAR	**Eielson Array**	**87.19**	**24**	P	P	17 40 44.9	-0.1
	0.3nm,0.7s,baz=269,slow=6.0,SNR=1.9						
	0.3nm,0.7s						

*SKHL **26** 17:30:38.5±0.5, 44°40N×149°60E, h52km±5km, mb4.2/2*
*JMA **26** 17:30:39.6±1.4, 45°N±6°×14°E±°, h30km, MV3.6/11, SE OFF ETOROFU*

ISC 26 17:30:36.6±4.0, 44°35N±0°09×149°7E±0°2, h36km, n14, σ2s28/24, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.57**	**305**	*e*P	**Pn**	**17 31 01.7**	**-0.1**
KUR				AMB	AMB	17 31 02.4	
	90nm,0.3s						
KUR				*i* S	**Sn**	**17 31 18.6**	**-2.2**
KUR				A	A	17 31 21.7	
	260nm,0.5s						
KUR				A	A	17 31 21.7	
	340nm,0.5s						
SHO	**Shikotan**	**2.11**	**258**	*e*P	**Pn**	**17 31 09.5**	**+0.2**
SHO				*e*S	**Sn**	**17 31 33.0**	**-1.3**
SHO				A	A	17 31

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.97**	**229**	P	**Pn**	**17 33 39.4**	**+1.4**
MMPI				S	**Sn**	**17 34 25.6**	**+2.2**
GENI	**Genyem**	**4.60**	**315**	P	**Pn**	**17 33 47.2**	**+0.6**
PMG	**Port Moresby**	**5.10**	**134**	Pn	**Pn**	**17 33 54.7**	**+1.1**
	1.5nm,0.3s,baz=281,slow=23,SNR=7.7						
PMG				Sn	**Sn**	**17 34 52.4**	**+1.0**
	2.1nm,0.3s,baz=41,slow=23,SNR=9.3						
	12nm,0.6s						
SMPI	**Sarmi**	**6.08**	**309**	P	**Pn**	**17 34 08.6**	**+1.6**
	61nm,1.2s,1µm0.3nm						
FAKI	**Fak Fak**	**11.52**	**284**	P	**Pn**	**17 35 23.2**	**+1.5**
CTA	**Charters Tower**	**14.40**	**169**	LR	LR	17 41 31.9	
	comp=Z,544nm,18.8s,baz=26,slow=38						
WRA	**Warramunga Arr**	**16.55**	**211**	Pn	Pn	17 36 18.9	-10
	0.4nm,0.3s,baz=30,slow=13,SNR=8.4						
ASAR	**Alice Springs**	**19.93**	**206**	P	**P**	**17 37 04.7**	**-3.9**
	9.0nm,0.8s,baz=40,slow=9.6,SNR=30						
KSRS	**Korea Array**	**45.46**	**343**	P	**P**	**17 40 55.6**	**+0.4**
	2.5nm,0.9s,baz=163,slow=9.0,SNR=8.9						
	2.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.08**	**300**	P	**P**	**17 41 29.5**	**-2.0**
	0.3nm,0.4s,baz=112,slow=6.3,SNR=2.7						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**75.16**	**322**	P	**P**	**17 44 17.8**	**-0.7**
	0.3nm,0.5s,baz=100,slow=6.8,SNR=3.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**79.01**	**324**	P	**P**	**17 44 39.1**	**-0.9**
	0.2nm,0.6s,baz=118,slow=4.5,SNR=2.3						
	0.2nm,0.6s						
QSPA	**South Pole Qui**	**84.10**	**180**	P	**P**	**17 45 06.2**	**-0.5**
	1.0nm,0.8s,baz=4.6,slow=9.8,SNR=6.7						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**84.58**	**325**	P	**P**	**17 45 09.2**	**0.0**
	3.1nm,1.0s,baz=106,slow=8.2,SNR=9.4						
	3.1nm,1.0s						
ILAR	**Eielson Array**	**86.77**	**24**	P	**P**	**17 45 21.0**	**+1.1**
	1.1nm,0.8s,baz=255,slow=4.7,SNR=14						
	1.1nm,0.8s						

*IDC **26** 17:36:43.9±1.2,6°04S×142°.95E,h0km,mb3.7/3, mbtmp3.8/7,ML3.2/3,Error ellipse: s-maj=42.4km s-min=26.1km az=81.0*

ISC 26 17:36:48.9±1.0,6°.2S±0°.1×143°.0E±0°.1,h35km,n7,σ1s22/8, mb3.8/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.25**	**128**	Pn	**Pn**	**17 38 05.4**	**+0.5**
	7.5nm,0.8s,baz=289,slow=17,SNR=1.0						
PMG				Sn	**Sn**	**17 39 03.4**	**-0.9**
	0.2nm,0.3s,baz=252,slow=4.5,SNR=1.3						
CTA	**Charters Tower**	**14.21**	**167**	Pn	**Pn**	**17 40 08.6**	**+0.8**
	baz=350,slow=14,SNR=3.8						
	5.9nm,1.1s						
WRA	**Warramunga Arr**	**16.07**	**211**	Pn	**Pn**	**17 40 30.4**	**-2.0**
	0.1nm,0.3s,baz=29,slow=13,SNR=1.9						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**19.48**	**206**	P	**P**	**17 41 14.0**	**+1.0**
	0.2nm,0.3s,baz=31,slow=10,SNR=7.5						
	3.3nm,0.8s						
MKAR	**Makanchi Array**	**75.11**	**322**	P	**P**	**17 48 27.7**	**+0.2**
	0.2nm,0.7s,baz=97,slow=5.8,SNR=4.3						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**84.56**	**325**	P	**P**	**17 49 18.9**	**+0.4**
	1.7nm,0.9s,baz=107,slow=6.3,SNR=6.1						
	1.7nm,0.9s						
ILAR	**Eielson Array**	**87.22**	**24**	P	**P**	**17 49 30.6**	**-0.8**
	0.6nm,0.9s,baz=268,slow=4.2,SNR=3.8						
	0.6nm,0.9s						

*IDC **26** 17:41:13.8±0.6,5°.75S×142°.73E,h0km,mb4.5/16, mbtmp4.5/19,ML2.9/2,MS4.3/7,Error ellipse: s-maj=27.3km s-min=12.7km az=77.0*

*MOS **26** 17:41:14.2±0.9,5°.83S×142°.55E,h14km,mb5.0/28,Error ellipse: s-maj=12.5km s-min=6.1km az=107.8*

*NEIC **26** 17:41:15.7±1.6,5°.78S±0°.07×142°.56E±0°.07,h10km±1km, mb5.2/110,Error ellipse: s-maj=12.3km s-min=11.2km az=238.0*

*BJI **26** 17:41:16.0±0.0,5°.80S×142°.60E,h10km,mb4.8/74, mB5.3/26,Ms5.0/24,Ms7 4.8/24*

*DJA **26** 17:41:19.1±1.2,6°S±3°×14°.3E±1°,h16km±9km,M5.0/36, mB5.4/26,mb5.0/36,MLv5.6/6,Mw(mB)4.9/26*

ISC 26 17:41:16.3±0.3,5°.89S±0°.03×142°.64E±0°.04,h10km,n497, σ1s81/439,mb5.1/119,MS4.8/14,16C-13D,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.54**	**293**	P	**Pn**	**17 41 44.2**	**+0.4**
MMPI	**Merauke**	**3.40**	**221**	P	**Pn**	**17 42 11.6**	**+2.2**
GENI	**Genyem**	**4.10**	**323**	P	**Pn**	**17 42 20.1**	**+1.1**
GENI	**Genyem**	**4.10**	**323**	P	**Pn**	**17 42 19.9**	**+0.9**
SMPI	**Sarmi**	**5.51**	**314**	P	**Pn**	**17 42 39.5**	**+1.1**
	627nm,1.0s,6µm2.4nm						
PMG	**Port Moresby**	**5.68**	**128**	Pn	**Pn**	**17 42 40.5**	**-0.3**
PMG	**Port Moresby**	**5.68**	**128**	P	**Pn**	**17 42 43.4**	**+2.6**
PMG	**Port Moresby**	**5.68**	**128**	P	**Pn**	**17 42 43.2**	**+2.4**
PMG	**Port Moresby**	**5.68**	**128**	*ce*P	**Pn**	**17 42 42.2**	**+1.4**
PMG				pmax	pmax		
	comp=Z,32nm,0.6s						
PMG	**Port Moresby**	**5.68**	**128**	Pn	**Pn**	**17 42 41.8**	**+1.0**
	comp=Z,6.6nm,0.3s,baz=308,slow=2.5,SNR=43						
PMG				Sn	**Sn**	**17 43 45.8**	**-0.4**
	comp=Z,4.6nm,0.3s,baz=286,slow=21,SNR=3.9						
	comp=Z,40nm,0.5s						
MANU	**Manus Island**	**6.07**	**51**	Pn	**Pn**	**17 42 45.1**	**-1.0**
MANU	**Manus Island**	**6.07**	**51**	P	Pn	17 42 53.6	+7.5
COEN	**Coen**	**8.04**	**176**	P	**Pn**	**17 43 16.2**	**+3.0**
	baz=8.1,SNR=13						
COEN	**Coen**	**8.04**	**176**	Pn	**Pn**	**17 43 13.9**	**+0.8**
COEN	**Coen**	**8.04**	**176**	P	**Pn**	**17 43 15.8**	**+2.6**
RABL	**Rabaul**	**9.64**	**80**		**Pn**	**17 43 34.0**	**-1.2**
RABL	**Rabaul**	**9.64**	**80**	P	Pn	17 43 42.0	+6.8
FAKI	**Fak Fak**	**10.77**	**285**	Pn	**Pn**	**17 43 47.9**	**-2.7**
FAKI	**Fak Fak**	**10.77**	**285**	P	**Pn**	**17 43 48.6**	**-2.1**
FAKI	**Fak Fak**	**10.77**	**285**	P	**Pn**	**17 43 48.4**	**-2.3**
	comp=Z,155nm,0.8s,comp=Z,1µm						
SAUI	**Saumlaki**	**11.45**	**259**	Pn	**Pn**	**17 43 58.4**	**-1.6**
SAUI	**Saumlaki**	**11.45**	**259**	P	**Pn**	**17 44 00.5**	**+0.6**
SAUI	**Saumlaki**	**11.45**	**259**	P	**Pn**	**17 43 59.4**	**-0.5**
	comp=Z,2µm,1.0s,comp=Z,19µm						
KDU	**Kakadu**	**12.09**	**235**	P	**Pn**	**17 44 07.4**	**-1.3**
	baz=12,SNR=16						
KDU	**Kakadu**	**12.09**	**235**	P	**Pn**	**17 44 07.9**	**-0.8**
MTSU	**Mount Surprise**	**12.28**	**172**	P	**Pn**	**17 44 14.5**	**+3.1**
	baz=12,SNR=4.7						
SWI	**Sorong**	**12.40**	**293**	P	**Pn**	**17 44 11.8**	**-1.2**
	comp=Z,138nm,0.9s,comp=Z,1µm						
DRS	**Darwin Rock St**	**13.28**	**240**	P	**Pn**	**17 44 23.8**	**-1.3**
MTN	**Manton Dam**	**13.29**	**238**	P	**Pn**	**17 44 23.7**	**-1.4**
	baz=13,SNR=18						
MTN	**Manton Dam**	**13.29**	**238**	Pn	**Pn**	**17 44 22.1**	**-3.0**
MTN	**Manton Dam**	**13.29**	**238**	P	**Pn**	**17 44 23.8**	**-1.3**
TV1H	**Townsville Har**	**13.90**	**163**	P	**Pn**	**17 44 35.7**	**+2.3**
AUAYR	**Ayr State High**	**14.38**	**162**	P	**Pn**	**17 44 42.8**	**+2.8**
CTA	**Charters Tower**	**14.55**	**166**	P	**Pn**	**17 44 44.8**	**+2.4**
CTA	**Charters Tower**	**14.55**	**166**	Pn	**Pn**	**17 44 43.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=326,slow=12,SNR=3.5						
CTA				Lg	Lg	17 48 55.5	
	comp=Z,0.7nm,0.3s,baz=60,slow=20,SNR=2.4						
CTA				LR	LR	17 50 37.6	
	comp=Z,1µm,20.5s,baz=2.0,slow=38						
	comp=Z,5.5nm,1.1s						
CTAO	**Charters Tower**	**14.55**	**166**	Pn	**Pn**	**17 44 42.1**	**-0.3**
CTAO	**Charters Tower**	**14.55**	**166**	P	**Pn**	**17 44 45.6**	**+3.2**
CTAO	**Charters Tower**	**14.55**	**166**	P	**Pn**	**17 44 42.1**	**-0.3**
QIS	**Mount Isa**	**14.88**	**191**	P	**Pn**	**17 44 47.0**	**+0.1**
	baz=15,SNR=5.3						
QIS	**Mount Isa**	**14.88**	**191**	P	**Pn**	**17 44 47.2**	**+0.3**
WB0	**Warramunga Arr**	**15.96**	**209**	P	**Pn**	**17 44 58.1**	**-3.0**
LBMI	**Labuha**	**15.98**	**288**	P	**Pn**	**17 45 02.4**	**+1.0**
	comp=Z,123nm,1.1s,comp=Z,2µm						
WRAB	**Tennant Creek**	**16.12**	**209**	P	**Pn**	**17 44 59.8**	**-3.3**
WRAB	**Tennant Creek**	**16.12**	**209**	*e*P	Pn	17 44 57.5	-5.6
WRAB				pmax	pmax		
	comp=Z,35nm,0.9s						
WB2	**Warramunga Arr**	**16.13**	**209**	P	**Pn**	**17 44 59.2**	**-4.0**
WC3	**Warramunga Arr**	**16.13**	**209**	P	**Pn**	**17 45 01.9**	**-1.4**
	baz=16						
WRA	**Warramunga Arr**	**16.13**	**209**	P	**Pn**	**17 45 00.0**	**-3.3**
WRA	**Warramunga Arr**	**16.13**	**209**	*i* P	**Pn**	**17 45 01.2**	**-2.1**
WRA				pmax	pmax		
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**16.13**	**209**	Pn	**Pn**	**17 45 01.2**	**-2.1**
	comp=Z,2.2nm,0.3s,baz=28,slow=13,SNR=40						
WRA				Sn	Sn	17 47 49.2	-13
	comp=Z,2.3nm,0.3s,baz=20,slow=22,SNR=5.7						
WRA				Lg	Lg	17 49 43.4	
	comp=Z,3.0nm,0.3s,baz=28,slow=24,SNR=5.1						
KNRA	**Kununurra**	**16.73**	**233**	Pn	**Pn**	**17 45 06.2**	**-4.7**
KNRA				IAmb	IAmb	17 45 17.5	
	comp=Z,144nm,0.8s						
KNRA	**Kununurra**	**16.73**	**233**	P	**Pn**	**17 45 08.6**	**-2.4**
SANI	**Sanana**	**17.04**	**282**	P	**Pn**	**17 45 15.4**	**+0.5**
SANI	**Sanana**	**17.04**	**282**	P	**Pn**	**17 45 12.2**	**-2.7**
	comp=Z,76nm,1.2s						
HNR	**Honiara**	**17.51**	**103**	P	**Pn**	**17 45 21.2**	**+0.5**
HNR	**Honiara**	**17.51**	**103**	P	**P**	**17 45 26.1**	**+4.2**
HNR	**Honiara**	**17.51**	**103**	P	**Pn**	**17 45 21.2**	**+0.5**
HNR				pmax	pmax		
	comp=Z,65nm,0.9s						
SOEI	**Soe**	**18.60**	**257**		**P**	**17 45 32.0**	**-2.0**
SOEI	**Soe**	**18.60**	**257**	P	**P**	**17 45 34.5**	**+0.5**
SOEI	**Soe**	**18.60**	**257**	P	**Pn**	**17 45 37.3**	**+3.0**
	comp=Z,681nm,1.1s,comp=Z,5µm						
RK1H	**Rockhampton Ha**	**18.97**	**157**	P	**Pn**	**17 45 41.1**	**+2.5**
GUMO	**Guam**	**19.48**	**7**	LR	LR	17 52 36.7	
	comp=Z,207nm,21.0s,baz=142,slow=35						
AS01	**Alice Springs**	**19.55**	**204**	P	**P**	**17 45 45.6**	**+1.2**
AS31	**Alice Springs**	**19.57**	**205**	P	**P**	**17 45 43.8**	**-0.7**
ASAR	**Alice Springs**	**19.57**	**205**	P	**P**	**17 45 44.1**	**-0.5**
ASAR	**Alice Springs**	**19.57**	**205**	P	**P**	**17 45 46.0**	**+1.4**
ASAR	**Alice Springs**	**19.57**	**205**	P	**P**	**17 45 46.0**	**+1.4**
	comp=Z,67nm,0.8s,baz=35,slow=10,SNR=167						
ASAR				S	**Sn**	**17 49 16.9**	**-9.0**
	comp=Z,18nm,0.9s,baz=22,slow=27,SNR=5.1						
ASAR				Lg	Lg	17 51 34.6	
	comp=Z,0.7nm,0.3s,baz=20,slow=28,SNR=1.6						
ASAR				LR	LR	17 54 08.3	
	comp=Z,2µm,18.4s,baz=34,slow=39						
ASPA	**Alice Springs**	**19.58**	**205**	P	**P**	**17 45 46.2**	**+1.6**
	baz=20						
GD1S	**Gladstone Soft**	**19.65**	**156**	P	**P**	**17 45 48.4**	**+3.1**
KMSI	**Cibinong**	**19.70**	**288**	P	**Pn**	**17 45 48.9**	**+1.5**
	comp=Z,199nm,0.7s,comp=Z,3µm						
LUWI	**Luwuk**	**20.40**	**283**	P	**P**	**17 45 51.0**	**-2.6**
LUWI				IAmb	IAmb	17 46 06.2	
	comp=Z,140nm,1.2s						
LUWI	**Luwuk**	**20.40**	**283**	P	**P**	**17 45 56.0**	**+2.4**
LUWI	**Luwuk**	**20.40**	**283**	P	**P**	**17 45 54.9**	**+1.3**
	comp=Z,150nm,0.9s,comp=Z,1µm						
MMRI	**Maumere**	**20.42**	**261**	P	P	17 45 47.5	-6.3
MMRI				IAmb	IAmb	17 46 05.6	
	comp=Z,86nm,0.9s						
MMRI	**Maumere**	**20.42**	**261**	P	**P**	**17 45 54.6**	**+0.8**
MMRI	**Maumere**	**20.42**	**261**	P	**P**	**17 45 55.4**	**+1.6**
	comp=Z,175nm,1.1s,comp=Z,1µm						
FITZ	**Fitzroy Crossi**	**20.56**	**232**	P	**P**	**17 45 55.5**	**+0.2**
	baz=20,SNR=19						
FITZ	**Fitzroy Crossi**	**20.56**	**232**	P	**P**	**17 45 52.3**	**-3.0**
FITZ				IAmb	IAmb	17 46 06.1	
	comp=Z,119nm,1.6s						
FITZ	**Fitzroy Crossi**	**20.56**	**232**	P	**P**	**17 45 56.3**	**+1.0**
QLP	**Quilpie**	**20.64**	**176**	P	**P**	**17 45 58.9**	**+2.8**
	baz=21,SNR=28						
QLP	**Quilpie**	**20.64**	**176**	P	P		
EDFI	**Ende, Flores**	**20.97**	**261**	P	Pn	17 46 03.2	+0.7
	comp=Z,137nm,1.1s,comp=Z,2µm						
EIDS	**Eidsvold**	**20.99**	**158**	P	**P**	**17 46 03.6**	**+3.7**
	baz=21,SNR=15						
EIDS	**Eidsvold**	**20.99**	**158**	P	**P**	**17 45 59.7**	**-0.2**
EIDS	**Eidsvold**	**20.99**	**158**	P	**P**	**17 46 03.3**	**+3.4**
DAV	**Davao City (W)**	**21.34**	**307**	LR	LR	17 56 10.9	
	comp=Z,350nm,18.3s,baz=53,slow=42						
MRSI	**Marisa**	**21.61**	**286**	P	**P**	**17 46 06.8**	**+0.1**
	comp=Z,97nm,0.8s,comp=Z,771nm						
INKA	**Innaminka**	**21.81**	**185**	P	**P**	**17 46 10.7**	**+2.0**
BASI	**Baing, Sumba**	**22.26**	**257**	P	**P**	**17 46 15.3**	**+1.6**
	comp=Z,451nm,1.0s,comp=Z,4µm						
OOD	**Oodnadatta**	**22.77**	**196**	P	**P**	**17 46 20.5**	**+1.6**
TOLI2	**Tolitoli**	**22.91**	**287**	P	**P**	**17 46 17.9**	**-2.6**
TOLI2				IAmb	IAmb	17 46 30.8	
	comp=Z,52nm,0.7s						
TOLI2	**Tolitoli**	**22.91**	**287**	P	**P**	**17 46 22.1**	**+1.6**
TTSI	**Tana Toraja**	**22.92**	**276**	P	**P**	**17 46 23.8**	**+3.1**
	comp=Z,65nm,0.9s,comp=Z,623nm						
WRKA	**Warakurna**	**23.49**	**214**	P	**P**	**17 46 26.2**	**-0.2**
	baz=24,SNR=24						
WRKA	**Warakurna**	**23.49**	**214**	P	**P**	**17 46 26.6**	**+0.2**
AULRC	**Lightning Ridg**	**23.95**	**168**	P	**P**	**17 46 31.7**	**+0.9**
LCRK	**Leigh Creek**	**24.78**	**189**	P	**P**	**17 46 38.5**	**+0.1**
PLAI	**Plampang**	**24.83**	**262**	P	**P**	**17 46 40.6**	**+1.6**
PLAI	**Plampang**	**24.83**	**262**	P	**P**	**17 46 40.9**	**+1.9**
	comp=Z,54nm,0.9s,comp=Z,706nm						
KOUNC	**Koumac, New Ca**	**25.57**	**127**	P	**P**	**17 46 45.4**	**-0.2**
KOUNC	**Koumac, New Ca**	**25.57**	**127**	P	**P**	**17 46 48.5**	**+2.9**
MULG	**Mulgathing**	**25.58**	**197**	P	**P**	**17 46 45.3**	**-0.3**
CMSA	**Cobar Meteorol**	**25.68**	**174**	P	**P**	**17 46 47.8**	**+1.3**
	baz=26,SNR=7.2						
CMSA	**Cobar Meteorol**	**25.68**	**174**	P	**P**	**17 46 47.2**	**+0.7**
TWSI	**Taliwang, Sumb**	**25.70**	**262**	P	P	17 46 56.9	+10
STKA	**Stephens Creek**	**25.88**	**182**	P	**P**	**17 46 48.5**	**+0.2**
	baz=26,SNR=10						
STKA	**Stephens Creek**	**25.88**	**182**	P	**P**	**17 46 46.7**	**-1.6**
STKA	**Stephens Creek**	**25.88**	**182**	P	**P**	**17 46 48.5**	**+0.2**
STKA	**Stephens Creek**	**25.88**	**182**	⇑*e*P	**P**	**17 46 47.8**	**-0.5**
STKA	**Stephens Creek**	**25.88**	**182**	P	**P**	**17 46 48.0**	**-0.4**
	comp=Z,13nm,0.9s,baz=352,slow=8.3,SNR=15						
	comp=Z,13nm,0.9s						
MBWA	**Marble Bar**	**26.89**	**233**	P	**P**	**17 46 55.1**	**-2.5**
MBWA				IAmb	IAmb	17 47 37.0	
	comp=Z,30nm,0.9s						
MBWA	**Marble Bar**	**26.89**	**233**	P	**P**	**17 46 59.3**	**+1.7**
PSA00	**Pilbara Seismi**	**27.01**	**233**	P	**P**	**17 46 56.2**	**-2.5**
PSA00				IAmb	IAmb	17 47 36.5	
	comp=Z,28nm,0.7s						
PSA00	**Pilbara Seismi**	**27.01**	**233**	P	**P**	**17 46 55.5**	**-3.3**
PSA00				IAmb	IAmb	17 47 35.6	
	comp=Z,60nm,1.9s						
PSA00	**Pilbara Seismi**	**27.01**	**233**	P	**P**	**17 46 59.6**	**+0.9**
BBOO	**Buckleboo**	**27.48**	**192**	P	**P**	**17 47 06.1**	**+3.3**
	baz=28,SNR=6.6						
HTT	**Hallett**	**27.62**	**187**	P	**P**	**17 47 06.5**	**+2.4**
	baz=28,SNR=3.8						
JAGI	**Jajag, Banyuwa**	**28.38**	**263**	P	**P**	**17 47 09.0**	**-2.0**
JAGI				IAmb	IAmb	17 47 18.2	
	comp=Z,19nm,0.6s						
PWJI	**Pagerwojo**	**30.68**	**264**	P	P	17 47 48.4	+17
ARPS	**Mount Arapiles**	**30.75**	**181**	P	**P**	**17 47 32.3**	**+0.5**
	baz=31,SNR=5.7						
MEEK	**Meekatharra**	**30.83**	**225**	P	P	17 47 36.9	+4.2
	baz=31,SNR=3.0						
TOO	**Toolangi**	**31.64**	**176**	P	**P**	**17 47 39.1**	**-0.6**
TOO	**Toolangi**	**31.64**	**176**	P	**P**	**17 47 39.1**	**-0.6**
TOO				pmax	pmax		
	comp=Z,13nm,1.1s						
KPJI	**Karang Pucung**	**33.51**	**266**	P	**P**	**17 47 58.3**	**+2.0**
	comp=Z,27nm,0.8s						
BBJI	**Bungbulang**	**34.78**	**265**	P	**P**	**17 48 10.1**	**+2.6**
CNJI	**Cibinong**	**35.30**	**266**	P	**P**	**17 48 13.7**	**+1.9**
	comp=Z,40nm,1.1s,comp=Z,368nm						
PPBI	**Pangkal Pinang**	**36.59**	**274**	P	P	17 48 34.1	+11
KASI	**Kota Agung**	**37.95**	**269**	P	**P**	**17 48 36.0**	**+1.5**
	comp=Z,23nm,0.9s						
LWLI	**Liwa**	**38.41**	**269**	P	P	17 48 47.4	+8.9
JNU	**Nakatsue**	**40.37**	**345**	P	**P**	**17 48 51.6**	**-2.9**
JNU	**Nakatsue**	**40.37**	**345**	P	**P**	**17 48 59.1**	**+4.6**
KRJI	**Kerinci**	**41.24**	**274**	P	P	17 49 08.8	+6.8
MJAR	**Matsushiro Arr**	**42.41**	**355**	P	**P**	**17 49 08.4**	**-2.8**
	comp=Z,1.9nm,0.6s,baz=173,slow=9.6,SNR=8.0						
	comp=Z,1.9nm,0.6s						
MAJO	**Matsushiro**	**42.41**	**355**	P	**P**	**17 49 09.1**	**-2.0**
MAJO	**Matsushiro**	**42.41**	**355**	⇑*e*P	**P**	**17 49 10.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,16nm,2.1s						
MJB9	**Matsu-Tunnel**	**42.41**	**355**	P	**P**	**17 49 09.2**	**-2.0**
JMM	**Marumori**	**43.56**	**358**	P	**P**	**17 49 25.0**	**+4.6**
JSD	**Sado**	**43.89**	**355**	IAmb	IAmb	17 49 32.4	
	comp=Z,30nm,0.9s						
NJ2	**Nanjing**	**44.01**	**330**	⇓P	P	17 49 30.3	+6.2
NJ2				pmax	pmax		
	comp=Z,42nm,1.3s						
TJN	**Taejon**	**44.41**	**342**	P	P	17 49 33.3	+6.0
TJN	**Taejon**	**44.41**	**342**	⇑*e*P	**P**	**17 49 25.9**	**-1.4**
RPSI	**Rantau Prapat**	**44.48**	**280**	P	**P**	**17 49 25.4**	**-2.8**
RPSI				IAmb	IAmb	17 49 43.5	
	comp=Z,20nm,0.9s						
PSI	**Prapat**	**44.50**	**280**	P	**P**	**17 49 27.5**	**-1.0**
PSI	**Prapat**	**44.50**	**280**	P	**P**	**17 49 25.5**	**-3.0**
PSI				pmax	pmax		
	comp=Z,20nm,0.9s						
RPZ	**Rata Peaks**	**45.20**	**151**	LR	LR	18 08 26.1	
	comp=Z,698nm,18.4s,baz=189,slow=36						
WHN	**Wuhan**	**45.23**	**325**	⇓P	P	17 49 40.5	+6.6
WHN				sP	sP	17 49 46.0	+6.8
WHN				pmax	pmax		
	comp=Z,390nm,1.8s						
KSAR	**Wonju Array Be**	**45.25**	**343**	P	**P**	**17 49 32.6**	**-1.3**
KSAR	**Wonju Array Be**	**45.25**	**343**	P	**P**	**17 49 32.6**	**-1.3**
KSRS	**Korea Array**	**45.25**	**343**	P	**P**	**17 49 32.5**	**-1.5**
	comp=Z,4.3nm,0.8s,baz=166,slow=9.9,SNR=14						
KSRS				PcP	**PcP**	**17 51 12.9**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=161,slow=4.1,SNR=1.3						
KSRS				LR	LR	18 06 02.3	
	comp=Z,197nm,21.7s,baz=5.0,slow=33						
	comp=Z,4.3nm,0.8s						
KS19	**Wonju Array Si**	**45.31**	**343**	IAmb	IAmb	17 49 40.7	
	comp=Z,65nm,1.8s						
INCN	**Inchon**	**45.66**	**342**	P	P	17 49 42.6	+5.4
NONG	**Nongkai**	**45.66**	**302**	P	**P**	**17 49 41.7**	**+4.2**
GYA	**Guiyang**	**47.43**	**314**	P	**P**	**17 49 52.5**	**+1.1**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,200nm,4.4s						
SRDT	**SRDT**	**47.62**	**295**	P	**P**	**17 49 55.3**	**+2.4**
ENH	**Enshi**	**47.98**	**320**	P	**P**	**17 49 58.8**	**+3.3**
TIA	**Tai'an**	**48.23**	**332**	P	**P**	**17 50 02.0**	**+4.6**
TIA				pmax	pmax		
	comp=Z,21nm,1.0s						
PHRA	**Phrae**	**48.33**	**301**	P	**P**	**17 49 56.2**	**-2.2**
CRAI	**Chiangrai**	**48.98**	**303**	P	P	17 49 57.6	-5.8
LYN	**LuoYang**	**49.28**	**327**	⇑P	**P**	**17 50 04.5**	**-0.9**
LYN				pmax	pmax		
	comp=Z,22nm,0.8s						
LYN				LR	LR		
	comp=Z,760nm,23.4s						
LYN				LR	LR		
	comp=Z,800nm,16.5s						
LYN				LR	LR		
	comp=Z,1µm,19.2s						
CM31	**Chiang Mai Arr**	**49.41**	**300**	P	P	17 50 03.5	-3.2
CMAR	**Chiang Mai Arr**	**49.41**	**300**	P	P	17 50 03.1	-3.6
CMAR	**Chiang Mai Arr**	**49.41**	**300**	P	**P**	**17 50 05.8**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=122,slow=6.0,SNR=24						
	comp=Z,2.8nm,0.8s						
PSTR	**Posyet**	**49.49**	**349**	⇑*e*P	**P**	**17 50 06.5**	**-0.4**
KMI	**Kunming**	**49.55**	**310**	⇑P	P	17 50 04.5	-3.4
KMI				pmax	pmax		
	comp=Z,44nm,1.1s						
CHTO	**Chiang Mai**	**49.56**	**301**	P	P	17 50 04.3	-3.6
CHTO	**Chiang Mai**	**49.56**	**301**	P	**P**	**17 50 07.4**	**-0.5**
CHTO	**Chiang Mai**	**49.56**	**301**	P	P	17 50 04.3	-3.6
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HNS	**HongShan**	**50.33**	**331**	⇓P	**P**	**17 50 13.0**	**-0.4**
HNS				*e*S	**S**	**17 57 28.0**	**+1.6**
HNS				pmax	pmax		
	comp=Z,13nm,0.6s						
HNS				LR	LR		
	comp=Z,980nm,20.7s						
HNS				LR	LR		
	comp=Z,330nm,21.5s						
HNS				LR	LR		
	comp=Z,1µm,20.7s						
USRK	**Ussuriysk Ar.**	**50.77**	**350**	P	**P**	**17 50 14.4**	**-2.2**
USRK	**Ussuriysk Ar.**	**50.77**	**350**	P	**P**	**17 50 15.2**	**-1.4**
	comp=Z,8.6nm,0.8s,baz=175,slow=7.1,SNR=10						
	comp=Z,8.6nm,0.8s						
USA0B	**Ussuriysk Arra**	**50.77**	**350**	P	P	17 50 12.9	-3.7
USA0B				IAmb	IAmb	17 50 23.2	
	comp=Z,40nm,0.9s						

comp=Z,22nm,0.9s
BTO Baotou 55.12 330 *e*P **P** **17 50 49.8 +0.9**
BTO P **pP** **17 50 54.5 +1.7**
BTO sP **sP** **17 50 57.3 +3.1**
BTO PP **PP** **17 52 56.0 +3.6**
BTO sS **sS** **17 58 43.3 +4.9**
BTO SS **SS** **18 02 17.3 +1.1**
BTO pmax pmax
comp=Z,18nm,1.3s
BTO pmax pmax
comp=Z,260nm,6.2s
BTO LR LR
comp=Z,2µm,21.0s
BTO LR LR
comp=Z,710nm,17.5s
BTO LR LR
comp=Z,3µm,20.8s
LZH Lanzhou 55.37 322 *e*P **P** **17 50 50.8 -0.1**
LZH sP sP 17 50 57.5 +1.3
LZH pmax pmax
comp=Z,43nm,1.2s
KLR Kul'dur 55.71 351 *de*P **P** **17 50 52.1 -0.7**
KLR pmax pmax
comp=Z,14nm,1.7s
TYV Tymovskoe 56.52 0 *e*P **P** **17 50 57.9 -0.7**
TYV pmax pmax
comp=Z,200nm,4.0s
TYV pmax pmax
comp=Z,9.0nm,1.2s
GRNR Gornyy 56.68 355⇓ *i*P P 17 51 05.2 +5.4
GRNR pmax pmax
comp=N,5.0nm,1.2s
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,270nm,17.0s
HEH HeiHe 57.45 348 *e*P **P** **17 51 03.5 -1.7**
HEH pmax pmax
comp=E,6.0nm,1.2s
HIA Hailar 58.45 343 P P 17 51 17.6 +5.3
HIA Hailar 58.45 343⇓ *e*P **P** **17 51 11.5 -0.8**
HIA pmax pmax
comp=Z,4.0nm,0.9s
GTA Gaotai 59.95 323 P **P** **17 51 22.8 -0.2**
GTA pP sP 17 51 29.5 +1.1
GTA pmax pmax
comp=Z,3.0nm,1.6s
PETK Petropavlovsk- 60.14 10 P **P** **17 51 22.6 -1.3**
comp=Z,15nm,1.0s,baz=158,slow=6.9,SNR=22
comp=Z,15nm,1.0s
LSA Lhasa 60.74 309 IAmb IAmb 17 51 37.4
comp=Z,25nm,1.0s
ZEA Zeya 60.80 350 *e*P **P** **17 51 27.4 -1.0**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,60nm,1.0s
GOMU GeErMu 61.29 317 P **P** **17 51 33.5 +0.9**
GOMU pP sP 17 51 39.0 +1.1
GOMU sP pP 17 51 42.5 +6.0
GOMU pmax pmax
comp=Z,2.0nm,1.1s
ULN Ulaanbaatar 62.00 334 P **P** **17 51 35.2 -1.7**
ULN IAmb IAmb 17 51 43.8
comp=Z,26nm,1.1s
ULN Ulaanbaatar 62.00 334⇑ *e*P **P** **17 51 36.5 -0.4**
ULN pmax pmax
comp=Z,9.0nm,2.5s
SONM Songino Array 62.27 333 P **P** **17 51 37.0 -1.6**
SONM IAmb IAmb 17 51 46.0
comp=Z,35nm,1.5s
SONM Songino Array 62.27 333 P **P** **17 51 38.2 -0.4**
comp=Z,0.8nm,0.6s,baz=166,slow=7.8,SNR=8.4
comp=Z,0.8nm,0.6s
CIT Chita 62.80 340 *e*P P 17 51 47.6 +5.6
CIT *e* 17 52 24.4
CIT pmax pmax
comp=Z,57nm,1.4s
CASY Casey 64.27 194 P **P** **17 51 51.1 -0.3**
ZAK Zakamensk 65.53 334 *e*P **P** **17 51 59.2 -0.8**
ZAK pmax pmax
comp=Z,29nm,1.1s
MA2 Magadan 65.58 5 P **P** **17 51 58.5 -1.4**
MA2 Magadan 65.58 5 P P 17 52 05.6 +5.6
MA2 Magadan 65.58 5⇓ *e*P **P** **17 51 58.8 -1.2**
MA2 pmax pmax
comp=Z,16nm,1.7s
HYB Hyderabad 67.37 292 *e*P **P** **17 52 10.9 -1.5**
HYB *es*P **pP** **17 52 15.1 -1.2**
HYB *e*PP **PP** **17 54 39.5 -1.5**
HYB *e*S **S** **18 01 07.7 -0.8**
MOY Mondy 67.47 333 *e*P **P** **17 52 12.5 +0.1**
MOY pmax pmax
comp=Z,44nm,1.8s
BOD Bodaibo 67.59 344 *e*P **P** **17 52 17.6 +4.7**
BOD pmax pmax
comp=Z,15nm,1.3s
YAK Yakutsk 68.46 353 P **P** **17 52 17.3 -0.9**
YAK Yakutsk 68.46 353 *d i*P P 17 52 23.4 +5.2
YAK *e**PP sP 17 52 30.8 +7.2
YAK *e*S **S** **18 01 24.4 +4.6**
YAK *e**SS sS 18 01 35.8 +9.3
YAK pmax pmax
comp=Z,35nm,1.3s
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK smax smax
comp=E,156nm,4.8s
SEY Seymchan 69.03 5⇓ *e*P **P** **17 52 20.7 -1.1**
SEY pmax pmax
comp=Z,11nm,2.5s
WMQ Urumqi 69.92 321 *e*P **P** **17 52 27.0 -0.8**
WMQ pP pP 17 52 33.5 +1.7
WMQ pmax pmax
comp=Z,23nm,1.3s
VNDA Vanda 72.31 176 P **P** **17 52 42.3 +0.6**
VNDA IAmb IAmb 17 52 44.2
comp=Z,33nm,1.8s
VNDA Vanda 72.31 176 P **P** **17 52 42.3 +0.6**
VNDA pmax pmax
comp=Z,33nm,1.8s
VNDA Vanda 72.31 176 P **P** **17 52 42.0 +0.3**
comp=Z,4.9nm,0.7s,baz=327,slow=6.8,SNR=18
comp=Z,4.9nm,0.7s
DGZ Jazzator, Alta 73.08 326 *ce*P **P** **17 52 45.9 -1.0**
DGZ pmax pmax
comp=Z,15nm,1.1s
MK31 Makanchi Array 74.69 322 *c i*P **P** **17 52 55.2 -1.0**
MKAR Makanchi Array 74.69 322 P **P** **17 52 55.5 -0.8**
comp=Z,1.8nm,0.6s,baz=108,slow=7.3,SNR=26
comp=Z,1.8nm,0.6s
MAKZ Makanchi 74.89 322 P **P** **17 52 56.1 -1.2**
MAKZ IAmb IAmb 17 53 04.5
comp=Z,18nm,0.9s
MAKZ Makanchi 74.89 322 P **P** **17 52 56.1 -1.2**
MAKZ pmax pmax
comp=Z,18nm,1.0s
BILL Bilibino 75.62 9 P **P** **17 53 00.7 -0.3**
BILL IAmb IAmb 17 53 13.5
comp=Z,21nm,1.4s
BILL Bilibino 75.62 9⇑ *e*P **P** **17 53 00.8 -0.3**
BILL pmax pmax
comp=Z,12nm,2.5s
KSH Kashi 76.10 313 P P 17 53 11.8 +7.2
KSH pmax pmax
comp=Z,10.0nm,1.1s
KSH LR LR
comp=Z,500nm,16.1s
KSH LR LR
comp=Z,410nm,18.2s
KSH LR LR
comp=Z,420nm,21.0s
NIL Nilore 76.35 307 P **P** **17 53 04.0 -2.1**
NIL Nilore 76.35 307 P **P** **17 53 04.0 -2.1**
NIL pmax pmax
comp=Z,53nm,0.9s
ZALV Zalesovo Beam 76.64 329 P **P** **17 53 04.9 -2.3**
ZALV Zalesovo Beam 76.64 329 *i*P **P** **17 53 09.5 +2.3**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 76.64 329 P **P** **17 53 04.4 -2.8**
comp=Z,0.7nm,0.4s,baz=104,slow=8.0,SNR=3.5
comp=Z,0.7nm,0.4s

NRN Naryn 76.74 315 P **P** **17 53 05.9 -2.5**
NRN Naryn 76.74 315 P **P** **17 53 05.9 -2.5**
NRN pmax pmax
comp=Z,5.0nm,0.8s
TIXI Tiksi 77.91 356 P **P** **17 53 11.3 -2.6**
TIXI Tiksi 77.91 356⇑ *e*P **P** **17 53 12.4 -1.5**
TIXI pmax pmax
comp=Z,2.0nm,0.6s
AAK Ala-Archa 78.20 316 P **P** **17 53 15.7 -0.8**
AAK Ala-Archa 78.20 316 P **P** **17 53 14.7 -1.7**
AAK IAmb IAmb 17 53 28.9
comp=Z,9.9nm,1.0s
AAK Ala-Archa 78.20 316⇑ *e*P **P** **17 53 16.6 +0.2**
AAK pmax pmax
comp=Z,5.0nm,1.3s
M13K Dall Lake 78.37 24 P **P** **17 53 16.5 -0.2**
baz=235
KURK Kurchatov 78.56 324 P **P** **17 53 16.2 -1.7**
KURK IAmb IAmb 17 53 24.8
comp=Z,18nm,1.1s
KURK Kurchatov 78.56 324⇓ *e*P **P** **17 53 16.9 -1.0**
KURK pmax pmax
comp=Z,8.0nm,1.3s
KURBB Kurchatov Arra 78.57 324 P **P** **17 53 16.5 -1.5**
comp=Z,2.1nm,1.0s,baz=117,slow=4.8,SNR=13
comp=Z,2.1nm,1.0s
M14K Bethel 79.13 24 P **P** **17 53 20.0 -0.9**
baz=237
L14K Kuka Creek 79.17 24 P **P** **17 53 20.5 -0.5**
baz=236
N15K Kwethluk River 79.59 25 P **P** **17 53 23.7 +0.3**
baz=238
M15K Kasigluk River 79.62 25 P **P** **17 53 24.0 +0.5**
baz=238
L15K Ungalak Mounta 79.83 24 P **P** **17 53 25.2 +0.6**
baz=237
TNA Tin City 79.84 19 P **P** **17 53 25.0 +0.4**
baz=230
ANM Nome 80.06 20 P **P** **17 53 26.5 +0.6**
baz=233
K15K Wolf Creek Mou 80.15 23 P **P** **17 53 26.3 -0.1**
baz=237
O16K Kokwok River B 80.16 26 P **P** **17 53 26.4 -0.1**
baz=240
F14K Arctic Creek 80.30 19 P **P** **17 53 27.7 +0.6**
baz=232
N16K Nishlik Lake 80.31 25 P **P** **17 53 27.6 +0.3**
baz=240
M16K Timber Creek 80.51 25 P **P** **17 53 28.7 +0.3**
baz=239
Q17K Contact Creek 80.53 28 P **P** **17 53 28.5 -0.1**
baz=242
L16K Owhat River 80.66 24 P **P** **17 53 28.7 -0.5**
baz=239
MAW Mawson 80.69 202 LR LR 18 26 01.8
comp=Z,328nm,20.0s,baz=335,slow=33
O17K Koliganek Bris 80.69 26 P **P** **17 53 28.9 -0.5**
baz=241
G15K Niniluk 80.77 20 P **P** **17 53 30.1 +0.4**
baz=234
SIMJ Simiganj 81.02 310 P **P** **17 53 29.0 -2.8**
SIMJ IAmb IAmb 17 53 44.3
comp=Z,29nm,1.1s
N17K Nushagak Hills 81.02 26 P **P** **17 53 30.9 -0.2**
baz=241
J16K Anvik River 81.05 22 P **P** **17 53 30.8 -0.4**
baz=238
KK31 Karatay Array 81.13 315 P **P** **17 53 29.8 -2.4**
KK31 Karatay Array 81.13 315 P **P** **17 53 29.8 -2.4**
KK31 pmax pmax
comp=Z,7.0nm,0.9s
H16K Elim 81.20 21 P **P** **17 53 31.6 -0.3**
baz=236,SNR=8.7
M17K Holitna River 81.34 25 P **P** **17 53 33.1 +0.3**
baz=241
I17K Unalakleet 81.34 22 P **P** **17 53 32.6 -0.1**
baz=237,SNR=5.8
L17K Donlin 81.35 24 P **P** **17 53 33.3 +0.4**
baz=240
G16K Koyuk River 81.59 20 P **P** **17 53 33.7 -0.3**
G16K IAmb IAmb 17 53 41.5
comp=Z,25nm,1.0s
G16K Koyuk River 81.59 20 P **P** **17 53 34.3 +0.3**
baz=236
K17K Iditarod 81.65 24 P **P** **17 53 34.7 +0.3**
baz=240
N18K Kilae Creek 81.66 26 P **P** **17 53 34.2 -0.3**
N18K IAmb IAmb 17 53 41.9
comp=Z,24nm,1.1s
N18K Kilae Creek 81.66 26 P **P** **17 53 34.8 +0.3**
baz=242
L18K Granite Mounta 82.05 24 P **P** **17 53 36.7 +0.1**
baz=241
M18K Stony River 82.06 25 P **P** **17 53 37.0 +0.4**
baz=242
H17K Granite Mounta 82.19 21 IAmb IAmb 17 53 44.9
comp=Z,20nm,0.8s
H17K Granite Mounta 82.19 21 P **P** **17 53 37.2 -0.1**
baz=238
G17K Kiwalik Mounta 82.24 21 P **P** **17 53 36.9 -0.6**
baz=237
N19K Bonanza Creek 82.33 26 P **P** **17 53 37.5 -0.7**
baz=243
C16K Lisburne Hills 82.34 17 P **P** **17 53 37.4 -0.5**
C16K IAmb IAmb 17 53 49.1
comp=Z,18nm,1.4s
C16K Lisburne Hills 82.34 17 P **P** **17 53 38.1 +0.2**
baz=232
J18K Innoko River 82.65 23 P **P** **17 53 39.5 -0.2**
baz=241
TTA Tatalina 82.67 24 P **P** **17 53 39.8 -0.1**
baz=242
D17K Noatak River 82.68 18 P **P** **17 53 39.2 -0.5**
baz=235,SNR=8.6
E17K Hotham Inlet 82.72 19 P **P** **17 53 39.8 -0.2**
baz=236,SNR=6.5
M19K Big River Lodg 82.86 25 P **P** **17 53 40.1 -0.7**
baz=243
H18K Honhosa River 82.87 21 P **P** **17 53 40.1 -0.6**
baz=239
C17K DeLong Mountai 83.10 18 P **P** **17 53 41.9 -0.1**
baz=234
G18K Tagagawik 83.15 21 IAmb IAmb 17 53 49.2
comp=Z,14nm,0.8s
G18K Tagagawik 83.15 21 P **P** **17 53 41.6 -0.6**
baz=239
F18K Selawik 83.17 20 P **P** **17 53 41.3 -1.0**
baz=238
GCSA Galena City Sc 83.21 22 P **P** **17 53 42.8 +0.3**
baz=241
E18K Tukpahlearik C 83.31 19 P **P** **17 53 42.2 -0.8**
E18K IAmb IAmb 17 53 50.4
comp=Z,17nm,0.8s
E18K Tukpahlearik C 83.31 19 P **P** **17 53 42.4 -0.6**
baz=239
J19K Poorman 83.33 23 P **P** **17 53 42.5 -0.7**
J19K Poorman 83.33 23 P **P** **17 53 42.5 -0.7**
baz=242
L20K Farewell, AK 83.33 25 P **P** **17 53 43.0 -0.3**
baz=244
M20K Styx River 83.39 25 P **P** **17 53 42.7 -0.9**
M20K IAmb IAmb 17 53 50.9
comp=Z,22nm,0.9s
M20K Styx River 83.39 25 P **P** **17 53 43.0 -0.6**
baz=244
N20K Mount Spurr 83.50 26 P **P** **17 53 44.3 +0.1**
baz=245
BRSE Bradley Lake S 83.57 28 P **P** **17 53 44.4 -0.1**
baz=247
K20K Telida 83.65 24 P **P** **17 53 44.6 -0.3**
baz=244
H19K Roundabout Mou 83.75 21 P **P** **17 53 45.5 +0.3**
baz=241
CAPN Captain Cook N 83.79 27 P **P** **17 53 45.4 -0.1**
baz=246
C18K Utukok River 83.80 18 P **P** **17 53 44.9 -0.7**
baz=236
G19K Purcell Mounta 83.83 21 IAmb IAmb 17 53 53.1
comp=Z,14nm,0.9s
G19K Purcell Mounta 83.83 21 P **P** **17 53 45.5 -0.2**
baz=240
NRIK Noril'sk 83.87 343 P **P** **17 53 44.4 -1.4**
comp=Z,3.9nm,0.8s,baz=111,slow=4.1,SNR=9.0
comp=Z,3.9nm,0.8s
F19K Shaleruckik Mo 83.94 20 P **P** **17 53 45.8 -0.4**
baz=240
J20K Nowinta River 83.99 23 P **P** **17 53 46.3 -0.2**
baz=243

B18K Kokolik River 84.02 17 P **P** **17 53 46.5 -0.1**
baz=236
QSPA South Pole Qui 84.08 180 P **P** **17 53 46.9 -0.3**
comp=Z,14nm,0.8s,baz=311,slow=0.5,SNR=66
comp=Z,14nm,0.8s
SKT Skwentna 84.11 26 P **P** **17 53 46.8 -0.4**
baz=246
I20K Naaghedeneel 84.14 23 P **P** **17 53 47.1 -0.2**
baz=243
BVAR Borovoye Array 84.15 325 P **P** **17 53 46.7 -0.9**
comp=Z,6.0nm,0.7s,baz=110,slow=7.0,SNR=43
comp=Z,6.0nm,0.7s
BRVK Borovoye 84.22 325 P **P** **17 53 46.3 -1.7**
BRVK Borovoye 84.22 325 *c i*P **P** **17 53 46.5 -1.4**
BRVK pmax pmax
comp=Z,13nm,1.3s
SUA Susitna One 84.25 26 P **P** **17 53 46.8 -1.2**
baz=247
SEW Seward 84.31 28 P **P** **17 53 47.6 -0.6**
baz=248
H20K Anotleneega Mo 84.31 22 P **P** **17 53 47.9 -0.2**
baz=242
O22K Cooper Landing 84.32 27 P **P** **17 53 47.1 -1.2**
O22K Cooper Landing 84.32 27 P **P** **17 53 47.6 -0.7**
baz=248
E19K Redstone River 84.43 20 P **P** **17 53 48.0 -0.8**
E19K IAmb IAmb 17 53 56.2
comp=Z,18nm,0.8s
E19K Redstone River 84.43 20 P **P** **17 53 48.5 -0.2**
baz=240
CAST Castle Rocks 84.48 24 P **P** **17 53 47.9 -1.2**
baz=245,SNR=5.8
C19K Lookout Ridge 84.54 18 P **P** **17 53 49.4 +0.1**
C19K Lookout Ridge 84.54 18 P **P** **17 53 49.5 +0.2**
baz=238
RC01 Rabbit Creek A 84.55 27 P **P** **17 53 48.1 -1.3**
baz=248
CHUM Lake Minchumin 84.58 24 P **P** **17 53 48.8 -0.7**
baz=245,SNR=6.7
M22K Willow 84.64 26 P **P** **17 53 48.6 -1.3**
baz=247,SNR=5.3
D19K Kuna River 84.67 19 IAmb IAmb 17 53 57.1
comp=Z,23nm,1.1s
D19K Kuna River 84.67 19 P **P** **17 53 49.6 -0.4**
baz=239
F20K Avaraaa Lake 84.74 20 IAmb IAmb 17 53 57.9
comp=Z,14nm,0.9s
F20K Avaraart Lake 84.74 20 P **P** **17 53 49.6 -0.7**
baz=242
IMAR Indian Mountai 84.95 22 P **P** **17 53 50.5 -0.9**
PMR Palmer 85.01 26 P **P** **17 53 50.7 -1.1**
baz=248
H21K Melozitna Rive 85.16 22 IAmb IAmb 17 53 59.1
comp=Z,13nm,1.2s
H21K Melozitna Rive 85.16 22 P **P** **17 53 51.7 -0.7**
baz=244
E20K Nigu River 85.17 19 P **P** **17 53 52.5 0.0**
baz=241
BPAW Bear Paw Mtn. 85.21 24 P **P** **17 53 51.8 -0.9**
baz=246
TRF Thorofare Moun 85.23 25 P **P** **17 53 52.4 -0.6**
baz=247
KNK Knik Glacier 85.25 27 P **P** **17 53 52.4 -0.6**
baz=249,SNR=5.8
D20K Etivluk River 85.26 19 P **P** **17 53 52.2 -0.7**
baz=241
I21K Tanana 85.26 23 P **P** **17 53 52.6 -0.4**
baz=245
SML Sawmill 85.45 26 P **P** **17 53 53.0 -1.0**
baz=249,SNR=5.9
F21K Alatna River 85.60 21 P **P** **17 53 54.5 -0.2**
baz=244
MLY Manley 85.68 23 IAmb IAmb 17 54 02.4
comp=Z,16nm,0.9s
MLY Manley 85.68 23 P **P** **17 53 54.3 -0.8**
baz=246,SNR=8.3
M23K Glacier View 85.71 27 P **P** **17 53 54.7 -0.6**
baz=249
WAT1 Susitna Watana 85.72 25 P **P** **17 53 54.0 -1.4**
baz=249
H22K Ishtalitna Cre 85.79 22 P **P** **17 53 55.4 -0.2**
baz=246
MCK McKinley 85.90 25 P **P** **17 53 55.1 -1.1**
baz=248
SCM Sheep Creek Mo 85.90 27 P **P** **17 53 55.4 -0.9**
baz=250
WAT6 Susitna Watana 85.98 26 P **P** **17 53 56.7 -0.1**
baz=249
E21K Killik River 85.99 19 P **P** **17 53 56.2 -0.3**
baz=243
C21K Knifeblade Rid 86.05 19 P **P** **17 53 57.0 +0.2**
baz=242
NEA2 Nenana 86.17 24 P **P** **17 53 56.2 -1.2**
baz=248
G22K Bettles 86.17 21 P **P** **17 53 57.2 -0.2**
baz=246
I23K Minto, Yukon-K 86.27 23 P **P** **17 53 57.7 -0.2**
baz=248
DHY Denali Highway 86.31 25 IAmb IAmb 17 54 05.1
comp=Z,18nm,0.8s
DHY Denali Highway 86.31 25 P **P** **17 53 57.8 -0.7**
baz=250
KLU Klutina 86.42 27 P **P** **17 53 58.6 -0.3**
baz=251
M24K Tolsona, Glenn 86.51 26 P **P** **17 53 58.7 -0.6**
baz=251
WRH Wood River Hil 86.52 24 IAmb IAmb 17 54 05.0
comp=Z,14nm,0.8s
A21K Barrow 86.55 16 P **P** **17 53 58.5 -0.7**
baz=240,SNR=5.3
E22K Anaktuvuk Pass 86.57 20 IAmb IAmb 17 54 07.5
comp=Z,13nm,0.8s
E22K Anaktuvuk Pass 86.57 20 P **P** **17 53 59.2 -0.3**
baz=245
D22K Ayikyak River 86.60 19 P **P** **17 53 59.8 +0.2**
baz=244
G23K Bananza Creek 86.62 22 P **P** **17 53 59.1 -0.7**
G23K IAmb IAmb 17 54 07.0
comp=Z,8.3nm,0.8s
G23K Bananza Creek 86.62 22 P **P** **17 53 59.3 -0.4**
baz=247,SNR=6.2
CCB Clear Creek Bu 86.70 24 IAmb IAmb 17 54 05.6
comp=Z,20nm,0.8s
COLA College 86.76 24 P **P** **17 53 59.4 -0.9**
baz=249
COLD Coldfoot 86.76 21 P **P** **17 54 00.1 -0.3**
baz=247
BMRM Bremner River 86.85 28 P **P** **17 54 00.5 -0.5**
baz=252
HDA Harding Lake 86.96 24 P **P** **17 54 01.0 -0.4**
baz=250
POKR Poker Plat Res 87.01 23 P **P** **17 54 01.3 -0.4**
baz=249
HARP HAARP 87.05 26 P **P** **17 54 01.8 -0.1**
baz=252
N25K Chitina, Valde 87.05 27 P **P** **17 54 01.0 -0.9**
baz=252
H24K Noodor Dome 87.10 23 P **P** **17 54 01.7 -0.4**
baz=249
PAX Paxson 87.10 26 P **P** **17 54 01.3 -0.9**
baz=251
IL31 87.11 24 IAmb IAmb 17 54 07.7
comp=Z,14nm,0.8s
ILAR Eielson Array 87.11 24 P 17 53 58.8 -3.3
ILAR Eielson Array 87.11 24 P P 17 53 59.5 -2.6
comp=Z,2.8nm,0.6s,baz=259,slow=4.7,SNR=52
comp=Z,2.8nm,0.6s
IL03 Eielson Array 87.12 24 P P 17 53 59.4 -2.8
E23K Chandalar 87.30 20 P **P** **17 54 03.4 +0.4**
baz=247
D23K Nanushuk River 87.30 19 P **P** **17 54 03.1 +0.1**
baz=246
CRQE Cirque 87.50 28 P **P** **17 54 03.9 -0.3**
baz=254
G24K Hadweenzic Riv 87.56 22 IAmb IAmb 17 54 11.6
comp=Z,17nm,1.1s
G24K Hadweenzic Riv 87.56 22 P **P** **17 54 04.1 -0.1**
baz=249
J25K Salcha River, 87.67 24 IAmb IAmb 17 54 11.1
comp=Z,16nm,0.9s
J25K Salcha River, 87.67 24 P **P** **17 54 03.8 -1.1**
baz=251
F24K Squaw Lake 87.70 21 IAmb IAmb 17 54 12.8
comp=Z,18nm,1.0s
F24K Squaw Lake 87.70 21 P **P** **17 54 04.6 -0.4**
baz=249
MCARA McCarthy VSAT 87.71 28 P **P** **17 54 03.6 -1.5**
baz=254

PRP	Porcupine Dome	87.90	23	P		P	17 54 05.0	-1.0
	baz=251							
D24K	Happy Valley	87.99	19	P		P	17 54 05.9	-0.3
	baz=248							
SCRK	Sand Creek	88.05	25	P		P	17 54 05.3	-1.5
	baz=253							
G25K	Bearman Lake	88.09	22	P		P	17 54 06.4	-0.3
	baz=251							
C24K	Franklin Bluff	88.24	19	P		P	17 54 07.1	-0.3
	baz=248							
CTG	Chitna Glacier	88.38	28	P		P	17 54 07.8	-0.6
	baz=255							
J26L	Joseph Creek	88.38	25	IAmb		IAmb	17 54 15.2	
	comp=Z,11nm,0.8s							
J26L	Joseph Creek	88.38	25	P		P	17 54 07.8	-0.5
	baz=253							
M27K	Edge Creek, AK	88.50	27	IAmb		IAmb	17 54 16.4	
	comp=Z,14nm,0.8s							
M27K	Edge Creek, AK	88.50	27	P		P	17 54 08.4	-0.6
	baz=255							
F25K	Christian Rive	88.54	21	P		P	17 54 08.6	-0.4
	baz=251							
PINM	Pinnacle	88.68	29	P		P	17 54 08.3	-1.5
	baz=256							
L27K	Beaver Creek,	88.71	26	IAmb		IAmb	17 54 18.2	
	comp=Z,17nm,1.1s							
L27K	Beaver Creek,	88.71	26	P		P	17 54 09.1	-0.7
	baz=255							
E25K	Arctic Village	88.74	21	IAmb		IAmb	17 54 17.7	
	comp=Z,11nm,0.9s							
E25K	Arctic Village	88.74	21	P		P	17 54 09.7	-0.2
	baz=251,SNR=7.3							
I26K	Coal Creek Min	88.78	24	P		P	17 54 09.2	-0.9
	baz=253							
D25K	Kavik River	88.86	20	P		P	17 54 10.4	0.0
	baz=250							
K27K	Chicken	88.87	25	P		P	17 54 10.1	-0.4
	baz=254							
BVCY	Beaver Creek	88.97	27	P		P	17 54 10.6	-0.5
	baz=255							
YUK3	Moose Creek	89.00	28	P		P	17 54 11.1	-0.3
	baz=256							
PNL	Peninsula	89.00	30	P		P	17 54 10.8	-0.4
	baz=257							
G26K	Porcupine Rive	89.02	22	P		P	17 54 11.2	+0.1
	baz=253							
F26K	Sheenjek River	89.11	21	P		P	17 54 12.2	+0.5
	baz=252,SNR=7.8							
GEYT	Alibeck	89.27	308	IAmb		IAmb	17 54 29.4	
	comp=Z,19nm,1.5s							
GEYT	Alibeck	89.27	308	P		P	17 54 12.3	-0.7
	comp=Z,0.5nm,0.4s,baz=207,slow=0.3,SNR=4.3							
	comp=Z,0.5nm,0.4s							
EGAK	Eagle	89.45	25	IAmb		IAmb	17 54 20.2	
	comp=Z,15nm,0.8s							
EGAK	Eagle	89.45	25	P		P	17 54 13.2	0.0
	baz=255							
I27K	Kandik River	89.48	24	P		P	17 54 13.4	0.0
	baz=255							
O29M	Mount Kennedy	89.54	29	P		P	17 54 13.7	-0.2
	baz=258							
H27K	Steamboat Moun	89.68	23	P		P	17 54 14.3	0.0
	baz=255							
YUK4	Talbot Arm	89.74	28	P		P	17 54 14.5	-0.4
	baz=258							
YUK6	Outpost Mounta	89.79	29	P		P	17 54 14.8	-0.3
	baz=258							
P29M	Windy Craggy	89.81	30	P		P	17 54 14.8	-0.2
	baz=258							
DAWY	Dawson	90.02	25	IAmb		IAmb	17 54 23.9	
	comp=Z,21nm,1.2s							
DAWY	Dawson	90.02	25	P		P	17 54 15.8	-0.2
	baz=257,SNR=7.3							
M29M	Somme Creek	90.06	27	IAmb		IAmb	17 54 23.6	
	comp=Z,7.8nm,0.8s							
M29M	Somme Creek	90.06	27	P		P	17 54 15.4	-0.9
	baz=258							
I28M	Miner Creek	90.12	24	P		P	17 54 15.7	-0.7
	baz=256							
HYT	Haines Junctio	90.17	29	P		P	17 54 15.9	-0.9
	baz=258							
L29M	L29M	90.36	27	IAmb		IAmb	17 54 25.5	
	comp=Z,15nm,0.8s							
L29M	L29M	90.36	27	P		P	17 54 17.0	-0.6
	baz=258							
J29N	Klondike Camp	90.61	25	P		P	17 54 18.0	-0.7
	baz=258							
K29M	Barlow Dome	90.78	26	IAmb		IAmb	17 54 27.0	
	comp=Z,13nm,0.8s							
K29M	Barlow Dome	90.78	26	P		P	17 54 18.9	-0.7
	baz=258,SNR=7.4							
O30N	Mendenhall	90.84	29	P		P	17 54 19.3	-0.5
	baz=260							
M30M	Minto, Yukon	90.85	27	P		P	17 54 19.1	-0.7
	baz=259							
WHY	Whitehorse	91.41	29	P		P	17 54 21.8	-0.7
	baz=261							
J30M	Hart River	91.43	25	IAmb		IAmb	17 54 29.9	
	comp=Z,7.2nm,0.8s							
J30M	Hart River	91.43	25	P		P	17 54 21.9	-0.7
	baz=260							
I30M	Mount Dempster	91.53	25	P		P	17 54 22.4	-0.7
	baz=260							
ARU	Arti	91.59	326	*d i* P		P	17 54 27.2	+3.9
ARU							17 58 09.2	
ARU					SS	SS	18 11 41.6	+12
ARU					pmax	pmax		
	comp=Z,11nm,1.1s							
M31M	Drury Creek, Y	91.89	28	P		P	17 54 24.1	-0.6
	baz=261							
G30M	tAoh Zraii Nji	91.92	23	P		P	17 54 23.7	-1.0
	baz=260							
FARO	Faro, Yukon	92.38	28	P		P	17 54 26.5	-0.4
	baz=262							
V35K	Ketchikan	92.38	35	P		P	17 54 26.4	-0.6
	baz=263							
H31M	Peel River	92.47	24	P		P	17 54 26.4	-0.8
	baz=261							
G31M	Satah River	92.66	23	P		P	17 54 27.3	-0.7
	baz=262							
ELIB	Princess Elisa	93.15	196	*d* P		P	17 54 31.2	+0.7
R33M	Jennings River	93.18	31	P		P	17 54 29.8	-1.1
	baz=264							
BELG	Belogornoye	97.69	322	‖ *e* P		P	17 54 48.8	-2.5
BELG					pmax	pmax		
	comp=Z,3.0nm,0.9s							
YKA	Yellowknife Ar	101.08	27	P		Pdif	17 55 04.9	-1.4
	comp=Z,0.1nm,0.5s,baz=281,slow=4.9,SNR=1.6							
OBN	Obninsk	103.98	325	*i* P		Pdif	17 55 17.9	-1.4
OBN				*e*			17 59 35.7	
OBN					pmax	pmax		
	comp=Z,3.0nm,1.0s							
BRG	Berggiesshubel	118.22	326	*e* PKP		PKiKP	18 00 10.7	+6.8
BRG				Amp			18 00 13.5	
	comp=Z,2.7nm,0.7s							
BRG	Berggiesshubel	118.22	326	*e* PKIKP		PKiKP	18 00 10.6	+6.8
BRG					pmax	pmax		
	comp=Z,3.0nm,0.7s							
GERES	GERESS Array B	119.31	324	PKP		PKPdf	18 00 03.5	-2.6
	comp=Z,0.6nm,0.6s,baz=51,slow=6.4,SNR=2.0							
LESA	Schwarzleotal	120.57	323	*e* PKiKP		PKPdf	18 00 07.4	-1.2
	comp=Z,1.2nm,0.4s							
ABTA	Abfaltersbach	120.99	322	*i* PKiKP		PKPdf	18 00 08.6	-0.8
	comp=Z,3.0nm,0.7s							
WTTA	Wattenberg	121.27	323	*e* pPKP		PKPdf	18 00 10.9	+0.8
	comp=Z,2.5nm,0.5s							
WATA	Walderalm	121.28	323	*e* PKiKP		PKPdf	18 00 10.1	+0.1
	comp=Z,1.3nm,0.4s							
MOTA	Moosalm	121.55	323	*e* PKP		PKPdf	18 00 09.1	-1.5
	comp=Z,0.1nm,0.1s							
FETA	Feichten	121.93	323	*e* pPKP		PKPdf	18 00 12.3	+1.0
	comp=Z,1.1nm,0.6s							
DAVA	Damuels	122.31	324	*e* PKiKP		PKPdf	18 00 11.5	-0.6
	comp=Z,1.9nm,0.3s							
TORD	Torodi Ar. Bea	140.85	284	PKhKP		PKPpre	18 00 42.1	
	comp=Z,0.8nm,0.8s,baz=46,slow=3.8,SNR=3.7							
LPAZ	La Paz	142.42	126			PKPdf	18 00 46.2	-5.0
LPAZ	La Paz	142.42	126	PKiKP		PKPdf	18 00 46.2	-5.0
CPUP	Villa Florida	142.57	150	PKP		PKPdf	18 00 49.6	-0.8
	comp=Z,0.6nm,0.3s,baz=290,slow=5.8,SNR=1.9							
ROSC	El Rosal	143.19	90	PKPdf		PKPab	18 00 46.3	-1.7
ROSC	El Rosal	143.19	90	PKHKP		PKPpre	18 00 46.3	
BARC	Barichara	144.39	87	*e* P		PKPab	18 00 51.5	-0.9
RUSC	La Rusia	144.47	88	*e* P		PKPab	18 00 52.1	-0.9
PAMC	Pamplona, Colo	144.87	86	*e* P		PKPab	18 00 54.2	-0.3
TBTG	Tabatinga, AM	145.99	106	PKPdf		PKPdf	18 00 55.0	-1.7
SDV	Santo Domingo	146.88	83	*e* P		PKPab	18 01 04.4	+2.8
SDV	Santo Domingo	146.88	83	*e* P		PKPab	18 01 04.4	+2.8
ETMB	Extrema	147.29	118			PKPdf	18 00 58.7	-0.2
DBIC	Dimbokro	147.68	273	PKPdf		PKPdf	18 00 56.6	-2.9
DBIC	Dimbokro	147.68	273	PKPbc		PKPdf	18 01 01.8	+2.3
	comp=Z,4.4nm,0.5s,baz=96,slow=1.3,SNR=9.5							
TRCB	Terra Rica	147.82	153	PKPdf		PKPdf	18 00 57.2	-2.4
AQDB	Aquidauana	148.20	146	PKPdf		PKPdf	18 00 57.3	-2.9
CELP	Cerrillos	149.02	64	PKPdf		PKPdf	18 00 58.8	-2.8
GCPR	Guaynabo City	149.38	64	PKPdf		PKPdf	18 00 58.0	-4.2
IGPR	InterUniversit	149.48	64	PKPdf		PKPdf	18 00 58.5	-3.8
HUMP	Col San Antoni	149.65	64	PKPdf		PKPdf	18 00 57.5	-5.1
PTLB	Fontes e Lacer	149.75	135	PKPdf		PKPdf	18 00 59.5	-3.4
SAML	Samuel	150.34	120	PKPdf		PKPdf	18 00 59.8	-4.0
SAML	Samuel	150.34	120	PKIKP		PKPdf	18 00 59.8	-4.0
VILB	Vilhena	150.59	130	PKPdf		PKPdf	18 01 01.7	-2.5

IDC 26 17:45:53.8±1.3, 6°06S×142°98E, h0km, mb4.1/3, mbtmp4.2/5, ML1.6/1, Error ellipse: s-maj=44.8km s-min=27.8km az=56.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.31	129	Pn	Pn	17 47 15.6	+1.1
	1.3nm,0.3s,baz=270,slow=20,SNR=1.4						
PMG				Sn	Sn	17 48 16.7	+0.4
	4.1nm,0.3s,baz=216,slow=15,SNR=2.4						
	19nm,0.7s						
ASAR	Alice Springs	19.56	206	P	P	17 50 22.9	-0.5
	19nm,0.7s,baz=31,slow=12,SNR=2.6						
MKAR	Makanchi Array	75.03	322	P	P	17 57 37.9	+0.5
	0.6nm,0.7s,baz=114,slow=6.1,SNR=2.2						
	0.6nm,0.7s						
BVAR	Borovoye Array	84.48	325	P	P	17 58 28.9	+0.3
	2.3nm,0.7s,baz=107,slow=6.3,SNR=8.6						
	2.3nm,0.7s						
ILAR	Eielson Array	87.13	24	P	P	17 58 40.5	-0.9
	0.6nm,0.7s,baz=259,slow=4.4,SNR=5.5						
	0.6nm,0.7s						

IDC 26 17:58:01.9±0.6, 5°83S×142°71E, h0km, mb4.1/15, mbtmp4.1/18, ML2.9/2, Error ellipse: s-maj=29.5km s-min=13.0km az=78.0
NEIC 26 17:58:03.8±2.0, 5°96S±0°08×142°43E±0°08, h10km±1km, mb4.5/45, Error ellipse: s-maj=13.8km s-min=12.7km az=100.0
DJA 26 17:58:06.1±0.3, 6°S±3°×14°2E±°, h10km, M4.8/11, mB5.1/3, mb4.6/11, MLv4.9/7, Mw(mB)4.4/3

ISC 26 17:58:06.1±0.5, 6°05S±0°05×142°45E±0°06, h28km, n84, σ1s71/85, mb4.3/30, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	Merauke	3.16	220	P	Pn	17 58 56.1	+2.1
GENI	Genyem	4.12	326	P	Pn	17 59 07.4	+0.1
SMPI	Sarmi	5.49	317	P	Pn	17 59 29.5	+3.4
	63nm,1.1s,1µm0.5nm						
PMG	Port Moresby	5.74	126		Pn	17 59 28.5	-0.9
PMG	Port Moresby	5.74	126	Pn	Pn	17 59 29.5	0.0
	7.2nm,0.3s,baz=356,slow=6.9,SNR=32						
PMG				Sn	Sn	18 00 33.8	-0.6
	8.7nm,0.3s,baz=252,slow=21,SNR=6.3						
	16nm,0.3s						
MANU	Manus Island	6.31	51		Pn	17 59 37.4	-0.1
COEN	Coen	7.89	175		Pn	18 00 01.8	+2.6
RABL	Rabaul	9.85	80	Pn	Pn	18 00 27.1	+1.1
FAKI	Fak Fak	10.63	287	Pn	Pn	18 00 35.5	-1.2
FAKI	Fak Fak	10.63	287	P	Pn	18 00 38.8	+2.0
	57nm,1.4s						
SAUI	Saumlaki	11.23	260		Pn	18 00 41.7	-3.3
SAUI	Saumlaki	11.23	260	P	Pn	18 00 45.9	+0.9
	168nm,0.9s						
SWI	Sorong	12.30	294	P	Pn	18 01 02.9	+3.4
	19nm,0.7s,681nm						
MTN	Manton Dam	13.04	238		Pn	18 01 08.7	-1.0
CTA	Charters Tower	14.44	166	Pn	Pn	18 01 30.8	+2.1
	0.1nm,0.3s,baz=343,slow=14,SNR=2.2						
CTA				Lg	Lg	18 05 43.5	
	0.1nm,0.3s,baz=53,slow=20,SNR=1.2						
	3.1nm,0.8s						
WB0	Warramunga Arr	15.73	209	Pn	Pn	18 01 46.0	+0.1
WB0				IAmb	IAmb	18 01 53.4	
	comp=Z,32nm,1.3s						
WRAB	Tennant Creek	15.89	209		Pn	18 01 47.0	-1.0
WRAB				IAmb	IAmb	18 01 55.9	
	comp=Z,16nm,0.6s						
WB2	Warramunga Arr	15.90	209		Pn	18 01 47.7	-0.4
WB2				IAmb	IAmb	18 02 02.3	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	15.90	209		Pn	18 01 47.8	-0.4
WRA	Warramunga Arr	15.90	209	Pn	Pn	18 01 47.8	-0.4
	comp=Z,3.1nm,0.3s,baz=28,slow=13,SNR=78						
WRA				Sn	Sn	18 04 35.6	-8.1
	comp=Z,0.2nm,0.3s,baz=22,slow=22,SNR=3.6						
WRA				Lg	Lg	18 06 34.1	
	comp=Z,0.6nm,0.3s,baz=26,slow=27,SNR=6.0						
KNRA	Kununurra	16.49	233	Pn	Pn	18 01 54.3	-1.3
KNRA				IAmb	IAmb	18 02 01.8	
	comp=Z,36nm,0.7s						
SOEI	Soe	18.38	257		Pn	18 02 20.0	+0.7
SOEI				IAmb	IAmb	18 02 31.8	
	comp=Z,37nm,0.8s						
SOEI	Soe	18.38	257	P	Pn	18 02 22.6	+3.3
	comp=Z,58nm,1.1s						
AS31	Alice Springs	19.35	204		Pn	18 02 32.8	+1.9
ASAR	Alice Springs	19.35	204		Pn	18 02 31.3	+0.5
ASAR	Alice Springs	19.35	204	P	Pn	18 02 32.9	+2.0
	comp=Z,12nm,0.6s,baz=35,slow=9.4,SNR=199						
ASAR				S	S	18 06 03.7	-3.5
	comp=Z,2.0nm,0.7s,baz=16,slow=27,SNR=4.3						
ASAR				Lg	Lg	18 08 25.2	
	comp=Z,0.2nm,0.3s,baz=19,slow=29,SNR=1.6						
FITZ	Fitzroy Crossi	20.31	232		Pn	18 02 42.0	-0.3
GTOI	Gorontalo	20.51	288	P	Pn	18 02 47.9	+3.3
TOLI2	Tolitoli	22.77	288	P	P	18 03 03.8	-2.9
TOLI2				IAmb	IAmb	18 03 41.7	
	comp=Z,8.2nm,0.9s						
STKA	Stephens Creek	25.71	182	P	P	18 03 33.0	-1.1
STKA	Stephens Creek	25.71	182	P	P	18 03 35.0	+0.8
	comp=Z,3.1nm,0.8s,baz=349,slow=9.9,SNR=3.1						
	comp=Z,3.1nm,0.8s						
PSA00	Pilbara Seismi	26.77	233	P	P	18 03 46.0	+2.1
BBOO	Buckleboo	27.29	192	P	P	18 03 50.9	+2.5
BBOO				IAmb	IAmb	18 04 30.4	
	comp=Z,21nm,1.4s						
MJAR	Matsushiro Arr	42.55	355	P	P	18 05 57.4	-2.2
	comp=Z,1.0nm,0.6s,baz=163,slow=7.7,SNR=4.3						
	comp=Z,1.0nm,0.6s						
JSD	Sado	44.03	355	P	P	18 06 09.9	-1.5
JSD				IAmb	IAmb	18 06 39.6	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	45.35	344	P	P	18 06 21.1	-0.8
	comp=Z,2.8nm,1.0s,baz=163,slow=8.8,SNR=8.5						
	comp=Z,2.8nm,1.0s						
JTM	Tenmabayashi	46.62	359	P	P	18 06 29.4	-2.5
ENH	Enshi	47.98	321	P	P	18 06 42.7	-0.1
ENH				IAmb	IAmb	18 06 49.3	
	comp=Z,4.7nm,0.7s						
CMAR	Chiang Mai Arr	49.33	301	P	P	18 06 54.1	+0.8
	comp=Z,0.6nm,0.8s,baz=113,slow=7.4,SNR=1.9						
	comp=Z,0.6nm,0.8s						
USRK	Ussuriysk Ar.	50.90	350	P	P	18 07 03.5	-1.2
USRK	Ussuriysk Ar.	50.90	350	P	P	18 07 03.7	-1.0
	comp=Z,3.0nm,0.8s,baz=179,slow=7.5,SNR=6.9						
	comp=Z,3.0nm,0.8s						
HEH	HeiHe	57.57	349	*e* P	P	18 07 52.5	-0.7
HEH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHL	Shillong	58.29	305	P	P	18 07 59.3	+0.3
PEA0B	Petropavlovsk-	60.33	11	P	P	18 08 11.4	-0.9
PETK	Petropavlovsk-	60.33	11	P	P	18 08 11.2	-1.2
PETK	Petropavlovsk-	60.33	11	P	P	18 08 11.0	-1.4
	comp=Z,6.1nm,0.8s,baz=188,slow=8.7,SNR=6.2						
	comp=Z,6.1nm,0.8s						
LSA	Lhasa	60.70	309	P	P	18 08 16.4	+0.5
LSA				IAmb	IAmb	18 08 25.7	
	comp=Z,2.9nm,0.8s						
ULN	Ulaanbaatar	62.06	334	P	P	18 08 25.6	+1.2
ULN				IAmb	IAmb	18 08 30.6	
	comp=Z,2.4nm,0.8s						
SONM	Songino Array	62.33	333	P	P	18 08 26.1	0.0
SONM	Songino Array	62.33	333	P	P	18 08 26.6	+0.4
	comp=Z,0.5nm,0.6s,baz=146,slow=7.9,SNR=2.6						
	comp=Z,0.5nm,0.6s						
VNDA	Vanda	72.17	176	P	P	18 09 29.1	+1.2
VNDA				IAmb	IAmb	18 09 54.0	
	comp=Z,4.6nm,1.3s						
VNDA	Vanda	72.17	176	P	P	18 09 29.6	+1.8
	comp=Z,1.1nm,0.6s,baz=324,slow=6.4,SNR=9.2						
	comp=Z,1.1nm,0.6s						
MK31	Makanchi Array	74.70	322	P	P	18 09 43.3	0.0
MKAR	Makanchi Array	74.70	322	P	P	18 09 43.5	+0.1
MKAR	Makanchi Array	74.70	322	P	P	18 09 43.9	+0.5
	comp=Z,0.7nm,0.7s,baz=103,slow=7.2,SNR=9.0						
	comp=Z,0.7nm,0.7s						
MAKZ	Makanchi	74.90	322	P	P	18 09 44.1	-0.4
MAKZ				IAmb	IAmb	18 09 52.5	
	comp=Z,3.9nm,1.3s						
TARG	Taragay, Kyrgy	75.56	316	P	P	18 09 47.7	-1.2
TARG				IAmb	IAmb	18 09 52.1	
	comp=Z,2.5nm,1.0s						
NIL	Nilore	76.30	307	P	P	18 09 51.4	-1.4
ZAA0	Zalesovo Array	76.69	329	P	P	18 09 53.8	-0.7
ZALV	Zalesovo Beam	76.69	329	P	P	18 09 55.3	+0.8
ZALV	Zalesovo Beam	76.69	329	P	P	18 09 54.3	-0.2
	comp=Z,0.6nm,0.5s,baz=109,slow=4.2,SNR=2.8						
	comp=Z,0.6nm,0.5s						
KURBB	Kurchatov Arra	78.59	324	P	P	18 10 05.4	+0.2
	comp=Z,0.4nm,0.3s,baz=120,slow=4.7,SNR=2.1						
	comp=Z,0.4nm,0.3s						
L14K	Kuka Creek	79.39	24	P	P	18 10 08.3	-1.0
K15K	Wolf Creek Mou	80.37	23	P	P	18 10 14.1	-0.5
KKAR	Karatay Array	81.11	315		P	18 10 19.3	+0.2
KKAR	Karatay Array	81.11	315	P	P	18 10 18.7	-0.3
KKAR				IAmb	IAmb	18 10 40.6	
	comp=Z,3.4nm,1.5s						
J16K	Anvik River	81.27	23	P	P	18 10 19.6	+0.2
G16K	Koyuk River	81.80	20	P	P	18 10 21.5	-0.7
G16K				IAmb	IAmb	18 10 26.8	
	comp=Z,3.0nm,1.0s						
L18K	Granite Mounta	82.28	24	P	P	18 10 25.9	+1.2
J18K	Innoko River	82.87	23	P	P	18 10 27.3	-0.5
J18K				IAmb	IAmb	18 11 00.3	
	comp=Z,7.8nm,1.4s						
H18K	Honhosa River	83.09	21	P	P	18 10 27.4	-1.6
G18K	Tagagawik	83.36	21	P	P	18 10 29.6	-0.8
E18K	Tukpahlearik C	83.52	19	P	P	18 10 30.7	-0.4
E18K				IAmb	IAmb	18 10 33.4	
	comp=Z,3.6nm,0.9s						
QSPA	South Pole Qui	83.92	180	P	P	18 10 34.4	+1.0
QSPA	South Pole Qui	83.92	180	P	P	18 10 34.8	+1.3
	comp=Z,4.5nm,0.6s,baz=304,slow=1.0,SNR=40						
	comp=Z,4.5nm,0.6s						
NRIK	Noril'sk	83.97	343	P	P	18 10 33.3	0.0
NRIK				IAmb	IAmb	18 10 34.0	
	comp=Z,3.4nm,1.2s						
NRIK	Noril'sk	83.97	343	P	P	18 10 33.0	-0.3
	comp=Z,1.1nm,0.4s,baz=90,slow=4.0,SNR=2.5						
	comp=Z,1.1nm,0.4s						
H19K	Roundabout Mou	83.97	22	P	P	18 10 31.9	-1.5
H19K				IAmb	IAmb	18 10 46.7	
	comp=Z,6.1nm,1.2s						
C18K	Utukok River	84.01	18	P	P	18 10 33.4	-0.3
C18K				IAmb	IAmb	18 10 52.1	
	comp=Z,6.8nm,1.5s						
BVAR	Borovoye Array	84.17	325	P	P	18 10 34.0	-0.7
	comp=Z,2.2nm,0.8s,baz=112,slow=6.7,SNR=12						
	comp=Z,2.2nm,0.8s						
BRVK	Borovoye	84.24	325	P	P	18 10 35.1	0.0
BRVK				IAmb	IAmb	18 10 41.8	
	comp=Z,3.0nm,0.9s						
E19K	Redstone River	84.65	20	P	P	18 10 36.7	-0.2
ILAR	Eielson Array	87.33	24	P	P	18 10 48.2	-1.9
ILAR	Eielson Array	87.33	24	P	P	18 10 47.4	-2.8
	comp=Z,1.3nm,0.9s,baz=258,slow=4.9,SNR=9.7						
	comp=Z,1.3nm,0.9s						

IDC 26 18:12:23.0±1.9, 5°90S×142°44E, h0km, mb3.5/1, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=42.8km s-min=29.4km az=53.0

ISC 26 18:12:26.9±1.2, 6°0S±0°1×142°43E±0°10, h28km, n9, σ0s77/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	Tabubil	1.38	300	P	Pn	18 12 50.4	0.0
PMG	Port Moresby	5.81	126	Pn	Pn	18 13 51.2	-0.1
	5.0nm,0.4s,baz=308,slow=17,SNR=7.8						
PMG				Sn	Sn	18 14 57.2	+0.2
	0.5nm,0.3s,baz=338,slow=19,SNR=1.3						
FAKI	Fak Fak	10.59	286	P	Pn	18 14 56.3	-0.6
KDU	Kakadu	11.87	235	P	Pn	18 15 14.5	0.0
MTSU	Mount Surprise	12.24	171	P	Pn	18 15 04.7	-15
MTN	Manton Dam	13.07	238	P	Pn	18 15 31.1	+0.3
WRA	Warramunga Arr	15.96	209	Pn	Pn	18 16 08.0	-1.7
	0.4nm,0.3s,baz=26,slow=13,SNR=17						
	1.0nm,0.5s						
ASAR	Alice Springs	19.42	204	P	Pn	18 16 52.8	+0.3
	0.3nm,0.3s,baz=32,slow=12,SNR=20						
	1.8nm,0.7s						
MKAR	Makanchi Array	74.61	322	P	P	18 24 03.9	+0.2
	0.3nm,0.7s,baz=107,slow=7.5,SNR=3.6						
	0.3nm,0.7s						

IDC 26 18:18:23.7±0.9, 56°23N×148°40W, h0km, mb3.8/14, mbtmp3.8/19, ML3.8/5, MS4.1/27, Error ellipse: s-maj=23.3km s-min=15.5km az=28.0
NEIC 26 18:18:27.0±1.0, 56°58N±0°08×148°68W±0°09, h10km±1km, mb4.3/8, ML4.3/78, ML3.8(AEIC), Error ellipse: s-maj=14.2km s-min=7.7km az=168.0
AEIC 26 18:18:29.5±1.3, 56°46N±0°09×148°6W±0°1, h2km±4km, Error ellipse: s-maj=12.7km s-min=7.8km az=165.0

ISC 26 18:18:26.1±0.6, 56°48N±0°07×148°52W±0°04, h10km, n310, σ1s09/283, mb4.0/17, MS4.1/21, Gulf of Alaska

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

BRSE	Bradley Lake S	3.47	341		P		Pn	18 19 19.6	-0.6
	baz=160								
BRLK	Bradley Lake	3.52	340				Pn	18 19 20.1	-0.8
BRLK	Bradley Lake	3.52	340				Sn	18 20 01.1	-1.4
P23K	Montague Islan	3.58	9				Pn	18 19 21.2	-0.3
P23K							Sn	18 20 01.1	-2.7
P23K	Montague Islan	3.58	9		P		Pn	18 19 21.2	-0.3
	baz=191								
P23K					S		Sn	18 20 01.1	-2.7
	baz=191								
SEW	Seward	3.67	353				Pn	18 19 21.9	-0.8
SEW							Sn	18 20 05.2	-0.8
SEW	Seward	3.67	353		P		Pn	18 19 22.0	-0.8
	baz=173								
SEW					S		Sn	18 20 05.2	-0.8
	baz=173								
Q19K	Cape Douglas,	3.68	314				Pn	18 19 23.2	+0.1
Q19K					IAML			18 20 21.0	
	comp=N,778nm,0.8s								
Q19K	Cape Douglas,	3.68	314		P		Pn	18 19 23.8	+0.7
	baz=130								
P19K	Oil Pt	4.04	324				Pn	18 19 28.2	+0.2
P19K					IAML			18 20 46.2	
	comp=E,509nm,0.5s								
P19K					IAML			18 20 46.4	
	comp=N,646nm,0.6s								
P19K	Oil Pt	4.04	324		P		Pn	18 19 28.4	+0.3
	baz=140								
O22K	Cooper Landing	4.06	352				Pn	18 19 27.5	-0.7
O22K	Cooper Landing	4.06	352		P		Pn	18 19 27.8	-0.4
	baz=171								
HIN	Hinchinbrook I	4.07	14				Pn	18 19 28.3	0.0
HIN					IAML			18 20 17.6	
	comp=E,594nm,1.0s								
KAIM	Kayak Island	4.08	30				Pn	18 19 28.8	+0.4
KAIM					IAML			18 20 49.3	
	comp=N,600nm,0.5s								
KAIM					IAML			18 20 49.7	
	comp=E,603nm,1.0s								
KAIM	Kayak Island	4.08	30		P		Pn	18 19 28.8	+0.4
	baz=214								
KAHC	Katmai Hardscr	4.11	305				Pn	18 19 28.9	-0.1
KAHC	Katmai Hardscr	4.11	305		P		Pn	18 19 28.9	-0.1
	baz=120								
SLKM	Skilak Lake	4.13	348				Pn	18 19 28.8	-0.4
O20K	Slope Mountain	4.21	331				Pn	18 19 29.9	-0.4
O20K	Slope Mountain	4.21	331		P		Pn	18 19 29.9	-0.4
	baz=148								
IVE	Iliamna Volcan	4.27	328				Pn	18 19 30.3	-0.8
ILSW	Iliamna Southw	4.28	327				Pn	18 19 30.3	-1.0
ILSW					IAML			18 20 49.1	
	comp=N,252nm,0.9s								
ILSW					IAML			18 20 51.1	
	comp=E,287nm,1.0s								
EYAK	Cordova Ski Ar	4.33	18				Pn	18 19 31.8	-0.1
EYAK	Cordova Ski Ar	4.33	18		P		Pn	18 19 32.0	+0.1
EYAK	Cordova Ski Ar	4.33	18		P		Pn	18 19 31.8	-0.1
	baz=201								
CNTC	Contact Creek	4.37	297				Pn	18 19 32.7	+0.2
Q17K	Contact Creek	4.37	297		P		Pn	18 19 32.7	+0.2
	baz=112								
SUCK	Suckling Hills	4.38	33				Pn	18 19 33.0	+0.3
SUCK					IAML			18 20 29.9	
	comp=E,342nm,1.0s								
SUCK					IAML			18 21 10.6	
	comp=N,452nm,1.1s								
RAGM	Ragged Mountai	4.41	26				Pn	18 19 33.1	+0.1
FID	Port Fidalgo	4.41	13				Pn	18 19 32.1	-0.9
FID					IAML			18 20 24.7	
	comp=N,290nm,1.1s								
FID					IAML			18 20 56.3	
	comp=E,276nm,1.3s								
NICHA	Nichawak Mount	4.46	31				Pn	18 19 34.4	+0.6
GLI	Glacier Island	4.47	9				Pn	18 19 33.8	-0.1
GLI					IAML			18 20 32.9	
	comp=E,357nm,0.7s								
GLI					IAML			18 20 52.5	
	comp=N,277nm,1.3s								
GLI	Glacier Island	4.47	9		P		Pn	18 19 33.8	-0.1
	baz=191								
CAPN	Captain Cook N	4.51	343				Pn	18 19 34.5	+0.1
RED	Redoubt Volcan	4.54	332				Pn	18 19 33.9	-0.9
GOAT	Goat Mountain	4.57	24				Pn	18 19 35.5	+0.3
RSO	Redoubt South	4.57	333				Pn	18 19 34.5	-0.8
BGLC	Bering Glacier	4.58	35				Pn	18 19 35.9	+0.7
BGLC	Bering Glacier	4.58	35		P		Pn	18 19 35.9	+0.7
	baz=220								
RDT	Redoubt	4.58	335				Pn	18 19 34.3	-1.1
RDWB	Redoubt West	4.61	332				Pn	18 19 35.0	-0.9
P18K	Big Mountain,	4.61	312		Pn		Pn	18 19 34.7	-1.2
P18K	Big Mountain,	4.61	312		P		Pn	18 19 35.0	-0.8
	baz=127								
DFR	Drift River	4.66	334				Pn	18 19 35.8	-0.8
RC01	Rabbit Creek A	4.66	353				Pn	18 19 36.5	0.0
RC01					IAML			18 20 31.5	
	comp=N,287nm,0.5s								
RC01					IAML			18 20 57.7	
	comp=E,305nm,0.7s								
BERG	Berg Lake	4.67	31		Pn		Pn	18 19 36.8	+0.2
GRIN	Grindle Hills	4.69	34				Pn	18 19 37.2	+0.3
NCT	North Crescent	4.70	332				Pn	18 19 36.4	-0.7
FIS	Fire Island	4.76	350				Pn	18 19 36.4	-1.4
SNH	Sunshine Point	4.76	37				Pn	18 19 37.7	-0.2
SNH					IAML			18 21 05.9	
	comp=N,168nm,0.9s								
SNH					IAML			18 21 25.5	
	comp=E,254nm,1.3s								
O19K	Port Alsworth	4.82	323				Pn	18 19 37.3	-1.3
O19K	Port Alsworth	4.82	323		P		Pn	18 19 38.6	0.0
	baz=139								
KHIT	Khitrov Hills	4.84	33				Pn	18 19 38.9	-0.1
DIV	Divide	4.88	16				Pn	18 19 39.4	0.0
O18K	Koktuh Hills	4.89	316		IAML			18 21 10.4	
	comp=N,146nm,0.9s								
O18K	Koktuh Hills	4.89	316		P		Pn	18 19 39.2	-0.5
	baz=131								
BMRM	Bremner River	4.94	23		P		Pn	18 19 40.6	+0.3
	baz=206								
KNK	Knik Glacier	4.95	0				Pn	18 19 40.3	-0.1
KNK	Knik Glacier	4.95	0		IAML			18 21 07.0	
	comp=E,182nm,0.8s								
KNK					IAML			18 21 15.3	
	comp=N,166nm,0.9s								
KNK	Knik Glacier	4.95	0		P		Pn	18 19 40.3	-0.1
	baz=181								
WAX	Waxell Ridge	4.97	34				Pn	18 19 40.5	-0.2
WAX	Waxell Ridge	4.97	34		IAML			18 21 04.9	
	comp=E,331nm,0.8s								
P17K	Kvichak River	5.03	306				Pn	18 19 41.6	+0.1
P17K	Kvichak River	5.03	306		P		Pn	18 19 41.6	+0.1
	baz=120								
BARK	Barkley Ridge	5.05	36				Pn	18 19 42.3	+0.5
MESA	MESA	5.07	40		IAML			18 21 08.7	
	comp=E,189nm,0.7s								
MESA					IAML			18 21 15.1	
	comp=N,215nm,0.8s								
N20K	Mount Spurr	5.10	340		P		Pn	18 19 42.0	-0.6
	baz=157								
SPCR	Spurr Chakacha	5.10	340				Pn	18 19 42.0	-0.6
CRQM	Cirque	5.13	31				Pn	18 19 43.2	+0.2
CRQM	Cirque	5.13	31		IAML			18 20 46.6	
	comp=N,265nm,0.6s								
CRQM					IAML			18 21 17.1	
	comp=E,244nm,0.8s								
SUA	Susitna One	5.13	348				Pn	18 19 42.5	-0.5
SUA	Susitna One	5.13	348		P		Pn	18 19 42.5	-0.5
	baz=167								
CRQE	Cirque	5.13	31		P		Pn	18 19 43.2	+0.2
	baz=216								
PMR	Palmer	5.13	357				Pn	18 19 42.7	-0.2
PMR					IAML			18 20 42.8	
	comp=E,176nm,0.9s								
PMR					IAML			18 20 49.5	
	comp=N,116nm,1.1s								
PMR	Palmer	5.13	357		P		Pn	18 19 43.8	+0.9
SPCG	Spurr Capps Gl	5.15	341				Pn	18 19 43.5	+0.2
SPCP	Crater Peak Br	5.15	340				Pn	18 19 43.8	+0.4
KLU	Klutina	5.20	14				Pn	18 19 44.2	+0.3
KLU	Klutina	5.20	14		IAML			18 21 15.3	
	comp=E,175nm,1.0s								
KLU					IAML			18 21 16.3	
	comp=N,160nm,0.9s								
KLU	Klutina	5.20	14		P		Pn	18 19 44.2	+0.3
	baz=196								
TGL	Tana Glacier	5.21	32				Pn	18 19 44.5	+0.4
	comp=N,159nm,0.7s								
TGL					IAML			18 21 18.7	
	comp=E,168nm,0.7s								
BAGL	Bagley Icefiel	5.25	37				Pn	18 19 44.5	+0.1
ISLE	Juniper Island	5.25	36				Pn	18 19 45.0	+0.4
ISLE					IAML			18 21 09.5	
	comp=N,178nm,1.2s								
ISLE					IAML			18 21 28.5	
	comp=E,164nm,1.1s								
GHO	Glory Hole Cre	5.31	358				Pn	18 19 45.9	+0.5
GHO	Glory Hole Cre	5.31	358		IAML			18 21 16.0	
	comp=E,252nm,0.8s								
STLK	Strandline Lak	5.31	343				Pn	18 19 45.5	+0.1
SML	Sawmill	5.34	1				Pn	18 19 46.2	+0.4
SML					IAML			18 21 25.3	
	comp=E,201nm,0.9s								
SML	Sawmill	5.34	1		P		Pn	18 19 46.3	+0.4
	baz=182								
M23K	Glacier View	5.34	4				Pn	18 19 46.5	+0.7
M23K	Glacier View	5.34	4		P		Pn	18 19 46.5	+0.7
	baz=185								
N19K	Bonanza Creek	5.34	327				Pn	18 19 45.5	-0.3
N19K	Bonanza Creek	5.34	327		IAML			18 21 19.6	
	comp=E,102nm,1.0s								
N19K	Bonanza Creek	5.34	327		P		Pn	18 19 45.5	-0.3
	baz=142								
SCM	Sheep Creek Mo	5.40	6				Pn	18 19 47.1	+0.4
SCM	Sheep Creek Mo	5.40	6		P		Pn	18 19 47.1	+0.4
	baz=188								
VRDI	Verde Repeater	5.44	27				Pn	18 19 47.5	+0.2
VRDI	Verde Repeater	5.44	27		IAML			18 21 11.6	
	comp=N,99nm,1.0s								
VRDI					IAML			18 21 19.7	
	comp=E,110nm,0.8s								
SAMH	Samovar Hills	5.48	45				Pn	18 19 48.1	+0.4
KIAG	Kiagna River	5.49	33				Pn	18 19 48.1	+0.1
N25K	Chitina, Valde	5.52	20				Pn	18 19 48.8	+0.5
N25K	Chitina, Valde	5.52	20		P		Pn	18 19 48.8	+0.5
	baz=204								
GLB	Gilahina Butte	5.54	24				Pn	18 19 48.9	+0.3
TABL	Table Mountain	5.54	41				Pn	18 19 49.4	+0.7
O17K	Koliganek Bris	5.61	310				Pn	18 19 49.1	-0.4
O17K	Koliganek Bris	5.61	310		P		Pn	18 19 49.1	-0.4
	baz=123								
PCA	Pinnacle	5.67	47				Pn	18 19 50.9	+0.6
PINM	Pinnacle	5.67	47		P		Pn	18 19 50.9	+0.6
	baz=234								
MCARA	McCarthy VSAT	5.68	28				Pn	18 19 50.6	+0.2
MCARA	McCarthy VSAT	5.68	28		P		Pn	18 19 50.6	+0.2
	baz=213								
N18K	Kilae Creek	5.71	321				Pn	18 19 50.1	-0.7
N18K	Kilae Creek	5.71	321		P		Pn	18 19 50.2	-0.7
	baz=135								
SKT	Skwentna	5.73	346				Pn	18 19 51.1	0.0
SKT	Skwentna	5.73	346		P		Pn	18 19 51.1	0.0
	baz=164								
M24K	Tolsona, Glenn	5.77	11				Pn	18 19 52.7	+1.0
M24K	Tolsona, Glenn	5.77	11		P		Pn	18 19 52.7	+1.0
	baz=193								
PNL	Peninsula	5.80	53				Pn	18 19 53.1	+1.0
PNL	Peninsula	5.80	53		P		Pn	18 19 53.4	+1.3
PNL	Peninsula	5.80	53		P		Pn	18 19 53.1	+1.0
	baz=241								
BARN	Bard Glacier	5.81	35				Pn	18 19 53.0	+0.6
BCPM	Bancas Point	5.84	50				Pn	18 19 54.1	+1.4
CTG	Chitna Glacier	5.85	37		P		Pn	18 19 53.3	+0.4
	baz=223								
CTGM	Chitina Glacie	5.85	37				Pn	18 19 53.3	+0.4
LOGN	Logan Glacier	5.86	39				Pn	18 19 53.4	+0.3
SVW2	Sparrevohn	5.91	325				Pn	18 19 52.7	-0.8
SVW2	Sparrevohn	5.91	325		P		Pn	18 19 52.9	-0.6
M20K	Styx River	5.91	338				Pn	18 19 54.0	+0.3
M20K	Styx River	5.91	338		P		Pn	18 19 54.0	+0.3
	baz=155								
WACK	Wrangell Chich	5.92	20				Pn	18 19 54.6	+0.6
O16K	Kokwok River B	5.96	305				Pn	18 19 54.3	0.0
O16K	Kokwok River B	5.96	305		P		Pn	18 19 54.3	0.0
	baz=118								
WAZA	Wrangell Mount	6.04	20				Pn	18 19 56.2	+0.6
N17K	Nushagak Hills	6.09	315				Pn	18 19 55.8	-0.2
N17K	Nushagak Hills	6.09	315		P		Pn	18 19 55.8	-0.2
	baz=126								
WAT6	Susitna Watana	6.13	3				Pn	18 19 56.9	+0.2
WAT6	Susitna Watana	6.13	3		P		Pn	18 19 56.9	+0.2
	baz=184								
HARP	HAARP	6.18	15				Pn	18 19 57.6	+0.4
HARP	HAARP	6.18	15		P		Pn	18 19 57.7	+0.4
	baz=198								
M19K	Big River Lodg	6.22	333				Pn	18 19 57.2	-0.6
M19K	Big River Lodg	6.22	333		P		Pn	18 19 57.2	-0.6
	baz=149								
M18K	Stony River	6.28	326				Pn	18 19 57.6	-1.0
M18K	Stony River	6.28	326		P		Pn	18 19 57.6	-1.0
	baz=140								
WAT1	Susitna Watana	6.37	360				Pn	18 20 00.2	+0.3
WAT1	Susitna Watana	6.37	360		P		Pn	18 20 00.2	+0.3
	baz=180								
WAT7	Susitna Watana	6.37	359				Pn	18 20 00.5	+0.5
P29M	Windy Craggy	6.53	57				Pn	18 20 02.2	+0.1
P29M	Windy Craggy	6.53	57		P		Pn	18 20 02.2	+0.1
	baz=246								
L19K	White Mountain	6.57	333				Pn	18 20 01.6	-1.0
L19K	White Mountain	6.57	333		P		Pn	18 20 01.6	-1.0
	baz=148								
L20K	Farewell, AK	6.60	338				Pn	18 20 02.8	-0.4
L20K	Farewell, AK	6.60	338		P		Pn	18 20 02.8	-0.4
	baz=154								
DHY	Denali Highway	6.64	5				Pn	18 20 04.5	+0.8
DHY	Denali Highway	6.64	5		P		Pn	18 20 04.5	+0.8
	baz=186								
PAX	Paxson	6.69	12				Pn	18 20 04.9	+0.5
PAX	Paxson	6.69	12		P		Pn	18 20 04.9	+0.5
	baz=195								
N16K	Nishlik Lake	6.70	311				Pn	18 20 04.3	-0.1
N16K	Nishlik Lake	6.70	311		P		Pn	18 20 04.3	-0.1
	baz=123								
M17K	Holitna River	6.75	321				Pn	18 20 04.8	-0.3
M17K	Holitna River	6.75	321		P		Pn	18 20 04.8	-0.3
	baz=133								
M27K	Edge Creek, AK	6.79	27				Pn	18 20 06.7	+0.8
M27K	Edge Creek, AK	6.79	27		P		Pn	18 20 06.7	+0.8
	baz=213								
SDPT	Sand Point	6.82	265		P		Pn	18 20 05.7	-0.3
S31K	Pelican	6.84	72				Pn	18 20 06.0	-0.2
S31K	Pelican	6.84	72		P		Pn	18 20 05.2	-1.1
	baz=263								
YUK6	Outpost Mounta	6.92	46				Pn	18 20 09.0	+1.3
YUK6	Outpost Mounta	6.92	46		P		Pn	18 20 09.0	+1.3
	baz=234								
RND	Reindeer	6.95	359				Pn	18 20 08.7	+0.8
TRF	Thorofare Moun	7.05	354				Pn	18 20 09.5	+0.2
TRF	Thorofare Moun	7.05	354		P		Pn	18 20 09.5	+0.2
	baz=172								
YUK4	Talbot Arm	7.06	42		P		Pn	18 20 12.3	+2.7
	baz=231								
M16K	Timber Creek	7.08	314				Pn	18 20 09.6	-0.1
M16K	Timber Creek	7.08	314		P		Pn	18 20 09.6	-0.1
	baz=126								
P30M	Million Dollar	7.10	54				Pn	18 20 09.2	-0.8
P30M	Million Dollar	7.10	54		P		Pn	18 20 09.2	-0.8
	baz=244								
PLBC	Pleasant Camp	7.12	60				Pn	18 20 11.3	+1.1
PLBC	Pleasant Camp	7.12	60		P		Pn	18 20 11.3	+1.1
	baz=250								
CAST	Castle Rocks	7.18	347				Pn	18 20 11.4	+0.3
CAST	Castle Rocks	7.18	347		P		Pn	18 20 11.4	+0.3
	baz=164								
KTH	Kantishna Hill	7.20	351				Pn	18 20 12.2	+0.9
HYT	Haines Junctio	7.21	48				Pn	18 20 12.5	+1.0
HYT	Haines Junctio	7.21	48		P		Pn	18 20 12.5	+1.0
	baz=238								
MCK	McKinley	7.28	359				Pn	18 20 13.2	+0.8
MCK	McKinley	7.28	359		P		Pn	18 20 13.2	+0.8
	baz=178								
SIT	Sitka	7.28	80		P		Pn	18 20 11.2	-1.1
O14K	Tigyukauivet M	7.34	298				Pn	18 20 13.2	0.0
O14K	Tigyukauivet M	7.34	298		P		Pn	18 20 13.2	0.0
	baz=107								
L27K	Beaver Creek,	7.41	24				Pn	18 20 14.7	+0.5
L27K	Beaver Creek,	7.41	24		P		Pn	18 20 14.7	+0.5
	baz=210								
K20K	Telida	7.44	340				Pn	18 20 14.9	+0.3
K20K	Telida	7.44	340		P		Pn	18 20 14.9	+0.3
	baz=156								
TTA	Tatalina	7.49	333				Pn	18 20 15.5	+0.2
TTA	Tatalina	7.49	333		P		Pn	18 20 15.0	-0.3
TTA	Tatalina	7.49	333		P		Pn	18 20 15.5	+0.2
	baz=147								
L17K	Donlin	7.55	323				Pn	18 20 15.9	-0.2
L17K	Donlin	7.55	323		P		Pn	18 20 16.0	-0.2
	baz=135								
SKAG	Skagway	7.62	61		P		Pn	18 20 19.5	+2.5
PN7A	Pavlof North-7	7.64	268				Pn	18 20 17.1	-0.3
BESE	Bessie Mountai	7.65	68				Pn	18 20 17.7	+0.2
L16K	Owhat River	7.69	317				Pn	18 20 18.0	0.0
L16K	Owhat River	7.69	317		P		Pn	18 20 18.0	0.0
	baz=128								
BPAW	Bear Paw Mtn.	7.74	352		P		Pn	18 20 19.5	+0.8
	baz=170								
SCRK	Sand Creek	7.85	15		P		Pn	18 20 21.3	+1.1
	baz=199								
JIS	Juneau Island	7.85	71				Pn	18 20 21.4	+1.2
JIS	Juneau Island	7.85	71		P		Pn	18 20 21.7	+1.5
WRH	Wood River Hil	8.02	1				Pn	18 20 23.0	+0.5
NEA2	Nenana	8.14	358		P		Pn	18 20 24.4	+0.2
	baz=178								
CCB	Clear Creek Bu	8.20	2				Pn	18 20 25.4	+0.4
WHY	Whitehorse	8.26	54		Pn		Pn	18 20 27.3	+1.4
J25K	Salcha River,	8.30	9		P		Pn	18 20 27.0	+0.5
	baz=192								
ILAR	Eielson Array	8.36	5		Pn		Pn	18 20 26.8	-0.3
	comp=E,1.0nm,0.3s,baz=188,slow=13,SNR=33								
ILAR					Sn		Sn	18 21 55.3	-6.1
	comp=E,0.7nm,0.3s,baz=192,slow=24,SNR=4.4								
ILAR					LR		LR	18 23 46.4	
	comp=E,680nm,20.1s,baz=240,slow=38								
	comp=E,2.3nm,0.4s								
COLA	College	8.43	2		P		Pn	18 20 29.2	+1.2
P32M	Atlin	8.45	62		P		Pn	18 20 29.4	+0.9
	baz=255								
L29M	L29M	8.45	34				Pn	18 20 29.3	+0.8
L29M	L29M	8.45	34		P		Pn	18 20 29.3	+0.8
	baz=223								
MDM	Murphy Dome	8.51	1				Pn	18 20 29.6	+0.4
M30M	Minto, Yukon	8.53	39		P		Pn	18 20 30.2	+0.7
	baz=230								
CRAG	Craig	8.70	90		P		Pn	18 20 31.6	-0.2
I23K	Minto, Yukon-K	8.71	358				Pn	18 20 31.8	-0.1
I23K	Minto, Yukon-K	8.71	358		P		Pn	18 20 31.8	-0.1
	baz=177								
L14K	Kuka Creek	8.79	309				Pn	18 20 33.5	+0.4
L14K	Kuka Creek	8.79	309		P		Pn	18 20 33.4	+0.4
	baz=118								
P33M	Teslin, Yukon	9.06	59		P		Pn	18 20 37.7	+0.9
	baz=252								
M31M	Drury Creek, Y	9.21	46				Pn	18 20 40.2	+1.4
M31M	Drury Creek, Y	9.21	46		P		Pn	18 20 40.2	+1.4
	baz=238								
R33M	Jennings River	9.77	65				Pn	18 20 47.2	+0.6
R33M	Jennings River	9.77	65		P		Pn	18 20 47.3	+0.6
	baz=260								
J30M	Hart River	10.08	31				Pn	18 20 51.7	+0.9
J30M	Hart River	10.08	31		P		Pn	18 20 51.7	+0.9
	baz=222								
DLBC	Dease Lake	10.15	71				Pn	18 20 53.0	+1.3
DLBC	Dease Lake	10.15	71		Pn		Pn	18 20 51.6	-0.1
	comp=E,1.0nm,0.3s,baz=263,slow=8.1,SNR=10								
DLBC					Sn		Sn	18 22 39.7	-5.9
	comp=E,1.0nm,0.3s,baz=292,slow=11,SNR=1.2								
DLBC					LR		LR	18 24 13.5	
	comp=E,786nm,20.9s,baz=276,slow=34								
	comp=E,2.5nm,0.4s								
G23K	Bananza Creek	10.29	357				Pn	18 20 54.4	+0.7
G18K	Tagagawik	10.62	337				Pn	18 20 57.0	-1.1
MMPY	Sheldon Lake,	10.68	48				Pn	18 21 00.5	+1.5
F19K	Shaleruckik Mo	11.26	341				Pn	18 21 07.0	+0.2
G31M	Satah River	12.42	27				Pn	18 21 24.1	+1.5
BBB	Bella Bella	12.65	101		LR		LR	18 25 04.1	
	comp=E,1µm,21.5s,baz=318,slow=32								
F31M	Tsiigehtchic	12.95	26				Pn	18 21 28.8	-1.2
INK	Inuvik	13.69	24		Pn		Pn	18 21 41.0	+1.1
	comp=E,0.1nm,0.3s,baz=210,slow=15,SNR=19								
INK					LR		LR	18 26 59.3	
	comp=E,870nm,20.9s,baz=186,slow=37								
	comp=E,8.5nm,0.9s								
C36M	Paulatuk	16.85	30		IAmb		IAmb	18 22 37.8	
	comp=Z,12nm,0.7s								
YKA	Yellowknife Ar	18.08	57		P		Pn	18 22 38.2	+1.2
	comp=Z,0.2nm,0.3s,baz=263,slow=11,SNR=42								
YKA					LR		LR	18 29 27.6	
	comp=Z,623nm,18.9s,baz=288,slow=36								
	comp=Z,8.3nm,1.0s								
A36M	Sachs Harbour	18.33	23				P	18 22 40.4	+0.3
NEW	Newport	20.70	100		LR		LR	18 30 08.5	
	comp=Z,389nm,18.4s,baz=305,slow=34								
BILL	Bilibino	23.38	318		P		P	18 23 33.6	-0.8
WVOR	Wild Horse Val	23.73	114		P		P	18 23 41.0	+2.7
WVOR					IAmb		IAmb	18 24 08.1	
	comp=Z,9.3nm,1.1s								
ELK	Elko	26.71	112		LR		LR	18 33 00.6	
	comp=Z,409nm,21.7s,baz=329,slow=33								
NVAR	Mina Array Bea	26.94	119		P		P	18 24 04.9	-2.7
	comp=Z,0.2nm,0.3s,baz=302,slow=10,SNR=1.0								
NVAR					LR		LR	18 32 52.7	
	comp=Z,443nm,21.0s,baz=281,slow=32								
	comp=Z,

	comp=Z,160nm,19.0s,baz=287,slow=37							
ARCES	**ARCESS Array B**	**54.21**	**3**	P		**P**	**18 27 51.3**	**+0.1**
	comp=Z,4.1nm,1.1s,baz=355,slow=7.3,SNR=4.8							
	comp=Z,4.1nm,1.1s							
SONM	**Songino Array**	**58.83**	**311**	P		**P**	**18 28 26.1**	**+1.6**
	comp=Z,2.4nm,0.9s,baz=40,slow=5.8,SNR=16							
	comp=Z,2.4nm,0.9s							
ZALV	**Zalesovo Beam**	**61.62**	**327**	P		**P**	**18 28 44.6**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=22,slow=7.9,SNR=6.6							
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**62.34**	**3**	P		**P**	**18 28 49.4**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=1.4,slow=7.6,SNR=7.2							
	comp=Z,0.6nm,0.5s							
BVAR	**Borovoye Array**	**66.28**	**336**	P		**P**	**18 29 13.9**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=28,slow=6.7,SNR=5.2							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Area**	**66.38**	**329**	P		**P**	**18 29 15.3**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=31,slow=6.4,SNR=5.7							
	comp=Z,0.5nm,0.8s							
MKAR	**Makanchi Array**	**68.67**	**325**	P		**P**	**18 29 30.1**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=35,slow=6.0,SNR=7.0							
	comp=Z,0.5nm,0.7s							
AKASG	**Malin Array Be**	**73.17**	**1**	P		**P**	**18 29 57.1**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=350,slow=4.8,SNR=1.9							
	comp=Z,0.4nm,0.4s							
KKAR	**Karatay Array**	**75.47**	**332**	P		**P**	**18 30 07.5**	**-2.6**
KKAR	**Karatay Array**	**75.47**	**332**	P		**P**	**18 30 09.6**	**-0.4**
ESDC	**Sonseca Array**	**79.62**	**27**	LR		LR	19 05 26.1	
	comp=Z,102nm,20.1s,baz=336,slow=35							
CMAR	**Chiang Mai Arr**	**86.56**	**299**	P		**P**	**18 31 09.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=23,slow=5.6,SNR=5.6							
	comp=Z,0.6nm,0.7s							
QSPA	**South Pole Qui**	**146.28**	**180**	PKPbc		**PKPdf**	**18 38 04.0**	**-0.2**
	comp=Z,1.9nm,1.1s,baz=338,slow=5.4,SNR=2.4							
BOSA	**Boshof**	**151.80**	**12**	PKPbc		**PKPbc**	**18 38 18.6**	**-2.1**
	comp=Z,2.2nm,0.8s,baz=354,slow=7.4,SNR=1.8							

*AEIC **26** 18:18:57.9±1.2,56˚.5N±0˚.1×148˚.6W±0˚.1,h11km±6km, Error ellipse: s-maj=15.9km s-min=9.2km az=184.0*

NEIC 26 18:18:53.6±0.9,56˚.54N±0˚.10×148˚.7W±0˚.1,h10km±2km, mb4.3/4,ML4.3/48,ML4.0(AEIC),Error ellipse: s-maj=16.6km s-min=10.1km az=180.0,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.44**	**302**		Pn	18 19 33.6	+0.2
KDAK					Sn	18 20 01.6	-1.6
OHAK	**Old Harbor**	**2.59**	**287**		Pn	18 19 36.1	+0.7
OHAK					Sn	18 20 05.4	-1.6
SYI	**Shuyak Island**	**2.86**	**318**		Pn	18 19 39.7	+0.5
SYI					Sn	18 20 13.7	0.0
SYI	**Shuyak Island**	**2.86**	**318**	IAML		18 20 19.3	
	comp=E,488nm,1.1s						
SYI				IAML		18 20 20.0	
	comp=N,347nm,0.8s						
Q23K	**Middleton Isla**	**3.17**	**23**		Pn	18 19 42.9	-0.6
MID	**Middleton Isla**	**3.17**	**23**	Pn	Pn	18 19 42.9	-0.6
CNPM	**China Poot**	**3.28**	**337**		Pn	18 19 45.3	+0.3
BRSE	**Bradley Lake S**	**3.39**	**343**		Pn	18 19 46.7	+0.2
BRLK	**Bradley Lake**	**3.43**	**342**		Pn	18 19 47.2	0.0
BRLK	**Bradley Lake**	**3.43**	**342**	IAML		18 20 32.6	
	comp=N,285nm,0.8s						
BRLK				IAML		18 20 32.7	
	comp=E,394nm,0.7s						
HOM	**Homer**	**3.49**	**335**	Pn	Pn	18 19 46.6	-1.2
HOM				IAML		18 20 14.4	
	comp=N,942nm,0.7s						
P23K	**Montague Islan**	**3.54**	**11**		Pn	18 19 48.3	-0.3
SEW	**Seward**	**3.60**	**354**		Pn	18 19 49.6	+0.2
P19K	**Oil Pt**	**3.93**	**325**		Pn	18 19 55.3	+1.4
HIN	**Hinchinbrook I**	**4.05**	**16**		Pn	18 19 55.6	0.0
HIN	**Hinchinbrook I**	**4.05**	**16**	IAML		18 20 42.8	
	comp=E,492nm,0.8s						
KAIM	**Kayak Island**	**4.10**	**32**		Pn	18 19 55.8	-0.4
CNTC	**Contact Creek**	**4.24**	**297**		Pn	18 19 59.5	+1.3
EYAK	**Cordova Ski Ar**	**4.32**	**20**		Pn	18 19 59.2	-0.1
FID	**Port Fidalgo**	**4.39**	**15**	Pn	Pn	18 20 00.1	-0.2
SUCK	**Suckling Hills**	**4.41**	**34**	Pn	Pn	18 20 00.4	-0.1
SUCK				IAML		18 20 54.0	
	comp=E,312nm,0.9s						
RAGM	**Ragged Mountai**	**4.41**	**27**		Pn	18 20 00.5	-0.1
GLI	**Glacier Island**	**4.44**	**10**	Pn	Pn	18 20 00.3	-0.6
HMT	**Hamilton**	**4.48**	**30**		Pn	18 20 01.5	0.0
NICHA	**Nichawak Mount**	**4.48**	**32**		Pn	18 20 01.7	+0.2
P18K	**Big Mountain,**	**4.49**	**312**	Pn	Pn	18 20 01.2	-0.4
BERG	**Berg Lake**	**4.69**	**32**	Pn	Pn	18 20 03.9	-0.4
SNH	**Sunshine Point**	**4.80**	**38**	Pn	Pn	18 20 05.4	-0.4
KHIT	**Khitrov Hills**	**4.86**	**34**		Pn	18 20 06.6	-0.2
WAX	**Waxell Ridge**	**4.99**	**36**		Pn	18 20 08.2	-0.4
BARK	**Barkley Ridge**	**5.08**	**38**		Pn	18 20 09.5	-0.3
CRQM	**Cirque**	**5.14**	**32**	Pn	Pn	18 20 10.6	-0.2
CRQM				IAML		18 21 10.1	
	comp=N,204nm,0.6s						
KLU	**Klutina**	**5.18**	**15**	Pn	Pn	18 20 11.5	+0.3
TGL	**Tana Glacier**	**5.24**	**34**	Pn	Pn	18 20 11.5	-0.5
TGL				IAML		18 21 13.6	
	comp=N,155nm,0.6s						
ISLE	**Juniper Island**	**5.28**	**37**	Pn	Pn	18 20 12.1	-0.4
SML	**Sawmill**	**5.29**	**2**	Pn	Pn	18 20 12.6	-0.1
VRDI	**Verde Repeater**	**5.45**	**28**	Pn	Pn	18 20 14.8	-0.1
N25K	**Chitina, Valde**	**5.51**	**21**	Pn	Pn	18 20 16.2	+0.4
GLB	**Gilahina Butte**	**5.54**	**25**	Pn	Pn	18 20 15.8	-0.2
TABL	**Table Mountain**	**5.58**	**42**	Pn	Pn	18 20 16.7	-0.1
MCARA	**McCarthy VSAT**	**5.69**	**29**	Pn	Pn	18 20 18.2	+0.1
M24K	**Tolsona, Glenn**	**5.74**	**12**	Pn	Pn	18 20 19.0	+0.2
BARN	**Barnard Glacie**	**5.84**	**36**	Pn	Pn	18 20 20.3	0.0
CTGM	**Chitina Glacie**	**5.88**	**38**	Pn	Pn	18 20 20.4	-0.4
LOGN	**Logan Glacier**	**5.89**	**40**	Pn	Pn	18 20 20.9	-0.1
BCPM	**Bancas Point**	**5.90**	**51**	Pn	Pn	18 20 20.9	-0.1
O29M	**Mount Kennedy**	**6.54**	**51**	Pn	Pn	18 20 29.9	0.0
P29M	**Windy Craggy**	**6.61**	**57**	Pn	Pn	18 20 30.6	-0.1
M27K	**Edge Creek, AK**	**6.80**	**28**		Pn	18 20 33.4	-0.1
L27K	**Beaver Creek,**	**7.41**	**25**	Pn	Pn	18 20 41.5	-0.2
BCAR	**Beaver Creek A**	**7.43**	**25**	Pn	Pn	18 20 41.6	-0.3
SKAG	**Skagway**	**7.70**	**62**	Pn	Pn	18 20 46.5	+0.8
R32K	**Eaglecrest**	**7.88**	**71**		Pn	18 20 49.8	+1.7
M29M	**Somme Creek**	**7.89**	**37**	Pn	Pn	18 20 48.6	+0.1
WHY	**Whitehorse**	**8.33**	**55**	Pn	Pn	18 20 54.8	+0.4
J26L	**Joseph Creek**	**8.39**	**16**	Pn	Pn	18 20 55.7	+0.6
L29M	**L29M**	**8.48**	**35**	Pn	Pn	18 20 56.5	+0.1
P32M	**Atlin**	**8.53**	**63**	Pn	Pn	18 20 56.9	-0.2
DAWY	**Dawson**	**8.85**	**28**		Pn	18 21 01.4	-0.1
P33M	**Teslin, Yukon**	**9.13**	**60**	Pn	Pn	18 21 05.0	-0.4
M31M	**Drury Creek, Y**	**9.26**	**46**	Pn	Pn	18 21 07.9	+0.9
FARO	**Faro, Yukon**	**9.69**	**48**	Pn	Pn	18 21 13.7	+0.7
EGMT	**Eagleton**	**25.02**	**93**	P	P	18 24 15.8	-1.8
NVAR	**Mina Array Bea**	**27.07**	**119**	P	P	18 24 37.5	+1.1
NV11	**Mina Array Sit**	**27.14**	**119**	P	P	18 24 35.9	-1.0
NV11				IAmb	IAmb	18 24 38.8	
	comp=Z,5.7nm,1.1s						
R11B	**Troy Canyon, C**	**28.47**	**116**	P	P	18 24 47.4	-1.5
P18A	**Preston Nutter**	**30.26**	**107**	P	P	18 25 02.8	-2.0
P18A				IAmb	IAmb	18 25 03.2	
	comp=Z,5.6nm,1.0s						

DJA 26 18:20:56.5±0.4,3˚S±5˚×12˚6E±˚,h41km±19km,M3.6/9, mb3.9/5,MLv3.5/9,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.84**	**106**	P	Pn	18 21 12.8	+0.9
NLAI				S	Sn	18 21 24.3	+1.2
SANI	**Sanana**	**0.99**	**342**	P	Pn	18 21 13.9	-0.1
LBMI	**Labuha**	**2.64**	**27**	P	Pn	18 21 37.0	+0.4
BNDI	**Bandanaira**	**3.91**	**113**	P	Pn	18 21 53.6	-0.5
LUWI	**Luwuk**	**4.02**	**299**	P	Pn	18 21 53.0	-2.6
BBSI	**Bau Bau**	**4.46**	**236**	P	Pn	18 22 02.1	+0.5
SWI	**Sorong**	**5.40**	**67**	P	Pn	18 22 14.3	-0.3
	18nm,1.0s,0.1nm						
FAKI	**Fak Fak**	**5.95**	**89**	P	Pn	18 22 22.8	+0.6

*NEIC **26** 18:24:41.2±0.8,56˚.5N±0˚.1×148˚.7W±0˚.1,h10km±2km, ML3.6/44,ML3.3(AEIC),Error ellipse: s-maj=17.2km s-min=9.6km az=176.0*

*AEIC **26** 18:24:44.5±1.1,56˚.4N±0˚.1×148˚.7W±0˚.1,h12km±9km, Error ellipse: s-maj=17.5km s-min=10.3km az=176.0*

ISC 26 18:24:40.1±2.2,56˚.5N±0˚.1×148˚.69W±0˚.05,h10km,n85, σ1°11/81,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.49**	**303**		Pn	**18 25 21.8**	**+1.2**
KDAK					Sn	**18 25 49.7**	**-1.2**
OHAK	**Old Harbor**	**2.63**	**288**		Pn	**18 25 23.1**	**+0.6**
OHAK					Sn	**18 25 52.2**	**-2.2**
OHAK	**Old Harbor**	**2.63**	**288**	P	Pn	**18 25 23.1**	**+0.6**
	baz=106						
OHAK				S	Sn	**18 25 52.2**	**-2.2**
	baz=106						
SYI	**Shuyak Island**	**2.91**	**318**		Pn	**18 25 27.4**	**+0.9**
SYI	**Shuyak Island**	**2.91**	**318**		Sn	**18 26 01.9**	**+0.4**
SYI	**Shuyak Island**	**2.91**	**318**	IAML		18 25 55.2	
	comp=N,51nm,3.8s						
SYI	**Shuyak Island**	**2.91**	**318**	IAML		18 26 07.5	
	comp=E,43nm,3.0s						
Q20K	**Shuyak Island**	**2.92**	**318**	P	Pn	**18 25 27.3**	**+0.9**
	baz=136						
Q20K				S	Sn	**18 26 01.8**	**+0.4**
	baz=136						
CNPM	**China Poot**	**3.33**	**337**		Pn	**18 25 33.0**	**+0.8**
BRSE	**Bradley Lake S**	**3.44**	**342**		Pn	**18 25 34.2**	**+0.6**
BRSE					Sn	**18 26 13.8**	**-0.6**
BRSE	**Bradley Lake S**	**3.44**	**342**	P	Pn	**18 25 34.2**	**+0.6**
	baz=161						
BRSE				S	Sn	**18 26 13.8**	**-0.6**
	baz=161						
BRLK	**Bradley Lake**	**3.48**	**341**		Pn	**18 25 34.8**	**+0.5**
P23K	**Montague Islan**	**3.58**	**10**		Pn	**18 25 36.0**	**+0.4**
P23K					Sn	**18 26 15.5**	**-2.3**
P23K	**Montague Islan**	**3.58**	**10**	P	Pn	**18 25 36.0**	**+0.4**
	baz=191						
P23K				S	Sn	**18 26 15.5**	**-2.3**
	baz=191						
Q19K	**Cape Douglas,**	**3.61**	**315**	Pn	Pn	**18 25 37.4**	**+1.4**
Q19K				IAML		18 26 27.2	
	comp=E,178nm,2.1s						
Q19K				IAML		18 26 28.5	
	comp=N,149nm,1.7s						
SEW	**Seward**	**3.65**	**354**		Pn	**18 25 36.9**	**+0.5**
SEW	**Seward**	**3.65**	**354**	P	Pn	**18 25 36.9**	**+0.5**
	baz=173						
HIN	**Hinchinbrook I**	**4.08**	**15**		Pn	**18 25 43.1**	**+0.6**
HIN	**Hinchinbrook I**	**4.08**	**15**	IAML		18 26 22.4	
	comp=E,130nm,2.2s						
HIN				IAML		18 27 55.2	
	comp=N,137nm,2.6s						
SLKM	**Skilak Lake**	**4.11**	**349**		Pn	**18 25 43.6**	**+0.7**
KAIM	**Kayak Island**	**4.12**	**31**		Pn	**18 25 43.4**	**+0.4**
KAIM	**Kayak Island**	**4.12**	**31**	P	Pn	**18 25 43.4**	**+0.4**
	baz=214						
O20K	**Slope Mountain**	**4.16**	**332**		Pn	**18 25 44.5**	**+0.9**
O20K	**Slope Mountain**	**4.16**	**332**	P	Pn	**18 25 44.5**	**+0.9**
	baz=149						
ILSW	**Illiamna Southw**	**4.22**	**328**		Pn	**18 25 46.1**	**+1.6**
ILSW	**Illiamna Southw**	**4.22**	**328**	IAML		18 26 37.2	
	comp=N,34nm,3.1s						
FID	**Port Fidalgo**	**4.42**	**14**		Pn	**18 25 47.5**	**+0.3**
FID	**Port Fidalgo**	**4.42**	**14**	IAML		18 27 13.6	
	comp=E,54nm,2.6s						
FID				IAML		18 28 39.8	
	comp=N,56nm,2.7s						
SUCK	**Suckling Hills**	**4.43**	**34**		Pn	**18 25 47.9**	**+0.7**
RAGM	**Ragged Mountai**	**4.44**	**27**		Pn	**18 25 48.3**	**+0.9**
RAGM	**Ragged Mountai**	**4.44**	**27**	IAML		18 26 25.3	
	comp=N,174nm,2.7s						
GLI	**Glacier Island**	**4.48**	**10**		Pn	**18 25 48.5**	**+0.6**
GLI	**Glacier Island**	**4.48**	**10**	IAML		18 26 29.1	
	comp=E,44nm,2.9s						
GLI				IAML		18 27 24.7	
	comp=N,51nm,2.8s						
GLI	**Glacier Island**	**4.48**	**10**	P	Pn	**18 25 48.5**	**+0.6**
	baz=191						
RED	**Redoubt Volcan**	**4.48**	**333**		Pn	**18 25 48.6**	**+0.5**
HMT	**Hamilton**	**4.50**	**29**		Pn	**18 25 49.1**	**+0.8**
NICHA	**Nichawak Mount**	**4.50**	**32**		Pn	**18 25 49.2**	**+0.9**
RDSO	**Redoubt South**	**4.51**	**334**		Pn	**18 25 49.1**	**+0.7**
P18K	**Big Mountain,**	**4.54**	**313**		Pn	**18 25 50.0**	**+1.2**
P18K	**Big Mountain,**	**4.54**	**313**	IAML		18 27 25.9	
	comp=N,42nm,3.1s						
P18K				IAML		18 27 42.2	
	comp=E,34nm,4.8s						
P18K	**Big Mountain,**	**4.54**	**313**	P	Pn	**18 25 50.0**	**+1.2**
	baz=128						
BERG	**Berg Lake**	**4.71**	**32**		Pn	**18 25 51.8**	**+0.8**
GRIN	**Grindle Hills**	**4.73**	**34**		Pn	**18 25 52.1**	**+0.7**
O18K	**Koktuh Hills**	**4.82**	**317**		Pn	**18 25 53.5**	**+0.8**
O18K	**Koktuh Hills**	**4.82**	**317**	IAML		18 26 57.7	
	comp=E,42nm,3.5s						
O18K				IAML		18 28 58.0	
	comp=N,49nm,3.6s						
O18K	**Koktuh Hills**	**4.82**	**317**	P	Pn	**18 25 53.5**	**+0.8**
	baz=132						
KHIT	**Khitrov Hills**	**4.88**	**34**		Pn	**18 25 54.5**	**+1.0**
BMRM	**Bremner River**	**4.97**	**24**		Pn	**18 25 55.6**	**+1.0**
BMRM	**Bremner River**	**4.97**	**24**	P	Pn	**18 25 55.7**	**+1.0**
	baz=206						
WAX	**Waxell Ridge**	**5.01**	**35**		Pn	**18 25 56.2**	**+0.9**
BARK	**Barkley Ridge**	**5.09**	**37**		Pn	**18 25 57.1**	**+0.6**
KLU	**Klutina**	**5.21**	**15**		Pn	**18 25 59.2**	**+1.1**
KLU	**Klutina**	**5.21**	**15**	IAML		18 26 50.2	
	comp=N,28nm,2.8s						
KLU				IAML		18 27 09.8	
	comp=E,27nm,4.5s						
KLU	**Klutina**	**5.21**	**15**	P	Pn	**18 25 59.2**	**+1.1**
	baz=197						
N19K	**Bonanza Creek**	**5.28**	**327**		Pn	**18 26 00.1**	**+1.0**
N19K	**Bonanza Creek**	**5.28**	**327**	IAML		18 28 31.6	
	comp=E,44nm,3.6s						
N19K				IAML		18 29 04.3	
	comp=N,32nm,4.5s						
N19K	**Bonanza Creek**	**5.28**	**327**	P	Pn	**18 26 00.1**	**+1.0**
	baz=143						
GHO	**Glory Hole Cre**	**5.30**	**359**	Pn	Pn	**18 26 01.4**	**+2.1**
GHO				IAML		18 28 01.8	
	comp=N,31nm,3.6s						
GHO				IAML		18 28 46.2	
	comp=E,25nm,5.0s						
SML	**Sawmill**	**5.33**	**2**		Pn	**18 26 00.9**	**+1.1**
SML	**Sawmill**	**5.33**	**2**	IAML		18 27 26.3	
	comp=E,38nm,2.9s						
SML				IAML		18 27 27.5	
	comp=N,35nm,3.0s						
SML	**Sawmill**	**5.33**	**2**	P	Pn	**18 26 00.9**	**+1.1**
	baz=182						
TABL	**Table Mountain**	**5.60**	**42**		Pn	**18 26 04.4**	**+0.9**
N18K	**Kilae Creek**	**5.64**	**321**		Pn	**18 26 04.9**	**+1.0**
N18K	**Kilae Creek**	**5.64**	**321**	P	Pn	**18 26 04.9**	**+1.0**
	baz=136						
BARN	**Barnard Glacie**	**5.86**	**36**		Pn	**18 26 07.6**	**+0.6**
PNL	**Peninsula**	**5.87**	**53**		Pn	**18 26 08.1**	**+1.1**
PNL	**Peninsula**	**5.87**	**53**	P	Pn	**18 26 08.1**	**+1.1**
	baz=240						
M20K	**Styx River**	**5.87**	**339**		Pn	**18 26 08.5**	**+1.4**
M20K	**Styx River**	**5.87**	**339**	P	Pn	**18 26 08.5**	**+1.4**
	baz=155						
O16K	**Kokwok River B**	**5.88**	**306**	Pn	Pn	**18 26 07.7**	**+0.5**
N17K	**Nushagak Hills**	**6.01**	**316**	Pn	Pn	**18 26 08.3**	**-0.7**
M19K	**Big River Lodg**	**6.17**	**334**	Pn	Pn	**18 26 10.1**	**-1.0**
L19K	**White Mountain**	**6.52**	**334**	Pn	Pn	**18 26 15.5**	**-0.5**
M17K	**Holitna River**	**6.68**	**321**	Pn	Pn	**18 26 19.5**	**+1.4**
M16K	**Timber Creek**	**7.01**	**315**	Pn	Pn	**18 26 21.7**	**-0.9**
N15K	**Kwethluk River**	**7.04**	**306**	Pn	Pn	**18 26 24.8**	**+1.6**
BPAW	**Bear Paw Mtn.**	**7.72**	**352**	Pn	Pn	**18 26 34.2**	**+1.8**
M29M	**Somme Creek**	**7.91**	**37**	Pn	Pn	**18 26 36.1**	**+1.0**
K17K	**Iditarod**	**7.91**	**326**	Pn	Pn	**18 26 35.0**	**0.0**
MLY	**Manley**	**8.63**	**354**	Pn	Pn	**18 26 45.7**	**+0.9**
I23K	**Minto, Yukon-K**	**8.69**	**358**	Pn	Pn	**18 26 47.8**	**+2.1**
I21K	**Tanana**	**8.86**	**351**	Pn	Pn	**18 26 49.1**	**+1.1**
H21K	**Melozitna Rive**	**9.41**	**350**	Pn	Pn	**18 26 56.2**	**+0.7**
IMAR	**Indian Mountai**	**9.83**	**348**	Pn	Pn	**18 27 02.0**	**+0.8**
G24K	**Hadweenzic Riv**	**10.26**	**3**	Pn	Pn	**18 27 09.3**	**+2.1**

*IDC **26** 18:27:59.2±0.4,6˚.02S±.142˚.82E,h0km,mb5.5/17, mbtmp5.5/23,ML4.6/2,MS4.9/51,Error ellipse: s-maj=17.1km s-min=8.9km az=92.0*

*BJI **26** 18:28:00.7±0.0,5˚.97S±.143˚.37E,h30km,mb5.4/87, mB5.7/55,Ms5.0/80,Ms7 4.8/77*

*MOS **26** 18:28:01.4±0.9,5˚.94S±.142˚.84E,h20km,mb5.8/53, MS5.2/16,Error ellipse: s-maj=10.3km s-min=4.6km az=110.8*

*NEIC **26** 18:28:02.9,6˚.05S±.142˚.69E,h14km*

*DJA **26** 18:28:02.8±0.2,6˚S±2˚×14˚3E±˚,h10km,M5.5/40, mb5.4/39,mB5.8/40,MLv6.3/7,Mw(mB)5.4/40, MwMwp5.3/1,Mwp5.5/1*

*NEIC **26** 18:28:03.6±1.9,6˚.03S±.0˚.07×142˚.71E±.0˚.07,h20km±1km, mb5.8/257,Ms_20 5.4/475,Mwb5.6/14,Mww5.4/16,Error ellipse: s-maj=11.6km s-min=11.3km az=238.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.29; Mθθ-0.09; Mϕϕ-2.19; Mrθ0.59; Mrϕ0.84; Mθϕ0.99; Fault plane solution: M₀2.66000×10¹⁷ NP1: ϕs142.42000°,δ39.43000°,λ59.81000°. NP2: ϕs359.41000°,δ56.70000°,λ112.47000°. Principal axes: T 2.7045, Plg69.0000°, Azm319.0000°; N -0.0985, Plg19.0000°, Azm167.0000°; P -2.6060, Plg9.0000°, Azm74.0000°;*

*NEIC **26** 18:28:03.5,5˚.84S×142˚.40E,h26km, Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10¹⁷Nm; Mrr1.39; Mθθ-0.49; Mϕϕ-0.91; Mrθ0.44; Mθϕ1.16; Mrϕ-0.24; Fault plane solution: M₀1.71000×10¹⁷ NP1: ϕs130.91000°,δ53.74000°,λ77.89000°. NP2: ϕs330.86000°,δ37.96000°,λ105.97000°. Principal axes: T 1.4873, Plg77.0000°, Azm358.0000°; N 0.4523, Plg10.0000°, Azm138.0000°; P -1.9397, Plg8.0000°, Azm230.0000°;*

*NEIC **26** 18:28:03.5,6˚.04S×142˚.70E,h26km*

*GCMT **26** 18:28:07.5±0.1,6˚.09S±.0˚.01×142˚.61E±.0˚.01,h22km, MW5.5/140,Moment Tension Solution. s123,c204; s140,c265; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.28±.03; Mθθ-0.21±.02; Mϕϕ-1.07±.02; Mrθ1.30±.04; Mθϕ1.04±.01; Mrϕ-0.34±.03; Best double couple: M₀2.07400×10¹⁷ NP1:ϕs120.00000°,δ68.00000°, λ62.00000°. NP2:ϕs354.00000°,δ35.00000°,λ139.00000°. Principal axes: T 2.0520, Plg58.0000°, Azm351.0000°; N 0.0450, Plg26.0000°, Azm131.0000°; P -2.0960, Plg18.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 18:28:03.3±0.4,6˚.06S±.0˚.03×142˚.81E±.0˚.04,h24km±2km, h24km:pP-P,n1297,σ1°34/1064,mb5.7/214,MS5.4/317, 47C-21D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.39**	**225**	P	Pn	**18 28 54.9**	**+0.1**
GENI	**Genyem**	**4.33**	**322**	P	Pn	**18 29 08.6**	**+0.8**
GENI	**Genyem**	**4.33**	**322**	P	Pn	**18 29 08.8**	**+1.0**
PMG	**Port Moresby**	**5.45**	**128**	Pn	Pn	**18 29 24.5**	**+1.5**
PMG	**Port Moresby**	**5.45**	**128**	P	Pn	**18 29 24.8**	**+1.7**
PMG	**Port Moresby**	**5.45**	**128**	*d iP*	Pn	**18 29 24.4**	**+1.3**
PMG	**Port Moresby**	**5.45**	**128**	Pn	Pn	**18 29 23.8**	**+0.7**
	304nm,0.5s,baz=347,slow=3.1,SNR=146						
PMG				Sn	Sn	**18 30 25.1**	**+0.1**
	156nm,0.3s,baz=346,slow=21,SNR=8.2						
PMG				LR	LR	18 32 05.6	
	comp=Z,9μm,20.7s,baz=274,slow=45						
SMPI	**Sarmi**	**5.75**	**315**	P	Pn	**18 29 27.7**	**+0.5**
	2μm,1.8s,31μm18μm8.5nm						
MANU	**Manus Island**	**6.05**	**49**	Pn	Pn	**18 29 35.3**	**+3.9**
MANU	**Manus Island**	**6.05**	**49**	P	Pn	**18 29 33.4**	**+2.0**
BULU	**Kimbe**	**7.49**	**86**	P	Pn	**18 29 54.9**	**+3.8**
COEN	**Coen**	**7.86**	**177**	P	Pn	**18 29 58.8**	**+2.5**
	baz=7.9,SNR=24						
COEN	**Coen**	**7.86**	**177**	Pn	Pn	**18 29 57.9**	**+1.6**
COEN	**Coen**	**7.86**	**177**	P	Pn	**18 29 59.3**	**+3.0**
KAVG	**Kavieng**	**8.69**	**67**	P	Pn	**18 30 10.4**	**+2.7**
I40PG	**Keravat**	**9.33**	**80**	I	I	19 19 30.0	
	baz=264,slow=311,SNR=0.7						
RABL	**Rabaul**	**9.50**	**79**		Pn	**18 30 21.9**	**+3.1**
RABL	**Rabaul**	**9.50**	**79**	P	Pn	**18 30 22.0**	**+3.1**
FAKI	**Fak Fak**	**10.98**	**286**	Pn	Pn	**18 30 39.0**	**-0.1**
FAKI	**Fak Fak**	**10.98**	**286**	P	Pn	**18 30 38.0**	**-1.1**
FAKI	**Fak Fak**	**10.98**	**286**	P	Pn	**18 30 37.9**	**-1.1**
	233nm,0.8s,4μm						
SAUI	**Saumlaki**	**11.58**	**260**	Pn	Pn	**18 30 47.4**	**+0.1**
SAUI	**Saumlaki**	**11.58**	**260**	P	Pn	**18 30 47.8**	**+0.5**
SAUI	**Saumlaki**	**11.58**	**260**	P	Pn	**18 30 46.7**	**-0.6**
	2μm,1.3s,22μm						
MTSU	**Mount Surprise**	**12.09**	**173**	P	Pn	**18 30 57.3**	**+3.0**
	baz=12,SNR=15						
MTSU	**Mount Surprise**	**12.09**	**173**	P	Pn	**18 30 57.2**	**+2.9**
KDU	**Kakadu**	**12.14**	**236**	P	Pn	**18 30 53.3**	**-1.6**
	baz=12,SNR=124						
KDU	**Kakadu**	**12.14**	**236**	P	Pn	**18 30 53.9**	**-1.0**
SWI	**Sorong**	**12.63**	**294**	P	Pn	**18 31 00.0**	**-1.6**
	228nm,0.8s,3μm						
BNDI	**Bandanaira**	**12.94**	**276**	P	Pn	**18 31 06.5**	**+0.6**
	561nm,0.8s,11μm						
MTN	**Manton Dam**	**13.34**	**239**	P	Pn	**18 31 09.0**	**-2.3**
	baz=13,SNR=79						
MTN	**Manton Dam**	**13.34**	**239**	Pn	Pn	**18 31 08.5**	**-2.9**
MTN	**Manton Dam**	**13.34**	**239**	P	Pn	**18 31 09.5**	**-1.9**
DRS	**Darwin Rock St**	**13.35**	**241**	P	Pn	**18 31 10.7**	**-0.7**
TV1H	**Townsville Har**	**13.69**	**164**	P	P	**18 31 20.4**	**-4.2**
AUAYR	**Ayr State High**	**14.17**	**162**	P	Pn	**18 31 25.4**	**+2.8**
CT

ASPA	Alice Springs	19.49	205	P		Pn	18 32 31.5	+1.3		
	baz=20									
GUMO	Guam	19.63	6	P		P	18 32 29.1	-1.2		
GUMO				IAmb		IAmb	18 32 31.7			
	comp=Z,1µm,1.3s									
GUMO	Guam	19.63	6	P		P	18 32 30.5	+0.2		
GUMO	Guam	19.63	6	P		P	18 32 30.5	+0.2		
	comp=Z,259nm,0.7s,baz=180,slow=6.6,SNR=11									
GUMO				LR		LR	18 39 15.5			
	comp=Z,2µm,21.8s,baz=183,slow=34									
SGSI	Sangihe	19.78	299	P		P	18 32 31.8	-0.3		
	comp=Z,528nm,1.3s,comp=Z,6µm									
KMSI	Cibinong	19.92	289	P		Pn	18 32 35.0	-0.3		
	comp=Z,891nm,0.9s,comp=Z,9µm									
PATS	Pohnpei	20.09	51	P		Pn	18 32 36.9	-0.4		
	baz=20,SNR=9.8									
PATS	Pohnpei	20.09	51	P		P	18 32 34.7	-0.7		
PATS	Pohnpei	20.09	51	P		Pn	18 32 36.8	-0.5		
BBSI	Bau Bau	20.14	271	P		Pn	18 32 49.4	+11		
QLP	Quilpie	20.46	176	P		Pn	18 32 41.7	+0.2		
	baz=21,SNR=78									
QLP	Quilpie	20.46	176	P		Pn	18 32 41.7	+0.2		
MMRI	Maumere	20.56	262	P		P	18 32 36.9	-3.7		
MMRI				IAmb		IAmb	18 32 53.0			
	comp=Z,349nm,1.1s									
MMRI	Maumere	20.56	262	P		P	18 32 41.4	+0.8		
MMRI	Maumere	20.56	262	P		P	18 32 41.1	+0.5		
	comp=Z,370nm,1.4s,comp=Z,5µm									
FITZ	Fitzroy Crossi	20.59	233	P		P	18 32 41.5	+0.7		
	baz=20,SNR=68									
FITZ	Fitzroy Crossi	20.59	233	P		P	18 32 38.0	-2.8		
FITZ	Fitzroy Crossi	20.59	233	P		P	18 32 41.2	+0.4		
LUWI	Luwuk	20.60	283	P		P	18 32 40.1	-0.9		
LUWI				IAmb		IAmb	18 32 47.9			
	comp=Z,336nm,0.9s									
LUWI	Luwuk	20.60	283	P		P	18 32 41.4	+0.4		
	comp=Z,518nm,0.9s,comp=Z,5µm									
EIDS	Eidsvold	20.77	158	P		Pn	18 32 45.7	+0.4		
	baz=21,SNR=30									
EIDS	Eidsvold	20.77	158	P		Pn	18 32 44.2	-1.0		
EIDS				IAmb		IAmb	18 32 56.8			
	comp=Z,669nm,1.2s									
EIDS	Eidsvold	20.77	158	P		Pn	18 32 45.6	+0.4		
GTOI	Gorontalo	20.85	288	P		Pn	18 32 46.5	+0.2		
	comp=Z,314nm,0.7s,comp=Z,3µm									
RMQ	Roma	21.09	165	P		P	18 32 50.4	+4.2		
	baz=21,SNR=20									
RMQ	Roma	21.09	165	P		P	18 32 49.3	+3.1		
EDFI	Ende, Flores	21.11	261	P		P	18 32 47.8	+1.2		
	comp=Z,267nm,1.6s,comp=Z,3µm									
DAV	Davao City (W)	21.58	307	LR		LR	18 40 34.1			
	comp=Z,1µm,20.5s,baz=126,slow=35									
INKA	Innaminka	21.65	185	P		P	18 32 54.8	+2.6		
MRSI	Marisa	21.82	287	P		P	18 32 54.6	+0.5		
	comp=Z,239nm,1.2s,comp=Z,2µm									
BASI	Baing, Sumba	22.39	258	P		P	18 33 00.2	0.0		
	comp=Z,461nm,0.9s,comp=Z,10µm									
OOD	Oodnadatta	22.65	197	P		P	18 33 04.5	+1.6		
TTSI	Tana Toraja	23.11	276	P		P	18 33 08.5	+0.7		
	comp=Z,241nm,1.3s,comp=Z,3µm									
TOLI2	Tolitoli	23.12	287	P		P	18 33 06.8	-1.1		
TOLI2	Tolitoli	23.12	287	P		P	18 33 07.7	-0.2		
WRKA	Warakurna	23.44	215	P		P	18 33 11.2	+0.1		
	baz=24,SNR=76									
WRKA	Warakurna	23.44	215	P		P	18 33 11.2	+0.1		
AULRC	Lightning Ridg	23.76	169	P		P	18 33 14.3	+0.3		
LCRK	Leigh Creek	24.64	190	P		P	18 33 22.3	+0.1		
PLAI	Plampang	24.97	262	P		P	18 33 24.3	-1.1		
PLAI	Plampang	24.97	262	P		P	18 33 24.1	-1.3		
	comp=Z,97nm,0.8s,comp=Z,1µm									
KOUNC	Koumac, New Ca	25.33	127	P		P	18 33 27.2	-1.3		
KOUNC	Koumac, New Ca	25.33	127	P		P	18 33 30.2	+1.6		
MULG	Mulgathing	25.47	198	P		P	18 33 30.1	+0.4		
CMSA	Cobar Meteorol	25.49	174	P		P	18 33 32.6	+2.7		
	baz=26,SNR=15									
CMSA	Cobar Meteorol	25.49	174	P		P	18 33 31.1	+1.2		
ARMA	Armidale	25.61	162	P		P	18 33 33.1	+1.9		
	baz=26,SNR=5.5									
ARMA	Armidale	25.61	162	P		P	18 33 33.9	+2.8		
STKA	Stephens Creek	25.71	182	P		P	18 33 32.3	+0.4		
	baz=26,SNR=33									
STKA	Stephens Creek	25.71	182	P		P	18 33 32.4	+0.4		
STKA	Stephens Creek	25.71	182	P		P	18 33 32.0	+0.2		
STKA	Stephens Creek	25.71	182	*d*	*iP*	P	18 33 32.1	+0.2		
STKA	Stephens Creek	25.71	182	P		P	18 33 30.4	-1.5		
	comp=Z,33nm,0.8s,baz=345,slow=9.2,SNR=46									
STKA				Lg		Lg	18 41 37.4			
	comp=Z,0.7nm,0.3s,baz=73,slow=20,SNR=3.0									
STKA				LR		LR	18 44 23.0			
	comp=Z,5µm,19.0s,baz=356,slow=38									
	comp=Z,33nm,0.8s									
TWSI	Taliwang, Sumb	25.84	262	P		P	18 33 34.1	+0.8		
	comp=Z,41nm,0.7s,comp=Z,729nm									
AUPHS	Peel High Scho	26.04	164	P		P	18 33 37.9	+3.0		
BKB	Balikpapan	26.29	279	P		P	18 33 39.8	+2.5		
BKB	Balikpapan	26.29	279	P		P	18 33 38.4	+1.1		
AUDCS	Dubbo College	26.60	169	P		P	18 33 42.7	+2.8		
MBWA	Marble Bar	26.93	234	P		P	18 33 42.0	-1.0		
MBWA	Marble Bar	26.93	234	P		P	18 33 44.2	+1.2		
MBWA	Marble Bar	26.93	234	P		P	18 33 46.3	+3.3		
PSA00	Pilbara Seismi	27.05	233	P		P	18 33 43.4	-0.7		
PSA00	Pilbara Seismi	27.05	233	P		P	18 33 42.4	-1.7		
PSA00				IAmb		IAmb	18 34 04.3			
	comp=Z,36nm,1.0s									
PSA00	Pilbara Seismi	27.05	233	P		P	18 33 43.8	-0.3		
WHYH	Whyalla	27.28	190	P		P	18 33 46.2	+0.2		
BBOO	Buckleboo	27.35	192	P		P	18 33 46.6	-0.1		
	baz=28,SNR=12									
BBOO	Buckleboo	27.35	192	P		P	18 33 46.2	-0.5		
BBOO	Buckleboo	27.35	192	P		P	18 33 46.8	+0.1		
HTT	Hallett	27.48	187	P		P	18 33 48.1	+0.2		
	baz=28,SNR=13									
HTT	Hallett	27.48	187	P		P	18 33 47.8	0.0		
DZM	Mont Dzumac	27.84	127	P		P	18 33 51.9	+0.6		
DZM	Mont Dzumac	27.84	127	P		P	18 33 52.3	+1.0		
DZM	Mont Dzumac	27.84	127	LR		LR	18 44 44.1			
	comp=Z,3µm,21.1s,baz=311,slow=36									
ONTNC	Ouen Toro	27.97	128	P		P	18 33 53.5	+1.2		
YATNC	Mamie plateau,	28.19	127	P		P	18 33 55.4	+1.1		
FORT	Forrest	28.23	208	P		P	18 33 54.5	0.0		
	baz=28,SNR=9.5									
FORT	Forrest	28.23	208	P		P	18 33 54.3	-0.3		
FORT				IAmb		IAmb	18 34 54.9			
	comp=Z,203nm,0.8s									
FORT	Forrest	28.23	208	P		P	18 33 54.8	+0.3		
OUENC	Ouen Island, N	28.33	127	P		P	18 33 58.1	+2.5		
JAGI	Jajag, Banyuwa	28.52	263	P		P	18 33 55.4	-2.0		
YNG	Young	28.57	170	P		P	18 34 00.7	+3.1		
TGY	Tagaytay City	29.53	313	LR		LR	18 48 41.3			
	comp=Z,592nm,18.0s,baz=116,slow=42									
CAN	Canberra	29.68	170	IAMs_20		IAMs_20	18 46 34.7			
	comp=Z,9µm,19.0s									
CAN	Canberra	29.68	170	P		P	18 34 10.0	+2.6		
AUMAG	Moama Anglican	29.95	177	P		P	18 34 11.5	+1.7		
ARPS	Mount Arapiles	30.58	182	P		P	18 34 16.6	+1.3		
	baz=31,SNR=9.6									
ARPS	Mount Arapiles	30.58	182	P		P	18 34 16.2	+0.9		
MEEK	Meekatharra	30.83	226	P		P	18 34 17.4	-0.3		
	baz=31,SNR=5.2									
MEEK	Meekatharra	30.83	226	P		P	18 34 18.1	+0.4		
BRAT	Ballarat	31.36	178	P		P	18 34 24.3	+2.1		
TOO	Toolangi	31.46	176	P		P	18 34 25.6	+2.4		
	baz=32,SNR=4.5									
TOO	Toolangi	31.46	176	P		P	18 34 24.7	+1.5		
KMBL	Kambalda	31.91	215	P		P	18 34 26.9	-0.2		
	baz=32,SNR=4.6									
KMBL	Kambalda	31.91	215	P		P	18 34 26.9	-0.2		
GEXS	Deakin Univers	32.02	178	P		P	18 34 30.8	+2.8		
UGM	Wanagama	32.09	265	P		P	18 34 28.3	-0.7		
UGM				IAmb		IAmb	18 34 37.1			
	comp=Z,168nm,1.1s									
UGM	Wanagama	32.09	265	P		P	18 34 28.5	-0.5		
SMRI	Semarang	32.17	266	P		P	18 34 29.9	+0.3		
MORW	Morawa	34.11	225	P		P	18 34 46.1	-0.2		
	baz=34,SNR=3.7									
MORW	Morawa	34.11	225	P		P	18 34 44.6	-1.8		
MORW	Morawa	34.11	225	P		P	18 34 46.2	-0.2		
BBJI	Bungbulang	34.94	266	P		P	18 34 52.7	-1.1		
LEM	Lembang	34.97	267	LR		LR	18 52 30.0			
	comp=Z,1µm,18.8s,baz=78,slow=42									
JOW	Kunigami	35.60	337	P		P	18 34 59.2	0.0		
JOW	Kunigami	35.60	337	P		P	18 34 59.5	+0.3		
JOW	Kunigami	35.60	337	LR		LR	18 46 49.9			
	comp=Z,2µm,21.0s,baz=148,slow=32									
NWAO	Narrogin (SRO)	35.79	218	IAMs_20		IAMs_20	18 50 29.4			
	comp=Z,7µm,20.0s									
NWAO	Narrogin (SRO)	35.79	218	LR		LR	18 50 32.0			
	comp=Z,8µm,18.8s,baz=34,slow=38									
YULB	Yu-li	36.03	325	P		P	18 35 02.7	-0.3		
YULB				IAmb		IAmb	18 35 05.7			
	comp=Z,278nm,1.9s									
FUNA	Funafuti	36.17	96	P		P	18 35 05.8	+1.5		
MOO	Moorlands	36.44	175	P		P	18 35 08.3	+2.0		
NACB	Ninganchiao	36.48	326	P		P	18 35 07.0	+0.2		
NACB	Ninganchiao	36.48	326	P		P	18 35 07.1	+0.3		
SSLB	Suanglung	36.54	325	P		P	18 35 07.1	-0.2		
SSLB	Suanglung	36.54	325	P		P	18 35 07.6	+0.3		
XMI	Christmas Isla	36.97	261	P		P	18 35 12.2	+1.0		
YHNB	Yeheng	36.99	326	P		P	18 35 11.6	+0.3		
YHNB	Yeheng	36.99	326	P		P	18 35 12.4	+1.1		
XMIS	Christmas Isla	37.01	261	P		P	18 35 10.2	-1.3		
XMIS	Christmas Isla	37.01	261	P		P	18 35 12.3	+0.7		
TATO	Taipei	37.18	327	P		P	18 35 13.2	+0.5		
TATO	Taipei	37.18	327	P		P	18 35 12.6	-0.1		
TATO				P		P	18 35 12.6	-0.1		
DGTI	Dogotuki	37.56	109	P		P	18 35 17.6	+1.4		
KNMB	Chin-men Tao	38.55	323	P		P	18 35 25.3	+0.9		
QZH	Quanzhou	38.79	324	⇑	*iP*	P	18 35 27.0	+0.6		
QZH					*eS*	S	18 41 27.8	+5.0		
QZH				pmax		pmax				
	comp=Z,800nm,3.5s									
QZH				LR		LR				
	comp=Z,1µm,18.6s									
QZH				LR		LR				
	comp=Z,1µm,21.6s									
JHJ	Hachijo jima 2	39.07	356	LR		LR	18 48 22.6			
	comp=Z,3µm,22.0s,baz=210,slow=31									
JMN	Monobe	40.46	349	P		P	18 35 39.9	-0.3		
JMN				IAmb		IAmb	18 35 41.6			
	comp=Z,229nm,1.1s									
JMN	Monobe	40.46	349	P		P	18 35 40.3	+0.1		
JNU	Nakatsue	40.58	345	P		P	18 35 39.9	-1.3		
JNU				IAmb		IAmb	18 35 42.4			
	comp=Z,204nm,1.4s									
JNU	Nakatsue	40.58	345	P		P	18 35 41.0	-0.2		
QIZ	Qiongzhong	40.94	308	P		P	18 35 44.3	-0.1		
QIZ				S		S	18 41 56.8	+1.6		
QIZ				pmax		pmax				
	comp=Z,51nm,1.3s									
QIZ				LR		LR				
	comp=Z,730nm,14.7s									
QIZ				LR		LR				
	comp=Z,490nm,16.7s									
QIZ				LR		LR				
	comp=Z,920nm,20.6s									
INU	Inuyama	41.54	353	P		P	18 35 47.3	-1.8		
INU	Inuyama	41.54	353	P		P	18 35 48.3	-0.7		
JGF	Kuroka	41.75	353	P		P	18 35 49.7	-1.1		
JGF	Kuroka	41.75	353	P		P	18 35 49.9	-0.9		
BKNI	Bangkinang	42.17	277	P		P	18 35 55.9	+1.3		
MJAR	Matsushiro Arr	42.59	355	P		P	18 35 55.2	-2.5		
	comp=Z,47nm,1.0s,baz=181,slow=8.7,SNR=69									
MJAR				PcP		PcP	18 37 50.2	+0.4		
	comp=Z,13nm,1.0s,baz=193,slow=3.9,SNR=4.1									
MJAR				LR		LR	18 51 57.4			
	comp=Z,1µm,21.0s,baz=140,slow=34									
	comp=Z,47nm,1.0s									
MAJO	Matsushiro	42.59	355	P		P	18 35 56.4	-1.2		
MAJO				IAmb		IAmb	18 35 57.7			
	comp=Z,141nm,1.1s									
MAJO	Matsushiro	42.59	355	P		P	18 35 56.2	-1.4		
MAJO	Matsushiro	42.59	355	*c*	*iP*	P	18 35 56.2	-1.4		
MAJO				pmax		pmax				
	comp=Z,96nm,1.2s									
MJB9	Matsu-Tunnel	42.60	355	P		P	18 35 56.2	-1.5		
MJB9				IAmb		IAmb	18 35 58.6			
	comp=Z,138nm,1.1s									
WAN2	Wando-Q330s	43.02	340	P		P	18 36 02.0	+0.9		
	SNR=11									
BOSB	Boseong-gun	43.19	341	P		P	18 36 03.0	+0.6		
	SNR=14									
HANB	Haenam	43.21	340	P		P	18 36 03.0	+0.4		
	SNR=29									
KSJAH	Jangheung	43.21	341	P		P	18 36 03.2	+0.6		
	SNR=6.9									
KSJDO	Jindo	43.22	340	P		P	18 36 04.0	+1.2		
	SNR=9.8									
GGDB	Gageodo	43.26	338	P		P	18 36 04.0	+1.0		
	SNR=6.8									
JEJB	Jeongja	43.34	344	P		P	18 36 04.1	+0.5		
	SNR=14									
YOA0	Yeongam	43.34	341	P		P	18 36 04.1	+0.4		
	SNR=48									
KSUSN	Ulsan	43.49	344	P		P	18 36 06.0	+1.1		
	SNR=22									
HACA	Hapcheon Acc B	43.51	342	P		P	18 36 06.0	+0.9		
	SNR=8.1									
KSSAC	SANCHEONG	43.57	342	P		P	18 36 07.0	+1.4		
	SNR=5.5									
KSDAG	Daegu	43.61	344	P		P	18 36 07.0	+1.1		
	SNR=12									
KSKWJ	Gwangju	43.62	341	P		P	18 36 07.0	+1.0		
	SNR=8.4									
KSKWJ	Gwangju	43.62	341	P		P	18 36 07.0	+1.0		
	SNR=8.4									
KSHAC	HAPCHEON	43.62	343	P		P	18 36 07.0	+1.0		
	SNR=12									
RAO	Raoul Island	43.64	127	LR		LR	18 52 11.1			
	comp=Z,1µm,21.6s,baz=306,slow=33									
HAMB	Hamyang	43.71	342	P		P	18 36 07.0	+0.4		
	SNR=12									
HUK2	Heuksan-myeon	43.71	339	P		P	18 36 07.3	+0.6		
	SNR=9.2									
JMM	Marumori	43.74	358	P		P	18 36 06.1	-0.7		
JMM				IAmb		IAmb	18 36 07.4			
	comp=Z,217nm,1.2s									
JMM	Marumori	43.74	358	P		P	18 36 06.4	-0.4		
KSKCH	Geochang	43.75	342	P		P	18 36 08.0	+1.0		
	SNR=13									
YOCB	Yeongcheon	43.79	344	P		P	18 36 09.0	+1.7		
	SNR=20									
KSPHA	Pohang	43.88	344	P		P	18 36 09.2	+1.3		
	SNR=7.4									
GOCB	Gochang-gun	43.92	341	P		P	18 36 09.0	+0.6		
	SNR=26									
KSJEU	Jeongeup	43.95	341	P		P	18 36 09.0	+0.4		
	SNR=14									
KSCIG	Chilgok	44.01	343	P		P	18 36 10.0	+0.9		
	SNR=8.2									
DUSB	Deogyusan	44.06	342	P		P	18 36 10.1	+0.6		
	SNR=18									
JSD	Sado	44.07	355	P		P	18 36 08.5	-1.0		
JSD				IAmb		IAmb	18 36 10.2			
	comp=Z,117nm,0.9s									
JSD	Sado	44.07	355	P		P	18 36 09.0	-0.5		
GUWB	Gunwi	44.08	343	P		P	18 36 11.0	+1.4		
	SNR=15									
SKLT	Songkhla	44.09	287	P		P	18 36 10.6	+0.5		
ANMD	Anmado	44.11	340	P		P	18 36 11.0	+1.2		
	SNR=6									
MRNZ	Matariki Terra	44.17	147	P		P	18 36 11.7	+1.4		
JCZ	Jackson Bay	44.19	153	P		P	18 36 13.4	+2.9		
YODB	Yeongdeok	44.19	344	P		P	18 36 12.0	+1.5		
	SNR=9.4									
KSADO	Andong	44.20	344	P		P	18 36 12.0	+1.4		
	SNR=10									
EUSB	Uiseong	44.22	344	P		P	18 36 12.0	+1.3		
	SNR=19									
NJ2	Nanjing	44.24	330	⇑	*iP*	P	18 36 12.3	+1.3		
NJ2				pP		pP	18 36 17.3	-1.4		
NJ2				sP		sP	18 36 22.0	+0.1		
NJ2				S		S	18 42 42.5	-0.9		
NJ2				sS		sS	18 42 58.0	+1.6		
NJ2				pmax		pmax				
	comp=Z,98nm,1.8s									
NJ2				pmax		pmax				
	comp=Z,1µm,4.3s									
NJ2				LR		LR				
	comp=Z,910nm,18.0s									
NJ2				LR		LR				
	comp=Z,1µm,18.9s									
NJ2				LR		LR				
	comp=Z,1µm,17.1s									
KSJEO	Jeonju	44.24	342	P		P	18 36 11.0	+0.1		
	SNR=15									
SMKB	Mukjeong-gil	44.25	341	P		P	18 36 12.0	+1.0		
	SNR=11									
KSCPR	CHUPUNGNYEONG	44.30	343	P		P	18 36 13.0	+1.6		
	SNR=9.3									
INZ	Inchbonnie	44.43	150	IAMs_20		IAMs_20	18 54 33.4			
	comp=Z,4µm,20.0s									
THZ	Tophouse	44.50	148	P		P	18 36 14.1	+1.0		
THZ				IAmb		IAmb	18 36 40.0			
	comp=Z,188nm,1.8s									
CNSH	ChangSha	44.60	321	⇑	P	P	18 36 15.8	+1.9		
CNSH				S		S	18 42 50.5	+1.8		
CNSH				pmax		pmax				
	comp=Z,46nm,0.9s									
CNSH				LR		LR				
	comp=Z,550nm,19.0s									
CNSH				LR		LR				
	comp=Z,630nm,16.7s									
CNSH				LR		LR				
	comp=Z,880nm,22.0s									
TJN	Taejon	44.63	342	IAMs_20		IAMs_20	18 52 34.9			
	comp=Z,4µm,20.0s									
TJN	Taejon	44.63	342	P		P	18 36 14.3	+0.3		
TJN	Taejon	44.63	342	*c*	*iP*	P	18 36 13.7	-0.3		
URZ	Urewera	44.65	141	LR		LR	18 54 46.4			
	comp=Z,4µm,19.2s,baz=44,slow=36									
PSI	Prapat	44.70	280	P		P	18 36 15.2	+0.1		
RTZ	Ruatahuna	44.79	141	P		P	18 36 16.5	+1.1		
RTZ				IAmb		IAmb	18 36 19.2			
	comp=Z,71nm,0.8s									
BKZ	Black Stump Fm	44.83	142	P		P	18 36 15.6	-0.1		
BKZ	Black Stump Fm	44.83	142	P		P	18 36 18.2	+2.5		
TUWZ	Tuamarina	44.83	147	P		P	18 36 15.9	+0.4		
LTZ	Lake Taylor	44.89	149	P		P	18 36 17.0	+0.9		
LTZ				IAmb		IAmb	18 36 37.8			
	comp=Z,209nm,1.9s									
LTZ				IAMs_20		IAMs_20	18 55 36.6			
	comp=Z,5µm,18.0s									
RPZ	Rata Peaks	44.97	151	IAMs_20		IAMs_20	18 53 49.6			
	comp=Z,4µm,21.0s									
RPZ	Rata Peaks	44.97	151	LR		LR	18 54 01.7			
	comp=Z,4µm,20.2s,baz=312,slow=35									
PYZ	Puysegur Point	44.98	157	P		P	18 36 20.9	+4.2		
BSWZ	Blackbirch Sta	44.99	147	P		P	18 36 17.2	+0.3		
OXZ	Oxford	45.17	150	IAMs_20		IAMs_20	18 54 45.9			
	comp=Z,4µm,20.0s									
MRZ	Mangatainoka R	45.24	145	P		P	18 36 19.9	+1.1		
KHZ	Kahutara	45.29	148	IAMs_20		IAMs_20	18 56 04.2			
	comp=Z,3µm,18.0s									
GVZ	Greta Valley S	45.42	149	P		P	18 36 20.5	+0.3		
GVZ				IAmb		IAmb	18 37 19.8			
	comp=Z,83nm,1.1s									
GVZ				IAMs_20		IAMs_20	18 55 53.5			
	comp=Z,4µm,19.0s									
KSAR	Wonju Array Be	45.46	343	P		P	18 36 20.9	+0.3		
KSAR	Wonju Array Be	45.46	343	P		P	18 36 20.9	+0.3		
KSRS	Korea Array	45.46	343	P		P	18 36 19.8	-0.8		
	comp=Z,67nm,1.0s,baz=161,slow=8.9,SNR=133									
KSRS				PcP		PcP	18 38 00.0	+0.6		
	comp=Z,7.0nm,0.9s,baz=151,slow=2.9,SNR=4.2									
KSRS				LR		LR	18 53 05.8			
	comp=Z,763nm,21.8s,baz=145,slow=33									
	comp=Z,67nm,1.0s									
WHN	Wuhan	45.47	325	⇑	*iP*	P	18 36 22.5	+1.7		
WHN				pP		pP	18 36 27.3	-1.3		
WHN				sP		sP	18 36 29.8	-1.9		
WHN				S		S	18 43 06.0	+4.8		
WHN				pmax		pmax				
	comp=Z,3µm,2.8s									
WHN				LR		LR				
	comp=Z,4µm,19.9s									
WHN				LR		LR				
	comp=Z,2µm,20.2s									
WHN				LR		LR				
	comp=Z,3µm,21.6s									
SRIT	Nakonsritamara	45.47	288	P		P	18 36 21.7	+0.6		
KS19	Wonju Array Si	45.52	343	P		P	18 36 21.3	+0.2		
KS19				IAmb		IAmb	18 36 22.6			
	comp=Z,206nm,1.4s									
BFZ	Birch Farm	45.64	144	P		P	18 36 20.5	-1.5		
BFZ				IAmb		IAmb	18 36 43.3			
	comp=Z,67nm,0.9s									
BFZ	Birch Farm	45.64	144	P		P	18 36 23.7	+1.7		
NAYO	Nakonayok	45.86	297	P		P	18 36 24.8	+0.7		
INCN	Inchon	45.87	342	P		P	18 36 24.6	+0.7		
INCN	Inchon	45.87	342	P		P	18 36 24.3	+0.5		
INCN				P		P	18 36 24.3	+0.5		
NONG	Nongkai	45.89	302	P		P	18 36 24.3	0.0		
JTM	Tenmabayashi	46.64	358	P		P	18 36 28.1	-1.7		
JTM	Tenmabayashi	46.64	358	P		P	18 36 29.9	+0.1		
HJU	Haeju	46.67	341	P		P	18 36 32.4	+2.3		
HJU				S		S	18

CHTO pmax pmax
comp=Z,40nm,1.0s
CHTO Chiang Mai 49.79 301 P P 18 36 55.0 +0.4
CHTO P P 18 36 55.0 +0.4
VLA Vladivostok 49.94 350 *i* P P 18 36 55.9 +0.7
VLA pmax pmax
comp=Z,107nm,1.1s
JKA Kamikawa-asahi 49.94 360 P P 18 36 55.3 0.0
ASAJ Asahikawa 49.94 360 P P 18 36 55.3 0.0
ASAJ pmax pmax
comp=Z,349nm,1.4s
ASAJ MLR MLR
comp=Z,600nm,21.0s
ASAJ Asahikawa 49.94 360 LR LR 18 57 08.0
comp=Z,247nm,22.0s,baz=188,slow=35
MCQ Macquarie Isla 50.03 168 P P 18 36 58.4 +2.6
HNS HongShan 50.56 331 ⇑P P 18 37 00.5 +0.4
HNS *e*S S 18 44 14.5 +1.4
HNS pmax pmax
comp=Z,89nm,1.7s
HNS LR LR
comp=Z,630nm,20.7s
HNS LR LR
comp=Z,860nm,19.1s
HNS LR LR
comp=Z,1μm,19.1s
SNY Shenyang 50.79 341 P P 18 37 01.8 +0.1
SNY pmax pmax
comp=Z,49nm,1.0s
SNY pmax pmax
comp=Z,700nm,3.5s
SNY LR LR
comp=Z,340nm,17.0s
SNY LR LR
comp=Z,280nm,20.6s
SNY LR LR
comp=Z,800nm,21.8s
USA0B Ussuriysk Arra 50.97 350*c i*P P 18 37 03.1 +0.1
USRK Ussuriysk Ar. 50.97 350 P P 18 37 03.2 +0.2
comp=Z,80nm,0.9s,baz=167,slow=7.5,SNR=89
USRK PcP PcP 18 38 18.5 -0.6
comp=Z,8.2nm,0.7s,baz=158,slow=5.6,SNR=1.1
USRK LR LR 18 55 29.4
comp=Z,1μm,21.3s,baz=170,slow=32
comp=Z,80nm,0.9s
XAN Xi'an 51.16 324 ⇑P P 18 37 04.8 +0.1
XAN pP sP 18 37 15.0 -0.7
XAN PP PP 18 39 00.5 -1.3
XAN S S 18 44 20.8 -0.9
XAN sS sS 18 44 34.5 -0.4
XAN pmax pmax
comp=Z,160nm,1.3s
XAN pmax pmax
comp=Z,1μm,4.5s
XAN LR LR
comp=Z,730nm,18.4s
XAN LR LR
comp=Z,730nm,19.9s
XAN LR LR
comp=Z,1μm,19.2s
TEY Ternei 51.16 354⇓ *e*P P 18 37 03.5 -1.0
TEY *e* 18 44 23.1
TEY pmax pmax
comp=N,10.0nm,1.5s
TEY pmax pmax
comp=Z,10.0nm,1.5s
KUR Kuril'sk 51.26 5 *e*P P 18 37 02.7 -2.5
KUR S S 18 44 22.8 +0.3
KUR pmax pmax
comp=Z,1μm,3.8s
KUR MLR MLR
comp=Z,800nm,19.0s
PZH PanZhiHua 51.29 311 P P 18 37 06.8 +0.9
PZH S S 18 44 24.5 +0.6
PZH pmax pmax
comp=Z,60nm,1.3s
PZH pmax pmax
comp=Z,230nm,3.5s
PZH LR LR
comp=Z,530nm,23.3s
PZH LR LR
comp=Z,400nm,23.5s
PZH LR LR
comp=Z,840nm,24.3s
MDJ Mudanjiang 51.83 348 P P 18 37 09.5 0.0
MDJ pP pP 18 37 14.0 -3.4
MDJ sP sP 18 37 16.8 -3.6
MDJ PP PP 18 39 09.0 +1.5
MDJ ScP ScP 18 42 14.0 -3.8
MDJ PcS PcS 18 42 17.5 -2.7
MDJ sS sS 18 44 49.0 +5.5
MDJ ScS ScS 18 46 57.3 -0.9
MDJ pmax pmax
comp=Z,74nm,1.0s
MDJ pmax pmax
comp=Z,530nm,10.3s
MDJ LR LR
comp=Z,950nm,20.1s
MDJ LR LR
comp=Z,750nm,21.6s
MDJ LR LR
comp=Z,2μm,22.9s
MDJ Mudanjiang 51.83 348 P P 18 37 09.4 0.0
TIY Taiyuan 51.93 329 P P 18 37 11.0 +0.5
TIY pP sP 18 37 21.8 +0.3
TIY sP pP 18 37 25.5 +7.1
TIY pmax pmax
comp=Z,39nm,1.3s
TIY pmax pmax
comp=Z,580nm,5.3s
TIY LR LR
comp=Z,870nm,20.6s
TIY LR LR
comp=Z,480nm,20.6s
TIY LR LR
comp=Z,940nm,19.9s
BJT Baijiatuau 52.01 334 IAmb IAmb 18 37 12.7
comp=Z,196nm,1.7s
BJT Baijiatuau 52.01 334 P P 18 37 11.0 +0.1
BJI Beijing 52.03 334 P P 18 37 11.0 0.0
BJI PcP PcP 18 38 23.8 +0.7
BJI pmax pmax
comp=Z,40nm,1.4s
BJI pmax pmax
comp=Z,460nm,12.3s
BJI LR LR
comp=Z,710nm,17.8s
BJI LR LR
comp=Z,490nm,19.7s
BJI LR LR
comp=Z,1μm,18.4s
CN2 Changchun 52.05 344⇑ *i*P P 18 37 10.8 -0.3
CN2 PcP PcP 18 38 23.0 -0.1
CN2 S S 18 44 32.0 -1.5
CN2 pmax pmax
comp=Z,60nm,1.4s
CN2 pmax pmax
comp=Z,500nm,3.0s
CN2 LR LR
comp=Z,700nm,17.0s
CN2 LR LR
comp=Z,600nm,17.0s
CN2 LR LR
comp=Z,900nm,18.0s
CD2 Chengdu 52.40 317 ⇑P P 18 37 15.0 +1.0
CD2 S S 18 44 41.0 +2.2
CD2 SS SS 18 48 21.8 +4.7
CD2 pmax pmax
comp=Z,100nm,0.9s
CD2 pmax pmax
comp=Z,520nm,5.6s
CD2 LR LR
comp=Z,200nm,11.9s
CD2 LR LR
comp=Z,240nm,14.4s
CD2 LR LR
comp=Z,920nm,19.6s
YSS Yuzh-Sakhalins 52.78 360 P P 18 37 16.5 +0.1
YSS IAmb IAmb 18 37 17.6
comp=Z,110nm,1.0s
YSS Yuzh-Sakhalins 52.78 360 P P 18 37 16.4 -0.1
YSS Yuzh-Sakhalins 52.78 360⇑ *e*P P 18 37 16.2 -0.2
YSS *e**SP **sP** 18 37 28.9 +1.4
YSS *e* 18 39 17.0
YSS *e*S S 18 44 40.2 -3.1
YSS pmax pmax
comp=Z,120nm,0.9s
YSS pmax pmax
comp=N,50nm,0.8s
YSS pmax pmax
comp=Z,700nm,3.2s
YSS pmax pmax
comp=N,400nm,3.3s
TNCH TengChong 53.01 308 ⇑P P 18 37 20.0 +1.2
TNCH S S 18 44 48.0 +0.4
TNCH SS SS 18 48 25.8 -1.4
TNCH pmax pmax
comp=N,110nm,1.4s
TNCH pmax pmax
comp=N,610nm,2.8s
TNCH LR LR
comp=N,730nm,19.3s
TNCH LR LR
comp=N,1μm,18.9s
TNCH LR LR
comp=N,460nm,17.0s
BNX BinXian 53.37 347 ⇑P P 18 37 20.5 -0.4
BNX pmax pmax
comp=N,200nm,1.2s
BNX pmax pmax
comp=N,810nm,3.8s
MND Mandalay 53.56 303 P P 18 37 23.4 +0.7
HHC Hu-ho-hao-te 54.78 331 *e*P P 18 37 32.0 +0.6
HHC pP pP 18 37 36.5 -2.9
HHC S S 18 45 11.0 0.0
HHC sS sS 18 45 22.8 -1.6
HHC SS SS 18 48 48.3 -6.3
HHC pmax pmax
comp=N,61nm,1.4s
HHC LR LR
comp=N,600nm,17.6s
HHC LR LR
comp=N,680nm,17.6s
HHC LR LR
comp=N,980nm,17.6s
UGL Uglegorsk 54.91 359 *e*P P 18 37 31.5 -0.5
UGL *e*S S 18 45 12.3 +0.2
UGL pmax pmax
comp=Z,150nm,1.2s
UGL pmax pmax
comp=N,600nm,5.0s
UGL pmax pmax
comp=Z,530nm,3.0s
XLT XiLinHaoTe 55.27 337 *e*P P 18 37 34.3 -0.6
XLT sP sP 18 37 51.8 +5.9
XLT PcP PcP 18 38 34.0 -1.5
XLT sS sS 18 45 34.8 +3.9
XLT pmax pmax
comp=Z,26nm,0.9s
XLT pmax pmax
comp=Z,400nm,5.7s
XLT LR LR
comp=Z,890nm,21.7s
XLT LR LR
comp=Z,740nm,19.4s
BTO Baotou 55.35 330 *e*P P 18 37 37.3 +1.8
BTO pP **sP** 18 37 50.0 +3.5
BTO sP pP 18 37 55.0 +12
BTO PP **PP** 18 39 43.3 +3.8
BTO S S 18 45 20.0 +1.4
BTO sS sS 18 45 39.8 +7.8
BTO SS SS 18 49 04.0 +0.5
BTO pmax pmax
comp=Z,100nm,1.5s
BTO pmax pmax
comp=Z,1μm,8.3s
BTO LR LR
comp=Z,2μm,18.4s
BTO LR LR
comp=Z,2μm,19.7s
BTO LR LR
comp=Z,3μm,18.2s
LZH Lanzhou 55.61 322⇑ *i*P P 18 37 39.0 +1.5
LZH sP sP 18 37 48.5 -0.1
LZH pmax pmax
comp=Z,110nm,1.0s
KLR Kul'dur 55.90 351*c i*P P 18 37 39.0 -0.1
KLR pmax pmax
comp=Z,166nm,1.7s
KLR Kul'dur 55.90 351 LR LR 18 57 35.0
comp=Z,1μm,21.9s,baz=162,slow=32
TYV Tymovskoe 56.69 360 *e*P P 18 37 45.2 +0.4
TYV *e*S S 18 45 36.8 +1.0
TYV pmax pmax
comp=Z,56nm,0.9s
TYV pmax pmax
comp=Z,400nm,3.4s
TYV smax smax
comp=N,100nm,6.3s
TYV smax smax
comp=E,200nm,6.3s
GRNR Gornyy 56.87 355⇑ *i*P P 18 37 46.4 +0.4
GRNR *e*S S 18 45 41.2 +3.0
GRNR pmax pmax
comp=E,4.0nm,0.8s
GRNR pmax pmax
comp=N,10.0nm,1.1s
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR smax smax
comp=N,1.0nm,0.9s
RAR Rarotonga 57.49 111 P P 18 37 51.2 +0.1
RAR IAmb IAmb 18 37 54.0
comp=Z,150nm,1.6s
RAR Rarotonga 57.49 111 P P 18 37 52.5 +1.4
RAR Rarotonga 57.49 111 P P 18 37 51.2 +0.1
RAR pmax pmax
comp=Z,150nm,1.6s
RAR Rarotonga 57.49 111 LR LR 18 59 19.0
comp=Z,552nm,21.9s,baz=283,slow=33
HEH HeiHe 57.65 348 *e*P P 18 37 51.0 -0.5
HEH pP **pP** 18 37 57.5 -2.0
HEH S S 18 45 50.0 +1.5
HEH SS SS 18 49 39.3 +0.1
HEH pmax pmax
comp=Z,100nm,1.7s
HEH pmax pmax
comp=Z,830nm,5.9s
HEH LR LR
comp=Z,1μm,20.5s
HEH LR LR
comp=Z,660nm,19.3s
HEH LR LR
comp=Z,2μm,22.0s
SKR Severo-Kuril's 57.67 10*de*P P 18 37 52.4 +0.7
SHL Shillong 58.59 305 P P 18 37 59.9 +1.1
SNR=60
HIA Hailar 58.66 343 IAmb IAmb 18 38 00.4
comp=Z,89nm,1.6s
HIA Hailar 58.66 343 P P 18 37 59.3 +0.6
HIA Hailar 58.66 343*c i*P P 18 37 58.8 +0.1
HIA pmax pmax
comp=Z,29nm,1.3s
NKL Nikolayevsk 59.01 359 *e*P P 18 37 58.5 -2.5
NKL *e*S S 18 46 02.2 -3.9
NKL pmax pmax
comp=N,87nm,1.1s
NKL pmax pmax
comp=E,288nm,1.2s
NKL pmax pmax
comp=Z,855nm,1.2s
NKL smax smax
comp=E,125nm,5.2s
NKL smax smax
comp=N,123nm,3.4s
GTA Gaotai 60.18 322 ⇑P P 18 38 10.8 +1.2
GTA sP pP 18 38 18.8 +1.2
GTA pmax pmax
comp=N,54nm,1.0s
GTA pmax pmax
comp=N,370nm,8.0s
GTA LR LR
comp=N,360nm,19.9s
GTA LR LR
comp=N,270nm,22.7s
GTA LR LR
comp=N,530nm,19.5s
PEA0B Petropavlovsk- 60.28 10*c i*P P 18 38 10.2 +0.4
PETK Petropavlovsk- 60.28 10 P P 18 38 08.6 -1.2
PETK Petropavlovsk- 60.28 10 P P 18 38 08.6 -1.2
PETK Petropavlovsk- 60.28 10 P P 18 38 07.4 -2.3
comp=N,87nm,1.0s,baz=176,slow=4.5,SNR=43
PETK LR LR 19 00 00.7
comp=N,841nm,22.0s,baz=194,slow=32
PETK PKPPKP **P'P'df 19 07 24.8 -6.1**
comp=N,5.5nm,1.0s,baz=304,slow=8.0,SNR=3.7
comp=N,87nm,1.0s
PET Petropavlovsk 60.37 11⇑ *e*P P 18 38 10.1 -0.3
PET pmax pmax
comp=Z,97nm,1.7s
ZEA Zeya 61.00 350 *e*P P 18 38 15.0 +0.3
ZEA pmax pmax
comp=N,200nm,1.5s
ZEA pmax pmax
comp=Z,300nm,1.7s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,70nm,1.1s
ZEA pmax pmax
comp=Z,120nm,1.2s
ZEA MLR MLR
comp=E,300nm,23.0s
GOMU GeErMu 61.53 317 P P 18 38 20.3 +1.2
GOMU pmax pmax
comp=E,29nm,1.1s
GOMU LR LR
comp=E,380nm,18.2s
GOMU LR LR
comp=E,340nm,19.7s
GOMU LR LR
comp=E,880nm,19.7s
ULN Ulaanbaatar 62.23 334 P P 18 38 23.1 -0.2
ULN IAmb IAmb 18 38 25.1
comp=Z,48nm,0.9s
ULN Ulaanbaatar 62.23 334*c i*P P 18 38 24.2 +0.9
ULN pmax pmax
comp=Z,161nm,2.5s
ULN Ulaanbaatar 62.23 334 P P 18 38 23.6 +0.3
ULN P P 18 38 23.6 +0.3
SONM Songino Array 62.50 333 P P 18 38 25.3 +0.2
SONM IAmb IAmb 18 38 27.5
comp=Z,90nm,1.5s
SONM Songino Array 62.50 333 P P 18 38 25.2 +0.2
comp=Z,16nm,0.8s,baz=158,slow=6.3,SNR=94
SONM LR LR 19 05 42.2
comp=Z,2μm,19.5s,baz=150,slow=36
SONM PKPPKP **P'P'df 19 07 27.2 -1.1**
comp=Z,0.7nm,1.0s,baz=252,slow=0.9,SNR=3.6
comp=Z,16nm,0.8s
CIT Chita 63.02 340 *e*P P 18 38 29.5 +1.2
CIT *e* 18 38 38.8
CIT *e* 18 39 01.6
CIT *e* 18 40 53.5
CIT *e* 18 42 23.2
CIT *e* 18 53 52.3
CIT pmax pmax
comp=Z,235nm,2.2s
PALK Pallekele 63.36 281 LR LR 19 08 38.6
comp=Z,400nm,20.1s,baz=206,slow=38
PALK Pallekele 63.36 281 P P 18 38 34.6 +3.3
SHEM Shemya Is, Ala 64.30 21 LR LR 19 01 10.5
comp=Z,2μm,21.8s,baz=247,slow=31
MWH Moku'aweowe 65.70 66 IAMs_20 IAMs_20 19 01 33.8
comp=Z,3μm,22.0s
MA2 Magadan 65.73 4 P P 18 38 45.5 -0.4
MA2 IAmb IAmb 18 38 47.4
comp=Z,93nm,1.0s
MA2 Magadan 65.73 4 P P 18 38 46.2 +0.3
MA2 Magadan 65.73 4*c i*P P 18 38 45.8 -0.1
MA2 pmax pmax
comp=Z,266nm,2.5s
MA2 Magadan 65.73 4 LR LR 19 05 04.6
comp=Z,312nm,21.4s,baz=190,slow=34
ZAK Zakamensk 65.76 333 *e*P P 18 38 46.7 +0.3
ZAK pmax pmax
comp=Z,92nm,1.3s
WRMHI West Rim 65.94 66 IAMs_20 IAMs_20 19 02 31.4
comp=Z,3μm,19.0s
OBL Observatory Le 65.96 66 IAMs_20 IAMs_20 19 02 15.9
comp=Z,3μm,22.0s
BYL Byron's Ledge 65.98 66 IAMs_20 IAMs_20 19 01 33.4
comp=Z,3μm,21.0s
IRK Irkutsk 66.69 335 *e*P P 18 38 52.5 +0.3
IRK pmax pmax
comp=Z,115nm,2.3s
PPT Papeete 66.88 106 LR LR 19 04 05.8
comp=Z,525nm,21.6s,baz=265,slow=32
ADK Adak 67.27 26 P P 18 38 56.0 +0.2
ADK Adak 67.27 26 P P 18 38 56.0 +0.2
ADK pmax pmax
comp=Z,426nm,1.7s
HYB Hyderabad 67.59 292 *e*P P 18 38 58.4 -0.2
HYB *e*pP **pP** 18 39 05.2 -1.5
HYB *e*PcP **PcP** 18 39 25.9 +0.2
HYB *e*S S 18 47 55.1 +0.4
MOY Mondy 67.69 333 *e*P P 18 38 59.6 +0.9
MOY pmax pmax
comp=Z,164nm,2.4s
BOD Bodaibo 67.80 344 *e*P P 18 38 58.0 -1.1
BOD pmax pmax
comp=Z,54nm,1.5s
YAK Yakutsk 68.64 353 P P 18 39 03.6 -0.7
YAK Yakutsk 68.64 353*c i*P P 18 39 04.0 -0.3
YAK *e**PP **pP** 18 39 11.5 -0.9
YAK *e* 18 39 29.3
YAK *e* 18 41 38.0
YAK *e*S S 18 48 11.3 +5.8
YAK *e**SS **SKSac** 18 49 01.5 -0.3
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=N,21nm,1.4s
YAK pmax pmax
comp=Z,94nm,1.9s
YAK pmax pmax
comp=N,60nm,1.8s
YAK pmax pmax
comp=E,88nm,2.9s
YAK smax smax
comp=N,177nm,12.4s
YAK smax smax
comp=E,115nm,12.0s
YAK Yakutsk 68.64 353 LR LR 19 07 26.5
comp=E,606nm,20.6s,baz=158,slow=34
SEY Seymchan 69.18 5⇑ *e*P P 18 39 07.8 +0.2
SEY pmax pmax
comp=Z,87nm,1.7s
SEY Seymchan 69.18 5 LR LR 19 07 24.3
comp=Z,508nm,20.8s,baz=186,slow=34
KAAM Kaadhehdhoo 69.98 273 P P 18 39 17.3 +3.6
WMQ Urumqi 70.16 321⇑ *i*P P 18 39 15.3 +1.1
WMQ pmax pmax
comp=Z,110nm,1.3s
WMQ pmax pmax
comp=Z,250nm,4.7s
WMQ LR LR
comp=Z,370nm,18.3s
WMQ LR LR
comp=Z,430nm,13.7s
WMQ LR LR
comp=Z,380nm,24.7s
VNDA Vanda 72.13 176 P P 18 39 26.8 +1.3
VNDA Vanda 72.13 176 P P 18 39 26.4 +0.9
comp=Z,11nm,0.9s,baz=331,slow=7.8,SNR=9.5
VNDA LR LR 19 10 31.4
comp=Z,3μm,18.3s,baz=348,slow=35
comp=Z,11nm,0.9s
DGZ Jazzator, Alta 73.31 326*c i*P P 18 39 33.7 +0.6
DGZ pmax pmax
comp=Z,54nm,0.9s
ZSN Zaisan 73.66 323 *e*P P 18 39 35.1 0.0
comp=Z,73nm,1.9s,baz=323
ZSN Zaisan 73.66 323 *e*P P 18 39 35.1 0.0
ZSN pmax pmax
comp=Z,73nm,1.9s
MK31 Makanchi Array 74.92 322 P P 18 39 43.1 +0.7
MK31 IAmb IAmb 18 39 44.6
comp=Z,106nm,1.3s
MK31 Makanchi Array 74.92 322*c i*P P 18 39 43.2 +0.8
MK31 pmax pmax
comp=Z,155nm,1.3s
MKAR Makanchi Array 74.92 322 P P 18 39 43.1 +0.7
MKAR Makanchi Array 74.92 322 P P 18 39 43.1 +0.7
MKAR Makanchi Array 74.92 322 P P 18 39 42.6 +0.2
comp=Z,44nm,0.8s,baz=108,slow=7.2,SNR=356
MKAR LR LR 19 12 23.4
comp=Z,343nm,20.9s,baz=88,slow=36

comp=Z,44nm,0.8s
MAKZ Makanchi 75.12 322 P **P** **18 39 44.2 +0.6**
MAKZ IAmb IAmb 18 39 45.6
comp=Z,177nm,1.4s
MAKZ Makanchi 75.12 322 P **P** **18 39 44.0 +0.4**
SHLS Shalkode 75.22 317 *e*P **P** **18 39 43.0 -1.4**
comp=Z,73nm,1.4s,baz=318
SHLS Shalkode 75.22 317 *e*P **P** **18 39 43.0 -1.4**
SHLS pmax pmax
comp=Z,73nm,1.4s
PDGK Podgornoye 75.27 318 P **P** **18 39 44.7 0.0**
UZB Uzynbulak 75.52 317 *e*P **P** **18 39 46.1 0.0**
comp=Z,41nm,0.8s,baz=317
UZB Uzynbulak 75.52 317 *e*P **P** **18 39 46.1 0.0**
UZB pmax pmax
comp=Z,41nm,0.8s
BILL Bilibino 75.76 9 P **P** **18 39 46.6 -0.2**
BILL IAmb IAmb 18 39 48.4
comp=Z,129nm,1.9s
BILL Bilibino 75.76 9 *i*P **P** **18 39 46.8 +0.1**
BILL pmax pmax
comp=Z,84nm,2.5s
KPKS Kokpek 75.87 318 *e*P **P** **18 39 48.1 +0.1**
comp=Z,64nm,1.5s,baz=318
KPKS Kokpek 75.87 318 *e*P **P** **18 39 48.1 +0.1**
KPKS pmax pmax
comp=Z,64nm,1.5s
SATY Saty 75.90 317 *e*P **P** **18 39 48.4 +0.1**
comp=Z,59nm,1.4s,baz=317
SATY Saty 75.90 317 *e*P **P** **18 39 48.4 +0.1**
SATY pmax pmax
comp=Z,59nm,1.4s
ZHN Zhinishke 75.92 317 *e*P **P** **18 39 48.6 +0.1**
comp=Z,42nm,1.7s,baz=317
ZHN Zhinishke 75.92 317 *e*P **P** **18 39 48.5 +0.1**
ZHN pmax pmax
comp=Z,42nm,1.7s
KSH Kashi 76.34 313 P **P** **18 39 53.0 +2.2**
KSH pP sP 18 40 01.0 -1.1
KSH pmax pmax
comp=Z,59nm,1.1s
KSH LR LR
comp=Z,480nm,18.9s
KSH LR LR
comp=Z,310nm,17.2s
KSH LR LR
comp=Z,610nm,21.0s
NIL Nilore 76.59 307 P **P** **18 39 51.8 -0.5**
NIL Nilore 76.59 307 P **P** **18 39 51.8 -0.5**
NIL pmax pmax
comp=Z,135nm,0.7s
NIL Nilore 76.59 307 P **P** **18 39 53.5 +1.2**
TDK Taldyqorghan 76.65 319 *e*P **P** **18 39 52.7 +0.3**
comp=Z,52nm,0.9s,baz=319
TDK Taldyqorghan 76.65 319 *e*P **P** **18 39 52.6 +0.3**
TDK pmax pmax
comp=Z,52nm,0.9s
ARXS Arharly 76.73 318 *e*P **P** **18 39 53.1 +0.2**
MDOK Medeo 76.86 317 *e*P **P** **18 39 54.1 +0.3**
baz=317
MDOK Medeo 76.86 317 *e*P **P** **18 39 54.0 +0.3**
ZAAO Zalesovo Array 76.88 329 P **P** **18 39 53.0 -0.4**
ZALV Zalesovo Beam 76.88 329 P **P** **18 39 51.9 -1.5**
ZALV Zalesovo Beam 76.88 329 *i*P **P** **18 39 52.9 -0.5**
ZALV pmax pmax
comp=Z,25nm,0.7s
ZALV Zalesovo Beam 76.88 329 P **P** **18 39 52.0 -1.4**
comp=Z,25nm,0.7s,baz=112,slow=5.5,SNR=130
ZALV LR LR 19 14 35.1
comp=Z,463nm,18.9s,baz=119,slow=36
comp=Z,25nm,0.7s
AAA Alma-Ata 76.97 317 *e*P **P** **18 39 54.5 +0.3**
comp=Z,65nm,1.3s,baz=317
AAA Alma-Ata 76.97 317 *e*P **P** **18 39 54.5 +0.3**
AAA pmax pmax
comp=Z,65nm,1.3s
ULHL Ulahol 77.09 316 P **P** **18 39 55.9 +0.7**
SNR=23
GAMB Gambell 77.54 19 P **P** **18 39 57.6 +0.8**
baz=227
KUU Kurty 77.61 317 *e*P **P** **18 39 57.6 -0.1**
baz=317
KUU Kurty 77.61 317 *e*P **P** **18 39 57.6 -0.1**
SEM Semipalatinsk 77.72 324 *e*P **P** **18 39 57.6 -0.9**
comp=Z,56nm,1.5s,baz=324
SEM Semipalatinsk 77.72 324 *e*P **P** **18 39 57.6 -0.9**
SEM pmax pmax
comp=Z,56nm,1.5s
TKM2 Tokmak 2 77.77 316 P **P** **18 39 59.7 +0.8**
SNR=31
TKM2 Tokmak 2 77.77 316 *i*P **P** **18 39 59.2 +0.3**
TKM2 pmax pmax
comp=Z,37nm,0.9s
S14K Fog Glacier 77.89 29 P **P** **18 39 59.6 +0.4**
baz=239
TIXI Tiksi 78.09 356 P **P** **18 39 57.9 -1.9**
TIXI Tiksi 78.09 356ljj *e*P **P** **18 39 58.8 -1.0**
TIXI pmax pmax
comp=Z,10.0nm,0.9s
TIXI Tiksi 78.09 356 LR LR 19 13 29.8
comp=Z,330nm,21.1s,baz=184,slow=35
KBK Karagaybulak 78.13 316 P **P** **18 40 01.7 +0.8**
SNR=15
UCH Uchtor 78.29 315 P **P** **18 40 03.4 +1.2**
SNR=52
CHMS Chumysh 78.38 316 P **P** **18 40 02.7 +0.6**
SNR=25
AAK Ala-Archa 78.44 316 P **P** **18 40 03.5 +0.9**
SNR=33
AAK Ala-Archa 78.44 316 P **P** **18 40 02.8 +0.2**
AAK Ala-Archa 78.44 316*c i*P **P** **18 40 03.3 +0.7**
AAK pmax pmax
comp=Z,51nm,1.3s
AAK Ala-Archa 78.44 316 LR LR 19 18 46.3
comp=Z,190nm,18.2s,baz=104,slow=39
AAK Ala-Archa 78.44 316 P **P** **18 40 03.4 +0.9**
CHGN Chignik 78.44 29 P **P** **18 40 02.1 +0.1**
baz=240
M13K Dall Lake 78.45 24 P **P** **18 40 03.0 +1.0**
baz=235
SGDS Sogindy 78.62 316 *e*P **P** **18 40 03.1 -0.3**
baz=316
SGDS Sogindy 78.62 316 *e*P **P** **18 40 03.1 -0.3**
USP Ospenovka 78.64 316 P **P** **18 40 04.4 +0.8**
SNR=53
O14K Tigyukauivet M 78.68 26 P **P** **18 40 04.5 +1.2**
baz=237
KURK Kurchatov 78.79 324 P **P** **18 40 03.8 -0.3**
KURK IAmb IAmb 18 40 05.8
comp=Z,170nm,1.4s
KURK Kurchatov 78.79 324*c i*P **P** **18 40 04.3 +0.2**
KURK pmax pmax
comp=Z,135nm,1.3s
KURK Kurchatov 78.79 324 P **P** **18 40 04.1 0.0**
KURBB Kurchatov Arra 78.81 324 P **P** **18 40 04.0 -0.1**
comp=Z,40nm,1.0s,baz=116,slow=4.7,SNR=230
KURBB S **S** **18 50 03.3 +2.7**
comp=Z,0.2nm,0.3s,baz=140,slow=12,SNR=5.0
KURBB PKKPbc **PKKPbc** **18 58 59.5 -1.2**
comp=Z,0.5nm,0.7s,baz=296,slow=3.1,SNR=4.8
KURBB LR LR 19 15 37.5
comp=Z,370nm,20.1s,baz=174,slow=36
comp=Z,40nm,1.0s
N14K Kuskokwak Cree 78.87 25 P **P** **18 40 05.4 +1.1**
baz=237
EKS2 Erkin-Say 78.94 315 P **P** **18 40 06.3 +1.0**
SNR=60
M14K Bethel 79.21 24 P **P** **18 40 07.4 +1.3**
baz=236,SNR=9.2
L14K Kuka Creek 79.25 24 IAmb IAmb 18 40 08.7
comp=Z,129nm,1.0s
L14K Kuka Creek 79.25 24 P **P** **18 40 07.5 +1.2**
baz=236
O15K Ungalikthiuk R 79.26 26 P **P** **18 40 08.0 +1.5**
baz=238
BTLS Baital 79.54 318 *e*P **P** **18 40 08.3 -0.1**
comp=Z,74nm,1.7s,baz=318
BTLS Baital 79.54 318 *e*P **P** **18 40 08.3 -0.1**
BTLS pmax pmax
comp=Z,74nm,1.7s
N15K Kwethluk River 79.67 25 IAmb IAmb 18 40 10.5
comp=Z,106nm,1.1s
N15K Kwethluk River 79.67 25 P **P** **18 40 10.0 +1.3**
baz=238,SNR=6.9
M15K Kasigluk River 79.70 25 P **P** **18 40 09.6 +0.8**
baz=238
J14K Nanvaranak Lak 79.73 22 P **P** **18 40 09.7 +0.8**
J14K IAmb IAmb 18 40 11.8
comp=Z,262nm,1.7s
J14K Nanvaranak Lak 79.73 22 P **P** **18 40 10.0 +1.1**
baz=235
L15K Ungalak Mounta 79.92 24 P **P** **18 40 10.6 +0.6**
baz=237,SNR=7.7
TNA Tin City 79.94 19 P **P** **18 40 10.8 +0.8**
baz=230,SNR=14
P16K Nushagak River 80.00 27 P **P** **18 40 11.3 +0.8**
baz=240
ANM Nome 80.16 20 P **P** **18 40 11.1 -0.2**
ANM IAmb IAmb 18 40 13.7
comp=Z,184nm,1.6s
ANM IAMs_20 IAMs_20 19 10 06.7
comp=Z,1μm,20.0s
ANM Nome 80.16 20 P **P** **18 40 12.5 +1.2**
baz=233,SNR=18
ANM Nome 80.16 20 P **P** **18 40 11.1 -0.2**
ANM pmax pmax
comp=Z,184nm,1.6s
ANM MLR MLR
comp=Z,2μm,20.0s
KBL Kabul 80.19 306 P **P** **18 40 11.6 -0.8**
KBL Kabul 80.19 306 P **P** **18 40 11.6 -0.8**
KBL pmax pmax
comp=Z,27nm,0.8s
KBL MLR MLR
comp=Z,300nm,20.0s
KBL Kabul 80.19 306 P **P** **18 40 12.3 -0.1**
SNR=15
KBL P **P** **18 40 12.3 -0.1**
SNR=15
O16K Kokwok River B 80.24 26 IAmb IAmb 18 40 13.8
comp=Z,161nm,1.2s
O16K Kokwok River B 80.24 26 P **P** **18 40 12.7 +0.9**
baz=240
K15K Wolf Creek Mou 80.24 23 IAmb IAmb 18 40 14.3
comp=Z,121nm,1.1s
K15K Wolf Creek Mou 80.24 23 P **P** **18 40 13.0 +1.3**
baz=236
BTK Batken 80.28 312 IAmb IAmb 18 40 14.7
comp=Z,146nm,1.9s
N16K Nishlik Lake 80.39 25 P **P** **18 40 14.0 +1.3**
baz=239
F14K Arctic Creek 80.40 19 P **P** **18 40 13.7 +1.1**
baz=232
MAW Mawson 80.59 202 LR LR 19 12 40.5
comp=Z,830nm,20.9s,baz=83,slow=33
M16K Timber Creek 80.60 25 IAmb IAmb 18 40 16.1
comp=Z,158nm,1.1s
M16K Timber Creek 80.60 25 P **P** **18 40 15.1 +1.4**
baz=239,SNR=13
Q17K Contact Creek 80.60 28 P **P** **18 40 13.7 -0.2**
baz=242,SNR=8.6
DZA Taraz 80.73 315 *e*P **P** **18 40 15.0 +0.1**
comp=Z,66nm,1.0s,baz=315
DZA Taraz 80.73 315 *e*P **P** **18 40 14.9 +0.1**
DZA pmax pmax
comp=Z,66nm,1.0s
L16K Owhat River 80.74 24 P **P** **18 40 15.2 +0.7**
L16K IAmb IAmb 18 40 16.0
comp=Z,65nm,0.9s
L16K IAMs_20 IAMs_20 19 10 13.4
comp=Z,2μm,21.0s
L16K Owhat River 80.74 24 P **P** **18 40 15.3 +0.9**
baz=238
O17K Koliganek Bris 80.77 26 P **P** **18 40 15.7 +1.1**
baz=241
G15K Niukluk 80.87 20 P **P** **18 40 15.7 +0.6**
baz=234
N17K Nushagak Hills 81.10 26 IAmb IAmb 18 40 18.9
comp=Z,108nm,1.1s
N17K IAMs_20 IAMs_20 19 10 55.5
comp=Z,2μm,21.0s
N17K Nushagak Hills 81.10 26 P **P** **18 40 17.8 +1.4**
baz=241
J16K Anvik River 81.14 22 IAmb IAmb 18 40 19.3
comp=Z,205nm,1.4s
J16K Anvik River 81.14 22 P **P** **18 40 18.0 +1.4**
baz=237
SIMJ Simiganj 81.26 310 P **P** **18 40 17.7 -0.2**
SIMJ IAmb IAmb 18 40 19.7
comp=Z,110nm,1.1s
H16K Elim 81.30 21 P **P** **18 40 18.1 +0.8**
baz=236,SNR=34
KK31 Karatay Array 81.37 315 IAmb IAmb 18 40 20.2
comp=Z,136nm,1.6s
KK31 Karatay Array 81.37 315 P **P** **18 40 18.2 -0.1**
KKAR Karatay Array 81.37 315 P **P** **18 40 18.5 +0.2**
KKAR Karatay Array 81.37 315 IAmb IAmb 18 40 20.2
comp=Z,135nm,1.6s
KKAR Karatay Array 81.37 315 P **P** **18 40 18.5 +0.2**
OHAK Old Harbor 81.37 30 P **P** **18 40 18.7 +0.8**
baz=245
M17K Holitna River 81.42 25 IAmb IAmb 18 40 20.9
comp=Z,106nm,0.9s
M17K Holitna River 81.42 25 P **P** **18 40 19.9 +1.7**
baz=240,SNR=9.7
P18K Big Mountain, 81.42 27 IAMs_20 IAMs_20 19 10 17.6
comp=Z,2μm,22.0s
I17K Unalakleet 81.44 22 IAmb IAmb 18 40 20.9
comp=Z,141nm,1.1s
I17K Unalakleet 81.44 22 P **P** **18 40 19.7 +1.6**
baz=237,SNR=24
IUG luzhnay 81.44 314 *e*P **P** **18 40 18.8 0.0**
comp=Z,95nm,1.8s,baz=314
IUG luzhnay 81.44 314 *e*P **P** **18 40 18.7 0.0**
IUG pmax pmax
comp=Z,95nm,1.8s
L17K Donlin 81.44 24 P **P** **18 40 19.5 +1.3**
baz=240
O18K Koktuh Hills 81.65 27 P **P** **18 40 19.6 +0.3**
baz=243
G16K Koyuk River 81.69 20 IAmb IAmb 18 40 21.6
comp=Z,96nm,1.1s
G16K IAMs_20 IAMs_20 19 10 54.6
comp=Z,2μm,20.0s
G16K Koyuk River 81.69 20 P **P** **18 40 20.3 +1.0**
baz=235
OTUK Ortayu 81.70 320 P **P** **18 40 20.3 +0.4**
N18K Kilae Creek 81.73 26 IAmb IAmb 18 40 21.7
comp=Z,59nm,0.9s
N18K Kilae Creek 81.73 26 P **P** **18 40 20.9 +1.1**
baz=242
K17K Iditarod 81.73 23 IAMs_20 IAMs_20 19 11 06.6
comp=Z,2μm,22.0s
K17K Iditarod 81.73 23 P **P** **18 40 20.7 +1.0**
baz=239
BRLS Borolday 81.82 315 *e*P **P** **18 40 20.7 0.0**
baz=315
BRLS Borolday 81.82 315 *e*P **P** **18 40 20.7 0.0**
Q19K Cape Douglas, 81.94 28 P **P** **18 40 21.1 +0.2**
baz=244
KDAK Kodiak Island 81.96 29 P **P** **18 40 21.1 +0.1**
KDAK IAmb IAmb 18 40 22.3
comp=Z,75nm,1.1s
KDAK Kodiak Island 81.96 29 P **P** **18 40 21.2 +0.2**
baz=245
KDAK Kodiak Island 81.96 29*de*P **P** **18 40 20.8 -0.2**
KDAK pmax pmax
comp=Z,99nm,1.2s
KDAK Kodiak Island 81.96 29 LR LR 19 14 20.7
comp=Z,866nm,19.4s,baz=263,slow=34
BRZS Berezniki 82.06 322 *e*P **P** **18 40 21.8 0.0**
comp=Z,50nm,1.4s,baz=322
BRZS Berezniki 82.06 322 *e*P **P** **18 40 21.7 0.0**
BRZS pmax pmax
comp=Z,50nm,1.4s
SVW2 Sparrevohn 82.06 26 IAmb IAmb 18 40 23.9
comp=Z,85nm,1.0s
SVW2 IAMs_20 IAMs_20 19 10 43.1
comp=Z,2μm,20.0s
SVW2 Sparrevohn 82.06 26 P **P** **18 40 23.0 +1.5**
L18K Granite Mounta 82.14 24 IAmb IAmb 18 40 23.8
comp=Z,76nm,1.1s
L18K IAMs_20 IAMs_20 19 12 33.3
comp=Z,2μm,20.0s
L18K Granite Mounta 82.14 24 P **P** **18 40 22.3 +0.5**
baz=241
M18K Stony River 82.14 25 P **P** **18 40 23.3 +1.4**
baz=242
O19K Port Alsworth 82.20 27 IAMs_20 IAMs_20 19 11 59.7
comp=Z,2μm,21.0s
O19K Port Alsworth 82.20 27 P **P** **18 40 22.3 +0.1**
baz=243
H17K Granite Mounta 82.29 21 IAmb IAmb 18 40 24.9
comp=Z,118nm,1.1s
H17K IAMs_20 IAMs_20 19 13 27.7
comp=Z,1μm,20.0s
H17K Granite Mounta 82.29 21 P **P** **18 40 23.7 +1.1**
baz=238
G17K Kiwalik Mounta 82.34 21 P **P** **18 40 24.1 +1.3**
baz=237
Q20K Shuyak Island 82.40 29 P **P** **18 40 23.8 +0.5**
baz=245
SYI Shuyak Island 82.40 29 IAMs_20 IAMs_20 19 12 15.5
comp=Z,2μm,21.0s
N19K Bonanza Creek 82.41 26 IAmb IAmb 18 40 25.3
comp=Z,136nm,1.1s
N19K IAMs_20 IAMs_20 19 12 58.2
comp=Z,2μm,21.0s
N19K Bonanza Creek 82.41 26 P **P** **18 40 24.3 +0.9**
baz=243
C16K Lisburne Hills 82.45 17 IAmb IAmb 18 40 26.3
comp=Z,182nm,1.9s
C16K Lisburne Hills 82.45 17 P **P** **18 40 24.1 +0.8**
baz=232
P19K Oil Pt 82.45 27 P **P** **18 40 23.5 -0.1**
baz=244,SNR=5.3
ILSW Iliamna Southw 82.64 27 IAmb IAmb 18 40 25.2
comp=Z,103nm,1.4s
F17K Baldwin Pennin 82.65 20 P **P** **18 40 25.4 +1.0**
baz=236
J18K Innoko River 82.73 23 IAmb IAmb 18 40 26.8
comp=Z,229nm,1.9s
J18K IAMs_20 IAMs_20 19 12 20.6
comp=Z,1μm,20.0s
J18K Innoko River 82.73 23 P **P** **18 40 25.6 +0.6**
baz=241,SNR=16
TTA Tatalina 82.75 24 IAmb IAmb 18 40 27.2
comp=Z,87nm,1.4s
TTA Tatalina 82.75 24 P **P** **18 40 25.8 +0.6**
TTA Tatalina 82.75 24 P **P** **18 40 25.9 +0.7**
baz=242,SNR=12
D17K Noatak River 82.78 18 P **P** **18 40 26.1 +1.0**
baz=234,SNR=46
E17K Hotham Inlet 82.83 19 P **P** **18 40 26.3 +0.9**
baz=236,SNR=51
L19K White Mountain 82.88 25 IAmb IAmb 18 40 28.0
comp=Z,120nm,1.2s
L19K White Mountain 82.88 25 P **P** **18 40 26.6 +0.9**
baz=243
O20K Slope Mountain 82.91 27 P **P** **18 40 26.5 +0.5**
baz=245
M19K Big River Lodg 82.94 25 IAmb IAmb 18 40 40.4
comp=Z,78nm,1.2s
M19K IAMs_20 IAMs_20 19 11 43.6
comp=Z,2μm,21.0s
M19K Big River Lodg 82.94 25 P **P** **18 40 27.0 +0.9**
baz=243,SNR=8.0
H18K Honhosa River 82.96 21 IAmb IAmb 18 40 27.8
comp=Z,84nm,1.4s
H18K IAMs_20 IAMs_20 19 11 25.9
comp=Z,2μm,21.0s
H18K Honhosa River 82.96 21 P **P** **18 40 26.4 +0.3**
baz=239,SNR=12
HOM Homer 83.19 28 P **P** **18 40 27.7 +0.3**
baz=246
C17K DeLong Mountai 83.21 18 P **P** **18 40 28.1 +0.7**
baz=234
G18K Tagagawik 83.25 21 IAmb IAmb 18 40 29.3
comp=Z,60nm,1.0s
G18K IAMs_20 IAMs_20 19 13 16.3
comp=Z,2μm,21.0s
G18K Tagagawik 83.25 21 P **P** **18 40 28.1 +0.6**
baz=239,SNR=25
F18K Selawik 83.28 20 P **P** **18 40 28.1 +0.5**
baz=238,SNR=12
GCSA Galena City Sc 83.30 22 P **P** **18 40 28.6 +0.8**
baz=238,SNR=12
CNPM China Poot 83.32 28 IAmb IAmb 18 40 28.9
comp=Z,95nm,0.9s
E18K Tukpahlearik C 83.41 19 IAmb IAmb 18 40 30.4
comp=Z,64nm,1.0s
E18K Tukpahlearik C 83.41 19 P **P** **18 40 29.2 +0.8**
baz=237
L20K Farewell, AK 83.42 25 P **P** **18 40 29.5 +1.0**
baz=244,SNR=14
J19K Poorman 83.42 23 IAmb IAmb 18 40 30.7
comp=Z,138nm,1.4s
J19K Poorman 83.42 23 P **P** **18 40 29.5 +1.0**
baz=242
M20K Styx River 83.47 25 IAmb IAmb 18 40 30.8
comp=Z,97nm,1.0s
M20K IAMs_20 IAMs_20 19 12 52.5
comp=Z,1μm,20.0s
M20K Styx River 83.47 25 P **P** **18 40 29.7 +0.9**
baz=244
N20K Mount Spurr 83.57 26 P **P** **18 40 28.7 -0.8**
baz=245,SNR=6.8
BRSE Bradley Lake S 83.64 28 P **P** **18 40 29.5 -0.2**
baz=247
K20K Telida 83.73 24 IAmb IAmb 18 40 32.4
comp=Z,96nm,1.1s
K20K Telida 83.73 24 P **P** **18 40 30.9 +0.7**
baz=243
H19K Roundabout Mou 83.85 21 IAMs_20 IAMs_20 19 12 24.9
comp=Z,2μm,21.0s
H19K Roundabout Mou 83.85 21 P **P** **18 40 31.5 +0.9**
baz=241
CAPN Captain Cook N 83.86 27 P **P** **18 40 31.7 +0.9**
baz=246
C18K Utukok River 83.91 18 IAmb IAmb 18 40 32.8
comp=Z,144nm,1.6s
C18K Utukok River 83.91 18 P **P** **18 40 31.5 +0.5**
baz=236
QSPA South Pole Qui 83.91 180 P **P** **18 40 31.4 +0.2**
QSPA IAmb IAmb 18 40 41.3
comp=Z,54nm,0.8s
QSPA South Pole Qui 83.91 180 P **P** **18 40 31.0 -0.2**
comp=Z,29nm,0.8s,baz=318,slow=1.3,SNR=43
QSPA LR LR 19 18 15.5
comp=Z,5μm,19.0s,baz=11,slow=36
comp=Z,29nm,0.8s
G19K Purcell Mounta 83.92 21 IAmb IAmb 18 40 33.2
comp=Z,116nm,1.2s
G19K IAMs_20 IAMs_20 19 14 17.8
comp=Z,2μm,21.0s
G19K Purcell Mounta 83.92 21 P **P** **18 40 31.9 +0.9**
baz=240
F19K Shaleruckik Mo 84.04 20 IAMs_20 IAMs_20 19 13 30.7
comp=Z,2μm,21.0s
F19K Shaleruckik Mo 84.04 20 P **P** **18 40 31.9 +0.4**
baz=240,SNR=25
J20K Nowinta River 84.08 23 P **P** **18 40 32.9 +1.1**
baz=243
NRIK Noril'sk 84.08 343*c i*P **P** **18 40 31.8 +0.1**
NRIK pmax pmax
comp=Z,118nm,1.0s
NRIK Noril'sk 84.08 343 P **P** **18 40 30.6 -1.2**
comp=Z,78nm,0.9s,baz=118,slow=5.1,SNR=117
NRIK LR LR 19 15 16.4
comp=Z,493nm,21.6s,baz=127,slow=34
comp=Z,78nm,0.9s
B18K Kokolik River 84.13 17 P **P** **18 40 32.9 +0.8**
baz=235
SKT Skwentna 84.19 26 IAMs_20 IAMs_20 19 12 20.8
comp=Z,2μm,22.0s
SKT Skwentna 84.19 26 P **P** **18 40 31.6 -0.9**
baz=246,SNR=8.4
I20K Naaghedeneel 84.23 22 P **P** **18 40 33.5 +0.9**
baz=243
PPLA Purkeypile 84.30 25 P **P** **18 40 33.3 +0.1**
baz=245,SNR=5.4
SUA Susitna One 84.33 26 IAmb IAmb 18 40 33.7
comp=Z,46nm,0.8s
SUA Susitna One 84.33 26 P **P** **18 40 32.8 -0.5**
baz=246,SNR=14
SEW Seward 84.38 28 P **P** **18 40 33.5 +0.1**
baz=248,SNR=9.4
BVA0 Borovoye Array 84.38 325 P **P** **18 40 33.7 +0.1**
BVAR Borovoye Array 84.38 325 P **P** **18 40 33.5 -0.1**
comp=Z,188nm,0.7s,baz=104,slow=6.3,SNR=593
comp=Z,188nm,0.7s
O22K Cooper Landing 84.40 27 IAMs_20 IAMs_20 19 12 02.2
comp=Z,2μm,22.0s
O22K Cooper Landing 84.40 27 P **P** **18 40 33.5 0.0**
baz=247,SNR=12
H20K Anotleneega Mo 84.41 22 P **P** **18 40 34.2 +0.7**
baz=242
BRVK Borovoye 84.45 325 P **P** **18 40 34.3 +0.3**
BRVK Borovoye 84.45 325*c i*P **P** **18 40 34.5 +0.5**
BRVK pmax pmax
comp=Z,294nm,1.3s
BRVK Borovoye 84.45 325 P **P** **18 40 34.5 +0.5**

BRVK				P	P	18 40 34.5	+0.5			
CAST	**Castle Rocks**	**84.57**	**24**	IAmb	IAmb	18 40 35.5				
	comp=Z,61nm,0.9s									
CAST				IAMs_20	IAMs_20	19 13 35.5				
	comp=Z,2µm,22.0s									
CAST	**Castle Rocks**	**84.57**	**24**	P	P	**18 40 34.2**	**-0.2**			
	baz=245,SNR=24									
RC01	**Rabbit Creek A**	**84.63**	**27**	P	P	**18 40 34.6**	**-0.1**			
	baz=247,SNR=27									
C19K	**Lookout Ridge**	**84.65**	**18**	P	P	**18 40 35.7**	**+1.0**			
	baz=238									
CHUM	**Lake Minchumin**	**84.67**	**24**	P	P	**18 40 35.6**	**+0.7**			
	baz=245,SNR=76									
M22K	**Willow**	**84.72**	**26**	IAMs_20	IAMs_20	19 12 36.6				
	comp=Z,2µm,21.0s									
M22K	**Willow**	**84.72**	**26**	P	P	**18 40 34.4**	**-0.7**			
	baz=247,SNR=8.5									
D19K	**Kuna River**	**84.78**	**19**	IAmb	IAmb	18 40 37.2				
	comp=Z,89nm,1.1s									
D19K				IAMs_20	IAMs_20	19 12 54.2				
	comp=Z,1µm,21.0s									
D19K	**Kuna River**	**84.78**	**19**	P	P	**18 40 35.9**	**+0.6**			
	baz=239									
F20K	**Avaraart Lake**	**84.84**	**20**	IAmb	IAmb	18 40 37.9				
	comp=Z,59nm,1.1s									
F20K				IAMs_20	IAMs_20	19 14 37.1				
	comp=Z,2µm,20.0s									
F20K	**Avaraart Lake**	**84.84**	**20**	P	P	**18 40 36.6**	**+0.9**			
	baz=241									
CUT	**Chulitna**	**84.91**	**25**	IAMs_20	IAMs_20	19 15 00.7				
	comp=Z,1µm,20.0s									
CUT	**Chulitna**	**84.91**	**25**	P	P	**18 40 35.4**	**-0.7**			
	baz=247,SNR=16									
IMAR	**Indian Mountai**	**85.05**	**22**	P	P	**18 40 37.1**	**+0.4**			
NGCH	**Negor - Chabah**	**85.08**	**296**	P	P	**18 40 38.6**	**+0.9**			
PMR	**Palmer**	**85.09**	**26**	IAMs_20	IAMs_20	19 13 52.5				
	comp=Z,1µm,20.0s									
PMR	**Palmer**	**85.09**	**26**	P	P	**18 40 36.8**	**-0.2**			
PMR	**Palmer**	**85.09**	**26**	P	P	**18 40 36.7**	**-0.2**			
	baz=248,SNR=19									
KTH	**Kantishna Hill**	**85.10**	**24**	IAmb	IAmb	18 40 37.7				
	comp=Z,99nm,1.1s									
KTH				IAMs_20	IAMs_20	19 12 49.5				
	comp=Z,2µm,22.0s									
RER	**Riviere de l'E**	**85.11**	**249**	P	P	**18 40 39.8**	**+1.7**			
GHO	**Glory Hole Cre**	**85.25**	**26**	IAmb	IAmb	18 40 38.9				
	comp=Z,72nm,0.9s									
GHO				IAMs_20	IAMs_20	19 13 46.6				
	comp=Z,2µm,21.0s									
H21K	**Melozitna Rive**	**85.25**	**22**	IAMs_20	IAMs_20	19 12 45.4				
	comp=Z,2µm,22.0s									
H21K	**Melozitna Rive**	**85.25**	**22**	P	P	**18 40 38.4**	**+0.7**			
	baz=244,SNR=18									
E20K	**Nigu River**	**85.28**	**19**	P	P	**18 40 38.7**	**+0.8**			
	baz=241									
BPAW	**Bear Paw Mtn.**	**85.29**	**24**	IAmb	IAmb	18 40 39.0				
	comp=Z,44nm,1.0s									
BPAW				IAMs_20	IAMs_20	19 14 08.7				
	comp=Z,2µm,21.0s									
BPAW	**Bear Paw Mtn.**	**85.29**	**24**	P	P	**18 40 37.9**	**-0.1**			
	baz=246,SNR=17									
P23K	**Montague Islan**	**85.29**	**28**	P	P	**18 40 38.1**	**+0.1**			
	baz=250									
TRF	**Thorofare Moun**	**85.31**	**25**	IAmb	IAmb	18 40 40.2				
	comp=Z,25nm,0.6s									
TRF				IAMs_20	IAMs_20	19 13 17.3				
	comp=Z,2µm,21.0s									
TRF	**Thorofare Moun**	**85.31**	**25**	P	P	**18 40 37.5**	**-0.8**			
	baz=247,SNR=7.7									
KNK	**Knik Glacier**	**85.32**	**27**	IAMs_20	IAMs_20	19 12 34.6				
	comp=Z,1µm,21.0s									
KNK	**Knik Glacier**	**85.32**	**27**	P	P	**18 40 38.3**	**+0.1**			
	baz=248,SNR=25									
I21K	**Tanana**	**85.36**	**23**	IAmb	IAmb	18 40 40.4				
	comp=Z,68nm,1.0s									
I21K				IAMs_20	IAMs_20	19 12 49.2				
	comp=Z,1µm,22.0s									
I21K	**Tanana**	**85.36**	**23**	P	P	**18 40 39.2**	**+0.9**			
	baz=245,SNR=27									
D20K	**Etivluk River**	**85.36**	**19**	P	P	**18 40 39.0**	**+0.8**			
	baz=240									
SML	**Sawmill**	**85.52**	**26**	P	P	**18 40 39.5**	**+0.2**			
	baz=249,SNR=28									
F21K	**Alatna River**	**85.70**	**20**	IAMs_20	IAMs_20	19 15 13.8				
	comp=Z,1µm,20.0s									
F21K	**Alatna River**	**85.70**	**20**	P	P	**18 40 40.5**	**+0.5**			
	baz=244									
GLI	**Glacier Island**	**85.75**	**27**	P	P	**18 40 40.2**	**-0.1**			
	baz=250,SNR=7.0									
MLY	**Manley**	**85.77**	**23**	IAmb	IAmb	18 40 41.9				
	comp=Z,79nm,1.0s									
MLY				IAMs_20	IAMs_20	19 14 17.2				
	comp=Z,2µm,22.0s									
MLY	**Manley**	**85.77**	**23**	P	P	**18 40 40.8**	**+0.3**			
	baz=246,SNR=42									
M23K	**Glacier View**	**85.78**	**26**	P	P	**18 40 40.3**	**-0.2**			
	baz=249,SNR=14									
WAT1	**Susitna Watana**	**85.81**	**25**	P	P	**18 40 40.4**	**-0.2**			
	baz=248									
H22K	**Ishtalitna Cre**	**85.89**	**22**	P	P	**18 40 41.6**	**+0.7**			
	baz=246									
RND	**Reindeer**	**85.89**	**25**	IAMs_20	IAMs_20	19 13 37.5				
	comp=Z,2µm,22.0s									
BWN	**Browne**	**85.94**	**24**	IAMs_20	IAMs_20	19 14 31.4				
	comp=Z,2µm,22.0s									
SCM	**Sheep Creek Mo**	**85.98**	**27**	IAMs_20	IAMs_20	19 13 39.9				
	comp=Z,1µm,20.0s									
SCM	**Sheep Creek Mo**	**85.98**	**27**	P	P	**18 40 41.7**	**+0.2**			
	baz=250,SNR=14									
MCK	**McKinley**	**85.98**	**24**	P	P	**18 40 41.0**	**-0.5**			
	baz=248,SNR=37									
WAT6	**Susitna Watana**	**86.06**	**26**	P	P	**18 40 41.9**	**-0.1**			
	baz=249,SNR=20									
E21K	**Killik River**	**86.09**	**19**	IAmb	IAmb	18 40 44.5				
	comp=Z,46nm,0.8s									
E21K	**Killik River**	**86.09**	**19**	P	P	**18 40 42.8**	**+0.9**			
	baz=243									
C21K	**Knifeblade Rid**	**86.16**	**19**	P	P	**18 40 43.0**	**+0.8**			
	baz=242									
JLN	**Jalan Bani Buh**	**86.17**	**293**	P	P	**18 40 43.6**	**+0.3**			
	SNR=8.3									
JLN				P	P	**18 40 43.6**	**+0.3**			
	SNR=8.3									
NEA2	**Nenana**	**86.26**	**24**	IAmb	IAmb	18 40 43.4				
	comp=Z,109nm,1.4s									
NEA2	**Nenana**	**86.26**	**24**	P	P	**18 40 42.3**	**-0.5**			
	baz=248,SNR=20									
EYAK	**Cordova Ski Ar**	**86.26**	**28**	P	P	**18 40 43.7**	**+0.9**			
EYAK	**Cordova Ski Ar**	**86.26**	**28**	P	P	**18 40 43.3**	**+0.5**			
	baz=251									
G22K	**Bettles**	**86.27**	**21**	P	P	**18 40 43.3**	**+0.6**			
	baz=245									
I23K	**Minto, Yukon-K**	**86.36**	**23**	IAmb	IAmb	18 40 59.0				
	comp=Z,96nm,1.6s									
I23K				IAMs_20	IAMs_20	19 14 54.7				
	comp=Z,2µm,21.0s									
I23K	**Minto, Yukon-K**	**86.36**	**23**	P	P	**18 40 43.4**	**+0.2**			
	baz=247,SNR=14									
DHY	**Denali Highway**	**86.39**	**25**	IAMs_20	IAMs_20	19 13 30.9				
	comp=Z,1µm,22.0s									
DHY	**Denali Highway**	**86.39**	**25**	P	P	**18 40 43.8**	**+0.2**			
	baz=249,SNR=50									
KLU	**Klutina**	**86.49**	**27**	IAMs_20	IAMs_20	19 12 33.6				
	comp=Z,2µm,22.0s									
KLU	**Klutina**	**86.49**	**27**	P	P	**18 40 44.6**	**+0.6**			
	baz=251,SNR=14									
M24K	**Tolsona, Glenn**	**86.58**	**26**	P	P	**18 40 44.9**	**+0.5**			
	baz=250,SNR=11									
WRH	**Wood River Hil**	**86.60**	**24**	IAMs_20	IAMs_20	19 15 31.3				
	comp=Z,1µm,21.0s									
WBK	**Wadi Bani Khal**	**86.64**	**293**	P	P	**18 40 46.0**	**+0.4**			
	SNR=6.6									
A21K	**Barrow**	**86.67**	**16**	P	P	**18 40 45.3**	**+0.7**			
	baz=240									
E22K	**Anaktuvuk Pass**	**86.67**	**20**	IAmb	IAmb	18 40 47.4				
	comp=Z,55nm,0.8s									
E22K	**Anaktuvuk Pass**	**86.67**	**20**	P	P	**18 40 45.8**	**+0.9**			
	baz=245,SNR=49									
KAIM	**Kayak Island**	**86.69**	**29**	P	P	**18 40 46.0**	**+1.0**			
	baz=252									
D22K	**Ayikyak River**	**86.71**	**19**	IAmb	IAmb	18 40 47.7				
	comp=Z,59nm,0.8s									
D22K				IAMs_20	IAMs_20	19 15 22.3				
	comp=Z,1µm,20.0s									
D22K	**Ayikyak River**	**86.71**	**19**	P	P	**18 40 46.1**	**+1.2**			
	baz=244									
G23K	**Bananza Creek**	**86.72**	**22**	IAmb	IAmb	18 40 46.5				
	comp=Z,36nm,0.8s									
G23K				IAMs_20	IAMs_20	19 13 53.1				
	comp=Z,2µm,21.0s									
G23K	**Bananza Creek**	**86.72**	**22**	P	P	**18 40 45.9**	**+0.8**			
	baz=247									
CCB	**Clear Creek Bu**	**86.78**	**24**	IAMs_20	IAMs_20	19 15 05.0				
	comp=Z,1µm,21.0s									
COLA	**College**	**86.85**	**24**	P	P	**18 40 44.4**	**-1.2**			
COLA				IAmb	IAmb	18 40 45.9				
	comp=Z,71nm,0.9s									
COLA	**College**	**86.85**	**24**	IAMs_20	IAMs_20	19 15 06.6				
	comp=Z,1µm,21.0s									
COLA	**College**	**86.85**	**24**	P	P	**18 40 45.2**	**-0.4**			
COLA	**College**	**86.85**	**24**	P	P	**18 40 45.0**	**-0.6**			
	baz=249									
COLA	**College**	**86.85**	**24**	P	P	**18 40 44.4**	**-1.2**			
COLA				pmax	pmax					
	comp=Z,71nm,0.9s									
COLA				MLR	MLR					
	comp=Z,1µm,21.0s									
COLD	**Coldfoot**	**86.86**	**21**	P	P	**18 40 46.7**	**+1.0**			
	baz=246,SNR=29									
BMRM	**Bremner River**	**86.92**	**28**	P	P	**18 40 46.6**	**+0.4**			
	baz=252,SNR=16									
HDA	**Harding Lake**	**87.04**	**24**	IAmb	IAmb	18 40 48.3				
	comp=Z,37nm,0.8s									
HDA				IAMs_20	IAMs_20	19 15 34.0				
	comp=Z,1µm,20.0s									
HDA	**Harding Lake**	**87.04**	**24**	P	P	**18 40 45.7**	**-0.9**			
	baz=250,SNR=17									
POKR	**Poker Plat Res**	**87.10**	**23**	IAMs_20	IAMs_20	19 15 26.0				
	comp=Z,1µm,22.0s									
POKR	**Poker Plat Res**	**87.10**	**23**	P	P	**18 40 46.1**	**-0.7**			
	baz=249,SNR=7.3									
N25K	**Chitina, Valde**	**87.13**	**27**	P	P	**18 40 47.6**	**+0.4**			
	baz=252,SNR=6.8									
HARP	**HAARP**	**87.13**	**26**	P	P	**18 40 47.4**	**+0.3**			
	baz=251,SNR=5.4									
PAX	**Paxson**	**87.18**	**26**	P	P	**18 40 47.5**	**+0.1**			
	baz=251,SNR=17									
H24K	**Noodor Dome**	**87.19**	**23**	IAmb	IAmb	18 40 48.9				
	comp=Z,42nm,0.9s									
H24K				IAMs_20	IAMs_20	19 15 41.6				
	comp=Z,2µm,20.0s									
H24K	**Noodor Dome**	**87.19**	**23**	P	P	**18 40 47.5**	**+0.1**			
	baz=249,SNR=24									
IL31		**87.20**	**24**	IAmb	IAmb	18 40 47.2				
	comp=Z,66nm,0.8s									
ILAR	**Eielson Array**	**87.20**	**24**	P	P	**18 40 45.9**	**-1.4**			
ILAR				pP	pP	**18 40 53.2**	**-2.6**			
ILAR	**Eielson Array**	**87.20**	**24**	P	P	**18 40 45.5**	**-1.8**			
	comp=Z,53nm,0.8s,baz=256,slow=5.0,SNR=321									
ILAR				LR	LR	19 15 27.8				
	comp=Z,967nm,21.6s,baz=242,slow=33									
	comp=Z,53nm,0.8s									
K24K	**Donnelly Dome**	**87.32**	**25**	P	P	**18 40 48.1**	**0.0**			
	baz=251									
MHTO	**MHTO**	**87.35**	**291**	P	P	**18 40 49.3**	**+0.3**			
	SNR=22									
MHTO				P	P	**18 40 49.3**	**+0.3**			
	SNR=22									
E23K	**Chandalar**	**87.40**	**20**	P	P	**18 40 49.5**	**+1.1**			
	baz=247									
D23K	**Nanushuk River**	**87.40**	**19**	P	P	**18 40 49.8**	**+1.6**			
	baz=246									
JMDO	**Jabal Madar**	**87.40**	**293**	P	P	**18 40 48.1**	**-1.2**			
GLB	**Gilahina Butte**	**87.44**	**27**	IAmb	IAmb	18 40 50.1				
	comp=Z,74nm,0.9s									
BIDO	**Bidbid**	**87.53**	**294**	P	P	**18 40 50.4**	**+0.5**			
	SNR=9.5									
VRDI	**Verde Repeater**	**87.54**	**28**	IAmb	IAmb	18 40 50.2				
	comp=Z,44nm,0.9s									
SMDO	**Samad**	**87.54**	**293**	P	P	**18 40 49.7**	**-0.4**			
SMDO				P	P	**18 40 49.7**	**-0.4**			
CRQE	**Cirque**	**87.56**	**28**	P	P	**18 40 49.8**	**+0.4**			
	baz=253									
DQM	**DQM**	**87.61**	**290**	P	P	**18 40 50.7**	**+0.3**			
	SNR=8.8									
G24K	**Hadweenzic Riv**	**87.65**	**22**	IAMs_20	IAMs_20	19 13 59.5				
	comp=Z,2µm,22.0s									
G24K	**Hadweenzic Riv**	**87.65**	**22**	P	P	**18 40 50.6**	**+1.0**			
	baz=249									
J25K	**Salcha River,**	**87.76**	**24**	IAMs_20	IAMs_20	19 15 46.4				
	comp=Z,1µm,20.0s									
J25K	**Salcha River,**	**87.76**	**24**	P	P	**18 40 49.9**	**-0.2**			
	baz=251									
C23K	**Itkillik River**	**87.78**	**19**	IAMs_20	IAMs_20	19 15 18.5				
	comp=Z,2µm,21.0s									
MCARA	**McCarthy VSAT**	**87.78**	**28**	IAmb	IAmb	18 40 52.0				
	comp=Z,69nm,1.0s									
MCARA	**McCarthy VSAT**	**87.78**	**28**	P	P	**18 40 50.8**	**+0.5**			
	baz=253,SNR=9.7									
F24K	**Squaw Lake**	**87.80**	**21**	IAMs_20	IAMs_20	19 14 04.3				
	comp=Z,1µm,22.0s									
F24K	**Squaw Lake**	**87.80**	**21**	P	P	**18 40 51.4**	**+1.1**			
	baz=249									
MESA	**MESA**	**87.95**	**29**	P	P	**18 40 52.0**	**+0.7**			
	baz=254									
PRP	**Porcupine Dome**	**87.99**	**23**	IAMs_20	IAMs_20	19 15 17.9				
	comp=Z,1µm,21.0s									
PRP	**Porcupine Dome**	**87.99**	**23**	P	P	**18 40 49.9**	**-1.4**			
	baz=251,SNR=6.2									
JASK	**Jask - Hormozg**	**88.08**	**296**	P	P	**18 40 53.0**	**+0.6**			
D24K	**Happy Valley**	**88.09**	**19**	P	P	**18 40 53.1**	**+1.5**			
	baz=248									
L26K	**Log Cabin Wild**	**88.11**	**26**	IAmb	IAmb	18 40 53.0				
	comp=Z,38nm,0.8s									
L26K				IAMs_20	IAMs_20	19 14 25.4				
	comp=Z,1µm,22.0s									
L26K	**Log Cabin Wild**	**88.11**	**26**	P	P	**18 40 52.5**	**+0.7**			
	baz=253									
SCRK	**Sand Creek**	**88.13**	**25**	IAmb	IAmb	18 40 53.3				
	comp=Z,31nm,1.0s									
SCRK	**Sand Creek**	**88.13**	**25**	P	P	**18 40 52.2**	**+0.2**			
	baz=252,SNR=25									
G25K	**Bearman Lake**	**88.19**	**22**	P	P	**18 40 53.1**	**+1.1**			
	baz=250									
BSY	**Bisya**	**88.28**	**293**	P	P	**18 40 53.3**	**-0.2**			
HOQ	**Hoqain**	**88.28**	**294**	P	P	**18 40 53.7**	**+0.2**			
	SNR=5.4									
HOQ				P	P	**18 40 53.7**	**+0.2**			
	SNR=5.4									
C24K	**Franklin Bluff**	**88.34**	**19**	P	P	**18 40 53.5**	**+0.8**			
	baz=248									
TABL	**Table Mountain**	**88.40**	**29**	IAMs_20	IAMs_20	19 15 53.3				
	comp=Z,2µm,20.0s									
FYU	**Fort Yukon**	**88.45**	**22**	IAMs_20	IAMs_20	19 14 55.9				
	comp=Z,2µm,21.0s									
CTG	**Chitna Glacier**	**88.45**	**28**	P	P	**18 40 54.3**	**+0.7**			
	baz=255,SNR=22									
J26L	**Joseph Creek**	**88.46**	**25**	P	P	**18 40 54.0**	**+0.5**			
	baz=253,SNR=60									
LOGN	**Logan Glacier**	**88.57**	**28**	IAmb	IAmb	18 40 55.6				
	comp=Z,61nm,0.8s									
M27K	**Edge Creek, AK**	**88.58**	**27**	IAMs_20	IAMs_20	19 15 13.7				
	comp=Z,2µm,22.0s									
F25K	**Christian Rive**	**88.63**	**21**	P	P	**18 40 55.5**	**+1.3**			
	baz=251,SNR=52									
PINM	**Pinnacle**	**88.75**	**29**	P	P	**18 40 55.6**	**+0.7**			
	baz=256,SNR=5.3									
L27K	**Beaver Creek,**	**88.79**	**26**	IAMs_20	IAMs_20	19 14 44.3				
	comp=Z,2µm,22.0s									
L27K	**Beaver Creek,**	**88.79**	**26**	P	P	**18 40 55.9**	**+0.8**			
	baz=254,SNR=38									
BCAR	**Beaver Creek A**	**88.81**	**26**	P	P	**18 40 55.8**	**+0.7**			
BCAR				pP	pP	**18 41 02.1**	**-1.5**			
E25K	**Arctic Village**	**88.83**	**21**	IAMs_20	IAMs_20	19 17 37.0				
	comp=Z,2µm,21.0s									
E25K	**Arctic Village**	**88.83**	**21**	P	P	**18 40 56.5**	**+1.3**			
	baz=251,SNR=44									
I26K	**Coal Creek Min**	**88.87**	**24**	IAmb	IAmb	18 40 56.5				
	comp=Z,41nm,1.1s									
I26K	**Coal Creek Min**	**88.87**	**24**	P	P	**18 40 55.3**	**0.0**			
	baz=253,SNR=17									
K27K	**Chicken**	**88.95**	**25**	IAMs_20	IAMs_20	19 15 32.0				
	comp=Z,2µm,21.0s									
K27K	**Chicken**	**88.95**	**25**	P	P	**18 40 57.2**	**+1.5**			
	baz=254									
D25K	**Kavik River**	**88.96**	**20**	P	P	**18 40 56.3**	**+0.6**			
	baz=250									
BMAR	**Burnt Mountain**	**88.97**	**22**	P	P	**18 40 57.0**	**+1.3**			
ARQ	**Aragi**	**88.97**	**293**	P	P	**18 40 56.1**	**-0.6**			
	SNR=6.5									
BVCY	**Beaver Creek**	**89.05**	**27**	P	P	**18 40 56.9**	**+0.7**			
	baz=255									
SOHO	**SOHO**	**89.06**	**294**	P	P	**18 40 56.6**	**-0.5**			
PNL	**Peninsula**	**89.06**	**30**	P	P	**18 40 57.1**	**+0.7**			
PNL	**Peninsula**	**89.06**	**30**	P	P	**18 40 57.3**	**+0.9**			
	baz=256									
YUK3	**Moose Creek**	**89.07**	**28**	P	P	**18 40 57.1**	**+0.5**			
	baz=256,SNR=22									
G26K	**Porcupine Rive**	**89.11**	**22**	P	P	**18 40 57.9**	**+1.5**			
	baz=252									
F26K	**Sheenjek River**	**89.21**	**21**	P	P	**18 40 58.3**	**+1.4**			
	baz=252,SNR=91									
UOSS	**Minazif**	**89.45**	**295**	P	P	**18 40 58.0**	**-1.0**			
UOSS	**Minazif**	**89.45**	**295**	P	P	**18 40 58.3**	**-0.7**			
HATD	**Hatta, Dubai**	**89.50**	**295**	P	P	**18 40 59.2**	**0.0**			
HATD				P	P	**18 40 59.2**	**0.0**			
GEYT	**Alibeck**	**89.51**	**308**	P	P	**18 40 59.4**	**+0.4**			
GEYT	**Alibeck**	**89.51**	**308**	P	P	**18 40 58.1**	**-0.9**			
	comp=Z,24nm,1.2s,baz=126,slow=2.0,SNR=31									
GEYT				LR	LR	19 23 24.8				
	comp=Z,338nm,21.4s,baz=104,slow=37									
	comp=Z,24nm,1.2s									
EGAK	**Eagle**	**89.53**	**25**	IAmb	IAmb	18 41 00.1				
	comp=Z,74nm,0.9s									
EGAK				IAMs_20	IAMs_20	19 17 13.8				
	comp=Z,2µm,20.0s									
EGAK	**Eagle**	**89.53**	**25**	P	P	**18 40 58.9**	**+0.5**			
	baz=255,SNR=19									
MASF	**Masafi**	**89.55**	**295**	P	P	**18 40 59.4**	**0.0**			
	SNR=5.9									
ASHO	**Ashiyiah**	**89.56**	**295**	P	P	**18 40 59.4**	**-0.1**			
ASHO				P	P	**18 40 59.4**	**-0.1**			
I27K	**Kandik River**	**89.57**	**24**	P	P	**18 40 59.5**	**+0.8**			
	baz=254									
O29M	**Mount Kennedy**	**89.61**	**29**	IAmb	IAmb	18 41 00.6				
	comp=Z,33nm,0.8s									
O29M	**Mount Kennedy**	**89.61**	**29**	P	P	**18 40 59.9**	**+0.9**			
	baz=257									
SHME	**Shamm**	**89.64**	**296**	P	P	**18 40 59.8**	**0.0**			
C26K	**Camden Bay**	**89.65**	**19**	P	P	**18 41 00.4**	**+1.6**			
	baz=251									
ALNE	**Al Ain**	**89.76**	**294**	P	P	**18 41 00.4**	**0.0**			
	SNR=7.1									
H27K	**Steamboat Moun**	**89.77**	**23**	P	P	**18 41 00.8**	**+1.2**			
	baz=255									
DMTO	**DMTO**	**89.79**	**288**	P	P	**18 41 00.5**	**-0.1**			
DMTO				P	P	**18 41 00.5**	**-0.1**			
YUK4	**Talbot Arm**	**89.81**	**28**	P	P	**18 41 01.3**	**+1.2**			
	baz=257									
YUK6	**Outpost Mounta**	**89.85**	**29**	P	P	**18 41 01.1**	**+0.8**			
	baz=257,SNR=5.8									
P29M	**Windy Craggy**	**89.87**	**30**	P	P	**18 41 01.2**	**+1.1**			
	baz=258,SNR=9.1									
AB31	**Akbulak array**	**89.90**	**319**	*i* P	P	**18 40 59.2**	**-1.3**			
ABKAR	**Akbulak array**	**89.90**	**319**	P	P	**18 40 59.3**	**-1.2**			
NAZ	**Nazwa, Dubai**	**89.95**	**295**	P	P	**18 41 01.0**	**-0.2**			
FAQ	**Al Faqa, Dubai**	**89.98**	**295**	P	P	**18 41 00.9**	**-0.5**			
DAWY	**Dawson**	**90.10**	**25**	IAmb	IAmb	18 41 03.2				
	comp=Z,85nm,1.1s									
DAWY				IAMs_20	IAMs_20	19 15 58.8				
	comp=Z,2µm,21.0s									
DAWY	**Dawson**	**90.10**	**25**	P	P	**18 41 01.9**	**+0.8**			
	baz=256,SNR=40									
M29M	**Somme Creek**	**90.14**	**27**	IAmb	IAmb	18 41 03.4				
	comp=Z,40nm,0.8s									
M29M				IAMs_20	IAMs_20	19 17 02.7				
	comp=Z,2µm,20.0s									
M29M	**Somme Creek**	**90.14**	**27**	P	P	**18 41 02.3**	**+0.9**			
	baz=257									
UMZA	**Um Al Zommool**	**90.15**	**293**	P	P	**18 40 59.9**	**-2.3**			
I28M	**Miner Creek**	**90.20**	**24**	IAmb	IAmb	18 41 03.6				
	comp=Z,72nm,1.3s									
I28M	**Miner Creek**	**90.20**	**24**	P	P	**18 41 02.2**	**+0.6**			
	baz=256,SNR=30									
ASUD	**Al Ashush, Dub**	**90.21**	**295**	P	P	**18 41 02.6**	**+0.2**			
HYT	**Haines Junctio**	**90.24**	**29**	IAmb	IAmb	18 41 03.9				
	comp=Z,36nm,0.9s									
HYT	**Haines Junctio**	**90.24**	**29**	P	P	**18 41 02.9**	**+0.9**			
	baz=258,SNR=12									
S31K	**Pelican**	**90.31**	**32**	P	P	**18 41 03.0**	**+0.9**			
	baz=259									
P30M	**Million Dollar**	**90.36**	**30**	P	P	**18 41 03.5**	**+1.0**			
	baz=259									
L29M	**L29M**	**90.43**	**27**	P	P	**18 41 03.7**	**+0.9**			
	baz=258									
RBK	**Rabkut**	**90.47**	**287**	P	P	**18 41 03.8**	**-0.1**			
	SNR=5.5									
RBK				P	P	**18

ARU						pmax	pmax			
	comp=Z,49nm,1.1s									
ARU	**Arti**	**91.82**	**326**		LR	LR		19 24 59.5		
	comp=Z,329nm,18.9s,baz=110,slow=37									
P32M	**Atlin**	**91.88**	**30**		P	**P**		**18 41 09.9**	**+0.4**	
	baz=261									
M31M	**Drury Creek, Y**	**91.96**	**28**		P	**P**		**18 41 10.0**	**+0.2**	
	baz=261,SNR=7.1									
G30M	**tAoh Zraii Nji**	**92.01**	**23**		IAmb	IAmb		18 41 11.1		
	comp=Z,37nm,1.1s									
G30M						IAMs_20	IAMs_20	19 17 58.0		
	comp=Z,1µm,20.0s									
G30M	**tAoh Zraii Nji**	**92.01**	**23**		P	**P**		**18 41 09.9**	**-0.1**	
	baz=259									
WRAK	**Wrangell Islan**	**92.15**	**34**		IAmb	IAmb		18 41 35.2		
	comp=Z,41nm,1.1s									
WRAK	**Wrangell Islan**	**92.15**	**34**		P	**P**		**18 41 11.4**	**+0.7**	
	baz=262									
F30M	**Barrier River**	**92.29**	**22**		P	**P**		**18 41 11.4**	**+0.2**	
	baz=260									
P33M	**Teslin, Yukon**	**92.42**	**30**		P	**P**		**18 41 12.2**	**+0.1**	
	baz=262									
N32M	**Quiet Lake**	**92.42**	**29**		IAmb	IAmb		18 43 56.2		
	comp=Z,28nm,0.6s									
N32M	**Quiet Lake**	**92.42**	**29**		P	**P**		**18 41 12.5**	**+0.5**	
	baz=262									
V35K	**Ketchikan**	**92.42**	**35**		P	**P**		**18 41 12.5**	**+0.6**	
	baz=263									
FARO	**Faro, Yukon**	**92.44**	**28**		IAmb	IAmb		18 41 13.4		
	comp=Z,26nm,1.0s									
FARO	**Faro, Yukon**	**92.44**	**28**		P	**P**		**18 41 12.3**	**+0.3**	
	baz=262,SNR=9.8									
Q32M	**Nakina River**	**92.53**	**31**		P	**P**		**18 41 13.1**	**+0.4**	
	baz=263									
H31M	**Peel River**	**92.55**	**24**		IAmb	IAmb		18 41 13.7		
	comp=Z,27nm,0.8s									
H31M	**Peel River**	**92.55**	**24**		P	**P**		**18 41 12.5**	**0.0**	
	baz=261									
G31M	**Satah River**	**92.75**	**23**		IAmb	IAmb		18 41 14.5		
	comp=Z,27nm,0.8s									
G31M	**Satah River**	**92.75**	**23**		P	**P**		**18 41 13.5**	**+0.2**	
	baz=261,SNR=18									
S34M	**Telegraph Cree**	**92.99**	**32**		IAMs_20	IAMs_20		19 15 10.9		
	comp=Z,1µm,20.0s									
S34M	**Telegraph Cree**	**92.99**	**32**		P	**P**		**18 41 14.8**	**+0.2**	
	baz=264									
ELIB	**Princess Elisa**	**93.03**	**196**	*d*	P	**P**		**18 41 15.4**	**+0.6**	
	comp=Z,16nm,1.1s									
F31M	**Tsiigehtchic**	**93.03**	**23**		IAmb	IAmb		18 41 15.5		
	comp=Z,35nm,1.1s									
F31M						IAMs_20	IAMs_20	19 19 11.2		
	comp=Z,2µm,20.0s									
F31M	**Tsiigehtchic**	**93.03**	**23**		P	**P**		**18 41 14.6**	**0.0**	
	baz=262,SNR=12									
INK	**Inuvik**	**93.24**	**22**		P	**P**		**18 41 15.3**	**-0.2**	
	baz=262,SNR=8.6									
INK	**Inuvik**	**93.24**	**22**		LR	LR		19 18 42.2		
	comp=Z,935nm,21.7s,baz=192,slow=33									
R33M	**Jennings River**	**93.24**	**31**		P	**P**		**18 41 16.3**	**+0.4**	
	baz=264									
VOI	**Vohitsoka**	**93.32**	**248**		P	**P**		**18 41 16.6**	**-0.5**	
VOI	**Vohitsoka**	**93.32**	**248**		P	**P**		**18 41 18.8**	**+1.6**	
T35M	**Bob Quinn**	**93.36**	**33**		P	**P**		**18 41 16.9**	**+0.5**	
	baz=264									
MMPY	**Sheldon Lake,**	**93.46**	**28**		P	**P**		**18 41 17.2**	**+0.5**	
	baz=264									
DLBC	**Dease Lake**	**93.63**	**32**		IAmb	IAmb		18 41 54.9		
	comp=Z,77nm,2.0s									
DLBC	**Dease Lake**	**93.63**	**32**		P	**P**		**18 41 18.2**	**+0.6**	
	baz=264									
BBB	**Bella Bella**	**94.17**	**38**		LR	LR		19 17 29.7		
	comp=Z,581nm,20.1s,baz=260,slow=32									
WTLY	**Watson Lake, Y**	**94.40**	**30**		IAmb	IAmb		18 41 22.9		
	comp=Z,38nm,1.1s									
WTLY	**Watson Lake, Y**	**94.40**	**30**		P	**P**		**18 41 21.9**	**+0.7**	
	baz=266									
TGTN	**Hyland Airport**	**94.76**	**29**		P	**P**		**18 41 23.2**	**+0.4**	
	baz=266									
OZB	**Mount Ozzard**	**95.64**	**41**		IAMs_20	IAMs_20		19 25 36.8		
	comp=Z,1µm,22.0s									
BELA	**Belgrano 2**	**96.17**	**181**		P	**P**		**18 41 29.4**	**+0.4**	
A36M	**Sachs Harbour**	**96.32**	**18**		P	**P**		**18 41 29.6**	**+0.1**	
	baz=270									
C36M	**Paulatuk**	**96.73**	**21**		IAMs_20	IAMs_20		19 20 02.7		
	comp=Z,1µm,21.0s									
C36M	**Paulatuk**	**96.73**	**21**		P	**P**		**18 41 31.7**	**+0.3**	
	baz=271									
KOTAN	**Kotaneelee Air**	**96.78**	**30**		P	**P**		**18 41 32.2**	**+0.3**	
	baz=270									
KIRV	**Kirov**	**96.90**	**328**	*ce*	P	**P**		**18 41 31.1**	**-1.3**	
KIRV	**Kirov**	**96.90**	**328**		LR	LR		19 26 43.2		
	comp=Z,767nm,20.2s,baz=88,slow=36									
B04A	**Port Angeles**	**96.93**	**42**		IAMs_20	IAMs_20		19 19 31.1		
	comp=Z,2µm,20.0s									
HUMO	**Hull Mountain**	**97.18**	**48**		IAmb	IAmb		18 41 36.4		
	comp=Z,20nm,1.1s									
YBH	**Yreka Blue Hor**	**97.34**	**49**		LR	LR		19 17 17.2		
	comp=Z,2µm,21.9s,baz=288,slow=30									
BELG	**Belogornoye**	**97.93**	**322**	*c i*	P	**P**		**18 41 35.8**	**-1.4**	
BELG						pmax	pmax			
	comp=Z,15nm,0.9s									
BELG	**Belogornoye**	**97.93**	**322**		LR	LR		19 28 30.3		
	comp=Z,278nm,19.9s,baz=111,slow=37									
TROLL	**Troll, Antarti**	**97.94**	**192**	⇑	PcP	**P**		**18 41 36.1**	**-1.1**	
	comp=Z,392nm,0.8s									
I05D	**Terrebonne, OR**	**98.38**	**46**		IAmb	IAmb		18 41 41.4		
	comp=Z,32nm,1.1s									
J05D	**Fort Rock, OR**	**98.45**	**47**		P	**P**		**18 41 39.6**	**-0.5**	
J05D						IAmb	IAmb	18 41 42.2		
	comp=Z,32nm,1.1s									
AFDM	**Forest Hills D**	**98.61**	**52**			Pdif		18 41 40.8	+0.1	
PINE	**Pine Mountain**	**98.67**	**47**		IAmb	IAmb		18 41 43.2		
	comp=Z,29nm,1.0s									
K05A	**Summer Lake**	**98.70**	**48**			Pdif		18 41 42.0	+0.8	
K05A					IAmb	IAmb		18 41 42.8		
	comp=Z,25nm,1.1s									
RAYN	**Ar Rayn**	**99.07**	**293**			**Pdif**		**18 41 42.1**	**-1.1**	
RAYN	**Ar Rayn**	**99.07**	**293**		P	**Pdif**		**18 41 42.1**	**-1.1**	
RAYN					pmax	pmax				
	comp=Z,13nm,1.2s									
RAYN	**Ar Rayn**	**99.07**	**293**		P	**Pdif**		**18 41 42.9**	**-0.3**	
SNAA	**Sanae**	**99.22**	**190**	⇑	Pdiff	**Pdif**		**18 41 38.0**	**-4.9**	
	comp=Z,68nm,0.8s									
SNAA	**Sanae**	**99.22**	**190**		P	**Pdif**		**18 41 41.4**	**-1.4**	
	comp=Z,3.9nm,1.0s,baz=76,slow=3.1,SNR=3.6									
SNAA					LR	LR		19 26 21.5		
	comp=Z,2µm,20.0s,baz=142,slow=35									
	comp=Z,3.9nm,1.0s									
EMB	**Emerald Bay**	**99.28**	**52**		IAMs_20	IAMs_20		19 18 20.4		
	comp=Z,2µm,22.0s									
PKM	**Mcpherson Peak**	**99.48**	**56**		P	**Pdif**		**18 41 45.0**	**+0.2**	
	baz=269									
YERR	**Yerington**	**99.96**	**52**		IAMs_20	IAMs_20		19 18 42.2		
	comp=Z,2µm,20.0s									
GNI	**Garni**	**100.04**	**310**	⇑	*eP*	**Pdif**		**18 41 46.9**	**-0.3**	
GNI						pmax	pmax			
	comp=Z,5.0nm,1.1s									
ISA	**Isabella, Lake**	**100.58**	**55**		IAMs_20	IAMs_20		19 17 15.0		
	comp=Z,2µm,22.0s									
NVAR	**Mina Array Bea**	**100.69**	**52**		P	**Pdif**		**18 41 50.6**	**+0.4**	
	comp=Z,3.8nm,0.9s,baz=259,slow=6.6,SNR=13									
CWC	**Cottonwood Cre**	**100.89**	**54**		P	**Pdif**		**18 41 51.1**	**0.0**	
	baz=271									
EDW2	**Edwards Air Fo**	**100.97**	**56**		P	**Pdif**		**18 41 51.6**	**+0.3**	
	baz=270									
YKAW3	**Yellowknife Wh**	**101.14**	**27**		IAMs_20	IAMs_20		19 21 38.0		
	comp=Z,1µm,22.0s									
YKA	**Yellowknife Ar**	**101.16**	**28**		P	**Pdif**		**18 41 50.2**	**-1.2**	
	comp=Z,2.5nm,0.8s,baz=280,slow=4.9,SNR=36									
YKA					PP	**PP**		**18 45 56.7**	**-3.5**	
	comp=Z,7.1nm,1.1s,baz=277,slow=7.5,SNR=6.1									
YKA					PKKPbc	**PKKPbc**		**18 58 01.8**	**-2.6**	
	comp=Z,0.4nm,0.9s,baz=110,slow=4.1,SNR=4.0									
NEW	**Newport**	**101.20**	**42**		P	**Pdif**		**18 41 52.4**	**+0.4**	
	baz=274									
YKAW1	**Yellowknife Wh**	**101.21**	**28**		IAMs_20	IAMs_20		19 21 37.8		
	comp=Z,1µm,22.0s									
KBZ	**Khabaz**	**101.32**	**313**	⇓	*eP*	**Pdif**		**18 41 50.7**	**-1.9**	
KBZ					pmax	pmax				
	comp=Z,2.0nm,0.9s									
KBZ	**Khabaz**	**101.32**	**313**		P	**Pdif**		**18 41 51.5**	**-1.1**	
	comp=Z,4.1nm,1.1s,baz=84,slow=6.8,SNR=4.1									
MPMC	**Manual Prospec**	**101.38**	**55**		P	**Pdif**		**18 41 53.6**	**+0.2**	
	baz=271									
KIV	**Kislovodsk**	**101.46**	**313**		*eP*	**Pdif**		**18 41 52.3**	**-1.1**	
KIV					*e*			18 46 02.7		
KIV					*e*SS	SS		19 00 33.4	-0.7	
KIV					pmax	pmax				
	comp=Z,4.0nm,1.1s									
GMN	**Gold Mountain**	**101.54**	**53**		IAMs_20	IAMs_20		19 19 25.2		
	comp=Z,1µm,21.0s									
VRH	**Novokhopyorsk**	**101.64**	**321**		*eP*	**Pdif**		**18 41 51.6**	**-2.2**	
VRH					pmax	pmax				
	comp=Z,23nm,0.6s									
KLMR	**Klimovskoe**	**101.73**	**331**		*eP*	**Pdif**		**18 41 51.1**	**-2.9**	
KLMR					*e*			18 45 59.9		
KLMR					pmax	pmax				
	comp=Z,15nm,1.0s									
KLMR					MLR	MLR				
	comp=Z,719nm,20.0s									
QSM	**Queen of Sheba**	**101.88**	**55**		IAMs_20	IAMs_20		19 19 29.4		
	comp=Z,1µm,20.0s									
GSC	**Goldstone, Bar**	**101.94**	**55**		IAMs_20	IAMs_20		19 18 32.2		
	comp=Z,952nm,20.0s									
GWY	**Greenwater Val**	**102.04**	**54**		IAMs_20	IAMs_20		19 18 58.5		
	comp=Z,2µm,22.0s									
TKX	**Tecate**	**102.15**	**58**		IAMs_20	IAMs_20		19 19 13.8		
	comp=Z,1µm,21.0s									
MONP2	**Monument Peak**	**102.30**	**58**		P	**Pdif**		**18 41 57.9**	**+0.4**	
	baz=271									
HEC	**Hector,Ludlow**	**102.34**	**56**		P	**Pdif**		**18 41 58.0**	**+0.5**	
	baz=271									
IKP	**In-Ko-Pah, Jac**	**102.57**	**58**		P	**Pdif**		**18 41 59.0**	**+0.5**	
	baz=271									
BELC	**Belle Mtn. Jos**	**102.64**	**57**		P	**Pdif**		**18 41 59.3**	**+0.4**	
	baz=271									
R11B	**Troy Canyon, C**	**102.83**	**52**		P	**Pdif**		**18 42 00.2**	**+0.5**	
	baz=272									
VTX	**Valle De La Tr**	**102.86**	**59**		IAMs_20	IAMs_20		19 18 09.8		
	comp=Z,1µm,22.0s									
GMRC	**Granite Mounta**	**102.90**	**56**		P	**Pdif**		**18 42 00.6**	**+0.6**	
	baz=272									
APA	**Apatity**	**102.92**	**338**	⇓	*iP*	**Pdif**		**18 41 53.7**	**-5.5**	
APA					pmax	pmax				
	comp=Z,5.0nm,1.0s									
APA					MLR	MLR				
	comp=Z,500nm,19.0s									
SPITS	**Spitsbergen Ar**	**102.97**	**350**		PP	**PP**		**18 46 11.7**	**-1.7**	
	comp=Z,10nm,0.9s,baz=319,slow=6.3,SNR=2.0									
BC3	**Big Chuckawall**	**103.10**	**57**		P	**Pdif**		**18 42 01.4**	**+0.5**	
	baz=272									
UABX	**UABC, Campus M**	**103.13**	**58**		IAMs_20	IAMs_20		19 19 23.7		
	comp=Z,1µm,19.0s									
VORR	**Voronezh**	**103.16**	**322**		*eP*	**Pdif**		**18 41 59.1**	**-1.5**	
VORR					pmax	pmax				
	comp=Z,41nm,0.4s									
VORD	**Divnogorie**	**103.19**	**321**		*eP*	**Pdif**		**18 41 57.5**	**-3.2**	
VORD					pmax	pmax				
	comp=Z,30nm,1.3s									
LPSR	**Galich'ya Gora**	**103.21**	**323**		*eP*	**Pdif**		**18 41 57.0**	**-3.8**	
LPSR					pmax	pmax				
	comp=Z,20nm,0.9s									
VSR	**Storozhevoye**	**103.24**	**321**		*eP*	**Pdif**		**18 41 57.8**	**-3.1**	
VSR					pmax	pmax				
	comp=Z,10.0nm,0.8s									
SHPR	**Sheep Range**	**103.25**	**54**		IAMs_20	IAMs_20		19 20 10.6		
	comp=Z,1µm,21.0s									
Q12A	**Willow Creek R**	**103.39**	**51**		IAMs_20	IAMs_20		19 21 02.0		
	comp=Z,1µm,20.0s									
HLID	**Hailey**	**103.41**	**47**		P	**Pdif**		**18 42 03.0**	**+0.8**	
	baz=274									
OBN	**Obninsk**	**104.22**	**325**		*i* P	**Pdif**		**18 42 03.2**	**-2.0**	
OBN					*e*			18 46 22.1		
OBN					pmax	pmax				
	comp=Z,8.0nm,1.0s									
113A	**Mohawk Valley,**	**104.54**	**58**		IAMs_20	IAMs_20		19 19 41.1		
	comp=Z,1µm,22.0s									
DUG	**Dugway, Tooele**	**104.87**	**50**		P	**Pdif**		**18 42 09.1**	**+0.4**	
	baz=275									
ARCES	**ARCESS Array B**	**104.98**	**341**		Pdiff	**Pdif**		**18 42 06.8**	**-1.6**	
	comp=Z,7.9nm,0.9s,baz=69,slow=6.9,SNR=10									
ARCES					PKiKP	**PKiKP**		**18 46 22.4**	**-0.6**	
	comp=Z,2.5nm,0.8s,baz=45,slow=1.9,SNR=6.7									
KNB	**Kanab**	**105.09**	**53**		IAMs_20	IAMs_20		19 21 22.3		
	comp=Z,1µm,21.0s									
BOZ	**Bozeman (W)**	**105.19**	**44**		P	**PKiKP**		**18 46 24.5**	**+0.2**	
	baz=277									
U15A	**North Rim**	**105.56**	**54**		IAMs_20	IAMs_20		19 22 06.7		
	comp=Z,1µm,20.0s									
AHID	**Auburn Hatcher**	**105.90**	**47**		IAMs_20	IAMs_20		19 24 42.0		
	comp=Z,1µm,19.0s									
SNOW	**Snow King Moun**	**106.07**	**47**		IAMs_20	IAMs_20		19 22 29.2		
	comp=Z,1µm,20.0s									
LOHW	**Long Hollow**	**106.16**	**46**		IAMs_20	IAMs_20		19 24 14.7		
	comp=Z,1µm,20.0s									
Q16A	**Castle Valley**	**106.24**	**51**		IAMs_20	IAMs_20		19 23 28.5		
	comp=Z,1µm,20.0s									
SRU	**San Rafael Swe**	**106.72**	**51**		IAMs_20	IAMs_20		19 23 13.3		
	comp=Z,1µm,20.0s									
PDAR	**Pinedale Array**	**107.02**	**47**		Pdiff	**Pdif**		**18 42 17.8**	**-0.5**	
	comp=Z,0.7nm,0.6s,baz=256,slow=2.4,SNR=7.0									
PDAR					PKiKP	**PKiKP**		**18 46 27.8**	**-0.1**	
	comp=Z,0.7nm,0.8s,baz=239,slow=0.9,SNR=4.7									
TUC	**Tucson**	**107.08**	**58**		IAMs_20	IAMs_20		19 22 57.3		
	comp=Z,1µm,21.0s									
RDMU	**Red Mountain**	**107.29**	**49**		IAMs_20	IAMs_20		19 26 18.1		
	comp=Z,1µm,21.0s									
FIA1	**FINESS Array S**	**107.87**	**333**		IAMs_20	IAMs_20		19 33 32.3		
	comp=Z,1µm,20.0s									
FINES	**FINESS Array B**	**107.87**	**333**		Pdiff	**Pdif**		**18 42 19.7**	**-1.6**	
	comp=Z,3.7nm,0.9s,baz=45,slow=3.0,SNR=5.4									
FINES					PKiKP	**PKiKP**		**18 46 28.4**	**-0.1**	
	comp=Z,1.6nm,0.6s,baz=76,slow=8.0,SNR=4.9									
NEEM	**North Greenlan**	**108.27**	**3**		*i* P	**PKiKP**		**18 46 29.1**	**-0.3**	
BRTR	**Keskin Array B**	**108.58**	**310**		PKKP			18 57 53.0		
	comp=Z,1.0nm,1.0s,baz=183,slow=7.4,SNR=3.8									
MNK	**Minsk**	**109.24**	**326**		*i* P	**Pdif**		**18 42 24.6**	**-3.0**	
MNK					*i*			18 46 57.6		
MNK					*i* PPP	PPP		18 49 16.0		
MNK					*i* SP	SP		18 56 21.1	-2.7	
MNK					*i* PS	**PS**		**18 56 25.5**	**-2.0**	
MNK					*i* SSS	SSS		19 06 23.3		
MNK					pmax	pmax				
	comp=N,6.0nm,0.8s									
MNK					pmax	pmax				
	comp=Z,10.0nm,0.9s									
MNK					pmax	pmax				
	comp=E,3.0nm,0.9s									
MNK					MLR	MLR				
	comp=E,121nm,18.0s									
K22A	**Casper**	**109.25**	**47**		IAMs_20	IAMs_20		19 27 02.7		
	comp=Z,958nm,21.0s									
AKASG	**Malin Array Be**	**109.51**	**322**		PKiKP	**PKiKP**		**18 46 31.6**	**-0.3**	
	comp=Z,0.2nm,0.3s,baz=70,slow=1.4,SNR=5.1									
AKASG					PP	**PP**		**18 47 00.3**	**-2.0**	
	comp=Z,0.2nm,0.3s,baz=66,slow=5.6,SNR=5.8									
AKASG					PKKPbc	**PKKPbc**		**18 57 36.2**	**-2.3**	
	comp=Z,0.2nm,0.2s,baz=266,slow=1.5,SNR=4.2									
121A	**Cookes Peak, D**	**109.59**	**58**		IAMs_20	IAMs_20		19 24 26.8		
	comp=Z,1µm,21.0s									
N23A	**Red Feather La**	**109.97**	**49**		IAMs_20	IAMs_20		19 24 29.0		
	comp=Z,900nm,22.0s									
PHWY	**Pilot Hill**	**110.27**	**48**		IAMs_20	IAMs_20		19 25 33.7		
	comp=Z,830nm,20.0s									
ISCO	**Idaho Springs**	**110.40**	**50**		P	**PKiKP**		**18 46 33.9**	**-0.6**	
	baz=280									
ANMO	**Albuquerque**	**110.43**	**55**		P	**PKiKP**		**18 46 34.0**	**-0.5**	
	baz=277									
EPT	**El Paso**	**110.74**	**58**		IAMs_20	IAMs_20		19 24 31.4		
	comp=Z,981nm,21.0s									
RSSD	**Black Hills**	**110.75**	**45**		P	**PKiKP**		**18 46 34.8**	**-0.1**	
	baz=282									
SDCO	**Great Sand Dun**	**110.81**	**52**		P	**PKiKP**		**18 46 35.3**	**+0.1**	
	baz=279									
Q24A	**Divide**	**110.89**	**51**		IAMs_20	IAMs_20		19 28 44.6		
	comp=Z,796nm,19.0s									
MNTX	**Cornudas Mount**	**111.70**	**58**		P	**PKiKP**		**18 46 37.0**	**+0.3**	
	baz=276,SNR=6.7									
FCC	**Fort Churchill**	**111.87**	**28**		IAMs_20	IAMs_20		19 27 50.7		
	comp=Z,1µm,22.0s									
HPIG		**111.90**	**64**		IAMs_20	IAMs_20		19 25 21.6		
	comp=Z,1µm,20.0s									
KSCO	**Kaye Shedlock'**	**112.82**	**50**		IAMs_20	IAMs_20		19 26 17.5		
	comp=Z,889nm,20.0s									
TXAR	**Lajitas Array**	**113.44**	**61**		PKiKP	**PKiKP**		**18 46 40.3**	**+0.1**	
	comp=Z,2.6nm,1.0s,baz=270,slow=1.3,SNR=12									
TXAR					PP	**PP**		**18 47 30.4**	**-1.0**	
	comp=Z,1.6nm,1.0s,baz=262,slow=7.1,SNR=3.9									
MSTX	**Muleshoe**	**113.58**	**56**		IAMs_20	IAMs_20		19 26 54.2		
	comp=Z,792nm,20.0s									
MSTX	**Muleshoe**	**113.58**	**56**		P	**PKiKP**		**18 46 40.6**	**+0.3**	
	baz=279									
K30B	**Basset**	**114.23**	**46**		IAMs_20	IAMs_20		19 29 41.2		
	comp=Z,1µm,19.0s									
KOLS	**Kolonicke sedl**	**114.33**	**321**		*e*PKiKP	**PKiKP**		**18 46 42.5**	**+1.3**	
KOLS	**Kolonicke sedl**	**114.33**	**321**		*e*PKP	**PKiKP**		**18 46 42.5**	**+1.3**	
ULM	**Lac du Bonnet**	**114.34**	**37**		PKiKP	PKPdf		18 46 40.3	-0.9	
	comp=Z,3.4nm,0.6s,baz=304,slow=2.0,SNR=8.8									
NB2	**NORSAR Subarra**	**114.39**	**336**		PKPdf	**PKiKP**		**18 46 40.3**	**-0.7**	
	comp=Z,1.9nm,0.9s,baz=44,slow=1.9									
NOA	**NORSAR Array B**	**114.39**	**336**		PKiKP	**PKiKP**		**18 46 40.4**	**-0.7**	
	comp=Z,0.8nm,0.7s,baz=54,slow=1.9,SNR=5.5									
CBKS	**Cedar Bluff**	**115.06**	**50**		P	**PKiKP**		**18 46 42.9**	**-0.1**	
	baz=283									
BGNE	**Belgrade**	**115.61**	**47**		P	**PKPdf**		**18 46 44.0**	**+0.1**	
	baz=286									
LANS	**Liptovska Anna**	**115.97**	**322**		*e*PKiKP	**PKPdf**		**18 46 46.3**	**+1.9**	
LANS	**Liptovska Anna**	**115.97**	**322**		*e*PKP	**PKPdf**		**18 46 46.3**	**+1.9**	
ECSD	**EROS Data Cent**	**116.04**	**44**		IAMs_20	IAMs_20		19 29 04.8		
	comp=Z,1µm,21.0s									
U32A	**Winter Ranch,**	**116.17**	**52**		IAMs_20	IAMs_20		19 27 28.5		
	comp=Z,1µm,22.0s									
ABTX	**Abilene, Hawle**	**116.38**	**57**		P	**PKiKP**		**18 46 46.0**	**+0.3**	
	baz=280									
MOIG	**Morelia**	**116.48**	**71**		IAMs_20	IAMs_20		19 26 51.7		
	comp=Z,1µm,20.0s									
OKC	**Ostrava-Krasne**	**116.49**	**323**		AMS	AMS		19 41 20.0		
	comp=Z,400nm,19.7s									
JCT	**Junction City**	**116.61**	**59**		IAMs_20	IAMs_20		19 28 59.8		
	comp=Z,1µm,20.0s									
JCT	**Junction City**	**116.61**	**59**		P	**PKPdf**		**18 46 46.2**	**0.0**	
	baz=279									
VYHS	**Vyhne**	**116.61**	**322**		*e*PKiKP	**PKiKP**		**18 46 46.0**	**+0.4**	
VYHS					*e*			18 47 50.0		
VYHS	**Vyhne**	**116.61**	**322**		*e*PKP	**PKiKP**		**18 46 46.0**	**+0.4**	
VYHS					*e*PP	**PP**		**18 47 50.0**	**-2.9**	
WMOK	**Wichita Mounta**	**116.69**	**54**		P	**PKPdf**		**18 46 46.1**	**-0.1**	
	baz=282,SNR=5.3									
L34A	**Svendsen Farm,**	**116.73**	**46**		IAMs_20	IAMs_20		19 29 16.4		
	comp=Z,1µm,22.0s									
COP	**Copenhagen**	**116.82**	**331**		*i* P	**PKiKP**		**18 46 49.7**	**+4.0**	
MORC	**Moravsky Berou**	**116.88**	**324**		*e*PKP	**PKiKP**		**18 46 46.7**	**+0.6**	
ICESG	**Greenland Ices**	**117.03**	**1**		*e*P	**PKPdf**		**18 46 43.8**	**-2.5**	
JAVC	**Velka Javorina**	**117.17**	**323**		*e*PKP	**PKiKP**		**18 46 48.0**	**+1.2**	
KRLC	**Kraliky**	**117.20**	**324**		*e*PKPDF	**PKiKP**		**18 46 47.6**	**+0.9**	
KRLC					AMS	AMS		19 41 20.0		
	comp=Z,400nm,15.7s									
KRLC	**Kraliky**	**117.20**	**324**		*e*PKiKP	**PKiKP**		**18 46 47.6**	**+0.9**	
KRLC					MLR	MLR				
	comp=Z,400nm,15.7s									
833A	**Chaparral WMA,**	**117.28**	**61**		IAMs_20	IAMs_20		19 29 18.9		
	comp=Z,1µm,20.0s									
833A	**Chaparral WMA,**	**117.28**	**61**		P	**PKPdf**		**18 46 47.3**	**-0.2**	
	baz=278									
OSTC	**Ostas**	**117.31**	**325**		*e*PKPDF	**PKiKP**		**18 46 48.1**	**+1.2**	
OSTC	**Ostas**	**117.31**	**325**		*e*PKiKP	**PKiKP**		**18 46 48

baz=60,slow=1.8
SOKA Soboth 119.70 321 *i* PKP **PKiKP 18 46 51.9 +0.1**
comp=Z,11nm,0.8s
U38A Gravette 119.77 51 IAMs_20 IAMs_20 19 29 53.6
comp=Z,1μm,22.0s
MOX Moxa 119.86 326 *e*PKPdf **PKiKP 18 46 52.6 +0.7**
baz=60,slow=1.8
MOX *e*L L 19 41 28.7
comp=Z,548nm,20.5s
WET Wettzell 119.88 324 *e*PKPdf **PKiKP 18 46 52.4 +0.5**
baz=60,slow=1.8
CLZ Clausthal 119.90 328 *e*PKPdf **PKiKP 18 46 52.8 +0.9**
baz=60,slow=1.8
MANZ Manzenberg 119.91 326 *e*PKPdf **PKiKP 18 46 53.0 +1.0**
baz=60,slow=1.8
BIOA Bad Ischl, Aus 120.11 323 *e*PKP **PKPdf 18 46 52.0 -0.4**
comp=Z,4.4nm,0.8s
HHAR Hobbs 120.16 51 IAMs_20 IAMs_20 19 30 16.9
comp=Z,1μm,22.0s
L40A Anamosa 120.33 44 IAMs_20 IAMs_20 19 32 00.4
comp=Z,751nm,20.0s
TSUM Tsumeb 120.52 244 IAMs_20 IAMs_20 19 37 16.1
comp=Z,817nm,18.0s
GRF Grafenberg Arr 120.56 326 *e*L L 19 41 20.6
comp=Z,523nm,21.9s
KBA Koelnbreisper 120.56 322 *e*PKP **PKiKP 18 46 53.6 0.0**
comp=Z,5.4nm,0.7s
MYKA Terra Mystica 120.58 322 *i* PKP **PKPdf 18 46 53.4 0.0**
comp=Z,5.0nm,0.6s
JFWS Jewell Farm 120.68 43 IAMs_20 IAMs_20 19 31 29.6
comp=Z,779nm,22.0s
JFWS Jewell Farm 120.68 43 P **PKPdf 18 46 53.3 -0.3**
baz=293
NATX Nacogdoches 120.69 57 P **PKPdf 18 46 53.8 -0.1**
baz=283
LESA Schwarzleotal 120.81 323 *i* PKP **PKPdf 18 46 53.4 -0.5**
comp=Z,9.6nm,0.7s
R40A Maddies Statio 120.84 49 IAMs_20 IAMs_20 19 31 39.7
comp=Z,1μm,22.0s
MIAR Mount Ida 120.91 53 IAMs_20 IAMs_20 19 31 24.0
comp=Z,1μm,22.0s
MIAR Mount Ida 120.91 53 P **PKPdf 18 46 54.2 -0.1**
baz=285,SNR=8.4
N41A Harden Midland 121.07 46 IAMs_20 IAMs_20 19 33 35.3
comp=Z,853nm,20.0s
I42A Draeger Farm, 121.19 42 IAMs_20 IAMs_20 19 37 01.8
comp=Z,889nm,22.0s
ABTA Abfaltersbach 121.22 322 *i* PKP **PKPdf 18 46 54.5 -0.2**
comp=Z,12nm,0.7s,SNR=9.0
KASTN Kahler Asten 121.28 328 *e*PKPdf **PKiKP 18 46 55.2 +0.5**
baz=60,slow=1.8
E43A Lone Tree Farm 121.33 38 IAMs_20 IAMs_20 19 31 22.2
comp=Z,979nm,20.0s
L42A Oliver, Polo 121.42 44 IAMs_20 IAMs_20 19 34 05.4
comp=Z,920nm,21.0s
WTTA Wattenberg 121.51 323 *i* PKiKP **PKiKP 18 46 56.0 +0.5**
comp=Z,23nm,0.7s,SNR=9.7
WATA Walderalm 121.51 323 *i* PKiKP **PKiKP 18 46 55.8 +0.4**
comp=Z,12nm,0.8s
X40A Basin Creek Fa 121.51 53 IAMs_20 IAMs_20 19 32 03.0
comp=Z,977nm,22.0s
FCAR Ozark Folk Cen 121.68 51 IAMs_20 IAMs_20 19 31 01.1
comp=Z,1μm,22.0s
CCM Cathedral Cave 121.68 49 PKPdf **PKPdf 18 46 54.5 -1.1**
CCM Cathedral Cave 121.68 49 IAMs_20 IAMs_20 19 32 36.9
comp=Z,966nm,21.0s
CCM Cathedral Cave 121.68 49 P **PKPdf 18 46 55.7 0.0**
baz=289
CCM Cathedral Cave 121.68 49 PKiKP **PKPdf 18 46 54.5 -1.1**
CCM MLR MLR
comp=Z,1μm,21.0s
SQTA Sankt Quirin 121.79 323 *i* PKiKP **PKiKP 18 46 56.0 +0.1**
comp=Z,10nm,1.0s,SNR=5.6
MOTA Moosalm 121.79 323 *i* PKiKP **PKiKP 18 46 56.0 +0.1**
comp=Z,18nm,0.8s
TNS Taunus Mts 121.80 327 *e*PKPdf **PKiKP 18 46 56.4 +0.7**
baz=60,slow=1.8
UALR University of 121.82 53 IAMs_20 IAMs_20 19 35 52.2
comp=Z,955nm,19.0s
Z41A Richland Creek 121.86 54 IAMs_20 IAMs_20 19 32 05.4
comp=Z,795nm,20.0s
RETA Reutte 121.92 324 *e*PKP **PKiKP 18 46 56.2 +0.1**
comp=Z,13nm,1.6s
K43A Burlington 122.06 43 IAMs_20 IAMs_20 19 39 12.0
comp=Z,761nm,21.0s
FETA Feichten 122.17 323 *e*PKiKP **PKiKP 18 46 57.0 +0.3**
comp=Z,8.0nm,0.8s,SNR=7.7
STU Stuttgart 122.17 326 *e*PKPdf **PKiKP 18 46 57.0 +0.6**
baz=60,slow=1.8
UBR Ueberruh 122.21 324 *e*PKPdf **PKiKP 18 46 56.9 +0.2**
baz=60,slow=1.8
HDIL Hopedale 122.23 45 P **PKPdf 18 46 56.4 -0.2**
baz=292
SLM Saint Louis 122.24 48 IAMs_20 IAMs_20 19 33 44.5
comp=Z,1μm,20.0s
AHRW Bad Neuenahr-A 122.35 328 *e*PKPdf **PKiKP 18 46 57.8 +1.1**
baz=60,slow=1.8
LCAR Lake Charles 122.38 51 IAMs_20 IAMs_20 19 31 24.5
comp=Z,970nm,21.0s
P43A Skaggs, Pawnee 122.41 46 IAMs_20 IAMs_20 19 34 07.7
comp=Z,1855nm,19.0s
CCAR Cane Creek 122.52 53 IAMs_20 IAMs_20 19 32 21.6
comp=Z,902nm,22.0s
DAVA Damuels 122.54 324 *i* PKiKP **PKiKP 18 46 57.7 +0.2**
comp=Z,22nm,0.7s
L44A Lake County Fo 122.56 43 IAMs_20 IAMs_20 19 37 32.2
comp=Z,838nm,20.0s
L44A Lake County Fo 122.56 43 P **PKPdf 18 46 57.1 -0.1**
baz=294
M44A Midewin, Midew 122.78 44 IAMs_20 IAMs_20 19 34 35.4
comp=Z,780nm,20.0s
BTNL Ternell 122.82 329 *d*PKP **PKiKP 18 46 57.9 +0.2**
MEM Membach 122.87 329 *d*PKP **PKiKP 18 46 58.4 +0.7**
I45A Fountain 122.87 40 IAMs_20 IAMs_20 19 32 01.3
comp=Z,844nm,22.0s
BFO Black Forest 122.89 325 *e*PKPdf **PKiKP 18 46 58.1 +0.2**
baz=60,slow=1.8
O44A Mansfield 122.97 45 IAMs_20 IAMs_20 19 35 25.5
comp=Z,787nm,20.0s
E46A Sault Ste Mari 122.98 37 PKPdf **PKPdf 18 46 56.9 -1.0**
BSTI Sart Tilman 123.11 329 *d*PKP **PKiKP 18 46 58.2 -0.1**
143A Socs Landing, 123.14 55 IAMs_20 IAMs_20 19 33 06.3
comp=Z,1μm,21.0s
TUE Stuetta 123.27 323 IAMs_20 IAMs_20 19 42 40.0
comp=Z,893nm,20.0s
GNAR Gosnell 123.28 51 IAMs_20 IAMs_20 19 33 09.5
comp=Z,1μm,20.0s
WLF Walferdange 123.34 328 *d*PKP **PKPdf 18 46 57.1 -1.4**
BCLA Clavier 123.34 329 *d*PKP **PKPdf 18 46 56.7 -1.7**
PEBM Pemiscott Bayo 123.36 50 IAMs_20 IAMs_20 19 32 19.4
comp=Z,1μm,21.0s
BGES Gesves 123.47 329 *d*PKP **PKiKP 18 46 59.5 +0.5**
GLMI Grayling 123.53 39 IAMs_20 IAMs_20 19 38 37.6
comp=Z,1μm,20.0s
GLMI Grayling 123.53 39 P **PKiKP 18 46 59.3 +0.1**
baz=299
RCHB Rochefort 123.54 329 *d*PKP **PKiKP 18 46 59.9 +0.8**
BMRD Maredsous 123.69 329 *d*PKP **PKiKP 18 46 59.8 +0.4**
OLIL Olney 123.77 47 IAMs_20 IAMs_20 19 36 58.8
comp=Z,781nm,20.0s
HALT Halls 123.82 50 IAMs_20 IAMs_20 19 33 46.8
comp=Z,972nm,20.0s
EKA Eskdalemuir Ar 123.84 337 PKP **PKPdf 18 46 58.9 -0.3**
comp=Z,3.7nm,0.5s,baz=31,slow=2.8,SNR=20
SFIN Lafayette 123.84 45 P **PKPdf 18 46 59.5 -0.3**
baz=294
DOU Dourbes 123.90 329 *d*PKP **PKiKP 18 47 00.2 +0.4**
VBMS Vicksburg 123.99 55 IAMs_20 IAMs_20 19 33 41.9
comp=Z,949nm,22.0s
VBMS Vicksburg 123.99 55 P **PKPdf 18 46 59.8 -0.4**
baz=286
OXF Oxford 124.21 52 P **PKPdf 18 47 00.2 -0.4**
baz=288
PLCA Paso Flores 124.27 150 **PKiKP 18 47 01.9 +0.9**
PLCA Paso Flores 124.27 150 PKP **PKPdf 18 47 00.6 -0.1**
comp=Z,5.0nm,0.9s,baz=228,slow=2.3,SNR=8.7
Y45A Yeager Farm, C 124.31 53 IAMs_20 IAMs_20 19 33 35.9
comp=Z,749nm,20.0s
IVI Ivigtut 124.36 6 *i* P **PKPdf 18 46 57.7 -2.3**
N47A Urbana 124.61 44 IAMs_20 IAMs_20 19 34 18.7
comp=Z,891nm,20.0s
NRS Narsarsuaq 124.67 5 *i* P **PKPdf 18 47 00.2 -0.5**
WVT Waverly 124.90 50 PKPdf **PKPdf 18 47 00.3 -1.6**
WVT Waverly 124.90 50 P **PKPdf 18 47 01.5 -0.4**
baz=291
WVT Waverly 124.90 50 PKiKP **PKPdf 18 47 00.3 -1.6**
WVT MLR MLR
comp=Z,2μm,22.0s

146A Union 125.06 54 IAMs_20 IAMs_20 19 38 22.0
comp=Z,783nm,19.0s
T47A Sharon Grove 125.14 49 IAMs_20 IAMs_20 19 37 31.4
comp=Z,868nm,19.0s
O48B Farmland 125.25 44 P **PKPdf 18 47 02.2 -0.2**
baz=295,SNR=11
WCI Wyandotte Cave 125.27 47 IAMs_20 IAMs_20 19 34 03.5
comp=Z,888nm,21.0s
WCI Wyandotte Cave 125.27 47 P **PKPdf 18 47 02.4 -0.2**
baz=293
AAM Ann Arbor 125.34 41 P **PKPdf 18 47 02.5 0.0**
baz=298
BNI Bardonecchia 125.60 323 PKPdf **PKPdf 18 47 02.4 -0.7**
BNI IAMs_20 IAMs_20 19 43 30.8
comp=Z,1μm,20.0s
BNI Bardonecchia 125.60 323 PKiKP **PKPdf 18 47 02.4 -0.7**
BNI MLR MLR
comp=Z,1μm,20.0s
N49A Columbus Grove 125.62 43 IAMs_20 IAMs_20 19 34 51.4
comp=Z,858nm,22.0s
Z47A Carrollton 125.68 53 IAMs_20 IAMs_20 19 33 14.3
comp=Z,1μm,22.0s
K50A Casco 125.79 40 IAMs_20 IAMs_20 19 33 40.4
comp=Z,840nm,21.0s
O49A Covington 125.84 44 IAMs_20 IAMs_20 19 37 09.3
comp=Z,764nm,20.0s
SCHQ Scheffervill 125.84 21 PKP **PKPdf 18 47 03.2 0.0**
comp=Z,5.5nm,0.8s,baz=351,slow=1.4,SNR=14
P49A Miami Univ. Ec 125.86 45 P **PKPdf 18 47 03.7 +0.1**
baz=295,SNR=7.0
VLDQ Val d'Or 125.90 32 IAMs_20 IAMs_20 19 35 45.7
comp=Z,1μm,22.0s
U49A Red Boiling Sp 126.30 49 IAMs_20 IAMs_20 19 34 26.2
comp=Z,965nm,21.0s
LRAL Lakeview Retre 126.58 53 IAMs_20 IAMs_20 19 35 10.2
comp=Z,883nm,20.0s
LRAL Lakeview Retre 126.58 53 P **PKPdf 18 47 05.1 -0.1**
baz=289
SWET Sewanee 126.67 50 IAMs_20 IAMs_20 19 34 42.1
comp=Z,1μm,22.0s
ACSO Alum Creek Sta 126.75 43 P **PKPdf 18 47 05.3 -0.1**
baz=297
N51A Ashland 126.84 42 IAMs_20 IAMs_20 19 34 23.5
comp=Z,816nm,21.0s
P51A Williamsport 127.03 44 IAMs_20 IAMs_20 19 37 23.9
comp=Z,669nm,20.0s
BRAL Brewton 127.12 55 P **PKPdf 18 47 05.7 -0.6**
baz=288
FPAL Fort Paine 127.16 51 IAMs_20 IAMs_20 19 39 10.1
comp=Z,758nm,21.0s
M52A Chesterland 127.21 41 IAMs_20 IAMs_20 19 41 16.2
comp=Z,806nm,21.0s
P52A Corning 127.61 44 IAMs_20 IAMs_20 19 38 13.9
comp=Z,988nm,20.0s
P52A Corning 127.61 44 P **PKPdf 18 47 07.0 0.0**
baz=298,SNR=5.1
M53A WI Miller and 127.71 41 IAMs_20 IAMs_20 19 44 05.3
comp=Z,761nm,20.0s
M53A WI Miller and 127.71 41 P **PKPdf 18 47 06.9 -0.2**
baz=300
ERPA Erie 127.80 40 IAMs_20 IAMs_20 19 40 36.7
comp=Z,756nm,20.0s
ERPA Erie 127.80 40 P **PKPdf 18 47 07.3 0.0**
baz=301
Q52A Bidwell 127.82 44 IAMs_20 IAMs_20 19 40 52.7
comp=Z,760nm,20.0s
N53A Lisbon 127.92 42 IAMs_20 IAMs_20 19 42 23.9
comp=Z,916nm,19.0s
O53A New Philadelph 127.94 42 IAMs_20 IAMs_20 19 41 16.6
comp=Z,757nm,20.0s
O53A New Philadelph 127.94 42 P **PKPdf 18 47 07.5 -0.1**
baz=299,SNR=5.8
DELO Doloro Mine 127.94 36 IAMs_20 IAMs_20 19 34 18.7
comp=Z,1μm,22.0s
TZTN Tazewell 127.94 48 P **PKPdf 18 47 07.7 0.0**
baz=294
KEST Kesra 128.14 311 PKP **PKPdf 18 47 07.7 -0.5**
comp=Z,11nm,1.0s,baz=14,slow=12,SNR=6.1
P53A Whipple 128.18 43 IAMs_20 IAMs_20 19 41 58.2
comp=Z,899nm,20.0s
SNET Serv Nac Est T 128.26 77 IAMs_20 IAMs_20 19 34 52.3
comp=Z,863nm,20.0s
152A Waverly Hall 128.51 53 IAMs_20 IAMs_20 19 35 59.3
comp=Z,1μm,22.0s
WVNY West Valley, N 128.52 39 IAMs_20 IAMs_20 19 35 36.5
comp=Z,1μm,22.0s
M55A Ridgway 128.92 40 IAMs_20 IAMs_20 19 42 02.3
comp=Z,999nm,19.0s
MCWV Mont Chateau 129.14 42 P **PKPdf 18 47 09.9 0.0**
baz=300
LDAQ Lac Daran 129.15 29 IAMs_20 IAMs_20 19 39 38.8
comp=Z,1μm,20.0s
GOGA Godfrey 129.23 51 IAMs_20 IAMs_20 19 44 50.0
comp=Z,856nm,20.0s
GOGA Godfrey 129.23 51 P **PKPdf 18 47 10.2 0.0**
baz=292
J57A Williamstown 129.54 36 IAMs_20 IAMs_20 19 35 16.0
comp=Z,1μm,22.0s
LONY Lake Ozonia 129.62 34 IAMs_20 IAMs_20 19 39 23.8
comp=Z,964nm,21.0s
LONY Lake Ozonia 129.62 34 P **PKPdf 18 47 10.5 -0.2**
baz=309
R55A Marlinton 129.62 44 IAMs_20 IAMs_20 19 39 47.5
comp=Z,819nm,21.0s
TIGA Tifton 129.84 54 IAMs_20 IAMs_20 19 38 11.5
comp=Z,746nm,22.0s
TIGA Tifton 129.84 54 P **PKPdf 18 47 11.3 -0.2**
baz=290
BLA Blacksburg 129.91 45 IAMs_20 IAMs_20 19 40 55.3
comp=Z,787nm,20.0s
BLA Blacksburg 129.91 45 P **PKPdf 18 47 11.3 -0.2**
baz=298
SSPA Standing Stone 129.93 40 **PKPdf 18 47 10.9 -0.5**
SSPA Standing Stone 129.93 40 IAMs_20 IAMs_20 19 36 18.9
comp=Z,904nm,21.0s
SSPA Standing Stone 129.93 40 P **PKPdf 18 47 11.3 0.0**
baz=302
J58A Remsen 129.98 36 IAMs_20 IAMs_20 19 39 12.8
comp=Z,697nm,19.0s
FRNY Flat Rock 130.03 33 IAMs_20 IAMs_20 19 37 43.7
comp=Z,1μm,21.0s
KMSC Kings Mountain 130.16 48 P **PKPdf 18 47 12.2 +0.2**
baz=295
BINY Binghamton 130.25 38 P **PKPdf 18 47 12.1 +0.2**
baz=306
P57A Homestead Farm 130.45 42 IAMs_20 IAMs_20 19 40 13.0
comp=Z,920nm,21.0s
255A Hazlehurst 130.55 53 IAMs_20 IAMs_20 19 36 40.3
comp=Z,1μm,20.0s
S57A Dark Hollow, R 130.68 44 IAMs_20 IAMs_20 19 39 28.5
comp=Z,840nm,20.0s
T57A Hurt 130.84 45 IAMs_20 IAMs_20 19 43 15.7
comp=Z,971nm,21.0s
MVL Millersville 131.26 40 IAMs_20 IAMs_20 19 36 38.2
comp=Z,829nm,21.0s
R58B Mineral 131.32 43 IAMs_20 IAMs_20 19 43 01.2
comp=Z,906nm,20.0s
LBNH Lisbon 131.32 33 P **PKPdf 18 47 14.2 +0.3**
baz=311
CBN Corbin Frederi 131.54 43 IAMs_20 IAMs_20 19 38 47.0
comp=Z,972nm,21.0s
CBN Corbin Frederi 131.54 43 P **PKPdf 18 47 14.9 +0.5**
baz=301
PQI Presque Isle 131.61 28 IAMs_20 IAMs_20 19 38 44.8
comp=Z,1μm,22.0s
WUPA West Chester U 131.77 40 IAMs_20 IAMs_20 19 42 31.7
comp=Z,587nm,19.0s
F63A Nahmakanta, Br 131.79 30 IAMs_20 IAMs_20 19 40 36.6
comp=Z,1μm,20.0s
X58A Rowland 131.89 48 IAMs_20 IAMs_20 19 38 41.2
comp=Z,832nm,21.0s
PKME Peaks-Kenny Pk 132.00 30 P **PKiKP 18 47 15.8 -0.4**
baz=315
T59A Double "B" Far 132.04 44 IAMs_20 IAMs_20 19 40 15.5
comp=Z,699nm,20.0s
L61B Northampton 132.05 35 P **PKiKP 18 47 16.1 -0.3**
baz=309
PAL Palisades 132.21 38 P **PKiKP 18 47 16.3 -0.4**
baz=307
WSPT Westport, CT 132.46 37 IAMs_20 IAMs_20 19 38 58.5
comp=Z,1μm,21.0s
YLE Yale 132.61 37 IAMs_20 IAMs_20 19 42 47.2
comp=Z,984nm,21.0s
HRV Adam Dziewonsk 132.66 35 P **PKiKP 18 47 17.3 -0.3**
baz=310
DWPF Disney Wildern 132.73 57 P **PKPdf 18 47 17.3 +0.3**
baz=289
Y60A Bolivia 132.97 48 IAMs_20 IAMs_20 19 38 08.7
comp=Z,868nm,20.0s
061Z Ochoppi 133.88 60 IAMs_20 IAMs_20 19 43 18.2
comp=Z,712nm,21.0s
ESDC Sonseca Array 135.13 323 PKP **PKiKP 18 47 22.3 -0.5**
comp=Z,1.2nm,0.7s,baz=146,slow=1.9,SNR=6.7
ESDC PP **PP 18 49 56.8 +0.7**
comp=Z,2.9nm,1.1s,baz=40,slow=4.8,SNR=4.3
PBRG Braganca 135.28 327 *e*PKPdf **PKPdf 18 47 20.3 -1.2**
MVO Moncorvo 135.88 327 *e*PKPdf **PKiKP 18 47 24.3 0.0**
MCRA Macar, Loja 136.06 103 PKPdf **PKPdf 18 47 23.0 -0.7**
MCRA Macar, Loja 136.06 103 *e*P **PKPdf 18 47 23.9 +0.2**
PVRL Vila Real 136.17 328 *e*PKPdf **PKiKP 18 47 25.6 +0.8**
PVIS Viseu 136.66 327 *e*PKPdf **PKiKP 18 47 25.2 -0.7**
NNA Nana 136.69 114 PKP **PKPdf 18 47 25.7 +0.8**
comp=Z,7.1nm,0.3s,baz=329,slow=7.4,SNR=3.6
MTE Manteigas 136.70 327 *e*PKPdf **PKiKP 18 47 25.5 -0.5**
ATAH Atahualpa 136.85 107 PKP **PKPdf 18 47 26.1 +0.4**
comp=Z,16nm,0.9s,baz=280,slow=1.2,SNR=9.9
PCBR Castelo Branco 137.05 326 *e*PKPdf **PKPdf 18 47 25.5 +0.7**
PCAS Casmilo, Conde 137.46 327 *e*PKPdf **PKPdf 18 47 25.4 -0.1**
PB11 IPOC Station P 139.03 130 PKPdf **PKPdf 18 47 27.9 -1.2**
BBAC Balboa, Cauca 139.85 94 *e*P **PKPdf 18 47 26.1 -4.9**
TOA0 Torodi Ar. Sit 141.06 283 PKPpre 18 47 24.4
TORD Torodi Ar. Bea 141.06 283 PKhKP PKPpre 18 47 26.3
comp=Z,6.1nm,1.0s,baz=60,slow=4.8,SNR=18
GARC Garzon, Huila 141.62 94 *e*P **PKPdf 18 47 27.6 -6.6**
GUY2C Guyana, Caldas 142.01 89 *e*P **PKPdf 18 47 30.6 -4.5**
CZSB Cruzeiro do Su 142.02 111 *e*P **PKPdf 18 47 31.2 -3.4**
ORTC Ortega, Tolima 142.04 91 *e*P **PKPdf 18 47 29.3 -5.3**
CPUP Villa Florida 142.34 150 PKP **PKPdf 18 47 32.6 -2.2**
comp=Z,5.6nm,0.8s,baz=142,slow=2.0,SNR=8.5
NORC Norcasia 142.52 89 *e*P **PKPdf 18 47 30.9 -4.6**
PTBC PUERTO BERRIO 142.96 87 *e*P **PKPdf 18 47 32.0 -4.2**
ROSC El Rosal 143.03 90 PKP PKPbc 18 47 33.6 0.0
comp=Z,24nm,0.7s,baz=311,slow=6.6,SNR=18
SMRC Santa Marta, M 143.06 80 *e*P PKPbc 18 47 33.2 0.0
SPBC San Pablo de B 143.31 89 *e*P PKPbc 18 47 33.8 -0.2
ITAB Concordia 143.88 157 PKPdf PKPbc 18 47 35.9 +0.7
OCAC Ocana 144.10 84 *e*P PKPbc 18 47 36.8 +0.4
BARC Barichara 144.23 87 *e*P PKPbc 18 47 37.4 +0.4
RUSC La Rusia 144.31 88 *e*P **PKPab 18 47 37.3 +0.1**
CRJC Cerrejon, Guaj 144.38 80 *e*P **PKPab 18 47 35.5 -1.4**
SDDR Presa de Saban 144.41 66 PKPdf **PKPab 18 47 36.5 -0.3**
PAMC Pamplona, Colo 144.72 86 *e*P **PKPab 18 47 38.7 +0.1**
PTGC Puerto Gaitan, 145.15 91 *e*P **PKPbc 18 47 39.1 -0.5**
TAMC Tame, Arauca 145.61 87 *e*P **PKPdf 18 47 41.0 +0.1**
SDV Santo Domingo 146.73 83 PKPdf **PKPdf 18 47 41.6 -1.4**
SDV Santo Domingo 146.73 83 *e*P **PKPdf 18 47 42.9 -0.1**
PMAR Madeira 147.43 327 *e*PKPab **PKPab 18 47 47.9 -0.1**
PMOZ Porto Moniz, M 147.50 328 *e*PKPab **PKPab 18 47 48.1 -0.1**
KIC Kosan Boka 147.74 272 ⇑*i*PKP1 **PKPbc 18 47 48.1 +0.8**
comp=Z,132nm,1.1s
SIV San Ignacio 147.77 133 PKPbc **PKPdf 18 47 45.0 +0.5**
comp=Z,55nm,1.0s,baz=234,slow=2.6,SNR=42
DBIC Dimbokro 147.86 273 **PKPdf 18 47 44.2 -0.4**
DBIC Dimbokro 147.86 273 PKPbc **PKPbc 18 47 46.3 -1.2**
comp=Z,73nm,1.0s,baz=89,slow=3.2,SNR=43
LIC Lamto 148.02 272 ⇑*i*PKP1 **PKPbc 18 47 48.9 +0.9**
comp=Z,233nm,0.9s
TIC Toumodi 148.02 273 ⇑*i*PKP1 **PKPbc 18 47 48.8 +0.8**
comp=Z,110nm,1.0s
SPB Sao Paulo 148.88 162 **PKPdf 18 47 45.0 -1.0**
SAML Samuel 150.11 120 PKPdf **PKPdf 18 47 47.9 -0.3**
SAML Samuel 150.11 120 PKiKP **PKPdf 18 47 47.9 -0.3**
SAML MLR MLR
comp=Z,500nm,22.0s
SMRT St. Maarten 152.07 62 IAMs_20 IAMs_20 19 49 48.6
comp=Z,774nm,22.0s
BDFB Brasilia 155.92 154 PKP **PKPdf 18 47 58.1 +1.3**
comp=Z,4.0nm,0.6s,baz=188,slow=3.0,SNR=6.4
BDFB PKPab **PKPab 18 48 23.5 0.0**
comp=Z,8.4nm,0.8s,baz=128,slow=1.4,SNR=5.0

TAP 26 18:31:55.5, 22°18N×119°89E, h56km, ML3.2, 3C, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu** baz=69	**0.47**	**69**	P		Pn	18 32 07.0	+0.2
TWP				S		Sn	18 32 16.1	+1.2
KAU	**Kaohsiung** baz=45	**0.55**	**45**	*e*P		Pn	18 32 08.2	+0.6
KAU				S		Sn	18 32 17.8	+1.3
WSSB	**Gushan** baz=36	**0.57**	**36**	P		Pn	18 32 08.4	+0.3
WSSB				S		Sn	18 32 18.1	+1.0
SCZT	**Fangliau** baz=74	**0.70**	**74**	⇑*i*P		Pn	18 32 10.0	+0.5
SCZT				*i* S		Sn	18 32 20.5	+0.8
SNJT	**Kaohsiung City** baz=35	**0.70**	**35**	*e*P		Pn	18 32 10.3	+0.7
SNJT				S		Sn	18 32 21.1	+1.3
TSPT	**Pingtung City** baz=47	**0.75**	**48**	*e*P		Pn	18 32 11.4	+1.4
TSPT				*e*S		Sn	18 32 22.9	+2.2
SGLT	**Jiouru** baz=45	**0.78**	**45**	P		Pn	18 32 12.1	+1.7
SGLT				*e*S		Sn	18 32 24.3	+2.9
HEN	**Hengchun** baz=102	**0.80**	**102**	*e*P		Pn	18 32 11.9	+1.1
HEN				*e*S		Sn	18 32 23.8	+1.8
TWM1	**Shoushan** baz=37	**0.81**	**37**	*e*P		Pn	18 32 12.6	+1.7
MASBT	**Mashibuluo** baz=57	**0.81**	**58**	⇑*i*P		Pn	18 32 11.4	+0.5
MASBT				*e*S		Sn	18 32 23.0	+0.8
SLIU	**Shizi** baz=87	**0.84**	**87**	*i* P		Pn	18 32 11.9	+0.6
SLIU				*e*S		Sn	18 32 24.1	+1.2
TSMG	**Majia** baz=52	**0.87**	**53**	P		Pn	18 32 12.3	+0.6
TSMG				*i* S		Sn	18 32 23.7	+0.1
TWK1	**Hengchun** baz=105	**0.88**	**105**	*e*P		Pn	18 32 12.6	+0.8
TWK1				*e*S		Sn	18 32 25.6	+1.8
TWKBT	**Hengchun** baz=105	**0.88**	**105**	P		Pn	18 32 12.7	+0.8
TWKBT				S		Sn	18 32 25.2	+1.3
SSD	**Sandimen** baz=50	**0.89**	**50**	*e*P		Pn	18 32 12.8	+0.9
SSD				*e*S		Sn	18 32 25.1	+1.2
SMST	**Manzhou Townsh** baz=100	**0.89**	**100**	*e*P		Pn	18 32 12.9	+1.0
SMST				*e*S		Sn	18 32 25.5	+1.5
SCST	**Cishan** baz=38	**0.90**	**38**	*e*P		Pn	18 32 13.1	+1.1
SCST				*e*S		Sn	18 32 25.9	+1.7
EAST	**Anshuo** baz=77	**0.91**	**77**	*i* P		Pn	18 32 13.2	+1.0
EAST				*e*S		Sn	18 32 25.5	+1.0
TAI1	**Yung-k'ang** baz=20	**0.91**	**20**	*e*P		Pn	18 32 12.8	+0.6
TAI1				*e*S		Sn	18 32 25.9	+1.4
TAWH	**Dawu Township** baz=80	**0.93**	**80**	P		Pn	18 32 13.2	+0.7
TAWH				*e*S		Sn	18 32 26.2	+1.2
SHHT	**Tainan City** baz=26	**0.94**	**26**	P		Pn	18 32 13.6	+1.0
SHHT				S		Sn	18 32 26.7	+1.6
TSCK	**Chigu Township** baz=10.0	**0.98**	**10**	*e*P		Pn	18 32 14.4	+1.3
TSCK				*e*S		Sn	18 32 27.6	+1.5
CHN3	**Shinhua** baz=25	**0.99**	**26**	P		Pn	18 32 14.2	+0.9

CHN3					S	Sn	18 32 28.1	+1.6		
	baz=25									
SSHA	**Shanhua**	**1.02**	**21**	P	Pn	18 32 14.4	+0.7			
	baz=20									
SSHA					S	Sn	18 32 28.4	+1.3		
	baz=20									
ECL	**Taimali**	**1.07**	**67**	⇑ *i* P	Pn	18 32 15.4	+1.1			
	baz=67									
ECL				*i*	S	Sn	18 32 29.1	+0.9		
	baz=67									
SLGT	**Liugui**	**1.07**	**40**	*e*P	Pn	18 32 15.3	+1.0			
	baz=40									
SLGT				*e*S	Sn	18 32 29.1	+0.8			
	baz=40									
SGST	**Jiashian**	**1.10**	**35**	P	Pn	18 32 14.7	0.0			
	baz=35									
SGST				*e*S	Sn	18 32 29.2	+0.1			
	baz=35									
VCHM	**Qimei**	**1.11**	**337**	*e*P	Pn	18 32 13.2	-1.7			
	baz=337									
VCHM				*e*S	Sn	18 32 27.4	-1.9			
	baz=337									
CHN1	**Nanshi**	**1.16**	**30**	P	Pn	18 32 16.2	+0.6			
	baz=30									
CHN1				*e*S	Sn	18 32 31.1	+0.6			
	baz=30									
SNST	**Tainan City**	**1.18**	**28**	P	Pn	18 32 16.4	+0.6			
	baz=28									
SNST				*e*S	Sn	18 32 31.1	+0.3			
	baz=28									
TWK	**Hsinying**	**1.21**	**27**	P	Pn	18 32 16.8	+0.5			
	baz=27									
TWK				*e*S	Sn	18 32 32.5	+0.7			
	baz=27									
ICHU	**Yijhu**	**1.23**	**17**	*e*P	Pn	18 32 16.7	+0.3			
	baz=16									
ICHU				*e*S	Sn	18 32 33.0	+0.9			
	baz=16									
WTP	**Ta-pu**	**1.25**	**32**	P	Pn	18 32 17.4	+0.5			
	baz=32									
WTP				*e*S	Sn	18 32 33.4	+0.7			
	baz=32									
STYT	**Tauyuan**	**1.26**	**39**	*e*P	Pn	18 32 17.8	+0.8			
	baz=39									
STYT				*e*S	Sn	18 32 33.9	+0.9			
	baz=39									
TWG	**Pinlang**	**1.26**	**59**	P	Pn	18 32 18.5	+1.6			
	baz=59									
TWG				*e*S	Sn	18 32 33.9	+1.0			
	baz=59									
TWGBT	**Beinan**	**1.27**	**60**	P	Pn	18 32 18.5	+1.5			
	baz=59									
TWGBT				*e*S	Sn	18 32 34.2	+1.2			
	baz=59									
STYH	**Taoyuan**	**1.28**	**39**	*e*P	Pn	18 32 18.2	+1.0			
	baz=39									
STYH				*e*S	Sn	18 32 34.4	+1.2			
	baz=39									
TPUB	**Ta-pu**	**1.31**	**31**	P	Pn	18 32 17.9	+0.4			
	baz=31									
TPUB				*e*S	Sn	18 32 33.7	-0.3			
	baz=31									
CHN4	**Tsaushan**	**1.33**	**29**	*e*P	Pn	18 32 18.3	+0.4			
	baz=28									
CHN4				*e*S	Sn	18 32 35.5	+0.9			
	baz=28									
LONT	**Longtian**	**1.35**	**57**	*e*P	Pn	18 32 20.2	+2.1			
	baz=57									
LONT				*e*S	Sn	18 32 36.7	+1.6			
	baz=57									
PHUB	**P'eng-hu**	**1.36**	**347**	*e*P	Pn	18 32 16.8	-1.4			
	baz=347									
PHUB				*e*S	Sn	18 32 34.4	-0.8			
	baz=347									
WCKO	**Fanlu**	**1.42**	**27**	P	Pn	18 32 19.3	+0.3			
	baz=27									
WCKO				*e*S	Sn	18 32 36.6	0.0			
	baz=27									
PNG	**Penghu**	**1.42**	**347**	*e*P	Pn	18 32 17.9	-1.1			
	baz=347									
PNG				*e*S	Sn	18 32 36.9	+0.3			
	baz=347									
ELDTW	**Lidau**	**1.44**	**46**	*e*P	Pn	18 32 20.7	+1.2			
	baz=46									
ELDTW				*e*S	Sn	18 32 38.2	+0.7			
	baz=46									
WSF	**Szhu**	**1.48**	**12**	*e*P	Pn	18 32 19.4	-0.5			
	baz=12									
WSF				*e*S	Sn	18 32 39.7	+1.5			
	baz=12									
EDH	**Donghe**	**1.52**	**59**	*e*P	Pn	18 32 21.2	+0.8			
	baz=58									
EDH				*e*S	Sn	18 32 40.4	+1.2			
	baz=58									
ECS	**Chishang**	**1.53**	**53**	*e*P	Pn	18 32 22.4	+1.9			
	baz=53									
ECS				*e*S	Sn	18 32 41.8	+2.5			
	baz=53									
LDUT	**Ludao**	**1.54**	**71**	*e*P	Pn	18 32 21.6	+1.0			
	baz=71									
LDUT				*e*S	Sn	18 32 40.8	+1.3			
	baz=71									
LAY	**Lan-yu**	**1.54**	**95**	*e*P	Pn	18 32 21.1	+0.4			
	baz=95									
LAY				*e*S	Sn	18 32 40.4	+0.7			
	baz=95									
EHD	**Haiduan**	**1.55**	**51**	*e*P	Pn	18 32 22.1	+1.3			
	baz=51									
EHD				*e*S	Sn	18 32 40.8	+0.9			
	baz=51									
ALS	**Alishan**	**1.57**	**32**	P	Pn	18 32 21.9	+0.6			
	baz=32									
ALS				*e*S	Sn	18 32 41.2	+0.5			
	baz=32									
WTK	**Tuku**	**1.57**	**17**	*e*P	Pn	18 32 21.3	+0.3			
	baz=16									
WTK				*e*S	Sn	18 32 41.0	+0.7			
	baz=16									
LYUB	**Lan-yu**	**1.58**	**96**	*e*P	Pn	18 32 20.5	-0.7			
	baz=96									
LYUB				*e*S	Sn	18 32 41.6	+1.1			
	baz=96									
CHN5	**Tsauling**	**1.59**	**27**	*e*P	Pn	18 32 21.8	+0.4			
	baz=27									
CHN5				*e*S	Sn	18 32 41.3	+0.5			
	baz=27									
WGK	**Gukeng**	**1.62**	**22**	*e*P	Pn	18 32 22.3	+0.6			
	baz=22									
WGK				*e*S	Sn	18 32 42.4	+0.9			
	baz=22									
CHKT	**Chengkung**	**1.64**	**56**	*e*P	Pn	18 32 23.6	+1.7			
	baz=56									
CHKT				*e*S	Sn	18 32 44.7	+2.7			
	baz=56									
FULB	**Fuli**	**1.64**	**52**	*e*P	Pn	18 32 24.8	+2.7			
	baz=51									
FULB				*e*S	Sn	18 32 44.4	+2.3			
	baz=51									
CHKH	**Chenggong**	**1.71**	**54**	*e*P	Pn	18 32 25.0	+2.0			
	baz=53									
CHKH				*e*S	Sn	18 32 46.2	+2.4			
	baz=53									
TWF1	**Yuli**	**1.74**	**48**	*e*P	Pn	18 32 25.2	+1.8			
	baz=48									
TWF1				*e*S	Sn	18 32 45.6	+1.0			
	baz=48									
WHYT	**Xinyi Township**	**1.75**	**30**	*e*P	Pn	18 32 24.6	+1.1			
	baz=30									
WHYT				*e*S	Sn	18 32 45.6	+0.8			
	baz=30									
EYUL	**Yuli**	**1.76**	**48**	*e*P	Pn	18 32 25.1	+1.6			
	baz=48									
EYUL				*e*S	Sn	18 32 46.2	+1.4			
	baz=48									
WRL	**Guolierlin Hig**	**1.77**	**14**	*e*P	Pn	18 32 24.4	+0.6			
	baz=14									
WRL				*e*S	Sn	18 32 46.2	+1.0			
	baz=14									
YULB	**Yu-li**	**1.77**	**47**	P	Pn	18 32 25.4	+1.6			
	baz=46									
YULB				S	Sn	18 32 46.1	+0.8			
	baz=46									
WJS	**Zhushan**	**1.81**	**25**	*e*P	Pn	18 32 24.8	+0.5			
	baz=25									
WJS				*e*S	Sn	18 32 46.9	+0.7			
	baz=25									
WNT	**Mingjian**	**1.84**	**23**	*e*P	Pn	18 32 25.2	+0.4			
	baz=23									
WNT				*e*S	Sn	18 32 48.0	+1.0			
	baz=23									
SSLB	**Suanglung**	**1.88**	**31**	P	Pn	18 32 26.2	+0.9			
	baz=31									
SSLB				S	Sn	18 32 48.7	+0.8			
	baz=31									
HGSD	**Ruisui**	**1.92**	**47**	*e*P	Pn	18 32 28.3	+2.5			
	baz=47									
HGSD				*e*S	Sn	18 32 51.9	+2.9			
	baz=47									
SMLT	**Sun Moon Lake**	**1.93**	**28**	P	Pn	18 32 27.2	+1.1			
	baz=28									
SMLT				*e*S	Sn	18 32 50.9	+1.6			
	baz=28									
TYC	**Yuchr**	**1.93**	**27**	P	Pn	18 32 27.0	+1.0			
	baz=27									
TYC				*e*S	Sn	18 32 50.5	+1.3			
	baz=27									
VWDT	**VWDT**	**1.94**	**36**	*e*P	Pn	18 32 27.4	+1.3			
	baz=36									
VWDT				*e*S	Sn	18 32 50.5	+1.1			
	baz=36									
WWF	**Wufeng**	**2.00**	**22**	*e*P	Pn	18 32 28.1	+1.2			
	baz=21									
WWF				*e*S	Sn	18 32 51.6	+0.9			
	baz=21									
WARBT	**Fenglin Townsh**	**2.06**	**42**	*e*P	Pn	18 32 29.2	+1.4			
	baz=41									
WARBT				*e*S	Sn	18 32 53.0	+0.7			
	baz=41									
DPDB	**Guoxing**	**2.08**	**27**	*e*P	Pn	18 32 29.1	+1.1			
	baz=27									
DPDB				*e*S	Sn	18 32 53.8	+1.0			
	baz=27									
WCS	**Beigang Elemen**	**2.09**	**26**	*e*P	Pn	18 32 29.3	+1.1			
	baz=26									
WCS				*e*S	Sn	18 32 54.0	+0.9			
	baz=26									
OWD	**Renai**	**2.12**	**33**	*e*P	Pn	18 32 30.3	+1.5			
	baz=33									
OWD				*e*S	Sn	18 32 55.5	+1.4			
	baz=33									
WUSB	**Renai**	**2.13**	**32**	P	Pn	18 32 30.0	+1.2			
	baz=31									
WUSB				S	Sn	18 32 54.5	+0.4			
	baz=31									
ESL	**Shilin**	**2.16**	**41**	*e*P	Pn	18 32 31.8	+2.7			
	baz=41									
ESL				*e*S	Sn	18 32 56.4	+1.7			
	baz=41									
CHGB	**Renai**	**2.21**	**32**	*e*P	Pn	18 32 31.2	+1.2			
	baz=32									
CHGB				*e*S	Sn	18 32 57.5	+1.1			
	baz=32									
WHP	**Taichung City**	**2.30**	**25**	*e*P	Pn	18 32 32.6	+1.4			
	baz=24									
WHP				*e*S	Sn	18 32 59.8	+1.4			
	baz=24									
TWQ1	**Liyutan**	**2.31**	**20**	*e*P	Pn	18 32 32.7	+1.6			
	baz=20									
TWQ1				*e*S	Sn	18 32 59.8	+1.5			
	baz=20									
LXIB	**Xiulin Townshi**	**2.31**	**37**	*e*P	Pn	18 32 32.3	+1.1			
	baz=37									
LXIB				*e*S	Sn	18 32 59.2	+0.7			
	baz=37									
ETM	**Tongmen**	**2.31**	**39**	*e*P	Pn	18 32 33.1	+2.0			
	baz=39									
ETM				*e*S	Sn	18 32 59.3	+0.9			
	baz=39									
FUSS	**Fushou**	**2.40**	**31**	*e*P	Pn	18 32 33.8	+1.1			
	baz=31									
FUSS				*e*S	Sn	18 33 02.5	+1.4			
	baz=31									
ETLH	**Xiulin Townshi**	**2.49**	**36**	*e*P	Pn	18 32 36.1	+2.4			
	baz=35									
ETLH				*e*S	Sn	18 33 04.8	+1.8			
	baz=35									
NACB	**Ninganchiao**	**2.53**	**38**	*e*P	Pn	18 32 35.9	+1.7			
	baz=38									
NACB				*e*S	Sn	18 33 04.9	+1.1			
	baz=38									
NNSB	**Datong**	**2.62**	**31**	*e*P	Pn	18 32 37.5	+1.9			
	baz=31									
NNSB				*e*S	Sn	18 33 07.8	+1.5			
	baz=31									
NNS	**Nan Shan**	**2.63**	**31**	*e*P	Pn	18 32 38.0	+2.3			
	baz=31									
NNS				*e*S	Sn	18 33 08.3	+1.9			
	baz=31									
NSTT	**Nanjuang**	**2.64**	**22**	*e*P	Pn	18 32 36.7	+1.0			
	baz=22									
NSTT				*e*S	Sn	18 33 07.0	+0.4			
	baz=22									
KNMB	**Chin-men Tao**	**2.66**	**329**	*e*P	Pn	18 32 35.3	-0.7			
	baz=328									
KNMB				*e*S	Sn	18 33 04.7	-2.3			
	baz=328									
LIOB	**Emei**	**2.66**	**23**	*e*P	Pn	18 32 37.0	+1.1			
	baz=22									
LIOB				*e*S	Sn	18 33 07.7	+0.6			
	baz=22									
NFF	**Wufeng Townshi**	**2.69**	**24**	*e*P	Pn	18 32 37.5	+1.2			
	baz=24									
NFF				*e*S	Sn	18 33 08.3	+0.5			
	baz=24									
DSXP	**Dongshan**	**2.74**	**304**	*e*P	Pn	18 32 36.3	-0.6			
	baz=303									
DSXP				*e*S	Sn	18 33 05.3	-3.5			
	baz=303									
LATG	**Datong**	**2.78**	**32**	*e*P	Pn	18 32 40.2	+2.5			
	baz=32									
LATG				*e*S	Sn	18 33 12.4	+2.2			
	baz=32									
ENA	**Nanau**	**2.81**	**37**	*e*P	Pn	18 32 39.9	+1.9			
	baz=37									
ENA				*e*S	Sn	18 33 10.4	-0.3			
	baz=37									
NSK	**Sanguang**	**2.83**	**28**	*e*P	Pn	18 32 40.0	+1.7			
	baz=28									
NSK				*e*S	Sn	18 33 13.1	+1.9			
	baz=28									
YHNB	**Yeheng**	**2.83**	**28**	*e*P	Pn	18 32 39.8	+1.5			
	baz=28									
YHNB				*e*S	Sn	18 33 13.7	+2.4			
	baz=28									
VWUC	**VWUC**	**2.83**	**352**	*e*P	Pn	18 32 37.8	-0.5			
	baz=351									
VWUC				*e*S	Sn	18 33 09.4	-1.7			
	baz=351									
NDT	**Datong Townshi**	**2.83**	**31**	*e*P	Pn	18 32 40.7	+2.4			
	baz=31									
NDT				*e*S	Sn	18 33 13.6	+2.3			
	baz=31									
EWUT	**Wuta**	**2.84**	**37**	*e*P	Pn	18 32 40.0	+1.6			
	baz=37									
EWUT				*e*S	Sn	18 33 14.0	+2.5			
	baz=37									
ENTT	**Nioudou**	**2.89**	**32**	*e*P	Pn	18 32 41.9	+2.8			
	baz=32									
ENTT				*e*S	Sn	18 33 16.1	+3.5			
	baz=32									
PTMZ	**Houxiangcun**	**2.94**	**346**	*e*P	Pn	18 32 39.9	+0.2			
	baz=345									
PTMZ				*e*S	Sn	18 33 12.1	-1.6			
	baz=345									
EOS4	**EOS4**	**2.95**	**49**	*e*P	Pn	18 32 42.7	+3.1			
	baz=49									
EOS4				*e*S	Sn	18 33 14.8	+1.1			
	baz=49									
NWLT	**Wulai**	**2.98**	**29**	*e*P	Pn	18 32 41.9	+1.6			
	baz=29									
NWLT				*e*S	Sn	18 33 16.1	+1.3			
	baz=29									
FUSB	**Fushanzhiwuyua**	**3.00**	**31**	*e*P	Pn	18 32 42.5	+1.9			
	baz=31									
FUSB				*e*S	Sn	18 33 17.3	+1.8			
	baz=31									
AXDP	**Jialang**	**3.23**	**327**	*e*P	Pn	18 32 43.1	-0.7			
	baz=326									
AXDP				*e*S	Sn	18 33 17.9	-3.1			
	baz=326									
TIPB	**Shuangxi**	**3.30**	**32**	*e*P	Pn	18 32 46.7	+2.0			
	baz=32									
TIPB				*e*S	Sn	18 33 25.5	+2.8			
	baz=32									
YM01	**YM01**	**3.33**	**27**	*e*P	Pn	18 32 45.9	+0.8			
	baz=27									
YM01				*e*S	Sn	18 33 24.0	+0.5			
	baz=27									
MATB	**Ma-tsu**	**3.96**	**1**	*e*P	Pn	18 32 54.0	+0.3			
MATB				*e*S	Sn	18 33 38.2	-0.5			
MHZQ	**Yeshan**	**3.98**	**349**	*e*P	Pn	18 32 53.9	-0.2			
	baz=348									
MHZQ				*e*S	Sn	18 33 38.5	-0.9			
	baz=348									
LYJJ	**Jianjiangzhen**	**4.35**	**358**	*e*P	Pn	18 32 59.4	+0.3			
	baz=358									
LYJJ				*e*S	Sn	18 33 47.5	-1.0			
	baz=358									
XPSS	**Dashiqiu**	**4.74**	**3**	*e*P	Pn	18 33 04.0	-0.3			
	baz=3.0									
XPSS				*e*S	Sn	18 33 55.1	-2.9			
	baz=3.0									

IDC 26 18:35:25.2±209.0, 22°.75S×69°.54W, h0km, Error ellipse: s-maj=142.4km s-min=77.2km az=1.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.59**	**76**	I	I	18 37 37.7	
	baz=287,slow=11,SNR=24						
I08BO	**LAS PENAS INFR**	**6.58**	**9**	I	I	19 20 20.0	
	baz=189,slow=324,SNR=6.3						
I14CL	**ROBINSON CRUSO**	**13.58**	**215**	I	I	20 00 30.0	
	baz=38,slow=323,SNR=1.5						
I20EC	**Galapagos**	**29.92**	**315**	I	I	21 35 30.0	
	baz=141,slow=321,SNR=3.2						
I13CL	**EASTER ISLAND**	**36.27**	**255**	I	I	22 17 04.1	
	baz=89,slow=315,SNR=1.4						

*IDC **26** 18:40:38.4±0.7, 5°.79S×142°.53E, h0km, mb4.3/14, mbtmp4.4/18, ML4.1/2, MS4.1/1, Error ellipse: s-maj=25.2km s-min=16.2km az=81.0*
*NEIC **26** 18:40:40.3±1.4, 5°.84S±0°.08×142°.44E±0°.08, h10km±1km, mb4.9/56, Error ellipse: s-maj=14.3km s-min=12.9km az=182.0*

ISC 26 18:40:42.3±0.5, 5°.91S±0°.07×142°.46E±0°.07, h28km, n92, σ0°.93/90, mb4.6/23, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.82**	**127**	Pn	**Pn**	**18 42 06.6**	**-0.1**
PMG	**Port Moresby**	**5.82**	**127**	Pn	**Pn**	**18 42 07.6**	**+0.8**
	8.4nm,0.3s,baz=336,slow=17,SNR=10						
PMG				Sn	**Sn**	**18 43 11.2**	**-1.4**
	1.2nm,0.3s,baz=348,slow=16,SNR=2.2						
MANU	**Manus Island**	**6.22**	**52**		**Pn**	**18 42 12.9**	**+0.6**
RABL	**Rabaul**	**9.82**	**80**		**Pn**	**18 43 01.7**	**0.0**
FAKI	**Fak Fak**	**10.60**	**286**	Pn	**Pn**	**18 43 11.1**	**-1.3**
SAUI	**Saumlaki**	**11.26**	**259**	Pn	**Pn**	**18 43 20.3**	**-1.2**
MTN	**Manton Dam**	**13.12**	**238**	Pn	**Pn**	**18 43 45.1**	**-1.8**
WB0	**Warramunga Arr**	**15.85**	**209**	Pn	**Pn**	**18 44 25.3**	**+1.7**
WB0				IAmb	IAmb	18 44 25.7	
	comp=Z,182nm,1.6s						
WRAB	**Tennant Creek**	**16.02**	**209**	Pn	**Pn**	**18 44 25.8**	**+0.1**
WRAB				IAmb	IAmb	18 44 32.5	
	comp=Z,271nm,1.8s						
WB2	**Warramunga Arr**	**16.02**	**209**	Pn	**Pn**	**18 44 25.8**	**0.0**
WB2				IAmb	IAmb	18 44 26.0	
	comp=Z,248nm,1.7s						
WRA	**Warramunga Arr**	**16.03**	**209**	Pn	**Pn**	**18 44 25.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=26,slow=13,SNR=15						
WRA				Lg	Lg	18 49 08.2	
	comp=Z,0.3nm,0.3s,baz=32,slow=36,SNR=1.5 comp=Z,14nm,1.0s						
HNR	**Honiara**	**17.68**	**103**	P	**Pn**	**18 44 47.7**	**+1.0**
HNR				IAmb	IAmb	18 44 53.2	
	comp=Z,86nm,1.0s						
HNR	**Honiara**	**17.68**	**103**	P	**Pn**	**18 44 44.8**	**-1.9**
	comp=Z,280nm,0.7s,baz=319,slow=13,SNR=1.5						
SOEI	**Soe**	**18.42**	**257**	P	**Pn**	**18 44 55.8**	**0.0**
SOEI				IAmb	IAmb	18 45 03.6	
	comp=Z,277nm,1.6s						
AS31	**Alice Springs**	**19.48**	**204**	P	**Pn**	**18 45 08.6**	**+0.1**
ASAR	**Alice Springs**	**19.48**	**204**		**Pn**	**18 45 10.9**	**+2.4**
ASAR	**Alice Springs**	**19.48**	**204**	P	**Pn**	**18 45 09.3**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=34,slow=11,SNR=8.3 comp=Z,11nm,0.7s						
GUMO	**Guam**	**19.52**	**7**	LR	LR	18 52 04.0	
	comp=Z,587nm,19.3s,baz=212,slow=35						
TOLI2	**Tolitoli**	**22.73**	**287**	P	**P**	**18 45 41.5**	**-0.8**
MJAR	**Matsushiro Arr**	**42.41**	**355**	P	**P**	**18 48 33.2**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=177,slow=10,SNR=5.0 comp=Z,1.4nm,0.6s						
JSD	**Sado**	**43.89**	**355**	P	**P**	**18 48 46.4**	**0.0**
JSD				IAmb	IAmb	18 48 47.2	
	comp=Z,8.6nm,0.7s						
KSRS	**Korea Array**	**45.22**	**344**	P	**P**	**18 48 57.2**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=160,slow=9.0,SNR=8.2 comp=Z,2.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**49.26**	**300**	P	**P**	**18 49 29.6**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=129,slow=5.8,SNR=5.5 comp=Z,0.5nm,0.4s						
USRK	**Ussuriysk Ar.**	**50.76**	**350**	P	**P**	**18 49 39.8**	**0.0**
	comp=Z,6.4nm,0.8s,baz=180,slow=6.9,SNR=11 comp=Z,6.4nm,0.8s						
USA0B	**Ussuriysk Arra**	**50.76**	**350**	P	**P**	**18 49 39.9**	**+0.1**
USA0B				IAmb	IAmb	18 49 41.0	
	comp=Z,7.7nm,0.8s						
KLR	**Kul'dur**	**55.70**	**352**	P	**P**	**18 50 15.7**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=179,slow=4.3,SNR=7.6 comp=Z,2.2nm,0.7s						
PETK	**Petropavlovsk-**	**60.19**	**11**	P	**P**	**18 50 47.0**	**-0.5**
PETK	**Petropavlovsk-**	**60.19**	**11**	P	**P**	**18 50 47.2**	**-0.3**
	comp=Z,40nm,1.4s,baz=139,slow=6.1,SNR=8.2 comp=Z,40nm,1.4s						
LSA	**Lhasa**	**60.61**	**309**	P	**P**	**18 50 51.8**	**+0.3**
LSA				IAmb	IAmb	18 51 07.3	
	comp=Z,4.1nm,1.0s						
SONM	**Songino Array**	**62.21**	**333**	P	**P**	**18 51 02.6**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=153,slow=7.3,SNR=1.7 comp=Z,0.6nm,0.9s						
VNDA	**Vanda**	**72.31**	**176**	P	**P**	**18 52 05.9**	**+1.1**
VNDA				IAmb	IAmb	18 54 19.1	
	comp=Z,32nm,1.9s						
SBA	**Scott Base**	**73.03**	**175**	P	**P**	**18 52 06.5**	**-2.6**
MK31	**Makanchi Array**	**74.59**	**322**	P	**P**	**18 52 19.3**	**+0.5**
MKAR	**Makanchi Array**	**74.59**	**322**	P	**P**	**18 52 19.1**	**+0.3**
MKAR	**Makanchi Array**	**74.59**	**322**	P	**P**	**18 52 19.6**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=101,slow=7.3,SNR=12 comp=Z,2.4nm,0.8s						
MAKZ	**Makanchi**	**74.79**	**322**	P	**P**	**18 52 20.1**	**+0.1**
NIL	**Nilore**	**76.22**	**307**	P	**P**	**18 52 28.8**	**+0.3**
NIL				IAmb	IAmb	18 52 30.1	
	comp=Z,8.8nm,0.5s						
ZALV	**Zalesovo Beam**	**76.57**	**329**	P	**P**	**18 52 28.9**	**-1.1**
ZALV	**Zalesovo Beam**	**76.57**	**329**	P	**P**	**18 52 29.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=102,slow=9.0,SNR=4.2 comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**78.48**	**324**	P	**P**	**18 52 39.4**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=115,slow=4.8,SNR=5.8 comp=Z,1.1nm,0.9s						
KK31	**Karatay Array**	**81.01**	**315**	P	**P**	**18 52 55.0**	**+0.3**
KKAR	**Karatay Array**	**81.01**	**315**	P	**P**	**18 52 54.6**	**-0.1**
KKAR	**Karatay Array**	**81.01**	**315**	P	**P**	**18 52 55.4**	**+0.7**
KKAR	

	comp=Z,5.4nm,0.9s							
CAST	**Castle Rocks**	**84.57**	**24**	P		**P**	**18 53 10.7**	**-2.0**
C19K	**Lookout Ridge**	**84.61**	**18**	P		**P**	**18 53 13.6**	**+0.7**
D19K	**Kuna River**	**84.75**	**19**	P		**P**	**18 53 14.1**	**+0.5**
IMAR	**Indian Mountai**	**85.04**	**22**	P		**P**	**18 53 14.2**	**-0.8**
BPAW	**Bear Paw Mtn.**	**85.30**	**24**	P		**P**	**18 53 15.5**	**-0.8**
MLY	**Manley**	**85.77**	**23**	P		**P**	**18 53 18.6**	**-0.1**
RND	**Reindeer**	**85.90**	**25**	P		**P**	**18 53 18.6**	**-0.9**
DHY	**Denali Highway**	**86.41**	**25**	P		**P**	**18 53 21.0**	**-1.1**
E22K	**Anaktuvuk Pass**	**86.65**	**20**	P		**P**	**18 53 23.2**	**+0.2**
D22K	**Ayikyak River**	**86.68**	**19**	P		**P**	**18 53 23.9**	**+0.8**
G23K	**Bananza Creek**	**86.71**	**22**	P		**P**	**18 53 23.3**	**0.0**
CCB	**Clear Creek Bu**	**86.79**	**24**	P		**P**	**18 53 22.1**	**-1.5**
CCB				IAmb		IAmb	18 53 23.5	
	comp=Z,5.9nm,0.9s							
POKR	**Poker Plat Res**	**87.10**	**23**	IAmb		IAmb	18 53 29.1	
	comp=Z,5.9nm,0.7s							
N25K	**Chitina, Valde**	**87.15**	**27**	P		**P**	**18 53 24.4**	**-1.3**
H24K	**Noodor Dome**	**87.18**	**23**	P		**P**	**18 53 25.0**	**-0.6**
IL31		**87.20**	**24**	P		**P**	**18 53 23.8**	**-1.8**
IL31				IAmb		IAmb	18 56 10.2	
	comp=Z,26nm,2.0s							
ILAR	**Eielson Array**	**87.20**	**24**	P		**P**	**18 53 23.6**	**-2.1**
ILAR	**Eielson Array**	**87.20**	**24**	P		**P**	**18 53 24.4**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=255,slow=5.1,SNR=26							
	comp=Z,2.8nm,0.8s							
G24K	**Hadweenzic Riv**	**87.64**	**22**	P		**P**	**18 53 28.1**	**+0.3**
J25K	**Salcha River,**	**87.76**	**24**	P		**P**	**18 53 27.9**	**-0.6**
F24K	**Squaw Lake**	**87.78**	**21**	P		**P**	**18 53 28.5**	**0.0**
J26L	**Joseph Creek**	**88.47**	**25**	P		**P**	**18 53 32.0**	**+0.2**
M27K	**Edge Creek, AK**	**88.60**	**27**	P		**P**	**18 53 33.0**	**+0.5**
BCAR	**Beaver Creek A**	**88.83**	**26**	P		**P**	**18 53 33.9**	**+0.4**
BMAR	**Burnt Mountain**	**88.96**	**22**	P		**P**	**18 53 35.2**	**+1.2**
K27K	**Chicken**	**88.96**	**25**	P		**P**	**18 53 34.5**	**+0.5**
EGAK	**Eagle**	**89.54**	**25**			pP	18 53 44.0	-2.1
M29M	**Somme Creek**	**90.16**	**27**	P		**P**	**18 53 40.6**	**+0.7**
I28M	**Miner Creek**	**90.21**	**24**	P		**P**	**18 53 40.4**	**+0.4**
L29M	**L29M**	**90.45**	**27**	P		**P**	**18 53 41.5**	**+0.4**
K29M	**Barlow Dome**	**90.87**	**26**	P		**P**	**18 53 43.7**	**+0.5**
CPUP	**Villa Florida**	**142.65**	**150**	PKP		**PKPdf**	**19 00 14.7**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=162,slow=3.2,SNR=3.5							
DBIC	**Dimbokro**	**147.50**	**273**	PKPbc		**PKPab**	**19 00 26.0**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=116,slow=1.7,SNR=3.1							
SIV	**San Ignacio**	**148.13**	**133**	PKPbc		**PKPbc**	**19 00 27.6**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=242,slow=2.9,SNR=12							

*ANF **26** 18:44:40.9±0.1,33°.48N×116°.51W,h13km±1km,ML3.6/31, Error ellipse: s-maj=1.3km s-min=1.1km az=116.0*
*NEIC **26** 18:44:40.9±1.1,33°.47N±0°.02×116°.505W±0°.010, h18km±5km, Error ellipse: s-maj=3.1km s-min=0.5km az=158.0*
*PAS **26** 18:44:42.0±1.2,33°.48N±0°.02×116°.50W±0°.02,h13km±4km, ML3.7/305,ML3.5/48(NEIC), Error ellipse: s-maj=2.7km s-min=2.3km az=165.0*

ISC 26 18:44:40.9±0.7,33°.48N±0°.01×116°.49W±0°.01,h17km±4km, n125,σ0s82/173,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRD	**Ford Ranch, An**	**0.09**	**280**		**Pg**	**18 44 44.8**	**+0.2**
FRD					**Sg**	**18 44 46.9**	**-0.1**
FRD	**Ford Ranch, An**	**0.09**	**280**		**Pg**	**18 44 44.8**	**+0.2**
FRD					**Sg**	**18 44 46.9**	**-0.1**
SNDA	**J Saunders Pla**	**0.12**	**306**		**Pb**	**18 44 45.2**	**+0.3**
SNDA					**Sb**	**18 44 48.1**	**+0.5**
PFO	**Pinyon Flats O**	**0.14**	**11**		**Pg**	**18 44 44.8**	**-0.2**
PFO				IAML		18 44 47.6	
	10μm,0.1s						
PFO				IAML		18 44 47.8	
	19μm,0.3s						
PFO	**Pinyon Flats O**	**0.14**	**11**		**Pg**	**18 44 45.2**	**+0.2**
PFO					**Sg**	**18 44 47.5**	**-0.3**
PFO	**Pinyon Flats O**	**0.14**	**11**	P	**Pg**	**18 44 44.9**	**-0.2**
	baz=196,SNR=1000						
PFO				S	**Sg**	**18 44 47.5**	**-0.3**
	baz=196						
XPFO	**Pion Flat**	**0.14**	**13**		**Pg**	**18 44 45.2**	**+0.1**
XPFO					**Sg**	**18 44 47.5**	**-0.3**
DNR	**Dunn Ranch,Anz**	**0.15**	**307**		**Pb**	**18 44 45.5**	**+0.3**
DNR					**Sb**	**18 44 48.5**	**+0.3**
BZNA	**Buzz No.'s Pla**	**0.15**	**275**		**Pb**	**18 44 45.6**	**+0.3**
BZNA					**Sg**	**18 44 48.1**	**0.0**
PMD	**Palm Desert**	**0.19**	**29**		**Pg**	**18 44 45.6**	**-0.1**
BORC	**Borrego Spring**	**0.22**	**164**		**Pb**	**18 44 46.8**	**+0.4**
BORC					**Sb**	**18 44 50.0**	**-0.1**
CRY	**Cary Ranch**	**0.22**	**293**		**Pg**	**18 44 46.6**	**+0.4**
CRY					**Sg**	**18 44 50.0**	**+0.2**
GVDA	**Garner Valley**	**0.24**	**321**		**Pg**	**18 44 46.7**	**+0.1**
GVDA					**Sg**	**18 44 50.4**	**-0.1**
MATG	**Mataguay Scout**	**0.31**	**205**		**Pb**	**18 44 48.3**	**+0.3**
MATG					**Sb**	**18 44 52.8**	**+0.1**
SLH	**Sleepy Hollow**	**0.35**	**145**		**Pb**	**18 44 49.2**	**+0.6**
SLH					**Sb**	**18 44 54.8**	**+1.0**
JUEM	**Julian Eagle M**	**0.41**	**193**		**Sb**	**18 44 55.7**	**0.0**
POB	**Polly Butte**	**0.42**	**300**		**Pg**	**18 44 49.8**	**+0.3**
POB					**Sg**	**18 44 55.4**	**+0.2**
DEVC	**Devers**	**0.46**	**351**		**Sg**	**18 44 57.0**	**+0.4**
EW2	**E Wide Canyon**	**0.47**	**9**		**Sg**	**18 44 57.2**	**+0.5**
BACC	**Bachelor Mtn.**	**0.48**	**286**		**Sg**	**18 44 56.9**	**-0.1**
HMTC	**Hemet**	**0.49**	**298**		**Sg**	**18 44 57.1**	**-0.2**
CTW	**Cottonwood Mou**	**0.55**	**69**		**Pb**	**18 44 52.7**	**+0.5**
CTW					**Sb**	**18 45 00.4**	**+0.6**
MONP2	**Monument Peak**	**0.59**	**174**	P	**Pb**	**18 44 53.3**	**+0.4**
	baz=353,SNR=224						
MONP2				S	**Sb**	**18 45 01.1**	**+0.2**
	baz=353						
BLAC	**Blackrock camp**	**0.60**	**8**		**Sg**	**18 45 00.9**	**+0.2**
MURC	**Murrieta**	**0.60**	**282**		**Pg**	**18 44 52.9**	**+0.1**
MURC					**Sg**	**18 45 00.7**	**-0.1**
MURC	**Murrieta**	**0.60**	**282**	P	**Pg**	**18 44 52.9**	**+0.1**
	baz=101,SNR=184						
MURC				S	**Sg**	**18 45 00.8**	**-0.1**
	baz=101						
BBSC	**Beaumont Base**	**0.60**	**317**		**Pb**	**18 44 53.4**	**+0.4**
BBSC					**Sb**	**18 45 01.5**	**+0.3**
EML	**El Monte Cty P**	**0.66**	**207**		**Sg**	**18 45 02.7**	**+0.1**
BELC	**Belle Mtn. Jos**	**0.66**	**38**	P	**Pg**	**18 44 54.3**	**+0.3**
	baz=219,SNR=288						
BELC				S	**Sg**	**18 45 02.8**	**-0.1**
	baz=219						
PEC	**Perris**	**0.69**	**307**		**Sg**	**18 45 03.8**	**-0.1**
GORC	**Green Oak Ranc**	**0.70**	**243**		**Pg**	**18 44 54.5**	**-0.1**
HAY	**Hayfield**	**0.71**	**71**		**Pn**	**18 44 56.0**	**-0.1**
HAY					**Sb**	**18 45 06.0**	**+1.7**
CRR	**Carrizo Plain**	**0.73**	**143**		**Pb**	**18 44 55.7**	**+0.5**
CRR					**Sb**	**18 45 06.3**	**+1.4**
CFT	**Crafton Hills**	**0.76**	**317**		**Pb**	**18 44 56.0**	**+0.4**
109C	**Camp Elliot, M**	**0.78**	**221**	Pg	**Pb**	**18 44 56.1**	**+0.1**
109C	**Camp Elliot, M**	**0.78**	**221**	P	**Pb**	**18 44 56.1**	**+0.1**
	baz=40,SNR=40						
109C				S	**Sg**	**18 45 06.1**	**-0.4**
	baz=40						
CPE	**Camp Elliot**	**0.78**	**221**		**Pb**	**18 44 56.1**	**+0.1**
CPE					**Sg**	**18 45 05.9**	**-0.7**
SWSC	**Sam W. Stewart**	**0.79**	**132**		**Sg**	**18 45 06.8**	**+0.1**
SWSC	**Sam W. Stewart**	**0.79**	**132**	P	**Pb**	**18 44 56.2**	**+0.1**
	baz=313,SNR=214						
SWSC				S	**Sb**	**18 45 07.2**	**+0.7**
	baz=313						
ELS	**Elsinore Mount**	**0.80**	**282**		**Pb**	**18 44 56.1**	**-0.3**
ELS	**Elsinore Mount**	**0.80**	**282**		**Sg**	**18 45 06.6**	**-0.5**
SVD	**Seven Oaks Dam**	**0.81**	**321**		**Sb**	**18 45 06.9**	**-0.1**
MTRP	**Mission Trails**	**0.81**	**216**		**Pb**	**18 44 56.4**	**-0.1**
MTRP					**Sb**	**18 45 07.0**	**-0.2**
BAR	**Barrett**	**0.81**	**191**		**Pb**	**18 44 56.7**	**+0.2**
BAR	**Barrett**	**0.81**	**191**		**Sb**	**18 45 07.2**	**0.0**
GTM	**Goat Mountain**	**0.82**	**8**		**Pb**	**18 44 56.8**	**+0.1**
GTM					**Sb**	**18 45 07.4**	**-0.2**
SDRC	**San Diego Road**	**0.83**	**207**		**Sb**	**18 45 07.5**	**-0.2**
CLI2	**Calipatria 2**	**0.84**	**115**		**Pb**	**18 44 57.4**	**+0.4**
RSBC	**Riverside Bore**	**0.85**	**306**		**Pb**	**18 44 57.4**	**+0.1**
RSBC					**Sb**	**18 45 08.3**	**-0.1**
RSBC	**Riverside Bore**	**0.85**	**306**		**Pb**	**18 44 57.3**	**+0.1**
RSBC					**Sb**	**18 45 07.7**	**-0.7**
BBRC	**Big Bear Solar**	**0.86**	**336**		**Sb**	**18 45 08.9**	**+0.1**
BBRC	**Big Bear Solar**	**0.86**	**336**	P	**Pb**	**18 44 57.8**	**+0.3**
	baz=156,SNR=30						
BBRC				S	**Sb**	**18 45 09.0**	**+0.2**
	baz=156						
SDMC	**San Diego Miss**	**0.88**	**218**		**Pb**	**18 44 57.8**	**+0.1**
SDMC					**Sb**	**18 45 09.1**	**0.0**
HLNC	**Highland**	**0.88**	**317**		**Pb**	**18 44 58.2**	**+0.4**
BC3	**Big Chuckawall**	**0.88**	**78**		**Pb**	**18 44 58.0**	**+0.2**
BC3	**Big Chuckawall**	**0.88**	**78**	P	**Pb**	**18 44 58.0**	**+0.2**
	baz=259,SNR=342						
BC3				S	**Sg**	**18 45 10.3**	**+0.4**
	baz=259						
IKP	**In-Ko-Pah, Jac**	**0.89**	**159**		**Sg**	**18 45 10.2**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.89**	**159**	P	**Pg**	**18 44 58.3**	**+0.1**
	baz=338,SNR=151						
IKP				S	**Sg**	**18 45 10.4**	**+0.5**
	baz=338						
COK2	**Cook Ranch 2**	**0.90**	**134**		**Pb**	**18 44 58.2**	**+0.2**
DUZA	**Dulzura**	**0.90**	**195**		**Pb**	**18 44 58.1**	**+0.1**
TKX	**Tecate**	**0.91**	**186**		**Pb**	**18 44 58.4**	**+0.2**
TKX				IAML		18 45 11.5	
	comp=N,2μm,0.2s						
CLTC	**Calectric**	**0.92**	**312**		**Pg**	**18 44 59.1**	**+0.3**
RMX	**La Rumorosa**	**0.94**	**158**		**Sn**	**18 45 13.4**	**+0.9**
RMX	**La Rumorosa**	**0.94**	**158**		**Pn**	**18 45 00.7**	**+1.2**
RMX	**La Rumorosa**	**0.94**	**158**	IAML		18 45 14.3	
	comp=E,3μm,0.3s						
RMX				IAML		18 45 15.2	
	comp=N,1μm,0.3s						
YUH	**Yuha Desert**	**0.96**	**150**	Pg	**Pb**	**18 44 58.9**	**-0.1**
YUH				IAML		18 45 13.9	
	comp=E,1μm,0.3s						
WESC	**Westside Schoo**	**0.96**	**138**		**Pb**	**18 44 59.4**	**+0.4**
FON	**Fontana**	**1.00**	**308**		**Pb**	**18 44 60.0**	**+0.2**
MLSC	**Mira Loma**	**1.03**	**301**		**Pb**	**18 45 00.5**	**+0.2**
MLSC					**Sb**	**18 45 13.4**	**-0.2**
TJX	**Tijuana**	**1.08**	**206**		**Pb**	**18 45 01.3**	**+0.3**
TJX				IAML		18 45 19.9	
	comp=N,2μm,0.6s						
TJX				IAML		18 45 24.0	
	comp=E,2μm,0.7s						
SS2	**San Sevaine**	**1.11**	**311**		**Pb**	**18 45 01.8**	**+0.1**
CHNC	**Chino**	**1.12**	**298**		**Pb**	**18 45 02.0**	**+0.3**
CHNC					**Sb**	**18 45 16.0**	**0.0**
CBX	**Cerro Bola**	**1.17**	**187**		**Pn**	**18 45 03.0**	**+0.4**
CBX	**Cerro Bola**	**1.17**	**187**		**Sn**	**18 45 18.4**	**+0.2**
SANC	**Santa Ana**	**1.19**	**281**		**Pn**	**18 45 03.0**	**+0.3**
BFSC	**Mount Baldy Ra**	**1.23**	**308**		**Pn**	**18 45 03.7**	**+0.3**
BFSC	**Mount Baldy Ra**	**1.23**	**308**	P	**Pn**	**18 45 03.6**	**+0.1**
	baz=128,SNR=120						
BFSC				S	**Sb**	**18 45 19.6**	**+0.1**
	baz=128						
PSRC	**Puddingstone R**	**1.25**	**300**		**Pn**	**18 45 04.2**	**+0.5**
IRM	**Iron Mountain**	**1.31**	**58**	P	**Pn**	**18 45 04.3**	**-0.1**
	baz=240,SNR=272						
IRM				Sb	**Sg**	**18 45 23.5**	**+0.2**
	baz=240						
HEC	**Hector,Ludlow**	**1.35**	**5**	P	**Pn**	**18 45 05.4**	**+0.4**
	baz=186						
HEC				Sb	**Sg**	**18 45 24.8**	**+0.1**
	baz=186						
RRX	**Edison Barstow**	**1.46**	**343**	P	**Pg**	**18 45 08.7**	**-0.2**
	baz=164						
RRX				Sb	**Sg**	**18 45 27.7**	**-0.3**
	baz=164						
GMRC	**Granite Mounta**	**1.47**	**28**	P	**Pn**	**18 45 07.0**	**+0.2**
	baz=208,SNR=126						
GMRC				Sb	**Sb**	**18 45 27.9**	**+1.5**
	baz=208						
FMP	**Fort Macarthur**	**1.52**	**279**	Pb	**Pb**	**18 45 08.6**	**0.0**
	baz=98						
FMP				Sg	**Sg**	**18 45 30.5**	**+0.4**
	baz=98						
PASC	**Pasadena Art C**	**1.57**	**297**		**Pn**	**18 45 08.9**	**+0.9**
PASC				IAML		18 45 31.8	
	comp=N,476nm,0.7s						
CIS	**Catalina Islan**	**1.61**	**268**	P	**Pn**	**18 45 08.7**	**+0.2**
	baz=87,SNR=31						
CIS				Sb	**Sb**	**18 45 31.4**	**+1.2**
	baz=87						
CCX	**Cicese**	**1.61**	**185**		**Pb**	**18 45 09.8**	**-0.4**
CCX				IAML		18 45 34.7	
	comp=E,428nm,0.5s						
BLYC	**Blythe**	**1.66**	**80**	Pn	**Pn**	**18 45 09.2**	**-0.1**
BLYC				IAML		18 45 36.0	
	comp=N,507nm,0.4s						
BLYC				IAML		18 45 36.2	
	comp=E,421nm,0.5s						
DECC	**Green Verdugo**	**1.72**	**297**	Pb	**Pb**	**18 45 12.0**	**0.0**
	baz=116						
DECC				Sb	**Sb**	**18 45 34.8**	**+1.5**
	baz=116						
SCI2	**San Clemente I**	**1.79**	**254**	P	**Pn**	**18 45 11.7**	**+0.7**
	baz=73,SNR=11						
SCI2				S	**Sn**	**18 45 33.7**	**+0.4**
	baz=73						
GSC	**Goldstone, Bar**	**1.84**	**352**		**Pn**	**18 45 12.6**	**+0.9**
GSC				IAML		18 45 44.2	
	comp=N,341nm,0.6s						
GSC				IAML		18 45 46.8	
	comp=E,440nm,0.7s						
GSC	**Goldstone, Bar**	**1.84**	**352**	P	**Pn**	**18 45 12.6**	**+0.9**
	baz=172,SNR=72						
GSC				Sb	**Sg**	**18 45 39.1**	**-1.0**
	baz=172						
EDW2	**Edwards Air Fo**	**1.87**	**319**	P	**Pn**	**18 45 12.8**	**+0.6**
	baz=138,SNR=87						
EDW2				Sb	**Sb**	**18 45 39.7**	**+1.8**
	baz=138						
TUQ	**Turquoise Moun**	**2.01**	**13**	Pb	**Pb**	**18 45 17.6**	**+0.6**
	baz=194						
TUQ				Sb	**Sg**	**18 45 44.3**	**-1.3**
	baz=194						
NEE2	**Needles Airpor**	**2.02**	**50**	P	**Pn**	**18 45 14.8**	**+0.7**
	baz=231,SNR=33						
NEE2				Sb	**Sg**	**18 45 44.5**	**-1.3**
	baz=231						
CCAC	**Calif City Air**	**2.09**	**323**		**Pn**	**18 45 16.3**	**+1.1**
PDMCI	**Parker Dam,Lak**	**2.12**	**67**	Sb	**Sg**	**18 45 47.8**	**-1.3**
	baz=248						
VTX	**Valle De La Tr**	**2.17**	**164**		**Pb**	**18 45 20.9**	**+1.2**
VTX				IAML		18 45 51.3	
	comp=E,340nm,0.4s						
VTX				IAML		18 45 51.5	
	comp=N,310nm,0.7s						
OSI	**Osito Audit: C**	**2.17**	**302**	P	**Pn**	**18 45 17.1**	**+0.8**
	baz=121,SNR=11						
OSI				Sb	**Sb**	**18 45 48.5**	**+2.1**
	baz=121						
LRMC	**Laurel Mtn Rad**	**2.23**	**334**	Sb	**Sb**	**18 45 50.7**	**+2.6**
	baz=154						
113A	**Mohawk Valley,**	**2.39**	**106**	Pn	**Pn**	**18 45 20.3**	**+1.0**
SHOC	**Shoshone, Teco**	**2.42**	**4**	Sb	**Sg**	**18 45 57.2**	**-1.6**
	baz=184						
QSM	**Queen of Sheba**	**2.50**	**353**		**Pn**	**18 45 21.3**	**+0.6**
ARVC	**Arvin**	**2.54**	**311**	Sb	**Sb**	**18 45 59.5**	**+2.6**
	baz=130						
SCZ2	**Santa Cruz Isl**	**2.67**	**282**	Sg	**Sg**	**18 46 08.1**	**+1.4**
	baz=100						
W13A	**Hualapai Mount**	**2.70**	**52**	Pn	**Pn**	**18 45 24.3**	**+0.6**
MPMC	**Manual Prospec**	**2.70**	**343**	P	**Pn**	**18 45 24.7**	**+1.0**
	baz=162						
MPMC				Sb	**Sb**	**18 46 05.1**	**+3.4**
	baz=162						
GWY	**Greenwater Val**	**2.71**	**357**		**Pn**	**18 45 24.5**	**+0.8**
ISA	**Isabella, Lake**	**2.73**	**324**	Sb	**Sg**	**18 46 06.1**	**-2.4**
	baz=143						
BCW	**Bitter Crk WRg**	**2.83**	**302**		**Pn**	**18 45 27.2**	**+1.8**
BCW				IAML		18 46 13.3	
	comp=N,264nm,0.7s						
BCW				IAML		18 46 15.9	
	comp=E,293nm,0.6s						
Y14A	**Wickenburg**	**2.94**	**80**		**Pn**	**18 45 27.1**	**+0.2**
PIX	**Pinacate**	**3.20**	**126**		**Pn**	**18 45 31.7**	**+1.4**
SHPR	**Sheep Range**	**3.21**	**20**	Pn	**Pn**	**18 45 31.5**	**+0.9**
WCT	**Wildcat Mounta**	**3.31**	**358**		**Pn**	**18 45 32.0**	**+0.1**
214A	**Organ Pipe Nat**	**3.45**	**115**		**Pn**	**18 45 35.1**	**+1.2**
GRAC	**Grapevine Rang**	**3.58**	**349**	IAML		18 46 40.0	
	comp=N,134nm,0.9s						
GRAC				IAML		18 46 40.1	
	comp=E,109nm,0.7s						
TIN	**Tinemaha, Big**	**3.84**	**339**	S	**Sn**	**18 46 25.2**	**+1.1**
	baz=158						
U15A	**North Rim**	**4.53**	**48**		**Pn**	**18 45 51.1**	**+2.1**
WUAZ	**Wupatki**	**4.69**	**63**		**Pn**	**18 45 51.3**	**+0.3**
WUAZ				IAML		18 47 15.5	
	comp=E,35nm,0.5s						
R11B	**Troy Canyon, C**	**4.92**	**8**		**Pn**	**18 45 55.6**	**+1.5**
NVAR	**Mina Array Bea**	**5.15**	**344**		**Pn**	**18 45 57.1**	**-0.4**
DUG	**Dugway, Tooele**	**7.32**	**23**	Pn	**Pn**	**18 46 24.7**	**-2.4**
MNHN	**Monahans**	**11.80**	**97**	Pn	**Pn**	**18 47 26.4**	**-2.0**
ODSA	**Odessa**	**11.81**	**93**	Pn	**Pn**	**18 47 28.2**	**-0.4**
OZNA	**Ozona**	**13.26**	**97**	Pn	**Pn**	**18 47 46.5**	**-1.9**
NEW	**Newport**	**14.78**	**358**	Pn	**Pn**	**18 48 09.0**	**-0.1**

*IDC **26** 18:48:19.6±1.1,34°.69S×179°.48W,h0km,mb4.1/4, mbtmp4.2/5,ML4.3/1, Error ellipse: s-maj=34.5km s-min=32.7km az=174.0*
*WEL **26** 18:48:25.5±1.3,35°.5S±7°×18°.0W±1°.2,h141km±4.4km, M4.4/12, ML4.6/12, MLv4.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=117.3, confirmed*
*NEIC **26** 18:48:26.9±1.7,34°.99S±0°.06×179°.8W±0°.1,h35km±2km, mb4.4/11, Error ellipse: s-maj=21.4km s-min=6.5km az=67.0*

ISC 26 18:48:25.8±0.7,34°.96S±0°.07×179°.6W±0°.1,h43km,n67, σ1s55/68,mb4.3/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.09**	**212**	Pn	**Pn**	**18 49 12.2**	**+0.1**
MXZ	**Matakaoa Point**	**3.09**	**212**	P	**Pn**	**18 49 12.8**	**+0.7**
WMGZ	**Waiomatatini S**	**3.27**	**208**	P	**Pn**	**18 49 16.1**	**+1.6**
PKGZ	**Pakihiroa**	**3.46**	**212**	P	**Pn**	**18 49 18.6**	**+1.3**
PKGZ				S	**Sn**	**18 49 59.1**	**+2.0**
HAZ	**Te Kaha**	**3.49**	**216**	P	**Pn**	**18 49 16.7**	**-0.9**
PUZ	**Puketiti**	**3.55**	**208**	P	**Pn**	**18 49 19.2**	**+0.9**
WIZ	**White Island**	**3.63**	**224**	P	**Pn**	**18 49 18.8**	**-0.8**
RUGZ	**Raukumara Rang**	**3.71**	**215**	P	**Pn**	**18 49 21.2**	**+0.6**
TWGZ	**Tauwhareparae**	**3.75**	**210**	P	**Pn**	**18 49 22.0**	**+0.9**
CNGZ	**Carnagh Statio**	**3.93**	**206**	P	**Pn**	**18 49 24.7**	**+1.2**
TKGZ	**Te Karaka**	**4.03**	**210**	P	**Pn**	**18 49 26.2**	**+1.3**
TKGZ				S	**Sn**	**18 50 09.5**	**-1.3**
MWZ	**Matawai**	**4.08**	**213**	P	**Pn**	**18 49 25.9**	**+0.3**
MWZ				S	**Sn**	**18 50 13.5**	**+1.4**
GRZ	**Great Barrier**	**4.21**	**251**	P	**Pn**	**18 49 28.2**	**+0.8**
URZ	**Urewera**	**4.21**	**218**	Pn	**Pn**	**18 49 27.2**	**-0.3**
	16nm,0.3s,baz=357,slow=3.8,SNR=35						
URZ				Sn	**Sn**	**18 50 13.7**	**-1.7**
	10nm,0.3s,baz=342,slow=20,SNR=7.8						
	35nm,0.3s						
URZ	**Urewera**	**4.21**	**218**	P	**Pn**	**18 49 28.2**	**+0.7**
URZ				S	**Sn**	**18 50 13.5**	**-1.9**
RTZ	**Ruatahuna**	**4.56**	**216**	Pn	**Pn**	**18 49 32.2**	**-0.1**
TOZ	**Tahuroa Road**	**4.81**	**233**	Pn	**Pn**	**18 49 36.5**	**+0.9**
WCZ	**Waipu Caves**	**5.02**	**257**	P	**Pn**	**18 49 39.3**	**+0.7**
BKZ	**Black Stump Fm**	**5.22**	**215**	Pn	**Pn**	**18 49 40.9**	**-0.5**
OUZ	**Omahuta**	**5.56**	**265**	P	**Pn**	**18 49 46.6**	**+0.5**
GLKZ	**Green Lake**	**5.86**	**15**	P	**Pn**	**18 49 50.2**	**+0.1**
GLKZ				S	**Sn**	**18 50 54.9**	**-1.1**
BFZ	**Birch Farm**	**6.58**	**209**	Pn	**Pn**	**18 49 59.5**	**-0.5**
MRZ	**Mangatainoka R**	**6.84**	**212**	Pn	**Pn**	**18 50 02.1**	**-1.5**
BHW	**Baring Head**	**7.76**	**212**	Pn	**Pn**	**18 50 12.9**	**-3.3**
TCW	**Tory Channel**	**7.88**	**216**	Pn	**Pn**	**18 50 16.3**	**-1.5**
TUWZ	**Tuamarina**	**8.21**	**216**	Pn	**Pn**	**18 50 19.4**	**-2.9**
BSWZ	**Blackbirch Sta**	**8.46**	**215**	Pn	**Pn**	**18 50 24.2**	**-1.5**
MRNZ	**Matariki Terra**	**8.79**	**221**	Pn	**Pn**	**18 50 29.7**	**-0.6**
THZ	**Tophouse**	**8.97**	**219**	Pn	Pn	18 50 27.5	-5.4
CTZ	**Chatham Island**	**9.07**	**166**	Pn	**Pn**	**18 50 32.9**	**-1.2**
KHZ	**Kahutara**	**9.16**	**214**	Pn	**Pn**	**18 50 32.9**	**-2.5**
GVZ	**Greta Valley S**	**9.83**	**213**	Pn	**Pn**	**18 50 42.3**	**-2.2**
LTZ	**Lake Taylor**	**10.04**	**217**	Pn	**Pn**	**18 50 43.3**	**-4.2**
OXZ	**Oxford**	**10.57**	**215**	Pn	**Pn**	**18 50 50.1**	**-4.4**
MQZ	**McQueen's Vall**	**10.58**	**212**	Pn	**Pn**	**18 50 51.8**	**-3.0**
CTA	**Charters Tower**	**33.50**	**287**	P	**P**	**18 55 02.8**	**+1.5**
	1.5nm,0.6s,baz=127,slow=10,SNR=1.3						
	1.5nm,0.6s						
CTAO	**Charters Tower**	**33.50**	**287**	P	**P**	**18 55 03.4**	**+2.2**
CTAO				IAmb	IAmb	18 55 38.8	
	comp=Z,8.2nm,1.1s						
AS31	**Alice Springs**	**41.72**	**273**	P	**P**	**18 56 11.7**	**+0.9**
ASAR	**Alice Springs**	**41.72**	**273**	P	**P**	**18 56 10.8**	**0.0**
ASAR	**Alice Springs**	**41.72**	**273**	P	**P**	**18 56 11.4**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=117,slow=7.3,SNR=21						
	comp=Z,1.9nm,0.6s						
WB2	**Warramunga Arr**	**43.12**	**278**	P	**P**	**

0.5nm,0.7s
ULM Lac du Bonnet 151.28 340 PKPbc PKPbc 19 19 49.2 -0.1
1.1nm,0.5s,baz=350,slow=11,SNR=3.0

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*IDC **26** 19:00:12.8±1.1,5.˚89S×142.˚85E,h0km,mb3.8/5, mbtmp3.7/8,ML3.5/2,Error ellipse: s-maj=32.0km s-min=22.8km az=77.0*
ISC 26 19:00:17.9±0.9,6.˚2S±0.˚1×142.˚6E±0.˚1,h35km,n8, σ1⁰s78/10,mb3.6/5,New Guinea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.55 125**	Pn	**Pn**	**19 01 38.1**	**0.0**
	3.0nm,0.5s,baz=224,slow=21,SNR=2.3					
PMG			Sn	**Sn**	**19 02 41.6**	**+0.8**
	0.7nm,0.3s,baz=195,slow=20,SNR=2.1					
WRA	**Warramunga Arr**	**15.84 210**	Pn	**P**	**19 04 01.3**	**-0.6**
	0.1nm,0.3s,baz=28,slow=13,SNR=2.1					
WRA			Sn	**Sn**	**19 06 50.4**	**-2.7**
	0.1nm,0.3s,baz=34,slow=24,SNR=1.7					
WRA			Lg	Lg	19 08 48.1	
	0.1nm,0.3s,baz=36,slow=27,SNR=2.0					
	0.4nm,0.4s					
ASAR	**Alice Springs**	**19.28 205**	P	**Pn**	**19 04 43.4**	**+2.3**
	0.2nm,0.3s,baz=35,slow=9.6,SNR=16					
	1.6nm,0.5s					
CMAR	**Chiang Mai Arr**	**49.51 301**	P	**P**	**19 09 06.9**	**+1.4**
	0.3nm,0.6s,baz=116,slow=5.9,SNR=2.5					
	0.3nm,0.6s					
MKAR	**Makanchi Array**	**74.88 322**	P	**P**	**19 11 55.8**	**+0.6**
	0.4nm,0.5s,baz=99,slow=8.4,SNR=5.0					
	0.4nm,0.5s					
ZALV	**Zalesovo Beam**	**76.87 329**	P	**P**	**19 12 05.7**	**-0.6**
	0.6nm,0.5s,baz=167,slow=6.9,SNR=4.0					
	0.6nm,0.5s					
BVAR	**Borovoye Array**	**84.35 325**	P	**P**	**19 12 46.5**	**0.0**
	1.6nm,0.6s,baz=106,slow=6.7,SNR=8.2					
	1.6nm,0.6s					
ILAR	**Eielson Array**	**87.41 24**	P	**P**	**19 12 58.9**	**-2.4**
	0.3nm,0.7s,baz=236,slow=6.7,SNR=4.2					
	0.3nm,0.7s					

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*DMN **26** 19:00:49.5±0.2,27.˚71N×86.˚34E,h25km,Ml4.8/8,Error ellipse: s-maj=5.2km s-min=1.7km az=22.0*
*IDC **26** 19:00:50.0±3.4,27.˚79N×86.˚15E,h0km,mb3.5/5, mbtmp3.4/7,ML3.7/1,Error ellipse: s-maj=71.6km s-min=38.0km az=41.0*
ISC 26 19:00:50.6±0.9,27.˚66N±0.˚06×86.˚34E±0.˚04,h15km±6km, n20,σ0⁰s93/33,mb3.4/5,Nepal

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	**Jiri**	**0.13 271**	*e*Pg	**Pg**	**19 00 54.6**	**0.0**
JIRN			*e*Sg	**Sg**	**19 00 57.4**	**+0.2**
	43μm,0.3s					
GUN	**Gumba**	**0.48 302**	*e*Pg	**Pg**	**19 00 59.8**	**-0.4**
GUN			*e*Sg	**Sg**	**19 01 06.4**	**-0.3**
	11μm,0.3s					
RAMN	**Ramite**	**0.74 162**	*e*Pg	**Pg**	**19 01 04.9**	**-0.2**
RAMN			*e*Sg	**Sb**	**19 01 15.9**	**+0.5**
	4μm,0.6s					
PKI	**Pulchoki**	**0.83 264**	*e*Pg	**Pg**	**19 01 06.4**	**-0.3**
PKI			*e*Sg	**Sb**	**19 01 18.1**	**+0.2**
	906nm,0.2s					
PKIN	**Phulchoki**	**0.84 265**	*e*Pg	**Pg**	**19 01 06.5**	**-0.4**
PKIN			*e*Sg	**Sg**	**19 01 17.9**	**-0.1**
	2μm,0.3s					
KKN	**Kakani**	**0.94 278**	*e*Pg	**Pb**	**19 01 08.3**	**-0.5**
KKN			*e*Sg	**Sb**	**19 01 20.5**	**-0.7**
	3μm,0.2s					
DMN	**Daman**	**1.09 268**	*e*Pg	**Pb**	**19 01 11.0**	**-0.3**
DMN			*e*Sg	**Sb**	**19 01 25.3**	**-0.2**
	2μm,0.3s					
ODAN	**Odare**	**1.23 130**	*e*Pg	**Pb**	**19 01 14.1**	**+0.4**
ODAN			*e*Sg	**Sg**	**19 01 30.6**	**+0.2**
	2μm,0.4s					
TAPN	**Taplejung**	**1.26 104**	*e*Pg	**Pn**	**19 01 13.7**	**-0.2**
TAPN			*e*Sg	**Sg**	**19 01 31.3**	**-0.1**
	2μm,0.5s					
GKN	**Gorkha**	**1.54 283**	*e*Pg	**Pb**	**19 01 18.8**	**-0.1**
GKN			*e*Sg	**Sb**	**19 01 38.9**	**+0.5**
	3μm,0.3s					
DANN	**Dangsing**	**2.38 287**	*e*Pg	**Pb**	**19 01 33.2**	**-0.1**
DANN			*e*Sg	**Sb**	**19 02 03.0**	**+0.4**
	1μm,0.4s					
KOLN	**Koldanda**	**2.43 273**	*e*Pg	**Pb**	**19 01 33.8**	**-0.3**
KOLN			*e*Sg	**Sb**	**19 02 06.0**	**+2.1**
	727nm,0.2s					
PYUN	**Piuthan**	**2.99 279**	*e*Pg	**Pb**	**19 01 44.8**	**+1.1**
PYUN			*e*Sg	**Sb**	**19 02 23.2**	**+3.0**
	2μm,0.7s					
CMAR	**Chiang Mai Arr**	**14.77 126**	Pn	**P**	**19 04 23.9**	**-1.0**
	0.1nm,0.4s,baz=295,slow=11,SNR=4.6					
MKAR	**Makanchi Array**	**19.36 352**	P	**P**	**19 05 15.2**	**-0.4**
	0.2nm,0.3s,baz=181,slow=12,SNR=18					
	1.4nm,0.6s					
KURBB	**Kurchatov Arra**	**23.69 348**	P	**P**	**19 06 01.6**	**0.0**
	1.3nm,0.9s,baz=170,slow=9.4,SNR=12					
	1.3nm,0.9s					
SONM	**Songino Array**	**25.50 32**	P	**P**	**19 06 18.8**	**+0.5**
	0.1nm,0.4s,baz=224,slow=10,SNR=1.4					
	0.1nm,0.4s					
ZALV	**Zalesovo Beam**	**26.29 358**	P	**P**	**19 06 27.8**	**+2.5**
	0.3nm,0.3s,baz=169,slow=9.8,SNR=2.2					
	0.3nm,0.3s					
BVAR	**Borovoye Array**	**27.97 339**	P	**P**	**19 06 40.5**	**0.0**
	0.3nm,0.4s,baz=142,slow=12,SNR=2.1					
	0.3nm,0.4s					
FINES	**FINESS Array B**	**51.95 328**	P	**P**	**19 09 58.3**	**-0.2**
	0.7nm,0.6s,baz=111,slow=7.6,SNR=1.3					
	0.7nm,0.6s					

IDC 26 19:00:55.0±1.5,29.˚32N×102.˚35E,h0km,mb3.9/2, mbtmp3.6/4,ML3.2/2,Error ellipse: s-maj=58.0km s-min=25.4km az=75.0,Sichuan

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.25 197**	Pn	Pn	19 03 39.2	+2.1
	0.1nm,0.3s,baz=9.0,slow=12,SNR=5.6					
	0.6nm,0.8s					
SONM	**Songino Array**	**18.75 8**	P	Pn	19 05 17.2	+1.3
	0.1nm,0.3s,baz=192,slow=13,SNR=6.3					
	0.7nm,0.7s					
KURBB	**Kurchatov Arra**	**27.82 327**	P	P	19 06 45.1	-0.7
	0.8nm,0.7s,baz=130,slow=10,SNR=7.0					
	0.8nm,0.7s					
WRA	**Warramunga Arr**	**57.88 144**	P	P	19 10 48.2	-0.6
	1.0nm,0.5s,baz=333,slow=7.9,SNR=5.5					
	1.0nm,0.5s					

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*IDC **26** 19:06:14.2±0.9,6.˚12S×142.˚90E,h0km,mb3.9/7, mbtmp3.8/10,ML3.7/2,Error ellipse: s-maj=36.2km s-min=20.3km az=84.0*
ISC 26 19:06:19.5±0.9,6.˚2S±0.˚1×142.˚9E±0.˚1,h35km,n10, σ1⁰s30/11,mb3.8/7,New Guinea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.26 127**	Pn	**Pn**	**19 07 35.2**	**-0.5**
	4.5nm,0.4s,baz=5.4,slow=3.6,SNR=6.3					
PMG			Sn	**Sn**	**19 08 35.0**	**-0.1**
	1.4nm,0.3s,baz=264,slow=19,SNR=2.7					
WRA	**Warramunga Arr**	**15.97 211**	Pn	**Pn**	**19 09 59.6**	**-2.0**
	0.2nm,0.3s,baz=29,slow=14,SNR=1.3					
WRA			Sn	Sn	19 12 47.5	-10
	0.2nm,0.3s,baz=30,slow=23,SNR=2.2					
WRA			Lg	Lg	19 14 44.7	
	0.4nm,0.3s,baz=24,slow=13,SNR=2.1					
	0.4nm,0.3s					
ASAR	**Alice Springs**	**19.38 206**	P	**P**	**19 10 42.5**	**+0.1**
	0.5nm,0.3s,baz=31,slow=9.8,SNR=26					
	5.1nm,0.8s					
VNDA	**Vanda**	**71.95 176**	P	**P**	**19 17 41.7**	**+2.8**
	0.6nm,0.5s,baz=336,slow=5.0,SNR=2.2					
	0.6nm,0.5s					
MKAR	**Makanchi Array**	**75.12 322**	P	**P**	**19 17 58.5**	**+0.4**
	0.5nm,0.7s,baz=108,slow=7.2,SNR=5.6					
	0.5nm,0.7s					
ZALV	**Zalesovo Beam**	**77.08 329**	P	**P**	**19 18 08.7**	**-0.3**
	0.8nm,0.8s,baz=101,slow=7.5,SNR=4.0					
	0.8nm,0.8s					
KURBB	**Kurchatov Arra**	**79.00 324**	P	**P**	**19 18 19.3**	**-0.5**
	0.3nm,0.7s,baz=125,slow=4.6,SNR=4.2					
	0.3nm,0.7s					
QSPA	**South Pole Qui**	**83.74 180**	P	**P**	**19 18 44.7**	**-0.1**
	0.6nm,0.8s,baz=325,slow=9.8,SNR=1.5					
	0.6nm,0.8s					
BVAR	**Borovoye Array**	**84.58 325**	P	**P**	**19 18 49.1**	**0.0**
	2.9nm,0.7s,baz=103,slow=6.7,SNR=15					
	2.9nm,0.7s					
ILAR	**Eielson Array**	**87.32 24**	P	**P**	**19 19 01.4**	**-1.1**
	0.5nm,0.7s,baz=259,slow=5.5,SNR=6.8					
	0.5nm,0.7s					

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*IDC **26** 19:10:39.7±0.8,5.˚98S×142.˚99E,h0km,mb3.9/11, mbtmp3.9/14,ML1.4/1,Error ellipse: s-maj=28.9km s-min=15.9km az=84.0*
ISC 26 19:10:41.3±0.7,6.˚0S±0.˚1×142.˚9E±0.˚1,h10km,n14, σ0⁰s93/14,mb4.1/11,New Guinea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.38 129**	Pn	**Pn**	**19 12 00.6**	**-1.0**
	0.8nm,0.3s,baz=327,slow=9.2,SNR=2.9					
PMG			Sn	**Sn**	**19 13 04.2**	**+0.5**
	0.6nm,0.3s,baz=294,slow=20,SNR=1.4					
	2.2nm,0.3s					
WRA	**Warramunga Arr**	**16.17 210**	Pn	**Pn**	**19 14 27.3**	**-1.6**
	1.2nm,0.5s,baz=29,slow=13,SNR=7.6					
WRA			Lg	Lg	19 19 13.9	
	0.1nm,0.3s,baz=108,slow=31,SNR=2.3					
ASAR	**Alice Springs**	**19.58 205**	P	**P**	**19 15 10.1**	**+0.4**
	3.7nm,0.7s,baz=35,slow=10,SNR=23					
ASAR			Lg	Lg	19 21 02.0	
	baz=17,slow=36					
STKA	**Stephens Creek**	**25.76 183**	P	**P**	**19 16 13.9**	**+1.6**
	1.6nm,0.8s,baz=356,slow=13,SNR=3.4					
	1.6nm,0.8s					
KSRS	**Korea Array**	**45.45 343**	P	**P**	**19 19 00.6**	**0.0**
	2.2nm,1.0s,baz=160,slow=9.1,SNR=6.5					
	2.2nm,1.0s					
CMAR	**Chiang Mai Arr**	**49.72 300**	P	**P**	**19 19 34.3**	**+0.1**
	0.9nm,0.3s,baz=115,slow=6.5,SNR=8.8					
	0.9nm,0.3s					
USRK	**Ussuriysk Ar.**	**50.95 350**	P	**P**	**19 19 44.0**	**+1.1**
	1.9nm,0.7s,baz=199,slow=14,SNR=5.1					
	1.9nm,0.7s					
SONM	**Songino Array**	**62.52 333**	P	**P**	**19 21 04.8**	**-0.5**
	0.1nm,0.3s,baz=157,slow=7.8,SNR=2.3					
	0.1nm,0.3s					
MKAR	**Makanchi Array**	**74.96 322**	P	**P**	**19 22 23.5**	**+0.6**
	0.4nm,0.6s,baz=92,slow=7.9,SNR=8.5					
	0.4nm,0.6s					
KURBB	**Kurchatov Arra**	**78.84 324**	P	**P**	**19 22 44.6**	**0.0**
	0.5nm,0.8s,baz=111,slow=4.2,SNR=3.2					
	0.5nm,0.8s					
QSPA	**South Pole Qui**	**83.95 180**	P	**P**	**19 23 12.4**	**+0.8**
	1.5nm,1.0s,baz=336,slow=4.1,SNR=2.0					
	1.5nm,1.0s					
NRIK	**Noril'sk**	**84.07 343**	P	**P**	**19 23 11.1**	**-0.8**
	1.1nm,0.4s,baz=76,slow=6.4,SNR=3.5					
	1.1nm,0.4s					
BVAR	**Borovoye Array**	**84.42 325**	P	**P**	**19 23 13.7**	**-0.3**
	0.9nm,0.5s,baz=119,slow=5.2,SNR=8.7					
	0.9nm,0.5s					
ILAR	**Eielson Array**	**87.11 24**	P	P	19 23 25.6	-1.5
	0.6nm,0.8s,baz=267,slow=4.6,SNR=7.0					
	0.6nm,0.8s					

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*IDC **26** 19:21:24.9±1.9,5.˚98S×142.˚91E,h0km,mb3.7/3, mbtmp3.6/5,ML3.4/2,MS3.7/2,Error ellipse: s-maj=74.0km s-min=31.1km az=104.0*
ISC 26 19:21:25.9±1.1,6.˚1S±0.˚2×143.˚0E±0.˚2,h10km,n8,σ0⁰s84/6, mb3.5/3,New Guinea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.28 129**	LR	LR	19 25 03.0	
	comp=Z,1μm,19.7s,baz=284,slow=40					
MANU	**Manus Island**	**5.93 47**	P	**Pg**	**19 23 19.6**	**0.0**
WRA	**Warramunga Arr**	**16.13 211**	Pn	**Pn**	**19 25 12.5**	**-0.4**
	0.1nm,0.3s,baz=31,slow=11,SNR=2.8					
	0.4nm,0.5s					
ASAR	**Alice Springs**	**19.54 206**	P	**Pn**	**19 25 55.4**	**+0.4**
	0.2nm,0.3s,baz=33,slow=11,SNR=16					
	2.3nm,0.8s					
KSRS	**Korea Array**	**45.55 343**	LR	LR	19 46 43.3	
	comp=Z,60nm,20.0s,baz=165,slow=33					
MKAR	**Makanchi Array**	**75.07 322**	P	**P**	**19 33 07.2**	**-0.8**
	0.4nm,0.8s,baz=103,slow=4.6,SNR=2.6					
	0.4nm,0.8s					
BVAR	**Borovoye Array**	**84.52 325**	P	**P**	**19 34 00.2**	**+1.1**
	1.2nm,0.8s,baz=97,slow=6.2,SNR=5.5					
	1.2nm,0.8s					
ILAR	**Eielson Array**	**87.16 24**	P	**P**	**19 34 11.7**	**-0.2**
	0.2nm,0.7s,baz=259,slow=5.5,SNR=1.8					
	0.2nm,0.7s					

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*MOS **26** 19:21:47.8±0.8,6.˚37S×143.˚56E,h13km,mb5.1/33,Error ellipse: s-maj=11.4km s-min=5.9km az=114.6*
*IDC **26** 19:21:47.1±0.5,6.˚45S×143.˚66E,h0km,mb4.8/15, mbtmp4.9/19,ML1.1/1,Error ellipse: s-maj=20.7km s-min=12.8km az=73.0*
*BJI **26** 19:21:47.3±0.0,6.˚46S×144.˚04E,h23km,mb4.9/74, mB5.1/31,Ms4.7/11,Ms7 4.3/11*
*NEIC **26** 19:21:50.6±2.8,6.˚49S±0.˚07×143.˚40E±0.˚07,h13km±3km, mb5.1/129,Error ellipse: s-maj=10.3km s-min=9.6km az=119.0*
*GCMT **26** 19:21:50.6±0.4,6.˚56S±0.˚03×143.˚48E±0.˚04,h23km±1km, MW5.0/66,Moment Tensor Solution. s18,c18; s66,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.94±.30; $M_{\theta\theta}$-2.00±.17; $M_{\phi\phi}$-1.93±.19; $M_{r\theta}$0.64±.21; $M_{\theta\phi}$1.33±.08; $M_{\phi r}$-0.05±.29; Best double couple: M◎3.66900×10^{16} NP1:ϕ_s129.00000°,δ49.00000°,λ83.00000°. NP2: ϕ_s319.00000°,δ41.00000°,λ97.00000°. Principal axes: T 4.0090, Plg84.0000°, Azm352.0000°; N -0.6700, Plg5.0000°, Azm133.0000°; P -3.3290, Plg4.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **26** 19:21:53.7±1.7,7.˚5S±3.˚4×14.˚3E±.˚,h28km±16km,M4.8/17, mB5.2/11,mb4.6/17,MLv5.3/6,Mw(mB)4.7/11*
ISC 26 19:21:49.7±0.3,6.˚49S±0.˚05×143.˚49E±0.˚05,h10km,n297, σ1⁰s53/239,mb5.1/124,MS4.3/3,17C-12D,New Guinea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.66 237**	P	**Pn**	**19 22 48.8**	**+2.5**
PMG	**Port Moresby**	**4.65 129**	Pn	**Pn**	**19 22 59.6**	**-0.4**
PMG	**Port Moresby**	**4.65 129**	*i*P	**Pn**	**19 22 59.8**	**-0.2**
PMG	**Port Moresby**	**4.65 129**	Pn	Pn	19 22 56.7	-3.3
	0.7nm,0.3s,baz=336,slow=9.7,SNR=3.6					
PMG			Sn	**Sn**	**19 23 46.8**	**-7.3**
	5.3nm,0.3s,baz=28,slow=14,SNR=3.7					
PMG			Lg	Lg	19 24 11.7	
	8.4nm,0.3s,baz=340,slow=22,SNR=3.6					
	135nm,0.8s					
GENI	**Genyem**	**5.09 319**	P	**Pn**	**19 23 06.9**	**+0.8**
GENI	**Genyem**	**5.09 319**	P	Pn	19 23 11.2	+5.1
	283nm,1.1s,4μm3.1nm					
MANU	**Manus Island**	**5.87 41**	Pn	**Pn**	**19 23 18.7**	**+1.9**
SMPI	**Sarmi**	**6.53 313**	P	Pn	19 23 31.1	+5.2
	131nm,1.4s,2μm0.6nm					
COEN	**Coen**	**7.43 182**	Pn	**Pn**	**19 23 39.8**	**+1.5**
COEN	**Coen**	**7.43 182**	P	**Pn**	**19 23 40.9**	**+2.6**
RABL	**Rabaul**	**8.93 76**		**Pn**	**19 24 00.1**	**+1.1**
RABL	**Rabaul**	**8.93 76**	P	**Pn**	**19 24 01.4**	**+2.5**
MTSU	**Mount Surprise**	**11.61 176**	P	**Pn**	**19 24 37.9**	**+2.3**
FAKI	**Fak Fak**	**11.75 287**		**Pn**	**19 24 36.2**	**-1.3**
SAUI	**Saumlaki**	**12.18 262**	Pn	**Pn**	**19 24 43.8**	**+0.3**
SAUI	**Saumlaki**	**12.18 262**	P	**Pn**	**19 24 44.0**	**+0.5**
SAUI	**Saumlaki**	**12.18 262**	P	**Pn**	**19 24 44.7**	**+1.2**
	295nm,1.3s,3μm					
KDU	**Kakadu**	**12.48 240**	P	**Pn**	**19 24 46.3**	**-1.3**
TV1H	**Townsville Har**	**13.10 166**	P	**Pn**	**19 25 00.5**	**+4.5**
MTN	**Manton Dam**	**13.72 242**	Pn	**Pn**	**19 25 02.4**	**-2.0**
MTN	**Manton Dam**	**13.72 242**	P	**Pn**	**19 25 02.5**	**-1.9**
DRS	**Darwin Rock St**	**13.75 244**	P	**Pn**	**19 25 06.5**	**+1.7**
CTA	**Charters Tower**	**13.79 169**	Lg	Lg	19 29 08.1	
	0.4nm,0.3s,baz=53,slow=20,SNR=4.3					
CTAO	**Charters Tower**	**13.79 169**	Pn	Pn	19 25 00.0	-5.3
CTAO	**Charters Tower**	**13.79 169**	P	Pn	19 25 00.0	-5.3
QIS	**Mount Isa**	**14.49 195**	P	**Pn**	**19 25 15.7**	**+0.7**
WB0	**Warramunga Arr**	**15.89 213**	Pn	**Pn**	**19 25 30.0**	**-3.5**
WRAB	**Tennant Creek**	**16.05 213**	Pn	**Pn**	**19 25 33.7**	**-1.9**
WRAB	**Tennant Creek**	**16.05 213**	*ce*P	**Pn**	**19 25 33.1**	**-2.5**
WRAB			pmax	pmax		
	comp=Z,11nm,0.6s					
WB2	**Warramunga Arr**	**16.05 213**	Pn	**Pn**	**19 25 33.5**	**-2.2**
WRA	**Warramunga Arr**	**16.06 213**	Pn	**Pn**	**19 25 32.6**	**-3.2**
WRA	**Warramunga Arr**	**16.06 213**	*i* P	**Pn**	**19 25 36.0**	**+0.2**
WRA			pmax	pmax		
	comp=Z,12nm,0.7s					
WRA	**Warramunga Arr**	**16.06 213**	Pn	**Pn**	**19 25 34.1**	**-1.7**
	comp=Z,12nm,0.8s,baz=31,slow=13,SNR=24					
WRA			Sn	Sn	19 28 23.5	-11
	comp=Z,1.9nm,0.3s,baz=31,slow=16,SNR=4.3					
WRA			Lg	Lg	19 30 19.4	
	comp=Z,2.1nm,0.3s,baz=40,slow=30,SNR=4.9					
HNR	**Honiara**	**16.56 101**		**Pn**	**19 25 44.6**	**+2.4**
HNR			IAmb	IAmb	19 25 47.8	
	comp=Z,160nm,0.9s					
HNR	**Honiara**	**16.56 101**	P	**P**	**19 25 46.4**	**+1.6**
HNR	**Honiara**	**16.56 101**	Pn	**Pn**	**19 25 40.1**	**-2.1**
	comp=Z,304nm,0.4s,baz=201,slow=12,SNR=1.5					
LBMI	**Labuha**	**16.98 289**	P	**Pn**	**19 25 50.3**	**+2.8**
	comp=Z,69nm,1.2s					
KNRA	**Kununurra**	**17.08 236**	Pn	**Pn**	**19 25 46.2**	**-2.6**
KNRA	**Kununurra**	**17.08 236**	P	**Pn**	**19 25 46.7**	**-2.1**
SANI	**Sanana**	**18.00 283**	P	**Pn**	**19 26 00.8**	**+0.6**
SANI	**Sanana**	**18.00 283**	P	**Pn**	**19 26 02.9**	**+2.7**
	comp=Z,42nm,0.9s,comp=Z,830nm					
SOEI	**Soe**	**19.30 259**	P	**P**	**19 26 14.8**	**-0.4**
SOEI			IAmb	IAmb	19 26 25.8	
	comp=Z,182nm,1.4s					
SOEI	**Soe**	**19.30 259**	P	**P**	**19 26 16.9**	**+1.7**
SOEI	**Soe**	**19.30 259**	P	**P**	**19 26 17.2**	**+2.0**
	comp=Z,118nm,1.1s,comp=Z,2μm					
AS01	**Alice Springs**	**19.39 207**	P	**Pn**	**19 26 18.6**	**+1.5**
AS31	**Alice Springs**	**19.41 207**	Pn	**P**	**19 26 18.1**	**+1.9**
ASAR	**Alice Springs**	**19.41 207**	P	**P**	**19 26 18.1**	**+1.8**
	comp=Z,79nm,0.9s,baz=37,slow=9.7,SNR=141					
ASAR			S	Sn	19 29 44.8	-11
	comp=Z,7.4nm,0.9s,baz=15,slow=28,SNR=2.9					
QLP	**Quilpie**	**20.00 178**	P	**P**	**19 26 24.5**	**+1.9**
EIDS	**Eidsvold**	**20.13 160**	P	**P**	**19 26 24.4**	**+0.4**
EIDS	**Eidsvold**	**20.13 160**	P	**P**	**19 26 26.5**	**+2.5**
KMSI	**Cibinong**	**20.70 289**	P	**P**	**19 26 30.5**	**+0.3**
	comp=Z,204nm,1.0s,comp=Z,2μm					
FITZ	**Fitzroy Crossi**	**20.89 235**	P	**P**	**19 26 32.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.89 235**	P	**P**	**19 26 32.3**	**0.0**
MMRI	**Maumere**	**21.17 263**	P	**P**	**19 26 31.9**	**-3.5**
MMRI			IAmb	IAmb	19 26 43.8	
	comp=Z,96nm,1.2s					
MMRI	**Maumere**	**21.17 263**	P	**P**	**19 26 35.4**	**0.0**
MMRI	**Maumere**	**21.17 263**	P	**P**	**19 26 38.2**	**+2.8**
	comp=Z,70nm,1.1s,comp=Z,1μm					
INKA	**Innaminka**	**21.30 187**	P	**P**	**19 26 38.2**	**+1.6**
LUWI	**Luwuk**	**21.36 284**	P	**P**	**19 26 37.7**	**+0.3**
LUWI	**Luwuk**	**21.36 284**	P	**P**	**19 26 39.8**	**+2.4**
LUWI	**Luwuk**	**21.36 284**	P	**P**	**19 26 41.1**	**+3.7**
	comp=Z,71nm,1.5s,comp=Z,1μm					
OOD	**Oodnadatta**	**22.45 198**	P	**P**	**19 26 50.8**	**+1.8**
AULRC	**Lightning Ridg**	**23.21 170**	P	**P**	**19 26 56.8**	**-0.2**
WRKA	**Warakurna**	**23.49 217**	P	**P**	**19 26 59.7**	**-0.2**
KAPI	**Kappang**	**23.66 272**	P	**P**	**19 27 00.9**	**-0.7**
KAPI			IAmb	IAmb	19 27 03.8	
	comp=Z,48nm,1.1s					
KAPI	**Kappang**	**23.66 272**	P	**P**	**19 27 00.9**	**-0.7**
KAPI			pmax	pmax		
	comp=Z,48nm,1.1s					
TOLI2	**Tolitoli**	**23.89 288**	P	**P**	**19 27 02.5**	**-1.3**
TOLI2	**Tolitoli**	**23.89 288**	P	**P**	**19 27 03.2**	**-0.6**
LCRK	**Leigh Creek**	**24.35 191**	P	**P**	**19 27 08.0**	**+0.1**
CMSA	**Cobar Meteorol**	**25.01 176**	P	**P**	**19 27 15.2**	**+1.3**
MULG	**Mulgathing**	**25.28 199**	P	**P**	**19 27 16.4**	**+0.1**
STKA	**Stephens Creek**	**25.32 184**	P	**P**	**19 27 15.3**	**-1.5**
STKA	**Stephens Creek**	**25.32 184**	P	**P**	**19 27 16.3**	**-0.4**
STKA	**Stephens Creek**	**25.32 184**	P	**P**	**19 27 15.7**	**-1.1**
	comp=Z,4.5nm,0.8s,baz=0.6,slow=9.9,SNR=9.1					
	comp=Z,4.5nm,0.8s					
PLAI	**Plampang**	**25.59 263**	P	**P**	**19 27 16.9**	**-2.4**
WHYH	**Whyalla**	**26.98 191**	P	**P**	**19 27 32.5**	**+0.8**
DZM	**Mont Dzumac**	**27.04 127**	P	**P**	**19 27 31.1**	**-1.4**
DZM	**Mont Dzumac**	**27.04 127**	P	**P**	**19 27 34.0**	**+1.5**
HTT	**Hallett**	**27.14 188**	P	**P**	**19 27 34.6**	**+1.3**
JAGI	**Jajag, Banyuwa**	**29.15 264**	P	P	19 27 47.9	-3.5
JAGI			IAmb	IAmb	19 27 49.5	
	comp=Z,29nm,1.0s					
BBJI	**Bungbulang**	**35.58 266**	P	**P**	**19 28 45.9**	**-1.9**
MJAR	**Matsushiro Arr**	**43.09 354**	P	P	19 29 47.4	-2.6
	comp=Z,6.9nm,1.0s,baz=178,slow=9.2,SNR=12					
	comp=Z,6.9nm,1.0s					
MAJO	**Matsushiro**	**43.09 354**	⇑*e*P	P	19 29 47.4	-2.7
MAJO			pmax	pmax		
	comp=Z,11nm,1.2s					
JCZ	**Jackson Bay**	**43.50 153**	P	**P**	**19 29 55.5**	**+2.0**
RTZ	**Ruatahuna**	**44.03 142**	P	**P**	**19 29 57.9**	**+0.1**
RTZ			IAmb	IAmb	19 30 00.7	
	comp=Z,31nm,0.9s					
BKZ	**Black Stump Fm**	**44.08 143**	P	**P**	**19 29 58.4**	**+0.2**
BKZ			IAmb	IAmb	19 30 00.1	
	comp=Z,24nm,1.0s					
NJ2	**Nanjing**	**44.95 330**	⇓P	**P**	**19 30 05.8**	**+0.8**
NJ2			pP	**pP**	**19 30 11.5**	**+3.0**
NJ2			pmax	pmax		
	comp=Z,11nm,0.8s					
TJN	**Taejon**	**45.24 342**	P	**P**	**19 30 07.0**	**-0.3**
TJN	**Taejon**	**45.24 342**	⇑*e*P	**P**	**19 30 05.9**	**-1.

comp=Z,23nm,0.9s,baz=175,slow=8.0,SNR=37
comp=Z,23nm,0.9s
XAN Xi'an 51.91 323 P **P** **19 30 58.3 -0.5**
XAN pP sP 19 31 11.8 +8.2
XAN pmax pmax
comp=Z,33nm,1.5s
XAN pmax pmax
comp=Z,190nm,4.3s
PZH PanZhiHua 52.08 311 P **P** **19 31 00.5 +0.2**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,130nm,5.2s
MDJ Mudanjiang 52.38 347 P **P** **19 31 02.0 -0.1**
MDJ pP pP 19 31 06.3 +0.7
MDJ sP sP 19 31 07.8 +0.9
MDJ PP **PP** **19 33 00.3 -0.7**
MDJ S **S** **19 38 29.0 +1.1**
MDJ sS pS 19 38 35.3 +3.0
MDJ pmax pmax
comp=Z,15nm,1.1s
MDJ pmax pmax
comp=Z,74nm,3.8s
MDJ Mudanjiang 52.38 347 P **P** **19 31 01.5 -0.6**
CN2 Changchun 52.65 344 P **P** **19 31 03.0 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
BJT Baijiatuau 52.69 334 IAmb IAmb 19 31 04.9
comp=Z,17nm,1.0s
BJT Baijiatuau 52.69 334 P **P** **19 31 04.1 -0.3**
BJI Beijing 52.71 334 P **P** **19 31 04.0 -0.5**
BJI sP **sP** **19 31 13.5 +4.1**
BJI pmax pmax
comp=Z,13nm,1.3s
CD2 Chengdu 53.17 317 P **P** **19 31 08.5 +0.3**
CD2 pmax pmax
comp=Z,40nm,0.8s
YSS Yuzh-Sakhalins 53.21 359 P **P** **19 31 07.1 -1.0**
YSS IAmb IAmb 19 31 08.1
comp=Z,22nm,1.2s
YSS Yuzh-Sakhalins 53.21 359 *eP* **P** **19 31 07.4 -0.7**
YSS pmax pmax
comp=Z,10.0nm,1.0s
TNCH TengChong 53.80 307 P **P** **19 31 13.8 +0.7**
TNCH pP pP 19 31 20.3 +3.6
TNCH pmax pmax
comp=Z,10.0nm,1.3s
BNX BinXian 53.95 346 ||P **P** **19 31 13.0 -0.5**
BNX pmax pmax
comp=Z,49nm,0.9s
BNX pmax pmax
comp=Z,84nm,4.6s
MND Mandalay 54.37 303 P **P** **19 31 17.7 +0.6**
HHC Hu-ho-hao-te 55.48 331 *eP* **P** **19 31 27.8 +2.9**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,110nm,5.7s
HHC LR LR
comp=Z,130nm,15.3s
HHC LR LR
comp=Z,130nm,15.3s
HHC LR LR
comp=Z,200nm,16.8s
BTO Baotou 56.06 330 *eP* **P** **19 31 29.8 +0.7**
BTO pP sP 19 31 42.3 +8.3
BTO PP **PP** **19 33 37.0 +2.8**
BTO S **S** **19 39 16.0 -1.9**
BTO SS **SS** **19 43 02.0 -2.4**
BTO pmax pmax
comp=Z,25nm,1.0s
BTO pmax pmax
comp=Z,210nm,6.6s
BTO LR LR
comp=Z,390nm,15.7s
BTO LR LR
comp=Z,340nm,17.3s
BTO LR LR
comp=Z,440nm,19.8s
LZH Lanzhou 56.36 322 *eP* **P** **19 31 32.0 +0.6**
LZH pP pP 19 31 38.0 +3.0
LZH sP sP 19 31 41.5 +5.2
LZH pmax pmax
comp=Z,33nm,1.1s
KLR Kul'dur 56.42 351 *ceP* **P** **19 31 30.8 -0.6**
KLR pmax pmax
comp=Z,37nm,1.7s
TYV Tymovskoe 57.12 359 *eP* **P** **19 31 35.6 -0.7**
TYV pmax pmax
comp=Z,11nm,0.9s
TYV pmax pmax
comp=Z,10.0nm,4.0s
HEH HeiHe 58.20 348 *eP* **P** **19 31 42.8 -1.1**
HEH pmax pmax
comp=Z,10.0nm,1.1s
HEH pmax pmax
comp=Z,110nm,3.9s
HIA Hailar 59.27 342 P **P** **19 31 52.1 +0.7**
HIA Hailar 59.27 342 *ceP* P 19 31 49.9 -1.5
HIA pmax pmax
comp=Z,12nm,1.0s
SHL Shillong 59.39 305 IAmb IAmb 19 31 54.1
comp=Z,20nm,1.0s
PETK Petropavlovsk- 60.58 10 P **P** **19 31 59.2 -1.1**
comp=Z,16nm,0.9s,baz=186,slow=8.8,SNR=13
comp=Z,16nm,0.9s
GTA Gaotai 60.93 322 *eP* **P** **19 32 03.5 +0.3**
GTA pP pP 19 32 09.5 +2.7
GTA pmax pmax
comp=Z,11nm,0.9s
GTA LR LR
comp=Z,100nm,12.0s
GTA LR LR
comp=Z,92nm,15.1s
GTA LR LR
comp=Z,100nm,16.7s
ZEA Zeya 61.54 349 *eP* **P** **19 32 06.5 -0.3**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.0s
LSA Lhasa 61.78 309 IAmb IAmb 19 32 11.7
comp=Z,11nm,0.9s
GOMU GeErMu 62.30 317 P **P** **19 32 13.5 +0.7**
GOMU pP pP 19 32 17.0 +0.6
GOMU pmax pmax
comp=Z,6.0nm,1.2s
ULN Ulaanbaatar 62.91 333 P **P** **19 32 16.0 -0.4**
ULN Ulaanbaatar 62.91 333 *ceP* **P** **19 32 15.9 -0.5**
ULN pmax pmax
comp=Z,7.0nm,1.1s
SONM Songino Array 63.19 333 P **P** **19 32 18.1 0.0**
comp=Z,4.1nm,1.1s,baz=157,slow=6.5,SNR=19
comp=Z,4.1nm,1.1s
CIT Chita 63.65 340 *eP* **P** **19 32 21.2 +0.2**
CIT pmax pmax
comp=Z,31nm,2.6s
MA2 Magadan 66.11 4 P **P** **19 32 35.8 -1.0**
MA2 IAmb IAmb 19 32 37.1
comp=Z,20nm,1.0s
MA2 Magadan 66.11 4 P **P** **19 32 36.0 -0.8**
MA2 Magadan 66.11 4 *deP* **P** **19 32 36.5 -0.3**
MA2 pmax pmax
comp=Z,17nm,1.0s
ZAK Zakamensk 66.44 333 *eP* **P** **19 32 38.2 -1.1**
ZAK pmax pmax
comp=Z,15nm,1.2s
HYB Hyderabad 68.38 292 *eP* **P** **19 32 51.1 -1.0**
HYB *ePcP* **PcP** **19 33 16.8 -0.9**
MOY Mondy 68.38 333 *eP* **P** **19 32 51.8 +0.3**
MOY pmax pmax
comp=Z,26nm,2.1s
YAK Yakutsk 69.15 353 *eP* **P** **19 32 55.1 -0.8**
YAK pmax pmax
comp=Z,8.0nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.1s
SEY Seymchan 69.55 4 ||*eP* **P** **19 32 58.0 -0.5**
SEY pmax pmax
comp=Z,18nm,1.7s
WMQ Urumqi 70.92 321 *eP* **P** **19 33 07.5 +0.2**
WMQ pmax pmax
comp=Z,28nm,1.1s
DGZ Jazzator, Alta 74.04 326 *ceP* **P** **19 33 25.2 -0.8**
DGZ pmax pmax
comp=Z,9.0nm,1.0s

ZSN Zaisan 74.41 323 *eP* **P** **19 33 27.5 -0.5**
baz=323
ZSN Zaisan 74.41 323 *eP* **P** **19 33 27.5 -0.5**
MK31 Makanchi Array 75.68 322 IAmb IAmb 19 33 36.4
comp=Z,17nm,1.2s
MK31 Makanchi Array 75.68 322 *ciP* **P** **19 33 35.0 -0.3**
MKAR Makanchi Array 75.68 322 P **P** **19 33 34.8 -0.5**
comp=Z,9.1nm,0.9s,baz=111,slow=6.8,SNR=60
comp=Z,9.1nm,0.9s
MAKZ Makanchi 75.88 321 P **P** **19 33 35.9 -0.6**
MAKZ IAmb IAmb 19 33 37.4
comp=Z,23nm,1.1s
MAKZ Makanchi 75.88 321 P **P** **19 33 35.9 -0.6**
MAKZ pmax pmax
comp=Z,23nm,1.1s
SHLS Shalkode 76.00 317 *eP* P 19 33 35.3 -2.1
comp=Z,9.3nm,1.1s,baz=317
SHLS Shalkode 76.00 317 *eP* P 19 33 35.3 -2.1
SHLS pmax pmax
comp=Z,9.0nm,1.1s
BILL Bilibino 76.08 9 P **P** **19 33 36.0 -1.1**
BILL Bilibino 76.08 9 ||*eP* **P** **19 33 36.7 -0.4**
BILL pmax pmax
comp=Z,11nm,2.5s
UZB Uzynbulak 76.29 317 *eP* **P** **19 33 38.5 -0.6**
comp=Z,7.9nm,0.7s,baz=317
UZB Uzynbulak 76.29 317 *eP* **P** **19 33 38.4 -0.6**
UZB pmax pmax
comp=Z,8.0nm,0.7s
KPKS Kokpek 76.64 317 *eP* **P** **19 33 40.5 -0.5**
baz=317
KPKS Kokpek 76.64 317 *eP* **P** **19 33 40.4 -0.5**
SATY Saty 76.67 317 *eP* **P** **19 33 40.4 -0.8**
comp=Z,11nm,1.3s,baz=317
SATY Saty 76.67 317 *eP* **P** **19 33 40.4 -0.8**
SATY pmax pmax
comp=Z,11nm,1.3s
ZHN Zhinishke 76.69 317 *eP* **P** **19 33 40.4 -1.0**
baz=317
ZHN Zhinishke 76.69 317 *eP* **P** **19 33 40.3 -1.0**
KSH Kashi 77.12 313 P **P** **19 33 45.3 +1.5**
KSH pmax pmax
comp=Z,12nm,1.1s
NIL Nilore 77.39 306 P **P** **19 33 45.0 -0.3**
NIL Nilore 77.39 306 P **P** **19 33 45.0 -0.3**
NIL pmax pmax
comp=Z,33nm,0.9s
TDK Taldyqorghan 77.41 319 *eP* **P** **19 33 44.5 -0.7**
comp=Z,16nm,1.0s,baz=319
TDK Taldyqorghan 77.41 319 *eP* **P** **19 33 44.5 -0.7**
TDK pmax pmax
comp=Z,16nm,1.0s
ZALV Zalesovo Beam 77.59 329 *i* P **P** **19 33 44.7 -1.2**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 77.59 329 P **P** **19 33 44.5 -1.5**
comp=Z,4.6nm,0.8s,baz=109,slow=5.2,SNR=21
comp=Z,4.6nm,0.8s
MDOK Medeo 77.64 317 *eP* **P** **19 33 46.2 -0.5**
baz=317
MDOK Medeo 77.64 317 *eP* **P** **19 33 46.1 -0.5**
TNSS Tian-Shan 77.66 316 *eP* **P** **19 33 46.9 -0.2**
baz=316
TNSS Tian-Shan 77.66 316 *eP* **P** **19 33 46.9 -0.2**
AAA Alma-Ata 77.74 317 *eP* **P** **19 33 46.9 -0.3**
baz=317
AAA Alma-Ata 77.74 317 *eP* **P** **19 33 46.8 -0.3**
ULHL Ulahol 77.87 316 P **P** **19 33 48.2 +0.2**
SNR=5.2
KUU Kurty 78.38 317 *eP* **P** **19 33 49.6 -1.0**
comp=Z,20nm,0.9s,baz=317
KUU Kurty 78.38 317 *eP* **P** **19 33 49.6 -1.0**
KUU pmax pmax
comp=Z,20nm,0.9s
SEM Semipalatinsk 78.46 324 *eP* P 19 33 49.2 -2.0
baz=324
SEM Semipalatinsk 78.46 324 *eP* P 19 33 49.1 -2.1
TKM2 Tokmak 2 78.55 316 P **P** **19 33 51.6 -0.2**
SNR=6.8
TIXI Tiksi 78.57 355 P P 19 33 49.2 -1.8
TIXI Tiksi 78.57 355 ||*eP* P 19 33 49.1 -1.9
TIXI pmax pmax
comp=Z,14nm,2.5s
KBK Karagaybulak 78.91 316 P **P** **19 33 53.8 +0.1**
SNR=5.5
UCH Uchtor 79.07 315 P **P** **19 33 55.3 +0.3**
SNR=15
CHMS Chumysh 79.16 316 P **P** **19 33 54.6 -0.3**
SNR=7.2
AAK Ala-Archa 79.22 315 P **P** **19 33 55.4 0.0**
SNR=9.5
AAK Ala-Archa 79.22 315 P **P** **19 33 55.1 -0.3**
AAK Ala-Archa 79.22 315 *ciP* **P** **19 33 55.4 0.0**
AAK pmax pmax
comp=Z,8.0nm,1.2s
USP Ospenovka 79.42 316 P **P** **19 33 56.2 -0.2**
SNR=23
KURK Kurchatov 79.53 324 P **P** **19 33 55.6 -1.2**
KURK Kurchatov 79.53 324 *ceP* **P** **19 33 56.1 -0.6**
KURK pmax pmax
comp=Z,23nm,1.7s
KURBB Kurchatov Arra 79.55 324 P **P** **19 33 55.8 -1.0**
comp=Z,2.0nm,0.2s,baz=116,slow=4.7,SNR=19
comp=Z,2.0nm,0.2s
BTLS Baital 80.31 318 *eP* **P** **19 34 00.2 -0.9**
baz=318
BTLS Baital 80.31 318 *eP* **P** **19 34 00.1 -1.0**
ANM Nome 80.33 20 P **P** **19 34 00.8 0.0**
ANM IAmb IAmb 19 34 01.9
comp=Z,22nm,1.2s
ANM Nome 80.33 20 P **P** **19 34 00.8 0.0**
ANM pmax pmax
comp=Z,21nm,1.2s
J16K Anvik River 81.28 22 IAmb IAmb 19 34 07.9
comp=Z,39nm,1.5s
DZA Taraz 81.51 315 *eP* **P** **19 34 07.0 -0.6**
comp=Z,8.4nm,1.0s,baz=315
DZA Taraz 81.51 315 *eP* **P** **19 34 07.0 -0.6**
DZA pmax pmax
comp=Z,8.0nm,1.0s
I17K Unalakleet 81.58 22 IAmb IAmb 19 34 08.9
comp=Z,23nm,1.1s
G16K Kyuk River 81.85 20 IAmb IAmb 19 34 10.3
comp=Z,26nm,1.1s
SIMJ Simiganj 82.05 310 P **P** **19 34 09.8 -0.9**
SIMJ IAmb IAmb 19 34 11.3
comp=Z,18nm,1.1s
KK31 Karatay Array 82.15 315 IAmb IAmb 19 34 11.5
comp=Z,18nm,1.6s
IUG Iuzhnay 82.22 314 *eP* **P** **19 34 10.4 -1.0**
comp=Z,9.9nm,1.3s,baz=314
IUG Iuzhnay 82.22 314 *eP* **P** **19 34 10.4 -1.0**
IUG pmax pmax
comp=Z,10.0nm,1.3s
H17K Granite Mounta 82.44 21 IAmb IAmb 19 34 12.6
comp=Z,21nm,1.1s
BRLS Borolday 82.60 315 *eP* **P** **19 34 12.3 -1.1**
baz=314
BRLS Borolday 82.60 315 *eP* **P** **19 34 12.2 -1.1**
C16K Lisburne Hills 82.66 17 IAmb IAmb 19 34 16.5
comp=Z,16nm,1.2s
BRZS Berezniki 82.81 322 *eP* P 19 34 12.3 -1.9
baz=322
BRZS Berezniki 82.81 322 *eP* P 19 34 12.3 -1.9
F17K Baldwin Pennin 82.83 19 IAmb IAmb 19 34 20.9
comp=Z,17nm,1.1s
G18K Tagagawik 83.41 20 IAmb IAmb 19 34 17.5
comp=Z,17nm,1.1s
QSPA South Pole Qui 83.48 180 P **P** **19 34 16.9 -0.8**
QSPA IAmb IAmb 19 34 18.1
comp=Z,20nm,1.0s
QSPA South Pole Qui 83.48 180 P **P** **19 34 16.8 -0.8**
comp=Z,16nm,1.2s,baz=2.8,slow=2.0,SNR=27
comp=Z,16nm,1.0s
J19K Poorman 83.55 23 IAmb IAmb 19 34 19.2
comp=Z,26nm,1.3s
E18K Tukpahlearik C 83.59 19 IAmb IAmb 19 34 18.8
comp=Z,12nm,1.0s
K20K Telida 83.85 24 IAmb IAmb 19 34 20.2
comp=Z,17nm,1.0s
H19K Roundabout Mou 84.00 21 IAmb IAmb 19 34 20.9
comp=Z,22nm,1.1s
C18K Utukok River 84.11 18 IAmb IAmb 19 34 22.4
comp=Z,16nm,1.2s
F19K Shaleruckik Mo 84.20 20 IAmb IAmb 19 34 21.3
comp=Z,12nm,1.1s
CAST Castle Rocks 84.68 24 IAmb IAmb 19 34 23.3

comp=Z,14nm,1.0s
NRIK Noril'sk 84.68 343 P **P** **19 34 22.6 -0.7**
comp=Z,33nm,1.0s,baz=121,slow=4.8,SNR=45
comp=Z,33nm,1.0s
F20K Avaraart Lake 85.01 20 IAmb IAmb 19 34 26.1
comp=Z,12nm,0.9s
BVAR Borovoye Array 85.12 325 P **P** **19 34 25.2 -0.7**
comp=Z,18nm,0.9s,baz=104,slow=6.3,SNR=62
comp=Z,18nm,0.9s
PMR Palmer 85.17 26 IAmb IAmb 19 34 25.5
comp=Z,19nm,1.0s
BRVK Borovoye 85.19 325 P **P** **19 34 25.3 -1.0**
BRVK IAmb IAmb 19 34 27.0
comp=Z,17nm,0.9s
BRVK Borovoye 85.19 325 *deP* **P** **19 34 26.1 -0.2**
BRVK pmax pmax
comp=Z,27nm,1.3s
KTH Kantishna Hill 85.21 24 IAmb IAmb 19 34 25.6
comp=Z,19nm,1.0s
BPAW Bear Paw Mtn. 85.41 24 IAmb IAmb 19 34 26.8
comp=Z,14nm,1.1s
MLY Manley 85.90 23 IAmb IAmb 19 34 36.6
comp=Z,24nm,1.3s
E21K Killik River 86.27 19 IAmb IAmb 19 34 33.4
comp=Z,15nm,1.1s
NEA2 Nenana 86.38 24 IAmb IAmb 19 34 31.4
comp=Z,28nm,1.4s
DHY Denali Highway 86.49 25 IAmb IAmb 19 34 32.7
comp=Z,17nm,0.8s
B21K Ikpikpuk River 86.62 18 IAmb IAmb 19 34 34.7
comp=Z,17nm,0.9s
WRH Wood River Hil 86.72 24 IAmb IAmb 19 34 32.9
comp=Z,24nm,1.2s
MDM Murphy Dome 86.85 23 IAmb IAmb 19 34 33.5
comp=Z,33nm,1.7s
G23K Bananza Creek 86.87 21 IAmb IAmb 19 34 35.2
comp=Z,11nm,0.9s
D22K Ayikyak River 86.89 19 IAmb IAmb 19 34 36.6
comp=Z,24nm,1.1s
CCB Clear Creek Bu 86.90 24 IAmb IAmb 19 34 33.6
comp=Z,20nm,1.1s
IL31 87.31 24 IAmb IAmb 19 34 35.2
comp=Z,15nm,1.1s
ILAR Eielson Array 87.31 24 P P 19 34 34.0 -2.5
comp=Z,8.2nm,1.0s,baz=258,slow=4.7,SNR=42
comp=Z,8.2nm,1.0s
H24K Noodor Dome 87.32 23 IAmb IAmb 19 34 43.6
comp=Z,8.7nm,1.1s
L27K Beaver Creek, 88.87 26 IAmb IAmb 19 34 44.8
comp=Z,15nm,1.1s
I26K Coal Creek Min 88.98 24 IAmb IAmb 19 34 45.9
comp=Z,17nm,1.4s
K27K Chicken 89.05 25 IAmb IAmb 19 34 46.0
comp=Z,19nm,1.1s
EGAK Eagle 89.64 24 IAmb IAmb 19 34 47.9
comp=Z,20nm,1.2s
DAWY Dawson 90.19 25 IAmb IAmb 19 34 51.0
comp=Z,12nm,1.0s
M29M Somme Creek 90.21 27 IAmb IAmb 19 34 50.6
comp=Z,15nm,1.1s
GEYT Alibeck 90.30 308 P **P** **19 34 50.6 -0.7**
comp=Z,1.6nm,0.7s,baz=88,slow=7.9,SNR=4.7
comp=Z,1.6nm,0.7s
J29N Klondike Camp 90.78 25 IAmb IAmb 19 36 23.7
comp=Z,31nm,0.2s
G30M tAoh Zrail Nji 92.14 23 IAmb IAmb 19 34 58.9
comp=Z,16nm,1.2s
ARU Arti 92.55 326 P P 19 34 58.8 -2.4
ARU IAmb IAmb 19 34 60.0
comp=Z,10nm,1.2s
ARU Arti 92.55 326 *ciP* P 19 34 58.1 -3.1
ARU 19 38 39.1
ARU S **SKSac** **19 45 28.2 -6.6**
ARU pmax pmax
comp=Z,12nm,1.3s
ELIB Princess Elisa 92.81 196 *dP* **P** **19 35 02.1 -0.3**
comp=Z,5.9nm,1.2s
INK Inuvik 93.39 22 IAmb IAmb 19 35 05.0
comp=Z,9.3nm,1.2s
NVAR Mina Array Bea 100.42 52 P **Pdif** **19 35 36.7 -1.0**
comp=Z,0.5nm,0.6s,baz=256,slow=6.7,SNR=4.0
YKA Yellowknife Ar 101.22 28 P **Pdif** **19 35 38.6 -1.7**
comp=Z,0.6nm,1.0s,baz=280,slow=4.7,SNR=6.1
KIV Kislovodsk 102.25 313 *eP* **Pdif** **19 35 42.8 -2.7**
KIV pmax pmax
comp=Z,3.0nm,1.0s
OBN Obninsk 104.95 325 *iP* **Pdif** **19 35 55.5 -1.5**
OBN *e* 19 40 14.6
OBN *ePPP* PPP 19 42 29.8
OBN pmax pmax
comp=Z,2.0nm,0.9s
TXAR Lajitas Array 113.05 61 PKiKP **PKiKP** **19 40 27.4 -0.8**
comp=Z,0.7nm,0.9s,baz=318,slow=1.7,SNR=5.1
F36A Milaca 117.28 41 **PKPdf** **19 40 34.0 -1.6**
S39A Bolivar 119.99 50 **PKPdf** **19 40 39.2 -1.8**
PLCA Paso Flores 123.56 149 PKP **PKPdf** **19 40 46.9 -1.1**
comp=Z,1.9nm,0.8s,baz=213,slow=5.7,SNR=4.3
O48B Farmland 125.08 45 **PKPdf** **19 40 49.3 -1.5**
VLDQ Val d'Or 125.89 33 **PKPdf** **19 40 50.0 -2.0**
BO02 Sierra Bellavi 127.74 144 **PKPdf** **19 40 55.8 -0.4**
CPUP Villa Florida 141.63 149 PKP **PKPdf** **19 41 21.1 -1.1**
comp=Z,1.3nm,0.6s,baz=124,slow=0.6,SNR=7.5
TORD Torodi Ar. Bea 141.81 283 PKhKP PKPpre 19 41 17.3
comp=Z,1.9nm,0.8s,baz=66,slow=4.0,SNR=10
SDV Santo Domingo 146.11 84 **PKPdf** **19 41 29.7 -0.9**
ETMB Extrema 146.27 118 **PKPdf** **19 41 29.8 -0.8**
TRCB Terra Rica 146.90 152 **PKPdf** **19 41 30.7 -0.8**
AQDB Aquidauana 147.23 145 PKPbc **PKPdf** **19 41 32.6 +0.5**
KIC Kosan Boka 148.43 272 ||*i*PKP1 **PKPdf** **19 41 37.4 +3.2**
comp=Z,29nm,0.8s
DBIC Dimbokro 148.56 272 PKPbc **PKPdf** **19 41 36.5 +2.1**
comp=Z,20nm,0.8s,baz=106,slow=2.9,SNR=19
LIC Lamto 148.71 271 ||*i*PKP1 **PKPdf** **19 41 38.0 +3.3**
comp=Z,61nm,0.8s
TIC Toumodi 148.72 272 ||*i*PKP1 **PKPdf** **19 41 38.1 +3.4**
comp=Z,31nm,0.8s
PTLB Pontes e Lacer 148.74 134 PKPdf **PKPdf** **19 41 32.5 -2.1**
SAML Samuel 149.31 120 **PKPdf** **19 41 38.5 +2.9**
SAML Samuel 149.31 120 PKP2 **PKPdf** **19 41 38.5 +2.9**
BDFB Brasilia 155.24 153 PKP **PKPdf** **19 41 44.3 -0.2**
comp=Z,0.9nm,0.4s,baz=243,slow=14,SNR=3.6

*IDC **26** 19:47:24.6±1.8,33.˚45S×177.˚95W,h0km,mb3.8/4, mbtmp3.9/5,ML3.4/1,Error ellipse: s-maj=40.5km s-min=27.0km az=81.0*
ISC 26 19:47:27.8±1.7,33.˚4S±0.˚1×177.˚6W±0.˚2,h35km,n7, σ0°89/8,mb4.0/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.47**	**220**	Pn		**Pn**	**19 48 59.9**	**-0.6**
	0.8nm,0.3s,baz=51,slow=15,SNR=2.8							
URZ				Sn		**Sn**	**19 50 13.9**	**+1.0**
	1.4nm,0.3s,baz=104,slow=19,SNR=2.2							
	4.8nm,0.3s							
HNR	**Honiara**	**31.53**	**314**	P		**P**	**19 53 48.0**	**+1.2**
	666nm,0.1s,baz=140,slow=16,SNR=4.3							
CTA	**Charters Tower**	**34.68**	**283**	P		**P**	**19 54 14.1**	**-0.2**
	0.7nm,0.3s,baz=113,slow=7.8,SNR=1.6							
	0.7nm,0.3s							
ASAR	**Alice Springs**	**43.33**	**270**	P		**P**	**19 55 25.9**	**-0.9**
	0.6nm,0.6s,baz=111,slow=7.6,SNR=8.7							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**44.59**	**275**	P		**P**	**19 55 36.1**	**-0.7**
	0.9nm,0.4s,baz=114,slow=7.8,SNR=18							
	0.9nm,0.4s							
VNDA	**Vanda**	**45.17**	**186**	P		**P**	**19 55 40.9**	**+0.3**
	0.5nm,0.4s,baz=16,slow=6.3,SNR=7.2							
	0.5nm,0.4s							
FINES	**FINESS Array B**	**148.04**	**339**	PKPbc		**PKPab**	**20 07 11.4**	**-0.2**
	1.3nm,0.5s,baz=48,slow=2.1,SNR=9.5							

*IDC **26** 19:53:28.7±1.1,6.˚37S×143.˚54E,h0km,mb3.9/5, mbtmp3.9/8,ML1.4/1,Error ellipse: s-maj=31.3km s-min=20.2km az=95.0*
ISC 26 19:53:33.7±0.7,6.˚40S±0.˚09×143.˚48E±0.˚09,h35km,n17, σ1°87/18,mb3.8/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.71**	**130**	Pn		**Pn**	**19 54 41.9**	**-0.4**
	1.1nm,0.3s,baz=69,slow=22,SNR=3.3							
PMG				Sn		**Sn**	**19 55 34.8**	**-1.0**
	2.1nm,0.3s,baz=312,slow=14,SNR=4.4							
	4.2nm,0.4s							

COEN	Coen	7.52	182	P	Pn	19 55 23.2	+2.2
KDU	Kakadu	12.53	239	P	Pn	19 56 26.8	-2.7
MTN	Manton Dam	13.75	241	P	Pn	19 56 43.4	-3.0
DRS	Darwin Rock St	13.78	243	P	Pn	19 56 44.5	-2.2
WRA	Warramunga Arr	16.13	213	Pn	Pn	19 57 15.5	-2.5
	1.6nm,0.6s,baz=30,slow=13,SNR=19						
WRA				Lg	Lg	20 02 01.5	
	0.3nm,0.3s,baz=27,slow=25,SNR=6.4						
WB1	Warramunga Ar.	16.14	212	P	Pn	19 57 15.8	-2.3
KNRA	Kununurra	17.13	236	P	Pn	19 57 28.2	-2.3
ASAR	Alice Springs	19.49	207	P	P	19 57 58.8	+0.9
	11nm,0.7s,baz=34,slow=9.8,SNR=89						
ASAR				Lg	Lg	20 03 51.5	
	0.1nm,0.3s,baz=83,slow=31,SNR=3.0						
FITZ	Fitzroy Crossi	20.93	235	P	P	19 58 14.3	+0.7
OOD	Oodnadatta	22.53	198	P	P	19 58 33.2	+2.5
WRKA	Warakurna	23.56	216	P	P	19 58 41.2	0.0
KSRS	Korea Array	45.98	343	P	P	20 01 54.0	+0.5
	1.0nm,0.8s,baz=168,slow=8.9,SNR=3.4						
	1.0nm,0.8s						
PETK	Petropavlovsk-	60.49	10	P	P	20 03 40.2	+0.2
	4.1nm,0.9s,baz=166,slow=6.9,SNR=3.7						
	4.1nm,0.9s						
MKAR	Makanchi Array	75.60	322	P	P	20 05 15.9	+0.8
	0.2nm,0.4s,baz=111,slow=6.8,SNR=4.6						
	0.2nm,0.4s						
BVAR	Borovoye Array	85.05	325	P	P	20 06 05.8	+0.1
	0.4nm,0.6s,baz=114,slow=7.2,SNR=4.7						
	0.4nm,0.6s						
ILAR	Eielson Array	87.23	24	P	P	20 06 15.9	-0.3
	0.7nm,0.9s,baz=250,slow=5.5,SNR=5.2						
	0.7nm,0.9s						

*IDC **26** 20:14:42.7±2.0,5.°69S×152.°48E,h0km,mb3.5/5, mbtmp3.6/6,ML1.9/1,Error ellipse: s-maj=75.1km s-min=23.4km az=122.0*

ISC 26 20:14:49.0±2.0,5.°7S±0.°3×152.°3E±0.°4,h40km,n6,σ0s96/7, mb3.5/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.24	234	Pn	Pn	20 16 19.1	+0.4
	1.6nm,0.3s,baz=51,slow=8.2,SNR=8.1						
PMG				Sn	Sn	20 17 27.7	-1.1
	2.8nm,0.3s,baz=264,slow=20,SNR=9.3						
	9.4nm,0.5s						
WRA	Warramunga Arr	22.44	229	P	P	20 19 44.8	+0.1
	0.5nm,0.7s,baz=58,slow=12,SNR=2.4						
	0.5nm,0.7s						
ASAR	Alice Springs	25.11	223	P	P	20 20 11.3	+0.9
	2.4nm,0.9s,baz=54,slow=9.4,SNR=17						
	2.4nm,0.9s						
SONM	Songino Array	66.84	328	P	P	20 25 37.2	+0.2
	0.3nm,0.7s,baz=126,slow=7.3,SNR=2.4						
	0.3nm,0.7s						
MKAR	Makanchi Array	80.69	319	P	P	20 26 58.6	+0.5
	0.1nm,0.5s,baz=106,slow=5.1,SNR=1.6						
	0.1nm,0.5s						
ILAR	Eielson Array	83.22	22	P	P	20 27 09.9	-1.0
	0.8nm,0.7s,baz=241,slow=5.3,SNR=13						
	0.8nm,0.7s						

*TRN **26** 20:24:27.4, 10.°05N×62.°74W,h165km,MD3.1, Venezuela.*

*FUNV **26** 20:24:28.6, 10.°32N×62.°94W,h15km,MW3.4*

ISC 26 20:24:26.5±1.0,10.°20N±0.°05×63.°01W±0.°03,h10km,n10, σ1s46/19,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	Carupano	0.52	335	eP	Pg	20 24 35.8	-0.8
CRUV				eS	Sg	20 24 42.0	-1.5
PCRV	Puerto La Cruz	1.60	269	eP	Pg	20 24 56.8	-0.4
PCRV				eS	Sn	20 25 15.7	0.0
TRN	Trinidad (W)	1.64	74	eP	Pg	20 24 57.6	-0.4
TRN				eS	Sg	20 25 19.5	+0.1
GRGR	Grenville	2.33	35	eP	Pn	20 25 06.4	+1.4
GRGR				eS	Sb	20 25 35.9	-1.7
GCMP	Grenada, Carri	2.75	34	eP	Pn	20 25 12.1	+1.4
GCMP				eS	Sn	20 25 45.4	+1.4
FUNV	FUNVISIS	3.75	274	eP	Pn	20 25 26.3	+1.8
BENV	Beln	4.52	267	eP	Pn	20 25 37.5	+2.3
BENV				eS	Sn	20 26 27.0	-0.9
LUEV	Luepa	4.60	160	eP	Pn	20 25 36.9	+0.6
LUEV				eS	Sn	20 26 28.9	-1.0
BAUV	El Baul	5.12	256	eP	Pn	20 25 44.9	+1.6
BAUV				eS	Sn	20 26 40.6	-1.9
BAUV	El Baul	5.12	256	eP	Pn	20 25 45.5	+2.3
BAUV				eS	Sn	20 26 42.2	-0.2

*IDC **26** 20:38:22.8±1.1,6.°00S×142.°96E,h0km,mb3.8/6, mbtmp3.9/8,ML1.6/1,MS3.1/3,Error ellipse: s-maj=41.0km s-min=23.1km az=73.0*

ISC 26 20:38:27.5±0.9,6.°2S±0.°1×143.°0E±0.°1,h35km,n11, σ1s47/10,mb3.7/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.27	128	Pn	Pn	20 39 43.1	-0.8
	1.4nm,0.3s,baz=302,slow=19,SNR=3.8						
PMG				Sn	Sn	20 40 43.5	0.0
	1.4nm,0.3s,baz=263,slow=20,SNR=3.3						
PMG				LR	LR	20 42 40.7	
	comp=Z,94nm,18.0s,baz=288,slow=48						
	5.5nm,0.4s						
CTA	Charters Tower	14.21	167	Lg	Lg	20 45 59.9	
	0.5nm,0.3s,baz=148,slow=10,SNR=1.7						
CTA				LR	LR	20 47 05.9	
	comp=Z,146nm,18.9s,baz=332,slow=36						
WRA	Warramunga Arr	16.05	211	Pn	Pn	20 42 08.5	-2.2
	0.3nm,0.3s,baz=30,slow=11,SNR=6.7						
WRA				Lg	Lg	20 46 51.6	
	0.1nm,0.3s,baz=44,slow=32,SNR=4.3						
ASAR	Alice Springs	19.46	206	P	P	20 42 52.9	+1.5
	14nm,0.7s,baz=33,slow=9.1,SNR=32						
GUMO	Guam	19.71	6	LR	LR	20 49 45.8	
	comp=Z,48nm,20.3s,baz=160,slow=35						
STKA	Stephens Creek	25.61	183	P	P	20 43 55.9	+2.1
	1.8nm,0.7s,baz=16,slow=7.5,SNR=3.5						
	1.8nm,0.7s						
CMAR	Chiang Mai Arr	49.81	300	P	P	20 47 16.4	-1.0
	0.4nm,0.6s,baz=148,slow=5.3,SNR=1.7						
	0.4nm,0.6s						
MKAR	Makanchi Array	75.09	322	P	P	20 50 07.2	+1.2
	0.4nm,0.7s,baz=103,slow=6.7,SNR=5.0						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	78.97	324	P	P	20 50 28.1	+0.4
	0.2nm,0.4s,baz=118,slow=4.3,SNR=2.4						
	0.2nm,0.4s						
BVAR	Borovoye Array	84.55	325	P	P	20 50 56.7	-0.4
	2.3nm,0.8s,baz=116,slow=6.8,SNR=7.7						
	2.3nm,0.8s						
ILAR	Eielson Array	87.23	24	P	P	20 51 10.1	0.0
	0.4nm,0.8s,baz=269,slow=3.9,SNR=3.3						
	0.4nm,0.8s						

*IDC **26** 20:43:46.9±0.7,56.°61N×148.°56W,h0km,mb4.0/19, mbtmp4.0/25,ML3.4/5,MS3.5/5,Error ellipse: s-maj=18.3km s-min=12.2km az=23.0*

*NEIC **26** 20:43:47.3±1.5,56.°58N±0.°08×148.°66W±0.°08,h10km±1km, mb4.2/7,ML3.9/80,ML3.6(AEIC),Error ellipse: s-maj=13.5km s-min=6.1km az=164.0*

*MOS **26** 20:43:47.7±0.7,56.°70N×148.°59W,h15km,mb4.5/17, Error ellipse: s-maj=17.0km s-min=6.1km az=95.1*

*AEIC **26** 20:43:50.0±1.6,56.°52N±0.°08×148.°6W±0.°1,h1km±6km, Error ellipse: s-maj=12.0km s-min=8.7km az=174.0*

ISC 26 20:43:48.1±0.5,56.°61N±0.°06×148.°59W±0.°04,h10km, n252,σ1s06/243,mb4.2/33,MS3.6/4,12C-3D,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	2.47	300		Pn	20 44 27.3	-1.1
KDAK	Kodiak Island	2.47	300		Sn	20 44 55.7	-2.8
KDAK	Kodiak Island	2.47	300	ceP	Pn	20 44 27.1	-1.3
KDAK				pmax	pmax		
	comp=Z,33nm,0.3s						
KDAK	Kodiak Island	2.47	300	Pn	Pn	20 44 27.0	-1.4
	comp=Z,7.4nm,0.3s,baz=141,slow=5.0,SNR=72						
KDAK				Sn	Sn	20 44 56.0	-2.5
	comp=Z,13nm,0.3s,baz=241,slow=23,SNR=4.4						
KDAK				LR	LR	20 45 18.0	
	comp=Z,225nm,20.0s,baz=202,slow=37						
	comp=Z,23nm,0.4s						
OHAK	Old Harbor	2.65	285		Sn	20 44 58.6	-4.3
OHAK	Old Harbor	2.65	285	Pn	Pn	20 44 28.9	-1.9
OHAK	Old Harbor	2.65	285	P	Pn	20 44 27.9	-2.9
	baz=105						
OHAK				S	Sn	20 44 58.6	-4.3
	baz=105						
SYI	Shuyak Island	2.86	316		Sn	20 45 07.4	-0.8
SYI	Shuyak Island	2.86	316	Pn	Pn	20 44 33.3	-0.4
Q20K	Shuyak Island	2.86	316	P	Pn	20 44 33.4	-0.4
	baz=135						
Q20K				S	Sn	20 45 07.4	-0.9
	baz=135						
Q23K	Middleton Isla	3.06	22		Sn	20 45 11.3	-1.9
Q23K	Middleton Isla	3.06	22	Pn	Pn	20 44 35.7	-0.9
Q23K				IAML		20 45 13.8	
	comp=E,265nm,1.5s						
Q23K				IAML		20 45 24.2	
	comp=N,236nm,1.5s						
Q23K	Middleton Isla	3.06	22	P	Pn	20 44 35.9	-0.7
	baz=202						
Q23K				S	Sn	20 45 11.3	-1.9
	baz=202						
MID	Middleton Isla	3.07	22	Pn	Pn	20 44 35.6	-1.0
MID				IAML		20 45 13.8	
	comp=E,267nm,1.4s						
MID				IAML		20 45 24.1	
	comp=N,198nm,1.4s						
MID	Middleton Isla	3.07	22	P	Pn	20 44 35.6	-1.0
CNPM	China Poot	3.24	335		Pn	20 44 38.2	-0.8
CNPM	China Poot	3.24	335		Sn	20 45 16.3	-1.3
CNPM	China Poot	3.24	335	IAML		20 45 20.4	
	comp=E,108nm,0.6s						
CNPM				IAML		20 45 22.5	
	comp=N,82nm,0.5s						
BRSE	Bradley Lake S	3.34	341		Pn	20 44 39.6	-0.7
BRSE	Bradley Lake S	3.34	341	P	Pn	20 44 39.6	-0.7
	baz=160						
BRLK	Bradley Lake	3.38	340		Pn	20 44 39.8	-1.2
BRLK	Bradley Lake	3.38	340		Sn	20 45 18.7	-2.5
BRLK	Bradley Lake	3.38	340	IAML		20 45 22.6	
	comp=N,106nm,0.7s						
BRLK				IAML		20 45 27.0	
	comp=E,87nm,0.6s						
P23K	Montague Islan	3.45	10		Pn	20 44 41.2	-0.7
P23K	Montague Islan	3.45	10	P	Pn	20 44 41.2	-0.7
	baz=190						
HOM	Homer	3.46	333	Pn	Pn	20 44 40.6	-1.4
HOM				IAML		20 46 29.1	
	comp=E,355nm,1.3s						
SEW	Seward	3.53	353		Pn	20 44 41.9	-1.0
SEW	Seward	3.53	353	P	Pn	20 44 41.9	-1.0
	baz=172						
Q19K	Cape Douglas,	3.57	313		Pn	20 44 43.8	+0.3
P19K	Oil Pt	3.92	323	Pn	Pn	20 44 48.1	-0.2
P19K				IAML		20 45 36.6	
	comp=E,187nm,0.5s						
P19K				IAML		20 45 38.9	
	comp=N,151nm,0.6s						
P19K	Oil Pt	3.92	323	P	Pn	20 44 48.3	0.0
	baz=140						
O22K	Cooper Landing	3.92	352		Pn	20 44 47.8	-0.5
O22K	Cooper Landing	3.92	352	P	Pn	20 44 47.9	-0.5
	baz=171						
HIN	Hinchinbrook I	3.95	15		Pn	20 44 48.0	-0.8
HIN				IAML		20 45 38.5	
	comp=N,236nm,1.1s						
KAIM	Kayak Island	3.99	32	Pn	Pn	20 44 48.8	-0.5
KAIM	Kayak Island	3.99	32	P	Pn	20 44 48.8	-0.5
	baz=214						
O20K	Slope Mountain	4.08	330		Pn	20 44 50.3	-0.3
O20K	Slope Mountain	4.08	330	P	Pn	20 44 50.3	-0.3
	baz=148						
IVE	Iliamna Volcan	4.13	327		Pn	20 44 50.4	-0.9
ILSW	Iliamna Southw	4.14	326		Pn	20 44 51.6	0.0
ILSW				IAML		20 45 41.9	
	comp=N,81nm,0.4s						
ILSW				IAML		20 45 47.4	
	comp=E,86nm,0.6s						
EYAK	Cordova Ski Ar	4.22	19		Pn	20 44 52.0	-0.4
EYAK	Cordova Ski Ar	4.22	19	P	Pn	20 44 52.0	-0.4
	baz=201						
FID	Port Fidalgo	4.29	14	Pn	Pn	20 44 52.5	-0.9
FID				IAML		20 45 46.7	
	comp=E,76nm,0.5s						
FID				IAML		20 45 53.6	
	comp=N,96nm,1.1s						
SUCK	Suckling Hills	4.30	34		Pn	20 44 53.5	0.0
SUCK				IAML		20 45 49.9	
	comp=E,128nm,1.4s						
SUCK				IAML		20 46 10.9	
	comp=N,148nm,1.5s						
RAGM	Ragged Mountai	4.30	27		Pn	20 44 53.2	-0.5
GLI	Glacier Island	4.35	10	Pn	Pn	20 44 53.9	-0.3
GLI				IAML		20 46 53.1	
	comp=E,167nm,0.2s						
GLI				IAML		20 46 53.1	
	comp=N,112nm,0.3s						
GLI	Glacier Island	4.35	10	P	Pn	20 44 53.8	-0.4
	baz=190						
HMT	Hamilton	4.37	30		Pn	20 44 54.7	+0.2
NICHA	Nichawak Mount	4.37	32		Pn	20 44 54.3	-0.2
CAPN	Captain Cook N	4.38	343	Pn	Pn	20 44 54.4	-0.2
RSO	Redoubt South	4.43	332		Pn	20 44 54.7	-0.9
RDT	Redoubt	4.45	335		Pn	20 44 54.6	-1.0
GOAT	Goat Mountain	4.46	25		Pn	20 44 55.7	-0.1
RDWB	Redoubt West	4.48	332		Pn	20 44 55.2	-0.9
P18K	Big Mountain,	4.50	311	Pn	Pn	20 44 53.8	-2.5
RC01	Rabbit Creek A	4.53	353	Pn	Pn	20 44 55.5	-1.2
RC01				IAML		20 45 48.6	
	comp=N,67nm,0.4s						
RC01				IAML		20 45 50.5	
	comp=E,80nm,0.7s						
NCT	North Crescent	4.56	332		Pn	20 44 56.5	-0.8
BERG	Berg Lake	4.58	32	Pn	Pn	20 44 56.8	-0.6
BERG				IAML		20 46 02.0	
	comp=N,137nm,0.8s						
GRIN	Grindle Hills	4.60	35		Pn	20 44 57.6	-0.1
FIS	Fire Island	4.62	350		Pn	20 44 57.6	-0.3
FIS				IAML		20 45 54.5	
	comp=E,147nm,1.2s						
SNH	Sunshine Point	4.68	38	Pn	Pn	20 44 59.2	+0.3
SNH				IAML		20 46 06.8	
	comp=E,113nm,1.5s						
SNH				IAML		20 47 30.0	
	comp=N,128nm,1.5s						
O19K	Port Alsworth	4.69	322	Pn	Pn	20 44 56.4	-2.4
KHIT	Khitrov Hills	4.75	34		Pn	20 44 59.2	-0.6
DIV	Divide	4.76	17		Pn	20 44 59.6	-0.3
O18K	Koktuh Hills	4.77	316	Pn	Pn	20 44 59.2	-0.8
KNK	Knik Glacier	4.81	1		Pn	20 45 00.7	0.0
KNK				IAML		20 46 54.2	
	comp=E,90nm,0.4s						
KNK				IAML		20 46 54.5	
	comp=N,63nm,0.8s						
KNK	Knik Glacier	4.81	1	P	Pn	20 45 00.5	-0.2
	baz=181						
BMRM	Bremner River	4.83	24		Pn	20 45 00.7	-0.2
BMRM	Bremner River	4.83	24	P	Pn	20 45 00.7	-0.2
	baz=206						
WAX	Waxell Ridge	4.88	36		Pn	20 45 00.7	-0.9
BARK	Barkley Ridge	4.97	38		Pn	20 45 02.3	-0.5
N20K	Mount Spurr	4.97	339	P	Pn	20 45 02.2	-0.6
	baz=157						
SPCR	Spurr Chakacha	4.97	339		Pn	20 45 02.2	-0.6
SUA	Susitna One	4.99	348	Pn	Pn	20 45 02.4	-0.7
SUA	Susitna One	4.99	348	P	Pn	20 45 02.6	-0.5
	baz=166						
MESA	MESA	5.00	42	Pn	Pn	20 45 02.7	-0.6
MESA				IAML		20 46 06.1	
	comp=E,51nm,1.1s						
MESA				IAML		20 46 21.9	
	comp=N,101nm,1.4s						
PMR	Palmer	5.00	357	Pn	Pn	20 45 03.0	-0.1
PMR				IAML		20 46 02.2	
	comp=N,36nm,1.0s						
PMR	Palmer	5.00	357	P	Pn	20 45 03.1	-0.1
CRQM	Cirque	5.03	32		Pn	20 45 03.3	-0.5
CRQM	Cirque	5.03	32	IAML		20 46 00.8	
	comp=E,73nm,1.0s						
CRQM				IAML		20 46 10.8	
	comp=N,90nm,0.9s						
CRQE	Cirque	5.04	32	P	Pn	20 45 03.3	-0.6
	baz=216						
KLU	Klutina	5.08	15		Pn	20 45 04.4	0.0
KLU				IAML		20 46 02.3	
	comp=N,61nm,0.4s						
KLU				IAML		20 46 04.5	
	comp=E,45nm,0.5s						
KLU	Klutina	5.08	15	P	Pn	20 45 04.0	-0.4
	baz=196						
ISLE	Juniper Island	5.16	37	Pn	Pn	20 45 05.0	-0.6
ISLE				IAML		20 46 08.1	
	comp=N,89nm,1.1s						
ISLE				IAML		20 46 18.5	
	comp=E,42nm,0.8s						
BAGL	Bagley Icefiel	5.17	39		Pn	20 45 04.9	-0.5
STLK	Strandline Lak	5.18	343		Pn	20 45 05.4	-0.2
GHO	Glory Hole Cre	5.18	358		Pn	20 45 05.7	0.0
GHO				IAML		20 46 10.1	
	comp=N,68nm,0.6s						
GHO				IAML		20 46 12.6	
	comp=E,76nm,0.7s						
N19K	Bonanza Creek	5.21	326	Pn	Pn	20 45 05.5	-0.6
N19K	Bonanza Creek	5.21	326	P	Pn	20 45 05.6	-0.6
	baz=142						
SML	Sawmill	5.21	1	Pn	Pn	20 45 06.4	+0.2
SML				IAML		20 46 11.2	
	comp=E,54nm,0.5s						
SML				IAML		20 46 14.9	
	comp=N,66nm,1.0s						
SML	Sawmill	5.21	1	P	Pn	20 45 06.3	+0.2
	baz=181						
SPNN	North Nagishla	5.22	338		Pn	20 45 06.6	+0.3
SCM	Sheep Creek Mo	5.28	7		Pn	20 45 07.4	+0.4
SCM				IAML		20 46 14.8	
	comp=E,66nm,1.4s						
SCM				IAML		20 46 18.0	
	comp=N,52nm,1.2s						
SCM	Sheep Creek Mo	5.28	7	P	Pn	20 45 07.3	+0.4
	baz=187						
SCM	Sheep Creek Mo	5.28	7	P	Pn	20 45 07.4	+0.4
VRDI	Verde Repeater	5.34	28	Pn	Pn	20 45 08.0	0.0
VRDI				IAML		20 46 17.4	
	comp=N,47nm,1.1s						
KIAG	Kiagna River	5.40	34		Pn	20 45 08.5	-0.3
N25K	Chitina, Valde	5.41	21		Pn	20 45 08.5	-0.4
N25K	Chitina, Valde	5.41	21	P	Pn	20 45 09.1	+0.2
	baz=203						
SAMH	Samovar Hills	5.41	46		Pn	20 45 08.7	-0.2
GLB	Gilahina Butte	5.43	25		Pn	20 45 08.5	-0.7
CHGN	Chignik	5.46	271	Pn	Pn	20 45 08.4	-1.1
TABL	Table Mountain	5.47	42		Pn	20 45 08.9	-0.9
PTPK	Patty Peak	5.58	32		Pn	20 45 11.0	-0.3
N18K	Kilae Creek	5.58	320	Pn	Pn	20 45 10.2	-1.0
N18K	Kilae Creek	5.58	320	P	Pn	20 45 10.4	-0.7
	baz=135						
MCARA	McCarthy VSAT	5.58	29	Pn	Pn	20 45 11.1	0.0
MCARA	McCarthy VSAT	5.58	29	P	Pn	20 45 11.2	0.0
	baz=212						
SKT	Skwentna	5.59	346	Pn	Pn	20 45 11.4	+0.2
SKT	Skwentna	5.59	346	P	Pn	20 45 11.6	+0.3
	baz=163						
PCA	Pinnacle	5.61	48		Pn	20 45 10.7	-0.9
PINM	Pinnacle	5.61	48	P	Pn	20 45 10.7	-0.9
	baz=234						
M24K	Tolsona, Glenn	5.65	12	Pn	Pn	20 45 12.4	+0.3
M24K	Tolsona, Glenn	5.65	12	P	Pn	20 45 12.8	+0.7
	baz=193						
BARN	Barnard Glacie	5.73	36		Pn	20 45 13.0	-0.4
PNL	Peninsula	5.75	54		Pn	20 45 13.0	-0.5
PNL	Peninsula	5.75	54	P	Pn	20 45 13.0	-0.5
	baz=240						
CTG	Chitna Glacier	5.76	38	P	Pn	20 45 13.3	-0.5
	baz=223						
CTGM	Chitina Glacie	5.77	38		Pn	20 45 12.7	-1.1
M20K	Styx River	5.77	338	Pn	Pn	20 45 13.3	-0.6
M20K	Styx River	5.77	338	P	Pn	20 45 13.6	-0.3
	baz=155						
SVW2	Sparrevohn	5.78	324		Pn	20 45 12.8	-1.0
LOGN	Logan Glacier	5.78	40		Pn	20 45 13.0	-1.0
BCPM	Bancas Point	5.79	51	Pn	Pn	20 45 13.5	-0.5
WACK	Wrangell Chich	5.81	20		Pn	20 45 15.1	+0.6
O16K	Kokwok River B	5.86	305		Pn	20 45 14.9	0.0
N17K	Nushagak Hills	5.97	315	Pn	Pn	20 45 14.5	-1.9
WAT6	Susitna Watana	6.00	4		Pn	20 45 17.0	0.0
WAT6	Susitna Watana	6.00	4	P	Pn	20 45 17.0	0.0
	baz=184						
HARP	HAARP	6.06	15		Pn	20 45 17.9	+0.2
HARP	HAARP	6.06	15	P	Pn	20 45 17.9	+0.2
	baz=198						
M19K	Big River Lodg	6.08	333	Pn	Pn	20 45 16.5	-1.5
M18K	Stony River	6.15	326		Pn	20 45 18.2	-0.7
M18K	Stony River	6.15	326	P	Pn	20 45 18.2	-0.7
	baz=140						
WAT7	Susitna Watana	6.24	359		Pn	20 45 20.6	+0.3
O29M	Mount Kennedy	6.42	51		Pn	20 45 23.0	+0.1
O29M	Mount Kennedy	6.42	51	P	Pn	20 45 22.7	-0.1
	baz=238						
L19K	White Mountain	6.43	333		Pn	20 45 21.9	-0.9
M26K	Nabesna, AK	6.46	24	Pn	Pn	20 45 23.4	+0.1
M26K	Nabesna, AK	6.46	24	P	Pn	20 45 23.8	+0.5
	baz=208						
P29M	Windy Craggy	6.50	58	Pn	Pn	20 45 22.8	-0.9
P29M	Windy Craggy	6.50	58	P	Pn	20 45 22.8	-0.9
	baz=246						
DHY	Denali Highway	6.51	5	Pn	Pn	20 45 24.2	+0.2
DHY	Denali Highway	6.51	5	P	Pn	20 45 24.3	+0.2
	baz=186						
PAX	Paxson	6.57	13		Pn	20 45 25.2	+0.5
PAX	Paxson	6.57	13	P	Pn	20 45 25.2	+0.5
	baz=195						
PAX	Paxson	6.57	13	P	Pn	20 45 25.2	+0.5
M27K	Edge Creek, AK	6.70	28	Pn	Pn	20 45 26.9	+0.3
M27K	Edge Creek, AK	6.70	28	P	Pn	20 45 27.1	+0.6
	baz=213						
SDPT	Sand Point	6.79	264	Pn	Pn	20 45 24.3	-3.4
RND	Reindeer	6.82	359	Pn	Pn	20 45 28.7	+0.5
RND	Reindeer	6.82	359	P	Pn	20 45 28.7	+0.5
S31K	Pelican	6.83	73		Pn	20 45 25.9	-2.4
TRF	Thorofare Moun	6.91	354		Pn	20 45 28.2	-1.3
TRF	Thorofare Moun	6.91	354	P	Pn	20 45 30.2	+0.6
	baz=172						
L26K	Log Cabin Wild	6.95	20	Pn	Pn	20 45 31.0	+1.1
M16K	Timber Creek	6.96	314	Pn	Pn	20 45 29.5	-0.6
L18K	Granite Mounta	6.97	327	Pn	Pn	20 45 28.8	-1.4
YUK4	Talbot Arm	6.99	43	P	Pn	20 45 33.1	+2.4
	baz=230						
N15K	Kwethluk River	7.01	305	Pn	Pn	20 45 31.3	+0.5
CAST	Castle Rocks	7.05	347	Pn	Pn	20 45 31.9	+0.7
KTH	Kantishna Hill	7.06	351	Pn	Pn	20 45 31.9	+0.4
MCK	McKinley	7.14	359	P	Pn	20 45 34.1	+1.5
	baz=178						
HYT	Haines Junctio	7.15	49	Pn	Pn	20 45 33.1	+0.4
O14K	Tigyukauivet M	7.25	297	Pn	Pn	20 45 34.3	+0.3
K20

comp=N,3.0nm,0.4s
G23K **Bananza Creek** 10.16 357 **Pn** **20 46 12.7 -1.2**
F20K **Avaraart Lake** 10.99 345 **Pn** **20 46 24.8 -0.4**
BBB **Bella Bella** 12.71 102 Pn **Pn** **20 46 47.9 -0.9**
comp=N,54nm,1.3s,baz=210,slow=21,SNR=2.2
INK **Inuvik** 13.58 24 Pn **Pn** **20 47 01.3 +0.7**
baz=204,slow=15,SNR=3.9
comp=N,1.6nm,1.0s
YKA **Yellowknife Ar** 18.04 57 *e*P **P** **20 47 59.5 +0.5**
YKA **Yellowknife Ar** 18.04 57 P **P** **20 47 59.0 0.0**
comp=N,0.1nm,0.3s,baz=267,slow=12,SNR=11
comp=N,1.1nm,0.8s
NEW **Newport** 20.77 100 P Pn 20 48 30.1 -1.3
comp=N,0.7nm,0.3s,baz=324,slow=14,SNR=1.2
comp=N,0.7nm,0.3s
YBH **Yreka Blue Hor** 22.35 121 LR LR 20 55 13.7
comp=N,187nm,18.9s,baz=64,slow=31
BILL **Bilibino** 23.25 318 P **P** **20 48 53.9 -1.3**
BILL IAmb IAmb 20 48 57.9
comp=Z,11nm,1.0s
BILL **Bilibino** 23.25 318 *e*P **P** **20 48 53.3 -1.9**
BILL pmax pmax
comp=Z,9.0nm,1.0s
WVOR **Wild Horse Val** 23.82 114 IAmb IAmb 20 49 03.1
comp=Z,6.1nm,1.1s
RLMT **Red Lodge** 26.97 98 IAmb IAmb 20 49 31.3
comp=Z,5.0nm,1.1s
NVAR **Mina Array Bea** 27.03 119 P **P** **20 49 30.6 0.0**
comp=Z,0.3nm,0.5s,baz=325,slow=9.2,SNR=1.7
comp=Z,0.3nm,0.5s
PDAR **Pinedale Array** 28.36 102 P **P** **20 49 43.5 +1.1**
comp=Z,0.2nm,0.5s,baz=309,slow=7.1,SNR=2.6
comp=Z,0.2nm,0.5s
R11B **Troy Canyon, C** 28.43 116 P **P** **20 49 42.7 -0.3**
SRU **San Rafael Swe** 30.44 109 P **P** **20 50 01.2 +0.4**
SRU IAmb IAmb 20 50 09.1
comp=Z,4.0nm,1.0s
SRU **San Rafael Swe** 30.44 109 P **P** **20 50 01.2 +0.4**
SRU pmax pmax
comp=Z,4.0nm,1.0s
V12A **Nelson** 30.85 118 P **P** **20 50 03.6 -0.7**
ULM **Lac du Bonnet** 31.36 79 *e*P **P** **20 50 09.2 +0.6**
ULM **Lac du Bonnet** 31.36 79 LR LR 21 01 40.9
comp=Z,79nm,19.4s,baz=250,slow=34
X16A **Lo Mia Camp, P** 33.58 115 P **P** **20 50 27.2 -1.2**
X16A IAmb IAmb 20 50 37.0
comp=Z,2.1nm,0.8s
TIXI **Tiksi** 35.60 327 *e*P **P** **20 50 46.4 +1.2**
TIXI pmax pmax
comp=Z,14nm,3.7s
YAK **Yakutsk** 39.43 313 *ce*P **P** **20 51 18.5 +0.7**
YAK pmax pmax
comp=Z,14nm,1.7s
TXAR **Lajitas Array** 41.59 112 P **P** **20 51 36.6 +0.6**
comp=Z,0.6nm,0.9s,baz=305,slow=8.7,SNR=4.4
comp=Z,0.6nm,0.9s
SUMG **Summit** 42.51 25 *i* P **P** **20 51 44.0 +0.6**
ZEA **Zeya** 45.27 304 *e*P P 20 52 11.5 +6.1
ZEA pmax pmax
comp=Z,10.0nm,0.7s
KLR **Kul'dur** 46.03 296 *e*P **P** **20 52 12.5 +1.1**
KLR pmax pmax
comp=Z,5.0nm,1.2s
TKL **Tuckaleechee C** 47.53 88 LR LR 21 12 17.3
comp=Z,96nm,18.4s,baz=354,slow=36
NRIK **Noril'sk** 47.95 337 *e*P **P** **20 52 27.1 +0.9**
NRIK pmax pmax
comp=Z,7.0nm,1.2s
NRIK **Noril'sk** 47.95 337 P **P** **20 52 25.4 -0.8**
comp=Z,2.9nm,0.5s,baz=27,slow=3.5,SNR=5.0
comp=Z,2.9nm,0.5s
H11N2 **WAKE ISLAND Hy** 49.38 240 T T 21 45 47.6
baz=30,slow=76,SNR=36
H11N3 **WAKE ISLAND Hy** 49.39 240 T T 21 45 48.4
baz=30,slow=76,SNR=31
H11N1 **WAKE ISLAND Hy** 49.40 240 T T 21 45 51.8
baz=30,slow=76,SNR=28
H11S1 **WAKE ISLAND Hy** 50.52 240 T T 21 47 14.3
baz=30,slow=76,SNR=36
H11S2 **WAKE ISLAND Hy** 50.54 240 T T 21 47 15.8
baz=30,slow=76,SNR=40
H11S3 **WAKE ISLAND Hy** 50.54 240 T T 21 47 17.6
baz=30,slow=76,SNR=39
ARCES **ARCESS Array B** 54.08 3 P **P** **20 53 12.3 0.0**
comp=Z,1.5nm,0.9s,baz=8.7,slow=8.8,SNR=4.9
comp=Z,1.5nm,0.9s
KSRS **Korea Array** 56.32 288 *e*P **P** **20 53 30.5 +1.7**
KSRS pmax pmax
comp=Z,2.0nm,0.8s
KSRS **Korea Array** 56.32 288 P **P** **20 53 30.2 +1.4**
comp=Z,1.4nm,0.8s,baz=53,slow=7.6,SNR=5.0
comp=Z,1.4nm,0.8s
ULN **Ulaanbaatar** 58.42 310 *e*P **P** **20 53 45.1 +1.4**
ULN pmax pmax
comp=Z,3.0nm,1.0s
SONM **Songino Array** 58.72 310 P **P** **20 53 47.2 +1.4**
comp=Z,3.1nm,0.9s,baz=47,slow=7.2,SNR=22
comp=Z,3.1nm,0.9s
ZALV **Zalesovo Beam** 61.49 327 *e*P **P** **20 54 05.0 +0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV **Zalesovo Beam** 61.49 327 P **P** **20 54 04.7 +0.2**
comp=Z,2.0nm,0.6s,baz=21,slow=6.5,SNR=11
comp=Z,2.0nm,0.6s
FINES **FINESS Array B** 62.21 3 P **P** **20 54 09.6 +0.4**
comp=Z,3.3nm,1.1s,baz=2.7,slow=8.0,SNR=10.0
comp=Z,3.3nm,1.1s
KIRV **Kirov** 64.25 350 *e*P **P** **20 54 24.4 +1.7**
DGZ **Jazzator, Alta** 64.33 323 *e*P **P** **20 54 22.3 -1.4**
DGZ pmax pmax
comp=Z,3.0nm,1.1s
ARU **Arti** 65.19 344 *d i*P **P** **20 54 29.4 +0.4**
ARU S **S** **21 03 13.0 +1.4**
ARU SS **SS** **21 07 20.7 -2.2**
ARU pmax pmax
comp=Z,6.0nm,1.2s
BRVK **Borovoye** 66.14 336 *ce*P **P** **20 54 35.8 +0.7**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BVAR **Borovoye Array** 66.14 335 P **P** **20 54 35.8 +0.6**
comp=Z,3.0nm,0.7s,baz=30,slow=7.5,SNR=17
comp=Z,3.0nm,0.7s
KURK **Kurchatov** 66.14 329 P **P** **20 54 35.9 +0.7**
KURBB **Kurchatov Arra** 66.25 329 P **P** **20 54 35.9 0.0**
comp=Z,1.1nm,0.7s,baz=27,slow=6.0,SNR=7.6
comp=Z,1.1nm,0.7s
MK31 **Makanchi Array** 68.54 325 *ce*P **P** **20 54 50.6 +0.1**
MKAR **Makanchi Array** 68.54 325 P **P** **20 54 50.6 +0.1**
comp=Z,1.1nm,0.8s,baz=40,slow=5.8,SNR=10.0
comp=Z,1.1nm,0.8s
OBN **Obninsk** 68.55 357 *e*P **P** **20 54 50.7 +0.4**
OBN *e* 20 55 16.1
OBN *e* 20 57 25.0
OBN pmax pmax
comp=Z,6.0nm,1.1s
BELG **Belogornoye** 70.54 350 *e*P **P** **20 55 03.0 +0.4**
BELG pmax pmax
comp=Z,2.0nm,1.0s
AKASG **Malin Array Be** 73.04 1 P **P** **20 55 17.6 -0.1**
comp=Z,0.9nm,0.5s,baz=354,slow=6.4,SNR=2.5
comp=Z,0.9nm,0.5s
AAK **Ala-Archa** 74.67 328 *e*P **P** **20 55 27.8 +0.1**
AAK pmax pmax
comp=Z,5.0nm,2.5s
TGY **Tagaytay City** 78.62 278 LR LR 21 27 50.2
comp=Z,38nm,21.7s,baz=155,slow=34
KIV **Kislovodsk** 79.35 352 *e*P **P** **20 55 52.6 -1.3**
KIV pmax pmax
comp=Z,5.0nm,1.0s
ESDC **Sonseca Array** 79.52 27 P **P** **20 55 55.3 +0.5**
comp=Z,1.1nm,0.8s,baz=335,slow=6.0,SNR=5.3
comp=Z,1.1nm,0.8s
GEYT **Aibeck** 83.14 339 P **P** **20 56 14.2 +0.2**
comp=Z,2.7nm,0.8s,baz=308,slow=7.3,SNR=6.2
comp=Z,2.7nm,0.8s
BRTR **Keskin Array B** 84.01 358 P **P** **20 56 18.9 +0.3**
comp=Z,1.6nm,0.9s,baz=319,slow=8.6,SNR=2.9
comp=Z,1.6nm,0.9s
CMAR **Chiang Mai Arr** 86.46 298 P **P** **20 56 31.5 +0.5**
comp=Z,1.3nm,0.8s,baz=13,slow=4.7,SNR=13
comp=Z,1.3nm,0.8s
WRA **Warramunga Arr** 99.56 248 P **Pdif** **20 57 31.6 +0.2**
comp=Z,1.0nm,0.8s,baz=65,slow=8.6,SNR=9.4
comp=Z,1.0nm,0.8s
QSPA **South Pole Qui** 146.41 180 PKPbc **PKPab** **21 03 27.3 -1.4**
comp=Z,6.9nm,0.9s,baz=67,slow=0.3,SNR=13
BOSA **Boshof** 151.68 11 PKPbc **PKiKP** **21 03 42.5 -0.4**
comp=Z,2.3nm,0.8s,baz=323,slow=1.9,SNR=5.7

IDC 26 20:47:46.3±1.9, 5°99S×143°03E, h0km, mb3.8/3, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=76.5km s-min=30.2km az=105.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.24**	**211**	Pn	Pn	20 51 34.1	-1.9
	0.1nm,0.3s,baz=34,slow=14,SNR=6.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**19.64**	**206**	P	Pn	20 52 17.6	-0.6
	0.2nm,0.3s,baz=34,slow=9.7,SNR=17						
	2.2nm,0.7s						
MKAR	**Makanchi Array**	**75.01**	**322**	P	P	20 59 29.6	-0.2
	0.4nm,0.7s,baz=123,slow=6.1,SNR=5.3						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**84.46**	**325**	P	P	21 00 21.4	+0.5
	1.2nm,0.7s,baz=119,slow=5.6,SNR=7.9						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**87.05**	**24**	P	P	21 00 33.1	-0.4
	0.6nm,1.1s,baz=248,slow=4.6,SNR=4.6						
	0.6nm,1.1s						

*NEIC **26** 20:51:26.6±2.1, 8°.4S±0°.2×158°.5E±0°.1, h10km±2km, mb4.4/10, Error ellipse: s-maj=33.9km s-min=14.1km az=32.0*
*IDC **26** 20:51:27.9±0.9, 8°.98S×158°.36E, h0km, mb4.0/8, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=22.8km s-min=18.5km az=1.0*
ISC 26 20:51:28.8±1.0, 8°.8S±0°.2×158°.37E±0°.07, h10km, n21, σ1s05/21, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.67**	**111**		**Pn**	**20 51 56.5**	**-1.6**
HNR				Sn	**Sn**	**20 52 19.7**	**+0.1**
HNR	**Honiara**	**1.67**	**111**	Pn	**Pn**	**20 51 58.0**	**-0.1**
	11µm,0.3s,baz=244,slow=5.6,SNR=96						
HNR				Sn	**Sb**	**20 52 20.9**	**+0.1**
	12µm,0.3s,baz=61,slow=18,SNR=12						
CTA	**Charters Tower**	**16.20**	**225**	Pn	**Pn**	**20 55 16.1**	**-0.7**
	0.3nm,0.3s,baz=28,slow=9.0,SNR=1.8						
	1.4nm,0.4s						
EIDS	**Eidsvold**	**17.86**	**202**		**Pn**	**20 55 38.9**	**+1.4**
ARMA	**Armidale**	**22.39**	**195**	P	**P**	**20 56 29.7**	**+2.2**
ARMA				IAmb	IAmb	20 57 04.7	
	comp=Z,44nm,1.4s						
WB0	**Warramunga Arr**	**25.62**	**242**	P	**P**	**20 56 58.5**	**-0.2**
WB0				IAmb	IAmb	20 56 59.5	
	comp=Z,8.2nm,1.1s						
WRAB	**Tennant Creek**	**25.72**	**242**	P	**P**	**20 56 59.8**	**+0.2**
WRAB				IAmb	IAmb	20 57 00.4	
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**25.72**	**242**	P	**P**	**20 56 59.5**	**-0.1**
WB2				IAmb	IAmb	20 57 00.5	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**25.73**	**242**	P	**P**	**20 56 59.8**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=68,slow=9.6,SNR=9.7						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**27.67**	**235**	P	**P**	**20 57 16.4**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=67,slow=9.2,SNR=9.4						
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**27.73**	**212**	P	**P**	**20 57 17.1**	**-0.5**
STKA	**Stephens Creek**	**27.73**	**212**	P	**P**	**20 57 17.2**	**-0.4**
	comp=Z,4.4nm,0.5s,baz=50,slow=14,SNR=14						
	comp=Z,4.4nm,0.5s						
KNRA	**Kununurra**	**29.70**	**254**	P	**P**	**20 57 33.2**	**-2.1**
BBOO	**Buckleboo**	**31.55**	**218**	P	**P**	**20 57 50.8**	**-0.7**
BBOO				IAmb	IAmb	20 57 51.7	
	comp=Z,9.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**33.09**	**250**	P	**P**	**20 58 04.2**	**-1.0**
FITZ				IAmb	IAmb	20 58 25.6	
	comp=Z,2.0nm,1.1s						
FORT	**Forrest**	**35.72**	**228**	P	**P**	**20 58 27.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**64.58**	**295**	P	**P**	**21 02 08.4**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=4.5,SNR=1.3						
	comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**72.69**	**326**	P	P	21 02 59.0	+2.0
	comp=Z,1.4nm,0.9s,baz=129,slow=4.2,SNR=9.9						
	comp=Z,1.4nm,0.9s						
QSPA	**South Pole Qui**	**81.16**	**180**	P	**P**	**21 03 44.4**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=49,slow=2.1,SNR=6.0						
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**83.87**	**21**	P	P	21 03 59.4	+1.0
	comp=Z,0.3nm,0.7s,baz=219,slow=7.5,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**86.98**	**318**	P	**P**	**21 04 15.3**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=99,slow=7.5,SNR=6.3						
	comp=Z,0.2nm,0.5s						

*NEIC **26** 20:53:28.9±2.7, 24°.4S±0°.2×70°.01E±0°.05, h10km±2km, mb4.5/20, Error ellipse: s-maj=30.2km s-min=5.1km az=189.0*
*IDC **26** 20:53:31.1±1.5, 23°.72S×69°.72E, h0km, mb4.1/11, mbtmp4.1/11, MS3.8/9, Error ellipse: s-maj=43.6km s-min=29.9km az=9.0*
ISC 26 20:53:29.1±1.2, 24°.3S±0°.2×70°.0E±0°.1, h10km, n48, σ1s15/34, mb4.3/17, MS3.8/9, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**26.26**	**209**	T	T	21 27 01.1	
	baz=40,slow=75,SNR=1021						
H04N1	**CROZET ISLANDS**	**26.27**	**209**	T	T	21 27 00.7	
	baz=40,slow=75,SNR=1352						
H04N3	**CROZET ISLANDS**	**26.28**	**209**	T	T	21 26 59.5	
	baz=40,slow=75,SNR=1363						
PALK	**Pallekele**	**33.09**	**20**	LR	LR	21 09 56.8	
	comp=Z,157nm,21.6s,baz=319,slow=30						
KIBK	**Kibwezi**	**37.84**	**300**	P	**P**	**21 00 45.1**	**-1.3**
KIBK				IAmb	IAmb	21 00 52.0	
	comp=Z,5.5nm,1.1s						
H01W2	**Cape Leeuwin H**	**39.49**	**116**	T	T	21 43 45.2	
	baz=274,slow=75,SNR=5.0						
H01W3	**Cape Leeuwin H**	**39.49**	**116**	T	T	21 43 39.9	
	baz=274,slow=75,SNR=4.7						
H01W1	**Cape Leeuwin H**	**39.51**	**116**	T	T	21 43 46.0	
	baz=274,slow=75,SNR=5.7						
LEM	**Lembang**	**39.99**	**70**	LR	LR	21 14 10.0	
	comp=Z,99nm,19.3s,baz=221,slow=31						
BOSA	**Boshof**	**40.13**	**254**	LR	LR	21 14 12.7	
	comp=Z,148nm,21.4s,baz=101,slow=31						
LBTB	**Lobatse**	**40.24**	**259**	LR	LR	21 14 32.7	
	comp=Z,142nm,18.7s,baz=115,slow=32						
LSZ	**Lusaka**	**40.25**	**275**	LR	LR	21 15 17.2	
	comp=Z,130nm,19.1s,baz=137,slow=33						
LODK	**Lodwar**	**43.55**	**305**	P	**P**	**21 01 32.9**	**-0.6**
SUR	**Sutherland**	**43.73**	**248**	LR	LR	21 16 04.3	
	comp=Z,123nm,19.5s,baz=88,slow=31						
TSUM	**Tsumeb**	**48.74**	**265**	LR	LR	21 20 30.7	
	comp=Z,113nm,18.9s,baz=144,slow=33						
CMAR	**Chiang Mai Arr**	**51.02**	**36**		**P**	**21 02 30.2**	**-1.4**
CMAR	**Chiang Mai Arr**	**51.02**	**36**	P	**P**	**21 02 32.7**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=228,slow=6.7,SNR=6.9						
CMAR				LR	LR	21 21 47.1	
	comp=Z,47nm,19.1s,baz=225,slow=34						
	comp=Z,0.5nm,0.6s						
RAYN	**Ar Rayn**	**53.19**	**332**	P	**P**	**21 02 45.1**	**-2.5**
SHL	**Shillong**	**53.92**	**25**	P	**P**	**21 02 54.0**	**+0.9**
SHL				IAmb	IAmb	21 02 56.2	
	comp=Z,4.8nm,1.0s						
ASAR	**Alice Springs**	**57.88**	**104**	P	**P**	**21 03 21.3**	**-0.3**
ASAR	**Alice Springs**	**57.88**	**104**	P	P	21 03 28.1	+6.5
	comp=Z,2.9nm,0.7s,baz=30,slow=10,SNR=4.3						
	comp=Z,2.9nm,0.7s						
AS31	**Alice Springs**	**57.88**	**104**	P	**P**	**21 03 19.9**	**-1.7**
KBL	**Kabul**	**58.55**	**359**	P	**P**	**21 03 24.7**	**-1.5**
WRA	**Warramunga Arr**	**59.28**	**100**	P	**P**	**21 03 31.6**	**+0.2**
WB2	**Warramunga Arr**	**59.29**	**100**	P	**P**	**21 03 30.5**	**-0.9**
WRAB	**Tennant Creek**	**59.29**	**100**	P	**P**	**21 03 31.4**	**-0.1**
WB0	**Warramunga Arr**	**59.38**	**99**	P	**P**	**21 03 29.3**	**-2.8**
BTK	**Batken**	**64.06**	**1**	P	**P**	**21 04 03.2**	**+0.1**
BTK				IAmb	IAmb	21 04 04.5	
	comp=Z,3.3nm,0.8s						
KK31	**Karatay Array**	**67.10**	**0**	P	**P**	**21 04 23.6**	**+0.9**
KK31				IAmb	IAmb	21 04 24.7	
	comp=Z,6.3nm,1.2s						
KKAR	**Karatay Array**	**67.10**	**0**	P	**P**	**21 04 22.6**	**-0.1**
GURO	**Guroymak-BITLI**	**67.83**	**337**	P	**P**	**21 04 28.6**	**+1.0**
GURO				IAmb	IAmb	21 04 29.7	
	comp=Z,3.1nm,1.0s						
MK31	**Makanchi Array**	**71.65**	**9**	P	**P**	**21 04 50.9**	**+0.1**
MKAR	**Makanchi Array**	**71.65**	**9**	P	**P**	**21 04 50.9**	**+0.1**
MKAR	**Makanchi Array**	**71.65**	**9**	P	**P**	**21 04 51.5**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=199,slow=5.9,SNR=13						
	comp=Z,1.6nm,0.6s						
BRTR	**Keskin Array B**	**72.21**	**331**	P	**P**	**21 04 53.8**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=123,slow=6.1,SNR=5.6						
	comp=Z,1.8nm,0.9s						
ABKAR	**Akbulak array**	**73.80**	**353**	P	**P**	**21 05 02.7**	**-0.8**
ABKAR	**Akbulak array**	**73.80**	**353**	P	**P**	**21 05 03.3**	**-0.2**
ABKAR				IAmb	IAmb	21 05 04.6	
	comp=Z,4.6nm,1.0s						
KURBB	**Kurchatov Arra**	**75.00**	**6**	P	**P**	**21 05 11.4**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=203,slow=6.4,SNR=10						
	comp=Z,1.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.38**	**291**	P	**P**	**21 05 21.0**	**+1.9**
	comp=Z,1.4nm,1.0s,baz=119,slow=6.3,SNR=4.6						
	comp=Z,1.4nm,1.0s						
BVAR	**Borovoye Array**	**77.03**	**0**	P	**P**	**21 05 21.1**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=155,slow=7.4,SNR=7.9						
BVAR				LR	LR	21 38 19.2	
	comp=Z,51nm,18.5s,baz=92,slow=35						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**78.92**	**24**	P	**P**	**21 05 34.5**	**+1.7**
	comp=Z,1.0nm,1.0s,baz=197,slow=4.0,SNR=4.9						
	comp=Z,1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**79.00**	**9**	P	**P**	**21 05 33.6**	**+0.8**
ZALV	**Zalesovo Beam**	**79.00**	**9**	P	**P**	**21 05 33.2**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=180,slow=2.5,SNR=10						
	comp=Z,2.0nm,0.7s						
BURAR	**Bucovina Array**	**82.17**	**331**	P	**P**	**21 05 51.1**	**+0.9**
AKASG	**Malin Array Be**	**82.94**	**335**	P	**P**	**21 05 53.6**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=136,slow=4.4,SNR=10						
	comp=Z,1.7nm,0.6s						
ESDC	**Sonseca Array**	**93.80**	**312**	P	**P**	**21 06 47.3**	**+0.7**
	comp=Z,1.4nm,1.0s,baz=132,slow=1.9,SNR=4.2						
	comp=Z,1.4nm,1.0s						
YKA	**Yellowknife Ar**	**141.72**	**3**	PKP	**PKiKP**	**21 13 02.8**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=344,slow=3.8,SNR=3.6						
ULM	**Lac du Bonnet**	**151.90**	**341**	PKPbc	**PKiKP**	**21 13 25.1**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=335,slow=2.9,SNR=6.7						

*IDC **26** 20:54:50.3±1.1, 6°.25S×143°.08E, h0km, mb4.0/5, mbtmp3.9/7, ML1.4/1, MS2.8/1, Error ellipse: s-maj=28.5km s-min=15.3km az=101.0*
ISC 26 20:54:52.1±1.0, 6°.32S±0°.09×142°.96E±0°.10, h10km, n10, σ2s19/10, mb3.8/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.17**	**127**	Pn	**Pn**	**20 56 07.8**	**-1.8**
	1.0nm,0.3s,baz=294,slow=14,SNR=2.3						
PMG				Sn	**Sn**	**20 57 11.0**	**+1.7**
	1.7nm,0.3s,baz=8.9,slow=22,SNR=3.9						
	3.9nm,0.5s						
CTA	**Charters Tower**	**14.05**	**167**	Lg	Lg	21 02 21.0	
	0.1nm,0.3s,baz=108,slow=24,SNR=2.0						
WRA	**Warramunga Arr**	**15.92**	**211**	Pn	**Pn**	**20 58 34.1**	**-2.3**
	0.2nm,0.3s,baz=23,slow=12,SNR=8.2						
WRA				Sn	**Sn**	**21 01 30.7**	**-2.4**
	0.2nm,0.3s,baz=32,slow=24,SNR=1.4						
WRA				Lg	Lg	21 03 20.7	
	0.2nm,0.3s,baz=34,slow=28,SNR=5.0						
ASAR	**Alice Springs**	**19.32**	**206**	P	**P**	**20 59 20.1**	**+2.5**
	4.4nm,0.8s,baz=31,slow=11,SNR=24						
ASAR				S	**Sn**	**21 02 58.5**	**+3.0**
	0.7nm,0.7s,baz=24,slow=22,SNR=1.8						
GUMO	**Guam**	**19.87**	**5**	LR	LR	21 07 21.7	
	comp=Z,31nm,20.2s,baz=166,slow=38						
CMAR	**Chiang Mai Arr**	**49.90**	**300**	P	**P**	**21 03 45.9**	**-0.5**
	0.2nm,0.3s,baz=115,slow=6.1,SNR=1.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**	**21 06 35.8**	**+0.6**
	1.3nm,0.7s,baz=110,slow=7.4,SNR=5.5						
	1.3nm,0.7s						
KURBB	**Kurchatov Arra**	**79.11**	**324**	P	**P**	**21 06 57.1**	**+0.3**
	0.6nm,0.5s,baz=117,slow=5.0,SNR=4.5						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**84.68**	**325**	P	**P**	**21 07 26.7**	**+0.5**
	3.4nm,0.8s,baz=104,slow=6.3,SNR=16						
	3.4nm,0.8s						
ILAR	**Eielson Array**	**87.38**	**24**	P	P	21 07 37.0	-2.3
	0.5nm,0.8s,baz=267,slow=5.3,SNR=5.1						
	0.5nm,0.8s						

*IDC **26** 21:00:23.5±0.7, 43°.10S×82°.51W, h0km, mb4.3/13, mbtmp4.3/15, ML4.1/2, MS4.3/27, Error ellipse: s-maj=26.1km s-min=20.3km az=38.0*
*GCMT **26** 21:00:25.7±0.2, 42°.97S±0°.02×82°.79W±0°.01, h14km, MW5.0/118, Moment Tensor Solution. s44,c56; s118,c179; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-4.56±.18; $M_{\theta\theta}$-0.00±.10; $M_{\phi\phi}$4.57±.13; $M_{r\theta}$0.93±.26; $M_{\theta\phi}$-1.16±.08; $M_{\phi r}$-0.00±.23; Best double couple: M_o4.80000×10¹⁶ NP1:φ=335.00000°, δ47.00000°, λ-106.00000°. NP2:φ178.00000°, δ45.00000°, λ-74.00000°. Principal axes: T 4.8530, Plg1.0000°, Azm76.0000°; N -0.0980, Plg11.0000°, Azm346.0000°; P -4.7480, Plg79.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **26** 21:00:27.7±1.9, 42°.81S±0°.10×82°.4W±0°.2, h10km±2km, mb4.8/52 Error ellipse: s-maj=19.7km s-min=16.5km az=253.0*
ISC 26 21:00:25.7±0.6, 43°.02S±0°.08×82°.47W±0°.10, h10km, n128, σ1s14/101, mb4.7/38, MS4.3/26, 4C-2D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL06	**Loncomilla**	**6.58**	**86**	Pn	**Pn**	**21 02 01.7**	**-0.7**
AY01	**Puyuhuapi**	**7.26**	**105**	Pn	**Pn**	**21 02 14.2**	**+2.5**
LL01	**San Ignacio de**	**7.44**	**89**	Pn	**Pn**	**21 02 15.5**	**+1.2**
AY02	**Valle Explorad**	**7.46**	**121**	Pn	**Pn**	**21 02 16.1**	**+1.6**
LL02	**Futaleuf**	**7.78**	**95**	Pn	**Pn**	**21 02 21.1**	**+2.2**
AY03	**Cochrane**	**8.17**	**125**	Pn	**Pn**	**21 02 27.6**	**+3.3**
LR05	**Currie**	**8.32**	**74**	Pn	**Pn**	**21 02 25.8**	**-0.5**
GO08	**Villa O'Higgin**	**8.82**	**132**	Pn	**Pn**	**21 02 36.1**	**+2.9**
GO06	**Curarrehue**	**8.96**	**71**	Pn	**Pn**	**21 02 35.5**	**+0.2**
PLCA	**Paso Flores**	**9.18**	**80**	Pn	**Pn**	**21 02 39.1**	**+0.8**
PLCA	**Paso Flores**	**9.18**	**80**	Pn	**Pn**	**21 02 37.8**	**-0.5**
	0.2nm,0.3s,baz=251,slow=9.7,SNR=8.0						
PLCA				LR	LR	21 05 43.6	
	comp=Z,6µm,18.5s,baz=328,slow=35						
	13nm,1.2s						
H03S1	**Juan Fernandez**	**9.57**	**18**	T	T	21 12 40.2	
	baz=194,slow=73,SNR=122						
H03S2	**Juan Fernandez**	**9.58**	**18**	T	T	21 12 37.5	
	baz=194,slow=73,SNR=30						
H03S3	**Juan Fernandez**	**9.59**	**18**	T	T	21 12 45.9	
	baz=194,slow=73,SNR=149						
H03N3	**Juan Fernandez**	**9.94**	**17**	T	T	21 13 31.9	
	baz=214,slow=73,SNR=19						
H03N2	**Juan Fernandez**	**9.96**	**17**	T	T	21 13 07.1	
	baz=214,slow=73,SNR=27						
H03N1	**Juan Fernandez**	**9.96**	**17**	T	T	21 13 15.8	
	baz=214,slow=73,SNR=12						
ML02	**Panimavida**	**11.20**	**53**	Pn

PB01 IAmb IAmb 21 05 53.4
comp=Z,43nm,1.7s
ITQB Itaqui 24.60 66 P P 21 05 46.2 +0.2
ITQB IAmb IAmb 21 06 08.0
comp=Z,38nm,1.1s
PB08 IPOC Station P 25.41 30 P P 21 05 53.9 +0.1
PLTB Pedras Altas 25.42 73 P P 21 05 53.5 +0.1
PLTB IAmb IAmb 21 05 56.6
comp=Z,22nm,1.3s
CPUP Villa Florida 26.40 59 P P 21 06 02.3 -0.1
CPUP IAmb IAmb 21 06 19.9
comp=Z,21nm,1.4s
CPUP Villa Florida 26.40 59 P P 21 06 02.0 -0.3
comp=Z,5.6nm,1.0s,baz=236,slow=8.6,SNR=5.9
CPUP LR LR 21 16 27.9
comp=Z,2μm,18.4s,baz=230,slow=36
comp=Z,5.6nm,1.0s
RPN Rapa Nui 26.94 297 LR LR 21 13 52.5
comp=Z,2μm,20.4s,baz=144,slow=30
NNA Nana 31.30 11 LR LR 21 15 56.3
comp=Z,360nm,20.4s,baz=186,slow=30
AQDB Aquidauana 31.75 53 P P 21 06 49.6 -0.4
AQDB IAmb IAmb 21 06 55.8
comp=Z,27nm,1.8s
SIV San Ignacio 32.55 41 LR LR 21 19 39.3
comp=Z,713nm,21.2s,baz=230,slow=35
PTLB Pontes e Lacer 33.97 43 P P 21 07 09.1 -0.3
PTLB IAmb IAmb 21 07 16.6
comp=Z,11nm,1.3s
VILB Vilhena 35.60 39 P P 21 07 24.2 +0.6
VILB IAmb IAmb 21 07 30.3
comp=Z,19nm,1.2s
ATAH Atahualpa 35.92 7 LR LR 21 18 46.6
comp=Z,170nm,18.1s,baz=199,slow=31
ETMB Extrema 35.99 28 P P 21 07 27.6 +0.7
ETMB IAmb IAmb 21 07 36.0
comp=Z,16nm,1.5s
SAML Samuel 37.91 32 P P 21 07 43.4 +0.2
MCRA Macar, Loja 38.55 4 P P 21 07 48.5 -0.1
BOSC San Juan Bosco 39.85 6 P P 21 07 59.3 -0.4
BDFB Brasilia 40.11 58 P P 21 08 02.2 +0.4
BDFB Brasilia 40.11 58 P P 21 08 01.8 0.0
comp=Z,6.0nm,1.0s,baz=226,slow=3.6,SNR=5.3
BDFB LR LR 21 25 11.2
comp=Z,1μm,18.0s,baz=201,slow=37
comp=Z,6.0nm,1.0s
COHC Cochancay 40.48 5 P P 21 08 06.2 +1.6
CHSH Refugio Sur-Vo 41.47 5 P P 21 08 13.0 -0.4
CHSH IAmb IAmb 21 08 22.0
comp=Z,20nm,1.0s
OTAV Otavalo 43.21 6 P P 21 08 27.8 +0.3
TULM Tulcn-Chalpat 43.74 7 P P 21 08 32.6 +0.8
TULM IAmb IAmb 21 09 10.3
comp=Z,17nm,0.5s
VNA3 Neumayer Olymp 44.49 154 ⇑P **P 21 08 37.0 +0.2**
comp=Z,14nm,0.7s
VNA2 Neumayer--Watz 45.25 153 ⇑P **P 21 08 41.6 -1.1**
comp=Z,13nm,0.8s,baz=273,slow=7.1
SNAA Sanae 46.64 155 ⇑P **P 21 08 53.7 -0.1**
comp=Z,162nm,0.9s
SNAA Sanae 46.64 155 P P 21 08 53.0 -0.8
comp=Z,6.8nm,0.8s,baz=242,slow=3.3,SNR=7.7
comp=Z,6.8nm,0.8s
ROSC El Rosal 48.20 11 P P 21 09 06.2 -0.7
ROSC El Rosal 48.20 11 P P 21 09 08.5 +1.6
comp=Z,8.1nm,0.5s,baz=255,slow=13,SNR=1.8
ROSC LR LR 21 27 07.3
comp=Z,451nm,20.4s,baz=239,slow=33
comp=Z,8.1nm,0.5s
TROLL Troll, Antarti 48.25 155 ⇑P **P 21 09 06.3 0.0**
comp=Z,344nm,1.1s
SDV Santo Domingo 52.77 15 LR LR 21 30 17.2
comp=Z,182nm,21.7s,baz=156,slow=34
JTS Las Juntas de 53.09 357 P P 21 09 44.6 +1.3
JTS IAmb IAmb 21 09 57.5
comp=Z,22nm,1.2s
JTS Las Juntas de 53.09 357 LR LR 21 26 24.7
comp=Z,157nm,21.6s,baz=110,slow=29
BAUV El Baul 53.36 18 P P 21 09 46.1 +0.8
ELIB Princess Elisa 54.30 158 *dP* **P 21 09 50.3 -1.4**
comp=Z,7.6nm,1.2s
RCBR Riachuelo 55.24 62 LR LR 21 33 59.2
comp=Z,2μm,18.6s,baz=224,slow=36
PCRV Puerto La Cruz 55.39 21 LR LR 21 31 39.3
comp=Z,240nm,19.6s,slow=34
MTO3 Montecristo 57.48 352 P P 21 10 15.1 -0.1
MTO3 IAmb IAmb 21 10 21.7
comp=Z,10nm,1.0s
CMIG Matias Romero 60.89 346 LR LR 21 30 28.5
comp=Z,46nm,19.8s,baz=178,slow=30
TEIG Tepich 63.15 354 LR LR 21 33 02.3
comp=Z,1μm,19.6s,baz=350,slow=31
RAR Rarotonga 66.73 262 LR LR 21 32 28.8
comp=Z,489nm,20.2s,baz=127,slow=29
ZAIG Zacatecas 68.03 340 P P 21 11 26.1 +0.6
ZAIG IAmb IAmb 21 11 28.1
comp=Z,23nm,1.9s
HPIG 72.81 338 P P 21 11 56.1 +1.6
HPIG IAmb IAmb 21 12 02.6
comp=Z,11nm,1.1s
HNDO Hondo 73.82 345 P P 21 12 00.3 +0.1
HNDO IAmb IAmb 21 12 07.9
comp=Z,18nm,1.0s
RAO Raoul Island 74.36 245 LR LR 21 41 52.9
comp=Z,107nm,18.6s,baz=144,slow=34
TXAR Lajitas Array 74.58 341 P P 21 12 05.3 +0.6
TXAR Lajitas Array 74.58 341 P P 21 12 03.8 -1.0
comp=Z,1.5nm,0.9s,baz=158,slow=7.4,SNR=8.2
comp=Z,1.5nm,0.9s
TX31 Lajitas Ar. Si 74.58 341 P P 21 12 04.8 0.0
TX31 IAmb IAmb 21 12 12.1
comp=Z,9.7nm,1.2s
NATX Nacogdoches 75.25 349 P P 21 12 08.4 0.0
143A Socs Landing, 75.80 352 P P 21 12 10.4 -1.1
Z47A Carrollton 76.02 355 P P 21 12 13.2 +0.4
MNHN Monahans 76.30 342 P P 21 12 14.9 +0.3
MNHN IAmb IAmb 21 12 22.9
comp=Z,6.8nm,1.0s
FW03 Perrin-Whitt E 77.02 347 P P 21 12 18.9 +0.4
FW03 IAmb IAmb 21 13 56.9
comp=Z,8.7nm,0.8s
SUR Sutherland 77.31 122 LR LR 21 41 47.2
comp=Z,195nm,20.1s,baz=221,slow=32
TKL Tuckaleechee C 78.31 359 LR LR 21 41 12.3
comp=Z,85nm,19.8s,baz=155,slow=31
121A Cookes Peak, D 78.68 338 P P 21 12 27.7 -0.3
121A IAmb IAmb 21 12 58.5
comp=Z,6.4nm,0.8s
GLAT Glass 79.15 354 P P 21 12 31.4 +1.2
SMWD Samnorwood 79.42 345 P P 21 12 31.1 -0.8
AMTX Amarillo 79.49 344 P P 21 12 31.3 -1.1
DEOK Depew 79.52 348 P P 21 12 32.7 +0.4
DEOK IAmb IAmb 21 12 39.6
comp=Z,19nm,1.1s
ANMO Albuquerque 80.62 340 P P 21 12 38.6 +0.1
ANMO IAmb IAmb 21 12 46.8
comp=Z,14nm,1.1s
ANMO Albuquerque 80.62 340 P P 21 12 37.6 -0.9
comp=Z,2.2nm,0.9s,baz=256,slow=6.8,SNR=3.9
comp=Z,2.2nm,0.9s
Q44A Meyer Farm, Va 81.75 355 P P 21 12 42.8 -1.4
PFO Pinyon Flats O 82.36 332 P P 21 12 47.4 -0.2
comp=Z,1.5nm,0.6s,baz=173,slow=3.4,SNR=1.9
comp=Z,1.5nm,0.6s
BOSA Boshof 82.68 122 LR LR 21 44 22.5
comp=Z,174nm,19.1s,baz=204,slow=32
O49A Covington 82.84 359 P P 21 12 51.9 +2.1
LBTB Lobatse 85.44 120 LR LR 21 46 04.8
comp=Z,109nm,20.3s,baz=214,slow=32
DBIC Dimbokro 85.54 77 P P 21 13 03.8 -0.4
comp=Z,2.2nm,0.9s,baz=254,slow=14,SNR=1.7
DBIC LR LR 21 45 31.3
comp=Z,210nm,20.8s,baz=226,slow=32
comp=Z,2.2nm,0.9s
GMN Gold Mountain 85.97 333 P P 21 13 06.7 +0.5
GMN IAmb IAmb 21 13 14.7
comp=Z,7.7nm,1.1s
NVAR Mina Array Bea 87.35 333 P P 21 13 13.9 +1.1
comp=Z,1.2nm,0.8s,baz=146,slow=5.4,SNR=4.7
comp=Z,1.2nm,0.8s
SPUT South Promonto 88.19 338 P P 21 13 18.0 +1.4
ELK Elko 88.47 336 P P 21 13 17.5 -0.6
comp=Z,1.0nm,0.8s,baz=158,slow=8.0,SNR=4.5
ELK LR LR 21 46 13.2
comp=Z,62nm,19.0s,baz=128,slow=31
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 88.80 340 P P 21 13 19.1 -0.5
comp=Z,0.4nm,0.8s,baz=126,slow=4.6,SNR=2.7
PDAR LR LR 21 48 22.7
comp=Z,71nm,19.3s,baz=139,slow=32
comp=Z,0.4nm,0.8s
YHH Holmes Hill 91.02 340 P P 21 13 30.6 +0.6
YBH Yreka Blue Hor 91.82 331 P P 21 13 35.1 +1.6
comp=Z,0.9nm,0.4s,baz=249,slow=11,SNR=2.2
comp=Z,0.9nm,0.4s
LSZ Lusaka 94.12 115 LR LR 21 51 35.2
comp=Z,204nm,20.4s,baz=203,slow=33
TORD Torodi Ar. Bea 94.65 76 P P 21 13 46.7 -0.4
comp=Z,0.7nm,1.1s,baz=197,slow=1.5,SNR=2.3
comp=Z,0.7nm,1.1s
SCHQ Schefferville 98.38 9 LR LR 21 54 58.4
comp=Z,26nm,20.0s,baz=188,slow=33
H11S2 WAKE ISLAND Hyl 17.50 270 T T 23 27 23.4
baz=130,slow=76,SNR=12
H11S1 WAKE ISLAND Hyl 17.51 270 T T 23 27 23.8
baz=130,slow=76,SNR=7.2
H11S3 WAKE ISLAND Hyl 17.51 270 T T 23 27 25.1
baz=130,slow=76,SNR=9.7
BMRD Maredsous 119.93 48 *d*PKPdf **PKiKP 21 19 17.5 +1.8**
GERES GERESS Array B 124.22 53 PKP **PKPdf 21 19 21.7 -2.3**
comp=Z,0.7nm,0.4s,baz=232,slow=4.8,SNR=3.0
AKASG Malin Array Be 134.19 55 PKP **PKPdf 21 19 43.1 +0.3**
comp=Z,1.2nm,0.8s,baz=257,slow=0.7,SNR=1.8
MJAR Matsushiro Arr 148.31 272 PKPbc **PKPdf 21 20 09.6 +1.1**
comp=Z,0.4nm,0.4s,baz=156,slow=2.0,SNR=5.0
GEYT Alibeck 149.79 86 PKPbc **PKiKP 21 20 16.6 0.0**
comp=Z,5.1nm,0.9s,baz=236,slow=11,SNR=5.9
NRIK Noril'sk 153.11 8 PKPbc **PKiKP 21 20 22.9 +0.5**
comp=Z,1.5nm,0.6s,baz=287,slow=6.2,SNR=1.7
CMAR Chiang Mai Arr 155.49 183 PKP **PKPdf 21 20 18.3 -1.5**
comp=Z,0.7nm,0.5s,baz=239,slow=2.8,SNR=7.3
BVAR Borovoye Array 159.39 52 PKP **PKPdf 21 20 22.2 -1.4**
comp=Z,0.1nm,0.5s,baz=293,slow=1.1,SNR=1.8
KURBB Kurchatov Arra 164.96 53 PKP **PKPdf 21 20 27.6 -1.7**
comp=Z,0.7nm,0.2s,baz=300,slow=1.4,SNR=4.7
KURBB PKPab **PKPab 21 21 24.3 -1.6**
comp=Z,1.0nm,0.4s,baz=316,slow=5.2,SNR=2.0
ZALV Zalesovo Beam 166.22 33 PKP **PKPdf 21 20 27.8 -2.4**
comp=Z,0.3nm,0.3s,baz=336,slow=3.3,SNR=4.0
ZALV PKPab **PKPab 21 21 30.4 -0.8**
comp=Z,0.2nm,0.3s,baz=302,slow=8.3,SNR=1.2
MKAR Makanchi Array 168.56 65 PKP **PKPdf 21 20 31.4 -0.8**
comp=Z,0.1nm,0.5s,baz=352,slow=2.9,SNR=1.8
MKAR PKPab **PKPab 21 21 40.3 -1.7**
comp=Z,0.5nm,0.8s,baz=299,slow=3.5,SNR=5.3
SONM Songino Array 172.12 311 PKPab **PKPab 21 21 57.6 -0.2**
comp=Z,0.5nm,1.0s,baz=80,slow=3.4,SNR=2.7

*IDC **26** 21:11:36.1±0.8, 6°.35S×143°.70E, h0km, mb4.2/13, mbtmp4.2/15, ML1.8/1, MS3.4/2, Error ellipse: s-maj=29.6km s-min=18.4km az=78.0*
ISC 26 21:11:41.3±0.6, 6°.43S±0°.10×143°.6E±0°.1, h35km, n23, σ1s01/20, mb4.3/15, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.58**	**130**	Pn		**Pn**	**Pn**	**21 12 48.8**	**+0.7**
	2.9nm,0.3s,baz=342,slow=5.0,SNR=7.7								
PMG				Sn		**Sn**	**Sn**	**21 13 39.9**	**-0.3**
	6.1nm,0.3s,baz=29,slow=19,SNR=7.8								
	11nm,0.4s								
CTA	**Charters Tower**	**13.81**	**170**	Lg		Lg		21 18 54.7	
	0.2nm,0.3s,baz=18,slow=19,SNR=2.5								
WRA	**Warramunga Arr**	**16.18**	**213**	Pn		**Pn**	**Pn**	**21 15 23.7**	**-2.5**
	0.2nm,0.3s,baz=30,slow=13,SNR=9.8								
WRA				Lg		Lg		21 20 10.3	
	0.1nm,0.3s,baz=35,slow=25,SNR=2.0								
ASAR	**Alice Springs**	**19.52**	**208**	P		**P**	**P**	**21 16 07.8**	**+1.9**
	14nm,0.8s,baz=37,slow=9.4,SNR=98								
ASAR				Lg		Lg		21 21 55.6	
	0.1nm,0.3s,baz=21,slow=28,SNR=3.7								
STKA	**Stephens Creek**	**25.39**	**184**	LR		LR		21 27 10.2	
	comp=Z,67nm,19.8s,baz=195,slow=37								
JCJ	**Chichijima**	**33.36**	**358**	LR		LR		21 30 36.8	
	comp=Z,65nm,19.5s,baz=66,slow=34								
MJAR	**Matsushiro Arr**	**43.05**	**354**	P		**P**		**21 19 36.9**	**-0.9**
	1.2nm,0.6s,baz=151,slow=11,SNR=2.6								
	1.2nm,0.6s								
KSRS	**Korea Array**	**46.05**	**343**	P		**P**		**21 20 01.4**	**-0.4**
	1.6nm,0.7s,baz=162,slow=9.6,SNR=8.5								
	1.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**50.53**	**300**	P		**P**		**21 20 37.6**	**+0.9**
	1.5nm,0.6s,baz=117,slow=6.0,SNR=5.9								
	1.5nm,0.6s								
USRK	**Ussuriysk Ar.**	**51.48**	**349**	P		**P**		**21 20 42.8**	**-0.5**
	3.9nm,0.8s,baz=182,slow=10,SNR=6.3								
	3.9nm,0.8s								
XAN	**Xi'an**	**51.94**	**323**	P		**P**		**21 20 47.5**	**+0.5**
XAN				pmax		pmax			
	comp=Z,7.0nm,1.3s								
LZH	**Lanzhou**	**56.40**	**322**	*e*P		**P**		**21 21 20.5**	**+0.8**
LZH				pP		pP		21 21 25.0	-5.8
LZH				pmax		pmax			
	comp=Z,18nm,1.5s								
PETK	**Petropavlovsk-**	**60.50**	**10**	P		**P**		**21 21 48.2**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=141,slow=7.3,SNR=1.8								
	comp=Z,2.0nm,0.7s								
SONM	**Songino Array**	**63.20**	**333**	P		**P**		**21 22 06.7**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=147,slow=5.0,SNR=6.9								
	comp=Z,1.3nm,0.9s								
MKAR	**Makanchi Array**	**75.72**	**322**	P		**P**		**21 23 23.6**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=106,slow=6.7,SNR=12								
	comp=Z,1.4nm,0.8s								
ZALV	**Zalesovo Beam**	**77.61**	**329**	P		**P**		**21 23 33.1**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=134,slow=4.3,SNR=3.6								
	comp=Z,0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**79.58**	**324**	P		**P**		**21 23 44.7**	**-0.1**
	comp=Z,0.8nm,0.2s,baz=109,slow=4.3,SNR=6.9								
	comp=Z,0.8nm,0.2s								
QSPA	**South Pole Qui**	**83.54**	**180**	P		**P**		**21 24 06.0**	**+0.4**
	comp=Z,2.8nm,1.1s,baz=356,slow=8.1,SNR=3.1								
	comp=Z,2.8nm,1.1s								
NRIK	**Noril'sk**	**84.67**	**343**	P		**P**		**21 24 10.7**	**-0.4**
	comp=Z,3.0nm,0.4s,baz=135,slow=5.3,SNR=5.9								
	comp=Z,3.0nm,0.4s								
BVAR	**Borovoye Array**	**85.15**	**325**	P		**P**		**21 24 14.4**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=101,slow=7.7,SNR=22								
	comp=Z,4.1nm,0.9s								
ILAR	**Eielson Array**	**87.21**	**24**	P		**P**		**21 24 22.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=263,slow=5.4,SNR=7.9								
	comp=Z,0.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**141.93**	**283**	PKhKP		PKPpre		21 31 05.7	
	comp=Z,0.4nm,0.7s,baz=86,slow=4.3,SNR=2.4								
DBIC	**Dimbokro**	**148.69**	**272**	PKPbc		**PKPbc**		**21 31 24.9**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=80,slow=3.0,SNR=2.1								

*IDC **26** 21:13:33.8±1.1, 6°.45S×143°.55E, h0km, mb3.8/8, mbtmp3.9/10, ML1.5/1, Error ellipse: s-maj=33.7km s-min=22.5km az=72.0*
ISC 26 21:13:38.5±0.8, 6°.6S±0°.1×143°.4E±0°.1, h35km, n12, σ1s35/12, mb3.9/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.63**	**127**	Pn		**Pn**	**Pn**	**21 14 46.5**	**+0.5**
	1.5nm,0.3s,baz=310,slow=14,SNR=1.5								
PMG				Sn		**Sn**	**Sn**	**21 15 38.3**	**-0.2**
	1.9nm,0.3s,baz=222,slow=23,SNR=1.5								
	19nm,0.5s								
CTA	**Charters Tower**	**13.66**	**169**	Lg		Lg		21 20 54.3	
	baz=321,slow=13								
WRA	**Warramunga Arr**	**15.89**	**213**	Pn		**Pn**	**Pn**	**21 17 17.1**	**-2.6**
	0.2nm,0.3s,baz=33,slow=13,SNR=3.0								
WRA				Lg		Lg		21 22 01.2	
	baz=332,slow=26								
ASAR	**Alice Springs**	**19.24**	**207**	P		**Pn**		**21 18 03.4**	**+2.3**
	8.7nm,1.0s,baz=35,slow=9.8,SNR=8.0								
ASAR				Lg		Lg		21 23 49.6	
	0.1nm,0.3s,baz=18,slow=28,SNR=2.6								
KSRS	**Korea Array**	**46.18**	**343**	P		**P**		**21 22 00.2**	**+0.3**
	1.3nm,0.8s,baz=157,slow=9.0,SNR=4.5								
	1.3nm,0.8s								
CMAR	**Chiang Mai Arr**	**50.44**	**300**	P		**P**		**21 22 33.0**	**-0.1**
	0.4nm,0.3s,baz=108,slow=4.9,SNR=2.2								
	0.4nm,0.3s								
USRK	**Ussuriysk Ar.**	**51.64**	**350**	P		**P**		**21 22 41.2**	**-0.4**
	2.6nm,0.7s,baz=177,slow=9.5,SNR=5.2								
	2.6nm,0.7s								
SONM	**Songino Array**	**63.28**	**333**	P		**P**		**21 24 04.6**	**+0.8**
	0.2nm,0.6s,baz=147,slow=8.6,SNR=3.0								
	0.2nm,0.6s								
MKAR	**Makanchi Array**	**75.74**	**322**	P		**P**		**21 25 21.7**	**+1.0**
	0.8nm,1.0s,baz=102,slow=8.5,SNR=5.7								
	0.8nm,1.0s								
KURBB	**Kurchatov Arra**	**79.62**	**324**	P		**P**		**21 25 42.0**	**-0.2**
	0.6nm,0.3s,baz=120,slow=4.4,SNR=1.4								
	0.6nm,0.3s								
BVAR	**Borovoye Array**	**85.19**	**325**	P		**P**		**21 26 10.9**	**-0.3**
	0.6nm,0.6s,baz=111,slow=8.1,SNR=3.6								
	0.6nm,0.6s								
ILAR	**Eielson Array**	**87.48**	**24**	P		**P**		**21 26 20.8**	**-1.4**
	0.5nm,0.9s,baz=264,slow=4.2,SNR=3.2								
	0.5nm,0.9s								

*IDC **26** 21:22:21.0±1.1, 6°.31S×143°.48E, h0km, mb3.8/4, mbtmp3.8/6, ML1.7/1, Error ellipse: s-maj=36.4km s-min=23.7km az=72.0*
ISC 26 21:22:26.1±0.9, 6°.5S±0°.1×143°.4E±0°.1, h35km, n7, σ1s50/8, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.76**	**128**	Pn		**Pn**	**Pn**	**21 23 35.7**	**+0.3**
	2.2nm,0.3s,baz=329,slow=5.9,SNR=3.3								
PMG				Sn		**Sn**	**Sn**	**21 24 29.1**	**-0.3**
	1.3nm,0.3s,baz=286,slow=20,SNR=4.8								
	5.0nm,0.3s								
WRA	**Warramunga Arr**	**16.01**	**212**	Pn		**Pn**	**Pn**	**21 26 06.5**	**-2.3**
	0.3nm,0.3s,baz=31,slow=13,SNR=7.2								
WRA				Sn		Sn	Sn	21 28 56.1	-9.2
	0.1nm,0.3s,baz=39,slow=24,SNR=1.3								
WRA				Lg		Lg	Lg	21 30 49.6	
	baz=33,slow=28,SNR=1.6								
ASAR	**Alice Springs**	**19.37**	**207**	P		**P**	**P**	**21 26 51.0**	**+2.0**
	2.1nm,0.7s,baz=35,slow=9.5,SNR=11								
ASAR				Lg		Lg	Lg	21 32 41.4	
	0.2nm,0.3s,baz=24,slow=30,SNR=9.4								
MKAR	**Makanchi Array**	**75.59**	**322**	P		**P**	**P**	**21 34 07.9**	**+0.4**
	0.7nm,0.7s,baz=106,slow=7.7,SNR=8.1								
	0.7nm,0.7s								
QSPA	**South Pole Qui**	**83.50**	**180**	P		**P**	**P**	**21 34 50.7**	**+0.4**
	1.1nm,0.9s,baz=280,slow=6.1,SNR=1.8								
	1.1nm,0.9s								
BVAR	**Borovoye Array**	**85.03**	**325**	P		**P**	**P**	**21 34 58.4**	**+0.4**
	0.7nm,0.7s,baz=120,slow=5.3,SNR=5.7								
	0.7nm,0.7s								
ILAR	**Eielson Array**	**87.34**	**24**	P		**P**	**P**	**21 35 08.1**	**-1.1**
	0.3nm,0.8s,baz=264,slow=5.3,SNR=3.2								
	0.3nm,0.8s								

*IDC **26** 21:28:44.4±1.4, 5°.97S×142°.89E, h0km, mb3.8/3, mbtmp3.7/6, ML3.3/2, Error ellipse: s-maj=37.3km s-min=23.9km az=67.0*
ISC 26 21:28:49.5±1.0, 6°.4S±0°.1×142°.6E±0°.1, h35km, n6, σ2s36/8, mb4.1/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.40**	**124**	Pn		**Pn**	**Pn**	**21 30 06.9**	**-0.7**
	2.5nm,0.3s,baz=280,slow=14,SNR=1.7								
PMG				Sn		**Sn**	**Sn**	**21 31 09.0**	**+0.4**
	0.6nm,0.3s,baz=18,slow=20,SNR=1.2								
WRA	**Warramunga Arr**	**15.72**	**210**	Pn		**P**	**P**	**21 32 31.4**	**-0.8**
	0.1nm,0.3s,baz=28,slow=14,SNR=1.4								
WRA				Sn		**Sn**	**Sn**	**21 35 18.7**	**-3.0**
	0.1nm,0.3s,baz=28,slow=24,SNR=1.2								
WRA				Lg		Lg	Lg	21 37 12.1	
	0.1nm,0.3s,baz=28,slow=25,SNR=0.9								
	0.6nm,0.6s								
ASAR	**Alice Springs**	**19.14**	**205**	P		**Pn**	**Pn**	**21 33 15.1**	**+4.1**
	0.2nm,0.3s,baz=33,slow=10,SNR=10								
ASAR				Lg		Lg	Lg	21 39 08.1	
	baz=21,slow=32,SNR=2.6								
	1.9nm,0.7s								
CMAR	**Chiang Mai Arr**	**49.65**	**301**	P		**P**	**P**	**21 37 38.6**	**+0.4**
	0.6nm,0.3s,baz=106,slow=6.7,SNR=2.2								
	0.6nm,0.3s								
MKAR	**Makanchi Array**	**75.06**	**322**	P		**P**	**P**	**21 40 27.4**	**-0.4**
	0.2nm,0.6s,baz=106,slow=6.1,SNR=4.0								
	0.2nm,0.6s								
BVAR	**Borovoye Array**	**84.53**	**325**	P		**P**	**P**	**21 41 18.4**	**-0.6**
	1.1nm,0.6s,baz=106,slow=6.3,SNR=7.9								
	1.1nm,0.6s								

*CATAC **26** 21:38:55.0±1.0, 12°.72N×88°.39W, h29km±6km, ML3.1*
*SNET **26** 21:38:56.0±1.1, 12°.78N×88°.40W, h34km±4km, ML3.5*
ISC 26 21:38:54.2±1.8, 12°.66N±0°.09×88°.42W±0°.04, h29km±12km, n20, σ0s53/33, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.61**	**16**	*e*P		**Pb**		**21 39 05.8**	**-0.7**
JUCU				*e*S		**Sn**		**21 39 15.4**	**-0.5**
JUCU	**Jucuarįn**	**0.61**	**16**	*i* S		**Sn**		**21 39 16.2**	**+0.3**
RANC	**El Ranchito**	**0.78**	**9**	*i* P		**Pn**		**21 39 09.6**	**+0.2**
RANC				*i* S		**Sn**		**21 39 20.0**	**-0.2**
RANC				IAML				21 39 22.7	
	comp=Z,690nm,1.0s								
PACA	**Pacayal**	**0.81**	**6**	*e*P		**Pb**		**21 39 10.2**	**+0.4**
PACA				*e*S		**Sn**		**21 39 21.0**	**+0.1**
PACA				IAML				21 39 23.1	
	comp=Z,5μm,0.3s								
PACA	**Pacayal**	**0.81**	**6**	*i* P		**Pb**		**21 39 10.3**	**+0.4**
PACA				*i* S		**Sn**		**21 39 20.7**	**-0.2**
PACA				IAML				21 39 23.0	
	comp=Z,4μm,1.0s								
LCND	**La Caada**	**0.82**	**39**	*i* P		**Pb**		**21 39 10.5**	**+0.5**
LCND				IAML				21 39 10.9	
	comp=Z,290nm,1.0s								
LCND				*i* S		**Sn**		**21 39 20.1**	**-1.0**
CNCH	**Conchagua**	**0.83**	**43**	*e*P		**Pb**		**21 39 10.7**	**+0.4**
CNCH				*e*S		**Sn**		**21 39 21.7**	**+0.2**
CNCH				IAML				21 39 24.8	
	comp=Z,600nm,0.2s								
CNCH	**Conchagua**	**0.83**	**43**	*i* P		**Pb**		**21 39 10.6**	**+0.4**
CNCH				*i* S		**Sn**		**21 39 21.9**	**+0.4**
CNCH				IAML				21 39 25.9	
	comp=Z,510nm,1.0s								
CSGN	**Cosiguina Volc**	**0.89**	**69**	*i* P		**Pn**		**21 39 10.9**	**0.0**
CSGN				*i* S		**Sb**		**21 39 23.1**	**+0.3**
CSGN				IAML				21 39 25.7	
	comp=Z,1μm,1.0s								
TECO	**Alcaldia de Te**	**0.94**	**338**	*i* S		**Sb**		**21 39 23.5**	**-0.6**
AMPH	**Amapala**	**0.96**	**50**	*e*P		**Pb**		**21 39 12.2**	**-0.1**
AMPH				*e*S		**Sn**		**21 39 23.6**	**-0.9**
AMPH	**Amapala**	**0.96**	**50**	*i* P		**Pb**		**21 39 12.3**	**-0.1**
AMPH				*i* S		**Sb**		**21 39 25.0**	**+0.2**
SJTE	**Alcalda de S**	**1.11**	**329**	*i* P		**Pb**		**21 39 14.8**	**0.0**
SJTE				*i* S		**Sb**		**21 39 28.6**	**-0.3**
SJTE				IAML				21 39 29.3	
	comp=Z,180nm,1.0s								
LOMA	**Loma Larga**	**1.22**	**323**	*i* P		**Pn**		**21 39 15.4**	**-0.1**
LOMA				*i* S		**Sb**		**21 39 32.1**	**-0.2**
LOMA				IAML				21 39 51.6	
	comp=Z,150nm,1.0s								
CRIN	**San Cristobal**	**1.33**	**88**	*i* S		**Sb**		**21 39 35.3**	**-0.1**
PMON	**Piamonte**	**1.36**	**320**	*i* S		**Sn**		**21 39 35.2**	**+0.7**
PKGN	**Cerro Pek

ϕ=307.00000°, δ40.00000°, λ84.00000°. Principal axes: T 3.3950, Plg83.0000°, Azm76.0000°; N -0.4040, Plg4.0000°, Azm312.0000°; P -2.9910, Plg5.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 21:52:36.6±0.3, 6°34S±0.04×142°93E±0.05, h10km, n269, σ1§44/251, mb4.9/98, MS4.1/14, 19C-5D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**2.00**	**302**	P	**Pb**	**21 53 12.5**	**-0.7**
MMPI	**Merauke**	**3.29**	**230**	Pg	**Pg**	**21 53 41.2**	**+1.4**
GENI	**Genyem**	**4.63**	**323**	P	**Pn**	**21 53 47.6**	**+0.9**
GENI	**Genyem**	**4.63**	**323**	P	**Pn**	**21 53 48.4**	**+1.7**
PMG	**Port Moresby**	**5.18**	**126**		**Pn**	**21 53 54.5**	**+0.2**
PMG	**Port Moresby**	**5.18**	**126**	P	**Pn**	**21 53 55.9**	**+1.6**
PMG	**Port Moresby**	**5.18**	**126**	P	**Pn**	**21 53 55.6**	**+1.3**
PMG	**Port Moresby**	**5.18**	**126**	*ce*P	**Pn**	**21 53 54.9**	**+0.6**
PMG				pmax	pmax		
	comp=Z,79nm,0.8s						
PMG	**Port Moresby**	**5.18**	**126**	Pn	**Pn**	**21 53 54.8**	**+0.6**
	comp=Z,11nm,0.3s,baz=315,slow=13,SNR=34						
PMG				Sn	**Sn**	**21 54 52.9**	**-1.2**
	comp=Z,14nm,0.3s,baz=13,slow=22,SNR=7.5						
	comp=Z,67nm,0.7s						
SMPI	**Sarmi**	**6.03**	**316**	P	**Pn**	**21 54 06.5**	**+0.6**
	comp=Z,171nm,1.5s,comp=Z,4µm,comp=Z,1.1nm						
MANU	**Manus Island**	**6.15**	**46**	Pn	**Pn**	**21 54 08.9**	**+1.4**
COEN	**Coen**	**7.58**	**178**	P	**Pn**	**21 54 30.8**	**+3.6**
	baz=7.8,SNR=8.6						
COEN	**Coen**	**7.58**	**178**	Pn	**Pn**	**21 54 27.1**	**0.0**
RABL	**Rabaul**	**9.44**	**77**	Pn	**Pn**	**21 54 55.0**	**+2.2**
FAKI	**Fak Fak**	**11.17**	**287**	Pn	**Pn**	**21 55 15.9**	**-0.7**
FAKI	**Fak Fak**	**11.17**	**287**	P	**Pn**	**21 55 16.4**	**-0.1**
FAKI	**Fak Fak**	**11.17**	**287**	P	**Pn**	**21 55 16.9**	**+0.4**
	comp=Z,40nm,0.9s						
SAUI	**Saumlaki**	**11.65**	**261**	Pn	**Pn**	**21 55 23.5**	**+0.4**
SAUI	**Saumlaki**	**11.65**	**261**	P	**Pn**	**21 55 24.1**	**+1.0**
	comp=Z,346nm,0.9s,comp=Z,5µm						
MTSU	**Mount Surprise**	**11.80**	**174**	P	**Pn**	**21 55 29.2**	**+4.1**
	baz=12,SNR=4.2						
KDU	**Kakadu**	**12.09**	**238**	P	**Pn**	**21 55 28.6**	**-0.4**
	baz=12,SNR=175						
KDU	**Kakadu**	**12.09**	**238**	P	**Pn**	**21 55 28.9**	**-0.1**
SWI	**Sorong**	**12.85**	**295**	P	**Pn**	**21 55 37.4**	**-2.1**
	comp=Z,40nm,1.2s,comp=Z,894nm						
BNDI	**Bandanaira**	**13.09**	**277**	P	**Pn**	**21 55 43.3**	**+0.5**
	comp=Z,133nm,1.2s,comp=Z,15µm						
MTN	**Manton Dam**	**13.30**	**240**	P	**Pn**	**21 55 45.4**	**-0.3**
	baz=13,SNR=38						
MTN	**Manton Dam**	**13.30**	**240**	Pn	**Pn**	**21 55 44.1**	**-1.5**
MTN	**Manton Dam**	**13.30**	**240**	P	**Pn**	**21 55 45.6**	**-0.1**
DRS	**Darwin Rock St**	**13.32**	**242**	P	**Pn**	**21 55 46.3**	**+0.4**
CTA	**Charters Tower**	**14.04**	**167**	Pn	**Pn**	**21 55 57.5**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=4.1						
CTA				Lg	Lg	21 59 50.5	
	comp=Z,0.3nm,0.3s,baz=62,slow=19,SNR=3.4						
CTA				LR	LR	22 01 11.4	
	comp=Z,174nm,19.2s,baz=356,slow=36						
	comp=Z,4.9nm,0.9s						
CTAO	**Charters Tower**	**14.04**	**167**	Pn	**Pn**	**21 55 55.6**	**-0.2**
CTAO	**Charters Tower**	**14.04**	**167**	P	**Pn**	**21 55 55.6**	**-0.2**
QIS	**Mount Isa**	**14.50**	**193**	P	**Pn**	**21 56 03.9**	**+1.9**
	baz=15,SNR=10						
QIS	**Mount Isa**	**14.50**	**193**	P	**Pn**	**21 56 04.1**	**+2.1**
WB0	**Warramunga Arr**	**15.72**	**211**	Pn	**Pn**	**21 56 18.1**	**-0.1**
WRAB	**Tennant Creek**	**15.88**	**211**	Pn	**Pn**	**21 56 18.9**	**-1.5**
WRAB	**Tennant Creek**	**15.88**	**211**	*de*P	**Pn**	**21 56 19.2**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,20nm,1.0s						
WB2	**Warramunga Arr**	**15.88**	**211**	Pn	**Pn**	**21 56 19.3**	**-1.1**
WC3	**Warramunga Arr**	**15.89**	**211**	P	**Pn**	**21 56 19.8**	**-0.7**
	baz=16						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**21 56 19.6**	**-1.0**
WRA	**Warramunga Arr**	**15.89**	**211**	*i* P	**Pn**	**21 56 19.5**	**-1.0**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.3s						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**21 56 19.5**	**-1.0**
	comp=Z,2.7nm,0.3s,baz=30,slow=13,SNR=65						
WRA				Sn	**Sn**	**21 59 08.6**	**-8.3**
	comp=Z,0.6nm,0.3s,baz=32,slow=23,SNR=4.6						
WRA				Lg	Lg	22 01 00.9	
	comp=Z,0.6nm,0.3s,baz=29,slow=29,SNR=4.6						
KNRA	**Kununurra**	**16.70**	**235**	Pn	**Pn**	**21 56 29.6**	**-1.3**
KNRA	**Kununurra**	**16.70**	**235**	P	**Pn**	**21 56 30.3**	**-0.7**
HNR	**Honiara**	**17.13**	**101**	P	**Pn**	**21 56 36.4**	**0.0**
HNR				IAmb	IAmb	21 56 44.2	
	comp=Z,115nm,1.2s						
HNR	**Honiara**	**17.13**	**101**	Pn	**Pn**	**21 56 34.8**	**-1.6**
	comp=Z,128nm,0.3s,baz=185,slow=15,SNR=1.2						
SANI	**Sanana**	**17.42**	**283**	P	**P**	**21 56 42.2**	**+1.0**
	comp=Z,28nm,1.1s,comp=Z,617nm						
SOEI	**Soe**	**18.79**	**258**	P	**P**	**21 56 54.1**	**-2.3**
SOEI				IAmb	IAmb	21 57 08.6	
	comp=Z,121nm,1.2s						
SOEI	**Soe**	**18.79**	**258**	P	**Pn**	**21 56 59.0**	**+2.1**
	comp=Z,109nm,1.4s,comp=Z,1µm						
AS01	**Alice Springs**	**19.27**	**206**	P	**Pn**	**21 57 05.0**	**+2.4**
AS31	**Alice Springs**	**19.29**	**206**	P	**Pn**	**21 57 02.9**	**0.0**
ASAR	**Alice Springs**	**19.29**	**206**	P	**Pn**	**21 57 03.5**	**+0.7**
ASAR	**Alice Springs**	**19.29**	**206**	P	**Pn**	**21 57 05.2**	**+2.4**
	comp=Z,117nm,0.9s,baz=33,slow=9.6,SNR=344						
ASAR				S	**Sn**	**22 00 33.2**	**-6.1**
	comp=Z,9.0nm,0.9s,baz=16,slow=29,SNR=4.1						
ASAR				Lg	Lg	22 02 47.5	
	comp=Z,0.2nm,0.3s,baz=11,slow=26,SNR=4.5						
ASPA	**Alice Springs**	**19.29**	**206**	P	**Pn**	**21 57 05.6**	**+2.7**
	baz=20						
QLP	**Quilpie**	**20.17**	**177**	P	Pn	21 57 15.3	+2.1
	baz=20,SNR=5.5						
EIDS	**Eidsvold**	**20.47**	**158**	P	Pn	21 57 18.4	+1.7
	baz=21,SNR=3.0						
FITZ	**Fitzroy Crossi**	**20.52**	**234**	P	Pn	21 57 17.1	-0.3
	baz=21,SNR=20						
FITZ	**Fitzroy Crossi**	**20.52**	**234**	P	**P**	**21 57 15.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.52**	**234**	P	Pn	21 57 17.1	-0.3
LUWI	**Luwuk**	**20.79**	**284**	P	**P**	**21 57 14.2**	**-4.0**
LUWI	**Luwuk**	**20.79**	**284**	P	Pn	21 57 19.8	-0.8
	comp=Z,80nm,1.3s,comp=Z,1µm						
EDFI	**Ende, Flores**	**21.19**	**262**	P	**P**	**21 57 23.6**	**+1.0**
	comp=Z,31nm,1.0s						
INKA	**Innaminka**	**21.39**	**185**	P	**P**	**21 57 27.9**	**+3.4**
MRSI	**Marisa**	**22.02**	**287**	P	**P**	**21 57 33.6**	**+2.2**
	comp=Z,36nm,0.9s,comp=Z,544nm						
OOD	**Oodnadatta**	**22.42**	**197**	P	**P**	**21 57 38.0**	**+2.4**
KAPI	**Kappang**	**23.10**	**272**	P	**P**	**21 57 41.4**	**-1.5**
KAPI	**Kappang**	**23.10**	**272**	P	**P**	**21 57 41.4**	**-1.5**
KAPI				pmax	pmax		
	comp=Z,172nm,1.5s						
TTSI	**Tana Toraja**	**23.26**	**277**	P	**P**	**21 57 46.3**	**+1.8**
	comp=Z,37nm,1.5s,comp=Z,1µm						
WRKA	**Warakurna**	**23.28**	**215**	P	**P**	**21 57 45.7**	**+1.0**
	baz=24,SNR=120						
WRKA	**Warakurna**	**23.28**	**215**	P	**P**	**21 57 45.9**	**+1.2**
TOLI2	**Tolitoli**	**23.32**	**288**	P	**P**	**21 57 43.6**	**-1.4**
TOLI2				IAmb	IAmb	21 57 47.3	
	comp=Z,41nm,0.9s						
TOLI2	**Tolitoli**	**23.32**	**288**	P	**P**	**21 57 45.8**	**+0.7**
LCRK	**Leigh Creek**	**24.39**	**190**	P	**P**	**21 57 56.6**	**+1.4**
CMSA	**Cobar Meteorol**	**25.20**	**174**	P	**P**	**21 58 05.0**	**+2.5**
	baz=26,SNR=7.6						
MULG	**Mulgathing**	**25.24**	**198**	P	**P**	**21 58 04.1**	**+1.2**
STKA	**Stephens Creek**	**25.44**	**183**	P	**P**	**21 58 06.4**	**+1.7**
	baz=26,SNR=11						
STKA	**Stephens Creek**	**25.44**	**183**	P	**P**	**21 58 03.1**	**-1.5**
STKA	**Stephens Creek**	**25.44**	**183**	‖ *e*P	**P**	**21 58 03.5**	**-1.2**
STKA	**Stephens Creek**	**25.44**	**183**	P	**P**	**21 58 04.7**	**0.0**
	comp=Z,19nm,1.1s,baz=353,slow=8.7,SNR=16						
STKA				LR	LR	22 10 10.9	
	comp=Z,306nm,21.4s,baz=354,slow=41						
	comp=Z,19nm,1.1s						
PSA00	**Pilbara Seismi**	**26.98**	**234**	P	**P**	**21 58 17.6**	**-1.2**
PSA00	**Pilbara Seismi**	**26.98**	**234**	P	**P**	**21 58 21.6**	**+2.9**
BBOO	**Buckleboo**	**27.10**	**193**	P	**P**	**21 58 21.0**	**+1.2**
	baz=27						
BBOO	**Buckleboo**	**27.10**	**193**	P	**P**	**21 58 20.3**	**+0.5**
HTT	**Hallett**	**27.21**	**187**	P	**P**	**21 58 23.6**	**+2.9**
	baz=28,SNR=4.1						
HTT	**Hallett**	**27.21**	**187**	P	**P**	**21 58 24.5**	**+3.7**
DZM	**Mont Dzumac**	**27.57**	**127**	P	**P**	**21 58 23.6**	**-0.6**
LIFNC	**LIFOU**	**27.59**	**124**	P	**P**	**21 58 24.1**	**-0.2**
KMBL	**Kambalda**	**31.75**	**216**	P	**P**	**21 59 01.6**	**+0.5**
	baz=32						
KPJI	**Karang Pucung**	**33.77**	**266**	P	**P**	**21 59 20.7**	**+1.8**
	comp=Z,28nm,1.1s						
CMJI	**Cimerak**	**34.24**	**266**	P	**P**	**21 59 23.2**	**+0.1**
	comp=Z,56nm,1.1s						
CNJI	**Cibinong**	**35.55**	**266**	P	**P**	**21 59 33.9**	**-0.5**
	comp=Z,46nm,1.2s,comp=Z,385nm						
NWAO	**Narrogin (SRO)**	**35.65**	**219**	LR	LR	22 14 59.2	
	comp=Z,309nm,21.8s,baz=16,slow=38						
KASI	**Kota Agung**	**38.23**	**269**	P	**P**	**21 59 56.5**	**-0.7**
	comp=Z,14nm,1.1s						
JMN	**Monobe**	**40.76**	**348**	P	**P**	**22 00 17.8**	**-0.2**
JMN				IAmb	IAmb	22 01 05.2	
	comp=Z,30nm,1.1s						
JNU	**Nakatsue**	**40.88**	**344**	P	**P**	**22 00 16.2**	**-2.8**
	comp=Z,6.8nm,0.9s,baz=189,slow=18,SNR=2.5						
	comp=Z,6.8nm,0.9s						
KRJI	**Kerinci**	**41.56**	**274**	P	**P**	**22 00 25.7**	**+0.7**
	comp=Z,134nm,1.1s						
BKNI	**Bangkinang**	**42.33**	**277**	P	**P**	**22 00 31.3**	**+0.2**
MJAR	**Matsushiro Arr**	**42.88**	**354**	P	**P**	**22 00 33.5**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=176,slow=8.6,SNR=4.2						
MJAR				PcP	**PcP**	**22 02 26.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=206,slow=5.3,SNR=2.1						
	comp=Z,1.3nm,0.6s						
IPM	**Ipoh**	**43.19**	**283**	IAmb	IAmb	22 00 40.4	
	comp=Z,30nm,1.3s						
JSD	**Sado**	**44.36**	**355**	P	**P**	**22 00 46.8**	**-0.4**
JSD				IAmb	IAmb	22 01 32.7	
	comp=Z,53nm,1.8s						
URZ	**Urewera**	**44.36**	**141**	LR	LR	22 19 04.7	
	comp=Z,255nm,18.7s,baz=118,slow=36						
TUWZ	**Tuamarina**	**44.53**	**146**	P	**P**	**22 00 49.1**	**+0.6**
NJ2	**Nanjing**	**44.55**	**330**	*e*P	**P**	**22 00 50.8**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RPSI	**Rantau Prapat**	**44.84**	**280**	P	**P**	**22 00 50.8**	**-0.7**
RPSI				IAmb	IAmb	22 00 58.3	
	comp=Z,29nm,1.3s						
PSI	**Prapat**	**44.87**	**280**	P	**P**	**22 00 50.8**	**-1.0**
PSI				pmax	pmax		
	comp=Z,29nm,1.3s						
KSAR	**Wonju Array Be**	**45.76**	**343**	P	**P**	**22 00 57.6**	**-0.8**
KSAR	**Wonju Array Be**	**45.76**	**343**	P	**P**	**22 00 57.6**	**-0.8**
KSRS	**Korea Array**	**45.76**	**343**	P	**P**	**22 00 58.6**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=160,slow=8.9,SNR=10						
	comp=Z,2.9nm,0.7s						
WHN	**Wuhan**	**45.77**	**325**	P	**P**	**22 01 00.0**	**+1.5**
WHN				pmax	pmax		
	comp=Z,94nm,1.4s						
JTM	**Tenmabayashi**	**46.92**	**358**	P	**P**	**22 01 07.0**	**-0.4**
ENH	**Enshi**	**48.51**	**320**	IAmb	IAmb	22 02 34.2	
	comp=Z,25nm,1.5s						
CRAI	**Chiangrai**	**49.47**	**303**	P	**P**	**22 01 27.3**	**-0.2**
LYN	**LuoYang**	**49.81**	**327**	⇑P	**P**	**22 01 30.3**	**+0.4**
LYN				pmax	pmax		
	comp=Z,250nm,4.1s						
CM31	**Chiang Mai Arr**	**49.89**	**300**	P	**P**	**22 01 31.1**	**+0.4**
CM31				IAmb	IAmb	22 01 33.1	
	comp=Z,29nm,1.7s						
CMAR	**Chiang Mai Arr**	**49.89**	**300**	P	**P**	**22 01 31.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**49.89**	**300**	P	**P**	**22 01 31.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**49.89**	**300**	P	**P**	**22 01 31.1**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=124,slow=6.3,SNR=18						
	comp=Z,2.7nm,0.8s						
CHTO	**Chiang Mai**	**50.04**	**301**	P	**P**	**22 01 31.8**	**0.0**
CHTO	**Chiang Mai**	**50.04**	**301**	P	**P**	**22 01 31.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	**Kunming**	**50.06**	**310**	⇑P	**P**	**22 01 34.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HNS	**HongShan**	**50.87**	**331**	⇑P	**P**	**22 01 37.5**	**-0.2**
HNS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
USA0B	**Ussuriysk Arra**	**51.27**	**350**	⇑ *e*P	**P**	**22 01 39.6**	**-1.0**
USRK	**Ussuriysk Ar.**	**51.27**	**350**	P	**P**	**22 01 39.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**51.27**	**350**	P	**P**	**22 01 40.2**	**-0.4**
	comp=Z,3.7nm,0.7s,baz=139,slow=13,SNR=6.2						
	comp=Z,3.7nm,0.7s						
XAN	**Xi'an**	**51.46**	**324**	P	**P**	**22 01 42.5**	**+0.1**
XAN				pP	sP	22 01 55.0	+7.9
XAN				S	**S**	**22 09 01.0**	**-1.6**
XAN				pmax	pmax		
	comp=Z,22nm,1.2s						
XAN				pmax	pmax		
	comp=Z,200nm,5.2s						
PZH	**PanZhiHua**	**51.56**	**311**	P	**P**	**22 01 44.5**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,130nm,5.0s						
MDJ	**Mudanjiang**	**52.12**	**348**	P	**P**	**22 01 50.3**	**+3.2**
MDJ				pP	sP	22 01 54.3	+2.4
MDJ				sP	pP	22 01 56.5	+5.9
MDJ				ScP	**ScP**	**22 06 58.5**	**+2.3**
MDJ				S	**S**	**22 09 13.8**	**+2.5**
MDJ				sS	sS	22 09 21.0	+3.6
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.9s						
BJI	**Beijing**	**52.33**	**334**	P	**P**	**22 01 48.3**	**-0.3**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
CN2	**Changchun**	**52.35**	**344**	P	**P**	**22 01 51.8**	**+3.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2	**Chengdu**	**52.68**	**317**	P	**P**	**22 01 52.5**	**+1.0**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
TNCH	**TengChong**	**53.27**	**308**	P	**P**	**22 01 57.5**	**+1.3**
TNCH				pP	pP	22 02 00.5	+0.8
TNCH				sP	sP	22 02 02.8	+1.8
TNCH				S	**S**	**22 09 27.8**	**-0.2**
TNCH				pmax	pmax		
	comp=Z,13nm,1.3s						
TNCH				pmax	pmax		
	comp=Z,130nm,5.2s						
BNX	**BinXian**	**53.67**	**347**	‖ P	**P**	**22 01 58.5**	**0.0**
BNX				pmax	pmax		
	comp=Z,11nm,0.7s						
BNX				pmax	pmax		
	comp=Z,100nm,3.5s						
HHC	**Hu-ho-hao-te**	**55.08**	**331**	*e*P	**P**	**22 02 10.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
HHC				LR	LR		
	comp=Z,81nm,19.1s						
HHC				LR	LR		
	comp=Z,140nm,18.3s						
HHC				LR	LR		
	comp=Z,210nm,19.3s						
BTO	**Baotou**	**55.65**	**330**	*e*P	**P**	**22 02 14.8**	**+1.7**
BTO				PP	**PP**	**22 04 21.5**	**+4.0**
BTO				S	**S**	**22 09 59.5**	**+0.1**
BTO				SS	**SS**	**22 13 44.5**	**-0.4**
BTO				pmax	pmax		
	comp=Z,17nm,1.0s						
BTO				pmax	pmax		
	comp=Z,150nm,5.8s						
BTO				LR	LR		
	comp=Z,280nm,16.6s						
BTO				LR	LR		
	comp=Z,390nm,17.0s						
BTO				LR	LR		
	comp=Z,430nm,20.8s						
LZH	**Lanzhou**	**55.90**	**322**	*e*P	**P**	**22 02 16.3**	**+1.2**
LZH				sP	sP	22 02 23.5	+3.6
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
KLR	**Kul'dur**	**56.19**	**351**	⇑ *e*P	**P**	**22 02 15.2**	**-1.5**
KLR				pmax	pmax		
	comp=Z,14nm,1.6s						
HEH	**HeiHe**	**57.95**	**348**	*e*P	**P**	**22 02 27.5**	**-1.6**
HEH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GTA	**Gaotai**	**60.48**	**323**	*e*P	**P**	**22 02 48.0**	**+1.0**
GTA				pP	sP	22 02 55.3	+3.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
PETK	**Petropavlovsk-**	**60.53**	**10**	P	**P**	**22 02 45.1**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=209,slow=4.6,SNR=1.4						
	comp=Z,1.6nm,0.7s						
ZEA	**Zeya**	**61.30**	**349**	*e*P	**P**	**22 02 52.1**	**0.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GOMU	**GeErMu**	**61.82**	**317**	P	**P**	**22 02 57.8**	**+1.3**
GOMU				sP	sP	22 03 04.5	+3.2
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	**Ulaanbaatar**	**62.53**	**334**	P	**P**	**22 03 00.1**	**-0.7**
ULN				IAmb	IAmb	22 03 02.7	
	comp=Z,12nm,1.4s						
ULN	**Ulaanbaatar**	**62.53**	**334**	*c i*P	**P**	**22 03 01.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	**Songino Array**	**62.80**	**333**	P	**P**	**22 03 02.5**	**0.0**
SONM	**Songino Array**	**62.80**	**333**	P	**P**	**22 03 02.6**	**0.0**
SONM				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SONM	**Songino Array**	**62.80**	**333**	P	**P**	**22 03 02.6**	**0.0**
	comp=Z,1.6nm,0.5s,baz=154,slow=7.3,SNR=14						
	comp=Z,1.6nm,0.5s						
PALK	**Pallekele**	**63.53**	**281**	LR	LR	22 33 16.4	
	comp=Z,45nm,21.1s,baz=220,slow=38						
SHEM	**Shemya Is, Ala**	**64.52**	**20**	LR	LR	22 24 07.2	
	comp=Z,86nm,21.1s,baz=260,slow=29						
ZAK	**Zakamensk**	**66.06**	**333**	*e*P	**P**	**22 03 23.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SEY	**Seymchan**	**69.45**	**5**	‖ *e*P	**P**	**22 03 44.5**	**-0.2**
SEY				pmax	pmax		
	comp=Z,12nm,1.6s						
WMQ	**Urumqi**	**70.45**	**321**	*e*P	**P**	**22 03 52.0**	**+0.6**
WMQ				PcP	**PcP**	**22 04 12.3**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				LR	LR		
	comp=Z,210nm,24.2s						
VNDA	**Vanda**	**71.84**	**176**	P	**P**	**22 03 59.8**	**+0.6**
VNDA				IAmb	IAmb	22 04 02.5	
	comp=Z,11nm,1.3s						
VNDA	**Vanda**	**71.84**	**176**	P	**P**	**22 04 00.1**	**+0.9**
	comp=Z,5.7nm,1.1s,baz=319,slow=3.2,SNR=4.7						
	comp=Z,5.7nm,1.1s						
DGZ	**Jazzator, Alta**	**73.61**	**326**	*ce*P	**P**	**22 04 10.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,19nm,1.4s						
ZSN	**Zaisan**	**73.96**	**323**	*e*P	**P**	**22 04 12.4**	**0.0**
	baz=323						
ZSN	**Zaisan**	**73.96**	**323**	*e*P	**P**	**22 04 12.3**	**0.0**
MK31	**Makanchi Array**	**75.22**	**322**	P	**P**	**22 04 19.3**	**-0.3**
MK31				IAmb	IAmb	22 04 21.6	
	comp=Z,33nm,1.8s						
MK31	**Makanchi Array**	**75.22**	**322**	*c i*P	**P**	**22 04 20.1**	**+0.5**
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**	**22 04 19.6**	**-0.1**
MKAR	**Makanchi Array**	**75.22**	**322**	*i* P	**P**	**22 04 20.2**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MKAR	**Makanchi Array**	**75.22**	**322**	P	**P**	**22 04 20.0**	**+0.4**
	comp=Z,5.5nm,0.6s,baz=97,slow=8.3,SNR=143						
	comp=Z,5.5nm,0.6s						
MAKZ	**Makanchi**	**75.42**	**322**	P	**P**	**22 04 20.6**	**-0.2**
MAKZ	**Makanchi**	**75.42**	**322**	P	**P**	**22 04 20.6**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,65nm,1.8s						
SHLS	**Shalkode**	**75.51**	**317**	*e*P	**P**	**22 04 19.9**	**-1.7**
	baz=318						
SHLS	**Shalkode**	**75.51**	**317**	*e*P	**P**	**22 04 19.8**	**-1.7**
UZB	**Uzynbulak**	**75.81**	**317**	*e*P	**P**	**22 04 23.1**	**-0.2**
	baz=317						
UZB	**Uzynbulak**	**75.81**	**317**	*e*P	**P**	**22 04 23.0**	**-0.2**
PRZ	**Przheval'sk**	**75.97**	**316**	P	**P**	**22 04 25.5**	**+1.3**
PRZ	**Przheval'sk**	**75.97**	**316**	P	**P**	**22 04 25.5**	**+1.3**
PRZ				pmax	pmax		
	comp=Z,53nm,1.7s						
BILL	**Bilibino**	**76.02**	**9**	P	**P**	**22 04 23.1**	**-0.6**
BILL				IAmb	IAmb	22 04 34.4	
	comp=Z,14nm,1.5s						
BILL	**Bilibino**	**76.02**	**9**	‖ *e*P	**P**	**22 04 23.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KPKS	**Kokpek**	**76.16**	**318**	*e*P	**P**	**22 04 24.9**	**-0.3**
	baz=318						
KPKS	**Kokpek**	**76.16**	**318**	*e*P	**P**	**22 04 24.8**	**-0.3**
SATY	**Saty**	**76.19**	**317**	*e*P	**P**	**22 04 25.1**	**-0.3**
	comp=Z,7.8nm,1.2s,baz=317						
SATY	**Saty**	**76.19**	**317**	*e*P	**P**	**22 04 25.0**	**-0.3**
SATY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KSH	**Kashi**	**76.62**	**313**	P	**P**	**22 04 30.0**	**+2.1**
KSH				sP	PcP	22 04 37.5	-1.9
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NIL	**Nilore**	**76.85**	**307**	P	**P**	**22 04 28.7**	**-0.5**
NIL	**Nilore**	**76.85**	**307**	P	**P**	**22 04 28.7**	**-0.5**
NIL				pmax	pmax		
	comp=Z,46nm,1.5s						
TDK	**Taldyqorghan**	**76.94**	**319**	*e*P	**P**	**22 04 29.5**	**+0.1**
	comp=Z,6.4nm,0.8s,baz=319						
TDK	**Taldyqorghan**	**76.94**	**319**	*e*P	**P**	**22 04 29.5**	**+0.1**
TDK		

	comp=Z,6.0nm,1.0s								
KKAR	**Karatay Array**	**81.65**	**315**		P		**P**	**22 04 54.5**	**-0.8**
KKAR	**Karatay Array**	**81.65**	**315**		P		**P**	**22 04 54.5**	**-0.8**
IUG	**luzhnay**	**81.72**	**314**	*eP*	P		**P**	**22 04 54.5**	**-1.2**
	baz=314								
IUG	**luzhnay**	**81.72**	**314**	*eP*	P		**P**	**22 04 54.5**	**-1.2**
G16K	**Koyuk River**	**81.91**	**20**		IAmb		IAmb	22 05 03.1	
	comp=Z,16nm,1.2s								
BRZS	**Berezniki**	**82.35**	**322**	*eP*	P		**P**	**22 04 57.9**	**-0.9**
	baz=322								
BRZS	**Berezniki**	**82.35**	**322**	*eP*	P		**P**	**22 04 57.8**	**-0.9**
H17K	**Granite Mounta**	**82.51**	**21**		IAmb		IAmb	22 05 00.9	
	comp=Z,39nm,1.7s								
G18K	**Tagagawik**	**83.47**	**21**		IAmb		IAmb	22 05 54.3	
	comp=Z,34nm,1.9s								
QSPA	**South Pole Qui**	**83.63**	**180**		P		**P**	**22 05 05.0**	**-0.3**
QSPA					IAmb		IAmb	22 05 12.5	
	comp=Z,17nm,1.2s								
QSPA	**South Pole Qui**	**83.63**	**180**		P		**P**	**22 05 05.4**	**+0.1**
QSPA					LR		LR	22 42 15.7	
	comp=Z,7.5nm,0.8s,baz=312,slow=1.1,SNR=29								
	comp=Z,234nm,18.0s,baz=7.0,slow=36								
	comp=Z,7.5nm,0.8s								
E18K	**Tukpahlearik C**	**83.64**	**19**		IAmb		IAmb	22 05 17.7	
	comp=Z,18nm,1.4s								
C18K	**Utukok River**	**84.14**	**18**		IAmb		IAmb	22 05 23.4	
	comp=Z,21nm,1.7s								
G19K	**Purcell Mounta**	**84.14**	**21**		IAmb		IAmb	22 05 09.3	
	comp=Z,24nm,1.5s								
NRIK	**Noril'sk**	**84.38**	**343**		P		**P**	**22 05 08.3**	**-0.4**
NRIK	**Noril'sk**	**84.38**	**343**	*c i*	P		**P**	**22 05 08.7**	**-0.1**
NRIK					pmax		pmax		
	comp=Z,31nm,1.5s								
NRIK	**Noril'sk**	**84.38**	**343**		P		**P**	**22 05 08.3**	**-0.4**
	comp=Z,6.1nm,0.6s,baz=127,slow=5.6,SNR=15								
	comp=Z,6.1nm,0.6s								
BVAR	**Borovoye Array**	**84.68**	**325**		P		**P**	**22 05 11.1**	**+0.4**
	comp=Z,21nm,0.6s,baz=110,slow=6.7,SNR=100								
	comp=Z,21nm,0.6s								
BRVK	**Borovoye**	**84.75**	**325**		P		**P**	**22 05 11.1**	**+0.1**
BRVK	**Borovoye**	**84.75**	**325**	*c i*	P		**P**	**22 05 11.4**	**+0.4**
BRVK					pmax		pmax		
	comp=Z,37nm,1.3s								
E19K	**Redstone River**	**84.76**	**20**		IAmb		IAmb	22 05 12.2	
	comp=Z,29nm,1.6s								
C19K	**Lookout Ridge**	**84.88**	**18**		IAmb		IAmb	22 05 13.3	
	comp=Z,14nm,1.0s								
D19K	**Kuna River**	**85.01**	**18**		IAmb		IAmb	22 05 15.2	
	comp=Z,13nm,1.1s								
F20K	**Avaraart Lake**	**85.06**	**20**		IAmb		IAmb	22 05 54.1	
	comp=Z,21nm,1.8s								
MLY	**Manley**	**85.98**	**23**		P		**P**	**22 05 15.9**	**-1.1**
MLY					IAmb		IAmb	22 05 23.2	
	comp=Z,27nm,1.5s								
KLU	**Klutina**	**86.68**	**27**		P		**P**	**22 05 18.8**	**-1.7**
E22K	**Anaktuvuk Pass**	**86.90**	**20**		IAmb		IAmb	22 05 24.5	
	comp=Z,24nm,1.8s								
G23K	**Bananza Creek**	**86.93**	**22**		IAmb		IAmb	22 05 23.9	
	comp=Z,9.5nm,1.2s								
ILAR	**Eielson Array**	**87.40**	**24**		P		**P**	**22 05 21.6**	**-2.2**
ILAR	**Eielson Array**	**87.40**	**24**		P		**P**	**22 05 22.1**	**-1.8**
	comp=Z,2.6nm,0.6s,baz=257,slow=4.8,SNR=40								
ILAR					LR		LR	22 39 08.3	
	comp=Z,38nm,20.6s,baz=243,slow=32								
	comp=Z,2.6nm,0.6s								
G24K	**Hadweenzic Riv**	**87.87**	**22**		IAmb		IAmb	22 05 27.7	
	comp=Z,24nm,1.6s								
J26L	**Joseph Creek**	**88.67**	**25**		IAmb		IAmb	22 05 36.5	
	comp=Z,18nm,1.4s								
K27K	**Chicken**	**89.15**	**25**		IAmb		IAmb	22 05 34.9	
	comp=Z,18nm,1.3s								
BMAR	**Burnt Mountain**	**89.18**	**22**		P		**P**	**22 05 32.5**	**+0.2**
D25K	**Kavik River**	**89.19**	**20**		IAmb		IAmb	22 05 41.3	
	comp=Z,15nm,1.6s								
GEYT	**Alibeck**	**89.77**	**308**		P		**P**	**22 05 35.3**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=45,slow=8.6,SNR=6.2								
	comp=Z,1.7nm,0.9s								
ABKAR	**Akbulak array**	**90.19**	**319**		P		**P**	**22 05 35.9**	**-1.4**
ABKAR					IAmb		IAmb	22 05 37.4	
	comp=Z,14nm,1.6s								
ARU	**Arti**	**92.12**	**326**		P		**P**	**22 05 44.2**	**-1.9**
ARU					IAmb		IAmb	22 05 58.0	
	comp=Z,7.1nm,1.1s								
ARU	**Arti**	**92.12**	**326**	*c i*	P		**P**	**22 05 44.9**	**-1.2**
ARU								22 09 24.5	
ARU					S		**SKSac**	**22 16 17.5**	**-1.8**
ARU					SS		**SS**	**22 22 57.2**	**-0.8**
ARU					pmax		pmax		
	comp=Z,6.0nm,0.9s								
ELIB	**Princess Elisa**	**92.80**	**196**	*d*	P		**P**	**22 05 48.4**	**-0.8**
DLBC	**Dease Lake**	**93.80**	**32**		LR		LR	22 41 26.1	
	comp=Z,53nm,19.2s,baz=256,slow=31								
BBB	**Bella Bella**	**94.32**	**38**		LR		LR	22 40 00.1	
	comp=Z,65nm,21.8s,baz=248,slow=30								
YBH	**Yreka Blue Hor**	**97.43**	**49**		LR		LR	22 42 58.8	
	comp=Z,129nm,20.3s,baz=286,slow=31								
SNAA	**Sanae**	**98.97**	**190**		LR		LR	22 50 36.3	
	comp=Z,109nm,19.4s,baz=141,slow=35								
GERES	**GERESS Array B**	**119.84**	**324**		PKP		**PKPdf**	**22 11 26.8**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=106,slow=3.5,SNR=1.9								
PLCA	**Paso Flores**	**123.97**	**150**		PKP		**PKPdf**	**22 11 36.1**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=180,slow=9.1,SNR=3.3								
EKA	**Eskdalemuir Ar**	**124.15**	**337**		PKP		**PKPdf**	**22 11 35.2**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=38,slow=2.4,SNR=4.1								
TORD	**Torodi Ar. Bea**	**141.24**	**283**		PKhKP		PKPpre	22 12 02.8	
	comp=Z,0.2nm,0.4s,baz=50,slow=3.7,SNR=4.7								
TORD					PKP		**PKPdf**	**22 12 09.2**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=62,slow=2.7,SNR=4.9								
CPUP	**Villa Florida**	**142.04**	**150**		PKP		**PKPdf**	**22 12 11.6**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=217,slow=4.4,SNR=3.6								
SDV	**Santo Domingo**	**146.65**	**84**				**PKPdf**	**22 12 17.1**	**-1.3**
KIC	**Kosan Boka**	**147.87**	**272**	*i*	PKP1		**PKPbc**	**22 12 24.0**	**+0.8**
	comp=Z,34nm,1.1s								
DBIC	**Dimbokro**	**147.99**	**272**		PKPbc		**PKPbc**	**22 12 23.2**	**-0.3**
DBIC	**Dimbokro**	**147.99**	**272**		PKPbc		**PKPbc**	**22 12 23.9**	**+0.4**
	comp=Z,12nm,0.9s,baz=45,slow=1.6,SNR=8.6								
LIC	**Lamto**	**148.15**	**272**	*i*	PKP1		**PKPbc**	**22 12 24.6**	**+0.7**
	comp=Z,52nm,1.0s								
TIC	**Toumodi**	**148.16**	**272**	*i*	PKP1		**PKPbc**	**22 12 24.8**	**+0.9**
	comp=Z,24nm,1.0s								
PTLB	**Pontes e Lacer**	**149.23**	**135**		PKPdf		**PKPdf**	**22 12 21.5**	**-0.9**
SAML	**Samuel**	**149.87**	**120**		PKPdf		**PKPdf**	**22 12 21.0**	**-2.4**
SAML	**Samuel**	**149.87**	**120**		PKIKP		**PKPdf**	**22 12 21.0**	**-2.4**

*IDC **26** 21:58:13.8±2.3, 14˚.46N×146˚.98E, h0km, mb4.1/10, mbtmp4.1/11, ML4.1/1, MS3.8/6, Error ellipse: s-maj=56.5km s-min=23.3km az=153.0*
*NEIC **26** 21:58:15.7±1.3, 14˚.26N±0˚.08×146˚.94E±0˚.10, h10km±1km, mb4.4/21, Error ellipse: s-maj=16.4km s-min=12.5km az=64.0*

ISC 26 21:58:14.7±0.7, 14˚.3N±0˚.1×146˚.95E±0˚.07, h10km, n50, σ1§06/39, mb4.3/21, MS3.9/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.13**	**252**	Pn	**Pn**	**21 58 51.1**	**+0.8**
GUMO	**Guam**	**2.13**	**252**	Pn	**Pb**	**21 58 53.0**	**-0.3**
	54nm,0.3s,baz=207,slow=2.0,SNR=11						
GUMO				Sn	**Sb**	**21 59 19.9**	**0.0**
	39nm,0.3s,baz=18,slow=18,SNR=6.1						
	111nm,0.3s						
PATS	**Pohnpei**	**13.38**	**122**	Pn	**Pn**	**22 01 23.9**	**-0.9**
H11S3	**WAKE ISLAND Hy**	**19.39**	**75**	T	T	22 22 37.1	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**19.41**	**75**	T	T	22 22 43.3	
	baz=262						
H11S2	**WAKE ISLAND Hy**	**19.41**	**75**	T	T	22 22 38.2	
	baz=262						
H11N1	**WAKE ISLAND Hy**	**19.82**	**71**	T	T	22 23 02.1	
	baz=258						
H11N2	**WAKE ISLAND Hy**	**19.83**	**71**	T	T	22 23 04.8	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**19.84**	**71**	T	T	22 23 06.6	
	baz=258						
TGY	**Tagaytay City**	**25.22**	**273**	LR	LR	22 11 56.5	
	comp=Z,99nm,20.3s,baz=132,slow=33						
KSRS	**Korea Array**	**28.63**	**327**	P	**P**	**22 04 12.7**	**+1.3**
	0.7nm,0.5s,baz=147,slow=8.9,SNR=2.3						
	0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**32.45**	**340**		**P**	**22 04 44.2**	**-0.9**
PINNC	**Pines Island,**	**41.79**	**151**	P	**P**	**22 06 05.2**	**+0.6**
ULN	**Ulaanbaatar**	**47.01**	**324**	P	**P**	**22 06 44.9**	**-1.4**
ULN					IAmb	IAmb	22 06 48.7	
	comp=Z,1.8nm,0.5s						
SONM	**Songino Array**	**47.37**	**323**	P	**P**	**22 06 49.3**	**+0.2**
SONM	**Songino Array**	**47.37**	**323**	P	**P**	**22 06 48.2**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=138,slow=6.6,SNR=7.8						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**62.26**	**324**	P	**P**	**22 08 35.6**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=90,slow=10,SNR=2.3						
	comp=Z,0.8nm,0.5s						
F17K	**Baldwin Pennin**	**62.27**	**21**	P	**P**	**22 08 39.5**	**+2.9**
F17K				IAmb	IAmb	22 08 41.2	
	comp=Z,2.2nm,1.0s						
MK31	**Makanchi Array**	**62.42**	**316**	P	**P**	**22 08 37.9**	**0.0**
MKAR	**Makanchi Array**	**62.42**	**316**	P	**P**	**22 08 37.9**	**0.0**
MKAR	**Makanchi Array**	**62.42**	**316**	P	**P**	**22 08 38.5**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=90,slow=8.6,SNR=20						
	comp=Z,0.7nm,0.4s						
MAKZ	**Makanchi**	**62.63**	**316**	P	**P**	**22 08 39.5**	**+0.1**
MAKZ				IAmb	IAmb	22 08 41.8	
	comp=Z,1.7nm,0.8s						
H18K	**Honhosa River**	**62.69**	**23**	P	**P**	**22 08 40.2**	**+0.8**
H19K	**Roundabout Mou**	**63.58**	**23**	P	**P**	**22 08 47.0**	**+1.8**
H19K				IAmb	IAmb	22 09 26.9	
	comp=Z,3.0nm,1.2s						
D19K	**Kuna River**	**64.34**	**20**	P	**P**	**22 08 51.6**	**+1.3**
CAST	**Castle Rocks**	**64.51**	**26**	P	**P**	**22 08 51.8**	**+0.3**
CAST				IAmb	IAmb	22 09 24.8	
	comp=Z,3.8nm,1.1s						
KURBB	**Kurchatov Arra**	**65.42**	**319**	P	**P**	**22 08 57.4**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=98,slow=7.0,SNR=28						
	comp=Z,5.9nm,0.6s						
MLY	**Manley**	**65.61**	**24**	P	**P**	**22 08 59.7**	**+1.1**
MLY				IAmb	IAmb	22 09 05.6	
	comp=Z,4.6nm,1.4s						
D22K	**Ayikyak River**	**66.30**	**20**	P	**P**	**22 09 04.0**	**+1.0**
ILAR	**Eielson Array**	**67.10**	**25**	P	**P**	**22 09 07.8**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=251,slow=5.7,SNR=12						
	comp=Z,0.5nm,0.4s						
J25K	**Salcha River,**	**67.69**	**26**	P	**P**	**22 09 11.0**	**-0.9**
J25K				IAmb	IAmb	22 09 18.9	
	comp=Z,3.0nm,1.2s						
J26L	**Joseph Creek**	**68.42**	**26**	P	**P**	**22 09 16.7**	**+0.1**
J26L				IAmb	IAmb	22 09 24.1	
	comp=Z,5.8nm,1.4s						
BMAR	**Burnt Mountain**	**68.70**	**23**	P	**P**	**22 09 19.0**	**+0.8**
BCAR	**Beaver Creek A**	**68.91**	**28**	P	**P**	**22 09 20.5**	**+0.8**
I28M	**Miner Creek**	**70.11**	**25**	P	**P**	**22 09 29.0**	**+1.9**
I28M				IAmb	IAmb	22 09 38.2	
	comp=Z,5.1nm,1.4s						
M29M	**Somme Creek**	**70.33**	**28**	P	**P**	**22 09 29.9**	**+1.4**
L29M	**L29M**	**70.56**	**28**	P	**P**	**22 09 31.0**	**+1.2**
L29M				IAmb	IAmb	22 09 32.5	
	comp=Z,4.9nm,1.0s						
BVAR	**Borovoye Array**	**70.65**	**321**	P	**P**	**22 09 30.4**	**-0.1**
	comp=Z,1.9nm,0.4s,baz=102,slow=6.9,SNR=9.5						
	comp=Z,1.9nm,0.4s						
K29M	**Barlow Dome**	**70.92**	**27**	P	**P**	**22 09 32.9**	**+0.9**
M30M	**Minto, Yukon**	**71.11**	**28**	P	**P**	**22 09 34.4**	**+1.2**
G31M	**Satah River**	**72.58**	**24**	P	**P**	**22 09 41.7**	**0.0**
G31M				IAmb	IAmb	22 09 49.5	
	comp=Z,3.6nm,1.2s						
ABKAR	**Akbulak array**	**77.40**	**318**	P	**P**	**22 10 09.3**	**-0.8**
YKA	**Yellowknife Ar**	**81.33**	**28**	P	**P**	**22 10 32.1**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=285,slow=5.7,SNR=4.2						
	comp=Z,0.4nm,0.8s						
NVAR	**Mina Array Bea**	**84.92**	**52**	LR	LR	22 43 58.5	
	comp=Z,82nm,19.5s,baz=272,slow=32						
ARCES	**ARCESS Array B**	**87.06**	**343**	P	**P**	**22 10 59.1**	**-1.1**
	comp=Z,2.0nm,1.0s,baz=43,slow=5.5,SNR=3.7						
	comp=Z,2.0nm,1.0s						
PFO	**Pinyon Flats O**	**87.59**	**56**	LR	LR	22 44 39.2	
	comp=Z,55nm,19.1s,baz=240,slow=32						
FINES	**FINESS Array B**	**91.39**	**336**	P	**P**	**22 11 19.5**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=36,slow=4.9,SNR=3.4						
	comp=Z,1.1nm,0.7s						
ANMO	**Albuquerque**	**95.04**	**52**	LR	LR	22 52 25.3	
	comp=Z,32nm,18.9s,baz=16,slow=34						
LPIG	**La Paz**	**95.51**	**64**	LR	LR	22 49 08.3	
	comp=Z,72nm,19.0s,baz=231,slow=32						
TXAR	**Lajitas Array**	**99.30**	**57**	LR	LR	22 52 01.0	
	comp=Z,23nm,19.2s,baz=274,slow=32						

*IDC **26** 22:02:26.2±0.8, 5˚.99S×142˚.55E, h0km, mb4.1/13, mbtmp4.2/16, ML4.2/2, MS3.7/4, Error ellipse: s-maj=32.7km s-min=19.1km az=82.0*
*NEIC **26** 22:02:29.9±2.5, 6˚.26S±0˚.09×142˚.54E±0˚.02, h10km±1km, mb4.8/21, Error ellipse: s-maj=15.8km s-min=2.9km az=170.0*
*DJA **26** 22:02:30.9±0.4, 6˚S±4˚×14˚3E±˚, h10km, M5.0/11, mB5.5/3, mb4.7/11, MLv5.1/5, Mw(mB)5.0/3*

ISC 26 22:02:29.9±0.5, 6˚.31S±0˚.06×142˚.54E±0˚.06, h10km, n78, σ1§55/68, mb4.5/35, 3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.67**	**308**	P	**Pn**	**22 02 58.3**	**-0.9**
MMPI	**Merauke**	**3.02**	**225**	P	**Pn**	**22 03 18.4**	**+0.6**
GENI	**Genyem**	**4.39**	**327**	P	**Pn**	**22 03 36.9**	**+0.3**
PMG	**Port Moresby**	**5.51**	**124**	Pn	**Pn**	**22 03 51.8**	**-0.3**
PMG	**Port Moresby**	**5.51**	**124**	P	**Pn**	**22 03 53.6**	**+1.5**
PMG	**Port Moresby**	**5.51**	**124**	Pn	**Pn**	**22 03 53.6**	**+1.5**
	46nm,0.5s,baz=328,slow=3.4,SNR=24						
PMG				Sn	**Sn**	**22 04 57.0**	**+1.4**
	2.8nm,0.3s,baz=15,slow=22,SNR=1.0						
PMG				LR	LR	22 07 13.5	
	comp=Z,660nm,19.8s,baz=257,slow=50						
SMPI	**Sarmi**	**5.75**	**318**	P	**Pn**	**22 03 55.3**	**0.0**
	139nm,0.9s,3µm1.2nm						
MANU	**Manus Island**	**6.42**	**49**	Pn	**Pn**	**22 04 03.6**	**-0.9**
RABL	**Rabaul**	**9.81**	**78**	Pn	**Pn**	**22 04 51.7**	**+0.5**
FAKI	**Fak Fak**	**10.79**	**288**	Pn	**Pn**	**22 05 04.6**	**0.0**
FAKI	**Fak Fak**	**10.79**	**288**	P	**Pn**	**22 05 04.1**	**-0.5**
FAKI	**Fak Fak**	**10.79**	**288**	P	**Pn**	**22 05 04.9**	**+0.3**
	47nm,0.7s						
SAUI	**Saumlaki**	**11.27**	**261**	Pn	**Pn**	**22 05 10.5**	**-0.7**
SAUI	**Saumlaki**	**11.27**	**261**	P	**Pn**	**22 05 13.3**	**+2.1**
	313nm,0.8s						
KDU	**Kakadu**	**11.77**	**237**	P	**Pn**	**22 05 19.6**	**+1.6**
SWI	**Sorong**	**12.49**	**295**	P	**Pn**	**22 05 28.6**	**+0.8**
	39nm,1.1s						
MTN	**Manton Dam**	**12.98**	**239**	Pn	**Pn**	**22 05 35.7**	**+1.2**
DRS	**Darwin Rock St**	**12.99**	**241**	P	**Pn**	**22 05 36.1**	**+1.5**
CTA	**Charters Tower**	**14.16**	**166**	Lg	Lg	22 10 05.7	
	0.2nm,0.3s,baz=49,slow=20,SNR=2.9						
WRA	**Warrankuna Arr**	**15.72**	**210**	Pn	**Pn**	**22 06 12.3**	**+0.8**
	2.0nm,0.3s,baz=30,slow=13,SNR=23						
WRA				Sn	**Sn**	**22 09 03.4**	**-2.4**
	1.4nm,0.3s,baz=42,slow=21,SNR=6.6						
WRA				Lg	Lg	22 10 53.0	
	1.0nm,0.3s,baz=30,slow=29,SNR=6.4						
	4.5nm,0.5s						
KNRA	**Kununurra**	**16.40**	**234**	P	**Pn**	**22 06 20.6**	**+0.3**
HNR	**Honiara**	**17.52**	**101**		**Pn**	**22 06 34.5**	**0.0**
HNR				IAmb	IAmb	22 06 56.7	
	comp=Z,79nm,1.1s						
SOEI	**Soe**	**18.41**	**258**	P	**P**	**22 06 45.7**	**+0.2**
SOEI	**Soe**	**18.41**	**258**	P	**P**	**22 06 47.4**	**+1.9**
	comp=Z,159nm,1.0s						
AS31	**Alice Springs**	**19.15**	**205**	P	**P**	**22 06 54.5**	**+1.0**
ASAR	**Alice Springs**	**19.15**	**205**	P	**P**	**22 06 55.3**	**+1.8**
ASAR	**Alice Springs**	**19.15**	**205**	P	**P**	**22 06 53.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=37,slow=9.1,SNR=4.2						
ASAR				Sn	**Sn**	**22 10 25.0**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=24,slow=27,SNR=4.5						
ASAR				Lg	Lg	22 12 46.2	
	comp=Z,0.2nm,0.3s,baz=20,slow=30,SNR=3.2						
ASAR				LR	LR	22 15 03.7	
	comp=Z,560nm,20.5s,baz=33,slow=39						
	comp=Z,4.3nm,0.4s						
GUMO	**Guam**	**19.91**	**7**	LR	LR	22 13 36.9	
	comp=Z,73nm,19.3s,baz=253,slow=34						
EDFI	**Ende, Flores**	**20.81**	**262**	P	**P**	**22 07 14.3**	**+2.5**
	comp=Z,27nm,0.9s						
KAPI	**Kappang**	**22.71**	**272**	P	**P**	**22 07 33.4**	**+1.2**
TTSI	**Tana Toraja**	**22.87**	**277**	P	P	22 07 44.1	+10
TOLI2	**Tolitoli**	**22.94**	**288**	P	**P**	**22 07 35.3**	**+0.8**
TOLI2				IAmb	IAmb	22 07 54.4	
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**25.45**	**182**	LR	LR	22 18 49.9	
	comp=Z,233nm,18.2s,baz=355,slow=38						
MJAR	**Matsushiro Arr**	**42.82**	**355**	P	P	22 10 22.4	-5.7
	comp=Z,0.8nm,0.5s,baz=186,slow=8.3,SNR=4.7						
	comp=Z,0.8nm,0.5s						
NJ2	**Nanjing**	**44.33**	**331**	*eP*	**P**	**22 10 41.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
RPSI	**Rantau Prapat**	**44.46**	**280**	P	**P**	**22 10 40.6**	**-1.0**
KSAR	**Wonju Array Be**	**45.63**	**344**	P	**P**	**22 10 49.8**	**-0.7**
KSRS	**Korea Array**	**45.63**	**344**	P	P	22 10 45.6	-4.9
	comp=Z,0.7nm,0.4s,baz=171,slow=9.2,SNR=2.2						
	comp=Z,0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**49.54**	**301**	P	**P**	**22 11 19.9**	**-1.4**
CMAR	**Chiang Mai Arr**	**49.54**	**301**	P	**P**	**22 11 19.4**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=119,slow=5.6,SNR=2.4						
	comp=Z,0.6nm,0.4s						
LYN	**LuoYang**	**49.58**	**327**	⇓P	P	**22 11 24.3**	**+3.0**
LYN				pmax	pmax		
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**49.69**	**301**	P	**P**	**22 11 22.4**	**0.0**
USRK	**Ussuriysk Ar.**	**51.17**	**350**	P	P	22 11 27.7	-5.5
	comp=Z,2.4nm,0.7s,baz=170,slow=5.3,SNR=4.5						
	comp=Z,2.4nm,0.7s						
XAN	**Xi'an**	**51.21**	**324**	P	**P**	**22 11 32.3**	**-1.4**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PZH	**PanZhiHua**	**51.26**	**311**	P	**P**	**22 11 36.5**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,120nm,5.9s						
MDJ	**Mudanjiang**	**52.02**	**348**	P	**P**	**22 11 40.3**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.8s						
CD2	**Chengdu**	**52.40**	**317**	P	**P**	**22 11 45.3**	**+2.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**53.56**	**347**	⇓P	**P**	**22 11 50.5**	**-0.4**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,74nm,6.5s						
HHC	**Hu-ho-hao-te**	**54.88**	**331**	*eP*	**P**	**22 12 01.8**	**+1.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
BTO	**Baotou**	**55.44**	**330**	*eP*	**P**	**22 12 04.5**	**-0.3**
BTO				pP	**pP**	**22 12 09.3**	**+1.2**
BTO				sP	**sP**	**22 12 11.8**	**+2.4**
BTO				PP	**PP**	**22 14 11.0**	**+2.2**
BTO				pmax	pmax		
	comp=Z,11nm,0.8s						
BTO				pmax	pmax		
	comp=Z,250nm,7.4s						
LZH	**Lanzhou**	**55.64**	**322**	*eP*	**P**	**22 12 04.8**	**-1.6**
LZH				pP	pP	22 12 09.0	-0.8
LZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SHL	**Shillong**	**58.51**	**305**	P	**P**	**22 12 26.0**	**-1.0**
SHL				IAmb	IAmb	22 12 32.1	
	comp=Z,13nm,1.2s						
GTA	**Gaotai**	**60.22**	**323**	P	**P**	**22 12 41.0**	**+2.5**
GTA				pP	sP	22 12 49.8	+6.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
PETK	**Petropavlovsk-**	**60.58**	**10**	P	P	22 12 35.9	-4.6
	comp=Z,3.1nm,0.9s,baz=205,slow=6.4,SNR=1.6						
	comp=Z,3.1nm,0.9s						
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**22 12 52.0**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=155,slow=7.2,SNR=2.3						
	comp=Z,0.4nm,0.6s						
WMQ	**Urumqi**	**70.19**	**321**	*eP*	**P**	**22 13 45.5**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**74.96**	**322**	P	**P**	**22 14 09.9**	**-1.5**
MKAR	**Makanchi Array**	**74.96**	**322**	P	**P**	**22 14 10.0**	**-1.4**
MKAR	**Makanchi Array**	**74.96**	**322**	P	P	22 14 07.9	-3.5
	comp=Z,2.0nm,0.9s,baz=102,slow=6.7,SNR=13						
	comp=Z,2.0nm,0.9s						
MAKZ	**Makanchi**	**75.16**	**322**	P	**P**	**22 14 10.6**	**-1.9**
MAKZ				IAmb	IAmb	22 14 17.8	
	comp=Z,7.4nm,1.2s						
PRZ	**Przheval'sk**	**75.69**	**317**	P	**P**	**22 14 15.5**	**-0.3**
PRZ				IAmb	IAmb	22 14 22.5	
	comp=Z,15nm,1.4s						
KSH	**Kashi**	**76.32**	**313**	P	**P**	**22 14 20.5**	**+1.1**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIL	**Nilore**	**76.53**	**307**	P	**P**	**22 14 19.5**	**-1.2**
ZALV	**Zalesovo Beam**	**76.96**	**329**	P	P	22 14 19.8	-2.7
ZALV	**Zalesovo Beam**	**76.96**	**329**	P	P	22

SONM	**Songino Array**	**40.47 339**	P	**P**	**22 14 27.8**	**-0.3**	
	1.5nm,1.2s,baz=166,slow=9.6,SNR=1.8						
	1.5nm,1.2s						
MKAR	**Makanchi Array**	**51.54 323**	P	**P**	**22 15 54.7**	**-0.4**	
	0.9nm,0.7s,baz=114,slow=7.8,SNR=6.2						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**54.10 331**	P	**P**	**22 16 13.3**	**-0.6**	
	0.7nm,0.7s,baz=110,slow=6.6,SNR=2.0						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**55.57 325**	P	**P**	**22 16 24.3**	**-0.3**	
	0.5nm,0.4s,baz=128,slow=7.5,SNR=1.5						
	0.5nm,0.4s						
BVAR	**Borovoye Array**	**61.16 325**	P	**P**	**22 17 02.4**	**-1.1**	
	0.7nm,0.8s,baz=97,slow=7.4,SNR=1.5						
	0.7nm,0.8s						
ARCES	**ARCESS Array B**	**83.65 340**	P	**P**	**22 19 17.1**	**0.0**	
	1.7nm,0.8s,baz=80,slow=6.8,SNR=7.1						
	1.7nm,0.8s						
EIL	**Elat**	**85.79 299**	LR	LR	23 03 29.1		
	comp=Z,31nm,18.4s,baz=78,slow=40						

*IDC **26** 22:16:53.1±0.6,5.75S×142.52E,h0km,mb4.1/16, mbtmp4.2/20,ML4.4/3,MS3.6/10,Error ellipse: s-maj=28.7km s-min=13.2km az=82.0*
*NEIC **26** 22:16:56.2±1.7,5.91S±0.08×142.34E±0.07,h10km±1km, mb4.8/42,Error ellipse: s-maj=13.3km s-min=12.5km az=203.0*
*DJA **26** 22:16:59.4±0.3,6.3S×14.3E±,h10km,M4.9/16,mB5.8/4, mb4.6/16,MLv5.0/5,Mw(mB)5.4/4*

ISC 26 22:16:56.4±0.4,6.04S±0.04×142.39E±0.06,h10km,n115, σ2s74/105,mb4.7/49,MS3.7/8,2C-3D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.13 219**		P	**Pb**	**22 17 54.8**	**+2.6**
GENI	**Genyem**	**4.08 327**		P	**Pn**	**22 17 59.9**	**+1.0**
SMPI	**Sarmi**	**5.45 317**		P	**Pn**	**22 18 21.8**	**+4.1**
	179nm,1.0s,6μm0.6nm						
PMG	**Port Moresby**	**5.79 126**		Pn	**Pn**	**22 18 22.0**	**-0.3**
PMG	**Port Moresby**	**5.79 126**		Pn	**Pn**	**22 18 22.6**	**+0.3**
	37nm,0.3s,baz=359,slow=6.0,SNR=16						
PMG				Sn	**Sn**	**22 19 27.9**	**-0.9**
	15nm,0.3s,baz=228,slow=23,SNR=2.4						
PMG				LR	LR	22 21 29.9	
	comp=Z,313nm,20.6s,baz=310,slow=47						
MANU	**Manus Island**	**6.35 52**		Pn	**Pn**	**22 18 29.1**	**-1.0**
COEN	**Coen**	**7.91 174**		Pn	**Pn**	**22 18 53.3**	**+1.8**
RABL	**Rabaul**	**9.90 80**		Pn	**Pn**	**22 19 19.6**	**+0.7**
FAKI	**Fak Fak**	**10.58 287**		Pn	**Pn**	**22 19 25.1**	**-3.1**
SAUI	**Saumlaki**	**11.18 259**		Pn	**Pn**	**22 19 36.1**	**-0.3**
SAUI	**Saumlaki**	**11.18 259**		P	Pn	22 19 43.1	+6.7
	114nm,0.8s						
SWI	**Sorong**	**12.24 294**		P	**Pn**	**22 19 49.8**	**-1.1**
MTN	**Manton Dam**	**13.00 238**		Pn	**Pn**	**22 20 01.1**	**-0.2**
CTA	**Charters Tower**	**14.46 165**		Pn	**Pn**	**22 20 23.6**	**+2.3**
	0.2nm,0.3s,baz=321,slow=14,SNR=1.9						
CTA				Lg	Lg	22 24 40.0	
	0.4nm,0.3s,baz=260,slow=22,SNR=2.4						
CTA				LR	LR	22 26 19.1	
	comp=Z,444nm,20.9s,baz=354,slow=38						
	3.5nm,0.9s						
CTAO	**Charters Tower**	**14.46 165**		Pn	**Pn**	**22 20 21.3**	**0.0**
WB0	**Warramunga Arr**	**15.71 209**		Pn	**Pn**	**22 20 37.7**	**-0.2**
WRAB	**Tennant Creek**	**15.87 209**		Pn	**Pn**	**22 20 40.4**	**+0.4**
WB2	**Warramunga Arr**	**15.88 209**		Pn	**Pn**	**22 20 39.2**	**-1.0**
WRA	**Warramunga Arr**	**15.88 209**		Pn	**Pn**	**22 20 40.4**	**+0.1**
WRA	**Warramunga Arr**	**15.88 209**		Pn	**Pn**	**22 20 40.3**	**+0.1**
	2.6nm,0.3s,baz=31,slow=12,SNR=66						
WRA				Sn	**Sn**	**22 23 30.7**	**-5.8**
	2.1nm,0.3s,baz=26,slow=22,SNR=6.1						
WRA				Lg	Lg	22 25 25.7	
	baz=32,slow=27						
	3.7nm,0.3s						
KNRA	**Kununurra**	**16.45 233**		Pn	**Pn**	**22 20 47.2**	**-0.3**
KNRA				IAmb	IAmb	22 20 55.1	
	comp=Z,29nm,0.6s						
HNR	**Honiara**	**17.71 102**			**Pn**	**22 21 05.8**	**+2.4**
HNR				IAmb	IAmb	22 21 06.9	
	comp=Z,47nm,0.6s						
HNR	**Honiara**	**17.71 102**		P	**Pn**	**22 21 05.6**	**+2.2**
	comp=Z,354nm,0.3s,baz=253,slow=19,SNR=0.9						
SOEI	**Soe**	**18.33 257**		P	**Pn**	**22 21 10.1**	**-0.9**
SOEI				IAmb	IAmb	22 21 20.5	
	comp=Z,81nm,1.1s						
SOEI	**Soe**	**18.33 257**		P	**P**	**22 21 18.0**	**+6.8**
	comp=Z,77nm,0.8s						
AS31	**Alice Springs**	**19.34 204**		P	**P**	**22 21 24.1**	**+2.1**
ASAR	**Alice Springs**	**19.34 204**		P	**P**	**22 21 24.4**	**+2.3**
ASAR	**Alice Springs**	**19.34 204**		P	**Pn**	**22 21 24.8**	**+1.6**
	comp=Z,3.4nm,0.3s,baz=34,slow=9.6,SNR=101						
ASAR				S	**Sn**	**22 24 55.0**	**-5.2**
	comp=Z,7.9nm,0.8s,baz=18,slow=28,SNR=5.1						
ASAR				Lg	Lg	22 27 17.6	
	baz=190,slow=34						
	comp=Z,30nm,0.9s						
LUWI	**Luwuk**	**20.20 283**		P	**P**	**22 21 30.1**	**-1.4**
LUWI				IAmb	IAmb	22 21 45.3	
	comp=Z,31nm,1.3s						
LUWI	**Luwuk**	**20.20 283**		P	Pn	22 21 37.1	+3.7
	comp=Z,63nm,0.6s,comp=Z,9μm						
FITZ	**Fitzroy Crossi**	**20.27 232**		P	**P**	**22 21 31.9**	**-0.4**
GTOI	**Gorontalo**	**20.45 288**		P	Pn	22 21 40.6	+4.1
	comp=Z,17nm,0.6s						
EDFI	**Ende, Flores**	**20.71 261**		P	Pn	22 21 43.7	+4.2
	comp=Z,16nm,0.9s						
EIDS	**Eidsvold**	**20.95 158**		P	**P**	**22 21 40.5**	**+1.0**
EIDS				IAmb	IAmb	22 21 45.8	
	comp=Z,40nm,1.1s						
DAV	**Davao City (W)**	**21.24 308**		LR	LR	22 31 56.6	
	comp=Z,110nm,18.2s,baz=136,slow=43						
MRSI	**Marisa**	**21.42 287**		P	**P**	**22 21 49.4**	**+4.7**
	comp=Z,23nm,1.1s						
KAPI	**Kappang**	**22.56 271**		P	**P**	**22 21 57.5**	**+0.5**
KAPI				IAmb	IAmb	22 22 09.8	
	comp=Z,20nm,1.0s						
TOLI2	**Tolitoli**	**22.72 288**		P	**P**	**22 21 56.1**	**-2.6**
TOLI2				IAmb	IAmb	22 22 13.5	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**25.72 182**		P	**P**	**22 22 27.4**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=348,slow=12,SNR=4.7						
STKA				S	**S**	**22 27 05.6**	**+10**
	comp=Z,0.9nm,0.3s,baz=167,slow=23,SNR=1.4						
	comp=Z,3.2nm,0.7s						
JCJ	**Chichijima**	**32.94 360**		LR	LR	22 36 04.4	
	comp=Z,79nm,21.5s,baz=105,slow=35						
JOW	**Kunigami**	**35.42 338**		LR	LR	22 36 03.2	
	comp=Z,138nm,20.6s,baz=137,slow=33						
JHJ	**Hachijo jima 2**	**39.02 357**		LR	LR	22 36 47.6	
	comp=Z,149nm,21.1s,baz=215,slow=31						
MJAR	**Matsushiro Arr**	**42.54 355**		P	P	22 24 48.2	-4.1
	comp=Z,0.5nm,0.4s,baz=153,slow=7.1,SNR=1.7						
	comp=Z,0.5nm,0.4s						
NJ2	**Nanjing**	**44.02 331**		*e*P	**P**	**22 25 08.0**	**+3.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
KSAR	**Wonju Array Be**	**45.33 344**		P	**P**	**22 25 12.6**	**-2.0**
KSRS	**Korea Array**	**45.33 344**		P	P	22 25 11.0	-3.7
	comp=Z,0.7nm,0.4s,baz=159,slow=8.3,SNR=2.5						
	comp=Z,0.7nm,0.4s						
ENH	**Enshi**	**47.94 321**		P	**P**	**22 25 32.6**	**-2.8**
PHRA	**Phrae**	**48.20 301**		P	**P**	**22 25 35.3**	**-2.1**
CRAI	**Chiangrai**	**48.86 303**		P	**P**	**22 25 40.1**	**-2.5**
CRAI				IAmb	IAmb	22 25 48.3	
	comp=Z,8.2nm,1.3s						
LYN	**LuoYang**	**49.27 327**		⇓P	**P**	**22 25 48.8**	**+3.3**
LYN				pmax	pmax		
	comp=Z,35nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.27 301**		P	**P**	**22 25 43.4**	**-2.4**
CMAR	**Chiang Mai Arr**	**49.27 301**		P	**P**	**22 25 43.9**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=107,slow=5.5,SNR=7.1						
	comp=Z,0.7nm,0.3s						
CHTO	**Chiang Mai**	**49.43 301**		P	**P**	**22 25 45.6**	**-1.4**
KMI	**Kunming**	**49.46 310**		⇑P	P	22 25 52.3	+4.9
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
HNS	**HongShan**	**50.35 331**		⇑P	**P**	**22 25 56.3**	**+2.7**
HNS				pmax	pmax		
	comp=Z,26nm,1.3s						
USRK	**Ussuriysk Ar.**	**50.88 350**		P	**P**	**22 25 55.4**	**-2.1**
USRK	**Ussuriysk Ar.**	**50.88 350**		P	**P**	**22 25 54.2**	**-3.3**
	comp=Z,3.0nm,0.7s,baz=176,slow=7.9,SNR=9.0						
USRK				LR	LR	22 47 21.3	
	comp=Z,47nm,18.0s,baz=155,slow=36						
	comp=Z,3.0nm,0.7s						
XAN	**Xi'an**	**50.90 324**		P	**P**	**22 26 01.3**	**+3.4**
XAN				pmax	pmax		
	comp=Z,18nm,1.4s						
PZH	**PanZhiHua**	**50.97 311**		P	**P**	**22 26 02.5**	**+3.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH				pmax	pmax		
	comp=Z,140nm,5.6s						
BJT	**Baijiatuau**	**51.81 334**		P	**P**	**22 26 02.1**	**-2.5**
BJT				IAmb	IAmb	22 26 08.2	
	comp=Z,17nm,1.1s						
BJI	**Beijing**	**51.83 334**		P	**P**	**22 26 07.3**	**+2.6**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2	**Changchun**	**51.92 344**		P	**P**	**22 26 08.0**	**+2.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2	**Chengdu**	**52.10 317**		P	**P**	**22 26 11.0**	**+4.0**
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
TNCH	**TengChong**	**52.67 308**		P	**P**	**22 26 16.0**	**+4.5**
TNCH				pP	sP	22 26 19.5	+3.5
TNCH				pmax	pmax		
	comp=Z,16nm,1.3s						
BNX	**BinXian**	**53.26 347**		⇓P	**P**	**22 26 17.5**	**+2.3**
BNX				pmax	pmax		
	comp=Z,67nm,3.5s						
BNX				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**54.57 332**		*e*P	**P**	**22 26 27.8**	**+2.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,73nm,5.0s						
BTO	**Baotou**	**55.13 330**		*e*P	**P**	**22 26 32.3**	**+3.2**
BTO				pP	**sP**	**22 26 37.0**	**+3.4**
BTO				sP	**pP**	**22 26 39.3**	**+6.9**
BTO				PP	**PP**	**22 28 37.5**	**+4.9**
BTO				pmax	pmax		
	comp=Z,13nm,0.7s						
BTO				pmax	pmax		
	comp=Z,320nm,6.6s						
LZH	**Lanzhou**	**55.34 322**		*e*P	**P**	**22 26 35.5**	**+4.7**
LZH				sP	sP	22 26 41.8	+6.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
HEH	**HeiHe**	**57.55 349**		*e*P	**P**	**22 26 47.8**	**+1.8**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAR	**Rarotonga**	**57.88 111**		LR	LR	22 49 54.5	
	comp=Z,48nm,18.7s,baz=281,slow=34						
SHL	**Shillong**	**58.24 305**		P	**P**	**22 26 50.6**	**-1.0**
GTA	**Gaotai**	**59.92 323**		P	**P**	**22 27 07.0**	**+4.1**
GTA				sP	sP	22 27 17.3	+10
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
PETK	**Petropavlovsk-**	**60.33 11**		P	**P**	**22 27 01.9**	**-3.4**
	comp=Z,1.8nm,0.7s,baz=151,slow=3.3,SNR=2.0						
	comp=Z,1.8nm,0.7s						
LSA	**Lhasa**	**60.65 309**		P	**P**	**22 27 06.9**	**-1.6**
LSA				IAmb	IAmb	22 27 15.2	
	comp=Z,9.8nm,1.0s						
ULN	**Ulaanbaatar**	**62.03 334**		P	**P**	**22 27 14.8**	**-2.4**
ULN				IAmb	IAmb	22 27 22.4	
	comp=Z,8.4nm,0.8s						
SONM	**Songino Array**	**62.30 333**		P	**P**	**22 27 17.9**	**-1.0**
SONM				IAmb	IAmb	22 27 24.2	
	comp=Z,17nm,1.4s						
SONM	**Songino Array**	**62.30 333**		P	**P**	**22 27 16.2**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=157,slow=8.0,SNR=3.6						
	comp=Z,0.3nm,0.6s						
YAK	**Yakutsk**	**68.58 354**		P	**P**	**22 27 57.8**	**-1.3**
WMQ	**Urumqi**	**69.89 321**		*e*P	**P**	**22 28 12.3**	**+4.6**
WMQ				sP	sP	22 28 18.5	+6.2
WMQ	**Urumqi**	**69.89 321**		SS	SS	22 41 50.0	+3.1
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
VNDA	**Vanda**	**72.18 176**		P	**P**	**22 28 20.8**	**-0.2**
VNDA				IAmb	IAmb	22 28 21.9	
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**72.18 176**		P	**P**	**22 28 21.1**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=326,slow=7.5,SNR=19						
	comp=Z,2.9nm,0.5s						
MK31	**Makanchi Array**	**74.65 322**		P	**P**	**22 28 34.5**	**-1.6**
MK31				IAmb	IAmb	22 28 41.5	
	comp=Z,7.7nm,0.9s						
MKAR	**Makanchi Array**	**74.65 322**		P	**P**	**22 28 34.6**	**-1.5**
MKAR	**Makanchi Array**	**74.65 322**		P	**P**	**22 28 33.6**	**-2.5**
	comp=Z,1.2nm,0.7s,baz=93,slow=8.3,SNR=15						
	comp=Z,1.2nm,0.7s						
MAKZ	**Makanchi**	**74.85 322**		P	**P**	**22 28 35.5**	**-1.8**
MAKZ				IAmb	IAmb	22 28 42.5	
	comp=Z,11nm,0.9s						
PRZ	**Przheval'sk**	**75.39 317**		P	**P**	**22 28 40.4**	**-0.2**
PRZ				IAmb	IAmb	22 28 46.7	
	comp=Z,15nm,1.1s						
KSH	**Kashi**	**76.02 313**		P	P	22 28 50.0	+5.7
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**76.25 307**		P	**P**	**22 28 44.0**	**-1.5**
NIL				IAmb	IAmb	22 28 51.4	
	comp=Z,9.3nm,0.8s						
ZAA0	**Zalesovo Array**	**76.65 329**		P	**P**	**22 28 47.4**	**+0.1**
ZAA0				IAmb	IAmb	22 28 51.4	
	comp=Z,6.6nm,1.1s						
ZALV	**Zalesovo Beam**	**76.65 329**		P	**P**	**22 28 47.3**	**0.0**
ZALV	**Zalesovo Beam**	**76.65 329**		P	**P**	**22 28 44.3**	**-3.0**
	comp=Z,0.6nm,0.4s,baz=116,slow=5.7,SNR=2.3						
	comp=Z,0.6nm,0.4s						
NRN	**Naryn**	**76.67 315**		P	**P**	**22 28 45.5**	**-2.7**
TIXI	**Tiksi**	**78.04 356**		P	**P**	**22 28 53.2**	**-1.6**
TIXI				IAmb	IAmb	22 29 05.7	
	comp=Z,21nm,2.0s						
AAK	**Ala-Archa**	**78.14 316**		P	**P**	**22 28 54.3**	**-1.8**
KURK	**Kurchatov**	**78.54 324**		P	**P**	**22 28 58.0**	**+0.1**
KURK				IAmb	IAmb	22 29 03.0	
	comp=Z,11nm,1.1s						
KURBB	**Kurchatov Arra**	**78.55 324**		P	**P**	**22 28 55.7**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=120,slow=4.7,SNR=5.6						
	comp=Z,0.4nm,0.4s						
SIMJ	**Simiganj**	**80.93 311**		P	**P**	**22 29 09.6**	**-1.8**
SIMJ				IAmb	IAmb	22 29 16.8	
	comp=Z,10nm,0.9s						
KKAR	**Karatay Array**	**81.06 315**		P	**P**	**22 29 11.0**	**-0.9**
KDAK	**Kodiak Island**	**82.14 29**		LR	LR	23 00 53.9	
	comp=Z,35nm,21.8s,baz=239,slow=32						
QSPA	**South Pole Qui**	**83.93 180**		P	**P**	**22 29 26.0**	**-0.6**
	comp=Z,8.6nm,0.5s,baz=349,slow=3.3,SNR=41						
	comp=Z,8.6nm,0.5s						
NRIK	**Noril'sk**	**83.94 343**		P	**P**	**22 29 24.4**	**-1.8**
NRIK	**Noril'sk**	**83.94 343**		P	**P**	**22 29 23.8**	**-2.5**
	comp=Z,1.0nm,0.4s,baz=90,slow=5.6,SNR=2.1						
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**84.13 325**		P	**P**	**22 29 25.1**	**-2.5**
	comp=Z,2.9nm,0.8s,baz=118,slow=5.7,SNR=17						
	comp=Z,2.9nm,0.8s						
BRVK	**Borovoye**	**84.20 325**		P	**P**	**22 29 25.9**	**-2.1**
ILAR	**Eielson Array**	**87.34 24**		P	P	22 29 38.6	-4.7
	comp=Z,1.3nm,0.7s,baz=256,slow=4.7,SNR=21						
	comp=Z,1.3nm,0.7s						
L27K	**Beaver Creek,**	**88.95 26**		P	**P**	**22 29 49.0**	**-2.0**
BMAR	**Burnt Mountain**	**89.10 22**		P	**P**	**22 29 49.9**	**-1.7**
GEYT	**Alibeck**	**89.17 308**		P	**P**	**22 29 50.5**	**-2.2**
	comp=Z,1.2nm,1.0s,baz=95,slow=3.2,SNR=1.4						
	comp=Z,1.2nm,1.0s						
ABKAR	**Akbulak array**	**89.62 319**		P	**P**	**22 29 52.1**	**-2.3**
ELIB	**Princess Elisa**	**92.94 196**		*d*P	**P**	**22 30 08.0**	**-1.7**
INK	**Inuvik**	**93.38 22**		LR	LR	23 05 26.6	
	comp=Z,53nm,21.7s,baz=180,slow=31						
PLCA	**Paso Flores**	**124.49 150**		PKP	**PKPdf**	**22 35 56.0**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=227,slow=1.7,SNR=7.5						
TORD	**Torodi Ar. Bea**	**140.65 283**		PKP	**PKPdf**	**22 36 25.2**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=58,slow=3.6,SNR=4.4						
DBIC	**Dimbokro**	**147.45 273**		PKPbc	**PKPdf**	**22 36 40.3**	**+1.0**
	comp=Z,2.7nm,0.6s,baz=126,slow=2.3,SNR=4.9						

*IDC **26** 22:19:51.5±0.9,55.93N×149.74W,h0km,mb3.9/15, mbtmp3.8/20,ML3.6/5,MS3.3/4,Error ellipse: s-maj=24.4km s-min=15.9km az=25.0*
*NEIC **26** 22:19:53.6±1.8,56.08N±0.09×149.7W±0.1,h20km±8km, ML3.9/46,ML3.6(AEIC),Error ellipse: s-maj=12.7km s-min=8.4km az=174.0*
*AEIC **26** 22:19:57.6±1.8,56.16N±0.09×149.7W±0.1,h7km±6km, Error ellipse: s-maj=13.3km s-min=8.4km az=168.0*

ISC 26 22:19:52.3±3.8,56.19N±0.07×149.73W±0.05,h3km±25km, n257,σ1s16/262,mb4.2/15,MS3.6/3,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.22 299**			**Pn**	**22 20 29.1**	**-0.8**
OHAK					**Sn**	**22 20 54.7**	**-3.1**
OHAK	**Old Harbor**	**2.22 299**		P	**Pn**	**22 20 29.4**	**-0.5**
	baz=117						
OHAK				S	**Sn**	**22 20 55.4**	**-2.4**
	baz=117						
KDAK	**Kodiak Island**	**2.23 317**		Pn	**Pn**	**22 20 30.1**	**0.0**
KDAK	**Kodiak Island**	**2.23 317**		Sn	**Sn**	**22 20 55.3**	**-2.9**
KDAK	**Kodiak Island**	**2.23 317**		Pn	**Pn**	**22 20 30.5**	**+0.3**
	14nm,0.3s,baz=145,slow=4.3,SNR=71						
KDAK				Sn	**Sn**	**22 20 56.0**	**-2.2**
	14nm,0.3s,baz=177,slow=17,SNR=11						
KDAK				LR	LR	22 21 26.3	
	comp=Z,112nm,20.7s,baz=285,slow=39						
	29nm,0.3s						
Q20K	**Shuyak Island**	**2.82 330**		P	**Pn**	**22 20 38.9**	**+0.7**
	baz=148						
Q20K				S	**Sn**	**22 21 11.9**	**-0.8**
	baz=148						
SYI	**Shuyak Island**	**2.82 330**		Pn	**Pn**	**22 20 38.6**	**+0.4**
SYI				Sn	**Sn**	**22 21 10.9**	**-1.8**
CNPM	**China Poot**	**3.44 347**		Pn	**Pn**	**22 20 46.6**	**-0.2**
CNPM				Sn	**Sn**	**22 21 25.6**	**-2.4**
CNPM				IAML		22 21 30.7	
	comp=E,84nm,0.6s						
Q19K	**Cape Douglas,**	**3.46 324**		Pn	**Pn**	**22 20 47.2**	**+0.1**
Q19K				IAML		22 21 38.3	
	comp=N,392nm,0.8s						
Q19K	**Cape Douglas,**	**3.46 324**		P	**Pn**	**22 20 47.8**	**+0.7**
	baz=141						
BRSE	**Bradley Lake S**	**3.60 352**			**Pn**	**22 20 49.0**	**+0.1**
BRSE					**Sn**	**22 21 30.0**	**-2.0**
BRSE	**Bradley Lake S**	**3.60 352**		P	**Pn**	**22 20 49.0**	**+0.1**
	baz=171						
BRSE				S	**Sn**	**22 21 30.0**	**-2.0**
	baz=171						
BRLK	**Bradley Lake**	**3.64 351**		Pn	**Pn**	**22 20 47.7**	**-1.7**
Q23K	**Middleton Isla**	**3.72 28**		Pn	**Pn**	**22 20 49.2**	**-1.3**
Q23K				IAML		22 21 44.4	
	comp=N,329nm,2.5s						
Q23K				IAML		22 21 46.8	
	comp=E,394nm,3.3s						
MID	**Middleton Isla**	**3.72 28**		Pn	**Pn**	**22 20 50.2**	**-0.3**
MID				IAML		22 21 25.3	
	comp=E,353nm,2.5s						
MID				IAML		22 21 45.7	
	comp=N,340nm,2.4s						
ANCK	**Angle Creek**	**3.73 305**			**Pn**	**22 20 51.5**	**+0.8**
KVTA	**Katmai Vly 10**	**3.74 308**			**Pn**	**22 20 51.7**	**+0.9**
PLK3	**Peulik 3**	**3.88 295**			**Pn**	**22 20 53.5**	**+0.6**
SEW	**Seward**	**3.93 2**			**Sn**	**22 21 37.4**	**-2.6**
SEW	**Seward**	**3.93 2**		Pn	**Pn**	**22 20 52.6**	**-0.8**
SEW	**Seward**	**3.93 2**		P	**Pn**	**22 20 53.3**	**-0.1**
	baz=182						
SEW				S	**Sn**	**22 21 37.4**	**-2.6**
	baz=182						
CNTC	**Contact Creek**	**3.94 304**			**Pn**	**22 20 54.3**	**+0.7**
Q17K	**Contact Creek**	**3.94 304**		P	**Pn**	**22 20 54.3**	**+0.7**
	baz=120						
P23K	**Montague Islan**	**4.01 17**			**Pn**	**22 20 55.0**	**+0.4**
P23K					**Sn**	**22 21 39.7**	**-2.4**
P23K	**Montague Islan**	**4.01 17**		P	**Pn**	**22 20 55.0**	**+0.4**
	baz=199						
P23K				S	**Sn**	**22 21 39.7**	**-2.4**
	baz=199						
O20K	**Slope Mountain**	**4.19 340**			**Pn**	**22 20 57.5**	**+0.4**
O20K	**Slope Mountain**	**4.19 340**		P	**Pn**	**22 20 57.5**	**+0.4**
	baz=158						
IVE	**Iliamna Volcan**	**4.22 337**			**Pn**	**22 20 57.6**	**+0.2**
O22K	**Cooper Landing**	**4.30 0**		Pn	**Pn**	**22 20 59.0**	**+0.4**
O22K				IAML		22 22 00.3	
	comp=E,237nm,0.8s						
O22K				IAML		22 22 05.6	
	comp=N,187nm,0.7s						
O22K	**Cooper Landing**	**4.30 0**		P	**Pn**	**22 20 58.9**	**+0.4**
	baz=180						
P18K	**Big Mountain,**	**4.36 320**		Pn	**Pn**	**22 20 59.5**	**+0.2**
P18K	**Big Mountain,**	**4.36 320**		P	**Pn**	**22 20 59.2**	**-0.1**
	baz=135						
HIN	**Hinchinbrook I**	**4.55 21**		Pn	**Pn**	**22 21 02.5**	**+0.5**
HIN				IAML		22 21 55.1	
	comp=N,110nm,1.1s						
HIN				IAML		22 22 25.6	
	comp=E,116nm,1.7s						
RSO	**Redoubt South**	**4.57 341**		Pn	**Pn**	**22 21 02.8**	**+0.4**
CAPN	**Captain Cook N**	**4.65 351**		Pn	**Pn**	**22 21 05.0**	**+1.7**
O18K	**Koktuh Hills**	**4.69 324**		Pn	**Pn**	**22 21 03.0**	**-0.9**
O18K				IAML		22 22 07.8	
	comp=N,63nm,0.9s						
O18K				IAML		22 22 46.6	
	comp=E,48nm,3.3s						
KAIM	**Kayak Island**	**4.69 35**		Pn	**Pn**	**22 21 03.8**	**-0.1**
KAIM	**Kayak Island**	**4.69 35**		P	**Pn**	**22 21 04.3**	**+0.4**
	baz=219						
EYAK	**Cordova Ski Ar**	**4.85 24**		Pn	**Pn**	**22 21 06.1**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.85 24**		P	**Pn**	**22 21 06.7**	**+0.7**
	baz=207						
FID	**Port Fidalgo**	**4.88 19**		Pn	**Pn**	**22 21 06.3**	**

SML	Sawmill	5.68	7	Pn	Pn	22 21 18.7	+1.2
SML	Sawmill	5.68	7	P	Pn	22 21 18.8	+1.2
	baz=188						
CRQM	Cirque	5.74	34	Pn	Pn	22 21 18.2	-0.2
MESA	MESA	5.74	43	Pn	Pn	22 21 19.0	+0.6
MESA	MESA	5.74	43	P	Pn	22 21 18.7	+0.3
	baz=229						
CRQE	Cirque	5.75	35	P	Pn	22 21 19.1	+0.6
	baz=220						
SCM	Sheep Creek Mo	5.80	11	Pn	Pn	22 21 20.7	+1.6
SCM	Sheep Creek Mo	5.80	11	P	Pn	22 21 20.5	+1.3
	baz=193						
N17K	Nushagak Hills	5.86	321	Pn	Pn	22 21 19.7	-0.1
N17K	Nushagak Hills	5.86	321	P	Pn	22 21 20.3	+0.4
	baz=135						
SKT	Skwentna	5.88	352	Pn	Pn	22 21 20.8	+0.5
ISLE	Juniper Island	5.89	38	Pn	Pn	22 21 20.3	-0.1
BAGL	Bagley Icefiel	5.90	40		Pn	22 21 21.0	+0.6
M20K	Styx River	5.97	344	Pn	Pn	22 21 20.5	-1.1
VRDI	Verde Repeater	6.02	30	Pn	Pn	22 21 22.2	-0.1
N25K	Chitina, Valde	6.05	24	Pn	Pn	22 21 24.1	+1.6
N25K	Chitina, Valde	6.05	24	P	Pn	22 21 23.8	+1.2
	baz=208						
GLB	Gilahina Butte	6.10	28	Pn	Pn	22 21 23.6	+0.4
KIAG	Kiagna River	6.12	36		Pn	22 21 24.4	+0.8
SDPT	Sand Point	6.12	267	Pn	Pn	22 21 22.3	-1.3
SAMH	Samovar Hills	6.17	46		Pn	22 21 25.5	+1.3
M18K	Stony River	6.18	332		Pn	22 21 24.4	0.0
M18K	Stony River	6.18	332	P	Pn	22 21 24.4	0.0
	baz=147						
O15K	Ungalikthiuk R	6.19	303		Pn	22 21 24.4	0.0
O15K	Ungalikthiuk R	6.19	303	P	Pn	22 21 24.4	0.0
	baz=115						
M24K	Tolsona, Glenn	6.21	16	Pn	Pn	22 21 26.2	+1.4
M24K	Tolsona, Glenn	6.21	16	P	Pn	22 21 26.2	+1.4
	baz=199						
TABL	Table Mountain	6.21	43	Pn	Pn	22 21 25.3	+0.3
M19K	Big River Lodg	6.21	339	Pn	Pn	22 21 25.6	+0.8
MCARA	McCarthy VSAT	6.26	31	Pn	Pn	22 21 26.5	+1.0
MCARA	McCarthy VSAT	6.26	31	P	Pn	22 21 26.8	+1.3
	baz=217						
PTPK	Patty Peak	6.28	34		Pn	22 21 27.1	+1.2
PINM	Pinnacle	6.36	48	P	Pn	22 21 27.7	+0.8
	baz=236						
N16K	Nishlik Lake	6.41	316		Pn	22 21 28.4	+0.9
N16K	Nishlik Lake	6.41	316	P	Pn	22 21 28.4	+0.9
	baz=128						
WACK	Wrangell Chich	6.44	23		Pn	22 21 29.6	+1.4
BARN	Barnard Glacie	6.45	37	Pn	Pn	22 21 28.8	+0.6
CTG	Chitna Glacier	6.49	39	P	Pn	22 21 29.5	+0.8
	baz=226						
CTGM	Chitina Glacie	6.49	39	Pn	Pn	22 21 29.2	+0.5
PNL	Peninsula	6.51	53		Pn	22 21 29.5	+0.6
PNL	Peninsula	6.51	53	P	Pn	22 21 29.5	+0.6
	baz=242						
LOGN	Logan Glacier	6.52	41	Pn	Pn	22 21 29.0	-0.1
BCPM	Bancas Point	6.55	51	Pn	Pn	22 21 30.1	+0.7
L19K	White Mountain	6.56	338	Pn	Pn	22 21 29.7	+0.2
L19K	White Mountain	6.56	338	P	Pn	22 21 31.3	+1.8
	baz=154						
M17K	Holitna River	6.58	326	P	Pn	22 21 30.8	+1.0
	baz=139						
HARP	HAARP	6.65	19		Pn	22 21 32.7	+1.9
HARP	HAARP	6.65	19	P	Pn	22 21 32.7	+1.9
	baz=202						
WAT7	Susitna Watana	6.68	3		Pn	22 21 33.0	+1.7
WAT1	Susitna Watana	6.69	5		Pn	22 21 32.7	+1.4
WAT1	Susitna Watana	6.69	5	P	Pn	22 21 32.7	+1.4
	baz=186						
N15K	Kwethluk River	6.78	310	Pn	Pn	22 21 33.8	+1.3
M16K	Timber Creek	6.83	319	Pn	Pn	22 21 33.8	+0.5
M16K	Timber Creek	6.83	319	P	Pn	22 21 34.2	+0.9
	baz=131						
O14K	Tigyukauivet M	6.90	301	Pn	Pn	22 21 35.1	+1.0
O14K	Tigyukauivet M	6.90	301	P	Pn	22 21 35.2	+1.1
	baz=112						
PN7A	Pavlof North-7	6.96	269		Pn	22 21 34.5	-0.6
DHY	Denali Highway	7.01	9	Pn	Pn	22 21 37.5	+1.6
DHY	Denali Highway	7.01	9	P	Pn	22 21 37.2	+1.3
	baz=191						
L18K	Granite Mounta	7.02	332	Pn	Pn	22 21 35.5	-0.3
O29M	Mount Kennedy	7.18	50	P	Pn	22 21 38.8	+0.6
	baz=240						
RND	Reindeer	7.25	3	Pn	Pn	22 21 40.4	+1.3
P29M	Windy Craggy	7.26	57	Pn	Pn	22 21 39.2	+0.1
P29M	Windy Craggy	7.26	57	P	Pn	22 21 39.3	+0.2
	baz=247						
TRF	Thorofare Moun	7.29	358	Pn	Pn	22 21 40.4	+0.7
M15K	Kasigluk River	7.31	313		Pn	22 21 40.9	+1.1
M15K	Kasigluk River	7.31	313	P	Pn	22 21 40.9	+1.1
	baz=124						
CAST	Castle Rocks	7.35	352	Pn	Pn	22 21 40.8	+0.4
N14K	Kuskokwak Cree	7.36	305		Pn	22 21 41.7	+1.2
N14K	Kuskokwak Cree	7.36	305	P	Pn	22 21 41.7	+1.2
	baz=116						
M27K	Edge Creek, AK	7.37	30	Pn	Pn	22 21 41.4	+0.6
L17K	Donlin	7.41	327		Pn	22 21 42.6	+1.5
L17K	Donlin	7.41	327	P	Pn	22 21 42.6	+1.5
	baz=140						
KTH	Kantishna Hill	7.41	356	Pn	Pn	22 21 41.6	+0.4
MENT	Mentasta	7.42	22	Pn	Pn	22 21 43.2	+1.8
TTA	Tatalina	7.47	337	Pn	Pn	22 21 40.9	-1.3
L16K	Owhat River	7.48	322	Pn	Pn	22 21 42.9	+0.8
L16K	Owhat River	7.48	322	P	Pn	22 21 43.0	+0.9
	baz=134						
YUK7	Dusty Glacier	7.49	50		Pn	22 21 43.8	+1.4
K20K	Telida	7.51	345	Pn	Pn	22 21 41.6	-1.0
K20K	Telida	7.51	345	P	Pn	22 21 42.4	-0.2
	baz=161						
S31K	Pelican	7.57	71	Pn	Pn	22 21 40.9	-2.5
P30M	Million Dollar	7.82	54	Pn	Pn	22 21 47.3	+0.5
P30M	Million Dollar	7.82	54	P	Pn	22 21 48.0	+1.1
	baz=245						
K17K	Iditarod	7.86	330	Pn	Pn	22 21 47.6	+0.2
M14K	Bethel	7.87	311	Pn	Pn	22 21 48.9	+1.5
M14K	Bethel	7.87	311	P	Pn	22 21 48.7	+1.2
	baz=120						
HYT	Haines Junctio	7.91	49	Pn	Pn	22 21 47.4	-0.7
RIDG	Independent Ri	7.96	16	Pn	Pn	22 21 49.8	+1.0
BPAW	Bear Paw Mtn.	7.96	356	Pn	Pn	22 21 48.6	-0.1
L27K	Beaver Creek,	7.97	27	Pn	Pn	22 21 48.1	-0.8
BCAR	Beaver Creek A	7.98	27	Pn	Pn	22 21 49.6	+0.6
SIT	Sitka	7.99	78	Pn	Pn	22 21 46.1	-3.0
BWN	Browne	8.01	1	Pn	Pn	22 21 50.8	+1.4
ISLZ	Isanotski Laza	8.08	265		Pn	22 21 49.4	-1.1
J18K	Innoko River	8.10	337	Pn	Pn	22 21 50.8	+0.1
SSLS	Shishaldin Sou	8.25	266		Pn	22 21 52.0	-0.7
J20K	Nowinta River	8.31	346	Pn	Pn	22 21 52.9	-0.5
SCRK	Sand Creek	8.32	18	Pn	Pn	22 21 54.8	+1.1
M13K	Dall Lake	8.32	306	Pn	Pn	22 21 54.2	+0.6
WRH	Wood River Hil	8.35	5	Pn	Pn	22 21 55.4	+1.3
HDA	Harding Lake	8.36	8	Pn	Pn	22 21 56.5	+2.3
J19K	Poorman	8.36	342	Pn	Pn	22 21 53.7	-0.5
N30M	Aishikik Lake	8.41	46	Pn	Pn	22 21 55.9	+0.9
NEA2	Nenana	8.44	2	Pn	Pn	22 21 56.5	+1.2
L14K	Kuka Creek	8.48	313	Pn	Pn	22 21 56.9	+1.1
O30N	Mendenhall	8.49	52	Pn	Pn	22 21 56.4	+0.4
M29M	Somme Creek	8.51	38	Pn	Pn	22 21 57.5	+1.2
CCB	Clear Creek Bu	8.54	6	Pn	Pn	22 21 57.6	+1.0
JIS	Juneau Island	8.58	70	Pn	Pn	22 21 56.0	-1.3
K15K	Wolf Creek Mou	8.60	320	Pn	Pn	22 21 58.9	+1.5
J25K	Salcha River,	8.72	12	Pn	Pn	22 22 00.1	+0.9
IL31		8.72	8	Pn	Pn	22 22 00.3	+1.1
ILAR	Eielson Array	8.72	8	Pn	Pn	22 22 00.4	+1.2
ILAR	Eielson Array	8.72	8	Pn	Pn	22 22 00.8	+1.6
	comp=E,0.6nm,0.3s,baz=192,slow=14,SNR=26						
ILAR				Sn	Sn	22 23 34.9	-3.0
	comp=E,0.3nm,0.3s,baz=193,slow=23,SNR=5.6						
	comp=E,1.5nm,0.4s						
K27K	Chicken	8.74	23	Pn	Pn	22 22 00.3	+0.9
MDM	Murphy Dome	8.83	4	Pn	Pn	22 22 01.0	+0.4
J26L	Joseph Creek	8.88	18	Pn	Pn	22 22 01.8	+0.5
MLY	Manley	8.89	357	Pn	Pn	22 22 01.1	-0.4
J16K	Anvik River	8.97	327	Pn	Pn	22 22 03.0	+0.4
WHY	Whitehorse	8.98	54	Pn	Pn	22 22 03.3	+0.5
I23K	Minto, Yukon-K	8.99	1	Pn	Pn	22 22 03.7	+0.9
POKR	Poker Plat Res	9.03	6	Pn	Pn	22 22 02.9	-0.4
L29M	L29M	9.08	35	Pn	Pn	22 22 05.9	+1.9
P32M	Atlin	9.18	62	Pn	Pn	22 22 05.6	+0.1
M30M	Minto, Yukon	9.18	41	Pn	Pn	22 22 05.8	+0.3
U33K	Whale Pass	9.27	84	Pn	Pn	22 22 04.0	-2.6
DAWY	Dawson	9.42	29	Pn	Pn	22 22 10.4	+1.6
J14K	Nanvaranak Lak	9.61	319	Pn	Pn	22 22 12.2	+0.8
H21K	Melozitna Rive	9.62	352	Pn	Pn	22 22 09.8	-1.6
H24K	Noodor Dome	9.72	5	Pn	Pn	22 22 13.9	+1.0
Q32M	Nakina River	9.78	66	Pn	Pn	22 22 12.3	-1.5
P33M	Teslin, Yukon	9.79	59	Pn	Pn	22 22 13.7	-0.2
K29M	Barlow Dome	9.79	33	Pn	Pn	22 22 15.4	+1.4
M31M	Drury Creek, Y	9.89	46	Pn	Pn	22 22 16.8	+1.6
H18K	Honhosa River	9.93	338	Pn	Pn	22 22 15.0	-0.6
IMAR	Indian Mountai	10.02	351	Pn	Pn	22 22 16.2	-0.7
I28M	Miner Creek	10.43	23	Pn	Pn	22 22 25.4	+2.8
R33M	Jennings River	10.51	64	Pn	Pn	22 22 23.8	0.0
G23K	Bananza Creek	10.56	359	Pn	Pn	22 22 24.9	+0.5
FYU	Fort Yukon	10.63	10	Pn	Pn	22 22 24.9	-0.4
J30M	Hart River	10.68	33	Pn	Pn	22 22 26.9	+0.8
DLBC	Dease Lake	10.88	70	Pn	Pn	22 22 28.5	-0.3
DLBC	Dease Lake	10.88	70	Pn	Pn	22 22 29.6	+0.7
	comp=E,0.7nm,0.3s,baz=227,slow=14,SNR=5.4						
	comp=E,1.4nm,0.3s						
I30M	Mount Dempster	11.14	30	Pn	Pn	22 22 34.2	+1.7
F21K	Alatna River	11.21	352	Pn	Pn	22 22 33.8	+0.6
F20K	Avaraart Lake	11.26	348	Pn	Pn	22 22 34.4	+0.6
MMPY	Sheldon Lake,	11.37	48	Pn	Pn	22 22 37.1	+1.6
ANM	Nome	11.39	324	Pn	Pn	22 22 36.8	+1.2
F24K	Squaw Lake	11.40	4	Pn	Pn	22 22 37.2	+1.3
BMAR	Burnt Mountain	11.53	10	Pn	Pn	22 22 39.0	+1.3
E19K	Redstone River	11.84	346	Pn	Pn	22 22 42.7	+1.0
F15K	North Star Dit	11.95	329	Pn	Pn	22 22 44.3	+1.0
E25K	Arctic Village	12.13	7	Pn	Pn	22 22 47.3	+1.5
G31M	Satah River	12.99	28	Pn	Pn	22 22 56.1	-1.3
C18K	Utukok River	13.54	342	Pn	Pn	22 23 06.2	+1.1
C23K	Itkillik River	13.71	359	Pn	Pn	22 23 07.3	+0.1
C16K	Lisburne Hills	14.07	336	Pn	Pn	22 23 13.9	+1.7
INK	Inuvik	14.23	25	Pn	Pn	22 23 18.4	+4.0
	comp=E,0.2nm,0.3s,baz=223,slow=14,SNR=4.1						
	comp=E,0.6nm,0.4s						
ATKA	Atka Island	14.83	265	P	P	22 23 29.3	+0.6
YKA	Yellowknife Ar	18.80	56	P	P	22 24 11.8	-0.7
YKA	Yellowknife Ar	18.80	56	P	Pn	22 24 14.1	+1.2
	comp=E,0.1nm,0.3s,baz=264,slow=10,SNR=9.9						
	comp=E,1.2nm,0.9s						
NEW	Newport	21.32	98	P	P	22 24 40.5	+0.4
	comp=E,0.9nm,0.4s,baz=30,slow=10,SNR=2.3						
	comp=E,0.9nm,0.4s						
PDAR	Pinedale Array	28.89	101	P	P	22 25 52.5	+0.1
	comp=E,0.3nm,0.6s,baz=301,slow=5.7,SNR=4.4						
	comp=E,0.3nm,0.6s						
TXAR	Lajitas Array	42.03	110	P	P	22 27 42.2	-2.7
	comp=E,0.2nm,0.7s,baz=328,slow=4.7,SNR=1.9						
	comp=E,0.2nm,0.7s						
H11N2	WAKE ISLAND Hy	48.62	240	T	T	23 20 53.5	
	baz=31,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	48.62	240	T	T	23 20 57.5	
	baz=31,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	48.64	240	T	T	23 20 57.8	
	baz=31,slow=76,SNR=35						
H11S1	WAKE ISLAND Hy	49.76	239	T	T	23 22 22.0	
	baz=30,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	49.77	239	T	T	23 22 20.8	
	baz=30,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	49.78	239	T	T	23 22 19.1	
	baz=30,slow=76,SNR=50						
SONM	Songino Array	58.51	310	P	P	22 29 51.1	+1.6
	comp=E,2.6nm,0.8s,baz=43,slow=5.8,SNR=15						
	comp=E,2.6nm,0.8s						
ZALV	Zalesovo Beam	61.50	327	P	P	22 30 10.8	+1.0
	comp=E,1.4nm,0.5s,baz=18,slow=7.3,SNR=6.1						
	comp=E,1.4nm,0.5s						
NOA	NORSAR Array B	62.15	10	P	P	22 30 14.8	+0.7
	comp=E,0.7nm,0.9s,baz=330,slow=8.1,SNR=1.7						
	comp=E,0.7nm,0.9s						
FINES	FINESS Array B	62.66	2	P	P	22 30 18.1	+0.6
	comp=E,1.4nm,0.8s,baz=353,slow=7.9,SNR=5.5						
	comp=E,1.4nm,0.8s						
HFS	Hagfors	63.28	9	P	P	22 30 22.2	+0.6
	comp=E,1.9nm,0.8s,baz=5.7,slow=4.5,SNR=2.0						
HFS				LR	LR	22 59 13.0	
	comp=E,51nm,18.5s,baz=57,slow=37						
	comp=E,1.9nm,0.8s						
BVAR	Borovoye Array	66.26	335	P	P	22 30 42.2	+1.0
	comp=E,2.1nm,0.7s,baz=46,slow=11,SNR=2.1						
	comp=E,2.1nm,0.7s						
KURBB	Kurchatov Arra	66.29	329	P	P	22 30 42.2	+0.8
	comp=E,1.5nm,0.7s,baz=28,slow=6.5,SNR=7.6						
	comp=E,1.5nm,0.7s						
MKAR	Makanchi Array	68.53	324	P	P	22 30 56.3	+0.6
	comp=E,1.0nm,0.5s,baz=31,slow=6.3,SNR=13						
	comp=E,1.0nm,0.5s						
AKASG	Malin Array Be	73.47	1	P	P	22 31 26.0	+0.5
	comp=E,0.6nm,0.6s,baz=160,slow=39,SNR=2.0						
	comp=E,0.6nm,0.6s						
VRAC	Vranov	74.25	9	LR	LR	23 05 42.9	
	comp=E,29nm,19.4s,baz=114,slow=37						
GERES	GERESS Array B	74.42	11	P	P	22 31 33.9	+2.6
	comp=E,0.8nm,0.8s,baz=354,slow=8.9,SNR=1.4						
GERES				LR	LR	23 07 42.0	
	comp=E,33nm,19.1s,baz=55,slow=38						
	comp=E,0.8nm,0.8s						
ESDC	Sonseca Array	80.18	26	P	P	22 32 04.9	+1.2
	comp=E,0.7nm,0.8s,baz=229,slow=25,SNR=2.2						
	comp=E,0.7nm,0.8s						
CMAR	Chiang Mai Arr	86.11	298	P	P	22 32 34.4	-0.1
	comp=E,0.8nm,0.4s,baz=7.1,slow=5.4,SNR=4.2						
	comp=E,0.8nm,0.4s						
QSPA	South Pole Qui	145.98	180	PKPbc	PKPbc	22 39 31.2	-0.7
	comp=E,2.2nm,0.6s,baz=54,slow=1.5,SNR=7.8						
BOSA	Boshof	152.21	9	PKPbc	PKPbc	22 39 49.0	-0.1
	comp=E,2.9nm,1.0s,baz=305,slow=2.6,SNR=3.8						

*IDC **26** 22:21:47.5±0.7, 6°.20S×143°.53E, h0km, mb4.1/14, mbtmp4.2/17, ML4.3/2, MS3.3/1, Error ellipse: s-maj=30.6km s-min=16.2km az=80.0*
*NEIC **26** 22:21:47.7±1.8, 6°.35S±0°.10×143°.3E±0°.1, h10km±1km, mb4.1/5, Error ellipse: s-maj=20.2km s-min=16.2km az=86.0*

ISC 26 22:21:48.1±0.6, **6°.32S**±0°.07×**143°.33E**±0°.10, **h10**km, **n33,** σ1§**54**/32, **mb4.2**/16, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.87	129	Pn	Pn	22 23 01.2	-0.4
PMG	Port Moresby	4.87	129	Pn	Pn	22 23 00.9	-0.7
	19nm,0.5s,baz=356,slow=9.9,SNR=2.6						
PMG				Sn	Sn	22 23 57.3	-0.8
	6.9nm,0.3s,baz=249,slow=20,SNR=3.5						
MANU	Manus Island	5.85	44	Pn	Pn	22 23 13.7	-1.3
CTA	Charters Tower	13.98	169	Lg	Lg	22 29 15.1	
	0.2nm,0.3s,baz=67,slow=17,SNR=1.4						
WRA	Warramunga Arr	16.12	212	Pn	Pn	22 25 32.1	-2.9
WRA	Warramunga Arr	16.12	212	Pn	P	22 25 36.6	-1.7
	1.2nm,0.3s,baz=28,slow=11,SNR=3.2						
WRA				Lg	Lg	22 30 22.6	
	0.4nm,0.3s,baz=29,slow=26,SNR=4.8						
	29nm,1.1s						
AS31	Alice Springs	19.49	207	P	P	22 26 13.8	-1.7
AS31				IAmb	IAmb	22 26 27.1	
	comp=Z,9.0nm,0.8s						
ASAR	Alice Springs	19.49	207	P	P	22 26 14.3	-1.2
ASAR	Alice Springs	19.49	207	P	Pn	22 26 18.2	+1.5
	comp=Z,0.8nm,0.3s,baz=36,slow=9.6,SNR=7.2						
ASAR				Lg	Lg	22 32 03.0	
	comp=Z,0.1nm,0.3s,baz=26,slow=27,SNR=4.0						
	comp=Z,17nm,0.9s						
GUMO	Guam	19.84	4	LR	LR	22 32 27.5	
	comp=Z,102nm,21.8s,baz=192,slow=32						
STKA	Stephens Creek	25.48	183	P	P	22 27 19.4	+2.8
	comp=Z,1.2nm,0.4s,baz=331,slow=14,SNR=3.0						
	comp=Z,1.2nm,0.4s						
MJAR	Matsushiro Arr	42.91	354	P	P	22 29 46.2	-0.8
	comp=Z,0.5nm,0.3s,baz=186,slow=9.8,SNR=1.0						
	comp=Z,0.5nm,0.3s						
KSAR	Wonju Array Be	45.86	343	P	P	22 30 09.8	-0.9
KSRS	Korea Array	45.86	343	P	P	22 30 11.0	+0.4
	comp=Z,2.7nm,1.0s,baz=158,slow=9.5,SNR=6.7						
	comp=Z,2.7nm,1.0s						
CMAR	Chiang Mai Arr	50.22	300	P	P	22 30 43.4	-1.4
CMAR	Chiang Mai Arr	50.22	300	P	P	22 30 46.0	+1.2
	comp=Z,2.4nm,0.4s,baz=125,slow=6.0,SNR=1.9						
	comp=Z,2.4nm,0.4s						
USRK	Ussuriysk Ar.	51.32	350	P	P	22 30 53.2	+0.7
USRK	Ussuriysk Ar.	51.32	350	P	P	22 30 52.5	0.0
	comp=Z,3.7nm,1.1s,baz=157,slow=6.2,SNR=4.1						
	comp=Z,3.7nm,1.1s						
PETK	Petropavlovsk-	60.44	10	P	P	22 31 59.3	+1.4
	comp=Z,6.1nm,1.0s,baz=179,slow=7.3,SNR=3.7						
	comp=Z,6.1nm,1.0s						
SONM	Songino Array	62.97	333	P	P	22 32 17.0	+1.8
	comp=Z,0.6nm,0.9s,baz=159,slow=4.6,SNR=3.9						
	comp=Z,0.6nm,0.9s						
MK31	Makanchi Array	75.45	322	P	P	22 33 31.1	-1.4
MK31				IAmb	IAmb	22 33 39.9	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	75.45	322	P	P	22 33 30.9	-1.6
MKAR	Makanchi Array	75.45	322	P	P	22 33 33.8	+1.3
	comp=Z,0.8nm,0.6s,baz=102,slow=6.1,SNR=7.0						
	comp=Z,0.8nm,0.6s						
MAKZ	Makanchi	75.65	322	P	P	22 33 31.3	-2.3
ZALV	Zalesovo Beam	77.37	329	P	P	22 33 43.9	+0.7
	comp=Z,0.3nm,0.3s,baz=106,slow=4.8,SNR=1.7						
	comp=Z,0.3nm,0.3s						
KURBB	Kurchatov Arra	79.32	324	P	P	22 33 54.9	+0.9
	comp=Z,0.8nm,0.9s,baz=109,slow=4.7,SNR=4.5						
	comp=Z,0.8nm,0.9s						
KK31	Karatay Array	81.92	315	P	P	22 34 07.3	-0.9
KK31				IAmb	IAmb	22 34 19.4	
	comp=Z,1.1nm,0.8s						
KKAR	Karatay Array	81.92	315	P	P	22 34 05.2	-3.0
QSPA	South Pole Qui	83.65	180	P	P	22 34 18.8	+1.9
	comp=Z,3.6nm,1.0s,baz=352,slow=1.9,SNR=5.6						
	comp=Z,3.6nm,1.0s						
NRIK	Noril'sk	84.48	343	P	P	22 34 21.4	+0.6
	comp=Z,1.3nm,0.5s,baz=90,slow=6.2,SNR=2.6						
	comp=Z,1.3nm,0.5s						
BVAR	Borovoye Array	84.90	325	P	P	22 34 24.4	+1.1
	comp=Z,2.0nm,0.9s,baz=70,slow=4.9,SNR=6.4						
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	87.22	24	P	P	22 34 33.6	-0.9
	comp=Z,2.5nm,1.0s,baz=256,slow=5.1,SNR=12						
	comp=Z,2.5nm,1.0s						
DBIC	Dimbokro	148.40	272	PKPbc	PKiKP	22 41 37.0	-0.7
	comp=Z,2.8nm,1.0s,baz=220,slow=1.5,SNR=3.7						

*IDC **26** 22:23:53.0±1.1, 6°.22S×142°.93E, h0km, mb3.7/5, mbtmp4.0/8, ML4.4/1, Error ellipse: s-maj=37.3km s-min=24.9km az=66.0*

ISC 26 22:23:57.9±0.9, **6°.3S**±0°.1×**142°.9E**±0°.1, **h35**km, **n8,** σ0§**67**/9, **mb3.6**/5, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.23	126	Pn	Pn	22 25 13.3	-0.4
	78nm,0.9s,baz=274,slow=17,SNR=1.7						
PMG				Sn	Sn	22 26 13.1	+0.3
	2.9nm,0.3s,baz=94,slow=19,SNR=0.9						
WRA	Warramunga Arr	15.85	211	Pn	Pn	22 27 37.7	-0.9
	3.4nm,0.6s,baz=29,slow=12,SNR=1.1						
ASAR	Alice Springs	19.26	206	P	Pn	22 28 21.9	+1.0
	1.1nm,0.3s,baz=27,slow=12,SNR=5.2						
	18nm,0.8s						
SONM	Songino Array	62.78	333	P	P	22 34 19.5	-0.5
	0.3nm,0.9s,baz=120,slow=8.5,SNR=1.3						
	0.3nm,0.5s						
MKAR	Makanchi Array	75.18	322	P	P	22 35 37.1	+0.1
	0.4nm,0.7s,baz=103,slow=6.4,SNR=1.6						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	79.07	324	P	P	22 35 58.9	+0.3
	0.8nm,1.1s,baz=98,slow=3.7,SNR=2.9						
	0.8nm,1.1s						
BVAR	Borovoye Array	84.65	325	P	P	22 36 28.4	+0.4
	1.6nm,0.6s,baz=115,slow=6.7,SNR=4.9						
	1.6nm,0.8s						
ILAR	Eielson Array	87.43	24	P	P	22 36 41.5	+0.1
	0.4nm,0.7s,baz=255,slow=5.4,SNR=4.9						
	0.4nm,0.7s						

IDC 26 22:30:43.4±7.3, **6°.21S**×**142°.09E**, **h0**km, **mb3.4**/2, **mbtmp3.5**/4, **ML3.1**/2, **Error ellipse: s-maj=268.1km s-min=34.5km az=96.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.59	208	Pn	Pn	22 34 23.8	-0.9
	0.1nm,0.3s,baz=27,slow=15,SNR=0.6						
	0.8nm,0.5s						
ASAR	Alice Springs	19.06

USA0B	**Ussuriysk Arra**	**51.13**	**350**	P	**P**	**22 44 22.7**	**-0.1**
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**22 45 45.1**	**+0.6**
SONM	**Songino Array**	**62.61**	**333**	P	**P**	**22 45 42.8**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=143,slow=3.1,SNR=3.4						
	comp=Z,0.5nm,0.8s						
MK31	**Makanchi Array**	**75.00**	**322**	P	**P**	**22 47 01.7**	**+0.1**
MK31				IAmb	IAmb	22 47 12.0	
	comp=Z,2.2nm,1.2s						
MKAR	**Makanchi Array**	**75.00**	**322**	P	**P**	**22 47 01.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=120,slow=7.3,SNR=7.1						
	comp=Z,0.6nm,0.7s						
MAKZ	**Makanchi**	**75.20**	**322**	P	**P**	**22 47 02.4**	**-0.3**
MAKZ				IAmb	IAmb	22 47 07.2	
	comp=Z,2.6nm,1.1s						
ZALV	**Zalesovo Beam**	**76.97**	**329**	P	**P**	**22 47 11.9**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=111,slow=3.6,SNR=2.3						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**78.89**	**324**	P	**P**	**22 47 23.4**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=119,slow=5.1,SNR=7.7						
	comp=Z,1.1nm,0.9s						
J16K	**Anvik River**	**81.35**	**22**	P	**P**	**22 47 37.0**	**+0.7**
E18K	**Tukpahlearik C**	**83.61**	**19**	P	**P**	**22 47 49.3**	**+1.2**
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**22 47 49.4**	**+0.4**
QSPA				IAmb	IAmb	22 48 12.6	
	comp=Z,4.5nm,1.4s						
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**22 47 49.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=325,slow=1.5,SNR=5.2						
	comp=Z,1.0nm,0.7s						
NRIK	**Noril'sk**	**84.22**	**343**	P	**P**	**22 47 51.0**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=105,slow=3.5,SNR=3.5						
	comp=Z,1.9nm,0.9s						
BVAR	**Borovoye Array**	**84.47**	**325**	P	**P**	**22 47 52.9**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=108,slow=6.8,SNR=18						
	comp=Z,2.9nm,0.7s						
BRVK	**Borovoye**	**84.54**	**325**	P	**P**	**22 47 53.0**	**-0.1**
E19K	**Redstone River**	**84.74**	**20**	P	**P**	**22 47 54.4**	**+0.6**
E19K				IAmb	IAmb	22 48 17.3	
	comp=Z,2.0nm,0.9s						
IMAR	**Indian Mountai**	**85.25**	**22**	P	**P**	**22 47 55.9**	**-0.6**
ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**22 48 05.8**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=247,slow=4.5,SNR=7.3						
	comp=Z,0.7nm,0.8s						

NEIC 26 22:40:16.3±0.6, 31°57N±0.03×103°54W±0.03, h5km±1km, ML1.3/14, Error ellipse: s-maj=5.5km s-min=2.9km az=145.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PECS	**Pecos**	**0.34**	**234**	Pg	Pg	22 40 23.1	+0.1
PECS				Sg	Sg	22 40 28.0	+0.6
MNHN	**Monahans**	**0.71**	**109**	Pg	Pg	22 40 29.6	-0.2
MNHN				IAML		22 40 46.9	
	15nm,0.3s						
MNHN				IAML		22 40 47.6	
	13nm,0.6s						
ODSA	**Odessa**	**1.01**	**57**	Pg	Pg	22 40 34.6	-1.1
ODSA				IAML		22 41 01.6	
	8.8nm,0.6s						
ODSA				IAML		22 41 09.3	
	11nm,0.9s						
ALPN	**Alpine**	**1.20**	**184**		Pg	22 40 37.3	-2.0
ALPN				IAML		22 40 59.4	
	5.8nm,0.2s						
VHRN	**Van Horn**	**1.46**	**238**		Pn	22 40 42.5	-1.0
VHRN				IAML		22 40 53.5	
	4.8nm,4.7s						
VHRN				IAML		22 41 16.9	
	4.5nm,4.3s						
SAND	**Sanderson**	**2.02**	**142**	Pn	Pn	22 40 50.6	-0.5
TX31	**Lajitas Ar. Si**	**2.23**	**183**	Pn	Pn	22 40 53.6	-0.4
TXAR	**Lajitas Array**	**2.23**	**183**	Pn	Pn	22 40 53.1	-1.0

*IDC **26** 22:42:50.6±0.8, 5°70S×142°77E, h0km, mb3.9/11, mbtmp3.9/13, ML1.8/1, Error ellipse: s-maj=32.8km s-min=15.9km az=76.0*

ISC 26 22:42:51.9±0.7, 5°8S±0°1×142°6E±0°1, h10km, n15, σ1s29/15, mb3.9/11, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.76**	**129**	Pn	**Pn**	**22 44 15.8**	**-1.7**
	1.6nm,0.3s,baz=285,slow=23,SNR=1.7						
PMG				Sn	**Sn**	**22 45 25.3**	**+1.5**
	1.1nm,0.3s,baz=357,slow=19,SNR=1.5						
	3.9nm,0.4s						
CTA	**Charters Tower**	**14.67**	**166**	Lg	Lg	22 50 43.5	
	0.2nm,0.3s,baz=16,slow=14,SNR=2.2						
WRA	**Warramunga Arr**	**16.24**	**209**	Pn	**Pn**	**22 46 38.0**	**-2.5**
	0.5nm,0.3s,baz=31,slow=13,SNR=13						
WRA				Sn	Sn	22 49 28.1	-13
	0.3nm,0.3s,baz=32,slow=22,SNR=6.3						
WRA				Lg	Lg	22 51 28.9	
	0.4nm,0.3s,baz=32,slow=26,SNR=5.3						
ASAR	**Alice Springs**	**19.69**	**204**	P	**Pn**	**22 47 23.1**	**+0.1**
	6.5nm,0.6s,baz=31,slow=11,SNR=17						
ASAR				S	S	22 50 51.8	-12
	1.9nm,0.7s,baz=17,slow=28,SNR=4.5						
ASAR				Lg	Lg	22 53 16.4	
	0.2nm,0.3s,baz=221,slow=39,SNR=2.7						
STKA	**Stephens Creek**	**26.00**	**182**	P	**P**	**22 48 24.9**	**-0.3**
	0.5nm,0.3s,baz=142,slow=19,SNR=1.7						
	0.5nm,0.3s						
MJAR	**Matsushiro Arr**	**42.29**	**355**	P	**P**	**22 50 44.5**	**-1.3**
	0.5nm,0.3s,baz=149,slow=7.4,SNR=1.5						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**49.35**	**300**	P	**P**	**22 51 42.5**	**+0.6**
	1.3nm,0.3s,baz=116,slow=8.1,SNR=4.0						
	1.3nm,0.3s						
SONM	**Songino Array**	**62.16**	**333**	P	**P**	**22 53 12.7**	**-0.9**
	0.2nm,0.4s,baz=113,slow=3.3,SNR=1.8						
	0.2nm,0.4s						
VNDA	**Vanda**	**72.44**	**176**	P	**P**	**22 54 19.5**	**+1.4**
	0.9nm,0.6s,baz=349,slow=6.2,SNR=5.5						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**74.59**	**322**	P	**P**	**22 54 32.4**	**+1.1**
	0.7nm,0.6s,baz=105,slow=7.9,SNR=10						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**78.47**	**324**	P	**P**	**22 54 53.9**	**+0.7**
	0.5nm,0.9s,baz=113,slow=5.2,SNR=2.9						
	0.5nm,0.9s						
NRIK	**Noril'sk**	**83.75**	**343**	P	**P**	**22 55 21.6**	**+0.7**
	0.9nm,0.5s,baz=172,slow=16,SNR=1.6						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**84.05**	**325**	P	**P**	**22 55 23.7**	**+0.9**
	1.8nm,0.8s,baz=114,slow=6.6,SNR=14						
	1.8nm,0.8s						
QSPA	**South Pole Qui**	**84.20**	**180**	P	**P**	**22 55 24.3**	**+0.8**
	1.4nm,0.6s,baz=320,slow=0.9,SNR=13						
	1.4nm,0.6s						
ILAR	**Eielson Array**	**87.00**	**24**	P	**P**	**22 55 36.9**	**-0.4**
	0.5nm,0.7s,baz=253,slow=4.5,SNR=6.2						
	0.5nm,0.7s						

*IDC **26** 22:49:59.5±1.2, 2°71N×66°35E, h0km, mb3.9/9, mbtmp3.9/9, MS3.6/9, Error ellipse: s-maj=41.2km s-min=23.4km az=53.0*

*NEIC **26** 22:49:59.7±1.8, 2°4N±0°1×66°30E±0°05, h10km±1km, mb4.5/8, Error ellipse: s-maj=21.6km s-min=7.9km az=180.0*

ISC 26 22:50:00.8±0.7, 2°4N±0°1×66°28E±0°09, h20km, n36, σ1s09/23, mb4.2/12, MS3.6/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAAM	**Kaadhehdhoo**	**6.98**	**106**	Pn	**Pn**	**22 51 40.7**	**-1.3**
MNCI	**Minicoy**	**8.92**	**49**		**Pn**	**22 52 08.2**	**-0.5**
MSEY	**Mahe Island**	**12.88**	**237**	Pn	**Pn**	**22 53 02.3**	**-0.6**
PALK	**Pallekele**	**15.16**	**71**	Pn	**Pn**	**22 53 33.5**	**-0.6**
PALK				IAmb	IAmb	22 53 48.6	
	comp=Z,29nm,1.5s						
PALK	**Pallekele**	**15.16**	**71**	LR	LR	22 58 06.2	
	comp=Z,132nm,19.7s,baz=338,slow=32						
HYB	**Hyderabad**	**19.18**	**38**	eP	**Pn**	**22 54 23.7**	**-0.7**
ATD	**Arta Tunnel**	**24.94**	**292**	P	**P**	**22 55 21.9**	**-1.2**
SHL	**Shillong**	**33.73**	**45**	P	**P**	**22 56 41.7**	**+0.4**
SHL				IAmb	IAmb	22 56 43.9	
	comp=Z,6.3nm,1.0s						
MBAR	**Mbarara**	**35.66**	**266**	LR	LR	23 10 19.2	
	comp=Z,73nm,18.5s,baz=72,slow=34						
CMAR	**Chiang Mai Arr**	**35.76**	**61**	LR	LR	23 10 55.8	
	comp=Z,32nm,19.9s,baz=175,slow=35						
LSZ	**Lusaka**	**41.58**	**244**	LR	LR	23 13 04.5	
	comp=Z,80nm,18.2s,baz=126,slow=33						

MKAR	**Makanchi Array**	**46.36**	**15**	P	**P**	**22 58 23.8**	**-1.8**
	comp=Z,0.6nm,1.0s,baz=202,slow=11,SNR=3.3						
MKAR				PcP	**PcP**	**23 00 01.7**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=231,slow=4.1,SNR=4.1						
	comp=Z,0.6nm,1.0s						
ABKAR	**Akbulak array**	**46.99**	**354**	P	**P**	**22 58 30.4**	**-0.1**
KURBB	**Kurchatov Arra**	**49.15**	**10**	P	**P**	**22 58 46.8**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=203,slow=7.8,SNR=5.4						
	comp=Z,0.7nm,0.9s						
BOSA	**Boshof**	**49.99**	**229**	LR	LR	23 18 52.0	
	comp=Z,53nm,18.1s,baz=68,slow=34						
H04N2	**CROZET ISLANDS**	**50.03**	**193**	T	T	23 52 49.8	
	baz=20,slow=75,SNR=24						
H04N1	**CROZET ISLANDS**	**50.03**	**193**	T	T	23 52 56.8	
	baz=20,slow=75,SNR=27						
H04N3	**CROZET ISLANDS**	**50.05**	**193**	T	T	23 52 55.9	
	baz=20,slow=75,SNR=27						
ZAA0	**Zalesovo Array**	**53.59**	**14**	P	**P**	**22 59 19.0**	**-1.3**
ZAA0				IAmb	IAmb	22 59 20.4	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**53.59**	**14**	P	**P**	**22 59 19.3**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=203,slow=7.2,SNR=8.8						
	comp=Z,1.7nm,0.8s						
SUR	**Sutherland**	**55.20**	**227**	LR	LR	23 20 41.2	
	comp=Z,105nm,18.5s,baz=110,slow=33						
SONM	**Songino Array**	**56.93**	**31**	P	**P**	**22 59 45.2**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=226,slow=5.5,SNR=5.2						
	comp=Z,0.7nm,0.8s						
H01W3	**Cape Leeuwin H**	**58.17**	**134**	T	T	00 02 52.4	
	baz=300,slow=75,SNR=11						
H01W2	**Cape Leeuwin H**	**58.18**	**134**	T	T	00 02 52.7	
	baz=300,slow=75,SNR=10.0						
H01W1	**Cape Leeuwin H**	**58.19**	**134**	T	T	00 02 56.6	
	baz=300,slow=75,SNR=10						
DAVOX	**Davos/Dischmat**	**65.78**	**321**	LR	LR	23 31 07.7	
	comp=Z,68nm,18.3s,baz=16,slow=38						
KSRS	**Korea Array**	**66.24**	**50**	P	**P**	**23 00 48.4**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=240,slow=6.9,SNR=1.7						
KSRS				LR	LR	23 32 08.6	
	comp=Z,17nm,18.2s,baz=120,slow=38						
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**70.12**	**335**	P	**P**	**23 01 11.8**	**+0.2**
	comp=Z,3.9nm,0.8s,baz=142,slow=7.3,SNR=3.8						
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**70.31**	**112**	P	**P**	**23 01 14.6**	**+1.0**
WRA	**Warramunga Arr**	**70.31**	**112**	P	**P**	**23 01 15.4**	**+1.9**
	comp=Z,2.6nm,0.8s,baz=287,slow=6.0,SNR=7.9						
	comp=Z,2.6nm,0.8s						
WB2	**Warramunga Arr**	**70.32**	**112**	P	**P**	**23 01 13.4**	**-0.2**
WB2				IAmb	IAmb	23 01 30.8	
	comp=Z,7.6nm,1.3s						
ASAR	**Alice Springs**	**70.61**	**116**	P	**P**	**23 01 17.6**	**+2.2**
	comp=Z,1.3nm,0.7s,baz=279,slow=6.5,SNR=13						
	comp=Z,1.3nm,0.7s						
ESDC	**Sonseca Array**	**73.31**	**311**	P	**P**	**23 01 31.7**	**+0.4**
ESDC	**Sonseca Array**	**73.31**	**311**	P	**P**	**23 01 32.1**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=91,slow=4.5,SNR=4.1						
	comp=Z,0.9nm,0.8s						
PMG	**Port Moresby**	**81.41**	**100**	LR	LR	23 39 56.3	
	comp=Z,48nm,18.3s,baz=254,slow=37						
TXAR	**Lajitas Array**	**147.00**	**344**	PKPbc	**PKPab**	**23 09 44.6**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=60,slow=2.8,SNR=34						

IDC 26 22:50:57.3±1.7, 6°17S×143°16E, h0km, mb3.6/2, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=48.1km s-min=31.0km az=73.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.10**	**129**	Pn	Pn	22 52 15.1	0.0
	3.6nm,0.4s,baz=118,slow=23,SNR=1.4						
PMG				Sn	Sn	22 53 05.7	-9.1
	3.3nm,0.3s,baz=244,slow=21,SNR=4.1						
WRA	**Warramunga Arr**	**16.15**	**211**	Pn	Pn	22 54 44.4	-1.5
	0.1nm,0.3s,baz=33,slow=12,SNR=9.1						
WRA				Lg	Lg	22 59 18.4	
	baz=48,slow=33,SNR=1.4						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**19.54**	**206**	P	Pn	22 55 27.6	-0.4
	1.6nm,0.9s,baz=31,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**75.23**	**322**	P	P	23 02 42.6	+0.5
	0.2nm,0.7s,baz=115,slow=6.0,SNR=2.5						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**84.68**	**325**	P	P	23 03 32.4	-0.6
	0.7nm,0.8s,baz=93,slow=5.8,SNR=2.9						
	0.7nm,0.8s						

*NEIC **26** 22:53:43.7±2.7, 55°98N±0°08×149°71W±0°10, h10km±2km, ML3.5/32, ML3.2(AEIC), Error ellipse: s-maj=14.4km s-min=9.0km az=187.0*

*IDC **26** 22:53:45.0±1.2, 55°98N×150°13W, h0km, mb3.5/6, mbtmp3.3/10, ML2.8/4, Error ellipse: s-maj=26.4km s-min=21.0km az=52.0*

*AEIC **26** 22:53:48.9±2.6, 56°04N±0°07×149°7W±0°1, h9km±7km, Error ellipse: s-maj=10.2km s-min=7.9km az=143.0*

ISC 26 22:53:45.4±0.9, 56°15N±0°08×149°81W±0°06, h10km, n130, σ1s39/134, mb3.7/6, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**2.20**	**301**		**Pn**	**22 54 21.9**	**-0.1**
OHAK				Sn	**Sn**	**22 54 47.8**	**-1.4**
OHAK	**Old Harbor**	**2.20**	**301**	P	**Pn**	**22 54 22.3**	**+0.3**
	baz=120						
OHAK				S	**Sn**	**22 54 47.9**	**-1.4**
	baz=120						
KDAK	**Kodiak Island**	**2.24**	**318**	Pn	**Pn**	**22 54 22.0**	**-0.5**
KDAK				Sn	**Sn**	**22 54 48.8**	**-1.3**
KDAK	**Kodiak Island**	**2.24**	**318**	Pn	**Pn**	**22 54 21.5**	**-1.0**
	2.0nm,0.3s,baz=118,slow=4.2,SNR=19						
KDAK				Sn	**Sn**	**22 54 48.5**	**-1.6**
	12nm,0.3s,baz=175,slow=17,SNR=7.0						
	5.6nm,0.3s						
Q20K	**Shuyak Island**	**2.84**	**332**	P	**Pn**	**22 54 30.9**	**+0.1**
	baz=150						
Q20K				S	**Sn**	**22 55 05.5**	**+0.5**
	baz=150						
SYI	**Shuyak Island**	**2.84**	**332**	Pn	**Pn**	**22 54 29.2**	**-1.5**
SYI				Sn	**Sn**	**22 55 04.4**	**-0.6**
Q19K	**Cape Douglas,**	**3.47**	**325**	Pn	**Pn**	**22 54 38.6**	**-0.9**
Q19K	**Cape Douglas,**	**3.47**	**325**	P	**Pn**	**22 54 40.5**	**+1.0**
	baz=142						
CNPM	**China Poot**	**3.48**	**348**	Pn	**Pn**	**22 54 39.4**	**-0.1**
CNPM				Sn	**Sn**	**22 55 19.2**	**-1.5**
CNPM				IAML		22 55 23.0	
	comp=E,36nm,1.4s						
BRSE	**Bradley Lake S**	**3.64**	**353**		**Pn**	**22 54 41.7**	**-0.1**
BRSE					**Sn**	**22 55 24.3**	**-0.4**
BRSE	**Bradley Lake S**	**3.64**	**353**	P	**Pn**	**22 54 41.7**	**-0.1**
	baz=171						
BRSE				S	**Sn**	**22 55 24.3**	**-0.4**
	baz=171						
BRLK	**Bradley Lake**	**3.67**	**351**	Pn	**Pn**	**22 54 40.8**	**-1.5**
BRLK				IAML		22 55 29.8	
	comp=E,31nm,1.4s						
ANCK	**Angle Creek**	**3.72**	**306**		**Pn**	**22 54 44.1**	**+1.3**
CNTC	**Contact Creek**	**3.93**	**305**		**Pn**	**22 54 46.8**	**+1.0**
Q17K	**Contact Creek**	**3.93**	**305**	P	**Pn**	**22 54 46.8**	**+0.9**
	baz=121						
P19K	**Oil Pt**	**3.96**	**334**	Pn	**Pn**	**22 54 43.8**	**-2.5**
P19K				IAML		22 55 37.5	
	comp=E,81nm,1.2s						
P19K				IAML		22 55 39.6	
	comp=N,81nm,1.0s						
P19K	**Oil Pt**	**3.96**	**334**	P	**Pn**	**22 54 45.6**	**-0.6**
	baz=151						
P23K	**Montague Islan**	**4.07**	**17**		**Pn**	**22 54 48.2**	**+0.5**
P23K	**Montague Islan**	**4.07**	**17**	P	**Pn**	**22 54 48.2**	**+0.5**
	baz=198						
O20K	**Slope Mountain**	**4.22**	**340**		**Pn**	**22 54 50.6**	**+0.8**
O20K	**Slope Mountain**	**4.22**	**340**	P	**Pn**	**22 54 50.6**	**+0.8**
	baz=158						
IVE	**Iliamna Volcan**	**4.24**	**338**		**Pn**	**22 54 50.2**	**+0.1**
O22K	**Cooper Landing**	**4.35**	**1**	Pn	**Pn**	**22 54 52.0**	**+0.6**
O22K				IAML		22 56 11.9	
	comp=E,72nm,1.0s						
P18K	**Big Mountain,**	**4.36**	**321**	P	**Pn**	**22 54 52.4**	**+0.7**
	baz=136						
RDSO	**Redoubt South**	**4.59**	**342**		**Pn**	**22 54 54.5**	**-0.4**
RSO	**Redoubt South**	**4.60**	**341**	Pn	**Pn**	**22 54 53.7**	**-1.4**
HIN	**Hinchinbrook I**	**4.61**	**21**	Pn	**Pn**	**22 54 53.4**	**-1.7**
HIN				IAML		22 55 33.0	
	comp=N,58nm,1.4s						
HIN				IAML		22 56 13.6	

	comp=E,54nm,1.4s						
KAIM	**Kayak Island**	**4.75**	**35**	Pn	**Pn**	**22 54 56.6**	**-0.4**
FID	**Port Fidalgo**	**4.94**	**19**	Pn	**Pn**	**22 54 59.4**	**-0.1**
FID				IAML		22 57 40.5	
	comp=N,33nm,1.4s						
FID				IAML		22 58 11.0	
	comp=E,28nm,1.2s						
GLI	**Glacier Island**	**4.96**	**16**	Pn	**Pn**	**22 54 58.8**	**-1.0**
GLI				IAML		22 56 00.4	
	comp=N,21nm,1.4s						
GLI	**Glacier Island**	**4.96**	**16**	P	**Pn**	**22 55 00.5**	**+0.7**
	baz=197						
RC01	**Rabbit Creek A**	**4.96**	**0**	Pn	**Pn**	**22 54 59.2**	**-0.7**
RC01				IAML		22 58 22.4	
	comp=E,20nm,0.6s						
RAGM	**Ragged Mountai**	**5.04**	**30**	Pn	**Pn**	**22 54 58.7**	**-2.3**
SUCK	**Suckling Hills**	**5.07**	**37**	Pn	**Pn**	**22 55 00.1**	**-1.3**
SUCK				IAML		22 56 32.5	
	comp=N,38nm,1.3s						
SUCK				IAML		22 57 49.1	
	comp=E,42nm,1.3s						
HMT	**Hamilton**	**5.12**	**33**	Pn	**Pn**	**22 55 02.2**	**+0.1**
NICHA	**Nichawak Mount**	**5.13**	**35**		**Pn**	**22 55 02.8**	**+0.5**
GOAT	**Goat Mountain**	**5.19**	**29**		**Pn**	**22 55 03.8**	**+0.7**
N19K	**Bonanza Creek**	**5.28**	**334**	Pn	**Pn**	**22 55 03.6**	**-0.9**
KNK	**Knik Glacier**	**5.33**	**7**	Pn	**Pn**	**22 55 04.5**	**-0.5**
BERG	**Berg Lake**	**5.34**	**35**	Pn	**Pn**	**22 55 05.0**	**-0.1**
SUA	**Susitna One**	**5.36**	**355**	Pn	**Pn**	**22 55 04.9**	**-0.5**
N18K	**Kilae Creek**	**5.56**	**327**	Pn	**Pn**	**22 55 04.7**	**-3.4**
O16K	**Kokwok River B**	**5.61**	**311**	Pn	**Pn**	**22 55 10.0**	**+1.2**
GHO	**Glory Hole Cre**	**5.66**	**4**	Pn	**Pn**	**22 55 09.6**	**0.0**
WAX	**Waxell Ridge**	**5.66**	**37**	Pn	**Pn**	**22 55 09.8**	**+0.3**
KLU	**Klutina**	**5.73**	**19**	Pn	**Pn**	**22 55 10.6**	**+0.1**
SML	**Sawmill**	**5.73**	**7**	Pn	**Pn**	**22 55 11.8**	**+1.3**
CRQM	**Cirque**	**5.80**	**34**	Pn	**Pn**	**22 55 11.3**	**-0.2**
MESA	**MESA**	**5.80**	**43**	Pn	**Pn**	**22 55 12.2**	**+0.7**
SCM	**Sheep Creek Mo**	**5.85**	**12**	Pn	**Pn**	**22 55 12.2**	**+0.1**
N17K	**Nushagak Hills**	**5.86**	**322**	Pn	**Pn**	**22 55 10.9**	**-1.3**
SKT	**Skwentna**	**5.92**	**352**	Pn	**Pn**	**22 55 11.9**	**-1.1**
ISLE	**Juniper Island**	**5.95**	**38**	Pn	**Pn**	**22 55 13.1**	**-0.5**
M20K	**Styx River**	**6.00**	**345**	Pn	**Pn**	**22 55 13.9**	**-0.4**
SDPT	**Sand Point**	**6.08**	**267**	Pn	**Pn**	**22 55 12.9**	**-2.3**
VRDI	**Verde Repeater**	**6.08**	**30**	Pn	**Pn**	**22 55 15.5**	**+0.1**
N25K	**Chitina, Valde**	**6.11**	**24**	Pn	**Pn**	**22 55 16.5**	**+0.8**
GLB	**Gilahina Butte**	**6.16**	**28**	Pn	**Pn**	**22 55 17.8**	**+1.4**
M18K	**Stony River**	**6.20**	**332**		**Pn**	**22 55 18.1**	**+1.2**
M18K	**Stony River**	**6.20**	**332**	P	**Pn**	**22 55 18.1**	**+1.2**
	baz=147						
M24K	**Tolsona, Glenn**	**6.26**	**16**	Pn	**Pn**	**22 55 19.7**	**+1.8**
TABL	**Table Mountain**	**6.28**	**43**	Pn	**Pn**	**22 55 18.2**	**+0.1**
CUT	**Chulitna**	**6.28**	**358**	Pn	**Pn**	**22 55 17.6**	**-0.4**
MCARA	**McCarthy VSAT**	**6.33**	**31**	Pn	**Pn**	**22 55 19.2**	**+0.6**
BARN	**Barnard Glacie**	**6.51**	**37**	Pn	**Pn**	**22 55 21.6**	**+0.3**
CTGM	**Chitina Glacie**	**6.56**	**39**	Pn	**Pn**	**22 55 20.8**	**-1.1**
LOGN	**Logan Glacier**	**6.58**	**41**	Pn	**Pn**	**22 55 22.2**	**-0.1**
L19K	**White Mountain**	**6.58**	**339**	Pn	**Pn**	**22 55 21.0**	**-1.2**
N15K	**Kwethluk River**	**6.77**	**311**	Pn	**Pn**	**22 55 26.2**	**+1.4**
M16K	**Timber Creek**	**6.84**	**319**	Pn	**Pn**	**22 55 26.0**	**+0.4**
O14K	**Tigyukauivet M**	**6.88**	**302**	Pn	**Pn**	**22 55 26.2**	**0.0**
DHY	**Denali Highway**	**7.06**	**9**	Pn	**Pn**	**22 55 28.9**	**+0.1**
O29M	**Mount Kennedy**	**7.25**	**50**	Pn	**Pn**	**22 55 31.6**	**+0.3**
RND	**Reindeer**	**7.30**	**3**	Pn	**Pn**	**22 55 33.5**	**+1.4**
P29M	**Windy Craggy**	**7.32**	**57**	Pn	**Pn**	**22 55 31.4**	**-0.8**
CAST	**Castle Rocks**	**7.39**	**352**	Pn	**Pn**	**22 55 35.8**	**+2.6**
M27K	**Edge Creek, AK**	**7.43**	**30**	Pn	**Pn**	**22 55 34.9**	**+0.9**
KTH	**Kantishna Hill**	**7.45**	**356**	Pn	**Pn**	**22 55 34.2**	**+0.1**
L16K	**Owhat River**	**7.49**	**322**	Pn	**Pn**	**22 55 34.3**	**-0.2**
S31K	**Pelican**	**7.62**	**71**	Pn	**Pn**	**22 55 32.7**	**-3.7**
BPAW	**Bear Paw Mtn.**	**8.00**	**356**	Pn	**Pn**	**22 55 40.7**	**-0.9**
RIDG	**Independent Ri**	**8.01**	**16**	Pn	**Pn**	**22 55 41.1**	**-0.7**
BCAR	**Beaver Creek A**	**8.04**	**27**	Pn	**Pn**	**22 55 42.4**	**+0.2**
SIT	**Sitka**	**8.05**	**77**	Pn	**Pn**	**22 55 38.2**	**-4.0**
J19K	**Poorman**	**8.39**	**342**	Pn	**Pn**	**22 55 49.0**	**+2.1**
WRH	**Wood River Hil**	**8.40**	**5**	Pn	**Pn**	**22 55 48.4**	**+1.4**
L14K	**Kuka Creek**	**8.47**	**313**	Pn	**Pn**	**22 55 48.6**	**+0.6**
N30M	**Aishikik Lake**	**8.48**	**46**	Pn	**Pn**	**22 55 46.4**	**-1.8**
M29M	**Somme Creek**	**8.57**	**38**	Pn	**Pn**	**22 55 51.1**	**+1.6**
CCB	**Clear Creek Bu**	**8.59**	**6**	Pn

0.3nm,0.6s,baz=206,slow=11,SNR=5.3
BVAR Borovoye Array 16.05 358 P Pn 22 59 32.0 -0.6
0.3nm,0.4s,baz=165,slow=12,SNR=2.7
ZALV Zalesovo Beam 19.37 25 P P 23 00 08.6 -0.6
1.2nm,0.4s,baz=217,slow=9.6,SNR=7.3

*IDC **26** 22:56:01.8±1.2,56°.07N×149°.72W,h0km,mb3.8/8, mbtmp3.6/13, ML3.4/4, Error ellipse: s-maj=24.9km s-min=22.6km az=4.0*
*NEIC **26** 22:56:03.7±1.7,56°.14N±0°.10×149°.8W±0°.1,h19km±8km, ML3.5/42, ML3.3(AEIC), Error ellipse: s-maj=14.8km s-min=8.2km az=162.0*
*AEIC **26** 22:56:05.8±2.3,56°.03N±0°.10×149°.8W±0°.1,h7km±7km, Error ellipse: s-maj=14.5km s-min=8.1km az=166.0*
ISC 26 22:56:04.0±1.0,56°.24N±0°.09×149°.82W±0°.06,h10km, n158,σ0s92/151,mb3.9/8,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**2.15**	**299**			**Pn**	**22 56 38.4**	**-1.4**
OHAK						**Sn**	**22 57 03.9**	**-2.6**
OHAK	**Old Harbor**	**2.15**	**299**	P		**Pn**	**22 56 38.8**	**-1.0**
	baz=120							
OHAK				S		**Sn**	**22 57 04.8**	**-1.6**
	baz=120							
KDAK	**Kodiak Island**	**2.16**	**317**	Pn		**Pn**	**22 56 39.4**	**-0.6**
KDAK				Sn		**Sn**	**22 57 04.8**	**-2.0**
KDAK	**Kodiak Island**	**2.16**	**317**	Pn		**Pn**	**22 56 40.0**	**0.0**
	2.6nm,0.3s,baz=124,slow=7.9,SNR=1.7							
KDAK				Sn		**Sn**	**22 57 06.2**	**-0.6**
	19nm,0.3s,baz=120,slow=20,SNR=15							
	15nm,0.6s							
SYI	**Shuyak Island**	**2.75**	**331**	Pn		**Pn**	**22 56 48.0**	**-0.1**
SYI				Sn		**Sn**	**22 57 21.2**	**-0.1**
SYI				IAML			22 57 23.2	
	comp=E,72nm,0.5s							
Q20K	**Shuyak Island**	**2.75**	**331**	P		**Pn**	**22 56 48.2**	**+0.1**
	baz=150							
Q20K				S		**Sn**	**22 57 21.7**	**+0.3**
	baz=150							
CNPM	**China Poot**	**3.38**	**348**	Pn		**Pn**	**22 56 55.7**	**-1.0**
CNPM				Sn		**Sn**	**22 57 35.9**	**-1.0**
CNPM				IAML			22 57 47.5	
	comp=E,51nm,1.0s							
Q19K	**Cape Douglas,**	**3.39**	**324**	Pn		**Pn**	**22 56 56.5**	**-0.4**
Q19K	**Cape Douglas,**	**3.39**	**324**	P		**Pn**	**22 56 57.8**	**+0.8**
	baz=142							
BRSE	**Bradley Lake S**	**3.54**	**352**			**Pn**	**22 56 58.6**	**-0.5**
BRSE	**Bradley Lake S**	**3.54**	**352**	P		**Pn**	**22 56 58.6**	**-0.5**
	baz=172							
HOM	**Homer**	**3.56**	**345**	Pn		**Pn**	**22 56 58.1**	**-1.2**
BRLK	**Bradley Lake**	**3.58**	**351**	Pn		**Pn**	**22 56 58.5**	**-1.0**
BRLK				Sn		**Sn**	**22 57 41.3**	**-0.5**
BRLK				IAML			22 57 46.9	
	comp=E,36nm,0.8s							
ANCK	**Angle Creek**	**3.66**	**305**			**Pn**	**22 57 01.4**	**+0.8**
CNTC	**Contact Creek**	**3.87**	**304**			**Pn**	**22 57 02.4**	**-1.2**
Q17K	**Contact Creek**	**3.87**	**304**	P		**Pn**	**22 57 02.4**	**-1.2**
	baz=121							
P19K	**Oil Pt**	**3.87**	**333**	Pn		**Pn**	**22 57 02.8**	**-0.8**
P19K				IAML			22 57 56.3	
	comp=N,116nm,0.6s							
P19K	**Oil Pt**	**3.87**	**333**	P		**Pn**	**22 57 03.9**	**+0.3**
	baz=151							
SEW	**Seward**	**3.88**	**3**	Pn		**Pn**	**22 57 02.3**	**-1.3**
SEW	**Seward**	**3.88**	**3**	P		**Pn**	**22 57 02.8**	**-0.8**
	baz=182							
P23K	**Montague Islan**	**3.98**	**18**			**Pn**	**22 57 04.5**	**-0.5**
P23K	**Montague Islan**	**3.98**	**18**	P		**Pn**	**22 57 04.5**	**-0.5**
	baz=198							
O20K	**Slope Mountain**	**4.13**	**340**			**Pn**	**22 57 07.3**	**+0.2**
O20K	**Slope Mountain**	**4.13**	**340**	P		**Pn**	**22 57 07.3**	**+0.2**
	baz=158							
IVE	**Iliamna Volcan**	**4.15**	**337**			**Pn**	**22 57 07.5**	**+0.1**
IVE						**Sn**	**22 57 56.9**	**+1.0**
O22K	**Cooper Landing**	**4.25**	**1**	Pn		**Pn**	**22 57 08.8**	**+0.1**
O22K				IAML			22 58 04.1	
	comp=N,91nm,0.9s							
O22K	**Cooper Landing**	**4.25**	**1**	P		**Pn**	**22 57 07.8**	**-0.9**
	baz=180							
P18K	**Big Mountain,**	**4.28**	**320**	Pn		Pn	22 57 06.9	-2.2
P18K	**Big Mountain,**	**4.28**	**320**	P		**Pn**	**22 57 09.2**	**+0.1**
	baz=137							
SLKM	**Skilak Lake**	**4.29**	**357**			**Pn**	**22 57 08.8**	**-0.4**
RDSO	**Redoubt South**	**4.50**	**341**			**Pn**	**22 57 11.2**	**-1.0**
RSO	**Redoubt South**	**4.51**	**341**	Pn		**Pn**	**22 57 11.0**	**-1.4**
HIN	**Hinchinbrook I**	**4.52**	**21**	Pn		**Pn**	**22 57 11.2**	**-1.2**
HIN				IAML			22 58 15.5	
	comp=N,64nm,1.3s							
HIN				IAML			23 00 08.2	
	comp=E,55nm,1.5s							
KAIM	**Kayak Island**	**4.68**	**36**	Pn		**Pn**	**22 57 14.0**	**-0.6**
KAIM				IAML			22 57 59.8	
	comp=N,50nm,1.5s							
KAIM				IAML			22 58 01.9	
	comp=E,68nm,1.2s							
KAIM	**Kayak Island**	**4.68**	**36**	P		**Pn**	**22 57 14.5**	**-0.1**
	baz=218							
EYAK	**Cordova Ski Ar**	**4.82**	**25**	Pn		**Pn**	**22 57 15.1**	**-1.4**
EYAK	**Cordova Ski Ar**	**4.82**	**25**	P		**Pn**	**22 57 16.6**	**+0.1**
	baz=207							
FID	**Port Fidalgo**	**4.85**	**20**	Pn		**Pn**	**22 57 16.3**	**-0.7**
FID				IAML			22 58 14.9	
	comp=N,28nm,1.3s							
FID				IAML			22 58 20.8	
	comp=E,30nm,1.5s							
RC01	**Rabbit Creek A**	**4.86**	**0**	Pn		**Pn**	**22 57 17.0**	**0.0**
RC01				IAML			22 58 19.1	
	comp=N,18nm,0.5s							
RC01				IAML			22 58 27.5	
	comp=E,21nm,1.4s							
RC01	**Rabbit Creek A**	**4.86**	**0**	P		**Pn**	**22 57 17.1**	**0.0**
	baz=180							
GLI	**Glacier Island**	**4.87**	**16**	Pn		Pn	22 57 15.4	-1.7
GLI				IAML			22 58 22.6	
	comp=E,23nm,0.9s							
GLI				IAML			22 58 25.6	
	comp=N,21nm,1.4s							
GLI	**Glacier Island**	**4.87**	**16**	P		**Pn**	**22 57 17.1**	**0.0**
	baz=197							
FIS	**Fire Island**	**4.92**	**358**	Pn		**Pn**	**22 57 18.1**	**+0.2**
FIS				IAML			22 58 32.6	
	comp=E,51nm,1.3s							
FIS				IAML			23 00 10.7	
	comp=N,44nm,1.3s							
RAGM	**Ragged Mountai**	**4.96**	**31**	Pn		**Pn**	**22 57 18.8**	**+0.2**
RAGM				IAML			22 58 32.6	
	comp=E,59nm,1.1s							
SUCK	**Suckling Hills**	**5.00**	**37**	Pn		**Pn**	**22 57 19.6**	**+0.6**
SUCK				IAML			22 58 01.4	
	comp=E,30nm,1.4s							
SUCK				IAML			23 00 41.3	
	comp=N,52nm,1.4s							
HMT	**Hamilton**	**5.05**	**33**	Pn		**Pn**	**22 57 19.2**	**-0.5**
NICHA	**Nichawak Mount**	**5.06**	**35**			**Pn**	**22 57 19.6**	**-0.2**
GOAT	**Goat Mountain**	**5.11**	**29**			**Pn**	**22 57 20.3**	**-0.3**
N19K	**Bonanza Creek**	**5.20**	**334**	P		**Pn**	**22 57 21.4**	**-0.3**
	baz=151							
BGLC	**Bering Glacier**	**5.21**	**39**			**Pn**	**22 57 21.8**	**0.0**
BGLC	**Bering Glacier**	**5.21**	**39**	P		**Pn**	**22 57 21.8**	**0.0**
	baz=223							
SUA	**Susitna One**	**5.26**	**355**	Pn		Pn	22 57 21.2	-1.4
SUA				IAML			22 58 45.6	
	comp=E,12nm,1.5s							
BERG	**Berg Lake**	**5.27**	**35**	Pn		**Pn**	**22 57 22.6**	**0.0**
BERG				IAML			23 00 25.3	
	comp=N,45nm,1.4s							
GRIN	**Grindle Hills**	**5.31**	**38**			**Pn**	**22 57 23.3**	**0.0**
DIV	**Divide**	**5.34**	**22**	Pn		**Pn**	**22 57 23.1**	**-0.6**
SNH	**Sunshine Point**	**5.41**	**40**	Pn		**Pn**	**22 57 24.9**	**+0.3**
KHIT	**Khitrov Hills**	**5.45**	**37**			**Pn**	**22 57 24.4**	**-0.8**
BMRM	**Bremner River**	**5.47**	**28**	Pn		**Pn**	**22 57 24.8**	**-0.7**
BMRM	**Bremner River**	**5.47**	**28**	P		**Pn**	**22 57 25.2**	**-0.2**
	baz=211							
N18K	**Kilae Creek**	**5.47**	**327**	Pn		**Pn**	**22 57 24.5**	**-1.0**
N18K	**Kilae Creek**	**5.47**	**327**	P		**Pn**	**22 57 25.3**	**-0.2**
	baz=143							
O16K	**Kokwok River B**	**5.54**	**311**	P		**Pn**	**22 57 26.7**	**+0.3**
	baz=125							
GHO	**Glory Hole Cre**	**5.57**	**4**	Pn		**Pn**	**22 57 26.3**	**-0.6**
WAX	**Waxell Ridge**	**5.59**	**38**	Pn		**Pn**	**22 57 26.5**	**-0.7**
SML	**Sawmill**	**5.64**	**7**	Pn		Pn	22 57 25.3	-2.4
KLU	**Klutina**	**5.64**	**19**	Pn		**Pn**	**22 57 28.1**	**+0.3**
KLU	**Klutina**	**5.64**	**19**	P		**Pn**	**22 57 27.7**	**-0.1**
	baz=202							
BARK	**Barkley Ridge**	**5.69**	**40**			**Pn**	**22 57 27.7**	**-0.7**
CRQM	**Cirque**	**5.72**	**35**	Pn		**Pn**	**22 57 28.5**	**-0.6**
CRQE	**Cirque**	**5.74**	**35**	P		**Pn**	**22 57 29.1**	**-0.1**
	baz=219							
SCM	**Sheep Creek Mo**	**5.75**	**12**	Pn		**Pn**	**22 57 29.8**	**+0.4**
N17K	**Nushagak Hills**	**5.78**	**321**	Pn		**Pn**	**22 57 31.1**	**+1.4**
SKT	**Skwentna**	**5.82**	**352**	Pn		**Pn**	**22 57 29.1**	**-1.2**
ISLE	**Juniper Island**	**5.88**	**39**	Pn		**Pn**	**22 57 31.3**	**+0.1**
BAGL	**Bagley Icefiel**	**5.89**	**40**			**Pn**	**22 57 31.0**	**-0.2**
VRDI	**Verde Repeater**	**6.00**	**31**	Pn		**Pn**	**22 57 32.8**	**0.0**
N25K	**Chitina, Valde**	**6.02**	**25**	Pn		**Pn**	**22 57 33.1**	**0.0**
SDPT	**Sand Point**	**6.08**	**266**	Pn		**Pn**	**22 57 32.6**	**-1.1**
GLB	**Gilahina Butte**	**6.08**	**28**	Pn		**Pn**	**22 57 34.2**	**+0.4**
M24K	**Tolsona, Glenn**	**6.17**	**16**	Pn		**Pn**	**22 57 34.1**	**-1.1**
TABL	**Table Mountain**	**6.21**	**44**	Pn		**Pn**	**22 57 35.8**	**0.0**
MCARA	**McCarthy VSAT**	**6.25**	**32**	Pn		**Pn**	**22 57 36.8**	**+0.7**
BARN	**Barnard Glacie**	**6.44**	**38**	Pn		**Pn**	**22 57 38.8**	**-0.1**
CTGM	**Chitina Glacie**	**6.49**	**40**	Pn		**Pn**	**22 57 38.5**	**-1.1**
LOGN	**Logan Glacier**	**6.51**	**41**	Pn		Pn	22 57 38.0	-1.9
N15K	**Kwethluk River**	**6.70**	**310**	Pn		**Pn**	**22 57 43.7**	**+1.4**
M16K	**Timber Creek**	**6.76**	**319**	Pn		**Pn**	**22 57 44.0**	**+0.8**
O14K	**Tigyukauivet M**	**6.83**	**301**	Pn		**Pn**	**22 57 44.0**	**0.0**
O29M	**Mount Kennedy**	**7.19**	**51**	Pn		**Pn**	**22 57 48.0**	**-1.1**
RND	**Reindeer**	**7.21**	**3**	Pn		**Pn**	**22 57 48.6**	**-0.7**
P29M	**Windy Craggy**	**7.27**	**57**	Pn		**Pn**	**22 57 48.9**	**-1.3**
CAST	**Castle Rocks**	**7.29**	**352**	Pn		**Pn**	**22 57 49.8**	**-0.7**
M27K	**Edge Creek, AK**	**7.36**	**30**	Pn		**Pn**	**22 57 52.4**	**+1.0**
KTH	**Kantishna Hill**	**7.36**	**356**	Pn		**Pn**	**22 57 51.8**	**+0.4**
L16K	**Owhat River**	**7.41**	**322**	Pn		**Pn**	**22 57 52.1**	**+0.1**
M14K	**Bethel**	**7.80**	**310**	Pn		Pn	22 57 55.6	-1.7
BPAW	**Bear Paw Mtn.**	**7.91**	**356**	Pn		Pn	22 57 57.1	-1.7
L27K	**Beaver Creek,**	**7.94**	**27**	Pn		**Pn**	**22 58 00.5**	**+1.1**
BCAR	**Beaver Creek A**	**7.96**	**27**	Pn		**Pn**	**22 57 59.8**	**+0.2**
J20K	**Nowinta River**	**8.25**	**347**	Pn		**Pn**	**22 58 04.7**	**+1.3**
M13K	**Dall Lake**	**8.25**	**306**	Pn		**Pn**	**22 58 04.0**	**+0.5**
J19K	**Poorman**	**8.29**	**342**	Pn		**Pn**	**22 58 04.3**	**+0.1**
WRH	**Wood River Hil**	**8.30**	**5**	Pn		**Pn**	**22 58 05.9**	**+1.6**
L14K	**Kuka Creek**	**8.40**	**313**	Pn		**Pn**	**22 58 06.9**	**+1.3**
N30M	**Aishikik Lake**	**8.41**	**46**	Pn		**Pn**	**22 58 05.0**	**-0.9**
CCB	**Clear Creek Bu**	**8.49**	**6**	Pn		**Pn**	**22 58 07.0**	**+0.1**
M29M	**Somme Creek**	**8.50**	**38**	Pn		**Pn**	**22 58 06.8**	**-0.3**
K15K	**Wolf Creek Mou**	**8.52**	**320**	Pn		**Pn**	**22 58 08.7**	**+1.4**
IL31		**8.68**	**8**	Pn		**Pn**	**22 58 10.4**	**+1.0**
ILAR	**Eielson Array**	**8.68**	**8**	Pn		**Pn**	**22 58 09.2**	**-0.3**
ILAR	**Eielson Array**	**8.68**	**8**	Pn		**Pn**	**22 58 09.0**	**-0.4**
	comp=N,0.2nm,0.3s,baz=194,slow=13,SNR=7.2							
ILAR					Sn	**Sn**	**22 59 43.7**	**-3.5**
	comp=N,0.1nm,0.3s,baz=194,slow=18,SNR=3.8							
	comp=N,1.3nm,0.7s							
MDM	**Murphy Dome**	**8.78**	**4**	Pn		**Pn**	**22 58 10.0**	**-0.8**
J26L	**Joseph Creek**	**8.84**	**18**	Pn		**Pn**	**22 58 11.8**	**0.0**
J16K	**Anvik River**	**8.90**	**327**	Pn		Pn	22 58 10.3	-2.1
I23K	**Minto, Yukon-K**	**8.94**	**1**	Pn		**Pn**	**22 58 11.6**	**-1.4**
WHY	**Whitehorse**	**8.99**	**54**	Pn		**Pn**	**22 58 13.3**	**-0.5**
L29M	**L29M**	**9.07**	**36**	Pn		**Pn**	**22 58 15.7**	**+0.9**
M30M	**Minto, Yukon**	**9.18**	**41**	Pn		**Pn**	**22 58 16.5**	**+0.2**
P32M	**Atlin**	**9.20**	**62**	Pn		Pn	22 58 14.1	-2.6
H21K	**Melozitna Rive**	**9.56**	**353**	Pn		**Pn**	**22 58 21.1**	**-0.3**
I26K	**Coal Creek Min**	**9.65**	**17**	Pn		**Pn**	**22 58 25.0**	**+2.2**
H24K	**Noodor Dome**	**9.68**	**5**	Pn		**Pn**	**22 58 22.6**	**-0.5**
K29M	**Barlow Dome**	**9.78**	**34**	Pn		**Pn**	**22 58 23.7**	**-0.9**
P33M	**Teslin, Yukon**	**9.80**	**59**	Pn		Pn	22 58 22.9	-2.0
H18K	**Honhosa River**	**9.86**	**339**	Pn		**Pn**	**22 58 26.1**	**+0.5**
M31M	**Drury Creek, Y**	**9.90**	**47**	Pn		Pn	22 58 24.4	-1.8
IMAR	**Indian Mountai**	**9.96**	**351**	Pn		**Pn**	**22 58 27.2**	**+0.3**
G23K	**Bananza Creek**	**10.51**	**360**	Pn		**Pn**	**22 58 35.4**	**+0.9**
R33M	**Jennings River**	**10.53**	**65**	Pn		**Pn**	**22 58 33.8**	**-1.2**
G24K	**Hadweenzic Riv**	**10.56**	**5**	Pn		**Pn**	**22 58 34.4**	**-0.7**
J30M	**Hart River**	**10.67**	**33**	Pn		**Pn**	**22 58 37.7**	**+0.9**
DLBC	**Dease Lake**	**10.91**	**70**	Pn		**Pn**	**22 58 39.4**	**-0.7**
	comp=N,0.3nm,0.3s,baz=281,slow=10,SNR=1.5							
	comp=N,3.0nm,1.1s							
F21K	**Alatna River**	**11.15**	**353**	Pn		**Pn**	**22 58 44.7**	**+1.4**
MMPY	**Sheldon Lake,**	**11.38**	**48**	Pn		**Pn**	**22 58 45.6**	**-0.8**
BMAR	**Burnt Mountain**	**11.49**	**10**	Pn		**Pn**	**22 58 49.4**	**+1.5**
E19K	**Redstone River**	**11.77**	**346**	Pn		**Pn**	**22 58 51.5**	**-0.2**
F15K	**North Star Dit**	**11.88**	**329**	Pn		**Pn**	**22 58 53.8**	**+0.7**
E25K	**Arctic Village**	**12.08**	**8**	Pn		**Pn**	**22 58 56.3**	**+0.3**
G31M	**Satah River**	**12.97**	**28**	Pn		**Pn**	**22 59 06.6**	**-1.5**
D25K	**Kavik River**	**13.22**	**5**	Pn		**Pn**	**22 59 12.8**	**+1.3**
C23K	**Itkillik River**	**13.65**	**359**	Pn		**Pn**	**22 59 20.3**	**+3.0**
INK	**Inuvik**	**14.21**	**25**	Pn		**Pn**	**22 59 25.1**	**+0.2**
	comp=N,0.2nm,0.3s,baz=198,slow=6.4,SNR=5.8							
	comp=N,0.8nm,0.7s							
YKA	**Yellowknife Ar**	**18.81**	**56**	P		**P**	**23 00 22.1**	**-1.3**
	comp=N,0.2nm,0.7s,baz=263,slow=10,SNR=1.7							
H11N2	**WAKE ISLAND Hy**	**48.60**	**239**	T		T	23 57 04.5	
	baz=31,slow=76,SNR=13							
H11N3	**WAKE ISLAND Hy**	**48.61**	**239**	T		T	23 57 06.9	
	baz=31,slow=76,SNR=13							
H11N1	**WAKE ISLAND Hy**	**48.62**	**239**	T		T	23 57 09.5	
	baz=31,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**49.74**	**239**	T		T	23 58 31.8	
	baz=30,slow=76,SNR=10.9							
H11S2	**WAKE ISLAND Hy**	**49.76**	**239**	T		T	23 58 32.8	
	baz=30,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**49.76**	**239**	T		T	23 58 32.5	
	baz=30,slow=76,SNR=11							
SONM	**Songino Array**	**58.44**	**310**	P		**P**	**23 06 00.2**	**+0.5**
	comp=N,1.1nm,0.7s,baz=46,slow=8.5,SNR=6.1							
	comp=N,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**61.43**	**327**	P		**P**	**23 06 20.5**	**+0.6**
	comp=N,0.7nm,0.4s,baz=28,slow=6.5,SNR=4.0							
	comp=N,0.7nm,0.4s							
NOA	**NORSAR Array B**	**62.11**	**10**	P		**P**	**23 06 24.6**	**+0.1**
	comp=N,0.4nm,0.7s,baz=318,slow=4.8,SNR=1.6							
	comp=N,0.4nm,0.7s							
BVAR	**Borovoye Array**	**66.19**	**335**	P		**P**	**23 06 51.5**	**+0.2**
	comp=N,0.6nm,0.6s,baz=28,slow=6.7,SNR=5.3							
	comp=N,0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**66.22**	**329**	P		**P**	**23 06 51.9**	**+0.3**
	comp=N,0.5nm,0.7s,baz=30,slow=6.7,SNR=5.7							
	comp=N,0.5nm,0.7s							
MKAR	**Makanchi Array**	**68.45**	**324**	P		**P**	**23 07 05.8**	**0.0**
	comp=N,0.4nm,0.5s,baz=28,slow=6.0,SNR=11							
	comp=N,0.4nm,0.5s							
ESDC	**Sonseca Array**	**80.16**	**26**	P		**P**	**23 08 14.6**	**+0.5**
	comp=N,0.7nm,1.0s,baz=277,slow=5.8,SNR=2.5							
	comp=N,0.7nm,1.0s							
BRTR	**Keskin Array B**	**84.36**	**357**	P		**P**	**23 08 38.4**	**+2.2**
	comp=N,2.8nm,1.1s,baz=356,slow=8.7,SNR=3.9							
	comp=N,2.8nm,1.1s							
QSPA	**South Pole Qui**	**146.03**	**180**	PKPbc		**PKPdf**	**23 15 40.9**	**-0.7**
	comp=N,1.4nm,0.7s,baz=163,slow=0.2,SNR=11							

*NEIC **26** 23:08:00.7±2.0,36°.27N±0°.04×140°.16E±0°.07,h52km±5km, mb4.5/45, Mwr4.3/18, Error ellipse: s-maj=8.1km s-min=5.1km az=101.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr1.39; Mθθ-2.07; Mφφ0.68; Mrθ1.58; Mrφ-1.03; Mθφ1.74; Fault plane solution: M₀3.15000×10¹⁵ NP1:φs44.92000°,δ73.93000°, λ64.32000°. NP2:φs284.99000°,δ30.00000°,λ146.38000°. Principal axes: T 2.8943, Plg54.0000°, Azm284.0000°; N 0.4681, Plg25.0000°, Azm53.0000°; P -3.3624, Plg25.0000°, Azm155.0000°;*
*MOS **26** 23:08:00.8±0.9,36°.30N×140°.09E,h65km,mb4.6/26 Error ellipse: s-maj=11.2km s-min=6.2km az=117.1*
*NEIC **26** 23:08:01.3,36°.30N×140°.15E,h57km*
*JMA **26** 23:08:02.1±0.1,36°.2N±0°.3×140°.1E±0°.4,h54km,MD4.3/40, MW4.4/40,SW IBARAKI PREF*
JMA Felt III J1 at SW IBARAKI PREF .
*NIED **26** 23:08:02.1,36°.23N×140°.09E,h54km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.49; Mθθ-2.44; Mφφ-0.05; Mrθ1.89; Mθφ-1.01; Mrφ2.18; Fault plane solution: M₀3.93000×10¹⁵ NP1:φs49.00000°, δ70.00000°,λ74.00000°. NP2:φs270.00000°,δ26.00000°, λ127.00000°.*
*IDC **26** 23:08:03.8±1.9,36°.24N×139°.95E,h75km±17km,mb3.7/19, mbtmp4.1/20,MS3.3/21 Error ellipse: s-maj=18.5km s-min=14.5km az=55.0*
ISC 26 23:08:01.6±0.6,36°.26N±0°.04×140°.11E±0°.04,h57km±5km, n193,σ1s43/168,mb4.3/59,MS3.5/17,9C-22D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYT	**Yasato**	**0.08**	**113**	*i*	P	**Pn**	**23 08 10.6**	**+0.4**
JYT					S	**Sn**	**23 08 16.4**	**+0.1**
JYT	**Yasato**	**0.08**	**113**		A	A	23 08 10.6	
	comp=E,256nm,0.4s,comp=N,250nm,0.3s							
JHYU	**Hitachinakayam**	**0.40**	**78**		A	A	23 08 12.7	
	comp=E,62nm,0.5s,comp=N,79nm,0.6s							
JIHU	**Itakohorinouch**	**0.45**	**131**		A	A	23 08 12.9	
	comp=E,85nm,2.0s,comp=N,59nm,1.2s							
JHO	**Hitachi**	**0.51**	**47**		A	A	23 08 14.2	
	comp=E,43nm,0.4s,comp=N,59nm,1.0s							
JAG	**Ashikaga**	**0.55**	**288**	⇓	*i* P	**Pn**	**23 08 14.3**	**+0.4**
JAG				⇓	S	**Sn**	**23 08 22.9**	**+0.1**
JAG	**Ashikaga**	**0.55**	**288**		A	A	23 08 14.3	
	comp=E,18nm,1.5s,comp=N,27nm,2.2s							
TOK	**Tokyo**	**0.64**	**206**		A	A	23 08 14.8	
	comp=E,63nm,1.2s,comp=N,54nm,0.8s							
JSMT	**Sammumatsuo**	**0.68**	**156**		A	A	23 08 15.4	
	comp=E,39nm,0.7s,comp=N,33nm,1.8s							
JSB	**Shiboa**	**0.72**	**348**		A	A	23 08 16.8	
	comp=E,26nm,1.1s,comp=N,28nm,0.9s							
JHU	**Hanno**	**0.78**	**239**		A	A	23 08 16.7	
	comp=E,6.0nm,1.3s,comp=N,5.0nm,0.8s							
JCN	**Nagara**	**0.84**	**175**		A	A	23 08 17.5	
	comp=E,32nm,1.5s,comp=N,27nm,2.1s							
JKT	**Katashina**	**0.86**	**307**	⇓	*i* P	**Pn**	**23 08 18.2**	**+0.4**
JKT				⇓	S	**Sn**	**23 08 30.2**	**+0.6**
JKT	**Katashina**	**0.86**	**307**		A	A	23 08 18.2	
	comp=E,17nm,0.3s,comp=N,17nm,0.3s							
JFFD	**Fukushimafurud**	**0.91**	**24**		A	A	23 08 19.4	
	comp=E,31nm,0.7s,comp=N,26nm,0.6s							
JSGW	**Sagamiharawaka**	**0.98**	**228**		A	A	23 08 19.4	
	comp=E,9.0nm,1.0s,comp=N,14nm,1.1s							
JRY	**Ryogami san**	**1.00**	**256**	⇓	*i* P	**Pn**	**23 08 19.9**	**+0.3**
JRY				⇓	S	**Sn**	**23 08 32.9**	**0.0**
JRY	**Ryogami san**	**1.00**	**256**		A	A	23 08 19.9	
	comp=E,5.0nm,0.7s,comp=N,7.0nm,1.7s							
ONAJ	**Iwakimizuishiy**	**1.01**	**33**		A	A	23 08 20.8	
	comp=E,25nm,0.4s,comp=N,18nm,0.5s							
JYO	**Yokosk**	**1.09**	**199**		A	A	23 08 20.9	
	comp=E,16nm,0.9s,comp=N,17nm,0.7s							
JKUC	**kamogawauchiur**	**1.10**	**176**		A	A	23 08 21.1	
	comp=E,11nm,3.2s,comp=N,11nm,0.9s							
JFY	**Yanaizu**	**1.19**	**344**	⇓	*i* P	**Pn**	**23 08 23.1**	**+1.1**
JGK	**Kuni**	**1.22**	**285**		A	A	23 08 23.2	
	comp=E,5.0nm,2.6s,comp=N,5.0nm,2.5s							
TATJ	**Tateyama 2**	**1.24**	**188**		A	A	23 08 22.9	
	comp=E,32nm,1.1s,comp=N,30nm,2.4s							
JFK	**Kawauchi**	**1.27**	**29**	⇓	*i* P	**Pn**	**23 08 23.6**	**+0.6**
JFK				⇓	S	**Sn**	**23 08 39.8**	**+0.6**
JFK	**Kawauchi**	**1.27**	**29**		A	A	23 08 23.6	
	comp=E,12nm,1.3s,comp=N,13nm,0.8s							
JUON	**Uonuma**	**1.27**	**319**	⇓	*i* P	**Pn**	**23 08 23.9**	**+0.9**
JOD2	**Odawara 2**	**1.29**	**220**		P	**Pn**	**23 08 24.1**	**+0.7**
JOD2					*e*S	**Sn**	**23 08 39.7**	**-0.1**
JOD2	**Odawara 2**	**1.29**	**220**		A	A	23 08 24.1	
	comp=E,8.0nm,1.6s,comp=N,6.0nm,0.7s							
JOTO	**OTAMA OYAMA**	**1.31**	**8**	*i*	P	**Pn**	**23 08 24.8**	**+1.1**
JOTO					S	**Sn**	**23 08 42.4**	**+2.1**
JOTO	**OTAMA OYAMA**	**1.31**	**8**		A	A	23 08 24.8	
	comp=E,15nm,3.3s,comp=N,11nm,1.0s					

HHC				pmax	pmax			
	comp=Z,10.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,37nm,4.2s							
BTO	**Baotou**	**23.90**	**290**	SS	S	23 17 09.0	-13	
MA2	**Magadan**	**24.34**	**13**	P	**P**	**23 13 12.8**	**-0.9**	
MA2				IAmb	IAmb	23 13 16.2		
	comp=Z,12nm,0.8s							
MA2	**Magadan**	**24.34**	**13**⇓	*eP*	**P**	**23 13 14.2**	**+0.5**	
MA2				pmax	pmax			
	comp=Z,17nm,1.7s							
MA2	**Magadan**	**24.34**	**13**	LR	LR	23 23 00.1		
	comp=Z,37nm,21.3s,baz=110,slow=37							
ENH	**Enshi**	**26.22**	**266**	P	**P**	**23 13 29.2**	**-1.9**	
ENH				IAmb	IAmb	23 13 31.9		
	comp=Z,9.8nm,0.9s							
YAK	**Yakutsk**	**26.61**	**349**	LR	LR	23 24 04.1		
	comp=Z,50nm,21.1s,baz=126,slow=36							
ULN	**Ulaanbaatar**	**26.94**	**306**⇑	*eP*	**P**	**23 13 39.1**	**+1.5**	
ULN				pmax	pmax			
	comp=Z,4.0nm,1.3s							
SONM	**Songino Array**	**27.36**	**306**	P	**P**	**23 13 38.9**	**-2.5**	
SONM	**Songino Array**	**27.36**	**306**	P	**P**	**23 13 40.5**	**-0.8**	
	comp=Z,0.9nm,0.7s,baz=104,slow=8.6,SNR=5.4							
	comp=Z,0.9nm,0.7s							
SEY	**Seymchan**	**27.76**	**12**⇓	*eP*	**P**	**23 13 45.5**	**+0.9**	
SEY				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KMI	**Kunming**	**33.80**	**261**	⇓P	**P**	**23 14 37.8**	**-0.7**	
KMI				pmax	pmax			
	comp=Z,8.0nm,0.9s							
KIWB	**Kanaga Island**	**33.90**	**49**	P	**P**	**23 14 37.2**	**-1.5**	
PZH	**PanZhiHua**	**33.98**	**264**	P	**P**	**23 14 41.0**	**+1.1**	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,70nm,4.7s							
BILL	**Bilibino**	**35.07**	**17**⇓	*eP*	**P**	**23 14 48.9**	**+0.2**	
TIXI	**Tiksi**	**35.94**	**354**	P	**P**	**23 14 56.5**	**+0.5**	
TIXI				IAmb	IAmb	23 14 59.8		
	comp=Z,5.5nm,1.1s							
TIXI	**Tiksi**	**35.94**	**354**⇓	*eP*	**P**	**23 14 55.6**	**-0.5**	
TIXI				pmax	pmax			
	comp=Z,8.0nm,1.8s							
DGZ	**Jazzator, Alta**	**40.00**	**307**	*ceP*	**P**	**23 15 31.6**	**+0.8**	
DGZ				pmax	pmax			
	comp=Z,5.0nm,0.9s							
WMQ	**Urumqi**	**40.26**	**297**	*eP*	**P**	**23 15 34.8**	**+1.9**	
LSA	**Lhasa**	**41.23**	**275**	P	**P**	**23 15 40.9**	**-0.7**	
LSA				IAmb	IAmb	23 15 43.4		
	comp=Z,7.4nm,0.9s							
LSA	**Lhasa**	**41.23**	**275**	P	**P**	**23 15 40.9**	**-0.7**	
LSA				pmax	pmax			
	comp=Z,7.0nm,0.9s							
ZAA0	**Zalesovo Array**	**41.67**	**313**	P	**P**	**23 15 43.5**	**-0.7**	
ZALV	**Zalesovo Beam**	**41.67**	**313**	P	**P**	**23 15 43.3**	**-1.0**	
ZALV	**Zalesovo Beam**	**41.67**	**313**	P	**P**	**23 15 44.5**	**+0.3**	
	comp=Z,3.1nm,0.7s,baz=96,slow=7.4,SNR=17							
ZALV				PcP	**PcP**	**23 17 39.5**	**-0.5**	
	comp=Z,2.6nm,0.8s,baz=101,slow=2.6,SNR=5.9							
	comp=Z,3.1nm,0.7s							
NRIK	**Noril'sk**	**43.54**	**336**	*deP*	**P**	**23 15 59.0**	**-0.2**	
NRIK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
MK31	**Makanchi Array**	**43.64**	**303**	P	**P**	**23 15 59.7**	**-0.7**	
MK31	**Makanchi Array**	**43.64**	**303**	*d iP*	**P**	**23 16 00.6**	**+0.2**	
MKAR	**Makanchi Array**	**43.64**	**303**	P	**P**	**23 16 00.1**	**-0.3**	
MKAR	**Makanchi Array**	**43.64**	**303**	*ceP*	**P**	**23 16 00.6**	**+0.2**	
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**43.64**	**303**	P	**P**	**23 16 00.2**	**-0.2**	
	comp=Z,3.1nm,0.9s,baz=90,slow=9.8,SNR=33							
MKAR				PcP	**PcP**	**23 17 46.6**	**-0.2**	
	comp=Z,1.1nm,0.7s,baz=75,slow=5.1,SNR=4.4							
	comp=Z,3.1nm,0.9s							
MAKZ	**Makanchi**	**43.85**	**303**	P	**P**	**23 16 00.8**	**-1.3**	
MAKZ	**Makanchi**	**43.85**	**303**	P	**P**	**23 16 00.8**	**-1.3**	
MAKZ				pmax	pmax			
	comp=Z,7.0nm,1.1s							
E18K	**Tukpahlearik C**	**45.37**	**28**	P	**P**	**23 16 14.8**	**+0.9**	
E18K				IAmb	IAmb	23 16 35.6		
	comp=Z,7.3nm,1.2s							
C18K	**Utukok River**	**45.44**	**26**	P	**P**	**23 16 13.0**	**-1.4**	
C18K				IAmb	IAmb	23 16 16.4		
	comp=Z,6.4nm,0.8s							
KURK	**Kurchatov**	**45.59**	**309**	P	**P**	**23 16 14.7**	**-1.1**	
KURK				IAmb	IAmb	23 16 17.2		
	comp=Z,9.2nm,1.1s							
KURK	**Kurchatov**	**45.59**	**309**	*d iP*	**P**	**23 16 15.8**	**0.0**	
KURK				pmax	pmax			
	comp=Z,9.0nm,1.3s							
KURBB	**Kurchatov Arra**	**45.65**	**308**	P	**P**	**23 16 15.5**	**-0.8**	
	comp=Z,1.9nm,0.6s,baz=85,slow=8.2,SNR=25							
KURBB				PcP	**PcP**	**23 17 52.4**	**-1.2**	
	comp=Z,1.0nm,0.7s,baz=90,slow=3.7,SNR=5.4							
	comp=Z,1.9nm,0.6s							
C19K	**Lookout Ridge**	**46.11**	**26**	P	**P**	**23 16 20.4**	**+0.6**	
C19K				IAmb	IAmb	23 16 22.6		
	comp=Z,5.9nm,0.8s							
D19K	**Kuna River**	**46.51**	**27**	P	**P**	**23 16 23.0**	**+0.2**	
D19K				IAmb	IAmb	23 16 25.4		
	comp=Z,6.0nm,0.9s							
E19K	**Redstone River**	**46.65**	**28**	P	**P**	**23 16 24.0**	**+0.1**	
PRZ	**Przheval'sk**	**47.19**	**297**		**P**	**23 16 27.6**	**-1.0**	
PRZ				IAmb	IAmb	23 16 33.3		
	comp=Z,6.0nm,0.8s							
PRZ	**Przheval'sk**	**47.19**	**297**	P	**P**	**23 16 27.7**	**-1.0**	
PRZ				pmax	pmax			
	comp=Z,6.0nm,0.8s							
TARG	**Taragay, Kyrgy**	**47.80**	**297**	P	**P**	**23 16 33.8**	**+0.1**	
TARG	**Taragay, Kyrgy**	**47.80**	**297**	P	**P**	**23 16 33.8**	**+0.1**	
TARG				pmax	pmax			
	comp=Z,9.0nm,0.8s							
D22K	**Ayikyak River**	**48.53**	**26**	P	**P**	**23 16 39.0**	**+0.6**	
D22K				IAmb	IAmb	23 16 41.2		
	comp=Z,4.4nm,0.7s							
E22K	**Anaktuvuk Pass**	**48.78**	**28**	P	**P**	**23 16 40.8**	**+0.3**	
E22K				IAmb	IAmb	23 16 42.5		
	comp=Z,3.5nm,0.8s							
NRN	**Naryn**	**49.19**	**297**	P	**P**	**23 16 43.8**	**-0.5**	
NRN	**Naryn**	**49.19**	**297**	P	**P**	**23 16 43.8**	**-0.5**	
NRN				pmax	pmax			
	comp=Z,3.0nm,1.0s							
FIS	**Fire Island**	**49.38**	**37**	P	**P**	**23 16 44.0**	**-1.0**	
KSH	**Kashi**	**49.76**	**294**	P	**P**	**23 16 52.8**	**+4.3**	
KSH				pmax	pmax			
	comp=Z,3.0nm,1.1s							
AAK	**Ala-Archa**	**49.93**	**299**		**P**	**23 16 48.7**	**-1.0**	
AAK	**Ala-Archa**	**49.93**	**299**	*ceP*	**P**	**23 16 50.8**	**+1.0**	
AAK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
D24K	**Happy Valley**	**49.93**	**26**	P	**P**	**23 16 49.6**	**+0.5**	
D24K				IAmb	IAmb	23 16 51.4		
	comp=Z,3.5nm,0.8s							
MDM	**Murphy Dome**	**50.13**	**32**	P	**P**	**23 16 49.3**	**-1.5**	
MDM				IAmb	IAmb	23 16 53.1		
	comp=Z,5.1nm,0.8s							
BVAR	**Borovoye Array**	**50.32**	**313**	P	**P**	**23 16 52.7**	**+0.4**	
	comp=Z,0.7nm,0.4s,baz=96,slow=7.3,SNR=8.2							
BVAR				PcP	**PcP**	**23 18 10.3**	**0.0**	
	comp=Z,1.8nm,0.7s,baz=100,slow=5.1,SNR=5.2							
BVAR				LR	LR	23 38 45.9		
	comp=Z,33nm,18.6s,baz=59,slow=37							
	comp=Z,0.7nm,0.4s							
BRVK	**Borovoye**	**50.38**	**313**⇑	*eP*	**P**	**23 16 54.6**	**+1.9**	
BRVK				pmax	pmax			
	comp=Z,3.0nm,1.3s							
POKR	**Poker Plat Res**	**50.46**	**32**	P	**P**	**23 16 51.8**	**-1.4**	
HDA	**Harding Lake**	**50.70**	**32**	P	**P**	**23 16 53.3**	**-1.7**	
IL31		**50.71**	**32**	P	**P**	**23 16 53.5**	**-1.5**	
IL31				IAmb	IAmb	23 16 56.8		
	comp=Z,3.3nm,0.8s							
ILAR	**Eielson Array**	**50.71**	**32**	P	**P**	**23 16 56.0**	**+0.9**	
	comp=Z,1.6nm,0.7s,baz=273,slow=6.3,SNR=22							
	comp=Z,1.6nm,0.7s							
D25K	**Kavik River**	**50.81**	**26**	P	**P**	**23 16 55.3**	**-0.6**	
D25K				IAmb	IAmb	23 16 58.2		
	comp=Z,3.8nm,0.8s							
GLI	**Glacier Island**	**50.91**	**37**	P	**P**	**23 16 54.7**	**-2.0**	
ARSB	**Arslanbob**	**51.39**	**297**	P	**P**	**23 17 00.5**	**-0.3**	
ARSB	**Arslanbob**	**51.39**	**297**	P	**P**	**23 17 00.5**	**-0.3**	
ARSB				pmax	pmax			
	comp=Z,2.0nm,1.0s							
BMAR	**Burnt Mountain**	**51.52**	**28**	P	**P**	**23 16 59.2**	**-1.9**	
KK31	**Karatay Array**	**52.60**	**300**	P	**P**	**23 17 09.0**	**-0.6**	
KK31				IAmb	IAmb	23 17 12.4		
	comp=Z,7.5nm,1.2s							
KK31	**Karatay Array**	**52.60**	**300**	P	**P**	**23 17 09.0**	**-0.6**	
KK31				pmax	pmax			
	comp=Z,7.0nm,1.2s							
KKAR	**Karatay Array**	**52.60**	**300**	P	**P**	**23 17 08.8**	**-0.8**	
KKAR				IAmb	IAmb	23 17 12.3		
	comp=Z,7.4nm,1.2s							
KKAR	**Karatay Array**	**52.60**	**300**	P	**P**	**23 17 08.8**	**-0.8**	
KKAR				pmax	pmax			
	comp=Z,7.0nm,1.2s							
I30M	**Mount Dempster**	**55.08**	**31**	P	**P**	**23 17 27.6**	**+0.1**	
SIMJ	**Simiganj**	**55.16**	**296**	P	**P**	**23 17 27.7**	**-0.7**	
SIMJ				IAmb	IAmb	23 17 30.1		
	comp=Z,4.1nm,1.1s							
HYT	**Haines Junctio**	**55.55**	**36**	P	**P**	**23 17 30.7**	**-0.1**	
HYT				IAmb	IAmb	23 17 37.0		
	comp=Z,6.4nm,1.1s							
INK	**Inuvik**	**55.55**	**27**	P	**P**	**23 17 29.0**	**-1.6**	
INK				IAmb	IAmb	23 17 47.8		
	comp=Z,4.2nm,1.0s							
INK	**Inuvik**	**55.55**	**27**	P	**P**	**23 17 29.0**	**-1.6**	
INK				pmax	pmax			
	comp=Z,4.0nm,1.0s							
INK	**Inuvik**	**55.55**	**27**	LR	LR	23 42 46.1		
	comp=Z,20nm,18.4s,baz=199,slow=37							
G31M	**Satah River**	**55.56**	**28**	P	**P**	**23 17 30.2**	**-0.4**	
F31M	**Tsiigehtchic**	**55.66**	**28**	P	**P**	**23 17 28.8**	**-2.5**	
F31M				IAmb	IAmb	23 17 33.6		
	comp=Z,5.3nm,1.4s							
FITZ	**Fitzroy Crossi**	**55.77**	**197**	P	**P**	**23 17 32.2**	**-0.4**	
WB0	**Warramunga Arr**	**55.98**	**186**	P	**P**	**23 17 32.9**	**-1.3**	
WRAB	**Tennant Creek**	**56.15**	**187**	P	**P**	**23 17 34.4**	**-1.0**	
WRAB	**Tennant Creek**	**56.15**	**187**⇑	*eP*	**P**	**23 17 35.7**	**+0.3**	
WRAB				pmax	pmax			
	comp=Z,9.0nm,0.9s							
WB2	**Warramunga Arr**	**56.16**	**187**	P	**P**	**23 17 34.3**	**-1.2**	
WRA	**Warramunga Arr**	**56.16**	**187**	P	**P**	**23 17 34.3**	**-1.2**	
WRA	**Warramunga Arr**	**56.16**	**187**	*i* P	**P**	**23 17 36.0**	**+0.5**	
WRA				pmax	pmax			
	comp=Z,2.0nm,0.4s							
WRA	**Warramunga Arr**	**56.16**	**187**	P	**P**	**23 17 35.6**	**+0.1**	
	comp=Z,1.7nm,0.4s,baz=1.0,slow=7.6,SNR=11							
	comp=Z,1.7nm,0.4s							
ARU	**Arti**	**56.24**	**319**	P	**P**	**23 17 35.2**	**-0.5**	
ARU				IAmb	IAmb	23 17 37.7		
	comp=Z,3.1nm,0.8s							
ARU	**Arti**	**56.24**	**319**	*c iP*	**P**	**23 17 35.4**	**-0.3**	
ARU				*PP	**pP**	**23 17 49.5**	**-1.5**	
ARU						23 19 39.7		
ARU				S	**S**	**23 25 25.1**	**+4.0**	
ARU				SS	**SS**	**23 29 11.4**	**+3.6**	
ARU				pmax	pmax			
	comp=Z,3.0nm,0.7s							
M31M	**Drury Creek, Y**	**56.64**	**34**	P	**P**	**23 17 36.3**	**-2.3**	
ASAR	**Alice Springs**	**59.89**	**187**	P	**P**	**23 18 02.5**	**+1.0**	
	comp=Z,1.1nm,0.7s,baz=11,slow=11,SNR=4.9							
	comp=Z,1.1nm,0.7s							
KIRV	**Kirov**	**60.23**	**323**	LR	LR	23 44 40.5		
	comp=Z,48nm,19.3s,baz=37,slow=36							
DZM	**Mont Dzumac**	**63.13**	**153**	LR	LR	23 49 09.5		
	comp=Z,19nm,18.1s,baz=244,slow=39							
ARCES	**ARCESS Array B**	**64.35**	**339**	P	**P**	**23 18 32.4**	**+1.5**	
	comp=Z,1.5nm,0.9s,baz=65,slow=5.8,SNR=4.5							
ARCES				LR	LR	23 49 05.0		
	comp=Z,28nm,21.2s,baz=51,slow=38							
	comp=Z,1.5nm,0.9s							
YKA	**Yellowknife Ar**	**65.00**	**30**	P	**P**	**23 18 35.9**	**+0.7**	
	comp=Z,0.9nm,0.9s,baz=301,slow=6.7,SNR=12							
	comp=Z,0.9nm,0.9s							
OBN	**Obninsk**	**68.08**	**323**	*eP*	**P**	**23 18 54.4**	**-0.6**	
OBN				*e*PP	**pP**	**23 19 12.0**	**+1.4**	
OBN				*e*		23 19 20.2		
OBN				*e*		23 21 27.9		
OBN				*e*PPP	PPP	23 23 07.3		
OBN				pmax	pmax			
	comp=Z,2.0nm,0.9s							
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**23 19 00.1**	**-0.5**	
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**23 19 00.1**	**-0.5**	
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**23 18 59.6**	**-1.0**	
	comp=Z,1.5nm,0.7s,baz=42,slow=5.9,SNR=5.3							
FINES				LR	LR	23 52 26.0		
	comp=Z,22nm,19.1s,baz=172,slow=39							
	comp=Z,1.5nm,0.7s							
KBZ	**Khabz**	**70.60**	**310**	P	**P**	**23 19 10.6**	**-0.2**	
	comp=Z,1.9nm,0.8s,baz=328,slow=2.8,SNR=4.8							
	comp=Z,1.9nm,0.8s							
KIV	**Kislovodsk**	**70.61**	**311**	*eP*	**P**	**23 19 12.0**	**+1.0**	
KIV				pmax	pmax			
	comp=Z,8.0nm,1.0s							
GNI	**Garni**	**71.32**	**306**	LR	LR	23 53 18.8		
	comp=Z,29nm,18.5s,baz=60,slow=38							
AKASG	**Malin Array Be**	**74.26**	**322**	P	**P**	**23 19 31.8**	**-0.6**	
	comp=Z,1.9nm,0.7s,baz=47,slow=6.1,SNR=7.9							
AKASG				LR	LR	23 53 22.2		
	comp=Z,54nm,18.6s,baz=32,slow=37							
	comp=Z,1.9nm,0.7s							
HFS	**Hagfors**	**74.36**	**335**	P	**P**	**23 19 32.8**	**0.0**	
	comp=Z,3.0nm,0.8s,baz=46,slow=4.3,SNR=5.3							
HFS				LR	LR	23 54 17.8		
	comp=Z,43nm,19.1s,baz=124,slow=37							
	comp=Z,3.0nm,0.8s							
NB2	**NORSAR Subarra**	**74.49**	**337**	P	**P**	**23 19 33.3**	**-0.3**	
	comp=Z,2.6nm,0.8s,baz=41,slow=6.2							
NOA	**NORSAR Array B**	**74.49**	**337**	P	**P**	**23 19 33.4**	**-0.3**	
	comp=Z,1.2nm,0.7s,baz=41,slow=5.7,SNR=5.3							
NOA				LR	LR	23 55 36.9		
	comp=Z,27nm,18.0s,baz=35,slow=38							
	comp=Z,1.2nm,0.7s							
NVAR	**Mina Array Bea**	**76.29**	**52**	P	**P**	**23 19 46.0**	**+1.4**	
	comp=Z,1.1nm,0.7s,baz=267,slow=5.7,SNR=6.0							
	comp=Z,1.1nm,0.7s							
PDAR	**Pinedale Array**	**78.96**	**45**	P	**P**	**23 20 00.2**	**+0.8**	
	comp=Z,0.5nm,0.6s,baz=235,slow=2.0,SNR=6.1							
	comp=Z,0.5nm,0.6s							
MLR	**Muntele Rosu**	**79.29**	**319**	LR	LR	23 56 42.7		
	comp=Z,43nm,18.1s,baz=60,slow=37							
VRAC	**Vranov**	**81.19**	**326**	LR	LR	23 57 12.1		
	comp=Z,22nm,19.1s,baz=198,slow=36							
CLL	**Collm**	**81.24**	**330**	*eP*	**P**	**23 20 11.0**	**-0.2**	
CLL	**Collm**	**81.24**	**330**	*eP*	**P**	**23 20 11.0**	**-0.2**	
GERES	**GERESS Array B**	**82.81**	**328**	P	**P**	**23 20 17.9**	**-1.7**	
	comp=Z,1.0nm,0.7s,baz=57,slow=3.6,SNR=3.5							
GERES				LR	LR	00 00 47.4		
	comp=Z,24nm,18.4s,baz=32,slow=38							
	comp=Z,1.0nm,0.7s							
DAVOX	**Davos/Dischmat**	**86.04**	**328**	LR	LR	00 00 42.6		
	comp=Z,27nm,19.5s,baz=297,slow=37							
TXAR	**Lajitas Array**	**91.43**	**52**	P	**P**	**23 21 02.9**	**+1.0**	
	comp=Z,0.4nm,0.6s,baz=306,slow=3.5,SNR=4.9							
	comp=Z,0.4nm,0.6s							

IDC ***26*** *23:09:00.1±1.1,6.35S×142.93E,h0km,mb3.8/4, mbtmp3.7/7,ML3.8/2,MS3.0/2,Error ellipse: s-maj=33.4km s-min=24.5km az=76.0*

ISC 26 23:09:05.0±0.9,6.6S±0.1×142.8E±0.1,h35km,n9,σ0.93/9, mb3.7/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.20**	**123**	Pn		**Pn**	**Pn**	**23 10 20.6**	**+0.3**
	6.4nm,0.4s,baz=148,slow=23,SNR=1.8								
PMG				Sn		**Sn**	**Sn**	**23 11 19.2**	**+0.1**
	2.2nm,0.3s,baz=274,slow=18,SNR=1.7								
WRA	**Warramunga Arr**	**15.60**	**211**	Pn		**P**	**P**	**23 12 46.6**	**+0.4**
	0.6nm,0.3s,baz=29,slow=13,SNR=17								
WRA				Sn		**Sn**	**Sn**	**23 15 33.5**	**-0.7**
	0.2nm,0.3s,baz=31,slow=22,SNR=1.0								
WRA				Lg		Lg	Lg	23 17 19.9	
	0.2nm,0.3s,baz=26,slow=15,SNR=1.7								
	1.0nm,0.5s								
ASAR	**Alice Springs**	**19.00**	**206**	P		**Pn**	**Pn**	**23 13 24.7**	**-0.1**
	0.1nm,0.3s,baz=34,slow=8.4,SNR=3.0								
ASAR				Lg		Lg	Lg	23 19 12.4	
	baz=14,slow=27								
	0.4nm,0.6s								
GUMO	**Guam**	**20.14**	**6**	LR		LR	LR	23 21 36.6	
	comp=Z,36nm,20.8s,baz=68,slow=38								
JOW	**Kunigami**	**36.05**	**338**	LR		LR	LR	23 26 55.4	
	comp=Z,35nm,21.8s,baz=175,slow=30								
MKAR	**Makanchi Array**	**75.29**	**322**	P		**P**	**P**	**23 20 45.0**	**+0.4**
	0.6nm,0.8s,baz=109,slow=7.7,SNR=4.6								
	0.6nm,0.8s								
KURBB	**Kurchatov Arra**	**79.19**	**324**	P		**P**	**P**	**23 21 06.6**	**+0.4**
	0.2nm,0.4s,baz=116,slow=4.2,SNR=2.2								
	0.2nm,0.4s								
BVAR	**Borovoye Array**	**84.76**	**325**	P			**P**	**23 21 36.7**	**+1.1**
	2.2nm,0.8s,baz=115,slow=10.0,SNR=9.4								
	2.2nm,0.8s								
ILAR	**Eielson Array**	**87.69**	**24**	P			**P**	**23 21 48.0**	**-1.7**
	0.4nm,0.7s,baz=239,slow=5.3,SNR=5.8								
	0.4nm,0.7s								

IDC 26 23:13:13.0±1.6,6.13S×142.39E,h0km,mb3.6/2, mbtmp3.6/5,ML3.5/1,Error ellipse: s-maj=43.1km s-min=28.1km az=88.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.74**	**125**	Pn		Pn	Pn	23 14 39.2	-0.3
	7.7nm,0.6s,baz=79,slow=20,SNR=1.5								
PMG				Sn			Sn	23 15 39.6	-6.5
	4.1nm,0.3s,baz=290,slow=22,SNR=7.4								
WRA	**Warramunga Arr**	**15.81**	**209**	Pn			Pn	23 16 58.2	+1.1
	0.2nm,0.3s,baz=26,slow=13,SNR=1.7								
WRA				Lg			Lg	23 21 34.5	
	baz=31,slow=25								
	0.4nm,0.4s								
ASAR	**Alice Springs**	**19.26**	**204**	P		P	P	23 17 39.0	-0.2
	0.9nm,0.7s,baz=35,slow=9.8,SNR=4.9								
MKAR	**Makanchi Array**	**74.72**	**322**	P		P	P	23 24 54.1	-0.6
	0.2nm,0.6s,baz=122,slow=5.2,SNR=2.4								
	0.2nm,0.6s								
BVAR	**Borovoye Array**	**84.20**	**325**	P		P	P	23 25 46.9	+0.7
	0.6nm,0.6s,baz=112,slow=6.6,SNR=4.1								
	0.6nm,0.6s								

VAO ***26*** *23:31:41.7±0.3,28.44S×67.68W,h110km,mb4.8*
MOS ***26*** *23:31:43.2±1.2,28.31S×67.58W,h127km,mb4.8/35, Error ellipse: s-maj=11.6km s-min=5.5km az=104.5*
NEIC ***26*** *23:31:43.4±1.2,28.38S±0.05×67.48W±0.08,h120km±6km, mb4.9/485,Error ellipse: s-maj=10.1km s-min=7.5km az=93.0*
SJA ***26*** *23:31:44.1±0.7,28.37S×67.59W,h145km±3km,ML5.0, MW4.7*
IDC ***26*** *23:31:45.4±0.5,28.31S×67.47W,h135km±4km,mb4.3/16, mbtmp4.7/20,MS3.5/7,Error ellipse: s-maj=16.1km s-min=10.8km az=59.0*
GUC ***26*** *23:31:45.1±0.7,28.38S×67.55W,h139km±5km,ML4.9*
GCMT ***26*** *23:31:52.4±0.4,28.32S±0.03×67.53W±0.04,h147km±5km, MW4.9/72,Moment Tensor Solution. s15,c15; s72,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.65±.12; Mθθ-1.13±.18; Mφφ 1.77±.19; Mrθ-1.53±.08; Mrφ 1.13±.15; Mθφ-0.70±.10; Best double couple: Mo2.55000×10^16 NP1:φs58.00000°,δ80.00000°,λ-45.00000°. NP2: φs158.00000°,δ46.00000°,λ-166.00000°. Principal axes: T 2.6190, Plg22.0000°, Azm116.0000°; N -0.1440, Plg44.0000°, Azm228.0000°; P -2.4820, Plg38.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 23:31:44.4±0.4,28.34S±0.03×67.62W±0.03,h132km±3km, h132km:pP-P,n906,σ1900/948,mb4.9/263,19C-7D,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TINO	**Tinogasta**	**0.28**	**9**	*eP*		**Pn**	**Pn**	**23 32 04.6**	**+1.7**
VCA	**Vinchina**	**0.65**	**232**	*eP*		**Pn**	**Pn**	**23 32 06.3**	**+1.5**
VCA				*eS*		**Sn**	**Sn**	**23 32 22.8**	**+2.5**
VCA				AMP				23 32 23.8	
	comp=Z,882μm,0.2s								
VCA				IAML				23 32 25.9	
	comp=Z,32μm,0.8s								
VCA	**Vinchina**	**0.65**	**232**⇓	*iP*		**Pn**	**Pn**	**23 32 06.4**	**+1.5**
VCA				*eS*		**Sn**	**Sn**	**23 32 22.1**	**+1.8**
VCA				IAML				23 32 25.3	
	comp=E,64μm,0.4s								
ACLC	**CERRO LA CRUZ**	**1.23**	**152**	*eP*		**Pn**	**Pn**	**23 32 11.2**	**+1.3**
ACLC				*eS*		**Sn**	**Sn**	**23 32 30.4**	**+1.0**
ACLC				IAML				23 32 32.3	
	comp=Z,13μm,0.6s								
AGUA	**GUANDACOL**	**1.38**	**213**	*eP*		**Pn**	**Pn**	**23 32 12.7**	**+1.2**
AGUA				*eS*		**Sn**	**Sn**	**23 32 33.3**	**+1.3**
AGUA				IAML				23 32 34.2	
	comp=Z,20μm,0.4s								
CYA	**Choya**	**1.60**	**94**	*eP*		**Pn**	**Pn**	**23 32 15.0**	**+1.1**
CYA				*eS*		**Sn**	**Sn**	**23 32 37.4**	**+1.1**
CYA				IAML				23 32 38.0	
	comp=Z,7μm,0.6s								
CYA	**Choya**	**1.60**	**94**	*i* P		**Pn**	**Pn**	**23 32 15.3**	**+1.5**
CYA				*eS*		**Sn**	**Sn**	**23 32 36.6**	**+0.2**
CYA				IAML				23 32 37.9	
	comp=E,9μm,0.5s								
AC02	**Maricunga**	**2.01**	**318**				**Pn**	**23 32 21.1**	**+1.9**
AC02				Sn			**Sn**	**23 32 47.5**	**+1.9**
AC02	**Maricunga**

SJA IAML 23 33 16.4
comp=Z,2µm,0.8s
GO04 Tololo Observa 3.33 236 Pn P 23 32 35.4 -0.1
GO04 Sn Sn 23 33 15.1 0.0
GO04 Tololo Observa 3.33 236 *eP* Pn P 23 32 35.5 0.0
GO04 *eS* Sn 23 33 15.9 +0.9
GO04 Tololo Observa 3.33 236 *i* P Pn P 23 32 35.8 +0.2
GO04 *eS* Sn 23 33 14.8 -0.2
AC01 Pan de Azucar 3.43 309 Pn Pn 23 32 36.9 +0.2
AC01 Sn Sn 23 33 15.8 -1.5
AC01 Pan de Azucar 3.43 309 *eP* Pn 23 32 36.8 0.0
AC01 Pan de Azucar 3.43 309⇑*iP* Pn 23 32 37.0 +0.2
AC01 *eS* Sn 23 33 15.2 -2.0
CO05 La Serena 3.54 243 Pn P 23 32 37.2 -0.8
CO05 Sn Sn 23 33 17.8 -1.8
CO05 La Serena 3.54 243 *eP* Pn 23 32 37.2 -0.8
CO05 *eS* Sn 23 33 16.9 -2.7
GO02 Mina Guanaco 3.62 330 Pn Pn 23 32 40.6 +1.1
GO02 Mina Guanaco 3.62 330 *eP* Pn 23 32 40.9 +1.3
GO02 Mina Guanaco 3.62 330⇑*iP* Pn 23 32 40.7 +1.2
GO02 *eS* Sn 23 33 22.2 +0.1
CO03 El Pedregal 3.66 226 Pn 23 32 40.0 +0.3
CO03 El Pedregal 3.66 226 *eP* Pn 23 32 40.2 +0.5
CO03 IAML 23 33 34.9
comp=Z,1µm,0.5s
CO03 El Pedregal 3.66 226 *i* P Pn P 23 32 40.0 +0.3
RTLS Leoncito 3.74 202 *eP* Pn 23 32 41.8 +0.7
RTLS IAML 23 33 31.3
comp=Z,3µm,0.3s
TCA Tanti 3.98 139 *eP* Pn 23 32 44.5 +0.5
TCA *eS* Sn 23 33 28.0 -2.3
TCA IAML 23 33 45.9
comp=Z,2µm,0.6s
CO02 Combarbal 4.10 225 Pn Pn 23 32 44.6 -1.0
CO02 Combarbal 4.10 225 *eP* Pn 23 32 45.1 -0.5
CO02 IAML 23 33 36.5
comp=Z,1µm,1.1s
CO02 Combarbal 4.10 225 *eP* Pn 23 32 44.9 -0.7
CO02 *eS* Sn 23 33 32.0 -1.1
CO06 Fray Jorge 4.20 235 Pn 23 32 45.3 -1.6
CO06 Fray Jorge 4.20 235 *eP* Pn 23 32 45.1 -1.8
ASAL Salagasta 4.37 194 *eP* Pn 23 32 49.6 +0.5
ASAL IAML 23 33 42.5
comp=Z,851nm,0.6s
PB14 IPOC Station P 4.46 325 Pn Pn 23 32 51.0 +0.4
PB14 IPOC Station P 4.46 325 *eP* Pn 23 32 51.1 +0.4
PB14 *eS* Sn 23 33 40.3 -1.7
ARCO CERRO ARCO 4.63 194 *eP* Pn 23 32 52.9 +0.2
ARCO IAML 23 34 12.6
comp=Z,2µm,0.6s
VA03 San Esteban 5.08 209 Pn 23 32 57.9 -0.8
VA03 San Esteban 5.08 209 *eP* Pn 23 32 59.0 +0.3
VA06 Catapilco 5.27 216 Pn 23 32 59.3 -1.9
PB15 IPOC Station P 5.37 341 Pn 23 33 02.6 -0.2
AF01 San Pedro de A 5.39 354 Pn 23 33 04.2 +1.2
PEL Peldehue 5.47 208 Pn Pn 23 33 03.5 -0.3
PEL Peldehue 5.47 208 P Pn 23 33 03.6 -0.3
MT16 CCHEN 5.65 205 Pn 23 33 06.8 +0.4
MT05 Renca 5.71 207 Pn 23 33 06.0 -1.0
MT03 Universidad Ad 5.71 205 Pn 23 33 07.3 +0.2
MT02 Curacav 5.76 211 Pn 23 33 05.7 -2.0
VA01 Torpederas 5.82 216 Pn Pn 23 33 06.2 -2.2
LVC Limon Verde 5.82 348 P Pn 23 33 09.4 +0.5
comp=Z,51nm,0.3s,baz=167,slow=9.7,SNR=137
LVC S Sn **23 34 11.7 -3.1**
comp=Z,76nm,0.3s,baz=187,slow=16,SNR=5.2
MT13 San Alfonso 5.85 202 Pn 23 33 08.4 -0.7
PB06 IPOC Station P 5.88 342 Pn 23 33 08.9 -0.6
LMEL Las Melosas 5.92 201 Pn 23 33 10.0 0.0
MT09 Talagante 6.14 207 Pn Pn 23 33 11.2 -1.8
VACA Villa Angela C 6.16 85 *eP* Pn 23 33 11.9 -1.1
BO04 La Punta 6.19 204 Pn 23 33 12.3 -1.2
PB09 IPOC Station P 6.68 347 Pn 23 33 19.6 -0.7
TICA Tres Isletas 6.72 75 *eP* Pn 23 33 20.0 -0.7
BO01 Tunca 6.72 205 Pn Pn 23 33 18.2 -2.4
GO01 Chusmiza 8.75 350 Pn 23 33 46.8 -1.7
ESFA Espinillo Form 8.84 70 *eP* Pn 23 33 48.2 -0.9
PSAL Palomas, Salto 9.12 110 *eP* Pn 23 33 51.8 -1.2
CPUP Villa Florida 9.37 80 Pn 23 33 53.8 -2.4
CPUP Villa Florida 9.37 80 P Pn 23 33 54.4 -1.8
comp=Z,3.1nm,0.3s,baz=263,slow=12,SNR=10
CPUP Villa Florida 9.37 80 *eP* Pn 23 33 54.8 -1.4
ITQB Itaqui 9.72 100 Pn Pn 23 33 59.5 -1.5
ITQB Itaqui 9.72 100 *eP* Pn 23 33 59.4 -1.5
PB16 IPOC Station P 10.11 350 Pn 23 34 05.7 -1.0
TBOT Tacuaremb 10.66 111 *eP* Pn 23 34 12.0 -1.5
TRQA Tornquist 10.78 155 Pn 23 34 12.9 -2.2
TRQA Tornquist 10.78 155 P Pn 23 34 12.9 -2.2
TRQA Tornquist 10.78 155 *eP* Pn 23 34 11.8 -3.3
RODS Rosario do Sul 11.02 103 *eP* Pn 23 34 16.3 -2.1
UNIS Unistalda (Bra 11.04 97 *eP* Pn 23 34 16.9 -1.7
GO06 Curarrehue 11.66 195 Pn Pn 23 34 24.5 -2.3
LPAZ La Paz 12.00 358 Pn Pn 23 34 31.9 0.0
LPAZ La Paz 12.00 358 *eP* Pn 23 34 31.9 0.0
CRSM Crissiumal (Br 12.04 89 *eP* Pn 23 34 30.2 -1.5
ANTJ Antonio Joao (12.26 62 *eP* Pn 23 34 34.0 -0.7
BBRB Robore, Bolivi 12.31 37 *eP* Pn 23 34 33.3 -2.1
CPSB Cacapava Do Su 12.54 103 *eP* Pn 23 34 35.7 -2.5
PLCA Paso Flores 12.60 190 Pn Pn 23 34 37.7 -1.3
PLCA Paso Flores 12.60 190 *eP* Pn 23 34 37.7 -1.3
PLCA Paso Flores 12.60 190 P Pn 23 34 37.2 -1.8
comp=Z,2.2nm,0.8s,baz=4,2,slow=11,SNR=7.9
PLCA Paso Flores 12.60 190 *eP* Pn **23 34 34.9 -4.1**
PLTB Pedras Altas 12.61 109 Pn Pn 23 34 37.0 -2.2
PLTB Pedras Altas 12.61 109 *eP* Pn 23 34 37.1 -2.2
BDQN Bodoquena, MS 12.63 54 *eP* Pn 23 34 39.9 +0.4
ALGR Alto Alegre (B 12.84 96 *eP* Pn 23 34 40.6 -1.6
BBSD Serra de San D 12.84 32 *eP* Pn 23 34 41.1 -1.2
FRBT Francisco Belt 13.17 83 *eP* Pn 23 34 45.9 -0.6
LL03 Petrohue 13.36 196 Pn 23 34 46.6 -2.2
AQDB Aquidauana 13.38 57 Pn 23 34 47.3 -1.9
AQDB Aquidauana 13.38 57 *eP* Pn 23 34 48.6 -0.5
SIV San Ignacio 13.70 28 P Pn **23 34 51.2 -2.1**
comp=Z,14nm,0.9s,baz=220,slow=9.6,SNR=18
ITAB Concordia 13.76 89 Pn 23 34 51.7 -2.3
ITAB Concordia 13.76 89 *eP* Pn 23 34 52.4 -1.6
PTGB Pitanga 14.38 79 *eP* Pn 23 35 01.7 -0.3
LL01 San Ignacio de 14.54 194 Pn 23 35 01.6 -2.1
TRCB Terra Rica 14.60 71 Pn 23 35 02.0 -2.8
TRCB Terra Rica 14.60 71 *eP* Pn 23 35 04.0 -0.8
CNLB Canela 14.73 98 *eP* Pn 23 35 04.8 -1.5
RPRD Ribas do Rio P 14.89 61 *eP* Pn 23 35 08.4 +0.1
PTLB Pontes e Lacer 15.04 33 Pn 23 35 08.6 -1.6
PTLB Pontes e Lacer 15.04 33 *eP* Pn 23 35 09.0 -1.2
LL02 Futaleuf 15.21 192 Pn 23 35 10.8 -1.3
LL07 Hotel Espejo d 15.22 197 Pn Pn 23 35 10.2 -2.0
GO07 Milladeo Hill, 15.53 197 P P 23 35 17.8 +0.2
LDASE Londrina, Braz 15.64 75 *eP* Pn 23 35 16.9 -0.9
PCMB Pacaembu 16.27 69 *eP* Pn 23 35 24.3 -1.2
SALV Santo Antonio 16.57 44 *eP* Pn 23 35 28.1 -1.1
VILB Vilhena 16.80 26 P 23 35 31.5 -0.4
VILB IAmb IAmb 23 35 32.2
comp=Z,49nm,0.8s
VILB Vilhena 16.80 26 *eP* P 23 35 31.5 -0.4
FRTB Fartura 16.99 77 *eP* P 23 35 34.1 +0.1
COYC Coyhaique 17.56 190 P P 23 35 39.6 -0.4
ITRB Iturama 17.94 65 *eP* P 23 35 44.6 +0.1
NNA Nana 18.41 330 Pn P 23 35 50.3 +0.7
NNA Nana 18.41 330⇑*eP* P 23 35 50.1 +0.5
NNA pmax pmax
comp=Z,36nm,1.1s
NNA Nana 18.41 330 P P **23 35 49.9 +0.3**
comp=Z,6.7nm,0.4s,baz=187,slow=12,SNR=2.8
ETMB Extrema 18.47 4 P P 23 35 51.0 +0.8
ETMB IAmb IAmb 23 35 55.4
comp=Z,64nm,0.8s
ETMB Extrema 18.47 4 *eP* Pn 23 35 51.9 0.0
PET01 Itanhaem-SP 18.68 82 *eP* P 23 35 51.9 -0.4
SPB Sao Paulo 18.75 80 *eP* P 23 35 53.6 +0.4
BB19B Bebedouro 18.78 72 *eP* P 23 35 53.6 -0.1
RCLB Rio Claro- Sao 19.07 77 *eP* P 23 35 56.6 -0.2
AY03 Cochrane 19.28 190 P P 23 35 58.3 -0.4
AY03 IAmb IAmb 23 36 01.0
comp=Z,34nm,1.1s
VAO Valinhos 19.35 79 *eP* P 23 35 59.7 -0.1
PDRB Porto dos Gac 19.51 34 *eP* P 23 36 00.7 -0.8
SAML Samuel 19.73 13 P P 23 36 04.0 +0.1
SAML IAmb IAmb 23 36 06.0
comp=Z,68nm,0.8s
SAML Samuel 19.73 13 P P **23 36 04.0 +0.1**
SAML pmax pmax
comp=Z,68nm,0.9s
SAML Samuel 19.73 13 *eP* P **23 36 05.0 +1.1**
PARB Paraibuna 20.41 81 *eP* P 23 36 10.5 -0.7
GO08 Villa O'Higgin 20.46 189 P P 23 36 11.1 -0.3
GO08 IAmb IAmb 23 36 14.5
comp=Z,44nm,0.8s
IPMB Ipameri, GO 20.58 64 *eP* P 23 36 12.2 -0.9
CZSB Cruzeiro do Su 21.05 346 P P 23 36 18.5 +0.4
CZSB Cruzeiro do Su 21.05 346 *eP* P 23 36 19.3 +1.2
PMNB Patos De Minas 21.71 68 *eP* P 23 36 25.1 -0.2
BSCB Bom Sucesso 21.99 76 *eP* P 23 36 27.5 -0.6
BDFB Brasilia 22.10 59 P P 23 36 26.4 -2.9
BDFB Brasilia 22.10 59 P P 23 36 27.9 -1.3
comp=Z,2.2nm,0.3s,baz=254,slow=8.3,SNR=7.0
BDFB LR LR 23 46 49.4
comp=Z,117nm,20.4s,baz=163,slow=41
comp=Z,2.2nm,0.3s
VAS01 Vassouras-RJ 22.65 80 *eP* P 23 36 34.5 -0.2
GO09 Cerro Castillo 23.18 188 P P 23 36 40.2 +0.9
GO09 IAmb IAmb 23 36 42.3
comp=Z,44nm,1.1s
MG05 Puerto Natales 23.60 188 P P 23 36 41.6 -1.4
MG05 IAmb IAmb 23 36 51.2
comp=Z,38nm,1.1s
DIAM Diamantina, MG 24.11 71 *eP* P 23 36 49.6 +1.4
TBTG Tabatinga, AM 24.12 354 P P 23 36 48.4 +0.3
TBTG Tabatinga, AM 24.12 354 *eP* P 23 36 49.2 +1.1
NPGB Novo Progresso 24.15 31 *eP* P 23 36 47.1 -1.2
EFI East Falkland 24.39 166 P P 23 36 48.9 -1.3
EFI East Falkland 24.39 166 P P 23 36 48.9 -1.3
EFI pmax pmax
comp=Z,101nm,0.8s
MG02 Cerro Sombrero 24.45 182 P P 23 36 51.9 +1.2
TEFE Tefe 24.86 7 *eP* P 23 36 55.8 +1.0
GO10 Punta Arenas 24.92 185 P P 23 36 56.4 +1.3
GO10 IAmb IAmb 23 37 01.9
comp=Z,72nm,0.8s
JANB Januaria 25.31 63 *eP* P 23 36 58.0 -1.0
MG03 Isla Dawson 25.57 184 P P 23 37 01.4 +0.5
MACA Manacapuru-AM 25.89 16 P P 23 37 05.1 +1.0
MACA Manacapuru-AM 25.89 16 *eP* P 23 37 04.9 +0.7
SJMB Sao Joao De Ma 26.02 74 *eP* P 23 37 05.2 -0.1
ITTB Itaituba 26.38 28 *eP* P 23 37 08.3 -0.3
SDBA SAO DESIDERIO 26.47 58 *eP* P 23 37 08.3 -1.2
MCRA Macar, Loja 26.57 332 P P 23 37 11.5 +1.2
SMTB Santa Maria do 27.04 48 *eP* P 23 37 13.5 -1.0
COHC Cochancay 28.02 335 pP pP 23 37 49.8 -3.0
GUA01 Guaratinga, BA 28.17 71 *eP* P 23 37 24.3 -0.2
CHSH Refugio Sur-Vo 28.78 336 IAmb IAmb 23 37 38.1
comp=Z,14nm,0.7s
MALB Monte Alegre 29.26 28 *eP* P 23 37 33.8 -0.4
OTAV Otavalo 30.25 338 P P 23 37 45.8 +2.3
OTAV Otavalo 30.25 338 *eP* P 23 37 45.8 +2.3
BOAV Boa Vista 31.31 14 P P 23 37 51.7 -0.5
BOAV IAmb IAmb 23 37 53.9
comp=Z,26nm,0.8s
BOAV Boa Vista 31.31 14 *eP* P 23 37 52.6 +0.4
MCPB Macapa, AP 31.56 31 *eP* P 23 37 54.9 +0.4
POPC Popayan, Colom 31.91 343 *eP* P 23 38 00.2 +2.4
ORTC Ortega, Tolima 32.89 346 *eP* P 23 38 06.0 -0.1
YOTC Yotoco, Valle 33.21 344 *eP* P 23 38 10.2 +1.1
PLMC San Jos del P 34.09 344 *eP* P 23 38 16.4 -0.2
GUY2C Guyana, Caldas 34.19 346 *eP* P 23 38 18.5 +0.6
SPBC San Pablo de B 34.36 349 *eP* P 23 38 18.6 -0.3
HOPE Hope Point 34.42 148 P P 23 38 19.6 +0.7
HOPE IAmb IAmb 23 38 25.9
comp=Z,27nm,1.1s
HOPE Hope Point 34.42 148 *eP* P 23 38 19.6 +0.7
HOPE Hope Point 34.42 148 P P 23 38 20.3 +1.4
NORC Norcasia 34.42 347 *eP* P 23 38 19.2 -0.2
RUSC La Rusia 34.44 350 *eP* P 23 38 20.1 +0.1
TAMC Tame, Arauca 34.80 353 *eP* P 23 38 21.0 -1.6
CBOC Ciudad Bolivar 34.95 345 *eP* P 23 38 25.1 +1.0
BARC Barichara 35.14 350 *eP* P 23 38 26.0 +0.2
HELC Santa Helena 35.16 346 *eP* P 23 38 25.9 -0.2
PTBC PUERTO BERRIO, 35.30 348 *eP* P 23 38 24.1 -2.7
PAMC Pamplona, Colo 35.81 351 *eP* P 23 38 30.0 -1.7
DBBC Dabeiba 36.11 345 *eP* P 23 38 34.8 +0.9
MDP Montagnes des 36.24 26 LR LR 23 53 48.4
comp=Z,72nm,19.6s,baz=128,slow=37
MPGF Montagnes des 36.25 26 P P 23 38 34.7 -0.3
UREC San Jos de Ur 36.68 347 *eP* P 23 38 37.6 -1.0
OCAC Ocana 36.78 351 *eP* P 23 38 37.6 -2.0
APAC Apartado, Choc 37.05 345 *eP* P 23 38 44.4 +2.6
BAUV El Baul 37.06 359 P P 23 38 41.3 -0.5
SDV Santo Domingo 37.12 355 P P 23 38 42.0 -0.6
SDV Santo Domingo 37.12 355 *eP* P 23 38 41.9 -0.6
SDV Santo Domingo 37.12 355 *eP* P 23 38 41.4 -1.2
ARGC Ariguani, Magd 38.51 349 *eP* P 23 38 53.8 -0.2
SJCC San Jacinto, C 38.71 348 *eP* P 23 38 55.6 -0.1
BCIP Isla Barro Col 39.11 341 P P 23 39 00.9 +1.9
BCIP IAmb IAmb 23 39 01.7
comp=Z,32nm,0.8s
BCIP Isla Barro Col 39.11 341 P P **23 39 00.9 +1.9**
BCIP pmax pmax
comp=Z,32nm,0.8s
BRU2 Volcan 39.68 336 P P 23 39 06.5 +2.5
BRU2 IAmb IAmb 23 39 07.8
comp=Z,26nm,0.7s
DRK0 Durika 40.32 336 P P 23 39 11.8 +2.6
RIMA Rio Macho 41.01 335 P P 23 39 15.3 +0.4
LCR2 La Lucha 2 41.04 335 P P 23 39 15.6 +0.4
LCR2 IAmb IAmb 23 39 18.7
comp=Z,18nm,1.1s
SOCE Pocosol 41.86 334 P P 23 39 24.1 +2.4
SOCE IAmb IAmb 23 39 25.6
comp=Z,50nm,0.9s
JTS Las Juntas de 41.90 334 P P 23 39 23.0 +1.0
JTS IAmb IAmb 23 39 25.0
comp=Z,10nm,0.7s
JTS Las Juntas de 41.90 334‖*eP* P 23 39 22.9 +0.9
JTS Las Juntas de 41.90 334 P P 23 39 24.1 +2.2
comp=Z,8.1nm,0.6s,baz=149,slow=7.0,SNR=4.9
comp=Z,8.1nm,0.6s
JTS Las Juntas de 41.90 334 *eP* P 23 39 24.2 +2.2
JTS Las Juntas de 41.90 334 P P 23 39 24.2 +2.2
BIM Bigot 43.07 9 P P 23 39 31.0 -0.4
FDF Fort de France 43.27 9 P P 23 39 31.6 -1.4
FDF Fort de France 43.27 9 P P 23 39 31.6 -1.4
FDF pmax pmax
comp=Z,65nm,0.8s
MLPR Magueyes Islan 46.04 1 P P 23 39 53.8 -1.0
OBIP Obispado Ponce 46.12 1 P P 23 39 53.9 -1.6
OBIP IAmb IAmb 23 39 55.0
comp=Z,32nm,0.8s
CELP Cerrillos 46.15 1 P P 23 39 54.0 -1.7
TGUH Tegucigalpa,Un 46.24 333 P P 23 39 58.0 +1.3
MTO3 Montecristo 47.41 331 P P 23 40 07.1 +1.2
MTO3 IAmb IAmb 23 40 08.3
comp=Z,42nm,1.1s
ESQI Esquipulas 47.55 331 P P 23 40 07.7 +0.8
PETF Flores 49.88 332 P P 23 40 25.6 +1.2
CCIG Comitan 50.31 329 P P 23 40 27.0 -0.9
CCIG IAmb IAmb 23 40 30.5
comp=Z,22nm,1.1s
BELA Belgrano 2 51.84 172 P P 23 40 38.7 +0.2
TEIG Tepich 52.24 335 P P 23 40 41.9 -0.2
TEIG Tepich 52.24 335 P P 23 40 42.5 +0.4
CMIG Matias Romero 52.30 326 P P 23 40 43.3 +0.7
comp=Z,7.7nm,0.9s,baz=125,slow=2.6,SNR=12
CMIG LR LR 00 00 29.4
comp=Z,35nm,18.2s,baz=87,slow=33
comp=Z,7.7nm,0.9s
SOR Soroa 52.95 342 P P 23 40 47.5 +0.2
SOR Soroa 52.95 342 P P 23 40 47.5 +0.2
SOR pmax pmax
comp=Z,35nm,0.8s
VNA3 Neumayer Olymp 53.26 160⇑P P **23 40 49.7 +0.7**
comp=Z,20nm,0.7s
VNA2 Neumayer--Watz 53.85 159⇑P P 23 40 51.7 -1.6
comp=Z,23nm,0.8s,baz=284,slow=7.5
TLIG Tlapa 54.58 323 P P 23 41 00.7 +1.3
TLIG IAmb IAmb 23 41 02.3
comp=Z,16nm,0.8s
SNAA Sanae 55.48 160 P P 23 41 04.9 -0.1
SNAA IAmb IAmb 23 41 06.3
comp=Z,17nm,0.7s
SNAA Sanae 55.48 160⇑P P 23 41 05.4 +0.4
comp=Z,377nm,0.7s
SNAA Sanae 55.48 160*c iP* P 23 41 05.0 -0.1
SNAA pmax pmax
comp=Z,22nm,1.0s
SNAA Sanae 55.48 160 P P **23 41 05.3 +0.2**
comp=Z,18nm,0.8s,baz=286,slow=6.6,SNR=18
SNAA LR LR 00 02 34.2
comp=Z,59nm,19.2s,baz=50,slow=33
comp=Z,18nm,0.8s
TROLL Troll, Antarti 57.19 160⇑P P **23 41 18.3 +0.9**
comp=Z,375nm,0.3s
NVL N'lazarevskaya 60.07 158 *eP* P **23 41 33.7 -3.3**
NVL pmax pmax
comp=Z,34nm,1.5s
ZAIG Zacatecas 60.98 323 P P **23 41 46.0 +1.8**
ZAIG IAmb IAmb 23 41 48.0
comp=Z,13nm,0.9s
TIGA Tifton 61.36 344 P P **23 41 46.4 +0.2**
baz=164
352A Blakely 61.73 343 P P **23 41 48.9 +0.2**
QSPA South Pole Qui 61.88 180 P P **23 41 50.1 +0.5**
QSPA IAmb IAmb 23 41 51.3
comp=Z,6.4nm,0.7s
QSPA South Pole Qui 61.88 180 P P **23 41 50.4 +0.9**
comp=Z,4.9nm,0.5s,baz=200,slow=0.4,SNR=47
comp=Z,4.9nm,0.5s
QSPA South Pole Qui 61.88 180 P P **23 41 50.8 +1.2**
QSPA pP pP **23 42 22.8 +0.6**
QSPA sP sP **23 42 36.2 -0.7**
BRAL Brewton 62.01 341 P P **23 41 50.9 +0.4**
baz=161
NHSC New Hope 62.26 348 P P **23 41 51.4 -0.8**
NHSC New Hope 62.26 348 P P **23 41 52.2 0.0**
baz=167
154A Montrose 62.38 345 P P **23 41 52.3 -0.7**
152A Waverly Hall 62.81 344 P P **23 41 55.9 0.0**
152A IAmb IAmb 23 41 56.8
comp=Z,22nm,1.1s
Y60A Bolivia 62.81 350 P P **23 41 56.0 +0.2**
Y58A Scranton 62.95 349 P P **23 41 57.5 +0.7**
Y57A Sumter 63.19 348 P P **23 41 57.6 -0.8**
GOGA Godfrey 63.23 345 P P **23 41 58.5 -0.1**
GOGA IAmb IAmb 23 41 59.6
comp=Z,11nm,0.9s
GOGA Godfrey 63.23 345 P P **23 41 58.1 -0.5**
baz=164
GOGA Godfrey 63.23 345 P P **23 41 58.5 -0.1**
GOGA pmax pmax
comp=Z,11nm,0.9s
X58A Rowland 63.53 349 P P **23 42 01.1 +0.6**
JSC Jenkinsville 63.60 347 P P **23 42 01.3 +0.2**
JSC IAmb IAmb 23 42 02.6
comp=Z,22nm,1.0s
JSC Jenkinsville 63.60 347 P P **23 42 01.3 +0.2**
JSC pmax pmax
comp=Z,22nm,1.0s
LRAL Lakeview Retre 63.75 342 P P **23 42 01.8 -0.3**
LRAL IAmb IAmb 23 42 02.5
comp=Z,14nm,1.1s
LRAL Lakeview Retre 63.75 342 P P **23 42 01.6 -0.5**
baz=161
HODGE Hodges 63.76 346 P P **23 42 02.4 +0.3**
HODGE IAmb IAmb 23 42 03.5
comp=Z,12nm,0.9s
Y52A Lilburn 63.80 345 P P **23 42 02.5 +0.2**
Y52A IAmb IAmb 23 42 03.5
comp=Z,23nm,0.9s
BIRD Birdtown, Kers 63.81 348 P P **23 42 02.8 +0.4**
BIRD IAmb IAmb 23 42 03.7
comp=Z,17nm,0.7s
HKT Hockley 63.92 333 P P **23 42 03.5 +0.3**
HKT Hockley 63.92 333 P P **23 42 03.5 +0.3**
HKT pmax pmax
comp=Z,8.0nm,0.9s
146A Union 63.97 340 P P **23 42 04.3 +0.8**
146A IAmb IAmb 23 42 04.5
comp=Z,20nm,0.9s
833A Chaparral WMA, 64.04 329 P P **23 42 05.2 +1.1**
833A Chaparral WMA, 64.04 329 P P **23 42 05.0 +0.9**
baz=149,SNR=7.8
VBMS Vicksburg 64.04 338 P P **23 42 05.6 +1.7**
VBMS IAmb IAmb 23 42 06.7
comp=Z,32nm,1.1s
VBMS Vicksburg 64.04 338 P P **23 42 04.5 +0.6**
baz=158
Z47A Carrollton 64.20 341 P P **23 42 04.6 -0.4**
Z47A IAmb IAmb 23 42 06.1
comp=Z,24nm,1.1s
W57A Gilead 64.22 349 P P **23 42 05.3 +0.2**
W57A IAmb IAmb 23 42 06.7
comp=Z,25nm,0.8s
PAULI Pauline 64.23 347 P P **23 42 05.4 +0.2**
PAULI IAmb IAmb 23 42 06.8
comp=Z,28nm,1.2s
Y49A Blount Mountai 64.37 343 P P **23 42 06.2 0.0**
Y49A IAmb IAmb 23 42 07.1
comp=Z,17nm,0.9s
KMSC Kings Mountain 64.45 348 P P **23 42 07.4 +0.7**
KMSC IAmb IAmb 23 42 08.2
comp=Z,22nm,0.9s
KMSC Kings Mountain 64.45 348 P P **23 42 07.8 +1.1**
baz=166
HNVL Huntsville, TX 64.49 334 P P **23 42 07.9 +1.0**
HNVL IAmb IAmb 23 42 09.1
comp=Z,17nm,0.8s
BG3 Lake Jocassee 64.63 346 P P **23 42 08.4 +0.6**
BG3 IAmb IAmb 23 42 08.8
comp=Z,15nm,0.7s
X51A Calhoun 64.65 344 P P **23 42 08.4 +0.5**
V58A Windy Hill, Pi 64.70 350 P P **23 42 08.5 +0.3**
V58A IAmb IAmb 23 42 09.8
comp=Z,24nm,0.9s
143A Socs Landing, 64.78 338 P P **23 42 10.3 +1.5**
FPAL Fort Paine 64.81 344 P P **23 42 09.1 0.0**
FPAL IAmb IAmb 23 42 10.0
comp=Z,19nm,0.8s
W52A Murphy 64.94 345 P P **23 42 10.2 +0.3**
W52A IAmb IAmb 23 42 10.7
comp=Z,14nm,0.8s
HNDO Hondo 65.02 330 P P **23 42 11.2 +0.8**
U59A Littleton 65.06 351 P P **23 42 10.7 +0.2**
U59A IAmb IAmb 23 42 12.4
comp=Z,18nm,1.1s
NATX Nacogdoches 65.07 335 P P **23 42 11.1 +0.4**
NATX IAmb IAmb 23 42 12.7
comp=Z,22nm,0.8s
NATX Nacogdoches 65.07 335 P P **23 42 11.8 +1.1**
baz=154
X48A Hartselle 65.10 342 P P **23 42 10.8 0.0**
V55A Taylorsville 65.12 348 P P **23 42 11.6 +0.6**
V53A Saluda 65.26 346 P P **23 42 11.8 -0.2**
V53A IAmb IAmb 23 42 13.2
comp=Z,25nm,1.1s
Y45A Yeager Farm, C 65.26 340 P P **23 42 12.3 +0.4**
W50A Signal Mountai 65.37 344 P P **23 42 12.1 -0.6**
435B Jarrell 65.37 332 P P **23 42 13.2 +0.5**
baz=151
CPCT Cooper Cave 65.42 345 P P **23 42 13.2 +0.3**
TKL Tuckaleechee C 65.45 346 P P **23 42 13.1 0.0**
TKL Tuckaleechee C 65.45 346 P P **23 42 13.1 0.0**
comp=Z,22nm,0.8s,baz=160,slow=8.4,SNR=27
TKL LR LR 00 13 11.4
comp=Z,33nm,18.4s,baz=141,slow=38
comp=Z,22nm,0.8s
U56A King 65.45 349 P P **23 42 13.5 +0.4**
SWET Sewanee 65.53 344 P P **23 42 13.6 -0.1**
V52A Sevierville 65.59 346 P P **23 42 14.2 +0.2**
V51A Loudon 65.72 345 P P **23 42 14.7 -0.1**
V51A IAmb IAmb 23 42 15.7
comp=Z,22nm,0.8s
237A Washetta, Mont 65.73 334 P P **23 42 15.6 +0.7**
Z41A Richland Creek 65.75 337 P P **23 42 15.0 -0.1**
Z41A IAmb IAmb 23 42 17.2
comp=Z,16nm,0.7s
OXF Oxford 65.82 340 P P **23 42 15.4 -0.1**
OXF Oxford 65.82 340 P P **23 42 15.3 -0.2**
baz=159,SNR=5.8
OXF Oxford 65.82 340 P P **23 42 15.4 -0.1**
OXF pmax pmax
comp=Z,37nm,1.0s
SLBS Sierra La Lagu 65.87 317 P P **23 42 17.4 +1.3**
PLAL Pickwick Lake 65.88 342 P P **23 42 15.8 -0.1**
PLAL IAmb IAmb 23 42 16.6
comp=Z,17nm,0.9s
U54A Nelsons Funny 65.88 347 P P **23 42 16.2 +0.2**
T57A Hurt 65.90 350 P P **23 42 16.1 +0.2**
T57A IAmb IAmb 23 42 17.8
comp=Z,15nm,0.8s
HPIG 65.98 323 P P **23 42 17.8 +0.9**
HPIG IAmb IAmb 23 42 19.7

	comp=Z,11nm,0.9s						
JCT	**Junction City**	**66.06**	**330**	P	**P**	**23 42 18.4**	**+1.2**
JCT				IAmb	IAmb	23 42 19.2	
	comp=Z,22nm,0.8s						
JCT	**Junction City**	**66.06**	**330**	P	**P**	**23 42 18.2**	**+1.0**
	baz=149						
JCT	**Junction City**	**66.06**	**330**	P	**P**	**23 42 18.4**	**+1.2**
JCT				pmax	pmax		
	comp=Z,22nm,0.8s						
WLAR	**White Oak Lake**	**66.25**	**337**	P	**P**	**23 42 19.6**	**+1.4**
TZTN	**Tazewell**	**66.25**	**346**	P	**P**	**23 42 18.0**	**-0.3**
	baz=165						
V48A	**Smith Brothers**	**66.26**	**343**	P	**P**	**23 42 17.9**	**-0.4**
BLA	**Blacksburg**	**66.30**	**349**	P	**P**	**23 42 18.6**	**+0.1**
	baz=168						
WHTX	**Lake Whitney,**	**66.37**	**333**	P	**P**	**23 42 19.6**	**+0.6**
WHTX				IAmb	IAmb	23 42 20.4	
	comp=Z,14nm,0.8s						
WHTX	**Lake Whitney,**	**66.37**	**333**	P	**P**	**23 42 19.5**	**+0.4**
	baz=151						
BRDY	**Brady**	**66.41**	**331**	P	**P**	**23 42 19.7**	**+0.4**
BRDY				IAmb	IAmb	23 42 20.6	
	comp=Z,16nm,0.7s						
CLTN	**Cedars of Leba**	**66.47**	**344**	P	**P**	**23 42 19.2**	**-0.3**
Z38A	**Mt. Pleasant**	**66.54**	**335**	P	**P**	**23 42 20.7**	**+0.6**
Z38A				IAmb	IAmb	23 42 21.8	
	comp=Z,16nm,0.9s						
S57A	**Dark Hollow, R**	**66.61**	**350**	P	**P**	**23 42 21.2**	**+0.8**
S57A				IAmb	IAmb	23 42 23.3	
	comp=Z,23nm,1.1s						
R58B	**Mineral**	**66.65**	**351**	P	**P**	**23 42 21.3**	**+0.7**
R58B				IAmb	IAmb	23 42 22.5	
	comp=Z,14nm,0.8s						
FW13	**Cleburne**	**66.68**	**333**	P	**P**	**23 42 20.9**	**-0.1**
FW13				IAmb	IAmb	23 42 22.2	
	comp=Z,14nm,0.6s						
SAND	**Sanderson**	**66.68**	**328**	P	**P**	**23 42 21.5**	**+0.3**
SAND				IAmb	IAmb	23 42 23.2	
	comp=Z,16nm,0.7s						
U49A	**Red Boiling Sp**	**66.73**	**344**	P	**P**	**23 42 20.9**	**-0.3**
U49A				IAmb	IAmb	23 42 21.6	
	comp=Z,14nm,0.7s						
CBN	**Corbin Frederi**	**66.82**	**352**	P	**P**	**23 42 21.9**	**+0.1**
CBN				IAmb	IAmb	23 42 23.2	
	comp=Z,13nm,0.8s						
CBN	**Corbin Frederi**	**66.82**	**352**	P	**P**	**23 42 22.5**	**+0.7**
	baz=171						
X40A	**Basin Creek Fa**	**66.88**	**338**	P	**P**	**23 42 22.3**	**+0.1**
WVT	**Waverly**	**66.89**	**342**	P	**P**	**23 42 22.1**	**-0.2**
WVT	**Waverly**	**66.89**	**342**	P	**P**	**23 42 22.4**	**+0.2**
	baz=161						
WVT	**Waverly**	**66.89**	**342**	P	**P**	**23 42 22.1**	**-0.2**
WVT				pmax	pmax		
	comp=Z,75nm,0.8s						
WVT	**Waverly**	**66.89**	**342**	P	**P**	**23 42 22.1**	**-0.2**
TXAR	**Lajitas Array**	**66.91**	**326**	P	**P**	**23 42 23.5**	**+0.9**
TXAR	**Lajitas Array**	**66.91**	**326**	P	**P**	**23 42 23.9**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=154,slow=8.5,SNR=11						
	comp=Z,2.8nm,0.7s						
TX31	**Lajitas Ar. Si**	**66.91**	**326**	P	**P**	**23 42 23.0**	**+0.3**
UALR	**University of**	**66.98**	**338**	P	**P**	**23 42 23.0**	**+0.2**
UALR				IAmb	IAmb	23 42 24.4	
	comp=Z,17nm,0.9s						
T50A	**Nancy**	**67.00**	**345**	P	**P**	**23 42 22.4**	**-0.5**
T50A				IAmb	IAmb	23 42 23.7	
	comp=Z,11nm,0.8s						
S54A	**Dingess, Beckl**	**67.03**	**348**	P	**P**	**23 42 23.2**	**0.0**
S54A				IAmb	IAmb	23 42 24.5	
	comp=Z,21nm,0.8s						
OZNA	**Ozona**	**67.03**	**329**	P	**P**	**23 42 23.9**	**+0.5**
OZNA				IAmb	IAmb	23 42 24.8	
	comp=Z,19nm,0.8s						
MIAR	**Mount Ida**	**67.19**	**337**	P	**P**	**23 42 24.5**	**+0.3**
MIAR				IAmb	IAmb	23 42 26.0	
	comp=Z,14nm,0.9s						
MIAR	**Mount Ida**	**67.19**	**337**	P	**P**	**23 42 25.0**	**+0.8**
	baz=155,SNR=8.4						
MIAR	**Mount Ida**	**67.19**	**337**	P	**P**	**23 42 24.5**	**+0.3**
MIAR				pmax	pmax		
	comp=Z,14nm,1.0s						
R55A	**Marlinton**	**67.30**	**349**	P	**P**	**23 42 25.9**	**+1.0**
R55A				IAmb	IAmb	23 42 27.4	
	comp=Z,29nm,1.1s						
S51A	**Beattyville**	**67.32**	**346**	P	**P**	**23 42 24.4**	**-0.5**
S51A				IAmb	IAmb	23 42 25.5	
	comp=Z,13nm,0.7s						
LNXT	**Lenox**	**67.33**	**341**	P	**P**	**23 42 25.1**	**+0.1**
GNAR	**Gosnell**	**67.35**	**340**	P	**P**	**23 42 25.3**	**+0.1**
UTMT	**University of**	**67.37**	**342**	P	**P**	**23 42 25.8**	**+0.5**
WHAR	**Wooly Hollow**	**67.44**	**338**	P	**P**	**23 42 25.9**	**+0.2**
WHAR				IAmb	IAmb	23 42 27.3	
	comp=Z,14nm,1.0s						
PLPT	**Palo Pinto**	**67.44**	**332**	P	**P**	**23 42 26.4**	**+0.6**
PLPT				IAmb	IAmb	23 42 27.2	
	comp=Z,14nm,0.8s						
PEBM	**Pemiscott Bayo**	**67.44**	**341**	P	**P**	**23 42 25.9**	**+0.2**
Z35A	**Perchaven, San**	**67.47**	**333**	P	**P**	**23 42 27.0**	**+1.0**
T47A	**Sharon Grove**	**67.51**	**343**	P	**P**	**23 42 25.7**	**-0.5**
FW03	**Perrin-Whitt E**	**67.54**	**333**	P	**P**	**23 42 27.1**	**+0.7**
FW03				IAmb	IAmb	23 42 27.9	
	comp=Z,18nm,0.8s						
HICK	**Hickman**	**67.66**	**341**	P	**P**	**23 42 27.3**	**+0.2**
PVMO	**Portageville**	**67.68**	**341**	P	**P**	**23 42 28.1**	**+0.9**
ALPN	**Alpine**	**67.75**	**327**	P	**P**	**23 42 28.4**	**+0.4**
LCAR	**Lake Charles**	**67.79**	**340**	P	**P**	**23 42 28.2**	**+0.2**
ABTX	**Abilene, Hawle**	**67.83**	**331**	P	**P**	**23 42 29.0**	**+0.7**
ABTX				IAmb	IAmb	23 42 29.7	
	comp=Z,15nm,1.1s						
ABTX	**Abilene, Hawle**	**67.83**	**331**	P	**P**	**23 42 29.3**	**+1.0**
	baz=150,SNR=6.3						
X37A	**Clayton**	**67.87**	**335**		**P**	**23 42 29.1**	**+0.6**
X37A				IAmb	IAmb	23 42 30.6	
	comp=Z,28nm,1.1s						
SGCY	**Sterling City**	**67.87**	**330**	P	**P**	**23 42 28.7**	**+0.1**
SGCY				IAmb	IAmb	23 42 31.7	
	comp=Z,9.8nm,0.6s						
PARMO	**Parma**	**67.92**	**341**	P	**P**	**23 42 29.5**	**+0.8**
FCAR	**Ozark Folk Cen**	**67.93**	**339**	P	**P**	**23 42 28.9**	**+0.1**
FCAR				IAmb	IAmb	23 42 30.7	
	comp=Z,14nm,0.8s						
SDMD	**Soldier's Deli**	**67.94**	**352**	P	**P**	**23 42 30.0**	**+1.2**
T45A	**Paducah**	**67.95**	**342**	P	**P**	**23 42 28.9**	**0.0**
LOOK	**Love County**	**68.02**	**334**		**P**	**23 42 30.2**	**+0.7**
LOOK				IAmb	IAmb	23 42 32.0	
	comp=Z,28nm,1.0s						
R50A	**Paris**	**68.09**	**346**	P	**P**	**23 42 28.8**	**-1.0**
R50A				IAmb	IAmb	23 42 30.3	
	comp=Z,12nm,0.8s						
Q54A	**Coxs Mills**	**68.10**	**349**	P	**P**	**23 42 29.5**	**-0.3**
Q54A				IAmb	IAmb	23 42 30.6	
	comp=Z,12nm,0.8s						
MNHN	**Monahans**	**68.14**	**328**	P	**P**	**23 42 31.1**	**+0.8**
MNHN				IAmb	IAmb	23 42 32.4	
	comp=Z,22nm,0.8s						
P57A	**Homestead Farm**	**68.16**	**351**	P	**P**	**23 42 31.7**	**+1.5**
PBMO	**Poplar Bluff**	**68.23**	**340**	P	**P**	**23 42 30.5**	**-0.1**
SSFO	**Shawnee State**	**68.26**	**347**	P	**P**	**23 42 30.7**	**-0.1**
R49A	**Shelbyville**	**68.29**	**345**	P	**P**	**23 42 30.7**	**-0.3**
R49A				IAmb	IAmb	23 42 31.7	
	comp=Z,16nm,0.9s						
WUPA	**West Chester U**	**68.33**	**353**	P	**P**	**23 42 32.0**	**+0.8**
WTFS	**Witchita Falls**	**68.33**	**333**		**P**	**23 42 32.3**	**+0.9**
WTFS				IAmb	IAmb	23 42 32.7	
	comp=Z,18nm,0.8s						
Q52A	**Bidwell**	**68.33**	**348**	P	**P**	**23 42 31.3**	**+0.1**
Q52A				IAmb	IAmb	23 42 32.5	
	comp=Z,15nm,0.8s						
MVL	**Millersville**	**68.47**	**353**	P	**P**	**23 42 32.3**	**+0.3**
MVL				IAmb	IAmb	23 42 34.5	
	comp=Z,21nm,1.0s						
WCI	**Wyandotte Cave**	**68.49**	**344**	P	**P**	**23 42 31.6**	**-0.6**
WCI				IAmb	IAmb	23 42 32.8	
	comp=Z,19nm,0.8s						
WCI	**Wyandotte Cave**	**68.49**	**344**	P	**P**	**23 42 31.9**	**-0.3**
	baz=162						
WCI	**Wyandotte Cave**	**68.49**	**344**	P	**P**	**23 42 31.6**	**-0.6**
WCI				pmax	pmax		
	comp=Z,19nm,0.9s						
WCI	**Wyandotte Cave**	**68.49**	**344**	P	**P**	**23 42 31.7**	**-0.6**
CGM3	**Cape Girardeau**	**68.49**	**341**	P	**P**	**23 42 32.3**	**0.0**
CGM3				IAmb	IAmb	23 42 32.8	
	comp=Z,19nm,0.6s						
USIN	**University of**	**68.58**	**343**	P	**P**	**23 42 31.6**	**-1.2**
USIN				IAmb	IAmb	23 42 33.3	
	comp=Z,24nm,1.1s						
SN05	**Snyder 5**	**68.59**	**330**	P	**P**	**23 42 33.6**	**+0.5**
SN05				IAmb	IAmb	23 42 34.3	
	comp=Z,14nm,0.9s						
MCWV	**Mont Chateau**	**68.60**	**350**	P	**P**	**23 42 33.1**	**+0.2**
MCWV				IAmb	IAmb	23 42 34.6	
	comp=Z,17nm,0.8s						
MCWV	**Mont Chateau**	**68.60**	**350**	P	**P**	**23 42 34.1**	**+1.2**
	baz=168						
Q51A	**Peebles**	**68.61**	**347**	P	**P**	**23 42 32.5**	**-0.4**
Q51A				IAmb	IAmb	23 42 34.1	
	comp=Z,27nm,1.1s						
APMT	**Aspermont**	**68.64**	**331**	P	**P**	**23 42 33.9**	**+0.6**
APMT				IAmb	IAmb	23 42 35.2	
	comp=Z,18nm,0.9s						
P53A	**Whipple**	**68.69**	**349**	P	**P**	**23 42 33.7**	**+0.3**
P53A				IAmb	IAmb	23 42 35.1	
	comp=Z,40nm,1.1s						
PECS	**Pecos**	**68.69**	**327**	P	**P**	**23 42 35.4**	**+1.6**
ODSA	**Odessa**	**68.69**	**329**	P	**P**	**23 42 34.5**	**+0.8**
ODSA				IAmb	IAmb	23 42 35.5	
	comp=Z,30nm,0.9s						
S44A	**Carbondale**	**68.75**	**342**	P	**P**	**23 42 34.2**	**+0.3**
VHRN	**Van Horn**	**68.75**	**326**	P	**P**	**23 42 35.2**	**+1.0**
SIUC	**Southern Illin**	**68.76**	**342**	P	**P**	**23 42 33.5**	**-0.4**
SN07	**Snyder 07**	**68.77**	**330**	P	**P**	**23 42 34.7**	**+0.6**
SN07				IAmb	IAmb	23 42 35.8	
	comp=Z,12nm,0.8s						
X34A	**Smith Ranch, M**	**68.81**	**334**		**P**	**23 42 34.7**	**+0.3**
HHAR	**Hobbs**	**68.89**	**337**	P	**P**	**23 42 34.9**	**+0.1**
HHAR				IAmb	IAmb	23 42 35.9	
	comp=Z,14nm,0.9s						
W35A	**Tecumseh**	**68.93**	**335**		**P**	**23 42 34.8**	**-0.3**
W35A				IAmb	IAmb	23 42 35.5	
	comp=Z,9.8nm,0.6s						
P52A	**Corning**	**68.96**	**348**	P	**P**	**23 42 35.1**	**0.0**
P52A				IAmb	IAmb	23 42 36.2	
	comp=Z,26nm,0.9s						
P52A	**Corning**	**68.96**	**348**	P	**P**	**23 42 35.2**	**0.0**
	baz=166						
LUPA	**Lehigh Univers**	**68.96**	**354**	P	**P**	**23 42 35.5**	**+0.4**
LUPA				IAmb	IAmb	23 42 37.5	
	comp=Z,14nm,0.8s						
BRNJ	**Basking Ridge**	**68.97**	**354**	P	**P**	**23 42 36.4**	**+1.2**
BRNJ				IAmb	IAmb	23 42 37.6	
	comp=Z,32nm,0.9s						
P51A	**Williamsport**	**68.99**	**347**	P	**P**	**23 42 34.7**	**-0.6**
P51A				IAmb	IAmb	23 42 36.3	
	comp=Z,29nm,1.1s						
POST	**Post**	**69.02**	**330**	P	**P**	**23 42 36.0**	**+0.2**
MGMO	**Mountain Grove**	**69.14**	**339**	P	**P**	**23 42 36.5**	**+0.2**
RLO	**Rose Lookout**	**69.16**	**337**		**P**	**23 42 36.5**	**+0.1**
RLO				IAmb	IAmb	23 42 37.6	
	comp=Z,19nm,0.7s						
U38A	**Gravette**	**69.18**	**337**	P	**P**	**23 42 36.8**	**+0.2**
U38A				IAmb	IAmb	23 42 37.6	
	comp=Z,14nm,0.7s						
O54A	**Avella**	**69.19**	**350**	P	**P**	**23 42 36.8**	**+0.2**
O54A				IAmb	IAmb	23 42 38.0	
	comp=Z,15nm,1.1s						
TUL3	**Leonard**	**69.20**	**336**	P	**P**	**23 42 37.1**	**+0.3**
TUL3				IAmb	IAmb	23 42 38.3	
	comp=Z,30nm,0.8s						
TUL3	**Leonard**	**69.20**	**336**	P	**P**	**23 42 37.0**	**+0.3**
	baz=154,SNR=7.7						
FNO	**Franklin**	**69.22**	**334**	P	**P**	**23 42 36.9**	**+0.1**
FNO				IAmb	IAmb	23 42 37.8	
	comp=Z,13nm,0.6s						
PAL	**Palisades**	**69.24**	**355**	P	**P**	**23 42 37.2**	**+0.4**
	baz=174						
DKNS	**Dickens**	**69.28**	**331**	P	**P**	**23 42 37.7**	**+0.4**
SSPA	**Standing Stone**	**69.28**	**352**	P	**P**	**23 42 37.9**	**+0.8**
SSPA				IAmb	IAmb	23 42 39.2	
	comp=Z,20nm,1.1s						
SSPA	**Standing Stone**	**69.28**	**352**	P	**P**	**23 42 38.3**	**+1.2**
	baz=170						
SSPA	**Standing Stone**	**69.28**	**352**	P	**P**	**23 42 38.1**	**+1.0**
WMOK	**Wichita Mounta**	**69.31**	**333**		**P**	**23 42 37.5**	**+0.1**
WMOK	**Wichita Mounta**	**69.31**	**333**	P	**P**	**23 42 37.5**	**+0.1**
	baz=151,SNR=7.2						
WMOK	**Wichita Mounta**	**69.31**	**333**	P	**P**	**23 42 37.5**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
N58A	**Sunbury**	**69.34**	**353**	P	**P**	**23 42 37.6**	**+0.1**
N58A				IAmb	IAmb	23 42 39.8	
	comp=Z,27nm,1.0s						
FVM	**French Village**	**69.35**	**341**	P	**P**	**23 42 37.9**	**+0.3**
FVM	**French Village**	**69.35**	**341**	P	**P**	**23 42 37.9**	**+0.3**
FVM				pmax	pmax		
	comp=Z,63nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**69.36**	**334**	P	**P**	**23 42 38.1**	**+0.3**
ODNJ	**Ogdensburg**	**69.37**	**354**	P	**P**	**23 42 38.6**	**+1.0**
ODNJ				IAmb	IAmb	23 42 39.9	
	comp=Z,12nm,0.8s						
O52A	**Adamsville**	**69.38**	**348**	P	**P**	**23 42 37.7**	**0.0**
O52A				IAmb	IAmb	23 42 38.9	
	comp=Z,19nm,0.8s						
P49A	**Miami Univ. Ec**	**69.38**	**346**	P	**P**	**23 42 37.0**	**-0.7**
P49A				IAmb	IAmb	23 42 38.4	
	comp=Z,20nm,0.9s						
P49A	**Miami Univ. Ec**	**69.38**	**346**	P	**P**	**23 42 37.3**	**-0.4**
	baz=164						
O53A	**New Philadelph**	**69.40**	**349**	P	**P**	**23 42 38.3**	**+0.5**
O53A	**New Philadelph**	**69.40**	**349**	P	**P**	**23 42 38.3**	**+0.5**
	baz=167						
DEOK	**Depew**	**69.40**	**335**		**P**	**23 42 38.3**	**+0.4**
OLIL	**Olney**	**69.42**	**343**	P	**P**	**23 42 37.2**	**-0.7**
OLIL				IAmb	IAmb	23 42 37.9	
	comp=Z,15nm,0.6s						
BLO	**Bloomington**	**69.44**	**344**	P	**P**	**23 42 37.6**	**-0.5**
BLO				IAmb	IAmb	23 42 38.7	
	comp=Z,22nm,0.8s						
BLO	**Bloomington**	**69.44**	**344**	P	**P**	**23 42 37.6**	**-0.5**
BLO				pmax	pmax		
	comp=Z,22nm,0.8s						
P48A	**Milroy**	**69.46**	**345**	P	**P**	**23 42 37.6**	**-0.6**
P48A				IAmb	IAmb	23 42 38.2	
	comp=Z,13nm,0.5s						
M63A	**Gales Ferry**	**69.51**	**356**	P	**P**	**23 42 39.0**	**+0.6**
M63A				IAmb	IAmb	23 42 55.0	
	comp=Z,22nm,1.1s						
CLN7	**Carlsbad 7**	**69.52**	**328**	P	**P**	**23 42 39.9**	**+1.0**
GDL2	**Guadalupe Moun**	**69.61**	**327**	P	**P**	**23 42 40.0**	**+0.6**
OK052	**Battle Ridge R**	**69.65**	**335**		**P**	**23 42 40.0**	**+0.6**
CCM	**Cathedral Cave**	**69.66**	**340**	P	**P**	**23 42 39.8**	**+0.4**
CCM	**Cathedral Cave**	**69.66**	**340**	P	**P**	**23 42 40.0**	**+0.5**
	baz=158						
CCM	**Cathedral Cave**	**69.66**	**340**	P	**P**	**23 42 39.8**	**+0.4**
CCM				pmax	pmax		
	comp=Z,64nm,0.9s						
CCM	**Cathedral Cave**	**69.66**	**340**	P	**P**	**23 42 40.0**	**+0.5**
MNTX	**Cornudas Mount**	**69.69**	**326**	P	**P**	**23 42 39.8**	**-0.1**
	baz=145,SNR=8.9						
ACSO	**Alum Creek Sta**	**69.70**	**348**	P	**P**	**23 42 39.8**	**+0.1**
ACSO				IAmb	IAmb	23 42 40.8	
	comp=Z,23nm,0.9s						
ACSO	**Alum Creek Sta**	**69.70**	**348**	P	**P**	**23 42 39.8**	**+0.1**
	baz=166						
OK029	**Liberty Lake**	**69.72**	**334**		**P**	**23 42 39.8**	**-0.1**
OK033	**Mehan**	**69.74**	**335**		**P**	**23 42 39.6**	**-0.5**
OK033				IAmb	IAmb	23 42 41.7	
	comp=Z,36nm,1.0s						
DBIC	**Dimbokro**	**69.74**	**70**	P	**P**	**23 42 40.8**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=230,slow=5.7,SNR=5.4						
	comp=Z,1.2nm,0.3s						
DBIC	**Dimbokro**	**69.74**	**70**	P	**P**	**23 42 41.2**	**+0.7**
QUOK	**Quay**	**69.77**	**335**		**P**	**23 42 41.2**	**+1.0**
QUOK				IAmb	IAmb	23 42 41.9	
	comp=Z,33nm,1.1s						
Q44A	**Meyer Farm, Va**	**69.81**	**342**	P	**P**	**23 42 39.5**	**-0.8**
Q44A				IAmb	IAmb	23 42 41.8	
	comp=Z,16nm,0.7s						
M57A	**Sunshine Farm,**	**69.88**	**352**	P	**P**	**23 42 41.1**	**+0.4**
M57A				IAmb	IAmb	23 42 42.5	
	comp=Z,11nm,0.8s						
SLM	**Saint Louis**	**69.90**	**341**	P	**P**	**23 42 41.0**	**+0.1**
SLM	**Saint Louis**	**69.90**	**341**	P	**P**	**23 42 41.0**	**+0.1**
SLM				pmax	pmax		
	comp=Z,23nm,0.6s						
KSCT	**Kent School, K**	**69.92**	**355**	P	**P**	**23 42 41.7**	**+0.7**
O49A	**Covington**	**69.93**	**346**	P	**P**	**23 42 41.0**	**-0.1**
O49A				IAmb	IAmb	23 42 42.1	
	comp=Z,25nm,1.0s						
S39A	**Bolivar**	**69.96**	**339**	P	**P**	**23 42 41.6**	**+0.2**
P46A	**Rosedale**	**70.03**	**344**	P	**P**	**23 42 40.4**	**-1.3**
P46A				IAmb	IAmb	23 42 42.2	
	comp=Z,34nm,0.9s						
CSTR	**Hydro, Custer**	**70.06**	**333**	P	**P**	**23 42 42.1**	**0.0**
OK048	**Pawnee Station**	**70.07**	**335**		**P**	**23 42 42.6**	**+0.6**
OK051	**E0350 and S346**	**70.11**	**335**		**P**	**23 42 42.7**	**+0.4**
O48B	**Farmland**	**70.17**	**346**	P	**P**	**23 42 42.0**	**-0.5**
O48B				IAmb	IAmb	23 42 43.4	
	comp=Z,21nm,0.8s						
O48B	**Farmland**	**70.17**	**346**	P	**P**	**23 42 42.2**	**-0.3**
	baz=164						
R40A	**Maddies Statio**	**70.18**	**340**	P	**P**	**23 42 42.9**	**+0.3**
M55A	**Ridgway**	**70.22**	**351**	P	**P**	**23 42 43.5**	**+0.6**
SMWD	**Samorwood**	**70.22**	**332**	P	**P**	**23 42 43.8**	**+0.7**
SMWD				IAmb	IAmb	23 42 44.9	
	comp=Z,18nm,1.1s						
N51A	**Ashland**	**70.25**	**348**	P	**P**	**23 42 43.1**	**0.0**
MSTX	**Muleshoe**	**70.35**	**329**	P	**P**	**23 42 44.1**	**+0.2**
MSTX				IAmb	IAmb	23 42 45.6	
	comp=Z,27nm,0.8s						
MSTX	**Muleshoe**	**70.35**	**329**	P	**P**	**23 42 44.3**	**+0.3**
	baz=147,SNR=8.9						
T35A	**Sooner Cattle**	**70.36**	**336**	P	**P**	**23 42 44.5**	**+0.7**
T35A				IAmb	IAmb	23 42 45.7	
	comp=Z,25nm,1.1s						
M53A	**WI Miller and**	**70.47**	**350**	P	**P**	**23 42 44.8**	**+0.5**
M53A				IAmb	IAmb	23 42 45.9	
	comp=Z,24nm,1.0s						
M53A	**WI Miller and**	**70.47**	**350**	P	**P**	**23 42 44.5**	**+0.2**
	baz=168						
BLOK	**Blackwell**	**70.48**	**335**		**P**	**23 42 45.3**	**+0.8**
BLOK				IAmb	IAmb	23 42 46.5	
	comp=Z,24nm,0.7s						
HSIG		**70.51**	**320**	P	**P**	**23 42 45.7**	**+0.8**
L59A	**Walton**	**70.51**	**354**	P	**P**	**23 42 45.4**	**+0.7**
L59A				IAmb	IAmb	23 42 47.1	
	comp=Z,22nm,0.8s						
CROK	**Carrier**	**70.54**	**334**		**P**	**23 42 45.2**	**+0.3**
HRV	**Adam Dziewonsk**	**70.58**	**357**	P	**P**	**23 42 45.9**	**+0.9**
	baz=176						
HRV	**Adam Dziewonsk**	**70.58**	**357**	P	**P**	**23 42 46.2**	**+1.2**
L61B	**Northampton**	**70.59**	**356**	P	**P**	**23 42 46.0**	**+1.0**
	baz=175						
ALLY	**Alegheny Colle**	**70.59**	**350**	P	**P**	**23 42 45.3**	**+0.2**
ALLY				IAmb	IAmb	23 42 46.7	
	comp=Z,25nm,0.9s						
N49A	**Columbus Grove**	**70.60**	**347**	P	**P**	**23 42 44.6**	**-0.5**
BINY	**Binghamton**	**70.61**	**353**	P	**P**	**23 42 45.6**	**+0.4**
	baz=172						
AMTX	**Amarillo**	**70.64**	**331**	P	**P**	**23 42 46.0**	**+0.4**
AMTX	**Amarillo**	**70.64**	**331**	P	**P**	**23 42 46.1**	**+0.4**
	baz=148						
P43A	**Skaggs, Pawnee**	**70.64**	**342**	P	**P**	**23 42 45.1**	**-0.3**
M52A	**Chesterland**	**70.68**	**349**	P	**P**	**23 42 46.0**	**+0.4**
M52A				IAmb	IAmb	23 42 47.0	
	comp=Z,22nm,0.9s						
ELIS	**Ellis County**	**70.72**	**333**	P	**P**	**23 42 48.0**	**+2.0**
ELIS				IAmb	IAmb	23 42 48.3	
	comp=Z,35nm,1.0s						
L56A	**Greenwood**	**70.72**	**352**	P	**P**	**23 42 45.7**	**-0.2**
L56A				IAmb	IAmb	23 42 47.9	
	comp=Z,26nm,0.9s						
SFIN	**Lafayette**	**70.72**	**344**	P	**P**	**23 42 45.0**	**-0.9**
	baz=162						
KAN13	**South Haven SW**	**70.80**	**335**	P	**P**	**23 42 46.8**	**+0.3**
OK038	**West end E0370**	**70.81**	**334**		**P**	**23 42 47.1**	**+0.6**
U32A	**Winter Ranch,**	**70.83**	**334**		**P**	**23 42 47.4**	**+0.8**
M50A	**Fremont**	**70.84**	**348**	P	**P**	**23 42 46.5**	**-0.1**
M50A				IAmb	IAmb	23 42 47.7	
	comp=Z,24nm,0.9s						
O44A	**Mansfield**	**70.85**	**343**	P	**P**	**23 42 46.1**	**-0.6**
N47A	**Urbana**	**70.88**	**346**	P	**P**	**23 42 45.8**	**-1.0**
OK032	**Salt Plains WL**	**70.89**	**334**		**P**	**23 42 46.8**	**-0.2**
OK032				IAmb	IAmb	23 42 48.4	
	comp=Z,17nm,0.9s						
KAN14	**Manchester OK**	**70.93**	**335**	P	**P**	**23 42 47.9**	**+0.6**
KAN14				IAmb	IAmb	23 42 49.7	
	comp=Z,24nm,1.0s						
KAN17	**Caldwell West**	**70.93**	**335**	P	**P**	**23 42 47.8**	**+0.5**
KAN17				IAmb	IAmb	23 42 49.2	
	comp=Z,30nm,0.9s						
TRY	**Troy**	**70.94**	**355**	P	**P**	**23 42 48.4**	**+1.3**
TRY				IAmb	IAmb	23 42 50.4	
	comp=Z,17nm,1.0s						
ERPA	**Erie**	**71.03**	**350**	P	**P**	**23 42 48.4**	**+0.7**
ERPA	**Erie**	**71.03**	**350**	P	**P**	**23 42 48.6**	**+0.8**
	baz=168,SNR=7.8						
KAN01	**Argonia South**	**71.03**	**335**	P	**P**	**23 42 48.3**	**+0.5**
WVNY	**West Valley, N**	**71.12**	**351**	P	**P**	**23 42 49.3**	**+1.0**
KAN08	**Anthony NE Sta**	**71.17**	**335**		**P**	**23 42 49.5**	**+0.8**
KAN12	**Harper NE Stat**	**71.25**	**335**	P	**P**	**23 42 49.9**	**+0.8**
KAN12				IAmb	IAmb	23 42 50.7	
	comp=Z,24nm,0.6s						
P40A	**Paris**	**71.25**	**340**	P	**P**	**23 42 49.2**	**+0.1**
319A	**Douglas**	**71.42**	**323**	P	**P**	**23 42 51.3**	**+0.9**
319A				IAmb	IAmb	23 42 53.5	
	comp=Z,30nm,1.1s						
HDIL	**Hopedale**	**71.44**	**343**	P	**P**	**23 42 49.9**	**-0.3**
HDIL	**Hopedale**	**71.44**	**343**	P	**P**	**23 42 50.0**	**-0.3**
	baz=160,SNR=8.5						
121A	**Cookes Peak, D**	**71.56**	**325**	P	**P**	**23 42 52.6**	**+1.2**
121A				IAmb	IAmb	23 42 54.5	
	comp=Z,22nm,1.1s						
121A	**Cookes Peak, D**	**71.56**	**325**	P	**P**	**23 42 53.3**	**+2.0**
	baz=143,SNR=12						
L48A	**N Adams**	**71.64**	**347**	P	**P**	**23 42 51.0**	**-0.4**
L48A				IAmb	IAmb	23 42 52.1	
	comp=Z,17nm,0.8s						
J59A	**Piesco**	**71.73**	**355**	P	**P**	**23 42 52.3**	**+0.3**
J59A				IAmb	IAmb	23 42 54.2	
	comp=Z,16nm,0.9s					

TUC pmax pmax
comp=Z,7.0nm,1.2s
FRNY Flat Rock 73.02 356 IAmb IAmb 23 43 01.5
comp=Z,17nm,0.9s
K43A Burlington 73.22 344 P **P** **23 43 01.0 +0.2**
K43A IAmb IAmb 23 43 02.6
comp=Z,19nm,0.9s
CBKS Cedar Bluff 73.23 334 P **P** **23 43 01.6 +0.6**
CBKS Cedar Bluff 73.23 334 P **P** **23 43 02.1 +1.1**
baz=151
CBKS Cedar Bluff 73.23 334 P **P** **23 43 01.6 +0.6**
CBKS pmax pmax
comp=Z,46nm,1.1s
G62A West of Eustis 73.25 358 P **P** **23 43 00.4 -0.5**
G62A IAmb IAmb 23 43 03.1
comp=Z,17nm,0.8s
PKME Peaks-Kenny Pk 73.27 359 P **P** **23 43 02.7 +1.8**
baz=178
WBO Williamsburg 73.32 354 P **P** **23 43 02.1 +0.9**
WBO IAmb IAmb 23 43 03.1
comp=Z,18nm,0.8s
L40A Anamosa 73.36 342 P **P** **23 43 01.6 0.0**
N35A Tabor 73.59 338 P **P** **23 43 02.6 -0.3**
T25A Trinidad 73.72 330 P **P** **23 43 04.8 +0.6**
T25A IAmb IAmb 23 43 07.0
comp=Z,22nm,1.1s
T25A Trinidad 73.72 330 P **P** **23 43 05.8 +1.7**
baz=147,SNR=12
214A Organ Pipe Nat 73.78 321 P **P** **23 43 05.1 +0.8**
214A IAmb IAmb 23 43 07.6
comp=Z,22nm,1.1s
214A Organ Pipe Nat 73.78 321 P **P** **23 43 06.6 +2.3**
baz=139,SNR=12
SCIA State Center 73.79 340 P **P** **23 43 04.5 +0.4**
SCIA IAmb IAmb 23 43 05.5
comp=Z,27nm,1.1s
SCIA State Center 73.79 340 P **P** **23 43 04.5 +0.4**
baz=157
PIX Pinacate 73.84 320 P **P** **23 43 04.5 -0.1**
LMN Caledonia Moun 73.88 2 P **P** **23 43 05.4 +0.8**
LMN IAmb IAmb 23 43 06.5
comp=Z,21nm,1.0s
JFWS Jewell Farm 73.90 343 P **P** **23 43 04.9 +0.2**
JFWS IAmb IAmb 23 43 05.6
comp=Z,15nm,0.7s
JFWS Jewell Farm 73.90 343 P **P** **23 43 04.8 +0.1**
baz=159
JFWS Jewell Farm 73.90 343 P **P** **23 43 04.9 +0.2**
JFWS pmax pmax
comp=Z,15nm,0.7s
N33A J Bar K, Exete 74.09 337 P **P** **23 43 06.4 +0.5**
X18A Snowflake 74.24 325 P **P** **23 43 08.2 +1.1**
TRQ Mont Tremblant 74.47 355 P **P** **23 43 08.6 +0.5**
TRQ IAmb IAmb 23 43 09.2
comp=Z,14nm,0.7s
I42A Draeger Farm, 74.48 344 P **P** **23 43 08.0 -0.1**
I42A IAmb IAmb 23 43 08.9
comp=Z,14nm,0.7s
KSCO Kaye Shedlock' 74.55 332 P **P** **23 43 10.1 +1.3**
KSCO IAmb IAmb 23 43 11.0
comp=Z,13nm,0.7s
KSCO Kaye Shedlock' 74.55 332 P **P** **23 43 10.0 +1.3**
baz=148
W18A Petrified Fore 74.60 325 P **P** **23 43 11.0 +1.8**
baz=142
E62A Clayton Lake 74.62 359 P **P** **23 43 09.9 +1.1**
E62A IAmb IAmb 23 43 11.4
comp=Z,25nm,0.8s
SDCO Great Sand Dun 74.71 330 P **P** **23 43 10.3 +0.4**
L34A Svendsen Farm, 74.83 338 P **P** **23 43 10.1 0.0**
I40A Norwalk 74.91 343 P **P** **23 43 10.2 -0.3**
I40A IAmb IAmb 23 43 11.2
comp=Z,15nm,1.1s
113A Mohawk Valley, 74.92 321 P **P** **23 43 12.0 +1.2**
X16A Lo Mia Camp, P 74.92 324 P **P** **23 43 12.0 +0.9**
X16A IAmb IAmb 23 43 14.3
comp=Z,16nm,1.1s
BGNE Belgrade 74.93 337 P **P** **23 43 11.0 +0.2**
BGNE Belgrade 74.93 337 P **P** **23 43 11.5 +0.7**
baz=152,SNR=10
PPTF Pamatai, Papee 74.95 258 P **P** **23 43 11.9 +0.3**
PPTF IAmb IAmb 23 43 27.9
comp=Z,33nm,1.0s
D62A Allapoint, All 75.08 359 P **P** **23 43 11.4 +0.1**
D62A IAmb IAmb 23 43 13.7
comp=Z,36nm,0.9s
Y14A Wickenburg 75.39 322 P **P** **23 43 13.8 +0.2**
Q24A Divide 75.57 331 P **P** **23 43 15.9 +1.1**
Q24A IAmb IAmb 23 43 17.5
comp=Z,26nm,0.9s
Q24A Divide 75.57 331 P **P** **23 43 16.6 +1.8**
baz=146,SNR=20
LMQ La Malbaie 75.57 358 P **P** **23 43 14.2 -0.1**
ESJX Sierra Juarez 75.59 319 P **P** **23 43 15.0 +0.1**
MVCO Mesa Verde 75.66 327 P **P** **23 43 16.2 +1.0**
MVCO IAmb IAmb 23 43 18.2
comp=Z,17nm,1.1s
MVCO Mesa Verde 75.66 327 P **P** **23 43 16.8 +1.5**
baz=144,SNR=11
GLA Glamis 75.72 321 P **P** **23 43 16.8 +1.3**
baz=138
WUAZ Wupatki 75.74 324 P **P** **23 43 16.7 +1.0**
WUAZ IAmb IAmb 23 43 19.0
comp=Z,24nm,1.1s
WUAZ Wupatki 75.74 324 P **P** **23 43 18.0 +2.3**
baz=141,SNR=5.7
I37A Lemond, Waseca 75.78 341 P **P** **23 43 15.5 0.0**
E46A Sault Ste Mari 75.88 348 P **P** **23 43 15.8 -0.1**
E46A IAmb IAmb 23 43 16.7
comp=Z,18nm,0.8s
OGNE Ogallala 75.96 334 P **P** **23 43 17.3 +0.6**
OGNE IAmb IAmb 23 43 19.2
comp=Z,15nm,0.8s
OGNE Ogallala 75.96 334 P **P** **23 43 17.9 +1.2**
baz=149
LDAQ Lac Daran 76.02 357 P **P** **23 43 17.3 +0.4**
LDAQ IAmb IAmb 23 43 18.4
comp=Z,17nm,0.8s
YUH Yuha Desert 76.05 320 P **P** **23 43 18.1 +0.9**
BLYC Blythe 76.07 321 P **P** **23 43 18.3 +0.9**
BLYC IAmb IAmb 23 43 20.6
comp=Z,15nm,1.0s
G40A Rib Lake 76.09 344 P **P** **23 43 17.2 0.0**
IKP In-Ko-Pah, Jac 76.15 319 P **P** **23 43 19.9 +1.9**
baz=137
SWSC Sam W. Stewart 76.19 320 P **P** **23 43 20.2 +2.1**
baz=138
PDMCI Parker Dam,Lak 76.28 322 P **P** **23 43 20.6 +2.1**
baz=139
E43A Lone Tree Farm 76.41 346 P **P** **23 43 18.5 -0.5**
E43A IAmb IAmb 23 43 20.0
comp=Z,12nm,0.8s
PV01 Paradox Valley 76.43 328 P **P** **23 43 20.8 +1.2**
ISCO Idaho Springs 76.46 331 P **P** **23 43 20.6 +0.7**
ISCO IAmb IAmb 23 43 22.6
comp=Z,15nm,1.0s
ISCO Idaho Springs 76.46 331 P **P** **23 43 21.2 +1.4**
baz=146,SNR=14
ISCO Idaho Springs 76.46 331 P **P** **23 43 20.6 +0.7**
ISCO pmax pmax
comp=Z,15nm,1.0s
ECSD EROS Data Cent 76.49 339 P **P** **23 43 19.8 +0.3**
ECSD IAmb IAmb 23 43 21.2
comp=Z,28nm,1.1s
BC3 Big Chuckawall 76.52 321 P **P** **23 43 21.4 +1.3**
baz=138,SNR=8.1
SMCO Snowmass 76.54 330 P **P** **23 43 20.5 0.0**
SMCO IAmb IAmb 23 43 23.6
comp=Z,22nm,1.1s
PV15 Paradox Valley 76.56 328 P **P** **23 43 21.8 +1.5**
K30B Basset 76.56 336 P **P** **23 43 20.1 +0.1**
BRIGG Briggsdale 76.57 332 P **P** **23 43 21.7 +1.5**
BRIGG IAmb IAmb 23 43 23.3
comp=Z,29nm,1.0s
PV02 Paradox Valley 76.57 328 P **P** **23 43 21.2 +0.8**
VLDQ Val d'Or 76.61 353 P **P** **23 43 20.4 +0.4**
VLDQ IAmb IAmb 23 43 21.9
comp=Z,18nm,1.2s
COWI Conover 76.62 345 P **P** **23 43 20.4 +0.1**
PV05 Paradox Valley 76.63 328 P **P** **23 43 21.3 +0.5**
PV05 IAmb IAmb 23 43 23.4
comp=Z,19nm,1.0s
PV03 Paradox Valley 76.66 328 P **P** **23 43 21.4 +0.5**
PV18 Skein Mesa, Pa 76.68 328 P **P** **23 43 21.7 +0.7**
PV12 Saucer Basin, 76.69 328 P **P** **23 43 21.9 +0.8**
PV11 David Mesa, Pa 76.70 328 P **P** **23 43 20.8 -0.3**
PV07 Paradox Valley 76.71 328 P **P** **23 43 22.0 +0.8**
IRM Iron Mountain 76.72 321 P **P** **23 43 22.7 +1.5**
baz=138,SNR=5.5
SPMN Marine on St. 76.72 342 P **P** **23 43 20.6 -0.2**
SPMN Marine on St. 76.72 342 P **P** **23 43 20.9 +0.1**
baz=157
W13A Hualapai Mount 76.74 323 P **P** **23 43 22.8 +1.4**
PV19 Morning Glory 76.77 328 P **P** **23 43 21.9 +0.4**
PV20 West Nyswonger 76.78 328 P **P** **23 43 21.9 +0.3**
PV10 Paradox Valley 76.84 328 P **P** **23 43 21.7 -0.3**
PV10 IAmb IAmb 23 43 24.2
comp=Z,17nm,1.0s
PV22 Blue Mesa, Pa 76.85 328 P **P** **23 43 22.8 +0.8**
PV22 IAmb IAmb 23 43 24.7
comp=Z,21nm,1.2s
NEE2 Needles Airpor 76.89 322 P **P** **23 43 23.4 +1.4**
baz=139
U15A North Rim 76.92 324 P **P** **23 43 23.2 +0.7**
U15A IAmb IAmb 23 43 25.9
comp=Z,20nm,1.1s
PV21 Cone Mtn., Par 76.96 328 P **P** **23 43 22.1 -0.5**
PMD Palm Desert 77.04 320 P **P** **23 43 23.9 +1.0**
TPFO Pinon Flats 77.05 320 P **P** **23 43 24.7 +1.6**
baz=137
TSUM Tsumeb 77.05 105 P **P** **23 43 22.9 -0.6**
PFO Pinyon Flats O 77.06 320 P **P** **23 43 23.1 0.0**
PFO Pinyon Flats O 77.06 320 P **P** **23 43 25.3 +2.2**
baz=137
PFO Pinyon Flats O 77.06 320 *de*P **P** **23 43 24.5 +1.4**
PFO pmax pmax
comp=Z,22nm,1.1s
BELC Belle Mtn. Jos 77.08 320 P **P** **23 43 25.2 +1.9**
baz=138
HMU Henry Mountain 77.31 326 P **P** **23 43 24.6 -0.1**
D41A Chassel 77.39 345 P **P** **23 43 24.3 -0.2**
D41A IAmb IAmb 23 43 26.5
comp=Z,27nm,0.8s
MURC Murrieta 77.47 319 P **P** **23 43 27.2 +1.9**
baz=137
GMRC Granite Mounta 77.47 321 P **P** **23 43 26.6 +1.2**
baz=138,SNR=18
F36A Milaca 77.51 342 P **P** **23 43 24.8 -0.4**
F36A IAmb IAmb 23 43 26.2
comp=Z,14nm,0.9s
N23A Red Feather La 77.51 331 P **P** **23 43 26.4 +0.8**
N23A Red Feather La 77.51 331 P **P** **23 43 27.0 +1.3**
baz=146,SNR=7.0
ELS Elsinore Mount 77.64 319 P **P** **23 43 26.9 +0.7**
KNB Kanab 77.64 324 P **P** **23 43 27.5 +1.1**
KNB Kanab 77.64 324 P **P** **23 43 27.5 +1.1**
KNB pmax pmax
comp=Z,43nm,1.0s
PHWY Pilot Hill 77.64 332 P **P** **23 43 27.3 +0.9**
E38A The Farm, Brul 77.67 343 P **P** **23 43 26.1 +0.1**
SOE Somerset East 77.72 121 P **P** **23 43 25.8 -1.2**
V12A Nelson 77.73 322 P **P** **23 43 27.7 +0.9**
DRLN Deer Lake 77.77 7 P **P** **23 43 26.3 -0.2**
DRLN IAmb IAmb 23 43 28.1
comp=Z,25nm,0.7s
SCI2 San Clemente I 77.81 318 P **P** **23 43 29.0 +1.8**
baz=136
HEC Hector,Ludlow 77.88 321 P **P** **23 43 29.8 +2.2**
baz=137,SNR=7.1
SUSD Miller 77.89 338 P **P** **23 43 27.8 +0.4**
SUSD Miller 77.89 338 P **P** **23 43 27.8 +0.4**
baz=152,SNR=5.1
O20A White River Ci 77.89 329 P **P** **23 43 28.9 +1.1**
O20A IAmb IAmb 23 43 30.6
comp=Z,27nm,0.9s
O20A White River Ci 77.89 329 P **P** **23 43 29.3 +1.6**
baz=144,SNR=17
MTPU Mount Pierson 78.11 326 P **P** **23 43 29.1 -0.1**
SRU San Rafael Swe 78.13 327 P **P** **23 43 29.5 +0.4**
SRU IAmb IAmb 23 43 31.5
comp=Z,28nm,1.1s
SRU San Rafael Swe 78.13 327 P **P** **23 43 29.5 +0.4**
SRU pmax pmax
comp=Z,28nm,1.1s
BFSC Mount Baldy Ra 78.20 320 P **P** **23 43 30.7 +1.2**
baz=136
SZCU Shurtz Canyon 78.22 325 P **P** **23 43 30.0 +0.4**
SZCU IAmb IAmb 23 43 32.9
comp=Z,16nm,1.1s
F33A 5 Mile Ranch, 78.29 340 P **P** **23 43 29.3 -0.2**
Q16A Castle Valley 78.29 327 P **P** **23 43 30.8 +0.9**
Q16A IAmb IAmb 23 43 32.9
comp=Z,17nm,1.0s
CCUT Cedar City 78.33 324 P **P** **23 43 31.6 +1.4**
CCUT IAmb IAmb 23 43 33.8
comp=Z,22nm,1.0s
P18A Preston Nutter 78.41 328 P **P** **23 43 31.6 +0.9**
P18A IAmb IAmb 23 43 33.7
comp=Z,28nm,1.1s
PASC Pasadena Art C 78.45 319 P **P** **23 43 31.2 +0.5**
PASC IAmb IAmb 23 43 33.5
comp=Z,27nm,1.1s
MSU Marysvale 78.47 326 P **P** **23 43 32.1 +1.1**
MSU Marysvale 78.47 326 P **P** **23 43 32.1 +1.1**
SHPR Sheep Range 78.48 323 P **P** **23 43 30.7 -0.3**
MVU Marysvale 78.48 326 P **P** **23 43 32.7 +1.6**
GSC Goldstone, Bar 78.49 321 P **P** **23 43 30.5 -0.5**
GSC Goldstone, Bar 78.49 321 P **P** **23 43 32.3 +1.3**
baz=137
GSC Goldstone, Bar 78.49 321 P **P** **23 43 30.5 -0.5**
GSC pmax pmax
comp=Z,6.0nm,0.8s
P17A Butcher Ranch, 78.52 327 P **P** **23 43 32.3 +1.1**
P17A IAmb IAmb 23 43 33.8
comp=Z,25nm,1.0s
TOA0 Torodi Ar. Sit 78.66 68 P **P** **23 43 31.1 -1.1**
TORD Torodi Ar. Bea 78.66 68 P **P** **23 43 31.7 -0.6**
TORD Torodi Ar. Bea 78.66 68 P **P** **23 43 32.9 +0.6**
comp=Z,9.0nm,0.9s,baz=272,slow=4.2,SNR=43
TORD pP **pP** **23 44 04.5 -1.2**
comp=Z,2.5nm,0.7s,baz=278,slow=4.8,SNR=1.9
comp=Z,9.0nm,0.9s
TCRU Three Creeks R 78.68 326 P **P** **23 43 32.8 +0.6**
RWWY Rawlins 78.70 331 P **P** **23 43 32.1 -0.2**
RWWY IAmb IAmb 23 43 33.9
comp=Z,39nm,0.9s
RDMU Red Mountain 78.84 329 P **P** **23 43 33.4 +0.4**
RDMU IAmb IAmb 23 43 35.5
comp=Z,27nm,0.9s
EDW2 Edwards Air Fo 78.85 320 P **P** **23 43 34.4 +1.4**
baz=136
EYMN Ely 78.91 344 P **P** **23 43 32.1 -0.8**
EYMN IAmb IAmb 23 43 34.1
comp=Z,15nm,1.1s
EYMN Ely 78.91 344 P **P** **23 43 33.4 +0.6**
baz=159,SNR=5.5
QSM Queen of Sheba 79.01 321 P **P** **23 43 34.9 +1.2**
GWY Greenwater Val 79.06 322 P **P** **23 43 33.6 -0.5**
K22A Casper 79.20 332 P **P** **23 43 34.5 -0.3**
K22A IAmb IAmb 23 43 37.6
comp=Z,23nm,1.0s
K22A Casper 79.20 332 P **P** **23 43 36.1 +1.3**
baz=146,SNR=9.2
BOSA Boshof 79.28 117 P **P** **23 43 35.5 -0.2**
BOSA Boshof 79.28 117 P **P** **23 43 36.4 +0.7**
comp=Z,5.6nm,0.7s,baz=266,slow=4.8,SNR=17
BOSA pP **pP** **23 44 08.3 -0.9**
comp=Z,6.2nm,0.8s,baz=230,slow=4.3,SNR=4.2
comp=Z,5.6nm,0.7s
BSUT Blindstream Ca 79.37 328 P **P** **23 43 36.6 +0.6**
BSUT IAmb IAmb 23 43 38.9
comp=Z,28nm,1.0s
MPMC Manual Prospec 79.42 321 P **P** **23 43 37.5 +1.3**
baz=137
RSSD Black Hills 79.44 334 P **P** **23 43 37.0 +0.9**
RSSD IAmb IAmb 23 43 38.3
comp=Z,12nm,0.8s
RSSD Black Hills 79.44 334 P **P** **23 43 37.3 +1.2**
baz=148
RSSD Black Hills 79.44 334 P **P** **23 43 37.0 +0.9**
RSSD pmax pmax
comp=Z,12nm,0.8s
WCT Wildcat Mounta 79.48 322 P **P** **23 43 37.0 +0.6**
NLU North Lily Min 79.54 327 P **P** **23 43 37.7 +0.9**
S11A Rachel 79.64 323 P **P** **23 43 37.6 +0.3**
ISA Isabella, Lake 79.68 320 P **P** **23 43 38.8 +1.3**
ISA Isabella, Lake 79.68 320 P **P** **23 43 39.2 +1.8**
baz=136,SNR=5.5
ISA Isabella, Lake 79.68 320 P **P** **23 43 38.8 +1.3**
ISA pmax pmax
comp=Z,10.0nm,1.0s
B35A Bob, Littlefor 79.86 343 P **P** **23 43 37.9 -0.1**
B35A IAmb IAmb 23 43 39.4
comp=Z,21nm,1.0s
PKM Mcpherson Peak 79.90 319 P **P** **23 43 39.5 +0.7**
baz=135
CTU Camp Tracy 79.96 327 P **P** **23 43 38.5 -0.4**
CWC Cottonwood Cre 80.02 321 P **P** **23 43 41.0 +1.7**
baz=136
GRAC Grapevine Rang 80.03 322 P **P** **23 43 40.9 +1.6**
baz=137
R11B Troy Canyon, C 80.08 324 P **P** **23 43 40.9 +1.2**
R11B Troy Canyon, C 80.08 324 P **P** **23 43 41.0 +1.4**
baz=138,SNR=15
DUG Dugway, Tooele 80.08 327 P **P** **23 43 40.7 +1.1**
DUG Dugway, Tooele 80.08 327 P **P** **23 43 41.2 +1.6**
baz=141,SNR=11
DUG Dugway, Tooele 80.08 327 P **P** **23 43 40.7 +1.1**
DUG pmax pmax
comp=Z,9.0nm,0.9s
VES Vestal, Richgr 80.16 320 P **P** **23 43 40.2 +0.3**
baz=136
Q12A Willow Creek R 80.20 325 P **P** **23 43 41.3 +1.0**
SMMC Simmler 80.31 319 P **P** **23 43 40.6 -0.2**
baz=135
E28A Huff 80.35 338 P **P** **23 43 40.7 0.0**
LCH Last Change Ra 80.36 322 P **P** **23 43 41.0 -0.1**
AGMN Agassiz Nation 80.38 341 P **P** **23 43 41.0 +0.1**
AGMN IAmb IAmb 23 43 42.4
comp=Z,15nm,0.9s
AGMN Agassiz Nation 80.38 341 P **P** **23 43 40.9 +0.1**
baz=155,SNR=5.7
HWUT Hardware Ranch 80.58 328 P **P** **23 43 42.8 +0.5**
HWUT IAmb IAmb 23 43 44.5
comp=Z,32nm,0.9s
BW06 Boulder Array 80.60 330 P **P** **23 43 42.5 +0.1**
baz=143,SNR=17
PD31 Pinedale Array 80.60 330 P **P** **23 43 42.9 +0.5**
PDAR Pinedale Array 80.60 330 P **P** **23 43 42.8 +0.5**
PDAR Pinedale Array 80.60 330 P **P** **23 43 43.3 +0.9**
comp=Z,8.1nm,0.7s,baz=126,slow=7.3,SNR=48
comp=Z,8.1nm,0.7s
DSP Deep Springs 80.64 322 P **P** **23 43 43.6 +1.2**
TPH Tonopah 80.74 322 P **P** **23 43 44.0 +0.8**
TPH Tonopah 80.74 322 P **P** **23 43 44.0 +0.8**
TPH pmax pmax
comp=Z,39nm,0.9s
BGU Big Grassy Mou 80.75 327 P **P** **23 43 44.0 +0.9**
SPUT South Promonto 80.77 327 P **P** **23 43 44.2 +0.9**
SPUT IAmb IAmb 23 43 45.6
comp=Z,23nm,0.9s
MDND Maddock 81.11 339 P **P** **23 43 45.0 +0.3**
MDND Maddock 81.11 339 P **P** **23 43 45.5 +0.8**
baz=152,SNR=6.4
LBTB Lobatse 81.16 114 P **P** **23 43 45.8 0.0**
LBTB Lobatse 81.16 114 P **P** **23 43 45.8 0.0**
LBTB pmax pmax
comp=Z,6.0nm,0.8s
AHID Auburn Hatcher 81.28 329 P **P** **23 43 45.9 -0.1**
AHID IAmb IAmb 23 43 48.2
comp=Z,32nm,1.1s
HVU Hansel Valley 81.29 328 P **P** **23 43 46.9 +0.9**
HVU IAmb IAmb 23 43 48.0
comp=Z,17nm,0.8s
HVU Hansel Valley 81.29 328 P **P** **23 43 46.9 +0.9**
PMPB Monarch Peak 81.41 319 P **P** **23 43 47.1 +0.5**
PMPB IAmb IAmb 23 43 53.5
comp=Z,15nm,1.0s
MDPB Devils Postpil 81.44 321 P **P** **23 43 47.8 +0.8**
NV11 Mina Array Sit 81.50 322 P **P** **23 43 47.8 +0.6**
LHV Little Huntoon 81.56 322 P **P** **23 43 48.3 +1.0**
NVAR Mina Array Bea 81.58 322 P **P** **23 43 48.5 +0.8**
NVAR Mina Array Bea 81.58 322 P **P** **23 43 49.1 +1.4**
comp=Z,3.6nm,0.9s,baz=162,slow=6.7,SNR=13
comp=Z,3.6nm,0.8s
REDW Red Top Meadow 81.64 330 P **P** **23 43 47.8 -0.1**
SNOW Snow King Moun 81.68 330 P **P** **23 43 49.1 +0.9**
ELK Elko 81.70 325 P **P** **23 43 49.0 +0.7**
ELK Elko 81.70 325 P **P** **23 43 49.0 +0.7**
ELK pmax pmax
comp=Z,11nm,0.9s
LOHW Long Hollow 81.73 330 P **P** **23 43 48.8 +0.4**
LOHW IAmb IAmb 23 43 50.6
comp=Z,10nm,0.7s
TPAW Teton Pass 81.79 330 P **P** **23 43 48.4 -0.3**
TPAW IAmb IAmb 23 43 50.1
comp=Z,16nm,1.1s
MOOW Moose Ponds 81.90 330 P **P** **23 43 49.3 0.0**
KVN Kaiserville 81.92 323 P **P** **23 43 49.7 +0.3**
KVN Kaiserville 81.92 323 P **P** **23 43 49.7 +0.3**
KVN pmax pmax
comp=Z,12nm,1.1s
FXWY Fox Creek 81.94 330 P **P** **23 43 50.3 +0.8**
FLWY Flagg Ranch 82.15 330 P **P** **23 43 51.4 +0.9**
FLWY IAmb IAmb 23 43 53.1
comp=Z,18nm,0.8s
ULM Lac du Bonnet 82.16 342 P **P** **23 43 49.9 -0.2**
ULM Lac du Bonnet 82.16 342 *le*P **P** **23 43 49.4 -0.7**
ULM Lac du Bonnet 82.16 342 P **P** **23 43 50.4 +0.3**
comp=Z,5.1nm,0.4s,baz=156,slow=6.4,SNR=16
comp=Z,5.1nm,0.4s
WAKR Walker 82.25 322 P **P** **23 43 51.9 +0.7**
H17A Grant Village 82.34 330 P **P** **23 43 50.7 -0.9**
H17A Grant Village 82.34 330 P **P** **23 43 52.4 +0.9**
baz=143
RLMT Red Lodge 82.37 332 P **P** **23 43 51.9 +0.3**
RLMT IAmb IAmb 23 43 53.4
comp=Z,10nm,0.7s
RLMT Red Lodge 82.37 332 P **P** **23 43 53.0 +1.4**
baz=144,SNR=10
LKWY Lake 82.40 331 P **P** **23 43 52.3 +0.4**
LKWY Lake 82.40 331 P **P** **23 43 52.3 +0.4**
LKWY pmax pmax
comp=Z,8.0nm,1.1s
LAO LASA Array 82.43 334 P **P** **23 43 52.3 +0.5**
LAO IAmb IAmb 23 43 53.6
comp=Z,15nm,0.9s
LAO LASA Array 82.43 334 P **P** **23 43 52.8 +1.1**
baz=146,SNR=7.3
YMP Mirror Lake Pl 82.44 331 P **P** **23 43 53.2 +1.0**
YMP IAmb IAmb 23 44 09.5
comp=Z,13nm,0.8s
YERR Yerington 82.49 322 P **P** **23 43 52.9 +0.5**
YFT Old Faithful 82.50 330 P **P** **23 43 52.6 +0.3**
YNR Norris Junctio 82.64 331 P **P** **23 43 53.9 +0.8**
PNTR Pine Nut 82.76 322 P **P** **23 43 54.9 +1.1**
PNTR IAmb IAmb 23 43 56.6
comp=Z,16nm,0.7s
YHH Holmes Hill 82.77 331 P **P** **23 43 55.6 +1.8**
SCHQ Schefferville 82.83 0 P **P** **23 43 53.5 0.0**
SCHQ IAmb IAmb 23 43 55.0
comp=Z,18nm,1.1s
SCHQ Schefferville 82.83 0 P **P** **23 43 53.6 0.0**
comp=Z,7.7nm,0.8s,baz=204,slow=5.1,SNR=10
comp=Z,7.7nm,0.8s
YHL Hebgen Lake 82.97 330 P **P** **23 43 55.4 +0.5**
YHL IAmb IAmb 23 43 57.2
comp=Z,8.4nm,0.7s
QLMT Earthquake Lak 83.06 330 P **P** **23 43 56.5 +1.3**
GCMT Greycliff 83.07 332 P **P** **23 43 55.7 +0.6**
PAHR Pah Rah Range 83.09 322 P **P** **23 43 56.3 +0.9**
PAHR IAmb IAmb 23 43 58.1
comp=Z,15nm,1.0s
DGMT Dagmar 83.19 336 P **P** **23 43 55.9 +0.3**
DGMT Dagmar 83.19 336 P **P** **23 43 56.8 +1.2**
baz=148,SNR=10
AFDM Forest Hills D 83.42 321 P **P** **23 43 57.3 +0.3**
HLID Hailey 83.43 328 P **P** **23 43 58.2 +1.1**
HLID IAmb IAmb 23 43 59.9
comp=Z,19nm,1.1s
HLID Hailey 83.43 328 P **P** **23 43 58.4 +1.3**
baz=140,SNR=25
MCMT McKenzie Canyo 83.69 329 P **P** **23 43 59.9 +1.4**
BOZ Bozeman (W) 83.75 331 P **P** **23 43 59.4 +0.7**
BOZ Bozeman (W) 83.75 331 P **P** **23 43 59.8 +1.1**
baz=142,SNR=7.0
BOZ Bozeman (W) 83.75 331 P **P** **23 43 59.4 +0.7**
BOZ pmax pmax
comp=Z,4.0nm,0.8s
MFID Camas Ranch 83.99 327 P **P** **23 44 00.7 +0.9**
ORV Oroville 84.13 321 P **P** **23 44 01.1 +0.5**
ORV IAmb IAmb 23 44 03.2
comp=Z,13nm,1.1s
ORV Oroville 84.13 321 P **P** **23 44 01.1 +0.5**
ORV pmax pmax

comp=Z,13nm,1.2s
LRM Limekiln Ridge 84.28 330 P P 23 44 02.2 +0.7
WVOR Wild Horse Val 84.66 325 P P 23 44 04.0 +0.7
WVOR Wild Horse Val 84.66 325 P P 23 44 04.0 +0.7
WVOR pmax pmax
comp=Z,4.0nm,1.2s
HRY Holter Researc 84.71 331 P P 23 44 04.5 +1.0
EGMT Eagleton 84.90 333 P P 23 44 04.1 -0.2
EGMT Eagleton 84.90 333 P P 23 44 06.2 +1.9
baz=144,SNR=5.8
BPMT Black Pine Rid 85.20 330 P P 23 44 07.1 +1.0
J08A Circle Bar Ran 85.25 325 P P 23 44 07.2 +1.0
J08A IAmb IAmb 23 44 08.7
comp=Z,25nm,0.8s
PLID Pearl Lake 85.33 328 P P 23 44 07.3 +0.6
PLID IAmb IAmb 23 44 08.9
comp=Z,22nm,0.8s
BMO Blue Mountains 85.77 327 P P 23 44 09.5 +0.8
BMO Blue Mountains 85.77 327 P P 23 44 09.5 +0.8
BMO pmax pmax
comp=Z,4.0nm,0.9s
K05A Summer Lake 86.03 324 P P 23 44 11.5 +1.3
I07A Izee 86.29 325 P P 23 44 11.6 +0.3
I07A IAmb IAmb 23 44 13.7
comp=Z,12nm,1.0s
F10A Beach Ranch, E 86.56 328 P P 23 44 12.8 +0.2
J05D Fort Rock, OR 86.60 324 P P 23 44 12.6 -0.3
J05D IAmb IAmb 23 44 15.3
comp=Z,23nm,1.1s
PINE Pine Mountain 86.81 324 P P 23 44 14.5 +0.5
KRMB Red Mountain 86.82 321 P P 23 44 14.8 +0.8
G08A Pilot Rock 86.89 326 P P 23 44 14.6 +0.4
I05D Terrebonne, OR 87.40 325 P P 23 44 17.2 +0.6
I05D IAmb IAmb 23 44 19.2
comp=Z,22nm,0.9s
K02D Willamette Mer 87.48 322 P P 23 44 18.2 +1.1
DBO Dodson Butte 87.55 323 P P 23 44 18.1 +0.8
DBO IAmb IAmb 23 44 19.5
comp=Z,22nm,0.9s
LSZ Lusaka 87.85 106 LR LR 00 21 21.1
comp=Z,32nm,20.3s,baz=285,slow=34
FFC Flin Flon 87.85 341 P P 23 44 18.3 -0.1
FFC IAmb IAmb 23 44 19.8
comp=Z,8.3nm,1.0s
FFC Flin Flon 87.85 341 P P 23 44 18.3 -0.1
FFC pmax pmax
comp=Z,8.0nm,1.0s
HAWA Hanford 87.96 327 P P 23 44 20.2 +1.0
HAWA IAmb IAmb 23 44 21.3
comp=Z,6.8nm,0.8s
H04A Detroit Lake 88.07 324 P P 23 44 20.7 +0.9
H04A IAmb IAmb 23 44 21.3
comp=Z,15nm,0.9s
NEW Newport 88.21 329 P P 23 44 21.0 +0.6
baz=138
C09A Chrisman Ranch 88.39 329 P P 23 44 21.9 +0.7
C09A IAmb IAmb 23 44 23.1
comp=Z,14nm,1.1s
FCC Fort Churchill 89.53 347 P P 23 44 26.2 +0.1
FCC IAmb IAmb 23 44 28.0
comp=Z,18nm,0.9s
FCC Fort Churchill 89.53 347 P P 23 44 26.3 +0.1
FCC pmax pmax
comp=Z,18nm,1.0s
ESDC Sonseca Array 89.91 44 P P 23 44 29.6 +1.0
comp=Z,1.7nm,1.0s,baz=221,slow=2.9,SNR=4.7
comp=Z,1.7nm,1.0s
EDM Edmonton 90.42 334 P P 23 44 30.5 -0.1
EDM IAmb IAmb 23 44 31.2
comp=Z,18nm,1.0s
EDM Edmonton 90.42 334 P P 23 44 30.5 -0.1
EDM pmax pmax
comp=Z,18nm,1.0s
MBAR Mbarara 97.08 94 *e*P P 23 45 01.8 -0.5
MBAR pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 97.99 340 P Pdif 23 45 05.5 +0.5
comp=Z,2.7nm,0.8s,baz=139,slow=4.4,SNR=51
comp=Z,2.7nm,0.8s
AKASG Malin Array Be 115.55 44 PKP PKPdf 23 50 09.8 -0.6
comp=Z,0.6nm,0.4s,baz=268,slow=2.0,SNR=2.3
BRTR Keskin Array B 115.68 57 *i* PKIKP **PKiKP 23 50 12.8 +1.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 115.68 57 PKP PKPdf 23 50 09.6 -1.7
comp=Z,0.6nm,0.8s,baz=327,slow=0.9,SNR=3.6
FINES FINESS Array B 116.19 32 PKP PKiKP 23 50 11.5 +0.2
comp=Z,2.4nm,0.9s,baz=180,slow=2.8,SNR=1.9
ARCES ARCESS Array B 117.32 23 PKP PKiKP 23 50 13.6 +0.2
comp=Z,1.4nm,0.9s,baz=247,slow=3.7,SNR=8.3
OBN Obninsk 120.70 40 *e*PKIKP **PKPdf 23 50 19.6 -0.5**
OBN *e* 23 51 47.2
OBN pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 122.61 34 *e*PKIKP **PKPdf 23 50 23.5 -0.2**
KLMR pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 123.20 54 *i* PKIKP **PKiKP 23 50 25.7 0.0**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 123.31 54 *i* PKIKP **PKiKP 23 50 26.4 +0.6**
KBZ Khabaz 123.31 54 PKP PKiKP 23 50 26.1 +0.4
comp=Z,3.4nm,0.9s,baz=326,slow=5.0,SNR=6.4
ASAR Alice Springs 124.29 204 PKP PKPdf 23 50 28.0 -0.3
comp=Z,2.7nm,0.7s,baz=141,slow=2.1,SNR=12
ASAR pPKP **pPKPdf 23 51 03.6 -0.7**
comp=Z,1.8nm,0.7s,baz=147,slow=1.9,SNR=6.3
WRA Warramunga Arr 127.52 206 PKP **PKPdf 23 50 34.5 +0.1**
comp=Z,4.3nm,0.7s,baz=155,slow=2.0,SNR=23
WRA pPKP **pPKPdf 23 51 10.4 -0.2**
comp=Z,3.0nm,0.7s,baz=163,slow=1.6,SNR=7.8
BILL Bilibino 129.27 337 *e*PKIKP **PKiKP 23 50 37.5 +0.5**
ARU Arti 132.98 38 PKIKP **PKPdf 23 50 44.1 +0.5**
GEYT Alibeck 134.12 63 PKP PKiKP 23 50 47.8 0.0
comp=Z,1.7nm,0.8s,baz=235,slow=10,SNR=4.0
TIXI Tiksi 135.69 353 *i* PKIKP **PKPdf 23 50 48.7 +0.5**
SEY Seymchan 136.78 335 *i* PKIKP **PKiKP 23 50 52.0 -0.3**
SEY pmax pmax
comp=Z,15nm,2.5s
SEY Seymchan 136.78 335 PKP PKiKP 23 50 51.7 -0.6
comp=Z,1.8nm,0.3s,baz=144,slow=2.6,SNR=6.4
SEY pPKP **pPKPdf 23 51 27.7 +1.1**
comp=Z,1.0nm,0.3s,baz=53,slow=4.3,SNR=1.9
BVAR Borovoye Array 140.54 39 PKhKP PKPpre 23 50 51.4
comp=Z,0.4nm,0.3s,baz=336,slow=2.5,SNR=4.8
BVAR PKP **PKPdf 23 50 58.7 +1.0**
comp=Z,1.8nm,0.5s,baz=313,slow=3.4,SNR=8.9
YAK Yakutsk 144.41 346 *e*PKIKP PKPbc 23 51 03.3 +0.3
YAK *e* 23 51 39.8
YAK *e* 23 54 20.7
YAK pmax pmax
comp=Z,84nm,0.9s
YAK pmax pmax
comp=N,15nm,1.3s
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=Z,22nm,0.8s
YAK Yakutsk 144.41 346 PKP PKPbc 23 51 03.6 +0.6
comp=Z,82nm,0.7s,baz=143,slow=0.8,SNR=20
EKS2 Erkin-Say 145.79 55 P PKPab 23 51 09.7 +0.9
SNR=31
KURBB Kurchatov Arra 146.13 40 PKPbc **PKPab 23 51 09.3 -0.3**
comp=Z,24nm,0.9s,baz=299,slow=3.4,SNR=132
KURBB pPKPbc pPKPab 23 51 45.2 +0.6
comp=Z,3.3nm,0.7s,baz=300,slow=3.3,SNR=3.7
KURK Kurchatov 146.14 39 *e*PKP2 **PKPab 23 51 09.4 -0.3**
KURK pmax pmax
comp=Z,23nm,1.0s
USP Ospenovka 146.17 54 P PKPab 23 51 09.9 -0.3
SNR=12
AAK Ala-Archa 146.31 55 P PKPab 23 51 10.9 +0.1
SNR=30
AAK Ala-Archa 146.31 55 *de*PKP2 **PKPbc 23 51 09.8 0.0**
UCH Uchtor 146.41 55 P PKPab 23 51 11.6 0.0
SNR=27
CHMS Chumysh 146.41 54 P PKPbc 23 51 10.1 +0.2
SNR=17
KBK Karagaybulak 146.63 55 P PKPbc 23 51 11.3 +0.5
SNR=20
TKM2 Tokmak 2 147.03 54 P PKPbc 23 51 11.4 -0.5
SNR=15
ZALV Zalesovo Beam 147.44 31 PKPbc **PKPdf 23 51 11.0 +1.3**
comp=Z,20nm,0.3s,baz=287,slow=2.4,SNR=82
ZALV pPKPbc **pPKPab 23 51 49.1 -0.3**
comp=Z,6.7nm,0.6s,baz=302,slow=3.9,SNR=3.2

ULHL Ulahol 147.66 55 P PKPbc 23 51 13.3 -0.3
SNR=14
KSH Kashi 148.00 60 PKPbc **PKPbc 23 51 13.0 -1.5**
KSH sPKP 23 51 51.3
YSS Yuzh-Sakhalins 149.88 316 *e*PKP2 **PKiKP 23 51 19.6 -0.1**
YSS pmax pmax
comp=Z,20nm,1.0s
MK31 Makanchi Array 150.13 44 *de*PKIKP **PKPdf 23 51 14.5 +0.2**
MKAR Makanchi Array 150.13 44 PKP PKPdf 23 51 14.7 +0.4
comp=Z,0.8nm,0.8s,baz=356,slow=0.5,SNR=6.9
MKAR PKPbc **PKiKP 23 51 20.3 +0.1**
comp=Z,24nm,0.7s,baz=292,slow=2.5,SNR=174
MKAR pPKPbc **pPKPbc 23 51 55.9 +0.9**
comp=Z,6.2nm,0.8s,baz=304,slow=2.6,SNR=3.6
BOD Bodaibo 150.51 358 *e*PKIKP **PKPbc 23 51 19.5 -0.5**
BOD pmax pmax
comp=Z,14nm,1.2s
ZEA Zeya 152.37 341 *e*PKIKP **PKiKP 23 51 24.9 +0.3**
KLR Kul'dur 154.39 330 PKP **PKPdf 23 51 19.9 -0.5**
comp=Z,2.5nm,0.9s,baz=0.5,slow=4.1,SNR=6.3
KLR PKPbc **PKPbc 23 51 28.4 -0.4**
comp=Z,2.0nm,0.6s,baz=341,slow=3.1,SNR=7.0
KLR PKPab **PKPab 23 51 43.1 -0.5**
comp=Z,1.4nm,0.5s,baz=350,slow=2.5,SNR=4.4
WMQ Urumqi 154.90 45 *e*P **PKPdf 23 51 21.5 0.0**
WMQ LR LR
comp=Z,190nm,24.2s
HEH HeiHe 155.31 337 *e*P **PKPdf 23 51 19.8 -1.9**
HEH pmax pmax
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 156.77 297 PKPab **PKPab 23 51 55.1 +0.7**
comp=Z,4.5nm,1.0s,baz=152,slow=2.1,SNR=7.3
MDJ Mudanjiang 158.73 324 P **PKPdf 23 51 25.0 -1.2**
MDJ pmax pmax
comp=Z,6.0nm,1.0s
MDJ pmax pmax
comp=Z,160nm,4.1s
SONM Songino Array 159.99 12 PKP **PKPdf 23 51 28.3 +0.5**
comp=Z,2.2nm,1.0s,baz=214,slow=1.9,SNR=13
SONM PKPab **PKPab 23 52 07.4 -0.6**
comp=Z,2.9nm,0.7s,baz=325,slow=4.3,SNR=19
KSRS Korea Array 164.11 309 PKP **PKPdf 23 51 33.0 +1.0**
comp=Z,0.7nm,0.3s,baz=124,slow=0.5,SNR=5.7
KSRS PKPab **PKPab 23 52 27.8 +1.5**
comp=Z,1.1nm,0.6s,baz=58,slow=4.2,SNR=4.2
CMAR Chiang Mai Arr 164.24 126 PKP **PKPdf 23 51 33.4 +0.6**
comp=Z,1.5nm,0.3s,baz=272,slow=3.8,SNR=4.4
GTA Gaotai 164.82 40 PKP **PKPdf 23 51 34.0 +1.1**
GTA pPKP PKPab 23 52 30.8 +1.3
HHC Hu-ho-hao-te 167.50 3 *e*P **PKPdf 23 51 37.0 +2.1**
BTO Baotou 167.61 8 *e*PKP **PKPdf 23 51 36.5 +1.5**
BTO Baotou 167.61 8 PP PP 23 56 33.3 +3.8
BTO pmax pmax
comp=Z,14nm,1.1s
BTO pmax pmax
comp=Z,180nm,3.9s
BTO LR LR
comp=N,650nm,19.5s
BTO LR LR
comp=E,420nm,17.6s
BTO LR LR
comp=Z,880nm,18.5s
PZH PanZhiHua 170.37 98 PKP **PKPdf 23 51 35.8 -1.4**
NJ2 Nanjing 173.28 305 *e*P **PKPdf 23 51 38.0 -0.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s

*IDC **26** 23:36:28.7±0.9, 6°.18S×143°.53E, h0km, mb3.9/8, mbtmp3.9/9, ML1.5/1, MS3.3/5, Error ellipse: s-maj=44.4km s-min=20.6km az=79.0*
ISC 26 23:36:33.6±0.8, 6°.40S±0°.09×143°.33E±0°.09, h35km, n20, σ2s24/19, mb3.8/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.83**	**129**			Pn	**Pn**	**23 37 43.2**	**-0.7**
	1.4nm,0.3s,baz=289,slow=22,SNR=2.2								
PMG						Sn	**Sn**	**23 38 37.8**	**-0.8**
	2.4nm,0.3s,baz=312,slow=11,SNR=3.6								
	9.2nm,0.3s								
COEN	**Coen**	**7.51**	**181**	P		**Pn**	**Pn**	**23 38 24.4**	**+3.6**
KDU	**Kakadu**	**12.40**	**239**	P		**Pn**	**Pn**	**23 39 25.8**	**-1.9**
MTN	**Manton Dam**	**13.62**	**241**	P		**Pn**	**Pn**	**23 39 42.7**	**-1.8**
CTA	**Charters Tower**	**13.90**	**169**	Lg		Lg	Lg	23 43 56.0	
	0.2nm,0.3s,baz=349,slow=13,SNR=1.5								
CTA						LR	LR	23 45 34.4	
	comp=Z,120nm,18.9s,baz=357,slow=39								
WRA	**Warramunga Arr**	**16.05**	**212**	Pn		**Pn**	**Pn**	**23 40 15.5**	**-1.3**
	0.9nm,0.3s,baz=30,slow=13,SNR=27								
WRA						Sn	Sn	23 43 03.9	-10
	0.7nm,0.3s,baz=27,slow=23,SNR=6.0								
WRA						Lg	Lg	23 44 56.0	
	baz=7.1,slow=36								
KNRA	**Kununurra**	**17.00**	**236**	P		**Pn**	**Pn**	**23 40 26.0**	**-2.9**
ASAR	**Alice Springs**	**19.42**	**207**	P		**Pn**	**Pn**	**23 41 00.6**	**+2.2**
	35nm,0.6s,baz=32,slow=10,SNR=304								
ASAR						S	**S**	**23 44 28.7**	**-6.2**
	1.5nm,0.8s,baz=21,slow=28,SNR=2.4								
ASAR						Lg	Lg	23 46 49.6	
	0.2nm,0.3s,baz=28,slow=32,SNR=4.7								
ASAR						LR	LR	23 49 03.1	
	comp=Z,201nm,18.1s,baz=40,slow=38								
GUMO	**Guam**	**19.91**	**4**	LR		LR	LR	23 49 20.2	
	comp=Z,18nm,18.4s,baz=89,slow=39								
FITZ	**Fitzroy Crossi**	**20.81**	**234**	P		P	**P**	**23 41 12.9**	**+0.7**
STKA	**Stephens Creek**	**25.40**	**183**	P		P	**P**	**23 41 59.3**	**+1.4**
	1.4nm,0.4s,baz=356,slow=8.5,SNR=3.4								
STKA						LR	LR	23 53 13.6	
	comp=Z,103nm,18.8s,baz=25,slow=39								
	1.4nm,0.4s								
NWAO	**Narrogin (SRO)**	**35.85**	**219**	LR		LR	LR	23 59 08.9	
	comp=Z,82nm,20.2s,baz=236,slow=38								
MKAR	**Makanchi Array**	**75.51**	**322**	P		P	**P**	**23 48 15.0**	**+0.5**
	0.5nm,0.8s,baz=93,slow=8.9,SNR=4.6								
	0.5nm,0.8s								
ZALV	**Zalesovo Beam**	**77.43**	**329**	P		P	**P**	**23 48 24.5**	**-0.6**
	0.3nm,0.4s,baz=123,slow=10,SNR=1.9								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**79.39**	**324**	P		P	**P**	**23 48 35.9**	**-0.2**
	0.2nm,0.6s,baz=111,slow=5.0,SNR=2.2								
	0.2nm,0.6s								
QSPA	**South Pole Qui**	**83.57**	**180**	P		P	**P**	**23 48 59.6**	**+1.4**
	4.2nm,0.8s,baz=294,slow=1.0,SNR=21								
	4.2nm,0.8s								
NRIK	**Noril'sk**	**84.55**	**343**	P		P	**P**	**23 49 03.1**	**+0.3**
	1.6nm,0.7s,baz=239,slow=4.2,SNR=2.4								
	1.6nm,0.7s								
BVAR	**Borovoye Array**	**84.96**	**325**	P		P	**P**	**23 49 06.1**	**+0.9**
	0.5nm,0.5s,baz=108,slow=4.7,SNR=3.1								
	0.5nm,0.5s								
ILAR	**Eielson Array**	**87.29**	**24**	P		P	**P**	**23 49 15.8**	**-0.7**
	0.3nm,0.8s,baz=255,slow=5.5,SNR=4.5								
	0.3nm,0.8s								
DBIC	**Dimbokro**	**148.40**	**272**	PKPbc		PKiKP	**PKiKP**	**23 56 18.8**	**-0.4**
	4.9nm,0.9s,baz=136,slow=4.4,SNR=4.4								

*IDC **26** 23:41:32.8±6.0, 15°.94S×70°.48W, h78km±60km, **mb3.3**/2, **mbtmp3.6**/4, **ML3.3**/2, Error ellipse: s-maj=70.0km s-min=47.1km az=150.0, Southern Peru*

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**6.80**	**168**	P		Pn		23 43 09.9	-0.4
	0.4nm,0.3s,baz=335,slow=14,SNR=2.2								
	2.7nm,0.6s								
SIV	**San Ignacio**	**9.05**	**92**	P		Pn		23 43 41.5	+0.7
	baz=272,slow=12,SNR=6.0								
	1.7nm,0.5s								
TORD	**Torodi Ar. Bea**	**76.99**	**72**	P		P		23 53 16.9	-0.8
	0.5nm,0.9s,baz=235,slow=6.8,SNR=2.3								
	0.5nm,0.9s								
YKA	**Yellowknife Ar**	**85.48**	**341**	P		P		23 54 00.9	-0.7
	0.5nm,0.8s,baz=134,slow=5.5,SNR=7.0								
	0.5nm,0.8s								
SONM	**Songino Array**	**148.09**	**4**	PKPbc		PKiKP		00 01 10.9	-0.7
	0.4nm,0.8s,baz=22,slow=1.6,SNR=4.1								

*JMA **26** 23:43:04.8±0.7, 47°.N±5°.×14°.9E±1°.0, h448km, MV3.8/9, SOUTHERN SEA OF OKHOTSK*
*SKHL **26** 23:43:07.9±0.3, 47°.60N×147°.80E, h441km±3km, mb4.5/3, msha4.8/4*
*MOS **26** 23:43:07.8±1.5, 47°.70N×147°.77E, h444km, mb3.5/5, Error ellipse: s-maj=14.1km s-min=11.7km az=96.9*

*IDC **26** 23:43:09.5±2.0, 48°.19N×147°.70E, h424km±31km, mb2.9/10, mbtmp3.8/14, Error ellipse: s-maj=35.7km s-min=14.8km az=175.0*
ISC 26 23:43:08.9±0.6, 47°.62N±0°.06×147°.84E±0°.07, h450km, n45, σ2s51/58, mb3.3/14, 2C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**3.52**	**261**	*e*PN		**P**		**23 44 18.9**	**-1.1**
YSS				*e*S		**S**		**23 45 14.9**	**-2.9**
YSS				pmax	pmax				
	comp=Z,60nm,0.7s								
YSS				smax	smax				
	comp=N,30nm,0.8s								
YSS	**Yuzh-Sakhalins**	**3.52**	**261**	*e*P		**P**		**23 44 18.9**	**-1.1**
YSS				AMB	AMB			23 44 23.3	
	comp=N,40nm,0.6s								
YSS				*e*S		**S**		**23 45 14.5**	**-3.3**
YSS				A	A			23 45 20.2	
	comp=N,20nm,0.4s								
YSS				A	A			23 45 20.2	
	comp=N,30nm,0.4s								
SHO	**Shikotan**	**3.81**	**191**	*e*PN		**P**		**23 44 20.8**	**-1.7**
SHO				*e*S		**S**		**23 45 17.2**	**-5.1**
SHO				smax	smax				
	comp=E,194nm,0.4s								
SHO				smax	smax				
	comp=N,189nm,0.3s								
SHO	**Shikotan**	**3.81**	**191**	*e*P		**P**		**23 44 20.8**	**-1.7**
SHO				*e*S		**S**		**23 45 17.4**	**-4.9**
SHO				A	A			23 45 19.3	
	comp=N,190nm,0.4s								
SHO				A	A			23 45 19.3	
	comp=N,180nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**3.84**	**202**	*e*P		**P**		**23 44 21.6**	**-1.1**
YUK				AMB	AMB			23 44 24.9	
	comp=N,110nm,0.6s								
YUK				*e*S		**S**		**23 45 18.7**	**-4.0**
YUK				A	A			23 45 20.0	
	comp=N,180nm,0.4s								
YUK				A	A			23 45 20.0	
	comp=N,90nm,0.4s								
NEM2	**Nemuro 2**	**4.50**	**200**	*e*P		**P**		**23 44 26.3**	**-2.4**
NEM2				*e*S		**S**		**23 45 29.5**	**-3.9**
NMR	**Nemuro--Hokkai**	**4.50**	**200**	*e*PN		**P**		**23 44 26.2**	**-2.4**
NMR				*e*S		**S**		**23 45 29.6**	**-3.9**
NMR	**Nemuro--Hokkai**	**4.50**	**200**	*e*P		**P**		**23 44 26.2**	**-2.4**
NMR				*e*S		**S**		**23 45 29.5**	**-3.9**
JTKR	**Abashiri--Toko**	**4.57**	**218**	*e*P		**P**		**23 44 29.4**	**+0.1**
JTKR				*e*S		**S**		**23 45 36.0**	**+1.4**
JNK	**Nakash**	**4.59**	**210**	*e*P		**P**		**23 44 28.9**	**-0.5**
TYV	**Tymovskoe**	**4.70**	**316**	*e*PN		**P**		**23 44 26.3**	**-3.9**
TYV				*e*S		**S**		**23 45 28.2**	**-8.4**
TYV				pmax	pmax				
	comp=Z,11nm,0.6s								
TYV				pmax	pmax				
	comp=Z,100nm,3.7s								
TYV				smax	smax				
	comp=N,10.0nm,1.2s								
TYV				smax	smax				
	comp=E,8.0nm,1.2s								
TYV				smax	smax				
	comp=E,100nm,3.8s								
TYV	**Tymovskoe**	**4.70**	**316**	*e*P		**P**		**23 44 26.3**	**-3.9**
TYV				AMB	AMB			23 44 26.9	
	comp=E,10.0nm,0.6s								
AKK	**Akkeshi**	**5.06**	**206**	*e*P		**P**		**23 44 32.2**	**-1.7**
ASAJ	**Asahikawa**	**5.06**	**228**	P		**P**		**23 44 35.6**	**+1.7**
	comp=E,6.9nm,0.7s,baz=82,slow=6.9,SNR=4.3								
ASAJ				S		**S**		**23 45 45.0**	**+1.8**
	comp=E,3.1nm,0.4s,baz=219,slow=32,SNR=1.5								
JAR	**Ashorobuto**	**5.18**	**215**	*e*P		**P**		**23 44 35.5**	**+0.4**
JAR				*e*S		**S**		**23 45 46.8**	**+1.5**
JOB	**Onbets**	**5.50**	**212**	*e*P		**P**		**23 44 37.8**	**-0.3**
JCH	**Churui**	**5.92**	**214**	*e*P		**P**		**23 44 41.6**	**-0.9**
JCH				*e*S		**S**		**23 45 55.0**	**-3.8**
ERM	**Erimo**	**6.51**	**212**	*c i*PN		**P**		**23 44 49.3**	**+0.7**
PEA0B	**Petropavlovsk-**	**8.36**	**45**	*i* PN		**P**		**23 45 09.3**	**+1.3**
PETK	**Petropavlovsk-**	**8.36**	**45**	*e*PN		**P**		**23 45 10.0**	**+2.0**
PETK				pmax	pmax				
	comp=Z,2.0nm,0.6s								
JANG	**Nango**	**8.55**	**214**	*e*S		**S**		**23 46 48.0**	**-2.1**
KLR	**Kul'dur**	**10.81**	**285**	P		**P**		**23 45 35.1**	**+0.4**
	comp=Z,2.8nm,0.4s,baz=80,slow=7.9,SNR=15								
USRK	**Ussuriysk Ar.**	**11.56**	**259**	P		**P**		**23 45 45.7**	**+2.8**
	comp=Z,1.6nm,0.6s,baz=58,slow=11,SNR=2.3								
KSRS	**Korea Array**	**17.80**	**242**	*e*P		**P**		**23 46 53.0**	**+3.5**
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.5s								
KSRS	**Korea Array**	**17.80**	**242**	P		**P**		**23 46 52.2**	**+2.7**
	comp=Z,1.5nm,0.5s,baz=41,slow=9.2,SNR=6.7								
ULN	**Ulaanbaatar**	**27.20**	**286**	*i* P		**P**		**23 48 15.1**	**+0.3**
ULN				pmax	pmax				
	comp=Z,1.0nm,0.9s								
ULN	**Ulaanbaatar**	**27.20**	**286**	*e*P		**P**		**23 48 15.1**	**+0.3**
NRIK	**Noril'sk**	**36.15**	**328**	*i* P		**P**		**23 49 32.3**	**+1.2**
NRIK				pmax	pmax				
	comp=Z,1.0nm,1.1s								
ILAR	**Eielson Array**	**38.13**	**39**	P		**P**		**23 49 46.3**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=258,slow=6.0,SNR=6.3								
	comp=Z,0.4nm,0.6s								
DGZ	**Jazzator, Alta**	**39.01**	**296**	*e*P		**P**		**23 49 55.7**	**+0.6**
DGZ				pmax	pmax				
	comp=Z,1.0nm,0.7s								
MK31	**Makanchi Array**	**43.32**	**294**	*i* P		**P**		**23 50 29.5**	**0.0**
MKAR	**Makanchi Array**	**43.32**	**294**	P		**P**		**23 50 29.5**	**0.0**
	comp=Z,0.5nm,0.6s,baz=60,slow=5.7,SNR=11								
	comp=Z,0.5nm,0.6s								
KURK	**Kurchatov**	**43.86**	**301**	P		**P**		**23 50 33.6**	**+0.1**
KURK	**Kurchatov**	**43.86**	**301**	*e*P		**P**		**23 50 32.7**	**-0.8**
KURBB	**Kurchatov Arra**	**43.95**	**301**	P		**P**		**23 50 33.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=73,slow=8.5,SNR=6.3								
	comp=Z,0.8nm,0.8s								
YKA	**Yellowknife Ar**	**52.34**	**36**	*e*P		**P**		**23 51 37.2**	**+0.1**
YKA	**Yellowknife Ar**	**52.34**	**36**	P		**P**		**23 51 36.4**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=303,slow=7.4,SNR=5.5								
	comp=Z,0.4nm,0.6s								
FINES	**FINESS Array B**	**61.66**	**332**	P		**P**		**23 52 39.5**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=38,slow=11,SNR=3.7								
	comp=Z,1.4nm,0.8s								
OBN	**Obninsk**	**62.50**	**323**	*e*P		**P**		**23 52 46.1**	**-0.7**
OBN				*e*				23 53 22.7	
OBN				pmax	pmax				
	comp=Z,4.0nm,0.8s								
OBN	**Obninsk**	**62.50**	**323**	*e*P		**P**		**23 52 46.1**	**-0.7**
GEYT	**Alibeck**	**63.04**	**297**	P		**P**		**23 52 51.4**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=38,slow=5.9,SNR=3.7								
	comp=Z,1.1nm,0.5s								
NVAR	**Mina Array Bea**	**65.16**	**60**	P		**P**		**23 53 06.5**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=288,slow=6.1,SNR=5.9								
	comp=Z,0.9nm,0.7s								
NOA	**NORSAR Array B**	**66.17**	**339**	P		**P**		**23 53 09.1**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=32,slow=6.6,SNR=1.5								
	comp=Z,0.3nm,0.5s								
PDAR	**Pinedale Array**	**67.08**	**51**	P		**P**		**23 53 17.7**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=350,slow=1.2,SNR=6.1								
	comp=Z,0.5nm,0.6s								
TXAR	**Lajitas Array**	**80.12**	**57**	P		**P**		**23 54 33.2**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=288,slow=3.3,SNR=7.9								
	comp=Z,0.7nm,0.6s								

*IDC **26** 23:54:20.6±6.8, 6°.13S×142°.79E, h0km, **mb3.7**/2, **mbtmp3.5**/4, **ML3.1**/2, Error ellipse: s-maj=248.9km s-min=35.1km az=97.0, New Guinea*

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.00**	**210**			Pn	Pn	23 58 06.1	-1.1
	0.1nm,0.3s,baz=30,slow=14,SNR=2.5								
	0.4nm,0.6s								
ASAR	**Alice Springs**	**19.42**	**205**	P		P		23 58 49.1	+0.4
	0.1nm,0.3s,baz=34,slow=10,SNR=2.4								
	0.7nm,0.6s								
MKAR

mb3.9/4, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.57**	**130**	Pn	**Pn**	**23 56 10.9**	**-0.9**
	10nm,0.4s,baz=306,slow=7.8,SNR=4.8						
PMG				Sn	**Sn**	**23 57 06.1**	**+1.1**
	2.3nm,0.3s,baz=57,slow=23,SNR=1.6						
CTA	**Charters Tower**	**13.77**	**169**	Lg	Lg	00 02 18.6	
	0.1nm,0.3s,baz=35,slow=8.5,SNR=1.0						
WRA	**Warramunga Arr**	**16.11**	**213**	Pn	**Pn**	**23 58 48.0**	**-1.4**
	0.3nm,0.3s,baz=30,slow=13,SNR=9.2						
WRA				Lg	Lg	00 03 34.1	
	0.1nm,0.3s,baz=359,slow=39,SNR=1.5						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**19.46**	**208**	P	**P**	**23 59 31.7**	**+2.1**
	20nm,0.7s,baz=36,slow=9.6,SNR=69						
ASAR				Lg	Lg	00 05 16.3	
	0.1nm,0.3s,baz=22,slow=31,SNR=3.1						
STKA	**Stephens Creek**	**25.33**	**184**	P	**P**	**00 00 29.4**	**-0.2**
	1.5nm,0.5s,baz=343,slow=9.6,SNR=3.4						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**75.74**	**322**	P	**P**	**00 06 49.5**	**+1.0**
	0.2nm,0.8s,baz=116,slow=6.6,SNR=1.5						
	0.2nm,0.8s						
QSPA	**South Pole Qui**	**83.48**	**180**	P	**P**	**00 07 30.0**	**-0.4**
	1.6nm,0.9s,baz=256,slow=2.3,SNR=5.1						
	1.6nm,0.9s						
BVAR	**Borovoye Array**	**85.18**	**325**	P	**P**	**00 07 38.5**	**-0.6**
	0.6nm,0.7s,baz=116,slow=6.6,SNR=2.8						
	0.6nm,0.7s						

IDC ***27*** *00:05:13.0±0.7,6°.15S×143°.12E,h0km,mb4.4/13, mbtmp4.4/16,ML2.6/2,Error ellipse: s-maj=32.1km s-min=15.2km az=73.0*

NEIC ***27*** *00:05:14.3±2.0,6°.23S±0°.06×143°.07E±0°.08,h10km±1km, mb4.6/40,Error ellipse: s-maj=17.1km s-min=5.0km az=306.0*

ISC 27 00:05:17.7±0.5,**6°.27S**±0°.07×**143°.01E**±0°.09,**h35**km,**n76,** σ1**s40**/79,**mb4.6**/38,**1D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.16**	**127**		**Pn**	**00 06 31.7**	**-0.8**
PMG	**Port Moresby**	**5.16**	**127**	Pn	**Pn**	**00 06 33.1**	**+0.6**
	3.3nm,0.3s,baz=305,slow=16,SNR=6.7						
PMG				Sn	**Sn**	**00 07 30.6**	**-0.2**
	1.3nm,0.3s,baz=4.5,slow=15,SNR=3.1						
	10nm,0.4s						
COEN	**Coen**	**7.64**	**179**	Pn	**Pn**	**00 07 07.6**	**+1.0**
CTA	**Charters Tower**	**14.09**	**167**	Pn	**Pn**	**00 08 36.8**	**+1.8**
	0.1nm,0.3s,baz=348,slow=13,SNR=2.5						
	2.9nm,0.8s						
WB0	**Warramunga Arr**	**15.82**	**211**		**Pn**	**00 08 57.0**	**-0.9**
WR0	**Warramunga Arr**	**15.90**	**210**	Pn	**Pn**	**00 08 56.8**	**-2.2**
WR0				IAmb	IAmb	00 09 08.4	
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**15.98**	**211**		**Pn**	**00 08 58.7**	**-1.3**
WRAB				IAmb	IAmb	00 09 07.8	
	comp=Z,23nm,1.1s						
WRA	**Warramunga Arr**	**15.99**	**211**	Pn	**Pn**	**00 08 56.8**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=6.1						
WRA				Lg	Lg	00 13 46.4	
	baz=30,slow=27						
SOEI	**Soe**	**18.88**	**258**	P	**P**	**00 09 34.9**	**-0.5**
SOEI				IAmb	IAmb	00 09 40.3	
	comp=Z,33nm,0.8s						
AS31	**Alice Springs**	**19.39**	**206**		**Pn**	**00 09 41.1**	**-1.0**
ASAR	**Alice Springs**	**19.39**	**206**		**Pn**	**00 09 42.7**	**+0.6**
ASAR	**Alice Springs**	**19.39**	**206**	P	**Pn**	**00 09 42.4**	**+0.2**
	comp=Z,41nm,0.9s,baz=32,slow=10,SNR=172						
EIDS	**Eidsvold**	**20.50**	**159**	P	**P**	**00 09 52.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**20.62**	**234**	P	**P**	**00 09 54.6**	**+0.3**
KAPI	**Kappang**	**23.18**	**272**	P	**P**	**00 10 22.4**	**+0.8**
KAPI				IAmb	IAmb	00 10 24.2	
	comp=Z,24nm,1.0s						
TOLI2	**Tolitoli**	**23.37**	**288**	P	**P**	**00 10 23.4**	**0.0**
TOLI2				IAmb	IAmb	00 10 25.3	
	comp=Z,23nm,0.9s						
STKA	**Stephens Creek**	**25.51**	**183**	P	**P**	**00 10 44.8**	**+1.9**
	comp=Z,4.7nm,0.9s,baz=358,slow=12,SNR=6.8						
	comp=Z,4.7nm,0.9s						
PSA00	**Pilbara Seismi**	**27.08**	**234**	P	**P**	**00 10 55.7**	**-1.6**
PSA00				IAmb	IAmb	00 10 56.8	
	comp=Z,9.4nm,0.8s						
BBOO	**Buckleboo**	**27.19**	**193**	P	**P**	**00 10 57.5**	**-0.6**
BBOO				IAmb	IAmb	00 11 03.4	
	comp=Z,7.2nm,1.0s						
DZM	**Mont Dzumac**	**27.55**	**127**	P	**P**	**00 10 59.3**	**-2.3**
OUENC	**Ouen Island, N**	**28.05**	**127**	P	**P**	**00 11 05.2**	**-0.7**
MJAR	**Matsushiro Arr**	**42.82**	**354**	P	**P**	**00 12 13.3**	**-0.1**
	comp=Z,4.0nm,1.0s,baz=178,slow=7.3,SNR=2.2						
	comp=Z,4.0nm,1.0s						
NJ2	**Nanjing**	**44.53**	**330**	*e*P	**P**	**00 13 26.8**	**+0.7**
NJ2				pP	**pP**	**00 13 31.0**	**-5.9**
NJ2				sP	sP	00 13 32.8	-8.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,5.7s						
KSRS	**Korea Array**	**45.72**	**343**	P	**P**	**00 13 35.6**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=164,slow=10,SNR=8.4						
	comp=Z,2.9nm,0.9s						
WHN	**Wuhan**	**45.76**	**325**	P	**P**	**00 13 37.5**	**+1.6**
LYN	**LuoYang**	**49.80**	**327**	⫝P	**P**	**00 14 08.0**	**+0.8**
LYN				pmax	pmax		
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.92**	**300**	P	**P**	**00 14 09.4**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=127,slow=5.9,SNR=7.2						
	comp=Z,1.0nm,0.3s						
XAN	**Xi'an**	**51.45**	**323**	P	**P**	**00 14 20.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PZH	**PanZhiHua**	**51.58**	**311**	P	**P**	**00 14 23.5**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.5s						
MDJ	**Mudanjiang**	**52.08**	**348**	P	**P**	**00 14 25.5**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.8s						
HHC	**Hu-ho-hao-te**	**55.06**	**331**	*e*P	**P**	**00 14 49.0**	**+2.7**
HHC				S	**S**	**00 22 23.3**	**-3.3**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,53nm,4.0s						
HHC				LR	LR		
	comp=N,200nm,16.0s						
HHC				LR	LR		
	comp=E,120nm,16.6s						
HHC				LR	LR		
	comp=Z,240nm,16.0s						
LZH	**Lanzhou**	**55.90**	**322**	*e*P	**P**	**00 14 54.3**	**+1.8**
LZH				sP	pP	00 15 03.3	-0.2
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**60.47**	**322**	P	**P**	**00 15 26.0**	**+1.6**
GTA				pP	pP	00 15 29.8	-5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**62.78**	**333**	P	**P**	**00 15 40.3**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=151,slow=6.3,SNR=5.3						
	comp=Z,0.9nm,0.9s						
MK31	**Makanchi Array**	**75.21**	**322**	P	**P**	**00 16 57.9**	**+1.0**
MK31				IAmb	IAmb	00 16 58.9	
	comp=Z,4.2nm,1.0s						
MKAR	**Makanchi Array**	**75.21**	**322**	P	**P**	**00 16 57.8**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=115,slow=6.8,SNR=31						
	comp=Z,3.6nm,0.8s						
MAKZ	**Makanchi**	**75.41**	**322**	P	**P**	**00 16 58.9**	**+0.9**
MAKZ				IAmb	IAmb	00 16 59.9	
	comp=Z,6.8nm,0.9s						
TARG	**Taragay, Kyrgy**	**76.11**	**316**	P	**P**	**00 16 60.0**	**-2.7**
KSH	**Kashi**	**76.63**	**313**	P	**P**	**00 17 07.8**	**+2.5**
KSH				sP	pP	00 17 14.5	-2.2
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	**Nilore**	**76.88**	**307**	P	**P**	**00 17 05.0**	**-1.7**
ZAA0	**Zalesovo Array**	**77.16**	**329**	P	**P**	**00 17 06.3**	**-1.4**
ZAA0				IAmb	IAmb	00 17 08.4	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**77.16**	**329**	P	**P**	**00 17 06.9**	**-0.9**
ZALV	**Zalesovo Beam**	**77.16**	**329**	P	**P**	**00 17 07.8**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=106,slow=4.7,SNR=9.0						
	comp=Z,2.8nm,0.9s						
AAK	**Ala-Archa**	**78.73**	**316**	P	**P**	**00 17 16.0**	**-0.9**
KURK	**Kurchatov**	**79.08**	**324**	P	**P**	**00 17 18.1**	**-0.3**
KURK				IAmb	IAmb	00 17 20.1	
	comp=Z,7.9nm,1.1s						
KURBB	**Kurchatov Arra**	**79.10**	**324**	P	**P**	**00 17 19.1**	**+0.6**
	comp=Z,3.3nm,0.9s,baz=115,slow=4.7,SNR=20						
	comp=Z,3.3nm,0.9s						
ARSB	**Arslanbob**	**79.38**	**314**	P	**P**	**00 17 20.0**	**-0.5**
SIMJ	**Simiganj**	**81.55**	**310**	P	**P**	**00 17 32.4**	**+0.1**
SIMJ				IAmb	IAmb	00 17 33.9	
	comp=Z,8.1nm,1.1s						
KK31	**Karatay Array**	**81.66**	**315**	P	**P**	**00 17 32.8**	**+0.2**
KKAR	**Karatay Array**	**81.66**	**315**	P	**P**	**00 17 33.1**	**+0.5**
QSPA	**South Pole Qui**	**83.70**	**180**	P	**P**	**00 17 42.9**	**0.0**
QSPA				IAmb	IAmb	00 18 03.6	
	comp=Z,5.6nm,1.1s						
QSPA	**South Pole Qui**	**83.70**	**180**	P	**P**	**00 17 43.4**	**+0.6**
	comp=Z,4.8nm,0.9s,baz=340,slow=3.1,SNR=13						
	comp=Z,4.8nm,0.9s						
C18K	**Utukok River**	**84.05**	**18**	P	**P**	**00 17 45.7**	**+1.2**
C18K				IAmb	IAmb	00 17 56.7	
	comp=Z,6.6nm,1.3s						
NRIK	**Noril'sk**	**84.34**	**343**	P	**P**	**00 17 45.8**	**0.0**
NRIK	**Noril'sk**	**84.34**	**343**	P	**P**	**00 17 46.5**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=109,slow=5.4,SNR=9.7						
	comp=Z,4.5nm,0.8s						
E19K	**Redstone River**	**84.67**	**20**	P	**P**	**00 17 48.1**	**+0.6**
E19K				IAmb	IAmb	00 17 49.8	
	comp=Z,4.7nm,0.9s						
BVAR	**Borovoye Array**	**84.67**	**325**	P	**P**	**00 17 48.5**	**+0.6**
	comp=Z,16nm,0.8s,baz=108,slow=6.6,SNR=94						
	comp=Z,16nm,0.8s						
BRVK	**Borovoye**	**84.74**	**325**	P	**P**	**00 17 47.6**	**-0.6**
M22K	**Willow**	**84.82**	**26**	P	**P**	**00 17 46.8**	**-1.5**
D19K	**Kuna River**	**84.92**	**18**	P	**P**	**00 17 49.3**	**+0.4**
F20K	**Avaraart Lake**	**84.97**	**20**	P	**P**	**00 17 49.9**	**+0.8**
F20K				IAmb	IAmb	00 17 51.0	
	comp=Z,4.9nm,1.1s						
IMAR	**Indian Mountai**	**85.17**	**22**	P	**P**	**00 17 50.0**	**-0.1**
E22K	**Anaktuvuk Pass**	**86.81**	**20**	P	**P**	**00 17 59.5**	**+1.3**
E22K				IAmb	IAmb	00 18 08.2	
	comp=Z,3.4nm,0.8s						
IL31		**87.31**	**24**	P	**P**	**00 17 59.3**	**-1.2**
ILAR	**Eielson Array**	**87.31**	**24**	P	**P**	**00 17 59.8**	**-0.8**
ILAR	**Eielson Array**	**87.31**	**24**	P	**P**	**00 18 00.1**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=255,slow=4.8,SNR=22						
	comp=Z,1.9nm,0.8s						
IL03	**Eielson Array**	**87.32**	**24**	P	**P**	**00 18 00.3**	**-0.5**
C23K	**Itkilik River**	**87.92**	**19**	P	**P**	**00 18 04.0**	**+0.6**
F24K	**Squaw Lake**	**87.92**	**21**	P	**P**	**00 18 04.1**	**+0.5**
F24K				IAmb	IAmb	00 18 06.4	
	comp=Z,2.8nm,0.8s						
D24K	**Happy Valley**	**88.22**	**19**	P	**P**	**00 18 05.9**	**+1.0**
D25K	**Kavik River**	**89.10**	**20**	P	**P**	**00 18 09.2**	**+0.1**
D25K				IAmb	IAmb	00 18 11.0	
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**90.19**	**319**	P	**P**	**00 18 14.0**	**-0.6**
ABKAR				IAmb	IAmb	00 18 14.9	
	comp=Z,2.2nm,0.9s						
L29M	**L29M**	**90.53**	**26**	P	**P**	**00 18 15.5**	**-0.5**
ARU	**Arti**	**92.11**	**326**	P	**P**	**00 18 22.6**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=56,slow=6.4,SNR=4.7						
	comp=Z,1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**141.30**	**283**	PKhKP	PKPpre	00 24 40.5	
	comp=Z,0.6nm,1.0s,baz=358,slow=2.4,SNR=3.1						
TORD				PKP	**PKPdf**	**00 24 47.1**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=65,slow=2.4,SNR=5.0						
DBIC	**Dimbokro**	**148.07**	**273**	PKPbc	**PKPbc**	**00 25 01.4**	**+0.5**
	comp=Z,6.9nm,0.9s,baz=83,slow=2.2,SNR=5.2						

IDC 27 00:05:19.1±2.3,**6°.95S×127°.58E,h0**km,**mb3.9**/1, **mbtmp3.5**/3,**ML3.5**/2,**Error ellipse: s-maj=297.8km s-min=30.6km az=64.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.49**	**154**	Pn	Pn	00 08 44.3	-1.3
	0.2nm,0.3s,baz=330,slow=14,SNR=8.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.70**	**161**	P	P	00 09 28.2	0.0
	0.1nm,0.3s,baz=340,slow=9.5,SNR=4.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**66.89**	**328**	P	P	00 16 13.2	0.0
	0.6nm,0.4s,baz=128,slow=7.8,SNR=18						
	0.6nm,0.4s						

IDC ***27*** *00:08:11.0±0.4,6°.40S×143°.52E,h0km,mb4.7/21, mbtmp4.7/24,ML4.4/2,MS4.3/27,Error ellipse: s-maj=19.1km s-min=9.3km az=93.0*

BJI ***27*** *00:08:10.5±0.0,6°.52S×143°.86E,h22km,mb4.8/66, mB5.1/36,Ms4.6/27,Ms7 4.3/32*

MOS ***27*** *00:08:11.4±0.8,6°.40S×143°.35E,h12km,mb5.0/47,Error ellipse: s-maj=9.6km s-min=5.3km az=113.2*

NEIC ***27*** *00:08:13.0±1.3,6°.36S±0°.03×143°.40E±0°.06,h10km±1km, mb5.2/151,Error ellipse: s-maj=11.0km s-min=2.8km az=290.0*

DJA ***27*** *00:08:16.6±0.6,7°S±3°×14°3E±°,h32km±5km,M5.0/41, mb5.0/41,mB5.5/19,MLv5.4/5,Mw(mB)4.9/19, MwMwp5.0/1,Mwp5.3/1*

GCMT ***27*** *00:08:18.0±0.2,6°.41S±0°.01×143°.38E±0°.01,h26km, MW5.1/114,Moment Tensor Solution. s70,c96; s114,c162; Duration: 0 Moment tensor: Scale 1016Nm; Mrr3.00±.13; Mθθ-2.00±.10; Mϕϕ-1.00±.10; Mrθ-3.09±.21; Mθϕ3.05±.07; Mϕr-1.43±.20; Best double couple: M05.24900×1016 NP1:ϕ±277.00000°,δ66.00000°, λ51.00000°. NP2:ϕs161.00000°,δ45.00000°,λ145.00000°. Principal axes: T 5.5890, Plg52.0000°, Azm141.0000°; N -0.6810, Plg35.0000°, Azm295.0000°; P -4.9080, Plg12.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 00:08:14.0±0.5,**6°.47S**±0°.04×**143°.40E**±0°.04,**h18**km±2km, **h18**km:**pP-P,n429,** σ1**s24**/426,**mb5.0**/152,**MS4.3**/39, **19C-9D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.59**	**236**	P	**Pn**	**00 09 09.8**	**+1.0**
PMG	**Port Moresby**	**4.72**	**128**	Pn	**Pn**	**00 09 25.2**	**+0.8**
PMG				Sn	**Sn**	**00 10 18.9**	**+0.1**
PMG	**Port Moresby**	**4.72**	**128**	P	**Pn**	**00 09 25.6**	**+1.2**
PMG	**Port Moresby**	**4.72**	**128**	*i*P	**Pn**	**00 09 25.2**	**+0.8**
PMG	**Port Moresby**	**4.72**	**128**	Pn	**Pn**	**00 09 24.8**	**+0.4**
	192nm,0.6s,baz=310,slow=8.6,SNR=22						
PMG				Sn	**Sn**	**00 10 19.8**	**+1.1**
	32nm,0.3s,baz=305,slow=17,SNR=5.9						
GENI	**Genyem**	**5.03**	**320**	P	**Pn**	**00 09 29.4**	**+0.9**
	454nm,1.4s,4.9nm						
MANU	**Manus Island**	**5.91**	**42**	Pn	**Pn**	**00 09 42.5**	**+1.7**
SMPI	**Sarmi**	**6.46**	**313**	P	**Pn**	**00 09 49.1**	**+0.8**
	169nm,1.3s,1.3nm						
COEN	**Coen**	**7.44**	**182**	P	**Pn**	**00 10 02.9**	**+1.2**
	baz=7.4						
COEN	**Coen**	**7.44**	**182**	Pn	**Pn**	**00 10 03.4**	**+1.6**
COEN	**Coen**	**7.44**	**182**	P	Pn	00 10 07.0	+5.2
RABL	**Rabaul**	**9.01**	**76**	Pn	**Pn**	**00 10 25.9**	**+2.6**
MTSU	**Mount Surprise**	**11.62**	**176**	P	**Pn**	**00 11 02.2**	**+3.1**
	baz=12,SNR=5.5						
FAKI	**Fak Fak**	**11.66**	**287**	Pn	**Pn**	**00 10 57.7**	**-2.0**
SAUI	**Saumlaki**	**12.10**	**262**		**Pn**	**00 11 05.0**	**-0.6**
SAUI	**Saumlaki**	**12.10**	**262**	P	**Pn**	**00 11 05.6**	**-0.1**
	434nm,0.8s						
KDU	**Kakadu**	**12.42**	**239**	P	**Pn**	**00 11 10.1**	**+0.1**
	baz=12,SNR=4.9						
TV1H	**Townsville Har**	**13.13**	**166**	P	**P**	**00 11 25.2**	**-4.6**
	38nm,0.8s						
SWI	**Sorong**	**13.34**	**294**	P	**Pn**	**00 11 23.0**	**+0.5**
	46nm,0.8s,2μm						
MTN	**Manton Dam**	**13.65**	**241**	Pn	**Pn**	**00 11 27.8**	**+1.0**
DRS	**Darwin Rock St**	**13.68**	**243**	P	**Pn**	**00 11 28.9**	**+1.7**
	262nm,0.9s						
CTA	**Charters Tower**	**13.81**	**169**	Pn	**Pn**	**00 11 30.5**	**+1.5**
	0.4nm,0.3s,baz=350,slow=13,SNR=5.4						
CTA				Lg	Lg	00 15 31.6	
	0.3nm,0.3s,baz=260,slow=17,SNR=2.3						
CTA				LR	LR	00 17 20.2	
	comp=Z,4μm,18.1s,baz=354,slow=40						
	5.1nm,0.6s						
CTAO	**Charters Tower**	**13.81**	**169**	Pn	**Pn**	**00 11 31.1**	**+2.0**
CTAO	**Charters Tower**	**13.81**	**169**	P	**Pn**	**00 11 35.4**	**-2.0**
CTAO	**Charters Tower**	**13.81**	**169**	P	**Pn**	**00 11 31.1**	**+2.0**
QIS	**Mount Isa**	**14.48**	**194**	P	**Pn**	**00 11 39.8**	**+1.7**
	baz=14,SNR=11						
WB0	**Warramunga Arr**	**15.85**	**213**		**Pn**	**00 11 57.3**	**+0.9**
WR0	**Warramunga Arr**	**15.93**	**212**	Pn	**Pn**	**00 11 58.3**	**+0.9**
WRAB	**Tennant Creek**	**16.01**	**212**		**Pn**	**00 11 59.0**	**+0.6**
WRAB	**Tennant Creek**	**16.01**	**212**	⫝*e*P	**Pn**	**00 11 57.3**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,42nm,0.9s						
WB2	**Warramunga Arr**	**16.02**	**212**	Pn	**Pn**	**00 11 59.3**	**+0.8**
WC3	**Warramunga Arr**	**16.02**	**212**	P	**Pn**	**00 11 58.1**	**-0.4**
	baz=16						
WRA	**Warramunga Arr**	**16.02**	**212**	Pn	**Pn**	**00 11 56.8**	**-1.8**
WRA	**Warramunga Arr**	**16.02**	**212**	*i*P	**Pn**	**00 11 58.0**	**-0.6**
WRA				pmax	pmax		
	comp=Z,25nm,0.7s						
WRA	**Warramunga Arr**	**16.02**	**212**	Pn	**Pn**	**00 11 57.8**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=34,slow=13,SNR=14						
WRA				Sn	**Sn**	**00 14 50.7**	**-5.3**
	comp=Z,1.8nm,0.3s,baz=21,slow=24,SNR=1.6						
WRA				Lg	Lg	00 16 42.4	
	comp=Z,1.8nm,0.3s,baz=29,slow=29,SNR=4.6						
	comp=Z,25nm,0.7s						
NLAI	**Namlea**	**16.56**	**280**	P	**P**	**00 12 07.0**	**-0.9**
	comp=Z,39nm,1.3s						
HNR	**Honiara**	**16.64**	**101**		**Pn**	**00 12 07.4**	**+0.9**
HNR	**Honiara**	**16.64**	**101**	P	**Pn**	**00 12 00.7**	**-5.8**
HNR	**Honiara**	**16.64**	**101**	P	**Pn**	**00 12 07.4**	**+0.9**
HNR				pmax	pmax		
	comp=Z,484nm,1.3s						
HNR	**Honiara**	**16.64**	**101**	Pn	Pn	00 11 56.6	-10
	comp=Z,386nm,0.3s,baz=223,slow=19,SNR=2.5						
LBMI	**Labuha**	**16.89**	**289**	P	**Pn**	**00 12 10.3**	**+0.6**
	comp=Z,84nm,1.1s,comp=Z,3μm						
KNRA	**Kununurra**	**17.02**	**236**	Pn	**Pn**	**00 12 09.6**	**-1.6**
KNRA				IAmb	IAmb	00 12 18.0	
	comp=Z,117nm,0.7s						
SANI	**Sanana**	**17.91**	**283**	P	**P**	**00 12 23.7**	**+0.8**
	comp=Z,55nm,0.9s						
SOEI	**Soe**	**19.22**	**259**		**P**	**00 12 36.8**	**-0.7**
SOEI	**Soe**	**19.22**	**259**	P	**P**	**00 12 34.4**	**-3.1**
SOEI	**Soe**	**19.22**	**259**	P	**Pn**	**00 12 38.6**	**+0.1**
	comp=Z,211nm,0.9s,comp=Z,2μm						
AS31	**Alice Springs**	**19.38**	**207**	P	**Pn**	**00 12 42.7**	**+2.5**
AS31				IAmb	IAmb	00 12 44.1	
	comp=Z,98nm,0.8s						
ASAR	**Alice Springs**	**19.38**	**207**	Pn	**Pn**	**00 12 41.4**	**+1.2**
ASAR	**Alice Springs**	**19.38**	**207**	P	**Pn**	**00 12 41.4**	**+1.2**
ASAR	**Alice Springs**	**19.38**	**207**	P	**Pn**	**00 12 41.9**	**+1.6**
	comp=Z,317nm,0.8s,baz=35,slow=9.8,SNR=230						
ASAR				S	**S**	**00 16 21.1**	**+3.3**
	comp=Z,9.9nm,0.8s,baz=25,slow=27,SNR=2.1						
ASAR				Lg	Lg	00 18 29.8	
	comp=Z,0.7nm,0.3s,baz=21,slow=29,SNR=4.5						
ASAR				LR	LR	00 20 52.6	
	comp=Z,2μm,20.2s,baz=38,slow=39						
ASPA	**Alice Springs**	**19.38**	**207**	P	**Pn**	**00 12 42.4**	**+2.2**
	baz=19						
PATS	**Pohnpei**	**19.90**	**49**	P	**P**	**00 12 45.0**	**+0.3**
QLP	**Quilpie**	**20.01**	**178**	P	Pn	00 12 47.9	+0.2
	baz=20,SNR=9.8						
QLP	**Quilpie**	**20.01**	**178**	P	Pn	00 12 49.7	+2.0
EIDS	**Eidsvold**	**20.18**	**159**	P	Pn	00 12 50.6	+1.0
	baz=20,SNR=9.6						
EIDS	**Eidsvold**	**20.18**	**159**		Pn	00 12 49.2	-0.4
EIDS	**Eidsvold**	**20.18**	**159**	P	Pn	00 12 51.1	+1.5
FITZ	**Fitzroy Crossi**	**20.82**	**235**	P	**P**	**00 12 55.8**	**+1.0**
	baz=21,SNR=18						
FITZ	**Fitzroy Crossi**	**20.82**	**235**		**P**	**00 12 55.8**	**+1.0**
MMRI	**Maumere**	**21.09**	**263**	P	**P**	**00 12 58.8**	**+1.1**
MMRI				IAmb	IAmb	00 13 14.9	
	comp=Z,121nm,1.3s						
LUWI	**Luwuk**	**21.28**	**284**	P	**P**	**00 13 00.8**	**+1.2**
LUWI				IAmb	IAmb	00 13 21.0	
	comp=Z,107nm,1.1s						
LUWI	**Luwuk**	**21.28**	**284**	P	**P**	**00 13 01.3**	**+1.6**
	comp=Z,93nm,1.2s,comp=Z,3μm						
INKA	**Innaminka**	**21.30**	**186**	P	**P**	**00 13 03.0**	**+3.2**
EDFI	**Ende, Flores**	**21.64**	**263**	P	**P**	**00 13 03.7**	**0.0**
	comp=Z,50nm,1.1s,comp=Z,584nm						
DAV	**Davao City (W)**	**22.30**	**307**	LR	LR	00 23 45.6	
	comp=Z,279nm,18.3s,baz=149,slow=42						
OOD	**Oodnadatta**	**22.43**	**198**	P	**P**	**00 13 14.7**	**+2.7**
WRKA	**Warakurna**	**23.45**	**216**	P	**P**	**00 13 23.1**	**+0.5**
	baz=23,SNR=25						
KAPI	**Kappang**	**23.58**	**272**	P	**P**	**00 13 24.4**	**+0.5**
KAPI				IAmb	IAmb	00 13 27.1	
	comp=Z,80nm,1.0s						
KAPI	**Kappang**	**23.58**	**272**	⫝*e*P	**P**	**00 13 23.6**	**-0.3**
KAPI				pmax	pmax		
	comp=Z,102nm,1.1s						
TTSI	**Tana Toraja**	**23.75**	**277**	P	**P**	**00 13 27.0**	**+1.5**
	comp=Z,35nm,1.5s,comp=Z,1μm						
TOLI2	**Tolitoli**	**23.80**	**288**	P	**P**

QIZ LR LR
comp=Z,440nm,3.7s
QIZ LR LR
comp=Z,220nm,16.7s
QIZ LR LR
comp=Z,280nm,23.5s
QIZ LR LR
comp=Z,300nm,22.7s
RAO Raoul Island 42.91 127 LR LR 00 31 29.3
comp=Z,359nm,22.0s,baz=110,slow=33
MJAR Matsushiro Arr 43.06 354 P **P** **00 16 11.5 -1.4**
comp=Z,2.0nm,0.6s,baz=178,slow=9.7,SNR=7.4
MJAR LR LR 00 33 39.2
comp=Z,332nm,20.6s,baz=143,slow=36
comp=Z,2.0nm,0.6s
MAJO Matsushiro 43.07 354⇑ *e*P **P** **00 16 11.8 -1.1**
MAJO pmax pmax
comp=Z,12nm,1.1s
TGRZ Tauranga 43.10 141 P P 00 16 23.0 +10
WTVZ West Tongariro 43.56 143 P **P** **00 16 20.8 +3.7**
NNVZ North Ngauruho 43.59 143 P **P** **00 16 20.8 +3.4**
NGZ Ngauruhoe 43.61 143 P **P** **00 16 20.9 +3.4**
TMVZ Te Maari 43.63 143 P **P** **00 16 21.2 +3.6**
OTVZ Oturere 43.64 143 P **P** **00 16 21.0 +3.3**
SNVZ South Ngauruho 43.64 143 P **P** **00 16 21.4 +3.6**
ETVZ East Tongariro 43.65 143 P **P** **00 16 20.8 +3.0**
URZ Urewera 43.96 141 LR LR 00 35 54.1
comp=Z,420nm,18.1s,baz=344,slow=38
DCZ Deep Cove 43.97 156 P **P** **00 16 21.3 +1.2**
DCZ IAmb IAmb 00 16 23.5
comp=Z,38nm,0.9s
BHHZ Black Hill Sta 44.08 143 P **P** **00 16 23.5 +2.3**
RTZ Ruatahuna 44.10 141 P **P** **00 16 22.4 +1.0**
RTZ Ruatahuna 44.10 141 P **P** **00 16 21.4 +0.1**
BKZ Black Stump Fm 44.14 142 P **P** **00 16 22.4 +0.8**
BKZ IAmb IAmb 00 16 24.5
comp=Z,42nm,0.9s
RUGZ Raukumara Rang 44.14 140 P **P** **00 16 24.5 +2.7**
MTHZ Maungataniwha 44.16 142 P **P** **00 16 23.7 +1.9**
TUWZ Tuamarina 44.16 147 P **P** **00 16 22.7 +1.0**
TCW Tory Channel 44.19 146 P **P** **00 16 22.5 +0.6**
KWHZ Kaweka Forest 44.26 143 P **P** **00 16 23.3 +0.6**
MWZ Matawai 44.27 141 P **P** **00 16 24.9 +2.2**
MLZ Mavora Lakes 44.29 155 P **P** **00 16 23.8 +1.0**
MLZ IAmb IAmb 00 16 25.4
comp=Z,39nm,0.9s
RPZ Rata Peaks 44.33 151 P **P** **00 16 23.9 +0.8**
RPZ IAmb IAmb 00 16 26.6
comp=Z,53nm,1.0s
RPZ Rata Peaks 44.33 151 LR LR 00 33 21.4
comp=Z,588nm,19.4s,baz=310,slow=34
PKGZ Pakihiroa 44.35 140 P **P** **00 16 25.9 +2.5**
PYZ Puysegur Point 44.36 157 P **P** **00 16 23.2 -0.1**
KRHZ Kereru 44.37 143 P **P** **00 16 25.3 +1.9**
LBZ Lake Benmore 44.43 153 P **P** **00 16 25.0 +1.2**
LBZ IAmb IAmb 00 16 25.6
comp=Z,37nm,1.1s
PNHZ Pukenui 44.44 143 P **P** **00 16 25.9 +1.9**
TWGZ Tauwhareparae 44.46 140 P **P** **00 16 24.6 +0.4**
WMGZ Waiomatatini S 44.53 140 P **P** **00 16 26.9 +2.2**
MRZ Mangatainoka R 44.56 145 P **P** **00 16 25.4 +0.4**
MRZ IAmb IAmb 00 16 26.6
comp=Z,44nm,1.1s
KHZ Kahutara 44.63 148 P **P** **00 16 25.5 +0.1**
KHZ IAmb IAmb 00 16 27.4
comp=Z,38nm,0.9s
GVZ Greta Valley S 44.76 149 P **P** **00 16 26.9 +0.4**
NJ2 Nanjing 44.90 330 *e*P **P** **00 16 29.3 +1.6**
NJ2 pP **pP** **00 16 32.0 -1.8**
NJ2 sP **sP** **00 16 34.0 -2.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,300nm,6.6s
BFZ Birch Farm 44.96 144 P **P** **00 16 28.0 -0.1**
BFZ Birch Farm 44.96 144 P **P** **00 16 29.4 +1.3**
RPSI Rantau Prapat 45.33 280 P **P** **00 16 30.2 -1.3**
PSI Prapat 45.35 280 P **P** **00 16 30.2 -1.6**
PSI pmax pmax
comp=Z,13nm,0.9s
KSAR Wonju Array Be 46.03 343 P **P** **00 16 36.2 -0.4**
KSAR Wonju Array Be 46.03 343 P **P** **00 16 36.2 -0.4**
KSRS Korea Array 46.03 343 P **P** **00 16 36.5 0.0**
comp=Z,7.6nm,0.9s,baz=163,slow=9.4,SNR=18
KSRS LR LR 00 33 41.0
comp=Z,204nm,21.9s,baz=160,slow=33
comp=Z,7.6nm,0.9s
WHN Wuhan 46.15 324 ⇓P **P** **00 16 39.5 +1.9**
WHN sP **sP** **00 16 52.3 +6.4**
WHN S **S** **00 23 25.0 +2.0**
WHN LR LR
comp=Z,840nm,21.4s
PHRA Phrae 49.28 301 P **P** **00 17 02.9 +0.8**
CRAI Chiangrai 49.94 303 P **P** **00 17 05.6 -1.5**
LYN LuoYang 50.19 326 ⇓P **P** **00 17 09.3 +0.5**
LYN S **S** **00 24 20.5 +0.5**
LYN pmax pmax
comp=Z,15nm,1.3s
LYN pmax pmax
comp=Z,110nm,7.3s
LYN LR LR
comp=Z,410nm,21.0s
LYN LR LR
comp=Z,210nm,16.1s
LYN LR LR
comp=Z,590nm,19.1s
CMAR Chiang Mai Arr 50.36 300 P **P** **00 17 09.8 -0.5**
CMAR Chiang Mai Arr 50.36 300 P **P** **00 17 11.8 +1.4**
comp=Z,2.4nm,0.4s,baz=124,slow=5.7,SNR=15
CMAR LR LR 00 40 39.3
comp=Z,52nm,18.9s,baz=135,slow=39
comp=Z,2.4nm,0.4s
KMI Kunming 50.51 310 ⇑P **P** **00 17 12.5 +0.8**
KMI S **S** **00 24 25.5 +0.2**
KMI pmax pmax
comp=Z,14nm,1.1s
KMI LR LR
comp=Z,150nm,28.6s
KMI LR LR
comp=Z,220nm,19.5s
KMI LR LR
comp=Z,320nm,22.7s
CHTO Chiang Mai 50.51 301 P **P** **00 17 10.9 -0.6**
CHTO Chiang Mai 50.51 301 P **P** **00 17 10.9 -0.6**
CHTO pmax pmax
comp=Z,7.0nm,0.9s
HNS HongShan 51.21 331 ⇑P **P** **00 17 16.3 -0.1**
HNS S **S** **00 24 34.5 +0.4**
HNS pmax pmax
comp=Z,10.0nm,1.0s
HNS LR LR
comp=Z,310nm,20.7s
HNS LR LR
comp=Z,250nm,23.9s
HNS LR LR
comp=Z,340nm,22.3s
USRK Ussuriysk Ar. 51.48 350 P **P** **00 17 18.5 +0.1**
comp=Z,9.5nm,0.8s,baz=154,slow=6.8,SNR=9.2
USRK LR LR 00 36 11.5
comp=Z,352nm,21.6s,baz=163,slow=33
comp=Z,9.5nm,0.8s
XAN Xi'an 51.84 323 P **P** **00 17 21.3 0.0**
XAN pP pP 00 17 27.3 -0.2
XAN S **S** **00 24 42.5 -0.7**
XAN pmax pmax
comp=Z,20nm,1.2s
XAN pmax pmax
comp=Z,150nm,3.9s
XAN LR LR
comp=Z,260nm,16.2s
XAN LR LR
comp=Z,190nm,15.6s
XAN LR LR
comp=Z,230nm,15.8s
PZH PanZhiHua 52.01 311 P **P** **00 17 23.5 +0.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,90nm,4.8s
MDJ Mudanjiang 52.35 348 P **P** **00 17 23.8 -1.1**
MDJ pmax pmax
comp=Z,18nm,1.5s
MDJ pmax pmax
comp=Z,310nm,4.2s
CN2 Changchun 52.61 344 P **P** **00 17 28.5 +1.7**
CN2 S **S** **00 24 54.5 +1.3**

CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,300nm,19.0s
BJT Baijiatuau 52.64 334 P **P** **00 17 26.3 -0.8**
BJT Baijiatuau 52.64 334 P **P** **00 17 26.3 -0.8**
BJT pmax pmax
comp=Z,15nm,1.0s
BJI Beijing 52.66 334 P **P** **00 17 27.0 -0.2**
BJI pmax pmax
comp=Z,10.0nm,1.2s
BJI LR LR
comp=Z,180nm,21.5s
BJI LR LR
comp=Z,100nm,19.6s
BJI LR LR
comp=Z,260nm,22.0s
CD2 Chengdu 53.10 317 P **P** **00 17 31.5 +0.8**
CD2 S **S** **00 25 02.8 +2.3**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 LR LR
comp=Z,240nm,15.3s
YSS Yuzh-Sakhalins 53.20 359 *e*P **P** **00 17 32.1 +1.1**
YSS *e* 00 19 35.5
YSS *e*S **S** **00 25 01.4 +0.4**
TNCH TengChong 53.73 307 P **P** **00 17 35.5 -0.1**
TNCH pP pP 00 17 40.8 -0.9
TNCH S **S** **00 25 10.5 +1.0**
TNCH pmax pmax
comp=Z,29nm,0.5s
TNCH pmax pmax
comp=Z,180nm,4.3s
TNCH LR LR
comp=Z,170nm,18.0s
BNX BinXian 53.91 346 ⇓P **P** **00 17 36.0 -0.3**
BNX pmax pmax
comp=Z,22nm,0.7s
BNX pmax pmax
comp=Z,130nm,4.2s
HHC Hu-ho-hao-te 55.43 331 *e*P **P** **00 17 50.5 +2.9**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,110nm,6.1s
HHC LR LR
comp=Z,180nm,17.6s
HHC LR LR
comp=Z,120nm,18.3s
HHC LR LR
comp=Z,250nm,17.9s
BTO Baotou 56.00 330 *e*P **P** **00 17 52.5 +0.8**
BTO pP **pP** **00 17 57.0 -0.9**
BTO sP **sP** **00 17 59.5 -0.6**
BTO PP **PP** **00 19 59.3 +2.5**
BTO S **S** **00 25 40.0 +0.7**
BTO SS **SS** **00 29 26.3 +0.5**
BTO pmax pmax
comp=Z,20nm,1.4s
BTO pmax pmax
comp=Z,170nm,3.7s
BTO LR LR
comp=Z,620nm,16.9s
BTO LR LR
comp=Z,410nm,21.1s
BTO LR LR
comp=Z,880nm,19.9s
LZH Lanzhou 56.30 322 *e*P **P** **00 17 55.3 +1.3**
LZH pP pP 00 18 00.8 +0.7
LZH S **S** **00 25 44.5 +1.0**
LZH pmax pmax
comp=Z,25nm,1.1s
LZH LR LR
comp=Z,210nm,18.6s
LZH LR LR
comp=Z,210nm,16.8s
LZH LR LR
comp=Z,330nm,19.9s
KLR Kul'dur 56.40 351⇓ *e*P **P** **00 17 54.2 0.0**
KLR pmax pmax
comp=Z,26nm,1.7s
KLR Kul'dur 56.40 351 LR LR 00 38 18.2
comp=Z,257nm,21.0s,baz=159,slow=32
RAR Rarotonga 56.79 111 LR LR 00 40 27.9
comp=Z,138nm,20.9s,baz=300,slow=34
TYV Tymovskoe 57.11 359 *e*P **P** **00 17 59.2 0.0**
TYV pmax pmax
comp=Z,6.0nm,0.8s
TYV pmax pmax
comp=Z,100nm,3.3s
SKR Severo-Kuril's 57.98 10 *e*P P 00 17 54.3 -11
SKR pmax pmax
comp=Z,135nm,1.0s
SKR MLR MLR
comp=Z,1μm,19.0s
HEH HeiHe 58.17 348 *e*P **P** **00 18 06.5 -0.2**
HEH pmax pmax
comp=Z,7.0nm,1.0s
SHL Shillong 59.31 305 P **P** **00 18 14.9 -0.5**
SHL IAmb IAmb 00 18 17.1
comp=Z,19nm,1.1s
SHL Shillong 59.31 305 P **P** **00 18 14.9 -0.5**
SHL pmax pmax
comp=Z,19nm,1.1s
PEA0B Petropavlovsk- 60.58 10⇑ *e*P **P** **00 18 25.3 +2.0**
PETK Petropavlovsk- 60.58 10 P **P** **00 18 23.3 0.0**
PETK Petropavlovsk- 60.58 10 P **P** **00 18 23.3 0.0**
PETK Petropavlovsk- 60.58 10 P **P** **00 18 23.1 -0.3**
comp=Z,7.3nm,0.8s,baz=176,slow=5.5,SNR=7.5
comp=Z,7.3nm,0.8s
GTA Gaotai 60.87 322 P **P** **00 18 26.5 +0.7**
GTA pP sP 00 18 34.8 +0.4
GTA pmax pmax
comp=Z,9.0nm,1.0s
ZEA Zeya 61.52 349 *e*P **P** **00 18 29.5 -0.1**
ZEA pmax pmax
comp=Z,100nm,2.0s
ZEA pmax pmax
comp=Z,20nm,1.3s
LSA Lhasa 61.70 309 P **P** **00 18 31.9 -0.1**
LSA IAmb IAmb 00 18 34.6
comp=Z,10.0nm,0.9s
LSA Lhasa 61.70 309 P **P** **00 18 31.9 -0.1**
LSA pmax pmax
comp=Z,10.0nm,0.9s
ULN Ulaanbaatar 62.86 333 P **P** **00 18 39.2 +0.2**
ULN IAmb IAmb 00 18 49.4
comp=Z,10nm,1.1s
ULN Ulaanbaatar 62.86 333*c**e*P **P** **00 18 39.1 +0.1**
ULN pmax pmax
comp=Z,12nm,1.7s
SONM Songino Array 63.14 333 P **P** **00 18 40.9 +0.1**
SONM Songino Array 63.14 333 P **P** **00 18 41.3 +0.5**
comp=Z,1.8nm,0.7s,baz=145,slow=8.5,SNR=11
SONM LR LR 00 44 50.1
comp=Z,266nm,21.8s,baz=153,slow=35
comp=Z,1.8nm,0.7s
CIT Chita 63.61 340 *e*P **P** **00 18 44.6 +0.9**
CASY Casey 63.89 194 P **P** **00 18 45.6 +0.2**
PALK Pallekele 64.02 281 LR LR 00 48 14.6
comp=Z,135nm,21.9s,baz=218,slow=38
MA2 Magadan 66.10 4⇓ *e*P **P** **00 18 59.4 -0.3**
MA2 pmax pmax
comp=Z,29nm,2.5s
MA2 Magadan 66.10 4 P **P** **00 19 00.0 +0.3**
comp=Z,3.1nm,0.3s,baz=221,slow=19,SNR=4.0
comp=Z,3.1nm,0.3s
PPT Papeete 66.19 106 LR LR 00 43 54.5
comp=Z,169nm,22.0s,baz=190,slow=32
ZAK Zakamensk 66.39 333 *e*P **P** **00 19 01.8 -0.2**
ZAK pmax pmax
comp=Z,13nm,1.4s
BOD Bodaibo 68.36 344 *e*P **P** **00 19 13.1 -1.0**
BOD pmax pmax
comp=Z,13nm,1.8s
YAK Yakutsk 69.12 353 *e*P P 00 19 27.3 +8.5
YAK pmax pmax
comp=Z,17nm,1.3s
YAK pmax pmax
comp=N,7.0nm,1.3s

YAK pmax pmax
comp=E,2.0nm,1.1s
SEY Seymchan 69.55 4⇑ *e*P **P** **00 19 20.8 -0.6**
SEY pmax pmax
comp=Z,8.0nm,1.3s
SEY Seymchan 69.55 4 P **P** **00 19 20.7 -0.6**
comp=Z,3.6nm,0.7s,baz=184,slow=13,SNR=9.3
comp=Z,3.6nm,0.7s
WMQ Urumqi 70.86 321 *e*P **P** **00 19 31.0 +1.1**
WMQ sP sP 00 19 39.3 +0.7
WMQ pmax pmax
comp=Z,27nm,0.9s
VNDA Vanda 71.68 176 P **P** **00 19 35.0 +0.7**
VNDA Vanda 71.68 176 P **P** **00 19 35.0 +0.7**
VNDA pmax pmax
comp=Z,8.0nm,0.9s
VNDA Vanda 71.68 176 P **P** **00 19 34.5 +0.3**
comp=Z,5.5nm,0.8s,baz=338,slow=6.7,SNR=14
comp=Z,5.5nm,0.8s
SBA Scott Base 72.38 175 P **P** **00 19 39.4 +1.0**
SBA IAmb IAmb 00 19 50.9
comp=Z,40nm,1.4s
SBA Scott Base 72.38 175 P **P** **00 19 39.4 +1.0**
SBA pmax pmax
comp=Z,40nm,1.5s
DGZ Jazzator, Alta 73.98 326*c* *i*P **P** **00 19 48.6 0.0**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
ZSN Zaisan 74.35 323 *e*P **P** **00 19 50.5 -0.2**
baz=323
ZSN Zaisan 74.35 323 *e*P **P** **00 19 50.4 -0.2**
MK31 Makanchi Array 75.61 322 P **P** **00 19 57.9 -0.1**
MK31 Makanchi Array 75.61 322*c* *i*P **P** **00 19 58.0 +0.1**
MKAR Makanchi Array 75.61 322 P **P** **00 19 57.4 -0.5**
MKAR Makanchi Array 75.61 322 P **P** **00 19 58.1 +0.2**
comp=Z,10nm,0.9s,baz=108,slow=7.7,SNR=37
MKAR LR LR 00 53 10.7
comp=Z,84nm,21.5s,baz=89,slow=36
comp=Z,10nm,0.9s
MAKZ Makanchi 75.81 322 P **P** **00 19 58.6 -0.4**
MAKZ IAmb IAmb 00 20 09.9
comp=Z,19nm,1.1s
MAKZ Makanchi 75.81 322 P **P** **00 19 58.7 -0.4**
MAKZ pmax pmax
comp=Z,19nm,1.1s
SHLS Shalkode 75.93 317 *e*P **P** **00 19 58.5 -1.5**
comp=Z,13nm,1.3s,baz=318
SHLS Shalkode 75.93 317 *e*P **P** **00 19 58.4 -1.5**
SHLS pmax pmax
comp=Z,13nm,1.3s
BILL Bilibino 76.08 9 P **P** **00 19 59.8 -0.3**
BILL IAmb IAmb 00 20 09.8
comp=Z,19nm,1.3s
BILL Bilibino 76.08 9⇑ *e*P **P** **00 20 00.5 +0.4**
BILL pmax pmax
comp=Z,19nm,2.5s
UZB Uzynbulak 76.22 317 *e*P **P** **00 20 01.6 0.0**
comp=Z,5.9nm,0.6s,baz=317
UZB Uzynbulak 76.22 317 *e*P **P** **00 20 01.6 0.0**
UZB pmax pmax
comp=Z,6.0nm,0.6s
PRZ Przheval'sk 76.39 316 P **P** **00 20 03.0 +0.3**
PRZ Przheval'sk 76.39 316 P **P** **00 20 03.0 +0.3**
TARG Taragay, Kyrgy 76.53 315 P **P** **00 20 03.6 -0.1**
TARG Taragay, Kyrgy 76.53 315 P **P** **00 20 03.6 -0.1**
TARG pmax pmax
comp=Z,8.0nm,1.0s
KPKS Kokpek 76.57 317 *e*P **P** **00 20 03.4 -0.2**
comp=Z,10nm,1.2s,baz=317
KPKS Kokpek 76.57 317 *e*P **P** **00 20 03.3 -0.2**
KPKS pmax pmax
comp=Z,11nm,1.2s
SATY Saty 76.61 317 *e*P **P** **00 20 03.6 -0.2**
comp=Z,10nm,1.3s,baz=317
SATY Saty 76.61 317 *e*P **P** **00 20 03.6 -0.2**
SATY pmax pmax
comp=Z,10.0nm,1.3s
ZHN Zhinishke 76.63 317 *e*P **P** **00 20 03.7 -0.3**
baz=317
ZHN Zhinishke 76.63 317 *e*P **P** **00 20 03.6 -0.3**
KSH Kashi 77.05 313 P **P** **00 20 08.0 +1.6**
KSH pP pP 00 20 13.8 +1.1
KSH pmax pmax
comp=Z,11nm,1.1s
NIL Nilore 77.31 306 P **P** **00 20 07.8 0.0**
NIL Nilore 77.31 306 P **P** **00 20 07.8 0.0**
NIL pmax pmax
comp=Z,33nm,0.9s
TDK Taldyqorghan 77.35 319 *e*P **P** **00 20 07.5 -0.3**
comp=Z,11nm,0.8s,baz=319
TDK Taldyqorghan 77.35 319 *e*P **P** **00 20 07.4 -0.3**
TDK pmax pmax
comp=Z,11nm,0.8s
ZAA0 Zalesovo Array 77.54 329 P **P** **00 20 07.7 -0.9**
ZALV Zalesovo Beam 77.54 329 *i* P **P** **00 20 07.6 -1.0**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 77.54 329 P **P** **00 20 07.8 -0.8**
comp=Z,3.0nm,0.6s,baz=115,slow=6.7,SNR=14
comp=Z,3.0nm,0.6s
MDOK Medeo 77.57 317 *e*P **P** **00 20 09.1 -0.2**
baz=317
MDOK Medeo 77.57 317 *e*P **P** **00 20 09.0 -0.2**
TNSS Tian-Shan 77.59 317 *e*P **P** **00 20 09.5 -0.2**
baz=316
TNSS Tian-Shan 77.59 317 *e*P **P** **00 20 09.5 -0.2**
NRN Naryn 77.69 315 P **P** **00 20 09.2 -1.0**
NRN Naryn 77.69 315 P **P** **00 20 09.2 -1.0**
NRN pmax pmax
comp=Z,4.0nm,1.0s
ULHL Ulahol 77.80 316 P **P** **00 20 11.3 +0.7**
SNR=5.4
KUU Kurty 78.31 317 *e*P **P** **00 20 12.5 -0.8**
baz=317
KUU Kurty 78.31 317 *e*P **P** **00 20 12.4 -0.8**
TKM2 Tokmak 2 78.48 316 P **P** **00 20 14.8 +0.4**
SNR=8.7
TIXI Tiksi 78.55 355 P **P** **00 20 13.6 -0.2**
TIXI Tiksi 78.55 355⇓ *e*P **P** **00 20 12.1 -1.8**
TIXI pmax pmax
comp=Z,11nm,1.8s
TIXI Tiksi 78.55 355 P **P** **00 20 12.9 -0.9**
comp=Z,2.3nm,0.2s,baz=180,slow=2.8,SNR=5.2
comp=Z,2.3nm,0.2s
UCH Uchtor 79.00 315 P **P** **00 20 18.5 +0.9**
SNR=14
CHMS Chumysh 79.09 316 P **P** **00 20 17.7 +0.2**
SNR=5.4
AAK Ala-Archa 79.15 315 P **P** **00 20 18.6 +0.6**
SNR=7.1
AAK Ala-Archa 79.15 315 P **P** **00 20 17.4 -0.6**
AAK Ala-Archa 79.15 315*c* *i*P **P** **00 20 18.4 +0.4**
AAK pmax pmax
comp=Z,13nm,1.7s
AAK Ala-Archa 79.15 315 LR LR 00 59 42.3
comp=Z,60nm,18.2s,baz=102,slow=39
SGDS Sogindy 79.32 316 *e*P **P** **00 20 18.1 -0.7**
baz=316
SGDS Sogindy 79.32 316 *e*P **P** **00 20 18.1 -0.7**
USP Ospenovka 79.35 316 P **P** **00 20 19.4 +0.4**
SNR=17
KURK Kurchatov 79.47 324 P **P** **00 20 18.4 -1.0**
KURK Kurchatov 79.47 324*c* *i*P **P** **00 20 18.8 -0.6**
KURK pmax pmax
comp=Z,21nm,1.7s
KURBB Kurchatov Arra 79.49 324 P **P** **00 20 19.2 -0.2**
comp=Z,3.7nm,0.9s,baz=113,slow=4.4,SNR=22
comp=Z,3.7nm,0.9s
EKS2 Erkin-Say 79.66 315 P **P** **00 20 21.9 +1.2**
SNR=5.6
ARSB Arslanbob 79.80 314 P **P** **00 20 20.3 -1.3**
ARSB Arslanbob 79.80 314 P **P** **00 20 20.3 -1.3**
BTLS Baital 80.25 318 *e*P **P** **00 20 23.4 -0.3**
comp=Z,5.2nm,0.7s,baz=318
BTLS Baital 80.25 318 *e*P **P** **00 20 23.4 -0.3**
BTLS pmax pmax
comp=Z,5.0nm,0.7s
ANM Nome 80.34 20 P **P** **00 20 23.6 -0.2**
ANM Nome 80.34 20 P **P** **00 20 23.6 -0.2**
ANM pmax pmax
comp=Z,17nm,1.2s
MAW Mawson 80.44 203 LR LR 00 54 14.9
comp=Z,130nm,18.1s,baz=85,slow=34
KBL Kabul 80.91 306 P **P** **00 20 26.9 -0.9**
KBL Kabul 80.91 306 P **P** **00 20 26.9 -0.9**
KBL pmax pmax

	comp=Z,4.0nm,0.9s								
BTK	**Batken**	**81.00**	**312**	P	**P**	**00 20 27.4**	**-0.6**		
BTK	**Batken**	**81.00**	**312**	P	**P**	**00 20 27.4**	**-0.6**		
BTK				pmax	pmax				
	comp=Z,3.0nm,0.8s								
F15K	**North Star Dit**	**81.29**	**19**	P	**P**	**00 20 27.6**	**-1.2**		
F15K				IAmb	IAmb	00 20 30.2			
	comp=Z,22nm,1.3s								
J16K	**Anvik River**	**81.30**	**22**	P	**P**	**00 20 27.3**	**-1.7**		
J16K				IAmb	IAmb	00 20 39.5			
	comp=Z,22nm,1.0s								
DZA	**Taraz**	**81.44**	**315**	*e*P	**P**	**00 20 29.9**	**-0.4**		
	comp=Z,5.8nm,0.8s,baz=315								
DZA	**Taraz**	**81.44**	**315**	*e*P	**P**	**00 20 29.8**	**-0.4**		
DZA				pmax	pmax				
	comp=Z,6.0nm,0.8s								
I17K	**Unalakleet**	**81.60**	**22**	P	**P**	**00 20 29.6**	**-0.9**		
I17K				IAmb	IAmb	00 20 49.9			
	comp=Z,28nm,1.2s								
N18K	**Kilae Creek**	**81.85**	**26**	P	**P**	**00 20 32.2**	**+0.3**		
N18K				IAmb	IAmb	00 20 33.2			
	comp=Z,21nm,1.1s								
G16K	**Koyuk River**	**81.87**	**20**	P	**P**	**00 20 31.9**	**0.0**		
G16K				IAmb	IAmb	00 20 42.1			
	comp=Z,23nm,1.2s								
K17K	**Iditarod**	**81.88**	**23**	P	**P**	**00 20 32.4**	**+0.4**		
K17K				IAmb	IAmb	00 20 47.9			
	comp=Z,30nm,1.1s								
SIMJ	**Simiganj**	**81.97**	**310**	P	**P**	**00 20 32.0**	**-1.2**		
SIMJ				IAmb	IAmb	00 20 34.4			
	comp=Z,22nm,1.2s								
KK31	**Karatay Array**	**82.08**	**315**	P	**P**	**00 20 32.2**	**-1.3**		
KK31	**Karatay Array**	**82.08**	**315**	P	**P**	**00 20 32.2**	**-1.3**		
KK31				pmax	pmax				
	comp=Z,5.0nm,0.9s								
KKAR	**Karatay Array**	**82.08**	**315**	P	**P**	**00 20 32.7**	**-0.8**		
KKAR	**Karatay Array**	**82.08**	**315**	P	**P**	**00 20 32.5**	**-1.0**		
KKAR	**Karatay Array**	**82.08**	**315**	P	**P**	**00 20 32.7**	**-0.8**		
KKAR				pmax	pmax				
	comp=Z,5.0nm,0.9s								
IUG	**luzhnay**	**82.15**	**314**	*e*P	**P**	**00 20 33.6**	**-0.5**		
	comp=Z,22nm,1.7s,baz=314								
IUG	**luzhnay**	**82.15**	**314**	*e*P	**P**	**00 20 33.5**	**-0.5**		
IUG				pmax	pmax				
	comp=Z,22nm,1.7s								
H17K	**Granite Mounta**	**82.46**	**21**	P	**P**	**00 20 35.0**	**-0.1**		
H17K				IAmb	IAmb	00 20 35.8			
	comp=Z,9.3nm,0.8s								
BRLS	**Borolday**	**82.53**	**315**	*e*P	**P**	**00 20 35.3**	**-0.7**		
	baz=314								
BRLS	**Borolday**	**82.53**	**315**	*e*P	**P**	**00 20 35.2**	**-0.7**		
C16K	**Lisburne Hills**	**82.67**	**17**	P	**P**	**00 20 35.4**	**-0.5**		
C16K				IAmb	IAmb	00 20 38.6			
	comp=Z,9.6nm,0.9s								
BRZS	**Berezniki**	**82.75**	**322**	*e*P	**P**	**00 20 36.4**	**-0.5**		
	comp=Z,7.5nm,1.3s,baz=322								
BRZS	**Berezniki**	**82.75**	**322**	*e*P	**P**	**00 20 36.3**	**-0.5**		
BRZS				pmax	pmax				
	comp=Z,8.0nm,1.3s								
F17K	**Baldwin Pennin**	**82.84**	**19**	P	**P**	**00 20 36.9**	**0.0**		
F17K				IAmb	IAmb	00 20 52.0			
	comp=Z,19nm,1.2s								
G18K	**Tagagawik**	**83.42**	**21**	P	**P**	**00 20 39.0**	**-1.0**		
G18K				IAmb	IAmb	00 20 49.8			
	comp=Z,27nm,1.4s								
QSPA	**South Pole Qui**	**83.50**	**180**	P	**P**	**00 20 40.8**	**+0.2**		
QSPA	**South Pole Qui**	**83.50**	**180**	P	**P**	**00 20 40.9**	**+0.3**		
	comp=Z,36nm,1.0s,baz=337,slow=2.5,SNR=56								
	comp=Z,36nm,1.0s								
E18K	**Tukpahlearik C**	**83.61**	**19**	P	**P**	**00 20 40.6**	**-0.3**		
E18K				IAmb	IAmb	00 20 44.4			
	comp=Z,9.4nm,0.8s								
BRLK	**Bradley Lake**	**83.67**	**28**	P	**P**	**00 20 40.7**	**-0.7**		
K20K	**Telida**	**83.87**	**24**	P	**P**	**00 20 42.0**	**-0.4**		
K20K				IAmb	IAmb	00 20 43.6			
	comp=Z,14nm,0.9s								
H19K	**Roundabout Mou**	**84.02**	**21**	P	**P**	**00 20 42.7**	**-0.3**		
G19K	**Purcell Mounta**	**84.10**	**21**	P	**P**	**00 20 43.3**	**-0.2**		
G19K				IAmb	IAmb	00 20 44.7			
	comp=Z,17nm,1.1s								
C18K	**Utukok River**	**84.12**	**18**	P	**P**	**00 20 43.1**	**-0.5**		
F19K	**Shaleruckik Mo**	**84.22**	**20**	P	**P**	**00 20 43.7**	**-0.3**		
F19K				IAmb	IAmb	00 20 53.8			
	comp=Z,20nm,1.4s								
J20K	**Nowinta River**	**84.22**	**23**	P	**P**	**00 20 44.2**	**+0.1**		
J20K				IAmb	IAmb	00 20 55.0			
	comp=Z,17nm,1.0s								
NRIK	**Noril'sk**	**84.65**	**343**	P	**P**	**00 20 44.9**	**-1.3**		
NRIK	**Noril'sk**	**84.65**	**343**	*c i*P	**P**	**00 20 45.7**	**-0.4**		
NRIK				pmax	pmax				
	comp=Z,20nm,1.0s								
NRIK	**Noril'sk**	**84.65**	**343**	P	**P**	**00 20 45.8**	**-0.4**		
	comp=Z,14nm,0.9s,baz=118,slow=5.7,SNR=24								
	comp=Z,14nm,0.9s								
CAST	**Castle Rocks**	**84.70**	**24**	P	**P**	**00 20 45.9**	**-0.7**		
CAST				IAmb	IAmb	00 20 46.6			
	comp=Z,16nm,1.0s								
E19K	**Redstone River**	**84.73**	**19**	P	**P**	**00 20 46.6**	**0.0**		
E19K				IAmb	IAmb	00 20 47.7			
	comp=Z,14nm,0.8s								
M22K	**Willow**	**84.83**	**26**	P	**P**	**00 20 46.8**	**-0.3**		
C19K	**Lookout Ridge**	**84.86**	**18**	P	**P**	**00 20 47.0**	**-0.4**		
D19K	**Kuna River**	**84.98**	**18**	P	**P**	**00 20 47.5**	**-0.4**		
D19K				IAmb	IAmb	00 20 58.9			
	comp=Z,27nm,1.2s								
F20K	**Avaraart Lake**	**85.03**	**20**	P	**P**	**00 20 47.4**	**-0.7**		
F20K				IAmb	IAmb	00 20 49.4			
	comp=Z,11nm,0.9s								
BVAR	**Borovoye Array**	**85.06**	**325**	P	**P**	**00 20 48.4**	**-0.2**		
	comp=Z,13nm,0.8s,baz=108,slow=6.6,SNR=34								
	comp=Z,13nm,0.8s								
BRVK	**Borovoye**	**85.13**	**325**	P	**P**	**00 20 48.4**	**-0.5**		
BRVK				IAmb	IAmb	00 20 59.7			
	comp=Z,14nm,0.9s								
BRVK	**Borovoye**	**85.13**	**325**	*ce*P	**P**	**00 20 48.6**	**-0.3**		
BRVK				pmax	pmax				
	comp=Z,27nm,1.7s								
IMAR	**Indian Mountai**	**85.21**	**21**	P	**P**	**00 20 48.6**	**-0.4**		
H21K	**Melozitna Rive**	**85.41**	**22**	P	**P**	**00 20 50.2**	**+0.1**		
KNK	**Knik Glacier**	**85.42**	**27**	P	**P**	**00 20 49.5**	**-0.7**		
RER	**Riviere de l'E**	**85.52**	**249**	P	**P**	**00 20 51.4**	**-0.3**		
SML	**Sawmill**	**85.63**	**26**	P	**P**	**00 20 50.6**	**-0.7**		
F21K	**Alatna River**	**85.88**	**20**	P	**P**	**00 20 51.5**	**-0.9**		
MLY	**Manley**	**85.92**	**23**	P	**P**	**00 20 51.8**	**-0.9**		
MLY				IAmb	IAmb	00 21 02.1			
	comp=Z,27nm,1.2s								
RND	**Reindeer**	**86.02**	**25**	P	**P**	**00 20 51.9**	**-1.3**		
RND	**Reindeer**	**86.02**	**25**	P	**P**	**00 20 51.9**	**-1.3**		
RND				pmax	pmax				
	comp=Z,21nm,0.8s								
E21K	**Killik River**	**86.28**	**19**	P	**P**	**00 20 54.6**	**+0.2**		
E21K				IAmb	IAmb	00 20 55.7			
	comp=Z,8.8nm,0.8s								
HRA	**Herat**	**86.37**	**305**	P	**P**	**00 20 54.9**	**-0.9**		
HRA				IAmb	IAmb	00 20 57.8			
	comp=Z,12nm,1.4s								
NEA2	**Nenana**	**86.40**	**24**	P	**P**	**00 20 53.5**	**-1.5**		
NEA2				IAmb	IAmb	00 20 55.3			
	comp=Z,19nm,1.2s								
DHY	**Denali Highway**	**86.52**	**25**	P	**P**	**00 20 55.3**	**-0.5**		
DHY				IAmb	IAmb	00 20 56.1			
	comp=Z,16nm,0.8s								
WRH	**Wood River Hil**	**86.74**	**24**	P	**P**	**00 20 55.0**	**-1.6**		
WRH				IAmb	IAmb	00 20 56.3			
	comp=Z,19nm,1.1s								
KAIM	**Kayak Island**	**86.77**	**29**	P	**P**	**00 20 57.3**	**+0.4**		
E22K	**Anaktuvuk Pass**	**86.86**	**20**	P	**P**	**00 20 57.2**	**-0.1**		
E22K				IAmb	IAmb	00 20 58.9			
	comp=Z,7.5nm,0.8s								
G23K	**Bananza Creek**	**86.89**	**21**	P	**P**	**00 20 57.6**	**+0.2**		
G23K				IAmb	IAmb	00 20 58.3			
	comp=Z,7.2nm,0.8s								
D22K	**Ayikyak River**	**86.91**	**19**	P	**P**	**00 20 57.8**	**+0.4**		
CCB	**Clear Creek Bu**	**86.92**	**24**	P	**P**	**00 20 56.3**	**-1.2**		
CCB				IAmb	IAmb	00 21 05.8			
	comp=Z,26nm,1.2s								
ILAR	**Eielson Array**	**87.33**	**24**	P	**P**	**00 20 57.0**	**-2.6**		
ILAR	**Eielson Array**	**87.33**	**24**	P	**P**	**00 20 57.5**	**-2.1**		
	comp=Z,7.4nm,1.0s,baz=258,slow=5.1,SNR=8.3								
	comp=Z,7.4nm,1.0s								
WSAR	**Wadi Sarin**	**87.75**	**294**	LR	LR	01 07 57.0			
	comp=Z,46nm,18.2s,baz=120,slow=41								
G24K	**Hadweenzic Riv**	**87.81**	**22**	P	**P**	**00 21 01.4**	**-0.5**		
G24K				IAmb	IAmb	00 21 13.1			
	comp=Z,25nm,1.4s								

RIDG	**Independent Ri**	**87.81**	**25**	P	**P**	**00 21 01.5**	**-0.4**		
J25K	**Salcha River,**	**87.89**	**24**	P	**P**	**00 21 01.1**	**-1.2**		
F24K	**Squaw Lake**	**87.97**	**21**	P	**P**	**00 21 02.7**	**+0.1**		
C23K	**Itkillik River**	**87.98**	**18**	P	**P**	**00 21 02.3**	**-0.2**		
MESA	**MESA**	**88.02**	**29**	P	**P**	**00 21 03.1**	**-0.1**		
MENT	**Mentasta**	**88.04**	**26**	P	**P**	**00 21 02.6**	**-0.4**		
MENT				IAmb	IAmb	00 21 03.5			
	comp=Z,8.2nm,0.7s								
SCRK	**Sand Creek**	**88.25**	**25**	P	**P**	**00 21 03.7**	**-0.4**		
SCRK				IAmb	IAmb	00 21 13.3			
	comp=Z,8.6nm,1.1s								
D24K	**Happy Valley**	**88.28**	**19**	P	**P**	**00 21 03.4**	**-0.5**		
BARN	**Barnard Glacie**	**88.41**	**28**	P	**P**	**00 21 04.5**	**-0.5**		
CTGM	**Chitina Glacie**	**88.54**	**28**	P	**P**	**00 21 05.3**	**-0.2**		
J26L	**Joseph Creek**	**88.59**	**24**	P	**P**	**00 21 04.9**	**-0.7**		
J26L				IAmb	IAmb	00 21 15.9			
	comp=Z,21nm,1.2s								
FYU	**Fort Yukon**	**88.60**	**22**	P	**P**	**00 21 04.4**	**-1.1**		
M27K	**Edge Creek, AK**	**88.68**	**27**	P	**P**	**00 21 05.6**	**-0.6**		
L27K	**Beaver Creek,**	**88.90**	**26**	P	**P**	**00 21 07.2**	**+0.2**		
L27K				IAmb	IAmb	00 21 17.6			
	comp=Z,22nm,1.2s								
BCAR	**Beaver Creek A**	**88.92**	**26**	P	**P**	**00 21 06.8**	**-0.4**		
E25K	**Arctic Village**	**89.01**	**21**	P	**P**	**00 21 07.8**	**+0.3**		
E25K				IAmb	IAmb	00 21 18.0			
	comp=Z,15nm,1.1s								
K27K	**Chicken**	**89.07**	**25**	P	**P**	**00 21 08.2**	**+0.4**		
BMAR	**Burnt Mountain**	**89.13**	**22**	P	**P**	**00 21 08.2**	**+0.1**		
D25K	**Kavik River**	**89.16**	**20**	P	**P**	**00 21 08.3**	**+0.1**		
D25K				IAmb	IAmb	00 21 18.1			
	comp=Z,28nm,1.4s								
EGAK	**Eagle**	**89.66**	**25**	P	**P**	**00 21 10.3**	**-0.2**		
EGAK				IAmb	IAmb	00 21 20.7			
	comp=Z,27nm,1.5s								
DAWY	**Dawson**	**90.22**	**25**	P	**P**	**00 21 13.4**	**+0.2**		
DAWY				IAmb	IAmb	00 21 23.2			
	comp=Z,20nm,1.2s								
GEYT	**Alibeck**	**90.23**	**308**	P	**P**	**00 21 13.5**	**-0.4**		
GEYT	**Alibeck**	**90.23**	**308**	P	**P**	**00 21 13.5**	**-0.4**		
GEYT				pmax	pmax				
	comp=Z,7.0nm,1.3s								
GEYT	**Alibeck**	**90.23**	**308**	P	**P**	**00 21 13.2**	**-0.7**		
	comp=Z,2.0nm,1.0s,baz=88,slow=3.6,SNR=6.2								
	comp=Z,2.0nm,1.0s								
GYA0B	**ALIBECK ARRAY**	**90.23**	**308**	P	**P**	**00 21 13.4**	**-0.5**		
M29M	**Somme Creek**	**90.24**	**27**	P	**P**	**00 21 13.2**	**-0.2**		
M29M				IAmb	IAmb	00 21 24.0			
	comp=Z,19nm,1.2s								
I28M	**Miner Creek**	**90.34**	**24**	P	**P**	**00 21 13.6**	**-0.3**		
I28M				IAmb	IAmb	00 21 34.6			
	comp=Z,18nm,1.4s								
L29M	**L29M**	**90.54**	**26**	P	**P**	**00 21 14.3**	**-0.4**		
ABKAR	**Akbulak array**	**90.60**	**319**	P	**P**	**00 21 13.5**	**-1.7**		
K29M	**Barlow Dome**	**90.97**	**26**	P	**P**	**00 21 16.6**	**-0.2**		
K29M				IAmb	IAmb	00 21 27.5			
	comp=Z,20nm,1.2s								
J30M	**Hart River**	**91.63**	**25**	P	**P**	**00 21 19.1**	**-0.8**		
J30M				IAmb	IAmb	00 21 30.0			
	comp=Z,12nm,1.1s								
I30M	**Mount Dempster**	**91.74**	**25**	P	**P**	**00 21 19.3**	**-1.1**		
I30M				IAmb	IAmb	00 21 29.9			
	comp=Z,10nm,1.2s								
EPYK	**Eagle Plains**	**91.84**	**23**	P	**P**	**00 21 20.0**	**-0.7**		
EPYK				IAmb	IAmb	00 21 21.2			
	comp=Z,14nm,1.1s								
G30M	**tAoh Zrail Nji**	**92.16**	**23**	P	**P**	**00 21 21.3**	**-0.8**		
G30M				IAmb	IAmb	00 21 31.3			
	comp=Z,13nm,1.3s								
ARU	**Arti**	**92.49**	**326**	*d i*P	**P**	**00 21 22.8**	**-1.1**		
ARU						00 25 03.7			
ARU				S	**SKSac**	**00 31 55.9**	**-0.5**		
ARU				pmax	pmax				
	comp=Z,6.0nm,1.1s								
ARU	**Arti**	**92.49**	**326**	LR	LR	01 04 48.6			
	comp=Z,119nm,20.0s,baz=84,slow=37								
ELIB	**Princess Elisa**	**92.80**	**196**	*d*P	**P**	**00 21 24.8**	**-0.5**		
	comp=Z,10nm,1.0s								
G31M	**Satah River**	**92.90**	**23**	P	**P**	**00 21 24.4**	**-1.1**		
G31M				IAmb	IAmb	00 21 34.7			
	comp=Z,13nm,1.1s								
F31M	**Tsiigehtchic**	**93.19**	**23**	P	**P**	**00 21 26.0**	**-0.8**		
F31M				IAmb	IAmb	00 21 35.7			
	comp=Z,20nm,1.4s								
INK	**Inuvik**	**93.41**	**22**	P	**P**	**00 21 26.3**	**-1.5**		
INK				IAmb	IAmb	00 21 38.2			
	comp=Z,9.0nm,1.2s								
INK	**Inuvik**	**93.41**	**22**	P	**P**	**00 21 26.7**	**-1.1**		
	comp=Z,3.5nm,1.0s,baz=232,slow=5.3,SNR=6.1								
	comp=Z,3.5nm,1.0s								
DLBC	**Dease Lake**	**93.67**	**32**	LR	LR	00 58 26.2			
	comp=Z,206nm,19.9s,baz=282,slow=32								
BBB	**Bella Bella**	**94.13**	**38**	LR	LR	00 59 20.5			
	comp=Z,278nm,19.1s,baz=297,slow=33								
BELA	**Belgrano 2**	**95.77**	**180**	P	**P**	**00 21 38.1**	**-0.5**		
BELA				IAmb	IAmb	00 21 39.4			
	comp=Z,8.0nm,0.9s								
A36M	**Sachs Harbour**	**96.53**	**18**	P	**P**	**00 21 40.5**	**-1.6**		
A36M				IAmb	IAmb	00 21 49.6			
	comp=Z,5.1nm,1.1s								
SNAA	**Sanae**	**98.92**	**190**	LR	LR	01 09 01.2			
	comp=Z,513nm,18.1s,baz=136,slow=37								
NVAR	**Mina Array Bea**	**100.48**	**52**	P	**Pdif**	**00 22 00.6**	**-0.2**		
	comp=Z,1.0nm,1.0s,baz=267,slow=6.3,SNR=3.7								
YKA	**Yellowknife Ar**	**101.25**	**28**	P	**Pdif**	**00 22 02.4**	**-1.0**		
	comp=Z,0.3nm,0.8s,baz=277,slow=5.2,SNR=3.7								
YKA				PKiKP	**PKiKP**	**00 26 28.4**	**+0.5**		
	comp=Z,0.2nm,0.8s,baz=283,slow=2.3,SNR=3.9								
OBN	**Obninsk**	**104.89**	**325**	*i* P	**Pdif**	**00 22 18.0**	**-1.7**		
OBN				*i*		00 26 38.0			
TXAR	**Lajitas Array**	**113.12**	**61**	PKiKP	**PKiKP**	**00 26 50.8**	**-0.4**		
	comp=Z,0.8nm,0.9s,baz=327,slow=1.5,SNR=7.2								
NOA	**NORSAR Array B**	**115.00**	**337**	PKP	**PKiKP**	**00 26 52.7**	**-1.0**		
	comp=Z,0.3nm,0.6s,baz=52,slow=1.6,SNR=1.5								
ECSD	**EROS Data Cent**	**115.92**	**44**		**PKPdf**	**00 26 54.8**	**-1.2**		
CLL	**Collm**	**119.44**	**327**	*e*PKiKP	**PKPdf**	**00 27 02.0**	**-0.5**		
CLL	**Collm**	**119.44**	**327**	*e*PKiKP	**PKPdf**	**00 27 02.0**	**-0.5**		
CLL				*i* PP	**PP**	**00 28 21.7**	**-2.1**		
	comp=Z,11nm,1.3s								
GERES	**GERESS Array B**	**120.23**	**324**	PKP	**PKPdf**	**00 27 04.2**	**0.0**		
	comp=Z,0.5nm,0.6s,baz=108,slow=3.2,SNR=1.9								
LCAR	**Lake Charles**	**122.17**	**51**		**PKPdf**	**00 27 07.1**	**-1.1**		
PLCA	**Paso Flores**	**123.61**	**149**	PKP	**PKiKP**	**00 27 11.4**	**+0.1**		
	comp=Z,3.4nm,0.7s,baz=222,slow=2.1,SNR=11								
EKA	**Eskdalemuir Ar**	**124.45**	**338**	PKP	**PKPdf**	**00 27 11.7**	**-0.3**		
	comp=Z,0.7nm,0.6s,baz=40,slow=2.7,SNR=4.0								
N47A	**Urbana**	**124.50**	**44**	PKPdf	**PKPdf**	**00 27 11.5**	**-1.1**		
VLDQ	**Val d'Or**	**125.93**	**33**		**PKPdf**	**00 27 13.8**	**-1.2**		
SOCE	**Pocosol**	**132.37**	**82**		PKPpre	00 27 13.5			
LPAZ	**La Paz**	**141.46**	**126**	PKiKP	**PKPdf**	**00 27 44.8**	**-1.0**		
CPUP	**Villa Florida**	**141.69**	**149**	PKP	**PKPdf**	**00 27 45.0**	**-0.2**		
	comp=Z,4.3nm,0.8s,baz=241,slow=2.4,SNR=3.3								
TORD	**Torodi Ar. Bea**	**141.73**	**283**	PKiKP	PKPpre	00 27 40.0			
	comp=Z,2.1nm,0.7s,baz=66,slow=4.2,SNR=12								
SDV	**Santo Domingo**	**146.19**	**84**		**PKPdf**	**00 27 53.5**	**-0.1**		
ETMB	**Extrema**	**146.35**	**118**		**PKPdf**	**00 27 53.9**	**+0.2**		
AQDB	**Aquidauana**	**147.29**	**145**		**PKPbc**	**00 27 56.7**	**-0.7**		
KIC	**Kosan Boka**	**148.35**	**272**	*i* iPKP1	**PKPbc**	**00 28 00.8**	**+0.4**		
	comp=Z,41nm,0.8s								
DBIC	**Dimbokro**	**148.47**	**272**	PKPab	**PKPbc**	**00 28 01.2**	**+0.5**		
DBIC	**Dimbokro**	**148.47**	**272**	PKP2	**PKPbc**	**00 28 01.2**	**+0.5**		
DBIC	**Dimbokro**	**148.47**	**272**	PKPbc	**PKPbc**	**00 28 01.0**	**+0.3**		
	comp=Z,28nm,0.9s,baz=86,slow=2.4,SNR=29								
LIC	**Lamto**	**148.63**	**271**	*i* iPKP1	**PKPbc**	**00 28 01.5**	**+0.4**		
	comp=Z,122nm,0.8s								
TIC	**Tomodi**	**148.63**	**272**	*i* iPKP1	**PKPbc**	**00 28 01.4**	**+0.2**		
	comp=Z,45nm,0.8s								
BAUV	**El Baul**	**148.75**	**83**		**PKPdf**	**00 27 59.4**	**+1.7**		
HUMP	**Col San Antoni**	**149.21**	**65**		**PKPbc**	**00 28 01.8**	**-0.7**		
SAML	**Samuel**	**149.39**	**120**		**PKPdf**	**00 27 59.2**	**+0.5**		
SAML	**Samuel**	**149.39**	**120**	PKHKP	PKPpre	00 27 59.2			
BDFB	**Brasilia**	**155.29**	**153**	PKP	**PKPdf**	**00 28 07.0**	**-0.4**		
	comp=Z,2.4nm,0.7s,baz=256,slow=4.2,SNR=4.8								
BDFB				PKPbc	**sPKPdf**	**00 28 16.4**	**0.0**		
	comp=Z,4.3nm,0.7s,baz=172,slow=1.7,SNR=9.1								
BDFB				PKPab	**PKPab**	**00 28 31.4**	**-0.9**		
	comp=Z,3.9nm,0.7s,baz=194,slow=5.4,SNR=5.8								

NEIC ***27*** *00:16:59.3±2.0,56˚.05N±0˚.09×149˚.1W±0˚.1,h22km±9km, ML3.8/50,ML3.5(AEIC),Error ellipse: s-maj=12.8km s-min=8.8km az=174.0*

AEIC ***27*** *00:17:03.5±1.7,56˚.16N±0˚.08×149˚.2W±0˚.1,h10km±7km, Error ellipse: s-maj=12.3km s-min=9.4km az=180.0*

ISC 27 00:16:59.2±1.4,56˚.20N±0˚.09×149˚.13W±0˚.06,h10km,

n212, σ1$07/211, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.46**	**311**	Pn	**Pn**	**00 17 38.9**	**-0.5**
KDAK	**Kodiak Island**	**2.46**	**311**		**Sn**	**00 18 06.8**	**-2.7**
OHAK	**Old Harbor**	**2.51**	**296**		**Pn**	**00 17 38.9**	**-1.0**
OHAK	**Old Harbor**	**2.51**	**296**		**Sn**	**00 18 07.1**	**-3.5**
OHAK	**Old Harbor**	**2.51**	**296**	IAML		00 18 07.6	
	comp=N,106nm,0.2s						
OHAK				IAML		00 18 08.0	
	comp=E,76nm,0.5s						
OHAK	**Old Harbor**	**2.51**	**296**	P	**Pn**	**00 17 39.0**	**-1.0**
OHAK	**Old Harbor**	**2.51**	**296**	P	**Pn**	**00 17 38.9**	**-1.0**
	baz=114						
OHAK				S	**Sn**	**00 18 07.2**	**-3.4**
	baz=114						
SYI	**Shuyak Island**	**2.99**	**325**		**Pn**	**00 17 46.3**	**-0.3**
SYI	**Shuyak Island**	**2.99**	**325**		**Sn**	**00 18 21.1**	**-1.3**
SYI	**Shuyak Island**	**2.99**	**325**	IAML		00 18 22.5	
	comp=E,75nm,0.3s						
SYI				IAML		00 18 23.2	
	comp=N,77nm,0.3s						
Q20K	**Shuyak Island**	**2.99**	**325**	P	**Pn**	**00 17 46.5**	**-0.1**
	baz=143						
Q20K				S	**Sn**	**00 18 21.1**	**-1.4**
	baz=143						
CNPM	**China Poot**	**3.52**	**342**	IAML		00 18 36.2	
	comp=E,70nm,0.4s						
CNPM	**China Poot**	**3.52**	**342**		**Pn**	**00 17 53.5**	**-0.4**
CNPM					**Sn**	**00 18 33.3**	**-2.2**
Q23K	**Middleton Isla**	**3.56**	**24**		**Pn**	**00 17 54.3**	**-0.1**
Q23K	**Middleton Isla**	**3.56**	**24**	IAML		00 19 05.7	
	comp=N,244nm,1.4s						
Q23K				IAML		00 19 08.5	
	comp=E,240nm,1.4s						
MID	**Middleton Isla**	**3.56**	**24**		**Pn**	**00 17 54.4**	**-0.1**
BRSE	**Bradley Lake S**	**3.65**	**347**		**Pn**	**00 17 55.4**	**-0.3**
BRSE					**Sn**	**00 18 35.9**	**-2.9**
BRSE	**Bradley Lake S**	**3.65**	**347**	P	**Pn**	**00 17 55.4**	**-0.3**
	baz=166						
BRSE				S	**Sn**	**00 18 35.9**	**-2.9**
	baz=166						
Q19K	**Cape Douglas,**	**3.66**	**320**		**Pn**	**00 17 56.1**	**+0.3**
Q19K	**Cape Douglas,**	**3.66**	**320**	P	**Pn**	**00 17 56.1**	**+0.3**
	baz=137						
BRLK	**Bradley Lake**	**3.69**	**346**		**Pb**	**00 18 07.8**	**+3.3**
BRLK	**Bradley Lake**	**3.69**	**346**		**Pn**	**00 17 55.5**	**-0.8**
BRLK	**Bradley Lake**	**3.69**	**346**		**Sn**	**00 18 37.8**	**-2.0**
BRLK	**Bradley Lake**	**3.69**	**346**	IAML		00 18 38.3	
	comp=E,72nm,0.6s						
BRLK				IAML		00 18 41.9	
	comp=N,60nm,0.5s						
HOM	**Homer**	**3.71**	**340**		**Pn**	**00 17 56.6**	**+0.1**
P23K	**Montague Islan**	**3.91**	**13**		**Pn**	**00 17 59.1**	**-0.2**
P23K					**Sn**	**00 18 42.4**	**-2.9**
P23K	**Montague Islan**	**3.91**	**13**	P	**Pn**	**00 17 59.2**	**-0.2**
	baz=194						
P23K				S	**Sn**	**00 18 42.4**	**-2.9**
	baz=194						
SEW	**Seward**	**3.92**	**358**		**Pn**	**00 17 58.9**	**-0.4**
SEW					**Sn**	**00 18 41.2**	**-4.0**
SEW	**Seward**	**3.92**	**358**	P	**Pn**	**00 17 58.9**	**-0.4**
	baz=178

	baz=147						
PMR	Palmer	5.41	0	Pn	Pn	00 18 20.4	+0.7
MESA	MESA	5.50	41		Pn	00 18 21.6	+0.3
MESA	MESA baz=226	5.50	41	P	Pn	00 18 21.6	+0.3
P16K	Nushagak River	5.54	304		Pn	00 18 21.8	+0.2
P16K	Nushagak River baz=118	5.54	304	P	Pn	00 18 21.8	+0.2
CRQM	Cirque	5.54	32	Pn	Pn	00 18 22.4	+0.5
KLU	Klutina	5.56	16		Pn	00 18 22.5	+0.5
KLU	Klutina baz=199	5.56	16	P	Pn	00 18 22.5	+0.5
GHO	Glory Hole Cre	5.59	1	Pn	Pn	00 18 22.8	+0.4
SML	Sawmill	5.64	4	Pn	Pn	00 18 23.6	+0.6
ISLE	Juniper Island	5.67	36		Pn	00 18 23.9	+0.3
BAGL	Bagley Icefiel	5.67	38		Pn	00 18 24.0	+0.5
N18K	Kilae Creek	5.72	324		Pn	00 18 23.4	-0.7
N18K	Kilae Creek baz=139	5.72	324	P	Pn	00 18 23.4	-0.7
SCM	Sheep Creek Mo	5.72	9	Pn	Pn	00 18 25.5	+1.3
VRDI	Verde Repeater	5.84	28		Pn	00 18 26.0	+0.1
O16K	Kokwok River B	5.86	309		Pn	00 18 26.2	+0.2
O16K	Kokwok River B baz=122	5.86	309	P	Pn	00 18 26.2	+0.2
N25K	Chitina, Valde	5.91	22		Pn	00 18 27.4	+0.6
N25K	Chitina, Valde baz=205	5.91	22	P	Pn	00 18 27.3	+0.6
KIAG	Kiagna River	5.91	34		Pn	00 18 27.1	+0.2
SKT	Skwentna	5.92	349	Pn	Pn	00 18 26.8	-0.1
GLB	Gilahina Butte	5.94	26	Pn	Pn	00 18 28.0	+0.9
SVW2	Sparrevohn	5.95	328	Pn	Pn	00 18 26.6	-0.7
TABL	Table Mountain	5.98	41	Pn	Pn	00 18 28.3	+0.4
M20K	Styx River	6.06	342	Pn	Pn	00 18 27.4	-1.4
N17K	Nushagak Hills	6.06	319	Pn	Pn	00 18 28.5	-0.3
PTPK	Patty Peak	6.08	32		Pn	00 18 30.1	+0.8
MCARA	McCarthy VSAT	6.09	29		Pn	00 18 29.8	+0.6
MCARA	McCarthy VSAT baz=214	6.09	29	P	Pn	00 18 29.8	+0.6
PCA	Pinnacle	6.11	47		Pn	00 18 29.9	+0.5
PINM	Pinnacle baz=234	6.11	47	P	Pn	00 18 29.9	+0.4
M24K	Tolsona, Glenn	6.11	13	Pn	Pn	00 18 31.5	+1.9
BARN	Barnard Glacie	6.24	36		Pn	00 18 31.9	+0.5
PNL	Peninsula	6.24	52		Pn	00 18 31.6	+0.3
PNL	Peninsula	6.24	52	P	Pn	00 18 31.9	+0.7
PNL	Peninsula baz=240	6.24	52	P	Pn	00 18 31.6	+0.3
CTG	Chitna Glacier baz=224	6.27	37	P	Pn	00 18 32.2	+0.4
CTGM	Chitina Glacie	6.28	37		Pn	00 18 32.2	+0.3
BCPM	Bancas Point	6.28	49		Pn	00 18 32.2	+0.4
LOGN	Logan Glacier	6.29	39		Pn	00 18 32.3	+0.2
M19K	Big River Lodg	6.33	337	Pn	Pn	00 18 33.3	+0.9
SDPT	Sand Point	6.46	267		Pn	00 18 32.5	-1.7
SDPT	Sand Point	6.46	267	P	Pn	00 18 33.7	-0.5
SDPT	Sand Point baz=78	6.46	267	P	Pn	00 18 33.5	-0.7
O15K	Ungalikthiuk R	6.46	302		Pn	00 18 34.5	+0.3
O15K	Ungalikthiuk R baz=113	6.46	302	P	Pn	00 18 34.6	+0.3
HARP	HAARP	6.54	16		Pn	00 18 36.7	+1.4
HARP	HAARP baz=200	6.54	16	P	Pn	00 18 36.7	+1.4
L19K	White Mountain	6.67	336	Pn	Pn	00 18 36.9	-0.3
M17K	Holitna River	6.76	324	Pn	Pn	00 18 38.3	-0.1
O29M	Mount Kennedy	6.92	49		Pn	00 18 41.8	+1.1
O29M	Mount Kennedy baz=238	6.92	49	P	Pn	00 18 41.8	+1.1
DHY	Denali Highway	6.95	7	Pn	Pn	00 18 42.5	+1.4
P29M	Windy Craggy	6.97	56		Pn	00 18 41.3	0.0
P29M	Windy Craggy baz=245	6.97	56	P	Pn	00 18 41.3	0.0
N15K	Kwethluk River	7.02	309	Pn	Pn	00 18 43.0	+1.1
M16K	Timber Creek	7.04	317		Pn	00 18 42.0	-0.2
M16K	Timber Creek baz=129	7.04	317	P	Pn	00 18 42.0	-0.2
L18K	Granite Mounta	7.17	330	Pn	Pn	00 18 43.0	-0.9
O14K	Tigyukauivet M	7.18	300		Pn	00 18 43.0	-1.1
O14K	Tigyukauivet M baz=110	7.18	300	P	Pn	00 18 44.4	+0.4
M27K	Edge Creek, AK	7.20	28	Pn	Pn	00 18 45.8	+1.3
RND	Reindeer	7.23	1	Pn	Pn	00 18 45.9	+1.0
S31K	Pelican	7.25	71		Pn	00 18 43.7	-1.3
S31K	Pelican baz=261	7.25	71	P	Pn	00 18 43.7	-1.3
TRF	Thorofare Moun	7.29	356	Pn	Pn	00 18 46.5	+0.7
CAST	Castle Rocks	7.39	350	Pn	Pn	00 18 48.2	+1.2
KTH	Kantishna Hill	7.43	354		Pn	00 18 47.3	-0.3
P30M	Million Dollar	7.54	54		Pn	00 18 49.9	+0.8
P30M	Million Dollar baz=244	7.54	54	P	Pn	00 18 50.1	+1.0
K20K	Telida	7.59	343	Pn	Pn	00 18 49.6	-0.2
HYT	Haines Junctio	7.65	48	Pn	Pn	00 18 51.6	+0.9
SIT	Sitka	7.67	78	Pn	Pn	00 18 48.5	-2.2
L16K	Owhat River	7.68	320		Pn	00 18 50.5	-0.4
L16K	Owhat River baz=132	7.68	320	P	Pn	00 18 50.5	-0.4
L27K	Beaver Creek,	7.81	25	Pn	Pn	00 18 52.4	-0.3
BCAR	Beaver Creek A	7.82	25	Pn	Pn	00 18 53.6	+0.7
RIDG	Independent Ri	7.86	14	Pn	Pn	00 18 55.3	+1.9
BPAW	Bear Paw Mtn.	7.98	354	Pn	Pn	00 18 55.4	+0.4
K17K	Iditarod	8.02	328	Pn	Pn	00 18 55.3	-0.4
SKAG	Skagway	8.05	60	Pn	Pn	00 18 56.9	+0.8
SKAG	Skagway	8.05	60	P	Pn	00 18 57.2	+1.1
BESE	Bessie Mountai	8.07	67		Pn	00 18 55.0	-1.4
M14K	Bethel	8.12	309	Pn	Pn	00 18 57.0	+0.1
N30M	Aishikik Lake	8.16	45	Pn	Pn	00 18 58.6	+0.9
R32K	Eaglecrest	8.20	69	Pn	Pn	00 18 55.9	-2.1
FALS	False Pass	8.22	266	P	Pn	00 18 57.8	-0.5
FALS	False Pass baz=75	8.22	266	P	Pn	00 18 58.0	-0.4
O30N	Mendenhall	8.22	51		Pn	00 18 58.8	+0.4
O30N	Mendenhall baz=242	8.22	51	P	Pn	00 18 58.8	+0.4
JIS	Juneau Island	8.27	69		Pn	00 18 58.9	-0.1
JIS	Juneau Island	8.27	69	P	Pn	00 18 59.1	+0.1
M29M	Somme Creek	8.29	37		Pn	00 19 00.6	+1.1
M29M	Somme Creek baz=226	8.29	37	P	Pn	00 19 00.6	+1.1
J20K	Nowinta River	8.38	345	Pn	Pn	00 19 00.4	-0.1
ISLZ	Isanotski Laza	8.42	266		Pn	00 18 60.0	-1.2
J19K	Poorman	8.46	340	Pn	Pn	00 19 01.4	-0.2
M13K	Dall Lake	8.59	305	Pn	Pn	00 19 03.9	+0.5
K27K	Chicken	8.60	21	Pn	Pn	00 19 04.7	+1.1
IL31		8.67	6	Pn	Pn	00 19 05.6	+1.2
ILAR	Eielson Array	8.67	6	Pn	Pn	00 19 05.6	+1.1
WHY	Whitehorse	8.70	53	Pn	Pn	00 19 06.1	+1.0
L14K	Kuka Creek	8.71	312	Pn	Pn	00 19 05.6	+0.5
J26L	Joseph Creek	8.77	16	Pn	Pn	00 19 07.1	+1.1
MDM	Murphy Dome	8.80	3	Pn	Pn	00 19 07.2	+0.9
K15K	Wolf Creek Mou	8.80	319		Pn	00 19 07.0	+0.7
L29M	L29M	8.88	34		Pn	00 19 08.5	+1.1
L29M	L29M baz=224	8.88	34	P	Pn	00 19 08.5	+1.1
P32M	Atlin	8.88	61		Pn	00 19 07.5	0.0
P32M	Atlin baz=254	8.88	61	P	Pn	00 19 07.5	0.0
U33K	Whale Pass	8.94	84		Pn	00 19 05.8	-2.3
U33K	Whale Pass baz=277	8.94	84	P	Pn	00 19 05.8	-2.3
M30M	Minto, Yukon	8.96	39	Pn	Pn	00 19 09.7	+1.2
I23K	Minto, Yukon-K	8.98	359	Pn	Pn	00 19 09.6	+0.9
Q32M	Nakina River	9.47	66	Pn	Pn	00 19 15.2	-0.5
P33M	Teslin, Yukon	9.49	58	Pn	Pn	00 19 16.2	+0.3
P33M	Teslin, Yukon baz=252	9.49	58	P	Pn	00 19 16.2	+0.3
I26K	Coal Creek Min	9.58	15	Pn	Pn	00 19 16.9	-0.2
K29M	Barlow Dome	9.60	32	Pn	Pn	00 19 18.7	+1.3
M31M	Drury Creek, Y	9.64	45	Pn	Pn	00 19 19.7	+1.8
H21K	Melozitna River	9.65	351	Pn	Pn	00 19 18.4	+0.5
N32M	Quiet Lake	9.71	53	Pn	Pn	00 19 19.6	+0.8
J14K	Nanvaranak Lak	9.82	318	Pn	Pn	00 19 21.0	+0.7
H18K	Honhosa River	10.04	337	Pn	Pn	00 19 24.1	+0.8
IMAR	Indian Mountai	10.06	349	Pn	Pn	00 19 23.5	-0.1
FARO	Faro, Yukon	10.08	47	Pn	Pn	00 19 24.7	+0.8
R33M	Jennings River	10.20	64	Pn	Pn	00 19 25.5	-0.1
J30M	Hart River	10.49	32	Pn	Pn	00 19 31.3	+1.6

*NEIC **27** 00:18:33.1±1.7,56.1°N±0.1°×150.0°W±0.1°,1,h20km±11km, ML3.3/20,ML3.1(AEIC),Error ellipse: s-maj=16.0km s-min=8.5km az=182.0*

AEIC 27 00:18:35.2±1.1,55.9N±0.1°×149.9W±0.1°,1,h10km±9km, Error ellipse: s-maj=19.5km s-min=10.4km az=179.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.27	306		Pn	00 19 07.2	-5.6
OHAK	Old Harbor	2.27	306		Sn	00 19 33.0	-7.8
KDAK	Kodiak Island	2.37	323	Pn	Pn	00 19 09.0	-5.1
KDAK	Kodiak Island	2.37	323		Sn	00 19 35.5	-7.6
KDAK	Kodiak Island	2.37	323		Pn	00 19 09.1	-5.0
SYI	Shuyak Island	3.01	335		Pn	00 19 17.8	-5.1
SYI	Shuyak Island	3.01	335	Pn	Pn	00 19 17.5	-5.3
SYI	Shuyak Island comp=N,40nm,1.1s	3.01	335	IAML		00 19 58.4	
SYI	comp=E,42nm,1.2s			IAML		00 20 03.3	
Q19K	Cape Douglas,	3.62	328		Pn	00 19 27.0	-4.3
Q19K	Cape Douglas, comp=N,225nm,1.1s	3.62	328	IAML		00 20 25.8	
Q19K	comp=E,321nm,1.4s			IAML		00 20 30.0	
CNPM	China Poot	3.68	349		Sn	00 20 08.8	-6.7
ACHA	Angle Creek He	3.74	310		Pn	00 19 28.5	-4.4
ANCK	Angle Creek	3.80	309		Pn	00 19 29.9	-3.9
BRSE	Bradley Lake S	3.85	354		Pn	00 19 28.6	-5.9
BRLK	Bradley Lake	3.88	353		Pn	00 19 29.6	-5.3
BRLK	comp=N,23nm,1.1s			IAML		00 19 59.8	
BRLK	comp=E,24nm,1.4s			IAML		00 20 51.7	
MID	Middleton Isla	4.00	27	Pn	Pn	00 19 32.2	-4.3
CNTC	Contact Creek	4.01	308		Pn	00 19 31.7	-5.0
P19K	Oil Pt	4.14	336		Pn	00 19 33.5	-4.9
P19K	Oil Pt comp=N,92nm,1.4s	4.14	336	IAML		00 20 25.6	
P19K	comp=E,80nm,0.8s			IAML		00 20 30.8	
P23K	Montague Islan	4.30	17		Pn	00 19 36.0	-4.6
P23K					Sn	00 20 22.3	-8.4
P18K	Big Mountain,	4.50	323		Pn	00 19 38.3	-5.1
P18K	Big Mountain, comp=E,12nm,1.3s	4.50	323	IAML		00 20 36.2	
KAIM	Kayak Island	4.97	34		Pn	00 19 45.1	-4.6
KAIM	Kayak Island comp=E,75nm,1.3s	4.97	34	IAML		00 20 22.1	
SUCK	Suckling Hills	5.29	36		Pn	00 19 49.4	-4.8
SUCK	Suckling Hills comp=E,38nm,1.3s	5.29	36	IAML		00 22 59.5	
SUCK	comp=N,54nm,1.5s			IAML		00 23 19.0	
PNL	Peninsula	6.76	52		Pn	00 20 09.5	-4.8

IDC 27 00:19:28.4±1.4,12.91N×142.34E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=55.3km s-min=28.1km az=88.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs 2.0nm,0.9s,baz=34,slow=10,SNR=6.8 2.0nm,0.9s	37.28	193	P	P	00 26 42.2	0.0
SONM	Songino Array 0.2nm,0.3s,baz=142,slow=7.3,SNR=2.0 0.2nm,0.3s	45.90	327	P	P	00 27 52.7	-0.2
MKAR	Makanchi Array 0.3nm,0.7s,baz=108,slow=8.4,SNR=4.4 0.3nm,0.7s	60.28	317	P	P	00 29 39.3	+0.5
BVAR	Borovoye Array 0.9nm,0.9s,baz=79,slow=7.5,SNR=3.7 0.9nm,0.9s	68.93	322	P	P	00 30 34.4	-0.9
ILAR	Eielson Array 0.4nm,0.7s,baz=244,slow=4.7,SNR=4.9 0.4nm,0.7s	70.23	25	P	P	00 30 43.4	+0.3

*IDC **27** 00:40:42.9±1.4,6.61S×146.62E,h0km,mb3.9/3, mbtmp3.9/5,ML3.4/1,MS3.1/1,Error ellipse: s-maj=41.8km s-min=23.3km az=94.0*

ISC 27 00:40:44.3±1.3,6.7S±0.1°×146.6E±0.3,h10km,n6,σ1§30/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby 26nm,0.5s,baz=344,slow=11,SNR=14	2.74	168	Pn	Pn	00 41 29.7	+1.3
PMG	9.3nm,0.3s,baz=344,slow=19,SNR=2.1			Sn	Sb	00 42 06.2	-0.9
PMG	comp=Z,330nm,18.6s,baz=162,slow=44			LR	LR	00 42 47.1	
WRA	Warramunga Arr 0.1nm,0.3s,baz=43,slow=13,SNR=5.9 1.8nm,0.9s	17.74	221	P	P	00 44 52.0	-0.5
ASAR	Alice Springs 2.6nm,0.8s,baz=38,slow=12,SNR=22 2.6nm,0.8s	20.81	215	P	Pn	00 45 27.1	-1.5
CMAR	Chiang Mai Arr 0.8nm,0.3s,baz=104,slow=6.6,SNR=1.9 0.8nm,0.3s	53.23	299	P	P	00 50 04.2	+0.7
ILAR	Eielson Array 0.9nm,0.7s,baz=245,slow=5.5,SNR=11 0.9nm,0.7s	86.28	23	P	P	00 53 25.9	-0.3
TORD	Torodi Ar. Bea 1.3nm,0.8s,baz=81,slow=3.5,SNR=6.9	144.87	283	PKP	PKPdf	01 00 21.5	-1.4

*IDC **27** 00:42:05.1±2.9,6.26N×126.61E,h71km±25km,mb3.7/11, mbtmp4.0/11,Error ellipse: s-maj=62.1km s-min=12.5km az=66.0*

*DJA **27** 00:42:06.2±1.6,6°N±7°×12°6E±°,h23km±19km,M4.8/10, mB5.2/7,mb4.9/10,MLv4.9/8,Mw(mB)4.5/7*

*NEIC **27** 00:42:07.5±1.1,6.23N±0.08×126.3E±0.1,h84km±8km, mb4.2/26,Error ellipse: s-maj=17.9km s-min=9.1km az=62.0*

ISC 27 00:42:05.6±0.5,6.24N±0.05×126.46E±0.08,h71km,n58, σ1§20/61,mb4.2/22,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W) 438nm,0.3s,baz=108,slow=13,SNR=12	1.20	313	P	Pn	00 42 27.4	+0.7
DAV	comp=Z,57nm,18.0s,baz=19,slow=24			LR	LR	00 42 37.0	
DAV	3µm,0.3s,baz=107,slow=20,SNR=8.0			S	Sn	00 42 44.4	+1.9
SGSI	Sangihe	2.70	200	P	Pn	00 42 47.3	+0.5
SGSI				S	Sn	00 43 18.5	0.0
TNTI	Ternate	5.51	171	Pn	Pn	00 43 26.3	+1.2
TNTI	Ternate 100nm,0.8s,2µm0.5nm	5.51	171	P	Pn	00 43 27.2	+2.1
TNTI	100nm,0.8s,2µm0.5nm			S	Sn	00 44 28.4	+1.2
GTOI	Gorontalo 130nm,0.6s,1µm0.5nm	6.55	212	P	Pn	00 43 38.7	-0.6
LBMI	Labuha 125nm,0.7s,2µm0.8nm	6.91	171	P	Pn	00 43 46.4	+2.1
TOLI2	Tolitoli	7.62	228	Pn	Pn	00 43 51.6	-2.4
LUWI	Luwuk	8.12	207	Pn	Pn	00 44 02.9	+2.1
LUWI	Luwuk 98nm,0.8s,2µm0.5nm	8.12	207	P	Pn	00 44 00.9	+0.1
SANI	Sanana 187nm,0.9s,3µm	8.25	183	P	Pn	00 44 02.3	-0.3
NLAI	Namlea 101nm,0.6s,3µm	9.44	176	P	Pn	00 44 18.2	-0.7
TTSI	Tana Toraja	11.36	216	P	Pn	00 44 48.6	+3.5
KAPI	Kappang	13.04	211	Pn	Pn	00 45 08.2	+0.3
SBUM	Sibu	14.69	256	P	P	00 45 34.7	+0.6
EDFI	Ende, Flores 20nm,0.6s,282nm	15.63	198	P	Pn	00 45 42.5	+0.6
SOEI	Soe	16.04	188		P	00 45 49.1	-0.1
SOEI	comp=Z,45nm,0.9s			IAmb	IAmb	00 46 03.6	
SOEI	Soe	16.04	188	P	Pn	00 45 48.1	+1.0
PLAI	Plampang	17.29	210	P	P	00 46 06.4	+3.4
TWSI	Taliwang, Sumb	17.68	213	P	P	00 46 09.3	+2.1
YHNB	Yeheng	18.96	346	P	P	00 46 22.1	+0.8
YHNB	comp=Z,9.8nm,0.5s			IAmb	IAmb	00 46 31.3	
JAGI	Jajag, Banyuwa	19.09	220	P	P	00 46 22.0	-0.6
JAGI	comp=Z,10nm,0.7s			IAmb	IAmb	00 46 33.3	
KNRA	Kununurra	21.90	174	P	P	00 46 52.8	-0.1
FITZ	Fitzroy Crossi	24.20	182	P	P	00 47 15.6	0.0
COEN	Coen	26.04	140	P	P	00 47 33.3	+0.9
COEN	comp=Z,12nm,0.7s			IAmb	IAmb	00 47 52.4	
WB0	Warramunga Arr WB0 comp=Z,4.5nm,0.6s	27.00	163	P IAmb	P IAmb	00 47 40.9 00 47 52.8	-0.1
WRA	Warramunga Arr	27.15	164	P	P	00 47 42.2	-0.2
WRA	Warramunga Arr comp=Z,1.0nm,0.5s,baz=340,slow=10,SNR=8.0 comp=Z,1.0nm,0.5s	27.15	164	P	P	00 47 41.4	-1.0
WB2	Warramunga Arr WB2 comp=Z,4.4nm,0.6s	27.16	164	P IAmb	P IAmb	00 47 41.3 00 47 58.3	-1.1
MBWA	Marble Bar MBWA comp=Z,9.3nm,0.8s	28.02	193	P IAmb	P IAmb	00 47 48.5 00 47 49.0	-1.7
PSA00	Pilbara Seismi	28.39	193	P	P	00 47 52.0	-1.4
AS31	Alice Springs	30.60	167	P	P	00 48 12.2	-0.9
ASAR	Alice Springs	30.60	167	P	P	00 48 13.2	+0.2
ASAR	Alice Springs comp=Z,2.7nm,0.6s,baz=347,slow=7.0,SNR=22 comp=Z,2.7nm,0.6s	30.60	167	P	P	00 48 12.3	-0.8
FORT	Forrest	36.84	178	P	P	00 49 06.8	-0.3
BBOO	Buckleboo	39.90	167	P	P	00 49 32.6	-0.1
NWAO	Narrogin (SRO)	39.93	192	P	P	00 49 32.1	-0.8
STKA	Stephens Creek	40.56	160	P	P	00 49 38.2	0.0
STKA	Stephens Creek comp=Z,3.9nm,0.6s,baz=330,slow=11,SNR=8.6 comp=Z,3.9nm,0.6s	40.56	160	P	P	00 49 37.9	-0.3
SONM	Songino Array	44.85	341	P	P	00 50 13.7	+0.8
SONM	Songino Array comp=Z,0.4nm,0.6s,baz=142,slow=6.2,SNR=5.4 comp=Z,0.4nm,0.6s	44.85	341	P	P	00 50 12.9	0.0
DZM	Mont Dzumac DZM comp=Z,7.1nm,1.1s	48.22	127	P IAmb	P IAmb	00 50 40.3 00 50 40.5	+0.7
MK31	Makanchi Array MK31 comp=Z,1.0nm,0.9s	55.36	324	P IAmb	P IAmb	00 51 32.0 00 51 33.6	-0.3
MKAR	Makanchi Array comp=Z,0.6nm,0.4s,baz=123,slow=7.7,SNR=10 comp=Z,0.6nm,0.4s	55.36	324	P	P	00 51 32.4	+0.1
MAKZ	Makanchi MAKZ comp=Z,1.8nm,1.1s	55.55	324	P IAmb	P IAmb	00 51 33.6 00 51 38.8	0.0
DGAR	Diego Garcia	55.56	257	P	P	00 51 34.9	+0.7
ZAA0	Zalesovo Array ZAA0 comp=Z,1.9nm,1.1s	58.24	332	P IAmb	P IAmb	00 51 51.9 00 52 01.9	-0.6
ZALV	Zalesovo Beam comp=Z,0.8nm,0.6s,baz=132,slow=4.3,SNR=5.6 comp=Z,0.8nm,0.6s	58.24	332	P	P	00 51 52.2	-0.4
KURK	Kurchatov KURK comp=Z,1.8nm,0.7s	59.50	327	P IAmb	P IAmb	00 52 01.1 00 52 02.4	-0.2
KURBB	Kurchatov Arra comp=Z,1.5nm,0.7s,baz=122,slow=6.8,SNR=18 comp=Z,1.5nm,0.7s	59.50	327	P	P	00 52 01.8	+0.5
BVAR	Borovoye Array comp=Z,0.9nm,0.7s,baz=118,slow=8.3,SNR=7.5 comp=Z,0.9nm,0.7s	65.08	326	P	P	00 52 39.2	+0.6
NRIK	Noril'sk comp=Z,0.9nm,0.4s,baz=163,slow=5.5,SNR=1.8 comp=Z,0.9nm,0.4s	67.94	346	P	P	00 52 56.3	-0.2
ILAR	Eielson Array comp=Z,0.3nm,0.8s,baz=244,slow=5.9,SNR=1.9 comp=Z,0.3nm,0.8s	82.97	26	P	P	00 54 21.4	-1.3
I28M	Miner Creek	85.87	25	P	P	00 54 38.3	+0.8
VNDA	Vanda VNDA comp=Z,2.2nm,1.1s	85.94	173	P IAmb	P IAmb	00 54 36.2 00 54 38.3	-1.2
DAWY	Dawson DAWY comp=Z,1.6nm,1.2s	86.25	26	P IAmb	P IAmb	00 54 40.0 00 54 57.1	+0.7
H29M	Whitestone	86.42	24	P	P	00 54 40.4	+0.4
ARCES	ARCESS Array B comp=Z,4.4nm,1.2s,baz=90,slow=6.3,SNR=3.6 comp=Z,4.4nm,1.2s	88.01	340	P	P	00 54 45.8	-1.9
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.4s,baz=74,slow=2.6,SNR=1.5	121.86	290	PKP	PKPdf	01 00 50.7	-2.0

*NOU **27** 00:45:55.5,42.58S×174.07E,h6km,MLv4.1/10,Off E. Coast of S. Island, N.Z.*

*WEL **27** 00:45:57.7±0.4,42°S±3°×17°4E±°,h20km±4km,M3.6/31, ML3.8/30,MLv3.6/31,Error ellipse: s-maj=0.0km s-min=0.0km az=126.8,confirmed*

ISC 27 00:45:57.9±1.0,42.24S±0.03×173.67E±0.04,h29km±7km, n97,σ1§26/105,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.20	208	P	Pb	00 46 04.2	+0.1
KHZ	Kahutara	0.20	208	P	Pb	00 46 04.1	+0.1
KHZ				S	Sb	00 46 08.0	-0.2
BSWZ	Blackbirch Sta	0.55	17	P	Pb	00 46 08.9	-0.1
CMWZ	Cape Campbell	0.64	40	P	Pn	00 46 12.0	+1.1
THZ	Tophouse	0.74	310	P	Pn	00 46 11.4	-0.9
THZ				S	Sb	00 46 19.7	-2.4
TUWZ	Tuamarina	0.83	14	P	Pn	00 46 13.9	+0.3
GVZ	Greta Valley S	0.87	212	P	Pb	00 46 15.4	+1.0
GVZ				S	Sn	00 46 27.7	+1.9
NNZ	Nelson	1.04	348	P	Pn	00 46 16.7	+0.2
NNZ				S	Sn	00 46 29.4	-0.6
MRNZ	Matariki Terra	1.08	321	P	Pn	00 46 17.5	+0.5
MRNZ				S	Sn	00 46 31.3	+0.3
TCW	Tory Channel	1.12	24	P	Pn	00 46 18.7	+1.1
TCW				S	Sn	00 46 33.0	+1.0
LTZ	Lake Taylor	1.17	242	P	Pb	00 46 19.0	-0.4
LTZ				S	Sn	00 46 33.8	+0.5
AMCZ	Amberley	1.20	218	P	Pb	00 46 19.7	-0.3
SNZO	South Karori	1.21	40	P	Pb	00 46 20.3	-0.2
BHW	Baring Head	1.22	48	P	Pb	00 46 20.3	-0.1
WEL	Wellington	1.26	41	P	Pb	00 46 21.0	0.0
TKNZ	Takaka Hill	1.31	336	P	Pn	00 46 21.7	+1.5
PLWZ	Palliser	1.36	61	P	Pb	00 46 21.9	-0.9
DUWZ	D'Urville Isla DUWZ	1.45	8	P S	Pn Sn	00 46 23.3 00 46 41.6	+1.2 +1.5
DSZ	Denniston Nort	1.47	289	P	Pn	00 46 23.7	+1.3
CAW	Cannon Point	1.54	43	P	Pn	00 46 24.6	+1.2
PAWZ	Paruwai Farm	1.57	58	P	Pn	00 46 24.5	+0.7
OXZ	Oxford	1.62	227	P	Pn	00 46 24.5	+0.1
MQZ	McQueen's Vall	1.65	207	P	Pn	00 46 24.6	-0.1
KIW	Kapiti Island	1.66	35	P	Pn	00 46 26.5	+1.4
INZ	Inchbonnie	1.71	253	P	Pn	00 46 26.9	+1.1
AKCZ	Akaroa Harbour	1.73	198	P	Pn	00 46 26.3	+0.4
TRWZ	Traveller	1.73	62	P	Pn	00 46 26.4

FWVZ	Far West T-bar	3.31	26	P		Pn	00 46 49.8	+1.9
LBZ	Lake Benmore	3.33	229	P		Pn	00 46 48.2	+0.3
TUVZ	Tukino	3.33	28	P		Pn	00 46 50.0	+1.9
NGZ	Ngauruhoe	3.39	26	P		Pn	00 46 50.9	+1.9
SNVZ	South Ngauruho	3.40	27	P		Pn	00 46 50.8	+1.8
OTVZ	Oturere	3.43	27	P		Pn	00 46 51.2	+1.7
NNVZ	North Ngauruho	3.44	26	P		Pn	00 46 51.4	+1.8
KAHZ	Kahuranaki	3.44	46	P		Pn	00 46 49.2	-0.4
WTVZ	West Tongariro	3.44	26	P		Pn	00 46 51.4	+1.7
ETVZ	East Tongariro	3.47	27	P		Pn	00 46 51.9	+2.0
KRVZ	Karewarewa	3.48	26	P		Pn	00 46 51.8	+1.7
TMVZ	Te Maari	3.48	27	P		Pn	00 46 52.0	+1.8
NTVZ	North Tongarir	3.49	27	P		Pn	00 46 52.2	+1.9
KWHZ	Kaweka Forest	3.50	38	P		Pn	00 46 50.2	-0.2
ODZ	Otahua Downs	3.56	217	P		Pn	00 46 50.6	-0.5
ODZ	Otahua Downs	3.56	217	P		Pn	00 46 50.8	-0.3
HIZ	Hauiti	3.83	14	P		Pn	00 46 59.5	+4.7
HIZ	Hauiti	3.83	14	P		Pb	00 47 01.3	-3.5
JCZ	Jackson Bay	4.01	241	P		Pn	00 46 57.7	+0.3
JCZ	Jackson Bay	4.01	241	P		Pn	00 46 57.4	0.0
TLZ	Tolley Road	4.16	21	P		Pn	00 47 00.8	+1.4
WKZ	Wanaka	4.26	231	P		Pn	00 47 00.4	-0.4
HHSZ	Highcliff Hill	4.26	210	P		Pn	00 46 59.8	-1.0
EAZ	Earnscleugh	4.35	225	P		Pn	00 47 01.9	-0.1
TUZ	Tuapeka	4.72	217	P		Pn	00 47 07.0	+0.1
URZ	Urewera	4.77	35	P		Pn	00 47 08.1	+0.4
URZ	Urewera	4.77	35	P		Pn	00 47 07.7	0.0
MLZ	Mavora Lakes	5.09	230	P		Pn	00 47 11.6	-0.6
MKAZ	Moumakai	5.25	13	P		Pn	00 47 16.3	+2.0
RUGZ	Raukumara Rang	5.26	37	P		Pn	00 47 13.7	-0.9
SYZ	Scrubby Hill	5.38	215	P		Pn	00 47 16.4	+0.3
SYZ	Scrubby Hill	5.38	215	P		Pn	00 47 16.5	+0.4
APZ	The Paps	6.13	220	P		Pn	00 47 26.5	+0.1

JMA ***27*** *00:53:02.6±0.1,38˚.6N±0˚.2×141˚.9E±0˚.5,h47km,MV3.6/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .
IDC ***27*** *00:53:03.5±9.1,39˚.20N×140˚.95E,h0km,mb3.8/4, mbtmp3.7/5,ML2.2/1,Error ellipse: s-maj=185.8km s-min=39.9km az=98.0*

ISC 27 00:53:02.3±1.9,38˚.63N±0˚.05×141˚.9E±0˚.1,h45km±10km, n21,σ0s59/23,mb3.7/4,16D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKMT	Kesennumamotoy	0.41	296	⇓*i*	P	Pn	00 53 12.3	+0.2
JKMT				⇓	S	Sn	00 53 19.0	0.0
JIKH	Ishinomakikobu	0.49	229	⇓*i*	P	Pn	00 53 13.2	+0.1
JIKH				⇓	S	Sn	00 53 20.7	-0.1
JIO	Ouri	0.49	249	⇓*i*	P	Pn	00 53 13.3	+0.1
JIO				⇓	S	Sn	00 53 20.7	-0.2
OFUJ	Ofunato	0.49	335	⇓*i*	P	Pn	00 53 13.5	+0.2
OFUJ				⇓	S	Sn	00 53 21.0	0.0
JMK	Ichinoseki	0.65	300	⇓*i*	P	Pn	00 53 15.3	+0.2
JMK				⇓	S	Sn	00 53 24.4	0.0
JOM	Ohasama	0.98	329	⇓*i*	P	Pn	00 53 19.9	+0.2
JOM				⇓*e*	S	Sn	00 53 32.6	+0.2
JOU	Okura	1.03	256	⇓*i*	P	Pn	00 53 20.4	0.0
JOU				⇓	S	Sn	00 53 33.7	0.0
JMM	Marumori	1.18	230	⇓*i*	P	Pn	00 53 22.0	-0.4
JMM				⇓	S	Sn	00 53 36.5	-0.8
JYK	Kaneyama	1.27	284	*i*	P	Pn	00 53 23.7	+0.2
JRG	Rokugo	1.27	307	*i*	P	Pn	00 53 23.8	+0.2
MJAR	Matsushiro Arr 0.3nm,0.3s,baz=37,slow=12,SNR=8.3 3.6nm,0.4s	3.62	236	Pn		Pn	00 53 58.1	+2.2
H11N2	WAKE ISLAND Hy 28.65 124 baz=316,slow=75,SNR=56			T		T	01 29 16.3	
H11N1	WAKE ISLAND Hy 28.66 124 baz=316,slow=75,SNR=101			T		T	01 29 17.1	
H11N3	WAKE ISLAND Hy 28.67 124 baz=316,slow=75,SNR=96			T		T	01 29 17.1	
H11S1	WAKE ISLAND Hy 29.42 126 baz=318,slow=76,SNR=92			T		T	01 30 09.8	
H11S3	WAKE ISLAND Hy 29.42 126 baz=318,slow=76,SNR=143			T		T	01 30 18.5	
H11S2	WAKE ISLAND Hy 29.43 126 baz=318,slow=76,SNR=89			T		T	01 30 15.3	
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=87,slow=9.1,SNR=4.6 0.6nm,0.5s	41.16	311	P		P	01 00 41.6	-0.4
MKAR	Makanchi Array 0.6nm,0.8s,baz=79,slow=7.5,SNR=5.0 0.6nm,0.8s	43.64	301	P		P	01 01 02.0	-0.3
KURBB	Kurchatov Arra 1.7nm,0.4s,baz=81,slow=8.1,SNR=18 1.7nm,0.4s	45.36	307	P		P	01 01 15.4	-0.5
BVAR	Borovoye Array 0.5nm,0.5s,baz=78,slow=8.0,SNR=4.0 0.5nm,0.5s	49.82	311	P		P	01 01 50.3	-0.2

BJI ***27*** *00:55:18.2±0.0,6˚.05S×143˚.33E,h10km,mb4.7/66, mB5.1/30,Ms4.4/5,Ms7 4.1/5*
IDC ***27*** *00:55:20.6±0.5,6˚.01S×142˚.82E,h0km,mb4.6/21, mbtmp4.5/23,ML3.0/2,MS3.9/18,Error ellipse: s-maj=21.2km s-min=9.7km az=91.0*
MOS ***27*** *00:55:20.3±0.9,6˚.06S×142˚.66E,h10km,mb5.0/26,Error ellipse: s-maj=10.1km s-min=6.0km az=108.4*
NEIC ***27*** *00:55:22.6±1.5,6˚.04S±0˚.07×142˚.63E±0˚.07,h10km±1km, mb5.0/128,Error ellipse: s-maj=12.2km s-min=11.6km az=205.0*
DJA ***27*** *00:55:24.1±1.2,6˚.S±2˚×14˚3E±˚,h11km±8km,M5.2/42, mb5.0/42,mB5.5/24,MLv5.8/5,Mw(mB)5.0/24, MwMwp7.0/1,Mwp6.8/1*

ISC 27 00:55:23.1±0.6,6˚.09S±0˚.04×142˚.65E±0˚.05,h16km±3km, h16km:pP-P,n322,σ1s20/311,mb4.9/119,MS3.9/14, 13C-10D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TABU	Tabubil	1.63	300	P		Pn	00 55 51.9	+0.6
MMPI	Merauke	3.26	223	P		Pn	00 56 14.8	+1.1
MMPI				S		Sn	00 56 52.7	+0.5
GENI	Genyem	4.26	324	P		Pn	00 56 29.9	+2.4
GENI	Genyem	4.26	324	P		Pn	00 56 26.9	-0.6
PMG	Port Moresby	5.55	127	Pn		Pn	00 56 44.9	-0.3
PMG	Port Moresby	5.55	127	P		Pn	00 56 50.4	+5.2
PMG	Port Moresby	5.55	127	P		Pn	00 56 50.3	+5.1
PMG	Port Moresby 5.8nm,0.3s,baz=323,slow=12,SNR=8.3	5.55	127	*ce*P		Pn	00 56 44.7	-0.5
PMG				Pn		Pn	00 56 44.6	-0.6
	baz=323,slow=20			Sn		Sn	00 57 46.3	-2.5
PMG				LR		LR	00 59 03.3	
	comp=Z,426nm,18.3s,baz=289,slow=41 31nm,0.5s							
SMPI	Sarmi 325nm,1.4s,5μm1.9nm	5.66	316	P		Pn	00 56 45.4	-1.2
MANU	Manus Island	6.19	50			Pn	00 56 53.8	-0.2
COEN	Coen baz=7.8,SNR=5.6	7.84	176	P		Pn	00 57 18.7	+2.1
COEN	Coen	7.84	176	Pn		Pn	00 57 18.9	+2.3
COEN	Coen	7.84	176	P		Pn	00 57 19.8	+3.2
RABL	Rabaul	9.66	79	Pn		Pn	00 57 43.3	+1.6
FAKI	Fak Fak	10.83	286	Pn		Pn	00 57 56.9	-0.8
FAKI	Fak Fak	10.83	286	P		Pn	00 57 58.6	+0.9
FAKI	Fak Fak 97nm,1.0s,1μm	10.83	286	P		Pn	00 57 57.6	-0.1
SAUI	Saumlaki	11.42	260	Pn		Pn	00 58 06.2	+0.5
SAUI	Saumlaki 1μm,0.9s	11.42	260	P		Pn	00 58 07.0	+1.3
KDU	Kakadu baz=12,SNR=64	11.99	236	P		Pn	00 58 12.9	-0.6
KDU	Kakadu	11.99	236	P		Pn	00 58 13.6	+0.1
SWI	Sorong 81nm,0.9s	12.49	294	P		Pn	00 58 18.5	-1.9
MTN	Manton Dam baz=13,SNR=33	13.19	239	P		Pn	00 58 29.0	-0.9
MTN	Manton Dam	13.19	239	Pn		Pn	00 58 28.4	-1.5
MTN	Manton Dam	13.19	239	P		Pn	00 58 29.9	0.0
DRS	Darwin Rock St	13.19	241	P		Pn	00 58 30.8	+0.8
CTA	Charters Tower baz=14	14.35	166	P		Pn	00 58 48.7	+2.9
CTA	Charters Tower 0.2nm,0.3s,baz=340,slow=12,SNR=4.5	14.35	166	Pn		Pn	00 58 47.7	+1.8
CTA				Lg		Lg	01 02 56.5	
	0.8nm,0.3s,baz=61,slow=22,SNR=3.7							
CTA				LR		LR	01 04 15.3	
	comp=Z,325nm,21.0s,baz=3.5,slow=37 1.7nm,0.5s							
CTAO	Charters Tower	14.35	166			Pn	00 58 44.4	-1.5
CTAO	Charters Tower	14.35	166	P		Pn	00 58 44.4	-1.5
QIS	Mount Isa baz=15,SNR=13	14.68	191	P		Pn	00 58 51.3	+0.9
QIS	Mount Isa	14.68	191	P		Pn	00 58 50.8	+0.4
NLAI	Namlea 34nm,0.9s,7μm	15.75	280	P		Pn	00 59 04.5	0.0
WB0	Warramunga Arr	15.79	210			Pn	00 59 03.7	-1.3
WB0					IAmb	IAmb	00 59 20.1	
	comp=Z,103nm,0.8s							
WR0	Warramunga Arr	15.88	209			Pn	00 59 05.3	-0.9
WR0					IAmb	IAmb	00 59 21.2	
	comp=Z,136nm,0.8s							
WRAB	Tennant Creek	15.95	210			Pn	00 59 06.6	-0.6
WRAB					IAmb	IAmb	00 59 21.6	
	comp=Z,84nm,0.7s							
WRAB	Tennant Creek	15.95	210	*de*	P	Pn	00 59 05.4	-1.7
WRAB					pmax	pmax		
	comp=Z,28nm,0.8s							
WB2	Warramunga Arr	15.96	210			Pn	00 59 06.4	-0.8
WB2					IAmb	IAmb	00 59 25.4	
	comp=Z,117nm,0.9s							
WC3	Warramunga Arr baz=16	15.96	209	P		Pn	00 59 07.2	-0.1
WRA	Warramunga Arr	15.96	210	Pn		Pn	00 59 05.9	-1.4
WRA	Warramunga Arr	15.96	210	*i* P		Pn	00 59 05.5	-1.7
WRA					pmax	pmax		
	comp=Z,9.0nm,0.4s							
WRA	Warramunga Arr comp=Z,2.8nm,0.3s,baz=29,slow=13,SNR=44	15.96	210	Pn		Pn	00 59 05.6	-1.7
WRA					Sn	Sn	01 01 56.4	-7.7
	comp=Z,1.8nm,0.3s,baz=28,slow=22,SNR=4.6							
WRA					Lg	Lg	01 03 52.3	
	comp=Z,2.7nm,0.3s,baz=28,slow=28,SNR=6.0							
LBMI	Labuha comp=Z,69nm,1.2s	16.05	289	P		Pn	00 59 08.3	-0.2
KNRA	Kununurra baz=16	16.62	234	P		Pn	00 59 15.0	-0.7
KNRA	Kununurra	16.62	234			Pn	00 59 14.8	-0.9
KNRA	Kununurra	16.62	234	P		Pn	00 59 15.8	+0.1
TNTI	Ternate	16.71	294	Pn		Pn	00 59 15.3	-1.5
SANI	Sanana comp=Z,38nm,0.9s	17.09	283	P		Pn	00 59 20.4	-1.2
HNR	Honiara	17.46	102			Pn	00 59 26.8	+0.6
HNR	Honiara	17.46	102	P		Pn	00 59 26.8	+0.6
HNR					pmax	pmax		
	comp=Z,205nm,0.8s							
SOEI	Soe	18.56	258			Pn	00 59 40.3	+0.4
SOEI	Soe comp=Z,275nm,0.8s,comp=Z,2μm	18.56	258	P		Pn	00 59 41.0	+1.1
AS01	Alice Springs	19.38	205	P		Pn	00 59 50.7	+1.1
AS31	Alice Springs	19.40	205	P		Pn	00 59 50.9	+1.0
AS31					IAmb	IAmb	01 00 02.2	
	comp=Z,70nm,0.8s							
ASAR	Alice Springs	19.40	205	P		Pn	00 59 50.0	+0.2
ASAR	Alice Springs comp=Z,132nm,0.7s,baz=32,slow=9.7,SNR=327	19.40	205	P		Pn	00 59 51.5	+1.7
ASAR					S	S	01 03 31.3	+3.5
	comp=Z,7.6nm,0.7s,baz=18,slow=27,SNR=4.0							
ASAR					Lg	Lg	01 05 41.6	
	comp=Z,0.8nm,0.3s,baz=21,slow=32,SNR=5.4							
ASAR					LR	LR	01 08 21.4	
	comp=Z,632nm,19.4s,baz=30,slow=40							
ASPA	Alice Springs baz=19	19.40	205	P		Pn	00 59 51.4	+1.6
GUMO	Guam comp=Z,78nm,18.2s,baz=140,slow=40	19.67	6	LR		LR	01 08 20.0	
KMSI	Cibinong comp=Z,173nm,0.8s	19.77	289	P		P	00 59 53.3	+0.4
MMRI	Maumere	20.40	262	P		P	00 59 59.5	-0.2
MMRI					IAmb	IAmb	01 00 22.4	
	comp=Z,136nm,1.3s							
QLP	Quilpie baz=20,SNR=28	20.44	176	P		Pn	01 00 02.2	+0.1
QLP	Quilpie	20.44	176	P		Pn	01 00 03.6	+1.5
FITZ	Fitzroy Crossi baz=20,SNR=23	20.44	233	P		Pn	01 00 01.6	-0.7
FITZ	Fitzroy Crossi	20.44	233	P		P	01 00 01.0	+0.9
LUWI	Luwuk	20.45	283	P		P	01 00 01.0	+0.8
LUWI	Luwuk comp=Z,145nm,0.9s,comp=Z,2μm	20.45	283	P		P	01 00 00.8	+0.5
GTOI	Gorontalo comp=Z,176nm,0.7s,comp=Z,1μm	20.71	288	P		Pn	01 00 05.4	0.0
EIDS	Eidsvold baz=21,SNR=7.0	20.80	158	P		Pn	01 00 06.1	-0.3
EIDS	Eidsvold	20.80	158	P		P	01 00 04.9	+1.0
EIDS					IAmb	IAmb	01 00 17.9	
	comp=Z,63nm,1.1s							
EIDS	Eidsvold	20.80	158	P		Pn	01 00 06.9	+0.5
EDFI	Ende, Flores comp=Z,78nm,1.2s,comp=Z,821nm	20.95	261	P		P	01 00 06.1	+0.4
DAV	Davao City (W) comp=Z,148nm,19.7s,baz=195,slow=38	21.47	307	LR		LR	01 08 57.1	
INKA	Innaminka	21.61	185	P		P	01 00 15.8	+3.2
OOD	Oodnadatta	22.58	196	P		P	01 00 24.9	+1.9
KAPI	Kappang	22.81	272	P		P	01 00 26.4	+0.8
KAPI	Kappang	22.81	272	P		P	01 00 26.4	+0.8
KAPI					pmax	pmax		
	comp=Z,130nm,1.0s							
TTSI	Tana Toraja comp=Z,33nm,1.2s,comp=Z,988nm	22.95	277	P		P	01 00 27.9	+0.8
TOLI2	Tolitoli	22.97	287	P		P	01 00 26.7	-0.6
WRKA	Warakurna baz=23,SNR=62	23.33	215	P		P	01 00 31.3	+0.5
WRKA	Warakurna	23.33	215	P		P	01 00 31.4	+0.5
LCRK	Leigh Creek	24.59	189	P		P	01 00 43.0	+0.4
PLAI	Plampang	24.81	262	P		P	01 00 44.2	-0.6
PLAI	Plampang comp=Z,69nm,0.8s	24.81	262	P		P	01 00 44.6	-0.2
MULG	Mulgathing	25.39	198	P		P	01 00 52.7	+2.8
KOUNC	Koumac, New Ca	25.44	126	P		P	01 00 50.8	+0.3
CMSA	Cobar Meteorol baz=26	25.48	174	P		P	01 00 52.5	+1.8
CMSA	Cobar Meteorol	25.48	174	P		P	01 00 53.5	+2.8
STKA	Stephens Creek baz=26,SNR=9.0	25.68	182	P		P	01 00 52.7	+0.2
STKA	Stephens Creek	25.68	182	P		P	01 00 52.1	-0.4
STKA	Stephens Creek	25.68	182	P		P	01 00 56.6	+4.1
STKA	Stephens Creek	25.68	182	⇓*e*	P	P	01 00 51.9	-0.6
STKA	Stephens Creek comp=Z,11nm,0.9s,baz=354,slow=11,SNR=12	25.68	182	P		P	01 00 52.6	+0.1
STKA					LR	LR	01 10 51.1	
	comp=Z,183nm,19.0s,baz=358,slow=36 comp=Z,11nm,0.9s							
BKB	Balikpapan	26.13	280	P		P	01 00 57.8	+0.9
MBWA	Marble Bar	26.78	234	P		P	01 01 02.7	+0.1
MBWA					IAmb	IAmb	01 01 31.8	
	comp=Z,35nm,1.1s							
MBWA	Marble Bar	26.78	234	P		P	01 01 05.5	+2.9
PSA00	Pilbara Seismi	26.90	233	P		P	01 01 02.2	-1.5
PSA00					IAmb	IAmb	01 01 18.0	
	comp=Z,29nm,0.8s							
PSA00	Pilbara Seismi	26.90	233	P		P	01 01 03.1	-0.6
PSA00					IAmb	IAmb	01 01 18.5	
	comp=Z,14nm,0.8s							
PSA00	Pilbara Seismi	26.90	233	P		P	01 01 04.9	+1.2
BBOO	Buckleboo baz=27,SNR=4.9	27.29	192	P		P	01 01 07.0	0.0
BBOO	Buckleboo	27.29	192	P		P	01 01 05.4	-1.7
BBOO					IAmb	IAmb	01 01 17.5	
	comp=Z,23nm,0.8s							
BBOO	Buckleboo	27.29	192	P		P	01 01 09.1	+2.0
HTT	Hallett baz=27,SNR=5.3	27.43	187	P		P	01 01 08.5	+0.2
DZM	Mont Dzumac	27.95	127	P		P	01 01 12.3	-0.9
DZM	Mont Dzumac comp=Z,170nm,20.4s,baz=28,slow=35	27.95	127	LR		LR	01 11 39.6	
FORT	Forrest	28.13	207	P		P	01 01 14.3	-0.3
JAGI	Jajag, Banyuwa	28.36	263	P		P	01 01 14.9	-2.0
JAGI	Jajag, Banyuwa comp=Z,38nm,1.2s	28.36	263	P		P	01 01 16.7	-0.2
KKM	Kota Kinabalu	29.00	294	P		P	01 01 21.1	-1.6
KKM					IAmb	IAmb	01 01 24.1	
	comp=Z,22nm,0.8s							
ARPS	Mount Arapiles baz=30	30.55	181	P		P	01 01 36.9	+0.9
PWJI	Pagerwojo comp=Z,25nm,1.0s	30.67	265	P		P	01 01 36.0	-1.3
SBUM	Sibu	31.55	285	P		P	01 01 45.5	+0.4
KMBL	Kambalda baz=32	31.79	215	P		P	01 01 46.7	-0.4
UGM	Wanagama	31.93	265	P		P	01 01 47.6	-1.0
UGM	Wanagama comp=Z,78nm,1.4s	31.93	265	P		P	01 01 49.9	+1.4
SMRI	Semarang	32.01	266	P		P	01 01 47.9	-1.3
KSM	Kuching	33.15	282	P		P	01 01 57.4	-1.8
KPJI	Karang Pucung comp=Z,44nm,1.4s	33.50	266	P		P	01 02 03.5	+1.2
CMJI	Cimerak comp=Z,116nm,1.1s,comp=Z,1μm	33.98	265	P		P	01 02 05.6	-0.8
LEM	Lembang comp=Z,176nm,19.4s,baz=80,slow=43	34.81	267	LR		LR	01 20 11.8	
CNJI	Cibinong comp=Z,72nm,1.1s,comp=Z,683nm	35.29	266	P		P	01 02 17.3	-0.5
NWAO	Narrogin (SRO) comp=Z,700nm,20.1s,baz=28,slow=38	35.67	218	LR		LR	01 17 47.8	
NACB	Ninganchiao	36.42	326	P		P	01 02 25.3	-2.0
NACB					IAmb	IAmb	01 02 34.7	
	comp=Z,29nm,0.9s							
XMIS	Christmas Isla	36.85	261	P		P	01 02 29.9	-1.2
KASI	Kota Agung comp=Z,15nm,1.0s	37.95	269	P		P	01 02 39.9	-0.6
KNMB	Chin-men Tao	38.48	323	P		P	01 02 43.5	-1.2
MYKOM	Kota Tinggi	39.52	280	P		P	01 02 52.7	-1.0
MYKOM					IAmb	IAmb	01 02 55.6	
	comp=Z,69nm,1.4s							
JMN	Monobe	40.46	349	P		P	01 03 00.5	-0.7
JMN					IAmb	IAmb	01 03 02.0	
	comp=Z,27nm,1.1s							
JNU	Nakatsue comp=Z,7.1nm,0.9s,baz=194,slow=4.2,SNR=3.2 comp=Z,7.1nm,0.9s	40.56	345	P		P	01 03 01.7	-0.4
BKNI	Bangkinang	42.02	277	P		P	01 03 13.8	-0.4
MJAR	Matsushiro Arr comp=Z,2.9nm,0.6s,baz=177,slow=7.3,SNR=4.9 comp=Z,2.9nm,0.6s	42.61	355	P		P	01 03 17.5	-1.3
IPM	Ipoh	42.86	283	P		P	01 03 19.6	-1.6
IPM					IAmb	IAmb	01 03 23.9	
	comp=Z,24nm,1.0s							
NJ2	Nanjing	44.19	331	*e*P		P	01 03 32.3	+0.8
NJ2					pP	pP	01 03 34.8	-2.1
NJ2					sP	sP	01 03 37.0	-2.0
NJ2					pmax	pmax		
	comp=Z,3.0nm,0.5s							
NJ2					pmax	pmax		
	comp=Z,70nm,3.7s							
RPSI	Rantau Prapat	44.52	280	P		P	01 03 34.8	+0.3
PSI	Prapat	44.54	280	P		P	01 03 34.8	-0.1
PSI					pmax	pmax		
	comp=Z,33nm,1.0s							
URZ	Urewera comp=Z,326nm,18.2s,baz=121,slow=37	44.73	141	LR		LR	01 22 34.9	
TUWZ	Tuamarina	44.89	146	P		P	01 03 37.7	+0.6
RPZ	Rata Peaks comp=Z,191nm,20.0s,baz=302,slow=36	45.02	151	LR		LR	01 22 40.2	
WHN	Wuhan	45.40	325	P		P	01 03 43.3	+2.1
KSAR	Wonju Array Be	45.45	343	P		P	01 03 41.4	0.0
KSAR	Wonju Array Be	45.45	343	P		P	01 03 41.4	0.0
KSRS	Korea Array comp=Z,7.0nm,0.9s,baz=161,slow=9.5,SNR=18 comp=Z,7.0nm,0.9s	45.45	344	P		P	01 03 41.8	+0.4
GYA	Guiyang	47.57	314	⇓*i*	P	P	01 04 00.5	+2.0
GYA					pmax	pmax		
	comp=Z,18nm,1.3s							
TIA	Tai'an	48.41	332	P		P	01 04 11.3	+6.6
TIA					pmax	pmax		
	comp=Z,5.0nm,0.9s							
PHRA	Phrae	48.44	301	P		P	01 04 05.7	+0.5
CRAI	Chiangrai	49.10	303	P		P	01 04 10.6	+0.3
LYN	LuoYang	49.45	327	⇓P		P	01 04 13.8	+1.1
LYN					sP	pP	01 04 18.8	+0.7
LYN					pmax	pmax		
	comp=Z,31nm,0.9s							
CM31	Chiang Mai Arr	49.52	300	P		P	01 04 12.8	-0.7
CM31					IAmb	IAmb	01 04 25.8	
	comp=Z,21nm,0.9s							
CMAR	Chiang Mai Arr	49.52	300	P		P	01 04 13.9	+0.4
CMAR	Chiang Mai Arr comp=Z,6.9nm,0.8s,baz=126,slow=6.0,SNR=34	49.52	300	P		P	01 04 15.0	+1.5
CMAR					LR	LR	01 24 18.8	
	comp=Z,28nm,21.4s,baz=175,slow=35 comp=Z,6.9nm,0.8s							
CHTO	Chiang Mai	49.67	301	P		P	01 04 14.8	+0.2
CHTO					IAmb	IAmb	01 04 26.6	
	comp=Z,15nm,0.8s							
CHTO	Chiang Mai	49.67	301	P		P	01 04 14.9	+0.2
CHTO					pmax	pmax		
	comp=Z,15nm,0.9s							
KMI	Kunming	49.68	310	⇑P		P	01 04 17.0	+2.1
KMI					pmax	pmax		
	comp=Z,16nm,1.0s							
ASAJ	Asahikawa comp=Z,6.6nm,0.9s,baz=180,slow=10,SNR=2.1 comp=Z,6.6nm,0.9s	49.97	360	P		P	01 04 16.1	-0.3
HNS	HongShan	50.51	331	⇓P		P	01 04 21.3	+0.6
HNS					pmax	pmax		
	comp=Z,10.0nm,1.5s							
USA0B	Ussuriysk Arra	50.97	350	*de*P		P	01 04 23.8	-0.2
USRK	Ussuriysk Ar.	50.97	350	P		P	01 04 23.0	-1.1
USRK	Ussuriysk Ar. comp=Z,7.4nm,0.8s,baz=168,slow=7.4,SNR=11 comp=Z,7.4nm,0.8s	50.97	350	P		P	01 04 24.3	+0.2
XAN	Xi'an	51.09	324	P		P	01 04 25.8	+0.6
XAN					pP	pP	01 04 31.8	+1.2
XAN					S	S	01 11 44.5	+2.0
XAN					pmax	pmax		
	comp=Z,21nm,1.4s							
XAN					pmax	pmax		
	comp=Z,150nm,3.8s							
PZH	PanZhiHua	51.19	311	P		P	01 04 31.5	+5.3
PZH					pmax	pmax		
	comp=Z,10.0nm,1.0s							
PZH					pmax	pmax		
	comp=Z,100nm,4.5s							
MDJ	Mudanjiang	51.82	348	P		P	01 04 31.8	+1.4
MDJ					pmax	pmax		
	comp=Z,9.0nm,1.9s							
MDJ					pmax	pmax		
	comp=Z,120nm,4.7s							
BJI	Beijing	51.98	334	P		P	01 04 31.5	-0.2
BJI					pmax	pmax		
	comp=Z,7.0nm,0.6s	

SHL	**Shillong**	**58.47**	**305**	P	**P**	**01 05 18.5**	**-0.6**
SHL				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	**Hailar**	**58.64**	**343**	P	**P**	**01 05 19.0**	**-0.6**
HIA	**Hailar**	**58.64**	**343**	P	**P**	**01 05 19.0**	**-0.6**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA	**Gaotai**	**60.11**	**323**	*e*P	**P**	**01 05 31.5**	**+1.4**
GTA				pP	pP	01 05 36.8	+1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PETK	**Petropavlovsk-**	**60.34**	**10**	P	**P**	**01 05 30.4**	**-0.8**
PETK	**Petropavlovsk-**	**60.34**	**10**	P	**P**	**01 05 30.9**	**-0.3**
	comp=Z,7.3nm,0.9s,baz=198,slow=4.2,SNR=5.2						
	comp=Z,7.3nm,0.9s						
PET	**Petropavlovsk**	**60.43**	**11**	P	**P**	**01 05 31.3**	**-0.5**
LSA	**Lhasa**	**60.88**	**309**	P	**P**	**01 05 36.3**	**+0.4**
LSA	**Lhasa**	**60.88**	**309**	P	**P**	**01 05 36.3**	**+0.4**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZEA	**Zeya**	**61.00**	**350**	*e*P	**P**	**01 05 35.7**	**0.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GOMU	**GeErMu**	**61.44**	**317**	P	**P**	**01 05 41.0**	**+1.5**
GOMU				pP	pP	01 05 45.0	0.0
GOMU				sP	sP	01 05 46.8	-0.3
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	**Ulaanbaatar**	**62.19**	**334**	P	**P**	**01 05 44.5**	**+0.4**
ULN				IAmb	IAmb	01 05 52.8	
	comp=Z,6.9nm,0.9s						
ULN	**Ulaanbaatar**	**62.19**	**334**	*ce*P	**P**	**01 05 44.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**62.45**	**333**	P	**P**	**01 05 45.4**	**-0.4**
SONM	**Songino Array**	**62.45**	**333**	P	**P**	**01 05 46.3**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=149,slow=6.9,SNR=12						
	comp=Z,1.9nm,0.8s						
PALK	**Pallekele**	**63.21**	**281**	LR	LR	01 35 43.4	
	comp=Z,40nm,19.2s,baz=211,slow=38						
ZAK	**Zakamensk**	**65.72**	**334**	*e*P	**P**	**01 06 07.0**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	**Magadan**	**65.77**	**5**	P	**P**	**01 06 06.6**	**-0.6**
MA2				IAmb	IAmb	01 06 08.0	
	comp=Z,9.7nm,0.8s						
MA2	**Magadan**	**65.77**	**5**	⇑*e*P	**P**	**01 06 07.1**	**-0.1**
MA2				pmax	pmax		
	comp=Z,25nm,2.5s						
PPT	**Papeete**	**67.02**	**106**	LR	LR	01 32 31.1	
	comp=Z,42nm,19.6s,baz=358,slow=33						
SEY	**Seymchan**	**69.23**	**5**	⇑*e*P	**P**	**01 06 28.9**	**0.0**
SEY				pmax	pmax		
	comp=Z,21nm,2.5s						
WMQ	**Urumqi**	**70.08**	**321**	*e*P	**P**	**01 06 36.0**	**+1.2**
WMQ				sP	sP	01 06 47.3	+4.9
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
VNDA	**Vanda**	**72.11**	**176**	P	**P**	**01 06 46.9**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=345,slow=5.7,SNR=3.7						
VNDA				LR	LR	01 39 10.2	
	comp=Z,103nm,18.1s,baz=325,slow=36						
	comp=Z,1.8nm,0.7s						
DGZ	**Jazzator, Alta**	**73.25**	**326**	*c i*P	**P**	**01 06 54.0**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**74.85**	**322**	P	**P**	**01 07 03.0**	**-0.1**
MK31	**Makanchi Array**	**74.85**	**322**	*ce*P	**P**	**01 07 03.2**	**+0.1**
MKAR	**Makanchi Array**	**74.85**	**322**	P	**P**	**01 07 03.0**	**0.0**
MKAR	**Makanchi Array**	**74.85**	**322**	P	**P**	**01 07 03.4**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=109,slow=7.8,SNR=62						
	comp=Z,4.0nm,0.7s						
MAKZ	**Makanchi**	**75.05**	**322**	P	**P**	**01 07 03.8**	**-0.4**
MAKZ				IAmb	IAmb	01 07 17.1	
	comp=Z,14nm,1.1s						
MAKZ	**Makanchi**	**75.05**	**322**	P	**P**	**01 07 03.8**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.1s						
TARG	**Taragay, Kyrgy**	**75.72**	**316**	P	**P**	**01 07 08.7**	**0.0**
TARG	**Taragay, Kyrgy**	**75.72**	**316**	P	**P**	**01 07 08.7**	**0.0**
TARG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL	**Bilibino**	**75.81**	**9**	P	**P**	**01 07 08.9**	**+0.8**
BILL	**Bilibino**	**75.81**	**9**	⇑*e*P	**P**	**01 07 07.7**	**-0.4**
KSH	**Kashi**	**76.24**	**313**	P	**P**	**01 07 13.8**	**+2.4**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NIL	**Nilore**	**76.48**	**307**	P	**P**	**01 07 12.3**	**-0.4**
NIL	**Nilore**	**76.48**	**307**	P	**P**	**01 07 12.3**	**-0.4**
NIL				pmax	pmax		
	comp=Z,23nm,0.7s						
ZAA0	**Zalesovo Array**	**76.82**	**329**	P	**P**	**01 07 13.5**	**-0.6**
ZALV	**Zalesovo Beam**	**76.82**	**329**	P	**P**	**01 07 13.2**	**-0.9**
ZALV	**Zalesovo Beam**	**76.82**	**329**	P	**P**	**01 07 13.5**	**-0.6**
	comp=Z,3.6nm,0.6s,baz=119,slow=5.7,SNR=16						
	comp=Z,3.6nm,0.6s						
NRN	**Naryn**	**76.88**	**315**	P	**P**	**01 07 14.5**	**-0.7**
NRN	**Naryn**	**76.88**	**315**	P	**P**	**01 07 14.5**	**-0.7**
NRN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**78.11**	**356**	P	**P**	**01 07 19.9**	**-1.1**
	comp=Z,1.2nm,0.2s,baz=225,slow=5.3,SNR=0.9						
	comp=Z,1.2nm,0.2s						
AAK	**Ala-Archa**	**78.35**	**316**	P	**P**	**01 07 22.5**	**-0.6**
AAK	**Ala-Archa**	**78.35**	**316**	⇑*e*P	**P**	**01 07 23.4**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	**Kurchatov**	**78.72**	**324**	P	**P**	**01 07 24.5**	**-0.3**
KURK				IAmb	IAmb	01 07 37.4	
	comp=Z,9.7nm,0.8s						
KURK	**Kurchatov**	**78.72**	**324**	*de*P	**P**	**01 07 25.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURBB	**Kurchatov Arra**	**78.74**	**324**	P	**P**	**01 07 24.6**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=115,slow=4.6,SNR=30						
	comp=Z,4.2nm,0.9s						
KBL	**Kabul**	**80.08**	**306**	P	**P**	**01 07 31.6**	**-1.3**
KBL	**Kabul**	**80.08**	**306**	P	**P**	**01 07 31.6**	**-1.3**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAW	**Mawson**	**80.51**	**202**	LR	LR	01 41 56.5	
	comp=Z,101nm,18.5s,baz=80,slow=35						
SIMJ	**Simiganj**	**81.15**	**311**	P	**P**	**01 07 37.9**	**-0.5**
SIMJ				IAmb	IAmb	01 07 46.6	
	comp=Z,12nm,0.9s						
KK31	**Karatay Array**	**81.28**	**315**	P	**P**	**01 07 38.6**	**-0.2**
KK31	**Karatay Array**	**81.28**	**315**	P	**P**	**01 07 38.6**	**-0.2**
KK31				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KKAR	**Karatay Array**	**81.28**	**315**	P	**P**	**01 07 38.7**	**-0.1**
KKAR	**Karatay Array**	**81.28**	**315**	P	**P**	**01 07 38.7**	**-0.1**
G16K	**Koyuk River**	**81.77**	**20**	P	**P**	**01 07 41.0**	**+0.1**
G16K				IAmb	IAmb	01 07 42.4	
	comp=Z,14nm,1.2s						
N18K	**Kilae Creek**	**81.83**	**26**	P	**P**	**01 07 42.1**	**+0.8**
N18K				IAmb	IAmb	01 08 06.0	
	comp=Z,29nm,1.4s						
N19K	**Bonanza Creek**	**82.50**	**26**	P	**P**	**01 07 44.3**	**-0.7**
C16K	**Lisburne Hills**	**82.52**	**17**	P	**P**	**01 07 45.5**	**+0.7**
G18K	**Tagagawik**	**83.33**	**21**	P	**P**	**01 07 49.3**	**+0.3**
G18K				IAmb	IAmb	01 07 55.5	
	comp=Z,5.4nm,0.8s						
E18K	**Tukpahlearik C**	**83.49**	**19**	P	**P**	**01 07 49.9**	**+0.1**
E18K				IAmb	IAmb	01 07 58.8	
	comp=Z,7.4nm,1.1s						
J19K	**Poorman**	**83.51**	**23**	P	**P**	**01 07 50.5**	**+0.5**
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**01 07 52.0**	**-0.1**
QSPA				IAmb	IAmb	01 07 53.0	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**83.88**	**180**	P	**P**	**01 07 52.1**	**0.0**
	comp=Z,6.4nm,1.0s,baz=349,slow=2.5,SNR=10						
QSPA				LR	LR	01 45 31.3	
	comp=Z,288nm,18.2s,baz=12,slow=36						
	comp=Z,6.4nm,1.0s						
H19K	**Roundabout Mou**	**83.94**	**21**	P	**P**	**01 07 52.5**	**+0.4**
H19K				IAmb	IAmb	01 08 08.3	
	comp=Z,7.9nm,1.0s						
C18K	**Utukok River**	**83.99**	**18**	P	**P**	**01 07 52.9**	**+0.5**
G19K	**Purcell Mounta**	**84.01**	**21**	P	**P**	**01 07 52.5**	**-0.1**
G19K				IAmb	IAmb	01 08 07.8	
	comp=Z,7.6nm,1.0s						
NRIK	**Noril'sk**	**84.06**	**343**	P	**P**	**01 07 51.8**	**-0.9**
NRIK				IAmb	IAmb	01 08 03.3	
	comp=Z,11nm,0.9s						
NRIK	**Noril'sk**	**84.06**	**343**	P	**P**	**01 07 52.4**	**-0.3**
	comp=Z,7.2nm,0.9s,baz=126,slow=4.9,SNR=15						
	comp=Z,7.2nm,0.9s						
J20K	**Nowinta River**	**84.17**	**23**	P	**P**	**01 07 53.5**	**+0.2**
J20K				IAmb	IAmb	01 08 21.6	
	comp=Z,11nm,1.1s						
BVAR	**Borovoye Array**	**84.31**	**325**	P	**P**	**01 07 54.6**	**+0.3**
	comp=Z,24nm,0.7s,baz=110,slow=6.7,SNR=141						
	comp=Z,24nm,0.7s						
BRVK	**Borovoye**	**84.39**	**325**	P	**P**	**01 07 54.5**	**-0.2**
BRVK	**Borovoye**	**84.39**	**325**	*c i*P	**P**	**01 07 54.8**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,31nm,1.3s						
E19K	**Redstone River**	**84.62**	**20**	P	**P**	**01 07 55.3**	**-0.3**
E19K				IAmb	IAmb	01 08 20.7	
	comp=Z,7.7nm,0.8s						
C19K	**Lookout Ridge**	**84.72**	**18**	P	**P**	**01 07 56.8**	**+0.6**
C19K				IAmb	IAmb	01 08 03.9	
	comp=Z,9.8nm,0.8s						
RC01	**Rabbit Creek A**	**84.72**	**27**	P	**P**	**01 07 57.2**	**+1.0**
D19K	**Kuna River**	**84.86**	**19**	P	**P**	**01 07 57.0**	**+0.2**
D19K				IAmb	IAmb	01 08 08.8	
	comp=Z,9.6nm,0.9s						
F20K	**Avaraart Lake**	**84.93**	**20**	P	**P**	**01 07 57.8**	**+0.7**
RER	**Riviere de l'E**	**84.95**	**249**		**P**	**01 07 57.2**	**-1.2**
IMAR	**Indian Mountai**	**85.13**	**22**	P	**P**	**01 07 58.1**	**-0.1**
MLY	**Manley**	**85.86**	**23**	P	**P**	**01 08 00.9**	**-1.0**
MLY				IAmb	IAmb	01 08 08.4	
	comp=Z,7.6nm,0.9s						
RND	**Reindeer**	**85.99**	**25**	P	**P**	**01 08 01.6**	**-1.0**
RND				IAmb	IAmb	01 08 07.6	
	comp=Z,11nm,0.8s						
RND	**Reindeer**	**85.99**	**25**	P	**P**	**01 08 01.6**	**-1.0**
RND				pmax	pmax		
	comp=Z,11nm,0.8s						
BWN	**Browne**	**86.03**	**24**	P	**P**	**01 08 03.6**	**+1.0**
MCK	**McKinley**	**86.08**	**25**	P	**P**	**01 08 02.9**	**-0.1**
MCK				IAmb	IAmb	01 08 11.8	
	comp=Z,16nm,1.0s						
MCK	**McKinley**	**86.08**	**25**	P	**P**	**01 08 02.9**	**-0.1**
MCK				pmax	pmax		
	comp=Z,15nm,1.0s						
DHY	**Denali Highway**	**86.49**	**25**	P	**P**	**01 08 05.3**	**0.0**
DHY				IAmb	IAmb	01 08 12.9	
	comp=Z,12nm,0.9s						
WRH	**Wood River Hil**	**86.70**	**24**	P	**P**	**01 08 04.6**	**-1.4**
WRH				IAmb	IAmb	01 08 06.1	
	comp=Z,12nm,1.2s						
MSEY	**Mahe Island**	**86.70**	**266**	P	**P**	**01 08 06.2**	**-1.0**
MSEY	**Mahe Island**	**86.70**	**266**	P	**P**	**01 08 06.2**	**-1.0**
MSEY				pmax	pmax		
	comp=Z,128nm,1.5s						
E22K	**Anaktuvuk Pass**	**86.76**	**20**	P	**P**	**01 08 07.2**	**+0.9**
E22K				IAmb	IAmb	01 08 14.3	
	comp=Z,8.3nm,0.9s						
D22K	**Ayikyak River**	**86.79**	**19**	P	**P**	**01 08 06.8**	**+0.4**
D22K				IAmb	IAmb	01 08 25.2	
	comp=Z,16nm,1.4s						
G23K	**Bananza Creek**	**86.81**	**22**	P	**P**	**01 08 07.0**	**+0.5**
CCB	**Clear Creek Bu**	**86.88**	**24**	P	**P**	**01 08 06.1**	**-0.7**
CCB				IAmb	IAmb	01 08 13.2	
	comp=Z,8.2nm,0.8s						
COLA	**College**	**86.94**	**24**	P	**P**	**01 08 06.8**	**-0.2**
COLA				IAmb	IAmb	01 08 12.7	
	comp=Z,12nm,0.8s						
COLA	**College**	**86.94**	**24**	P	**P**	**01 08 06.9**	**-0.2**
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
POKR	**Poker Plat Res**	**87.19**	**23**	P	**P**	**01 08 08.8**	**+0.4**
POKR				IAmb	IAmb	01 08 15.6	
	comp=Z,6.7nm,1.1s						
H24K	**Noodor Dome**	**87.28**	**23**	P	**P**	**01 08 09.4**	**+0.6**
H24K				IAmb	IAmb	01 08 16.7	
	comp=Z,4.4nm,0.7s						
IL31		**87.29**	**24**	P	**P**	**01 08 07.4**	**-1.4**
IL31				IAmb	IAmb	01 08 27.2	
	comp=Z,6.4nm,0.8s						
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**01 08 07.4**	**-1.4**
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**01 08 07.4**	**-1.4**
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**01 08 06.8**	**-2.0**
	comp=Z,2.2nm,0.6s,baz=256,slow=4.6,SNR=25						
	comp=Z,2.2nm,0.6s						
IL03	**Eielson Array**	**87.30**	**24**	P	**P**	**01 08 07.3**	**-1.6**
G24K	**Hadweenzic Riv**	**87.74**	**22**	P	**P**	**01 08 11.0**	**0.0**
G24K				IAmb	IAmb	01 08 21.6	
	comp=Z,9.3nm,1.2s						
J25K	**Salcha River,**	**87.85**	**24**	P	**P**	**01 08 11.4**	**-0.2**
J25K				IAmb	IAmb	01 08 16.4	
	comp=Z,14nm,1.4s						
C23K	**Itkillik River**	**87.86**	**19**	P	**P**	**01 08 11.1**	**-0.4**
F24K	**Squaw Lake**	**87.89**	**21**	P	**P**	**01 08 11.4**	**-0.3**
F24K				IAmb	IAmb	01 08 22.4	
	comp=Z,6.9nm,0.8s						
MENT	**Mentasta**	**88.02**	**26**	P	**P**	**01 08 11.7**	**-0.8**
MENT				IAmb	IAmb	01 08 18.6	
	comp=Z,7.8nm,0.9s						
D24K	**Happy Valley**	**88.17**	**19**	P	**P**	**01 08 13.5**	**+0.5**
BARN	**Barnard Glacie**	**88.43**	**28**	P	**P**	**01 08 12.6**	**-2.0**
FYU	**Fort Yukon**	**88.54**	**22**	P	**P**	**01 08 14.6**	**-0.1**
J26L	**Joseph Creek**	**88.56**	**25**	P	**P**	**01 08 13.9**	**-1.1**
J26L				IAmb	IAmb	01 08 18.9	
	comp=Z,16nm,1.4s						
M27K	**Edge Creek, AK**	**88.67**	**27**	P	**P**	**01 08 15.8**	**+0.1**
M27K				IAmb	IAmb	01 08 22.3	
	comp=Z,9.6nm,0.9s						
L27K	**Beaver Creek,**	**88.89**	**26**	P	**P**	**01 08 16.7**	**+0.2**
BCAR	**Beaver Creek A**	**88.91**	**26**	P	**P**	**01 08 16.6**	**-0.1**
E25K	**Arctic Village**	**88.92**	**21**	P	**P**	**01 08 17.1**	**+0.4**
K27K	**Chicken**	**89.04**	**25**	P	**P**	**01 08 17.4**	**+0.1**
K27K				IAmb	IAmb	01 08 24.2	
	comp=Z,10nm,0.9s						
D25K	**Kavik River**	**89.05**	**20**	P	**P**	**01 08 17.3**	**+0.1**
BMAR	**Burnt Mountain**	**89.05**	**22**	P	**P**	**01 08 17.9**	**+0.7**
GEYT	**Alibeck**	**89.40**	**308**	P	**P**	**01 08 18.9**	**-0.6**
GEYT	**Alibeck**	**89.40**	**308**	P	**P**	**01 08 18.9**	**-0.6**
GEYT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GEYT	**Alibeck**	**89.40**	**308**	P	**P**	**01 08 20.4**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=86,slow=5.9,SNR=3.6						
	comp=Z,1.2nm,0.6s						
EGAK	**Eagle**	**89.63**	**25**	P	**P**	**01 08 19.5**	**-0.4**
EGAK				IAmb	IAmb	01 08 25.7	
	comp=Z,13nm,1.1s						
ABKAR	**Akbulak array**	**89.82**	**319**	P	**P**	**01 08 19.6**	**-1.6**
ABKAR	**Akbulak array**	**89.82**	**319**	P	**P**	**01 08 19.6**	**-1.6**
ABKAR				IAmb	IAmb	01 08 32.9	
	comp=Z,3.6nm,0.8s						
DAWY	**Dawson**	**90.20**	**25**	P	**P**	**01 08 22.9**	**+0.2**
DAWY				IAmb	IAmb	01 08 29.3	
	comp=Z,7.2nm,1.0s						
M29M	**Somme Creek**	**90.24**	**27**	P	**P**	**01 08 22.2**	**-0.8**
I28M	**Miner Creek**	**90.30**	**24**	P	**P**	**01 08 23.4**	**+0.3**
L29M	**L29M**	**90.53**	**27**	P	**P**	**01 08 24.3**	**0.0**
L29M				IAmb	IAmb	01 08 31.4	
	comp=Z,8.1nm,0.8s						
K29M	**Barlow Dome**	**90.95**	**26**	P	**P**	**01 08 26.8**	**+0.5**
K29M				IAmb	IAmb	01 08 32.4	
	comp=Z,8.0nm,1.1s						
J30M	**Hart River**	**91.61**	**25**		**P**	**01 08 30.1**	**+0.8**
J30M				IAmb	IAmb	01 08 35.2	
	comp=Z,7.5nm,1.1s						
ARU	**Arti**	**91.76**	**326**	P	**P**	**01 08 28.9**	**-1.1**
ARU				IAmb	IAmb	01 08 40.6	
	comp=Z,6.1nm,1.1s						
ARU	**Arti**	**91.76**	**326**	P	**P**	**01 08 28.8**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=94,slow=13,SNR=5.0						
	comp=Z,1.9nm,0.4s						
G31M	**Satah River**	**92.84**	**23**	P	**P**	**01 08 35.8**	**+1.0**
G31M				IAmb	IAmb	01 08 40.8	
	comp=Z,9.0nm,1.4s						
ELIB	**Princess Elisa**	**92.96**	**196**	*d*P	**P**	**01 08 36.3**	**+0.8**
INK	**Inuvik**	**93.33**	**22**	LR	LR	01 44 34.1	
	comp=Z,50nm,20.9s,baz=221,slow=32						
T35M	**Bob Quinn**	**93.48**	**33**	P	**P**	**01 08 37.6**	**-0.4**
YKA	**Yellowknife Ar**	**101.26**	**27**	P	**Pdif**	**01 09 13.3**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=284,slow=4.7,SNR=4.1						
EKA	**Eskdalemuir Ar**	**123.81**	**337**	PKP	**PKiKP**	**01 14 20.8**	**+0.3**
	comp=Z,1.0nm,1.9s,baz=15,slow=3.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**140.91**	**283**	PKhKP	PKPpre	01 14 47.9	
	comp=Z,1.0nm,0.9s,baz=79,slow=4.6,SNR=4.8						
CPUP	**Villa Florida**	**142.40**	**150**	PKP	**PKPdf**	**01 14 55.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=333,slow=2.3,SNR=1.5						
ROSC	**El Rosal**	**143.19**	**90**	PKP	**PKPdf**	**01 14 57.9**	**-0.3**
	comp=Z,6.9nm,0.5s,baz=225,slow=1.4,SNR=2.2						
KIC	**Kosan Boka**	**147.58**	**272**	⇑*e*P	**PKPbc**	**01 15 08.2**	**+0.3**
	comp=Z,21nm,1.1s						
DBIC	**Dimbokro**	**147.70**	**273**	PKPbc	**PKPbc**	**01 15 08.6**	**+0.3**
	comp=Z,10.0nm,0.9s,baz=86,slow=2.3,SNR=6.8						
DBIC				PKPab	**sPKPdf**	**01 15 13.5**	**+0.4**
	comp=Z,14nm,0.9s,baz=69,slow=2.4,SNR=7.9						
LIC	**Lamto**	**147.86**	**272**	⇓*e*P	**PKPbc**	**01 15 09.5**	**+0.8**
	comp=Z,44nm,1.0s						
TIC	**Toumodi**	**147.86**	**273**	⇑*e*P	**PKPbc**	**01 15 09.3**	**+0.6**
	comp=Z,16nm,0.9s						
SIV	**San Ignacio**	**147.87**	**133**	PKPbc	**PKPbc**	**01 15 08.9**	**+0.2**
	comp=Z,5.6nm,1.2s,baz=229,slow=4.0,SNR=8.1						

*KRNET **27** 01:06:52.7±0.1,39°.53N×73°.03E,h14km,mb3.0*
*SOME **27** 01:06:53.5,39°.82N×72°.65E,h5km*

ISC 27 01:06:54.4±1.1,39°.69N±0°.05×72°.95E±0°.03,h10km,n33,
σ2ᵈ46/65,18C-20D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.53**	**53**	⇓*i*P		**Pg**	**01 07 04.3**	**-0.5**
	baz=37							
SFK				⇓*i*S		**Sb**	**01 07 12.7**	**-1.1**
	baz=37							
OHH	**Osh**	**0.84**	**351**	⇓*i*P		**Pn**	**01 07 11.8**	**-0.6**
	baz=49							
OHH				⇓*i*S		**Sn**	**01 07 25.7**	**+0.9**
	baz=49							
DRK	**Karamyk**	**0.91**	**257**	⇑*i*P		**Pg**	**01 07 10.6**	**-1.4**
	baz=67							
DRK				⇑*i*S		**Sb**	**01 07 23.9**	**-0.9**
	baz=67							
ARSB	**Arslanbob**	**1.63**		1⇑*e*P		**Pg**	**01 07 25.8**	**+0.1**
	baz=59							
ARSB				⇑*e*S		**Sg**	**01 07 50.1**	**+3.3**
	baz=59							
ARSB	**Arslanbob**	**1.63**	**1**	P		**Pg**	**01 07 25.5**	**-0.2**
ARSB	**Arslanbob**	**1.63**	**1**	P		**Pg**	**01 07 25.5**	**-0.2**
BTK	**Batken**	**1.68**	**283**	⇑*i*P		**Pg**	**01 07 25.7**	**-0.9**
	baz=88							
BTK				⇑*i*S		**Sg**	**01 07 49.7**	**+1.3**
	baz=88							
ARK	**Arkit**	**2.23**	**341**	⇑*i*P		**Pb**	**01 07 34.9**	**0.0**
	baz=41							
ARK				⇑*i*S		**Sg**	**01 08 05.7**	**-0.4**
	baz=41							
TRKS	**Terek-Say**	**2.29**	**324**	⇓*e*P		**Pb**	**01 07 35.0**	**-1.0**
	baz=24							
TRKS				⇓*e*S		**Sb**	**01 08 05.2**	**+0.7**
	baz=24							
ARLS	**Aral**	**2.40**	**25**	⇑*e*P		**Pb**	**01 07 36.4**	**-1.4**
	baz=23							
ARLS				⇑*e*S		**Sb**	**01 08 08.4**	**+0.8**
	baz=23							
UCH	**Uchtor**	**2.79**	**25**	⇑*i*P		**Pb**	**01 07 41.9**	**-2.8**
	baz=22							
UCH				⇑*i*S		**Sb**	**01 08 18.0**	**-1.2**
	baz=22							
MNAS	**Manas**	**2.81**	**353**	⇓*i*P		**Pb**	**01 07 42.9**	**-1.9**
	baz=53							
MNAS				⇓*i*S		**Sb**	**01 08 19.4**	**+0.1**
	baz=53							
NRN	**Naryn**	**2.90**	**52**	⇓*i*P		**Pn**	**01 07 42.1**	**+1.2**
	baz=49							
NRN				⇓*i*S		**Sn**	**01 08 18.2**	**+2.1**
	baz=49							
EKS2	**Erkin-Say**	**3.03**	**12**	⇑*i*P		**Pb**	**01 07 45.4**	**-3.1**
	baz=10.0							
EKS2				⇑*i*S		**Sb**	**01 08 24.0**	**-1.6**
	baz=10.0							
MRKS	**Merke**	**3.06**	**4**	*e*P		**Pb**	**01 07 47.7**	**-1.2**
	4.0nm,0.6s							
MRKS				*e*S		**Sb**	**01 08 26.8**	**+0.5**
	6.8nm,0.2s							
AAK	**Ala-Archa**	**3.16**	**21**	⇓*i*P		**Pn**	**01 07 47.0**	**+2.6**
	baz=19							
AAK				⇓*i*S		**Sb**	**01 08 27.0**	**-2.5**
	baz=19							
IUG	**Iuzhnay**	**3.30**	**319**	*e*P		**Pb**	**01 07 50.6**	**-2.5**
	11nm,0.4s							
IUG				*e*S		**Sb**	**01 08 31.9**	**-1.4**
	45nm,0.4s							
ULHL	**Ulahol**	**3.56**	**43**	⇓*i*P		**Pn**	**01 07 52.0**	**+2.0**
	baz=41							
ULHL				⇓*i*S		**Sn**	**01 08 35.3**	**+3.0**
	baz=41							
USP	**Ospenovka**	**3.75**	**18**	⇓*i*P		**Pn**	**01 07 55.4**	**+3.0**
	baz=16							
USP				⇓*i*S		**Sn**	**01 08 41.0**	**+4.3**
	baz=16							
TKM2	**Tokmak 2**	**3.79**	**31**	⇓*i*P		**Pn**	**01 07 55.7**	**+2.6**
	baz=29							
TKM2				⇓*i*S		**Sn**	**01 08 41.4**	**+3.6**
	baz=29							
KK31	**Karatay Array**	**3.87**	**332**	⇓Pn		**Pb**	**01 07 58.8**	**-3.9**
	0.7nm,0.4s,baz=151,slow=14,SNR=11							
KK31				⇑Pg		**Pg**	**01 08 07.6**	**-0.9**
	0.4nm,0.2s,baz=160,sl

KRSC ***27*** *01:31:02.5±1.9, 49°.41N×156°.40E, h40km±21km, Mc4.5, Ml5.3, Felt [III-IV] at Podgornay.*
MOS ***27*** *01:31:04.9±1.0, 49°.49N×156°.01E, h66km, mb4.7/17, MS3.3/4, Error ellipse: s-maj=8.0km s-min=3.3km az=75.0*
NEIC ***27*** *01:31:06.5±2.0, 49°.56N±0°.06×155°.8E±0°.1, h57km±7km, mb4.6/53, Error ellipse: s-maj=13.0km s-min=8.4km az=101.0*
IDC ***27*** *01:31:07.8±2.1, 49°.66N×155°.75E, h74km±19km, mb4.1/30, mbtmp4.4/36, MS3.8/59, Error ellipse: s-maj=12.6km s-min=9.4km az=131.0*

ISC 27 01:31:05.7±0.5, 49°.48N±0°.05×155°.96E±0°.04, h60km±4km, h59km:pP-P, n288, σ1§66/272, mb4.5/83, MS3.9/54, 15C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.21**	**5**	***i*PN**		**Pn**	**01 31 24.7**	**-1.8**
SKR				*i* S		**Sn**	**01 31 39.0**	**-2.9**
SKR				pmax	pmax			
	comp=Z,5μm,0.4s							
SKR				smax	smax			
	comp=N,28μm,0.5s							
SKR				smax	smax			
	comp=E,25μm,0.3s							
SKR	**Severo-Kuril's**	**1.21**	**5**	***e*P**		**Pn**	**01 31 25.2**	**-1.3**
SKR				*e*S		**Sn**	**01 31 39.8**	**-2.1**
PAU	**Pauzhetka**	**2.06**	**15**	PN		**Pn**	**01 31 38.6**	**+0.6**
PAU				S		**Sn**	**01 32 03.1**	**+0.5**
PAU	**Pauzhetka**	**2.06**	**15**	***e*P**		**Pn**	**01 31 38.6**	**+0.6**
PAU				*e*S		**Sn**	**01 32 03.1**	**+0.5**
KDTR	**Khodutka, Kamc**	**2.69**	**29**	PN		**Pn**	**01 31 45.3**	**-1.3**
KDTR				S		**Sn**	**01 32 15.9**	**-2.1**
KDTR	**Khodutka, Kamc**	**2.69**	**29**	***e*P**		**Pn**	**01 31 45.3**	**-1.3**
KDTR				*e*S		**Sn**	**01 32 15.9**	**-2.1**
ASAK	**Asacha**	**3.16**	**22**	PN		**Pn**	**01 31 53.4**	**+0.4**
ASAK	**Asacha**	**3.16**	**22**	***e*P**		**Pn**	**01 31 53.4**	**+0.4**
MTVR	**Mutnovka**	**3.32**	**24**	PN		**Pn**	**01 31 55.0**	**-0.3**
MTVR				S		**Sn**	**01 32 33.8**	**+0.3**
MTVR	**Mutnovka**	**3.32**	**24**	***e*P**		**Pn**	**01 31 55.0**	**-0.3**
MTVR				*e*S		**Sn**	**01 32 33.8**	**+0.3**
GRL	**Gorelyy**	**3.35**	**23**	PN		**Pn**	**01 31 56.0**	**+0.3**
GRL	**Gorelyy**	**3.35**	**23**	***e*P**		**Pn**	**01 31 56.0**	**+0.3**
RUS	**Russkaya**	**3.37**	**28**	PN		**Pn**	**01 31 55.1**	**-0.7**
RUS				S		**Sn**	**01 32 32.4**	**-2.1**
RUS	**Russkaya**	**3.37**	**28**	***e*P**		**Pn**	**01 31 55.1**	**-0.7**
RUS				*e*S		**Sn**	**01 32 32.4**	**-2.1**
APC	**Apacha**	**3.53**	**12**	PN		**Pn**	**01 31 58.7**	**+0.7**
APC	**Apacha**	**3.53**	**12**	***e*P**		**Pn**	**01 31 58.7**	**+0.7**
KRMR	**Karymshinskiy**	**3.62**	**21**	PN		**Pn**	**01 32 00.1**	**+0.8**
KRMR	**Karymshinskiy**	**3.62**	**21**	***e*P**		**Pn**	**01 32 00.1**	**+0.8**
PEA0B	**Petropavlovsk-**	**3.79**	**16**			**Pn**	**01 32 02.6**	**+1.0**
PEA0B	**Petropavlovsk-**	**3.79**	**16**	PN		**Pn**	**01 32 02.6**	**+1.0**
PETK	**Petropavlovsk-**	**3.79**	**16**			**Pn**	**01 32 01.7**	**+0.1**
PETK	**Petropavlovsk-**	**3.79**	**16**	PN		**Pn**	**01 32 01.7**	**+0.1**
PETK	**Petropavlovsk-**	**3.79**	**16**	P		**Pn**	**01 32 02.0**	**+0.4**
	comp=E,38nm,0.4s,baz=179,slow=13,SNR=205							
PETK				S		**Sn**	**01 32 53.0**	**+8.0**
	comp=E,63nm,0.6s,baz=126,slow=17,SNR=4.6							
PETK				LR	LR		01 33 46.0	
	comp=E,2μm,20.1s,baz=188,slow=43							
PET	**Petropavlovsk**	**3.93**	**24**			**Pn**	**01 32 03.4**	**0.0**
PET	**Petropavlovsk**	**3.93**	**24**	***e*PN**		**Pn**	**01 32 03.7**	**+0.2**
PET				*e*S		**Sn**	**01 32 48.6**	**+0.3**
PET				pmax	pmax			
	comp=Z,227nm,0.3s							
PET				smax	smax			
	comp=N,1μm,0.5s							
PET				smax	smax			
	comp=E,764nm,0.5s							
PET				MLR	MLR			
	comp=Z,700nm,9.0s							
PET	**Petropavlovsk**	**3.93**	**24**	***e*P**		**Pn**	**01 32 04.5**	**+1.1**
PET				*e*S		**Sn**	**01 32 48.8**	**+0.5**
INSR	**Institute**	**3.96**	**24**	***e*P**		**Pn**	**01 32 05.1**	**+1.3**
INSR				*e*S		**Sn**	**01 32 51.3**	**+2.4**
DALK	**Dalny**	**3.97**	**25**	PN		**Pn**	**01 32 03.9**	**0.0**
DALK				S		**Sn**	**01 32 49.6**	**+0.5**
DALK	**Dalny**	**3.97**	**25**	***e*P**		**Pn**	**01 32 03.9**	**0.0**
DALK				*e*S		**Sn**	**01 32 49.6**	**+0.5**
UGLR	**Uglovaya**	**4.14**	**25**	PN		**Pn**	**01 32 07.8**	**+1.3**
UGLR	**Uglovaya**	**4.14**	**25**	***e*P**		**Pn**	**01 32 07.8**	**+1.3**
KOK	**Koryaka**	**4.17**	**23**	PN		**Pn**	**01 32 09.0**	**+2.1**
KOK	**Koryaka**	**4.17**	**23**	***e*P**		**Pn**	**01 32 09.0**	**+2.1**
AVH	**Avacha**	**4.17**	**24**	PN		**Pn**	**01 32 08.7**	**+1.8**
AVH	**Avacha**	**4.17**	**24**	***e*P**		**Pn**	**01 32 08.7**	**+1.8**
SMAR	**Somma**	**4.19**	**24**	PN		**Pn**	**01 32 08.0**	**+0.8**
SMAR	**Somma**	**4.19**	**24**	***e*P**		**Pn**	**01 32 08.0**	**+0.8**
KRER	**Koryakskii**	**4.21**	**23**	PN		**Pn**	**01 32 08.7**	**+1.2**
KRER	**Koryakskii**	**4.21**	**23**	***e*P**		**Pn**	**01 32 08.7**	**+1.2**
SDLR	**Sedlovina**	**4.22**	**25**	PN		**Pn**	**01 32 08.8**	**+1.2**
SDLR	**Sedlovina**	**4.22**	**25**	***e*P**		**Pn**	**01 32 08.8**	**+1.2**
KRX	**Arik**	**4.23**	**22**	PN		**Pn**	**01 32 09.1**	**+1.3**
KRX	**Arik**	**4.23**	**22**	***e*P**		**Pn**	**01 32 09.1**	**+1.3**
NLC	**Nalytchevo**	**4.26**	**29**	PN		**Pn**	**01 32 06.4**	**-1.6**
NLC	**Nalytchevo**	**4.26**	**29**	***e*P**		**Pn**	**01 32 06.4**	**-1.6**
GNL	**Ganaly**	**4.40**	**16**	PN		**Pn**	**01 32 11.5**	**+1.5**
GNL	**Ganaly**	**4.40**	**16**	***e*P**		**Pn**	**01 32 11.5**	**+1.5**
SPN	**Mys Shipunski**	**4.43**	**34**	PN		**Pn**	**01 32 09.9**	**-0.4**
SPN	**Mys Shipunski**	**4.43**	**34**	***e*P**		**Pn**	**01 32 09.9**	**-0.4**
KII	**Karymskiy**	**5.05**	**24**	PN		**Pn**	**01 32 20.2**	**+1.3**
KII	**Karymskiy**	**5.05**	**24**	***e*P**		**Pn**	**01 32 20.2**	**+1.3**
TUMD	**Tumrok D**	**6.34**	**24**	***e*P**		**Pn**	**01 32 37.2**	**+0.7**
TUMR	**Tumrok**	**6.35**	**22**	PN		**Pn**	**01 32 37.2**	**+0.5**
TUMR	**Tumrok**	**6.35**	**22**	***e*P**		**Pn**	**01 32 38.2**	**+1.5**
ESO	**Esso**	**6.67**	**13**	PN		**Pn**	**01 32 42.6**	**+1.7**
ESO	**Esso**	**6.67**	**13**	***e*P**		**Pn**	**01 32 42.6**	**+1.7**
KMNR	**Kamenistaya**	**6.80**	**21**	PN		**Pn**	**01 32 45.2**	**+2.3**
KMNR	**Kamenistaya**	**6.80**	**21**	***e*P**		**Pn**	**01 32 45.2**	**+2.3**
KUR	**Kuril'sk**	**6.95**	**235**	***e*PN**		**Pn**	**01 32 46.6**	**+1.9**
KUR				*e*S		**Sn**	**01 34 04.1**	**+1.8**
KUR				pmax	pmax			
	comp=Z,187nm,1.0s							
KUR	**Kuril'sk**	**6.95**	**235**	***e*P**		**Pn**	**01 32 46.9**	**+2.2**
KPT	**Kopyto**	**6.99**	**20**	PN		**Pn**	**01 32 46.9**	**+1.4**
KPT	**Kopyto**	**6.99**	**20**	***e*P**		**Pn**	**01 32 46.9**	**+1.4**
KIRR	**Kirishev**	**7.01**	**21**	PN		**Pn**	**01 32 47.2**	**+1.5**
KIRR	**Kirishev**	**7.01**	**21**	***e*P**		**Pn**	**01 32 47.2**	**+1.5**
BZMR	**Bezymyannaya**	**7.03**	**21**	PN		**Pn**	**01 32 47.0**	**+1.0**
BZMR	**Bezymyannaya**	**7.03**	**21**	***e*P**		**Pn**	**01 32 47.0**	**+1.0**
BZWR	**Bezymyannyi-We**	**7.05**	**21**	PN		**Pn**	**01 32 47.6**	**+1.2**
BZWR	**Bezymyannyi-We**	**7.05**	**21**	***e*P**		**Pn**	**01 32 47.5**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**7.08**	**22**	PN		**Pn**	**01 32 48.1**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**7.08**	**22**	***e*P**		**Pn**	**01 32 48.1**	**+1.4**
LGNR	**Loginova**	**7.21**	**22**	PN		**Pn**	**01 32 50.5**	**+1.9**
LGNR	**Loginova**	**7.21**	**22**	***e*P**		**Pn**	**01 32 50.5**	**+1.9**
SRDR	**Sredinnyy**	**7.22**	**17**	PN		**Pn**	**01 32 50.2**	**+1.7**
SRDR	**Sredinnyy**	**7.22**	**17**	***e*P**		**Pn**	**01 32 50.2**	**+1.7**
KRSR	**Krestovskiy**	**7.30**	**21**	PN		**Pn**	**01 32 50.8**	**+1.1**
KRSR	**Krestovskiy**	**7.30**	**21**	***e*P**		**Pn**	**01 32 50.8**	**+1.1**
BKI	**Bering**	**8.39**	**43**	PN		**Pn**	**01 33 02.1**	**-2.3**
BKI	**Bering**	**8.39**	**43**	***e*P**		**Pn**	**01 33 02.1**	**-2.3**
SHO	**Shikotan**	**8.42**	**232**	***e*PN**		**Pn**	**01 33 02.2**	**-2.7**
SHO				pmax	pmax			
	comp=Z,37nm,0.2s							
SHO				pmax	pmax			
	comp=N,18nm,0.3s							
SHO				pmax	pmax			
	comp=E,29nm,0.2s							
TYV	**Tymovskoe**	**8.65**	**284**	***e*PN**		Pn	01 33 12.7	+4.6
TYV				*e*S		**Sn**	**01 34 48.1**	**+4.0**
TYV				pmax	pmax			
	comp=Z,100nm,2.3s							
TYV				pmax	pmax			
	comp=Z,20nm,0.9s							
TYV				smax	smax			
	comp=N,7.0nm,1.0s							
TYV				smax	smax			
	comp=E,5.0nm,1.0s							
TYV				smax	smax			
	comp=N,100nm,3.8s							
TYV				smax	smax			
	comp=E,100nm,3.8s							
TYV				MLR	MLR			
	comp=Z,400nm,19.0s							
YUK	**Yuzh-Kuril'sk**	**8.81**	**236**	***e*PN**		**Pn**	**01 33 10.2**	**-0.1**
YUK				pmax	pmax			
	comp=N,64nm,0.2s							
YUK				pmax	pmax			
	comp=E,66nm,0.2s							
YUK				pmax	pmax			
	comp=Z,274nm,0.2s							
YUK				MLR	MLR			
	comp=Z,4μm,20.0s							
UGL	**Uglegorsk**		**9.10**	**273**	***e*PN**	**Pn**	01 33 18.4	+4.3
UGL					*e*S	**Sn**	**01 34 58.4**	**+3.5**
UGL					pmax	pmax		
	comp=Z,115nm,1.0s							
UGL					smax	smax		
	comp=N,82nm,0.5s							
UGL					smax	smax		
	comp=E,61nm,0.6s							
RUSJ	**Misakicho**		**9.10**	**238**	***e*PN**	**Pn**	**01 33 15.3**	**+1.1**
YSS	**Yuzh-Sakhalins**		**9.17**	**259**	Pn	**Pn**	**01 33 17.2**	**+2.0**
YSS	**Yuzh-Sakhalins**		**9.17**	**259**	P	**Pn**	**01 33 18.1**	**+2.9**
YSS	**Yuzh-Sakhalins**		**9.17**	**259**	***e*PN**	**Pn**	**01 33 18.3**	**+3.1**
YSS					pmax	pmax		
	comp=Z,60nm,0.9s							
YSS					pmax	pmax		
	comp=Z,300nm,3.9s							
YSS					MLR	MLR		
	comp=E,300nm,19.0s							
NMR	**Nemuro--Hokkai**		**9.34**	**233**	***e*PN**	**Pn**	**01 33 14.2**	**-3.3**
MA2	**Magadan**		**10.55**	**345**		**Pn**	**01 33 33.9**	**-0.1**
MA2	**Magadan**		**10.55**	**345**	P	**Pn**	**01 33 34.0**	**0.0**
MA2	**Magadan**		**10.55**	**345**	***ce*PN**	**Pn**	**01 33 33.6**	**-0.4**
MA2					pmax	pmax		
	comp=Z,23nm,0.6s							
MA2	**Magadan**		**10.55**	**345**	P	**Pn**	**01 33 34.0**	**0.0**
	comp=Z,27nm,0.6s,baz=161,slow=7.8,SNR=21							
MA2					S	**Sn**	**01 35 24.2**	**-6.3**
	comp=Z,8.4nm,0.5s,baz=68,slow=20,SNR=3.0							
MA2					LR	LR	01 38 21.5	
	comp=Z,516nm,18.5s,baz=168,slow=42							
JKA	**Kamikawa-asahi**		**10.61**	**245**		**Pn**	**01 33 36.0**	**+1.1**
ASAJ	**Asahikawa**		**10.61**	**245**	P	**Pn**	**01 33 37.1**	**+2.2**
	comp=Z,105nm,0.8s,baz=85,slow=13,SNR=24							
ASAJ					LR	LR	01 37 15.7	
	comp=Z,384nm,19.7s,baz=10.0,slow=35							
ERM	**Erimo**		**11.64**	**235**	Pn	**Pn**	**01 33 45.9**	**-2.9**
ERM	**Erimo**		**11.64**	**235**	***ce*PN**	**Pn**	**01 33 46.8**	**-2.1**
SHEM	**Shemya Is, Ala**		**11.85**	**67**	P	**Pn**	**01 33 51.4**	**-0.4**
	comp=Z,46nm,0.5s,baz=312,slow=11,SNR=2.6							
SHEM					S	Sn	01 35 53.1	-9.2
	comp=Z,45nm,0.4s,baz=269,slow=17,SNR=8.2							
SHEM					LR	LR	01 37 58.8	
	comp=Z,317nm,21.9s,baz=295,slow=34							
GRNR	**Gornyy**		**12.61**	**283**	***i*PN**	**Pn**	**01 34 05.0**	**+2.9**
GRNR					pmax	pmax		
	comp=Z,10.0nm,1.1s							
GRNR					MLR	MLR		
	comp=N,190nm,14.0s							
GRNR					MLR	MLR		
	comp=E,410nm,14.0s							
GRNR					MLR	MLR		
	comp=Z,300nm,17.0s							
SEY	**Seymchan**		**13.63**	**353**	***e*P**	**Pn**	**01 34 17.1**	**+1.2**
SEY					pmax	pmax		
	comp=Z,18nm,1.7s							
SEY	**Seymchan**		**13.63**	**353**	P	**Pn**	**01 34 17.4**	**+1.5**
	comp=Z,4.8nm,0.5s,baz=161,slow=12,SNR=22							
SEY					LR	LR	01 40 22.0	
	comp=Z,448nm,18.8s,baz=178,slow=41							
TEY	**Ternei**		**13.87**	**259**	***e*P**	**Pn**	**01 34 21.6**	**+2.4**
KLR	**Kul'dur**		**15.77**	**278**	***e*P**	**P**	**01 34 45.8**	**-0.8**
KLR					pmax	pmax		
	comp=Z,41nm,1.5s							
KLR	**Kul'dur**		**15.77**	**278**	P	**P**	**01 34 47.2**	**+0.6**
	comp=Z,10nm,0.9s,baz=89,slow=12,SNR=19							
KLR					LR	LR	01 41 19.5	
	comp=Z,464nm,18.6s,baz=84,slow=39							
JSD	**Sado**		**17.11**	**235**	Pn	**Pn**	**01 35 00.2**	**-0.4**
JSD					IAmb	IAmb	01 35 06.6	
	comp=Z,24nm,0.6s							
JSD	**Sado**		**17.11**	**235**	P	**Pn**	**01 35 01.4**	**+0.8**
USA0B	**Ussuriysk Arra**		**17.20**	**261**		**Pn**	**01 35 01.3**	**-0.4**
USA0B	**Ussuriysk Arra**		**17.20**	**261**	***e*P**	**Pn**	**01 35 01.8**	**+0.1**
USRK	**Ussuriysk Ar.**		**17.20**	**261**		**Pn**	**01 35 01.5**	**-0.2**
USRK	**Ussuriysk Ar.**		**17.20**	**261**	P	**P**	**01 35 02.1**	**-0.4**
	comp=Z,12nm,0.8s,baz=61,slow=10,SNR=12							
USRK					LR	LR	01 41 17.0	
	comp=Z,199nm,21.4s,baz=59,slow=36							
MJB9	**Matsu-Tunnel**		**18.26**	**232**		**P**	**01 35 14.2**	**-0.1**
MAJO	**Matsushiro**		**18.26**	**232**		**P**	**01 35 13.2**	**-1.1**
MAJO	**Matsushiro**		**18.26**	**232**	P	**P**	**01 35 14.5**	**+0.2**
MAJO	**Matsushiro**		**18.26**	**232**	***ce*P**	**P**	**01 35 14.3**	**0.0**
MAJO					pmax	pmax		
	comp=Z,23nm,1.0s							
MJAR	**Matsushiro Arr**		**18.26**	**232**	P	**P**	**01 35 14.5**	**+0.2**
	comp=Z,11nm,0.8s,baz=27,slow=12,SNR=24							
MJAR					LR	LR	01 42 26.4	
	comp=Z,201nm,21.0s,baz=40,slow=37							
ZEA	**Zeya**		**18.27**	**294**	***e*P**	**Pn**	**01 35 16.8**	**+2.1**
ZEA					pmax	pmax		
	comp=Z,20nm,0.7s							
HEH	**HeiHe**		**18.38**	**283**	***e*P**	**Pn**	**01 35 17.5**	**+1.4**
HEH					pP	**pP**	**01 35 28.8**	**+0.7**
HEH					S	**S**	**01 38 41.5**	**-0.4**
HEH					sS	sS	01 38 52.5	-10
HEH					pmax	pmax		
	comp=Z,52nm,1.3s							
HEH					pmax	pmax		
	comp=Z,260nm,4.4s							
HEH					LR	LR		
	comp=N,290nm,12.6s							
HEH					LR	LR		
	comp=E,340nm,13.5s							
HEH					LR	LR		
	comp=Z,480nm,13.0s							
MDJ	**Mudanjiang**		**18.57**	**265**	P	**P**	**01 35 17.3**	**-0.3**
MDJ					pmax	pmax		
	comp=Z,11nm,1.3s							
MDJ					pmax	pmax		
	comp=Z,78nm,3.9s							
MDJ	**Mudanjiang**		**18.57**	**265**	P	**Pn**	**01 35 18.3**	**-0.1**
YAK	**Yakutsk**		**19.23**	**321**	P	**Pn**	**01 35 25.5**	**-0.6**
YAK	**Yakutsk**		**19.23**	**321**	***e*P**	**Pn**	**01 35 25.6**	**-0.6**
YAK					*e*S	**Sn**	**01 38 59.8**	**-1.0**
YAK					pmax	pmax		
	comp=E,5.0nm,0.8s							
YAK					pmax	pmax		
	comp=Z,32nm,0.8s							
YAK					smax	smax		
	comp=E,70nm,2.3s							
YAK					smax	smax		
	comp=N,66nm,2.0s							
YAK					MLR	MLR		
	comp=Z,382nm,15.0s							
YAK	**Yakutsk**		**19.23**	**321**	P	**P**	**01 35 24.7**	**0.0**
	comp=Z,46nm,0.6s,baz=105,slow=6.3,SNR=10							
YAK					LR	LR	01 42 44.8	
	comp=Z,311nm,21.7s,baz=122,slow=37							
BILL	**Bilibino**		**19.32**	**12**	P	**P**	**01 35 26.1**	**+0.5**
BILL	**Bilibino**		**19.32**	**12**	***e*P**	**P**	**01 35 24.8**	**-0.8**
BILL					pmax	pmax		
	comp=Z,6.0nm,0.7s							
JGF	**Kuroka**		**19.43**	**231**	P	**P**	**01 35 28.3**	**+1.2**
JGF	**Kuroka**		**19.43**	**231**	P	**Pn**	**01 35 28.8**	**+0.1**
INU	**Inuyama**		**19.80**	**232**	P	**P**	**01 35 31.1**	**+0.1**
INU					IAmb	IAmb	01 35 36.8	
	comp=Z,28nm,0.8s							
INU	**Inuyama**		**19.80**	**232**	P	**P**	**01 35 31.0**	**0.0**
CN2	**Changchun**		**21.61**	**266**	P	**P**	**01 35 49.0**	**-1.6**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					LR	LR		
	comp=N,300nm,18.0s							
CN2					LR	LR		
	comp=E,300nm,18.0s							
CN2					LR	LR		
	comp=Z,300nm,19.0s							
HIA	**Hailar**		**23.45**	**283**	***de*P**	**P**	**01 36 11.5**	**+1.9**
HIA					pmax	pmax		
	comp=Z,6.0nm,0.7s							
KSRS	**Korea Array**		**23.49**	**250**	P	**P**	**01 36 10.5**	**+0.5**
	comp=Z,7.6nm,0.8s,baz=55,slow=9.6,SNR=22							
KSRS					LR	LR	01 44 28.5	
	comp=Z,148nm,19.9s,baz=35,slow=34							
	comp=Z,7.6nm,0.8s							
KS19	**Wonju Array Si**		**23.49**	**250**	P	**P**	**01 36 10.6**	**+0.6**
KS19					IAmb	IAmb	01 36 11.7	
	comp=Z,15nm,0.8s							
TJN	**Taejon**		**24.52**	**249**	***e*P**	**P**	**01 36 20.1**	**+0.7**
JNU	**Nakatsue**		**24.77**	**238**	P	**P**	**01 36 22.2**	**+0.5**
JNU					IAmb	IAmb	01 36 24.3	
	comp=Z,31nm,1.0s							
JNU	**Nakatsue**		**24.77**	**238**	P	**P**	**01 36 22.1**	**+0.3**
JNU	**Nakatsue**		**24.77**	**238**	P	**P**	**01 36 22.5**	**+0.7**
	comp=Z,22nm,0.9s,baz=54,slow=9.7,SNR=14							
JNU					LR	LR	01 46 10.3	
	comp=Z,96nm,20.5s,baz=47,slow=36							
	comp=Z,22nm,0.9s							
ANM	**Nome**		**25.36**	**39**	P	**P**	**01 36 27.8**	**+1.0**
ANM	**Nome**		**25.36**	**39**	P	**P**	**01 36 27.8**	**+1.0**
ANM					pmax	pmax		
	comp=Z,12nm,1.2s							
TIXI	**Tiksi**		**25.46**	**340**	P	**P**	**01 36 27.0**	**-0.5**
TIXI					IAmb	IAmb	01 36 28.9	
	comp=Z,9.3nm,0.6s							
TIXI	**Tiksi**		**25.46**	**340**	***e*P**	**P**	**01 36 25.2**	**-2.4**
TIXI					pmax	pmax		
	comp=Z,8.0nm,0.6s							
TIXI	**Tiksi**		**25.46**	**340**	LR	LR	01 47 09.1	
	comp=Z,173nm,20.2s,baz=184,slow=38							
BOD	**Bodaibo**		**25.86**	**305**	***e*P**	**P**	**01 36 31.1**	**-0.2**
BOD					pmax	pmax		
	comp=Z,13nm,2.0s							
XLT	**XiLinHaoTe**		**27.68**	**274**	***e*P**	**P**	**01 36 41.0**	**-7.0**
XLT					pP	pP	01 36 55.3	-7.1
XLT					sP	sP	01 37 02.0	-7.4
XLT					PP	**PnPn**	**01 37 32.5**	**-3.7**
XLT					pmax	pmax		
	comp=Z,7.0nm,0.8s							
XLT					pmax	pmax		
	comp=Z,56nm,3.1s							
H11N2	**WAKE ISLAND Hy**		**30.95**	**160**	T	T	02 10 03.0	
	baz=346,slow=76,SNR=360							
H11N1	**WAKE ISLAND Hy**		**30.96**	**160**	T	T	02 10 09.9	
	baz=346,slow=76,SNR=429							
H11N3	**WAKE ISLAND Hy**		**30.96**	**160**	T	T	02 10 10.4	
	baz=346,slow=76,SNR=547							
JOW	**Kunigami**		**31.09**	**234**	LR	LR	01 49 60.0	
	comp=Z,86nm,21.7s,baz=23,slow=36							
ULN	**Ulaanbaatar**		**31.89**	**286**	***e*P**	**P**	**01 37 26.3**	**+1.0**
ULN					pmax	pmax		
	comp=Z,2.0nm,0.7s							
HHC	**Hu-ho-hao-te**		**32.07**	**272**	***e*P**	**P**	**01 37 26.8**	**0.0**
HHC					S	**S**	**01 42 29.0**	**-5.6**
HHC					pmax	pmax		
	comp=Z,10.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,87nm,4.9s							
HHC					LR	LR		
	comp=N,110nm,16.0s							
HHC					LR	LR		
	comp=E,200nm,18.3s							
HHC					LR	LR		
	comp=Z,230nm,18.3s							
H11S1	**WAKE ISLAND Hy**		**32.09**	**161**	T	T	02 11 32.8	
	SNR=3709							
H11S3	**WAKE ISLAND Hy**		**32.09**	**161**	T	T	02 10 55.6	
	baz=344,slow=74,SNR=129							
H11S2	**WAKE ISLAND Hy**		**32.10**	**161**	T	T	02 10 58.9	
	baz=225,slow=74,SNR=505							
SONM	**Songino Array**		**32.31**	**286**	P	**P**	**01 37 32.0**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=66,slow=7.2,SNR=4.5							
SONM					PcP	**PcP**	**01 40 15.1**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=76,slow=1.6,SNR=5.5							
SONM					LR	LR	01 53 23.3	
	comp=Z,192nm,18.7s,baz=42,slow=42							
RND	**Reindeer**		**32.38**	**44**	P	**P**	**01 37 29.0**	**-0.3**
RND					IAmb	IAmb	01 37 42.5	
	comp=Z,12nm,1.1s							
RND	**Reindeer**		**32.38**	**44**	P	**P**	**01 37 29.0**	**-0.3**
RND					pmax	pmax		
	comp=Z,12nm,1.1s							
NJ2	**Nanjing**		**32.64**	**252**	***e*P**	**P**	**01 37 32.0**	**+0.2**
NJ2					pP	**pP**	**01 37 44.5**	**-2.1**
NJ2					sP	**sP**	**01 37 51.3**	**-2.2**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
NJ2					pmax	pmax		
	comp=Z,110nm,5.9s							
KNK	**Knik Glacier**		**32.66**	**47**	P	**P**	**01 37 31.9**	**+0.2**
SML	**Sawmill**		**32.69**	**47**	P	**P**	**01 37 32.3**	**+0.3**
COLA	**College**		**32.82**	**41**	P	**P**	**01 37 33.8**	**+0.9**
COLA	**College**		**32.82**	**41**	P	**P**	**01 37 33.5**	**+0.6**
COLA	**College**		**32.82**	**41**	P	**P**	**01 37 33.8**	**+0.9**
COLA					pmax	pmax		
	comp=Z,13nm,0.6s							
CCB	**Clear Creek Bu**		**32.84**	**41**	IAmb	IAmb	01 37 46.8	
	comp=Z,8.4nm,1.1s							
ILAR	**Eielson Array**		**33.23**	**41**	P	**P**	**01 37 36.2**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=255,slow=6.6,SNR=37							
ILAR					LR	LR	01 51 31.2	
	comp=Z,74nm,20.3s,baz=224,slow=37							
	comp=Z,1.5nm,0.5s							
PRP	**Porcupine Dome**		**33.80**	**40**	P	**P**	**01 37 42.4**

BVAR	**Borovoye Array**	**50.62**	**309**	P		**P**	**01 39 56.6**	**-1.7**
	comp=Z,3.1nm,0.3s,baz=57,slow=8.9,SNR=35							
BVAR				PcP		PcP	**01 41 14.4**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=48,slow=4.6,SNR=1.8							
BVAR				LR		LR	02 02 30.0	
	comp=Z,118nm,20.4s,baz=59,slow=37							
	comp=Z,3.1nm,0.3s							
BRVK	**Borovoye**	**50.65**	**309**	P		**P**	**01 39 57.2**	**-1.3**
BRVK				IAmb		IAmb	01 39 58.2	
	comp=Z,3.7nm,0.8s							
BRVK	**Borovoye**	**50.65**	**309**	*de*P		**P**	**01 39 56.8**	**-1.7**
BRVK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
MANU	**Manus Island**	**51.85**	**191**	P		**P**	**01 40 09.3**	**+1.5**
NONG	**Nongkai**	**52.51**	**253**	P		**P**	**01 40 13.6**	**+0.8**
EDM	**Edmonton**	**53.06**	**49**	P		**P**	**01 40 17.4**	**+0.9**
EDM	**Edmonton**	**53.06**	**49**	P		**P**	**01 40 17.4**	**+0.9**
EDM				pmax		pmax		
	comp=Z,9.0nm,0.8s							
PHRA	**Phrae**	**54.02**	**256**	P		**P**	**01 40 25.0**	**+1.2**
ARU	**Arti**	**54.30**	**317**	P		**P**	**01 40 22.9**	**-2.4**
ARU				IAmb		IAmb	01 40 23.9	
	comp=Z,5.1nm,0.9s							
ARU	**Arti**	**54.30**	**317**	*de*P		**P**	**01 40 23.0**	**-2.4**
ARU				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ARU	**Arti**	**54.30**	**317**	LR		LR	02 06 09.9	
	comp=Z,112nm,19.3s,baz=92,slow=39							
AAK	**Ala-Archa**	**54.34**	**296**	LR		LR	02 04 51.9	
	comp=Z,270nm,19.6s,baz=50,slow=37							
CHTO	**Chiang Mai**	**54.60**	**257**	P		**P**	**01 40 28.9**	**+0.8**
CHTO	**Chiang Mai**	**54.60**	**257**	P		**P**	**01 40 28.7**	**+0.6**
CHTO	**Chiang Mai**	**54.60**	**257**	P		**P**	**01 40 28.9**	**+0.8**
CHTO				pmax		pmax		
	comp=Z,10.0nm,0.9s							
J05D	**Fort Rock, OR**	**54.72**	**63**	P		**P**	**01 40 31.1**	**+2.2**
J05D				IAmb		IAmb	01 40 31.4	
	comp=Z,7.6nm,0.9s							
YBH	**Yreka Blue Hor**	**54.81**	**65**	LR		LR	02 00 12.1	
	comp=Z,43nm,21.6s,baz=306,slow=32							
CMAR	**Chiang Mai Arr**	**54.86**	**257**	P		**P**	**01 40 31.1**	**+1.1**
	comp=Z,5.1nm,0.6s,baz=35,slow=7.1,SNR=24							
CMAR				LR		LR	02 04 37.0	
	comp=Z,43nm,20.6s,baz=45,slow=37							
	comp=Z,5.1nm,0.6s							
KSH	**Kashi**	**55.38**	**292**	P		**P**	**01 40 37.5**	**+3.8**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KSH				LR		LR		
	comp=N,200nm,16.1s							
KSH				LR		LR		
	comp=E,160nm,14.8s							
KSH				LR		LR		
	comp=Z,220nm,15.8s							
ARCES	**ARCESS Array B**	**55.89**	**341**	P		**P**	**01 40 34.3**	**-2.5**
	comp=Z,4.3nm,1.1s,baz=39,slow=5.9,SNR=5.9							
ARCES				LR		LR	02 07 46.2	
	comp=Z,140nm,21.0s,baz=19,slow=40							
	comp=Z,4.3nm,1.1s							
KIRV	**Kirov**	**56.74**	**323**	LR		LR	02 07 52.6	
	comp=Z,131nm,18.4s,baz=45,slow=39							
WVOR	**Wild Horse Val**	**56.75**	**62**	P		**P**	**01 40 45.2**	**+1.8**
WVOR				IAmb		IAmb	01 41 19.1	
	comp=Z,4.6nm,1.0s							
WVOR	**Wild Horse Val**	**56.75**	**62**	P		**P**	**01 40 45.2**	**+1.8**
WVOR				pmax		pmax		
	comp=Z,5.0nm,1.0s							
AKTO	**Aktyubinsk**	**58.33**	**312**	LR		LR	02 06 45.7	
	comp=Z,94nm,19.2s,baz=46,slow=37							
YERR	**Yerington**	**58.60**	**65**	IAmb		IAmb	01 40 59.3	
	comp=Z,4.3nm,0.8s							
BOZ	**Bozeman (W)**	**58.63**	**55**	IAmb		IAmb	01 40 58.7	
	comp=Z,5.0nm,0.7s							
BMN	**Battle Mountai**	**58.85**	**63**	IAmb		IAmb	01 41 00.0	
	comp=Z,4.8nm,0.9s							
PMG	**Port Moresby**	**59.14**	**190**	*de*P		**P**	**01 41 01.1**	**+1.0**
PMG				pmax		pmax		
	comp=Z,17nm,1.3s							
PMG	**Port Moresby**	**59.14**	**190**	P		**P**	**01 41 01.6**	**+1.5**
	comp=Z,4.8nm,0.3s,baz=2.9,slow=11,SNR=4.5							
	comp=Z,4.8nm,0.3s							
KVN	**Kaiserville**	**59.23**	**65**	IAmb		IAmb	01 41 03.1	
	comp=Z,2.9nm,0.8s							
NVAR	**Mina Array Bea**	**59.52**	**65**	P		**P**	**01 41 04.2**	**+1.3**
	comp=Z,4.4nm,0.7s,baz=292,slow=7.2,SNR=21							
	comp=Z,2.4nm,0.7s							
ELK	**Elko**	**59.79**	**62**	LR		LR	02 03 35.1	
	comp=Z,33nm,20.8s,baz=342,slow=33							
LKWY	**Lake**	**59.97**	**55**	IAmb		IAmb	01 41 09.5	
	comp=Z,5.8nm,0.9s							
SIMJ	**Simiganj**	**60.09**	**296**	P		**P**	**01 41 05.8**	**-0.9**
MOOW	**Moose Ponds**	**60.32**	**56**	P		**P**	**01 41 10.0**	**+1.6**
TPH	**Tonopah**	**60.39**	**65**	P		**P**	**01 41 10.4**	**+1.6**
TPH	**Tonopah**	**60.39**	**65**	P		**P**	**01 41 10.4**	**+1.6**
LAO	**LASA Array**	**60.74**	**51**	P		**P**	**01 41 12.6**	**+1.7**
PDAR	**Pinedale Array**	**61.62**	**57**	P		**P**	**01 41 18.1**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=317,slow=2.1,SNR=35							
	comp=Z,3.3nm,0.8s							
BELG	**Belogornoye**	**61.76**	**319**	LR		LR	02 09 11.2	
	comp=Z,103nm,19.5s,baz=141,slow=37							
FRB	**Frobisher Bay**	**61.83**	**21**	LR		LR	02 10 22.1	
	comp=Z,43nm,20.4s,baz=14,slow=38							
SFJD	**Kangerlussuaq**	**62.11**	**11**	LR		LR	02 11 16.9	
	comp=Z,86nm,19.7s,baz=358,slow=39							
FINES	**FINESS Array B**	**62.37**	**335**	P		**P**	**01 41 19.6**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=36,slow=7.4,SNR=12							
FINES				LR		LR	02 11 36.9	
	comp=Z,142nm,19.0s,baz=28,slow=39							
	comp=Z,0.5nm,0.3s							
ULM	**Lac du Bonnet**	**63.22**	**43**	P		**P**	**01 41 27.4**	**0.0**
	comp=Z,0.9nm,0.4s,baz=328,slow=10,SNR=3.6							
	comp=Z,0.9nm,0.4s							
RSSD	**Black Hills**	**63.62**	**52**	P		**P**	**01 41 31.0**	**+0.6**
RSSD	**Black Hills**	**63.62**	**52**	P		**P**	**01 41 31.0**	**+0.6**
PFO	**Pinyon Flats O**	**63.86**	**68**	LR		LR	02 04 41.7	
	comp=Z,48nm,21.5s,baz=204,slow=32							
OBN	**Obninsk**	**64.12**	**326**	LR		LR	02 13 47.5	
	comp=Z,100nm,18.9s,baz=358,slow=40							
NOA	**NORSAR Array B**	**66.24**	**342**	P		**P**	**01 41 45.8**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=27,slow=6.8,SNR=4.3							
NOA				LR		LR	02 15 01.4	
	comp=Z,118nm,19.7s,baz=30,slow=40							
	comp=Z,0.4nm,0.6s							
HFS	**Hagfors**	**66.54**	**340**	P		**P**	**01 41 47.7**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=46,slow=4.2,SNR=1.7							
HFS				LR		LR	02 13 07.2	
	comp=Z,74nm,20.3s,baz=2.5,slow=38							
	comp=Z,1.1nm,0.3s							
GEYT	**Alibeck**	**66.82**	**302**	P		**P**	**01 41 50.6**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=38,slow=2.6,SNR=8.1							
GEYT				LR		LR	02 13 02.4	
	comp=Z,91nm,20.3s,baz=30,slow=38							
	comp=Z,2.5nm,0.5s							
MNK	**Minsk**	**67.60**	**330**	*i* P		**P**	**01 41 53.2**	**-2.4**
MNK				*i* *PP		**pP**	**01 42 07.3**	**-4.4**
MNK				*i*			01 44 22.2	
MNK				*i* S		**S**	**01 50 43.2**	**-4.4**
MNK				*i* SS		**SS**	**01 55 08.3**	**+0.3**
MNK				pmax		pmax		
	comp=E,7.0nm,1.0s							
MNK				pmax		pmax		
	comp=N,6.0nm,0.9s							
MNK				pmax		pmax		
	comp=Z,7.0nm,0.9s							
ANMO	**Albuquerque**	**68.81**	**61**	LR		LR	02 11 41.8	
	comp=Z,12nm,18.5s,baz=68,slow=35							
CTA	**Charters Tower**	**69.79**	**190**	P		**P**	**01 42 09.5**	**-0.1**
	comp=Z,11nm,1.1s,baz=18,slow=7.7,SNR=7.1							
	comp=Z,11nm,1.1s							
CTAO	**Charters Tower**	**69.79**	**190**	P		**P**	**01 42 09.4**	**-0.1**
SCHQ	**Schefferville**	**70.04**	**25**	P		**P**	**01 42 10.2**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=344,slow=8.2,SNR=6.9							
	comp=Z,1.5nm,0.5s							
AKASG	**Malin Array Be**	**70.31**	**327**	*ce*P		**P**	**01 42 13.3**	**+0.8**
AKASG	**Malin Array Be**	**70.31**	**327**	P		P	01 42 07.8	-4.7
	comp=Z,0.9nm,0.5s,baz=28,slow=6.7,SNR=4.5							
AKASG				LR		LR	02 15 30.6	
	comp=Z,122nm,18.6s,baz=27,slow=38							
KBZ	**Khabaz**	**70.31**	**315**	P		**P**	**01 42 12.0**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=59,slow=9.2,SNR=8.2							
KBZ				LR		LR	02 17 18.6	
	comp=Z,85nm,18.7s,baz=12,slow=40							
	comp=Z,2.2nm,0.7s							
WRA	**Warramunga Arr**	**71.73**	**201**	P		**P**	**01 42 21.6**	**+0.2**
	comp=Z,11nm,0.9s,baz=18,slow=6.5,SNR=16							
	comp=Z,11nm,0.9s							
DZM	**Mont Dzumac**	**71.84**	**170**	P		**P**	**01 42 24.3**	**+2.3**
GNI	**Garni**	**72.19**	**311**	LR		LR	02 18 16.0	
	comp=Z,64nm,19.8s,baz=36,slow=39							
FITZ	**Fitzroy Crossi**	**72.45**	**210**	P		**P**	**01 42 26.5**	**+0.9**
EKA	**Eskdalemuir Ar**	**74.11**	**348**	P		**P**	**01 42 33.7**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=18,slow=4.9,SNR=6.3							
	comp=Z,0.4nm,0.4s							
LPIG	**La Paz**	**74.39**	**71**	LR		LR	02 07 52.6	
	comp=Z,34nm,21.4s,baz=234,slow=30							
TXAR	**Lajitas Array**	**74.52**	**63**	P		**P**	**01 42 38.8**	**+0.8**
	comp=Z,4.1nm,0.7s,baz=298,slow=4.2,SNR=15							
	comp=Z,4.1nm,0.7s							
CLL	**Collm**	**74.73**	**337**	*i* P		**P**	**01 42 39.3**	**+0.5**
CLL				*i*			01 42 47.3	
CLL				pmax		pmax		
	comp=Z,20nm,1.7s							
CLL	**Collm**	**74.73**	**337**	*i* P		**P**	**01 42 39.3**	**+0.5**
	comp=Z,20nm,1.7s							
CLL				*i* x		x	01 42 47.3	
CLL				*e*(sP)		**sP**	**01 43 05.0**	**+3.2**
CLL				*e*PP		**PP**	**01 45 29.0**	**+3.3**
CLL				AMS		AMS	02 17 00.0	
	comp=Z,100nm,20.6s							
ASAR	**Alice Springs**	**75.42**	**201**	P		**P**	**01 42 44.3**	**+1.3**
	comp=Z,3.6nm,0.7s,baz=11,slow=5.3,SNR=18							
	comp=Z,3.6nm,0.7s							
VRAC	**Vranov**	**75.58**	**334**	LR		LR	02 19 58.6	
	comp=Z,187nm,18.8s,baz=24,slow=39							
MLR	**Mutnele Rosu**	**75.89**	**326**	LR		LR	02 20 02.6	
	comp=Z,104nm,19.6s,baz=84,slow=39							
QLP	**Quilpie**	**76.44**	**191**	P		**P**	**01 42 49.7**	**+1.1**
KHC	**Kasperske Hory**	**76.57**	**336**	*ce*P		**P**	**01 42 50.4**	**+1.0**
KHC				pmax		pmax		
	comp=Z,15nm,1.7s							
GERES	**GERESS Array B**	**76.80**	**335**	LR		LR	02 20 57.8	
	comp=Z,246nm,19.2s,baz=14,slow=39							
CONA	**Conrad Observa**	**77.03**	**334**	*e*P		**P**	**01 42 52.8**	**+0.8**
	comp=Z,5.4nm,1.1s							
WSAR	**Wadi Sarin**	**77.24**	**291**	LR		LR	02 21 30.7	
	comp=Z,100nm,20.3s,baz=50,slow=39							
BRTR	**Keskin Array B**	**77.67**	**318**	P		**P**	**01 42 55.4**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=56,slow=2.4,SNR=2.9							
	comp=Z,1.4nm,0.8s							
INKA	**Innaminka**	**78.06**	**194**	P		**P**	**01 42 59.0**	**+1.4**
LESA	**Schwarzleotal**	**78.38**	**336**	*e*P		**P**	**01 42 59.6**	**0.0**
	comp=Z,4.5nm,0.9s							
SOKA	**Soboth**	**78.40**	**334**	*e*P		**P**	**01 42 59.7**	**+0.1**
	comp=Z,10nm,1.5s							
KBA	**Koelnbreinsper**	**78.51**	**335**	*i* P		**P**	**01 43 00.6**	**+0.2**
	comp=Z,7.5nm,0.8s							
OBKA	**Obir**	**78.69**	**334**	*e*P		**P**	**01 42 59.2**	**-2.2**
	comp=Z,1.7nm,0.5s							
WTTA	**Wattenberg**	**78.81**	**336**	*e*P		**P**	**01 43 02.7**	**+0.7**
	comp=Z,7.1nm,1.0s							
MOTA	**Moosalm**	**78.87**	**336**	*e*P		**P**	**01 43 01.6**	**-0.7**
	comp=Z,5.0nm,0.8s							
DAVA	**Damuels**	**79.24**	**337**	*e*P		**P**	**01 43 04.4**	**+0.1**
	comp=Z,19nm,2.0s							
FETA	**Feichten**	**79.27**	**337**	*e*P		**P**	**01 43 05.8**	**+1.3**
	comp=Z,11nm,1.6s							
DAVOX	**Davos/Dischmat**	**79.71**	**337**	LR		LR	02 22 52.5	
	comp=Z,88nm,18.9s,baz=27,slow=39							
RAR	**Rarotonga**	**80.61**	**139**	LR		LR	02 18 31.3	
	comp=Z,77nm,18.3s,baz=284,slow=35							
CMSA	**Cobar Meteorol**	**81.17**	**189**	P		**P**	**01 43 16.1**	**+1.6**
STKA	**Stephens Creek**	**82.00**	**192**	P		**P**	**01 43 19.7**	**+0.9**
	comp=Z,4.1nm,1.0s,baz=298,slow=4.5,SNR=3.7							
	comp=Z,4.1nm,1.0s							
MMAI	**Mount Meron Ar**	**82.39**	**313**	P		**P**	**01 43 21.3**	**0.0**
	comp=Z,9.9nm,0.6s,baz=36,slow=6.9,SNR=17							
MMAI				LR		LR	02 25 57.9	
	comp=Z,36nm,18.9s,baz=355,slow=40							
	comp=Z,9.9nm,0.6s							
EIL	**Elat**	**85.36**	**312**	LR		LR	02 25 25.5	
	comp=Z,41nm,18.8s,baz=60,slow=38							
VAE	**Valguarnera**	**86.97**	**330**	LR		LR	02 30 00.8	
	comp=Z,94nm,19.2s,baz=338,slow=41							
ESDC	**Sonseca Array**	**89.47**	**345**	P		**P**	**01 43 54.0**	**-2.1**
	comp=Z,2.5nm,1.1s,baz=1.1,slow=4.2,SNR=5.4							
ESDC				LR		LR	02 30 17.7	
	comp=Z,62nm,18.7s,baz=36,slow=40							
	comp=Z,2.5nm,1.1s							
KEST	**Kesra**	**90.14**	**333**	P		**P**	**01 44 00.4**	**+1.1**
	comp=Z,4.7nm,0.9s,baz=357,slow=3.5,SNR=3.8							
KEST				LR		LR	02 27 49.2	
	comp=Z,154nm,21.4s,baz=324,slow=38							
	comp=Z,4.7nm,0.9s							
ATD	**Arta Tunnel**	**95.76**	**295**	LR		LR	02 33 28.8	
	comp=Z,5.6nm,18.2s,baz=69,slow=39							
CPUP	**Villa Florida**	**145.46**	**60**	PKPbc		**PKPdf**	**01 50 36.9**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=341,slow=3.6,SNR=6.3							
PLCA	**Paso Flores**	**146.49**	**93**	PKPbc		**PKPdf**	**01 50 40.2**	**+2.0**
	comp=Z,2.2nm,0.7s,baz=294,slow=3.0,SNR=7.5							

*BER **27** 01:34:55.4±3.5, 80.31N×1.10E, h10km, mb(Pn)3.9, ML3.0(NAO), Confirmed Earthquake*
*DNK **27** 01:34:59.4±1.1, 80.25N×0.18W, h10km, ML2.4*
*KOLA **27** 01:35:01.8, 80.37N×5.42E, h0km, ML2.4, Error ellipse: s-maj=72.6km s-min=30.0km az=60.0, Greenland sea*
ISC 27 01:34:53.9±1.1, 80.17N±0.08×1.25E±0.07, h10km, n24, σ2§25/40, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.31**	**117**	Pn	**Pn**	**01 35 33.3**	**+1.4**
KBS				Sn	**Sn**	**01 35 58.8**	**-1.6**
KBS	**Kingsbay**	**2.31**	**117**	P	**Pn**	**01 35 33.2**	**+1.4**
KBS				S	**Sn**	**01 35 56.1**	**-4.3**
KBS	**Kingsbay**	**2.31**	**117**	*e*P	**Pn**	**01 35 33.3**	**+1.4**
KBS				*e*S	**Sn**	**01 35 58.8**	**-1.6**
KBS				IAML		01 36 00.3	
	comp=Z,44nm,0.6s						
BRBB	**Barentsburg B**	**3.21**	**124**	Pn	**Pn**	**01 35 47.1**	**+2.9**
BRBB				Sn	**Sn**	**01 36 22.5**	**0.0**
BRBB	**Barentsburg B**	**3.21**	**124**	P	**Pn**	**01 35 46.9**	**+2.6**
BRBB				S	**Sn**	**01 36 22.1**	**-0.4**
BRBB	**Barentsburg B**	**3.21**	**124**	*e*P	**Pn**	**01 35 48.0**	**+3.8**
BRBB				*e*S	**Sn**	**01 36 22.1**	**-0.4**
BRBA	**Barentsburg A**	**3.24**	**124**	Pn	**Pn**	**01 35 48.0**	**+3.3**
BRBA				Sn	**Sn**	**01 36 24.0**	**+0.8**
BRBA	**Barentsburg A**	**3.24**	**124**	*e*P	**Pn**	**01 35 47.7**	**+3.0**
BRBA				*e*S	**Sn**	**01 36 21.6**	**-1.6**
BRBA				IAML		01 36 26.4	
	comp=Z,41nm,0.2s						
SPA0	**Spitsbergen Ar**	**3.47**	**117**	Pn	**Pn**	**01 35 50.0**	**+2.1**
	baz=315,slow=7.9						
SPA0				Sn	**Sn**	**01 36 27.7**	**-1.3**
	baz=325,slow=12						
SPA0	**Spitsbergen Ar**	**3.47**	**117**	Pn	**Pn**	**01 35 50.0**	**+2.1**
	baz=315,slow=7.9						
SPA0				Sn	**Sn**	**01 36 27.7**	**-1.3**
	baz=325,slow=12						
SPITS	**Spitsbergen Ar**	**3.47**	**117**	P	**Pn**	**01 35 49.9**	**+2.1**
SPITS				S	**Sn**	**01 36 25.7**	**-3.3**
HSPB	**Hornsund (broa**	**4.25**	**131**	Pn	**Pn**	**01 36 00.7**	**+2.2**
HSPB				Sn	**Sn**	**01 36 47.0**	**-1.1**
HSPB	**Hornsund (broa**	**4.25**	**131**	P	**Pn**	**01 36 00.7**	**+2.2**
HSPB				S	**Sn**	**01 36 47.5**	**-0.6**
HSPB	**Hornsund (broa**	**4.25**	**131**	*e*P	**Pn**	**01 36 00.7**	**+2.2**
HSPB				*e*S	**Sn**	**01 36 45.6**	**-2.4**
HSPB				IAML		01 36 52.4	
	comp=Z,18nm,0.8s						
HOPEN	**Hopen**	**6.00**	**115**	Sn	**Sn**	**01 37 28.1**	**-3.1**
HOPEN	**Hopen**	**6.00**	**115**	*e*P	**Pn**	**01 36 24.5**	**+2.0**
HOPEN				*e*S	**Sn**	**01 37 28.1**	**-3.1**
HOPEN				IAML		01 37 34.2	
	comp=Z,16nm,0.8s						
OMEGA	**Omega**	**7.56**	**63**	*e*P	**Pn**	**01 36 47.6**	**+3.7**
OMEGA				*e*S	**Sn**	**01 38 06.6**	**-2.8**
	comp=Z,18nm,2.3s						
NEEM	**North Greenlan**	**10.19**	**282**	*i* P	**Pn**	**01 37 19.8**	**-0.3**
NEEM				*i* S	Sn	01 39 01.7	-13
NEEM				IAML		01 39 09.7	
	comp=Z,7.9nm,0.4s						
NEEM	**North Greenlan**	**10.19**	**282**	*i* P	**Pn**	**01 37 19.8**	**-0.3**
NEEM				*i* S	Sn	01 39 01.7	-13
NEEM				IAML		01 39 09.7	
	comp=Z,7.9nm,0.4s						
SCO	**Scoresbysund**	**11.21**	**223**	*i* P	**Pn**	**01 37 33.8**	**-0.1**
SCO	**Scoresbysund**	**11.21**	**223**	*i* P	**Pn**	**01 37 33.8**	**-0.1**
SUMG	**Summit**	**11.71**	**251**	*e*	**Pn**	**01 37 38.5**	**-2.6**
	baz=40,slow=12						
SUMG				*i* P		01 37 39.3	
SUMG				*e*S	Sn	01 39 38.8	-13
ARA0	**ARCESS Array S**	**12.23**	**137**	Pn	**Pn**	**01 37 49.3**	**+1.5**
	baz=348,slow=14						

ARA0	**ARCESS Array S**	**12.23**	**137**	Pn		**Pn**	**01 37 49.3**	**+1.5**
	baz=348,slow=14								

*IDC **27** 01:41:30.1±1.1, 6.00S×143.22E, h0km, mb3.9/5, mbtmp4.0/7, ML1.7/1, Error ellipse: s-maj=41.69km s-min=25.1km az=61.0*
ISC 27 01:41:35.0±1.0, 6.2S±0.1×143.0E±0.1, h35km, n9, σ1§50/9, mb3.8/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.17**	**128**	Pn	**Pn**	**01 42 50.3**	**+0.2**
	1.9nm,0.3s,baz=257,slow=20,SNR=2.2						
PMG				Sn	**Sn**	**01 43 48.6**	**0.0**
	1.4nm,0.3s,baz=316,slow=16,SNR=1.7						
	8.9nm,0.5s						
CTA	**Charters Tower**	**14.14**	**168**	Lg	Lg	01 49 02.1	
	0.2nm,0.3s,baz=328,slow=19,SNR=1.5						
WRA	**Warramunga Arr**	**16.05**	**211**	Pn	**Pn**	**01 45 15.8**	**-2.4**
	0.2nm,0.3s,baz=32,slow=13,SNR=1.8						
WRA				Lg	Lg	01 49 51.1	
	baz=30,slow=13						
ASAR	**Alice Springs**	**19.45**	**206**	P	**P**	**01 46 00.9**	**+2.1**
	7.6nm,0.7s,baz=33,slow=10.0,SNR=25						
ASAR				Lg	Lg	01 51 48.4	
	baz=220,slow=39						
MKAR	**Makanchi Array**	**75.18**	**322**	P	**P**	**01 53 14.7**	**+0.7**
	0.7nm,0.7s,baz=111,slow=7.9,SNR=7.0						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**77.12**	**329**	P	**P**	**01 53 24.2**	**-0.7**
	0.3nm,0.4s,baz=97,slow=9.4,SNR=2.3						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**79.06**	**324**	P	**P**	**01 53 36.1**	**+0.4**
	0.6nm,0.9s,baz=114,slow=4.9,SNR=6.8						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	**84.64**	**325**	P	**P**	**01 54 05.7**	**+0.7**
	3.8nm,0.7s,baz=103,slow=7.3,SNR=14						
	3.8nm,0.7s						
ILAR	**Eielson Array**	**87.25**	**24**	P	**P**	**01 54 16.4**	**-1.2**
	0.5nm,0.8s,baz=243,slow=5.0,SNR=4.5						
	0.5nm,0.8s						

*IDC **27** 01:44:49.8±0.8, 6.33S×143.64E, h0km, mb4.1/11, mbtmp4.2/13, ML2.1/1, MS3.2/2, Error ellipse: s-maj=36.5km s-min=18.6km az=73.0*
*NEIC **27** 01:44:51.5±1.7, 6.52S±0.04×143.5E±0.1, h10km±1km, mb4.5/25, Error ellipse: s-maj=17.9km s-min=4.6km az=74.0*
ISC 27 01:44:54.6±0.5, 6.51S±0.07×143.46E±0.08, h35km, n48, σ1§13/46, mb4.2/19, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.66**	**128**		**Pn**	**01 46 00.6**	**-1.9**
PMG	**Port Moresby**	**4.66**	**128**	Pn	**Pn**	**01 46 03.1**	**+0.6**
	6.2nm,0.3s,baz=315,slow=13,SNR=7.1						
PMG				Sn	**Sn**	**01 46 56.1**	**+0.6**
	6.2nm,0.3s,baz=266,slow=19,SNR=6.6						
	19nm,0.4s						
COEN	**Coen**	**7.41**	**182**	Pn	**Pn**	**01 46 39.8**	**-0.5**
CTA	**Charters Tower**	**13.77**	**169**	Lg	Lg	01 52 13.0	
	0.2nm,0.3s,baz=300,slow=13,SNR=1.9						
WB0	**Warramunga Arr**	**15.85**	**213**	Pn	**Pn**	**01 48 35.6**	**+0.4**
WR0	**Warramunga Arr**	**15.93**	**212**	Pn	**Pn**	**01 48 34.3**	**-1.9**
WRAB	**Tennant Creek**	**16.01**	**213**	Pn	**Pn**	**01 48 34.9**	**-2.3**
WB2	**Warramunga Arr**	**16.02**	**213**	P	**Pn**	**01 48 38.3**	**+1.0**
WB2				IAmb	IAmb	01 48 58.9	
	comp=Z,29nm,1.4s						
WRA	**Warramunga Arr**	**16.02**	**213**	Pn	**Pn**	**01 48 35.8**	**-1.6**
WRA	**Warramunga Arr**	**16.02**	**213**	Pn	**Pn**	**01 48 34.9**	**-2.5**
	comp=Z,1.0nm,0.3s,baz=33,slow=14,SNR=16						
WRA				Lg	Lg	01 53 20.2	
	comp=Z,0.3nm,0.3s,baz=31,slow=31,SNR=5.2						
KNRA	**Kununurra**	**17.05**	**236**	Pn	**Pn**	**01 48 48.4**	**-2.0**
KNRA				IAmb	IAmb	01 49 13.6	
	comp=Z,38nm,1.1s						
AS31	**Alice Springs**	**19.38**	**207**	P	**Pn**	**01 49 18.7**	**-0.1**
ASAR	**Alice Springs**	**19.38**	**207**	P	**P**	**01 49 18.1**	**+0.6**
ASAR	**Alice Springs**	**19.38**	**207**	P	**Pn**	**01 49 20.7**	**+1.9**
	comp=Z,12nm,0.8s,baz=31,slow=10,SNR=23						

NEIC ***27*** *01:54:02.0±1.8, 4°.64S×0°.08×142°.7E±0°.1, h10km±1km, mb4.6/19, Error ellipse: s-maj=17.4km s-min=14.2km az=272.0*
IDC ***27*** *01:54:17.0±0.8, 6°.03S×142°.91E, h0km, mb4.2/8, mbtmp4.3/10, ML2.4/1, MS3.5/5, Error ellipse: s-maj=33.8km s-min=19.0km az=72.0*

ISC 27 01:54:17.9±0.7, 6°.09S±0°.08×142°.82E±0°.10, h10km, n41, σ1§93/25, mb4.6/14, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.41**	**128**	Pn	**Pn**	**01 55 37.5**	**-1.2**
PMG	**Port Moresby**	**5.41**	**128**	Pn	**Pn**	**01 55 40.8**	**+2.1**
	9.2nm,0.3s,baz=315,slow=1.4,SNR=15						
PMG				Sn	**Sn**	**01 56 42.3**	**+1.2**
	10nm,0.3s,baz=258,slow=20,SNR=14						
PMG				LR	LR	01 58 17.8	
	comp=Z,315nm,18.1s,baz=256,slow=45 29nm,0.3s						
COEN	**Coen**	**7.82**	**177**	Pn	**Pn**	**01 56 16.4**	**+4.5**
MTN	**Manton Dam**	**13.34**	**239**		Pn	01 57 20.3	-7.1
CTA	**Charters Tower**	**14.30**	**167**	Lg	Lg	02 01 49.6	
	0.4nm,0.3s,baz=85,slow=13,SNR=1.9						
CTA				LR	LR	02 03 19.6	
	comp=Z,310nm,18.1s,baz=349,slow=38						
WB0	**Warramunga Arr**	**15.87**	**210**		**Pn**	**01 58 00.8**	**-0.7**
WR0	**Warramunga Arr**	**15.96**	**210**	Pn	**Pn**	**01 58 00.6**	**-2.1**
WRAB	**Tennant Creek**	**16.03**	**210**	P	**Pn**	**01 58 02.8**	**-0.8**
WRAB				IAmb	IAmb	01 58 19.8	
	comp=Z,11nm,0.6s						
WB2	**Warramunga Arr**	**16.04**	**210**		**Pn**	**01 58 02.8**	**-1.0**
WB2				IAmb	IAmb	01 58 20.4	
	comp=Z,22nm,1.1s						
WRA	**Warramunga Arr**	**16.05**	**210**	Pn	**Pn**	**01 58 01.2**	**-2.6**
WRA	**Warramunga Arr**	**16.05**	**210**	Pn	**Pn**	**01 58 02.5**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=29,slow=14,SNR=16						
WRA				Lg	Lg	02 02 38.3	
	comp=Z,0.1nm,0.3s,baz=30,slow=28,SNR=4.8						
KNRA	**Kununurra**	**16.76**	**234**		Pn	01 58 06.2	-6.8
KNRA				IAmb	IAmb	01 58 42.4	
	comp=Z,65nm,1.4s						
AS31	**Alice Springs**	**19.46**	**205**	P	**P**	**01 58 42.1**	**-2.9**
AS31				IAmb	IAmb	01 58 58.3	
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**19.46**	**205**	Pn	**P**	**01 58 43.9**	**-1.1**
ASAR	**Alice Springs**	**19.46**	**205**	P	**Pn**	**01 58 46.9**	**+0.6**
	comp=Z,11nm,0.7s,baz=32,slow=10,SNR=24						
ASAR				Lg	Lg	02 04 28.6	
	baz=88,slow=35						
ASAR				LR	LR	02 06 17.6	
	comp=Z,167nm,21.2s,baz=60,slow=37						
GUMO	**Guam**	**19.66**	**6**	LR	LR	02 05 33.7	
	comp=Z,65nm,21.1s,baz=134,slow=35						
FITZ	**Fitzroy Crossi**	**20.58**	**233**	P	P	01 58 49.9	-7.2
EIDS	**Eidsvold**	**20.73**	**158**	P	**P**	**01 58 57.9**	**-0.9**
EIDS				IAmb	IAmb	01 59 13.9	
	comp=Z,48nm,1.4s						
STKA	**Stephens Creek**	**25.68**	**182**	P	**P**	**01 59 48.6**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=53,slow=11,SNR=1.7						
	comp=Z,1.3nm,0.5s						
MBWA	**Marble Bar**	**26.92**	**234**	P	P	01 59 50.2	-9.3
MBWA				IAmb	IAmb	01 59 52.2	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**27.32**	**192**	P	**P**	**01 59 58.3**	**-4.7**
BBOO				IAmb	IAmb	02 00 19.6	
	comp=Z,30nm,1.5s						
OUENC	**Ouen Island, N**	**28.30**	**127**	P	P	02 00 04.3	-7.6
OUENC				IAmb	IAmb	02 00 16.0	
	comp=Z,15nm,1.0s						
JOW	**Kunigami**	**35.64**	**337**	LR	LR	02 12 58.5	
	comp=Z,92nm,20.3s,baz=112,slow=32						
YHNB	**Yeheng**	**37.03**	**326**	P	P	02 01 01.2	-27
MJAR	**Matsushiro Arr**	**42.63**	**355**	P	**P**	**02 02 13.8**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=169,slow=8.5,SNR=1.8						
	comp=Z,0.9nm,0.3s						
GVZ	**Greta Valley S**	**45.38**	**149**	P	P	02 02 30.3	-6.3
CMAR	**Chiang Mai Arr**	**49.67**	**300**	P	**P**	**02 03 11.4**	**+1.1**
	comp=Z,3.8nm,0.2s,baz=112,slow=6.9,SNR=4.4						
	comp=Z,3.8nm,0.2s						
PETK	**Petropavlovsk-**	**60.31**	**10**	P	P	02 04 00.8	-26
ULN	**Ulaanbaatar**	**62.27**	**334**	P	P	02 04 14.1	-26
ULN				IAmb	IAmb	02 04 44.6	
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**72.09**	**176**	P	P	02 05 34.7	-7.3
VNDA				IAmb	IAmb	02 05 54.3	
	comp=Z,11nm,1.4s						
MKAR	**Makanchi Array**	**74.96**	**322**	P	P	02 05 36.0	-23
ZALV	**Zalesovo Beam**	**76.92**	**329**	P	**P**	**02 06 10.9**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=108,slow=7.7,SNR=1.9						
	comp=Z,0.5nm,0.4s						
P18K	**Big Mountain,**	**81.45**	**27**	P	P	02 06 11.6	-24
QSPA	**South Pole Qui**	**83.87**	**180**	P	**P**	**02 06 48.1**	**+0.3**
	comp=Z,3.8nm,1.0s,baz=322,slow=0.9,SNR=5.5						
	comp=Z,3.8nm,1.0s						
J20K	**Nowinta River**	**84.11**	**23**	P	P	02 06 27.3	-21
J20K				IAmb	IAmb	02 06 58.4	
	comp=Z,7.8nm,1.3s						
NRIK	**Noril'sk**	**84.12**	**343**	P	**P**	**02 06 50.0**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=70,slow=2.6,SNR=2.0						
	comp=Z,1.1nm,0.4s						
BVAR	**Borovoye Array**	**84.42**	**325**	P	**P**	**02 06 51.6**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=103,slow=6.7,SNR=8.1						
	comp=Z,2.5nm,0.8s						
FIS	**Fire Island**	**84.46**	**27**	P	P	02 06 28.3	-22
ILAR	**Eielson Array**	**87.22**	**24**	P	**P**	**02 07 04.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=255,slow=5.1,SNR=6.4						
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**141.08**	**283**	PKP	**PKPdf**	**02 13 50.2**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=78,slow=2.2,SNR=2.4						
DBIC	**Dimbokro**	**147.88**	**273**	PKPbc	**PKPab**	**02 14 06.2**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=108,slow=9.6,SNR=3.6						

KRSC ***27*** *01:59:03.5±1.8, 55°.28N×166°.61E, h40km±11km, Ml4.4*
IDC ***27*** *01:59:04.6±1.2, 55°.63N×166°.26E, h0km, mb3.7/7, mbtmp3.8/9, ML3.7/2, MS2.9/5, Error ellipse: s-maj=42.7km s-min=16.7km az=156.0*
MOS ***27*** *01:59:04.7±0.8, 55°.44N×166°.43E, h15km, mb4.8/1, Error ellipse: s-maj=22.8km s-min=6.5km az=139.3*
NEIC ***27*** *01:59:07.1±0.8, 55°.6N±0°.2×166°.1E±0°.2, h10km±2km, mb4.1/15, Error ellipse: s-maj=36.1km s-min=16.1km az=151.0*

ISC 27 01:59:07.7±0.6, 55°.31N±0°.06×166°.46E±0°.05, h20km, n100, σ1§18/116, mb3.9/13, MS2.8/3, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.29**	**250**	PN	**Pb**	**01 59 13.2**	**-1.0**
BKI				S	**Sb**	**01 59 19.0**	**+0.3**
BKI	**Bering**	**0.29**	**250**	*eP*	**Pb**	**01 59 13.3**	**-1.0**
BKI				*eS*	**Sb**	**01 59 19.0**	**+0.3**
KBG	**Krutoberegovo**	**2.32**	**296**	*eS*	**Sn**	**02 00 10.1**	**-2.6**
BZGR	**Bezymyannyi-Gr**	**3.33**	**283**	*eP*	**Pn**	**01 59 58.0**	**-0.7**
BZGR				*eS*	**Sn**	**02 00 39.3**	**+1.7**
BZMR	**Bezymyannaya**	**3.44**	**283**	*eP*	**Pn**	**01 59 59.8**	**-0.5**
BZMR				*eS*	**Sn**	**02 00 41.7**	**+1.2**
BZWR	**Bezymyannyi-We**	**3.44**	**284**	*eP*	**Pn**	**02 00 00.1**	**-0.2**
BZWR				*eS*	**Sn**	**02 00 42.3**	**+1.8**
KRSR	**Krestovskiy**	**3.45**	**288**	*eP*	**Pn**	**01 59 59.3**	**-1.1**
KRSR				*eS*	**Sn**	**02 00 40.8**	**+0.1**
TUMD	**Tumrok D**	**3.47**	**271**	*eP*	**Pn**	**02 00 00.4**	**-0.1**
TUMD				*eS*	**Sn**	**02 00 41.8**	**+0.8**
KMNR	**Kamenistaya**	**3.56**	**280**	*eP*	**Pn**	**02 00 02.0**	**+0.2**
KMNR				*eS*	**Sn**	**02 00 45.3**	**+1.9**
KPT	**Kopyto**	**3.59**	**283**	*eP*	**Pn**	**02 00 02.2**	**-0.1**
TUMR	**Tumrok**	**3.61**	**272**	*eP*	**Pn**	**02 00 02.7**	**+0.2**
KOZ	**Kozyrevsk**	**3.80**	**284**	*eP*	**Pn**	**02 00 05.7**	**+0.6**
SRDR	**Sredinnyy**	**3.94**	**288**	*eP*	**Pn**	**02 00 06.6**	**-0.3**
SRDR				*eS*	**Sn**	**02 00 54.3**	**+1.8**
KII	**Karymskiy**	**4.26**	**256**	*eP*	**Pn**	**02 00 11.8**	**+0.4**
KII				*eS*	**Sn**	**02 01 01.6**	**+1.0**
SPN	**Mys Shipunski**	**4.38**	**242**	PN	**Pn**	**02 00 11.9**	**-1.1**
SPN	**Mys Shipunski**	**4.38**	**242**	*eP*	**Pn**	**02 00 11.9**	**-1.1**
SPN				*eS*	**Sn**	**02 01 01.2**	**-2.1**
ESO	**Esso**	**4.44**	**281**	PN	**Pn**	**02 00 15.4**	**+1.5**
NLC	**Nalytchevo**	**4.69**	**246**	PN	**Pn**	**02 00 16.6**	**-0.6**
NLC	**Nalytchevo**	**4.69**	**246**	*eP*	**Pn**	**02 00 16.6**	**-0.6**
NLC				*eS*	**Sn**	**02 01 09.8**	**-1.1**
SDLR	**Sedlovina**	**4.88**	**249**	PN	**Pn**	**02 00 21.7**	**+1.7**
SDLR				S	**Sn**	**02 01 19.0**	**+3.2**
SMAR	**Somma**	**4.93**	**249**	PN	**Pn**	**02 00 21.0**	**+0.3**
SMAR	**Somma**	**4.93**	**249**	*eP*	**Pn**	**02 00 21.1**	**+0.3**
KRER	**Koryakskii**	**4.94**	**249**	PN	**Pn**	**02 00 21.7**	**+0.8**
KRER	**Koryakskii**	**4.94**	**249**	*eP*	**Pn**	**02 00 21.3**	**+0.5**
KRER				*eS*	**Sn**	**02 01 18.8**	**+1.3**
UGLR	**Uglovaya**	**4.94**	**248**	PN	**Pn**	**02 00 21.2**	**+0.4**
UGLR	**Uglovaya**	**4.94**	**248**	*eP*	**Pn**	**02 00 21.2**	**+0.4**
UGLR				*eS*	**Sn**	**02 01 17.9**	**+0.5**
AVH	**Avacha**	**4.96**	**249**	PN	**Pn**	**02 00 21.6**	**+0.5**
AVH	**Avacha**	**4.96**	**249**	*eP*	**Pn**	**02 00 21.6**	**+0.5**
AVH				*eS*	**Sn**	**02 01 19.3**	**+1.5**
KRX	**Arik**	**4.97**	**250**	PN	**Pn**	**02 00 21.5**	**+0.3**
KRX	**Arik**	**4.97**	**250**	*eP*	**Pn**	**02 00 21.5**	**+0.3**
KRX				*eS*	**Sn**	**02 01 17.7**	**-0.4**
KOK	**Koryaka**	**5.00**	**249**	PN	**Pn**	**02 00 22.0**	**+0.3**
KOK	**Koryaka**	**5.00**	**249**	*eP*	**Pn**	**02 00 22.0**	**+0.3**
KOK				*eS*	**Sn**	**02 01 20.1**	**+1.1**
DALK	**Dalny**	**5.07**	**246**	PN	**Pn**	**02 00 22.6**	**+0.2**
DALK	**Dalny**	**5.07**	**246**	*eP*	**Pn**	**02 00 22.5**	**+0.1**
DALK				*eS*	**Sn**	**02 01 19.4**	**-0.9**
PET	**Petropavlovsk**	**5.12**	**247**		**Pn**	**02 00 23.2**	**0.0**
PET					**Sn**	**02 01 20.2**	**-1.4**
PET	**Petropavlovsk**	**5.12**	**247**	*ePN*	**Pn**	**02 00 22.8**	**-0.4**
PET	**Petropavlovsk**	**5.12**	**247**	*eS*	**Sn**	**02 01 21.4**	**-0.2**
TILK	**Tilichiki**	**5.16**	**358**	*eP*	**Pn**	**02 00 21.5**	**-2.1**
GNL	**Ganaly**	**5.22**	**255**	PN	**Pn**	**02 00 25.4**	**+0.8**
GNL	**Ganaly**	**5.22**	**255**	*eP*	**Pn**	**02 00 25.6**	**+1.0**
KRMR	**Karymshinskiy**	**5.49**	**247**	PN	**Pn**	**02 00 28.4**	**+0.1**
KRMR	**Karymshinskiy**	**5.49**	**247**	*eP*	**Pn**	**02 00 28.5**	**+0.1**
KRMR				*eS*	**Sn**	**02 01 31.7**	**+0.9**
RUS	**Russkaya**	**5.51**	**242**	PN	**Pn**	**02 00 28.0**	**-0.5**
RUS	**Russkaya**	**5.51**	**242**	*eP*	**Pn**	**02 00 27.9**	**-0.5**
PEA0B	**Petropavlovsk-**	**5.59**	**250**		**Pn**	**02 00 29.9**	**+0.2**
PEA0B	**Petropavlovsk-**	**5.59**	**250**	PN	**Pn**	**02 00 29.9**	**+0.2**
PETK	**Petropavlovsk-**	**5.59**	**250**		**Pn**	**02 00 29.3**	**-0.3**
PETK	**Petropavlovsk-**	**5.59**	**250**	Pn	**Pn**	**02 00 29.5**	**-0.1**
	15nm,0.3s,baz=70,slow=14,SNR=124						
PETK				Sn	**Sn**	**02 01 35.1**	**+1.8**
	3.4nm,0.3s,baz=23,slow=12,SNR=1.9						
PETK				LR	LR	02 02 31.6	
	comp=Z,49nm,20.4s,baz=86,slow=37 35nm,0.5s						
MTVR	**Mutnovka**	**5.65**	**243**	PN	**Pn**	**02 00 30.6**	**0.0**
MTVR	**Mutnovka**	**5.65**	**243**	*eP*	**Pn**	**02 00 30.6**	**0.0**
MTVR				*eS*	**Sn**	**02 01 33.6**	**-1.2**
GRL	**Gorelyy**	**5.67**	**244**	PN	**Pn**	**02 00 31.3**	**+0.5**
GRL	**Gorelyy**	**5.67**	**244**	*eP*	**Pn**	**02 00 31.3**	**+0.5**
GRL				*eS*	**Sn**	**02 01 37.7**	**+2.4**
ASAK	**Asacha**	**5.85**	**243**	PN	**Pn**	**02 00 34.7**	**+1.4**
ASAK	**Asacha**	**5.85**	**243**	*eP*	**Pn**	**02 00 34.0**	**+0.7**
ASAK				*eS*	**Sn**	**02 01 39.9**	**+0.2**
APC	**Apacha**	**5.96**	**250**	PN	**Pn**	**02 00 35.8**	**+1.1**
APC	**Apacha**	**5.96**	**250**	*eP*	**Pn**	**02 00 35.9**	**+1.1**
KDTR	**Khodutka, Kamc**	**6.10**	**238**	PN	**Pn**	**02 00 35.6**	**-1.0**
KDTR	**Khodutka, Kamc**	**6.10**	**238**	*eP*	**Pn**	**02 00 35.7**	**-0.8**
KDTR				*eS*	**Sn**	**02 01 42.2**	**-3.4**
MA2	**Magadan**	**9.47**	**303**	LR	LR	02 05 04.6	
	comp=Z,33nm,20.6s,baz=128,slow=39						
YSS	**Yuzh-Sakhalins**	**17.00**	**250**	*eP*	**P**	**02 03 07.6**	**+1.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
L14K	**Kuka Creek**	**17.18**	**57**		**P**	**02 03 08.1**	**+0.4**
L14K				IAmb	IAmb	02 03 49.9	
	comp=Z,16nm,1.1s						
ASAJ	**Asahikawa**	**18.96**	**244**	P	**Pn**	**02 03 28.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=80,slow=11,SNR=3.6						
	comp=Z,5.8nm,0.7s						
YAK	**Yakutsk**	**20.04**	**305**	LR	LR	02 11 42.4	
	comp=Z,33nm,19.5s,baz=155,slow=38						
ERM	**Erimo**	**20.21**	**239**	P	**P**	**02 03 41.7**	**+0.7**
ERM	**Erimo**	**20.21**	**239**	P	**P**	**02 03 41.7**	**+0.7**
ERM				pmax	pmax		
	comp=Z,48nm,1.3s						
J19K	**Poorman**	**20.74**	**50**	P	**P**	**02 03 46.9**	**+0.2**
J19K				IAmb	IAmb	02 03 52.4	
	comp=Z,8.0nm,1.2s						
E19K	**Redstone River**	**20.83**	**40**	P	**P**	**02 03 48.2**	**+0.5**
P18K	**Big Mountain,**	**20.86**	**63**	P	**P**	**02 03 48.8**	**+0.7**
P18K				IAmb	IAmb	02 03 54.6	
	comp=Z,29nm,1.5s						
IMAR	**Indian Mountai**	**21.82**	**45**	P	**P**	**02 03 58.6**	**+0.3**
OHAK	**Old Harbor**	**22.21**	**68**	P	**P**	**02 04 03.9**	**+1.3**
TIXI	**Tiksi**	**22.83**	**330**	LR	LR	02 12 58.2	
	comp=Z,32nm,20.0s,baz=360,slow=37						
E22K	**Anaktuvuk Pass**	**23.00**	**40**	P	**P**	**02 04 10.6**	**-0.2**
E22K				IAmb	IAmb	02 04 12.3	
	comp=Z,9.9nm,1.3s						
F24K	**Squaw Lake**	**24.36**	**42**	P	**P**	**02 04 23.1**	**-0.8**
IL31		**24.57**	**49**	P	**P**	**02 04 25.9**	**+0.1**
IL31				IAmb	IAmb	02 04 27.2	
	comp=Z,6.4nm,1.1s						
ILAR	**Eielson Array**	**24.57**	**49**	P	**P**	**02 04 25.0**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=259,slow=8.2,SNR=20						
	comp=Z,3.0nm,1.0s						
D25K	**Kavik River**	**25.18**	**38**	P	**P**	**02 04 29.2**	**-2.2**
D25K				IAmb	IAmb	02 04 31.3	
	comp=Z,7.3nm,1.4s						
E25K	**Arctic Village**	**25.30**	**41**	P	**P**	**02 04 32.0**	**-0.4**
E25K				IAmb	IAmb	02 05 09.3	
	comp=Z,4.8nm,1.3s						
BMAR	**Burnt Mountain**	**25.61**	**42**	P	**P**	**02 04 34.6**	**-0.7**
MJAR	**Matsushiro Arr**	**26.87**	**237**	P	**P**	**02 04 47.5**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=21,slow=9.4,SNR=4.7						
	comp=Z,1.7nm,0.6s						
BCAR	**Beaver Creek A**	**26.93**	**52**	P	**P**	**02 04 46.8**	**-0.5**
G30M	**tAoh Zraii Nji**	**28.87**	**43**	P	**P**	**02 05 03.9**	**-0.6**
G30M				IAmb	IAmb	02 05 32.7	
	comp=Z,6.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**35.52**	**179**	T	T	02 43 34.9	
	baz=360,slow=76,SNR=77						
H11N3	**WAKE ISLAND Hy**	**35.53**	**179**	T	T	02 43 22.5	
	baz=360,slow=76,SNR=63						
H11N1	**WAKE ISLAND Hy**	**35.53**	**179**	T	T	02 43 25.8	
	baz=360,slow=76,SNR=72						
H11S1	**WAKE ISLAND Hy**	**36.73**	**180**	T	T	02 44 48.7	
	baz=351						
H11S3	**WAKE ISLAND Hy**	**36.75**	**180**	T	T	02 45 19.9	
	baz=351						
H11S2	**WAKE ISLAND Hy**	**36.75**	**180**	T	T	02 44 56.6	
	baz=351						
HOLB	**Holberg**	**38.36**	**69**	P	**P**	**02 06 30.5**	**+3.4**
YKA	**Yellowknife Ar**	**38.96**	**46**	P	**P**	**02 06 31.0**	**-0.9**
YKA	**Yellowknife Ar**	**38.96**	**46**	P	**P**	**02 06 30.9**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=303,slow=8.1,SNR=4.8						
	comp=Z,0.5nm,0.9s						
KURK	**Kurchatov**	**49.68**	**304**	P	**P**	**02 07 56.4**	**-1.3**
KURBB	**Kurchatov Arra**	**49.79**	**304**	P	**P**	**02 07 56.4**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=56,slow=7.6,SNR=3.4						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**50.50**	**298**	P	**P**	**02 08 02.0**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=46,slow=6.6,SNR=2.3						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**51.88**	**310**	P	**P**	**02 08 11.6**	**-2.6**
	comp=Z,0.7nm,0.7s,baz=61,slow=12,SNR=1.5						
	comp=Z,0.7nm,0.7s						
KIRV	**Kirov**	**55.76**	**326**	LR	LR	02 35 04.9	
	comp=Z,45nm,18.3s,baz=349,slow=39						
ABKAR	**Akbulak array**	**59.12**	**313**	P	**P**	**02 09 04.5**	**-1.8**
ABKAR	**Akbulak array**	**59.12**	**313**	P	**P**	**02 09 04.8**	**-1.5**
ABKAR				IAmb	IAmb	02 09 09.2	
	comp=Z,1.8nm,1.2s						
TXAR	**Lajitas Array**	**66.36**	**72**	P	**P**	**02 09 54.7**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=307,slow=4.7,SNR=6.0						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**79.78**	**211**	P	**P**	**02 11 16.0**	**+1.9**
WRA	**Warramunga Arr**	**79.78**	**211**	P	**P**	**02 11 16.0**	**+1.9**

IDC ***27*** *01:59:14.1±2.1, 46°.98N×92°.61E, h0km, mb3.7/3, mbtmp3.6/9, ML2.9/6, Error ellipse: s-maj=44.5km s-min=20.7km az=178.0*
NNC ***27*** *01:59:17.9±1.8, 47°.12N×92°.16E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=17.1km s-min=12.3km az=132.0*
ASRS ***27*** *01:59:23.6±0.5, 47°.N±2°×9°.3E±°, h12km±3km, MLh4.3/14, Error ellipse: s-maj=5.4km s-min=3.6km az=165.0, confirmed*

ISC 27 01:59:21.7±1.3, 47°.42N±0°.08×92°.67E±0°.04, h10km, n43, σ2§64/54, mb3.7/3, 11C-4D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERNS	**Erzin**	**3.29**	**29**	Pn	**Pn**	**02 00 12.6**	**-0.8**
ERNS				Pg	**Pb**	**02 00 21.9**	**+1.8**
ERNS				Sg	**Sg**	**02 01 04.1**	**-3.2**
CUR	**Chagan-Uzun**	**3.92**	**315**	Pn	**Pn**	**02 00 22.5**	**+0.5**
CUR				Pg	**Pb**	**02 00 33.8**	**+2.9**
CUR				Sg	**Sg**	**02 01 26.6**	**-0.9**
DGZ	**Jazzator, Alta**	**4.16**	**305**	Pn	**Pn**	**02 00 25.6**	**+0.3**
DGZ				Pg	**Pb**	**02 00 36.2**	**+1.1**
DGZ				Sg	**Sg**	**02 01 33.7**	**-1.5**
AKAR	**Aktash**	**4.42**	**313**	Pn	**Pn**	**02 00 29.2**	**+0.4**
AKAR				Pg	**Pg**	**02 00 45.1**	**-1.2**
AKAR				Sg	**Sg**	**02 01 40.8**	**-2.7**
KZLR	**Kyzyl**	**4.45**	**14**	Pg	**Pb**	**02 00 38.3**	**-1.5**
KZLR				Sg	**Sg**	**02 01 46.9**	**+2.5**
ULGR	**Ulagan, Altay**	**4.46**	**318**	Pn	**Pn**	**02 00 32.2**	**+2.8**
ULGR				Pg	**Pg**	**02 00 50.1**	**+3.1**
ULGR				Sg	**Sg**	**02 01 45.2**	**+0.4**
CHBI	**Chibit, Altay**	**4.47**	**312**	Pn	**Pn**	**02 00 29.9**	**+0.3**
CHBI				Pg	**Pg**	**02 00 46.1**	**-1.2**
CHBI				Sg	**Sg**	**02 01 43.9**	**-1.4**
ARDR	**Aradan**	**5.19**	**5**	Pn	**Pn**	**02 00 39.6**	**+0.1**
ZSN	**Zaisan**	**5.29**	**273**	Pg	Pn	02 00 37.0	-3.8
	29nm,0.6s						
ZSN				Lg	Lg	02 02 02.7	
	66nm,1.1s						
DJO	**Djoy, Khakassi**	**5.45**	**351**	Pn	**Pn**	**02 00 45.0**	**+2.1**
DJO				Pg	**Pb**	**02 00 59.8**	**+2.8**
DJO				Sg	**Sg**	**02 02 14.7**	**-1.8**
YALR	**Yailyu, Altay**	**5.46**	**325**	Pn	**Pn**	**02 00 43.4**	**+0.4**
YALR				Pg	**Pg**	**02 01 03.6**	**-2.5**
YALR				Sg	**Sg**	**02 02 17.3**	**+0.6**
CERR	**Cheremushki**	**5.50**	**352**	Pg	**Pb**	**02 00 58.9**	**+1.1**
ARTR	**Artybash**	**5.61**	**323**	Pn	**Pn**	**02 00 48.7**	**+3.5**
ARTR				Pg	**Pg**	**02 01 08.8**	**-0.2**
ARTR				Sg	**Sg**	**02 02 22.9**	**+1.2**
ELDR	**Elanda**	**5.74**	**314**	Pn	**Pn**	**02 00 47.5**	**+0.6**
ELDR				Pg	**Pb**	**02 01 06.4**	**+4.5**
ELDR				Sg	**Sg**	**02 02 22.2**	**-3.6**
TASR	**Tashtagol**	**6.17**	**332**	Pn	**Pn**	**02 00 55.2**	**+2.4**
TASR				Pg	Pg	02 01 15.0	-4.8
TASR				Sg	**Sg**	**02 02 39.2**	**-0.5**
UKR	**Ust'-Kan**	**6.26**	**307**	Pn	**Pn**	**02 00 57.5**	**+3.4**
UKR				Pg	**Pg**	**02 01 18.4**	**-3.1**
UKR				Sg	**Sg**	**02 02 40.2**	**-2.2**
GALT	**Gorno-Altaysk,**	**6.30**	**319**	Sg	**Sg**	**02 02 45.5**	**+1.8**
LUZB	**Luzhba, Kemero**	**6.70**	**340**	Sg	**Sg**	**02 02 57.6**	**+1.2**
MOY	**Mondy**	**6.89**	**49**	Pg	**Pb**	**02 01 19.8**	**-1.6**
MK31	**Makanchi Array**	**7.11**	**269**	Pn	Pn	02 00 59.6	-6.1
	1.8nm,0.3s,baz=92,slow=14,SNR=106						
MK31				⇓Pg	Pb	02 01 21.0	-4.2
	3.7nm,0.6s,baz=80,slow=17,SNR=5.1						
MK31				⇑Lg	Lg	02 02 53.6	
	21nm,0.8s,baz=84,slow=30,SNR=4.9						
MKAR	**Makanchi Array**	**7.11**	**269**	Pn	Pn	02 00 59.9	-5.9
	2.0nm,0.3s,baz=91,slow=15,SNR=124						
MKAR				Lg	Lg	02 02 56.3	
	2.4nm,0.3s,baz=79,slow=32,SNR=8.5						
	3.1nm,0.3s						
MKAR	**Makanchi Array**	**7.11**	**269**	Pn	Pn	02 00 59.6	-6.1
MKAR				Pg	**Pb**	**02 01 29.1**	**+3.9**
MKAR				Sg	**Sb**	**02 02 55.9**	**+5.8**
ELT	**Eltsovka**	**7.15**	**327**	Pn	**Pn**	**02 01 06.8**	**+0.6**
ELT				Pg	Pb	02 01 31.9	+6.1
ELT				Sg	**Sg**	**02 03 08.7**	**-2.2**
MAKZ	**Makanchi**	**7.32**	**269**	⇓Pn	Pn	02 01 02.4	-6.2
	2.0nm,0.3s						
MAKZ				⇑Pg	Pb	02 01 24.8	-3.9
	1.4nm,0.4s						
MAKZ				⇓Lg	Lg	02 03 00.1	
	22nm,0.8s						
MINR	**

RPZ	**Rata Peaks**	**16.80**	**211**	Pn	**Pn**	02 04 09.1	**-0.9**	
	comp=Z,1.3nm,0.3s,baz=9.5,slow=6.1,SNR=2.6							
RPZ				Sn	Sn	02 07 01.9	-14	
	comp=Z,0.6nm,0.3s,baz=319,slow=19,SNR=1.7							
	comp=Z,8.2nm,0.6s							
FOZ	**Fox Glacier**	**17.23**	**213**	Pn	**P**	**02 04 16.3**	**-0.4**	
LBZ	**Lake Benmore**	**17.71**	**211**		**P**	**02 04 22.4**	**+0.4**	
ODZ	**Otahua Downs**	**18.04**	**209**	P	**Pn**	**02 04 23.3**	**-2.1**	
ODZ				IAmb	IAmb	02 04 27.5		
	comp=Z,14nm,0.9s							
MLZ	**Mavora Lakes**	**19.41**	**213**	P	**P**	**02 04 39.3**	**-1.4**	
MLZ				IAmb	IAmb	02 04 42.2		
	comp=Z,25nm,1.3s							
PPT	**Papeete**	**27.98**	**71**	LR	LR	02 13 57.2		
	comp=Z,124nm,21.6s,baz=187,slow=30							
CTA	**Charters Tower**	**34.38**	**278**	P	**P**	**02 07 03.0**	**+1.3**	
	comp=Z,3.7nm,0.5s,baz=123,slow=7.9,SNR=3.5							
	comp=Z,3.7nm,0.5s							
CTAO	**Charters Tower**	**34.38**	**278**	P	**P**	**02 07 03.4**	**+1.7**	
STKA	**Stephens Creek**	**35.30**	**256**	P	**P**	**02 07 11.0**	**+1.6**	
STKA	**Stephens Creek**	**35.30**	**256**	P	**P**	**02 07 11.2**	**+1.8**	
	comp=Z,7.5nm,0.8s,baz=90,slow=7.7,SNR=13							
	comp=Z,7.5nm,0.8s							
PMG	**Port Moresby**	**38.96**	**294**	LR	LR	02 19 41.6		
	comp=Z,2µm,20.5s,baz=27,slow=30							
BBOO	**Buckleboo**	**39.81**	**253**	P	**P**	**02 07 48.1**	**+0.5**	
BBOO				IAmb	IAmb	02 07 53.7		
	comp=Z,16nm,1.4s							
ASAR	**Alice Springs**	**43.84**	**266**	P	**P**	**02 08 19.8**	**-1.0**	
	comp=Z,2.7nm,0.8s,baz=103,slow=7.4,SNR=6.8							
	comp=Z,2.7nm,0.8s							
WR0	**Warramunga Arr**	**44.59**	**271**	P	**P**	**02 08 26.3**	**-0.4**	
WR0				IAmb	IAmb	02 08 34.7		
	comp=Z,7.8nm,1.1s							
WB2	**Warramunga Arr**	**44.76**	**271**	P	**P**	**02 08 27.6**	**-0.5**	
WRAB	**Tennant Creek**	**44.76**	**271**	P	**P**	**02 08 27.8**	**-0.3**	
WRA	**Warramunga Arr**	**44.77**	**271**	P	**P**	**02 08 27.9**	**-0.3**	
WRA	**Warramunga Arr**	**44.77**	**271**	P	**P**	**02 08 27.2**	**-1.0**	
	comp=Z,10.0nm,0.9s,baz=113,slow=6.8,SNR=18							
	comp=Z,10.0nm,0.9s							
WB0	**Warramunga Arr**	**44.79**	**271**	P	**P**	**02 08 27.8**	**-0.5**	
WB0				IAmb	IAmb	02 08 28.4		
	comp=Z,6.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**53.05**	**269**	P	**P**	**02 09 32.0**	**+0.3**	
FITZ				IAmb	IAmb	02 09 34.9		
	comp=Z,3.8nm,1.2s							
CASY	**Casey**	**56.04**	**208**	P	**P**	**02 09 53.6**	**+0.9**	
RPN	**Rapa Nui**	**58.95**	**105**	LR	LR	02 31 22.9		
	comp=Z,32nm,19.6s,baz=296,slow=32							
QSPA	**South Pole Qui**	**60.37**	**180**	P	**P**	**02 10 25.4**	**+2.2**	
QSPA				IAmb	IAmb	02 10 26.1		
	comp=Z,3.6nm,0.8s							
QSPA	**South Pole Qui**	**60.37**	**180**	P	**P**	**02 10 24.8**	**+1.7**	
	comp=Z,2.5nm,0.6s,baz=47,slow=3.8,SNR=7.6							
	comp=Z,2.5nm,0.6s							
BELA	**Belgrano 2**	**70.34**	**172**	P	**P**	**02 11 27.6**	**+0.2**	
BELA				IAmb	IAmb	02 11 36.0		
	comp=Z,9.1nm,1.5s							
H03S2	**Juan Fernandez**	**80.25**	**123**	T	T	03 42 02.0		
	baz=239,slow=74,SNR=4.6							
H03S1	**Juan Fernandez**	**80.26**	**123**	T	T	03 42 02.0		
	baz=239,slow=74,SNR=5.0							
H03S3	**Juan Fernandez**	**80.27**	**123**	T	T	03 42 06.8		
	baz=239,slow=74,SNR=5.3							
PETK	**Petropavlovsk-**	**85.35**	**345**	P	**P**	**02 12 50.4**	**-0.5**	
	comp=Z,2.1nm,0.7s,baz=145,slow=10,SNR=3.8							
	comp=Z,2.1nm,0.7s							
NVAR	**Mina Array Bea**	**87.29**	**42**	P	**P**	**02 13 00.9**	**-0.1**	
	comp=Z,0.7nm,0.9s,baz=217,slow=8.8,SNR=4.6							
	comp=Z,0.7nm,0.9s							
KLR	**Kul'dur**	**90.82**	**329**	P	**P**	**02 13 17.1**	**0.0**	
	comp=Z,1.3nm,0.6s,baz=112,slow=3.6,SNR=6.3							
	comp=Z,1.3nm,0.6s							
MKAR	**Makanchi Array**	**117.88**	**310**	PKP	**PKPdf**	**02 18 58.8**	**-1.5**	
	comp=Z,0.3nm,0.7s,baz=96,slow=1.4,SNR=3.5							
KURBB	**Kurchatov Arra**	**121.13**	**314**	PKP	**PKPdf**	**02 19 05.2**	**-1.2**	
	comp=Z,0.8nm,0.7s,baz=106,slow=1.8,SNR=7.5							
BVAR	**Borovoye Array**	**126.41**	**316**	PKP	**PKPdf**	**02 19 15.8**	**-0.7**	
	comp=Z,1.2nm,0.7s,baz=90,slow=0.3,SNR=7.8							
ARCES	**ARCESS Array B**	**138.09**	**348**	PKP	**PKPdf**	**02 19 38.5**	**+0.4**	
	comp=Z,6.1nm,1.2s,baz=64,slow=2.1,SNR=4.4							
H10N3	**ASCENSION HYDR**	**139.10**	**153**	T	T	04 56 21.1		
	baz=204,slow=75							
H10N1	**ASCENSION HYDR**	**139.10**	**153**	T	T	04 56 20.5		
	baz=204,slow=75							
H10N2	**ASCENSION HYDR**	**139.11**	**153**	T	T	04 56 21.7		
	baz=204,slow=75							
FINES	**FINESS Array B**	**144.76**	**341**	PKP	**PKPab**	**02 19 48.0**	**-1.1**	
	comp=Z,3.6nm,0.7s,baz=56,slow=3.4,SNR=18							
KBZ	**Khabaz**	**145.31**	**305**	PKPbc	**PKPbc**	**02 19 51.5**	**0.0**	
	comp=Z,3.3nm,0.8s,baz=82,slow=1.7,SNR=6.6							
NB2	**NORSAR Subarra**	**148.20**	**352**	PKP	**PKPbc**	**02 19 58.4**	**-1.0**	
	comp=Z,6.9nm,1.2s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**148.20**	**352**	PKPbc	**PKPbc**	**02 19 57.9**	**-1.5**	
	comp=Z,1.6nm,0.8s,baz=14,slow=4.4,SNR=5.8							
HFS	**Hagfors**	**148.73**	**349**	PKPbc	**PKPbc**	**02 19 59.2**	**-1.5**	
	comp=Z,3.9nm,0.8s,baz=59,slow=5.6,SNR=3.7							
AKASG	**Malin Array Be**	**151.18**	**324**	PKPbc	**PKPbc**	**02 20 06.0**	**-0.9**	
	comp=Z,5.6nm,1.0s,baz=46,slow=2.6,SNR=11							
MMAI	**Mount Meron Ar**	**152.03**	**285**	PKPbc	**PKiKP**	**02 20 10.8**	**+0.8**	
	comp=Z,0.6nm,0.3s,baz=93,slow=5.9,SNR=2.9							
BRTR	**Keskin Array B**	**152.88**	**300**	PKPbc	**PKPbc**	**02 20 10.9**	**-0.5**	
	comp=Z,1.1nm,1.0s,baz=124,slow=4.8,SNR=2.6							
TORD	**Torodi Ar. Bea**	**163.46**	**176**	PKPab	**PKPab**	**02 21 08.9**	**+0.5**	
	comp=Z,0.5nm,0.9s,baz=182,slow=2.5,SNR=2.1							

*IDC **27** 02:09:45.9±1.2,5.˚66S×142.˚58E, h0km, mb3.9/5, mbtmp4.0/7, ML2.2/1, Error ellipse: s-maj=45.0km s-min=25.5km az=83.0*

ISC 27 02:09:50.3±1.1,5.˚8S±0.˚1×142.˚5E±0.˚1, h28km, n8, σ1§51/9, mb3.9/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.82**	**128**	Pn	**Pn**	**02 11 15.9**	**+1.1**
	4.4nm,0.3s,baz=276,slow=7.9,SNR=7.3						
PMG				Sn	**Sn**	02 12 19.4	-1.4
	2.4nm,0.3s,baz=322,slow=12,SNR=1.7						
	12nm,0.2s						
WRA	**Warramunga Arr**	**16.14**	**209**	Pn	**Pn**	**02 13 33.0**	**-2.3**
	0.7nm,0.3s,baz=26,slow=13,SNR=23						
ASAR	**Alice Springs**	**19.59**	**204**	P	**Pn**	**02 14 18.2**	**+0.2**
	9.9nm,0.7s,baz=33,slow=9.7,SNR=68						
STKA	**Stephens Creek**	**25.94**	**182**	P	**P**	**02 15 20.5**	**+0.1**
	1.3nm,0.5s,baz=350,slow=10,SNR=4.4						
	1.3nm,0.5s						
VNDA	**Vanda**	**72.39**	**176**	P	**P**	**02 21 14.6**	**+1.2**
	0.9nm,0.8s,baz=321,slow=6.9,SNR=1.5						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**74.55**	**322**	P	**P**	**02 21 27.4**	**+0.7**
	0.2nm,0.7s,baz=125,slow=7.2,SNR=3.4						
	0.2nm,0.7s						
QSPA	**South Pole Qui**	**84.15**	**180**	P	**P**	**02 22 19.3**	**+0.5**
	1.9nm,0.7s,baz=262,slow=4.8,SNR=4.3						
	1.9nm,0.7s						
ILAR	**Eielson Array**	**87.09**	**24**	P	**P**	**02 22 31.5**	**-1.7**
	0.6nm,0.8s,baz=254,slow=4.8,SNR=5.0						
	0.6nm,0.8s						

*IDC **27** 02:11:14.4±1.1,6.˚34S×143.˚58E, h0km, mb4.4/12, mbtmp4.4/13, ML4.2/1, Error ellipse: s-maj=42.0km s-min=22.5km az=94.0*

*NEIC **27** 02:11:17.1±1.6,6.˚34S±0.˚08×143.˚2E±0.˚1, h10km±1km, mb4.8/53, Error ellipse: s-maj=20.9km s-min=13.5km az=107.0*

ISC 27 02:11:16.9±0.5,6.˚34S±0.˚07×143.˚2E±0.˚1, h10km, n77, σ0§98/77, mb4.8/37, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**5.94**	**44**		**Pn**	**02 12 46.0**	**+0.9**
COEN	**Coen**	**7.57**	**180**	Pn	**Pn**	**02 13 09.7**	**+2.3**
WB0	**Warramunga Arr**	**15.87**	**212**	Pn	**Pn**	**02 15 00.6**	**0.0**
WB2	**Warramunga Arr**	**16.03**	**212**	Pn	**Pn**	**02 15 01.5**	**-1.2**
WRA	**Warramunga Arr**	**16.04**	**212**	Pn	**Pn**	**02 14 59.1**	**-3.7**
	0.7nm,0.3s,baz=32,slow=13,SNR=8.2						
KNRA	**Kununurra**	**16.94**	**236**	Pn	**Pn**	**02 15 12.1**	**-2.2**
SOEI	**Soe**	**19.07**	**259**	P	**Pn**	**02 15 42.7**	**+2.0**
SOEI				IAmb	IAmb	02 15 53.8	
	comp=Z,47nm,1.0s						
AS31	**Alice Springs**	**19.42**	**207**		**P**	**02 15 42.2**	**-1.3**
ASAR	**Alice Springs**	**19.42**	**207**		**Pn**	**02 15 45.0**	**+0.3**
ASAR	**Alice Springs**	**19.42**	**207**	P	**Pn**	**02 15 45.5**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=38,slow=9.8,SNR=14						
	comp=Z,11nm,0.8s						

FITZ	**Fitzroy Crossi**	**20.75**	**234**	P	**P**	**02 15 58.1**	**0.0**	
TOLI2	**Tolitoli**	**23.59**	**288**	P	**P**	**02 16 28.4**	**+0.2**	
PSA00	**Pilbara Seismi**	**27.21**	**234**	P	**P**	**02 17 01.1**	**-0.1**	
TUWZ	**Tuamarina**	**44.37**	**147**	P	**P**	**02 19 27.2**	**-0.3**	
KSRS	**Korea Array**	**45.85**	**343**	P	**P**	**02 19 39.5**	**+0.2**	
	comp=Z,3.8nm,0.9s,baz=160,slow=9.3,SNR=13							
	comp=Z,3.8nm,0.9s							
CMAR	**Chiang Mai Arr**	**50.14**	**300**	P	**P**	**02 20 14.2**	**+1.3**	
	comp=Z,1.2nm,0.3s,baz=120,slow=5.3,SNR=4.1							
	comp=Z,1.2nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.32**	**350**	P	**P**	**02 20 21.1**	**-0.2**	
	comp=Z,4.7nm,0.9s,baz=164,slow=7.5,SNR=5.1							
	comp=Z,4.7nm,0.9s							
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**02 21 26.8**	**-0.1**	
	comp=Z,8.4nm,0.9s,baz=199,slow=7.8,SNR=6.0							
	comp=Z,8.4nm,0.9s							
SONM	**Songino Array**	**62.94**	**333**	P	**P**	**02 21 44.4**	**+0.6**	
SONM	**Songino Array**	**62.94**	**333**	P	**P**	**02 21 44.5**	**+0.8**	
	comp=Z,1.0nm,0.9s,baz=138,slow=6.2,SNR=5.3							
	comp=Z,1.0nm,0.9s							
VNDA	**Vanda**	**71.82**	**176**	P	**P**	**02 22 39.7**	**+0.3**	
VNDA				IAmb	IAmb	02 22 49.7		
	comp=Z,12nm,1.6s							
MK31	**Makanchi Array**	**75.40**	**322**	P	**P**	**02 23 00.9**	**-0.1**	
MKAR	**Makanchi Array**	**75.40**	**322**	P	**P**	**02 23 00.8**	**-0.2**	
MKAR	**Makanchi Array**	**75.40**	**322**	P	**P**	**02 23 01.3**	**+0.3**	
	comp=Z,3.7nm,0.9s,baz=112,slow=7.1,SNR=23							
	comp=Z,3.7nm,0.9s							
MAKZ	**Makanchi**	**75.60**	**322**	P	**P**	**02 23 02.1**	**0.0**	
MAKZ				IAmb	IAmb	02 23 05.9		
	comp=Z,8.7nm,1.1s							
NIL	**Nilore**	**77.09**	**306**	P	**P**	**02 23 10.3**	**-0.6**	
NIL				IAmb	IAmb	02 23 12.5		
	comp=Z,8.6nm,0.9s							
ZALV	**Zalesovo Beam**	**77.33**	**329**	P	**P**	**02 23 10.9**	**-0.9**	
	comp=Z,1.3nm,0.7s,baz=109,slow=6.8,SNR=5.6							
	comp=Z,1.3nm,0.7s							
BOOM	**Boonskoye usch**	**77.87**	**316**	P	**P**	**02 23 15.2**	**-0.1**	
AAK	**Ala-Archa**	**78.93**	**316**	P	**P**	**02 23 21.4**	**+0.3**	
KURK	**Kurchatov**	**79.26**	**324**	P	**P**	**02 23 22.5**	**0.0**	
KURBB	**Kurchatov Arra**	**79.28**	**324**	P	**P**	**02 23 22.0**	**-0.6**	
	comp=Z,1.9nm,0.9s,baz=111,slow=4.8,SNR=9.0							
	comp=Z,1.9nm,0.9s							
SIMJ	**Simiganj**	**81.75**	**310**	P	**P**	**02 23 35.7**	**-0.7**	
K17K	**Iditarod**	**81.83**	**23**	P	**P**	**02 23 36.0**	**0.0**	
L18K	**Granite Mounta**	**82.22**	**24**	P	**P**	**02 23 37.7**	**-0.4**	
QSPA	**South Pole Qui**	**83.63**	**180**	P	**P**	**02 23 44.3**	**-1.3**	
	comp=Z,3.3nm,0.8s,baz=358,slow=2.0,SNR=5.7							
	comp=Z,3.3nm,0.8s							
H19K	**Roundabout Mou**	**83.96**	**21**	P	**P**	**02 23 47.0**	**0.0**	
H19K				IAmb	IAmb	02 23 47.7		
	comp=Z,10.0nm,1.2s							
G19K	**Purcell Mounta**	**84.04**	**21**	P	**P**	**02 23 46.5**	**-1.0**	
G19K				IAmb	IAmb	02 23 49.7		
	comp=Z,7.9nm,1.1s							
C18K	**Utukok River**	**84.05**	**18**	P	**P**	**02 23 48.3**	**+0.8**	
C18K				IAmb	IAmb	02 24 02.8		
	comp=Z,9.0nm,1.4s							
NRIK	**Noril'sk**	**84.47**	**343**	P	**P**	**02 23 48.1**	**-1.4**	
NRIK				IAmb	IAmb	02 24 00.3		
	comp=Z,13nm,1.1s							
NRIK	**Noril'sk**	**84.47**	**343**	P	**P**	**02 23 49.2**	**-0.4**	
	comp=Z,1.8nm,0.4s,baz=126,slow=6.8,SNR=5.7							
	comp=Z,1.8nm,0.4s							
E19K	**Redstone River**	**84.66**	**20**	P	**P**	**02 23 50.6**	**0.0**	
E19K				IAmb	IAmb	02 23 51.4		
	comp=Z,5.2nm,1.0s							
C19K	**Lookout Ridge**	**84.79**	**18**	P	**P**	**02 23 50.4**	**-0.8**	
C19K				IAmb	IAmb	02 24 01.1		
	comp=Z,9.6nm,1.1s							
BVAR	**Borovoye Array**	**84.85**	**325**	P	**P**	**02 23 52.3**	**+0.5**	
	comp=Z,6.0nm,0.9s,baz=104,slow=6.1,SNR=13							
	comp=Z,6.0nm,0.9s							
D19K	**Kuna River**	**84.92**	**18**	P	**P**	**02 23 51.1**	**-0.8**	
D19K				IAmb	IAmb	02 24 00.7		
	comp=Z,11nm,1.2s							
BRVK	**Borovoye**	**84.92**	**325**	P	**P**	**02 23 52.3**	**+0.2**	
BRVK				IAmb	IAmb	02 24 03.4		
	comp=Z,7.5nm,1.0s							
IMAR	**Indian Mountai**	**85.16**	**21**	P	**P**	**02 23 52.8**	**-0.3**	
RND	**Reindeer**	**85.98**	**25**	P	**P**	**02 23 55.6**	**-1.7**	
DHY	**Denali Highway**	**86.47**	**25**	P	**P**	**02 23 58.5**	**-1.4**	
DHY				IAmb	IAmb	02 24 00.3		
	comp=Z,7.6nm,1.0s							
M24K	**Tolsona, Glenn**	**86.65**	**26**	P	**P**	**02 24 01.1**	**+0.5**	
WRH	**Wood River Hil**	**86.69**	**24**	P	**P**	**02 24 00.5**	**-0.3**	
WRH				IAmb	IAmb	02 24 00.8		
	comp=Z,8.8nm,1.0s							
E22K	**Anaktuvuk Pass**	**86.80**	**20**	P	**P**	**02 24 01.1**	**-0.1**	
E22K				IAmb	IAmb	02 24 14.5		
	comp=Z,12nm,1.6s							
G23K	**Bananza Creek**	**86.83**	**21**	P	**P**	**02 24 01.5**	**+0.1**	
G23K				IAmb	IAmb	02 24 08.7		
	comp=Z,6.5nm,1.4s							
D22K	**Ayikyak River**	**86.84**	**19**	P	**P**	**02 24 00.6**	**-0.8**	
D22K				IAmb	IAmb	02 24 09.1		
	comp=Z,11nm,1.4s							
CCB	**Clear Creek Bu**	**86.88**	**24**	P	**P**	**02 23 59.1**	**-2.5**	
CCB				IAmb	IAmb	02 24 01.0		
	comp=Z,7.2nm,1.1s							
BMRM	**Bremner River**	**86.98**	**28**	P	**P**	**02 24 01.2**	**-1.1**	
IL31		**87.29**	**24**	P	**P**	**02 24 03.6**	**0.0**	
IL31				IAmb	IAmb	02 24 03.7		
	comp=Z,4.5nm,1.0s							
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**02 24 02.1**	**-1.5**	
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**02 24 01.4**	**-2.2**	
	comp=Z,3.2nm,1.0s,baz=260,slow=5.2,SNR=15							
	comp=Z,3.2nm,1.0s							
J25K	**Salcha River,**	**87.84**	**24**	P	**P**	**02 24 05.4**	**-1.0**	
J25K				IAmb	IAmb	02 24 06.6		
	comp=Z,8.9nm,1.1s							
F24K	**Squaw Lake**	**87.92**	**21**	P	**P**	**02 24 07.3**	**+0.6**	
F24K				IAmb	IAmb	02 24 07.9		
	comp=Z,5.1nm,0.9s							
MENT	**Mentasta**	**88.00**	**26**	P	**P**	**02 24 07.3**	**+0.2**	
D24K	**Happy Valley**	**88.22**	**19**	P	**P**	**02 24 08.2**	**+0.3**	
BARN	**Barnard Glacie**	**88.38**	**28**	P	**P**	**02 24 09.1**	**-0.1**	
M27K	**Edge Creek, AK**	**88.64**	**27**	P	**P**	**02 24 09.5**	**-0.8**	
BCAR	**Beaver Creek A**	**88.88**	**26**	P	**P**	**02 24 10.8**	**-0.6**	
E25K	**Arctic Village**	**88.95**	**21**	P	**P**	**02 24 11.7**	**+0.1**	
E25K				IAmb	IAmb	02 24 12.6		
	comp=Z,4.9nm,1.1s							
K27K	**Chicken**	**89.03**	**25**	P	**P**	**02 24 10.2**	**-1.7**	
BMAR	**Burnt Mountain**	**89.08**	**22**	P	**P**	**02 24 12.2**	**+0.1**	
D25K	**Kavik River**	**89.09**	**20**	P	**P**	**02 24 11.9**	**-0.3**	
D25K				IAmb	IAmb	02 24 21.6		
	comp=Z,4.0nm,1.1s							
DAWY	**Dawson**	**90.18**	**25**	P	**P**	**02 24 17.5**	**+0.1**	
M29M	**Somme Creek**	**90.20**	**27**	P	**P**	**02 24 17.3**	**-0.2**	
M29M				IAmb	IAmb	02 24 17.5		
	comp=Z,9.5nm,1.2s							
HYT	**Haines Junctio**	**90.29**	**29**	P	**P**	**02 24 17.6**	**-0.5**	
HYT				IAmb	IAmb	02 24 29.8		
	comp=Z,14nm,1.4s							
L29M	**L29M**	**90.50**	**26**	P	**P**	**02 24 18.9**	**0.0**	
L29M				IAmb	IAmb	02 24 28.4		
	comp=Z,9.3nm,1.4s							
K29M	**Barlow Dome**	**90.93**	**26**	P	**P**	**02 24 20.4**	**-0.6**	
K29M				IAmb	IAmb	02 24 22.8		
	comp=Z,12nm,1.5s							
H31M	**Peel River**	**92.64**	**24**	P	**P**	**02 24 28.1**	**-0.6**	
G31M	**Satah River**	**92.85**	**23**	P	**P**	**02 24 28.8**	**-0.8**	
DBIC	**Dimbokro**	**148.28**	**272**	PKPbc	**PKPbc**	**02 31 04.6**	**0.0**	
	comp=Z,3.5nm,0.8s,baz=90,slow=4.0,SNR=4.8							

*BJI **27** 02:15:02.6±0.0,6.˚47S×143.˚90E, h10km, mb5.2/74, mB5.3/41, Ms4.6/26, Ms7 4.3/30*

*IDC **27** 02:15:04.9±0.5,6.˚48S×143.˚45E, h0km, mb5.1/16, mbtmp5.1/19, ML4.6/2, MS4.2/26, Error ellipse: s-maj=25.3km s-min=12.9km az=81.0*

*MOS **27** 02:15:04.7±0.8,6.˚48S×143.˚35E, h10km, mb5.4/48, Error ellipse: s-maj=10.1km s-min=5.1km az=109.2*

*NEIC **27** 02:15:07.8,6.˚51S×143.˚24E, h12km*

*DJA **27** 02:15:07.9±0.3,7.˚S±2.˚×14.˚3E±.˚, h17km±2km, M5.2/71, mb5.2/71, mB5.6/30, MLv5.6/6, Mw(mB)5.1/30, MwMwp4.8/2, Mwp5.1/2*

*NEIC **27** 02:15:07.2±1.5,6.˚57S±0.˚07×143.˚24E±0.˚08, h10km±1km, mb5.5/229, Mww4.9/14, Error ellipse: s-maj=13.1km s-min=11.6km az=253.0*

*NEIC **27** 02:15:07.8,6.˚51S×142.˚94E, h12km, Moment Tensor Solution. Duration: 1§5 Moment tensor: Scale 10¹⁶Nm; Mrr2.48; Mθθ-1.61; Mϕϕ-0.87; Mrθ1.24; Mθϕ1.21; Mϕr-1.59; Fault plane solution: M0 3.21000×10¹⁶ NP1: ϕs136.06000°, δ64.61000°, λ98.31000°. NP2: ϕs297.25000°, δ26.63000°, λ73.07000°. Principal axes: T 3.2289, Plg69.0000°, Azm63.0000°; N -0.0455, Plg8.0000°, Azm312.0000°; P -3.1835, Plg19.0000°, Azm220.0000°;*

*GCMT **27** 02:15:08.2±0.2,6.˚57S±0.˚02×143.˚30E±0.˚02, h12km, MW4.9/101, Moment Tensor Solution. s37,c41; s101,c139; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.70±.07; Mθθ-1.69±.07; Mϕϕ-1.01±.07; Mrθ1.09±.26; Mθϕ1.33±.06; Mϕr-0.72±.25; Best double couple: M0 3.00900×10¹⁶ NP1:ϕs126.00000°,δ58.00000°, λ88.00000°. NP2:ϕs310.00000°,δ32.00000°,λ93.00000°. Principal axes: T 2.9990, Plg77.0000°, Azm29.0000°; N 0.0200, Plg2.0000°, Azm127.0000°; P -3.0190, Plg13.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 02:15:07.5±0.4,6.˚62S±0.˚04×143.˚27E±0.˚05, h17km±2km, h17km:pP-P, n768, σ1§04/693, mb5.4/203, MS4.3/36, 33C-11D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.40**	**237**	P	**Pn**	**02 16 01.1**	**+1.3**
PMG	**Port Moresby**	**4.74**	**126**	Pn	**Pn**	**02 16 18.1**	**-0.2**
PMG	**Port Moresby**	**4.74**	**126**	P	**Pn**	**02 16 18.3**	**0.0**
PMG	**Port Moresby**	**4.74**	**126**	*c iP*	**Pn**	**02 16 17.8**	**-0.5**
PMG	**Port Moresby**	**4.74**	**126**	Pn	**Pn**	**02 16 18.3**	**0.0**
	264nm,0.7s,baz=312,slow=15,SNR=27						
PMG				Sn	**Sn**	**02 17 09.6**	**-3.4**
	13nm,0.3s,baz=233,slow=19,SNR=5.6						
GENI	**Genyem**	**5.06**	**322**	P	**Pn**	**02 16 23.4**	**+0.8**
GENI	**Genyem**	**5.06**	**322**	P	**Pn**	**02 16 22.4**	**-0.2**
MANU	**Manus Island**	**6.11**	**42**	Pn	**Pn**	**02 16 37.5**	**+0.4**
MANU	**Manus Island**	**6.11**	**42**	P	**Pn**	**02 16 38.2**	**+1.1**
SMPI	**Sarmi**	**6.47**	**315**	P	**Pn**	**02 16 42.4**	**+0.4**
	296nm,1.4s,6µm2.3nm						
COEN	**Coen**	**7.29**	**181**	P	**Pn**	**02 16 55.6**	**+2.2**
	baz=7.3						
COEN	**Coen**	**7.29**	**181**	Pn	**Pn**	**02 16 55.3**	**+1.9**
MTSU	**Mount Surprise**	**11.49**	**175**	P	Pn	02 17 56.4	+5.5
FAKI	**Fak Fak**	**11.58**	**288**	Pn	**Pn**	**02 17 52.3**	**+0.1**
FAKI	**Fak Fak**	**11.58**	**288**	P	**Pn**	**02 17 53.7**	**+1.5**
FAKI	**Fak Fak**	**11.58**	**288**	P	**Pn**	**02 17 50.3**	**-1.9**
	118nm,0.8s,1µm2µm						
SAUI	**Saumlaki**	**11.95**	**263**	Pn	**Pn**	**02 17 57.5**	**+0.2**
SAUI	**Saumlaki**	**11.95**	**263**	P	**Pn**	**02 17 59.0**	**+1.8**
SAUI	**Saumlaki**	**11.95**	**263**	P	**Pn**	**02 17 58.7**	**+1.5**
	808nm,0.7s,9µm						
KDU	**Kakadu**	**12.23**	**240**	P	Pn	02 17 56.7	-4.4
	baz=12						
KDU	**Kakadu**	**12.23**	**240**	P	**Pn**	**02 18 01.4**	**+0.4**
TV1H	**Townsville Har**	**13.02**	**165**	P	**Pn**	**02 18 15.9**	**+4.0**
SWI	**Sorong**	**13.28**	**295**	P	**Pn**	**02 18 13.3**	**-2.0**
	91nm,0.8s						
MTN	**Manton Dam**	**13.46**	**242**	P	**Pn**	**02 18 17.6**	**-0.3**
	baz=14						
MTN	**Manton Dam**	**13.46**	**242**	Pn	Pn	02 18 16.0	-1.9
MTN	**Manton Dam**	**13.46**	**242**	P	**Pn**	**02 18 18.2**	**+0.3**
DRS	**Darwin Rock St**	**13.49**	**244**	P	**Pn**	**02 18 19.8**	**+1.5**
CTA	**Charters Tower**	**13.70**	**168**	P	**Pn**	**02 18 24.6**	**+3.5**
CTA	**Charters Tower**	**13.70**	**168**	LR	LR	02 23 25.8	
	comp=Z,960nm,20.2s,baz=354,slow=36						
CTAO	**

MPSI	**Mapaga**	**24.32 286**	P	**P**	**02 20 24.7**	**+0.1**		
	comp=Z,26nm,0.9s							
KOUNC	**Koumac, New Ca**	**24.63 126**	P	**P**	**02 20 28.5**	**+1.2**		
CMSA	**Cobar Meteorol**	**24.89 175**	P	**P**	**02 20 32.0**	**+2.4**		
	baz=25,SNR=16							
CMSA	**Cobar Meteorol**	**24.89 175**	P	**P**	**02 20 31.6**	**+2.0**		
MULG	**Mulgathing**	**25.08 199**	P	**P**	**02 20 32.0**	**+0.7**		
STKA	**Stephens Creek**	**25.18 183**	P	**P**	**02 20 32.9**	**+0.7**		
	baz=25,SNR=6.5							
STKA	**Stephens Creek**	**25.18 183**	P	**P**	**02 20 32.6**	**+0.4**		
STKA	**Stephens Creek**	**25.18 183**	P	**P**	**02 20 32.9**	**+0.7**		
STKA	**Stephens Creek**	**25.18 183**	P	**P**	**02 20 32.6**	**+0.4**		
STKA			pmax	pmax				
	comp=Z,14nm,1.8s							
STKA	**Stephens Creek**	**25.18 183**	P	**P**	**02 20 32.4**	**+0.3**		
	comp=Z,5.5nm,0.7s,baz=353,slow=8.8,SNR=9.3							
STKA			LR	LR	02 31 52.9			
	comp=Z,878nm,20.0s,baz=358,slow=40							
	comp=Z,5.5nm,0.7s							
PLAI	**Plampang**	**25.36 263**	P	**P**	**02 20 32.6**	**-1.4**		
PLAI	**Plampang**	**25.36 263**	P	**P**	**02 20 32.5**	**-1.4**		
	comp=Z,75nm,0.8s,comp=Z,672nm							
AUPHS	**Peel High Scho**	**25.38 165**	P	**P**	**02 20 36.2**	**+2.2**		
TWSI	**Taliwang, Sumb**	**26.23 264**	P	**P**	**02 20 40.8**	**-1.1**		
	comp=Z,29nm,0.8s							
WHYH	**Whyalla**	**26.81 191**	P	**P**	**02 20 50.4**	**+3.5**		
BBOO	**Buckleboo**	**26.91 194**	P	**P**	**02 20 47.7**	**-0.1**		
	baz=27,SNR=6.2							
BBOO	**Buckleboo**	**26.91 194**	P	**P**	**02 20 47.5**	**-0.4**		
BBOO	**Buckleboo**	**26.91 194**	P	**P**	**02 20 48.5**	**+0.7**		
MBWA	**Marble Bar**	**26.98 235**	P	**P**	**02 20 47.6**	**-1.0**		
MBWA	**Marble Bar**	**26.98 235**	P	**P**	**02 20 47.9**	**-0.7**		
HTT	**Hallett**	**26.98 188**	P	**P**	**02 20 48.9**	**+0.4**		
	baz=27,SNR=3.2							
HTT	**Hallett**	**26.98 188**	P	**P**	**02 20 51.8**	**+3.3**		
PSA00	**Pilbara Seismi**	**27.09 234**	P	**P**	**02 20 49.2**	**-0.4**		
PSA00	**Pilbara Seismi**	**27.09 234**	P	**P**	**02 20 48.6**	**-0.9**		
PSA00			IAmb	IAmb	02 21 28.9			
	comp=Z,12nm,0.9s							
PSA00	**Pilbara Seismi**	**27.09 234**	P	**P**	**02 20 49.2**	**-0.4**		
DZM	**Mont Dzumac**	**27.14 127**	P	**P**	**02 20 49.9**	**-0.2**		
DZM	**Mont Dzumac**	**27.14 127**	P	**P**	**02 20 52.4**	**+2.3**		
DZM	**Mont Dzumac**	**27.14 127**	LR	LR	02 29 56.8			
	comp=Z,245nm,21.2s,baz=256,slow=33							
YNG	**Young**	**27.95 171**	P	**P**	**02 20 58.7**	**+1.6**		
	baz=28,SNR=9.4							
YNG	**Young**	**27.95 171**	P	**P**	**02 20 58.6**	**+1.4**		
FORT	**Forrest**	**27.95 209**	P	**P**	**02 20 57.8**	**+0.6**		
	baz=28,SNR=10.0							
FORT	**Forrest**	**27.95 209**	P	**P**	**02 20 56.8**	**-0.4**		
FORT			IAmb	IAmb	02 21 41.9			
	comp=Z,63nm,1.0s							
FORT	**Forrest**	**27.95 209**	P	**P**	**02 20 58.4**	**+1.2**		
JAGI	**Jajag, Banyuwa**	**28.92 264**	P	**P**	**02 21 05.1**	**-1.0**		
JAGI	**Jajag, Banyuwa**	**28.92 264**	P	**P**	**02 21 03.9**	**-2.2**		
JAGI	**Jajag, Banyuwa**	**28.92 264**	P	**P**	**02 21 03.6**	**-2.5**		
	comp=Z,32nm,0.7s							
ARPS	**Mount Arapiles**	**30.04 182**	P	**P**	**02 21 16.6**	**+0.9**		
	baz=30,SNR=6.3							
ARPS	**Mount Arapiles**	**30.04 182**	P	**P**	**02 21 16.6**	**+0.9**		
TGY	**Tagaytay City**	**30.25 313**	LR	LR	02 34 53.5			
	comp=Z,192nm,19.5s,baz=127,slow=39							
PWJI	**Pagerwojo**	**31.24 265**	P	**P**	**02 21 25.9**	**-0.6**		
	comp=Z,21nm,1.3s							
KMBL	**Kambalda**	**31.73 216**	P	**P**	**02 21 31.3**	**+0.6**		
	baz=32							
UGM	**Wanagama**	**32.51 266**	P	**P**	**02 21 40.0**	**+2.2**		
UGM	**Wanagama**	**32.51 266**	P	**P**	**02 21 37.7**	**-0.1**		
	comp=Z,116nm,1.6s							
KSM	**Kuching**	**33.87 283**	P	**P**	**02 21 50.7**	**+1.1**		
KPJI	**Karang Pucung**	**34.09 267**	P	**P**	**02 21 51.4**	**-0.1**		
	comp=Z,45nm,0.9s							
CMJI	**Cimerak**	**34.56 266**	P	**P**	**02 21 54.1**	**-1.5**		
	comp=Z,104nm,0.9s,comp=Z,1µm							
BBJI	**Bungbulang**	**35.36 266**	P	**P**	**02 22 01.2**	**-1.4**		
LEM	**Lembang**	**35.40 268**	LR	LR	02 40 52.8			
	comp=Z,255nm,19.0s,baz=72,slow=44							
LEM	**Lembang**	**35.40 268**	P	**P**	**02 22 02.6**	**-0.5**		
	comp=Z,40nm,0.9s							
NWAO	**Narrogin (SRO)**	**35.64 219**	LR	LR	02 37 34.8			
	comp=Z,829nm,19.1s,baz=38,slow=38							
CNJI	**Cibinong**	**35.87 267**	P	**P**	**02 22 05.8**	**-1.2**		
	comp=Z,54nm,1.0s							
JOW	**Kunigami**	**36.29 337**	LR	LR	02 37 04.5			
	comp=Z,150nm,18.2s,baz=150,slow=36							
NACB	**Ninganchiao**	**37.20 326**	P	**P**	**02 22 15.8**	**-2.3**		
NACB	**Ninganchiao**	**37.20 326**	P	**P**	**02 22 17.9**	**-0.2**		
PPBI	**Pangkal Pinang**	**37.28 275**	P	**P**	**02 22 17.2**	**-1.7**		
	comp=Z,40nm,1.1s							
XMIS	**Christmas Isla**	**37.38 261**	P	**P**	**02 22 19.4**	**-0.5**		
XMIS			IAmb	IAmb	02 22 21.3			
	comp=Z,56nm,0.8s							
XMIS	**Christmas Isla**	**37.38 261**	P	**P**	**02 22 20.5**	**+0.7**		
KASI	**Kota Agung**	**38.56 269**	P	**P**	**02 22 28.5**	**-1.3**		
	comp=Z,18nm,0.9s							
JMN	**Monobe**	**41.10 348**	P	**P**	**02 22 48.7**	**-2.0**		
JMN	**Monobe**	**41.10 348**	P	**P**	**02 22 50.3**	**-0.4**		
JNU	**Nakatsue**	**41.24 344**	P	**P**	**02 22 50.9**	**-0.9**		
JNU	**Nakatsue**	**41.24 344**	P	**P**	**02 22 51.0**	**-0.8**		
INU	**Inuyama**	**42.16 352**	P	**P**	**02 22 57.3**	**-2.0**		
INU	**Inuyama**	**42.16 352**	P	**P**	**02 22 58.5**	**-0.7**		
JGF	**Kuroka**	**42.36 353**	P	**P**	**02 23 00.4**	**-0.5**		
JGF	**Kuroka**	**42.36 353**	P	**P**	**02 22 59.7**	**-1.3**		
RAO	**Raoul Island**	**42.94 126**	LR	LR	02 38 30.6			
	comp=Z,343nm,20.4s,baz=120,slow=33							
MJAR	**Matsushiro Arr**	**43.20 354**	P	**P**	**02 23 05.7**	**-2.0**		
	comp=Z,21nm,0.9s,baz=182,slow=8.6,SNR=33							
MJAR			PcP	**PcP**	**02 24 56.8**	**-0.2**		
	comp=Z,4.0nm,0.9s,baz=168,slow=2.6,SNR=3.9							
	comp=Z,21nm,0.9s							
MAJO	**Matsushiro**	**43.20 354**	P	**P**	**02 23 06.5**	**-1.2**		
MAJO	**Matsushiro**	**43.20 354**	P	**P**	**02 23 06.2**	**-1.5**		
MAJO	**Matsushiro**	**43.20 354** *c i*	P	**P**	**02 23 05.1**	**-2.6**		
MAJO			pmax	pmax				
	comp=Z,32nm,1.0s							
MJB9	**Matsu-Tunnel**	**43.20 354**	P	**P**	**02 23 07.7**	**-0.1**		
JCZ	**Jackson Bay**	**43.48 153**	P	**P**	**02 23 12.7**	**+2.7**		
IPM	**Ipoh**	**43.59 284**	P	**P**	**02 23 11.2**	**0.0**		
IPM	**Ipoh**	**43.59 284**	P	**P**	**02 23 12.2**	**+1.0**		
THZ	**Tophouse**	**43.78 148**	P	**P**	**02 23 13.4**	**+1.0**		
DCZ	**Deep Cove**	**43.89 156**	P	**P**	**02 23 15.1**	**+1.9**		
URZ	**Urewera**	**43.93 141**	LR	LR	02 43 18.4			
	comp=Z,224nm,18.3s,baz=316,slow=39							
RTZ	**Ruatahuna**	**44.06 141**	P	**P**	**02 23 15.5**	**+0.7**		
RTZ			IAmb	IAmb	02 23 17.1			
	comp=Z,43nm,0.8s							
BKZ	**Black Stump Fm**	**44.10 142**	P	**P**	**02 23 16.1**	**+1.0**		
BKZ	**Black Stump Fm**	**44.10 142**	P	**P**	**02 23 16.7**	**+1.6**		
TUWZ	**Tuamarina**	**44.11 147**	P	**P**	**02 23 16.1**	**+1.1**		
LTZ	**Lake Taylor**	**44.18 149**	P	**P**	**02 23 17.2**	**+1.6**		
MLZ	**Mavora Lakes**	**44.22 155**	P	**P**	**02 23 17.1**	**+1.2**		
MLZ			IAmb	IAmb	02 23 18.7			
	comp=Z,35nm,0.8s							
RPZ	**Rata Peaks**	**44.26 151**	P	**P**	**02 23 16.9**	**+0.7**		
RPZ			IAmb	IAmb	02 23 19.0			
	comp=Z,46nm,0.8s							
RPZ	**Rata Peaks**	**44.26 151**	LR	LR	02 40 43.6			
	comp=Z,380nm,19.2s,baz=305,slow=35							
BSWZ	**Blackbirch Sta**	**44.27 147**	P	**P**	**02 23 16.8**	**+0.6**		
JMM	**Marumori**	**44.32 357**	P	**P**	**02 23 16.0**	**-0.7**		
JMM			IAmb	IAmb	02 23 20.0			
	comp=Z,65nm,1.3s							
JMM	**Marumori**	**44.32 357**	P	**P**	**02 23 16.2**	**-0.4**		
LBZ	**Lake Benmore**	**44.36 152**	P	**P**	**02 23 17.7**	**+0.7**		
LBZ			IAmb	IAmb	02 23 43.1			
	comp=Z,74nm,1.4s							
WHZ	**Wether Hill Ro**	**44.57 155**	P	**P**	**02 23 19.5**	**+0.9**		
KHZ	**Kahutara**	**44.58 148**	P	**P**	**02 23 19.7**	**+1.1**		
JSD	**Sado**	**44.67 354**	P	**P**	**02 23 17.6**	**-1.9**		
JSD			IAmb	IAmb	02 23 19.6			
	comp=Z,41nm,0.8s							
JSD	**Sado**	**44.67 354**	P	**P**	**02 23 18.3**	**-1.2**		
GVZ	**Greta Valley S**	**44.70 149**	P	**P**	**02 23 20.9**	**+1.2**		
GVZ			IAmb	IAmb	02 23 22.4			
	comp=Z,61nm,0.7s							
BFZ	**Birch Farm**	**44.91 144**	P	**P**	**02 23 22.0**	**+0.5**		
BFZ			IAmb	IAmb	02 23 23.2			
	comp=Z,29nm,0.7s							
NJ2	**Nanjing**	**44.96 330**	⇓P	**P**	**02 23 22.8**	**+1.0**		
NJ2			pP	**pP**	**02 23 26.8**	**-0.5**		
NJ2			sP	**sP**	**02 23 29.5**	**+0.1**		
NJ2			sS	**sS**	**02 30 09.5**	**+1.1**		
NJ2			pmax	pmax				
	comp=Z,17nm,1.0s							
NJ2			pmax	pmax				
	comp=Z,370nm,4.3s							
RPSI	**Rantau Prapat**	**45.23 280**	P	**P**	**02 23 24.2**	**-0.2**		
RPSI			IAmb	IAmb	02 23 32.2			
	comp=Z,40nm,1.1s							
PSI	**Prapat**	**45.25 281**	P	**P**	**02 23 24.7**	**0.0**		
PSI	**Prapat**	**45.25 281**	P	**P**	**02 23 24.2**	**-0.5**		
PSI			pmax	pmax				
	comp=Z,40nm,1.1s							
TJN	**Taejon**	**45.30 342**	P	**P**	**02 23 24.3**	**-0.2**		
TJN	**Taejon**	**45.30 342** *ce*	P	**P**	**02 23 23.5**	**-1.0**		
KSRS	**Korea Array**	**46.13 343**	P	**P**	**02 23 31.1**	**+0.1**		
	comp=Z,41nm,0.9s,baz=162,slow=9.4,SNR=91							
KSRS			PcP	**PcP**	**02 25 07.7**	**+0.7**		
	comp=Z,3.5nm,0.8s,baz=157,slow=3.7,SNR=4.4							
KSRS			LR	LR	02 39 52.0			
	comp=Z,102nm,21.6s,baz=135,slow=32							
	comp=Z,41nm,0.9s							
KSAR	**Wonju Array Be**	**46.13 343**	P	**P**	**02 23 31.1**	**0.0**		
KSAR	**Wonju Array Be**	**46.13 343**	P	**P**	**02 23 31.1**	**0.0**		
KS19	**Wonju Array Si**	**46.19 343**	P	**P**	**02 23 31.3**	**-0.3**		
KS19			IAmb	IAmb	02 23 31.9			
	comp=Z,32nm,0.8s							
WHN	**Wuhan**	**46.19 325**	⇓P	**P**	**02 23 33.3**	**+1.7**		
WHN			pP	**pP**	**02 23 37.0**	**-0.1**		
WHN			pmax	pmax				
	comp=Z,76nm,0.8s							
WHN			LR	LR				
	comp=Z,550nm,24.0s							
KCSI	**Kotacane, Aceh**	**46.53 281**	P	**P**	**02 23 34.0**	**-0.6**		
	comp=Z,17nm,1.1s							
INCN	**Inchon**	**46.55 342**	P	**P**	**02 23 34.2**	**-0.2**		
INCN	**Inchon**	**46.55 342**	P	**P**	**02 23 34.2**	**-0.2**		
INCN	**Inchon**	**46.55 342**	P	**P**	**02 23 34.2**	**-0.2**		
INCN			pmax	pmax				
	comp=Z,60nm,0.8s							
NONG	**Nongkai**	**46.58 302**	P	**P**	**02 23 36.0**	**+1.1**		
JTM	**Tenmabayashi**	**47.22 358**	P	**P**	**02 23 39.0**	**-0.6**		
JTM	**Tenmabayashi**	**47.22 358**	P	**P**	**02 23 38.9**	**-0.6**		
SLVN	**Son La**	**47.58 307**	P	**P**	**02 23 43.7**	**+1.0**		
SNSI	**Sinabang, Aceh**	**47.71 279**	P	**P**	**02 23 44.2**	**+0.3**		
	comp=Z,77nm,1.1s,comp=Z,5µm							
GYA	**Guiyang**	**48.38 314**	⇑*i*P	**P**	**02 23 50.0**	**+1.0**		
GYA			sP	sP	02 23 57.5	+0.9		
GYA			pmax	pmax				
	comp=Z,28nm,1.3s							
SRDT	**SRDT**	**48.50 296**	P	**P**	**02 23 50.8**	**+0.9**		
ENH	**Enshi**	**48.94 320**	P	**P**	**02 23 53.0**	**-0.1**		
ENH			IAmb	IAmb	02 23 54.4			
	comp=Z,29nm,0.9s							
ENH	**Enshi**	**48.94 320**	P	**P**	**02 23 53.6**	**+0.5**		
TIA	**Tai'an**	**49.17 332**	P	**P**	**02 23 54.0**	**-0.7**		
TIA			pmax	pmax				
	comp=Z,7.0nm,1.1s							
TIA			pmax	pmax				
	comp=Z,130nm,4.7s							
PHRA	**Phrae**	**49.24 301**	P	**P**	**02 23 55.3**	**-0.3**		
CRAI	**Chiangrai**	**49.91 303**	P	**P**	**02 24 00.4**	**-0.2**		
MSHR	**Mys Shultsa**	**50.20 348**	⇑*e*P	**P**	**02 24 01.9**	**-0.5**		
MSHR			pmax	pmax				
	comp=Z,28nm,1.3s							
LYN	**LuoYang**	**50.23 327**	⇑P	**P**	**02 24 03.3**	**+0.4**		
LYN			pmax	pmax				
	comp=Z,62nm,1.2s							
LYN			pmax	pmax				
	comp=Z,320nm,3.5s							
LYN			LR	LR				
	comp=Z,250nm,16.2s							
CMAR	**Chiang Mai Arr**	**50.32 300**	P	**P**	**02 24 03.6**	**-0.2**		
CMAR	**Chiang Mai Arr**	**50.32 300**	P	**P**	**02 24 04.8**	**+1.1**		
	comp=Z,8.6nm,0.7s,baz=124,slow=6.0,SNR=34							
	comp=Z,8.6nm,0.7s							
PSTR	**Posyet**	**50.34 348** *c i*	P	**P**	**02 24 02.7**	**-0.7**		
CHTO	**Chiang Mai**	**50.47 301**	P	**P**	**02 24 04.7**	**-0.2**		
CHTO	**Chiang Mai**	**50.47 301**	P	**P**	**02 24 05.3**	**+0.4**		
CHTO	**Chiang Mai**	**50.47 301**	P	**P**	**02 24 04.7**	**-0.2**		
CHTO			pmax	pmax				
	comp=Z,9.0nm,0.8s							
KMI	**Kunming**	**50.50 310**	⇑P	**P**	**02 24 07.3**	**+2.0**		
KMI			pmax	pmax				
	comp=Z,31nm,1.2s							
JKA	**Kamikawa-asahi**	**50.50 359**	P	**P**	**02 24 04.6**	**-0.1**		
ASAJ	**Asahikawa**	**50.51 359**	P	**P**	**02 24 04.6**	**-0.1**		
ASAJ			pmax	pmax				
	comp=Z,132nm,1.5s							
VLA	**Vladivostok**	**50.58 349**	⇓*e*P	**P**	**02 24 05.2**	**0.0**		
VLA			pmax	pmax				
	comp=Z,55nm,0.9s							
HNS	**HongShan**	**51.27 331**	⇑P	**P**	**02 24 10.3**	**-0.3**		
HNS			*e*S	**S**	**02 31 28.0**	**-0.9**		
HNS			pmax	pmax				
	comp=Z,21nm,1.0s							
HNS			LR	LR				
	comp=Z,190nm,17.5s							
HNS			LR	LR				
	comp=Z,160nm,20.7s							
USA0B	**Ussuriysk Arra**	**51.60 350**	P	**P**	**02 24 12.5**	**-0.4**		
USA0B			IAmb	IAmb	02 24 13.5			
	comp=Z,50nm,0.8s							
USA0B	**Ussuriysk Arra**	**51.60 350** *c i*	P	**P**	**02 24 12.1**	**-0.8**		
USRK	**Ussuriysk Ar.**	**51.60 350**	P	**P**	**02 24 12.7**	**-0.2**		
USRK	**Ussuriysk Ar.**	**51.60 350**	P	**P**	**02 24 12.7**	**-0.2**		
USRK	**Ussuriysk Ar.**	**51.60 350**	P	**P**	**02 24 12.5**	**-0.4**		
	comp=Z,45nm,0.8s,baz=175,slow=7.4,SNR=72							
	comp=Z,45nm,0.8s							
XAN	**Xi'an**	**51.88 323**	⇑P	**P**	**02 24 15.3**	**0.0**		
XAN			pP	pP	02 24 19.3	-1.5		
XAN			pmax	pmax				
	comp=Z,63nm,1.2s							
XAN			pmax	pmax				
	comp=Z,380nm,3.8s							
XAN			LR	LR				
	comp=Z,200nm,12.4s							
XAN			LR	LR				
	comp=Z,230nm,14.3s							
XAN			LR	LR				
	comp=Z,270nm,14.9s							
PZH	**PanZhiHua**	**52.00 311**	P	**P**	**02 24 17.0**	**+0.5**		
PZH			pmax	pmax				
	comp=Z,10.0nm,1.5s							
PZH			pmax	pmax				
	comp=Z,90nm,3.9s							
MDJ	**Mudanjiang**	**52.47 348**	P	**P**	**02 24 19.0**	**-0.4**		
MDJ			pmax	pmax				
	comp=Z,42nm,1.1s							
MDJ			pmax	pmax				
	comp=Z,160nm,3.6s							
MDJ	**Mudanjiang**	**52.47 348**	P	**P**	**02 24 19.0**	**-0.4**		
MDJ	**Mudanjiang**	**52.47 348**	P	**P**	**02 24 19.2**	**-0.2**		
BJT	**Baijiatuau**	**52.72 334**	P	**P**	**02 24 21.0**	**-0.3**		
BJT	**Baijiatuau**	**52.72 334**	P	**P**	**02 24 21.1**	**-0.3**		
BJT	**Baijiatuau**	**52.72 334**	P	**P**	**02 24 21.0**	**-0.3**		
BJT			pmax	pmax				
	comp=Z,21nm,0.8s							
CN2	**Changchun**	**52.72 344**	P	**P**	**02 24 20.5**	**-0.7**		
CN2			pmax	pmax				
	comp=Z,20nm,0.7s							
BJI	**Beijing**	**52.73 334**	P	**P**	**02 24 20.5**	**-0.9**		
BJI			sP	**pP**	**02 24 25.3**	**-1.6**		
BJI			pmax	pmax				
	comp=Z,18nm,0.8s							
BJI			LR	LR				
	comp=Z,130nm,18.6s							
BJI			LR	LR				
	comp=Z,80nm,17.7s							
BJI			LR	LR				
	comp=Z,160nm,18.7s							
CD2	**Chengdu**	**53.12 317**	P	**P**	**02 24 25.3**	**+0.8**		
CD2			pmax	pmax				
	comp=Z,60nm,0.8s							
YSS	**Yuzh-Sakhalins**	**53.34 360**	P	**P**	**02 24 24.8**	**-0.9**		
YSS			IAmb	IAmb	02 24 27.2			
	comp=Z,33nm,0.6s							
YSS	**Yuzh-Sakhalins**	**53.34 360**	P	**P**	**02 24 25.2**	**-0.6**		
YSS	**Yuzh-Sakhalins**	**53.34 360**	*e*P	**P**	**02 24 25.2**	**-0.6**		
YSS			*e**SP	**pP**	**02 24 30.1**	**-1.3**		
YSS			*e*S	**S**	**02 31 54.5**	**-2.3**		
YSS			pmax	pmax				
	comp=Z,50nm,0.6s							
TNCH	**TengChong**	**53.71 308**	P	**P**	**02 24 30.5**	**+1.3**		
TNCH			pP	pP	02 24 33.8	-0.9		
TNCH			pmax	pmax				
	comp=Z,180nm,2.7s							
BNX	**BinXian**	**54.02 346**	⇑P	**P**	**02 24 30.0**	**-0.8**		
BNX			pmax	pmax				
	comp=Z,110nm,0.8s							
BNX			pmax	pmax				
	comp=Z,140nm,3.5s							
MND	**Mandalay**	**54.26 303**	P	**P**	**02 24 33.9**	**+0.9**		
UGL	**Uglegorsk**	**55.48 359**	*e*P	**P**	**02 24 40.6**	**-0.7**		
UGL			pmax	pmax				
	comp=Z,490nm,3.5s							
UGL			pmax	pmax				
	comp=Z,130nm,0.9s							
HHC	**Hu-ho-hao-te**	**55.49 331**	*e*P	**P**	**02 24 42.0**	**+0.3**		
HHC			pmax	pmax				
	comp=Z,22nm,0.8s							
HHC			pmax	pmax				
	comp=Z,180nm,4.1s							
HHC			LR	LR				
	comp=Z,91nm,17.6s							
HHC			LR	LR				
	comp=Z,150nm,16.8s							
HHC			LR	LR				
	comp=Z,220nm,17.6s							
XLT	**XiLinHaoTe**	**55.97 337**	*e*P	**P**	**02 24 44.3**	**-0.8**		
XLT			pP	pP	02 24 48.8	-1.8		
XLT			sP	sP	02 24 51.0	-1.6		
XLT			PcP	**PcP**	**02 25 43.5**	**0.0**		
XLT			pmax	pmax				
	comp=Z,11nm,0.7s							
XLT			pmax	pmax				
	comp=Z,96nm,3.2s							
BTO	**Baotou**	**56.06 330**	*e*P	**P**	**02 24 47.0**	**+1.2**		
BTO			pP	**pP**	**02 24 52.0**	**+0.6**		
BTO			sP	**sP**	**02 24 54.3**	**+0.8**		
BTO			PP	**PP**	**02 26 54.5**	**+3.5**		
BTO			S	**S**	**02 32 37.3**	**+3.3**		
BTO			sS	**sS**	**02 32 45.8**	**+2.7**		
BTO			SS	**SS**	**02 36 24.0**	**+3.4**		
BTO			pmax	pmax				
	comp=Z,43nm,1.1s							
BTO			pmax	pmax				
	comp=Z,320nm,4.8s							
BTO			LR	LR				
	comp=Z,360nm,20.1s							
BTO			LR	LR				
	comp=Z,350nm,16.6s							
BTO			LR	LR				
	comp=Z,440nm,19.7s							
LZH	**Lanzhou**	**56.33 322**	⇑*i*P	**P**	**02 24 48.8**	**+0.9**		
LZH			sP	sP	02 24 59.8	+4.3		
LZH			pmax	pmax				
	comp=Z,67nm,1.0s							
LZH			pmax	pmax				
	comp=Z,320nm,4.3s							
LZH			LR	LR				
	comp=Z,230nm,16.1s							
LZH			LR	LR				
	comp=Z,180nm,16.8s							
LZH			LR	LR				
	comp=Z,170nm,16.8s							
KLR	**Kul'dur**	**56.52 351** *c i*	P	**P**	**02 24 48.3**	**-0.5**		
KLR			pmax	pmax				
	comp=Z,57nm,1.7s							
RAR	**Rarotonga**	**56.87 111**	LR	LR	02 47 09.1			
	comp=Z,97nm,21.3s,baz=292,slow=34							
TYV	**Tymovskoe**	**57.25 360**	*e*P	**P**	**02 24 53.7**	**-0.2**		
TYV			pmax	pmax				
	comp=Z,200nm,3.6s							
TYV			pmax	pmax				
	comp=Z,34nm,0.8s							
GRNR	**Gornyy**	**57.46 355**	⇑*i*P	**P**	**02 24 54.8**	**-0.7**		
GRNR			pmax	pmax				
	comp=N,8.0nm,1.0s							
GRNR			pmax	pmax				
	comp=Z,10.0nm,1.0s							
GRNR			MLR	MLR				
	comp=N,200nm,15.0s							
GRNR			MLR	MLR				
	comp=E,300nm,15.0s							
GRNR			MLR	MLR				
	comp=Z,220nm,15.0s							
SKR	**Severo-Kuril's**	**58.15 10**	⇓*e*P	**P**	**02 24 59.9**	**-0.3**		
HEH	**HeiHe**	**58.29 348**	*e*P	**P**	**02 24 59.5**	**-1.7**		
HEH			pmax	pmax				
	comp=Z,20nm,1.0s							
HEH			pmax	pmax				
	comp=Z,290nm,3.6s							
HEH			LR	LR				
	comp=Z,230nm,13.0s							
HEH			LR	LR				
	comp=Z,280nm,14.6s							
HEH			LR	LR				
	comp=Z,450nm,15.9s							
SHL	**Shillong**	**59.28 305**	P	**P**	**02 25 08.8**	**-0.1**		
SHL	**Shillong**	**59.28 305**	P	**P**	**02 25 08.8**	**-0.1**		
SHL			pmax	pmax				
	comp=Z,64nm,1.2s							
HIA	**Hailar**	**59.33 342**	P	**P**	**02 25 08.5**	**-0.1**		
HIA	**Hailar**	**59.33 342**	P	**P**	**02 25 09.4**	**+0.8**		
HIA	**Hailar**	**59.33 342** *ce*	P	**P**	**02 25 07.9**	**-0.7**		
HIA			pmax	pmax				
	comp=Z,19nm,1.0s							
PEA0B	**Petropavlovsk-**	**60.75 10**	P	**P**	**02 25 18.0**	**-0.2**		
PEA0B			IAmb	IAmb	02 25 27.7			
	comp=Z,62nm,1.1s							
PEA0B	**Petropavlovsk-**	**60.75 10** *de*	P	**P**	**02 25 18.2**	**0.0**		
PETK	**Petropavlovsk-**	**60.75 10**	P	**P**	**02 25 17.9**	**-0.3**		
PETK	**Petropavlovsk-**	**60.75 10**	P	**P**	**02 25 17.9**	**-0.3**		
PETK	**Petropavlovsk-**	**60.75 10**	P	**P**	**02 25 17.6**	**-0.6**		
	comp=Z,35nm,0.8s,baz=182,slow=5.6,SNR=33							
	comp=Z,35nm,0.8s							
PET	**Petropavlovsk**	**60.84 11**	⇓*e*P	**P**	**02 25

HYB *e*PcP **PcP** 02 26 34.0 +0.3
HYB *e*PP **PP** 02 28 38.5 -0.1
BOD Bodaibo 68.47 344 *e*P **P** 02 26 07.5 -1.0
BOD pmax pmax
comp=Z,22nm,1.5s
YAK Yakutsk 69.25 353 *e*P **P** 02 26 12.3 -1.0
YAK *e**PP **pP** 02 26 16.1 -2.9
YAK *e* 02 26 35.6
YAK *e* 02 28 41.5
YAK *e*S **S** 02 35 18.3 -0.3
YAK *e* 02 36 09.8
YAK *e*SS **SS** 02 39 47.2 +1.6
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=Z,91nm,3.6s
YAK pmax pmax
comp=E,48nm,3.5s
YAK pmax pmax
comp=N,76nm,3.5s
YAK smax smax
comp=N,89nm,3.8s
YAK smax smax
comp=E,63nm,4.1s
YAK MLR MLR
comp=Z,289nm,16.0s
YAK MLR MLR
comp=E,246nm,16.0s
SEY Seymchan 69.70 4⇑ *e*P **P** 02 26 15.2 -0.9
SEY pmax pmax
comp=Z,38nm,1.7s
WMQ Urumqi 70.88 321 *e*P **P** 02 26 24.5 +0.7
WMQ pP pP 02 26 28.5 -1.0
WMQ pmax pmax
comp=Z,63nm,0.9s
WMQ pmax pmax
comp=Z,260nm,3.7s
VNDA Vanda 71.54 176 P **P** 02 26 27.9 +0.8
VNDA Vanda 71.54 176 P **P** 02 26 28.4 +1.3
comp=Z,7.0nm,0.9s,baz=321,slow=5.1,SNR=15
VNDA LR LR 02 57 58.6
comp=Z,130nm,18.1s,baz=344,slow=36
comp=Z,7.0nm,0.9s
UNV Unalaska Valle 73.48 28 P **P** 02 26 38.3 -0.7
baz=233
DGZ Jazzator, Alta 74.03 326*c i*P **P** 02 26 42.5 -0.1
DGZ pmax pmax
comp=Z,29nm,1.0s
ZSN Zaisan 74.39 323 *e*P **P** 02 26 43.8 -0.8
comp=Z,21nm,1.1s,baz=323
ZSN Zaisan 74.39 323 *e*P **P** 02 26 43.7 -0.8
ZSN pmax pmax
comp=Z,21nm,1.1s
MK31 Makanchi Array 75.65 322 P **P** 02 26 51.6 -0.2
MK31 IAmb IAmb 02 26 58.0
comp=Z,50nm,1.1s
MK31 Makanchi Array 75.65 322⇑ *e*P **P** 02 26 52.2 +0.4
MKAR Makanchi Array 75.65 322 P **P** 02 26 51.8 0.0
MKAR Makanchi Array 75.65 322 P **P** 02 26 52.3 +0.4
comp=Z,34nm,0.9s,baz=111,slow=6.9,SNR=110
comp=Z,34nm,0.9s
MAKZ Makanchi 75.85 322 P **P** 02 26 53.1 +0.1
MAKZ IAmb IAmb 02 26 54.4
comp=Z,53nm,0.9s
MAKZ Makanchi 75.85 322 P **P** 02 26 53.1 +0.1
MAKZ pmax pmax
comp=Z,53nm,1.0s
SHLS Shalkode 75.95 317 *e*P **P** 02 26 51.8 -2.0
comp=Z,29nm,1.3s,baz=318
SHLS Shalkode 75.95 317 *e*P **P** 02 26 51.7 -2.0
SHLS pmax pmax
comp=Z,29nm,1.3s
UZB Uzynbulak 76.24 317 *e*P **P** 02 26 54.9 -0.6
comp=Z,15nm,0.7s,baz=317
UZB Uzynbulak 76.24 317 *e*P **P** 02 26 54.8 -0.6
UZB pmax pmax
comp=Z,15nm,0.7s
BILL Bilibino 76.24 9 P **P** 02 26 54.3 -0.4
BILL Bilibino 76.24 9⇓ *e*P **P** 02 26 54.5 -0.2
BILL pmax pmax
comp=Z,22nm,1.7s
TARG Taragay, Kyrgy 76.54 316 P **P** 02 26 56.6 -0.9
TARG Taragay, Kyrgy 76.54 316 P **P** 02 26 56.6 -0.9
TARG pmax pmax
comp=Z,21nm,1.0s
KPKS Kokpek 76.59 317 *e*P **P** 02 26 56.2 -1.2
comp=Z,7.0nm,0.5s,baz=317
KPKS Kokpek 76.59 317 *e*P **P** 02 26 56.2 -1.2
KPKS pmax pmax
comp=Z,7.0nm,0.5s
SATY Saty 76.62 317 *e*P **P** 02 26 57.0 -0.6
comp=Z,20nm,1.2s,baz=317
SATY Saty 76.62 317 *e*P **P** 02 26 57.0 -0.6
SATY pmax pmax
comp=Z,20nm,1.2s
KSH Kashi 77.06 313 P **P** 02 27 02.5 +2.4
KSH pmax pmax
comp=Z,34nm,1.2s
SDPT Sand Point 77.22 29 P **P** 02 27 00.3 -0.1
baz=238
NIL Nilore 77.29 307 P **P** 02 27 01.6 +0.1
NIL Nilore 77.29 307 P **P** 02 27 01.6 +0.1
NIL pmax pmax
comp=Z,76nm,0.7s
TDK Taldyqorghan 77.37 319 *e*P **P** 02 27 01.6 0.0
baz=319
TDK Taldyqorghan 77.37 319 *e*P **P** 02 27 01.6 0.0
ARXS Arharly 77.45 318 *e*P **P** 02 27 02.2 0.0
MDOK Medeo 77.58 317 *e*P **P** 02 27 03.0 -0.1
baz=317
MDOK Medeo 77.58 317 *e*P **P** 02 27 02.9 -0.1
ZAA0 Zalesovo Array 77.59 329 P **P** 02 27 01.7 -0.9
ZALV Zalesovo Beam 77.59 329 P **P** 02 27 00.8 -1.8
ZALV Zalesovo Beam 77.59 329 P **P** 02 27 01.7 -0.9
comp=Z,10nm,0.7s,baz=111,slow=5.3,SNR=43
comp=Z,10nm,0.7s
TNSS Tian-Shan 77.61 317 *e*P **P** 02 27 03.4 -0.2
baz=316
TNSS Tian-Shan 77.61 317 *e*P **P** 02 27 03.3 -0.2
AAA Alma-Ata 77.69 317 *e*P **P** 02 27 03.8 +0.2
baz=317
AAA Alma-Ata 77.69 317 *e*P **P** 02 27 03.7 +0.2
NRN Naryn 77.69 315 P **P** 02 27 03.8 -0.1
NRN Naryn 77.69 315 P **P** 02 27 03.8 -0.1
NRN pmax pmax
comp=Z,17nm,1.2s
ULHL Ulahol 77.81 316 P **P** 02 27 05.1 +0.7
SNR=7.8
BOOM Boomskoye usch 78.11 316 P **P** 02 27 05.8 -0.2
BOOM IAmb IAmb 02 27 07.7
comp=Z,20nm,0.8s
BOOM Boomskoye usch 78.11 316 P **P** 02 27 05.8 -0.2
BOOM pmax pmax
comp=Z,20nm,0.8s
KUU Kurty 78.33 317 *e*P **P** 02 27 06.3 -0.8
baz=317
KUU Kurty 78.33 317 *e*P **P** 02 27 06.2 -0.8
TKM2 Tokmak 2 78.49 316 P **P** 02 27 08.7 +0.5
SNR=18
TIXI Tiksi 78.69 355⇓ *e*P **P** 02 27 06.7 -1.6
TIXI pmax pmax
comp=Z,5.0nm,0.7s
CHGN Chignik 78.71 29 P **P** 02 27 07.9 -0.8
baz=240
M13K Dall Lake 78.78 24 P **P** 02 27 09.1 +0.1
baz=234
KBK Karagaybulak 78.85 316 P **P** 02 27 10.7 +0.6
SNR=7.2
O14K Tigyukauivet M 78.98 26 P **P** 02 27 11.0 +0.8
baz=236
UCH Uchtor 79.01 315 P **P** 02 27 12.4 +1.1
SNR=32
CHMS Chumysh 79.10 316 P **P** 02 27 11.5 +0.2
SNR=13
AAK Ala-Archa 79.16 316 P **P** 02 27 12.4 +0.6
SNR=16
AAK Ala-Archa 79.16 316 P **P** 02 27 11.4 -0.4
AAK IAmb IAmb 02 27 18.9
comp=Z,41nm,1.2s
AAK Ala-Archa 79.16 316*c i*P **P** 02 27 12.0 +0.2
AAK pmax pmax
comp=Z,34nm,1.3s

N14K Kuskokwak Cree 79.18 25 P **P** 02 27 11.5 +0.3
baz=236
SGDS Sogindy 79.34 316 *e*P **P** 02 27 11.6 -1.1
baz=316
SGDS Sogindy 79.34 316 *e*P **P** 02 27 11.5 -1.1
USP Ospenovka 79.37 316 P **P** 02 27 13.2 +0.5
SNR=53
KURK Kurchatov 79.52 324 P **P** 02 27 12.9 -0.4
KURK IAmb IAmb 02 27 19.7
comp=Z,44nm,1.1s
KURK Kurchatov 79.52 324*c i*P **P** 02 27 12.7 -0.6
KURK pmax pmax
comp=Z,45nm,1.3s
KURBB Kurchatov Arra 79.53 324 P **P** 02 27 13.2 -0.1
comp=Z,18nm,1.0s,baz=117,slow=4.2,SNR=47
comp=Z,18nm,1.0s
M14K Bethel 79.53 24 P **P** 02 27 13.3 +0.1
M14K IAmb IAmb 02 27 14.2
comp=Z,52nm,0.8s
M14K Bethel 79.53 24 P **P** 02 27 13.5 +0.4
baz=236
O15K Ungalikthiuk R 79.56 26 P **P** 02 27 13.2 -0.1
baz=238
L14K Kuka Creek 79.58 23 P **P** 02 27 13.5 +0.1
L14K IAmb IAmb 02 27 14.5
comp=Z,56nm,0.8s
L14K Kuka Creek 79.58 23 P **P** 02 27 13.9 +0.5
baz=235
EKS2 Erkin-Say 79.67 315 P **P** 02 27 15.3 +0.8
SNR=35
ARSB Arslanbob 79.80 314 P **P** 02 27 14.7 -0.6
ARSB Arslanbob 79.80 314 P **P** 02 27 14.7 -0.6
ARSB pmax pmax
comp=Z,21nm,1.5s
N15K Kwethluk River 79.98 25 P **P** 02 27 16.0 +0.3
baz=237
M15K Kasigluk River 80.02 24 P **P** 02 27 15.9 +0.1
baz=237
J14K Nanvaranak Lak 80.07 22 IAmb IAmb 02 27 17.4
comp=Z,128nm,1.9s
J14K Nanvaranak Lak 80.07 22 P **P** 02 27 16.9 +0.9
baz=234
L15K Ungalak Mounta 80.25 23 P **P** 02 27 17.3 +0.3
baz=236
MAW Mawson 80.25 203 LR LR 03 01 46.2
comp=Z,169nm,18.3s,baz=80,slow=35
BTLS Baital 80.27 318 *e*P **P** 02 27 17.2 -0.3
comp=Z,16nm,0.8s,baz=318
BTLS Baital 80.27 318 *e*P **P** 02 27 17.2 -0.3
BTLS pmax pmax
comp=Z,16nm,0.8s
P16K Nushagak River 80.30 27 P **P** 02 27 17.6 +0.3
baz=240
TNA Tin City 80.33 19 P **P** 02 27 17.8 +0.5
baz=229
ANM Nome 80.53 20 IAmb IAmb 02 27 20.3
comp=Z,70nm,1.4s
ANM Nome 80.53 20 P **P** 02 27 18.7 +0.2
baz=232
O16K Kokwok River B 80.54 26 IAmb IAmb 02 27 23.9
comp=Z,79nm,1.3s
O16K Kokwok River B 80.54 26 P **P** 02 27 18.7 +0.1
baz=239
K15K Wolf Creek Mou 80.58 23 IAmb IAmb 02 27 20.1
comp=Z,44nm,0.8s
K15K Wolf Creek Mou 80.58 23 P **P** 02 27 19.1 +0.3
baz=236
N16K Nishlik Lake 80.70 25 P **P** 02 27 19.8 +0.3
baz=239
F14K Arctic Creek 80.78 19 P **P** 02 27 20.2 +0.4
baz=231
Q17K Contact Creek 80.88 28 P **P** 02 27 20.5 -0.1
baz=242
KBL Kabul 80.89 306 P **P** 02 27 21.2 -0.2
KBL Kabul 80.89 306 P **P** 02 27 21.2 -0.2
KBL pmax pmax
comp=Z,11nm,0.8s
M16K Timber Creek 80.91 25 IAmb IAmb 02 27 21.8
comp=Z,58nm,0.9s
M16K Timber Creek 80.91 25 P **P** 02 27 20.7 +0.1
baz=238
L16K Owhat River 81.07 24 IAmb IAmb 02 27 22.2
comp=Z,42nm,0.9s
L16K Owhat River 81.07 24 P **P** 02 27 21.7 +0.3
baz=238,SNR=7.9
O17K Koliganek Bris 81.07 26 P **P** 02 27 21.5 +0.1
baz=240,SNR=12
G15K Niukluk 81.24 20 P **P** 02 27 22.5 +0.2
baz=233
N17K Nushagak Hills 81.40 26 IAmb IAmb 02 27 24.2
comp=Z,31nm,0.9s
N17K Nushagak Hills 81.40 26 P **P** 02 27 23.2 -0.1
baz=240
DZA Taraz 81.45 315 *e*P **P** 02 27 23.4 -0.6
comp=Z,11nm,0.8s,baz=315
DZA Taraz 81.45 315 *e*P **P** 02 27 23.3 -0.6
DZA pmax pmax
comp=Z,11nm,0.8s
F15K North Star Dit 81.47 19 IAmb IAmb 02 27 28.6
comp=Z,66nm,1.4s
F15K North Star Dit 81.47 19 P **P** 02 27 23.8 +0.3
baz=232
J16K Anvik River 81.48 22 IAmb IAmb 02 27 25.1
comp=Z,41nm,0.8s
J16K Anvik River 81.48 22 P **P** 02 27 24.0 +0.3
baz=236
OHAK Old Harbor 81.64 29 P **P** 02 27 24.1 -0.3
baz=244
H16K Elim 81.66 21 P **P** 02 27 24.5 0.0
baz=235
M17K Holitna River 81.74 25 IAmb IAmb 02 27 26.6
comp=Z,52nm,0.9s
M17K Holitna River 81.74 25 P **P** 02 27 25.4 +0.4
baz=240
L17K Donlin 81.77 24 P **P** 02 27 25.6 +0.5
baz=239
I17K Unalakleet 81.78 22 IAmb IAmb 02 27 26.7
comp=Z,48nm,0.9s
I17K Unalakleet 81.78 22 P **P** 02 27 25.6 +0.4
baz=236,SNR=17
O18K Koktuh Hills 81.94 27 P **P** 02 27 26.8 +0.7
baz=242
SIMJ Simiganj 81.97 310 P **P** 02 27 27.1 +0.2
SIMJ IAmb IAmb 02 27 33.5
comp=Z,68nm,1.2s
N18K Kilae Creek 82.04 26 IAmb IAmb 02 27 27.9
comp=Z,36nm,0.9s
N18K Kilae Creek 82.04 26 P **P** 02 27 27.0 +0.3
baz=241
G16K Koyuk River 82.05 20 IAmb IAmb 02 27 27.6
comp=Z,34nm,0.9s
G16K Koyuk River 82.05 20 P **P** 02 27 27.1 +0.5
baz=235
K17K Iditarod 82.07 23 P **P** 02 27 27.0 +0.3
baz=239
KK31 Karatay Array 82.09 315 IAmb IAmb 02 27 34.6
comp=Z,50nm,1.7s
KKAR Karatay Array 82.09 315 IAmb IAmb 02 27 34.6
comp=Z,50nm,1.7s
IUG Iuzhnay 82.16 314 *e*P **P** 02 27 27.2 -0.6
baz=314
IUG Iuzhnay 82.16 314 *e*P **P** 02 27 27.2 -0.6
KDAK Kodiak Island 82.22 29 P **P** 02 27 28.2 +0.7
baz=244
KDAK Kodiak Island 82.22 29 LR LR 03 00 03.1
comp=Z,153nm,19.0s,baz=247,slow=33
SVW2 Sparrevohn 82.37 25 IAmb IAmb 02 27 29.6
comp=Z,32nm,0.9s
SVW2 Sparrevohn 82.37 25 P **P** 02 27 28.8 +0.4
L18K Granite Mounta 82.46 24 IAmb IAmb 02 27 30.6
comp=Z,38nm,1.1s
L18K Granite Mounta 82.46 24 P **P** 02 27 28.9 +0.2
baz=240
M18K Stony River 82.46 25 P **P** 02 27 29.0 +0.3
baz=241
CHM Chimkent 82.51 314 *e*P **P** 02 27 29.1 -0.4
baz=314
CHM Chimkent 82.51 314 *e*P **P** 02 27 29.1 -0.4
BRLS Borolday 82.54 315 *e*P **P** 02 27 28.8 -1.0
baz=314
BRLS Borolday 82.54 315 *e*P **P** 02 27 28.7 -1.0
H17K Granite Mounta 82.65 21 IAmb IAmb 02 27 30.9
comp=Z,40nm,0.8s
H17K Granite Mounta 82.65 21 P **P** 02 27 29.9 +0.2
baz=237
G17K Kiwalik Mounta 82.70 20 P **P** 02 27 30.3 +0.3
baz=236
N19K Bonanza Creek 82.71 26 IAmb IAmb 02 27 30.9
comp=Z,34nm,0.9s
N19K Bonanza Creek 82.71 26 P **P** 02 27 30.0 -0.2
baz=242
P19K Oil Pt 82.74 27 P **P** 02 27 30.2 -0.1
baz=244
BRZS Berezniki 82.78 322 *e*P **P** 02 27 29.4 -1.3
comp=Z,11nm,1.0s,baz=322
BRZS Berezniki 82.78 322 *e*P **P** 02 27 29.4 -1.3
BRZS pmax pmax
comp=Z,11nm,1.0s
C16K Lisburne Hills 82.85 17 IAmb IAmb 02 27 38.3
comp=Z,29nm,1.1s
C16K Lisburne Hills 82.85 17 P **P** 02 27 30.5 -0.1
baz=232
F17K Baldwin Pennin 83.03 19 IAmb IAmb 02 27 35.9
comp=Z,44nm,1.2s
F17K Baldwin Pennin 83.03 19 P **P** 02 27 32.1 +0.5
baz=236
J18K Innoko River 83.07 23 IAmb IAmb 02 27 36.5
comp=Z,26nm,1.1s
J18K Innoko River 83.07 23 P **P** 02 27 32.0 0.0
baz=240
D17K Noatak River 83.17 18 P **P** 02 27 32.4 0.0
baz=234,SNR=27
L19K White Mountain 83.19 25 IAmb IAmb 02 27 34.1
comp=Z,54nm,1.2s
L19K White Mountain 83.19 25 P **P** 02 27 32.7 +0.1
baz=242
E17K Hotham Inlet 83.21 19 P **P** 02 27 32.3 -0.2
baz=235,SNR=44
M19K Big River Lodg 83.25 25 P **P** 02 27 33.1 +0.2
baz=242
H18K Honhosa River 83.32 21 IAmb IAmb 02 27 34.2
comp=Z,46nm,1.5s
H18K Honhosa River 83.32 21 P **P** 02 27 32.9 -0.3
baz=238
QSPA South Pole Qui 83.35 180 P **P** 02 27 33.9 +0.3
QSPA IAmb IAmb 02 27 35.1
comp=Z,37nm,0.9s
QSPA South Pole Qui 83.35 180 P **P** 02 27 34.0 +0.5
comp=Z,28nm,0.9s,baz=347,slow=3.4,SNR=48
QSPA LR LR 03 05 14.8
comp=Z,386nm,18.9s,baz=12,slow=36
comp=Z,28nm,0.9s
HOM Homer 83.47 28 P **P** 02 27 34.0 -0.1
baz=245
C17K DeLong Mountai 83.61 17 P **P** 02 27 34.4 -0.2
baz=234,SNR=42
G18K Tagagawik 83.61 21 IAmb IAmb 02 27 35.2
comp=Z,28nm,0.9s
G18K Tagagawik 83.61 21 P **P** 02 27 34.0 -0.6
baz=238
F18K Selawik 83.65 20 P **P** 02 27 34.7 -0.1
baz=237,SNR=7.1
GCSA Galena City Sc 83.65 22 P **P** 02 27 34.7 -0.1
baz=240
L20K Farewell, AK 83.73 25 P **P** 02 27 35.5 +0.1
baz=243
J19K Poorman 83.75 23 IAmb IAmb 02 27 41.7
comp=Z,52nm,1.2s
J19K Poorman 83.75 23 P **P** 02 27 35.4 -0.1
baz=241,SNR=15
M20K Styx River 83.78 25 P **P** 02 27 35.3 -0.4
baz=244
E18K Tukpahlearik C 83.79 19 IAmb IAmb 02 27 36.6
comp=Z,30nm,1.0s
E18K Tukpahlearik C 83.79 19 P **P** 02 27 35.2 -0.3
baz=236
BRSE Bradley Lake S 83.92 28 P **P** 02 27 35.7 -0.7
baz=246
K20K Telida 84.06 24 IAmb IAmb 02 27 38.1
comp=Z,39nm,0.9s
K20K Telida 84.06 24 P **P** 02 27 37.5 +0.5
baz=242,SNR=14
CAPN Captain Cook N 84.16 27 P **P** 02 27 37.6 +0.1
baz=245
H19K Roundabout Mou 84.20 21 P **P** 02 27 37.6 0.0
baz=240
G19K Purcell Mounta 84.29 21 P **P** 02 27 38.0 -0.1
baz=240
C18K Utukok River 84.30 18 IAmb IAmb 02 27 44.1
comp=Z,30nm,1.1s
C18K Utukok River 84.30 18 P **P** 02 27 37.8 -0.4
baz=235,SNR=21
F19K Shaleruckik Mo 84.41 20 P **P** 02 27 38.0 -0.7
baz=239
J20K Nowinta River 84.41 23 P **P** 02 27 38.9 +0.1
baz=242
SKT Skwentna 84.50 26 IAmb IAmb 02 28 07.5
comp=Z,51nm,1.8s
SKT Skwentna 84.50 26 P **P** 02 27 37.9 -1.4
baz=245
B18K Kokolik River 84.53 17 P **P** 02 27 39.0 -0.3
baz=235
I20K Naaghedeneel 84.58 22 P **P** 02 27 39.4 -0.2
baz=242
PPLA Purkeypile 84.62 25 P **P** 02 27 39.1 -0.9
baz=244
SUA Susitna One 84.62 26 IAmb IAmb 02 27 42.7
comp=Z,43nm,1.2s
SUA Susitna One 84.62 26 P **P** 02 27 38.7 -1.3
baz=246,SNR=6.1
SEW Seward 84.66 28 P **P** 02 27 39.1 -1.0
baz=247
O22K Cooper Landing 84.68 27 P **P** 02 27 39.7 -0.5
baz=247
NRIK Noril'sk 84.75 343*c i*P **P** 02 27 39.5 -0.9
NRIK pmax pmax
comp=Z,55nm,0.9s
NRIK Noril'sk 84.75 343 P **P** 02 27 40.0 -0.4
comp=Z,49nm,0.8s,baz=122,slow=4.4,SNR=62
comp=Z,49nm,0.8s
H20K Anotleneega Mo 84.76 22 P **P** 02 27 40.4 -0.1
baz=242,SNR=25
CAST Castle Rocks 84.89 24 IAmb IAmb 02 27 41.6
comp=Z,28nm,0.9s
CAST Castle Rocks 84.89 24 P **P** 02 27 40.5 -0.7
baz=244,SNR=15
E19K Redstone River 84.91 19 P **P** 02 27 40.8 -0.4
baz=239
RC01 Rabbit Creek A 84.92 27 P **P** 02 27 40.6 -0.8
baz=247,SNR=8.1
CHUM Lake Minchumin 85.00 24 P **P** 02 27 41.3 -0.4
baz=244,SNR=7.3
M22K Willow 85.02 26 P **P** 02 27 41.5 -0.4
baz=246
C19K Lookout Ridge 85.04 18 P **P** 02 27 41.5 -0.4
baz=237
BVAR Borovoye Array 85.10 325 P **P** 02 27 42.7 +0.1
comp=Z,37nm,0.8s,baz=110,slow=6.3,SNR=101
comp=Z,37nm,0.8s
D19K Kuna River 85.17 18 P **P** 02 27 42.0 -0.6
baz=238
BRVK Borovoye 85.17 325 P **P** 02 27 42.8 -0.1
BRVK Borovoye 85.17 325*c i*P **P** 02 27 42.7 -0.1
BRVK pmax pmax
comp=Z,54nm,1.3s
F20K Avaraart Lake 85.21 20 IAmb IAmb 02 27 43.9
comp=Z,30nm,0.9s
F20K Avaraart Lake 85.21 20 P **P** 02 27 42.8 +0.1
baz=241
CUT Chulitna 85.22 25 P **P** 02 27 41.5 -1.3
baz=246,SNR=5.3
PMR Palmer 85.39 26 IAmb IAmb 02 27 43.9
comp=Z,34nm,1.0s
PMR Palmer 85.39 26 P **P** 02 27 42.6 -1.1
PMR Palmer 85.39 26 P **P** 02 27 42.8 -0.9
baz=247,SNR=5.8
KTH Kantishna Hill 85.42 24 IAmb IAmb 02 27 47.4
comp=Z,44nm,1.1s
GHO Glory Hole Cre 85.55 26 IAmb IAmb 02 27 44.5
comp=Z,29nm,0.9s
P23K Montague Islan 85.57 28 P **P** 02 27 44.1 -0.6
baz=249
H21K Melozitna Rive 85.60 22 P **P** 02 27 43.9 -0.8
baz=244
KNK Knik Glacier 85.61 27 P **P** 02 27 43.9 -1.0
baz=248,SNR=9.4
BPAW Bear Paw Mtn. 85.62 24 IAmb IAmb 02 27 45.2
comp=Z,34nm,1.2s
BPAW Bear Paw Mtn. 85.62 24 P **P** 02 27 43.9 -1.0
baz=245,SNR=8.0
TRF Thorofare Moun 85.64 24 IAmb IAmb 02 27 46.7
comp=Z,17nm,0.8s
TRF Thorofare Moun 85.64 24 P **P** 02 27 44.0 -1.2
baz=246
E20K Nigu River 85.66 19 P **P** 02 27 45.0 0.0
baz=240

D20K	**Etivluk River** baz=240	85.75	19	P		**P**	02 27 45.1	-0.3
SML	**Sawmill** baz=248,SNR=11	85.82	26	P		**P**	02 27 45.1	-0.9
GLI	**Glacier Island** baz=249,SNR=5.0	86.03	27	P		**P**	02 27 46.1	-0.8
F21K	**Alatna River** baz=243,SNR=8.0	86.06	20	P		**P**	02 27 46.5	-0.5
M23K	**Glacier View** baz=248,SNR=6.0	86.08	26	P		**P**	02 27 46.7	-0.5
MLY	**Manley** comp=Z,31nm,0.9s	86.11	23	IAmb		IAmb	02 27 47.7	
MLY	**Manley** baz=245,SNR=21	86.11	23	P		**P**	02 27 46.7	-0.6
WAT1	**Susitna Watana** baz=248	86.11	25	P		**P**	02 27 46.0	-1.4
H22K	**Ishtalitna Cre** baz=245,SNR=12	86.23	22	P		**P**	02 27 47.2	-0.6
SCM	**Sheep Creek Mo** baz=249,SNR=9.1	86.27	26	P		**P**	02 27 47.4	-0.8
MCK	**McKinley** baz=247,SNR=20	86.30	24	P		**P**	02 27 46.6	-1.6
WAT6	**Susitna Watana** baz=248,SNR=10	86.37	26	P		**P**	02 27 47.6	-1.2
E21K	**Killik River** comp=Z,23nm,0.8s	86.47	19	IAmb		IAmb	02 27 50.2	
E21K	**Killik River** baz=242,SNR=7.5	86.47	19	P		**P**	02 27 48.7	-0.3
C21K	**Knifeblade Rid** baz=241	86.55	18	P		**P**	02 27 48.7	-0.7
NEA2	**Nenana** comp=Z,38nm,1.1s	86.58	24	IAmb		IAmb	02 27 54.5	
NEA2	**Nenana** baz=247	86.58	24	P		**P**	02 27 49.2	-0.4
G22K	**Bettles** baz=245	86.62	21	P		**P**	02 27 48.9	-0.8
I23K	**Minto, Yukon-K** comp=Z,25nm,1.1s	86.69	23	IAmb		IAmb	02 27 55.9	
I23K	**Minto, Yukon-K** baz=247,SNR=12	86.69	23	P		**P**	02 27 49.5	-0.6
DHY	**Denali Highway** baz=249,SNR=21	86.70	25	P		**P**	02 27 49.4	-1.0
KLU	**Klutina** baz=250,SNR=13	86.78	27	P		**P**	02 27 50.0	-0.7
M24K	**Tolsona, Glenn** baz=250	86.88	26	P		**P**	02 27 50.6	-0.6
WRH	**Wood River Hil** comp=Z,36nm,0.9s	86.93	24	IAmb		IAmb	02 27 51.2	
KAIM	**Kayak Island** baz=251	86.96	29	P		**P**	02 27 50.9	-0.6
E22K	**Anaktuvuk Pass** baz=244	87.05	20	P		**P**	02 27 51.5	-0.3
MDM	**Murphy Dome** comp=Z,26nm,1.3s	87.06	23	IAmb		IAmb	02 27 56.1	
G23K	**Bananza Creek** comp=Z,25nm,0.8s	87.07	21	IAmb		IAmb	02 27 52.9	
G23K	**Bananza Creek** baz=246	87.07	21	P		**P**	02 27 51.7	-0.3
A21K	**Barrow** baz=240	87.07	16	P		**P**	02 27 51.8	0.0
D22K	**Ayikyak River** baz=243	87.09	19	P		**P**	02 27 52.0	0.0
COLA	**College**	87.18	24	P		**P**	02 27 51.0	-1.4
COLA	comp=Z,39nm,1.1s			IAmb		IAmb	02 27 51.7	
COLA	**College**	87.18	24	P		**P**	02 27 50.9	-1.5
COLA	**College** baz=248	87.18	24	P		**P**	02 27 51.5	-1.0
COLA	**College**	87.18	24	P		**P**	02 27 51.0	-1.4
COLA	comp=Z,39nm,1.1s			pmax		pmax		
BMRM	**Bremner River** baz=251,SNR=6.3	87.21	28	P		**P**	02 27 52.7	-0.1
COLD	**Coldfoot** baz=246,SNR=12	87.22	21	P		**P**	02 27 52.8	+0.1
HDA	**Harding Lake** baz=249	87.37	24	P		**P**	02 27 52.8	-0.7
N25K	**Chitina, Valde** baz=251,SNR=5.5	87.42	27	P		**P**	02 27 52.9	-1.0
HARP	**HAARP** baz=251	87.43	26	P		**P**	02 27 52.6	-1.2
POKR	**Poker Plat Res** baz=248	87.43	23	P		**P**	02 27 52.7	-1.0
PAX	**Paxson** baz=250,SNR=8.4	87.48	26	P		**P**	02 27 53.2	-0.9
IL31	comp=Z,30nm,0.9s	87.52	24	IAmb		IAmb	02 27 53.5	
ILAR	**Eielson Array** comp=Z,23nm,0.9s,baz=257,slow=4.8,SNR=129	87.52	24	P		**P**	02 27 52.4	-1.8
ILAR	comp=Z,0.4nm,1.0s,baz=1.4,slow=3.6,SNR=4.6			PKKPbc		**PKKPdf**	02 45 43.4	+3.2
ILAR	comp=Z,151nm,18.8s,baz=260,slow=35			LR		LR	03 05 59.0	
H24K	**Noodor Dome** comp=Z,23nm,0.9s baz=248	87.53	23	P		**P**	02 27 53.5	-0.7
K24K	**Donnelly Dome** baz=250	87.64	25	P		**P**	02 27 54.5	-0.3
E23K	**Chandalar** baz=246,SNR=23	87.76	20	P		**P**	02 27 55.3	-0.1
D23K	**Nanushuk River** baz=245	87.78	19	P		**P**	02 27 56.0	+0.6
VRDI	**Verde Repeater** comp=Z,26nm,1.0s	87.82	28	IAmb		IAmb	02 27 56.2	
CRQE	**Cirque** baz=252	87.84	28	P		**P**	02 27 55.1	-0.8
G24K	**Hadweenzic Riv** baz=248	88.00	22	P		**P**	02 27 56.4	0.0
RIDG	**Independent Ri** baz=251	88.00	25	P		**P**	02 27 55.5	-1.0
MCARA	**McCarthy VSAT** baz=253	88.06	28	P		**P**	02 27 56.3	-0.6
J25K	**Salcha River,** baz=250	88.08	24	P		**P**	02 27 55.7	-1.3
MESA	**MESA** baz=254	88.22	29	P		**P**	02 27 57.1	-0.7
L26K	**Log Cabin Wild** comp=Z,19nm,0.8s	88.42	26	IAmb		IAmb	02 27 59.0	
L26K	**Log Cabin Wild** baz=252,SNR=9.2	88.42	26	P		**P**	02 27 58.1	-0.5
SCRK	**Sand Creek** comp=Z,16nm,1.0s	88.44	25	IAmb		IAmb	02 27 58.9	
SCRK	**Sand Creek** baz=252,SNR=9.1	88.44	25	P		**P**	02 27 57.9	-0.8
D24K	**Happy Valley** baz=247	88.46	19	P		**P**	02 27 58.8	+0.3
G25K	**Bearman Lake** baz=250	88.53	22	P		**P**	02 27 59.2	+0.3
CTG	**Chitna Glacier** baz=254,SNR=9.6	88.72	28	P		**P**	02 27 59.9	-0.2
C24K	**Franklin Bluff** baz=247	88.73	19	P		**P**	02 27 60.0	+0.2
J26L	**Joseph Creek** comp=Z,26nm,0.9s	88.78	24	IAmb		IAmb	02 28 00.9	
J26L	**Joseph Creek** baz=252	88.78	24	P		**P**	02 27 59.6	-0.6
M27K	**Edge Creek, AK** baz=254	88.87	27	P		**P**	02 28 00.4	-0.4
F25K	**Christian Rive** baz=250	88.99	21	P		**P**	02 28 01.5	+0.4
PINM	**Pinnacle** baz=255	89.01	29	P		**P**	02 28 01.2	-0.2
L27K	**Beaver Creek,** comp=Z,50nm,1.3s	89.09	26	IAmb		IAmb	02 28 03.1	
L27K	**Beaver Creek,** baz=254	89.09	26	P		**P**	02 28 01.5	-0.1
I26K	**Coal Creek Min** baz=252	89.19	24	P		**P**	02 28 01.5	-0.6
E25K	**Arctic Village** comp=Z,26nm,0.9s	89.20	21	IAmb		IAmb	02 28 03.5	
E25K	**Arctic Village** baz=250,SNR=24	89.20	21	P		**P**	02 28 01.7	-0.4
K27K	**Chicken** baz=253	89.26	25	P		**P**	02 28 02.4	0.0
PNL	**Peninsula** baz=256	89.32	30	P		**P**	02 28 03.2	+0.4
D25K	**Kavik River** comp=Z,36nm,1.1s	89.34	20	IAmb		IAmb	02 28 08.2	
D25K	**Kavik River** baz=249	89.34	20	P		**P**	02 28 02.5	-0.3
BVCY	**Beaver Creek** baz=254,SNR=7.7	89.34	27	P		**P**	02 28 02.8	0.0
YUK3	**Moose Creek** baz=255,SNR=9.4	89.35	28	P		**P**	02 28 02.8	-0.4
G26K	**Porcupine Rive** baz=252	89.46	22	P		**P**	02 28 03.7	+0.5
F26K	**Sheenjek River** baz=251	89.56	21	P		**P**	02 28 04.3	+0.5
EGAK	**Eagle** comp=Z,22nm,0.9s	89.85	25	IAmb		IAmb	02 28 05.7	
EGAK	**Eagle** baz=254,SNR=12	89.85	25	P		**P**	02 28 05.1	0.0
O29M	**Mount Kennedy** comp=Z,30nm,1.1s	89.87	29	IAmb		IAmb	02 28 10.6	
O29M	**Mount Kennedy** baz=256	89.87	29	P		**P**	02 28 05.5	0.0
I27K	**Kandik River** baz=254	89.90	24	P		**P**	02 28 05.6	+0.2
YUK4	**Talbot Arm** baz=256,SNR=6.1	90.08	28	P		**P**	02 28 06.9	+0.3
H27K	**Steamboat Moun** baz=254	90.11	23	P		**P**	02 28 06.8	+0.4
P29M	**Windy Craggy** baz=257	90.13	30	P		**P**	02 28 06.5	-0.1
GEYT	**Alibeck**	90.21	308	P		**P**	02 28 08.0	+0.5
GEYT	**Alibeck** comp=Z,5.2nm,0.9s,baz=69,slow=7.9,SNR=8.5	90.21	308	P		**P**	02 28 08.0	+0.5
GYA0B	**ALIBECK ARRAY** comp=Z,5.2nm,0.9s comp=Z,29nm,1.5s	90.21	308	IAmb		IAmb	02 28 14.8	
DAWY	**Dawson** comp=Z,27nm,0.9s	90.41	25	IAmb		IAmb	02 28 08.7	
DAWY	**Dawson** baz=256,SNR=18	90.41	25	P		**P**	02 28 07.9	+0.1
M29M	**Somme Creek** comp=Z,25nm,1.1s	90.43	27	IAmb		IAmb	02 28 12.9	
M29M	**Somme Creek** baz=257	90.43	27	P		**P**	02 28 07.8	-0.3
HYT	**Haines Junctio** comp=Z,27nm,1.1s	90.51	29	IAmb		IAmb	02 28 13.3	
HYT	**Haines Junctio** baz=257	90.51	29	P		**P**	02 28 08.3	-0.1
I28M	**Miner Creek** comp=Z,23nm,1.2s	90.53	24	IAmb		IAmb	02 28 15.6	
I28M	**Miner Creek** baz=255	90.53	24	P		**P**	02 28 08.6	+0.1
P30M	**Million Dollar** baz=258	90.62	30	P		**P**	02 28 09.0	+0.1
L29M	**L29M** comp=Z,31nm,0.8s	90.73	26	IAmb		IAmb	02 28 10.4	
L29M	**L29M** baz=257	90.73	26	P		**P**	02 28 09.7	+0.4
J29N	**Klondike Camp** comp=Z,29nm,1.2s	91.00	25	IAmb		IAmb	02 28 15.2	
J29N	**Klondike Camp** baz=257	91.00	25	P		**P**	02 28 11.0	+0.3
F28M	**Old Crow** baz=255,SNR=7.5	91.11	22	P		**P**	02 28 11.1	+0.1
K29M	**Barlow Dome** comp=Z,30nm,0.9s	91.16	26	IAmb		IAmb	02 28 12.3	
K29M	**Barlow Dome** baz=258	91.16	26	P		**P**	02 28 11.6	+0.2
O30N	**Mendenhall** comp=Z,27nm,1.2s	91.17	29	IAmb		IAmb	02 28 12.2	
O30N	**Mendenhall** baz=259	91.17	29	P		**P**	02 28 11.7	+0.2
M30M	**Minto, Yukon** baz=258,SNR=7.8	91.21	27	P		**P**	02 28 11.7	0.0
SKAG	**Skagway** baz=259	91.30	30	P		**P**	02 28 12.1	+0.1
S32K	**Killisnoo** baz=260	91.32	32	P		**P**	02 28 12.2	+0.1
H29M	**Whitestone** comp=Z,44nm,1.4s	91.34	23	IAmb		IAmb	02 28 37.5	
MAYO	**Mayo, Yukon** baz=259	91.82	26	P		**P**	02 28 14.6	+0.3
J30M	**Hart River** comp=Z,16nm,0.9s	91.82	25	IAmb		IAmb	02 28 20.8	
J30M	**Hart River** baz=258,SNR=15	91.82	25	P		**P**	02 28 14.3	-0.2
D28M	**Stokes Point** baz=256	91.93	20	P		**P**	02 28 14.4	-0.2
I30M	**Mount Dempster** comp=Z,48nm,1.6s	91.93	25	IAmb		IAmb	02 28 20.1	
I30M	**Mount Dempster** baz=258,SNR=10	91.93	25	P		**P**	02 28 14.3	-0.7
E29M	**Blow River** baz=257	92.01	21	P		**P**	02 28 14.9	-0.2
EPYK	**Eagle Plains** baz=258,SNR=9.6	92.03	23	P		**P**	02 28 14.9	-0.4
P32M	**Atlin** baz=261	92.13	30	P		**P**	02 28 16.2	+0.2
M31M	**Drury Creek, Y** baz=260	92.24	28	P		**P**	02 28 16.7	+0.3
G30M	**tAoh Zraii Nji** comp=Z,31nm,1.2s	92.34	23	IAmb		IAmb	02 28 20.6	
G30M	**tAoh Zraii Nji** baz=259	92.34	23	P		**P**	02 28 16.5	-0.3
WRAK	**Wrangell Islan** baz=262	92.36	34	P		**P**	02 28 17.2	+0.3
ARU	**Arti**	92.54	326	P		**P**	02 28 16.3	-1.6
ARU	comp=Z,26nm,1.4s			IAmb		IAmb	02 28 21.2	
ARU	**Arti**	92.54	326	*c i* P		**P**	02 28 16.0	-1.8
ARU	comp=Z,19nm,1.3s			pmax		pmax		
ELIB	**Princess Elisa** comp=Z,8.5nm,1.1s	92.62	196	*d* P		**P**	02 28 18.8	+0.7
F30M	**Barrier River** baz=259	92.63	22	P		**P**	02 28 17.8	-0.2
P33M	**Teslin, Yukon** baz=262	92.67	30	P		**P**	02 28 18.0	-0.5
N32M	**Quiet Lake** comp=Z,23nm,1.2s	92.69	29	IAmb		IAmb	02 28 23.0	
N32M	**Quiet Lake** baz=261	92.69	29	P		**P**	02 28 17.8	-0.7
FARO	**Faro, Yukon** comp=Z,28nm,1.4s	92.73	28	IAmb		IAmb	02 28 23.9	
FARO	**Faro, Yukon** baz=261	92.73	28	P		**P**	02 28 17.6	-1.0
H31M	**Peel River** comp=Z,13nm,0.9s	92.87	24	IAmb		IAmb	02 28 23.3	
H31M	**Peel River** baz=260	92.87	24	P		**P**	02 28 18.4	-0.8
G31M	**Satah River** comp=Z,15nm,0.8s	93.09	23	IAmb		IAmb	02 28 20.1	
G31M	**Satah River** baz=260,SNR=9.7	93.09	23	P		**P**	02 28 19.4	-0.7
S34M	**Telegraph Cree** baz=263	93.22	32	P		**P**	02 28 20.0	-0.9
F31M	**Tsiigehtchic** comp=Z,14nm,1.0s	93.38	23	IAmb		IAmb	02 28 21.1	
F31M	**Tsiigehtchic** baz=261,SNR=7.5	93.38	23	P		**P**	02 28 20.5	-0.9
R33M	**Jennings River** baz=263	93.49	31	P		**P**	02 28 22.3	0.0
INK	**Inuvik** comp=Z,24nm,1.2s	93.59	22	IAmb		IAmb	02 28 25.9	
INK	**Inuvik** baz=261,SNR=11	93.59	22	P		**P**	02 28 21.3	-1.0
INK	**Inuvik** comp=Z,176nm,19.1s,baz=184,slow=34	93.59	22	LR		LR	03 08 26.9	
DLBC	**Dease Lake** baz=264	93.86	32	P		**P**	02 28 23.9	-0.1
DLBC	**Dease Lake** comp=Z,110nm,21.9s,baz=282,slow=30	93.86	32	LR		LR	03 02 02.9	
BBB	**Bella Bella** comp=Z,123nm,20.9s,baz=261,slow=30	94.33	38	LR		LR	03 01 27.3	
WTLY	**Watson Lake, Y** comp=Z,22nm,1.0s	94.66	30	IAmb		IAmb	02 28 28.1	
WTLY	**Watson Lake, Y** baz=265	94.66	30	P		**P**	02 28 27.6	0.0
TGTN	**Hyland Airport** baz=266	95.03	29	P		**P**	02 28 29.1	-0.2
BELA	**Belgrano 2**	95.62	180	P		**P**	02 28 31.8	+0.1
BELA	comp=Z,22nm,1.5s			IAmb		IAmb	02 28 39.4	
A36M	**Sachs Harbour** baz=269,SNR=6.3	96.71	18	P		**P**	02 28 35.3	-1.2
KOTAN	**Kotaneelee Air** baz=269	97.03	30	P		**P**	02 28 37.7	-0.6
C36M	**Paulatuk** comp=Z,30nm,1.9s	97.09	21	IAmb		IAmb	02 28 38.0	
C36M	**Paulatuk** baz=270,SNR=5.3	97.09	21	P		**P**	02 28 36.7	-1.6
YBH	**Yreka Blue Hor** comp=Z,131nm,21.7s,baz=306,slow=30	97.36	49	LR		LR	03 03 22.2	
KIRV	**Kirov**	97.62	328	*ce* P		**P**	02 28 38.3	-2.6
BELG	**Belogornoye**	98.65	322	*c i* P		**P**	02 28 44.0	-1.7
BELG	comp=Z,4.0nm,0.9s			pmax		pmax		
HAWA	**Hanford**	99.72	44			**Pdif**	02 28 50.9	+0.2
HAWA	comp=Z,16nm,1.4s			IAmb		IAmb	02 28 56.2	
NVAR	**Mina Array Bea** comp=Z,1.0nm,0.7s,baz=270,slow=5.4,SNR=7.2	100.67	52	P		**Pdif**	02 28 55.6	+0.2
EDW2	**Edwards Air Fo** baz=270	100.91	56	P		**Pdif**	02 28 57.3	+0.9
NEW	**Newport** baz=273	101.30	42	P		**Pdif**	02 28 58.1	+0.4
YKA	**Yellowknife Ar** comp=Z,1.4nm,1.0s,baz=282,slow=4.4,SNR=12	101.44	28	P		**Pdif**	02 28 57.2	-0.8
YKA	comp=Z,1.3nm,1.1s,baz=277,slow=7.0,SNR=5.5			PP		**PP**	02 33 10.6	+3.0
YKA	comp=Z,0.3nm,0.7s,baz=101,slow=3.2,SNR=4.8			PKKPbc		**PKKPbc**	02 45 06.1	-2.8
BELC	**Belle Mtn. Jos** baz=270	102.56	57	P		**Pdif**	02 29 04.4	+0.6
HLID	**Hailey** baz=274	103.46	47	P		**Pdif**	02 29 08.5	+0.9
APA	**Apatity**	103.61	338	⇓ *i* P		**Pdif**	02 29 06.1	-1.4
APA	comp=Z,7.0nm,1.0s			pmax		pmax		
APA	comp=Z,500nm,19.0s			MLR		MLR		
OBN	**Obninsk**	104.94	325	*i* P		**Pdif**	02 29 16.4	+2.8
OBN				*i*			02 33 32.5	
BOZ	**Bozeman (W)** baz=276	105.26	45	P		**PKiKP**	02 33 30.9	+1.1
MVCO	**Mesa Verde** baz=276	108.49	53	P		**PKiKP**	02 33 36.2	+0.1
LAO	**LASA Array** baz=281	108.82	43	P		**PKiKP**	02 33 36.8	+0.6
K22A	**Casper** baz=279	109.30	47	P		**PKiKP**	02 33 37.2	-0.1
121A	**Cookes Peak, D** baz=275	109.50	58	P		**PKiKP**	02 33 38.3	+0.3
DGMT	**Dagmar** baz=283	109.81	41	P		**PKiKP**	02 33 39.0	+1.1
N23A	**Red Feather La** baz=279	110.00	49	P		**PKiKP**	02 33 39.0	+0.1
ANMO	**Albuquerque** baz=276	110.37	55	P		**PKiKP**	02 33 39.7	+0.1
ISCO	**Idaho Springs** baz=279	110.41	50	P		**PKiKP**	02 33 39.5	-0.2
SDCO	**Great Sand Dun** baz=278	110.79	52	P		**PKiKP**	02 33 40.4	-0.1
RSSD	**Black Hills** baz=281	110.82	45	P		**PKiKP**	02 33 40.3	+0.1
MNTX	**Cornudas Mount** baz=276	111.60	59	P		**PKiKP**	02 33 42.1	+0.2
TXAR	**Lajitas Array**	113.31	61	*i* PKiKP		**PKiKP**	02 33 45.0	-0.2
TXAR	**Lajitas Array** comp=Z,1.0nm,0.9s,baz=158,slow=1.0,SNR=6.1	113.31	61	PKiKP		**PKiKP**	02 33 45.0	-0.2
NOA	**NORSAR Array B** comp=Z,0.5nm,0.8s,baz=49,slow=1.4,SNR=1.9	115.08	336	PKP		**PKiKP**	02 33 47.4	-0.2
AGMN	**Agassiz Nation** baz=290	115.19	39	P		**PKPdf**	02 33 48.6	+0.4
BGNE	**Belgrade** baz=285	115.66	47	P		**PKPdf**	02 33 49.5	+0.2
ABTX	**Abilene, Hawle** baz=280	116.31	57	P		**PKPdf**	02 33 50.1	-0.7
JCT	**Junction City** baz=278	116.50	59	P		**PKPdf**	02 33 50.9	-0.3
WMOK	**Wichita Mounta** baz=281	116.64	54	P		**PKPdf**	02 33 51.2	-0.2
833A	**Chaparral WMA,** baz=278	117.14	62	P		**PKPdf**	02 33 52.3	-0.2
KSU1	**Kansas State U** baz=285	117.38	49	P		**PKPdf**	02 33 52.7	0.0
MORC	**Moravsky Berou**	117.60	324	*e* PKP		**PKiKP**	02 33 53.4	+0.6
JAVC	**Velka Javorina**	117.90	323	*e* PKP		**PKiKP**	02 33 54.8	+1.4
EYMN	**Ely** baz=293	118.04	38	P		**PKPdf**	02 33 53.7	0.0
SPMN	**Marine on St.** baz=291	118.22	42	P		**PKiKP**	02 33 54.3	+0.2
WHTX	**Lake Whitney,** baz=280	118.24	57	P		**PKPdf**	02 33 54.3	-0.2
VRAC	**Vranov**	118.36	323	*e* PKP		**PKPdf**	02 33 54.0	-0.2
KRUC	**Moravsky**	118.58	323	*e* PKP		**PKiKP**	02 33 55.1	+0.4
TUL3	**Leonard** baz=284	118.78	53	P		**PKPdf**	02 33 55.3	-0.2
CLL	**Collm**	119.49	327	*i* PKiKP		**PKPdf**	02 33 56.3	0.0
CLL	**Collm**	119.49	327	*i* PKiKP		**PKPdf**	02 33 56.3	0.0
GERES	**GERESS Array B** comp=Z,2.5nm,1.1s,baz=57,slow=3.6,SNR=2.5	120.27	324	PKP		**PKPdf**	02 33 57.9	-0.1
MIAR	**Mount Ida** baz=284	120.87	54	P		**PKPdf**	02 33 58.9	-0.6
LESA	**Schwarzleotal** comp=Z,0.6nm,0.4s	121.53	323	*e* PKiKP		**PKiKP**	02 34 01.4	+0.8
CCM	**Cathedral Cave**	121.70	49	PKPdf		**PKPdf**	02 33 59.8	-1.2
CCM	**Cathedral Cave** baz=288	121.70	49	P		**PKPdf**	02 34 00.4	-0.6
CCM	**Cathedral Cave**	121.70	49	PKiKP		**PKPdf**	02 33 59.8	-1.2
ABTA	**Abfaltersbach** comp=Z,2.3nm,0.8s	121.95	322	*i* PKP		**PKPdf**	02 34 01.2	-0.2
WTTA	**Wattenberg** comp=Z,4.5nm,0.7s	122.23	323	*i* PKP		**PKiKP**	02 34 02.3	+0.1
HDIL	**Hopedale** baz=291	122.30	46	P		**PKPdf**	02 34 01.6	-0.4
MOTA	**Moosalm** comp=Z,0.3nm,0.3s	122.51	323	*i* PKP		**PKiKP**	02 34 03.2	+0.5
FETA	**Feichten** comp=Z,1.9nm,0.9s	122.89	323	*e* PKP		**PKPdf**	02 34 03.1	-0.2
E46A	**Sault Ste Mari**	123.14	38	PKPdf		**PKPdf**	02 34 02.8	-0.7
DAVA	**Damuels** comp=Z,1.6nm,0.6s	123.26	324	*i* PKP		**PKPdf**	02 34 04.2	+0.3
PLCA	**Paso Flores** comp=Z,2.3nm,0.9s,baz=233,slow=4.9,SNR=4.5	123.55	150	PKP		**PKiKP**	02 34 05.1	+0.2
SFIN	**Lafayette** baz=293	123.92	45	P		**PKPdf**	02 34 05.2	+0.1
VBMS	**Vicksburg** baz=285	123.93	56	P		**PKPdf**	02 34 05.3	-0.1
OXF	**Oxford** baz=287	124.19	53	P		**PKPdf**	02 34 05.9	+0.1
EKA	**Eskdalemuir Ar** comp=Z,0.9nm,0.7s,baz=59,slow=5.9,SNR=3.9	124.54	337	PKP		**PKPdf**	02 34 05.5	-0.4
WVT	**Waverly** baz=290	124.91	50	P		**PKPdf**	02 34 07.3	+0.1
WCI	**Wyandotte Cave**	125.31	47			**PKPdf**	02 34 07.4	-0.5
WCI	**Wyandotte Cave** baz=292	125.31	47	P		**PKPdf**	02 34 07.7	-0.2
WCI	**Wyandotte Cave**	125.31	47	PKiKP		**PKPdf**	02 34 07.4	-0.5
O48B	**Farmland** baz=294	125.33	45	P		**PKPdf**	02 34 07.1	-0.8
AAM	**Ann Arbor** baz=297	125.46	42	P		**PKPdf**	02 34 07.8	-0.2
P49A	**Miami Univ. Ec** baz=294	125.93	45	P		**PKPdf**	02 34 08.3	-0.8
VLDQ	**Val d'Or**	126.13	33			**PKPdf**	02 34 08.0	-1.1
SCHQ	**Schefferville** comp=Z,2.4nm,1.0s,baz=333,slow=2.3,SNR=2.0	126.20	21	PKP		**PKPdf**	02 34 08.1	-1.0
LRAL	**Lakeview Retre** baz=288	126.55	54	P		**PKPdf**	02 34 10.2	-0.2
ACSO	**Alum Creek Sta** baz=296	126.84	44	P		**PKPdf**	02 34 10.3	-0.5
BRAL	**Brewton** baz=287	127.06	56	P		**PKPdf**	02 34 11.2	-0.3
SADO	**Sadowa** comp=Z,6.4nm,0.8s,baz=344,slow=3.7,SNR=5.4	127.07	37	PKP		**PKPdf**	02 34 09.4	-1.6
P52A	**Corning** baz=297	127.69	44	P		**PKPdf**	02 34 11.7	-0.7
M53A	**WI Miller and** baz=299	127.83	41	P		**PKPdf**	02 34 12.3	-0.3
ERPA	**Erie** baz=300	127.94	40	P		**PKPdf**	02 34 12.5	-0.3
TZTN	**Tazewell** baz=293	127.98	48	P		**PKPdf**	02 34 12.8	-0.2
O53A	**New Philadelph** baz=298	128.04	43	P		**PKPdf**	02 34 12.8	-0.3
WVNY	**West Valley, N**	128.67	39	PKPdf		**PKPdf**	02 34 14.1	-0.1
GOGA	**Godfrey** baz=291	129.22	52	P		**PKPdf**	02 34 15.1	-0.4
MCWV	**Mont Chateau** baz=299	129.24	43	P		**PKPdf**	02 34 14.9	-0.5
TIGA	**Tifton** baz=290	129.80	54	P		**PKPdf**	02 34 16.8	+0.1
LONY	**Lake Ozonia** baz=308	129.82	35	P		**PKPdf**	02 34 16.3	0.0
BLA	**Blacksburg** baz=297	129.97	46	P		**PKPdf**	02 34 16.8	-0.1
SSPA	**Standing Stone**	130.05	41			**PKPdf**	02 34 16.9	0.0
SSPA	**Standing Stone** baz=302	130.05	41	P		**PKPdf**	02 34 16.6	-0.3
KMSC	**Kings Mountain** baz=294	130.19	49	P		**PKPdf**	02 34 17.2	-0.1
BINY	**Binghamton** baz=304	130.41	38	P		**PKPdf**	02 34 17.6	0.0
L61B	**Northampton** baz=308	132.24	36	P		**PKPdf**	02 34 20.7	-0.3
PAL	**Palisades** baz=306	132.37	38	P		**PKPdf**	02 34 21.0	-0.2
ARE1	**Arenal 1**	132.43	82			**PKPdf**	02 34 20.2	-1.9

DWPF	Disney Wildern baz=288	132.64	58	P		PKPdf	02 34 21.7	-0.4
GO02	Mina Guanaco	135.05	136		PKPpre		02 34 16.3	
CPUP	Villa Florida comp=Z,2.5nm,0.9s,baz=232,slow=2.8,SNR=5.9	141.63	149	PKhKP	PKPpre		02 34 32.6	
CPUP	comp=Z,6.3nm,1.0s,baz=222,slow=1.3,SNR=10			PKP		PKPdf	02 34 39.5	+0.7
TORD	Torodi Ar. Bea comp=Z,6.0nm,1.1s,baz=61,slow=3.5,SNR=18	141.63	283	PKhKP	PKPpre		02 34 33.6	
TORD	comp=Z,1.3nm,1.0s,baz=65,slow=6.8,SNR=4.0			PP		PP	02 37 47.3	+4.3
ROSC	El Rosal comp=Z,7.0nm,0.4s,baz=353,slow=12,SNR=2.1	142.56	91	PKhKP	PKPpre		02 34 37.8	
KIC	Kosan Boka comp=Z,104nm,0.9s	148.22	271⇑	*e*PKP1		PKPbc	02 34 54.4	+0.6
DBIC	Dimbokro comp=Z,63nm,0.8s,baz=88,slow=2.7,SNR=57	148.34	272	PKPbc		PKPbc	02 34 54.9	+0.7
LIC	Lamto comp=Z,232nm,0.8s	148.50	271⇑	*e*PKP1		PKPbc	02 34 55.2	+0.7
TIC	Toumodi comp=Z,132nm,0.9s	148.50	272⇑	*e*PKP1		PKPbc	02 34 55.2	+0.6
CELP	Cerrillos	148.75	66			PKPbc	02 34 53.7	-1.4
BDFB	Brasilia comp=Z,4.0nm,0.8s,baz=293,slow=3.8,SNR=4.2	155.22	153	PKP		PKPdf	02 35 02.1	+1.0

IDC 27 02:21:40.0±7.7, 5°82S×142°06E, h0km, mb4.2/2, mbtmp4.4/4, ML4.1/2, Error ellipse: s-maj=298.9km s-min=34.8km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
WRA	Warramunga Arr 0.6nm,0.3s,baz=29,slow=13,SNR=1.3 24nm,1.1s	15.93	207	P	Pn		Pn	02 25 23.9	-1.8
ASAR	Alice Springs 0.9nm,0.3s,baz=32,slow=12,SNR=1.7 16nm,0.9s	19.41	203	P	Pn		Pn	02 26 08.9	-0.1
MKAR	Makanchi Array 0.8nm,0.8s,baz=112,slow=6.3,SNR=2.9 0.8nm,0.8s	74.28	322	P	P		P	02 33 19.5	+0.3
BVAR	Borovoye Array 3.0nm,0.6s,baz=94,slow=6.4,SNR=6.6 3.0nm,0.6s	83.76	325	P	P		P	02 34 10.8	-0.3

IDC 27 02:21:47.2±3.6, 6°01S×142°98E, h0km, mb4.1/2, mbtmp4.4/4, ML4.2/2, Error ellipse: s-maj=127.5km s-min=33.2km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
WRA	Warramunga Arr 0.6nm,0.3s,baz=32,slow=11,SNR=1.3 12nm,0.8s	16.20	210	P	Pn		Pn	02 25 34.3	-2.1
ASAR	Alice Springs 1.7nm,0.3s,baz=35,slow=11,SNR=6.5 26nm,0.9s	19.61	206	P	Pn		Pn	02 26 18.3	-0.3
MKAR	Makanchi Array 0.4nm,0.5s,baz=108,slow=6.1,SNR=6.2 0.4nm,0.5s	74.99	322	P	P		P	02 33 30.5	-0.1
BVAR	Borovoye Array 2.3nm,0.5s,baz=72,slow=6.2,SNR=4.6 2.3nm,0.5s	84.44	325	P	P		P	02 34 21.8	+0.1

NNC 27 02:21:56.8±1.1, 42°.28N×81°.69E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.4km s-min=5.7km az=164.0
SOME 27 02:21:57.1, 42°.27N×81°.65E, h15km
ISC 27 02:21:55.5±2.4, 42°23N±0°.09×81°66E±0°.07, h9km±12km, n42, σ2s21/63, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
KTMS	Ketmen 8.6nm,0.4s	1.55	322	P			Pg	02 22 26.2	+0.9
KTMS	15nm,0.4s			S			Sg	02 22 47.0	+1.6
KTMS	Ketmen 8.6nm,0.4s	1.55	322	*e*P			Pg	02 22 26.2	+0.9
KTMS	15nm,0.4s			*e*S			Sg	02 22 47.0	+1.6
SHLS	Shalkode 20nm,0.2s	1.87	301	P			Pn	02 22 27.6	-0.1
SHLS	23nm,0.3s			S			Sn	02 22 49.3	-2.2
SHLS	Shalkode 20nm,0.2s	1.87	301	*e*P			Pn	02 22 27.6	-0.1
SHLS	23nm,0.3s			*e*S			Sn	02 22 49.3	-2.2
PDGK	Podgornoye 7.0nm,0.4s	1.94	305	Pg			Pg	02 22 32.8	+0.2
PDGK	16nm,0.5s			Lg			Lg	02 22 58.2	
PDGK	Podgornoye 6.3nm,0.4s	1.94	305	⇑Pn			Pb	02 22 30.9	-0.2
PDGK	17nm,0.5s			⇑Lg			Lg	02 22 59.3	
UZB	Uzynbulak 12nm,0.3s	2.15	296	Pg			Pb	02 22 36.6	+1.9
UZB	20nm,0.3s			Lg			Lg	02 23 05.0	
UZB	Uzynbulak 12nm,0.3s	2.15	296	*e*P			Pb	02 22 36.6	+1.9
UZB	20nm,0.3s			*e*S			Sg	02 23 05.0	+0.5
DJR	Jarkent 2.3nm,0.2s	2.51	328	Pg			Pb	02 22 42.7	+1.9
DJR	29nm,0.6s			Lg			Lg	02 23 15.5	
DJR	Jarkent 2.3nm,0.2s	2.51	328	*e*P			Pb	02 22 42.7	+1.9
DJR	29nm,0.6s			*e*S			Sg	02 23 15.5	-0.5
KPKS	Kokpek 9.4nm,0.3s	2.51	301	Pg			Pb	02 22 42.3	+1.5
KPKS	39nm,0.4s			Lg			Lg	02 23 14.6	
KPKS	Kokpek 9.4nm,0.3s	2.51	301	*e*P			Pb	02 22 42.3	+1.5
KPKS	39nm,0.4s			*e*S			Sg	02 23 14.6	-1.6
SATY	Saty 4.3nm,0.3s	2.54	290	Pg			Pg	02 22 44.0	-0.2
SATY	19nm,0.3s			Lg			Lg	02 23 17.8	
SATY	Saty 4.3nm,0.3s	2.54	290	*e*P			Pg	02 22 44.0	-0.2
SATY	19nm,0.3s			*e*S			Sg	02 23 17.8	+0.7
ZHN	Zhinishke 14nm,0.1s	2.55	293	Pg			Pg	02 22 44.4	0.0
ZHN	31nm,0.2s			Lg			Lg	02 23 18.3	
ZHN	Zhinishke 14nm,0.1s	2.55	293	*e*P			Pg	02 22 44.4	0.0
ZHN	31nm,0.2s			*e*S			Sg	02 23 18.3	+0.7
KURS	Kuram 1.6nm,0.5s	2.86	297	Pg			Pb	02 22 48.9	+2.2
KURS	4.6nm,0.9s			Lg			Lg	02 23 25.9	
KURS	Kuram 1.6nm,0.5s	2.86	297	*e*P			Pb	02 22 48.9	+2.2
KURS	4.6nm,0.9s			*e*S			Sg	02 23 25.9	-1.4
ARXS	Arharly 2.4nm,0.4s	3.43	307	Pg			Pb	02 22 58.8	+2.4
ARXS	10nm,0.3s			Lg			Lg	02 23 43.4	
ARXS	Arharly 2.4nm,0.4s	3.43	307	*e*P			Pb	02 22 58.8	+2.4
ARXS	10nm,0.3s			*e*S			Sg	02 23 43.4	-2.3
KAPS	Kapalarasan 2.4nm,0.2s	3.48	332	Pg			Pb	02 22 59.6	+2.3
KAPS	14nm,0.4s			Lg			Lg	02 23 44.5	
KAPS	Kapalarasan 2.4nm,0.2s	3.48	332	*e*P			Pb	02 22 59.6	+2.3
KAPS	14nm,0.4s			*e*S			Sg	02 23 44.5	-2.8
KOTS	Kotyrbulak 2.6nm,0.5s	3.50	288	Pg			Pb	02 23 00.0	+2.4
KOTS	16nm,0.6s			Lg			Lg	02 23 45.3	
KOTS	Kotyrbulak 2.6nm,0.5s	3.50	288	*e*P			Pb	02 23 00.0	+2.4
KOTS	16nm,0.6s			*e*S			Sg	02 23 45.3	-2.5
MDOK	Medeo 2.1nm,0.6s	3.52	287	Pg			Pb	02 23 01.4	+3.3
MDOK	4.9nm,0.4s			Lg			Lg	02 23 47.3	
MDOK	Medeo 2.1nm,0.6s	3.52	287	*e*P			Pb	02 23 01.4	+3.3
MDOK	4.9nm,0.4s			*e*S			Sg	02 23 47.2	-1.4
TNSS	Tian-Shan 3.1nm,0.9s	3.57	285	Pg			Pb	02 23 01.7	+2.7
TNSS	2.7nm,0.4s			Lg			Lg	02 23 47.9	
TNSS	Tian-Shan 3.1nm,0.9s	3.57	285	*e*P			Pb	02 23 01.7	+2.7
TNSS	2.7nm,0.4s			*e*S			Sg	02 23 47.9	-2.2
KTBS	Karatobe 3.2nm,0.8s	3.94	294	Pg			Pg	02 23 09.3	-1.7
KTBS	4.7nm,0.6s			Lg			Lg	02 24 00.6	
KTBS	Karatobe 3.2nm,0.8s	3.94	294	*e*P			Pg	02 23 09.2	-1.7
KTBS	4.7nm,0.6s			*e*S			Sg	02 24 00.6	-1.4
MTBS	Maitube 2.7nm,0.3s	3.96	285	Pg			Pb	02 23 09.2	+3.7
MTBS	5.6nm,0.2s			Lg			Lg	02 24 00.8	
MTBS	Maitube 2.7nm,0.3s	3.96	285	*e*P			Pb	02 23 09.2	+3.7
MTBS	5.6nm,0.2s			*e*S			Sg	02 24 00.8	-1.8
KUU	Kurty 5.0nm,0.5s	4.24	295	Pg			Pb	02 23 14.0	+3.9
KUU	5.0nm,0.3s			Lg			Lg	02 24 09.1	
KUU	Kurty 5.0nm,0.5s	4.24	295	*e*P			Pb	02 23 14.0	+3.9
KUU	5.0nm,0.3s			*e*S			Sg	02 24 09.1	-2.4
KST	Kastek 3.3nm,0.6s	4.28	283	Pg			Pg	02 23 15.5	-1.9
KST	6.9nm,0.7s			Lg			Lg	02 24 11.6	
KST	Kastek 3.3nm,0.6s	4.28	283	*e*P			Pg	02 23 15.5	-1.9
KST	6.9nm,0.7s			*e*S			Sg	02 24 11.7	-1.2
DGS	Degeres 2.1nm,0.8s	4.45	285	Pg			Pb	02 23 17.6	+3.7
DGS	3.5nm,0.6s			Lg			Lg	02 24 15.4	
DGS	Degeres 2.1nm,0.8s	4.45	285	*e*P			Pb	02 23 17.6	+3.7
DGS	3.5nm,0.6s			*e*S			Sg	02 24 15.3	-3.1
MAKZ	Makanchi 8.7nm,1.1s	4.59	3	⇑Pn			Pn	02 23 04.5	-0.6
MAKZ	1.7nm,0.7s,baz=187,slow=15,SNR=6.3			⇑Sn			Sn	02 24 00.2	+1.8
MAKZ	3.7nm,0.9s			⇓Lg			Lg	02 24 20.3	
MAKZ	3.6nm,0.6s,baz=187,slow=28,SNR=5.9								
MK31	Makanchi Array 6.7nm,1.1s,baz=103,slow=6.2,SNR=26	4.59	5	Pn			Pn	02 23 04.7	-0.4
MK31	1.7nm,0.7s,baz=187,slow=15,SNR=6.3			⇑Pg			Pb	02 23 17.7	+1.6
MK31	3.6nm,0.6s,baz=187,slow=28,SNR=5.9			⇓Lg			Lg	02 24 20.4	
ZSN	Zaisan 1.8nm,0.3s	5.70	23	Pg			Pg	02 23 40.6	-4.0
ZSN	6.9nm,0.4s			Lg			Lg	02 24 54.7	
ZSN	Zaisan 1.8nm,0.3s	5.70	23	*e*P			Pg	02 23 40.6	-4.0
ZSN	6.9nm,0.4s			*e*S			Sg	02 24 54.6	-3.7

BJI 27 02:31:00.0±0.0, 53°.40N×164°.30W, h10km, mb5.0/54, mB5.0/28, Ms4.8/24, Ms7 4.5/25
MOS 27 02:31:01.9±0.8, 53°.54N×164°.43W, h10km, mb5.2/47, Error ellipse: s-maj=12.7km s-min=5.1km az=105.2
NEIC 27 02:31:02.9±1.3, 53°.35N±0°.06×164°.21W±0°.07, h9km±5km, mb4.8/238, ML4.6/12, ML4.4(AEIC), Error ellipse: s-maj=9.3km s-min=5.7km az=157.0
IDC 27 02:31:02.2±0.7, 53°.60N×164°.33W, h0km, mb4.8/33, mbtmp4.7/36, ML4.2/3, MS4.0/30, Error ellipse: s-maj=19.5km s-min=10.2km az=178.0
AEIC 27 02:31:04.3±1.4, 53°.34N±0°.04×164°.23W±0°.06, h4km±4km, Error ellipse: s-maj=6.6km s-min=5.2km az=193.0
GCMT 27 02:31:08.9±0.4, 53°.41N±0°.04×164°.13W±0°.05, h27km±1km, MW4.9/71, Moment Tensor Solution. s28,c32; s71,c88; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.78±.23; Mθθ-1.80±.14; Mφφ-0.98±.14; Mrθ1.14±.23; Mrφ-1.12±.07; Mθφ0.33±.24; Best double couple: M◎2.93100×10^16 NP1:θ◎62.00000°, δ57.00000°, λ97.00000°. NP2: φ◎229.00000°, δ34.00000°, λ79.00000°. Principal axes: T 3.0490, Plg77.0000°, Azm356.0000°; N -0.2440, Plg6.0000°, Azm238.0000°; P -2.8130, Plg11.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BGR 27 02:31:18.1, 55°.13N×165°.57W, h33km, mb4.8, Ms3.9
ISC 27 02:31:02.8±0.5, 53°36N±0°.05×164°25W±0°.03, h13km±2km, h14km:pP-P, n606, σ1s26/527, mb4.9/231, MS4.1/42, 41C-18D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
WESE	West Dahl East	1.14	350				Pn	02 31 24.6	+0.1
AKSA	Akutan Strait	1.16	313				Pn	02 31 25.1	+0.4
AKSA							Sn	02 31 41.8	+1.4
AKUT	Akutan	1.19	312				Pn	02 31 25.8	+0.6
AKUT	comp=N,9μm,0.8s				IAML			02 31 50.7	
AKUT	Akutan	1.19	312				Sn	02 31 42.8	+1.6
AKUT	Akutan	1.19	312	P			Pn	02 31 26.2	+1.1
AHB	Akutan Harbor	1.20	310				Pn	02 31 26.0	+0.7
WECS	Westdahl Cape	1.22	345				Pn	02 31 26.0	+0.5
WECS							Sn	02 31 42.6	+0.7
AKBBA	Akutan Broad B	1.24	307				Pg	02 31 26.5	-0.2
AKBBA							Sn	02 31 44.8	+2.2
ZRO	Akutan Zero	1.26	306				Pg	02 31 27.0	-0.1
WEBT	Westdahl Beart	1.27	347				Pg	02 31 27.4	+0.2
WEBT							Sn	02 31 45.1	+1.9
AKLV	Akutan Long Va	1.29	309				Pg	02 31 27.1	-0.6
AKLV							Sn	02 31 45.9	+2.2
BRPK	Brown Peak	1.33	13				Pg	02 31 27.6	-0.7
AKRB	Akutan Reef Bi	1.33	306				Pg	02 31 28.1	-0.2
LVA	Lava Point	1.33	308				Pg	02 31 27.9	-0.4
AKGG	Akutan Green G	1.33	310				Pg	02 31 28.1	-0.3
AKGG							Sg	02 31 46.3	+0.6
SSLS	Shishaldin Sou	1.37	6				Pb	02 31 27.9	-0.3
ISLZ	Isanotski Laza	1.41	13				Pb	02 31 28.7	-0.3
UNV	Unalaska Valle	1.43	291				Sg	02 31 47.3	-1.4
UNV	Unalaska Valle	1.43	291				Pg	02 31 29.4	-0.9
UNV	Unalaska Valle	1.43	291	P			Pg	02 31 29.2	-1.0
ISNN	Isanotski Nort	1.51	11				Pg	02 31 30.7	-1.1
FALS	False Pass	1.58	18				Pb	02 31 31.5	-0.4
FALS	False Pass	1.58	18	P			Pb	02 31 31.7	-0.2
MGOD	Makushin Gods	1.62	287				Pb	02 31 32.0	-0.6
MAPS	Pakushin South	1.66	287				Sg	02 31 55.2	-1.1
OKSP	Okmok Steeple	2.42	269				Pn	02 31 42.9	+0.7
PN7A	Pavlof North-7	2.46	31				Pn	02 31 44.2	+1.5
PS1A	Pavlof South-1	2.54	34				Pn	02 31 45.1	+1.5
NIKH	Nikolski High	2.80	264				Pn	02 31 48.0	+0.7
NIKH	Nikolski High	2.80	264	P			Pn	02 31 47.9	+0.7
SDPT	Sand Point	2.98	46	Pn			Pn	02 31 50.4	+0.7
SDPT				IAML				02 32 27.4	
SDPT	comp=N,2μm,0.5s Sand Point	2.98	46	P			Pn	02 31 50.7	+1.0
CNBA	Chernabura Isl	3.12	60				Pn	02 31 51.8	+0.2
CLCO	Concord Point,	3.35	262				Pn	02 31 56.1	+1.4
CLES	Cleveland East	3.44	263				Pn	02 31 57.2	+1.1
CLES	Cleveland East comp=E,1μm,1.1s	3.44	263		IAML			02 32 38.7	
CLES					IAML			02 33 12.0	
VNFG	comp=N,1μm,1.4s Fog Glacier, M	4.00	41				Pn	02 32 05.2	+1.4
CHGN	Chignik	4.48	47				Pn	02 32 11.1	+0.7
CHGN	Chignik comp=N,485nm,0.5s	4.48	47		IAML			02 33 03.0	
CHGN	comp=E,614nm,1.4s				IAML			02 33 30.3	
SPIA	Saint Paul Isl	5.14	321				Pn	02 32 21.4	+2.0
SPIA	Saint Paul Isl	5.14	321	P			Pn	02 32 21.7	+2.4
O14K	Tigyukauivet M	6.14	15				Pn	02 32 34.9	+1.8
ATKA	Atka Island	6.14	263				Pn	02 32 34.6	+1.5
ATKA	Atka Island	6.14	263	P			Pn	02 32 34.9	+1.8
O15K	Ungalikthiuk R	6.33	21				Pn	02 32 37.4	+1.6
P16K	Nushagak River	6.67	29				Pn	02 32 41.9	+1.5
N14K	Kuskokwak Cree	6.74	11				Pn	02 32 43.2	+2.0
CNTC	Contact Creek	6.81	40				Pn	02 32 43.7	+1.3
ANCK	Angle Creek	6.92	42				Pn	02 32 45.0	+1.1
ACHA	Angle Creek He	7.00	42				Pn	02 32 46.0	+1.0
M13K	Dall Lake	7.09	4				Pn	02 32 48.7	+2.6
O16K	Kokwok River B	7.12	26				Pn	02 32 47.8	+1.3
M11K	Mekoryuk	7.13	352				Pn	02 32 48.9	+2.2
N15K	Kwethluk River	7.20	17				Pn	02 32 50.1	+2.4
GSMY	Great Sitkin M	7.29	264				Pn	02 32 49.9	+0.9
OHAK	Old Harbor	7.36	54				Pn	02 32 49.1	-0.8
M14K	Bethel	7.52	9				Pn	02 32 53.7	+1.8
O17K	Koliganek Bris	7.55	29				Pn	02 32 53.6	+1.2
M15K	Kasigluk River	7.61	13				Pn	02 32 54.9	+1.6
ADK	Adak	7.71	264				Pn	02 32 55.9	+1.3
ADK	Adak	7.71	264	P			Pn	02 32 56.5	+1.9
P18K	Big Mountain,	7.85	36				Pn	02 32 58.1	+1.5
KDAK	Kodiak Island	7.96	51				Pn	02 32 57.0	-1.1
KDAK	Kodiak Island	7.96	51	*i* P			Pn	02 32 56.2	-1.9
KDAK	Kodiak Island comp=E,5.1nm,0.3s,baz=237,slow=6.9,SNR=19	7.96	51	Pn			Pn	02 32 56.7	-1.4
KDAK	comp=E,3.4nm,0.3s,baz=25,slow=23,SNR=9.9 comp=E,16nm,0.3s			Sn			Sn	02 34 21.3	-6.6
L14K	Kuka Creek	8.05	5				Pn	02 33 00.6	+1.3
Q19K	Cape Douglas,	8.14	42				Pn	02 33 01.6	+1.1
N17K	Nushagak Hills	8.16	25				Pn	02 33 02.5	+1.7
O18K	Koktuh Hills	8.20	34				Pn	02 33 03.5	+2.1
M16K	Timber Creek	8.20	18				Pn	02 33 02.5	+1.0
L15K	Ungalak Mounta	8.48	9				Pn	02 33 06.4	+1.5
SYI	Shuyak Island	8.48	47				Pn	02 33 06.0	+0.9
N18K	Kilae Creek	8.64	28				Pn	02 33 08.0	+0.7
L16K	Owhat River	8.76	15				Pn	02 33 10.0	+1.0
M17K	Holitna River	8.86	22				Pn	02 33 11.8	+1.4
SVW2	Sparrevohn	9.07	28	P			Pn	02 33 15.4	+2.2
K15K	Wolf Creek Mou	9.08	8				Pn	02 33 15.2	+1.8
N19K	Bonanza Creek	9.16	31				Pn	02 33 16.1	+1.5
M18K	Stony River	9.33	26				Pn	02 33 17.9	+1.0
L17K	Donlin	9.36	17				Pn	02 33 18.5	+1.4
J14K	Nanvaranak Lak	9.43	2				Pn	02 33 19.4	+1.3
CNPM	China Poot	9.49	44				Pn	02 33 18.8	-0.2
AMKA	Amchitka	10.25	265	Pn			Pn	02 33 30.4	+1.0
O22K	Cooper Landing	10.66	42				Pn	02 33 35.3	+0.3
SUA	Susitna One	10.89	36	Pn			Pn	02 33 38.7	+0.4
SKT	Skwentna	10.98	33				Pn	02 33 40.5	+1.1
ANM	Nome	11.26	358	Pn			Pn	02 33 44.6	+1.4
J19K	Poorman	11.56	19				Pn	02 33 47.8	+0.5
KNIK	Knik Glacier	11.71	40				Pn	02 33 48.3	-1.1
HIN	Hinchinbrook I	11.97	47				Pn	02 33 52.0	-1.0
EYAK	Cordova Ski Ar	12.37	47	P			Pn	02 33 58.4	0.0
F15K	North Star Dit	12.39	359				Pn	02 34 01.6	+2.9
KLU	Klutina	12.77	43				Pn	02 34 02.3	-1.6
SHEM	Shemya Is, Ala comp=E,621nm,18.4s,baz=107,slow=39	13.04	276	LR			LR	02 39 28.5	
ILAR	Eielson Array comp=E,0.3nm,0.3s,baz=229,slow=12,SNR=25	14.45	31	Pn			Pn	02 34 22.8	-3.9
ILAR	comp=E,670nm,19.1s,baz=225,slow=40 comp=E,1.1nm,0.5s			LR			LR	02 40 31.3	
C16K	Lisburne Hills	14.98	358	P			Pn	02 34 35.0	+1.1
PNL	Peninsula	15.04	55	P			Pn	02 34 36.1	+1.2
G23K	Bananza Creek comp=Z,25nm,0.7s	15.10	22	IAmb			IAmb	02 34 41.5	
J26L	Joseph Creek comp=Z,37nm,1.0s	15.36	35	IAmb			IAmb	02 34 45.8	
O29M	Mount Kennedy comp=Z,23nm,0.8s	15.60	53	IAmb			IAmb	02 34 49.7	
P29M	Windy Craggy	15.86	56	Pn			Pn	02 34 46.7	+1.2
EGAK	Eagle comp=Z,31nm,0.8s	16.36	37	IAmb			IAmb	02 34 57.6	
DAWY	Dawson comp=Z,36nm,0.8s	16.66	40	IAmb			IAmb	02 35 03.6	
L29M	L29M comp=Z,61nm,0.8s	16.74	44	IAmb			IAmb	02 35 02.7	
SKAG	Skagway comp=Z,55nm,1.2s	17.04	57	IAmb			IAmb	02 35 06.1	
SKAG	Skagway	17.04	57	P			P	02 35 02.2	0.0
J29N	Klondike Camp comp=Z,36nm,0.5s	17.29	40	IAmb			IAmb	02 35 09.4	
K29M	Barlow Dome comp=Z,62nm,1.1s	17.29	42	IAmb			IAmb	02 35 08.9	
MAYO	Mayo, Yukon comp=Z,108nm,0.8s	17.86	44	IAmb			IAmb	02 35 19.4	
M31M	Drury Creek, Y comp=Z,54nm,0.8s	18.06	49	IAmb			IAmb	02 35 21.6	
J30M	Hart River comp=Z,23nm,0.5s	18.08	41	IAmb			IAmb	02 35 19.6	
P33M	Teslin, Yukon comp=Z,55nm,0.8s	18.40	56	IAmb			IAmb	02 35 21.9	
N32M	Quiet Lake comp=Z,60nm,1.0s	18.43	53	IAmb			IAmb	02 35 23.1	
FARO	Faro, Yukon comp=Z,85nm,0.8s	18.54	49	IAmb			IAmb	02 35 23.6	
EPYK	Eagle Plains comp=Z,59nm,0.9s	18.78	35	IAmb			IAmb	02 35 25.9	
G30M	tAoh Zraii Nji comp=Z,24nm,0.8s	19.26	34	IAmb			IAmb	02 35 33.4	
H31M	Peel River comp=Z,65nm,1.1s	19.36	38	IAmb			IAmb	02 35 43.0	
DLBC	Dease Lake comp=Z,100nm,2.0s	19.70	61	IAmb			IAmb	02 35 42.7	
DLBC	Dease Lake comp=Z,0.4nm,0.3s,baz=280,slow=11,SNR=15	19.70	61	P			Pn	02 35 33.9	+0.7
DLBC	comp=Z,400nm,21.8s,baz=280,slow=36 comp=Z,9.3nm,0.7s			LR			LR	02 42 58.8	
G31M	Satah River comp=Z,36nm,0.9s	19.90	35	IAmb			IAmb	02 35 38.0	
BILL	Bilibino	20.29	328	P			P	02 35 37.8	-0.1
BILL	Bilibino comp=Z,22nm,0.8s	20.29	328⇑	*e*P pmax			P pmax	02 35 36.7	-1.2
F31M	Tsiigehtchic comp=Z,18nm,0.7s	20.33	34	P IAmb			P IAmb	02 35 39.3	+1.0
F31M								02 35 43.7	
WTLY	Watson Lake, Y	20.39	56	P			P	02 35 39.0	-0.1
INK	Inuvik comp=Z,52nm,0.7s	20.83	32	P IAmb			P IAmb	02 35 42.3	-1.4
INK								02 35 49.2	
INK	Inuvik comp=Z,10nm,0.5s,baz=235,slow=10,SNR=66	20.83	32	P			P	02 35 41.9	-1.8
INK	comp=Z,2.1nm,0.9s,baz=320,slow=16,SNR=1.9 comp=Z,10nm,0.5s			S			S	02 39 29.2	-6.2
PET	Petropavlovsk	22.07	284	*e*P			P	02 36 01.5	+4.4
PET				*e*S			S	02 39 51.7	-8.3
PET	comp=Z,29nm,0.6s			pmax			pmax		
PET	comp=Z,300nm,12.0s			MLR			MLR		
PEA0B	Petropavlovsk-	22.60	285	*ce*P			P	02 36 02.2	-0.7
PETK	Petropavlovsk- comp=Z,11nm,0.5s,baz=83,slow=13,SNR=27 comp=Z,11nm,0.5s	22.60	285	P			P	02 36 02.1	-0.7
WRGLY	Wrigley comp=Z,38nm,0.8s	23.20	49	IAmb			IAmb	02 36 18.3	
SEY	Seymchan	24.34	310	*ce*P			P	02 36 20.4	+0.5
SEY	comp=Z,9.0nm,0.8s			pmax			pmax		
SEY	Seymchan comp=Z,332nm,18.3s,baz=139,slow=39	24.34	310	LR			LR	02 46 35.1	
C36M	Paulatuk	24.38	34	P			P	02 36 20.6	+0.4
A36M	Sachs Harbour	25.09	28	P			P	02 36 26.9	+0.3
MA2	Magadan	25.20	302	P			P	02 36 28.1	+0.3
MA2	comp=Z,39nm,1.3s			IAmb			IAmb	02 36 29.9	
MA2	Magadan	25.20	302	*i* P			P	02 36 27.1	-0.7
MA2	comp=Z,18nm,0.8s			pmax			pmax		
YKA	Yellowknife Ar	27.24	51	P			P	02 36 47.6	+1.5
YKA	Yellowknife Ar comp=Z,7.7nm,0.9s,baz=275,slow=10,SNR=59	27.24	51

comp=Z,491nm,19.6s,baz=261,slow=39
comp=Z,7.7nm,0.9s
HAWA Hanford 29.25 85 IAmb IAmb 02 37 19.8
comp=Z,16nm,1.1s
NEW Newport 29.77 80 LR LR 02 46 50.0
comp=Z,171nm,21.3s,baz=297,slow=32
EDM Edmonton 29.90 69 IAmb IAmb 02 37 12.1
comp=Z,14nm,0.7s
I07A Izee 30.49 89 IAmb IAmb 02 37 31.4
comp=Z,8.2nm,0.8s
J08A Circle Bar Ran 31.52 90 IAmb IAmb 02 37 40.4
comp=Z,9.8nm,0.9s
WVOR Wild Horse Val 31.95 91 IAmb IAmb 02 37 45.0
comp=Z,10nm,0.9s
PAHR Pah Rah Range 33.17 96 IAmb IAmb 02 38 52.9
comp=Z,14nm,1.0s
PNTR Pine Nut 33.44 97 IAmb IAmb 02 38 06.8
comp=Z,15nm,0.9s
TIXI Tiksi 33.51 328 P **P** **02 37 41.7 +0.3**
TIXI IAmb IAmb 02 37 42.3
comp=Z,4.6nm,0.6s
TIXI Tiksi 33.51 328 *ce*P **P** **02 37 40.5 -0.9**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
TIXI Tiksi 33.51 328 LR LR 02 53 15.6
comp=Z,396nm,18.4s,baz=80,slow=40
YERR Yerington 33.72 97 IAmb IAmb 02 38 00.2
comp=Z,8.0nm,0.9s
HLID Hailey 33.83 86 IAmb IAmb 02 37 54.8
comp=Z,22nm,2.0s
YSS Yuzh-Sakhalins 33.87 281 *e*P **P** **02 37 44.9 +0.1**
YSS pmax pmax
comp=Z,20nm,1.0s
WAKR Walker 33.91 98 IAmb IAmb 02 38 05.3
comp=Z,7.7nm,0.9s
RES Resolute Bay 34.12 26 IAmb IAmb 02 37 50.6
comp=Z,5.4nm,0.8s
RES Resolute Bay 34.12 26 LR LR 02 55 05.7
comp=Z,186nm,18.7s,baz=218,slow=42
KVN Kaiserville 34.35 96 P **P** **02 37 48.9 -0.5**
KVN **sP** **02 37 52.5 -0.9**
KVN IAmb IAmb 02 38 10.0
comp=Z,6.5nm,1.0s
RYN Ryan 34.38 97 IAmb IAmb 02 38 05.2
comp=Z,9.5nm,1.1s
NVAR Mina Array Bea 34.63 97 P **P** **02 37 54.5 +2.7**
comp=Z,5.4nm,0.8s,baz=295,slow=8.5,SNR=28
comp=Z,5.4nm,0.8s
MDPB Devils Postpil 34.70 98 IAmb IAmb 02 38 12.6
comp=Z,12nm,0.9s
YAK Yakutsk 34.86 311 *e*P **P** **02 37 52.5 -0.7**
YAK *e**PP **pwP** **02 38 01.5 +0.3**
YAK *e* 02 39 13.5
YAK *e* 02 40 26.5
YAK *e*S **S** **02 43 20.7 -2.8**
YAK *e*SS **SnSn** **02 45 32.7 -4.7**
YAK *e* 02 48 14.7
YAK pmax pmax
comp=Z,33nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,179nm,4.7s
YAK pmax pmax
comp=N,152nm,6.0s
YAK pmax pmax
comp=E,90nm,5.2s
YAK smax smax
comp=E,193nm,5.0s
YAK smax smax
comp=N,80nm,4.8s
ELK Elko 35.00 91 IAmb IAmb 02 38 10.9
comp=Z,6.6nm,0.8s
ELK Elko 35.00 91 P **P** **02 37 56.6 +1.6**
comp=Z,3.1nm,0.9s,baz=289,slow=10.0,SNR=13
comp=Z,3.1nm,0.9s
JKA Kamikawa-asahi 35.49 277 P **P** **02 37 59.2 +0.3**
ASAJ Asahikawa 35.49 277 LR LR 02 50 56.6
comp=Z,160nm,20.9s,baz=111,slow=34
GRNR Gornyy 35.66 290 ⇑ *i*P **P** **02 37 59.2 -1.0**
GRNR pmax pmax
comp=Z,9.0nm,1.1s
GRNR MLR MLR
comp=E,490nm,16.0s
GRNR MLR MLR
comp=N,220nm,17.0s
GRNR MLR MLR
comp=Z,160nm,19.0s
LCH Last Change Ra 35.82 98 IAmb IAmb 02 38 22.1
comp=Z,13nm,1.4s
HVU Hansel Valley 35.85 88 P **P** **02 38 02.4 +0.2**
EUNU Eureka 35.88 17 IAmb IAmb 02 38 03.4
comp=Z,8.8nm,0.6s
GRAC Grapevine Rang 36.14 98 IAmb IAmb 02 38 36.1
comp=Z,24nm,1.4s
BGU Big Grassy Mou 36.22 89 P **P** **02 38 05.3 0.0**
R11B Troy Canyon, C 36.31 94 P **P** **02 38 06.6 +0.5**
Q12A Willow Creek R 36.32 93 IAmb IAmb 02 38 25.7
comp=Z,27nm,1.3s
ERM Erimo 36.38 274 *i* P **P** **02 38 06.2 -0.2**
ERM pmax pmax
comp=Z,63nm,1.4s
DUG Dugway, Tooele 36.80 90 IAmb IAmb 02 38 29.4
comp=Z,20nm,1.5s
PDAR Pinedale Array 37.19 84 P **P** **02 38 16.2 +2.5**
comp=Z,0.2nm,0.6s,baz=299,slow=6.0,SNR=2.9
DGMT Dagmar 37.20 73 IAmb IAmb 02 38 27.5
comp=Z,26nm,1.3s
GSC Goldstone, Bar 37.62 99 IAmb IAmb 02 38 28.4
comp=Z,7.9nm,0.8s
FCC Fort Churchill 37.90 53 P **P** **02 38 18.8 -0.4**
FCC IAmb IAmb 02 38 32.8
comp=Z,15nm,0.8s
MVU Marysvale 38.23 91 IAmb IAmb 02 38 26.0
comp=Z,23nm,0.9s
V12A Nelson 38.49 97 P **P** **02 38 24.7 +0.1**
KLR Kul'dur 39.04 291 *i* P **P** **02 38 27.8 -1.1**
KLR pmax pmax
comp=Z,8.0nm,0.9s
KLR Kul'dur 39.04 291 LR LR 02 54 28.4
comp=Z,230nm,21.3s,baz=73,slow=36
ZEA Zeya 39.25 299 *e*P **P** **02 38 32.4 +1.8**
ZEA *e* 02 47 40.2
ZEA MLR MLR
comp=Z,200nm,15.0s
HMU Henry Mountain 39.48 91 IAmb IAmb 02 38 53.2
comp=Z,13nm,0.8s
O20A White River Ci 39.57 86 IAmb IAmb 02 38 55.4
comp=Z,14nm,0.9s
BLYC Blythe 40.05 99 P **P** **02 38 38.0 +0.5**
BLYC IAmb IAmb 02 38 57.2
comp=Z,18nm,1.2s
E28A Huff 40.22 73 IAmb IAmb 02 38 53.5
comp=Z,26nm,0.8s
H11N2 WAKE ISLAND Hy 40.25 225 T T 03 22 06.6
baz=26,slow=76,SNR=231
H11N3 WAKE ISLAND Hy 40.26 225 T T 03 22 07.1
baz=26,slow=76,SNR=275
H11N1 WAKE ISLAND Hy 40.27 225 T T 03 22 08.0
baz=26,slow=76,SNR=291
HEH HeiHe 40.90 294 *e*P **P** **02 38 42.5 -1.8**
HEH pmax pmax
comp=Z,14nm,0.8s
HEH pmax pmax
comp=Z,120nm,4.4s
HEH LR LR
comp=Z,230nm,14.3s
HEH LR LR
comp=Z,280nm,14.6s
HEH LR LR
comp=Z,450nm,15.9s
ULM Lac du Bonnet 40.93 66 P **P** **02 38 44.4 -0.2**
comp=Z,5.2nm,0.7s,baz=300,slow=9.2,SNR=14
ULM LR LR 02 56 32.2
comp=Z,144nm,18.5s,baz=296,slow=37
comp=Z,5.2nm,0.7s
H11S1 WAKE ISLAND Hy 41.42 224 T T 03 23 32.8
baz=25,slow=76,SNR=124
H11S2 WAKE ISLAND Hy 41.44 224 T T 03 23 38.9
baz=25,slow=76,SNR=146
H11S3 WAKE ISLAND Hy 41.44 224 T T 03 23 45.0
baz=25,slow=76,SNR=160
USRK Ussuriysk Ar. 41.69 284 LR LR 02 57 51.5
comp=Z,121nm,19.4s,baz=67,slow=39
AGMN Agassiz Nation 41.99 68 IAmb IAmb 02 38 54.3

comp=Z,11nm,0.8s
MJAR Matsushiro Arr 42.81 271 P **P** **02 39 00.9 +0.8**
comp=Z,6.2nm,1.1s,baz=33,slow=7.8,SNR=7.8
MJAR LR LR 02 55 07.7
comp=Z,202nm,21.2s,baz=58,slow=34
comp=Z,6.2nm,1.1s
MAJO Matsushiro 42.81 271 P **P** **02 38 60.0 -0.1**
MAJO IAmb IAmb 02 39 14.2
comp=Z,28nm,1.0s
MAJO Matsushiro 42.81 271 *i* P **P** **02 39 00.0 -0.1**
MAJO pmax pmax
comp=Z,28nm,1.0s
MJB9 Matsu-Tunnel 42.81 271 IAmb IAmb 02 39 15.1
comp=Z,28nm,1.0s
MDJ Mudanjiang 42.83 286 P **P** **02 38 59.3 -0.9**
MDJ pmax pmax
comp=Z,19nm,2.0s
MDJ pmax pmax
comp=Z,310nm,3.6s
B35A Bob, Littlefor 43.14 67 IAmb IAmb 02 39 03.3
comp=Z,7.6nm,0.6s
NEEM North Greenlan 43.16 17 *i* P **P** **02 39 01.8 -1.1**
NEEM IAmb IAmb 02 39 05.0
comp=Z,50nm,0.8s
TUC Tucson 43.29 97 P **P** **02 39 04.1 0.0**
BNX BinXian 43.42 289 ⇑ P **P** **02 39 03.3 -1.6**
BNX pmax pmax
comp=Z,4.0nm,0.7s
BNX pmax pmax
comp=Z,71nm,3.9s
BOD Bodaibo 43.76 310 *e*P **P** **02 39 06.4 -1.1**
BOD pmax pmax
comp=Z,20nm,0.9s
T25A Trinidad 43.79 87 IAmb IAmb 02 39 27.1
comp=Z,22nm,1.4s
NOR Nord 44.16 6 *i* P **P** **02 39 09.3 -1.2**
NOR IAmb IAmb 02 39 11.3
comp=Z,9.9nm,1.0s
JHJ Hachijo jima 2 44.20 266 LR LR 02 55 01.4
comp=Z,95nm,21.6s,baz=286,slow=33
EYMN Ely 44.60 66 P **P** **02 39 14.7 +0.2**
EYMN IAmb IAmb 02 39 31.6
comp=Z,6.0nm,0.8s
F36A Milaca 44.70 70 IAmb IAmb 02 39 34.2
comp=Z,7.7nm,1.1s
UPNV Upernavik 44.88 24 *i* P **P** **02 39 17.2 +0.9**
121A Cookes Peak, D 44.92 94 IAmb IAmb 02 39 21.0
comp=Z,7.2nm,0.8s
E38A The Farm, Brul 45.36 68 IAmb IAmb 02 39 21.0
comp=Z,9.9nm,0.8s
SPMN Marine on St. 45.49 70 IAmb IAmb 02 39 34.4
comp=Z,15nm,1.4s
HIA Hailar 45.59 297 *i* P **P** **02 39 20.9 -1.4**
HIA pmax pmax
comp=Z,11nm,0.9s
CN2 Changchun 45.70 288 P **P** **02 39 22.5 -0.7**
CN2 pmax pmax
comp=Z,20nm,0.8s
FRB Frobisher Bay 46.34 38 P **P** **02 39 28.3 +0.4**
comp=Z,19nm,0.7s,baz=311,slow=8.6,SNR=68
comp=Z,19nm,0.7s
NUUG Nuugaatsiaq 46.36 24 *i* P **P** **02 39 28.3 +0.4**
COWI Conover 47.00 67 IAmb IAmb 02 40 58.9
comp=Z,6.7nm,1.1s
NRIK Noril'sk 47.01 333 P **P** **02 39 33.0 -0.1**
NRIK Noril'sk 47.01 333 *ce*P **P** **02 39 33.0 -0.1**
NRIK pmax pmax
comp=Z,21nm,0.9s
NRIK Noril'sk 47.01 333 P **P** **02 39 33.6 +0.6**
comp=Z,13nm,0.7s,baz=70,slow=8.4,SNR=19
NRIK LR LR 03 01 05.6
comp=Z,143nm,18.3s,baz=40,slow=39
comp=Z,13nm,0.7s
JCJ Chichijima 47.15 258 LR LR 02 55 47.2
comp=Z,88nm,21.7s,baz=98,slow=32
VHRN Van Horn 47.84 94 IAmb IAmb 02 40 00.0
comp=Z,15nm,1.1s
KSRS Korea Array 48.34 279 P **P** **02 39 45.0 +1.2**
KSRS Korea Array 48.34 279 P **P** **02 39 45.0 +1.2**
comp=Z,16nm,0.8s,baz=52,slow=7.2,SNR=50
KSRS LR LR 03 01 26.5
comp=Z,86nm,19.1s,baz=80,slow=38
comp=Z,16nm,0.8s
L40A Anamosa 48.35 72 IAmb IAmb 02 39 44.2
comp=Z,8.1nm,0.8s
JFWS Jewell Farm 48.37 71 IAmb IAmb 02 39 43.9
comp=Z,11nm,0.7s
KSAR Wonju Array Be 48.37 279 P **P** **02 39 44.3 +0.3**
P38A Dawn 48.60 76 IAmb IAmb 02 39 58.3
comp=Z,9.5nm,0.8s
SPA0 Spitsbergen Ar 48.73 360 *e*P **P** **02 39 46.5 +0.1**
SPITS Spitsbergen Ar 48.73 360 P **P** **02 39 46.2 -0.1**
comp=Z,14nm,0.8s,baz=21,slow=5.2,SNR=10
comp=Z,14nm,0.8s
WMOK Wichita Mounta 48.78 85 P **P** **02 39 48.0 +0.7**
WMOK IAmb IAmb 02 40 06.5
comp=Z,7.6nm,0.8s
SUMG Summit 48.88 19 P **P** **02 39 48.6 +0.6**
SUMG Summit 48.88 19 *i* P **P** **02 39 48.4 +0.3**
SUMG IAmb IAmb 02 39 50.2
comp=Z,32nm,0.6s
OK052 Battle Ridge R 49.10 82 P **P** **02 39 49.8 +0.1**
OK052 IAmb IAmb 02 40 04.9
comp=Z,20nm,1.1s
TJN Taejon 49.39 279 P **P** **02 39 52.7 +0.8**
TJN Taejon 49.39 279 *ce*P **P** **02 39 52.4 +0.5**
P40A Paris 49.53 75 IAmb IAmb 02 40 05.8
comp=Z,15nm,0.8s
JNU Nakatsue 49.54 273 LR LR 02 59 24.1
comp=Z,203nm,21.9s,baz=44,slow=34
TX31 Lajitas Ar. Si 49.67 94 IAmb IAmb 02 40 14.1
comp=Z,18nm,1.1s
TXAR Lajitas Array 49.67 94 P **P** **02 39 55.5 +1.2**
comp=Z,2.9nm,0.6s,baz=300,slow=5.8,SNR=54
comp=Z,2.9nm,0.6s
SFJD Kangerlussuaq 50.09 28 P **P** **02 39 57.3 +0.5**
SFJD Kangerlussuaq 50.09 28 *i* P **P** **02 39 56.3 -0.5**
SFJD IAmb IAmb 02 39 58.6
comp=Z,24nm,0.9s
SFJD Kangerlussuaq 50.09 28 P **P** **02 39 57.5 +0.7**
comp=Z,21nm,0.9s,baz=328,slow=8.1,SNR=14
comp=Z,21nm,0.9s
R40A Maddies Statio 50.22 77 IAmb IAmb 02 40 12.5
comp=Z,10nm,0.7s
HOPEN Hopen 50.27 357 *e*P **P** **02 39 57.8 -0.3**
XLT XiLinHaoTe 50.89 294 *e*P **P** **02 40 03.8 +0.5**
XLT pP pwP 02 40 08.3 -3.0
XLT sP sP 02 40 11.8 +4.4
XLT PcP **PcP** **02 41 16.5 -3.2**
XLT PP **PP** **02 41 56.0 -3.3**
XLT pmax pmax
comp=Z,13nm,0.7s
XLT pmax pmax
comp=Z,63nm,4.7s
P43A Skaggs, Pawnee 50.91 74 IAmb IAmb 02 40 03.9
comp=Z,18nm,0.8s
X37A Clayton 50.91 83 IAmb IAmb 02 40 19.6
comp=Z,9.5nm,0.8s
MGMO Mountain Grove 50.99 78 IAmb IAmb 02 40 17.7
comp=Z,8.2nm,0.9s
BRDY Brady 51.06 88 IAmb IAmb 02 40 22.9
comp=Z,5.4nm,0.8s
JCT Junction City 51.16 90 IAmb IAmb 02 40 19.5
comp=Z,8.9nm,0.8s
ICESG Greenland Ices 51.33 22 *i* P **P** **02 40 05.5 -1.1**
ICESG IAmb IAmb 02 40 09.2
comp=Z,46nm,0.8s
DRIO Del Rio 51.43 91 IAmb IAmb 02 40 13.3
comp=Z,6.2nm,0.8s
WHTX Lake Whitney, 51.49 86 IAmb IAmb 02 40 21.8
comp=Z,14nm,1.1s
DY2G Dye2 51.67 27 *i* P **P** **02 40 08.2 -0.8**
SFIN Lafayette 51.81 71 IAmb IAmb 02 40 12.8
comp=Z,10nm,0.9s
FCAR Ozark Folk Cen 51.94 79 IAmb IAmb 02 40 24.9
comp=Z,8.9nm,0.8s
MIAR Mount Ida 52.01 81 IAmb IAmb 02 40 27.0
comp=Z,5.1nm,0.8s
N47A Urbana 52.27 70 IAmb IAmb 02 40 13.6
comp=Z,15nm,0.7s
435B Jarrell 52.27 88 IAmb IAmb 02 40 28.9
comp=Z,8.5nm,0.7s
OLIL Olney 52.34 74 IAmb IAmb 02 40 14.6
comp=Z,14nm,0.7s
SCHQ Schefferville 52.55 46 P **P** **02 40 15.4 -0.1**
SCHQ IAmb IAmb 02 40 28.5
comp=Z,19nm,1.2s

SCHQ Schefferville 52.55 46 P **P** **02 40 15.3 -0.1**
comp=Z,3.9nm,0.7s,baz=303,slow=9.8,SNR=8.2
comp=Z,3.9nm,0.7s
833A Chaparral WMA, 52.97 91 IAmb IAmb 02 40 33.7
comp=Z,17nm,1.0s
ULN Ulaanbaatar 53.06 303 P **P** **02 40 19.6 +0.1**
ULN Ulaanbaatar 53.06 303 *ce*P **P** **02 40 19.3 -0.2**
ULN pmax pmax
comp=Z,37nm,1.0s
ZAK Zakamensk 53.24 307 *e*P **P** **02 40 20.1 -0.7**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
SONM Songino Array 53.41 303 P **P** **02 40 22.4 +0.3**
SONM IAmb IAmb 02 40 23.4
comp=Z,21nm,1.0s
SONM Songino Array 53.41 303 P **P** **02 40 22.4 +0.3**
comp=Z,14nm,0.8s,baz=38,slow=8.3,SNR=84
SONM PcP **PcP** **02 41 30.2 +1.1**
comp=Z,2.8nm,0.8s,baz=46,slow=1.6,SNR=3.9
comp=Z,14nm,0.8s
SCO Scoresbysund 53.52 15 *i* P **P** **02 40 21.9 -0.5**
SCO IAmb IAmb 02 40 24.4
comp=Z,16nm,0.9s
P49A Miami Univ. Ec 53.73 71 IAmb IAmb 02 40 23.6
comp=Z,13nm,0.8s
SOEG Soedalen 53.83 20 *i* P **P** **02 40 24.5 -0.1**
SOEG IAmb IAmb 02 40 26.4
comp=Z,75nm,1.2s
T47A Sharon Grove 54.11 74 IAmb IAmb 02 40 28.0
comp=Z,11nm,0.8s
WVT Waverly 54.28 76 P **P** **02 40 28.5 +0.1**
WVT IAmb IAmb 02 40 28.9
comp=Z,12nm,0.8s
ISOG Isortoq, Green 54.29 25 *i* P **P** **02 40 27.9 -0.2**
ISOG IAmb IAmb 02 40 29.4
comp=Z,57nm,1.1s
R50A Paris 54.81 71 IAmb IAmb 02 40 32.4
comp=Z,10nm,0.8s
Q51A Peebles 54.85 70 IAmb IAmb 02 40 44.6
comp=Z,15nm,0.8s
IVI Ivigtut 55.06 32 P **P** **02 40 34.1 +0.5**
IVI Ivigtut 55.06 32 *i* P **P** **02 40 34.9 +1.3**
IVI IAmb IAmb 02 40 38.3
comp=Z,25nm,0.8s
CLTN Cedars of Leba 55.18 75 IAmb IAmb 02 40 49.8
comp=Z,15nm,1.2s
T50A Nancy 55.39 73 IAmb IAmb 02 40 36.7
comp=Z,6.9nm,0.7s
HHC Hu-ho-hao-te 55.41 294 *e*P **P** **02 40 37.5 +0.8**
HHC S **S** **02 48 15.5 -5.4**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,49nm,5.6s
HHC LR LR
comp=Z,100nm,17.6s
HHC LR LR
comp=Z,160nm,17.6s
HHC LR LR
comp=Z,170nm,18.0s
NRS Narsarsuaq 55.95 31 *i* P **P** **02 40 40.7 +0.6**
HAMF Hammerfest 56.17 357 *e*P **P** **02 40 40.8 -0.8**
BTO Baotou 56.43 294 *e*P **P** **02 40 44.0 0.0**
BTO pP **pwP** **02 40 48.8 -3.2**
BTO sP **sP** **02 40 51.0 +2.9**
BTO PP **PP** **02 42 50.5 +1.3**
BTO pmax pmax
comp=Z,28nm,0.9s
BTO pmax pmax
comp=Z,170nm,6.2s
BTO LR LR
comp=Z,420nm,11.8s
BTO LR LR
comp=Z,620nm,15.7s
BTO LR LR
comp=Z,360nm,21.4s
VADS Vadso 56.44 354 *e*P **P** **02 40 43.5 +0.1**
FPAL Fort Paine 56.69 76 IAmb IAmb 02 40 59.5
comp=Z,10nm,0.9s
KEV Kevo 56.92 355 P **P** **02 40 46.7 -0.2**
ARA0 ARCESS Array S 57.21 356 *e*P **P** **02 40 48.5 -0.5**
ARCES ARCESS Array B 57.21 356 P **P** **02 40 48.8 -0.2**
comp=Z,26nm,1.1s,baz=12,slow=7.8,SNR=59
ARCES PcP **PcP** **02 41 43.6 +0.4**
comp=Z,4.1nm,0.5s,baz=15,slow=4.7,SNR=10
comp=Z,26nm,1.1s
TRO Tromso 57.30 359 *e*P **P** **02 40 49.9 +0.3**
JETT Jettan, Norway 57.35 358 *e*P **P** **02 40 50.2 +0.3**
NJ2 Nanjing 57.44 281 ⇓ *i* P **P** **02 40 51.3 +0.2**
NJ2 pP **sP** **02 40 54.3 -0.9**
NJ2 pmax pmax
comp=Z,19nm,0.7s
NJ2 pmax pmax
comp=Z,210nm,6.6s
BLA Blacksburg 57.76 70 IAmb IAmb 02 40 53.8
comp=Z,14nm,0.8s
KTK1 Kautokeino 57.82 357 *e*P **P** **02 40 52.9 -0.3**
LVZ Lovozero 58.24 352 P **P** **02 40 56.9 +0.7**
LVZ Lovozero 58.24 352 *ce*P **P** **02 40 55.9 -0.4**
LVZ pmax pmax
comp=Z,32nm,0.8s
ZAA0 Zalesovo Array 58.73 320 IAmb IAmb 02 41 00.5
comp=Z,4.3nm,0.5s
ZALV Zalesovo Beam 58.73 320 P **P** **02 40 59.6 -0.2**
ZALV Zalesovo Beam 58.73 320 P **P** **02 40 59.8 0.0**
comp=Z,3.6nm,0.3s,baz=43,slow=7.2,SNR=19
ZALV PcP **PcP** **02 41 50.2 +0.7**
comp=Z,1.7nm,0.5s,baz=30,slow=5.7,SNR=3.8
comp=Z,3.6nm,0.3s
BORG Borgarnes 58.81 18 LR LR 03 08 49.9
comp=Z,104nm,18.1s,baz=354,slow=39
LOF Lofoten 58.82 1 *e*P **P** **02 40 59.4 -0.8**
STEI Steigen 59.03 0 *e*P **P** **02 41 01.4 -0.3**
LYN LuoYang 59.35 288 *e*P **P** **02 41 05.0 +0.6**
LYN pmax pmax
comp=Z,22nm,0.8s
LYN LR LR
comp=Z,310nm,15.8s
LYN LR LR
comp=Z,220nm,13.9s
LYN LR LR
comp=Z,360nm,20.9s
FAUS Fauske 59.58 0 *e*P **P** **02 41 05.2 -0.3**
MOR8 Moi Rana 60.80 1 *e*P **P** **02 41 12.9 -1.0**
DGZ Jazzator, Alta 60.89 315 *i* P **P** **02 41 14.9 -0.1**
DGZ pmax pmax
comp=Z,8.0nm,0.7s
WHN Wuhan 61.18 283 ⇑ P **P** **02 41 17.3 +0.4**
WHN sP **pwP** **02 41 24.0 -0.9**
WHN pmax pmax
comp=Z,50nm,0.8s
XAN Xi'an 61.73 290 P **P** **02 41 20.8 0.0**
XAN pmax pmax
comp=Z,15nm,0.8s
XAN LR LR
comp=Z,280nm,13.7s
XAN LR LR
comp=Z,250nm,15.3s
XAN LR LR
comp=Z,220nm,14.6s
NSS Namsos 62.41 2 *e*P **P** **02 41 24.3 -0.5**
GTA Gaotai 62.73 300 P **P** **02 41 27.5 0.0**
GTA sP pwP 02 41 37.3 +1.8
GTA pmax pmax
comp=Z,11nm,1.2s
GTA LR LR
comp=Z,180nm,20.3s
GTA LR LR
comp=Z,320nm,15.1s
GTA LR LR
comp=Z,310nm,16.7s
LZH Lanzhou 63.05 295 *e*P **P** **02 41 30.0 +0.4**
LZH pP pwP 02 41 40.5 +2.8
LZH pmax pmax
comp=Z,29nm,1.0s
LZH LR LR
comp=Z,270nm,18.2s
LZH LR LR
comp=Z,300nm,17.2s
LZH LR LR
comp=Z,260nm,17.5s
KURK Kurchatov 63.63 321 P **P** **02 41 33.1 0.0**
KURK Kurchatov 63.63 321 *ce*P **P** **02 41 33.0 0.0**
KURK pmax pmax
comp=Z,17nm,1.0s
TBLU Trondheim 63.65 3 *e*P **P** **02 41 32.3 -0.7**

ZSN	**Zaisan**	**63.71**	**315**	*e*P		**P**	**02 41 33.6**	**-0.1**
	baz=315								
ZSN	**Zaisan**	**63.71**	**315**	*e*P		**P**	**02 41 33.6**	**-0.1**
KURBB	**Kurchatov Arra**	**63.74**	**321**	P		**P**	**02 41 33.8**	**0.0**
	comp=Z,11nm,1.0s,baz=42,slow=6.8,SNR=58								
	comp=Z,11nm,1.0s								
SVE	**Sverdlovsk**	**64.20**	**334**	*e*P		**P**	**02 41 37.3**	**+0.6**
SVE					pmax	pmax			
	comp=Z,36nm,0.9s								
KLMR	**Klimovskoe**	**64.57**	**347**	*e*P		**P**	**02 41 37.2**	**-1.8**
KLMR					pmax	pmax			
	comp=Z,33nm,1.2s								
AKN	**Aaknes**	**64.60**	**5**	*e*P		**P**	**02 41 40.0**	**+0.7**
BVAR	**Borovoye Array**	**64.64**	**327**	P		**P**	**02 41 40.0**	**+0.4**
	comp=Z,25nm,0.7s,baz=42,slow=6.8,SNR=91								
BVAR				PcP		**PcP**	**02 42 13.8**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=56,slow=3.6,SNR=1.8								
	comp=Z,25nm,0.7s								
BRVK	**Borovoye**	**64.64**	**327**	P		**P**	**02 41 40.0**	**+0.3**
BRVK	**Borovoye**	**64.64**	**327**	*ce*P		**P**	**02 41 39.8**	**+0.1**
BRVK					pmax	pmax			
	comp=Z,25nm,1.0s								
DOMB	**Dombas**	**64.82**	**3**	*e*P		**P**	**02 41 41.4**	**+0.6**
VALR	**Valaam**	**65.00**	**352**	*i* P		**P**	**02 41 41.5**	**-0.3**
VALR					pmax	pmax			
	comp=Z,30nm,1.0s								
FOO	**Floro**	**65.08**	**6**	*e*P		**P**	**02 41 42.5**	**+0.1**
ARU	**Arti**	**65.08**	**335**	P		**P**	**02 41 42.4**	**-0.1**
ARU	**Arti**	**65.08**	**335**	*ce*P		**P**	**02 41 42.4**	**-0.1**
ARU					pmax	pmax			
	comp=Z,30nm,0.8s								
KIRV	**Kirov**	**65.13**	**341**	*ce*P		**P**	**02 41 42.5**	**-0.2**
FINES	**FINESS Array B**	**65.25**	**355**	P		**P**	**02 41 43.3**	**-0.2**
	comp=Z,6.8nm,0.5s,baz=24,slow=6.9,SNR=74								
	comp=Z,6.8nm,0.5s								
WMQ	**Urumqi**	**65.30**	**311**	*e*P		**P**	**02 41 45.0**	**+0.8**
WMQ				pP		pwP	02 41 52.0	-0.3
WMQ				PcP		**PcP**	**02 42 19.5**	**+3.1**
WMQ					pmax	pmax			
	comp=Z,23nm,0.7s								
WMQ					pmax	pmax			
	comp=Z,86nm,4.1s								
WMQ					LR	LR			
	comp=Z,430nm,18.9s								
WMQ					LR	LR			
	comp=Z,180nm,18.1s								
MK31	**Makanchi Array**	**65.31**	**316**	IAmb		IAmb	02 41 44.6		
	comp=Z,5.7nm,0.7s								
MK31	**Makanchi Array**	**65.31**	**316**	*ce*P		**P**	**02 41 43.4**	**-0.8**
MKAR	**Makanchi Array**	**65.31**	**316**	*ce*P		**P**	**02 41 43.5**	**-0.6**
MKAR					pmax	pmax			
	comp=Z,8.0nm,0.7s								
MKAR	**Makanchi Array**	**65.31**	**316**	P		**P**	**02 41 43.6**	**-0.6**
	comp=Z,7.4nm,0.7s,baz=46,slow=5.8,SNR=93								
MKAR					LR	LR	03 11 40.5		
	comp=Z,288nm,19.6s,baz=46,slow=37								
	comp=Z,7.4nm,0.7s								
MAKZ	**Makanchi**	**65.43**	**316**	P		**P**	**02 41 44.6**	**-0.3**
MAKZ	**Makanchi**	**65.43**	**316**	P		**P**	**02 41 44.3**	**-0.7**
NC204	**NORSAR Array S**	**65.65**	**3**	P		**P**	**02 41 47.0**	**+0.9**
RAF	**Rauma**	**65.87**	**357**	*e*P		**P**	**02 41 47.7**	**+0.2**
NB2	**NORSAR Subarra**	**65.89**	**2**	P		**P**	**02 41 47.6**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=355,slow=6.5								
NB2	**NORSAR Subarra**	**65.89**	**2**	P		**P**	**02 41 47.6**	**-0.2**
	baz=355,slow=6.5								
NOA	**NORSAR Array B**	**65.89**	**2**	P		**P**	**02 41 47.5**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=357,slow=6.5,SNR=12								
NOA				PcP		**PcP**	**02 42 19.2**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=349,slow=3.2,SNR=4.4								
NOA					LR	LR	03 12 55.8		
	comp=Z,61nm,18.2s,baz=20,slow=38								
	comp=Z,5.4nm,0.9s								
SKAR	**Skarslia**	**66.16**	**4**	*e*P		**P**	**02 41 49.6**	**+0.1**
NC602	**NORSAR Array S**	**66.21**	**2**	*e*P		**P**	**02 41 50.6**	**+0.9**
BRZS	**Berezniki**	**66.41**	**324**	*e*P		**P**	**02 41 50.7**	**-0.5**
	baz=324								
BRZS	**Berezniki**	**66.41**	**324**	*e*P		**P**	**02 41 50.7**	**-0.5**
MEF	**Metsahovi**	**66.56**	**355**	*e*P		**P**	**02 41 52.1**	**+0.2**
HFS	**Hagfors**	**66.85**	**1**	P		**P**	**02 41 53.6**	**-0.2**
	comp=Z,6.8nm,0.4s,baz=26,slow=2.9,SNR=63								
	comp=Z,6.8nm,0.4s								
CD2	**Chengdu**	**66.97**	**291**	P		**P**	**02 41 56.3**	**+1.2**
CD2					pmax	pmax			
	comp=Z,30nm,0.8s								
GOMU	**GeErMu**	**67.75**	**301**	P		**P**	**02 42 00.0**	**-0.3**
GOMU				pP		sP	02 42 03.5	-1.0
GOMU				sP		pwP	02 42 06.3	-2.1
GOMU				S		**S**	**02 50 49.8**	**-8.1**
GOMU					pmax	pmax			
	comp=Z,9.0nm,0.6s								
GOMU					LR	LR			
	comp=Z,160nm,16.1s								
GOMU					LR	LR			
	comp=Z,130nm,16.9s								
GOMU					LR	LR			
	comp=Z,190nm,15.2s								
MTSE	**Matsula**	**68.09**	**355**	*e*P		**P**	**02 42 02.0**	**+0.4**
VSU	**Vasula**	**68.18**	**354**	*ce*P		**P**	**02 42 02.1**	**-0.1**
VSU					pmax	pmax			
	comp=Z,67nm,2.5s								
VSU	**Vasula**	**68.18**	**354**	*e*P		**P**	**02 42 02.6**	**+0.4**
TDK	**Taldyqorghan**	**68.36**	**317**	*e*P		**P**	**02 42 03.7**	**+0.1**
	baz=317								
TDK	**Taldyqorghan**	**68.36**	**317**	*e*P		**P**	**02 42 03.6**	**0.0**
GYA	**Guiyang**	**68.69**	**286**	⇓*i* P		**P**	**02 42 07.3**	**+1.2**
GYA					pmax	pmax			
	comp=Z,29nm,1.0s								
ARXS	**Arharly**	**69.24**	**317**	*e*P		**P**	**02 42 09.4**	**+0.2**
SLIT	**Slitere, Latvi**	**69.25**	**356**	*e*P		**P**	**02 42 09.4**	**+0.6**
SHLS	**Shalkode**	**69.43**	**316**	*e*P		**P**	**02 42 09.9**	**-0.6**
	baz=315								
SHLS	**Shalkode**	**69.43**	**316**	*e*P		**P**	**02 42 09.9**	**-0.6**
KPKS	**Kokpek**	**69.50**	**316**	*e*P		**P**	**02 42 11.2**	**+0.3**
	comp=Z,8.3nm,0.6s,baz=316								
KPKS	**Kokpek**	**69.50**	**316**	*e*P		**P**	**02 42 11.1**	**+0.3**
KPKS					pmax	pmax			
	comp=Z,8.0nm,0.6s								
UZB	**Uzynbulak**	**69.63**	**316**	*e*P		**P**	**02 42 11.7**	**0.0**
	baz=316								
UZB	**Uzynbulak**	**69.63**	**316**	*e*P		**P**	**02 42 11.7**	**0.0**
MOS	**Moscow**	**69.79**	**347**	*e*P		**P**	**02 42 11.4**	**-0.8**
SATY	**Saty**	**69.95**	**316**	*e*P		**P**	**02 42 13.7**	**0.0**
	baz=316								
SATY	**Saty**	**69.95**	**316**	*e*P		**P**	**02 42 13.7**	**0.0**
BTLS	**Baital**	**70.05**	**320**	*e*P		**P**	**02 42 14.0**	**-0.1**
	comp=Z,9.3nm,0.4s,baz=320								
BTLS	**Baital**	**70.05**	**320**	*e*P		**P**	**02 42 14.0**	**-0.1**
BTLS					pmax	pmax			
	comp=Z,9.0nm,0.4s								
KUU	**Kurty**	**70.11**	**318**	*e*P		**P**	**02 42 13.8**	**-0.7**
	comp=Z,8.8nm,0.6s,baz=318								
KUU	**Kurty**	**70.11**	**318**	*e*P		**P**	**02 42 13.7**	**-0.7**
KUU					pmax	pmax			
	comp=Z,9.0nm,0.6s								
MDOK	**Medeo**	**70.43**	**317**	*e*P		**P**	**02 42 16.5**	**-0.1**
	baz=317								
MDOK	**Medeo**	**70.43**	**317**	*e*P		**P**	**02 42 16.5**	**-0.1**
OBN	**Obninsk**	**70.53**	**347**	*i* P		**P**	**02 42 16.6**	**-0.2**
OBN				*i*			02 42 24.3		
OBN				*i*			02 42 36.0		
OBN				*i*			02 44 49.6		
OBN					pmax	pmax			
	comp=Z,17nm,0.9s								
EKA	**Eskdalemuir Ar**	**70.56**	**11**	P		**P**	**02 42 17.8**	**+0.8**
	comp=Z,12nm,0.7s,baz=343,slow=4.5,SNR=39								
	comp=Z,12nm,0.7s								
VSVD	**Vaisvydziai**	**70.82**	**355**	*e*P		**P**	**02 42 18.8**	**+0.3**
ISAL	**Salakas**	**71.10**	**354**	*e*P		**P**	**02 42 20.9**	**+0.6**
ABKAR	**Akbulak array**	**71.15**	**331**	P		**P**	**02 42 20.9**	**+0.2**
ABKAR	**Akbulak array**	**71.15**	**331**	P		**P**	**02 42 21.0**	**+0.4**
ABKAR					IAmb	IAmb	02 42 22.2		
	comp=Z,16nm,0.8s								
SGDS	**Sogindy**	**71.16**	**319**	*e*P		**P**	**02 42 21.4**	**+0.4**
	baz=319								
SGDS	**Sogindy**	**71.16**	**319**	*e*P		**P**	**02 42 21.3**	**+0.4**
TKM2	**Tokmak 2**	**71.22**	**318**	P		**P**	**02 42 22.2**	**+0.7**
	SNR=9.0								
PABE	**Paberze**	**71.29**	**355**	*e*P		**P**	**02 42 22.2**	**+0.8**
BELG	**Belogornoye**	**71.30**	**340**	*d* P		**P**	**02 42 21.9**	**+0.4**
BELG					pmax	pmax			
	comp=Z,9.0nm,0.8s								
TARG	**Taragay, Kyrgy**	**71.30**	**316**	P		**P**	**02 42 23.0**	**+0.7**
USP	**Ospenovka**	**71.36**	**319**	P		**P**	**02 42 23.2**	**+1.0**
	SNR=5.3								
PZH	**PanZhiHua**	**71.47**	**289**	P		**P**	**02 42 23.8**	**+0.7**
PZH					pmax	pmax			
	comp=Z,20nm,0.8s								
PZH					pmax	pmax			
	comp=Z,120nm,7.9s								
CHMS	**Chumysh**	**71.49**	**318**	P		**P**	**02 42 24.0**	**+1.1**
	SNR=10.0								
ULHL	**Ulahol**	**71.52**	**317**	P		**P**	**02 42 24.2**	**+0.9**
	SNR=7.4								
KBK	**Karagaybulak**	**71.70**	**318**	P		**P**	**02 42 25.5**	**+1.2**
	SNR=9.4								
PPT	**Papeete**	**71.76**	**165**	LR		LR	03 04 52.4		
	comp=Z,116nm,21.2s,baz=358,slow=28								
AAK	**Ala-Archa**	**71.90**	**318**	P		**P**	**02 42 26.7**	**+1.1**
	SNR=14								
AAK	**Ala-Archa**	**71.90**	**318**	P		**P**	**02 42 24.9**	**-0.7**
AAK	**Ala-Archa**	**71.90**	**318**	*ce*P		**P**	**02 42 25.8**	**+0.3**
AAK					pmax	pmax			
	comp=Z,49nm,1.7s								
MNK	**Minsk**	**72.04**	**353**	*i* P		**P**	**02 42 25.8**	**-0.1**
MNK				*i*			02 45 05.4		
MNK				*i*	PPP	PPP	02 46 49.2		
MNK				*i*	S	**S**	**02 51 51.3**	**+4.5**
MNK				*i*	SS	**SS**	**02 56 25.6**	**+3.2**
MNK					pmax	pmax			
	comp=Z,11nm,0.9s								
MNK					pmax	pmax			
	comp=N,25nm,1.1s								
MNK					pmax	pmax			
	comp=E,6.0nm,1.1s								
MNK					MLR	MLR			
	comp=N,98nm,17.0s								
MNK					MLR	MLR			
	comp=Z,92nm,16.0s								
MNK					MLR	MLR			
	comp=E,85nm,18.0s								
EKS2	**Erkin-Say**	**72.16**	**319**	P		**P**	**02 42 28.2**	**+1.2**
	SNR=19								
NRN	**Naryn**	**72.30**	**317**	P		**P**	**02 42 29.0**	**+0.8**
LPSR	**Galich'ya Gora**	**72.65**	**345**	*e*P		**P**	**02 42 28.6**	**-1.0**
LPSR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
DZA	**Taraz**	**72.91**	**321**	*e*P		**P**	**02 42 31.4**	**0.0**
	baz=321								
DZA	**Taraz**	**72.91**	**321**	*e*P		**P**	**02 42 31.4**	**0.0**
KK31	**Karatay Array**	**73.04**	**321**	P		**P**	**02 42 32.7**	**+0.6**
KKAR	**Karatay Array**	**73.04**	**321**	P		**P**	**02 42 32.3**	**+0.2**
KKAR	**Karatay Array**	**73.04**	**321**	P		**P**	**02 42 32.6**	**+0.5**
BRLS	**Boroldday**	**73.36**	**322**	*e*P		**P**	**02 42 35.2**	**+1.2**
	baz=322								
BRLS	**Boroldday**	**73.36**	**322**	*e*P		**P**	**02 42 35.2**	**+1.2**
VORR	**Voronezh**	**73.51**	**345**	*e*P		**P**	**02 42 35.0**	**+0.3**
VORR					pmax	pmax			
	comp=Z,23nm,0.4s								
VRH	**Novokhopyorsk**	**73.55**	**343**	*e*P		**P**	**02 42 34.8**	**-0.1**
VRH					pmax	pmax			
	comp=Z,14nm,0.8s								
ARSB	**Arslanbob**	**73.61**	**319**	P		**P**	**02 42 36.3**	**+0.6**
ARSB					IAmb	IAmb	02 42 37.6		
	comp=Z,12nm,1.1s								
KSH	**Kashi**	**73.92**	**316**	P		**P**	**02 42 41.5**	**+4.0**
KSH					pmax	pmax			
	comp=Z,37nm,0.8s								
KSH					LR	LR			
	comp=Z,620nm,16.8s								
KSH					LR	LR			
	comp=Z,450nm,15.8s								
KSH					LR	LR			
	comp=Z,820nm,15.1s								
VSR	**Storozhevoye**	**73.96**	**345**	*e*P		**P**	**02 42 35.5**	**-1.8**
VSR					pmax	pmax			
	comp=Z,20nm,0.5s								
IUG	**luzhnay**	**74.04**	**321**	*e*P		**P**	**02 42 38.8**	**+0.6**
	comp=Z,9nm,0.8s,baz=321								
IUG	**luzhnay**	**74.04**	**321**	*e*P		**P**	**02 42 38.8**	**+0.6**
IUG					pmax	pmax			
	comp=Z,19nm,0.8s								
CHM	**Chimkent**	**74.06**	**321**	*e*P		**P**	**02 42 38.7**	**+0.6**
	comp=Z,16nm,0.6s,baz=322								
CHM	**Chimkent**	**74.06**	**321**	*e*P		**P**	**02 42 38.7**	**+0.6**
CHM					pmax	pmax			
	comp=Z,16nm,0.6s								
VORD	**Divnogorie**	**74.18**	**345**	*e*P		**P**	**02 42 36.0**	**-2.6**
VORD					pmax	pmax			
	comp=Z,10.0nm,0.5s								
SLVN	**Son La**	**74.24**	**284**	P		**P**	**02 42 40.3**	**+0.7**
SLVN					IAmb	IAmb	02 42 41.2		
	comp=Z,8.0nm,0.8s								
IBBN	**Ibbenburen**	**74.50**	**5**	*e*P		**P**	**02 42 41.4**	**+1.0**
	comp=Z,13nm,0.7s,baz=358,slow=5.8								
FLTG	**Flechtingen**	**74.62**	**3**	*e*P		**P**	**02 42 41.3**	**+0.2**
	comp=Z,5.8nm,0.7s,baz=358,slow=5.8								
LSA	**Lhasa**	**74.74**	**299**	P		**P**	**02 42 43.3**	**+0.4**
LSA					IAmb	IAmb	02 42 58.5		
	comp=Z,12nm,0.8s								
ASSE	**Asse, Remlinge**	**74.80**	**3**	*e*P		**P**	**02 42 42.7**	**+0.6**
	comp=Z,10nm,1.2s,baz=358,slow=5.8								
PMG	**Port Moresby**	**74.85**	**230**	*i* P		**P**	**02 42 41.6**	**-1.4**
PMG					pmax	pmax			
	comp=Z,28nm,2.0s								
CLZ	**Clausthal**	**75.08**	**3**	*e*P		**P**	**02 42 45.1**	**+1.2**
	comp=Z,13nm,0.9s,baz=358,slow=5.8								
BUG	**Bochum–Univer**	**75.33**	**5**	*e*P		**P**	**02 42 46.1**	**+0.8**
	comp=Z,16nm,1.0s,baz=358,slow=5.8								
GTTG	**Gottingen**	**75.36**	**4**	*e*P		**P**	**02 42 46.7**	**+1.2**
	comp=Z,18nm,0.9s,baz=358,slow=5.8								
KASTN	**Kahler Asten**	**75.63**	**5**	*e*P		**P**	**02 42 47.9**	**+0.8**
	comp=Z,7.2nm,0.9s,baz=358,slow=5.8								
CLL	**Collm**	**75.68**	**2**	*i* P		**P**	**02 42 47.4**	**+0.1**
CLL				*i*			02 42 52.7		
CLL					pmax	pmax			
	comp=Z,6.0nm,0.8s								
CLL	**Collm**	**75.68**	**2**	*i* P		**P**	**02 42 47.4**	**+0.1**
	comp=Z,6.0nm,0.8s								
CLL				*i*	pP	**pP**	**02 42 49.9**	**-0.5**
CLL				*i*	x	x	02 42 52.7		
CLL					AMS	AMS	03 18 00.0		
	comp=Z,100nm,21.9s								
CLL	**Collm**	**75.68**	**2**	*e*P		**P**	**02 42 47.7**	**+0.4**
	comp=Z,5.1nm,0.7s,baz=358,slow=5.8								
AKASG	**Malin Array Be**	**75.70**	**351**	P		**P**	**02 42 47.0**	**-0.4**
	comp=Z,11nm,0.5s,baz=11,slow=5.7,SNR=28								
AKASG					LR	LR	03 18 06.3		
	comp=Z,90nm,19.0s,baz=34,slow=37								
	comp=Z,11nm,0.5s								
AKBB	**Malin Array Si**	**75.70**	**351**	P		**P**	**02 42 46.3**	**-1.1**
AKBB	**Malin Array Si**	**75.70**	**351**	*ce*P		**P**	**02 42 46.7**	**-0.7**
AKBB					pmax	pmax			
	comp=Z,15nm,0.6s								
KIEV	**Kiev**	**75.70**	**351**	⇑P		**P**	**02 42 47.2**	**-0.3**
KIEV	**Kiev**	**75.70**	**351**	P		**P**	**02 42 46.3**	**-1.1**
KIEV	**Kiev**	**75.70**	**351**	P		**P**	**02 42 47.1**	**-0.3**
NEUB	**Neuenburg**	**75.75**	**3**	*e*P		**P**	**02 42 48.7**	**+1.0**
	comp=Z,15nm,0.6s,baz=358,slow=5.8								
BSTI	**Sart Tilman**	**76.08**	**7**	*d*P		**P**	**02 42 50.6**	**+1.0**
	comp=Z,6.5nm,0.7s								
MEM	**Membach**	**76.08**	**6**	*d*P		**P**	**02 42 50.4**	**+0.7**
	comp=Z,13nm,0.9s								
BTNL	**Ternell**	**76.11**	**6**	*d*P		**P**	**02 42 50.7**	**+0.9**
	comp=Z,10nm,0.9s								
BRG	**Berggiesshubel**	**76.13**	**1**	*e*P		**P**	**02 42 50.5**	**+0.6**
BRG					Amp		02 42 51.1		
	comp=Z,5.6nm,0.8s								
BRG	**Berggiesshubel**	**76.13**	**1**	*e*P		**P**	**02 42 50.5**	**+0.6**
BRG					pmax	pmax			
	comp=Z,6.0nm,0.8s								
BRG	**Berggiesshubel**	**76.13**	**1**	*e*P		**P**	**02 42 50.6**	**+0.6**
	comp=Z,5.6nm,0.8s,baz=358,slow=5.8								
KSP	**Ksiaz**	**76.17**	**360**	*e*P		**P**	**02 42 50.8**	**+0.6**
AHRW	**Bad Neuenahr-A**	**76.22**	**6**	*e*P		**P**	**02 42 51.6**	**+1.2**
	comp=Z,10nm,0.7s,baz=358,slow=5.8								
BCLA	**Clavier**	**76.22**	**7**	*d*P		**P**	**02 42 51.0**	**+0.5**
	comp=Z,7.9nm,0.9s								
BGES	**Gesves**	**76.24**	**7**	*d*P		**P**	**02 42 51.1**	**+0.5**
	comp=Z,7.6nm,0.8s								
BMRD	**Maredsous**	**76.30**	**7**	*d*P		**P**	**02 42 51.7**	**+0.9**
MOX	**Moxa**	**76.31**	**3**	*e*P		**P**	**02 42 51.9**	**+0.9**
	comp=Z,9.9nm,0.6s,baz=358,slow=5.8								
MOX					eL	L	03 25 18.2		
	comp=Z,69nm,20.9s								
BHOU	**Houvegnez**	**76.34**	**6**	*d*P		**P**	**02 42 51.1**	**0.0**
CHVC	**Chvalec**	**76.43**	**360**	*e*P		**P**	**02 42 52.5**	**+0.8**
CHVC	**Chvalec**	**76.43**	**360**	*e*P		**P**	**02 42 52.5**	**+0.8**
OSTC	**Ostas**	**76.46**	**360**	*e*P		**P**	**02 42 52.7**	**+0.9**
OSTC	**Ostas**	**76.46**	**360**	*e*P		**P**	**02 42 52.7**	**+0.9**
RICC	**Richard**	**76.46**	**1**	*e*P		**P**	**02 42 52.9**	**+1.1**
RCHB	**Rochefort**	**76.48**	**7**	*d*P		**P**	**02 42 52.3**	**+0.4**
	comp=Z,14nm,0.8s								
PVCC	**Panska Ves**	**76.48**	**1**	*e*P		**P**	**02 42 52.7**	**+0.8**
PVCC	**Panska Ves**	**76.48**	**1**	*e*P		**P**	**02 42 52.7**	**+0.8**
PLN	**Plauen**	**76.49**	**2**	*e*P		**P**	**02 42 52.8**	**+0.9**
	comp=Z,4.3nm,0.6s,baz=358,slow=5.8								
DOU	**Dourbes**	**76.49**	**7**	*d*P		**P**	**02 42 52.3**	**+0.4**
	comp=Z,7.4nm,0.9s								
UPC	**Upice**	**76.51**	**360**	*e*P		**P**	**02 42 52.9**	**+0.8**
UPC	**Upice**	**76.51**	**360**	*e*P		**P**	**02 42 52.9**	**+0.8**
TANN	**Tannenbergstha**	**76.57**	**2**	*e*P		**P**	**02 42 53.3**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=358,slow=5.8								
TNS	**Taunus Mts**	**76.61**	**5**	*e*P		**P**	**02 42 53.7**	**+1.0**
	comp=Z,6.9nm,0.7s,baz=358,slow=5.8								
DPC	**Dobruska-Polom**	**76.67**	**360**	*e*P		**P**	**02 42 53.8**	**+0.8**
DPC	**Dobruska-Polom**	**76.67**	**360**	*e*P		**P**	**02 42 53.8**	**+0.8**
OJC	**Ojcow**	**76.74**	**357**	*e*P		**P**	**02 42 54.0**	**+0.6**
NKC	**Novy Kostel**	**76.75**	**2**	*e*P		**P**	**02 42 54.3**	**+0.8**
NKC	**Novy Kostel**	**76.75**	**2**	*e*P		**P**	**02 42 54.3**	**+0.8**
KRLC	**Kraliky**	**76.94**	**359**	*e*P		**P**	**02 42 55.4**	**+0.8**
KRLC	**Kraliky**	**76.94**	**359**	*e*P		**P**	**02 42 55.4**	**+0.8**
PRU	**Pruhonice**	**77.03**	**1**	*e*P		**P**	**02 42 55.8**	**+0.8**
PRU	**Pruhonice**	**77.03**	**1**	*e*P		**P**	**02 42 55.8**	**+0.8**
WLF	**Walferdange**	**77.03**	**6**	*d*P		**P**	**02 42 56.2**	**+1.2**
WLF	**Walferdange**	**77.03**	**6**	*e*P		**P**	**02 42 56.4**	**+1.4**
	comp=Z,7.8nm,0.8s,baz=358,slow=5.8								
CRAI	**Chiangrai**	**77.15**	**286**	P		**P**	**02 42 55.7**	**-0.4**
CRAI					IAmb	IAmb	02 42 57.9		
	comp=Z,13nm,1.0s								
ROTZ	**Rotzenmuhle**	**77.21**	**2**	*e*P		**P**	**02 42 57.0**	**+1.0**
	comp=Z,1.7nm,1.0s,baz=358,slow=5.8								
KWP	**Kalwaria Pacla**	**77.22**	**355**	*e*P		**P**	**02 42 57.5**	**+1.4**
KWP	**Kalwaria Pacla**	**77.22**	**355**	P		**P**	**02 42 57.1**	**+1.0**
MORC	**Moravsky Berou**	**77.23**	**359**	*e*P		**P**	**02 42 56.8**	**+0.6**
GRF	**Grafenberg Arr**	**77.25**	**3**	*e*P		**P**	**02 42 57.5**	**+1.2**
	comp=Z,12nm,0.7s,baz=358,slow=5.8								
GRF				*e*L		L	03 22 30.3		
	comp=Z,72nm,21.8s								
NIE	**Niedzica**	**77.53**	**357**	*e*P		**P**	**02 42 59.1**	**+1.2**
SHL	**Shillong**	**77.65**	**296**	P		**P**	**02 42 58.5**	**-0.6**
SHL					IAmb	IAmb	02 43 00.7		
	comp=Z,13nm,0.9s								
VRAC	**Vranov**	**77.71**	**359**	⇑P		**P**	**02 42 59.7**	**+0.9**
VRAC	**Vranov**	**77.71**	**359**	*e*P		**P**	**02 42 59.8**	**+0.9**
VRAC	**Vranov**	**77.71**	**359**	P		**P**	**02 42 59.7**	**+0.9**
WET	**Wettzell**	**77.85**	**2**	*e*P		**P**	**02 43 00.7**	**+1.1**
	baz=358,slow=5.8								
KHC	**Kasperske Hory**	**77.87**	**1**	P		**P**	**02 42 59.9**	**0.0**
KHC					IAmb	IAmb	02 43 01.5		
	comp=Z,5.9nm,0.7s								
KHC	**Kasperske Hory**	**77.87**	**1**	*e*P		**P**	**02 43 00.9**	**+1.1**
KHC	**Kasperske Hory**	**77.87**	**1**	*ce*P		**P**	**02 43 00.0**	**+0.2**
KHC					pmax	pmax			
	comp=Z,25nm,1.7s								
KOLS	**Kolonicke sedl**	**77.94**	**356**	*e*P		**P**	**02 43 01.5**	**+1.4**
KOLS					pmax	pmax			
	comp=Z,10.0nm,0.7s								
KOLS	**Kolonicke sedl**	**77.94**	**356**	*e*P		**P**	**02 43 01.5**	**+1.4**
KRUC	**Moravsky**	**77.96**	**360**	*e*P		**P**	**02 43 00.8**	**+0.6**
JAVC	**Velka Javorina**	**78.15**	**359**	*e*P		**P**	**02 43 03.2**	**+1.8**
GEC2	**GERESS Array S**	**78.16**	**1**	P		**P**	**02 43 01.7**	**+0.2**
GEC2					IAmb	IAmb	02 43 03.1		
	comp=Z,4.5nm,0.8s								
GEC2	**GERESS Array S**	**78.16**	**1**	*e*P		**P**	**02 43 02.3**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=358,slow=5.8								
GERES	**GERESS Array B**	**78.16**	**1**	P		**P**	**02 43 02.2**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=7.1,slow=5.4,SNR=9.0								
	comp=Z,3.2nm,0.6s								
CKRC	**Cesky Krumlov**	**78.19**	**1**	*e*P		**P**	**02 43 02.3**	**+0.7**
CKRC	**Cesky Krumlov**	**78.19**	**1**	*e*P		**P**	**02 43 02.3**	**+0.7**
SORM	**Soroca**	**78.32**	**351**	⇑P		**P**	**02 43 01.7**	**-0.5**
SORM	**Soroca**	**78.32**	**351**	P		**P**	**02 43 01.7**	**-0.5**
CLF	**Chambon-Foret**	**78.35**	**9**	P		**P**	**02 43 02.3**	**-0.1**
VYHS	**Vyhne**	**78.49**	**358**	*e*P		**P**	**02 43 02.4**	**-0.8**
VYHS					pmax	pmax			
	comp=Z,7.0nm,0.8s								
VYHS	**Vyhne**	**78.49**	**358**	*e*P		**P**	**02 43 02.4**	**-0.8**
BFO	**Black Forest**	**78.49**	**5**	*e*P		**P**	**02 43 03.9**	**+0.6**
	comp=Z,5.3nm,0.8s,baz=358,slow=5

	comp=Z,104nm,18.5s,baz=7.0,slow=39							
	comp=Z,7.9nm,0.8s							
GROS	**Grobnik**	**80.56**	**0**	*i* P		**P**	**02 43 15.4**	**+0.8**
NCK	**Nalchik**	**80.60**	**340**	*i* P		**P**	**02 43 15.1**	**+0.3**
NCK				pmax		pmax		
	comp=Z,40nm,0.9s							
SIRR	**Siria**	**80.62**	**356**	⇓P		**P**	**02 43 15.4**	**+0.6**
VRI	**Vrincioaia**	**80.71**	**352**	⇓P		**P**	**02 43 16.6**	**+1.2**
VRI	**Vrincioaia**	**80.71**	**352**	P		**P**	**02 43 16.5**	**+1.2**
DOPR	**Dopca**	**80.71**	**353**	⇑P		**P**	**02 43 15.7**	**+0.4**
PLOR	**Plostina**	**80.73**	**352**	⇑P		**P**	**02 43 16.1**	**+0.6**
PLOR	**Plostina**	**80.73**	**352**	P		**P**	**02 43 16.0**	**+0.6**
ROBS	**Robic**	**80.76**	**2**	*i* P		**P**	**02 43 15.8**	**+0.2**
MORH	**Mrgy, Hungar**	**80.78**	**358**	⇑P		**P**	**02 43 16.1**	**+0.5**
SURR	**Surduc**	**81.12**	**355**	⇑P		**P**	**02 43 18.1**	**+0.7**
MLR	**Muntele Rosu**	**81.14**	**353**	LR		LR	03 22 57.4	
	comp=Z,166nm,18.1s,baz=62,slow=38							
VOIR		**81.26**	**353**	⇑P		**P**	**02 43 19.0**	**+0.6**
VOIR		**81.26**	**353**	P		**P**	**02 43 18.9**	**+0.6**
SOC	**Sochi**	**81.27**	**343**	*e*P		**P**	**02 43 18.3**	**0.0**
SOC				*e*			02 46 22.2	
SOC				*e*PPP		PPP	02 48 12.0	
SOC				*e*S		**S**	**02 53 30.4**	**+2.3**
SOC				*e*SS		**SS**	**02 58 42.6**	**+0.5**
SOC				pmax		pmax		
	comp=Z,16nm,0.5s							
BZS	**Buzias**	**81.28**	**356**	⇑P		**P**	**02 43 19.0**	**+0.7**
BZS	**Buzias**	**81.28**	**356**	P		**P**	**02 43 19.0**	**+0.7**
ARR	**Arges**	**81.36**	**354**	⇓P		**P**	**02 43 19.5**	**+0.7**
GZR	**Gura Zlata**	**81.44**	**355**	⇑P		**P**	**02 43 20.1**	**+0.8**
GZR	**Gura Zlata**	**81.44**	**355**	P		**P**	**02 43 20.1**	**+0.8**
ONI	**Oni**	**81.50**	**340**	P		**P**	**02 43 20.1**	**+0.4**
ONI				IAmb		IAmb	02 43 22.6	
	comp=Z,14nm,1.2s							
TEOL	**Teolo**	**81.60**	**3**	P		**P**	**02 43 20.2**	**+0.2**
BNI	**Bardonecchia**	**81.66**	**6**	P		**P**	**02 43 21.8**	**+1.2**
FRGS	**Fruska Gora**	**81.80**	**357**	⇑P		**P**	**02 43 22.0**	**+0.8**
GEYT	**Alibeck**	**81.97**	**327**	P		**P**	**02 43 23.0**	**+0.9**
GEYT	**Alibeck**	**81.97**	**327**	P		**P**	**02 43 22.7**	**+0.5**
	comp=Z,18nm,0.8s,baz=344,slow=4.7,SNR=34							
GEYT				LR		LR	03 24 29.9	
	comp=Z,238nm,18.7s,baz=74,slow=39							
	comp=Z,18nm,0.8s							
GYA0B	**ALIBECK ARRAY**	**81.97**	**327**	P		**P**	**02 43 22.9**	**+0.7**
HERR	**Herculane**	**81.97**	**355**	⇑P		**P**	**02 43 22.4**	**+0.4**
OSSC	**Osservatorio P**	**83.42**	**3**	P		**P**	**02 43 30.0**	**+0.4**
KARS	**Kars**	**83.46**	**339**	P		**P**	**02 43 30.6**	**+0.5**
GNI	**Garni**	**83.56**	**338**	P		**P**	**02 43 32.2**	**+1.7**
GNI	**Garni**	**83.56**	**338**	*e*P		**P**	**02 43 32.1**	**+1.6**
GNI				pmax		pmax		
	comp=Z,15nm,0.8s							
ESDC	**Sonseca Array**	**85.79**	**15**	P		**P**	**02 43 41.9**	**+0.2**
ESDC				IAmb		IAmb	02 44 46.5	
	comp=Z,16nm,1.9s							
ESDC	**Sonseca Array**	**85.79**	**15**	P		**P**	**02 43 42.1**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=343,slow=4.9,SNR=26							
	comp=Z,2.3nm,0.6s							
ARPR	**Arapgir-MALATY**	**85.87**	**343**	P		**P**	**02 43 43.6**	**+1.3**
ANTO	**Ankara**	**85.98**	**347**	P		**P**	**02 43 43.4**	**+0.7**
BR131	**Keskin Array S**	**86.01**	**346**	P		**P**	**02 43 43.5**	**+0.6**
BR131	**Keskin Array S**	**86.01**	**346**	*i* P		**P**	**02 43 43.4**	**+0.5**
BRTR	**Keskin Array B**	**86.01**	**346**	P		**P**	**02 43 43.9**	**+1.0**
	comp=Z,16nm,0.8s,baz=23,slow=2.3,SNR=54							
	comp=Z,16nm,0.8s							
BR231	**Keskin MP Arra**	**86.01**	**347**	P		**P**	**02 43 43.7**	**+0.8**
FNA	**Florina**	**86.11**	**356**	P		**P**	**02 43 43.7**	**+0.4**
FNA				IAmb		IAmb	02 43 44.4	
	comp=Z,8.3nm,0.7s							
BNN	**Bunyan**	**86.53**	**344**	P		**P**	**02 43 46.4**	**+1.0**
KEST	**Kesra**	**91.11**	**5**	P		**P**	**02 44 08.3**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=299,slow=3.8,SNR=5.5							
	comp=Z,1.8nm,0.6s							
MMAI	**Mount Meron Ar**	**92.31**	**344**	P		**P**	**02 44 13.6**	**+1.0**
	comp=Z,8.3nm,0.8s,baz=33,slow=3.4,SNR=5.9							
	comp=Z,8.3nm,0.8s							
PALK	**Pallekele**	**98.69**	**295**	LR		LR	03 35 14.8	
	comp=Z,37nm,19.9s,baz=157,slow=39							
RAYN	**Ar Rayn**	**99.21**	**333**			**Pdif**	**02 44 44.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**112.68**	**15**	PKiKP		**PKiKP**	**02 49 38.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=338,slow=2.0,SNR=4.8							
TORD				PKKPbc		**PKKPbc**	**03 00 25.8**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=170,slow=2.3,SNR=4.9							
H03N2	**Juan Fernandez**	**113.46**	**115**	T		T	04 53 45.7	
	baz=322,slow=77,SNR=9.5							
H03N1	**Juan Fernandez**	**113.47**	**115**	T		T	04 53 47.6	
	baz=322,slow=77,SNR=12							
H03N3	**Juan Fernandez**	**113.48**	**115**	T		T	04 53 44.7	
	baz=322,slow=77,SNR=9.4							
QSPA	**South Pole Qui**	**143.12**	**180**	PKhKP		PKPpre	02 50 31.2	
	comp=Z,2.0nm,0.8s,baz=33,slow=9.7,SNR=6.6							
BOSA	**Boshof**	**154.31**	**340**	PKPbc		**PKiKP**	**02 51 03.3**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=359,slow=4.2,SNR=1.9							
BOSA				PKPab		**PKPab**	**02 51 17.4**	**+0.9**
	comp=Z,15nm,0.8s,baz=18,slow=3.8,SNR=20							

IDC 27 **02:32:19.7±2.1, 5.76S×142.45E, h0km, mb3.6/1, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=233.9km s-min=35.3km az=115.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.16**	**208**	P	Pn	Pn	02 36 07.5	-0.9
	0.2nm,0.3s,baz=26,slow=13,SNR=2.6							
	1.4nm,0.7s							
ASAR	**Alice Springs**	**19.62**	**204**	P	P	P	02 36 50.2	+0.4
	0.4nm,0.3s,baz=36,slow=9.7,SNR=12							
	5.3nm,0.9s							
ILAR	**Eielson Array**	**87.07**	**24**	P	P	P	02 45 06.9	-0.1
	0.3nm,0.7s,baz=250,slow=4.7,SNR=2.5							
	0.3nm,0.7s							

IDC 27 02:35:01.4±1.1, 5.94S×142.80E, h0km, mb4.0/5, mbtmp4.1/7, ML2.0/1, MS3.7/1, Error ellipse: s-maj=42.5km s-min=28.3km az=70.0

ISC 27 02:35:06.0±0.8, 6.2S±0.1×142.6E±0.1, h35km, n9, σ1§64/9, mb4.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.50**	**126**	Pn	Pn	**Pn**	**02 36 26.3**	**+0.8**
	3.0nm,0.3s,baz=309,slow=13,SNR=6.0							
PMG					Sn	**Sn**	**02 37 27.1**	**-0.5**
	3.5nm,0.3s,baz=269,slow=22,SNR=2.0							
	12nm,0.4s							
WRA	**Warramunga Arr**	**15.87**	**210**	Pn		**Pn**	**02 38 44.4**	**-2.5**
	1.2nm,0.3s,baz=28,slow=14,SNR=18							
ASAR	**Alice Springs**	**19.30**	**205**	P		**P**	**02 39 30.4**	**+2.3**
	18nm,1.0s,baz=34,slow=10,SNR=39							
RAR	**Rarotonga**	**57.60**	**111**	LR		LR	03 06 49.7	
	comp=Z,72nm,19.6s,baz=326,slow=33							
SONM	**Songino Array**	**62.54**	**333**	P		**P**	**02 45 26.2**	**-0.3**
	0.5nm,0.9s,baz=145,slow=5.3,SNR=2.2							
	0.5nm,0.9s							
MKAR	**Makanchi Array**	**74.92**	**322**	P		**P**	**02 46 44.3**	**+0.8**
	1.6nm,1.0s,baz=116,slow=6.9,SNR=5.3							
	1.6nm,1.0s							
KURBB	**Kurchatov Arra**	**78.82**	**324**	P		**P**	**02 47 05.7**	**+0.4**
	0.8nm,0.9s,baz=110,slow=5.0,SNR=5.0							
	0.8nm,0.9s							
BVAR	**Borovoye Array**	**84.39**	**325**	P		**P**	**02 47 35.5**	**+0.7**
	4.3nm,0.9s,baz=107,slow=5.0,SNR=12							
	4.3nm,0.9s							
ILAR	**Eielson Array**	**87.39**	**24**	P		**P**	**02 47 47.8**	**-1.5**
	1.4nm,0.8s,baz=261,slow=5.1,SNR=12							
	1.4nm,0.8s							

IDC 27 **02:41:37.0±3.5, 33.31S×178.42W, h0km, mb3.9/2, mbtmp3.9/3, ML3.4/1, Error ellipse: s-maj=77.8km s-min=38.4km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.13**	**215**	Pn	Pn		02 43 09.4	+0.6
	0.9nm,0.3s,baz=350,slow=5.1,SNR=1.6							
URZ					Sn	Sn	02 44 18.4	-1.2
	4.2nm,0.3s,baz=60,slow=18,SNR=10							
	3.0nm,0.3s							
ASAR	**Alice Springs**	**42.68**	**270**	P		P	02 49 35.8	+0.1
	1.0nm,0.5s,baz=110,slow=7.5,SNR=7.3							
	1.0nm,0.5s							
WRA	**Warramunga Arr**	**43.93**	**275**	P		P	02 49 45.6	-0.2
	0.8nm,0.5s,baz=116,slow=7.7,SNR=11							
	0.8nm,0.5s							
FINES	**FINESS Array B**	**147.72**	**338**	PKPbc		PKPbc	03 01 21.9	-0.9
	2.3nm,0.9s,baz=35,slow=5.1,SNR=2.3							

UCR 27 02:59:26.1±0.4, 8.50N×83.22W, h11km±32km, MW3.7
UPA 27 02:59:26.3±0.5, 8.63N×83.33W, h12km±5km, MW3.4
CATAC 27 02:59:26.3±0.6, 8.45N×83.31W, h5km±2km, ML3.0

ISC 27 02:59:26.4±1.2, 8.49N±0.06×83.31W±0.03, h15km±7km, n25, σ0§91/40, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JIME	**Puerto Jimenez**	**0.05**	**347**	*e*P		**Pg**	**02 59 29.2**	**-0.1**
PLAN	**Los Planes de**	**0.41**	**296**	*i* P		**Pb**	**02 59 35.6**	**+0.3**
PLAN				*i* S		**Sb**	**02 59 42.7**	**+1.4**
PLAN				IAML			02 59 43.8	
	comp=Z,1μm,1.0s							
CDITO	**Canoas**	**0.44**	**79**	*e*P		**Pb**	**02 59 35.6**	**-0.4**
EDPN	**Palmar Norte**	**0.49**	**343**	*e*P		**Pg**	**02 59 36.0**	**-0.3**
EDPN				⇑*e*S		**Sb**	**02 59 43.5**	**-0.3**
PTPM	**Petroterminale**	**0.52**	**123**	*e*P		**Pn**	**02 59 39.0**	**-0.3**
POTG	**Potrero Grande**	**0.59**	**19**	*i* P		**Pb**	**02 59 38.1**	**-0.4**
POTG				*i* S		**Sb**	**02 59 46.9**	**+0.2**
POTG				IAML			02 59 50.0	
	comp=Z,860nm,1.0s							
BRU2	**Volcan**	**0.69**	**64**	*e*P		**Pg**	**02 59 39.8**	**-0.1**
BRU2				*e*S		**Sb**	**02 59 50.3**	**+0.7**
BRU2	**Volcan**	**0.69**	**64**	*i* P		**Pb**	**02 59 40.1**	**-0.1**
BRU2				*i* S		**Sb**	**02 59 50.2**	**+0.7**
BRU2				IAML			02 59 55.8	
	comp=Z,340nm,1.0s							
OCHAL	**Ojochal**	**0.69**	**332**	*i* P		**Pg**	**02 59 39.0**	**-0.9**
OCHAL				*i* S		**Sb**	**02 59 50.6**	**+1.2**
OCHAL				IAML			02 59 52.5	
	comp=Z,7.5nm,1.0s							
BC3P	**Paso Ancho**	**0.77**	**65**	*e*P		**Pg**	**02 59 41.0**	**-0.5**
BCO2	**Palmira**	**0.81**	**74**	*e*P		**Pb**	**02 59 42.2**	**-0.1**
BCO2				*e*S		**Sb**	**02 59 53.8**	**+0.7**
CDM	**Cerro de Muert**	**1.15**	**337**	*i* P		**Pg**	**02 59 47.4**	**-1.3**
CDM				*i* S		**Sn**	**03 00 04.0**	**0.0**
CDM				IAML			03 00 09.5	
	comp=Z,180nm,1.0s							
ABE2	**San Pablo**	**1.41**	**329**	*e*P		**Pn**	**02 59 51.3**	**-0.5**
LCR2	**La Lucha 2**	**1.42**	**331**	*e*P		**Pn**	**02 59 51.8**	**-0.2**
LCR2	**La Lucha 2**	**1.42**	**331**	*i* P		**Pn**	**02 59 51.7**	**-0.2**
LCR2				*i* S		**Sg**	**03 00 12.3**	**-0.1**
LCR2				IAML			03 00 14.9	
	comp=Z,120nm,1.0s							
OCM	**Ochomogo**	**1.54**	**335**	*i* P		**Pb**	**02 59 54.7**	**0.0**
OCM				IAML			02 59 55.7	
	comp=Z,120nm,1.0s							
OCM				*i* S		**Sb**	**03 00 14.8**	**+0.7**
VTCV	**VTCV, Calle Va**	**1.54**	**345**	*i* P		**Pb**	**02 59 54.8**	**0.0**
VTCV				*i* S		**Sg**	**03 00 16.9**	**+0.7**
VTCV				IAML			03 00 19.3	
	comp=Z,310nm,1.0s							
HAYA	**Volcan Irazu**	**1.57**	**341**	*i* P		**Pn**	**02 59 54.8**	**+0.7**
HAYA				*i* S		**Sg**	**03 00 16.9**	**-0.3**
HAYA				IAML			03 00 27.2	
	comp=Z,220nm,1.0s							
VIRE	**VIRE**	**1.58**	**339**	*i* P		**Pg**	**02 59 56.2**	**-0.7**
VIRE				*i* S		**Sg**	**03 00 17.9**	**+0.5**
VIRE				IAML			03 00 22.1	
	comp=Z,320nm,1.0s							
JACO	**JACO, Garabito**	**1.77**	**311**	*e*P		**Pn**	**02 59 56.7**	**+0.3**
JACO	**JACO, Garabito**	**1.77**	**311**	*i* P		**Pn**	**02 59 57.0**	**+0.5**
JACO				IAML			03 00 36.9	
	comp=Z,64nm,1.0s							
SOCE	**Pocosol**	**2.28**	**326**	*i* P		**Pb**	**03 00 06.7**	**-0.6**
SOCE				IAML			03 00 10.3	
	comp=Z,150nm,1.0s							
SOCE				*i* S		**Sb**	**03 00 37.4**	**+2.1**
JTS	**Las Juntas de**	**2.41**	**318**	*e*P		**Pn**	**03 00 07.7**	**+2.3**
SAJU	**San Juanillo,**	**2.84**	**304**	*i* P		**Pn**	**03 00 12.0**	**+0.8**
SAJU				IAML			03 00 26.7	
	comp=Z,35nm,1.0s							
SAJU				*i* S		**Sn**	**03 00 44.4**	**-0.7**
HZTE	**Horizontes, Gu**	**3.15**	**315**	*i* P		**Pb**	**03 00 19.5**	**-2.7**
HZTE				IAML			03 00 49.5	
	comp=Z,80nm,1.0s							

IDC 27 03:01:26.7±1.2, 6.08S×143.07E, h0km, mb3.9/7, mbtmp4.0/9, ML3.5/2, MS3.7/2, Error ellipse: s-maj=57.9km s-min=19.9km az=92.0

ISC 27 03:01:32.2±1.1, 6.1S±0.1×142.9E±0.3, h35km, n9, σ1§05/9, mb3.7/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.05**	**210**	Pn	Pn	**Pn**	**03 05 13.7**	**-1.7**
	0.1nm,0.3s,baz=34,slow=13,SNR=2.4							
WRA					Lg	Lg	03 09 55.6	
	0.1nm,0.3s,baz=49,slow=30,SNR=2.6							
WRA				LR	LR	LR	03 11 11.5	
	comp=Z,316nm,18.7s,baz=280,slow=36							
	1.5nm,0.8s							
ASAR	**Alice Springs**	**19.47**	**205**	P		**P**	**03 05 57.5**	**+1.3**
	0.4nm,0.3s,baz=32,slow=10,SNR=27							
ASAR					Lg	Lg	03 11 47.9	
	baz=334,slow=39							
ASAR				LR	LR	LR	03 14 03.7	
	comp=Z,188nm,19.2s,baz=45,slow=39							
	13nm,0.9s							
STKA	**Stephens Creek**	**25.64**	**183**	P		**P**	**03 06 58.9**	**+0.2**
	0.8nm,0.3s,baz=342,slow=9.6,SNR=3.1							
	0.8nm,0.3s							
KSRS	**Korea Array**	**45.55**	**343**	P		**P**	**03 09 48.0**	**-0.7**
	0.5nm,0.5s,baz=169,slow=9.5,SNR=1.6							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**75.03**	**322**	P		**P**	**03 13 11.1**	**+0.8**
	0.5nm,0.8s,baz=120,slow=5.5,SNR=4.3							
	0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**78.92**	**324**	P		**P**	**03 13 32.7**	**+0.7**
	0.2nm,0.6s,baz=112,slow=6.0,SNR=2.5							
	0.2nm,0.6s							
QSPA	**South Pole Qui**	**83.84**	**180**	P		**P**	**03 13 58.2**	**+0.1**
	2.3nm,0.9s,baz=266,slow=1.5,SNR=6.5							
	2.3nm,0.9s							
BVAR	**Borovoye Array**	**84.49**	**325**	P		**P**	**03 14 01.6**	**+0.2**
	2.5nm,0.7s,baz=108,slow=4.7,SNR=8.1							
	2.5nm,0.7s							
ILAR	**Eielson Array**	**87.22**	**24**	P		**P**	**03 14 14.2**	**-0.5**
	0.7nm,0.7s,baz=247,slow=4.3,SNR=2.1							
	0.7nm,0.7s							

IDC 27 **03:09:47.7±3.8, 6.14S×142.07E, h0km, mb3.7/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=132.2km s-min=26.7km az=100.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.65**	**208**	Pn	Pn		03 13 27.8	-1.9
	0.2nm,0.3s,baz=30,slow=13,SNR=5.2							
WRA					Sn	Sn	03 16 16.1	-7.8
	0.1nm,0.3s,baz=33,slow=23,SNR=1.9							
WRA					Lg	Lg	03 18 04.3	
	baz=30,slow=26							
	1.5nm,0.8s							
ASAR	**Alice Springs**	**19.12**	**203**	P		Pn	03 14 13.0	-0.2
	0.2nm,0.3s,baz=32,slow=10,SNR=15							
	2.6nm,0.8s							
MKAR	**Makanchi Array**	**74.53**	**322**	P		P	03 21 28.8	+0.4
	0.5nm,0.7s,baz=114,slow=6.6,SNR=6.2							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**78.44**	**324**	P		P	03 21 50.1	-0.3
	0.1nm,0.3s,baz=104,slow=5.5,SNR=1.7							
	0.1nm,0.3s							
BVAR	**Borovoye Array**	**84.02**	**325**	P		P	03 22 20.0	0.0
	0.6nm,0.7s,baz=116,slow=6.6,SNR=2.8							
	0.6nm,0.7s							

IDC 27 03:21:16.5±1.9, 5.89S×142.81E, h0km, mb3.8/3, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=80.7km s-min=30.6km az=106.0

ISC 27 03:21:21.2±1.1, 6.1S±0.1×142.8E±0.1, h35km, n6, σ0§76/6, mb3.8/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.41**	**128**	Sn		**Sn**	**03 23 40.4**	**0.0**
	5.7nm,0.3s,baz=211,slow=21,SNR=7.3							
WRA	**Warramunga Arr**	**16.07**	**210**	Pn	Pn	**Pn**	**03 25 03.7**	**-0.9**
	0.2nm,0.3s,baz=30,slow=14,SNR=1.7							
WRA					Lg	Lg	03 29 45.8	
	baz=21,slow=29							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**19.49**	**205**	P		**Pn**	**03 25 47.7**	**+0.9**
	0.3nm,0.3s,baz=32,slow=10,SNR=21							
ASAR					Lg	Lg	03 31 35.0	
	0.2nm,0.3s,baz=19,slow=26,SNR=3.3							
	2.8nm,0.6s							
MKAR	**Makanchi Array**	**74.96**	**322**	P		**P**	**03 32 59.1**	**+0.2**
	0.3nm,0.7s,baz=117,slow=5.4,SNR=3.1							
	0.3nm,0.7s							
BVAR	**Borovoye Array**	**84.42**	**325**	P		**P**	**03 33 50.1**	**0.0**
	0.9nm,0.6s,baz=108,slow=9.3,SNR=5.6							
	0.9nm,0.6s							
ILAR	**Eielson Array**	**87.20**	**24**	P		**P**	**03 34 03.4**	**-0.2**
	0.4nm,0.6s,baz=253,slow=4.2,SNR=5.2							
	0.4nm,0.6s							

IDC 27 03:23:33.3±1.3, 5.81S×142.97E, h0km, mb3.9/7, mbtmp3.9/8, ML4.3/1, MS2.9/1, Error ellipse: s-maj=61.7km s-min=25.0km az=90.0

ISC 27 03:23:37.9±0.8, 5.9S±0.1×142.6E±0.1, h28km, n11, σ1§22/10, mb4.0/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.66**	**128**	Sn		**Sn**	**03 26 04.6**	**+0.2**
	2.9nm,0.3s,baz=231,slow=18,SNR=1.8							
CTA	**Charters Tower**	**14.51**	**166**	LR	LR		03 32 18.0	
	comp=Z,50nm,20.9s,baz=63,slow=36							
WRA	**Warramunga Arr**	**16.10**	**209**	Pn		**Pn**	**03 27 20.6**	**-1.8**
	0.7nm,0.3s,baz=29,slow=13,SNR=6.6							
WRA					Lg	Lg	03 32 07.6	
	0.1nm,0.3s,baz=19,slow=28,SNR=3.2							
ASAR	**Alice Springs**	**19.54**	**205**	P		**Pn**	**03 28 05.4**	**+0.5**
	0.9nm,0.3s,baz=34,slow=11,SNR=9.7							
ASAR					Lg	Lg	03 33 59.7	
	baz=24,slow=30							
	2.8nm,0.6s							
KSRS	**Korea Array**	**45.29**	**343**	P		**P**	**03 31 52.6**	**-0.6**
	0.6nm,0.5s,baz=171,slow=9.4,SNR=2.3							
	0.6nm,0.5s							
USRK	**Ussuriysk Ar.**	**50.81**	**350**	P		**P**	**03 32 36.0**	**+0.2**
	1.4nm,0.6s,baz=163,slow=10,SNR=2.7							
	1.4nm,0.6s							
MKAR	**Makanchi Array**	**74.71**	**322**	P		**P**	**03 35 16.2**	**+1.1**
	0.3nm,0.5s,baz=98,slow=8.9,SNR=7.0							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**78.60**	**324**	P		**P**	**03 35 35.7**	**-1.3**
	0.2nm,0.4s,baz=110,slow=4.8,SNR=2.3							
	0.2nm,0.4s							
QSPA	**South Pole Qui**	**84.04**	**180**	P		**P**	**03 36 06.5**	**+0.7**
	0.9nm,0.7s,baz=307,slow=2.5,SNR=6.2							
	0.9nm,0.7s							
BVAR	**Borovoye Array**	**84.18**	**325**	P		**P**	**03 36 07.4**	**+0.8**
	1.3nm,0.6s,baz=103,slow=5.2,SNR=6.3							
	1.3nm,0.6s							
ILAR	**Eielson Array**	**87.15**	**24**	P		**P**	**03 36 19.5**	**-1.5**
	0.5nm,0.5s,baz=253,slow=4.8,SNR=6.8							
	0.5nm,0.5s							

IDC 27 03:36:51.8±1.1, 6.27S×143.65E, h0km, mb4.0/5, mbtmp4.0/8, ML3.6/2, MS3.2/6, Error ellipse: s-maj=35.4km s-min=23.0km az=63.0

ISC 27 03:36:57.1±0.9, 6.4S±0.1×143.5E±0.1, h35km, n14, σ1§15/9, mb4.0/5, MS3.2/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.67**	**130**	Pn		**Pn**	**03 38 05.5**	**+0.3**
	13nm,0.4s,baz=325,slow=12,SNR=8.0							
PMG					Sn	**Sn**	**03 38 58.6**	**+0.3**
	4.8nm,0.3s,baz=279,slow=19,SNR=4.0							
CTA	**Charters Tower**	**13.87**	**169**	LR	LR		03 45 26.7	
	comp=Z,79nm,18.4s,baz=320,slow=37							
WRA	**Warramunga Arr**	**16.16**	**213**	Pn		**Pn**	**03 40 40.6**	**-1.1**
	0.2nm,0.3s,baz=30,slow=13,SNR=8.3							
	0.6nm,0.8s							
ASAR	**Alice Springs**	**19.52**	**207**	P		**Pn**	**03 41 24.2**	**+1.2**
	0.4nm,0.3s,baz=36,slow=9.5,SNR=80							
ASAR					Lg	Lg	03 47 09.1	
	0.1nm,0.3s,baz=16,slow=28,SNR=2.6							
	9.3nm,0.8s							
DAV	**Davao City (W)**	**22.36**	**306**	LR	LR		03 51 27.4	
	comp=Z,20nm,18.9s,baz=342,slow=39							
DZM	**Mont Dzumac**	**27.06**	**127**	LR	LR		03 52 30.0	
	comp=Z,62nm,19.3s,baz=9.0,slow=35							
JOW	**Kunigami**	**36.19**	**337**	LR	LR		03 56 06.4	
	comp=Z,54nm,20.9s,baz=118,slow=32							
JHJ	**Hachijo jima 2**	**39.45**	**355**	LR	LR		03 59 47.4	
	comp=Z,39nm,20.9s,baz=144,slow=35							
CMAR	**Chiang Mai Arr**	**50.43**	**300**	P		**P**	**03 45 53.5**	**+1.8**
	1.2nm,0.3s,baz=113,slow=6.9,SNR=4.3							
	1.2nm,0.3s							
KLR	**Kul'dur**	**56.34**	**351**	LR	LR		04 10 01.2	
	comp=Z,22nm

BMAS Trigal station 1.83 44 P Pn 03 40 43.0 +0.2
ARRY Arrayan 1.85 45 P Pn 03 40 43.0 +0.1
TUYU Q. Yuibug Volc 1.85 44 P Pn 03 40 43.0 -0.1
BBIL Ulba Tungurahu 1.86 43 P Pn 03 40 44.0 +0.8
JUI6 Juive 1.90 43 P Pn 03 40 44.0 +0.4
POND Pondoa 1.91 43 P Pn 03 40 44.0 +0.2
BULB Ulba Tungurahu 1.93 45 P Pn 03 40 44.0 -0.1
BRUN Tungurahua Vol 1.93 44 P Pn 03 40 45.0 +0.9
ISPT Isla de la Pla 2.03 320 P Pn 03 40 43.0 -2.1
PECV Mancha de Ca P 2.05 352 P Pn 03 40 45.0 -0.5
ZUMB Zumba 2.12 163 P Pn 03 40 48.0 +1.5
PUYO Puyo, Santa Ro 2.18 53 P Pb 03 40 51.0 +0.5
PIS1 Pisayambo 2.23 38 P Pn 03 40 49.0 +0.7
TAIS Taisha 2.30 79 P Pb 03 40 52.0 -0.6
ILLI Illinizas Sur 2.33 26 P Pn 03 40 50.0 +0.2
PIAT Ana Tenorio 2.35 40 P Pn 03 40 52.0 +2.1
SRAM San Ramn-Vol 2.38 30 P Pn 03 40 52.0 +1.7
PAST Pastocalle 2.39 28 P Pn 03 40 52.0 +1.5
BRRN Barrancas-Volc 2.40 32 P Pn 03 40 52.0 +1.4
VCES Cotopaxi 2.43 34 P Pn 03 40 53.0 +1.9
SLOR San Lorenzo - 2.43 31 Pn 03 40 53.6 +2.5
SLOR San Lorenzo - 2.43 31 P Pn 03 40 53.0 +1.9
FLF1 Flavio Alfaro- 2.45 358 P Pn 03 40 50.0 -0.9
BMOR Cotopaxi Volca 2.45 32 P Pn 03 40 53.0 +1.6
CAMI Rancho Maria 2.47 31 P Pn 03 40 54.0 +2.3
BNAS Cotopaxi Volca 2.49 31 P Pb 03 40 55.0 -1.1
SUCR Mariscal Sucre 2.51 30 P Pn 03 40 54.0 +1.8
BREF Cotopaxi Volca 2.51 32 P Pn 03 40 54.0 +1.7
NAS2 Nasa 2.52 31 P Pn 03 40 55.0 +2.7
TAMB Tambo 2.53 33 P Pn 03 40 55.0 +2.5
BTAM Cotopaxi Volca 2.53 33 P Pn 03 40 54.0 +1.5
BVC2 Cotopaxi Volca 2.54 32 P Pn 03 40 54.0 +1.4
VC1 Cotopaxi 1 2.56 32 P Pn 03 40 55.0 +2.1
JAMA Jama 2.58 350 P Pn 03 40 54.0 +1.2
PITA Cotopaxi Volc 2.61 31 P Pn 03 40 56.0 +2.4
ASDO Santo Domingo 2.62 14 P Pn 03 40 53.0 -0.3
TOMA Boca Toma-Volc 2.66 30 P Pn 03 40 57.0 +2.8
MAG1 Magdalena 2.73 360 P Pn 03 40 54.0 -0.8
ANTM Antisana-La Mi 2.74 34 P Pn 03 40 58.0 +2.6
ANTG Antisana-Guama 2.75 33 P Pn 03 40 58.0 +2.4
ANTS Antisana-Sarah 2.80 35 P Pn 03 40 59.0 +2.7
HPAL Hacienda Las P 2.81 23 P Pn 03 40 58.0 +1.7
GGPT Toaza - Volcan 2.82 24 P Pn 03 40 58.0 +1.6
JUA2 San Juan 2 2.84 24 P Pn 03 40 59.0 +2.3
ANTI Antisana 2.85 34 P Pn 03 40 59.0 +2.1
GGPC Guagua Pichinc 2.87 24 P Pn 03 40 59.0 +1.8
TERV Terraza Guagua 2.87 24 P Pn 03 40 59.0 +1.8
PINO Pino 2.89 24 P Pn 03 40 59.0 +1.5
YANA Yana 2.94 24 P Pn 03 41 00.0 +1.9
PULU Pululahua 3.09 24 Pn 03 41 02.8 +2.7
PULU Pululahua 3.09 24 P Pn 03 41 00.0 +1.9
PAC1 Pacto, Paraso 3.22 18 P Pn 03 41 01.0 -0.6
OTAV Otavalo 3.31 23 Pn Pn 03 41 04.9 +1.7
OTAV Otavalo 3.31 23 P Pn 03 41 04.0 +0.9
CAYR Refugio Cayamb 3.32 32 P Pb 03 41 08.0 -2.3
ANGU Angureal 3.34 32 P Pn 03 41 06.0 +2.2
CAYA Cayambe 3.38 32 P Pn 03 41 07.0 +2.9
CUSE Cuicocha Este 3.39 24 P Pn 03 41 06.0 +1.7
CUIC Cuicocha-Domo 3.41 24 P Pn 03 41 06.0 +1.6
COTA Cotacachi 3.44 24 P Pn 03 41 08.0 +2.9
LAV4 Lava4-Reventad 3.45 38 P Pn 03 41 06.0 +1.1
IMBA Imbabura, San 3.45 27 Pn 03 41 07.9 +2.8
IMBA Imbabura, San 3.45 27 P Pn 03 41 08.0 +2.9
URCU Urcuqui 3.57 25 P Pn 03 41 09.0 +2.3
CASC Dorado de Casc 3.81 40 P Pn 03 41 12.0 +2.3
LITE1 Lita 3.85 21 P Pn 03 41 11.0 +0.6
RVRD Rio Verde 3.88 6 P Pn 03 41 09.0 -1.6
BONI La Bonita 3.94 34 P Pn 03 41 15.0 +3.3
LNGL El Angel-Carch 3.95 26 P Pn 03 41 14.0 +2.0
CHL1 Volc¡n Chiles 4.02 27 P Pn 03 41 15.0 +2.0
TULM Tulcn-Chalpat 4.03 29 Pn 03 41 15.8 +2.7
TULM Tulcn-Chalpat 4.03 29 P Pn 03 41 16.0 +2.9
CHMA Chilma 4.04 25 P Pn 03 41 15.0 +2.0
ECEN Cerro Negro 4.04 26 P Pn 03 41 16.0 +2.7
CHL2 Volc¡n Chiles 4.04 27 P Pn 03 41 17.0 +3.7
SNLR San Lorenzo-Es 4.19 13 P Pn 03 41 16.0 +1.2
CMBC Cumbal 4.21 27 P Pn 03 41 18.0 +2.5
ATAH Atahualpa 4.50 162 P Pn 03 41 23.1 +3.6
6.1nm,0.3s,baz=4.9,slow=8.2,SNR=39
ATAH S Sn 03 42 10.0 -2.0
287nm,0.8s,baz=356,slow=20,SNR=4.8
ATAH Lg Lg 03 42 28.1
11nm,0.3s,baz=319,slow=20,SNR=2.1
ATAH LR LR 03 43 23.6
comp=Z,2µm,18.4s,baz=342,slow=41
38nm,0.6s
TUMC Tumaco 4.73 13 P Pn 03 41 22.0 -0.3
BBAC Balboa, Cauca 5.43 28 P Pn 03 41 34.0 +1.9
PTLC Puerto Leguiza 5.79 59 P Pn 03 41 37.0 +0.2
FLOC Florencia 6.00 43 P Pn 03 41 41.0 +1.2
ROSC El Rosal 9.35 36 P Pn 03 42 29.6 +3.4
1.7nm,0.3s,baz=143,slow=20,SNR=2.3
ROSC Lg Lg 03 45 09.8
1.0nm,0.3s,baz=215,slow=23,SNR=1.5
ROSC LR LR 03 46 24.6
comp=Z,1µm,19.7s,baz=222,slow=39
3.9nm,0.4s
NNA Nana 9.55 163 Pn Pn 03 42 30.0 +1.3
NNA Nana 9.55 163 P Pn 03 42 31.1 +2.5
3.2nm,0.3s,baz=328,slow=11,SNR=7.4
NNA S Sn 03 44 16.2 +0.1
5.4nm,0.4s,baz=144,slow=23,SNR=1.2
NNA Lg Lg 03 45 06.0
2.1nm,0.3s,baz=221,slow=18,SNR=3.8
8.3nm,0.4s
TBTG Tabatinga, AM 9.93 98 Pn Pn 03 42 33.6 -0.1
CDITO Canoas 11.74 345 Pn 03 43 01.0 +2.5
JTS Las Juntas de 14.01 338 LR LR 03 47 48.4
comp=Z,278nm,21.5s,baz=148,slow=32
SDV Santo Domingo 14.77 38 Pn Pn 03 43 40.9 +0.8
SDV Santo Domingo 14.77 38 P Pn 03 43 43.2 +3.1
0.5nm,0.3s,baz=228,slow=16,SNR=2.3
SDV LR LR 03 50 08.3
comp=Z,600nm,20.1s,baz=220,slow=40
1.4nm,0.4s
ETMB Extrema 15.15 118 Pn Pn 03 43 41.4 -3.6
SAML Samuel 17.57 111 Pn Pn 03 44 14.2 -1.8
LPAZ La Paz 17.61 140 Pn Pn 03 44 16.3 -0.8
PB16 IPOC Station P 18.40 148 P Pn 03 44 27.0 +0.1
MACA Manacapuru-AM 19.05 92 P 03 44 32.7 -0.7
GO01 Chusmiza 19.67 149 P P 03 44 41.1 +0.4
PCRV Puerto La Cruz 19.84 49 LR LR 03 54 00.2
comp=Z,278nm,18.3s,slow=41
PB02 IPOC Station P 20.74 153 P P 03 44 50.5 -1.4
PB02 IAmb IAmb 03 44 55.6
comp=Z,20nm,0.7s
PB07 IPOC Station P 21.10 154 P P 03 44 53.2 -2.7
PB07 IAmb IAmb 03 45 03.2
comp=Z,48nm,1.4s
VILB Vilhena 21.81 119 P P 03 45 02.8 -0.7
VILB IAmb IAmb 03 45 22.5
comp=Z,29nm,0.8s
LVC Limon Verde 22.31 153 LR LR 03 54 37.6
comp=Z,191nm,18.3s,baz=310,slow=38
PTLB Pontes e Lacer 23.88 123 P P 03 45 25.2 +0.4
TEIG Tepich 24.38 340 LR LR 03 54 02.8
comp=Z,941nm,21.1s,baz=18,slow=34
CMIG Matias Romero 24.79 323 LR LR 03 53 50.0
comp=Z,66nm,20.4s,baz=155,slow=33
GCPR Guaynabo City 24.95 32 P P 03 45 36.8 +2.2
MDP Montagnes des 28.21 74 LR LR 03 57 46.1
comp=Z,334nm,18.1s,baz=215,slow=37
AQDB Aquidauana 29.30 129 P P 03 46 12.9 -0.7
AQDB IAmb IAmb 03 46 18.4
comp=Z,7.4nm,0.7s
CPUP Villa Florida 31.78 139 LR LR 04 01 31.4
comp=Z,108nm,19.2s,baz=319,slow=40
LMEL Las Melosas 32.13 165 P P 03 46 37.9 -0.8
LMEL IAmb IAmb 03 46 42.8
comp=Z,7.5nm,0.9s
BDFB Brasilia 33.76 114 P P 03 46 55.0 +1.9
comp=Z,2.8nm,0.7s,baz=274,slow=12,SNR=6.3
comp=Z,2.8nm,0.7s
ITQB Itaqui 34.57 143 P P 03 46 59.4 -0.5
HNDO Hondo 37.20 331 P P 03 47 24.4 +1.9
HNDO IAmb IAmb 03 47 29.9
comp=Z,10nm,0.9s
RPN Rapa Nui 37.21 227 LR LR 03 59 32.7
comp=Z,88nm,19.4s,baz=21,slow=31
Y45A Yeager Farm, C 37.64 347 P P 03 47 27.1 +1.1
Y45A IAmb IAmb 03 47 32.9
comp=Z,16nm,0.9s
DRIO Del Rio 37.78 330 P P 03 47 27.2 -0.2
DRIO IAmb IAmb 03 47 34.4
comp=Z,12nm,0.9s
TKL Tuckaleechee C 38.46 355 LR LR 04 02 28.0
comp=Z,78nm,21.0s,baz=170,slow=35
BRDY Brady 38.55 333 P P 03 47 33.9 +0.1
PLCA Paso Flores 38.65 169 P P 03 47 34.1 -0.5
comp=Z,1.2nm,0.8s,baz=352,slow=11,SNR=5.2
PLCA LR LR 04 00 20.2
comp=Z,69nm,20.1s,baz=19,slow=31
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 39.33 326 P P 03 47 40.0 -0.5
comp=Z,0.6nm,0.9s,baz=139,slow=8.4,SNR=4.3
TXAR PcP PcP 03 49 49.3 +0.2
comp=Z,1.4nm,0.9s,baz=148,slow=5.3,SNR=8.9
TXAR LR LR 04 01 22.0
comp=Z,17nm,21.4s,baz=90,slow=32
comp=Z,0.6nm,0.9s
PLPT Palo Pinto 39.56 335 P P 03 47 43.9 +1.7
HALT Halls 39.56 348 P P 03 47 43.7 +1.6
FW03 Perrin-Whitt E 39.65 336 P P 03 47 44.7 +1.7
FW03 IAmb IAmb 03 47 50.2
comp=Z,18nm,0.8s
ABTX Abilene, Hawle 39.97 333 P P 03 47 47.1 +1.4
ABTX IAmb IAmb 03 47 52.9
comp=Z,14nm,1.1s
ALPN Alpine 40.12 327 P P 03 47 48.4 +1.2
MNHN Monahans 40.41 329 P P 03 47 49.9 +0.5
WTFS Witchita Falls 40.44 336 P 03 47 50.4 +0.8
WTFS IAmb IAmb 03 47 56.7
comp=Z,15nm,1.0s
APMT Aspermont 40.78 334 P P 03 47 52.5 +0.1
APMT IAmb IAmb 03 47 59.6
comp=Z,11nm,0.9s
VHRN Van Horn 41.17 326 P P 03 47 56.2 +0.3
FNO Franklin 41.33 338 P 03 47 58.4 +1.5
FNO IAmb IAmb 03 48 04.0
comp=Z,28nm,1.2s
TUL3 Leonard 41.34 340 P P 03 47 57.6 +0.6
TUL3 IAmb IAmb 03 48 03.5
comp=Z,21nm,1.2s
WMOK Wichita Mounta 41.42 336 P 03 47 58.2 +0.6
DKNS Dickens 41.42 333 P P 03 47 58.2 +0.5
DEOK Depew 41.53 339 P 03 47 59.1 +0.6
DEOK IAmb IAmb 03 48 05.2
comp=Z,20nm,1.1s
OK052 Battle Ridge R 41.77 339 P 03 48 00.6 +0.2
OK052 IAmb IAmb 03 48 06.7
comp=Z,19nm,1.0s
OK029 Liberty Lake 41.83 338 P 03 48 02.3 +1.3
OK029 IAmb IAmb 03 48 08.1
comp=Z,22nm,0.9s
CSTR Hydro, Custer 42.17 337 P 03 48 04.8 +1.0
SMWD Samorwood 42.34 335 P P 03 48 05.0 -0.2
T35A Sooner Cattle 42.50 340 P P 03 48 07.0 +0.6
T35A IAmb IAmb 03 48 13.2
comp=Z,22nm,1.0s
MSTX Muleshoe 42.54 331 P P 03 48 07.7 +0.8
MSTX IAmb IAmb 03 48 13.9
comp=Z,20nm,1.1s
U32A Winter Ranch, 42.93 337 P P 03 48 09.1 -0.9
RCBR Riachuelo 43.83 95 LR LR 04 07 59.6
comp=Z,201nm,18.6s,baz=270,slow=38
121A Cookes Peak, D 44.06 325 P P 03 48 20.5 +1.2
KSU1 Kansas State U 44.51 341 P P 03 48 23.2 +0.6
RTBA Rita Blanca 44.55 333 P P 03 48 23.6 +0.5
RTBA IAmb IAmb 03 48 30.2
comp=Z,16nm,1.2s
R32A Long Quarter, 44.62 339 P P 03 48 24.3 +0.8
ANMO Albuquerque 45.16 329 P P 03 48 27.9 -0.2
ANMO IAmb IAmb 03 48 35.6
comp=Z,14nm,1.1s
T25A Trinidad 45.89 332 P P 03 48 34.9 +1.0
T25A IAmb IAmb 03 48 41.7
comp=Z,8.5nm,1.1s
J47A Sunmer 46.08 355 P P 03 48 34.9 -0.1
JFWS Jewell Farm 46.50 349 P P 03 48 37.4 -0.9
JFWS IAmb IAmb 03 48 42.5
comp=Z,7.7nm,0.8s
X18A Snowflake 46.75 325 P P 03 48 41.0 +0.3
X18A IAmb IAmb 03 48 48.4
comp=Z,5.6nm,1.0s
SDCO Great Sand Dun 46.89 332 P P 03 48 42.0 +0.1
SDCO IAmb IAmb 03 48 49.3
comp=Z,5.4nm,0.9s
W18A Petrified Fore 47.06 326 P P 03 48 43.4 +0.3
SADO Sadowa 47.38 1 LR LR 04 12 53.7
comp=Z,28nm,18.1s,baz=131,slow=41
X16A Lo Mia Camp, P 47.53 324 P P 03 48 47.8 +1.0
K30B Basset 48.72 341 P P 03 48 56.2 +0.7
ECSD EROS Data Cent 48.76 344 P P 03 48 55.8 -0.1
ECSD IAmb IAmb 03 49 01.0
comp=Z,6.8nm,0.9s
KNB Kanab 50.16 325 P P 03 49 07.2 +0.4
KNB IAmb IAmb 03 49 14.9
comp=Z,7.7nm,1.2s
SRU San Rafael Swe 50.43 329 P P 03 49 09.6 +0.7
SRU IAmb IAmb 03 49 15.9
comp=Z,9.9nm,1.3s
P17A Butcher Ranch, 50.81 329 P P 03 49 13.0 +1.2
CCUT Cedar City 50.84 325 P P 03 49 14.1 +2.0
RDMU Red Mountain 51.06 331 P P 03 49 13.5 -0.2
RDMU IAmb IAmb 03 49 20.5
comp=Z,9.9nm,1.3s
GSC Goldstone, Bar 51.40 321 P P 03 49 15.6 -0.5
GSC IAmb IAmb 03 49 23.4
comp=Z,8.2nm,1.1s
BSUT Blindstream Ca 51.62 330 P P 03 49 18.4 +0.3
BSUT IAmb IAmb 03 49 27.0
comp=Z,10nm,1.2s
WCT Wildcat Mounta 52.24 322 P P 03 49 23.0 +0.6
DUG Dugway, Tooele 52.42 328 P P 03 49 24.1 +0.3
DUG IAmb IAmb 03 49 31.4
comp=Z,11nm,1.5s
E28A Huff 52.55 342 P P 03 49 25.3 +0.9
R11B Troy Canyon, C 52.66 325 P P 03 49 24.9 -0.7
PDAR Pinedale Array 52.76 333 P P 03 49 24.2 -2.1
comp=Z,0.7nm,0.7s,baz=141,slow=5.8,SNR=3.9
PDAR PcP PcP 03 50 35.0 -0.9
comp=Z,0.4nm,0.6s,baz=146,slow=7.4,SNR=2.6
comp=Z,0.7nm,0.7s
AGMN Agassiz Nation 52.81 347 P P 03 49 25.8 -0.5
AGMN IAmb IAmb 03 49 31.7
comp=Z,6.3nm,0.8s
MDND Maddock 53.37 343 P P 03 49 30.8 +0.4
TPH Tonopah 53.44 323 P P 03 49 32.5 +1.1
REDW Red Top Meadow 53.82 332 P P 03 49 33.4 -0.7
TPAW Teton Pass 53.96 332 P P 03 49 35.4 +0.1
MDPB Devils Postpil 54.28 322 P P 03 49 35.8 -1.9
MDPB IAmb IAmb 03 49 45.2
comp=Z,9.3nm,1.3s
NVAR Mina Array Bea 54.32 323 P P 03 49 36.9 -1.0
comp=Z,1.5nm,0.7s,baz=143,slow=7.2,SNR=12
comp=Z,1.5nm,0.7s
ULM Lac du Bonnet 54.65 347 P P 03 49 38.5 -1.3
ULM IAmb IAmb 03 49 44.1
comp=Z,4.3nm,0.7s
ULM Lac du Bonnet 54.65 347 P P 03 49 38.5 -1.3
comp=Z,3.6nm,0.6s,baz=162,slow=8.0,SNR=12
comp=Z,3.6nm,0.6s
BMN Battle Mountai 55.00 325 P P 03 49 40.9 -1.8
YHL Hebgen Lake 55.12 333 P P 03 49 42.8 -0.9
YHL IAmb IAmb 03 49 50.7
comp=Z,7.4nm,1.1s
HLID Hailey 55.69 330 P P 03 49 48.2 +0.6
BOZ Bozeman (W) 55.89 333 P P 03 49 49.3 +0.3
MFID Camas Ranch 56.30 329 P P 03 49 52.3 +0.4
MFID IAmb IAmb 03 49 59.1
comp=Z,10nm,1.2s
ORV Oroville 56.96 322 P P 03 49 57.3 +0.7
ORV IAmb IAmb 03 50 04.2
comp=Z,7.9nm,0.9s
WVOR Wild Horse Val 57.13 326 P P 03 49 57.9 +0.1
WVOR IAmb IAmb 03 50 04.6
comp=Z,13nm,1.1s
SCHQ Schefferville 58.44 9 LR LR 04 14 37.8
comp=Z,52nm,22.0s,baz=210,slow=35
YBH Yreka Blue Hor 59.02 323 LR LR 04 14 50.7
comp=Z,52nm,19.0s,baz=146,slow=35
G08A Pilot Rock 59.22 329 P P 03 50 11.5 -1.0
G08A IAmb IAmb 03 50 14.8
comp=Z,8.7nm,1.3s
PINE Pine Mountain 59.29 326 P P 03 50 12.6 -0.4
B08A Colville Reser 61.51 331 P P 03 50 27.6 -0.3
FCC Fort Churchill 62.45 352 P P 03 50 33.7 -0.2
FCC IAmb IAmb 03 50 38.7
comp=Z,4.4nm,0.9s
EDM Edmonton 62.53 338 P P 03 50 35.3 +0.6
BRLDA Berland Lookou 64.76 337 P P 03 50 49.8 +0.3
YKA Yellowknife Ar 70.29 344 P P 03 51 23.2 -0.9
comp=Z,1.1nm,0.9s,baz=135,slow=6.3,SNR=17
YKA PcP PcP 03 51 43.0 -2.8
comp=Z,0.9nm,0.9s,baz=144,slow=4.6,SNR=4.3
comp=Z,1.1nm,0.9s
WRGLY Wrigley 73.53 341 P P 03 51 44.8 +1.2
WRGLY IAmb IAmb 03 51 49.4
comp=Z,13nm,1.2s
DBIC Dimbokro 75.36 82 P P 03 51 55.3 0.0
comp=Z,2.4nm,0.8s,baz=210,slow=3.2,SNR=4.1
comp=Z,2.4nm,0.8s
L29M L29M 78.78 337 P P 03 52 14.6 +1.0
L29M IAmb IAmb 03 52 20.4
comp=Z,13nm,1.1s
I30M Mount Dempster 79.21 339 P P 03 52 16.1 +0.2
I30M IAmb IAmb 03 52 22.2
comp=Z,6.2nm,1.0s
G31M Satah River 79.42 341 P P 03 52 16.1 -0.8
G31M IAmb IAmb 03 52 23.0
comp=Z,6.3nm,0.8s
INK Inuvik 79.97 342 P P 03 52 20.4 +0.6
INK IAmb IAmb 03 52 25.6
comp=Z,10nm,1.1s
A36M Sachs Harbour 80.13 347 P P 03 52 21.2 +0.5
E29M Blow River 81.38 341 P P 03 52 27.0 -0.4
E29M IAmb IAmb 03 52 33.3
comp=Z,8.2nm,1.2s
TORD Torodi Ar. Bea 82.33 76 P P 03 52 33.0 -0.6
comp=Z,1.3nm,1.0s,baz=281,slow=3.5,SNR=5.2
comp=Z,1.3nm,1.0s
ILAR Eielson Array 82.98 337 P P 03 52 34.3 -1.6
comp=Z,1.4nm,0.9s,baz=130,slow=3.6,SNR=9.7
comp=Z,1.4nm,0.9s
E25K Arctic Village 83.80 340 P P 03 52 40.8 +0.7
E25K IAmb IAmb 03 52 46.6
comp=Z,5.1nm,0.9s
D25K Kavik River 84.54 341 P P 03 52 42.6 -1.3
D25K IAmb IAmb 03 52 49.9
comp=Z,4.8nm,0.8s
MLY Manley 84.61 336 P P 03 52 44.4 +0.1
MLY IAmb IAmb 03 52 45.5
comp=Z,5.4nm,1.0s
CAST Castle Rocks 84.68 335 P P 03 52 44.2 -0.4
G23K Bananza Creek 84.88 338 P P 03 52 45.5 -0.1
E22K Anaktuvuk Pass 85.99 339 P P 03 52 51.3 +0.2
E22K IAmb IAmb 03 52 57.2
comp=Z,6.1nm,1.1s
F21K Alatna River 86.33 338 P P 03 52 52.3 -0.5
F21K IAmb IAmb 03 52 58.7
comp=Z,4.1nm,0.9s
E19K Redstone River 87.80 338 P P 03 53 00.9 +1.0
E19K IAmb IAmb 03 53 05.8
comp=Z,4.5nm,1.0s
G18K Tagagawik 88.03 336 P P 03 53 01.8 +0.7
D19K Kuna River 88.34 339 P P 03 53 03.7 +1.2
C19K Lookout Ridge 88.99 339 P P 03 53 06.0 +0.5
E18K Tukpahlearik C 89.07 338 P P 03 53 05.6 -0.3
F17K Baldwin Pennin 89.16 337 P P 03 53 06.7 +0.4
NOA NORSAR Array B 92.92 29 LR LR 04 31 50.0
comp=Z,12nm,21.5s,baz=25,slow=33
ZALV Zalesovo Beam 127.49 11 PKP PKPdf 03 59 14.8 -1.3
comp=Z,1.3nm,0.6s,baz=300,slow=2.9,SNR=7.3
KURBB Kurchatov Arra 128.96 18 PKP PKPdf 03 59 18.6 -0.4
comp=Z,0.9nm,0.4s,baz=324,slow=2.4,SNR=8.2
MKAR Makanchi Array 133.50 17 PKP PKPdf 03 59 26.4 -1.4
comp=Z,0.6nm,0.9s,baz=346,slow=1.7,SNR=4.1
WRA Warramunga Arr 139.60 234 PKhKP PKPpre 03 59 33.0
comp=Z,0.5nm,0.7s,baz=113,slow=2.0,SNR=2.2

IDC 27 03:42:05.7±2.5, 6°35S×129°09E, h0km, mb3.6/1, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=168.8km s-min=33.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.44**	**160**	P	Pn	03 45 31.3	-0.3
	0.2nm,0.3s,baz=341,slow=13,SNR=6.3						
WRA				Sn	Sn	03 48 02.1	-10
	0.5nm,0.3s,baz=344,slow=20,SNR=6.9						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**17.83**	**165**	P	Pn	03 46 15.7	+0.2
	0.2nm,0.3s,baz=352,slow=13,SNR=1.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**67.19**	**327**	P	P	03 53 01.7	0.0
	0.3nm,0.4s,baz=139,slow=6.8,SNR=2.6						
	0.3nm,0.4s						

IDC 27 04:02:16.0±3.4, 7°11S×148°68E, h0km, mb3.0/1, mbtmp3.2/2, ML3.3/1, Error ellipse: s-maj=119.6km s-min=46.5km az=119.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.74**	**213**	Sn	Sb	04 03 39.3	-0.7
	6.1nm,0.3s,baz=3.0,slow=11,SNR=6.7						
WRA	**Warramunga Arr**	**18.88**	**226**	P	P	04 06 38.1	0.0
	0.1nm,0.3s,baz=52,slow=11,SNR=5.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**21.74**	**219**	P	P	04 07 09.1	-0.2
	0.4nm,0.5s,baz=51,slow=9.4,SNR=6.7						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.97**	**283**	PKPbc	PKPbc	04 22 01.0	-0.7
	0.2nm,0.4s,baz=79,slow=4.2,SNR=4.6						

NNC ***27*** *04:03:26.6±0.3, 43°05N×74°92E, h0km, mb3.0, mpv2.9, Error ellipse: s-maj=4.1km s-min=1.3km az=170.0, Suspected Mining explosion.*
KNET ***27*** *04:03:26.4±0.3, 43°03N×74°90E, h9km, 6km, ml1.1, Error ellipse: s-maj=2.0km s-min=1.7km az=50.0*

ISC 27 04:03:27.0±0.9, 43°05N±0°03×74°92E±0°02, h0km, n21, σ0°52/36, 13C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHMS	**Chumysh**	**0.13**	**248**	⇑P	Pg	04 03 28.9	-0.6
	41nm,0.2s,SNR=51						
CHMS				⇑S	Sg	04 03 31.3	+0.1
	47nm,0.1s						
CHMS	**Chumysh**	**0.13**	**248**	⇑P	Pg	04 03 28.9	-0.6
	7.8nm,0.2s						
CHMS				⇑S	Sg	04 03 31.3	+0.1
	65nm,0.5s						
USP	**Ospenovka**	**0.38**	**306**	⇑P	Pg	04 03 33.8	-0.4
	19nm,0.1s,SNR=94						
USP				⇓S	Sg	04 03 39.7	+0.6
	12nm,0.1s						
KBK	**Karagaybulak**	**0.39**	**177**	⇑P	Pg	04 03 34.5	+0.1
	21nm,0.1s,SNR=9.8						
KBK				⇑S	Sg	04 03 40.8	+1.3
	40nm,0.2s						
SGDS	**Sogindy**	**0.46**	**332**	P	Pg	04 03 36.1	+0.4
	3.0nm,0.1s						
SGDS				S	Sg	04 03 41.6	0.0
	7.4nm,0.1s						
TKM2	**Tokmak 2**	**0.51**	**104**	⇓P	Pg	04 03 36.7	-0.1
	5.6nm,0.1s,SNR=32						
TKM2				⇓S	Sg	04 03 44.0	+0.6
	22nm,0.1s						
TKM2	**Tokmak 2**	**0.51**	**104**	⇓P	Pg	04 03 36.7	-0.1
	0.4nm,0.1s						
TKM2				⇑S	Sg	04 03 44.0	+0.6
	3.4nm,0.2s						
AAK	**Ala-Archa**	**0.52**	**217**	⇑P	Pg	04 03 36.1	-0.7
	2.9nm,0.1s,SNR=16						
AAK				⇓S	Sg	04 03 43.5	0.0
	7.0nm,0.3s						
DGS	**Degeres**	**0.65**	**73**	P	Pg	04 03 40.0	+0.6
	3.2nm,0.2s						
DGS				S	Sg	04 03 48.0	0.0
	6.5nm,0.1s						
KST	**Kastek**	**0.77**	**90**	P	Pg	04 03 42.0	+0.4
	2.9nm,0.1s						
KST				S	Sg	04 03 51.5	-0.1
	9.0nm,0.4s						
KRBS	**Karabastau**	**0.85**	**40**	P	Pg	04 03 43.5	+0.2
	2.5nm,0.1s						
KRBS				S	Sg	04 03 54.0	-0.3
	3.4nm,0.2s						
UCH	**Uchtor**	**0.87**	**200**	⇑P	Pg	04 03 43.2	-0.5
	1.0nm,0.1s,SNR=8.0						
UCH				⇑S	Sg	04 03 55.4	+0.4

	2.0nm,0.2s								
EKS2	**Erkin-Say**	**0.92**	**246**	⇑P		**Pg**	**04 03 44.0**	**-0.7**
	2.6nm,0.1s,SNR=6.6								
MRKS	**Merke**	**1.28**	**257**	P		**Pn**	**04 03 53.2**	**+1.0**
	2.4nm,0.2s								
MRKS				S		**Sn**	**04 04 10.6**	**+0.5**
	10nm,0.2s								
KUU	**Kurty**	**1.33**	**50**	P		**Pg**	**04 03 52.2**	**-0.3**
	4.0nm,0.2s								
KUU				S		**Sg**	**04 04 09.2**	**-0.6**
	8.3nm,0.3s								
TNSS	**Tian-Shan**	**1.49**	**90**	P		**Pn**	**04 03 55.2**	**-0.1**
	8.6nm,0.2s								
TNSS				S		**Sg**	**04 04 14.2**	**-0.5**
	3.5nm,0.4s								
MDOK	**Medeo**	**1.56**	**85**	Pg		**Pb**	**04 03 56.5**	**-0.4**
	6.5nm,0.1s								
MDOK				Lg		Lg	04 04 16.5		
	7.1nm,0.4s								
KOTS	**Kotyrbulak**	**1.62**	**83**	P		**Pb**	**04 03 57.6**	**-0.2**
	4.1nm,0.2s								
KOTS				S		**Sn**	**04 04 18.1**	**-0.4**
	4.7nm,0.3s								
BTLS	**Baital**	**2.09**	**343**	Pg		**Pg**	**04 04 06.7**	**-0.3**
	0.8nm,0.1s								
BTLS				Lg		Lg	04 04 33.5		
	6.5nm,0.3s								
KURS	**Kuram**	**2.42**	**78**	Pg		**Pg**	**04 04 12.3**	**-0.9**
	1.3nm,0.3s								
KURS				Lg		Lg	04 04 43.0		
	2.1nm,0.3s								
KK31	**Karatay Array**	**3.23**	**272**	⇑Lg		Lg	04 05 09.9		
	0.3nm,0.3s,baz=87,slow=27,SNR=5.2								

IDC 27 04:04:26.5±2.1, 6°08S×143°20E, h0km, mb3.8/3, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=86.8km s-min=36.1km az=104.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.25**	**211**	Pn	Pn	04 08 12.2	-4.1
	0.2nm,0.3s,baz=33,slow=13,SNR=8.6						
WRA				Sn	Sn	04 11 06.4	-11
	baz=27,slow=24,SNR=1.8						
ASAR	**Alice Springs**	**19.64**	**206**	P	P	04 08 56.8	-0.2
	0.4nm,0.3s,baz=33,slow=10,SNR=25						
	6.5nm,0.9s						
MKAR	**Makanchi Array**	**75.18**	**322**	P	P	04 16 10.1	-0.9
	0.3nm,0.5s,baz=127,slow=6.3,SNR=4.2						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**84.62**	**325**	P	P	04 17 03.1	+1.2
	1.5nm,0.7s,baz=98,slow=4.4,SNR=7.0						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**87.06**	**24**	P	P	04 17 13.4	-0.4
	0.3nm,0.6s,baz=251,slow=5.4,SNR=3.1						
	0.3nm,0.6s						

*AUST **27** 04:06:29.7±0.0, 30°.63S×138°.51E, h10km, Error ellipse: s-maj=0.4km s-min=0.1km az=299.0*
*IDC **27** 04:06:30.0±4.2, 30°.515S×138°.42E, h0km, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=112.1km s-min=22.2km az=44.0*
*NOU **27** 04:06:31.2, 30°.61S×138°.40E, h0km, MLv3.9/12, South Australia*

ISC 27 04:06:31.2±0.8, 30°.56S±0°.05×138°.45E±0°.04, h10km, n26, σ1s51/38, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**0.23**	**299**	P	**Pg**	**04 06 36.1**	**0.0**
	baz=0.3,SNR=1000						
LCRK				S	**Sg**	**04 06 40.4**	**+1.1**
	baz=0.3						
LCRK	**Leigh Creek**	**0.23**	**299**	P	**Pg**	**04 06 36.3**	**+0.2**
WHYH	**Whyalla**	**2.57**	**197**	P	**Pn**	**04 07 14.0**	**+1.0**
HTT	**Hallett**	**2.89**	**172**	P	**Pn**	**04 07 17.6**	**+0.2**
	baz=2.8,SNR=25						
HTT				S	**Sn**	**04 07 51.6**	**-0.6**
	baz=2.8,SNR=5.3						
HTT	**Hallett**	**2.89**	**172**	P	**Pn**	**04 07 17.7**	**+0.3**
STKA	**Stephens Creek**	**2.99**	**117**	P	**Pn**	**04 07 18.5**	**-0.2**
	baz=3.0,SNR=14						
STKA				S	**Sn**	**04 07 54.3**	**-0.4**
	baz=3.0,SNR=4.3						
STKA	**Stephens Creek**	**2.99**	**117**	P	**Pn**	**04 07 19.3**	**+0.5**
STKA	**Stephens Creek**	**2.99**	**117**	Pn	**Pn**	**04 07 18.5**	**-0.2**
	2.1nm,0.3s,baz=301,slow=14,SNR=19						
STKA				Pg	**Pb**	**04 07 26.4**	**+1.8**
	10nm,0.3s,baz=296,slow=14,SNR=28						
STKA				Sn	**Sn**	**04 07 55.0**	**+0.3**
	26nm,0.3s,baz=336,slow=20,SNR=11						
STKA				Lg	Lg	04 08 03.6	
	18nm,0.3s,baz=31,slow=24,SNR=6.6						
	4.2nm,0.3s						
BBOO	**Buckleboo**	**3.03**	**222**	P	**Pn**	**04 07 19.2**	**-0.1**
	baz=3.0,SNR=55						
BBOO				S	**Sn**	**04 07 55.5**	**-0.1**
	baz=3.0						
BBOO	**Buckleboo**	**3.03**	**222**	P	**Pn**	**04 07 19.5**	**+0.2**
INKA	**Innaminka**	**3.45**	**36**	P	**Pn**	**04 07 25.6**	**+0.5**
	baz=3.5,SNR=4.1						
INKA				S	**Sn**	**04 08 08.2**	**+2.1**
	baz=3.5						
INKA	**Innaminka**	**3.45**	**36**	P	**Pn**	**04 07 28.0**	**+2.9**
OOD	**Oodnadatta**	**3.67**	**318**	P	**Pn**	**04 07 30.0**	**+2.0**
	baz=3.7,SNR=12						
OOD				S	**Sn**	**04 08 13.8**	**+2.4**
	baz=3.7						
OOD	**Oodnadatta**	**3.67**	**318**	P	**Pn**	**04 07 30.3**	**+2.3**
MULG	**Mulgathing**	**3.81**	**273**	P	**Pn**	**04 07 30.5**	**+0.5**
	baz=3.8,SNR=13						
MULG				S	**Sn**	**04 08 16.2**	**+1.4**
	baz=3.8,SNR=5.9						
MULG	**Mulgathing**	**3.81**	**273**	P	**Pn**	**04 07 30.4**	**+0.5**
CMSA	**Cobar Meteorol**	**6.29**	**101**	P	**Pn**	**04 08 02.2**	**-1.9**
	baz=6.3						
CMSA				S	**Sn**	**04 09 13.4**	**-2.6**
	baz=6.3						
CMSA	**Cobar Meteorol**	**6.29**	**101**	P	**Pn**	**04 08 04.9**	**+0.9**
QLP	**Quilpie**	**6.45**	**53**	P	**Pn**	**04 08 07.7**	**+1.4**
	baz=6.5						
ARPS	**Mount Arapiles**	**6.80**	**156**	P	**Pn**	**04 08 10.2**	**-0.9**
	baz=6.8						
ARPS	**Mount Arapiles**	**6.80**	**156**	P	**Pn**	**04 08 12.9**	**+1.8**
AS01	**Alice Springs**	**7.96**	**329**	P	**Pn**	**04 08 26.9**	**-0.1**
ASAR	**Alice Springs**	**7.97**	**328**	Pn	**Pn**	**04 08 26.6**	**-0.7**
	0.6nm,0.3s,baz=152,slow=11,SNR=20						
ASAR				Sn	**Sn**	**04 09 54.0**	**-3.6**
	0.9nm,0.3s,baz=152,slow=22,SNR=5.7						
	1.6nm,0.7s						
FORT	**Forrest**	**8.96**	**266**	P	**Pn**	**04 08 39.5**	**-1.2**
	baz=8.9						
FORT	**Forrest**	**8.96**	**266**	P	**Pn**	**04 08 39.5**	**-1.2**
WRA	**Warramunga Arr**	**11.21**	**340**	Pn	**Pn**	**04 09 10.8**	**-0.8**
	0.6nm,0.3s,baz=160,slow=12,SNR=12						
WRA				Sn	**Sn**	**04 11 14.1**	**-3.0**
	0.3nm,0.3s,baz=167,slow=20,SNR=4.7						
	1.1nm,0.6s						

*NEIC **27** 04:13:58.9±1.7, 18°.26N±0°.09×103°.20W±0°.08, h14km±3km, mb4.4/57, Md4.7/47(MEX), Error ellipse: s-maj=15.1km s-min=8.4km az=219.0*
*MEX **27** 04:13:59.3±0.9, 18°.08N×103°.38W, h5km, MD4.7*
*IDC **27** 04:14:06.3±4.3, 18°.42N×102°.98W, h72km±33km, mb3.5/8, mbtmp3.8/10, ML3.5/2, MS3.3/8, Error ellipse: s-maj=52.1km s-min=19.7km az=49.0*

ISC 27 04:13:58.0±0.9, 18°.15N±0°.04×103°.25W±0°.03, h16km±5km, n170, σ2s14/223, mb4.4/25, MS3.4/4, 4C, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.17**	**328**		**Pg**	**04 14 03.0**	**+0.7**
MMIG					**Sg**	**04 14 05.6**	**+0.4**
MMIG	**Aquila**	**0.17**	**328**	⇑iP	**Pg**	**04 14 03.0**	**+0.7**
MMIG				*i* S	**Sg**	**04 14 05.6**	**+0.4**
CDAR	**Ciudad de Arme**	**1.07**	**318**	*e*S	**Sb**	**04 14 29.0**	**-2.7**
MNGA	**Volcan de Coli**	**1.36**	**345**	*e*P	**Pn**	**04 14 22.2**	**-0.3**
MNGA				*e*S	**Sg**	**04 14 40.6**	**-1.3**
CEGR	**Campo Tres**	**1.36**	**335**	⇑*e*P	**Pn**	**04 14 21.3**	**-1.1**
EZ5V		**1.36**	**346**	*e*P	**Pn**	**04 14 22.4**	**-0.2**
EZ5V				*e*S	**Sb**	**04 14 40.0**	**-0.6**
UON	**La Union**	**1.38**	**97**	*e*P	**Pn**	**04 14 23.1**	**+0.6**
UON				*e*S	**Sg**	**04 14 43.6**	**+1.1**
JUBC	**Volcan de Coli**	**1.39**	**348**	*e*P	**Pn**	**04 14 22.7**	**-0.3**
INCO	**Volcan de Coli**	**1.41**	**346**	⇑*e*P	**Pn**	**04 14 23.0**	**-0.3**
INCO				*i* S	**Sb**	**04 14 41.9**	**-0.2**
SOMAC	**Volcano de Col**	**1.42**	**345**	⇑*e*P	**Pn**	**04 14 23.0**	**-0.4**
SOMAC				*i* S	**Sb**	**04 14 41.6**	**-0.5**
CIHU	**Emiliano Zapat**	**1.79**	**309**	*e*P	**Pn**	**04 14 28.1**	**-0.1**
CIHU				*e*S	**Sn**	**04 14 51.0**	**+0.4**
PET2	**Petatlan**	**1.99**	**108**	*e*P	**Pn**	**04 14 31.1**	**+0.1**
PET2				*i* S	**Sg**	**04 15 01.3**	**-0.8**
CJM	**Chamela**	**2.17**	**309**	*e*P	**Pn**	**04 14 35.0**	**+1.7**
CJM				*e*S	**Sn**	**04 15 00.2**	**+0.4**
MOIG	**Morelia**	**2.48**	**52**	Pn	**Pn**	**04 14 36.0**	**-1.8**
MOIG	**Morelia**	**2.48**	**52**	*e*P	**Pn**	**04 14 39.6**	**+1.8**
MOIG				*e*S	**Sb**	**04 15 12.3**	**-0.3**
ESTA	**Talpa de Allen**	**2.69**	**326**	*e*P	**Pn**	**04 14 41.1**	**+0.3**
ESTA				*e*S	**Sb**	**04 15 17.1**	**-1.6**
ARIG	**Puente Sto Nin**	**2.76**	**87**		**Pn**	**04 14 43.5**	**+1.9**
ARIG	**Puente Sto Nin**	**2.76**	**87**	*e*P	**Pn**	**04 14 43.1**	**+1.5**
ATYC	**Atoyac**	**2.84**	**109**	*e*P	Pn	04 14 37.6	-5.1
ATYC				*e*S	**Sn**	**04 15 19.9**	**+3.3**
TEJU	**Tejupilco**	**3.03**	**75**	*e*P	**Pb**	**04 14 50.1**	**-1.5**
TEJU				*i* S	**Sb**	**04 15 31.3**	**+2.9**
CAIG	**El Cayaco**	**3.05**	**111**		**Pn**	**04 14 46.8**	**+1.3**
CAIG					**Sn**	**04 15 24.4**	**+2.8**
CAIG	**El Cayaco**	**3.05**	**111**	*e*P	**Pn**	**04 14 46.8**	**+1.3**
CAIG				*e*S	**Sn**	**04 15 24.4**	**+2.8**
ANIG	**Ahuacatlan**	**3.13**	**338**		**Pb**	**04 14 51.7**	**-1.6**
ANIG					**Sb**	**04 15 30.5**	**-0.8**
ANIG	**Ahuacatlan**	**3.13**	**338**	*e*P	**Pb**	**04 14 51.7**	**-1.6**
ANIG				*e*S	**Sb**	**04 15 30.5**	**-0.8**
IGIG	**Irapuato, Guan**	**3.16**	**35**		**Sb**	**04 15 27.9**	**-4.5**
IGIG	**Irapuato, Guan**	**3.16**	**35**	*e*S	**Sb**	**04 15 27.9**	**-4.5**
ACP2	**Acapulco**	**3.45**	**111**	*e*P	**Pn**	**04 14 52.3**	**+1.3**
ACP2				*i* S	**Sn**	**04 15 32.3**	**+0.7**
MEIG	**Mezcala**	**3.46**	**93**		**Pb**	**04 14 58.0**	**-0.9**
MEIG	**Mezcala**	**3.46**	**93**	*e*P	**Pb**	**04 14 58.0**	**-0.9**
VNTA	**La Mica**	**3.50**	**110**	*e*S	**Sn**	**04 15 35.0**	**+2.3**
TOVM	**TOLUCA**	**3.57**	**71**	*e*P	**Pb**	**04 14 58.1**	**-2.9**
TOVM				*e*S	**Sb**	**04 15 41.4**	**-2.8**
PLIG	**Platanillo**	**3.57**	**86**		**Pn**	**04 14 55.5**	**+2.7**
PLIG					**Sb**	**04 15 43.0**	**-1.0**
PLIG	**Platanillo**	**3.57**	**86**	*e*P	**Pn**	**04 14 55.5**	**+2.7**
PLIG				*e*S	**Sb**	**04 15 43.0**	**-1.0**
ATVM	**ATLACOMULCO**	**3.60**	**63**	*e*P	**Pn**	**04 14 55.9**	**+2.5**
ATVM				*e*S	**Sn**	**04 15 36.4**	**+0.6**
DAIG	**Los Arroyos**	**3.61**	**108**		**Pn**	**04 14 55.1**	**+1.8**
DAIG					**Sn**	**04 15 40.5**	**+4.9**
DAIG	**Los Arroyos**	**3.61**	**108**	*e*P	**Pn**	**04 14 55.1**	**+1.8**
DAIG				*e*S	**Sn**	**04 15 40.5**	**+4.9**
JRQG	**Juriquilla Cam**	**3.67**	**46**		**Pn**	**04 14 54.7**	**+0.5**
JRQG	**Juriquilla Cam**	**3.67**	**46**	*i* P	**Pb**	**04 15 02.3**	**-0.3**
JRQG				*e*S	**Sb**	**04 15 44.8**	**-2.1**
ACIG	**Acambay**	**3.67**	**60**	*e*P	**Pn**	**04 14 57.8**	**+3.5**
ACIG				*e*S	**Sn**	**04 15 41.2**	**+3.9**
INVM	**La Marquesa**	**3.84**	**72**	*e*P	**Pb**	**04 15 01.9**	**-3.7**
INVM				*e*S	**Sn**	**04 15 41.9**	**+0.2**
AAIG	**Aguscalientes**	**3.89**	**12**		**Pn**	**04 14 58.7**	**+1.4**
AAIG	**Aguscalientes**	**3.89**	**12**	*e*P	**Pn**	**04 14 58.7**	**+1.4**
AOVM	**Tlapan**	**3.89**	**73**	*e*P	**Pn**	**04 15 01.2**	**+3.7**
AOVM				*e*S	**Sb**	**04 15 54.2**	**+0.8**
CJVM	**Cuajimalpa**	**3.95**	**72**	*e*P	**Pn**	**04 14 58.9**	**+0.8**
CJVM				*e*P	**Pb**	**04 15 06.1**	**-1.2**
CJVM				*e*S	**Sn**	**04 15 48.0**	**+3.8**
AZVM	**Cuida Lopez Ma**	**4.02**	**69**	*e*P	**Pn**	**04 15 01.9**	**+2.7**
CNCY	**Coyoacan**	**4.03**	**73**	*e*P	**Pn**	**04 14 56.6**	**+0.3**
YAIG	**Yautepec**	**4.03**	**79**		**Pn**	**04 15 02.3**	**+3.1**
YAIG					**Sb**	**04 15 53.6**	**-3.7**
YAIG	**Yautepec**	**4.03**	**79**	*e*P	**Pn**	**04 15 02.3**	**+3.1**
YAIG				*e*S	**Sb**	**04 15 53.6**	**-3.7**
UNM	**Universidad Na**	**4.04**	**72**		**Pn**	**04 14 59.3**	**0.0**
UNM	**Universidad Na**	**4.04**	**72**	*e*P	**Pb**	**04 15 07.7**	**-1.2**
UNM				*e*S	**Sb**	**04 15 57.4**	**-0.2**
BJVM	**Benito Juarez**	**4.05**	**72**	*e*P	**Pn**	**04 15 02.7**	**+3.1**
BJVM				*e*S	**Sn**	**04 15 50.5**	**+3.6**
COVM	**Coyoacan**	**4.06**	**72**	*e*S	**Sn**	**04 15 43.8**	**-3.2**
COVM				*e*S	**Sb**	**04 15 52.5**	**-5.8**
XCVM	**Xochimilco**	**4.07**	**74**	*e*P	**Pn**	**04 15 03.8**	**+4.0**
PBVM	**Pinon**	**4.15**	**71**	*e*P	**Pn**	**04 15 01.4**	**+0.7**
PBVM				*e*S	**Sn**	**04 15 51.1**	**+2.2**
MPVM	**San Francisco**	**4.15**	**75**	*e*P	**Pn**	**04 15 03.6**	**+2.7**
MPVM				*e*S	**Sn**	**04 15 48.8**	**-0.5**
PTVM	**Pico Tres Padr**	**4.17**	**69**	*e*P	**Pb**	**04 15 09.9**	**-1.3**
PTVM				*e*S	**Sn**	**04 15 52.5**	**+2.1**
CRIG	**Cruz Grande**	**4.18**	**109**		**Pn**	**04 15 03.0**	**+2.0**
CRIG					**Sb**	**04 15 56.5**	**-4.8**
CRIG	**Cruz Grande**	**4.18**	**109**	*e*P	**Pn**	**04 15 03.0**	**+2.0**
CRIG				*e*S	**Sb**	**04 15 56.5**	**-4.8**
THVM	**De Xico**	**4.22**	**73**	*e*P	**Pb**	**04 15 13.0**	**+1.1**
THVM				*e*S	**Sn**	**04 15 51.0**	**+0.2**
ZUVM	**ZUMPANGO**	**4.29**	**66**	*e*P	**Pb**	**04 15 11.0**	**-2.1**
TXVM	**Universitario**	**4.30**	**72**	*i* P	**Pn**	**04 15 06.5**	**+3.6**
TXVM				*e*S	**Sn**	**04 15 55.8**	**+2.8**
AMVM	**AMECAMECA**	**4.35**	**76**	*e*P	**Pn**	**04 15 06.1**	**+2.5**
AMVM				*e*S	**Sn**	**04 15 58.1**	**+4.0**
HMTT	**Tlapaneco**	**4.48**	**94**	*i* P	**Pn**	**04 15 04.4**	**-0.8**
HMTT				*i* S	**Sn**	**04 15 57.6**	**+0.5**
PPM	**Popocatepetl**	**4.48**	**78**	*e*P	**Pn**	**04 15 09.4**	**+3.8**
PPM				*e*S	**Sn**	**04 16 03.6**	**+5.9**
TLIG	**Tlapa**	**4.50**	**97**		**Pn**	**04 15 06.1**	**+0.5**
TLIG	**Tlapa**	**4.50**	**97**	*e*P	**Pn**	**04 15 08.5**	**+2.9**
TLIG				*e*S	**Sb**	**04 15 05.7**	**-5.1**
DEIG	**Demacu**	**4.52**	**61**	*e*P	**Pn**	**04 15 09.4**	**+3.4**
DEIG				*e*S	**Sn**	**04 15 59.5**	**+1.1**
VTVM	**Tizayuca**	**4.53**	**68**	*i* P	**Pn**	**04 15 08.0**	**+1.8**
VTVM				*e*S	**Sn**	**04 15 57.1**	**-1.6**
ZAIG	**Zacatecas**	**4.64**	**8**		**Pn**	**04 15 06.7**	**-1.0**
ZAIG	**Zacatecas**	**4.64**	**8**	*e*P	**Pn**	**04 15 09.2**	**+1.5**
ZAIG				*i* S	**Sn**	**04 16 02.8**	**+1.4**
RPIG	**Rio Verde**	**4.82**	**39**	*e*P	**Pn**	**04 15 09.3**	**-0.7**
RPIG				*e*S	**Sn**	**04 16 06.2**	**+0.6**
FTIG	**Fresnillo de T**	**4.88**	**92**	*e*P	**Pn**	**04 15 10.5**	**-0.2**
FTIG				*e*S	**Sb**	**04 16 17.5**	**-4.1**
HLIG	**Huajuapan de L**	**5.20**	**93**	*i* P	Pn	04 15 09.6	-5.6
HLIG				*e*S	**Sb**	**04 16 25.0**	**-5.8**
PNIG	**Pinotepa**	**5.20**	**109**	*e*P	**Pn**	**04 15 17.7**	**+2.6**
PNIG				*e*S	**Sb**	**04 16 24.1**	**-6.6**
TXIG	**Tlaxiaco**	**5.30**	**99**	*e*P	Pn	04 15 10.9	-5.8
TXIG				*e*S	**Sn**	**04 16 4.0**	**+0.3**
YOIG	**Yosondua**	**5.59**	**102**	*e*P	**Sn**	**04 15 22.9**	**+2.1**
YOIG				*e*S	**Sn**	**04 16 26.7**	**+1.8**
TPIG	**Tehuac#an**	**5.60**	**86**	*e*P	**Pn**	**04 15 23.4**	**+2.6**
TPIG				*e*S	**Sn**	**04 16 24.6**	**-0.3**
TOIG	**Toxpalan**	**5.88**	**90**	*e*P	**Pn**	**04 15 25.5**	**+0.9**
TOIG				*e*S	**Sn**	**04 16 34.2**	**+2.4**
GTIG	**Gomez Farias**	**6.21**	**37**	*e*P	**Pn**	**04 15 31.1**	**+2.2**
GTIG				*e*S	**Sn**	**04 16 43.0**	**+3.3**
PEIG	**Puerto Escondi**	**6.22**	**109**	*e*P	**Pn**	**04 15 32.0**	**+2.9**
PEIG				*e*S	**Sn**	**04 16 39.5**	**-0.4**
VHO	**Vista Hermosa**	**6.31**	**99**	*i* P	**Pn**	**04 15 30.2**	**-0.3**
VHO				*e*S	**Sn**	**04 16 40.7**	**-1.7**
PDIG	**Papasquiaro**	**7.14**	**344**	*e*P	**Pn**	**04 15 45.7**	**+3.7**
PDIG				*e*S	**Sn**	**04 17 05.2**	**+2.3**
HUIG	**Huatulco**	**7.23**	**108**	*i* P	**Pn**	**04 15 44.0**	**+0.9**
HUIG				*e*S	**Sn**	**04 17 06.9**	**+2.0**
H06E1	**SOCORRO T-PHAS**	**7.31**	**276**	T	T	04 23 05.3	
	SNR=296						
LNIG	**Linares**	**7.58**	**27**	*e*P	**Pn**	**04 15 48.9**	**+1.0**
LNIG				*i* S	**Sn**	**04 17 16.4**	**+2.9**
CMIG	**Matias Romero**	**8.05**	**96**	P	**Pn**	**04 15 57.3**	**+3.1**
	0.5nm,0.3s,baz=298,slow=12,SNR=3.2						
CMIG				Lg	Lg	04 18 06.8	
	1.0nm,0.3s,baz=356,slow=2.8,SNR=4.6						
CMIG				LR	LR	04 19 37.7	
	comp=Z,161nm,21.0s,baz=280,slow=42						
	1.7nm,0.4s						
CMIG	**Matias Romero**	**8.05**	**96**	*e*P	**Pn**	**04 15 57.1**	**+2.9**
CMIG				*e*S	**Sn**	**04 17 31.4**	**+6.4**
SLBS	**Sierra La Lagu**	**8.33**	**313**	Pn	**Pn**	**04 15 59.3**	**+1.0**
LPIG	**La Paz**	**8.86**	**313**	LR	LR	04 18 47.2	
	comp=Z,165nm,20.2s,baz=20,slow=32						
TX31	**Lajitas Ar. Si**	**11.14**	**358**	Pn	**Pn**	**04 16 36.7**	**0.0**
TXAR	**Lajitas Array**	**11.14**	**358**	Pn	**Pn**	**04 16 36.5**	**-0.2**
TXAR	**Lajitas Array**	**11.14**	**358**	P	**Pn**	**04 16 40.5**	**+3.8**
	0.1nm,0.3s,baz=175,slow=14,SNR=20						
TXAR				Lg	Lg	04 19 44.0	
	baz=178,slow=33,SNR=2.4						
TXAR				LR	LR	04 20 20.6	
	comp=Z,57nm,18.6s,baz=164,slow=34						
	1.7nm,0.8s						
ALPN	**Alpine**	**12.18**	**358**	Pn	**Pn**	**04 16 50.7**	**-0.2**
SN05	**Snyder 5**	**14.82**	**8**	P	**P**	**04 17 32.0**	**-0.8**
POST	**Post**	**14.94**	**6**	P	**P**	**04 17 33.1**	**-0.9**
SN07	**Snyder 07**	**15.03**	**8**	Pn	**Pn**	**04 17 30.8**	**+1.0**
FW13	**Cleburne**	**15.09**	**19**	Pn	**Pn**	**04 17 29.1**	**-1.4**
237A	**Washetta, Mont**	**15.35**	**25**	P	**P**	**04 17 37.1**	**-1.4**
APMT	**Aspermont**	**15.37**	**10**	P	**Pn**	**04 17 36.7**	**+2.4**
APMT				IAmb	IAmb	04 17 47.3	
	comp=Z,19nm,0.8s						
FW03	**Perrin-Whitt E**	**15.54**	**16**	P	**P**	**04 17 39.0**	**-1.7**
FW03				IAmb	IAmb	04 17 49.5	
	comp=Z,12nm,0.7s						
DKNS	**Dickens**	**15.60**	**7**	Pn	**Pn**	**04 17 37.5**	**+0.3**
DKNS				IAmb	IAmb	04 17 52.2	
	comp=Z,22nm,0.9s						
NATX	**Nacogdoches**	**15.62**	**28**	Pn	**Pn**	**04 17 37.4**	**-0.1**
MSTX	**Muleshoe**	**15.76**	**1**	Pn	**Pn**	**04 17 38.6**	**-0.8**
MSTX				IAmb	IAmb	04 17 52.7	
	comp=Z,28nm,1.2s						
ANMO	**Albuquerque**	**16.97**	**351**	P	**P**	**04 17 59.4**	**+2.7**
	comp=Z,1.0nm,0.8s,baz=280,slow=6.0,SNR=3.3						
WMOK	**Wichita Mounta**	**17.00**	**13**	Pn	**Pn**	**04 17 53.1**	**-1.9**
SMWD	**Samnorwood**	**17.10**	**8**	Pn	**Pn**	**04 17 55.4**	**-0.9**
SMWD				IAmb	IAmb	04 18 23.0	
	comp=Z,24nm,1.2s						
MIAR	**Mount Ida**	**18.47**	**26**	P	**P**	**04 18 12.4**	**-0.7**
TUL3	**Leonard**	**18.89**	**19**		**P**	**04 18 17.3**	**-0.3**
TUL3				IAmb	IAmb	04 18 28.2	
	comp=Z,18nm,0.8s						
PFO	**Pinyon Flats O**	**19.42**	**325**	LR	LR	04 25 18.9	
	comp=Z,94nm,18.9s,baz=99,slow=35						
MVCO	**Mesa Verde**	**19.54**	**347**	P	**P**	**04 18 24.6**	**-0.5**
T35A	**Sooner Cattle**	**19.62**	**16**		**P**	**04 18 25.6**	**-0.1**
T35A				IAmb	IAmb	04 18 36.1	
	comp=Z,22nm,1.1s						
SDCO	**Great Sand Dun**	**19.62**	**355**	P	**P**	**04 18 26.0**	**0.0**
WHAR	**Wooly Hollow**	**19.66**	**28**	P	**P**	**04 18 26.3**	**+0.2**
HHAR	**Hobbs**	**19.85**	**23**	P	**P**	**04 18 26.8**	**-1.5**
FCAR	**Ozark Folk Cen**	**20.23**	**27**	P	**P**	**04 18 31.5**	**-0.9**
FCAR				IAmb	IAmb	04 18 43.0	
	comp=Z,6.8nm,0.8s						
Z47A	**Carrollton**	**20.26**	**39**	P	**P**	**04 18 31.7**	**-0.9**
Z47A				IAmb	IAmb	04 18 42.8	
	comp=Z,17nm,0.9s						
R32A	**Long Quarter,**	**20.59**	**10**	P	**P**	**04 18 36.8**	**+0.6**
R32A				IAmb	IAmb	04 18 48.3	
	comp=Z,24nm,1.1s						
KSCO	**Kaye Shedlock'**	**20.80**	**1**	P	**P**	**04 18 37.7**	**-0.9**
KSCO				IAmb	IAmb	04 18 52.9	
	comp=Z,9.3nm,0.8s						
LRAL	**Lakeview Retre**	**20.81**	**41**	P	**P**	**04 18 38.2**	**-0.5**
LRAL				IAmb	IAmb	04 18 48.6	
	comp=Z,6.8nm,0.7s						
LCAR	**Lake Charles**	**20.81**	**29**	P	**P**	**04 18 37.4**	**-1.3**
GSC	**Goldstone, Bar**	**20.90**	**327**	P	**P**	**04 18 38.8**	**-0.9**
MGMO	**Mountain Grove**	**21.25**	**25**	P	**P**	**04 18 42.4**	**-1.1**
MGMO				IAmb	IAmb	04 18 51.5	
	comp=Z,15nm,0.8s						
S39A	**Bolivar**	**21.33**	**22**	P	**P**	**04 18 45.0**	**+0.8**
S39A				IAmb	IAmb	04 18 56.5	
	comp=Z,10nm,1.1s						
X48A	**Hartselle**	**21.74**	**39**	P	**P**	**04 18 48.9**	**+0.2**
WCT	**Wildcat Mounta**	**22.00**	**330**	P	**P**	**04 18 50.3**	**-1.2**
R40A	**Maddies Statio**	**22.25**	**23**	P	**P**	**04 18 54.1**	**0.0**
CCM	**Cathedral Cave**	**22.44**	**25**	P	**P**	**04 18 54.6**	**-1.5**
CCM				IAmb	IAmb	04 19 04.4	
	comp=Z,5.6nm,0.7s						
FPAL	**Fort Paine**	**22.67**	**40**	P	**P**

*IDC **27** 04:15:31.6±0.9,6.°10S×143.°05E,h0km,mb4.2/7, mbtmp4.3/9,ML1.8/1,Error ellipse: s-maj=41.1km s-min=21.0km az=78.0*

ISC 27 04:15:36.6±0.8,**6.°3S**±0.°1×**143.°0E**±0.°1,**h35**km,**n10, σ1°29/11,mb4.1/7,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.22**	**127**	Pn		**Pn**	**04 16 52.2**	**+0.1**
	2.5nm,0.3s,baz=317,slow=6.1,SNR=5.5							
PMG				Sn		Sn	04 17 51.0	-0.2
	4.1nm,0.3s,baz=75,slow=23,SNR=4.3 13nm,0.5s							
WRA	**Warramunga Arr**	**15.97**	**211**	Pn		**Pn**	**04 19 16.1**	**-2.6**
	0.4nm,0.3s,baz=30,slow=13,SNR=14							
WRA				Sn		Sn	04 22 06.6	-8.1
	0.5nm,0.3s,baz=31,slow=24,SNR=5.5							
ASAR	**Alice Springs**	**19.37**	**206**	P		**P**	**04 20 01.3**	**+1.8**
	12nm,0.7s,baz=34,slow=9.8,SNR=64							
ASAR				S		S	04 23 27.5	-9.4
	1.6nm,0.8s,baz=16,slow=29,SNR=4.1							
STKA	**Stephens Creek**	**25.52**	**183**	P		**P**	**04 21 03.0**	**+1.1**
	2.3nm,0.7s,baz=333,slow=10,SNR=4.2 2.3nm,0.7s							
KSRS	**Korea Array**	**45.69**	**343**	P		**P**	**04 23 54.2**	**+0.1**
	0.9nm,0.5s,baz=160,slow=9.6,SNR=4.4 0.9nm,0.5s							
MKAR	**Makanchi Array**	**75.16**	**322**	P		**P**	**04 27 15.8**	**+0.3**
	1.2nm,0.7s,baz=103,slow=7.8,SNR=15 1.2nm,0.7s							
ZALV	**Zalesovo Beam**	**77.12**	**329**	P		**P**	**04 27 25.7**	**-0.6**
	0.7nm,0.3s,baz=116,slow=6.6,SNR=4.0 0.7nm,0.3s							
KURBB	**Kurchatov Arra**	**79.05**	**324**	P		**P**	**04 27 37.2**	**+0.1**
	3.0nm,1.2s,baz=116,slow=4.5,SNR=9.3 3.0nm,1.2s							
BVAR	**Borovoye Array**	**84.62**	**325**	P		**P**	**04 28 07.0**	**+0.6**
	7.7nm,0.7s,baz=104,slow=6.1,SNR=30 7.7nm,0.7s							
ILAR	**Eielson Array**	**87.32**	**24**	P		**P**	**04 28 18.6**	**-1.0**
	1.7nm,0.7s,baz=257,slow=5.1,SNR=17 1.7nm,0.7s							

*IDC **27** 04:17:06.7±4.3,19.°64S×177.°04W,h310km±38km,mb3.8/6, mbtmp4.5/7,Error ellipse: s-maj=26.2km s-min=15.8km az=76.0*

ISC 27 04:17:10.6±1.1,**19.°6S**±0.°1×**177.°1W**±0.°2,**h351**km,**n14, σ1°24/16,mb4.0/6,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.26**	**194**	P		**P**	**04 21 09.3**	**-1.3**
	2.4nm,0.3s,baz=16,slow=5.4,SNR=8.6							
URZ				S		**S**	**04 24 31.3**	**+2.3**
	3.0nm,0.5s,baz=106,slow=20,SNR=1.7							
CTA	**Charters Tower**	**34.46**	**263**	P		**P**	**04 23 27.1**	**+0.4**
	6.9nm,0.4s,baz=91,slow=9.9,SNR=12 6.9nm,0.4s							
STKA	**Stephens Creek**	**38.96**	**243**	P		**P**	**04 24 03.6**	**-0.6**
	2.9nm,0.7s,baz=72,slow=7.3,SNR=3.9 2.9nm,0.7s							
ASAR	**Alice Springs**	**45.58**	**256**	P		**P**	**04 24 56.0**	**-1.2**
	6.6nm,0.7s,baz=91,slow=7.6,SNR=21							
ASAR				PcP		**PcP**	**04 26 28.1**	**-1.0**
	2.4nm,0.8s,baz=104,slow=3.9,SNR=4.1 6.6nm,0.7s							
WRA	**Warramunga Arr**	**45.60**	**261**	P		**P**	**04 24 56.6**	**-0.7**
	2.1nm,0.4s,baz=97,slow=7.6,SNR=9.6 2.1nm,0.4s							
QSPA	**South Pole Qui**	**70.45**	**180**	P		**P**	**04 27 47.5**	**0.0**
	2.3nm,0.7s,baz=16,slow=1.1,SNR=16 2.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**90.65**	**289**	P		**P**	**04 29 36.8**	**+2.3**
	1.1nm,0.3s,baz=148,slow=2.6,SNR=9.3 1.1nm,0.3s							
MKAR	**Makanchi Array**	**111.23**	**314**	PKiKP		**PKiKP**	**04 35 02.9**	**-0.1**
	0.3nm,0.6s,baz=101,slow=1.5,SNR=3.8							
KURBB	**Kurchatov Arra**	**113.99**	**318**	PKP		**PKiKP**	**04 35 08.0**	**-0.1**
	0.2nm,0.5s,baz=92,slow=1.5,SNR=4.1							
BVAR	**Borovoye Array**	**118.96**	**320**	PKP		**PKiKP**	**04 35 17.9**	**+0.3**
	0.6nm,0.4s,baz=132,slow=2.1,SNR=4.2							
AKASG	**Malin Array Be**	**142.65**	**332**	PKP		**PKPdf**	**04 36 00.4**	**-1.7**
	2.0nm,0.5s,baz=42,slow=4.2,SNR=12							
BRTR	**Keskin Array B**	**146.88**	**314**	PKPbc		**PKPbc**	**04 36 13.6**	**+1.1**
	1.2nm,0.6s,baz=145,slow=4.7,SNR=6.9							
MMAI	**Mount Meron Ar**	**148.12**	**301**	PKPbc		**PKiKP**	**04 36 17.3**	**0.0**
	1.9nm,0.5s,baz=74,slow=6.2,SNR=5.5							
GERES	**GERESS Array B**	**149.57**	**346**	PKPbc		**PKiKP**	**04 36 20.0**	**+0.1**
	0.8nm,0.8s,baz=355,slow=2.4,SNR=2.6							

IDC 27 04:25:57.2±701.0,**7.°97S×52.°38W,h0km,Error ellipse: s-maj=298.4km s-min=171.4km az=0.0,Brazil**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
I09BR	**BRASILIA INFRA**	**8.73**	**151**	I		I	05 15 50.0	
	baz=329,slow=329,SNR=1.9							
I08BO	**LAS PENAS INFR**	**17.72**	**241**	I		I	06 12 20.0	
	baz=64,slow=328,SNR=2.9							
I41PY	**VILLA FLORIDA**	**18.86**	**194**	I		I	06 22 20.0	
	baz=14,slow=312,SNR=2.6							

*IDC **27** 04:28:10.8±1.6,2.°50S×127.°51E,h0km,mb3.6/3, mbtmp3.7/4,ML3.7/1,Error ellipse: s-maj=139.2km s-min=22.7km az=67.0*

*DJA **27** 04:28:14.5±0.3,3.°5S±4.°×12.°7E±.°,h10km,M3.8/11,mb3.9/5, MLv3.7/11*

ISC 27 04:28:13.9±0.9,**2.°62S**±0.°07×**126.°75E**±0.°07,**h10**km,**n12, σ1°82/12,mb3.9/3,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.70**	**150**	Pg		**Pg**	**04 28 27.7**	**+0.2**
SANI	**Sanana**	**0.95**	**307**	Pg		**Pg**	**04 28 31.5**	**-0.8**
LBMI	**Labuha**	**2.11**	**21**	Pn		**Pn**	**04 28 50.1**	**+0.8**
LUWI	**Luwuk**	**4.28**	**291**	P		**Pn**	**04 29 19.2**	**+0.1**
SWI	**Sorong**	**4.83**	**69**	P		**Pn**	**04 29 27.4**	**+0.7**
GTOI	**Gorontalo**	**4.95**	**311**	P		**Pn**	**04 29 30.7**	**+2.4**
	5.2nm,0.5s,0.0nm							
BKSI	**Bulukumba**	**7.14**	**248**	P		**Pn**	**04 30 00.0**	**+1.6**
	16nm,0.6s,0.1nm							
EDFI	**Ende, Flores**	**7.90**	**219**	P		**Pn**	**04 30 09.4**	**+0.4**
WRA	**Warramunga Arr**	**18.74**	**157**	P		**P**	**04 32 30.1**	**-2.9**
	0.3nm,0.3s,baz=338,slow=12,SNR=12 0.7nm,0.4s							
ASAR	**Alice Springs**	**22.03**	**162**	P		**P**	**04 33 05.6**	**-3.2**
	1.0nm,0.6s,baz=342,slow=11,SNR=12 1.0nm,0.6s							
MKAR	**Makanchi Array**	**62.82**	**327**	P		**P**	**04 38 40.5**	**+0.6**
	0.9nm,0.8s,baz=121,slow=8.5,SNR=7.8 0.9nm,0.8s							
KURBB	**Kurchatov Arra**	**67.12**	**329**	P		**P**	**04 39 08.1**	**+0.4**
	0.5nm,0.6s,baz=131,slow=5.7,SNR=5.8 0.5nm,0.6s							

IDC 27 04:28:51.4±999.0,**29.°56N×132.°18E,h0km,Error ellipse: s-maj=617.1km s-min=153.3km az=56.0,Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
I30JP	**ISUMI INFRASON**	**8.95**	**48**	I		I	05 22 42.4	
	0.3nm,0.9s,baz=237,slow=312,SNR=8.6							
I44RU	**PETROPAVLOVSK**	**80.05**	**31**	I		I	07 35 50.0	
	0.1nm,1.2s,baz=225,slow=335,SNR=1.5							
I60US	**Wake Island**	**32.87**	**100**	I		I	07 46 10.0	
	baz=300,slow=321,SNR=0.4							

*ASIES **27** 04:40:07.7,24.°19N×121.°83E,h2km,ML4.0,Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10²¹Nm; Mrr8.55; Mθθ-7.79; Mφφ-0.76; Mrθ 1.80; Mθφ-0.67; Mφr-0.85; Fault plane solution: Mo8.46153×10²¹ NP1:φs90.79000°, δ51.22000°,λ97.60000°. NP2:φs258.77000°,δ39.40000°, λ80.65000°. Principal axes: T Plg81.5970°, Azm40.5940°; N Plg5.9190°, Azm266.0210°; P Plg5.9430°, Azm175.4030°;*

*TAP **27** 04:40:07.7,24.°19N×121.°83E,h2km,ML4.0,C*

*NIED **27** 04:40:08.1,24.°13N×121.°80E,h7km,MW4.2,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.68; Mθθ-0.87; Mφφ0.18; Mrθ-2.20; Mθφ-0.17; Mφr-0.82;*

Fault plane solution: Mo2.48000×10¹⁵ NP1: φs250.00000°,δ81.00000°,λ85.00000°. NP2:φs98.00000°, δ10.00000°,λ118.00000°.

*JMA **27** 04:40:08.1±0.1,24.°1N±0.°4×121.°8E±0.°6,h7km±2km, MV3.7/14,TAIWAN REGION*

*IDC **27** 04:40:28.4±5.9,24.°53N×121.°71E,h174km±58km,mb3.4/9, mbtmp3.8/10,MS3.0/4,Error ellipse: s-maj=29.1km s-min=16.3km az=65.0*

ISC 27 04:40:08.6±0.9,**24.°20N**±0.°01×**121.°84E**±0.°02,**h7**km±6km, **n99,σ0°84/164,mb3.8/9,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**322**	P		**Pg**	**04 40 11.4**	**-0.2**
	baz=328							
EHP				*e*S		**Sg**	**04 40 13.8**	**+0.1**
	baz=328							
EAHA	**Aohua**	**0.16**	**326**	P		**Pg**	**04 40 11.8**	**-0.1**
	baz=330							
EAHA				S		**Sg**	**04 40 14.8**	**+0.6**
	baz=330							
ETL	**Fush Village**	**0.20**	**259**	*e*P		**Pg**	**04 40 12.1**	**-0.5**
	baz=261							
ETL				S		**Sg**	**04 40 16.6**	**+1.2**
	baz=261							
NACB	**Ninganchiao**	**0.22**	**264**	P		**Pg**	**04 40 12.4**	**-0.6**
	baz=266							
ENA	**Nanau**	**0.25**	**339**	*i* P		**Pg**	**04 40 13.4**	**0.0**
	baz=340							
ENA				*i* S		**Sg**	**04 40 17.8**	**+0.9**
	baz=340							
TWD	**Chiawan**	**0.25**	**242**	*i* P		**Pg**	**04 40 13.1**	**-0.4**
	baz=254							
TWD				S		**Sg**	**04 40 17.9**	**+1.0**
	baz=254							
EWUT	**Wuta**	**0.25**	**348**	P		**Pg**	**04 40 13.6**	**0.0**
	baz=347							
EWUT				S		**Sg**	**04 40 17.8**	**+0.7**
	baz=347							
HWA	**Hwalien**	**0.30**	**224**	*i* P		**Pb**	**04 40 15.5**	**-0.8**
	baz=243							
HWA				*i* S		**Sb**	**04 40 21.9**	**+0.4**
	baz=243							
ETLH	**Xiulin Townshi**	**0.33**	**272**	*e*P		**Pg**	**04 40 14.5**	**-0.5**
	baz=273							
ETLH				*e*S		**Sg**	**04 40 19.1**	**-0.2**
	baz=273							
ESAO	**Su ao**	**0.38**	**1**	P		**Pg**	**04 40 16.0**	**+0.1**
	baz=350							
ESAO				S		**Sb**	**04 40 22.1**	**-1.6**
	baz=350							
ETM	**Tongmen**	**0.39**	**234**	*e*P		**Pg**	**04 40 15.6**	**-0.6**
	baz=247							
ETM				S		**Sb**	**04 40 23.5**	**-0.5**
	baz=247							
TWC	**Suao**	**0.41**	**2**	*i* P		**Pg**	**04 40 16.8**	**+0.2**
	baz=352							
TWC				*i* S		**Sb**	**04 40 23.7**	**-0.9**
	baz=352							
LATG	**Datong**	**0.44**	**320**	P		**Pg**	**04 40 17.1**	**-0.1**
	baz=321							
LATG				S		**Sb**	**04 40 24.9**	**-0.7**
	baz=321							
NDS	**Dongshan**	**0.45**	**346**	P		**Pg**	**04 40 17.6**	**+0.3**
	baz=345							
NDS				S		**Sb**	**04 40 24.5**	**-1.2**
	baz=345							
NNSB	**Datong**	**0.47**	**299**	P		**Pg**	**04 40 17.6**	**-0.2**
	baz=301							
NNSB				S		**Sg**	**04 40 24.5**	**+0.4**
	baz=301							
SHUL	**Shoufeng**	**0.48**	**212**	P		**Pb**	**04 40 18.6**	**-0.7**
	baz=217							
SHUL				*e*S		**Sb**	**04 40 27.3**	**+0.8**
	baz=217							
NNS	**Nan Shan**	**0.49**	**300**	*i* P		**Pg**	**04 40 18.1**	**0.0**
	baz=302							
NNS				*i* S		**Sg**	**04 40 24.7**	**+0.2**
	baz=302							
NDT	**Datong Townshi**	**0.50**	**324**	P		**Pb**	**04 40 18.7**	**-1.0**
	baz=324							
NDT				*e*S		**Sb**	**04 40 27.4**	**+0.2**
	baz=324							
ENTT	**Nioudou**	**0.51**	**331**	*i* P		**Pb**	**04 40 18.7**	**-1.1**
	baz=331							
ENTT				S		**Sb**	**04 40 26.4**	**-0.9**
	baz=331							
WHF	**Hehuan Shan**	**0.53**	**264**	*i* P		**Pb**	**04 40 19.1**	**-1.2**
	baz=267							
WHF				*i* S		**Sg**	**04 40 25.5**	**-0.3**
	baz=267							
ESL	**Shilin**	**0.53**	**224**	*i* P		**Pg**	**04 40 18.2**	**-0.6**
	baz=241							
ESL				*i* S		**Sb**	**04 40 28.3**	**+0.3**
	baz=241							
FUSS	**Fushou**	**0.54**	**275**	P		**Pg**	**04 40 19.1**	**-0.1**
	baz=278							
FUSS				S		**Sb**	**04 40 26.7**	**-2.0**
	baz=278							
TWE	**Neicheng**	**0.54**	**343**	*i* P		**Pb**	**04 40 19.4**	**-1.1**
	baz=344							
TWE				*i* S		**Sb**	**04 40 28.0**	**-0.5**
	baz=344							
FUSB	**Fushanzhiwuyua**	**0.60**	**338**	*e*P		**Pb**	**04 40 20.6**	**-1.0**
	baz=338							
FUSB				*e*S		**Sb**	**04 40 30.0**	**-0.3**
	baz=338							
TWT	**Tachien**	**0.61**	**275**	*e*P		**Pb**	**04 40 20.9**	**-0.7**
	baz=276							
TWT				*e*S		**Sb**	**04 40 30.7**	**+0.3**
	baz=276							
CHGB	**Renai**	**0.62**	**257**	*e*P		**Pg**	**04 40 20.3**	**-0.3**
	baz=259							
CHGB				*e*S		**Sg**	**04 40 28.4**	**-0.3**
	baz=259							
TDCB	**Techi**	**0.62**	**275**	*e*P		**Pb**	**04 40 20.6**	**-1.3**
	baz=277							
TDCB				*e*S		**Sg**	**04 40 28.4**	**-0.4**
	baz=277							
WARBT	**Fenglin Townsh**	**0.63**	**221**	*e*P		**Pg**	**04 40 20.2**	**-0.6**
	baz=234							
WARBT				*e*S		**Sb**	**04 40 30.4**	**-0.5**
	baz=234							
YHNB	**Yeheng**	**0.63**	**318**	*e*P		**Pb**	**04 40 21.0**	**-1.0**
	baz=319							
YHNB				*e*S		**Sb**	**04 40 30.6**	**-0.4**
	baz=319							
EGFH	**Guangfu**	**0.65**	**216**	*e*P		**Pb**	**04 40 21.0**	**-1.1**
	baz=232							
EGFH				*e*S		**Sb**	**04 40 31.0**	**-0.4**
	baz=232							
NSK	**Sanguang**	**0.65**	**318**	*e*P		**Pb**	**04 40 21.2**	**-1.1**
	baz=319							
NSK				*e*S		**Sb**	**04 40 31.5**	**+0.1**
	baz=319							
NWLT	**Wulai**	**0.65**	**332**	*e*P		**Pb**	**04 40 21.7**	**-0.6**
	baz=332							
NWLT				*e*S		**Sb**	**04 40 30.8**	**-0.8**
	baz=332							
WUSB	**Renai**	**0.69**	**253**	*e*P		**Pg**	**04 40 21.6**	**-0.3**
	baz=254							
WUSB				*e*S		**Sb**	**04 40 32.8**	**0.0**
	baz=254							
TIPB	**Shuangxi**	**0.77**	**359**	*e*P		**Pb**	**04 40 24.1**	**-0.3**
	baz=9.0							
VWDT	**VWDT**	**0.78**	**235**	*e*P		**Pb**	**04 40 23.6**	**-0.7**
	baz=237							
VWDT				*e*S		**Sb**	**04 40 35.6**	**+0.5**
	baz=237							
NFF	**Wufeng Townshi**	**0.79**	**304**	*e*P		**Pb**	**04 40 23.9**	**-0.7**
	baz=304							
NFF				*e*S		**Sb**	**04 40 35.9**	**+0.4**
	baz=304							
HGSD	**Ruisui**	**0.80**	**208**	*e*P		**Pb**	**04 40 24.3**	**-0.4**
	baz=211							
HGSD				*e*S		**Sn**	**04 40 37.9**	**-0.4**
	baz=211							
NHDH	**Xindian Distri**	**0.81**	**340**	*e*P		**Pb**	**04 40 24.8**	**-0.2**
	baz=339							
WHP	**Taichung City**	**0.82**	**276**	*e*P		**Pb**	**04 40 24.7**	**-0.5**
	baz=277							
WHP				*e*S		**Sb**	**04 40 36.0**	**-0.4**
	baz=277							
TWB1	**Santiao Chiao**	**0.82**	**10**	*e*P		**Pb**	**04 40 25.1**	**0.0**
	baz=360							
WCS	**Beigang Elemen**	**0.86**	**261**	*e*P		**Pb**	**04 40 25.0**	**-0.7**
	baz=263							
WCS				*e*S		**Sb**	**04 40 36.3**	**-1.1**
	baz=263							
LIOB	**Emei**	**0.87**	**301**	*e*P		**Pn**	**04 40 26.2**	**-1.1**
	baz=302							
LIOB				*e*S		**Sb**	**04 40 38.0**	**0.0**
	baz=302							
NWF	**Wu-fen Shan**	**0.87**	**357**	*e*P		**Pb**	**04 40 25.8**	**-0.3**
	baz=345							
NWF				*e*S		**Sn**	**04 40 38.9**	**-1.4**
	baz=345							
WFSB	**Wu-fen Shan**	**0.87**	**357**	*e*P		**Pb**	**04 40 25.9**	**-0.2**
	baz=345							
WFSB				*e*S		**Sb**	**04 40 38.7**	**+0.8**
	baz=345							
NSTT	**Nanjuang**	**0.88**	**300**	*e*P		**Pb**	**04 40 26.0**	**-0.1**
	baz=301							
NSTT				*e*S		**Sb**	**04 40 37.3**	**-0.7**
	baz=301							
SXI1	**Grass Mountain**	**0.89**	**2**	*e*P		**Pb**	**04 40 26.6**	**+0.1**
	baz=10.0							
SXI1				*e*S		**Sn**	**04 40 39.9**	**-1.0**
	baz=10.0							
SSLB	**Suanglung**	**0.91**	**243**	*e*P		**Pg**	**04 40 25.3**	**-0.6**
	baz=258							
SSLB				*e*S		**Sb**	**04 40 38.0**	**-0.9**
	baz=258							
SMLT	**Sun Moon Lake**	**0.91**	**250**	*e*P		**Pb**	**04 40 25.8**	**-1.0**
	baz=252							
SMLT				*e*S		**Sn**	**04 40 40.1**	**-1.2**
	baz=252							
YULB	**Yu-li**	**0.94**	**212**	*e*P		**Pg**	**04 40 26.0**	**-0.7**
	baz=230							
YULB				*e*S		**Sn**	**04 40 40.5**	**-1.4**
	baz=230							
TYC	**Yuchr**	**0.94**	**252**	*e*P		**Pb**	**04 40 26.6**	**-0.6**
	baz=254							
TYC				*e*S		**Sn**	**04 40 40.8**	**-1.1**
	baz=254							
TNOU	**National Taiwa**	**0.95**	**356**	*e*P		**Pb**	**04 40 27.4**	**+0.1**
	baz=355							
SBCB	**Hsinchu**	**0.98**	**308**	*e*P		**Pn**	**04 40 28.6**	**-0.1**
	baz=308							
SBCB				*e*S		**Sn**	**04 40 42.4**	**-0.4**
	baz=308							
TWF1	**Yuli**	**0.98**	**211**	*e*P		**Pg**	**04 40 26.5**	**-0.8**
	baz=227							
YM01	**YM01**	**0.98**	**346**	*e*P		**Pn**	**04 40 27.9**	**-0.8**
	baz=343							
TWS1	**Kuangyinshan**	**0.98**	**337**	*e*P		**Pn**	**04 40 28.4**	**-0.3**
	baz=337							
TWQ1	**Liyutan**	**0.98**	**279**	*e*P		**Pn**	**04 40 29.5**	**+0.7**
	baz=281							
TWQ1				*e*S		**Sn**	**04 40 42.8**	**-0.1**
	baz=281							
HSN	**Hsinchu**	**0.99**	**307**	*e*P		**Pn**	**04 40 28.9**	**0.0**
	baz=311							
HSN				*e*S		**Sn**	**04 40 42.6**	**-0.5**
	baz=311							
NMLH	**Miaoli**	**1.01**	**290**	*e*P		**Pn**	**04 40 30.3**	**+1.1**
	baz=291							
NMLH				*e*S		**Sn**	**04 40 45.2**	**+1.5**
	baz=291							
YM08	**YM08**	**1.01**	**347**	*e*P		**Pb**	**04 40 28.2**	**-0.2**
	baz=345							
NTST	**Danshui**	**1.03**	**340**	*e*P		**Pn**	**04 40 29.7**	**+0.3**
	baz=326							
WHYT	**Xinyi Township**	**1.03**	**241**	*e*P		**Pn**	**04 40 29.1**	**-0.3**
	baz=252							
WHYT				*e*S		**Sn**	**04 40 43.6**	**-0.5**
	baz=252							
JYNG	**Yonagunijimaku**	**1.04**	**76**	P		**Pn**	**04 40 29.1**	**-0.5**
JYNG				S		**Sg**	**04 40 41.6**	**-0.5**
TCU	**Taichung**	**1.06**	**268**	*e*P		**Pn**	**04 40 31.5**	**+1.6**
	baz=269							
TCU				*e*S		**Sn**	**04 40 44.6**	**-0.3**
	baz=269							
CHKH	**Chenggong**	**1.08**	**202**	*e*P		**Pg**	**04 40 28.5**	**-0.8**
	baz=205							
CHKH				*e*S		**Sn**	**04 40 44.5**	**-0.8**
	baz=205							
WJS	**Zhushan**	**1.08**	**250**	*e*P		**Pn**	**04 40 30.0**	**-0.1**
	baz=252							
WJS				*e*S		**Sn**	**04 40 46.1**	**+0.7**
	baz=252							
TWY	**Chenhua**	**1.09**	**349**	*e*P		**Pn**	**04 40 30.1**	**-0.2**
	baz=338							
TWY				*e*S		**Sn**	**04 40 45.5**	**-0.2**
	baz=338							
WNT	**Mingjian**	**1.10**	**253**	*e*P		**Pn**	**04 40 30.6**	**+0.3**
	baz=248							
WNT				*e*S		**Sn**	**04 40 46.6**	**+0.8**
	baz=248							
YOJ	**Yonaguni jima**	**1.10**	**76**	*e*P		**Pn**	**04 40 30.1**	**-0.2**
	baz=64							
YOJ				*e*S		**Sb**	**04 40 44.9**	**+0.4**
	baz=64							
YOJ	**Yonaguni jima**	**1.10**	**76**	P		**Pn**	**04 40 30.5**	**+0.1**
ALS	**Alishan**	**1.17**	**234**	*e*P		**Pb**	**04 40 30.4**	**-0.8**
	baz=238							
ALS				S		**Sn**	**04 40 47.1**	**-0.8**
	baz=238							
CHKT	**Chengkung**	**1.18**	**202**	*e*P		**Pg**	**04 40 30.2**	**-1.0**
	baz=189							
CHKT				*e*S		**Sn**	**04 40 47.8**	**+0.2**
	baz=189							
EHD	**Haiduan**	**1.19**	**209**	*e*P		**Pn**	**04 40 31.7**	**+0.1**
	baz=215							
EHD				*e*S		**Sn**	**04 40 48.6**	**+0.4**
	baz=215							
ELDTW	**Lidau**	**1.25**	**217**	*e*P		**Pb**	**04 40 31.1**	**-1.5**
	baz=208							
ELDTW				*e*S		**Sn**	**04 40 49.6**	**-0.1**
	baz=208							
WDLH	**Douliu**	**1.29**	**247**	*e*P		**Pg**	**04 40 34.8**	**+1.4**
	baz=253							
WDLH				*e*S		**Sn**	**04 40 52.5**	**+2.0**
	baz=253							
WCKO	**Fanlu**	**1.36**	**236**	*e*P		**Pg**	**04 40 34.5**	**-0.1**
	baz=245							
WCKO				*e*S		**Sn**	**04 40 53.6**	**+1.4**
	baz=245							
WRL	**Guolierlin Hig**	**1.37**	**258**	*e*P		**Pg**	**04 40 34.6**	**-0.2**
	baz=263							
WRL				*e*S		**Sg**	**04 40 53.6**	**+1.1**
	baz=263							
STYH	**Taoyuan**	**1.41**	**224**	*e*P		**Pn**	**04 40 33.7**	**-1.0**
	baz=213							
CHN4	**Tsaushan**	**1.42**	**234**	*e*P		**Pg**	**04 40 35.2**	**-0.6**
	baz=254							
CHN4				*e*S		**Sg**	**04 40 56.7**	**+2.5**
	baz=254							
WTK	**Tuku**	**1.42**	**249**	*e*P		**Pg**	**04 40 36.9**	**+1.1**
	baz=256							
WTK				*e*S		**Sg**	**04 40 55.7**	**+1.4**
	baz=256							
TPUB	**Ta-pu**	**1.42**	**231**	*e*P		**Pg**	**04 40 35.6**	**-0.3**
	baz=238							
TPUB				*e*S		**Sg**	**04 40 54.8**	**+0.4**
	baz=238							
WTP	**Ta-pu**	**1.47**	**230**	*e*P		**Pg**	**04 40 36.9**	**+0.2**
	baz=237							
WTP				*e*S		**Sg**	**04 40 56.2**	**+0.4**
	baz=237							
HATJ	**Hateruma jima**	**1.80**	**94**	P		**Pn**	**04 40 40.4**	**+0.4**
JKRS	**Kuro-shima**	**1.98**	**88**	P		**Pn**	**04 40 43.3**	**+0.8**
JIJ	**Ishigaki jima**	**2.11**	**85**	P		**Pn**	**04 40 43.9**	**-0.3**
JISG	**Ishigakijimahi**	**2.29**	**80**	P		**Pn**	**04 40 46.6**	**-0.1**
JTJ	**Tarama**	**2.65**	**80**	*e*P		**Pn**	**04 40 52.0**	**+0.3**
KSRS	**Korea Array**	**14.21**	**20**	P		**P**	**04 43 38.0**	**+0.3**
	2.3nm,

1.3nm,0.9s,baz=116,slow=6.3,SNR=7.1
1.3nm,0.9s
WRA Warramunga Arr 45.53 163 P **P** **04 48 33.1 +4.1**
0.8nm,0.7s,baz=345,slow=8.6,SNR=3.0
0.8nm,0.7s
TIXI Tiksi 47.65 3 LR LR 05 10 45.9
comp=Z,30nm,21.9s,baz=330,slow=38
BVAR Borovoye Array 48.04 321 P **P** **04 48 46.9 -1.5**
0.8nm,0.6s,baz=112,slow=6.5,SNR=4.8
0.8nm,0.6s
ASAR Alice Springs 49.00 165 P P 04 49 00.4 +4.3
0.6nm,0.8s,baz=345,slow=6.7,SNR=4.8
0.6nm,0.8s
YKA Yellowknife Ar 82.72 23 P **P** **04 52 30.9 -1.9**
0.9nm,0.8s,baz=314,slow=4.9,SNR=15
0.9nm,0.8s

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*IDC **27** 04:53:19.4±0.8,50.28S×112.53E,h0km,mb4.3/8, mbtmp4.3/8,MS4.0/4,Error ellipse: s-maj=45.7km s-min=17.6km az=101.0*
*NEIC **27** 04:53:20.6±1.6,50.33S±0.05×112.2E±0.3,h10km±1km, mb4.7/14,Error ellipse: s-maj=30.1km s-min=8.2km az=262.0*

ISC 27 04:53:20.6±0.7,50.31S±0.09×112.4E±0.2,h10km,n30, σ0.56/24,mb4.5/13,MS4.3/3,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.46**	**5**	T	T	05 12 48.7	
	baz=183,slow=74,SNR=37						
H01W1	**Cape Leeuwin H**	**15.46**	**5**	T	T	05 12 42.2	
	baz=183,slow=74,SNR=47						
H01W3	**Cape Leeuwin H**	**15.47**	**5**	T	T	05 12 49.5	
	baz=183,slow=74,SNR=45						
NWAO	**Narrogin (SRO)**	**17.73**	**13**	LR	LR	05 02 31.3	
	comp=Z,208nm,20.5s,baz=292,slow=31						
MORW	**Morawa**	**21.39**	**9**	P	**P**	**04 58 08.8 +0.5**	
MORW				IAmb	IAmb	04 58 10.5	
	comp=Z,58nm,1.3s						
FORT	**Forrest**	**22.76**	**37**	P	**P**	**04 58 24.1 +1.1**	
BBOO	**Buckleboo**	**24.71**	**54**	P	**P**	**04 58 41.3 -0.6**	
BBOO				IAmb	IAmb	04 59 16.2	
	comp=Z,39nm,1.5s						
ASAR	**Alice Springs**	**31.43**	**40**	P	**P**	**04 59 41.4 -0.7**	
	comp=Z,2.0nm,0.8s,baz=206,slow=8.9,SNR=10						
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**32.89**	**162**	P	**P**	**04 59 54.8 +0.5**	
VNDA				IAmb	IAmb	04 59 55.9	
	comp=Z,6.8nm,1.1s						
VNDA	**Vanda**	**32.89**	**162**	P	**P**	**04 59 54.6 +0.4**	
	comp=Z,3.6nm,0.9s,baz=287,slow=11,SNR=10						
VNDA				LR	LR	05 11 51.6	
	comp=Z,88nm,18.0s,baz=294,slow=34						
	comp=Z,3.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**33.84**	**23**	P	**P**	**05 00 02.1 -1.0**	
WRA	**Warramunga Arr**	**34.94**	**38**	P	**P**	**05 00 12.2 -0.5**	
	comp=Z,5.6nm,0.9s,baz=205,slow=8.3,SNR=4.7						
	comp=Z,5.6nm,0.9s						
KNRA	**Kununurra**	**36.99**	**27**	P	**P**	**05 00 30.7 +0.4**	
QSPA	**South Pole Qui**	**39.82**	**180**	P	**P**	**05 00 53.7 -0.1**	
QSPA	**South Pole Qui**	**39.82**	**180**	P	**P**	**05 00 54.0 +0.3**	
	comp=Z,3.7nm,0.8s,baz=349,slow=0.7,SNR=13						
	comp=Z,3.7nm,0.8s						
CTAO	**Charters Tower**	**40.31**	**54**	P	**P**	**05 00 57.9 -0.2**	
MTN	**Manton Dam**	**40.38**	**29**	P	**P**	**05 00 58.8 +0.2**	
MTN				IAmb	IAmb	05 00 59.9	
	comp=Z,12nm,1.1s						
RTZ	**Ruatahuna**	**46.16**	**101**	P	**P**	**05 01 45.5 +0.2**	
SNAA	**Sanae**	**50.10**	**202**	P	**P**	**05 02 15.1 -0.2**	
SNAA				IAmb	IAmb	05 02 26.2	
	comp=Z,19nm,1.5s						
SNAA	**Sanae**	**50.10**	**202**	P	**P**	**05 02 16.0 +0.8**	
	comp=Z,4.7nm,0.8s,baz=131,slow=7.2,SNR=5.1						
	comp=Z,4.7nm,0.8s						
BELA	**Belgrano 2**	**50.48**	**189**	P	**P**	**05 02 17.2 -0.8**	
BELA				IAmb	IAmb	05 02 19.3	
	comp=Z,6.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.49**	**346**	P	**P**	**05 04 29.5 +0.4**	
	comp=Z,1.1nm,0.3s,baz=188,slow=5.5,SNR=10						
	comp=Z,1.1nm,0.3s						
RAR	**Rarotonga**	**72.61**	**102**	LR	LR	05 32 57.6	
	comp=Z,181nm,20.6s,baz=262,slow=33						
SHL	**Shillong**	**77.70**	**341**	P	**P**	**05 05 16.8 -0.7**	
SHL				IAmb	IAmb	05 05 19.8	
	comp=Z,5.9nm,0.8s						
PPT	**Papeete**	**81.67**	**107**	LR	LR	05 34 44.7	
	comp=Z,305nm,18.2s,baz=275,slow=30						
PLCA	**Paso Flores**	**89.30**	**178**	P	**P**	**05 06 17.1 +0.1**	
	comp=Z,3.0nm,1.0s,baz=280,slow=3.2,SNR=4.7						
	comp=Z,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**89.43**	**21**	P	**P**	**05 06 17.7 +0.5**	
	comp=Z,0.6nm,0.3s,baz=194,slow=4.6,SNR=4.3						
	comp=Z,0.6nm,0.3s						
TXAR	**Lajitas Array**	**145.74**	**114**	PKPbc	**PKPbc**	**05 12 59.7 0.0**	
	comp=Z,1.1nm,0.9s,baz=197,slow=3.9,SNR=8.5						
PDAR	**Pinedale Array**	**150.49**	**88**	PKPbc	**PKiKP**	**05 13 12.4 -0.4**	
	comp=Z,1.8nm,1.0s,baz=222,slow=2.0,SNR=8.5						
YKA	**Yellowknife Ar**	**151.96**	**46**	PKPbc	**PKPbc**	**05 13 14.4 -0.1**	
	comp=Z,1.3nm,0.9s,baz=273,slow=2.1,SNR=12						

IDC 27 05:17:42.6±8.6,5.87S×142.19E,h0km,mb3.5/1, mbtmp3.4/3,ML3.0/1,Error ellipse: s-maj=308.0km s-min=37.6km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.93**	**208**	Pn	Pn	05 21 28.2	-0.1
	0.1nm,0.3s,baz=29,slow=12,SNR=1.5						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.41**	**203**	P	P	05 22 10.5	+0.1
	1.0nm,0.8s,baz=33,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	**74.40**	**322**	P	P	05 29 22.5	0.0
	0.4nm,0.9s,baz=108,slow=4.7,SNR=2.5						
	0.4nm,0.9s						

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*NOU **27** 05:17:58.9,18.84S×169.23E,h209km,ML5.2/140, Vanuatu Islands*
*NEIC **27** 05:17:58.7,18.78S×169.18E,h220km,Moment Tensor Solution. Duration: 2≥7 Moment tensor: Scale 10^17Nm; Mrr1.51; Mθθ0.51; Mφφ-2.02; Mrθ1.03; Mθφ-0.40; Mφr-0.59; Fault plane solution: M0 2.21000×10^17 NP1: φs159.59000°,δ60.17000°,λ52.15000°. NP2:φs36.96000°, δ46.76000°,λ136.94000°. Principal axes: T 2.2736, Plg57.0000°, Azm17.0000°; N -0.1328, Plg32.0000°, Azm181.0000°; P -2.1408, Plg8.0000°, Azm276.0000°;*
*IDC **27** 05:17:58.2±0.5,18.90S×169.22E,h209km±4km,mb5.1/33, mbtmp5.6/36 Error ellipse: s-maj=7.2km s-min=6.3km az=121.0*
*NEIC **27** 05:17:58.7,18.88S×169.29E,h220km*
*NEIC **27** 05:17:58.1,18.86S×169.32E,h197km*
*MOS **27** 05:17:58.9±1.0,18.87S×169.23E,h228km,mb5.6/32, Error ellipse: s-maj=8.7km s-min=6.6km az=118.7*
*NEIC **27** 05:17:58.2±1.6,18.87S±0.07×169.29E±0.07,h203km±1km, mb5.5/471,Mwb5.6/27,Mww5.5/18,Error ellipse: s-maj=12.3km s-min=9.6km az=223.0,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr2.44; Mθθ0.36; Mφφ-2.80; Mrθ0.81; Mθφ-0.02; Mφr-0.29; Fault plane solution: M0 2.77000×10^17 NP1:φs18.37000°, δ44.96000°,λ117.17000°. NP2:φs162.42000°,δ51.05000°, λ65.49000°. Principal axes: T 2.7300, Plg71.0000°, Azm9.0000°; N 0.0839, Plg19.0000°, Azm178.0000°; P -2.8139, Plg3.0000°, Azm270.0000°;*
*BJI **27** 05:17:58.3±0.0,18.25S×169.26E,h203km,mb5.3/80, mB5.2/45*
*GCMT **27** 05:18:01.2±0.1,18.82S±0.01×169.09E±0.01,h215km, MW5.5/158,Moment Tensor Solution. s137,c244; s158,c296; Duration: 1≥4 Moment tensor: Scale 10^17 Nm; Mrr1.53±.02; Mθθ0.41±.02; Mφφ-1.95±.02; Mrθ1.02±.02; Mθφ-0.63±.02; Mφr-0.34±.02; Best double couple: M0 2.16800×10^17 NP1:φs165.00000°,δ55.00000°, λ48.00000°. NP2:φs42.00000°,δ52.00000°,λ133.00000°. Principal axes: T 2.2260, Plg57.0000°, Azm16.0000°; N -0.1220, Plg33.0000°, Azm192.0000°; P -2.1090, Plg1.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 05:17:57.6±0.2,18.85S±0.03×169.31E±0.04,h208km±2km,

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h208km:pP-P,n1336,σ1≥33/1187,mb5.5/331,82C-37D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**2.73**	**225**	Pn	**Pn**	**05 18 43.4**	**-1.1**
LIFNC	**LIFOU**	**2.73**	**225**	P	**Pn**	**05 18 43.7**	**-0.8**
MARNC	**Mare, Loyalty**	**2.88**	**204**		**Pn**	**05 18 45.3**	**-0.9**
MARNC				Sn	**S**	**05 19 21.2**	**-2.7**
MARNC	**Mare, Loyalty**	**2.88**	**204**	P	**Pn**	**05 18 45.7**	**-0.5**
YATNC	**Mamie plateau,**	**3.91**	**215**	P	**Pn**	**05 18 57.7**	**-0.9**
PINNC	**Pines Island,**	**4.13**	**205**		**Pn**	**05 19 00.7**	**-0.5**
PINNC	**Pines Island,**	**4.13**	**205**	P	**Pn**	**05 19 01.2**	**0.0**
DZM	**Mont Dzumac**	**4.18**	**219**	Pn	**Pn**	**05 19 02.1**	**+0.1**
DZM				Sn	**S**	**05 19 53.3**	**+1.0**
DZM	**Mont Dzumac**	**4.18**	**219**	P	**Pn**	**05 19 02.1**	**+0.1**
DZM	**Mont Dzumac**	**4.18**	**219**	P	**Pn**	**05 19 02.0**	**0.0**
	1μm,0.7s,baz=41,slow=12,SNR=1151						
DZM				S	**S**	**05 19 52.3**	**+0.1**
	3μm,1.0s,baz=109,slow=23,SNR=14						
OUENC	**Ouen Island, N**	**4.23**	**213**		**Pn**	**05 19 02.7**	**+0.2**
OUENC				Sn	**S**	**05 19 54.1**	**+0.8**
OUENC	**Ouen Island, N**	**4.23**	**213**	P	**Pn**	**05 19 02.9**	**+0.4**
ONTNC	**Ouen Toro**	**4.35**	**217**	Pn	**Pn**	**05 19 04.4**	**+0.4**
ONTNC	**Ouen Toro**	**4.35**	**217**	P	**Pn**	**05 19 04.4**	**+0.4**
KOUNC	**Koumac, New Ca**	**5.02**	**250**	Pn	**Pn**	**05 19 13.8**	**+1.3**
KOUNC	**Koumac, New Ca**	**5.02**	**250**	P	**Pn**	**05 19 13.9**	**+1.4**
YSA	**Yasawairara**	**8.17**	**76**	P	**Pn**	**05 19 56.4**	**+3.4**
NFK	**Norfolk Island**	**10.22**	**187**	P	**Pn**	**05 20 19.7**	**+0.2**
	baz=10,SNR=16						
NFK	**Norfolk Island**	**10.22**	**187**	P	**Pn**	**05 20 22.6**	**+3.1**
DGTI	**Dogotuki**	**10.27**	**77**	P	**Pn**	**05 20 23.3**	**+3.1**
TAVE	**Taveuni**	**10.50**	**80**	P	**Pn**	**05 20 26.5**	**+3.3**
LKBA	**Tubou, Lakemba**	**11.28**	**89**	P	**P**	**05 20 36.0**	**-2.8**
HNR	**Honiara**	**13.04**	**315**	Pn	**Pn**	**05 20 55.6**	**+0.2**
HNR	**Honiara**	**13.04**	**315**	P	**Pn**	**05 20 56.4**	**+1.0**
HNR	**Honiara**	**13.04**	**315**	P	**P**	**05 20 56.9**	**-1.4**
	8μm,0.9s,baz=120,slow=13,SNR=27						
HNR				S	S	05 23 31.6	+11
	1μm,0.6s,baz=162,slow=20,SNR=1.8						
FUNA	**Funafuti**	**14.05**	**44**	P	**P**	**05 21 10.0**	**+0.5**
FUNA	**Funafuti**	**14.05**	**44**	P	**P**	**05 21 10.1**	**+0.5**
RAO	**Raoul Island**	**15.59**	**134**	P	**Pn**	**05 21 28.5**	**+1.9**
	199nm,0.4s,baz=346,slow=12,SNR=4.5						
GC1S	**Gold Coast 1 S**	**17.18**	**234**	P	**Pn**	**05 21 46.4**	**+0.8**
GD1S	**Gladstone Soft**	**17.61**	**250**	P	**Pn**	**05 21 51.1**	**+0.5**
EIDS	**Eidsvold**	**18.08**	**246**	P	**Pn**	**05 21 55.7**	**-0.5**
	baz=18,SNR=139						
EIDS	**Eidsvold**	**18.08**	**246**		**Pn**	**05 21 55.6**	**-0.5**
EIDS	**Eidsvold**	**18.08**	**246**	P	**Pn**	**05 21 55.8**	**-0.5**
RK1H	**Rockhampton Ha**	**18.12**	**252**	P	**Pn**	**05 21 56.4**	**-0.3**
TOZ	**Tahuroa Road**	**19.57**	**165**	P	**P**	**05 22 11.4**	**+1.7**
NIUE	**Niue**	**19.64**	**94**	P	**P**	**05 22 09.8**	**-1.0**
	baz=20,SNR=4.0						
ARMA	**Armidale**	**19.74**	**231**	P	**P**	**05 22 13.4**	**+1.6**
	baz=20,SNR=47						
ARMA	**Armidale**	**19.74**	**231**	P	**P**	**05 22 13.4**	**+1.6**
ARMA	**Armidale**	**19.74**	**231**	P	**P**	**05 22 13.8**	**+2.0**
HIZ	**Hauiti**	**20.18**	**167**	P	**P**	**05 22 18.2**	**+1.9**
TARA	**Tarawa**	**20.39**	**10**	P	**P**	**05 22 18.7**	**0.0**
TARA	**Tarawa**	**20.39**	**10**	P	**P**	**05 22 20.3**	**+1.5**
RMQ	**Roma**	**20.41**	**244**	P	**P**	**05 22 19.5**	**+0.6**
	baz=21,SNR=7.5						
RMQ	**Roma**	**20.41**	**244**	P	**P**	**05 22 20.7**	**+1.8**
URZ	**Urewera**	**20.50**	**162**	P	**P**	**05 22 21.4**	**+1.7**
URZ	**Urewera**	**20.50**	**162**	P	**P**	**05 22 20.9**	**+1.2**
	27nm,0.6s,baz=10,slow=3.4,SNR=26						
URZ				S	**S**	**05 25 59.8**	**+2.6**
	3.6nm,0.3s,baz=97,slow=23,SNR=1.5						
	27nm,0.6s						
AUPHS	**Peel High Scho**	**20.64**	**230**	P	**P**	**05 22 23.0**	**+1.7**
AUAYR	**Ayr State High**	**20.69**	**264**	P	**P**	**05 22 23.9**	**+2.0**
RTZ	**Ruatahuna**	**20.79**	**163**	P	**P**	**05 22 23.6**	**+0.7**
NTLH	**Newcastle Hard**	**21.09**	**225**	P	**P**	**05 22 27.5**	**+1.6**
BKZ	**Black Stump Fm**	**21.18**	**164**	P	**P**	**05 22 28.2**	**+1.3**
BKZ	**Black Stump Fm**	**21.18**	**164**	P	**P**	**05 22 27.8**	**+0.9**
TV1H	**Townsville Har**	**21.28**	**265**	P	**P**	**05 22 28.3**	**+0.2**
MGCD	**Mangrove Creek**	**21.67**	**225**	P	**P**	**05 22 33.0**	**+1.1**
	baz=22,SNR=62						
MGCD	**Mangrove Creek**	**21.67**	**225**	P	**P**	**05 22 33.3**	**+1.4**
CTA	**Charters Tower**	**21.77**	**263**	P	**P**	**05 22 33.1**	**+0.1**
CTA	**Charters Tower**	**21.77**	**263**	P	**P**	**05 22 33.3**	**+0.2**
	213nm,0.8s,baz=93,slow=11,SNR=181						
CTA				S	**S**	**05 26 20.4**	**+1.1**
	75nm,1.2s,baz=261,slow=20,SNR=9.6						
	213nm,0.8s						
CTAO	**Charters Tower**	**21.77**	**263**	P	**P**	**05 22 32.9**	**-0.1**
CTAO	**Charters Tower**	**21.77**	**263**	P	**P**	**05 22 33.2**	**+0.2**
CTAO	**Charters Tower**	**21.77**	**263**	P	**P**	**05 22 32.9**	**-0.1**
RIV	**Riverview**	**22.02**	**224**	P	**P**	**05 22 36.5**	**+1.2**
	baz=22,SNR=4.1						
RIV	**Riverview**	**22.02**	**224**	P	**P**	**05 22 37.1**	**+1.9**
AULRC	**Lightning Ridg**	**22.09**	**238**	P	**P**	**05 22 36.7**	**+0.7**
SYDH	**Sydney Hard Ro**	**22.25**	**224**	P	**P**	**05 22 39.2**	**+1.8**
TKNZ	**Takaka Hill**	**22.33**	**173**	P	**P**	**05 22 40.0**	**+1.9**
MRZ	**Mangatainoka R**	**22.39**	**167**	P	**P**	**05 22 39.3**	**+0.6**
AUCSH	**Cairns State H**	**22.48**	**271**	P	**P**	**05 22 40.4**	**+0.7**
BFZ	**Birch Farm**	**22.56**	**166**	P	**P**	**05 22 40.0**	**-0.1**
BFZ	**Birch Farm**	**22.56**	**166**	P	**P**	**05 22 40.4**	**+0.2**
WOLH	**Wollongong Har**	**22.56**	**223**	P	**P**	**05 22 41.1**	**+0.9**
MRNZ	**Matariki Terra**	**22.67**	**173**	P	**P**	**05 22 43.1**	**+1.9**
TCW	**Tory Channel**	**22.69**	**170**	P	**P**	**05 22 43.0**	**+1.6**
TUWZ	**Tuamarina**	**22.85**	**171**	P	**P**	**05 22 43.4**	**+0.6**
SNZO	**South Karori**	**22.86**	**169**	P	**P**	**05 22 43.3**	**+0.5**
AUDCS	**Dubbo College**	**22.87**	**230**	P	**P**	**05 22 44.1**	**+1.0**
PMG	**Port Moresby**	**23.41**	**291**	P	**P**	**05 22 49.2**	**+1.1**
PMG	**Port Moresby**	**23.41**	**291**	*ceP*	**P**	**05 22 49.0**	**+0.8**
PMG				pmax	pmax		
	comp=Z,301nm,1.0s						
PMG	**Port Moresby**	**23.41**	**291**	P	**P**	**05 22 49.3**	**+1.1**
	comp=Z,237nm,0.8s,baz=118,slow=6.6,SNR=83						
PMG				S	**S**	**05 26 47.6**	**+1.7**
	comp=Z,55nm,0.3s,baz=359,slow=22,SNR=2.0						
	comp=Z,237nm,0.8s						
AUUHS	**Ulladulla High**	**23.42**	**222**	P	**P**	**05 22 49.0**	**+1.0**
MTSU	**Mount Surprise**	**23.71**	**268**	P	**P**	**05 22 52.0**	**+1.1**
	baz=24,SNR=511						
MTSU	**Mount Surprise**	**23.71**	**268**	P	**P**	**05 22 51.9**	**+1.1**
CNB	**Canberra Magne**	**24.09**	**223**	P	**P**	**05 22 55.6**	**+1.4**
	baz=24,SNR=90						
CNB	**Canberra Magne**	**24.09**	**223**	P	**P**	**05 22 55.5**	**+1.2**
YNG	**Young**	**24.14**	**226**	P	**P**	**05 22 55.5**	**+0.8**
	baz=24,SNR=54						
YNG	**Young**	**24.14**	**226**	P	**P**	**05 22 56.0**	**+1.3**
CAN	**Canberra**	**24.33**	**224**	P	**P**	**05 22 56.6**	**+0.2**
CAN				IAmb	IAmb	05 22 58.6	
	comp=Z,70nm,0.9s						
CAN	**Canberra**	**24.33**	**224**	P	**P**	**05 22 57.6**	**+1.2**
CAN	**Canberra**	**24.33**	**224**	P	**P**	**05 22 56.6**	**+0.2**
CAN				pmax	pmax		
	comp=Z,70nm,0.9s						
QLP	**Quilpie**	**24.34**	**247**	P	**P**	**05 22 56.8**	**+0.3**
	baz=24,SNR=130						
QLP	**Quilpie**	**24.34**	**247**	P	**P**	**05 22 57.1**	**+0.6**
OXZ	**Oxford**	**24.51**	**175**	IAmb	IAmb	05 23 39.7	
	comp=Z,89nm,1.2s						
FOZ	**Fox Glacier**	**24.61**	**179**	IAmb	IAmb	05 23 45.4	
	comp=Z,111nm,1.0s						
CMSA	**Cobar Meteorol**	**24.76**	**235**	P	**P**	**05 23 00.7**	**+0.5**
	baz=25,SNR=150						
CMSA	**Cobar Meteorol**	**24.76**	**235**	P	**P**	**05 23 01.0**	**+0.8**
RPZ	**Rata Peaks**	**24.83**	**177**	IAmb	IAmb	05 23 43.4	
	comp=Z,145nm,1.7s						
MILA	**Mila**	**25.32**	**220**	P	**P**	**05 23 06.0**	**+0.7**
	baz=26,SNR=6.9						
MILA	**Mila**	**25.32**	**220**	P	**P**	**05 23 06.2**	**+0.9**
COEN	**Coen**	**25.52**	**277**	P	**P**	**05 23 07.5**	**+0.1**
	baz=26,SNR=11						
COEN	**Coen**	**25.52**	**277**	P	**P**	**05 23 08.0**	**+0.8**
COEN				IAmb	IAmb	05 23 14.2	
	comp=Z,197nm,1.1s						
COEN	**Coen**	**25.52**	**277**	P	**P**	**05 23 08.1**	**+0.8**
INKA	**Innaminka**	**27.63**	**246**	P	**P**	**05 23 26.8**	**+0.8**
TOO	**Toolangi**	**27.94**	**223**	P	**P**	**05 23 29.7**	**+1.0**
	baz=28,SNR=15						
TOO	**Toolangi**	**27.94**	**223**	P	**P**	**05 23 29.1**	**+0.4**
TOO	**Toolangi**	**27.94**	**223**	P	**P**	**05 23 29.7**	**+1.0**
TOO	**Toolangi**	**27.94**	**223**	P	**P**	**05 23 29.1**	**+0.4**
TOO				pmax	pmax		
	comp=Z,53nm,1.2s						
QIS	**Mount Isa**	**28.00**	**262**	P	**P**	**05 23 29.2**	**-0.2**
	baz=28,SNR=38						
QIS	**Mount Isa**	**28.00**	**262**	P	**P**	**05 23 29.9**	**+0.5**
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**05 23 31.1**	**+0.8**
	baz=28,SNR=188						
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**05 23 30.9**	**+0.7**
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**05 23 31.2**	**+1.0**
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**05 23 31.0**	**+0.8**
	comp=Z,122nm,0.7s,baz=69,slow=11,SNR=220						
STKA				PcP	**PcP**	**05 26 39.6**	**+0.6**
	comp=Z,29nm,0.7s,baz=102,slow=4.0,SNR=5.3						
STKA				S	**S**	**05 28 00.0**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=335,slow=23,SNR=1.3						
STKA				ScP	**ScP**	**05 30 02.5**	**+2.2**
	comp=Z,8.9nm,0.8s,baz=56,slow=3.6,SNR=6.2						
STKA				PKiKP	**PKiKP**	**05 34 13.9**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=104,slow=4.2,SNR=3.7						
	comp=Z,122nm,0.7s						
GLAD	**Gladstone**	**28.62**	**215**	P	**P**	**05 23 35.5**	**+0.9**
BRAT	**Ballarat**	**28.96**	**225**	P	**P**	**05 23 39.3**	**+1.7**
ARPS	**Mount Arapiles**	**29.99**	**228**	P	**P**	**05 23 47.2**	**+0.5**
	baz=30,SNR=8.3						
ARPS	**Mount Arapiles**	**29.99**	**228**	P	**P**	**05 23 47.6**	**+0.8**
MOO	**Moorlands**	**30.07**	**214**	P	**P**	**05 23 48.6**	**+1.2**
	baz=30,SNR=7.8						
MOO	**Moorlands**	**30.07**	**214**	P	**P**	**05 23 48.6**	**+1.2**
LCRK	**Leigh Creek**	**30.43**	**242**	P	**P**	**05 23 51.2**	**+0.5**
HTT	**Hallett**	**30.76**	**236**	P	**P**	**05 23 54.1**	**+0.4**
	baz=31,SNR=38						
HTT	**Hallett**	**30.76**	**236**	P	**P**	**05 23 54.4**	**+0.7**
WHYH	**Whyalla**	**31.69**	**237**	P	**P**	**05 24 02.4**	**+0.6**
OOD	**Oodnadatta**	**32.05**	**248**	P	**P**	**05 24 05.8**	**+0.9**
WR0	**Warramunga Arr**	**32.78**	**262**	IAmb	IAmb	05 24 11.5	
	comp=Z,169nm,1.1s						
GENI	**Genyem**	**32.78**	**296**	P	**P**	**05 24 12.7**	**+1.3**
GENI	**Genyem**	**32.78**	**296**	P	**P**	**05 24 12.6**	**+1.2**
	comp=Z,500nm,1.1s,comp=Z,5μm						
BBOO	**Buckleboo**	**32.84**	**238**	P	**P**	**05 24 12.1**	**+0.3**
	baz=33,SNR=68						
BBOO	**Buckleboo**	**32.84**	**238**	P	**P**	**05 24 11.8**	**0.0**
BBOO				IAmb	IAmb	05 24 13.1	
	comp=Z,110nm,0.7s						
BBOO	**Buckleboo**	**32.84**	**238**	P	**P**	**05 24 12.4**	**+0.6**
WB0	**Warramunga Arr**	**32.93**	**263**	P	**P**	**05 24 11.6**	**-1.1**
WC3	**Warramunga Arr**	**32.93**	**262**	P	**P**	**05 24 11.9**	**-0.8**
	baz=33						
WB2	**Warramunga Arr**	**32.95**	**262**	IAmb	IAmb	05 24 13.1	
	comp=Z,160nm,1.0s						
WRAB	**Tennant Creek**	**32.96**	**262**	*diP*	**P**	**05 24 11.6**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,186nm,1.1s						
WRA	**Warramunga Arr**	**32.97**	**262**	P	**P**	**05 24 11.9**	**-1.2**
	comp=Z,99nm,0.6s,baz=94,slow=8.4,SNR=335						
WRA				PcP	**PcP**	**05 26 52.0**	**-0.1**
	comp=Z,13nm,0.7s,baz=94,slow=3.2,SNR=5.4						
WRA				S	**S**	**05 29 10.8**	**-5.0**
	comp=Z,34nm,1.1s,baz=93,slow=14,SNR=22						
WRA				ScP	**ScP**	**05 30 16.2**	**-0.4**
	comp=Z,6.0nm,0.9s,baz=93,slow=3.3,SNR=3.4						
WRA				PKiKP	**PKiKP**	**05 34 16.7**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=41,slow=0.2,SNR=8.1						
	comp=Z,99nm,0.6s						
AS01	**Alice Springs**	**33.24**	**255**	P	**P**	**05 24 15.1**	**-0.3**
AS31	**Alice Springs**	**33.28**	**255**	P	**P**	**05 24 15.6**	**-0.2**
ASAR	**Alice Springs**	**33.28**	**255**	P	**P**	**05 24 15.7**	**-0.1**
ASAR	**Alice Springs**	**33.28**	**255**	P	**P**	**05 24 15.4**	**-0.4**
	comp=Z,600nm,0.4s,baz=84,slow=8.9,SNR=6057						
ASAR				PcP	**PcP**	**05 26 52.8**	**-0.2**
	comp=Z,11nm,0.7s,baz=91,slow=3.0,SNR=5.7						
ASAR				S	**S**	**05 29 17.7**	**-3.0**
	comp=Z,22nm,0.8s,baz=81,slow=18,SNR=20						
ASAR				ScP	**ScP**	**05 30 17.8**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=87,slow=4.1,SNR=3.3						
ASAR				PKiKP	**PKiKP**	**05 34 17.2**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=93,slow=2.1,SNR=8.9						
ASPA	**Alice Springs**	**33.29**	**255**	P	**P**	**05 24 15.3**	**-0.5**
	baz=33						
MULG	**Mulgathing**	**33.88**	**244**	P	**P**	**05 24 21.1**	**+0.3**
SMPI	**Sarmi**	**34.33**	**296**	P	**P**	**05 24 25.3**	**+0.5**
	comp=Z,72nm,1.5s,comp=Z,16μm						
KDU	**Kakadu**	**35.92**	**274**	P	**P**	**05 24 38.1**	**-0.3**
	baz=36,SNR=44						
KDU	**Kakadu**	**35.92**	**274**	P	**P**	**05 24 38.5**	**+0.1**
MTN	**Manton Dam**	**37.15**	**274**	P	**P**	**05 24 48.8**	**-0.1**
	baz=37,SNR=43						
MTN	**Manton Dam**	**37.15**	**274**	P	**P**	**05 24 48.7**	**-0.1**
DRS	**Darwin Rock St**	**37.48**	**274**	P	**P**	**05 24 51.9**	**+0.4**
WAKE	**Wake Island**	**37.99**	**356**	P	**P**	**05 24 55

LUWI **Luwuk** 48.92 286 P P 05 26 23.0 0.0
LUWI **Luwuk** 48.92 286 P P 05 26 23.9 +0.9
LUWI **Luwuk** 48.92 286 P P 05 26 24.0 +0.9
comp=Z,56nm,1.1s,comp=Z,1µm
MORW **Morawa** 49.38 248 P P 05 26 25.9 -0.5
baz=50,SNR=14
MORW **Morawa** 49.38 248 P P 05 26 25.5 -0.9
BKSI **Bulukumba** 49.76 279 P P 05 26 29.5 +0.1
comp=Z,41nm,0.9s,comp=Z,483nm
KAPI **Kappang** 50.21 279 P P 05 26 32.9 +0.1
KAPI **Kappang** 50.21 279*d* *i* P P 05 26 33.2 +0.4
KAPI pmax pmax
comp=Z,54nm,0.9s
TTSI **Tana Toraja** 50.85 282 P P 05 26 38.6 +1.0
comp=Z,26nm,1.0s
PLAI **Plampang** 50.86 274 P P 05 26 37.7 0.0
PLAI **Plampang** 50.86 274 P P 05 26 37.6 -0.1
comp=Z,55nm,0.8s,comp=Z,590nmcomp=Z,2µm
KHLU **Kahalu`u** 51.24 44 IAmb IAmb 05 26 44.0
comp=Z,161nm,0.8s
KIP **Kipapa** 51.24 40 P P 05 26 40.9 +0.6
KIP IAmb IAmb 05 26 42.2
comp=Z,153nm,0.7s
KIP **Kipapa** 51.24 40 P P 05 26 41.4 +1.1
KIP **Kipapa** 51.24 40 P P 05 26 40.9 +0.6
KIP pmax pmax
comp=Z,153nm,0.7s
KIP **Kipapa** 51.24 40 P P 05 26 41.2 +0.9
HUH **Hualalai** 51.34 44 IAmb IAmb 05 26 43.5
comp=Z,132nm,0.8s
MWH **Moku'aweowe** 51.35 44 IAmb IAmb 05 26 43.6
comp=Z,160nm,0.7s
GIRL **Giralia** 51.40 256 P P 05 26 41.5 0.0
baz=52,SNR=15
DRV **Dumont d'Urvil** 51.42 194 P P 05 26 40.8 -0.2
DRV pP pP 05 27 25.8 -0.3
DRV PcP PcP 05 27 52.1 -0.3
OPA **Opana** 51.44 40 P P 05 26 42.2 +0.4
OPA **Opana** 51.44 40 P P 05 26 42.2 +0.4
OPA pmax pmax
comp=Z,345nm,0.7s
SDHHI **Sand Hill** 51.49 44 IAmb IAmb 05 26 44.4
comp=Z,176nm,0.7s
WRMHI **West Rim** 51.49 44 IAmb IAmb 05 26 44.7
comp=Z,173nm,0.7s
POHA **Pohakuloa** 51.59 44 P P 05 26 44.1 +0.9
POHA **Pohakuloa** 51.59 44 P P 05 26 44.4 +1.1
POHA pP pP 05 27 29.9 +1.4
STCH **Steam Cracks** 51.59 44 P P 05 26 43.7 +0.6
TOLI2 **Tolitoli** 51.62 287 P P 05 26 43.0 -0.3
TOLI2 **Tolitoli** 51.62 287 P P 05 26 43.4 +0.1
TWSI **Taliwang, Sumb** 51.73 274 P P 05 26 44.4 +0.3
comp=Z,39nm,1.3s
MPSI **Mapaga** 52.10 286 P P 05 26 46.8 0.0
comp=Z,38nm,0.9s,comp=Z,532nmcomp=Z,1µm
IGBI **Denpasar** 53.35 273 P P 05 26 56.5 +0.5
comp=Z,99nm,0.9s,comp=Z,2µm
JAGI **Jajag, Banyuwa** 54.39 273 P P 05 27 02.9 -0.7
JAGI **Jajag, Banyuwa** 54.39 273 P P 05 27 02.4 -1.2
comp=Z,42nm,0.9s
GMJI **Gumukmas** 55.12 273 P P 05 27 08.4 -0.3
BLJI **Banyuglugur** 55.13 274 P P 05 27 08.9 +0.1
comp=Z,34nm,0.7s
PWJI **Pagerwojo** 56.74 273 P P 05 27 20.0 -0.3
comp=Z,30nm,0.7s
KKM **Kota Kinabalu** 57.86 290 P P 05 27 28.0 -0.2
KKM **Kota Kinabalu** 57.86 290 P P 05 27 29.2 +1.0
UGM **Wanagama** 57.99 272 IAmb IAmb 05 27 30.2
comp=Z,61nm,0.8s
UGM **Wanagama** 57.99 272 P P 05 27 29.5 +0.4
UGM **Wanagama** 57.99 272 P P 05 27 29.4 +0.4
comp=Z,108nm,1.5s
VNDA **Vanda** 58.82 182 P P 05 27 33.9 +0.2
VNDA **Vanda** 58.82 182 P P 05 27 33.7 0.0
comp=Z,7.2nm,0.6s,baz=5.1,slow=7.5,SNR=53
VNDA PcP PcP 05 28 21.3 +0.4
comp=Z,7.2nm,0.9s,baz=23,slow=4.6,SNR=4.1
comp=Z,7.2nm,0.6s
VNDA **Vanda** 58.82 182 P P 05 27 33.6 0.0
VNDA pP pP 05 28 20.5 0.0
SBA **Scott Base** 59.05 181 P P 05 27 36.7 +1.4
SBA IAmb IAmb 05 27 37.9
comp=Z,83nm,0.8s
SBA **Scott Base** 59.05 181 P P 05 27 36.7 +1.4
SBA pmax pmax
comp=Z,83nm,0.9s
SBA **Scott Base** 59.05 181 P P 05 27 36.5 +1.2
SBA pP pP 05 28 22.7 +0.6
KPJI **Karang Pucung** 59.66 272 P P 05 27 40.4 -0.1
comp=Z,38nm,0.8s
CMJI **Cimerak** 59.99 272 P P 05 27 42.1 -0.6
comp=Z,37nm,0.9s
JOW **Kunigami** 60.39 318 P P 05 27 45.2 +0.1
JOW IAmb IAmb 05 27 47.7
comp=Z,64nm,0.9s
JOW **Kunigami** 60.39 318 P P 05 27 46.4 +1.3
CASY **Casey** 60.50 203 P P 05 27 45.1 -0.2
CASY IAmb IAmb 05 27 46.5
comp=Z,138nm,1.8s
BBJI **Bungbulang** 60.84 272 P P 05 27 48.1 -0.5
LEM **Lembang** 61.06 273 P P 05 27 50.6 +0.4
comp=Z,74nm,0.7s
CCD **Concordia, Ant** 61.29 192 P P 05 27 50.5 -0.5
CCD pP pP 05 28 37.2 -0.8
CNJI **Cibinong** 61.38 272 P P 05 27 51.3 -0.8
comp=Z,21nm,0.9s,comp=Z,575nm
INU **Inuyama** 62.00 330 IAmb IAmb 05 27 57.9
comp=Z,85nm,1.3s
INU **Inuyama** 62.00 330 P P 05 27 56.6 +0.8
JGF **Kuroka** 62.05 331 P P 05 27 56.6 +0.4
JMN **Monobe** 62.25 327 IAmb IAmb 05 28 00.0
comp=Z,171nm,1.3s
JMN **Monobe** 62.25 327 P P 05 27 58.8 +1.3
MJAR **Matsushiro Arr** 62.44 332 P P 05 27 58.8 +0.1
comp=Z,23nm,0.6s,baz=161,slow=7.3,SNR=50
comp=Z,23nm,0.6s
MAJO **Matsushiro** 62.44 332 P P 05 27 59.1 +0.4
MAJO IAmb IAmb 05 28 00.4
comp=Z,188nm,1.5s
MAJO **Matsushiro** 62.44 332 P P 05 27 59.3 +0.5
MAJO **Matsushiro** 62.44 332*c* *i* P P 05 27 59.2 +0.5
MAJO pmax pmax
comp=Z,141nm,1.6s
MAJO **Matsushiro** 62.44 332 P P 05 27 59.1 +0.4
MAJO PcP PcP 05 28 35.5 -0.6
MJB9 **Matsu-Tunnel** 62.45 332 IAmb IAmb 05 28 01.3
comp=Z,191nm,1.5s
JMM **Marumori** 62.47 335 IAmb IAmb 05 28 01.3
comp=Z,70nm,0.9s
JMM **Marumori** 62.47 335 P P 05 28 00.3 +1.5
YULB **Yu-li** 62.92 310 P P 05 28 02.2 +0.1
YULB **Yu-li** 62.92 310 P P 05 28 02.8 +0.7
CGJI **Cibinong** 62.94 272 P P 05 28 01.3 -1.2
comp=Z,91nm,0.9s,comp=Z,3µmcomp=Z,9µm
NACB **Ninganchiao** 63.18 311 IAmb IAmb 05 28 05.2
comp=Z,88nm,1.0s
NACB **Ninganchiao** 63.18 311 P P 05 28 04.2 +0.4
TPUB **Ta-pu** 63.35 309 IAmb IAmb 05 28 05.7
comp=Z,87nm,0.8s
TPUB **Ta-pu** 63.35 309 P P 05 28 04.5 -0.5
JNU **Nakatsue** 63.39 324 IAmb IAmb 05 28 06.8
comp=Z,75nm,0.9s
JNU **Nakatsue** 63.39 324 P P 05 28 05.4 +0.3
SSLB **Suanglung** 63.41 310 P P 05 28 05.2 -0.2
SSLB IAmb IAmb 05 28 06.1
comp=Z,57nm,0.6s
SSLB **Suanglung** 63.41 310 P P 05 28 04.8 -0.5
YHNB **Yeheng** 63.64 311 P P 05 28 07.5 +0.6
JSD **Sado** 63.67 333 P P 05 28 07.6 +0.9
TATO **Taipei** 63.75 311 P P 05 28 08.8 +1.3
KASI **Kota Agung** 64.41 273 P P 05 28 11.0 -1.1
comp=Z,59nm,0.7s
JTM **Tenmabayashi** 64.88 337 P P 05 28 15.3 +0.8
ERM **Erimo** 65.21 339 P P 05 28 18.1 +1.6
ERM IAmb IAmb 05 28 19.7
comp=Z,35nm,0.7s
ERM **Erimo** 65.21 339 P P 05 28 18.2 +1.6
ERM pmax pmax
comp=Z,35nm,0.7s
QZH **Quanzhou** 65.82 310⇓ *i* P P 05 28 22.0 +1.1
QZH sP sP 05 29 30.0 -1.2
QZH S S 05 36 52.3 +1.4
ASAJ **Asahikawa** 67.26 339 P P 05 28 31.5 +1.9
comp=Z,62nm,0.5s,baz=209,slow=5.2,SNR=55
comp=Z,62nm,0.5s

TJN **Taejon** 67.74 324 P P 05 28 34.1 +1.3
TJN **Taejon** 67.74 324*ce* P P 05 28 32.8 0.0
KSRS **Korea Array** 68.22 325 P P 05 28 36.5 +0.7
comp=Z,4.9nm,0.7s,baz=145,slow=6.5,SNR=23
KSAR **Wonju Array Be** 68.24 325 P P 05 28 36.4 +0.6
KSAR **Wonju Array Be** 68.24 325 P P 05 28 36.4 +0.6
INCN **Inchon** 68.94 325 P P 05 28 41.5 +1.2
INCN IAmb IAmb 05 28 42.7
comp=Z,263nm,1.6s
INCN **Inchon** 68.94 325 P P 05 28 42.0 +1.7
INCN **Inchon** 68.94 325 P P 05 28 41.5 +1.2
INCN pmax pmax
comp=Z,263nm,1.6s
QIZ **Qiongzhong** 69.44 300 P P 05 28 45.0 +1.3
QIZ sP sP 05 29 53.0 -1.7
QIZ S S 05 37 38.0 +3.7
QIZ sS sS 05 38 56.0 -1.0
QIZ pmax pmax
comp=Z,24nm,1.5s
QIZ pmax pmax
comp=Z,270nm,5.4s
YSS **Yuzh-Sakhalins** 69.74 341 P P 05 28 46.0 +1.1
YSS IAmb IAmb 05 28 48.2
comp=Z,131nm,1.0s
YSS **Yuzh-Sakhalins** 69.74 341 P P 05 28 47.1 +2.3
YSS **Yuzh-Sakhalins** 69.74 341*ce* P P 05 28 46.7 +1.9
YSS *eS* S 05 37 32.3 -4.2
YSS pmax pmax
comp=Z,700nm,4.3s
YSS pmax pmax
comp=N,300nm,4.1s
YSS pmax pmax
comp=Z,130nm,1.0s
NJ2 **Nanjing** 69.98 316⇓ *i* P P 05 28 47.8 +1.2
NJ2 PcP PcP 05 29 12.3 +4.8
NJ2 sP sP 05 29 58.3 +0.9
NJ2 S S 05 37 43.3 +3.3
NJ2 pmax pmax
comp=Z,36nm,1.0s
NJ2 pmax pmax
comp=Z,200nm,8.1s
SKR **Severo-Kuril's** 70.20 351*ce* P P 05 28 49.0 +1.5
TEY **Ternei** 70.21 336 *e* P P 05 28 50.0 +2.2
MSHR **Mys Shultsa** 70.52 331*ce* P P 05 28 51.1 +1.4
MSHR pmax pmax
comp=Z,73nm,2.5s
PSTR **Posyet** 70.73 331*c* *i* P P 05 28 53.2 +2.2
IPM **Ipoh** 71.07 282 P P 05 28 54.0 +0.3
QSPA **South Pole Qui** 71.20 180 P P 05 28 53.5 -0.2
QSPA IAmb IAmb 05 28 55.0
comp=Z,64nm,0.9s
QSPA **South Pole Qui** 71.20 180 P P 05 28 53.5 -0.2
comp=Z,48nm,0.8s,baz=19,slow=3.6,SNR=167
QSPA pP pP 05 29 42.2 -0.2
comp=Z,37nm,0.9s,baz=23,slow=3.3,SNR=6.5
comp=Z,48nm,0.8s
QSPA **South Pole Qui** 71.20 180 P P 05 28 53.5 -0.2
QSPA pP pP 05 29 40.9 -1.4
KIWB **Kanaga Island** 71.39 9 P P 05 28 55.7 +0.9
SHEM **Shemya Is, Ala** 71.40 3 P P 05 28 55.1 +0.4
comp=Z,105nm,0.4s,baz=76,slow=3.6,SNR=17
comp=Z,105nm,0.4s
USRK **Ussuriysk Ar.** 71.42 333 P P 05 28 56.4 +1.3
comp=Z,21nm,0.6s,baz=144,slow=4.5,SNR=42
comp=Z,21nm,0.6s
USA0B **Ussuriysk Arra** 71.42 333 IAmb IAmb 05 28 57.9
comp=Z,139nm,1.4s
USA0B **Ussuriysk Arra** 71.42 333 *i* P P 05 28 55.1 0.0
ADK **Adak** 71.49 9 P P 05 28 56.1 +0.8
ADK IAmb IAmb 05 28 57.0
comp=Z,100nm,0.8s
ADK **Adak** 71.49 9 P P 05 28 56.1 +0.8
ADK pmax pmax
comp=Z,100nm,0.8s
KULM **Kulim** 71.71 282 P P 05 28 57.9 +0.3
GSTR **Great Sitkin T** 71.79 9 P P 05 28 58.1 +1.0
WHN **Wuhan** 72.14 312⇑ *i* P P 05 29 00.3 +0.6
WHN pmax pmax
comp=Z,210nm,1.1s
PET **Petropavlovsk** 72.17 353 P P 05 29 00.3 +1.0
PET **Petropavlovsk** 72.17 353 P P 05 29 00.5 +1.2
PET **Petropavlovsk** 72.17 353 *eP* P 05 29 00.1 +0.8
PET *eS* S 05 38 05.7 +1.4
PET pmax pmax
comp=Z,170nm,0.5s
ATKA **Atka Island** 72.20 11 P P 05 29 00.7 +1.2
PEA0B **Petropavlovsk-** 72.36 353*ce* P P 05 29 01.2 +0.7
PETK **Petropavlovsk-** 72.36 353 P P 05 29 01.0 +0.5
comp=Z,132nm,0.7s,baz=140,slow=7.5,SNR=113
comp=Z,132nm,0.7s
PSI **Prapat** 72.42 279 P P 05 29 01.5 -0.4
DL2 **Dalian** 72.75 323 P P 05 29 04.8 +1.7
DL2 pmax pmax
comp=Z,130nm,0.7s
MDJ **Mudanjiang** 72.82 331 P P 05 29 04.0 +0.6
MDJ PcP PcP 05 29 25.5 +6.2
MDJ PP PP 05 31 45.0 -3.7
MDJ S SKiKP 05 38 14.5 -0.7
MDJ SS SS 05 42 49.8 -7.3
MDJ pmax pmax
comp=Z,65nm,1.2s
MDJ pmax pmax
comp=Z,170nm,5.2s
MDJ LR LR
comp=Z,250nm,10.4s
MDJ LR LR
comp=Z,180nm,13.4s
MDJ LR LR
comp=Z,190nm,12.4s
MDJ **Mudanjiang** 72.82 331 IAmb IAmb 05 29 06.0
comp=Z,92nm,1.1s
GSI **Gunungsitoli** 73.17 277 P P 05 29 06.2 0.0
comp=Z,69nm,0.7s,comp=Z,10µm
TYV **Tymovskoe** 73.27 343 *eP* P 05 29 07.6 +1.8
TYV pmax pmax
comp=Z,200nm,3.3s
TYV pmax pmax
comp=Z,53nm,1.4s
TIA **Tai'an** 73.70 318 P P 05 29 09.3 +0.6
TIA S S 05 38 22.0 -0.3
TIA SKS SKSac 05 38 53.8 -1.8
TIA pmax pmax
comp=Z,42nm,0.9s
NIKH **Nikolski High** 73.99 14 P P 05 29 10.3 +0.3
NIKH **Nikolski High** 73.99 14 P P 05 29 10.5 +0.6
baz=202,SNR=15
SURA **Surathani** 74.10 286 P P 05 29 13.2 +1.7
CN2 **Changchun** 74.16 329 P P 05 29 12.0 +0.8
CN2 pP pP 05 30 03.0 +2.7
CN2 sP sP 05 30 24.3 +1.9
CN2 S S 05 38 29.0 +1.8
CN2 pmax pmax
comp=Z,120nm,0.6s
NAYO **Nakonayok** 74.62 291 P P 05 29 15.8 +1.3
NONG **Nongkai** 74.62 296 P P 05 29 15.5 +1.1
BNX **BinXian** 74.67 331 ⇑P P 05 29 14.0 -0.1
BNX pmax pmax
comp=Z,51nm,0.7s
BNX pmax pmax
comp=Z,310nm,3.7s
SNSI **Sinabang, Aceh** 74.72 278 P P 05 29 14.8 -0.3
comp=Z,69nm,1.1s
GRNR **Gornyy** 75.12 339⇑ *i* P P 05 29 18.5 +1.9
GRNR *eS* S 05 38 41.7 +4.2
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=N,20nm,1.2s
GRNR pmax pmax
comp=Z,100nm,1.2s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,150nm,16.0s
GRNR MLR MLR
comp=N,90nm,17.0s
GRNR MLR MLR
comp=Z,120nm,17.0s
UNV **Unalaska Valle** 75.34 15 P P 05 29 18.0 +0.3
UNV **Unalaska Valle** 75.34 15 P P 05 29 17.8 +0.1
baz=204,SNR=9.0
KLR **Kul'dur** 75.55 336*ce* P P 05 29 19.4 +0.4
KLR pmax pmax
comp=Z,175nm,1.7s
KLR **Kul'dur** 75.55 336 P P 05 29 20.4 +1.4

comp=Z,39nm,0.8s,baz=142,slow=6.3,SNR=114
comp=Z,39nm,0.8s
GYA **Guiyang** 75.65 305⇑ *i* P P 05 29 21.0 +0.7
GYA PcP PcP 05 29 34.3 +2.1
GYA pP pP 05 30 11.0 +1.2
GYA sP sP 05 30 33.5 +1.6
GYA S S 05 38 45.0 +0.4
GYA pmax pmax
comp=Z,39nm,1.2s
GYA pmax pmax
comp=Z,200nm,5.0s
LYN **LuoYang** 75.75 315⇑ *i* P P 05 29 21.5 +1.0
LYN pP pP 05 30 13.0 +3.2
LYN sP sP 05 30 32.5 +0.7
LYN S S 05 38 47.0 +2.0
LYN SS SS 05 43 43.5 +1.5
LYN pmax pmax
comp=Z,200nm,1.1s
LYN pmax pmax
comp=Z,720nm,4.3s
HNS **HongShan** 75.96 318 ⇑P P 05 29 22.8 +1.2
HNS pP pP 05 30 12.8 +1.9
HNS sP sP 05 30 34.0 +1.1
HNS S S 05 38 49.5 +2.3
HNS pmax pmax
comp=Z,59nm,1.3s
SRDT **SRDT** 76.58 290 P P 05 29 27.3 +1.7
BJT **Baijiatuau** 76.67 321 IAmb IAmb 05 29 28.0
comp=Z,51nm,0.7s
BJI **Beijing** 76.68 321 P P 05 29 26.0 +0.4
BJI pP pP 05 30 18.0 +3.0
BJI sP sP 05 30 37.8 +0.8
BJI S S 05 38 58.3 +3.4
BJI pmax pmax
comp=Z,48nm,0.7s
FALS **False Pass** 77.02 16 P P 05 29 27.2 0.0
baz=206
P08K **Saint George I** 77.24 12 P P 05 29 28.8 +0.4
baz=200
TIY **Taiyuan** 77.60 317 P P 05 29 32.8 +1.9
TIY sP sP 05 30 47.5 +5.1
TIY S S 05 39 08.5 +3.4
TIY ScS ScS 05 39 30.5 +0.4
TIY sS sS 05 40 27.5 -2.6
TIY pmax pmax
comp=Z,47nm,1.0s
TIY pmax pmax
comp=Z,300nm,4.2s
SPIA **Saint Paul Isl** 77.65 11 P P 05 29 30.7 +0.1
baz=200
XAN **Xi'an** 77.90 312 ⇑P P 05 29 33.3 +0.7
XAN sP sP 05 30 43.3 -0.9
XAN PP PP 05 32 33.5 +1.7
XAN S S 05 39 09.5 +1.0
XAN sS sS 05 40 34.8 +1.7
XAN pmax pmax
comp=Z,140nm,1.2s
XAN pmax pmax
comp=Z,650nm,5.3s
CHNA **Chernabura Isl** 78.04 18 P P 05 29 33.5 +0.7
baz=210
HEH **HeiHe** 78.10 334 *eP* P 05 29 33.0 -0.2
HEH sP sP 05 30 41.3 -3.4
HEH S S 05 39 07.3 -2.5
HEH SS SS 05 44 07.8 -9.0
HEH pmax pmax
comp=Z,62nm,1.0s
HEH pmax pmax
comp=Z,430nm,6.0s
KMI **Kunming** 78.12 302 ⇑P P 05 29 35.8 +1.5
KMI S S 05 39 14.8 +3.2
KMI pmax pmax
comp=Z,120nm,1.1s
SDPT **Sand Point** 78.24 17 P P 05 29 34.2 +0.3
SDPT **Sand Point** 78.24 17 P P 05 29 34.0 +0.1
baz=209
CMAR **Chiang Mai Arr** 78.40 294 P P 05 29 36.9 +1.2
comp=Z,15nm,0.7s,baz=130,slow=4.3,SNR=86
CMAR pP pP 05 30 26.5 +1.1
comp=Z,14nm,1.1s,baz=124,slow=3.9,SNR=3.8
comp=Z,15nm,0.7s
CHTO **Chiang Mai** 78.55 294 P P 05 29 37.1 +0.6
CHTO **Chiang Mai** 78.55 294 P P 05 29 38.0 +1.5
CHTO **Chiang Mai** 78.55 294 P P 05 29 37.1 +0.6
CHTO pmax pmax
comp=Z,35nm,0.8s
MAW **Mawson** 78.81 202 P P 05 29 38.2 +1.2
comp=Z,36nm,0.9s,baz=125,slow=8.3,SNR=7.4
comp=Z,36nm,0.9s
XLT **XiLinHaoTe** 79.17 324 *eP* P 05 29 41.0 +1.6
XLT PcP PcP 05 29 48.3 +1.3
XLT pP pP 05 30 30.3 +1.2
XLT sP sP 05 30 52.8 +1.8
XLT S S 05 39 23.8 +2.2
XLT ScS SKSac 05 39 34.5 -1.0
XLT sS sS 05 40 43.5 -4.3
XLT pmax pmax
comp=Z,60nm,0.7s
XLT pmax pmax
comp=Z,110nm,4.0s
S14K **Fog Glacier** 79.32 17 P P 05 29 40.2 +0.4
baz=210
PZH **PanZhiHua** 79.55 303 P P 05 29 42.3 +0.4
PZH pP pP 05 30 34.3 +2.6
PZH sP sP 05 30 54.5 +1.0
PZH S S 05 39 26.3 -0.2
PZH pmax pmax
comp=Z,50nm,1.1s
PZH pmax pmax
comp=Z,210nm,5.1s
MA2 **Magadan** 79.60 351 P P 05 29 41.0 -0.2
MA2 **Magadan** 79.60 351 P P 05 29 42.3 +1.1
MA2 **Magadan** 79.60 351 P P 05 29 41.5 +0.3
comp=Z,30nm,0.8s,baz=158,slow=6.6,SNR=18
comp=Z,30nm,0.8s
CHGN **Chignik** 79.65 18 P P 05 29 41.2 -0.3
baz=211
HHC **Hu-ho-hao-te** 79.97 319 *eP* P 05 29 45.3 +1.5
HHC sP sP 05 30 56.5 +1.0
HHC S S 05 39 31.5 +1.3
HHC sS sS 05 40 58.5 +2.7
HHC SS SS 05 44 43.3 -2.1
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,260nm,6.0s
CD2 **Chengdu** 80.05 307 P P 05 29 45.3 +0.9
CD2 sP sP 05 30 51.0 -5.2
CD2 S S 05 39 32.5 +1.1
CD2 sS sS 05 40 57.8 +1.9
CD2 pmax pmax
comp=Z,50nm,1.1s
CD2 pmax pmax
comp=Z,200nm,4.0s
BTO **Baotou** 80.79 318 *eP* P 05 29 50.8 +2.6
BTO pP pP 05 30 40.8 +2.8
BTO sP sP 05 31 02.3 +2.5
BTO S S 05 39 39.3 +0.5
BTO pmax pmax
comp=Z,67nm,2.1s
BTO pmax pmax
comp=Z,640nm,7.6s
HIA **Hailar** 80.81 330*c* *i* P P 05 29 47.8 -0.2
HIA pmax pmax
comp=Z,59nm,1.3s
ZEA **Zeya** 80.83 336 *eP* P 05 29 49.3 +1.4
ZEA pmax pmax
comp=E,10.0nm,0.3s
ZEA pmax pmax
comp=N,30nm,0.7s
ZEA pmax pmax
comp=Z,70nm,0.8s
R16K **Pilot Point** 80.98 17 P P 05 29 49.4 +0.8
baz=212
M11K **Mekoryuk** 81.42 12 P P 05 29 52.4 +1.6
baz=203,SNR=9.4
O14K **Tigyukauivet M** 81.48 15 P P 05 29 52.1 +1.0
baz=206
TNCH **TengChong** 81.51 300 P P 05 29 53.5 +1.1
TNCH pP pP 05 30 42.3 -0.1
TNCH sP sP 05 31 03.5 -0.8
TNCH S S 05 39 49.5 +2.5
TNCH pmax pmax
comp=Z,56nm,0.5s
TNCH pmax pmax

	comp=Z,310nm,4.3s								
O15K	**Ungalikthiuk R**	81.77	15	P		**P**		**05 29 53.3 +0.6**	
	baz=209								
N14K	**Kuskokwak Cree**	81.97	14	P		**P**		**05 29 55.0 +1.3**	
	baz=208								
OHAK	**Old Harbor**	81.97	19	P		**P**		**05 29 55.8 +2.0**	
OHAK	**Old Harbor**	81.97	19	P		**P**		**05 29 55.0 +1.2**	
	baz=216								
M13K	**Dall Lake**	82.03	13	P		**P**		**05 29 55.8 +1.8**	
	baz=206								
Q17K	**Contact Creek**	82.05	18	P		**P**		**05 29 54.8 +0.5**	
	baz=213,SNR=15								
P16K	**Nushagak River**	82.12	16	P		**P**		**05 29 54.8 +0.4**	
	baz=211								
Q16K	**King Salmon**	82.18	17	P		**P**		**05 29 55.8 +1.0**	
	baz=212,SNR=22								
MND	**Mandalay**	82.28	296	P		**P**		**05 29 57.1 +0.9**	
LZH	**Lanzhou**	82.52	312	⇑*i*P		**P**		**05 29 59.0 +1.6**	
LZH				pP		pP		05 30 50.5 +3.0	
LZH				sP		sP		05 31 12.0 +2.8	
LZH				S		**S**		**05 39 58.5 +1.7**	
LZH				sS		sS		05 41 26.3 +3.5	
LZH				pmax		pmax			
	comp=Z,110nm,1.0s								
LZH				pmax		pmax			
	comp=Z,520nm,4.2s								
N15K	**Kwethluk River**	82.57	15	P		**P**		**05 29 58.0 +1.1**	
	baz=209								
O16K	**Kokwok River B**	82.57	16	IAmb		IAmb		05 29 59.1	
	comp=Z,105nm,1.4s								
O16K	**Kokwok River B**	82.57	16	P		**P**		**05 29 56.5 -0.3**	
	baz=211								
SEY	**Seymchan**	82.60	352	*ce*P		**P**		**05 29 57.2 +0.3**	
SEY				pmax		pmax			
	comp=Z,155nm,2.5s								
SEY	**Seymchan**	82.60	352	P		**P**		**05 29 57.3 +0.4**	
	comp=Z,35nm,0.7s,baz=161,slow=6.1,SNR=70								
	comp=Z,35nm,0.7s								
M14K	**Bethel**	82.64	14	IAmb		IAmb		05 29 59.8	
	comp=Z,92nm,0.7s								
M14K	**Bethel**	82.64	14	P		**P**		**05 29 58.2 +1.1**	
	baz=207,SNR=11								
KDAK	**Kodiak Island**	82.65	19	P		**P**		**05 29 59.1 +1.8**	
KDAK				IAmb		IAmb		05 29 59.9	
	comp=Z,128nm,0.8s								
KDAK	**Kodiak Island**	82.65	19	P		**P**		**05 29 58.0 +0.7**	
	baz=216								
KDAK	**Kodiak Island**	82.65	19	*i* P		**P**		**05 29 57.1 -0.2**	
KDAK				pmax		pmax			
	comp=Z,251nm,0.9s								
KDAK	**Kodiak Island**	82.65	19	P		**P**		**05 29 59.0 +1.7**	
	comp=Z,86nm,0.7s,baz=211,slow=3.7,SNR=22								
	comp=Z,86nm,0.7s								
P17K	**Kvichak River**	82.68	17	P		**P**		**05 29 57.9 +0.6**	
	baz=212,SNR=15								
M15K	**Kasigluk River**	82.89	14	P		**P**		**05 29 59.7 +1.2**	
	baz=208,SNR=13								
O17K	**Koliganek Bris**	82.99	16	P		**P**		**05 29 59.3 +0.3**	
	baz=212,SNR=10								
L14K	**Kuka Creek**	83.01	13	IAmb		IAmb		05 30 01.8	
	comp=Z,96nm,0.8s								
L14K	**Kuka Creek**	83.01	13	P		**P**		**05 30 00.0 +1.0**	
	baz=207,SNR=25								
N16K	**Nishlik Lake**	83.16	15	P		**P**		**05 30 01.5 +1.6**	
	baz=210								
P18K	**Big Mountain,**	83.18	17	P		**P**		**05 30 00.3 +0.3**	
	baz=214,SNR=57								
Q19K	**Cape Douglas,**	83.26	18	P		**P**		**05 30 00.8 +0.3**	
	baz=215,SNR=14								
Q20K	**Shuyak Island**	83.38	19	P		**P**		**05 30 02.1 +1.0**	
	baz=216								
O18K	**Koktuh Hills**	83.57	17	P		**P**		**05 30 02.3 +0.2**	
	baz=214,SNR=32								
L15K	**Ungalak Mounta**	83.58	14	P		**P**		**05 30 02.7 +0.8**	
	baz=208								
M16K	**Timber Creek**	83.59	15	P		**P**		**05 30 03.6 +1.5**	
	baz=210								
N17K	**Nushagak Hills**	83.61	16	IAmb		IAmb		05 30 05.7	
	comp=Z,153nm,0.9s								
N17K	**Nushagak Hills**	83.61	16	P		**P**		**05 30 03.4 +1.2**	
	baz=212								
GAMB	**Gambell**	83.68	8	P		**P**		**05 30 03.5 +1.1**	
	baz=198,SNR=5.9								
P19K	**Oil Pt**	83.97	18	P		**P**		**05 30 04.4 +0.3**	
	baz=215,SNR=11								
L16K	**Owhat River**	84.06	14	P		**P**		**05 30 05.3 +0.9**	
	baz=210,SNR=40								
N18K	**Kilae Creek**	84.08	16	IAmb		IAmb		05 30 06.9	
	comp=Z,105nm,1.0s								
N18K	**Kilae Creek**	84.08	16	P		**P**		**05 30 05.1 +0.6**	
	baz=213								
J14K	**Nanvaranak Lak**	84.10	12	P		**P**		**05 30 06.3 +1.7**	
	baz=206								
O19K	**Port Alsworth**	84.11	17	P		**P**		**05 30 05.5 +0.8**	
	baz=214								
K15K	**Wolf Creek Mou**	84.11	13	P		**P**		**05 30 06.4 +1.7**	
	baz=208								
M17K	**Holitna River**	84.29	15	P		**P**		**05 30 07.1 +1.5**	
	baz=211								
HOM	**Homer**	84.45	19	P		**P**		**05 30 06.6 +0.2**	
	baz=217								
O20K	**Slope Mountain**	84.50	18	P		**P**		**05 30 06.4 -0.3**	
	baz=216								
SVW2	**Sparrevohn**	84.51	16	P		**P**		**05 30 08.3 +1.6**	
N19K	**Bonanza Creek**	84.57	17	IAmb		IAmb		05 30 08.8	
	comp=Z,76nm,0.9s								
N19K	**Bonanza Creek**	84.57	17	P		**P**		**05 30 06.5 -0.7**	
	baz=214,SNR=14								
L17K	**Donlin**	84.71	15	P		**P**		**05 30 09.3 +1.6**	
	baz=211								
BRLK	**Bradley Lake**	84.77	19	IAmb		IAmb		05 30 10.9	
	comp=Z,142nm,1.2s								
RSO	**Redoubt South**	84.77	18	P		**P**		**05 30 09.4 +1.1**	
M18K	**Stony River**	84.78	16	P		**P**		**05 30 09.7 +1.6**	
	baz=213								
BRSE	**Bradley Lake S**	84.80	19	P		**P**		**05 30 08.7 +0.5**	
	baz=218,SNR=8.7								
MCCM	**Marconi Confer**	85.16	47	IAmb		IAmb		05 30 13.4	
	comp=Z,95nm,0.8s								
L18K	**Granite Mounta**	85.18	15	P		**P**		**05 30 11.7 +1.7**	
	baz=212								
J16K	**Anvik River**	85.19	13	P		**P**		**05 30 11.8 +1.8**	
	baz=208								
K17K	**Iditarod**	85.21	14	P		**P**		**05 30 11.8 +1.6**	
	baz=211								
SNCC	**San Nicolas Is**	85.36	53	P		**P**		**05 30 12.2 +0.6**	
	baz=244								
KMPM	**Mount Pierce**	85.41	45	IAmb		IAmb		05 30 15.1	
	comp=Z,91nm,0.9s								
ANM	**Nome**	85.41	11	IAmb		IAmb		05 30 14.1	
	comp=Z,88nm,0.9s								
ANM	**Nome**	85.41	11	P		**P**		**05 30 12.6 +1.5**	
	baz=204,SNR=48								
CAPN	**Captain Cook N**	85.49	18	P		**P**		**05 30 13.7 +2.2**	
	baz=217								
M19K	**Big River Lodg**	85.50	16	IAmb		IAmb		05 30 15.5	
	comp=Z,190nm,1.8s								
M19K	**Big River Lodg**	85.50	16	P		**P**		**05 30 12.4 +0.8**	
	baz=214								
SAO	**San Andreas Ge**	85.52	49	IAmb		IAmb		05 30 15.3	
	comp=Z,47nm,0.9s								
N20K	**Mount Spurr**	85.53	18	P		**P**		**05 30 13.3 +1.5**	
	baz=216								
GDXM	**Geysers**	85.53	47	IAmb		IAmb		05 30 15.6	
	comp=Z,69nm,1.3s								
CIT	**Chita**	85.60	329	*e*P		**P**		**05 30 12.6 +0.2**	
CIT				*e*				05 31 06.2	
CIT				pmax		pmax			
	comp=Z,153nm,2.5s								
SCZ2	**Santa Cruz Isl**	85.61	52	P		**P**		**05 30 13.4 +0.6**	
	baz=244								
L19K	**White Mountain**	85.61	16	IAmb		IAmb		05 30 17.0	
	comp=Z,148nm,1.2s								
L19K	**White Mountain**	85.61	16	P		**P**		**05 30 13.3 +1.1**	
	baz=214,SNR=29								
I17K	**Unalakleet**	85.70	13	IAmb		IAmb		05 30 15.8	
	comp=Z,55nm,0.9s								
I17K	**Unalakleet**	85.70	13	P		**P**		**05 30 14.5 +2.0**	
	baz=208,SNR=23								
BBGB	**Big Mountain B**	85.73	49	IAmb		IAmb		05 30 17.0	
	comp=Z,164nm,1.3s								
PMPB	**Monarch Peak**	85.74	50	IAmb		IAmb		05 30 16.7	
	comp=Z,80nm,0.9s								
SBC	**Santa Barbara**	85.74	52	P		**P**		**05 30 14.1 +0.6**	
	baz=244								
M20K	**Styx River**	85.83	17	P		**P**		**05 30 15.7 +2.4**	
	baz=215								
PKM	**Mcpherson Peak**	85.86	51	P		**P**		**05 30 15.0 +0.7**	
	baz=244,SNR=7.9								
TNA	**Tin City**	85.92	9	P		**P**		**05 30 14.8 +1.3**	
	baz=202,SNR=39								
SMMC	**Simmler**	85.92	51	P		**P**		**05 30 15.8 +1.5**	
	baz=244,SNR=11								
Q23K	**Middleton Isla**	85.98	21	P		**P**		**05 30 16.0 +2.0**	
	baz=222								
SCI2	**San Clemente I**	85.98	53	P		**P**		**05 30 15.8 +1.1**	
	baz=244								
G15K	**Niukluk**	86.04	11	P		**P**		**05 30 15.6 +1.4**	
	baz=205								
H16K	**Elim**	86.06	12	P		**P**		**05 30 15.2 +1.0**	
	baz=207,SNR=72								
FIS	**Fire Island**	86.07	18	IAmb		IAmb		05 30 19.1	
	comp=Z,88nm,0.7s								
F14K	**Arctic Creek**	86.09	10	P		**P**		**05 30 16.0 +1.6**	
	baz=203								
KRMB	**Red Mountain**	86.09	44	IAmb		IAmb		05 30 18.0	
	comp=Z,38nm,0.7s								
L20K	**Farewell, AK**	86.11	16	P		**P**		**05 30 15.3 +0.6**	
	baz=215								
SUA	**Susitna One**	86.16	18	IAmb		IAmb		05 30 19.2	
	comp=Z,58nm,1.0s								
SUA	**Susitna One**	86.16	18	P		**P**		**05 30 15.2 +0.2**	
	baz=218,SNR=12								
RC01	**Rabbit Creek A**	86.17	19	P		**P**		**05 30 15.1 +0.2**	
RC01				IAmb		IAmb		05 30 18.5	
	comp=Z,104nm,1.4s								
RC01	**Rabbit Creek A**	86.17	19	P		**P**		**05 30 15.7 +0.8**	
	baz=218,SNR=8.9								
J18K	**Innoko River**	86.23	15	IAmb		IAmb		05 30 17.9	
	comp=Z,87nm,0.7s								
J18K	**Innoko River**	86.23	15	P		**P**		**05 30 16.3 +1.1**	
	baz=212								
KSXB	**Camp Six Broad**	86.26	44	IAmb		IAmb		05 30 19.1	
	comp=Z,66nm,1.2s								
CIS	**Catalina Island**	86.27	53	P		**P**		**05 30 16.6 +0.5**	
	baz=245								
BRDH	**Bariadhala**	86.34	295	P		**P**		**05 30 18.3 +1.7**	
	comp=Z,86nm,0.4s,baz=90,slow=9.1,SNR=14								
	comp=Z,86nm,0.4s								
SKT	**Skwentna**	86.35	17	P		**P**		**05 30 17.1 +1.3**	
	baz=217								
KEBM	**Edson Butte**	86.48	42	P		**P**		**05 30 18.9 +2.0**	
FMP	**Fort Macarthur**	86.49	53	P		**P**		**05 30 17.4 +0.3**	
	baz=245								
YAK	**Yakutsk**	86.52	342	P		**P**		**05 30 17.8 +1.2**	
YAK				IAmb		IAmb		05 30 18.2	
	comp=Z,111nm,1.1s								
YAK	**Yakutsk**	86.52	342	*c i* P		**P**		**05 30 16.2 -0.4**	
YAK				*e**PP		**pP**		**05 31 07.9 +0.8**	
YAK				*e*				05 33 40.6	
YAK				*e*S		**SKSac**		**05 40 22.5 -0.2**	
YAK				pmax		pmax			
	comp=Z,105nm,1.1s								
YAK				pmax		pmax			
	comp=E,12nm,1.1s								
YAK				pmax		pmax			
	comp=N,30nm,1.4s								
YAK				pmax		pmax			
	comp=Z,136nm,3.8s								
YAK				pmax		pmax			
	comp=E,102nm,4.3s								
YAK				smax		smax			
	comp=E,52nm,3.8s								
YAK				smax		smax			
	comp=N,47nm,3.6s								
YAK	**Yakutsk**	86.52	342	P		**P**		**05 30 17.5 +0.9**	
	comp=N,44nm,0.5s,baz=133,slow=5.8,SNR=27								
YAK				pP		**pP**		**05 31 07.9 +0.8**	
	comp=N,12nm,0.4s,baz=132,slow=6.3,SNR=1.4								
	comp=N,44nm,0.5s								
ELIB	**Princess Elisa**	86.53	190	*d*P		**P**		**05 30 15.6 -1.3**	
	comp=Z,18nm,0.8s								
ELIB				*d*pP		**pP**		**05 31 04.7 -3.1**	
M22K	**Willow**	86.58	18	P		**P**		**05 30 17.1 +0.3**	
	baz=218,SNR=8.1								
F15K	**North Star Dit**	86.58	10	P		**P**		**05 30 18.1 +1.3**	
	baz=205								
ULN	**Ulaanbaatar**	86.59	323	P		**P**		**05 30 18.3 +0.8**	
ULN				IAmb		IAmb		05 30 19.8	
	comp=Z,126nm,1.1s								
ULN	**Ulaanbaatar**	86.59	323	*ce*P		**P**		**05 30 18.1 +0.6**	
ULN				pmax		pmax			
	comp=Z,212nm,1.7s								
BILL	**Bilibino**	86.67	359	P		**P**		**05 30 17.9 +0.7**	
BILL				IAmb		IAmb		05 30 19.7	
	comp=Z,119nm,1.0s								
BILL	**Bilibino**	86.67	359	⇑*e*P		**P**		**05 30 17.5 +0.3**	
BILL				pmax		pmax			
	comp=Z,174nm,1.3s								
DECC	**Green Verdugo**	86.69	52	P		**P**		**05 30 18.6 +0.5**	
	baz=245,SNR=6.1								
ARVC	**Arvin**	86.69	51	P		**P**		**05 30 18.7 +0.6**	
	baz=244,SNR=12								
G16K	**Koyuk River**	86.71	11	IAmb		IAmb		05 30 21.0	
	comp=Z,83nm,0.9s								
G16K	**Koyuk River**	86.71	11	P		**P**		**05 30 19.4 +2.0**	
	baz=207								
PMR	**Palmer**	86.75	19	P		**P**		**05 30 17.8 +0.1**	
PMR	**Palmer**	86.75	19	P		**P**		**05 30 18.4 +0.7**	
	baz=219,SNR=8.7								
PASC	**Pasadena Art C**	86.77	52	IAmb		IAmb		05 30 20.6	
	comp=Z,72nm,0.7s								
ORV	**Oroville**	86.77	46	IAmb		IAmb		05 30 21.0	
	comp=Z,61nm,0.8s								
H17K	**Granite Mounta**	86.79	13	IAmb		IAmb		05 30 20.7	
	comp=Z,59nm,0.7s								
H17K	**Granite Mounta**	86.79	13	P		**P**		**05 30 19.1 +1.2**	
	baz=209								
K20K	**Telida**	86.79	16	P		**P**		**05 30 18.5 +0.6**	
	baz=214								
KNK	**Knik Glacier**	86.81	19	P		**P**		**05 30 18.4 +0.4**	
	baz=220,SNR=6.8								
VOG	**Valley Oaks Go**	86.81	50	P		**P**		**05 30 19.4 +0.8**	
	baz=244								
VES	**Vestal, Richgr**	86.82	51	P		**P**		**05 30 19.5 +0.9**	
	baz=244,SNR=25								
K02D	**Willamette Mer**	86.82	43	IAmb		IAmb		05 30 21.5	
	comp=Z,50nm,0.8s								
GLI	**Glacier Island**	86.83	20	P		**P**		**05 30 17.9 -0.3**	
	baz=221								
CMB	**Columbia Colle**	86.85	48	IAmb		IAmb		05 30 21.4	
	comp=Z,62nm,0.8s								
AFDM	**Forest Hills D**	86.86	47	IAmb		IAmb		05 30 21.4	
	comp=Z,70nm,0.9s								
J01E	**Myrtle Point**	86.88	42	IAmb		IAmb		05 30 21.7	
	comp=Z,65nm,0.8s								
GTA	**Gaotai**	86.91	313	⇑P		**P**		**05 30 20.0 +0.8**	
GTA				pP		pP		05 31 10.8 +1.1	
GTA				sP		sP		05 31 34.5 +3.1	
GTA				S		**S**		**05 40 38.0 -1.9**	
GTA				pmax		pmax			
	comp=Z,57nm,1.4s								
GTA				pmax		pmax			
	comp=Z,240nm,7.1s								
GTA				LR		LR			
	comp=Z,110nm,16.6s								
GTA				LR		LR			
	comp=Z,170nm,19.3s								
GTA				LR		LR			
	comp=Z,170nm,24.4s								
PPLA	**Purkeypile**	86.91	17	P		**P**		**05 30 18.4 -0.3**	
	baz=216								
FID	**Port Fidalgo**	86.93	20	IAmb		IAmb		05 30 20.4	
	comp=Z,59nm,1.0s								
J19K	**Poorman**	86.94	15	P		**P**		**05 30 19.4 +0.9**	
	baz=213,SNR=14								
SONM	**Songino Array**	86.95	323	IAmb		IAmb		05 30 21.2	
	comp=Z,82nm,1.0s								
SONM	**Songino Array**	86.95	323	P		**P**		**05 30 19.4 +0.2**	
	comp=Z,41nm,0.7s,baz=143,slow=5.0,SNR=177								
SONM				pP		**pP**		**05 31 10.2 +0.5**	
	comp=Z,10nm,1.1s,baz=130,slow=4.5,SNR=3.0								
SONM				PKKPbc		**PKKPbc**		**05 48 11.5 -1.9**	
	comp=Z,1.3nm,0.6s,baz=330,slow=2.3,SNR=4.6								
	comp=Z,41nm,0.7s								
CCX	**Cicese**	86.97	55	IAmb		IAmb		05 30 22.1	
	comp=Z,46nm,0.8s								
YBH	**Yreka Blue Hor**	86.98	44	IAmb		IAmb		05 30 22.5	
	comp=Z,108nm,1.1s								
KAIM	**Kayak Island**	87.01	21	P		**P**		**05 30 20.1 +1.1**	
	baz=223								
EYAK	**Cordova Ski Ar**	87.02	20	P		**P**		**05 30 18.8 -0.2**	
	baz=222								
109C	**Camp Elliot, M**	87.05	54	IAmb		IAmb		05 30 22.3	
	comp=Z,73nm,1.0s								
109C	**Camp Elliot, M**	87.05	54	P		**P**		**05 30 19.7 -0.1**	
	baz=245,SNR=11								
CUT	**Chulitna**	87.05	18	P		**P**		**05 30 18.9 -0.2**	
CUT				IAmb		IAmb		05 30 20.6	
	comp=Z,63nm,1.0s								
CUT	**Chulitna**	87.05	18	P		**P**		**05 30 19.1 -0.1**	
	baz=218,SNR=5.8								
G17K	**Kiwalik Mounta**	87.14	12	P		**P**		**05 30 20.6 +1.1**	
	baz=205								
CBX	**Cerro Bola**	87.15	55	IAmb		IAmb		05 30 23.1	
	comp=Z,78nm,0.8s								
SML	**Sawmill**	87.15	19	IAmb		IAmb		05 30 24.2	
	comp=Z,50nm,1.0s								
SML	**Sawmill**	87.15	19	P		**P**		**05 30 21.0 +1.3**	
	baz=220,SNR=5.9								
ISA	**Isabella, Lake**	87.19	51	IAmb		IAmb		05 30 23.3	
	comp=Z,64nm,0.8s								
ISA	**Isabella, Lake**	87.19	51	P		**P**		**05 30 21.1 +0.6**	
	baz=244,SNR=34								
BFSC	**Mount Baldy Ra**	87.19	52	P		**P**		**05 30 20.8 +0.1**	
	baz=245,SNR=48								
EDW2	**Edwards Air Fo**	87.21	52	P		**P**		**05 30 21.6 +0.9**	
	baz=245,SNR=29								
SHL	**Shillong**	87.23	298	IAmb		IAmb		05 30 22.5	
	comp=Z,133nm,1.8s								
HUMO	**Hull Mountain**	87.23	43	IAmb		IAmb		05 30 23.8	
	comp=Z,83nm,0.9s								
MURC	**Murrieta**	87.27	53	P		**P**		**05 30 21.5 +0.5**	
	baz=245,SNR=16								
GCSA	**Galena City Sc**	87.28	14	P		**P**		**05 30 20.5 +0.3**	
	baz=212,SNR=21								
H18K	**Honhosa River**	87.31	13	P		**P**		**05 30 20.5 +0.2**	
	baz=210								
M23K	**Glacier View**	87.33	19	P		**P**		**05 30 20.5 -0.1**	
	baz=220								
CAST	**Castle Rocks**	87.36	16	P		**P**		**05 30 19.7 -1.0**	
CAST				IAmb		IAmb		05 30 20.8	
	comp=Z,43nm,0.6s								
CAST	**Castle Rocks**	87.36	16	P		**P**		**05 30 19.4 -1.2**	
	baz=216,SNR=60								
J20K	**Nowinta River**	87.45	15	P		**P**		**05 30 21.1 +0.1**	
	baz=214								
VTX	**Valle De La Tr**	87.46	56	IAmb		IAmb		05 30 24.9	
	comp=Z,68nm,1.3s								
SCM	**Sheep Creek Mo**	87.48	19	P		**P**		**05 30 20.7 -0.6**	
	baz=221,SNR=7.5								
DIB	**Dawson Inlet,**	87.51	31	IAmb		IAmb		05 30 24.1	
	comp=Z,56nm,0.8s								
I03D	**Drain, OR**	87.51	42	IAmb		IAmb		05 30 24.5	
	comp=Z,74nm,0.7s								
MONP2	**Monument Peak**	87.57	54	P		**P**		**05 30 23.4 +0.7**	
	baz=246,SNR=46								
ESJX	**Sierra Juarez**	87.58	55	IAmb		IAmb		05 30 25.6	
	comp=Z,94nm,1.6s								
BERG	**Berg Lake**	87.59	21	IAmb		IAmb		05 30 24.1	
	comp=Z,90nm,1.0s								
MDPB	**Devils Postpil**	87.60	49	IAmb		IAmb		05 30 25.5	
	comp=Z,50nm,0.9s								
KLU	**Klutina**	87.67	20	IAmb		IAmb		05 30 24.9	
	comp=Z,76nm,1.4s								
KLU	**Klutina**	87.67	20	P		**P**		**05 30 22.8 +0.6**	
	baz=222,SNR=6.5								
CHUM	**Lake Minchumin**	87.67	16	P		**P**		**05 30 22.9 +0.8**	
	baz=216								
LRMC	**Laurel Mtn Rad**	87.69	51	P		**P**		**05 30 24.6 +1.5**	
	baz=245								
BMRM	**Bremner River**	87.71	21	P		**P**		**05 30 23.4 +1.0**	
	baz=223								
IKP	**In-Ko-Pah, Jac**	87.71	54	P		**P**		**05 30 24.5 +1.4**	
	baz=246,SNR=13								
MLAC	**Mammoth, Mammo**	87.77	49	P		**P**		**05 30 24.7 +1.2**	
	baz=244								
KTH	**Kantishna Hill**	87.78	17	IAmb		IAmb		05 30 25.5	
	comp=Z,38nm,0.8s								
CWC	**Cottonwood Cre**	87.81	50	P		**P**		**05 30 24.9 +1.3**	
	baz=245								
PFO	**Pinyon Flats O**	87.84	53	P		**P**		**05 30 24.8 +1.1**	
PFO	**Pinyon Flats O**	87.84	53	P		**P**		**05 30 25.0 +1.2**	
	baz=246,SNR=7.9								
PFO	**Pinyon Flats O**	87.84	53	*i* P		**P**		**05 30 24.5 +0.8**	
PFO				pmax		pmax			
	comp=Z,67nm,0.9s								
TPFO	**Pinon Flats**	87.84	53	P		**P**		**05 30 24.9 +1.1**	
	baz=246,SNR=14								
YUH	**Yuha Desert**	87.86	55	IAmb		IAmb		05 30 26.5	
	comp=Z,44nm,0.9s								
F17K	**Baldwin Pennin**	87.86	11	IAmb		IAmb		05 30 26.1	
	comp=Z,95nm,0.7s								
F17K	**Baldwin Pennin**	87.86	11	P		**P**		**05 30 24.0 +1.2**	
	baz=208								
TRF	**Thorofare Moun**	87.87	17	IAmb		IAmb		05 30 27.1	
	comp=Z,58nm,1.0s								
TRF	**Thorofare Moun**	87.87	17	P		**P**		**05 30 23.2 -0.1**	
	baz=218,SNR=12								
PNTR	**Pine Nut**	87.87	47	IAmb		IAmb		05 30 26.8	
	comp=Z,58nm,0.7s								
WAT1	**Susitna Watana**	87.88	18	P		**P**		**05 30 23.6 +0.5**	
	baz=220								
I20K	**Naaghedeneel**	87.89	15	IAmb		IAmb		05 30 26.3	
	comp=Z,75nm,0.9s								
I20K	**Naaghedeneel**	87.89	15	P		**P**		**05 30 24.0 +1.0**	
	baz=214,SNR=5.9								
G18K	**Tagagawik**	87.89	13	IAmb		IAmb		05 30 26.5	
	comp=Z,123nm,1.3s								
G18K	**Tagagawik**	87.89	13	P		**P**		**05 30 23.4 +0.3**	
	baz=210								
PMD	**Palm Desert**	87.91	53	IAmb		IAmb		05 30 26.5	
	comp=Z,62nm,1.1s								
WAT6	**Susitna Watana**	87.93	18	P		**P**		**05 30 23.7 +0.2**	
	baz=220,SNR=9.6								
WAX	**Waxell Ridge**	87.93	22	IAmb		IAmb		05 30 25.3	
	comp=Z,44nm,0.7s								
RRX	**Edison Barstow**	87.95	52	P		**P**		**05 30 25.0 +0.8**	
	baz=245,SNR=9.5								
TIN	**

baz=220,SNR=6.1
HEC **Hector,Ludlow** **88.43 52** P **P** **05 30 27.2 +0.7**
baz=246,SNR=13
RYN **Ryan** **88.43 48** IAmb IAmb 05 30 29.2
comp=Z,56nm,1.0s
G19K **Purcell Mounta** **88.43 13** IAmb IAmb 05 30 29.4
comp=Z,74nm,0.9s
G19K **Purcell Mounta** **88.43 13** P **P** **05 30 26.3 +0.7**
baz=212
LCH **Last Change Ra** **88.46 50** IAmb IAmb 05 30 29.2
comp=Z,108nm,1.6s
MCK **McKinley** **88.47 17** P **P** **05 30 26.5 +0.6**
baz=219,SNR=15
NVAR **Mina Array Bea** **88.50 48** P **P** **05 30 27.9 +1.1**
comp=Z,21nm,0.7s,baz=231,slow=5.7,SNR=147
NVAR PKKPbc **PKKPbc** **05 48 09.6 +0.5**
comp=Z,1.0nm,0.6s,baz=69,slow=4.9,SNR=8.8
NVAR PKPPKP **P'P'df** **05 56 17.2 +1.4**
comp=Z,0.6nm,0.7s,baz=116,slow=2.1,SNR=4.1
comp=Z,21nm,0.7s
TABL **Table Mountain** **88.53 22** IAmb IAmb 05 30 27.7
comp=Z,60nm,0.8s
MCARA **McCarthy VSAT** **88.54 21** P **P** **05 30 26.5 +0.2**
baz=224
CRAG **Craig** **88.56 29** P **P** **05 30 27.9 +1.5**
baz=233
GRAC **Grapevine Rang** **88.56 50** P **P** **05 30 27.8 +0.9**
baz=245,SNR=29
HARP **HAARP** **88.58 19** P **P** **05 30 27.1 +0.7**
baz=222,SNR=5.2
NV11 **Mina Array Sit** **88.60 49** IAmb IAmb 05 30 30.0
comp=Z,77nm,1.1s
PINM **Pinnacle** **88.61 23** P **P** **05 30 27.1 +0.5**
baz=227
BC3 **Big Chuckawall** **88.62 54** P **P** **05 30 28.3 +0.9**
baz=246,SNR=11
D17K **Noatak River** **88.66 10** P **P** **05 30 27.4 +0.8**
baz=206,SNR=42
FURC **Furnace Creek,** **88.71 51** P **P** **05 30 28.8 +1.2**
baz=245,SNR=5.3
GWY **Greenwater Val** **88.74 51** IAmb IAmb 05 30 31.2
comp=Z,157nm,1.5s
S31K **Pelican** **88.76 26** P **P** **05 30 28.1 +0.9**
baz=230
BARN **Barnard Glacie** **88.78 22** IAmb IAmb 05 30 29.4
comp=Z,49nm,0.8s
CTG **Chitna Glacier** **88.82 22** P **P** **05 30 27.8 0.0**
baz=226,SNR=12
C16K **Lisburne Hills** **88.82 9** IAmb IAmb 05 30 31.1
comp=Z,53nm,1.1s
C16K **Lisburne Hills** **88.82 9** P **P** **05 30 28.5 +1.2**
baz=204
CTGM **Chitina Glacie** **88.83 22** IAmb IAmb 05 30 29.5
comp=Z,46nm,0.7s
LOGN **Logan Glacier** **88.84 22** IAmb IAmb 05 30 29.1
comp=Z,34nm,0.7s
E18K **Tukpahlearik C** **88.85 11** IAmb IAmb 05 30 31.4
comp=Z,56nm,0.8s
E18K **Tukpahlearik C** **88.85 11** P **P** **05 30 29.0 +1.4**
baz=208
F19K **Shaleruckik Mo** **88.88 12** IAmb IAmb 05 30 31.3
comp=Z,44nm,1.0s
F19K **Shaleruckik Mo** **88.88 12** P **P** **05 30 28.5 +0.9**
baz=211
KVN **Kaiserville** **88.91 48** IAmb IAmb 05 30 31.3
comp=Z,49nm,0.7s
PAX **Paxson** **88.91 19** P **P** **05 30 28.6 +0.6**
baz=222
SHOC **Shoshone, Teco** **88.91 51** P **P** **05 30 29.3 +0.7**
baz=246
GMRC **Granite Mounta** **88.92 53** P **P** **05 30 29.8 +1.0**
baz=246,SNR=30
TROLL **Troll, Antarti** **88.92 184** ⇑P **P** **05 30 27.4 -0.8**
comp=Z,2µm,0.6s
TROLL ⇑pP **pP** **05 31 18.4 -1.0**
comp=Z,3µm,1.0s
U33K **Whale Pass** **88.95 28** P **P** **05 30 29.3 +1.1**
baz=233
TUQ **Turquoise Moun** **88.98 52** P **P** **05 30 30.0 +0.9**
baz=246,SNR=6.4
H21K **Melozitna Rive** **89.00 15** P **P** **05 30 29.0 +0.7**
baz=216
MLY **Manley** **89.01 16** P **P** **05 30 28.6 +0.2**
baz=217,SNR=18
BOD **Bodaibo** **89.02 334** *e*P **P** **05 30 27.6 -0.9**
BOD pmax pmax
comp=Z,17nm,1.4s
WCT **Wildcat Mounta** **89.02 51** IAmb IAmb 05 30 31.9
comp=Z,55nm,0.7s
IRM **Iron Mountain** **89.06 53** P **P** **05 30 30.1 +0.8**
baz=246,SNR=16
GOMU **GeErMu** **89.09 309** P **P** **05 30 30.8 +0.9**
GOMU pmax pmax
comp=Z,15nm,1.7s
NEA2 **Nenana** **89.10 17** P **P** **05 30 29.3 +0.5**
baz=219
GRNB **Grenville Isla** **89.11 31** IAmb IAmb 05 30 32.2
comp=Z,70nm,1.0s
BBB **Bella Bella** **89.12 33** P **P** **05 30 30.3 +1.2**
comp=Z,36nm,0.7s,baz=253,slow=14,SNR=11
comp=Z,36nm,0.7s
S32K **Killisnoo** **89.14 27** P **P** **05 30 29.8 +0.7**
baz=232
V35K **Ketchikan** **89.17 29** P **P** **05 30 30.6 +1.3**
baz=234
P29M **Windy Craggy** **89.24 24** IAmb IAmb 05 30 31.3
comp=Z,49nm,0.8s
P29M **Windy Craggy** **89.24 24** P **P** **05 30 29.8 +0.2**
baz=229
NVL **N'lazarevskaya** **89.25 187** *e*P **P** **05 30 26.8 -2.7**
NVL pmax pmax
comp=Z,62nm,1.2s
WRH **Wood River Hil** **89.28 17** IAmb IAmb 05 30 32.5
comp=Z,33nm,0.6s
C17K **DeLong Mountai** **89.34 10** P **P** **05 30 31.5 +1.6**
baz=206
PIX **Pinacate** **89.35 56** IAmb IAmb 05 30 33.3
comp=Z,46nm,0.8s
SLBS **Sierra La Lagu** **89.36 65** P **P** **05 30 33.1 +2.0**
O29M **Mount Kennedy** **89.37 23** P **P** **05 30 31.0 +0.7**
baz=228
BLYC **Blythe** **89.37 54** IAmb IAmb 05 30 34.5
comp=Z,141nm,1.4s
K24K **Donnelly Dome** **89.44 18** P **P** **05 30 30.4 0.0**
baz=222,SNR=18
T33K **Petersburg** **89.44 28** P **P** **05 30 32.0 +1.5**
baz=233
I23K **Minto, Yukon-K** **89.46 16** P **P** **05 30 30.8 +0.4**
baz=219,SNR=8.4
Q09A **Carvers** **89.47 48** IAmb IAmb 05 30 34.1
comp=Z,84nm,0.9s
WRAK **Wrangell Islan** **89.48 28** IAmb IAmb 05 30 33.8
comp=Z,77nm,1.0s
WRAK **Wrangell Islan** **89.48 28** P **P** **05 30 31.8 +1.1**
baz=234
F20K **Avaraart Lake** **89.49 13** P **P** **05 30 31.3 +0.8**
baz=213
E19K **Redstone River** **89.53 12** IAmb IAmb 05 30 35.9
comp=Z,89nm,1.4s
E19K **Redstone River** **89.53 12** P **P** **05 30 31.9 +1.2**
baz=212
H22K **Ishtalitna Cre** **89.54 15** P **P** **05 30 31.6 +0.8**
baz=217
CLRS **Cowichan Lake** **89.55 37** IAmb IAmb 05 30 34.7
comp=Z,85nm,1.1s
SNAA **Sanae** **89.55 182** ⇑P **P** **05 30 30.0 -1.0**
comp=Z,410nm,0.4s
SNAA ⇑pP **pP** **05 31 21.0 -1.4**
comp=Z,432nm,0.9s
SNAA **Sanae** **89.55 182** *i* P **P** **05 30 30.5 -0.6**
SNAA pmax pmax
comp=Z,34nm,0.7s
SNAA **Sanae** **89.55 182** P **P** **05 30 30.2 -0.9**
comp=Z,24nm,0.6s,baz=189,slow=5.0,SNR=60
SNAA pP **pP** **05 31 20.9 -1.5**
comp=Z,24nm,1.0s,baz=187,slow=3.4,SNR=6.7
comp=Z,24nm,0.6s
HDA **Harding Lake** **89.55 17** IAmb IAmb 05 30 33.2
comp=Z,37nm,0.7s
HDA **Harding Lake** **89.55 17** P **P** **05 30 30.3 -0.6**
baz=221,SNR=29
113A **Mohawk Valley,** **89.57 55** IAmb IAmb 05 30 34.6
comp=Z,163nm,1.6s
YUK8 **Steele Glacier** **89.60 22** P **P** **05 30 31.6 +0.1**
baz=227
L26K **Log Cabin Wild** **89.61 20** P **P** **05 30 31.9 +0.7**
baz=224,SNR=9.5
M27K **Edge Creek, AK** **89.61 21** P **P** **05 30 31.7 +0.3**
baz=225
MDM **Murphy Dome** **89.62 17** IAmb IAmb 05 30 32.6
comp=Z,35nm,0.6s
COLA **College** **89.66 17** P **P** **05 30 30.6 -0.7**
COLA IAmb IAmb 05 30 32.2
comp=Z,42nm,0.7s
COLA **College** **89.66 17** P **P** **05 30 30.6 -0.7**
COLA **College** **89.66 17** P **P** **05 30 31.1 -0.2**
baz=220
COLA **College** **89.66 17** P **P** **05 30 30.6 -0.7**
COLA pmax pmax
comp=Z,42nm,0.7s
PLBC **Pleasant Camp** **89.66 25** P **P** **05 30 31.8 +0.3**
baz=230
R32K **Eaglecrest** **89.66 26** IAmb IAmb 05 30 33.7
comp=Z,46nm,1.1s
R32K **Eaglecrest** **89.66 26** P **P** **05 30 31.8 +0.2**
baz=232
RIDG **Independent Ri** **89.67 19** IAmb IAmb 05 30 33.9
comp=Z,55nm,0.9s
RIDG **Independent Ri** **89.67 19** P **P** **05 30 31.3 -0.3**
baz=223
YUK3 **Moose Creek** **89.69 21** P **P** **05 30 31.6 -0.3**
baz=227,SNR=13
NEE2 **Needles Airpor** **89.70 53** P **P** **05 30 33.4 +1.1**
baz=247,SNR=5.2
JIS **Juneau Island** **89.72 26** IAmb IAmb 05 30 34.0
comp=Z,66nm,1.1s
JIS **Juneau Island** **89.72 26** P **P** **05 30 33.3 +1.6**
C18K **Utukok River** **89.83 10** P **P** **05 30 33.4 +1.2**
baz=208
ILAR **Eielson Array** **89.84 17** P **P** **05 30 31.1 -1.1**
comp=Z,18nm,0.7s,baz=232,slow=6.8,SNR=173
ILAR PKKP **PKKPdf** **05 47 59.7 -2.8**
comp=Z,0.3nm,0.5s,baz=43,slow=0.5,SNR=6.0
comp=Z,18nm,0.7s
PGC **Siey** **89.86 38** IAmb IAmb 05 30 36.0
comp=Z,95nm,1.0s
P30M **Million Dollar** **89.86 24** P **P** **05 30 33.4 +0.9**
baz=230
YUK6 **Outpost Mounta** **89.87 23** P **P** **05 30 32.8 0.0**
baz=228
PDMCI **Parker Dam,Lak** **89.88 54** P **P** **05 30 33.8 +0.7**
baz=247,SNR=50
V12A **Nelson** **89.90 52** IAmb IAmb 05 30 36.1
comp=Z,40nm,0.8s
LON **Longmire** **89.92 40** IAmb IAmb 05 30 35.4
comp=Z,40nm,0.8s
G06A **Carlson Farm,** **89.95 42** IAmb IAmb 05 30 35.8
comp=Z,55nm,0.9s
POKR **Poker Plat Res** **89.96 17** P **P** **05 30 32.5 -0.3**
baz=220,SNR=9.8
BVCY **Beaver Creek** **90.00 21** P **P** **05 30 32.9 -0.2**
baz=226
WVOR **Wiseye Val** **90.00 45** IAmb IAmb 05 30 36.5
comp=Z,98nm,1.0s
S11A **Rachel** **90.01 50** IAmb IAmb 05 30 36.4
comp=Z,63nm,0.8s
214A **Organ Pipe Nat** **90.01 56** IAmb IAmb 05 30 37.0
comp=Z,82nm,1.1s
214A **Organ Pipe Nat** **90.01 56** P **P** **05 30 34.7 +0.9**
baz=248,SNR=29
ZAK **Zakamensk** **90.02 324** *e*P **P** **05 30 33.2 -0.3**
ZAK pmax pmax
comp=Z,51nm,1.5s
YUK4 **Talbot Arm** **90.04 22** P **P** **05 30 34.2 +0.7**
baz=228,SNR=13
SKAG **Skagway** **90.07 25** P **P** **05 30 35.1 +1.7**
SKAG **Skagway** **90.07 25** P **P** **05 30 34.3 +1.0**
baz=231
SCRK **Sand Creek** **90.10 19** IAmb IAmb 05 30 36.1
comp=Z,44nm,0.8s
SCRK **Sand Creek** **90.10 19** P **P** **05 30 33.2 -0.4**
baz=224,SNR=30
BMN **Battle Mountai** **90.11 47** IAmb IAmb 05 30 37.0
comp=Z,63nm,0.8s
HYT **Haines Junctio** **90.11 23** IAmb IAmb 05 30 35.2
comp=Z,56nm,1.2s
HYT **Haines Junctio** **90.11 23** P **P** **05 30 33.9 +0.1**
baz=229,SNR=7.2
F21K **Alatna River** **90.12 14** IAmb IAmb 05 30 35.4
comp=Z,33nm,0.8s
F21K **Alatna River** **90.12 14** P **P** **05 30 34.0 +0.5**
baz=215,SNR=52
L27K **Beaver Creek,** **90.13 20** P **P** **05 30 34.2 +0.5**
baz=226
VNA3 **Neumayer Olymp** **90.14 180** ⇑P **P** **05 30 32.6 -1.2**
VNA3 ⇑pP **pP** **05 31 23.2 -1.8**
comp=Z,57nm,0.8s
J25K **Salcha River,** **90.16 18** IAmb IAmb 05 30 41.1
comp=Z,76nm,1.4s
J25K **Salcha River,** **90.16 18** P **P** **05 30 33.5 -0.3**
baz=222
D19K **Kuna River** **90.25 11** IAmb IAmb 05 30 37.8
comp=Z,42nm,0.9s
D19K **Kuna River** **90.25 11** P **P** **05 30 34.8 +0.7**
baz=211
G22K **Bettles** **90.33 14** P **P** **05 30 34.8 +0.4**
baz=217
B18K **Kokolik River** **90.37 10** P **P** **05 30 35.5 +1.0**
baz=207
W13A **Hualapai Mount** **90.38 53** IAmb IAmb 05 30 38.6
comp=Z,54nm,0.8s
H24K **Noodor Dome** **90.39 16** P **P** **05 30 34.8 0.0**
baz=220
R11B **Troy Canyon, C** **90.41 49** P **P** **05 30 35.7 0.0**
baz=246,SNR=36
E20K **Nigu River** **90.42 12** P **P** **05 30 35.8 +0.8**
baz=212
VNA2 **Neumayer--Watz** **90.43 181** ⇑P **P** **05 30 34.0 -1.1**
comp=Z,49nm,0.6s,baz=175,slow=4.7
VNA2 ⇑pP **pP** **05 31 24.4 -1.9**
comp=Z,37nm,0.7s,baz=294,slow=1.6
C19K **Lookout Ridge** **90.51 11** IAmb IAmb 05 30 38.9
comp=Z,47nm,1.1s
C19K **Lookout Ridge** **90.51 11** P **P** **05 30 36.9 +1.6**
baz=209
G23K **Bananza Creek** **90.52 15** P **P** **05 30 35.9 +0.5**
baz=218
O30N **Mendenhall** **90.61 24** IAmb IAmb 05 30 38.0
comp=Z,58nm,1.1s
O30N **Mendenhall** **90.61 24** P **P** **05 30 36.4 +0.4**
baz=230,SNR=11
Y14A **Wickenburg** **90.61 54** IAmb IAmb 05 30 39.3
comp=Z,36nm,0.7s
J26L **Joseph Creek** **90.61 18** IAmb IAmb 05 30 38.8
comp=Z,39nm,0.8s
J26L **Joseph Creek** **90.61 18** P **P** **05 30 36.3 +0.4**
baz=224
D20K **Etivluk River** **90.72 12** P **P** **05 30 37.1 +0.8**
baz=212
K27K **Chicken** **90.73 19** IAmb IAmb 05 30 39.4
comp=Z,40nm,0.9s
K27K **Chicken** **90.73 19** P **P** **05 30 36.8 +0.5**
baz=225
T35M **Bob Quinn** **90.75 28** IAmb IAmb 05 30 40.0
comp=Z,59nm,1.2s
T35M **Bob Quinn** **90.75 28** P **P** **05 30 37.8 +1.1**
baz=235
MXC **Moxie City** **90.77 41** IAmb IAmb 05 30 39.7
comp=Z,58nm,0.9s
PRP **Porcupine Dome** **90.79 17** P **P** **05 30 37.7 +0.9**
baz=222
P32M **Atlin** **90.80 25** IAmb IAmb 05 30 38.9
comp=Z,71nm,0.8s
P32M **Atlin** **90.80 25** P **P** **05 30 37.4 +0.5**
baz=232,SNR=14
M29M **Somme Creek** **90.84 22** IAmb IAmb 05 30 37.7
comp=Z,79nm,1.8s
M29M **Somme Creek** **90.84 22** P **P** **05 30 37.1 0.0**
baz=228
LTY **Liberty** **90.85 40** IAmb IAmb 05 30 39.8
comp=Z,64nm,0.8s
COLD **Coldfoot** **90.89 15** P **P** **05 30 38.0 +1.0**
baz=218,SNR=43
S34M **Telegraph Cree** **90.89 27** P **P** **05 30 38.4 +1.2**
baz=235
WHY **Whitehorse** **91.00 24** IAmb IAmb 05 30 39.3
comp=Z,47nm,0.9s
WHY **Whitehorse** **91.00 24** P **P** **05 30 37.9 +0.1**
baz=232,SNR=12
PALK **Pallekele** **91.00 277** P **P** **05 30 39.4 +0.6**
comp=Z,6.9nm,0.6s,baz=112,slow=19,SNR=5.2
comp=Z,6.9nm,0.6s
Q32M **Nakina River** **91.02 26** IAmb IAmb 05 30 40.4
comp=Z,85nm,1.1s
Q32M **Nakina River** **91.02 26** P **P** **05 30 39.0 +0.9**
baz=234
E21K **Killik River** **91.03 13** IAmb IAmb 05 30 39.8
comp=Z,30nm,0.9s
E21K **Killik River** **91.03 13** P **P** **05 30 38.5 +0.7**
baz=214,SNR=6.7
G24K **Hadweenzic Riv** **91.16 16** IAmb IAmb 05 30 41.5
comp=Z,41nm,1.3s
G24K **Hadweenzic Riv** **91.16 16** P **P** **05 30 38.2 -0.1**
baz=220
Q12A **Willow Creek R** **91.22 49** IAmb IAmb 05 30 42.2
comp=Z,43nm,0.7s
E22K **Anaktuvuk Pass** **91.24 14** P **P** **05 30 39.3 +0.6**
baz=216
I26K **Coal Creek Min** **91.31 18** IAmb IAmb 05 30 41.7
comp=Z,54nm,1.0s
I26K **Coal Creek Min** **91.31 18** P **P** **05 30 39.0 -0.1**
baz=224
L29M **L29M** **91.39 21** IAmb IAmb 05 30 42.1
comp=Z,49nm,1.0s
L29M **L29M** **91.39 21** P **P** **05 30 39.2 -0.3**
baz=229
C21K **Knifeblade Rid** **91.45 12** P **P** **05 30 40.5 +0.9**
baz=214
GO10 **Punta Arenas** **91.47 148** P **P** **05 30 41.5 +1.1**
M30M **Minto, Yukon** **91.51 22** IAmb IAmb 05 30 42.2
comp=Z,76nm,1.1s
M30M **Minto, Yukon** **91.51 22** P **P** **05 30 40.0 -0.1**
baz=230,SNR=27
P33M **Teslin, Yukon** **91.54 25** IAmb IAmb 05 30 42.4
comp=Z,53nm,1.1s
P33M **Teslin, Yukon** **91.54 25** P **P** **05 30 40.7 +0.4**
baz=233,SNR=14
EGAK **Eagle** **91.54 19** IAmb IAmb 05 30 42.0
comp=Z,48nm,0.7s
EGAK **Eagle** **91.54 19** P **P** **05 30 40.0 0.0**
baz=226,SNR=32
G25K **Bearman Lake** **91.56 16** P **P** **05 30 40.1 0.0**
baz=222
DAWY **Dawson** **91.61 20** P **P** **05 30 40.4 -0.1**
baz=228,SNR=14
D22K **Ayikyak River** **91.66 13** P **P** **05 30 42.0 +1.3**
baz=216,SNR=56
DLBC **Dease Lake** **91.67 27** P **P** **05 30 41.7 +0.7**
baz=236
DLBC **Dease Lake** **91.67 27** P **P** **05 30 41.3 +0.4**
comp=Z,64nm,1.0s,baz=243,slow=4.9,SNR=38
comp=Z,64nm,1.0s
F24K **Squaw Lake** **91.68 15** IAmb IAmb 05 30 43.0
comp=Z,38nm,1.0s
F24K **Squaw Lake** **91.68 15** P **P** **05 30 41.7 +0.9**
baz=220
E23K **Chandalar** **91.68 14** P **P** **05 30 41.6 +0.8**
baz=218,SNR=37
CCUT **Cedar City** **91.71 51** IAmb IAmb 05 30 45.0
comp=Z,41nm,0.9s
TUC **Tucson** **91.74 57** P **P** **05 30 43.5 +1.6**
TUC IAmb IAmb 05 30 45.1
comp=Z,66nm,1.0s
TUC **Tucson** **91.74 57** P **P** **05 30 42.9 +1.0**
baz=249
TUC **Tucson** **91.74 57** P **P** **05 30 43.5 +1.6**
TUC pmax pmax
comp=Z,66nm,1.0s
R33M **Jennings River** **91.82 26** IAmb IAmb 05 30 44.1
comp=Z,82nm,1.0s
R33M **Jennings River** **91.82 26** P **P** **05 30 42.7 +1.0**
baz=235,SNR=18
D08A **Wollman Farm,** **91.83 41** IAmb IAmb 05 30 44.5
comp=Z,127nm,1.6s
KNB **Kanab** **91.91 52** IAmb IAmb 05 30 45.8
comp=Z,53nm,0.8s
SZCU **Shurtz Canyon** **91.93 51** IAmb IAmb 05 30 45.8
comp=Z,48nm,1.0s
I27K **Kandik River** **91.98 18** P **P** **05 30 42.5 +0.3**
baz=226,SNR=19
N32M **Quiet Lake** **92.00 24** P **P** **05 30 42.5 +0.1**
baz=233
E09A **Wood Farm, Sta** **92.07 41** IAmb IAmb 05 30 46.1
comp=Z,73nm,1.5s
K29M **Barlow Dome** **92.08 21** P **P** **05 30 42.7 -0.1**
baz=229
M31M **Drury Creek, Y** **92.14 23** IAmb IAmb 05 30 44.3
comp=Z,38nm,0.9s
M31M **Drury Creek, Y** **92.14 23** P **P** **05 30 42.5 -0.5**
baz=232,SNR=19
D23K **Nanushuk River** **92.16 13** P **P** **05 30 43.8 +0.9**
baz=218
J29N **Klondike Camp** **92.25 20** IAmb IAmb 05 30 46.1
comp=Z,29nm,0.7s
J29N **Klondike Camp** **92.25 20** P **P** **05 30 43.9 +0.4**
baz=225,SNR=18
MFID **Camas Ranch** **92.28 45** IAmb IAmb 05 30 46.6
comp=Z,29nm,0.8s
F25K **Christian Rive** **92.30 16** P **P** **05 30 44.6 +1.0**
baz=222
G26K **Porcupine Rive** **92.32 17** P **P** **05 30 44.0 +0.4**
baz=224
I28M **Miner Creek** **92.38 19** IAmb IAmb 05 30 46.1
comp=Z,28nm,0.8s
I28M **Miner Creek** **92.38 19** P **P** **05 30 44.9 +0.7**
baz=227
F10A **Beach Ranch, E** **92.42 42** IAmb IAmb 05 30 46.9
comp=Z,66nm,1.4s
WUAZ **Wupatki** **92.44 53** IAmb IAmb 05 30 48.2
comp=Z,50nm,0.8s
WUAZ **Wupatki** **92.44 53** P **P** **05 30 46.0 +0.8**
baz=249,SNR=16
H27K **Steamboat Moun** **92.44 18** P **P** **05 30 44.8 +0.5**
baz=226
PKCU **Pink Cliffs** **92.44 51** IAmb IAmb 05 30 48.9
comp=Z,70nm,1.0s
MAYO **Mayo, Yukon** **92.48 21** P **P** **05 30 45.0 +0.5**
baz=231,SNR=20
FARO **Faro, Yukon** **92.55 23** P **P** **05 30 45.0 +0.1**
baz=233,SNR=14
E25K **Arctic Village** **92.71 15** IAmb IAmb 05 30 47.7
comp=Z,50nm,1.4s
E25K **Arctic Village** **92.71 15** P **P** **05 30 46.2 +0.7**
baz=222,SNR=17
D24K **Happy Valley** **92.72 14** IAmb IAmb 05 30 47.9
comp=Z,42nm,0.8s
D24K **Happy Valley** **92.72 14** P **P** **05 30 46.4 +1.0**
baz=219
MTPU **Mount Pierson** **92.76 51** IAmb IAmb 05 30 50.2
comp=Z,37nm,0.7s
F26K **Sheenjek River** **92.77 16** P **P** **05 30 46.5 +0.8**
baz=224
TCRU **Three Creeks R** **92.78 50** IAmb IAmb 05 30 49.9
comp=Z,24nm,0.8s
A21K **Barrow** **92.94 10** P **P** **05 30 46.7 +0.3**
baz=212
J30M **Hart River** **92.95 21** IAmb IAmb 05 30 49.0
comp=Z,112nm,2.0s
J30M **Hart River** **92.95 21** P **P** **05 30 46.9 +0.1**
baz=230,SNR=9.4
DUG **Dugway, Tooele** **93.11 49** IAmb IAmb 05 30 50.4
comp=Z,58nm,1.8s
DUG **Dugway, Tooele** **93.11 49** P **P** **05 30 48.6 +0.5**
baz=248,SNR=14
WTLY **Watson Lake, Y** **93.13 26** IAmb IAmb 05 30 49.8
comp=Z,58nm,0.9s
WTLY **Watson Lake, Y** **93.13 26** P **P** **05 30 48.4 +0.8**
baz=237,SNR=22
X18A **Snowflake** **93.18 55** IAmb IAmb 05 30 52.1
comp=Z,31nm,0.8s
C24K **Franklin Bluff** **93.19 14** P **P** **05 30 48.6 +1.0**
baz=219
HLID **Hailey** **93.28 45** IAmb IAmb 05 30 51.9
comp=Z,21nm,0.8s
HLID **Hailey** **93.28 45** P **P** **05 30 48.9 0.0**
baz=247,SNR=45
I30M **Mount Dempster** **93.35 20** IAmb IAmb 05 30 50.5
comp=Z,39nm,0.8s
I30M **Mount Dempster** **93.35 20** P **P** **05 30 48.2 -0.4**
baz=230,SNR=31
H29M **Whitestone** **93.38 19** IAmb IAmb 05 30 50.9
comp=Z,39nm,1.1s
H29M **Whitestone** **93.38 19** P **P** **05 30 48.8 +0.3**
baz=229
D25K **Kavik River** **93.42 14** IAmb IAmb 05 30 50.3
comp=Z,22nm,0.7s
D25K **Kavik River** **93.42 14** P **P** **05 30 48.9 +0.2**
baz=222
NEW **Newport** **93.44 40** P **P** **05 30 49.5 +0.2**
baz=245
W18A **Petrified Fore** **93.55 54** IAmb IAmb 05 30 53.7
comp=Z,67nm,1.4s
W18A **Petrified Fore** **93.55 54** P **P** **05 30 51.3 +0.9**

baz=250,SNR=7.4
HVU Hansel Valley 93.72 47 lAmb lAmb 05 30 53.3
comp=Z,20nm,0.8s
SPUT South Promonto 93.78 48 lAmb lAmb 05 30 54.8
comp=Z,57nm,1.6s
HMU Henry Mountain 93.78 51 lAmb lAmb 05 30 53.6
comp=Z,19nm,0.7s
Q16A Castle Valley 93.82 50 lAmb lAmb 05 30 54.5
comp=Z,37nm,1.2s
F28M Old Crow 93.87 17 lAmb lAmb 05 30 53.4
comp=Z,41nm,1.4s
F28M Old Crow 93.87 17 P P **05 30 51.1 +0.3**
baz=227,SNR=18
EPYK Eagle Plains 93.98 19 lAmb lAmb 05 30 53.5
comp=Z,60nm,0.9s
EPYK Eagle Plains 93.98 19 P P **05 30 51.2 -0.2**
baz=230,SNR=34
TGTN Hyland Airport 94.12 25 P P **05 30 52.5 +0.4**
baz=237,SNR=13
121A Cookes Peak, D 94.19 57 lAmb lAmb 05 30 56.3
comp=Z,82nm,1.6s
121A Cookes Peak, D 94.19 57 P P **05 30 54.3 +0.9**
baz=250
SRU San Rafael Swe 94.36 50 lAmb lAmb 05 31 00.1
comp=Z,18nm,0.8s
TIXI Tiksi 94.38 348 P P **05 30 52.1 -0.9**
TIXI Tiksi 94.38 348 *ce*P P **05 30 52.3 -0.7**
TIXI pmax pmax
comp=Z,8.0nm,1.7s
TIXI Tiksi 94.38 348 P P **05 30 52.7 -0.3**
comp=Z,2.7nm,0.3s,baz=127,slow=5.1,SNR=8.3
TIXI PP PP **05 34 40.1 -3.4**
comp=Z,2.1nm,0.5s,baz=135,slow=9.7,SNR=9.4
comp=Z,2.7nm,0.3s
H31M Peel River 94.38 20 lAmb lAmb 05 30 54.7
comp=Z,26nm,0.8s
H31M Peel River 94.38 20 P P **05 30 52.7 -0.5**
baz=232
HWUT Hardware Ranch 94.50 48 lAmb lAmb 05 30 56.2
comp=Z,14nm,0.6s
G30M tAoh Zraii Nji 94.53 19 P P **05 30 53.8 -0.1**
baz=231
BSUT Blindstream Ca 94.69 49 lAmb lAmb 05 30 57.9
comp=Z,25nm,0.7s
E29M Blow River 94.95 17 lAmb lAmb 05 30 57.8
comp=Z,33nm,1.2s
E29M Blow River 94.95 17 P P **05 30 55.7 0.0**
baz=229
EPT El Paso 94.97 58 lAmb lAmb 05 30 59.9
comp=Z,56nm,1.2s
F30M Barrier River 95.06 18 P P **05 30 55.6 -0.6**
baz=231
G31M Satah River 95.09 19 P P **05 30 56.2 -0.1**
baz=232,SNR=41
COYC Coyhaique 95.16 142 P P **05 30 58.3 +1.0**
KOTAN Kotaneelee Air 95.17 27 P P **05 30 59.0 +2.1**
baz=241,SNR=15
MVCO Mesa Verde 95.21 53 P P **05 30 58.8 +0.8**
baz=250,SNR=6.9
D28M Stokes Point 95.34 16 P P **05 30 58.0 +0.6**
baz=228
Y22F Passcal Instru 95.39 56 P P **05 30 59.0 +0.3**
baz=251
FLDN Fort Liard 95.47 28 P P **05 30 59.6 +1.4**
baz=241,SNR=6.0
F31M Tsiigehtchic 95.57 19 P P **05 30 58.5 0.0**
baz=233,SNR=71
BRLDA Berland Lookou 95.69 35 lAmb lAmb 05 31 01.8
comp=Z,23nm,0.9s
SNOW Snow King Moun 95.72 46 lAmb lAmb 05 31 02.3
comp=Z,35nm,1.6s
MNTX Cornudas Mount 95.85 59 P P **05 31 01.5 +0.8**
baz=252
BOZ Bozeman (W) 95.89 44 lAmb lAmb 05 31 02.9
comp=Z,24nm,1.4s
BOZ Bozeman (W) 95.89 44 P P **05 31 01.4 +0.6**
baz=249,SNR=16
ANMO Albuquerque 96.03 55 P P **05 31 02.0 +0.3**
baz=251
INK Inuvik 96.16 18 P P **05 31 01.1 -0.1**
baz=233,SNR=40
INK Inuvik 96.16 18 P P **05 31 01.0 -0.1**
INK Inuvik 96.16 18 P P **05 31 01.0 -0.2**
comp=Z,27nm,0.9s,baz=230,slow=4.8,SNR=56
INK PP PP **05 34 54.5 -2.8**
comp=Z,4.6nm,1.1s,baz=234,slow=8.1,SNR=3.0
comp=Z,27nm,0.9s
H17A Grant Village 96.17 45 P P **05 31 03.0 +0.8**
baz=250,SNR=11
BW06 Boulder Array 96.31 47 P P **05 31 03.0 +0.2**
baz=250,SNR=8.8
PDAR Pinedale Array 96.31 47 P P **05 31 03.1 +0.3**
comp=Z,2.8nm,0.5s,baz=241,slow=3.7,SNR=24
PDAR PP PP **05 34 54.5 -5.0**
comp=Z,1.1nm,0.8s,baz=242,slow=7.0,SNR=5.0
PDAR PKKPbc **PKKPbc 05 47 47.2 -2.0**
comp=Z,0.5nm,0.6s,baz=79,slow=4.7,SNR=5.8
comp=Z,2.8nm,0.5s
O20A White River Ci 96.36 50 P P **05 31 03.6 +0.5**
baz=251,SNR=9.2
TXAR Lajitas Array 96.53 61 P P **05 31 05.2 +1.3**
comp=Z,8.5nm,0.7s,baz=224,slow=5.5,SNR=30
TXAR PP PP **05 35 01.4 +0.2**
comp=Z,0.4nm,0.9s,baz=240,slow=7.2,SNR=2.5
TXAR PKKPbc **PKKPbc 05 47 47.9 +0.1**
comp=Z,1.1nm,0.6s,baz=104,slow=3.8,SNR=13
comp=Z,8.5nm,0.7s
LL02 Futaleuf 96.61 140 P P **05 31 04.5 +0.5**
ALPN Alpine 96.87 60 lAmb lAmb 05 31 07.8
comp=Z,14nm,0.9s
WRGLY Wrigley 96.92 25 lAmb lAmb 05 31 06.4
comp=Z,37nm,1.0s
WRGLY Wrigley 96.92 25 P P **05 31 05.1 +0.4**
baz=242,SNR=19
WMQ Urumqi 96.98 314 *e*P P **05 31 06.8 +1.2**
WMQ pmax pmax
comp=Z,32nm,1.3s
WMQ pmax pmax
comp=Z,280nm,4.9s
RLMT Red Lodge 97.29 45 P Pdif 05 31 08.0 +0.8
baz=251
RWWY Rawlins 97.60 49 lAmb lAmb 05 31 09.4
comp=Z,27nm,1.3s
SDCO Great Sand Dun 97.64 53 P Pdif 05 31 09.8 +0.7
baz=252
EGMT Eagleton 97.93 42 P Pdif 05 31 11.2 +1.4
baz=251
ISCO Idaho Springs 98.18 51 P Pdif 05 31 12.5 +1.1
baz=252
N23A Red Feather La 98.27 50 P Pdif 05 31 12.7 +1.0
baz=252
Q24A Divide 98.27 52 P Pdif 05 31 12.9 +1.1
baz=252
ODSA Odessa 98.28 59 lAmb lAmb 05 31 13.6
comp=Z,18nm,1.0s
T25A Trinidad 98.28 54 P Pdif 05 31 12.7 +0.9
baz=253
K22A Casper 98.39 48 lAmb lAmb 05 35 14.8
comp=Z,18nm,1.4s
K22A Casper 98.39 48 P Pdif 05 31 12.6 +0.5
baz=252
MSTX Muleshoe 98.63 57 lAmb lAmb 05 31 14.9
comp=Z,18nm,0.7s
MSTX Muleshoe 98.63 57 P Pdif 05 31 13.6 +0.2
baz=253
PHWY Pilot Hill 98.74 49 lAmb lAmb 05 35 18.0
comp=Z,22nm,1.4s
PLCA Paso Flores 98.78 138 P Pdif 05 31 14.5 +0.6
comp=Z,1.4nm,0.9s,baz=238,slow=5.0,SNR=5.2
PLCA PKKPbc **PKKPbc 05 47 40.6 -1.1**
comp=Z,2.2nm,0.8s,baz=36,slow=3.1,SNR=6.0
comp=Z,1.4nm,0.9s
DGZ Jazzator, Alta 99.05 319 *i* P **Pdif 05 31 13.9 -1.0**
DGZ pmax pmax
comp=Z,24nm,1.5s
C36M Paulatuk 99.61 19 P **Pdif 05 31 16.9 +0.3**
baz=242
AMTX Amarillo 99.76 57 P **Pdif 05 31 18.9 +0.6**
baz=254
LAO LASA Array 99.80 44 P **Pdif 05 31 19.3 +1.2**
baz=253
833A Chaparral WMA, 99.82 63 P **Pdif 05 31 19.0 +0.4**
baz=254
ZSN Zaisan 100.00 317 *e*P **Pdif 05 31 18.3 -0.6**
comp=Z,14nm,1.1s,baz=317
ZSN *e*PP PP **05 35 25.2 -2.0**
baz=317
ZSN Zaisan 100.00 317 *e*P **Pdif 05 31 18.3 -0.6**
ZSN *e* 05 35 25.2
ZSN pmax pmax
comp=Z,14nm,1.1s
JCT Junction City 100.07 61 P **Pdif 05 31 19.8 +0.1**
baz=254
KSCO Kaye Shedlock' 100.16 52 P **Pdif 05 31 20.6 +0.6**
baz=254
YKA Yellowknife Ar 100.30 27 P **Pdif 05 31 20.5 +0.7**
comp=Z,16nm,0.8s,baz=253,slow=4.7,SNR=126
YKA PP PP **05 35 23.8 -5.1**
comp=Z,1.7nm,1.0s,baz=247,slow=7.6,SNR=5.8
YKA PKiKP **PKiKP 05 35 45.1 -0.7**
comp=Z,0.6nm,0.9s,baz=259,slow=2.0,SNR=2.5
YKA PKKPbc **PKKPbc 05 47 35.8 -2.7**
comp=Z,0.2nm,0.5s,baz=60,slow=2.9,SNR=4.4
A36M Sachs Harbour 100.53 17 P **Pdif 05 31 21.0 +0.3**
baz=241
RSSD Black Hills 100.55 47 P **Pdif 05 31 22.3 +0.5**
baz=254
ABTX Abilene, Hawle 100.78 59 P **Pdif 05 31 23.0 +0.3**
baz=254
MKAR Makanchi Array 101.51 316 *i* P **Pdif 05 31 26.5 +0.8**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 101.51 316 P **Pdif 05 31 26.4 +0.7**
comp=Z,6.7nm,0.6s,baz=98,slow=6.3,SNR=81
MKAR PP **PP 05 35 33.7 -4.8**
comp=Z,1.4nm,1.0s,baz=104,slow=6.1,SNR=4.1
MKAR PKiKP **PKiKP 05 35 48.4 -0.1**
comp=Z,0.6nm,0.4s,baz=113,slow=0.8,SNR=4.8
ZALV Zalesovo Beam 101.85 323 *i* P **Pdif 05 31 27.1 +0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 101.85 323 P **Pdif 05 31 26.8 -0.1**
comp=Z,2.9nm,0.6s,baz=111,slow=3.7,SNR=17
ZALV PP **PP 05 35 36.5 -4.4**
comp=Z,0.3nm,0.3s,baz=100,slow=6.0,SNR=3.7
ZALV PKiKP **PKiKP 05 35 48.0 -0.9**
comp=Z,0.9nm,0.5s,baz=94,slow=1.9,SNR=4.2
UZB Uzynbulak 102.84 311 *e*P **Pdif 05 31 30.7 -1.2**
baz=311
UZB *e*PP **PP 05 35 45.2 -3.6**
baz=311
UZB Uzynbulak 102.84 311 *e*P **Pdif 05 31 30.6 -1.2**
UZB *e* 05 35 45.2
SATY Saty 103.26 311 *e*PP **PP 05 35 48.6 -3.3**
baz=311
SATY *e*PKiKP **PKiKP 05 35 50.4 -1.6**
baz=311
TDK Taldyqorghan 103.70 313 *e*PP **PKiKP 05 35 52.0 -0.6**
baz=313
MDOK Medeo 104.25 311 *e*PP **PKiKP 05 35 56.7 +2.8**
baz=311
TNSS Tian-Shan 104.30 311 *e*PP **PKiKP 05 35 57.3 +3.1**
baz=311
NRIK Noril'sk 104.60 339 Pdiff **Pdif 05 31 39.1 +0.2**
comp=Z,4.8nm,0.7s,baz=99,slow=4.3,SNR=9.5
KURBB Kurchatov Arra 104.82 319 Pdiff **Pdif 05 31 40.4 +0.2**
comp=Z,3.6nm,0.2s,baz=104,slow=3.9,SNR=6.2
KURBB PKiKP **PKiKP 05 35 54.5 +0.1**
comp=Z,2.2nm,0.2s,baz=101,slow=1.9,SNR=8.3
KURBB PKKPbc **PKKPbc 05 47 22.4 -2.3**
comp=Z,0.8nm,0.3s,baz=305,slow=3.3,SNR=8.1
KUU Kurty 104.91 312 *e*PP **PP 05 36 01.1 -2.9**
baz=312
BTLS Batlal 106.74 313 *e*PKiKP **PKiKP 05 35 57.1 -1.1**
baz=312
ULM Lac du Bonnet 107.30 42 PKiKP **PKiKP 05 35 57.8 -1.2**
comp=Z,1.8nm,0.5s,baz=258,slow=3.4,SNR=5.9
ULM PKKPbc **PKKPbc 05 47 15.5 -1.5**
comp=Z,2.3nm,0.7s,baz=65,slow=4.4,SNR=6.1
DZA Taraz 108.32 310 *e*PP **PP 05 36 26.7 -2.3**
baz=310
BRZS Berezniki 108.41 317 *e*PKiKP **PKiKP 05 35 59.9 -1.2**
baz=318
IUG Iuzhnay 109.16 309 *e*PP **PP 05 36 32.6 -2.6**
baz=309
BRLS Boroldav 109.43 310 *e*PKiKP **PKiKP 05 36 01.4 -1.9**
baz=310
CHM Chimkent 109.50 309 *e*PP **PP 05 36 35.3 -2.2**
baz=309
EYMN Ely 109.85 45 P **PKiKP 05 36 03.5 -0.4**
baz=264
JFWS Jewell Farm 110.12 50 P **PKiKP 05 36 03.6 -1.0**
baz=263
BVAR Borovoye Array 110.16 321 Pdiff **Pdif 05 32 04.5 +0.6**
comp=Z,1.1nm,0.6s,baz=95,slow=3.5,SNR=5.3
BVAR PKiKP **PKiKP 05 36 04.2 -0.1**
comp=Z,3.4nm,0.4s,baz=94,slow=1.9,SNR=25
BVAR PKKPbc **PKKPbc 05 47 06.8 -1.2**
comp=Z,0.7nm,0.5s,baz=259,slow=2.2,SNR=5.3
BRVK Borovoye 110.23 321 *i* PKiKP **PKiKP 05 36 03.9 -0.5**
LRAL Lakeview Retre 111.26 61 P **PKiKP 05 36 06.0 -1.0**
baz=261
WCI Wyandotte Cave 112.55 56 P **PKiKP 05 36 08.7 -0.6**
baz=263
P49A Miami Univ. Ec 113.91 54 P **PKiKP 05 36 11.0 -0.9**
baz=265
GOGA Godfrey 114.24 61 P PKPdf 05 36 11.5 -1.2
baz=263
ACSO Alum Creek Sta 115.29 54 P **PKPdf 05 36 13.6 -0.9**
baz=266
P52A Hermiston 115.90 54 P **PKPdf 05 36 14.6 -1.1**
baz=266
KMSC Kings Mountain 116.19 60 P **PKPdf 05 36 15.8 -0.6**
baz=265
CPUP Villa Florida 116.22 133 PKP **PKPdf 05 36 16.1 -0.6**
comp=Z,0.4nm,0.4s,baz=212,slow=0.8,SNR=7.3
CPUP SKP 05 39 33.3
comp=Z,0.8nm,0.7s,baz=222,slow=6.4,SNR=3.1
CPUP PKKPbc **PKKPbc 05 46 46.5 -0.5**
comp=Z,2.0nm,0.8s,baz=34,slow=3.6,SNR=6.1
O53A New Philadelph 116.64 54 P **PKPdf 05 36 16.6 -0.5**
baz=267
ARU Arti 116.96 324 PKPdf **PKPdf 05 36 16.8 -0.4**
ARU Arti 116.96 324 *i* PKiKP **PKPdf 05 36 16.4 -0.8**
ARU 05 37 26.4
ARU 05 43 09.1
BLA Blacksburg 117.09 57 P **PKPdf 05 36 17.5 -0.6**
baz=266
M53A WI Miller and 117.10 53 P **PKPdf 05 36 17.4 -0.5**
baz=268
NOR Nord 117.14 1 *i* P **PKPdf 05 36 15.8 -1.2**
ERPA Erie 117.63 52 P **PKPdf 05 36 18.4 -0.5**
baz=269
MCWV Mont Chateau 117.67 55 P **PKPdf 05 36 18.5 -0.6**
baz=268
GEYT Alibeck 117.86 303 PKP **PKPdf 05 36 19.1 -0.5**
comp=Z,15nm,0.7s,baz=126,slow=2.0,SNR=29
NEEM North Greenlan 118.12 9 *i* P **PKPdf 05 36 17.7 -1.6**
UOSS Minazif 118.17 289 PKPdf **PKPdf 05 36 19.3 -1.2**
ETMB Extrema 118.29 113 **PKPdf 05 36 19.7 -1.4**
KBS Kingsbay 118.95 355 *e*PKPdf **PKPdf 05 36 20.1 -0.4**
CNNC Cliffs of the 119.01 60 P **PKPdf 05 36 21.2 -0.6**
baz=267
SSPA Standing Stone 119.19 53 P **PKPdf 05 36 21.4 -0.6**
baz=270
SPA0 Spitsbergen Ar 119.22 354 *e*PKPdf **PKPdf 05 36 20.7 -0.4**
SPITS Spitsbergen Ar 119.22 354 PKP **PKPdf 05 36 20.4 -0.7**
comp=Z,10nm,0.5s,baz=79,slow=3.1,SNR=36
CBN Corbin Frederi 119.55 56 P **PKPdf 05 36 21.4 -1.3**
baz=268
UPNV Upernavik 120.30 14 *i* P **PKPdf 05 36 22.6 -0.6**
BINY Binghamton 120.60 52 P **PKPdf 05 36 24.0 -0.7**
baz=272
AQDB Aquidauana 121.07 129 **PKPdf 05 36 25.4 -0.9**
SDV Santo Domingo 121.20 91 PKPdf **PKPdf 05 36 26.2 -0.7**
SAML Samuel 121.34 113 PKPdf **PKPdf 05 36 25.8 -1.1**
SAML Samuel 121.34 113 PKIKP **PKPdf 05 36 25.8 -1.1**
PTLB Pontes e Lacer 121.39 122 PKPdf **PKPdf 05 36 26.0 -0.9**
KIRV Kirov 121.39 328 *i* PKIKP **PKPdf 05 36 25.6 0.0**
BOSA Boshof 121.40 217 PKP **PKPdf 05 36 26.7 -0.2**
comp=Z,5.8nm,0.5s,baz=120,slow=1.7,SNR=22
BOSA PKKPbc **PKKPbc 05 46 27.3 -1.4**
comp=Z,4.8nm,0.7s,baz=324,slow=3.0,SNR=8.9
LONY Lake Ozonia 121.50 49 P **PKPdf 05 36 25.7 -0.7**
baz=274
NUUG Nuugaatsiaq 121.79 15 *i* P **PKPdf 05 36 24.5 -1.5**
PAL Palisades 122.20 53 P **PKPdf 05 36 27.2 -0.5**
baz=272
VT1 Waterbury 122.83 49 **PKPdf 05 36 28.2 -0.7**
L61B Northampton 123.04 51 P **PKPdf 05 36 28.9 -0.4**
baz=274
VADS Vadso 123.35 345 *e*PKPdf **PKPdf 05 36 28.7 -0.4**
LBNH Lisbon 123.43 49 P **PKPdf 05 36 29.9 -0.1**
baz=276
HRV Adam Dziewonsk 123.86 51 P **PKPdf 05 36 30.8 0.0**
baz=275
ILULI Ilulissat 123.88 16 *i* P **PKPdf 05 36 28.7 -1.4**
APA Apatity 123.89 341 ⇓*i* PKiKP **PKPdf 05 36 27.7 -2.5**
APA *i* 05 37 21.7
APA *i* 05 38 21.7
APA pmax pmax
comp=Z,10.0nm,0.7s
BELG Belogornoye 123.96 321 *i* PKiKP **PKPdf 05 36 30.0 -0.7**
SUMG Summit 123.97 10 PKPdf **PKPdf 05 36 30.9 +0.1**
SUMG Summit 123.97 10 PKiKP **PKPdf 05 36 30.9 +0.1**
SUMG Summit 123.97 10 *i* P **PKPdf 05 36 29.4 -1.4**
LMQ La Malbaie 124.10 45 PKPdf **PKPdf 05 36 30.4 -0.9**
HAMF Hammerfest 124.29 347 *e*PKPdf **PKPdf 05 36 30.1 -0.8**
SCHQ Schefferville 124.56 36 PKPdf **PKPdf 05 36 31.2 -0.7**
SCHQ Schefferville 124.56 36 PKP **PKPdf 05 36 31.5 -0.4**
comp=Z,6.6nm,0.7s,baz=285,slow=1.3,SNR=18
SCHQ PKKPbc **PKKPbc 05 46 15.6 -1.1**
comp=Z,3.0nm,0.6s,baz=119,slow=3.1,SNR=13
ARA0 ARCESS Array S 124.71 345 *e*PKPdf **PKPdf 05 36 31.1 -0.7**
ARCES ARCESS Array B 124.71 345 PKP **PKPdf 05 36 31.3 -0.4**
comp=Z,19nm,0.4s,baz=48,slow=1.3,SNR=268
ARCES PKKPab **PKKPab 05 46 13.3 +0.6**
comp=Z,1.9nm,0.8s,baz=219,slow=2.0,SNR=11
PKME Peaks-Kenny Pk 125.16 48 P **PKiKP 05 36 33.4 -0.2**
baz=279
KLMR Klimovskoe 125.22 333 *e*PKiKP **PKPdf 05 36 29.5 -3.4**
KLMR *e* 05 37 24.1
KLMR pmax pmax
comp=Z,41nm,1.3s
SFJD Kangerlussuaq 125.50 18 *i* P **PKPdf 05 36 31.3 -2.0**
KTK1 Kautokeino 125.64 346 *e*PKPdf **PKPdf 05 36 32.0 -1.5**
JETT Jettan, Norway 125.85 347 *e*PKPdf **PKPdf 05 36 32.8 -1.2**
TRO Tromso 126.09 348 *e*PKPdf **PKPdf 05 36 33.1 -1.2**
ICESG Greenland Ices 126.67 13 *i* P **PKPdf 05 36 34.2 -1.7**
BATG Bathurst New B 126.99 45 PKPdf **PKPdf 05 36 36.3 -0.5**
DY2G Dye2 127.11 17 *i* P **PKPdf 05 36 35.5 -1.2**
RAYN Ar Rayn 127.67 286 PKPdf **PKPdf 05 36 39.1 +0.3**
RAYN Ar Rayn 127.67 286 PKIKP **PKPdf 05 36 39.1 +0.3**
VRH Novokhopyorsk 127.81 321 *e*PKIKP **PKPdf 05 36 38.2 +0.1**
VRH pmax pmax
comp=Z,30nm,0.6s
GNI Garni 128.18 307 PKPdf **PKiKP 05 36 40.6 +0.6**
GNI Garni 128.18 307 PKIKP **PKiKP 05 36 40.7 +0.6**
STEI Steigen 128.26 348 *e*PKPdf **PKPdf 05 36 38.6 +0.1**
MOS Moscow 128.39 327 *i* PKIKP **PKPdf 05 36 35.7 -3.4**
MOS *e* 05 37 31.4
MOS *e* 05 38 43.7
MOS pmax pmax
comp=Z,37nm,1.0s
LOF Lofoten 128.41 349 *e*PKPdf **PKPdf 05 36 38.1 -0.7**
VALR Valaam 128.52 336 *i* PKIKP **PKPdf 05 36 38.2 -1.0**
GOF Gofitskoye 128.58 313 *ce*P **Pdif 05 33 42.3 +16**
FAUS Fauske 128.72 347 *e*PKPdf **PKPdf 05 36 36.6 -2.8**
LSZ Lusaka 128.86 231 PKPdf **PKPdf 05 36 38.9 -2.5**
LSZ Lusaka 128.86 231 PKIKP **PKPdf 05 36 38.9 -2.5**
KBZ Khabaz 128.96 311 PKP **PKiKP 05 36 41.3 0.0**
comp=Z,3.2nm,0.8s,baz=61,slow=5.3,SNR=6.9
LPSR Galich'ya Gora 128.96 323 *e*PKIKP **PKPdf 05 36 39.9 -0.4**
LPSR pmax pmax
comp=Z,90nm,1.3s
VORR Voronezh 129.14 322 *e*PKIKP **PKiKP 05 36 41.2 -0.2**
VORR pmax pmax
comp=Z,72nm,0.5s
OBN Obninsk 129.21 327 *i* PKIKP **PKPdf 05 36 40.9 +0.2**
OBN *i* SS SS 05 55 53.5 -1.7
OBN pmax pmax
comp=Z,37nm,1.4s
VSR Storozhevoye 129.32 322 *e*PKIKP **PKPdf 05 36 40.0 -1.0**
VSR pmax pmax
comp=Z,60nm,1.4s
VORD Divnogorie 129.34 321 *e*PKIKP **PKPdf 05 36 40.3 -0.8**
VORD pmax pmax
comp=Z,30nm,1.4s
BDFB Brasilia 129.76 131 PKPdf **PKPdf 05 36 42.9 -0.2**
BDFB Brasilia 129.76 131 PKIKP **PKPdf 05 36 42.9 -0.2**
BDFB Brasilia 129.76 131 PKP **PKPdf 05 36 42.8 -0.3**
comp=Z,9.3nm,0.6s,baz=243,slow=1.2,SNR=3.2
BDFB SKPbc SKPbc 05 39 48.2 +2.5
comp=Z,4.3nm,0.7s,baz=217,slow=6.5,SNR=8.8
KONS Konsvik 129.92 348 *e*PKPdf **PKPdf 05 36 40.6 -1.0**
MOR8 Moi Rana 129.93 347 *e*PKPdf **PKPdf 05 36 40.5 -1.3**
STOK Stokkvaagen 130.08 348 *e*PKPdf **PKPdf 05 36 41.3 -0.7**
IVI Ivigtut 130.16 23 *i* P **PKPdf 05 36 41.7 -0.6**
FINES FINESS Array B 130.25 338 PKhKP PKPpre 05 36 26.5
comp=Z,0.7nm,0.4s,baz=62,slow=4.8,SNR=8.0
FINES PKP **PKPdf 05 36 42.9 +0.4**
comp=Z,3.1nm,0.4s,baz=54,slow=2.4,SNR=11
FINES SKPbc **SKPbc 05 39 45.4 -0.6**
comp=Z,5.1nm,0.6s,baz=63,slow=3.7,SNR=9.8
BCA Borcka 130.32 309 ⇓P **PKiKP 05 36 44.1 -0.1**
NRS Narsarsuaq 131.17 22 *i* P **PKPdf 05 36 43.0 -1.3**
SOC Sochi 131.24 312 *e*PKIKP **PKPdf 05 36 43.3 -1.6**
SOC *e* 05 39 03.8
SOC *e*PPP PPP 05 41 56.5
SOC *e* 05 43 34.9
SOC *e*PS **PS 05 49 25.0 +2.9**
SOC *e*SS SS 05 56 20.3 -0.8
MEF Metsahovi 131.69 337 *e*P **PKiKP 05 36 46.1 -0.1**
NSS Namsos 131.87 347 *e*PKPdf **PKPdf 05 36 44.5 -0.9**
VSU Vasula 131.95 335 *e*P **PKiKP 05 36 46.4 -0.4**
RAF Rauma 132.04 339 *e*P **PKPdf 05 36 46.3 +0.4**
LODK Lodwar 132.46 257 **PKiKP 05 36 49.3 -0.1**
TSUM Tsumeb 133.09 218 **PKPdf 05 36 45.2 -4.1**
MNK Minsk 133.84 330 *i* PKIKP **PKPdf 05 36 44.5 -5.0**
MNK *i* 05 39 18.5
MNK *i* 05 43 28.6
MNK *i* SS SS 05 56 48.9 -2.5
MNK pmax pmax
comp=Z,14nm,0.6s
MNK pmax pmax
comp=N,59nm,0.8s
MNK pmax pmax
comp=E,23nm,0.9s
DOMB Dombas 134.69 347 *e*PKPdf **PKiKP 05 36 52.2 -0.2**
AKN Aaknes 134.99 348 *e*PKPdf **PKiKP 05 36 52.2 -0.7**
PABE Paberze 135.02 333 *e*P **PKiKP 05 36 53.3 +0.2**
NB2 NORSAR Subarra1 135.09 345 PKPdf **PKPdf 05 36 51.5 -0.2**
comp=Z,3.3nm,0.5s,baz=31,slow=1.9
NB2 NORSAR Subarra1 135.09 345 PKPdf **PKPdf 05 36 51.5 -0.2**
baz=31,slow=1.9
NOA NORSAR Array B 135.09 345 PKP **PKPdf 05 36 51.4 -0.2**
comp=Z,4.5nm,0.6s,baz=31,slow=2.1,SNR=19
HFS Hagfors 135.22 343 PKhKP PKPpre 05 36 41.0
comp=Z,1.8nm,0.8s,baz=66,slow=3.7,SNR=7.0
HFS PKP **PKiKP 05 36 52.7 -0.7**
comp=Z,3.4nm,0.4s,baz=66,slow=3.6,SNR=15
AKASG Malin Array Be 135.22 325 *ce*PKiKP **PKPdf 05 36 52.0 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 135.22 325 PKhKP PKPpre 05 36 45.2
comp=Z,0.8nm,0.4s,baz=43,slow=2.5,SNR=4.0
AKASG PKP **PKPdf 05 36 52.2 0.0**
comp=Z,2.4nm,0.4s,baz=66,slow=1.1,SNR=9.6
AKASG SKPbc **SKPbc 05 40 03.4 0.0**
comp=Z,3.8nm,0.6s,baz=50,slow=3.5,SNR=12
KIEV Kiev 135.23 325 PKPdf **PKPdf 05 36 50.1 -2.1**
KIEV Kiev 135.23 325 PKIKP **PKPdf 05 36 50.1 -2.1**
NC602 NORSAR Array S 135.27 345 *e*PKPdf **PKPdf 05 36 52.3 +0.3**
FOO Floro 135.88 349 *e* PKPpre 05 36 48.8
SKAR Skarslia 136.08 347 *e*PKPdf **PKPdf 05 36 54.3 +0.7**
SUW Suwalki 136.33 332 *e*PKPdf **PKiKP 05 36 55.5 -0.3**
MMAI Mount Meron Ar 136.55 298 PKP **PKPdf 05 36 54.2 -1.1**
comp=Z,11nm,0.6s,baz=92,slow=3.5,SNR=11
MMAI SKP 05 40 10.5
comp=Z,1.0nm,0.3s,baz=76,slow=6.1,SNR=2.6
BRTR Keskin Array B 136.63 308 *ce*PKiKP **PKPdf 05 36 55.7 +0.3**
BRTR pmax pmax
comp=Z,5.0nm,0.5s
BRTR Keskin Array B 136.63 308 PKhKP PKPpre 05 36 47.5
comp=Z,1.6nm,0.6s,baz=131,slow=2.1,SNR=5.6
BRTR PKP **PKiKP 05 36 56.4 -0.8**
comp=Z,5.0nm,0.5s,baz=116,slow=3.4,SNR=18
BLS5 Blasjo 137.62 347 *e*PKPdf **PKPdf 05 36 57.0 +0.6**
BURAR Bucovina Array 139.07 323 ⇓P PKPpre 05 36 52.2
BURAR Bucovina Array 139.07 323 ⇓PKHKP PKPpre 05 36 52.2
KWP Kalwaria Pacla 139.30 327 *e*PKPdf **PKiKP 05 37 01.2 -0.9**
MLR Muntele Rosu 139.71 320 ⇓P PKPpre 05 36 53.8
MLR Muntele Rosu 139.71 320 ⇓PKHKP PKPpre 05 36 53.8
DOPR Dopca 139.82 320 ⇓P PKPpre 05 36 53.0
OJC Ojcow 140.39 329 *e*PKPdf **PKPdf 05 37 02.0 +0.3**
ARR Arges 140.58 320 ⇓P PKPpre 05 36 58.0
NIE Niedzica 140.66 328 *e*PKPdf PKPpre 05 36 57.8
MARR Marisel-Cluj 140.78 323 ⇓P PKPpre 05 36 56.8

HUMR	Humele	140.78 319	⇑P	PKPpre	05 36 57.4		
LOT	Lotru	141.06 321	⇑P	PKPpre	05 36 59.3		
KPL	Plockton	141.39 356	*e*P	PKPpre	05 36 58.5		
KSP	Ksiaz	141.57 332	*e*PKPdf	PKPpre	05 36 59.6		
GZR	Gura Zlata	141.68 321	⇑P	PKPpre	05 36 59.9		
GZR	Gura Zlata	141.68 321	⇑PKHKP	PKPpre	05 36 59.9		
MORC	Moravsky Berou	141.76 330	⇑P	PKPpre	05 36 59.7		
MORC	Moravsky Berou	141.76 330	*e*PKP	PKPpre	05 37 00.8		
MORC	Moravsky Berou	141.76 330	⇑PKHKP	PKPpre	05 36 59.7		
PSZ	Piszkesteto	141.82 326	⇑P	PKPpre	05 36 59.9		
PSZ	Piszkesteto	141.82 326	⇑PKHKP	PKPpre	05 36 59.9		
SIRR	Siria	141.84 323	⇑P	PKPpre	05 37 00.7		
CHVC	Chvalec	141.86 332	*e*PKP	PKPpre	05 37 00.7		
CHVC	Chvalec	141.86 332	*e*PKIKP	PKPpre	05 37 00.7		
SURR	Surduc	141.86 322	⇑P	PKPpre	05 37 00.3		
KRLC	Kraliky	141.91 331	*e*PKP	PKPpre	05 37 00.6		
KRLC	Kraliky	141.91 331	*e*PKIKP	PKPpre	05 37 00.6		
DPC	Dobruska-Polom	141.92 332	*e*PKP	PKPpre	05 37 00.2		
DPC	Dobruska-Polom	141.92 332	*e*PKIKP	PKPpre	05 37 00.2		
UPC	Upice	141.94 332	*e*PKP	PKPpre	05 37 01.0		
UPC	Upice	141.94 332	*e*PKIKP	PKPpre	05 37 01.0		
VYHS	Vyhne	141.99 328	*e*PKIKP	PKPpre	05 37 00.8		
VYHS	Vyhne	141.99 328	*e*PKP	PKPpre	05 37 00.8		
HERR	Herculane	142.17 321	⇑P	PKPpre	05 37 01.5		
BZS	Buzias	142.24 322	⇑P	PKPpre	05 37 01.5		
BZS	Buzias	142.24 322	⇑PKIKP	PKPpre	05 37 01.5		
JAVC	Velka Javorina	142.33 329	*e*PKP	PKPpre	05 37 01.8		
LAWE	Loch Awe, Argy	142.44 355	*e*P	PKPpre	05 37 01.5		
VRAC	Vranov	142.53 330	⇑P	PKPpre	05 37 03.0		
VRAC	Vranov	142.53 330	*e*PKP	PKPpre	05 37 01.2		
VRAC	Vranov	142.53 330	⇑PKIKP	PKPpre	05 37 03.1		
BRG	Berggiesshubel	142.55 334	*i* PKP	PKPpre	05 37 02.4		
BRG			Amp		05 37 03.6		
	comp=Z,15nm,0.9s						
BRG	**Berggiesshubel**	**142.55 334**	*i* PKIKP	**PKPdf**	**05 37 02.3**	**-3.3**	
BRG					05 37 59.1		
BRG					05 40 24.9		
BRG			pmax	pmax			
	comp=Z,15nm,0.9s						
BRG			pmax	pmax			
	comp=Z,5.0nm,1.0s						
BRG			pmax	pmax			
	comp=Z,11nm,1.2s						
BRG			pmax	pmax			
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**142.59 335**	⇓*i* PKIKP	**PKPdf**	**05 37 02.3**	**-3.3**	
CLL			*e*		05 37 58.0		
CLL			pmax	pmax			
	comp=Z,21nm,0.6s						
CLL	**Collm**	**142.59 335**	⇓*i* PKPdf	**PKPdf**	**05 37 02.3**	**-3.3**	
	comp=Z,21nm,0.6s						
CLL			*e*pPKPdf	**pPKPdf**	**05 37 58.0**	**-1.4**	
CLL			*i* x	x	05 39 18.3		
CLL			*e*PP	**PP**	**05 40 15.0**	**-0.3**	
CLL			*e*SKPdf	**SKPdf**	**05 40 21.0**	**+0.6**	
MDVR	Moldovita	142.64 321	⇑P	**PKPdf**	**05 37 03.1**	**-2.9**	
KRUC	Moravsky	142.80 330	*e*PKP	**PKPdf**	**05 37 01.8**	**-4.3**	
MODS	Modra-Piesok	142.85 329	*e*PKIKP	**PKPdf**	**05 37 04.4**	**-1.8**	
MODS	Modra-Piesok	142.85 329	*e*PKP	**PKPdf**	**05 37 04.4**	**-1.8**	
HSKC	Hora Svate Kat	142.96 334	*e*PKP	**PKPdf**	**05 37 03.5**	**-2.9**	
PRU	Pruhonice	142.96 333	*e*PKP	**PKPdf**	**05 37 03.6**	**-2.7**	
PRU	Pruhonice	142.96 333	*e*PKIKP	**PKPdf**	**05 37 03.6**	**-2.7**	
NVR	Nevrokopi	143.00 315	P	**PKPdf**	**05 37 05.1**	**-1.6**	
ZST	Bratislava	143.06 329	*e*PKIKP	PKPbc	05 37 04.2	+0.2	
ZST	Bratislava	143.06 329	*e*PKP	PKPbc	05 37 04.2	+0.2	
EKA	Eskdalemuir Ar	143.13 353	PKhKP	PKPpre	05 37 03.2		
	comp=Z,6.7nm,0.4s,baz=356,slow=2.5,SNR=48						
EKA			PKP	**PKPdf**	**05 37 06.7**	**+0.2**	
	comp=Z,6.7nm,0.4s,baz=4.3,slow=2.8,SNR=17						
KOKK	Kokkinochori,	143.14 314	P	PKPab	05 37 03.4	+0.4	
BOVS	Bovan	143.26 319	⇑P	PKPbc	05 37 04.6	-0.1	
OUR	Ouranopolis	143.36 313	P	PKPbc	05 37 04.8	-0.3	
PEHC	Pehcevo	143.44 316	*i* P	PKPbc	05 37 05.7	+0.3	
EDMD	Edmundbyers	143.47 352	*e*P	PKPab	05 37 04.2	+0.3	
APE	Apeiranthos	143.50 307	⇓P	PKPbc	05 37 05.2	-0.4	
APE	Apeiranthos	143.50 307	⇓PKIKP	PKPbc	05 37 05.2	-0.5	
FRGS	Fruska Gora	143.54 323	⇑P	PKPbc	05 37 05.7	+0.2	
FRGS	Fruska Gora	143.54 323	⇑*i* P	PKPbc	05 37 05.3	-0.2	
MORH	Mrgy, Hungar	143.55 325	⇓P	PKPbc	05 37 05.6	+0.1	
SKY	Skiros Island	143.56 311	P	PKPab	05 37 05.1	+0.4	
SOH	Sokhos	143.58 314	P	PKPab	05 37 04.3	-0.5	
NKC	Novy Kostel	143.65 335	*e*PKP	PKPbc	05 37 05.8	+0.2	
NKC	Novy Kostel	143.65 335	*e*PKIKP	PKPbc	05 37 05.8	+0.2	
KNT	Kendrikon	143.73 315	P	PKPab	05 37 05.5	+0.2	
PAIG	Paliouri	143.75 313	P	PKPab	05 37 05.4	0.0	
RONA	Rosalia, Austr	143.79 329	*i* PKP	PKPbc	05 37 06.6	+0.5	
	comp=Z,102nm,0.7s,SNR=36						
CONA	Conrad Observa	143.84 329	*e*PKP	PKPbc	05 37 06.9	+0.6	
	comp=Z,140nm,1.5s,SNR=31						
HORT	Hortiatis	143.85 314	P	PKPab	05 37 06.1	+0.2	
VAY	Valandovo	143.87 316	*i* P	PKPab	05 37 06.0	+0.1	
THE	Thessaloniki	143.93 314	P	PKPab	05 37 05.8	-0.3	
CKRC	Cesky Krumlov	143.93 332	*e*PKP	PKPbc	05 37 06.7	+0.2	
CKRC	Cesky Krumlov	143.93 332	*e*PKIKP	PKPbc	05 37 06.7	+0.2	
KHC	Kasperske Hory	144.02 333	*e*PKP	PKPbc	05 37 06.9	+0.1	
KHC	Kasperske Hory	144.02 333	*e*PKIKP	PKPbc	05 37 06.9	+0.1	
TEKS	Tekeris	144.06 322	⇑*i* P	PKPbc	05 37 06.9	-0.1	
GERES	GERESS Array B	144.18 332	PKP	PKPbc	05 37 07.5	+0.1	
	comp=Z,44nm,0.7s,baz=34,slow=5.9,SNR=94						
GERES			SKPbc	**SKPbc**	**05 40 27.8**	**-0.1**	
	comp=Z,2.4nm,0.7s,baz=56,slow=3.7,SNR=4.6						
HPK	Haverah Park	144.27 351	*e*P	**PKPab**	**05 37 06.4**	**-0.6**	
SKO	Skopje	144.29 317	*i* P	**PKPdf**	**05 37 08.3**	**-0.6**	
DION	Dionisos Attik	144.32 310	P	**PKPab**	**05 37 07.6**	**-0.1**	
XOR	Xorichti	144.32 312	P	**PKPab**	**05 37 07.3**	**-0.4**	
NEO	Neokhori	144.33 312	P	**PKPab**	**05 37 06.5**	**-1.2**	
IOMK	Kirk Michael	144.34 354	*e*P	**PKPab**	**05 37 06.9**	**-0.3**	
IOMK			IAmb	IAmb	05 37 08.0		
	comp=Z,74nm,0.7s						
PTL	Penteli	144.38 310	P	**PKPab**	**05 37 07.9**	**-0.1**	
KSTL	Kastelli Herak	144.42 305	P	PKPbc	05 37 08.7	+0.3	
ATHU	Athens Univers	144.47 310	P	**PKPab**	**05 37 07.9**	**-0.4**	
WIM	Isle of Man	144.47 354	*e*P	PKPbc	05 37 07.8	-0.1	
ARSA	Arzberg	144.48 329	*e*PKP	PKPbc	05 37 08.6	+0.4	
	comp=Z,140nm,1.5s,SNR=30						
LIT	Litokhoron	144.49 314	P	**PKPab**	**05 37 07.7**	**-0.6**	
VLY	Voula,Athens	144.50 309	P	**PKPab**	**05 37 07.6**	**-0.8**	
ATH	Athens Observa	144.51 310	P	**PKPab**	**05 37 07.6**	**-0.8**	
BBLS	Lazići	144.53 321	⇑*i* P	**PKPdf**	**05 37 09.0**	**-0.4**	
SJES	Sjenica	144.53 320	⇑*i* P	**PKPdf**	**05 37 09.2**	**-0.2**	
GRFO	Grafenberg	144.57 335		**PKPdf**	**05 37 08.8**	**-0.4**	
GRFO	Grafenberg	144.57 335	PKIKP	**PKPdf**	**05 37 08.8**	**-0.4**	
MOA	Molln	144.66 331	*i* PKP	**PKPdf**	**05 37 09.2**	**-0.2**	
	comp=Z,238nm,0.9s,SNR=74						
KOGS	Kog	144.66 327	*i* PKPdf	PKPbc	05 37 08.8	0.0	
KOGS			*i* PKPbc	**PKPdf**	**05 37 09.6**	**+0.2**	
KOGS			*i* PKPab	**PKPab**	**05 37 10.2**	**+1.5**	
HAPS	Han Pijesak,BI	144.67 322	⇑*i* P	PKPbc	05 37 09.1	+0.1	
RUDO	Rudo	144.69 321	*e*P	**PKPab**	**05 37 08.7**	**-0.2**	
VILL	Villia	144.73 310	P	**PKPab**	**05 37 08.0**	**-1.3**	
LBWR	Ladybower, Pea	144.82 351	*e*P	PKPbc	05 37 08.8	-0.2	
LBWR			IAmb	IAmb	05 37 09.9		
	comp=Z,152nm,0.6s						
TYRN	Tyrnavos	144.84 313	P	PKPbc	05 37 08.3	-1.2	
PRNS	Prines Rethymn	144.84 305	P	**PKPdf**	**05 37 11.2**	**+1.1**	
FNA	Florina	144.92 315	P	PKPbc	05 37 09.4	-0.4	
AXAR	Agios Charalam	144.95 312	P	PKPbc	05 37 09.7	-0.2	
LOUT	Loutraki	145.05 310	P	**PKPbc**	**05 37 08.9**	**-1.3**	
THL	Klokotos Trika	145.06 313	P	**PKPbc**	**05 37 08.8**	**-1.4**	
WACR	West Acre	145.06 348	*e*P	**PKPbc**	**05 37 09.5**	**-0.2**	
WACR			IAmb	IAmb	05 37 10.7		
	comp=Z,209nm,0.9s						
BIOA	Bad Ischl, Aus	145.06 331	*e*PKP	**PKPab**	**05 37 10.7**	**+0.5**	
	comp=Z,41nm,0.6s,SNR=25						
AGG	Agios Georgios	145.08 312	P	**PKPbc**	**05 37 09.1**	**-1.2**	
PHP	Peshkopia	145.08 317	P	**PKPbc**	**05 37 09.4**	**-0.9**	
RCBR	Riachuelo	145.09 132		**PKPbc**	**05 37 09.9**	**-1.2**	
RCBR	Riachuelo	145.09 132	PKIKP	**PKPbc**	**05 37 09.9**	**-1.2**	
PERS	Pernice	145.11 328	*i* PKPdf	**PKPbc**	**05 37 10.1**	**-0.1**	
PERS			*i* PKPbc	**PKPab**	**05 37 11.0**	**+0.6**	
PERS			*i* PKPab	**PKPdf**	**05 37 11.5**	**+1.3**	
SOKA	Soboth	145.12 328	*i* PKP	**PKPbc**	**05 37 10.2**	**-0.1**	
	comp=Z,106nm,0.6s,SNR=31						
OHR	Ohrid	145.14 316	*i* P	**PKPab**	**05 37 11.7**	**+1.0**	
KRND	KRANIDI	145.16 309	P	**PKPdf**	**05 37 09.7**	**-0.8**	
WPS	Cemaes, Angles	145.19 354	*e*P	**PKPdf**	**05 37 09.6**	**-0.5**	
STNC	Stoke	145.20 351	*e*P	**PKPbc**	**05 37 10.2**	**0.0**	
STNC			IAmb	IAmb	05 37 11.6		
	comp=Z,242nm,0.7s						
UPM	Unac-Piva	145.21 321	⇑*i* P	**PKPab**	**05 37 11.0**	**-0.1**	
IMMV	Iera Moni Meta	145.22 306	P	**PKPab**	**05 37 11.9**	**+0.7**	

MAKR	Makrakomi, Fth	145.22 312	P	**PKPdf**	**05 37 10.1**	**-0.6**	
THAL	Thalero	145.25 310	P	**PKPdf**	**05 37 10.4**	**-0.3**	
A051A	Mrakovica	145.25 325	⇑*i* P	**PKPab**	**05 37 11.1**	**0.0**	
BLY	Banja Luka	145.27 324	⇑*i* P	**PKPab**	**05 37 11.3**	**+0.3**	
WLF1	Llynfaes	145.28 353	*e*P	**PKPdf**	**05 37 10.1**	**-0.1**	
NEST	Nestorio	145.32 315	P	**PKPdf**	**05 37 10.7**	**-0.2**	
KPRO	Kipourio	145.32 314	P	**PKPbc**	**05 37 11.0**	**-0.1**	
RODP	Rodopos	145.35 306	P	**PKPab**	**05 37 12.8**	**+1.1**	
PENT	Pentalofos	145.36 315	P	**PKPdf**	**05 37 10.9**	**-0.1**	
PRIJ	Prijedor	145.38 325	*e*P	**PKPab**	**05 37 12.3**	**+0.9**	
KBN	Korca	145.39 316	P	**PKPbc**	**05 37 11.2**	**-0.1**	
CWF	Charnwood Fore	145.40 350	*e*P	**PKPdf**	**05 37 10.3**	**-0.2**	
YLL	Llanberis	145.41 353	*e*P	**PKPdf**	**05 37 10.2**	**-0.2**	
OBKA	Obir	145.48 329	⇑*i* P	**PKPdf**	**05 37 11.0**	**+0.1**	
EVR	Evrytania	145.49 312	P	**PKPab**	**05 37 12.9**	**+0.7**	
CRES	Cresnjev	145.49 327	⇑*i* P	**PKPbc**	**05 37 11.4**	**0.0**	
SBD1	Bryn Du	145.52 352	*e*P	**PKiKP**	**05 37 17.8**	**+3.0**	
GUR	Goura	145.53 310	P	**PKPdf**	**05 37 11.2**	**-0.1**	
FOEL	Foel Wylfa	145.53 352	*e*P	**PKPbc**	**05 37 11.2**	**-0.1**	
MGRS	Mrkonjic Grad	145.53 324	⇑*i* P	**PKPab**	**05 37 12.0**	**-0.1**	
ANX	Ano Chora	145.55 312	P	**PKPab**	**05 37 12.3**	**-0.2**	
ALIK	Aliki, Aigiali	145.56 311	P	**PKPab**	**05 37 12.6**	**+0.3**	
VLI	Veliai	145.57 308	P	**PKPbc**	**05 37 11.6**	**-0.3**	
BEBN	Eben Emael	145.57 342	*d*PKPdf	**PKPdf**	**05 37 10.4**	**-0.4**	
ELMS	Elmsett, Ipswi	145.58 347	*e*P	**PKPbc**	**05 37 11.2**	**-0.1**	
ANKY	Antikythira Is	145.60 307	P	**PKPab**	**05 37 12.5**	**-0.1**	
BRY	Bratogost	145.60 321	⇑*i* P	**PKPdf**	**05 37 11.5**	**+0.2**	
DRME	Dracevica, Mon	145.61 319	⇑*i* P	**PKPbc**	**05 37 11.5**	**-0.3**	
KLV	Kalavryta, Ach	145.62 311	P	**PKPbc**	**05 37 11.9**	**-0.2**	
BTNL	Ternell	145.62 341	*d*PKPdf	**PKPab**	**05 37 12.1**	**-0.1**	
BTNL			*dp*PKP	**pPKPdf**	**05 38 04.7**	**-0.1**	
TIR	Tirane	145.63 317	⇑P	**PKPab**	**05 37 12.2**	**-0.3**	
TIR	Tirane	145.63 317	P	**PKPab**	**05 37 12.3**	**-0.3**	
TIR	Tirane	145.63 317	⇑PKP2	**PKPab**	**05 37 12.2**	**-0.3**	
NEVS	Nevesinje	145.63 321	*e*P	**PKPbc**	**05 37 12.0**	**0.0**	
LLW	Llanuwychllyn	145.63 352	*e*P	**PKPdf**	**05 37 11.0**	**+0.2**	
EFP	Efpalio	145.63 311	P	**PKPab**	**05 37 12.3**	**-0.3**	
MEM	Membach	145.64 341	*d*PKPdf	**PKPbc**	**05 37 11.5**	**-0.1**	
MEM			*dp*PKPdf	pPKPab	05 38 03.7	-0.5	
KBA	Koelnbreinsper	145.65 330	*e*PKP	**PKPbc**	**05 37 11.7**	**-0.3**	
	comp=Z,41nm,0.7s,SNR=16						
LESA	Schwarzleotal	145.70 331	*i* PKP	**PKPbc**	**05 37 11.9**	**-0.2**	
	comp=Z,53nm,0.5s						
LSK	Leskovik	145.75 315	P	**PKPab**	**05 37 13.1**	**0.0**	
UPR	University Cam	145.78 311	P	**PKPab**	**05 37 14.1**	**+0.9**	
SST	Sart Tilman	145.79 341	*d*PKPdf	**PKPbc**	**05 37 12.0**	**+0.1**	
BSTI			*dp*PKP	pPKPab	05 38 04.0	-0.8	
A050A	Klekovaca	145.80 324	⇑*i* P	**PKPab**	**05 37 12.9**	**-0.3**	
BOJS	Bojanci	145.81 327	⇑*i* P	**PKPdf**	**05 37 10.8**	**-0.6**	
JAN	Janina	145.81 314	P	**PKPab**	**05 37 14.3**	**+1.0**	
PVO	Paravola	145.82 312	P	**PKPab**	**05 37 13.4**	**+0.1**	
TREB	Trebinje	145.82 320	*e*P	**PKPbc**	**05 37 12.0**	**-0.5**	
MYKA	Terra Mystica	145.83 330	*e*PKP	**PKPbc**	**05 37 12.0**	**-0.5**	
	comp=Z,29nm,0.6s,SNR=21						
BHOU	Houvegnez	145.86 341	*d*PKPdf	**PKPbc**	**05 37 12.6**	**+0.2**	
HCY	Herceg Novi	145.88 320	⇑*i* P	**PKPdf**	**05 37 12.1**	**+0.4**	
CRNS	Crni Vrh	145.92 328	*i* PKPbc	**PKPab**	**05 37 13.2**	**-0.3**	
GBAS	Gorenja Brezov	145.93 328	*i* PKPbc	**PKPab**	**05 37 13.4**	**-0.1**	
GBAS			*i* PKPab	**PKiKP**	**05 37 14.6**	**-1.2**	
DBRK	Dubrovnik	145.97 321	*i* P	**PKPdf**	**05 37 12.3**	**+0.5**	
DRO	Drossia	145.97 311	P	**PKPab**	**05 37 14.3**	**+0.3**	
BCLA	Clavier	146.02 342	*d*PKPdf	**PKPbc**	**05 37 12.5**	**-0.2**	
CEY	Cerknica	146.07 328	⇑*i* P	**PKPbc**	**05 37 13.0**	**-0.2**	
RICI	Ricice	146.08 323	*i* P	**PKPbc**	**05 37 12.7**	**-0.6**	
KLMT	Kalamata	146.08 309	P	**PKPdf**	**05 37 12.3**	**+0.2**	
RLS	Riolos of Patr	146.10 311	P	**PKPab**	**05 37 14.0**	**-0.4**	
BGES	Gesves	146.11 342	*d*PKP	**PKPbc**	**05 37 12.6**	**-0.5**	
STON	Ston	146.12 321	*i* P	**PKPdf**	**05 37 12.3**	**+0.3**	
STON	Ston	146.12 321	⇑*i* P	**PKPbc**	**05 37 12.6**	**-0.7**	
KIJV	Kijevo	146.17 324	*i* P	**PKPbc**	**05 37 13.2**	**-0.3**	
UDBI	Udbina	146.19 325	*i* P	**PKPbc**	**05 37 13.2**	**-0.4**	
IGT	Igoumenitsa	146.22 314	P	**PKPbc**	**05 37 13.5**	**-0.3**	
WATA	Walderalm	146.26 332	*e*PKP	**PKPdf**	**05 37 12.6**	**+0.3**	
	comp=Z,84nm,1.2s,SNR=18						
RCHB	Rochefort	146.28 341	*d*PKPdf	**PKPbc**	**05 37 13.9**	**+0.4**	
ABTA	Abfaltersbach	146.28 331	*e*PKP	**PKPdf**	**05 37 12.2**	**-0.1**	
	comp=Z,37nm,0.5s,SNR=22						
SRN	Sarande	146.28 315	P	**PKPbc**	**05 37 13.7**	**-0.2**	
BMRD	Maredsous	146.28 342	*d*PKPdf	**PKPbc**	**05 37 13.3**	**-0.2**	
WTTA	Wattenberg	146.28 332	*e*PKP	**PKPbc**	**05 37 13.3**	**-0.6**	
	comp=Z,104nm,1.0s,SNR=26						
VLO	Vlora	146.32 316	P	**PKPab**	**05 37 15.0**	**-0.2**	
TSLK	Tsoukalades, L	146.33 313	P	**PKPbc**	**05 37 14.0**	**-0.1**	
LKD2	Lefkada island	146.35 313	P	**PKPbc**	**05 37 14.7**	**+0.5**	
NYDR	Nydri-Lefkada	146.35 313	P	**PKPbc**	**05 37 14.1**	**0.0**	
MCH1	Michaelchurch	146.38 351	*e*P	**PKPbc**	**05 37 13.3**	**-0.5**	
MCH1			IAmb	IAmb	05 37 14.6		
	comp=Z,90nm,0.9s						
SKDS	Skadanscina	146.42 328	⇑*i* P	**PKPbc**	**05 37 13.6**	**-0.6**	
WLF	Walferdange	146.42 340	*d*PKPdf	**PKPbc**	**05 37 13.8**	**-0.2**	
WLF			*dp*PKP	pPKPab	05 38 07.4	+0.2	
EVGI	Lefkada island	146.43 313	P	**PKPbc**	**05 37 14.9**	**+0.5**	
MOTA	Moosalm	146.46 333	*i* PKP	**PKPbc**	**05 37 13.9**	**-0.4**	
	comp=Z,130nm,1.2s,SNR=28						
STRD	Stroud	146.47 350	*e*P	**PKPbc**	**05 37 13.5**	**-0.5**	
STRD			IAmb	IAmb	05 37 16.4		
	comp=Z,156nm,0.8s						
RETA	Reutte	146.49 333	*i* PKP	**PKPbc**	**05 37 14.3**	**-0.1**	
	comp=Z,117nm,1.6s,SNR=15						
KEK	Kerkira	146.50 315	PKPdf	**PKPdf**	**05 37 12.7**	**-0.1**	
KEK	Kerkira	146.50 315	P	**PKPdf**	**05 37 12.4**	**-0.4**	
MONM	Monmouth	146.50 351	*e*P	**PKPbc**	**05 37 13.5**	**-0.6**	
SQTA	Sankt Quirin	146.50 333	*i* PKP	**PKPbc**	**05 37 14.2**	**-0.2**	
	comp=Z,76nm,0.5s,SNR=33						
DOU	Dourbes	146.52 342	*d*PKPdf	**PKPbc**	**05 37 14.0**	**-0.2**	
FSK	Fiskardo	146.56 312	P	**PKPbc**	**05 37 14.0**	**-0.8**	
RSBS	Rosebush, Pemb	146.64 353	*e*P	**PKPbc**	**05 37 13.8**	**-0.7**	
LSTV	Lastovo	146.66 322	*i* P	**PKPbc**	**05 37 14.3**	**-0.6**	
SWN1	Swindon	146.66 350	*e*P	**PKPbc**	**05 37 14.5**	**0.0**	
SWN1			IAmb	IAmb	05 37 15.8		
	comp=Z,403nm,0.6s						
VLS	Valsamata	146.67 312	P	**PKPbc**	**05 37 15.5**	**+0.4**	
LTHK	Lithakia	146.70 311	P	**PKPbc**	**05 37 14.6**	**-0.5**	
KEF5	Kardakata, Kep	146.71 312	P	**PKPbc**	**05 37 15.2**	**0.0**	
VIRC	Vir	146.73 325	*i* P	**PKPbc**	**05 37 14.5**	**-0.5**	
WOL	Wolverton	146.75 349	*e*P	**PKPbc**	**05 37 14.5**	**-0.3**	
BFO	Black Forest	146.79 337		**PKPbc**	**05 37 14.9**	**-0.2**	
BFO	Black Forest	146.79 337	PKP2	**PKPbc**	**05 37 14.9**	**-0.2**	
ZIRJ	Zirje	146.82 324	*i* P	**PKPbc**	**05 37 14.8**	**-0.5**	
KEF3	Kipouria, Keph	146.83 312	P	**PKPbc**	**05 37 15.2**	**-0.3**	
FETA	Feichten	146.87 333	*i* PKP	**PKPbc**	**05 37 15.0**	**-0.6**	
	comp=Z,50nm,0.5s,SNR=19						
DUGI	Dugi Otok	146.92 325	*i* P	**PKPbc**	**05 37 15.1**	**-0.5**	
DAVA	Damuels	147.02 334	*i* PKP	**PKPbc**	**05 37 16.1**	**+0.1**	
	comp=Z,43nm,0.6s,SNR=18						
SCTE	Santa Cesarea	147.20 316		**PKPbc**	**05 37 16.3**	**-0.2**	
HTL	Hartland	147.55 353	*e*P	**PKPbc**	**05 37 17.4**	**+0.3**	
HTL			IAmb	IAmb	05 37 20.9		
	comp=Z,70nm,0.7s						
MATE	Matera	148.01 319	⇓P	**PKPbc**	**05 37 18.3**	**-0.3**	
CCA1	Carnmenellis	148.43 353	*e*P	**PKPbc**	**05 37 19.5**	**+0.1**	
TIP	Timpagrande	148.79 316	⇑P	**PKPbc**	**05 37 21.2**	**+0.5**	
TIP	Timpagrande	148.79 316		**PKPbc**	**05 37 21.0**	**+0.3**	
JSA	Saint Aubin	148.97 349	*e*P	**PKPbc**	**05 37 19.9**	**-0.8**	
KEST	Kesra	155.59 318	PKPbc	PKPbc	05 37 36.8		
	comp=Z,7.1nm,0.8s,baz=151,slow=2.8,SNR=10						
KEST			PKPab	**PKPab**	**05 37 55.5**	**+1.6**	
	comp=Z,23nm,0.8s,baz=246,slow=2.4,SNR=11						
PGAV	Gavieira, Arco	156.87 355	*e*PKPab	**PKPab**	**05 38 00.1**	**+1.0**	
PBRG	Braganca	156.87 352	*e*PKPab	**PKPab**	**05 37 59.9**	**+0.8**	
POLO	Lamas de Olo	157.41 354	*e*PKPab	**PKPab**	**05 38 02.2**	**+0.7**	
PVRL	Vila Real	157.50 354	*e*PKPab	**PKPab**	**05 38 02.2**	**+0.4**	
MVO	Moncorvo	157.54 353	*e*PKPab	**PKPab**	**05 38 02.9**	**+0.9**	
MVO			*ep*PKPdf	**pPKPdf**	**05 38 19.4**	**-3.8**	
PTO	Porto	157.72 356	*e*PKPab	**PKPab**	**05 38 04.0**	**+1.4**	
PTO			*ep*PKPdf	**pPKPdf**	**05 38 21.1**	**-2.2**	
PVIS	Viseu	158.08 354	*e*PKPab	**PKPab**	**05 38 05.3**	**+1.0**	
MTE	Manteigas	158.35 353	*e*PKPab	**PKPab**	**05 38 06.7**	**+1.2**	
ESDC	Sonseca Array	158.45 346	PKPbc	PKPbc	05 37 42.7		
	comp=Z,0.9nm,0.9s,baz=0.5,slow=3.0,SNR=4.3						
ESDC			PKPab	**PKPab**	**05 38 06.5**	**+0.6**	
	comp=Z,2.6nm,0.5s,baz=10,slow=3.7,SNR=14						
COI	Coimbra	158.63 355	*e*PKPab	**PKPab**	**05 38 08.3**	**+1.7**	
PCAS	Casmilo, Conde	158.79 355	*e*PKPdf	**PKPdf**	**05 37 32.5**	**+1.9**	
PCAS	Casmilo, Conde	158.79 355	*e*PKPab	**PKPab**	**05 38 10.1**	**+0.8**	
PCBR	Castelo Branco	158.90 353	*e*PKPdf	**PKPdf**	**05 37 31.1**	**+0.3**	
PCBR	Castelo Branco	158.90 353	*e*PKPab	**PKPab**	**05 38 08.3**	**+0.5**	
PMRV	Marv??o	159.30 353	*e*PKPab	**PKPab**	**05 38 10.1**	**+0.5**	
PSBE	So Bento	159.34 356	*e*PKPab	**PKPab**	**05 38 11.0**	**+1.2**	
PESTR	Estremoz	159.87 353	*e*PKPab	**PKPab**	**05 38 13.0**	**+0.9**	
PMAFR	Mafra	159.93 357	*e*PKPab	**PKPab**	**05 38 13.5**	**+1.2**	
PMAFR			*i* LQ	LQ	05 38 34.6		
EVO	Evora	160.25 354	*e*PKPab	**PKPab**	**05 38 14.8**	**+1.1**	
PBAR	Barrancos	160.49 351	*e*PKPab	**PKPab**	**05 38 15.8**	**+1.0**	
PBEJ	Beja	160.74 353	*e*PKPab	**PKPab**	**05 38 17.3**	**+1.4**	
MESJ	Messejana	160.96 354	*e*PKPab	**PKPab**	**05 38 18.6**	**+1.8**	
MESJ			*ep*PKPdf	**pPKPdf**	**05 38 23.7**	**-3.5**	
PCVE	Castro Verde	161.15 353	*e*PKPab	**PKPab**	**05 38 19.1**	**+1.4**	
PVAQ	Vaqueiros	161.33 353	*e*PKPab	**PKPab**	**05 38 19.8**	**+1.3**	
LIC	Lamto	166.29 204	⇑*e*P	**PKPdf**	**05 37 38.1**	**-0.7**	
	comp=Z,27nm,0.9s						
LIC	Lamto	166.29 204	⇑*e*PKP2	**PKPab**	**05 38 40.9**	**+0.1**	
	comp=Z,30nm,0.7s						
KIC	Kosan Boka	166.30 206	⇓*i* PKIKP	**PKPdf**	**05 37 38.5**	**-0.3**	
	comp=Z,43nm,1.1s						
KIC	Kosan Boka	166.30 206	⇑*e*PKP2	**PKPab**	**05 38 41.0**	**+0.1**	
	comp=Z,20nm,0.6s						
DBIC	Dimbokro	166.62 206	PKP	**PKPdf**	**05 37 38.2**	**-0.8**	
	comp=Z,9.4nm,0.9s,baz=152,slow=1.5,SNR=8.2						

Plg0.0000°, Azm319.0000°; P -2.8170, Plg3.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA **27** *05:35:39.5±0.2, 6°S±2°, 14°2E±°, h19km±1km, M5.1/44, mB5.5/17, mb4.9/44, MLv5.5/5, Mw(mB)4.9/17*

ISC 27 05:35:37.7±0.6, 5.76S±0.05×142.29E±0.05, h19km±2km, h19km:pP-P, n277, σ1°12/229, mb5.1/130, MS4.1/10, 21C-4D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.29**	**215**	P	**Pn**	**05 36 24.9**	**-3.3**
GENI	**Genyem**	**3.79**	**326**	P	**Pn**	**05 36 37.8**	**+2.7**
SMPI	**Sarmi**	**5.17**	**316**	P	**Pn**	**05 36 56.5**	**+2.4**
	531nm,1.2s,7µm2.2nm						
PMG	**Port Moresby**	**6.04**	**127**	Pn	**Pn**	**05 37 05.8**	**-0.2**
PMG	**Port Moresby**	**6.04**	**127** *c i*	P	**Pn**	**05 37 05.8**	**-0.2**
PMG	**Port Moresby**	**6.04**	**127**	Pn	**Pn**	**05 37 06.1**	**+0.1**
	17nm,0.3s,baz=320,slow=16,SNR=18						
PMG				Sn	**Sn**	**05 38 13.1**	**-1.6**
	29nm,0.3s,baz=188,slow=21,SNR=8.2						
PMG				Lg	Lg	05 38 49.2	
	2.8nm,0.3s,baz=318,slow=16,SNR=1.3						
PMG				LR	LR	05 40 23.2	
	comp=Z,908nm,18.4s,baz=270,slow=48						
	47nm,0.3s						
MANU	**Manus Island**	**6.27**	**54**	Pn	**Pn**	**05 37 09.9**	**+0.7**
COEN	**Coen**	**8.19**	**174**		**Pn**	**05 37 37.0**	**+1.4**
RABL	**Rabaul**	**9.96**	**81**	Pn	**Pn**	**05 37 59.4**	**-0.6**
FAKI	**Fak Fak**	**10.40**	**285**	Pn	**Pn**	**05 38 06.0**	**+0.1**
FAKI	**Fak Fak**	**10.40**	**285**	P	Pn	05 38 13.3	+7.4
FAKI	**Fak Fak**	**10.40**	**285**	P	**Pn**	**05 38 05.5**	**-0.4**
	85nm,0.7s						
KDU	**Kakadu**	**11.88**	**234**	P	**Pn**	**05 38 27.1**	**+0.9**
SWI	**Sorong**	**12.03**	**293**	P	**Pn**	**05 38 28.6**	**+0.3**
	62nm,0.8s						
DRS	**Darwin Rock St**	**13.05**	**239**	P	**Pn**	**05 38 43.5**	**+1.3**
MTN	**Manton Dam**	**13.06**	**237**	Pn	**Pn**	**05 38 41.6**	**-0.7**
MTN	**Manton Dam**	**13.06**	**237**	P	**Pn**	**05 38 43.0**	**+0.7**
CTA	**Charters Tower**	**14.76**	**165**	Pn	**Pn**	**05 39 04.8**	**-0.7**
	0.1nm,0.3s,baz=357,slow=17,SNR=2.4						
CTA				Lg	Lg	05 43 25.4	
	0.8nm,0.3s,baz=66,slow=23,SNR=7.1						
CTA				LR	LR	05 44 49.8	
	comp=Z,998nm,18.5s,baz=352,slow=38						
	2.8nm,0.8s						
CTAO	**Charters Tower**	**14.76**	**165**		**Pn**	**05 39 05.3**	**-0.2**
CTAO	**Charters Tower**	**14.76**	**165**	P	**Pn**	**05 39 05.3**	**-0.2**
QIS	**Mount Isa**	**14.94**	**190**	P	**Pn**	**05 39 08.6**	**+0.6**
WB0	**Warramunga Arr**	**15.90**	**208**	P	**Pn**	**05 39 19.4**	**-1.2**
WR0	**Warramunga Arr**	**16.00**	**207**	Pn	**Pn**	**05 39 20.6**	**-1.2**
WRAB	**Tennant Creek**	**16.07**	**208**		**Pn**	**05 39 22.3**	**-0.4**
WRAB	**Tennant Creek**	**16.07**	**208**	P	**Pn**	**05 39 22.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,24nm,0.7s						
WB2	**Warramunga Arr**	**16.07**	**208**	Pn	**Pn**	**05 39 22.4**	**-0.4**
WRA	**Warramunga Arr**	**16.08**	**208**	Pn	**Pn**	**05 39 21.5**	**-1.3**
WRA	**Warramunga Arr**	**16.08**	**208**	P	**Pn**	**05 39 21.5**	**-1.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
WRA	**Warramunga Arr**	**16.08**	**208**	Pn	**Pn**	**05 39 21.1**	**-1.7**
	comp=Z,1.6nm,0.3s,baz=30,slow=13,SNR=36						
WRA				Sn	Sn	05 42 09.9	-11
	comp=Z,1.8nm,0.3s,baz=25,slow=22,SNR=11						
WRA				Lg	Lg	05 44 08.1	
	comp=Z,1.3nm,0.3s,baz=32,slow=30,SNR=1.0						
KNRA	**Kununurra**	**16.53**	**232**	Pn	**Pn**	**05 39 27.5**	**-1.2**
SOEI	**Soe**	**18.29**	**256**		**P**	**05 39 51.0**	**+0.2**
SOEI	**Soe**	**18.29**	**256**	P	**Pn**	**05 39 50.5**	**-0.2**
	comp=Z,136nm,0.9s,comp=Z,2µm						
GUMO	**Guam**	**19.39**	**8**	LR	LR	05 47 04.5	
	comp=Z,152nm,18.3s,baz=154,slow=36						
AS01	**Alice Springs**	**19.53**	**203**	P	**Pn**	**05 40 06.7**	**+1.2**
AS31	**Alice Springs**	**19.55**	**204**		**Pn**	**05 40 05.2**	**-0.6**
ASAR	**Alice Springs**	**19.55**	**204**	P	**Pn**	**05 40 06.3**	**+0.5**
	comp=Z,82nm,0.8s,baz=31,slow=10.0,SNR=326						
ASAR				S	**S**	**05 43 38.2**	**-6.4**
	comp=Z,22nm,0.9s,baz=19,slow=31,SNR=5.2						
ASAR				Lg	Lg	05 45 57.0	
	comp=Z,0.4nm,0.3s,baz=15,slow=31,SNR=2.8						
ASAR				LR	LR	05 48 29.3	
	comp=Z,2µm,21.6s,baz=30,slow=39						
LUWI	**Luwuk**	**20.03**	**283**	P	**P**	**05 40 10.0**	**+0.3**
	comp=Z,81nm,1.3s,comp=Z,2µm						
GTOI	**Gorontalo**	**20.27**	**288**	P	Pn	05 40 15.1	+0.8
	comp=Z,32nm,0.6s,comp=Z,412nm						
FITZ	**Fitzroy Crossi**	**20.36**	**232**	P	Pn	05 40 15.4	0.0
FITZ	**Fitzroy Crossi**	**20.36**	**232**	P	Pn	05 40 16.4	+1.0
EDFI	**Ende, Flores**	**20.64**	**261**	P	**P**	**05 40 16.2**	**-0.3**
	comp=Z,49nm,1.2s						
EDFI				pP	Pn	05 40 20.1	+1.2
	comp=Z,49nm,1.2s						
DAV	**Davao City (W)**	**20.98**	**307**	LR	LR	05 50 17.8	
	comp=Z,144nm,18.5s,baz=159,slow=42						
MRSI	**Marisa**	**21.24**	**286**	P	**P**	**05 40 23.7**	**+0.9**
	comp=Z,77nm,1.2s,comp=Z,900nm						
EIDS	**Eidsvold**	**21.24**	**158**	P	**P**	**05 40 23.5**	**+0.7**
EIDS				IAmb	IAmb	05 40 28.5	
	comp=Z,56nm,0.7s						
EIDS	**Eidsvold**	**21.24**	**158**	P	**P**	**05 40 27.8**	**+5.1**
INKA	**Innaminka**	**21.91**	**184**	P	**P**	**05 40 32.6**	**+2.7**
BASI	**Baing, Sumba**	**21.95**	**257**	P	**P**	**05 40 31.3**	**+0.9**
	comp=Z,138nm,1.0s,comp=Z,3µm						
BKSI	**Bulukumba**	**22.07**	**270**	P	**P**	**05 40 32.0**	**+0.3**
	comp=Z,51nm,1.2s,comp=Z,656nm						
BKSI				pP	**pP**	**05 40 37.0**	**-0.2**
	comp=Z,51nm,1.2s,comp=Z,656nm						
TOLI2	**Tolitoli**	**22.53**	**287**	P	**P**	**05 40 36.0**	**-0.8**
MPSI	**Mapaga**	**23.16**	**284**	P	**P**	**05 40 44.2**	**+0.9**
	comp=Z,15nm,0.9s						
MPSI				pP	**pP**	**05 40 48.4**	**-0.6**
	comp=Z,15nm,0.9s						
PLAI	**Plampang**	**24.50**	**261**	P	**P**	**05 40 56.6**	**+0.5**
	comp=Z,21nm,0.8s						
PLAI				pP	**pP**	**05 41 01.8**	**-0.2**
	comp=Z,21nm,0.8s						
SMKI	**Samarinda**	**25.58**	**281**	P	**P**	**05 41 06.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**25.93**	**127**	P	**P**	**05 41 07.8**	**-1.1**
KOUNC				IAmb	IAmb	05 41 12.6	
	comp=Z,29nm,0.8s						
STKA	**Stephens Creek**	**25.99**	**181**	P	**P**	**05 41 08.8**	**-0.6**
STKA	**Stephens Creek**	**25.99**	**181** *i*	P	**P**	**05 41 09.5**	**+0.1**
STKA	**Stephens Creek**	**25.99**	**181**	P	**P**	**05 41 09.2**	**-0.2**
	comp=Z,8.8nm,0.8s,baz=355,slow=7.9,SNR=11						
	comp=Z,8.8nm,0.8s						
PSA00	**Pilbara Seismi**	**26.82**	**232**	P	**P**	**05 41 17.4**	**+0.4**
BBOO	**Buckleboo**	**27.53**	**191**	P	**P**	**05 41 23.1**	**-0.2**
BBOO				IAmb	IAmb	05 41 54.0	
	comp=Z,83nm,1.8s						
DZM	**Mont Dzumac**	**28.43**	**127**	LR	LR	05 52 26.7	
	comp=Z,275nm,20.6s,baz=334,slow=36						
TGY	**Tagaytay City**	**28.95**	**313**	LR	LR	05 55 32.8	
	comp=Z,123nm,18.3s,baz=196,slow=41						
KPJI	**Karang Pucung**	**33.17**	**265**	P	**P**	**05 42 14.0**	**+0.6**
	comp=Z,14nm,0.8s						
CMJI	**Cimerak**	**33.66**	**265**	P	**P**	**05 42 15.6**	**-2.0**
	comp=Z,33nm,1.1s						
CMJI				pP	**pP**	**05 42 24.3**	**+0.7**
	comp=Z,33nm,1.1s						
CNJI	**Cibinong**	**34.96**	**266**	P	**P**	**05 42 28.1**	**-0.8**
	comp=Z,19nm,1.1s						
JOW	**Kunigami**	**35.13**	**338**	LR	LR	05 54 36.5	
	comp=Z,295nm,19.8s,baz=194,slow=32						
PPBI	**Pangkal Pinang**	**36.23**	**274**	P	**P**	**05 42 40.8**	**+0.9**
	comp=Z,97nm,0.7s,comp=Z,70µm						
JHJ	**Hachijo jima 2**	**38.74**	**357**	LR	LR	05 55 52.7	
	comp=Z,391nm,19.6s,baz=268,slow=32						
KRJI	**Kerinci**	**40.88**	**273**	P	**P**	**05 43 19.2**	**+0.1**
MJAR	**Matsushiro Arr**	**42.25**	**355**	P	**P**	**05 43 28.6**	**-1.2**
	comp=Z,4.0nm,0.8s,baz=172,slow=7.2,SNR=8.0						
	comp=Z,4.0nm,0.8s						
MAJO	**Matsushiro**	**42.25**	**355**	*i* P	**P**	**05 43 28.2**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,15nm,1.1s						
NJ2	**Nanjing**	**43.73**	**331**	⇓P	**P**	**05 43 43.5**	**+1.6**
NJ2				pP	**pP**	**05 43 46.8**	**-1.1**
NJ2				sP	**sP**	**05 43 48.8**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,17nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,5.9s						
RAO	**Raoul Island**	**44.23**	**127**	LR	LR	06 00 20.2	
	comp=Z,168nm,20.5s,baz=116,slow=34						
WHN	**Wuhan**	**44.93**	**325**	⇑P	**P**	**05 43 53.5**	**+2.0**
WHN				sP	**sP**	**05 43 59.0**	**-1.1**
KSAR	**Wonju Array Be**	**45.03**	**344**	P	**P**	**05 43 51.7**	**-0.5**
KSAR	**Wonju Array Be**	**45.03**	**344**	P	**P**	**05 43 51.7**	**-0.5**
KSRS	**Korea Array**	**45.03**	**344**	P	**P**	**05 43 52.4**	**+0.2**
	comp=Z,8.5nm,0.8s,baz=161,slow=9.6,SNR=35						
KSRS				PcP	**PcP**	**05 45 33.9**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=176,slow=3.6,SNR=4.8						
	comp=Z,8.5nm,0.8s						
URZ	**Urewera**	**45.21**	**141**	LR	LR	06 02 26.8	
	comp=Z,293nm,19.2s,baz=114,slow=36						
RTZ	**Ruatahuna**	**45.34**	**141**	P	**P**	**05 43 55.3**	**+0.5**
RTZ				IAmb	IAmb	05 43 56.6	
	comp=Z,23nm,0.8s						
TUWZ	**Tuamarina**	**45.36**	**146**	P	**P**	**05 43 54.8**	**-0.1**
BKZ	**Black Stump Fm**	**45.38**	**142**	P	**P**	**05 43 55.7**	**+0.6**
BKZ				IAmb	IAmb	05 43 57.1	
	comp=Z,24nm,1.0s						
RPZ	**Rata Peaks**	**45.48**	**151**	LR	LR	06 02 42.3	
	comp=Z,419nm,19.1s,baz=310,slow=36						
JTM	**Tennabayashi**	**46.33**	**359**	P	**P**	**05 44 01.6**	**-0.8**
GYA	**Guiyang**	**47.09**	**315**	P	**P**	**05 44 09.8**	**+1.0**
GYA				pmax	pmax		
	comp=Z,30nm,1.4s						
TIA	**Tai'an**	**47.96**	**332**	P	**P**	**05 44 15.5**	**+0.3**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PHRA	**Phrae**	**47.96**	**301**	P	**P**	**05 44 15.8**	**+0.3**
CRAI	**Chiangrai**	**48.62**	**303**	P	**P**	**05 44 20.5**	**-0.2**
CRAI				IAmb	IAmb	05 44 22.7	
	comp=Z,18nm,1.3s						
LYN	**LuoYang**	**48.98**	**327**	⇑P	**P**	**05 44 24.0**	**+0.8**
LYN				sP	pP	05 44 30.0	+0.7
LYN				pmax	pmax		
	comp=Z,42nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.04**	**300**	*i* P	**P**	**05 44 25.2**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**49.04**	**300**	P	**P**	**05 44 24.7**	**+0.8**
	comp=Z,5.3nm,0.7s,baz=120,slow=6.0,SNR=32						
	comp=Z,5.3nm,0.7s						
CHTO	**Chiang Mai**	**49.20**	**301**	P	**P**	**05 44 23.5**	**-1.6**
CHTO	**Chiang Mai**	**49.20**	**301**	P	**P**	**05 44 23.5**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,17nm,1.4s						
ASAJ	**Asahikawa**	**49.65**	**0**	P	**P**	**05 44 27.5**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,50nm,1.5s						
JKA	**Kamikawa-asahi**	**49.65**	**0**	P	**P**	**05 44 27.5**	**-0.5**
JKA				IAmb	IAmb	05 44 35.6	
	comp=Z,50nm,1.5s						
HNS	**HongShan**	**50.05**	**331**	⇑P	**P**	**05 44 31.8**	**+0.6**
HNS				pmax	pmax		
	comp=Z,22nm,1.0s						
USA0B	**Ussuriysk Arra**	**50.59**	**350**	IAmb	IAmb	05 44 36.5	
	comp=Z,25nm,0.9s						
USA0B	**Ussuriysk Arra**	**50.59**	**350** *c i*	P	**P**	**05 44 35.2**	**0.0**
USRK	**Ussuriysk Ar.**	**50.59**	**350**	P	**P**	**05 44 34.8**	**-0.4**
USRK	**Ussuriysk Ar.**	**50.59**	**350**	P	**P**	**05 44 35.2**	**0.0**
	comp=Z,20nm,0.8s,baz=168,slow=7.4,SNR=22						
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**50.62**	**324**	P	**P**	**05 44 36.0**	**+0.3**
XAN				pP	pP	05 44 40.8	-1.0
XAN				pmax	pmax		
	comp=Z,31nm,1.3s						
PZH	**PanZhiHua**	**50.70**	**311**	P	**P**	**05 44 37.8**	**+1.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,110nm,4.2s						
MDJ	**Mudanjiang**	**51.43**	**348**	IAmb	IAmb	05 44 42.7	
	comp=Z,21nm,1.1s						
BJT	**Baijiatuau**	**51.52**	**334**	IAmb	IAmb	05 44 43.8	
	comp=Z,31nm,1.3s						
BJI	**Beijing**	**51.53**	**334**	P	**P**	**05 44 42.5**	**+0.1**
BJI				PcS	**PcS**	**05 49 52.3**	**-1.8**
BJI				pmax	pmax		
	comp=Z,13nm,1.3s						
CN2	**Changchun**	**51.62**	**344**	P	**P**	**05 44 43.5**	**+0.5**
CN2				PcP	**PcP**	**05 45 57.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2	**Chengdu**	**51.83**	**317**	P	**P**	**05 44 46.0**	**+1.2**
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
CD2	**Chengdu**	**51.83**	**317**	SS	**P**	**05 44 46.0**	**+1.2**
TNCH	**TengChong**	**52.42**	**308**	P	**P**	**05 44 50.5**	**+1.0**
TNCH				pP	pP	05 44 55.3	-0.4
TNCH				pmax	pmax		
	comp=Z,26nm,0.6s						
TNCH				pmax	pmax		
	comp=Z,99nm,2.8s						
YSS	**Yuzh-Sakhalins**	**52.48**	**0**	*e*P	**P**	**05 44 48.6**	**-0.7**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
BNX	**BinXian**	**52.97**	**347**	⇓P	**P**	**05 44 53.0**	**+0.1**
BNX				pmax	pmax		
	comp=Z,58nm,1.0s						
BNX				pmax	pmax		
	comp=Z,130nm,3.5s						
HHC	**Hu-ho-hao-te**	**54.27**	**331**	*e*P	**P**	**05 45 03.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC				pmax	pmax		
	comp=Z,81nm,5.0s						
XLT	**XiLinHaoTe**	**54.80**	**337**	*e*P	**P**	**05 45 08.8**	**+2.3**
XLT				pP	pP	05 45 12.8	0.0
XLT				sP	sP	05 45 16.5	+1.5
XLT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,65nm,3.2s						
BTO	**Baotou**	**54.83**	**330**	*e*P	**P**	**05 45 04.5**	**-2.3**
BTO				pmax	pmax		
	comp=Z,20nm,0.9s						
BTO				pmax	pmax		
	comp=Z,350nm,9.3s						
LZH	**Lanzhou**	**55.05**	**322**	*e*P	**P**	**05 45 10.8**	**+2.2**
LZH				pP	pP	05 45 16.0	+1.2
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
KLR	**Kul'dur**	**55.53**	**352**	*i* P	**P**	**05 45 11.3**	**-0.2**
KLR				pmax	pmax		
	comp=Z,20nm,1.1s						
TYV	**Tymovskoe**	**56.40**	**0**	*e*P	**P**	**05 45 17.8**	**+0.1**
TYV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,4.1s						
HEH	**HeiHe**	**57.26**	**349**	*e*P	**P**	**05 45 23.5**	**-0.3**
HEH				pmax	pmax		
	comp=Z,15nm,1.0s						
HEH				pmax	pmax		
	comp=Z,170nm,4.6s						
HEH				LR	LR		
	comp=Z,240nm,19.0s						
HEH				LR	LR		
	comp=Z,200nm,19.6s						
HEH				LR	LR		
	comp=Z,310nm,17.8s						
GTA	**Gaotai**	**59.63**	**323**	⇑P	**P**	**05 45 42.0**	**+1.2**
GTA				pP	sP	05 45 48.5	-0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
PEA0B	**Petropavlovsk-**	**60.08**	**11**	P	**P**	**05 45 42.7**	**-0.8**
PEA0B	**Petropavlovsk-**	**60.08**	**11** *i*	P	**P**	**05 45 43.3**	**-0.2**
PETK	**Petropavlovsk-**	**60.08**	**11**	P	**P**	**05 45 42.6**	**-0.9**
	comp=Z,30nm,0.9s,baz=180,slow=4.3,SNR=20						
	comp=Z,30nm,0.9s						
LSA	**Lhasa**	**60.39**	**309**	IAmb	IAmb	05 45 49.9	
	comp=Z,23nm,0.9s						
ZEA	**Zeya**	**60.62**	**350**	*e*P	**P**	**05 45 47.4**	**+0.3**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
GOMU	**GeErMu**	**60.96**	**317**	P	**P**	**05 45 51.5**	**+1.2**
GOMU				pP	pP	05 45 57.0	+0.4
GOMU				sP	sP	05 45 58.5	-1.0
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**61.73**	**334**	P	**P**	**05 45 55.7**	**+0.7**
ULN				IAmb	IAmb	05 46 04.4	
	comp=Z,10nm,0.8s						
ULN	**Ulaanbaatar**	**61.73**	**334** *c i*	P	**P**	**05 45 56.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**62.00**	**333**	P	**P**	**05 45 57.4**	**+0.6**
SONM				IAmb	IAmb	05 45 59.1	
	comp=Z,16nm,1.5s						
SONM	**Songino Array**	**62.00**	**333**	P	**P**	**05 45 57.4**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=150,slow=6.7,SNR=18						
SONM				LR	LR	06 12 10.4	
	comp=Z,164nm,20.5s,baz=124,slow=35						
	comp=Z,2.0nm,0.6s						
ZAK	**Zakamensk**	**65.26**	**334**	*e*P	**P**	**05 46 17.9**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
MA2	**Magadan**	**65.48**	**5**	P	**P**	**05 46 18.5**	**-0.8**
MA2	**Magadan**	**65.48**	**5** *c i*	P	**P**	**05 46 18.9**	**-0.4**
MA2				pmax	pmax		
	comp=Z,26nm,1.1s						
HYB	**Hyderabad**	**67.00**	**292**	*e*P	**P**	**05 46 30.2**	**+0.2**
SEY	**Seymchan**	**68.93**	**5**	*i* P	**P**	**05 46 40.8**	**-0.3**
SEY				pmax	pmax		
	comp=Z,15nm,1.2s						
WMQ	**Urumqi**	**69.60**	**321**	*e*P	**P**	**05 46 46.8**	**+1.0**
WMQ				pP	pP	05 46 50.5	-1.9
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
VNDA	**Vanda**	**72.47**	**176**	P	**P**	**05 47 03.5**	**+1.0**
VNDA				IAmb	IAmb	05 47 04.6	
	comp=Z,12nm,0.9s						
VNDA	**Vanda**	**72.47**	**176**	P	**P**	**05 47 03.5**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**72.47**	**176**	P	**P**	**05 47 03.6**	**+1.0**
	comp=Z,8.1nm,0.8s,baz=325,slow=6.7,SNR=20						
	comp=Z,8.1nm,0.8s						
DGZ	**Jazzator, Alta**	**72.78**	**326** *c i*	P	**P**	**05 47 05.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,14nm,0.7s						
ZSN	**Zaisan**	**73.12**	**323**	*e*P	**P**	**05 47 07.0**	**0.0**
	baz=323						
ZSN	**Zaisan**	**73.12**	**323**	*e*P	**P**	**05 47 06.9**	**0.0**
MK31	**Makanchi Array**	**74.37**	**322**	P	**P**	**05 47 14.7**	**+0.4**
MK31				IAmb	IAmb	05 47 16.2	
	comp=Z,16nm,1.1s						
MK31	**Makanchi Array**	**74.37**	**322** *c i*	P	**P**	**05 47 14.9**	**+0.6**
MKAR	**Makanchi Array**	**74.37**	**322**	P	**P**	**05 47 15.1**	**+0.8**
	comp=Z,15nm,0.8s,baz=110,slow=7.2,SNR=98						
	comp=Z,15nm,0.8s						
MAKZ	**Makanchi**	**74.57**	**322**	P	**P**	**05 47 15.9**	**+0.5**
MAKZ				IAmb	IAmb	05 47 17.2	
	comp=Z,25nm,1.1s						
MAKZ	**Makanchi**	**74.57**	**322**	P	**P**	**05 47 15.9**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,25nm,1.1s						
UZB	**Uzynbulak**	**74.95**	**317**	*e*P	**P**	**05 47 17.9**	**0.0**
	comp=Z,6.7nm,0.5s,baz=317						
UZB	**Uzynbulak**	**74.95**	**317**	*e*P	**P**	**05 47 17.9**	**0.0**
UZB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SATY	**Saty**	**75.33**	**317**	*e*P	**P**	**05 47 20.0**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=317						
SATY	**Saty**	**75.33**	**317**	*e*P	**P**	**05 47 19.9**	**-0.1**
SATY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL	**Bilibino**	**75.55**	**9**	P	**P**	**05 47 20.2**	**-0.3**
BILL	**Bilibino**	**75.55**	**9** ⇑ *i* P		**P**	**05 47 20.3**	**-0.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH	**Kashi**	**75.76**	**313**	P	**P**	**05 47 25.0**	**+2.4**
KSH				pmax	pmax		
	comp=Z,11nm,1.0s						
NIL	**Nilore**	**76.00**	**307**		**P**	**05 47 24.2**	**+0.2**
NIL	**Nilore**	**76.00**	**307**	P	**P**	**05 47 24.2**	**+0.2**
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
TDK	**Taldyqorghan**	**76.08**	**319**	*e*P	**P**	**05 47 24.5**	**+0.2**
	baz=319						
TDK	**Taldyqorghan**	**76.08**	**319**	*e*P	**P**	**05 47 24.4**	**+0.2**
MDOK	**Medeo**	**76.29**	**317**	*e*P	**P**	**05 47 25.9**	**+0.2**
	baz=317						
MDOK	**Medeo**	**76.29**	**317**	*e*P	**P**	**05 47 25.8**	**+0.2**
ZAA0	**Zalesovo Array**	**76.36**	**329**	P	**P**	**05 47 24.8**	**-0.7**
ZALV	**Zalesovo Beam**	**76.36**	**329**	P	**P**	**05 47 25.1**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=119,slow=4.8,SNR=19						
	comp=Z,5.1nm,0.6s						
BOOM	**Boomskoye usch**	**76.81**	**316**	IAmb	IAmb	05 47 30.2	
	comp=Z,10nm,0.6s						
KUU	**Kurty**	**77.04**	**317**	*e*P	**P**	**05 47 29.7**	**0.0**
	baz=317						
KUU	**Kurty**	**77.04**	**317**	*e*P	**P**	**05 47 29.6**	**0.0**
TIXI	**Tiksi**	**77.76**	**356**	P	**P**	**05 47 31.7**	**-1.3**
TIXI	**Tiksi**	**77.76**	**356** ⇑ *i* P		**P**	**05 47 31.5**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
AAK	**Ala-Archa**	**77.86**	**316** *c i*	P	**P**	**05 47 35.3**	**+0.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SGDS	**Sogindy**	**78.04**	**316**	*e*P	**P**	**05 47 34.9**	**-0.4**
	baz=316						
SGDS	**Sogindy**	**78.04**	**316**	*e*P	**P**	**05 47 34.9**	**-0.4**
KURK	**Kurchatov**	**78.25**	**324**	P	**P**	**05 47 36.1**	**-0.1**
KURK				IAmb	IAmb	05 47 37.6	
	comp=Z,21nm,1.1s						
KURK	**Kurchatov**	**78.25**	**324** *c i*	P	**P**	**05 47 36.3**	**+0.1**
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
KURBB	**Kurchatov Arra**	**78.26**	**324**	P	**P**	**05 47 36.6**

s-min=37.1km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.57**	**208**	Pn	Pn	05 51 27.8	+0.3
	0.1nm,0.3s,baz=25,slow=11,SNR=1.8 1.6nm,1.1s						
ASAR	**Alice Springs**	**19.05**	**203**	P	P	05 52 10.3	-0.2
	0.1nm,0.3s,baz=33,slow=9.8,SNR=6.6 2.7nm,0.8s						
MKAR	**Makanchi Array**	**74.48**	**322**	P	P	05 59 27.0	+0.1
	0.4nm,0.7s,baz=104,slow=6.1,SNR=3.0 0.4nm,0.7s						

*IDC **27** 05:51:25.1±0.6,6.35S×143.31E,h0km,mb4.5/16, mbtmp4.5/19,ML3.2/2,MS3.7/7,Error ellipse: s-maj=27.3km s-min=12.8km az=78.0*
*NEIC **27** 05:51:26.8±1.5,6.48S±0.08×143.12E±0.09,h10km±1km, mb4.8/44,Error ellipse: s-maj=15.0km s-min=13.3km az=82.0*
*DJA **27** 05:51:28.6±0.3,7.3S±3×14.3E±,h10km,M4.9/22,mB5.2/8, mb4.8/22,MLv5.4/6,Mw(mB)4.5/8*

ISC 27 05:51:27.5±0.4,6.59S±0.05×143.13E±0.06,h10km,n115, σ1°61/92,mb4.8/53,MS3.7/4,4C,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.29**	**235**	P	**Pn**	**05 52 19.1**	**-0.1**
PMG	**Port Moresby**	**4.88**	**125**	P	**Pn**	**05 52 41.4**	**+0.5**
PMG	**Port Moresby**	**4.88**	**125**	Pn	**Pn**	**05 52 40.8**	**-0.1**
	10nm,0.3s,baz=316,slow=12,SNR=12						
PMG				Sn	**Sn**	**05 53 37.1**	**-0.4**
	8.3nm,0.3s,baz=288,slow=20,SNR=2.2						
PMG				Lg	Lg	05 53 54.0	
	8.9nm,0.3s,baz=195,slow=5.4,SNR=5.3						
PMG				LR	LR	05 55 04.9	
	comp=Z,417nm,18.8s,baz=288,slow=45 72nm,0.6s						
GENI	**Genyem**	**4.95**	**323**	P	Pn	05 52 47.3	+5.4
GENI	**Genyem**	**4.95**	**323**	P	**Pn**	**05 52 43.1**	**+1.2**
MANU	**Manus Island**	**6.19**	**43**	Pn	**Pn**	**05 52 57.9**	**-1.1**
MANU	**Manus Island**	**6.19**	**43**	P	**Pn**	**05 53 02.6**	**+3.6**
SMPI	**Sarmi**	**6.35**	**316**	P	**Pn**	**05 53 03.6**	**+2.4**
	175nm,1.4s,0.9nm						
COEN	**Coen**	**7.32**	**180**	Pn	**Pn**	**05 53 15.4**	**+0.9**
FAKI	**Fak Fak**	**11.44**	**288**	Pn	Pn	05 54 08.9	-2.1
FAKI	**Fak Fak**	**11.44**	**288**	P	**Pn**	**05 54 11.3**	**+0.3**
FAKI	**Fak Fak**	**11.44**	**288**	P	Pn	05 54 09.0	-2.0
	48nm,0.9s						
KDU	**Kakadu**	**12.12**	**239**	P	**Pn**	**05 54 19.8**	**-0.6**
SWI	**Sorong**	**13.13**	**295**	P	**Pn**	**05 54 32.5**	**-1.7**
	29nm,1.1s						
MTN	**Manton Dam**	**13.35**	**241**	Pn	**Pn**	**05 54 36.5**	**-0.7**
MTN	**Manton Dam**	**13.35**	**241**	P	**Pn**	**05 54 36.7**	**-0.5**
DRS	**Darwin Rock St**	**13.38**	**243**	P	**Pn**	**05 54 38.5**	**+0.9**
CTA	**Charters Tower**	**13.75**	**168**	Pn	**Pn**	**05 54 44.1**	**+1.4**
	0.4nm,0.3s,baz=323,slow=20,SNR=2.1						
CTA				Lg	Lg	05 58 47.5	
	0.2nm,0.3s,baz=253,slow=19,SNR=3.1						
CTA				LR	LR	05 59 29.0	
	comp=Z,290nm,20.1s,baz=352,slow=35 5.3nm,1.0s						
WB0	**Warramunga Arr**	**15.60**	**212**	Pn	**Pn**	**05 55 07.2**	**-0.5**
WR0	**Warramunga Arr**	**15.69**	**211**	Pn	**Pn**	**05 55 07.8**	**-0.9**
WR0				IAmb	IAmb	05 55 16.8	
	comp=Z,52nm,0.9s						
WRAB	**Tennant Creek**	**15.76**	**212**		**Pn**	**05 55 08.6**	**-1.2**
WRAB				IAmb	IAmb	05 55 27.7	
	comp=Z,60nm,1.2s						
WB2	**Warramunga Arr**	**15.77**	**212**	Pn	**Pn**	**05 55 09.0**	**-0.8**
WB2				IAmb	IAmb	05 55 34.4	
	comp=Z,53nm,1.1s						
WRA	**Warramunga Arr**	**15.78**	**212**		**Pn**	**05 55 08.0**	**-1.9**
WRA	**Warramunga Arr**	**15.78**	**212**	Pn	**Pn**	**05 55 08.7**	**-1.3**
	comp=Z,1.8nm,0.3s,baz=32,slow=13,SNR=30						
WRA				Sn	**Sn**	**05 58 00.2**	**-4.8**
	comp=Z,0.6nm,0.3s,baz=28,slow=24,SNR=5.2						
WRA				Lg	Lg	05 59 52.5	
	comp=Z,0.6nm,0.3s,baz=36,slow=28,SNR=6.2						
KNRA	**Kununurra**	**16.72**	**236**	Pn	**Pn**	**05 55 20.8**	**-1.3**
KNRA				IAmb	IAmb	05 55 27.1	
	comp=Z,70nm,0.6s						
KNRA	**Kununurra**	**16.72**	**236**	P	**Pn**	**05 55 21.0**	**-1.1**
SANI	**Sanana**	**17.67**	**284**	P	**Pn**	**05 55 37.0**	**+3.0**
SANI	**Sanana**	**17.67**	**284**	P	**Pn**	**05 55 35.4**	**+1.4**
	comp=Z,42nm,1.0s						
SOEI	**Soe**	**18.93**	**259**		**P**	**05 55 47.9**	**-1.0**
SOEI	**Soe**	**18.93**	**259**	P	**P**	**05 55 52.1**	**+3.2**
SOEI	**Soe**	**18.93**	**259**	P	**P**	**05 55 51.4**	**+2.5**
	comp=Z,139nm,0.8s						
AS31	**Alice Springs**	**19.15**	**207**		**P**	**05 55 51.3**	**+0.1**
ASAR	**Alice Springs**	**19.15**	**207**	P	**P**	**05 55 50.6**	**-0.6**
ASAR	**Alice Springs**	**19.15**	**207**	P	**P**	**05 55 53.9**	**+2.7**
	comp=Z,27nm,0.7s,baz=29,slow=11,SNR=45						
ASAR				Lg	Lg	06 01 41.6	
	comp=Z,0.2nm,0.3s,baz=30,slow=30,SNR=4.1						
ASAR				LR	LR	06 04 05.9	
	comp=Z,353nm,18.9s,baz=25,slow=39						
GUMO	**Guam**	**20.13**	**5**	LR	LR	06 03 04.9	
	comp=Z,143nm,19.8s,baz=156,slow=35						
EIDS	**Eidsvold**	**20.16**	**159**	P	**P**	**05 56 03.7**	**+1.5**
EIDS	**Eidsvold**	**20.16**	**159**	P	**P**	**05 56 04.7**	**+2.5**
FITZ	**Fitzroy Crossi**	**20.53**	**235**	P	**P**	**05 56 05.9**	**-0.4**
LUWI	**Luwuk**	**21.04**	**284**	P	**P**	**05 56 10.3**	**-1.5**
LUWI	**Luwuk**	**21.04**	**284**	P	**P**	**05 56 14.9**	**+3.2**
LUWI	**Luwuk**	**21.04**	**284**	P	**P**	**05 56 13.5**	**+1.8**
	comp=Z,111nm,1.5s						
INKA	**Innaminka**	**21.15**	**186**	P	**P**	**05 56 14.4**	**+1.5**
GTOI	**Gorontalo**	**21.32**	**289**	P	**P**	**05 56 17.2**	**+2.4**
	comp=Z,34nm,0.9s,comp=Z,376nm						
EDFI	**Ende, Flores**	**21.35**	**263**	P	**P**	**05 56 15.7**	**+0.5**
	comp=Z,27nm,1.0s						
MRSI	**Marisa**	**22.28**	**288**	P	**P**	**05 56 26.3**	**+1.2**
	comp=Z,21nm,0.7s						
BKSI	**Bulukumba**	**22.91**	**272**	P	**P**	**05 56 32.0**	**+0.1**
	comp=Z,67nm,1.2s,comp=Z,532nm						
KAPI	**Kappang**	**23.31**	**273**	P	**P**	**05 56 33.6**	**-2.2**
TTSI	**Tana Toraja**	**23.49**	**278**	P	**P**	**05 56 38.3**	**+0.6**
	comp=Z,31nm,1.1s,comp=Z,1μm						
TOLI2	**Tolitoli**	**23.58**	**288**	P	**P**	**05 56 37.1**	**-1.4**
TOLI2				IAmb	IAmb	05 56 42.2	
	comp=Z,31nm,1.0s						
MPSI	**Mapaga**	**24.18**	**286**	P	**P**	**05 56 44.7**	**+0.4**
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**25.20**	**183**	P	**P**	**05 56 55.2**	**+1.8**
	comp=Z,5.7nm,0.8s,baz=3.2,slow=9.7,SNR=4.9						
STKA				LR	LR	06 06 55.0	
	comp=Z,299nm,19.5s,baz=1.7,slow=36 comp=Z,5.7nm,0.8s						
PLAI	**Plampang**	**25.21**	**263**	P	**P**	**05 56 54.7**	**+1.0**
	comp=Z,25nm,0.8s						
PSA00	**Pilbara Seismi**	**26.98**	**234**	P	**P**	**05 57 09.4**	**-0.3**
DZM	**Mont Dzumac**	**27.27**	**127**	LR	LR	06 06 21.4	
	comp=Z,148nm,20.0s,baz=302,slow=33						
FORT	**Forrest**	**27.91**	**209**	P	**P**	**05 57 16.7**	**-1.1**
FORT				IAmb	IAmb	05 57 21.6	
	comp=Z,25nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.57**	**219**	LR	LR	06 13 10.1	
	comp=Z,217nm,18.3s,baz=344,slow=36						
MJAR	**Matsushiro Arr**	**43.15**	**354**	P	P	05 59 24.4	-4.0
	comp=Z,0.9nm,0.4s,baz=185,slow=12,SNR=2.3						
MJAR				PcP	**PcP**	**06 01 17.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=198,slow=3.5,SNR=4.2 comp=Z,0.9nm,0.4s						
NJ2	**Nanjing**	**44.86**	**330**	*e*P	**P**	**05 59 41.0**	**-1.2**
NJ2				pP	**pP**	**05 59 45.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,140nm,5.2s						
KSRS	**Korea Array**	**46.06**	**343**	P	P	05 59 49.2	-2.4
	comp=Z,6.0nm,1.1s,baz=160,slow=9.3,SNR=12 comp=Z,6.0nm,1.1s						
LYN	**LuoYang**	**50.13**	**327**	⇑P	**P**	**06 00 23.3**	**+0.1**
LYN				pmax	pmax		
	comp=Z,17nm,0.5s						
CMAR	**Chiang Mai Arr**	**50.18**	**301**	P	**P**	**06 00 23.3**	**-0.5**
	comp=Z,2.4nm,0.3s,baz=119,slow=5.2,SNR=9.6 comp=Z,2.4nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.55**	**350**	P	**P**	**06 00 32.4**	**-1.3**
	comp=Z,6.6nm,1.0s,baz=170,slow=8.8,SNR=4.6 comp=Z,6.6nm,1.0s						
XAN	**Xi'an**	**51.78**	**324**	P	**P**	**06 00 35.0**	**-0.6**
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						

PZH	**PanZhiHua**	**51.88**	**311**	P	**P**	**06 00 37.8**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,5.0s						
BJI	**Beijing**	**52.64**	**334**	P	**P**	**06 00 41.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
CD2	**Chengdu**	**53.00**	**317**	P	**P**	**06 00 46.0**	**+1.2**
HHC	**Hu-ho-hao-te**	**55.40**	**331**	*e*P	**P**	**06 01 02.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
LZH	**Lanzhou**	**56.22**	**322**	*e*P	**P**	**06 01 09.5**	**+1.3**
LZH				pP	pP	06 01 14.8	+3.2
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
SHL	**Shillong**	**59.15**	**305**	P	**P**	**06 01 27.7**	**-1.4**
SHL				IAmb	IAmb	06 01 31.6	
	comp=Z,12nm,1.1s						
PETK	**Petropavlovsk-**	**60.75**	**10**	P	**P**	**06 01 37.2**	**-2.1**
	comp=Z,6.9nm,0.7s,baz=166,slow=6.4,SNR=7.6 comp=Z,6.9nm,0.7s						
GTA	**Gaotai**	**60.80**	**322**	P	**P**	**06 01 40.5**	**+0.4**
GTA				pP	pP	06 01 46.5	+3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU	**GeErMu**	**62.13**	**317**	P	**P**	**06 01 51.0**	**+1.5**
GOMU				pP	pP	06 01 55.3	+2.4
GOMU				sP	sP	06 01 56.3	+2.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**06 01 55.6**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=147,slow=8.1,SNR=7.3 comp=Z,1.8nm,1.1s						
WMQ	**Urumqi**	**70.77**	**321**	*e*P	**P**	**06 02 44.0**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
VNDA	**Vanda**	**71.58**	**176**	P	**P**	**06 02 49.7**	**+1.2**
	comp=Z,5.0nm,1.1s,baz=336,slow=5.6,SNR=6.0 comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	**75.54**	**322**	IAmb	IAmb	06 03 13.9	
	comp=Z,10nm,1.2s						
MKAR	**Makanchi Array**	**75.54**	**322**	P	**P**	**06 03 11.0**	**-1.3**
	comp=Z,4.9nm,0.7s,baz=113,slow=6.5,SNR=30 comp=Z,4.9nm,0.7s						
MAKZ	**Makanchi**	**75.74**	**322**	P	**P**	**06 03 12.2**	**-1.3**
MAKZ				IAmb	IAmb	06 03 14.9	
	comp=Z,13nm,1.1s						
KSH	**Kashi**	**76.93**	**313**	P	**P**	**06 03 20.5**	**-0.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZALV	**Zalesovo Beam**	**77.50**	**329**	P	P	06 03 20.5	-2.7
ZALV	**Zalesovo Beam**	**77.50**	**329**	P	P	06 03 21.0	-2.2
	comp=Z,1.8nm,0.7s,baz=118,slow=7.1,SNR=6.8 comp=Z,1.8nm,0.7s						
BOOM	**Boomskoye usch**	**77.98**	**316**	P	**P**	**06 03 24.7**	**-1.8**
KURK	**Kurchatov**	**79.41**	**324**	P	**P**	**06 03 32.6**	**-1.3**
KURK				IAmb	IAmb	06 03 35.0	
	comp=Z,14nm,1.2s						
KURBB	**Kurchatov Arra**	**79.42**	**324**	P	**P**	**06 03 32.0**	**-2.0**
	comp=Z,3.8nm,0.8s,baz=114,slow=4.6,SNR=14 comp=Z,3.8nm,0.8s						
ARSB	**Arslanbob**	**79.68**	**314**	P	**P**	**06 03 34.9**	**-0.9**
F15K	**North Star Dit**	**81.50**	**19**	IAmb	IAmb	06 03 47.5	
	comp=Z,17nm,1.5s						
SIMJ	**Simiganj**	**81.84**	**310**	P	**P**	**06 03 45.5**	**-1.9**
SIMJ				IAmb	IAmb	06 03 48.9	
	comp=Z,9.1nm,1.0s						
KK31	**Karatay Array**	**81.97**	**315**	P	**P**	**06 03 46.0**	**-1.7**
KKAR	**Karatay Array**	**81.97**	**315**	P	**P**	**06 03 46.0**	**-1.7**
KKAR	**Karatay Array**	**81.97**	**315**	IAmb	IAmb	06 03 49.9	
	comp=Z,5.0nm,1.1s						
G16K	**Koyuk River**	**82.08**	**20**	IAmb	IAmb	06 03 48.7	
	comp=Z,9.1nm,1.2s						
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**06 03 53.7**	**-1.2**
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**06 03 54.6**	**-0.2**
	comp=Z,8.3nm,0.9s,baz=359,slow=1.6,SNR=16 comp=Z,8.3nm,0.9s						
G19K	**Purcell Mounta**	**84.31**	**21**	P	**P**	**06 03 59.2**	**-0.1**
G19K				IAmb	IAmb	06 04 01.8	
	comp=Z,9.5nm,1.2s						
C18K	**Utukok River**	**84.32**	**18**	IAmb	IAmb	06 04 16.8	
	comp=Z,11nm,1.4s						
NRIK	**Noril'sk**	**84.68**	**343**	P	**P**	**06 03 59.7**	**-1.5**
	comp=Z,11nm,1.0s,baz=124,slow=7.3,SNR=10 comp=Z,11nm,1.0s						
E19K	**Redstone River**	**84.93**	**20**	IAmb	IAmb	06 04 16.7	
	comp=Z,4.4nm,0.9s						
BVAR	**Borovoye Array**	**85.00**	**325**	P	**P**	**06 04 01.5**	**-1.6**
	comp=Z,14nm,0.9s,baz=111,slow=7.7,SNR=28 comp=Z,14nm,0.9s						
BRVK	**Borovoye**	**85.07**	**325**	P	**P**	**06 04 02.0**	**-1.5**
D19K	**Kuna River**	**85.18**	**18**	IAmb	IAmb	06 04 07.4	
	comp=Z,10nm,1.3s						
D22K	**Ayikyak River**	**87.11**	**19**	IAmb	IAmb	06 04 38.5	
	comp=Z,5.8nm,1.1s						
CCB	**Clear Creek Bu**	**87.14**	**24**	P	P	06 04 11.3	-2.1
CCB				IAmb	IAmb	06 04 13.1	
	comp=Z,13nm,1.4s						
ILAR	**Eielson Array**	**87.56**	**24**	P	P	06 04 11.9	-3.6
	comp=Z,1.4nm,0.7s,baz=256,slow=4.3,SNR=12 comp=Z,1.4nm,0.7s						
L27K	**Beaver Creek,**	**89.13**	**26**	IAmb	IAmb	06 04 23.7	
	comp=Z,10nm,1.4s						
BCAR	**Beaver Creek A**	**89.15**	**26**	P	P	06 04 19.5	-3.6
K27K	**Chicken**	**89.30**	**25**	IAmb	IAmb	06 04 26.8	
	comp=Z,7.7nm,1.1s						
GEYT	**Alibeck**	**90.08**	**308**	P	**P**	**06 04 26.8**	**-1.3**
	comp=Z,0.8nm,0.2s,baz=142,slow=6.0,SNR=5.3 comp=Z,0.8nm,0.2s						
ABKAR	**Akbulak array**	**90.51**	**319**	P	P	06 04 26.2	-3.5
ABKAR	**Akbulak array**	**90.51**	**319**	IAmb	IAmb	06 04 34.2	
	comp=Z,3.0nm,1.2s						
EPYK	**Eagle Plains**	**92.06**	**23**	IAmb	IAmb	06 04 58.7	
	comp=Z,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**141.48**	**283**	PKhKP	PKPpre	06 10 55.0	
	comp=Z,1.0nm,0.9s,baz=57,slow=3.3,SNR=3.8						
KIC	**Kosan Boka**	**148.07**	**271**⇑	*e*P	**PKPdf**	**06 11 13.6**	**+2.2**
	comp=Z,15nm,1.1s						
DBIC	**Dimbokro**	**148.20**	**272**	PKPbc	**PKPdf**	**06 11 14.3**	**+2.7**
	comp=Z,40nm,1.3s,baz=86,slow=2.9,SNR=8.7						
LIC	**Lamto**	**148.35**	**271**⇑	*e*P	**PKPdf**	**06 11 15.0**	**+3.1**
	comp=Z,32nm,0.8s						
TIC	**Toumodi**	**148.36**	**272**⇑	*e*P	**PKPdf**	**06 11 15.1**	**+3.2**
	comp=Z,23nm,0.9s						

*IDC **27** 05:57:53.9±1.8,36.96N×27.84E,h0km,mb3.3/2, mbtmp3.3/4,ML3.4/2,MS3.4/1,Error ellipse: s-maj=56.9km s-min=24.2km az=146.0*
*ISK **27** 05:57:53.9,37.01N×27.72E,h10km,ML3.1/14*
*ATH **27** 05:57:54.3,37.06N×27.82E,h12km±3km,ML3.1/3,Error ellipse: s-maj=7.4km s-min=0.9km az=67.0*
*AFAD **27** 05:57:54.3±0.0,37.00N×27.74E,h7km±2km,ML3.0*
*THE **27** 05:57:55.5,37.09N×27.79E,h21km±9km,ML3.0/4,Error ellipse: s-maj=10.5km s-min=1.4km az=68.0*

ISC 27 05:57:54.6±0.9,37.03N±0.02×27.68E±0.02,h10km±7km, n50,σ0°92/72,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.19**	**281**	P	**Pg**	**05 58 00.0**	**+1.3**
DATC	**Datca-Mugla**	**0.27**	**183**	Pg	**Pg**	**05 57 59.7**	**-0.4**
DATC				Sg	**Sg**	**05 58 03.9**	**+0.2**
MLSB	**Milas**	**0.28**	**16**	Pg	**Pg**	**05 58 00.1**	**-0.1**
MLSB				Sg	**Sb**	**05 58 04.7**	**-1.7**
BODT	**Bodrum**	**0.30**	**276**	Pg	**Pb**	**05 58 01.1**	**-0.9**
BODT				Sg	**Sb**	**05 58 06.2**	**-0.8**
DAT	**Datca**	**0.31**	**195**	Pg	**Pg**	**05 58 00.5**	**-0.4**
DAT				Sg	**Sg**	**05 58 05.3**	**+0.2**
DAT	**Datca**	**0.31**	**195**	P	**Pg**	**05 58 00.5**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.33**	**287**	Pg	**Pb**	**05 58 01.7**	**-0.9**
YAZI	**Mula-Dat§a-**	**0.39**	**208**	P	**Pg**	**05 58 02.4**	**0.0**
TURN	**Turunc**	**0.52**	**119**	P	**Pg**	**05 58 03.6**	**-1.1**
TURN				S	**Sg**	**05 58 10.7**	**-0.8**
TURN				*i* AML	AML	05 58 14.0	
	comp=N,906nm,0.2s						
DDIM	**Aydin, Didim**	**0.55**	**321**	P	**Pb**	**05 58 05.9**	**-0.4**
MULA	**Mugla, Merkez-**	**0.56**	**66**	P	**Pg**	**05 58 04.6**	**-0.9**
MULA				S	**Sg**	**05 58 12.4**	**-0.5**
MULA				*i* AML	AML	05 58 16.0	
	comp=N,463nm,0.8s						
MULA				*i* AML	AML	05 58 18.0	

IDC 27 05:47:46.5±5.0,6.16S×141.95E,h0km,mb3.6/1, mbtmp3.7/3,ML3.1/2,Error ellipse: s-maj=168.3km

comp=E,791nm,1.1s
KLNA **Kalymnos** 0.57 263 P Pb 05 58 07.0 +0.3
GCAM **G?zelcaml?** 0.76 332 P Pn 05 58 10.4 -0.9
DALY **Dalyan (Mula)** 0.81 105 Pg Pg 05 58 09.5 -0.7
ARG **Arkhangelos** 0.89 156 Pg Pg 05 58 10.6 -1.1
ARG **Arkhangelos** 0.89 156 P Pg 05 58 10.9 -0.8
ARG S Sn 05 58 25.2 -0.8
1µm,1.0s
ARG **Arkhangelos** 0.89 156 P Pg 05 58 10.6 -1.1
ARG S Sb 05 58 23.1 -0.9
ARG AML AML 05 58 26.8
comp=N,3525µm,1.1s
ARG AML AML 05 58 28.9
comp=E,1996µm,0.6s
ESEN **Aydn-Nazilli** 0.93 35 P Pg 05 58 10.9 -1.6
SMG **Samos** 0.95 315 P Pb 05 58 13.3 +0.1
SMG S Sg 05 58 25.2 -0.2
comp=E,1µm,0.7s
SMG **Samos** 0.95 315 P Pb 05 58 13.2 -0.1
SMG S Sn 05 58 27.4 -0.3
SMG AML AML 05 58 34.5
comp=E,2393µm,0.5s
SMG AML AML 05 58 36.0
comp=N,1959µm,0.4s
SABU **Mula-Dalaman** 1.05 101 P Pn 05 58 15.1 -0.3
SABU S Sb 05 58 28.4 -0.3
TAVA **DENIZLI_Tavas** 1.07 66 P Pg 05 58 14.0 -1.2
DNZT **Denizli-Tavas-** 1.10 77 P Pn 05 58 15.4 -0.8
DNZT P Pb 05 58 16.6 +0.8
DNZT S Sb 05 58 29.9 -0.3
IZMR **zmir-demi** 1.13 11 P Pn 05 58 16.0 -0.4
IZMR S Sb 05 58 31.0 +0.2
IZMR *i* AML AML 05 58 37.0
comp=N,177nm,0.6s
IZMR *i* AML AML 05 58 39.0
comp=N,368nm,0.7s
FETY **Fethiye** 1.19 109 Pn Pn 05 58 16.7 -0.6
FETY **Fethiye** 1.19 109 P Pn 05 58 20.4 +3.1
DNIZ **Denizli-Tavas-** 1.23 61 P Pn 05 58 17.4 -0.5
KIRA **zmir-Kiraz** 1.30 26 P Pg 05 58 19.1 -0.4
KIRA S Sn 05 58 36.5 +0.2
KIRA *i* AML AML 05 58 44.0
comp=N,212nm,0.5s
CAME **Cameli-Denizli** 1.30 93 Pn Pg 05 58 18.7 -0.9
CAEL **Denizli, Camel** 1.31 85 P Pg 05 58 20.6 +0.7
CAEL S Sn 05 58 39.8 +3.1
CAEL *i* AML AML 05 58 42.0
comp=N,667nm,0.9s
CAEL *i* AML AML 05 58 44.0
comp=N,462nm,0.7s
APMY **Acipayam-Deniz** 1.37 71 Pn Pn 05 58 19.4 -0.4
IZZE **Mula-Seydike** 1.38 115 P Pg 05 58 20.7 -0.3
IZZE S Sg 05 58 38.6 -0.3
IZZE *i* AML AML 05 58 43.0
comp=N,598nm,0.5s
IZZE *i* AML AML 05 58 44.0
comp=N,263nm,0.3s
GOLH **Golhisar** 1.52 82 P Pg 05 58 23.9 +0.2
GOLH S Sg 05 58 43.4 0.0
KNIK **Mula-Seydike** 1.53 96 P Pg 05 58 24.2 +0.3
KARP **Karpathos** 1.54 196 Pn Pn 05 58 21.9 -0.2
KARP **Karpathos** 1.54 196 P Pn 05 58 21.6 -0.5
KARP S Sn 05 58 41.6 -0.5
comp=N,378nm,0.5s
KARP **Karpathos** 1.54 196 P Pn 05 58 21.6 -0.5
KARP S Sn 05 58 41.8 -0.3
KARP AML AML 05 58 48.3
comp=N,936µm,0.7s
KARP AML AML 05 58 51.2
comp=E,579µm,0.5s
MANT **Manisa** 1.62 25 P Pb 05 58 24.2 -0.4
INCE **Denizli-Bozkur** 1.65 65 P Pg 05 58 25.5 -0.9
GOMA **Golmarmara-Man** 1.69 6 Pn Pn 05 58 23.9 -0.2
APE **Apeiranthos** 1.72 272 Pn Pn 05 58 25.1 +0.5
APE **Apeiranthos** 1.72 272 P Pn 05 58 23.9 -0.7
APE S Sn 05 58 47.0 +0.4
comp=E,110nm,1.4s
APE **Apeiranthos** 1.72 272 P Pn 05 58 24.9 +0.3
APE S Sb 05 58 47.6 -0.4
FOCM **Foa** 1.84 336 Pn Pn 05 58 26.9 +0.7
PASA **Karahalli, USA** 1.95 47 P Pn 05 58 28.1 +0.4
BRTR **Keskin Array B** 5.40 58 Pn Pn 05 59 17.2 +1.9
comp=E,0.3nm,0.3s,baz=238,slow=16,SNR=6.7
BRTR Sn Sn 06 00 15.9 -1.6
baz=273,slow=15
comp=E,2.6nm,0.8s
MMAI **Mount Meron Ar** 7.49 120 Pn Pn 05 59 42.9 -1.1
comp=E,2.3nm,0.3s,baz=305,slow=12,SNR=2.4
comp=E,1.3nm,0.3s
AKTO **Aktyubinsk** 25.48 49 LR LR 06 15 06.1
comp=E,73nm,18.3s,baz=81,slow=41
TORD **Torodi Ar. Bea** 33.25 231 P P 06 04 32.8 +0.8
comp=E,0.1nm,0.5s,baz=33,slow=9.4,SNR=1.5
comp=E,0.1nm,0.5s
SONM **Songino Array** 56.73 52 P P 06 07 39.7 +1.2
comp=E,0.3nm,0.6s,baz=284,slow=5.8,SNR=2.1
comp=E,0.3nm,0.6s

IDC 27 05:59:26.6±2.9, 53°.90N×86°.56E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=23.4km s-min=14.1km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**274**	I	I	06 06 47.5	
	baz=91,slow=343,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.03**	**274**	Pg	Pg	05 59 44.8	-1.5
	0.5nm,0.3s,baz=96,slow=16,SNR=4.9						
ZALV				Lg	Lg	06 00 01.2	
	1.5nm,0.3s,baz=95,slow=30,SNR=10						
KURBB	**Kurchatov Arra**	**5.92**	**240**	Pn	Pn	06 00 56.6	+1.1
	0.1nm,0.3s,baz=59,slow=14,SNR=2.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.62**	**203**	Pn	Pn	06 01 19.9	+1.2
	0.1nm,0.3s,baz=26,slow=14,SNR=3.0						
	0.1nm,0.3s						

IDC 27 06:06:04.2±2.0, 6°.14S×143°.23E, h0km, mb3.8/2, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=104.2km s-min=32.3km az=111.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.21**	**211**	Pn	Pn	06 09 51.3	-2.2
	0.1nm,0.3s,baz=30,slow=13,SNR=5.7						
WRA				Sn	Sn	06 12 38.9	-15
	0.1nm,0.3s,baz=32,slow=26,SNR=1.7						
WRA				Lg	Lg	06 14 34.5	
	baz=48,slow=26,SNR=1.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**19.60**	**206**	P	Pn	06 10 35.0	-0.5
	0.1nm,0.3s,baz=37,slow=7.5,SNR=7.4						
	1.3nm,0.8s						
BVAR	**Borovoye Array**	**84.69**	**325**	P	P	06 18 40.1	+0.2
	0.7nm,0.6s,baz=97,slow=7.4,SNR=4.5						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**87.10**	**24**	P	P	06 18 51.5	-0.2
	0.3nm,0.7s,baz=247,slow=4.7,SNR=4.4						
	0.3nm,0.7s						

*IDC **27** 06:19:08.3±0.4, 6°.41S×143°.05E, h0km, mb5.2/20, mbtmp5.3/24, ML4.6/4, MS5.3/24, Error ellipse: s-maj=18.7km s-min=10.4km az=70.0*

*MOS **27** 06:19:09.7±1.1, 6°.32S×143°.03E, h13km, mb5.7/51, MS5.2/13, Error ellipse: s-maj=9.6km s-min=5.0km az=109.4*

*BJI **27** 06:19:10.0±0.0, 6°.40S×143°.10E, h5km, mb5.1/89, mB5.5/67, Ms5.2/91, Ms7 5.0/88*

*DJA **27** 06:19:11.9±0.2, 6°.5S×144°.3E±°, h12km±1km, M5.5/115, mb5.5/115, mB6.0/85, MLv6.3/7, Mw5.6/131, Mw(mB)5.6/85, MwMwp5.4/36, Mwp5.5/36*

*NEIC **27** 06:19:12.2±2.0, 6°.40S±0°.07×143°.03E±0°.07, h12km±1km, mb5.8/283, Ms_20 5.6/792, Mww5.7/27, Error ellipse: s-maj=11.3km s-min=11.1km az=169.0*

*NEIC **27** 06:19:12.9, 6°.42S×142°.81E, h12km, Moment Tensor Solution. Duration: 39s7 Moment tensor: Scale 10^17^Nm; Mrr2.87; Mθθ-1.91; Mφφ-0.96; Mrθ3.42; Mθφ2.16; Mφr-1.20; Fault plane solution: M=4.90000×10^17^ NP1: φs113.15000°, δ69.81000°, λ76.27000°. NP2: φs328.44000°, δ24.25000°, λ122.83000°. Principal axes:*

T 4.6508, Plg63.0000°, Azm2.0000°; N 0.5002, Plg13.0000°, Azm118.0000°; P -5.1510, Plg24.0000°, Azm214.0000°;

*NEIC **27** 06:19:12.9, 6°.42S×143°.01E, h12km*

*GCMT **27** 06:19:14.2±0.1, 6°.43S±0°.01×143°.00E±0°.01, h12km, MW5.6/142, Moment Tensor Solution. s120,c192; s142,c284; Duration: 1s6 Moment tensor: Scale 10^17^ Nm; Mrr2.47±.03; Mθθ-1.70±.03; Mφφ-0.76±.03; Mrθ1.06±.08; Mθφ2.09±.03; Mφr-1.44±.08; Best double couple: M=3.44300×10^17^ NP1:φs139.00000°,δ61.00000°, λ103.00000°. NP2:φs295.00000°, δ31.00000°, λ68.00000°. Principal axes: T 3.0350, Plg71.0000°, Azm77.0000°; N 0.8180, Plg11.0000°, Azm313.0000°; P -3.8510, Plg15.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 06:19:12.0±0.4, 6°.47S±0°.03×143°.10E±0°.04, h15km±2km, h16km: pP-P, n1369, c1961/1035, mb5.7/271, MS5.6/459, 22C-9D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.35**	**233**	P	Pn	06 20 04.5	+0.7
GENI	**Genyem**	**4.84**	**323**	P	Pn	06 20 26.1	+1.8
GENI	**Genyem**	**4.84**	**323**	P	Pn	06 20 24.3	0.0
PMG	**Port Moresby**	**4.97**	**126**	Pn	Pn	06 20 24.3	-1.8
PMG	**Port Moresby**	**4.97**	**126**	Pn	Pn	06 20 24.6	-1.5
	190nm,0.5s,baz=329,slow=4.9,SNR=72						
PMG				Sn	Sn	06 21 21.1	-2.1
	15nm,0.3s,baz=232,slow=6.5,SNR=4.5						
MANU	**Manus Island**	**6.12**	**44**	Pn	Pn	06 20 42.0	+0.1
MANU	**Manus Island**	**6.12**	**44**	P	Pn	06 20 44.5	+2.6
SMPI	**Sarmi**	**6.24**	**315**	P	Pn	06 20 43.4	-0.2
	2µm,1.0s,40µm15µm13nm						
COEN	**Coen**	**7.44**	**179**	P	Pn	06 21 01.6	+1.5
	baz=7.5,SNR=22						
COEN	**Coen**	**7.44**	**179**	Pn	Pn	06 21 01.3	+1.2
COEN	**Coen**	**7.44**	**179**	P	Pn	06 21 02.0	+1.9
RABL	**Rabaul**	**9.30**	**76**		Pn	06 21 27.6	+1.9
RABL	**Rabaul**	**9.30**	**76**	P	Pn	06 21 29.9	+4.2
FAKI	**Fak Fak**	**11.38**	**288**	Pn	Pn	06 21 51.3	-2.8
FAKI	**Fak Fak**	**11.38**	**288**	P	Pn	06 21 53.4	-0.7
FAKI	**Fak Fak**	**11.38**	**288**	P	Pn	06 21 53.8	-0.3
	252nm,0.8s,6µm8µm						
MTSU	**Mount Surprise**	**11.65**	**174**	P	Pn	06 21 59.6	+1.7
	baz=12,SNR=22						
MTSU	**Mount Surprise**	**11.65**	**174**	P	Pn	06 22 00.1	+2.2
SAUI	**Saumlaki**	**11.80**	**262**	Pn	Pn	06 21 58.1	-1.9
SAUI	**Saumlaki**	**11.80**	**262**	P	Pn	06 22 01.0	+1.0
SAUI	**Saumlaki**	**11.80**	**262**	P	Pn	06 21 59.2	-0.8
	3µm,1.0s,25µm16µm						
KDU	**Kakadu**	**12.16**	**239**	P	Pn	06 22 02.7	-2.1
	baz=12,SNR=105						
KDU	**Kakadu**	**12.16**	**239**	P	Pn	06 22 05.4	+0.6
SWI	**Sorong**	**13.06**	**295**	P	Pn	06 22 14.1	-3.0
	275nm,0.9s,3µm4µm						
BNDI	**Bandanaira**	**13.28**	**278**	P	Pn	06 22 20.8	+0.7
BNDI	**Bandanaira**	**13.28**	**278**	P	Pn	06 22 19.1	-1.0
	1µm,1.1s,18µm						
MTN	**Manton Dam**	**13.39**	**241**	P	Pn	06 22 19.6	-2.0
	baz=13,SNR=69						
MTN	**Manton Dam**	**13.39**	**241**	Pn	Pn	06 22 18.9	-2.7
MTN	**Manton Dam**	**13.39**	**241**	P	Pn	06 22 21.7	+0.1
CTA	**Charters Tower**	**13.88**	**168**	P	Pn	06 22 30.7	+2.4
CTA	**Charters Tower**	**13.88**	**168**	Pn	Pn	06 22 27.1	-1.2
	0.3nm,0.3s,baz=336,slow=14,SNR=3.9						
CTA				Lg	Lg	06 26 32.5	
	0.7nm,0.3s,baz=59,slow=19,SNR=3.1						
CTA				LR	LR	06 27 47.1	
	comp=Z,13µm,18.8s,baz=354,slow=37						
CTAO	**Charters Tower**	**13.88**	**168**	Pn	Pn	06 22 31.3	+3.0
CTAO	**Charters Tower**	**13.88**	**168**	P	Pn	06 22 30.7	+2.4
CTAO	**Charters Tower**	**13.88**	**168**	P	Pn	06 22 31.3	+3.0
QIS	**Mount Isa**	**14.41**	**193**	P	Pn	06 22 35.4	-0.2
	baz=14,SNR=25						
QIS	**Mount Isa**	**14.41**	**193**	P	Pn	06 22 35.8	+0.2
WB0	**Warramunga Arr**	**15.69**	**212**		Pn	06 22 49.5	-3.3
WB2	**Warramunga Arr**	**15.86**	**212**	Pn	Pn	06 22 52.4	-2.5
WC3	**Warramunga Arr**	**15.86**	**211**	P	Pn	06 22 52.6	-2.3
	baz=16						
I07AU	**WARRAMUNGA INF**	**15.87**	**212**	I	I	07 53 40.0	
	baz=27,slow=312,SNR=1.3						
WRA	**Warramunga Arr**	**15.87**	**212**	Pn	Pn	06 22 53.5	-1.5
WRA	**Warramunga Arr**	**15.87**	**212**	P	Pn	06 22 53.5	-1.5
WRA				pmax	pmax		
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**15.87**	**212**	Pn	Pn	06 22 51.5	-3.5
	comp=Z,3.9nm,0.3s,baz=33,slow=12,SNR=49						
WRA				Sn	Sn	06 25 43.1	-7.6
	comp=Z,1.6nm,0.3s,baz=35,slow=23,SNR=2.5						
WRA				Lg	Lg	06 27 31.5	
	comp=Z,1.7nm,0.3s,baz=165,slow=40,SNR=1.5						
WRA				LR	LR	06 29 37.6	
	comp=Z,53µm,20.0s,baz=28,slow=40						
	comp=Z,66nm,0.9s						
NLAI	**Namlea**	**16.26**	**281**	P	Pn	06 23 00.8	+0.7
	comp=Z,156nm,1.5s,comp=Z,4µm						
LBMI	**Labuha**	**16.61**	**290**	P	Pn	06 23 04.4	-0.1
	comp=Z,391nm,1.1s,comp=Z,7µm						
KNRA	**Kununurra**	**16.77**	**236**	P	Pn	06 23 05.3	-1.2
	baz=17						
KNRA	**Kununurra**	**16.77**	**236**	Pn	Pn	06 23 03.9	-2.7
KNRA				IAmb	IAmb	06 23 13.8	
	comp=Z,487nm,0.8s						
HNR	**Honiara**	**16.94**	**101**	Pn	Pn	06 23 09.5	+0.8
HNR				IAmb	IAmb	06 23 13.7	
	comp=Z,385nm,0.9s						
HNR	**Honiara**	**16.94**	**101**	P	P	06 23 12.0	+1.4
HNR	**Honiara**	**16.94**	**101**	Pn	Pn	06 23 09.5	+0.8
	comp=Z,44nm,0.3s,baz=172,slow=6.7,SNR=1.7						
TNTI	**Ternate**	**17.27**	**294**	P	Pn	06 23 10.6	-2.2
TNTI	**Ternate**	**17.27**	**294**	P	P	06 23 14.2	-0.1
TNTI	**Ternate**	**17.27**	**294**	P	Pn	06 23 11.2	-1.7
	comp=Z,96nm,1.0s,comp=Z,4µmcomp=Z,2µm						
SANI	**Sanana**	**17.62**	**284**	P	P	06 23 18.8	+0.7
SANI	**Sanana**	**17.62**	**284**	P	Pn	06 23 13.9	-3.2
	comp=Z,255nm,1.0s,comp=Z,4µmcomp=Z,5µm						
SOEI	**Soe**	**18.93**	**259**	P	P	06 23 32.5	-0.2
SOEI				IAmb	IAmb	06 23 39.8	
	comp=Z,917nm,1.2s						
SOEI	**Soe**	**18.93**	**259**	P	Pn	06 23 34.0	+0.7
SOEI	**Soe**	**18.93**	**259**	P	P	06 23 32.7	+0.1
	comp=Z,1µm,1.1s,comp=Z,12µmcomp=Z,11µm						
AS31	**Alice Springs**	**19.25**	**206**	P	Pn	06 23 36.9	-0.1
ASAR	**Alice Springs**	**19.25**	**206**	P	P	06 23 36.3	+0.3
	comp=Z,7.4nm,0.3s,baz=34,slow=9.8,SNR=128						
ASAR				S	Sn	06 27 05.2	-7.5
	comp=Z,13nm,0.9s,baz=10,slow=6.9,SNR=1.8						
ASAR				Lg	Lg	06 29 14.4	
	comp=Z,0.8nm,0.3s,baz=107,slow=38,SNR=1.7						
ASAR				LR	LR	06 31 34.6	
	comp=Z,33µm,20.5s,baz=33,slow=39						
	comp=Z,63nm,0.6s						
ASPA	**Alice Springs**	**19.25**	**206**	P	Pn	06 23 37.9	+0.8
	baz=19						
GUMO	**Guam**	**20.00**	**5**	P	P	06 23 44.0	-0.2
GUMO				IAmb	IAmb	06 23 51.5	
	comp=Z,1µm,1.6s						
GUMO	**Guam**	**20.00**	**5**	P	Pn	06 23 46.1	+0.1
GUMO	**Guam**	**20.00**	**5**	P	P	06 23 44.0	-0.2
GUMO				pmax	pmax		
	comp=Z,1µm,1.7s						
GUMO	**Guam**	**20.00**	**5**	P	P	06 23 42.1	-2.1
	comp=Z,3.8nm,0.3s,baz=177,slow=7.8,SNR=4.6						
GUMO				LR	LR	06 31 00.5	
	comp=Z,4µm,19.6s,baz=194,slow=36						
	comp=Z,185nm,0.8s						
QLP	**Quilpie**	**20.03**	**177**	P	Pn	06 23 46.6	+0.3
	baz=20,SNR=27						
QLP	**Quilpie**	**20.03**	**177**	P	Pn	06 23 47.4	+1.1
PATS	**Pohnpei**	**20.13**	**49**	P	Pn	06 23 47.2	-0.3
	baz=20,SNR=4.6						
PATS	**Pohnpei**	**20.13**	**49**	P	P	06 23 44.4	-1.2
PATS				IAMs_20	IAMs_20	06 30 45.1	
	comp=Z,24µm,19.0s						
PATS	**Pohnpei**	**20.13**	**49**	P	P	06 23 46.4	+0.8
SGSI	**Sangihe**	**20.24**	**299**	P	P	06 23 46.0	-0.9
	comp=Z,445nm,0.8s,comp=Z,14µm						
EIDS	**Eidsvold**	**20.29**	**159**	P	Pn	06 23 48.8	-0.5
	baz=20,SNR=17						
EIDS	**Eidsvold**	**20.29**	**159**	P	Pn	06 23 48.5	-0.8
EIDS	**Eidsvold**	**20.29**	**159**	P	Pn	06 23 48.3	-1.0
KMSI	**Cibinong**	**20.33**	**289**	P	P	06 23 47.5	-0.3
	comp=Z,1µm,1.1s,comp=Z,13µmcomp=Z,4µm						
BBSI	**Bau Bau**	**20.44**	**272**	P	P	06 23 49.2	+0.1
	comp=Z,259nm,1.2s,comp=Z,6µmcomp=Z,6µm						
FITZ	**Fitzroy Crossi**	**20.58**	**234**	P	P	06 23 50.9	+0.3
	baz=20,SNR=234						
FITZ	**Fitzroy Crossi**	**20.58**	**234**	P	P	06 23 50.8	+0.3
RMQ	**Roma**	**20.62**	**165**	P	Pn	06 23 54.1	+0.8
	baz=21,SNR=7.7						
RMQ	**Roma**	**20.62**	**165**	P	Pn	06 23 53.6	+0.4
MMRI	**Maumere**	**20.79**	**263**	P	P	06 23 53.9	+1.0
MMRI				IAmb	IAmb	06 24 07.3	
	comp=Z,355nm,1.2s						
MMRI	**Maumere**	**20.79**	**263**	P	Pn	06 23 54.4	-0.9
MMRI	**Maumere**	**20.79**	**263**	P	P	06 23 52.6	-0.3
	comp=Z,284nm,0.8s,comp=Z,7µmcomp=Z,8µm						
MMRI				pP	Pn	06 23 55.8	+0.5
	comp=Z,284nm,0.8s,comp=Z,7µmcomp=Z,8µm						
LUWI	**Luwuk**	**20.98**	**284**	P	P	06 23 55.3	+0.4
LUWI	**Luwuk**	**20.98**	**284**	P	Pn	06 23 56.9	-0.7
LUWI	**Luwuk**	**20.98**	**284**	P	P	06 23 55.7	+0.8
	comp=Z,769nm,1.3s,comp=Z,1µmcomp=Z,9µm						
INKA	**Innaminka**	**21.27**	**186**	P	P	06 24 00.8	+2.9
EDFI	**Ende, Flores**	**21.34**	**263**	P	P	06 23 58.0	-0.9
	comp=Z,278nm,1.7s,comp=Z,5µmcomp=Z,8µm						
DAV	**Davao City (W)**	**22.06**	**307**	P	P	06 24 12.0	+5.5
DAV	**Davao City (W)**	**22.06**	**307**	P	P	06 24 11.9	+5.5
DAV				S	Sn	06 28 16.3	-4.0
MRSI	**Marisa**	**22.22**	**287**	P	P	06 24 08.5	+0.3
	comp=Z,230nm,1.3s,comp=Z,3µmcomp=Z,4µm						
MRSI				pP	pP	06 24 11.2	-1.5
	comp=Z,230nm,1.3s,comp=Z,3µmcomp=Z,4µm						
OOD	**Oodnadatta**	**22.35**	**197**	P	P	06 24 11.3	+1.9
BASI	**Baing, Sumba**	**22.59**	**259**	P	P	06 24 12.9	+0.7
	comp=Z,617nm,1.0s,comp=Z,8µmcomp=Z,8µm						
BKSI	**Bulukumba**	**22.89**	**272**	P	P	06 24 15.7	+0.4
	comp=Z,478nm,1.3s,comp=Z,6µmcomp=Z,6µm						
BKSI				pP	pP	06 24 17.9	-1.9
	comp=Z,478nm,1.3s,comp=Z,6µmcomp=Z,6µm						
KAPI	**Kappang**	**23.28**	**272**	P	P	06 24 19.6	+0.3
KAPI	**Kappang**	**23.28**	**272**	P	P	06 24 19.6	+0.3
KAPI				pmax	pmax		
	comp=Z,566nm,1.3s						
WRKA	**Warakurna**	**23.28**	**216**	P	P	06 24 18.9	-0.4
	baz=23,SNR=353						
WRKA	**Warakurna**	**23.28**	**216**	P	P	06 24 19.9	+0.6
AULRC	**Lightning Ridg**	**23.30**	**169**	P	P	06 24 20.3	+0.9
TTSI	**Tana Toraja**	**23.45**	**277**	P	P	06 24 21.5	+0.5
	comp=Z,360nm,1.8s,comp=Z,8µm						
TOLI2	**Tolitoli**	**23.52**	**288**	P	P	06 24 20.6	-1.2
TOLI2				IAmb	IAmb	06 24 29.3	
	comp=Z,278nm,1.0s						
TOLI2	**Tolitoli**	**23.52**	**288**	P	P	06 24 23.0	+1.3
MPSI	**Mapaga**	**24.12**	**285**	P	P	06 24 26.9	-0.6
	comp=Z,110nm,0.9s,comp=Z,3µmcomp=Z,4µm						
LCRK	**Leigh Creek**	**24.29**	**190**	P	P	06 24 29.3	+0.4
KOUNC	**Koumac, New Ca**	**24.86**	**126**	P	P	06 24 33.6	-0.5
KOUNC				IAmb	IAmb	06 24 41.0	
	comp=Z,126nm,0.9s						
KOUNC	**Koumac, New Ca**	**24.86**	**126**	P	P	06 24 36.2	+2.1
CMSA	**Cobar Meteorol**	**25.06**	**175**	P	P	06 24 38.7	+2.9
	baz=25,SNR=17						
CMSA	**Cobar Meteorol**	**25.06**	**175**	P	P	06 24 37.4	+1.6
ARMA	**Armidale**	**25.14**	**162**	P	P	06 24 39.6	+2.9
	baz=25,SNR=9.9						
ARMA	**Armidale**	**25.14**	**162**	P	P	06 24 37.9	+1.2
ARMA				IAmb	IAmb	06 24 46.4	
	comp=Z,364nm,1.7s						
ARMA	**Armidale**	**25.14**	**162**	P	P	06 24 40.7	+4.0
MULG	**Mulgathing**	**25.17**	**199**	P	P	06 24 39.9	+3.1
PLAI	**Plampang**	**25.21**	**263**	P	P	06 24 37.0	-0.4
PLAI	**Plampang**	**25.21**	**263**	P	P	06 24 35.6	-1.8
	comp=Z,114nm,0.8s,comp=Z,2µmcomp=Z,3µm						
STKA	**Stephens Creek**	**25.32**	**183**	P	P	06 24 39.4	+1.1
	baz=25,SNR=13						
STKA	**Stephens Creek**	**25.32**	**183**	P	P	06 24 37.9	-0.3
STKA	**Stephens Creek**	**25.32**	**183**	P	P	06 24 39.3	+1.1
STKA	**Stephens Creek**	**25.32**	**183**	P	P	06 24 37.9	-0.3
STKA				pmax	pmax		
	comp=Z,12nm,0.8s						
STKA				MLR	MLR		
	comp=Z,4µm,18.0s						
STKA	**Stephens Creek**	**25.32**	**183**	P	P	06 24 36.2	-2.0
	comp=Z,18nm,0.7s,baz=2.5,slow=12,SNR=18						
STKA				S	S	06 29 02.6	-1.2
	comp=Z,5.7nm,0.8s,baz=102,slow=22,SNR=0.9						
STKA				LR	LR	06 35 44.7	
	comp=Z,17µm,19.6s,baz=357,slow=39						
	comp=Z,18nm,0.7s						
AUPHS	**Peel High Scho**	**25.57**	**164**	P	P	06 24 44.3	+3.8
TWSI	**Taliwang, Sumb**	**26.08**	**263**	P	P	06 24 44.9	-0.5
	comp=Z,55nm,1.0s,comp=Z,1µm						
AUDCS	**Dubbo College**	**26.14**	**169**	P	P	06 24 48.6	+2.9
BKB	**Balikpapan**	**26.64**	**280**	P	P	06 24 49.5	-0.9
MBWA	**Marble Bar**	**26.93**	**235**	P	P	06 24 52.6	-0.2
MBWA				IAmb	IAmb	06 25 26.4	
	comp=Z,187nm,1.4s						
MBWA	**Marble Bar**	**26.93**	**235**	IAMs_20	IAMs_20	06 36 05.5	
	comp=Z,25µm,22.0s						
MBWA	**Marble Bar**	**26.93**	**235**	P	P	06 24 54.7	+1.8
BBOO	**Buckleboo**	**27.02**	**193**	P	P	06 24 52.7	-0.9
	baz=27,SNR=15						
BBOO	**Buckleboo**	**27.02**	**193**	P	P	06 24 54.2	+0.6
BBOO				IAMs_20	IAMs_20	06 35 55.3	
	comp=Z,15µm,19.0s						
BBOO	**Buckleboo**	**27.02**	**193**	P	P	06 24 56.4	+2.8
PSA00	**Pilbara Seismi**	**27.04**	**234**	P	P	06 24 53.0	-0.9
PSA00	**Pilbara Seismi**	**27.04**	**234**	P	P	06 24 53.1	-0.7
PSA00				IAmb	IAmb	06 25 02.5	
	comp=Z,78nm,0.9s						
PSA00				IAMs_20	IAMs_20	06 36 10.5	
	comp=Z,28µm,21.0s						
PSA00	**Pilbara Seismi**	**27.04**	**234**	P	P	06 24 54.9	+1.0
PSAB1	**Pilbara Seismi**	**27.05**	**234**	IAMs_20	IAMs_20	06 35 43.0	
	comp=Z,15µm,21.0s						
HTT	**Hallett**	**27.11**	**188**	P	P	06 24 55.9	+1.5
	baz=27,SNR=13						
HTT	**Hallett**	**27.11**	**188**	P	P	06 24 57.6	+3.2
DZM	**Mont Dzumac**	**27.36**	**127**	P	P	06 24 57.5	+0.6
DZM				IAmb	IAmb	06 25 08.0	
	comp=Z,203nm,1.4s						
DZM	**Mont Dzumac**	**27.36**	**127**	P	P	06 25 00.1	+3.2
DZM	**Mont Dzumac**	**27.36**	**127**	P	P	06 24 56.2	-0.7
	comp=Z,38nm,1.0s,baz=299,slow=7.6,SNR=13						
DZM				S	S	06 29 24.8	-12
	comp=Z,2.9nm

comp=Z,14µm,19.0s
BLJI Banyuglugur 29.30 266 P **P** **06 25 13.5 -0.7**
comp=Z,19nm,0.6s,comp=Z,2µm
GMJI Gumukmas 29.46 265 P **P** **06 25 15.0 -0.6**
KKM Kota Kinabalu 29.57 294 P **P** **06 25 15.9 -0.8**
KKM Kota Kinabalu 29.57 294 P **P** **06 25 18.4 +1.7**
ARPS Mount Arapiles 30.18 182 P **P** **06 25 22.0 +0.3**
baz=30,SNR=7.8
ARPS Mount Arapiles 30.18 182 P **P** **06 25 24.2 +2.5**
BWJI Bawean 30.27 269 P **P** **06 25 22.7 -0.1**
comp=Z,458nm,0.9s
MEEK Meekatharra 30.76 227 P **P** **06 25 26.9 -0.1**
baz=31,SNR=7.8
MEEK Meekatharra 30.76 227 P **P** **06 25 30.4 +3.4**
PWJI Pagerwojo 31.08 265 P **P** **06 25 29.5 -0.4**
comp=Z,30nm,1.0s
KMBL Kambalda 31.75 216 P **P** **06 25 36.4 +0.7**
baz=32,SNR=12
KMBL Kambalda 31.75 216 P **P** **06 25 37.9 +2.3**
GIRL Giralia 32.13 237 P **P** **06 25 41.0 +1.9**
baz=32,SNR=4.0
STKI Sintang 32.22 280 P **P** **06 25 41.0 +1.0**
UGM Wanagama 32.35 265 P **P** **06 25 40.2 -0.9**
UGM Wanagama 32.35 265 P **P** **06 25 43.7 +2.5**
UGM Wanagama 32.35 265 P **P** **06 25 40.8 -0.4**
comp=Z,199nm,1.2s,comp=Z,5µm
SMRI Semarang 32.44 267 P **P** **06 25 42.5 +0.6**
SMRI Semarang 32.44 267 P **P** **06 25 44.7 +2.8**
SMRI Semarang 32.44 267 P **P** **06 25 42.2 +0.3**
comp=Z,343nm,1.9s,comp=Z,5µm
JCJ Chichijima 33.38 359 LR LR 06 38 41.4
comp=Z,1µm,21.7s,baz=160,slow=35
KSM Kuching 33.67 282 IAmb IAmb 06 25 57.4
comp=Z,289nm,2.0s
KSM Kuching 33.67 282 P **P** **06 25 53.9 +1.2**
KPJI Karang Pucung 33.93 266 P **P** **06 25 54.0 -0.9**
comp=Z,139nm,1.1s,comp=Z,2µm
MORW Morawa 34.02 225 IAMs_20 IAMs_20 06 40 03.9
comp=Z,15µm,22.0s
CMJI Cimerak 34.40 266 P **P** **06 25 58.2 -0.8**
comp=Z,232nm,1.0s,comp=Z,2µm
KLBR Kellerberrin 34.44 220 P **P** **06 26 01.2 +2.0**
JCJI Jatiwangi 34.60 268 P **P** **06 26 00.1 -0.7**
comp=Z,209nm,1.1s
BBJI Bungbulang 35.20 266 P **P** **06 26 04.9 -1.1**
LEM Lembang 35.24 267 LR LR 06 44 51.4
comp=Z,3µm,19.4s,baz=106,slow=44
LEM Lembang 35.24 267 P **P** **06 26 06.4 -0.1**
comp=Z,127nm,1.1s,comp=Z,2µmcomp=Z,2µm
NWAO Narrogin (SRO) 35.65 219 IAMs_20 IAMs_20 06 40 46.2
comp=Z,15µm,22.0s
NWAO Narrogin (SRO) 35.65 219 LR LR 06 40 56.9
comp=Z,13µm,19.5s,baz=37,slow=37
CNJI Cibinong 35.72 266 P **P** **06 26 09.7 -0.7**
comp=Z,218nm,1.1s,comp=Z,2µm
JOW Kunigami 36.09 337 P **P** **06 26 13.2 -0.2**
JOW IAmb IAmb 06 26 18.6
comp=Z,166nm,1.6s
JOW Kunigami 36.09 337 P **P** **06 26 15.3 +2.0**
JOW Kunigami 36.09 337 LR LR 06 38 08.8
comp=Z,2µm,21.1s,baz=173,slow=32
DBJI Dramaga 36.11 268 P **P** **06 26 13.3 -0.5**
comp=Z,61nm,0.5s,comp=Z,11µm
SKJI Sukabumi 36.29 267 P **P** **06 26 15.8 +0.5**
comp=Z,276nm,1.0s,comp=Z,8µm
TAU Tasmania Unive 36.48 175 IAMs_20 IAMs_20 06 39 46.4
comp=Z,9µm,19.0s
YULB Yu-li 36.53 325 P **P** **06 26 16.5 -0.8**
TPUB Ta-pu 36.85 324 P **P** **06 26 21.0 +1.1**
NACB Ninganchiao 36.98 326 IAmb IAmb 06 26 45.0
comp=Z,202nm,1.3s
NACB Ninganchiao 36.98 326 P **P** **06 26 22.8 +1.8**
PPBI Pangkal Pinang 37.10 275 P **P** **06 26 20.6 -1.6**
DGTI Dogotuki 37.16 108 P **P** **06 26 25.4 +2.7**
CGJI Cibinong 37.16 268 P **P** **06 26 21.1 -1.6**
comp=Z,70nm,1.0s,comp=Z,2µm
XMI Christmas Isla 37.20 261 P **P** **06 26 25.4 +2.3**
XMIS Christmas Isla 37.24 261 IAmb IAmb 06 26 30.0
comp=Z,159nm,0.9s
XMIS Christmas Isla 37.24 261 P **P** **06 26 25.0 +1.6**
YHNB Yeheng 37.50 326 IAmb IAmb 06 26 32.7
comp=Z,418nm,1.9s
YHNB Yeheng 37.50 326 P **P** **06 26 26.8 +1.3**
TATO Taipei 37.68 327 P **P** **06 26 25.6 -1.3**
TATO Taipei 37.68 327 P **P** **06 26 30.2 +3.3**
KASI Kota Agung 38.40 269 P **P** **06 26 32.1 -1.1**
comp=Z,80nm,1.1s,comp=Z,881nm
LWLI Liwa 38.87 270 P **P** **06 26 38.0 +0.7**
comp=Z,130nm,0.6s
DSRI Dabo 38.89 277 P **P** **06 26 38.3 +1.0**
comp=Z,120nm,1.2s,comp=Z,2µm
TPRI Tanjung Pinang 39.20 279 P **P** **06 26 40.7 +0.8**
comp=Z,118nm,0.8s
QZH Quanzhou 39.30 324⇓*i*P P **06 26 42.8 +2.3**
QZH PcS **PcS** **06 32 40.3 +1.1**
QZH S **S** **06 32 44.3 +3.3**
QZH pmax pmax
comp=Z,460nm,4.2s
QZH LR LR
comp=Z,1µm,24.0s
QZH LR LR
comp=Z,1µm,19.2s
QZH LR LR
comp=Z,3µm,25.1s
LHSI Lahat 39.50 272 P **P** **06 26 42.7 +0.3**
comp=Z,133nm,1.1s,comp=Z,4µm
MNAI Manna 40.01 271 P **P** **06 26 46.7 0.0**
comp=Z,132nm,1.9s,comp=Z,3µm
OUZ Omahuta 40.06 140 IAMs_20 IAMs_20 06 42 32.5
comp=Z,9µm,19.0s
JMN Monobe 40.92 348 IAmb IAmb 06 26 55.5
comp=Z,221nm,1.6s
JMN Monobe 40.92 348 P **P** **06 26 54.3 +0.4**
QIZ Qiongzhong 41.42 308 P **P** **06 26 58.5 +0.2**
QIZ S **S** **06 33 15.0 +1.9**
QIZ sS **sS** **06 33 21.5 +0.3**
QIZ LR LR
comp=Z,2µm,20.1s
QIZ LR LR
comp=Z,980nm,17.7s
QIZ LR LR
comp=Z,1µm,17.6s
KRJI Kerinci 41.74 274 P **P** **06 27 02.2 +1.1**
comp=Z,711nm,1.0s,comp=Z,8µm
INU Inuyama 41.99 353 P **P** **06 27 04.9 +2.3**
JGF Kuroka 42.19 353 P **P** **06 27 05.9 +1.6**
BKNI Bangkinang 42.51 278 P **P** **06 27 07.3 0.0**
BKNI IAmb IAmb 06 27 16.3
comp=Z,276nm,1.3s
BKNI Bangkinang 42.51 278 P **P** **06 27 09.4 +2.1**
BKNI Bangkinang 42.51 278 P **P** **06 27 07.8 +0.5**
comp=Z,194nm,1.2s,comp=Z,3µmcomp=Z,2µm
SSE Sheshan 42.83 332 P **P** **06 27 10.0 +0.4**
SSE S **S** **06 33 35.0 +1.5**
SSE pmax pmax
comp=Z,30nm,1.6s
SSE pmax pmax
comp=Z,250nm,8.0s
SSE LR LR
comp=Z,330nm,18.2s
SSE LR LR
comp=Z,420nm,18.4s
HIZ Hauiti 42.92 143 IAmb IAmb 06 27 19.4
comp=Z,177nm,1.0s
MJAR Matsushiro Arr 43.03 354 P **P** **06 27 07.6 -3.5**
comp=Z,26nm,1.1s,baz=182,slow=10,SNR=26
MJAR PcP **PcP** **06 28 59.9 -1.4**
comp=Z,5.2nm,0.8s,baz=174,slow=2.9,SNR=3.2
MJAR S S 06 33 21.0 -15
comp=Z,1.0nm,0.4s,baz=201,slow=27,SNR=1.3
comp=Z,26nm,1.1s
MAJO Matsushiro 43.03 354 P **P** **06 27 07.8 -3.3**
MAJO Matsushiro 43.03 354 P **P** **06 27 12.5 +1.4**
MAJO Matsushiro 43.03 354 P **P** **06 27 07.8 -3.3**
MAJO pmax pmax
comp=Z,145nm,1.7s
PPSI Pulau Pagai 43.10 273 P **P** **06 27 12.6 +0.6**
comp=Z,220nm,1.1s,comp=Z,2µm
RAO Raoul Island 43.16 127 LR LR 06 43 04.3
comp=Z,2µm,21.4s,baz=298,slow=33
IPM Ipoh 43.39 283 P **P** **06 27 15.8 +1.4**
DSZ Denniston Nort 43.41 148 IAMs_20 IAMs_20 06 45 04.7
comp=Z,9µm,19.0s
JCZ Jackson Bay 43.69 153 P **P** **06 27 18.4 +1.9**
WTVZ West Tongariro 43.75 143 P **P** **06 27 20.3 +3.3**
NNVZ North Ngauruho 43.77 143 P **P** **06 27 19.2 +1.9**
NTVZ North Tongarir 43.79 143 P **P** **06 27 19.4 +2.0**
TMVZ Te Maari 43.81 143 P **P** **06 27 22.2 +4.6**
OTVZ Oturere 43.82 143 P **P** **06 27 21.1 +3.4**
SNVZ South Ngauruho 43.82 143 P **P** **06 27 20.2 +2.5**
ETVZ East Tongariro 43.83 143 P **P** **06 27 21.7 +3.9**
INZ Inchbonnie 43.93 150 IAMs_20 IAMs_20 06 44 57.6
comp=Z,8µm,20.0s
KULM Kulim 43.95 284 P **P** **06 27 16.7 -2.2**
THZ Tophouse 44.00 148 IAMs_20 IAMs_20 06 45 23.4
comp=Z,6µm,19.0s
URZ Urewera 44.15 141 P **P** **06 27 20.7 +0.5**
comp=Z,19nm,0.9s,baz=18,slow=6.1,SNR=7.3
URZ LR LR 06 47 42.6
comp=Z,4µm,18.4s,baz=39,slow=39
comp=Z,19nm,0.9s
JMM Marumori 44.16 357 P **P** **06 27 22.6 +2.5**
RTZ Ruatahuna 44.29 141 IAmb IAmb 06 27 31.2
comp=Z,102nm,1.0s
RTZ Ruatahuna 44.29 141 P **P** **06 27 23.7 +2.3**
BKZ Black Stump Fm 44.32 142 P **P** **06 27 21.4 -0.2**
BKZ IAMs_20 IAMs_20 06 45 36.3
comp=Z,6µm,19.0s
BKZ Black Stump Fm 44.32 142 P **P** **06 27 24.4 +2.8**
TUWZ Tuamarina 44.33 147 P **P** **06 27 21.9 +0.4**
LTZ Lake Taylor 44.39 149 IAMs_20 IAMs_20 06 45 24.8
comp=Z,9µm,20.0s
RPZ Rata Peaks 44.47 151 P **P** **06 27 21.4 -1.2**
RPZ IAmb IAmb 06 27 30.3
comp=Z,83nm,1.0s
RPZ IAMs_20 IAMs_20 06 44 52.9
comp=Z,8µm,20.0s
RPZ Rata Peaks 44.47 151 LR LR 06 45 04.1
comp=Z,9µm,19.9s,baz=312,slow=35
PYZ Puysegur Point 44.48 157 IAmb IAmb 06 27 27.3
comp=Z,118nm,1.1s
PYZ Puysegur Point 44.48 157 P **P** **06 27 26.4 +3.7**
JSD Sado 44.51 355 IAmb IAmb 06 27 28.9
comp=Z,342nm,1.9s
JSD Sado 44.51 355 P **P** **06 27 26.7 +3.8**
LBZ Lake Benmore 44.57 152 P **P** **06 27 23.8 +0.4**
LBZ IAmb IAmb 06 27 33.0
comp=Z,189nm,1.8s
OXZ Oxford 44.67 150 IAMs_20 IAMs_20 06 45 21.1
comp=Z,7µm,19.0s
MRZ Mangatainoka R 44.73 145 IAMs_20 IAMs_20 06 46 23.0
comp=Z,7µm,18.0s
NJ2 Nanjing 44.74 330⇓*i*P P **06 27 26.0 +1.1**
NJ2 pP **pP** **06 27 30.0 +0.1**
NJ2 sP **sP** **06 27 31.5 -0.3**
NJ2 PP **PP** **06 29 09.3 -0.3**
NJ2 S **S** **06 34 05.5 +4.1**
NJ2 sS **sS** **06 34 11.8 +1.9**
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,680nm,5.2s
NJ2 LR LR
comp=Z,1µm,18.9s
NJ2 LR LR
comp=Z,1µm,18.9s
NJ2 LR LR
comp=Z,1µm,18.5s
WHZ Wether Hill Ro 44.77 155 IAmb IAmb 06 27 35.5
comp=Z,115nm,1.4s
KHZ Kahutara 44.79 148 IAMs_20 IAMs_20 06 46 00.4
comp=Z,8µm,19.0s
GVZ Greta Valley S 44.92 149 IAmb IAmb 06 27 30.0
comp=Z,51nm,0.7s
GVZ IAMs_20 IAMs_20 06 46 20.7
comp=Z,8µm,18.0s
RPSI Rantau Prapat 45.03 280 P **P** **06 27 26.9 -0.7**
RPSI IAmb IAmb 06 27 35.2
comp=Z,156nm,1.5s
PSI Prapat 45.06 280 P **P** **06 27 27.4 -0.5**
PSI Prapat 45.06 280 P **P** **06 27 26.9 -1.0**
PSI pmax pmax
comp=Z,156nm,1.5s
PSI MLR MLR
comp=Z,800nm,18.0s
CNSH ChangSha 45.11 321⇑*i*P P **06 27 30.0 +2.1**
CNSH S **S** **06 34 12.0 +5.2**
CNSH pmax pmax
comp=Z,37nm,1.5s
CNSH LR LR
comp=Z,950nm,21.2s
CNSH LR LR
comp=Z,910nm,23.7s
CNSH LR LR
comp=Z,1µm,16.5s
TJN Taejon 45.11 342 IAmb IAmb 06 27 38.3
comp=Z,84nm,0.9s
TJN IAMs_20 IAMs_20 06 43 41.7
comp=Z,8µm,21.0s
TJN Taejon 45.11 342 P **P** **06 27 29.5 +1.8**
TJN Taejon 45.11 342*ce*P **P** **06 27 27.8 +0.1**
BFZ Birch Farm 45.13 144 IAmb IAmb 06 27 34.0
comp=Z,61nm,0.9s
BFZ IAMs_20 IAMs_20 06 46 34.6
comp=Z,8µm,18.0s
BFZ Birch Farm 45.13 144 P **P** **06 27 31.1 +3.1**
PBSI Pulau Batu 45.17 276 P **P** **06 27 29.4 +0.7**
comp=Z,121nm,1.5s
SRIT Nakonsritamara 45.88 289 P **P** **06 27 36.4 +2.2**
KSRS Korea Array 45.94 343 P **P** **06 27 32.8 -1.5**
comp=Z,42nm,1.1s,baz=166,slow=9.9,SNR=73
KSRS PcP **PcP** **06 29 11.8 +0.7**
comp=Z,7.7nm,1.0s,baz=157,slow=4.3,SNR=2.5
KSRS S **S** **06 34 12.3 -6.1**
comp=Z,0.6nm,0.4s,baz=105,slow=29,SNR=0.9
KSRS LR LR 06 44 00.7
comp=Z,2µm,21.9s,baz=160,slow=32
comp=Z,42nm,1.1s
WHN Wuhan 45.97 325⇓*i*P P **06 27 36.5 +1.8**
WHN pP **pP** **06 27 40.5 +0.9**
WHN S **S** **06 34 22.5 +3.3**
WHN pmax pmax
comp=Z,520nm,1.7s
WHN pmax pmax
comp=Z,2µm,3.9s
WHN LR LR
comp=Z,4µm,17.0s
WHN LR LR
comp=Z,4µm,21.0s
WHN LR LR
comp=Z,4µm,18.9s
KS19 Wonju Array Si 46.00 343 IAmb IAmb 06 27 40.5
comp=Z,253nm,1.9s
SURA Surathani 46.02 289 P **P** **06 27 36.9 +1.5**
GSI Gunungsitoli 46.09 278 P **P** **06 27 35.0 -1.0**
comp=Z,52nm,0.9s
NAYO Nakonayok 46.31 297 P **P** **06 27 38.9 +1.3**
KCSI Kotacane, Aceh 46.33 281 P **P** **06 27 37.4 -0.5**
comp=Z,33nm,0.9s,comp=Z,1µm
INCN Inchon 46.35 342 P **P** **06 27 37.0 -0.5**
INCN Inchon 46.35 342 P **P** **06 27 39.0 +1.4**
INCN Inchon 46.35 342 P **P** **06 27 37.1 -0.5**
INCN pmax pmax
comp=Z,283nm,1.8s
INCN Inchon 46.35 342 P **P** **06 27 37.8 +0.3**
INCN P **P** **06 27 37.8 +0.3**
INCN S **S** **06 34 23.9 -0.6**
INCN S **S** **06 34 23.9 -0.6**
NONG Nongkai 46.36 302 P **P** **06 27 39.2 +1.3**
JTM Tenmabayashi 47.06 358 IAmb IAmb 06 27 49.9
comp=Z,78nm,0.8s
JTM Tenmabayashi 47.06 358 P **P** **06 27 44.8 +1.8**
HJU Haeju 47.15 341 P **P** **06 27 44.2 +0.4**
HJU S **S** **06 34 34.8 -1.0**
HJU AmB
comp=Z,531nm,2.2s
SNSI Sinabang, Aceh 47.52 279 P **P** **06 27 47.1 -0.1**
comp=Z,116nm,1.2s,comp=Z,3µm
MLSI Meulaboh, Aceh 47.82 282 P **P** **06 27 49.1 -0.4**
comp=Z,89nm,0.8s
PYAG Pyongyang 48.06 342 P **P** **06 27 50.4 -0.4**
PYAG S **S** **06 34 48.5 -0.3**
PYAG AmB
comp=Z,194nm,1.9s
GYA Guiyang 48.16 314⇓*i*P P **06 27 53.8 +1.8**
GYA sP sP 06 28 04.0 +5.1
GYA S **S** **06 34 52.3 +1.5**
GYA pmax pmax
comp=Z,54nm,1.3s
GYA LR LR
comp=Z,980nm,23.2s
SRDT SRDT 48.28 296 P **P** **06 27 55.4 +2.4**
ENH Enshi 48.72 320 IAmb IAmb 06 28 29.1
comp=Z,80nm,1.2s
ENH Enshi 48.72 320 P **P** **06 27 57.5 +1.3**
TIA Tai'an 48.96 332 P **P** **06 27 57.5 -0.4**
TIA S **S** **06 35 01.8 +0.2**
TIA ScS **ScS** **06 37 53.0 +3.1**
TIA pmax pmax
comp=Z,8.0nm,1.3s
TIA pmax pmax
comp=Z,200nm,3.6s
TIA LR LR
comp=Z,470nm,20.7s
TIA LR LR
comp=Z,500nm,13.6s
TIA LR LR
comp=Z,910nm,20.1s
DL2 Dalian 49.34 338 P **P** **06 28 02.3 +1.6**
DL2 S **S** **06 35 06.0 -0.9**
DL2 pmax pmax
comp=Z,33nm,1.5s
DL2 pmax pmax
comp=Z,370nm,8.2s
DL2 LR LR
comp=Z,1µm,25.7s
DL2 LR LR
comp=Z,1µm,18.7s
DL2 LR LR
comp=Z,1µm,20.1s
SUJ Sinuiju 49.42 341 P **P** **06 28 02.2 +0.9**
SUJ S **S** **06 35 07.1 -0.7**
SUJ AmB
comp=Z,426nm,2.1s
MCQ Macquarie Isla 49.57 168 P **P** **06 28 05.9 +3.7**
baz=50,SNR=4.3
MCQ Macquarie Isla 49.57 168 IAMs_20 IAMs_20 06 47 25.0
comp=Z,5µm,20.0s
MCQ Macquarie Isla 49.57 168 P **P** **06 28 05.3 +3.1**
MSHR Mys Shultsa 50.01 348*ce*P **P** **06 28 06.9 +1.1**
MSHR pmax pmax
comp=Z,40nm,1.7s
LYN LuoYang 50.02 327⇑P P **06 28 06.0 0.0**
LYN S **S** **06 35 15.5 -1.0**
LYN SS **SS** **06 38 44.0 -5.8**
LYN pmax pmax
comp=Z,86nm,1.6s
LYN pmax pmax
comp=Z,500nm,3.5s
LYN LR LR
comp=Z,1µm,16.7s
LYN LR LR
comp=Z,920nm,19.8s
LYN LR LR
comp=Z,2µm,20.6s
CMAR Chiang Mai Arr 50.10 300 P **P** **06 28 06.2 -0.7**
comp=Z,8.2nm,0.8s,baz=124,slow=5.7,SNR=42
CMAR PcP **PcP** **06 29 27.1 +0.7**
comp=Z,6.1nm,0.8s,baz=124,slow=3.6,SNR=4.6
CMAR S **S** **06 35 19.4 +1.3**
comp=Z,1.8nm,0.3s,baz=329,slow=47,SNR=1.9
comp=Z,8.2nm,0.8s
CHTO Chiang Mai 50.25 301 P **P** **06 28 07.9 -0.1**
CHTO Chiang Mai 50.25 301 P **P** **06 28 09.4 +1.4**
CHTO Chiang Mai 50.25 301 P **P** **06 28 07.9 -0.1**
CHTO pmax pmax
comp=Z,38nm,1.4s
CHTO Chiang Mai 50.25 301 P **P** **06 28 09.1 +1.0**
CHTO P **P** **06 28 09.1 +1.0**
CHTO S **S** **06 35 18.2 -2.0**
CHTO S **S** **06 35 18.2 -2.0**
KMI Kunming 50.27 310⇑P P **06 28 09.5 +1.1**
KMI S **S** **06 35 22.0 +1.2**
KMI pmax pmax
comp=Z,86nm,1.4s
KMI LR LR
comp=Z,430nm,24.2s
KMI LR LR
comp=Z,990nm,20.0s
KMI LR LR
comp=Z,1µm,22.8s
JKA Kamikawa-asahi 50.35 360 IAmb IAmb 06 28 11.2
comp=Z,262nm,1.6s
HNS HongShan 51.06 331⇑P P **06 28 13.5 -0.3**
HNS S **S** **06 35 29.3 -1.5**
HNS pmax pmax
comp=Z,38nm,1.8s
HNS LR LR
comp=Z,930nm,22.3s
HNS LR LR
comp=Z,1µm,20.8s
HNS LR LR
comp=Z,2µm,19.9s
SNY Shenyang 51.27 341⇓P P **06 28 15.0 -0.3**
SNY S **S** **06 35 32.0 -1.6**
SNY pmax pmax
comp=Z,26nm,1.1s
SNY pmax pmax
comp=Z,430nm,3.5s
SNY LR LR
comp=Z,770nm,17.2s
SNY LR LR
comp=Z,400nm,11.6s
SNY LR LR
comp=Z,900nm,18.2s
USA0B Ussuriysk Arra 51.42 350 IAmb IAmb 06 28 17.7
comp=Z,88nm,1.3s
USRK Ussuriysk Ar. 51.42 350 P **P** **06 28 15.0 -1.4**
comp=Z,39nm,1.0s,baz=167,slow=8.7,SNR=26
USRK S **S** **06 35 39.5 +3.9**
comp=Z,0.4nm,0.4s,baz=160,slow=18,SNR=1.3
comp=Z,39nm,1.0s
TEY Ternei 51.60 354 *e*P **P** **06 28 16.8 -0.9**
TEY *e* 06 35 34.5
KUR Kuril'sk 51.65 4 *e*P **P** **06 28 18.1 +0.1**
KUR *e*S **S** **06 35 39.8 +1.2**
KUR *e* 06 38 08.5
KUR pmax pmax
comp=Z,337nm,1.3s
XAN Xi'an 51.66 324⇑P P **06 28 18.3 -0.2**
XAN pP pP 06 28 22.3 -1.2
XAN S **S** **06 35 41.0 +1.6**
XAN sS sS 06 35 49.3 +1.5
XAN ScS **ScS** **06 38 04.3 -4.3**
XAN pmax pmax
comp=Z,110nm,1.4s
XAN pmax pmax
comp=Z,710nm,4.5s
XAN LR LR
comp=Z,940nm,20.6s
XAN LR LR
comp=Z,680nm,17.3s
XAN LR LR
comp=Z,2µm,18.9s
PZH PanZhiHua 51.78 311 P **P** **06 28 20.8 +1.2**
PZH S **S** **06 35 43.8 +2.4**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,360nm,5.9s
PZH LR LR
comp=Z,580nm,16.9s
PZH LR LR
comp=Z,840nm,18.8s
PZH LR LR
comp=Z,1µm,18.0s
MDJ Mudanjiang 52.29 348 P **P** **06 28 21.3 -1.5**
MDJ pP pP 06 28 25.0 -2.9
MDJ sP sP 06 28 28.0 -1.9
MDJ PcS **PcS** **06 33 29.0 -3.2**
MDJ S **S** **06 35 49.8 +2.3**
MDJ ScS **ScS** **06 38 12.5 +0.1**
MDJ pmax pmax
comp=Z,17nm,1.4s
MDJ pmax pmax
comp=Z,490nm,4.2s
MDJ LR LR
comp=Z,1µm,21.8s
MDJ LR LR
comp=Z,2µm,21.7s
MDJ LR LR
comp=Z,1µm,18.2s
MDJ Mudanjiang 52.29 348 P **P** **06 28 24.9 +2.1**
TIY Taiyuan 52.43 329 *e*P **P** **06 28 25.8 +1.6**
TIY S **S** **06 35 53.0 +3.1**
TIY pmax pmax
comp=Z,21nm,0.6s
TIY pmax pmax

TIY comp=Z,320nm,4.6s LR LR
TIY comp=Z,870nm,18.6s LR LR
TIY comp=Z,670nm,18.6s LR LR
TIY comp=Z,1μm,19.2s LR LR
BJT Baijiatuau 52.51 334 P **P** **06 28 26.5 +1.9**
BJI Beijing 52.52 334 P **P** **06 28 24.0 -0.6**
BJI PP **PP** **06 30 21.0 -2.8**
BJI S **S** **06 35 52.0 +1.2**
BJI pmax pmax
BJI comp=Z,18nm,1.2s pmax pmax
BJI comp=Z,270nm,3.3s LR LR
BJI comp=Z,980nm,19.7s LR LR
BJI comp=Z,450nm,18.9s LR LR
BJI comp=Z,1μm,20.0s LR LR
CN2 Changchun 52.52 344 P **P** **06 28 23.3 -1.3**
CN2 S **S** **06 35 48.0 -2.8**
CN2 pmax pmax
CN2 comp=Z,30nm,1.6s LR LR
CN2 comp=Z,900nm,16.0s LR LR
CN2 comp=Z,900nm,16.0s LR LR
CN2 comp=Z,1μm,18.0s LR LR
CD2 Chengdu 52.89 317 P **P** **06 28 28.5 +0.8**
CD2 S **S** **06 35 58.3 +1.9**
CD2 pmax pmax
CD2 comp=Z,60nm,1.2s pmax pmax
CD2 comp=Z,420nm,5.3s LR LR
CD2 comp=Z,300nm,18.7s LR LR
CD2 comp=Z,350nm,9.6s LR LR
CD2 comp=Z,1μm,16.2s LR LR
YSS Yuzh-Sakhalins 53.19 360 P **P** **06 28 28.3 -1.2**
YSS IAmb IAmb 06 28 36.0
YSS comp=Z,192nm,1.9s P **P** **06 28 30.8 +1.4**
YSS Yuzh-Sakhalins 53.19 360 P **P** **06 28 29.0 -0.4**
YSS Yuzh-Sakhalins 53.19 360⇓ *e*P **P** **06 28 29.0 -0.4**
YSS *e*S **S** **06 35 57.2 -2.5**
YSS *e*SS **SS** **06 39 36.9 -2.7**
YSS pmax pmax
YSS comp=Z,40nm,0.9s MLR MLR
YSS comp=N,600nm,15.0s MLR MLR
YSS comp=Z,1μm,15.0s MLR MLR
PBA Port Blair 53.23 290 P **P** **06 28 34.9 +4.6**
TNCH TengChong 53.49 308 P **P** **06 28 33.5 +1.2**
TNCH pP pP 06 28 36.8 -0.5
TNCH sP sP 06 28 38.8 -0.5
TNCH S **S** **06 36 04.8 -0.2**
TNCH sS pS 06 36 09.8 -1.3
TNCH pmax pmax
TNCH comp=Z,97nm,0.9s pmax pmax
TNCH comp=Z,500nm,4.3s LR LR
TNCH comp=Z,630nm,18.5s LR LR
TNCH comp=Z,500nm,17.3s LR LR
TNCH comp=Z,980nm,19.6s LR LR
BNX BinXian 53.84 346 ⇑P **P** **06 28 33.0 -1.2**
BNX pP **pP** **06 28 37.8 -1.5**
BNX sP **sP** **06 28 40.5 -0.8**
BNX PP **PP** **06 30 35.8 +0.2**
BNX S **S** **06 36 07.5 -1.1**
BNX pmax pmax
BNX comp=Z,60nm,1.1s pmax pmax
BNX comp=Z,740nm,3.9s LR LR
BNX comp=Z,630nm,19.8s LR LR
BNX comp=Z,850nm,18.8s LR LR
BNX comp=Z,1μm,19.3s LR LR
MND Mandalay 54.03 303 P **P** **06 28 37.5 +1.4**
HHC Hu-ho-hao-te 55.28 331 *e*P **P** **06 28 45.3 +0.3**
HHC S **S** **06 36 27.0 -1.5**
HHC SS **SS** **06 40 13.3 +0.2**
HHC pmax pmax
HHC comp=Z,22nm,1.2s pmax pmax
HHC comp=Z,420nm,5.8s LR LR
HHC comp=Z,950nm,18.3s LR LR
HHC comp=Z,600nm,19.1s LR LR
HHC comp=Z,1μm,18.3s LR LR
UGL Uglegorsk 55.32 359 *e*P **P** **06 28 45.2 +0.3**
UGL *e*S **S** **06 36 23.6 -4.8**
UGL pmax pmax
UGL comp=Z,100nm,1.3s smax smax
UGL comp=E,600nm,9.0s smax smax
UGL comp=N,1μm,11.0s smax smax
XLT XiLinHaoTe 55.77 337 *e*P **P** **06 28 50.0 +1.6**
XLT pP pP 06 28 54.0 +0.6
XLT sP sP 06 28 56.5 +1.1
XLT PcP **PcP** **06 29 49.5 +2.0**
XLT S **S** **06 36 36.8 +2.0**
XLT sS sS 06 36 47.8 +4.7
XLT pmax pmax
XLT comp=N,14nm,1.0s pmax pmax
XLT comp=N,270nm,5.7s LR LR
XLT comp=N,1μm,18.7s LR LR
XLT comp=N,2μm,18.7s LR LR
BTO Baotou 55.85 330 *e*P **P** **06 28 50.5 +1.4**
BTO pP **sP** **06 28 55.5 -0.6**
BTO sP **pP** **06 28 57.8 +3.7**
BTO PP **PP** **06 30 57.0 +3.1**
BTO S **S** **06 36 42.5 +6.4**
BTO SS **SS** **06 40 24.3 +2.2**
BTO pmax pmax
BTO comp=N,47nm,1.4s pmax pmax
BTO comp=N,1μm,5.7s LR LR
BTO comp=N,2μm,21.3s LR LR
BTO comp=N,2μm,18.5s LR LR
BTO comp=N,4μm,19.6s LR LR
LZH Lanzhou 56.11 322 *e*P **P** **06 28 52.0 +0.9**
LZH sP sP 06 29 01.0 +2.9
LZH S S 06 36 30.5 -9.3
LZH pmax pmax
LZH comp=N,81nm,1.4s pmax pmax
LZH comp=N,560nm,4.9s LR LR
LZH comp=N,1μm,18.0s LR LR
LZH comp=N,1μm,21.3s LR LR
LZH comp=N,2μm,20.2s LR LR
KLR Kul'dur 56.35 351 *ce*P **P** **06 28 51.1 -1.2**
KLR pmax pmax
KLR comp=Z,106nm,1.7s LR LR 06 51 14.6
RAR Rarotonga 57.08 111 LR LR 06 50 49.5
comp=Z,1μm,21.2s,baz=279,slow=33
TYV Tymovskoe 57.10 360 *e*P **P** **06 28 57.1 -0.5**
TYV *e*S **S** **06 36 54.6 +2.6**
TYV pmax pmax
TYV comp=Z,32nm,1.6s pmax pmax
TYV comp=Z,400nm,3.9s smax smax
TYV comp=N,300nm,7.0s smax smax
TYV comp=E,300nm,7.0s smax smax
GRNR Gornyy 57.30 355⇓ *i*P **P** **06 28 59.4 +0.3**
GRNR pmax pmax
GRNR comp=N,8.0nm,1.2s pmax pmax
GRNR comp=Z,10.0nm,1.2s MLR MLR
GRNR comp=E,550nm,21.0s MLR MLR
GRNR comp=N,420nm,16.0s MLR MLR
GRNR comp=Z,420nm,18.0s MLR MLR
SKR Severo-Kuril's 58.02 10 *e*P P 06 28 57.3 -6.8
SKR *e*S **S** **06 36 57.9 -6.2**
SKR pmax pmax
SKR comp=Z,600nm,15.8s pmax pmax
SKR comp=Z,161nm,1.0s pmax pmax
HEH HeiHe 58.11 348 *e*P **P** **06 29 03.3 -1.4**
HEH S **S** **06 37 08.0 +2.7**
HEH pmax pmax
HEH comp=Z,51nm,1.4s pmax pmax
HEH comp=Z,720nm,4.7s LR LR
HEH comp=Z,990nm,18.2s LR LR
HEH comp=Z,960nm,18.9s LR LR
HEH comp=Z,2μm,21.9s LR LR
SHL Shillong 59.06 305 IAmb IAmb 06 29 23.6
comp=Z,117nm,1.2s
SHL Shillong 59.06 305 P **P** **06 29 13.2 +1.0**
SNR=44
HIA Hailar 59.14 342 IAmb IAmb 06 29 17.1
comp=Z,77nm,1.7s
HIA Hailar 59.14 342 P **P** **06 29 13.6 +1.6**
NKL Nikolayevsk 59.43 358 *e*P **P** **06 29 11.1 -2.7**
NKL *e*S **S** **06 37 21.7 -0.6**
NKL pmax pmax
NKL comp=N,56nm,0.9s pmax pmax
NKL comp=E,213nm,1.6s pmax pmax
NKL comp=Z,488nm,1.6s smax smax
NKL comp=E,283nm,3.6s smax smax
NKL comp=N,378nm,3.8s MLR MLR
NKL comp=E,9μm,18.0s MLR MLR
NKL comp=N,6μm,24.0s MLR MLR
NKL comp=Z,6μm,22.0s MLR MLR
XMAS Kiritimati 59.95 84 P **P** **06 29 19.1 +0.8**
XMAS IAmb IAmb 06 29 24.8
comp=Z,111nm,1.1s
XMAS Kiritimati 59.95 84 IAMs_20 IAMs_20 06 50 50.7
comp=Z,4μm,20.0s
PEA0B Petropavlovsk- 60.63 10 *ce*P **P** **06 29 22.8 +0.7**
PETK Petropavlovsk- 60.63 10 P **P** **06 29 20.5 -1.6**
comp=Z,54nm,0.8s,baz=165,slow=6.0,SNR=44
PETK LR LR 06 55 01.5
comp=Z,1μm,19.4s,baz=196,slow=36
comp=Z,54nm,0.8s
GTA Gaotai 60.69 322 ⇑P **P** **06 29 23.8 +0.8**
GTA sP sP 06 29 30.0 0.0
GTA S **S** **06 37 40.8 +1.5**
GTA pmax pmax
GTA comp=Z,24nm,1.4s pmax pmax
GTA comp=Z,370nm,8.3s LR LR
GTA comp=Z,450nm,20.5s LR LR
GTA comp=Z,830nm,17.7s LR LR
GTA comp=Z,820nm,17.4s LR LR
PET Petropavlovsk 60.72 11 P **P** **06 29 21.7 -1.0**
PET IAmb IAmb 06 29 25.7
comp=Z,143nm,1.6s
PET Petropavlovsk 60.72 11 *e*P **P** **06 29 21.1 -1.6**
PET *e*S **S** **06 37 36.9 -2.0**
PET 06 44 16.4
PET pmax pmax
PET comp=Z,400nm,5.0s pmax pmax
PET comp=Z,300nm,7.5s pmax pmax
PET comp=Z,66nm,1.4s pmax pmax
ZEA Zeya 61.46 349 *e*P **P** **06 29 26.9 -0.8**
ZEA *e* 06 31 40.4
ZEA *e*S **S** **06 37 49.1 +0.8**
ZEA *e*SS **SS** **06 41 52.8 +3.3**
ZEA pmax pmax
ZEA comp=N,100nm,4.0s pmax pmax
ZEA comp=Z,300nm,4.0s pmax pmax
ZEA comp=E,20nm,1.3s pmax pmax
ZEA comp=N,50nm,1.2s pmax pmax
ZEA comp=Z,100nm,1.4s pmax pmax
ZEA comp=N,100nm,4.7s pmax pmax
ZEA comp=Z,100nm,9.8s smax smax
ZEA comp=N,300nm,7.3s smax smax
ZEA comp=E,300nm,6.8s smax smax
GOMU GeErMu 62.03 317 P **P** **06 29 33.5 +1.1**
GOMU pP sP 06 29 38.5 -0.9
GOMU sP pP 06 29 40.0 +2.5
GOMU S **S** **06 38 03.0 +6.0**
GOMU SS **SS** **06 41 57.0 -2.9**
GOMU pmax pmax
GOMU comp=E,28nm,1.4s LR LR
GOMU comp=E,340nm,15.5s LR LR
GOMU comp=E,570nm,15.1s LR LR
GOMU comp=E,690nm,19.6s LR LR
ULN Ulaanbaatar 62.73 334 P **P** **06 29 36.6 0.0**
ULN Ulaanbaatar 62.73 334 *ce*P **P** **06 29 37.3 +0.7**
ULN pmax pmax
ULN comp=Z,38nm,1.3s P **P** **06 29 37.0 +0.4**
ULN Ulaanbaatar 62.73 334 P **P** **06 29 37.0 +0.4**
ULN S **S** **06 38 06.5 +1.6**
ULN S **S** **06 38 06.5 +1.6**
SONM Songino Array 63.00 333 P **P** **06 29 36.8 -1.6**
comp=Z,23nm,1.2s,baz=154,slow=7.0,SNR=51
SONM PKP2bc 06 58 41.5
comp=Z,0.7nm,0.8s,baz=304,slow=2.7,SNR=4.1
comp=Z,23nm,1.2s
CIT Chita 63.50 340 *e*P **P** **06 29 41.9 +0.4**
CIT *e* 06 30 15.1
CIT pmax pmax
comp=Z,131nm,2.9s
PALK Pallekele 63.73 281 P **P** **06 29 46.9 +3.2**
PALK S **S** **06 38 23.3 +4.9**
CASY Casey 63.82 194 P **P** **06 29 43.5 +0.2**
CASY IAmb IAmb 06 29 50.6
comp=Z,70nm,0.9s
SHEM Shemya Is, Ala 64.58 20 P **P** **06 29 47.8 -0.7**
comp=Z,335nm,1.1s,baz=78,slow=3.6,SNR=5.3
SHEM LR LR 06 53 58.5
comp=Z,3μm,20.8s,baz=204,slow=32
POHA Pohakuloa 65.74 65 IAMs_20 IAMs_20 06 53 00.3
comp=Z,4μm,22.0s
MA2 Magadan 66.12 4 P **P** **06 29 56.7 -1.6**
MA2 Magadan 66.12 4 P **P** **06 29 59.5 +1.2**
MA2 Magadan 66.12 4 *ce*P **P** **06 29 57.4 -0.9**
MA2 pmax pmax
comp=Z,154nm,1.3s
ZAK Zakamensk 66.26 333 *e*P **P** **06 29 59.1 -0.5**
ZAK pmax pmax
comp=Z,51nm,1.6s
PPT Papeete 66.48 106 P **P** **06 30 02.4 +0.8**
comp=Z,15nm,0.8s,baz=270,slow=1.0,SNR=0.9
comp=Z,15nm,0.8s
AIS Amsterdam Isla 66.77 232 IAMs_20 IAMs_20 06 57 54.9
comp=Z,4μm,18.0s
IRK Irkutsk 67.19 335 *e*P **P** **06 30 06.1 +0.7**
IRK pmax pmax
comp=Z,110nm,2.6s
ADK Adak 67.51 26 P **P** **06 30 07.7 +0.3**
ADK Adak 67.51 26 IAMs_20 IAMs_20 06 54 44.7
comp=Z,6μm,22.0s
ADK Adak 67.51 26 P **P** **06 30 10.7 +3.3**
ADK Adak 67.51 26 P **P** **06 30 07.7 +0.3**
ADK pmax pmax
comp=Z,447nm,1.3s
HYB Hyderabad 68.01 292 *e*P **P** **06 30 11.7 +0.4**
HYB *e*pP **pP** **06 30 14.8 -1.6**
HYB *e*PP **PP** **06 32 40.3 -1.2**
HYB *e*S **S** **06 39 10.3 -0.2**
BOD Bodaibo 68.28 344 *e*P **P** **06 30 11.6 -0.5**
BOD pmax pmax
comp=Z,40nm,1.5s
ATKA Atka Island 68.83 27 IAMs_20 IAMs_20 06 54 27.6
comp=Z,5μm,22.0s
ATKA Atka Island 68.83 27 P **P** **06 30 18.9 +3.3**
YAK Yakutsk 69.08 353 P **P** **06 30 16.9 -0.2**
YAK Yakutsk 69.08 353 *e*P **P** **06 30 16.8 -0.2**
YAK *e* 06 30 41.9
YAK *e* 06 32 51.4
YAK *e*S **S** **06 39 22.3 +0.8**
YAK *e* 06 40 16.5
YAK pmax pmax
YAK comp=Z,72nm,1.4s pmax pmax
YAK comp=N,39nm,1.4s pmax pmax
YAK comp=E,10.0nm,1.4s pmax pmax
YAK comp=Z,108nm,2.5s smax smax
YAK comp=N,652nm,6.7s smax smax
YAK comp=E,501nm,6.1s P **P** **06 30 27.5 +0.2**
WMQ Urumqi 70.66 321 *e*P PcP **PcP** **06 30 46.0 -2.2**
WMQ S **S** **06 39 43.0 +2.0**
WMQ pmax pmax
WMQ comp=E,70nm,1.5s pmax pmax
WMQ comp=E,620nm,4.1s LR LR
WMQ comp=E,890nm,19.7s LR LR
WMQ comp=E,680nm,16.7s LR LR
WMQ comp=E,390nm,23.9s P **P** **06 30 32.6 -0.3**
VNDA Vanda 71.70 176 IAMs_20 IAMs_20 06 58 29.6
VNDA comp=Z,3μm,20.0s P **P** **06 30 32.6 -0.3**
VNDA Vanda 71.70 176 pmax pmax
VNDA comp=Z,51nm,1.4s P **P** **06 30 31.6 -1.3**
VNDA Vanda 71.70 176 comp=Z,14nm,0.9s,baz=329,slow=8.8,SNR=17
comp=Z,14nm,0.9s
NIKH Nikolski High 71.78 28 P **P** **06 30 31.9 -1.8**
baz=231
SBA Scott Base 72.41 175 P **P** **06 30 39.0 +1.9**
SBA IAmb IAmb 06 30 43.3
comp=Z,193nm,1.8s
SBA Scott Base 72.41 175 IAMs_20 IAMs_20 06 59 13.3
comp=Z,3μm,21.0s
SBA Scott Base 72.41 175 P **P** **06 30 39.0 +1.9**
SBA pmax pmax
comp=Z,193nm,1.8s
UNV Unalaska Valle 73.43 28 P P 06 30 48.5 +5.0
comp=Z,129nm,1.3s
UNV Unalaska Valle 73.43 28 P **P** **06 30 42.1 -1.3**
baz=233
P08K Saint George I 73.80 25 P **P** **06 30 44.4 -1.1**
baz=230
SPIA Saint Paul Isl 73.88 24 P **P** **06 30 45.0 -1.0**
baz=229
ZSN Zaisan 74.17 323 *e*P **P** **06 30 46.8 -1.3**
comp=Z,59nm,1.5s,baz=323
ZSN *e*S **S** **06 40 22.9 +2.0**
baz=323
ZSN Zaisan 74.17 323 *e*P **P** **06 30 46.7 -1.3**
ZSN *e*S **S** **06 40 22.9 +2.0**
ZSN pmax pmax
comp=Z,59nm,1.5s
MK31 Makanchi Array 75.42 322 IAmb IAmb 06 30 59.3
comp=Z,154nm,1.6s
MK31 Makanchi Array 75.42 322 *i*P **P** **06 30 54.3 -1.0**
MK31 pmax pmax
comp=Z,32nm,0.7s
MKAR Makanchi Array 75.42 322 *ce*P **P** **06 30 54.4 -0.9**
MKAR pmax pmax
comp=Z,23nm,0.7s
MKAR Makanchi Array 75.42 322 P **P** **06 30 53.4 -1.9**
comp=Z,20nm,0.6s,baz=114,slow=6.9,SNR=168
comp=Z,20nm,0.6s
FALS False Pass 75.49 29 P **P** **06 30 52.7 -2.7**
baz=236
MAKZ Makanchi 75.62 322 P **P** **06 30 55.8 -0.7**
MAKZ Makanchi 75.62 322 P **P** **06 30 55.1 -1.4**
SHLS Shalkode 75.72 317 *i*P **P** **06 30 54.8 -2.5**
comp=Z,69nm,1.5s,baz=318
SHLS Shalkode 75.72 317 *i*P **P** **06 30 54.7 -2.5**
SHLS pmax pmax
comp=Z,69nm,1.5s
PDGK Podgornoye 75.77 318 P **P** **06 30 55.8 -1.8**
UZB Uzynbulak 76.02 317 *e*P **P** **06 30 57.7 -1.3**
comp=Z,64nm,1.4s,baz=317
UZB *e*S **S** **06 40 42.9 +1.0**
baz=317
UZB Uzynbulak 76.02 317 *e*P **P** **06 30 57.7 -1.3**
UZB *e*S **S** **06 40 42.9 +1.0**
UZB pmax pmax
comp=Z,64nm,1.4s
BILL Bilibino 76.12 9⇑ *e*P **P** **06 30 58.7 -0.1**
BILL pmax pmax
comp=Z,104nm,1.7s
TARG Taragay, Kyrgy 76.31 316 IAmb IAmb 06 31 14.9
comp=Z,109nm,1.5s
KPKS Kokpek 76.37 317 *e*P **P** **06 30 59.9 -1.1**
comp=Z,60nm,1.4s,baz=318
KPKS Kokpek 76.37 317 *e*P **P** **06 30 59.8 -1.1**
KPKS pmax pmax
comp=Z,60nm,1.4s
SATY Saty 76.40 317 *e*P **P** **06 31 00.3 -0.9**
comp=Z,51nm,1.4s,baz=317
SATY *e*S **S** **06 40 48.2 +2.1**
baz=317
SATY Saty 76.40 317 *e*P **P** **06 31 00.2 -0.9**
SATY *e*S **S** **06 40 48.2 +2.1**
SATY pmax pmax
comp=Z,51nm,1.4s
ZHN Zhinishke 76.42 317 *e*P **P** **06 31 00.4 -0.9**
comp=Z,37nm,1.5s,baz=317
ZHN Zhinishke 76.42 317 *e*P **P** **06 31 00.3 -0.9**
ZHN pmax pmax
comp=Z,37nm,1.5s
KSH Kashi 76.83 313 P **P** **06 31 05.5 +1.9**
KSH S **S** **06 40 54.3 +3.3**
KSH pmax pmax
comp=Z,39nm,1.5s
KSH LR LR
comp=Z,560nm,16.5s
KSH LR LR
comp=Z,530nm,22.0s
KSH LR LR
comp=Z,910nm,18.9s
NIL Nilore 77.07 307 P **P** **06 31 04.9 -0.1**
NIL IAmb IAmb 06 31 10.1
comp=Z,64nm,0.7s
NIL Nilore 77.07 307 P **P** **06 31 04.9 -0.1**
NIL pmax pmax
comp=Z,65nm,0.7s
NIL Nilore 77.07 307 P **P** **06 31 05.4 +0.4**
TDK Taldyqorghan 77.15 319 *e*P **P** **06 31 04.4 -0.8**
comp=Z,100nm,1.3s,baz=319
TDK Taldyqorghan 77.15 319 *e*P **P** **06 31 04.3 -0.8**
TDK pmax pmax
comp=Z,100nm,1.3s
SDPT Sand Point 77.17 29 IAMs_20 IAMs_20 06 58 32.4
comp=Z,2μm,20.0s
SDPT Sand Point 77.17 29 P P 06 31 10.1 +5.1

comp=Z,154nm,1.3s
SDPT Sand Point 77.17 29 P P 06 31 02.7 -2.3
baz=238
ARXS Arharly 77.23 318 *e*P P 06 31 05.5 -0.2
CNBA Chernabura Isl 77.33 30 IAMs_20 IAMs_20 06 58 54.8
comp=Z,3μm,20.0s
CHNA Chernabura Isl 77.34 30 P P 06 31 04.1 -1.8
baz=239
MDOK Medeo 77.36 317 *e*P P 06 31 06.0 -0.6
baz=317
MDOK *e*S S 06 40 57.3 +0.6
baz=317
MDOK *e*S S 06 40 58.5 +1.8
baz=317
MDOK Medeo 77.36 317 *e*P P 06 31 05.9 -0.6
MDOK *e*S S 06 40 57.2 +0.6
MDOK *e*S S 06 40 58.4 +1.8
ZALV Zalesovo Beam 77.38 329 *i* P P 06 31 05.4 -0.8
ZALV pmax pmax
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 77.38 329 P P 06 31 03.9 -2.3
comp=Z,11nm,0.8s,baz=108,slow=4.8,SNR=37
ZALV PKP2bc 06 58 05.7
comp=Z,0.8nm,0.5s,baz=238,slow=1.4,SNR=4.3
comp=Z,11nm,0.8s
M11K Mekoryuk 77.56 23 P P 06 31 05.4 -1.6
baz=232
ULHL Ulahol 77.58 316 P P 06 31 09.3 +1.3
SNR=7.9
GAMB Gambell 77.83 19 P P 06 31 06.6 -1.9
baz=226
KUU Kurty 78.11 317 *e*P P 06 31 09.8 -0.8
baz=317
KUU *e*S S 06 41 05.5 +1.0
baz=317
KUU Kurty 78.11 317 *e*P P 06 31 09.7 -0.8
KUU *e*S S 06 41 05.4 +1.0
S14K Fog Glacier 78.11 29 P P 06 31 08.4 -1.9
baz=239
ROCAM Rodrigues Isla 78.20 251 IAMs_20 IAMs_20 07 02 15.8
comp=Z,3μm,21.0s
TKM2 Tokmak 2 78.27 316 *i* P P 06 31 10.6 -1.1
TKM2 pmax pmax
comp=Z,59nm,1.2s
TIXI Tiksi 78.53 355 *ce*P P 06 31 10.3 -1.9
TIXI pmax pmax
comp=Z,36nm,1.7s
KBK Karagaybulak 78.63 316 P P 06 31 14.3 +0.7
SNR=8.1
CHGN Chignik 78.66 29 P P 06 31 11.4 -1.9
baz=240
M13K Dall Lake 78.71 24 IAMs_20 IAMs_20 07 00 48.5
comp=Z,4μm,22.0s
M13K Dall Lake 78.71 24 P P 06 31 10.7 -2.7
baz=235
UCH Uchtor 78.78 315 P P 06 31 16.2 +1.3
SNR=64
O14K Tigyukauivet M 78.92 26 IAMs_20 IAMs_20 07 01 22.4
comp=Z,2μm,20.0s
O14K Tigyukauivet M 78.92 26 P P 06 31 12.3 -2.3
baz=237
AAK Ala-Archa 78.94 316 P P 06 31 15.6 +0.3
SNR=38
AAK Ala-Archa 78.94 316 *ce*P P 06 31 16.3 +1.0
AAK pmax pmax
comp=Z,70nm,1.3s
N14K Kuskokwak Cree 79.11 25 P P 06 31 13.4 -2.3
baz=236
SGDS Sogindy 79.11 316 *e*P P 06 31 15.7 -0.6
baz=316
SGDS Sogindy 79.11 316 *e*P P 06 31 15.6 -0.6
USP Ospenovka 79.14 316 P P 06 31 16.7 +0.4
SNR=92
KURK Kurchatov 79.30 324 P P 06 31 16.5 -0.4
KURK IAmb IAmb 06 31 20.4
comp=Z,148nm,1.4s
KURK Kurchatov 79.30 324 *ce*P P 06 31 17.1 +0.2
KURK pmax pmax
comp=Z,117nm,1.3s
KURK Kurchatov 79.30 324 P P 06 31 15.9 -1.0
KURK P P 06 31 15.9 -1.0
KURK S S 06 41 11.3 -5.4
KURK S S 06 41 11.3 -5.4
KURBB Kurchatov Arra 79.31 324 P P 06 31 15.2 -1.8
comp=Z,41nm,1.1s,baz=119,slow=4.0,SNR=112
comp=Z,41nm,1.1s
EKS2 Erkin-Say 79.44 315 P P 06 31 19.6 +1.5
SNR=31
M14K Bethel 79.47 24 IAMs_20 IAMs_20 07 01 53.5
comp=Z,3μm,21.0s
M14K Bethel 79.47 24 P P 06 31 15.2 -2.4
baz=236,SNR=14
O15K Ungalikthiuk R 79.50 26 P P 06 31 16.1 -1.8
baz=238
L14K Kuka Creek 79.51 23 IAmb IAmb 06 31 22.6
comp=Z,233nm,1.6s
L14K IAMs_20 IAMs_20 07 01 02.8
comp=Z,3μm,21.0s
L14K Kuka Creek 79.51 23 P P 06 31 16.7 -1.1
baz=235,SNR=14
R16K Pilot Point 79.69 28 P P 06 31 17.6 -1.2
baz=240
N15K Kwethluk River 79.92 25 IAmb IAmb 06 31 24.8
comp=Z,162nm,1.4s
N15K IAMs_20 IAMs_20 07 02 04.7
comp=Z,3μm,21.0s
N15K Kwethluk River 79.92 25 P P 06 31 18.9 -1.2
baz=238
M15K Kasigluk River 79.95 25 P P 06 31 19.6 -0.6
baz=237
J14K Nanvaranak Lak 80.00 22 IAmb IAmb 06 31 27.7
comp=Z,190nm,1.6s
J14K Nanvaranak Lak 80.00 22 P P 06 31 19.9 -0.5
baz=234
BTLS Baital 80.04 318 *e*P P 06 31 20.0 -1.1
comp=Z,57nm,1.4s,baz=318
BTLS *e*S S 06 41 26.3 +1.4
baz=318
BTLS Baital 80.04 318 *e*P P 06 31 20.0 -1.1
BTLS *e*S S 06 41 26.3 +1.4
BTLS pmax pmax
comp=Z,57nm,1.4s
L15K Ungalak Mounta 80.17 23 P P 06 31 20.6 -0.8
baz=236
TNA Tin City 80.24 19 P P 06 31 20.8 -0.9
baz=230,SNR=18
P16K Nushagak River 80.24 27 P P 06 31 20.8 -1.0
baz=240
MAW Mawson 80.33 203 LR LR 07 06 41.9
comp=Z,1μm,18.1s,baz=73,slow=36
ANM Nome 80.44 20 IAmb IAmb 06 31 29.0
comp=Z,136nm,1.4s
ANM Nome 80.44 20 P P 06 31 22.6 -0.2
baz=232,SNR=38
O16K Kokwok River B 80.48 26 IAmb IAmb 06 31 26.7
comp=Z,182nm,1.4s
O16K IAMs_20 IAMs_20 07 01 15.5
comp=Z,4μm,22.0s
O16K Kokwok River B 80.48 26 P P 06 31 22.4 -0.7
baz=240
K15K Wolf Creek Mou 80.50 23 IAmb IAmb 06 31 27.4
comp=Z,212nm,1.5s
K15K IAMs_20 IAMs_20 07 02 57.9
comp=Z,3μm,21.0s
K15K Wolf Creek Mou 80.50 23 P P 06 31 22.7 -0.5
baz=236
N16K Nishlik Lake 80.64 25 P P 06 31 23.7 -0.3
baz=239
Q16K King Salmon 80.67 27 P P 06 31 23.6 -0.4
baz=241
KBL Kabul 80.67 306 P P 06 31 24.6 -0.4
KBL Kabul 80.67 306 P P 06 31 24.6 -0.4
KBL pmax pmax
comp=Z,17nm,0.9s
KBL Kabul 80.67 306 P P 06 31 25.0 0.0
SNR=12
KBL S S 06 41 30.6 -1.8
F14K Arctic Creek 80.69 19 P P 06 31 24.0 -0.1
baz=231
Q17K Contact Creek 80.82 28 P P 06 31 24.8 -0.3
baz=242
M16K Timber Creek 80.85 25 IAMs_20 IAMs_20 07 01 17.2
comp=Z,3μm,22.0s
M16K Timber Creek 80.85 25 P P 06 31 24.7 -0.3
baz=239
L16K Owhat River 81.00 24 IAmb IAmb 06 31 29.6
comp=Z,212nm,1.6s

L16K IAMs_20 IAMs_20 07 02 19.0
comp=Z,3μm,22.0s
L16K Owhat River 81.00 24 P P 06 31 25.3 -0.5
baz=238,SNR=14
O17K Koliganek Bris 81.01 26 P P 06 31 25.9 0.0
baz=240
P17K Kvichak River 81.02 27 P P 06 31 25.7 -0.2
baz=241
G15K Niukluk 81.16 20 P P 06 31 26.6 0.0
baz=233
DZA Taraz 81.22 315 *e*P P 06 31 26.7 -0.9
comp=Z,44nm,1.2s,baz=315
DZA Taraz 81.22 315 *e*P P 06 31 26.6 -0.9
DZA pmax pmax
comp=Z,44nm,1.2s
N17K Nushagak Hills 81.34 26 IAmb IAmb 06 31 34.1
comp=Z,194nm,1.7s
N17K IAMs_20 IAMs_20 07 03 00.4
comp=Z,3μm,20.0s
N17K Nushagak Hills 81.34 26 P P 06 31 26.8 -0.9
baz=240
F15K North Star Dit 81.39 19 IAmb IAmb 06 31 33.8
comp=Z,168nm,1.4s
F15K North Star Dit 81.39 19 P P 06 31 27.6 -0.3
baz=233
J16K Anvik River 81.41 22 IAmb IAmb 06 31 33.1
comp=Z,213nm,1.6s
J16K IAMs_20 IAMs_20 07 03 36.9
comp=Z,2μm,21.0s
J16K Anvik River 81.41 22 P P 06 31 27.6 -0.4
baz=237
H16K Elim 81.57 21 P P 06 31 27.9 -0.9
baz=235,SNR=26
OHAK Old Harbor 81.59 30 P P 06 31 32.2 +3.2
OHAK Old Harbor 81.59 30 P P 06 31 27.5 -1.5
baz=244
P18K Big Mountain, 81.66 27 IAMs_20 IAMs_20 07 02 00.7
comp=Z,3μm,21.0s
P18K Big Mountain, 81.66 27 P P 06 31 29.0 -0.4
baz=242
M17K Holitna River 81.67 25 IAmb IAmb 06 32 16.1
comp=Z,110nm,1.4s
M17K IAMs_20 IAMs_20 07 02 06.1
comp=Z,2μm,21.0s
M17K Holitna River 81.67 25 P P 06 31 28.7 -0.7
baz=240
L17K Donlin 81.69 24 P P 06 31 28.6 -0.9
baz=239
I17K Unalakleet 81.71 22 IAMs_20 IAMs_20 07 01 37.6
comp=Z,3μm,22.0s
I17K Unalakleet 81.71 22 P P 06 31 28.9 -0.6
baz=237,SNR=27
SIMJ Simiganj 81.74 310 P P 06 31 29.9 -0.6
SIMJ IAmb IAmb 06 31 34.2
comp=Z,96nm,1.2s
KK31 Karatay Array 81.86 315 P P 06 31 30.7 -0.2
KK31 IAmb IAmb 06 31 34.6
comp=Z,90nm,1.4s
KK31 Karatay Array 81.86 315 *i* P P 06 31 30.4 -0.5
KKAR Karatay Array 81.86 315 IAmb IAmb 06 31 34.6
comp=Z,89nm,1.4s
O18K Koktuh Hills 81.88 27 IAMs_20 IAMs_20 07 01 57.6
comp=Z,4μm,22.0s
O18K Koktuh Hills 81.88 27 P P 06 31 29.7 -0.9
baz=242
IUG luzhnay 81.93 314 *e*P P 06 31 30.2 -1.2
comp=Z,105nm,1.5s,baz=314
IUG luzhnay 81.93 314 *e*P P 06 31 30.2 -1.2
IUG pmax pmax
comp=Z,105nm,1.5s
G16K Koyuk River 81.97 20 IAmb IAmb 06 31 34.9
comp=Z,184nm,1.6s
G16K IAMs_20 IAMs_20 07 01 43.7
comp=Z,2μm,22.0s
G16K Koyuk River 81.97 20 P P 06 31 30.5 -0.4
baz=235
N18K Kilae Creek 81.97 26 IAMs_20 IAMs_20 07 02 02.2
comp=Z,3μm,22.0s
N18K Kilae Creek 81.97 26 P P 06 31 30.7 -0.4
baz=241
K17K Iditarod 81.99 23 IAMs_20 IAMs_20 07 03 33.3
comp=Z,4μm,21.0s
K17K Iditarod 81.99 23 P P 06 31 31.3 +0.2
baz=239
Q19K Cape Douglas, 82.17 28 IAMs_20 IAMs_20 07 05 21.4
comp=Z,2μm,19.0s
Q19K Cape Douglas, 82.17 28 P P 06 31 31.6 -0.6
baz=244
KDAK Kodiak Island 82.17 29 P P 06 31 34.3 +2.2
KDAK Kodiak Island 82.17 29 IAMs_20 IAMs_20 07 01 29.6
comp=Z,3μm,22.0s
KDAK Kodiak Island 82.17 29 P P 06 31 31.5 -0.6
baz=245
KDAK Kodiak Island 82.17 29 P P 06 31 31.8 -0.3
comp=Z,71nm,1.2s,baz=291,slow=6.5,SNR=4.1
comp=Z,71nm,1.2s
OTUK Ortayu 82.21 320 P P 06 31 30.0 -2.6
CHM Chimkent 82.28 314 *e*P P 06 31 31.6 -1.6
comp=Z,44nm,1.3s,baz=314
CHM Chimkent 82.28 314 *e*P P 06 31 31.5 -1.6
CHM pmax pmax
comp=Z,44nm,1.3s
SVW2 Sparrevohn 82.31 25 IAMs_20 IAMs_20 07 02 47.5
comp=Z,3μm,21.0s
SVW2 Sparrevohn 82.31 25 P P 06 31 36.8 +4.0
BRLS Borolday 82.32 315 *e*P P 06 31 32.4 -0.9
comp=Z,36nm,1.5s,baz=315
BRLS Borolday 82.32 315 *e*P P 06 31 32.4 -0.9
BRLS pmax pmax
comp=Z,36nm,1.5s
L18K Granite Mounta 82.39 24 IAmb IAmb 06 31 37.4
comp=Z,125nm,1.5s
L18K IAMs_20 IAMs_20 07 02 06.0
comp=Z,3μm,22.0s
L18K Granite Mounta 82.39 24 P P 06 31 32.7 -0.5
baz=240
M18K Stony River 82.39 25 P P 06 31 33.5 +0.3
baz=241
O19K Port Alsworth 82.44 27 IAmb IAmb 06 31 37.5
comp=Z,84nm,1.6s
O19K IAMs_20 IAMs_20 07 04 01.3
comp=Z,3μm,20.0s
O19K Port Alsworth 82.44 27 P P 06 31 32.9 -0.5
baz=243
BRZS Berezniki 82.56 322 *e*P P 06 31 33.4 -1.0
comp=Z,44nm,1.6s,baz=322
BRZS Berezniki 82.56 322 *e*P P 06 31 33.4 -1.0
BRZS pmax pmax
comp=Z,44nm,1.6s
H17K Granite Mounta 82.57 21 P P 06 31 33.4 -0.7
baz=237
Q20K Shuyak Island 82.62 28 P P 06 31 33.7 -0.8
baz=245
G17K Kiwalik Mounta 82.62 20 P P 06 31 33.9 -0.4
baz=236
N19K Bonanza Creek 82.65 26 IAMs_20 IAMs_20 07 04 10.0
comp=Z,4μm,21.0s
N19K Bonanza Creek 82.65 26 P P 06 31 33.8 -0.9
baz=243
P19K Oil Pt 82.68 27 IAMs_20 IAMs_20 07 02 30.8
comp=Z,3μm,20.0s
P19K Oil Pt 82.68 27 P P 06 31 34.4 -0.4
baz=244
C16K Lisburne Hills 82.75 17 IAmb IAmb 06 31 38.5
comp=Z,92nm,1.3s
C16K Lisburne Hills 82.75 17 P P 06 31 34.9 0.0
baz=232
ILSW Iliamna Southw 82.87 27 IAmb IAmb 06 31 38.1
comp=Z,159nm,1.6s
F17K Baldwin Pennin 82.94 20 IAmb IAmb 06 31 45.0
comp=Z,44nm,1.1s
F17K Baldwin Pennin 82.94 20 P P 06 31 35.6 -0.4
baz=236
J18K Innoko River 83.00 23 IAmb IAmb 06 31 42.0
comp=Z,77nm,1.4s
J18K IAMs_20 IAMs_20 07 04 14.9
comp=Z,3μm,21.0s
J18K Innoko River 83.00 23 P P 06 31 35.6 -0.7
baz=240
D17K Noatak River 83.08 18 P P 06 31 37.0 +0.3
baz=234
E17K Hotham Inlet 83.12 19 P P 06 31 37.0 +0.2
baz=235,SNR=51
L19K White Mountain 83.13 25 IAmb IAmb 06 31 40.9
comp=Z,143nm,1.6s
L19K IAMs_20 IAMs_20 07 02 51.5
comp=Z,2μm,22.0s
L19K White Mountain 83.13 25 P P 06 31 37.0 -0.1
baz=242,SNR=14
O20K Slope Mountain 83.14 27 P P 06 31 36.8 -0.4
baz=244
M19K Big River Lodg 83.19 25 IAmb IAmb 06 31 41.5
comp=Z,60nm,1.2s
M19K IAMs_20 IAMs_20 07 02 40.1
comp=Z,4μm,22.0s
M19K Big River Lodg 83.19 25 P P 06 31 37.1 -0.3
baz=243
H18K Honhosa River 83.24 21 IAmb IAmb 06 31 43.0
comp=Z,112nm,1.6s
H18K IAMs_20 IAMs_20 07 03 10.1
comp=Z,2μm,22.0s
H18K Honhosa River 83.24 21 P P 06 31 37.3 -0.3
baz=239
HOM Homer 83.41 28 P P 06 31 38.5 0.0
baz=245
QSPA South Pole Qui 83.50 180 P P 06 31 38.2 -0.9
QSPA IAmb IAmb 06 31 46.0
comp=Z,67nm,0.9s
QSPA South Pole Qui 83.50 180 P P 06 31 38.0 -1.1
comp=Z,32nm,0.8s,baz=345,slow=1.5,SNR=65
comp=Z,32nm,0.8s
C17K DeLong Mountai 83.51 17 P P 06 31 39.1 +0.1
baz=234
G18K Tagagawik 83.53 21 IAmb IAmb 06 31 41.6
comp=Z,57nm,1.2s
G18K IAMs_20 IAMs_20 07 02 31.7
comp=Z,3μm,22.0s
G18K Tagagawik 83.53 21 P P 06 31 38.9 -0.1
baz=238,SNR=23
CNPM China Poot 83.55 28 IAMs_20 IAMs_20 07 02 14.7
comp=Z,2μm,22.0s
F18K Selawik 83.56 20 P P 06 31 38.7 -0.4
baz=237
GCSA Galena City Sc 83.58 22 P P 06 31 39.6 +0.4
baz=240,SNR=18
L20K Farewell, AK 83.67 25 P P 06 31 40.2 +0.3
baz=243
J19K Poorman 83.68 23 IAmb IAmb 06 31 43.8
comp=Z,109nm,1.4s
J19K IAMs_20 IAMs_20 07 04 25.0
comp=Z,2μm,20.0s
J19K Poorman 83.68 23 P P 06 31 40.1 +0.3
baz=241,SNR=20
E18K Tukpahlearik C 83.70 19 IAmb IAmb 06 31 43.7
comp=Z,86nm,1.2s
E18K Tukpahlearik C 83.70 19 P P 06 31 40.1 +0.3
baz=236
M20K Styx River 83.71 25 IAmb IAmb 06 31 50.7
comp=Z,64nm,1.1s
M20K IAMs_20 IAMs_20 07 04 26.1
comp=Z,3μm,20.0s
M20K Styx River 83.71 25 P P 06 31 40.5 +0.4
baz=244
BRLK Bradley Lake 83.81 28 IAMs_20 IAMs_20 07 02 21.2
comp=Z,3μm,22.0s
N20K Mount Spurr 83.81 26 P P 06 31 38.5 -2.1
baz=245
BRSE Bradley Lake S 83.86 28 P P 06 31 39.8 -1.1
baz=246
K20K Telida 83.99 24 IAMs_20 IAMs_20 07 03 17.2
comp=Z,3μm,22.0s
K20K Telida 83.99 24 P P 06 31 41.1 -0.3
baz=243
CAPN Captain Cook N 84.10 27 P P 06 31 41.0 -1.0
baz=246
H19K Roundabout Mou 84.12 21 P P 06 31 41.5 -0.6
baz=240
G19K Purcell Mounta 84.20 21 IAmb IAmb 06 31 46.4
comp=Z,104nm,1.3s
G19K IAMs_20 IAMs_20 07 03 04.7
comp=Z,3μm,22.0s
G19K Purcell Mounta 84.20 21 P P 06 31 42.3 -0.1
baz=240
C18K Utukok River 84.21 18 P P 06 31 42.5 -0.1
baz=236
F19K Shaleruckik Mo 84.32 20 IAmb IAmb 06 31 46.4
comp=Z,100nm,1.6s
F19K IAMs_20 IAMs_20 07 02 54.6
comp=Z,3μm,22.0s
F19K Shaleruckik Mo 84.32 20 P P 06 31 42.9 -0.1
baz=239
J20K Nowinta River 84.34 23 IAMs_20 IAMs_20 07 04 35.4
comp=Z,3μm,22.0s
J20K Nowinta River 84.34 23 P P 06 31 43.4 +0.2
baz=243
SKT Skwentna 84.44 26 IAmb IAmb 06 31 48.4
comp=Z,51nm,1.2s
SKT IAMs_20 IAMs_20 07 05 29.1
comp=Z,3μm,20.0s
SKT Skwentna 84.44 26 P P 06 31 43.3 -0.5
baz=245
B18K Kokolik River 84.44 17 P P 06 31 43.3 -0.3
baz=235
I20K Naaghedeneel 84.50 22 IAMs_20 IAMs_20 07 04 41.6
comp=Z,2μm,21.0s
I20K Naaghedeneel 84.50 22 P P 06 31 44.3 +0.3
baz=242
PPLA Purkeypile 84.55 25 P P 06 31 44.2 -0.3
baz=244,SNR=8.0
NRIK Noril'sk 84.56 343 *ce*P P 06 31 42.7 -1.5
NRIK pmax pmax
comp=Z,237nm,1.5s
NRIK Noril'sk 84.56 343 P P 06 31 41.7 -2.4
comp=Z,86nm,1.1s,baz=123,slow=5.0,SNR=64
NRIK LR LR 07 11 39.6
comp=Z,1μm,19.2s,baz=120,slow=37
comp=Z,86nm,1.1s
SUA Susitna One 84.56 26 IAmb IAmb 06 31 52.5
comp=Z,118nm,1.9s
SUA IAMs_20 IAMs_20 07 03 33.5
comp=Z,3μm,22.0s
SUA Susitna One 84.56 26 P P 06 31 44.4 -0.2
baz=246
SEW Seward 84.60 28 P P 06 31 45.0 +0.5
baz=247
O22K Cooper Landing 84.63 27 IAMs_20 IAMs_20 07 04 29.3
comp=Z,3μm,21.0s
O22K Cooper Landing 84.63 27 P P 06 31 44.8 +0.1
baz=247
H20K Anotleneega Mo 84.68 22 P P 06 31 44.7 -0.2
baz=242,SNR=17
CAST Castle Rocks 84.82 24 IAmb IAmb 06 31 50.7
comp=Z,101nm,1.3s
CAST IAMs_20 IAMs_20 07 03 54.1
comp=Z,2μm,22.0s
CAST Castle Rocks 84.82 24 P P 06 31 45.5 -0.2
baz=245,SNR=26
E19K Redstone River 84.82 20 IAMs_20 IAMs_20 07 03 22.1
comp=Z,2μm,22.0s
E19K Redstone River 84.82 20 P P 06 31 45.7 +0.1
baz=240
RC01 Rabbit Creek A 84.86 27 IAMs_20 IAMs_20 07 02 21.4
comp=Z,3μm,22.0s
RC01 Rabbit Creek A 84.86 27 P P 06 31 44.8 -1.1
baz=247,SNR=12
BVA0 Borovoye Array 84.88 325 *i* P P 06 31 44.8 -1.4
BVAR Borovoye Array 84.88 325 P P 06 31 45.0 -1.2
BVAR Borovoye Array 84.88 325 P P 06 31 45.0 -1.2
comp=Z,71nm,0.8s,baz=108,slow=4.7,SNR=160
comp=Z,71nm,0.8s
CHUM Lake Minchumin 84.93 24 P P 06 31 45.8 -0.3
baz=244,SNR=26
C19K Lookout Ridge 84.95 18 IAmb IAmb 06 31 54.2
comp=Z,52nm,0.9s
C19K Lookout Ridge 84.95 18 P P 06 31 46.1 -0.2
baz=237
BRVK Borovoye 84.95 325 P P 06 31 46.3 -0.3
BRVK Borovoye 84.95 325 *ce*P P 06 31 45.9 -0.6
BRVK pmax pmax
comp=Z,181nm,1.3s
BRVK Borovoye 84.95 325 P P 06 31 46.3 -0.3
BRVK S SKSac 06 42 08.4 -2.1
M22K Willow 84.95 26 IAMs_20 IAMs_20 07 04 31.8
comp=Z,3μm,21.0s
M22K Willow 84.95 26 P P 06 31 45.1 -1.2
baz=246,SNR=8.7
D19K Kuna River 85.08 18 IAMs_20 IAMs_20 07 04 38.5
comp=Z,2μm,21.0s
D19K Kuna River 85.08 18 P P 06 31 46.9 0.0
baz=239
F20K Avaraart Lake 85.13 20 IAmb IAmb 06 31 54.0
comp=Z,41nm,1.1s
F20K IAMs_20 IAMs_20 07 03 20.0
comp=Z,3μm,22.0s
F20K Avaraart Lake 85.13 20 P P 06 31 47.3 +0.2
baz=241

CUT	**Chulitna**	**85.15**	**25**	IAMs_20	IAMs_20	07 06 33.1			
	comp=Z,3µm,20.0s								
CUT	**Chulitna**	**85.15**	**25**	P	**P**	**06 31 46.6**	**-0.7**		
	baz=246,SNR=11								
PMR	**Palmer**	**85.33**	**26**	IAmb	IAmb	06 31 53.4			
	comp=Z,94nm,1.2s								
PMR				IAMs_20	IAMs_20	07 04 50.7			
	comp=Z,3µm,21.0s								
PMR	**Palmer**	**85.33**	**26**	P	**P**	**06 31 48.2**	**0.0**		
PMR	**Palmer**	**85.33**	**26**	P	**P**	**06 31 47.9**	**-0.2**		
	baz=247								
KTH	**Kantishna Hill**	**85.35**	**24**	IAMs_20	IAMs_20	07 04 23.1			
	comp=Z,3µm,22.0s								
GHO	**Glory Hole Cre**	**85.49**	**26**	IAmb	IAmb	06 31 54.7			
	comp=Z,99nm,1.3s								
GHO				IAMs_20	IAMs_20	07 04 23.9			
	comp=Z,3µm,21.0s								
P23K	**Montague Islan**	**85.52**	**28**	P	**P**	**06 31 48.5**	**-0.6**		
	baz=249								
H21K	**Melozitna Rive**	**85.52**	**22**	IAmb	IAmb	06 31 54.9			
	comp=Z,52nm,1.4s								
H21K				IAMs_20	IAMs_20	07 06 36.6			
	comp=Z,2µm,20.0s								
H21K	**Melozitna Rive**	**85.52**	**22**	P	**P**	**06 31 48.8**	**-0.3**		
	baz=244								
NGCH	**Negor - Chabah**	**85.53**	**296**	P	**P**	**06 31 51.4**	**+1.4**		
	SNR=6.1								
NGCH				S	**SKSac**	**06 42 13.2**	**-2.1**		
BPAW	**Bear Paw Mtn.**	**85.55**	**24**	IAmb	IAmb	06 31 54.8			
	comp=Z,72nm,1.3s								
BPAW				IAMs_20	IAMs_20	07 05 53.4			
	comp=Z,3µm,21.0s								
BPAW	**Bear Paw Mtn.**	**85.55**	**24**	P	**P**	**06 31 48.6**	**-0.7**		
	baz=246,SNR=9.4								
KNK	**Knik Glacier**	**85.56**	**27**	IAMs_20	IAMs_20	07 05 54.8			
	comp=Z,2µm,20.0s								
KNK	**Knik Glacier**	**85.56**	**27**	P	**P**	**06 31 49.1**	**-0.3**		
	baz=248								
TRF	**Thorofare Moun**	**85.57**	**24**	IAMs_20	IAMs_20	07 06 05.9			
	comp=Z,2µm,20.0s								
TRF	**Thorofare Moun**	**85.57**	**24**	P	**P**	**06 31 48.1**	**-1.5**		
	baz=246								
E20K	**Nigu River**	**85.57**	**19**	P	**P**	**06 31 48.4**	**-0.9**		
	baz=240								
D20K	**Etivluk River**	**85.66**	**19**	P	**P**	**06 31 48.9**	**-0.9**		
	baz=240								
SML	**Sawmill**	**85.76**	**26**	IAMs_20	IAMs_20	07 04 55.1			
	comp=Z,2µm,22.0s								
SML	**Sawmill**	**85.76**	**26**	P	**P**	**06 31 50.3**	**-0.2**		
	baz=248,SNR=11								
Q23K	**Middleton Isla**	**85.82**	**29**	P	**P**	**06 31 49.8**	**-0.8**		
	baz=250								
GLI	**Glacier Island**	**85.97**	**27**	IAMs_20	IAMs_20	07 04 12.9			
	comp=Z,3µm,22.0s								
GLI	**Glacier Island**	**85.97**	**27**	P	**P**	**06 31 51.0**	**-0.4**		
	baz=249								
F21K	**Alatna River**	**85.98**	**20**	IAMs_20	IAMs_20	07 03 58.6			
	comp=Z,3µm,22.0s								
F21K	**Alatna River**	**85.98**	**20**	P	**P**	**06 31 50.7**	**-0.7**		
	baz=243								
M23K	**Glacier View**	**86.02**	**26**	P	**P**	**06 31 50.9**	**-0.8**		
	baz=249								
MLY	**Manley**	**86.04**	**23**	IAmb	IAmb	06 31 57.8			
	comp=Z,104nm,1.4s								
MLY				IAMs_20	IAMs_20	07 05 38.1			
	comp=Z,3µm,22.0s								
MLY	**Manley**	**86.04**	**23**	P	**P**	**06 31 51.1**	**-0.7**		
	baz=246,SNR=28								
WAT1	**Susitna Watana**	**86.05**	**25**	P	**P**	**06 31 51.1**	**-0.8**		
	baz=248								
RND	**Reindeer**	**86.14**	**25**	IAmb	IAmb	06 31 57.3			
	comp=Z,118nm,1.2s								
RND				IAMs_20	IAMs_20	07 05 10.1			
	comp=Z,4µm,22.0s								
H22K	**Ishtalitna Cre**	**86.16**	**22**	P	**P**	**06 31 51.8**	**-0.5**		
	baz=245								
BWN	**Browne**	**86.19**	**24**	IAMs_20	IAMs_20	07 05 43.1			
	comp=Z,3µm,22.0s								
FID	**Port Fidalgo**	**86.21**	**28**	IAMs_20	IAMs_20	07 02 55.7			
	comp=Z,2µm,21.0s								
SCM	**Sheep Creek Mo**	**86.21**	**26**	IAMs_20	IAMs_20	07 04 50.1			
	comp=Z,3µm,21.0s								
SCM	**Sheep Creek Mo**	**86.21**	**26**	P	**P**	**06 31 52.0**	**-0.8**		
	baz=249,SNR=10.0								
MCK	**McKinley**	**86.24**	**24**	P	**P**	**06 31 52.1**	**-0.6**		
	baz=247,SNR=28								
WAT6	**Susitna Watana**	**86.31**	**26**	P	**P**	**06 31 52.9**	**-0.4**		
	baz=249								
E21K	**Killik River**	**86.38**	**19**	P	**P**	**06 31 52.8**	**-0.6**		
	baz=242								
C21K	**Knifeblade Rid**	**86.46**	**18**	P	**P**	**06 31 53.7**	**0.0**		
	baz=242								
EYAK	**Cordova Ski Ar**	**86.48**	**28**	P	**P**	**06 31 53.9**	**-0.1**		
	baz=250								
NEA2	**Nenana**	**86.52**	**24**	IAmb	IAmb	06 31 59.2			
	comp=Z,111nm,1.5s								
NEA2				IAMs_20	IAMs_20	07 05 38.8			
	comp=Z,2µm,21.0s								
NEA2	**Nenana**	**86.52**	**24**	P	**P**	**06 31 53.3**	**-0.7**		
	baz=247								
G22K	**Bettles**	**86.55**	**21**	P	**P**	**06 31 53.8**	**-0.3**		
	baz=245								
JLN	**Jalan Bani Buh**	**86.60**	**293**	P	**P**	**06 31 56.2**	**+0.8**		
	SNR=7.7								
JLN				S	**SKSac**	**06 42 24.5**	**+2.3**		
I23K	**Minto, Yukon-K**	**86.62**	**23**	IAmb	IAmb	06 31 57.7			
	comp=Z,96nm,1.6s								
I23K				IAMs_20	IAMs_20	07 06 26.5			
	comp=Z,3µm,21.0s								
I23K	**Minto, Yukon-K**	**86.62**	**23**	P	**P**	**06 31 54.0**	**-0.5**		
	baz=247,SNR=16								
DHY	**Denali Highway**	**86.64**	**25**	IAMs_20	IAMs_20	07 06 28.3			
	comp=Z,3µm,20.0s								
DHY	**Denali Highway**	**86.64**	**25**	P	**P**	**06 31 54.3**	**-0.6**		
	baz=249,SNR=23								
KLU	**Klutina**	**86.72**	**27**	IAmb	IAmb	06 32 01.4			
	comp=Z,89nm,1.2s								
KLU				IAMs_20	IAMs_20	07 04 38.6			
	comp=Z,4µm,22.0s								
KLU	**Klutina**	**86.72**	**27**	P	**P**	**06 31 55.0**	**-0.2**		
	baz=250,SNR=8.7								
M24K	**Tolsona, Glenn**	**86.82**	**26**	P	**P**	**06 31 55.3**	**-0.4**		
	baz=250,SNR=10.0								
WRH	**Wood River Hil**	**86.86**	**24**	IAMs_20	IAMs_20	07 08 43.0			
	comp=Z,2µm,20.0s								
KAIM	**Kayak Island**	**86.91**	**29**	P	**P**	**06 31 55.9**	**-0.1**		
	baz=252								
RAGM	**Ragged Mountai**	**86.93**	**28**	IAMs_20	IAMs_20	07 05 59.3			
	comp=Z,3µm,20.0s								
E22K	**Anaktuvuk Pass**	**86.96**	**20**	P	**P**	**06 31 55.9**	**-0.3**		
	baz=244								
A21K	**Barrow**	**86.98**	**16**	P	**P**	**06 31 55.8**	**-0.3**		
	baz=240								
MDM	**Murphy Dome**	**86.99**	**23**	IAmb	IAmb	06 31 58.6			
	comp=Z,62nm,1.5s								
MDM				IAMs_20	IAMs_20	07 05 53.3			
	comp=Z,3µm,22.0s								
G23K	**Bananza Creek**	**86.99**	**21**	IAmb	IAmb	06 32 00.3			
	comp=Z,102nm,1.6s								
G23K				IAMs_20	IAMs_20	07 04 41.4			
	comp=Z,3µm,22.0s								
G23K	**Bananza Creek**	**86.99**	**21**	P	**P**	**06 31 56.0**	**-0.4**		
	baz=246								
D22K	**Ayikyak River**	**87.00**	**19**	P	**P**	**06 31 56.1**	**-0.2**		
	baz=244								
CCB	**Clear Creek Bu**	**87.04**	**24**	IAMs_20	IAMs_20	07 06 47.7			
	comp=Z,2µm,21.0s								
WBK	**Wadi Bani Khal**	**87.07**	**293**	P	**P**	**06 31 58.8**	**+1.1**		
	SNR=8.7								
WBK				S	**SKSac**	**06 42 28.6**	**+3.5**		
COLA	**College**	**87.11**	**24**	P	**P**	**06 31 54.8**	**-2.1**		
COLA				IAmb	IAmb	06 31 58.9			
	comp=Z,107nm,1.4s								
COLA	**College**	**87.11**	**24**	IAMs_20	IAMs_20	07 06 50.3			
	comp=Z,2µm,21.0s								
COLA	**College**	**87.11**	**24**	P	**P**	**06 31 56.4**	**-0.5**		
	baz=248								
COLA	**College**	**87.11**	**24**	P	**P**	**06 31 54.8**	**-2.1**		
COLA				pmax	pmax				
	comp=Z,107nm,1.4s								
COLD	**Coldfoot**	**87.14**	**21**	P	**P**	**06 31 57.0**	**0.0**		
	baz=246								
BMRM	**Bremner River**	**87.15**	**28**	P	**P**	**06 31 56.3**	**-1.0**		
	baz=251,SNR=11								
HDA	**Harding Lake**	**87.30**	**24**	IAmb	IAmb	06 32 04.0			
	comp=Z,101nm,1.7s								
HDA				IAMs_20	IAMs_20	07 04 22.6			
	comp=Z,3µm,22.0s								
HDA	**Harding Lake**	**87.30**	**24**	P	**P**	**06 31 57.7**	**-0.2**		
	baz=249,SNR=9.4								
N25K	**Chitina, Valde**	**87.36**	**27**	P	**P**	**06 31 57.6**	**-0.7**		
	baz=251,SNR=8.5								
POKR	**Poker Plat Res**	**87.36**	**23**	IAmb	IAmb	06 32 00.2			
	comp=Z,45nm,1.4s								
POKR				IAMs_20	IAMs_20	07 07 19.2			
	comp=Z,2µm,21.0s								
POKR	**Poker Plat Res**	**87.36**	**23**	P	**P**	**06 31 58.0**	**-0.2**		
	baz=249								
HARP	**HAARP**	**87.37**	**26**	P	**P**	**06 31 58.1**	**-0.1**		
	baz=251								
PAX	**Paxson**	**87.42**	**26**	P	**P**	**06 31 58.6**	**0.0**		
	baz=251,SNR=14								
H24K	**Noodor Dome**	**87.45**	**23**	IAmb	IAmb	06 32 01.9			
	comp=Z,76nm,1.5s								
H24K				IAMs_20	IAMs_20	07 07 35.6			
	comp=Z,3µm,21.0s								
H24K	**Noodor Dome**	**87.45**	**23**	P	**P**	**06 31 58.8**	**+0.1**		
	baz=248								
ILAR	**Eielson Array**	**87.45**	**24**	P	**P**	**06 31 55.6**	**-3.0**		
	comp=Z,14nm,0.9s,baz=257,slow=3.7,SNR=68								
ILAR				PKKPbc	**PKKPdf**	**06 49 47.5**	**+2.4**		
	comp=Z,0.8nm,0.8s,baz=355,slow=1.2,SNR=7.5								
	comp=Z,14nm,0.9s								
BGLC	**Bering Glacier**	**87.51**	**29**	P	**P**	**06 31 58.8**	**-0.1**		
	baz=253								
K24K	**Donnelly Dome**	**87.57**	**25**	P	**P**	**06 31 59.2**	**0.0**		
	baz=250,SNR=8.2								
E23K	**Chandalar**	**87.68**	**20**	P	**P**	**06 31 59.3**	**-0.5**		
	baz=247								
D23K	**Nanushuk River**	**87.69**	**19**	P	**P**	**06 31 59.5**	**-0.1**		
	baz=246								
VRDI	**Verde Repeater**	**87.76**	**28**	IAmb	IAmb	06 32 03.7			
	comp=Z,68nm,1.3s								
CRQM	**Cirque**	**87.77**	**28**	IAMs_20	IAMs_20	07 06 15.8			
	comp=Z,2µm,20.0s								
MHTO	**MHTO**	**87.77**	**291**	P	**P**	**06 32 02.0**	**+0.9**		
	SNR=18								
MHTO				S	**SKSac**	**06 42 27.3**	**-1.9**		
CRQE	**Cirque**	**87.79**	**28**	P	**P**	**06 31 59.4**	**-1.0**		
	baz=253								
WAX	**Waxell Ridge**	**87.81**	**28**	IAMs_20	IAMs_20	07 06 02.6			
	comp=Z,3µm,19.0s								
JMDO	**Jabal Madar**	**87.83**	**293**	P	**P**	**06 32 01.0**	**-0.4**		
JMDO				S	**SKSac**	**06 42 30.1**	**+0.4**		
TGL	**Tana Glacier**	**87.91**	**28**	IAMs_20	IAMs_20	07 09 14.6			
	comp=Z,2µm,21.0s								
G24K	**Hadweenzic Riv**	**87.92**	**22**	IAMs_20	IAMs_20	07 06 17.1			
	comp=Z,3µm,21.0s								
G24K	**Hadweenzic Riv**	**87.92**	**22**	P	**P**	**06 32 00.3**	**-0.6**		
	baz=249								
RIDG	**Independent Ri**	**87.94**	**25**	P	**P**	**06 31 59.8**	**-1.2**		
	baz=251								
BIDO	**Bidbid**	**87.97**	**294**	P	**P**	**06 32 02.5**	**+0.6**		
	SNR=10.0								
SMDO	**Samad**	**87.97**	**293**	P	**P**	**06 32 01.3**	**-0.8**		
MCARA	**McCarthy VSAT**	**88.01**	**28**	IAmb	IAmb	06 32 33.1			
	comp=Z,91nm,1.4s								
MCARA	**McCarthy VSAT**	**88.01**	**28**	P	**P**	**06 32 00.7**	**-0.6**		
	baz=253								
J25K	**Salcha River,**	**88.01**	**24**	IAMs_20	IAMs_20	07 06 04.6			
	comp=Z,2µm,22.0s								
J25K	**Salcha River,**	**88.01**	**24**	P	**P**	**06 32 00.7**	**-0.7**		
	baz=251								
DQM	**DQM**	**88.03**	**290**	P	**P**	**06 32 04.4**	**+2.1**		
	SNR=6.6								
F24K	**Squaw Lake**	**88.08**	**21**	IAMs_20	IAMs_20	07 05 37.9			
	comp=Z,3µm,22.0s								
F24K	**Squaw Lake**	**88.08**	**21**	P	**P**	**06 32 01.0**	**-0.6**		
	baz=248								
ISLE	**Juniper Island**	**88.10**	**28**	IAMs_20	IAMs_20	07 04 56.2			
	comp=Z,2µm,20.0s								
MESA	**MESA**	**88.16**	**29**	P	**P**	**06 32 00.6**	**-1.7**		
	baz=254								
PRP	**Porcupine Dome**	**88.25**	**23**	IAMs_20	IAMs_20	07 06 41.7			
	comp=Z,2µm,22.0s								
PRP	**Porcupine Dome**	**88.25**	**23**	P	**P**	**06 32 01.2**	**-1.4**		
	baz=250								
L26K	**Log Cabin Wild**	**88.36**	**26**	IAmb	IAmb	06 32 06.5			
	comp=Z,85nm,1.4s								
L26K				IAMs_20	IAMs_20	07 07 32.7			
	comp=Z,3µm,20.0s								
L26K	**Log Cabin Wild**	**88.36**	**26**	P	**P**	**06 32 02.0**	**-1.0**		
	baz=252,SNR=16								
SCRK	**Sand Creek**	**88.38**	**25**	IAmb	IAmb	06 32 06.4			
	comp=Z,56nm,1.3s								
SCRK	**Sand Creek**	**88.38**	**25**	P	**P**	**06 32 02.3**	**-0.9**		
	baz=252,SNR=19								
D24K	**Happy Valley**	**88.38**	**19**	P	**P**	**06 32 02.5**	**-0.4**		
	baz=247								
G25K	**Bearman Lake**	**88.46**	**22**	P	**P**	**06 32 02.9**	**-0.4**		
	baz=250								
JASK	**Jask - Hormozg**	**88.52**	**296**	P	**P**	**06 32 06.8**	**+2.2**		
JASK				S	**SKSac**	**06 42 38.2**	**+4.6**		
BARN	**Barnard Glacie**	**88.55**	**28**	IAMs_20	IAMs_20	07 06 29.1			
	comp=Z,2µm,20.0s								
TABL	**Table Mountain**	**88.62**	**29**	IAMs_20	IAMs_20	07 07 02.1			
	comp=Z,3µm,21.0s								
C24K	**Franklin Bluff**	**88.64**	**19**	P	**P**	**06 32 03.5**	**-0.6**		
	baz=247								
CTG	**Chitna Glacier**	**88.67**	**28**	P	**P**	**06 32 03.7**	**-1.0**		
	baz=254,SNR=11								
BSY	**Bisya**	**88.71**	**293**	P	**P**	**06 32 04.8**	**-0.8**		
BSY				S	**SKSac**	**06 42 35.7**	**+0.8**		
J26L	**Joseph Creek**	**88.71**	**25**	IAmb	IAmb	06 32 08.2			
	comp=Z,85nm,1.2s								
J26L	**Joseph Creek**	**88.71**	**25**	P	**P**	**06 32 04.7**	**0.0**		
	baz=252								
FYU	**Fort Yukon**	**88.72**	**22**	IAMs_20	IAMs_20	07 07 44.9			
	comp=Z,3µm,21.0s								
HOQ	**Hoqain**	**88.72**	**294**	P	**P**	**06 32 04.5**	**-1.1**		
	SNR=6.4								
HOQ				S	**SKSac**	**06 42 38.7**	**+3.7**		
LOGN	**Logan Glacier**	**88.79**	**28**	IAmb	IAmb	06 32 11.7			
	comp=Z,48nm,1.0s								
M27K	**Edge Creek, AK**	**88.81**	**27**	IAMs_20	IAMs_20	07 06 55.9			
	comp=Z,4µm,22.0s								
M27K	**Edge Creek, AK**	**88.81**	**27**	P	**P**	**06 32 05.0**	**-0.3**		
	baz=254								
F25K	**Christian Rive**	**88.91**	**21**	P	**P**	**06 32 05.4**	**-0.2**		
	baz=250								
PINM	**Pinnacle**	**88.96**	**29**	P	**P**	**06 32 05.5**	**-0.4**		
	baz=255								
L27K	**Beaver Creek,**	**89.03**	**26**	IAmb	IAmb	06 32 09.9			
	comp=Z,90nm,1.4s								
L27K				IAMs_20	IAMs_20	07 08 01.7			
	comp=Z,3µm,20.0s								
L27K	**Beaver Creek,**	**89.03**	**26**	P	**P**	**06 32 05.5**	**-0.7**		
	baz=254								
E25K	**Arctic Village**	**89.11**	**21**	IAmb	IAmb	06 32 10.9			
	comp=Z,92nm,1.4s								
E25K				IAMs_20	IAMs_20	07 08 40.3			
	comp=Z,2µm,21.0s								
E25K	**Arctic Village**	**89.11**	**21**	P	**P**	**06 32 06.2**	**-0.3**		
	baz=250								
I26K	**Coal Creek Min**	**89.12**	**24**	IAmb	IAmb	06 32 09.5			
	comp=Z,42nm,1.2s								
I26K				IAMs_20	IAMs_20	07 06 47.2			
	comp=Z,2µm,21.0s								
I26K	**Coal Creek Min**	**89.12**	**24**	P	**P**	**06 32 06.6**	**+0.1**		
	baz=253,SNR=12								
K27K	**Chicken**	**89.19**	**25**	IAMs_20	IAMs_20	07 06 30.9			
	comp=Z,3µm,22.0s								
K27K	**Chicken**	**89.19**	**25**	P	**P**	**06 32 06.7**	**-0.2**		
	baz=254								
D25K	**Kavik River**	**89.25**	**20**	IAmb	IAmb	06 32 13.7			
	comp=Z,104nm,1.5s								
D25K	**Kavik River**	**89.25**	**20**	P	**P**	**06 32 06.6**	**-0.5**		
	baz=250								
PNL	**Peninsula**	**89.27**	**30**	P	**P**	**06 32 06.8**	**-0.5**		
	baz=256								
BVCY	**Beaver Creek**	**89.28**	**27**	P	**P**	**06 32 07.3**	**0.0**		
	baz=255,SNR=11								
YUK3	**Moose Creek**	**89.30**	**28**	P	**P**	**06 32 07.4**	**-0.3**		
	baz=255,SNR=13								
G26K	**Porcupine Rive**	**89.38**	**22**	P	**P**	**06 32 07.0**	**-0.7**		
	baz=252								
ARQ	**Araqi**	**89.40**	**293**	P	**P**	**06 32 10.9**	**+2.1**		
ARQ				S	**SKSac**	**06 42 37.0**	**-2.1**		
F26K	**Sheenjek River**	**89.48**	**21**	P	**P**	**06 32 07.8**	**-0.4**		
	baz=252								
SOHO	**SOHO**	**89.49**	**294**	P	**P**	**06 32 06.4**	**-2.8**		
SOHO				S	**SKSac**	**06 42 40.5**	**+1.0**		
SHAO	**Shalim**	**89.59**	**288**	P	**P**	**06 32 10.1**	**+0.3**		
SHAO				S	**SKSac**	**06 42 43.2**	**+2.9**		
EGAK	**Eagle**	**89.79**	**25**	IAmb	IAmb	06 32 13.1			
	comp=Z,57nm,1.2s								
EGAK	**Eagle**	**89.79**	**25**	P	**P**	**06 32 09.3**	**-0.3**		
	baz=254,SNR=13								
O29M	**Mount Kennedy**	**89.82**	**29**	IAMs_20	IAMs_20	07 09 58.2			
	comp=Z,3µm,20.0s								
O29M	**Mount Kennedy**	**89.82**	**29**	P	**P**	**06 32 09.3**	**-0.8**		
	baz=257								
I27K	**Kandik River**	**89.83**	**24**	P	**P**	**06 32 09.2**	**-0.7**		
	baz=254,SNR=28								
MDH	**Madha**	**89.85**	**295**	P	**P**	**06 32 10.8**	**-0.1**		
UOSS	**Minazif**	**89.89**	**295**	P	**P**	**06 32 09.8**	**-1.3**		
UOSS	**Minazif**	**89.89**	**295**	P	**P**	**06 32 11.8**	**+0.8**		
UOSS				S	**SKSac**	**06 42 38.8**	**-3.1**		
MASF	**Masafi**	**89.98**	**295**	P	**P**	**06 32 12.2**	**+0.7**		
MASF				S	**SKSac**	**06 42 42.4**	**-0.1**		
GEYT	**Alibeck**	**89.99**	**308**	IAmb	IAmb	06 32 14.9			
	comp=Z,51nm,1.4s								
GEYT	**Alibeck**	**89.99**	**308**	P	**P**	**06 32 10.1**	**-1.2**		
	comp=Z,18nm,1.2s,baz=76,slow=12,SNR=5.8								
	comp=Z,18nm,1.2s								
GYA0B	**ALIBECK ARRAY**	**89.99**	**308**	IAmb	IAmb	06 32 14.9			
	comp=Z,54nm,1.4s								
YUK4	**Talbot Arm**	**90.03**	**28**	P	**P**	**06 32 10.9**	**-0.2**		
	baz=257								
H27K	**Steamboat Moun**	**90.03**	**23**	P	**P**	**06 32 10.6**	**-0.2**		
	baz=254								
YUK6	**Outpost Mounta**	**90.07**	**29**	P	**P**	**06 32 10.7**	**-0.7**		
	baz=257								
P29M	**Windy Craggy**	**90.08**	**30**	IAmb	IAmb	06 32 45.8			
	comp=Z,98nm,1.4s								
P29M				IAMs_20	IAMs_20	07 08 01.0			
	comp=Z,2µm,19.0s								
P29M	**Windy Craggy**	**90.08**	**30**	P	**P**	**06 32 11.0**	**-0.2**		
	baz=258								
DMTO	**DMTO**	**90.19**	**288**	P	**P**	**06 32 13.2**	**+0.7**		
ALNE	**Al Ain**	**90.19**	**294**	P	**P**	**06 32 13.8**	**+1.4**		
	SNR=5.2								
ALNE				S	**SKSac**	**06 42 43.9**	**+0.3**		
DAWY	**Dawson**	**90.34**	**25**	IAmb	IAmb	06 32 19.0			
	comp=Z,46nm,1.0s								
DAWY	**Dawson**	**90.34**	**25**	P	**P**	**06 32 12.3**	**-0.1**		
	baz=256								
M29M	**Somme Creek**	**90.37**	**27**	IAMs_20	IAMs_20	07 06 22.2			
	comp=Z,3µm,22.0s								
M29M	**Somme Creek**	**90.37**	**27**	P	**P**	**06 32 11.4**	**-1.2**		
	baz=257								
AB31	**Akbulak array**	**90.40**	**319**	*i* P	**P**	**06 32 10.1**	**-2.7**		
HYT	**Haines Junctio**	**90.46**	**29**	IAmb	IAmb	06 32 47.5			
	comp=Z,43nm,1.3s								
HYT	**Haines Junctio**	**90.46**	**29**	P	**P**	**06 32 12.5**	**-0.6**		
	baz=258								
I28M	**Miner Creek**	**90.46**	**24**	IAmb	IAmb	06 32 16.6			
	comp=Z,76nm,1.4s								
I28M				IAMs_20	IAMs_20	07 09 32.2			
	comp=Z,2µm,21.0s								
I28M	**Miner Creek**	**90.46**	**24**	P	**P**	**06 32 12.1**	**-0.8**		
	baz=256								
S31K	**Pelican**	**90.50**	**32**	P	**P**	**06 32 12.5**	**-0.6**		
	baz=259								
P30M	**Million Dollar**	**90.57**	**30**	P	**P**	**06 32 13.0**	**-0.5**		
	baz=258								
L29M	**L29M**	**90.67**	**26**	IAmb	IAmb	06 32 18.3			
	comp=Z,36nm,1.0s								
L29M				IAMs_20	IAMs_20	07 08 42.1			
	comp=Z,3µm,21.0s								
L29M	**L29M**	**90.67**	**26**	P	**P**	**06 32 12.5**	**-1.3**		
	baz=257								
SIT	**Sitka**	**90.81**	**33**	P	**P**	**06 32 13.7**	**-0.9**		
	baz=260								
R31K	**City Hall, Gus**	**90.85**	**31**	P	**P**	**06 32 14.8**	**+0.2**		
	baz=259								
J29N	**Klondike Camp**	**90.93**	**25**	IAmb	IAmb	06 32 19.3			
	comp=Z,36nm,1.2s								
J29N				IAMs_20	IAMs_20	07 08 31.8			
	comp=Z,4µm,21.0s								
J29N	**Klondike Camp**	**90.93**	**25**	P	**P**	**06 32 15.2**	**+0.1**		
	baz=257								
AJN	**Ajban**	**90.95**	**294**	P	**P**	**06 32 15.4**	**-0.5**		
F28M	**Old Crow**	**91.03**	**22**	IAmb	IAmb	06 32 23.3			
	comp=Z,60nm,1.9s								
F28M				IAMs_20	IAMs_20	07 09 36.0			
	comp=Z,3µm,20.0s								
F28M	**Old Crow**	**91.03**	**22**	P	**P**	**06 32 14.9**	**-0.5**		
	baz=256								
DOK	**Doka**	**91.07**	**288**	P	**P**	**06 32 16.0**	**-0.6**		
	SNR=7.5								
K29M	**Barlow Dome**	**91.10**	**26**	IAmb	IAmb	06 32 22.7			
	comp=Z,34nm,1.0s								
K29M				IAMs_20	IAMs_20	07 08 05.3			
	comp=Z,3µm,21.0s								
K29M	**Barlow Dome**	**91.10**	**26**	P	**P**	**06 32 15.9**	**-0.1**		
	baz=258								
O30N	**Mendenhall**	**91.12**	**29**	IAMs_20	IAMs_20	07 07 25.2			
	comp=Z,3µm,22.0s								
O30N	**Mendenhall**	**91.12**	**29**	P	**P**	**06 32 15.2**	**-0.8**		
	baz=259								
M30M	**Minto, Yukon**	**91.16**	**27**	IAMs_20	IAMs_20	07 06 22.8			
	comp=Z,3µm,22.0s								
M30M	**Minto, Yukon**	**91.16**	**27**	P	**P**	**06 32 16.1**	**0.0**		
	baz=258								
SKAG	**Skagway**	**91.25**	**30**	P	**P**	**06 32 16.5**	**-0.1**		
	baz=260								
SVE	**Sverdlovsk**	**91.25**	**327**	*e* P	**P

ARU 06 36 02.4
ARU S **SKSac** **06 42 54.0 -0.3**
ARU SP SPn 06 44 36.7 +1.2
ARU SS **SS** **06 49 37.9 +3.0**
ARU pmax pmax
comp=Z,17nm,1.4s
ARU MLR MLR
comp=Z,596nm,20.0s
WRAK Wrangell Islan 92.33 34 P **P** **06 32 20.6 -0.9**
baz=262
F30M Barrier River 92.56 22 P **P** **06 32 21.6 -0.8**
baz=259
V35K Ketchikan 92.59 35 P **P** **06 32 22.1 -0.7**
baz=262
P33M Teslin, Yukon 92.63 30 IAMs_20 IAMs_20 07 09 11.0
comp=Z,2µm,21.0s
P33M Teslin, Yukon 92.63 30 P **P** **06 32 21.9 -1.2**
baz=262
N32M Quiet Lake 92.64 29 IAmb IAmb 06 32 26.4
comp=Z,44nm,1.3s
N32M IAMs_20 IAMs_20 07 11 28.3
comp=Z,2µm,18.0s
N32M Quiet Lake 92.64 29 P **P** **06 32 22.3 -0.8**
baz=262
FARO Faro, Yukon 92.67 28 IAMs_20 IAMs_20 07 10 34.0
comp=Z,2µm,20.0s
FARO Faro, Yukon 92.67 28 P **P** **06 32 22.5 -0.6**
baz=261
ELIB Princess Elisa 92.72 196 *d*P **P** **06 32 22.8 -0.5**
comp=Z,14nm,0.9s
Q32M Nakina River 92.72 31 P **P** **06 32 22.1 -1.6**
baz=262
H31M Peel River 92.80 24 IAMs_20 IAMs_20 07 08 05.2
comp=Z,2µm,22.0s
H31M Peel River 92.80 24 P **P** **06 32 22.8 -0.9**
baz=261
FOMA Nahampoana Res 92.82 245 IAMs_20 IAMs_20 07 14 07.9
comp=Z,2µm,18.0s
G31M Satah River 93.02 23 IAmb IAmb 06 32 27.4
comp=Z,26nm,1.1s
G31M Satah River 93.02 23 P **P** **06 32 23.9 -0.7**
baz=261,SNR=11
S34M Telegraph Cree 93.18 32 IAMs_20 IAMs_20 07 08 16.0
comp=Z,2µm,20.0s
S34M Telegraph Cree 93.18 32 P **P** **06 32 24.1 -1.4**
baz=263
F31M Tsiigehtchic 93.30 23 IAmb IAmb 06 32 28.3
F31M comp=Z,40nm,1.4s IAMs_20 IAMs_20 07 10 33.1
comp=Z,3µm,21.0s
F31M Tsiigehtchic 93.30 23 P **P** **06 32 25.4 -0.4**
baz=261,SNR=9.2
GRNB Grenville Isla 93.37 36 IAMs_20 IAMs_20 07 09 34.4
comp=Z,3µm,20.0s
VOI Vohitsoka 93.43 248 P **P** **06 32 28.0 +0.3**
VOI IAmb IAmb 06 32 30.9
comp=Z,54nm,1.4s
VOI IAMs_20 IAMs_20 07 12 42.2
comp=Z,2µm,19.0s
VOI Vohitsoka 93.43 248 P **P** **06 32 31.3 +3.6**
ABPO Ambohimpanom 93.44 251 IAMs_20 IAMs_20 07 11 37.4
comp=Z,2µm,19.0s
R33M Jennings River 93.44 31 P **P** **06 32 25.7 -1.2**
baz=263
INK Inuvik 93.51 22 IAMs_20 IAMs_20 07 11 17.6
comp=Z,3µm,21.0s
INK Inuvik 93.51 22 P **P** **06 32 26.1 -0.7**
baz=262,SNR=8.1
T35M Bob Quinn 93.55 33 P **P** **06 32 26.1 -1.2**
baz=264
DLBC Dease Lake 93.82 32 P **P** **06 32 28.4 -0.2**
baz=264
BBB Bella Bella 94.31 38 IAMs_20 IAMs_20 07 05 42.6
comp=Z,3µm,22.0s
WTLY Watson Lake, Y 94.61 30 IAmb IAmb 06 32 35.6
comp=Z,44nm,1.3s
WTLY Watson Lake, Y 94.61 30 P **P** **06 32 32.3 +0.2**
baz=265
TGTN Hyland Airport 94.98 29 P **P** **06 32 33.6 -0.2**
baz=266
OZB Mount Ozzard 95.75 41 IAMs_20 IAMs_20 07 09 14.2
comp=Z,2µm,20.0s
CBB Campbell River 95.89 40 IAMs_20 IAMs_20 07 07 11.8
comp=Z,2µm,22.0s
NVL N'lazarevskaya 96.41 195 *e*P **P** **06 32 40.5 +0.4**
NVL pmax pmax
comp=Z,21nm,1.2s
NVL MLR MLR
comp=Z,4µm,16.0s
A36M Sachs Harbour 96.62 18 P **P** **06 32 40.7 -0.2**
baz=270
CLRS Cowichan Lake 96.64 42 IAMs_20 IAMs_20 07 10 59.8
comp=Z,2µm,20.0s
NLWA Neilton Lookou 96.77 43 IAmb IAmb 06 32 45.5
comp=Z,58nm,1.4s
KOTAN Kotaneelee Air 96.98 30 P **P** **06 32 42.3 -0.6**
baz=269
C36M Paulatuk 97.01 21 IAmb IAmb 06 32 49.0
C36M comp=Z,29nm,1.8s IAMs_20 IAMs_20 07 12 11.1
comp=Z,2µm,22.0s
C36M Paulatuk 97.01 21 P **P** **06 32 41.7 -1.1**
baz=270
PGC Sidney 97.09 42 IAMs_20 IAMs_20 07 11 23.6
comp=Z,2µm,20.0s
HUMO Hull Mountain 97.23 48 IAMs_20 IAMs_20 07 07 22.8
comp=Z,2µm,21.0s
FLDN Fort Liard 97.27 30 P **P** **06 32 43.5 -0.7**
baz=270
WRGLY Wrigley 97.28 27 IAMs_20 IAMs_20 07 16 17.0
comp=Z,2µm,20.0s
WRGLY Wrigley 97.28 27 P Pdif 06 32 44.3 +0.1
baz=270
F04D Rainier, OR 97.31 44 IAMs_20 IAMs_20 07 08 00.8
comp=Z,3µm,22.0s
YBH Yreka Blue Hor 97.39 49 IAmb IAmb 06 32 46.9
comp=Z,23nm,1.5s
YBH Yreka Blue Hor 97.39 49 LR LR 07 09 38.2
comp=Z,4µm,20.5s,baz=322,slow=31
KIRV Kirov 97.40 328 *e*P **P** **06 32 43.1 -1.6**
KIRV Kirov 97.40 328 LR LR 07 18 02.5
comp=Z,730nm,21.4s,baz=87,slow=36
GNW Green Mountain 97.48 43 IAmb IAmb 06 32 49.2
comp=Z,23nm,1.2s
LON Longmire 98.16 44 IAMs_20 IAMs_20 07 09 53.1
comp=Z,2µm,20.0s
ORV Oroville 98.24 51 P **P** **06 32 48.9 -0.1**
ORV IAmb IAmb 06 32 50.8
comp=Z,31nm,1.7s
ORV IAMs_20 IAMs_20 07 12 15.7
comp=Z,2µm,20.0s
ORV Oroville 98.24 51 P **P** **06 32 48.9 -0.1**
ORV pmax pmax
comp=Z,31nm,1.7s
HOOD Mount Hood Mea 98.25 45 IAmb IAmb 06 32 52.6
comp=Z,46nm,1.4s
HOOD IAMs_20 IAMs_20 07 11 05.7
comp=Z,3µm,20.0s
BELG Belogornoye 98.43 322 *i* P **P** **06 32 47.5 -2.0**
BELG pmax pmax
comp=Z,16nm,1.3s
I05D Terrebonne, OR 98.45 46 IAmb IAmb 06 32 54.7
comp=Z,27nm,1.2s
I05D IAMs_20 IAMs_20 07 10 20.3
comp=Z,3µm,21.0s
MAK Makhachkala 98.46 312 *e*P **P** **06 32 45.5 -4.4**
MAK *e* 06 36 44.1
MAK *e* 06 43 20.5
MAK pmax pmax
comp=Z,101nm,1.4s
J05D Fort Rock, OR 98.52 47 P **P** **06 32 50.1 -0.3**
J05D IAmb IAmb 06 32 54.2
comp=Z,28nm,1.2s
AFDM Forest Hills D 98.63 52 IAmb IAmb 06 32 54.3
comp=Z,18nm,1.2s
PINE Pine Mountain 98.74 47 IAmb IAmb 06 32 55.3
comp=Z,28nm,1.1s
K05A Summer Lake 98.76 48 Pdif 06 32 52.4 +0.9
K05A IAmb IAmb 06 33 11.9
comp=Z,53nm,1.6s
SNAA Sanae 98.88 190 LR LR 07 18 57.3
comp=Z,2µm,19.4s,baz=132,slow=36
LTY Liberty 98.94 43 IAMs_20 IAMs_20 07 11 00.8
comp=Z,2µm,21.0s
MXC Moxie City 99.20 44 IAmb IAmb 06 32 59.4
comp=Z,29nm,1.6s
SMMC Simmler 99.33 55 P **Pdif** **06 32 53.1 -1.0**
baz=269

PKM Mcpherson Peak 99.47 56 P **Pdif** **06 32 54.8 -0.1**
baz=269
E07A Sunnyside 99.50 44 IAmb IAmb 06 32 58.3
comp=Z,39nm,1.5s
SNCC San Nicolas Is 99.67 57 P **Pdif** **06 32 54.2 -1.3**
baz=269
I07A Izee 99.77 46 IAMs_20 IAMs_20 07 13 01.2
comp=Z,3µm,20.0s
E08A Dider Farm, El 100.05 44 IAMs_20 IAMs_20 07 10 14.2
comp=Z,2µm,20.0s
VES Vestal, Richgr 100.08 55 P **Pdif** **06 32 57.6 +0.3**
baz=269
G08A Pilot Rock 100.15 45 IAMs_20 IAMs_20 07 12 11.9
comp=Z,3µm,19.0s
ARVC Arvin 100.28 56 P **Pdif** **06 32 58.6 +0.4**
baz=269
WVOR Wild Horse Val 100.43 48 IAMs_20 IAMs_20 07 10 58.3
comp=Z,2µm,21.0s
SCI2 San Clemente I 100.48 58 P **Pdif** **06 32 59.6 +0.4**
baz=269
J08A Circle Bar Ran 100.53 47 IAMs_20 IAMs_20 07 11 52.2
comp=Z,3µm,21.0s
ISA Isabella, Lake 100.58 55 P **Pdif** **06 32 59.9 +0.3**
baz=270
CIS Catalina Islan 100.60 57 P **Pdif** **06 32 59.5 -0.2**
baz=269
E09A Wood Farm, Sta 100.68 44 IAMs_20 IAMs_20 07 09 25.0
comp=Z,2µm,21.0s
NVAR Mina Array Bea 100.72 52 P **Pdif** **06 32 58.3 -2.1**
comp=Z,3.6nm,0.9s,baz=259,slow=5.6,SNR=12
NVAR PP **PP** **06 37 05.0 -3.0**
comp=Z,0.3nm,0.4s,baz=238,slow=8.4,SNR=1.8
BRLDA Berland Lookou 100.78 36 IAMs_20 IAMs_20 07 09 53.5
comp=Z,2µm,22.0s
CWC Cottonwood Cre 100.90 54 P **Pdif** **06 33 01.5 +0.3**
baz=270
EDW2 Edwards Air Fo 100.96 56 P **Pdif** **06 33 01.9 +0.5**
baz=270
BFSC Mount Baldy Ra 101.24 56 P **Pdif** **06 33 03.6 +0.9**
baz=270
NEW Newport 101.30 42 IAMs_20 IAMs_20 07 14 08.2
comp=Z,2µm,20.0s
NEW Newport 101.30 42 P **Pdif** **06 33 03.4 +0.9**
baz=273
F10A Beach Ranch, E 101.34 45 IAMs_20 IAMs_20 07 10 41.4
comp=Z,2µm,21.0s
YKAW3 Yellowknife Wh 101.37 27 IAMs_20 IAMs_20 07 13 56.1
comp=Z,3µm,22.0s
MPMC Manual Prospec 101.38 55 P **Pdif** **06 33 03.9 +0.6**
baz=270
YKA Yellowknife Ar 101.38 28 P **Pdif** **06 33 00.7 -1.8**
comp=Z,0.9nm,0.9s,baz=281,slow=4.8,SNR=12
YKA PKKPbc **PKKPbc** **06 49 11.1 -2.7**
comp=Z,1.1nm,0.9s,baz=98,slow=3.1,SNR=13
YKAW1 Yellowknife Wh 101.44 28 IAMs_20 IAMs_20 07 16 28.9
comp=Z,2µm,21.0s
KBZ Khabaz 101.81 313 P **Pdif** **06 33 01.9 -2.9**
comp=Z,1.3nm,0.7s,baz=72,slow=9.6,SNR=2.0
GSC Goldstone, Bar 101.94 55 P **Pdif** **06 33 06.3 +0.6**
baz=271
VRH Novokhopyorsk 102.14 321 *e*P **Pdif** **06 33 05.5 -0.6**
VRH pmax pmax
comp=Z,12nm,0.6s
KLMR Klimovskoe 102.23 331 *e*P **Pdif** **06 33 03.9 -2.4**
KLMR pmax pmax
comp=Z,22nm,1.6s
TPFO Pinon Flats 102.24 57 P **Pdif** **06 33 06.9 -0.3**
baz=270
PLID Pearl Lake 102.25 45 IAMs_20 IAMs_20 07 13 20.5
comp=Z,2µm,20.0s
HEC Hector,Ludlow 102.33 56 P **Pdif** **06 33 08.3 +0.8**
baz=271
SHOC Shoshone, Teco 102.36 55 P **Pdif** **06 33 08.4 +0.9**
baz=271
MFID Camas Ranch 102.46 47 IAMs_20 IAMs_20 07 13 22.3
comp=Z,2µm,20.0s
IKP In-Ko-Pah, Jac 102.53 58 P **Pdif** **06 33 09.2 +0.8**
baz=270
BELC Belle Mtn. Jos 102.62 57 P **Pdif** **06 33 08.7 -0.2**
baz=271
R11B Troy Canyon, C 102.85 52 P **Pdif** **06 33 10.5 +0.6**
baz=272
GMRC Granite Mounta 102.88 56 P **Pdif** **06 33 10.7 +0.7**
baz=271
ELK Elko 103.02 50 IAMs_20 IAMs_20 07 11 55.2
comp=Z,2µm,21.0s
EDM Edmonton 103.26 37 IAMs_20 IAMs_20 07 11 31.3
comp=Z,3µm,22.0s
APA Apatity 103.41 338 *i* P **Pdif** **06 33 09.2 -2.2**
APA pmax pmax
comp=Z,3.0nm,1.1s
HLID Hailey 103.47 47 IAMs_20 IAMs_20 07 14 13.2
comp=Z,3µm,20.0s
HLID Hailey 103.47 47 P **Pdif** **06 33 12.7 +0.2**
baz=274
GLA Glamis 103.61 58 P **Pdif** **06 33 14.1 +0.9**
baz=271
VORR Voronezh 103.66 322 *e*P **Pdif** **06 33 11.2 -1.6**
VORR pmax pmax
comp=Z,61nm,0.4s
VORD Divnogorie 103.69 321 *e*P **Pdif** **06 33 11.4 -1.6**
VORD pmax pmax
comp=Z,10.0nm,1.4s
LPSR Galich'ya Gora 103.72 323 *e*P **Pdif** **06 33 10.6 -2.5**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 103.74 321 *e*P **Pdif** **06 33 10.7 -2.5**
VSR pmax pmax
comp=Z,10.0nm,1.4s
PDMCI Parker Dam,Lak 104.15 56 P **Pdif** **06 33 16.0 +0.6**
baz=272
OBN Obninsk 104.72 325 *i* P **Pdif** **06 33 16.4 -1.0**
OBN *i* 06 37 37.4
OBN *i* 06 45 00.2
OBN MLR MLR
comp=Z,628nm,24.0s
DUG Dugway, Tooele 104.90 50 IAMs_20 IAMs_20 07 17 07.0
comp=Z,1µm,19.0s
DUG Dugway, Tooele 104.90 50 P **Pdif** **06 33 19.9 +1.0**
baz=274
FURI Furi 105.17 277 IAMs_20 IAMs_20 07 18 44.2
comp=Z,2µm,22.0s
BOZ Bozeman (W) 105.27 45 IAMs_20 IAMs_20 07 15 17.5
comp=Z,2µm,20.0s
BOZ Bozeman (W) 105.27 45 P **PKiKP** **06 37 35.1 +0.6**
baz=276
214A Organ Pipe Nat 105.34 59 P **PKiKP** **06 37 35.6 +0.7**
baz=272
ARCES ARCESS Array B 105.47 341 Pdiff **Pdif** **06 33 17.8 -2.8**
comp=Z,8.6nm,1.1s,baz=69,slow=7.8,SNR=3.6
HWUT Hardware Ranch 105.73 49 IAMs_20 IAMs_20 07 14 24.7
comp=Z,2µm,20.0s
AHID Auburn Hatcher 105.96 47 IAMs_20 IAMs_20 07 16 52.0
comp=Z,2µm,20.0s
TPAW Teton Pass 105.99 47 IAMs_20 IAMs_20 07 14 33.6
comp=Z,3µm,20.0s
YNR Norris Junctio 106.04 45 IAMs_20 IAMs_20 07 20 59.0
comp=Z,2µm,19.0s
FLWY Flagg Ranch 106.11 46 IAMs_20 IAMs_20 07 16 46.7
comp=Z,2µm,20.0s
MOOW Moose Ponds 106.11 46 IAMs_20 IAMs_20 07 15 19.9
comp=Z,2µm,20.0s
LOHW Long Hollow 106.23 47 IAMs_20 IAMs_20 07 15 34.0
comp=Z,3µm,20.0s
Q16A Castle Valley 106.27 51 IAMs_20 IAMs_20 07 13 44.6
comp=Z,2µm,21.0s
WUAZ Wupatki 106.36 55 P **PKiKP** **06 37 37.7 +0.8**
baz=274
YMP Mirror Lake Pl 106.41 45 IAMs_20 IAMs_20 07 16 37.7
comp=Z,2µm,21.0s
RLMT Red Lodge 106.99 45 IAMs_20 IAMs_20 07 16 22.9
comp=Z,2µm,20.0s
TUC Tucson 107.04 58 IAMs_20 IAMs_20 07 13 29.7
comp=Z,2µm,21.0s
PDAR Pinedale Array 107.09 47 Pdiff **Pdif** **06 33 27.5 -1.2**
comp=Z,1.5nm,0.9s,baz=276,slow=3.4,SNR=8.8
PDAR PP **PP** **06 38 00.2 +5.0**
comp=Z,1.9nm,1.1s,baz=260,slow=5.4,SNR=3.5
BALJ Balqa 108.20 302 IAMs_20 IAMs_20 07 28 41.0
comp=Z,630nm,21.0s
MVCO Mesa Verde 108.53 53 IAMs_20 IAMs_20 07 14 50.6
comp=Z,3µm,21.0s
MVCO Mesa Verde 108.53 53 P **PKiKP** **06 37 41.3 +0.3**
baz=276
LAO LASA Array 108.83 43 P **PKiKP** **06 37 41.9 +0.9**
baz=281
RWWY Rawlins 108.96 48 IAMs_20 IAMs_20 07 16 19.1
comp=Z,2µm,20.0s

K22A Casper 109.32 47 IAMs_20 IAMs_20 07 18 59.9
comp=Z,2µm,20.0s
K22A Casper 109.32 47 P **PKiKP** **06 37 42.9 +0.8**
baz=279
121A Cookes Peak, D 109.56 58 P **PKiKP** **06 37 43.4 +0.5**
baz=275
DGMT Dagmar 109.80 41 IAMs_20 IAMs_20 07 20 33.8
comp=Z,1µm,20.0s
DGMT Dagmar 109.80 41 P **PKiKP** **06 37 43.4 +0.6**
baz=283
AKASG Malin Array Be 110.01 322 Pdiff **Pdif** **06 33 41.4 +0.3**
comp=Z,0.2nm,0.3s,baz=75,slow=2.7,SNR=4.5
N23A Red Feather La 110.02 49 P **PKiKP** **06 37 43.1 -0.6**
baz=279
PHWY Pilot Hill 110.32 48 IAMs_20 IAMs_20 07 17 53.2
comp=Z,2µm,20.0s
ANMO Albuquerque 110.42 55 IAMs_20 IAMs_20 07 15 59.7
comp=Z,1µm,22.0s
ANMO Albuquerque 110.42 55 P **PKiKP** **06 37 45.4 +0.9**
baz=277
ISCO Idaho Springs 110.44 50 IAMs_20 IAMs_20 07 24 01.6
comp=Z,2µm,19.0s
ISCO Idaho Springs 110.44 50 P **PKiKP** **06 37 45.6 +1.1**
baz=279
EPT El Paso 110.71 59 IAMs_20 IAMs_20 07 16 40.7
comp=Z,1µm,21.0s
BOSA Boshof 110.78 236 IAMs_20 IAMs_20 07 18 49.1
comp=Z,2µm,21.0s
SDCO Great Sand Dun 110.83 52 P **PKiKP** **06 37 45.5 +0.1**
baz=278
BRIGG Briggsdale 111.29 49 IAMs_20 IAMs_20 07 20 42.0
comp=Z,2µm,19.0s
MNTX Cornudas Mount 111.67 59 P **PKiKP** **06 37 47.4 +0.7**
baz=276,SNR=6.1
LBTB Lobatse 111.67 240 IAMs_20 IAMs_20 07 28 08.9
comp=Z,2µm,18.0s
LSZ Lusaka 112.00 251 IAMs_20 IAMs_20 07 19 17.2
comp=Z,2µm,22.0s
OGNE Ogallala 112.93 48 IAMs_20 IAMs_20 07 26 17.2
comp=Z,1µm,18.0s
MDND Maddock 112.94 41 IAMs_20 IAMs_20 07 24 13.6
comp=Z,1µm,20.0s
TXAR Lajitas Array 113.38 61 Pdiff **Pdif** **06 33 58.0 +1.2**
comp=Z,0.5nm,1.0s,baz=274,slow=3.5,SNR=2.4
TXAR PKiKP **PKiKP** **06 37 50.8 +0.6**
comp=Z,2.6nm,1.0s,baz=285,slow=1.3,SNR=12
TXAR PKKPbc **PKKPab** **06 48 39.1 -3.0**
comp=Z,1.7nm,0.8s,baz=109,slow=5.5,SNR=12
MLR Muntele Rosu 113.49 317 PKiKP **PKiKP** **06 37 50.3 +0.3**
comp=Z,4.5nm,0.8s,baz=159,slow=9.4,SNR=4.7
SUSD Miller 114.31 44 IAMs_20 IAMs_20 07 20 52.5
comp=Z,2µm,21.0s
AMTX Amarillo 114.32 55 IAMs_20 IAMs_20 07 16 57.8
comp=Z,1µm,22.0s
ULM Lac du Bonnet 114.50 37 PKP **PKiKP** **06 37 49.3 -2.2**
comp=Z,1.7nm,0.8s,baz=284,slow=4.2,SNR=2.6
ULM PP **PP** **06 38 46.5 -1.5**
comp=Z,3.8nm,1.0s,baz=254,slow=5.6,SNR=5.1
D32A Dogwood Acres, 114.82 41 IAMs_20 IAMs_20 07 26 06.6
comp=Z,1µm,20.0s
KOLS Kolonicke sedl 114.83 321 *e*PKiKP PKPdf 06 37 54.2 +2.0
KOLS Kolonicke sedl 114.83 321 *e*PKP PKPdf 06 37 54.2 +2.0
NOA NORSAR Array B 114.88 336 PKP **PKiKP** **06 37 48.8 -3.2**
comp=Z,1.1nm,0.8s,baz=54,slow=2.1,SNR=2.2
AGMN Agassiz Nation 115.18 39 IAMs_20 IAMs_20 07 24 30.6
comp=Z,2µm,20.0s
AGMN Agassiz Nation 115.18 39 P **PKPdf** **06 37 54.1 +1.2**
baz=290
BGNE Belgrade 115.67 47 IAMs_20 IAMs_20 07 21 34.1
comp=Z,2µm,20.0s
BGNE Belgrade 115.67 47 P **PKPdf** **06 37 55.2 +1.1**
baz=285
F33A 5 Mile Ranch, 115.70 42 IAMs_20 IAMs_20 07 27 30.1
comp=Z,1µm,20.0s
ECSD EROS Data Cent 116.13 44 IAMs_20 IAMs_20 07 22 17.5
comp=Z,2µm,20.0s
KONO Kongsberg 116.35 336 IAMs_20 IAMs_20 07 32 18.3
comp=Z,1µm,20.0s
N33A J Bar K, Exete 116.36 48 IAMs_20 IAMs_20 07 27 04.3
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 116.36 57 P **PKiKP** **06 37 57.0 +1.3**
baz=280
B35A Bob, Littlefor 116.49 39 IAMs_20 IAMs_20 07 22 40.2
comp=Z,2µm,20.0s
JCT Junction City 116.57 59 IAMs_20 IAMs_20 07 19 57.3
comp=Z,2µm,20.0s
JCT Junction City 116.57 59 P **PKiKP** **06 37 56.6 +0.5**
baz=279
ILULI Ilulissat 116.64 6 IAMs_20 IAMs_20 07 29 31.6
comp=Z,1µm,20.0s
WMOK Wichita Mounta 116.69 54 IAMs_20 IAMs_20 07 20 13.6
comp=Z,2µm,21.0s
WMOK Wichita Mounta 116.69 54 P **PKiKP** **06 37 56.9 +0.6**
baz=281
VYHS Vyhne 117.11 322 *e*PKiKP **PKiKP** **06 37 57.7 +1.0**
VYHS Vyhne 117.11 322 *e*PKP **PKiKP** **06 37 57.7 +1.0**
833A Chaparral WMA, 117.22 62 IAMs_20 IAMs_20 07 21 18.9
comp=Z,2µm,21.0s
833A Chaparral WMA, 117.22 62 P **PKiKP** **06 37 57.8 +0.4**
baz=278
MORC Moravsky Berou 117.38 324 *e*PKP **PKiKP** **06 37 58.8 +1.6**
KSU1 Kansas State U 117.41 49 P **PKiKP** **06 37 58.2 +0.7**
baz=285
OK029 Liberty Lake 117.53 53 IAMs_20 IAMs_20 07 20 15.0
comp=Z,2µm,22.0s
N35A Tabor 117.65 47 IAMs_20 IAMs_20 07 22 46.1
comp=Z,2µm,20.0s
JAVC Velka Javorina 117.68 323 *e*PKP **PKiKP** **06 37 59.6 +1.8**
KRLC Kraliky 117.70 324 *e*PKPDF **PKPdf** **06 37 57.3 -0.5**
KRLC AMS AMS 07 31 20.0
comp=Z,600nm,20.3s
KRLC Kraliky 117.70 324 *e*PKIKP **PKPdf** **06 37 57.3 -0.5**
KRLC MLR MLR
comp=Z,600nm,20.3s
OSTC Ostas 117.82 325 *e*PKPDF **PKiKP** **06 37 59.5 +1.5**
OSTC Ostas 117.82 325 *e*PKIKP **PKiKP** **06 37 59.5 +1.5**
DPC Dobruska-Polom 117.85 325 *e*PKPDF **PKiKP** **06 37 58.9 +0.8**
DPC Dobruska-Polom 117.85 325 *e*PKIKP **PKiKP** **06 37 58.9 +0.8**
FW07 Weatherford 117.89 56 IAMs_20 IAMs_20 07 26 31.0
comp=Z,1µm,19.0s
EF01 Eagle Ford 01 117.99 61 IAMs_20 IAMs_20 07 21 55.1
comp=Z,1µm,20.0s
FNA Florina 118.01 313 PKPdf **PKPdf** **06 37 58.6 -0.1**
FNA Florina 118.01 313 PKIKP **PKPdf** **06 37 58.6 -0.1**
T35A Sooner Cattle 118.02 52 PKPdf **PKPdf** **06 37 57.6 -1.2**
EYMN Ely 118.03 38 P **PKPdf** **06 37 58.1 -0.4**
baz=294
FW06 Azle 118.03 56 IAMs_20 IAMs_20 07 25 58.6
comp=Z,2µm,20.0s
MODS Modra-Piesok 118.11 322 *e*PKIKP **PKiKP** **06 38 01.3 +2.6**
MODS Modra-Piesok 118.11 322 *e*PKP **PKiKP** **06 38 01.2 +2.6**
VRAC Vranov 118.14 323 *e*PKP **PKiKP** **06 37 59.6 +1.0**
W35A Tecumseh 118.14 54 IAMs_20 IAMs_20 07 30 29.1
comp=Z,1µm,20.0s
SPMN Marine on St. 118.22 42 P **PKiKP** **06 37 59.4 +0.5**
baz=291
I37A Lemond, Waseca 118.24 43 IAMs_20 IAMs_20 07 23 15.3
comp=Z,2µm,20.0s
UNM Universidad Na 118.25 72 IAMs_20 IAMs_20 07 21 45.3
comp=Z,1µm,20.0s
WHTX Lake Whitney, 118.30 57 P **PKiKP** **06 37 59.6 +0.2**
baz=281
KRUC Moravsky 118.36 323 *e*PKP **PKiKP** **06 37 59.8 +0.8**
435B Jarrell 118.41 59 IAMs_20 IAMs_20 07 21 04.9
comp=Z,2µm,20.0s
E38A The Farm, Brul 118.52 40 IAMs_20 IAMs_20 07 22 26.0
comp=Z,1µm,20.0s
735A Kenedy 118.53 61 IAMs_20 IAMs_20 07 22 01.3
comp=Z,2µm,20.0s
PVCC Panska Ves 118.77 325 AMS AMS 07 29 50.0
comp=Z,800nm,19.1s
TUL3 Leonard 118.83 53 P **PKiKP** **06 38 00.8 +0.5**
baz=284
TLIG Tlapa 118.91 74 IAMs_20 IAMs_20 07 19 30.0
comp=Z,2µm,21.0s
GOPC GO Pecny, Ondr 118.93 325 *e*PKPDF **PKiKP** **06 38 03.5 +3.4**
GOPC AMS AMS 07 30 10.0
comp=Z,700nm,20.2s
GOPC GO Pecny, Ondr 118.93 325 *e*PKIKP **PKiKP** **06 38 03.5 +3.4**
GOPC MLR MLR
comp=Z,700nm,20.2s
BRG Berggiesshubel 118.96 326 *e*PKP **PKiKP** **06 38 01.4 +1.2**
BRG Amp 06 38 05.6
comp=Z,8.7nm,0.9s
BRG Berggiesshubel 118.96 326 *e*PKIKP **PKiKP** **06 38 01.3 +1.2**
BRG pmax pmax
comp=Z,9.0nm,0.9s

BRG					MLR	MLR					
	comp=E,433nm,21.5s										
BRG					MLR	MLR					
	comp=Z,892nm,20.8s										
BRG					MLR	MLR					
	comp=N,722nm,17.3s										
RONA	**Rosalia, Austr**	**118.99**	**322**	*i*	PKiKP	**PKiKP**	**06**	**38**	**01.8**	**+1.4**
	comp=N,8.9nm,1.4s										
RICC	**Richard**	**119.03**	**325**		AMS	AMS	07	32	00.0		
	comp=N,800nm,22.1s										
PRU	**Pruhonice**	**119.03**	**325**		AMS	AMS	07	30	20.0		
	comp=N,800nm,21.7s										
PRA	**Prague**	**119.06**	**325**		AMS	AMS	07	30	30.0		
	comp=N,1µm,28.1s										
SCIA	**State Center**	**119.07**	**45**		IAMs_20	IAMs_20	07	30	01.5		
	comp=Z,1µm,20.0s										
K38A	**Parkersburg**	**119.14**	**44**		IAMs_20	IAMs_20	07	23	41.1		
	comp=Z,2µm,20.0s										
CONA	**Conrad Observa**	**119.16**	**322**	*i*	PKiKP	**PKiKP**	**06**	**38**	**01.7**	**+0.9**
	comp=Z,5.4nm,1.0s										
CLL	**Collm**	**119.27**	**327**	*e*	PKiKP	**PKiKP**	**06**	**38**	**01.0**	**+0.3**
CLL					MLR	MLR					
	comp=Z,700nm,20.0s										
CLL	**Collm**	**119.27**	**327**	*e*	PKiKP	**PKiKP**	**06**	**38**	**01.0**	**+0.3**
CLL				*ex*		x	06	38	04.0		
CLL					AMS	AMS	07	33	00.0		
	comp=Z,700nm,20.0s										
HSKC	**Hora Svate Kat**	**119.37**	**326**		AMS	AMS	07	31	30.0		
	comp=Z,900nm,18.1s										
X37A	**Clayton**	**119.47**	**54**		IAMs_20	IAMs_20	07	28	46.4		
	comp=Z,1µm,21.0s										
P38A	**Dawn**	**119.55**	**48**		IAMs_20	IAMs_20	07	24	18.7		
	comp=Z,2µm,21.0s										
ARSA	**Arzberg**	**119.66**	**322**	*i*	PKiKP	**PKiKP**	**06**	**38**	**02.4**	**+0.7**
	comp=Z,6.3nm,1.0s										
237A	**Washetta, Mont**	**119.67**	**57**		IAMs_20	IAMs_20	07	24	22.1		
	comp=Z,1µm,20.0s										
CKRC	**Cesky Krumlov**	**119.70**	**324**	*e*	PKPDF	**PKiKP**	**06**	**38**	**02.6**	**+0.9**
CKRC					AMS	AMS	07	32	30.0		
	comp=Z,700nm,23.3s										
CKRC	**Cesky Krumlov**	**119.70**	**324**	*e*	PKiKP	**PKiKP**	**06**	**38**	**02.6**	**+0.9**
CKRC					MLR	MLR					
	comp=Z,700nm,23.3s										
U38A	**Gravette**	**119.80**	**52**		IAMs_20	IAMs_20	07	21	23.7		
	comp=Z,2µm,22.0s										
G40A	**Rib Lake**	**119.91**	**41**		IAMs_20	IAMs_20	07	24	48.0		
	comp=Z,1µm,21.0s										
KHC	**Kasperske Hory**	**119.99**	**324**		PKPdf	**PKPdf**	**06**	**38**	**00.6**	**-1.6**
KHC	**Kasperske Hory**	**119.99**	**324**	*e*	PKPDF	**PKiKP**	**06**	**38**	**03.5**	**+1.2**
KHC					AMS	AMS	07	31	00.0		
	comp=Z,700nm,23.5s										
KHC	**Kasperske Hory**	**119.99**	**324**		PKiKP	**PKPdf**	**06**	**38**	**00.6**	**-1.6**
KHC					MLR	MLR					
	comp=Z,600nm,20.0s										
GEC2	**GERESS Array S**	**120.05**	**324**		PKPdf	**PKPdf**	**06**	**38**	**01.4**	**-1.0**
GERES	**GERESS Array B**	**120.05**	**324**		PKP	**PKPdf**	**06**	**37**	**59.6**	**-2.8**
	comp=Z,1.3nm,0.5s,baz=35,slow=3.6,SNR=4.0										
Z38A	**Mt. Pleasant**	**120.08**	**55**		IAMs_20	IAMs_20	07	21	46.8		
	comp=Z,1µm,21.0s										
NKC	**Novy Kostel**	**120.10**	**326**	*e*	PKPDF	**PKiKP**	**06**	**38**	**03.1**	**+0.7**
NKC	**Novy Kostel**	**120.10**	**326**	*e*	PKiKP	**PKiKP**	**06**	**38**	**03.1**	**+0.7**
I40A	**Norwalk**	**120.16**	**42**		IAMs_20	IAMs_20	07	24	14.0		
	comp=Z,2µm,22.0s										
MOA	**Molln**	**120.16**	**323**	*i*	pPKP	**PKiKP**	**06**	**38**	**05.1**	**+2.5**
	comp=Z,4.0nm,0.9s										
HHAR	**Hobbs**	**120.18**	**52**		IAMs_20	IAMs_20	07	21	12.0		
	comp=Z,2µm,22.0s										
SOKA	**Soboth**	**120.20**	**321**	*i*	PKiKP	**PKiKP**	**06**	**38**	**04.0**	**+1.1**
	comp=Z,11nm,1.3s										
COWI	**Conover**	**120.25**	**40**		IAMs_20	IAMs_20	07	23	38.9		
	comp=Z,2µm,21.0s										
L40A	**Anamosa**	**120.42**	**45**		IAMs_20	IAMs_20	07	24	09.0		
	comp=Z,2µm,20.0s										
TSUM	**Tsumeb**	**120.60**	**243**		IAMs_20	IAMs_20	07	31	21.7		
	comp=Z,2µm,18.0s										
BIOA	**Bad Ischl, Aus**	**120.61**	**323**	*i*	pPKP	**PKiKP**	**06**	**38**	**05.9**	**+2.4**
	comp=Z,7.8nm,1.0s										
P40A	**Paris**	**120.67**	**48**		IAMs_20	IAMs_20	07	28	27.3		
	comp=Z,1µm,19.0s										
NATX	**Nacogdoches**	**120.68**	**57**		IAMs_20	IAMs_20	07	26	00.7		
	comp=Z,1µm,20.0s										
JFWS	**Jewell Farm**	**120.78**	**43**		IAMs_20	IAMs_20	07	24	22.4		
	comp=Z,2µm,21.0s										
JFWS	**Jewell Farm**	**120.78**	**43**		P	**PKPdf**	**06**	**38**	**03.7**	**-0.2**
	baz=292										
MIAR	**Mount Ida**	**120.92**	**54**		P	**PKPdf**	**06**	**38**	**04.0**	**-0.3**
	baz=285										
F42A	**Maple Grove Fa**	**121.03**	**40**		IAMs_20	IAMs_20	07	24	23.5		
	comp=Z,2µm,22.0s										
KBA	**Koelnbreinsper**	**121.07**	**322**	*i*	PKP	**PKPdf**	**06**	**38**	**04.6**	**+0.1**
	comp=Z,11nm,1.4s										
MYKA	**Terra Mystica**	**121.09**	**322**	*i*	pPKP	**PKiKP**	**06**	**38**	**06.9**	**+2.3**
	comp=Z,9.0nm,1.0s										
N41A	**Harden Midland**	**121.15**	**46**		IAMs_20	IAMs_20	07	26	59.6		
	comp=Z,2µm,20.0s										
LESA	**Schwarzleotal**	**121.31**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**05.3**	**+0.3**
	comp=Z,14nm,1.3s										
E43A	**Lone Tree Farm**	**121.47**	**39**		IAMs_20	IAMs_20	07	28	32.1		
	comp=Z,2µm,20.0s										
WLAR	**White Oak Lake**	**121.50**	**54**		IAMs_20	IAMs_20	07	30	57.3		
	comp=Z,2µm,20.0s										
FCAR	**Ozark Folk Cen**	**121.70**	**52**		IAMs_20	IAMs_20	07	26	26.2		
	comp=Z,1µm,20.0s										
ABTA	**Abfaltersbach**	**121.73**	**322**	*i*	PKiKP	**PKiKP**	**06**	**38**	**06.1**	**+0.3**
	comp=Z,17nm,1.0s										
CCM	**Cathedral Cave**	**121.73**	**49**		PKPdf	**PKPdf**	**06**	**38**	**04.6**	**-1.2**
CCM	**Cathedral Cave**	**121.73**	**49**		P	**PKiKP**	**06**	**38**	**06.1**	**+0.1**
	baz=288										
CCM	**Cathedral Cave**	**121.73**	**49**		PKiKP	**PKPdf**	**06**	**38**	**04.6**	**-1.2**
WHAR	**Wooly Hollow**	**121.74**	**52**		IAMs_20	IAMs_20	07	26	53.3		
	comp=Z,2µm,19.0s										
STAL	**STALIGIAL**	**121.83**	**322**		PKPdf	**PKPdf**	**06**	**38**	**05.7**	**-0.1**
Z41A	**Richland Creek**	**121.86**	**55**		IAMs_20	IAMs_20	07	23	32.8		
	comp=Z,2µm,21.0s										
WTTA	**Wattenberg**	**122.01**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**07.2**	**+0.7**
	comp=Z,27nm,1.0s										
WATA	**Walderalm**	**122.01**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**07.5**	**+1.1**
	comp=Z,29nm,1.6s										
441A	**DeRidder**	**122.12**	**58**		IAMs_20	IAMs_20	07	22	40.2		
	comp=Z,1µm,21.0s										
K43A	**Burlington**	**122.16**	**43**		IAMs_20	IAMs_20	07	25	25.9		
	comp=Z,2µm,21.0s										
SQTA	**Sankt Quirin**	**122.29**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**07.8**	**+0.8**
	comp=Z,22nm,1.7s										
MOTA	**Moosalm**	**122.29**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**07.5**	**+0.5**
	comp=Z,23nm,1.2s										
SLM	**Saint Louis**	**122.30**	**48**		IAMs_20	IAMs_20	07	24	43.3		
	comp=Z,2µm,21.0s										
HDIL	**Hopedale**	**122.31**	**46**		IAMs_20	IAMs_20	07	24	49.3		
	comp=Z,1µm,21.0s										
HDIL	**Hopedale**	**122.31**	**46**		P	**PKiKP**	**06**	**38**	**07.2**	**+0.2**
	baz=292										
FVM	**French Village**	**122.37**	**49**		IAMs_20	IAMs_20	07	27	49.4		
	comp=Z,2µm,20.0s										
LCAR	**Lake Charles**	**122.41**	**51**		IAMs_20	IAMs_20	07	23	16.7		
	comp=Z,2µm,22.0s										
RETA	**Reutte**	**122.42**	**324**	*i*	PKP	**PKPdf**	**06**	**38**	**06.6**	**-0.4**
	comp=Z,5.8nm,1.2s										
P43A	**Skaggs, Pawnee**	**122.47**	**47**		IAMs_20	IAMs_20	07	27	40.8		
	comp=Z,2µm,20.0s										
CCAR	**Cane Creek**	**122.52**	**54**		IAMs_20	IAMs_20	07	27	58.2		
	comp=Z,2µm,20.0s										
L44A	**Lake County Fo**	**122.66**	**43**		IAMs_20	IAMs_20	07	28	34.1		
	comp=Z,2µm,21.0s										
L44A	**Lake County Fo**	**122.66**	**43**		P	**PKiKP**	**06**	**38**	**07.8**	**+0.2**
	baz=294										
FETA	**Feichten**	**122.67**	**323**	*i*	PKiKP	**PKiKP**	**06**	**38**	**08.7**	**+0.9**
	comp=Z,13nm,1.0s										
M44A	**Midewin, Midew**	**122.88**	**44**		IAMs_20	IAMs_20	07	26	35.1		
	comp=Z,2µm,20.0s										
G45A	**Suttons Bay**	**122.92**	**39**		IAMs_20	IAMs_20	07	28	48.3		
	comp=Z,2µm,20.0s										
HBAR	**Harrisburg**	**122.94**	**52**		IAMs_20	IAMs_20	07	26	53.0		
	comp=Z,2µm,19.0s										
I45A	**Fountain**	**122.99**	**41**		IAMs_20	IAMs_20	07	27	42.7		
	comp=Z,1µm,21.0s										
DAVA	**Damuels**	**123.04**	**324**	*i*	PKiKP	**PKiKP**	**06**	**38**	**09.1**	**+0.6**
	comp=Z,7.4nm,0.7s										
O44A	**Mansfield**	**123.05**	**46**		IAMs_20	IAMs_20	07	26	41.8		
	comp=Z,1µm,20.0s										
Q44A	**Meyer Farm, Va**	**123.10**	**47**		IAMs_20	IAMs_20	07	27	43.5		
	comp=Z,2µm,20.0s										
E46A	**Sault Ste Mari**	**123.12**	**37**		PKPdf	**PKPdf**	**06**	**38**	**07.5**	**-0.8**
143A	**Socs Landing,**	**123.14**	**55**		IAMs_20	IAMs_20	07	24	34.7		
	comp=Z,2µm,21.0s										
DAVOX	**Davos/Dischmat**	**123.30**	**323**		PKP	**PKPdf**	**06**	**38**	**05.9**	**-2.9**
	comp=Z,2.3nm,0.6s,baz=158,slow=22,SNR=3.1										
GNAR	**Gosnell**	**123.32**	**51**		IAMs_20	IAMs_20	07	24	37.8		
	comp=Z,2µm,21.0s										
PEBM	**Pemiscott Bayo**	**123.39**	**51**		IAMs_20	IAMs_20	07	23	58.7		
	comp=Z,2µm,22.0s										
MET	**Memphis--Engin**	**123.64**	**52**		IAMs_20	IAMs_20	07	27	53.5		
	comp=Z,1µm,20.0s										
GLMI	**Grayling**	**123.67**	**39**		IAMs_20	IAMs_20	07	29	30.3		
	comp=Z,2µm,20.0s										
GLMI	**Grayling**	**123.67**	**39**		P	**PKPdf**	**06**	**38**	**09.0**	**-0.3**
	baz=298										
PLCA	**Paso Flores**	**123.77**	**150**		PKPdf	**PKPdf**	**06**	**38**	**08.7**	**-1.2**
PLCA	**Paso Flores**	**123.77**	**150**		PKP	**PKPdf**	**06**	**38**	**07.9**	**-1.9**
	comp=Z,4.1nm,1.1s,baz=295,slow=2.4,SNR=8.4										
L46A	**Eue Claire**	**123.82**	**43**		IAMs_20	IAMs_20	07	26	33.9		
	comp=Z,2µm,20.0s										
OLIL	**Olney**	**123.83**	**47**		IAMs_20	IAMs_20	07	28	14.8		
	comp=Z,2µm,20.0s										
HALT	**Halls**	**123.86**	**51**		IAMs_20	IAMs_20	07	24	43.0		
	comp=Z,2µm,21.0s										
SFIN	**Lafayette**	**123.93**	**45**		IAMs_20	IAMs_20	07	29	28.1		
	comp=Z,2µm,21.0s										
SFIN	**Lafayette**	**123.93**	**45**		P	**PKiKP**	**06**	**38**	**10.3**	**0.0**
	baz=293										
VBMS	**Vicksburg**	**123.99**	**55**		IAMs_20	IAMs_20	07	25	00.2		
	comp=Z,1µm,22.0s										
VBMS	**Vicksburg**	**123.99**	**55**		P	**PKiKP**	**06**	**38**	**10.6**	**0.0**
	baz=285										
P46A	**Rosedale**	**124.15**	**46**		IAMs_20	IAMs_20	07	25	53.0		
	comp=Z,2µm,22.0s										
OXF	**Oxford**	**124.23**	**52**		IAMs_20	IAMs_20	07	23	59.3		
	comp=Z,2µm,22.0s										
OXF	**Oxford**	**124.23**	**52**		P	**PKiKP**	**06**	**38**	**10.9**	**-0.1**
	baz=288										
J47A	**Sunmer**	**124.27**	**41**		IAMs_20	IAMs_20	07	28	42.4		
	comp=Z,1µm,21.0s										
Y45A	**Yeager Farm, C**	**124.32**	**53**		IAMs_20	IAMs_20	07	24	33.6		
	comp=Z,2µm,22.0s										
EKA	**Eskdalemuir Ar**	**124.33**	**337**		PKP	**PKPdf**	**06**	**38**	**08.2**	**-2.1**
	comp=Z,4.3nm,0.8s,baz=35,slow=2.9,SNR=7.5										
N47A	**Urbana**	**124.70**	**44**		IAMs_20	IAMs_20	07	26	40.4		
	comp=Z,2µm,20.0s										
BLO	**Bloomington**	**124.81**	**46**		IAMs_20	IAMs_20	07	26	14.5		
	comp=Z,2µm,22.0s										
WVT	**Waverly**	**124.94**	**50**		PKPdf	**PKPdf**	**06**	**38**	**10.9**	**-1.1**
WVT	**Waverly**	**124.94**	**50**		P	**PKiKP**	**06**	**38**	**12.2**	**-0.1**
	baz=290										
WVT	**Waverly**	**124.94**	**50**		PKiKP	**PKPdf**	**06**	**38**	**10.9**	**-1.1**
146A	**Union**	**125.06**	**54**		IAMs_20	IAMs_20	07	29	56.5		
	comp=Z,1µm,19.0s										
346A	**Big Creek Wild**	**125.07**	**56**		IAMs_20	IAMs_20	07	26	14.0		
	comp=Z,1µm,22.0s										
L48A	**N Adams**	**125.10**	**42**		IAMs_20	IAMs_20	07	33	59.7		
	comp=Z,2µm,19.0s										
I49A	**Point Hope**	**125.22**	**39**		IAMs_20	IAMs_20	07	31	07.4		
	comp=Z,2µm,21.0s										
WCI	**Wyandotte Cave**	**125.33**	**47**		P	**PKiKP**	**06**	**38**	**12.9**	**-0.1**
	baz=292										
O48B	**Farmland**	**125.34**	**44**		IAMs_20	IAMs_20	07	30	04.2		
	comp=Z,2µm,20.0s										
O48B	**Farmland**	**125.34**	**44**		P	**PKPdf**	**06**	**38**	**12.7**	**0.0**
	baz=295										
AAM	**Ann Arbor**	**125.46**	**42**		IAMs_20	IAMs_20	07	29	09.0		
	comp=Z,1µm,21.0s										
AAM	**Ann Arbor**	**125.46**	**42**		P	**PKiKP**	**06**	**38**	**13.7**	**+0.5**
	baz=298										
P48A	**Milroy**	**125.47**	**45**		IAMs_20	IAMs_20	07	29	06.0		
	comp=Z,1µm,20.0s										
K50A	**Casco**	**125.91**	**41**		IAMs_20	IAMs_20	07	30	43.8		
	comp=Z,2µm,21.0s										
O49A	**Covington**	**125.94**	**44**		IAMs_20	IAMs_20	07	30	52.0		
	comp=Z,2µm,21.0s										
P49A	**Miami Univ. Ec**	**125.94**	**45**		IAMs_20	IAMs_20	07	28	46.1		
	comp=Z,1µm,20.0s										
P49A	**Miami Univ. Ec**	**125.94**	**45**		P	**PKiKP**	**06**	**38**	**14.2**	**-0.1**
	baz=295										
VLDQ	**Val d'Or**	**126.09**	**33**		PKPdf	**PKPdf**	**06**	**38**	**11.7**	**-2.1**
R49A	**Shelbyville**	**126.12**	**47**		IAMs_20	IAMs_20	07	31	18.4		
	comp=Z,2µm,20.0s										
SCHQ	**Schefferville**	**126.12**	**21**		PKP	**PKPdf**	**06**	**38**	**11.2**	**-2.6**
	comp=Z,5.0nm,0.9s,baz=332,slow=4.0,SNR=5.2										
SCHQ					PP	**PP**	**06**	**40**	**03.8**	**-3.3**
	comp=Z,7.8nm,1.1s,baz=306,slow=8.6,SNR=2.8										
M50A	**Fremont**	**126.28**	**42**		IAMs_20	IAMs_20	07	26	21.8		
	comp=Z,1µm,21.0s										
U49A	**Red Boiling Sp**	**126.36**	**49**		IAMs_20	IAMs_20	07	30	10.9		
	comp=Z,2µm,20.0s										
LRAL	**Lakeview Retre**	**126.60**	**53**		IAMs_20	IAMs_20	07	29	17.0		
	comp=Z,2µm,21.0s										
LRAL	**Lakeview Retre**	**126.60**	**53**		P	**PKPdf**	**06**	**38**	**15.3**	**0.0**
	baz=288										
SWET	**Sewanee**	**126.71**	**50**		IAMs_20	IAMs_20	07	25	39.5		
	comp=Z,2µm,22.0s										
R50A	**Paris**	**126.73**	**46**		IAMs_20	IAMs_20	07	29	15.6		
	comp=Z,2µm,21.0s										
Y49A	**Blount Mountai**	**126.80**	**52**		IAMs_20	IAMs_20	07	29	01.1		
	comp=Z,1µm,20.0s										
ACSO	**Alum Creek Sta**	**126.85**	**44**		P	**PKiKP**	**06**	**38**	**16.0**	**0.0**
	baz=297										
T50A	**Nancy**	**126.86**	**48**		IAMs_20	IAMs_20	07	28	32.2		
	comp=Z,2µm,20.0s										
N51A	**Ashland**	**126.95**	**43**		IAMs_20	IAMs_20	07	31	32.6		
	comp=Z,2µm,21.0s										
VSL	**Villasalto**	**127.04**	**316**			**PKPdf**	**06**	**38**	**16.2**	**+0.2**
SADO	**Sadowa**	**127.05**	**37**		PKPdf	**PKPdf**	**06**	**38**	**15.8**	**0.0**
BRAL	**Brewton**	**127.12**	**56**		IAMs_20	IAMs_20	07	31	18.1		
	comp=Z,2µm,20.0s										
BRAL	**Brewton**	**127.12**	**56**		P	**PKPdf**	**06**	**38**	**16.5**	**+0.2**
	baz=287										
Q51A	**Peebles**	**127.12**	**45**		IAMs_20	IAMs_20	07	29	41.6		
	comp=Z,1µm,20.0s										
P51A	**Williamsport**	**127.12**	**44**		IAMs_20	IAMs_20	07	34	59.6		
	comp=Z,2µm,19.0s										
FPAL	**Fort Paine**	**127.19**	**51**		IAMs_20	IAMs_20	07	30	26.4		
	comp=Z,1µm,20.0s										
M52A	**Chesterland**	**127.33**	**41**		IAMs_20	IAMs_20	07	33	50.5		
	comp=Z,2µm,20.0s										
P52A	**Corning**	**127.70**	**44**		IAMs_20	IAMs_20	07	29	32.7		
	comp=Z,2µm,20.0s										
P52A	**Corning**	**127.70**	**44**		P	**PKiKP**	**06**	**38**	**17.6**	**-0.2**
	baz=297										
X51A	**Calhoun**	**127.76**	**51**		IAMs_20	IAMs_20	07	26	46.5		
	comp=Z,2µm,22.0s										
M53A	**WI Miller and**	**127.83**	**41**		IAMs_20	IAMs_20	07	31	56.6		
	comp=Z,1µm,20.0s										
M53A	**WI Miller and**	**127.83**	**41**		P	**PKiKP**	**06**	**38**	**17.9**	**-0.1**
	baz=300										
Q52A	**Bidwell**	**127.91**	**45**		IAMs_20	IAMs_20	07	28	48.3		
	comp=Z,2µm,22.0s										
ERPA	**Erie**	**127.93**	**40**		IAMs_20	IAMs_20	07	26	14.2		
	comp=Z,2µm,22.0s										
ERPA	**Erie**	**127.93**	**40**		P	**PKPdf**	**06**	**38**	**17.7**	**+0.1**
	baz=301										
Z51A	**Franklin**	**127.95**	**52**		IAMs_20	IAMs_20	07	26	47.7		
	comp=Z,1µm,21.0s										
TZTN	**Tazewell**	**128.00**	**48**		IAMs_20	IAMs_20	07	27	56.4		
	comp=Z,2µm,21.0s										
TZTN	**Tazewell**	**128.00**	**48**		P	**PKiKP**	**06**	**38**	**18.3**	**-0.2**
	baz=294										
N53A	**Lisbon**	**128.03**	**42**		IAMs_20	IAMs_20	07	35	33.1		
	comp=Z,1µm,19.0s										
O53A	**New Philadelph**	**128.04**	**43**		IAMs_20	IAMs_20	07	30	33.6		
	comp=Z,2µm,21.0s										
O53A	**New Philadelph**	**128.04**	**43**		P	**PKiKP**	**06**	**38**	**18.5**	**0.0**
	baz=298										
451A	**Vernon**	**128.35**	**56**		IAMs_20	IAMs_20	07	32	53.8		
	comp=Z,1µm,19.0s										
TEIG	**Tepich**	**128.38**	**69**		IAMs_20	IAMs_20	07	26	33.6		
	comp=Z,1µm,21.0s										
R53A	**Hurricane**	**128.41**	**45**		IAMs_20	IAMs_20	07	28	38.6		
	comp=Z,1µm,22.0s										
KEST	**Kesra**	**128.62**	**311**		PKP	**PKPdf**	**06**	**38**	**17.0**	**-2.2**
	comp=Z,2.6nm,1.0s,baz=29,slow=3.5,SNR=1.6										
Y52A	**Lilburn**	**128.63**	**51**		IAMs_20	IAMs_20	07	27	02.5		
	comp=Z,2µm,22.0s										
O54A	**Avella**	**128.64**	**42**		IAMs_20	IAMs_20	07	31	00.2		
	comp=Z,2µm,21.0s										
WVNY	**West Valley, N**	**128.66**	**39**		IAMs_20	IAMs_20	07	28	11.3		
	comp=Z,2µm,22.0s										
352A	**Blakely**	**128.75**	**55**		IAMs_20	IAMs_20	07	37	42.3		
	comp=Z,1µm,20.0s										
MT05	**Renca**	**128.99**	**143**		IAMs_20	IAMs_20	07	26	20.3		
	comp=Z,1µm,20.0s										
M55A	**Ridgway**	**129.05**	**40**		IAMs_20	IAMs_20	07	33	43.8		
	comp=Z,2µm,20.0s										
S54A	**Dingess, Beckl**	**129.09**	**46**		IAMs_20	IAMs_20	07	33	43.9		
	comp=Z,2µm,22.0s										
WBO	**Williamsburg**	**129.17**	**35**		IAMs_20	IAMs_20	07	30	07.0		
	comp=Z,2µm,21.0s										
PEL	**Peldehue**	**129.20**	**143**			**PKiKP**	**06**	**38**	**21.2**	**+0.1**
	comp=Z,2µm,21.0s										
PEL	**Peldehue**	**129.20**	**143**		PKiKP	**PKiKP**	**06**	**38**	**21.2**	**+0.1**
MCWV	**Mont Chateau**	**129.25**	**43**		IAMs_20	IAMs_20	07	31	20.5		
	comp=Z,2µm,20.0s										
MCWV	**Mont Chateau**	**129.25**	**43**		P	**PKiKP**	**06**	**38**	**20.8**	**-0.1**
	baz=299										
GOGA	**Godfrey**	**129.25**	**52**		IAMs_20	IAMs_20	07	39	46.1		
	comp=Z,948nm,19.0s										
GOGA	**Godfrey**	**129.25**	**52**		P	**PKPdf**	**06**	**38**	**20.6**	**+0.3**
	baz=291										
VA03	**San Esteban**	**129.54**	**143**		IAMs_20	IAMs_20	07	26	15.0		
	comp=Z,1µm,21.0s										
553A	**Crawfordville**	**129.56**	**56**		IAMs_20	IAMs_20	07	31	36.9		
	comp=Z,2µm,21.0s										
R55A	**Marlinton**	**129.71**	**44**		IAMs_20	IAMs_20	07	29	45.1		
	comp=Z,2µm,21.0s										
LONY	**Lake Ozonia**	**129.79**	**35**		IAMs_20	IAMs_20	07	30	15.5		
	comp=Z,1µm,21.0s										
LONY	**Lake Ozonia**	**129.79**	**35**		P	**PKiKP**	**06**	**38**	**21.5**	**-0.3**
	baz=306										
154A	**Montrose**	**129.82**	**52**		IAMs_20	IAMs_20	07	28	37.3		
	comp=Z,1µm,20.0s										
TIGA	**Tifton**	**129.84**	**54**		IAMs_20	IAMs_20	07	30	03.1		
	comp

	comp=Z,222nm,0.9s								
TIC	**Toumodi**	**148.33**	**272**	*e*PKIKP	**PKPbc**	**06 38 57.8**	**-1.1**
	comp=Z,147nm,1.1s								
SPB	**Sao Paulo**	**148.40**	**161**	PKPdf	**PKPdf**	**06 38 55.5**	**+0.2**
SPB				IAMs_20	IAMs_20	07 45 23.9	
	comp=Z,1μm,20.0s								
MLPR	**Magueyes Islan**	**148.46**	**66**	PKPdf	**PKPdf**	**06 38 53.1**	**-2.4**
CELP	**Cerrillos**	**148.85**	**66**		**PKPdf**	**06 38 57.2**	**+1.1**
SAML	**Samuel**	**149.65**	**120**	PKPdf	**PKPdf**	**06 38 56.6**	**-1.0**
SAML	**Samuel**	**149.65**	**120**	IAMs_20	IAMs_20	07 59 39.0	
	comp=Z,1μm,19.0s								
SAML	**Samuel**	**149.65**	**120**	PKHKP	PKPpre	06 38 56.6	
VILB	**Vilhena**	**149.86**	**130**	IAMs_20	IAMs_20	07 57 48.2	
	comp=Z,1μm,19.0s								
SEUS	**St. Eustatius**	**152.28**	**64**	IAMs_20	IAMs_20	07 52 36.6	
	comp=Z,843nm,20.0s								
BIM	**Bigot**	**154.94**	**69**	IAMs_20	IAMs_20	07 43 27.1	
	comp=Z,1μm,21.0s								
MPOM	**Morne Pois Mar**	**155.16**	**69**	IAMs_20	IAMs_20	07 43 42.7	
	comp=Z,1μm,22.0s								
BDFB	**Brasilia**	**155.43**	**153**	IAMs_20	IAMs_20	07 49 38.0	
	comp=Z,1μm,21.0s								
BDFB	**Brasilia**	**155.43**	**153**	PKP	**PKPdf**	**06 39 06.2**	**0.0**
	comp=Z,3.4nm,0.8s,baz=0.0,slow=2.0,SNR=7.3								
BDFB				PKPab	**PKPab**	**06 39 29.8**	**-1.6**
	comp=Z,13nm,0.9s,baz=171,slow=4.8,SNR=5.8								
BOAV	**Boa Vista**	**156.11**	**99**	PKPdf	**PKPdf**	**06 39 05.6**	**-1.5**
BOAV				IAMs_20	IAMs_20	08 02 50.8	
	comp=Z,1μm,22.0s								

*IDC **27** 06:23:16.6±0.8, 10°.70S×164°.38E, h0km, mb4.4/9, mbtmp4.5/11, ML5.1/2, Error ellipse: s-maj=25.4km s-min=22.1km az=115.0*
*NOU **27** 06:23:17.9, 10°.52S×164°.71E, h22km, mb5.0/13, Santa Cruz Islands Region*
*NEIC **27** 06:23:19.9±1.1, 10°.72S±0°.09×164°.4E±0°.1, h10km±1km, mb4.9/27, Error ellipse: s-maj=21.1km s-min=13.3km az=64.0*
*GCMT **27** 06:23:20.9±0.4, 10°.68S±0°.02×164°.28E±0°.02, h19km±1km, MW5.0/66, Moment Tensor Solution. s16,c16; s66,c91; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.29±.27; Mθθ=1.32±.22; Mφφ=-0.03±.19; Mrθ=2.40±.52; Mrφ=3.92±.17; Mθφ=0.70±.45; Best double couple: Mo=4.63700×10^16 NP1: ϕs=271.00000°, δ85.00000°, λ-34.00000°. NP2: ϕs=4.00000°, δ56.00000°, λ-174.00000°. Principal axes: T 5.4120, Plg19.0000°, Azm322.0000°; N -1.5580, Plg56.0000°, Azm83.0000°; P -3.8620, Plg27.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 06:23:18.6±0.5, 10°.77S±0°.06×164°.43E±0°.08, h10km, n72, σ1s47/68, mb4.8/21, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.61**	**286**		**Pn**	**06 24 29.0**	**+0.7**
HNR	**Honiara**	**4.61**	**286**	P	**Pn**	**06 24 29.4**	**+1.1**
HNR	**Honiara**	**4.61**	**286**	Pn	**Pn**	**06 24 27.3**	**-1.0**
	4μm,0.3s,baz=132,slow=4.3,SNR=34						
HNR				Sn	**Sn**	**06 25 21.6**	**-0.3**
	1μm,0.3s,baz=184,slow=19,SNR=1.3						
KOUNC	**Koumac, New Ca**	**9.72**	**181**	Pn	**Pn**	**06 25 40.6**	**+2.0**
KOUNC	**Koumac, New Ca**	**9.72**	**181**	P	**Pn**	**06 25 40.5**	**+1.9**
LIFNC	**LIFOU**	**10.31**	**165**	Pn	**Pn**	**06 25 46.5**	**-0.2**
LIFNC	**LIFOU**	**10.31**	**165**	P	**Pn**	**06 25 46.4**	**-0.2**
MARNC	**Mare, Loyalty**	**11.19**	**162**	Pn	**Pn**	**06 25 59.9**	**+1.1**
MARNC	**Mare, Loyalty**	**11.19**	**162**	P	**Pn**	**06 25 59.2**	**+0.4**
DZM	**Mont Dzumac**	**11.40**	**170**	Pn	**Pn**	**06 26 03.1**	**+1.4**
DZM	**Mont Dzumac**	**11.40**	**170**	P	**Pn**	**06 26 02.9**	**+1.2**
DZM	**Mont Dzumac**	**11.40**	**170**	Pn	**Pn**	**06 26 02.3**	**+0.7**
	5.0nm,0.3s,baz=352,slow=7.2,SNR=104						
DZM				Sn	**Sn**	**06 28 02.9**	**-6.3**
	0.3nm,0.3s,baz=276,slow=23,SNR=1.1						
	44nm,0.8s						
YATNC	**Mamie plateau,**	**11.47**	**168**	P	**Pn**	**06 26 02.6**	**+0.1**
OUENC	**Ouen Island, N**	**11.81**	**169**		**Pn**	**06 26 07.8**	**+0.6**
OUENC	**Ouen Island, N**	**11.81**	**169**	P	**Pn**	**06 26 08.0**	**+0.8**
PINNC	**Pines Island,**	**12.12**	**167**	Pn	**Pn**	**06 26 13.3**	**+1.8**
PATS	**Pohnpei**	**18.52**	**341**		**P**	**06 27 33.4**	**-2.0**
PATS				IAmb	IAmb	06 27 40.0	
	comp=Z,164nm,1.2s						
MANU	**Manus Island**	**19.03**	**296**	P	**P**	**06 27 41.0**	**0.0**
MANU				IAmb	IAmb	06 27 43.9	
	comp=Z,39nm,0.6s						
EIDS	**Eidsvold**	**19.25**	**219**	P	**P**	**06 27 44.9**	**+1.6**
EIDS	**Eidsvold**	**19.25**	**219**	P	**P**	**06 27 45.5**	**+2.2**
CTA	**Charters Tower**	**19.80**	**240**	P	**P**	**06 27 49.6**	**+0.3**
	comp=Z,7.5nm,0.3s,baz=69,slow=12,SNR=7.7						
	comp=Z,114nm,0.7s						
CTAO	**Charters Tower**	**19.80**	**240**	P	**P**	**06 27 50.2**	**+0.8**
CTAO	**Charters Tower**	**19.80**	**240**	P	**P**	**06 27 50.4**	**+1.1**
ARMA	**Armidale**	**22.89**	**209**	P	**P**	**06 28 23.6**	**+1.0**
ARMA				IAmb	IAmb	06 28 25.9	
	comp=Z,54nm,1.4s						
ARMA	**Armidale**	**22.89**	**209**	P	**P**	**06 28 24.0**	**+1.4**
QLP	**Quilpie**	**24.70**	**228**	P	**P**	**06 28 40.6**	**+0.5**
MGCD	**Mangrove Creek**	**25.46**	**207**	P	**P**	**06 28 48.3**	**+1.4**
CAN	**Canberra**	**28.18**	**207**	P	**P**	**06 29 12.2**	**+0.8**
CAN				IAmb	IAmb	06 29 12.7	
	comp=Z,27nm,1.5s						
H11S2	**WAKE ISLAND Hy**	**29.16**	**4**	T	T	06 59 45.8	
	baz=183,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**29.17**	**4**	T	T	06 59 45.4	
	baz=183,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**29.18**	**4**	T	T	06 59 46.9	
	baz=183,slow=76,SNR=21						
STKA	**Stephens Creek**	**29.76**	**222**	P	**P**	**06 29 26.6**	**+1.1**
STKA	**Stephens Creek**	**29.76**	**222**	P	**P**	**06 29 25.2**	**-0.3**
	comp=Z,9.5nm,0.7s,baz=32,slow=9.1,SNR=4.9						
	comp=Z,9.5nm,0.7s						
RTZ	**Ruatahuna**	**29.91**	**160**	P	**P**	**06 29 28.0**	**+1.2**
RTZ				IAmb	IAmb	06 29 34.9	
	comp=Z,19nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**30.39**	**5**	T	T	07 01 25.1	
	baz=185,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.40**	**5**	T	T	07 01 28.4	
	baz=185,slow=76						
H11N2	**WAKE ISLAND Hy**	**30.41**	**5**	T	T	07 01 21.3	
	baz=185,slow=76						
TOO	**Toolangi**	**31.65**	**209**	P	**P**	**06 29 43.0**	**+0.9**
TOO				IAmb	IAmb	06 29 46.6	
	comp=Z,23nm,1.4s						
THZ	**Tophouse**	**31.75**	**168**	P	**P**	**06 29 44.0**	**+1.0**
AS31	**Alice Springs**	**31.76**	**242**	P	**P**	**06 29 41.4**	**-1.9**
ASAR	**Alice Springs**	**31.76**	**242**	P	**P**	**06 29 43.4**	**+0.1**
BBOO	**Buckleboo**	**34.08**	**226**	P	**P**	**06 30 02.9**	**-0.5**
JGF	**Kuroka**	**52.74**	**332**	P	**P**	**06 32 33.6**	**-0.2**
MJAR	**Matsushiro Arr**	**53.14**	**334**	P	**P**	**06 32 33.4**	**-3.3**
	comp=Z,2.0nm,0.8s,baz=152,slow=5.5,SNR=2.3						
	comp=Z,2.0nm,0.8s						
JNU	**Nakatsue**	**54.11**	**325**	P	**P**	**06 32 44.2**	**+0.2**
JNU				IAmb	IAmb	06 32 52.5	
	comp=Z,21nm,1.4s						
VNDA	**Vanda**	**66.75**	**181**	P	**P**	**06 34 11.3**	**+1.6**
VNDA				IAmb	IAmb	06 34 11.6	
	comp=Z,15nm,1.5s						
CMAR	**Chiang Mai Arr**	**70.82**	**294**	P	**P**	**06 34 35.9**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=134,slow=5.0,SNR=4.4						
	comp=Z,2.2nm,0.4s						
M14K	**Bethel**	**76.11**	**16**	P	**P**	**06 35 06.4**	**+0.2**
K15K	**Wolf Creek Mou**	**77.50**	**16**	P	**P**	**06 35 15.2**	**+1.1**
K15K				IAmb	IAmb	06 35 17.9	
	comp=Z,14nm,1.1s						
SONM	**Songino Array**	**77.69**	**324**	P	**P**	**06 35 15.5**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=132,slow=6.4,SNR=4.0						
	comp=Z,1.7nm,1.0s						
QSPA	**South Pole Qui**	**79.23**	**180**	P	**P**	**06 35 24.1**	**+0.2**
QSPA				IAmb	IAmb	06 35 27.9	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**79.23**	**180**	P	**P**	**06 35 23.2**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=286,slow=3.2,SNR=1.8						
	comp=Z,4.1nm,0.8s						
G19K	**Purcell Mounta**	**81.77**	**15**	P	**P**	**06 35 38.4**	**+1.1**
IMAR	**Indian Mountai**	**82.52**	**16**	P	**P**	**06 35 42.5**	**+1.3**
VRDI	**Verde Repeater**	**82.57**	**23**	P	**P**	**06 35 42.6**	**+0.8**
VRDI				IAmb	IAmb	06 35 45.2	
	comp=Z,10nm,0.9s						
F20K	**Avaraart Lake**	**82.82**	**15**	P	**P**	**06 35 43.6**	**+0.9**
BARN	**Barnard Glacie**	**83.15**	**23**	P	**P**	**06 35 46.1**	**+1.2**
HDA	**Harding Lake**	**83.41**	**19**	P	**P**	**06 35 48.3**	**+2.4**
HDA				IAmb	IAmb	06 35 48.8	
	comp=Z,8.5nm,0.7s						

IL31			**83.67**	**19**	P	**P**	**06 35 48.0**	**+0.9**
ILAR	**Eielson Array**		**83.67**	**19**	P	**P**	**06 35 47.6**	**+0.4**
ILAR	**Eielson Array**		**83.67**	**19**	P	**P**	**06 35 46.9**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=238,slow=5.1,SNR=7.5							
	comp=Z,2.3nm,0.8s							
J25K	**Salcha River,**		**84.06**	**19**	P	**P**	**06 35 50.4**	**+1.2**
J25K					IAmb	IAmb	06 35 51.9	
	comp=Z,6.4nm,0.7s							
BCAR	**Beaver Creek A**		**84.32**	**22**	P	**P**	**06 35 52.7**	**+2.1**
D22K	**Ayikyak River**		**84.96**	**14**	P	**P**	**06 35 55.6**	**+2.0**
D22K					IAmb	IAmb	06 35 56.9	
	comp=Z,5.7nm,0.8s							
DAWY	**Dawson**		**85.78**	**21**	P	**P**	**06 36 00.1**	**+2.2**
DAWY					IAmb	IAmb	06 36 04.6	
	comp=Z,8.5nm,1.3s							
NVAR	**Mina Array Bea**		**86.84**	**50**	P	**P**	**06 36 05.4**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=245,slow=5.9,SNR=3.0							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**		**92.44**	**317**	P	**P**	**06 36 28.4**	**-1.4**
	comp=Z,2.2nm,1.0s,baz=105,slow=6.1,SNR=2.4							
	comp=Z,2.2nm,1.0s							
C36M	**Paulatuk**		**93.61**	**20**		**P**	**06 36 35.5**	**+0.9**
YKA	**Yellowknife Ar**		**95.33**	**27**	P	**P**	**06 36 42.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=254,slow=4.7,SNR=5.1							
	comp=Z,0.7nm,0.8s							
ARCES	**ARCESS Array B**		**115.74**	**345**	PKP	**PKiKP**	**06 41 58.7**	**-2.1**
	comp=Z,2.1nm,0.9s,baz=45,slow=2.9,SNR=8.8							
KEST	**Kesra**		**146.41**	**322**	PKPbc	**PKPdf**	**06 42 59.4**	**+0.2**
	comp=Z,5.2nm,0.8s,baz=244,slow=4.9,SNR=4.0							
ESDC	**Sonseca Array**		**149.42**	**342**	PKPbc	**PKPbc**	**06 43 07.6**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=78,slow=1.7,SNR=2.9							

IDC 27 06:28:02.7±2.9, 54°.00N×86°.56E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=23.6km s-min=13.8km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**268**	I	I	06 34 50.0	
	baz=87,slow=342,SNR=3.9						
ZALV	**Zalesovo Beam**	**1.03**	**268**	Pg	Pg	06 28 22.4	0.0
	0.2nm,0.3s,baz=81,slow=22,SNR=1.8						
ZALV				Lg	Lg	06 28 36.4	
	0.6nm,0.3s,baz=86,slow=29,SNR=6.1						
ZALV				Rg	Rg	06 28 42.9	
	1.8nm,0.6s,baz=77,slow=23,SNR=19						
KURBB	**Kurchatov Arra**	**5.98**	**239**	Pn	Pn	06 29 33.0	+0.7
	baz=55,slow=14,SNR=5.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.71**	**202**	Pn	Pn	06 29 57.1	+0.9
	0.1nm,0.3s,baz=26,slow=14,SNR=2.4						
	0.1nm,0.3s						
TKM2	**Tokmak 2**	**13.24**	**218**	P	Pn	06 31 12.3	+0.3
	SNR=34						
CHMS	**Chumysh**	**13.49**	**220**	P	Pn	06 31 15.7	+0.5
	SNR=20						

*IDC **27** 06:29:37.9±1.0, 5°.98S×142°.94E, h0km, mb3.9/8, mbtmp3.9/9, ML1.8/1, Error ellipse: s-maj=37.6km s-min=21.5km az=64.0*

ISC 27 06:29:42.9±0.7, 6°.1S±0°.1×142°.8E±0°.1, h35km, n12, σ1s20/12, mb3.8/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.42**	**127**	Pn	**Pn**	**06 31 01.5**	**+0.2**
	1.8nm,0.3s,baz=239,slow=22,SNR=1.5						
PMG				Sn	**Sn**	**06 32 02.4**	**0.0**
	3.1nm,0.3s,baz=303,slow=13,SNR=1.6						
	8.5nm,0.4s						
CTA	**Charters Tower**	**14.29**	**167**	Lg	Lg	06 37 08.8	
	0.2nm,0.3s,baz=58,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**16.01**	**210**	Pn	**Pn**	**06 33 23.1**	**-2.5**
	1.1nm,0.3s,baz=32,slow=13,SNR=14						
WRA				Sn	Sn	06 36 14.8	-7.2
	0.8nm,0.3s,baz=24,slow=24,SNR=1.7						
WRA				Lg	Lg	06 38 05.7	
	0.7nm,0.3s,baz=28,slow=34,SNR=3.4						
ASAR	**Alice Springs**	**19.43**	**205**	P	**P**	**06 34 08.3**	**+1.9**
	36nm,0.8s,baz=33,slow=11,SNR=23						
ASAR				Lg	Lg	06 40 00.5	
	0.3nm,0.3s,baz=23,slow=30,SNR=4.7						
KSRS	**Korea Array**	**45.52**	**343**	P	**P**	**06 37 58.2**	**-0.8**
	0.5nm,0.4s,baz=160,slow=9.7,SNR=2.0						
	0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**49.66**	**300**	P	**P**	**06 38 32.4**	**+0.8**
	1.1nm,0.3s,baz=105,slow=5.9,SNR=1.7						
	1.1nm,0.3s						
SONM	**Songino Array**	**62.55**	**333**	P	**P**	**06 40 03.4**	**0.0**
	0.5nm,0.8s,baz=141,slow=6.9,SNR=1.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**74.96**	**322**	P	**P**	**06 41 21.1**	**+0.4**
	0.4nm,0.6s,baz=116,slow=6.6,SNR=0.7						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**78.85**	**324**	P	**P**	**06 41 42.4**	**0.0**
	0.5nm,0.8s,baz=116,slow=4.2,SNR=1.7						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**83.85**	**180**	P	**P**	**06 42 09.1**	**+0.3**
	1.1nm,0.8s,baz=310,slow=2.7,SNR=1.6						
	1.1nm,0.8s						
BVAR	**Borovoye Array**	**84.42**	**325**	P	**P**	**06 42 12.8**	**+1.0**
	2.5nm,0.7s,baz=119,slow=5.9,SNR=9.3						
	2.5nm,0.7s						
ILAR	**Eielson Array**	**87.26**	**24**	P	**P**	**06 42 24.8**	**-0.8**
	0.4nm,0.7s,baz=262,slow=4.8,SNR=5.8						
	0.4nm,0.7s						

IDC 27 06:35:16.5±2.9, 53°.46N×87°.53E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=27.9km s-min=15.9km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**288**	I	I	06 45 40.0	
	baz=107,slow=343,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.69**	**288**	Pg	Pn	06 35 46.1	-1.1
	0.8nm,0.3s,baz=108,slow=13,SNR=8.0						
ZALV				Lg	Lg	06 36 09.9	
	0.8nm,0.3s,baz=107,slow=29,SNR=2.5						
KURBB	**Kurchatov Arra**	**6.23**	**247**	Pn	Pn	06 36 50.5	+0.8
	baz=59,slow=13,SNR=7.3						
KURBB				Lg	Lg	06 38 36.9	
	baz=59,slow=35,SNR=3.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.47**	**209**	Pn	Pn	06 37 07.8	+1.1
	0.1nm,0.3s,baz=30,slow=12,SNR=10.0						
	0.2nm,0.2s						

*FUNV **27** 06:39:47.4, 11°.13N×62°.14W, h123km, MW3.5*
*TRN **27** 06:39:48.3, 11°.11N×61°.83W, h118km, MD3.0, North-west of Trinidad.*

ISC 27 06:39:41.5±2.2, 11°.00N±0°.07×62°.05W±0°.09, h156km±15km, n12, σ2s81/21, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.41**	**136**	*e*P	**Pn**	**06 40 05.7**	**+2.5**
TCE				*e*S	**Sn**	**06 40 18.3**	**-1.4**
TRN	**Trinidad (W)**	**0.72**	**119**	*e*P	**Pn**	**06 40 06.8**	**+2.1**
TRN				*e*S	**Sn**	**06 40 20.3**	**-2.2**
GRFF	**Grenada Fort F**	**1.09**	**16**	*e*P	**Pn**	**06 40 09.1**	**+1.5**
GRFF				*e*S	**Sn**	**06 40 25.0**	**-2.7**
GRGR	**Grenville**	**1.19**	**19**	*e*P	**Pn**	**06 40 10.0**	**+1.5**
GRGR				*e*S	**Sn**	**06 40 26.6**	**-2.8**
CRUV	**Carupano**	**1.21**	**255**	*e*P	**Pn**	**06 40 11.5**	**+2.8**
CRUV				*e*S	**Sn**	**06 40 28.2**	**-1.3**
GRW	**Mount Saint Ca**	**1.22**	**18**	*e*S	**Sn**	**06 40 28.0**	**-1.9**
GRHS	**Sauteurs**	**1.28**	**18**	*e*P	**Pn**	**06 40 11.5**	**+2.1**
GRHS				*e*S	**Sn**	**06 40 28.0**	**-2.8**
GCMP	**Grenada, Carri**	**1.60**	**22**	*e*P	**Pn**	**06 40 15.2**	**+2.7**
GCMP				*e*S	**Sn**	**06 40 34.0**	**-2.5**
PCRV	**Puerto La Cruz**	**2.67**	**252**	*e*P	**Pn**	**06 40 27.6**	**+2.5**
BENV	**Beln**	**5.56**	**260**	*e*P	**Pn**	**06 41 06.4**	**+4.0**
BENV				*e*S	**Sn**	**06 42 01.9**	**-3.9**
CACV	**CAICARA DEL OR**	**5.59**	**233**	*e*P	**Pn**	**06 41 01.7**	**-1.2**
CACV				*e*S	Sn	06 41 56.0	-11
BAUV	**El Baul**	**6.25**	**251**	*e*P	**Pn**	**06 41 14.5**	**+3.0**
BAUV				*e*S	**Sn**	**06 42 18.9**	**-3.3**

IDC 27 06:48:14.3±1.5, 5°.98S×142°.48E, h0km, mb3.9/2, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=44.6km s-min=31.5km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.75**	**127**	Pn	Pn	06 49 41.5	+0.5
	5.3nm,0.3s,baz=304,slow=23,SNR=2.0						
PMG				Sn	Sn	06 50 42.0	-5.8
	2.0nm,0.3s,baz=198,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**15.98**	**209**	Pn	Pn	06 51 58.7	-1.9
	0.2nm,0.3s,baz=30,slow=13,SNR=6.8						
WRA				Sn	Sn	06 54 43.9	-15
	0.1nm,0.3s,baz=32,slow=23,SNR=1.4						
WRA				Lg	Lg	06 56 37.4	
	baz=25,slow=32						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**19.43**	**204**	P	P	06 52 43.0	+0.5
	0.1nm,0.3s,baz=32,slow=9.6,SNR=8.8						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**84.13**	**325**	P	P	07 00 48.0	+0.8
	1.9nm,1.1s,baz=92,slow=3.6,SNR=4.2						
	1.9nm,1.1s						
ILAR	**Eielson Array**	**87.26**	**24**	P	P	07 01 01.5	-1.0
	0.3nm,0.7s,baz=238,slow=5.2,SNR=2.8						
	0.3nm,0.7s						

*NNC **27** 06:50:00.1±2.1, 53°.61N×88°.35E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=17.0km s-min=9.5km az=55.0, Suspected Mining explosion.*

IDC 27 06:50:00.8±2.9, 53°.74N×88°.17E, h0km, mbtmp2.9/2, ML2.6/2, 5C-3D, Error ellipse: s-maj=24.2km s-min=16.3km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.00**	**277**	I	I	07 02 50.0	
	0.2nm,0.8s,baz=94,slow=341,SNR=32						
ZAA0	**Zalesovo Array**	**2.00**	**277**	⇑Pn	Pb	06 50 37.0	-0.9
	1.4nm,0.8s						
ZAA0				⇓Sn	Sg	06 51 04.6	-0.3
	2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**2.00**	**277**	Pg	Pn	06 50 35.9	+0.1
	1.5nm,0.3s,baz=99,slow=22,SNR=19						
ZALV				Lg	Lg	06 51 04.6	
	3.0nm,0.3s,baz=95,slow=27,SNR=16						
KURK	**Kurchatov**	**6.60**	**247**	⇓Lg	Lg	06 53 31.9	
	5.5nm,1.3s						
KURBB	**Kurchatov Arra**	**6.70**	**246**	⇑Pn	Pn	06 51 41.1	+0.8
	1.1nm,0.5s						
KURBB				⇓Sn	Sn	06 52 58.6	+1.4
	2.2nm,0.5s						
KURBB				⇑Lg	Lg	06 53 36.6	
	3.5nm,0.7s						
KURBB	**Kurchatov Arra**	**6.70**	**246**	Pn	Pn	06 51 40.2	-0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=9.3						
KURBB				Sn	Sn	06 52 58.4	+1.1
	baz=62,slow=25						
KURBB				Lg	Lg	06 53 32.1	
	baz=61,slow=31,SNR=6.4						
	0.7nm,0.4s						
MK31	**Makanchi Array**	**7.90**	**211**	Pn	Pn	06 51 55.4	-1.5
	0.5nm,0.7s,baz=29,slow=12,SNR=6.3						
MK31				⇑Sn	Sn	06 53 26.3	-0.7
	0.7nm,0.8s,baz=309,slow=25,SNR=4.7						
MK31				⇑Lg	Lg	06 54 11.2	
	1.9nm,1.0s,baz=30,slow=31						
MKAR	**Makanchi Array**	**7.90**	**211**	Pn	Pn	06 51 58.9	+1.9
	0.1nm,0.3s,baz=26,slow=11,SNR=6.7						
MKAR				Sn	Sn	06 53 26.2	-0.8
	0.1nm,0.3s,baz=30,slow=12,SNR=1.5						
MKAR				Lg	Lg	06 54 08.3	
	baz=28,slow=34,SNR=2.6						
	0.2nm,0.4s						

*NEIC **27** 06:53:47.9±1.5, 30°.72N±0°.02×109°.25W±0°.02, h10km±2km, ML3.4/40, Error ellipse: s-maj=4.4km s-min=3.2km az=230.0*
*MEX **27** 06:53:52.7±1.7, 30°.45N×109°.23W, h5km, MD4.2*

ISC 27 06:53:47.7±1.2, 30°.74N±0°.03×109°.25W±0°.04, h10km±11km, n32, σ0s99/39, Sonora

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NZIG	**Nacozari, Sono**	**0.45**	**216**		**Pg**	**06 53 56.6**	**+0.1**
NZIG					**Sg**	**06 54 03.2**	**+0.7**
NZIG	**Nacozari, Sono**	**0.45**	**216**	*i* P	**Pg**	**06 53 56.6**	**+0.1**
NZIG				*i* S	**Sg**	**06 54 03.2**	**+0.7**
319A	**Douglas**	**0.64**	**357**		**Pg**	**06 54 00.1**	**+0.1**
CGIG		**1.16**	**108**		**Pn**	**06 54 09.6**	**-0.6**
CGIG					**Sb**	**06 54 24.5**	**-0.5**
CGIG		**1.16**	**108**	*e*P	**Pn**	**06 54 09.6**	**-0.6**
CGIG				*e*S	**Sb**	**06 54 24.5**	**-0.5**
DUN6	**Lazy B Ranch**	**1.81**	**4**		**Pn**	**06 54 19.0**	**-0.1**
TUC	**Tucson**	**2.04**	**320**		**Pn**	**06 54 22.1**	**-0.2**
TUC				IAML		06 54 53.4	
	239nm,0.5s						
TUC	**Tucson**	**2.04**	**320**	*e*P	**Pn**	**06 54 21.8**	**-0.5**
TUC				*e*S	**Sb**	**06 54 49.8**	**-0.7**
121A	**Cookes Peak, D**	**2.18**	**35**		**Pn**	**06 54 24.5**	**+0.2**
121A				IAML		06

TNTI	Ternate	2.06 122	P	Pn	06 57 46.8 -0.6
KMSI	Cibinong	2.10 232	P	Pn	06 57 48.2 +0.2
GTOI	Gorontalo	2.90 245	P	Pn	06 57 59.5 +1.0
LBMI	Labuha	3.12 143	P	Pn	06 58 01.5 0.0
SANI	Sanana	3.92 175	P	Pn	06 58 11.8 -0.5
LUWI	Luwuk	4.07 225	P	Pn	06 58 15.1 +0.8
NLAI	Namlea	5.29 164	P	Pn	06 58 31.8 +1.0

BJI ***27*** *07:19:21.3±0.0,6˚30S×142˚80E,h5km,mb4.8/70, mB5.2/32,Ms4.7/13,Ms7 4.4/13*
IDC ***27*** *07:19:21.7±0.5,6˚28S×142˚86E,h0km,mb5.0/15, mbtmp5.1/19,ML3.4/2,MS4.1/17,Error ellipse: s-maj=23.6km s-min=12.1km az=79.0*
MOS ***27*** *07:19:22.0±0.9,6˚27S×142˚82E,h16km,mb5.2/43,Error ellipse: s-maj=10.7km s-min=5.3km az=113.9*
NEIC ***27*** *07:19:23.4±1.9,6˚33S±0.07˚×142˚79E±0.07,h10km±1km, mb5.2/119,Error ellipse: s-maj=12.2km s-min=11.6km az=70.0*
DJA ***27*** *07:19:25.0±0.2,6˚S±2˚×14˚3E±˚,h20km±1km,M5.1/80, mb5.3/80,mB5.5/35,MLv5.6/6,Mw5.0/24,Mw(mB)5.0/35*
ISC 27 07:19:23.9±0.4,6˚41S±0.04×142˚75E±0.04,h14km±2km, h14km:pP-P,n685,σ1§30/703,mb5.2/149,MS4.0/17, 19C-4D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
TABU	Tabubil	1.90	306	P		Pb	07 19 57.4	-1.0
MMPI	Merauke	3.12	229	P		Pn	07 20 12.8	+0.1
GENI	Genyem	4.58	326	P		Pn	07 20 34.2	+1.3
GENI	Genyem	4.58	326	P		Pn	07 20 32.4	-0.5
PMG	Port Moresby	5.28	125	Pn		Pn	07 20 41.4	-1.1
PMG	Port Moresby	5.28	125	P		Pn	07 20 41.7	-0.8
PMG	Port Moresby	5.28	125	P		Pn	07 20 41.6	-0.9
PMG	Port Moresby	5.28	125	*c i* P		Pn	07 20 40.7	-1.8
PMG	Port Moresby	5.28	125	Pn		Pn	07 20 41.5	-0.9
	18nm,0.3s,baz=317,slow=14,SNR=48							
PMG				Sn		Sn	07 21 40.5	-2.7
	29nm,0.3s,baz=311,slow=20,SNR=12							
PMG				LR		LR	07 22 40.1	
	comp=Z,833nm,21.2s,baz=279,slow=38							
	110nm,0.6s							
SMPI	Sarmi	5.96	317	P		Pn	07 20 51.8	0.0
	665nm,1.2s,7µm2.1nm							
MANU	Manus Island	6.32	47	Pn		Pn	07 20 56.6	-0.2
MANU	Manus Island	6.32	47	P		Pn	07 20 59.4	+2.6
COEN	Coen	7.51	177	P		Pn	07 21 14.5	+1.3
	baz=7.5,SNR=5.9							
COEN	Coen	7.51	177	Pn		Pn	07 21 15.0	+1.8
COEN	Coen	7.51	177	P		Pn	07 21 16.2	+3.0
RABL	Rabaul	9.62	77			Pn	07 21 45.9	+3.7
RABL	Rabaul	9.62	77	P		Pn	07 21 45.7	+3.5
FAKI	Fak Fak	11.03	288	Pn		Pn	07 21 59.3	-2.1
FAKI	Fak Fak	11.03	288	P		Pn	07 22 02.6	+1.2
FAKI	Fak Fak	11.03	288	P		Pn	07 21 59.4	-2.0
	114nm,0.7s,2µm							
SAUI	Saumlaki	11.47	261	Pn		Pn	07 22 08.1	+0.6
SAUI	Saumlaki	11.47	261	P		Pn	07 22 08.5	+1.0
SAUI	Saumlaki	11.47	261	P		Pn	07 22 07.7	+0.2
	2µm,0.9s,16µm							
MTSU	Mount Surprise	11.76	173	P		Pn	07 22 13.8	+2.4
	baz=12,SNR=13							
MTSU	Mount Surprise	11.76	173	P		Pn	07 22 14.1	+2.7
KDU	Kakadu	11.90	238	P		Pn	07 22 12.4	-0.9
	baz=12,SNR=138							
KDU	Kakadu	11.90	238	P		Pn	07 22 12.6	-0.7
SWI	Sorong	12.72	295	P		Pn	07 22 24.7	+0.2
	97nm,0.8s,2µm							
MTN	Manton Dam	13.12	240	P		Pn	07 22 28.9	-1.1
	baz=13,SNR=46							
MTN	Manton Dam	13.12	240	Pn		Pn	07 22 28.7	-1.3
MTN	Manton Dam	13.12	240	P		Pn	07 22 28.9	-1.1
DRS	Darwin Rock St	13.13	242	P		Pn	07 22 29.9	-0.3
TV1H	Townsville Har	13.37	163	P		Pn	07 22 35.7	+2.3
CTA	Charters Tower	14.02	166	P		Pn	07 22 45.9	+3.6
CTA	Charters Tower	14.02	166	Pn		Pn	07 22 44.9	+2.6
	0.7nm,0.3s,baz=345,slow=14,SNR=17							
CTA				Lg		Lg	07 26 37.8	
	0.5nm,0.3s,baz=80,slow=21,SNR=1.7							
CTA				LR		LR	07 27 30.1	
	comp=Z,571nm,20.4s,baz=354,slow=35							
	32nm,1.2s							
CTAO	Charters Tower	14.02	166	Pn		Pn	07 22 44.9	+2.6
CTAO	Charters Tower	14.02	166	P		Pn	07 22 45.9	+3.6
CTAO	Charters Tower	14.02	166	P		Pn	07 22 44.9	+2.6
QIS	Mount Isa	14.39	192	P		Pn	07 22 47.5	0.0
	baz=14,SNR=44							
QIS	Mount Isa	14.39	192	P		Pn	07 22 48.1	+0.6
WB0	Warramunga Arr	15.57	211			Pn	07 23 01.0	-2.2
WB0				IAmb		IAmb	07 23 10.1	
	comp=Z,151nm,0.8s							
WR0	Warramunga Arr	15.66	210			Pn	07 23 02.8	-1.6
WRAB	Tennant Creek	15.73	210			Pn	07 23 03.7	-1.6
WRAB				IAmb		IAmb	07 23 11.6	
	comp=Z,154nm,0.6s							
WRAB	Tennant Creek	15.73	210	*c i* P		Pn	07 23 02.8	-2.5
WB2	Warramunga Arr	15.74	210	P		Pn	07 23 04.8	-0.6
	baz=16							
WB2	Warramunga Arr	15.74	210			Pn	07 23 02.6	-2.7
WB2				IAmb		IAmb	07 23 12.1	
	comp=Z,180nm,0.9s							
WRA	Warramunga Arr	15.74	210	Pn		Pn	07 23 02.2	-3.2
WRA	Warramunga Arr	15.74	210	P		Pn	07 23 02.2	-3.2
WRA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
WRA	Warramunga Arr	15.74	210	Pn		Pn	07 23 03.9	-1.6
	comp=Z,4.5nm,0.3s,baz=32,slow=14,SNR=49							
WRA				Sn		Sn	07 25 52.5	-7.4
	comp=Z,2.3nm,0.3s,baz=30,slow=23,SNR=2.3							
WRA				Lg		Lg	07 27 48.8	
	comp=Z,6.8nm,0.3s,baz=31,slow=29,SNR=6.3							
LBMI	Labuha	16.26	290	P		Pn	07 23 11.2	-0.9
	comp=Z,104nm,1.0s,comp=Z,2µm							
LBMI				pP		pP	07 23 18.7	-0.5
	comp=Z,104nm,1.0s,comp=Z,2µm							
KNRA	Kununurra	16.52	235	Pn		Pn	07 23 13.6	-1.9
KNRA				IAmb		IAmb	07 23 20.6	
	comp=Z,239nm,0.9s							
KNRA	Kununurra	16.52	235	P		Pn	07 23 13.9	-1.5
TNTI	Ternate	16.93	294	P		Pn	07 23 18.4	-2.3
SANI	Sanana	17.27	284	P		Pn	07 23 25.9	+1.1
SANI	Sanana	17.27	284	P		Pn	07 23 25.0	+0.1
	comp=Z,67nm,0.9s,comp=Z,801nm							
SANI				pP		sP	07 23 30.6	-1.7
	comp=Z,67nm,0.9s,comp=Z,801nm							
HNR	Honiara	17.29	101	P		Pn	07 23 25.4	+0.2
HNR				IAmb		IAmb	07 23 32.6	
	comp=Z,106nm,0.8s							
HNR	Honiara	17.29	101	P		Pn	07 23 25.4	+0.2
	comp=Z,588nm,0.4s,baz=186,slow=7.3,SNR=1.4							
RK1H	Rockhampton Ha	18.45	157	P		Pn	07 23 41.6	+2.2
SOEI	Soe	18.60	258			P	07 23 41.3	+0.1
SOEI	Soe	18.60	258	P		Pn	07 23 43.7	+2.3
SOEI	Soe	18.60	258	P		P	07 23 41.8	+0.6
	comp=Z,554nm,1.0s,comp=Z,4µm							
SOEI				pP		sP	07 23 46.7	-0.5
	comp=Z,554nm,1.0s,comp=Z,4µm							
GD1S	Gladstone Soft	19.13	156	P		Pn	07 23 49.7	+2.1
AS01	Alice Springs	19.13	205	P		P	07 23 48.7	+1.9
AS31	Alice Springs	19.15	205			P	07 23 48.2	+1.1
AS31				IAmb		IAmb	07 23 52.6	
	comp=Z,213nm,0.8s							
ASAR	Alice Springs	19.16	205	P		P	07 23 48.3	+1.3
ASAR	Alice Springs	19.16	205	P		P	07 23 50.1	+3.0
	comp=Z,599nm,0.8s,baz=33,slow=9.8,SNR=420							
ASAR				S		Sn	07 27 15.8	-6.7
	comp=Z,7.3nm,0.6s,baz=34,slow=17,SNR=3.1							
ASAR				Lg		Lg	07 29 36.6	
	comp=Z,1.9nm,0.3s,baz=27,slow=28,SNR=4.9							
ASAR				LR		LR	07 31 56.2	
	comp=Z,2µm,21.4s,baz=36,slow=39							
ASPA	Alice Springs	19.16	205	P		P	07 23 48.3	+1.2
	baz=19							
GUMO	Guam	19.98	6	P		P	07 23 54.8	-1.2
	comp=Z,78nm,0.9s,baz=218,slow=18,SNR=1.8							
KMSI	Cibinong	19.98	290	P		P	07 23 55.9	-0.2
QLP	Quilpie	20.11	176	P		P	07 24 00.1	+2.6
	baz=20,SNR=36							
QLP	Quilpie	20.11	176	P		Pn	07 24 01.0	+1.7
FITZ	Fitzroy Crossi	20.34	234	P		P	07 24 01.0	+1.0
	baz=20,SNR=112							
FITZ	Fitzroy Crossi	20.34	234			P	07 24 01.0	+1.0
FITZ	Fitzroy Crossi	20.34	234	P		P	07 24 01.6	+1.6
PATS	Pohnpei	20.35	50	P		P	07 23 57.8	-2.3
MMRI	Maumere	20.46	263	P		P	07 24 00.8	-0.6
MMRI				IAmb		IAmb	07 24 06.8	
	comp=Z,116nm,0.9s							
MMRI	Maumere	20.46	263	P		P	07 24 02.0	+0.6
MMRI	Maumere	20.46	263	P		P	07 24 01.2	-0.2
	comp=Z,149nm,0.9s							
MMRI				pP		pP	07 24 06.0	+0.6
	comp=Z,149nm,0.9s							
EIDS	Eidsvold	20.47	158	P		P	07 24 03.7	+2.3
	baz=21,SNR=10							
EIDS	Eidsvold	20.47	158	P		P	07 24 02.6	+1.2
EIDS				IAmb		IAmb	07 24 09.4	
	comp=Z,104nm,1.0s							
EIDS	Eidsvold	20.47	158	P		P	07 24 03.4	+2.0
LUWI	Luwuk	20.63	284	P		P	07 24 04.5	+1.2
LUWI	Luwuk	20.63	284	P		P	07 24 04.8	+1.6
LUWI	Luwuk	20.63	284	P		P	07 24 03.3	+0.1
	comp=Z,190nm,0.8s,comp=Z,3µm							
LUWI				pP		sP	07 24 08.5	-0.7
	comp=Z,190nm,0.8s,comp=Z,3µm							
RMQ	Roma	20.77	165	P		P	07 24 07.5	+2.9
	baz=21,SNR=9.9							
RMQ	Roma	20.77	165	P		P	07 24 08.1	+3.4
GTOI	Gorontalo	20.91	289	P		Pn	07 24 08.4	-0.4
	comp=Z,163nm,0.8s,comp=Z,1µm							
EDFI	Ende, Flores	21.01	262	P		P	07 24 05.6	-1.8
	comp=Z,131nm,0.9s,comp=Z,2µm							
INKA	Innaminka	21.30	185	P		P	07 24 12.9	+2.6
DAV	Davao City (W)	21.75	308	LR		LR	07 33 01.0	
	comp=Z,281nm,19.3s,baz=231,slow=38							
MRSI	Marisa	21.87	287	P		P	07 24 17.6	+1.0
	comp=Z,108nm,1.2s,comp=Z,1µm							
MRSI				pP		sP	07 24 23.2	+0.6
	comp=Z,108nm,1.2s,comp=Z,1µm							
BASI	Baing, Sumba	22.26	259	P		P	07 24 20.9	+0.1
	comp=Z,321nm,1.0s,comp=Z,3µm							
OOD	Oodnadatta	22.30	197	P		P	07 24 23.8	+2.7
BKSI	Bulukumba	22.54	272	P		P	07 24 23.7	-0.1
	comp=Z,149nm,0.9s,comp=Z,1µm							
BKSI				pP		sP	07 24 29.7	-0.1
	comp=Z,149nm,0.9s,comp=Z,1µm							
KAPI	Kappang	22.93	272	P		P	07 24 28.1	+0.2
KAPI	Kappang	22.93	272	*c i* P		P	07 24 28.6	+0.7
KAPI				pmax		pmax		
	comp=Z,184nm,1.5s							
TTSI	Tana Toraja	23.10	277	P		P	07 24 29.8	+0.2
	comp=Z,39nm,1.0s,comp=Z,2µm							
WRKA	Warakurna	23.13	215	P		P	07 24 30.1	+0.2
	baz=23,SNR=200							
WRKA	Warakurna	23.13	215	P		P	07 24 30.9	+1.0
TOLI2	Tolitoli	23.17	288	P		P	07 24 29.1	-1.3
TOLI2				IAmb		IAmb	07 24 31.6	
	comp=Z,106nm,1.2s							
TOLI2	Tolitoli	23.17	288	P		P	07 24 30.6	+0.2
AULRC	Lightning Ridg	23.43	168	P		P	07 24 33.6	+0.8
MPSI	Mapaga	23.77	286	P		P	07 24 36.2	-0.1
	comp=Z,60nm,1.1s,comp=Z,771nm							
MPSI				pP		sP	07 24 42.1	-0.4
	comp=Z,60nm,1.1s,comp=Z,771nm							
LCRK	Leigh Creek	24.29	190	P		P	07 24 41.9	+0.9
PLAI	Plampang	24.87	263	P		P	07 24 46.1	-0.4
PLAI	Plampang	24.87	263	P		P	07 24 44.7	-1.8
	comp=Z,77nm,0.9s,comp=Z,846nm							
PLAI				pP		pP	07 24 49.3	-1.5
	comp=Z,77nm,0.9s,comp=Z,846nm							
MULG	Mulgathing	25.12	198	P		P	07 24 49.6	+1.1
CMSA	Cobar Meteorol	25.15	174	P		P	07 24 49.2	+0.4
	baz=25,SNR=34							
CMSA	Cobar Meteorol	25.15	174	P		P	07 24 50.6	+1.8
KOUNC	Koumac, New Ca	25.17	126	P		P	07 24 47.8	-1.3
KOUNC				IAmb		IAmb	07 24 58.0	
	comp=Z,44nm,1.1s							
KOUNC	Koumac, New Ca	25.17	126	P		P	07 24 49.6	+0.5
ARMA	Armidale	25.30	162	P		P	07 24 51.8	+1.5
	baz=25,SNR=5.6							
ARMA	Armidale	25.30	162	P		P	07 24 50.6	+0.3
ARMA	Armidale	25.30	162	P		P	07 24 52.3	+2.0
STKA	Stephens Creek	25.36	182	P		P	07 24 50.7	0.0
	baz=25,SNR=74							
STKA	Stephens Creek	25.36	182	P		P	07 24 49.7	-1.0
STKA	Stephens Creek	25.36	182	P		P	07 24 50.7	0.0
STKA	Stephens Creek	25.36	182	*c i* P		P	07 24 50.4	-0.3
STKA	Stephens Creek	25.36	182	P		P	07 24 51.0	+0.3
	comp=Z,66nm,0.9s,baz=354,slow=10,SNR=59							
STKA				LR		LR	07 36 18.0	
	comp=Z,507nm,19.9s,baz=352,slow=40							
	comp=Z,66nm,0.9s							
AUPHS	Peel High Scho	25.72	164	P		P	07 24 56.0	+2.0
TWSI	Taliwang, Sumb	25.75	263	P		P	07 24 53.0	-1.4
	comp=Z,36nm,1.1s,comp=Z,900nm							
AUDCS	Dubbo College	26.27	169	P		P	07 25 01.5	+2.5
BKB	Balikpapan	26.29	280	P		P	07 25 00.9	+1.6
MBWA	Marble Bar	26.68	234	P		P	07 25 01.8	-0.9
MBWA				IAmb		IAmb	07 25 33.7	
	comp=Z,32nm,0.8s							
MBWA	Marble Bar	26.68	234	P		P	07 25 02.8	0.0
PSA00	Pilbara Seismi	26.80	233	P		P	07 25 02.9	-1.0
PSA00				IAmb		IAmb	07 25 28.7	
	comp=Z,39nm,0.9s							
PSA00	Pilbara Seismi	26.80	233	P		P	07 25 02.2	-1.6
PSA00				IAmb		IAmb	07 25 04.5	
	comp=Z,15nm,0.8s							
PSA00	Pilbara Seismi	26.80	233	P		P	07 25 03.8	0.0
WHYH	Whyalla	26.93	190	P		P	07 25 05.6	+0.8
BBOO	Buckleboo	27.00	192	P		P	07 25 05.4	-0.1
	baz=27,SNR=30							
BBOO	Buckleboo	27.00	192	P		P	07 25 03.9	-1.6
BBOO				IAmb		IAmb	07 25 10.2	
	comp=Z,54nm,0.7s							
BBOO	Buckleboo	27.00	192	P		P	07 25 05.8	+0.3
HTT	Hallett	27.12	187	P		P	07 25 06.9	+0.2
	baz=27,SNR=25							
HTT	Hallett	27.12	187	P		P	07 25 07.5	+0.8
DZM	Mont Dzumac	27.67	127	P		P	07 25 10.5	-1.3
DZM	Mont Dzumac	27.67	127	P		P	07 25 14.9	+3.1
DZM	Mont Dzumac	27.67	127	LR		LR	07 36 28.2	
	comp=Z,218nm,18.9s,baz=350,slow=37							
FORT	Forrest	27.89	208	P		P	07 25 14.0	+0.4
	baz=28,SNR=12							
FORT	Forrest	27.89	208	P		P	07 25 14.2	+0.6
BBKI	Banjar Baru	27.96	275	P		P	07 25 14.7	+0.3
	comp=Z,51nm,0.9s							
YNG	Young	28.24	170	P		P	07 25 17.7	+1.1
	baz=28,SNR=15							
YNG	Young	28.24	170	P		P	07 25 18.6	+1.9
JAGI	Jajag, Banyuwa	28.43	264	P		P	07 25 17.5	-1.1
JAGI	Jajag, Banyuwa	28.43	264	P		P	07 25 16.5	-2.1
	comp=Z,48nm,1.1s							
KKM	Kota Kinabalu	29.23	295	P		P	07 25 24.7	-1.1
KKM				IAmb		IAmb	07 25 26.1	
	comp=Z,31nm,1.1s							
KKM	Kota Kinabalu	29.23	295	P		P	07 25 25.6	-0.2
CAN	Canberra	29.34	170	P		P	07 25 26.6	+0.1
CAN				IAmb		IAmb	07 25 28.6	
	comp=Z,33nm,1.2s							
CAN	Canberra	29.34	170	P		P	07 25 27.6	+1.1
CAN	Canberra	29.34	170	P		P	07 25 26.6	+0.1
CAN				pmax		pmax		
	comp=Z,33nm,1.2s							
ARPS	Mount Arapiles	30.23	181	P		P	07 25 35.0	+0.8
	baz=30,SNR=5.2							
ARPS	Mount Arapiles	30.23	181	P		P	07 25 34.9	+0.6
MEEK	Meekatharra	30.55	226	P		P	07 25 36.9	-0.4
	baz=30,SNR=9.9							
PWJI	Pagerwojo	30.74	265	P		P	07 25 37.6	-1.5
	comp=Z,31nm,0.9s							
PWJI				pP		pP	07 25 42.2	-1.3
	comp=Z,31nm,0.9s							
BRAT	Ballarat	31.02	178	P		P	07 25 42.9	+1.7
TOO	Toolangi	31.12	176	P		P	07 25 43.5	+1.4
	baz=31,SNR=5.6							
TOO	Toolangi	31.12	176	P		P	07 25 41.6	-0.6
TOO	Toolangi	31.12	176	P		P	07 25 44.4	+2.2
TOO	Toolangi	31.12	176	P		P	07 25 41.6	-0.6
TOO				pmax		pmax		
	comp=Z,16nm,1.0s							
KMBL	Kambalda	31.60	216	P		P	07 25 46.3	-0.1
	baz=32,SNR=11							
KMBL	Kambalda	31.60	216	P		P	07 25 47.3	+0.9
GEXS	Deakin Univers	31.68	178	P		P	07 25 49.4	+2.4
SBUM	Sibu	31.73	265	P		P	07 25 47.0	-0.8
UGM	Wanagama	32.01	265	P		P	07 25 49.3	-1.0
UGM	Wanagama	32.01	265	P		P	07 25 49.7	-0.6
UGM	Wanagama	32.01	265	P		P	07 25 48.9	-1.4
	comp=Z,108nm,1.1s							
UGM				pP		pP	07 25 53.5	-1.2
	comp=Z,108nm,1.1s							
SMRI	Semarang	32.09	267	P		P	07 25 49.4	-1.6
KSM	Kuching	33.32	282	P		P	07 26 01.5	-0.2
KSM				IAmb		IAmb	07 26 03.5	
	comp=Z,74nm,1.4s							
KSM	Kuching	33.32	282	P		P	07 26 03.0	+1.3
KPJI	Karang Pucung	33.59	266	P		P	07 26 03.5	-0.6
	comp=Z,74nm,1.4s							
KPJI				pP		pP	07 26 08.0	-0.5
	comp=Z,74nm,1.4s							
MORW	Morawa	33.82	225	P		P	07 26 05.8	-0.1
	baz=34,SNR=5.1							
MORW	Morawa	33.82	225	P		P	07 26 05.3	-0.7
MORW				IAmb		IAmb	07 26 06.6	
	comp=Z,64nm,1.4s							
CMJI	Cimerak	34.06	266	P		P	07 26 06.2	-2.0
	comp=Z,156nm,1.0s,comp=Z,1µm							
KLBR	Kellerberrin	34.27	220	P		P	07 26 09.5	-0.3
	baz=34,SNR=5.1							
BLDU	Ballidu	34.31	222	P		P	07 26 09.8	-0.4
	baz=34,SNR=5.7							
BBJI	Bungbulang	34.86	266	P		P	07 26 14.3	-0.9
LEM	Lembang	34.90	267	LR		LR	07 44 16.3	
	comp=Z,270nm,19.9s,baz=126,slow=43							
LEM	Lembang	34.90	267	P		P	07 26 14.9	-0.7
	comp=Z,97nm,0.9s							
CNJI	Cibinong	35.38	266	P		P	07 26 17.8	-1.7
	comp=Z,108nm,1.0s,comp=Z,1µm							
CNJI				pP		pP	07 26 22.3	-1.7
	comp=Z,108nm,1.0s,comp=Z,1µm							
NWAO	Narrogin (SRO)	35.49	219	LR		LR	07 41 43.7	
	comp=Z,1µm,19.9s,baz=342,slow=38							
JOW	Kunigami	35.90	338	LR		LR	07 38 19.9	
	comp=Z,174nm,20.0s,baz=272,slow=32							
NACB	Ninganchiao	36.74	327	P		P	07 26 34.5	+3.5
PPBI	Pangkal Pinang	36.75	275	P		P	07 26 31.4	+0.1
	comp=Z,35nm,0.8s							
PPBI				pP		pP	07 26 35.6	-0.2
	comp=Z,35nm,0.8s							
CGJI	Cibinong	36.82	268	P		P	07 26 29.9	-2.0
	comp=Z,62nm,0.9s							
XMI	Christmas Isla	36.87	261	P		P	07 26 33.1	+0.8
XMIS	Christmas Isla	36.91	261	P		P	07 26 32.1	-0.5
XMIS	Christmas Isla	36.91	261	P		P	07 26 33.5	+0.8
YHNB	Yeheng	37.25	327	P		P	07 26 35.3	-0.2
KASI	Kota Agung	38.05	269	P		P	07 26 40.4	-2.0
	comp=Z,39nm,0.9s							
LWLI	Liwa	38.52	270	P		P	07 26 46.0	-0.5
	comp=Z,165nm,1.0s,comp=Z,19µm							
DSRI	Dabo	38.54	277	P		P	07 26 46.9	+0.4
	comp=Z,61nm,1.1s							
JMN	Monobe	40.79	349	P		P	07 27 03.3	-1.7
JMN				IAmb		IAmb	07 27 08.4	
	comp=Z,32nm,0.9s							
JMN	Monobe	40.79	349	P		P	07 27 05.2	+0.2
JNU	Nakatsue	40.90	345	P		P	07 27 03.9	-1.9
JNU	Nakatsue	40.90	345	P		P	07 27 08.1	+2.2
JNU	Nakatsue	40.90	345	LR		LR	07 40 48.5	
	comp=Z,134nm,21.5s,baz=150,slow=32							
JGF	Kuroka	42.09	353	P		P	07 27 14.3	-1.4
JGF	Kuroka	42.09	353	P		P	07 27 18.0	+2.4
BKNI	Bangkinang	42.16	278	P		P	07 27 18.1	+1.6
BKNI	Bangkinang	42.16	278	P		P	07 27 15.8	-0.7
	comp=Z,176nm,1.1s							
MJAR	Matsushiro Arr	42.93	355	P		P	07 27 19.5	-3.0
	comp=Z,6.0nm,0.9s,baz=176,slow=7.4,SNR=8.3							
	comp=Z,6.0nm,0.9s							
MAJO	Matsushiro	42.94	355	*e* P		P	07 27 21.5	-0.9
MAJO				pmax		pmax		
	comp=Z,28nm,1.7s							
IPM	Ipoh	43.04	284	P		P	07 27 23.2	-0.5
IPM				IAmb		IAmb	07 27 25.5	
	comp=Z,35nm,0.9s							
IPM	Ipoh	43.04	284	P		P	07 27 24.2	+0.5
KULM	Kulim	43.60	285	P		P	07 27 27.8	-0.5
KULM				IAmb		IAmb	07 27 29.1	
	comp=Z,41nm,1.5s							
JCZ	Jackson Bay	43.90	153	P		P	07 27 33.1	+2.8
JMM	Marumori	44.08	358	P		P	07 27 31.5	-0.1
JMM				IAmb		IAmb	07 27 39.6	
	comp=Z,33nm,1.0s							
JMM	Marumori	44.08	358	P		P	07 27 34.2	+2.6
DCZ	Deep Cove	44.30	155	P		P	07 27 33.6	+0.3
URZ	Urewera	44.42	141	LR		LR	07 46 18.2	
	comp=Z,540nm,18.1s,baz=354,slow=36							
NJ2	Nanjing	44.52	331	*e* P		P	07 27 35.5	+0.3
NJ2				pP		pP	07 27 38.0	-1.7
NJ2				sP		sP	07 27 42.0	+0.5
NJ2				S		S	07 34 15.3	+4.9
NJ2				sS		sS	07 34 18.8	+0.9
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,170nm,6.6s							
RTZ	Ruatahuna	44

comp=Z,230nm,4.1s
CHTO Chiang Mai 49.92 301 P **P** **07 28 17.0 -0.7**
CHTO Chiang Mai 49.92 301 P **P** **07 28 18.4 +0.7**
CHTO Chiang Mai 49.92 301 P **P** **07 28 17.0 -0.7**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
KMI Kunming 49.97 310 ⇓P **P** **07 28 19.3 +1.1**
KMI pmax pmax
comp=Z,37nm,1.2s
HNS HongShan 50.84 331 ⇓P **P** **07 28 25.3 +1.1**
HNS pmax pmax
comp=Z,19nm,1.1s
USRK Ussuriysk Ar. 51.30 350 P **P** **07 28 26.2 -1.4**
USRK Ussuriysk Ar. 51.30 350 P **P** **07 28 27.8 +0.2**
comp=Z,21nm,0.8s,baz=166,slow=8.2,SNR=14
comp=Z,21nm,0.8s
USA0B Ussuriysk Arra 51.30 350 P **P** **07 28 27.3 -0.3**
USA0B IAmb IAmb 07 28 30.9
comp=Z,24nm,0.9s
USA0B Ussuriysk Arra 51.30 350 *i* P **P** **07 28 26.3 -1.3**
XAN Xi'an 51.41 324 P **P** **07 28 27.5 -1.2**
XAN pP pP 07 28 31.3 -2.0
XAN S **S** **07 35 48.0 -0.2**
XAN pmax pmax
comp=Z,33nm,1.3s
XAN pmax pmax
comp=Z,410nm,6.2s
XAN LR LR
comp=Z,250nm,13.4s
XAN LR LR
comp=Z,280nm,12.5s
XAN LR LR
comp=Z,300nm,13.7s
PZH PanZhiHua 51.48 311 P **P** **07 28 29.8 +0.4**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,150nm,6.0s
MDJ Mudanjiang 52.15 348 P **P** **07 28 33.5 -0.5**
MDJ pmax pmax
comp=Z,14nm,1.4s
MDJ pmax pmax
comp=Z,170nm,4.8s
MDJ Mudanjiang 52.15 348 P **P** **07 28 33.3 -0.7**
MDJ Mudanjiang 52.15 348 P **P** **07 28 34.8 +0.8**
BJT Baijiatuau 52.30 334 P **P** **07 28 34.7 -0.4**
BJT Baijiatuau 52.30 334 P **P** **07 28 38.0 +2.9**
BJT Baijiatuau 52.30 334 P **P** **07 28 34.7 -0.4**
BJT pmax pmax
comp=Z,15nm,1.2s
BJI Beijing 52.31 334 P **P** **07 28 34.5 -0.7**
BJI PcP **PcP** **07 29 50.5 +4.2**
BJI pmax pmax
comp=Z,8.0nm,0.8s
CN2 Changchun 52.37 344 P **P** **07 28 38.0 +2.4**
CN2 PcP **PcP** **07 29 50.0 +3.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 52.61 317 P **P** **07 28 38.0 +0.3**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
YSS Yuzh-Sakhalins 53.13 0 P **P** **07 28 40.0 -1.1**
YSS IAmb IAmb 07 28 48.2
comp=Z,18nm,0.6s
YSS Yuzh-Sakhalins 53.13 0 P **P** **07 28 43.4 +2.3**
YSS Yuzh-Sakhalins 53.13 0 *eP* **P** **07 28 40.3 -0.8**
YSS pmax pmax
comp=Z,20nm,0.0s
TNCH TengChong 53.18 308 P **P** **07 28 42.8 +0.7**
TNCH pP pP 07 28 46.0 -0.7
TNCH pmax pmax
comp=Z,38nm,0.4s
BNX BinXian 53.70 347 ⇓P **P** **07 28 45.3 0.0**
BNX pmax pmax
comp=Z,17nm,0.9s
BNX pmax pmax
comp=Z,120nm,3.6s
MND Mandalay 53.71 303 P **P** **07 28 47.3 +1.4**
HHC Hu-ho-hao-te 55.06 331 *eP* **P** **07 28 58.3 +2.8**
HHC pmax pmax
comp=Z,15nm,0.9s
XLT XiLinHaoTe 55.57 337 *eP* **P** **07 29 00.0 +0.9**
XLT pP sP 07 29 04.0 -1.5
XLT sP pP 07 29 06.5 +2.8
XLT PcP **PcP** **07 29 58.5 -0.3**
XLT pmax pmax
comp=Z,10.0nm,0.9s
XLT pmax pmax
comp=Z,140nm,7.1s
BTO Baotou 55.62 330 *eP* **P** **07 29 03.3 +3.7**
BTO pP **sP** **07 29 08.0 +2.1**
BTO sP pP 07 29 10.5 +6.3
BTO PP **PP** **07 31 09.8 +5.8**
BTO pmax pmax
comp=Z,35nm,1.0s
BTO pmax pmax
comp=Z,380nm,8.1s
BTO LR LR
comp=Z,360nm,13.7s
BTO LR LR
comp=Z,570nm,15.0s
BTO LR LR
comp=Z,530nm,24.0s
LZH Lanzhou 55.85 322 *eP* **P** **07 29 01.0 -0.3**
LZH pP sP 07 29 09.0 +1.3
LZH pmax pmax
comp=Z,34nm,1.2s
KLR Kul'dur 56.23 351 *ceP* **P** **07 29 02.3 -1.3**
KLR pmax pmax
comp=Z,10.0nm,1.0s
TYV Tymovskoe 57.04 360 *eP* **P** **07 29 08.3 -1.0**
TYV *eS* **S** **07 37 04.9 +1.4**
TYV pmax pmax
comp=Z,200nm,3.9s
TYV pmax pmax
comp=Z,10.0nm,0.7s
TYV smax smax
comp=N,100nm,4.3s
TYV smax smax
comp=E,100nm,4.3s
RAR Rarotonga 57.42 111 LR LR 07 50 46.7
comp=E,96nm,21.8s,baz=358,slow=33
HEH HeiHe 57.98 348 *eP* **P** **07 29 17.0 +1.1**
HEH pmax pmax
comp=E,12nm,1.1s
SHL Shillong 58.74 305 P **P** **07 29 21.1 -0.9**
SHL IAmb IAmb 07 29 26.9
comp=Z,35nm,1.1s
SHL Shillong 58.74 305 P **P** **07 29 21.1 -0.9**
SHL pmax pmax
comp=Z,35nm,1.1s
HIA Hailar 58.97 343 *i* P **P** **07 29 20.4 -2.6**
HIA pmax pmax
comp=Z,4.0nm,0.7s
GTA Gaotai 60.43 323 P **P** **07 29 33.3 0.0**
GTA pP pP 07 29 37.0 -1.0
GTA pmax pmax
comp=Z,5.0nm,1.3s
PEA0B Petropavlovsk- 60.63 10 *i* P **P** **07 29 32.1 -2.2**
PETK Petropavlovsk- 60.63 10 P **P** **07 29 32.7 -1.6**
PETK Petropavlovsk- 60.63 10 P **P** **07 29 33.8 -0.4**
comp=Z,14nm,0.9s,baz=200,slow=7.7,SNR=7.6
comp=Z,14nm,0.9s
ZEA Zeya 61.33 350 *eP* **P** **07 29 38.4 -0.6**
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.8s
GOMU GeErMu 61.75 317 P **P** **07 29 42.8 +0.1**
GOMU pP sP 07 29 46.8 -2.3
GOMU sP pP 07 29 48.5 +1.2
GOMU pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 62.52 334 P **P** **07 29 46.6 -0.7**
ULN IAmb IAmb 07 29 51.3
comp=Z,12nm,0.8s
ULN Ulaanbaatar 62.52 334 *ceP* **P** **07 29 46.3 -1.0**
ULN pmax pmax
comp=Z,20nm,1.3s
SONM Songino Array 62.79 333 P **P** **07 29 49.0 0.0**
SONM Songino Array 62.79 333 P **P** **07 29 49.1 0.0**
comp=Z,5.6nm,0.9s,baz=151,slow=5.2,SNR=18
PKP2bc
comp=Z,0.7nm,0.8s,baz=270,slow=1.4,SNR=5.5
SONM PKP2ab 07 59 06.7

comp=Z,0.6nm,0.8s,baz=318,slow=1.9,SNR=3.6
comp=Z,5.6nm,0.9s
PALK Pallekele 63.38 281 *i* P **P** **07 29 52.4 -1.2**
PALK pmax pmax
comp=Z,36nm,1.3s
CASY Casey 63.80 194 P **P** **07 29 55.0 -0.3**
SHEM Shemya Is, Ala 64.65 20 LR LR 07 52 18.2
comp=Z,91nm,20.2s,baz=160,slow=31
ZAK Zakamensk 66.05 334 *eP* **P** **07 30 09.4 -1.0**
ZAK pmax pmax
comp=Z,25nm,1.1s
MA2 Magadan 66.08 4 *i* P **P** **07 30 09.3 -0.9**
MA2 pmax pmax
comp=Z,17nm,1.0s
YAK Yakutsk 68.98 353 *i* P **P** **07 30 27.3 -1.2**
YAK pmax pmax
comp=Z,8.0nm,0.9s
SEY Seymchan 69.53 5 *ceP* **P** **07 30 31.0 -0.9**
SEY pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 70.40 321 *eP* **P** **07 30 38.0 +0.3**
WMQ pP pP 07 30 41.5 -1.0
WMQ pmax pmax
comp=Z,34nm,1.1s
WMQ pmax pmax
comp=Z,270nm,3.7s
VNDA Vanda 71.79 176 P **P** **07 30 46.0 +0.5**
VNDA Vanda 71.79 176 P **P** **07 30 46.0 +0.5**
comp=Z,5.6nm,0.7s,baz=339,slow=7.4,SNR=20
VNDA PKKP **PKKPdf** **07 50 24.5 +2.6**
comp=Z,0.5nm,0.5s,baz=349,slow=5.2,SNR=1.7
VNDA LR LR 08 01 18.4
comp=Z,220nm,19.2s,baz=268,slow=35
comp=Z,5.6nm,0.7s
DGZ Jazzator, Alta 73.57 326 *i* P **P** **07 30 55.4 -1.4**
DGZ pmax pmax
comp=Z,19nm,0.8s
ZSN Zaisan 73.91 323 *eP* **P** **07 30 57.9 -0.8**
comp=Z,7.1nm,0.7s,baz=323
ZSN Zaisan 73.91 323 *eP* **P** **07 30 57.8 -0.9**
ZSN pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 75.16 322 P **P** **07 31 05.4 -0.6**
MK31 IAmb IAmb 07 31 10.6
comp=Z,29nm,1.4s
MK31 Makanchi Array 75.16 322 *ceP* **P** **07 31 05.5 -0.5**
MKAR Makanchi Array 75.16 322 P **P** **07 31 05.4 -0.5**
comp=Z,12nm,0.8s,baz=112,slow=6.9,SNR=40
comp=Z,12nm,0.8s
MAKZ Makanchi 75.36 322 P **P** **07 31 06.5 -0.6**
MAKZ IAmb IAmb 07 31 11.6
comp=Z,51nm,1.4s
MAKZ Makanchi 75.36 322 P **P** **07 31 06.5 -0.6**
MAKZ pmax pmax
comp=Z,51nm,1.4s
SHLS Shalkode 75.44 318 *eP* **P** **07 31 05.4 -2.4**
comp=Z,12nm,1.2s,baz=318
SHLS Shalkode 75.44 318 *eP* **P** **07 31 05.4 -2.4**
SHLS pmax pmax
comp=Z,12nm,1.2s
UZB Uzynbulak 75.74 317 *eP* **P** **07 31 08.8 -0.7**
comp=Z,13nm,1.0s,baz=317
UZB Uzynbulak 75.74 317 *eP* **P** **07 31 08.8 -0.7**
UZB pmax pmax
comp=Z,13nm,1.0s
TARG Taragay, Kyrgy 76.03 316 P **P** **07 31 11.1 -0.4**
TARG Taragay, Kyrgy 76.03 316 P **P** **07 31 11.1 -0.4**
TARG pmax pmax
comp=Z,9.0nm,0.9s
KPKS Kokpek 76.09 318 *eP* **P** **07 31 10.5 -0.9**
comp=Z,12nm,1.4s,baz=318
KPKS Kokpek 76.09 318 *eP* **P** **07 31 10.5 -0.9**
KPKS pmax pmax
comp=Z,11nm,1.4s
BILL Bilibino 76.11 9 P **P** **07 31 11.9 +1.0**
BILL Bilibino 76.11 9 ⇑ *eP* **P** **07 31 10.1 -0.8**
BILL pmax pmax
comp=Z,13nm,1.7s
SATY Saty 76.12 317 *eP* **P** **07 31 10.9 -0.8**
comp=Z,10nm,1.2s,baz=317
SATY Saty 76.12 317 *eP* **P** **07 31 10.8 -0.8**
SATY pmax pmax
comp=Z,10.0nm,1.2s
KSH Kashi 76.54 313 P **P** **07 31 15.0 +0.9**
KSH pP sP 07 31 19.3 -1.3
KSH pmax pmax
comp=Z,9.0nm,1.0s
NIL Nilore 76.75 307 P **P** **07 31 15.5 +0.2**
NIL Nilore 76.75 307 P **P** **07 31 15.5 +0.2**
NIL pmax pmax
comp=Z,29nm,0.7s
TDK Taldyqorghan 76.87 319 *eP* **P** **07 31 14.4 -1.4**
baz=319
TDK Taldyqorghan 76.87 319 *eP* **P** **07 31 14.3 -1.4**
MDOK Medeo 77.08 317 *eP* **P** **07 31 16.1 -1.0**
baz=317
MDOK Medeo 77.08 317 *eP* **P** **07 31 16.1 -1.0**
NRN Naryn 77.18 315 P **P** **07 31 17.4 -0.6**
NRN Naryn 77.18 315 P **P** **07 31 17.4 -0.6**
NRN pmax pmax
comp=Z,5.0nm,1.0s
BOOM Boomskoye usch 77.59 316 P **P** **07 31 18.7 -1.4**
BOOM IAmb IAmb 07 31 24.4
comp=Z,11nm,0.8s
BOOM Boomskoye usch 77.59 316 P **P** **07 31 18.7 -1.4**
BOOM pmax pmax
comp=Z,11nm,0.8s
KUU Kurty 77.83 317 *eP* **P** **07 31 20.0 -1.2**
baz=317
KUU Kurty 77.83 317 *eP* **P** **07 31 19.9 -1.2**
GAMB Gambell 77.88 19 P **P** **07 31 21.2 +0.3**
baz=226
TIXI Tiksi 78.44 356 P **P** **07 31 22.4 -1.4**
TIXI Tiksi 78.44 356 *ceP* **P** **07 31 21.8 -2.0**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
AAK Ala-Archa 78.65 316 P **P** **07 31 25.2 -0.6**
AAK Ala-Archa 78.65 316 *ceP* **P** **07 31 25.4 -0.5**
AAK pmax pmax
comp=Z,9.0nm,1.3s
CHGN Chignik 78.77 29 P **P** **07 31 25.4 -0.6**
baz=240
M13K Dall Lake 78.79 24 P **P** **07 31 26.2 +0.2**
baz=235
SGDS Sogindy 78.83 316 *eP* **P** **07 31 25.5 -1.3**
baz=316
SGDS Sogindy 78.83 316 *eP* **P** **07 31 25.4 -1.3**
O14K Tigyukauivet M 79.01 26 P **P** **07 31 27.1 -0.2**
baz=237
KURK Kurchatov 79.04 324 P **P** **07 31 26.9 -0.7**
KURK IAmb IAmb 07 31 31.9
comp=Z,30nm,1.1s
KURK Kurchatov 79.04 324 P **P** **07 31 26.9 -0.7**
KURK pmax pmax
comp=Z,30nm,1.1s
KURBB Kurchatov Arra 79.06 324 P **P** **07 31 26.8 -0.9**
comp=Z,13nm,0.9s,baz=115,slow=4.6,SNR=44
comp=Z,13nm,0.9s
N14K Kuskokwak Cree 79.20 25 P **P** **07 31 28.0 -0.2**
baz=236
ARSB Arslanbob 79.29 314 P **P** **07 31 27.8 -1.6**
ARSB Arslanbob 79.29 314 P **P** **07 31 27.8 -1.6**
ARSB pmax pmax
comp=Z,3.0nm,0.8s
M14K Bethel 79.55 24 P **P** **07 31 28.9 -1.2**
M14K IAmb IAmb 07 31 34.2
comp=Z,32nm,0.8s
M14K Bethel 79.55 24 P **P** **07 31 29.7 -0.5**
baz=236
L14K Kuka Creek 79.59 24 P **P** **07 31 29.3 -1.1**
L14K Kuka Creek 79.59 24 P **P** **07 31 30.7 +0.3**
baz=235
O15K Ungalikthiuk R 79.60 26 P **P** **07 31 30.1 -0.3**
baz=238
BTLS Baital 79.77 318 *eP* **P** **07 31 30.9 -0.9**
comp=Z,11nm,1.0s,baz=318
BTLS Baital 79.77 318 *eP* **P** **07 31 30.8 -0.9**
BTLS pmax pmax
comp=Z,11nm,1.0s
R16K Pilot Point 79.80 28 P **P** **07 31 30.4 -1.1**
baz=241
N15K Kwethluk River 80.01 25 P **P** **07 31 31.7 -1.0**
baz=238
M15K Kasigluk River 80.04 25 P **P** **07 31 32.4 -0.4**
baz=237
J14K Nanvaranak Lak 80.07 22 P **P** **07 31 33.0 +0.1**
baz=234
J14K Nanvaranak Lak 80.07 22 P **P** **07 31 32.7 -0.2**
baz=234
L15K Ungalak Mounta 80.26 24 P **P** **07 31 33.2 -0.7**
baz=236
TNA Tin City 80.29 19 P **P** **07 31 34.0 0.0**
baz=230
P16K Nushagak River 80.34 27 P **P** **07 31 33.7 -0.8**
baz=240
KBL Kabul 80.36 307 P **P** **07 31 34.0 -1.4**
KBL Kabul 80.36 307 P **P** **07 31 34.0 -1.4**
KBL pmax pmax
comp=Z,7.0nm,0.7s
ANM Nome 80.50 20 P **P** **07 31 35.0 -0.3**
ANM IAmb IAmb 07 31 44.3
comp=Z,30nm,1.4s
ANM Nome 80.50 20 P **P** **07 31 34.7 -0.6**
baz=232
ANM Nome 80.50 20 P **P** **07 31 35.0 -0.3**
ANM pmax pmax
comp=Z,30nm,1.4s
O16K Kokwok River B 80.57 26 P **P** **07 31 34.7 -1.0**
baz=240
K15K Wolf Creek Mou 80.58 23 P **P** **07 31 35.3 -0.4**
K15K IAmb IAmb 07 31 45.8
comp=Z,24nm,0.9s
K15K Wolf Creek Mou 80.58 23 P **P** **07 31 35.1 -0.6**
baz=236
N16K Nishlik Lake 80.73 25 P **P** **07 31 35.9 -0.7**
baz=239
F14K Arctic Creek 80.75 19 P **P** **07 31 36.2 -0.3**
baz=231
Q16K King Salmon 80.77 27 P **P** **07 31 36.2 -0.6**
baz=241
Q17K Contact Creek 80.93 28 P **P** **07 31 36.5 -1.4**
baz=242
M16K Timber Creek 80.93 25 P **P** **07 31 37.4 -0.3**
M16K IAmb IAmb 07 31 41.9
comp=Z,33nm,0.8s
M16K Timber Creek 80.93 25 P **P** **07 31 36.8 -0.8**
baz=239
L16K Owhat River 81.08 24 P **P** **07 31 38.0 -0.4**
L16K IAmb IAmb 07 31 42.3
comp=Z,22nm,0.8s
L16K Owhat River 81.08 24 P **P** **07 31 37.8 -0.6**
baz=238
O17K Koliganek Bris 81.10 26 P **P** **07 31 37.7 -0.8**
baz=241
P17K Kvichak River 81.12 27 P **P** **07 31 37.9 -0.7**
baz=241
G15K Niukluk 81.22 20 P **P** **07 31 38.4 -0.7**
baz=234
N17K Nushagak Hills 81.43 26 P **P** **07 31 39.8 -0.5**
baz=240
SIMJ Simiganj 81.44 311 P **P** **07 31 40.3 -0.7**
SIMJ IAmb IAmb 07 31 45.5
comp=Z,19nm,0.9s
F15K North Star Dit 81.44 19 P **P** **07 31 39.7 -0.6**
baz=233
J16K Amvik River 81.48 22 P **P** **07 31 39.5 -1.0**
baz=237
KK31 Karatay Array 81.57 315 P **P** **07 31 41.1 -0.4**
KK31 Karatay Array 81.57 315 P **P** **07 31 41.1 -0.4**
KK31 pmax pmax
comp=Z,11nm,1.1s
KKAR Karatay Array 81.57 315 P **P** **07 31 41.1 -0.4**
KKAR Karatay Array 81.57 315 P **P** **07 31 40.6 -0.9**
KKAR Karatay Array 81.57 315 P **P** **07 31 41.1 -0.4**
KKAR pmax pmax
comp=Z,10.0nm,1.1s
H16K Elim 81.64 21 P **P** **07 31 40.3 -1.0**
baz=235,SNR=16
IUG Iuzhnay 81.64 314 *eP* **P** **07 31 40.9 -1.1**
comp=Z,15nm,1.2s,baz=314
IUG Iuzhnay 81.64 314 *eP* **P** **07 31 40.9 -1.1**
IUG pmax pmax
comp=Z,15nm,1.2s
OHAK Old Harbor 81.70 30 P **P** **07 31 41.1 -0.7**
baz=244
M17K Holitna River 81.76 25 P **P** **07 31 42.0 0.0**
M17K IAmb IAmb 07 31 47.1
comp=Z,27nm,0.8s
M17K Holitna River 81.76 25 P **P** **07 31 41.7 -0.4**
baz=240
I17K Unalakleet 81.78 22 P **P** **07 31 42.3 +0.3**
I17K IAmb IAmb 07 31 46.7
comp=Z,21nm,0.9s
I17K Unalakleet 81.78 22 P **P** **07 31 42.2 +0.2**
baz=237
L17K Donlin 81.78 24 P **P** **07 31 41.9 -0.2**
baz=239
O18K Koktuh Hills 81.98 27 P **P** **07 31 42.1 -1.1**
baz=242
BRLS Boroldav 82.03 315 *eP* **P** **07 31 42.5 -1.5**
baz=315
BRLS Boroldav 82.03 315 *eP* **P** **07 31 42.4 -1.5**
G16K Koyuk River 82.03 20 P **P** **07 31 43.7 +0.3**
baz=235
N18K Kilae Creek 82.07 26 P **P** **07 31 43.4 -0.3**
baz=242
K17K Iditarod 82.08 23 P **P** **07 31 43.8 +0.1**
baz=239
Q19K Cape Douglas, 82.28 28 P **P** **07 31 44.7 -0.2**
baz=244
KDAK Kodiak Island 82.29 29 P **P** **07 31 44.3 -0.6**
baz=245
BRZS Berezniki 82.30 322 *eP* **P** **07 31 43.5 -1.6**
comp=Z,13nm,1.5s,baz=322
BRZS Berezniki 82.30 322 *eP* **P** **07 31 43.5 -1.6**
BRZS pmax pmax
comp=Z,13nm,1.5s
SVW2 Sparrevohn 82.40 26 P **P** **07 31 49.0 +3.6**
L18K Granite Mounta 82.47 24 P **P** **07 31 45.8 0.0**
L18K IAmb IAmb 07 31 50.1
comp=Z,18nm,1.1s
L18K Granite Mounta 82.47 24 P **P** **07 31 46.1 +0.3**
baz=241
M18K Stony River 82.48 25 P **P** **07 31 46.0 +0.2**
baz=242
O19K Port Alsworth 82.53 27 P **P** **07 31 46.2 +0.2**
baz=243
H17K Granite Mounta 82.63 21 P **P** **07 31 46.1 -0.4**
H17K IAmb IAmb 07 31 50.8
comp=Z,19nm,0.8s
H17K Granite Mounta 82.63 21 P **P** **07 31 46.2 -0.4**
baz=238
G17K Kiwalik Mounta 82.68 21 P **P** **07 31 47.0 +0.3**
baz=237
Q20K Shuyak Island 82.73 29 P **P** **07 31 47.5 +0.3**
baz=245
N19K Bonanza Creek 82.74 26 P **P** **07 31 47.0 -0.3**
baz=243
P19K Oil Pt 82.78 27 P **P** **07 31 47.5 +0.1**
baz=244
C16K Lisburne Hills 82.80 17 P **P** **07 31 46.9 -0.4**
baz=232
F17K Baldwin Pennin 83.00 20 P **P** **07 31 48.2 -0.1**
baz=236
J18K Innoko River 83.08 23 P **P** **07 31 48.4 -0.5**
baz=241
D17K Noatak River 83.13 18 P **P** **07 31 48.6 -0.5**
baz=234,SNR=17
E17K Hotham Inlet 83.17 19 P **P** **07 31 48.9 -0.4**
baz=236,SNR=26
L19K White Mountain 83.21 25 P **P** **07 31 49.8 +0.2**
L19K White Mountain 83.21 25 P **P** **07 31 49.3 -0.3**
baz=242
O20K Slope Mountain 83.25 27 P **P** **07 31 49.3 -0.6**
baz=245
M19K Big River Lodg 83.28 25 P **P** **07 31 49.3 -0.7**
baz=243
H18K Honhosa River 83.31 21 P **P** **07 31 48.3 -1.7**
H18K Honhosa River 83.31 21 P **P** **07 31 49.5 -0.6**
baz=239
HOM Homer 83.52 28 P **P** **07 31 50.6 -0.6**
baz=246
C17K DeLong Mountai 83.56 18 P **P** **07 31 51.1 -0.2**
baz=234
QSPA South Pole Qui 83.56 180 P **P** **07 31 51.2 -0.4**
QSPA South Pole Qui 83.56 180 P **P** **07 31 51.4 -0.1**
comp=Z,43nm,1.0s,baz=338,slow=3.5,SNR=74
comp=Z,43nm,1.0s
G18K Tagagawik 83.59 21 P **P** **07 31 50.9 -0.6**
baz=239
F18K Selawik 83.62 20 P **P** **07 31 50.7 -0.8**
baz=238
GCSA Galena City Sc 83.65 22 P **P** **07 31 51.2 -0.5**
baz=240,SNR=7.1

L20K	Farewell, AK	83.75	25	P	P	07 31 51.8	-0.6	
	baz=243							
E18K	Tukpahlearik C	83.76	19	P	P	07 31 52.3	+0.1	
	baz=237							
J19K	Poorman	83.76	23	P	P	07 31 52.0	-0.4	
	baz=242,SNR=5.1							
M20K	Styx River	83.80	25	P	P	07 31 51.6	-1.2	
M20K	Styx River	83.80	25	P	P	07 31 52.2	-0.6	
	baz=244,SNR=6.9							
BRSE	Bradley Lake S	83.97	28	P	P	07 31 53.0	-0.5	
	baz=246							
K20K	Telida	84.07	24	P	P	07 31 53.9	-0.1	
	baz=243							
H19K	Roundabout Mou	84.19	21	P	P	07 31 54.0	-0.5	
H19K				IAmb	IAmb	07 31 58.6		
	comp=Z,21nm,0.9s							
H19K	Roundabout Mou	84.19	21	P	P	07 31 54.4	-0.1	
	baz=241							
CAPN	Captain Cook N	84.20	27	P	P	07 31 53.7	-0.9	
	baz=246							
C18K	Utukok River	84.25	18	P	P	07 31 54.8	-0.1	
	baz=236							
G19K	Purcell Mounta	84.27	21	P	P	07 31 54.8	-0.1	
	baz=240							
F19K	Shaleruckik Mo	84.38	20	P	P	07 31 55.4	-0.1	
	baz=239							
NRIK	Noril'sk	84.39	343	P	P	07 31 54.7	-0.8	
NRIK	Noril'sk	84.39	343	*ceP*	P	07 31 54.8	-0.7	
NRIK				pmax	pmax			
	comp=Z,64nm,1.0s							
NRIK	Noril'sk	84.39	343	P	P	07 31 55.4	-0.1	
	comp=Z,48nm,1.0s,baz=121,slow=4.8,SNR=29							
	comp=Z,48nm,1.0s							
J20K	Nowinta River	84.42	23	P	P	07 31 55.8	+0.1	
	baz=243							
B18K	Kokolik River	84.48	17	P	P	07 31 55.9	0.0	
	baz=235							
SKT	Skwentna	84.53	26	P	P	07 31 56.3	0.0	
	baz=246							
BVAR	Borovoye Array	84.63	325	P	P	07 31 56.3	-0.7	
	comp=Z,59nm,0.7s,baz=112,slow=6.5,SNR=122							
	comp=Z,59nm,0.7s							
PPLA	Purkeypile	84.64	25	P	P	07 31 56.6	-0.4	
	baz=245							
SUA	Susitna One	84.66	26	P	P	07 31 55.7	-1.4	
	baz=246							
BRVK	Borovoye	84.70	325	P	P	07 31 56.7	-0.7	
BRVK	Borovoye	84.70	325	*ceP*	P	07 31 56.2	-1.2	
BRVK				pmax	pmax			
	comp=Z,74nm,1.0s							
SEW	Seward	84.71	28	P	P	07 31 56.1	-1.2	
	baz=248							
O22K	Cooper Landing	84.73	27	P	P	07 31 56.7	-0.6	
	baz=247							
H20K	Anotleneega Mo	84.75	22	P	P	07 31 57.0	-0.4	
	baz=242,SNR=7.3							
E19K	Redstone River	84.88	20	P	P	07 31 57.5	-0.5	
	baz=240							
CAST	Castle Rocks	84.91	24	P	P	07 31 57.0	-1.2	
CAST				IAmb	IAmb	07 32 01.3		
	comp=Z,16nm,0.9s							
CAST	Castle Rocks	84.91	24	P	P	07 31 57.3	-0.9	
	baz=245,SNR=6.4							
RC01	Rabbit Creek A	84.96	27	P	P	07 31 57.3	-1.2	
RC01	Rabbit Creek A	84.96	27	P	P	07 31 57.7	-0.8	
	baz=247							
C19K	Lookout Ridge	84.99	18	P	P	07 31 58.6	0.0	
	baz=237							
CHUM	Lake Minchumin	85.01	24	P	P	07 31 58.3	-0.4	
	baz=245,SNR=20							
M22K	Willow	85.05	26	P	P	07 31 57.6	-1.3	
M22K	Willow	85.05	26	P	P	07 31 58.0	-0.9	
	baz=247							
D19K	Kuna River	85.12	19	P	P	07 31 57.7	-1.5	
D19K				IAmb	IAmb	07 32 03.5		
	comp=Z,28nm,1.1s							
D19K	Kuna River	85.12	19	P	P	07 31 58.9	-0.4	
	baz=239							
F20K	Avaraart Lake	85.19	20	P	P	07 31 59.0	-0.5	
F20K				IAmb	IAmb	07 32 03.8		
	comp=Z,12nm,0.8s							
F20K	Avaraart Lake	85.19	20	P	P	07 31 59.1	-0.5	
	baz=241							
CUT	Chulitna	85.25	25	P	P	07 31 59.6	-0.3	
	baz=247							
IMAR	Indian Mountai	85.39	22	P	P	07 31 59.8	-0.8	
PMR	Palmer	85.42	26	P	P	07 31 59.5	-1.3	
PMR				IAmb	IAmb	07 32 03.6		
	comp=Z,20nm,0.8s							
PMR	Palmer	85.42	26	P	P	07 32 02.6	+1.8	
PMR	Palmer	85.42	26	P	P	07 31 59.6	-1.1	
	baz=248,SNR=5.5							
PMR	Palmer	85.42	26	P	P	07 31 59.5	-1.3	
PMR				pmax	pmax			
	comp=Z,20nm,0.8s							
H21K	Melozitna Rive	85.59	22	P	P	07 32 00.6	-1.0	
	baz=244							
E20K	Nigu River	85.62	19	P	P	07 32 01.5	-0.3	
	baz=241							
BPAW	Bear Paw Mtn.	85.63	24	P	P	07 32 01.4	-0.5	
	baz=246							
TRF	Thorofare Moun	85.65	25	P	P	07 32 01.7	-0.5	
	baz=246							
KNK	Knik Glacier	85.66	27	P	P	07 32 01.8	-0.2	
	baz=248							
D20K	Etivluk River	85.71	19	P	P	07 32 02.2	+0.1	
	baz=240							
SML	Sawmill	85.86	26	P	P	07 32 02.6	-0.5	
SML	Sawmill	85.86	26	P	P	07 32 02.9	-0.1	
	baz=248							
Q23K	Middleton Isla	85.93	29	P	P	07 32 02.7	-0.6	
	baz=250							
F21K	Alatna River	86.05	20	P	P	07 32 03.5	-0.3	
	baz=243							
GLI	Glacier Island	86.08	27	P	P	07 32 03.4	-0.7	
	baz=250							
MLY	Manley	86.11	23	P	P	07 32 03.3	-1.0	
MLY				IAmb	IAmb	07 32 08.1		
	comp=Z,18nm,0.8s							
MLY	Manley	86.11	23	P	P	07 32 03.5	-0.8	
	baz=246,SNR=8.1							
M23K	Glacier View	86.12	26	P	P	07 32 03.6	-0.7	
	baz=249							
WAT1	Susitna Watana	86.14	25	P	P	07 32 04.2	-0.2	
	baz=248							
H22K	Ishtalitna Cre	86.23	22	P	P	07 32 04.6	-0.1	
	baz=245							
SCM	Sheep Creek Mo	86.31	27	P	P	07 32 05.0	-0.3	
	baz=249							
MCK	McKinley	86.32	24	P	P	07 32 04.7	-0.5	
	baz=248,SNR=6.7							
WAT6	Susitna Watana	86.40	26	P	P	07 32 05.6	-0.3	
	baz=249							
E21K	Killik River	86.44	19	P	P	07 32 05.7	-0.1	
	baz=243							
C21K	Knifeblade Rid	86.51	19	P	P	07 32 06.2	+0.2	
	baz=242							
EYAK	Cordova Ski Ar	86.59	28	P	P	07 32 06.6	0.0	
	baz=251							
NEA2	Nenana	86.60	24	P	P	07 32 06.3	-0.3	
	baz=248							
G22K	Bettles	86.61	21	P	P	07 32 06.5	-0.1	
	baz=245							
I23K	Minto, Yukon-K	86.69	23	P	P	07 32 06.9	-0.1	
	baz=247							
DHY	Denali Highway	86.73	25	P	P	07 32 07.2	-0.3	
	baz=249,SNR=7.5							
KLU	Klutina	86.82	27	P	P	07 32 07.5	-0.3	
	baz=250							
M24K	Tolsona, Glenn	86.92	26	P	P	07 32 07.9	-0.4	
	baz=250							
A21K	Barrow	87.01	16	P	P	07 32 08.8	+0.4	
	baz=240							
KAIM	Kayak Island	87.02	29	P	P	07 32 08.6	-0.1	
	baz=252							
E22K	Anaktuvuk Pass	87.02	20	P	P	07 32 08.0	-0.7	
E22K				IAmb	IAmb	07 32 13.7		
	comp=Z,20nm,0.7s							
E22K	Anaktuvuk Pass	87.02	20	P	P	07 32 08.7	+0.1	
	baz=245							
D22K	Ayikyak River	87.05	19	P	P	07 32 08.4	-0.3	
D22K	Ayikyak River	87.05	19	P	P	07 32 08.9	+0.1	
	baz=244							
G23K	Bananza Creek	87.06	22	P	P	07 32 08.2	-0.6	
G23K				IAmb	IAmb	07 32 14.2		
	comp=Z,12nm,0.7s							
G23K	Bananza Creek	87.06	22	P	P	07 32 09.2	+0.3	
	baz=246							
CCB	Clear Creek Bu	87.12	24	P	P	07 32 07.1	-2.0	
CCB				IAmb	IAmb	07 32 15.7		
	comp=Z,21nm,0.8s							
COLA	College	87.19	24	P	P	07 32 07.8	-1.5	
COLA				IAmb	IAmb	07 32 16.1		
	comp=Z,18nm,0.7s							
COLA	College	87.19	24	P	P	07 32 11.5	+2.1	
COLA	College	87.19	24	P	P	07 32 09.2	-0.2	
	baz=249							
COLA	College	87.19	24	P	P	07 32 07.9	-1.5	
COLA				pmax	pmax			
	comp=Z,18nm,0.7s							
COLD	Coldfoot	87.20	21	P	P	07 32 09.4	-0.1	
	baz=246,SNR=7.2							
BMRM	Bremner River	87.26	28	P	P	07 32 09.8	-0.1	
	baz=252							
HDA	Harding Lake	87.38	24	P	P	07 32 09.9	-0.5	
HDA				IAmb	IAmb	07 32 15.0		
	comp=Z,11nm,0.7s							
HDA	Harding Lake	87.38	24	P	P	07 32 10.5	0.0	
	baz=250							
POKR	Poker Plat Res	87.44	23	P	P	07 32 10.5	-0.2	
	baz=249							
N25K	Chitina, Valde	87.46	27	P	P	07 32 10.8	-0.1	
	baz=252							
HARP	HAARP	87.46	26	P	P	07 32 10.8	0.0	
	baz=251							
PAX	Paxson	87.51	26	P	P	07 32 10.6	-0.6	
	baz=251							
H24K	Noodor Dome	87.53	23	P	P	07 32 09.7	-1.5	
H24K				IAmb	IAmb	07 32 14.8		
	comp=Z,12nm,0.9s							
H24K	Noodor Dome	87.53	23	P	P	07 32 10.9	-0.2	
	baz=249							
IL31		87.53	24	P	P	07 32 08.5	-2.6	
IL31				IAmb	IAmb	07 32 13.0		
	comp=Z,18nm,0.9s							
ILAR	Eielson Array	87.53	24	P	P	07 32 08.2	-3.0	
ILAR	Eielson Array	87.53	24	P	P	07 32 09.1	-2.1	
	comp=Z,15nm,0.8s,baz=259,slow=4.8,SNR=46							
ILAR				PKKP	PKKPdf	07 49 58.4	+1.2	
	comp=Z,0.4nm,0.8s,baz=338,slow=1.0,SNR=4.2							
	comp=Z,15nm,0.8s							
K24K	Donnelly Dome	87.66	25	P	P	07 32 12.0	+0.2	
	baz=251							
E23K	Chandalar	87.74	20	P	P	07 32 12.3	+0.1	
	baz=247							
D23K	Nanushuk River	87.75	19	P	P	07 32 12.1	0.0	
	baz=246							
CRQE	Cirque	87.90	28	P	P	07 32 12.5	-0.6	
	baz=253							
G24K	Hadweenzic Riv	88.00	22	P	P	07 32 13.3	-0.1	
	baz=249							
RIDG	Independent Ri	88.03	25	P	P	07 32 13.1	-0.5	
	baz=251							
J25K	Salcha River,	88.09	24	P	P	07 32 12.1	-1.8	
J25K	Salcha River,	88.09	24	P	P	07 32 13.4	-0.5	
	baz=251							
MCARA	McCarthy VSAT	88.11	28	P	P	07 32 13.7	-0.3	
	baz=253							
F24K	Squaw Lake	88.14	21	P	P	07 32 14.0	-0.1	
	baz=248							
D24K	Happy Valley	88.43	19	P	P	07 32 15.6	+0.2	
	baz=248							
L26K	Log Cabin Wild	88.45	26	P	P	07 32 15.6	0.0	
	baz=253							
SCRK	Sand Creek	88.47	25	P	P	07 32 15.2	-0.5	
	baz=252							
G25K	Bearman Lake	88.53	22	P	P	07 32 15.2	-0.6	
	baz=250							
C24K	Franklin Bluff	88.69	19	P	P	07 32 16.6	+0.2	
	baz=248							
CTG	Chitna Glacier	88.78	28	P	P	07 32 16.6	-0.7	
	baz=255							
J26L	Joseph Creek	88.80	25	P	P	07 32 17.1	-0.1	
	baz=252							
M27K	Edge Creek, AK	88.91	27	P	P	07 32 17.8	-0.1	
	baz=254							
F25K	Christian Rive	88.98	21	P	P	07 32 18.1	+0.1	
	baz=251							
PINM	Pinnacle	89.08	29	P	P	07 32 18.5	-0.1	
	baz=256							
L27K	Beaver Creek,	89.12	26	P	P	07 32 18.2	-0.5	
L27K				IAmb	IAmb	07 32 22.8		
	comp=Z,15nm,1.0s							
L27K	Beaver Creek,	89.12	26	P	P	07 32 18.8	0.0	
	baz=254							
BCAR	Beaver Creek A	89.14	26	P	P	07 32 17.6	-1.3	
E25K	Arctic Village	89.18	21	P	P	07 32 19.2	+0.2	
	baz=251							
I26K	Coal Creek Min	89.21	24	P	P	07 32 19.3	+0.2	
	baz=253							
K27K	Chicken	89.29	25	P	P	07 32 19.9	+0.4	
	baz=254							
D25K	Kavik River	89.31	20	P	P	07 32 19.8	+0.2	
	baz=250							
BMAR	Burnt Mountain	89.31	22	P	P	07 32 19.6	+0.1	
BVCY	Beaver Creek	89.38	27	P	P	07 32 20.0	0.0	
	baz=255							
PNL	Peninsula	89.39	30	P	P	07 32 20.0	-0.1	
	baz=256							
YUK3	Moose Creek	89.40	28	P	P	07 32 20.0	-0.3	
	baz=255							
G26K	Porcupine Rive	89.45	22	P	P	07 32 20.1	0.0	
	baz=252							
F26K	Sheenjek River	89.55	21	P	P	07 32 20.7	0.0	
	baz=252							
GEYT	Alibeck	89.68	308	P	P	07 32 21.7	-0.2	
	comp=Z,1.1nm,0.4s,baz=130,slow=2.3,SNR=6.8							
	comp=Z,1.1nm,0.4s							
EGAK	Eagle	89.87	25	P	P	07 32 22.3	+0.1	
	baz=255							
I27K	Kandik River	89.91	24	P	P	07 32 22.4	0.0	
	baz=254							
O29M	Mount Kennedy	89.94	29	P	P	07 32 22.5	-0.2	
	baz=257							
H27K	Steamboat Moun	90.11	23	P	P	07 32 23.6	+0.3	
	baz=254							
ABKAR	Akbulak array	90.13	319	P	P	07 32 21.8	-1.9	
YUK4	Talbot Arm	90.14	28	P	P	07 32 23.6	-0.2	
	baz=257							
YUK6	Outpost Mounta	90.18	29	P	P	07 32 24.1	+0.1	
	baz=257							
P29M	Windy Craggy	90.20	30	P	P	07 32 23.8	-0.1	
	baz=258							
DAWY	Dawson	90.44	25	P	P	07 32 23.5	-1.4	
DAWY				IAmb	IAmb	07 32 29.0		
	comp=Z,15nm,1.0s							
DAWY	Dawson	90.44	25	P	P	07 32 24.9	+0.1	
	baz=256,SNR=9.9							
M29M	Somme Creek	90.47	27	P	P	07 32 25.4	+0.2	
	baz=257							
I28M	Miner Creek	90.54	24	P	P	07 32 25.8	+0.4	
	baz=256							
HYT	Haines Junctio	90.57	29	P	P	07 32 25.9	+0.2	
	baz=258							
S31K	Pelican	90.63	32	P	P	07 32 26.1	+0.3	
	baz=259							
P30M	Million Dollar	90.69	30	P	P	07 32 26.4	+0.2	
	baz=258							
L29M	L29M	90.77	27	P	P	07 32 26.3	-0.2	
	baz=257							
PLBC	Pleasant Camp	90.85	30	P	P	07 32 26.3	-0.5	
	baz=259							
J29N	Klondike Camp	91.02	25	P	P	07 32 27.2	-0.4	
	baz=257							
F28M	Old Crow	91.10	22	P	P	07 32 27.9	+0.1	
	baz=256							
K29M	Barlow Dome	91.19	26	P	P	07 32 28.2	-0.3	
	baz=258							
O30N	Mendenhall	91.24	29	P	P	07 32 28.4	-0.2	
	baz=259							
M30M	Minto, Yukon	91.26	27	P	P	07 32 28.6	-0.1	
	baz=259							
H29M	Whitestone	91.35	23	P	P	07 32 29.1	0.0	
	baz=257							
SKAG	Skagway	91.37	30	P	P	07 32 28.7	-0.5	
	baz=260							
S32K	Killisnoo	91.42	32	P	P	07 32 28.9	-0.5	
	baz=260							
R32K	Eaglecrest	91.58	32	P	P	07 32 29.7	-0.6	
	baz=260							
WHY	Whitehorse	91.80	29	P	P	07 32 30.7	-0.7	
	baz=260							
J30M	Hart River	91.85	25	P	P	07 32 31.1	-0.4	
	baz=259,SNR=5.7							
MAYO	Mayo, Yukon	91.85	26	P	P	07 32 31.2	-0.3	
	baz=259							
CRAG	Craig	91.90	35	P	P	07 32 31.4	-0.4	
	baz=262							
D28M	Stokes Point	91.91	20	P	P	07 32 31.2	-0.3	
	baz=257							
I30M	Mount Dempster	91.95	25	P	P	07 32 31.1	-0.9	
	baz=259,SNR=5.7							
U33K	Whale Pass	92.00	34	P	P	07 32 32.3	+0.1	
	baz=262							
EPYK	Eagle Plains	92.03	23	P	P	07 32 31.8	-0.5	
	baz=259							
ARU	Arti	92.08	326	*ceP*	P	07 32 30.6	-2.0	
ARU				pmax	pmax			
	comp=Z,21nm,1.0s							
P32M	Atlin	92.20	30	P	P	07 32 33.2	0.0	
	baz=261							
M31M	Drury Creek, Y	92.29	28	P	P	07 32 33.8	+0.3	
	baz=261							
G30M	tAoh Zraii Nji	92.35	23	P	P	07 32 34.1	+0.4	
	baz=259							
WRAK	Wrangell Islan	92.47	34	P	P	07 32 34.7	+0.3	
	baz=262							
F30M	Barrier River	92.63	22	P	P	07 32 35.3	+0.4	
	baz=260							
ELIB	Princess Elisa	92.68	196	*d*P	P	07 32 35.6	+0.3	
	comp=Z,7.0nm,1.0s							
V35K	Ketchikan	92.73	35	P	P	07 32 35.8	+0.2	
	baz=263							
P33M	Teslin, Yukon	92.74	30	P	P	07 32 35.8	+0.1	
	baz=262							
N32M	Quiet Lake	92.75	29	P	P	07 32 35.7	+0.1	
	baz=262							
FARO	Faro, Yukon	92.78	28	P	P	07 32 35.9	+0.1	
	baz=262							
H31M	Peel River	92.89	24	P	P	07 32 36.3	+0.1	
	baz=261							
G31M	Satah River	93.09	23	P	P	07 32 37.2	+0.2	
	baz=261							
S34M	Telegraph Cree	93.31	32	P	P	07 32 38.2	-0.1	
	baz=263							
F31M	Tsiigehtchic	93.38	23	P	P	07 32 38.1	-0.2	
	baz=262							
INK	Inuvik	93.58	22	P	P	07 32 39.4	+0.2	
	baz=262							
T35M	Bob Quinn	93.68	33	P	P	07 32 39.9	-0.2	
	baz=264							
WTLY	Watson Lake, Y	94.73	30	P	P	07 32 44.8	0.0	
	baz=266							
TGTN	Hyland Airport	95.09	29	P	P	07 32 45.7	-0.7	
	baz=266							
A36M	Sachs Harbour	96.67	18	P	P	07 32 53.3	0.0	
	baz=270							
C36M	Paulatuk	97.08	21	P	P	07 32 55.1	-0.1	
	baz=271							
KOTAN	Kotaneelee Air	97.10	30	P	P	07 32 55.5	0.0	
	baz=270							
KIRV	Kirov	97.17	328	*i* P	P	07 32 55.0	-0.8	
BELG	Belogornoye	98.17	322	*i* P	P	07 32 56.2	-4.2	
BELG				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BELG	Belogornoye	98.17	322	LR	LR	08 20 19.2		
	comp=Z,84nm,20.0s,baz=302,slow=37							
PKM	Mcpherson Peak	99.72	56	P	Pdif	07 33 07.3	-0.8	
	baz=269							
SBC	Santa Barbara	99.79	56	P	Pdif	07 33 06.8	-1.4	
	baz=269							
NVAR	Mina Array Bea	100.95	52	P	Pdif	07 33 13.0	-0.6	
	comp=Z,0.2nm,0.4s,baz=246,slow=28,SNR=1.8							
YKA	Yellowknife Ar	101.49	28	P	Pdif	07 33 14.0	-1.1	
YKA	Yellowknife Ar	101.49	28	P	Pdif	07 33 14.0	-1.1	
	comp=Z,0.8nm,0.9s,baz=278,slow=4.7,SNR=9.0							
YKA				PKKPbc	PKKPbc	07 49 22.0	-3.7	
	comp=Z,0.3nm,0.8s,baz=101,slow=2.6,SNR=5.3							
SHOC	Shoshone, Teco	102.61	55	P	Pdif	07 33 20.0	-0.8	
	baz=271							
BOZ	Bozeman (W)	105.47	45	P	PKiKP	07 37 45.1	-1.9	
	baz=277							
RLMT	Red Lodge	107.19	45	P	PKiKP	07 37 49.4	-0.9	
	baz=278							
BW06	Boulder Array	107.30	47	P	PKiKP	07 37 49.4	-1.2	
	baz=277							
TUC	Tucson	107.30	58	P	PKiKP	07 37 49.8	-0.9	
	baz=273							
SDCO	Great Sand Dun	111.07	52	P	PKiKP	07 37 57.0	-1.0	
	baz=278							
MNTX	Cornudas Mount	111.93	59	P	PKiKP	07 37 58.2	-1.2	
	baz=276							
T25A	Trinidad	112.02	53	P	PKiKP	07 37 58.0	-1.7	
	baz=279							
TXAR	Lajitas Array	113.65	61	PKKPab	PKKPab	07 48 53.9	+0.9	
	comp=Z,1.8nm,0.8s,baz=115,slow=6.4,SNR=20							
GERES	GERESS Array B	119.79	324	PKP	PKPdf	07 38 14.3	+0.3	
	comp=Z,0.6nm,0.5s,baz=101,slow=4.1,SNR=3.6							
MIAR	Mount Ida	121.16	53	P	PKPdf	07 38 15.5	-1.4	
	baz=285							
CCM	Cathedral Cave	121.95	49	P	PKPdf	07 38 17.1	-1.3	
	baz=289							
PLCA	Paso Flores	124.00	150	PKP	PKPdf	07 38 22.5	+0.1	
	comp=Z,1.8nm,1.0s,baz=231,slow=8.2,SNR=3.4							
EKA	Eskdalemuir Ar	124.14	337	PKP	PKiKP	07 38 22.9	+0.6	
	comp=Z,1.5nm,0.7s,baz=25,slow=3.5,SNR=3.8							
P49A	Miami Univ. Ec	126.14	45	P	PKPdf	07 38 25.3	-1.1	
	baz=295							
SCHQ	Schefferville	126.19	21	PKP	PKiKP	07 38 26.7	+0.2	
	comp=Z,2.7nm,0.9s,baz=278,slow=4.7,SNR=4.3							
LRAL	Lakeview Retre	126.84	53	P	PKPdf	07 38 26.7	-1.2	
	baz=289							
ACSO	Alum Creek Sta	127.04	43	P	PKPdf	07 38 27.0	-1.1	
	baz=297							
P52A	Corning	127.89	44	P	PKPdf	07 38 28.6	-1.1	
	baz=297							
M53A	WI Miller and	128.01	41	P	PKPdf	07 38 29.3	-0.6	
	baz=300							
TZTN	Tazewell	128.22	48	P	PKPdf	07 38 29.8	-0.7	
	baz=294							
O53A	New Philadelph	128.23	43	P	PKPdf	07 38 29.6	-0.8	
	baz=299							
BLA	Blacksburg	130.19	46	P	PKPdf	07 38 33.3	-1.0	
	baz=297							
SSPA	Standing Stone	130.23	40	P	PKPdf	07 38 33.6	-0.6	
	baz=302							
NHSC	New Hope	132.14	50	P	PKPdf	07 38 36.9	-1.1	
	baz=294							
L61B	Northampton	132.37	36	P	PKPdf	07 38 37.6	-0.5	
	baz=309							
DWPF	Disney Wildern	132.96	57	P	PKPdf	07 38 39.0	-0.6	
	baz=289							
HRV	Adam Dziewonsk	132.97	35	P	PKPdf	07 38 38.7	-0.6	
	baz=310							
TORD	Torodi Ar. Bea	141.08	283	PKhKP	PKPpre	07 38 48.3		
	comp=Z,4.0nm,1.1s,baz=65,slow=4.9,SNR=11							
TORD				PKP	PKiKP	07 38 57.0	-0.7	
	comp=Z,1.7nm,0.6s,baz=76,slow=3.3,SNR=6.4							
CZSB	Cruzeiro do Su	141.95	111	PKPdf	PKPdf	07 38 55.2	-1.4	
LPAZ	La Paz	142.02	127	PKPdf	PKPdf	07 38 57.3	-0.1	
LPAZ	La Paz	142.02	127	PKIKP	PKPdf	07 38 57.3	-0.1	
CPUP	Villa Florida	142.07	150	PKhKP	PKPpre	07 38 48.8		
	comp=Z,0.9nm,0.7s,baz=215,slow=9.8,SNR=3.6							
CPUP				PKP	PKPdf	07 38 57.8	+1.3	
	comp=Z,3.6nm,1.0s,baz=201,slow=1.0,SNR=5.7							
ROSC	El Rosal	143.08	90		PKPbc	07 38 56.3	+0.4	
ROSC	El Rosal	143.08	90	PKP	PKPbc	07 38 56.7	+0.7	
	comp=Z,6.1nm,0.6s,baz=216,slow=4.9,SNR=6.9							
TBTG	Tabatinga, AM	145.73	107	PKPdf	PKPdf	07 39 01.6	-1.6	
SDV	Santo Domingo	146.82	84		PKPdf	07 39 04.5	-0.9	
ETMB	Extrema	146

az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**284**	I	I	07 41 50.0	
	baz=100,slow=341,SNR=10.0						
ZALV	**Zalesovo Beam**	**1.77**	**284**	Pg	Pn	07 30 35.1	-0.1
	1.8nm,0.3s,baz=106,slow=12,SNR=32						
ZALV				Lg	Lg	07 31 00.1	
	3.0nm,0.3s,baz=103,slow=24,SNR=17						
KURBB	**Kurchatov Arra**	**6.39**	**246**	Sn	Sn	07 32 50.3	-1.9
	baz=62,slow=26						
KURBB				Lg	Lg	07 33 27.6	
	baz=62,slow=32,SNR=5.6						
MKAR	**Makanchi Array**	**7.62**	**209**	Pn	Pn	07 31 56.9	+1.3
	0.2nm,0.3s,baz=27,slow=13,SNR=7.5						
MKAR				Lg	Lg	07 34 04.8	
	0.1nm,0.3s,baz=19,slow=31,SNR=2.5						
	2.2nm,0.9s						

*NOU **27** 07:44:36.7, 40°.13S×176°.75E, h87km, MLv3.4/7, North Island, New Zealand*
*WEL **27** 07:44:39.8±0.4,40°.3S±3°×17°.6E±°, h23km±4km, M3.3/16, ML3.6/16, MLv3.3/16, Error ellipse: s-maj=0.0km s-min=0.0km az=90.2, confirmed*
ISC 27 07:44:40.0±0.9, 39°.96S±0°.02×176°.31E±0°.02, h33km±5km, n113, σ1§00/122, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNHZ	**Pukenui**	**0.09**	**298**	P	**Pb**	**07 44 45.2**	**-0.5**
PNHZ				S	**Sb**	**07 44 49.5**	**-0.2**
WPHZ	**Waipukurau**	**0.15**	**136**	P	**Pb**	**07 44 46.0**	**-0.1**
WPHZ				S	**Sb**	**07 44 51.0**	**+0.7**
TSZ	**Takapari Road**	**0.28**	**249**	P	**Pb**	**07 44 47.3**	**-0.3**
TSZ				S	**Sn**	**07 44 52.9**	**-0.2**
KRHZ	**Kereru**	**0.32**	**9**	P	**Pb**	**07 44 47.5**	**-0.5**
KRHZ				S	**Sn**	**07 44 53.4**	**-0.5**
DVHZ	**Dannevirke**	**0.36**	**197**	P	**Pb**	**07 44 48.5**	**-0.1**
DVHZ				S	**Sn**	**07 44 55.8**	**+0.8**
PRHZ	**Porangahau**	**0.40**	**141**	P	**Pb**	**07 44 49.6**	**+0.5**
PRHZ				S	**Sn**	**07 44 57.9**	**+2.0**
PXZ	**Pawanui**	**0.43**	**100**	P	**Pb**	**07 44 49.8**	**+0.3**
PXZ				S	**Sn**	**07 44 59.0**	**+2.3**
KAHZ	**Kahuranaki**	**0.47**	**70**	P	**Pn**	**07 44 50.5**	**0.0**
KAHZ				S	**Sn**	**07 44 59.5**	**+1.8**
BHHZ	**Black Hill Sta**	**0.50**	**338**	P	**Pb**	**07 44 50.3**	**-0.4**
ANWZ	**Angora Road**	**0.52**	**166**	P	**Pb**	**07 44 51.4**	**+0.5**
ANWZ				S	**Sn**	**07 45 00.9**	**+2.0**
KWHZ	**Kaweka Forest**	**0.54**	**10**	P	**Pb**	**07 44 50.9**	**-0.3**
MCHZ	**McNeill Hill**	**0.59**	**31**	P	**Pn**	**07 44 52.5**	**+0.3**
POWZ	**Post Office Ro**	**0.60**	**223**	P	**Pn**	**07 44 52.6**	**+0.3**
PRWZ	**Pori Road**	**0.65**	**203**	P	**Pn**	**07 44 53.7**	**+0.7**
MOWZ	**Moawhango**	**0.69**	**322**	P	**Pn**	**07 44 53.2**	**-0.1**
BFZ	**Birch Farm**	**0.73**	**184**	P	**Pb**	**07 44 54.2**	**+0.1**
BFZ	**Birch Farm**	**0.73**	**184**	P	**Pb**	**07 44 54.1**	**-0.1**
OHWZ	**Ohakea**	**0.80**	**252**	P	**Pn**	**07 44 56.4**	**+1.4**
BKZ	**Black Stump Fm**	**0.80**	**10**	P	**Pb**	**07 44 55.1**	**-0.5**
BKZ	**Black Stump Fm**	**0.80**	**10**	P	**Pb**	**07 44 55.1**	**-0.5**
WNVZ	**Wahianoa**	**0.83**	**319**	P	**Pn**	**07 44 56.3**	**+0.6**
TUVZ	**Tukino**	**0.85**	**324**	P	**Pn**	**07 44 56.7**	**+0.8**
MTVZ	**Mangateitei**	**0.86**	**311**	P	**Pn**	**07 44 56.9**	**+1.0**
WHVZ	**Whangaehu Hut**	**0.87**	**320**	P	**Pn**	**07 44 57.1**	**+0.9**
ARHZ	**Aropaoanui**	**0.87**	**38**	P	**Pb**	**07 44 56.3**	**-0.4**
TIWZ	**Tintock**	**0.88**	**201**	P	**Pb**	**07 44 56.7**	**-0.2**
TRVZ	**Turoa**	**0.88**	**318**	P	**Pn**	**07 44 57.2**	**+0.8**
MAVZ	**Matarangi**	**0.90**	**320**	P	**Pn**	**07 44 57.8**	**+1.2**
MRZ	**Mangatainoka R**	**0.90**	**218**	P	**Pb**	**07 44 56.5**	**-0.7**
FWVZ	**Far West T-bar**	**0.91**	**320**	P	**Pn**	**07 44 57.6**	**+0.9**
SNVZ	**South Ngauruho**	**0.93**	**326**	P	**Pn**	**07 44 57.8**	**+0.9**
OTVZ	**Oturere**	**0.93**	**328**	P	**Pn**	**07 44 57.9**	**+0.9**
ETVZ	**East Tongariro**	**0.94**	**330**	P	**Pn**	**07 44 58.0**	**+0.9**
NMHZ	**Naumai**	**0.94**	**24**	P	**Pn**	**07 44 57.6**	**+0.6**
NGZ	**Ngauruhoe**	**0.95**	**325**	P	**Pn**	**07 44 58.3**	**+1.0**
CPWZ	**Castlepoint**	**0.96**	**185**	P	**Pn**	**07 44 58.7**	**+1.5**
COVZ	**Chateau Observ**	**0.96**	**322**	P	**Pn**	**07 44 58.3**	**+1.0**
TMVZ	**Te Maari**	**0.96**	**331**	P	**Pn**	**07 44 58.3**	**+0.9**
NNVZ	**North Ngauruho**	**0.98**	**327**	P	**Pn**	**07 44 58.8**	**+1.1**
NTVZ	**North Tongarir**	**0.98**	**330**	P	**Pn**	**07 44 58.7**	**+1.0**
PKVZ	**Pokaka**	**1.00**	**312**	P	**Pn**	**07 44 59.0**	**+1.2**
KRVZ	**Karewarewa**	**1.00**	**329**	P	**Pn**	**07 44 59.1**	**+1.1**
WTVZ	**West Tongariro**	**1.01**	**326**	P	**Pn**	**07 44 59.1**	**+1.1**
WAZ	**Wanganui**	**1.04**	**281**	P	**Pb**	**07 45 00.3**	**+0.8**
RITZ	**Rihia Road**	**1.04**	**340**	P	**Pb**	**07 44 59.6**	**+0.1**
HATZ	**Hinemaiaia**	**1.08**	**351**	P	**Pb**	**07 44 59.8**	**-0.3**
KATZ	**Kakaramea**	**1.09**	**334**	P	**Pb**	**07 45 00.4**	**0.0**
TWVZ	**Taurewa**	**1.11**	**322**	P	**Pb**	**07 45 00.4**	**-0.3**
HOWZ	**Holdsworth Sta**	**1.12**	**212**	P	**Pn**	**07 44 59.2**	**-0.2**
MRHZ	**Matea Rd**	**1.12**	**4**	P	**Pb**	**07 45 00.2**	**-0.8**
RATZ	**Rangitukua**	**1.13**	**339**	P	**Pn**	**07 45 01.9**	**+0.2**
MTHZ	**Maungataniwha**	**1.18**	**21**	P	**Pn**	**07 45 00.3**	**0.0**
TMWZ	**Te Maipa**	**1.19**	**195**	P	**Pn**	**07 45 00.2**	**-0.2**
RAHZ	**Arahi**	**1.20**	**30**	P	**Pn**	**07 45 00.6**	**0.0**
OGWZ	**Otaki Gorge**	**1.22**	**225**	P	**Pn**	**07 45 00.9**	**+0.1**
WATZ	**Wairara**	**1.32**	**340**	P	**Pb**	**07 45 03.8**	**-0.5**
MTW	**Mount Morrison**	**1.35**	**207**	P	**Pn**	**07 45 01.9**	**-0.7**
ALRZ	**Allen Road**	**1.39**	**1**	P	**Pn**	**07 45 03.3**	**+0.1**
KIW	**Kapiti Island**	**1.40**	**229**	P	**Pn**	**07 45 03.5**	**+0.2**
KNZ	**Kokohu**	**1.41**	**49**	P	**Pn**	**07 45 02.6**	**-0.8**
SNGZ	**Shannon Statio**	**1.42**	**35**	P	**Pn**	**07 45 03.5**	**-0.1**
RTZ	**Ruatahuna**	**1.44**	**22**	P	**Pn**	**07 45 04.1**	**+0.3**
PRRZ	**Plateau Road**	**1.46**	**3**	P	**Pn**	**07 45 04.3**	**+0.2**
VRZ	**Vera Road**	**1.46**	**304**	P	**Pb**	**07 45 05.5**	**-1.0**
MHGZ	**Mahia Peninsul**	**1.48**	**58**	P	**Pn**	**07 45 03.7**	**-0.6**
CAW	**Cannon Point**	**1.49**	**219**	P	**Pn**	**07 45 04.0**	**-0.5**
KUTZ	**Kaahu Road**	**1.51**	**345**	P	**Pn**	**07 45 05.8**	**+0.9**
TRWZ	**Traveller**	**1.52**	**196**	P	**Pn**	**07 45 04.2**	**-0.7**
LREZ	**Lake Rotokare**	**1.55**	**288**	P	**Pn**	**07 45 05.8**	**+0.5**
HRRZ	**Handcock Road**	**1.56**	**359**	P	**Pn**	**07 45 04.1**	**-1.4**
PAWZ	**Paruwai Farm**	**1.57**	**205**	P	**Pn**	**07 45 04.7**	**-1.0**
PRGZ	**Paritu Road**	**1.60**	**50**	P	**Pn**	**07 45 05.6**	**-0.4**
RIGZ	**Rimuhau**	**1.68**	**43**	P	**Pn**	**07 45 06.4**	**-0.8**
RAGZ	**Rawiri**	**1.69**	**31**	P	**Pn**	**07 45 06.8**	**-0.6**
TARZ	**Mount Tarawera**	**1.73**	**5**	P	**Pn**	**07 45 08.1**	**+0.2**
TLZ	**Tolley Road**	**1.73**	**340**	P	**Pn**	**07 45 08.4**	**+0.5**
MHEZ	**Mangahewa**	**1.77**	**299**	P	**Pb**	**07 45 13.5**	**+1.7**
PREZ	**Palmer Road**	**1.77**	**290**	P	**Pb**	**07 45 11.3**	**-0.5**
PLWZ	**Palliser**	**1.80**	**206**	P	**Pn**	**07 45 07.4**	**-1.4**
DREZ	**Durham Road**	**1.80**	**295**	P	**Pb**	**07 45 11.3**	**-1.0**
URZ	**Urewera**	**1.81**	**21**	P	**Pn**	**07 45 08.0**	**-0.9**
URZ	**Urewera**	**1.81**	**21**	P	**Pn**	**07 45 08.0**	**-0.9**
BHW	**Baring Head**	**1.81**	**216**	P	**Pn**	**07 45 07.7**	**-1.2**
SNZO	**South Karori**	**1.82**	**221**	P	**Pn**	**07 45 08.0**	**-1.0**
HIZ	**Hauiti**	**1.83**	**322**	P	**Pn**	**07 45 10.3**	**+1.1**
HIZ	**Hauiti**	**1.83**	**322**	P	**Pn**	**07 45 10.0**	**+0.8**
NEZ	**North Egmont**	**1.84**	**291**	P	**Pb**	**07 45 12.1**	**-1.0**
MWZ	**Matawai**	**1.88**	**31**	P	**Pn**	**07 45 08.9**	**-1.0**
KHEZ	**Kahui Hut**	**1.89**	**290**	P	**Pb**	**07 45 13.4**	**-0.5**
KHEZ	**Kahui Hut**	**1.89**	**290**	P	**Pb**	**07 45 12.9**	**-1.0**
TKGZ	**Te Karaka**	**1.93**	**39**	P	**Pn**	**07 45 09.6**	**-1.0**
PKE	**Pukeiti**	**1.95**	**292**	P	**Pb**	**07 45 14.4**	**-0.5**
NMEZ	**Namu Road**	**1.95**	**285**	P	**Pb**	**07 45 13.7**	**-1.2**
TCW	**Tory Channel**	**1.99**	**230**	P	**Pn**	**07 45 10.6**	**-0.8**
NBEZ	**Newall Road No**	**2.00**	**289**	P	**Pb**	**07 45 14.3**	**-1.5**
DUWZ	**D'Urville Isla**	**2.01**	**244**	P	**Pn**	**07 45 11.5**	**-0.2**
RUGZ	**Raukumara Rang**	**2.26**	**29**	P	**Pn**	**07 45 14.1**	**-1.1**
TUWZ	**Tuamarina**	**2.32**	**230**	P	**Pn**	**07 45 14.7**	**-1.3**
HAZ	**Te Kaha**	**2.48**	**28**	P	**Pn**	**07 45 17.3**	**-0.9**
PKGZ	**Pakihiroa**	**2.48**	**34**	P	**Pn**	**07 45 17.5**	**-0.8**
BSWZ	**Blackbirch Sta**	**2.55**	**226**	P	**Pn**	**07 45 17.6**	**-1.4**
NNZ	**Nelson**	**2.56**	**240**	P	**Pn**	**07 45 19.7**	**+0.5**
WMGZ	**Waiomatatini S**	**2.69**	**38**	P	**Pn**	**07 45 19.3**	**-1.7**
TKNZ	**Takaka Hill**	**2.77**	**246**	P	**Pn**	**07 45 22.2**	**0.0**
MRNZ	**Matariki Terra**	**3.06**	**241**	P	**Pn**	**07 45 25.9**	**-0.2**
THZ	**Tophouse**	**3.15**	**234**	P	**Pn**	**07 45 26.0**	**-1.4**
KHZ	**Kahutara**	**3.23**	**219**	P	**Pn**	**07 45 26.1**	**-2.2**
KHZ	**Kahutara**	**3.23**	**219**	P	**Pn**	**07 45 25.7**	**-2.6**
DSZ	**Denniston Nort**	**3.85**	**241**	P	**Pn**	**07 45 36.5**	**-0.6**
GVZ	**Greta Valley S**	**3.88**	**218**	P	**Pn**	**07 45 40.0**	**+2.6**
AKCZ	**Akaroa Harbour**	**4.66**	**212**	P	**Pn**	**07 45 46.0**	**-2.1**
WACZ	**Wakanui South**	**5.19**	**218**	P	**Pn**	**07 45 52.7**	**-2.7**
CTZ	**Chatham Island**	**6.49**	**128**	P	**Pn**	**07 46 12.5**	**-0.8**

*NEIC **27** 08:00:58.7±1.1,56°.0N±0°.1×150°.0W±0°.1, h20km±10km, ML3.6/40, MLv3.3(AEIC), Error ellipse: s-maj=15.8km s-min=9.7km az=162.0*
*AEIC **27** 08:01:01.4±1.3,55°.9N±0°.1×150°.0W±0°.1, h10km±8km, Error ellipse: s-maj=17.0km s-min=10.4km az=172.0*

ISC 27 08:00:57.1±2.4,56°.0N±0°.1×149°.97W±0°.06, h10km, n82, σ0§93/85, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.19**	**305**		**Pn**	**08 01 33.6**	**+0.2**
OHAK					**Sn**	**08 01 59.1**	**-1.5**
OHAK	**Old Harbor**	**2.19**	**305**	P	**Pn**	**08 01 33.6**	**+0.2**
	baz=125						
OHAK				S	**Sn**	**08 01 59.1**	**-1.5**
	baz=125						
KDAK	**Kodiak Island**	**2.27**	**322**		**Pn**	**08 01 35.4**	**+0.9**
KDAK	**Kodiak Island**	**2.27**	**322**		**Sn**	**08 02 01.7**	**-0.9**
KDAK	**Kodiak Island**	**2.27**	**322**	S	**Sn**	**08 02 01.7**	**-0.9**
	baz=142						
SYI	**Shuyak Island**	**2.90**	**334**		**Pn**	**08 01 44.2**	**+0.9**
SYI					**Sn**	**08 02 18.4**	**+0.2**
Q20K	**Shuyak Island**	**2.91**	**334**	P	**Pn**	**08 01 44.2**	**+0.9**
	baz=154						
Q20K				S	**Sn**	**08 02 18.4**	**+0.2**
	baz=154						
Q19K	**Cape Douglas,**	**3.52**	**327**		**Pn**	**08 01 53.3**	**+1.5**
Q19K	**Cape Douglas,**	**3.52**	**327**	IAML		08 03 15.9	
	comp=N,158nm,2.2s						
Q19K	**Cape Douglas,**	**3.52**	**327**	P	**Pn**	**08 01 53.3**	**+1.5**
	baz=146						
CNPM	**China Poot**	**3.58**	**350**		**Pn**	**08 01 53.1**	**+0.5**
CNPM					**Sn**	**08 02 35.0**	**+0.1**
CNPM	**China Poot**	**3.58**	**350**	IAML		08 03 33.8	
	comp=N,72nm,2.4s						
BRSE	**Bradley Lake S**	**3.75**	**354**		**Pn**	**08 01 55.4**	**+0.5**
BRSE					**Sn**	**08 02 37.7**	**-1.4**
BRSE	**Bradley Lake S**	**3.75**	**354**	P	**Pn**	**08 01 55.4**	**+0.5**
	baz=174						
BRSE				S	**Sn**	**08 02 37.7**	**-1.4**
	baz=174						
HOM	**Homer**	**3.75**	**347**	Pn	**Pn**	**08 01 56.1**	**+1.2**
BRLK	**Bradley Lake**	**3.78**	**353**		**Pn**	**08 01 55.7**	**+0.3**
CNTC	**Contact Creek**	**3.92**	**307**		**Pn**	**08 01 58.7**	**+1.3**
Q17K	**Contact Creek**	**3.92**	**307**	P	**Pn**	**08 01 58.7**	**+1.3**
	baz=124						
P19K	**Oil Pt**	**4.03**	**336**	Pn	**Pn**	**08 01 59.0**	**+0.1**
P19K				IAML		08 02 32.8	
	comp=N,108nm,3.0s						
P19K				IAML		08 03 37.7	
	comp=E,116nm,3.1s						
P23K	**Montague Islan**	**4.21**	**18**		**Pn**	**08 02 02.1**	**+0.8**
P23K	**Montague Islan**	**4.21**	**18**	P	**Pn**	**08 02 02.1**	**+0.8**
	baz=200						
ILSW	**Iliamna Southw**	**4.31**	**338**	Pn	**Pn**	**08 02 05.2**	**+2.4**
ILSW				IAML		08 03 02.4	
	comp=N,53nm,3.9s						
ILSW				IAML		08 04 36.9	
	comp=E,58nm,2.2s						
P18K	**Big Mountain,**	**4.40**	**322**		**Pn**	**08 02 04.6**	**+0.8**
P18K	**Big Mountain,**	**4.40**	**322**	IAML		08 02 45.1	
	comp=N,43nm,3.8s						
P18K	**Big Mountain,**	**4.40**	**322**		**Sn**	**08 02 54.0**	**-1.1**
P18K	**Big Mountain,**	**4.40**	**322**	P	**Pn**	**08 02 04.6**	**+0.8**
	baz=139						
P18K				S	**Sn**	**08 02 54.0**	**-1.1**
	baz=139						
O22K	**Cooper Landing**	**4.47**	**2**	Pn	**Pn**	**08 02 04.8**	**0.0**
O22K				IAML		08 04 12.9	
	comp=N,72nm,2.1s						
SLKM	**Skilak Lake**	**4.50**	**358**		**Pn**	**08 02 05.8**	**+0.5**
P17K	**Kvichak River**	**4.71**	**315**		**Pn**	**08 02 08.9**	**+0.8**
P17K	**Kvichak River**	**4.71**	**315**	P	**Pn**	**08 02 08.9**	**+0.8**
	baz=131						
CHGN	**Chignik**	**4.73**	**277**	Pn	**Pn**	**08 02 08.2**	**-0.1**
CHGN				IAML		08 02 51.1	
	comp=N,46nm,2.5s						
CHGN				IAML		08 05 06.5	
	comp=E,50nm,2.9s						
O18K	**Koktuh Hills**	**4.75**	**326**		**Pn**	**08 02 09.6**	**+1.0**
O18K	**Koktuh Hills**	**4.75**	**326**	IAML		08 04 13.5	
	comp=E,38nm,4.0s						
O18K				IAML		08 04 21.7	
	comp=N,31nm,3.5s						
O18K	**Koktuh Hills**	**4.75**	**326**	P	**Pn**	**08 02 09.6**	**+1.0**
	baz=143						
HIN	**Hinchinbrook I**	**4.75**	**21**		**Pn**	**08 02 09.3**	**+0.6**
O19K	**Port Alsworth**	**4.77**	**333**	Pn	**Pn**	**08 02 09.2**	**+0.2**
O19K				IAML		08 03 08.8	
	comp=E,31nm,0.5s						
O19K				IAML		08 03 55.1	
	comp=N,39nm,3.1s						
EYAK	**Cordova Ski Ar**	**5.05**	**24**		**Pn**	**08 02 13.3**	**+0.5**
EYAK	**Cordova Ski Ar**	**5.05**	**24**	P	**Pn**	**08 02 13.3**	**+0.5**
	baz=208						
RC01	**Rabbit Creek A**	**5.08**	**1**	Pn	**Pn**	**08 02 12.7**	**-0.5**
RC01				IAML		08 03 42.7	
	comp=N,28nm,4.0s						
RC01				IAML		08 04 02.4	
	comp=E,31nm,4.8s						
GLI	**Glacier Island**	**5.10**	**16**	Pn	**Pn**	**08 02 14.7**	**+1.3**
GLI				IAML		08 04 01.5	
	comp=E,47nm,2.4s						
GLI				IAML		08 05 17.6	
	comp=N,53nm,4.4s						
RAGM	**Ragged Mountai**	**5.19**	**30**	Pn	**Pn**	**08 02 14.4**	**-0.3**
HMT	**Hamilton**	**5.27**	**33**	Pn	**Pn**	**08 02 16.0**	**+0.1**
O17K	**Koliganek Bris**	**5.34**	**318**		**Pn**	**08 02 17.7**	**+0.9**
O17K	**Koliganek Bris**	**5.34**	**318**	P	**Pn**	**08 02 17.7**	**+0.9**
	baz=133						
N19K	**Bonanza Creek**	**5.35**	**336**		**Pn**	**08 02 17.6**	**+0.6**
N19K	**Bonanza Creek**	**5.35**	**336**	IAML		08 03 27.0	
	comp=N,28nm,3.5s						
N19K				IAML		08 04 30.8	
	comp=E,24nm,4.8s						
N19K	**Bonanza Creek**	**5.35**	**336**	P	**Pn**	**08 02 17.7**	**+0.6**
	baz=153						
BERG	**Berg Lake**	**5.49**	**35**	Pn	**Pn**	**08 02 19.1**	**+0.2**
N18K	**Kilae Creek**	**5.61**	**329**		**Pn**	**08 02 21.2**	**+0.7**
N18K	**Kilae Creek**	**5.61**	**329**	P	**Pn**	**08 02 21.2**	**+0.7**
	baz=145						
O16K	**Kokwok River B**	**5.62**	**313**	Pn	**Pn**	**08 02 21.8**	**+1.2**
KHIT	**Khitrov Hills**	**5.68**	**36**		**Pn**	**08 02 22.1**	**+0.6**
WAX	**Waxell Ridge**	**5.81**	**37**		**Pn**	**08 02 24.2**	**+0.9**
SML	**Sawmill**	**5.86**	**8**	Pn	**Pn**	**08 02 24.8**	**+0.8**
SVW2	**Sparrevohn**	**5.87**	**332**	Pn	**Pn**	**08 02 24.5**	**+0.5**
KLU	**Klutina**	**5.87**	**19**		**Pn**	**08 02 25.2**	**+1.1**
KLU	**Klutina**	**5.87**	**19**	P	**Pn**	**08 02 25.2**	**+1.1**
	baz=202						
N17K	**Nushagak Hills**	**5.90**	**323**	Pn	**Pn**	**08 02 24.7**	**+0.2**
TGL	**Tana Glacier**	**6.05**	**35**		**Pn**	**08 02 27.2**	**+0.6**
ISLE	**Juniper Island**	**6.10**	**38**	Pn	**Pn**	**08 02 27.4**	**+0.1**
VRDI	**Verde Repeater**	**6.23**	**30**	Pn	**Pn**	**08 02 28.4**	**-0.7**
N25K	**Chitina, Valde**	**6.25**	**24**	Pn	**Pn**	**08 02 29.8**	**+0.5**
M18K	**Stony River**	**6.27**	**333**		**Pn**	**08 02 29.9**	**+0.4**
M18K	**Stony River**	**6.27**	**333**	P	**Pn**	**08 02 29.9**	**+0.4**
	baz=149						
GLB	**Gilahina Butte**	**6.31**	**28**	Pn	**Pn**	**08 02 28.9**	**-1.2**
PCA	**Pinnacle**	**6.57**	**48**		**Pn**	**08 02 34.5**	**+0.7**
PINM	**Pinnacle**	**6.58**	**48**	P	**Pn**	**08 02 34.5**	**+0.7**
	baz=235						
M17K	**Haltina River**	**6.64**	**327**	Pn	**Pn**	**08 02 35.7**	**+1.1**
BARN	**Barnard Glacie**	**6.66**	**37**		**Pn**	**08 02 35.8**	**+0.7**
L19K	**White Mountain**	**6.67**	**340**	Pn	**Pn**	**08 02 35.3**	**+0.4**
PNL	**Peninsula**	**6.72**	**53**		**Pn**	**08 02 36.4**	**+0.6**
PNL	**Peninsula**	**6.72**	**53**	P	**Pn**	**08 02 36.4**	**+0.6**
	baz=241						
BCPM	**Bancas Point**	**6.76**	**50**		**Pn**	**08 02 37.0**	**+0.8**
N15K	**Kwethluk River**	**6.78**	**312**	Pn	**Pn**	**08 02 37.9**	**+1.4**
M16K	**Timber Creek**	**6.87**	**321**	Pn	**Pn**	**08 02 39.5**	**+1.8**
O29M	**Mount Kennedy**	**7.39**	**50**		**Pn**	**08 02 46.1**	**+1.0**
O29M	**Mount Kennedy**	**7.39**	**50**	P	**Pn**	**08 02 46.1**	**+1.0**
	baz=239						
P29M	**Windy Craggy**	**7.46**	**56**		**Pn**	**08 02 46.3**	**+0.4**
P29M	**Windy Craggy**	**7.46**	**56**	P	**Pn**	**08 02 46.3**	**+0.4**
	baz=246						
L16K	**Owhat River**	**7.53**	**323**	Pn	**Pn**	**08 02 47.7**	**+0.9**
L14K	**Kuka Creek**	**8.49**	**314**	Pn	**Pn**	**08 03 01.1**	**+1.2**
K15K	**Wolf Creek Mou**	**8.64**	**321**	Pn	**Pn**	**08 03 04.2**	**+2.2**

IDC 27 08:05:31.3±2.7,54°.10N×86°.56E, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=22.7km s-min=14.3km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**262**	I	I	08 12 30.0	
	baz=83,slow=342,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.04**	**262**	Pg	Pg	08 05 50.0	-1.2
	0.7nm,0.3s,baz=76,slow=14,SNR=3.1						
ZALV				Lg	Lg	08 06 06.0	
	1.8nm,0.3s,baz=78,slow=28,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.03**	**238**	Pn	Pn	08 07 02.5	+0.9
	0.1nm,0.3s,baz=54,slow=13,SNR=3.4						
KURBB				Lg	Lg	08 08 42.2	
	baz=51,slow=31						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.80**	**202**	Pn	Pn	08 07 27.2	+1.1
	0.2nm,0.3s,baz=26,slow=14,SNR=12						
	0.2nm,0.3s						

*NEIC **27** 08:07:02.3±2.1, 19°.7S±0°.1×169°.05E±0°.09, h55km±8km, mb4.7/31, Error ellipse: s-maj=14.6km s-min=12.5km az=169.0*
*NOU **27** 08:07:02.4, 19°.61S×169°.03E, h55km, mb4.8/51, Vanuatu Islands*
*IDC **27** 08:07:03.4±0.8, 19°.57S×168°.77E, h64km±6km, mb4.1/12, mbtmp4.4/14, MS3.6/6, Error ellipse: s-maj=14.9km s-min=10.4km az=108.0*
ISC 27 08:07:01.3±0.5, 19°.52S±0°.06×168°.99E±0°.07, h48km±3km, h48km:pP-P, n153, σ1§34/158, mb4.7/34, MS3.4/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**2.07**	**233**	Pn	**Pn**	**08 07 32.6**	**-1.0**
LIFNC	**LIFOU**	**2.07**	**233**	P	**Pn**	**08 07 32.8**	**-0.8**
MARNC	**Mare, Loyalty**	**2.15**	**205**		**Pn**	**08 07 33.4**	**-1.3**
MARNC	**Mare, Loyalty**	**2.15**	**205**	P	**Pn**	**08 07 33.7**	**-1.0**
YATNC	**Mamie plateau,**	**3.20**	**218**	P	**Pn**	**08 07 47.5**	**-1.7**
PINNC	**Pines Island,**	**3.40**	**205**		**Pn**	**08 07 51.3**	**-0.6**
PINNC	**Pines Island,**	**3.40**	**205**	P	**Pn**	**08 07 52.3**	**+0.4**
DZM	**Mont Dzumac**	**3.48**	**223**	P	**Pn**	**08 07 52.8**	**-0.3**
DZM	**Mont Dzumac**	**3.48**	**223**	P	**Pn**	**08 07 52.4**	**-0.7**
	227nm,0.5s,baz=69,slow=9.6,SNR=455						
DZM				S	**Sn**	**08 08 31.2**	**-2.0**
	342nm,0.4s,baz=293,slow=24,SNR=13						
OUENC	**Ouen Island, N**	**3.52**	**215**		**Pn**	**08 07 53.0**	**-0.4**
OUENC	**Ouen Island, N**	**3.52**	**215**	P	**Pn**	**08 07 53.7**	**+0.2**
ONTNC	**Ouen Toro**	**3.65**	**220**	Pn	**Pn**	**08 07 54.9**	**-0.4**
ONTNC	**Ouen Toro**	**3.65**	**220**	P	**Pn**	**08 07 55.6**	**+0.3**
KOUNC	**Koumac, New Ca**	**4.54**	**256**	Pn	**Pn**	**08 08 08.0**	**+0.5**
KOUNC	**Koumac, New Ca**	**4.54**	**256**	P	**Pn**	**08 08 09.6**	**+2.0**
NFK	**Norfolk Island**	**9.53**	**186**	P	**Pn**	**08 09 17.1**	**+1.2**
HNR	**Honiara**	**13.31**	**318**	LR	LR	08 15 07.7	
	comp=Z,2μm,19.0s,baz=160,slow=37						
OUZ	**Omahuta**	**16.16**	**166**	P	**Pn**	**08 10 46.5**	**+1.4**
EIDS	**Eidsvold**	**17.54**	**247**	P	**P**	**08 11 05.1**	**+2.1**
EIDS	**Eidsvold**	**17.54**	**247**	P	**P**	**08 11 05.6**	**+2.5**
ARMA	**Armidale**	**19.09**	**232**		**Pn**	**08 11 23.0**	**+1.6**
ARMA				IAmb	IAmb	08 11 25.7	
	comp=Z,37nm,1.0s						
ARMA	**Armidale**	**19.09**	**232**	P	**Pn**	**08 11 22.8**	**+1.4**
HAZ	**Te Kaha**	**19.72**	**159**	P	**P**	**08 11 28.2**	**+1.4**
RUGZ	**Raukumara Rang**	**19.87**	**159**	P	**P**	**08 11 28.7**	**+0.1**

FAKI	**Fak Fak**	**39.50 290**	P	**P**	**08 14 26.7**	**-0.9**
	comp=Z,20nm,0.8s					
FITZ	**Fitzroy Crossi**	**40.98 265**	P	**P**	**08 14 39.7**	**-0.1**
KMBL	**Kambalda**	**43.85 245**	P	**P**	**08 15 01.8**	**-1.2**
PSA00	**Pilbara Seismi**	**45.92 259**	P	**P**	**08 15 19.1**	**-0.5**
PSA00	**Pilbara Seismi**	**45.92 259**	P	**P**	**08 15 20.0**	**+0.4**
MBWA	**Marble Bar**	**46.07 259**	P	**P**	**08 15 20.5**	**-0.3**
MBWA			IAmb	IAmb	08 15 21.2	
	comp=Z,21nm,0.9s					
MBWA	**Marble Bar**	**46.07 259**	P	**P**	**08 15 20.7**	**-0.1**
MEEK	**Meekatharra**	**46.65 251**	P	**P**	**08 15 24.9**	**-0.4**
EDFI	**Ende, Flores**	**46.96 276**	P	**P**	**08 15 28.0**	**0.0**
	comp=Z,8.4nm,0.9s					
KLBR	**Kellerberrin**	**47.38 245**	P	**P**	**08 15 29.6**	**-1.3**
NWAO	**Narrogin (SRO)**	**47.88 243**	P	**P**	**08 15 33.7**	**-1.1**
NWAO	**Narrogin (SRO)**	**47.88 243**	P	**P**	**08 15 34.0**	**-0.8**
BLDU	**Ballidu**	**48.26 246**	P	**P**	**08 15 36.4**	**-1.3**
TOLI2	**Tolitoli**	**51.54 288**	P	**P**	**08 16 02.0**	**-0.8**
TOLI2			IAmb	IAmb	08 16 02.9	
	comp=Z,12nm,0.8s					
TOLI2	**Tolitoli**	**51.54 288**	P	**P**	**08 16 03.5**	**+0.7**
MPSI	**Mapaga**	**52.00 286**	P	**P**	**08 16 05.9**	**-0.3**
VNDA	**Vanda**	**58.14 182**	P	**P**	**08 16 49.6**	**-0.1**
VNDA			IAmb	IAmb	08 17 12.7	
	comp=Z,7.0nm,1.4s					
VNDA	**Vanda**	**58.14 182**	P	**P**	**08 16 50.1**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=357,slow=6.2,SNR=8.7					
	comp=Z,1.4nm,0.8s					
SBA	**Scott Base**	**58.38 181**	P	**P**	**08 16 52.3**	**+1.0**
NJ2	**Nanjing**	**70.25 316**	*e*P	**P**	**08 18 12.3**	**+2.7**
NJ2			pP	**sP**	**08 18 26.5**	**-1.9**
NJ2			sP	**PcP**	**08 18 32.5**	**+1.4**
NJ2			pmax	pmax		
	comp=Z,5.0nm,0.6s					
NJ2			pmax	pmax		
	comp=Z,250nm,5.2s					
QSPA	**South Pole Qui**	**70.53 180**	P	**P**	**08 18 10.5**	**-0.5**
QSPA			IAmb	IAmb	08 18 15.3	
	comp=Z,5.8nm,1.0s					
QSPA	**South Pole Qui**	**70.53 180**	P	**P**	**08 18 10.5**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=66,slow=2.3,SNR=15					
QSPA			pP	**sP**	**08 18 29.1**	**-0.5**
	comp=Z,6.1nm,1.0s,baz=316,slow=5.2,SNR=4.9					
	comp=Z,3.4nm,0.7s					
USRK	**Ussuriysk Ar.**	**71.88 333**	P	**P**	**08 18 19.9**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=142,slow=7.3,SNR=2.7					
	comp=Z,1.9nm,0.8s					
PEA0B	**Petropavlovsk-**	**72.98 353**	P	**P**	**08 18 27.5**	**+1.9**
PEA0B			IAmb	IAmb	08 19 00.8	
	comp=Z,30nm,1.3s					
PETK	**Petropavlovsk-**	**72.98 353**	P	**P**	**08 18 27.1**	**+1.5**
PETK	**Petropavlovsk-**	**72.98 353**	P	**P**	**08 18 27.6**	**+2.1**
	comp=Z,5.5nm,0.8s,baz=144,slow=8.6,SNR=6.2					
	comp=Z,5.5nm,0.8s					
MDJ	**Mudanjiang**	**73.26 332**	P	**P**	**08 18 30.5**	**+3.1**
MDJ			pmax	pmax		
	comp=Z,12nm,0.8s					
MDJ			pmax	pmax		
	comp=Z,210nm,3.8s					
CN2	**Changchun**	**74.58 329**	P	P	08 18 39.8	+4.7
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
XAN	**Xi'an**	**78.13 313**	P	**P**	**08 18 55.5**	**-0.1**
XAN			pmax	pmax		
	comp=Z,7.0nm,0.9s					
CMAR	**Chiang Mai Arr**	**78.41 294**	P	**P**	**08 18 57.3**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=126,slow=4.6,SNR=6.0					
	comp=Z,1.0nm,0.3s					
PZH	**PanZhiHua**	**79.66 303**	P	**P**	**08 19 06.0**	**+1.8**
PZH			pmax	pmax		
	comp=Z,10.0nm,0.5s					
PZH			pmax	pmax		
	comp=Z,110nm,5.3s					
HHC	**Hu-ho-hao-te**	**80.28 320**	*e*P	**P**	**08 19 09.0**	**+1.8**
HHC			pmax	pmax		
	comp=Z,17nm,0.8s					
HHC			pmax	pmax		
	comp=Z,120nm,4.7s					
BELA	**Belgrano 2**	**81.84 175**	P	**P**	**08 19 13.1**	**-1.8**
BELA			IAmb	IAmb	08 19 15.8	
	comp=Z,5.6nm,0.7s					
J16K	**Anvik River**	**85.91 13**	P	**P**	**08 19 36.2**	**+0.6**
J16K			IAmb	IAmb	08 19 37.9	
	comp=Z,8.0nm,0.7s					
SONM	**Songino Array**	**87.31 323**	P	**P**	**08 19 42.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=143,slow=4.1,SNR=5.5					
SONM			pP	**sP**	**08 20 01.4**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=116,slow=3.4,SNR=2.5					
	comp=Z,1.0nm,0.7s					
RMX	**La Rumorosa**	**88.34 55**	P	**P**	**08 19 46.8**	**-1.6**
SNAA	**Sanae**	**88.87 183**	P	**P**	**08 19 49.0**	**-1.1**
SNAA			IAmb	IAmb	08 19 52.7	
	comp=Z,5.1nm,0.8s					
SNAA	**Sanae**	**88.87 183**	P	**P**	**08 19 49.0**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=213,slow=13,SNR=2.9					
	comp=Z,3.3nm,0.7s					
NVAR	**Mina Array Bea**	**89.16 49**	P	**P**	**08 19 52.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=226,slow=9.8,SNR=4.2					
	comp=Z,0.4nm,0.5s					
J05D	**Fort Rock, OR**	**89.36 43**	P	**P**	**08 19 53.0**	**+0.2**
J05D			IAmb	IAmb	08 20 33.5	
	comp=Z,9.4nm,1.3s					
ILAR	**Eielson Array**	**90.57 17**	P	**P**	**08 19 54.9**	**-2.9**
	comp=Z,1.2nm,0.7s,baz=240,slow=5.3,SNR=15					
ILAR			pP	**sP**	**08 20 15.8**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=244,slow=5.5,SNR=2.4					
TXAR	**Lajitas Array**	**97.10 62**	P	**P**	**08 20 30.4**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=226,slow=6.0,SNR=3.5					
	comp=Z,0.3nm,0.8s					
YKA	**Yellowknife Ar**	**101.02 27**	P	**Pdif**	**08 20 46.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=253,slow=4.8,SNR=7.9					
MKAR	**Makanchi Array**	**101.78 316**	P	**Pdif**	**08 20 49.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=32,slow=6.5,SNR=3.6					
ARCES	**ARCESS Array B**	**125.28 345**	PKP	**PKPdf**	**08 25 53.8**	**-2.2**
	comp=Z,1.8nm,0.8s,baz=64,slow=2.1,SNR=7.8					
FINES	**FINESS Array B**	**130.76 338**	SKPbc	**SKPbc**	**08 29 23.6**	**-3.1**
	comp=Z,2.4nm,1.0s,baz=66,slow=1.7,SNR=4.1					
EKA	**Eskdalemuir Ar**	**143.75 352**	PKP	**PKPdf**	**08 26 29.7**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=352,slow=3.1,SNR=4.2					
RONA	**Rosalia, Austr**	**144.20 328**	*e*PKP	**PKPdf**	**08 26 30.6**	**-1.2**
	comp=Z,12nm,1.7s					
GERES	**GERESS Array B**	**144.63 332**	PKP	**PKPab**	**08 26 30.6**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=38,slow=5.0,SNR=5.9					
GERES			pPKP	**pPKPdf**	**08 26 49.5**	**+2.4**
	comp=Z,1.5nm,0.7s,baz=74,slow=4.3,SNR=3.4					
ARSA	**Arzberg**	**144.89 328**	*i* PKP	**PKPdf**	**08 26 32.4**	**-0.7**
	comp=Z,2.2nm,0.5s					
MOA	**Molln**	**145.09 330**	*e*PKP	**PKPbc**	**08 26 31.4**	**-1.5**
	comp=Z,8.8nm,0.9s					
SOKA	**Soboth**	**145.53 328**	*e*PKP	**PKPdf**	**08 26 33.9**	**-0.4**
	comp=Z,6.7nm,1.2s					
KBA	**Koelnbreinsper**	**146.07 330**	*e*PKP	**PKPbc**	**08 26 35.5**	**-0.8**
	comp=Z,7.1nm,1.1s					
LESA	**Schwarzleotal**	**146.14 331**	*e*PKP	**PKPbc**	**08 26 36.1**	**-0.1**
	comp=Z,7.5nm,1.0s					
ABTA	**Abfaltersbach**	**146.71 330**	*e*PKP	**PKPdf**	**08 26 35.7**	**-0.6**
	comp=Z,5.5nm,0.9s					
WTTA	**Wattenberg**	**146.73 331**	*e*PKP	**PKPbc**	**08 26 37.4**	**-0.8**
	comp=Z,6.5nm,1.0s					
SQTA	**Sankt Quirin**	**146.96 332**	*e*PKP	**PKPbc**	**08 26 38.5**	**-0.2**
	comp=Z,5.0nm,0.7s					
FETA	**Feichten**	**147.32 332**	*e*PKP	**PKPdf**	**08 26 35.3**	**-2.1**
	comp=Z,7.7nm,1.0s					
DAVA	**Damuels**	**147.48 333**	*e*PKP	**PKPbc**	**08 26 38.6**	**-1.6**
	comp=Z,12nm,1.1s					
TORD	**Torodi Ar. Bea**	**166.27 244**	PKPab	**PKPab**	**08 28 01.1**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=86,slow=1.8,SNR=3.3					

IDC 27 08:17:07.3±3.3, 53.63N×88.26E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=25.9km s-min=17.0km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.07 280**		I	I	08 29 52.1	
	baz=97,slow=342,SNR=8.3						
ZALV	**Zalesovo Beam**	**2.07 280**		Pg	Pb	08 17 45.2	-0.4
	0.7nm,0.3s,baz=99,slow=12,SNR=4.6						
ZALV				Lg	Lg	08 18 13.3	
	1.7nm,0.3s,baz=94,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.71 247**		Pn	Pn	08 18 47.0	+0.1
	0.1nm,0.3s,baz=61,slow=14,SNR=4.3						
KURBB				Sn	Sn	08 20 03.5	-0.5
	baz=64,slow=25,SNR=2.0						
KURBB				Lg	Lg	08 20 39.5	
	baz=58,slow=34,SNR=5.7						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.84 212**		Pn	Pn	08 19 03.9	+1.4
	0.1nm,0.3s,baz=29,slow=14,SNR=3.3						
MKAR				Sn	Sn	08 20 31.8	-0.2
	baz=28,slow=23,SNR=2.7						
MKAR				Lg	Lg	08 21 14.6	
	baz=24,slow=27						
	0.2nm,0.5s						

IDC 27 08:20:32.7±3.5, 54.08N×87.48E, h0km, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=31.0km s-min=18.9km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.58 266**		I	I	08 30 46.7	
	baz=86,slow=338,SNR=7.2						
ZALV	**Zalesovo Beam**	**1.58 266**		Pg	Pn	08 21 00.3	-1.6
	1.1nm,0.3s,baz=81,slow=15,SNR=12						
ZALV				Lg	Lg	08 21 22.9	
	2.3nm,0.3s,baz=83,slow=25,SNR=12						
KURBB	**Kurchatov Arra**	**6.48 241**		Pn	Pn	08 22 10.5	+1.2
	baz=55,slow=14,SNR=4.1						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.01 206**		Pn	Pn	08 22 31.3	+1.0
	baz=30,slow=14,SNR=1.1						
	0.1nm,0.3s						

IDC 27 08:23:43.6±1.8, 10.98N×126.20E, h0km, mb3.7/6, mbtmp3.7/6, MS3.0/2, Error ellipse: s-maj=173.2km s-min=21.0km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**18.42 80**		LR	LR	08 33 03.2	
	comp=Z,71nm,21.1s,baz=246,slow=30						
JHJ	**Hachijo jima 2**	**25.32 27**		LR	LR	08 40 33.6	
	comp=Z,24nm,18.1s,baz=78,slow=40						
WRA	**Warramunga Arr**	**31.75 165**		P	P	08 30 09.1	-0.6
	0.2nm,0.4s,baz=345,slow=9.3,SNR=1.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**35.25 168**		P	P	08 30 40.5	+0.4
	0.3nm,0.4s,baz=339,slow=7.6,SNR=11						
	0.3nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**39.79 74**		T	T	09 14 02.6	
	baz=265,slow=75,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**39.80 74**		T	T	09 14 05.8	
	baz=265,slow=75,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**39.81 74**		T	T	09 14 03.6	
	baz=265,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**40.10 72**		T	T	09 14 29.3	
	baz=265,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**40.11 72**		T	T	09 14 29.0	
	baz=265,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**40.12 72**		T	T	09 14 31.1	
	baz=265,slow=75,SNR=15						
MKAR	**Makanchi Array**	**51.43 322**		P	P	08 32 50.8	+0.2
	0.4nm,0.6s,baz=111,slow=7.0,SNR=5.9						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**53.98 331**		P	P	08 33 09.9	+0.7
	0.4nm,0.5s,baz=115,slow=6.8,SNR=2.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**55.45 325**		P	P	08 33 19.8	-0.2
	0.3nm,0.5s,baz=124,slow=7.6,SNR=1.4						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**83.51 340**		P	P	08 36 11.9	-1.1
	1.8nm,0.8s,baz=69,slow=6.0,SNR=1.8						
	1.8nm,0.8s						

IDC 27 08:29:00.6±3.1, 53.55N×87.86E, h0km, mbtmp2.5/2, ML2.2/2, Error ellipse: s-maj=25.8km s-min=17.8km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.85 284**		I	I	08 41 10.0	
	0.1nm,0.8s,baz=101,slow=343,SNR=9.2						
ZALV	**Zalesovo Beam**	**1.85 284**		Pg	Pn	08 29 33.5	0.0
	0.6nm,0.3s,baz=99,slow=16,SNR=10						
ZALV				Lg	Lg	08 29 59.9	
	2.2nm,0.3s,baz=101,slow=25,SNR=17						
KURBB	**Kurchatov Arra**	**6.45 247**		Pn	Pn	08 30 37.4	+0.6
	baz=62,slow=14,SNR=4.0						
KURBB				Sn	Sn	08 31 50.0	-1.0
	baz=66,slow=24,SNR=1.8						
KURBB				Lg	Lg	08 32 24.2	
	baz=60,slow=32,SNR=4.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.65 210**		Pn	Pn	08 30 54.6	+1.4
	0.1nm,0.3s,baz=29,slow=14,SNR=2.8						
	0.1nm,0.3s						

IDC 27 08:30:57.1±7.4, 6.14S×141.91E, h0km, mb3.7/2, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=285.2km s-min=33.0km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.57 208**		Pn	Pn	08 34 36.9	-1.2
	0.2nm,0.3s,baz=30,slow=13,SNR=7.5						
WRA				Sn	Sn	08 37 24.6	-6.7
	0.1nm,0.3s,baz=25,slow=22,SNR=1.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.05 203**		P	Pn	08 35 21.6	-0.1
	0.2nm,0.3s,baz=27,slow=12,SNR=13						
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**74.44 322**		P	P	08 42 37.5	+0.3
	0.1nm,0.4s,baz=104,slow=6.1,SNR=1.1						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**83.93 325**		P	P	08 43 28.6	-0.3
	0.9nm,0.5s,baz=108,slow=4.7,SNR=5.1						
	0.9nm,0.5s						

IDC 27 08:35:21.3±3.1, 54.11N×87.20E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=27.9km s-min=15.7km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.41 264**		I	I	08 44 30.0	
	0.1nm,0.8s,baz=82,slow=336,SNR=14						
ZALV	**Zalesovo Beam**	**1.41 264**		Pg	Pn	08 35 46.2	-2.0
	1.5nm,0.3s,baz=78,slow=16,SNR=13						
ZALV				Lg	Lg	08 36 06.3	
	1.7nm,0.3s,baz=84,slow=27,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.35 240**		Pn	Pn	08 36 57.1	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=6.1						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.96 205**		Pn	Pn	08 37 19.9	+1.6
	0.1nm,0.3s,baz=25,slow=13,SNR=4.8						
MKAR				Sn	Sn	08 38 48.2	-0.8
	0.1nm,0.3s,baz=24,slow=26,SNR=4.3						
MKAR				Lg	Lg	08 39 32.0	
	baz=28,slow=28,SNR=3.0						
	0.2nm,0.4s						

IDC 27 08:42:33.0±2.4, 53.69N×86.78E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=21.6km s-min=12.1km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.19 283**		I	I	08 50 47.9	
	baz=102,slow=338,SNR=3.0						
ZALV	**Zalesovo Beam**	**1.19 283**		Pg	Pg	08 42 54.2	-1.7
	1.5nm,0.3s,baz=102,slow=17,SNR=20						
ZALV				Lg	Lg	08 43 11.9	
	1.2nm,0.3s,baz=104,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**5.94 242**		Pn	Pn	08 44 04.2	+2.1
	0.1nm,0.3s,baz=58,slow=13,SNR=5.3						
KURBB				Lg	Lg	08 45 40.6	
	baz=57,slow=31,SNR=1.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.48 204**		Pn	Pn	08 44 24.1	+0.8
	0.1nm,0.3s,baz=23,slow=13,SNR=9.4						
MKAR				Sn	Sn	08 45 48.9	+0.1
	0.1nm,0.3s,baz=25,slow=27,SNR=1.7						
MKAR				Lg	Lg	08 46 30.1	
	baz=26,slow=31,SNR=2.0						
	0.2nm,0.2s						

IDC 27 08:45:29.6±1.3, 10.92N×125.93E, h0km, mb4.0/7, mbtmp4.0/7, MS2.9/1, Error ellipse: s-maj=156.4km s-min=17.5km az=68.0, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**27.14 289**		LR	LR	09 03 03.4	
	comp=Z,23nm,18.7s,baz=45,slow=39						
WRA	**Warramunga Arr**	**31.77 165**		P	P	08 51 55.0	-0.8
	0.6nm,0.6s,baz=345,slow=9.3,SNR=5.1						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**35.25 167**		P	P	08 52 25.9	-0.2
	0.8nm,0.4s,baz=343,slow=7.0,SNR=15						
	0.8nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.06 74**		T	T	09 35 50.5	
	baz=265,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**40.07 74**		T	T	09 35 56.7	
	baz=265,slow=75,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**40.08 74**		T	T	09 35 54.1	
	baz=265,slow=75,SNR=15						
SONM	**Songino Array**	**40.30 340**		P	P	08 53 09.5	+0.8
	0.6nm,0.6s,baz=155,slow=9.5,SNR=4.0						
	0.6nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**40.37 72**		T	T	09 36 16.9	
	baz=265,slow=74,SNR=31						
H11N2	**WAKE ISLAND Hy**	**40.38 72**		T	T	09 36 11.9	
	baz=265,slow=74,SNR=23						
H11N3	**WAKE ISLAND Hy**	**40.39 72**		T	T	09 36 18.4	
	baz=265,slow=74,SNR=31						
STKA	**Stephens Creek**	**45.12 161**		P	P	08 53 49.1	+1.2
	0.9nm,0.4s,baz=328,slow=12,SNR=3.3						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**51.31 323**		P	P	08 54 35.8	+0.1
	2.0nm,0.7s,baz=123,slow=8.1,SNR=24						
	2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**55.35 325**		P	P	08 55 05.1	-0.2
	0.9nm,0.5s,baz=127,slow=6.8,SNR=4.1						
	0.9nm,0.5s						
ARCES	**ARCESS Array B**	**83.47 340**		P	P	08 57 58.0	-0.9
	5.3nm,1.0s,baz=74,slow=6.7,SNR=10.0						
	5.3nm,1.0s						

*IDC **27** 08:53:09.9±1.4, 5.90S×142.01E, h0km, mb4.0/3, mbtmp4.1/6, ML3.9/2, Error ellipse: s-maj=46.7km s-min=26.0km az=81.0*
*NEIC **27** 08:53:11.6±2.8, 5.77S±0.1×142.08E±0.05, h10km±2km, mb4.1/12, Error ellipse: s-maj=21.1km s-min=4.9km az=19.0*

ISC 27 08:53:11.5±0.8, 5.81S±0.09×142.14E±0.09, h10km, n24, σ1.156/25, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.13 126**		Pn	**Pn**	**08 54 43.0**	**+0.7**
PMG	**Port Moresby**	**6.13 126**		Pn	**Pn**	**08 54 42.2**	**0.0**
	8.3nm,0.5s,baz=352,slow=21,SNR=2.3						
PMG				Sn	**Sn**	**08 55 49.9**	**-2.6**
	2.3nm,0.3s,baz=16,slow=14,SNR=1.5						
COEN	**Coen**	**8.17 173**		Pn	**Pn**	**08 55 12.0**	**+1.8**
FAKI	**Fak Fak**	**10.27 286**		Pn	**Pn**	**08 55 38.1**	**-0.9**
WB0	**Warramunga Arr**	**15.79 208**			**Pn**	**08 56 52.0**	**-2.2**
WB0				IAmb	IAmb	08 57 02.2	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**15.89 207**		Pn	**Pn**	**08 56 54.2**	**-1.2**
WR0				IAmb	IAmb	08 57 01.0	
	comp=Z,9.9nm,0.7s						
WRAB	**Tennant Creek**	**15.96 208**			**Pn**	**08 56 55.3**	**-1.0**
WRAB				IAmb	IAmb	08 57 04.9	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**15.96 208**			**Pn**	**08 56 54.8**	**-1.6**
WB2				IAmb	IAmb	08 57 08.1	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**15.97 208**			**Pn**	**08 56 56.3**	**-0.1**
WRA	**Warramunga Arr**	**15.97 208**		Pn	**Pn**	**08 56 52.7**	**-3.7**
	comp=Z,0.5nm,0.3s,baz=28,slow=12,SNR=11						
WRA				Sn	Sn	08 59 39.8	-14
	comp=Z,0.2nm,0.3s,baz=25,slow=22,SNR=5.5						
	comp=Z,2.2nm,0.6s						
KNRA	**Kununurra**	**16.39 232**			**Pn**	**08 56 60.0**	**-1.8**
SOEI	**Soe**	**18.13 256**		P	**Pn**	**08 57 23.5**	**-0.3**
SOEI				IAmb	IAmb	08 57 33.7	
	comp=Z,25nm,0.8s						
AS31	**Alice Springs**	**19.45 203**		P	**P**	**08 57 39.1**	**+0.6**
ASAR	**Alice Springs**	**19.45 203**		P	**P**	**08 57 39.1**	**+0.6**
ASAR	**Alice Springs**	**19.45 203**		P	**P**	**08 57 37.5**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=32,slow=9.5,SNR=26						
	comp=Z,8.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.22 231**		P	**P**	**08 57 46.5**	**-0.4**
STKA	**Stephens Creek**	**25.94 181**		P	**P**	**08 58 45.8**	**+1.6**
STKA				IAmb	IAmb	08 59 26.0	
	comp=Z,3.3nm,1.5s						
KSRS	**Korea Array**	**45.03 344**		P	**P**	**09 01 28.0**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=162,slow=8.6,SNR=4.1						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	**72.43 176**		P	**P**	**09 04 39.5**	**+1.9**
SBA	**Scott Base**	**73.16 175**		P	**P**	**09 04 44.2**	**+2.3**
MKAR	**Makanchi Array**	**74.31 322**		P	**P**	**09 04 48.7**	**-0.6**
MKAR	**Makanchi Array**	**74.31 322**		P	**P**	**09 04 49.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=122,slow=5.9,SNR=7.8						
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**83.79 325**		P	**P**	**09 05 41.3**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=119,slow=5.1,SNR=4.2						
	comp=Z,2.3nm,0.9s						
QSPA	**South Pole Qui**	**84.16 180**		P	**P**	**09 05 42.2**	**-0.7**

IDC 27 08:56:12.6±7.2, 6.07S×142.41E, h0km, mb3.7/1, mbtmp3.9/3, ML3.8/2, Error ellipse: s-maj=249.9km s-min=37.6km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.87 209**		Pn	Pn	08 59 55.6	-1.8
	0.4nm,0.3s,baz=30,slow=13,SNR=3.4						
	2.6nm,0.7s						
ASAR	**Alice Springs**	**19.32 204**		P	Pn	09 00 40.1	-0.3
	0.3nm,0.3s,baz=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.74**	**86**	P	Pn	09 08 20.6	+0.4
SBJI				S	Sn	09 08 37.5	+0.9
BLSI	**Bandar Lampung**	**0.81**	**350**	P	Pn	09 08 21.5	+0.7
KASI	**Kota Agung**	**1.10**	**306**	P	Pn	09 08 24.3	+1.1
KASI				S	Sn	09 08 42.3	+0.3
SKJI	**Sukabumi**	**1.43**	**126**	P	Pn	09 08 28.1	+1.6
CNJI	**Cibinong**	**2.06**	**123**	P	Pn	09 08 34.0	+0.2
MNAI	**Manna**	**3.02**	**306**	P	Pn	09 08 45.7	0.0
CMJI	**Cimerak**	**3.43**	**118**	P	Pn	09 08 51.3	+0.2
KPJI	**Karang Pucung**	**3.70**	**108**	P	Pn	09 08 55.8	+1.2
PPBI	**Pangkal Pinang**	**4.05**	**11**	P	Pn	09 08 58.8	-0.4
UGM	**Wanagama** 39nm,1.6s,0.3nm	**5.38**	**109**	P	Pn	09 09 15.7	-1.2
PPSI	**Pulau Pagai**	**6.34**	**302**	P	Pn	09 09 28.5	-1.2

*NEIC **27** 09:11:16.2±1.8,55.7°N±0.1°×149.1°W±0.1°,h8km±8km, ML3.7/36,ML3.6(AEIC),Error ellipse: s-maj=15.2km s-min=9.6km az=175.0*
*AEIC **27** 09:11:20.0±1.8,55.7°N±0.1°×149.1°W±0.1°,h6km±8km,Error ellipse: s-maj=15.1km s-min=9.7km az=176.0*
ISC 27 09:11:16.8±2.1,55.8°N±0.1°×149.11°W±0.07,h10km,n180, σ1§16/189,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.73**	**304**		**Pn**	**09 11 59.8**	**-0.7**
OHAK					**Sn**	**09 12 32.0**	**-1.5**
OHAK	**Old Harbor** baz=123	**2.73**	**304**	P	**Pn**	**09 11 59.8**	**-0.7**
OHAK	baz=123			S	**Sn**	**09 12 31.0**	**-2.6**
KDAK	**Kodiak Island**	**2.77**	**318**		**Pn**	**09 12 00.8**	**-0.3**
KDAK	**Kodiak Island**	**2.77**	**318**	Sn	**Sn**	**09 12 33.3**	**-1.3**
KDAK	**Kodiak Island** baz=137	**2.77**	**318**	S	**Sn**	**09 12 33.0**	**-1.6**
Q20K	**Shuyak Island** baz=148	**3.35**	**329**	P	**Pn**	**09 12 09.4**	**+0.3**
Q20K	baz=148			S	**Sn**	**09 12 48.9**	**0.0**
SYI	**Shuyak Island**	**3.35**	**329**		**Pn**	**09 12 09.3**	**+0.2**
SYI					**Sn**	**09 12 49.1**	**+0.2**
SYI	comp=E,58nm,0.8s			IAML		09 12 50.4	
CNPM	**China Poot**	**3.92**	**344**		**Pn**	**09 12 16.9**	**-0.1**
CNPM					**Sn**	**09 13 03.2**	**+0.2**
CNPM	comp=N,68nm,0.4s			IAML		09 13 04.5	
CNPM	comp=E,39nm,0.6s			IAML		09 13 04.6	
Q19K	**Cape Douglas,**	**4.00**	**324**		**Pn**	**09 12 19.1**	**+1.0**
Q19K	comp=N,132nm,0.9s			IAML		09 13 21.2	
Q19K	**Cape Douglas,** baz=142	**4.00**	**324**	P	**Pn**	**09 12 19.0**	**+0.9**
BRSE	**Bradley Lake S**	**4.07**	**348**		**Pn**	**09 12 18.7**	**-0.3**
BRSE					**Sn**	**09 13 05.2**	**-1.3**
BRSE	**Bradley Lake S** baz=167	**4.07**	**348**	P	**Pn**	**09 12 18.7**	**-0.3**
BRSE	baz=167			S	**Sn**	**09 13 05.3**	**-1.3**
BRLK	**Bradley Lake**	**4.10**	**347**		**Pn**	**09 12 19.4**	**-0.1**
BRLK	comp=E,53nm,0.5s			IAML		09 13 10.0	
BRLK	comp=N,47nm,0.9s			IAML		09 13 10.6	
ACHA	**Angle Creek He**	**4.18**	**308**		**Pn**	**09 12 21.0**	**+0.4**
ANCK	**Angle Creek**	**4.25**	**307**		**Pn**	**09 12 22.3**	**+0.8**
KAHC	**Katmai Hardscr**	**4.30**	**314**		**Pn**	**09 12 23.3**	**+1.0**
KAHC	**Katmai Hardscr** baz=131	**4.30**	**314**	P	**Pn**	**09 12 23.3**	**+1.0**
P23K	**Montague Islan**	**4.33**	**11**		**Pn**	**09 12 22.5**	**0.0**
P23K	**Montague Islan** baz=192	**4.33**	**11**	P	**Pn**	**09 12 23.0**	**+0.5**
P23K	baz=192			S	**Sn**	**09 13 11.1**	**-1.8**
SEW	**Seward**	**4.34**	**358**		**Pn**	**09 12 23.1**	**+0.4**
SEW	**Seward** baz=178	**4.34**	**358**	P	**Pn**	**09 12 22.8**	**+0.2**
SEW	baz=178			S	**Sn**	**09 13 10.9**	**-2.3**
PLK3	**Peulik 3**	**4.38**	**299**		**Pn**	**09 12 23.8**	**+0.5**
CNTC	**Contact Creek**	**4.46**	**307**		**Pn**	**09 12 25.0**	**+0.5**
Q17K	**Contact Creek** baz=123	**4.46**	**307**	P	**Pn**	**09 12 25.0**	**+0.5**
P19K	**Oil Pt**	**4.46**	**332**		**Pn**	**09 12 24.4**	**0.0**
P19K	comp=E,104nm,1.1s			IAML		09 13 21.5	
P19K	comp=N,103nm,0.6s			IAML		09 13 27.4	
P19K	**Oil Pt** baz=150	**4.46**	**332**	P	**Pn**	**09 12 25.0**	**+0.5**
PLK1	**Peulik 1**	**4.59**	**299**		**Pn**	**09 12 26.5**	**+0.3**
O22K	**Cooper Landing**	**4.72**	**356**		**Sn**	**09 13 21.1**	**-1.6**
SLKM	**Skilak Lake**	**4.78**	**353**		**Pn**	**09 12 28.6**	**-0.1**
HIN	**Hinchinbrook I**	**4.83**	**16**	Pn	**Pn**	**09 12 28.9**	**-0.5**
HIN	comp=E,90nm,1.0s			IAML		09 13 26.4	
KAIM	**Kayak Island**	**4.85**	**29**		**Pn**	**09 12 30.0**	**+0.3**
KAIM	comp=E,90nm,1.0s			IAML		09 13 32.1	
KAIM	comp=N,80nm,1.1s			IAML		09 14 25.9	
KAIM	**Kayak Island** baz=212	**4.85**	**29**	P	**Pn**	**09 12 30.2**	**+0.5**
P18K	**Big Mountain,**	**4.89**	**320**		**Pn**	**09 12 30.4**	**+0.1**
P18K	**Big Mountain,** baz=136	**4.89**	**320**	P	**Pn**	**09 12 30.2**	**-0.1**
Q16K	**King Salmon**	**5.02**	**308**		**Pn**	**09 12 32.1**	**+0.1**
Q16K	**King Salmon** baz=124	**5.02**	**308**	P	**Pn**	**09 12 32.6**	**+0.6**
RDSO	**Redoubt South**	**5.07**	**339**		**Pn**	**09 12 32.3**	**-0.5**
RSO	**Redoubt South**	**5.07**	**339**	Pn	**Pn**	**09 12 32.9**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.10**	**19**		**Pn**	**09 12 34.1**	**+1.0**
EYAK	**Cordova Ski Ar** baz=201	**5.10**	**19**	P	**Pn**	**09 12 33.7**	**+0.6**
ANNE	**Aniakchak Nort**	**5.10**	**287**		**Pn**	**09 12 32.4**	**-0.8**
SUCK	**Suckling Hills**	**5.16**	**31**		**Pn**	**09 12 34.8**	**+0.9**
SUCK	comp=N,60nm,0.3s			IAML		09 13 33.7	
SUCK	comp=E,43nm,1.2s			IAML		09 14 30.2	
FID	**Port Fidalgo**	**5.17**	**14**		**Pn**	**09 12 34.5**	**+0.4**
FID	comp=N,44nm,0.4s			IAML		09 13 34.9	
FID	comp=E,49nm,0.3s			IAML		09 13 35.3	
RAGM	**Ragged Mountai**	**5.18**	**25**		**Pn**	**09 12 35.0**	**+0.7**
O19K	**Port Alsworth**	**5.22**	**330**		**Pn**	**09 12 33.8**	**-1.0**
O19K	comp=E,74nm,0.4s			IAML		09 13 43.1	
O19K	**Port Alsworth** baz=147	**5.22**	**330**	P	**Pn**	**09 12 34.5**	**-0.3**
GLI	**Glacier Island**	**5.22**	**11**	Pn	**Pn**	**09 12 34.6**	**-0.2**
GLI	comp=E,41nm,1.1s			IAML		09 13 34.1	
GLI	comp=N,36nm,0.5s			IAML		09 13 36.7	
O18K	**Koktuh Hills**	**5.22**	**324**	Pn	**Pn**	**09 12 35.0**	**+0.1**
P17K	**Kvichak River**	**5.23**	**314**		**Pn**	**09 12 35.4**	**+0.6**
P17K	**Kvichak River** baz=129	**5.23**	**314**	P	**Pn**	**09 12 35.4**	**+0.6**
NICHA	**Nichawak Mount**	**5.24**	**29**		**Pn**	**09 12 35.8**	**+0.8**
CHGN	**Chignik**	**5.24**	**280**	Pn	**Pn**	**09 12 33.6**	**-1.4**
HMT	**Hamilton**	**5.24**	**27**	Pn	**Pn**	**09 12 36.1**	**+0.9**
RC01	**Rabbit Creek A**	**5.33**	**357**		**Sn**	**09 13 35.1**	**-2.6**
GOAT	**Goat Mountain**	**5.34**	**24**		**Pn**	**09 12 37.3**	**+0.8**
FIS	**Fire Island**	**5.41**	**354**	Pn	**Pn**	**09 12 38.9**	**+1.6**
BERG	**Berg Lake**	**5.44**	**30**		**Pn**	**09 12 38.5**	**+0.7**
GRIN	**Grindle Hills**	**5.46**	**32**		**Pn**	**09 12 38.9**	**+0.8**
SNH	**Sunshine Point**	**5.53**	**35**		**Pn**	**09 12 40.0**	**+0.9**
KHIT	**Khitrov Hills**	**5.61**	**31**		**Pn**	**09 12 40.6**	**+0.3**
KNK	**Knik Glacier**	**5.66**	**3**	Pn	**Pn**	**09 12 43.7**	**+2.9**
VNHG	**Veniaminof 1**	**5.66**	**279**		**Pn**	**09 12 40.3**	**-0.6**
BMRM	**Bremner River**	**5.71**	**23**		**Pn**	**09 12 42.7**	**+1.1**
BMRM	**Bremner River** baz=206	**5.71**	**23**	P	**Pn**	**09 12 42.2**	**+0.5**
WAX	**Waxell Ridge**	**5.74**	**33**		**Pn**	**09 12 42.7**	**+0.8**
SUA	**Susitna One**	**5.76**	**352**	Pn	**Pn**	**09 12 43.8**	**+1.4**
N19K	**Bonanza Creek**	**5.78**	**333**		**Pn**	**09 12 42.5**	**-0.1**
N19K	**Bonanza Creek** baz=149	**5.78**	**333**	P	**Pn**	**09 12 42.3**	**-0.3**
P16K	**Nushagak River**	**5.80**	**308**		**Pn**	**09 12 43.1**	**+0.4**
P16K	**Nushagak River** baz=122	**5.80**	**308**	P	**Pn**	**09 12 43.1**	**+0.4**
BARK	**Barkley Ridge**	**5.81**	**34**		**Pn**	**09 12 43.7**	**+0.7**
MESA	**MESA**	**5.82**	**38**	Pn	**Pn**	**09 12 43.8**	**+0.5**
PMR	**Palmer**	**5.83**	**360**	Pn	**Pn**	**09 12 43.3**	**+0.2**
O17K	**Koliganek Bris**	**5.85**	**316**		**Pn**	**09 12 43.7**	**+0.3**
O17K	**Koliganek Bris** baz=131	**5.85**	**316**	P	**Pn**	**09 12 43.7**	**+0.3**
CRQM	**Cirque**	**5.90**	**30**	Pn	**Pn**	**09 12 45.1**	**+0.8**
STLK	**Strandline Lak**	**5.91**	**347**		**Pn**	**09 12 44.1**	**-0.2**
KLU	**Klutina**	**5.96**	**15**		**Pn**	**09 12 46.4**	**+1.3**
KLU	**Klutina** baz=197	**5.96**	**15**	P	**Pn**	**09 12 46.0**	**+0.9**
TGL	**Tana Glacier**	**5.99**	**31**		**Pn**	**09 12 46.2**	**+0.8**
BAGL	**Bagley Icefiel**	**6.01**	**35**		**Pn**	**09 12 46.5**	**+1.0**
GHO	**Glory Hole Cre**	**6.01**	**1**	Pn	**Pn**	**09 12 47.5**	**+1.8**
ISLE	**Juniper Island**	**6.01**	**34**		**Pn**	**09 12 46.6**	**+0.8**
SML	**Sawmill**	**6.06**	**4**	Pn	**Pn**	**09 12 47.9**	**+1.6**
N18K	**Kilae Creek**	**6.08**	**327**	Pn	**Pn**	**09 12 46.8**	**+0.2**
O16K	**Kokwok River B**	**6.15**	**312**	Pn	**Pn**	**09 12 48.2**	**+0.7**
VRDI	**Verde Repeater**	**6.21**	**26**	Pn	**Pn**	**09 12 49.5**	**+0.9**
SAMH	**Samovar Hills**	**6.21**	**42**		**Pn**	**09 12 49.7**	**+1.2**
KIAG	**Kiagna River**	**6.26**	**32**		**Pn**	**09 12 49.7**	**+0.4**
TABL	**Table Mountain**	**6.29**	**39**		**Pn**	**09 12 50.7**	**+1.0**
N25K	**Chitina, Valde**	**6.29**	**20**		**Pn**	**09 12 51.0**	**+1.4**
N25K	**Chitina, Valde** baz=203	**6.29**	**20**	P	**Pn**	**09 12 50.9**	**+1.3**
GRNC	**Granite Creek**	**6.30**	**35**	Pn	**Pn**	**09 12 50.7**	**+0.9**
GLB	**Gilahina Butte**	**6.31**	**24**		**Pn**	**09 12 50.8**	**+1.0**
SVW2	**Sparrevohn**	**6.32**	**330**	Pn	**Pn**	**09 12 49.7**	**-0.1**
N17K	**Nushagak Hills**	**6.39**	**321**	Pn	**Pn**	**09 12 50.0**	**-0.8**
PTPK	**Patty Peak**	**6.44**	**30**		**Pn**	**09 12 52.4**	**+0.7**
MCARA	**McCarthy VSAT**	**6.45**	**27**		**Pn**	**09 12 52.6**	**+0.9**
MCARA	**McCarthy VSAT** baz=211	**6.45**	**27**	P	**Pn**	**09 12 52.5**	**+0.8**
M20K	**Styx River**	**6.46**	**343**	Pn	**Pn**	**09 12 52.0**	**+0.1**
PNL	**Peninsula**	**6.50**	**49**		**Pn**	**09 12 52.6**	**+0.2**
PNL	**Peninsula** baz=236	**6.50**	**49**	P	**Pn**	**09 12 52.6**	**+0.2**
M24K	**Tolsona, Glenn**	**6.52**	**12**	Pn	**Pn**	**09 12 55.2**	**+2.5**
BCPM	**Bancas Point**	**6.56**	**47**		**Pn**	**09 12 54.4**	**+1.2**
BARN	**Barnard Glacie**	**6.58**	**33**		**Pn**	**09 12 54.7**	**+1.1**
CTG	**Chitna Glacier** baz=221	**6.61**	**35**	P	**Pn**	**09 12 54.5**	**+0.5**
CTGM	**Chitina Glacie**	**6.61**	**35**		**Pn**	**09 12 54.9**	**+0.9**
LOGN	**Logan Glacier**	**6.62**	**37**		**Pn**	**09 12 54.7**	**+0.6**
WASW	**Wrangell South**	**6.67**	**21**		**Pn**	**09 12 56.0**	**+1.1**
M19K	**Big River Lodg**	**6.72**	**338**	Pn	**Pn**	**09 12 55.5**	**+0.1**
L19K	**White Mountain**	**7.07**	**338**		**Pn**	**09 13 00.0**	**-0.1**
L19K	**White Mountain** baz=153	**7.07**	**338**	P	**Pn**	**09 12 59.6**	**-0.6**
M17K	**Holitna River**	**7.11**	**326**	Pn	**Pn**	**09 13 01.2**	**+0.5**
O29M	**Mount Kennedy**	**7.19**	**47**		**Pn**	**09 13 03.2**	**+1.3**
O29M	**Mount Kennedy** baz=234	**7.19**	**47**	P	**Pn**	**09 13 02.8**	**+0.8**
P29M	**Windy Craggy**	**7.21**	**53**		**Pn**	**09 13 02.7**	**+0.6**
P29M	**Windy Craggy** baz=241	**7.21**	**53**	P	**Pn**	**09 13 02.0**	**-0.1**
N15K	**Kwethluk River**	**7.30**	**312**	Pn	**Pn**	**09 13 04.9**	**+1.5**
M16K	**Timber Creek**	**7.37**	**320**	Pn	**Pn**	**09 13 05.0**	**+0.8**
DHY	**Denali Highway**	**7.37**	**6**	Pn	**Pn**	**09 13 06.8**	**+2.4**
S31K	**Pelican**	**7.39**	**68**		**Pn**	**09 13 02.5**	**-2.0**
S31K	**Pelican** baz=257	**7.39**	**68**	P	**Pn**	**09 13 02.5**	**-2.0**
O14K	**Tigyukauivet M**	**7.41**	**303**	Pn	**Pn**	**09 13 05.4**	**+0.6**
L18K	**Granite Mounta**	**7.54**	**332**	Pn	**Pn**	**09 13 06.4**	**-0.2**
M27K	**Edge Creek, AK**	**7.57**	**26**	Pn	**Pn**	**09 13 09.0**	**+1.8**
RND	**Reindeer**	**7.65**	**1**	Pn	**Pn**	**09 13 10.2**	**+2.1**
P30M	**Million Dollar**	**7.79**	**51**		**Pn**	**09 13 11.2**	**+1.1**
P30M	**Million Dollar** baz=240	**7.79**	**51**	P	**Pn**	**09 13 11.1**	**+1.1**
CAST	**Castle Rocks**	**7.81**	**350**	Pn	**Pn**	**09 13 11.8**	**+1.5**
L26K	**Log Cabin Wild**	**7.83**	**20**	Pn	**Pn**	**09 13 10.6**	**-0.1**
HYT	**Haines Junctio**	**7.93**	**46**	Pn	**Pn**	**09 13 13.5**	**+1.5**
K20K	**Telida**	**8.00**	**344**	Pn	**Pn**	**09 13 12.9**	**0.0**
L16K	**Owhat River**	**8.02**	**322**	Pn	**Pn**	**09 13 13.5**	**+0.4**
L27K	**Beaver Creek,**	**8.19**	**24**	Pn	**Pn**	**09 13 17.8**	**+2.3**
S32K	**Killisnoo**	**8.19**	**72**	Pn	**Pn**	**09 13 14.7**	**-0.8**
BCAR	**Beaver Creek A**	**8.20**	**24**	Pn	**Pn**	**09 13 17.3**	**+1.7**
BESE	**Bessie Mountai**	**8.24**	**64**		**Pn**	**09 13 15.9**	**-0.3**
RIDG	**Independent Ri**	**8.27**	**13**	Pn	**Pn**	**09 13 19.6**	**+2.9**
R32K	**Eaglecrest**	**8.34**	**67**	Pn	**Pn**	**09 13 17.3**	**-0.3**
K17K	**Iditarod**	**8.39**	**330**	Pn	**Pn**	**09 13 17.9**	**-0.3**
M14K	**Bethel**	**8.40**	**312**	Pn	**Pn**	**09 13 20.3**	**+2.0**
JIS	**Juneau Island**	**8.41**	**67**	Pn	**Pn**	**09 13 18.5**	**0.0**
O30N	**Mendenhall**	**8.48**	**49**		**Pn**	**09 13 20.6**	**+1.0**
O30N	**Mendenhall** baz=239	**8.48**	**49**	P	**Pn**	**09 13 20.4**	**+0.8**
M29M	**Somme Creek**	**8.63**	**35**		**Pn**	**09 13 23.2**	**+1.6**
M29M	**Somme Creek** baz=223	**8.63**	**35**	P	**Pn**	**09 13 23.0**	**+1.4**
J20K	**Nowinta River**	**8.79**	**345**	Pn	**Pn**	**09 13 26.4**	**+2.7**
NE42	**Nenana**	**8.84**	**0**	Pn	**Pn**	**09 13 26.4**	**+2.0**
M13K	**Dall Lake**	**8.85**	**307**	Pn	**Pn**	**09 13 25.4**	**+1.0**
CCB	**Clear Creek Bu**	**8.92**	**4**	Pn	**Pn**	**09 13 28.9**	**+3.5**
WHY	**Whitehorse**	**8.95**	**51**		**Pn**	**09 13 27.5**	**+1.4**
WHY	**Whitehorse** baz=242	**8.95**	**51**	P	**Pn**	**09 13 27.2**	**+1.2**
K27K	**Chicken**	**8.99**	**20**	Pn	**Pn**	**09 13 28.0**	**+1.5**
L14K	**Kuka Creek**	**9.01**	**314**	Pn	**Pn**	**09 13 28.0**	**+1.3**
P32M	**Atlin**	**9.08**	**59**		**Pn**	**09 13 28.2**	**+0.5**
P32M	**Atlin** baz=251	**9.08**	**59**	P	**Pn**	**09 13 27.8**	**0.0**
K15K	**Wolf Creek Mou**	**9.13**	**321**	Pn	**Pn**	**09 13 29.7**	**+1.3**
L29M	**L29M**	**9.22**	**33**		**Pn**	**09 13 31.2**	**+1.5**
L29M	**L29M** baz=222	**9.22**	**33**	P	**Pn**	**09 13 31.1**	**+1.5**
M30M	**Minto, Yukon**	**9.28**	**38**		**Pn**	**09 13 31.9**	**+1.4**
M30M	**Minto, Yukon** baz=228	**9.28**	**38**	P	**Pn**	**09 13 31.6**	**+1.1**
I23K	**Minto, Yukon-K**	**9.40**	**359**	Pn	**Pn**	**09 13 32.8**	**+0.8**
J16K	**Anvik River**	**9.51**	**327**	Pn	**Pn**	**09 13 34.8**	**+1.3**
DAWY	**Dawson**	**9.62**	**26**	Pn	**Pn**	**09 13 36.7**	**+1.5**
Q32M	**Nakina River**	**9.63**	**64**	Pn	**Pn**	**09 13 34.1**	**-1.4**
P33M	**Teslin, Yukon**	**9.71**	**56**		**Pn**	**09 13 37.2**	**+0.8**
P33M	**Teslin, Yukon** baz=249	**9.71**	**56**	P	**Pn**	**09 13 36.8**	**+0.4**
M31M	**Drury Creek, Y**	**9.94**	**44**	Pn	**Pn**	**09 13 41.9**	**+2.4**
N32M	**Quiet Lake**	**9.96**	**51**		**Pn**	**09 13 40.8**	**+1.0**
N32M	**Quiet Lake** baz=244	**9.96**	**51**	P	**Pn**	**09 13 40.9**	**+1.1**
H21K	**Melozitna Rive**	**10.07**	**351**		**Pn**	**09 13 42.6**	**+1.3**
R33M	**Jennings River**	**10.38**	**62**		**Pn**	**09 13 45.7**	**0.0**
R33M	**Jennings River** baz=257	**10.38**	**62**	P	**Pn**	**09 13 45.7**	**0.0**
IMAR	**Indian Mountai**	**10.48**	**350**	Pn	**Pn**	**09 13 48.2**	**+1.4**
G16K	**Koyuk River**	**11.60**	**332**	Pn	**Pn**	**09 14 03.0**	**+0.8**
F21K	**Alatna River**	**11.66**	**352**	Pn	**Pn**	**09 14 03.9**	**+0.8**
F20K	**Avaraart Lake**	**11.73**	**347**	Pn	**Pn**	**09 14 05.7**	**+1.8**
BMAR	**Burnt Mountain**	**11.88**	**9**	Pn	**Pn**	**09 14 08.9**	**+2.9**
E19K	**Redstone River**	**12.32**	**345**	Pn	**Pn**	**09 14 14.2**	**+2.2**
G31M	**Satah River**	**13.20**	**26**	Pn	**Pn**	**09 14 25.6**	**+1.7**

*BJI **27** 09:20:37.8±0.0,2.9°S×127.1°E,h22km,mb5.3/53, mB5.1/26,Ms4.4/4,Ms7.4.1/5*
*IDC **27** 09:20:38.0±0.3,2.8°S×126.8°E,h0km,mb4.9/26, mbtmp5.0/28,ML5.3/2,MS3.8/37,Error ellipse: s-maj=19.8km s-min=7.4km az=68.0*
*MOS **27** 09:20:40.0±1.0,2.7°S×126.7°E,h22km,mb5.4/55,Error ellipse: s-maj=8.4km s-min=4.4km az=114.3*
*NEIC **27** 09:20:41.5,2.7°S×126.8°E,h20km,Moment Tensor Solution. Duration: 1§6 Moment tensor: Scale 10¹⁶Nm; Mrr2.87; Mθθ0.05; Mϕϕ -2.93; Mrθ-0.23; Mrϕ 1.91; Mθϕ-2.16; Fault plane solution: M0 4.07000×10¹⁶ NP1: ϕs173.77000°,δ62.72000°,λ112.93000°. NP2: ϕs311.07000°,δ35.06000°,λ52.93000°. Principal axes: T 3.7891, Plg65.0000°, Azm124.0000°; N 0.5568, Plg20.0000°, Azm343.0000°; P -4.3458, Plg15.0000°, Azm247.0000°;*
*NEIC **27** 09:20:41.5±2.4,2.7°S±0.6°×126.8°E±0.6°,h10km±1km, mb5.3/210,Mww5.0/16 Error ellipse: s-maj=10.7km s-min=9.7km az=233.0*
*NEIC **27** 09:20:41.5,2.7°S×126.8°E,h20km*
*DJA **27** 09:20:42.9±0.1,3°S±2°×12°7E±°,h28km±1km,M5.1/73, mb5.4/73,mB5.6/46,MLv5.4/25,Mw4.9/40,Mw(mB)5.1/46, MwMwp4.7/6,Mwp5.0/6*
*GCMT **27** 09:20:43.5±0.2,2.6°S±0.0°×126.8°E±0.0°,h14km, MW4.9/90,Moment Tensor Solution. s49,c53; s90,c130; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.83±.14; Mθθ-0.90±.08; Mϕϕ-1.93±.09; Mrθ-0.92±.20; Mθϕ1.46±.05; Mϕr-1.30±.19; Best double couple: M0 3.27600×10¹⁶ NP1:ϕs168.00000°,δ55.00000°,λ119.00000°. NP2: ϕs304.00000°,δ44.00000°,λ55.00000°. Principal axes: T 3.5340, Plg66.0000°, Azm134.0000°; N -0.5170, Plg23.0000°, Azm330.0000°; P -3.0180, Plg6.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 09:20:42.3±0.3,2.82S±0.03×126.79E±0.04,h24km±2km, h24km:pP-P,n736,σ1§23/739,mb5.3/190,MS3.9/40, 23C-2D,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.52**	**143**	P	**Pn**	**09 20 54.8**	**+0.5**
SANI	**Sanana**	**1.10**	**314**	P	**Pb**	**09 21 07.3**	**+4.5**
LBMI	**Labuha**	**2.28**	**18**	P	**Pn**	**09 21 17.8**	**-0.7**
BNDI	**Bandanaira**	**3.54**	**119**	P	**Pn**	**09 21 40.1**	**+4.3**
BNDI	**Bandanaira**	**3.54**	**119**	P	**Pn**	**09 21 38.9**	**+3.1**
TNTI	**Ternate**	**3.61**	**9**		**Pn**	**09 21 36.6**	**-0.2**
TNTI	**Ternate**	**3.61**	**9**	P	**Pn**	**09 21 37.0**	**+0.2**
TNTI	**Ternate**	**3.61**	**9**	P	**Pn**	**09 21 36.2**	**-0.6**
KMSI	**Cibinong**	**4.38**	**320**	P	**Pn**	**09 21 44.4**	**-3.0**
LUWI	**Luwuk**	**4.38**	**294**		**Pn**	**09 21 45.9**	**-1.5**
LUWI	**Luwuk**	**4.38**	**294**	P	**Pn**	**09 21 46.3**	**-1.1**
LUWI	**Luwuk**	**4.38**	**294**	P	**Pn**	**09 21 45.9**	**-1.5**
SWI	**Sorong**	**4.87**	**67**	P	**Pn**	**09 21 54.0**	**-0.2**
BBSI	**Bau Bau** 235nm,0.9s,3µm4µm1.1nm	**4.97**	**238**	P	**Pn**	**09 21 56.8**	**+1.3**
GTOI	**Gorontalo** 203nm,0.5s,3µm1.8nm	**5.10**	**312**	P	**Pn**	**09 21 57.5**	**+0.2**
FAKI	**Fak Fak**	**5.46**	**91**		**Pn**	**09 22 02.4**	**+0.2**
FAKI	**Fak Fak**	**5.46**	**91**	P	**Pn**	**09 22 03.4**	**+1.2**
FAKI	**Fak Fak** 352nm,0.8s,3µm3µm2.3nm	**5.46**	**91**	P	**Pn**	**09 22 02.0**	**-0.2**
MRSI	**Marisa** 490nm,0.5s,8µm5.1nm	**5.85**	**304**	P	**Pn**	**09 22 06.3**	**-1.2**
SGSI	**Sangihe** 475nm,0.6s,8µm4.2nm	**6.58**	**349**	P	**Pn**	**09 22 15.5**	**-2.2**
SAUI	**Saumlaki**	**6.82**	**139**	Pn	**Pn**	**09 22 19.6**	**-1.3**
TTSI	**Tana Toraja** 228nm,0.7s,2µm0.7nm	**6.96**	**268**	P	**Pn**	**09 22 22.7**	**-0.2**
BKSI	**Bulukumba** 884nm,0.7s,8µm2µm2.9nm	**7.10**	**249**	P	**Pn**	**09 22 26.6**	**+1.9**
TOLI2	**Tolitoli**	**7.16**	**303**	Pn	**Pn**	**09 22 25.2**	**-0.4**
TOLI2	**Tolitoli**	**7.16**	**303**	P	**Pn**	**09 22 25.4**	**-0.2**
SOEI	**Soe** 274nm,1.0s,3µm3µm1.1nm	**7.33**	**200**	P	Pn	09 22 33.0	+4.9
MMRI	**Maumere**	**7.34**	**218**		**Pn**	**09 22 30.9**	**+2.8**
MMRI	**Maumere**	**7.34**	**218**	P	**Pn**	**09 22 31.8**	**+3.7**
MMRI	**Maumere** 125nm,0.8s,2µm3µm0.5nm	**7.34**	**218**	P	**Pn**	**09 22 29.5**	**+1.4**
KAPI	**Kappang**	**7.35**	**253**	Pn	**Pn**	**09 22 30.8**	**+2.6**
KAPI	**Kappang**	**7.35**	**253**	*d* P	**Pn**	**09 22 30.6**	**+2.4**
MPSI	**Mapaga** 508nm,1.0s,5µm2µm1.7nm	**7.57**	**294**	P	**Pn**	**09 22 30.3**	**-0.9**
EDFI	**Ende, Flores** 80nm,0.6s,1µm0.4nm	**7.77**	**220**	P	**Pn**	**09 22 36.0**	**+1.9**
BASI	**Baing, Sumba** 233nm,1.1s,3µm	**9.60**	**220**	P	**Pn**	**09 23 01.6**	**+2.5**
SMKI	**Samarinda**	**9.86**	**284**	P	**Pn**	**09 23 02.4**	**-0.3**
BKB	**Balikpapan**	**10.01**	**279**	Pn	**Pn**	**09 23 05.2**	**+0.5**
BKB	**Balikpapan** 345nm,0.7s	**10.01**	**279**	P	**Pn**	**09 23 06.2**	**+1.5**
BKB	**Balikpapan** 349nm,0.7s,4µm	**10.01**	**279**	P	**Pn**	**09 23 04.7**	**0.0**
DRS	**Darwin Rock St**	**10.38**	**157**	P	**Pn**	**09 23 14.0**	**+4.2**
PLAI	**Plampang**	**10.77**	**236**	P	**Pn**	**09 23 18.4**	**+3.3**
PLAI	**Plampang** 199nm,1.1s,2µm	**10.77**	**236**	P	**Pn**	**09 23 17.9**	**+2.8**
MTN	**Manton Dam** baz=11,SNR=5.4	**10.85**	**157**	P	**Pn**	**09 23 18.7**	**+2.5**
MTN	**Manton Dam**	**10.85**	**157**	Pn	**Pn**	**09 23 17.5**	**+1.2**
MTN	**Manton Dam**	**10.85**	**157**	P	**Pn**	**09 23 18.0**	**+1.8**
KDU	**Kakadu** baz=11,SNR=14	**11.31**	**150**	P	**Pn**	**09 23 24.3**	**+1.9**
KDU	**Kakadu**	**11.31**	**150**	P	**Pn**	**09 23 25.1**	**+2.6**
TWSI	**Taliwang, Sumb** 131nm,0.9s,842nm	**11.47**	**239**	P	**Pn**	**09 23 28.2**	**+3.4**
SRBI	**Singaraja** 92nm,1.2s,1µm	**12.65**	**245**	P	**Pn**	**09 23 42.1**	**+1.2**

LEM	**Lembang**	**19.51**	**258**	P	**P**	**09 25 09.0**	**+0.8**			
	comp=Z,171nm,0.9s,comp=Z,2µm									
LEM				pP	**pP**	**09 25 13.2**	**-1.3**			
	comp=Z,171nm,0.9s,comp=Z,2µm									
BBJI	**Bungbulang**	**19.61**	**256**	P	**P**	**09 25 09.5**	**+0.3**			
COEN	**Coen**	**19.61**	**125**	P	**P**	**09 25 08.8**	**-0.3**			
	baz=20,SNR=385									
COEN	**Coen**	**19.61**	**125**	P	**P**	**09 25 08.8**	**-0.3**			
COEN	**Coen**	**19.61**	**125**	P	**P**	**09 25 08.8**	**-0.3**			
PSA00	**Pilbara Seismi**	**19.83**	**199**	P	**P**	**09 25 11.5**	**0.0**			
PSA00	**Pilbara Seismi**	**19.83**	**199**	P	**P**	**09 25 11.1**	**-0.4**			
PSA00				lAmb	lAmb	09 25 20.5				
	comp=Z,28nm,1.1s									
PSA00	**Pilbara Seismi**	**19.83**	**199**	P	**P**	**09 25 11.2**	**-0.3**			
CNJI	**Cibinong**	**20.08**	**256**	P	**P**	**09 25 13.8**	**-0.5**			
	comp=Z,104nm,1.2s									
CBJI	**Citeko**	**20.19**	**259**	P	Pn	09 25 16.9	-0.6			
	comp=Z,333nm,0.8s									
DBJI	**Dramaga**	**20.31**	**259**	P	**P**	**09 25 17.5**	**+0.7**			
	comp=Z,105nm,0.9s									
MANU	**Manus Island**	**20.57**	**88**		**P**	**09 25 20.6**	**+1.0**			
MANU	**Manus Island**	**20.57**	**88**	P	**P**	**09 25 21.0**	**+1.3**			
PPBI	**Pangkal Pinang**	**20.64**	**271**	P	**P**	**09 25 21.2**	**+0.8**			
	comp=Z,41nm,0.7s									
PMG	**Port Moresby**	**21.28**	**109**	P	**P**	**09 25 27.9**	**+0.7**			
PMG	**Port Moresby**	**21.28**	**109**	P	**P**	**09 25 28.4**	**+1.2**			
PMG	**Port Moresby**	**21.28**	**109**	*i* P	**P**	**09 25 27.2**	**0.0**			
PMG				pmax	pmax					
	comp=Z,60nm,0.8s									
PMG	**Port Moresby**	**21.28**	**109**	P	**P**	**09 25 26.9**	**-0.4**			
	comp=Z,53nm,0.7s,baz=292,slow=8.2,SNR=18									
	comp=Z,53nm,0.7s									
QIS	**Mount Isa**	**21.61**	**146**	P	**P**	**09 25 30.1**	**-0.7**			
	baz=22,SNR=300									
QIS	**Mount Isa**	**21.61**	**146**	P	**P**	**09 25 30.7**	**-0.1**			
AS31	**Alice Springs**	**21.84**	**162**	P	**P**	**09 25 32.7**	**-0.5**			
ASPA	**Alice Springs**	**21.84**	**162**	P	**P**	**09 25 32.6**	**-0.6**			
	baz=22									
ASAR	**Alice Springs**	**21.84**	**162**	P	**P**	**09 25 32.9**	**-0.4**			
ASAR					**PcP**	**09 29 30.5**	**-2.2**			
ASAR	**Alice Springs**	**21.84**	**162**	P	**P**	**09 25 32.9**	**-0.4**			
	comp=Z,75nm,0.7s,baz=342,slow=10,SNR=824									
ASAR				S	**S**	**09 29 33.1**	**-0.6**			
	comp=Z,12nm,0.9s,baz=347,slow=24,SNR=7.3									
ASAR				ScP	**ScP**	**09 33 09.3**	**+0.7**			
	comp=Z,1.3nm,0.7s,baz=352,slow=2.8,SNR=4.6									
	comp=Z,75nm,0.7s									
AS01	**Alice Springs**	**21.85**	**162**	P	**P**	**09 25 32.8**	**-0.6**			
WRKA	**Warakurna**	**22.14**	**176**	P	**P**	**09 25 36.5**	**0.0**			
	baz=22,SNR=117									
WRKA	**Warakurna**	**22.14**	**176**	P	**P**	**09 25 36.6**	**+0.2**			
XMI	**Christmas Isla**	**22.27**	**249**	P	**P**	**09 25 36.8**	**-1.2**			
XMIS	**Christmas Isla**	**22.32**	**249**	P	**P**	**09 25 37.1**	**-1.3**			
XMIS				lAmb	lAmb	09 25 42.9				
	comp=Z,99nm,1.0s									
XMIS	**Christmas Isla**	**22.32**	**249**	P	**P**	**09 25 37.1**	**-1.3**			
KASI	**Kota Agung**	**22.39**	**262**	P	**P**	**09 25 38.8**	**-0.4**			
	comp=Z,60nm,1.1s,comp=Z,802nm									
LWLI	**Liwa**	**22.78**	**264**	P	**P**	**09 25 42.7**	**-0.8**			
	comp=Z,188nm,0.8s									
MTSU	**Mount Surprise**	**22.96**	**133**	P	**P**	**09 25 44.9**	**-0.3**			
	baz=23,SNR=50									
MTSU	**Mount Surprise**	**22.96**	**133**	P	**P**	**09 25 45.0**	**-0.2**			
GIRL	**Giralia**	**23.17**	**211**	P	**P**	**09 25 47.0**	**-0.2**			
	baz=23,SNR=10									
LHSI	**Lahat**	**23.25**	**267**	P	**P**	**09 25 48.7**	**+0.6**			
	comp=Z,159nm,0.8s									
MYKOM	**Kota Tinggi**	**23.38**	**281**	P	**P**	**09 25 49.5**	**0.0**			
MNAI	**Manna**	**23.83**	**266**	P	**P**	**09 25 55.0**	**+1.1**			
MNAI	**Manna**	**23.83**	**266**	P	**P**	**09 25 55.2**	**+1.3**			
MNAI	**Manna**	**23.83**	**266**	P	**P**	**09 25 54.4**	**+0.5**			
	comp=Z,337nm,1.0s,comp=Z,4µm									
GUMO	**Guam**	**24.24**	**47**	LR	LR	09 34 24.5				
	comp=Z,241nm,21.6s,baz=210,slow=34									
MEEK	**Meekatharra**	**24.95**	**198**	P	**P**	**09 26 02.6**	**-1.4**			
	baz=25,SNR=59									
MEEK	**Meekatharra**	**24.95**	**198**	P	**P**	**09 26 02.0**	**-2.0**			
KRJI	**Kerinci**	**25.31**	**271**	P	**P**	**09 26 09.0**	**+1.5**			
	comp=Z,235nm,0.5s,comp=Z,21µm									
RABL	**Rabaul**	**25.36**	**94**	P	**P**	**09 26 09.2**	**+1.3**			
RABL	**Rabaul**	**25.36**	**94**	P	**P**	**09 26 09.2**	**+1.3**			
TV1H	**Townsville Har**	**25.49**	**131**	P	**P**	**09 26 09.0**	**+0.1**			
CTA	**Charters Tower**	**25.61**	**134**	P	**P**	**09 26 11.4**	**+1.4**			
CTAO	**Charters Tower**	**25.61**	**134**	P	**P**	**09 26 11.6**	**+1.6**			
CTAO				lAmb	lAmb	09 26 12.6				
	comp=Z,43nm,1.0s									
CTAO	**Charters Tower**	**25.61**	**134**	P	**P**	**09 26 11.3**	**+1.3**			
CTAO	**Charters Tower**	**25.61**	**134**	P	**P**	**09 26 11.6**	**+1.6**			
CTAO				pmax	pmax					
	comp=Z,43nm,1.0s									
BKNI	**Bangkinang**	**25.93**	**277**	P	**P**	**09 26 14.4**	**+1.4**			
BKNI	**Bangkinang**	**25.93**	**277**	P	**P**	**09 26 14.9**	**+1.9**			
BKNI	**Bangkinang**	**25.93**	**277**	P	**P**	**09 26 14.4**	**+1.4**			
	comp=Z,283nm,1.4s,comp=Z,5µm									
AUAYR	**Ayr State High**	**26.15**	**131**	P	**P**	**09 26 18.4**	**+3.5**			
OOD	**Oodnadatta**	**26.25**	**162**	P	**P**	**09 26 15.0**	**-0.8**			
YULB	**Yu-li**	**26.59**	**349**	P	**P**	**09 26 20.1**	**+1.2**			
TPUB	**Ta-pu**	**26.64**	**347**	P	**P**	**09 26 18.2**	**-1.1**			
TPUB				lAmb	lAmb	09 26 34.4				
	comp=Z,80nm,0.8s									
TPUB	**Ta-pu**	**26.64**	**347**	P	**P**	**09 26 18.8**	**-0.6**			
IPM	**Ipoh**	**26.74**	**286**	P	**P**	**09 26 21.7**	**+1.3**			
IPM				lAmb	lAmb	09 26 22.5				
	comp=Z,64nm,0.9s									
IPM	**Ipoh**	**26.74**	**286**	P	**P**	**09 26 21.2**	**+0.8**			
SSLB	**Suanglung**	**27.05**	**348**	P	**P**	**09 26 25.7**	**+2.7**			
SSLB	**Suanglung**	**27.05**	**348**	P	**P**	**09 26 23.3**	**+0.3**			
KULM	**Kulim**	**27.32**	**287**	P	**P**	**09 26 26.4**	**+0.8**			
YHNB	**Yeheng**	**27.82**	**349**	P	**P**	**09 26 29.4**	**-0.6**			
YHNB				lAmb	lAmb	09 26 53.0				
	comp=Z,46nm,1.1s									
FORT	**Forrest**	**27.84**	**178**	P	**P**	**09 26 28.3**	**-1.7**			
	baz=28,SNR=29									
FORT	**Forrest**	**27.84**	**178**	P	**P**	**09 26 28.8**	**-1.1**			
FORT	**Forrest**	**27.84**	**178**	P	**P**	**09 26 29.0**	**-1.0**			
MORW	**Morawa**	**28.04**	**200**	P	**P**	**09 26 31.8**	**-0.1**			
MORW				lAmb	lAmb	09 27 11.3				
	comp=Z,88nm,1.9s									
TATO	**Taipei**	**28.10**	**350**	P	**P**	**09 26 31.7**	**-0.7**			
INKA	**Innaminka**	**28.15**	**153**	P	**P**	**09 26 32.2**	**-0.6**			
MULG	**Mulgathing**	**28.17**	**167**	P	**P**	**09 26 33.4**	**+0.4**			
RPSI	**Rantau Prapat**	**28.39**	**281**	P	**P**	**09 26 35.0**	**-0.1**			
RPSI				lAmb	lAmb	09 26 36.2				
	comp=Z,35nm,0.8s									
PSI	**Prapat**	**28.41**	**281**	P	**P**	**09 26 35.6**	**+0.2**			
PSI	**Prapat**	**28.41**	**281**	P	**P**	**09 26 35.0**	**-0.4**			
KMBL	**Kambalda**	**28.77**	**189**	P	**P**	**09 26 36.8**	**-1.5**			
	baz=29,SNR=23									
QLP	**Quilpie**	**28.95**	**146**	P	**P**	**09 26 39.7**	**-0.3**			
	baz=29,SNR=5.2									
QLP	**Quilpie**	**28.95**	**146**	P	**P**	**09 26 39.7**	**-0.3**			
BLDU	**Ballidu**	**29.25**	**198**	P	**P**	**09 26 41.4**	**-1.2**			
	baz=29,SNR=12									
GSI	**Gunungsitoli**	**29.49**	**278**	P	**P**	**09 26 44.5**	**-0.4**			
GSI				lAmb	lAmb	09 26 45.4				
	comp=Z,73nm,0.8s									
GSI	**Gunungsitoli**	**29.49**	**278**	P	**P**	**09 26 43.5**	**-1.4**			
	comp=Z,96nm,1.0s,comp=Z,5µm									
GSI				pP	**pP**	**09 26 52.1**	**+0.7**			
	comp=Z,96nm,1.0s,comp=Z,5µm									
JOW	**Kunigami**	**29.51**	**3**	LR	LR	09 37 06.8				
	comp=Z,125nm,21.5s,baz=170,slow=34									
LCRK	**Leigh Creek**	**29.53**	**160**	P	**P**	**09 26 44.1**	**-1.0**			
KCSI	**Kotacane, Aceh**	**29.68**	**282**	P	**P**	**09 26 46.0**	**-0.6**			
	comp=Z,18nm,1.2s,comp=Z,1µm									
KCSI				pP	**sP**	**09 26 54.2**	**-1.7**			
	comp=Z,18nm,1.2s,comp=Z,1µm									
RK1H	**Rockhampton Ha**	**30.73**	**134**	P	**P**	**09 26 55.5**	**-0.3**			
BBOO	**Buckleboo**	**31.08**	**165**	P	**P**	**09 26 57.5**	**-1.3**			
	baz=31,SNR=54									
BBOO	**Buckleboo**	**31.08**	**165**	P	**P**	**09 26 57.3**	**-1.4**			
BBOO				PP	**PP**	**09 28 08.9**	**-0.3**			
BBOO				lAmb	lAmb	09 28 09.5				
	comp=Z,59nm,0.8s									
BBOO	**Buckleboo**	**31.08**	**165**	P	**P**	**09 26 57.3**	**-1.4**			
MLSI	**Meulaboh, Aceh**	**31.17**	**283**	P	**P**	**09 26 59.4**	**-0.3**			
	comp=Z,51nm,1.0s									
NWAO	**Narrogin (SRO)**	**31.26**	**196**	P	**P**	**09 26 58.8**	**-1.6**			
	baz=31,SNR=6.1									
NWAO				P	**P**	**09 26 58.8**	**-1.6**			
	baz=31,SNR=6.1									
NWAO	**Narrogin (SRO)**	**31.26**	**196**	P	**P**	**09 26 59.8**	**-0.6**			
NWAO				lAmb	lAmb	09 28 04.1				
	comp=Z,57nm,1.4s									
NWAO	**Narrogin (SRO)**	**31.26**	**196**	P	**P**	**09 26 59.8**	**-0.6**			
NWAO				pmax	pmax					
	comp=Z,57nm,1.4s									
NWAO	**Narrogin (SRO)**	**31.26**	**196**	LR	LR	09 40 54.3				
	comp=Z,329nm,18.5s,baz=36,slow=39									
WHYH	**Whyalla**	**31.71**	**163**	P	**P**	**09 27 03.6**	**-0.7**			
STKA	**Stephens Creek**	**32.09**	**156**	P	**P**	**09 27 06.7**	**-0.9**			
	baz=32,SNR=18									
STKA	**Stephens Creek**	**32.09**	**156**	P	**P**	**09 27 06.8**	**-0.9**			
STKA	**Stephens Creek**	**32.09**	**156**	P	**P**	**09 27 06.6**	**-1.1**			
STKA	**Stephens Creek**	**32.09**	**156**	*c* /P	**P**	**09 27 06.2**	**-1.5**			
STKA	**Stephens Creek**	**32.09**	**156**	P	**P**	**09 27 06.7**	**-0.9**			
	comp=Z,21nm,0.8s,baz=330,slow=11,SNR=25									
STKA				PcP	**PcP**	**09 29 56.5**	**-0.3**			
	comp=Z,2.2nm,0.4s,baz=315,slow=2.9,SNR=3.6									
	comp=Z,21nm,0.8s									
EIDS	**Eidsvold**	**32.39**	**136**	P	**P**	**09 27 08.7**	**-1.7**			
EIDS				lAmb	lAmb	09 27 22.6				
	comp=Z,58nm,1.7s									
HTT	**Hallett**	**32.50**	**161**	P	**P**	**09 27 10.2**	**-1.1**			
	baz=33,SNR=44									
HTT	**Hallett**	**32.50**	**161**	P	**P**	**09 27 10.7**	**-0.6**			
JCJ	**Chichijima**	**33.24**	**26**	LR	LR	09 40 32.4				
	comp=Z,172nm,19.8s,baz=138,slow=36									
AULRC	**Lightning Ridg**	**33.25**	**145**	P	**P**	**09 27 17.2**	**-0.6**			
HNR	**Honiara**	**33.60**	**103**	P	**P**	**09 27 20.0**	**-1.1**			
HNR	**Honiara**	**33.60**	**103**	P	**P**	**09 27 20.0**	**-1.1**			
HNR				pmax	pmax					
	comp=Z,97nm,1.1s									
HNR	**Honiara**	**33.60**	**103**	LR	LR	09 43 01.3				
	comp=Z,4µm,18.7s,baz=290,slow=40									
PHRA	**Phrae**	**33.65**	**310**	P	**P**	**09 27 22.6**	**+1.1**			
CMSA	**Cobar Meteorol**	**33.67**	**150**	P	**P**	**09 27 21.3**	**-0.2**			
	baz=34,SNR=125									
CMSA	**Cobar Meteorol**	**33.67**	**150**	P	**P**	**09 27 20.8**	**-0.7**			
CMAR	**Chiang Mai Arr**	**34.62**	**309**	P	**P**	**09 27 30.9**	**+1.0**			
CMAR	**Chiang Mai Arr**	**34.62**	**309**	P	**P**	**09 27 31.0**	**+1.1**			
	comp=Z,2.5nm,0.8s,baz=134,slow=7.7,SNR=14									
CMAR				PcP	**PcP**	**09 30 05.7**	**+1.5**			
	comp=Z,3.5nm,0.6s,baz=162,slow=2.4,SNR=11									
CMAR				ScP	**ScP**	**09 33 51.3**	**+3.1**			
	comp=Z,0.9nm,0.3s,baz=116,slow=4.1,SNR=1.3									
CMAR				LR	LR	09 43 44.4				
	comp=Z,159nm,20.5s,baz=120,slow=40									
	comp=Z,2.5nm,0.8s									
CHTO	**Chiang Mai**	**34.82**	**309**	P	**P**	**09 27 32.1**	**+0.5**			
CHTO	**Chiang Mai**	**34.82**	**309**	P	**P**	**09 27 32.6**	**+1.0**			
CHTO	**Chiang Mai**	**34.82**	**309**	P	**P**	**09 27 32.1**	**+0.5**			
CHTO				pmax	pmax					
	comp=Z,18nm,1.1s									
WHN	**Wuhan**	**35.23**	**341**	⇓P	**P**	**09 27 36.8**	**+1.8**			
WHN				pP	**pwP**	**09 27 45.5**	**+0.3**			
WHN				S	**S**	**09 33 11.8**	**+4.5**			
WHN				pmax	pmax					
	comp=Z,96nm,1.1s									
WHN				LR	LR					
	comp=Z,520nm,14.8s									
AUDCS	**Dubbo College**	**35.74**	**147**	P	**P**	**09 27 39.1**	**-0.3**			
JNU	**Nakatsue**	**35.95**	**6**	LR	LR	09 40 55.9				
	comp=Z,213nm,20.8s,baz=170,slow=34									
ARMA	**Armidale**	**36.14**	**142**	P	**P**	**09 27 42.8**	**-0.2**			
	baz=36,SNR=18									
ARMA	**Armidale**	**36.14**	**142**	P	**P**	**09 27 43.1**	**+0.2**			
ARMA				lAmb	lAmb	09 27 44.2				
	comp=Z,20nm,0.7s									
ARMA	**Armidale**	**36.14**	**142**	P	**P**	**09 27 43.4**	**+0.4**			
ARPS	**Mount Arapiles**	**36.52**	**159**	P	**P**	**09 27 45.6**	**-0.3**			
	baz=37,SNR=72									
ARPS	**Mount Arapiles**	**36.52**	**159**	P	**P**	**09 27 45.7**	**-0.3**			
ENH	**Enshi**	**36.82**	**335**	P	**P**	**09 27 49.1**	**+0.5**			
ENH				lAmb	lAmb	09 27 58.8				
	comp=Z,45nm,1.0s									
ENH	**Enshi**	**36.82**	**335**	P	**P**	**09 27 49.4**	**+0.8**			
YNG	**Young**	**37.23**	**150**	P	**P**	**09 27 52.3**	**+0.1**			
	baz=37,SNR=60									
YNG	**Young**	**37.23**	**150**	P	**P**	**09 27 52.5**	**+0.4**			
JHJ	**Hachijo jima 2**	**37.80**	**18**	LR	LR	09 43 25.4				
	comp=Z,188nm,19.1s,baz=194,slow=36									
MGCD	**Mangrove Creek**	**37.85**	**146**	P	**P**	**09 27 57.7**	**+0.4**			
	baz=38,SNR=12									
BRAT	**Ballarat**	**37.98**	**158**	P	**P**	**09 27 59.1**	**+0.8**			
CAN	**Canberra**	**38.35**	**150**	P	**P**	**09 28 02.2**	**+0.7**			
CAN				lAmb	lAmb	09 28 02.8				
	comp=Z,65nm,0.7s									
CAN	**Canberra**	**38.35**	**150**	P	**P**	**09 28 02.2**	**+0.7**			
CAN	**Canberra**	**38.35**	**150**	P	**P**	**09 28 02.2**	**+0.7**			
CAN				pmax	pmax					
	comp=Z,65nm,0.7s									
CNB	**Canberra Magne**	**38.52**	**150**	P	**P**	**09 28 03.5**	**+0.4**			
	baz=39,SNR=27									
CNB	**Canberra Magne**	**38.52**	**150**	P	**P**	**09 28 03.5**	**+0.4**			
TOO	**Toolangi**	**38.62**	**156**	P	**P**	**09 28 04.2**	**+0.4**			
	baz=39,SNR=11									
TOO	**Toolangi**	**38.62**	**156**	P	**P**	**09 28 04.2**	**+0.4**			
TOO	**Toolangi**	**38.62**	**156**	P	**P**	**09 28 04.3**	**+0.5**			
TOO	**Toolangi**	**38.62**	**156**	P	**P**	**09 28 04.2**	**+0.4**			
TOO				pmax	pmax					
	comp=Z,33nm,1.0s									
TNCH	**TengChong**	**38.97**	**317**	*e*P	**P**	**09 28 08.0**	**+1.0**			
TNCH				pP	sP	09 28 15.5	-0.2			
TNCH				pmax	pmax					
	comp=Z,47nm,0.3s									
TJN	**Taejon**	**39.00**	**1**	*i* P	**P**	**09 28 05.0**	**-1.8**			
AUSMG	**Snowy Mountain**	**39.04**	**152**	P	**P**	**09 28 08.2**	**+0.8**			
INU	**Inuyama**	**39.16**	**13**	P	**P**	**09 28 06.6**	**-1.6**			
JGF	**Kuroka**	**39.48**	**14**	P	**P**	**09 28 09.3**	**-1.7**			
LYN	**LuoYang**	**39.53**	**341**	⇑P	**P**	**09 28 11.8**	**+0.4**			
LYN				sP	pwP	09 28 21.0	-0.7			
LYN				S	**S**	**09 34 16.8**	**+4.2**			
LYN				pmax	pmax					
	comp=Z,60nm,0.8s									
LYN				pmax	pmax					
	comp=Z,200nm,4.7s									
KSAR	**Wonju Array Be**	**40.07**	**1**	P	**P**	**09 28 15.6**	**-0.2**			
KSAR					**PcP**	**09 30 21.4**	**+1.1**			
KSAR	**Wonju Array Be**	**40.07**	**1**	P	**P**	**09 28 15.6**	**-0.2**			
KSAR						09 30 21.4				
KSRS	**Korea Array**	**40.08**	**1**	P	**P**	**09 28 15.4**	**-0.4**			
	comp=Z,15nm,0.8s,baz=183,slow=9.3,SNR=68									
KSRS				PcP	**PcP**	**09 30 21.1**	**+0.7**			
	comp=Z,3.4nm,0.9s,baz=182,slow=3.3,SNR=7.1									
KSRS				LR	LR	09 43 16.9				
	comp=Z,103nm,21.9s,baz=165,slow=34									
	comp=Z,15nm,0.8s									
CD2	**Chengdu**	**40.09**	**329**	P	**P**	**09 28 16.5**	**+0.4**			
CD2				pmax	pmax					
	comp=Z,20nm,1.1s									
INCN	**Inchon**	**40.10**	**360**	P	**P**	**09 28 16.2**	**+0.1**			
INCN	**Inchon**	**40.10**	**360**	P	**P**	**09 28 16.5**	**+0.4**			
INCN	**Inchon**	**40.10**	**360**	P	**P**	**09 28 16.2**	**+0.1**			
INCN				pmax	pmax					
	comp=Z,27nm,0.7s									
KS19	**Wonju Array Si**	**40.13**	**1**	P	**P**	**09 28 15.2**	**-1.1**			
XAN	**Xi'an**	**40.34**	**337**	⇑P	**P**	**09 28 17.8**	**-0.4**			
XAN				pP	sP	09 28 27.3	+0.4			
XAN				PcP	**PcP**	**09 30 22.0**	**+0.6**			
XAN				S	**S**	**09 34 23.0**	**-1.8**			
XAN				pmax	pmax					
	comp=Z,63nm,0.8s									
XAN				pmax	pmax					
	comp=Z,200nm,4.5s									
XAN	**Xi'an**	**40.34**	**337**	P	**P**	**09 28 17.6**	**-0.6**			
XAN	**Xi'an**	**40.34**	**337**	P	**P**	**09 28 17.6**	**-0.6**			
XAN				pmax	pmax					
	comp=Z,33nm,0.8s									
KOUNC	**Koumac, New Ca**	**40.57**	**119**	P	**P**	**09 28 20.6**	**+0.3**			
KOUNC				lAmb	lAmb	09 28 21.6				
	comp=Z,46nm,0.8s									
KOUNC	**Koumac, New Ca**	**40.57**	**119**	P	**P**	**09 28 21.0**	**+0.8**			
MAJO	**Matsushiro**	**40.58**	**14**	*i* P	**P**	**09 28 17.9**	**-2.2**			
MAJO				pmax	pmax					
	comp=Z,43nm,2.3s									
MJAR	**Matsushiro Arr**	**40.58**	**14**	P	**P**	**09 28 18.5**	**-1.5**			
	comp=Z,2.8nm,0.7s,baz=191,slow=9.0,SNR=5.7									
MJAR				PcP	**PcP**	**09 30 22.8**	**+0.7**			
	comp=Z,3.5nm,0.8s,baz=183,slow=3.9,SNR=6.0									
MJAR				LR	LR	09 43 11.0				
	comp=Z,282nm,19.8s,baz=186,slow=33									
	comp=Z,2.8nm,0.7s									
HNS	**HongShan**	**41.56**	**345**	⇑P	**P**	**09 28 28.0**	**-0.1**			
HNS				pmax	pmax					
	comp=Z,46nm,1.0s									
JMM	**Marumori**	**42.51**	**16**	P	**P**	**09 28 35.4**	**-0.5**			
DZM	**Mont Dzumac**	**42.99**	**120**	P	**P**	**09 28 40.5**	**+0.4**			
DZM	**Mont Dzumac**	**42.99**	**120**	P	**P**	**09 28 40.7**	**+0.6**			
ONTNC	**Ouen Toro**	**43.08**	**120**	P	**P**	**09 28 41.2**	**+0.5**			
ONTNC	**Ouen Toro**	**43.08**	**120**	P	**P**	**09 28 41.5**	**+0.8**			
LIFNC	**LIFOU**	**43.25**	**118**	P	**P**	**09 28 43.0**	**+0.9**			
LIFNC	**LIFOU**	**43.25**	**118**	P	**P**	**09 28 42.7**	**+0.6**			
YATNC	**Mamie plateau,**	**43.37**	**120**	P	**P**	**09 28 44.2**	**+1.1**			
OUENC	**Ouen Island, N**	**43.45**	**120**	P	**P**	**09 28 43.9**	**+0.1**			
OUENC				lAmb	lAmb	09 28 45.5				
	comp=Z,33nm,0.9s									
OUENC	**Ouen Island, N**	**43.45**	**120**	P	**P**	**09 28 44.4**	**+0.6**			
BJT	**Baijiatuao**	**43.73**	**348**	P	**P**	**09 28 45.3**	**-0.4**			
BJT	**Baijiatuao**	**43.73**	**348**	P	**P**	**09 28 45.1**	**-0.6**			
BJT	**Baijiatuao**	**43.73**	**348**	P	**P**	**09 28 45.3**	**-0.4**			
BJT				pmax	pmax					
	comp=Z,24nm,0.8s									
BJI	**Beijing**	**43.75**	**348**	P	**P**	**09 28 45.0**	**-0.8**			
BJI				sP	**sP**	**09 28 53.8**	**-1.0**			
BJI				pmax	pmax					
	comp=Z,21nm,0.7s									
SHL	**Shillong**	**44.04**	**312**	P	**P**	**09 28 49.0**	**+0.4**			
SHL	**Shillong**	**44.04**	**312**	P	**P**	**09 28 49.0**	**+0.4**			
SHL				pmax	pmax					
	comp=Z,25nm,1.1s									
PINNC	**Pines Island,**	**44.04**	**120**	P	**P**	**09 28 49.7**	**+1.2**			
PINNC				lAmb	lAmb	09 28 50.6				
	comp=Z,51nm,1.0s									
MARNC	**Mare, Loyalty**	**44.17**	**118**	P	**P**	**09 28 50.3**	**+0.8**			
LZH	**Lanzhou**	**44.24**	**333**	*e*P	**P**	**09 28 51.3**	**+1.2**			
LZH				sP	pwP	09 29 00.0	-1.2			
LZH				pmax	pmax					
	comp=Z,82nm,1.1s									
SNY	**Shenyang**	**44.53**	**357**	⇑P	**P**	**09 28 51.3**	**-0.8**			
SNY				pmax	pmax					
	comp=Z,46nm,0.8s									
JTM	**Tenmabayashi**	**45.32**	**15**	P	**P**	**09 28 59.0**	**+0.7**			
JTM				lAmb	lAmb	09 28 59.6				
	comp=Z,35nm,0.9s									
JTM	**Tenmabayashi**	**45.32**	**15**	P	**P**	**09 28 58.7**	**+0.4**			
MSHR	**Mys Shultsa**	**45.36**	**5**	*ce*P	**P**	**09 28 58.9**	**+0.3**			
MSHR				pmax	pmax					
	comp=Z,17nm,1.3s									
BTO	**Baotou**	**45.85**	**342**	*e*P	**P**	**09 29 05.0**	**+2.2**			
BTO				pP	**pwP**	**09 29 12.5**	**-0.7**			
BTO				sP	sP	09 29 15.8	+4.0			
BTO				PP	**PP**	**09 30 53.8**	**+3.3**			
BTO				S	**S**	**09 35 51.5**	**+5.9**			
BTO				sS	sS	09 36 02.8	+7.5			
BTO				pmax	pmax					
	comp=Z,20nm,1.9s									
BTO				pmax	pmax					
	comp=Z,220nm,5.1s									
CN2	**Changchun**	**46.42**	**359**	P	**P**	**09 29 04.0**	**-3.0**			
CN2				PcP	**PcP**

ZAK pmax pmax
comp=Z,11nm,1.2s
ODZ Otahua Downs 56.97 144 P **P** **09 30 26.2 +0.3**
TUWZ Tuamarina 57.12 139 P **P** **09 30 25.9 -1.1**
BKZ Black Stump Fm 57.80 136 P **P** **09 30 31.9 -0.1**
BKZ IAmb IAmb 09 30 32.6
comp=Z,23nm,0.7s
BKZ Black Stump Fm 57.80 136 P **P** **09 30 31.7 -0.2**
RTZ Ruatahuna 57.91 135 P **P** **09 30 32.6 -0.1**
BOD Bodaibo 61.31 352 *e*P **P** **09 30 55.0 -0.7**
BOD pmax pmax
comp=Z,30nm,1.2s
PETK Petropavlovsk- 61.47 21 P **P** **09 30 57.4 +0.6**
PETK PcP **PcP** **09 31 39.6 +1.0**
PETK Petropavlovsk- 61.47 21 P **P** **09 30 57.4 +0.6**
PETK 09 31 39.6
PETK Petropavlovsk- 61.47 21 P **P** **09 30 57.0 +0.2**
comp=Z,11nm,0.8s,baz=194,slow=5.3,SNR=10
PETK PcP **PcP** **09 31 38.5 -0.1**
comp=Z,4.7nm,1.0s,baz=225,slow=3.6,SNR=3.6
PETK LR LR 09 54 48.1
comp=Z,36nm,21.7s,baz=197,slow=33
comp=Z,11nm,0.8s
AFI Afiamalu 61.61 104 P **P** **09 30 59.6 +1.0**
AFI Afiamalu 61.61 104 P **P** **09 30 59.6 +1.0**
AFI pmax pmax
comp=Z,57nm,1.1s
PET Petropavlovsk 61.74 21 *e*P **P** **09 31 00.8 +2.2**
PET *e*S **S** **09 39 22.9 +2.9**
PET pmax pmax
comp=Z,48nm,1.5s
ZSN Zaisan 62.06 329 *e*P **P** **09 31 00.1 -0.9**
comp=Z,16nm,0.9s,baz=329
ZSN Zaisan 62.06 329 *e*P **P** **09 31 00.1 -0.9**
ZSN pmax pmax
comp=Z,16nm,0.9s
NIL Nilore 62.08 311 P **P** **09 31 01.3 -0.1**
NIL Nilore 62.08 311 P **P** **09 31 01.3 -0.1**
NIL pmax pmax
comp=Z,52nm,0.8s
DGZ Jazzator, Alta 62.33 332 *i* P **P** **09 31 02.6 -0.3**
DGZ pmax pmax
comp=Z,35nm,1.1s
SHLS Shalkode 62.47 323 *e*P **P** **09 31 01.0 -3.0**
baz=323
SHLS Shalkode 62.47 323 *e*P **P** **09 31 00.9 -3.0**
PDGK Podgornoye 62.55 323 P **P** **09 31 04.6 +0.1**
TARG Taragay, Kyrgy 62.72 321 P **P** **09 31 06.0 0.0**
TARG Taragay, Kyrgy 62.72 321 P **P** **09 31 06.0 0.0**
TARG pmax pmax
comp=Z,52nm,1.1s
UZB Uzynbulak 62.74 322 *e*P **P** **09 31 04.5 -1.2**
comp=Z,21nm,1.2s,baz=322
UZB Uzynbulak 62.74 322 *e*P **P** **09 31 04.5 -1.2**
UZB pmax pmax
comp=Z,21nm,1.2s
PRZ Przheval'sk 62.75 322 P **P** **09 31 07.7 +1.8**
PRZ Przheval'sk 62.75 322 P **P** **09 31 07.7 +1.8**
PRZ pmax pmax
comp=Z,82nm,0.8s
KSH Kashi 62.79 318 P **P** **09 31 07.8 +1.6**
KSH pP pwP 09 31 16.5 +0.6
KSH pmax pmax
comp=Z,22nm,1.0s
MK31 Makanchi Array 63.00 327 P **P** **09 31 07.5 +0.3**
MK31 Makanchi Array 63.00 327 P **P** **09 31 07.5 +0.3**
MK31 pmax pmax
comp=Z,79nm,0.9s
MKAR Makanchi Array 63.00 327 P **P** **09 31 07.4 +0.2**
MKAR Makanchi Array 63.00 327*ce*P **P** **09 31 07.5 +0.2**
MKAR pmax pmax
comp=Z,39nm,0.8s
MKAR Makanchi Array 63.00 327 P **P** **09 31 07.7 +0.4**
comp=Z,39nm,0.8s,baz=128,slow=7.6,SNR=320
comp=Z,39nm,0.8s
SATY Saty 63.06 322 *e*P **P** **09 31 06.4 -1.6**
baz=322
SATY Saty 63.06 322 *e*P **P** **09 31 06.3 -1.6**
ZHN Zhinishke 63.11 322 *e*P **P** **09 31 07.3 -0.8**
comp=Z,9.7nm,0.7s,baz=322
ZHN Zhinishke 63.11 322 *e*P **P** **09 31 07.3 -0.8**
ZHN pmax pmax
comp=Z,10.0nm,0.7s
KPKS Kokpek 63.12 323 *e*P **P** **09 31 07.0 -1.2**
comp=Z,19nm,0.7s,baz=322
KPKS Kokpek 63.12 323 *e*P **P** **09 31 07.0 -1.2**
KPKS pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi 63.18 327 P **P** **09 31 08.3 -0.1**
MAKZ Makanchi 63.18 327 P **P** **09 31 08.3 -0.1**
MAKZ pmax pmax
comp=Z,63nm,0.8s
NRN Naryn 63.73 319 P **P** **09 31 13.0 +0.4**
NRN Naryn 63.73 319 P **P** **09 31 13.0 +0.4**
NRN pmax pmax
comp=Z,37nm,0.8s
MDOK Medeo 63.96 322 *e*P **P** **09 31 12.8 -1.1**
baz=322
MDOK Medeo 63.96 322 P **P** **09 31 13.8 0.0**
TDK Taldyqorghan 64.14 324 *e*P **P** **09 31 13.8 -1.0**
baz=324
TDK Taldyqorghan 64.14 324 *e*P **P** **09 31 13.8 -1.0**
BOOM Boomskoye usch 64.30 320 P **P** **09 31 16.5 +0.3**
BOOM Boomskoye usch 64.30 320 P **P** **09 31 16.5 +0.3**
BOOM pmax pmax
comp=Z,52nm,0.9s
CHKK Chushkaly 64.36 322 *e*P **P** **09 31 14.8 -1.5**
baz=322
CHKK Chushkaly 64.36 322 *e*P **P** **09 31 14.8 -1.5**
YAK Yakutsk 64.71 2 P **P** **09 31 18.4 +0.3**
YAK Yakutsk 64.71 2*c i*P **P** **09 31 17.9 -0.2**
YAK *e**PP **sP** **09 31 27.2 0.0**
YAK *e* 09 31 51.3
YAK *e*S **S** **09 39 56.6 -0.2**
YAK *e**SS sS 09 40 15.6 +8.4
YAK *e* 09 41 07.1
YAK *e*SS **SS** **09 44 08.6 +0.4**
YAK pmax pmax
comp=Z,77nm,1.0s
YAK pmax pmax
comp=N,30nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK smax smax
comp=E,161nm,5.7s
YAK smax smax
comp=N,40nm,4.4s
YAK Yakutsk 64.71 2 LR LR 09 59 40.2
comp=N,66nm,21.6s,baz=122,slow=36
TKM2 Tokmak 2 64.74 321 P **P** **09 31 19.6 +0.6**
SNR=21
TKM2 Tokmak 2 64.74 321 *i* P **P** **09 31 19.4 +0.3**
TKM2 pmax pmax
comp=Z,63nm,0.7s
KUU Kurty 64.78 322 *e*P **P** **09 31 18.3 -0.7**
baz=322
KUU Kurty 64.78 322 *e*P **P** **09 31 18.3 -0.7**
MA2 Magadan 65.01 13 P **P** **09 31 20.4 +0.2**
MA2 IAmb IAmb 09 31 30.8
comp=Z,16nm,0.8s
MA2 Magadan 65.01 13 P **P** **09 31 21.3 +1.1**
MA2 Magadan 65.01 13*ce*P **P** **09 31 19.8 -0.4**
MA2 pmax pmax
comp=Z,35nm,1.7s
MA2 Magadan 65.01 13 LR LR 09 56 53.7
comp=Z,83nm,21.7s,baz=216,slow=34
KBK Karagaybulak 65.02 320 P **P** **09 31 21.7 +0.9**
SNR=7.5
UCH Uchtor 65.09 320 P **P** **09 31 22.6 +1.0**
SNR=16
AAK Ala-Archa 65.30 320 P **P** **09 31 23.4 +0.8**
SNR=13
AAK Ala-Archa 65.30 320 P **P** **09 31 23.4 +0.8**
AAK Ala-Archa 65.30 320*ce*P **P** **09 31 23.1 +0.5**
AAK pmax pmax
comp=Z,47nm,2.5s
AAK Ala-Archa 65.30 320 P **P** **09 31 23.5 +0.8**
comp=Z,10nm,0.8s,baz=132,slow=6.9,SNR=28
comp=Z,10nm,0.8s
CHMS Chumysh 65.32 320 P P 09 31 32.0 +9.5
SNR=7.4
USP Ospenovka 65.61 321 P **P** **09 31 24.9 +0.4**
SNR=23
SGDS Sogindy 65.62 321 *e*P **P** **09 31 23.3 -1.3**
baz=321
SGDS Sogindy 65.62 321 *e*P **P** **09 31 23.2 -1.3**
DRK Karamyk 65.63 316 P **P** **09 31 25.3 +0.3**
KBL Kabul 65.64 310 P **P** **09 31 25.2 +0.1**
KBL Kabul 65.64 310 P **P** **09 31 25.2 +0.1**
KBL pmax pmax
comp=Z,55nm,0.9s
KBL Kabul 65.64 310 P **P** **09 31 25.5 +0.4**
SNR=31
ARSB Arslanbob 65.66 318 P **P** **09 31 25.1 +0.1**
ARSB IAmb IAmb 09 31 35.6
comp=Z,22nm,0.8s
ARSB Arslanbob 65.66 318 P **P** **09 31 25.1 +0.1**
ARSB pmax pmax
comp=Z,22nm,0.8s
EKS2 Erkin-Say 65.78 320 P **P** **09 31 26.7 +1.0**
SNR=20
ZAA0 Zalesovo Array 66.45 334 P **P** **09 31 27.8 -1.7**
ZALV Zalesovo Beam 66.45 334 P **P** **09 31 28.8 -0.8**
ZALV Zalesovo Beam 66.45 334 P **P** **09 31 28.8 -0.8**
ZALV Zalesovo Beam 66.45 334 P **P** **09 31 28.3 -1.2**
comp=Z,16nm,0.9s,baz=129,slow=4.6,SNR=30
comp=Z,16nm,0.9s
BTK Batken 66.56 316 P **P** **09 31 30.6 -0.1**
BTK IAmb IAmb 09 31 42.5
comp=Z,33nm,0.8s
BTK Batken 66.56 316 P **P** **09 31 30.6 -0.1**
BTK pmax pmax
comp=Z,33nm,0.9s
BTLS Baital 66.78 322 *e*P **P** **09 31 30.5 -1.5**
baz=322
BTLS Baital 66.78 322 *e*P **P** **09 31 30.4 -1.5**
SIMJ Simiganj 67.26 314 P **P** **09 31 35.1 -0.2**
KURBB Kurchatov Arra 67.30 329 P **P** **09 31 34.8 -0.3**
comp=Z,35nm,0.8s,baz=126,slow=6.0,SNR=266
comp=Z,35nm,0.8s
KURK Kurchatov 67.31 329 P **P** **09 31 34.9 -0.1**
KURK Kurchatov 67.31 329 *i* P **P** **09 31 34.5 -0.6**
KURK pmax pmax
comp=Z,84nm,1.0s
IUG luzhnay 68.00 318 *e*P **P** **09 31 38.7 -1.2**
comp=Z,9.7nm,0.6s,baz=318
IUG luzhnay 68.00 318 *e*P **P** **09 31 38.6 -1.2**
IUG pmax pmax
comp=Z,10.0nm,0.6s
KK31 Karatay Array 68.11 319 P **P** **09 31 40.5 +0.1**
KK31 Karatay Array 68.11 319 *i* P **P** **09 31 40.0 -0.3**
KKAR Karatay Array 68.11 319 P **P** **09 31 39.9 -0.4**
KKAR Karatay Array 68.11 319 P **P** **09 31 39.9 -0.4**
SEY Seymchan 68.37 12*ce*P **P** **09 31 42.6 +1.1**
SEY pmax pmax
comp=Z,69nm,1.7s
SEY Seymchan 68.37 12 LR LR 10 00 12.3
comp=Z,62nm,20.5s,baz=324,slow=35
BRLS Borolday 68.52 319 *e*P **P** **09 31 41.5 -1.5**
baz=318
BRLS Borolday 68.52 319 *e*P **P** **09 31 41.4 -1.5**
OTUK Ortayu 69.40 324 P **P** **09 31 47.6 -0.7**
BRZS Berezniki 70.08 326 *e*P **P** **09 31 50.9 -1.5**
comp=Z,12nm,0.9s,baz=326
BRZS Berezniki 70.08 326 *e*P **P** **09 31 50.9 -1.5**
BRZS pmax pmax
comp=Z,12nm,0.9s
JLN Jalan Bani Buh 70.25 295 P **P** **09 31 54.3 +0.3**
WBK Wadi Bani Khal 70.74 295 P P 09 31 51.3 -5.8
HRA Herat 70.88 308 P **P** **09 31 58.0 +0.1**
HRA IAmb IAmb 09 32 07.9
comp=Z,18nm,1.0s
WSAR Wadi Sarin 71.17 296 LR LR 10 08 04.9
comp=Z,45nm,18.1s,baz=103,slow=40
JMDO Jabal Madar 71.48 295 P **P** **09 32 01.9 +0.3**
SMDO Samad 71.66 295 P **P** **09 32 02.5 -0.2**
BIDO Bidbid 71.69 296 P **P** **09 32 03.2 +0.4**
SNR=14
BSY Bisya 72.37 295 P P 09 32 15.9 +9.0
HOQ Hoqain 72.43 296 P **P** **09 32 07.7 +0.5**
SNR=13
BVA0 Borovoye Array 72.84 328 *i* P **P** **09 32 08.4 -0.7**
BVAR Borovoye Array 72.84 328 P **P** **09 32 08.6 -0.5**
comp=Z,20nm,0.8s,baz=128,slow=6.1,SNR=91
comp=Z,20nm,0.8s
BRVK Borovoye 72.92 328 P **P** **09 32 09.0 -0.5**
BRVK Borovoye 72.92 328*ce*P **P** **09 32 08.9 -0.5**
BRVK pmax pmax
comp=Z,31nm,1.0s
ARQ Araqi 73.10 295 P P 09 32 20.5 +9.3
SOHO SOHO 73.23 296 P **P** **09 32 11.5 -0.4**
RAR Rarotonga 73.55 111 LR LR 10 06 03.2
comp=Z,46nm,18.4s,baz=179,slow=37
UOSS Minazif 73.68 297 P **P** **09 32 13.8 -0.7**
UOSS Minazif 73.68 297 P **P** **09 32 13.9 -0.7**
HATD Hatta, Dubai 73.72 297 P **P** **09 32 15.2 +0.4**
SNR=5.4
ASHO Ashiyiah 73.76 297 P **P** **09 32 14.9 -0.2**
MASF Masafi 73.81 297 P **P** **09 32 14.5 -0.9**
SHME Shamm 73.95 298 P **P** **09 32 12.3 -3.9**
NAZ Nazwa, Dubai 74.17 297 P **P** **09 32 21.5 +4.1**
TIXI Tiksi 74.34 1 P **P** **09 32 16.3 -1.1**
TIXI IAmb IAmb 09 32 17.8
comp=Z,18nm,0.9s
TIXI Tiksi 74.34 1*ce*P **P** **09 32 15.4 -2.1**
TIXI pmax pmax
comp=Z,31nm,1.3s
TIXI Tiksi 74.34 1 LR LR 10 06 50.3
comp=Z,129nm,18.9s,baz=198,slow=37
GEYT Alibeck 75.08 310 P **P** **09 32 23.2 +0.7**
GEYT PcP **pwP** **09 32 32.2 -0.4**
GEYT IAmb IAmb 09 32 33.1
comp=Z,31nm,1.1s
GEYT Alibeck 75.08 310 P **P** **09 32 23.2 +0.7**
comp=Z,4.0nm,0.8s,baz=158,slow=4.7,SNR=7.2
comp=Z,4.0nm,0.8s
GYA0B ALIBECK ARRAY 75.08 310 P **P** **09 32 23.3 +0.8**
GYA0B PcP **pwP** **09 32 32.5 -0.1**
GYA0B IAmb IAmb 09 32 33.1
comp=Z,25nm,1.1s
BILL Bilibino 75.83 14 P **P** **09 32 26.8 +0.6**
BILL PcP **sP** **09 32 36.5 +0.4**
BILL Bilibino 75.83 14*e*P **P** **09 32 25.7 -0.4**
BILL pmax pmax
comp=Z,3.0nm,0.8s
NRIK Noril'sk 76.77 347 P **P** **09 32 31.5 +0.1**
NRIK IAmb IAmb 09 32 32.5
comp=Z,27nm,0.9s
NRIK PcP **sP** **09 32 41.0 -0.3**
NRIK Noril'sk 76.77 347*ce*P **P** **09 32 30.9 -0.5**
NRIK pmax pmax
comp=Z,32nm,0.9s
NRIK Noril'sk 76.77 347 P **P** **09 32 31.4 -0.1**
comp=Z,20nm,0.8s,baz=130,slow=6.8,SNR=35
comp=Z,20nm,0.8s
VNDA Vanda 76.97 173 P **P** **09 32 31.6 -0.9**
comp=Z,6.1nm,0.8s,baz=322,slow=5.8,SNR=22
VNDA LR LR 10 05 24.3
comp=Z,102nm,20.1s,baz=327,slow=35
comp=Z,6.1nm,0.8s
AB31 Akbulak array 77.26 322 *i* P **P** **09 32 33.6 -1.0**
ABKAR Akbulak array 77.26 322 P **P** **09 32 33.6 -1.1**
ABKAR PcP **sP** **09 32 43.5 -1.0**
ABKAR Akbulak array 77.26 322 P **P** **09 32 33.8 -0.8**
ABKAR PcP **sP** **09 32 43.5 -1.0**
ABKAR IAmb IAmb 09 32 44.2
comp=Z,23nm,1.0s
MAW Mawson 77.68 201 LR LR 10 03 47.6
comp=Z,88nm,20.9s,baz=66,slow=33
AKTO Aktyubinsk 78.83 323 P **P** **09 32 42.6 -0.7**
comp=Z,9.5nm,0.8s,baz=112,slow=5.9,SNR=20
comp=Z,9.5nm,0.8s
ARU Arti 80.49 328 P **P** **09 32 51.0 -1.2**
ARU PcP **sP** **09 33 00.6 -1.6**
ARU Arti 80.49 328*c i*P **P** **09 32 50.9 -1.2**
ARU 09 35 50.9
ARU S **S** **09 42 57.2 0.0**
ARU SS **SS** **09 48 04.8 -4.8**
ARU pmax pmax
comp=Z,13nm,1.0s
ARU Arti 80.49 328 P **P** **09 32 50.7 -1.5**
comp=Z,6.0nm,0.2s,baz=91,slow=3.1,SNR=8.6
comp=Z,6.0nm,0.2s
SDPT Sand Point 82.58 33 P **P** **09 33 03.1 -0.1**
CNBA Chernabura Isl 82.92 34 P **P** **09 33 05.8 +0.7**
PPT Papeete 83.09 107 LR LR 10 11 21.7
comp=Z,20nm,18.1s,baz=293,slow=37
RAYN Ar Rayn 83.13 294 P **P** **09 33 06.2 -0.6**
RAYN IAmb IAmb 09 33 16.8
comp=Z,17nm,0.9s
RAYN Ar Rayn 83.13 294 P **P** **09 33 06.3 -0.6**
RAYN pmax pmax
comp=Z,17nm,1.0s
ANM Nome 83.19 24 P **P** **09 33 07.6 +1.4**
ANM IAmb IAmb 09 33 08.2
comp=Z,16nm,0.8s
ANM Nome 83.19 24 P **P** **09 33 07.6 +1.4**
ANM pmax pmax
comp=Z,16nm,0.8s
L14K Kuka Creek 83.24 27 P **P** **09 33 08.2 +1.7**
L14K IAmb IAmb 09 33 09.1
comp=Z,36nm,1.0s
J14K Nanvaranak Lak 83.31 26 P **P** **09 33 08.3 +1.5**
J14K IAmb IAmb 09 33 09.5
comp=Z,28nm,1.0s
M14K Bethel 83.39 28 P **P** **09 33 08.3 +1.0**
F15K North Star Dit 83.88 23 P **P** **09 33 11.1 +1.3**
F15K IAmb IAmb 09 33 12.3
comp=Z,46nm,1.2s
K15K Wolf Creek Mou 84.06 26 P **P** **09 33 12.4 +1.6**
N15K Kwethluk River 84.10 29 P **P** **09 33 12.3 +1.3**
C16K Lisburne Hills 84.56 20 P **P** **09 33 14.6 +1.4**
C16K IAmb IAmb 09 33 15.4
comp=Z,20nm,1.1s
G16K Koyuk River 84.67 23 P **P** **09 33 14.9 +1.2**
J16K Anvik River 84.76 26 P **P** **09 33 16.0 +1.7**
L16K Owhat River 84.82 27 P **P** **09 33 15.8 +1.2**
M16K Timber Creek 84.87 28 P **P** **09 33 16.6 +1.7**
I17K Unalakleet 84.89 25 P **P** **09 33 16.7 +1.8**
I17K IAmb IAmb 09 33 17.7
comp=Z,25nm,1.2s
O16K Kokwok River B 84.93 30 P **P** **09 33 16.7 +1.6**
N17K Nushagak Hills 85.59 29 IAmb IAmb 09 33 21.1
comp=Z,25nm,1.0s
BELG Belogornoye 85.61 323*c i*P **P** **09 33 17.7 -1.0**
BELG pmax pmax
comp=Z,10.0nm,1.0s
K17K Iditarod 85.61 27 P **P** **09 33 20.1 +1.5**
K17K IAmb IAmb 09 33 21.8
comp=Z,31nm,1.1s
GNI Garni 85.72 310 LR LR 10 19 33.6
comp=Z,21nm,18.1s,baz=154,slow=41
KIRV Kirov 85.83 329 *i* P **P** **09 33 18.1 -1.5**
KIRV Kirov 85.83 329 P **P** **09 33 18.9 -0.7**
comp=Z,4.8nm,0.5s,baz=90,slow=11,SNR=6.5
comp=Z,4.8nm,0.5s
E18K Tukpahlearik C 85.97 22 P **P** **09 33 21.2 +1.0**
C18K Utukok River 86.13 20 P **P** **09 33 21.6 +0.5**
L18K Granite Mounta 86.22 27 IAmb IAmb 09 33 24.1
comp=Z,15nm,0.8s
C19K Lookout Ridge 86.82 20 P **P** **09 33 25.4 +0.9**
C19K IAmb IAmb 09 33 26.4
comp=Z,18nm,0.8s
F19K Shaleruckik Mo 86.88 23 P **P** **09 33 25.2 +0.5**
F19K IAmb IAmb 09 33 25.6
comp=Z,24nm,1.8s
OHAK Old Harbor 86.90 32 P **P** **09 33 25.8 +0.9**
N19K Bonanza Creek 86.95 29 IAmb IAmb 09 33 28.2
comp=Z,28nm,0.9s
G19K Purcell Mounta 86.97 23 IAmb IAmb 09 33 26.7
comp=Z,28nm,0.8s
H19K Roundabout Mou 87.08 24 IAmb IAmb 09 33 27.3
comp=Z,18nm,0.8s
J19K Poorman 87.09 26 P **P** **09 33 26.7 +0.9**
QSPA South Pole Qui 87.13 180 P **P** **09 33 24.1 -2.1**
QSPA IAmb IAmb 09 33 25.3
comp=Z,26nm,1.4s
QSPA South Pole Qui 87.13 180 P **P** **09 33 24.0 -2.1**
comp=Z,16nm,1.1s,baz=308,slow=1.2,SNR=30
comp=Z,16nm,1.1s
D19K Kuna River 87.17 21 P **P** **09 33 26.6 +0.5**
D19K IAmb IAmb 09 33 27.5
comp=Z,25nm,1.1s
M19K Big River Lodg 87.21 28 P **P** **09 33 27.8 +1.3**
M19K IAmb IAmb 09 33 37.7
comp=Z,12nm,0.8s
E19K Redstone River 87.23 22 P **P** **09 33 27.2 +0.7**
E19K IAmb IAmb 09 33 28.1
comp=Z,28nm,0.9s
KDAK Kodiak Island 87.37 32 P **P** **09 33 27.5 +0.3**
KDAK Kodiak Island 87.37 32 *i* P **P** **09 33 26.3 -1.0**
KDAK pmax pmax
comp=Z,177nm,1.7s
KDAK Kodiak Island 87.37 32 LR LR 10 06 37.5
comp=Z,105nm,22.0s,baz=235,slow=32
KBZ Khabaz 87.51 314 *i* P **P** **09 33 25.2 -3.0**
KBZ pmax pmax
comp=Z,12nm,1.3s
KBZ Khabaz 87.51 314 P **P** **09 33 27.7 -0.6**
comp=Z,1.7nm,0.9s,baz=304,slow=3.8,SNR=1.6
comp=Z,1.7nm,0.9s
GURO Guroymak-BITLI 87.63 309 P **P** **09 33 29.9 +0.7**
GURO IAmb IAmb 09 33 40.0
comp=Z,24nm,1.0s
K20K Telida 87.64 26 P **P** **09 33 29.5 +1.0**
F20K Avaraart Lake 87.71 23 P **P** **09 33 29.2 +0.6**
F20K IAmb IAmb 09 33 30.3
comp=Z,13nm,0.8s
J20K Nowinta River 87.76 25 P **P** **09 33 29.9 +0.9**
J20K IAmb IAmb 09 33 31.2
comp=Z,40nm,1.8s
M20K Styx River 87.79 28 P **P** **09 33 30.1 +0.7**
M20K IAmb IAmb 09 33 31.0
comp=Z,16nm,1.0s
IMAR Indian Mountai 88.27 24 P **P** **09 33 31.9 +0.5**
CAST Castle Rocks 88.53 26 P **P** **09 33 33.4 +0.7**
CAST IAmb IAmb 09 35 43.0
comp=Z,35nm,2.0s
SKT Skwentna 88.56 28 P **P** **09 33 31.8 -1.1**
SKT IAmb IAmb 09 33 32.8
comp=Z,16nm,1.1s
H21K Melozitna Rive 88.59 24 P **P** **09 33 33.2 +0.2**
F21K Alatna River 88.60 23 P **P** **09 33 33.1 +0.1**
KIBK Kibwezi 88.63 268 P **P** **09 33 34.9 +0.5**
E21K Killik River 88.65 21 P **P** **09 33 34.0 +0.7**
E21K IAmb IAmb 09 33 34.4
comp=Z,10nm,0.8s
SUA Susitna One 88.85 28 P **P** **09 33 34.3 -0.1**
SUA IAmb IAmb 09 33 44.9
comp=Z,30nm,1.0s
M22K Willow 89.19 28 P **P** **09 33 35.9 +0.1**
D22K Ayikyak River 89.19 21 P **P** **09 33 36.5 +0.7**
D22K IAmb IAmb 09 34 23.4
comp=Z,18nm,1.6s
RC01 Rabbit Creek A 89.28 29 P **P** **09 33 36.3 0.0**
RC01 IAmb IAmb 09 33 47.5
comp=Z,23nm,1.0s
MLY Manley 89.35 25 P **P** **09 33 37.0 +0.4**
MLY IAmb IAmb 09 33 37.6
comp=Z,16nm,1.1s
E22K Anaktuvuk Pass 89.39 22 P **P** **09 33 37.1 +0.4**
E22K IAmb IAmb 09 33 38.3
comp=Z,16nm,0.9s
KMBO Kilima Mbogo 89.48 269 P **P** **09 33 37.3 -1.3**
KMBO IAmb IAmb 09 34 43.4
comp=Z,9.3nm,0.8s
KMBO Kilima Mbogo 89.48 269 P **P** **09 33 37.3 -1.3**
KMBO pmax pmax
comp=Z,9.0nm,0.8s
SOC Sochi 89.80 313 *e*P **P** **09 33 36.0 -3.1**
SOC *e* 09 37 08.4
SOC *e*S **SKSac** **09 44 03.5 -4.9**
SOC *e*SS **SS** **09 50 25.0 -2.2**
SOC MLR MLR
comp=Z,591nm,22.0s
G23K Bananza Creek 89.87 23 P **P** **09 33 39.5 +0.6**
G23K IAmb IAmb 09 33 40.6
comp=Z,14nm,0.9s
I23K Minto, Yukon-K 89.94 25 P **P** **09 33 40.1 +0.8**
I23K IAmb IAmb 09 33 40.5
comp=Z,25nm,1.1s
RND Reindeer 89.97 27 P **P** **09 33 38.6 -0.9**
RND IAmb IAmb 09 33 48.9
comp=Z,12nm,0.9s
RND Reindeer 89.97 27 P **P** **09 33 38.7 -0.9**
RND pmax pmax
comp=Z,12nm,0.9s
SML Sawmill 90.04 28 P **P** **09 33 40.0 +0.1**
SML IAmb IAmb 09 33 42.7
comp=Z,21nm,0.9s
WRH Wood River Hil 90.41 26 P **P** **09 33 41.2 -0.2**
WRH IAmb IAmb 09 33 41.6
comp=Z,19nm,1.1s
CCB Clear Creek Bu 90.55 25 P **P** **09 33 41.5 -0.6**
CCB IAmb IAmb 09 33 42.6

comp=Z,15nm,1.0s
D24K Happy Valley 90.61 21 P **P** 09 33 43.2 **+0.9**
D24K IAmb IAmb 09 33 44.0
comp=Z,12nm,1.1s
H24K Noodor Dome 90.63 24 P **P** 09 33 43.3 **+0.7**
H24K IAmb IAmb 09 33 44.0
comp=Z,11nm,0.8s
HDA Harding Lake 90.90 26 IAmb IAmb 09 33 43.8
comp=Z,12nm,0.8s
IL31 90.96 25 IAmb IAmb 09 35 14.8
comp=Z,27nm,1.9s
ILAR Eielson Array 90.96 25 P **P** 09 33 42.5 **-1.5**
ILAR Eielson Array 90.96 25 P **P** 09 33 42.5 **-1.5**
ILAR Eielson Array 90.96 25 P **P** 09 33 42.1 **-1.9**
comp=Z,2.6nm,0.8s,baz=257,slow=4.4,SNR=27
ILAR PP **PP** 09 37 17.2 **-3.0**
comp=Z,1.6nm,1.0s,baz=263,slow=7.2,SNR=7.6
ILAR LR LR 10 09 51.7
comp=Z,58nm,21.6s,baz=248,slow=32
comp=Z,2.6nm,0.8s
KLMR Klimovskoe 91.10 331 *e*P P 09 33 40.2 -4.6
KLMR pmax pmax
comp=Z,24nm,1.8s
KLU Klutina 91.16 29 P **P** 09 33 45.8 **+0.6**
KLU IAmb IAmb 09 34 26.7
comp=Z,30nm,1.4s
D25K Kavik River 91.49 21 P **P** 09 33 47.0 **+0.5**
J25K Salcha River, 91.60 26 IAmb IAmb 09 34 14.3
comp=Z,14nm,1.4s
E25K Arctic Village 91.71 22 IAmb IAmb 09 33 49.4
comp=Z,16nm,1.4s
RIDG Independent Ri 91.78 26 IAmb IAmb 09 33 48.6
comp=Z,22nm,1.1s
BMAR Burnt Mountain 92.05 23 P **P** 09 33 50.2 **+1.0**
J26L Joseph Creek 92.37 26 P **P** 09 33 51.4 **+0.7**
J26L IAmb IAmb 09 33 51.6
comp=Z,13nm,0.8s
I26K Coal Creek Min 92.56 25 P **P** 09 33 51.9 **+0.5**
I26K IAmb IAmb 09 33 52.3
comp=Z,9.0nm,0.9s
WAX Waxell Ridge 92.61 30 P **P** 09 33 53.2 **+1.3**
TGL Tana Glacier 92.62 29 P **P** 09 33 52.8 **+0.8**
MMAI Mount Meron Ar 92.68 303 LR LR 10 21 56.2
comp=Z,40nm,20.1s,baz=88,slow=40
EIL Elat 92.97 299 LR LR 10 22 12.9
comp=Z,33nm,18.0s,baz=63,slow=40
L27K Beaver Creek, 93.12 27 IAmb IAmb 09 33 56.1
comp=Z,19nm,1.2s
EGAK Eagle 93.41 25 P **P** 09 33 55.7 **+0.3**
TABL Table Mountain 93.46 30 P **P** 09 33 57.5 **+1.5**
F28M Old Crow 93.86 23 P **P** 09 33 58.3 **+0.9**
F28M IAmb IAmb 09 33 58.7
comp=Z,8.1nm,0.9s
I28M Miner Creek 93.91 25 P **P** 09 33 58.6 **+0.8**
I28M IAmb IAmb 09 33 59.4
comp=Z,19nm,0.9s
DAWY Dawson 94.19 26 P **P** 09 33 59.9 **+0.8**
DAWY IAmb IAmb 09 34 00.7
comp=Z,19nm,1.0s
BRTR Keskin Array B 94.21 309 P **P** 09 33 58.7 **-1.2**
comp=Z,0.8nm,0.8s,baz=150,slow=6.0,SNR=1.9
comp=Z,0.8nm,0.8s
H29M Whitestone 94.52 24 P **P** 09 34 01.0 **+0.5**
H29M IAmb IAmb 09 36 46.7
comp=Z,40nm,1.8s
E29M Blow River 94.57 22 IAmb IAmb 09 34 10.9
comp=Z,12nm,1.4s
M29M Somme Creek 94.69 28 IAmb IAmb 09 34 12.3
comp=Z,12nm,1.1s
J29N Klondike Camp 94.69 26 IAmb IAmb 09 34 02.9
comp=Z,12nm,1.1s
L29M L29M 94.80 27 IAmb IAmb 09 34 04.2
comp=Z,21nm,1.1s
K29M Barlow Dome 95.03 26 P **P** 09 34 03.9 **+0.9**
K29M IAmb IAmb 09 34 05.6
comp=Z,22nm,1.2s
HYT Haines Junctio 95.23 29 IAmb IAmb 09 34 06.3
comp=Z,17nm,0.9s
G30M tAoh Zrail Nji 95.32 23 IAmb IAmb 09 34 04.7
comp=Z,15nm,1.1s
M30M Minto, Yukon 95.45 28 P **P** 09 34 05.9 **+1.1**
J30M Hart River 95.49 26 IAmb IAmb 09 34 06.8
comp=Z,16nm,1.3s
MBAR Mbarara 96.01 269 LR LR 10 16 31.0
comp=Z,56nm,18.1s,baz=95,slow=35
G31M Satah River 96.09 23 IAmb IAmb 09 34 08.1
comp=Z,18nm,0.8s
INK Inuvik 96.19 22 P **P** 09 34 07.9 **-0.1**
INK IAmb IAmb 09 34 08.6
comp=Z,15nm,1.1s
INK Inuvik 96.19 22 P **P** 09 34 07.9 **-0.1**
INK pmax pmax
comp=Z,15nm,1.2s
INK Inuvik 96.19 22 LR LR 10 17 58.0
comp=Z,32nm,20.8s,baz=196,slow=36
H31M Peel River 96.20 24 IAmb IAmb 09 34 09.0
comp=Z,23nm,1.4s
F31M Tsiigehtchic 96.23 23 IAmb IAmb 09 34 08.6
comp=Z,13nm,0.9s
WHY Whitehorse 96.53 29 IAmb IAmb 09 34 11.7
comp=Z,16nm,1.0s
ARCES ARCESS Array B 96.57 340 P **P** 09 34 08.1 **-1.7**
comp=Z,6.8nm,1.0s,baz=77,slow=5.6,SNR=7.3
comp=Z,6.8nm,1.0s
SPITS Spitsbergen Ar 96.87 349 P **P** 09 34 10.4 **-0.6**
SPITS pmax pmax
comp=Z,145nm,1.5s
SPITS Spitsbergen Ar 96.87 349 P **P** 09 34 09.9 **-1.0**
comp=Z,16nm,1.0s,baz=64,slow=6.6,SNR=4.3
SPITS LR LR 10 21 22.5
comp=Z,47nm,21.4s,baz=7.5,slow=38
comp=Z,16nm,1.0s
FARO Faro, Yukon 97.08 28 P Pdif 09 34 13.0 +0.6
FARO IAmb IAmb 09 34 13.9
comp=Z,14nm,1.0s
LSZ Lusaka 97.55 254 LR LR 10 13 23.1
comp=Z,42nm,21.0s,baz=100,slow=32
A36M Sachs Harbour 98.18 17 P **P** 09 34 17.1 **+0.2**
A36M IAmb IAmb 09 34 27.4
comp=Z,5.1nm,0.9s
R33M Jennings River 98.65 30 P Pdif 09 34 20.6 +1.1
BOSA Boshof 98.76 241 LR LR 10 17 49.7
comp=Z,52nm,18.3s,baz=150,slow=35
SNAA Sanae 98.93 194 LR LR 10 18 26.4
comp=Z,82nm,18.2s,baz=72,slow=35
LBTB Lobatse 98.94 244 LR LR 10 11 13.2
comp=Z,58nm,21.7s,baz=134,slow=31
DLBC Dease Lake 99.29 31 LR LR 10 12 33.7
comp=Z,42nm,21.0s,baz=284,slow=31
C36M Paulatuk 99.31 20 Pdif Pdif 09 34 21.9 **-0.1**
C36M IAmb IAmb 09 34 22.8
comp=Z,10nm,0.9s
RES Resolute Bay 104.20 11 Pdif **Pdif** 09 34 44.2 **+0.5**
RES Resolute Bay 104.20 11 *i* P **Pdif** 09 34 44.2 **+0.5**
YKA Yellowknife Ar 105.38 25 Pdiff **Pdif** 09 34 48.9 **-0.3**
comp=Z,0.5nm,0.8s,baz=291,slow=5.3,SNR=6.3
YKA PKIKP **PKiKP** 09 39 02.5 **-0.3**
comp=Z,0.4nm,0.8s,baz=293,slow=1.7,SNR=6.7
PD31 Pinedale Array 116.14 43 **PKiKP** 09 39 24.8 **+0.6**
PDAR Pinedale Array 116.14 43 PKPdf **PKPdf** 09 39 24.6 **+0.4**
PDAR Pinedale Array 116.14 43 PKP **PKPdf** 09 39 24.1 **-0.1**
comp=Z,0.8nm,0.5s,baz=284,slow=3.6,SNR=15
PDAR PKKPbc **PKKPbc** 09 49 54.1 **-1.2**
comp=Z,0.4nm,0.7s,baz=105,slow=5.8,SNR=4.4
U15A North Rim 116.28 51 PKPdf **PKiKP** 09 39 26.4 **+1.7**
ORCD Orcadas 116.28 185 PKPdf **PKPdf** 09 39 25.3 **+1.8**
P17A Butcher Ranch, 116.49 47 PKPdf **PKiKP** 09 39 25.4 **+0.6**
LAO LASA Array 116.69 38 **PKiKP** 09 39 25.5 **+0.6**
SRU San Rafael Swe 116.77 47 PKPdf **PKiKP** 09 39 26.2 **+0.8**
SRU San Rafael Swe 116.77 47 PKiKP **PKiKP** 09 39 26.2 **+0.8**
WUAZ Wupatki 117.26 51 PKPdf **PKiKP** 09 39 27.4 **+1.0**
X16A Lo Mia Camp, P 117.53 52 PKPdf **PKiKP** 09 39 28.4 **+1.3**
O20A White River Ci 118.05 45 PKPdf **PKiKP** 09 39 29.1 **+1.2**
RWWY Rawlins 118.17 43 **PKPdf** 09 39 27.8 **-0.3**
TUC Tucson 118.65 55 **PKiKP** 09 39 30.5 **+1.4**
TUC Tucson 118.65 55 PKiKP **PKiKP** 09 39 30.5 **+1.4**
W18A Petrified Fore 118.66 51 PKPdf **PKPdf** 09 39 29.0 **-0.1**
X18A Snowflake 118.67 52 PKPdf **PKPdf** 09 39 29.6 **+0.4**
MVCO Mesa Verde 118.92 49 PKPdf **PKiKP** 09 39 30.4 **+0.7**
RSSD Black Hills 119.23 40 PKPdf **PKPdf** 09 39 29.8 **-0.2**
RSSD Black Hills 119.23 40 PKiKP **PKPdf** 09 39 29.8 **-0.2**
N23A Red Feather La 119.36 44 PKPdf **PKPdf** 09 39 30.4 **-0.1**
HSIG 119.38 58 PKPdf **PKPdf** 09 39 30.8 **+0.4**
DUN6 Lazy B Ranch 119.95 54 PKPdf **PKiKP** 09 39 33.0 **+1.3**
ISCO Idaho Springs 120.04 45 PKPdf **PKPdf** 09 39 32.2 **+0.4**
ISCO Idaho Springs 120.04 45 PKiKP **PKPdf** 09 39 32.2 **+0.4**
E28A Huff 120.07 36 PKPdf **PKPdf** 09 39 30.3 **-1.0**
319A Douglas 120.14 55 PKPdf **PKiKP** 09 39 32.6 **+0.5**
ULM Lac du Bonnet 120.59 30 PKPdf **PKPdf** 09 39 31.2 **-0.9**
ULM Lac du Bonnet 120.59 30 PKiKP **PKPdf** 09 39 31.2 **-0.9**
ULM Lac du Bonnet 120.59 30 PKP **PKPdf** 09 39 31.5 **-0.7**
comp=Z,3.8nm,0.7s,baz=274,slow=2.2,SNR=10
SDCO Great Sand Dun 120.94 47 **PKiKP** 09 39 34.6 **+0.9**
121A Cookes Peak, D 121.01 53 PKPdf **PKPdf** 09 39 34.1 **+0.4**
ANMO Albuquerque 121.25 50 PKPdf **PKPdf** 09 39 34.3 **+0.1**
ANMO Albuquerque 121.25 50 PKiKP **PKPdf** 09 39 34.3 **+0.1**
ECSD EROS Data Cent 124.03 37 PKPdf **PKPdf** 09 39 38.7 **-0.3**
BGNE Belgrade 124.33 40 **PKPdf** 09 39 39.0 **0.0**
MSTX Mulehoe 124.44 50 PKPdf **PKiKP** 09 39 41.0 **+0.5**
TOAO Torodi Ar. Sit 124.78 284 PKPdf **PKPdf** 09 39 41.3 **+0.2**
TORD Torodi Ar. Bea 124.78 284 **PKPdf** 09 39 41.3 **+0.1**
TORD Torodi Ar. Bea 124.78 284 PKP **PKPdf** 09 39 40.9 **-0.3**
comp=Z,5.4nm,0.8s,baz=57,slow=2.6,SNR=33
TORD PKKPbc **PKKPab** 09 49 21.2 **-0.6**
comp=Z,1.8nm,1.1s,baz=246,slow=1.4,SNR=5.7
ALPN Alpine 125.06 54 PKPdf **PKiKP** 09 39 42.7 **+0.8**
TXAR Lajitas Array 125.39 56 PKP **PKPdf** 09 39 42.6 **+0.4**
comp=Z,2.2nm,0.8s,baz=298,slow=1.9,SNR=10
KSU1 Kansas State U 126.54 42 PKPdf **PKiKP** 09 39 44.8 **+0.4**
OK032 Salt Plains WL 126.58 45 PKPdf **PKiKP** 09 39 45.2 **+0.6**
COWI Conover 126.72 31 PKPdf **PKPdf** 09 39 44.4 **+0.4**
G40A Rib Lake 126.72 32 **PKPdf** 09 39 44.0 **0.0**
SCHQ Schefferville 126.97 10 PKP **PKPdf** 09 39 44.6 **+0.3**
comp=Z,1.9nm,0.8s,baz=25,slow=2.8,SNR=6.4
WMOK Wichita Mounta 127.12 48 PKPdf **PKiKP** 09 39 46.2 **+0.5**
WMOK Wichita Mounta 127.12 48 PKiKP **PKiKP** 09 39 46.2 **+0.5**
OK048 Pawnee Station 127.66 45 PKPdf **PKiKP** 09 39 47.4 **+0.7**
L40A Anamosa 128.21 36 **PKPdf** 09 39 47.3 **+0.3**
JFWS Jewell Farm 128.23 34 PKPdf **PKPdf** 09 39 46.0 **-1.0**
JFWS Jewell Farm 128.23 34 PKiKP **PKPdf** 09 39 46.0 **-1.0**
P38A Dawn 128.26 40 PKPdf **PKPdf** 09 39 47.5 **+0.4**
ZAIG Zacatecas 128.26 63 PKPdf **PKiKP** 09 39 49.5 **+0.9**
PLPT Palo Pinto 128.32 49 PKPdf **PKiKP** 09 39 49.3 **+1.2**
W35A Tecumseh 128.32 46 PKPdf **PKiKP** 09 39 48.9 **+0.8**
BRDY Brady 128.43 52 PKPdf **PKiKP** 09 39 48.7 **+0.3**
U38A Cravette 129.43 42 PKPdf **PKiKP** 09 39 49.2 **-0.3**
S39A Bolivar 129.47 41 PKPdf **PKPdf** 09 39 50.0 **+0.4**
HHAR Hobbs 129.82 43 **PKPdf** 09 39 49.7 **-0.6**
R40A Maddies Statio 129.82 40 **PKPdf** 09 39 50.4 **+0.2**
MGMO Mountain Grove 130.47 41 **PKPdf** 09 39 52.0 **+0.6**
CCM Cathedral Cave 130.62 40 PKPdf **PKPdf** 09 39 52.2 **+0.5**
CCM Cathedral Cave 130.62 40 PKiKP **PKPdf** 09 39 52.2 **+0.5**
P43A Skaggs, Pawnee 130.73 37 **PKiKP** 09 39 53.2 **+0.5**
MIAR Mount Ida 130.98 45 PKPdf **PKiKP** 09 39 53.5 **+0.1**
MIAR Mount Ida 130.98 45 PKiKP **PKiKP** 09 39 53.5 **+0.1**
DBIC Dimbokro 131.68 276 PKP **PKPdf** 09 39 55.2 **+0.8**
comp=Z,3.2nm,0.7s,baz=98,slow=2.7,SNR=5.3
WLAR White Oak Lake 131.75 46 PKPdf **PKPdf** 09 39 54.5 **+0.5**
LCAR Lake Charles 131.82 42 PKPdf **PKPdf** 09 39 54.7 **+0.7**
BLO Bloomington 132.81 36 PKPdf **PKPdf** 09 39 53.1 **-2.6**
BLO Bloomington 132.81 36 PKiKP **PKPdf** 09 39 53.2 **-2.6**
O49A Covington 133.34 33 **PKPdf** 09 39 56.3 **-0.5**
PLCA Paso Flores 133.85 162 PKP **PKiKP** 09 39 59.1 **0.0**
comp=Z,3.0nm,0.8s,baz=236,slow=1.2,SNR=8.9
T50A Nancy 135.23 37 PKPdf **PKPdf** 09 40 00.7 **+0.3**
W50A Signal Mountai 136.13 39 PKPdf **PKPdf** 09 40 02.9 **+0.7**
LCO Las Campanas 144.18 153 PKPdf **PKPab** 09 40 14.9 **0.0**
LCO Las Campanas 144.18 153 PKiKP **PKPab** 09 40 14.9 **0.0**
TGUH Tegucigalpa,Un 144.57 70 **PKPab** 09 40 17.1 **+0.6**
CRIN San Cristobal 145.11 72 *e*P **PKPbc** 09 40 18.6 **+0.2**
PLTB Pedras Altas 145.61 179 PKPdf **PKPdf** 09 40 19.1 **-0.2**
HZTE Horizontes, Gu 146.93 75 *e*P **PKPdf** 09 40 21.6 **-0.3**
ALIBA Liberia Airpor 147.00 75 *e*P **PKiKP** 09 40 27.0 **+0.4**
ACON Acoyapa 147.06 72 *e*P **PKPbc** 09 40 24.4 **+0.1**
JUD3 Juan Diaz 3 147.09 76 *e*P **PKPdf** 09 40 23.4 **+1.1**
ORTG Ortega, Santa 147.13 75 *e*P **PKPbc** 09 40 25.4 **+0.8**
INDI Punta indio, G 147.18 76 *e*P **PKPbc** 09 40 25.8 **+1.1**
CMARA Lajas Hojancha 147.22 76 *e*P **PKPbc** 09 40 26.0 **+1.1**
PLVR Palo Verde 147.23 75 *e*P **PKPbc** 09 40 26.1 **+1.1**
ITQB Itaqui 147.53 174 PKPdf **PKPdf** 09 40 22.4 **-0.2**
VERA Finca Concepci 147.60 74 *e*P **PKPbc** 09 40 25.8 **0.0**
JUNT Juntas 147.63 75 *e*P **PKPbc** 09 40 26.2 **+0.4**
JTS Las Juntas de 147.63 75 PKPbc **PKPbc** 09 40 26.7 **+0.8**
JTS Las Juntas de 147.63 75 PKP2 **PKPbc** 09 40 26.7 **+0.8**
JTS Las Juntas de 147.63 75 *e*P **PKPbc** 09 40 26.3 **+0.4**
LAFE Finca La Fe, P 147.76 76 *e*P **PKPbc** 09 40 27.5 **+1.2**
ARE1 Arenal 1 147.82 75 PKPbc **PKPbc** 09 40 27.2 **+0.8**
ARE1 Arenal 1 147.82 75 *e*P **PKPbc** 09 40 26.6 **+0.1**
CEDE Laguna Cedeo 147.83 75 *e*P **PKPbc** 09 40 27.4 **+0.9**
VACR Volcan Arenal 147.86 75 *e*P **PKPbc** 09 40 26.3 **-0.2**
SOCE Pocosol 147.94 75 PKPbc **PKPbc** 09 40 27.5 **+0.8**
SOCE Pocosol 147.94 75 *e*P **PKPbc** 09 40 27.3 **+0.6**
JACO JACO, Garabito 148.03 76 *e*P **PKPbc** 09 40 28.0 **+1.0**
TRB2 Turrubares 148.19 76 *e*P **PKiKP** 09 40 28.9 **-0.2**
SANTA Santa Ana 148.44 76 *e*P **PKiKP** 09 40 29.7 **0.0**
HDC Heredia 148.50 75 PKPbc **PKPbc** 09 40 29.1 **+0.8**
ABE2 San Pablo 148.61 76 *e*P **PKPdf** 09 40 27.3 **+2.3**
RAZU San Marcos de 148.65 76 *e*P **PKiKP** 09 40 30.4 **+0.2**
LCR2 La Lucha 2 148.65 76 **PKiKP** 09 40 30.2 **-0.1**
LCR2 La Lucha 2 148.65 76 *e*P **PKPbc** 09 40 30.0 **+1.1**
CVIMO Finca Echandi 148.66 75 *e*P **PKiKP** 09 40 30.2 **-0.1**
OCM Ochomogo 148.66 76 *e*P **PKiKP** 09 40 30.3 **0.0**
VICA Volcano Irazu 148.76 75 *e*P **PKiKP** 09 40 30.9 **+0.1**
REPA Paraso 148.76 76 *e*P **PKiKP** 09 40 31.6 **+1.1**
ICR3 Volcano Irazu 148.77 75 *e*P **PKiKP** 09 40 30.9 **+0.1**
RIMA Rio Macho 148.78 76 *e*P **PKiKP** 09 40 30.6 **0.0**
VTRT Volcan Turrial 148.81 75 *e*P **PKPbc** 09 40 30.6 **+1.2**
VTLA Turrialba Volc 148.82 75 *e*P **PKiKP** 09 40 31.0 **+0.2**
CVTQ Turrialba Volc 148.83 75 *e*P **PKiKP** 09 40 30.9 **0.0**
VTR0 Volcan Turrial 148.83 75 *e*P **PKiKP** 09 40 31.1 **+0.2**
CVTR Volcan Turrial 148.84 75 *e*P **PKiKP** 09 40 30.9 **0.0**
CVTV Tajo 148.85 75 *e*P **PKiKP** 09 40 31.0 **+0.2**
VTCV Volcan Turrial 148.87 75 *e*P **PKiKP** 09 40 31.4 **+0.6**
VERB Verbena 148.91 75 *e*P **PKiKP** 09 40 31.0 **+0.3**
CDM Cerro de Muert 148.92 76 *e*P **PKiKP** 09 40 31.5 **+0.4**
TURIB Turrialba 148.93 75 *e*P **PKiKP** 09 40 31.0 **+0.3**
PEZE Perez Zeledon, 149.03 76 *e*P **PKiKP** 09 40 31.3 **+0.3**
IRES Siquirres 149.06 75 *e*P **PKiKP** 09 40 31.9 **+1.0**
PIRO Carate, Puerto 149.52 78 *e*P **PKiKP** 09 40 33.1 **+1.3**
EDP2 Potrero Grande 149.58 77 *e*P **PKiKP** 09 40 33.5 **+1.5**
PB15 IPOC Station P 149.66 149 PKPbc **PKPbc** 09 40 32.1 **+1.0**
PB04 IPOC Station P 150.02 147 PKPbc **PKPbc** 09 40 32.3 **+0.3**
PB06 IPOC Station P 150.02 149 PKPbc **PKPbc** 09 40 32.5 **+0.5**
BRU2 Volcan 150.09 77 *e*P **PKiKP** 09 40 34.1 **+0.9**
ITAB Concordia 150.10 182 **PKPbc** 09 40 31.9 **+0.1**
CPUP Villa Florida 150.75 172 PKP **PKPdf** 09 40 27.3 **-0.6**
comp=Z,5.7nm,0.9s,baz=163,slow=1.6,SNR=8.9
CPUP PKPbc **PKPbc** 09 40 33.3 **-0.1**
comp=Z,6.5nm,0.6s,baz=180,slow=3.0,SNR=12
ROSC El Rosal 158.84 84 PKP **PKPdf** 09 40 39.1 **-0.7**
comp=Z,6.6nm,0.6s,baz=48,slow=15,SNR=1.6
ROSC PKPab **PKPab** 09 41 14.4 **-1.3**
comp=Z,9.9nm,0.6s,baz=325,slow=16,SNR=4.9
BDFB Brasilia 160.95 196 PKP **PKPdf** 09 40 42.3 **+0.6**
comp=Z,2.4nm,0.6s,baz=153,slow=6.8,SNR=4.6
SDV Santo Domingo 161.66 70 PKPdf **PKPdf** 09 40 41.0 **-1.7**
TBTG Tabatinga, AM 161.92 113 PKPdf **PKPdf** 09 40 42.5 **-0.3**
TBTG PKPab **PKPab** 09 41 29.6 **+1.0**
ETMB Extrema 161.97 134 PKPdf **PKPdf** 09 40 42.2 **-0.1**
ETMB PKPab **PKPab** 09 41 28.3 **-0.4**
VILB Vilhena 162.87 156 PKPdf **PKPdf** 09 40 41.2 **-2.4**
VILB PKPab **PKPab** 09 41 32.6 **+0.1**
BAUV El Baul 164.05 67 PKPdf **PKPdf** 09 40 41.9 **-2.9**
BAUV **PKPab** 09 41 38.0 **+0.1**
SAML Samuel 164.66 140 PKPdf **PKPdf** 09 40 44.0 **-1.3**
SAML PKPab **PKPab** 09 41 39.9 **-0.6**
SAML Samuel 164.66 140 PKP2 **PKPab** 09 41 39.9 **-0.6**
SAML 10 40 44.0

*NNC **27** 09:22:08.1±1.6,52.10N×75.58E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=62.7km s-min=5.1km az=27.0, Suspected Mining explosion.*
*IDC **27** 09:22:13.8±1.1,51.77N×75.73E,h0km, mbtmp2.4/3, ML1.9/3,Error ellipse: s-maj=34.7km s-min=8.4km az=29.0.*
ISC 27 09:22:10.2±1.1,52.36N±0.09×76.32E±0.08,h0km,n10, σ1s04/8,2C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.18**	**138**	⇓Pg	**Pb**	**09 22 50.2**	**-0.4**
	2.4nm,0.6s						
KURK				⇓Lg	Lg	09 23 23.2	
	3.4nm,0.5s						
KURBB	**Kurchatov Arra**	**2.22**	**141**	⇓Pg	**Pg**	**09 22 51.8**	**-0.9**
	1.4nm,0.3s						
KURBB				⇑Lg	Lg	09 23 24.1	
	12nm,0.5s						
KURBB	**Kurchatov Arra**	**2.22**	**141**	Pg	**Pb**	**09 22 50.7**	**-0.5**
	0.3nm,0.3s,baz=301,slow=18,SNR=7.0						
KURBB				Lg	Lg	09 23 21.8	
	0.3nm,0.3s,baz=304,slow=31,SNR=7.8						
BVA0	**Borovoye Array**	**3.67**	**283**	Pg	**Pn**	**09 23 08.2**	**0.0**
	1.3nm,0.8s,baz=124,slow=18,SNR=5.6						
BVA0				⇓Lg	Lg	09 23 54.1	
	2.6nm,0.8s,baz=111,slow=28,SNR=6.1						
BVAR	**Borovoye Array**	**3.67**	**283**	Pn	**Pn**	**09 23 09.1**	**+0.8**
	0.1nm,0.3s,baz=113,slow=17,SNR=7.0						
BVAR				Sn	**Sn**	**09 23 51.3**	**-0.9**
	0.1nm,0.3s,baz=112,slow=23,SNR=9.0						
	0.5nm,0.3s						
BRVK	**Borovoye**	**3.74**	**283**	⇑Lg	Lg	09 23 55.0	
	1.7nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.36**	**69**	I	I	09 58 14.8	
	baz=250,slow=292,SNR=5.1						
ZALV	**Zalesovo Beam**	**5.36**	**69**	Pn	**Pb**	**09 23 44.3**	**-0.4**
	0.1nm,0.3s,baz=256,slow=12,SNR=2.1						
	0.4nm,0.4s						
MK31	**Makanchi Array**	**6.79**	**143**	Lg	Lg	09 25 44.1	
	0.6nm,0.5s,baz=324,slow=27,SNR=4.8						
MKAR	**Makanchi Array**	**6.79**	**143**	Pn	**Pn**	**09 23 52.6**	**+1.6**
	baz=317,slow=13,SNR=1.6						
MKAR				Lg	Lg	09 25 43.9	
	0.2nm,0.3s,baz=329,slow=27,SNR=5.8						
	0.1nm,0.4s						

ISK 27 09:26:12.2,38.11N×32.64E,h0km,ML1.4/3,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LADK	**Ladik-KONYA**	**0.23**	**292**	Pg	Pg	09 26 19.1	+2.4
LADK				Sg	Sg	09 26 24.1	+4.4
KONT	**Konya--Tatoy**	**0.28**	**233**	Pg	Pb	09 26 19.7	-0.4
KONT				Sg	Sb	09 26 25.2	-0.2
CHBY	**Cihanbeyli**	**0.51**	**23**	Pg	Pb	09 26 23.3	-0.8

AFAD 27 09:26:40.3±0.0,37.30N×31.93E,h7km±3km,ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEDI	**Konya, Seydise**	**0.21**	**318**	P	Pg	09 26 44.6	+0.1
SEDI				S	Sg	09 26 48.8	+1.5
SEDI				*i* AML	AML	09 26 49.0	
	comp=N,195nm,0.4s						
SEDI				*i* AML	AML	09 26 49.0	
	comp=E,162nm,0.3s						
KEPZ	**Antalya-Kepez**	**0.47**	**213**	P	Pg	09 26 49.6	+0.2
KEPZ				S	Sb	09 26 57.1	-1.0
KEPZ				*i* AML	AML	09 27 00.0	
	comp=E,33nm,0.6s						
KEPZ				*i* AML	AML	09 27 01.0	
	comp=N,36nm,0.4s						
KKBE	**Karaman, Kazim**	**0.81**	**95**	P	Pb	09 26 56.4	-0.4
KKBE				S	Sn	09 27 10.4	-0.2
KKBE				*i* AML	AML	09 27 23.0	
	comp=N,15nm,2.2s						
DOGA	**KONYA_Doganhis**	**0.83**	**346**	P	Pg	09 26 55.8	-0.5
DOGA				S	Sn	09 27 10.7	-0.6
DOGA				*i* AML	AML	09 27 12.0	
	comp=N,24nm,0.3s						
DOGA				*i* AML	AML	09 27 13.0	
	comp=E,16nm,0.5s						
YVAC	**Isparta, Yalva**	**1.11**	**331**	P	Pg	09 27 01.1	-0.6
YVAC				S	Sn	09 27 17.7	-0.5
YVAC				*i* AML	AML	09 27 23.0	
	comp=E,3.8nm,0.3s						
YVAC				*i* AML	AML	09 27 32.0	
	comp=N,11nm,2.0s						
KDHN	**Kadinhani**	**1.23**	**7**	P	Pn	09 27 04.5	+0.4
KDHN				S	Sn	09 27 22.2	+1.2
KDHN				*i* AML	AML	09 27 26.0	
	comp=E,9.6nm,0.4s						
KDHN				*i* AML	AML	09 27 27.0	
	comp=N,5.8nm,0.5s						

*IDC **27** 09:43:43.5±1.8,52.52S×141.20E,h0km,mb3.7/4, mbtmp3.6/6,ML3.3/2,Error ellipse: s-maj=71.5km s-min=30.2km az=100.0*
ISC 27 09:43:48.5±1.7,5.7S±0.2×141.1E±0.5,h35km,n6,σ0s92/7, mb3.7/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.63**	**204**	Pn	**Pn**	**09 47 27.1**	**+0.9**
	0.1nm,0.3s,baz=21,slow=13,SNR=2.9						
WRA				Sn	**Sn**	**09 50 17.2**	**-1.2**
	0.1nm,0.3s,baz=27,slow=21,SNR=4.8						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**19.18**	**201**	P	**Pn**	**09 48 11.0**	**+0.7**
	0.2nm,0.3s,baz=29,slow=10,SNR=9.3						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**73.60**	**322**	P	**P**	**09 55 18.5**	**+0.3**
	0.6nm,0.8s,baz=106,slow=7.8,SNR=4.6						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**77.53**	**325**	P	**P**	**09 55 41.2**	**+0.5**
	0.1nm,0.4s,baz=108,slow=5.6,SNR=1.3						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**83.11**	**325**	P	**P**	**09 56 10.1**	**-0.5**
	1.1nm,0.8s,baz=120,slow=5.2,SNR=5.2						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**87.55**	**24**	P	**P**	**09 56 32.2**	**-0.3**
	0.3nm,0.6s,baz=248,slow=4.7,SNR=5.3						
	0.3nm,0.6s						

*IDC **27** 09:54:54.6±0.8,6.40S×143.59E,h0km,mb3.9/11, mbtmp4.0/13,ML2.2/1,MS3.2/6,Error ellipse: s-maj=26.7km s-min=12.6km az=102.0*
ISC 27 09:54:59.7±0.7,6.41S±0.08×143.6E±0.1,h35km,n18, σ1s44/17,mb4.1/12,MS3.2/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.65**	**130**	Pn	**Pn**	**09 56 07.7**	**+0.2**
	8.6nm,0.3s,baz=305,slow=12,SNR=20						
PMG				Sn	**Sn**	**09 57 00.3**	**0.0**
	2.8nm,0.3s,baz=313,slow=19,SNR=4.4						
	40nm,0.6s						
CTA	**Charters Tower**	**13.85**	**169**	LR	LR	10 04 02.7	
	comp=Z,131nm,20.5s,baz=356,slow=40						
WRA	**Warramunga Arr**	**16.16**	**213**	Pn	**Pn**	**09 58 40.3**	**-4.0**
	0.7nm,0.3s,baz=28,slow=13,SNR=22						
WRA				Lg	Lg	10 03 26.2	
	0.2nm,0.3s,baz=37,slow=29,SNR=2.8						
ASAR	**Alice Spring

KDAK	**Kodiak Island**	81.90	29	P		P	10 07 15.1	-0.3
	18nm,1.1s,baz=329,slow=8.7,SNR=1.9							
QSPA	**South Pole Qui**	83.56	180	P		P	10 07 24.2	+0.1
	2.3nm,1.0s,baz=304,slow=1.6,SNR=5.2							
	2.3nm,1.0s							
NRIK	**Noril'sk**	84.63	343	P		P	10 07 29.6	+0.4
	1.0nm,0.3s,baz=125,slow=6.0,SNR=4.2							
NRIK				LR		LR	10 45 15.4	
	comp=Z,20nm,20.9s,baz=89,slow=36							
	1.0nm,0.3s							
BVAR	**Borovoye Array**	85.10	325	P		P	10 07 31.7	-0.3
	1.0nm,0.7s,baz=106,slow=4.7,SNR=3.7							
	1.0nm,0.7s							
ILAR	**Eielson Array**	87.22	24	P		P	10 07 41.8	-0.3
	0.6nm,0.8s,baz=251,slow=5.6,SNR=5.7							
	0.6nm,0.8s							

NEIC ***27*** *10:02:03.8±1.9,3˚.15N±0˚.09×128˚.6E±0˚.1,h200km±8km, mb4.3/52, Error ellipse: s-maj=15.8km s-min=12.6km az=60.0*

IDC ***27*** *10:02:05.2±4.6,3˚.08N×128˚.51E,h224km±47km,mb3.6/14, mbtmp4.2/14, Error ellipse: s-maj=24.0km s-min=10.4km az=77.0*

DJA ***27*** *10:02:05.2±0.6,3˚N±6˚×12˚8E±˚,h212km±7km,M4.1/12, mb3.9/7,mB5.0/2,MLv4.3/12,Mw(mB)4.3/2*

ISC 27 10:02:03.0±0.4,3˚.15N±0˚.05×128˚.53E±0˚.07,h200km,n86, σ1§19/90,mb4.2/37,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	2.63	206		Pn	10 02 49.8	+1.4
TNTI	**Ternate**	2.63	206	P	Pn	10 02 49.7	+1.3
TNTI				S	Sn	10 03 23.9	-0.1
SGSI	**Sangihe**	3.04	280	P	Pn	10 02 53.8	+0.7
SGSI				S	Sn	10 03 31.6	-0.6
LBMI	**Labuha**	3.90	195	P	Pn	10 03 04.5	+0.9
SWI	**Sorong**	4.84	146	P	Pn	10 03 17.9	+2.5
SANI	**Sanana**	5.76	206	P	Pn	10 03 25.5	-1.7
	108nm,0.6s,4µm0.6nm						
GTOI	**Gorontalo**	6.05	246	P	Pn	10 03 32.2	+1.2
	5.9nm,1.1s,0.0nm						
NLAI	**Namlea**	6.51	193	P	Pn	10 03 36.4	-0.5
	18nm,0.7s,0.1nm						
FAKI	**Fak Fak**	7.09	148	Pn	Pn	10 03 43.7	-0.8
FAKI	**Fak Fak**	7.09	148	P	Pn	10 03 46.5	+2.1
LUWI	**Luwuk**	7.10	234	Pn	Pn	10 03 45.6	+1.0
LUWI	**Luwuk**	7.10	234	P	Pn	10 03 43.7	-0.9
	41nm,0.6s,2µm0.2nm						
TOLI2	**Tolitoli**	8.00	255	Pn	Pn	10 03 57.4	+1.1
MTN	**Manton Dam**	16.10	171	P	P	10 05 37.3	-0.9
MTN				IAmb	IAmb	10 05 40.5	
	comp=Z,17nm,1.2s						
KNRA	**Kununurra**	18.71	179	P	P	10 06 06.7	0.0
KNRA				IAmb	IAmb	10 06 10.2	
	comp=Z,18nm,0.9s						
GUMO	**Guam**	19.19	56	P	P	10 06 08.3	-3.5
TPUB	**Ta-pu**	21.44	340	P	P	10 06 35.6	-0.1
SSLB	**Suanglung**	21.78	341	P	P	10 06 36.4	-2.8
SSLB				IAmb	IAmb	10 06 38.6	
	comp=Z,22nm,1.2s						
YOJ	**Yonaguni jima**	21.84	346	P	P	10 06 40.7	+1.0
COEN	**Coen**	22.36	140	P	P	10 06 44.5	-0.3
COEN				IAmb	IAmb	10 07 03.0	
	comp=Z,11nm,1.4s						
JMZ	**Minamidaito 2**	22.69	6	P	P	10 06 45.1	-2.5
WB0	**Warramunga Arr**	23.50	166	P	P	10 06 54.6	-0.4
WB0				IAmb	IAmb	10 06 56.1	
	comp=Z,7.4nm,0.6s						
WRAB	**Tennant Creek**	23.64	166	P	P	10 06 56.1	-0.3
WRAB				IAmb	IAmb	10 07 21.6	
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	23.65	166	P	P	10 06 55.9	-0.5
WRA	**Warramunga Arr**	23.65	166	P	P	10 06 55.7	-0.7
	comp=Z,2.0nm,0.4s,baz=345,slow=11,SNR=50						
	comp=Z,2.0nm,0.4s						
WB2	**Warramunga Arr**	23.65	166	P	P	10 06 55.9	-0.5
WB2				IAmb	IAmb	10 06 57.8	
	comp=Z,5.1nm,0.8s						
WR0	**Warramunga Arr**	23.72	166	P	P	10 06 55.2	-1.8
WR0				IAmb	IAmb	10 06 58.6	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	27.17	169	P	P	10 07 27.8	-0.3
ASAR	**Alice Springs**	27.17	169	P	P	10 07 27.9	-0.2
ASAR	**Alice Springs**	27.17	169	P	P	10 07 27.6	-0.5
	comp=Z,3.3nm,0.5s,baz=351,slow=7.7,SNR=41						
ASAR				PcP	PcP	10 10 43.0	-0.4
	comp=Z,0.4nm,0.5s,baz=349,slow=2.0,SNR=5.2						
	comp=Z,3.3nm,0.5s						
JNU	**Nakatsue**	29.89	4	P	P	10 07 53.0	+0.8
JNU				IAmb	IAmb	10 08 21.4	
	comp=Z,14nm,1.3s						
PHRA	**Phrae**	31.62	301	P	P	10 08 06.8	-0.6
CMAR	**Chiang Mai Arr**	32.71	300	P	P	10 08 18.5	+1.6
CMAR	**Chiang Mai Arr**	32.71	300	P	P	10 08 18.2	+1.3
	comp=Z,1.8nm,0.7s,baz=111,slow=6.8,SNR=8.8						
	comp=Z,1.8nm,0.7s						
CHTO	**Chiang Mai**	32.85	300	P	P	10 08 19.2	+1.0
CHTO				IAmb	IAmb	10 08 19.9	
	comp=Z,3.4nm,0.6s						
KSRS	**Korea Array**	34.14	359	P	P	10 08 30.0	+0.9
	comp=Z,0.9nm,0.5s,baz=176,slow=8.6,SNR=4.2						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	34.41	14	P	P	10 08 30.7	-0.7
	comp=Z,2.0nm,0.5s,baz=183,slow=9.4,SNR=9.8						
	comp=Z,2.0nm,0.5s						
JMM	**Marumori**	36.33	16	P	P	10 08 47.4	-0.3
BBOO	**Buckleboo**	36.47	169	P	P	10 08 48.9	-0.1
STKA	**Stephens Creek**	36.99	161	P	P	10 08 53.1	-0.2
STKA	**Stephens Creek**	36.99	161	P	P	10 08 52.7	-0.7
	comp=Z,3.1nm,0.4s,baz=332,slow=9.0,SNR=21						
	comp=Z,3.1nm,0.4s						
NWAO	**Narrogin (SRO)**	37.44	196	P	P	10 08 56.7	-0.4
JTM	**Tenmabayashi**	39.14	15	P	P	10 09 12.6	+1.4
ARMA	**Armidale**	40.02	148	P	P	10 09 19.4	+0.6
ARMA				IAmb	IAmb	10 09 45.4	
	comp=Z,20nm,1.2s						
USRK	**Ussuriysk Ar.**	40.99	4	P	P	10 09 26.6	+0.3
SHL	**Shillong**	41.66	306	P	P	10 09 33.0	+0.6
SHL				IAmb	IAmb	10 09 33.4	
	comp=Z,11nm,0.6s						
DZM	**Mont Dzumac**	44.74	126	P	P	10 09 58.1	+1.2
DZM				IAmb	IAmb	10 10 18.9	
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	48.43	340	P	P	10 10 25.8	+0.6
	comp=Z,1.0nm,0.5s,baz=146,slow=8.3,SNR=5.7						
	comp=Z,1.0nm,0.5s						
PETK	**Petropavlovsk-**	55.30	21	P	P	10 11 16.9	+1.2
	comp=Z,3.3nm,0.9s,baz=191,slow=5.2,SNR=4.8						
	comp=Z,3.3nm,0.9s						
MKAR	**Makanchi Array**	59.05	325	P	P	10 11 42.4	+0.3
MKAR	**Makanchi Array**	59.05	325	P	P	10 11 42.1	0.0
	comp=Z,2.5nm,0.5s,baz=120,slow=8.6,SNR=28						
MKAR				PcP	pP	10 12 27.8	+0.4
	comp=Z,1.0nm,0.7s,baz=111,slow=6.6,SNR=5.1						
	comp=Z,2.5nm,0.5s						
MAKZ	**Makanchi**	59.24	325	P	P	10 11 43.5	+0.1
MAKZ				IAmb	IAmb	10 11 43.9	
	comp=Z,3.1nm,0.6s						
LBZ	**Lake Benmore**	60.21	147	P	P	10 11 50.2	+0.2
RTZ	**Ruatahuna**	61.00	138	P	P	10 11 55.4	-0.1
ZALV	**Zalesovo Beam**	61.92	332	P	P	10 12 00.3	-0.9
	comp=Z,0.7nm,0.4s,baz=122,slow=5.6,SNR=4.1						
	comp=Z,0.7nm,0.4s						
SEY	**Seymchan**	62.20	12	P	P	10 12 04.7	+1.7
	comp=Z,0.9nm,0.5s,baz=240,slow=6.9,SNR=6.8						
	comp=Z,0.9nm,0.5s						
ARSB	**Arslanbob**	62.52	316	P	P	10 12 05.5	-0.3
SIMJ	**Simiganj**	64.50	312	P	P	10 12 19.2	+0.4
KK31	**Karatay Array**	64.88	317	P	P	10 12 20.8	-0.2
KKAR	**Karatay Array**	64.88	317	P	P	10 12 20.7	-0.2
TIXI	**Tiksi**	68.40	0	P	P	10 12 42.5	-0.1
TIXI				IAmb	IAmb	10 12 43.6	
	comp=Z,3.8nm,1.1s						
BVAR	**Borovoye Array**	68.78	327	P	P	10 12 44.4	-1.0
	comp=Z,1.9nm,0.4s,baz=120,slow=10,SNR=4.0						
	comp=Z,1.9nm,0.4s						
ABKAR	**Akbulak array**	73.73	321	P	P	10 13 14.5	-0.6
E18K	**Tukpahlearik C**	79.82	22	P	P	10 13 50.6	+1.8
C18K	**Utukok River**	79.97	20	P	P	10 13 50.9	+1.3
L18K	**Granite Mounta**	80.15	27	P	P	10 13 52.6	+1.9
L18K				IAmb	IAmb	10 14 08.1	
	comp=Z,9.2nm,1.4s						
J18K	**Innoko River**	80.40	26	P	P	10 13 52.5	+0.4
J18K				IAmb	IAmb	10 14 13.9	
	comp=Z,7.4nm,1.5s						
C19K	**Lookout Ridge**	80.66	20	P	P	10 13 54.8	+1.5
C19K				IAmb	IAmb	10 14 05.9	
	comp=Z,4.3nm,1.4s						
F19K	**Shaleruckik Mo**	80.73	23	P	P	10 13 55.1	+1.4
F19K				IAmb	IAmb	10 13 55.7	
	comp=Z,8.2nm,0.8s						
G19K	**Purcell Mounta**	80.84	23	P	P	10 13 56.2	+1.9
G19K				IAmb	IAmb	10 14 18.9	
	comp=Z,6.2nm,1.4s						
D19K	**Kuna River**	81.01	21	P	P	10 13 56.6	+1.4
D19K				IAmb	IAmb	10 13 57.3	
	comp=Z,3.2nm,0.9s						
E19K	**Redstone River**	81.08	22	P	P	10 13 57.5	+1.9
J20K	**Nowinta River**	81.66	26	P	P	10 14 00.6	+2.0
J20K				IAmb	IAmb	10 14 23.8	
	comp=Z,8.6nm,1.5s						
IMAR	**Indian Mountai**	82.14	24	P	P	10 14 02.7	+1.6
F21K	**Alatna River**	82.46	23	P	P	10 14 04.3	+1.6
SKT	**Skwentna**	82.50	28	P	P	10 14 03.6	+0.6
E22K	**Anaktuvuk Pass**	83.24	22	P	P	10 14 08.7	+1.9
E22K				IAmb	IAmb	10 14 08.8	
	comp=Z,4.2nm,1.1s						
G23K	**Bananza Creek**	83.73	23	P	P	10 14 11.4	+2.1
I23K	**Minto, Yukon-K**	83.83	25	P	P	10 14 09.7	0.0
RND	**Reindeer**	83.89	27	P	P	10 14 10.7	+0.5
RND				IAmb	IAmb	10 14 24.5	
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	84.85	25	P	P	10 14 14.8	-0.1
	comp=Z,0.3nm,1.0s,baz=256,slow=6.0,SNR=2.0						
	comp=Z,0.3nm,1.0s						
BMAR	**Burnt Mountain**	85.91	23	P	P	10 14 20.6	+0.5
I28M	**Miner Creek**	87.80	25	P	P	10 14 30.2	+0.8
I28M				IAmb	IAmb	10 14 32.8	
	comp=Z,5.3nm,1.5s						
SKAG	**Skagway**	90.44	31	P	P	10 14 42.8	+1.2
ARCES	**ARCESS Array B**	91.60	340	P	P	10 14 45.3	-1.6
	comp=Z,2.9nm,1.0s,baz=46,slow=6.9,SNR=4.7						
	comp=Z,2.9nm,1.0s						
TORD	**Torodi Ar. Bea**	124.80	288	PKP	PKPdf	10 20 39.4	-0.7
	comp=Z,0.4nm,0.6s,baz=73,slow=2.2,SNR=4.1						

IDC 27 10:11:47.9±1.4,6˚.30S×142˚.71E,h0km,mb3.6/2, mbtmp3.6/5,ML3.6/2,MS3.6/1,Error ellipse: s-maj=36.0km s-min=28.5km az=68.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.38	125	Pn	Pn	10 13 10.0	+0.4
	4.3nm,0.4s,baz=0.0,slow=0.0,SNR=2.2						
PMG				Sn	Sn	10 14 12.5	+0.2
	2.0nm,0.3s,baz=71,slow=17,SNR=6.6						
WRA	**Warramunga Arr**	15.81	210	Pn	Pn	10 15 29.9	-2.2
	0.2nm,0.3s,baz=27,slow=14,SNR=8.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	19.23	205	P	Pn	10 16 14.3	-0.4
	0.2nm,0.3s,baz=34,slow=9.5,SNR=14						
	2.1nm,0.7s						
NWAO	**Narrogin (SRO)**	35.54	218	LR	LR	10 32 20.5	
	comp=Z,81nm,19.3s,baz=230,slow=35						
MKAR	**Makanchi Array**	75.05	322	P	P	10 23 32.2	+0.6
	0.1nm,0.3s,baz=134,slow=6.2,SNR=3.7						
	0.1nm,0.3s						
ILAR	**Eielson Array**	87.46	24	P	P	10 24 36.5	-0.6
	0.5nm,1.0s,baz=260,slow=5.1,SNR=2.5						
	0.5nm,1.0s						

IDC 27 10:13:54.4±5.8,6˚.15S×142˚.23E,h0km,mb3.9/3, mbtmp3.9/5,ML3.5/2,Error ellipse: s-maj=223.1km s-min=31.0km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	15.71	208	Pn	Pn	10 17 35.6	-1.6
	0.1nm,0.3s,baz=29,slow=13,SNR=2.5						
	1.4nm,1.0s						
ASAR	**Alice Springs**	19.17	204	P	Pn	10 18 20.2	-0.3
	0.4nm,0.3s,baz=32,slow=10,SNR=16						
	7.0nm,0.8s						
MKAR	**Makanchi Array**	74.64	322	P	P	10 25 36.0	+0.2
	0.5nm,0.7s,baz=108,slow=8.2,SNR=4.5						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	78.55	324	P	P	10 25 58.4	+0.8
	0.6nm,0.9s,baz=116,slow=4.3,SNR=4.5						
	0.6nm,0.9s						
BVAR	**Borovoye Array**	84.12	325	P	P	10 26 26.6	-0.7
	2.6nm,0.8s,baz=103,slow=6.5,SNR=11						
	2.6nm,0.8s						

IDC ***27*** *10:20:41.1±1.6,6˚.61S×146˚.47E,h105km±16km,mb3.9/14, mbtmp4.2/16,MS3.1/2,Error ellipse: s-maj=21.6km s-min=10.6km az=97.0*

DJA ***27*** *10:20:41.9±0.4,7˚S±3˚×147˚6E±˚,h91km±5km,M4.7/19, mB5.2/6,mb4.7/19,MLv4.8/4,Mw(mB)4.7/6*

NEIC ***27*** *10:20:42.1±1.2,6˚.68S±0˚.06×146˚.38E±0˚.10,h106km±4km, mb4.6/106,Error ellipse: s-maj=14.0km s-min=7.8km az=79.0*

ISC 27 10:20:42.1±0.4,6˚.69S±0˚.05×146˚.30E±0˚.06,h110km,n154, σ1§12/155,mb4.6/66,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	2.83	163	Pn	Pn	10 21 26.1	+0.3
PMG				Sn	Sn	10 21 59.0	-0.6
PMG	**Port Moresby**	2.83	163	P	Pn	10 21 26.0	+0.1
PMG	**Port Moresby**	2.83	163	P	Pn	10 21 26.1	+0.3
	809nm,0.6s,baz=38,slow=5.0,SNR=317						
PMG				S	Sn	10 21 59.3	-0.2
	372nm,0.5s,baz=122,slow=21,SNR=20						
MANU	**Manus Island**	4.74	13	Pn	Pn	10 21 50.8	-0.7
RABL	**Rabaul**	5.34	67	Pn	Pn	10 22 13.8	+0.7
COEN	**Coen**	7.85	203	Pn	Pn	10 22 34.9	+1.3
COEN	**Coen**	7.85	203	P	Pn	10 22 35.3	+1.7
MTSU	**Mount Surprise**	11.54	189	P	Pn	10 23 25.0	+1.4
TV1H	**Townsville Har**	12.50	178	P	Pn	10 23 39.4	+3.1
CTA	**Charters Tower**	13.32	180	P	P	10 23 51.1	-1.4
CTA	**Charters Tower**	13.32	180	P	P	10 23 51.7	-0.8
	77nm,0.5s,baz=359,slow=14,SNR=168						
CTA				LR	LR	10 29 15.6	
	comp=Z,64nm,18.0s,baz=346,slow=38						
CTAO	**Charters Tower**	13.32	180	P	P	10 23 51.5	-1.0
HNR	**Honiara**	13.78	102	Pn	Pn	10 23 52.1	-0.8
FAKI	**Fak Fak**	14.49	284	Pn	Pn	10 24 03.6	+1.5
FAKI	**Fak Fak**	14.49	284	P	P	10 24 06.4	+0.7
QIS	**Mount Isa**	15.24	205	P	P	10 24 16.3	+2.4
SWI	**Sorong**	16.08	290	P	Pn	10 24 21.1	-1.0
	47nm,0.9s						
MTN	**Manton Dam**	16.15	247		P	10 24 23.6	-0.3
WR0	**Warramunga Arr**	17.45	220	P	P	10 24 38.2	-0.1
WRAB	**Tennant Creek**	17.55	220	P	P	10 24 39.4	-0.1
WB2	**Warramunga Arr**	17.55	220	P	Pn	10 24 39.9	-0.1
WRA	**Warramunga Arr**	17.56	220	P	Pn	10 24 40.4	+0.3
WRA	**Warramunga Arr**	17.56	220	P	P	10 24 39.3	-0.3
	2.2nm,0.7s,baz=48,slow=12,SNR=14						
WRA				S	Sn	10 27 47.1	-9.0
	1.0nm,0.8s,baz=40,slow=23,SNR=2.3						
EIDS	**Eidsvold**	19.13	167	P	P	10 24 55.3	-1.4
EIDS				IAmb	IAmb	10 25 12.7	
	comp=Z,39nm,0.8s						
KNRA	**Kununurra**	19.37	241	P	P	10 24 59.1	-0.3
TNTI	**Ternate**	20.30	291	P	Pn	10 25 12.1	-0.4
	comp=Z,33nm,1.4s						
AS31	**Alice Springs**	20.66	214	P	P	10 25 13.8	+0.5
ASAR	**Alice Springs**	20.66	214	P	P	10 25 12.7	-0.6
ASAR	**Alice Springs**	20.66	214	P	P	10 25 14.8	+1.5
	comp=Z,2.0nm,0.6s,baz=52,slow=8.3,SNR=21						
ASAR				S	S	10 29 01.3	+3.0
	comp=Z,2.8nm,1.0s,baz=22,slow=23,SNR=6.0						
	comp=Z,2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	23.12	239	P	P	10 25 39.7	+0.9
ARMA	**Armidale**	24.13	169	P	P	10 25 47.9	-0.1
ARMA				IAmb	IAmb	10 26 10.7	
	comp=Z,35nm,1.5s						
GTOI	**Gorontalo**	24.36	287	P	P	10 25 51.6	+1.5
	comp=Z,16nm,0.5s,comp=Z,168nm						
DZM	**Mont Dzumac**	24.73	130	LR	LR	10 34 57.8	
	comp=Z,37nm,18.4s,baz=210,slow=35						
STKA	**Stephens Creek**	25.44	189	P	P	10 26 00.3	+0.6
STKA	**Stephens Creek**	25.44	189	P	P	10 26 00.2	+0.4
	comp=Z,5.1nm,0.8s,baz=345,slow=7.8,SNR=11						
	comp=Z,5.1nm,0.8s						
TOLI2	**Tolitoli**	26.62	286	P	P	10 26 10.5	-0.2

MBWA	**Marble Bar**	29.46	238	P		P	10 26 35.6	-0.2
IGBI	**Denpasar**	30.94	264	P		P	10 26 49.9	+0.9
	comp=Z,61nm,0.9s,comp=Z,2µm							
TPUB	**Ta-pu**	38.96	321	P		P	10 27 56.8	-1.0
DSRI	**Dabo**	42.08	277	P		P	10 28 24.3	+0.7
KSRS	**Korea Array**	47.15	340	P		P	10 29 02.5	-0.9
	comp=Z,2.2nm,0.9s,baz=158,slow=8.0,SNR=7.8							
	comp=Z,2.2nm,0.9s							
PHRA	**Phrae**	51.87	300	P		P	10 29 40.8	+1.2
USA0B	**Ussuriysk Arra**	52.28	347	P		P	10 29 40.9	-1.3
USA0B				IAmb		IAmb	10 30 08.5	
	comp=Z,8.3nm,1.4s							
USRK	**Ussuriysk Ar.**	52.28	347	P		P	10 29 40.9	-1.3
USRK	**Ussuriysk Ar.**	52.28	347	P		P	10 29 41.3	-0.9
	comp=Z,1.9nm,0.5s,baz=168,slow=7.7,SNR=10							
	comp=Z,1.9nm,0.5s							
CMAR	**Chiang Mai Arr**	52.97	299	P		P	10 29 49.2	+1.4
CMAR	**Chiang Mai Arr**	52.97	299	P		P	10 29 48.5	+0.6
	comp=Z,2.4nm,0.5s,baz=121,slow=6.0,SNR=16							
	comp=Z,2.4nm,0.5s							
PETK	**Petropavlovsk-**	60.35	8	P		P	10 30 38.0	-1.3
	comp=Z,3.2nm,0.9s,baz=162,slow=6.4,SNR=6.1							
	comp=Z,3.2nm,0.9s							
SONM	**Songino Array**	64.67	331	P		P	10 31 09.3	+0.9
	comp=Z,0.3nm,0.4s,baz=153,slow=9.7,SNR=2.7							
	comp=Z,0.3nm,0.4s							
VNDA	**Vanda**	71.27	176	P		P	10 31 50.0	+0.9
VNDA	**Vanda**	71.27	176	P		P	10 31 49.7	+0.6
	comp=Z,1.2nm,0.8s,baz=334,slow=7.2,SNR=2.3							
	comp=Z,1.2nm,0.8s							
MKAR	**Makanchi Array**	77.59	321	P		P	10 32 26.2	0.0
	comp=Z,1.2nm,0.4s,baz=96,slow=7.4,SNR=16							
	comp=Z,1.2nm,0.4s							
MAKZ	**Makanchi**	77.79	321	P		P	10 32 27.7	+0.4
MAKZ				IAmb		IAmb	10 32 29.0	
	comp=Z,7.4nm,1.2s							
L14K	**Kuka Creek**	78.47	22	P		P	10 32 31.3	+0.6
L14K				IAmb		IAmb	10 32 31.8	
	comp=Z,8.5nm,0.8s							
ZALV	**Zalesovo Beam**	79.23	328	P		P	10 32 34.1	-0.9
	comp=Z,0.9nm,0.4s,baz=109,slow=5.5,SNR=4.8							
	comp=Z,0.9nm,0.4s							
O16K	**Kokwok River B**	79.29	25	P		P	10 32 35.4	+0.1
O16K				IAmb		IAmb	10 32 35.8	
	comp=Z,16nm,1.0s							
G16K	**Koyuk River**	81.10	19	P		P	10 32 45.2	+0.3
G16K				IAmb		IAmb	10 32 45.8	
	comp=Z,7.5nm,0.9s							
SVW2	**Sparrevohn**	81.16	25	P		P	10 32 46.1	+0.8
L18K	**Granite Mounta**	81.31	23	P		P	10 32 46.9	+0.9
L18K				IAmb		IAmb	10 32 52.9	
	comp=Z,13nm,1.4s							
AAK	**Ala-Archa**	81.33	315	P		P	10 32 47.6	+0.8
KURK	**Kurchatov**	81.35	323	P		P	10 32 46.7	+0.2
KURK				IAmb		IAmb	10 32 53.4	
	comp=Z,16nm,1.2s							
P19K	**Oil Pt**	81.44	27	P		P	10 32 46.8	0.0
N19K	**Bonanza Creek**	81.47	25	P		P	10 32 47.2	+0.2
L19K	**White Mountain**	82.02	24	P		P	10 32 50.4	+0.6
C16K	**Lisburne Hills**	82.05	16	P		P	10 32 49.8	0.0
C16K				IAmb		IAmb	10 33 09.4	
	comp=Z,9.8nm,1.5s							
M19K	**Big River Lodg**	82.06	24	P		P	10 32 50.5	+0.5
M19K				IAmb		IAmb	10 32 53.4	
	comp=Z,15nm,1.4s							
F17K	**Baldwin Pennin**	82.11	19	P		P	10 32 51.1	+1.1
F17K				IAmb		IAmb	10 32 56.1	
	comp=Z,7.3nm,1.2s							
CNPM	**China Poot**	82.27	27	P		P	10 32 51.5	+0.3
H18K	**Honhosa River**	82.31	21	P		P	10 32 51.0	-0.2
BRLK	**Bradley Lake**	82.54	27	P		P	10 32 52.1	-0.5
M20K	**Styx River**	82.57	25	P		P	10 32 52.7	-0.1
M20K				IAmb		IAmb	10 32 56.7	
	comp=Z,16nm,1.4s							
G18K	**Tagagawik**	82.63	20	P		P	10 32 53.0	0.0
G18K				IAmb		IAmb	10 32 53.0	
	comp=Z,3.6nm,0.7s							
J19K	**Poorman**	82.67	22	P		P	10 32 53.6	+0.5
E18K	**Tukpahlearik C**	82.90	18	P		P	10 32 54.7	+0.5
K20K	**Telida**	82.93	23	P		P	10 32 54.2	-0.2
K20K				IAmb		IAmb	10 33 13.9	
	comp=Z,12nm,1.4s							
H19K	**Roundabout Mou**	83.19	21	P		P	10 32 56.0	+0.3
H19K				IAmb		IAmb	10 32 56.6	
	comp=Z,8.5nm,0.9s							
QSPA	**South Pole Qui**	83.28	180	P		P	10 32 56.3	-0.2
QSPA				IAmb		IAmb	10 32 57.2	
	comp=Z,6.2nm,1.3s							
QSPA	**South Pole Qui**	83.28	180	P		P	10 32 56.1	-0.3
	comp=Z,2.8nm,0.8s,baz=177,slow=1.3,SNR=22							
	comp=Z,2.8nm,0.8s							
G19K	**Purcell Mounta**	83.31	20	P		P	10 32 56.3	0.0
G19K				IAmb		IAmb

	comp=Z,4.0nm,0.5s,baz=252,slow=5.0,SNR=73							
	comp=Z,4.0nm,0.5s							
GLB	**Gilahina Butte**	**86.41**	**27**	P	**P**	**10 33 12.0**	**-0.1**	
CRQM	**Cirque**	**86.47**	**28**	P	**P**	**10 33 12.5**	**-0.1**	
VRDI	**Verde Repeater**	**86.50**	**27**	P	**P**	**10 33 12.5**	**-0.2**	
WAX	**Waxell Ridge**	**86.50**	**28**	P	**P**	**10 33 13.3**	**+0.7**	
MCARA	**McCarthy VSAT**	**86.74**	**27**	P	**P**	**10 33 14.1**	**+0.4**	
RIDG	**Independent Ri**	**86.80**	**25**	P	**P**	**10 33 13.4**	**-0.5**	
RIDG				IAmb	IAmb	10 33 15.5		
	comp=Z,14nm,1.3s							
BVAR	**Borovoye Array**	**86.92**	**324**	P	**P**	**10 33 12.9**	**-1.8**	
	comp=Z,1.9nm,0.4s,baz=94,slow=4.3,SNR=10							
	comp=Z,1.9nm,0.4s							
J25K	**Salcha River,**	**86.92**	**24**	P	**P**	**10 33 13.6**	**-0.9**	
J25K				IAmb	IAmb	10 33 14.3		
	comp=Z,7.8nm,0.7s							
GRNC	**Granite Creek**	**87.11**	**28**	P	**P**	**10 33 15.7**	**0.0**	
F24K	**Squaw Lake**	**87.15**	**21**	P	**P**	**10 33 16.2**	**+0.7**	
F24K				IAmb	IAmb	10 33 17.0		
	comp=Z,12nm,1.5s							
L26K	**Log Cabin Wild**	**87.17**	**25**	P	**P**	**10 33 15.8**	**+0.1**	
L26K				IAmb	IAmb	10 33 16.4		
	comp=Z,3.2nm,0.5s							
BARN	**Barnard Glacie**	**87.26**	**28**	P	**P**	**10 33 16.8**	**+0.4**	
TABL	**Table Mountain**	**87.30**	**28**	P	**P**	**10 33 17.0**	**+0.4**	
CTGM	**Chitina Glacie**	**87.38**	**28**	P	**P**	**10 33 17.1**	**+0.2**	
LOGN	**Logan Glacier**	**87.48**	**28**	P	**P**	**10 33 17.4**	**-0.1**	
M27K	**Edge Creek, AK**	**87.58**	**26**	P	**P**	**10 33 18.2**	**+0.3**	
L27K	**Beaver Creek,**	**87.84**	**26**	P	**P**	**10 33 19.1**	**+0.2**	
L27K				IAmb	IAmb	10 33 33.0		
	comp=Z,12nm,1.4s							
K27K	**Chicken**	**88.05**	**25**	P	**P**	**10 33 20.5**	**+0.7**	
I26K	**Coal Creek Min**	**88.05**	**23**	P	**P**	**10 33 19.3**	**-0.5**	
I26K				IAmb	IAmb	10 33 24.1		
	comp=Z,8.5nm,1.4s							
BMAR	**Burnt Mountain**	**88.29**	**21**	P	**P**	**10 33 21.2**	**+0.3**	
D25K	**Kavik River**	**88.41**	**19**	P	**P**	**10 33 22.0**	**+0.5**	
D25K				IAmb	IAmb	10 33 22.7		
	comp=Z,9.0nm,1.4s							
EGAK	**Eagle**	**88.67**	**24**	P	**P**	**10 33 22.4**	**-0.3**	
EGAK				IAmb	IAmb	10 33 24.2		
	comp=Z,5.9nm,1.2s							
P29M	**Windy Craggy**	**88.70**	**30**	P	**P**	**10 33 23.5**	**+0.5**	
M29M	**Somme Creek**	**89.12**	**27**	P	**P**	**10 33 25.2**	**+0.1**	
HYT	**Haines Junctio**	**89.13**	**28**	P	**P**	**10 33 25.6**	**+0.5**	
HYT				IAmb	IAmb	10 33 48.7		
	comp=Z,10nm,1.2s							
DAWY	**Dawson**	**89.19**	**25**	P	**P**	**10 33 25.4**	**+0.1**	
DAWY				IAmb	IAmb	10 33 47.2		
	comp=Z,3.9nm,1.2s							
I28M	**Miner Creek**	**89.38**	**24**	P	**P**	**10 33 26.2**	**0.0**	
L29M	**L29M**	**89.46**	**26**	P	**P**	**10 33 27.1**	**+0.6**	
L29M				IAmb	IAmb	10 33 27.7		
	comp=Z,13nm,1.4s							
M30M	**Minto, Yukon**	**89.91**	**27**	P	**P**	**10 33 28.8**	**+0.2**	
M30M				IAmb	IAmb	10 33 47.8		
	comp=Z,7.3nm,1.4s							
K29M	**Barlow Dome**	**89.92**	**25**	P	**P**	**10 33 29.1**	**+0.4**	
J30M	**Hart River**	**90.61**	**25**	P	**P**	**10 33 31.7**	**-0.3**	
J30M				IAmb	IAmb	10 33 40.0		
	comp=Z,8.5nm,1.4s							
I30M	**Mount Dempster**	**90.75**	**24**	P	**P**	**10 33 32.1**	**-0.5**	
I30M				IAmb	IAmb	10 33 53.2		
	comp=Z,7.4nm,1.5s							
H31M	**Peel River**	**91.71**	**24**	P	**P**	**10 33 35.9**	**-1.1**	
H31M				IAmb	IAmb	10 33 50.9		
	comp=Z,8.0nm,1.4s							
G31M	**Satah River**	**91.98**	**23**	P	**P**	**10 33 37.2**	**-0.9**	
G31M				IAmb	IAmb	10 33 48.4		
	comp=Z,4.6nm,1.4s							
F31M	**Tsiigehtchic**	**92.29**	**22**	P	**P**	**10 33 40.2**	**+0.7**	
F31M				IAmb	IAmb	10 33 53.2		
	comp=Z,6.5nm,1.4s							
ABKAR	**Akbulak array**	**92.64**	**319**	P	**P**	**10 33 40.3**	**-1.2**	
C36M	**Paulatuk**	**96.08**	**21**	P	**P**	**10 33 55.7**	**-1.1**	
YKA	**Yellowknife Ar**	**100.10**	**28**	P	**Pdif**	**10 34 13.4**	**-1.6**	
	comp=Z,0.2nm,0.8s,baz=286,slow=4.4,SNR=3.9							
	comp=Z,0.2nm,0.8s							
PLCA	**Paso Flores**	**121.92**	**148**	PKP	**PKiKP**	**10 39 24.2**	**0.0**	
	comp=Z,0.6nm,0.3s,baz=278,slow=3.3,SNR=7.5							
TORD	**Torodi Ar. Bea**	**144.58**	**283**	PKP	PKPbc	10 40 06.0	+0.2	
	comp=Z,6.2nm,0.7s,baz=66,slow=4.1,SNR=31							
DBIC	**Dimbokro**	**151.36**	**272**	PKPbc	**PKPbc**	**10 40 24.2**	**+0.1**	
	comp=Z,12nm,0.7s,baz=120,slow=3.1,SNR=15							
BDFB	**Brasilia**	**153.67**	**148**	PKPbc	**PKPbc**	**10 40 29.3**	**0.0**	
	comp=Z,2.9nm,0.4s,baz=199,slow=3.3,SNR=5.5							

IDC 27 10:31:06.5±7.3, 6°22.5S×142°00.0E, h0km, mb3.1/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=255.9km s-min=37.2km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.54**	**208**	Pn	Pn	10 34 45.3	-1.9
	0.1nm,0.3s,baz=32,slow=13,SNR=1.4						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**19.02**	**203**	P	Pn	10 35 30.9	+0.1
	0.2nm,0.3s,baz=34,slow=9.9,SNR=8.7						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**74.55**	**322**	P	P	10 42 47.3	0.0
	0.1nm,0.4s,baz=123,slow=7.4,SNR=1.3						
	0.1nm,0.4s						

*IDC **27** 10:33:41.7±0.6, 6°28S×143°49E, h0km, mb4.4/15, mbtmp4.5/17, ML2.7/1, MS3.6/7, Error ellipse: s-maj=29.1km s-min=14.2km az=78.0*
*NEIC **27** 10:33:43.7±1.4, 6°42.5±0.07°×143°25.5E±0.08, h10km±1km, mb4.9/84, Error ellipse: s-maj=13.0km s-min=11.8km az=91.0*
*DJA **27** 10:33:46.5±0.3, 7°S±3°×14°3E±°, h23km±2km, M4.8/22, mB5.1/6, mb4.8/22, MLv5.2/6, Mw(mB)4.4/6*

ISC 27 10:33:43.5±0.4, 6°52.5±0.05°×143°28.5E±0.05, h10km, n148, σ1§53/138, mb4.9/66, MS3.3/4, 1C, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**2.40**	**301**	P	**Pn**	**10 34 23.7**	**+0.8**
MMPI	**Merauke**	**3.46**	**236**	P	**Pn**	**10 34 39.5**	**+2.0**
PMG	**Port Moresby**	**4.79**	**127**	Pn	**Pn**	**10 34 57.1**	**+1.3**
PMG	**Port Moresby**	**4.79**	**127**	P	**Pn**	**10 34 57.5**	**+1.7**
PMG	**Port Moresby**	**4.79**	**127**	Pn	**Pn**	**10 34 57.2**	**+1.4**
	25nm,0.3s,baz=20,slow=3.2,SNR=58						
PMG				Sn	**Sn**	**10 35 50.9**	**-0.6**
	29nm,0.3s,baz=270,slow=8.7,SNR=5.8						
PMG				LR	LR	10 37 10.8	
	comp=Z,510nm,19.4s,baz=282,slow=44						
	56nm,0.3s						
GENI	**Genyem**	**4.99**	**321**	P	Pn	10 35 02.4	+3.9
MANU	**Manus Island**	**6.03**	**43**	Pn	**Pn**	**10 35 14.4**	**+1.6**
SMPI	**Sarmi**	**6.41**	**314**	P	**Pn**	**10 35 21.4**	**+3.4**
	101nm,1.2s,0.5nm						
COEN	**Coen**	**7.39**	**181**	Pn	**Pn**	**10 35 33.8**	**+2.2**
FAKI	**Fak Fak**	**11.56**	**288**	Pn	**Pn**	**10 36 27.7**	**-1.0**
FAKI	**Fak Fak**	**11.56**	**288**	P	**Pn**	**10 36 28.3**	**-0.5**
FAKI	**Fak Fak**	**11.56**	**288**	P	**Pn**	**10 36 29.5**	**+0.7**
	58nm,0.8s						
MTSU	**Mount Surprise**	**11.59**	**175**	P	**Pn**	**10 36 30.6**	**+1.5**
SAUI	**Saumlaki**	**11.97**	**262**	Pn	**Pn**	**10 36 34.6**	**+0.1**
SAUI	**Saumlaki**	**11.97**	**262**	P	**Pn**	**10 36 34.9**	**+0.5**
	317nm,0.7s						
KDU	**Kakadu**	**12.29**	**239**	P	**Pn**	**10 36 37.9**	**-0.8**
MTN	**Manton Dam**	**13.52**	**241**	Pn	**Pn**	**10 36 54.6**	**-0.9**
MTN	**Manton Dam**	**13.52**	**241**	P	**Pn**	**10 36 54.8**	**-0.7**
DRS	**Darwin Rock St**	**13.55**	**243**	P	**Pn**	**10 36 55.5**	**-0.4**
CTA	**Charters Tower**	**13.79**	**168**	Pn	**P**	**10 37 08.0**	**+0.2**
	0.2nm,0.3s,baz=6.1,slow=17,SNR=5.0						
CTA				Lg	Lg	10 41 05.6	
	0.5nm,0.3s,baz=232,slow=18,SNR=2.4						
CTA				LR	LR	10 42 46.6	
	comp=Z,464nm,19.5s,baz=356,slow=39						
CTAO	**Charters Tower**	**13.79**	**168**	Pn	**Pn**	**10 36 58.9**	**-0.4**
QIS	**Mount Isa**	**14.40**	**194**	P	**Pn**	**10 37 09.6**	**+2.0**
WB0	**Warramunga Arr**	**15.74**	**212**	Pn	**Pn**	**10 37 24.4**	**-1.2**
WR0	**Warramunga Arr**	**15.83**	**212**		**Pn**	**10 37 25.2**	**-1.4**
WRAB	**Tennant Creek**	**15.90**	**212**		**Pn**	**10 37 26.6**	**-1.0**
WB2	**Warramunga Arr**	**15.91**	**212**	Pn	**Pn**	**10 37 26.8**	**-1.0**
WRA	**Warramunga Arr**	**15.92**	**212**	Pn	**Pn**	**10 37 26.0**	**-1.8**
WRA	**Warramunga Arr**	**15.92**	**212**	Pn	**Pn**	**10 37 26.4**	**-1.4**
	4.3nm,0.3s,baz=32,slow=13,SNR=61						
WRA				Sn	**Sn**	**10 40 16.4**	**-8.1**
	2.2nm,0.3s,baz=26,slow=22,SNR=3.4						
WRA				Lg	Lg	10 42 07.8	
	1.6nm,0.3s,baz=16,slow=30,SNR=5.3						
KNRA	**Kununurra**	**16.89**	**236**	Pn	**Pn**	**10 37 38.8**	**-1.4**
SOEI	**Soe**	**19.09**	**259**	Pn	**Pn**	**10 38 07.3**	**-0.2**
SOEI	**Soe**	**19.09**	**259**	P	**Pn**	**10 38 07.5**	**0.0**
	170nm,0.8s,2μm						
AS31	**Alice Springs**	**19.28**	**207**	P	**P**	**10 38 09.1**	**+0.4**
ASAR	**Alice Springs**	**19.28**	**207**	P	**P**	**10 38 10.0**	**+1.3**
ASAR	**Alice Springs**	**19.28**	**207**	P	**Pn**	**10 38 11.6**	**+1.9**
	42nm,0.8s,baz=28,slow=11,SNR=79						
ASAR				Lg	Lg	10 43 51.0	
	0.5nm,0.3s,baz=30,slow=28,SNR=4.4						
ASAR				LR	LR	10 46 24.5	
	comp=Z,414nm,21.1s,baz=31,slow=39						
PATS	**Pohnpei**	**20.03**	**49**	P	**P**	**10 38 15.1**	**-1.6**
GUMO	**Guam**	**20.04**	**5**	LR	LR	10 45 54.0	
	comp=Z,26nm,19.0s,baz=118,slow=37						
EIDS	**Eidsvold**	**20.17**	**159**	P	**P**	**10 38 18.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.70**	**235**	P	**P**	**10 38 25.1**	**+1.1**
EDFI	**Ende, Flores**	**21.51**	**263**	P	**P**	**10 38 32.7**	**-0.3**
	31nm,0.9s,391nm						
DAV	**Davao City (W)**	**22.23**	**307**	LR	LR	10 48 59.9	
	comp=Z,104nm,18.6s,baz=151,slow=41						
KAPI	**Kappang**	**23.46**	**272**	P	**P**	**10 38 53.6**	**+0.2**
KAPI				IAmb	IAmb	10 39 02.6	
	comp=Z,43nm,1.1s						
TOLI2	**Tolitoli**	**23.70**	**288**	P	**P**	**10 38 56.7**	**+0.9**
TOLI2				IAmb	IAmb	10 39 03.6	
	comp=Z,28nm,0.8s						
KOUNC	**Koumac, New Ca**	**24.68**	**126**	P	**P**	**10 39 04.5**	**-0.3**
KOUNC				IAmb	IAmb	10 39 08.2	
	comp=Z,24nm,1.0s						
STKA	**Stephens Creek**	**25.27**	**183**	P	**P**	**10 39 10.7**	**+0.6**
STKA	**Stephens Creek**	**25.27**	**183**	P	**P**	**10 39 13.5**	**+3.4**
	comp=Z,1.5nm,0.7s,baz=341,slow=14,SNR=3.5						
STKA				LR	LR	10 50 33.9	
	comp=Z,220nm,20.2s,baz=351,slow=40						
	comp=Z,1.5nm,0.7s						
PLAI	**Plampang**	**25.38**	**263**	P	**P**	**10 39 09.7**	**-1.5**
	comp=Z,24nm,1.0s						
BBOO	**Buckleboo**	**27.01**	**193**	P	**P**	**10 39 25.9**	**+0.1**
BBOO				IAmb	IAmb	10 39 43.0	
	comp=Z,49nm,1.5s						
MBWA	**Marble Bar**	**27.04**	**235**	P	**P**	**10 39 26.2**	**0.0**
PSA00	**Pilbara Seismi**	**27.15**	**234**	P	**P**	**10 39 26.1**	**-1.2**
PSA00				IAmb	IAmb	10 39 47.3	
	comp=Z,12nm,0.6s						
PSA00	**Pilbara Seismi**	**27.15**	**234**	P	**P**	**10 39 28.4**	**+1.2**
PSA00				IAmb	IAmb	10 39 42.1	
	comp=Z,4.9nm,0.7s						
FORT	**Forrest**	**28.04**	**209**	P	**P**	**10 39 34.6**	**-0.5**
CAN	**Canberra**	**29.14**	**170**	P	**P**	**10 39 45.5**	**+0.6**
LEM	**Lembang**	**35.42**	**267**	LR	LR	10 58 14.5	
	comp=Z,70nm,20.4s,baz=58,slow=41						
MJAR	**Matsushiro Arr**	**43.10**	**354**	P	**P**	**10 41 41.0**	**-3.0**
	comp=Z,2.2nm,0.7s,baz=163,slow=8.9,SNR=5.2						
	comp=Z,2.2nm,0.7s						
RTZ	**Ruatahuna**	**44.13**	**141**	P	**P**	**10 41 54.3**	**+1.8**
RTZ				IAmb	IAmb	10 42 04.8	
	comp=Z,20nm,1.1s						
TUWZ	**Tuamarina**	**44.19**	**147**	P	**P**	**10 41 54.2**	**+1.5**
NJ2	**Nanjing**	**44.88**	**330**	*e*P	**P**	**10 41 58.3**	**0.0**
NJ2				pP	**sP**	**10 42 05.8**	**+2.7**
NJ2				sP	**pP**	**10 42 08.5**	**+6.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,5.0s						
BFZ	**Birch Farm**	**44.99**	**144**	P	**P**	**10 42 00.5**	**+1.3**
KSAR	**Wonju Array Be**	**46.04**	**343**	P	**P**	**10 42 06.4**	**-1.0**
KSRS	**Korea Array**	**46.04**	**343**	P	**P**	**10 42 06.3**	**-1.1**
	comp=Z,4.6nm,0.9s,baz=162,slow=9.2,SNR=17						
	comp=Z,4.6nm,0.9s						
KS19	**Wonju Array Si**	**46.10**	**343**	P	**P**	**10 42 06.2**	**-1.7**
KS19				IAmb	IAmb	10 42 06.9	
	comp=Z,10.0nm,0.9s						
JTM	**Tenmabayashi**	**47.12**	**358**	P	**P**	**10 42 14.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**50.28**	**300**	P	**P**	**10 42 40.9**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=119,slow=5.7,SNR=1.6						
	comp=Z,0.6nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.51**	**350**	P	**P**	**10 42 47.4**	**-2.0**
USRK	**Ussuriysk Ar.**	**51.51**	**350**	P	**P**	**10 42 48.3**	**-1.0**
	comp=Z,6.2nm,0.8s,baz=169,slow=7.7,SNR=13						
	comp=Z,6.2nm,0.8s						
XAN	**Xi'an**	**51.81**	**323**	P	**P**	**10 42 52.0**	**+0.1**
XAN				pP	sP	10 42 58.3	+1.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH	**PanZhiHua**	**51.95**	**311**	P	**P**	**10 42 55.0**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,70nm,7.3s						
MDJ	**Mudanjiang**	**52.38**	**348**	P	**P**	**10 42 56.8**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.9s						
BNX	**BinXian**	**53.93**	**346**	⇑P	**P**	**10 43 06.5**	**-0.8**
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
BNX				pmax	pmax		
	comp=Z,52nm,3.5s						
HHC	**Hu-ho-hao-te**	**55.41**	**331**	*e*P	**P**	**10 43 19.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.8s						
LZH	**Lanzhou**	**56.26**	**322**	*e*P	P	10 43 32.0	+7.5
LZH				pP	sP	10 43 37.8	+8.4
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
PEA0B	**Petropavlovsk-**	**60.65**	**10**	P	**P**	**10 43 52.4**	**-2.3**
PETK	**Petropavlovsk-**	**60.65**	**10**	P	**P**	**10 43 52.8**	**-1.8**
PETK	**Petropavlovsk-**	**60.65**	**10**	P	**P**	**10 43 53.2**	**-1.4**
	comp=Z,10nm,0.8s,baz=177,slow=6.6,SNR=10						
	comp=Z,10nm,0.8s						
GTA	**Gaotai**	**60.83**	**322**	*e*P	**P**	**10 43 56.8**	**+0.4**
GTA				pP	sP	10 44 03.5	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	**Ulaanbaatar**	**62.85**	**333**	P	**P**	**10 44 09.8**	**0.0**
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**10 44 10.4**	**-1.2**
SONM	**Songino Array**	**63.12**	**333**	P	**P**	**10 44 10.9**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=151,slow=5.6,SNR=6.1						
	comp=Z,1.0nm,0.8s						
MA2	**Magadan**	**66.16**	**4**	P	**P**	**10 44 30.1**	**-0.9**
MA2				IAmb	IAmb	10 44 30.8	
	comp=Z,13nm,1.0s						
WMQ	**Urumqi**	**70.81**	**321**	*e*P	**P**	**10 45 00.3**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,83nm,4.5s						
VNDA	**Vanda**	**71.64**	**176**	P	**P**	**10 45 05.9**	**+1.0**
VNDA	**Vanda**	**71.64**	**176**	P	**P**	**10 45 06.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=333,slow=6.9,SNR=5.4						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**75.58**	**322**	P	**P**	**10 45 28.3**	**-0.3**
MKAR	**Makanchi Array**	**75.58**	**322**	P	**P**	**10 45 28.0**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=104,slow=7.2,SNR=54						
	comp=Z,5.4nm,0.8s						
MAKZ	**Makanchi**	**75.78**	**322**	P	**P**	**10 45 29.2**	**-0.5**
MAKZ				IAmb	IAmb	10 45 37.5	
	comp=Z,12nm,1.0s						
ZAA0	**Zalesovo Array**	**77.51**	**329**	P	**P**	**10 45 38.0**	**-1.4**
ZALV	**Zalesovo Beam**	**77.51**	**329**	P	**P**	**10 45 37.5**	**-1.8**
ZALV	**Zalesovo Beam**	**77.51**	**329**	P	**P**	**10 45 38.0**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=114,slow=4.6,SNR=9.6						
	comp=Z,2.0nm,0.6s						
M14K	**Bethel**	**79.44**	**24**	P	**P**	**10 45 49.4**	**-0.3**
KURBB	**Kurchatov Arra**	**79.45**	**324**	P	**P**	**10 45 49.6**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=99,slow=5.9,SNR=5.2						
	comp=Z,2.7nm,0.9s						
L14K	**Kuka Creek**	**79.49**	**23**	P	**P**	**10 45 49.8**	**-0.3**
ARSB	**Arslanbob**	**79.74**	**314**	P	**P**	**10 45 50.4**	**-1.8**
J16K	**Anvik River**	**81.39**	**22**	P	**P**	**10 45 59.9**	**-0.3**
J16K				IAmb	IAmb	10 46 01.4	
	comp=Z,14nm,1.1s						
I17K	**Unalakleet**	**81.69**	**22**	P	**P**	**10 46 01.5**	**-0.3**
I17K				IAmb	IAmb	10 46 02.8	
	comp=Z,12nm,1.1s						
SIMJ	**Simiganj**	**81.91**	**310**	P	**P**	**10 46 02.3**	**-1.5**
SIMJ				IAmb	IAmb	10 46 14.5	
	comp=Z,6.7nm,0.8s						
G16K	**Koyuk River**	**81.96**	**20**	P	**P**	**10 46 03.1**	**-0.1**
G16K				IAmb	IAmb	10 46 03.9	
	comp=Z,10.0nm,1.1s						
K17K	**Iditarod**	**81.97**	**23**	P	**P**	**10 46 03.3**	**-0.1**
K17K				IAmb	IAmb	10 46 04.2	
	comp=Z,13nm,0.9s						
KK31	**Karatay Array**	**82.02**	**315**	P	**P**	**10 46 03.1**	**-1.0**
KKAR	**Karatay Array**	**82.02**	**315**	P	**P**	**10 46 03.5**	**-0.6**
SVW2	**Sparrevohn**	**82.28**	**25**	P	**P**	**10 46 05.1**	**+0.1**
SVW2				IAmb	IAmb	10 46 05.6	
	comp=Z,16nm,1.1s						
L18K	**Granite Mounta**	**82.36**	**24**	P	**P**	**10 46 05.0**	**-0.5**
L18K				IAmb	IAmb	10 46 26.3	
	comp=Z,11nm,1.1s						
N19K	**Bonanza Creek**	**82.61**	**26**	P	**P**	**10 46 06.5**	**-0.4**
N19K				IAmb	IAmb	10 46 06.8	
	comp=Z,12nm,1.1s						
C16K	**Lisburne Hills**	**82.75**	**17**	P	**P**	**10 46 06.7**	**-0.6**
C16K				IAmb	IAmb	10 46 20.0	
	comp=Z,11nm,1.4s						
J18K	**Innoko River**	**82.97**	**23**	P	**P**	**10 46 08.1**	**-0.5**
J18K				IAmb	IAmb	10 46 35.7	
	comp=Z,10nm,1.4s						
L19K	**White Mountain**	**83.10**	**25**	P	**P**	**10 46 09.3**	**0.0**
L19K				IAmb	IAmb	10 46 14.3	
	comp=Z,16nm,1.2s						
M19K	**Big River Lodg**	**83.16**	**25**	P	**P**	**10 46 08.8**	**-0.8**
QSPA	**South Pole Qui**	**83.45**	**180**	P	**P**	**10 46 11.4**	**+0.2**
QSPA				IAmb	IAmb	10 46 19.0	
	comp=Z,6.6nm,0.9s						
QSPA	**South Pole Qui**	**83.45**	**180**	P	**P**	**10 46 11.2**	**0.0**
	comp=Z,4.4nm,0.6s,baz=301,slow=1.0,SNR=51						
	comp=Z,4.4nm,0.6s						
G18K	**Tagagawik**	**83.51**	**21**	P	**P**	**10 46 10.3**	**-1.1**
G18K				IAmb	IAmb	10 46 11.5	
	comp=Z,12nm,1.2s						
J19K	**Poorman**	**83.66**	**23**	P	**P**	**10 46 12.1**	**0.0**
M20K	**Styx River**	**83.68**	**25**	P	**P**	**10 46 11.9**	**-0.5**
E18K	**Tukpahlearik C**	**83.69**	**19**	P	**P**	**10 46 11.1**	**-1.1**
E18K				IAmb	IAmb	10 46 12.2	
	comp=Z,7.5nm,1.1s						
K20K	**Telida**	**83.97**	**24**	P	**P**	**10 46 13.7**	**-0.1**
K20K				IAmb	IAmb	10 46 14.3	
	comp=Z,8.6nm,0.9s						
H19K	**Roundabout Mou**	**84.11**	**21**	P	**P**	**10 46 13.7**	**-0.7**
H19K				IAmb	IAmb	10 46 14.9	
	comp=Z,12nm,1.1s						
G19K	**Purcell Mounta**	**84.19**	**21**	P	**P**	**10 46 14.8**	**0.0**
G19K				IAmb	IAmb	10 46 15.3	
	comp=Z,10nm,1.1s						
J20K	**Nowinta River**	**84.32**	**23**	P	**P**	**10 46 14.6**	**-0.9**
J20K				IAmb	IAmb	10 46 16.1	
	comp=Z,11nm,1.1s						
NRIK	**Noril'sk**	**84.66**	**343**	P	**P**	**10 46 16.3**	**-0.8**
NRIK	**Noril'sk**	**84.66**	**343**	P	**P**	**10 46 16.0**	**-1.1**
	comp=Z,7.6nm,0.7s,baz=136,slow=8.7,SNR=4.0						
	comp=Z,7.6nm,0.7s						
E19K	**Redstone River**	**84.81**	**19**	P	**P**	**10 46 17.3**	**-0.6**
E19K				IAmb	IAmb	10 46 18.4	
	comp=Z,8.9nm,0.9s						
C19K	**Lookout Ridge**	**84.94**	**18**	IAmb	IAmb	10 46 19.4	
	comp=Z,9.8nm,1.0s						
BVAR	**Borovoye Array**	**85.03**	**325**	P	**P**	**10 46 19.3**	**0.0**
	comp=Z,7.5nm,0.8s,baz=107,slow=7.9,SNR=17						
	comp=Z,7.5nm,0.8s						
D19K	**Kuna River**	**85.07**	**18**	IAmb	IAmb	10 46 27.8	
	comp=Z,9.0nm,1.1s						
F20K	**Avaraart Lake**	**85.11**	**20**	IAmb	IAmb	10 46 20.1	
	comp=Z,8.2nm,1.1s						
MLY	**Manley**	**86.01**	**23**	P	**P**	**10 46 22.4**	**-1.6**
RND	**Reindeer**	**86.12**	**25**	P	**P**	**10 46 22.7**	**-1.9**
DHY	**Denali Highway**	**86.61**	**25**	IAmb	IAmb	10 46 26.8	
	comp=Z,9.6nm,0.8s						
WRH	**Wood River Hil**	**86.83**	**24**	P	**P**	**10 46 26.7**	**-1.3**
E22K	**Anaktuvuk Pass**	**86.95**	**20**	P	**P**	**10 46 27.9**	**-0.7**
E22K				IAmb	IAmb	10 46 30.1	
	comp=Z,7.1nm,1.1s						
G23K	**Bananza Creek**	**86.97**	**21**	IAmb	IAmb	10 46 41.3	
	comp=Z,4.7nm,0.8s						
D22K	**Ayikyak River**	**86.99**	**19**	IAmb	IAmb	10 46 29.9	
	comp=Z,9.1nm,1.1s						
CCB	**Clear Creek Bu**	**87.02**	**24**	IAmb	IAmb	10 46 27.6

az=97.0
DJA 27 10:49:57.3±0.2,6°S±3″×14″3E±°, h24^{km}±1^{km}, M4.9/27, mB5.3/13, mb4.8/27, MLv5.3/6, Mw(mB)4.7/13
ISC 27 10:49:55.7±0.5,**6°36'S**±0'05×**143°50E**±0'06,**h19**^{km}±2^{km}, **h20**^{km}:**pP-P, n227**,σ1**s31**/215,**mb4.8**/96,**MS4.0**/31,**3C-1D**, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.73**	**236**	P	**Pn**	**10 50 54.0**	**+1.7**
PMG	**Port Moresby**	**4.72**	**130**	Pn	**Pn**	**10 51 06.5**	**+0.6**
PMG	**Port Moresby**	**4.72**	**130**	P	**Pn**	**10 51 06.8**	**+0.9**
PMG	**Port Moresby**	**4.72**	**130**	Pn	**Pn**	**10 51 06.1**	**+0.2**
	19nm,0.3s,baz=328,slow=6.2,SNR=60						
PMG				Sn	**Sn**	**10 51 58.5**	**-1.8**
	26nm,0.3s,baz=208,slow=24,SNR=7.7						
	111nm,0.6s						
GENI	**Genyem**	**5.00**	**318**	P	**Pn**	**10 51 11.3**	**+1.5**
MANU	**Manus Island**	**5.76**	**42**	Pn	**Pn**	**10 51 20.3**	**0.0**
SMPI	**Sarmi**	**6.45**	**312**	P	**Pn**	**10 51 31.9**	**+2.2**
	134nm,1.5s,2μm0.6nm						
COEN	**Coen**	**7.56**	**182**	Pn	**Pn**	**10 51 46.4**	**+1.5**
COEN	**Coen**	**7.56**	**182**	P	**Pn**	**10 51 46.5**	**+1.5**
RABL	**Rabaul**	**8.89**	**76**	Pn	**Pn**	**10 52 01.6**	**-1.6**
FAKI	**Fak Fak**	**11.72**	**286**	Pn	**Pn**	**10 52 41.2**	**-0.9**
FAKI	**Fak Fak**	**11.72**	**286**	P	**Pn**	**10 52 38.9**	**-3.1**
FAKI	**Fak Fak**	**11.72**	**286**	P	**Pn**	**10 52 41.8**	**-0.2**
	27nm,0.7s						
MTSU	**Mount Surprise**	**11.73**	**176**	P	**Pn**	**10 52 44.2**	**+2.0**
KDU	**Kakadu**	**12.56**	**239**	P	**Pn**	**10 52 51.7**	**-1.8**
TV1H	**Townsville Har**	**13.22**	**166**	P	**Pn**	**10 53 04.6**	**+2.1**
MTN	**Manton Dam**	**13.79**	**241**	Pn	**Pn**	**10 53 07.6**	**-2.7**
MTN	**Manton Dam**	**13.79**	**241**	P	**Pn**	**10 53 08.1**	**-2.2**
DRS	**Darwin Rock St**	**13.81**	**243**	P	**Pn**	**10 53 09.3**	**-1.3**
CTA	**Charters Tower**	**13.91**	**169**	Pn	**Pn**	**10 53 14.1**	**+2.1**
	0.7nm,0.3s,baz=0.4,slow=13,SNR=7.6						
CTA				Lg	Lg	10 57 18.5	
	0.5nm,0.3s,baz=19,slow=6.3,SNR=5.0						
CTA				LR	LR	10 58 55.0	
	comp=Z,1μm,19.4s,baz=357,slow=39						
CTAO	**Charters Tower**	**13.91**	**169**	Pn	**Pn**	**10 53 11.1**	**-0.9**
CTAO	**Charters Tower**	**13.91**	**169**	P	**Pn**	**10 53 13.9**	**+2.0**
QIS	**Mount Isa**	**14.61**	**195**	P	**Pn**	**10 53 21.8**	**+0.2**
WB0	**Warramunga Arr**	**16.00**	**213**	Pn	**Pn**	**10 53 37.3**	**-2.5**
WR0	**Warramunga Arr**	**16.08**	**212**		**Pn**	**10 53 38.4**	**-2.5**
WRAB	**Tennant Creek**	**16.16**	**213**		**Pn**	**10 53 39.4**	**-2.5**
WB2	**Warramunga Arr**	**16.17**	**212**	Pn	**Pn**	**10 53 39.3**	**-2.7**
WRA	**Warramunga Arr**	**16.17**	**213**	Pn	**Pn**	**10 53 39.7**	**-2.4**
WRA	**Warramunga Arr**	**16.17**	**213**	Pn	**Pn**	**10 53 38.9**	**-3.2**
	1.0nm,0.3s,baz=35,slow=13,SNR=34						
WRA				Lg	Lg	10 58 20.8	
	0.9nm,0.3s,baz=37,slow=29,SNR=6.0						
WRA				LR	LR	11 00 41.1	
	comp=Z,2μm,18.1s,baz=21,slow=40						
KNRA	**Kununurra**	**17.16**	**236**	Pn	**Pn**	**10 53 52.4**	**-2.2**
KNRA	**Kununurra**	**17.16**	**236**	P	**Pn**	**10 53 52.6**	**-2.0**
SOEI	**Soe**	**19.34**	**259**	P	**P**	**10 54 20.1**	**-0.2**
SOEI				IAmb	IAmb	10 54 37.6	
	comp=Z,47nm,0.8s						
SOEI	**Soe**	**19.34**	**259**	P	**P**	**10 54 19.9**	**-0.4**
	comp=Z,85nm,0.9s						
SOEI				pP	**sP**	**10 54 28.4**	**-0.6**
	comp=Z,85nm,0.9s						
AS01	**Alice Springs**	**19.50**	**207**	P	**Pn**	**10 54 23.5**	**+0.2**
AS31	**Alice Springs**	**19.53**	**207**	Pn	**Pn**	**10 54 24.1**	**+0.6**
AS31				IAmb	IAmb	10 54 25.7	
	comp=Z,58nm,0.9s						
ASAR	**Alice Springs**	**19.53**	**207**	Pn	**Pn**	**10 54 24.2**	**+0.6**
ASAR	**Alice Springs**	**19.53**	**207**	P	**Pn**	**10 54 23.7**	**+0.2**
	comp=Z,178nm,0.8s,baz=36,slow=9.8,SNR=708						
ASAR				Lg	Lg	11 00 00.4	
	comp=Z,0.3nm,0.3s,baz=34,slow=34,SNR=4.2						
ASAR				LR	LR	11 02 36.3	
	comp=Z,1μm,18.8s,baz=31,slow=39						
GUMO	**Guam**	**19.86**	**4**	LR	LR	11 02 28.7	
	comp=Z,236nm,18.1s,baz=184,slow=38						
EIDS	**Eidsvold**	**20.25**	**160**		**P**	**10 54 31.6**	**+1.6**
EIDS				IAmb	IAmb	10 54 44.1	
	comp=Z,34nm,0.8s						
EIDS	**Eidsvold**	**20.25**	**160**	P	Pn	10 54 32.2	+0.2
FITZ	**Fitzroy Crossi**	**20.97**	**235**	P	**P**	**10 54 37.2**	**-0.6**
INKA	**Innaminka**	**21.43**	**187**	P	**P**	**10 54 44.6**	**+1.9**
GTOI	**Gorontalo**	**21.60**	**288**	P	**P**	**10 54 46.9**	**+2.2**
	comp=Z,21nm,0.9s,comp=Z,232nm						
GTOI				pP	**sP**	**10 54 51.4**	**-2.0**
	comp=Z,21nm,0.9s,comp=Z,232nm						
EDFI	**Ende, Flores**	**21.75**	**262**	P	**P**	**10 54 45.5**	**-0.9**
	comp=Z,19nm,1.0s						
EDFI				pP	**pP**	**10 54 51.0**	**-1.3**
	comp=Z,19nm,1.0s						
DAV	**Davao City (W)**	**22.31**	**306**	LR	LR	11 04 31.0	
	comp=Z,87nm,19.0s,baz=162,slow=39						
OOD	**Oodnadatta**	**22.57**	**198**	P	**P**	**10 54 55.7**	**+0.7**
BKSI	**Bulukumba**	**23.28**	**271**	P	**P**	**10 55 02.9**	**+0.4**
	comp=Z,46nm,1.3s,comp=Z,568nm						
WRKA	**Warakurna**	**23.60**	**216**	P	**P**	**10 55 04.7**	**-0.9**
KAPI	**Kappang**	**23.67**	**272**	P	**P**	**10 55 07.9**	**+1.6**
KAPI				IAmb	IAmb	10 55 22.5	
	comp=Z,48nm,1.1s						
TTSI	**Tana Toraja**	**23.83**	**277**	P	**P**	**10 55 09.8**	**+2.0**
	comp=Z,9.8nm,0.5s,comp=Z,2μm						
TOLI2	**Tolitoli**	**23.86**	**287**	P	**P**	**10 55 07.1**	**-1.0**
LCRK	**Leigh Creek**	**24.47**	**191**	P	**P**	**10 55 13.0**	**-0.6**
MPSI	**Mapaga**	**24.48**	**285**	P	**P**	**10 55 13.1**	**-0.8**
	comp=Z,9.0nm,0.9s,comp=Z,1μm						
ARMA	**Armidale**	**25.12**	**163**	P	**P**	**10 55 21.6**	**+1.9**
ARMA				IAmb	IAmb	10 55 22.4	
	comp=Z,31nm,1.1s						
CMSA	**Cobar Meteorol**	**25.13**	**176**	P	**P**	**10 55 20.6**	**+1.0**
MULG	**Mulgathing**	**25.40**	**199**	P	**P**	**10 55 23.0**	**+0.9**
STKA	**Stephens Creek**	**25.45**	**184**	P	**P**	**10 55 21.6**	**-0.8**
STKA	**Stephens Creek**	**25.45**	**184**	P	**P**	**10 55 21.7**	**-0.8**
STKA	**Stephens Creek**	**25.45**	**184**	P	**P**	**10 55 21.7**	**-0.8**
	comp=Z,7.4nm,0.7s,baz=349,slow=7.4,SNR=12						
STKA				Lg	Lg	11 03 30.8	
	comp=Z,0.1nm,0.3s,baz=74,slow=18,SNR=1.6						
	comp=Z,7.4nm,0.7s						
PLAI	**Plampang**	**25.61**	**263**	P	**P**	**10 55 22.5**	**-1.7**
TWSI	**Taliwang, Sumb**	**26.49**	**263**	P	**P**	**10 55 31.8**	**-0.3**
	comp=Z,12nm,0.7s,comp=Z,767nm						
BBOO	**Buckleboo**	**27.22**	**194**	P	**P**	**10 55 37.8**	**-0.6**
BBOO				IAmb	IAmb	10 55 53.2	
	comp=Z,22nm,1.1s						
BBOO	**Buckleboo**	**27.22**	**194**	P	**P**	**10 55 39.9**	**+1.4**
MBWA	**Marble Bar**	**27.31**	**235**	P	**P**	**10 55 39.1**	**-0.4**
FORT	**Forrest**	**28.29**	**209**	P	**P**	**10 55 47.4**	**-0.7**
CAN	**Canberra**	**29.27**	**171**	P	**P**	**10 55 58.3**	**+1.5**
CAN				IAmb	IAmb	10 55 58.9	
	comp=Z,9.4nm,0.7s						
CAN	**Canberra**	**29.27**	**171**	P	**P**	**10 55 58.5**	**+1.7**
MLBS	**Spotswood, Mel**	**31.35**	**178**	P	**P**	**10 56 15.9**	**+0.8**
JCJ	**Chichijima**	**33.28**	**358**	LR	LR	11 10 26.4	
	comp=Z,142nm,19.1s,baz=100,slow=37						
KSM	**Kuching**	**34.04**	**282**	P	**P**	**10 56 36.3**	**-2.7**
KSM				IAmb	IAmb	10 56 37.5	
	comp=Z,13nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.99**	**219**	LR	LR	11 12 44.5	
	comp=Z,900nm,18.6s,baz=28,slow=38						
JOW	**Kunigami**	**36.14**	**337**	LR	LR	11 09 35.9	
	comp=Z,160nm,19.8s,baz=152,slow=33						
TPUB	**Ta-pu**	**36.99**	**324**	P	**P**	**10 57 03.6**	**-0.6**
TPUB				IAmb	IAmb	10 57 09.2	
	comp=Z,18nm,1.1s						
YHNB	**Yeheng**	**37.62**	**326**	P	**P**	**10 57 07.3**	**-2.4**
YHNB				IAmb	IAmb	10 57 22.9	
	comp=Z,19nm,0.9s						
JHJ	**Hachijo jima 2**	**39.42**	**355**	LR	LR	11 10 55.4	
	comp=Z,378nm,20.3s,baz=145,slow=32						
JNU	**Nakatsue**	**41.05**	**344**	P	**P**	**10 57 35.6**	**-2.5**
JNU	**Nakatsue**	**41.05**	**344**	LR	LR	11 12 06.0	
	comp=Z,140nm,20.3s,baz=161,slow=32						
RAO	**Raoul Island**	**42.91**	**127**	LR	LR	11 11 47.7	
	comp=Z,122nm,20.5s,baz=80,slow=31						
MJAR	**Matsushiro Arr**	**42.96**	**354**	P	**P**	**10 57 51.6**	**-2.0**
	comp=Z,2.7nm,1.0s,baz=173,slow=7.5,SNR=4.4						
MJAR				LR	LR	11 13 36.2	
	comp=Z,130nm,21.1s,baz=142,slow=33						
	comp=Z,2.7nm,1.0s						
URZ	**Urewera**	**43.99**	**141**	LR	LR	11 16 01.2	
	comp=Z,192nm,18.3s,baz=46,slow=36						
BSWZ	**Blackbirch Sta**	**44.36**	**147**	P	**P**	**10 58 04.0**	**-0.8**
RPZ	**Rata Peaks**	**44.38**	**151**	P	**P**	**10 58 03.7**	**-1.3**
RPZ	**Rata Peaks**	**44.38**	**151**	P	**P**	**10 58 05.7**	**+0.7**
	comp=Z,8.5nm,0.7s,baz=270,slow=1.0,SNR=3.5						
RPZ				LR	LR	11 14 34.3	
	comp=Z,232nm,18.8s,baz=294,slow=33						
	comp=Z,8.5nm,0.7s						
KHZ	**Kahutara**	**44.68**	**148**	P	**P**	**10 58 07.0**	**-0.3**
KHZ				IAmb	IAmb	10 58 09.0	
	comp=Z,13nm,0.8s						
GVZ	**Greta Valley S**	**44.81**	**149**	P	**P**	**10 58 09.0**	**+0.6**
NJ2	**Nanjing**	**44.84**	**330**	*e*P	**P**	**10 58 10.5**	**+1.7**
NJ2				pP	**sP**	**10 58 16.0**	**-1.7**
NJ2				sP	**pP**	**10 58 19.3**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.7s						
BFZ	**Birch Farm**	**44.99**	**144**	P	**P**	**10 58 10.5**	**+0.6**
KSRS	**Korea Array**	**45.95**	**343**	P	**P**	**10 58 17.2**	**-0.2**
	comp=Z,12nm,1.0s,baz=162,slow=9.4,SNR=36						
KSRS				LR	LR	11 15 10.5	
	comp=Z,120nm,21.3s,baz=140,slow=33						
	comp=Z,12nm,1.0s						
KSAR	**Wonju Array Be**	**45.95**	**343**	P	**P**	**10 58 17.4**	**0.0**
KS19	**Wonju Array Si**	**46.01**	**343**	P	**P**	**10 58 15.2**	**-2.8**
WHN	**Wuhan**	**46.11**	**324**	P	**P**	**10 58 20.3**	**+1.5**
INCN	**Inchon**	**46.37**	**341**	P	**P**	**10 58 20.9**	**0.0**
JTM	**Tenmabayashi**	**46.97**	**357**	P	**P**	**10 58 24.3**	**-1.1**
JTM				IAmb	IAmb	10 58 31.8	
	comp=Z,13nm,1.0s						
GYA	**Guiyang**	**48.37**	**314**	⇑*i*P	**P**	**10 58 39.3**	**+2.6**
GYA				pmax	pmax		
	comp=Z,18nm,0.6s						
ENH	**Enshi**	**48.88**	**320**	P	**P**	**10 58 40.6**	**+0.1**
ENH				IAmb	IAmb	10 58 54.9	
	comp=Z,10nm,1.0s						
TIA	**Tai'an**	**49.05**	**332**	P	**P**	**10 58 42.0**	**+0.4**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PHRA	**Phrae**	**49.30**	**301**	P	**P**	**10 58 43.0**	**-0.9**
LYN	**LuoYang**	**50.14**	**326**	⇑P	**P**	**10 58 50.3**	**+0.3**
LYN				pmax	pmax		
	comp=Z,22nm,0.5s						
JKA	**Kamikawa-asahi**	**50.25**	**359**	P	**P**	**10 58 48.6**	**-2.0**
ASAJ	**Asahikawa**	**50.25**	**359**	LR	LR	11 27 58.4	
	comp=Z,48nm,18.4s,baz=176,slow=46						
CMAR	**Chiang Mai Arr**	**50.38**	**300**	P	**P**	**10 58 53.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**50.38**	**300**	P	**P**	**10 58 52.9**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=123,slow=5.0,SNR=8.7						
	comp=Z,1.3nm,0.5s						
CHTO	**Chiang Mai**	**50.54**	**301**	P	**P**	**10 58 51.9**	**-1.3**
SNY	**Shenyang**	**51.30**	**341**	⇓P	**P**	**10 58 57.8**	**-0.7**
SNY				S	**S**	**11 06 20.0**	**+3.4**
SNY				pmax	pmax		
	comp=Z,16nm,0.9s						
SNY				pmax	pmax		
	comp=Z,110nm,4.1s						
SNY				LR	LR		
	comp=Z,98nm,12.3s						
SNY				LR	LR		
	comp=Z,130nm,15.3s						
SNY				LR	LR		
	comp=Z,170nm,14.9s						
USA0B	**Ussuriysk Arra**	**51.39**	**349**	P	**P**	**10 58 58.9**	**-0.2**
USA0B				IAmb	IAmb	10 58 59.1	
	comp=Z,14nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.39**	**349**	P	**P**	**10 58 58.8**	**-0.3**
	comp=Z,14nm,1.0s,baz=164,slow=8.8,SNR=13						
USRK				LR	LR	11 17 51.3	
	comp=Z,155nm,21.6s,baz=150,slow=33						
	comp=Z,14nm,1.0s						
XAN	**Xi'an**	**51.81**	**323**	P	**P**	**10 59 02.5**	**-0.1**
XAN				pmax	pmax		
	comp=Z,18nm,1.2s						
PZH	**PanZhiHua**	**52.01**	**311**	P	**P**	**10 59 05.5**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,4.6s						
MDJ	**Mudanjiang**	**52.26**	**347**	P	**P**	**10 59 05.3**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
MDJ	**Mudanjiang**	**52.26**	**347**	P	**P**	**10 59 05.1**	**-0.6**
CN2	**Changchun**	**52.53**	**344**	P	**P**	**10 59 06.0**	**-1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJT	**Baijiatuan**	**52.58**	**334**	P	**P**	**10 59 07.6**	**-0.6**
BJT				IAmb	IAmb	10 59 09.3	
	comp=Z,14nm,1.0s						
BJI	**Beijing**	**52.60**	**334**	P	**P**	**10 59 07.5**	**-0.8**
BJI				sP	**sP**	**10 59 19.5**	**+2.0**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**53.08**	**359**	P	**P**	**10 59 10.9**	**-0.8**
YSS				IAmb	IAmb	10 59 11.6	
	comp=Z,9.4nm,1.0s						
CD2	**Chengdu**	**53.08**	**317**	P	**P**	**10 59 12.5**	**+0.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
BNX	**BinXian**	**53.83**	**346**	⇑P	**P**	**10 59 16.5**	**-0.7**
BNX				pmax	pmax		
	comp=Z,32nm,0.8s						
BNX				pmax	pmax		
	comp=Z,160nm,5.1s						
HHC	**Hu-ho-hao-te**	**55.38**	**331**	*e*P	**P**	**10 59 31.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,47nm,4.0s						
BTO	**Baotou**	**55.95**	**330**	*e*P	**P**	**10 59 34.5**	**+1.6**
BTO				pP	**sP**	**10 59 40.5**	**-1.7**
BTO				sP	**pP**	**10 59 43.3**	**+3.7**
BTO				PP	**PP**	**11 01 41.0**	**+3.1**
BTO				pmax	pmax		
	comp=Z,24nm,1.2s						
BTO				pmax	pmax		
	comp=Z,240nm,4.7s						
LZH	**Lanzhou**	**56.27**	**322**	*e*P	**P**	**10 59 36.0**	**+0.7**
LZH				sP	sP	10 59 50.5	+5.9
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
KLR	**Kul'dur**	**56.30**	**351**	LR	LR	11 22 25.6	
	comp=Z,72nm,20.0s,baz=156,slow=35						
RAR	**Rarotonga**	**56.74**	**111**	LR	LR	11 21 19.2	
	comp=Z,49nm,19.0s,baz=211,slow=33						
HEH	**HeiHe**	**58.08**	**348**	*e*P	**P**	**10 59 46.5**	**-1.1**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HEH				pmax	pmax		
	comp=Z,160nm,4.4s						
HEH				LR	LR		
	comp=Z,190nm,14.7s						
HEH				LR	LR		
	comp=Z,150nm,14.6s						
HEH				LR	LR		
	comp=Z,310nm,17.9s						
HIA	**Hailar**	**59.15**	**342**	P	**P**	**10 59 55.6**	**+0.5**
HIA				IAmb	IAmb	10 59 56.3	
	comp=Z,11nm,1.1s						
SHL	**Shillong**	**59.32**	**305**	P	**P**	**10 59 57.4**	**+0.4**
SHL				IAmb	IAmb	11 00 11.6	
	comp=Z,9.0nm,1.1s						
PEA0B	**Petropavlovsk-**	**60.45**	**10**	P	**P**	**11 00 03.7**	**-0.3**
PETK	**Petropavlovsk-**	**60.45**	**10**	P	**P**	**11 00 02.7**	**-1.3**
PETK	**Petropavlovsk-**	**60.45**	**10**	P	**P**	**11 00 03.1**	**-0.9**
	comp=Z,17nm,0.9s,baz=190,slow=6.0,SNR=16						
	comp=Z,17nm,0.9s						
GTA	**Gaotai**	**60.84**	**322**	*e*P	**P**	**11 00 07.5**	**+0.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOMU	**GeErMu**	**62.22**	**317**	P	**P**	**11 00 18.0**	**+1.2**
GOMU				pP	pP	11 00 21.5	-2.1
GOMU				sP	sP	11 00 24.0	-2.1
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**62.80**	**333**	P	**P**	**11 00 20.7**	**+0.5**
ULN				IAmb	IAmb	11 00 24.1	
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**63.08**	**333**	P	**P**	**11 00 22.4**	**+0.5**
SONM	**Songino Array**	**63.08**	**333**	P	**P**	**11 00 22.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=156,slow=7.1,SNR=16						
SONM				LR	LR	11 28 04.9	
	comp=Z,111nm,19.6s,baz=162,slow=36						
	comp=Z,2.6nm,0.8s						
HON	**Honolulu**	**63.61**	**63**	P	**P**	**11 00 26.0**	**+0.2**
CASY	**Casey**	**64.03**	**194**	P	**P**	**11 00 27.9**	**+0.2**
PALK	**Pallekele**	**64.09**	**281**	LR	LR	11 32 24.0	
	comp=Z,42nm,18.1s,baz=219,slow=40						
SHEM	**Shemya Is, Ala**	**64.34**	**20**	LR	LR	11 24 55.9	
	comp=Z,255nm,20.3s,baz=235,slow=33						
MA2	**Magadan**	**65.98**	**4**	P	**P**	**11 00 40.0**	**-0.6**
PPT	**Papeete**	**66.13**	**106**	LR	LR	11 25 23.7	
	comp=Z,68nm,21.9s,baz=274,slow=32						
WMQ	**Urumqi**	**70.83**	**321**	*e*P	**P**	**11 01 12.0**	**+0.7**
WMQ				pP	sP	11 01 19.8	-0.9
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
VNDA	**Vanda**	**71.78**	**176**	P	**P**	**11 01 17.1**	**+0.7**
VNDA	**Vanda**	**71.78**	**176**	P	**P**	**11 01 16.3**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=318,slow=6.8,SNR=5.2						
VNDA				LR	LR	11 32 26.2	
	comp=Z,205nm,18.1s,baz=338,slow=36						
	comp=Z,2.0nm,0.9s						
SBA	**Scott Base**	**72.49**	**175**	P	**P**	**11 01 21.6**	**+1.0**
MKAR	**Makanchi Array**	**75.58**	**322**	P	**P**	**11 01 39.2**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=104,slow=7.6,SNR=18						
	comp=Z,1.5nm,0.6s						
MAKZ	**Makanchi**	**75.78**	**321**	P	**P**	**11 01 40.3**	**-0.1**
MAKZ				IAmb	IAmb	11 01 50.6	
	comp=Z,7.4nm,1.0s						
BILL	**Bilibino**	**75.95**	**9**	P	**P**	**11 01 41.0**	**+0.2**
KSH	**Kashi**	**77.05**	**313**	P	**P**	**11 01 49.5**	**+1.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NIL	**Nilore**	**77.32**	**306**	P	**P**	**11 01 47.2**	**-2.2**
NIL				IAmb	IAmb	11 01 58.9	
	comp=Z,12nm,0.8s						
ZAA0	**Zalesovo Array**	**77.49**	**329**	P	**P**	**11 01 47.9**	**-2.0**
ZALV	**Zalesovo Beam**	**77.49**	**329**	P	**P**	**11 01 48.6**	**-1.3**
ZALV	**Zalesovo Beam**	**77.49**	**329**	P	**P**	**11 01 48.8**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=107,slow=7.9,SNR=4.7						
ZALV				LR	LR	11 37 14.2	
	comp=Z,43nm,18.9s,baz=122,slow=37						
	comp=Z,0.9nm,0.6s						
AAK	**Ala-Archa**	**79.13**	**315**	P	**P**	**11 02 00.0**	**+0.6**
M14K	**Bethel**	**79.20**	**24**	P	**P**	**11 01 59.0**	**-0.1**
M14K				IAmb	IAmb	11 02 00.1	
	comp=Z,22nm,1.1s						
L14K	**Kuka Creek**	**79.25**	**23**	P	**P**	**11 01 59.4**	**0.0**
L14K				IAmb	IAmb	11 02 10.8	
	comp=Z,16nm,1.1s						
KURK	**Kurchatov**	**79.44**	**324**	P	**P**	**11 02 00.9**	**+0.3**
KURBB	**Kurchatov Arra**	**79.45**	**324**	P	**P**	**11 02 00.5**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=116,slow=4.2,SNR=7.4						
	comp=Z,1.6nm,1.0s						
J14K	**Nanvaranak Lak**	**79.75**	**22**	P	**P**	**11 02 02.9**	**+0.8**
O16K	**Kokwok River B**	**80.20**	**26**	P	**P**	**11 02 04.8**	**+0.2**
O16K				IAmb	IAmb	11 02 09.0	
	comp=Z,13nm,1.1s						
K15K	**Wolf Creek Mou**	**80.25**	**23**	P	**P**	**11 02 05.7**	**+0.8**
K15K				IAmb	IAmb	11 02 06.2	
	comp=Z,18nm,1.1s						
M16K	**Timber Creek**	**80.58**	**25**	P	**P**	**11 02 07.0**	**+0.3**
L16K	**Owhat River**	**80.74**	**24**	P	**P**	**11 02 07.4**	**-0.1**
L16K				IAmb	IAmb	11 02 10.3	
	comp=Z,10nm,1.1s						
N17K	**Nushagak Hills**	**81.07**	**25**	P	**P**	**11 02 09.9**	**+0.7**
N17K				IAmb	IAmb	11 02 11.2	
	comp=Z,8.2nm,0.9s						
F15K	**North Star Dit**	**81.15**	**19**	P	**P**	**11 02 09.6**	**0.0**
F15K				IAmb	IAmb	11 02 11.3	
	comp=Z,8.1nm,1.0s						
J16K	**Anvik River**	**81.16**	**22**	P	**P**	**11 02 10.5**	**+0.9**
J16K				IAmb	IAmb	11 02 11.3	
	comp=Z,7.3nm,0.8s						
M17K	**Holitna River**	**81.41**	**25**	P	**P**	**11 02 11.2**	**+0.1**
M17K				IAmb	IAmb	11 02 13.7	
	comp=Z,14nm,1.0s						
I17K	**Unalakleet**	**81.46**	**22**	IAmb	IAmb	11 02 12.9	
	comp=Z,14nm,1.0s						
G16K	**Koyuk River**	**81.73**	**20**	IAmb	IAmb	11 02 14.4	
	comp=Z,10.0nm,0.9s						
K17K	**Iditarod**	**81.74**	**23**	P	**P**	**11 02 13.2**	**+0.4**
KDAK	**Kodiak Island**	**81.88**	**29**	LR	LR	11 32 03.0	
	comp=Z,127nm,21.5s,baz=260,slow=31						
SIMJ	**Simiganj**	**81.97**	**310**	P	**P**	**11 02 13.7**	**-1.1**
SVW2	**Sparrevohn**	**82.04**	**25**	P	**P**	**11 02 15.2**	**+0.8**
SVW2				IAmb	IAmb	11 02 16.1	
	comp=Z,9.0nm,1.1s						
KKAR	**Karatay Array**	**82.06**	**315**	P	**P**	**11 02 14.9**	**0.0**
L18K	**Granite Mounta**	**82.13**	**24**	P	**P**	**11 02 15.8**	**+1.0**
L18K				IAmb	IAmb	11 02 16.7	
	comp=Z,15nm,1.1s						
H17K	**Granite Mounta**	**82.32**	**21**	P	**P**	**11 02 15.9**	**+0.1**
H17K				IAmb	IAmb	11 02 17.1	
	comp=Z,14nm,1.1s						
N19K	**Bonanza Creek**	**82.37**	**26**	P	**P**	**11 02 16.4**	**+0.1**
C16K	**Lisburne Hills**	**82.53**	**17**	P	**P**	**11 02 16.2**	**-0.6**
C16K				IA

RIDG	Independent Ri	87.67	25	P	P	11 02 42.8	0.0	
J25K	Salcha River,	87.75	24	P	P	11 02 42.2	-0.9	
WSAR	Wadi Sarin	87.79	294	LR	LR	11 47 03.2		
	comp=Z,18nm,19.7s,baz=216,slow=39							
F24K	Squaw Lake	87.83	21	P	P	11 02 43.4	-0.1	
F24K				IAmb	IAmb	11 02 45.0		
	comp=Z,8.6nm,0.9s							
D24K	Happy Valley	88.14	19	P	P	11 02 45.2	+0.3	
FYU	Fort Yukon	88.46	22	P	P	11 02 44.6	-1.8	
L27K	Beaver Creek,	88.75	26	P	P	11 02 48.1	+0.2	
L27K				IAmb	IAmb	11 02 50.0		
	comp=Z,7.5nm,1.1s							
E25K	Arctic Village	88.87	21	P	P	11 02 49.1	+0.8	
E25K				IAmb	IAmb	11 02 49.9		
	comp=Z,8.2nm,1.1s							
K27K	Chicken	88.93	25	P	P	11 02 49.5	+0.9	
BMAR	Burnt Mountain	88.99	22	P	P	11 02 49.6	+0.6	
D25K	Kavik River	89.02	20	P	P	11 02 49.1	+0.1	
D25K				IAmb	IAmb	11 02 51.6		
	comp=Z,10nm,1.1s							
DAWY	Dawson	90.07	25	P	P	11 02 53.8	-0.3	
DAWY				IAmb	IAmb	11 02 57.7		
	comp=Z,8.6nm,1.1s							
L29M	L29M	90.39	26	P	P	11 02 56.1	+0.5	
L29M				IAmb	IAmb	11 02 56.7		
	comp=Z,7.0nm,1.0s							
K29M	Barlow Dome	90.83	26	P	P	11 02 58.0	+0.3	
J30M	Hart River	91.49	25	P	P	11 02 59.8	-0.9	
J30M				IAmb	IAmb	11 03 04.2		
	comp=Z,6.0nm,1.1s							
INK	Inuvik	93.26	22	LR	LR	11 42 23.4		
	comp=Z,138nm,19.0s,baz=183,slow=34							
DLBC	Dease Lake	93.52	32	LR	LR	11 39 43.4		
	comp=Z,76nm,19.5s,baz=285,slow=32							
BBB	Bella Bella	93.98	38	LR	LR	11 40 47.3		
	comp=Z,87nm,18.3s,baz=331,slow=33							
YKA	Yellowknife Ar	101.10	28	P	Pdif	11 03 42.4	-1.9	
	comp=Z,0.2nm,0.7s,baz=279,slow=4.1,SNR=3.3							
TORD	Torodi Ar. Bea	141.79	283	PKP	PKPdf	11 09 24.9	-2.2	
	comp=Z,0.3nm,0.5s,baz=52,slow=3.8,SNR=1.7							
DBIC	Dimbokro	148.56	272	PKPbc	PKPbc	11 09 42.1	-0.4	
	comp=Z,2.6nm,0.7s,baz=135,slow=2.9,SNR=3.2							

IDC ***27*** *10:55:33.7±1.9, 32°.82S×178°.63W, h0km, mb4.1/3, mbtmp4.1/4, ML3.9/1, Error ellipse: s-maj=47.9km s-min=37.2km az=75.0*

NEIC ***27*** *10:55:35.4±1.0, 33°.00S±0°.1×178°.5W±0°.2, h10km±2km, mb4.5/11, Error ellipse: s-maj=22.6km s-min=19.2km az=125.0*

WEL ***27*** *10:56:49.3, 38°S±18°×17°8E±1°.2, h30km±13km, M2.3/13, ML2.3/14, MLv2.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=177.6*

ISC 27 10:55:37.7±0.9, 33°.01S±0°.10×178°.5W±0°.1, h32km, n48, σ1§19/49, mb4.4/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.25	209	Pn	Pn	10 56 53.6	-0.2
MXZ	Matakaoa Point	5.25	209	P	Pn	10 56 54.4	+0.6
WMGZ	Waiomatatini S	5.43	207	P	Pn	10 56 56.6	+0.3
PKGZ	Pakihiroa	5.62	209	P	Pn	10 56 58.3	-0.8
HAZ	Te Kaha	5.63	212	P	Pn	10 56 59.3	+0.1
PUZ	Puketiti	5.71	207	P	Pn	10 56 59.1	-1.1
RUGZ	Raukumara Rang	5.85	211	P	Pn	10 57 01.9	-0.4
TWGZ	Tauwhareparae	5.91	208	P	Pn	10 57 04.3	+1.4
CNGZ	Carnagh Statio	6.09	205	P	Pn	10 57 05.0	-0.4
TKGZ	Te Karaka	6.18	208	P	Pn	10 57 08.3	+1.5
MWZ	Matawai	6.23	210	P	Pn	10 57 06.6	-0.7
MARZ	Manawahe	6.34	217	P	Pn	10 57 13.4	+4.4
URZ	Urewera	6.35	213	Pn	Pn	10 57 08.7	-0.2
	2.5nm,0.3s,baz=346,slow=3.7,SNR=26						
URZ				Sn	Sn	10 58 20.2	-0.2
	3.6nm,0.3s,baz=258,slow=22,SNR=6.5						
	5.4nm,0.3s						
URZ	Urewera	6.35	213	P	Pn	10 57 08.4	-0.6
RIGZ	Rimuhau	6.45	207	P	Pn	10 57 09.8	-0.6
PRGZ	Paritu Road	6.59	206	P	Pn	10 57 10.8	-1.6
MUGZ	Murupara	6.68	214	P	Pn	10 57 13.5	-0.1
SNGZ	Shannon Statio	6.68	209	P	Pn	10 57 14.1	+0.5
RTZ	Ruatahuna	6.70	212		Pn	10 57 13.3	-0.5
TOZ	Tahuroa Road	6.81	225	Pn	Pn	10 57 17.2	+1.9
RAHZ	Arahi	6.90	210	P	Pn	10 57 17.8	+1.1
MTHZ	Maungataniwha	6.96	212	P	Pn	10 57 18.9	+1.6
NMHZ	Naumai	7.17	211	P	Pn	10 57 21.0	+0.6
ARHZ	Aropaoanui	7.23	209	P	Pn	10 57 21.5	+0.3
BKZ	Black Stump Fm	7.37	212	Pn	Pn	10 57 22.9	-0.1
BKZ	Black Stump Fm	7.37	212	P	Pn	10 57 24.3	+1.3
ETVZ	East Tongariro	7.71	216	P	Pn	10 57 26.9	-0.9
KAHZ	Kahuranaki	7.74	208	P	Pn	10 57 26.2	-1.8
BFZ	Birch Farm	8.74	207	Pn	Pn	10 57 39.8	-2.1
MRZ	Mangatainoka R	9.00	210	Pn	Pn	10 57 45.3	-0.1
TUWZ	Tuamarina	10.34	214	Pn	Pn	10 58 03.3	-0.5
KOUNC	Koumac, New Ca	19.73	305	P	P	11 00 04.1	-0.6
RAR	Rarotonga	20.34	59	P	P	11 00 12.1	+0.7
RAR				IAmb	IAmb	11 00 15.5	
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	33.91	283	P	P	11 02 16.7	-1.2
AS31	Alice Springs	42.63	270	P	P	11 03 31.2	-0.1
AS31				IAmb	IAmb	11 03 49.5	
	comp=Z,7.4nm,1.1s						
ASAR	Alice Springs	42.63	270	P	P	11 03 31.0	-0.3
	comp=Z,2.1nm,0.9s,baz=112,slow=7.5,SNR=2.6						
	comp=Z,2.1nm,0.9s						
WB2	Warramunga Arr	43.84	275	P	P	11 03 41.6	+0.5
WB2				IAmb	IAmb	11 03 55.8	
	comp=Z,8.3nm,0.9s						
WRAB	Tennant Creek	43.85	275	P	P	11 03 41.0	-0.1
WRAB				IAmb	IAmb	11 03 45.5	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	43.85	275	P	P	11 03 40.6	-0.6
WRA	Warramunga Arr	43.85	275	P	P	11 03 40.9	-0.2
	comp=Z,2.1nm,0.4s,baz=114,slow=8.0,SNR=7.4						
	comp=Z,2.1nm,0.4s						
WB0	Warramunga Arr	43.89	275	P	P	11 03 41.3	-0.1
WB0				IAmb	IAmb	11 03 41.9	
	comp=Z,9.2nm,0.7s						
SBA	Scott Base	45.41	184	P	P	11 03 53.2	+0.4
VNDA	Vanda	45.47	186	P	P	11 03 52.7	-0.5
KNRA	Kununurra	50.55	277	P	P	11 04 31.8	-1.5
FITZ	Fitzroy Crossi	52.00	272	P	P	11 04 42.5	-1.7
FITZ				IAmb	IAmb	11 04 54.8	
	comp=Z,6.4nm,1.1s						
QSPA	South Pole Qui	57.11	180	P	P	11 05 22.1	+1.3
QSPA				IAmb	IAmb	11 05 25.2	
	comp=Z,4.7nm,1.1s						
QSPA	South Pole Qui	57.11	180	P	P	11 05 23.2	+2.4
	comp=Z,3.0nm,1.2s,baz=14,slow=3.7,SNR=2.1						
	comp=Z,3.0nm,1.2s						
FINES	FINESS Array B	147.43	338	PKPbc	PKPbc	11 15 17.2	-0.3
	comp=Z,1.4nm,0.4s,baz=34,slow=4.7,SNR=12						

HEL ***27*** *10:59:32.5±0.2, 64°.74N×30°.71E, h0km, ML1.7, Suspected explosion*

KOLA ***27*** *10:59:34.9, 64°.78N×30°.50E, h0km, ML2.0, Kostomuksha, Karelia*

IDC ***27*** *10:59:37.6±3.0, 64°.84N×30°.01E, h0km, mbtmp2.9/3, ML2.3/2, Error ellipse: s-maj=49.9km s-min=9.8km az=101.0*

ISC 27 10:59:31.6±0.9, 64°.74N±0°.03×30°.55E±0°.05, h0km, n27, σ1§70/41, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.59	207	PG	Pb	10 59 44.1	-0.7
	baz=33						
RMF				SG	Sg	10 59 47.9	-2.6
RMF				MSG		10 59 52.2	
	comp=Z,9.9nm,0.2s						
KU6	Riekki	1.32	348	PG	Pg	10 59 56.6	-0.2
	baz=162						
KU6				MSG		11 00 12.7	
	comp=Z,4.2nm,0.2s						
KU6				SB	Sg	11 00 13.7	-0.2
MSF	Maaselka	1.34	332	PG	Pg	10 59 57.2	0.0
	baz=150						
MSF				SG	Sb	11 00 15.4	+0.2
OLKF	Oulanka, Finla	1.66	344	PG	Pb	11 00 02.8	-0.2
OLKF				MSG		11 00 22.5	
	comp=Z,3.8nm,0.2s						
OLKF				SN	Sg	11 00 25.2	+0.4
NIF	Nilsia	1.81	223	PG	Pg	11 00 06.0	-0.3
	baz=39						
JOF	Joensuu	1.86	169	PG	Pn	11 00 05.2	+0.5
JOF				SG	Sb	11 00 30.4	+0.2
OUL	Oulu	2.01	282	PG	Pg	11 00 09.7	-0.4
	baz=96						
OUL				SG	Sg	11 00 38.3	+2.1
RANF	Ranua	2.03	311	PG	Pb	11 00 09.4	+0.1
	baz=125						
RANF				SG	Sg	11 00 36.0	-0.7
OBF4	Vikkela, Lumij	2.33	274	PG	Pb	11 00 14.7	+0.2
	baz=88						
OBF4				MSG		11 00 43.5	
	comp=Z,5.4nm,0.2s						
OBF4				SG	Sg	11 00 46.7	+0.2
OUF	Merijarvi	2.54	264	PB	Pb	11 00 16.6	-1.4
	baz=77						
OUF				MSG		11 00 49.5	
	comp=Z,5.1nm,0.2s						
OUF				SG	Sg	11 00 51.9	-1.2
RNF	Rovaniemi	2.66	317	PB	Pb	11 00 18.7	-1.2
	baz=130						
RNF				SB	Sb	11 00 53.8	+0.8
OBF0	Syolatti, Pyha	2.73	268	PG	Pg	11 00 23.2	-0.7
OBF0				MSG		11 00 54.9	
	comp=Z,4.8nm,0.2s						
OBF0				SG	Sg	11 00 59.2	0.0
TOF	Tornio	2.93	300	PB	Pb	11 00 24.4	-0.2
TOF				MSG		11 01 00.3	
	comp=Z,1.3nm,0.2s						
APA0	Apatity Array	3.04	18	P	Pn	11 00 23.6	+2.7
APA0				S	Sn	11 00 59.2	+1.2
VRF	Varrio	3.04	353	PB	Pn	11 00 22.8	+1.8
	baz=170						
VRF				MSG		11 01 02.1	
	comp=Z,1.3nm,0.2s						
SGF	Sodankyl	3.17	331	SB	Sb	11 01 07.6	-0.2
KALU	Kalix	3.22	294	PB	Pb	11 00 28.0	-1.6
KALU				SG	Sg	11 01 12.9	-2.1
KAF	Kangasniemi	3.25	218	PN	Pn	11 00 26.5	+2.7
KLF	Kolari	3.68	316	PB	Pb	11 00 34.2	-3.1
VAF	Ylistaro	3.88	248	PN	Pn	11 00 35.4	+3.1
VAF	Ylistaro	3.88	248	SN	Pn	11 00 35.4	+3.1
FINES	FINESS Array B	3.88	214	Pn	Pb	11 00 39.6	-1.3
	comp=Z,0.8nm,0.6s,baz=39,slow=14,SNR=1.1						
FINES				Lg	Lg	11 01 35.7	
	comp=Z,0.5nm,0.3s,baz=36,slow=26,SNR=7.7						
HEF	Hetta	4.59	326	SG	Sg	11 01 54.3	-4.7
ARCES	ARCESS Array B	5.20	340	P	Pn	11 00 51.6	+1.1
ARCES				S	Sn	11 01 50.2	-0.9
ARCES	ARCESS Array B	5.20	340	Pn	Pn	11 00 51.4	+0.8
	comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=23						
ARCES				Sn	Sn	11 01 49.4	-1.8
	comp=Z,0.1nm,0.3s,baz=152,slow=30,SNR=2.0						
ARCES				Lg	Lg	11 02 10.7	
	comp=Z,0.1nm,0.3s,baz=153,slow=32,SNR=3.4						
	comp=Z,0.3nm,0.3s						
I37NO	I37NO	6.39	318	I	I	11 37 10.0	
	baz=131,slow=336,SNR=2.2						
HFS	Hagfors	9.06	247	Pn	Pn	11 01 45.8	+2.3
	comp=Z,0.2nm,0.3s,baz=53,slow=15,SNR=1.4						
	comp=Z,2.1nm,0.8s						

HEL 27 10:59:44.1±0.2, 61°.60N×24°.34E, h0km, ML1.2, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF	Keuruu	0.62	24	PG	Pg	10 59 55.6	-0.3
	baz=208						
KEF				SG	Sg	11 00 03.6	-0.4
KEF				MSG		11 00 03.8	
	comp=Z,3.0nm,0.2s						
FIA0	FINESS Array S	0.85	100	PB	Pg	11 00 00.3	0.0
	baz=285						
FIA0				MSG		11 00 10.3	
	comp=Z,2.6nm,0.2s						
FIA0				SB	Sn	11 00 15.5	-0.8
KAF	Kangasniemi	1.06	60	PN	Pg	11 00 04.6	+0.2
KAF				MSG		11 00 16.5	
	comp=Z,2.5nm,0.2s						
KAF				SN	Sb	11 00 20.5	+0.8
KPF	Kankaanpaa	1.11	283	PG	Pg	11 00 03.6	-1.7
	baz=99						
NUR	Nurmijrvi	1.11	172	MSG		11 00 17.8	
	comp=Z,2.1nm,0.2s						
NUR				SB	Sg	11 00 20.3	+0.7
PVF	Pernaja	1.29	145	PN	Pg	11 00 09.0	+0.2
	baz=330						
PVF				MSG		11 00 23.2	
	comp=Z,2.7nm,0.2s						
PVF				SN	Sb	11 00 26.4	+0.1
RAF	Rauma	1.38	246	PG	Pg	11 00 08.9	-1.5
	baz=62						
RAF				MSG		11 00 25.6	
	comp=Z,1.7nm,0.2s						
RAF				SG	Sg	11 00 27.4	-0.8
MEF	Metsahovi	1.39	179	PN	Pn	11 00 10.1	-0.6
MEF				MSG		11 00 26.1	
	comp=Z,2.9nm,0.2s						
MEF				SN	Sg	11 00 28.3	-0.5
SUF	Sumiainen	1.40	36	PN	Pn	11 00 10.4	-0.5
SUF				MSG		11 00 26.4	
	comp=Z,1.0nm,0.2s						
VAF	Ylistaro	1.64	332	PN	Pn	11 00 14.3	+0.1
VAF				MSG		11 00 33.4	
	comp=Z,1.8nm,0.2s						
VJF	Virojoki	1.89	123	MSG		11 00 40.3	
	comp=Z,2.2nm,0.2s						
VJF				SG	Sg	11 00 44.2	-0.6
RUF	Ruokolahti	2.21	93	PG	Pb	11 00 24.6	-0.3
RUF				MSG		11 00 49.7	
	comp=Z,1.0nm,0.2s						
AAL	Aland	2.56	238	PB	Pn	11 00 28.1	+1.3
MTSE	Matsula	2.91	185	SG	Sb	11 01 11.8	-1.0
BURU	Burvik	3.28	337	PN	Pn	11 00 37.3	+0.7
BURU				SG	Sg	11 01 27.3	-2.1
SLIT	Slitere, Latvi	4.12	196	SB	Sb	11 01 44.1	-3.6
TOF	Tornio	4.49	360	PG	Pb	11 01 03.5	-0.3
TOF	Tornio	4.49	360	SG	Pb	11 01 03.5	-0.3

IDC ***27*** *11:02:02.8±2.5, 3°.36S×130°.21E, h0km, mb3.7/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=159.8km s-min=28.1km az=70.0*

DJA ***27*** *11:02:04.6±0.4, 3°.5S×13°.1E±°, h10km, M3.4/7, MLv3.4/7*

ISC 27 11:02:03.5±1.0, 3°.15S±0°.07×130°.78E±0°.08, h10km, n9, σ1§06/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.48	81	P	Pb	11 02 32.1	+0.9
BNDI	Bandanaira	1.62	213	P	Pn	11 02 32.9	+0.8
SWI	Sorong	2.32	12	Pn	Pn	11 02 41.9	+0.1
NLAI	Namlea	3.68	269	P	Pn	11 03 00.9	+0.4
LBMI	Labuha	4.12	307	P	Pn	11 03 06.7	+0.1
SANI	Sanana	4.91	283	P	Pn	11 03 18.0	+0.5
WRA	Warramunga Arr	17.05	169	Pn	Pn	11 05 60.0	-2.2
	0.1nm,0.3s,baz=346,slow=12,SNR=1.5						
	1.0nm,0.6s						
ASAR	Alice Springs	20.62	172	P	P	11 06 43.3	+0.1
	3.4nm,0.3s,baz=351,slow=10,SNR=46						
	3.4nm,0.3s						
MKAR	Makanchi Array	65.48	326	P	P	11 12 46.8	-0.1
	0.2nm,0.5s,baz=121,slow=6.9,SNR=2.7						
	0.2nm,0.5s						

IDC ***27*** *11:09:23.6±1.2, 6°.04S×143°.00E, h0km, mb4.0/4, mbtmp4.0/6, ML1.5/1, Error ellipse: s-maj=45.1km s-min=29.8km az=72.0*

ISC 27 11:09:28.5±1.0, 6°.2S±0°.1×142°.8E±0°.2, h35km, n7, σ1§59/7, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.31	127	Pn	Pn	11 10 45.8	+0.4
	1.0nm,0.3s,baz=284,slow=4.2,SNR=2.5						
	6.3nm,0.5s						
WRA	Warramunga Arr	15.92	210	Pn	Pn	11 13 08.2	-1.9
	0.3nm,0.3s,baz=30,slow=13,SNR=12						
ASAR	Alice Springs	19.34	205	P	P	11 13 52.5	+1.4
	8.0nm,0.7s,baz=36,slow=8.0,SNR=67						
MKAR	Makanchi Array	75.08	322	P	P	11 21 07.9	+0.9
	0.8nm,0.7s,baz=106,slow=8.0,SNR=7.9						
	0.8nm,0.7s						
KURBB	Kurchatov Arra	78.97	324	P	P	11 21 28.6	-0.1
	0.3nm,0.4s,baz=102,slow=5.0,SNR=4.6						
	0.3nm,0.4s						
BVAR	Borovoye Array	84.55	325	P	P	11 21 58.7	+0.7
	3.8nm,0.8s,baz=115,slow=7.0,SNR=17						
	3.8nm,0.8s						
ILAR	Eielson Array	87.36	24	P	P	11 22 09.9	-1.7
	0.5nm,0.9s,baz=234,slow=5.5,SNR=4.1						
	0.5nm,0.9s						

IDC ***27*** *11:09:48.4±1.8, 51°.03N×174°.67E, h0km, mb3.5/6, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=35.5km s-min=22.8km az=4.0*

NEIC ***27*** *11:09:51.1±2.7, 51°.85N±0°.06×174°.4E±0°.1, h35km±2km, ML3.5(AEIC), Error ellipse: s-maj=16.3km s-min=3.1km az=51.0*

AEIC ***27*** *11:09:53±2.2, 50°.7N±0°.1×175°.5E±0°.2, h5km±10km, Error ellipse: s-maj=22.8km s-min=13.7km az=112.0*

ISC 27 11:09:51.8±1.1, 50°.9N±0°.1×174°.68E±0°.05, h35km, n23, σ1§60/29, mb3.5/6, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHEM	Shemya Is, Ala	1.86	349	Pn	Pn	11 10 19.9	-1.1
	44nm,0.3s,baz=162,slow=4.0,SNR=26						
SHEM				Sn	Sn	11 10 42.7	-0.6
	32nm,0.3s,baz=262,slow=23,SNR=16						
LSSA	Little Sitkin	2.62	65		Pn	11 10 31.4	-0.2
LSNW	Little Sitkin	2.63	65		Pn	11 10 31.5	-0.2
LSNW					Sn	11 11 01.5	-0.8
LSPA	Little Sitkin	2.66	65		Pn	11 10 31.6	-0.4
AMKA	Amchitka	2.95	79		Pn	11 10 34.5	-1.6
AMKA					Sn	11 11 06.6	-3.7
CESW	Semis' Southwe	3.22	70		Pn	11 10 39.5	-0.3
CESW					Sn	11 11 15.3	-1.5
CERB	Semis' Cerberu	3.27	70		Pn	11 10 41.0	+0.6
CERB					Sn	11 11 17.3	-0.7
CEPE	Semis' Perret	3.29	69		Pn	11 10 40.5	-0.2
CEPE					Sn	11 11 17.3	-1.2
GANO	Gareloi North	4.19	75		Pn	11 10 52.6	-0.4
KIWB	Kanaga Island	5.21	76	Pn	Pn	11 11 05.1	-2.0
ADK	Adak	5.50	76		Sn	11 12 11.1	-1.9
ADK	Adak	5.50	76	Pn	Pn	11 11 10.9	-0.1
GSCK	Great Sitkin C	5.83	76		Pn	11 11 14.8	-0.9
GSMY	Great Sitkin M	5.90	75		Pn	11 11 15.8	-0.9
ATKA	Atka Island	7.06	75		Pn	11 11 31.3	-1.2
PEA0B	Petropavlovsk-	10.69	288	Pn	Pn	11 12 16.5	-5.8
PETK	Petropavlovsk-	10.69	288	Pn	Pn	11 12 22.1	-0.2
	0.4nm,0.3s,baz=101,slow=19,SNR=14						
PETK				Sn	Sn	11 14 15.9	-4.8
	0.3nm,0.3s,baz=120,slow=25,SNR=1.9						
	2.8nm,0.9s						
ILAR	Eielson Array	24.23	40	P	P	11 15 04.8	0.0
	0.4nm,0.9s,baz=259,slow=6.3,SNR=4.9						
	0.4nm,0.9s						
YKA	Yellowknife Ar	38.50	45	P	P	11 17 11.8	+1.8
	0.3nm,0.8s,baz=287,slow=8.4,SNR=3.7						
	0.3nm,0.8s						
PDAR	Pinedale Array	50.33	68	P	P	11 18 46.2	+1.1
	0.3nm,0.6s,baz=306,slow=2.1,SNR=4.3						
	0.3nm,0.6s						
KURBB	Kurchatov Arra	56.39	310	P	P	11 19 30.7	+1.6
	0.6nm,0.4s,baz=46,slow=6.5,SNR=5.8						
	0.6nm,0.4s						
MKAR	Makanchi Array	57.02	305	P	P	11 19 34.7	+0.9
	0.3nm,0.7s,baz=54,slow=6.2,SNR=4.0						
	0.3nm,0.7s						
BVAR	Borovoye Array	58.50	317	P	P	11 19 45.7	+1.7
	0.6nm,0.5s,baz=35,slow=6.7,SNR=3.7						
	0.6nm,0.5s						

IDC 27 11:12:06.1±368.0, 5°.46S×148°.09E, h0km, Error ellipse: s-maj=146.4km s-min=93.9km az=73.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I40PG	Keravat	4.07	74	I	I	11 37 11.6	
	0.4nm,0.6s,baz=254,slow=313,SNR=2.6						
I39PW	PALAU INFRASON	18.68	314	I	I	13 07 00.0	
	baz=134,slow=313,SNR=1.2						
I07AU	WARRAMUNGA INF	59.65	222	I	I	13 07 50.0	
	baz=41,slow=308,SNR=4.7						

IDC 27 11:13:28.1±6.1, 6°.42S×142°.16E, h0km, mb3.3/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=208.1km s-min=37.2km az=96.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.44	209	Pn	Pn	11 17 06.7	-0.8
	0.2nm,0.3s,baz=27,slow=13,SNR=1.8						
	0.5nm,0.4s						
ASAR	Alice Springs	18.90	204	P	P	11 17 50.3	-0.1
	0.3nm,0.3s,baz=34,slow=9.5,SNR=8.8						
	1.2nm,0.5s						
MKAR	Makanchi Array	74.81	322	P	P	11 25 10.6	+0.2
	0.2nm,0.5s,baz=120,slow=8.8,SNR=2.7						
	0.2nm,0.5s						

IDC ***27*** *11:16:55.4±1.3, 6°.37S×143°.25E, h0km, mb3.9/4, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=48.1km s-min=25.7km az=75.0*

ISC 27 11:17:00.6±1.1, 6°.5S±0°.1×143°.3E±0°.2, h35km, n7, σ1§16/7, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.84	127	Pn	Pn	11 18 10.8	-0.2
	7.4nm,0.5s,baz=341,slow=6.7,SNR=2.4						
WRA	Warramunga Arr	15.93	212	Pn	Pn	11 20 40.7	-1.5
	0.2nm,0.3s,baz=28,slow=13,SNR=2.2						
	0.6nm,0.6s						
ASAR	Alice Springs	19.30	207	P	P	11 21 24.2	+1.6
	0.3nm,0.3s,baz=36,slow=10,SNR=7.4						
	1.2nm,0.6s						
MKAR	Makanchi Array	75.53	322	P	P	11 28 41.7	+0.2
	0.9nm,0.8s,baz=102,slow=7.1,SNR=9.2						
	0.9nm,0.8s						
ZALV	Zalesovo Beam	77.46	329	P	P	11 28 51.6	-0.7
	0.4nm,0.4s,baz=101,slow=3.1,SNR=2.2						
	0.4nm,0.4s						
QSPA	South Pole Qui	83.49	180	P	P	11 29 24.9	+0.3
	0.8nm,0.8s,baz=283,slow=0.9,SNR=1.5						
	0.8nm,0.8s						
BVAR	Borovoye Array	84.98	325	P	P	11 29 32.4	+0.2
	1.2nm,0.7s,baz=114,slow=5.5,SNR=5.7						
	1.2nm,0.7s						

IDC ***27*** *11:19:43.3±0.7, 6°.24

WB0	**Warramunga Arr**	**15.60**	**212**	Pn	**Pn**	**11 23 24.6**	**-1.2**
WB0				IAmb	IAmb	11 23 41.3	
	comp=Z,13nm,0.8s						
WR0	**Warramunga Arr**	**15.68**	**211**	Pn	**Pn**	**11 23 25.5**	**-1.4**
WRAB	**Tennant Creek**	**15.76**	**212**	Pn	**Pn**	**11 23 26.3**	**-1.6**
WRAB				IAmb	IAmb	11 23 48.3	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**15.76**	**212**	Pn	**Pn**	**11 23 27.6**	**-0.4**
WRA	**Warramunga Arr**	**15.77**	**212**	Pn	**Pn**	**11 23 26.5**	**-1.6**
WRA	**Warramunga Arr**	**15.77**	**212**	Pn	**Pn**	**11 23 27.4**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=9.6						
WRA				Lg	Lg	11 28 11.9	
	comp=Z,0.4nm,0.3s,baz=31,slow=28,SNR=5.3						
KNRA	**Kununurra**	**16.68**	**236**		**Pn**	**11 23 39.0**	**-0.6**
KNRA				IAmb	IAmb	11 23 54.0	
	comp=Z,21nm,0.8s						
SOEI	**Soe**	**18.85**	**259**	P	**P**	**11 24 03.3**	**-2.5**
SOEI				IAmb	IAmb	11 24 25.8	
	comp=Z,33nm,0.8s						
AS31	**Alice Springs**	**19.15**	**206**	P	**P**	**11 24 07.1**	**-1.9**
ASAR	**Alice Springs**	**19.16**	**206**	P	**P**	**11 24 08.0**	**-1.0**
ASAR	**Alice Springs**	**19.16**	**206**	P	**Pn**	**11 24 12.3**	**+2.2**
	comp=Z,13nm,0.7s,baz=33,slow=10,SNR=49						
ASAR				Lg	Lg	11 29 45.8	
	comp=Z,0.1nm,0.3s,baz=24,slow=30,SNR=4.0						
ASAR				LR	LR	11 32 23.4	
	comp=Z,204nm,19.7s,baz=35,slow=39						
GUMO	**Guam**	**20.09**	**5**	LR	LR	11 31 23.4	
	comp=Z,35nm,20.5s,baz=66,slow=35						
FITZ	**Fitzroy Crossi**	**20.49**	**234**	P	**P**	**11 24 22.6**	**-1.0**
WRKA	**Warakurna**	**23.18**	**216**	P	**P**	**11 24 55.0**	**+2.8**
KAPI	**Kappang**	**23.22**	**273**	P	**P**	**11 24 49.5**	**-3.1**
TOLI2	**Tolitoli**	**23.48**	**288**	P	**P**	**11 24 52.0**	**-3.3**
TOLI2				IAmb	IAmb	11 25 01.2	
	comp=Z,19nm,0.9s						
TOLI2	**Tolitoli**	**23.48**	**288**	P	**P**	**11 24 56.7**	**+1.5**
STKA	**Stephens Creek**	**25.24**	**183**	P	**P**	**11 25 14.8**	**+3.5**
	comp=Z,1.8nm,0.7s,baz=344,slow=7.4,SNR=2.2						
STKA				LR	LR	11 37 03.0	
	comp=Z,85nm,20.7s,baz=26,slow=41						
	comp=Z,1.8nm,0.7s						
DZM	**Mont Dzumac**	**27.37**	**127**	LR	LR	11 34 35.9	
	comp=Z,44nm,19.7s,baz=15,slow=33						
KSRS	**Korea Array**	**45.99**	**343**	P	**P**	**11 28 08.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=160,slow=9.2,SNR=5.5						
	comp=Z,1.2nm,0.8s						
JTM	**Tenmabayashi**	**47.13**	**358**	P	**P**	**11 28 18.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**50.08**	**301**	P	**P**	**11 28 41.5**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=111,slow=5.0,SNR=2.1						
	comp=Z,0.7nm,0.4s						
KLR	**Kul'dur**	**56.41**	**351**	LR	LR	11 50 18.9	
	comp=Z,14nm,20.7s,baz=118,slow=33						
PETK	**Petropavlovsk-**	**60.72**	**10**	P	**P**	**11 29 54.3**	**-2.0**
	comp=Z,2.2nm,0.9s,baz=140,slow=4.1,SNR=1.6						
	comp=Z,2.2nm,0.9s						
SONM	**Songino Array**	**63.03**	**333**	P	**P**	**11 30 11.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=145,slow=3.5,SNR=2.7						
	comp=Z,0.2nm,0.5s						
SHEM	**Shemya Is, Ala**	**64.68**	**20**	LR	LR	11 58 28.9	
	comp=Z,5.5nm,18.4s,baz=276,slow=36						
YAK	**Yakutsk**	**69.15**	**353**	LR	LR	12 00 45.0	
	comp=Z,13nm,18.3s,baz=108,slow=36						
VNDA	**Vanda**	**71.63**	**176**	LR	LR	12 03 54.3	
	comp=Z,33nm,20.2s,baz=246,slow=37						
MKAR	**Makanchi Array**	**75.44**	**322**	P	**P**	**11 31 29.1**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=105,slow=7.3,SNR=14						
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**77.41**	**329**	P	**P**	**11 31 39.9**	**0.0**
	comp=Z,0.6nm,0.5s,baz=134,slow=6.2,SNR=2.7						
	comp=Z,0.6nm,0.5s						
BOOM	**Boomskoye usch**	**77.89**	**316**	P	**P**	**11 31 43.5**	**+0.4**
KURBB	**Kurchatov Arra**	**79.33**	**324**	P	**P**	**11 31 50.5**	**0.0**
	comp=Z,1.3nm,0.2s,baz=114,slow=4.5,SNR=8.1						
	comp=Z,1.3nm,0.2s						
QSPA	**South Pole Qui**	**83.43**	**180**	P	**P**	**11 32 12.9**	**+0.7**
QSPA				IAmb	IAmb	11 32 24.3	
	comp=Z,3.7nm,0.9s						
QSPA	**South Pole Qui**	**83.43**	**180**	P	**P**	**11 32 13.5**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=286,slow=1.0,SNR=8.4						
	comp=Z,1.4nm,0.7s						
NRIK	**Noril'sk**	**84.61**	**343**	P	**P**	**11 32 16.7**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=180,slow=3.0,SNR=1.6						
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**84.91**	**325**	P	**P**	**11 32 20.1**	**+0.3**
	comp=Z,6.1nm,0.8s,baz=104,slow=6.3,SNR=21						
	comp=Z,6.1nm,0.8s						
E19K	**Redstone River**	**84.92**	**20**	P	**P**	**11 32 19.5**	**0.0**
E19K				IAmb	IAmb	11 32 45.1	
	comp=Z,5.8nm,1.4s						
BRVK	**Borovoye**	**84.98**	**325**	P	**P**	**11 32 19.6**	**-0.5**
C19K	**Lookout Ridge**	**85.04**	**18**	P	**P**	**11 32 20.6**	**+0.5**
C19K				IAmb	IAmb	11 32 36.9	
	comp=Z,3.0nm,1.0s						
IMAR	**Indian Mountai**	**85.41**	**22**	P	**P**	**11 32 22.9**	**+0.9**
G23K	**Bananza Creek**	**87.08**	**21**	P	**P**	**11 32 30.2**	**-0.1**
G23K				IAmb	IAmb	11 32 58.1	
	comp=Z,1.4nm,1.1s						
D22K	**Ayikyak River**	**87.09**	**19**	P	**P**	**11 32 30.8**	**+0.6**
D22K				IAmb	IAmb	11 32 59.7	
	comp=Z,1.9nm,1.1s						
CCB	**Clear Creek Bu**	**87.13**	**24**	P	**P**	**11 32 32.2**	**+1.7**
CCB				IAmb	IAmb	11 32 52.6	
	comp=Z,3.2nm,1.2s						
ILAR	**Eielson Array**	**87.55**	**24**	P	**P**	**11 32 32.8**	**+0.2**
ILAR	**Eielson Array**	**87.55**	**24**	P	**P**	**11 32 29.5**	**-3.0**
	comp=Z,0.3nm,0.6s,baz=256,slow=4.8,SNR=9.9						
	comp=Z,0.3nm,0.6s						
M27K	**Edge Creek, AK**	**88.91**	**27**	P	**P**	**11 32 40.1**	**+0.9**
BCAR	**Beaver Creek A**	**89.14**	**26**	P	**P**	**11 32 41.2**	**+1.0**
BMAR	**Burnt Mountain**	**89.33**	**22**	P	**P**	**11 32 41.1**	**+0.2**
ABKAR	**Akbulak array**	**90.42**	**319**	P	**P**	**11 32 47.8**	**+1.4**
INK	**Inuvik**	**93.61**	**22**	LR	LR	12 17 07.9	
	comp=Z,25nm,18.1s,baz=348,slow=37						
YBH	**Yreka Blue Hor**	**97.48**	**49**	LR	LR	12 10 43.6	
	comp=Z,17nm,19.0s,baz=278,slow=32						
TORD	**Torodi Ar. Bea**	**141.39**	**283**	PKP	**PKPdf**	**11 39 15.3**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=57,slow=5.6,SNR=2.8						
DBIC	**Dimbokro**	**148.11**	**272**	PKPbc	**PKiKP**	**11 39 32.7**	**-0.7**
	comp=Z,5.9nm,1.0s,baz=65,slow=3.2,SNR=5.0						

DJA 27 11:21:11.7±0.4, 8°S±4°×12°4E±°, h271km±7km, M3.6/10, mb3.9/7, MLv3.4/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.89**	**243**	P	Pn	11 21 54.4	-0.6
SOEI	**Soe**	**1.99**	**171**	P	Pn	11 21 56.4	+0.4
EDFI	**Ende, Flores**	**2.43**	**246**	P	Pn	11 22 00.2	+0.3
BASI	**Baing, Sumba**	**4.11**	**234**	P	Pn	11 22 17.7	-0.1
BKSI	**Bulukumba**	**4.51**	**303**	P	Pn	11 22 22.6	+0.2
PLAI	**Plampang**	**6.19**	**260**	P	Pn	11 22 41.3	-1.3
	18nm,0.7s,0.1nm						
TWSI	**Taliwang, Sumb**	**7.05**	**262**	P	Pn	11 22 51.8	-1.5
	16nm,1.0s,0.1nm						
FAKI	**Fak Fak**	**9.58**	**60**	P	Pn	11 23 23.6	-1.3

SOME 27 11:32:07.4, 43°39N×69°40E
NNC 27 11:32:08.5±1.7, 43°65N×69°75E, h0km, mb3.7, mpv3.6, 2C, Error ellipse: s-maj=9.7km s-min=6.3km az=137.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Boroldaу**	**0.63**	**175**	P	Pn	11 32 23.7	-1.0
	1.9nm,0.1s						
BRLS				S	Sn	11 32 35.8	+0.3
	13nm,0.2s						
KK31	**Karatay Array**	**0.78**	**135**	⇑P	Pg	11 32 23.0	-0.4
	1.6nm,0.5s,baz=318,slow=16,SNR=78						
KK31				⇑S	Sg	11 32 34.5	+1.0
	17nm,0.5s,baz=317,slow=32,SNR=69						
DZA	**Taraz**	**1.38**	**123**	P	Pb	11 32 35.2	0.0
	203nm,0.1s						
DZA				S	Sn	11 32 55.0	+1.0
	106nm,0.2s						
IUG	**Iuzhnay**	**1.52**	**172**	P	Pn	11 32 37.3	+0.3
	18nm,0.2s						
IUG				S	Sn	11 32 58.8	+1.2
	70nm,0.3s						
MRKS	**Merke**	**2.70**	**108**	Pg	Pb	11 32 58.3	+0.7
	2.2nm,0.3s						
MRKS				Lg	Lg	11 33 35.0	
	8.5nm,0.3s						
BTLS	**Baital**	**3.38**	**64**	Pg	Pg	11 33 12.9	-0.3
	6.8nm,0.3s						
BTLS				Lg	Lg	11 33 59.7	
	3.6nm,0.3s						
SGDS	**Sogindy**	**3.55**	**92**	Pg	Pb	11 33 14.3	+2.1
	4.4nm,0.1s						
SGDS				Lg	Lg	11 34 02.4	
	16nm,0.1s						
KRBS	**Karabastau**	**4.29**	**87**	Pg	Pg	11 33 28.2	-2.6
	1.8nm,0.5s						
KRBS				Lg	Lg	11 34 26.5	
	3.4nm,0.4s						
KTBS	**Karatobe**	**5.03**	**87**	Pg	Pg	11 33 41.4	-3.4
	1.0nm,0.2s						
KTBS				Lg	Lg	11 34 49.0	
	4.8nm,0.5s						

IDC 27 11:38:06.0±3.2, 33°17S×178°24W, h0km, mb3.9/2, mbtmp3.9/3, ML3.8/1, MS3.6/2, Error ellipse: s-maj=75.0km s-min=46.2km az=123.0
NEIC 27 11:38:10.4±0.9, 33°46S±0°08×178°6W±0°2, h10km±2km, mb4.2/9, Error ellipse: s-maj=27.3km s-min=10.4km az=72.0
ISC 27 11:38:09.3±1.7, 33°3S±0°1×178°5W±0°2, h10km, n17, σ0°69/16, mb4.2/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.06**	**215**	Pn	**Pn**	**11 39 40.2**	**+1.3**
	2.3nm,0.3s,baz=335,slow=4.5,SNR=24						
URZ				Sn	**Sn**	**11 40 48.3**	**0.0**
	1.9nm,0.3s,baz=210,slow=18,SNR=6.5						
	4.3nm,0.3s						
RTZ	**Ruatahuna**	**6.41**	**213**	Pn	**Pn**	**11 39 43.4**	**-0.4**
MRZ	**Mangatainoka R**	**8.70**	**211**	Pn	**Pn**	**11 40 14.0**	**-1.2**
DZM	**Mont Dzumac**	**17.38**	**306**	LR	LR	11 47 58.6	
	comp=Z,98nm,18.1s,baz=149,slow=34						
PMG	**Port Moresby**	**39.54**	**299**	P	**P**	**11 45 39.8**	**-0.8**
PMG				IAmb	IAmb	11 45 56.3	
	comp=Z,7.2nm,1.0s						
COEN	**Coen**	**39.74**	**290**	P	**P**	**11 45 42.6**	**+0.3**
COEN				IAmb	IAmb	11 45 53.5	
	comp=Z,6.2nm,1.1s						
AS31	**Alice Springs**	**42.59**	**270**	P	**P**	**11 46 06.4**	**+0.6**
ASAR	**Alice Springs**	**42.59**	**270**	P	**P**	**11 46 06.0**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=109,slow=7.4,SNR=20						
	comp=Z,1.3nm,0.6s						
WR0	**Warramunga Arr**	**43.66**	**276**	P	**P**	**11 46 13.3**	**-1.1**
WR0				IAmb	IAmb	11 46 26.6	
	comp=Z,4.6nm,1.2s						
WB2	**Warramunga Arr**	**43.83**	**275**	P	**P**	**11 46 16.2**	**+0.4**
WB2				IAmb	IAmb	11 46 22.8	
	comp=Z,7.7nm,1.4s						
WRAB	**Tennant Creek**	**43.84**	**276**	P	**P**	**11 46 16.2**	**+0.3**
WRAB				IAmb	IAmb	11 46 21.2	
	comp=Z,5.6nm,1.2s						
WRA	**Warramunga Arr**	**43.84**	**275**	P	**P**	**11 46 15.9**	**+0.1**
WRA	**Warramunga Arr**	**43.84**	**275**	P	**P**	**11 46 15.8**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=116,slow=7.7,SNR=11						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**43.88**	**276**	P	**P**	**11 46 16.4**	**+0.2**
QSPA	**South Pole Qui**	**56.79**	**180**	P	**P**	**11 47 53.6**	**+0.1**
JTS	**Las Juntas de**	**98.54**	**83**	LR	LR	12 28 20.2	
	comp=Z,41nm,19.0s,baz=118,slow=31						
FINES	**FINESS Array B**	**147.71**	**338**	PKPbc	**PKPdf**	**11 57 50.9**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=65,slow=6.6,SNR=4.3						

IDC 27 11:47:09.3±1.9, 6°25S×143°03E, h0km, mb4.0/3, mbtmp3.9/5, ML3.5/2, Error ellipse: s-maj=73.5km s-min=30.1km az=106.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.02**	**211**	Pn	Pn	11 50 54.2	-2.0
	0.1nm,0.3s,baz=30,slow=13,SNR=6.5						
WRA				Sn	Sn	11 53 41.6	-13
	0.1nm,0.3s,baz=26,slow=22,SNR=2.4						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**19.42**	**206**	P	Pn	11 51 38.0	-0.4
	0.4nm,0.3s,baz=33,slow=9.9,SNR=43						
	4.5nm,0.7s						
MKAR	**Makanchi Array**	**75.21**	**322**	P	P	11 58 54.2	+0.3
	0.6nm,0.8s,baz=111,slow=6.6,SNR=6.2						
	0.6nm,0.8s						
BVAR	**Borovoye Array**	**84.66**	**325**	P	P	11 59 45.4	+0.5
	2.3nm,0.7s,baz=114,slow=6.6,SNR=11						
	2.3nm,0.7s						
ILAR	**Eielson Array**	**87.28**	**24**	P	P	11 59 56.8	-0.9
	0.5nm,0.8s,baz=256,slow=4.7,SNR=5.9						
	0.5nm,0.8s						

IDC 27 11:51:00.5±4.6, 6°14S×142°33E, h0km, mb3.4/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=150.6km s-min=37.5km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.76**	**209**	Pn	Pn	11 54 44.0	0.0
	0.1nm,0.3s,baz=31,slow=12,SNR=2.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**19.22**	**204**	P	P	11 55 26.4	+0.1
	0.1nm,0.3s,baz=31,slow=9.8,SNR=6.7						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**74.69**	**322**	P	P	12 02 42.1	0.0
	0.3nm,0.7s,baz=100,slow=4.4,SNR=2.6						
	0.3nm,0.7s						

KRSC 27 11:57:29.5±2.0, 49°27N×157°09E, h8km±52km, MI3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.54**	**336**	*e*P	Pn	11 57 56.7	-0.6
SKR				*e*S	Sn	11 58 16.4	-1.0
PAU	**Pauzhetka**	**2.20**	**355**	*e*P	Pb	11 58 09.4	-0.1
PAU				*e*S	Sb	11 58 35.8	-1.1
KDTR	**Khodutka, Kamc**	**2.62**	**14**	*e*P	Pb	11 58 14.5	-2.0
ASAK	**Asacha**	**3.15**	**9**	*e*P	Pn	11 58 22.4	+3.0
MTVR	**Mutnovka**	**3.29**	**12**	*e*P	Pn	11 58 23.4	+2.1
RUS	**Russkaya**	**3.29**	**15**	*e*S	Sb	11 59 04.3	-3.8
GRL	**Gorelyy**	**3.34**	**10**	*e*P	Pn	11 58 24.1	+2.0
KRMR	**Karymshinskiy**	**3.62**	**10**	*e*P	Pn	11 58 29.5	+3.7
DALK	**Dalny**	**3.91**	**15**	*e*P	Pn	11 58 31.6	+1.9
AVH	**Avacha**	**4.13**	**14**	*e*P	Pn	11 58 37.5	+4.7
SMAR	**Somma**	**4.14**	**14**	*e*P	Pn	11 58 36.9	+3.8
KOK	**Koryaka**	**4.14**	**13**	*e*P	Pn	11 58 36.0	+3.0
KRX	**Arik**	**4.21**	**13**	*e*P	Pn	11 58 37.8	+3.8
SPN	**Mys Shipunski**	**4.25**	**25**	*e*P	Pn	11 58 38.1	+3.7

IDC 27 11:57:37.9±7.4, 5°92S×142°43E, h0km, mb3.4/1, mbtmp3.3/3, ML3.3/2, MS3.3/1, Error ellipse: s-maj=259.6km s-min=37.5km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.00**	**209**	Pn	Pn	12 01 23.1	-1.5
	0.1nm,0.3s,baz=28,slow=13,SNR=1.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.46**	**204**	P	P	12 02 06.9	+0.5
	0.1nm,0.3s,baz=35,slow=10.0,SNR=8.3						
	0.5nm,0.6s						
DZM	**Mont Dzumac**	**28.22**	**127**	LR	LR	12 14 43.4	
	comp=Z,55nm,19.5s,baz=293,slow=36						
MKAR	**Makanchi Array**	**74.58**	**322**	P	P	12 09 19.0	+0.1
	0.2nm,0.6s,baz=100,slow=6.0,SNR=2.6						
	0.2nm,0.6s						

IDC 27 12:05:02.8±3.0, 33°35S×178°50W, h0km, mb4.0/2, mbtmp4.1/3, ML3.8/1, Error ellipse: s-maj=69.4km s-min=35.7km az=118.0
NEIC 27 12:05:02.9±1.0, 33°47S±0°09×178°1W±0°2, h10km±2km, mb4.3/7, Error ellipse: s-maj=31.7km s-min=13.4km az=107.0
ISC 27 12:05:03.0±1.4, 33°4S±0°1×178°2W±0°2, h10km, n17, σ0°60/18, mb4.2/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.18**	**3**	Pn	**Pn**	**12 06 07.0**	**+0.1**
MXZ	**Matakaoa Point**	**5.00**	**214**	Pn	**Pn**	**12 06 17.1**	**-1.1**
URZ	**Urewera**	**6.13**	**217**	Pn	**Pn**	**12 06 33.7**	**0.0**
	2.6nm,0.3s,baz=325,slow=2.5,SNR=18						
URZ				Sn	**Sn**	**12 07 43.2**	**-0.7**
	2.3nm,0.3s,baz=272,slow=19,SNR=8.2						
	6.4nm,0.3s						
RTZ	**Ruatahuna**	**6.47**	**216**	Pn	**Pn**	**12 06 39.5**	**+1.1**
BFZ	**Birch Farm**	**8.48**	**210**	Pn	**Pn**	**12 07 06.0**	**+0.1**
MRZ	**Mangatainoka R**	**8.76**	**213**	Pn	**Pn**	**12 07 10.1**	**+0.5**
CTAO	**Charters Tower**	**34.23**	**284**	P	**P**	**12 11 50.0**	**+0.8**
AS31	**Alice Springs**	**42.86**	**270**	P	**P**	**12 13 01.8**	**+0.1**
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**12 13 01.7**	**0.0**
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**12 13 01.1**	**-0.6**
	1.7nm,0.6s,baz=110,slow=7.7,SNR=28						
	1.7nm,0.6s						
WR0	**Warramunga Arr**	**43.95**	**275**	P	**P**	**12 13 10.2**	**-0.2**
WR0				IAmb	IAmb	12 13 26.0	
	comp=Z,4.4nm,1.2s						
WB2	**Warramunga Arr**	**44.11**	**275**	P	**P**	**12 13 11.4**	**-0.3**
WB2				IAmb	IAmb	12 13 39.9	
	comp=Z,8.2nm,1.2s						
WRAB	**Tennant Creek**	**44.12**	**275**	P	**P**	**12 13 11.4**	**-0.4**
WRAB				IAmb	IAmb	12 13 21.8	
	comp=Z,5.7nm,1.2s						
WRA	**Warramunga Arr**	**44.12**	**275**	P	**P**	**12 13 11.0**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=116,slow=7.7,SNR=19						
	comp=Z,1.1nm,0.5s						
WB0	**Warramunga Arr**	**44.16**	**276**	P	**P**	**12 13 11.8**	**-0.4**
WB0				IAmb	IAmb	12 13 38.7	
	comp=Z,14nm,1.5s						
QSPA	**South Pole Qui**	**56.68**	**180**	P	**P**	**12 14 46.5**	**+0.1**
QSPA				IAmb	IAmb	12 14 56.7	
	comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**147.91**	**338**	PKPbc	**PKPbc**	**12 24 47.8**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=64,slow=4.8,SNR=7.1						

IDC 27 12:08:23.7±3.4, 33°16S×178°38W, h0km, mb4.0/2, mbtmp4.0/3, ML3.9/1, Error ellipse: s-maj=75.7km s-min=47.4km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.27**	**214**	Pn	Pn	12 09 57.0	-0.4
	2.9nm,0.3s,baz=357,slow=2.9,SNR=14						
URZ				Sn	Sn	12 11 05.5	-4.4
	1.8nm,0.3s,baz=201,slow=20,SNR=6.2						
	6.2nm,0.3s						
ASAR	**Alice Springs**	**42.71**	**270**	P	P	12 16 23.0	+0.3
	1.6nm,0.6s,baz=110,slow=7.5,SNR=24						
	1.6nm,0.6s						
WRA	**Warramunga Arr**	**43.95**	**275**	P	P	12 16 32.3	-0.4
	1.0nm,0.5s,baz=117,slow=7.7,SNR=13						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**147.60**	**338**	PKPbc	PKPbc	12 28 08.5	-0.7
	0.9nm,0.6s,baz=40,slow=4.5,SNR=1.7						

IDC 27 12:13:18.4±2.3, 6°51S×129°62E, h0km, mb3.7/1, mbtmp3.3/3, ML3.1/2, MS4.1/1, Error ellipse: s-maj=145.6km s-min=32.8km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.12**	**162**	Pn	Pn	12 16 41.6	+1.7
	0.1nm,0.3s,baz=345,slow=13,SNR=6.4						
WRA				Sn	Sn	12 19 03.1	-14
	0.4nm,0.3s,baz=325,slow=23,SNR=5.8						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**17.55**	**167**	P	Pn	12 17 23.4	-1.3
	baz=339,slow=10,SNR=2.0						
	0.3nm,0.7s						
RAO	**Raoul Island**	**54.28**	**121**	LR	LR	12 44 44.8	
	comp=Z,153nm,18.4s,baz=110,slow=35						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	12 24 17.1	0.0
	0.3nm,0.4s,baz=127,slow=7.6,SNR=4.9						
	0.3nm,0.4s						

IDC 27 12:21:32.9±2.6, 4°67N×75°42W, h0km, mb3.5/5, mbtmp3.5/6, ML2.8/1, MS3.1/4, Error ellipse: s-maj=67.0km s-min=11.3km az=2.0
RSNC 27 12:21:32.1±2.6, 4°50N×75°40W, h0km±7km, ML3.2, Mw3.8, Probable volcanic
ISC 27 12:21:33.2±0.6, 4°51N±0°02×75°41W±0°02, h10km, n46, σ2°14/74, mb3.4/5, 3C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORTC	**Ortega, Tolima**	**0.62**	**165**	⇓*i*P	**Pg**	**12 21 43.0**	**-2.4**
ORTC				*e*S	**Sg**	**12 21 51.8**	**-1.7**
ORTC				*i*		12 22 04.7	
	comp=Z,791nm,0.6s						
GUY2C	**Guyana, Caldas**	**0.71**	**4**	⇑*e*P	**Pg**	**12 21 45.2**	**-1.8**
GUY2C				*e*S	**Sg**	**12 21 56.5**	**+0.2**
GUY2C				*i*		12 22 05.6	
	comp=Z,329nm,0.7s						
PLMC	**San Jos del P**	**0.95**	**294**	⇑*i*P	**Pg**	**12 21 49.6**	**-2.0**
PLMC				*e*S	**Sg**	**12 22 03.5**	**-0.5**
PLMC				*i*		12 22 05.6	
	comp=Z,342nm,0.3s						
YOTC	**Yotoco, Valle**	**1.07**	**241**	⇑*i*P	**Pg**	**12 21 50.5**	**-3.3**
YOTC				*e*S	**Sg**	**12 22 05.0**	**-2.7**
ROSC	**El Rosal**	**1.14**	**73**	Pg	**Pn**	**12 21 55.1**	**-0.4**
	comp=Z,31nm,0.3s,baz=321,slow=14,SNR=30						
ROSC				Lg	Lg	12 22 08.9	
	comp=Z,49nm,0.3s,baz=313,slow=18,SNR=7.7						
NORC	**Norcasia**	**1.18**	**27**	*e*P	**Pb**	**12 21 53.3**	**-2.4**
NORC				*e*S	**Sb**	**12 22 08.3**	**-2.7**
NORC				*i*		12 22 10.4	
	comp=Z,378nm,0.5s						
CVER	**Cruz Verde, Cu**	**1.

GR1C	**Gorgona, Isla**	**3.13**	**241**	*eP*		**Pn**		**12 22 22.8**	**+0.1**
GR1C				*eS*		**Sn**		**12 23 03.2**	**+3.0**
UREC	**San Jos de Ur**	**3.22**	**358**	*eP*		**Pn**		**12 22 26.8**	**+2.9**
UREC				*eS*		**Sb**		**12 23 11.1**	**+1.2**
PTGC	**Puerto Gaitan,**	**3.28**	**95**	*eP*		**Pn**		**12 22 26.3**	**+1.5**
PTGC				*eS*		**Sb**		**12 23 13.9**	**+2.2**
PTGC				*i*				12 23 28.7	
	comp=Z,81nm,0.8s								
CRUC	**La Cruz**	**3.31**	**208**	*eP*		**Pb**		**12 22 31.6**	**-0.6**
APAC	**Apartado, Choc**	**3.56**	**341**	*eP*		**Pb**		**12 22 33.0**	**-3.3**
APAC				*i*				12 23 46.8	
	comp=Z,45nm,0.8s								
GCUF	**Volcan Galeras**	**3.79**	**211**	*eP*		**Pb**		**12 22 41.0**	**+0.4**
GCUF				*eS*		**Sn**		**12 23 20.9**	**+3.7**
PAMC	**Pamplona, Colo**	**3.89**	**44**	*eP*		**Pn**		**12 22 36.1**	**+2.5**
PAMC				*eS*		**Sb**		**12 23 25.9**	**-3.8**
PAMC				*i*				12 23 37.4	
	comp=Z,31nm,0.5s								
TAMC	**Tame, Arauca**	**4.08**	**62**	*eP*		**Pn**		**12 22 36.1**	**+0.3**
TAMC				*eS*		**Sn**		**12 23 28.3**	**+4.6**
TAMC				*i*				12 23 51.1	
	comp=Z,19nm,0.5s								
OCAC	**Ocana**	**4.25**	**29**	*eP*		**Pn**		**12 22 37.6**	**-0.6**
OCAC				*eS*		**Sb**		**12 23 35.0**	**-4.5**
OCAC				*i*				12 23 47.4	
	comp=Z,95nm,0.3s								
PTLC	**Puerto Leguiza**	**4.36**	**172**	*eP*		**Pb**		**12 22 52.4**	**+2.4**
PTLC				*i*				12 24 00.5	
	comp=Z,80nm,0.4s								
TULM	**Tulcn-Chalpat**	**4.46**	**212**	*eP*		**Pb**		**12 22 47.1**	**-4.8**
TULM				*eS*		**Sn**		**12 23 38.0**	**+4.4**
TULM				*i*				12 24 04.2	
	comp=Z,13nm,0.7s								
OTAV	**Otavalo**	**5.22**	**216**	*eP*		**Pn**		**12 22 52.7**	**+0.9**
OTAV				*eS*		**Sn**		**12 23 58.0**	**+5.7**
SJCC	**San Jacinto, C**	**5.35**	**2**	*eP*		Pn		12 22 59.7	+6.4
SJCC				*i*				12 24 38.6	
	comp=Z,11nm,0.7s								
SDV	**Santo Domingo**	**6.43**	**47**	Pn		**Pn**		**12 23 08.6**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=238,slow=15,SNR=11								
SDV				Sn		**Sn**		**12 24 23.5**	**+1.6**
	comp=Z,2.8nm,0.3s,baz=336,slow=17,SNR=4.8								
SDV				LR		LR		12 25 48.5	
	comp=Z,76nm,19.7s,baz=222,slow=40								
	comp=Z,8.0nm,0.6s								
SDV	**Santo Domingo**	**6.43**	**47**	*eP*		**Pn**		**12 23 11.3**	**+3.0**
SDV				*eS*		**Sn**		**12 24 23.6**	**+1.7**
SDV				*i*				12 24 32.1	
	comp=Z,7.4nm,0.5s								
MCRA	**Macar, Loja**	**9.92**	**207**	*eP*		**Pn**		**12 23 58.3**	**+2.2**
ATAH	**Atahualpa**	**11.95**	**194**	LR		LR		12 29 46.4	
	comp=Z,73nm,21.3s,baz=13,slow=41								
NNA	**Nana**	**16.45**	**185**	LR		LR		12 33 06.7	
	comp=Z,92nm,19.7s,baz=4.5,slow=42								
CPUP	**Villa Florida**	**35.31**	**151**	LR		LR		12 44 04.4	
	comp=Z,57nm,18.4s,baz=58,slow=38								
TXAR	**Lajitas Array**	**36.40**	**316**	P		**P**		**12 28 39.4**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=127,slow=9.4,SNR=6.3								
TXAR				PcP		**PcP**		**12 31 03.5**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=131,slow=3.5,SNR=3.8								
	comp=Z,0.4nm,0.7s								
PDAR	**Pinedale Array**	**48.66**	**327**	P		**P**		**12 30 18.4**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=152,slow=12,SNR=2.8								
	comp=Z,0.2nm,0.6s								
NVAR	**Mina Array Bea**	**51.53**	**317**	P		**P**		**12 30 40.6**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=131,slow=7.8,SNR=5.3								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**64.66**	**341**	P		**P**		**12 32 09.8**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=130,slow=6.7,SNR=8.7								
	comp=Z,0.4nm,0.8s								
ILAR	**Eielson Array**	**78.09**	**335**	P		**P**		**12 33 32.3**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=108,slow=5.1,SNR=2.3								
	comp=Z,0.2nm,0.7s								

NEIC ***27*** *12:29:51.8±1.9, 17°.8S±0°.1×178°.1W±0°.1, h505km±7km, mb4.4/162, Error ellipse: s-maj=18.1km s-min=13.3km az=157.0*

IDC ***27*** *12:29:52.1±1.6, 17°.83S×178°.07W, h515km±18km, mb4.0/14, mbtmp4.8/16, Error ellipse: s-maj=15.3km s-min=9.9km az=167.0*

NOU ***27*** *12:29:53.8, 17°.93S×178°.06W, h533km, mb4.9/64, Fiji Islands Region*

ISC 27 12:29:52.7±0.6, 17°.93S±0°.07×178°.04W±0°.05, h526km±7km, n303, σ1§04/295, mb4.5/121, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**2.16**	**304**	P	**P**	**12 31 03.1**	**+2.1**
DGTI	**Dogotuki**	**2.67**	**307**	P	**P**	**12 31 05.3**	**+1.4**
YSA	**Yasawairara**	**4.36**	**286**	P	**P**	**12 31 17.5**	**+1.7**
AFI	**Afiamalu**	**7.23**	**57**	P	**P**	**12 31 39.6**	**-2.7**
AFI				S	**S**	**12 33 07.5**	**-4.4**
NIUE	**Niue**	**7.78**	**100**	P	**P**	**12 31 47.8**	**+0.2**
	baz=7.7,SNR=10						
NIUE	**Niue**	**7.78**	**100**	P	**P**	**12 31 47.8**	**+0.2**
NIUE	**Niue**	**7.78**	**100**	P	**P**	**12 31 48.5**	**+0.9**
LIFNC	**LIFOU**	**14.18**	**256**	P	**P**	**12 32 53.4**	**-0.6**
PINNC	**Pines Island,**	**14.39**	**249**	P	**P**	**12 32 56.4**	**+0.2**
OUENC	**Ouen Island, N**	**14.88**	**250**	P	**P**	**12 32 58.8**	**-2.5**
DZM	**Mont Dzumac**	**15.15**	**252**	P	**P**	**12 33 03.2**	**-1.0**
DZM				IAmb	IAmb	12 33 07.9	
	comp=Z,13nm,0.7s						
DZM	**Mont Dzumac**	**15.15**	**252**	P	**P**	**12 33 04.5**	**+0.2**
DZM	**Mont Dzumac**	**15.15**	**252**	P	**P**	**12 33 03.4**	**-0.8**
	comp=Z,12nm,0.7s,baz=98,slow=18,SNR=16						
KOUNC	**Koumac, New Ca**	**16.89**	**258**	P	**P**	**12 33 21.2**	**-0.4**
KOUNC	**Koumac, New Ca**	**16.89**	**258**	P	**P**	**12 33 21.8**	**+0.2**
RAR	**Rarotonga**	**17.52**	**104**	P	**P**	**12 33 26.1**	**-1.3**
RAR	**Rarotonga**	**17.52**	**104**	P	**P**	**12 33 28.2**	**+0.8**
RAR	**Rarotonga**	**17.52**	**104**	P	**P**	**12 33 27.8**	**+0.4**
	comp=Z,54nm,0.9s,baz=255,slow=5.8,SNR=7.0						
URZ	**Urewera**	**20.69**	**191**	P	**P**	**12 33 53.6**	**-2.4**
	comp=Z,18nm,0.8s,baz=180,slow=4.1,SNR=11						
URZ				S	**S**	**12 37 05.4**	**-7.8**
	comp=Z,5.2nm,0.7s,baz=209,slow=19,SNR=1.4						
TCW	**Tory Channel**	**24.12**	**194**	P	**P**	**12 34 28.1**	**+1.4**
PPT	**Papeete**	**27.10**	**94**	P	**P**	**12 34 54.2**	**+0.8**
	comp=Z,38nm,0.7s,baz=41,slow=2.2,SNR=9.7						
	comp=Z,38nm,0.7s						
PPTF	**Pamatai, Papee**	**27.11**	**94**	P	**P**	**12 34 54.5**	**+0.9**
JCZ	**Jackson Bay**	**28.32**	**200**	P	**P**	**12 35 03.8**	**-0.1**
EIDS	**Eidsvold**	**29.59**	**250**	P	**P**	**12 35 14.9**	**-0.1**
	baz=30,SNR=5.7						
EIDS	**Eidsvold**	**29.59**	**250**	P	**P**	**12 35 14.9**	**-0.1**
ARMA	**Armidale**	**30.23**	**240**	P	**P**	**12 35 21.6**	**+0.9**
	baz=30,SNR=19						
ARMA	**Armidale**	**30.23**	**240**	P	**P**	**12 35 21.7**	**+0.9**
ARMA	**Armidale**	**30.23**	**240**	P	**P**	**12 35 21.6**	**+0.9**
AUPHS	**Peel High Scho**	**31.04**	**239**	P	**P**	**12 35 28.7**	**+1.2**
MGCD	**Mangrove Creek**	**31.57**	**235**	P	**P**	**12 35 33.1**	**+1.1**
	baz=32,SNR=6.8						
AULRC	**Lightning Ridg**	**33.04**	**243**	P	**P**	**12 35 45.3**	**+0.8**
CNB	**Canberra Magne**	**33.69**	**233**	P	**P**	**12 35 51.0**	**+0.9**
	baz=34,SNR=50						
CNB	**Canberra Magne**	**33.69**	**233**	P	**P**	**12 35 50.9**	**+0.9**
CTA	**Charters Tower**	**33.79**	**261**	P	**P**	**12 35 50.7**	**-0.3**
CTA	**Charters Tower**	**33.79**	**261**	P	**P**	**12 35 50.7**	**-0.3**
	comp=Z,21nm,0.8s,baz=92,slow=9.6,SNR=22						
	comp=Z,21nm,0.8s						
CTAO	**Charters Tower**	**33.79**	**261**	P	**P**	**12 35 50.9**	**-0.2**
CTAO	**Charters Tower**	**33.79**	**261**	P	**P**	**12 35 50.8**	**-0.2**
CAN	**Canberra**	**33.97**	**233**	P	**P**	**12 35 53.2**	**+0.8**
CAN	**Canberra**	**33.97**	**233**	P	**P**	**12 35 52.9**	**+0.5**
YNG	**Young**	**34.06**	**235**	P	**P**	**12 35 53.6**	**+0.5**
	baz=34,SNR=4.7						
AUSMG	**Snowy Mountain**	**34.68**	**231**	P	**P**	**12 35 59.3**	**+0.9**
PMG	**Port Moresby**	**34.81**	**279**	P	**P**	**12 36 00.1**	**+0.5**
PMG	**Port Moresby**	**34.81**	**279**	P	**P**	**12 35 59.9**	**+0.3**
PMG	**Port Moresby**	**34.81**	**279**	P	**P**	**12 36 00.3**	**+0.7**
	comp=Z,15nm,0.8s,baz=101,slow=6.1,SNR=11						
	comp=Z,15nm,0.8s						
CMSA	**Cobar Meteorol**	**35.44**	**241**	P	**P**	**12 36 05.0**	**+0.4**
	baz=36,SNR=29						
CMSA	**Cobar Meteorol**	**35.44**	**241**	P	**P**	**12 36 05.1**	**+0.4**
MTSU	**Mount Surprise**	**35.75**	**264**	P	**P**	**12 36 07.2**	**-0.3**
	baz=36,SNR=9.1						
MTSU	**Mount Surprise**	**35.75**	**264**	P	**P**	**12 36 07.1**	**-0.3**
QLP	**Quilpie**	**35.85**	**249**	P	**P**	**12 36 07.8**	**-0.3**
	baz=36,SNR=3.3						
QLP	**Quilpie**	**35.85**	**249**	P	**P**	**12 36 08.6**	**+0.4**
TOO	**Toolangi**	**37.43**	**231**	P	**P**	**12 36 21.7**	**+0.7**
	baz=38,SNR=41						
TOO	**Toolangi**	**37.43**	**231**	P	**P**	**12 36 22.1**	**+1.1**
TOO	**Toolangi**	**37.43**	**231**	P	**P**	**12 36 21.7**	**+0.7**
MANU	**Manus Island**	**37.43**	**291**	P	**P**	**12 36 21.3**	**0.0**
MANU	**Manus Island**	**37.43**	**291**	P	**P**	**12 36 22.2**	**+0.8**
COEN	**Coen**	**37.45**	**270**	P	**P**	**12 36 21.1**	**-0.5**
	baz=38,SNR=9.8						
COEN	**Coen**	**37.45**	**270**	P	**P**	**12 36 21.7**	**+0.1**
COEN				IAmb	IAmb	12 36 22.6	
	comp=Z,20nm,0.8s						
COEN	**Coen**	**37.45**	**270**	P	**P**	**12 36 21.6**	**+0.1**
AUMAG	**Moama Anglican**	**37.48**	**234**	P	**P**	**12 36 22.6**	**+1.2**
CORO	**Coronation Par**	**37.87**	**224**	P	**P**	**12 36 25.6**	**+1.1**
TAOE	**Nuku Hiva Isla**	**37.88**	**81**	P	**P**	**12 36 26.8**	**+1.7**
TAU	**Tasmania Unive**	**38.46**	**222**	P	**P**	**12 36 30.2**	**+1.0**
GEXS	**Deakin Univers**	**38.54**	**231**	P	**P**	**12 36 30.9**	**+0.9**
BRAT	**Ballarat**	**38.58**	**232**	P	**P**	**12 36 31.8**	**+1.5**
STKA	**Stephens Creek**	**38.92**	**241**	P	**P**	**12 36 34.0**	**+0.7**
	baz=39,SNR=26						
STKA	**Stephens Creek**	**38.92**	**241**	P	**P**	**12 36 34.0**	**+0.7**
STKA				IAmb	IAmb	12 36 34.9	
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**38.92**	**241**	P	**P**	**12 36 33.9**	**+0.7**
STKA	**Stephens Creek**	**38.92**	**241**	P	**P**	**12 36 34.0**	**+0.7**
	comp=Z,38nm,0.8s,baz=92,slow=9.9,SNR=50						
STKA				PcP	**PcP**	**12 38 30.7**	**0.0**
	comp=Z,2.3nm,0.7s,baz=154,slow=10,SNR=3.2						
	comp=Z,38nm,0.8s						
INKA	**Innaminka**	**39.06**	**248**	P	**P**	**12 36 35.3**	**+0.9**
ARPS	**Mount Arapiles**	**39.92**	**234**	P	**P**	**12 36 41.4**	**+0.2**
	baz=40,SNR=12						
ARPS	**Mount Arapiles**	**39.92**	**234**	P	**P**	**12 36 41.4**	**+0.2**
QIS	**Mount Isa**	**39.99**	**259**	P	**P**	**12 36 42.0**	**0.0**
	baz=40,SNR=4.0						
HTT	**Hallett**	**41.43**	**240**	P	**P**	**12 36 53.8**	**+0.4**
	baz=42,SNR=24						
HTT	**Hallett**	**41.43**	**240**	P	**P**	**12 36 54.0**	**+0.6**
LCRK	**Leigh Creek**	**41.56**	**244**	P	**P**	**12 36 54.6**	**+0.2**
WHYH	**Whyalla**	**42.48**	**240**	P	**P**	**12 37 02.0**	**+0.5**
OOD	**Oodnadatta**	**43.53**	**248**	P	**P**	**12 37 10.2**	**+0.3**
BBOO	**Buckleboo**	**43.70**	**241**	P	**P**	**12 37 11.3**	**+0.2**
	baz=44,SNR=9.6						
BBOO	**Buckleboo**	**43.70**	**241**	P	**P**	**12 37 11.4**	**+0.2**
BBOO	**Buckleboo**	**43.70**	**241**	P	**P**	**12 37 11.3**	**+0.2**
GENI	**Genyem**	**43.71**	**286**	P	**P**	**12 37 12.5**	**+1.1**
GENI	**Genyem**	**43.71**	**286**	P	**P**	**12 37 12.2**	**+0.8**
	comp=Z,105nm,1.3s,comp=Z,2μm						
WR0	**Warramunga Arr**	**44.78**	**260**	P	**P**	**12 37 19.3**	**-0.4**
WR0				IAmb	IAmb	12 37 26.2	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	**44.94**	**260**	P	**P**	**12 37 19.9**	**-1.0**
WB2	**Warramunga Arr**	**44.96**	**260**	P	**P**	**12 37 20.4**	**-0.7**
WRAB	**Tennant Creek**	**44.96**	**260**	P	**P**	**12 37 20.4**	**-0.7**
WRAB				IAmb	IAmb	12 37 21.0	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**44.97**	**260**	P	**P**	**12 37 19.6**	**-1.6**
WRA				PcP	**PcP**	**12 38 50.9**	**-0.4**
WRA	**Warramunga Arr**	**44.97**	**260**	P	**P**	**12 37 20.2**	**-0.9**
	comp=Z,20nm,0.8s,baz=91,slow=7.6,SNR=102						
WRA				PcP	**PcP**	**12 38 51.6**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=90,slow=4.0,SNR=8.8						
WRA				ScP	**ScP**	**12 41 54.5**	**+0.9**
	comp=Z,3.5nm,1.1s,baz=86,slow=5.3,SNR=7.0						
WRA				S	**S**	**12 43 18.4**	**-2.9**
	comp=Z,0.4nm,0.8s,baz=101,slow=16,SNR=1.8						
	comp=Z,20nm,0.8s						
AS01	**Alice Springs**	**45.08**	**254**	P	**P**	**12 37 21.5**	**-0.5**
MULG	**Mulgathing**	**45.12**	**245**	P	**P**	**12 37 21.9**	**-0.2**
AS31	**Alice Springs**	**45.12**	**254**	P	**P**	**12 37 22.1**	**-0.2**
ASAR	**Alice Springs**	**45.12**	**254**	P	**P**	**12 37 22.0**	**-0.3**
	comp=Z,146nm,0.6s,baz=88,slow=8.4,SNR=1556						
ASAR				PcP	**PcP**	**12 38 51.8**	**0.0**
	comp=Z,9.2nm,0.7s,baz=105,slow=4.0,SNR=9.1						
ASAR				ScP	**ScP**	**12 41 56.5**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=107,slow=4.0,SNR=7.4						
ASAR				S	**S**	**12 43 21.1**	**-2.3**
	comp=Z,4.9nm,0.9s,baz=88,slow=15,SNR=21						
SMPI	**Sarmi**	**45.28**	**286**	P	**P**	**12 37 23.6**	**0.0**
	comp=Z,45nm,1.2s						
KDU	**Kakadu**	**47.91**	**269**	P	**P**	**12 37 42.7**	**-0.7**
	baz=48,SNR=6.1						
MTN	**Manton Dam**	**49.15**	**268**	P	**P**	**12 37 51.6**	**-1.0**
	baz=49,SNR=9.0						
MTN	**Manton Dam**	**49.15**	**268**	P	**P**	**12 37 51.8**	**-0.9**
MTN				IAmb	IAmb	12 37 52.6	
	comp=Z,24nm,0.9s						
MTN	**Manton Dam**	**49.15**	**268**	P	**P**	**12 37 51.8**	**-0.9**
WRKA	**Warakurna**	**50.17**	**252**	P	**P**	**12 37 59.9**	**-0.3**
	baz=50,SNR=62						
WRKA	**Warakurna**	**50.17**	**252**	P	**P**	**12 37 59.8**	**-0.3**
FORT	**Forrest**	**50.31**	**245**	P	**P**	**12 38 00.0**	**-1.0**
	baz=50,SNR=19						
FORT	**Forrest**	**50.31**	**245**	P	**P**	**12 37 59.9**	**-1.2**
KNRA	**Kununurra**	**50.83**	**264**	P	**P**	**12 38 04.5**	**-0.5**
KNRA	**Kununurra**	**50.83**	**264**	P	**P**	**12 38 04.5**	**-0.5**
SWI	**Sorong**	**52.59**	**283**	P	**P**	**12 38 17.6**	**-0.1**
	comp=Z,137nm,0.9s,comp=Z,1μm						
FITZ	**Fitzroy Crossi**	**53.37**	**260**	P	**P**	**12 38 23.0**	**-0.2**
	baz=54,SNR=3.5						
FITZ	**Fitzroy Crossi**	**53.37**	**260**	P	**P**	**12 38 23.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.37**	**260**	P	**P**	**12 38 23.1**	**-0.2**
NLAI	**Namlea**	**55.65**	**279**	P	**P**	**12 38 38.9**	**-0.4**
	comp=Z,27nm,1.3s						
LBMI	**Labuha**	**56.17**	**282**	P	**P**	**12 38 43.4**	**+0.5**
	comp=Z,59nm,0.9s						
SOEI	**Soe**	**56.42**	**270**	P	**P**	**12 38 45.3**	**+0.5**
SOEI	**Soe**	**56.42**	**270**	P	**P**	**12 38 46.0**	**+1.2**
SOEI	**Soe**	**56.42**	**270**	P	**P**	**12 38 45.5**	**+0.7**
	comp=Z,91nm,0.9s						
TNTI	**Ternate**	**56.81**	**283**	P	**P**	**12 38 47.6**	**+0.3**
TNTI	**Ternate**	**56.81**	**283**	P	**P**	**12 38 48.0**	**+0.7**
TNTI	**Ternate**	**56.81**	**283**	P	**P**	**12 38 47.3**	**0.0**
	comp=Z,56nm,1.0s						
SANI	**Sanana**	**57.09**	**279**	P	**P**	**12 38 48.8**	**-0.5**
SANI	**Sanana**	**57.09**	**279**	P	**P**	**12 38 48.5**	**-0.8**
	comp=Z,76nm,0.9s,comp=Z,704nm						
PSA00	**Pilbara Seismi**	**58.24**	**255**	P	**P**	**12 38 55.9**	**-1.1**
PSA00				IAmb	IAmb	12 38 57.3	
	comp=Z,13nm,0.9s						
PSA00				PcP	**PcP**	**12 39 41.5**	**+0.2**
PSA00	**Pilbara Seismi**	**58.24**	**255**	P	**P**	**12 38 56.4**	**-0.6**
MBWA	**Marble Bar**	**58.41**	**256**	P	**P**	**12 38 57.4**	**-0.7**
MBWA				IAmb	IAmb	12 38 58.3	
	comp=Z,16nm,0.8s						
MBWA	**Marble Bar**	**58.41**	**256**	P	**P**	**12 38 57.5**	**-0.7**
MEEK	**Meekatharra**	**58.75**	**249**	P	**P**	**12 38 59.0**	**-1.4**
	baz=59,SNR=8.7						
MEEK	**Meekatharra**	**58.75**	**249**	P	**P**	**12 38 59.6**	**-0.8**
KLBR	**Kellerberrin**	**59.13**	**244**	P	**P**	**12 39 02.0**	**-0.8**
	baz=59,SNR=6.9						
KLBR	**Kellerberrin**	**59.13**	**244**	P	**P**	**12 39 02.1**	**-0.8**
EDFI	**Ende, Flores**	**59.14**	**270**	P	**P**	**12 39 02.4**	**-0.9**
	comp=Z,37nm,1.0s						
NWAO	**Narrogin (SRO)**	**59.51**	**242**	P	**P**	**12 39 04.6**	**-0.7**
	baz=60,SNR=4.2						
NWAO				P	**P**	**12 39 04.6**	**-0.7**
	baz=60,SNR=4.2						
NWAO	**Narrogin (SRO)**	**59.51**	**242**	P	**P**	**12 39 04.1**	**-1.3**
BLDU	**Ballidu**	**60.09**	**245**	P	**P**	**12 39 08.7**	**-0.6**
	baz=60,SNR=14						
MUN	**Mundaring**	**60.42**	**243**	P	**P**	**12 39 11.1**	**-0.4**
	baz=60,SNR=4.3						
VNDA	**Vanda**	**60.45**	**185**	P	**P**	**12 39 11.8**	**+1.0**
VNDA	**Vanda**	**60.45**	**185**	P	**P**	**12 39 12.3**	**+1.5**
	comp=Z,2.7nm,0.6s,baz=348,slow=7.2,SNR=21						
	comp=Z,2.7nm,0.6s						
MORW	**Morawa**	**60.79**	**246**	P	**P**	**12 39 13.4**	**-0.5**
	baz=61,SNR=8.1						
MORW	**Morawa**	**60.79**	**246**	P	**P**	**12 39 13.2**	**-0.7**
MORW				IAmb	IAmb	12 39 14.0	
	comp=Z,13nm,0.7s						
GTOI	**Gorontalo**	**60.81**	**281**	P	**P**	**12 39 14.8**	**+0.5**
	comp=Z,17nm,0.9s						
BKSI	**Bukukumba**	**61.60**	**274**	P	**P**	**12 39 18.3**	**-1.1**
	comp=Z,11nm,0.9s						
PLAI	**Plampang**	**62.84**	**269**	P	**P**	**12 39 26.9**	**-0.6**
PLAI	**Plampang**	**62.84**	**269**	P	**P**	**12 39 26.9**	**-0.6**
	comp=Z,71nm,0.9s						
TOLI2	**Tolitoli**	**63.06**	**281**	P	**P**	**12 39 28.4**	**-0.6**
TOLI2				IAmb	IAmb	12 39 29.4	
	comp=Z,19nm,1.0s						
TOLI2	**Tolitoli**	**63.06**	**281**	P	**P**	**12 39 29.6**	**+0.7**
MPSI	**Mapaga**	**63.62**	**280**	P	**P**	**12 39 32.0**	**-0.5**
	comp=Z,29nm,0.9s						
TWSI	**Taliwang, Sumb**	**63.72**	**269**	P	**P**	**12 39 32.6**	**-0.5**
	comp=Z,71nm,1.1s,comp=Z,626nm						
IGBI	**Denpasar**	**65.35**	**268**	P	**P**	**12 39 42.8**	**-0.7**
	comp=Z,90nm,0.9s						
SRBI	**Singaraja**	**65.48**	**269**	P	**P**	**12 39 43.6**	**-0.7**
	comp=Z,37nm,1.1s						
CASY	**Casey**	**66.26**	**205**	P	**P**	**12 39 48.8**	**+0.6**
JAGI	**Jajag, Banyuwa**	**66.39**	**268**	P	**P**	**12 39 48.7**	**-1.3**
JAGI	**Jajag, Banyuwa**	**66.39**	**268**	P	**P**	**12 39 48.1**	**-1.9**
	comp=Z,60nm,0.8s						
GMJI	**Gumukmas**	**67.12**	**268**	P	**P**	**12 39 53.2**	**-1.2**
PWJI	**Pagerwojo**	**68.75**	**268**	P	**P**	**12 40 03.5**	**-0.9**
	comp=Z,31nm,1.2s						
KKM	**Kota Kinabalu**	**69.09**	**284**	P	**P**	**12 40 06.7**	**+0.1**
UGM	**Wanagama**	**70.00**	**268**	P	**P**	**12 40 11.9**	**-0.1**
UGM	**Wanagama**	**70.00**	**268**	P	**P**	**12 40 11.2**	**-0.7**
	comp=Z,89nm,1.0s						
SBUM	**Sibu**	**71.56**	**279**	P	**P**	**12 40 20.9**	**-0.1**
SBUM				IAmb	IAmb	12 40 22.5	
	comp=Z,9.1nm,0.8s						
KPJI	**Karang Pucung**	**71.67**	**268**	P	**P**	**12 40 21.1**	**-0.7**
QSPA	**South Pole Qui**	**72.12**	**180**	P	**P**	**12 40 24.9**	**+1.3**
QSPA				IAmb	IAmb	12 40 25.1	
	comp=Z,18nm,0.7s						
QSPA	**South Pole Qui**	**72.12**	**180**	P	**P**	**12 40 24.5**	**+1.0**
	comp=Z,16nm,0.6s,baz=272,slow=0.5,SNR=140						
	comp=Z,16nm,0.6s						
BBJI	**Bungbulang**	**72.85**	**268**	P	**P**	**12 40 27.7**	**-1.0**
KSM	**Kuching**	**73.03**	**277**	P	**P**	**12 40 30.4**	**+0.8**
KSM	**Kuching**	**73.03**	**277**	P	**P**	**12 40 30.6**	**+0.9**
LEM	**Lembang**	**73.06**	**268**	P	**P**	**12 40 29.9**	**-0.1**
	comp=Z,88nm,1.0s						
CNJI	**Cibinong**	**73.39**	**268**	P	**P**	**12 40 30.2**	**-1.5**
	comp=Z,29nm,1.0s						
PMPB	**Monarch Peak**	**76.31**	**44**	P	**P**	**12 40 48.0**	**+0.3**
PMPB				IAmb	IAmb	12 41 03.2	
	comp=Z,29nm,1.1s						
KASI	**Kota Agung**	**76.41**	**269**	P	**P**	**12 40 47.2**	**-1.4**
	comp=Z,78nm,0.9s,comp=Z,1μm						
KMRM	**Mail Ridge**	**76.81**	**40**	P	**P**	**12 40 51.6**	**+1.3**
CMB	**Columbia Colle**	**77.62**	**43**	P	**P**	**12 40 54.7**	**0.0**
OHAK	**Old Harbor**	**77.67**	**13**	P	**P**	**12 40 54.0**	**-0.4**
AFDM	**Forest Hills D**	**77.76**	**42**	P	**P**	**12 40 55.6**	**+0.1**
ORV	**Oroville**	**77.78**	**41**	P	**P**	**12 40 55.0**	**-0.5**
NJ2	**Nanjing**	**78.22**	**309**	*eP*	**P**	**12 40 57.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,91nm,4.7s						
MDPB	**Devils Postpil**	**78.25**	**44**	P	**P**	**12 40 59.0**	**+0.5**
MDPB				IAmb	IAmb	12 41 08.1	
	comp=Z,14nm,0.8s						
MDJ	**Mudanjiang**	**78.41**	**325**	P	**P**	**12 40 55.3**	**-3.4**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,67nm,4.5s						
WAKR	**Walker**	**78.50**	**43**	P	**P**	**12 40 59.8**	**+0.1**
WAKR				IAmb	IAmb	12 41 01.2	
	comp=Z,14nm,0.9s						
HUMO	**Hull Mountain**	**78.70**	**38**	P	**P**	**12 41 01.5**	**+1.1**
PNTR	**Pine Nut**	**78.72**	**43**	P	**P**	**12 41 01.4**	**+0.5**
PNTR				IAmb	IAmb	12 41 02.3	
	comp=Z,22nm,

ENH	**Enshi**	**84.57**	**304**	P		**P**	**12 41 32.0**	**+1.2**
SRU	**San Rafael Swe**	**84.78**	**46**	P		**P**	**12 41 32.1**	**+0.3**
GSI	**Gunungsitoli**	**85.05**	**273**	P		**P**	**12 41 34.7**	**+1.3**
GSI	**Gunungsitoli**	**85.05**	**273**	P		**P**	**12 41 34.1**	**+0.7**
	comp=Z,53nm,1.0s							
MNTX	**Cornudas Mount**	**85.31**	**55**	P		**P**	**12 41 34.8**	**+0.5**
WRH	**Wood River Hil**	**85.32**	**13**	IAmb		IAmb	12 41 33.7	
	comp=Z,10nm,1.2s							
SRIT	**Nakonsritamara**	**85.42**	**280**	P		**P**	**12 41 37.0**	**+1.8**
KCSI	**Kotacane, Aceh**	**85.55**	**275**	P		**P**	**12 41 35.5**	**-0.4**
	comp=Z,24nm,0.8s,comp=Z,961nm							
NAYO	**Nakonayok**	**85.70**	**286**	P		**P**	**12 41 36.9**	**+0.4**
TX31	**Lajitas Ar. Si**	**85.71**	**57**	P		**P**	**12 41 37.6**	**+1.2**
TX31				IAmb		IAmb	12 41 38.8	
	comp=Z,15nm,1.1s							
TXAR	**Lajitas Array**	**85.71**	**57**	P		**P**	**12 41 37.5**	**+1.2**
	comp=Z,6.9nm,0.8s,baz=225,slow=5.9,SNR=71							
	comp=Z,6.9nm,0.8s							
SLVN	**Son La**	**85.81**	**294**	IAmb		IAmb	12 41 38.9	
	comp=Z,12nm,1.4s							
ILAR	**Eielson Array**	**85.83**	**13**	P		**P**	**12 41 34.5**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=221,slow=5.4,SNR=21							
	comp=Z,1.8nm,0.7s							
ANMO	**Albuquerque**	**85.84**	**51**	P		**P**	**12 41 37.1**	**+0.1**
XLT	**XiLinHaoTe**	**86.00**	**319**	*e*P		**P**	**12 41 39.3**	**+1.9**
XLT				sP		sP	12 44 34.0	+8.2
XLT				pmax		pmax		
	comp=Z,9.0nm,0.8s							
XLT				pmax		pmax		
	comp=Z,90nm,5.3s							
ALPN	**Alpine**	**86.14**	**57**	IAmb		IAmb	12 41 40.3	
	comp=Z,5.1nm,0.8s							
BPMT	**Black Pine Rid**	**86.48**	**39**	P		**P**	**12 41 39.9**	**0.0**
XAN	**Xi'an**	**86.55**	**307**	P		**P**	**12 41 40.0**	**-0.2**
XAN				pmax		pmax		
	comp=Z,11nm,1.1s							
TPAW	**Teton Pass**	**86.57**	**42**	P		**P**	**12 41 39.5**	**-0.8**
TPAW				IAmb		IAmb	12 41 40.8	
	comp=Z,5.8nm,1.1s							
REDW	**Red Top Meadow**	**86.57**	**42**	P		**P**	**12 41 40.5**	**+0.2**
SNOW	**Snow King Moun**	**86.68**	**42**	P		**P**	**12 41 40.9**	**0.0**
SNOW				IAmb		IAmb	12 41 42.7	
	comp=Z,5.2nm,0.8s							
MOOW	**Moose Ponds**	**86.82**	**42**	P		**P**	**12 41 41.2**	**-0.3**
LOHW	**Long Hollow**	**86.85**	**42**	P		**P**	**12 41 41.8**	**+0.2**
YHL	**Hebgen Lake**	**87.08**	**41**	P		**P**	**12 41 44.0**	**+1.3**
YHL				IAmb		IAmb	12 41 44.7	
	comp=Z,11nm,0.9s							
PD31	**Pinedale Array**	**87.13**	**43**	P		**P**	**12 41 42.9**	**-0.1**
PDAR	**Pinedale Array**	**87.13**	**43**	P		**P**	**12 41 42.5**	**-0.5**
PDAR	**Pinedale Array**	**87.13**	**43**	P		**P**	**12 41 42.6**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=216,slow=2.7,SNR=22							
PDAR				PP		**PP**	**12 45 14.3**	**-2.2**
	comp=Z,0.6nm,1.0s,baz=252,slow=8.9,SNR=4.3							
	comp=Z,2.4nm,0.8s							
BOZ	**Bozeman (W)**	**87.16**	**40**	P		**P**	**12 41 43.0**	**+0.1**
SAND	**Sanderson**	**87.19**	**57**	IAmb		IAmb	12 41 44.7	
	comp=Z,8.2nm,1.1s							
H17A	**Grant Village**	**87.24**	**42**	IAmb		IAmb	12 41 45.9	
	comp=Z,5.8nm,0.8s							
LKWY	**Lake**	**87.43**	**41**	P		**P**	**12 41 45.8**	**+1.4**
LKWY				IAmb		IAmb	12 41 46.9	
	comp=Z,7.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**87.54**	**314**	*e*P		**P**	**12 41 43.5**	**-1.3**
HHC				pmax		pmax		
	comp=Z,14nm,0.8s							
HHC				pmax		pmax		
	comp=Z,75nm,4.7s							
MAYO	**Mayo, Yukon**	**87.60**	**17**	P		**P**	**12 41 44.6**	**+0.3**
SDCO	**Great Sand Dun**	**87.71**	**49**	P		**P**	**12 41 46.1**	**+0.2**
DRIO	**Del Rio**	**88.21**	**58**	P		**P**	**12 41 48.8**	**+0.8**
MSTX	**Muleshoe**	**88.22**	**54**	P		**P**	**12 41 47.9**	**-0.3**
MSTX				IAmb		IAmb	12 41 48.5	
	comp=Z,4.6nm,0.8s							
OZNA	**Ozona**	**88.35**	**57**	P		**P**	**12 41 48.9**	**+0.1**
OZNA				IAmb		IAmb	12 41 49.9	
	comp=Z,5.4nm,0.8s							
RLMT	**Red Lodge**	**88.40**	**41**	P		**P**	**12 41 49.6**	**+0.7**
RLMT				IAmb		IAmb	12 41 49.8	
	comp=Z,5.4nm,1.1s							
BRLDA	**Berland Lookou**	**88.41**	**31**	P		**P**	**12 41 48.5**	**0.0**
BRLDA				IAmb		IAmb	12 41 50.1	
	comp=Z,12nm,0.9s							
D22K	**Ayikyak River**	**88.48**	**9**	P		**P**	**12 41 47.9**	**-0.5**
BMAR	**Burnt Mountain**	**88.61**	**12**	P		**P**	**12 41 49.0**	**-0.1**
POST	**Post**	**88.86**	**55**	P		**P**	**12 41 49.7**	**-1.3**
POST				IAmb		IAmb	12 41 51.6	
	comp=Z,8.2nm,0.8s							
K22A	**Casper**	**89.08**	**44**	P		**P**	**12 41 51.4**	**-0.6**
K22A				IAmb		IAmb	12 41 52.8	
	comp=Z,5.8nm,1.1s							
ELIB	**Princess Elisa**	**89.17**	**187**	*d*P		**P**	**12 41 51.8**	**-0.2**
	comp=Z,24nm,0.8s							
CM31	**Chiang Mai Arr**	**89.22**	**290**	P		**P**	**12 41 54.0**	**+1.0**
CM31				IAmb		IAmb	12 41 55.0	
	comp=Z,9.4nm,1.0s							
CMAR	**Chiang Mai Arr**	**89.22**	**290**	P		**P**	**12 41 54.1**	**+1.2**
	comp=Z,4.7nm,0.9s,baz=108,slow=3.0,SNR=35							
	comp=Z,4.7nm,0.9s							
JCT	**Junction City**	**89.25**	**58**	P		**P**	**12 41 53.1**	**+0.2**
JCT				IAmb		IAmb	12 41 53.8	
	comp=Z,3.8nm,0.7s							
SN05	**Snyder 5**	**89.27**	**55**	P		**P**	**12 41 53.1**	**+0.1**
SN05				IAmb		IAmb	12 41 53.5	
	comp=Z,9.6nm,0.9s							
HNDO	**Hondo**	**89.33**	**59**	P		**P**	**12 41 54.8**	**+1.5**
CHTO	**Chiang Mai**	**89.34**	**290**	P		**P**	**12 41 54.8**	**+1.3**
CHTO				IAmb		IAmb	12 41 55.2	
	comp=Z,6.9nm,0.9s							
CHTO	**Chiang Mai**	**89.34**	**290**	P		**P**	**12 41 54.5**	**+1.0**
PZH	**PanZhiHua**	**89.48**	**298**	P		**P**	**12 41 54.5**	**+0.4**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.3s							
PZH				pmax		pmax		
	comp=Z,90nm,5.0s							
APMT	**Aspermont**	**90.03**	**55**	P		**P**	**12 41 56.7**	**+0.2**
APMT				IAmb		IAmb	12 41 57.1	
	comp=Z,5.8nm,0.8s							
G30M	**tAoh Zraii Nji**	**90.14**	**15**	P		**P**	**12 41 55.0**	**-1.2**
G30M				IAmb		IAmb	12 41 56.6	
	comp=Z,10nm,1.1s							
ABTX	**Abilene, Hawle**	**90.15**	**56**	P		**P**	**12 41 57.5**	**+0.4**
ABTX				IAmb		IAmb	12 41 58.0	
	comp=Z,10nm,1.0s							
BRDY	**Brady**	**90.18**	**57**	IAmb		IAmb	12 41 58.0	
	comp=Z,3.6nm,0.9s							
SNAA	**Sanae**	**90.56**	**178**	P		**P**	**12 41 58.3**	**0.0**
SNAA				IAmb		IAmb	12 42 24.8	
	comp=Z,10nm,1.3s							
SNAA	**Sanae**	**90.56**	**178**	⇑P		**P**	**12 41 57.8**	**-0.5**
	comp=Z,49nm,0.3s							
SNAA	**Sanae**	**90.56**	**178**	P		**P**	**12 41 57.7**	**-0.5**
	comp=Z,5.1nm,0.7s,baz=191,slow=17,SNR=8.2							
	comp=Z,5.1nm,0.7s							
G31M	**Satah River**	**90.59**	**16**	P		**P**	**12 41 57.7**	**-0.4**
G31M				IAmb		IAmb	12 41 58.7	
	comp=Z,7.1nm,0.9s							
VNA3	**Neumayer Olymp**	**90.69**	**176**	⇑P		**P**	**12 41 58.8**	**0.0**
	comp=Z,18nm,0.6s							
LAO	**LASA Array**	**91.00**	**41**	IAmb		IAmb	12 42 02.4	
	comp=Z,6.5nm,0.9s							
F31M	**Tsiigehtchic**	**91.11**	**16**	P		**P**	**12 41 59.7**	**-0.8**
VNA2	**Neumayer--Watz**	**91.14**	**177**	⇑P		**P**	**12 42 01.1**	**+0.2**
	comp=Z,16nm,0.6s,baz=203,slow=4.0							
PLPT	**Palo Pinto**	**91.26**	**56**	P		**P**	**12 42 01.8**	**-0.3**
RSSD	**Black Hills**	**91.34**	**44**	P		**P**	**12 42 02.0**	**-0.5**
RSSD				IAmb		IAmb	12 42 02.9	
	comp=Z,4.8nm,0.9s							
INK	**Inuvik**	**91.82**	**15**	P		**P**	**12 42 03.0**	**-0.8**
INK				IAmb		IAmb	12 42 03.5	
	comp=Z,4.5nm,1.1s							
R32A	**Long Quarter,**	**92.92**	**51**	P		**P**	**12 42 10.1**	**+0.5**
DGMT	**Dagmar**	**92.99**	**40**	P		**P**	**12 42 10.1**	**+0.4**
YKA	**Yellowknife Ar**	**94.21**	**25**	P		**P**	**12 42 13.9**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=245,slow=4.4,SNR=17							
	comp=Z,1.3nm,0.8s							
BVAR	**Borovoye Array**	**117.08**	**321**	PKP		**PKiKP**	**12 47 41.2**	**+3.6**
	comp=Z,0.4nm,0.5s,baz=73,slow=2.0,SNR=3.6							
BNN	**Bunyan**	**143.93**	**312**			**PKPdf**	**12 48 28.2**	**-0.4**
LODK	**Lodwar**	**144.24**	**250**	PKPbc		**PKPab**	**12 48 29.6**	**-0.1**
BURAR	**Bucovina Array**	**144.80**	**332**	PKPdf		**PKPdf**	**12 48 29.8**	**0.0**
BRTR	**Keskin Array B**	**145.05**	**315**	PKPdf		PKPbc	12 48 31.0	-0.2
BRTR	**Keskin Array B**	**145.05**	**315**	PKP		**PKPdf**	**12 48 29.6**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=142,slow=4.7,SNR=6.3							
MBAR	**Mbarara**	**146.22**	**240**	PKPbc		**PKPbc**	**12 48 35.8**	**+0.4**
MMAI	**Mount Meron Ar**	**146.45**	**303**	PKPbc		**PKPbc**	**12 48 35.8**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=84,slow=5.9,SNR=4.2							
TORD	**Torodi Ar. Bea**	**175.24**	**177**	PKPab		**PKPab**	**12 50 42.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=137,slow=3.0,SNR=5.4							

*IDC **27** 12:40:27.7±1.1,6.29S×143.00E,h0km,mb3.8/7, mbtmp3.8/9,ML1.5/1,MS2.9/1,Error ellipse: s-maj=42.7km s-min=27.2km az=71.0*
ISC 27 12:40:32.5±0.8,6.5S±0.1×142.9E±0.2,h35km,n10, σ1§34/10,mb3.8/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.15**	**125**	Pn		**Pn**	**Pn**	**12 41 47.4**	**+0.3**
	1.3nm,0.3s,baz=316,slow=6.2,SNR=6.2								
PMG				LR		LR	LR	12 44 32.3	
	comp=Z,120nm,20.7s,baz=284,slow=48								
	3.5nm,0.4s								
WRA	**Warramunga Arr**	**15.77**	**211**	Pn		**Pn**	**Pn**	**12 44 10.2**	**-1.8**
	0.3nm,0.3s,baz=30,slow=13,SNR=8.7								
ASAR	**Alice Springs**	**19.16**	**206**	P		**P**	**P**	**12 44 54.8**	**+1.6**
	4.5nm,0.8s,baz=36,slow=8.4,SNR=32								
KSRS	**Korea Array**	**45.87**	**343**	P		**P**	**P**	**12 48 50.5**	**-0.9**
	1.1nm,0.9s,baz=159,slow=7.8,SNR=4.2								
	1.1nm,0.9s								
SONM	**Songino Array**	**62.89**	**333**	P		**P**	**P**	**12 50 57.1**	**+1.8**
	0.3nm,0.4s,baz=152,slow=6.5,SNR=2.4								
MKAR	**Makanchi Array**	**75.28**	**322**	P		**P**	**P**	**12 52 12.4**	**+0.4**
	0.4nm,0.6s,baz=96,slow=7.1,SNR=3.6								
	0.4nm,0.6s								
ZALV	**Zalesovo Beam**	**77.26**	**329**	P		**P**	**P**	**12 52 22.9**	**-0.2**
	0.4nm,0.5s,baz=106,slow=5.2,SNR=2.4								
	0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**79.18**	**324**	P		**P**	**P**	**12 52 33.3**	**-0.4**
	0.6nm,0.8s,baz=102,slow=4.1,SNR=5.2								
	0.6nm,0.8s								
BVAR	**Borovoye Array**	**84.75**	**325**	P		**P**	**P**	**12 53 03.9**	**+0.9**
	2.7nm,0.7s,baz=110,slow=6.3,SNR=9.7								
	2.7nm,0.7s								
ILAR	**Eielson Array**	**87.53**	**24**	P		**P**	**P**	**12 53 15.2**	**-1.3**
	0.5nm,0.7s,baz=257,slow=5.3,SNR=7.4								
	0.5nm,0.7s								

*IDC **27** 12:41:35.5±1.2,33.33S×178.43W,h0km, mb4.6/3, mbtmp4.6/4,ML4.4/1,MS3.7/3,Error ellipse: s-maj=38.0km s-min=30.7km az=143.0*
*NEIC **27** 12:41:35.6±2.5,33.18S±0.05×178.2W±0.2,h10km±2km, mb4.4/9,Error ellipse: s-maj=25.4km s-min=6.7km az=102.0*
ISC 27 12:41:36.5±1.0,33.20S±0.08×178.4W±0.2,h10km,n26, σ1§23/25,mb4.5/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.96**	**7**	Pn		**Pn**	**Pn**	**12 42 35.6**	**-1.7**
MXZ	**Matakaoa Point**	**5.10**	**210**	Pn		**Pn**	**Pn**	**12 42 52.5**	**-0.4**
URZ	**Urewera**	**6.21**	**214**	Pn		**Pn**	**Pn**	**12 43 07.1**	**-1.1**
	8.3nm,0.3s,baz=30,slow=1.4,SNR=31								
URZ				Sn		**Sn**	**Sn**	**12 44 15.9**	**-3.3**
	3.2nm,0.3s,baz=198,slow=19,SNR=2.4								
	14nm,0.3s								
RTZ	**Ruatahuna**	**6.56**	**213**	Pn		**Pn**	**Pn**	**12 43 12.3**	**-0.7**
BKZ	**Black Stump Fm**	**7.22**	**213**	Pn		**Pn**	**Pn**	**12 43 21.1**	**-1.0**
OUENC	**Ouen Island, N**	**16.86**	**306**	Pn		**Pn**	**Pn**	**12 45 33.2**	**+0.6**
OUENC				IAmb		IAmb	IAmb	12 45 59.6	
	comp=Z,34nm,1.5s								
DZM	**Mont Dzumac**	**17.36**	**306**	LR		LR	LR	12 51 17.1	
	comp=Z,244nm,18.1s,baz=160,slow=33								
PPT	**Papeete**	**30.24**	**66**	LR		LR	LR	12 57 42.6	
	comp=Z,27nm,19.3s,baz=239,slow=32								
CTA	**Charters Tower**	**33.98**	**284**	P		**P**	**P**	**12 48 22.5**	**+2.1**
	comp=Z,5.1nm,0.8s,baz=123,slow=11,SNR=10								
	comp=Z,5.1nm,0.8s								
CTAO	**Charters Tower**	**33.98**	**284**	P		**P**	**P**	**12 48 22.6**	**+2.1**
CTAO				IAmb		IAmb	IAmb	12 48 31.0	
	comp=Z,13nm,1.1s								
AS31	**Alice Springs**	**42.66**	**270**	P		**P**	**P**	**12 49 32.7**	**-0.8**
AS31				IAmb		IAmb	IAmb	12 49 34.6	
	comp=Z,3.0nm,0.6s								
ASAR	**Alice Springs**	**42.66**	**270**	P		**P**	**P**	**12 49 33.7**	**+0.2**
ASAR	**Alice Springs**	**42.66**	**270**	P		**P**	**P**	**12 49 33.9**	**+0.3**
	comp=Z,6.7nm,0.6s,baz=110,slow=7.4,SNR=33								
	comp=Z,6.7nm,0.6s								
WB2	**Warramunga Arr**	**43.89**	**275**	P		**P**	**P**	**12 49 43.0**	**-0.5**
WB2				IAmb		IAmb	IAmb	12 49 48.4	
	comp=Z,12nm,0.8s								
WRA	**Warramunga Arr**	**43.90**	**275**	P		**P**	**P**	**12 49 42.1**	**-1.4**
WRA	**Warramunga Arr**	**43.90**	**275**	P		**P**	**P**	**12 49 43.7**	**+0.1**
	comp=Z,3.7nm,0.4s,baz=116,slow=7.6,SNR=12								
WRA				LR		LR	LR	13 07 22.6	
	comp=Z,335nm,18.3s,baz=108,slow=35								
	comp=Z,3.7nm,0.4s								
WB0	**Warramunga Arr**	**43.94**	**276**	P		**P**	**P**	**12 49 44.4**	**+0.6**
KNRA	**Kununurra**	**50.60**	**277**	P		**P**	**P**	**12 50 35.8**	**0.0**
FITZ	**Fitzroy Crossi**	**52.04**	**272**	P		**P**	**P**	**12 50 47.0**	**+0.5**
FITZ				IAmb		IAmb	IAmb	12 50 47.2	
	comp=Z,1.8nm,0.8s								
QSPA	**South Pole Qui**	**56.92**	**180**	P		**P**	**P**	**12 51 22.9**	**+1.3**
KURBB	**Kurchatov Arra**	**122.72**	**312**	PKP		**PKiKP**	**PKiKP**	**13 00 31.9**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=120,slow=1.6,SNR=6.2								
BVAR	**Borovoye Array**	**128.11**	**314**	PKP		**PKiKP**	**PKiKP**	**13 00 42.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=114,slow=2.8,SNR=4.5								
FINES	**FINESS Array B**	**147.62**	**338**	PKPbc		**PKPbc**	**PKPbc**	**13 01 20.5**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=52,slow=4.1,SNR=20								
MMAI	**Mount Meron Ar**	**151.72**	**279**	PKPbc		**PKiKP**	**PKiKP**	**13 01 32.9**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=98,slow=6.0,SNR=4.5								
BRTR	**Keskin Array B**	**153.48**	**293**	PKPbc		**PKiKP**	**PKiKP**	**13 01 35.6**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=131,slow=5.1,SNR=5.0								
TORD	**Torodi Ar. Bea**	**160.04**	**180**	PKPab		**PKPab**	**PKPab**	**13 02 16.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=192,slow=4.1,SNR=2.4								

*IDC **27** 12:49:08.2±1.0,6.27S×143.37E,h0km,mb4.2/12, mbtmp4.2/13,ML5.1/1,MS3.2/7,Error ellipse: s-maj=45.0km s-min=18.2km az=85.0*
*NEIC **27** 12:49:11.8±2.8,6.27S±0.07×143.02E±0.06,h19km±4km, mb4.5/33,Error ellipse: s-maj=11.3km s-min=7.6km az=143.0*
ISC 27 12:49:13.7±0.5,6.42S±0.06×142.99E±0.06,h35km,n83, σ1§47/78,mb4.5/26,MS3.3/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**2.09**	**303**	P		**P**	**P**	**12 49 45.9**	**-0.5**
GENI	**Genyem**	**4.73**	**323**	P		**Pn**	**Pn**	**12 50 23.0**	**+0.5**
PMG	**Port Moresby**	**5.09**	**126**	P		**Pn**	**Pn**	**12 50 27.3**	**-0.2**
PMG	**Port Moresby**	**5.09**	**126**	Pn		**Pn**	**Pn**	**12 50 27.5**	**0.0**
	8.0nm,0.3s,baz=6.0,slow=1.9,SNR=39								
PMG				Sn		**Sn**	**Sn**	**12 51 25.2**	**+0.1**
	8.2nm,0.3s,baz=42,slow=21,SNR=14								
MANU	**Manus Island**	**6.16**	**45**	Pn		Pn	Pn	12 50 37.3	-5.0
COEN	**Coen**	**7.49**	**179**	Pn		**Pn**	**Pn**	**12 51 01.5**	**+0.9**
RABL	**Rabaul**	**9.40**	**77**	Pn		**Pn**	**Pn**	**12 51 24.8**	**-2.0**
FAKI	**Fak Fak**	**11.25**	**288**	Pn		**Pn**	**Pn**	**12 51 51.3**	**-0.8**
FAKI	**Fak Fak**	**11.25**	**288**	P		**P**	**Pn**	**12 51 52.0**	**-0.1**
KDU	**Kakadu**	**12.09**	**238**	P		**Pn**	**Pn**	**12 52 02.7**	**-0.9**
MTN	**Manton Dam**	**13.31**	**240**	Pn		**Pn**	**Pn**	**12 52 19.4**	**-0.9**
MTN	**Manton Dam**	**13.31**	**240**	P		**Pn**	**Pn**	**12 52 19.4**	**-0.9**
DRS	**Darwin Rock St**	**13.33**	**242**	P		**Pn**	**Pn**	**12 52 20.9**	**+0.3**
CTA	**Charters Tower**	**13.95**	**167**	LR		LR	LR	12 57 16.2	
	comp=Z,94nm,18.6s,baz=358,slow=35								
WB0	**Warramunga Arr**	**15.68**	**211**	Pn		**Pn**	**Pn**	**12 52 53.1**	**+1.0**
WR0	**Warramunga Arr**	**15.76**	**211**	Pn		**Pn**	**Pn**	**12 52 52.5**	**-0.7**
WRAB	**Tennant Creek**	**15.84**	**211**	Pn		**Pn**	**Pn**	**12 52 53.5**	**-0.7**
WB2	**Warramunga Arr**	**15.85**	**211**	Pn		**Pn**	**Pn**	**12 52 53.0**	**-1.3**
WRA	**Warramunga Arr**	**15.85**	**211**	Pn		**Pn**	**Pn**	**12 52 52.7**	**-1.7**
WRA	**Warramunga Arr**	**15.85**	**211**	Pn		**Pn**	**Pn**	**12 52 52.5**	**-1.9**
	0.8nm,0.3s,baz=31,slow=14,SNR=21								
WRA				Sn		**Sn**	**Sn**	**12 55 40.7**	**-8.3**
	0.5nm,0.3s,baz=29,slow=24,SNR=3.5								
WRA				Lg		Lg	Lg	12 57 37.1	
	0.5nm,0.3s,baz=23,slow=29,SNR=5.5								
WB1	**Warramunga Ar.**	**15.86**	**211**	P		**Pn**	**Pn**	**12 52 54.7**	**+0.2**
KNRA	**Kununurra**	**16.71**	**235**	Pn		**Pn**	**Pn**	**12 53 03.8**	**-1.4**
KNRA				IAmb		IAmb	IAmb	12 53 16.0	
	comp=Z,25nm,0.8s								
KNRA	**Kununurra**	**16.71**	**235**	P		**Pn**	**Pn**	**12 53 04.6**	**-0.6**
SOEI	**Soe**	**18.82**	**259**	P		**P**	**P**	**12 53 29.6**	**-1.2**
SOEI				IAmb		IAmb	IAmb	12 53 48.5	
	comp=Z,48nm,0.9s								
SOEI	**Soe**	**18.82**	**259**	P		**P**	**P**	**12 53 29.8**	**-1.0**
AS31	**Alice Springs**	**19.24**	**206**	P		**Pn**	**Pn**	**12 53 38.0**	**+1.6**
ASAR	**Alice Springs**	**19.25**	**206**	P		**Pn**	**Pn**	**12 53 38.3**	**+1.9**
ASAR	**Alice Springs**	**19.25**	**206**	P		**Pn**	**Pn**	**12 53 38.0**	**+1.6**
	comp=Z,5.9nm,0.3s,baz=32,slow=10,SNR=275								
ASAR				Lg		Lg	Lg	12 59 22.2	
	baz=17,slow=29								
ASAR				LR		LR	LR	13 02 00.6	
	comp=Z,55nm,18.4s,baz=38,slow=40								
	comp=Z,47nm,0.9s								
EIDS	**Eidsvold**	**20.37**	**159**	P		**P**	**P**	**12 53 48.0**	**+0.5**
EIDS				IAmb		IAmb	IAmb	12 53 58.7	
	comp=Z,25nm,1.3s								
FITZ	**Fitzroy Crossi**	**20.52**	**234**			**P**	**P**	**12 53 49.5**	**+0.4**
DAV	**Davao City (W)**	**21.93**	**307**	LR		LR	LR	13 04 17.0	
	comp=Z,16nm,19.0s,baz=177,slow=41								
OOD	**Oodnadatta**	**22.36**	**197**	P		**P**	**P**	**12 54 11.3**	**+2.5**
KAPI	**Kappang**	**23.16**	**272**	P		**P**	**P**	**12 54 16.1**	**-1.3**
WRKA	**Warakurna**	**23.25**	**216**	P		**P**	**P**	**12 54 19.6**	**+1.4**
TOLI2	**Tolitoli**	**23.39**	**288**	P		**P**	**P**	**12 54 18.8**	**-0.8**
TOLI2				IAmb		IAmb	IAmb	12 54 21.8	
	comp=Z,22nm,1.1s								
LCRK	**Leigh Creek**	**24.32**	**190**	P		**P**	**P**	**12 54 29.6**	**+1.4**
MULG	**Mulgathing**	**25.18**	**198**	P		**P**	**P**	**12 54 37.9**	**+1.9**
STKA	**Stephens Creek**	**25.36**	**183**	P		**P**	**P**	**12 54 38.6**	**+1.0**
STKA	**Stephens Creek**	**25.36**	**183**	P		**P**	**P**	**12 54 38.3**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=334,slow=8.5,SNR=4.5								
	comp=Z,2.1nm,0.5s								
MBWA	**Marble Bar**	**26.86**	**235**	P		**P**	**P**	**12 54 51.2**	**-0.2**
MBWA				IAmb		IAmb	IAmb	12 55 11.0	
	comp=Z,20nm,1.3s								
PSA00	**Pilbara Seismi**	**26.98**	**234**	P		**P**	**P**	**12 54 53.5**	**+1.1**
PSA00				IAmb		IAmb	IAmb	12 54 57.6	
	comp=Z,17nm,1.2s								
BBOO	**Buckleboo**	**27.04**	**193**	P		**P**	**P**	**12 54 53.9**	**+1.1**
HTT	**Hallett**	**27.14**	**187**	P		**P**	**P**	**12 54 55.2**	**+1.4**
NWAO	**Narrogin (SRO)**	**35.62**	**219**	LR		LR	LR	13 09 31.9	
	comp=Z,114nm,20.5s,baz=228,slow=34								
JHJ	**Hachijo jima 2**	**39.44**	**356**	LR		LR	LR	13 10 21.0	
	comp=Z,47nm,19.6s,baz=66,slow=32								
MJAR	**Matsushiro Arr**	**42.97**	**354**	P		**P**	**P**	**12 57 09.5**	**0.0**
	comp=Z,1.6nm,0.8s,baz=164,slow=10,SNR=2.3								
MJAR				LR		LR	LR	13 13 35.1	
	comp=Z,24nm,20.9s,baz=182,slow=34								
	comp=Z,1.6nm,0.8s								
KSRS	**Korea Array**	**45.86**	**343**	P		**P**	**P**	**12 57 31.1**	**-1.4**
	comp=Z,1.7nm,1.0s,baz=169,slow=9.8,SNR=5.4								
	comp=Z,1.7nm,1.0s								
JTM	**Tenmabayashi**	**47.01**	**358**	P		**P**	**P**	**12 57 40.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**49.97**	**300**	P		**P**	**P**	**12 58 02.3**	**-2.5**
CMAR	**Chiang Mai Arr**	**49.97**	**300**	P		**P**	**P**	**12 58 05.

0.7nm,0.9s,baz=114,slow=6.1,SNR=3.3
0.7nm,0.9s
KURBB **Kurchatov Arra** 78.80 324 P **P** 13 03 48.9 -1.1
0.2nm,0.6s,baz=125,slow=4.2,SNR=2.7
0.2nm,0.6s
QSPA **South Pole Qui** 84.06 180 P **P** 13 04 17.6 -0.1
2.4nm,1.1s,baz=78,slow=9.3,SNR=2.8
2.4nm,1.1s
BVAR **Borovoye Array** 84.37 325 P **P** 13 04 19.8 +0.4
2.2nm,0.8s,baz=115,slow=6.8,SNR=5.6
2.2nm,0.8s
ILAR **Eielson Array** 86.98 24 P **P** 13 04 32.1 +0.1
0.3nm,0.7s,baz=260,slow=5.3,SNR=2.3
0.3nm,0.7s

IDC 27 12:53:14.4±1.8, 6°16.16S × 129°28.28E, h0km, mb4.0/3, mbtmp4.0/5, ML4.2/2, Error ellipse: s-maj=147.2km s-min=28.7km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.55**	**161**	Pn	Pn	12 56 42.0	+0.2
	1.2nm,0.3s,baz=342,slow=14,SNR=7.1						
WRA				Sn	Sn	12 59 07.3	-17
	1.7nm,0.3s,baz=252,slow=7.6,SNR=2.0						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**17.96**	**166**	P	Pn	12 57 25.8	0.0
	0.5nm,0.3s,baz=352,slow=13,SNR=5.6						
ASAR				S	Sn	13 00 33.0	-14
	1.7nm,0.6s,baz=350,slow=27,SNR=1.4						
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**67.14**	**327**	P	P	13 04 10.7	+0.7
	1.3nm,0.5s,baz=122,slow=7.3,SNR=13						
	1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**70.52**	**334**	P	P	13 04 30.1	-0.8
	0.4nm,0.3s,baz=143,slow=3.6,SNR=2.0						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**71.43**	**329**	P	P	13 04 36.3	-0.2
	0.6nm,0.5s,baz=124,slow=4.9,SNR=7.5						
	0.6nm,0.5s						

*ISN **27** 13:00:15.3±1.3, 34°21N × 46°64E, h8km ± 6km, ML2.7*
*TEH **27** 13:00:16.4, 34°18N × 46°65E, h10km ± 64km, ML2.7*
ISC 27 13:00:16.5±1.0, 34°20N±0°04 × 46°64E±0°04, h15km ± 8km, n12, σ0°84/16, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.14**	**335**	Pg	**Pg**	**13 00 20.3**	**-0.3**
IGHG				Sg	**Sg**	**13 00 24.0**	**+0.7**
KCHF	**Cheshme Sefid,**	**0.34**	**77**	Pg	**Pg**	**13 00 22.8**	**-0.8**
IDHR	**Dehrash**	**0.54**	**337**	Pg	**Pg**	**13 00 26.8**	**-0.5**
ILBA	**Ilam Banvizeh**	**0.68**	**212**	Pg	**Pg**	**13 00 29.3**	**-0.5**
ILIN	**Lien**	**0.77**	**20**	Pg	**Pb**	**13 00 31.8**	**+0.1**
KGS1	**Ghasr-e-Shirin**	**0.92**	**290**	Pg	**Pn**	**13 00 35.0**	**0.0**
IBZA	**Bozab**	**1.04**	**75**	Pg	**Pn**	**13 00 37.4**	**+0.5**
IKFM	**Kafar-mosalman**	**1.21**	**124**	Pg	**Pg**	**13 00 39.5**	**-0.3**
IBDR	**Badra**	**1.24**	**209**	*e*Pg	**Pg**	**13 00 40.0**	**-0.4**
IBDR				*e*Sg	**Sn**	**13 00 56.0**	**+0.2**
IDOB	**Doab**	**1.34**	**107**	Pg	**Pg**	**13 00 42.3**	**0.0**
BHD	**Baghdad**	**2.10**	**244**	*e*Pn	**Pn**	**13 00 52.0**	**+0.8**
BHD				*e*Sn	**Sb**	**13 01 20.0**	**-0.2**
RAFI	**Al-Rafai**	**2.51**	**190**	*e*Pn	**Pn**	**13 00 58.0**	**+1.2**
RAFI				*e*Sn	**Sb**	**13 01 30.0**	**-2.0**

*MOS **27** 13:02:01.1, 44°91N × 37°49E, h41km, MPVA3.1*
ISC 27 13:01:54.6±1.8, 45°3N±0°1 × 37°58E±0°04, h5km ± 13km, n15, σ1°20/22, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANN	**Anapa**	**0.48**	**192**	*i* Pg	**Pn**	**13 02 08.7**	**+0.6**
ANN				*i* Sg	**Sb**	**13 02 13.3**	**+0.4**
SPGR	**Shapsug**	**0.64**	**146**	*e*Pg	**Pn**	**13 02 12.1**	**+1.9**
SPGR				*e*Sg	**Sn**	**13 02 19.8**	**-0.9**
GELR	**Gelenjik**	**0.75**	**157**	*i* Pg	**Pn**	**13 02 13.2**	**+1.4**
GELR				*i* Sg	**Sb**	**13 02 20.6**	**0.0**
GOYR	**Goytkh**	**1.64**	**128**	*e*Pg	**Pg**	**13 02 26.5**	**+0.5**
GOYR				*e*Sg	**Sn**	**13 02 45.2**	**-0.4**
SUDU	**Sudak**	**1.86**	**259**	*e*Pg	**Pg**	**13 02 30.5**	**+0.2**
SUDU				*e*Sg	**Sn**	**13 02 50.9**	**-0.1**
SUDU	**Sudak**	**1.86**	**259**	Snm		13 02 53.3	
	comp=E,16nm,0.4s						
SUDU	**Sudak**	**1.86**	**259**	Pnm		13 02 30.9	
	comp=Z,4.0nm,0.3s						
SUDU	**Sudak**	**1.86**	**259**	*e*Sn	**Sn**	**13 02 50.9**	**-0.1**
SUDU	**Sudak**	**1.86**	**259**	Snm		13 02 53.0	
	comp=N,20nm,0.3s						
MRNR	**Maryino**	**1.90**	**134**	*e*Pg	**Pb**	**13 02 29.1**	**-0.7**
MRNR				*e*Sg	**Sn**	**13 02 49.9**	**-2.1**
GUZR	**Guzeripl'**	**2.22**	**124**	*e*Pg	**Pb**	**13 02 34.3**	**-0.9**
GUZR				*e*Sg	**Sn**	**13 02 58.7**	**-1.2**
SEV	**Sevastopol'**	**2.87**	**257**	*e*Sn	**Sn**	**13 03 15.1**	**-0.7**
SEV				Snm		13 03 17.7	
	comp=N,5.0nm,0.3s						
SEV				Snm		13 03 18.3	
	comp=E,6.0nm,0.4s						
KIV	**Kislovodsk**	**3.88**	**108**	*e*Pn	**Pb**	**13 03 01.5**	**-2.0**
KIV				*e*Sn	**Sn**	**13 03 41.8**	**+0.9**
SHA1	**Shidzhatmaz**	**3.94**	**111**	*e*Pn	**Pb**	**13 03 04.0**	**-0.8**
SHA1				*e*Sn	**Sn**	**13 03 43.7**	**+1.0**
KBZ	**Khabaz**	**4.11**	**110**	*e*Pn	**Pb**	**13 03 05.3**	**-2.1**
KBZ				*e*Sn	**Sn**	**13 03 47.0**	**+0.6**

IDC 27 13:03:13.2±2.1, 6°25S × 143°30E, h0km, mb3.2/1, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=48.0km s-min=34.6km az=71.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.94**	**130**	Pn	Pn	13 04 28.6	-0.1
	4.9nm,0.6s,baz=286,slow=1.2,SNR=5.4						
PMG				Sn	Sn	13 05 22.5	-4.1
	0.6nm,0.3s,baz=3.5,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**16.15**	**212**	Pn	Pn	13 06 59.7	-2.1
	0.1nm,0.3s,baz=31,slow=14,SNR=4.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**19.53**	**207**	P	Pn	13 07 43.1	-0.5
	0.1nm,0.3s,baz=37,slow=8.9,SNR=12						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**75.38**	**322**	P	P	13 14 58.9	+0.1
	0.2nm,0.7s,baz=98,slow=7.6,SNR=2.0						
	0.2nm,0.7s						

*IDC **27** 13:06:14.9±1.4, 33°17S × 178°58W, h0km, mb4.3/4, mbtmp4.3/5, ML4.1/1, MS3.2/1, Error ellipse: s-maj=38.8km s-min=29.7km az=48.0*
*NEIC **27** 13:06:14.6±1.5, 33°28S±0°09 × 178°3W±0°2, h10km ± 1km, mb4.3/9, Error ellipse: s-maj=29.0km s-min=7.6km az=119.0*
*WEL **27** 13:06:15.8±0.7, 33°S±6° × 17°8W±1°3, h33km, M4.3/18, mB4.9/12, ML4.8/23, MLv4.5/18, Mw(mB)4.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3, confirmed*
ISC 27 13:06:18.1±0.9, 33°25S±0°06 × 178°3W±0°1, h35km, n61, σ1°87/78, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.98**	**4**	P	**Pn**	**13 07 13.9**	**-2.8**
GLKZ				S	**Sn**	**13 07 58.4**	**-3.8**
RAO	**Raoul Island**	**4.00**	**5**	Pn	**Pn**	**13 07 15.7**	**-1.2**
MXZ	**Matakaoa Point**	**5.13**	**212**	Pn	**Pn**	**13 07 30.5**	**-1.9**
MXZ	**Matakaoa Point**	**5.13**	**212**	P	**Pn**	**13 07 30.9**	**-1.5**
WMGZ	**Waiomatatini S**	**5.30**	**210**	P	**Pn**	**13 07 32.3**	**-2.5**
PKGZ	**Pakihiroa**	**5.50**	**212**	P	**Pn**	**13 07 35.5**	**-2.2**
HAZ	**Te Kaha**	**5.53**	**214**	P	**Pn**	**13 07 36.7**	**-1.2**
PUZ	**Puketiti**	**5.58**	**209**	P	**Pn**	**13 07 36.5**	**-2.1**
PUZ				S	**Sn**	**13 08 43.3**	**+1.8**
RUGZ	**Raukumara Rang**	**5.75**	**214**	P	**Pn**	**13 07 39.6**	**-1.4**
RUGZ				S	**Sn**	**13 08 48.4**	**+2.6**
TWGZ	**Tauwhareparae**	**5.79**	**211**	P	**Pn**	**13 07 40.2**	**-1.3**
TWGZ				S	**Sn**	**13 08 46.4**	**-0.2**
CNGZ	**Carnagh Statio**	**5.95**	**208**	P	**Pn**	**13 07 41.5**	**-2.3**
TKGZ	**Te Karaka**	**6.06**	**210**	P	**Pn**	**13 07 45.2**	**-0.1**
TKGZ				S	**Sn**	**13 08 52.2**	**-1.1**
MWZ	**Matawai**	**6.11**	**213**	P	**Pn**	**13 07 44.3**	**-1.7**
MWZ				S	**Sn**	**13 08 52.8**	**-2.0**
URZ	**Urewera**	**6.25**	**216**	Pn	**Pn**	**13 07 45.3**	**-2.5**
	4.5nm,0.3s,baz=352,slow=5.4,SNR=20						
	9.3nm,0.3s						
URZ	**Urewera**	**6.25**	**216**	P	**Pn**	**13 07 46.0**	**-1.8**
URZ				S	**Sn**	**13 08 55.6**	**-2.4**
MARZ	**Manawahe**	**6.26**	**220**	P	**Pn**	**13 07 48.4**	**+0.4**
MARZ				S	**Sn**	**13 08 59.4**	**+1.0**
RAGZ	**Rawiri**	**6.30**	**213**	P	**Pn**	**13 07 46.9**	**-1.7**
RAGZ				S	**Sn**	**13 08 58.1**	**-1.2**
RIGZ	**Rimuhau**	**6.32**	**209**	P	**Pn**	**13 07 46.8**	**-2.0**
RIGZ				S	**Sn**	**13 08 58.1**	**-1.8**
PRGZ	**Paritu Road**	**6.46**	**208**	P	**Pn**	**13 07 49.8**	**-0.9**
PRGZ				S	**Sn**	**13 08 60.0**	**-3.3**
WIAZ	**Waiheke Island**	**6.46**	**235**	P	**Pn**	**13 07 50.3**	**-0.4**
SNGZ	**Shannon Statio**	**6.57**	**211**	P	**Pn**	**13 07 51.6**	**-0.6**
SNGZ				S	**Sn**	**13 09 04.8**	**-1.0**
MUGZ	**Murupara**	**6.59**	**216**	P	**Pn**	**13 07 52.1**	**-0.4**
MUGZ				S	**Sn**	**13 09 05.8**	**-0.5**
RTZ	**Ruatahuna**	**6.59**	**214**		**Pn**	**13 07 51.0**	**-1.6**
MHGZ	**Mahia Peninsul**	**6.65**	**207**	P	**Pn**	**13 07 50.7**	**-2.6**
TOZ	**Tahuroa Road**	**6.76**	**227**	Pn	**Pn**	**13 07 52.3**	**-2.6**
RAHZ	**Arahi**	**6.79**	**212**	P	**Pn**	**13 07 54.3**	**-1.0**
RAHZ				S	**Sn**	**13 09 09.7**	**-1.6**
MTHZ	**Maungataniwha**	**6.85**	**214**	P	**Pn**	**13 07 55.3**	**-0.8**
MTHZ				S	**Sn**	**13 09 10.7**	**-2.1**
OUZ	**Omahuta**	**7.01**	**251**	P	**Pn**	**13 08 00.0**	**+1.7**
ARAZ	**Aratiatia Land**	**7.03**	**219**	P	**Pn**	**13 07 55.9**	**-2.7**
THQ2	**Tauhara North**	**7.04**	**218**	P	**Pn**	**13 07 59.4**	**+0.8**
MRHZ	**Matea Rd**	**7.04**	**216**	P	**Pn**	**13 07 57.1**	**-1.6**
ARHZ	**Aropaoanui**	**7.11**	**211**	P	**Pn**	**13 07 58.8**	**-0.9**
ARHZ				S	**Sn**	**13 09 16.4**	**-2.9**
BKZ	**Black Stump Fm**	**7.26**	**214**	Pn	**Pn**	**13 07 59.7**	**-2.1**
BKZ	**Black Stump Fm**	**7.26**	**214**	P	**Pn**	**13 08 00.1**	**-1.7**
BKZ				S	**Sn**	**13 09 20.0**	**-3.0**
MCHZ	**McNeill Hill**	**7.39**	**212**	P	**Pn**	**13 08 02.1**	**-1.4**
MCHZ				S	**Sn**	**13 09 22.5**	**-3.6**
HIZ	**Hauiti**	**7.66**	**225**	Pn	**Pn**	**13 08 04.7**	**-2.5**
BFZ	**Birch Farm**	**8.62**	**209**	Pn	**Pn**	**13 08 18.3**	**-2.0**
MRZ	**Mangatainoka R**	**8.88**	**212**	Pn	**Pn**	**13 08 21.2**	**-2.8**
TUWZ	**Tuamarina**	**10.24**	**215**	Pn	**Pn**	**13 08 41.0**	**-1.6**
NNZ	**Nelson**	**10.36**	**217**	Pn	**Pn**	**13 08 42.0**	**-2.2**
KHZ	**Kahutara**	**11.20**	**213**	Pn	**Pn**	**13 08 52.7**	**-3.0**
INZ	**Inchbonnie**	**12.45**	**218**	Pn	**Pn**	**13 09 11.2**	**-1.6**
WHZ	**Wether Hill Ro**	**16.47**	**216**	P	**Pn**	**13 10 07.9**	**+1.5**
WHZ				IAmb	IAmb	13 10 39.7	
	comp=Z,21nm,1.3s						
PPT	**Papeete**	**30.13**	**66**	LR	LR	13 25 15.8	
	comp=Z,38nm,18.5s,baz=296,slow=38						
CTA	**Charters Tower**	**34.13**	**284**	P	**P**	**13 12 59.9**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=112,slow=10,SNR=8.8						
	comp=Z,2.6nm,0.5s						
AS31	**Alice Springs**	**42.80**	**270**	P	**P**	**13 14 12.4**	**-0.3**
ASAR	**Alice Springs**	**42.80**	**270**	P	**P**	**13 14 12.2**	**-0.6**
ASAR	**Alice Springs**	**42.80**	**270**	P	**P**	**13 14 12.6**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=110,slow=7.4,SNR=51						
	comp=Z,4.7nm,0.7s						
WR0	**Warramunga Arr**	**43.87**	**275**	P	**P**	**13 14 21.1**	**-0.2**
WR0				IAmb	IAmb	13 14 38.6	
	comp=Z,7.2nm,1.3s						
WB2	**Warramunga Arr**	**44.03**	**275**	P	**P**	**13 14 22.5**	**-0.2**
WB2				IAmb	IAmb	13 14 23.0	
	comp=Z,3.9nm,0.6s						
WRA	**Warramunga Arr**	**44.05**	**275**	P	**P**	**13 14 22.1**	**-0.6**
WRA	**Warramunga Arr**	**44.05**	**275**	P	**P**	**13 14 22.4**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=117,slow=7.7,SNR=28						
	comp=Z,2.9nm,0.6s						
WB0	**Warramunga Arr**	**44.08**	**275**	P	**P**	**13 14 22.7**	**-0.3**
WB0				IAmb	IAmb	13 14 25.5	
	comp=Z,9.0nm,1.1s						
KNRA	**Kununurra**	**50.74**	**277**	P	**P**	**13 15 13.0**	**-1.9**
FITZ	**Fitzroy Crossi**	**52.18**	**272**	P	**P**	**13 15 25.2**	**-0.3**
FITZ				IAmb	IAmb	13 15 56.9	
	comp=Z,3.4nm,1.5s						
CASY	**Casey**	**52.53**	**209**	P	**P**	**13 15 29.2**	**+1.7**
QSPA	**South Pole Qui**	**56.87**	**180**	P	**P**	**13 16 03.0**	**+3.8**
	comp=Z,2.9nm,1.1s,baz=330,slow=8.1,SNR=3.7						
	comp=Z,2.9nm,1.1s						
KURBB	**Kurchatov Arra**	**122.85**	**312**	PKP	**PKiKP**	**13 25 10.7**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=117,slow=2.2,SNR=2.9						
FINES	**FINESS Array B**	**147.71**	**338**	PKPbc	**PKPbc**	**13 25 59.4**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=38,slow=3.4,SNR=11						
MMAI	**Mount Meron Ar**	**151.86**	**279**	PKPbc	**PKiKP**	**13 26 11.2**	**+1.4**
	comp=Z,1.4nm,0.4s,baz=113,slow=6.7,SNR=2.1						
TORD	**Torodi Ar. Bea**	**159.99**	**180**	PKPab	**PKPab**	**13 26 55.4**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=150,slow=3.9,SNR=1.4						

*IDC **27** 13:07:08.3±2.9, 33°55S × 178°23W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=136.9km s-min=49.8km az=172.0*
*NEIC **27** 13:07:12.6±1.0, 33°6S±0°1 × 178°6W±0°2, h10km ± 2km, mb4.2/9, Error ellipse: s-maj=36.8km s-min=5.4km az=120.0*
*WEL **27** 13:07:13.3±0.7, 33°S±6° × 17°9W±1°3, h33km, M4.3/21, mB4.9/10, ML4.7/21, MLv4.5/21, Mw(mB)4.2/10, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6, confirmed*
ISC 27 13:07:12.3±1.3, 33°31S±0°07 × 178°2W±0°2, h35km, n47, σ1°67/67, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.04**	**3**	P	**Pn**	**13 08 15.2**	**+3.4**
GLKZ				S	**Sn**	**13 08 54.6**	**-3.3**
MXZ	**Matakaoa Point**	**5.11**	**213**	Pn	**Pn**	**13 08 23.3**	**-3.1**
MXZ	**Matakaoa Point**	**5.11**	**213**	P	**Pn**	**13 08 23.6**	**-2.8**
MXZ				S	**Sn**	**13 09 24.3**	**+0.2**
WMGZ	**Waiomatatini S**	**5.28**	**211**	P	**Pn**	**13 08 29.8**	**+1.1**
WMGZ				S	**Sn**	**13 09 30.2**	**+2.0**
PKGZ	**Pakihiroa**	**5.48**	**213**	P	**Pn**	**13 08 30.1**	**-1.5**
PKGZ				S	**Sn**	**13 09 33.1**	**-0.3**
HAZ	**Te Kaha**	**5.51**	**215**	P	**Pn**	**13 08 33.5**	**+1.6**
HAZ				S	**Sn**	**13 09 37.2**	**+3.2**
PUZ	**Puketiti**	**5.55**	**210**	P	**Pn**	**13 08 32.0**	**-0.5**
PUZ				S	**Sn**	**13 09 35.3**	**+0.2**
RUGZ	**Raukumara Rang**	**5.73**	**215**	P	**Pn**	**13 08 36.2**	**+1.3**
RUGZ				S	**Sn**	**13 09 40.4**	**+0.9**
TWGZ	**Tauwhareparae**	**5.76**	**212**	P	**Pn**	**13 08 38.3**	**+2.9**
TWGZ				S	**Sn**	**13 09 41.2**	**+1.0**
CNGZ	**Carnagh Statio**	**5.93**	**208**	P	**Pn**	**13 08 37.1**	**-0.5**
CNGZ				S	**Sn**	**13 09 45.6**	**+1.4**
TKGZ	**Te Karaka**	**6.04**	**211**	P	**Pn**	**13 08 40.5**	**+1.4**
TKGZ				S	**Sn**	**13 09 46.3**	**-0.6**
MWZ	**Matawai**	**6.09**	**213**	P	**Pn**	**13 08 40.5**	**+0.6**
MWZ				S	**Sn**	**13 09 47.4**	**-1.0**
URZ	**Urewera**	**6.24**	**216**	P	**Pn**	**13 08 42.0**	**+0.2**
URZ				S	**Sn**	**13 09 50.6**	**-1.2**
URZ	**Urewera**	**6.24**	**216**	Sn	Sn	13 08 41.9	-70
	8.3nm,0.3s,baz=343,slow=2.3,SNR=7.3						
MARZ	**Manawahe**	**6.26**	**220**	P	**Pn**	**13 08 43.0**	**+0.9**
MARZ				S	**Sn**	**13 09 52.7**	**+0.2**
RAGZ	**Rawiri**	**6.28**	**213**	P	**Pn**	**13 08 43.3**	**+0.8**
RAGZ				S	**Sn**	**13 09 52.8**	**-0.2**
RIGZ	**Rimuhau**	**6.30**	**210**	P	**Pn**	**13 08 44.4**	**+1.6**
RIGZ				S	**Sn**	**13 09 53.6**	**+0.2**
PRGZ	**Paritu Road**	**6.43**	**208**	P	**Pn**	**13 08 45.7**	**+1.2**
SNGZ	**Shannon Statio**	**6.54**	**212**	P	**Pn**	**13 08 47.0**	**+0.9**
SNGZ				S	**Sn**	**13 09 59.1**	**-0.4**
MUGZ	**Murupara**	**6.57**	**217**	P	**Pn**	**13 08 44.6**	**-1.8**
MUGZ				S	**Sn**	**13 09 58.3**	**-1.9**
RTZ	**Ruatahuna**	**6.58**	**215**	Pn	**Pn**	**13 08 43.0**	**-3.5**
MHGZ	**Mahia Peninsul**	**6.62**	**207**	P	**Pn**	**13 08 45.9**	**-1.3**
RAHZ	**Arahi**	**6.77**	**213**	P	**Pn**	**13 08 50.4**	**+1.3**
RAHZ				S	**Sn**	**13 10 05.0**	**0.0**
HBAZ	**Herne Bay Bore**	**6.79**	**237**	P	**Pn**	**13 08 45.5**	**-3.9**
MTHZ	**Maungataniwha**	**6.83**	**215**	P	**Pn**	**13 08 51.7**	**+1.6**
MTHZ				S	**Sn**	**13 10 06.3**	**-0.3**
MRHZ	**Matea Rd**	**7.02**	**217**	P	**Pn**	**13 08 52.4**	**-0.4**
OUZ	**Omahuta**	**7.05**	**252**	P	**Pn**	**13 08 55.4**	**+2.3**
ARHZ	**Aropaoanui**	**7.09**	**212**	P	**Pn**	**13 08 54.4**	**+0.8**
ARHZ				S	**Sn**	**13 10 12.1**	**-0.9**
BKZ	**Black Stump Fm**	**7.25**	**215**	P	**Pn**	**13 08 56.7**	**+1.0**
BKZ				S	**Sn**	**13 10 16.3**	**-0.5**
MCHZ	**McNeill Hill**	**7.37**	**212**	P	**Pn**	**13 08 57.4**	**0.0**
MCHZ				S	**Sn**	**13 10 17.7**	**-2.1**
BFZ	**Birch Farm**	**8.59**	**210**	Pn	**Pn**	**13 09 09.8**	**-4.3**
BHW	**Baring Head**	**9.78**	**212**	Pn	Pn	13 09 25.5	-4.9
DCZ	**Deep Cove**	**16.57**	**219**	Pn	**Pn**	**13 10 59.0**	**-2.8**
DCZ				IAmb	IAmb	13 11 24.7	
	comp=Z,30nm,1.4s						
CTA	**Charters Tower**	**34.21**	**284**	P	**P**	**13 13 57.0**	**+2.2**
	comp=Z,2.2nm,0.5s,baz=127,slow=9.6,SNR=5.7						
	comp=Z,2.2nm,0.5s						
CTAO	**Charters Tower**	**34.21**	**284**	P	**P**	**13 13 56.9**	**+2.2**
AS31	**Alice Springs**	**42.86**	**270**	P	**P**	**13 15 07.7**	**+0.3**
ASAR	**Alice Springs**	**42.87**	**270**	P	**P**	**13 15 07.6**	**+0.2**
ASAR	**Alice Springs**	**42.87**	**270**	P	**P**	**13 15 08.2**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=112,slow=7.8,SNR=12						
	comp=Z,3.3nm,0.6s						
WR0	**Warramunga Arr**	**43.94**	**275**	P	**P**	**13 15 16.0**	**-0.1**
WR0				IAmb	IAmb	13 15 44.8	
	comp=Z,5.1nm,1.1s						
WB2	**Warramunga Arr**	**44.10**	**275**	P	**P**	**13 15 17.9**	**+0.5**
WRAB	**Tennant Creek**	**44.11**	**275**	P	**P**	**13 15 17.6**	**+0.1**
WRAB				IAmb	IAmb	13 15 42.9	
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**44.12**	**275**	P	**P**	**13 15 17.6**	**+0.1**
WRA	**Warramunga Arr**	**44.12**	**275**	P	**P**	**13 15 17.9**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=117,slow=7.8,SNR=12						
	comp=Z,2.1nm,0.4s						
WB0	**Warramunga Arr**	**44.15**	**276**	P	**P**	**13 15 17.9**	**+0.1**
WB0				IAmb	IAmb	13 15 42.7	
	comp=Z,5.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.24**	**272**	P	**P**	**13 16 20.8**	**+0.5**
FITZ				IAmb	IAmb	13 16 36.1	
	comp=Z,2.4nm,1.4s						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKiKP**	**13 26 54.5**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=46,slow=4.0,SNR=4.8						
MMAI	**Mount Meron Ar**	**151.94**	**279**	PKPbc	**PKiKP**	**13 27 05.1**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=116,slow=5.3,SNR=2.0						

*NEIC **27** 13:13:09.8±0.9, 33°3S±0°1 × 178°1W±0°2, h10km ± 2km, mb4.4/9, Error ellipse: s-maj=32.1km s-min=13.7km az=111.0*
*IDC **27** 13:13:10.8±1.3, 33°15S × 178°50W, h0km, mb4.3/4, mbtmp4.3/5, ML4.0/1, MS3.4/3, Error ellipse: s-maj=37.4km s-min=29.6km az=47.0*
*WEL **27** 13:13:13.1±0.8, 33°S±6° × 17°8W±1°6, h33km, M4.2/16, mB4.7/9, ML4.8/18, MLv4.5/16, Mw(mB)3.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=110.0, confirmed*
ISC 27 13:13:13.8±0.9, 33°24S±0°06 × 178°4W±0°1, h32km, n52, σ1°57/69, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.98**	**5**	P	**Pn**	**13 14 10.2**	**-2.4**
GLKZ				S	**Sn**	**13 14 55.0**	**-3.2**
RAO	**Raoul Island**	**3.99**	**5**	Pn	**Pn**	**13 14 11.6**	**-1.2**
RIZ	**Raoul Island**	**4.00**	**5**	S	**Sn**	**13 14 58.1**	**-0.5**
MXZ	**Matakaoa Point**	**5.11**	**211**	Pn	**Pn**	**13 14 27.4**	**-0.7**
WMGZ	**Waiomatatini S**	**5.28**	**209**	P	**Pn**	**13 14 31.8**	**+1.4**
WMGZ				S	**Sn**	**13 15 32.2**	**+2.1**
PKGZ	**Pakihiroa**	**5.48**	**211**	P	**Pn**	**13 14 31.5**	**-1.8**
PKGZ				S	**Sn**	**13 15 34.6**	**-0.6**
HAZ	**Te Kaha**	**5.50**	**214**	P	**Pn**	**13 14 33.1**	**-0.4**
HAZ				S	**Sn**	**13 15 38.0**	**+2.3**
PUZ	**Puketiti**	**5.56**	**209**	P	**Pn**	**13 14 34.8**	**+0.5**
PUZ				S	**Sn**	**13 15 36.4**	**-0.7**
RUGZ	**Raukumara Rang**	**5.72**	**213**	P	**Pn**	**13 14 36.0**	**-0.6**
RUGZ				S	**Sn**	**13 15 41.3**	**+0.1**
TWGZ	**Tauwhareparae**	**5.76**	**210**	P	**Pn**	**13 14 37.1**	**0.0**
TWGZ				S	**Sn**	**13 15 41.6**	**-0.6**
TKGZ	**Te Karaka**	**6.04**	**210**	P	**Pn**	**13 14 41.0**	**+0.1**
TKGZ				S	**Sn**	**13 15 46.6**	**-2.2**
MWZ	**Matawai**	**6.09**	**212**	P	**Pn**	**13 14 40.5**	**-1.1**
MWZ				S	**Sn**	**13 15 47.8**	**-2.4**
URZ	**Urewera**	**6.22**	**215**	Pn	**Pn**	**13 14 41.7**	**-1.7**
	3.2nm,0.3s,baz=358,slow=4.5,SNR=14						
URZ				Sn	**Sn**	**13 15 51.1**	**-2.3**
	3.8nm,0.3s,baz=272,slow=18,SNR=6.3						
	9.0nm,0.3s						
URZ	**Urewera**	**6.22**	**215**	P	**Pn**	**13 14 42.1**	**-1.3**
URZ				S	**Sn**	**13 15 51.4**	**-2.0**
MARZ	**Manawahe**	**6.23**	**219**	P	**Pn**	**13 14 43.9**	**+0.3**
RAGZ	**Rawiri**

0.3nm,0.3s,baz=28,slow=12,SNR=26
1.3nm,0.5s
MKAR Makanchi Array 74.77 322 P **P** **13 31 42.9 -0.3**
0.6nm,0.7s,baz=113,slow=7.5,SNR=7.9
0.6nm,0.7s
QSPA South Pole Qui 84.06 180 P **P** **13 32 35.1 +1.6**
0.6nm,0.6s,baz=211,slow=1.6,SNR=1.4
0.6nm,0.6s
BVAR Borovoye Array 84.23 325 P **P** **13 32 34.3 -0.1**
1.0nm,0.7s,baz=96,slow=4.3,SNR=5.5
1.0nm,0.7s
ILAR Eielson Array 87.09 24 P **P** **13 32 48.0 -0.3**
0.4nm,0.8s,baz=267,slow=5.0,SNR=3.2
0.4nm,0.8s

IDC ***27*** *13:20:31.6±1.2,47.°68S×99.°82E, h0km, mb4.4/7, mbtmp4.4/7, MS4.0/20, Error ellipse: s-maj=37.3km s-min=20.3km az=107.0*
NEIC ***27*** *13:20:32.1±1.9,47.°66S±0.°08×99.°6E±0.°3, h10km±2km, mb4.5/7, Error ellipse: s-maj=39.1km s-min=13.3km az=276.0*
GCMT ***27*** *13:20:36.1±0.3,47.°67S±0.°02×99.°75E±0.°03, h19km±1km, MW4.9/84, Moment Tensor Solution. s22,c26; s84,c110; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~0.24±.11; Mθθ2.34±.10; Mϕϕ-2.09±.10; Mrθ-0.89±.25; Mθϕ0.77±.08; Mϕr~0.11±.22; Best double couple: M◎2.47800×10^16 NP1:ϕs307.00000°,δ79.00000°,λ13.00000°. NP2: ϕs214.00000°,δ77.00000°,λ169.00000°. Principal axes: T 2.7370, Plg17.0000°, Azm171.0000°; N -0.5090, Plg73.0000°, Azm346.0000°; P -2.2200, Plg1.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 13:20:32.7±1.3,47.°6S±0.°1×99.°8E±0.°2, h11km, n37, σ1§06/19, mb4.4/9, MS4.0/19, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.66**	**45**	T	T	13 41 19.6	
	baz=215,slow=74,SNR=203						
H01W3	**Cape Leeuwin H**	**16.67**	**45**	T	T	13 41 23.7	
	baz=215,slow=74,SNR=184						
H01W1	**Cape Leeuwin H**	**16.67**	**45**	T	T	13 41 23.8	
	baz=215,slow=74,SNR=212						
NWAO	**Narrogin (SRO)**	**19.77**	**48**	LR	LR	13 30 44.4	
	comp=Z,271nm,21.1s,baz=157,slow=31						
MORW	**Morawa**	**22.42**	**40**	P	**P**	**13 25 29.3**	**-2.1**
MORW				IAmb	IAmb	13 26 04.9	
	comp=Z,18nm,1.1s						
MAW	**Mawson**	**27.42**	**210**	LR	LR	13 34 20.8	
	comp=Z,296nm,20.6s,baz=54,slow=30						
BBOO	**Buckleboo**	**31.10**	**75**	P	**P**	**13 26 50.9**	**-0.1**
STKA	**Stephens Creek**	**35.33**	**79**	P	**P**	**13 27 27.2**	**-0.7**
STKA	**Stephens Creek**	**35.33**	**79**	P	**P**	**13 27 26.9**	**-1.0**
	comp=Z,6.3nm,1.0s,baz=239,slow=7.8,SNR=4.9						
STKA				LR	LR	13 39 04.1	
	comp=Z,266nm,20.6s,baz=205,slow=32						
	comp=Z,6.3nm,1.0s						
ASAR	**Alice Springs**	**36.17**	**61**	P	**P**	**13 27 34.6**	**-0.6**
ASAR	**Alice Springs**	**36.17**	**61**	P	**P**	**13 27 34.8**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=216,slow=7.4,SNR=16						
	comp=Z,2.7nm,0.8s						
AS31	**Alice Springs**	**36.17**	**61**	P	**P**	**13 27 36.3**	**+1.1**
AS31				IAmb	IAmb	13 27 41.5	
	comp=Z,1.4nm,0.7s						
VNDA	**Vanda**	**38.02**	**162**	P	**P**	**13 27 50.3**	**0.0**
VNDA				IAmb	IAmb	13 27 58.0	
	comp=Z,9.1nm,1.1s						
VNDA	**Vanda**	**38.02**	**162**	P	**P**	**13 27 50.2**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=283,slow=7.9,SNR=8.6						
VNDA				LR	LR	13 41 57.9	
	comp=Z,394nm,21.4s,baz=289,slow=34						
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**39.32**	**57**	P	**P**	**13 28 03.5**	**+1.7**
	comp=Z,3.7nm,0.8s,baz=219,slow=8.7,SNR=8.3						
	comp=Z,3.7nm,0.8s						
LEM	**Lembang**	**41.21**	**12**	LR	LR	13 42 20.5	
	comp=Z,289nm,20.0s,baz=172,slow=32						
QSPA	**South Pole Qui**	**42.51**	**180**	P	**P**	**13 28 26.5**	**-1.3**
QSPA				IAmb	IAmb	13 28 29.9	
	comp=Z,11nm,1.0s						
QSPA	**South Pole Qui**	**42.51**	**180**	P	**P**	**13 28 27.4**	**-0.4**
	comp=Z,11nm,1.1s,baz=303,slow=1.7,SNR=19						
QSPA				LR	LR	13 45 07.2	
	comp=Z,399nm,18.1s,baz=305,slow=35						
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**46.44**	**70**	P	**P**	**13 29 00.2**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=225,slow=1.4,SNR=5.6						
	comp=Z,6.7nm,0.9s						
CTAO	**Charters Tower**	**46.44**	**70**	P	**P**	**13 29 00.3**	**+0.7**
CTAO				IAmb	IAmb	13 29 03.8	
	comp=Z,15nm,1.2s						
RPZ	**Rata Peaks**	**48.36**	**113**	LR	LR	13 45 28.6	
	comp=Z,150nm,18.2s,baz=249,slow=31						
PALK	**Palikekele**	**57.21**	**337**	LR	LR	13 50 29.5	
	comp=Z,96nm,18.3s,baz=271,slow=31						
BOSA	**Boshof**	**59.35**	**260**	LR	LR	13 51 01.2	
	comp=Z,101nm,19.1s,baz=187,slow=31						
SUR	**Sutherland**	**59.85**	**254**	LR	LR	13 50 11.8	
	comp=Z,144nm,21.9s,baz=158,slow=30						
LBTB	**Lobatse**	**61.50**	**263**	LR	LR	13 52 35.0	
	comp=Z,73nm,18.2s,baz=144,slow=31						
CMAR	**Chiang Mai Arr**	**65.78**	**359**	P	**P**	**13 31 17.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**65.78**	**359**	P	**P**	**13 31 18.4**	**+0.7**
	comp=Z,3.1nm,1.0s,baz=196,slow=5.9,SNR=13						
CMAR				LR	LR	13 57 03.0	
	comp=Z,132nm,19.3s,baz=170,slow=33						
	comp=Z,3.1nm,1.0s						
LSZ	**Lusaka**	**66.47**	**273**	LR	LR	13 54 55.4	
	comp=Z,80nm,20.6s,baz=148,slow=31						
PMSA	**Palmer Station**	**67.22**	**187**	LR	LR	14 00 46.0	
	comp=Z,278nm,19.2s,baz=162,slow=36						
TSUM	**Tsumeb**	**70.86**	**262**	LR	LR	13 58 03.2	
	comp=Z,100nm,19.1s,baz=148,slow=32						
MBAR	**Mbarara**	**75.53**	**285**	LR	LR	14 01 00.7	
	comp=Z,62nm,19.2s,baz=152,slow=32						
WSAR	**Wadi Sarin**	**79.65**	**322**	LR	LR	14 01 29.0	
	comp=Z,98nm,19.8s,baz=172,slow=31						
PLCA	**Paso Flores**	**91.60**	**187**	LR	LR	14 13 02.5	
	comp=Z,142nm,20.8s,baz=174,slow=34						
GEYT	**Ailbeck**	**92.93**	**328**	LR	LR	14 12 36.2	
	comp=Z,37nm,18.3s,baz=166,slow=34						
MMAI	**Mount Meron Ar**	**98.83**	**310**	LR	LR	14 13 05.2	
	comp=Z,41nm,18.3s,baz=119,slow=32						
NVAR	**Mina Array Bea**	**150.95**	**94**	PKPbc	**PKiKP**	**13 40 26.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=251,slow=2.8,SNR=3.8						
NVAR				PKPab	**PKPab**	**13 40 32.7**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=223,slow=3.3,SNR=11						
TXAR	**Lajitas Array**	**154.28**	**127**	PKPab	**PKPab**	**13 40 48.7**	**+1.9**
	comp=Z,0.9nm,1.0s,baz=178,slow=6.0,SNR=2.8						

IDC ***27*** *13:28:45.9±0.7,6.°16S×142.°92E, h0km, mb4.2/12, mbtmp4.2/14, ML1.7/1, MS3.4/6, Error ellipse: s-maj=32.2km s-min=16.8km az=71.0*
NEIC ***27*** *13:28:47.6±1.4,6.°3S±0.°1×142.°7E±0.°1, h10km±1km, mb4.6/20, Error ellipse: s-maj=21.3km s-min=15.4km az=210.0*
DJA ***27*** *13:28:49.7±0.7,6.°5S±4.°×14.°3E±.°, h14km±4km, M4.8/17, mB5.1/4, mb4.5/17, MLv5.0/4, Mw(mB)4.5/4*
ISC 27 13:28:48.2±0.5,6.°31S±0.°06×142.°68E±0.°07, h10km, n80, σ1§96/75, mb4.4/26, MS3.8/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.78**	**305**	P	**Pb**	**13 29 20.1**	**-1.0**
MMPI	**Merauke**	**3.13**	**227**	P	**Pn**	**13 29 36.4**	**-1.2**
GENI	**Genyem**	**4.46**	**326**	P	**Pn**	**13 29 57.3**	**+1.3**
GENI	**Genyem**	**4.46**	**326**	P	**Pn**	**13 29 56.1**	**+0.1**
PMG	**Port Moresby**	**5.40**	**125**	Pn	**Pn**	**13 30 06.9**	**-1.9**
PMG	**Port Moresby**	**5.40**	**125**	P	**Pn**	**13 30 08.9**	**+0.1**
PMG	**Port Moresby**	**5.40**	**125**	Pn	**Pn**	**13 30 07.5**	**-1.3**
	1.8nm,0.3s,baz=313,slow=7.6,SNR=13						
PMG				Sn	**Sn**	**13 31 10.1**	**-0.9**
	1.9nm,0.3s,baz=265,slow=5.5,SNR=4.3						
	19nm,0.6s						
SMPI	**Sarmi**	**5.84**	**317**	P	**Pn**	**13 30 16.0**	**+1.1**
	113nm,0.8s,2µm1.2nm						
FAKI	**Fak Fak**	**10.93**	**287**		**Pn**	**13 31 23.6**	**-1.2**
FAKI	**Fak Fak**	**10.93**	**287**	P	**Pn**	**13 31 23.9**	**-1.0**
	27nm,0.7s						
MTN	**Manton Dam**	**13.11**	**239**	Pn	**Pn**	**13 31 53.0**	**-1.6**
CTA	**Charters Tower**	**14.13**	**166**	Lg	Lg	13 36 23.4	
	0.1nm,0.3s,baz=238,slow=19,SNR=2.2						
QIS	**Mount Isa**	**14.47**	**192**	P	**Pn**	**13 32 16.1**	**+2.8**
WB0	**Warramunga Arr**	**15.62**	**210**	Pn	**Pn**	**13 32 28.9**	**+0.4**
WB0				IAmb	IAmb	13 32 48.1	
	comp=Z,28nm,1.0s						
WR0	**Warramunga Arr**	**15.71**	**209**	Pn	**Pn**	**13 32 29.4**	**-0.3**
WRAB	**Tennant Creek**	**15.78**	**210**		**Pn**	**13 32 30.2**	**-0.4**
WB2	**Warramunga Arr**	**15.78**	**210**	Pn	**Pn**	**13 32 30.2**	**-0.5**
WB2				IAmb	IAmb	13 32 39.8	
	comp=Z,32nm,1.0s						
WRA	**Warramunga Arr**	**15.79**	**210**	Pn	**Pn**	**13 32 29.9**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=30,slow=13,SNR=15						
WRA				Sn	**Sn**	**13 35 17.4**	**-8.6**
	comp=Z,0.2nm,0.3s,baz=27,slow=22,SNR=2.2						
WRA				Lg	Lg	13 37 04.5	
	comp=Z,0.1nm,0.3s,baz=24,slow=28,SNR=2.8						
KNRA	**Kununurra**	**16.52**	**235**	Pn	**Pn**	**13 32 37.6**	**-2.6**
KNRA				IAmb	IAmb	13 33 01.2	
	comp=Z,33nm,0.8s						
SOEI	**Soe**	**18.55**	**258**	P	**P**	**13 33 04.3**	**-1.2**
SOEI				IAmb	IAmb	13 33 32.2	
	comp=Z,52nm,0.9s						
SOEI	**Soe**	**18.55**	**258**	P	**Pn**	**13 33 10.2**	**+4.6**
SOEI	**Soe**	**18.55**	**258**	P	**Pn**	**13 33 06.7**	**+1.1**
	comp=Z,63nm,1.0s						
AS01	**Alice Springs**	**19.19**	**205**	P	**Pn**	**13 33 14.5**	**+1.3**
ASAR	**Alice Springs**	**19.21**	**205**		**P**	**13 33 12.9**	**+0.3**
ASAR	**Alice Springs**	**19.21**	**205**	P	**Pn**	**13 33 14.2**	**+0.8**
	comp=Z,29nm,0.9s,baz=31,slow=9.8,SNR=43						
ASAR				Lg	Lg	13 38 45.1	
	baz=16,slow=30						
GUMO	**Guam**	**19.89**	**6**	LR	LR	13 41 05.3	
	comp=Z,41nm,21.4s,baz=78,slow=38						
QLP	**Quilpie**	**20.21**	**176**	P	Pn	13 33 27.6	+2.3
FITZ	**Fitzroy Crossi**	**20.34**	**233**	P	**P**	**13 33 24.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.34**	**233**	P	Pn	13 33 27.1	+0.2
GTOI	**Gorontalo**	**20.81**	**289**	P	Pn	13 33 32.1	-0.4
	comp=Z,14nm,0.8s						
EDFI	**Ende, Flores**	**20.95**	**262**	P	**P**	**13 33 30.8**	**-0.9**
	comp=Z,17nm,0.9s						
INKA	**Innaminka**	**21.39**	**185**	P	**P**	**13 33 39.8**	**+3.6**
OOD	**Oodnadatta**	**22.38**	**196**	P	**P**	**13 33 50.7**	**+4.0**
BKSI	**Bulukumba**	**22.47**	**271**	P	**P**	**13 33 48.8**	**+1.0**
	comp=Z,23nm,0.9s						
TTSI	**Tana Toraja**	**23.02**	**277**	P	**P**	**13 33 53.5**	**-0.1**
	comp=Z,8.6nm,1.1s,comp=Z,590nm						
TOLI2	**Tolitoli**	**23.07**	**288**	P	**P**	**13 33 53.8**	**-0.4**
TOLI2				IAmb	IAmb	13 34 21.4	
	comp=Z,12nm,0.8s						
TOLI2	**Tolitoli**	**23.07**	**288**	P	**P**	**13 33 55.5**	**+1.3**
WRKA	**Warakurna**	**23.16**	**215**	P	**P**	**13 33 57.1**	**+2.0**
AULRC	**Lightning Ridg**	**23.53**	**168**	P	**P**	**13 34 02.9**	**+4.2**
MPSI	**Mapaga**	**23.68**	**285**	P	**P**	**13 34 01.7**	**+1.4**
	comp=Z,11nm,0.9s						
CMSA	**Cobar Meteorol**	**25.25**	**174**	P	**P**	**13 34 19.1**	**+4.5**
STKA	**Stephens Creek**	**25.46**	**182**	P	**P**	**13 34 18.7**	**+2.2**
STKA	**Stephens Creek**	**25.46**	**182**	P	**P**	**13 34 18.1**	**+1.7**
	comp=Z,5.3nm,1.1s,baz=23,slow=9.1,SNR=3.7						
	comp=Z,5.3nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.52**	**218**	LR	LR	13 51 02.4	
	comp=Z,315nm,19.0s,baz=292,slow=37						
MJAR	**Matsushiro Ar**	**42.83**	**355**	LR	LR	13 53 12.2	
	comp=Z,17nm,21.9s,baz=188,slow=34						
NJ2	**Nanjing**	**44.40**	**331**	*e*P	**P**	**13 37 00.5**	**+1.3**
NJ2				pP	**pP**	**13 37 02.0**	**-0.5**
NJ2				sP	**sP**	**13 37 04.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,130nm,4.3s						
KSRS	**Korea Array**	**45.67**	**344**	P	**P**	**13 37 08.3**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=164,slow=9.2,SNR=5.7						
	comp=Z,1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.66**	**301**	P	**P**	**13 37 41.1**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=127,slow=6.0,SNR=8.3						
	comp=Z,1.5nm,0.6s						
ASAJ	**Asahikawa**	**50.19**	**360**	LR	LR	14 05 08.1	
	comp=Z,12nm,18.1s,baz=175,slow=44						
USRK	**Ussuriysk Ar.**	**51.20**	**350**	P	**P**	**13 37 51.5**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=189,slow=8.5,SNR=3.4						
	comp=Z,2.1nm,0.7s						
PZH	**PanZhiHua**	**51.36**	**311**	P	**P**	**13 37 53.0**	**-0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.6s						
MDJ	**Mudanjiang**	**52.05**	**348**	P	**P**	**13 37 57.3**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.8s						
HHC	**Hu-ho-hao-te**	**54.94**	**331**	*e*P	**P**	**13 38 21.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,94nm,5.2s						
LZH	**Lanzhou**	**55.73**	**322**	*e*P	**P**	**13 38 26.0**	**+0.6**
LZH				sP	sP	13 38 31.3	+1.2
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**62.67**	**333**	P	**P**	**13 39 13.2**	**-0.1**
SONM	**Songino Array**	**62.67**	**333**	P	**P**	**13 39 13.8**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=151,slow=6.6,SNR=4.8						
	comp=Z,0.8nm,0.5s						
WMQ	**Urumqi**	**70.28**	**321**	*e*P	**P**	**13 40 03.8**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
MKAR	**Makanchi Array**	**75.04**	**322**	P	**P**	**13 40 29.2**	**-1.0**
MKAR	**Makanchi Array**	**75.04**	**322**	P	**P**	**13 40 30.3**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=102,slow=6.9,SNR=12						
MKAR				LR	LR	14 13 40.4	
	comp=Z,52nm,21.2s,baz=192,slow=36						
	comp=Z,1.9nm,0.7s						
MAKZ	**Makanchi**	**75.24**	**322**	P	**P**	**13 40 30.1**	**-1.3**
KSH	**Kashi**	**76.42**	**313**	P	**P**	**13 40 40.8**	**+2.4**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**77.03**	**329**	P	**P**	**13 40 38.8**	**-2.5**
	comp=Z,1.0nm,0.6s,baz=104,slow=6.3,SNR=4.8						
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**78.92**	**324**	P	**P**	**13 40 50.8**	**-1.2**
KURK				IAmb	IAmb	13 40 55.6	
	comp=Z,12nm,1.5s						
KURBB	**Kurchatov Arra**	**78.94**	**324**	P	**P**	**13 40 50.7**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=114,slow=4.9,SNR=9.7						
	comp=Z,1.7nm,0.9s						
M16K	**Timber Creek**	**80.88**	**25**	P	**P**	**13 41 00.1**	**-2.2**
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**13 41 16.6**	**-0.4**
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**13 41 16.4**	**-0.6**
	comp=Z,2.4nm,1.0s,baz=246,slow=1.7,SNR=6.2						
	comp=Z,2.4nm,1.0s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**13 41 19.0**	**-0.9**
NRIK				IAmb	IAmb	13 41 19.7	
	comp=Z,4.0nm,1.0s						
NRIK	**Noril'sk**	**84.28**	**343**	P	**P**	**13 41 18.3**	**-1.6**
	comp=Z,2.8nm,0.9s,baz=144,slow=2.4,SNR=3.8						
	comp=Z,2.8nm,0.9s						
BVAR	**Borovoye Array**	**84.52**	**325**	P	**P**	**13 41 21.1**	**-0.4**
	comp=Z,7.8nm,0.7s,baz=104,slow=6.3,SNR=28						
BVAR				LR	LR	14 19 14.5	
	comp=Z,39nm,20.1s,baz=116,slow=36						
	comp=Z,7.8nm,0.7s						
BRVK	**Borovoye**	**84.59**	**325**	P	**P**	**13 41 20.2**	**-1.6**
E19K	**Redstone River**	**84.81**	**20**	P	**P**	**13 41 21.6**	**-1.0**
E19K				IAmb	IAmb	13 41 56.9	
	comp=Z,6.8nm,1.3s						
SML	**Sawmill**	**85.80**	**26**	P	**P**	**13 41 27.4**	**-0.4**
D22K	**Ayikyak River**	**86.99**	**19**	P	**P**	**13 41 32.4**	**-1.0**
D22K				IAmb	IAmb	13 42 10.6	
	comp=Z,6.9nm,1.3s						
ILAR	**Eielson Array**	**87.48**	**24**	P	**P**	**13 41 33.5**	**-2.4**
ILAR	**Eielson Array**	**87.48**	**24**	P	**P**	**13 41 33.1**	**-2.7**
	comp=Z,1.3nm,0.8s,baz=256,slow=4.3,SNR=14						
	comp=Z,1.3nm,0.8s						
BARN	**Barnard Glacie**	**88.60**	**28**	P	**P**	**13 41 40.6**	**-0.9**
BCAR	**Beaver Creek A**	**89.09**	**26**	P	**P**	**13 41 42.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**140.99**	**283**	PKhKP	PKPpre	13 48 16.1	
	comp=Z,0.5nm,0.8s,baz=74,slow=6.1,SNR=3.8						
DBIC	**Dimbokro**	**147.75**	**272**	PKPbc	**PKPbc**	**13 48 32.9**	**-1.5**
	comp=Z,4.1nm,0.8s,baz=30,slow=2.0,SNR=5.4						

IDC ***27*** *13:42:30.1±1.1,31.°58N×103.°43E, h0km, mb3.5/6, mbtmp3.5/8, ML3.4/2, MS3.4/5, Error ellipse: s-maj=36.2km s-min=19.5km az=59.0*
ISC 27 13:42:32.0±1.0,31.°6N±0.°1×103.°5E±0.°2, h13km, n13, σ0§73/8, mb3.5/5, MS3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.71**	**198**	Pn	**Pn**	**13 45 46.2**	**0.0**
	0.1nm,0.3s,baz=18,slow=12,SNR=1.6						
	0.3nm,0.4s						
SONM	**Songino Array**	**16.36**	**7**	Pn	**Pn**	**13 46 21.1**	**-0.4**
	0.1nm,0.3s,baz=188,slow=12,SNR=4.1						
	1.1nm,1.0s						
KSRS	**Korea Array**	**20.96**	**67**	P	**P**	**13 47 15.1**	**+0.3**
	1.4nm,0.7s,baz=253,slow=10,SNR=6.3						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**22.23**	**319**	P	**P**	**13 47 28.1**	**-0.2**
	0.7nm,0.9s,baz=127,slow=12.2,SNR=4.7						
	0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**26.03**	**335**	P	**P**	**13 48 04.9**	**+0.3**
	0.4nm,0.3s,baz=133,slow=8.3,SNR=3.8						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**26.50**	**323**	P	**P**	**13 48 09.4**	**+0.5**
	0.9nm,0.8s,baz=128,slow=9.3,SNR=9.5						
	0.9nm,0.8s						
GNI	**Garni**	**47.57**	**297**	LR	LR	14 14 34.4	
	comp=Z,43nm,21.2s,baz=121,slow=40						
KBZ	**Khabaz**	**48.44**	**302**	LR	LR	14 14 33.1	
	comp=Z,28nm,19.7s,baz=118,slow=40						
OBN	**Obninsk**	**51.73**	**318**	LR	LR	14 16 31.6	
	comp=Z,40nm,21.9s,baz=268,slow=40						
WRA	**Warramunga Arr**	**59.20**	**146**	P	**P**	**13 52 31.9**	**-1.1**
	0.6nm,0.9s,baz=345,slow=6.9,SNR=3.4						
	0.6nm,0.9s						
MLR	**Muntele Rosu**	**59.96**	**308**	LR	LR	14 19 40.3	
	comp=Z,46nm,20.3s,baz=92,slow=37						
ASAR	**Alice Springs**	**62.21**	**148**	P	**P**	**13 52 54.4**	**+0.9**
	0.5nm,0.9s,baz=330,slow=7.6,SNR=4.7						
	0.5nm,0.9s						
DAVOX	**Davos/Dischmat**	**69.98**	**313**	LR	LR	14 24 46.0	
	comp=Z,36nm,18.0s,baz=238,slow=36						

NOU 27 13:42:49.7,20.°24S×169.°94E, h0km, MLv3.7/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.17**	**235**	P	Pn	13 43 26.7	-0.4
LIFNC	**LIFOU**	**2.59**	**258**	P	Pn	13 43 31.9	-0.9
PINNC	**Pines Island,**	**3.31**	**224**	P	Pn	13 43 42.8	0.0
YATNC	**Mamie plateau,**	**3.37**	**237**	P	Pn	13 43 42.9	-0.8
OUENC	**Ouen Island, N**	**3.61**	**233**	P	Pn	13 43 47.1	+0.2
DZM	**Mont Dzumac**	**3.74**	**240**	P	Pn	13 43 48.3	-0.5
ONTNC	**Ouen Toro**	**3.85**	**237**	P	Pn	13 43 50.5	+0.3
KOUNC	**Koumac, New Ca**	**5.31**	**266**	P	Pn	13 44 11.0	+0.7

IDC 27 13:51:31.6±6.5,6.°16S×142.°77E, h0km, mb3.4/2, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=241.3km s-min=34.2km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.96**	**210**	Pn	Pn	13 55 15.6	-2.1
	0.1nm,0.3s,baz=32,slow=14,SNR=1.8						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**19.38**	**205**	P	Pn	13 56 00.0	-0.3
	0.1nm,0.3s,baz=35,slow=8.0,SNR=9.7						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**74.98**	**322**	P	P	14 03 15.0	0.0
	0.1nm,0.7s,baz=101,slow=7.5,SNR=1.4						
	0.1nm,0.7s						
BVAR	**Borovoye Array**	**84.44**	**325**	P	P	14 04 06.2	+0.1
	0.5nm,0.6s,baz=90,slow=2.9,SNR=2.9						
	0.5nm,0.6s						

IDC ***27*** *13:54:11.7±1.1,6.°14S×142.°96E, h0km, mb4.0/5, mbtmp4.0/7, ML1.5/1, Error ellipse: s-maj=38.6km s-min=24.8km az=52.0*
ISC 27 13:54:17.1±0.8,6.°28S±0.°09×142.°82E±0.°09, h35km, n16, σ1§48/16, mb3.9/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**4.52**	**324**	P	**Pn**	**13 55 23.9**	**+0.9**
PMG	**Port Moresby**	**5.30**	**126**	Pn	**Pn**	**13 55 33.6**	**-0.3**
	1.0nm,0.3s,baz=315,slow=5.7,SNR=2.5						
PMG				Sn	**Sn**	**13 56 34.5**	**+0.7**
	0.3nm,0.3s,baz=264,slow=9.3,SNR=3.3						
	4.5nm,0.5s						
WRA	**Warramunga Arr**	**15.89**	**210**	Pn	**Pn**	**13 57 55.0**	**-3.2**
	0.2nm,0.3s,baz=31,slow=13,SNR=9.9						
KNRA	**Kununurra**	**16.65**	**235**	P	**Pn**	**13 58 06.6**	**-1.3**
SOEI	**Soe**	**18.69**	**258**	P	**P**	**13 58 32.7**	**0.0**
AS01	**Alice Springs**	**19.28**	**205**	P	**Pn**	**13 58 40.7**	**+0.5**
ASAR	**Alice Springs**	**19.30**	**205**	P	**P**	**13 58 39.5**	**+0.3**
	10nm,0.8s,baz=34,slow=9.8,SNR=48						
QLP	**Quilpie**	**20.24**	**176**	P	Pn	13 58 53.1	+1.6
FITZ	**Fitzroy Crossi**	**20

PMG Port Moresby 4.90 128 *ce*P Pn 13 59 37.0 -3.2
PMG pmax pmax
comp=Z,568nm,1.3s
PMG Port Moresby 4.90 128 Pn **Pn 13 59 40.8 +0.6**
comp=Z,30nm,0.3s,baz=13,slow=3.7,SNR=90
PMG Sn **Sn 14 00 35.0 -1.8**
comp=Z,45nm,0.3s,baz=90,slow=22,SNR=10
comp=Z,87nm,0.3s
MANU Manus Island 5.94 44 Pn **Pn 13 59 55.1 +0.6**
SMPI Sarmi 6.29 314 P **Pn 14 00 03.0 +3.6**
comp=Z,482nm,0.8s,comp=Z,6µmcomp=Z,5µmcomp=Z,2.8nm
COEN Coen 7.54 181 P **Pn 14 00 19.2 +2.7**
baz=7.7,SNR=7.9
COEN Coen 7.54 181 Pn **Pn 14 00 16.0 -0.5**
COEN Coen 7.54 181 P **Pn 14 00 19.3 +2.8**
RABL Rabaul 9.13 77 Pn **Pn 14 00 38.8 +0.4**
FAKI Fak Fak 11.50 287 Pn **Pn 14 01 09.0 -1.9**
FAKI Fak Fak 11.50 287 P **Pn 14 01 09.3 -1.6**
FAKI Fak Fak 11.50 287 P **Pn 14 01 09.5 -1.4**
comp=Z,101nm,1.1s,comp=Z,1µmcomp=Z,2µm
MTSU Mount Surprise 11.73 175 P **Pn 14 01 15.7 +1.6**
SAUI Saumlaki 11.97 262 Pn **Pn 14 01 15.0 -2.3**
SAUI Saumlaki 11.97 262 P **Pn 14 01 18.6 +1.2**
SAUI Saumlaki 11.97 262 P **Pn 14 01 16.2 -1.2**
comp=Z,527nm,0.7s,comp=Z,11µmcomp=Z,4µm
KDU Kakadu 12.35 239 P **Pn 14 01 21.0 -1.4**
baz=12,SNR=48
KDU Kakadu 12.35 239 P **Pn 14 01 21.3 -1.2**
SWI Sorong 13.17 294 P **Pn 14 01 31.6 -2.1**
comp=Z,95nm,0.7s,comp=Z,1µmcomp=Z,2µm
TV1H Townsville Har 13.26 165 P **Pn 14 01 36.8 +1.9**
MTN Manton Dam 13.57 241 P **Pn 14 01 37.8 -1.4**
baz=14,SNR=8.7
MTN Manton Dam 13.57 241 Pn **Pn 14 01 37.4 -1.8**
MTN Manton Dam 13.57 241 P **Pn 14 01 38.2 -1.0**
DRS Darwin Rock St 13.60 243 P **Pn 14 01 38.6 -0.9**
CTA Charters Tower 13.94 168 Pn **Pn 14 01 46.2 +2.0**
comp=Z,0.1nm,0.3s,baz=2.9,slow=15,SNR=1.9
CTA Lg Lg 14 05 56.0
comp=Z,0.7nm,0.3s,baz=261,slow=19,SNR=4.8
CTA LR LR 14 07 09.3
comp=Z,900nm,18.6s,baz=354,slow=37
comp=Z,3.9nm,0.9s
CTAO Charters Tower 13.94 168 Pn **Pn 14 01 43.3 -0.9**
CTAO Charters Tower 13.94 168 P **Pn 14 01 43.3 -0.9**
QIS Mount Isa 14.54 194 P **Pn 14 01 54.1 +1.6**
baz=15,SNR=11
QIS Mount Isa 14.54 194 P **Pn 14 01 54.3 +1.9**
WB0 Warramunga Arr 15.86 212 Pn **Pn 14 02 07.8 -2.1**
WR0 Warramunga Arr 15.94 211 **Pn 14 02 08.8 -2.2**
WRAB Tennant Creek 16.02 212 **Pn 14 02 10.2 -1.8**
WRAB Tennant Creek 16.02 212 *i* P **Pn 14 02 08.2 -3.8**
WB2 Warramunga Arr 16.02 212 P **Pn 14 02 11.0 -1.2**
baz=16
WB2 Warramunga Arr 16.02 212 Pn **Pn 14 02 10.6 -1.5**
WRA Warramunga Arr 16.03 212 Pn **Pn 14 02 09.9 -2.3**
comp=Z,2.2nm,0.3s,baz=32,slow=13,SNR=26
WRA Sn **Sn 14 05 01.6 -8.4**
comp=Z,1.5nm,0.3s,baz=30,slow=21,SNR=2.9
WRA Lg Lg 14 06 54.3
comp=Z,1.7nm,0.3s,baz=17,slow=27,SNR=4.8
NLAI Namlea 16.40 280 P **P 14 02 19.6 -0.2**
comp=Z,83nm,1.5s
LBMI Labuha 16.73 289 P **P 14 02 25.1 +1.7**
comp=Z,130nm,1.2s,comp=Z,2µm
HNR Honiara 16.80 101 Pn **Pn 14 02 21.9 -0.2**
HNR IAmb IAmb 14 02 27.3
comp=Z,398nm,1.6s
HNR Honiara 16.80 101 P **Pn 14 02 21.9 -0.2**
HNR pmax pmax
comp=Z,398nm,1.7s
HNR Honiara 16.80 101 Pn **P 14 02 24.9 +0.7**
comp=Z,41nm,0.3s,baz=165,slow=6.3,SNR=7.9
KNRA Kununurra 16.96 236 P **Pn 14 02 22.4 -1.6**
baz=17
KNRA Kununurra 16.96 236 Pn **Pn 14 02 21.2 -2.8**
KNRA IAmb IAmb 14 02 25.6
comp=Z,107nm,0.7s
KNRA Kununurra 16.96 236 P **Pn 14 02 22.3 -1.6**
TNTI Ternate 17.38 294 P **Pn 14 02 27.9 -1.4**
comp=Z,33nm,1.0s
SANI Sanana 17.75 283 P **P 14 02 34.2 -0.5**
SANI Sanana 17.75 283 P **P 14 02 34.7 0.0**
comp=Z,61nm,0.8s,comp=Z,1µm
SOEI Soe 19.10 259 P **P 14 02 49.2 -0.6**
SOEI IAmb IAmb 14 02 53.7
comp=Z,204nm,1.1s
SOEI Soe 19.10 259 P **Pn 14 02 51.4 +0.8**
comp=Z,304nm,0.8s,comp=Z,4µm
AS01 Alice Springs 19.38 207 P **Pn 14 02 55.0 +1.2**
AS31 Alice Springs 19.40 207 P **P 14 02 52.4 -0.5**
ASAR Alice Springs 19.41 207 P **P 14 02 52.5 -0.4**
ASAR Alice Springs 19.41 207 P **P 14 02 52.5 -0.4**
ASAR Alice Springs 19.41 207 P **Pn 14 02 55.2 +1.2**
comp=Z,77nm,0.8s,baz=32,slow=10.0,SNR=157
ASAR Lg Lg 14 08 30.1
comp=Z,0.7nm,0.3s,baz=28,slow=26,SNR=5.2
ASPA Alice Springs 19.41 207 P **Pn 14 02 56.2 +2.1**
baz=20
GUMO Guam 19.90 5 LR LR 14 10 24.3
comp=Z,223nm,18.6s,baz=206,slow=36
PATS Pohnpei 19.95 49 P **P 14 02 58.9 +0.1**
QLP Quilpie 20.12 177 P Pn 14 03 04.5 +2.1
baz=20,SNR=3.4
EIDS Eidsvold 20.32 159 P Pn 14 03 06.2 +1.4
baz=21,SNR=4.9
EIDS Eidsvold 20.32 159 P **P 14 03 02.7 -0.1**
KMSI Cibinong 20.45 289 P Pn 14 03 06.1 -0.3
comp=Z,312nm,0.9s,comp=Z,3µm
BBSI Bau Bau 20.60 271 P Pn 14 03 09.7 +1.5
comp=Z,67nm,1.7s,comp=Z,1µm
FITZ Fitzroy Crossi 20.77 234 P **P 14 03 09.1 +1.3**
baz=21,SNR=48
FITZ Fitzroy Crossi 20.77 234 Pn **P 14 03 08.8 +1.0**
MMRI Maumere 20.96 263 P **P 14 03 08.1 -1.8**
MMRI IAmb IAmb 14 03 20.6
comp=Z,202nm,1.6s
MMRI Maumere 20.96 263 P **P 14 03 09.2 -0.7**
comp=Z,121nm,1.1s,comp=Z,2µmcomp=Z,4µm
LUWI Luwuk 21.11 284 P **P 14 03 09.9 -1.6**
LUWI Luwuk 21.11 284 P **P 14 03 11.6 +0.1**
comp=Z,120nm,0.9s,comp=Z,3µm
EDFI Ende, Flores 21.51 262 P **P 14 03 15.0 -0.9**
comp=Z,72nm,1.3s,comp=Z,777nm
MRSI Marisa 22.34 287 P **P 14 03 26.1 +1.4**
comp=Z,62nm,0.9s,comp=Z,751nm
OOD Oodnadatta 22.48 198 P **P 14 03 27.7 +1.6**
BASI Baing, Sumba 22.77 259 P **P 14 03 30.8 +1.6**
comp=Z,192nm,1.2s,comp=Z,3µm
BKSI Bulukumba 23.04 271 P **P 14 03 32.5 +0.4**
comp=Z,113nm,1.5s,comp=Z,2µm
KAPI Kappang 23.43 272 P **P 14 03 35.9 -0.1**
KAPI Kappang 23.43 272 *c i*P **P 14 03 36.4 +0.3**
KAPI pmax pmax
comp=Z,156nm,1.5s
WRKA Warakurna 23.45 216 P **P 14 03 36.4 +0.2**
baz=24,SNR=61
WRKA Warakurna 23.45 216 P **P 14 03 36.5 +0.3**
TTSI Tana Toraja 23.59 277 P **P 14 03 38.4 +0.7**
comp=Z,81nm,2.2s,comp=Z,2µm
TOLI2 Tolitoli 23.64 288 P **P 14 03 37.1 -1.0**
TOLI2 IAmb IAmb 14 03 47.2
comp=Z,65nm,0.8s
TOLI2 Tolitoli 23.64 288 P **P 14 03 38.3 +0.2**
MPSI Mapaga 24.25 285 P **P 14 03 43.3 -0.6**
comp=Z,23nm,0.8s,comp=Z,656nm
LCRK Leigh Creek 24.41 191 P **P 14 03 46.1 +0.9**
CMSA Cobar Meteorol 25.14 175 P **P 14 03 54.6 +2.8**
baz=25
MULG Mulgathing 25.31 199 P **P 14 03 54.4 +1.1**
PLAI Plampang 25.38 263 P **P 14 03 52.4 -1.7**
PLAI Plampang 25.38 263 P **P 14 03 52.2 -1.9**
comp=Z,43nm,0.8s,comp=Z,569nm
STKA Stephens Creek 25.42 183 P **P 14 03 53.8 -0.5**
STKA Stephens Creek 25.42 183 P **P 14 03 56.3 +2.0**
STKA Stephens Creek 25.42 183 *i* P **P 14 03 51.5 -2.8**
STKA Stephens Creek 25.42 183 P **P 14 03 56.5 +2.2**
comp=Z,4.6nm,0.7s,baz=348,slow=15,SNR=5.1
STKA LR LR 14 15 15.5
comp=Z,1µm,21.6s,baz=355,slow=40
comp=Z,4.6nm,0.7s
MBWA Marble Bar 27.11 235 P **P 14 04 08.3 -1.4**
BBOO Buckleboo 27.14 193 P **P 14 04 12.7 +2.7**
baz=27,SNR=6.4
BBOO Buckleboo 27.14 193 P **P 14 04 12.3 +2.4**
HTT Hallett 27.22 188 P **P 14 04 13.4 +2.8**
baz=28,SNR=5.4
HTT Hallett 27.22 188 P **P 14 04 13.7 +3.0**
PSA00 Pilbara Seismi 27.22 234 P **P 14 04 10.4 -0.4**
DZM Mont Dzumac 27.29 127 *e*P **P 14 04 16.8 +5.3**
comp=Z,65nm,24.9s
DZM *e*S **S 14 08 54.0 +3.0**
comp=Z,412nm,26.1s
DZM *e*LR LR 14 11 05.2
comp=Z,975nm,26.1s
FORT Forrest 28.16 209 P **P 14 04 20.6 +1.6**
KPJI Karang Pucung 34.09 266 P **P 14 05 12.9 +1.3**
comp=Z,26nm,1.0s
NWAO Narrogin (SRO) 35.83 219 LR LR 14 21 20.1
comp=Z,1µm,18.0s,baz=46,slow=38
XMIS Christmas Isla 37.41 261 P **P 14 05 39.8 -0.2**
XMIS IAmb IAmb 14 05 41.9
comp=Z,35nm,0.9s
JNU Nakatsue 41.00 344 P **P 14 06 09.5 -0.4**
comp=Z,6.3nm,0.8s,baz=168,slow=5.2,SNR=7.0
JNU LR LR 14 22 29.9
comp=Z,139nm,18.3s,baz=162,slow=35
comp=Z,6.3nm,0.8s
QIZ Qiongzhong 41.49 308 P **P 14 06 14.5 +0.5**
QIZ S **S 14 12 31.3 +1.6**
QIZ LR LR
comp=Z,240nm,16.8s
QIZ LR LR
comp=Z,240nm,14.3s
QIZ LR LR
comp=Z,300nm,18.5s
MJAR Matsushiro Arr 42.95 354 P **P 14 06 24.6 -1.1**
comp=Z,1.8nm,0.6s,baz=172,slow=10,SNR=6.5
comp=Z,1.8nm,0.6s
RAO Raoul Island 43.09 127 LR LR 14 22 16.4
comp=Z,416nm,21.0s,baz=322,slow=33
URZ Urewera 44.12 141 LR LR 14 25 18.4
comp=Z,561nm,18.2s,baz=46,slow=37
RPZ Rata Peaks 44.48 151 LR LR 14 23 20.8
comp=Z,582nm,21.5s,baz=314,slow=34
NJ2 Nanjing 44.74 330 *e*P **P 14 06 41.5 +1.4**
NJ2 pP **sP 14 06 45.3 -0.3**
NJ2 sP **pP 14 06 47.0 +2.9**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 pmax pmax
comp=Z,120nm,4.0s
RPSI Rantau Prapat 45.17 280 P **P 14 06 42.4 -1.6**
PSI Prapat 45.20 280 P **P 14 06 42.4 -1.8**
PSI pmax pmax
comp=Z,10.0nm,0.8s
KSAR Wonju Array Be 45.90 343 P **P 14 06 48.7 -0.5**
KSAR Wonju Array Be 45.90 343 P **P 14 06 48.7 -0.5**
KSRS Korea Array 45.90 343 P **P 14 06 49.2 +0.1**
comp=Z,9.7nm,1.0s,baz=161,slow=9.4,SNR=32
KSRS LR LR 14 24 47.0
comp=Z,197nm,19.2s,baz=150,slow=34
comp=Z,9.7nm,1.0s
GSI Gunungsitoli 46.24 278 P **P 14 06 50.4 -2.0**
PHRA Phrae 49.11 301 P **P 14 07 13.9 -0.6**
CMAR Chiang Mai Arr 50.19 300 P **P 14 07 20.8 -2.0**
CMAR Chiang Mai Arr 50.19 300 P **P 14 07 23.6 +0.8**
comp=Z,1.3nm,0.5s,baz=118,slow=6.4,SNR=8.9
comp=Z,1.3nm,0.5s
ASAJ Asahikawa 50.26 359 P **P 14 07 22.1 -0.8**
ASAJ pmax pmax
comp=Z,61nm,1.6s
ASAJ Asahikawa 50.26 359 LR LR 14 27 12.5
comp=Z,99nm,21.4s,baz=178,slow=34
JKA Kamikawa-asahi 50.26 359 P **P 14 07 22.1 -0.8**
JKA IAmb IAmb 14 07 24.8
comp=Z,61nm,1.6s
KMI Kunming 50.34 310 ⇑P **P 14 07 26.8 +2.7**
KMI pmax pmax
comp=Z,22nm,0.9s
HNS HongShan 51.06 331 *e*P **P 14 07 30.5 +1.5**
HNS S **S 14 14 47.8 +1.4**
HNS LR LR
comp=Z,160nm,19.1s
HNS LR LR
comp=Z,220nm,20.7s
SNY Shenyang 51.24 341 ⇓P **P 14 07 30.0 -0.2**
SNY S **S 14 14 48.3 -0.4**
SNY pmax pmax
comp=Z,9.0nm,0.9s
SNY pmax pmax
comp=Z,120nm,4.5s
SNY LR LR
comp=Z,130nm,10.1s
SNY LR LR
comp=Z,150nm,19.4s
SNY LR LR
comp=Z,240nm,17.5s
USA0B Ussuriysk Arra 51.36 350 IAmb IAmb 14 07 32.2
comp=Z,35nm,1.3s
USA0B Ussuriysk Arra 51.36 350 *i* P **P 14 07 28.7 -2.4**
USRK Ussuriysk Ar. 51.36 350 P **P 14 07 31.2 +0.1**
comp=Z,12nm,1.0s,baz=152,slow=8.6,SNR=13
comp=Z,12nm,1.0s
XAN Xi'an 51.68 323 P P 14 07 39.3 +5.5
XAN pP sP 14 07 45.5 +6.1
XAN pmax pmax
comp=Z,15nm,1.2s
XAN pmax pmax
comp=Z,100nm,5.0s
PZH PanZhiHua 51.84 311 P **P 14 07 36.0 +0.8**
PZH S **S 14 14 58.5 +0.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,80nm,6.2s
MDJ Mudanjiang 52.23 348 P **P 14 07 37.0 -0.6**
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,200nm,6.3s
CN2 Changchun 52.48 344 P **P 14 07 39.5 0.0**
CN2 S **S 14 15 05.3 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,300nm,17.0s
BJI Beijing 52.51 334 P **P 14 07 40.0 +0.2**
BJI sP **sP 14 07 45.5 +0.2**
BJI S **S 14 15 06.0 -0.3**
BJI pmax pmax
comp=Z,7.0nm,1.3s
BJI LR LR
comp=Z,120nm,18.9s
BJI LR LR
comp=Z,100nm,18.6s
BJI LR LR
comp=Z,190nm,18.2s
CD2 Chengdu 52.93 317 P **P 14 07 45.5 +2.3**
CD2 S **S 14 15 14.3 +1.7**
CD2 ScS **ScS 14 17 31.8 -1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=Z,190nm,14.5s
YSS Yuzh-Sakhalins 53.10 360 P **P 14 07 42.0 -2.0**
YSS Yuzh-Sakhalins 53.10 360 *e*P **P 14 07 43.3 -0.7**
YSS *e*S **S 14 15 13.6 -0.5**
YSS pmax pmax
comp=Z,20nm,1.4s
YSS MLR MLR
comp=Z,300nm,17.0s
YSS MLR MLR
comp=Z,200nm,16.0s
TNCH TengChong 53.56 307 P **P 14 07 49.0 +0.9**
TNCH pP sP 14 07 55.3 +1.7
TNCH sP pP 14 07 58.0 +5.9
TNCH S **S 14 15 20.0 -1.5**
TNCH sS sS 14 15 30.0 +1.9
TNCH pmax pmax
comp=Z,13nm,0.6s
TNCH pmax pmax
comp=Z,120nm,4.5s
TNCH LR LR
comp=Z,99nm,12.4s
TNCH LR LR
comp=Z,140nm,14.3s
TNCH LR LR
comp=E,160nm,21.4s
BNX BinXian 53.78 346 ⇑P **P 14 07 49.0 -0.1**
BNX pmax pmax
comp=E,40nm,1.1s
BNX pmax pmax
comp=E,81nm,4.2s
HHC Hu-ho-hao-te 55.28 331 *e*P **P 14 08 02.5 +2.3**
HHC S **S 14 15 41.8 -2.2**
HHC pmax pmax
comp=E,8.0nm,0.7s
HHC pmax pmax
comp=E,85nm,6.6s
HHC LR LR
comp=E,120nm,15.3s
HHC LR LR
comp=E,150nm,17.6s
HHC LR LR
comp=E,150nm,17.6s
XLT XiLinHaoTe 55.74 336 *e*P **P 14 08 07.8 +4.3**
XLT pP sP 14 08 14.0 +5.0
XLT sP pP 14 08 18.3 +11
XLT PcP **PcP 14 09 08.0 +5.4**
XLT S **S 14 15 56.5 +6.4**
XLT pmax pmax
comp=E,6.0nm,0.8s
XLT pmax pmax
comp=E,120nm,5.5s
XLT LR LR
comp=E,20nm,19.6s
XLT LR LR
comp=E,140nm,11.9s
XLT LR LR
comp=E,250nm,19.6s
LZH Lanzhou 56.13 322 *e*P **P 14 08 08.8 +2.3**
LZH sP sP 14 08 14.5 +2.4
LZH S **S 14 16 01.8 +6.0**
LZH SS **SS 14 19 41.0 -1.5**
LZH pmax pmax
comp=E,17nm,1.1s
LZH LR LR
comp=E,160nm,16.1s
LZH LR LR
comp=E,200nm,15.1s
LZH LR LR
comp=E,210nm,19.6s
KLR Kul'dur 56.28 351 *ce*P **P 14 08 06.1 -1.0**
KLR pmax pmax
comp=Z,36nm,1.7s
RAR Rarotonga 56.96 111 LR LR 14 31 23.7
comp=Z,135nm,20.1s,baz=294,slow=35
TYV Tymovskoe 57.01 360 *e*P **P 14 08 12.3 +0.1**
TYV pmax pmax
comp=Z,11nm,1.4s
TYV pmax pmax
comp=Z,100nm,3.2s
HEH HeiHe 58.05 348 *e*P **P 14 08 18.5 -1.1**
HEH pP **sP 14 08 24.5 -0.6**
HEH S **S 14 16 19.0 -1.1**
HEH pmax pmax
comp=Z,12nm,1.7s
HEH pmax pmax
comp=Z,220nm,4.8s
HEH LR LR
comp=Z,270nm,16.4s
HEH LR LR
comp=Z,110nm,16.0s
HEH LR LR
comp=Z,430nm,22.1s
HIA Hailar 59.09 342 *i* P **P 14 08 25.9 -1.0**
HIA pmax pmax
comp=Z,15nm,1.8s
PEA0B Petropavlovsk- 60.51 10 *ce*P **P 14 08 35.2 -1.4**
PETK Petropavlovsk- 60.51 10 P **P 14 08 36.1 -0.5**
PETK Petropavlovsk- 60.51 10 P **P 14 08 36.3 -0.2**
comp=Z,24nm,1.0s,baz=194,slow=5.6,SNR=14
comp=Z,24nm,1.0s
GTA Gaotai 60.71 322 *e*P **P 14 08 39.0 +0.6**
GTA pP sP 14 08 46.5 +2.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
ZEA Zeya 61.39 349 *e*P **P 14 08 42.6 +0.1**
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,30nm,1.1s
ZEA MLR MLR
comp=Z,100nm,16.0s
LSA Lhasa 61.53 309 IAmb IAmb 14 09 05.7
comp=Z,17nm,1.3s
GOMU GeErMu 62.07 317 P **P 14 08 50.8 +2.8**
GOMU pP sP 14 08 55.5 +1.9
GOMU sP pP 14 08 57.0 +5.0
GOMU pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 62.71 333 *ce*P **P 14 08 52.3 +0.5**
ULN pmax pmax
comp=Z,13nm,2.5s
SONM Songino Array 62.99 333 P **P 14 08 52.9 -0.6**
SONM Songino Array 62.99 333 P **P 14 08 53.7 +0.2**
comp=Z,1.4nm,0.7s,baz=154,slow=5.9,SNR=12
SONM LR LR 14 36 08.4
comp=Z,202nm,19.9s,baz=142,slow=36
comp=Z,1.4nm,0.7s
PALK Pallekele 63.86 281 LR LR 14 40 50.4
comp=Z,75nm,18.9s,baz=217,slow=40
SHEM Shemya Is, Ala 64.44 20 LR LR 14 34 08.9
comp=Z,332nm,19.6s,baz=124,slow=33
MA2 Magadan 66.01 4 P **P 14 09 11.8 -1.1**
MA2 Magadan 66.01 4 *ce*P **P 14 09 11.4 -1.5**
MA2 pmax pmax
comp=Z,44nm,1.0s
ZAK Zakamensk 66.25 333 *e*P **P 14 09 14.9 +0.1**
ZAK pmax pmax
comp=Z,12nm,1.1s
PPT Papeete 66.35 106 LR LR 14 34 42.5
comp=Z,81nm,21.4s,baz=268,slow=33
PPT2 Papeete2 66.35 106 *e*S S 14 18 17.8 +12
comp=Z,87nm,26.0s
PPT2 *e*SS **SS 14 22 21.0 -1.9**
comp=Z,99nm,28.0s
PPT2 *e*LQ LQ 14 26 31.5
comp=Z,1µm,30.5s
PPT2 *e*LR LR 14 29 23.8
comp=Z,255nm,24.0s
TBI Tubuai 66.65 113 *e*LQ LQ 14 26 42.0
comp=Z,2µm,34.0s
TBI *e*LR LR 14 29 15.0
comp=Z,2µm,32.0s
HYB Hyderabad 68.13 292 *e*P **P 14 09 26.3 -1.0**
HYB *es*P **pP 14 09 27.8 -3.6**
YAK Yakutsk 69.01 353 *e*P **P 14 09 31.0 -0.8**
YAK *e**PP **sP 14 09 37.3 -0.1**
YAK *e* 14 09 55.4
YAK *e* 14 12 06.1
YAK *e*S **S 14 18 35.7 -0.6**
YAK *e* 14 19 20.2
YAK *e*SS **SS 14 22 59.6 -2.8**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=Z,173nm,5.9s
YAK smax smax
comp=E,172nm,3.5s
YAK smax smax
comp=N,77nm,3.2s
YAK Yakutsk 69.01 353 LR LR 14 38 09.5
comp=N,91nm,20.1s,baz=140,slow=35
SEY Seymchan 69.46 4 *ce*P **P 14 09 34.2 -0.4**
SEY pmax pmax
comp=Z,46nm,1.7s
WMQ Urumqi 70.69 321 *e*P **P 14 09 43.5 +0.8**
WMQ sP PcP 14 09 56.5 -7.1
WMQ pmax pmax
comp=Z,23nm,1.3s
WMQ pmax pmax
comp=Z,160nm,4.5s
VNDA Vanda 71.78 176 P **P 14 09 49.8 +1.1**
comp=Z,1.0nm,0.9s,baz=326,slow=11,SNR=1.5
VNDA LR LR 14 41 00.5
comp=Z,287nm,18.4s,baz=348,slow=36
comp=Z,1.0nm,0.9s
DGZ Jazzator, Alta 73.83 326 *i* P **P 14 10 01.5 +0.1**
DGZ pmax pmax
comp=Z,10.0nm,1.0s

MKAR **Makanchi Array** 75.45 322 P P 14 10 11.3 +0.5
comp=Z,3.8nm,0.6s,baz=93,slow=9.2,SNR=55
comp=Z,3.8nm,0.6s
MAKZ **Makanchi** 75.65 322 P P 14 10 11.9 0.0
MAKZ **Makanchi** 75.65 322 P P 14 10 11.9 0.0
MAKZ pmax pmax
comp=Z,92nm,2.0s
BILL **Bilibino** 76.00 9 *e* P P 14 10 13.3 -0.1
BILL pmax pmax
comp=Z,23nm,1.7s
KSH **Kashi** 76.88 313 P P 14 10 21.5 +2.3
KSH sP sP 14 10 27.3 +2.4
KSH PcP PcP 14 10 33.0 +2.7
KSH pmax pmax
comp=Z,4.0nm,0.8s
CHNA **Chernabura Isl** 77.18 30 P P 14 10 21.1 +0.8
baz=239
ZALV **Zalesovo Beam** 77.38 329 *i* P P 14 10 23.8 +2.3
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV **Zalesovo Beam** 77.38 329 P P 14 10 20.9 -0.6
comp=Z,2.1nm,0.6s,baz=112,slow=5.6,SNR=12
ZALV LR LR 14 43 36.5
comp=Z,82nm,21.4s,baz=115,slow=35
comp=Z,2.1nm,0.6s
TIXI **Tiksi** 78.45 355 P P 14 10 25.4 -1.6
TIXI **Tiksi** 78.45 355 *ce* P P 14 10 25.1 -1.9
TIXI pmax pmax
comp=Z,5.0nm,1.3s
TIXI **Tiksi** 78.45 355 LR LR 14 46 28.6
comp=Z,80nm,18.2s,baz=200,slow=37
M13K **Dall Lake** 78.56 24 P P 14 10 29.6 +1.7
baz=234
O14K **Tigyukauivet M** 78.77 26 P P 14 10 30.5 +1.5
baz=237
AAK **Ala-Archa** 78.98 316 *ce* P P 14 10 30.8 0.0
AAK pmax pmax
comp=Z,4.0nm,1.0s
KURK **Kurchatov** 79.31 324 P P 14 10 31.7 -0.5
KURK IAmb IAmb 14 10 39.3
comp=Z,31nm,1.4s
KURK **Kurchatov** 79.31 324 *ce* P P 14 10 32.7 +0.5
KURK pmax pmax
comp=Z,15nm,1.7s
M14K **Bethel** 79.31 24 P P 14 10 32.9 +0.9
baz=236
KURBB **Kurchatov Arra** 79.33 324 P P 14 10 32.9 +0.6
comp=Z,5.0nm,1.1s,baz=116,slow=4.6,SNR=16
comp=Z,5.0nm,1.1s
O15K **Ungalikthiuk R** 79.35 26 P P 14 10 33.1 +0.8
baz=238
L14K **Kuka Creek** 79.36 23 P P 14 10 33.2 +0.9
baz=235
R16K **Pilot Point** 79.54 28 P P 14 10 33.6 +0.3
baz=240
N15K **Kwethluk River** 79.77 25 P P 14 10 35.0 +0.5
baz=238
M15K **Kasigluk River** 79.80 24 P P 14 10 35.4 +0.8
baz=237
J14K **Nanvaranak Lak** 79.85 22 P P 14 10 35.9 +1.1
baz=234
L15K **Ungalak Mounta** 80.03 23 P P 14 10 36.5 +0.7
baz=236
P16K **Nushagak River** 80.08 27 P P 14 10 37.0 +0.8
baz=240
TNA **Tin City** 80.10 19 P P 14 10 37.0 +0.9
baz=229
ANM **Nome** 80.30 20 P P 14 10 38.2 +0.9
baz=232
O16K **Kokwok River B** 80.32 26 P P 14 10 38.4 +0.9
baz=239
K15K **Wolf Creek Mou** 80.36 23 P P 14 10 38.6 +1.0
baz=236
MAW **Mawson** 80.48 203 LR LR 14 43 53.4
comp=Z,103nm,20.1s,baz=89,slow=34
N16K **Nishlik Lake** 80.49 25 P P 14 10 39.5 +1.1
baz=239
F14K **Arctic Creek** 80.55 19 P P 14 10 39.2 +0.6
baz=231
Q17K **Contact Creek** 80.66 28 P P 14 10 39.9 +0.4
baz=242
M16K **Timber Creek** 80.69 25 P P 14 10 40.4 +0.9
baz=238
L16K **Owhat River** 80.85 24 P P 14 10 41.1 +0.9
baz=238
O17K **Koliganek Bris** 80.85 26 P P 14 10 41.4 +1.0
baz=240
G15K **Niukluk** 81.02 20 P P 14 10 41.8 +0.7
baz=233
N17K **Nushagak Hills** 81.19 26 P P 14 10 43.1 +1.0
baz=240
F15K **North Star Dit** 81.25 19 P P 14 10 43.1 +0.8
baz=232
J16K **Anvik River** 81.26 22 P P 14 10 43.7 +1.2
baz=237
H16K **Elim** 81.43 21 P P 14 10 44.2 +0.9
baz=235
M17K **Holitna River** 81.52 25 P P 14 10 44.8 +0.9
baz=240
L17K **Donlin** 81.55 24 P P 14 10 45.1 +1.1
baz=239
I17K **Unalakleet** 81.56 22 IAmb IAmb 14 10 46.4
comp=Z,25nm,1.1s
I17K **Unalakleet** 81.56 22 P P 14 10 45.3 +1.3
baz=236
SIMJ **Simiganj** 81.81 310 P 14 10 45.7 -0.4
N18K **Kilae Creek** 81.82 26 P P 14 10 46.5 +0.9
baz=241
G16K **Koyuk River** 81.83 20 IAmb IAmb 14 10 47.2
comp=Z,24nm,1.2s
G16K **Koyuk River** 81.83 20 P P 14 10 46.5 +1.1
baz=235
K17K **Iditarod** 81.85 23 IAmb IAmb 14 10 47.6
comp=Z,35nm,1.1s
K17K **Iditarod** 81.85 23 P P 14 10 46.3 +0.7
baz=239
KK31 **Karatay Array** 81.91 315 P 14 10 45.7 -0.7
KK31 IAmb IAmb 14 10 54.4
comp=Z,31nm,1.6s
KK31 **Karatay Array** 81.91 315 P P 14 10 45.7 -0.7
KK31 pmax pmax
comp=Z,31nm,1.7s
KKAR **Karatay Array** 81.91 315 IAmb IAmb 14 10 54.4
comp=Z,31nm,1.6s
KDAK **Kodiak Island** 82.01 29 P P 14 10 47.7 +1.2
baz=245
KDAK **Kodiak Island** 82.01 29 LR LR 14 40 34.7
comp=Z,178nm,20.3s,baz=269,slow=31
Q19K **Cape Douglas,** 82.01 28 P P 14 10 47.5 +0.9
baz=244
L18K **Granite Mounta** 82.24 24 P P 14 10 47.9 +0.2
baz=240
M18K **Stony River** 82.24 25 P P 14 10 48.2 +0.5
baz=241
O19K **Port Alsworth** 82.28 27 P P 14 10 48.5 +0.6
baz=243
H17K **Granite Mounta** 82.42 21 P P 14 10 49.5 +0.9
baz=237
Q20K **Shuyak Island** 82.46 28 P P 14 10 49.8 +0.9
baz=245
G17K **Kiwalik Mounta** 82.47 20 P P 14 10 49.6 +0.8
baz=236,SNR=8.9
N19K **Bonanza Creek** 82.49 26 P P 14 10 49.5 +0.4
baz=243
P19K **Oil Pt** 82.53 27 P P 14 10 49.7 +0.4
baz=244
C16K **Lisburne Hills** 82.62 17 P P 14 10 49.9 +0.4
baz=232
F17K **Baldwin Pennin** 82.80 20 IAmb IAmb 14 10 57.7
comp=Z,16nm,1.2s
F17K **Baldwin Pennin** 82.80 20 P P 14 10 50.9 +0.4
baz=236
J18K **Innoko River** 82.85 23 P P 14 10 51.3 +0.5
baz=240
TTA **Tatalina** 82.86 24 P P 14 10 51.8 +0.8
baz=241
D17K **Noatak River** 82.94 18 P P 14 10 52.0 +0.8
baz=234,SNR=9.4
L19K **White Mountain** 82.97 25 IAmb IAmb 14 10 53.2
comp=Z,32nm,1.2s
L19K **White Mountain** 82.97 25 P P 14 10 51.7 +0.1
baz=242
E17K **Hotham Inlet** 82.98 19 P P 14 10 52.0 +0.6
baz=235,SNR=14
O20K **Slope Mountain** 82.99 27 P P 14 10 51.6 -0.1
baz=244
M19K **Big River Lodg** 83.04 25 P P 14 10 51.7 -0.2
baz=242

H18K **Honhosa River** 83.09 21 IAmb IAmb 14 10 53.3
comp=Z,26nm,1.5s
H18K **Honhosa River** 83.09 21 P P 14 10 52.4 +0.3
baz=238
C17K **DeLong Mountai** 83.38 17 P P 14 10 53.6 +0.1
baz=234
G18K **Tagagawik** 83.38 21 IAmb IAmb 14 10 54.8
comp=Z,22nm,1.3s
G18K **Tagagawik** 83.38 21 P P 14 10 53.6 +0.1
baz=238
F18K **Selawik** 83.42 20 P P 14 10 53.8 +0.2
baz=237
GCSA **Galena City Sc** 83.43 22 P P 14 10 54.1 +0.4
baz=240,SNR=8.3
L20K **Farewell, AK** 83.52 25 P P 14 10 54.8 +0.4
baz=243
J19K **Poorman** 83.53 23 IAmb IAmb 14 10 56.1
comp=Z,19nm,1.2s
J19K **Poorman** 83.53 23 P P 14 10 54.6 +0.3
baz=241
M20K **Styx River** 83.56 25 P P 14 10 54.9 +0.2
baz=244
E18K **Tukpahlearik C** 83.56 19 IAmb IAmb 14 10 56.2
comp=Z,21nm,1.4s
E18K **Tukpahlearik C** 83.56 19 P P 14 10 54.1 -0.3
baz=236,SNR=7.3
QSPA **South Pole Qui** 83.59 180 P P 14 10 54.8 0.0
QSPA IAmb IAmb 14 11 03.9
comp=Z,11nm,0.8s
QSPA **South Pole Qui** 83.59 180 P P 14 10 55.0 +0.2
comp=Z,4.7nm,0.5s,baz=251,slow=0.2,SNR=105
QSPA LR LR 14 48 55.0
comp=Z,725nm,18.4s,baz=8.5,slow=36
comp=Z,4.7nm,0.5s
K20K **Telida** 83.84 24 IAmb IAmb 14 10 57.7
comp=Z,30nm,1.2s
K20K **Telida** 83.84 24 P P 14 10 56.3 +0.3
baz=243
CAPN **Captain Cook N** 83.94 27 P P 14 10 56.5 0.0
baz=246
H19K **Roundabout Mou** 83.98 21 P P 14 10 57.3 +0.8
baz=240
G19K **Purcell Mounta** 84.06 21 IAmb IAmb 14 10 58.8
comp=Z,33nm,1.3s
G19K **Purcell Mounta** 84.06 21 P P 14 10 57.4 +0.4
baz=240,SNR=14
C18K **Utukok River** 84.07 18 P P 14 10 57.4 +0.3
baz=236
F19K **Shaleruckik Mo** 84.18 20 P P 14 10 57.9 +0.3
baz=239
J20K **Nowinta River** 84.19 23 P P 14 10 58.2 +0.5
baz=242,SNR=11
SKT **Skwentna** 84.28 26 P P 14 10 58.7 +0.4
baz=245
B18K **Kokolik River** 84.30 17 P P 14 10 59.0 +0.8
baz=235
I20K **Naaghedeneel** 84.35 22 P P 14 10 58.5 +0.1
baz=242
PPLA **Purkeypile** 84.40 25 P P 14 10 58.8 -0.2
baz=244
SUA **Susitna One** 84.41 26 P P 14 10 58.8 -0.2
baz=246
SEW **Seward** 84.45 28 P P 14 10 59.5 +0.4
baz=247
O22K **Cooper Landing** 84.47 27 P P 14 10 59.7 +0.5
baz=247
NRIK **Noril'sk** 84.51 343 IAmb IAmb 14 11 06.0
comp=Z,19nm,0.9s
NRIK **Noril'sk** 84.51 343 *di* P P 14 10 58.2 -1.0
NRIK pmax pmax
comp=Z,25nm,1.0s
NRIK **Noril'sk** 84.51 343 P P 14 10 59.2 0.0
comp=Z,19nm,1.0s,baz=122,slow=5.8,SNR=17
NRIK LR LR 14 46 44.0
comp=Z,133nm,21.8s,baz=136,slow=34
comp=Z,19nm,1.0s
H20K **Anotleneega Mo** 84.53 22 P P 14 11 00.5 +1.0
baz=242
CAST **Castle Rocks** 84.67 24 IAmb IAmb 14 11 00.9
comp=Z,21nm,1.2s
CAST **Castle Rocks** 84.67 24 P P 14 10 59.6 -0.6
baz=244,SNR=5.8
E19K **Redstone River** 84.68 19 IAmb IAmb 14 11 01.8
comp=Z,20nm,1.2s
E19K **Redstone River** 84.68 19 P P 14 11 00.1 -0.1
baz=239,SNR=10
RC01 **Rabbit Creek A** 84.70 27 P P 14 10 59.6 -0.7
baz=247
CHUM **Lake Minchumin** 84.78 24 P P 14 11 00.7 0.0
baz=244,SNR=14
M22K **Wiw** 84.80 26 P P 14 11 00.1 -0.6
baz=246,SNR=5.9
C19K **Lookout Ridge** 84.81 18 P P 14 11 00.4 -0.4
baz=237
BVAR **Borovoye Array** 84.90 325 P P 14 11 02.1 +0.5
comp=Z,14nm,0.9s,baz=104,slow=6.3,SNR=51
comp=Z,14nm,0.9s
D19K **Kuna River** 84.94 18 P P 14 11 01.7 +0.3
baz=238
BRVK **Borovoye** 84.97 325 P 14 11 01.3 -0.6
BRVK IAmb IAmb 14 11 09.2
comp=Z,19nm,1.0s
BRVK **Borovoye** 84.97 325 *ce* P P 14 11 02.0 +0.1
BRVK pmax pmax
comp=Z,17nm,1.0s
F20K **Avaraart Lake** 84.98 20 P P 14 11 01.7 +0.1
baz=241
CUT **Chulitna** 85.00 25 P P 14 11 02.1 +0.3
baz=246
PMR **Palmer** 85.17 26 P P 14 11 02.6 0.0
baz=247
KTH **Kantishna Hill** 85.20 24 IAmb IAmb 14 11 03.0
comp=Z,23nm,1.2s
H21K **Melozitna Rive** 85.38 22 IAmb IAmb 14 11 04.4
comp=Z,20nm,1.6s
H21K **Melozitna Rive** 85.38 22 P P 14 11 04.1 +0.4
baz=244
KNK **Knik Glacier** 85.40 27 P P 14 11 03.6 -0.3
baz=248
BPAW **Bear Paw Mtn.** 85.40 24 P P 14 11 04.2 +0.4
baz=245
TRF **Thorofare Moun** 85.42 24 P P 14 11 04.2 +0.1
baz=246
E20K **Nigu River** 85.43 19 P P 14 11 03.8 -0.1
baz=240
D20K **Etivluk River** 85.52 19 P P 14 11 04.5 +0.1
baz=240
SML **Sawmill** 85.61 26 P P 14 11 04.8 -0.2
baz=248
Q23K **Middleton Isla** 85.66 29 P P 14 11 05.3 +0.2
baz=250
GLI **Glacier Island** 85.82 27 P P 14 11 05.5 -0.5
baz=249
F21K **Alatna River** 85.84 20 P P 14 11 05.6 -0.4
baz=243
M23K **Glacier View** 85.87 26 P P 14 11 05.7 -0.5
baz=248
MLY **Manley** 85.89 23 IAmb IAmb 14 11 07.4
comp=Z,21nm,1.2s
MLY **Manley** 85.89 23 P P 14 11 06.2 -0.1
baz=246,SNR=11
WAT1 **Susitna Watana** 85.90 25 P P 14 11 06.2 -0.1
baz=248
RND **Reindeer** 85.99 25 IAmb IAmb 14 11 06.9
comp=Z,33nm,1.2s
H22K **Ishtalitna Cre** 86.01 22 P P 14 11 07.0 +0.2
baz=245
SCM **Sheep Creek Mo** 86.06 26 P P 14 11 07.6 +0.3
baz=249
MCK **McKinley** 86.08 24 P P 14 11 06.2 -1.0
baz=247,SNR=8.4
WAT6 **Susitna Watana** 86.15 26 P P 14 11 07.1 -0.7
baz=248
C21K **Knifeblade Rid** 86.32 18 P P 14 11 08.8 +0.6
baz=242
NEA2 **Nenana** 86.36 24 IAmb IAmb 14 11 08.8
comp=Z,20nm,1.3s
NEA2 **Nenana** 86.36 24 P P 14 11 07.9 -0.7
baz=247
I23K **Minto, Yukon-K** 86.47 23 IAmb IAmb 14 11 20.9
comp=Z,39nm,1.9s
I23K **Minto, Yukon-K** 86.47 23 P P 14 11 09.1 +0.1
baz=247
DHY **Denali Highway** 86.49 25 IAmb IAmb 14 11 22.3
comp=Z,19nm,0.9s
DHY **Denali Highway** 86.49 25 P P 14 11 09.5 +0.1
baz=249,SNR=5.1
KLU **Klutina** 86.57 27 P P 14 11 10.3 +0.5
baz=250
M24K **Tolsona, Glenn** 86.66 26 P P 14 11 10.5 +0.4
baz=250
WRH **Wood River Hil** 86.71 24 IAmb IAmb 14 11 10.3
comp=Z,24nm,1.2s
KAIM **Kayak Island** 86.75 29 P P 14 11 10.8 +0.3
baz=252
E22K **Anaktuvuk Pass** 86.82 20 P P 14 11 11.2 +0.4
baz=244
A21K **Barrow** 86.84 16 P P 14 11 10.7 0.0
baz=240
G23K **Bananza Creek** 86.85 21 P P 14 11 11.0 0.0
baz=246
D22K **Ayikyak River** 86.86 19 IAmb IAmb 14 11 15.1
comp=Z,43nm,1.6s
D22K **Ayikyak River** 86.86 19 P P 14 11 11.2 +0.3
baz=244
CCB **Clear Creek Bu** 86.89 24 IAmb IAmb 14 11 11.0
comp=Z,30nm,1.2s
COLA **College** 86.96 24 P P 14 11 10.0 -1.4
COLA **College** 86.96 24 P P 14 11 10.9 -0.5
baz=248
COLA **College** 86.96 24 P P 14 11 10.0 -1.4
COLA pmax pmax
comp=Z,18nm,0.3s
BMRM **Bremner River** 86.99 28 P P 14 11 12.0 +0.2
baz=251
COLD **Coldfoot** 86.99 21 P P 14 11 11.8 +0.2
baz=246,SNR=5.4
HDA **Harding Lake** 87.15 24 P P 14 11 12.0 -0.5
baz=249
POKR **Poker Plat Res** 87.21 23 P P 14 11 12.7 0.0
baz=249
HARP **HAARP** 87.21 26 P P 14 11 12.9 +0.1
baz=251
PAX **Paxson** 87.27 26 P P 14 11 13.1 -0.1
baz=250
ILAR **Eielson Array** 87.30 24 P P 14 11 11.6 -1.6
comp=Z,4.8nm,1.0s,baz=259,slow=4.8,SNR=35
ILAR LR LR 14 48 57.5
comp=Z,146nm,18.9s,baz=264,slow=35
comp=Z,4.8nm,1.0s
H24K **Noodor Dome** 87.31 23 P P 14 11 13.2 0.0
baz=248
K24K **Donnelly Dome** 87.42 25 P P 14 11 13.9 +0.1
baz=250
E23K **Chandalar** 87.54 20 P P 14 11 14.8 +0.5
baz=246
D23K **Nanushuk River** 87.55 19 P P 14 11 15.1 +0.8
baz=245
WSAR **Wadi Sarin** 87.58 294 LR LR 14 58 07.4
comp=Z,55nm,18.5s,baz=122,slow=41
CRQE **Cirque** 87.63 28 P P 14 11 15.5 +0.5
baz=253
G24K **Hadweenzic Riv** 87.78 22 P P 14 11 16.1 +0.7
baz=248
RIDG **Independent Ri** 87.79 25 P P 14 11 15.7 +0.2
baz=251,SNR=6.6
J25K **Salcha River,** 87.86 24 P P 14 11 14.9 -1.0
baz=250
F24K **Squaw Lake** 87.93 21 P P 14 11 16.8 +0.6
baz=248
L26K **Log Cabin Wild** 88.20 26 P P 14 11 18.0 +0.4
baz=252
SCRK **Sand Creek** 88.22 25 IAmb IAmb 14 11 17.8
comp=Z,13nm,1.3s
SCRK **Sand Creek** 88.22 25 P P 14 11 17.3 -0.5
baz=252
D24K **Happy Valley** 88.24 19 P P 14 11 18.4 +0.8
baz=247
G25K **Bearman Lake** 88.31 22 P P 14 11 18.4 +0.5
baz=250
C24K **Franklin Bluff** 88.50 19 P P 14 11 19.1 +0.4
baz=247
CTG **Chitna Glacier** 88.51 28 P P 14 11 20.0 +0.8
baz=254
J26L **Joseph Creek** 88.56 24 P P 14 11 19.7 +0.4
baz=252
M27K **Edge Creek, AK** 88.65 27 P P 14 11 20.2 +0.4
baz=254
F25K **Christian Rive** 88.76 21 P P 14 11 20.7 +0.6
baz=250
L27K **Beaver Creek,** 88.88 26 IAmb IAmb 14 11 22.3
comp=Z,26nm,1.3s
L27K **Beaver Creek,** 88.88 26 P P 14 11 20.9 +0.2
baz=254
E25K **Arctic Village** 88.97 21 P P 14 11 21.9 +0.8
baz=250
I26K **Coal Creek Min** 88.97 24 P P 14 11 21.6 +0.5
baz=252
K27K **Chicken** 89.04 25 P P 14 11 21.9 +0.5
baz=254
D25K **Kavik River** 89.11 20 P P 14 11 21.5 -0.2
baz=250
BVCY **Beaver Creek** 89.13 27 P P 14 11 22.4 +0.5
baz=255
YUK3 **Moose Creek** 89.14 28 P P 14 11 21.8 -0.4
baz=255
G26K **Porcupine Rive** 89.24 22 P P 14 11 23.2 +1.0
baz=252
F26K **Sheenjek River** 89.34 21 P P 14 11 23.6 +0.8
baz=252
EGAK **Eagle** 89.64 25 P P 14 11 24.5 +0.4
baz=254
O29M **Mount Kennedy** 89.67 29 P P 14 11 25.4 +0.8
baz=257
I27K **Kandik River** 89.68 24 P P 14 11 24.6 +0.2
baz=254
YUK4 **Talbot Arm** 89.87 28 P P 14 11 26.5 +0.9
baz=257
H27K **Steamboat Moun** 89.89 23 P P 14 11 25.8 +0.4
baz=254
YUK6 **Outpost Mounta** 89.92 29 P P 14 11 26.4 +0.5
baz=257
P29M **Windy Craggy** 89.92 30 P P 14 11 26.0 +0.3
baz=257
DAWY **Dawson** 90.19 25 IAmb IAmb 14 11 28.5
comp=Z,21nm,1.3s
DAWY **Dawson** 90.19 25 P P 14 11 27.7 +0.8
baz=256,SNR=7.8
M29M **Somme Creek** 90.21 27 IAmb IAmb 14 11 28.6
comp=Z,22nm,1.4s
M29M **Somme Creek** 90.21 27 P P 14 11 27.6 +0.5
baz=257
HYT **Haines Junctio** 90.30 29 P P 14 11 28.0 +0.4
baz=258
I28M **Miner Creek** 90.31 24 IAmb IAmb 14 12 00.4
comp=Z,38nm,1.9s
I28M **Miner Creek** 90.31 24 P P 14 11 28.1 +0.6
baz=255
P30M **Million Dollar** 90.41 30 P P 14 11 28.5 +0.5
baz=258
ABKAR **Akbulak array** 90.43 319 P P 14 11 27.1 -1.2
ABKAR **Akbulak array** 90.43 319 IAmb IAmb 14 11 33.9
comp=Z,2.9nm,0.8s
L29M **L29M** 90.52 26 IAmb IAmb 14 11 30.1
comp=Z,20nm,1.1s
L29M **L29M** 90.52 26 P P 14 11 29.1 +0.7
baz=257
PLBC **Pleasant Camp** 90.57 30 P P 14 11 29.4 +0.8
baz=258
SIT **Sitka** 90.65 33 P P 14 11 29.7 +0.7
baz=259
F28M **Old Crow** 90.88 22 P P 14 11 30.3 +0.3
baz=256
K29M **Barlow Dome** 90.94 26 IAmb IAmb 14 11 32.0
comp=Z,18nm,1.1s
K29M **Barlow Dome** 90.94 26 P P 14 11 30.8 +0.3
baz=258
O30N **Mendenhall** 90.97 29 P P 14 11 30.9 +0.4
baz=259
M30M **Minto, Yukon** 91.00 27 P P 14 11 30.3 -0.4
baz=258
SKAG **Skagway** 91.09 30 P P 14 11 30.7 -0.3
baz=259
H29M **Whitestone** 91.12 23 P P 14 11 31.0 -0.2
baz=257
J30M **Hart River** 91.61 25 P P 14 11 33.2 -0.4
baz=259
U33K **Whale Pass** 91.69 34 P P 14 11 33.7 -0.2
baz=261
I30M **Mount Dempster** 91.71 25 IAmb IAmb 14 11 35.1
comp=Z,12nm,1.3s
I30M **Mount Dempster** 91.71 25 P P 14 11 33.7 -0.4
baz=259
E29M **Blow River** 91.79 21 P P 14 11 34.1 0.0
baz=257
EPYK **Eagle Plains** 91.81 23 IAmb IAmb 14 11 35.4

comp=Z,13nm,1.1s
EPYK Eagle Plains 91.81 23 P **P** 14 11 34.6 +0.2
baz=258
AKTO Aktyubinsk 91.84 320 LR LR 14 56 14.7
comp=Z,58nm,18.9s,baz=158,slow=38
P32M Atlin 91.92 30 P **P** 14 11 34.9 -0.1
baz=261
M31M Drury Creek, Y 92.03 28 P **P** 14 11 35.7 +0.3
baz=260
G30M tAoh Zraii Nji 92.12 23 P **P** 14 11 35.7 -0.1
baz=259
ARU Arti 92.33 326*d iP* **P** 14 11 35.3 -1.6
ARU 14 15 15.7
ARU S **SKSac** 14 22 08.2 -1.9
ARU pmax pmax
comp=Z,6.0nm,1.1s
F30M Barrier River 92.41 22 P **P** 14 11 37.3 +0.3
baz=259
FARO Faro, Yukon 92.52 28 P **P** 14 11 37.7 0.0
baz=261
G31M Satah River 92.87 23 P **P** 14 11 38.5 -0.6
baz=261
F31M Tsiigehtchic 93.15 23 P **P** 14 11 40.6 +0.2
baz=261
R33M Jennings River 93.28 31 P **P** 14 11 41.9 +0.5
baz=263
INK Inuvik 93.37 22 IAmb IAmb 14 11 41.9
comp=Z,11nm,1.4s
INK Inuvik 93.37 22 P **P** 14 11 41.8 +0.4
baz=261
T35M Bob Quinn 93.38 33 P **P** 14 11 41.9 +0.1
baz=264
BBB Bella Bella 94.14 38 LR LR 14 49 22.7
comp=Z,230nm,19.0s,baz=268,slow=32
WTLY Watson Lake, Y 94.45 30 P **P** 14 11 47.4 +0.8
baz=265
A36M Sachs Harbour 96.48 18 P **P** 14 11 55.6 +0.1
baz=270
KIRV Kirov 97.41 328 LR LR 14 57 57.4
comp=Z,103nm,19.6s,baz=87,slow=37
PINE Pine Mountain 98.56 47 P **P** 14 12 05.1 -0.7
PINE IAmb IAmb 14 12 07.6
comp=Z,7.6nm,1.0s
SNAA Sanae 99.00 190 LR LR 14 58 49.6
comp=Z,376nm,18.0s,baz=152,slow=37
VES Vestal, Richgr 99.90 55 P **Pdif** 14 12 11.8 +0.1
baz=269
NVAR Mina Array Bea 100.53 52 P **Pdif** 14 12 16.1 +1.3
comp=Z,1.0nm,0.8s,baz=234,slow=7.7,SNR=6.1
NVAR PP **PP** 14 16 19.6 -2.2
comp=Z,0.8nm,0.8s,baz=245,slow=12,SNR=4.7
NEW Newport 101.13 42 P **Pdif** 14 12 15.8 -1.2
baz=273
MPMC Manual Prospec 101.19 55 P **Pdif** 14 12 16.8 -1.0
baz=270
YKA Yellowknife Ar 101.23 28 P **Pdif** 14 12 16.5 -0.5
comp=Z,0.5nm,0.9s,baz=281,slow=4.3,SNR=5.5
YKA PP **PP** 14 16 20.2 -5.7
comp=Z,0.7nm,1.0s,baz=276,slow=7.7,SNR=3.8
PFO Pinyon Flats O 102.05 57 P **Pdif** 14 12 20.4 -1.2
baz=270
TPFO Pinon Flats 102.06 57 P **Pdif** 14 12 20.9 -0.7
baz=270
OBN Obninsk 104.73 325 *i* P **Pdif** 14 12 31.3 -1.5
PDAR Pinedale Array 106.91 47 Pdiff **Pdif** 14 12 43.0 -0.1
comp=Z,0.2nm,0.7s,baz=308,slow=6.5,SNR=2.3
TXAR Lajitas Array 113.19 61 PKKPab PKKPab 14 28 03.0 +4.8
comp=Z,0.4nm,0.7s,baz=121,slow=3.4,SNR=6.5
CLL Collm 119.28 327 *e*PKIKP **PKPdf** 14 17 15.0 -1.0
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 119.28 327 *e*PKiKP **PKPdf** 14 17 15.0 -1.0
comp=Z,8.0nm,1.3s
CLL AMS AMS 15 12 00.0
comp=Z,100nm,20.0s
OXF Oxford 124.05 52 P **PKPdf** 14 17 24.6 -1.0
baz=288
WVT Waverly 124.76 50 P **PKPdf** 14 17 26.0 -1.0
baz=290
O48B Farmland 125.16 44 P **PKPdf** 14 17 27.1 -0.6
baz=295
TZTN Tazewell 127.82 48 P **PKPdf** 14 17 31.9 -1.0
baz=294
O53A New Philadelph 127.86 43 P **PKPdf** 14 17 32.0 -0.8
baz=298
GOGA Godfrey 129.07 52 P **PKPdf** 14 17 34.2 -1.1
baz=291
LONY Lake Ozonia 129.62 35 P **PKPdf** 14 17 35.3 -0.8
baz=308
SSPA Standing Stone 129.88 41 P **PKPdf** 14 17 34.8 -1.8
baz=302
LBNH Lisbon 131.34 33 P **PKPdf** 14 17 38.0 -1.3
baz=310
L61B Northampton 132.05 36 P **PKPdf** 14 17 39.8 -0.8
baz=308
PKME Peaks-Kenny Pk 132.05 31 P **PKPdf** 14 17 39.8 -0.8
baz=314
PAL Palisades 132.18 38 P **PKPdf** 14 17 40.7 -0.3
baz=306
TORD Torodi Ar. Bea 141.57 283 PKhKP PKPpre 14 17 52.8
comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=3.4
TORD PKP **PKPdf** 14 17 58.5 -0.6
comp=Z,1.9nm,0.7s,baz=73,slow=4.3,SNR=8.0
KIC Kosan Boka 148.20 272‖ *e*PKP1 **PKPbc** 14 18 14.8 +1.0
comp=Z,19nm,0.7s
DBIC Dimbokro 148.33 272 **PKPbc** 14 18 15.2 +1.0
DBIC Dimbokro 148.33 272 PKP **PKPdf** 14 18 10.2 -0.6
comp=Z,3.3nm,0.5s,baz=63,slow=2.3,SNR=2.4
DBIC PKPbc **pPKPdf** 14 18 15.3 +0.2
comp=Z,8.2nm,0.5s,baz=101,slow=3.0,SNR=13
LIC Lamto 148.48 272‖ *e*PKP1 **PKPbc** 14 18 15.6 +1.0
comp=Z,42nm,0.6s
TIC Toumodi 148.49 272‖ *e*PKP1 **PKPbc** 14 18 15.5 +0.9
comp=Z,14nm,0.5s
PTLB Pontes e Lacer 148.97 135 PKPbc **PKPdf** 14 18 12.7 +1.0
SAML Samuel 149.56 120 PKPdf **PKPdf** 14 18 11.6 -1.1
SAML Samuel 149.56 120 PKHKP PKPpre 14 18 11.6

*RSPR **27** 14:01:20.0, 18˚.94N×67˚.24W, h28km±8km, MD3.0/6*
*SDD **27** 14:01:25.6±1.6, 18˚.47N×67˚.22W, h79km±16km, MD2.9, ML2.0, MW2.4*
ISC 27 14:01:19.0±1.8,**18˚.85N**±0˚.08×**67˚.20W**±0˚.05,**h3**km±12km, **n21**,σ1°**20**/28,**3C-3D**,**Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.39**	**167**	⇑ *iP*		**Pb**		**14 01 28.9**	**+0.3**
AGPR	**Aguadilla, PR**	**0.39**	**167**	*eS*		**Sb**		**14 01 35.9**	**+0.9**
AOPR	**Arecibo Observ**	**0.66**	**140**	‖ *eP*		**Pb**		**14 01 32.5**	**-0.6**
AOPR	**Arecibo Observ**	**0.66**	**140**	*eS*		**Sb**		**14 01 42.8**	**0.0**
AOPR	**Arecibo Observ**	**0.66**	**140**	*ePg*		**Pn**		**14 01 37.6**	**+2.3**
AOPR				*eSg*		**Sn**		**14 01 48.0**	**+1.8**
AOPR				IAML				14 01 48.5	
comp=N,42nm,0.3s									
LSP	**Las Mesas**	**0.68**	**171**	⇑ *eP*		**Pb**		**14 01 33.5**	**-0.1**
LSP	**Las Mesas**	**0.68**	**171**	*eS*		**Sb**		**14 01 43.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**0.85**	**174**	‖ *eP*		**Pb**		**14 01 35.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.85**	**174**	*eS*		**Sg**		**14 01 47.0**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.85**	**174**	*ePg*		**Pn**		**14 01 38.6**	**+0.8**
CRPR				*eSg*		**Sb**		**14 01 48.0**	**-0.1**
CRPR				IAML				14 01 57.8	
comp=N,46nm,2.2s									
MLPR	**Magueyes Islan**	**0.89**	**170**	⇑ *eP*		**Pg**		**14 01 35.5**	**-0.7**
MLPR	**Magueyes Islan**	**0.89**	**170**	*eS*		**Sg**		**14 01 48.2**	**+0.5**
MLPR	**Magueyes Islan**	**0.89**	**170**	*ePg*		**Pn**		**14 01 38.5**	**+0.1**
MLPR				IAML				14 01 47.2	
comp=N,21nm,2.5s									
MLPR				*eSg*		**Sg**		**14 01 48.0**	**+0.2**
CELP	**Cerrillos**	**0.97**	**143**	⇑ *eP*		**Pb**		**14 01 37.4**	**-1.1**
CELP	**Cerrillos**	**0.97**	**143**	*eS*		**Sb**		**14 01 50.9**	**-0.9**
CELP	**Cerrillos**	**0.97**	**143**	*ePg*		**Pn**		**14 01 41.6**	**+2.0**
CELP				*eSg*		**Sn**		**14 01 51.4**	**-2.6**
OBIP	**Obispado Ponce**	**0.99**	**145**	‖ *eP*		**Pg**		**14 01 36.7**	**-1.2**
OBIP	**Obispado Ponce**	**0.99**	**145**	*eS*		**Sg**		**14 01 50.1**	**-0.7**
MIDR	**Miches**	**1.75**	**275**	*ePg*		**Pg**		**14 01 54.1**	**+1.5**
MIDR				*eSg*		**Sb**		**14 02 14.1**	**-0.1**
MIDR				IAML				14 02 27.1	
comp=N,20nm,1.8s									
HATOM	**Hato Mayor del**	**2.06**	**269**	*ePg*		**Pb**		**14 01 56.4**	**-0.7**
HATOM				*eSg*		**Sb**		**14 02 21.9**	**-1.3**
HATOM				IAML				14 02 35.8	
comp=N,14nm,2.4s									
DR08	**Loma La Naviza**	**2.67**	**273**	*ePg*		**Pb**		**14 02 06.0**	**-1.5**
DR08				*eSg*		**Sn**		**14 02 34.8**	**-1.1**

*IDC **27** 14:10:32.9±0.8, 6˚.20S×143˚.04E, h0km, mb4.2/11, mbtmp4.2/14, ML4.1/1, Error ellipse: s-maj=34.3km s-min=17.2km az=79.0*
*NEIC **27** 14:10:35.4±1.5, 6˚.20S±0˚.09×143˚.02E±0˚.09, h10km±1km, mb4.6/34, Error ellipse: s-maj=16.2km s-min=13.4km az=47.0*
ISC 27 14:10:38.2±0.5,**6˚21S**±0˚.06×**143˚00E**±0˚.08,**h35**km,**n60**, σ1°**10**/60,**mb4.4**/**22**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.20**	**128**			Pn	**Pn**	**14 11 53.3**	**-0.2**
6.0nm,0.4s,baz=358,slow=6.6,SNR=6.5									
MANU	**Manus Island**	**6.01**	**47**			Pn	**Pn**	**14 12 02.2**	**-2.3**
COEN	**Coen**	**7.70**	**179**			Pn	**Pn**	**14 12 28.8**	**+0.9**
FAKI	**Fak Fak**	**11.21**	**286**			Pn	**Pn**	**14 13 16.7**	**+0.7**
MTN	**Manton Dam**	**13.43**	**240**			Pn	**Pn**	**14 13 43.3**	**-3.1**
WB0	**Warramunga Arr**	**15.86**	**211**			Pn	**Pn**	**14 14 17.1**	**-1.8**
WB0						IAmb	IAmb	14 14 59.9	
comp=Z,42nm,1.4s									
WR0	**Warramunga Arr**	**15.95**	**210**			Pn	**Pn**	**14 14 17.8**	**-2.3**
WR0						IAmb	IAmb	14 15 00.4	
comp=Z,34nm,1.1s									
WB2	**Warramunga Arr**	**16.03**	**211**			Pn	**Pn**	**14 14 18.8**	**-2.3**
WRA	**Warramunga Arr**	**16.04**	**211**			Pn	**Pn**	**14 14 18.9**	**-2.3**
comp=Z,0.7nm,0.3s,baz=32,slow=13,SNR=10									
comp=Z,1.9nm,0.6s									
KNRA	**Kununurra**	**16.84**	**235**			Pn	**Pn**	**14 14 29.9**	**-1.4**
KNRA						IAmb	IAmb	14 15 14.3	
comp=Z,35nm,0.9s									
SOEI	**Soe**	**18.88**	**258**			P	**P**	**14 14 54.1**	**-1.8**
SOEI						IAmb	IAmb	14 15 17.1	
comp=Z,24nm,0.8s									
AS31	**Alice Springs**	**19.44**	**206**			P	**Pn**	**14 15 02.6**	**-0.5**
AS31						IAmb	IAmb	14 15 47.9	
comp=Z,14nm,0.7s									
ASAR	**Alice Springs**	**19.44**	**206**			P	**Pn**	**14 15 02.7**	**-0.5**
ASAR	**Alice Springs**	**19.44**	**206**			P	**Pn**	**14 15 02.3**	**-0.9**
comp=Z,26nm,0.6s,baz=30,slow=11,SNR=74									
FITZ	**Fitzroy Crossi**	**20.66**	**234**			P	**P**	**14 15 14.9**	**-0.1**
TOLI2	**Tolitoli**	**23.35**	**287**			P	**P**	**14 15 43.6**	**-0.1**
TOLI2						IAmb	IAmb	14 15 45.3	
comp=Z,10nm,0.8s									
STKA	**Stephens Creek**	**25.57**	**183**			P	**P**	**14 16 03.9**	**-0.1**
STKA	**Stephens Creek**	**25.57**	**183**			P	**P**	**14 16 03.1**	**-0.8**
comp=Z,5.6nm,0.9s,baz=359,slow=8.4,SNR=3.9									
comp=Z,5.6nm,0.9s									
BBOO	**Buckleboo**	**27.24**	**193**			P	**P**	**14 16 18.4**	**-0.6**
FORT	**Forrest**	**28.18**	**208**			P	**P**	**14 16 28.0**	**+0.5**
CAN	**Canberra**	**29.49**	**170**			P	**P**	**14 16 39.6**	**+0.5**
XMIS	**Christmas Isla**	**37.18**	**261**			P	**P**	**14 17 46.3**	**0.0**
XMIS						IAmb	IAmb	14 18 09.1	
comp=Z,34nm,1.4s									
MRNZ	**Matariki Terra**	**43.93**	**147**			P	**P**	**14 18 42.2**	**+0.5**
TUWZ	**Tuamarina**	**44.59**	**147**			P	**P**	**14 18 48.4**	**+1.4**
KSRS	**Korea Array**	**45.66**	**343**			P	**P**	**14 18 55.5**	**+0.1**
comp=Z,0.9nm,0.7s,baz=165,slow=8.4,SNR=3.6									
comp=Z,0.9nm,0.7s									
JTM	**Tenmabayashi**	**46.80**	**358**			P	**P**	**14 19 04.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**49.89**	**300**			P	**P**	**14 19 28.8**	**+0.2**
comp=Z,0.8nm,0.6s,baz=118,slow=6.4,SNR=6.3									
comp=Z,0.8nm,0.6s									
JKA	**Kamikawa-asahi**	**50.10**	**360**			P	**P**	**14 19 30.6**	**+0.8**
JKA						IAmb	IAmb	14 20 14.6	
comp=Z,16nm,1.4s									
SONM	**Songino Array**	**62.73**	**333**			P	**P**	**14 21 00.6**	**+0.8**
SONM	**Songino Array**	**62.73**	**333**			P	**P**	**14 21 00.3**	**+0.5**
comp=Z,0.4nm,0.6s,baz=152,slow=8.3,SNR=3.0									
comp=Z,0.4nm,0.6s									
OBL	**Observatory Le**	**65.85**	**66**			P	**P**	**14 21 19.6**	**-1.2**
RIM	**Rim**	**65.85**	**66**			P	**P**	**14 21 19.6**	**-1.3**
MK31	**Makanchi Array**	**75.16**	**322**			P	**P**	**14 22 17.5**	**+0.5**
MKAR	**Makanchi Array**	**75.16**	**322**			P	**P**	**14 22 17.6**	**+0.6**
MKAR	**Makanchi Array**	**75.16**	**322**			P	**P**	**14 22 17.3**	**+0.3**
comp=Z,2.3nm,0.8s,baz=102,slow=7.9,SNR=21									
comp=Z,2.3nm,0.8s									
MAKZ	**Makanchi**	**75.36**	**322**			P	**P**	**14 22 18.8**	**+0.6**
ZALV	**Zalesovo Beam**	**77.11**	**329**			P	**P**	**14 22 27.4**	**-0.4**
comp=Z,0.8nm,0.5s,baz=126,slow=7.3,SNR=5.6									
comp=Z,0.8nm,0.5s									
KURBB	**Kurchatov Arra**	**79.05**	**324**			P	**P**	**14 22 38.6**	**-0.1**
comp=Z,1.6nm,0.8s,baz=116,slow=4.5,SNR=9.5									
comp=Z,1.6nm,0.8s									
L14K	**Kuka Creek**	**79.31**	**23**			P	**P**	**14 22 41.5**	**+1.6**
L14K						IAmb	IAmb	14 23 01.6	
comp=Z,12nm,1.2s									
K15K	**Wolf Creek Mou**	**80.31**	**23**			P	**P**	**14 22 46.7**	**+1.4**
K15K						IAmb	IAmb	14 23 00.6	
comp=Z,25nm,1.4s									
KKAR	**Karatay Array**	**81.61**	**315**			P	**P**	**14 22 53.0**	**+0.2**
L19K	**White Mountain**	**82.93**	**25**			P	**P**	**14 22 59.1**	**-0.1**
E18K	**Tukpahlearik C**	**83.49**	**19**			P	**P**	**14 23 02.9**	**+0.9**
QSPA	**South Pole Qui**	**83.76**	**180**			P	**P**	**14 23 03.7**	**+0.1**
QSPA						IAmb	IAmb	14 23 47.4	
comp=Z,6.8nm,0.9s									
QSPA	**South Pole Qui**	**83.76**	**180**			P	**P**	**14 23 03.7**	**+0.1**
comp=Z,2.0nm,0.6s,baz=264,slow=0.4,SNR=21									
comp=Z,2.0nm,0.6s									
C18K	**Utukok River**	**84.00**	**18**			P	**P**	**14 23 05.7**	**+1.1**
C18K						IAmb	IAmb	14 23 31.1	
comp=Z,3.9nm,1.4s									
NRIK	**Noril'sk**	**84.28**	**343**			P	**P**	**14 23 06.5**	**+0.6**
comp=Z,1.9nm,0.8s,baz=146,slow=4.6,SNR=3.7									
comp=Z,1.9nm,0.8s									
E19K	**Redstone River**	**84.61**	**20**			P	**P**	**14 23 08.1**	**+0.4**
E19K						IAmb	IAmb	14 23 09.9	
comp=Z,3.1nm,0.8s									
BVAR	**Bovoye Array**	**84.62**	**325**			P	**P**	**14 23 09.2**	**+1.2**
comp=Z,9.4nm,0.7s,baz=111,slow=6.8,SNR=44									
comp=Z,9.4nm,0.7s									
BRVK	**Borovoye**	**84.69**	**325**			P	**P**	**14 23 09.0**	**+0.6**
BRVK						IAmb	IAmb	14 23 10.2	
comp=Z,7.4nm,0.9s									
F20K	**Avaraart Lake**	**84.92**	**20**			P	**P**	**14 23 10.0**	**+0.8**
F20K						IAmb	IAmb	14 23 54.5	
comp=Z,3.0nm,1.0s									
E21K	**Killik River**	**86.17**	**19**			P	**P**	**14 23 16.2**	**+0.7**
I23K	**Minto, Yukon-K**	**86.42**	**23**			P	**P**	**14 23 17.5**	**+0.8**
I23K						IAmb	IAmb	14 23 44.3	
comp=Z,8.9nm,1.5s									
E22K	**Anaktuvuk Pass**	**86.75**	**20**			P	**P**	**14 23 18.7**	**+0.3**
E22K						IAmb	IAmb	14 23 27.5	
comp=Z,2.2nm,0.8s									
D22K	**Ayikyak River**	**86.79**	**19**			P	**P**	**14 23 20.4**	**+1.9**
ILAR	**Eielson Array**	**87.26**	**24**			P	**P**	**14 23 20.7**	**-0.1**
ILAR	**Eielson Array**	**87.26**	**24**			P	**P**	**14 23 20.2**	**-0.6**
comp=Z,1.3nm,0.7s,baz=256,slow=5.1,SNR=16									
comp=Z,1.3nm,0.7s									
BCAR	**Beaver Creek A**	**88.86**	**26**			P	**P**	**14 23 29.7**	**+1.1**
TORD	**Torodi Ar. Bea**	**141.28**	**283**			PKP	**PKiKP**	**14 30 08.1**	**-0.9**
comp=Z,0.5nm,0.8s,baz=65,slow=3.9,SNR=2.8									
DBIC	**Dimbokro**	**148.06**	**273**			PKPbc	**PKPbc**	**14 30 21.6**	**+0.4**
comp=Z,4.5nm,0.9s,baz=127,slow=5.6,SNR=3.9									

*BJI **27** 14:11:15.6±0.0, 6˚.50S×142˚.94E, h6km, mb4.6/52, mB5.0/24, Ms4.5/4, Ms7 4.4/5*
*MOS **27** 14:11:16.5±1.0, 6˚.29S×143˚.13E, h16km, mb5.0/19, Error ellipse: s-maj=11.2km s-min=7.3km az=104.3*
*IDC **27** 14:11:16.4±0.6, 6˚.19S×143˚.15E, h0km, mb4.5/16, mbtmp4.6/20, ML3.0/2, Error ellipse: s-maj=24.8km s-min=13.5km az=73.0*
*NEIC **27** 14:11:17.9±1.4, 6˚.38S±0˚.08×142˚.98E±0˚.09, h10km±3km, mb5.0/47, Error ellipse: s-maj=12.4km s-min=11.5km az=91.0*
*DJA **27** 14:11:19.8±0.3, 6˚S±3˚×14˚3E±˚, h10km, M4.8/27, mB5.2/10, mb4.8/27, MLv5.2/5, Mw(mB)4.5/10*
*GCMT **27** 14:11:19.9±0.3, 6˚.42S±0˚.02×142˚.97E±0˚.03, h12km±2km, MW4.8/54, Moment Tensor Solution. s21,c23; s54,c82; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.20±.14; Mθθ -0.81±.09; Mϕϕ -0.38±.09; Mrθ 1.27±.30; Mθϕ 0.92±.05; Mϕr -0.19±.23; Best double couple: M₀1.89900×10¹⁶ NP1:ϕs332.00000°, δ30.00000°, λ131.00000°. NP2: ϕs332.00000°, δ30.00000°, λ131.00000°. Principal axes: T 1.8410, Plg62.0000°, Azm346.0000°; N 0.1190, Plg19.0000°, Azm115.0000°; P -1.9570, Plg20.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 14:11:17.7±0.3,**6˚30S**±0˚.05×**143˚03E**±0˚.05,**h10**km,**n170**, σ1°**58**/168,**mb4.8**/67,**14C-3D**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.40**	**230**			P	**Pb**	**14 12 16.4**	**-1.7**
GENI	**Genyem**	**4.66**	**322**			P	**Pn**	**14 12 29.8**	**+1.6**
PMG	**Port Moresby**	**5.12**	**127**			Pn	**Pn**	**14 12 34.8**	**+0.2**
PMG	**Port Moresby**	**5.12**	**127**	*ce*		P	**Pn**	**14 12 34.4**	**-0.2**
PMG						pmax	pmax		
comp=Z,33nm,1.7s									
PMG	**Port Moresby**	**5.12**	**127**			Pn	**Pn**	**14 12 35.8**	**+1.2**
comp=Z,15nm,0.3s,baz=308,slow=12,SNR=21									
PMG						Sn	**Sn**	**14 13 33.4**	**-0.4**
comp=Z,31nm,0.3s,baz=225,slow=23,SNR=12									
comp=Z,94nm,0.7s									
MANU	**Manus Island**	**6.04**	**46**			Pn	**Pn**	**14 12 48.0**	**+0.7**
SMPI	**Sarmi**	**6.07**	**315**			P	**Pn**	**14 12 48.1**	**+0.5**
comp=Z,185nm,1.2s,comp=Z,3µmcomp=Z,1.1nm									
COEN	**Coen**	**7.61**	**179**			P	**Pn**	**14 13 12.3**	**+3.4**
baz=8.0									
FAKI	**Fak Fak**	**11.26**	**287**			P	**Pn**	**14 14 01.4**	**+2.5**
comp=Z,34nm,1.3s									
MTSU	**Mount Surprise**	**11.83**	**174**			P	**Pn**	**14 14 10.1**	**+3.4**
baz=12,SNR=3.8									
KDU	**Kakadu**	**12.20**	**238**			P	**Pn**	**14 14 11.8**	**+0.2**
baz=12									
SWI	**Sorong**	**12.93**	**294**			P	**Pn**	**14 14 17.7**	**-4.0**
comp=Z,34nm,1.4s									
MTN	**Manton Dam**	**13.41**	**240**			P	**Pn**	**14 14 29.1**	**+0.8**
baz=14									
MTN	**Manton Dam**	**13.41**	**240**				**Pn**	**14 14 25.8**	**-2.5**
CTA	**Charters Tower**	**14.06**	**167**			Pn	**Pn**	**14 14 36.5**	**-0.7**
comp=Z,0.1nm,0.3s,baz=338,slow=14,SNR=1.6									
CTA						Lg	Lg	14 18 35.8	
comp=Z,0.3nm,0.3s,baz=45,slow=20,SNR=4.7									
comp=Z,2.9nm,0.8s									
WB0	**Warramunga Arr**	**15.80**	**211**				**Pn**	**14 14 58.5**	**-2.1**
WR0	**Warramunga Arr**	**15.89**	**210**			Pn	**Pn**	**14 14 59.5**	**-2.1**
WRAB	**Tennant Creek**	**15.97**	**211**				**Pn**	**14 15 00.5**	**-2.2**
WRAB	**Tennant Creek**	**15.97**	**211**	*i*	P		**Pn**	**14 15 02.4**	**-0.2**
WB2	**Warramunga Arr**	**15.97**	**211**		P		**P**	**14 15 05.4**	**-0.8**
baz=16									
WB2	**Warramunga Arr**	**15.97**	**211**			Pn	**Pn**	**14 15 00.5**	**-2.2**
WRA	**Warramunga Arr**	**15.98**	**211**			Pn	**Pn**	**14 15 01.5**	**-1.3**
WRA	**Warramunga Arr**	**15.98**	**211**			P	**Pn**	**14 15 01.5**	**-1.3**
WRA						pmax	pmax		
comp=Z,1.0nm,1.0s									
WRA	**Warramunga Arr**	**15.98**	**211**			Pn	**Pn**	**14 15 00.1**	**-2.7**
comp=Z,1.4nm,0.3s,baz=32,slow=13,SNR=10									
WRA						Lg	Lg	14 19 44.0	
comp=Z,1.1nm,0.3s,baz=23,slow=31,SNR=5.0									
NLAI	**Namlea**	**16.16**	**280**			P	**Pn**	**14 15 03.3**	**-1.9**
comp=Z,22nm,0.9s,comp=Z,2µm									
KNRA	**Kununurra**	**16.81**	**235**				**Pn**	**14 15 10.9**	**-2.6**
KNRA						IAmb	IAmb	14 15 15.6	
comp=Z,69nm,0.8s									
HNR	**Honiara**	**17.04**	**102**				**P**	**14 15 19.9**	**+1.8**
HNR						IAmb	IAmb	14 15 26.0	
comp=Z,148nm,1.2s									
HNR	**Honiara**	**17.04**	**102**			Pn	**Pn**	**14 15 15.0**	**-1.3**
comp=Z,200nm,0.5s,baz=305,slow=12,SNR=1.3									
SANI	**Sanana**	**17.51**	**283**			P	**P**	**14 15 22.6**	**-0.8**
comp=Z,33nm,1.1s									
SOEI	**Soe**	**18.89**	**258**				**P**	**14 15 38.0**	**-0.7**
SOEI						IAmb	IAmb	14 15 42.9	
comp=Z,69nm,0.9s									
SOEI	**Soe**	**18.89**	**258**			P	**Pn**	**14 15 41.4**	**+2.1**
comp=Z,167nm,0.9s									
AS31	**Alice Springs**	**19.37**	**206**			P	**P**	**14 15 42.3**	**-1.5**
ASAR	**Alice Springs**	**19.37**	**206**			P	**Pn**	**14 15 46.4**	**+1.5**
comp=Z,119nm,0.8s,baz=33,slow=9.9,SNR=46									
ASAR						Lg	Lg	14 21 28.7	
comp=Z,0.6nm,0.3s,baz=33,slow=30,SNR=4.4									
ASPA	**Alice Springs**	**19.38**	**206**			P	**Pn**	**14 15 46.6**	**+1.6**
baz=20									
QLP	**Quilpie**	**20.20**	**177**			P	Pn	14 15 55.7	+0.9
baz=21,SNR=5.5									
KMSI	**Cibinong**	**20.21**	**289**			P	Pn	14 15 56.6	+1.7
comp=Z,179nm,1.3s,comp=Z,2µm									
EIDS	**Eidsvold**	**20.47**	**159**			P	Pn	14 15 58.9	+1.0
baz=21,SNR=8.8									
EIDS	**Eidsvold**	**20.47**	**159**			P	**P**	**14 15 54.5**	**-1.2**
EIDS						IAmb	IAmb	14 16 04.0	
comp=Z,46nm,0.9s									
FITZ	**Fitzroy Crossi**	**20.63**	**234**			P	Pn	14 15 58.9	-0.9
baz=21,SNR=7.3									
FITZ	**Fitzroy Crossi**	**20.63**	**234**			P	**P**	**14 15 56.2**	**-1.3**
MMRI	**Maumere**	**20.75**	**262**			P	Pn	14 16 03.2	+1.9
comp=Z,53nm,0.9s									
LUWI	**Luwuk**	**20.88**	**284**			P	Pn	14 16 01.9	-0.8
comp=Z,102nm,0.5s,comp=Z,2µm									
EDFI	**Ende, Flores**	**21.30**	**262**			P	**P**	**14 16 02.8**	**-2.1**
comp=Z,34nm,1.1s									
MRSI	**Marisa**	**22.10**	**287**			P	**P**	**14 16 15.6**	**+2.2**
comp=Z,31nm,1.2s									
BKSI	**Bulukumba**	**22.81**	**271**			P	**P**	**14 16 22.7**	**+1.7**
comp=Z,71nm,1.1s									
KAPI	**Kappang**	**23.20**	**272**			P	**P**	**14 16 24.6**	**-0.5**
KAPI						IAmb	IAmb	14 16 28.6	
comp=Z,90nm,1.2s									
KAPI	**Kappang**	**23.20**	**272**	*i*	P		**P**	**14 16 26.9**	**+1.8**
TTSI	**Tana Toraja**	**23.36**	**277**		P		**P**	**14 16 28.4**	**+1.8**

comp=Z,17nm,1.2s
ASAJ Asahikawa 50.18 360 P P 14 20 12.8 -0.8
comp=Z,13nm,1.2s,baz=211,slow=13,SNR=4.3
comp=Z,13nm,1.2s
JKA Kamikawa-asahi 50.18 360 P P 14 20 13.2 -0.3
JKA IAmb IAmb 14 20 16.0
comp=Z,17nm,1.2s
XAN Xi'an 51.49 323 P P 14 20 24.3 +0.6
XAN pmax pmax
comp=Z,15nm,1.2s
PZH PanZhiHua 51.62 311 P P 14 20 26.5 +1.6
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,140nm,5.9s
MDJ Mudanjiang 52.10 348 P P 14 20 32.8 +4.8
MDJ pmax pmax
comp=Z,6.0nm,2.1s
MDJ pmax pmax
comp=Z,120nm,6.2s
BJI Beijing 52.34 334 P P 14 20 31.0 +1.2
BJI sP **sP** 14 20 39.8 +5.2
BJI pmax pmax
comp=Z,4.0nm,0.8s
CD2 Chengdu 52.72 317 P P 14 20 34.0 +1.1
CD2 pmax pmax
comp=Z,10.0nm,0.8s
YSS Yuzh-Sakhalins 53.02 360 *eP* P 14 20 39.6 +4.9
YSS pmax pmax
comp=Z,10.0nm,0.9s
TNCH TengChong 53.33 308 P P 14 20 39.5 +1.8
TNCH pP sP 14 20 43.8 +1.3
TNCH pmax pmax
comp=Z,22nm,0.5s
BNX BinXian 53.66 346 ⇓P **P 14 20 41.0 +1.5**
BNX pmax pmax
comp=Z,5.0nm,0.7s
BNX pmax pmax
comp=Z,160nm,3.5s
HHC Hu-ho-hao-te 55.10 331 *eP* **P 14 20 53.3 +3.1**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,110nm,5.0s
LZH Lanzhou 55.93 322 *eP* **P 14 20 58.5 +2.1**
LZH pP sP 14 21 02.5 +1.3
LZH pmax pmax
comp=Z,18nm,1.4s
KLR Kul'dur 56.17 351 P P 14 20 58.4 +0.8
KLR pmax pmax
comp=Z,9.0nm,1.7s
KLR Kul'dur 56.17 351 P P 14 20 57.5 -0.1
comp=Z,1.0nm,0.8s,baz=152,slow=8.0,SNR=2.4
comp=Z,1.0nm,0.8s
HEH HeiHe 57.93 348 *eP* **P 14 21 09.8 -0.2**
HEH pmax pmax
comp=Z,4.0nm,1.0s
HEH pmax pmax
comp=Z,120nm,5.7s
PEA0B Petropavlovsk- 60.47 10 P P 14 21 26.8 -0.8
PEA0B Petropavlovsk- 60.47 10 P P 14 21 26.8 -0.8
PEA0B pmax pmax
comp=Z,60nm,1.4s
PETK Petropavlovsk- 60.47 10 P P 14 21 26.6 -1.0
PETK Petropavlovsk- 60.47 10 P P 14 21 26.7 -1.0
GTA Gaotai 60.51 322 *eP* **P 14 21 30.0 +1.7**
GTA pP sP 14 21 39.3 +6.1
GTA pmax pmax
comp=Z,5.0nm,1.2s
ZEA Zeya 61.27 349 *eP* **P 14 21 34.2 +1.1**
ZEA *e* 14 22 21.6
ZEA pmax pmax
comp=Z,10.0nm,0.9s
GOMU GeErMu 61.86 317 P P 14 21 39.0 +1.2
GOMU pP sP 14 21 44.5 +1.8
GOMU sP pP 14 21 48.3 +6.9
GOMU pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 62.54 334 *ceP* **P 14 21 40.1 -1.8**
ULN pmax pmax
comp=Z,7.0nm,1.7s
SONM Songino Array 62.81 333 P P 14 21 42.2 -1.5
comp=Z,1.1nm,0.8s,baz=152,slow=6.5,SNR=6.9
comp=Z,1.1nm,0.8s
CASY Casey 63.97 194 P P 14 21 50.1 -0.8
MA2 Magadan 65.95 4 *ceP* **P 14 22 04.1 +0.3**
MA2 pmax pmax
comp=Z,18nm,1.7s
MA2 Magadan 65.95 4 P P 14 22 03.1 -0.7
comp=Z,1.8nm,0.3s,baz=154,slow=9.2,SNR=2.9
comp=Z,1.8nm,0.3s
ZAK Zakamensk 66.07 333 *eP* **P 14 22 04.7 -0.3**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
HYB Hyderabad 67.89 292 *eP* **P 14 22 16.3 -0.8**
HYB *es*P **sP 14 22 21.3 -0.7**
SEY Seymchan 69.40 5 *ceP* **P 14 22 25.0 -0.6**
SEY pmax pmax
comp=Z,14nm,2.5s
SEY Seymchan 69.40 5 P P 14 22 25.5 -0.1
comp=Z,2.8nm,1.0s,baz=175,slow=7.6,SNR=5.0
comp=Z,2.8nm,1.0s
WMQ Urumqi 70.49 321 *eP* **P 14 22 34.5 +1.7**
WMQ pP sP 14 22 38.0 +0.4
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ pmax pmax
comp=Z,140nm,5.7s
VNDA Vanda 71.88 176 P P 14 22 37.7 -2.8
VNDA Vanda 71.88 176 P P 14 22 41.4 +0.9
comp=Z,4.3nm,1.1s,baz=334,slow=5.8,SNR=1.3
comp=Z,4.3nm,1.1s
DGZ Jazzator, Alta 73.63 326 *i* P **P 14 22 51.7 +0.1**
DGZ pmax pmax
comp=Z,10.0nm,1.2s
MKAR Makanchi Array 75.25 322 P P 14 23 00.8 -0.2
MKAR Makanchi Array 75.25 322 *ceP* **P 14 23 02.0 +1.1**
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 75.25 322 P P 14 23 01.8 +0.9
comp=Z,6.5nm,0.9s,baz=109,slow=7.8,SNR=22
comp=Z,6.5nm,0.9s
MAKZ Makanchi 75.45 322 P P 14 23 02.1 0.0
MAKZ IAmb IAmb 14 23 04.2
comp=Z,19nm,1.2s
MAKZ Makanchi 75.45 322 P P 14 23 02.1 0.0
MAKZ pmax pmax
comp=Z,19nm,1.2s
BILL Bilibino 75.96 9 P P 14 23 04.4 -0.1
BILL Bilibino 75.96 9⇑ *eP* **P 14 23 03.3 -1.2**
BILL pmax pmax
comp=Z,8.0nm,1.7s
KSH Kashi 76.67 313 P P 14 23 11.8 +2.5
KSH pmax pmax
comp=Z,7.0nm,1.1s
NIL Nilore 76.91 307 P P 14 23 11.3 +0.6
NIL Nilore 76.91 307 P P 14 23 11.3 +0.6
NIL pmax pmax
comp=Z,15nm,0.8s
ZAA0 Zalesovo Array 77.20 329 P P 14 23 11.1 -0.6
ZALV Zalesovo Beam 77.20 329 P P 14 23 11.1 -0.7
ZALV Zalesovo Beam 77.20 329 P P 14 23 11.6 -0.2
comp=Z,4.9nm,1.0s,baz=108,slow=4.8,SNR=8.9
comp=Z,4.9nm,1.0s
TIXI Tiksi 78.35 355 *i* P **P 14 23 16.2 -1.6**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
AAK Ala-Archa 78.77 316 P P 14 23 21.5 +0.6
AAK Ala-Archa 78.77 316 *ceP* **P 14 23 21.6 +0.6**
AAK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 79.12 324 P P 14 23 22.3 -0.2
KURK IAmb IAmb 14 23 24.3
comp=Z,19nm,1.2s
KURK Kurchatov 79.12 324 *ceP* **P 14 23 22.9 +0.4**
KURK pmax pmax
comp=Z,14nm,1.0s
KURBB Kurchatov Arra 79.13 324 P P 14 23 22.7 +0.1
comp=Z,6.2nm,1.0s,baz=117,slow=4.2,SNR=16
comp=Z,6.2nm,1.0s
L16K Owhat River 80.87 24 P P 14 23 32.5 +0.7
SIMJ Simiganj 81.58 310 P P 14 23 36.2 -0.1
SIMJ IAmb IAmb 14 24 33.9
comp=Z,30nm,1.5s
KK31 Karatay Array 81.69 315 P P 14 23 36.9 +0.3
KK31 IAmb IAmb 14 23 38.6
comp=Z,13nm,1.5s
KK31 Karatay Array 81.69 315 P P 14 23 36.9 +0.3
KK31 pmax pmax
comp=Z,13nm,1.5s
KKAR Karatay Array 81.69 315 P P 14 23 36.1 -0.5
KKAR Karatay Array 81.69 315 P P 14 23 36.1 -0.5
QSPA South Pole Qui 83.67 180 P P 14 23 46.6 0.0
QSPA South Pole Qui 83.67 180 P P 14 23 46.9 +0.3
comp=Z,7.9nm,0.8s,baz=76,slow=0.3,SNR=30
comp=Z,7.9nm,0.8s
NRIK Noril'sk 84.37 343 P P 14 23 50.0 +0.2
NRIK Noril'sk 84.37 343 *ceP* **P 14 23 50.4 +0.6**
NRIK pmax pmax
comp=Z,20nm,1.1s
NRIK Noril'sk 84.37 343 P P 14 23 50.2 +0.3
comp=Z,9.5nm,0.9s,baz=118,slow=4.8,SNR=12
comp=Z,9.5nm,0.9s
BVAR Borovoye Array 84.71 325 P P 14 23 52.5 +0.6
comp=Z,22nm,0.9s,baz=110,slow=6.3,SNR=28
comp=Z,22nm,0.9s
BRVK Borovoye 84.78 325 P P 14 23 52.5 +0.3
BRVK Borovoye 84.78 325 *ceP* **P 14 23 52.9 +0.7**
BRVK pmax pmax
comp=Z,27nm,1.0s
MLY Manley 85.90 23 P P 14 23 58.0 +0.3
MLY IAmb IAmb 14 24 44.5
comp=Z,7.3nm,0.9s
RND Reindeer 86.02 25 P P 14 23 58.4 +0.1
RND Reindeer 86.02 25 P P 14 23 58.4 +0.1
RND pmax pmax
comp=Z,16nm,1.0s
WRH Wood River Hil 86.73 24 P P 14 24 01.2 -0.5
WRH IAmb IAmb 14 24 08.4
comp=Z,11nm,1.1s
CCB Clear Creek Bu 86.91 24 P P 14 24 01.2 -1.3
IL31 87.32 24 P P 14 24 03.3 -1.2
IL31 IAmb IAmb 14 24 04.8
comp=Z,12nm,1.2s
ILAR Eielson Array 87.32 24 P P 14 24 03.2 -1.4
ILAR Eielson Array 87.32 24 P P 14 24 03.8 -0.8
comp=Z,3.0nm,1.0s,baz=259,slow=5.2,SNR=12
comp=Z,3.0nm,1.0s
F24K Squaw Lake 87.94 21 P P 14 24 08.4 +0.9
F24K IAmb IAmb 14 24 10.3
comp=Z,14nm,1.2s
FYU Fort Yukon 88.58 22 P P 14 24 11.2 +0.7
L27K Beaver Creek, 88.91 26 P P 14 24 12.8 +0.6
EGAK Eagle 89.66 25 P P 14 24 16.2 +0.6
EGAK IAmb IAmb 14 24 50.4
comp=Z,23nm,1.6s
ABKAR Akbulak array 90.23 319 P P 14 24 17.4 -1.2
ARU Arti 92.14 326 *d iP* **P 14 24 26.2 -1.1**
ARU 14 28 07.7
ARU S **SKSac 14 34 56.7 -3.8**
ARU SS **SS 14 41 32.5 -6.9**
ARU pmax pmax
comp=Z,8.0nm,1.1s
ELIB Princess Elisa 92.86 196 *dP* **P 14 24 29.7 -0.9**
NVAR Mina Array Bea 100.66 52 P Pdif 14 25 05.8 -1.0
comp=Z,0.3nm,0.6s,baz=288,slow=6.3,SNR=2.1
YKA Yellowknife Ar 101.26 28 PP PP 14 29 13.8 -3.7
comp=Z,0.4nm,0.9s,baz=277,slow=6.7,SNR=2.5
TORD Torodi Ar. Bea 141.33 283 PKhKP PKPpre 14 30 42.3
comp=Z,1.8nm,1.1s,baz=58,slow=4.2,SNR=4.1
CPUP Villa Florida 142.02 150 PKP PKPdf 14 30 51.9 +1.0
comp=Z,1.8nm,0.9s,baz=262,slow=2.5,SNR=2.7
SDV Santo Domingo 146.54 83 PKPbc PKPdf 14 31 00.2 +0.9
comp=Z,5.6nm,0.8s,baz=241,slow=4.1,SNR=6.0
KIC Kosan Boka 147.97 272⇑ *e*PKP1 **PKPbc 14 31 05.3 +0.7**
comp=Z,23nm,1.1s
DBIC Dimbokro 148.10 272 PKPbc PKPdf 14 31 03.2 +1.5
DBIC Dimbokro 148.10 272 PKPbc PKPbc 14 31 03.5 -1.4
comp=Z,1.1nm,0.9s,baz=84,slow=4.4,SNR=0.9
LIC Lamto 148.25 272⇑ *i*PKP1 **PKPbc 14 31 06.2 +0.9**
comp=Z,40nm,0.9s
TIC Toumodi 148.26 272⇑ *e*PKP1 **PKPbc 14 31 05.9 +0.6**
comp=Z,25nm,1.1s

*IDC **27** 14:12:01.2±0.6,6.˝38S×143.˝56E,h0km,mb4.5/17, mbtmp4.5/19,ML4.4/1,MS3.6/2,Error ellipse: s-maj=28.5km s-min=15.1km az=81.0*
*NEIC **27** 14:12:03.9±1.4,6.˚37S±0.˚09×143.˚53E±0.˚10,h10km±1km, mb5.1/57,Error ellipse: s-maj=16.2km s-min=15.0km az=250.0*

ISC 27 14:12:03.1±0.4,6˚37S±0.˚06×143˚52E±0.˚08,h10km,n90, σ0s85/90,mb5.0/44,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.70**	**130**	Pn	**Pn**	**14 13 14.6**	**+0.4**
	87nm,0.6s,baz=325,slow=9.6,SNR=4.0						
PMG				Sn	**Sn**	**14 14 07.4**	**-1.3**
	13nm,0.3s,baz=234,slow=22,SNR=1.5						
COEN	**Coen**	**7.55**	**183**	Pn	**Pn**	**14 13 53.9**	**+0.6**
WRAB	**Tennant Creek**	**16.16**	**213**		**P**	**14 15 54.3**	**+0.5**
WB2	**Warramunga Arr**	**16.17**	**213**		**P**	**14 15 54.4**	**+0.5**
WRA	**Warramunga Arr**	**16.18**	**213**	Pn	**Pn**	**14 15 49.1**	**-1.7**
	1.6nm,0.3s,baz=32,slow=12,SNR=1.4						
WRA				Sn	Sn	14 18 37.4	-13
	1.1nm,0.3s,baz=22,slow=22,SNR=2.5						
	15nm,0.7s						
AS31	**Alice Springs**	**19.53**	**207**	P	**P**	**14 16 31.7**	**+0.8**
ASAR	**Alice Springs**	**19.53**	**207**	P	**P**	**14 16 31.5**	**+0.6**
ASAR	**Alice Springs**	**19.53**	**207**	P	**Pn**	**14 16 32.5**	**+0.2**
	106nm,0.7s,baz=30,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**20.98**	**235**	P	**P**	**14 16 46.8**	**0.0**
KAPI	**Kappang**	**23.69**	**272**	P	**P**	**14 17 15.8**	**+0.5**
KAPI				IAmb	IAmb	14 17 17.4	
	comp=Z,45nm,1.1s						
TOLI2	**Tolitoli**	**23.89**	**287**	P	**P**	**14 17 16.8**	**-0.4**
STKA	**Stephens Creek**	**25.45**	**184**	P	**P**	**14 17 32.1**	**+0.9**
DZM	**Mont Dzumac**	**27.09**	**128**	P	**P**	**14 17 46.2**	**-0.2**
BBOO	**Buckleboo**	**27.21**	**194**	P	**P**	**14 17 49.0**	**+1.7**
BBOO				IAmb	IAmb	14 17 58.2	
	comp=Z,63nm,1.4s						
FORT	**Forrest**	**28.29**	**209**	P	**P**	**14 17 55.4**	**-1.6**
CAN	**Canberra**	**29.25**	**171**	P	**P**	**14 18 06.7**	**+1.2**
CAN				IAmb	IAmb	14 19 11.7	
	comp=Z,46nm,1.4s						
JCJ	**Chichijima**	**33.29**	**358**	LR	LR	14 32 40.6	
	comp=Z,131nm,19.3s,baz=143,slow=37						
XMIS	**Christmas Isla**	**37.67**	**261**	P	**P**	**14 19 18.0**	**-0.9**
XMIS				IAmb	IAmb	14 19 18.4	
	comp=Z,18nm,0.7s						
MJAR	**Matsushiro Arr**	**42.97**	**354**	P	**P**	**14 20 01.0**	**-1.5**
	comp=Z,3.2nm,0.9s,baz=176,slow=7.1,SNR=3.7						
	comp=Z,3.2nm,0.9s						
KSRS	**Korea Array**	**45.96**	**343**	P	**P**	**14 20 27.0**	**+0.6**
	comp=Z,5.5nm,0.9s,baz=163,slow=9.0,SNR=8.8						
KSRS				PcP	**PcP**	**14 22 03.1**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=170,slow=5.4,SNR=1.9						
KSRS				LR	LR	14 36 35.5	
	comp=Z,45nm,21.6s,baz=155,slow=32						
	comp=Z,5.5nm,0.9s						
JTM	**Tenmabayashi**	**46.98**	**357**	P	**P**	**14 20 34.6**	**+0.3**
JKA	**Kamikawa-asahi**	**50.25**	**359**	P	**P**	**14 21 00.2**	**+0.7**
JKA				IAmb	IAmb	14 21 08.6	
	comp=Z,32nm,1.7s						
ASAJ	**Asahikawa**	**50.26**	**359**	P	**P**	**14 21 00.6**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=246,slow=16,SNR=1.4						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.41**	**300**	P	**P**	**14 21 01.3**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=127,slow=5.9,SNR=2.0						
	comp=Z,1.4nm,0.6s						
USA0B	**Ussuriysk Arra**	**51.40**	**349**	P	**P**	**14 21 09.2**	**+1.0**
USA0B				IAmb	IAmb	14 21 14.1	
	comp=Z,38nm,1.8s						
USRK	**Ussuriysk Ar.**	**51.40**	**349**	P	**P**	**14 21 09.1**	**+0.9**
USRK	**Ussuriysk Ar.**	**51.40**	**349**	P	**P**	**14 21 08.0**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=173,slow=6.6,SNR=5.9						
	comp=Z,6.8nm,0.8s						
KLR	**Kul'dur**	**56.31**	**351**	P	**P**	**14 21 44.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=163,slow=7.8,SNR=6.8						
	comp=Z,1.1nm,0.5s						
PEA0B	**Petropavlovsk-**	**60.46**	**10**	P	**P**	**14 22 13.8**	**+0.9**
PETK	**Petropavlovsk-**	**60.46**	**10**	P	**P**	**14 22 13.6**	**+0.7**
PETK	**Petropavlovsk-**	**60.46**	**10**	P	**P**	**14 22 12.9**	**0.0**
	comp=Z,7.3nm,0.9s,baz=152,slow=6.3,SNR=7.4						
	comp=Z,7.3nm,0.9s						
SONM	**Songino Array**	**63.10**	**333**	P	**P**	**14 22 31.7**	**+0.7**
SONM	**Songino Array**	**63.10**	**333**	P	**P**	**14 22 30.8**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=158,slow=7.7,SNR=4.5						
	comp=Z,1.3nm,0.6s						
CASY	**Casey**	**64.02**	**194**	P	**P**	**14 22 36.9**	**+0.2**
PALK	**Pallekele**	**64.12**	**281**	P	**P**	**14 22 38.0**	**-0.3**
SEY	**Seymchan**	**69.43**	**4**	P	**P**	**14 23 11.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=162,slow=3.2,SNR=2.7						
	comp=Z,2.7nm,0.8s						
VNDA	**Vanda**	**71.78**	**176**	P	**P**	**14 23 25.9**	**+0.6**
VNDA				IAmb	IAmb	14 24 16.3	
	comp=Z,34nm,1.9s						
VNDA	**Vanda**	**71.78**	**176**	P	**P**	**14 23 25.0**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=350,slow=6.4,SNR=2.7						
	comp=Z,2.5nm,0.8s						
MK31	**Makanchi Array**	**75.61**	**322**	P	**P**	**14 23 48.3**	**-0.1**
MKAR	**Makanchi Array**	**75.61**	**322**	P	**P**	**14 23 48.4**	**0.0**
	comp=Z,4.8nm,0.7s,baz=112,slow=6.7,SNR=11						
	comp=Z,4.8nm,0.7s						
MAKZ	**Makanchi**	**75.81**	**321**	P	**P**	**14 23 49.5**	**0.0**
NIL	**Nilore**	**77.34**	**306**	P	**P**	**14 23 58.8**	**+0.2**
NIL				IAmb	IAmb	14 24 08.3	
	comp=Z,15nm,0.8s						
ZAA0	**Zalesovo Array**	**77.51**	**329**	P	**P**	**14 23 57.8**	**-1.1**
ZALV	**Zalesovo Beam**	**77.51**	**329**	P	**P**	**14 23 58.4**	**-0.5**
ZALV	**Zalesovo Beam**	**77.51**	**329**	P	**P**	**14 23 57.6**	**-1.3**
	comp=Z,2.2nm,0.6s,baz=112,slow=5.4,SNR=5.0						
	comp=Z,2.2nm,0.6s						
M14K	**Bethel**	**79.20**	**24**	P	**P**	**14 24 09.3**	**+1.2**
L14K	**Kuka Creek**	**79.25**	**23**	P	**P**	**14 24 09.5**	**+1.2**
L14K				IAmb	IAmb	14 24 11.3	
	comp=Z,11nm,0.7s						
KURBB	**Kurchatov Arra**	**79.47**	**324**	P	**P**	**14 24 09.6**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=112,slow=4.3,SNR=4.3						
	comp=Z,1.8nm,0.7s						
N15K	**Kwethluk River**	**79.65**	**25**	P	**P**	**14 24 11.6**	**+1.0**
ARSB	**Arslanbob**	**79.81**	**314**	P	**P**	**14 24 12.4**	**+0.3**
K15K	**Wolf Creek Mou**	**80.25**	**23**	P	**P**	**14 24 15.1**	**+1.3**
K15K				IAmb	IAmb	14 24 16.4	
	comp=Z,24nm,1.2s						
L16K	**Owhat River**	**80.73**	**24**	P	**P**	**14 24 17.4**	**+1.0**
L16K				IAmb	IAmb	14 24 28.7	
	comp=Z,32nm,1.5s						
J16K	**Anvik River**	**81.15**	**22**	P	**P**	**14 24 19.9**	**+1.2**
J16K				IAmb	IAmb	14 24 58.9	
	comp=Z,24nm,1.4s						
N18K	**Kilae Creek**	**81.70**	**26**	P	**P**	**14 24 22.2**	**+0.6**
KKAR	**Karatay Array**	**82.09**	**315**	P	**P**	**14 24 23.7**	**-0.4**
P19K	**Oil Pt**	**82.40**	**27**	P	**P**	**14 24 25.3**	**0.0**
L19K	**White Mountain**	**82.86**	**25**	P	**P**	**14 24 27.2**	**-0.4**
L19K				IAmb	IAmb	14 25 26.6	
	comp=Z,34nm,1.6s						
M20K	**Styx River**	**83.44**	**25**	P	**P**	**14 24 31.2**	**+0.4**
QSPA	**South Pole Qui**	**83.60**	**180**	P	**P**	**14 24 31.5**	**-0.2**
QSPA				IAmb	IAmb	14 24 32.9	
	comp=Z,18nm,0.9s						
QSPA	**South Pole Qui**	**83.60**	**180**	P	**P**	**14 24 31.2**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=263,slow=0.3,SNR=11						
	comp=Z,1.6nm,0.8s						
SKT	**Skwentna**	**84.16**	**25**	P	**P**	**14 24 33.6**	**-0.8**
SKT				IAmb	IAmb	14 26 12.6	
	comp=Z,31nm,1.6s						
SUA	**Susitna One**	**84.29**	**26**	P	**P**	**14 24 34.9**	**-0.3**
RC01	**Rabbit Creek A**	**84.58**	**27**	P	**P**	**14 24 36.1**	**-0.4**
NRIK	**Noril'sk**	**84.58**	**343**	P	**P**	**14 24 35.3**	**-1.0**
	comp=Z,7.2nm,0.8s,baz=120,slow=4.5,SNR=4.3						
	comp=Z,7.2nm,0.8s						
D19K	**Kuna River**	**84.84**	**18**	P	**P**	**14 24 38.5**	**+0.8**
D19K				IAmb	IAmb	14 24 49.4	
	comp=Z,12nm,1.2s						
BVAR	**Borovoye Array**	**85.04**	**325**	P	**P**	**14 24 38.8**	**-0.2**
	comp=Z,15nm,1.0s,baz=109,slow=6.6,SNR=2.2						
	comp=Z,15nm,1.0s						
MLY	**Manley**	**85.78**	**23**	P	**P**	**14 24 42.4**	**0.0**
RND	**Reindeer**	**85.87**	**25**	P	**P**	**14 24 42.3**	**-0.7**
RND				IAmb	IAmb	14 24 44.1	
	comp=Z,16nm,1.0s						
I23K	**Minto, Yukon-K**	**86.36**	**23**	P	**P**	**14 24 44.8**	**-0.5**
I23K				IAmb	IAmb	14 24 48.2	
	comp=Z,34nm,2.0s						
WRH	**Wood River Hil**	**86.60**	**24**	P	**P**	**14 24 45.6**	**-0.8**
WRH				IAmb	IAmb	14 24 47.0	
	comp=Z,7.7nm,0.9s						
E22K	**Anaktuvuk Pass**	**86.72**	**20**	P	**P**	**14 24 47.6**	**+0.5**
E22K				IAmb	IAmb	14 25 10.7	
	comp=Z,15nm,1.4s						
G23K	**Bananza Creek**	**86.74**	**21**	P	**P**	**14 24 47.8**	**+0.6**
G23K				IAmb	IAmb	14 24 49.2	
	comp=Z,12nm,1.2s						
D22K	**Ayikyak River**	**86.77**	**19**	P	**P**	**14 24 47.5**	**+0.2**
D22K				IAmb	IAmb	14 24 53.1	
	comp=Z,8.2nm,1.0s						
CCB	**Clear Creek Bu**	**86.78**	**24**	P	**P**	**14 24 46.4**	**-0.9**
CCB				IAmb	IAmb	14 24 47.7	
	comp=Z,8.2nm,0.8s						
IL31		**87.19**	**24**	P	**P**	**14 24 48.3**	**-1.0**
ILAR	**Eielson Array**	**87.19**	**24**	P	**P**	**14 24 48.1**	**-1.2**
	comp=Z,6.8nm,1.0s,baz=255,slow=5.2,SNR=7.1						
	comp=Z,6.8nm,1.0s						
J25K	**Salcha River,**	**87.74**	**24**	P	**P**	**14 24 52.3**	**+0.2**
J25K				IAmb	IAmb	14 24 53.6	
	comp=Z,16nm,1.1s						
F24K	**Squaw Lake**	**87.83**	**21**	P	**P**	**14 24 52.5**	**+0.1**
F24K				IAmb	IAmb	14 24 55.5	
	comp=Z,7.0nm,0.8s						
L26K	**Log Cabin Wild**	**88.08**	**26**	P	**P**	**14 24 54.2**	**+0.6**
CTGM	**Chitina Glacie**	**88.39**	**28**	P	**P**	**14 24 55.7**	**+0.4**
L27K	**Beaver Creek,**	**88.75**	**26**	P	**P**	**14 24 57.2**	**+0.3**
L27K				IAmb	IAmb	14 24 59.4	
	comp=Z,7.1nm,1.0s						
BCAR	**Beaver Creek A**	**88.77**	**26**	P	**P**	**14 24 57.7**	**+0.7**
K27K	**Chicken**	**88.92**	**25**	P	**P**	**14 24 58.1**	**+0.5**
K27K				IAmb	IAmb	14 25 00.7	
	comp=Z,13nm,1.1s						
DAWY	**Dawson**	**90.07**	**25**	P	**P**	**14 25 03.0**	**0.0**
DAWY				IAmb	IAmb	14 28 07.2	
	comp=Z,28nm,1.9s						
K29M	**Barlow Dome**	**90.82**	**26**	P	**P**	**14 25 07.0**	**+0.4**
K29M				IAmb	IAmb	14 25 09.2	
	comp=Z,8.4nm,0.8s						
PLCA	**Paso Flores**	**123.64**	**149**	PKP	**PKPdf**	**14 31 00.8**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=188,slow=7.1,SNR=0.9						
CPUP	**Villa Florida**	**141.72**	**149**	PKP	**PKPdf**	**14 31 33.6**	**-2.2**
	comp=Z,1.6nm,0.6s,baz=180,slow=5.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**141.82**	**283**	PKhKP	PKPpre	14 31 31.1	
	comp=Z,1.1nm,0.9s,baz=77,slow=3.1,SNR=4.3						
DBIC	**Dimbokro**	**148.59**	**272**	PKPbc	**PKPdf**	**14 31 50.2**	**+2.3**
DBIC	**Dimbokro**	**148.59**	**272**	PKPbc	**PKPdf**	**14 31 50.4**	**+2.5**
	comp=Z,22nm,1.0s,baz=93,slow=4.6,SNR=9.4						

IDC 27 14:16:17.1±4.2,25˚36S×176˚51W,h0km,mb4.4/4, mbtmp4.3/4,Error ellipse: s-maj=155.1km s-min=38.8km az=138.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.17**	**250**	P	P	14 23 31.0	+1.1
	3.4nm,0.7s,baz=111,slow=8.6,SNR=6.4						
	3.4nm,0.7s						
WRA	**Warramunga Arr**	**45.48**	**266**	P	P	14 24 37.0	-1.5
	3.4nm,1.1s,baz=100,slow=8.3,SNR=5.9						
	3.4nm,1.1s						
PETK	**Petropavlovsk-**	**81.30**	**345**	P	P	14 28 35.8	+0.9
	3.5nm,0.8s,baz=217,slow=4.4,SNR=5.3						
	3.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.01**	**289**	P	P	14 29 33.9	+0.9
	0.7nm,0.3s,baz=137,slow=3.7,SNR=7.3						
	0.7nm,0.3s						
AKASG	**Malin Array Be**	**147.89**	**329**	PKPbc	PKPdf	14 36 01.9	+0.9
	0.8nm,0.5s,baz=43,slow=3.8,SNR=2.4						
BRTR	**Keskin Array B**	**150.99**	**307**	PKPbc	PKPbc	14 36 11.9	-0.3
	1.1nm,1.0s,baz=64,slow=3.4,SNR=3.1						
BRTR				PKPab	PKPab	14 36 19.1	-0.5
	1.5nm,0.7s,baz=92,slow=4.2,SNR=5.3						
MMAI	**Mount Meron Ar**	**151.19**	**293**	PKPab	PKPab	14 36 19.3	-1.3
	3.3nm,0.6s,baz=59,slow=3.4,SNR=4.5						

*IDC **27** 14:20:38.6±0.9,2.˚45S×79.˚39W,h0km,mb3.8/6, mbtmp4.0/8,ML4.0/2,MS3.5/6,Error ellipse: s-maj=96.8km s-min=20.9km az=73.0*
*NEIC **27** 14:20:38.8±1.5,2.˚80S±0.˚03×79.˚79W±0.˚03,h3km±5km, mb4.5/24,Error ellipse: s-maj=5.9km s-min=1.5km az=131.0*
*IGQ **27** 14:20:39±0.1,3˚S±1˚×8˚W±˚,h2km*

ISC 27 14:20:38.2±1.1,2˚79S±0˚02×79˚81W±0˚03,h3km±7km, n156,σ1s84/159,mb4.4/16,MS3.6/3,Near coast of Ecuador

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

ISPG	Isla Puna-Puer	0.40	245	P		Pb	14 20 49.0	+0.9
ACH2	Ecuador-Machal	0.47	181	P		Pg	14 20 48.0	+0.8
ACH2				S		Sg	14 20 54.0	+0.7
ACH1	Ecuador-Univer	0.50	192	P		Pg	14 20 49.0	+1.2
MILO	Milagro-Astudi	0.57	26	P		Pb	14 20 52.0	+1.1
MILO				S		Sn	14 21 03.0	-0.2
APLA	Playas - Guaya	0.61	285	P		Pb	14 20 53.0	+1.5
COHC	Cochancay	0.64	59			Pg	14 20 50.9	+0.5
COHC				Sg		Sg	14 20 58.6	-0.1
COHC	Cochancay	0.64	59	eP		Pg	14 20 51.0	+0.5
COHC	Cochancay	0.64	59	P		Pg	14 20 51.0	+0.5
COHC				S		Sg	14 20 59.0	+0.2
GYE3	Ecuador-Guayaq	0.64	352	P		Pg	14 20 51.0	+0.4
GYE3				S		Sb	14 21 02.0	+0.5
AGUAY	Guayaquil	0.75	349	P		Pg	14 20 54.0	+1.4
ARNL	Arenillas	0.79	199			Pg	14 20 54.0	+0.6
ARNL				Sg		Sg	14 21 04.1	+0.3
ARNL	Arenillas	0.79	199	P		Pg	14 20 54.0	+0.6
ARNL				S		Sg	14 21 04.0	+0.3
ACUE	Ecuador-Cuenca	0.85	98	P		Pg	14 20 54.0	-0.6
ACUE				S		Sg	14 21 06.0	+0.3
AZOG	Ecuador-Azogue	0.96	88	P		Pg	14 20 57.0	+0.4
SALI	Salinas	1.33	297			Pn	14 21 04.2	+0.5
SALI	Salinas	1.33	297	P		Pn	14 21 04.0	+0.3
BOSC	San Juan Bosco	1.35	105			Pb	14 21 05.1	+0.7
BOSC	San Juan Bosco	1.35	105	P		Pg	14 21 04.0	-0.2
BOSC				S		Sg	14 21 22.0	+0.2
AMCR	Ecuador-Macara	1.57	185	P		Pn	14 21 06.0	-1.1
AMCR				S		Sn	14 21 26.0	-2.1
MCRA	Macar, Loja	1.57	185	Pn		Pn	14 21 06.4	-0.7
MCRA	Macar, Loja	1.57	185	eP		Pn	14 21 06.4	-0.7
MCRA				eP		Pn	14 21 06.0	-1.4
MCRA	Macar, Loja	1.57	185	P		Pn	14 21 06.0	-1.1
MCRA				S		Sn	14 21 26.0	-2.1
PPLP	Puerto Lpez	1.57	322	eP		Pn	14 21 05.7	-1.4
PPLP	Puerto Lpez	1.57	322	P		Pn	14 21 05.0	-2.2
CHSH	Refugio Sur-Vo	1.59	36			Pn	14 21 07.6	-0.3
CHSH	Refugio Sur-Vo	1.59	36	P		Pn	14 21 07.0	-0.9
TAMH	Tambohuasha Ch	1.61	39	P		Pn	14 21 07.0	-1.0
PORT	Chimborazo Vol	1.68	38	P		Pn	14 21 09.0	0.0
IGUA	Igualata	1.74	42	P		Pn	14 21 10.0	+0.1
AQUE	Quevedo	1.76	10	P		Pn	14 21 09.0	-0.7
BMAS	Trigal station	1.84	46	P		Pn	14 21 12.0	+0.8
BBIL	Ulba Tungurahu	1.88	45	P		Pn	14 21 12.0	+0.4
BULB	Ulba Tungurahu	1.94	46	P		Pn	14 21 13.0	+0.5
BRUN	Tungurahua Vol	1.94	45	P		Pn	14 21 14.0	+1.6
ISPT	Isla de la Pla	1.98	320	P		Pn	14 21 13.0	+0.3
ELAR	El Aromo	2.02	329	P		Pn	14 21 16.0	+0.4
PECV	Mancha de Ca P	2.02	353	P		Pn	14 21 14.0	+0.7
ZUMB	Zumba	2.16	162	P		Pn	14 21 17.0	+1.7
PUYO	Puyo, Santa Ro	2.20	54	P		Pb	14 21 18.0	+0.2
ABH2	Ecuador-Univer	2.20	344	P		Pn	14 21 18.0	+2.3
PIS1	Pisayambo	2.23	39	P		Pn	14 21 18.0	+1.4
ILLI	Illinizas Sur	2.33	28	P		Pn	14 21 19.0	+1.1
TAIS	Taisha	2.34	80	P		Pb	14 21 22.0	+0.9
PIAT	Ana Tenorio	2.36	41	eP		Pn	14 21 20.5	+2.2
PIAT	Ana Tenorio	2.36	41	P		Pn	14 21 20.0	+1.7
PAST	Pastocalle	2.39	29	P		Pn	14 21 21.0	+2.3
FLF1	Flavio Alfaro-	2.42	359	P		Pn	14 21 19.0	+0.2
VCES	Cotopaxi	2.43	35	P		Pb	14 21 22.0	-1.0
BMOR	Cotopaxi Volca	2.45	33	P		Pn	14 21 22.0	+2.3
CAMI	Rancho Maria	2.47	32	P		Pn	14 21 22.0	+2.1
BNAS	Cotopaxi Volca	2.49	32	P		Pb	14 21 23.0	-0.9
NAS2	Nasa	2.52	32	P		Pb	14 21 24.0	-0.4
TAMB	Tambo	2.53	35	P		Pn	14 21 23.0	+2.2
JAMA	Jama	2.55	351	P		Pn	14 21 23.0	+2.4
VC1	Cotopaxi 1	2.56	33	P		Pb	14 21 24.0	-1.1
PITA	Cotopaxi Volc	2.61	32	P		Pn	14 21 24.0	+2.2
TOMA	Boca Toma-Volc	2.66	31	P		Pb	14 21 26.0	-0.8
MAG1	Magdalena	2.70	1	P		Pn	14 21 23.0	+0.3
ANTM	Antisana-La Mi	2.74	35	P		Pb	14 21 27.0	-1.3
ANTG	Antisana-Guama	2.75	34	P		Pb	14 21 27.0	-1.5
ANTS	Antisana-Sarah	2.81	36	P		Pn	14 21 27.0	+2.4
HPAL	Hacienda Las P	2.81	24	P		Pn	14 21 26.0	+1.6
GGPT	Toaza - Volcan	2.81	25	P		Pn	14 21 26.0	+1.5
JUA2	San Juan 2	2.83	25	P		Pn	14 21 27.0	+2.2
ANTI	Antisana	2.85	35	P		Pn	14 21 28.0	+2.8
GGPC	Guagua Pichinc	2.87	25	P		Pn	14 21 28.0	+2.6
TERV	Terraza Guagua	2.87	25	P		Pn	14 21 27.0	+1.6
PINO	Pino	2.88	25	P		Pn	14 21 27.0	+1.4
PULU	Pululahua	3.08	25			Pn	14 21 28.6	+0.3
PULU	Pululahua	3.08	25	P		Pn	14 21 30.0	+1.7
PAC1	Pacto, Paraso	3.20	18	eP		Pn	14 21 33.1	+3.4
PAC1	Pacto, Paraso	3.20	18	P		Pn	14 21 31.0	+1.3
OTAV	Otavalo	3.30	24			Pn	14 21 32.6	+1.4
OTAV	Otavalo	3.30	24	eP		Pn	14 21 34.2	+2.9
OTAV	Otavalo	3.30	24	P		Pn	14 21 33.0	+1.7
CAYR	Refugio Cayamb	3.32	33	P		Pb	14 21 37.0	-1.2
ANGU	Angureal	3.34	32	P		Pb	14 21 36.0	-2.6
CAYA	Cayambe	3.38	33	P		Pb	14 21 37.0	-2.1
CUSE	Cuicocha Este	3.38	25	eP		Pn	14 21 35.6	+3.2
CUSE	Cuicocha Este	3.38	25	P		Pn	14 21 34.0	+1.6
CUIC	Cuicocha-Domo	3.40	25	P		Pn	14 21 35.0	+2.4
COTA	Cotacachi	3.44	25	P		Pn	14 21 37.0	+3.8
IMBA	Imbabura, San	3.45	28			Pn	14 21 35.4	+2.2
IMBA	Imbabura, San	3.45	28	P		Pb	14 21 38.0	-2.2
LAV4	Lava4-Reventad	3.45	39	P		Pb	14 21 39.0	-1.3
URCU	Urcuqui	3.56	26	P		Pb	14 21 40.0	-2.2
CASC	Dorado de Casc	3.81	40	P		Pb	14 21 43.0	-3.3
LITE1	Lita	3.85	22	P		Pn	14 21 41.0	+2.5
RVRD	Rio Verde	3.86	6	P		Pn	14 21 39.0	+0.5
LNGL	El Angel-Carch	3.95	27	P		Pn	14 21 45.0	+4.8
BONI	La Bonita	3.95	35	eP		Pb	14 21 46.1	-2.5
BONI	La Bonita	3.95	35	P		Pb	14 21 46.0	-2.7
CHL1	Volc¡n Chiles	4.02	28	P		Pn	14 21 45.0	+3.8
CHMA	Chilma	4.03	26	P		Pn	14 21 45.0	+3.8
TULM	Tulcn-Chalpat	4.03	30			Pn	14 21 43.1	+1.8
TULM	Tulcn-Chalpat	4.03	30	eP		Pb	14 21 46.6	-3.5
TULM	Tulcn-Chalpat	4.03	30	P		Pn	14 21 46.0	+4.7
ECEN	Cerro Negro	4.03	27	P		Pn	14 21 46.0	+4.5
CHL2	Volc¡n Chiles	4.04	28	P		Pb	14 21 47.0	-3.4
ATAH	Atahualpa	4.54	162	Pn		Pn	14 21 52.1	+3.8
	4.0nm,0.3s,baz=6.5,slow=7.6,SNR=17							
ATAH				Lg		Lg	14 23 00.0	
	11nm,0.3s,baz=54,slow=17,SNR=3.1							
ATAH				LR		LR	14 23 13.4	
	comp=Z,96nm,19.5s,baz=342,slow=32							
	17nm,0.4s							
GCUF	Volcan Galeras	4.69	32	eP		Pn	14 21 56.0	+5.5
TUMC	Tumaco	4.71	13	eP		Pb	14 21 57.8	-3.7
BBAC	Balboa, Cauca	5.42	28	eP		Pn	14 22 03.8	+3.5
PTLC	Puerto Leguiza	5.81	60	eP		Pn	14 22 08.6	+3.2
GR1C	Gorgona, Isla	5.99	16	eP		Pn	14 22 11.8	+4.0
FLOC	Florencia	6.01	44	eP		Pn	14 22 10.2	+2.0
POPC	Popayan, Colom	6.15	31	eP		Pn	14 22 13.6	+3.2
GARC	Garzon, Huila	6.56	41	eP		Pn	14 22 21.2	+5.3
JAMC	Jamundi, Valle	6.74	28	eP		Pn	14 22 20.5	+2.1
CZSB	Cruzeiro do Su	8.60	125	Pn		Pn	14 22 43.2	-0.6
CZSB	Cruzeiro do Su	8.60	125	eP		Pn	14 22 44.3	+0.5
GUY2C	Guyana, Caldas	9.12	29	eP		Pn	14 23 00.4	+9.2
ROSC	El Rosal	9.36	36	LR		LR	14 26 53.1	
	comp=Z,496nm,18.9s,baz=236,slow=42							
NNA	Nana	9.59	162	Pn		Pn	14 23 03.3	+5.8
	3.0nm,0.3s,baz=315,slow=7.9,SNR=3.6							
NNA				Lg		Lg	14 25 31.1	
	0.5nm,0.3s,baz=253,slow=19,SNR=1.2							
	8.3nm,0.3s							
SDV	Santo Domingo	14.77	38	LR		LR	14 30 36.0	
	comp=Z,228nm,18.9s,baz=255,slow=42							
ETMB	Extrema	15.20	118	Pn		Pn	14 24 08.7	-5.3
CNGN	Cerro Negro	16.67	336	Pn		Pn	14 24 29.1	-4.0
SAML	Samuel	17.62	111	P		P	14 24 46.5	+0.5
PB16	IPOC Station P	18.45	148			Pn	14 24 54.2	-1.6
PB07	IPOC Station P	21.15	154	P		P	14 25 25.6	+0.8
LVC	Limon Verde	22.36	153	LR		LR	14 35 07.3	
	comp=Z,77nm,20.4s,baz=260,slow=39							
TEIG	Tepich	24.34	340	P		P	14 25 58.8	+1.3
BIM	Bigot	25.31	47	P		P	14 26 06.5	+0.1
MDP	Montagnes des	28.25	74	LR		LR	14 38 06.1	
	comp=Z,154nm,18.4s,baz=210,slow=38							
DRIO	Del Rio	37.73	330	P		P	14 27 56.1	+0.6
TXAR	Lajitas Array	39.29	326	PcP		PcP	14 30 18.0	+0.3
	0.4nm,0.7s,baz=139,slow=5.6,SNR=4.1							
PLPT	Palo Pinto	39.51	335	P		P	14 28 11.6	+1.2
PLPT				IAmb		IAmb	14 28 17.9	
	comp=Z,14nm,0.8s							
SDCO	Great Sand Dun	46.85	332	P		P	14 29 11.1	+1.0
PDAR	Pinedale Array	52.71	333	P		P	14 29 55.4	+0.8
	comp=Z,0.5nm,0.9s,baz=132,slow=7.4,SNR=2.2							
	comp=Z,0.5nm,0.9s							
NVAR	Mina Array Bea	54.27	323	P		P	14 30 06.9	+0.8

	comp=Z,0.9nm,0.7s,baz=146,slow=7.1,SNR=6.3							
	comp=Z,0.9nm,0.7s							
ULM	Lac du Bonnet	54.62	347	P		P	14 30 07.7	-0.4
ULM				IAmb		IAmb	14 30 08.2	
	comp=Z,2.5nm,0.6s							
ULM	Lac du Bonnet	54.62	347	P		P	14 30 06.2	-1.8
	comp=Z,2.7nm,0.7s,baz=160,slow=6.5,SNR=5.7							
	comp=Z,2.7nm,0.7s							
YKA	Yellowknife Ar	70.25	344	P		P	14 31 52.2	-0.3
	comp=Z,0.2nm,0.4s,baz=136,slow=5.7,SNR=8.6							
	comp=Z,0.2nm,0.4s							
BELA	Belgrano 2	78.69	171	P		P	14 32 42.4	+0.9
BELA				IAmb		IAmb	14 33 14.1	
	comp=Z,3.6nm,1.2s							
G31M	Satah River	79.38	341	P		P	14 32 46.2	+0.9
G31M				IAmb		IAmb	14 32 47.0	
	comp=Z,5.0nm,1.0s							
SUMG	Summit	79.65	12	P		P	14 32 47.6	+0.4
SUMG				IAmb		IAmb	14 32 57.2	
	comp=Z,10nm,1.5s							
INK	Inuvik	79.93	342	P		P	14 32 49.0	+0.7
INK				IAmb		IAmb	14 32 54.5	
	comp=Z,7.2nm,1.1s							
A36M	Sachs Harbour	80.10	347	P		P	14 32 49.1	0.0
BCAR	Beaver Creek A	80.18	336	P		P	14 32 50.1	+0.2
H29M	Whitestone	80.39	339	P		P	14 32 51.1	+0.3
H29M				IAmb		IAmb	14 33 30.9	
	comp=Z,6.6nm,1.4s							
E29M	Blow River	81.34	341	P		P	14 32 55.5	-0.4
E29M				IAmb		IAmb	14 33 01.0	
	comp=Z,3.6nm,1.1s							
J25K	Salcha River,	82.28	337	P		P	14 33 01.4	+0.4
ILAR	Eielson Array	82.94	337	P		P	14 33 04.5	+0.2
ILAR	Eielson Array	82.94	337	P		P	14 33 04.4	+0.1
	comp=Z,1.1nm,1.0s,baz=119,slow=2.9,SNR=5.4							
	comp=Z,1.1nm,1.0s							
SNAA	Sanae	83.27	162	P		P	14 33 05.9	-0.2
CAST	Castle Rocks	84.63	335	P		P	14 33 12.8	-0.3
CAST				IAmb		IAmb	14 33 17.4	
	comp=Z,3.4nm,1.0s							
QSPA	South Pole Qui	87.28	180	P		P	14 33 27.5	+1.2
QSPA				IAmb		IAmb	14 33 54.9	
	comp=Z,3.0nm,1.2s							
QSPA	South Pole Qui	87.28	180	P		P	14 33 27.3	+1.0
	comp=Z,0.9nm,0.8s,baz=154,slow=2.9,SNR=1.1							
	comp=Z,0.9nm,0.8s							
F19K	Shaleruckik Mo	87.83	337	P		P	14 33 29.5	+0.8
F19K				IAmb		IAmb	14 34 10.9	
	comp=Z,3.6nm,0.9s							
E18K	Tukpahlearik C	89.03	338	P		P	14 33 35.1	+0.8
E18K				IAmb		IAmb	14 33 36.3	
	comp=Z,3.8nm,1.1s							
GERES	GERESS Array B	94.40	41	LR		LR	15 15 27.0	
	comp=Z,70nm,18.8s,baz=50,slow=35							
ZALV	Zalesovo Beam	127.47	11	PKP		PKPdf	14 39 44.8	0.0
	comp=Z,0.3nm,0.4s,baz=336,slow=3.2,SNR=3.9							
KURBB	Kurchatov Arra	128.95	18	PKP		PKPdf	14 39 48.2	+0.5
	comp=Z,0.4nm,0.4s,baz=331,slow=2.3,SNR=4.9							
MKAR	Makanchi Array	133.49	17	PKP		PKPdf	14 39 55.2	-1.2
	comp=Z,0.1nm,0.5s,baz=310,slow=4.3,SNR=1.6							
ASAR	Alice Springs	137.94	229	PKP		PKPdf	14 40 05.7	+0.3
	comp=Z,0.7nm,1.1s,baz=105,slow=2.1,SNR=2.4							
WRA	Warramunga Arr	139.58	235	PKP		PKiKP	14 40 10.7	-0.1
	comp=Z,0.2nm,0.5s,baz=114,slow=1.6,SNR=1.7							

IDC 27 14:35:59.9±6.0, 32°.49S×179°.08W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=243.3km s-min=63.9km az=159.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.13	270	P	P	14 43 53.9	-0.3
	0.9nm,0.7s,baz=110,slow=7.8,SNR=14						
	0.9nm,0.7s						
WRA	Warramunga Arr	43.31	275	P	P	14 44 03.9	+0.2
	0.4nm,0.6s,baz=116,slow=7.8,SNR=2.2						
	0.4nm,0.6s						
FINES	FINESS Array B	146.76	338	PKPbc	PKPbc	14 55 42.2	-0.9
	1.3nm,0.9s,baz=45,slow=3.1,SNR=1.3						

IDC 27 14:37:22.4±1.4, 31°.15N×103°.50E, h0km, mb3.4/5, mbtmp3.4/5, MS3.8/1, Error ellipse: s-maj=47.4km s-min=23.6km az=53.0

ISC 27 14:37:23.2±0.9, 31°.16N±0°.06×103°.39E±0°.08, h16km, n10, σ2s93/12, mb3.4/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.40	129	⇑Pg	Pb	14 37 31.3	-0.6
CD2				Sg	Sb	14 37 38.3	+0.4
CD2				smax	smax		
	comp=N,2μm,0.5s						
CD2				smax	smax		
	comp=E,2μm,0.5s						
PZH	PanZhiHua	4.86	198	Pn	Pn	14 38 38.3	+2.5
PZH				Pg	Pg	14 38 55.5	-0.8
PZH				Sn	Sb	14 39 40.5	-5.9
PZH				Sg	Sg	14 40 01.0	+1.7
PZH				smax	smax		
	comp=N,10.0nm,0.9s						
PZH				smax	smax		
	comp=E,20nm,0.7s						
HHC	Hu-ho-hao-te	11.71	32	eP	Pn	14 40 05.5	-4.1
NJ2	Nanjing	13.21	82	eP	Pn	14 40 17.5	-13
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	Korea Array	21.18	66	P	P	14 42 08.7	+0.9
	comp=Z,1.2nm,0.7s,baz=257,slow=10.0,SNR=5.7						
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	22.54	320	P	P	14 42 25.1	+2.7
	comp=Z,1.3nm,1.0s,baz=125,slow=12,SNR=6.7						
	comp=Z,1.3nm,1.0s						
ZALV	Zalesovo Beam	26.41	335	P	P	14 43 00.3	+1.5
	comp=Z,1.1nm,0.8s,baz=136,slow=5.0,SNR=4.2						
	comp=Z,1.1nm,0.8s						
OBN	Obninsk	52.03	318	LR	LR	15 08 33.6	
	comp=Z,102nm,21.7s,baz=178,slow=36						
WRA	Warramunga Arr	58.86	146	P	P	14 47 21.8	+0.5
	comp=Z,0.2nm,0.5s,baz=339,slow=7.8,SNR=1.6						
	comp=Z,0.2nm,0.5s						
ASAR	Alice Springs	61.86	148	P	P	14 47 43.8	+2.0
	comp=Z,0.1nm,0.5s,baz=340,slow=7.3,SNR=1.0						
	comp=Z,0.1nm,0.5s						

IDC 27 14:44:49.7±1.1, 60°.36S×150°.57E, h0km, mb4.4/7, mbtmp4.3/8, ML3.0/1, MS3.8/10, Error ellipse: s-maj=52.5km s-min=21.5km az=91.0
NEIC 27 14:44:51.7±1.2, 60°.4S±0°.1×150°.6E±0°.2, h10km±1km, mb4.8/15, Error ellipse: s-maj=21.3km s-min=16.3km az=175.0

ISC 27 14:44:51.3±0.6, 60°.36S±0°.10×150°.6E±0°.2, h10km, n46, σ0s70/33, mb4.5/15, MS3.8/10, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	17.64	172	Pn	Pn	14 48 56.1	-0.6
VNDA	Vanda	17.64	172	P	Pn	14 48 55.7	-1.0
	baz=340,slow=11,SNR=2.6						
	1.3nm,0.7s						
FOZ	Fox Glacier	20.45	43	P	P	14 49 28.1	-0.5
FOZ				IAmb	IAmb	14 49 44.6	
	comp=Z,71nm,1.4s						
STKA	Stephens Creek	29.11	344	P	P	14 50 52.4	+0.4
	comp=Z,3.6nm,0.9s,baz=188,slow=10.0,SNR=4.2						
	comp=Z,3.6nm,0.9s						
H01W1	Cape Leeuwin H	34.64	301	T	T	14 57 19.7	
	baz=160,slow=76						
H01W1				T	T	15 28 23.7	
	baz=149,slow=75						
H01W2	Cape Leeuwin H	34.65	301	T	T	14 57 20.0	
	baz=160,slow=76						
H01W2				T	T	15 28 23.4	
	baz=149,slow=75						
H01W3	Cape Leeuwin H	34.66	301	T	T	14 57 21.0	
	baz=160,slow=76						
H01W3				T	T	15 28 28.1	
	baz=149,slow=75						
NWAO	Narrogin (SRO)	35.07	306	LR	LR	15 02 03.5	
	comp=Z,251nm,20.4s,baz=164,slow=30						
MAW	Mawson	36.01	221	LR	LR	15 06 07.9	
	comp=Z,223nm,18.8s,baz=104,slow=36						
ASAR	Alice Springs	38.48	335	P	P	14 52 12.8	-0.5
ASAR	Alice Springs	38.48	335	P	P	14 52 13.1	-0.2
	comp=Z,6.9nm,0.7s,baz=163,slow=10.0,SNR=66						

ASAR				PcP	PcP	14 54 25.6	-0.7	
	comp=Z,1.1nm,0.8s,baz=143,slow=3.2,SNR=5.3							
	comp=Z,6.9nm,0.7s							
AS31	Alice Springs	38.48	335	P	P	14 52 13.1	-0.3	
DZM	Mont Dzumac	39.84	23	P	P	14 52 25.4	+0.6	
	comp=Z,7.6nm,1.0s,baz=281,slow=14,SNR=3.0							
	comp=Z,7.6nm,1.0s							
CTA	Charters Tower	40.35	354	P	P	14 52 29.1	+0.1	
	comp=Z,5.8nm,0.8s,baz=191,slow=10.0,SNR=5.7							
	comp=Z,5.8nm,0.8s							
KOUNC	Koumac, New Ca	40.93	20	P	P	14 52 34.4	+0.6	
KOUNC				IAmb	IAmb	14 52 35.6		
	comp=Z,20nm,0.9s							
WB2	Warramunga Arr	42.00	337	P	P	14 52 42.0	-0.5	
WB2				IAmb	IAmb	14 52 43.2		
	comp=Z,32nm,1.5s							
WRA	Warramunga Arr	42.01	337	P	P	14 52 41.7	-0.9	
WRA	Warramunga Arr	42.01	337	P	P	14 52 41.8	-0.8	
	comp=Z,7.2nm,1.1s,baz=167,slow=7.2,SNR=21							
WRA				PcP	PcP	14 54 36.6	-1.0	
	comp=Z,1.1nm,0.8s,baz=163,slow=2.8,SNR=4.8							
	comp=Z,7.2nm,1.1s							
WRAB	Tennant Creek	42.01	337	P	P	14 52 41.7	-0.9	
WRAB				IAmb	IAmb	14 52 43.2		
	comp=Z,23nm,1.4s							
WB0	Warramunga Arr	42.16	337	P	P	14 52 43.4	-0.5	
WB0				IAmb	IAmb	14 52 44.3		
	comp=Z,22nm,1.4s							
PSA00	Pilbara Seismi	44.38	317	P	P	14 53 01.6	-0.1	
PSA00				IAmb	IAmb	14 53 02.8		
	comp=Z,7.3nm,0.9s							
KNRA	Kununurra	47.36	331	P	P	14 53 24.5	-0.8	
KNRA				IAmb	IAmb	14 53 29.6		
	comp=Z,18nm,1.2s							
RAR	Rarotonga	52.21	64	LR	LR	15 12 27.2		
	comp=Z,78nm,19.5s,baz=201,slow=32							
LEM	Lembang	62.39	310	LR	LR	15 18 50.7		
	comp=Z,32nm,20.0s,baz=186,slow=33							
SBUM	Sibu	69.37	318	P	P	14 55 59.8	+0.8	
H03S2	Juan Fernandez	77.73	140	T	T	16 22 59.8		
	baz=201,slow=74,SNR=8.9							
H03S1	Juan Fernandez	77.73	140	T	T	16 22 54.6		
	baz=201,slow=74,SNR=11							
H03S3	Juan Fernandez	77.75	140	T	T	16 23 01.5		
	baz=201,slow=74,SNR=11							
BOSA	Boshof	80.77	227	P	P	14 57 05.8	+0.9	
	comp=Z,1.3nm,0.6s,baz=145,slow=9.3,SNR=3.0							
BOSA				LR	LR	15 29 51.4		
	comp=Z,50nm,18.6s,baz=191,slow=34							
	comp=Z,1.3nm,0.6s							
CO06	Fray Jorge	82.91	144	P	P	14 57 16.7	+0.7	
LBTB	Lobatse	83.92	228	LR	LR	15 30 17.0		
	comp=Z,24nm,18.5s,baz=172,slow=32							
AC04	Llanos de Chal	85.39	144	P	P	14 57 29.2	+0.5	
PLTB	Pedras Altas	86.08	159	P	P	14 57 32.8	+0.8	
PLTB				IAmb	IAmb	14 57 34.1		
	comp=Z,18nm,1.5s							
PALK	Pallekele	86.55	291	LR	LR	15 29 44.6		
	comp=Z,33nm,18.4s,baz=243,slow=31							
CMAR	Chiang Mai Arr	88.88	312	P	P	14 57 45.7	+0.2	
CMAR	Chiang Mai Arr	88.88	312	P	P	14 57 46.1	+0.6	
	comp=Z,0.7nm,0.6s,baz=160,slow=2.9,SNR=6.4							
CMAR				LR	LR	15 35 30.1		
	comp=Z,16nm,19.2s,baz=150,slow=34							
	comp=Z,0.7nm,0.6s							
CHTO	Chiang Mai	89.21	312	P	P	14 57 47.5	+0.4	
CHTO				IAmb	IAmb	14 57 48.6		
	comp=Z,2.8nm,0.8s							
LSZ	Lusaka	91.73	235	LR	LR	15 32 42.7		
	comp=Z,65nm,18.3s,baz=266,slow=31							
TSUM	Tsumeb	92.12	224	LR	LR	15 38 02.1		
	comp=Z,72nm,18.3s,baz=156,slow=35							
MKAR	Makanchi Array	120.29	312	PKP	PKPdf	15 03 40.4	-1.2	
	comp=Z,0.3nm,0.6s,baz=118,slow=2.8,SNR=2.3							
TORD	Torodi Ar. Bea	127.66	219	PKP	PKPdf	15 03 56.5	-0.1	
	comp

BKZ	**Black Stump Fm**	**7.22 213**	P	**Pn**	**14 51 54.3**	**+0.6**
BKZ	**Black Stump Fm**	**7.22 213**	P	**Pn**	**14 51 52.7**	**-1.0**
BKZ			S	**Sn**	**14 53 12.2**	**-2.5**
MCHZ	**McNeill Hill**	**7.36 211**	P	**Pn**	**14 51 54.6**	**-0.9**
MCHZ			S	**Sn**	**14 53 16.4**	**-1.6**
KWHZ	**Kaweka Forest**	**7.47 212**	P	**Pn**	**14 51 55.0**	**-2.0**
KWHZ			S	**Sn**	**14 53 17.6**	**-3.0**
TMVZ	**Te Maari**	**7.57 217**	P	**Pn**	**14 51 56.0**	**-2.5**
TMVZ			S	**Sn**	**14 53 21.8**	**-1.4**
NTVZ	**North Tongarir**	**7.57 217**	P	**Pn**	**14 51 57.1**	**-1.4**
KAHZ	**Kahuranaki**	**7.58 209**	P	**Pn**	**14 51 56.2**	**-2.3**
KAHZ			S	**Sn**	**14 53 20.7**	**-2.7**
OTVZ	**Oturere**	**7.62 217**	P	**Pn**	**14 51 58.0**	**-1.3**
SNVZ	**South Ngauruho**	**7.65 217**	P	**Pn**	**14 51 58.7**	**-1.0**
BHHZ	**Black Hill Sta**	**7.68 214**	P	**Pn**	**14 51 59.2**	**-0.8**
MOVZ	**Moawhango**	**7.77 216**	P	**Pn**	**14 52 00.2**	**-1.0**
WNVZ	**Wahianoa**	**7.78 217**	P	**Pn**	**14 52 01.2**	**-0.2**
CTZ	**Chatham Island**	**10.60 173**	P	**Pn**	**14 52 39.3**	**-0.6**
KHZ	**Kahutara**	**11.17 212**	P	**Pn**	**14 52 47.5**	**-0.1**
NFK	**Norfolk Island**	**12.41 286**	P	Pn	14 53 08.8	+4.1
RPZ	**Rata Peaks**	**13.33 215**	P	**Pn**	**14 53 17.5**	**+0.3**
RPZ	**Rata Peaks**	**13.33 215**	Pn	**Pn**	**14 53 15.1**	**-2.1**
	0.8nm,0.3s,baz=53,slow=10,SNR=1.5					
	10nm,0.9s					
JCZ	**Jackson Bay**	**14.73 219**	P	**Pn**	**14 53 37.7**	**+1.3**
MLZ	**Mavora Lakes**	**15.97 217**	Pn	**Pn**	**14 53 51.7**	**-0.8**
MLZ			IAmb	IAmb	14 54 21.4	
	comp=Z,17nm,1.1s					
WHZ	**Wether Hill Ro**	**16.43 216**	P	**P**	**14 54 00.7**	**-0.1**
DZM	**Mont Dzumac**	**17.39 306**	P	**P**	**14 54 14.3**	**+2.6**
DZM			IAmb	IAmb	14 54 16.5	
	comp=Z,13nm,0.9s					
DZM	**Mont Dzumac**	**17.39 306**	P	**P**	**14 54 14.5**	**+2.8**
	comp=Z,9.3nm,0.8s,baz=129,slow=7.1,SNR=5.7					
DZM			LR	LR	14 59 39.6	
	comp=Z,397nm,18.2s,baz=108,slow=33					
KOUNC	**Koumac, New Ca**	**19.89 305**		**Pn**	**14 54 41.9**	**+1.1**
KOUNC			IAmb	IAmb	14 54 45.8	
	comp=Z,25nm,1.0s					
KOUNC	**Koumac, New Ca**	**19.89 305**	P	**Pn**	**14 54 43.3**	**+2.4**
EIDS	**Eidsvold**	**27.66 278**	P	**P**	**14 55 56.4**	**+1.1**
EIDS			IAmb	IAmb	14 56 18.1	
	comp=Z,24nm,1.3s					
STKA	**Stephens Creek**	**33.60 261**	P	**P**	**14 56 48.4**	**+0.7**
STKA	**Stephens Creek**	**33.60 261**	P	**P**	**14 56 48.3**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=117,slow=11,SNR=3.3					
STKA			LR	LR	15 10 15.6	
	comp=Z,247nm,18.0s,baz=39,slow=36					
	comp=Z,3.0nm,0.9s					
CTA	**Charters Tower**	**34.01 284**	P	**P**	**14 56 53.3**	**+2.0**
	comp=Z,5.9nm,0.6s,baz=121,slow=10,SNR=16					
CTA			LR	LR	15 09 35.6	
	comp=Z,82nm,18.2s,baz=126,slow=34					
	comp=Z,5.9nm,0.6s					
CTAO	**Charters Tower**	**34.01 284**	P	**P**	**14 56 52.9**	**+1.5**
BBOO	**Buckleboo**	**37.94 258**	P	**P**	**14 57 24.0**	**-0.9**
PMG	**Port Moresby**	**39.57 299**	LR	LR	15 11 56.7	
	comp=Z,89nm,20.4s,baz=143,slow=33					
COEN	**Coen**	**39.79 290**	P	**P**	**14 57 42.5**	**+2.0**
COEN			IAmb	IAmb	14 58 06.9	
	comp=Z,4.4nm,0.7s					
AS31	**Alice Springs**	**42.68 270**	P	**P**	**14 58 04.1**	**-0.2**
AS31			IAmb	IAmb	14 58 05.6	
	comp=Z,4.5nm,0.7s					
ASAR	**Alice Springs**	**42.68 270**	P	**P**	**14 58 03.8**	**-0.5**
ASAR	**Alice Springs**	**42.68 270**	P	**P**	**14 58 04.2**	**-0.1**
	comp=Z,12nm,0.7s,baz=112,slow=7.5,SNR=131					
ASAR			PcP	**PcP**	**14 59 55.8**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=118,slow=4.8,SNR=5.8					
ASAR			S	**S**	**15 04 22.5**	**-3.3**
	comp=Z,0.7nm,0.8s,baz=118,slow=16,SNR=4.5					
ASAR			LR	LR	15 15 50.3	
	comp=Z,35nm,21.1s,baz=150,slow=36					
	comp=Z,12nm,0.7s					
WR0	**Warramunga Arr**	**43.75 275**	P	**P**	**14 58 12.8**	**-0.1**
WR0			IAmb	IAmb	14 58 14.3	
	comp=Z,7.6nm,1.1s					
WB2	**Warramunga Arr**	**43.91 275**	P	**P**	**14 58 14.1**	**-0.2**
WB2			IAmb	IAmb	14 58 26.3	
	comp=Z,7.6nm,0.6s					
WRAB	**Tennant Creek**	**43.92 275**	P	**P**	**14 58 14.0**	**-0.3**
WRAB			IAmb	IAmb	14 58 26.3	
	comp=Z,6.1nm,0.7s					
WRA	**Warramunga Arr**	**43.92 275**	P	**P**	**14 58 14.2**	**-0.2**
WRA	**Warramunga Arr**	**43.92 275**	P	**P**	**14 58 14.1**	**-0.2**
	comp=Z,8.3nm,0.9s,baz=116,slow=7.5,SNR=28					
WRA			PcP	**PcP**	**15 00 00.0**	**0.0**
	comp=Z,1.1nm,0.8s,baz=132,slow=3.1,SNR=2.8					
	comp=Z,8.3nm,0.9s					
WB0	**Warramunga Arr**	**43.96 276**	P	**P**	**14 58 14.6**	**-0.1**
WB0			IAmb	IAmb	14 58 15.5	
	comp=Z,9.6nm,0.8s					
KNRA	**Kununurra**	**50.62 277**	P	**P**	**14 59 07.0**	**+0.5**
KNRA			IAmb	IAmb	14 59 30.1	
	comp=Z,13nm,1.2s					
FITZ	**Fitzroy Crossi**	**52.06 272**	P	**P**	**14 59 16.7**	**-0.6**
CASY	**Casey**	**52.50 209**	P	**P**	**14 59 21.2**	**+1.3**
QSPA	**South Pole Qui**	**56.90 180**	P	**P**	**14 59 54.1**	**+2.1**
QSPA	**South Pole Qui**	**56.90 180**	P	**P**	**14 59 52.3**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=55,slow=5.8,SNR=8.7					
	comp=Z,4.0nm,1.0s					
PETK	**Petropavlovsk-**	**88.44 346**	LR	LR	15 35 48.6	
	comp=Z,28nm,21.6s,baz=113,slow=31					
CMAR	**Chiang Mai Arr**	**93.99 289**	PP	**PP**	**15 07 10.7**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=131,slow=9.7,SNR=5.2					
MA2	**Magadan**	**95.91 345**	LR	LR	15 41 37.5	
	comp=Z,18nm,20.7s,baz=92,slow=32					
MKAR	**Makanchi Array**	**119.28 309**	PKP	**PKPdf**	**15 08 55.3**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=108,slow=4.7,SNR=3.3					
ZALV	**Zalesovo Beam**	**119.88 317**	PKP	**PKPdf**	**15 08 56.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=110,slow=2.1,SNR=2.1					
KURBB	**Kurchatov Arra**	**122.74 312**	PKP	**PKPdf**	**15 09 02.0**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=112,slow=2.0,SNR=2.2					
BVAR	**Borovoye Array**	**128.14 314**	PKP	**PKPdf**	**15 09 13.1**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=94,slow=1.0,SNR=10					
KBZ	**Khabaz**	**146.31 300**	PKPbc	**PKPab**	**15 09 47.9**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=146,slow=3.6,SNR=4.4					
FINES	**FINESS Array B**	**147.64 338**	PKPbc	**PKPbc**	**15 09 50.9**	**+0.2**
	comp=Z,6.7nm,0.8s,baz=46,slow=6.0,SNR=15					
NB2	**NORSAR Subarra**	**151.46 350**	PKP	**PKPab**	**15 10 08.9**	**+0.2**
	comp=Z,6.4nm,1.0s,baz=18,slow=3.1					
NOA	**NORSAR Array B**	**151.46 350**	PKPbc	**PKPbc**	**15 09 59.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=16,slow=4.1,SNR=2.4					
MMAI	**Mount Meron Ar**	**151.74 279**	PKPbc	**PKPbc**	**15 10 01.7**	**-0.1**
	comp=Z,12nm,0.9s,baz=67,slow=6.4,SNR=6.6					
HFS	**Hagfors**	**151.91 347**	PKPbc	**PKPbc**	**15 10 00.8**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=114,slow=3.6,SNR=1.8					
AKASG	**Malin Array Be**	**153.25 319**	PKPbc	**PKiKP**	**15 10 05.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=48,slow=3.0,SNR=6.9					
BRTR	**Keskin Array B**	**153.51 293**	PKPbc	**PKiKP**	**15 10 06.3**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=132,slow=3.5,SNR=12					
TORD	**Torodi Ar. Bea**	**160.03 180**	PKPab	**PKPab**	**15 10 47.7**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=160,slow=2.6,SNR=3.9					

*IDC **27** 15:05:47.9±1.1, 6˚.24S×143˚.47E, h0km, mb3.9/4, mbtmp3.8/6, ML1.2/1, Error ellipse: s-maj=41.9km s-min=24.8km az=83.0*

ISC 27 15:05:53.2±0.9, 6˚.3S±0˚.2×143˚.5E±0˚.2, h35km, n7, σ0⁰86/7, mb3.9/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.77**	**131**	Pn	**Pn**	**15 07 03.7**	**+1.1**
	0.6nm,0.3s,baz=303,slow=5.5,SNR=2.2						
PMG				Sn	**Sn**	**15 07 55.9**	**-0.8**
	0.5nm,0.3s,baz=300,slow=16,SNR=2.1						
	4.9nm,0.6s						
WRA	**Warramunga Arr**	**16.25**	**212**	Pn	Pn	15 09 32.3	-6.6
	0.1nm,0.3s,baz=30,slow=13,SNR=2.1						
WRA				Lg	Lg	15 14 28.9	
	0.1nm,0.3s,baz=32,slow=35,SNR=3.6						
ASAR	**Alice Springs**	**19.61**	**207**	P	**P**	**15 10 19.1**	**+0.4**
	1.6nm,0.7s,baz=28,slow=13,SNR=16						
ASAR				Lg	Lg	15 16 10.9	
	baz=232,slow=6.2,SNR=1.9						
MKAR	**Makanchi Array**	**75.53**	**322**	P	**P**	**15 17 34.3**	**+0.1**
	0.7nm,0.7s,baz=104,slow=7.3,SNR=9.5						
	0.7nm,0.7s						
QSPA	**South Pole Qui**	**83.69**	**180**	P	**P**	**15 18 17.4**	**-0.9**
	1.0nm,0.8s,baz=357,slow=2.2,SNR=7.2						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**84.96**	**325**	P	**P**	**15 18 25.0**	**+0.2**
	1.5nm,0.8s,baz=114,slow=7.1,SNR=6.6						
	1.5nm,0.8s						
ILAR	**Eielson Array**	**87.11**	**24**	P	**P**	**15 18 35.0**	**-0.2**
	0.4nm,0.9s,baz=231,slow=5.7,SNR=2.7						
	0.4nm,0.9s						

*IGIL **27** 15:11:28.9, 36˚.47N×9˚.82W, h22km, ML1.5*
*SFS **27** 15:11:28.8, 36˚.59N×9˚.82W, h16km, ML2.3/9, ML3.1/7, MLv2.0/9*
*INMG **27** 15:11:29.7±1.6, 36˚.48N×9˚.85W, h32km±20km, ML1.8, Error ellipse: s-maj=14.9km s-min=6.9km az=68.0*
*MDD **27** 15:11:29.7±1.3, 36˚.64N×9˚.78W, h16km±6km, mb_Lg2.5/4, Error ellipse: s-maj=13.4km s-min=9.9km az=150.0*
*CNRM **27** 15:11:30.6, 36˚.56N×9˚.31W, h127km*

ISC 27 15:11:21.7±2.2, 36˚.49N±0˚.05×9˚.87W±0˚.08, h1km±11km, n37, σ1⁰61/58, 1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.05**	**52**	*e*P	**Pn**	**15 11 46.5**	**+2.8**
PFVI				*e*S	**Sn**	**15 11 59.4**	**+0.4**
PFVI				A	A	15 12 03.1	
	15nm,1.2s						
PFVI	**Vila Bisbo**	**1.05**	**52**	Pg	**Pn**	**15 11 46.5**	**+2.8**
PFVI				Sg	**Sn**	**15 11 59.1**	**+0.1**
MORF	**Marmelete**	**1.27**	**50**	*e*P	**Pn**	**15 11 49.6**	**+2.9**
MORF				*e*S	**Sn**	**15 12 04.9**	**+0.5**
MORF				A	A	15 12 09.2	
	5.9nm,0.1s						
MORF	**Marmelete**	**1.27**	**50**	*e*P	**Pn**	**15 11 49.5**	**+2.9**
MORF				*e*S	**Sn**	**15 12 04.8**	**+0.3**
MORF				IAML		15 12 07.1	
	comp=E,12nm,0.2s						
PTEO	**Sao Teotonio**	**1.40**	**40**	*e*S	**Sn**	**15 12 08.2**	**+0.7**
PTEO				A	A	15 12 13.1	
	comp=E,9.3nm,1.1s						
PBDV	**Barranco-do-Ve**	**1.73**	**63**	*e*P	**Pg**	**15 11 56.1**	**+1.3**
PBDV				*e*S	**Sg**	**15 12 16.4**	**-0.8**
PBDV				A	A	15 12 18.6	
	comp=E,2.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.73**	**63**	Pn	**Pg**	**15 11 56.1**	**+1.3**
PBDV				Sn	**Sg**	**15 12 16.1**	**-1.1**
PCVE	**Castro Verde**	**1.86**	**51**	*e*P	**Pg**	**15 11 58.0**	**+0.7**
PCVE				*e*S	**Sg**	**15 12 20.5**	**-0.9**
PCVE				A	A	15 12 42.1	
	comp=E,3.0nm,0.7s						
PCVE	**Castro Verde**	**1.86**	**51**	Sn	**Sg**	**15 12 19.8**	**-1.6**
MESJ	**Messejana**	**1.89**	**44**	*e*P	**Pg**	**15 11 58.2**	**+0.3**
MESJ				*e*S	**Sb**	**15 12 19.6**	**-1.4**
MESJ				A	A	15 12 31.2	
	comp=E,3.8nm,1.0s						
MESJ	**Messejana**	**1.89**	**44**	*e*P	**Pg**	**15 11 58.1**	**+0.2**
MESJ				*e*S	**Sb**	**15 12 19.6**	**-1.4**
MESJ				IAML		15 12 20.8	
	comp=N,2.1nm,0.2s						
PNCL	**Nicolau / Gran**	**1.94**	**33**	*e*P	**Pg**	**15 11 58.6**	**-0.3**
PNCL				*e*S	**Sb**	**15 12 20.9**	**-1.7**
PNCL				A	A	15 12 23.3	
	comp=N,3.1nm,0.1s						
PNCL	**Nicolau / Gran**	**1.94**	**33**	Pn	**Pg**	**15 11 58.6**	**-0.3**
PNCL				Sn	**Sb**	**15 12 20.9**	**-1.7**
PVAQ	**Vaqueiros**	**1.95**	**61**	*e*P	**Pg**	**15 11 59.0**	**-0.1**
PVAQ				*e*S	**Sn**	**15 12 20.9**	**-0.2**
PVAQ				A	A	15 12 22.0	
	comp=N,4.3nm,0.8s						
PVAQ	**Vaqueiros**	**1.95**	**61**	Pn	**Pg**	**15 11 59.0**	**-0.1**
PVAQ				Sn	**Sn**	**15 12 21.2**	**+0.1**
PVAQ	**Vaqueiros**	**1.95**	**61**	P	**Pb**	**15 11 58.3**	**+0.2**
EGRO	**El Granado**	**2.18**	**61**	Pn	**Pb**	**15 12 02.7**	**+0.7**
EGRO				Sn	**Sb**	**15 12 27.8**	**-1.6**
EGRO	**El Granado**	**2.18**	**61**	P	**Pb**	**15 12 02.6**	**+0.7**
EGRO				S	**Sn**	**15 12 27.0**	**+0.3**
EGRO				*i* Vmb_Lg		15 12 28.0	
PMAFR	**Mafra**	**2.51**	**10**	*e*S	**Sn**	**15 12 35.2**	**+0.3**
EVO	**Evora**	**2.52**	**35**	*e*S	**Sn**	**15 12 34.6**	**-0.6**
EVO	**Evora**	**2.52**	**35**	Sn	**Sn**	**15 12 34.5**	**-0.6**
PBAR	**Barrancos**	**2.81**	**52**	*e*P	**Pb**	**15 12 11.4**	**-1.4**
PBAR				*e*S	**Sn**	**15 12 42.7**	**+0.2**
PBAR				A	A	15 12 43.8	
	comp=N,3.0nm,0.8s						
EMIN	**Mina Concepcio**	**2.85**	**62**	S	**Sn**	**15 12 42.7**	**-0.7**
EMIN				*i* Vmb_Lg		15 12 43.2	
PMTG	**Montargil**	**2.89**	**26**	*e*P	**Pb**	**15 12 12.2**	**-1.8**
PMTG				*e*S	**Sn**	**15 12 43.2**	**-1.1**
PMTG				A	A	15 12 46.7	
	comp=N,3.3nm,0.8s						
PESTR	**Estremoz**	**2.98**	**37**	*e*S	**Sn**	**15 12 46.1**	**-0.6**
PESTR	**Estremoz**	**2.98**	**37**	P	**Pn**	**15 12 12.0**	**+1.8**
PESTR	**Estremoz**	**2.98**	**37**	S	**Sn**	**15 12 46.7**	**0.0**
EBAD	**Badajoz**	**3.20**	**44**	Pn	**Pn**	**15 12 15.5**	**+2.2**
EBAD				Sn	**Sn**	**15 12 51.0**	**-1.1**
EBAD	**Badajoz**	**3.20**	**44**	P	**Pn**	**15 12 15.5**	**+2.2**
EBAD				S	**Sn**	**15 12 51.3**	**-0.8**
EBAD				*i* Vmb_Lg		15 12 58.1	
ESPR	**Espera**	**3.25**	**82**	Sn	**Sn**	**15 12 53.0**	**0.0**
PMRV	**Marv??o**	**3.53**	**33**	*e*S	**Sn**	**15 12 58.7**	**-1.4**
PMRV				A	A	15 13 03.0	
	comp=N,2.2nm,0.5s						
ECAB	**El Cabril**	**3.89**	**65**	Pn	**Pn**	**15 12 25.8**	**+3.2**
ECAB				Sn	**Sn**	**15 13 06.0**	**-0.9**
ECAB	**El Cabril**	**3.89**	**65**	P	**Pn**	**15 12 25.9**	**+3.3**
ECAB				S	**Sn**	**15 13 06.8**	**-2.2**
ECAB				*i* Vmb_Lg		15 13 09.9	
MD31	**MD31**	**5.54**	**129**	P	**Pn**	**15 12 47.7**	**+2.2**
MD31	**MD31**	**5.54**	**129**	S	**Sn**	**15 13 47.5**	**-2.4**
MDT	**Midelt**	**5.67**	**129**	P	**Pn**	**15 12 49.7**	**+2.4**
MDT	**Midelt**	**5.67**	**129**	S	**Sn**	**15 13 49.2**	**-4.0**

RSNC 27 15:13:26.3±1.4, 6˚.79N×71˚.84W, h0km±6km, ML3.1, Mw3.5, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAMC	**Tame, Arauca**	**0.35**	**173**	*i*P	Pg	15 13 33.1	+0.1
TAMC				*e*S	Sg	15 13 39.0	+1.4
TAMC				*i*		15 13 40.3	
	comp=Z,2μm,0.3s						
PAMC	**Pamplona, Colo**	**1.02**	**303**	*i*P	Pg	15 13 44.4	-1.5
PAMC				*e*S	Sb	15 14 01.4	+0.1
PAMC				*i*		15 14 03.7	
	comp=Z,538nm,0.2s						
BARC	**Barichara**	**1.35**	**262**	*e*P	Pg	15 13 50.2	-2.0
BARC				*e*S	Sg	15 14 08.4	-1.4
BARC				*i*		15 14 11.6	
	comp=Z,477nm,0.3s						
RUSC	**La Rusia**	**1.52**	**234**	*e*P	Pn	15 13 53.9	-1.4
RUSC				*e*S	Sg	15 14 13.3	-2.1
RUSC				*i*		15 14 15.6	
	comp=Z,132nm,0.4s						
OCAC	**Ocana**	**2.06**	**315**	*e*P	Pn	15 14 01.4	-1.0
OCAC				*e*S	Sn	15 14 29.6	+0.8
SDV	**Santo Domingo**	**2.40**	**30**	*e*P	Pn	15 14 05.2	-1.9
SDV				*e*S	Sn	15 14 37.1	-0.3
SDV				*i*		15 14 45.2	
	comp=Z,127nm,0.3s						
SPBC	**San Pablo de B**	**2.49**	**243**	*e*P	Pn	15 14 09.6	+1.4
SPBC				*e*S	Sn	15 14 39.7	+0.3
SPBC				*i*		15 14 48.7	
	comp=Z,91nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.59**	**187**	*e*P	Pn	15 14 11.4	+1.9
PTGC				*e*S	Sn	15 14 42.7	+1.1
PTGC				*i*		15 14 53.4	
	comp=Z,198nm,0.2s						
PTBC	**PUERTO BERRIO,**	**2.62**	**265**	*e*P	Pn	15 14 07.4	-2.5
PTBC				*e*S	Sn	15 14 44.0	+1.6
PTBC				*i*		15 14 48.4	
	comp=Z,117nm,0.6s						
ROSC	**El Rosal**	**3.14**	**232**	*e*P	Pn	15 14 19.4	+2.0
CVER	**Cruz Verde, Cu**	**3.17**	**225**	*e*P	Pn	15 14 18.4	+0.6
NORC	**Norcasia**	**3.25**	**248**	*e*P	Pn	15 14 16.7	-2.0
NORC				*e*S	Sn	15 14 58.0	-0.2
NORC				*i*		15 15 06.7	
	comp=Z,33nm,0.5s						
LL6C	**La Loma 6 Bece**	**3.26**	**334**	*e*P	Pn	15 14 16.8	-1.9
LL6C				*e*S	Sn	15 14 57.6	-0.6
LL6C				*i*		15 15 16.2	
	comp=Z,37nm,0.2s						
HELC	**Santa Helena**	**3.72**	**261**	*e*P	Pn	15 14 23.1	-2.3
HELC				*e*S	Sn	15 15 09.4	-0.7
HELC				*i*		15 15 19.6	
	comp=Z,15nm,0.3s						
UREC	**San Jos de Ur**	**3.79**	**285**	*e*P	Pn	15 14 25.0	-1.1
GUY2C	**Guyana, Caldas**	**3.84**	**246**	*e*P	Pn	15 14 26.2	-0.9
GUY2C				*e*S	Sn	15 15 14.2	+1.0
GUY2C				*i*		15 15 24.7	
	comp=Z,18nm,0.5s						
ARGC	**Ariguani, Magd**	**3.87**	**322**	*e*P	Pn	15 14 25.8	-1.4
ARGC				*e*S	Sn	15 15 12.0	-1.5
ARGC				*i*		15 15 20.2	
	comp=E,20nm,0.6s						
CBOC	**Ciudad Bolivar**	**4.25**	**258**	*e*P	Pn	15 14 33.0	+0.5
CRJC	**Cerrejon, Guaj**	**4.33**	**346**	*e*P	Pn	15 14 32.2	-1.3
CRJC				*e*S	Sn	15 15 21.1	-3.8
CRJC				*i*		15 15 25.3	
	comp=Z,40nm,0.3s						
DBBC	**Dabeiba**	**4.35**	**273**	*e*P	Pn	15 14 34.2	+0.4
DBBC				*e*S	Sn	15 15 25.0	-0.3
ORTC	**Ortega, Tolima**	**4.44**	**230**	*e*P	Pn	15 14 34.3	-0.7
ORTC				*e*S	Sn	15 15 25.8	-1.7
ORTC				*i*		15 15 31.3	
	comp=Z,7.9nm,0.3s						
SJCC	**San Jacinto, C**	**4.53**	**313**	*e*P	Pn	15 14 35.4	-0.9
SJCC				*e*S	Sn	15 15 28.6	-1.1
SJCC				*i*		15 15 32.1	
	comp=Z,10nm,0.5s						
URIC	**Uribia, Colomb**	**4.89**	**358**	*e*P	Pn	15 14 37.4	-3.7
URIC				*e*S	Sn	15 15 31.3	-7.1
URIC				*i*		15 15 37.0	
	comp=Z,9.3nm,0.2s						

*IDC **27** 15:27:06.3±0.8, 6˚.34S×143˚.51E, h0km, mb4.3/11, mbtmp4.3/13, ML2.2/1, MS3.1/7, Error ellipse: s-maj=31.0km s-min=18.6km az=70.0*
*NEIC **27** 15:27:07.9±1.8, 6˚.37S±0˚.08×143˚.30E±0˚.09, h10km±1km, mb4.6/19, Error ellipse: s-maj=15.1km s-min=13.3km az=99.0*
*DJA **27** 15:27:10.6±0.8, 6˚S±4˚×14˚3E±˚, h34km±9km, M4.5/19, mB5.1/5, mb4.5/19, MLv4.5/3, Mw(mB)4.5/5*

ISC 27 15:27:08.1±0.5, 6˚.43S±0˚.06×143˚.35E±0˚.07, h10km, n84, σ1⁰40/74, mb4.6/30, MS3.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.57**	**235**	P	**Pg**	**15 28 17.7**	**+1.1**
PMG	**Port Moresby**	**4.79**	**128**	Pn	**Pn**	**15 28 20.4**	**+0.1**
PMG	**Port Moresby**	**4.79**	**128**	P	**Pn**	**15 28 21.0**	**+0.7**
PMG	**Port Moresby**	**4.79**	**128**	Pn	**Pn**	**15 28 20.8**	**+0.5**
	6.6nm,0.3s,baz=328,slow=12,SNR=25						
PMG				Sn	**Sn**	**15 29 14.5**	**-1.4**
	4.0nm,0.3s,baz=51,slow=24,SNR=5.9						
	21nm,0.4s						
GENI	**Genyem**	**4.96**	**320**	P	**Pn**	**15 28 23.9**	**+1.2**
MANU	**Manus Island**	**5.92**	**43**	Pn	Pn	15 28 34.1	-1.8
SMPI	**Sarmi**	**6.40**	**313**	P	**Pn**	**15 28 43.3**	**+0.9**
	54nm,1.3s,0.3nm						
COEN	**Coen**	**7.48**	**181**	Pn	**Pn**	**15 28 58.4**	**+1.1**
COEN	**Coen**	**7.48**	**181**	P	**Pn**	**15 28 59.5**	**+2.2**
FAKI	**Fak Fak**	**11.60**	**287**	Pn	Pn	15 29 51.3	-2.6
FAKI	**Fak Fak**	**11.60**	**287**	P	**Pn**	**15 29 53.0**	**-0.9**
FAKI	**Fak Fak**	**11.60**	**287**	P	**Pn**	**15 29 52.1**	**-1.8**
	25nm,0.8s						
MTSU	**Mount Surprise**	**11.67**	**175**	P	**Pn**	**15 29 57.6**	**+2.8**
KDU	**Kakadu**	**12.39**	**239**	P	**Pn**	**15 30 03.2**	**-1.5**
SWI	**Sorong**	**13.27**	**294**	P	Pn	15 30 13.6	-3.1
	14nm,0.8s,910nm						
MTN	**Manton Dam**	**13.62**	**241**	Pn	Pn	15 30 18.9	-2.7
MTN	**Manton Dam**	**13.62**	**241**	P	**Pn**	**15 30 19.9**	**-1.6**
DRS	**Darwin Rock St**	**13.65**	**243**	P	**Pn**	**15 30 20.9**	**-1.0**
CTA	**Charters Tower**	**13.86**	**169**	Lg	Lg	15 34 27.3	
	0.2nm,0.3s,baz=38,slow=18,SNR=1.3						
CTA				LR	LR	15 35 59.9	
	comp=Z,56nm,21.8s,baz=5.5,slow=38						
QIS	**Mount Isa**	**14.51**	**194**	P	**Pn**	**15 30 35.4**	**+1.8**
WB0	**Warramunga Arr**	**15.86**	**212**	Pn	Pn	15 30 49.7	-1.9
WR0	**Warramunga Arr**	**15.94**	**212**	Pn	**Pn**	**15 30 50.4**	**-2.2**
WR0				IAmb	IAmb	15 30 58.0	
	comp=Z,6.9nm,0.8s						
WRA	**Warramunga Arr**	**16.03**	**212**	Pn	**Pn**	**15 30 51.0**	**-2.8**
WRA	**Warramunga Arr**	**16.03**	**212**	Pn	**Pn**	**15 30 51.9**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=34,slow=13,SNR=16						
WRA				Lg	Lg	15 35 38.2	
	comp=Z,0.3nm,0.3s,baz=35,slow=28,S

comp=Z,0.8nm,0.7s,baz=131,slow=6.6,SNR=5.9
comp=Z,0.8nm,0.7s

WMQ	**Urumqi**	**70.79**	**321**	*eP*	**P**	**15 38 25.8**	**+0.8**
WMQ				pP	pP	15 38 30.5	+1.8
WMQ				pmax	pmax		

comp=Z,12nm,0.9s

MKAR	**Makanchi Array**	**75.55**	**322**	P	**P**	**15 38 52.7**	**-0.3**
MKAR	**Makanchi Array**	**75.55**	**322**	P	**P**	**15 38 53.4**	**+0.4**

comp=Z,3.5nm,0.7s,baz=109,slow=6.6,SNR=41
comp=Z,3.5nm,0.7s

MAKZ	**Makanchi**	**75.75**	**322**	P	**P**	**15 38 53.9**	**-0.3**
MAKZ				IAmb	IAmb	15 38 55.0	

comp=Z,5.6nm,1.0s

KSH	**Kashi**	**76.99**	**313**	P	**P**	**15 39 03.0**	**+1.5**
KSH				pmax	pmax		

comp=Z,4.0nm,0.8s

ZALV	**Zalesovo Beam**	**77.47**	**329**	P	**P**	**15 39 02.7**	**-0.9**

comp=Z,1.2nm,0.5s,baz=110,slow=4.9,SNR=6.0
comp=Z,1.2nm,0.5s

KURBB	**Kurchatov Arra**	**79.43**	**324**	P	**P**	**15 39 14.3**	**-0.2**

comp=Z,0.9nm,0.3s,baz=114,slow=4.2,SNR=5.5
comp=Z,0.9nm,0.3s

L16K	**Owhat River**	**80.86**	**24**	P	**P**	**15 39 22.1**	**0.0**
L16K				IAmb	IAmb	15 39 51.7	

comp=Z,17nm,1.4s

QSPA	**South Pole Qui**	**83.54**	**180**	P	**P**	**15 39 36.0**	**-0.2**

comp=Z,3.4nm,0.8s,baz=309,slow=3.0,SNR=24
comp=Z,3.4nm,0.8s

J19K	**Poorman**	**83.55**	**23**	P	**P**	**15 39 35.4**	**-0.7**
J19K				IAmb	IAmb	15 39 37.9	

comp=Z,6.6nm,1.2s

NRIK	**Noril'sk**	**84.59**	**343**	P	**P**	**15 39 41.1**	**-0.2**

comp=Z,4.6nm,0.8s,baz=136,slow=7.0,SNR=6.8
comp=Z,4.6nm,0.8s

RC01	**Rabbit Creek A**	**84.72**	**27**	P	**P**	**15 39 41.1**	**-1.0**
BVAR	**Borovoye Array**	**85.00**	**325**	P	**P**	**15 39 43.9**	**+0.1**

comp=Z,3.8nm,0.8s,baz=104,slow=6.3,SNR=17
comp=Z,3.8nm,0.8s

IMAR	**Indian Mountai**	**85.19**	**21**	P	**P**	**15 39 44.0**	**-0.4**
RND	**Reindeer**	**86.01**	**25**	P	**P**	**15 39 47.7**	**-0.9**
RND				IAmb	IAmb	15 39 56.3	

comp=Z,7.6nm,1.1s

I23K	**Minto, Yukon-K**	**86.49**	**23**	P	**P**	**15 39 50.3**	**-0.5**
I23K				IAmb	IAmb	15 40 13.7	

comp=Z,3.5nm,1.2s

ILAR	**Eielson Array**	**87.32**	**24**	P	**P**	**15 39 53.4**	**-1.5**
ILAR	**Eielson Array**	**87.32**	**24**	P	P	15 39 53.1	-1.8

comp=Z,1.4nm,0.8s,baz=258,slow=5.4,SNR=14
comp=Z,1.4nm,0.8s

BARN	**Barnard Glacie**	**88.40**	**28**	P	**P**	**15 40 00.3**	**-0.1**
BCAR	**Beaver Creek A**	**88.91**	**26**	P	**P**	**15 40 02.5**	**-0.1**
EGAK	**Eagle**	**89.65**	**25**	P	**P**	**15 40 05.9**	**0.0**
EGAK				IAmb	IAmb	15 40 23.7	

comp=Z,7.8nm,1.4s

TORD	**Torodi Ar. Bea**	**141.67**	**283**	PKhKP	PKPpre	15 46 35.5	

comp=Z,0.3nm,0.7s,baz=64,slow=4.0,SNR=2.5

DBIC	**Dimbokro**	**148.42**	**272**	PKPbc	**PKPdf**	**15 46 55.5**	**+2.9**

comp=Z,7.6nm,0.9s,baz=134,slow=4.5,SNR=8.4

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*IDC **27** 15:29:00.5±1.1,5.77S×142.65E,h0km,mb3.9/5, mbtmp3.9/8,ML3.9/2,MS3.2/1,Error ellipse: s-maj=38.6km s-min=23.9km az=71.0*
*NEIC **27** 15:29:02.3±0.7,5.87S±0.08×142.5E±0.2,h10km±2km, mb4.0/7,Error ellipse: s-maj=29.8km s-min=7.7km az=66.0*

ISC 27 15:29:04.8±0.9,5.9S±0.1×142.53E±0.1,0,h28km,n19, σ0.9,79,mb4.1/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.75**	**127**	Pn	**Pn**	**15 30 28.8**	**+0.6**
PMG	**Port Moresby**	**5.75**	**127**	Pn	**Pn**	**15 30 28.9**	**+0.7**

14nm,0.6s,baz=315,slow=13,SNR=3.5

PMG				Sn	**Sn**	**15 31 33.0**	**-0.3**

0.6nm,0.3s,baz=343,slow=19,SNR=1.3

COEN	**Coen**	**8.01**	**176**	Pn	**Pn**	**15 30 59.3**	**-0.1**
CTAO	**Charters Tower**	**14.54**	**166**	Pn	**Pn**	**15 32 28.0**	**-0.8**
WRAB	**Tennant Creek**	**16.04**	**209**	P	**P**	**15 32 50.9**	**-0.8**
WRAB				IAmb	IAmb	15 33 20.4	

comp=Z,9.8nm,1.0s

WB2	**Warramunga Arr**	**16.05**	**209**	P	**P**	**15 32 51.2**	**-0.6**
WB2				IAmb	IAmb	15 33 20.2	

comp=Z,6.9nm,0.8s

WRA	**Warramunga Arr**	**16.05**	**209**	P	**P**	**15 32 51.3**	**-0.6**
WRA	**Warramunga Arr**	**16.05**	**209**	Pn	**Pn**	**15 32 48.5**	**-0.2**

comp=Z,0.4nm,0.3s,baz=30,slow=11,SNR=4.0
comp=Z,1.0nm,0.6s

ASAR	**Alice Springs**	**19.50**	**204**	P	**Pn**	**15 33 32.5**	**+1.2**

comp=Z,0.3nm,0.3s,baz=31,slow=11,SNR=3.8
comp=Z,3.6nm,0.7s

EIDS	**Eidsvold**	**21.00**	**158**	P	**P**	**15 33 45.4**	**-0.7**
EIDS				IAmb	IAmb	15 34 22.4	

comp=Z,23nm,1.4s

STKA	**Stephens Creek**	**25.84**	**182**	P	**P**	**15 34 33.8**	**-0.1**
STKA				IAmb	IAmb	15 34 49.5	

comp=Z,2.3nm,1.3s

LEM	**Lembang**	**34.71**	**267**	LR	LR	15 54 05.9	

comp=Z,32nm,18.3s,baz=168,slow=43

VNDA	**Vanda**	**72.29**	**176**	P	**P**	**15 40 28.3**	**+1.1**
VNDA				IAmb	IAmb	15 40 35.2	

comp=Z,4.3nm,1.3s

VNDA	**Vanda**	**72.29**	**176**	P	**P**	**15 40 28.4**	**+1.1**

comp=Z,1.1nm,0.8s,baz=4.1,slow=3.3,SNR=2.4
comp=Z,1.1nm,0.8s

MKAR	**Makanchi Array**	**74.65**	**322**	P	**P**	**15 40 41.9**	**+0.2**

comp=Z,0.4nm,0.7s,baz=110,slow=7.0,SNR=2.6
comp=Z,0.4nm,0.7s

QSPA	**South Pole Qui**	**84.05**	**180**	P	**P**	**15 41 33.0**	**+0.3**
QSPA	**South Pole Qui**	**84.05**	**180**	P	**P**	**15 41 33.2**	**+0.5**

comp=Z,1.1nm,0.6s,baz=342,slow=1.6,SNR=9.1
comp=Z,1.1nm,0.6s

BVAR	**Borovoye Array**	**84.11**	**325**	P	**P**	**15 41 33.5**	**+0.4**

comp=Z,1.1nm,0.7s,baz=98,slow=5.1,SNR=3.4
comp=Z,1.1nm,0.7s

ILAR	**Eielson Array**	**87.18**	**24**	P	**P**	**15 41 46.7**	**-1.4**

comp=Z,0.6nm,0.9s,baz=265,slow=4.7,SNR=3.0
comp=Z,0.6nm,0.9s

IDC 27 15:30:36.8±1.4,6.22S×143.69E,h0km,mb3.9/3, mbtmp4.0/4,ML4.1/1,Error ellipse: s-maj=67.6km s-min=28.9km az=102.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.39**	**213**	Pn	Pn	15 34 23.6	-4.8

0.5nm,0.3s,baz=31,slow=14,SNR=2.5

WRA				Lg	Lg	15 39 07.2	

0.1nm,0.3s,baz=30,slow=28,SNR=1.1

ASAR	**Alice Springs**	**19.73**	**207**	P	P	15 35 08.4	+0.1

0.5nm,0.3s,baz=33,slow=11,SNR=6.6

ASAR				Lg	Lg	15 41 07.2	

baz=24,slow=30,SNR=1.1
5.0nm,0.6s

MKAR	**Makanchi Array**	**75.60**	**321**	P	P	15 42 24.1	+0.5

0.8nm,0.7s,baz=111,slow=7.4,SNR=4.3
0.8nm,0.7s

QSPA	**South Pole Qui**	**83.75**	**180**	P	P	15 43 07.0	-0.6

1.7nm,0.9s,baz=30,slow=1.2,SNR=6.7
1.7nm,0.9s

ILAR	**Eielson Array**	**86.99**	**24**	P	P	15 43 23.8	+0.2

0.4nm,0.8s,baz=252,slow=5.6,SNR=3.5
0.4nm,0.8s

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*TAP **27** 15:35:41.9,23.38N×121.50E,h31km,ML3.7,C*
*ASIES **27** 15:35:41.9,23.38N×121.50E,h31km,ML3.7,Mw3.3, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; Mrr3.34; Mθθ2.77; Mθϕ-6.12; Mrθ-7.82; Mϕϕ-2.70; Mϕr-7.69; Fault plane solution: $M_0$12.47670×10^{20} NP1: ϕs224.97000°,δ80.60000°,λ110.73000°. NP2: ϕs338.31000°,δ22.67000°,λ25.06000°. Principal axes: T Plg50.1670°, Azm157.9670°; N Plg20.4350°, Azm41.4370°; P Plg32.4820°, Azm297.7160°;*
*JMA **27** 15:35:41.6±0.1,23.3N±0.6×12.2E±, h35km±1km, MV3.4/19,TAIWAN REGION*

ISC 27 15:35:41.9±0.8,23.38N±0.01×121.56E±0.02,h31km±4km, n181,σ1s05/349,2C-30D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECBN	**Changbin**	**0.11**	**237**	⇑P	**Pn**	**15 35 47.8**	**+0.2**

baz=213

ECBN				S	**Sb**	**15 35 52.0**	**+0.8**

baz=213

HGSD	**Ruisui**	**0.17**	**313**	P	**Pn**	**15 35 47.8**	**-0.5**

baz=329

HGSD				*e*S	**Sb**	**15 35 53.1**	**+1.2**

baz=329

EYUL	**Yuli**	**0.22**	**262**	P	**Pb**	**15 35 48.4**	**-0.1**

baz=272

EYUL				*e*S	**Sb**	**15 35 53.6**	**+0.8**

baz=272

EHYH	**Wanrong**	**0.23**	**301**	P	**Pn**	**15 35 48.5**	**-0.6**

baz=309

EHYH				S	**Sb**	**15 35 52.9**	**-0.1**

baz=309

CHKH	**Chenggong**	**0.24**	**218**	P	**Pb**	**15 35 48.6**	**0.0**

baz=200

CHKH				S	**Sb**	**15 35 53.4**	**+0.2**

baz=200

YULB	**Yu-li**	**0.24**	**274**	P	**Pb**	**15 35 48.4**	**-0.3**
YULB	**Yu-li**	**0.24**	**274**	⇓P	**Pb**	**15 35 48.3**	**-0.4**

baz=287

YULB				S	**Sb**	**15 35 52.7**	**-0.6**

baz=287

TWF1	**Yuli**	**0.24**	**264**	⇓*i*P	**Pb**	**15 35 48.4**	**-0.3**

baz=274

TWF1				*i* S	**Sb**	**15 35 53.0**	**-0.3**

baz=274

EHY	**Hungye**	**0.25**	**301**	⇓*i*P	**Pb**	**15 35 48.4**	**-0.4**

baz=308

EHY				*i* S	**Sb**	**15 35 52.8**	**-0.7**

baz=308

FULB	**Fuli**	**0.30**	**234**	P	**Pb**	**15 35 49.5**	**0.0**

baz=240

FULB				S	**Sn**	**15 35 55.4**	**-0.2**

baz=240

EGFH	**Guangfu**	**0.31**	**338**	P	**Pb**	**15 35 49.4**	**-0.2**

baz=336

EGFH				S	**Sn**	**15 35 54.9**	**-1.0**

baz=336

CHKT	**Chengkung**	**0.33**	**212**	⇓*i*P	**Pb**	**15 35 49.8**	**0.0**

baz=195

CHKT				*i* S	**Sb**	**15 35 55.2**	**+0.1**

baz=195

WARBT	**Fenglin Townsh**	**0.37**	**335**	P	**Pb**	**15 35 49.8**	**-0.7**

baz=336

WARBT				S	**Sb**	**15 35 55.5**	**-0.8**

baz=336

EHD	**Haiduan**	**0.39**	**235**	⇓P	**Pb**	**15 35 49.8**	**-0.9**

baz=241

EHD				S	**Sb**	**15 35 55.3**	**-1.5**

baz=241

SHUL	**Shoufeng**	**0.41**	**1**	P	**Pn**	**15 35 51.5**	**-0.1**
SHUL				S	**Sn**	**15 35 59.4**	**+1.2**
ECS	**Chishang**	**0.42**	**228**	⇓P	**Pb**	**15 35 50.8**	**-0.3**

baz=234

ECS				*e*S	**Sb**	**15 35 57.6**	**+0.2**

baz=234

ESL	**Shilin**	**0.45**	**346**	*i* P	**Pb**	**15 35 50.9**	**-0.7**

baz=345

ESL				S	**Sb**	**15 35 57.1**	**-1.1**

baz=345

ELDTW	**Lidau**	**0.53**	**249**	⇓*i*P	**Pb**	**15 35 51.7**	**-1.2**

baz=241

ELDTW				S	**Sb**	**15 35 58.5**	**-1.9**

baz=241

VWDT	**VWDT**	**0.53**	**315**	P	**Pb**	**15 35 52.5**	**-0.4**

baz=318

VWDT				S	**Sb**	**15 35 59.8**	**-0.6**

baz=318

ETM	**Tongmen**	**0.59**	**354**	P	**Pb**	**15 35 52.9**	**-0.9**

baz=352

ETM				*e*S	**Sb**	**15 36 01.4**	**-0.6**

baz=352

HWA	**Hwalien**	**0.60**	**4**	*i* P	**Pn**	**15 35 54.3**	**+0.1**

baz=21

HWA				*e*S	**Sn**	**15 36 03.6**	**+0.6**

baz=21

LONT	**Longtian**	**0.61**	**220**	⇓P	**Pb**	**15 35 52.9**	**-1.3**

baz=216

LONT				S	**Sb**	**15 36 01.2**	**-1.4**

baz=216

LXIB	**Xiulin Townshi**	**0.65**	**349**	⇓P	**Pb**	**15 35 53.8**	**-1.2**

baz=348

LXIB				S	**Sb**	**15 36 01.8**	**-2.1**

baz=348

OWD	**Renai**	**0.67**	**329**	P	**Pb**	**15 35 54.4**	**-0.9**

baz=339

OWD				S	**Sb**	**15 36 02.8**	**-1.6**

baz=339

SSLB	**Suanglung**	**0.69**	**307**	P	**Pb**	**15 35 54.7**	**-0.7**
SSLB	**Suanglung**	**0.69**	**307**	⇓P	**Pb**	**15 35 54.5**	**-1.0**

baz=309

SSLB				S	**Sb**	**15 36 03.1**	**-1.6**

baz=309

TWD	**Chiawan**	**0.70**	**3**	*i* P	**Pb**	**15 35 54.9**	**-0.7**

baz=355

TWD				*e*S	**Sn**	**15 36 05.1**	**-0.3**

baz=355

ALS	**Alishan**	**0.70**	**281**	⇓*i*P	**Pb**	**15 35 55.4**	**-0.5**

baz=281

ALS				S	**Sb**	**15 36 04.0**	**-1.4**

baz=281

LDUT	**Ludao**	**0.71**	**186**	P	**Pb**	**15 35 54.3**	**-1.4**

baz=173

LDUT				S	**Sb**	**15 36 03.8**	**-1.3**

baz=173

TWGBT	**Beinan**	**0.71**	**218**	P	**Pb**	**15 35 54.3**	**-1.5**
TWGBT	**Beinan**	**0.71**	**218**	⇓P	**Pb**	**15 35 54.0**	**-1.8**

baz=215

TWGBT				S	**Sb**	**15 36 03.1**	**-2.1**

baz=215

TWG	**Pinlang**	**0.71**	**219**	⇓*i*P	**Pb**	**15 35 54.0**	**-1.8**

baz=215

TWG				*i* S	**Sb**	**15 36 03.0**	**-2.3**

baz=215

WHYT	**Xinyi Township**	**0.72**	**296**	⇓P	**Pb**	**15 35 55.5**	**-0.5**

baz=300

WHYT				S	**Sb**	**15 36 04.6**	**-1.0**

baz=300

TTN	**Taitung**	**0.73**	**211**	*i* P	**Pb**	**15 35 55.3**	**-0.8**

baz=208

TTN				*i* S	**Sb**	**15 36 06.0**	**+0.3**

baz=208

WUSB	**Renai**	**0.73**	**327**	⇓P	**Pb**	**15 35 55.5**	**-0.8**

baz=330

WUSB				S	**Sb**	**15 36 04.1**	**-2.0**

baz=330

STYH	**Taoyuan**	**0.75**	**254**	⇓P	**Pb**	**15 35 55.5**	**-0.9**

baz=250

STYH				S	**Sb**	**15 36 04.3**	**-2.0**

baz=250

CHGB	**Renai**	**0.76**	**333**	⇓P	**Pb**	**15 35 56.1**	**-0.8**

baz=342

CHGB				S	**Sb**	**15 36 05.8**	**-1.2**

baz=342

ETL	**Fush Village**	**0.78**	**5**	P	**Pb**	**15 35 56.1**	**-0.9**

baz=356

ETL				*e*S	**Sb**	**15 36 06.7**	**-0.6**

baz=356

SMLT	**Sun Moon Lake**	**0.78**	**310**	⇓*i*P	**Pb**	**15 35 56.4**	**-0.7**

baz=312

SMLT				S	**Sn**	**15 36 07.1**	**-0.6**

baz=312

NACB	**Ninganchiao**	**0.79**	**3**	P	**Pb**	**15 35 56.1**	**-1.1**
NACB	**Ninganchiao**	**0.79**	**3**	P	**Pb**	**15 35 55.8**	**-1.4**

baz=356

NACB				S	**Sn**	**15 36 08.1**	**+0.4**

baz=356

WHF	**Hehuan Shan**	**0.81**	**341**	*i* P	**Pb**	**15 35 56.5**	**-1.3**

baz=345

WHF				S	**Sb**	**15 36 06.7**	**-1.8**

baz=345

TYC	**Yuchr**	**0.83**	**309**	⇓*i*P	**Pb**	**15 35 57.1**	**-0.7**

baz=318

TYC				*i* S	**Sn**	**15 36 08.4**	**-0.1**

baz=318

ETLH	**Xiulin Townshi**	**0.83**	**355**	P	**Pb**	**15 35 56.4**	**-1.4**

baz=359

ETLH				S	**Sb**	**15 36 07.2**	**-1.6**

baz=359

WPL	**Puli Township**	**0.84**	**319**	P	**Pn**	**15 35 57.3**	**-0.3**

baz=325

WPL				*e*S	**Sn**	**15 36 08.4**	**-0.4**

baz=325

TPUB	**Ta-pu**	**0.85**	**265**	P	**Pn**	**15 35 57.9**	**+0.1**
TPUB	**Ta-pu**	**0.85**	**265**	⇓P	**Pb**	**15 35 57.7**	**-0.5**

baz=264

TPUB				S	**Sn**	**15 36 09.5**	**+0.2**

baz=264

WTP	**Ta-pu**	**0.88**	**262**	⇓*i*P	**Pb**	**15 35 58.0**	**-0.6**

baz=260

WTP				S	**Sn**	**15 36 10.2**	**+0.4**

baz=260

WCKO	**Fanlu**	**0.88**	**274**	⇓P	**Pn**	**15 35 58.3**	**+0.2**

baz=274

WCKO				S	**Sn**	**15 36 10.9**	**+1.1**

baz=274

WJS	**Zhushan**	**0.88**	**300**	P	**Pn**	**15 35 58.8**	**+0.7**

baz=301

WJS				S	**Sn**	**15 36 10.4**	**+0.6**

baz=301

CHN4	**Tsaushan**	**0.89**	**268**	⇓*i*P	**Pn**	**15 35 58.4**	**+0.2**

baz=263

CHN4				*i* S	**Sn**	**15 36 11.4**	**+1.4**

baz=263

WCS	**Beigang Elemen**	**0.90**	**319**	P	**Pb**	**15 35 58.1**	**-0.8**

baz=325

WCS				S	**Sn**	**15 36 10.3**	**0.0**

baz=325

FUSS	**Fushou**	**0.91**	**342**	P	**Pb**	**15 35 58.5**	**-0.9**

baz=345

FUSS				S	**Sb**	**15 36 10.1**	**-1.1**

baz=345

SLGT	**Liugui**	**0.92**	**246**	P	**Pn**	**15 35 59.0**	**+0.3**

baz=241

SLGT				S	**Sb**	**15 36 10.9**	**-0.4**

baz=241

TWT	**Tachien**	**0.94**	**338**	*i* P	**Pn**	**15 35 59.0**	**-0.2**

baz=340

TWT				*i* S	**Sb**	**15 36 10.2**	**-1.7**

baz=340

SGST	**Jiashian**	**0.94**	**252**	⇓*i*P	**Pn**	**15 35 58.1**	**-0.9**

baz=242

SGST				*i* S	**Sn**	**15 36 11.5**	**+0.1**

baz=242

WNT	**Mingjian**	**0.94**	**302**	⇓*i*P	**Pb**	**15 35 59.7**	**0.0**

baz=303

WNT				*i* S	**Sn**	**15 36 12.8**	**+1.4**

baz=303

TDCB	**Techi**	**0.94**	**337**	⇓P	**Pn**	**15 35 59.0**	**-0.2**

baz=340

TDCB				S	**Sb**	**15 36 10.4**	**-1.7**

baz=340

ECL	**Taimali**	**0.95**	**216**	P	**Pn**	**15 35 57.3**	**-1.9**

baz=213

ECL				*e*S	**Sb**	**15 36 09.6**	**-2.6**

baz=213

WNT1	**Nantou City**	**0.96**	**303**	P	**Pb**	**15 35 59.8**	**-0.2**

baz=304

WNT1				S	**Sn**	**15 36 13.5**	**+1.6**

baz=304

EAHA	**Aohua**	**0.96**	**10**	P	**Pn**	**15 35 59.1**	**-0.1**

baz=359

EAHA				S	**Sn**	**15 36 13.4**	**+1.5**

baz=359

WGK	**Gukeng**	**0.96**	**289**	⇓*i*P	**Pb**	**15 35 59.7**	**-0.3**

baz=289

WGK				*i* S	**Sn**	**15 36 13.5**	**+1.6**

baz=289

CHN1	**Nanshi**	**0.96**	**259**	⇓*i*P	**Pb**	**15 35 59.7**	**-0.4**

baz=258

CHN1				*i* S	**Sn**	**15 36 13.7**	**+1.7**

baz=258

WDLH	**Douliu**	**0.98**	**289**	P	**Pb**	**15 36 00.1**	**-0.3**

baz=289

WDLH				S	**Sn**	**15 36 13.9**	**+1.5**

baz=289

SNST	**Tainan City**	**0.99**	**261**	P	**Pb**	**15 35 59.9**	**-0.5**

baz=260

SNST				S	**Sn**	**15 36 13.8**	**+1.3**

baz=260

| | | | | | | | |
|---|---|---|---|---|---|---

TAW				S		Sn	15 36 15.8	-1.5	
	baz=210								
EAST	**Anshuo**	**1.19**	**214**	*i* P		Pn	15 36 01.0	-1.4	
EAST	baz=212			*e*S		Sn	15 36 16.4	-1.1	
SSHA	**Shanhua**	**1.19**	**259**	P		Pb	15 36 04.1	+0.2	
SSHA	baz=258			S		Sb	15 36 21.2	+2.3	
TSPT	**Pingtung City**	**1.20**	**235**	*e*P		Pb	15 36 04.3	+0.3	
TSPT	baz=223			S		Sb	15 36 23.2	+4.0	
WRL	**Guolierlin Hig**	**1.20**	**296**	P		Pb	15 36 03.3	-0.7	
WRL	baz=296			S		Sb	15 36 20.0	+0.8	
TAWH	**Dawu Township**	**1.20**	**211**	P		Pn	15 36 01.2	-1.4	
TAWH	baz=210			*e*S		Sn	15 36 16.3	-1.5	
TWQ1	**Liyutan**	**1.20**	**324**	⇓*i*P		Pb	15 36 04.1	+0.1	
TWQ1	baz=325			*i* S		Sb	15 36 19.9	+0.6	
EOS2	**EOS2**	**1.21**	**31**	*e*P		Pn	15 36 03.4	+0.9	
EOS2	baz=29			*e*S		Sn	15 36 17.8	0.0	
RLNB	**Erlin**	**1.21**	**295**	P		Pb	15 36 03.6	-0.6	
RLNB	baz=295			*e*S		Sb	15 36 20.3	+0.9	
NDT	**Datong Townshi**	**1.22**	**358**	P		Pn	15 36 03.0	+0.2	
NDT	baz=1.0			*e*S		Sb	15 36 18.9	-0.8	
ESAO	**Su ao**	**1.22**	**12**	P		Pb	15 36 04.2	-0.2	
ESAO	baz=26			*e*S		Sb	15 36 18.9	-1.0	
WSL	**Shuilin Townsh**	**1.23**	**277**	P		Pb	15 36 03.7	-0.8	
WSL	baz=277			S		Sb	15 36 20.2	+0.2	
CHN8	**Yiju**	**1.24**	**269**	*i* P		Pb	15 36 03.7	-1.0	
CHN8	baz=268			*i* S		Sb	15 36 20.5	+0.3	
WSF	**Szhu**	**1.25**	**282**	*i* P		Pn	15 36 03.6	+0.4	
WSF	baz=282			S		Sb	15 36 21.5	+0.9	
TWC	**Suao**	**1.25**	**12**	*i* P		Pb	15 36 04.1	-0.8	
TWC	baz=26			*e*S		Sb	15 36 20.1	-0.6	
ENTT	**Nioudou**	**1.26**	**0**	*i* P		Pn	15 36 03.3	0.0	
ENTT	baz=3.0			*e*S		Sb	15 36 20.6	-0.3	
NDS	**Dongshan**	**1.26**	**7**	P		Pb	15 36 04.1	-0.9	
NDS	baz=359			*e*S		Sn	15 36 19.2	0.0	
NSY	**Sanyi**	**1.26**	**325**	*i* P		Pb	15 36 05.2	+0.1	
NSY	baz=326			*i* S		Sb	15 36 22.4	+1.4	
WTCT	**Ta-ch'eng**	**1.27**	**293**	*i* P		Pb	15 36 04.2	-0.9	
WTCT	baz=293			*i* S		Sb	15 36 21.4	+0.3	
SCLT	**Jiali**	**1.27**	**261**	*i* P		Pb	15 36 04.5	-0.7	
SCLT	baz=260			*i* S		Sb	15 36 22.3	+1.1	
WDJ	**Dajia District**	**1.28**	**319**	P		Pb	15 36 05.2	-0.2	
WDJ	baz=320			S		Sb	15 36 22.9	+1.5	
SNJT	**Kaohsiung City**	**1.28**	**241**	P		Pb	15 36 06.0	+0.6	
SNJT	baz=240			S		Sb	15 36 23.8	+2.2	
YHNB	**Yeheng**	**1.30**	**353**	P		Pb	15 36 04.9	-0.8	
YHNB	**Yeheng**	**1.30**	**353**	P		Pn	15 36 04.5	+0.5	
YHNB	baz=5.0			*e*S		Sb	15 36 21.6	-0.4	
NSK	**Sanguang**	**1.30**	**352**	*i* P		Pn	15 36 04.5	+0.4	
NSK	baz=5.0			S		Sb	15 36 21.4	-0.9	
NFF	**Wufeng Townshi**	**1.31**	**342**	P		Pb	15 36 05.7	-0.3	
NFF	baz=350			S		Sb	15 36 21.7	-0.7	
SCZT	**Fangliau**	**1.32**	**221**	*i* P		Pn	15 36 04.2	0.0	
SCZT	baz=219			S		Sb	15 36 22.3	-0.4	
LAY	**Lan-yu**	**1.33**	**180**	*i* P		Pn	15 36 02.6	-1.8	
LAY	baz=172			S		Sn	15 36 19.8	-1.3	
TWE	**Neicheng**	**1.34**	**4**	*i* P		Pn	15 36 04.7	+0.2	
TWE	baz=7.0			*e*S		Sb	15 36 22.0	-1.2	
NSTT	**Nanjuang**	**1.35**	**338**	*i* P		Pb	15 36 05.8	-0.7	
NSTT	baz=340			S		Sb	15 36 24.4	+1.0	
NMLH	**Miaoli**	**1.35**	**329**	P		Pb	15 36 06.0	-0.6	
NMLH	baz=330			S		Sb	15 36 23.6	+0.1	
SLIU	**Shizi**	**1.35**	**211**	P		Pn	15 36 03.6	-1.0	
SLIU	baz=202			*e*S		Sn	15 36 21.4	-0.2	
LIOB	**Emei**	**1.35**	**339**	P		Pb	15 36 06.2	-0.5	
LIOB	baz=340			S		Sb	15 36 24.2	+0.5	
LYUB	**Lan-yu**	**1.37**	**179**	P		Pn	15 36 02.9	-2.0	
LYUB	baz=172			S		Sn	15 36 19.1	-2.9	
TSCK	**Chigu Township**	**1.37**	**261**	P		Pn	15 36 05.7	+0.9	
TSCK	baz=260			S		Sb	15 36 24.0	-0.1	
FUSB	**Fushanzhiwuyua**	**1.38**	**1**	P		Pn	15 36 05.1	+0.1	
FUSB	baz=4.0			*e*S		Sb	15 36 23.3	-1.0	
NWLT	**Wulai**	**1.39**	**358**	P		Pn	15 36 05.8	+0.5	
NWLT				S		Sn	15 36 22.5	-0.2	
WSSB	**Gushan**	**1.40**	**239**	P		Pb	15 36 07.2	-0.3	
WSSB	baz=238			S		Sb	15 36 25.6	+0.7	
NJD	**Zhudong**	**1.42**	**343**	P		Pb	15 36 07.8	+0.1	
NJD	baz=330			S		Sb	15 36 28.1	+2.6	
NJN	**Zhunan**	**1.44**	**334**	*e*P		Pb	15 36 10.8	+2.7	
NJN	baz=335			S		Sb	15 36 27.0	+0.9	
HSN1	**Hsinchu**	**1.48**	**341**	*e*P		Pb	15 36 07.2	-1.5	
HSN1	baz=342			*e*S		Sb	15 36 28.8	+1.7	
EGS		**1.50**	**13**	*i* P		Pb	15 36 09.0	-0.1	
EGS	baz=26			*e*S		Sb	15 36 28.1	+0.3	
SBCB	**Hsinchu**	**1.50**	**340**	*e*P		Pb	15 36 08.7	-0.4	
SBCB	baz=341			*e*S		Sb	15 36 27.4	-0.4	
SMST	**Manzhou Townsh**	**1.50**	**206**	P		Pn	15 36 07.9	+1.2	
SMST	baz=207			S		Sn	15 36 26.4	+1.1	
TWP	**Hsiaoliuchiu**	**1.50**	**227**	P		Pb	15 36 09.3	+0.1	
TWP	baz=227			*e*S		Sb	15 36 30.7	+2.8	
HEN	**Hengchun**	**1.56**	**209**	P		Pn	15 36 08.9	+1.4	
HEN	baz=198			*e*S		Sn	15 36 27.5	+0.9	
TWKBT	**Hengchun**	**1.59**	**206**	P		Pn	15 36 08.1	+0.2	
TWKBT	baz=207			*e*S		Sn	15 36 27.3	0.0	
TWK1	**Hengchun**	**1.59**	**206**	*i* P		Pn	15 36 08.7	+0.9	
TWK1	baz=207			*i* S		Sn	15 36 28.0	+0.7	
TSEB	**Hengchuen, Pin**	**1.59**	**203**	*e*P		Pn	15 36 08.7	+0.8	
TSEB	baz=205			S		Sn	15 36 27.5	+0.1	
TATO	**Taipei**	**1.59**	**358**	P		Pn	15 36 08.9	+1.0	
TIPB	**Shuangxi**	**1.61**	**9**	P		Pn	15 36 08.9	+0.7	
TIPB	baz=2.0			S		Sn	15 36 28.0	+0.1	
JYNG	**Yonagunijimaku**	**1.66**	**50**	*e*P		Pn	15 36 09.9	+1.0	
JYNG				*e*S		Sn	15 36 30.4	+1.2	
TWB1	**Santiao Chiao**	**1.67**	**14**	P		Pn	15 36 08.8	-0.2	
TWB1	baz=3.0			S		Sb	15 36 32.5	-0.1	
NWF	**Wu-fen Shan**	**1.70**	**7**	*e*P		Pn	15 36 10.8	+1.3	
NWF	baz=8.0			*e*S		Sb	15 36 32.7	-0.8	
WFSB	**Wu-fen Shan**	**1.70**	**7**	*e*P		Pn	15 36 10.8	+1.4	
WFSB	baz=8.0			*e*S		Sb	15 36 32.9	-0.6	
YOJ	**Yonaguni jima**	**1.71**	**51**	P		Pn	15 36 10.6	+1.0	
YOJ	**Yonaguni jima**	**1.71**	**51**	P		Pn	15 36 10.6	+1.0	
YOJ	baz=51			S		Sn	15 36 32.0	+1.6	
YOJ	**Yonaguni jima**	**1.71**	**51**	P		Pn	15 36 10.6	+1.0	
YOJ				*e*S		Sn	15 36 31.9	+1.4	
TWS1	**Kuangyinshan**	**1.72**	**356**	*i* P		Pn	15 36 10.6	+0.9	
TWS1	baz=12			S		Sb	15 36 33.5	-0.6	
SXI1	**Grass Mountain**	**1.73**	**10**	P		Pn	15 36 10.8	+0.9	
SXI1	baz=358			*e*S		Sn	15 36 31.5	+0.4	
WDGT	**Dungji**	**1.75**	**267**	⇑*i*P		Pn	15 36 10.1	0.0	
WDGT	baz=266			S		Sn	15 36 31.0	-0.2	
YM01	**YM01**	**1.76**	**0**	P		Pn	15 36 11.2	+0.9	
YM01	baz=2.0			*e*S		Sb	15 36 35.0	-0.3	
TNOU	**National Taiwa**	**1.77**	**6**	*e*P		Pn	15 36 11.3	+0.8	
TNOU	baz=8.0			S		Sn	15 36 33.3	+1.4	
NTST	**Danshui**	**1.78**	**357**	P		Pn	15 36 11.5	+0.9	
NTST	baz=13			*e*S		Sb	15 36 35.3	-0.6	
ANP	**Anpu**	**1.80**	**359**	*i* P		Pn	15 36 10.7	-0.2	
YM08	**YM08**	**1.80**	**1**	P		Pn	15 36 10.8	-0.1	
PHUB	**P'eng-hu**	**1.83**	**275**	P		Pn	15 36 11.2	0.0	
PHUB	baz=274			S		Sn	15 36 32.7	-0.5	
PNG	**Penghu**	**1.85**	**276**	*i* P		Pn	15 36 11.6	+0.1	
PNG	baz=275			*i* S		Sn	15 36 33.0	-0.8	
TWY	**Chenhua**	**1.89**	**1**	*e*P		Pb	15 36 14.2	-1.6	
TWY	baz=3.0			*e*S		Sn	15 36 35.5	+0.6	
VCHM	**Qimei**	**1.96**	**265**	P		Pn	15 36 13.1	+0.1	
VCHM	baz=265			*e*S		Sn	15 36 36.8	+0.2	
HATJ	**Hateruma jima**	**2.17**	**71**	P		Pn	15 36 16.6	+0.8	
HATJ				*e*S		Sn	15 36 42.4	+0.7	
IRIF	**Iriomote-Funau**	**2.21**	**64**	P		Pn	15 36 17.4	+1.0	
IRIF				*e*S		Sn	15 36 45.1	+2.5	
JKRS	**Kuro-shima**	**2.41**	**69**	P		Pn	15 36 20.4	+1.3	
JKRS				*e*S		Sn	15 36 48.8	+1.3	
VWUC	**VWUC**	**2.51**	**310**	P		Pn	15 36 20.5	0.0	
VWUC	baz=309			*e*S		Sn	15 36 49.8	-0.3	
JIJ	**Ishigaki jima**	**2.56**	**67**	P		Pn	15 36 22.0	+0.7	
JIJ				*e*S		Sn	15 36 51.7	+0.3	
PTMZ	**Houxiangcun**	**2.77**	**307**	P		Pn	15 36 24.4	+0.2	
PTMZ	baz=306			*e*S		Sn	15 36 55.9	-0.6	
JISG	**Ishigakijimahi**	**2.79**	**64**	P		Pn	15 36 24.8	+0.4	
JISG				*e*S		Sn	15 36 56.9	-0.2	
KNM	**Kinmen**	**3.04**	**291**	*i* P		Pn	15 36 28.8	+1.0	
KNM	baz=288			*e*S		Sn	15 37 04.6	+1.4	
KNMB	**Chin-men Tao**	**3.09**	**291**	P		Pn	15 36 28.1	-0.5	
KNMB	baz=289			*e*S		Sn	15 37 03.6	-0.9	
MATB	**Ma-tsu**	**3.12**	**332**	P		Pn	15 36 28.7	-0.3	
MATB	baz=331			S		Sn	15 37 03.2	-2.1	
JTJ	**Tarama**	**3.14**	**66**	S		Sn	15 37 07.8	+2.1	
ZPLA	**Ao Xicun**	**3.53**	**280**	P		Pn	15 36 34.0	-0.6	
ZPLA	baz=277			*e*S		Sn	15 37 14.3	-1.1	
MHZQ	**Yeshan**	**3.55**	**320**	P		Pn	15 36 35.0	+0.1	
MHZQ	baz=318			*e*S		Sn	15 37 16.9	+1.0	
LYJJ	**Jianjiangzhen**	**3.55**	**333**	P		Pn	15 36 34.4	-0.6	
LYJJ	baz=332			S		Sn	15 37 15.3	-0.6	
JIRB	**Irabujima**	**3.61**	**66**	P		Pn	15 36 36.6	+0.9	
JIRB				*e*S		Sn	15 37 19.2	+2.0	
AXDP	**Jialang**	**3.61**	**296**	P		Pn	15 36 35.5	-0.1	
	baz=293								
JMJ	**Miyako jima 2**	**3.70**	**67**	P		Pn	15 36 38.2	+1.2	
JMJ2	**Miyako jima3**	**3.71**	**68**	P		Pn	15 36 38.0	+1.0	
JMJ2				*e*S		Sn	15 37 21.1	+1.5	
JIKM	**Ikemajima**	**3.71**	**65**	*e*P		Pn	15 36 38.4	+1.3	
JIKM				*e*S		Sn	15 37 20.4	+0.8	
XPSS	**Dashiqiu**	**3.75**	**341**	P		Pn	15 36 37.3	-0.3	
XPSS	baz=341			*e*S		Sn	15 37 19.1	-1.5	
JOGS	**Gusukube**	**3.78**	**68**	P		Pn	15 36 39.2	+1.2	
JOGS				*e*S		Sn	15 37 22.8	+1.3	
DSXP	**Dongshan**	**3.80**	**276**	P		Pn	15 36 38.1	-0.2	
DSXP	baz=273			S		Sn	15 37 20.4	-1.7	

BJI ***27*** *16:19:49.6±0.0,5.°93S×143.°24E, h5km, mb5.0/77, mB5.3/44, Ms4.6/40, Ms7 4.3/44*
IDC ***27*** *16:19:51.7±0.5,5.°99S×142.°99E, h0km, mb4.9/16, mbtmp4.9/19, ML3.0/2, MS4.3/42, Error ellipse: s-maj=22.9km s-min=11.9km az=76.0*
MOS ***27*** *16:19:51.3±0.7,5.°97S×142.°93E, h11km, mb5.2/36, Error ellipse: s-maj=11.6km s-min=5.7km az=114.2*
NEIC ***27*** *16:19:53.9,6.°09S×142.°85E, h12km*
NEIC ***27*** *16:19:53.6±1.7,6.°09S±0.°07×142.°85E±0.°08, h10km±1km, mb5.2/162, Mww5.2/28, Error ellipse: s-maj=13.1km s-min=12.0km az=100.0*
NEIC ***27*** *16:19:53.9,6.°19S×142.°65E, h12km, Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10¹⁶Nm; Mrr5.77; Mθθ-2.56; Mϕϕ-3.21; Mrθ5.75; Mϕθ2.74; Mϕr-1.97; Fault plane solution: M08.31000×10¹⁶ NP1: ϕs118.40000°, δ68.91000°, λ75.96000°. NP2: ϕs333.21000°, δ25.16000°, λ122.18000°. Principal axes: T 8.7301, Plg63.0000°, Azm6.0000°; N -0.8398, Plg13.0000°, Azm124.0000°; P -7.8903, Plg23.0000°, Azm219.0000°;*
GCMT ***27*** *16:19:55.6±0.1,6.°10S±0.°01×142.°78E±0.°01, h12km, MW5.2/129, Moment Tensor Solution. s84,c111; s129,c217; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.89±.08; Mθθ-2.04±.08; Mϕϕ-3.85±.08; Mrθ2.42±.24; Mθθ2.83±.06; Mθr-2.49±.22; Best double couple: M06.84900×10¹⁶ NP1:ϕs140.00000°, δ60.00000°, λ86.00000°. NP2:ϕs328.00000°, δ30.00000°, λ97.00000°. Principal axes: T 6.8500, Plg74.0000°, Azm39.0000°; N -0.0040, Plg4.0000°, Azm142.0000°; P -6.8470, Plg15.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***27*** *16:19:55.3±1.3,6.°5S±3.°14×145.°3E±.°, h15km±10km, M4.9/42, mb5.0/42, mB5.3/35, MLv5.8/7, Mw(mB)4.8/35, MwMwp4.9/16, Mwp5.2/16*

ISC 27 16:19:53.8±0.5, 6.°10S±0.°04×142.°89E±0.°04, h14km±3km, h14km:pP-P, n635, σ1§21/571, mb5.2/154, MS4.3/58, 29C-3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TABU	**Tabubil**	**1.86**	**296**	P	**Pb**		**16 20 27.0**	**-0.6**
MMPI	**Merauke**	**3.42**	**227**	P	**Pn**		**16 20 48.8**	**+2.0**
GENI	**Genyem**	**4.42**	**322**	P	**Pn**		**16 21 02.5**	**+2.0**
GENI	**Genyem**	**4.42**	**322**	P	**Pn**		**16 21 02.1**	**+1.6**
PMG	**Port Moresby**	**5.35**	**128**		**Pn**		**16 21 13.4**	**+0.1**
PMG	**Port Moresby**	**5.35**	**128**	Pn	**Pn**		**16 21 13.8**	**+0.5**
PMG	15nm,0.3s,baz=342,slow=3.1,SNR=51			Sn	**Sn**		**16 22 15.7**	**+0.9**
SMPI	14nm,0.3s,baz=81,slow=23,SNR=6.6 39nm,0.4s **Sarmi**	**5.84**	**314**	P	**Pn**		**16 21 22.4**	**+2.3**
MANU	504nm,1.6s,8µm6µm3.3nm **Manus Island**	**6.01**	**48**	Pn	**Pn**		**16 21 24.7**	**+2.3**
MANU	**Manus Island**	**6.01**	**48**	P	Pn		16 21 26.7	+4.3
BULU	**Kimbe**	**7.41**	**86**	P	Pn		16 21 46.2	+4.6
COEN	**Coen**	**7.81**	**178**	P	**Pn**		**16 21 48.7**	**+1.6**
COEN	baz=7.9,SNR=8.4 **Coen**	**7.81**	**178**		**Pn**		**16 21 48.8**	**+1.7**
COEN	**Coen**	**7.81**	**178**	P	**Pn**		**16 21 50.1**	**+3.0**
RABL	**Rabaul**	**9.43**	**79**	P	**Pn**		**16 22 12.9**	**+3.6**
FAKI	**Fak Fak**	**11.07**	**286**	Pn	**Pn**		**16 22 31.6**	**-0.3**
FAKI	**Fak Fak**	**11.07**	**286**	P	**Pn**		**16 22 32.8**	**+0.9**
FAKI	**Fak Fak**	**11.07**	**286**	P	**Pn**		**16 22 30.2**	**-1.7**
SAUI	98nm,0.9s,1µm3µm **Saumlaki**	**11.66**	**260**	Pn	**Pn**		**16 22 39.0**	**-0.9**
SAUI	**Saumlaki**	**11.66**	**260**	P	**Pn**		**16 22 40.9**	**+1.0**
SAUI	**Saumlaki**	**11.66**	**260**	P	**Pn**		**16 22 40.4**	**+0.5**
MTSU	860nm,1.0s,7µm **Mount Surprise**	**12.04**	**174**	P	**Pn**		**16 22 46.4**	**+1.2**
MTSU	baz=12,SNR=5.0 **Mount Surprise**	**12.04**	**174**	P	**Pn**		**16 22 48.5**	**+3.4**
KDU	**Kakadu**	**12.18**	**237**	P	**Pn**		**16 22 46.3**	**-0.8**
KDU	baz=12,SNR=56 **Kakadu**	**12.18**	**237**	P	**Pn**		**16 22 47.0**	**-0.1**
SWI	**Sorong**	**12.72**	**294**	P	**Pn**		**16 22 52.7**	**-1.8**
MTN	74nm,0.8s,1µm **Manton Dam**	**13.39**	**239**	P	**Pn**		**16 23 03.6**	**0.0**
MTN	baz=14,SNR=53 **Manton Dam**	**13.39**	**239**	Pn	**Pn**		**16 23 02.3**	**-1.3**
MTN	**Manton Dam**	**13.39**	**239**	P	**Pn**		**16 23 05.0**	**+1.4**
DRS	**Darwin Rock St**	**13.40**	**241**	P	**Pn**		**16 23 04.8**	**+1.1**
TV1H	94nm,1.0s **Townsville Har**	**13.62**	**164**	P	**Pn**		**16 23 08.1**	**+1.4**
CTA	**Charters Tower**	**14.28**	**167**	Pn	**Pn**		**16 23 18.1**	**+2.3**
CTA	0.1nm,0.3s,baz=350,slow=11,SNR=3.8 0.3nm,0.3s,baz=253,slow=20,SNR=3.4			Lg	Lg		16 27 28.9	
CTA	comp=Z,2µm,19.7s,baz=354,slow=37 4.5nm,1.0s			LR	LR		16 28 40.7	
CTAO	**Charters Tower**	**14.28**	**167**	Pn	**Pn**		**16 23 16.4**	**+0.6**
CTAO	**Charters Tower**	**14.28**	**167**	P	**Pn**		**16 23 16.4**	**+0.6**
QIS	**Mount Isa**	**14.72**	**192**	P	**Pn**		**16 23 21.9**	**+0.1**
QIS	baz=15,SNR=19 **Mount Isa**	**14.72**	**192**	P	**Pn**		**16 23 23.6**	**+1.8**
WB0	**Warramunga Arr**	**15.90**	**211**		**Pn**		**16 23 36.3**	**-1.1**
WR0	**Warramunga Arr**	**15.99**	**210**		**Pn**		**16 23 36.7**	**-1.8**
WB2	**Warramunga Arr**	**16.07**	**210**		**Pn**		**16 23 37.5**	**-2.0**
WC3	**Warramunga Arr**	**16.07**	**210**	P	**Pn**		**16 23 37.5**	**-2.0**
I07AU	baz=16 **WARRAMUNGA INF**	**16.07**	**210**	I	I		17 57 50.0	
WRA	baz=28,slow=317,SNR=0.8 **Warramunga Arr**	**16.07**	**210**	Pn	**Pn**		**16 23 37.7**	**-2.0**
WRA	2.4nm,0.3s,baz=30,slow=13,SNR=49 1.1nm,0.3s,baz=28,slow=23,SNR=5.9			Sn	**Sn**		**16 26 32.4**	**-5.5**
WRA	1.0nm,0.3s,baz=32,slow=23,SNR=6.2			Lg	Lg		16 28 27.4	
WRA	comp=Z,6µm,20.4s,baz=28,slow=40			LR	LR		16 30 44.6	
LBMI	**Labuha**	**16.29**	**289**	P	**P**		**16 23 45.1**	**-0.3**
KNRA	84nm,0.9s,2µm **Kununurra**	**16.81**	**234**	P	**Pn**		**16 23 47.5**	**-1.5**
KNRA	baz=17 **Kununurra**	**16.81**	**234**	Pn	**Pn**		**16 23 47.0**	**-2.0**
KNRA	comp=Z,170nm,1.1s			IAmb	IAmb		16 23 54.9	
KNRA	**Kununurra**	**16.81**	**234**	P	**Pn**		**16 23 48.0**	**-1.0**
TNTI	**Ternate**	**16.94**	**293**	P	**Pn**		**16 23 49.8**	**-0.8**
TNTI	**Ternate**	**16.94**	**293**	P	**Pn**		**16 23 51.1**	**+0.5**
HNR	comp=Z,36nm,1.3s,comp=Z,846nm **Honiara**	**17.21**	**102**		**P**		**16 23 56.1**	**+0.5**
HNR	comp=Z,292nm,1.0s			IAmb	IAmb		16 23 58.8	
HNR	**Honiara**	**17.21**	**102**	P	**Pn**		**16 23 53.8**	**-0.3**
SANI	comp=Z,3µm,0.9s,baz=322,slow=12,SNR=5.5 **Sanana**	**17.33**	**283**	P	**Pn**		**16 23 56.2**	**+0.6**
SANI	**Sanana**	**17.33**	**283**	P	**P**		**16 23 56.9**	**0.0**
RK1H	comp=Z,40nm,0.9s,comp=Z,822nm **Rockhampton Ha**	**18.68**	**158**	P	**Pn**		**16 24 14.9**	**+2.9**
SOEI	**Soe**	**18.80**	**258**		**P**		**16 24 13.4**	**+0.1**
SOEI	**Soe**	**18.80**	**258**	P	**P**		**16 24 13.2**	**-0.1**
SOEI	**Soe**	**18.80**	**258**	P	**Pn**		**16 24 15.7**	**+2.0**
AS01	comp=Z,153nm,1.1s,comp=Z,4µmcomp=Z,3µm **Alice Springs**	**19.47**	**205**	P	**P**		**16 24 22.5**	**+2.1**
AS31	**Alice Springs**	**19.49**	**205**	P	**P**		**16 24 22.3**	**+1.7**
ASAR	**Alice Springs**	**19.49**	**205**	P	**P**		**16 24 22.5**	**+1.8**
ASAR	**Alice Springs**	**19.49**	**205**	P	**Pn**		**16 24 23.0**	**+1.1**
ASAR	**Alice Springs**	**19.49**	**205**	P	**Pn**		**16 24 22.9**	**+1.1**
ASAR	comp=Z,67nm,0.7s,baz=32,slow=11,SNR=174 comp=Z,12nm,1.0s,baz=17,slow=27,SNR=4.5			S	**S**		**16 27 54.9**	**-5.8**
ASAR	comp=Z,0.2nm,0.3s,baz=22,slow=38,SNR=2.2			Lg	Lg		16 30 16.7	
ASAR	comp=Z,6µm,19.1s,baz=34,slow=39			LR	LR		16 32 43.0	
ASPA	**Alice Springs**	**19.49**	**205**	P	**P**		**16 24 22.3**	**+1.6**
GUMO	baz=20 **Guam**	**19.66**	**6**	LR	LR		16 31 20.1	
KMSI	comp=Z,639nm,18.8s,baz=192,slow=35 **Cibinong**	**20.01**	**289**	P	**P**		**16 24 27.1**	**+0.7**
BBSI	comp=Z,343nm,1.3s,comp=Z,3µmcomp=Z,1µm **Bau Bau**	**20.23**	**271**	P	Pn		16 24 31.3	+0.6
QLP	comp=Z,68nm,1.1s,comp=Z,1µmcomp=Z,2µm **Quilpie**	**20.41**	**177**	P	**P**		**16 24 32.4**	**+1.8**
QLP	baz=21,SNR=22 **Quilpie**	**20.41**	**177**	P	**P**		**16 24 32.5**	**+1.9**
FITZ	**Fitzroy Crossi**	**20.63**	**233**	P	**P**		**16 24 34.0**	**+1.0**
FITZ	baz=21,SNR=23 **Fitzroy Crossi**	**20.63**	**233**	P	**P**		**16 24 33.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**20.63**	**233**	P	**P**		**16 24 34.1**	**+1.0**
MMRI	**Maumere**	**20.64**	**262**	P	**P**		**16 24 33.9**	**+0.7**
MMRI	**Maumere**	**20.64**	**262**	P	**P**		**16 24 34.0**	**+0.7**
LUWI	comp=Z,57nm,1.1s,comp=Z,1µmcomp=Z,2µm **Luwuk**	**20.70**	**283**	P	**P**		**16 24 33.8**	**0.0**
LUWI	comp=Z,138nm,1.1s			IAmb	IAmb		16 24 40.2	
LUWI	**Luwuk**	**20.70**	**283**	P	**P**		**16 24 34.5**	**+0.7**
LUWI	**Luwuk**	**20.70**	**283**	P	**P**		**16 24 35.3**	**+1.5**
EIDS	comp=Z,135nm,1.2s,comp=Z,2µm **Eidsvold**	**20.70**	**159**	P	**P**		**16 24 34.8**	**+1.0**

baz=21,SNR=5.8
EIDS Eidsvold 20.70 159 P **P** **16 24 34.3 +0.6**
EIDS Eidsvold 20.70 159 P Pn 16 24 36.4 +0.3
GTOI Gorontalo 20.95 288 P **P** **16 24 36.6 0.0**
comp=Z,71nm,0.6s,comp=Z,883nm
EDFI Ende, Flores 21.19 262 P **P** **16 24 40.3 +1.0**
comp=Z,48nm,1.0s,comp=Z,864nmcomp=Z,2µm
INKA Innaminka 21.62 185 P **P** **16 24 45.4 +1.8**
DAV Davao City (W) 21.57 307 LR LR 16 34 59.2
comp=Z,694nm,18.5s,baz=208,slow=42
MRSI Marisa 21.91 287 P **P** **16 24 46.8 -0.2**
comp=Z,63nm,0.8s,comp=Z,862nm
BASI Baing, Sumba 22.46 258 P **P** **16 24 54.8 +2.0**
comp=Z,104nm,0.9s,comp=Z,2µm
OOD Oodnadatta 22.63 197 P **P** **16 24 56.5 +2.0**
BKSI Bulukumba 22.67 271 P **P** **16 24 55.5 +0.4**
comp=Z,72nm,0.9s,comp=Z,2µmcomp=Z,1µm
KAPI Kappang 23.06 272 P **P** **16 24 58.8 -0.3**
KAPI IAmb IAmb 16 25 07.3
comp=Z,61nm,1.1s
KAPI Kappang 23.06 272*c i*P **P** **16 24 59.8 +0.7**
KAPI pmax pmax
comp=Z,69nm,1.1s
TTSI Tana Toraja 23.20 276 P **P** **16 25 02.2 +1.6**
comp=Z,40nm,0.9s,comp=Z,2µm
TOLI2 Tolitoli 23.21 287 P **P** **16 24 59.7 -1.0**
TOLI2 IAmb IAmb 16 25 06.0
comp=Z,54nm,0.9s
TOLI2 Tolitoli 23.21 287 P **P** **16 25 01.0 +0.3**
WRKA Warakurna 23.45 215 P **P** **16 25 03.3 +0.2**
baz=24,SNR=65
WRKA Warakurna 23.45 215 P **P** **16 25 03.9 +0.8**
AULRC Lightning Ridg 23.70 169 P **P** **16 25 06.4 +1.1**
MPSI Mapaga 23.83 285 P **P** **16 25 07.1 +0.3**
comp=Z,50nm,0.9s,comp=Z,832nmcomp=Z,2µm
LCRK Leigh Creek 24.61 190 P **P** **16 25 15.5 +1.6**
PLAI Plampang 25.05 262 P **P** **16 25 17.7 -0.3**
PLAI Plampang 25.05 262 P **P** **16 25 17.1 -0.9**
comp=Z,33nm,0.8s,comp=Z,769nm
KOUNC Koumac, New Ca 25.24 127 P **P** **16 25 22.1 +2.5**
CMSA Cobar Meteorol 25.44 174 P **P** **16 25 22.9 +1.6**
baz=26,SNR=7.1
CMSA Cobar Meteorol 25.44 174 P **P** **16 25 23.7 +2.4**
MULG Mulgathing 25.45 198 P **P** **16 25 23.7 +2.3**
STKA Stephens Creek 25.67 183 P **P** **16 25 24.0 +0.6**
baz=26,SNR=9.1
STKA Stephens Creek 25.67 183 P **P** **16 25 23.8 +0.3**
STKA Stephens Creek 25.67 183 P **P** **16 25 25.4 +2.0**
STKA Stephens Creek 25.67 183 *i* P **P** **16 25 22.2 -1.2**
STKA Stephens Creek 25.67 183 P **P** **16 25 23.8 +0.3**
comp=Z,15nm,1.0s,baz=345,slow=7.9,SNR=10
STKA LR LR 16 35 55.1
comp=Z,2µm,19.3s,baz=357,slow=37
comp=Z,15nm,1.0s
TWSI Taliwang, Sumb 25.92 263 P **P** **16 25 24.8 -1.1**
comp=Z,21nm,1.1s
AUPHS Peel High Scho 25.97 164 P **P** **16 25 27.3 +1.1**
MBWA Marble Bar 26.97 234 P **P** **16 25 35.4 +0.1**
PSA00 Pilbara Seismi 27.09 233 P **P** **16 25 35.7 -0.7**
PSA00 IAmb IAmb 16 25 47.6
comp=Z,69nm,1.6s
PSA00 Pilbara Seismi 27.09 233 P **P** **16 25 37.3 +0.9**
BBOO Buckleboo 27.32 193 P **P** **16 25 37.9 -0.5**
BBOO Buckleboo 27.32 193 P **P** **16 25 40.1 +1.7**
HTT Hallett 27.44 187 P **P** **16 25 40.0 +0.6**
baz=28,SNR=3.4
DZM Mont Dzumac 27.74 127 P **P** **16 25 45.7 +3.3**
DZM Mont Dzumac 27.74 127 LR LR 16 37 01.4
comp=Z,1µm,20.0s,baz=301,slow=37
YNG Young 28.52 170 P **P** **16 25 49.7 +0.7**
TGY Tagaytay City 29.63 313 LR LR 16 37 06.9
comp=Z,268nm,21.4s,baz=110,slow=35
JCJ Chichijima 33.01 359 LR LR 16 39 04.2
comp=Z,204nm,21.5s,baz=156,slow=35
KPJI Karang Pucung 33.75 266 P **P** **16 26 36.6 +1.2**
comp=Z,28nm,1.0s
BBJI Bungbulang 35.02 266 P **P** **16 26 45.5 -1.0**
LEM Lembang 35.05 267 LR LR 16 45 01.9
comp=Z,483nm,18.7s,baz=90,slow=43
JOW Kunigami 35.67 337 LR LR 16 38 37.8
comp=Z,320nm,21.2s,baz=199,slow=32
NWAO Narrogin (SRO) 35.81 218 LR LR 16 42 26.1
comp=Z,3µm,18.2s,baz=36,slow=38
YULB Yu-li 36.12 325 IAmb IAmb 16 26 57.8
comp=Z,79nm,1.5s
NACB Ninganchiao 36.57 326 P **P** **16 27 00.2 +0.7**
comp=Z,46nm,0.8s
YHNB Yeheng 37.08 326 P **P** **16 27 04.3 +0.4**
YHNB IAmb IAmb 16 27 14.3
comp=Z,58nm,0.9s
YHNB Yeheng 37.08 326 P **P** **16 27 05.0 +1.0**
TATO Taipei 37.26 327 P **P** **16 27 04.6 -0.8**
TATO Taipei 37.26 327 P **P** **16 27 06.7 +1.3**
comp=Z,141nm,1.2s
KNMB Chin-men Tao 38.64 323 P **P** **16 27 16.6 -0.5**
KNMB IAmb IAmb 16 27 34.2
comp=Z,51nm,1.2s
QZH Quanzhou 38.88 323 *e*P **P** **16 27 19.8 +0.7**
JHJ Hachijo jima 2 39.12 356 LR LR 16 42 25.4
comp=Z,490nm,20.2s,baz=154,slow=35
JMN Monobe 40.52 348 IAmb IAmb 16 27 33.7
comp=Z,61nm,1.0s
JMN Monobe 40.52 348 P **P** **16 27 32.7 0.0**
JNU Nakatsue 40.64 344 P **P** **16 27 34.2 +0.5**
JNU Nakatsue 40.64 344 LR LR 16 42 12.5
comp=Z,288nm,21.2s,baz=154,slow=33
QIZ Qiongzhong 41.04 308 P **P** **16 27 36.8 -0.3**
QIZ S **S** **16 33 50.8 +1.3**
QIZ LR LR
comp=Z,170nm,16.7s
QIZ LR LR
comp=Z,270nm,21.1s
QIZ LR LR
comp=Z,220nm,13.5s
INU Inuyama 41.60 353 P **P** **16 27 42.5 +1.1**
comp=Z,20nm,1.1s
JGF Kuroka 41.81 353 P **P** **16 27 45.5 +2.3**
comp=Z,13nm,1.2s
MJAR Matsushiro Arr 42.65 354 P **P** **16 27 48.1 -1.9**
comp=Z,11nm,0.9s,baz=182,slow=8.6,SNR=17
comp=Z,11nm,0.9s
MAJO Matsushiro 42.65 354 P **P** **16 27 48.3 -1.7**
MAJO Matsushiro 42.65 354 P **P** **16 27 48.9 -1.1**
MAJO Matsushiro 42.65 354 *i* P **P** **16 27 47.4 -2.6**
MAJO pmax pmax
comp=Z,39nm,1.2s
MJB9 Matsu-Tunnel 42.65 354 IAmb IAmb 16 27 50.1
comp=Z,43nm,1.2s
RAO Raoul Island 43.54 127 LR LR 16 46 00.5
comp=Z,285nm,18.2s,baz=98,slow=36
JMM Marumori 43.79 358 IAmb IAmb 16 27 59.0
comp=Z,49nm,1.1s
JMM Marumori 43.79 358 P **P** **16 27 59.4 +0.2**
comp=Z,41nm,1.3s
NJ2 Nanjing 44.32 330 ⇑P **P** **16 28 04.5 +0.9**
NJ2 pP **pP** **16 28 07.8 -0.5**
NJ2 sP **sP** **16 28 09.5 -0.6**
NJ2 S **S** **16 34 42.5 +5.0**
NJ2 pmax pmax
comp=Z,22nm,0.7s
NJ2 pmax pmax
comp=Z,290nm,3.6s
NJ2 LR LR
comp=Z,250nm,20.8s
NJ2 LR LR
comp=Z,400nm,22.7s
NJ2 LR LR
comp=Z,280nm,19.4s
URZ Urewera 44.56 141 LR LR 16 47 23.1
comp=Z,558nm,18.1s,baz=72,slow=37
CNSH ChangSha 44.69 321 ⇓P **P** **16 28 07.8 +1.2**
TJN Taejon 44.70 342 P **P** **16 28 07.4 +0.9**
comp=Z,96nm,1.1s
TJN Taejon 44.70 342*ce*P **P** **16 28 04.4 -2.1**
RPSI Rantau Prapat 44.77 280 P **P** **16 28 07.1 -0.4**
PSI Prapat 44.79 280 P **P** **16 28 08.1 +0.3**
PSI Prapat 44.79 280 P **P** **16 28 07.1 -0.7**
PSI pmax pmax
comp=Z,21nm,1.0s
RPZ Rata Peaks 44.89 151 LR LR 16 46 07.8
comp=Z,954nm,18.6s,baz=316,slow=35
KSAR Wonju Array Be 45.53 343 P **P** **16 28 12.6 -0.5**
KSAR Wonju Array Be 45.53 343 P **P** **16 28 12.6 -0.5**
KSRS Korea Array 45.53 343 P **P** **16 28 13.1 0.0**
comp=Z,40nm,1.0s,baz=162,slow=9.3,SNR=65
KSRS LR LR 16 44 42.8
comp=Z,302nm,21.9s,baz=165,slow=33
comp=Z,40nm,1.0s
WHN Wuhan 45.55 325 ⇑P **P** **16 28 15.0 +1.6**
WHN S **S** **16 34 58.5 +3.1**
WHN sS **sS** **16 35 05.5 +2.4**
WHN pmax pmax
comp=Z,100nm,1.1s
WHN LR LR
comp=Z,780nm,22.3s
KS19 Wonju Array Si 45.59 343 IAmb IAmb 16 28 14.8
comp=Z,30nm,1.0s
GSI Gunungsitoli 45.84 278 P **P** **16 28 14.6 -1.4**
GSI Gunungsitoli 45.84 278 P **P** **16 28 16.4 +0.4**
INCN Inchon 45.94 342 P **P** **16 28 17.5 +1.1**
NONG Nongkai 45.99 302 P **P** **16 28 16.8 -0.3**
comp=Z,26nm,0.8s
JTM Tenmabayashi 46.69 358 P **P** **16 28 21.7 -0.5**
SLVN Son La 46.97 307 P **P** **16 28 24.6 -0.2**
GYA Guiyang 47.76 314 ⇓*i*P **P** **16 28 32.5 +1.6**
GYA pmax pmax
comp=Z,26nm,1.2s
GYA pmax pmax
comp=Z,270nm,3.6s
ENH Enshi 48.30 320 IAmb IAmb 16 28 40.1
comp=Z,37nm,1.3s
ENH Enshi 48.30 320 P **P** **16 28 36.0 +1.0**
TIA Tai'an 48.54 332 P **P** **16 28 36.0 -0.7**
TIA pmax pmax
comp=Z,6.0nm,1.3s
LYN LuoYang 49.60 327 ⇑*i*P **P** **16 28 45.0 +0.2**
LYN S **S** **16 35 55.0 +2.2**
LYN pmax pmax
comp=Z,54nm,1.0s
LYN pmax pmax
comp=Z,220nm,3.7s
LYN LR LR
comp=Z,380nm,19.3s
LYN LR LR
comp=Z,370nm,16.1s
MSHR Mys Shultsa 49.62 349*ce*P **P** **16 28 44.0 -0.8**
MSHR pmax pmax
comp=Z,27nm,1.3s
CMAR Chiang Mai Arr 49.74 300 P **P** **16 28 45.6 -0.5**
CMAR Chiang Mai Arr 49.74 300 P **P** **16 28 46.8 +0.6**
comp=Z,6.2nm,0.6s,baz=117,slow=6.3,SNR=42
comp=Z,6.2nm,0.6s
KMI Kunming 49.88 310 ⇑P **P** **16 28 48.8 +1.4**
KMI pmax pmax
comp=Z,31nm,1.0s
KMI LR LR
comp=Z,140nm,19.7s
KMI LR LR
comp=Z,190nm,20.6s
KMI LR LR
comp=Z,290nm,24.3s
CHTO Chiang Mai 49.89 301 P **P** **16 28 46.9 -0.4**
CHTO Chiang Mai 49.89 301 P **P** **16 28 48.2 +0.9**
CHTO Chiang Mai 49.89 301 P **P** **16 28 46.9 -0.4**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
JKA Kamikawa-asahi 49.99 360 P **P** **16 28 47.0 -0.6**
JKA IAmb IAmb 16 28 48.3
comp=Z,50nm,1.2s
ASAJ Asahikawa 49.99 360 P **P** **16 28 47.0 -0.6**
ASAJ pmax pmax
comp=Z,50nm,1.2s
HNS HongShan 50.64 331 ⇑P **P** **16 28 52.5 -0.2**
HNS S **S** **16 36 06.3 -1.0**
HNS pmax pmax
comp=Z,23nm,1.3s
HNS LR LR
comp=Z,270nm,20.7s
HNS LR LR
comp=Z,280nm,19.1s
SNY Shenyang 50.86 341 ⇑P **P** **16 28 55.5 +1.3**
SNY S **S** **16 36 15.3 +5.2**
SNY pmax pmax
comp=Z,100nm,6.4s
SNY LR LR
comp=Z,190nm,20.6s
SNY LR LR
comp=Z,250nm,17.7s
USA0B Ussuriysk Arra 51.03 350 IAmb IAmb 16 28 56.3
comp=Z,51nm,1.1s
USA0B Ussuriysk Arra 51.03 350*c i*P **P** **16 28 54.9 -0.6**
USRK Ussuriysk Ar. 51.03 350 P **P** **16 28 54.7 -0.8**
USRK Ussuriysk Ar. 51.03 350 P **P** **16 28 54.7 -0.8**
USRK Ussuriysk Ar. 51.03 350 P **P** **16 28 55.1 -0.3**
comp=Z,33nm,0.9s,baz=168,slow=7.9,SNR=68
USRK LR LR 16 48 21.4
comp=Z,240nm,21.0s,baz=166,slow=34
comp=Z,33nm,0.9s
XAN Xi'an 51.25 323 ⇑P **P** **16 28 57.3 -0.1**
XAN S **S** **16 36 14.8 -1.1**
XAN sS sS 16 36 30.0 +6.3
XAN pmax pmax
comp=Z,49nm,1.3s
XAN pmax pmax
comp=Z,240nm,3.6s
XAN LR LR
comp=Z,250nm,18.6s
XAN LR LR
comp=Z,250nm,18.7s
XAN LR LR
comp=Z,310nm,19.9s
PZH PanZhiHua 51.38 311 P **P** **16 28 59.0 +0.4**
PZH pP **pP** **16 29 01.8 -1.6**
PZH S **S** **16 36 20.8 +2.6**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,150nm,4.7s
PZH LR LR
comp=Z,150nm,22.0s
PZH LR LR
comp=Z,150nm,22.4s
PZH LR LR
comp=Z,210nm,24.3s
MDJ Mudanjiang 51.89 348 P **P** **16 29 01.3 -0.6**
MDJ pP pP 16 29 05.5 -1.2
MDJ sP sP 16 29 07.3 -1.2
MDJ PcP **PcP** **16 30 12.3 -2.3**
MDJ PP **PP** **16 30 56.0 -4.0**
MDJ ScP **ScP** **16 34 09.5 -1.8**
MDJ PcS **PcS** **16 34 15.3 +2.8**
MDJ S **S** **16 36 21.8 -2.4**
MDJ pmax pmax
comp=Z,17nm,0.8s
MDJ pmax pmax
comp=Z,220nm,5.8s
MDJ LR LR
comp=Z,130nm,12.3s
MDJ LR LR
comp=Z,300nm,12.0s
MDJ LR LR
comp=Z,340nm,15.5s
MDJ Mudanjiang 51.89 348 IAmb IAmb 16 29 03.0
comp=Z,23nm,0.9s
MDJ Mudanjiang 51.89 348 P **P** **16 29 01.7 -0.2**
BJT Baijiatuan 52.09 334 IAmb IAmb 16 29 06.4
comp=Z,15nm,0.7s
BJT Baijiatuan 52.09 334 P **P** **16 29 03.8 +0.3**
BJI Beijing 52.10 334 P **P** **16 29 02.8 -0.8**
BJI pmax pmax
comp=Z,15nm,0.7s
BJI LR LR
comp=Z,190nm,19.6s
BJI LR LR
comp=Z,130nm,17.2s
BJI LR LR
comp=Z,280nm,21.2s
CN2 Changchun 52.12 344 P **P** **16 29 03.5 -0.1**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,300nm,20.0s
CD2 Chengdu 52.49 317 P **P** **16 29 07.8 +1.1**
CD2 S **S** **16 36 35.8 +2.7**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,210nm,6.7s
CD2 LR LR
comp=Z,200nm,14.5s
YSS Yuzh-Sakhalins 52.83 360 P **P** **16 29 07.2 -1.5**
YSS IAmb IAmb 16 29 09.5
comp=Z,29nm,0.9s
YSS Yuzh-Sakhalins 52.83 360 P **P** **16 29 08.4 -0.4**
YSS Yuzh-Sakhalins 52.83 360*ce*P **P** **16 29 07.1 -1.7**
YSS pmax pmax
comp=Z,38nm,1.0s
TNCH TengChong 53.10 308 ⇑P **P** **16 29 12.3 +0.8**
TNCH pP pP 16 29 15.5 -0.8
TNCH sP sP 16 29 17.5 -0.7
TNCH PcP **PcP** **16 30 20.8 +0.9**
TNCH S **S** **16 36 41.3 -0.6**
TNCH pmax pmax
comp=Z,23nm,1.3s
TNCH pmax pmax
comp=Z,190nm,3.7s
TNCH LR LR
comp=Z,120nm,20.6s
TNCH LR LR
comp=Z,140nm,20.3s
TNCH LR LR
comp=Z,200nm,22.7s
BNX BinXian 53.44 347 ⇓P **P** **16 29 13.0 -0.3**
BNX pmax pmax
comp=Z,73nm,1.1s
BNX pmax pmax
comp=Z,190nm,3.5s
MND Mandalay 53.66 303 P **P** **16 29 16.4 +1.0**
HHC Hu-ho-hao-te 54.86 331 *e*P **P** **16 29 24.3 +0.3**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=Z,160nm,17.5s
HHC LR LR
comp=Z,170nm,17.6s
HHC LR LR
comp=Z,270nm,17.3s
XLT XiLinHaoTe 55.35 337 *e*P **P** **16 29 26.8 -0.6**
XLT PcP **PcP** **16 30 26.5 -1.4**
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax
comp=Z,140nm,4.7s
XLT LR LR
comp=Z,22nm,16.6s
XLT LR LR
comp=Z,200nm,20.8s
XLT LR LR
comp=Z,260nm,19.6s
BTO Baotou 55.43 330 *e*P **P** **16 29 29.0 +0.9**
BTO PP **PP** **16 31 35.5 +3.3**
BTO S **S** **16 37 11.5 -1.2**
BTO SS **SS** **16 40 55.5 -2.2**
BTO pmax pmax
comp=Z,31nm,1.3s
BTO pmax pmax
comp=Z,440nm,9.3s
BTO LR LR
comp=Z,380nm,17.2s
BTO LR LR
comp=Z,330nm,20.0s
BTO LR LR
comp=Z,630nm,19.5s
LZH Lanzhou 55.70 322 *e*P **P** **16 29 31.3 +1.1**
LZH pP sP 16 29 35.8 -1.0
LZH S **S** **16 37 20.8 +4.3**
LZH pmax pmax
comp=Z,36nm,1.2s
LZH pmax pmax
comp=Z,270nm,5.3s
LZH LR LR
comp=Z,220nm,16.5s
LZH LR LR
comp=Z,270nm,17.2s
LZH LR LR
comp=Z,260nm,18.0s
KLR Kul'dur 55.96 351*ce*P **P** **16 29 30.5 -1.1**
KLR pmax pmax
comp=Z,38nm,1.7s
KLR Kul'dur 55.96 351 LR LR 16 49 09.3
comp=Z,160nm,21.8s,baz=164,slow=32
TYV Tymovskoe 56.74 360 *e*P **P** **16 29 36.9 -0.2**
TYV *e*S **S** **16 37 31.0 +1.6**
TYV pmax pmax
comp=Z,200nm,5.0s
TYV pmax pmax
comp=Z,18nm,0.9s
TYV smax smax
comp=N,100nm,4.9s
TYV smax smax
comp=E,100nm,4.9s
GRNR Gornyy 56.92 355 ⇑*i*P **P** **16 29 38.2 -0.2**
GRNR pmax pmax
comp=N,4.0nm,1.2s
GRNR pmax pmax
comp=Z,9.0nm,1.0s
RAR Rarotonga 57.40 111 LR LR 16 52 28.1
comp=Z,140nm,21.7s,baz=274,slow=34
HEH HeiHe 57.71 348 *e*P **P** **16 29 43.3 -0.7**
HEH pmax pmax
comp=Z,16nm,1.1s
HEH pmax pmax
comp=Z,110nm,6.7s
HIA Hailar 58.73 342 P **P** **16 29 52.0 +0.8**
GTA Gaotai 60.27 322 P **P** **16 30 03.0 +0.8**
GTA pP pP 16 30 06.3 -0.7
GTA pmax pmax
comp=Z,14nm,1.1s
GTA pmax pmax
comp=Z,150nm,6.3s
GTA LR LR
comp=Z,110nm,18.5s
GTA LR LR
comp=Z,150nm,19.3s
GTA LR LR
comp=Z,170nm,22.1s
PEA0B Petropavlovsk- 60.31 10 *i* P **P** **16 30 01.5 -0.5**
PETK Petropavlovsk- 60.31 10 P **P** **16 30 01.4 -0.6**
PETK Petropavlovsk- 60.31 10 P **P** **16 30 01.8 -0.2**
comp=Z,30nm,1.0s,baz=190,slow=5.1,SNR=16
PETK LR LR 16 55 32.7
comp=Z,95nm,19.5s,baz=188,slow=36
comp=Z,30nm,1.0s
PET Petropavlovsk 60.40 11 *e*P P 16 30 09.7 +7.1
PET *e*S S 16 38 25.6 +8.6
PET MLR MLR
comp=Z,400nm,17.0s
PET MLR MLR
comp=Z,700nm,22.0s
ZEA Zeya 61.06 349 *e*P **P** **16 30 07.0 -0.1**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.0s
GOMU GeErMu 61.62 317 P **P** **16 30 12.3 +0.6**
GOMU pP sP 16 30 17.5 -1.0
GOMU sP pP 16 30 20.0 +3.4
GOMU pmax pmax
comp=Z,6.0nm,1.2s
ULN Ulaanbaatar 62.31 334 P **P** **16 30 15.8 -0.1**
ULN IAmb IAmb 16 30 21.1
comp=Z,12nm,0.8s
ULN Ulaanbaatar 62.31 334*ce*P **P** **16 30 16.2 +0.3**
ULN pmax pmax
comp=Z,22nm,1.3s
SONM Songino Array 62.58 333 P **P** **16 30 17.3 -0.3**
SONM Songino Array 62.58 333 P **P** **16 30 17.3 -0.3**
SONM pmax pmax
comp=Z,12nm,1.2s
SONM Songino Array 62.58 333 P **P** **16 30 17.8 +0.2**
comp=Z,6.7nm,1.0s,baz=154,slow=7.0,SNR=31
SONM LR LR 16 57 55.7
comp=Z,239nm,19.4s,baz=122,slow=36
comp=Z,6.7nm,1.0s
PALK Pallekele 63.45 281 LR LR 17 01 25.7
comp=Z,223nm,20.8s,baz=212,slow=39
SHEM Shemya Is, Ala 64.31 20 LR LR 16 53 48.7
comp=Z,396nm,21.4s,baz=168,slow=32
MA2 Magadan 65.77 4 P **P** **16 30 37.4 -0.8**
MA2 Magadan 65.77 4*ce*P **P** **16 30 37.3 -0.8**

MA2 pmax pmax
comp=Z,36nm,1.0s
MA2 Magadan 65.77 4 LR LR 16 56 58.4
comp=Z,69nm,20.4s,baz=181,slow=34
ZAK Zakamensk 65.84 333 *eP* **P 16 30 38.3 -0.6**
ZAK pmax pmax
comp=Z,28nm,1.1s
IRK Irkutsk 66.77 335 *eP* **P 16 30 43.4 -1.4**
IRK pmax pmax
comp=Z,47nm,3.2s
PPT Papeete 66.78 106 LR LR 16 55 60.0
comp=Z,150nm,22.0s,baz=279,slow=32
YAK Yakutsk 68.70 353 P **P 16 30 55.8 -0.8**
YAK IAmb IAmb 16 31 00.8
comp=Z,19nm,1.1s
YAK Yakutsk 68.70 353 *eP* **P 16 30 55.9 -0.8**
YAK *e**PP **pP 16 31 00.8 -0.8**
YAK *e* 16 31 20.4
YAK *eS* **S 16 39 58.3 -0.9**
YAK *e* 16 40 56.2
YAK *eSS* **SS 16 44 25.7 +1.5**
YAK pmax pmax
comp=Z,15nm,1.5s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=Z,72nm,3.9s
YAK pmax pmax
comp=E,67nm,3.6s
YAK pmax pmax
comp=N,70nm,4.2s
YAK smax smax
comp=E,146nm,4.7s
YAK smax smax
comp=N,67nm,3.8s
YAK Yakutsk 68.70 353 LR LR 16 59 13.1
comp=N,108nm,20.3s,baz=146,slow=34
SEY Seymchan 69.22 5 *ceP* **P 16 30 59.0 -0.9**
SEY pmax pmax
comp=Z,20nm,1.0s
SEY Seymchan 69.22 5 LR LR 16 59 18.7
comp=Z,139nm,20.6s,baz=254,slow=34
WMQ Urumqi 70.25 321 *eP* **P 16 31 07.5 +0.7**
WMQ pP sP 16 31 12.0 -1.6
WMQ pmax pmax
comp=Z,32nm,1.3s
VNDA Vanda 72.08 176 P **P 16 31 17.8 +0.6**
comp=Z,4.6nm,1.2s,baz=346,slow=5.8,SNR=6.5
VNDA LR LR 17 03 01.0
comp=Z,448nm,18.1s,baz=348,slow=36
comp=Z,4.6nm,1.2s
UNV Unalaska Valle 73.21 29 P **P 16 31 24.7 +0.5**
baz=233
DGZ Jazzator, Alta 73.40 326 *c iP* **P 16 31 25.5 -0.2**
DGZ pmax pmax
comp=Z,22nm,1.0s
ZSN Zaisan 73.75 323 *eP* **P 16 31 26.4 -1.2**
comp=Z,14nm,1.2s,baz=323
ZSN Zaisan 73.75 323 *eP* **P 16 31 26.4 -1.2**
ZSN pmax pmax
comp=Z,14nm,1.2s
MK31 Makanchi Array 75.01 322 IAmb IAmb 16 31 40.8
comp=Z,22nm,1.1s
MKAR Makanchi Array 75.01 322 P **P 16 31 34.7 -0.3**
MKAR Makanchi Array 75.01 322 P **P 16 31 35.3 +0.3**
comp=Z,13nm,0.8s,baz=108,slow=7.8,SNR=72
comp=Z,13nm,0.8s
MAKZ Makanchi 75.21 322 P **P 16 31 35.8 -0.4**
MAKZ IAmb IAmb 16 31 41.9
comp=Z,29nm,1.1s
MAKZ Makanchi 75.21 322 P **P 16 31 35.8 -0.4**
MAKZ pmax pmax
comp=Z,29nm,1.1s
SHLS Shalkode 75.32 317 *eP* **P 16 31 34.4 -2.6**
baz=318
SHLS Shalkode 75.32 317 *eP* **P 16 31 34.3 -2.6**
UZB Uzynbulak 75.61 317 *eP* **P 16 31 37.7 -1.1**
comp=Z,13nm,1.0s,baz=317
UZB Uzynbulak 75.61 317 *eP* **P 16 31 37.6 -1.1**
UZB pmax pmax
comp=Z,13nm,1.0s
PRZ Przheval'sk 75.78 316 IAmb IAmb 16 31 46.7
comp=Z,37nm,1.2s
BILL Bilibino 75.79 9 P **P 16 31 38.4 -0.6**
BILL Bilibino 75.79 9⇑ *eP* **P 16 31 38.5 -0.5**
BILL pmax pmax
comp=Z,14nm,1.3s
SATY Saty 75.99 317 *eP* **P 16 31 39.9 -1.0**
comp=Z,26nm,2.0s,baz=317
SATY Saty 75.99 317 *eP* **P 16 31 39.8 -1.0**
SATY pmax pmax
comp=Z,26nm,2.0s
KSH Kashi 76.43 313 P **P 16 31 45.3 +1.9**
KSH pP sP 16 31 49.8 -0.5
KSH pmax pmax
comp=Z,12nm,1.2s
NIL Nilore 76.69 307 P **P 16 31 44.5 -0.4**
NIL IAmb IAmb 16 31 50.8
comp=Z,26nm,0.8s
NIL Nilore 76.69 307 P **P 16 31 44.5 -0.4**
NIL pmax pmax
comp=Z,26nm,0.8s
TDK Taldyqorghan 76.74 319 *eP* **P 16 31 44.1 -0.8**
baz=319
TDK Taldyqorghan 76.74 319 *eP* **P 16 31 44.1 -0.8**
MDOK Medeo 76.95 317 *eP* **P 16 31 45.2 -1.2**
baz=317
MDOK Medeo 76.95 317 *eP* **P 16 31 45.1 -1.2**
SDPT Sand Point 76.95 29 P **P 16 31 46.6 +0.8**
baz=238
ZALV Zalesovo Beam 76.96 329 P **P 16 31 44.5 -1.4**
ZALV Zalesovo Beam 76.96 329 P **P 16 31 45.2 -0.6**
comp=Z,7.2nm,0.9s,baz=106,slow=5.3,SNR=26
ZALV LR LR 17 04 50.5
comp=Z,58nm,21.8s,baz=126,slow=35
comp=Z,7.2nm,0.9s
CHKK Chushkaly 77.25 317 *eP* **P 16 31 46.1 -1.8**
baz=317
CHKK Chushkaly 77.25 317 *eP* **P 16 31 46.0 -1.8**
M11K Mekoryuk 77.30 23 P **P 16 31 49.2 +1.6**
baz=232
KUU Kurty 77.70 317 *eP* **P 16 31 48.7 -1.7**
baz=317
KUU Kurty 77.70 317 *eP* **P 16 31 48.6 -1.7**
TKM2 Tokmak 2 77.86 316 P **P 16 31 52.3 +0.8**
SNR=6.8
TIXI Tiksi 78.15 356 P **P 16 31 50.3 -1.8**
TIXI Tiksi 78.15 356 *ceP* **P 16 31 49.9 -2.3**
TIXI pmax pmax
comp=Z,14nm,2.5s
TIXI Tiksi 78.15 356 LR LR 17 08 23.8
comp=Z,90nm,18.5s,baz=195,slow=37
UCH Uchtor 78.38 315 P **P 16 31 56.1 +1.4**
SNR=14
M13K Dall Lake 78.46 24 P **P 16 31 55.3 +1.2**
baz=235
CHMS Chumysh 78.47 316 P **P 16 31 54.9 +0.2**
SNR=5.7
AAK Ala-Archa 78.53 316 P **P 16 31 56.1 +0.9**
SNR=8.2
AAK Ala-Archa 78.53 316 P **P 16 31 54.7 -0.5**
AAK Ala-Archa 78.53 316 *ceP* **P 16 31 54.9 -0.3**
AAK pmax pmax
comp=Z,18nm,1.7s
O14K Tigyukauivet M 78.68 26 P **P 16 31 56.7 +1.3**
baz=237
SGDS Sogindy 78.71 316 *eP* **P 16 31 55.2 -0.8**
comp=Z,13nm,1.9s,baz=316
SGDS Sogindy 78.71 316 *eP* **P 16 31 55.2 -0.8**
SGDS pmax pmax
comp=Z,13nm,1.9s
USP Ospenovka 78.74 316 P **P 16 31 56.5 +0.4**
SNR=18
N14K Kuskokwak Cree 78.87 25 P **P 16 31 56.9 +0.5**
baz=237
KURK Kurchatov 78.88 324 P **P 16 31 56.2 -0.5**
KURK IAmb IAmb 16 32 02.1
comp=Z,37nm,1.3s
KURK Kurchatov 78.88 324 *ceP* **P 16 31 56.3 -0.3**
KURK pmax pmax
comp=Z,43nm,1.7s
KURBB Kurchatov Arra 78.89 324 P **P 16 31 56.4 -0.3**
comp=Z,13nm,1.0s,baz=114,slow=4.7,SNR=56
comp=Z,13nm,1.0s
EKS2 Erkin-Say 79.04 315 P **P 16 31 58.6 +0.7**
SNR=11

M14K Bethel 79.22 24 P **P 16 31 59.1 +0.9**
baz=236
L14K Kuka Creek 79.26 24 IAmb IAmb 16 32 03.6
comp=Z,36nm,1.1s
L14K Kuka Creek 79.26 24 P **P 16 31 59.4 +0.9**
baz=235
O15K Ungalikthiuk R 79.27 26 P **P 16 31 59.9 +1.3**
baz=238
R16K Pilot Point 79.47 28 P **P 16 32 00.7 +1.0**
baz=241
BTLS Baital 79.64 318 *eP* **P 16 31 59.5 -1.5**
comp=Z,24nm,1.9s,baz=318
BTLS Baital 79.64 318 *eP* **P 16 31 59.4 -1.5**
BTLS pmax pmax
comp=Z,24nm,1.9s
N15K Kwethluk River 79.68 25 P **P 16 32 02.1 +1.2**
baz=238
M15K Kasigluk River 79.71 25 P **P 16 32 02.0 +1.1**
baz=237
J14K Nanvaranak Lak 79.74 22 IAmb IAmb 16 32 04.0
comp=Z,37nm,1.4s
J14K Nanvaranak Lak 79.74 22 P **P 16 32 01.2 +0.2**
baz=234
L15K Ungalak Mounta 79.92 24 P **P 16 32 02.4 +0.3**
baz=236
TNA Tin City 79.96 19 P **P 16 32 02.8 +0.6**
baz=230
P16K Nushagak River 80.00 27 P **P 16 32 03.0 +0.5**
baz=240
ANM Nome 80.17 20 IAmb IAmb 16 32 05.2
comp=Z,28nm,1.3s
ANM Nome 80.17 20 P **P 16 32 04.0 +0.6**
baz=232
O16K Kokwok River B 80.24 26 P **P 16 32 04.1 +0.3**
baz=240
K15K Wolf Creek Mou 80.25 23 IAmb IAmb 16 32 05.2
comp=Z,52nm,1.3s
K15K Wolf Creek Mou 80.25 23 P **P 16 32 04.2 +0.3**
baz=236
KBL Kabul 80.29 306 P **P 16 32 03.8 -1.2**
KBL Kabul 80.29 306 P **P 16 32 03.8 -1.2**
KBL pmax pmax
comp=Z,7.0nm,0.8s
N16K Nishlik Lake 80.40 25 P **P 16 32 05.5 +0.7**
baz=239
F14K Arctic Creek 80.42 19 P **P 16 32 05.1 +0.4**
baz=231
MAW Mawson 80.59 202 LR LR 17 06 17.5
comp=Z,250nm,18.4s,baz=80,slow=34
Q17K Contact Creek 80.59 28 P **P 16 32 05.6 -0.3**
baz=242
M16K Timber Creek 80.60 25 IAmb IAmb 16 32 07.6
comp=Z,35nm,1.1s
M16K Timber Creek 80.60 25 P **P 16 32 05.9 +0.1**
baz=239
L16K Owhat River 80.75 24 P **P 16 32 06.5 0.0**
L16K IAmb IAmb 16 32 11.6
comp=Z,35nm,1.4s
L16K Owhat River 80.75 24 P **P 16 32 06.7 +0.1**
baz=238
O17K Koliganek Bris 80.77 26 P **P 16 32 07.3 +0.7**
baz=241
DZA Taraz 80.82 315 *eP* **P 16 32 06.7 -0.7**
baz=315
DZA Taraz 80.82 315 *eP* **P 16 32 06.7 -0.7**
G15K Niukluk 80.89 20 P **P 16 32 07.4 +0.2**
baz=234
N17K Nushagak Hills 81.10 26 IAmb IAmb 16 32 13.8
comp=Z,42nm,1.2s
N17K Nushagak Hills 81.10 26 P **P 16 32 08.9 +0.4**
baz=241
F15K North Star Dit 81.11 19 P **P 16 32 08.9 +0.5**
baz=233
J16K Anvik River 81.15 22 P **P 16 32 08.9 +0.2**
baz=237
H16K Elim 81.31 21 P **P 16 32 09.4 -0.1**
baz=235
SIMJ Simiganj 81.35 310 P **P 16 32 09.5 -1.0**
SIMJ IAmb IAmb 16 32 11.8
comp=Z,24nm,1.1s
P18K Big Mountain, 81.42 27 P **P 16 32 10.7 +0.5**
baz=242
M17K Holitna River 81.43 25 P **P 16 32 10.7 +0.5**
baz=240
I17K Unalakleet 81.45 22 P **P 16 32 10.8 +0.6**
baz=237
L17K Donlin 81.45 24 P **P 16 32 10.5 +0.3**
baz=239
KKAR Karatay Array 81.46 315 P **P 16 32 10.0 -0.8**
KKAR Karatay Array 81.46 315 IAmb IAmb 16 32 15.7
comp=Z,15nm,1.2s
KKAR Karatay Array 81.46 315 P **P 16 32 10.0 -0.8**
IUG luzhnay 81.53 314 *eP* **P 16 32 10.2 -1.1**
baz=314
IUG luzhnay 81.53 314 *eP* **P 16 32 10.2 -1.1**
O18K Koktuh Hills 81.65 27 P **P 16 32 11.8 +0.4**
baz=242
G16K Koyuk River 81.70 20 IAmb IAmb 16 32 13.2
comp=Z,24nm,1.1s
G16K Koyuk River 81.70 20 P **P 16 32 12.2 +0.7**
baz=235
N18K Kilae Creek 81.74 26 P **P 16 32 11.9 +0.1**
baz=242
K17K Iditarod 81.74 23 P **P 16 32 12.5 +0.7**
baz=239
CHM Chimkent 81.88 314 *eP* **P 16 32 12.2 -0.9**
baz=314
CHM Chimkent 81.88 314 *eP* **P 16 32 12.1 -0.9**
BRLS Boroldav 81.91 315 *eP* **P 16 32 11.8 -1.4**
baz=315
BRLS Boroldav 81.91 315 *eP* **P 16 32 11.8 -1.4**
Q19K Cape Douglas, 81.94 28 P **P 16 32 13.7 +0.7**
baz=244
KDAK Kodiak Island 81.95 29 P **P 16 32 13.7 +0.7**
baz=245
KDAK Kodiak Island 81.95 29 LR LR 17 02 13.5
comp=Z,309nm,21.4s,baz=255,slow=31
SVW2 Sparrevohn 82.07 26 IAmb IAmb 16 32 15.5
comp=Z,30nm,1.2s
L18K Granite Mounta 82.14 24 IAmb IAmb 16 32 22.4
comp=Z,26nm,1.3s
L18K Granite Mounta 82.14 24 P **P 16 32 14.4 +0.5**
baz=241
BRZS Berezniki 82.15 322 *eP* **P 16 32 12.9 -1.4**
comp=Z,16nm,1.5s,baz=322
BRZS Berezniki 82.15 322 *eP* **P 16 32 12.8 -1.4**
BRZS pmax pmax
comp=Z,16nm,1.5s
M18K Stony River 82.15 25 P **P 16 32 14.1 +0.1**
baz=242
O19K Port Alsworth 82.20 27 P **P 16 32 14.4 +0.2**
baz=243
H17K Granite Mounta 82.30 21 P **P 16 32 14.3 -0.4**
baz=238
G17K Kiwalik Mounta 82.35 21 P **P 16 32 14.9 -0.1**
baz=237
Q20K Shuyak Island 82.39 29 P **P 16 32 15.1 -0.2**
baz=245
N19K Bonanza Creek 82.41 26 P **P 16 32 15.2 -0.3**
baz=243
P19K Oil Pt 82.45 27 P **P 16 32 15.8 +0.2**
baz=244
F17K Baldwin Pennin 82.67 20 P **P 16 32 17.3 +0.7**
baz=236
J18K Innoko River 82.74 23 IAmb IAmb 16 32 21.7
comp=Z,20nm,1.2s
J18K Innoko River 82.74 23 P **P 16 32 17.7 +0.6**
baz=241
TTA Tatalina 82.76 24 IAmb IAmb 16 32 22.1
comp=Z,20nm,1.4s
TTA Tatalina 82.76 24 P **P 16 32 18.2 +0.9**
baz=241
D17K Noatak River 82.80 18 P **P 16 32 17.8 +0.6**
baz=234,SNR=15
E17K Hotham Inlet 82.84 19 P **P 16 32 18.2 +0.8**
baz=236,SNR=15
L19K White Mountain 82.88 25 IAmb IAmb 16 32 22.9
comp=Z,28nm,1.1s
L19K White Mountain 82.88 25 P **P 16 32 17.8 -0.1**
baz=242
M19K Big River Lodg 82.95 25 P **P 16 32 18.9 +0.8**
baz=243
H18K Honhosa River 82.97 21 IAmb IAmb 16 32 23.6
comp=Z,25nm,1.4s
H18K Honhosa River 82.97 21 P **P 16 32 18.4 +0.2**
baz=239
C17K DeLong Mountai 83.23 17 P **P 16 32 20.2 +0.7**
baz=234

G18K Tagagawik 83.26 21 IAmb IAmb 16 32 20.9
comp=Z,21nm,1.1s
G18K Tagagawik 83.26 21 P **P 16 32 20.0 +0.3**
baz=239
F18K Selawik 83.29 20 P **P 16 32 20.1 +0.4**
baz=238
GCSA Galena City Sc 83.31 22 P **P 16 32 20.4 +0.4**
baz=240
L20K Farewell, AK 83.42 25 P **P 16 32 21.4 +0.7**
baz=243
E18K Tukpahlearik C 83.42 19 P **P 16 32 21.1 +0.6**
baz=237
J19K Poorman 83.43 23 IAmb IAmb 16 32 22.2
comp=Z,23nm,1.2s
J19K Poorman 83.43 23 P **P 16 32 21.5 +0.9**
baz=242,SNR=5.6
M20K Styx River 83.47 25 P **P 16 32 21.3 +0.4**
baz=244
N20K Mount Spurr 83.58 26 P **P 16 32 21.8 +0.3**
baz=245
BRSE Bradley Lake S 83.64 28 P **P 16 32 22.4 +0.6**
baz=246
K20K Telida 83.74 24 P **P 16 32 22.7 +0.4**
baz=243
H19K Roundabout Mou 83.86 21 IAmb IAmb 16 32 24.3
comp=Z,27nm,1.1s
H19K Roundabout Mou 83.86 21 P **P 16 32 23.2 +0.5**
baz=241
CAPN Captain Cook N 83.86 27 P **P 16 32 21.8 -1.1**
baz=246
QSPA South Pole Qui 83.86 180 P **P 16 32 23.1 0.0**
comp=Z,12nm,1.1s,baz=333,slow=1.0,SNR=22
QSPA LR LR 17 10 55.4
comp=Z,854nm,18.2s,baz=40,slow=36
comp=Z,12nm,1.1s
C18K Utukok River 83.92 18 IAmb IAmb 16 32 27.9
comp=Z,37nm,1.6s
C18K Utukok River 83.92 18 P **P 16 32 23.0 -0.1**
baz=236
G19K Purcell Mounta 83.94 21 P **P 16 32 23.8 +0.6**
baz=240
F19K Shaleruckik Mo 84.05 20 P **P 16 32 23.7 0.0**
baz=239
J20K Nowinta River 84.08 23 IAmb IAmb 16 32 25.8
comp=Z,24nm,1.1s
J20K Nowinta River 84.08 23 P **P 16 32 24.4 +0.5**
baz=243
NRIK Noril'sk 84.15 343 *ceP* **P 16 32 23.9 -0.2**
NRIK pmax pmax
comp=Z,32nm,1.0s
NRIK Noril'sk 84.15 343 P **P 16 32 23.9 -0.2**
comp=Z,27nm,1.0s,baz=102,slow=4.8,SNR=29
NRIK LR LR 17 08 19.7
comp=Z,118nm,21.4s,baz=141,slow=35
comp=Z,27nm,1.0s
B18K Kokolik River 84.15 17 P **P 16 32 24.6 +0.4**
baz=235
I20K Naaghedeneel 84.24 22 P **P 16 32 24.7 +0.1**
baz=243
PPLA Purkeypile 84.31 25 P **P 16 32 24.8 -0.5**
baz=245
SUA Susitna One 84.33 26 P **P 16 32 25.1 -0.3**
baz=246
SEW Seward 84.38 28 P **P 16 32 25.3 -0.2**
baz=248
O22K Cooper Landing 84.40 27 P **P 16 32 25.6 +0.1**
baz=247
H20K Anotleneega Mo 84.42 22 P **P 16 32 25.9 +0.2**
baz=242,SNR=10.0
BVAR Borovoye Array 84.47 325 P **P 16 32 26.2 +0.1**
comp=Z,46nm,0.9s,baz=106,slow=5.3,SNR=121
comp=Z,46nm,0.9s
BRVK Borovoye 84.54 325 P **P 16 32 26.0 -0.5**
BRVK Borovoye 84.54 325 *ceP* **P 16 32 26.6 +0.1**
BRVK pmax pmax
comp=Z,60nm,1.3s
E19K Redstone River 84.55 20 P **P 16 32 26.5 +0.2**
baz=240
CAST Castle Rocks 84.57 24 IAmb IAmb 16 32 27.1
comp=Z,18nm,1.1s
CAST Castle Rocks 84.57 24 P **P 16 32 26.3 -0.2**
baz=245,SNR=7.5
RC01 Rabbit Creek A 84.63 27 P **P 16 32 26.2 -0.5**
baz=247,SNR=7.9
C19K Lookout Ridge 84.66 18 P **P 16 32 26.6 -0.3**
baz=237
CHUM Lake Minchumin 84.68 24 P **P 16 32 27.3 +0.3**
baz=245,SNR=16
M22K Willow 84.72 26 P **P 16 32 26.6 -0.5**
baz=247
D19K Kuna River 84.80 19 P **P 16 32 27.6 +0.1**
baz=239
F20K Avaraart Lake 84.86 20 P **P 16 32 28.2 +0.4**
baz=241
CUT Chulitna 84.91 25 P **P 16 32 28.0 -0.1**
baz=247
IMAR Indian Mountai 85.06 22 P **P 16 32 28.6 -0.3**
PMR Palmer 85.09 26 IAmb IAmb 16 32 29.4
comp=Z,20nm,1.1s
PMR Palmer 85.09 26 P **P 16 32 28.2 -0.8**
baz=248
H21K Melozitna Rive 85.26 22 P **P 16 32 29.4 -0.4**
baz=244
E20K Nigu River 85.29 19 P **P 16 32 29.6 -0.5**
baz=241
BPAW Bear Paw Mtn. 85.30 24 IAmb IAmb 16 32 30.5
comp=Z,18nm,1.2s
BPAW Bear Paw Mtn. 85.30 24 P **P 16 32 29.4 -0.7**
baz=246
TRF Thorofare Moun 85.32 24 P **P 16 32 30.5 0.0**
baz=246
KNK Knik Glacier 85.32 27 P **P 16 32 30.5 +0.2**
baz=248,SNR=7.8
D20K Etivluk River 85.38 19 P **P 16 32 30.9 +0.4**
baz=240
SML Sawmill 85.52 26 P **P 16 32 31.1 -0.2**
baz=248
Q23K Middleton Isla 85.60 29 P **P 16 32 31.8 +0.2**
baz=250
F21K Alatna River 85.71 20 P **P 16 32 32.5 +0.4**
baz=243
GLI Glacier Island 85.75 27 P **P 16 32 32.7 +0.3**
baz=250
MLY Manley 85.78 23 IAmb IAmb 16 32 33.4
comp=Z,19nm,1.0s
MLY Manley 85.78 23 P **P 16 32 32.4 -0.1**
baz=246,SNR=13
M23K Glacier View 85.79 26 P **P 16 32 32.4 -0.2**
baz=249
WAT1 Susitna Watana 85.81 25 P **P 16 32 32.1 -0.6**
baz=248
H22K Ishtalitna Cre 85.89 22 P **P 16 32 33.6 +0.6**
baz=245
SCM Sheep Creek Mo 85.98 27 P **P 16 32 34.0 +0.4**
baz=249
MCK McKinley 85.99 24 P **P 16 32 32.7 -0.9**
baz=248,SNR=10
WAT6 Susitna Watana 86.07 26 P **P 16 32 33.9 -0.2**
baz=249
E21K Killik River 86.10 19 P **P 16 32 34.5 +0.5**
baz=243
C21K Knifeblade Rid 86.18 19 P **P 16 32 35.1 +0.8**
baz=242
NEA2 Nenana 86.26 24 IAmb IAmb 16 32 38.4
comp=Z,30nm,1.4s
NEA2 Nenana 86.26 24 P **P 16 32 34.8 0.0**
baz=248,SNR=6.8
G22K Bettles 86.28 21 P **P 16 32 34.8 -0.1**
baz=245
I23K Minto, Yukon-K 86.36 23 IAmb IAmb 16 32 39.8
comp=Z,26nm,1.4s
I23K Minto, Yukon-K 86.36 23 P **P 16 32 34.7 -0.6**
baz=247
DHY Denali Highway 86.40 25 P **P 16 32 35.7 -0.1**
baz=249,SNR=7.7
KLU Klutina 86.49 27 P **P 16 32 36.6 +0.4**
baz=251
M24K Tolsona, Glenn 86.58 26 P **P 16 32 36.9 +0.3**
baz=250
WRH Wood River Hil 86.61 24 IAmb IAmb 16 32 36.5
comp=Z,28nm,1.2s
A21K Barrow 86.68 16 P **P 16 32 37.0 +0.3**
baz=240
E22K Anaktuvuk Pass 86.69 20 IAmb IAmb 16 32 39.0
comp=Z,12nm,0.9s
E22K Anaktuvuk Pass 86.69 20 P **P 16 32 37.2 +0.2**
baz=245
D22K Ayikyak River 86.72 19 IAmb IAmb 16 32 43.4

	comp=Z,16nm,1.0s							
D22K	**Ayikyak River** baz=244	86.72	19	P	P	16 32 37.2	+0.1	
G23K	**Bananza Creek** baz=247	86.73	22	P	P	16 32 37.7	+0.5	
CCB	**Clear Creek Bu** comp=Z,23nm,1.0s	86.79	24	IAmb	IAmb	16 32 37.2		
COLA	**College** baz=249	86.85	24	P	P	16 32 37.2	-0.5	
COLD	**Coldfoot** baz=246	86.87	21	P	P	16 32 37.4	-0.3	
BMRM	**Bremner River** baz=252,SNR=5.7	86.92	28	P	P	16 32 37.9	-0.3	
HDA	**Harding Lake** comp=Z,12nm,1.0s	87.05	24	IAmb	IAmb	16 32 39.9		
HDA	**Harding Lake** baz=250	87.05	24	P	P	16 32 38.1	-0.6	
POKR	**Poker Plat Res** baz=249	87.11	23	P	P	16 32 38.2	-0.8	
N25K	**Chitina, Valde** baz=252	87.13	27	P	P	16 32 39.1	-0.2	
WSAR	**Wadi Sarin** comp=Z,78nm,20.5s,baz=132,slow=38	87.14	294	LR	LR	17 15 51.9		
PAX	**Paxson** baz=251	87.18	26	P	P	16 32 39.7	+0.2	
H24K	**Noodor Dome** comp=Z,44nm,1.9s	87.20	23	IAmb	IAmb	16 32 44.7		
H24K	**Noodor Dome** baz=249	87.20	23	P	P	16 32 39.7	+0.3	
IL31	comp=Z,13nm,0.9s	87.20	24	IAmb	IAmb	16 32 38.8		
ILAR	**Eielson Array**	87.20	24	P	P	16 32 37.4	-2.0	
ILAR	**Eielson Array** comp=Z,9.3nm,0.9s,baz=257,slow=4.9,SNR=76	87.20	24	P	P	16 32 37.6	-1.9	
ILAR	comp=Z,254nm,21.6s,baz=262,slow=32 comp=Z,9.3nm,0.9s			LR	LR	17 07 00.5		
K24K	**Donnelly Dome** baz=251	87.33	25	P	P	16 32 40.2	+0.1	
E23K	**Chandalar** baz=247	87.41	20	P	P	16 32 41.3	+0.8	
D23K	**Nanushuk River** baz=246	87.42	19	P	P	16 32 41.5	+1.1	
CRQE	**Cirque** baz=253	87.56	28	P	P	16 32 41.5	0.0	
G24K	**Hadweenzic Riv** comp=Z,24nm,1.1s	87.66	22	IAmb	IAmb	16 32 43.1		
G24K	**Hadweenzic Riv** baz=249	87.66	22	P	P	16 32 41.8	+0.2	
RIDG	**Independent Ri** baz=251,SNR=12	87.70	25	P	P	16 32 40.8	-1.1	
J25K	**Salcha River,** comp=Z,23nm,1.1s	87.76	24	IAmb	IAmb	16 32 42.6		
J25K	**Salcha River,** baz=251	87.76	24	P	P	16 32 41.6	-0.7	
MCARA	**McCarthy VSAT** baz=253	87.78	28	P	P	16 32 43.2	+0.9	
F24K	**Squaw Lake** baz=248	87.81	21	P	P	16 32 43.5	+1.1	
D24K	**Happy Valley** baz=248	88.10	19	P	P	16 32 44.6	+0.9	
L26K	**Log Cabin Wild** comp=Z,10nm,0.9s	88.12	26	IAmb	IAmb	16 32 47.1		
L26K	**Log Cabin Wild** baz=253	88.12	26	P	P	16 32 44.7	+0.8	
SCRK	**Sand Creek** comp=Z,24nm,1.6s	88.13	25	IAmb	IAmb	16 32 48.4		
SCRK	**Sand Creek** baz=252	88.13	25	P	P	16 32 44.1	0.0	
G25K	**Bearman Lake** baz=250	88.20	22	P	P	16 32 44.8	+0.7	
C24K	**Franklin Bluff** baz=248	88.36	19	P	P	16 32 45.3	+0.5	
CTG	**Chitna Glacier** baz=255	88.45	28	P	P	16 32 46.0	+0.3	
J26L	**Joseph Creek** baz=253	88.47	25	P	P	16 32 46.2	+0.6	
M27K	**Edge Creek, AK** comp=Z,25nm,1.1s	88.58	27	IAmb	IAmb	16 32 47.8		
M27K	**Edge Creek, AK** baz=254	88.58	27	P	P	16 32 46.7	+0.5	
F25K	**Christian Rive** baz=251	88.64	21	P	P	16 32 47.0	+0.7	
PINM	**Pinnacle** baz=256	88.74	29	P	P	16 32 47.5	+0.5	
L27K	**Beaver Creek,** baz=254	88.79	26	P	P	16 32 47.8	+0.7	
BCAR	**Beaver Creek A**	88.81	26	P	P	16 32 46.9	-0.3	
E25K	**Arctic Village** comp=Z,24nm,1.2s	88.85	21	IAmb	IAmb	16 32 49.3		
E25K	**Arctic Village** baz=251	88.85	21	P	P	16 32 48.5	+1.3	
I26K	**Coal Creek Min** baz=253	88.88	24	P	P	16 32 47.6	+0.2	
K27K	**Chicken** baz=254	88.95	25	P	P	16 32 49.0	+1.2	
BMAR	**Burnt Mountain**	88.98	22	P	P	16 32 48.3	+0.3	
D25K	**Kavik River** comp=Z,23nm,1.4s	88.98	20	IAmb	IAmb	16 32 49.3		
D25K	**Kavik River** baz=252	88.98	20	P	P	16 32 48.9	+1.0	
BVCY	**Beaver Creek** baz=255	89.05	27	P	P	16 32 49.2	+0.8	
PNL	**Peninsula** baz=256	89.06	30	P	P	16 32 49.4	+1.0	
YUK3	**Moose Creek** baz=255	89.07	28	P	P	16 32 49.4	+0.7	
G26K	**Porcupine Rive** baz=252	89.12	22	P	P	16 32 49.7	+1.2	
F26K	**Sheenjek River** baz=252	89.22	21	P	P	16 32 50.2	+1.2	
YUK8	**Steele Glacier** baz=256	89.27	28	P	P	16 32 50.3	+0.6	
EGAK	**Eagle** comp=Z,17nm,1.1s	89.54	25	IAmb	IAmb	16 32 51.7		
EGAK	**Eagle** baz=255,SNR=7.2	89.54	25	P	P	16 32 51.5	+0.9	
I27K	**Kandik River** baz=254	89.58	24	P	P	16 32 51.4	+0.6	
GEYT	**Alibeck**	89.60	308	P	P	16 32 51.1	-0.4	
GEYT	**Alibeck**	89.60	308	P	P	16 32 51.1	-0.4	
GEYT	comp=Z,10.0nm,1.2s			pmax	pmax			
GEYT	**Alibeck** comp=Z,4.3nm,0.9s,baz=241,slow=8.3,SNR=7.3 comp=Z,4.3nm,0.9s	89.60	308	P	P	16 32 51.2	-0.3	
O29M	**Mount Kennedy** baz=257	89.61	29	P	P	16 32 51.8	+0.6	
H27K	**Steamboat Moun** baz=254	89.78	23	P	P	16 32 52.6	+0.9	
YUK4	**Talbot Arm** baz=257	89.81	28	P	P	16 32 52.5	+0.4	
YUK6	**Outpost Mounta** baz=257	89.85	29	P	P	16 32 52.9	+0.5	
P29M	**Windy Craggy** baz=258	89.87	30	P	P	16 32 52.8	+0.5	
ABKAR	**Akbulak array**	89.99	319	P	P	16 32 51.5	-1.5	
DAWY	**Dawson** baz=256,SNR=12	90.10	25	P	P	16 32 53.7	+0.4	
M29M	**Somme Creek** baz=257	90.14	27	P	P	16 32 54.1	+0.6	
I28M	**Miner Creek** comp=Z,18nm,1.3s	90.21	24	IAmb	IAmb	16 32 55.2		
I28M	**Miner Creek** baz=256	90.21	24	P	P	16 32 54.3	+0.5	
HYT	**Haines Junctio** comp=Z,19nm,1.1s	90.24	29	IAmb	IAmb	16 32 59.0		
HYT	**Haines Junctio** baz=258	90.24	29	P	P	16 32 53.5	-0.6	
S31K	**Pelican** baz=259	90.30	32	P	P	16 32 54.3	+0.1	
P30M	**Million Dollar** baz=258	90.36	30	P	P	16 32 54.4	-0.1	
L29M	**L29M** comp=Z,19nm,1.0s	90.44	27	IAmb	IAmb	16 32 58.2		
L29M	**L29M** baz=258	90.44	27	P	P	16 32 55.3	+0.4	
J29N	**Klondike Camp** comp=Z,25nm,1.4s	90.69	25	IAmb	IAmb	16 33 00.6		
J29N	**Klondike Camp** baz=257	90.69	25	P	P	16 32 56.8	+0.8	
F28M	**Old Crow** baz=256	90.77	22	P	P	16 32 56.7	+0.4	
K29M	**Barlow Dome** baz=258	90.86	26	P	P	16 32 57.0	+0.1	
O30N	**Mendenhall** baz=259	90.91	29	P	P	16 32 57.4	+0.4	
M30M	**Minto, Yukon**	90.92	27	IAmb	IAmb	16 32 58.6		
	comp=Z,16nm,1.4s							
M30M	**Minto, Yukon** baz=259	90.92	27	P	P	16 32 57.6	+0.5	
H29M	**Whitestone** baz=257	91.02	23	P	P	16 32 58.1	+0.6	
J30M	**Hart River** comp=Z,20nm,1.2s	91.52	25	IAmb	IAmb	16 33 05.8		
J30M	**Hart River** baz=259,SNR=7.7	91.52	25	P	P	16 33 00.7	+0.8	
D28M	**Stokes Point** baz=257	91.58	20	P	P	16 32 59.8	-0.1	
I30M	**Mount Dempster** comp=Z,24nm,1.4s	91.62	25	IAmb	IAmb	16 33 14.7		
I30M	**Mount Dempster** baz=259,SNR=9.1	91.62	25	P	P	16 33 00.4	0.0	
EPYK	**Eagle Plains** comp=Z,16nm,1.1s	91.70	23	IAmb	IAmb	16 33 01.5		
EPYK	**Eagle Plains** baz=259,SNR=5.8	91.70	23	P	P	16 33 00.3	-0.3	
P32M	**Atlin** baz=261	91.87	30	P	P	16 33 01.8	+0.2	
ARU	**Arti**	91.91	326	*ce*P	P	16 32 59.0	-2.7	
ARU	comp=Z,15nm,1.1s			pmax	pmax			
M31M	**Drury Creek, Y** baz=261	91.96	28	P	P	16 33 02.2	+0.3	
G30M	**tAoh Zraii Nji** comp=Z,18nm,1.4s	92.01	23	IAmb	IAmb	16 33 05.3		
G30M	**tAoh Zraii Nji** baz=259	92.01	23	P	P	16 33 02.4	+0.3	
F30M	**Barrier River** baz=260	92.30	22	P	P	16 33 03.6	+0.3	
N32M	**Quiet Lake** baz=262	92.42	29	P	P	16 33 04.4	+0.3	
FARO	**Faro, Yukon** comp=Z,27nm,1.6s	92.45	28	IAmb	IAmb	16 33 09.9		
FARO	**Faro, Yukon** baz=262	92.45	28	P	P	16 33 04.5	+0.3	
Q32M	**Nakina River** baz=262	92.52	31	P	P	16 33 04.8	+0.1	
G31M	**Satah River** baz=261,SNR=5.4	92.76	23	P	P	16 33 05.4	0.0	
F31M	**Tsiigehtchic** baz=262	93.04	23	P	P	16 33 06.8	+0.1	
INK	**Inuvik** baz=262	93.25	22	P	P	16 33 08.2	+0.5	
INK	**Inuvik** comp=Z,254nm,21.9s,baz=188,slow=32	93.25	22	LR	LR	17 10 13.7		
T35M	**Bob Quinn** baz=264	93.36	33	P	P	16 33 08.6	+0.2	
DLBC	**Dease Lake** comp=Z,218nm,21.0s,baz=290,slow=31	93.62	32	LR	LR	17 07 51.1		
BBB	**Bella Bella** comp=Z,150nm,20.3s,baz=260,slow=30	94.16	38	LR	LR	17 06 53.0		
A36M	**Sachs Harbour** comp=Z,6.8nm,1.1s	96.34	18	IAmb	IAmb	16 33 22.4		
A36M	**Sachs Harbour** baz=270	96.34	18	P	P	16 33 21.5	-0.2	
YBH	**Yreka Blue Hor** comp=Z,257nm,21.8s,baz=282,slow=31	97.30	49	LR	LR	17 09 35.6		
RAYN	**Ar Rayn**	99.17	293	P	Pdif	16 33 34.9	-0.8	
RAYN	**Ar Rayn**	99.17	293	P	Pdif	16 33 34.9	-0.8	
RAYN	comp=Z,5.0nm,1.3s			pmax	pmax			
NVAR	**Mina Array Bea** comp=Z,2.0nm,0.9s,baz=257,slow=5.3,SNR=7.7	100.66	52	P	Pdif	16 33 43.3	+1.1	
NVAR	comp=Z,0.8nm,0.8s,baz=260,slow=8.1,SNR=4.3			PP	PP	16 37 46.9	-2.6	
CWC	**Cottonwood Cre** baz=270	100.85	54	P	Pdif	16 33 43.4	+0.4	
EDW2	**Edwards Air Fo** baz=270	100.93	56	P	Pdif	16 33 43.4	+0.1	
YKA	**Yellowknife Ar** comp=Z,0.8nm,0.9s,baz=277,slow=4.4,SNR=6.8	101.16	28	P	Pdif	16 33 43.2	-0.3	
YKA	comp=Z,0.7nm,0.9s,baz=275,slow=7.3,SNR=4.4			PP	PP	16 37 47.0	-5.2	
NEW	**Newport** baz=273	101.17	42	P	Pdif	16 33 44.2	+0.2	
LRMC	**Laurel Mtn Rad** baz=270	101.18	55	P	Pdif	16 33 44.7	+0.3	
BFSC	**Mount Baldy Ra** baz=270	101.21	56	P	Pdif	16 33 45.1	+0.5	
MPMC	**Manual Prospec** baz=271	101.33	55	P	Pdif	16 33 45.4	+0.2	
MONP2	**Monument Peak** baz=271	102.25	58	P	Pdif	16 33 48.5	-0.9	
R11B	**Troy Canyon, C** baz=272	102.79	52	P	Pdif	16 33 51.4	-0.2	
IRM	**Iron Mountain** baz=272	103.29	56	P	Pdif	16 33 53.7	-0.1	
HLID	**Hailey** baz=274	103.38	47	P	Pdif	16 33 54.3	+0.2	
OBN	**Obninsk**	104.30	325	*i* P	Pdif	16 33 53.5	-4.1	
OBN				*i*		16 38 15.0		
PDAR	**Pinedale Array** comp=Z,0.1nm,0.4s,baz=306,slow=3.0,SNR=4.1	106.99	47	Pdiff	Pdif	16 34 10.4	+0.2	
PDAR	comp=Z,0.2nm,0.6s,baz=276,slow=4.4,SNR=2.7			PP	PP	16 38 35.3	-1.3	
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=228,slow=32,SNR=2.4	113.38	61	PP	PP	16 39 22.6	-0.5	
ABTX	**Abilene, Hawle** baz=280	116.34	57	P	PKPdf	16 38 37.3	-0.4	
JCT	**Junction City** baz=279	116.56	59	P	PKiKP	16 38 38.5	+0.3	
WMOK	**Wichita Mounta** baz=282	116.65	54	P	PKPdf	16 38 38.3	+0.1	
GERES	**GERESS Array B** comp=Z,0.5nm,0.4s,baz=0.0,slow=4.0,SNR=4.2	119.63	324	PKP	PKiKP	16 38 44.3	+0.6	
S39A	**Bolivar**	120.19	50	PKPdf	PKPdf	16 38 43.5	-1.4	
MIAR	**Mount Ida** baz=285	120.86	53	P	PKiKP	16 38 46.5	+0.1	
CCM	**Cathedral Cave** baz=289	121.65	49	P	PKiKP	16 38 48.0	+0.1	
PLCA	**Paso Flores** comp=Z,1.5nm,0.8s,baz=173,slow=1.4,SNR=4.4	124.19	150	PKP	PKPdf	16 38 52.8	+0.1	
WVT	**Waverly** baz=290	124.86	50	P	PKPdf	16 38 54.1	+0.2	
LRAL	**Lakeview Retre** baz=289	126.54	53	P	PKPdf	16 38 57.3	0.0	
ACSO	**Alum Creek Sta** baz=297	126.72	43	P	PKPdf	16 38 56.9	-0.5	
P52A	**Corning** baz=298	127.58	44	P	PKPdf	16 38 59.0	-0.1	
TZTN	**Tazewell** baz=294	127.91	48	P	PKiKP	16 39 00.3	-0.1	
O53A	**New Philadelph** baz=299	127.91	42	P	PKPdf	16 38 59.5	-0.2	
MCWV	**Mont Chateau** baz=300	129.12	42	P	PKiKP	16 39 02.7	0.0	
GOGA	**Godfrey** baz=292	129.19	51	P	PKPdf	16 39 02.5	+0.2	
LONY	**Lake Ozonia** baz=308	129.61	34	P	PKPdf	16 39 03.2	+0.4	
TIGA	**Tifton** baz=290	129.80	54	P	PKiKP	16 39 04.0	-0.2	
SSPA	**Standing Stone** baz=302	129.91	40	P	PKiKP	16 39 04.4	+0.1	
LBNH	**Lisbon** baz=311	131.31	33	P	PKiKP	16 39 07.4	+0.4	
L61B	**Northampton** baz=309	132.04	35	P	PKiKP	16 39 08.2	-0.2	
ATAH	**Atahualpa** comp=Z,3.4nm,0.6s,baz=354,slow=8.1,SNR=3.6	136.76	107	PKP	PKPdf	16 39 17.4	-0.2	
TOA0	**Torodi Ar. Sit**	141.15	283	PKPdf	PKPdf	16 39 22.8	-2.3	
TORD	**Torodi Ar. Bea** comp=Z,2.3nm,0.9s,baz=57,slow=4.1,SNR=9.8	141.15	283	PKhKP	PKPpre	16 39 19.6		
GUY2C	**Guyana, Caldas**	141.92	89	*e*P	PKPdf	16 39 20.6	-6.5	
LPAZ	**La Paz**	142.09	126		PKPdf	16 39 25.2	-2.3	
LPAZ	**La Paz**	142.09	126	PKIKP	PKPdf	16 39 25.2	-2.3	
CPUP	**Villa Florida** comp=Z,2.0nm,0.7s,baz=288,slow=2.8,SNR=5.3	142.26	150	PKP	PKPdf	16 39 27.8	+1.0	
ROSC	**El Rosal** comp=Z,6.7nm,0.3s,baz=47,slow=22,SNR=4.0	142.94	90	PKP	PKPdf	16 39 27.9	-0.9	
SPBC	**San Pablo de B**	143.23	89	*e*P	PKPbc	16 39 25.7	-0.2	
BARC	**Barichara**	144.15	87	*e*P	PKPab	16 39 28.4	+0.1	
RUSC	**La Rusia**	144.22	88	*e*P	PKPab	16 39 28.9	0.0	
PAMC	**Pamplona, Colo**	144.63	86	*e*P	PKPab	16 39 30.6	+0.1	
SDV	**Santo Domingo**	146.65	83	PKPbc	PKPdf	16 39 35.2	+0.2	
SDV	**Santo Domingo**	146.65	83	*e*P	PKPdf	16 39 34.5	-0.5	
KIC	**Kosan Boka** comp=Z,45nm,1.0s	147.83	272	*i*P	KPKP1	PKPbc	16 39 40.0	+0.4
AQDB	**Aquidauana**	147.88	146	PKPbc	PKPdf	16 39 38.5	+1.9	
DBIC	**Dimbokro** comp=Z,25nm,1.0s,baz=80,slow=4.1,SNR=19	147.95	273	PKPbc	PKPbc	16 39 40.6	+0.7	
LIC	**Lamto** comp=Z,77nm,1.0s	148.11	272	*i*P	KPKP1	PKPbc	16 39 40.7	+0.3
TIC	**Toumodi** comp=Z,45nm,1.0s	148.11	273	*i*P	KPKP1	PKPbc	16 39 41.0	+0.6

BAUV	**El Baul**	149.21	83	PKPbc	PKPbc	16 39 41.7 -1.4
PTLB	**Pontes e Lacer**	149.42	135		PKPbc	16 39 43.3 -0.3
SAML	**Samuel**	150.01	120	PKPdf	PKPdf	16 39 38.9 -1.3
SAML	**Samuel**	150.01	120	PKIKP	PKPdf	16 39 38.9 -1.3

NEIC ***27*** *17:29:22.6±2.1, 60.25S±0.07×150.8E±0.2, h10km±1km, mb5.8/150, Ms_20 5.9/666, Mwb6.0/41, Mww6.1/24, Error ellipse: s-maj=17.1km s-min=12.0km az=104.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.01; Mθθ 0.90; Mϕϕ-0.90; Mrθ-0.10; Mθϕ-0.75; Mϕr-0.07; Fault plane solution: M0 1.18000×10¹⁸ NP1: ϕs 64.99000°, δ 88.90000°, λ -174.12000°. NP2: ϕs 334.87000°, δ 84.13000°, λ -1.11000°. Principal axes: T 1.1783, Plg 3.0000°, Azm 200.0000°; N -0.0025, Plg 84.0000°, Azm 76.0000°; P -1.1758, Plg 5.0000°, Azm 290.0000°;*

NEIC ***27*** *17:29:22.8, 60.23S×150.78E, h10km*

MOS ***27*** *17:29:23.5±1.8, 60.04S×150.97E, h10km, mb6.0/18, MS5.8/26, Error ellipse: s-maj=28.3km s-min=8.5km az=95.0*

IDC ***27*** *17:29:24.0±0.5, 60.30S×150.51E, h0km, mb4.8/10, mbtmp4.9/10, MS5.6/36, Error ellipse: s-maj=26.6km s-min=14.7km az=79.0*

IPGP ***27*** *17:29:23.0, 60.18S×150.73E, h6km, Mw6.0, Fault plane solution: NP1: ϕs 341.00000°, δ 72.00000°, λ 6.00000°. NP2: ϕs 249.00000°, δ 84.00000°, λ 162.00000°.*

NEIC ***27*** *17:29:23.3, 60.17S×150.72E, h12km*

NEIC ***27*** *17:29:23.3, 60.27S×150.32E, h12km, Moment Tensor Solution. Duration: 5±1 Moment tensor: Scale 10¹⁸Nm; Mrr-0.06; Mθθ 0.76; Mϕϕ-0.70; Mrθ 0.08; Mθϕ-0.89; Mϕr 1.03; Fault plane solution: M0 1.51000×10¹⁸ NP1: ϕs 160.23000°, δ 83.04000°, λ -37.83000°. NP2: ϕs 255.61000°, δ 52.49000°, λ -171.21000°. Principal axes: T 1.3100, Plg 20.0000°, Azm 214.0000°; N 0.3916, Plg 52.0000°, Azm 331.0000°; P -1.7016, Plg 31.0000°, Azm 111.0000°;*

GCMT ***27*** *17:29:29.6±0.1, 60.23S×150.18E, h12km, MW6.0/159, Moment Tensor Solution. s159,c335; s156,c540; Duration: 2±5 Moment tensor: Scale 10¹⁸Nm; Mrr-0.01±.01; Mθθ 0.83±.01; Mϕϕ-0.81±.01; Mrθ-0.26±.02; Mθϕ-0.95±.01; Mϕr 0.04±.02; Best double couple: M0 1.28600×10¹⁸ NP1: ϕs 249.00000°, δ 85.00000°, λ 170.00000°. NP2: ϕs 340.00000°, δ 80.00000°, λ 6.00000°. Principal axes: T 1.3130, Plg 11.0000°, Azm 204.0000°; N -0.0560, Plg 79.0000°, Azm 41.0000°; P -1.2580, Plg 3.0000°, Azm 295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 27 17:29:24.1±0.5, 60.41S±0.04×150.79E±0.06, h10km±2km, h10km:pP-P, n953, c2s10/658, mb5.7/109, MS5.9/398, 50C-19D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla** baz=7.5,SNR=6.7	7.38	40	P	Pn	17 31 09.2	-2.5
MCQ	**Macquarie Isla**	7.38	40	Pn	Pn	17 31 07.3	-4.5
MCQ	**Macquarie Isla**	7.38	40	P	Pn	17 31 14.6	+2.9
MCQ	**Macquarie Isla**	7.38	40	P	Pn	17 31 07.3	-4.4
PYZ	**Puysegur Point**	17.07	40		Pn	17 33 21.9	-0.7
PYZ	**Puysegur Point**	17.07	40	P	P	17 33 25.8	+1.5
VNDA	**Vanda**	17.58	172	Pn	Pn	17 33 25.1	-3.6
VNDA	comp=Z,786nm,1.9s			IAmb	IAmb	17 33 33.8	
VNDA	**Vanda**	17.58	172	P	Pn	17 33 25.1	-3.6
VNDA	comp=Z,786nm,1.9s			pmax	pmax		
VNDA	**Vanda** comp=Z,48nm,0.9s,baz=343,slow=10,SNR=37	17.58	172	P	Pn	17 33 27.7	-1.0
VNDA	comp=Z,43μm,19.2s,baz=352,slow=35			LR	LR	17 39 50.2	
SYZ	**Scrubby Hill**	17.58	46	P	P	17 33 32.7	+2.7
TAU	**Tasmania Unive**	17.65	352	P	Pn	17 33 27.8	-2.1
TAU	**Tasmania Unive**	17.65	352	P	P	17 33 35.2	+4.4
TAU	**Tasmania Unive**	17.65	352	P	P	17 33 34.7	+3.9
TAU	**Tasmania Unive**	17.65	352	P	Pn	17 33 27.8	-2.1
TAU	comp=Z,172nm,1.3s			pmax	pmax		
WHZ	**Wether Hill Ro**	17.73	43	P	Pn	17 33 29.2	-1.5
DCZ	**Deep Cove**	17.84	40	Pn	Pn	17 33 27.1	-5.1
MOO	**Moorlands** baz=18,SNR=24	18.13	351	P	Pn	17 33 36.5	+0.8
MOO	**Moorlands**	18.13	351	P	P	17 33 39.2	+3.1
MLZ	**Mavora Lakes**	18.25	42		Pn	17 33 31.1	-6.1
SBA	**Scott Base**	18.28	169		Pn	17 33 36.1	-1.3
SBA	comp=Z,2μm,1.9s			IAmb	IAmb	17 33 44.9	
SBA	**Scott Base**	18.28	169	P	Pn	17 33 36.1	-1.3
SBA	comp=Z,2μm,1.9s			pmax	pmax		
CASY	**Casey**	18.71	235		P	17 33 41.3	-1.0
WKZ	**Wanaka**	19.02	43	P	P	17 33 43.0	-2.9
CORO	**Coronation Par**	19.11	352	P	Pn	17 33 49.7	+2.0
AULHS	**Lilydale High**	19.31	352	P	Pn	17 33 53.9	+3.8
ODZ	**Otahua Downs**	19.40	46		P	17 33 48.4	-1.7
GLAD	**Gladstone**	19.53	354	P	Pn	17 33 56.9	+4.3
GLAD	**Gladstone**	19.53	354	P	Pn	17 33 55.1	+2.5
JCZ	**Jackson Bay**	19.61	42	P	Pn	17 33 57.3	+3.5
LBZ	**Lake Benmore**	19.81	45		P	17 33 52.1	-2.4
FOZ	**Fox Glacier**	20.43	43		P	17 33 56.2	-5.0
FOZ	comp=Z,47μm,20.0s			IAMs_20	IAMs_20	17 40 08.9	
RPZ	**Rata Peaks**	20.70	45	P	P	17 33 58.8	-5.4
RPZ	comp=Z,41μm,19.0s			IAMs_20	IAMs_20	17 40 23.1	
RPZ	**Rata Peaks** comp=Z,48nm,1.1s,baz=202,slow=7.1,SNR=6.0	20.70	45	P	P	17 34 05.3	+1.1
RPZ	comp=Z,42μm,20.0s,baz=194,slow=32 comp=Z,48nm,1.1s			LR	LR	17 40 34.7	
MQZ	**McQueen's Vall** comp=Z,55μm,19.0s	21.29	48	P	P	17 34 05.3	-5.1
MQZ				IAMs_20	IAMs_20	17 40 51.8	
OXZ	**Oxford** comp=Z,43μm,21.0s	21.39	46	P	P	17 34 08.2	-3.4
OXZ				IAMs_20	IAMs_20	17 40 35.5	
INZ	**Inchbonnie**	21.71	45		P	17 34 11.2	-3.7
INZ	comp=Z,517nm,1.8s			IAmb	IAmb	17 34 24.0	
LTZ	**Lake Taylor** comp=Z,406nm,1.8s	21.95	46	P	P	17 34 14.6	-3.0
LTZ				IAmb	IAmb	17 34 28.4	
LTZ	comp=Z,52μm,19.0s			IAMs_20	IAMs_20	17 41 23.2	
GVZ	**Greta Valley S** comp=Z,60μm,18.0s	22.06	48	IAMs_20	IAMs_20	17 41 59.4	
AUSSC	**Sale College,**	22.45	352	P	P	17 34 25.5	+2.5
GEXS	**Deakin Univers**	22.61	347	P	P	17 34 28.0	+3.4
DSZ	**Denniston Nort** comp=Z,48μm,20.0s	22.70	44	IAMs_20	IAMs_20	17 41 27.8	
KHZ	**Kahutara** comp=Z,54μm,20.0s	22.73	48	P	P	17 34 23.6	-2.3
KHZ				IAMs_20	IAMs_20	17 41 27.0	
KHZ	**Kahutara**	22.73	48	P	P	17 34 29.7	+3.8
AUHPC	**Hawkesdale P12**	22.96	343	P	P	17 34 31.6	+3.3
THZ	**Tophouse**	23.07	46	P	P	17 34 26.1	-3.4
THZ	comp=Z,1μm,2.0s			IAmb	IAmb	17 34 40.9	
TOO	**Toolangi** baz=23,SNR=18	23.11	349	P	P	17 34 30.8	+0.8
TOO	**Toolangi**	23.11	349	P	P	17 34 26.2	-3.7
TOO	**Toolangi**	23.11	349	P	P	17 34 33.4	+3.5
TOO	**Toolangi**	23.11	349	P	P	17 34 31.0	+1.1
TOO	**Toolangi**	23.11	349	P	P	17 34 26.2	-3.7
TOO	comp=Z,3μm,3.3s			pmax	pmax		
BRAT	**Ballarat**	23.29	346	P	P	17 34 33.6	+1.9
MRNZ	**Matariki Terra**	23.34	45	P	P	17 34 28.1	-4.1
MILA	**Mila** baz=23,SNR=8.9	23.40	357	P	P	17 34 33.7	+0.8
MILA	**Mila**	23.40	357	P	P	17 34 34.5	+1.6
BSWZ	**Blackbirch Sta**	23.46	48		P	17 34 30.4	-3.1
TKNZ	**Takaka Hill**	23.73	45	P	P	17 34 32.1	-4.0
TUWZ	**Tuamarina**	23.73	47		P	17 34 32.4	-3.7
SNZO	**South Karori**	24.12	48	P	P	17 34 37.7	-2.0
SNZO	**South Karori** comp=Z,43μm,19.0s	24.12	48	IAMs_20	IAMs_20	17 42 41.8	

ARPS Mount Arapiles 24.34 342 P **P** **17 34 42.7 +0.8**
baz=24,SNR=19
ARPS Mount Arapiles 24.34 342 P **P** **17 34 42.7 +0.8**
ARPS Mount Arapiles 24.34 342 P **P** **17 34 42.8 +1.0**
AUMAG Moama Anglican 24.64 348 P **P** **17 34 48.2 +3.7**
MRZ Mangatainoka R 25.01 49 P **P** **17 34 44.6 -3.2**
MRZ IAmb IAmb 17 34 57.4
comp=Z,632nm,2.4s
MRZ IAMs_20 IAMs_20 17 44 10.4
comp=Z,35µm,18.0s
CNB Canberra Magne 25.13 357 P **P** **17 34 49.8 +0.7**
baz=25,SNR=11
CNB Canberra Magne 25.13 357 P **P** **17 34 54.8 +5.8**
CNB Canberra Magne 25.13 357 P **P** **17 34 50.7 +1.7**
CAN Canberra 25.13 357 P **P** **17 34 45.5 -3.6**
CAN Canberra 25.13 357 P **P** **17 34 54.7 +5.7**
CAN Canberra 25.13 357 P **P** **17 34 51.3 +2.3**
CAN Canberra 25.13 357 P **P** **17 34 45.5 -3.6**
CAN pmax pmax
comp=Z,963nm,2.4s
CAN MLR MLR
comp=Z,24µm,20.0s
BFZ Birch Farm 25.24 50 **P** **17 34 47.8 -2.2**
BFZ IAmb IAmb 17 35 00.0
comp=Z,739nm,2.8s
BFZ IAMs_20 IAMs_20 17 43 29.8
comp=Z,36µm,19.0s
YNG Young 26.17 356 P **P** **17 35 00.1 +1.6**
baz=26,SNR=8.1
YNG Young 26.17 356 P **P** **17 34 59.5 +1.0**
HIZ Hauiti 26.64 46 IAMs_20 IAMs_20 17 44 02.2
comp=Z,42µm,20.0s
BKZ Black Stump Fm 26.66 49 **P** **17 35 00.2 -2.6**
BKZ IAMs_20 IAMs_20 17 44 22.0
comp=Z,39µm,20.0s
BKZ Black Stump Fm 26.66 49 P **P** **17 35 05.9 +3.1**
MGCD Mangrove Creek 27.21 1 P **P** **17 35 09.9 +2.1**
RTZ Ruatahuna 27.32 49 P **P** **17 35 05.1 -3.7**
TOZ Tahuroa Road 27.56 46 IAMs_20 IAMs_20 17 44 31.8
comp=Z,42µm,20.0s
URZ Urewera 27.68 49 LR LR 17 45 35.6
comp=Z,39µm,18.4s,baz=294,slow=35
HTT Hallett 28.09 339 P **P** **17 35 16.7 +1.0**
baz=28,SNR=4.7
HTT Hallett 28.09 339 P **P** **17 35 16.4 +0.7**
HTT Hallett 28.09 339 P **P** **17 35 16.5 +0.7**
AUDCS Dubbo College 28.22 356 P **P** **17 35 19.1 +2.2**
WHYH Whyalla 28.73 336 P **P** **17 35 22.0 +0.7**
CMSA Cobar Meteorol 29.08 351 P **P** **17 35 25.4 +0.9**
baz=29,SNR=10.0
CMSA Cobar Meteorol 29.08 351 P **P** **17 35 27.8 +3.4**
CMSA Cobar Meteorol 29.08 351 P **P** **17 35 24.9 +0.5**
STKA Stephens Creek 29.18 344 P **P** **17 35 26.4 +1.0**
baz=29,SNR=9.7
STKA Stephens Creek 29.18 344 P **P** **17 35 22.4 -3.0**
STKA Stephens Creek 29.18 344 P **P** **17 35 26.8 +1.4**
STKA Stephens Creek 29.18 344 P **P** **17 35 28.0 +2.6**
STKA Stephens Creek 29.18 344 *i*P **P** **17 35 24.5 -0.9**
STKA Stephens Creek 29.18 344 P **P** **17 35 25.9 +0.5**
comp=Z,7.7nm,0.8s,baz=157,slow=8.6,SNR=9.3
STKA LR LR 17 45 02.2
comp=Z,11µm,19.7s,baz=167,slow=32
comp=Z,7.7nm,0.8s
OUZ Omahuta 29.19 41 IAMs_20 IAMs_20 17 45 42.4
comp=Z,25µm,18.0s
BBOO Buckleboo 29.26 334 P **P** **17 35 26.0 -0.1**
baz=29,SNR=11
BBOO Buckleboo 29.26 334 P P 17 35 21.7 -4.4
BBOO IAmb IAmb 17 35 33.1
comp=Z,178nm,1.6s
BBOO Buckleboo 29.26 334 P **P** **17 35 25.8 -0.3**
BBOO Buckleboo 29.26 334 P **P** **17 35 28.5 +2.4**
QSPA South Pole Qui 29.68 180 P **P** **17 35 30.7 +0.9**
QSPA South Pole Qui 29.68 180 IAMs_20 IAMs_20 17 48 25.0
comp=Z,31µm,18.0s
QSPA South Pole Qui 29.68 180 P **P** **17 35 32.1 +2.3**
comp=Z,19nm,1.1s,baz=357,slow=4.1,SNR=26
QSPA LR LR 17 47 16.2
comp=Z,18µm,20.6s,baz=15,slow=36
comp=Z,19nm,1.1s
ARMA Armidale 30.00 1 P **P** **17 35 34.1 +1.3**
baz=30,SNR=4.4
ARMA Armidale 30.00 1 P **P** **17 35 29.1 -3.7**
AULRC Lightning Ridg 31.04 355 P **P** **17 35 42.8 +1.0**
LCRK Leigh Creek 31.12 339 P **P** **17 35 42.9 +0.3**
LCRK Leigh Creek 31.12 339 P **P** **17 35 44.3 +1.7**
MULG Mulgathing 32.14 332 P **P** **17 35 50.9 -0.6**
MULG Mulgathing 32.14 332 P **P** **17 35 52.0 +0.5**
FORT Forrest 33.28 323 P **P** **17 36 01.8 +0.4**
baz=33,SNR=9.0
FORT Forrest 33.28 323 P **P** **17 35 58.2 -3.2**
FORT IAmb IAmb 17 36 08.3
comp=Z,179nm,1.1s
FORT Forrest 33.28 323 P **P** **17 36 01.4 0.0**
FORT Forrest 33.28 323 P **P** **17 36 02.1 +0.7**
INKA Innaminka 33.37 344 P **P** **17 36 05.1 +2.8**
QLP Quilpie 34.11 350 P **P** **17 36 09.4 +0.7**
baz=34,SNR=10.0
QLP Quilpie 34.11 350 P **P** **17 36 11.3 +2.5**
OOD Oodnadatta 34.19 336 P **P** **17 36 09.5 +0.1**
OOD Oodnadatta 34.19 336 P **P** **17 36 09.4 +0.1**
H01W1 Cape Leeuwin H 34.74 301 T T 18 12 54.4
baz=148,slow=75
H01W2 Cape Leeuwin H 34.74 301 T T 18 12 59.3
baz=148,slow=75
H01W3 Cape Leeuwin H 34.75 301 T T 18 12 52.3
baz=148,slow=75
KMBL Kambalda 34.78 314 P **P** **17 36 14.5 0.0**
baz=34,SNR=4.3
KMBL Kambalda 34.78 314 P **P** **17 36 16.7 +2.2**
EIDS Eidsvold 35.02 0 P **P** **17 36 13.3 -3.3**
EIDS IAmb IAmb 17 36 25.5
comp=Z,152nm,1.6s
EIDS Eidsvold 35.02 0 P **P** **17 36 20.7 +4.1**
NWAO Narrogin (SRO) 35.16 306 P **P** **17 36 17.4 -0.4**
baz=35
NWAO P **P** **17 36 17.4 -0.4**
baz=35
NWAO Narrogin (SRO) 35.16 306 P **P** **17 36 15.8 -2.0**
NWAO IAmb IAmb 17 36 31.1
comp=Z,167nm,1.7s
NWAO Narrogin (SRO) 35.16 306 IAMs_20 IAMs_20 17 46 39.7
comp=Z,29µm,22.0s
NWAO Narrogin (SRO) 35.16 306 P **P** **17 36 19.0 +1.2**
NWAO Narrogin (SRO) 35.16 306 P **P** **17 36 17.6 -0.2**
NWAO Narrogin (SRO) 35.16 306 P **P** **17 36 15.8 -2.0**
NWAO pmax pmax
comp=Z,167nm,1.7s
NWAO MLR MLR
comp=Z,29µm,22.0s
NWAO Narrogin (SRO) 35.16 306 LR LR 17 47 01.0
comp=Z,27µm,20.8s,baz=134,slow=30
MAW Mawson 36.02 221 LR LR 17 51 17.0
comp=Z,10µm,18.2s,baz=116,slow=36
KLBR Kellerberrin 36.13 308 P **P** **17 36 26.0 -0.2**
baz=36,SNR=5.6
KLBR Kellerberrin 36.13 308 P **P** **17 36 26.4 +0.3**
MUN Mundaring 36.41 306 P **P** **17 36 28.4 -0.1**
baz=36,SNR=3.5
MUN Mundaring 36.41 306 P **P** **17 36 28.5 +0.1**
MUN Mundaring 36.41 306 P **P** **17 36 28.6 +0.1**
RK1H Rockhampton Ha 37.00 360 P **P** **17 36 36.1 +2.6**
BLDU Ballidu 37.41 307 P **P** **17 36 36.1 -0.9**
baz=37,SNR=7.4
BLDU Ballidu 37.41 307 P **P** **17 36 36.4 -0.6**
BLDU Ballidu 37.41 307 P **P** **17 36 36.6 -0.4**
RAO Raoul Island 37.56 48 LR LR 17 51 21.9
comp=Z,26µm,18.1s,baz=204,slow=35
AS01 Alice Springs 38.55 335 P **P** **17 36 47.4 +0.7**
ASAR Alice Springs 38.56 335 P **P** **17 36 45.0 -1.8**
ASAR Alice Springs 38.56 335 P **P** **17 36 46.1 -0.7**
comp=Z,25nm,0.7s,baz=164,slow=9.8,SNR=191
ASAR PcP **PcP** **17 38 59.5 +0.3**
comp=Z,4.4nm,1.0s,baz=165,slow=4.1,SNR=2.2
ASAR LR LR 17 50 11.1
comp=Z,12µm,21.1s,baz=166,slow=32
comp=Z,25nm,0.7s
ASPA Alice Springs 38.56 335 P **P** **17 36 46.1 -0.7**
baz=38
AS31 Alice Springs 38.56 335 P **P** **17 36 44.1 -2.7**
WRKA Warakurna 38.62 326 P **P** **17 36 46.5 -0.7**
baz=38,SNR=17
WRKA Warakurna 38.62 326 P **P** **17 36 46.8 -0.5**
WRKA Warakurna 38.62 326 P **P** **17 36 47.3 0.0**
MORW Morawa 39.05 308 P **P** **17 36 51.0 +0.2**
baz=39,SNR=4.4
MORW Morawa 39.05 308 P **P** **17 36 47.1 -3.8**
MORW Morawa 39.05 308 P **P** **17 36 51.3 +0.5**
MORW Morawa 39.05 308 P **P** **17 36 51.4 +0.6**
PINNC Pines Island, 39.53 25 P P 17 36 50.2 -4.7
OUENC Ouen Island, N 39.60 24 P **P** **17 36 51.5 -3.9**
ONTNC Ouen Toro 39.63 23 P **P** **17 36 51.9 -3.8**
ONTNC Ouen Toro 39.63 23 P **P** **17 36 59.0 +3.3**
DZM Mont Dzumac 39.86 23 P **P** **17 36 54.1 -3.7**
DZM IAMs_20 IAMs_20 17 50 35.9
comp=Z,19µm,19.0s
DZM Mont Dzumac 39.86 23 P **P** **17 37 00.6 +2.9**
DZM Mont Dzumac 39.86 23 LR LR 17 51 04.9
comp=Z,19µm,18.2s,baz=210,slow=33
YATNC Mamie plateau, 39.96 24 P **P** **17 37 02.3 +3.8**
MEEK Meekatharra 40.26 312 P **P** **17 37 00.6 -0.4**
baz=40,SNR=10
MEEK Meekatharra 40.26 312 P **P** **17 37 00.9 -0.1**
MEEK Meekatharra 40.26 312 P **P** **17 37 00.5 -0.4**
CTA Charters Tower 40.41 353 P **P** **17 37 02.9 +0.7**
CTAO Charters Tower 40.41 353 P **P** **17 36 59.6 -2.6**
CTAO Charters Tower 40.41 353 IAMs_20 IAMs_20 17 51 10.1
comp=Z,19µm,19.0s
CTAO Charters Tower 40.41 353 P **P** **17 37 03.0 +0.7**
CTAO Charters Tower 40.41 353 P **P** **17 36 59.6 -2.6**
CTAO pmax pmax
comp=Z,85nm,1.1s
CTAO MLR MLR
comp=Z,19µm,19.0s
QIS Mount Isa 40.60 344 P **P** **17 37 03.2 -0.5**
baz=40,SNR=9.0
AUAYR Ayr State High 40.86 355 P **P** **17 37 10.1 +4.2**
KOUNC Koumac, New Ca 40.95 19 P **P** **17 37 03.5 -3.2**
KOUNC IAmb IAmb 17 37 16.9
comp=Z,235nm,1.1s
KOUNC Koumac, New Ca 40.95 19 P **P** **17 37 09.7 +3.0**
TV1H Townsville Har 41.20 354 P **P** **17 37 10.6 +1.9**
LIFNC LIFOU 41.27 24 P **P** **17 37 06.7 -2.6**
LIFNC IAmb IAmb 17 37 18.9
comp=Z,170nm,1.1s
LIFNC IAMs_20 IAMs_20 17 50 34.4
comp=Z,17µm,20.0s
BELA Belgrano 2 41.92 178 P **P** **17 37 15.5 +1.4**
BELA IAmb IAmb 17 37 18.3
comp=Z,242nm,2.0s
WR0 Warramunga Arr 42.03 337 P **P** **17 37 13.5 -2.0**
WR0 IAmb IAmb 17 37 24.3
comp=Z,210nm,1.2s
WC3 Warramunga Arr 42.06 337 P **P** **17 37 14.8 -1.0**
baz=42
WB2 Warramunga Arr 42.08 337 P **P** **17 37 13.9 -2.1**
WB2 IAmb IAmb 17 37 24.7
comp=Z,264nm,1.2s
WRA Warramunga Arr 42.08 337 P **P** **17 37 13.8 -2.2**
WRA Warramunga Arr 42.08 337 P **P** **17 37 14.8 -1.1**
comp=Z,15nm,0.5s,baz=166,slow=6.8,SNR=71
WRA PcP **PcP** **17 39 10.5 -0.1**
comp=Z,5.2nm,1.0s,baz=168,slow=2.6,SNR=2.3
WRA LR LR 17 52 36.2
comp=Z,9µm,21.4s,baz=166,slow=33
comp=Z,15nm,0.5s
WB0 Warramunga Arr 42.24 337 P **P** **17 37 14.1 -3.2**
WB0 IAmb IAmb 17 37 25.8
comp=Z,158nm,1.2s
MTSU Mount Surprise 42.48 351 P **P** **17 37 19.6 +0.4**
baz=42,SNR=18
MTSU Mount Surprise 42.48 351 P **P** **17 37 20.7 +1.5**
ELIB Princess Elisa 43.05 201 *d*P **P** **17 37 25.4 +2.0**
comp=Z,31nm,1.5s
ELIB *d*PP **PP** **17 39 04.9 +1.9**
PSAD3 Pilbara Seismi 44.43 317 IAMs_20 IAMs_20 17 52 30.3
comp=Z,22µm,22.0s
PSAB3 Pilbara Seismi 44.45 317 IAMs_20 IAMs_20 17 52 41.8
comp=Z,17µm,20.0s
PSAC2 Pilbara Seismi 44.46 317 IAMs_20 IAMs_20 17 52 31.2
comp=Z,22µm,22.0s
PSAA3 Pilbara Seismi 44.47 317 IAMs_20 IAMs_20 17 52 31.2
comp=Z,22µm,21.0s
PSAA1 Pilbara Seismi 44.47 317 IAMs_20 IAMs_20 17 52 31.4
comp=Z,22µm,22.0s
PSA00 Pilbara Seismi 44.47 317 P **P** **17 37 32.4 -2.9**
PSA00 IAmb IAmb 17 37 44.4
comp=Z,232nm,1.1s
PSA00 IAMs_20 IAMs_20 17 52 32.4
comp=Z,23µm,22.0s
PSA00 Pilbara Seismi 44.47 317 P **P** **17 37 32.6 -2.7**
PSA00 IAmb IAmb 17 37 44.4
comp=Z,109nm,1.1s
PSA00 Pilbara Seismi 44.47 317 P **P** **17 37 35.1 -0.2**
PSA00 Pilbara Seismi 44.47 317 P **P** **17 37 35.6 +0.3**
PSAA2 Pilbara Seismi 44.48 317 IAMs_20 IAMs_20 17 52 31.6
comp=Z,21µm,21.0s
PSAB1 Pilbara Seismi 44.48 317 IAMs_20 IAMs_20 17 52 27.8
comp=Z,15µm,19.0s
PSAB2 Pilbara Seismi 44.48 317 IAMs_20 IAMs_20 17 52 31.7
comp=Z,22µm,22.0s
PSAC1 Pilbara Seismi 44.52 317 IAMs_20 IAMs_20 17 52 32.7
comp=Z,22µm,22.0s
PSAD1 Pilbara Seismi 44.59 317 IAMs_20 IAMs_20 17 52 35.4
comp=Z,21µm,22.0s
MBWA Marble Bar 44.90 317 P **P** **17 37 35.5 -3.1**
MBWA IAmb IAmb 17 37 47.7
comp=Z,169nm,1.2s
MBWA IAMs_20 IAMs_20 17 52 43.6
comp=Z,20µm,22.0s
MBWA Marble Bar 44.90 317 **P** **17 37 36.4 -2.3**
MBWA Marble Bar 44.90 317 P **P** **17 37 38.5 -0.1**
GIRL Giralia 45.52 310 P **P** **17 37 41.7 -1.9**
FITZ Fitzroy Crossi 45.94 326 P **P** **17 37 46.7 -0.2**
baz=46,SNR=18
FITZ Fitzroy Crossi 45.94 326 P **P** **17 37 45.2 -1.7**
NVL N'lazarevskaya 45.97 198 *e*P **P** **17 37 47.2 +0.6**
NVL *e* 17 39 37.9
NVL *e*S **S** **17 44 30.7 -0.1**
NVL *e*SS **SS** **17 47 57.9 +3.1**
NVL pmax pmax
comp=Z,179nm,2.0s
NVL smax smax
comp=N,2µm,8.5s
NVL MLR MLR
comp=Z,30µm,19.0s
TROLL Troll, Antarti 46.05 193 ⇑P **P** **17 37 49.3 +1.9**
comp=Z,210nm,0.5s
TROLL Troll, Antarti 46.05 193 ⇑PP PP 17 39 40.7 +5.7
comp=Z,830nm,1.1s
COEN Coen 46.71 350 P **P** **17 37 52.9 -0.1**
baz=47,SNR=12
COEN Coen 46.71 350 P **P** **17 37 50.3 -2.7**
COEN IAmb IAmb 17 38 00.3
comp=Z,299nm,1.9s
COEN Coen 46.71 350 P **P** **17 37 53.3 +0.3**
SNAA Sanae 46.93 191 P **P** **17 37 54.7 +0.4**
SNAA IAmb IAmb 17 37 58.1
comp=Z,223nm,1.6s
SNAA Sanae 46.93 191 ⇑P **P** **17 37 56.3 +2.0**
comp=Z,528nm,0.9s
SNAA Sanae 46.93 191*c i*P **P** **17 37 56.2 +2.0**
SNAA pmax pmax
comp=Z,131nm,1.6s
SNAA MLR MLR
comp=Z,12µm,17.0s
SNAA Sanae 46.93 191 P **P** **17 37 55.1 +0.9**
comp=Z,54nm,1.3s,baz=176,slow=7.2,SNR=16
SNAA LR LR 17 58 03.0
comp=Z,12µm,18.7s,baz=166,slow=37
comp=Z,54nm,1.3s
KNRA Kununurra 47.44 331 P **P** **17 37 57.3 -1.4**
KNRA IAmb IAmb 17 38 07.1
comp=Z,142nm,1.1s
KNRA Kununurra 47.44 331 P **P** **17 37 58.5 -0.2**
VNA3 Neumayer Olymp 47.92 188 ⇑P **P** **17 38 03.4 +1.6**
comp=Z,47nm,0.8s
VNA2 Neumayer--Watz 48.06 189 ⇑P **P** **17 38 05.5 +2.6**
comp=Z,18nm,0.6s,baz=171,slow=6.8
VNA1 Neumayer--Stat 48.39 189 ⇑P **P** **17 38 08.6 +3.1**
comp=Z,104nm,1.2s
KDU Kakadu 49.51 336 P **P** **17 38 14.6 0.0**
baz=49,SNR=5.5
KDU Kakadu 49.51 336 P **P** **17 38 14.6 0.0**
MTN Manton Dam 49.64 334 P **P** **17 38 15.6 0.0**
baz=50,SNR=7.6
MTN Manton Dam 49.64 334 P **P** **17 38 13.1 -2.6**
MTN IAmb IAmb 17 38 22.4
comp=Z,218nm,1.4s
MTN Manton Dam 49.64 334 P **P** **17 38 15.3 -0.3**
DRS Darwin Rock St 50.09 334 P **P** **17 38 19.4 +0.4**
PMG Port Moresby 50.97 355 P **P** **17 38 21.1 -4.6**
PMG IAmb IAmb 17 38 33.4
comp=Z,123nm,1.6s
PMG Port Moresby 50.97 355 IAMs_20 IAMs_20 17 56 04.0
comp=Z,11µm,21.0s
PMG Port Moresby 50.97 355 P **P** **17 38 27.8 +2.1**
PMG Port Moresby 50.97 355 P **P** **17 38 28.8 +3.1**
PMG Port Moresby 50.97 355 *i*P **P** **17 38 21.8 -3.9**
PMG pmax pmax
comp=Z,80nm,1.4s
PMG Port Moresby 50.97 355 LR LR 17 56 15.5
comp=Z,12µm,21.4s,baz=184,slow=32
HNR Honiara 51.33 12 P P 17 38 23.6 -4.8
HNR IAmb IAmb 17 38 39.3
comp=Z,158nm,1.0s
HNR Honiara 51.33 12 P **P** **17 38 32.1 +3.7**
HNR Honiara 51.33 12 P P 17 38 23.6 -4.8
HNR pmax pmax
comp=Z,158nm,1.0s
HNR MLR MLR
comp=Z,26µm,20.0s
RAR Rarotonga 52.16 64 LR LR 17 58 00.9
comp=Z,5µm,18.8s,baz=210,slow=33
SOEI Soe 54.27 327 P **P** **17 38 48.0 -2.4**
SOEI IAmb IAmb 17 39 12.9
comp=Z,201nm,1.3s
SOEI Soe 54.27 327 P **P** **17 38 52.8 +2.5**
SOEI Soe 54.27 327 P **P** **17 38 50.2 -0.2**
SAUI Saumlaki 54.33 336 IAMs_20 IAMs_20 18 03 52.0
comp=Z,9µm,19.0s
BASI Baing, Sumba 54.88 323 P **P** **17 38 54.5 -0.1**
comp=Z,192nm,1.5s,comp=Z,4µmcomp=Z,3µm
MMRI Maumere 55.90 325 P **P** **17 38 59.8 -2.1**
MMRI IAMs_20 IAMs_20 18 01 28.0
comp=Z,13µm,20.0s
MMRI Maumere 55.90 325 P **P** **17 39 02.9 +1.0**
MMRI Maumere 55.90 325 P **P** **17 39 00.3 -1.6**
comp=Z,139nm,1.6s,comp=Z,4µmcomp=Z,3µm
EDFI Ende, Flores 55.95 325 P **P** **17 39 01.1 -1.3**
comp=Z,48nm,2.4s,comp=Z,2µmcomp=Z,3µm
RABL Rabaul 56.09 2 IAMs_20 IAMs_20 18 00 44.5
comp=Z,8µm,19.0s
PLAI Plampang 57.06 320 P **P** **17 39 12.0 +1.8**
PLAI Plampang 57.06 320 P **P** **17 39 11.7 +1.5**
comp=Z,50nm,1.7s,comp=Z,2µmcomp=Z,3µm
MANU Manus Island 58.27 356 P **P** **17 39 16.2 -2.5**
MANU IAmb IAmb 17 39 34.3
comp=Z,165nm,1.9s
JAGI Jajag, Banyuwa 58.60 316 P **P** **17 39 18.8 -2.2**
JAGI IAmb IAmb 17 39 36.0
comp=Z,113nm,1.7s
JAGI IAMs_20 IAMs_20 18 00 37.0
comp=Z,8µm,22.0s
JAGI Jajag, Banyuwa 58.60 316 P **P** **17 39 22.5 +1.5**
comp=Z,32nm,1.1s,comp=Z,2µmcomp=Z,3µm
SRBI Singaraja 58.60 318 P **P** **17 39 20.7 -0.3**
comp=Z,85nm,2.6s,comp=Z,3µmcomp=Z,4µm
BBSI Bau Bau 58.81 327 P **P** **17 39 20.9 -1.6**
comp=Z,80nm,2.5s,comp=Z,2µmcomp=Z,2µm
SMPI Sarmi 59.00 346 P **P** **17 39 24.5 +0.7**
comp=Z,84nm,1.0s,comp=Z,14µm
FAKI Fak Fak 59.08 338 P **P** **17 39 22.3 -2.0**
FAKI IAmb IAmb 17 39 33.7
comp=Z,125nm,1.0s
FAKI Fak Fak 59.08 338 P **P** **17 39 28.5 +4.2**
FAKI Fak Fak 59.08 338 P **P** **17 39 25.3 +1.0**
comp=Z,128nm,0.9s,comp=Z,3µmcomp=Z,2µm
ABJI Asem Bagus 59.20 317 P **P** **17 39 25.1 -0.1**
comp=Z,85nm,2.1s,comp=Z,3µm
BKSI Bulukumba 59.66 324 P **P** **17 39 27.6 -0.7**
comp=Z,53nm,1.3s,comp=Z,2µmcomp=Z,2µm
XMIS Christmas Isla 59.92 306 P **P** **17 39 29.0 -1.1**
XMIS IAmb IAmb 17 39 39.8
comp=Z,102nm,1.4s
PPT Papeete 60.02 72 LR LR 18 00 08.1
comp=Z,3µm,20.1s,baz=222,slow=31
KAPI Kappang 60.06 324 P **P** **17 39 29.9 -1.2**
KAPI IAmb IAmb 17 39 38.9
comp=Z,158nm,1.4s
KAPI IAMs_20 IAMs_20 18 01 59.4
comp=Z,10µm,22.0s
KAPI Kappang 60.06 324*d i*P **P** **17 39 27.8 -3.3**
KAPI pmax pmax
comp=Z,128nm,1.4s
KAPI MLR MLR
comp=Z,5µm,17.0s
UGM Wanagama 60.40 313 P **P** **17 39 32.6 -0.9**
UGM IAmb IAmb 17 40 01.0
comp=Z,118nm,1.2s
UGM IAMs_20 IAMs_20 18 02 17.0
comp=Z,10µm,20.0s
MG01 Puerto William 61.02 156 P **P** **17 39 38.5 +1.3**
SMRI Semarang 61.23 313 P **P** **17 39 37.1 -2.0**
SMRI IAmb IAmb 17 40 13.9
comp=Z,150nm,1.2s
SMRI IAMs_20 IAMs_20 18 03 54.0
comp=Z,9µm,19.0s
SANI Sanana 61.24 331 P **P** **17 39 38.4 -0.7**
SANI Sanana 61.24 331 P **P** **17 39 37.0 -2.1**
MG03 Isla Dawson 61.43 154 P **P** **17 39 41.3 +1.4**
KPJI Karang Pucung 61.53 311 P **P** **17 39 41.7 +0.6**
comp=Z,65nm,1.2s,comp=Z,3µmcomp=Z,430µm
BBJI Bungbulang 61.89 310 P **P** **17 39 44.0 +0.4**
GO10 Punta Arenas 61.94 153 P **P** **17 39 44.1 +0.6**
COCO West Island 62.12 297 IAMs_20 IAMs_20 17 59 23.4
comp=Z,9µm,22.0s
LBMI Labuha 62.26 333 P **P** **17 39 46.9 +0.9**
comp=Z,183nm,1.7s,comp=Z,4µm
LEM Lembang 62.49 310 LR LR 18 02 55.3
comp=Z,6µm,20.7s,baz=149,slow=32
LEM Lembang 62.49 310 P **P** **17 39 47.8 +0.1**
comp=Z,90nm,2.2s,comp=Z,3µmcomp=Z,3µm
MG05 Puerto Natales 62.97 151 P **P** **17 39 50.1 -0.3**
LUWI Luwuk 63.02 328 P **P** **17 39 47.4 -3.6**
LUWI IAmb IAmb 17 40 00.9
comp=Z,148nm,1.4s
LUWI Luwuk 63.02 328 P **P** **17 39 50.8 -0.2**
LUWI Luwuk 63.02 328 P **P** **17 39 48.9 -2.1**
GO09 Cerro Castillo 63.39 151 P **P** **17 39 53.0 -0.2**
GO09 IAmb IAmb 17 40 03.8
comp=Z,104nm,1.3s
TNTI Ternate 63.66 334 P **P** **17 39 51.7 -3.5**
TNTI IAmb IAmb 17 40 07.1
comp=Z,48nm,1.1s
TNTI Ternate 63.66 334 P **P** **17 39 58.1 +2.8**
BKB Balikpapan 64.48 322 P P 17 39 56.5 -4.1
BKB IAmb IAmb 17 40 28.4
comp=Z,103nm,1.3s
GTOI Gorontalo 64.56 329 P **P** **17 40 01.3 +0.1**
comp=Z,15nm,1.3s,comp=Z,802nm
KASI Kota Agung 64.89 307 P **P** **17 40 03.4 0.0**
comp=Z,83nm,1.4s,comp=Z,2µm
MPSI Mapaga 65.11 326 P **P** **17 40 03.7 -1.1**
comp=Z,60nm,1.5s,comp=Z,2µmcomp=Z,2µm
TOLI2 Tolitoli 65.61 327 P P 17 40 03.2 -4.8
TOLI2 IAmb IAmb 17 40 23.2
comp=Z,80nm,1.6s
TOLI2 IAMs_20 IAMs_20 18 07 14.2
comp=Z,11µm,21.0s
TOLI2 Tolitoli 65.61 327 P **P** **17 40 09.0 +1.0**
GO08 Villa O'Higgin 65.94 150 P **P** **17 40 09.1 -0.7**
MNAI Manna 66.56 306 P **P** **17 40 10.8 -3.4**
AY03 Cochrane 67.06 149 P **P** **17 40 17.4 +0.5**
AY03 IAmb IAmb 17 40 40.3
comp=Z,398nm,2.9s
PMBI Palembang 67.15 309 IAMs_20 IAMs_20 18 04 33.5
comp=Z,7µm,21.0s
COYC Coyhaique 68.75 149 P **P** **17 40 27.7 0.0**
COYC IAmb IAmb 17 40 40.8
comp=Z,65nm,1.3s
KSM Kuching 69.19 316 P **P** **17 40 28.1 -2.6**
KSM IAmb IAmb 17 40 41.1
comp=Z,80nm,1.3s
KSM Kuching 69.19 316 P **P** **17 40 32.6 +1.9**
SBUM Sibu 69.46 318 P **P** **17 40 29.8 -2.6**
AY01 Puyuhuapi 69.68 148 P **P** **17 40 33.3 -0.1**
AY01 IAmb IAmb 17 40 43.8
comp=Z,328nm,2.9s
DAV Davao City (W) 70.15 333 LR LR 18 12 38.6
comp=Z,1µm,18.6s,baz=155,slow=37
GO07 Milladeo Hill, 70.62 147 P **P** **17 40 38.3 -0.9**
GO07 IAmb IAmb 17 40 41.9
comp=Z,76nm,1.1s
LL07 Hotel Espejo d 70.94 147 P **P** **17 40 40.5 -0.6**
LL02 Futaleuf 71.03 148 P **P** **17 40 42.3 +0.5**
RPN Rapa Nui 71.47 112 LR LR 18 03 59.8

comp=Z,3µm,20.4s,baz=210,slow=29
LL06 Loncomilla 71.47 147 P **P** **17 40 42.2 -2.2**
BKNI Bangkinang 71.59 306 P **P** **17 40 42.6 -2.8**
KKM Kota Kinabalu 71.60 324 P **P** **17 40 42.9 -2.7**
KKM Kota Kinabalu 71.60 324 P **P** **17 40 47.8 +2.3**
LL01 San Ignacio de 71.64 148 P **P** **17 40 45.1 -0.3**
ROCAM **Rodrigues Isla 71.77 262** P **P** **17 40 44.6 -1.9**
MYKOM **Kota Tinggi 71.83 310** P **P** **17 40 43.5 -3.3**
MYKOM IAmb IAmb 17 40 53.5
comp=Z,184nm,2.0s
LL05 Los Muermos 72.27 147 P **P** **17 40 47.6 -1.5**
LL05 IAmb IAmb 17 41 16.4
comp=Z,71nm,0.6s
PLCA Paso Flores 73.67 148 P **P** **17 40 58.7 +1.1**
PLCA IAmb IAmb 17 41 25.0
comp=Z,154nm,1.9s
PLCA Paso Flores 73.67 148 P **P** **17 40 59.6 +2.0**
comp=Z,5.3nm,1.0s,baz=194,slow=5.1,SNR=13
PLCA LR LR 18 08 36.8
comp=Z,3µm,18.0s,baz=204,slow=32
comp=Z,5.3nm,1.0s
LR05 Currie 73.76 147 P **P** **17 40 58.8 +0.8**
LR05 IAmb IAmb 17 41 17.6
comp=Z,78nm,1.2s
GSI Gunungsitoli 73.89 304 P **P** **17 40 58.1 -0.9**
GSI Gunungsitoli 73.89 304 P **P** **17 41 01.2 +2.2**
GSI Gunungsitoli 73.89 304 P **P** **17 40 59.4 +0.4**
comp=Z,63nm,1.3s,comp=Z,2µmcomp=Z,3µm
GUMO Guam 73.90 354 LR LR 18 14 13.6
comp=Z,2µm,18.2s,baz=183,slow=36
XMAS Kiritimati 73.97 55 IAMs_20 IAMs_20 18 08 15.7
comp=Z,6µm,20.0s
LR03 Panguipulli 74.23 147 P **P** **17 41 00.8 0.0**
RER Riviere de l'E 74.29 255 P **P** **17 41 00.8 -0.7**
RER IAmb IAmb 17 41 10.7
comp=Z,80nm,1.0s
GO06 Curarrehue 74.51 147 P **P** **17 41 02.7 +0.1**
GO06 IAmb IAmb 17 41 12.8
comp=Z,374nm,2.8s
RPSI Rantau Prapat 74.60 305 P **P** **17 41 00.3 -2.9**
RPSI IAmb IAmb 17 41 16.9
comp=Z,193nm,2.5s
PSI Prapat 74.69 305 P **P** **17 41 03.4 -0.5**
PSI Prapat 74.69 305 P **P** **17 41 00.3 -3.6**
PSI pmax pmax
comp=Z,193nm,2.5s
IPM Ipoh 75.39 308 P **P** **17 41 04.5 -3.3**
IPM Ipoh 75.39 308 P **P** **17 41 07.5 -0.2**
GRHM Grahamstown, E 76.16 225 P **P** **17 41 11.4 -0.7**
GRHM IAmb IAmb 17 41 21.9
comp=Z,137nm,1.5s
KULM Kulim 76.28 308 P **P** **17 41 09.8 -2.9**
KULM IAmb IAmb 17 41 22.7
comp=Z,154nm,1.6s
SOE Somerset East 76.96 225 P **P** **17 41 16.1 -0.6**
SOE IAmb IAmb 17 41 32.9
comp=Z,73nm,1.1s
H03S2 Juan Fernandez 77.64 139 T T 19 07 42.0
baz=201,slow=74,SNR=117
H03S1 Juan Fernandez 77.64 139 T T 19 07 30.1
baz=201,slow=74,SNR=129
H03S3 Juan Fernandez 77.66 139 T T 19 07 45.1
baz=201,slow=74,SNR=173
DGAR Diego Garcia 77.83 276 IAMs_20 IAMs_20 18 09 47.4
comp=Z,5µm,18.0s
H03N3 Juan Fernandez 77.99 139 T T 19 08 11.5
baz=249,slow=74,SNR=12
H03N2 Juan Fernandez 78.00 139 T T 19 08 13.3
baz=249,slow=74,SNR=22
H03N1 Juan Fernandez 78.01 139 T T 19 08 15.1
baz=249,slow=74,SNR=13
TGY Tagaytay City 78.03 330 LR LR 18 15 09.9
comp=Z,2µm,20.4s,baz=170,slow=35
TRQA Tornquist 78.26 154 P **P** **17 41 23.3 -0.5**
TRQA IAmb IAmb 17 41 49.1
comp=Z,103nm,1.8s
TRQA Tornquist 78.26 154 P **P** **17 41 23.3 -0.5**
TRQA pmax pmax
comp=Z,103nm,1.8s
GO05 Huala 78.67 145 P **P** **17 41 24.8 -1.2**
GO05 IAmb IAmb 17 41 51.6
comp=Z,258nm,2.0s
SUR Sutherland 78.88 221 P **P** **17 41 27.9 +0.4**
SUR IAmb IAmb 17 41 38.3
comp=Z,308nm,1.9s
SUR Sutherland 78.88 221 LR LR 18 12 18.6
comp=Z,4µm,20.8s,baz=155,slow=33
BO02 Sierra Bellavi 79.19 146 P **P** **17 41 29.4 +0.4**
BO01 Tunca 79.48 146 P **P** **17 41 31.1 +0.6**
SRIT Nakonsritamara 79.70 308 P **P** **17 41 29.7 -2.1**
SRIT Nakonsritamara 79.70 308 P **P** **17 41 32.5 +0.7**
BO04 La Punta 80.00 146 P **P** **17 41 34.1 +0.8**
BO04 IAmb IAmb 17 41 49.5
comp=Z,83nm,1.2s
VA05 Santo Domingo 80.03 145 P **P** **17 41 32.2 -1.2**
VA05 IAmb IAmb 17 41 40.8
comp=Z,107nm,1.7s
MT09 Talagante 80.09 146 P **P** **17 41 33.2 -0.8**
MT09 IAmb IAmb 17 41 59.3
comp=Z,389nm,2.4s
ABPO Ambohimpanom 80.15 249 P **P** **17 41 33.0 -1.5**
ABPO IAmb IAmb 17 41 45.3
comp=Z,168nm,2.1s
ABPO Ambohimpanom 80.15 249 P **P** **17 41 33.0 -1.5**
ABPO pmax pmax
comp=Z,168nm,2.1s
ABPO MLR MLR
comp=Z,3µm,20.0s
SURA Surathani 80.21 309 P **P** **17 41 35.4 +0.9**
LMEL Las Melosas 80.24 146 P **P** **17 41 34.1 -0.7**
LMEL IAmb IAmb 17 42 02.1
comp=Z,171nm,2.2s
MT13 San Alfonso 80.31 146 P **P** **17 41 34.8 -0.4**
WAKE Wake Island 80.45 15 IAMs_20 IAMs_20 18 12 55.2
comp=Z,6µm,20.0s
MT03 Universidad Ad 80.49 146 P **P** **17 41 34.8 -1.3**
MT05 Renca 80.52 146 P **P** **17 41 34.3 -1.9**
MT05 IAmb IAmb 17 41 39.4
comp=Z,351nm,1.9s
MT02 Curacav 80.53 145 P **P** **17 41 35.7 -0.5**
MT02 IAmb IAmb 17 41 39.5
comp=Z,154nm,2.0s
VA01 Torpederas 80.61 145 P **P** **17 41 36.5 -0.1**
PEL Peldehue 80.77 146 P **P** **17 41 37.1 -0.5**
PEL Peldehue 80.77 146 P **P** **17 41 37.1 -0.5**
PEL pmax pmax
comp=Z,66nm,1.3s
BOSA Boshof 80.79 226 P **P** **17 41 36.8 -1.1**
BOSA IAmb IAmb 17 44 30.9
comp=Z,73nm,1.3s
BOSA Boshof 80.79 226 P **P** **17 41 39.6 +1.8**
comp=Z,8.8nm,0.9s,baz=159,slow=6.8,SNR=11
BOSA LR LR 18 13 30.1
comp=Z,2µm,19.8s,baz=163,slow=33
comp=Z,8.8nm,0.9s
H11N1 WAKE ISLAND Hy 80.90 15 T T 19 10 18.8
baz=188,slow=76,SNR=4.8
H11N3 WAKE ISLAND Hy 80.91 15 T T 19 10 19.2
baz=188,slow=76,SNR=5.1
H11N2 WAKE ISLAND Hy 80.92 15 T T 19 10 20.1
baz=188,slow=76,SNR=7.7
VA06 Catapilco 81.14 145 P **P** **17 41 38.6 -0.9**
VA06 IAmb IAmb 17 41 42.4
comp=Z,154nm,1.9s
VA03 San Esteban 81.16 146 P **P** **17 41 38.6 -1.2**
CO02 Combarbal 82.50 145 P **P** **17 41 45.8 -1.0**
CO06 Fray Jorge 82.82 144 P **P** **17 41 47.2 -1.1**
CO03 El Pedregal 82.94 145 P **P** **17 41 47.8 -1.3**
CO03 IAmb IAmb 17 42 08.5
comp=Z,54nm,1.2s
JOHN Johnston Islan 83.25 38 IAMs_20 IAMs_20 18 13 01.6
comp=Z,7µm,21.0s
CO01 Juntas del Tor 83.92 145 P **P** **17 41 52.4 -1.9**
CO01 IAmb IAmb 17 42 13.5
comp=Z,237nm,2.4s
LBTB Lobatse 83.94 228 P **P** **17 41 51.8 -2.5**
LBTB Lobatse 83.94 228 P **P** **17 41 51.8 -2.5**
LBTB pmax pmax
comp=Z,200nm,0.5s
LBTB MLR MLR
comp=Z,2µm,20.0s
LBTB Lobatse 83.94 228 LR LR 18 16 31.6
comp=Z,2µm,19.2s,baz=156,slow=34
NAYO Nakonayok 84.30 312 P **P** **17 41 56.8 +0.9**
LCO Las Campanas 84.65 144 P **P** **17 41 57.0 -1.1**
LCO IAmb IAmb 17 42 17.8
comp=Z,87nm,1.7s
LCO Las Campanas 84.65 144 P **P** **17 41 57.0 -1.1**
LCO pmax pmax
comp=Z,87nm,1.7s
AC05 El Transito 84.94 145 P **P** **17 41 58.0 -1.3**
SRDT SRDT 85.15 310 P **P** **17 42 01.4 +1.2**
AC04 Llanos de Chal 85.30 144 P **P** **17 42 00.7 -0.3**
AC04 IAmb IAmb 17 42 26.6
comp=Z,110nm,1.5s
QIZ Qiongzhong 85.80 322 P **P** **17 42 03.5 +0.2**
QIZ PP **PP** **17 45 23.0 0.0**
QIZ S **S** **17 52 37.0 +1.0**
QIZ SS **SS** **17 58 15.0 +1.5**
QIZ pmax pmax
comp=Z,26nm,1.8s
QIZ pmax pmax
comp=Z,870nm,2.6s
QIZ LR LR
comp=Z,2µm,20.6s
QIZ LR LR
comp=Z,3µm,24.0s
QIZ LR LR
comp=Z,2µm,24.5s
PLTB Pedras Altas 86.00 159 P **P** **17 42 03.3 -1.2**
GO03 Copiap 86.12 144 P **P** **17 42 03.2 -1.9**
GO03 IAmb IAmb 17 42 13.2
comp=Z,79nm,1.4s
PALK Pallekele 86.64 291 P **P** **17 42 05.7 -2.0**
PALK Pallekele 86.64 291 IAMs_20 IAMs_20 18 16 37.5
comp=Z,4µm,18.0s
PALK Pallekele 86.64 291 P **P** **17 42 05.7 -2.0**
PALK pmax pmax
comp=Z,490nm,3.2s
PALK MLR MLR
comp=Z,4µm,18.0s
PALK Pallekele 86.64 291 LR LR 18 14 29.1
comp=Z,4µm,19.8s,baz=251,slow=31
YULB Yu-li 86.89 333 P **P** **17 42 05.7 -2.9**
YULB IAmb IAmb 17 43 40.5
comp=Z,60nm,1.3s
TPUB Ta-pu 86.96 332 P **P** **17 42 05.7 -3.3**
TPUB IAmb IAmb 17 42 13.4
comp=Z,160nm,1.6s
NONG Nongkai 87.10 315 P **P** **17 42 10.8 +1.1**
AC02 Maricunga 87.15 145 P **P** **17 42 09.9 -0.9**
SSLB Suanglung 87.35 333 P **P** **17 42 13.2 +2.3**
ITQB Itaqui 87.47 156 P **P** **17 42 10.3 -1.3**
MALK Mahakanadarawa 87.70 291 P **P** **17 42 11.6 -1.2**
GO02 Mina Guanaco 88.60 144 P **P** **17 42 14.6 -2.9**
JOW Kunigami 88.86 340 LR LR 18 19 25.1
comp=Z,2µm,21.8s,baz=155,slow=34
PB14 IPOC Station P 88.86 143 P **P** **17 42 17.1 -1.7**
PB14 IPOC Station P 88.86 143 P **P** **17 42 20.0 +1.2**
CM31 Chiang Mai Arr 88.98 312 P **P** **17 42 15.7 -3.0**
CMAR Chiang Mai Arr 88.98 312 P **P** **17 42 16.8 -1.9**
CMAR Chiang Mai Arr 88.98 312 P **P** **17 42 19.8 +1.1**
comp=Z,2.8nm,0.9s,baz=195,slow=4.4,SNR=16
CMAR PP **PP** **17 45 49.2 +0.6**
comp=Z,9.7nm,1.3s,baz=159,slow=6.3,SNR=4.1
CMAR LR LR 18 20 04.9
comp=Z,2µm,19.0s,baz=160,slow=34
comp=Z,2.8nm,0.9s
QZH Quanzhou 89.02 331 ⇓*i*P **P** **17 42 19.8 +1.1**
QZH SKS **SKSac** **17 52 50.0 +2.0**
QZH S **S** **17 53 08.3 +1.7**
QZH SS **SS** **17 58 59.5 -1.0**
QZH pmax pmax
comp=Z,710nm,4.1s
QZH LR LR
comp=Z,1µm,21.9s
QZH LR LR
comp=Z,1µm,20.8s
QZH LR LR
comp=Z,2µm,22.6s
CHTO Chiang Mai 89.30 312 P **P** **17 42 17.2 -3.0**
CHTO Chiang Mai 89.30 312 P **P** **17 42 22.9 +2.7**
CHTO Chiang Mai 89.30 312 P **P** **17 42 17.2 -3.0**
CHTO pmax pmax
comp=Z,301nm,2.7s
CHTO MLR MLR
comp=Z,4µm,22.0s
SLVN Son La 89.87 317 P P 17 42 18.8 -4.1
CPUP Villa Florida 90.56 155 P **P** **17 42 24.4 -1.8**
CPUP IAmb IAmb 17 42 46.4
comp=Z,96nm,2.1s
CPUP Villa Florida 90.56 155 P **P** **17 42 28.3 +2.1**
comp=Z,2.9nm,0.9s,baz=169,slow=1.4,SNR=5.8
comp=Z,2.9nm,0.9s
LVC Limon Verde 91.20 144 LR LR 18 14 55.3
comp=Z,2µm,20.6s,baz=202,slow=30
PB07 IPOC Station P 91.75 143 P **P** **17 42 31.2 -0.8**
LSZ Lusaka 91.76 234 P **P** **17 42 28.6 -3.5**
LSZ IAmb IAmb 17 42 42.5
comp=Z,98nm,2.0s
LSZ Lusaka 91.76 234 P **P** **17 42 28.6 -3.5**
LSZ pmax pmax
comp=Z,98nm,2.0s
LSZ MLR MLR
comp=Z,3µm,20.0s
LSZ Lusaka 91.76 234 LR LR 18 17 32.3
comp=Z,2µm,21.0s,baz=158,slow=32
TSUM Tsumeb 92.14 224 LR LR 18 18 35.8
comp=Z,2µm,21.8s,baz=160,slow=32
MND Mandalay 93.28 311 P **P** **17 42 39.7 +1.1**
CNSH ChangSha 93.55 327 ⇑P **P** **17 42 42.0 +2.3**
CNSH S **S** **17 53 53.8 +6.0**
CNSH SS **SS** **18 00 10.3 +4.4**
CNSH pmax pmax
comp=Z,310nm,7.3s
CNSH LR LR
comp=Z,2µm,26.5s
CNSH LR LR
comp=Z,830nm,25.1s
CNSH LR LR
comp=Z,3µm,28.7s
JHJ Hachijo jima 2 93.63 351 LR LR 18 21 28.2
comp=Z,2µm,21.1s,baz=175,slow=33
GYA Guiyang 93.75 321 P **P** **17 42 41.3 +0.5**
GYA PP **PP** **17 46 25.5 -1.0**
GYA SKS **SKSac** **17 53 16.5 +1.3**
GYA S **S** **17 53 47.8 -2.1**
GYA SS **SS** **18 00 11.0 +2.0**
GYA pmax pmax
comp=Z,490nm,4.4s
GYA LR LR
comp=Z,4µm,21.0s
GYA LR LR
comp=Z,1µm,18.8s
GYA LR LR
comp=Z,5µm,23.8s
KMI Kunming 93.77 317 ⇑P **P** **17 42 44.3 +3.2**
KMI PP **PP** **17 46 24.3 -2.5**
KMI S **S** **17 53 54.5 +4.1**
KMI pmax pmax
comp=Z,12nm,2.0s
KMI pmax pmax
comp=Z,290nm,5.4s
KMI LR LR
comp=Z,2µm,20.0s
KMI LR LR
comp=Z,1µm,21.7s
KMI LR LR
comp=Z,4µm,28.1s
SSE Sheshan 94.36 335 P **P** **17 42 45.0 +1.7**
SSE S **S** **17 53 54.5 -0.2**
SSE SS **SS** **18 00 20.0 +2.7**
SSE pmax pmax
comp=Z,7.0nm,0.7s
SSE pmax pmax
comp=Z,81nm,3.9s
SSE LR LR
comp=Z,650nm,22.8s
JNU Nakatsue 94.62 343 LR LR 18 22 17.5
comp=Z,2µm,21.5s,baz=160,slow=34
TNCH TengChong 95.15 314 P **P** **17 42 46.5 -0.9**
TNCH pP pP 17 42 49.8 +0.1
TNCH PP **PP** **17 46 34.3 -3.2**
TNCH SKS **SKSac** **17 53 21.0 -1.9**
TNCH S **S** **17 53 59.0 -3.3**
TNCH SS **SS** **18 00 29.0 -0.1**
TNCH pmax pmax
comp=Z,190nm,6.2s
TNCH LR LR
comp=Z,1µm,22.7s
TNCH LR LR
comp=Z,600nm,22.3s
TNCH LR LR
comp=Z,5µm,24.1s
PZH PanZhiHua 95.38 317 P **P** **17 42 50.5 +2.2**
PZH SKS **SKSac** **17 53 24.8 +0.8**
PZH S **ScS** **17 54 07.5 +2.5**
PZH SS **SS** **18 00 30.0 -2.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,180nm,6.2s
PZH LR LR
comp=Z,2µm,22.4s
PZH LR LR
comp=Z,1µm,22.2s
PZH LR LR
comp=Z,3µm,21.8s
WHN Wuhan 95.42 329 ⇑P **P** **17 42 51.0 +2.8**
WHN PP **PP** **17 46 40.0 +0.6**
WHN SKS **SKSac** **17 53 26.5 +2.8**
WHN S **ScS** **17 54 05.8 +1.0**
WHN SS **SS** **18 00 32.3 -0.2**
WHN LR LR
comp=Z,5µm,18.4s
WHN LR LR
comp=Z,5µm,22.8s
WHN LR LR
comp=Z,6µm,19.1s
NJ2 Nanjing 95.79 333 *e*P **P** **17 42 51.8 +2.0**
NJ2 pP **sP** **17 42 53.5 +0.5**
NJ2 sP **pwP** **17 42 55.0 -1.1**
NJ2 PP **PP** **17 46 42.5 +0.3**
NJ2 SKS **SKSac** **17 53 29.0 +3.5**
NJ2 S **ScS** **17 54 09.3 +1.5**
NJ2 sS **sS** **17 54 14.0 +2.9**
NJ2 pmax pmax
comp=Z,5.0nm,0.7s
NJ2 pmax pmax
comp=Z,270nm,3.9s
NJ2 LR LR
comp=Z,2µm,21.8s
NJ2 LR LR
comp=Z,1µm,19.9s
NJ2 LR LR
comp=Z,2µm,20.8s
HYB Hyderabad 96.53 294 *e*P **P** **17 42 52.0 -1.6**
HYB *e*PP **PP** **17 46 46.2 -1.8**
HYB *e*SKSac **SKSac** **17 53 28.7 -1.5**
HYB *e*SS **SS** **18 00 49.5 +1.1**
HYB IVMs_BB IVMs_BB 18 16 15.1
comp=Z,1µm,23.0s
MJAR Matsushiro Arr 97.16 350 LR LR 18 23 53.1
comp=Z,2µm,21.8s,baz=164,slow=34
LPAZ La Paz 97.40 143 P **P** **17 42 57.7 -0.8**
LPAZ La Paz 97.40 143 P **P** **17 42 57.7 -0.8**
NNA Nana 98.52 133 LR LR 18 18 49.9
comp=Z,3µm,18.2s,baz=192,slow=30
CD2 Chengdu 98.80 320 P Pdif 17 43 06.0 +2.4
CD2 PP **PP** **17 47 05.8 +0.3**
CD2 SKS **SKSac** **17 53 41.5 +0.2**
CD2 S **ScS** **17 54 34.5 +1.3**
CD2 SS **SS** **18 01 22.3 +2.0**
CD2 pmax pmax
comp=Z,10.0nm,1.3s
CD2 pmax pmax
comp=Z,110nm,5.0s
CD2 LR LR
comp=Z,550nm,14.3s
CD2 LR LR
comp=Z,560nm,17.0s
CD2 LR LR
comp=Z,3µm,21.3s
KSRS Korea Array 99.31 342 LR LR 18 25 15.7
comp=Z,1µm,21.7s,baz=155,slow=34
SIV San Ignacio 99.66 149 LR LR 18 27 02.1
comp=Z,994nm,18.1s,baz=189,slow=35
LYN LuoYang 99.71 329 *e*P **Pdif** **17 43 05.5 -2.0**
LYN PP **PP** **17 47 08.0 -4.3**
LYN SKS **SKSac** **17 53 49.0 +3.5**
LYN S **S** **17 54 40.5 0.0**
LYN SS **SS** **18 01 29.8 -3.1**
LYN pmax pmax
comp=Z,370nm,5.0s
LYN LR LR
comp=Z,2µm,23.0s
LYN LR LR
comp=Z,1µm,23.7s
LYN LR LR
comp=Z,4µm,30.4s
XAN Xi'an 100.18 326 P **Pdif** **17 43 10.5 +0.8**
XAN pP pwP 17 43 21.3 +5.3
XAN PP **PP** **17 47 15.3 -0.7**
XAN SKS **SKSac** **17 53 48.3 +0.3**
XAN S **Sdif** **17 54 44.8 +0.3**
XAN sS sS 17 54 57.5 +8.9
XAN SS **SS** **18 01 38.8 -0.8**
XAN pmax pmax
comp=Z,29nm,1.3s
XAN pmax pmax
comp=Z,330nm,5.5s
XAN LR LR
comp=Z,3µm,20.6s
XAN LR LR
comp=Z,2µm,19.4s
XAN LR LR
comp=Z,4µm,20.8s
DL2 Dalian 101.82 337 SS SS 18 01 53.5 -8.7
DL2 AMB AMB
comp=Z,450nm,4.6s
DL2 LR LR
comp=N,1µm,23.0s
DL2 LR LR
comp=E,1µm,23.2s
DL2 LR LR
comp=Z,2µm,22.2s
HNS HongShan 101.86 331 ⇓P **Pdif** **17 43 17.5 +0.6**
HNS PP **PP** **17 47 25.5 -3.0**
HNS S **Sdif** **17 54 56.5 -1.7**
HNS LR LR
comp=Z,2µm,23.9s
HNS LR LR
comp=Z,2µm,22.3s
SNY Shenyang 104.30 339 P **Pdif** **17 43 28.3 +0.7**
SNY PP **PP** **17 47 46.3 -0.4**
SNY SKS **SKSac** **17 54 09.5 +2.6**
SNY LR LR
comp=Z,1µm,27.9s
SNY LR LR
comp=Z,1µm,21.1s
SNY LR LR
comp=Z,3µm,21.1s
HHC Hu-ho-hao-te 105.90 330 Pdif **Pdif** **17 43 32.5 -2.5**
HHC SS SS 18 02 52.8 -5.7
HHC LR LR
comp=Z,2µm,16.8s
HHC LR LR
comp=Z,780nm,18.6s
HHC LR LR
comp=Z,3µm,19.9s
CN2 Changchun 105.90 341 Pdif **Pdif** **17 43 35.5 +0.8**
CN2 PP **PP** **17 47 57.0 -1.6**
CN2 S **Sdif** **17 55 32.0 +0.4**
CN2 SS **SS** **18 03 01.0 +2.8**
CN2 LR LR
comp=Z,2µm,21.0s
CN2 LR LR
comp=Z,900nm,21.0s
CN2 LR LR
comp=Z,2µm,21.0s
MDJ Mudanjiang 106.09 344 Pdif **Pdif** **17 43 34.0 -1.6**
MDJ SS SS 18 02 58.5 -2.3
MDJ AMB AMB
comp=Z,290nm,8.3s
MDJ LR LR
comp=Z,1µm,18.2s
MDJ LR LR
comp=Z,500nm,20.7s
MDJ LR LR
comp=Z,1µm,18.6s
GOMU GeErMu 106.61 316 Pdif **Pdif** **17 43 44.5 +5.9**
GOMU PP PP 17 47 57.3 -7.1
GOMU SKS SKiKP 17 51 04.5 -19
YSS Yuzh-Sakhalins 107.20 354 IAMs_20 IAMs_20 18 32 55.0
comp=Z,3µm,19.0s

XLT	**XiLinHaoTe**	**107.75**	**334**	*e*Pdif	**Pdif**	**17 43 46.3**	**+3.2**			
XLT				PP	**PP**	**17 48 14.3**	**+2.0**			
XLT				SKS	**SKSac**	**17 54 25.0**	**+2.6**			
XLT				SS	**SS**	**18 03 18.0**	**-5.6**			
XLT				AMB	AMB					
	comp=Z,250nm,7.4s									
XLT				LR	LR					
	comp=Z,2μm,23.8s									
XLT				LR	LR					
	comp=Z,2μm,21.3s									
GTA	**Gaotai**	**107.87**	**321**	Pdif	**Pdif**	**17 43 35.0**	**-8.8**			
GTA				pP	sPdif	17 43 57.5	+10			
GTA				PP	**PP**	**17 48 09.8**	**-3.5**			
GTA	**Gaotai**	**107.87**	**321**	SS	SS	18 03 23.5	-1.8			
GTA				LR	LR					
	comp=N,840nm,22.1s									
GTA				LR	LR					
	comp=E,990nm,24.1s									
GTA				LR	LR					
	comp=Z,2μm,21.3s									
NIL	**Nilore**	**112.92**	**298**	IAMs_20	IAMs_20	18 28 17.7				
	comp=Z,3μm,21.0s									
PET	**Petropavlovsk**	**113.26**	**5**	IAMs_20	IAMs_20	18 27 16.0				
	comp=Z,3μm,22.0s									
PET	**Petropavlovsk**	**113.26**	**5**	*e*P	**Pdif**	**17 44 19.9**	**+13**			
PET				*e*		17 48 55.5				
PET				*e*		17 54 46.8				
PET				*e*SS	SS	18 04 42.5	+5.7			
PET				pmax	pmax					
	comp=Z,400nm,11.1s									
PEA0B	**Petropavlovsk-**	**113.30**	**5**	IAMs_20	IAMs_20	18 26 50.2				
	comp=Z,4μm,22.0s									
UOSS	**Minazif**	**113.59**	**279**	IAMs_20	IAMs_20	18 25 25.9				
	comp=Z,3μm,21.0s									
SLBS	**Sierra La Lagu**	**114.84**	**86**	IAMs_20	IAMs_20	18 30 54.1				
	comp=Z,3μm,18.0s									
TLIG	**Tlapa**	**115.30**	**99**	IAMs_20	IAMs_20	18 25 38.2				
	comp=Z,3μm,21.0s									
KBU	**Kabul Universi**	**115.48**	**295**	PP	PP	17 49 06.0	-2.0			
HDC	**Heredia**	**115.52**	**117**	IAMs_20	IAMs_20	18 25 08.4				
	comp=Z,3μm,22.0s									
KBL	**Kabul**	**115.54**	**295**	IAMs_20	IAMs_20	18 29 07.5				
	comp=Z,4μm,22.0s									
MOIG	**Morelia**	**115.81**	**96**	IAMs_20	IAMs_20	18 26 52.2				
	comp=Z,3μm,20.0s									
WMQ	**Urumqi**	**115.88**	**314**	*e*PKP	**PKPdf**	**17 48 04.0**	**-1.9**			
WMQ				LR	LR					
	comp=Z,2μm,14.1s									
WMQ				LR	LR					
	comp=Z,1μm,17.7s									
WMQ				LR	LR					
	comp=Z,1μm,19.5s									
UNM	**Universidad Na**	**116.50**	**98**	IAMs_20	IAMs_20	18 28 37.0				
	comp=Z,2μm,18.0s									
KSH	**Kashi**	**116.72**	**303**	PKP	**PKiKP**	**17 48 10.8**	**+3.0**			
KSH				SKKS		17 56 15.0				
KSH				LR	LR					
	comp=Z,1μm,18.2s									
KSH				LR	LR					
	comp=Z,900nm,17.9s									
KSH				LR	LR					
	comp=Z,2μm,18.5s									
SRIG	**Santa Rosalia**	**116.74**	**81**	IAMs_20	IAMs_20	18 28 09.2				
	comp=Z,3μm,19.0s									
BOAB	**BOACO BROADBAN**	**116.99**	**114**	IAMs_20	IAMs_20	18 27 33.1				
	comp=Z,4μm,22.0s									
CLES	**Cleveland East**	**117.19**	**26**	IAMs_20	IAMs_20	18 32 53.9				
	comp=Z,3μm,20.0s									
TARG	**Taragay, Kyrgy**	**117.84**	**306**		**PKPdf**	**17 48 07.8**	**-2.5**			
TARG	**Taragay, Kyrgy**	**117.84**	**306**	PKiKP	**PKPdf**	**17 48 07.8**	**-2.5**			
VTX	**Valle De La Tr**	**118.38**	**76**	IAMs_20	IAMs_20	18 27 46.3				
	comp=Z,3μm,21.0s									
SHLS	**Shalkode**	**118.39**	**308**	*e*PKP	**PKPdf**	**17 48 10.2**	**-0.7**			
	baz=308									
SHLS				*e*PP	**PP**	**17 49 24.1**	**-4.0**			
	baz=308									
SHLS	**Shalkode**	**118.39**	**308**	*e*PKiKP	**PKPdf**	**17 48 10.2**	**-0.7**			
SHLS				*e*		17 49 24.1				
HRA	**Herat**	**118.53**	**290**	IAMs_20	IAMs_20	18 33 42.1				
	comp=Z,3μm,20.0s									
UZB	**Uzynbulak**	**118.55**	**308**	*e*PP	**PP**	**17 49 27.0**	**-2.3**			
	baz=308									
TJX	**Tijuana**	**118.69**	**74**	IAMs_20	IAMs_20	18 28 57.4				
	comp=Z,3μm,20.0s									
SATY	**Saty**	**118.72**	**307**	*e*PKP	**PKPdf**	**17 48 10.6**	**-0.9**			
	baz=307									
SATY				*e*PP	**PP**	**17 49 28.2**	**-2.3**			
	baz=307									
SATY	**Saty**	**118.72**	**307**	*e*PKiKP	**PKPdf**	**17 48 10.6**	**-0.9**			
SATY				*e*		17 49 28.1				
ZHN	**Zhinishke**	**118.80**	**307**	*e*PP	**PP**	**17 49 29.2**	**-1.8**			
	baz=307									
SIMJ	**Simiganj**	**118.98**	**298**	IAMs_20	IAMs_20	18 32 34.4				
	comp=Z,3μm,21.0s									
BAR	**Barrett**	**119.02**	**74**	IAMs_20	IAMs_20	18 28 60.0				
	comp=Z,4μm,21.0s									
MDOK	**Medeo**	**119.34**	**306**	*e*PKP	**PKPdf**	**17 48 12.6**	**-0.1**			
	baz=306									
MDOK	**Medeo**	**119.34**	**306**	*e*PKiKP	**PKPdf**	**17 48 12.6**	**-0.1**			
ELS	**Elsinore Mount**	**119.45**	**73**	IAMs_20	IAMs_20	18 29 58.4				
	comp=Z,4μm,19.0s									
PASC	**Pasadena Art C**	**119.52**	**72**	IAMs_20	IAMs_20	18 30 55.1				
	comp=Z,3μm,20.0s									
UABX	**UABC, Campus M**	**119.57**	**75**	IAMs_20	IAMs_20	18 28 40.6				
	comp=Z,3μm,19.0s									
MA2	**Magadan**	**119.65**	**360**	IAMs_20	IAMs_20	18 34 44.0				
	comp=Z,3μm,21.0s									
HPIG		**119.67**	**87**	IAMs_20	IAMs_20	18 34 56.2				
	comp=Z,3μm,18.0s									
AAK	**Ala-Archa**	**119.94**	**304**	*i* PKiKP	**PKPdf**	**17 48 14.5**	**+0.6**			
ZSN	**Zaisan**	**120.01**	**314**	*e*PKP	**PKPdf**	**17 48 14.1**	**+0.3**			
	baz=314									
ZSN	**Zaisan**	**120.01**	**314**	*e*PKiKP	**PKPdf**	**17 48 14.0**	**+0.3**			
SDV	**Santo Domingo**	**120.07**	**131**	IAMs_20	IAMs_20	18 32 16.8				
	comp=Z,2μm,20.0s									
KUU	**Kurty**	**120.24**	**306**	*e*PKP	**PKPdf**	**17 48 14.3**	**0.0**			
	baz=306									
KUU	**Kurty**	**120.24**	**306**	*e*PKiKP	**PKPdf**	**17 48 14.2**	**0.0**			
MK31	**Makanchi Array**	**120.38**	**312**		**PKPdf**	**17 48 13.2**	**-1.3**			
MK31	**Makanchi Array**	**120.38**	**312**	*i* PKiKP	**PKPdf**	**17 48 14.4**	**-0.1**			
MKAR	**Makanchi Array**	**120.38**	**312**	PKPdf	**PKPdf**	**17 48 12.7**	**-1.8**			
MKAR	**Makanchi Array**	**120.38**	**312**	PKP	**PKiKP**	**17 48 16.1**	**+1.6**			
	comp=Z,1.1nm,0.7s,baz=215,slow=2.0,SNR=9.1									
MAKZ	**Makanchi**	**120.51**	**312**		**PKPdf**	**17 48 13.0**	**-1.7**			
MAKZ	**Makanchi**	**120.51**	**312**	PKiKP	**PKPdf**	**17 48 13.0**	**-1.7**			
MAKZ				MLR	MLR					
	comp=Z,2μm,22.0s									
SGDS	**Sogindy**	**120.56**	**305**	*i* PKP	**PKPdf**	**17 48 14.4**	**-0.6**			
	baz=305									
SGDS				*e*PP	**PP**	**17 49 41.0**	**-2.0**			
	baz=305									
MCCM	**Marconi Confer**	**120.59**	**66**	IAMs_20	IAMs_20	18 34 31.0				
	comp=Z,4μm,19.0s									
DGZ	**Jazzator, Alta**	**121.05**	**317**	*i* PKiKP	**PKPdf**	**17 48 16.1**	**+0.3**			
IUG	**Iuzhnay**	**121.41**	**301**	*e*PKP	**PKPdf**	**17 48 16.7**	**0.0**			
	baz=301									
IUG				*e*PP	**PP**	**17 49 46.5**	**-2.3**			
	baz=301									
IUG	**Iuzhnay**	**121.41**	**301**	*e*PKiKP	**PKPdf**	**17 48 16.7**	**0.0**			
IUG				*e*		17 49 46.5				
QSM	**Queen of Sheba**	**121.61**	**72**	IAMs_20	IAMs_20	18 32 51.3				
	comp=Z,3μm,19.0s									
CMB	**Columbia Colle**	**121.64**	**68**	IAMs_20	IAMs_20	18 34 41.9				
	comp=Z,2μm,19.0s									
MDPB	**Devils Postpil**	**121.92**	**69**	IAMs_20	IAMs_20	18 32 19.6				
	comp=Z,3μm,19.0s									
BTLS	**Baital**	**122.11**	**305**	*e*PKP	**PKPdf**	**17 48 18.0**	**+0.2**			
	baz=306									
BTLS	**Baital**	**122.11**	**305**	*e*PKiKP	**PKPdf**	**17 48 18.0**	**+0.2**			
BRLS	**Borolday**	**122.21**	**301**	*e*PKP	**PKPdf**	**17 48 17.2**	**-1.0**			
	baz=301									
BRLS	**Borolday**	**122.21**	**301**	*e*PKiKP	**PKPdf**	**17 48 17.1**	**-1.0**			
DSP	**Deep Springs**	**122.23**	**70**	IAMs_20	IAMs_20	18 35 18.5				
	comp=Z,4μm,19.0s									
LCH	**Last Change Ra**	**122.27**	**71**	IAMs_20	IAMs_20	18 30 29.7				
	comp=Z,3μm,20.0s									
WAKR	**Walker**	**122.46**	**68**	IAMs_20	IAMs_20	18 35 10.6				
	comp=Z,3μm,18.0s									
EMB	**Emerald Bay**	**122.53**	**68**	IAMs_20	IAMs_20	18 35 28.5				
	comp=Z,3μm,20.0s									
TXAR	**Lajitas Array**	**122.64**	**87**	PKP	**PKiKP**	**17 48 22.6**	**+2.9**			
	comp=Z,2.3nm,1.3s,baz=170,slow=2.2,SNR=5.1									
LHV	**Little Huntoon**	**122.69**	**69**	IAMs_20	IAMs_20	18 33 12.7				
	comp=Z,3μm,19.0s									
MPK	**Martis Peak**	**122.83**	**67**	IAMs_20	IAMs_20	18 36 04.1				
	comp=Z,4μm,19.0s									
SHPR	**Sheep Range**	**122.85**	**73**	IAMs_20	IAMs_20	18 33 20.4				
	comp=Z,2μm,19.0s									
PNTR	**Pine Nut**	**122.86**	**68**	IAMs_20	IAMs_20	18 35 40.1				
	comp=Z,3μm,18.0s									
NVAR	**Mina Array Bea**	**122.93**	**69**	PKP	**PKiKP**	**17 48 22.9**	**+2.8**			
	comp=Z,0.3nm,0.4s,baz=177,slow=2.7,SNR=4.5									
YERR	**Yerington**	**122.94**	**68**	IAMs_20	IAMs_20	18 35 34.3				
	comp=Z,3μm,18.0s									
RYN	**Ryan**	**122.98**	**69**	IAMs_20	IAMs_20	18 32 53.5				
	comp=Z,2μm,20.0s									
NV11	**Mina Array Sit**	**123.00**	**69**	IAMs_20	IAMs_20	18 33 13.9				
	comp=Z,3μm,19.0s									
KSXB	**Camp Six Broad**	**123.14**	**63**	IAMs_20	IAMs_20	18 38 16.0				
	comp=Z,3μm,18.0s									
YAK	**Yakutsk**	**123.18**	**348**	*e*PKiKP	**PKPdf**	**17 48 19.2**	**-0.1**			
YAK				*e*		17 49 57.5				
YAK				*e*SS	SS	18 06 44.6	-0.6			
YAK				pmax	pmax					
	comp=Z,11nm,1.0s									
YAK				pmax	pmax					
	comp=Z,246nm,3.6s									
YAK				pmax	pmax					
	comp=N,127nm,3.3s									
YAK				pmax	pmax					
	comp=E,51nm,3.8s									
YAK				MLR	MLR					
	comp=Z,1μm,18.0s									
YAK				MLR	MLR					
	comp=E,1μm,21.0s									
YAK				MLR	MLR					
	comp=N,640nm,20.0s									
DBIC	**Dimbokro**	**123.32**	**209**	PKP	**PKiKP**	**17 48 23.4**	**+2.1**			
	comp=N,2.5nm,0.8s,baz=347,slow=5.1,SNR=3.3									
L02F	**Cave Junction**	**123.51**	**63**	IAMs_20	IAMs_20	18 39 01.8				
	comp=Z,3μm,19.0s									
KVN	**Kaiserville**	**123.52**	**69**	IAMs_20	IAMs_20	18 34 08.6				
	comp=Z,2μm,19.0s									
YBH	**Yreka Blue Hor**	**123.58**	**64**	IAMs_20	IAMs_20	18 38 08.7				
	comp=Z,3μm,19.0s									
Q09A	**Carvers**	**123.77**	**70**	IAMs_20	IAMs_20	18 33 03.5				
	comp=Z,3μm,21.0s									
WUAZ	**Wupatki**	**123.87**	**77**	IAMs_20	IAMs_20	18 31 47.9				
	comp=Z,3μm,20.0s									
833A	**Chaparral WMA,**	**123.92**	**92**	IAMs_20	IAMs_20	18 39 31.2				
	comp=Z,2μm,18.0s									
K02D	**Willamette Mer**	**123.93**	**62**	IAMs_20	IAMs_20	18 39 47.9				
	comp=Z,2μm,19.0s									
L04D	**Klamath Falls**	**124.15**	**64**	IAMs_20	IAMs_20	18 38 43.8				
	comp=Z,3μm,18.0s									
SEM	**Semipalatinsk**	**124.15**	**313**	*e*PKP	**PKPdf**	**17 48 20.7**	**-1.1**			
	baz=313									
SEM				*e*PP	**PP**	**17 50 05.3**	**-2.2**			
	baz=313									
SEM	**Semipalatinsk**	**124.15**	**313**	*e*PKiKP	**PKPdf**	**17 48 20.7**	**-1.1**			
SEM				*e*		17 50 05.2				
HUMO	**Hull Mountain**	**124.17**	**63**	IAMs_20	IAMs_20	18 39 52.3				
	comp=Z,3μm,18.0s									
KNB	**Kanab**	**124.38**	**75**	IAMs_20	IAMs_20	18 32 17.9				
	comp=Z,3μm,20.0s									
CCUT	**Cedar City**	**124.55**	**74**	IAMs_20	IAMs_20	18 34 16.3				
	comp=Z,3μm,20.0s									
K04D	**Chiloquin, OR**	**124.72**	**64**	IAMs_20	IAMs_20	18 39 04.9				
	comp=Z,3μm,19.0s									
KURBB	**Kurchatov Arra**	**124.95**	**312**	PKP	**PKPdf**	**17 48 23.8**	**+0.8**			
	comp=Z,1.5nm,0.7s,baz=147,slow=1.4,SNR=9.6									
KURBB				PP	**PP**	**17 50 13.7**	**+1.1**			
	comp=Z,0.6nm,0.3s,baz=151,slow=4.2,SNR=5.5									
PKCU	**Pink Cliffs**	**124.96**	**75**	IAMs_20	IAMs_20	18 32 37.4				
	comp=Z,3μm,20.0s									
KURK	**Kurchatov**	**125.00**	**312**	*i* PKiKP	**PKPdf**	**17 48 22.9**	**-0.2**			
BMN	**Battle Mountai**	**125.03**	**69**	IAMs_20	IAMs_20	18 37 08.6				
	comp=Z,3μm,18.0s									
735A	**Kenedy**	**125.15**	**93**	IAMs_20	IAMs_20	18 36 55.7				
	comp=Z,2μm,18.0s									
OHAK	**Old Harbor**	**125.25**	**33**	IAMs_20	IAMs_20	18 33 40.5				
	comp=Z,3μm,21.0s									
I04A	**Tendick Farm,**	**125.36**	**62**	IAMs_20	IAMs_20	18 40 08.7				
	comp=Z,2μm,18.0s									
J05D	**Fort Rock, OR**	**125.47**	**64**	IAMs_20	IAMs_20	18 39 44.9				
	comp=Z,3μm,18.0s									
MTPU	**Mount Pierson**	**125.50**	**74**	IAMs_20	IAMs_20	18 33 15.6				
	comp=Z,4μm,20.0s									
ZALV	**Zalesovo Beam**	**125.50**	**318**	PKP	**PKPdf**	**17 48 23.5**	**-0.4**			
	comp=Z,0.4nm,0.5s,baz=80,slow=1.7,SNR=3.8									
H04D	**Lebanon**	**125.79**	**62**	IAMs_20	IAMs_20	18 32 41.1				
	comp=Z,4μm,22.0s									
ANMO	**Albuquerque**	**125.81**	**81**	IAMs_20	IAMs_20	18 34 03.6				
	comp=Z,2μm,19.0s									
TCRU	**Three Creeks R**	**125.83**	**74**	IAMs_20	IAMs_20	18 33 24.1				
	comp=Z,4μm,20.0s									
WVOR	**Wild Horse Val**	**125.97**	**66**	IAMs_20	IAMs_20	18 41 14.3				
	comp=Z,3μm,18.0s									
HMU	**Henry Mountain**	**126.11**	**75**	IAMs_20	IAMs_20	18 32 47.0				
	comp=Z,2μm,20.0s									
H04A	**Detroit Lake**	**126.16**	**62**	IAMs_20	IAMs_20	18 40 25.9				
	comp=Z,3μm,18.0s									
ELK	**Elko**	**126.20**	**70**	IAMs_20	IAMs_20	18 35 17.8				
	comp=Z,3μm,18.0s									
M14K	**Bethel**	**126.21**	**27**	IAMs_20	IAMs_20	18 36 18.0				
	comp=Z,3μm,20.0s									
L14K	**Kuka Creek**	**126.58**	**26**	IAMs_20	IAMs_20	18 33 22.8				
	comp=Z,4μm,20.0s									
P18K	**Big Mountain,**	**126.62**	**31**	IAMs_20	IAMs_20	18 32 52.2				
	comp=Z,4μm,22.0s									
BRZS	**Berezniki**	**126.66**	**308**	*e*PKP	**PKPdf**	**17 48 25.7**	**-0.7**			
	baz=308									
BRZS	**Berezniki**	**126.66**	**308**	*e*PKiKP	**PKPdf**	**17 48 25.7**	**-0.7**			
SYI	**Shuyak Island**	**126.70**	**33**	IAMs_20	IAMs_20	18 33 30.3				
	comp=Z,3μm,22.0s									
RADR	**Rader Ridge**	**126.83**	**59**	IAMs_20	IAMs_20	18 37 44.5				
	comp=Z,3μm,20.0s									
435B	**Jarrell**	**126.84**	**92**	IAMs_20	IAMs_20	18 39 16.8				
	comp=Z,2μm,18.0s									
MSTX	**Muleshoe**	**126.84**	**85**	IAMs_20	IAMs_20	18 34 37.2				
	comp=Z,2μm,19.0s									
I07A	**Izee**	**126.87**	**64**	IAMs_20	IAMs_20	18 40 11.1				
	comp=Z,3μm,18.0s									
HOOD	**Mount Hood Mea**	**126.89**	**62**	IAMs_20	IAMs_20	18 33 14.4				
	comp=Z,3μm,21.0s									
F04D	**Rainier, OR**	**126.90**	**60**	IAMs_20	IAMs_20	18 42 39.4				
	comp=Z,3μm,19.0s									
G05A	**Wamic**	**126.98**	**62**	IAMs_20	IAMs_20	18 40 16.7				
	comp=Z,3μm,18.0s									
HKT	**Hockley**	**127.03**	**94**	IAMs_20	IAMs_20	18 39 30.6				
	comp=Z,2μm,18.0s									
O18K	**Koktuh Hills**	**127.03**	**31**	IAMs_20	IAMs_20	18 33 26.9				
	comp=Z,3μm,22.0s									
F04A	**Amboy**	**127.04**	**61**	IAMs_20	IAMs_20	18 32 53.1				
	comp=Z,3μm,21.0s									
NLU	**North Lily Min**	**127.06**	**73**	IAMs_20	IAMs_20	18 36 44.0				
	comp=Z,3μm,19.0s									
ABTX	**Abilene, Hawle**	**127.31**	**88**	IAMs_20	IAMs_20	18 33 45.0				
	comp=Z,3μm,20.0s									
P17A	**Butcher Ranch,**	**127.32**	**74**	IAMs_20	IAMs_20	18 34 24.0				
	comp=Z,4μm,20.0s									
MPU	**Maple Canyon**	**127.32**	**73**	IAMs_20	IAMs_20	18 35 02.9				
	comp=Z,3μm,20.0s									
BGU	**Big Grassy Mou**	**127.37**	**71**	IAMs_20	IAMs_20	18 38 56.0				
	comp=Z,3μm,19.0s									
O19K	**Port Alsworth**	**127.55**	**31**	IAMs_20	IAMs_20	18 33 31.7				
	comp=Z,3μm,22.0s									
NLWA	**Neilton Lookou**	**127.56**	**59**	IAMs_20	IAMs_20	18 34 12.7				
	comp=Z,3μm,20.0s									
J14K	**Nanvaranak Lak**	**127.66**	**25**	IAMs_20	IAMs_20	18 34 36.3				
	comp=Z,4μm,22.0s									
TORD	**Torodi Ar. Bea**	**127.66**	**219**	PKP	**PKPdf**	**17 48 29.6**	**+0.2**			
	comp=Z,4.8nm,1.0s,baz=39,slow=1.5,SNR=15									
K15K	**Wolf Creek Mou**	**127.68**	**26**	IAMs_20	IAMs_20	18 32 22.9				
	comp=Z,4μm,22.0s									
CNPM	**China Poot**	**127.79**	**33**	IAMs_20	IAMs_20	18 33 41.2				
	comp=Z,4μm,22.0s									
CTU	**Camp Tracy**	**127.80**	**73**	IAMs_20	IAMs_20	18 38 19.4				
	comp=Z,3μm,19.0s									
LON	**Longmire**	**127.94**	**61**	IAMs_20	IAMs_20	18 33 40.0				
	comp=Z,3μm,22.0s									
SPUT	**South Promonto**	**127.95**	**72**	IAMs_20	IAMs_20	18 36 23.3				
	comp=Z,2μm,20.0s									
G08A	**Pilot Rock**	**128.06**	**64**	IAMs_20	IAMs_20	18 41 45.4				
	comp=Z,2μm,19.0s									
BRLK	**Bradley Lake**	**128.09**	**33**	IAMs_20	IAMs_20	18 33 38.7				
	comp=Z,3μm,22.0s									
GNW	**Green Mountain**	**128.14**	**59**	IAMs_20	IAMs_20	18 34 01.1				
	comp=Z,3μm,22.0s									
BSUT	**Blindstream Ca**	**128.14**	**73**	IAMs_20	IAMs_20	18 35 30.7				
	comp=Z,3μm,20.0s									
HVU	**Hansel Valley**	**128.16**	**71**	IAMs_20	IAMs_20	18 40 10.9				
	comp=Z,3μm,18.0s									
D05A	**Enumclaw**	**128.21**	**60**	IAMs_20	IAMs_20	18 33 56.9				
	comp=Z,3μm,20.0s									
HOLB	**Holberg**	**128.35**	**53**	IAMs_20	IAMs_20	18 37 46.9				
	comp=Z,3μm,19.0s									
MXC	**Moxie City**	**128.47**	**62**	IAMs_20	IAMs_20	18 34 02.9				
	comp=Z,3μm,21.0s									
SDCO	**Great Sand Dun**	**128.50**	**80**		PKPpre	17 48 24.5				
T25A	**Trinidad**	**128.55**	**81**	IAMs_20	IAMs_20	18 35 52.2				
	comp=Z,3μm,19.0s									
CLRS	**Cowichan Lake**	**128.56**	**57**	IAMs_20	IAMs_20	18 35 01.1				
	comp=Z,3μm,21.0s									
HWUT	**Hardware Ranch**	**128.60**	**72**	IAMs_20	IAMs_20	18 39 19.5				
	comp=Z,3μm,18.0s									
FW06	**Azle**	**128.62**	**90**	IAMs_20	IAMs_20	18 37 18.9				
	comp=Z,2μm,19.0s									
BILL	**Bilibino**	**128.64**	**7**	IAMs_20	IAMs_20	18 38 01.6				
	comp=Z,2μm,20.0s									
BILL	**Bilibino**	**128.64**	**7**	*i* PKIKP	**PKPdf**	**17 48 28.3**	**-1.3**			
E07A	**Sunnyside**	**128.65**	**62**	IAMs_20	IAMs_20	18 34 18.7				
	comp=Z,3μm,21.0s									
HAWA	**Hanford**	**128.66**	**62**	IAMs_20	IAMs_20	18 33 49.1				
	comp=Z,3μm,21.0s									
PGC	**Sidney**	**128.72**	**58**	IAMs_20	IAMs_20	18 34 34.2				
	comp=Z,3μm,22.0s									
HLID	**Hailey**	**128.78**	**68**	IAMs_20	IAMs_20	18 40 28.0				
	comp=Z,2μm,19.0s									
LTY	**Liberty**	**128.83**	**61**	IAMs_20	IAMs_20	18 34 21.5				
	comp=Z,3μm,21.0s									
SMCO	**Snowmass**	**128.90**	**77**	IAMs_20	IAMs_20	18 34 13.1				
	comp=Z,3μm,20.0s									
E08A	**Dider Farm, El**	**128.94**	**63**	IAMs_20	IAMs_20	18 34 21.7				
	comp=Z,2μm,20.0s									
O20A	**White River Ci**	**129.04**	**76**	IAMs_20	IAMs_20	18 34 21.5				
	comp=Z,2μm,20.0s									
Z35A	**Perchaven, San**	**129.06**	**90**	IAMs_20	IAMs_20	18 37 41.6				
	comp=Z,2μm,20.0s									
NATX	**Nacogdoches**	**129.08**	**93**	IAMs_20	IAMs_20	18 42 29.7				
	comp=Z,2μm,18.0s									
PLID	**Pearl Lake**	**129.23**	**66**	IAMs_20	IAMs_20	18 41 02.7				
	comp=Z,3μm,19.0s									
M20K	**Styx River**	**129.30**	**31**	IAMs_20	IAMs_20	18 34 24.8				
	comp=Z,4μm,22.0s									
F10A	**Beach Ranch, E**	**129.36**	**64**	IAMs_20	IAMs_20	18 41 47.9				
	comp=Z,2μm,18.0s									
WMOK	**Wichita Mounta**	**129.43**	**88**	IAMs_20	IAMs_20	18 34 13.1				
	comp=Z,2μm,21.0s									
D08A	**Wollman Farm,**	**129.44**	**62**	IAMs_20	IAMs_20	18 34 22.8				
	comp=Z,3μm,22.0s									
RC01	**Rabbit Creek A**	**129.51**	**33**	IAMs_20	IAMs_20	18 34 58.7				
	comp=Z,4μm,22.0s									
BBB	**Bella Bella**	**129.56**	**52**	IAMs_20	IAMs_20	18 37 18.7				
	comp=Z,3μm,19.0s			

MAK MLR MLR
comp=Z,926nm,17.0s
RLMT Red Lodge 132.36 71 IAMs_20 IAMs_20 18 37 22.0
comp=Z,2µm,21.0s
R32A Long Quarter, 132.36 85 IAMs_20 IAMs_20 18 38 34.5
comp=Z,2µm,19.0s
TIXI Tiksi 132.66 351 PKPdf **PKPdf 17 48 36.0 -1.1**
TIXI Tiksi 132.66 351 *i* PKIKP **PKPdf 17 48 36.5 -0.6**
M27K Edge Creek, AK 132.75 36 IAMs_20 IAMs_20 18 45 46.5
comp=Z,2µm,19.0s
L26K Log Cabin Wild 132.85 35 IAMs_20 IAMs_20 18 37 13.1
comp=Z,3µm,22.0s
U38A Gravette 132.96 90 IAMs_20 IAMs_20 18 40 41.7
comp=Z,3µm,20.0s
RIDG Independent Ri 133.00 33 IAMs_20 IAMs_20 18 39 05.0
comp=Z,3µm,21.0s
AKTO Aktyubinsk 133.06 299 PKP **PKiKP 17 48 39.9 +0.2**
comp=Z,0.4nm,0.3s,baz=231,slow=2.5,SNR=4.1
CSS Mathiatis 133.09 266 IAMs_20 IAMs_20 18 42 12.9
comp=Z,2µm,18.0s
ILAR Eielson Array 133.28 31 PKPdf **PKPdf 17 48 36.9 -1.6**
ILAR Eielson Array 133.28 31 PKP **PKiKP 17 48 40.0 +0.3**
comp=Z,1.9nm,1.1s,baz=304,slow=5.0,SNR=11
L27K Beaver Creek, 133.31 35 IAMs_20 IAMs_20 18 38 48.3
comp=Z,3µm,22.0s
SCRK Sand Creek 133.42 33 IAMs_20 IAMs_20 18 39 41.1
comp=Z,3µm,20.0s
F21K Alatna River 133.69 26 IAMs_20 IAMs_20 18 36 51.8
comp=Z,2µm,22.0s
ARPR Arapgir-MALATY 133.85 274 IAMs_20 IAMs_20 18 39 18.1
comp=Z,3µm,20.0s
KSU1 Kansas State U 133.93 86 IAMs_20 IAMs_20 18 42 15.0
comp=Z,2µm,19.0s
J26L Joseph Creek 133.95 33 IAMs_20 IAMs_20 18 39 15.0
comp=Z,3µm,22.0s
C19K Lookout Ridge 134.03 22 IAMs_20 IAMs_20 18 40 22.4
comp=Z,3µm,21.0s
RSSD Black Hills 134.10 75 IAMs_20 IAMs_20 18 38 18.4
comp=Z,3µm,20.0s
M30M Minto, Yukon 134.43 38 IAMs_20 IAMs_20 18 32 17.3
comp=Z,2µm,20.0s
S39A Bolivar 134.47 90 IAMs_20 IAMs_20 18 41 44.6
comp=Z,3µm,20.0s
E21K Killik River 134.59 25 IAMs_20 IAMs_20 18 37 05.6
comp=Z,3µm,22.0s
I26K Coal Creek Min 134.69 33 IAMs_20 IAMs_20 18 39 33.5
comp=Z,3µm,21.0s
DAWY Dawson 134.78 36 IAMs_20 IAMs_20 18 40 13.3
comp=Z,3µm,20.0s
EGAK Eagle 134.82 34 IAMs_20 IAMs_20 18 40 33.3
comp=Z,2µm,20.0s
BGNE Belgrade 134.93 83 IAMs_20 IAMs_20 18 39 51.1
comp=Z,3µm,19.0s
LAO LASA Array 134.95 71 IAMs_20 IAMs_20 18 41 11.6
comp=Z,2µm,20.0s
KBZ Khabaz 135.11 282 *i* PKIKP **PKPdf 17 48 42.4 -0.1**
KBZ Khabaz 135.11 282 PKP **PKPdf 17 48 43.1 +0.5**
comp=Z,3.6nm,1.0s,baz=213,slow=1.8,SNR=4.2
K30B Basset 135.16 80 IAMs_20 IAMs_20 18 41 02.1
comp=Z,2µm,21.0s
K29M Barlow Dome 135.16 37 IAMs_20 IAMs_20 18 38 34.5
comp=Z,3µm,21.0s
TAM Tamanrasset 135.30 228 IAMs_20 IAMs_20 18 49 24.8
comp=Z,2µm,18.0s
J29N Klondike Camp 135.41 36 IAMs_20 IAMs_20 18 33 36.0
comp=Z,3µm,22.0s
R40A Maddies Statio 135.45 90 IAMs_20 IAMs_20 18 42 06.8
comp=Z,2µm,20.0s
I28M Miner Creek 135.67 34 IAMs_20 IAMs_20 18 40 49.6
comp=Z,3µm,20.0s
N35A Tabor 135.75 85 IAMs_20 IAMs_20 18 38 29.2
comp=Z,2µm,21.0s
J30M Hart River 136.06 36 IAMs_20 IAMs_20 18 44 52.0
comp=Z,2µm,20.0s
D24K Happy Valley 136.29 27 IAMs_20 IAMs_20 18 42 07.3
comp=Z,3µm,21.0s
EDM Edmonton 136.40 60 IAMs_20 IAMs_20 18 43 08.6
comp=Z,3µm,20.0s
I30M Mount Dempster 136.52 36 IAMs_20 IAMs_20 18 41 17.1
comp=Z,2µm,19.0s
P40A Paris 136.52 89 IAMs_20 IAMs_20 18 43 42.9
comp=Z,2µm,19.0s
SOC Sochi 136.56 280 *i* PKIKP **PKiKP 17 48 49.8 +2.8**
SOC *e* 17 51 34.5
BRTR Keskin Array B 136.66 271 PKP **PKPdf 17 48 44.5 -1.2**
comp=Z,1.5nm,0.9s,baz=353,slow=6.2,SNR=3.6
SUSD Miller 136.79 79 IAMs_20 IAMs_20 18 39 19.1
comp=Z,3µm,20.0s
D25K Kavik River 136.97 28 IAMs_20 IAMs_20 18 41 54.6
comp=Z,3µm,21.0s
NRIK Noril'sk 137.08 332 *i* PKIKP **PKPdf 17 48 45.5 +0.1**
NRIK Noril'sk 137.08 332 PKP **PKPdf 17 48 46.7 +1.3**
comp=Z,2.8nm,0.8s,baz=208,slow=2.9,SNR=5.1
ARU Arti 137.10 305 *i* PKIKP **PKPdf 17 48 46.6 +0.8**
DGMT Dagmar 137.19 71 IAMs_20 IAMs_20 18 40 54.7
comp=Z,3µm,20.0s
EPYK Eagle Plains 137.25 34 IAMs_20 IAMs_20 18 41 19.4
comp=Z,2µm,21.0s
E28A Huff 137.50 76 IAMs_20 IAMs_20 18 40 22.4
comp=Z,3µm,21.0s
SCIA State Center 137.74 86 IAMs_20 IAMs_20 18 47 56.9
comp=Z,3µm,18.0s
G30M tAoh Zrail Nji 137.82 34 IAMs_20 IAMs_20 18 37 54.5
comp=Z,3µm,22.0s
P43A Skaggs, Pawnee 137.86 91 IAMs_20 IAMs_20 18 43 53.5
comp=Z,2µm,20.0s
N41A Harden Midland 138.01 89 IAMs_20 IAMs_20 18 40 38.3
comp=Z,2µm,19.0s
G31M Satah River 138.33 35 PKPdf **PKPdf 17 48 45.2 -2.6**
G31M IAMs_20 IAMs_20 18 45 30.1
comp=Z,2µm,20.0s
WCI Wyandotte Cave 138.37 96 IAMs_20 IAMs_20 18 47 30.8
comp=Z,2µm,19.0s
E29M Blow River 138.37 32 IAMs_20 IAMs_20 18 39 23.8
comp=Z,3µm,22.0s
K38A Parkersburg 138.51 86 IAMs_20 IAMs_20 18 42 23.2
comp=Z,2µm,19.0s
ANN Anapa 138.57 279 *i* PKIKP **PKPdf 17 48 49.0 +0.1**
ANN pmax pmax
comp=Z,65nm,0.9s
ANN MLR MLR
comp=Z,941nm,13.0s
F31M Tsiigehtchic 138.84 35 IAMs_20 IAMs_20 18 44 46.4
comp=Z,2µm,22.0s
MDND Maddock 138.93 75 IAMs_20 IAMs_20 18 42 13.1
comp=Z,3µm,20.0s
F33A 5 Mile Ranch, 139.10 80 IAMs_20 IAMs_20 18 43 16.3
comp=Z,2µm,20.0s
I37A Lemond, Waseca 139.20 84 IAMs_20 IAMs_20 18 43 11.4
comp=Z,2µm,22.0s
INK Inuvik 139.49 34 IAMs_20 IAMs_20 18 43 35.5
comp=Z,2µm,21.0s
L42A Oliver, Polo 139.57 89 IAMs_20 IAMs_20 18 41 55.6
comp=Z,2µm,21.0s
D32A Dogwood Acres, 139.67 78 IAMs_20 IAMs_20 18 43 16.2
comp=Z,3µm,20.0s
P49A Miami Univ. Ec 140.16 96 IAMs_20 IAMs_20 18 48 36.1
comp=Z,2µm,18.0s
SIM Simferopol' 140.31 277 *i* PKIKP **PKiKP 17 48 59.0 +4.4**
SIM *e* 17 51 59.0
SIM pmax pmax
comp=Z,100nm,10.0s
SIM pmax pmax
comp=Z,70nm,17.0s
SIM pmax pmax
comp=E,600nm,19.0s
HQIL Hanson Quary C 140.32 91 IAMs_20 IAMs_20 18 55 18.6
comp=Z,2µm,18.0s
SPMN Marine on St. 140.37 83 IAMs_20 IAMs_20 18 41 36.3
comp=Z,2µm,22.0s
F36A Milaca 140.47 82 IAMs_20 IAMs_20 18 43 49.8
comp=Z,3µm,20.0s
I40A Norwalk 140.49 86 IAMs_20 IAMs_20 18 48 25.7
comp=Z,2µm,18.0s
O48B Farmland 140.49 95 IAMs_20 IAMs_20 18 45 42.9
comp=Z,2µm,20.0s
K43A Burlington 140.75 89 IAMs_20 IAMs_20 18 42 53.0
comp=Z,2µm,20.0s
VRH Novokhopyorsk 140.97 289 *e*PKIKP PKiKP 17 49 09.5 +14
VRH pmax pmax
comp=Z,2.0nm,0.3s
AGMN Agassiz Nation 141.04 77 IAMs_20 IAMs_20 18 46 03.3
comp=Z,2µm,20.0s
G40A Rib Lake 141.69 85 IAMs_20 IAMs_20 18 50 05.3
comp=Z,3µm,18.0s
YKA Yellowknife Ar 141.94 49 PKPdf **PKPdf 17 48 51.1 -3.4**
YKA Yellowknife Ar 141.94 49 PKIKP **PKPdf 17 48 51.1 -3.4**
YKA Yellowknife Ar 141.94 49 PKhKP PKPpre 17 48 50.1
comp=Z,0.9nm,0.7s,baz=227,slow=3.2,SNR=8.1
YKAW1 Yellowknife Wh 141.98 49 IAMs_20 IAMs_20 18 43 19.0
comp=Z,5µm,20.0s
YKAW3 Yellowknife Wh 141.98 49 IAMs_20 IAMs_20 18 43 39.0
comp=Z,5µm,20.0s
B35A Bob, Littlefor 142.12 79 IAMs_20 IAMs_20 18 45 10.0
comp=Z,3µm,20.0s
KIRV Kirov 142.26 303 *i* PKIKP **PKPdf 17 48 54.6 -0.5**
ULM Lac du Bonnet 142.36 75 PKhKP PKPpre 17 48 52.9
comp=Z,1.5nm,0.6s,baz=267,slow=5.3,SNR=3.6
FFC Flin Flon 142.41 65 PKPdf **PKPdf 17 48 52.8 -2.8**
FFC Flin Flon 142.41 65 PKIKP **PKPdf 17 48 52.8 -2.8**
FFC MLR MLR
comp=Z,3µm,20.0s
VORR Voronezh 142.46 288 *e*PKIKP **PKiKP 17 49 05.8 +7.0**
VORR pmax pmax
comp=Z,33nm,0.3s
I45A Fountain 142.77 90 IAMs_20 IAMs_20 18 49 14.3
comp=Z,2µm,19.0s
COWI Conover 142.81 85 **PKPdf 17 48 52.5 -4.1**
COWI IAMs_20 IAMs_20 18 51 19.7
comp=Z,2µm,18.0s
C36M Paulatuk 142.82 36 **PKPdf 17 48 52.8 -3.0**
EYMN Ely 142.93 81 PKPdf **PKPdf 17 48 53.1 -3.7**
F42A Maple Grove Fa 143.06 86 IAMs_20 IAMs_20 18 50 55.7
comp=Z,2µm,18.0s
P57A Homestead Farm 143.40 102 PKPdf PKPbc 17 48 55.5 +0.5
CFR Carcaliu 143.43 272 ⇑P **PKPdf 17 48 59.0 +1.4**
CFR Carcaliu 143.43 272 ⇑PKIKP **PKPdf 17 48 59.0 +1.4**
D41A Chassel 143.76 84 PKPab 17 48 54.5 -0.6
G45A Suttons Bay 143.78 89 IAMs_20 IAMs_20 18 43 07.0
comp=Z,3µm,20.0s
A36M Sachs Harbour 143.98 32 PKPdf PKPab 17 48 55.9 +0.6
A36M IAMs_20 IAMs_20 18 46 18.0
comp=Z,2µm,20.0s
E43A Lone Tree Farm 144.06 86 IAMs_20 IAMs_20 18 50 53.1
comp=Z,2µm,18.0s
GLMI Grayling 144.14 90 IAMs_20 IAMs_20 18 52 46.7
comp=Z,2µm,20.0s
CEL Celeste 144.20 252 **PKPab 17 48 56.7 -0.4**
CEL IAMs_20 IAMs_20 19 03 44.2
comp=Z,2µm,18.0s
MILM Milestii Mici 144.32 275 ⇑P **PKPab 17 48 57.1 -0.1**
MILM Milestii Mici 144.32 275 ⇑PKIKP **PKPab 17 48 57.1 -0.1**
SSPA Standing Stone 144.35 101 **PKPab 17 48 57.9 +0.3**
SSPA Standing Stone 144.35 101 IAMs_20 IAMs_20 19 06 16.6
comp=Z,2µm,20.0s
GHRR 144.41 272 ⇑P **PKPdf 17 49 00.7 +1.3**
VLAD Vladila 144.43 267 ⇑P **PKiKP 17 49 02.6 -0.5**
NEHR Nehoiu 144.52 271 ⇑P **PKPdf 17 49 01.9 +2.3**
SPBR Spulber 144.52 271 ⇓P **PKPdf 17 49 00.3 +0.7**
TIP Timpagrande 144.52 254 ⇑P **PKPdf 17 49 00.7 +0.8**
M55A Ridgway 144.56 100 PKPdf **PKPab 17 48 57.4 -1.0**
VRI Vrincioaia 144.61 272 ⇓P **PKPdf 17 49 00.2 +0.4**
VRI Vrincioaia 144.61 272 ⇓PKIKP **PKPdf 17 49 00.2 +0.4**
PLOR Plopina 144.64 271 ⇑P **PKPdf 17 49 00.4 +0.6**
MLR Muntele Rosu 144.74 270 ⇑P **PKPdf 17 49 00.8 +0.7**
MLR Muntele Rosu 144.74 270 PKPdf **PKPab 17 48 58.1 -1.0**
MLR Muntele Rosu 144.74 270 ⇑PKIKP **PKPdf 17 49 00.8 +0.7**
MLR Muntele Rosu 144.74 270 PKP **PKPab 17 48 59.4 +0.4**
comp=Z,9.5nm,0.8s,baz=61,slow=4.2,SNR=8.4
COVR Voineasa-Covas 144.86 271 ⇑P PKPbc 17 49 00.5 +1.1
TURR Turia 145.10 271 ⇓P **PKPdf 17 49 01.3 +0.7**
TESR Tescani 145.10 272 ⇓P **PKPdf 17 49 02.1 +1.6**
KEST Kesra 145.14 243 IAMs_20 IAMs_20 18 50 00.6
comp=Z,2µm,22.0s
KEST Kesra 145.14 243 PKPbc **PKPdf 17 49 02.9 +1.8**
comp=Z,39nm,1.1s,baz=281,slow=1.9,SNR=14
VOIR 145.14 270 ⇑P **PKPdf 17 49 03.3 +2.5**
VOIR 145.14 270 ⇑PKIKP **PKPdf 17 49 03.3 +2.5**
OZUR 145.24 271 ⇓P **PKPdf 17 49 01.8 +0.9**
BOSR Bodos 145.29 271 ⇑P **PKPab 17 49 02.3 +1.4**
ARR Arges 145.30 269 ⇑P **PKPab 17 49 03.5 +2.5**
DOPR Dopca 145.35 270 ⇑P **PKPab 17 49 02.8 +1.6**
SORM Soroca 145.38 276 ⇑P **PKPab 17 49 02.2 +1.1**
SORM Soroca 145.38 276 ⇑PKIKP **PKPab 17 49 02.2 +1.1**
BOVS Bovan 145.50 264 ⇑P **PKiKP 17 49 04.5 -0.8**
L56A Greenwood 145.65 100 PKPdf **PKPdf 17 49 01.6 -0.2**
MATE Matera 145.70 256 ⇑P **PKPab 17 49 04.3 +1.9**
MOS Moscow 145.73 293 *i* PKP2 **PKPdf 17 49 01.6 +0.3**
MOS pmax pmax
comp=Z,150nm,1.9s
LOT Lotru 145.79 268 ⇑P **PKPab 17 49 04.1 +1.3**
OBN Obninsk 145.85 291 ⇑P **PKPab 17 49 04.1 +1.5**
OBN Obninsk 145.85 291 IAMs_20 IAMs_20 18 56 32.0
comp=Z,2µm,19.0s
OBN Obninsk 145.85 291 *d* iPKP2 **PKPdf 17 49 02.2 +0.7**
OBN pmax pmax
comp=Z,166nm,1.2s
OBN MLR MLR
comp=Z,1µm,18.0s
OBN Obninsk 145.85 291 PKPbc **PKPab 17 49 03.8 +1.2**
comp=Z,30nm,0.7s,baz=18,slow=4.2,SNR=12
HERR Herculane 146.05 266 ⇑P **PKPbc 17 49 03.6 +0.5**
GZR Gura Zlata 146.24 267 ⇑P **PKPab 17 49 05.3 +0.8**
GZR Gura Zlata 146.24 267 ⇑PKIKP **PKPab 17 49 05.3 +0.8**
MDVR Moldovita 146.33 266 ⇑P **PKPab 17 49 05.8 +0.9**
BINY Binghamton 146.47 101 IAMs_20 IAMs_20 18 59 35.5
comp=Z,2µm,20.0s
BURAR Bucovina Array 146.57 272 ⇑P **PKPbc 17 49 04.9 +0.1**
BURAR Bucovina Array 146.57 272 ⇑PKP2 **PKPbc 17 49 04.9 +0.1**
AKASG Malin Array Be 146.64 280 PKPbc **PKPbc 17 49 05.5 +0.9**
comp=Z,9.9nm,0.8s,baz=103,slow=2.6,SNR=17
AKBB Malin Array Si 146.64 280 **PKPdf 17 49 03.1 +0.1**
AKBB Malin Array Si 146.64 280 *i* PKIKP **PKPdf 17 49 02.8 -0.2**
KIEV Kiev 146.64 280 ⇓P **PKPbc 17 49 05.7 +1.0**
KIEV Kiev 146.64 280 IAMs_20 IAMs_20 18 49 53.0
comp=Z,2µm,22.0s
KIEV Kiev 146.64 280 ⇓PKP2 **PKPbc 17 49 05.7 +1.0**
ARCR ARCALIA 146.64 271 ⇑P **PKPbc 17 49 06.1 +1.3**
SURR Surduc 146.82 267 ⇑P **PKPbc 17 49 06.7 +1.4**
MARR Marisel-Cluj 146.97 269 ⇑P **PKPbc 17 49 06.8 +0.9**
BZS Buzias 146.97 267 ⇑P **PKPbc 17 49 06.6 +0.8**
BZS Buzias 146.97 267 ⇑PKP2 **PKPbc 17 49 06.6 +0.8**
TIO Tiouine 147.09 216 PKP **PKPbc 17 49 07.4 +0.6**
SIRR Siria 147.41 268 ⇑P **PKPbc 17 49 07.1 +0.1**
FRGS Fruska Gora 147.54 264 ⇑P **PKPbc 17 49 08.1 +0.7**
KLMR Klimovskoe 147.69 301 *e*PKP2 **PKPdf 17 49 05.8 +1.4**
KLMR pmax pmax
comp=Z,120nm,1.3s
KLMR MLR MLR
comp=Z,2µm,20.0s
UCCT U. Connecticut 147.97 106 **PKPdf 17 49 04.4 -1.1**
J59A Piesco 148.14 101 **PKPdf 17 49 07.7 +1.9**
L61B Northampton 148.25 105 **PKPdf 17 49 04.5 -1.5**
L61B IAMs_20 IAMs_20 18 59 35.9
comp=Z,2µm,19.0s
QUA2 Belchertown 148.28 105 **PKPdf 17 49 08.3 +2.3**
QUA2 IAMs_20 IAMs_20 18 55 41.9
comp=Z,2µm,20.0s
FCC Fort Churchill 148.29 64 PKPdf **PKPdf 17 49 02.9 -2.6**
FCC PKPbc **PKPdf 17 49 07.6 +2.2**
FCC Fort Churchill 148.29 64 PKP2 **PKPdf 17 49 07.6 +2.2**
ACCN Adirondack Com 148.48 102 **PKPdf 17 49 08.6 +2.3**
M65A Busby, Falmout 148.54 108 IAMs_20 IAMs_20 19 05 36.9
comp=Z,2µm,20.0s
LVV L'vov 148.63 275 *e*PKP2 **PKiKP 17 49 11.8 +0.2**
K62A Royalston 148.63 105 **PKPdf 17 49 08.2 +1.6**
IFR Ifrane 148.83 221 PKP **PKiKP 17 49 14.5 +1.7**
HRV Adam Dziewonsk 148.84 106 IAMs_20 IAMs_20 19 06 39.6
comp=Z,2µm,19.0s
WES Weston 148.86 106 IAMs_20 IAMs_20 19 00 34.1
comp=Z,2µm,20.0s
MORH Mrgy, Hungar 148.87 265 ⇑P **PKiKP 17 49 12.6 +0.4**
WBO Williamsburg 148.89 99 **PKPab 17 49 07.3 +1.0**
KOLS Kolonicke sedl 148.92 272 *e*PKP2 **PKPab 17 49 15.2 +0.2**
KOLS Kolonicke sedl 148.92 272 *e*PKP **PKPab 17 49 15.2 +0.2**
LONY Lake Ozonia 148.95 100 **PKPdf 17 49 07.9 +0.8**
LONY IAMs_20 IAMs_20 19 05 32.9
comp=Z,2µm,22.0s
KWP Kalwaria Pacla 149.16 273 *e*PKPbc **PKPbc 17 49 11.1 -0.4**
KWP Kalwaria Pacla 149.16 273 **PKPdf 17 49 08.1 +0.9**
KWP Kalwaria Pacla 149.16 273 PKIKP **PKPdf 17 49 08.1 +0.9**
KWP MLR MLR
comp=Z,1µm,21.0s
CESX Cesi 149.18 254 IAMs_20 IAMs_20 19 02 36.6
comp=Z,2µm,19.0s
CRVS Cervenica-Dubn 149.30 271 *e*PKP2 **PKiKP 17 49 13.4 +0.4**
CRVS Cervenica-Dubn 149.30 271 *e*PKP **PKiKP 17 49 13.4 +0.4**
HNH Hanover 149.39 103 IAMs_20 IAMs_20 19 04 38.9
comp=Z,2µm,20.0s
PSZ Piszkesteto 149.42 268 ⇓P **PKPbc 17 49 13.4 +1.2**
PSZ Piszkesteto 149.42 268 **PKPbc 17 49 11.8 -0.5**
PSZ Piszkesteto 149.42 268 ⇓PKP2 **PKPbc 17 49 13.4 +1.2**
KECS Kecovo 149.51 270 *e*PKP2 **PKPbc 17 49 12.5 +0.1**
KECS Kecovo 149.51 270 *e*PKP **PKPbc 17 49 12.5 +0.1**
KECS *e* 17 49 18.0
FRNY Flat Rock 149.59 101 **PKPbc 17 49 11.8 -0.9**
MNK Minsk 149.59 285 *i* PKIKP **PKPdf 17 49 06.3 -1.4**
MNK *i* 17 52 44.4
MNK *i* 17 56 11.5
MNK *i* PPP PPP 17 56 12.1
MNK *i* SS SS 18 12 00.2 -0.4
MNK pmax pmax
comp=N,17nm,1.0s
MNK pmax pmax
comp=E,8.0nm,0.9s
MNK pmax pmax
comp=Z,31nm,0.9s
VT1 Waterbury 149.63 102 IAMs_20 IAMs_20 18 54 11.0
comp=Z,2µm,21.0s
WMELI Melilla 149.72 226 PKP **PKiKP 17 49 14.8 +0.5**
LBNH Lisbon 149.96 103 **PKPbc 17 49 12.0 -1.6**
LBNH IAMs_20 IAMs_20 19 06 03.0
comp=Z,2µm,20.0s
LBNH Lisbon 149.96 103 PKHKP PKPpre 17 49 12.0
LBNH MLR MLR
comp=Z,2µm,20.0s
NIE Niedzica 150.22 271 *e*PKPbc **PKPbc 17 49 15.2 +1.2**
NIE *e*SS SS 18 12 03.7 -4.0
VYHS Vyhne 150.33 268 *e*PKIKP **PKiKP 17 49 15.9 +0.7**
VYHS *e* 17 49 24.0
VYHS Vyhne 150.33 268 *e*PKP **PKiKP 17 49 15.9 +0.7**
VYHS *e* 17 49 24.0
SOKA Soboth 150.97 262 *e*PKiKP **PKiKP 17 49 18.2 +1.6**
comp=Z,20nm,1.3s
OJC Ojcow 150.98 272 *e*PKPbc **PKiKP 17 49 17.2 +0.8**
CART Cartagena 151.01 231 PKP **PKiKP 17 49 17.6 +0.7**
RONA Rosalia, Austr 151.06 265 *e*PKiKP **PKiKP 17 49 17.4 +0.7**
comp=Z,17nm,1.5s
ARSA Arzberg 151.13 263 *e*PKiKP **PKiKP 17 49 18.5 +1.6**
comp=Z,19nm,1.2s
JAVC Velka Javorina 151.15 268 *e*PKiKP **PKiKP 17 49 18.7 +1.8**
WVL Waterville 151.29 105 IAMs_20 IAMs_20 19 05 53.3
comp=Z,2µm,19.0s
CONA Conrad Observa 151.43 265 *e*PKiKP **PKiKP 17 49 18.2 +0.7**
comp=Z,6.7nm,1.4s
OKC Ostrava-Krasne 151.56 270 AMS AMS 19 20 50.0
comp=Z,1µm,19.1s
SUW Suwalki 151.59 281 *e*PKPbc **PKiKP 17 49 18.2 +0.7**
SUW *e*PKPab **pPKPab 17 49 29.1 +0.9**
SUW Suwalki 151.59 281 IAMs_20 IAMs_20 19 07 59.2
comp=Z,2µm,21.0s
MYKA Terra Mystica 151.62 260 *e*PKiKP **PKiKP 17 49 18.8 +0.9**
comp=Z,13nm,1.2s
MORC Moravsky Berou 151.82 269 ⇓P **PKiKP 17 49 19.1 +0.9**
MORC Moravsky Berou 151.82 269 *e*PKIKP **PKPbc 17 49 18.3 +0.5**
MORC Moravsky Berou 151.82 269 ⇓PKIKP **PKiKP 17 49 19.1 +0.9**
KRUC Moravsky 151.92 267 *e*PKIKP **PKiKP 17 49 19.1 +0.7**
VRAC Vranov 151.98 267 ⇓P **PKiKP 17 49 21.7 +3.1**
VRAC Vranov 151.98 267 *e*PKIKP **PKPbc 17 49 19.0 +0.8**
VRAC Vranov 151.98 267 PKPbc **PKiKP 17 49 19.5 +0.9**
comp=Z,3.6nm,0.8s,baz=193,slow=3.3,SNR=5.7
PKME Peaks-Kenny Pk 151.99 105 IAMs_20 IAMs_20 19 10 03.7
comp=Z,2µm,19.0s
PABE Paberze 152.03 284 IAMs_20 IAMs_20 19 06 05.4
comp=Z,2µm,22.0s
KBA Koelnbreinsper 152.08 261 *e*PKP **PKPbc 17 49 18.2 -0.5**
comp=Z,4.4nm,0.5s
ABTA Abfaltersbach 152.25 259 *e*PKiKP **PKiKP 17 49 20.4 +1.1**
comp=Z,9.6nm,1.1s
BIOA Bad Ischl, Aus 152.36 262 *e*pPKP **PKiKP 17 49 21.9 +2.5**
comp=Z,6.4nm,1.1s
KRLC Kraliky 152.38 269 ⇑*e*PKP **PKiKP 17 49 20.3 +0.9**
KRLC AMS AMS 19 10 30.0
comp=Z,2µm,22.5s
KRLC Kraliky 152.38 269 *e*PKIKP **PKiKP 17 49 20.3 +0.9**
KRLC MLR MLR
comp=Z,2µm,22.5s
EMMW East Machias 152.45 107 IAMs_20 IAMs_20 19 06 48.3
comp=Z,2µm,19.0s
TREC Trest 152.52 266 AMS AMS 19 10 30.0
comp=Z,2µm,21.2s
LESA Schwarzleotal 152.65 261 *e*pPKP pPKPdf 17 49 16.8 +1.5
comp=Z,12nm,0.9s
DPC Dobruska-Polom 152.79 269 ⇑*e*PKP **PKiKP 17 49 21.6 +1.4**
DPC AMS AMS 19 11 30.0
comp=Z,2µm,20.1s
DPC Dobruska-Polom 152.79 269 *e*PKIKP **PKiKP 17 49 21.6 +1.4**
DPC MLR MLR
comp=Z,2µm,20.1s
CKRC Cesky Krumlov 152.79 265 ⇑*e*PKP **PKiKP 17 49 21.4 +1.2**
CKRC *ex* x 18 12 36.6
CKRC AMS AMS 19 10 50.0
comp=Z,2µm,18.0s
CKRC Cesky Krumlov 152.79 265 *e*PKIKP **PKiKP 17 49 21.4 +1.2**
CKRC *e* 18 12 36.6
CKRC MLR MLR
comp=Z,2µm,18.0s
OSTC Ostas 152.97 269 *e*PKP **PKPab 17 49 30.7 -1.1**
OSTC AMS AMS 19 08 50.0
comp=Z,2µm,18.4s
RES Resolute Bay 153.03 32 **PKPbc 17 49 17.4 -2.3**
RES Resolute Bay 153.03 32 PKIKP **PKPbc 17 49 17.5 -2.3**
WTTA Wattenberg 153.04 259 *e*PKP **PKPbc 17 49 20.5 -0.4**
comp=Z,17nm,1.3s
GEC2 GERESS Array S 153.11 264 PKPdf **PKPdf 17 49 12.5 -0.9**
GERES GERESS Array B 153.11 264 **PKPdf 17 49 11.3 -2.1**
GERES GERESS Array B 153.11 264 PKIKP **PKPdf 17 49 11.3 -2.1**
GERES GERESS Array B 153.11 264 PKPbc **PKiKP 17 49 21.8 +0.8**
comp=Z,1.6nm,0.6s,baz=354,slow=4.2,SNR=9.6
WATA Walderalm 153.12 259 *e*PKP **PKPbc 17 49 20.3 -0.7**
comp=Z,20nm,1.5s
SQTA Sankt Quirin 153.22 259 *e*PKP **PKPbc 17 49 21.2 0.0**
comp=Z,11nm,1.0s
GOPC GO Pecny, Ondr 153.27 267 AMS AMS 19 19 10.0
comp=Z,2µm,21.1s
FETA Feichten 153.32 258 *e*PKP **PKPbc 17 49 20.5 -1.0**
comp=Z,7.0nm,1.1s
KHC Kasperske Hory 153.36 264 *e*PKP **PKPdf 17 49 18.0 +4.3**
KHC *e*pPKP **sPKPbc 17 49 25.9 +1.4**
KHC AMS AMS 19 10 40.0
comp=Z,2µm,22.7s
KHC Kasperske Hory 153.36 264 *e*PKIKP **PKPdf 17 49 18.0 +4.3**
KHC *e* 17 49 25.9
KHC MLR MLR
comp=Z,2µm,22.7s
MOTA Moosalm 153.36 259 *e*pPKP pPKPdf 17 49 19.2 +2.9
comp=Z,16nm,1.2s
PRU Pruhonice 153.44 267 *ex* x 18 12 41.8
PRU AMS AMS 19 18 10.0
comp=Z,2µm,19.4s
PRA Prague 153.55 267 AMS AMS 19 14 10.0
comp=Z,2µm,20.9s
DAVOX Davos/Dischmat 153.56 257 PKPbc **PKiKP 17 49 23.3 +1.2**
comp=Z,1.4nm,0.8s,baz=221,slow=17,SNR=2.0
PQI Presque Isle 153.62 104 IAMs_20 IAMs_20 18 59 44.8
comp=Z,2µm,21.0s
FINES FINESS Array B 153.79 297 PKPbc **PKiKP 17 49 22.9 +1.1**
comp=Z,6.7nm,0.9s,baz=186,slow=1.9,SNR=12
BNI Bardonecchia 153.81 250 IAMs_20 IAMs_20 19 09 20.8
comp=Z,2µm,20.0s
ESDC Sonseca Array 153.96 229 PKPbc **PKiKP 17 49 24.7 +1.7**
comp=Z,1.5nm,1.1s,baz=284,slow=24,SNR=9.9
RICC Richard 154.01 267 AMS AMS 19 13 50.0
comp=Z,2µm,18.4s
BRG Berggiesshubel 154.30 268 *e*PKP **PKPab 17 49 33.0 -4.4**
BRG Amp 17 49 34.3
comp=Z,4.6nm,1.0s
BRG Berggiesshubel 154.30 268 P **PKPab 17 49 43.3 +5.9**
BRG Amp 17 49 51.2
comp=Z,12nm,1.2s
GRA1 Grafenberg Arr 154.89 263 IAMs_20 IAMs_20 19 13 09.2
comp=Z,2µm,20.0s
GRF Grafenberg Arr 154.89 263 *e*PKPab **PKPab 17 49 39.6 -0.4**
baz=130,slow=5.2
GRF *e*L L 19 13 09.4
comp=Z,2µm,20.3s
GRFO Grafenberg 154.89 263 IAMs_20 IAMs_20 19 13 09.2
comp=Z,2µm,19.0s
CLL Collm 155.03 268 IAMs_20 IAMs_20 19 12 38.5
comp=Z,2µm,18.0s
CLL Collm 155.03 268 *e*PKIKP **PKPdf 17 49 16.0 +0.1**
CLL *e* 17 49 39.0
CLL MLR MLR
comp=Z,2µm,19.4s
MOX Moxa 155.31 265 *e*L L 19 12 38.2
comp=Z,2µm,21.7s

ARCES	ARCESS Array B	155.99	315	PKPab	PKPab	17 49 43.5	-0.6		comp=Z,6.9nm,1.0s,baz=110,slow=1.4,SNR=10	
SPITS	Spitsbergen Ar	157.09	338	PKPab	PKPab	17 49 50.1	+1.4		comp=Z,35nm,1.1s,baz=185,slow=27,SNR=3.6	
KBS	Kingsbay	157.52	341	IAMs_20	IAMs_20	18 59 37.8			comp=Z,2μm,20.0s	
HFS	Hagfors	158.99	288	PKPab	PKPab	17 49 57.4	0.0		comp=Z,5.6nm,0.9s,baz=103,slow=13,SNR=4.2	
SCHQ	Schefferville	159.31	89	PKPab	PKPab	17 50 00.6	+1.7		comp=Z,1.2nm,0.6s,baz=204,slow=6.5,SNR=3.7	
NOA	NORSAR Array B	160.44	290	PKPab	PKPab	17 50 04.0	+0.4		comp=Z,2.3nm,1.0s,baz=101,slow=4.5,SNR=3.5	

NEIC ***27*** *17:48:27.7±2.3, 17.69S±0.09×178.6W±0.1, h494km±5km, mb4.4/54, Error ellipse: s-maj=16.7km s-min=13.3km az=93.0*

IDC ***27*** *17:48:33.6±4.4, 17.64S×178.83W, h560km±51km, mb3.4/11, mbtmp4.3/12, Error ellipse: s-maj=25.7km s-min=19.7km az=128.0*

ISC 27 17:48:28.0±0.5, **17.67S**±0.09×**178.60W**±0.09, **h500**km, **n107,σ1s07**/105, **mb4.3**/40, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.55	61	P	P	17 50 20.3	+0.3
FUNA	Funafuti	9.34	346	P	P	17 50 37.3	-1.2
MARNC	Mare, Loyalty	13.16	251	P	P	17 51 20.8	+1.8
LIFNC	LIFOU	13.73	255	P	P	17 51 26.2	+1.2
LIFNC	LIFOU	13.73	255	P	P	17 51 27.2	+2.3
PINNC	Pines Island,	14.00	247	P	P	17 51 27.6	-0.2
PINNC	Pines Island,	14.00	247	P	P	17 51 31.4	+3.7
YATNC	Mamie plateau,	14.33	250	P	P	17 51 34.6	+3.3
OUENC	Ouen Island, N	14.47	249	P	P	17 51 33.2	+0.5
DZM	Mont Dzumac	14.74	250	P	P	17 51 36.0	+0.4
DZM	Mont Dzumac	14.74	250	P	P	17 51 38.2	+2.6
DZM	Mont Dzumac	14.74	250	P	P	17 51 37.4	+1.8
	12nm,0.6s,baz=317,slow=23,SNR=20						
KOUNC	Koumac, New Ca	16.43	257	P	P	17 51 53.0	-0.2
KOUNC	Koumac, New Ca	16.43	257	P	P	17 51 55.4	+2.2
RTZ	Ruatahuna	21.23	190	P	P	17 52 38.2	+0.4
RTZ				IAmb	IAmb	17 53 04.2	
	comp=Z,23nm,1.4s						
BKZ	Black Stump Fm	21.84	190	P	P	17 52 26.6	-17
	comp=Z,26nm,2.4s						
BFZ	Birch Farm	23.36	190	P	P	17 52 57.0	+0.2
MRZ	Mangatainoka R	23.46	191	P	P	17 52 57.0	-0.7
TCW	Tory Channel	24.25	193	P	P	17 53 04.2	-0.5
MRNZ	Matariki Terra	24.79	196	P	P	17 53 09.2	-0.4
THZ	Tophouse	25.10	195	P	P	17 53 12.7	+0.5
FOZ	Fox Glacier	27.59	198	P	P	17 53 33.7	-0.5
WKZ	Wanaka	29.00	198	P	P	17 53 45.7	-0.9
ARMA	Armidale	29.91	239	P	P	17 53 55.9	+1.2
ARMA				IAmb	IAmb	17 54 34.0	
	comp=Z,32nm,1.4s						
ARMA	Armidale	29.91	239	P	P	17 53 56.1	+1.3
WHZ	Wether Hill Ro	30.29	199	P	P	17 53 58.2	+0.5
WHZ				IAmb	IAmb	17 54 07.1	
	comp=Z,39nm,1.4s						
MGCD	Mangrove Creek	31.29	235	P	P	17 54 08.1	+1.6
CTA	Charters Tower	33.31	260	P	P	17 54 23.9	-0.1
	comp=Z,4.8nm,0.6s,baz=82,slow=10,SNR=7.3						
	comp=Z,4.8nm,0.6s						
CTAO	Charters Tower	33.31	260	P	P	17 54 24.0	+0.1
CTAO				IAmb	IAmb	17 54 25.1	
	comp=Z,12nm,1.2s						
CTAO	Charters Tower	33.31	260	P	P	17 54 24.1	+0.1
CNB	Canberra Magne	33.43	232	P	P	17 54 25.9	+1.1
CAN	Canberra	33.71	232	P	P	17 54 27.6	+0.4
CAN				IAmb	IAmb	17 54 29.1	
	comp=Z,20nm,1.2s						
PMG	Port Moresby	34.24	279	P	P	17 54 32.0	+0.2
PMG				IAmb	IAmb	17 54 34.4	
	comp=Z,10nm,0.8s						
COEN	Coen	36.92	270	P	P	17 54 54.6	+0.4
COEN				IAmb	IAmb	17 54 55.2	
	comp=Z,6.6nm,0.6s						
TOO	Toolangi	37.18	230	P	P	17 54 56.4	+0.3
TOO				IAmb	IAmb	17 54 58.2	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	38.59	241	P	P	17 55 08.1	+0.5
STKA	Stephens Creek	38.59	241	P	P	17 55 08.3	+0.7
	comp=Z,6.9nm,0.5s,baz=91,slow=10.0,SNR=32						
	comp=Z,6.9nm,0.5s						
BBOO	Buckleboo	43.37	241	P	P	17 55 45.5	-0.2
WR0	Warramunga Arr	44.31	259	P	P	17 55 52.5	-0.8
WB0	Warramunga Arr	44.47	260	P	P	17 55 52.9	-1.5
WB0				IAmb	IAmb	17 55 54.2	
	comp=Z,4.6nm,0.8s						
WB2	Warramunga Arr	44.49	259	P	P	17 55 53.0	-1.6
WB2				IAmb	IAmb	17 55 54.4	
	comp=Z,6.6nm,0.7s						
WRA	Warramunga Arr	44.50	259	P	P	17 55 53.2	-1.5
WRA	Warramunga Arr	44.50	259	P	P	17 55 54.0	-0.7
	comp=Z,3.5nm,0.6s,baz=94,slow=7.0,SNR=33						
	comp=Z,3.5nm,0.6s						
AS31	Alice Springs	44.68	254	P	P	17 55 55.5	-0.6
AS31				IAmb	IAmb	17 55 56.3	
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	44.68	254	P	P	17 55 55.4	-0.7
ASAR	Alice Springs	44.68	254	P	P	17 55 55.7	-0.4
	comp=Z,36nm,0.6s,baz=89,slow=7.9,SNR=596						
FORT	Forrest	49.95	244	P	P	17 56 34.5	-1.1
KNRA	Kununurra	50.33	264	P	P	17 56 37.8	-0.8
KNRA				IAmb	IAmb	17 56 38.9	
	comp=Z,6.9nm,0.6s						
FITZ	Fitzroy Crossi	52.89	260	P	P	17 56 57.0	-0.1
SOEI	Soe	55.89	270	P	P	17 57 18.0	-0.6
SOEI				IAmb	IAmb	17 57 20.3	
	comp=Z,14nm,0.9s						
PSA00	Pilbara Seismi	57.80	255	P	P	17 57 29.4	-2.0
PSA00	Pilbara Seismi	57.80	255	P	P	17 57 29.8	-1.6
PSA00				IAmb	IAmb	17 57 31.0	
	comp=Z,7.2nm,0.7s						
MBWA	Marble Bar	57.96	256	P	P	17 57 31.3	-1.2
MBWA				IAmb	IAmb	17 57 33.6	
	comp=Z,18nm,1.2s						
MORW	Morawa	60.41	246	P	P	17 57 47.4	-1.5
MORW				IAmb	IAmb	17 57 51.0	
	comp=Z,49nm,1.5s						
TOLI2	Tolitoli	62.49	281	P	P	17 58 03.5	+0.8
GIRL	Giralia	62.79	253	P	P	17 58 04.6	+0.1
CASY	Casey	66.28	205	P	P	17 58 24.5	-1.3
MJAR	Matsushiro Arr	67.61	323	P	P	17 58 34.1	-0.4
	comp=Z,1.5nm,0.6s,baz=162,slow=7.4,SNR=5.3						
	comp=Z,1.5nm,0.6s						
JKA	Kamikawa-asahi	70.98	331	P	P	17 58 56.0	+1.5
QSPA	South Pole Qui	72.39	180	P	P	17 59 02.7	0.0
QSPA	South Pole Qui	72.39	180	P	P	17 59 02.8	+0.1
	comp=Z,1.7nm,0.9s,baz=272,slow=1.4,SNR=5.5						
	comp=Z,1.7nm,0.9s						
PEA0B	Petropavlovsk-	73.40	345	P	P	17 59 08.5	0.0
PETK	Petropavlovsk-	73.40	345	P	P	17 59 08.6	+0.2
PETK	Petropavlovsk-	73.40	345	P	P	17 59 08.5	0.0
	comp=Z,3.5nm,0.7s,baz=129,slow=8.7,SNR=8.7						
	comp=Z,3.5nm,0.7s						
KDAK	Kodiak Island	78.21	14	P	P	17 59 35.3	+0.3
WAKR	Walker	78.67	43	P	P	17 59 38.7	+0.5
YERR	Yerington	79.06	43	P	P	17 59 41.5	+1.2
NVAR	Mina Array Bea	79.38	44	P	P	17 59 43.4	+1.3
	comp=Z,1.2nm,0.6s,baz=225,slow=8.3,SNR=8.3						
	comp=Z,1.2nm,0.6s						
KVN	Kaiserville	79.84	44	P	P	17 59 45.6	+1.1
CNPM	China Poot	80.09	14	P	P	17 59 45.2	+0.2
CNPM				IAmb	IAmb	18 00 29.5	
	comp=Z,19nm,1.0s						
K05A	Summer Lake	80.13	39	P	P	17 59 46.7	+0.8
K05A				IAmb	IAmb	17 59 50.0	
	comp=Z,10.0nm,1.3s						
J05D	Fort Rock, OR	80.25	39	P	P	17 59 47.0	+0.6
J05D				IAmb	IAmb	17 59 48.5	
	comp=Z,7.5nm,0.8s						
L16K	Owhat River	80.56	9	P	P	17 59 48.1	+0.7
K17K	Iditarod	81.70	9	P	P	17 59 53.7	+0.4
K17K				IAmb	IAmb	17 59 57.4	
	comp=Z,11nm,1.2s						
TTA	Tatalina	82.27	10	P	P	17 59 56.3	0.0
TTA				IAmb	IAmb	18 00 04.1	
	comp=Z,7.3nm,1.4s						
GHO	Glory Hole Cre	82.62	14	P	P	17 59 57.8	-0.2
GHO				IAmb	IAmb	18 00 24.0	
	comp=Z,25nm,1.4s						
K20K	Telida	83.00	11	P	P	17 59 59.7	-0.2
K20K				IAmb	IAmb	18 00 29.3	
	comp=Z,7.3nm,1.4s						
SCM	Sheep Creek Mo	83.04	14	P	P	17 59 59.9	-0.2
CAST	Castle Rocks	83.43	12	P	P	18 00 00.5	-1.6
CAST				IAmb	IAmb	18 00 01.3	
	comp=Z,4.8nm,0.9s						
N25K	Chitina, Valde	83.52	16	P	P	18 00 02.3	-0.3
GLB	Gilahina Butte	83.58	16	P	P	18 00 02.7	-0.2
GLB				IAmb	IAmb	18 00 41.9	
	comp=Z,20nm,1.4s						
RND	Reindeer	84.08	13	P	P	18 00 05.1	-0.2
RND				IAmb	IAmb	18 00 05.6	
	comp=Z,5.2nm,0.8s						
Q32M	Nakina River	85.23	22	P	P	18 00 11.8	+0.5
Q32M				IAmb	IAmb	18 00 12.5	
	comp=Z,26nm,1.4s						
IMAR	Indian Mountai	85.47	10	P	P	18 00 11.3	-0.7
ILAR	Eielson Array	85.69	13	P	P	18 00 12.3	-0.7
	comp=Z,0.6nm,0.4s,baz=224,slow=5.2,SNR=16						
	comp=Z,0.6nm,0.4s						
J25K	Salcha River,	85.89	14	P	P	18 00 13.6	-0.5
TXAR	Lajitas Array	86.02	58	P	P	18 00 16.3	+0.7
TXAR	Lajitas Array	86.02	58	P	P	18 00 17.4	+1.8
	comp=Z,1.0nm,0.7s,baz=217,slow=5.8,SNR=12						
	comp=Z,1.0nm,0.7s						
J26L	Joseph Creek	86.22	14	P	P	18 00 15.1	-0.6
J26L				IAmb	IAmb	18 00 29.0	
	comp=Z,6.2nm,1.4s						
E19K	Redstone River	86.33	8	P	P	18 00 15.4	-0.6
D19K	Kuna River	87.19	7	P	P	18 00 19.7	-0.4
PDAR	Pinedale Array	87.30	44	P	P	18 00 22.0	+0.5
	comp=Z,0.8nm,0.5s,baz=223,slow=3.0,SNR=9.0						
	comp=Z,0.8nm,0.5s						
BMAR	Burnt Mountain	88.46	12	P	P	18 00 26.2	+0.1
YKA	Yellowknife Ar	94.19	25	P	P	18 00 51.6	-0.9
	comp=Z,0.3nm,0.7s,baz=246,slow=4.6,SNR=4.0						
	comp=Z,0.3nm,0.7s						
BVAR	Borovoye Array	116.55	321	PKP	PKPdf	18 06 12.2	-2.4
	comp=Z,0.3nm,0.3s,baz=59,slow=2.6,SNR=4.6						
BRTR	Keskin Array B	144.49	315	PKP	PKPbc	18 07 06.4	-1.0
	comp=Z,0.8nm,0.8s,baz=96,slow=3.9,SNR=4.6						
CLL	Collm	145.19	347	*i* PKPbc	PKPdf	18 07 08.2	+0.1
	comp=Z,7.0nm,0.7s						
MMAI	Mount Meron Ar	145.86	303	PKPbc	PKPdf	18 07 10.7	+0.8
	comp=Z,0.9nm,0.5s,baz=72,slow=5.2,SNR=1.7						
GERES	GERESS Array B	147.33	345	PKPbc	PKPbc	18 07 14.4	-0.8
	comp=Z,1.3nm,0.5s,baz=18,slow=5.9,SNR=6.0						
CONA	Conrad Observa	147.58	342	*i* PKP	PKPbc	18 07 15.3	-0.5
	comp=Z,2.1nm,0.5s						
MOA	Molln	148.10	344	*e*PKP	PKPbc	18 07 17.0	-0.1
	comp=Z,1.2nm,0.5s						
ARSA	Arzberg	148.29	342	*i* PKP	PKPdf	18 07 14.2	+0.7
	comp=Z,0.3nm,0.2s						
LESA	Schwarzleotal	148.91	345	*i* PKP	PKPbc	18 07 18.2	-1.0
	comp=Z,1.5nm,0.4s						
WATA	Walderalm	149.25	346	*i* PKP	PKPbc	18 07 18.8	-1.3
	comp=Z,0.9nm,0.3s						
WTTA	Wattenberg	149.30	346	*i* PKP	PKPbc	18 07 19.3	-1.0
	comp=Z,3.9nm,0.4s						
MYKA	Terra Mystica	149.39	343	*i* PKP	PKPdf	18 07 16.0	+0.6
	comp=Z,0.9nm,0.3s						
ABTA	Abfaltersbach	149.58	345	*i* PKP	PKPdf	18 07 15.8	+0.2
	comp=Z,1.0nm,0.4s						

IDC ***27*** *17:52:22.7±6.9, 15.19S×174.76W, h179km±62km, mb3.8/11, mbtmp4.2/12, Error ellipse: s-maj=22.6km s-min=18.4km az=104.0*

NEIC ***27*** *17:52:30.3±1.0, 15.21S±0.09×174.84W±0.1, h251km±9km, mb4.5/40, Error ellipse: s-maj=18.3km s-min=13.1km az=91.0*

ISC 27 17:52:30.2±0.4, **15.21S**±0.07×**174.84W**±0.07, **h250**km, **n72,σ0s80**/73, **mb4.4**/32, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.24	67	Pn	Pn	17 53 25.4	0.0
AFI				Sn	S	17 54 07.7	-1.4
NIUE	Niue	6.07	130	Pn	Pn	17 54 00.9	+1.7
NIUE				Sn	S	17 55 08.1	-2.4
DZM	Mont Dzumac	18.99	246	P	P	17 56 33.9	+0.3
DZM	Mont Dzumac	18.99	246	P	P	17 56 33.3	-0.4
	5.4nm,0.7s,baz=101,slow=18,SNR=3.4						
KOUNC	Koumac, New Ca	20.55	252	P	P	17 56 50.3	0.0
KOUNC				IAmb	IAmb	17 56 53.6	
	comp=Z,7.8nm,0.8s						
URZ	Urewera	24.04	196	P	P	17 57 20.8	-1.8
	comp=Z,6.4nm,0.4s,baz=65,slow=5.1,SNR=6.1						
	comp=Z,6.4nm,0.4s						
HIZ	Hauiti	24.93	199	P	P	17 57 31.6	+0.9
HNR	Honiara	25.28	280	P	P	17 57 32.6	-1.5
	comp=Z,266nm,0.7s,baz=143,slow=10,SNR=1.7						
LTZ	Lake Taylor	29.62	199	P	P	17 58 11.9	-0.5
WHZ	Wether Hill Ro	33.83	202	P	P	17 58 49.8	+0.8
ARMA	Armidale	34.26	238	P	P	17 58 53.0	0.0
ARMA				IAmb	IAmb	17 59 08.4	
	comp=Z,21nm,1.3s						
CTAO	Charters Tower	37.33	257	P	P	17 59 18.6	-0.5
CTAO				IAmb	IAmb	17 59 20.5	
	comp=Z,10.0nm,0.9s						
CAN	Canberra	38.05	232	P	P	17 59 24.5	-0.5
CAN				IAmb	IAmb	17 59 27.2	
	comp=Z,29nm,1.5s						
WAKE	Wake Island	38.81	331	P	P	17 59 31.3	0.0
COEN	Coen	40.60	266	P	P	17 59 46.9	+0.7
COEN				IAmb	IAmb	17 59 59.9	
	comp=Z,35nm,1.1s						
TOO	Toolangi	41.52	230	P	P	17 59 52.8	-0.6
STKA	Stephens Creek	42.93	239	P	P	18 00 04.4	-0.4
STKA	Stephens Creek	42.93	239	P	P	18 00 04.3	-0.4
	comp=Z,3.2nm,0.6s,baz=80,slow=7.8,SNR=4.6						
	comp=Z,3.2nm,0.6s						
BBOO	Buckleboo	47.71	239	P	P	18 00 41.6	-0.5
BBOO				IAmb	IAmb	18 01 12.7	
	comp=Z,28nm,1.2s						
WB0	Warramunga Arr	48.49	257	P	P	18 00 47.8	-0.5
WB0				IAmb	IAmb	18 00 49.2	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	48.52	257	P	P	18 00 47.4	-1.2
WRA	Warramunga Arr	48.53	257	P	P	18 00 47.7	-0.9
WRA	Warramunga Arr	48.53	257	P	P	18 00 48.2	-0.4
	comp=Z,7.9nm,0.7s,baz=90,slow=7.5,SNR=32						
	comp=Z,7.9nm,0.7s						
AS31	Alice Springs	48.84	252	P	P	18 00 50.0	-1.1
AS31				IAmb	IAmb	18 00 52.4	
	comp=Z,15nm,0.7s						
ASAR	Alice Springs	48.85	252	P	P	18 00 50.6	-0.5
ASAR	Alice Springs	48.85	252	P	P	18 00 51.0	-0.1
	comp=Z,45nm,0.6s,baz=86,slow=8.2,SNR=145						
KNRA	Kununurra	54.22	261	P	P	18 01 30.7	0.0
KNRA				IAmb	IAmb	18 01 35.9	
	comp=Z,12nm,1.0s						
FORT	Forrest	54.26	243	P	P	18 01 30.1	-0.7
SOEI	Soe	59.55	268	P	P	18 02 09.4	+1.2
MMRI	Maumere	61.74	268	P	P	18 02 22.7	-0.2
MMRI				IAmb	IAmb	18 02 23.6	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	61.92	253	P	P	18 02 23.0	-1.0
PSA00	Pilbara Seismi	61.92	253	P	P	18 02 23.6	-0.4
PSA00				IAmb	IAmb	18 02 32.0	
	comp=Z,29nm,1.3s						
MBWA	Marble Bar	62.08	254	P	P	18 02 23.9	-1.1
MBWA				IAmb	IAmb	18 02 31.9	
	comp=Z,21nm,1.4s						
SBA	Scott Base	63.33	184	P	P	18 02 34.4	+2.1
PEA0B	Petropavlovsk-	72.03	343	P	P	18 03 26.8	+0.1
PETK	Petropavlovsk-	72.03	343	P	P	18 03 26.6	-0.1
PETK	Petropavlovsk-	72.03	343	P	P	18 03 26.8	+0.1
	comp=Z,8.7nm,0.7s,baz=114,slow=8.2,SNR=15						
	comp=Z,8.7nm,0.7s						
QSPA	South Pole Qui	74.83	180	P	P	18 03 42.6	-0.5
QSPA	South Pole Qui	74.83	180	P	P	18 03 43.5	+0.4
	comp=Z,1.2nm,0.6s,baz=318,slow=0.6,SNR=11						
	comp=Z,1.2nm,0.6s						
KSRS	Korea Array	75.05	316	P	P	18 03 45.0	+0.4
	comp=Z,1.1nm,0.8s,baz=140,slow=5.6,SNR=3.4						
	comp=Z,1.1nm,0.8s						
NVAR	Mina Array Bea	75.13	43	P	P	18 03 46.2	+0.9
	comp=Z,0.6nm,0.7s,baz=237,slow=8.4,SNR=2.8						
	comp=Z,0.6nm,0.7s						
O16K	Kokwok River B	75.77	9	P	P	18 03 47.5	-0.7
O16K				IAmb	IAmb	18 04 26.7	
	comp=Z,17nm,1.2s						
K15K	Wolf Creek Mou	77.96	6	P	P	18 04 01.7	+1.4
K15K				IAmb	IAmb	18 04 45.5	
	comp=Z,14nm,1.4s						
M19K	Big River Lodg	78.55	10	P	P	18 04 03.3	-0.3
M19K				IAmb	IAmb	18 04 09.5	
	comp=Z,11nm,1.4s						
SUA	Susitna One	78.78	12	P	P	18 04 05.2	+0.2
SCM	Sheep Creek Mo	79.82	13	P	P	18 04 10.3	-0.2
GLB	Gilahina Butte	80.28	15	P	P	18 04 13.0	0.0
GLB				IAmb	IAmb	18 04 33.5	
	comp=Z,10.0nm,1.2s						
IL31		82.53	12	P	P	18 04 24.1	-0.5
ILAR	Eielson Array	82.53	12	P	P	18 04 24.4	-0.2
	comp=Z,0.9nm,0.5s,baz=223,slow=5.5,SNR=30						
	comp=Z,0.9nm,0.5s						
F19K	Shaleruckik Mo	82.78	7	P	P	18 04 25.9	+0.1
F19K				IAmb	IAmb	18 04 27.5	
	comp=Z,5.1nm,0.8s						
E18K	Tukpahlearik C	83.06	5	P	P	18 04 27.9	+0.6
E18K				IAmb	IAmb	18 04 29.1	
	comp=Z,7.4nm,0.8s						
PDAR	Pinedale Array	83.06	42	P	P	18 04 28.4	+0.2
	comp=Z,0.7nm,0.7s,baz=212,slow=5.3,SNR=7.5						
	comp=Z,0.7nm,0.7s						
F20K	Avaraart Lake	83.23	7	P	P	18 04 28.6	+0.5
E19K	Redstone River	83.44	7	P	P	18 04 29.6	+0.4
E19K				IAmb	IAmb	18 04 31.0	
	comp=Z,7.4nm,0.8s						
D19K	Kuna River	84.34	6	P	P	18 04 34.0	+0.2
D19K				IAmb	IAmb	18 04 35.3	
	comp=Z,4.8nm,0.8s						
E22K	Anaktuvuk Pass	84.77	8	P	P	18 04 36.2	+0.3
E22K				IAmb	IAmb	18 04 37.5	
	comp=Z,5.1nm,0.9s						
YKA	Yellowknife Ar	90.48	24	P	P	18 05 02.6	-0.6
	comp=Z,0.1nm,0.3s,baz=248,slow=4.3,SNR=4.8						
	comp=Z,0.1nm,0.3s						
CMAR	Chiang Mai Arr	91.23	289	P	P	18 05 09.2	+1.5
	comp=Z,1.7nm,0.8s,baz=90,slow=2.7,SNR=12						
	comp=Z,1.7nm,0.8s						
BVAR	Borovoye Array	116.88	322	PKP	PKPdf	18 10 44.5	-0.3
	comp=Z,1.3nm,0.7s,baz=22,slow=1.6,SNR=7.0						
DPC	Dobruska-Polom	143.80	348	*e*PKP	PKPbc	18 11 33.9	0.0
BRTR	Keskin Array B	145.12	320	PKPbc	PKPbc	18 11 38.9	+0.5
	comp=Z,2.4nm,0.8s,baz=114,slow=3.1,SNR=9.6						
KHC	Kasperske Hory	145.47	350	*e*PKP	PKPdf	18 11 38.9	+0.4
CKRC	Cesky Krumlov	145.65	349	*e*PKP	PKPbc	18 11 39.6	+0.1
GERES	GERESS Array B	145.73	350	PKPbc	PKPbc	18 11 40.0	+0.2
	comp=Z,0.3nm,0.4s,baz=15,slow=5.5,SNR=4.9						
CONA	Conrad Observa	146.19	347	*i* PKP	PKPbc	18 11 41.9	+0.6
	comp=Z,1.9nm,0.6s						
RONA	Rosalia, Austr	146.31	346	*e*PKP	PKPab	18 11 42.8	-0.1
	comp=Z,1.7nm,0.5s						
MOA	Molln	146.59	349	*i* PKP	PKPbc	18 11 42.8	+0.4
	comp=Z,1.5nm,0.5s						
MMAI	Mount Meron Ar	147.36	308	PKPbc	PKPbc	18 11 45.7	+0.8
	comp=Z,3.8nm,0.6s,baz=60,slow=4.0,SNR=5.3						
RETA	Reutte	147.48	353	*e*PKP	PKPbc	18 11 45.0	+0.2
	comp=Z,0.4nm,0.3s						
WATA	Walderalm	147.53	352	*e*PKP	PKPbc	18 11 44.7	-0.4
	comp=Z,4.3nm,0.4s						
MOTA	Mooralm	147.58	352	*e*PKP	PKPbc	18 11 44.5	-0.7
	comp=Z,0.7nm,0.3s						
ABTA	Abfaltersbach	147.96	350	*i* PKP	PKPbc	18 11 44.8	-1.3
	comp=Z,2.5nm,0.6s						

NSSP ***27*** *18:01:57.4, 41.97N×45.73E, h19km, Ms3.0*
TIF ***27*** *18:01:57.8, 42.05N×45.90E, h32km±1km*
AZER ***27*** *18:01:58.7, 41.80N×45.89E, h3km, ml2.9*
MOS ***27*** *18:01:58.4, 42.04N×45.86E, h14km, MPVA4.0*
NORS ***27*** *18:01:59.0, 42.00N×45.83E, h3km, MPVA4.1*
DRS ***27*** *18:02:02.0, 42.07N×45.75E, h18km*

ISC 27 18:01:59.0±0.9, **42.02N**±0.01×**45.82E**±0.01, **h16**km±8km, **n119,σ1s23**/220, **7C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.37	120	P	Pg	18 02 06.4	-0.2
LGD				S	Sb	18 02 12.7	0.0
LGD	Lagodekhi	0.37	120	*e*Pg	Pg	18 02 06.4	-0.2
LGD				*e*Sg	Sb	18 02 12.7	0.0
LGD	Lagodekhi	0.37	120	PG	Pg	18 02 06.4	-0.2
LGD				S	Sb	18 02 12.7	0.0
ZKTA	Zakatala	0.71	122	P	Pg	18 02 12.9	-0.1
ZKTA				S	Sg	18 02 23.1	+0.7
CHRG	Chargali	0.73	295	P	Pb	18 02 12.0	-1.4
CHRG				S	Sb	18 02 23.0	-0.3
SEAG	Tbilisi Sea	0.80	252	P	Pb	18 02 14.3	-0.2
SEAG				S	Sn	18 02 26.5	-0.7
SEAG	Tbilisi Sea	0.80	252	PG	Pb	18 02 14.3	-0.2
SEAG				S	Sn	18 02 26.5	-0.7
SHTL	Shatili	0.81	323	P	Pb	18 02 13.6	-1.1
SHTL				S	Sb	18 02 25.0	-0.4
SHTL	Shatili	0.81	323	PG	Pb	18 02 13.6	-1.1
XNZR	Khunzakh	0.84	51	*e*Pg	Pn	18 02 16.3	-0.1
XNZR				*e*Sg	Sn	18 02 27.9	-0.6
HNZR	Khunzah	0.86	51	*e*PG	Pn

AKT	**Akhty**	**1.53**	**110**	*e*Pg	**Pb**	**18 02 26.1**	**-1.0**
AKT				*e*Sg	**Sg**	**18 02 48.6**	**+0.2**
BRNG	**Burnasheti**	**1.54**	**256**	P	**Pb**	**18 02 26.5**	**-0.8**
BRNG				S	**Sg**	**18 02 47.9**	**-0.8**
BRNG	**Burnasheti**	**1.54**	**256**	PG	**Pb**	**18 02 26.4**	**-0.8**
BRNG				S	**Sg**	**18 02 47.9**	**-0.8**
MAK	**Makhachkala**	**1.56**	**52**	*e*Pg	**Pb**	**18 02 27.5**	**-0.1**
MAK				*e*Sg	**Sg**	**18 02 50.9**	**+1.4**
MAK	**Makhachkala**	**1.56**	**52**	*e*PN	**Pn**	**18 02 25.9**	**-0.2**
MAK				pmax	pmax		
	comp=Z,92nm,0.4s						
MNGR	**Mingechevir, A**	**1.57**	**142**	Pn	**Pg**	**18 02 28.2**	**-0.9**
MNGR				Sn	**Sg**	**18 02 49.4**	**-0.2**
ALIG	**Mtskhetisjvari**	**1.62**	**274**	P	**Pb**	**18 02 27.2**	**+0.3**
ALIG				S	**Sb**	**18 02 48.3**	**-0.3**
ALIG	**Mtskhetisjvari**	**1.62**	**274**	PN	**Pn**	**18 02 27.2**	**+0.3**
ARNR	**Ardon**	**1.62**	**316**	*e*Pg	**Pg**	**18 02 30.2**	**0.0**
ARNR				*e*Sg	**Sg**	**18 02 53.6**	**+2.3**
ARNR	**Ardon**	**1.62**	**316**	*e*PN	**Pg**	**18 02 30.2**	**0.0**
ARNR				*e*S	**Sg**	**18 02 53.6**	**+2.3**
BTKR	**Batakoyurt**	**1.65**	**326**	*e*Pg	**Pg**	**18 02 31.4**	**+0.7**
BTKR				*e*Sg	**Sg**	**18 02 54.4**	**+2.3**
BTKR	**Batakoyurt**	**1.65**	**326**	*e*PN	**Pg**	**18 02 31.4**	**+0.7**
BTKR				*e*S	**Sg**	**18 02 54.4**	**+2.3**
KORR	**Kora**	**1.68**	**310**	*e*Pg	**Pg**	**18 02 30.6**	**-0.6**
KORR				*e*Sg	**Sg**	**18 02 54.6**	**+1.6**
KORR	**Kora**	**1.68**	**310**	*e*PN	**Pg**	**18 02 30.6**	**-0.6**
KORR				pmax	pmax		
	comp=Z,88nm,0.4s						
KSMR	**Kasumkent**	**1.78**	**103**	*e*Pg	**Pg**	**18 02 32.5**	**-0.7**
KSMR				*e*Sg	**Sg**	**18 02 56.4**	**+0.2**
BGD	**Bogdanovka**	**1.82**	**246**	P	**Pn**	**18 02 30.8**	**+0.8**
BGD				S	**Sb**	**18 02 54.7**	**-0.1**
BGD	**Bogdanovka**	**1.82**	**246**	PN	Pg	18 02 39.7	+5.6
BGD				S	**Sb**	**18 02 54.7**	**-0.1**
AKH	**Akhalkalaki**	**1.84**	**252**	P	**Pn**	**18 02 30.8**	**+0.7**
AKH				S	**Sb**	**18 02 55.3**	**0.0**
AKH	**Akhalkalaki**	**1.84**	**252**	PN	**Pn**	**18 02 30.8**	**+0.7**
ONI	**Oni**	**1.84**	**289**	P	**Pb**	**18 02 32.0**	**-0.4**
ONI				S	**Sg**	**18 02 57.0**	**-1.4**
ONI	**Oni**	**1.84**	**289**	*e*Pg	**Pb**	**18 02 32.0**	**-0.4**
ONI				*e*Sg	**Sg**	**18 02 57.0**	**-1.4**
ONI	**Oni**	**1.84**	**289**	PN	**Pb**	**18 02 32.0**	**-0.4**
QBL	**Gabala**	**1.86**	**125**	Pn	**Pb**	**18 02 32.6**	**0.0**
QBL				Sn	**Sg**	**18 02 59.0**	**+0.2**
STDR	**Stavd-Durt**	**1.87**	**317**	*e*Pg	**Pg**	**18 02 34.1**	**-0.8**
STDR				*e*Sg	**Sg**	**18 03 00.9**	**+1.7**
STDR	**Stavd-Durt**	**1.87**	**317**	*e*PN	**Pg**	**18 02 34.1**	**-0.8**
DRN	**Derbent**	**1.87**	**89**	*e*Pg	**Pg**	**18 02 33.5**	**-1.5**
DRN				*e*Sg	**Sg**	**18 02 58.6**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.87**	**299**	*e*Pg	**Pb**	**18 02 33.2**	**+0.2**
DIGR				*e*Sg	**Sg**	**18 02 58.1**	**-1.3**
DIGR	**Digorskoe uzhe**	**1.87**	**299**	*e*PN	**Pb**	**18 02 33.0**	**0.0**
DIGR				pmax	pmax		
	comp=Z,11nm,0.3s						
TRKR	**Terskaya**	**1.88**	**335**	*e*Pg	**Pg**	**18 02 33.8**	**-1.4**
TRKR				*e*Sg	**Sg**	**18 02 57.8**	**-1.8**
KAPZ	**Kaputan**	**1.89**	**207**	⇑*i*P	**Pb**	**18 02 32.1**	**-1.2**
KAPZ				⇑*i*S	**Sb**	**18 02 57.9**	**+1.1**
QSAR	**Qusar**	**1.90**	**105**	Pn	**Pg**	**18 02 34.6**	**-0.9**
QSAR				Sn	**Sg**	**18 02 58.6**	**-1.6**
LSNR	**Lesken**	**1.93**	**311**	*i* Pg	**Pg**	**18 02 35.2**	**-1.0**
LSNR				*e*Sg	**Sg**	**18 03 01.8**	**+0.5**
LSNR	**Lesken**	**1.93**	**311**	*i* PN	**Pg**	**18 02 35.2**	**-1.0**
LSNR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
XNQ	**Khinaliq**	**1.94**	**115**	Pn	**Pb**	**18 02 34.4**	**+0.4**
XNQ				Sn	**Sg**	**18 02 59.6**	**-1.8**
BRDA	**Brd**	**2.03**	**149**	Pn	**Pb**	**18 02 34.8**	**-0.8**
BRDA				Sn	**Sb**	**18 03 01.2**	**+0.7**
GNI	**Garni**	**2.04**	**204**	⇓⇓*i*P	**Pb**	**18 02 34.7**	**-1.0**
GNI				⇑⇑*i*S	**Sb**	**18 03 02.3**	**+1.5**
PRTR	**Priterechnaya**	**2.07**	**327**	*e*Pg	**Pb**	**18 02 35.7**	**-0.5**
PRTR				*e*Sg	**Sg**	**18 03 04.2**	**-1.3**
QUBA	**Quba, Azerbaij**	**2.11**	**107**	Pn	**Pb**	**18 02 36.9**	**0.0**
QUBA				Sn	**Sg**	**18 03 06.3**	**-0.7**
TKB	**Tkibuli**	**2.12**	**280**	P	**Pn**	**18 02 35.1**	**+1.3**
TKB				S	**Sb**	**18 03 03.8**	**+0.6**
TKB	**Tkibuli**	**2.12**	**280**	PN	**Pn**	**18 02 35.1**	**+1.3**
TKB				S	**Sb**	**18 03 03.8**	**+0.6**
AGDM	**Agdam**	**2.14**	**152**	Pn	**Pb**	**18 02 35.8**	**-1.7**
AGDM				Sn	**Sb**	**18 03 03.8**	**0.0**
IML	**Ismayilli**	**2.16**	**124**	Pn	**Pb**	**18 02 37.3**	**-0.4**
IML				Sn	**Sb**	**18 03 05.5**	**+1.2**
ARUZ	**Aruch**	**2.17**	**217**	⇑*i*P	**Pb**	**18 02 36.5**	**-1.5**
ARUZ				⇑*i*S	**Sb**	**18 03 05.3**	**+0.7**
NRKZ	**NAREK**	**2.20**	**204**	*e*P	**Pb**	**18 02 37.1**	**-1.4**
NRKZ				*e*S	**Sb**	**18 03 06.0**	**+0.5**
NCK	**Nalchik**	**2.20**	**313**	*e*Pg	**Pb**	**18 02 37.9**	**-0.6**
NCK				*e*Sg	**Sb**	**18 03 05.5**	**0.0**
NCK	**Nalchik**	**2.20**	**313**	*i* PN	**Pb**	**18 02 37.4**	**-1.1**
ZRD	**Zardab**	**2.24**	**140**	Pn	**Pb**	**18 02 37.5**	**-1.5**
ZRD				Sn	**Sg**	**18 03 09.5**	**-1.5**
ABS	**Abastumani**	**2.26**	**264**	P	**Pn**	**18 02 37.1**	**+1.2**
ABS				S	**Sb**	**18 03 07.9**	**+0.6**
ABS	**Abastumani**	**2.26**	**264**	*e*Pn	**Sb**	**18 02 37.1**	**+1.2**
ABS				*e*Sn	**Sb**	**18 03 07.9**	**+0.6**
ABS	**Abastumani**	**2.26**	**264**	PN	**Pn**	**18 02 37.0**	**+1.2**
ABS				S	**Sb**	**18 03 07.8**	**+0.6**
HYR	**Heyderabad**	**2.41**	**198**	Pn	**Pb**	**18 02 39.8**	**-2.3**
HYR				Sn	**Sb**	**18 03 11.9**	**+0.4**
PQL	**Pirkuli**	**2.42**	**120**	Pn	**Pb**	**18 02 41.5**	**-0.8**
PQL				Sn	**Sb**	**18 03 11.7**	**-0.3**
VNNZ	**Vanand**	**2.44**	**219**	⇑*i*P	**Pb**	**18 02 41.7**	**-0.8**
VNNZ				⇑*i*S	**Sb**	**18 03 14.0**	**+1.7**
SIZA	**Siyzn**	**2.50**	**111**	Pn	**Pb**	**18 02 42.3**	**-1.3**
SIZA				Sn	**Sb**	**18 03 13.3**	**-0.7**
KBTC	**Kuba-Taba**	**2.52**	**316**	*e*Pn	**Pb**	**18 02 44.0**	**+0.1**
KBTC				*e*Sn	**Sb**	**18 03 16.0**	**+1.3**
NEUR	**Neytrino**	**2.61**	**299**	*i* Pn	**Pb**	**18 02 45.7**	**+0.1**
NEUR				*e*Sn	**Sb**	**18 03 17.6**	**+0.1**
NEUR	**Neytrino**	**2.61**	**299**	*i* PN	**Pb**	**18 02 45.1**	**-0.5**
ATGJ	**Altiaghaj**	**2.62**	**115**	Pn	**Pb**	**18 02 43.9**	**-1.7**
ATGJ				Sn	**Sb**	**18 03 18.5**	**+1.1**
SBZ	**Shahbuz**	**2.63**	**184**	Pn	**Pb**	**18 02 43.7**	**-2.0**
SBZ				Sn	**Sb**	**18 03 16.0**	**-1.8**
BLQ	**Beylaqan**	**2.65**	**149**	Pn	**Pb**	**18 02 43.6**	**-2.4**
BLQ				Sn	**Sb**	**18 03 15.1**	**-3.2**
KBZ	**Khabaz**	**2.74**	**310**	*i* Pn	**Pb**	**18 02 47.3**	**-0.4**
KBZ				*e*Sn	**Sb**	**18 03 22.1**	**+1.1**
KBZ	**Khabaz**	**2.74**	**310**	*i* PN	**Pb**	**18 02 44.9**	**-2.7**
PYA1	**Pyatigorsk**	**2.85**	**317**	*e*Pn	**Pn**	**18 02 46.0**	**+2.1**
PYA1				*e*Sn	**Sb**	**18 03 22.1**	**-2.2**
PYA1	**Pyatigorsk**	**2.85**	**317**	*i* PN	**Pb**	**18 02 48.7**	**-0.9**
SHA1	**Shidzhatmaz**	**2.89**	**308**	*e*Pn	**Pb**	**18 02 49.1**	**-1.1**
SHA1				*e*Sn	**Sb**	**18 03 24.4**	**-1.0**
SHA1	**Shidzhatmaz**	**2.89**	**308**	*i* PN	**Pb**	**18 02 48.0**	**-2.3**
BEYR	**Belyy Ugol+**	**2.97**	**313**	*e*Pn	**Pn**	**18 02 44.0**	**-1.5**
BEYR				*e*Sn	**Sb**	**18 03 25.0**	**-2.5**
KIV	**Kislovodsk**	**3.00**	**311**	*e*Pn	**Pb**	**18 02 49.1**	**-3.0**
KIV				*e*Sn	**Sb**	**18 03 25.5**	**-3.1**
KIV	**Kislovodsk**	**3.00**	**311**	*i* PN	**Pb**	**18 02 48.8**	**-3.4**
ORD	**Ordubad**	**3.09**	**177**	Pn	**Pn**	**18 02 49.6**	**+2.4**
ORD				Sn	**Sn**	**18 03 27.0**	**+3.2**
GLBA	**Clilabad**	**3.40**	**144**	Pn	**Pn**	**18 02 52.3**	**+1.0**
GLBA				Sn	**Sn**	**18 03 34.3**	**+3.1**
YRD	**Yardimli**	**3.61**	**148**	Pn	**Pn**	**18 02 56.4**	**+1.9**
YRD				Sn	**Sn**	**18 03 38.1**	**+1.4**
LRK	**Lerik**	**3.88**	**149**	Pn	**Pn**	**18 02 59.6**	**+1.4**
LRK				Sn	**Sn**	**18 03 46.3**	**+2.8**
ASTR	**Astara**	**4.14**	**146**	Pn	**Pn**	**18 03 01.6**	**+0.1**
ASTR				Sn	**Sn**	**18 03 51.4**	**+2.0**
SOC	**Sochi**	**4.75**	**291**	*e*PN	**Pn**	**18 03 09.0**	**-0.9**
SOC				*e*PPP	PPP	18 03 31.2	
SOC				*e*		18 04 07.5	
SOC				MLR	MLR		
	comp=Z,135nm,14.0s						
BRTR	**Keskin Array B**	**9.51**	**260**	*i* P	**Pn**	**18 04 14.8**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*IDC **27** 18:10:46.8±5.6, 36°.69S×78°.97E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=204.9km s-min=51.5km az=30.0, Mid-Indian Ridge*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**22.37**	**236**	T	T	18 39 09.0	
	baz=74,slow=75,SNR=707						
H04N1	**CROZET ISLANDS**	**22.38**	**237**	T	T	18 39 11.8	
	baz=74,slow=75,SNR=719						
H04N3	**CROZET ISLANDS**	**22.39**	**236**	T	T	18 39 08.7	
	baz=74,slow=75,SNR=678						
H01W2	**Cape Leeuwin H**	**28.48**	**97**	T	T	18 46 22.7	
	baz=256,slow=74,SNR=348						
H01W3	**Cape Leeuwin H**	**28.49**	**97**	T	T	18 46 23.2	
	baz=256,slow=74,SNR=402						
H01W1	**Cape Leeuwin H**	**28.50**	**97**	T	T	18 46 24.1	
	baz=256,slow=74,SNR=309						
WRA	**Warramunga Arr**	**50.84**	**87**	P	P	18 19 49.4	-0.1
	1.2nm,1.0s,baz=240,slow=8.0,SNR=3.9						
	1.2nm,1.0s						
MKAR	**Makanchi Array**	**83.16**	**2**	P	P	18 23 13.5	-0.8
	0.3nm,0.8s,baz=166,slow=5.6,SNR=4.8						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**86.94**	**360**	P	P	18 23 34.2	+1.1
	0.6nm,0.9s,baz=193,slow=4.5,SNR=5.1						
	0.6nm,0.9s						
YKA	**Yellowknife Ar**	**152.83**	**14**	PKPbc	PKPbc	18 30 44.5	-0.4
	0.3nm,0.9s,baz=339,slow=3.3,SNR=2.6						

*IDC **27** 18:18:51.0±0.8, 38°.08S×91°.51W, h0km, mb4.3/8, mbtmp4.2/9, ML3.7/1, Error ellipse: s-maj=29.2km s-min=20.4km az=82.0*
*NEIC **27** 18:18:52±1.4, 38°.05S±0°.1×91°.4W±0°.2, h10km±1km, mb4.4/46, Error ellipse: s-maj=23.4km s-min=18.7km az=267.0*
ISC 27 18:18:51.8**±0.7, **37°.96S**±0°.09×**91°.4W**±0°.1, **h10**km, **n62**, σ0**s84**/60, **mb4.4**/21, **West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**10.88**	**72**	T	T	18 32 38.4	
	baz=243,slow=74,SNR=60						
H03S1	**Juan Fernandez**	**10.89**	**72**	T	T	18 32 39.5	
	baz=243,slow=74,SNR=74						
H03S3	**Juan Fernandez**	**10.90**	**71**	T	T	18 32 37.6	
	baz=243,slow=74,SNR=111						
LR05	**Currie**	**15.19**	**105**	Pn	**Pn**	**18 22 28.2**	**+1.9**
LR05				IAmb	IAmb	18 22 34.4	
	comp=Z,24nm,1.4s						
AY01	**Puyuhuapi**	**15.47**	**121**		**Pn**	**18 22 31.2**	**+1.3**
AY01				IAmb	IAmb	18 22 39.9	
	comp=Z,21nm,1.2s						
GO06	**Curarrehue**	**15.59**	**102**		**Pn**	**18 22 32.0**	**+0.3**
LL02	**Futaleuf**	**15.70**	**116**		**Pn**	**18 22 33.3**	**+0.3**
LL02				IAmb	IAmb	18 22 39.7	
	comp=Z,13nm,0.8s						
GO05	**Huala**	**15.89**	**85**		**Pn**	**18 22 36.2**	**+0.6**
GO05				IAmb	IAmb	18 22 42.5	
	comp=Z,31nm,1.1s						
ML02	**Panimavida**	**16.10**	**88**		**Pn**	**18 22 38.9**	**+0.7**
ML02				IAmb	IAmb	18 23 06.4	
	comp=Z,18nm,0.9s						
COYC	**Coyhaique**	**16.24**	**124**		**Pn**	**18 22 40.5**	**+0.6**
PLCA	**Paso Flores**	**16.32**	**106**		**Pn**	**18 22 41.8**	**+0.7**
PLCA	**Paso Flores**	**16.32**	**106**	Pn	**P**	**18 22 43.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=287,slow=12,SNR=5.5						
	comp=Z,2.4nm,0.9s						
VA05	**Santo Domingo**	**16.57**	**81**	P	**P**	**18 22 45.5**	**-1.2**
VA05				IAmb	IAmb	18 22 49.3	
	comp=Z,21nm,0.8s						
MT09	**Talagante**	**17.02**	**82**	P	**P**	**18 22 50.9**	**-1.0**
LMEL	**Las Melosas**	**17.61**	**83**	P	**P**	**18 22 58.0**	**-0.4**
VA03	**San Esteban**	**17.73**	**79**	P	**P**	**18 22 59.4**	**-0.3**
CO06	**Fray Jorge**	**17.82**	**72**	P	**Pn**	**18 22 59.4**	**-0.4**
CO02	**Combarbal**	**18.04**	**74**	P	**P**	**18 23 03.1**	**-0.1**
GO09	**Cerro Castillo**	**18.90**	**141**	P	**Pn**	**18 23 12.4**	**-0.6**
GO09				IAmb	IAmb	18 23 19.8	
	comp=Z,63nm,1.4s						
CO01	**Juntas del Tor**	**19.32**	**72**	P	**Pn**	**18 23 17.7**	**-0.7**
LCO	**Las Campanas**	**19.37**	**69**	P	**P**	**18 23 17.9**	**-0.1**
LCO				IAmb	IAmb	18 23 43.4	
	comp=Z,18nm,1.4s						
AC05	**El Transito**	**19.78**	**69**	P	**P**	**18 23 21.2**	**-1.0**
AC05				IAmb	IAmb	18 23 26.6	
	comp=Z,15nm,1.1s						
AC01	**Pan de Azucar**	**21.12**	**62**	P	**P**	**18 23 37.6**	**+0.9**
AC01				IAmb	IAmb	18 23 40.2	
	comp=Z,17nm,1.1s						
MG03	**Isla Dawson**	**21.40**	**145**	P	**P**	**18 23 40.0**	**+0.5**
AC02	**Maricunga**	**21.74**	**66**	P	**P**	**18 23 43.8**	**-0.1**
AC02				IAmb	IAmb	18 23 51.9	
	comp=Z,14nm,0.9s						
PB14	**IPOC Station P**	**22.23**	**59**	P	**P**	**18 23 49.6**	**+0.6**
PB14				IAmb	IAmb	18 23 52.8	
	comp=Z,23nm,1.1s						
GO02	**Mina Guanaco**	**22.44**	**62**	P	**P**	**18 23 51.0**	**-0.3**
GO02				IAmb	IAmb	18 23 58.5	
	comp=Z,27nm,1.1s						
PB15	**IPOC Station P**	**23.81**	**58**	P	**P**	**18 24 04.8**	**-0.4**
PB15				IAmb	IAmb	18 24 09.0	
	comp=Z,14nm,0.8s						
PB04	**IPOC Station P**	**23.97**	**55**	P	**P**	**18 24 07.1**	**+0.4**
PB06	**IPOC Station P**	**24.09**	**57**	P	**P**	**18 24 07.3**	**-0.5**
PB06				IAmb	IAmb	18 24 11.3	
	comp=Z,14nm,0.8s						
LVC	**Limon Verde**	**24.60**	**58**	P	**P**	**18 24 15.5**	**+2.8**
	comp=Z,8.3nm,0.7s,baz=257,slow=5.6,SNR=10						
	comp=Z,8.3nm,0.7s						
PB02	**IPOC Station P**	**24.86**	**54**	P	**P**	**18 24 15.0**	**+0.3**
PB09	**IPOC Station P**	**24.95**	**56**	P	**P**	**18 24 15.3**	**-0.2**
TA01	**Diego Aracena**	**25.23**	**53**	P	**P**	**18 24 16.9**	**-1.0**
PB01	**IPOC Station P**	**25.32**	**54**	P	**P**	**18 24 18.2**	**-0.6**
PB01				IAmb	IAmb	18 24 23.4	
	comp=Z,11nm,1.2s						
PB11	**IPOC Station P**	**26.16**	**52**	P	**P**	**18 24 27.3**	**+0.8**
PB11				IAmb	IAmb	18 25 06.4	
	comp=Z,22nm,1.3s						
CPUP	**Villa Florida**	**30.89**	**78**	P	**P**	**18 25 08.2**	**-0.3**
CPUP				IAmb	IAmb	18 25 09.7	
	comp=Z,7.0nm,1.1s						
CPUP	**Villa Florida**	**30.89**	**78**	P	**P**	**18 25 08.8**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=231,slow=8.0,SNR=4.7						
	comp=Z,1.8nm,0.4s						
PLTB	**Pedras Altas**	**31.43**	**90**	P	**P**	**18 25 12.5**	**-0.7**
AQDB	**Aquidauana**	**35.39**	**71**	P	**P**	**18 25 47.7**	**-0.1**
ETMB	**Extrema**	**36.00**	**45**	P	**P**	**18 25 53.8**	**+0.6**
ETMB				IAmb	IAmb	18 26 24.1	
	comp=Z,4.8nm,1.4s						
PTLB	**Pontes e Lacer**	**36.19**	**61**	P	**P**	**18 25 55.2**	**+0.5**
PTLB				IAmb	IAmb	18 25 59.4	
	comp=Z,6.7nm,1.4s						
TRCB	**Terra Rica**	**36.38**	**77**	P	**P**	**18 25 55.9**	**-0.5**
SAML	**Samuel**	**38.45**	**49**	P	**P**	**18 26 12.9**	**-1.0**
OTAV	**Otavalo**	**39.83**	**20**	P	**P**	**18 26 26.3**	**+0.3**
OTAV				IAmb	IAmb	18 26 31.8	
	comp=Z,13nm,1.1s						
BOAV	**Boa Vista**	**49.25**	**43**	P	**P**	**18 27 41.2**	**+0.4**
BOAV				IAmb	IAmb	18 27 42.0	
	comp=Z,3.1nm,0.7s						
BOAB	**BOACO BROADBAND**	**50.43**	**7**	P	**P**	**18 27 49.8**	**+0.3**
QSPA	**South Pole Qui**	**52.26**	**180**	P	**P**	**18 28 02.9**	**-0.1**
QSPA				IAmb	IAmb	18 28 05.6	
	comp=Z,4.4nm,0.8s						
QSPA	**South Pole Qui**	**52.26**	**180**	P	**P**	**18 28 03.3**	**+0.2**
	comp=Z,3.9nm,0.7s,baz=267,slow=0.6,SNR=39						
	comp=Z,3.9nm,0.7s						
SNAA	**Sanae**	**54.01**	**157**	P	**P**	**18 28 16.6**	**+0.9**
SNAA	**Sanae**	**54.01**	**157**	P	**P**	**18 28 15.3**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=289,slow=6.0,SNR=3.8						
	comp=Z,3.4nm,0.7s						
TXAR	**Lajitas Array**	**67.93**	**348**	P	**P**	**18 29 51.7**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=146,slow=6.6,SNR=5.7						
	comp=Z,0.6nm,0.7s						
TX31	**Lajitas Ar. Si**	**67.93**	**348**	P	**P**	**18 29 50.0**	**-0.7**
TX31				IAmb	IAmb	18 30 03.7	
	comp=Z,3.6nm,1.2s						
X51A	**Calhoun**	**72.42**	**6**	P	**P**	**18 30 17.7**	**-0.3**
MAW	**Mawson**	**72.96**	**170**	P	**P**	**18 30 20.7**	**-0.2**
	comp=Z,20nm,0.8s,baz=211,slow=12,SNR=1.8						
	comp=Z,20nm,0.8s						
NVAR	**Mina Array Bea**	**79.97**	**339**	P	**P**	**18 31 02.3**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=183,slow=5.6,SNR=5.9						
	comp=Z,0.9nm,0.7s						
PDAR	**Pinedale Array**	**82.04**	**347**	P	**P**	**18 31 12.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=155,slow=4.9,SNR=5.7						
	comp=Z,0.5nm,0.6s						
SEY	**Seymchan**	**134.81**	**325**	PKP	**PKiKP**	**18 38 11.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=76,slow=22,SNR=6.6						
TIXI	**Tiksi**	**140.56**	**341**	PKP	**PKiKP**	**18 38 22.0**	**-0.8**
	comp=Z,1.6nm,0.2s,baz=25,slow=3.8,SNR=4.6						
KBZ	**Khabaz**	**145.26**	**66**	PKPbc	**PKiKP**	**18 38 31.3**	**-2.0**
	comp=Z,2.0nm,0.8s,baz=264,slow=3.8,SNR=6.7						
NRIK	**Noril'sk**	**148.56**	**1**	PKPbc	**PKiKP**	**18 38 38.1**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=346,slow=4.2,SNR=3.8						
MKAR	**Makanchi Array**	**170.00**	**26**	PKP	**PKPdf**	**18 39 00.7**	**+1.4**
	comp=Z,0.5nm,1.0s,baz=226,slow=3.2,SNR=2.7						
MKAR				PKPab	**sPKPab**	**18 40 17.0**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=305,slow=5.1,SNR=2.2						

*IDC **27** 18:30:53.8±0.7, 6°.13S×142°.79E, h0km, mb4.2/15, mbtmp4.2/18, ML3.0/2, Error ellipse: s-maj=28.3km s-min=15.5km az=76.0*
*NEIC **27** 18:30:54.8±1.8, 6°.07S±0°.08×142°.58E±0°.08, h10km±1km, mb4.5/47, Error ellipse: s-maj=13.8km s-min=12.3km az=59.0*
*DJA **27** 18:30:58.1±1.4, 6°.5S±3°×14°.3E±°, h24km±12km, M4.8/15, mB5.3/1, mb4.5/15, MLv4.9/6, Mw(mB)4.7/1*
ISC 27 18:30:57.1**±0.4, **6°.20S**±0°.05×**142°.59E**±0°.06, **h28**km, **n116**, σ1**s84**/115, **mb4.5**/47, **1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**			P	**Pb**	**18 31 25.0**	**-1.8**
MMPI	**Merauke**			P	**Pn**	**18 31 47.8**	**+3.1**
GENI	**Genyem**			P	Pb	18 32 05.9	-6.5
GENI	**Genyem**			P	**Pn**	**18 32 03.0**	**+2.0**
PMG	**Port Moresby**				**Pn**	**18 32 17.6**	**-0.2**
PMG				Sn	**Sn**	**18 33 20.6**	**+0.1**
PMG	**Port Moresby**			Pn	**Pn**	**18 32 17.2**	**-0.5**
	6.6nm,0.3s,baz=334,slow=4.4,SNR=34						
PMG				Sn	**Sn**	**18 33 20.5**	**+0.1**
	8.5nm,0.3s,baz=224,slow=20,SNR=8.5						
	27nm,0.5s						
SMPI	**Sarmi**			P	**Pn**	**18 32 23.3**	**+3.4**
	97nm,0.9s,0.4nm						
MANU	**Manus Island**				**Pn**	**18 32 27.0**	**-1.3**
COEN	**Coen**			Pn	**Pn**	**18 32 50.5**	**+2.7**
COEN	**Coen**			P	**Pn**	**18 32 51.4**	**+3.5**
FAKI	**Fak Fak**			Pn	**Pn**	**18 33 28.8**	**-1.3**
FAKI	**Fak Fak**			P	**Pn**	**18 33 30.9**	**+0.8**
SAUI	**Saumlaki**			Pn	**Pn**	**18 33 37.5**	**+0.1**
KDU	**Kakadu**			P	**Pn**	**18 33 45.4**	**+0.7**
MTSU	**Mount Surprise**			P	**Pn**	**18 33 50.9**	**+4.7**
SWI	**Sorong**			P	**Pn**	**18 33 55.1**	**+2.1**
	13nm,0.8s						
MTN	**Manton Dam**			Pn	**Pn**	**18 34 00.0**	**-1.1**
MTN	**Manton Dam**			P	**Pn**	**18 34 00.9**	**-0.3**
DRS	**Darwin Rock St**			P	**Pn**	**18 34 01.5**	**+0.3**
TV1H	**Townsville Har**			P	**P**	**18 34 13.2**	**-3.8**
CTA	**Charters Tower**			Pn	**Pn**	**18 34 17.2**	**-0.1**
	0.2nm,0.3s,baz=332,slow=16,SNR=1.4						
CTA				Lg	Lg	18 38 31.8	
	0.2nm,0.3s,baz=74,slow=13,SNR=3.7						
	2.5nm,0.9s						
WB0	**Warramunga Arr**			Pn	**Pn**	**18 34 35.7**	**-0.3**
WR0	**Warramunga Arr**				**Pn**	**18 34 36.7**	**-0.5**
WB2	**Warramunga Arr**				**Pn**	**18 34 37.6**	**-0.6**
WB2				IAmb	IAmb	18 34 53.8	
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**			Pn	**Pn**	**18 34 37.1**	**-1.1**
WRA	**Warramunga Arr**			Pn	**Pn**	**18 34 37.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=29,slow=13,SNR=32						
WRA				Sn	**Sn**	**18 37 26.9**	**-6.2**
	comp=Z,0.6nm,0.3s,baz=26,slow=22,SNR=5.7						
WRA				Lg	Lg	18 39 21.4	
	comp=Z,0.7nm,0.3s,baz=33,slow=26,SNR=4.7						
KNRA	**

comp=Z,4.6nm,1.0s,baz=170,slow=5.1,SNR=1.8
comp=Z,4.6nm,1.0s

LSA Lhasa 60.90 309 P **P** **18 41 06.9 -1.4**
LSA IAmb IAmb 18 41 15.9
comp=Z,6.7nm,1.2s

ULN Ulaanbaatar 62.26 334 P **P** **18 41 15.7 -1.0**
ULN IAmb IAmb 18 41 56.8
comp=Z,5.2nm,1.3s

SONM Songino Array 62.53 333 P **P** **18 41 17.5 -1.0**
SONM IAmb IAmb 18 41 24.1
comp=Z,4.0nm,1.3s

SONM Songino Array 62.53 333 P **P** **18 41 20.1 +1.7**
comp=Z,0.7nm,0.8s,baz=180,slow=5.6,SNR=5.0
comp=Z,0.7nm,0.8s

MA2 Magadan 65.89 5 P **P** **18 41 41.8 +1.8**
comp=Z,3.3nm,0.7s,baz=214,slow=7.3,SNR=1.9
comp=Z,3.3nm,0.7s

SEY Seymchan 69.34 5 P **P** **18 42 01.0 -0.8**
comp=Z,0.3nm,0.3s,baz=360,slow=24,SNR=1.4
comp=Z,0.3nm,0.3s

WMQ Urumqi 70.13 321 *e*P **P** **18 42 08.5 +1.3**
WMQ pmax pmax
comp=Z,10.0nm,1.1s

VNDA Vanda 72.01 176 P **P** **18 42 20.3 +2.4**
VNDA IAmb IAmb 18 42 34.6
comp=Z,6.5nm,1.4s

MK31 Makanchi Array 74.90 322 P **P** **18 42 34.9 -0.5**
MK31 IAmb IAmb 18 42 41.9
comp=Z,4.4nm,1.1s

MKAR Makanchi Array 74.90 322 P **P** **18 42 35.4 0.0**
MKAR Makanchi Array 74.90 322 P **P** **18 42 36.7 +1.3**
comp=Z,3.9nm,1.1s,baz=108,slow=8.0,SNR=15
comp=Z,3.9nm,1.1s

MAKZ Makanchi 75.10 322 P **P** **18 42 36.9 +0.3**
MAKZ IAmb IAmb 18 42 42.9
comp=Z,7.8nm,1.1s

TARG Taragay, Kyrgy 75.76 316 P **P** **18 42 40.4 -0.7**
KSH Kashi 76.28 313 P P 18 42 50.5 +6.9
KSH pmax pmax
comp=Z,5.0nm,1.1s

NIL Nilore 76.50 307 P **P** **18 42 43.6 -1.3**
ZAA0 Zalesovo Array 76.89 329 P **P** **18 42 45.5 -1.1**
ZAA0 IAmb IAmb 18 42 51.6
comp=Z,3.0nm,1.1s

ZALV Zalesovo Beam 76.89 329 P **P** **18 42 44.8 -1.8**
ZALV Zalesovo Beam 76.89 329 P **P** **18 42 48.1 +1.6**
comp=Z,1.3nm,0.7s,baz=104,slow=6.3,SNR=6.1
comp=Z,1.3nm,0.7s

KURK Kurchatov 78.78 324 P **P** **18 42 56.8 -0.4**
KURK IAmb IAmb 18 43 03.1
comp=Z,6.3nm,1.2s

KURBB Kurchatov Arra 78.79 324 P **P** **18 42 58.4 +1.1**
comp=Z,2.9nm,1.1s,baz=114,slow=4.8,SNR=12
comp=Z,2.9nm,1.1s

SIMJ Simiganj 81.18 311 P **P** **18 43 09.7 -1.0**
SIMJ IAmb IAmb 18 43 17.4
comp=Z,7.5nm,1.1s

KK31 Karatay Array 81.31 315 P **P** **18 43 11.1 0.0**
KKAR Karatay Array 81.31 315 P **P** **18 43 10.9 -0.2**
C16K Lisburne Hills 82.65 17 P **P** **18 43 17.9 +0.4**
C16K IAmb IAmb 18 43 55.7
comp=Z,5.8nm,1.4s

QSPA South Pole Qui 83.77 180 P **P** **18 43 24.5 +0.9**
comp=Z,5.2nm,1.2s,baz=224,slow=2.1,SNR=6.8
comp=Z,5.2nm,1.2s

CAPN Captain Cook N 84.09 27 P **P** **18 43 24.8 -0.3**
G19K Purcell Mounta 84.14 21 P **P** **18 43 25.4 +0.1**
G19K IAmb IAmb 18 43 30.7
comp=Z,5.0nm,1.2s

NRIK Noril'sk 84.15 343 P **P** **18 43 24.5 -0.7**
NRIK Noril'sk 84.15 343 P **P** **18 43 26.2 +1.0**
comp=Z,5.8nm,1.0s,baz=138,slow=4.5,SNR=7.3
comp=Z,5.8nm,1.0s

BVAR Borovoye Array 84.37 325 P **P** **18 43 27.6 +0.9**
comp=Z,13nm,1.0s,baz=110,slow=4.3,SNR=15
comp=Z,13nm,1.0s

BRVK Borovoye 84.44 325 P **P** **18 43 27.3 +0.2**
E19K Redstone River 84.74 20 P **P** **18 43 28.6 +0.3**
E19K IAmb IAmb 18 43 36.8
comp=Z,5.1nm,1.0s

C19K Lookout Ridge 84.85 18 P **P** **18 43 29.5 +0.6**
C19K IAmb IAmb 18 43 34.8
comp=Z,7.0nm,1.1s

D19K Kuna River 84.98 19 P **P** **18 43 29.9 +0.4**
F20K Avaraart Lake 85.05 20 P **P** **18 43 30.4 +0.6**
F20K IAmb IAmb 18 43 35.7
comp=Z,3.2nm,1.1s

IMAR Indian Mountai 85.26 22 P **P** **18 43 30.8 -0.1**
BPAW Bear Paw Mtn. 85.51 24 P **P** **18 43 31.6 -0.6**
SML Sawmill 85.75 26 P **P** **18 43 32.3 -1.2**
SCM Sheep Creek Mo 86.20 27 P **P** **18 43 34.6 -1.2**
E22K Anaktuvuk Pass 86.88 20 P **P** **18 43 39.7 +0.7**
E22K IAmb IAmb 18 43 48.4
comp=Z,3.6nm,0.8s

D22K Ayikyak River 86.92 19 P **P** **18 43 38.9 -0.2**
D22K IAmb IAmb 18 44 07.4
comp=Z,6.4nm,1.3s

IL31 87.42 24 P **P** **18 43 40.5 -1.0**
IL31 IAmb IAmb 18 43 45.0
comp=Z,7.2nm,1.4s

ILAR Eielson Array 87.42 24 P **P** **18 43 40.3 -1.2**
comp=Z,1.7nm,1.0s,baz=260,slow=4.4,SNR=8.4
comp=Z,1.7nm,1.0s

F24K Squaw Lake 88.01 21 P **P** **18 43 44.9 +0.5**
F24K IAmb IAmb 18 44 01.6
comp=Z,6.7nm,1.4s

SCRK Sand Creek 88.35 25 P **P** **18 43 46.0 -0.1**
BARN Barnard Glacie 88.55 28 P **P** **18 43 47.4 +0.1**
BMAR Burnt Mountain 89.18 22 P **P** **18 43 50.9 +1.0**
TORD Torodi Ar. Bea 140.88 283 PKP **PKPdf** **18 50 26.2 +0.6**
comp=Z,0.6nm,0.8s,baz=120,slow=2.8,SNR=3.0
DBIC Dimbokro 147.65 273 PKPbc **PKPab** **18 50 43.5 +1.2**
comp=Z,4.8nm,1.0s,baz=148,slow=6.4,SNR=5.0

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*IDC **27** 18:50:16.1±1.1,6.1°S×143.1°E,h0km,mb4.0/4, mbtmp4.0/6,ML1.4/1,Error ellipse: s-maj=35.0km s-min=24.7km az=71.0*
ISC 27 18:50:17.3±1.1,6.5°S±0.1°×142.9°E±0.1°,h10km,n8,σ2.6 9/9, mb4.1/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
PMG	**Port Moresby**	**5.11**	**125**	Pn		**Pn**	**18 51 32.8**	**-1.2**
	0.9nm,0.3s,baz=221,slow=1.4,SNR=3.0							
PMG				Sn		**Sn**	**18 52 34.2**	**+1.0**
	1.0nm,0.3s,baz=340,slow=6.6,SNR=3.1							
	3.2nm,0.4s							
CTA	**Charters Tower**	**13.90**	**167**	Lg		Lg	18 57 34.3	
	0.2nm,0.3s,baz=349,slow=7.9,SNR=2.5							
WRA	**Warramunga Arr**	**15.74**	**211**	Pn		**Pn**	**18 54 01.0**	**+1.7**
	0.3nm,0.3s,baz=34,slow=12,SNR=9.5							
WRA				Sn		**Sn**	**18 56 50.1**	**-3.9**
	0.1nm,0.3s,baz=25,slow=22,SNR=1.8							
WRA				Lg		Lg	18 58 45.1	
	0.2nm,0.3s,baz=22,slow=28,SNR=5.1							
ASAR	**Alice Springs**	**19.14**	**206**	P		**Pn**	**18 54 46.2**	**+4.5**
	10nm,0.8s,baz=34,slow=9.0,SNR=56							
ASAR				S		**Sn**	**18 58 15.2**	**-1.2**
	0.6nm,0.9s,baz=19,slow=27,SNR=2.1							
ASAR				Lg		Lg	19 00 37.6	
	baz=17,slow=30,SNR=4.1							
MKAR	**Makanchi Array**	**75.32**	**322**	P		P	19 01 59.2	-1.7
	0.3nm,0.7s,baz=106,slow=7.7,SNR=3.9							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**79.21**	**324**	P		**P**	**19 02 22.4**	**-0.2**
	0.4nm,0.3s,baz=120,slow=5.2,SNR=4.3							
	0.4nm,0.3s							
BVAR	**Borovoye Array**	**84.79**	**325**	P		**P**	**19 02 52.4**	**+0.5**
	2.0nm,0.7s,baz=114,slow=6.8,SNR=14							
	2.0nm,0.7s							
ILAR	**Eielson Array**	**87.55**	**24**	P		**P**	**19 03 04.3**	**-1.0**
	1.0nm,0.7s,baz=251,slow=4.5,SNR=14							
	1.0nm,0.7s							

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*IDC **27** 19:03:34.1±0.7,41.47°N×48.47°E,h0km,mb3.9/15, mbtmp3.9/28,ML3.7/11,Error ellipse: s-maj=13.0km s-min=8.0km az=166.0*
*NEIC **27** 19:03:38.8±1.7,41.38°N±0.06°×48.51°E±0.04°,h50km±6km, mb4.4/53,Error ellipse: s-maj=9.5km s-min=3.6km az=159.0*
*MOS **27** 19:03:39.6,41.30°N×48.34°E,h37km,MPVA5.0*
*AZER **27** 19:03:39.5,41.28°N×48.31°E,h41km,ml4.2*
*DRS **27** 19:03:40.6,41.16°N×48.67°E,h24km*

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*TEH **27** 19:03:40.0,41.28°N×48.29°E,h40km,ML4.3*
*TIF **27** 19:03:40.6,41.27°N×48.33°E,h35km±1km*
*NNC **27** 19:03:43.5±3.2,41.45°N×49.08°E,h38km±21km,mb4.0, Error ellipse: s-maj=24.8km s-min=11.9km az=72.0*
ISC 27 19:03:37.8±0.5,41.32°N±0.02°×48.39°E±0.02,h43km±4km, n326,σ319/393,mb4.3/43,8C-8D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
QUB	**Quba**	**0.06**	**338**	Pg		**Pn**	**19 03 47.3**	**+2.5**
QUBA	**Quba, Azerbaij**	**0.08**	**66**	P		**Pn**	**19 03 47.3**	**+2.5**
QUBA				S		**Sn**	**19 03 53.3**	**+3.6**
QSAR	**Qusar**	**0.22**	**334**	Pg		**Pn**	**19 03 48.0**	**+2.4**
QSAR	**Qusar**	**0.22**	**334**	P		**Pn**	**19 03 48.0**	**+2.4**
QSAR				S		**Sn**	**19 03 54.5**	**+3.4**
XNQ	**Khinaliq**	**0.24**	**232**	Pg		**Pn**	**19 03 47.7**	**+1.8**
XNQ	**Khinaliq**	**0.24**	**232**	P		**Pn**	**19 03 47.8**	**+1.8**
XNQ				S		**Sn**	**19 03 54.0**	**+2.3**
KSMR	**Kasumkent**	**0.34**	**325**	*i* Pg		**Pn**	**19 03 49.3**	**+2.4**
KSMR				*e*Sg		**Sn**	**19 03 56.8**	**+3.5**
KSMR	**Kasumkent**	**0.34**	**325**	*e*PG		**Pn**	**19 03 49.5**	**+2.6**
KSMR				*e*S		**Sn**	**19 03 55.8**	**+2.6**
KSMR				pmax		pmax		
	comp=Z,5μm,0.6s							
SIZA	**Siyzn**	**0.45**	**122**	Pg		**Pn**	**19 03 51.1**	**+2.9**
SIZA	**Siyzn**	**0.45**	**122**	P		**Pn**	**19 03 51.1**	**+2.9**
SIZA				S		**Sn**	**19 04 00.9**	**+5.4**
AKT	**Akhty**	**0.52**	**288**	*i* Pg		**Pn**	**19 03 51.1**	**+2.0**
AKT				*i* Sg		**Sn**	**19 03 59.5**	**+2.5**
AKT	**Akhty**	**0.52**	**288**	*i* PG		**Pn**	**19 03 51.1**	**+2.0**
AKT				*i* S		**Sn**	**19 03 59.5**	**+2.5**
IML	**Ismayilli**	**0.55**	**197**	Pg		**Pn**	**19 03 51.6**	**+2.2**
IML	**Ismayilli**	**0.55**	**197**	P		**Pn**	**19 03 51.6**	**+2.2**
IML				S		**Sn**	**19 04 02.5**	**+4.9**
PQL	**Pirkuli**	**0.55**	**164**	Pg		**Pn**	**19 03 52.2**	**+2.7**
PQL	**Pirkuli**	**0.55**	**164**	P		**Pn**	**19 03 52.2**	**+2.7**
PQL				S		**Sn**	**19 04 03.2**	**+5.4**
QBL	**Gabala**	**0.56**	**228**	Pg		**Pn**	**19 03 51.6**	**+2.1**
QBL	**Gabala**	**0.56**	**228**	P		**Pn**	**19 03 51.6**	**+2.1**
QBL				S		**Sn**	**19 04 01.6**	**+3.8**
ATGJ	**Altiaghaj**	**0.62**	**138**	Pg		**Pn**	**19 03 53.5**	**+3.2**
ATGJ	**Altiaghaj**	**0.62**	**138**	P		**Pn**	**19 03 53.5**	**+3.2**
ATGJ				S		**Sn**	**19 04 03.3**	**+5.1**
DRN	**Derbent**	**0.71**	**356**	*i* Pg		**Pn**	**19 03 54.0**	**+2.6**
DRN				*e*Sg		**Sn**	**19 04 04.5**	**+3.2**
DRN	**Derbent**	**0.71**	**356**	*i* PG		**Pn**	**19 03 54.0**	**+2.6**
DRN				*e*S		**Sn**	**19 04 04.4**	**+3.2**
DRN				pmax		pmax		
	comp=Z,1μm,0.5s							
GBS	**Qobustan**	**0.89**	**152**	Pg		**Pn**	**19 03 58.3**	**+4.4**
GBS	**Qobustan**	**0.89**	**152**	P		**Pn**	**19 03 58.4**	**+4.4**
GBS				S		**Sn**	**19 04 12.0**	**+6.3**
SEKA	**Sheki**	**0.91**	**263**	PG		**Pn**	**19 03 56.2**	**+2.0**
SEKA	**Sheki**	**0.91**	**263**	Pg		**Pn**	**19 03 56.2**	**+2.0**
SEKA	**Sheki**	**0.91**	**263**	P		**Pn**	**19 03 56.5**	**+2.3**
KDMR	**Kurdemir**	**0.96**	**190**	Pg		**Pn**	**19 03 57.4**	**+2.7**
KDMR	**Kurdemir**	**0.96**	**190**	P		**Pn**	**19 03 57.5**	**+2.7**
KDMR				S		**Sn**	**19 04 11.5**	**+4.3**
URKR	**Urkarakh**	**1.02**	**326**	*i* Pg		**Pn**	**19 03 59.2**	**+3.5**
URKR				*e*Sg		**Sn**	**19 04 14.0**	**+5.0**
URKR	**Urkarakh**	**1.02**	**326**	*i* PG		**Pn**	**19 03 59.2**	**+3.5**
URKR				*e*S		**Sn**	**19 04 13.9**	**+5.0**
URKR				pmax		pmax		
	comp=Z,1μm,0.5s							
MNGR	**Mingechevir, A**	**1.13**	**241**	PG		**Pn**	**19 04 00.1**	**+3.0**
MNGR	**Mingechevir, A**	**1.13**	**241**	Pg		**Pn**	**19 04 00.1**	**+3.0**
MNGR	**Mingechevir, A**	**1.13**	**241**	P		**Pn**	**19 04 00.2**	**+3.0**
MNGR				S		**Sn**	**19 04 17.2**	**+5.8**
ZRD	**Zardab**	**1.17**	**208**	Pg		**Pn**	**19 04 00.4**	**+2.7**
ZRD	**Zardab**	**1.17**	**208**	P		**Pn**	**19 04 00.5**	**+2.7**
ZRD				S		**Sn**	**19 04 17.0**	**+4.5**
KMKR	**Kumukh**	**1.26**	**310**	*e*Pg		**Pn**	**19 04 03.1**	**+3.9**
KMKR				*e*Sg		**Sn**	**19 04 20.8**	**+5.8**
KMKR	**Kumukh**	**1.26**	**310**	*e*PG		**Pn**	**19 04 03.1**	**+3.9**
SGKR	**Sergokala**	**1.26**	**335**	*i* Pg		**Pn**	**19 04 03.0**	**+4.0**
SGKR				*e*Sg		**Sn**	**19 04 21.1**	**+6.3**
SGKR	**Sergokala**	**1.26**	**335**	*i* PG		**Pn**	**19 04 03.0**	**+4.0**
SGKR				*e*S		**Sn**	**19 04 21.1**	**+6.3**
SGKR				pmax		pmax		
	comp=Z,1μm,0.5s							
ZKT	**Zaqatala**	**1.34**	**285**	Pg		**Pn**	**19 04 03.6**	**+3.6**
ZKTA	**Zakatala**	**1.37**	**284**	Pn		**Pn**	**19 04 03.8**	**+3.4**
ZKTA				Sn		**Sn**	**19 04 23.2**	**+5.8**
GOBA	**Gobu**	**1.37**	**132**	Pg		Pn	19 04 05.3	+4.8
GOBA	**Gobu**	**1.37**	**132**	Pn		Pn	19 04 05.2	+4.8
GOBA				Sn		**Sn**	**19 04 25.0**	**+7.6**
BRDA	**Brd**	**1.40**	**221**	Pn		**Pn**	**19 04 03.6**	**+2.8**
BRDA				Sn		**Sn**	**19 04 23.2**	**+5.1**
NDR	**Nardaran**	**1.42**	**121**	Pn		**Pn**	**19 04 05.4**	**+4.3**
NDR				Sn		**Sn**	**19 04 26.8**	**+7.5**
ALIB	**Äli-Bayra**	**1.44**	**161**	Pn		Pn	19 04 06.1	+4.7
ALIB				Sn		**Sn**	**19 04 25.1**	**+6.1**
SAAT	**Saatly**	**1.46**	**179**	Pn		**Pn**	**19 04 04.3**	**+2.6**
SAAT				Sn		**Sn**	**19 04 24.2**	**+4.8**
VSHL	**Vashlovani**	**1.50**	**267**	P		Pn	19 04 07.5	+5.2
VSHL				S		**Sn**	**19 04 26.6**	**+5.9**
GNBR	**Gunib**	**1.51**	**316**	*i* Pg		**Pn**	**19 04 06.9**	**+4.4**
GNBR				*e*Sg		**Sn**	**19 04 27.2**	**+6.3**
GNBR	**Gunib**	**1.51**	**316**	*i* PN		**Pn**	**19 04 06.8**	**+4.4**
GNBR				pmax		pmax		
	comp=Z,503nm,0.4s							
AGDM	**Agdam**	**1.56**	**219**	Pn		**Pn**	**19 04 05.0**	**+2.0**
AGDM				Sn		**Sn**	**19 04 25.9**	**+3.9**
ARKR	**Arakani**	**1.65**	**321**	*i* Pg		**Pn**	**19 04 08.9**	**+4.5**
ARKR				*e*Sg		**Sn**	**19 04 31.7**	**+7.3**
ARKR	**Arakani**	**1.65**	**321**	*i* PN		**Pn**	**19 04 08.9**	**+4.5**
ARKR				pmax		pmax		
	comp=Z,266nm,0.7s							
LGD	**Lagodekhi**	**1.69**	**288**	P		**Pn**	**19 04 09.4**	**+4.5**
LGD				S		**Sn**	**19 04 32.2**	**+6.9**
LGD	**Lagodekhi**	**1.69**	**288**	*e*Pg		**Pn**	**19 04 09.4**	**+4.5**
LGD				*e*Sg		**Sn**	**19 04 32.2**	**+6.9**
LGD	**Lagodekhi**	**1.69**	**288**	PN		**Pn**	**19 04 09.3**	**+4.5**
GANJ	**Ganja**	**1.71**	**247**	PN		**Pn**	**19 04 06.8**	**+1.7**
GANJ	**Ganja**	**1.71**	**247**	Pn		**Pn**	**19 04 06.7**	**+1.7**
GANJ				Sn		**Sn**	**19 04 29.5**	**+3.8**
BLQ	**Beylaqan**	**1.72**	**202**	Pn		**Pn**	**19 04 07.0**	**+1.7**
BLQ				Sn		**Sn**	**19 04 28.7**	**+2.7**
XNZR	**Khunzakh**	**1.75**	**315**	*e*Pg		**Pn**	**19 04 10.5**	**+4.6**
XNZR				*e*Sg		**Sn**	**19 04 33.8**	**+6.7**
HNZR	**Khunzah**	**1.76**	**315**	*e*PN		**Pn**	**19 04 10.5**	**+4.6**
HNZR				pmax		pmax		
	comp=Z,395nm,0.4s							
MAK	**Makhachkala**	**1.77**	**338**	*i* Pg		**Pn**	**19 04 10.5**	**+4.6**
MAK				*e*Sg		**Sn**	**19 04 35.2**	**+8.1**
MAK	**Makhachkala**	**1.77**	**338**	*i* PN		**Pn**	**19 04 10.5**	**+4.6**
BUJR	**Buynaksk**	**1.78**	**328**	*e*Pg		Pn	19 04 10.9	+4.7
BUJR				*e*Sg		**Sn**	**19 04 33.9**	**+6.4**
BUJR	**Buynaksk**	**1.78**	**328**	*e*PN		Pn	19 04 10.8	+4.7
BUJR				pmax		pmax		
	comp=Z,546nm,0.4s							
UNCR	**Uncukul**	**1.83**	**320**	*e*Pg		Pn	19 04 11.7	+4.9
UNCR				*e*Sg		**Sn**	**19 04 36.3**	**+7.4**
UNCR	**Uncukul**	**1.83**	**320**	*e*PN		Pn	19 04 11.7	+4.9
UNCR				pmax		pmax		
	comp=Z,448nm,0.7s							
QRD	**Qoradiz**	**2.03**	**204**	Pn		**Pn**	**19 04 11.0**	**+1.5**
QRD				Sn		**Sn**	**19 04 35.1**	**+1.5**
DBC	**Dubki**	**2.06**	**326**	*e*Pg		Pn	19 04 14.9	+4.9
DBC				*e*Sg		**Sn**	**19 04 41.2**	**+6.7**
DBC	**Dubki**	**2.06**	**326**	*e*PN		Pn	19 04 14.9	+4.9
DBC				*e*S		**Sn**	**19 04 41.1**	**+6.7**
DBC				pmax		pmax		
	comp=Z,372nm,0.5s							
GLBA	**Cililabad**	**2.08**	**180**	Pn		**Pn**	**19 04 12.3**	**+2.1**
GLBA				Sn		**Sn**	**19 04 36.9**	**+2.1**
GDB	**GEDABAY**	**2.08**	**254**	Pn		**Pn**	**19 04 12.0**	**+1.6**
GDB				Sn		**Sn**	**19 04 38.9**	**+3.7**
DLMR	**Dylym**	**2.18**	**324**	*e*Pg		Pn	19 04 16.8	+5.1
DLMR				*e*Sg		**Sn**	**19 04 44.8**	**+7.4**
DLMR	**Dylym**	**2.18**	**324**	*e*PN		Pn	19 04 16.7	+5.1
DLMR				*e*S		**Sn**	**19 04 44.8**	**+7.4**
DLMR				pmax		pmax		
	comp=Z,717nm,0.5s							
QZX	**Qazax, Azerbai**	**2.29**	**264**	Pn		**Pn**	**19 04 15.4**	**+2.3**
QZX				Sn		**Sn**	**19 04 44.1**	**+3.9**
DVE	**Vedeno**	**2.35**	**315**	*i* Pn		**Pn**	**19 04 18.0**	**+4.1**
DVE				*e*Sn		**Sn**	**19 04 47.6**	**+6.0**
DVE	**Vedeno**	**2.35**	**315**	*i* PN		**Pn**	**19 04 18.0**	**+4.1**
DVE				*e*S		**Sn**	**19 04 47.6**	**+6.0**
YRD	**Yardimli**	**2.40**	**183**	Pn		**Pn**	**19 04 16.2**	**+1.4**
YRD				Sn		**Sn**	**19 04 44.3**	**+1.2**
GRMI	**Germi**	**2.54**	**189**	Pn		**Pn**	**19 04 18.9**	**+2.3**
LKRN	**Lenkeran, Azer**	**2.62**	**173**	PN		**Pn**	**19 04 20.1**	**+2.4**
LKRN	**Lenkeran, Azer**	**2.62**	**173**	Pn		**Pn**	**19 04 18.8**	**+1.2**
LKRN				Sn		**Sn**	**19 04 49.6**	**+1.3**
LRK	**Lerik**	**2.67**	**181**	Pn		**Pn**	**19 04 19.9**	**+1.4**
LRK				Sn		**Sn**	**19 04 51.3**	**+1.5**
SEAG	**Tbilisi Sea**	**2.73**	**281**	P		**Pn**	**19 04 23.4**	**+4.2**
SEAG				S		Sn	19 05 01.5	+11
SEAG	**Tbilisi Sea**	**2.73**	**281**	PN		**Pn**	**19 04 23.3**	**+4.2**
SEAG				S		Sn	19 05 01.5	+11
SHTL	**Shatili**	**2.76**	**300**	P		**Pn**	**19 04 24.0**	**+4.4**
SHTL				S		**Sn**	**19 04 54.1**	**+2.3**
SHTL	**Shatili**	**2.76**	**300**	PN		**Pn**	**19 04 24.0**	**+4.4**
ASTR	**Astara**	**2.77**	**174**	Pn		**Pn**	**19 04 20.7**	**+1.0**
ASTR				Sn		**Sn**	**19 04 53.2**	**+1.2**
CHRG	**Chargali**	**2.78**	**292**	P		**Pn**	**19 04 23.1**	**+3.2**
CHRG				S		Sn	19 05 07.9	+16
SBZ	**Shahbuz**	**2.90**	**229**	Pn		**Pn**	**19 04 24.1**	**+2.6**
SBZ				Sn		**Sn**	**19 05 00.4**	**+5.2**
GAS1	**Astara - Iran**	**2.95**	**173**	Pn		**Pn**	**19 04 23.8**	**+1.7**
GNI	**Garni**	**3.01**	**248**	Pn		**Pn**	**19 04 25.4**	**+2.3**
GNI	**Garni**	**3.01**	**248**	*e*Pn		Pn	19 04 28.2	+5.1
GNI				*e*Sn		**Sn**	**19 05 03.3**	**+5.3**
GNI	**Garni**	**3.01**	**248**	*e*PN		Pn	19 04 28.2	+5.1
GNI	**Garni**	**3.01**	**248**	Pn		Pn	19 04 29.9	+6.8
	comp=Z,8.0nm,0.3s,baz=51,slow=6.5,SNR=26							
GNI				Lg		Lg	19 05 10.4	
	comp=Z,24nm,0.3s,baz=332,slow=23,SNR=5.7							
	comp=Z,22nm,0.4s							
ORD	**Ordubad**	**3.01**	**218**	Pn		**Pn**	**19 04 25.3**	**+2.2**
ORD				Sn		**Sn**	**19 05 00.9**	**+2.9**
NAX	**Nakhchivan**	**3.08**	**227**	PN		**Pn**	**19 04 27.0**	**+3.0**
NAX	**Nakhchivan**	**3.08**	**227**	Pn		**Pn**	**19 04 27.0**	**+3.0**
NAX				Sn		**Sn**	**19 05 02.1**	**+2.3**
HYR	**Heyderabad**	**3.14**	**240**	Pn		**Pn**	**19 04 28.6**	**+3.8**
HYR				Sn		**Sn**	**19 05 05.1**	**+4.1**
GUDG	**Gudauri**	**3.14**	**293**	P		Pn	19 04 32.8	+7.9
GUDG	**Gudauri**	**3.14**	**293**	*i* Pn		Pn	19 04 30.0	+5.1
GUDG				*e*Sn		**Sn**	**19 05 05.0**	**+3.8**
GUDG	**Gudauri**	**3.14**	**293**	*i* PN		Pn	19 04 30.0	+5.1
KMGR	**Komgaron**	**3.14**	**305**	*e*Pn		**Pn**	**19 04 29.2**	**+4.4**
KMGR				*e*Sn		**Sn**	**19 05 06.8**	**+5.7**
KMGR	**Komgaron**	**3.14**	**305**	*e*PN		**Pn**	**19 04 29.2**	**+4.4**
DMNI	**Dmanisi**	**3.16**	**272**	P		Pn	19 04 28.8	+3.6
DMNI				S		Sn	19 05 16.6	+15
DMNI	**Dmanisi**	**3.16**	**272**	PN		**Pn**	**19 04 28.8**	**+3.6**
DMNI				S		Sn	19 05 16.6	+15
MTEO	**Meteo**	**3.18**	**297**	P		**Pn**	**19 04 29.6**	**+3.9**
MTEO	**Meteo**	**3.18**	**297**	PN		**Pn**	**19 04 29.6**	**+3.9**
TRLG	**Trialeti**	**3.23**	**275**	P		**Pn**	**19 04 28.3**	**+2.1**
TRLG				S		Sn	19 05 14.4	+11
TRLG	**Trialeti**	**3.23**	**275**	PN		**Pn**	**19 04 28.3**	**+2.1**
TRLG				S		Sn	19 05 14.4	+11
IMRD	**Marand**	**3.32**	**219**	Pn		**Pn**	**19 04 29.6**	**+2.1**
LACR	**Lac**	**3.40**	**298**	*i* Pn		**Pn**	**19 04 32.5**	**+4.1**
LACR				*e*Sn		**Sn**	**19 05 15.9**	**+8.4**
LACR	**Lac**	**3.40**	**298**	*i* PN		**Pn**	**19 04 32.5**	**+4.1**
LACR				*e*S		**Sn**	**19 05 15.9**	**+8.4**
BRNG	**Burnasheti**	**3.44**	**277**	P		**Pn**	**19 04 32.4**	**+3.3**
BRNG				S		Sn	19 05 19.3	+11
BRNG	**Burnasheti**	**3.44**	**277**	*e*Pn		**Pn**	**19 04 32.4**	**+3.3**
BRNG				*e*Sn		Sn	19 05 19.3	+11
BRNG	**Burnasheti**	**3.44**	**277**	PN		**Pn**	**19 04 32.4**	**+3.3**
BRNG				S		Sn	19 05 19.3	+11
MAKU	**Maku**	**3.45**	**236**	Pn		**Pn**	**19 04 31.8**	**+2.6**
BTKR	**Batakoyurt**	**3.51**	**307**	*e*Pn		**Pn**	**19 04 33.4**	**+3.5**
BTKR				*e*Sn		**Sn**	**19 05 15.0**	**+4.8**
BTKR	**Batakoyurt**	**3.51**	**307**	*e*PN		**Pn**	**19 04 33.4**	**+3.5**
ARNR	**Ardon**	**3.57**	**303**	*e*Pn		**Pn**	**19 04 34.1**	**+3.4**
ARNR				*e*Sn		**Sn**	**19 05 14.9**	**+3.3**
ARNR	**Ardon**	**3.57**	**303**	*e*PN		**Pn**	**19 04 34.1**	**+3.4**
BGD	**Bogdanovka**	**3.61**	**271**	P		**Pn**	**19 04 36.0**	**+4.6**
BGD	**Bogdanovka**	**3.61**	**271**	PN		**Pn**	**19 04 36.0**	**+4.6**
TRKR	**Terskaya**	**3.62**	**313**	*e*Pn		Pn	19 04 38.4	+7.1
TRKR				*e*Sn		**Sn**	**19 05 16.1**	**+3.4**
TRKR	**Terskaya**	**3.62**	**313**	*e*PN		Pn	19 04 38.4	+7.1
ALIG	**Mtskhetisjvari**	**3.64**	**284**	P		**Pn**	**19 04 35.7**	**+4.0**
ALIG	**Mtskhetisjvari**	**3.64**	**284**	PN		**Pn**	**19 04 35.7**	**+4.0**
KORR	**Kora**	**3.67**	**300**	*e*Pn		**Pn**	**19 04 35.6**	**+3.6**
KORR				*e*Sn		**Sn**	**19 05 17.1**	**+3.1**
**

GYA0	**ALIBECK ARRAY**	**8.23**	**111**	P		**Pn**		19 05 33.4	-1.3
GYA0				S		**Sn**		19 07 02.9	-3.5
GYA0B	**ALIBECK ARRAY**	**8.23**	**111**	⇓P		**Pn**		19 05 33.4	-1.3
GYA0B				⇓S		**Sn**		19 07 02.9	-3.5
GYA0B	**ALIBECK ARRAY**	**8.23**	**111**			**Pn**		19 05 33.6	-1.1
VRH	**Novokhopyorsk**	**10.90**	**337**	*e*P		**Pn**		19 06 10.3	-0.8
VRH	comp=Z,9.0nm,0.7s			pmax	pmax				
BELG	**Belogornoye**	**11.09**	**358**	*i* P		**Pn**		19 06 12.4	-1.2
BELG	**Belogornoye**	**11.09**	**358**	Pn		**Pn**		19 06 12.6	-1.1
BELG	comp=Z,4.0nm,0.3s,baz=184,slow=15,SNR=9.5			Sn		**Sn**		19 08 08.8	-7.3
	comp=Z,1.8nm,0.3s,baz=262,slow=24,SNR=2.8 comp=Z,15nm,0.5s								
AKTO	**Aktyubinsk**	**11.31**	**33**	⇑P		**Pn**		19 06 16.8	+0.2
AKTO	comp=Z,5.8nm,0.6s			⇑S		**Sn**		19 08 17.3	-4.3
	comp=Z,34nm,1.0s								
AKTO	**Aktyubinsk**	**11.31**	**33**	Pn		**Pn**		19 06 15.1	-1.6
AKTO	comp=Z,1.3nm,0.3s,baz=213,slow=9.5,SNR=21			Sn		**Sn**		19 08 13.9	-7.6
	comp=Z,3.6nm,0.3s,baz=307,slow=20,SNR=11 comp=Z,2.4nm,0.3s								
BRTR	**Keskin Array B**	**11.34**	**267**	Pn		**Pn**		19 06 22.0	+4.7
	comp=Z,0.4nm,0.6s,baz=80,slow=7.9,SNR=3.1								
AB31	**Akbulak array**	**11.36**	**42**	P		**Pn**		19 06 17.4	+0.1
AB31	comp=Z,1.2nm,0.3s,baz=224,slow=13,SNR=51			⇓S		**Sn**		19 08 17.8	-4.9
	comp=Z,17nm,0.7s,baz=222,slow=16,SNR=10.0								
AB31	**Akbulak array**	**11.36**	**42**	P		**Pn**		19 06 17.4	+0.1
AB31				S		**Sn**		19 08 17.8	-4.9
ABKAR	**Akbulak array**	**11.36**	**42**	Pn		**Pn**		19 06 16.6	-0.7
VSR	**Storozhevoye**	**11.77**	**330**	*e*P		**Pn**		19 06 23.6	+0.7
VSR	comp=Z,6.0nm,0.5s			pmax	pmax				
LPSR	**Galich'ya Gora**	**12.99**	**334**	*e*P		**Pn**		19 06 39.0	-0.6
LPSR	comp=Z,20nm,0.6s			pmax	pmax				
OBN	**Obninsk**	**15.86**	**334**	*i* P		**Pn**		19 07 14.9	-2.9
OBN	comp=Z,9.0nm,1.1s			pmax	pmax				
SIMJ	**Simiganj**	**16.02**	**93**	Pn		**Pn**		19 07 19.8	-0.3
AKASG	**Malin Array Be**	**16.25**	**312**	Pn		**Pn**		19 07 23.5	+0.7
AKASG	**Malin Array Be**	**16.25**	**312**	*e*P		**Pn**		19 07 25.7	+2.9
AKASG	comp=Z,2.0nm,0.3s			pmax	pmax				
AKASG	**Malin Array Be**	**16.25**	**312**	Pn		**Pn**		19 07 19.7	-3.0
	comp=Z,0.7nm,0.3s,baz=121,slow=12,SNR=3.0 comp=Z,0.2nm,0.3s								
AKBB	**Malin Array Si**	**16.25**	**312**			**Pn**		19 07 23.7	+0.9
AKBB	comp=Z,7.1nm,0.7s			IAmb	IAmb			19 08 05.5	
AKBB	**Malin Array Si**	**16.25**	**312**	P		**Pn**		19 07 23.7	+0.9
AKBB	comp=Z,7.0nm,0.7s			pmax	pmax				
KIEV	**Kiev**	**16.25**	**312**			**Pn**		19 07 23.3	+0.5
KIEV	**Kiev**	**16.25**	**312**	P		**Pn**		19 07 23.3	+0.5
KIEV	comp=Z,7.0nm,0.8s			pmax	pmax				
KK31	**Karatay Array**	**16.48**	**76**	P		**Pn**		19 07 25.0	-0.9
	comp=Z,2.5nm,0.5s,baz=275,slow=18,SNR=54								
KK31	comp=Z,2.3nm,0.6s,baz=252,slow=26,SNR=6.0			⇓S		**Sn**		19 10 21.8	-5.9
KK31	**Karatay Array**	**16.48**	**76**	Pn		**Pn**		19 07 24.4	-1.4
KK31	**Karatay Array**	**16.48**	**76**	P		**Pn**		19 07 24.4	-1.4
KK31	comp=Z,6.0nm,0.7s			pmax	pmax				
KKAR	**Karatay Array**	**16.48**	**76**	Pn		**Pn**		19 07 23.9	-1.9
KKAR	**Karatay Array**	**16.48**	**76**	P		**Pn**		19 07 23.9	-1.9
ARU	**Arti**	**16.50**	**20**	Pn		**Pn**		19 07 23.1	-2.9
ARU	comp=Z,7.8nm,0.7s			IAmb	IAmb			19 08 01.5	
ARU	**Arti**	**16.50**	**20**	*d i*P		**Pn**		19 07 26.4	+0.4
ARU				S		**Sn**		19 10 29.2	+1.2
ARU	comp=Z,18nm,1.8s			pmax	pmax				
ARU	**Arti**	**16.50**	**20**	Pn		**Pn**		19 07 21.7	-4.3
	comp=Z,1.5nm,0.3s,baz=179,slow=2.7,SNR=7.7								
ARU	comp=Z,0.9nm,0.3s,baz=266,slow=14,SNR=1.7 comp=Z,3.9nm,0.3s			Sn		Sn		19 10 12.1	-16
MLR	**Muntele Rosu**	**16.82**	**292**	Pn		**Pn**		19 07 31.1	+0.9
MLR	**Muntele Rosu**	**16.82**	**292**	Pn		**Pn**		19 07 31.3	+1.1
	comp=Z,2.7nm,0.8s,baz=126,slow=18								
KIRV	**Kirov**	**17.30**	**2**	P		**Pn**		19 07 34.0	-1.8
	comp=Z,1.0nm,0.3s,baz=180,slow=11,SNR=1.4 comp=Z,9.8nm,0.6s								
SVE	**Sverdlovsk**	**17.43**	**23**	*e*P		**Pn**		19 07 35.9	-1.6
SVE				*e*S		**Sn**		19 10 40.4	-10
SVE	comp=Z,18nm,1.0s			pmax	pmax				
UOSS	**Minazif**	**17.58**	**156**	Pn		**Pn**		19 07 38.7	-0.9
KARP	**Karpathos**	**17.59**	**258**	P		**P**		19 07 42.7	+2.4
KARP	comp=Z,64nm,1.1s			IAmb	IAmb			19 08 27.6	
KBL	**Kabul**	**17.62**	**106**			**Pn**		19 07 37.6	-2.7
KBL	**Kabul**	**17.62**	**106**	P		**Pn**		19 07 37.6	-2.7
KBL	comp=Z,11nm,1.1s			pmax	pmax				
BURAR	**Bucovina Array**	**17.66**	**299**	P		**Pn**		19 07 41.6	+1.0
BUR08	**Bucovina Ar. S**	**17.68**	**299**			**Pn**		19 07 42.1	+1.3
BUR08	comp=Z,14nm,1.2s			IAmb	IAmb			19 08 17.8	
RAYN	**Ar Rayn**	**17.91**	**189**			**P**		19 07 45.1	+1.1
RAYN	**Ar Rayn**	**17.91**	**189**	P		**P**		19 07 45.1	+1.1
RAYN	comp=Z,4.0nm,1.1s			pmax	pmax				
OTUK	**Ortayu**	**18.31**	**60**	⇑P		**Pn**		19 07 48.8	+0.3
	comp=Z,7.2nm,0.9s								
OTUK	**Ortayu**	**18.31**	**60**	P		**Pn**		19 07 48.8	+0.3
BRVK	**Borovoye**	**18.86**	**44**	P		**P**		19 07 53.2	-0.9
BRVK	comp=Z,8.1nm,0.6s			IAmb	IAmb			19 07 56.8	
BRVK	**Borovoye**	**18.86**	**44**	*i* P		**Pn**		19 07 54.9	-0.2
BRVK	comp=Z,6.0nm,0.6s			pmax	pmax				
EKS2	**Erkin-Say**	**18.90**	**77**	P		**Pn**		19 07 57.3	+1.6
	SNR=16								
BVA0	**Borovoye Array**	**18.90**	**44**	P		**Pn**		19 07 56.2	+0.6
	comp=Z,4.4nm,0.8s,baz=254,slow=8.6,SNR=35								
BVA0	**Borovoye Array**	**18.90**	**44**	P		**Pn**		19 07 56.2	+0.6
BVAR	**Borovoye Array**	**18.90**	**44**	P		**Pn**		19 07 55.9	+0.4
	comp=Z,0.2nm,0.3s,baz=246,slow=9.4,SNR=32								
BVAR	baz=227,slow=23,SNR=4.3 comp=Z,2.4nm,0.3s			Sn		S		19 11 11.7	-15
MNK	**Minsk**	**18.95**	**321**	*i* P		**P**		19 07 51.5	-3.7
	comp=Z,11nm,0.7s,baz=125								
MNK	comp=E,9.0nm,1.1s			*i* P		**Pn**		19 07 53.0	-3.1
MNK	comp=N,11nm,0.8s			*i* P		**Pn**		19 07 53.0	-3.1
MNK				*i* pP		**pP**		19 08 05.5	-0.2
MNK				*i* S		**S**		19 11 24.4	-3.7
MNK				*i* LQ		LQ		19 13 36.9	
MNK				*i* LR		LR		19 15 03.0	
MNK	**Minsk**	**18.95**	**321**	*i* P		**P**		19 07 51.4	-3.7
MNK				*i* S		**S**		19 11 24.3	-3.7
MNK	comp=Z,11nm,0.7s			pmax	pmax				
MNK	comp=E,9.0nm,1.1s			pmax	pmax				
MNK	comp=N,11nm,0.8s			pmax	pmax				
USP	**Ospenovka**	**19.39**	**76**	P		**Pn**		19 08 01.6	+0.1
	SNR=5.4								
AAK	**Ala-Archa**	**19.43**	**77**	P		**P**		19 07 59.6	-1.1
	SNR=10								
AAK	**Ala-Archa**	**19.43**	**77**	P		**P**		19 07 59.2	-1.4
AAK	comp=Z,18nm,1.4s			IAmb	IAmb			19 08 04.5	
AAK	**Ala-Archa**	**19.43**	**77**	*i* P		**Pn**		19 08 01.7	-0.4
AAK	comp=Z,14nm,1.3s			pmax	pmax				
AAK	**Ala-Archa**	**19.43**	**77**	P		**Pn**		19 08 02.4	+0.3
	comp=Z,0.5nm,0.3s,baz=262,slow=12,SNR=18 comp=Z,4.9nm,0.7s								
UCH	**Uchtor**	**19.48**	**79**	P		**Pn**		19 08 04.8	+1.7
	SNR=5.2								
NACGM	**Naroch**	**19.71**	**321**	*e*P		**P**		19 08 03.1	-0.2
	comp=Z,17nm,0.8s,baz=126								
KBK	**Karagaybulak**	**19.76**	**77**	P		**Pn**		19 08 06.3	+0.2
	SNR=13								
WSAR	**Wadi Sarin**	**19.97**	**151**	P		**Pn**		19 08 08.6	+0.1
	comp=Z,2.7nm,0.6s,baz=347,slow=9.7,SNR=4.2 comp=Z,2.7nm,0.6s								

KLMR	**Klimovskoe**	**20.30**	**347**	*e*P		**P**		19 08 09.4	-0.3
KLMR				*e*				19 11 56.1	
KLMR				pmax	pmax				
	comp=Z,12nm,0.7s								
ISAL	**Salakas**	**20.40**	**322**	*e*P		**P**		19 08 11.9	+1.0
ULHL	**Ulahol**	**20.76**	**78**	P		Pn		19 08 19.3	+1.5
	SNR=5.3								
KSH	**Kashi**	**21.05**	**86**	P		**P**		19 08 17.5	-0.7
KSH				pP		pP		19 08 27.0	-1.6
KSH	comp=Z,8.0nm,1.0s			pmax	pmax				
SUW	**Suwalki**	**21.06**	**316**	P		**P**		19 08 19.2	+1.2
SUW	**Suwalki**	**21.06**	**316**	P		**P**		19 08 19.2	+1.2
SUW	comp=Z,45nm,0.8s			pmax	pmax				
NIL	**Nilore**	**21.11**	**103**	P		**P**		19 08 17.9	-0.9
NIL	comp=Z,15nm,0.8s			IAmb	IAmb			19 08 24.9	
NIL	**Nilore**	**21.11**	**103**	P		**P**		19 08 17.9	-0.9
NIL	comp=Z,15nm,0.8s			pmax	pmax				
VSU	**Vasula**	**21.95**	**329**	*i* P		**P**		19 08 26.7	-0.7
VSU	comp=Z,23nm,0.8s			pmax	pmax				
VSU	**Vasula**	**21.95**	**329**	*e*P		**P**		19 08 27.7	+0.3
TARG	**Taragay, Kyrgy**	**21.98**	**79**	P		**P**		19 08 27.4	-1.1
TARG	comp=Z,7.7nm,1.0s			IAmb	IAmb			19 08 36.2	
TARG	**Taragay, Kyrgy**	**21.98**	**79**	P		**P**		19 08 27.4	-1.1
TARG	comp=Z,8.0nm,1.0s			pmax	pmax				
VALR	**Valaam**	**22.71**	**338**	*i* P		**P**		19 08 34.9	-0.7
VALR	comp=Z,10.0nm,0.9s			pmax	pmax				
KURBB	**Kurchatov Arra**	**22.78**	**56**	⇑P		**P**		19 08 38.9	+2.4
	comp=Z,7.6nm,1.1s								
KURBB	**Kurchatov Arra**	**22.78**	**56**	P		**P**		19 08 38.9	+2.4
KURBB	**Kurchatov Arra**	**22.78**	**56**	P		**P**		19 08 36.5	+0.1
	comp=Z,1.0nm,0.2s,baz=257,slow=11,SNR=2.6 comp=Z,1.0nm,0.2s								
KURK	**Kurchatov**	**22.86**	**55**	P		**P**		19 08 37.8	+0.5
KURK	comp=Z,6.2nm,0.8s			IAmb	IAmb			19 08 54.7	
KURK	**Kurchatov**	**22.86**	**55**	*i* P		**P**		19 08 38.1	+0.9
KURK	comp=Z,4.0nm,0.8s			pmax	pmax				
MTSE	**Matsula**	**23.28**	**327**	*e*P		**P**		19 08 42.0	+0.6
MEF	**Metsahovi**	**24.01**	**330**	*e*P		**P**		19 08 49.1	+0.8
FIA1	**FINESS Array S**	**24.26**	**334**	P		**P**		19 08 50.1	-0.5
FINES	**FINESS Array B**	**24.26**	**334**	P		**P**		19 08 50.3	-0.2
FINES	**FINESS Array B**	**24.26**	**334**	*e*P		**P**		19 08 50.9	+0.3
FINES	comp=Z,10.0nm,0.4s			pmax	pmax				
FINES	**FINESS Array B**	**24.26**	**334**	P		**P**		19 08 51.4	+0.8
	comp=Z,9.4nm,0.4s,baz=135,slow=9.9,SNR=92 comp=Z,9.4nm,0.4s								
MAKZ	**Makanchi**	**24.63**	**66**	⇓P		**P**		19 08 55.1	+1.0
	comp=Z,4.1nm,1.1s								
MAKZ	**Makanchi**	**24.63**	**66**	P		**P**		19 08 54.1	0.0
MAKZ	comp=Z,8.2nm,1.5s			IAmb	IAmb			19 08 57.7	
MAKZ	**Makanchi**	**24.63**	**66**	P		**P**		19 08 54.1	0.0
MAKZ	comp=Z,8.0nm,1.5s			pmax	pmax				
MK31	**Makanchi Array**	**24.84**	**66**	P		**P**		19 08 57.0	+0.9
	comp=Z,2.0nm,0.6s,baz=268,slow=8.2,SNR=28								
MK31	**Makanchi Array**	**24.84**	**66**	P		**P**		19 08 55.2	-0.8
MK31	**Makanchi Array**	**24.84**	**66**	*i* P		**P**		19 08 56.8	+0.8
MKAR	**Makanchi Array**	**24.84**	**66**	P		**P**		19 08 56.4	+0.4
MKAR	**Makanchi Array**	**24.84**	**66**	P		**P**		19 08 57.1	+1.1
	comp=Z,1.8nm,0.6s,baz=268,slow=9.5,SNR=21 comp=Z,1.8nm,0.6s								
GERES	**GERESS Array B**	**25.45**	**299**	P		**P**		19 09 03.2	+1.5
	comp=Z,0.3nm,0.4s,baz=99,slow=13,SNR=1.8 comp=Z,0.3nm,0.4s								
RAF	**Rauma**	**25.53**	**330**	*e*P		**P**		19 09 02.5	+0.4
ZAA0	**Zalesovo Array**	**27.28**	**50**	P		**P**		19 09 16.6	-1.4
ZALV	**Zalesovo Beam**	**27.28**	**50**	P		**P**		19 09 16.3	-1.6
ZALV	**Zalesovo Beam**	**27.28**	**50**	P		**P**		19 09 18.2	+0.2
	comp=Z,0.6nm,0.4s,baz=261,slow=11,SNR=3.4 comp=Z,0.6nm,0.4s								
CLTB	**Caltabellotta**	**27.30**	**274**	P		**P**		19 09 19.5	+1.1
LVZ	**Lovozero**	**27.66**	**349**	P		**P**		19 09 19.1	-2.1
LVZ	comp=Z,33nm,1.2s			IAmb	IAmb			19 09 46.4	
LVZ	**Lovozero**	**27.66**	**349**	P		**P**		19 09 19.2	-2.1
LVZ	comp=Z,33nm,1.2s			pmax	pmax				
HFS	**Hagfors**	**28.43**	**323**	P		**P**		19 09 28.4	+0.2
	comp=Z,1.4nm,0.4s,baz=118,slow=9.1,SNR=13 comp=Z,1.4nm,0.4s								
WMQ	**Urumqi**	**28.87**	**72**	*e*P		**P**		19 09 34.5	+2.2
WMQ	comp=Z,9.0nm,0.9s			pmax	pmax				
NC602	**NORSAR Array S**	**29.65**	**323**	P		**P**		19 09 39.5	+0.5
NC405	**NORSAR Array S**	**29.73**	**324**	P		**P**		19 09 40.1	+0.4
NC405	comp=Z,34nm,1.4s			IAmb	IAmb			19 10 18.7	
NB201	**NORSAR Array S**	**29.89**	**324**	P		**P**		19 09 41.0	-0.2
NB2	**NORSAR Subarra**	**29.92**	**324**	P		**P**		19 09 41.1	-0.3
	comp=Z,1.0nm,0.5s,baz=115,slow=8.6								
NOA	**NORSAR Array B**	**29.92**	**324**	P		**P**		19 09 41.5	0.0
	comp=Z,0.4nm,0.6s,baz=120,slow=9.1,SNR=6.7 comp=Z,0.4nm,0.6s								
NC303	**NORSAR Array S**	**29.93**	**324**	P		**P**		19 09 41.5	+0.1
NC303	comp=Z,16nm,1.1s			IAmb	IAmb			19 09 58.8	
NAO01	**NORSAR Array S**	**29.99**	**323**	P		**P**		19 09 41.7	-0.3
NBO00	**NORSAR Array S**	**30.11**	**324**	P		**P**		19 09 42.8	-0.3
NC204	**NORSAR Array S**	**30.22**	**324**	P		**P**		19 09 44.4	+0.3
KEV	**Kevo**	**30.60**	**346**	P		**P**		19 09 48.1	+0.9
KEV	**Kevo**	**30.60**	**346**	P		**P**		19 09 48.1	+0.9
KEV	comp=Z,56nm,1.4s			pmax	pmax				
ARCES	**ARCESS Array B**	**30.71**	**344**	P		**P**		19 09 48.8	+0.6
ARCES	comp=Z,11nm,1.4s			IAmb	IAmb			19 09 59.2	
ARCES	**ARCESS Array B**	**30.71**	**344**	P		**P**		19 09 48.8	+0.6
ARCES	comp=Z,11nm,1.4s			pmax	pmax				
ARCES	**ARCESS Array B**	**30.71**	**344**	P		**P**		19 09 48.9	+0.6
	comp=Z,2.3nm,0.7s,baz=146,slow=8.8,SNR=19 comp=Z,2.3nm,0.7s								
EKA	**Eskdalemuir Ar**	**36.15**	**311**	P		**P**		19 10 35.3	-0.4
	comp=Z,0.8nm,0.4s,baz=96,slow=8.5,SNR=4.9 comp=Z,0.8nm,0.4s								
LSA	**Lhasa**	**36.35**	**95**	P		**P**		19 10 38.1	-0.1
LSA	comp=Z,3.7nm,0.7s			IAmb	IAmb			19 10 41.5	
LSA	**Lhasa**	**36.35**	**95**	P		**P**		19 10 38.1	-0.1
LSA	comp=Z,4.0nm,0.7s			pmax	pmax				
SPB2	**Spitsbergen Ar**	**39.16**	**350**	P		**P**		19 11 01.7	+0.8
SPITS	**Spitsbergen Ar**	**39.17**	**350**	P		**P**		19 11 02.0	+1.1
	comp=Z,8.4nm,0.8s,baz=145,slow=12,SNR=7.0								
ESBB	**Sonseca Array**	**39.35**	**285**	P		**P**		19 11 03.8	+0.9
ESBB	comp=Z,9.7nm,1.2s			IAmb	IAmb			19 11 45.4	
ESDC	**Sonseca Array**	**39.35**	**285**	P		**P**		19 11 03.8	+0.8
ESDC	**Sonseca Array**	**39.35**	**285**	P		**P**		19 11 04.7	+1.7
	comp=Z,0.6nm,0.9s,baz=92,slow=4.1,SNR=2.0 comp=Z,0.6nm,0.9s								
PAB	**San Pablo**	**39.67**	**285**	P		**P**		19 11 05.9	+0.2
PAB	comp=Z,20nm,1.4s			IAmb	IAmb			19 11 26.1	
PAB	**San Pablo**	**39.67**	**285**	P		**P**		19 11 05.9	+0.2
PAB	comp=Z,20nm,1.5s			pmax	pmax				
SONM	**Songino Array**	**40.98**	**61**	*e*P		**P**		19 11 17.7	+1.2
SONM	comp=Z,1.0nm,0.6s			pmax	pmax				
SONM	**Songino Array**	**40.98**	**61**	P		**P**		19 11 17.5	+1.0
	comp=Z,0.5nm,0.6s,baz=282,slow=8.8,SNR=4.2 comp=Z,0.5nm,0.6s								
ULN	**Ulaanbaatar**	**41.40**	**60**	P		**P**		19 11 20.9	+0.9
ULN	comp=Z,2.5nm,0.6s			IAmb	IAmb			19 11 22.6	
ULN	**Ulaanbaatar**	**41.40**	**60**	P		**P**		19 11 20.9	+0.9
ULN	comp=Z,3.0nm,0.6s			pmax	pmax				
PZH	**PanZhiHua**	**45.98**	**91**	P		**P**		19 11 57.0	0.0
PZH	comp=Z,10.0nm,0.7s			pmax	pmax				
PZH	comp=Z,130nm,4.7s			pmax	pmax				
HHC	**Hu-ho-hao-te**	**46.65**	**69**	*e*P		**P**		19 12 02.3	+0.2
HHC				pP	pP			19 12 13.8	-0.3
HHC	comp=Z,12nm,0.6s			pmax	pmax				
HHC	comp=Z,100nm,5.6s			pmax	pmax				
CHTO	**Chiang Mai**	**48.38**	**102**	P		**P**		19 12 16.5	+0.9
CHTO	comp=Z,5.0nm,0.6s			IAmb	IAmb			19 12 17.7	
CHTO	**Chiang Mai**	**48.38**	**102**	P		**P**		19 12 16.5	+0.9
CHTO	comp=Z,5.0nm,0.6s			pmax	pmax				
CMAR	**Chiang Mai Arr**	**48.60**	**102**	P		**P**		19 12 18.3	+1.0
	comp=Z,3.0nm,0.6s,baz=304,slow=8.4,SNR=20 comp=Z,3.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**49.31**	**249**	P		**P**		19 12 22.4	-0.3
	comp=Z,0.3nm,0.8s,baz=30,slow=7.7,SNR=1.7								
KSRS	**Korea Array**	**59.52**	**65**	P		**P**		19 13 37.4	+0.7
	comp=Z,1.0nm,0.6s,baz=299,slow=5.3,SNR=2.6 comp=Z,1.0nm,0.6s								
E22K	**Anaktuvuk Pass**	**69.81**	**8**	P		**P**		19 14 42.5	-0.9
E22K	comp=Z,3.1nm,1.2s			IAmb	IAmb			19 15 11.9	
E29M	**Blow River**	**70.51**	**2**	P		**P**		19 14 49.2	+1.6
E29M	comp=Z,3.5nm,1.1s			IAmb	IAmb			19 15 04.1	
BMAR	**Burnt Mountain**	**71.13**	**5**	P		**P**		19 14 49.8	-1.6
G31M	**Satah River**	**72.07**	**1**	P		**P**		19 14 56.0	-0.9
G31M	comp=Z,5.1nm,1.1s			IAmb	IAmb			19 15 14.4	
CAST	**Castle Rocks**	**74.34**	**9**	P		**P**		19 15 10.2	-0.2
CAST	comp=Z,6.1nm,1.2s			IAmb	IAmb			19 15 30.9	
YKA	**Yellowknife Ar**	**75.63**	**352**	P		**P**		19 15 18.9	+1.0
	comp=Z,1.0nm,0.6s,baz=6.1,slow=6.0,SNR=3.0 comp=Z,0.1nm,0.6s								
BCAR	**Beaver Creek A**	**75.64**	**5**	P		**P**		19 15 17.8	-0.2
SKT	**Skwentna**	**75.80**	**10**	P		**P**		19 15 17.0	-1.8
SKT	comp=Z,11nm,1.4s			IAmb	IAmb			19 15 35.8	
SML	**Sawmill**	**76.33**	**8**	P		**P**		19 15 20.9	-1.1
SUA	**Susitna One**	**76.39**	**9**	P		**P**		19 15 23.0	+0.6
SUA	comp=Z,5.9nm,1.0s			IAmb	IAmb			19 15 52.5	

OSPL ***27*** *19:17:25.6±0.6, 19°.77N×69°.72W, h80km±10km, ML2.2*
SDD ***27*** *19:17:28.0±2.4, 19°.20N×69°.69W, h15km±22km, MD2.7, ML2.4, MW2.9*

ISC 27 19:17:26.8±1.1, 19°.22N±0°.06×69°.72W±0°.03, h24km±9km, n11, σ0s91/19, 8C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NADR	**Nagua**	**0.19**	**316**	*e*Pg		**Pb**	**19 17 32.3**	**0.0**
NADR				⇑*e*Sg		**Sb**	**19 17 37.1**	**+1.1**
NADR				IAML			19 17 37.7	
	comp=E,528nm,0.2s							
NADR	comp=N,2μm,0.2s			IAML			19 17 37.8	
DR08	**Loma La Naviza**	**0.39**	**229**	⇑*e*Pg		**Pb**	**19 17 33.7**	**-1.5**
DR08				*e*Sg		**Sb**	**19 17 40.5**	**-0.4**
DR08	comp=N,3μm,0.1s			IAML			19 17 41.3	
SMDR	**Samana, DR**	**0.50**	**82**	*e*Pg		**Pb**	**19 17 35.8**	**-1.3**
SMDR				⇑*e*Sg		**Sb**	**19 17 44.3**	**+0.2**
SMDR				IAML			19 17 44.5	
	comp=E,102nm,0.3s							
SMDR	comp=N,142nm,0.3s			IAML			19 17 44.6	
HATOM	**Hato Mayor del**	**0.53**	**143**	⇑*e*Pg		**Pb**	**19 17 37.2**	**-0.4**
HATOM				⇑*e*Sg		**Sb**	**19 17 45.0**	**+0.1**
HATOM				IAML			19 17 45.1	
	comp=E,389nm,0.3s							
HATOM	comp=N,145nm,0.2s			IAML			19 17 45.3	
MIDR	**Miches**	**0.67**	**110**	⇑*e*Pg		**Pb**	**19 17 38.8**	**-1.1**
MIDR				⇓*e*Sg		**Sb**	**19 17 48.2**	**-0.6**
MIDR				IAML			19 17 50.0	
	comp=N,42nm,0.1s							
ABDR	**Alto Bandera**	**0.95**	**245**	⇓*e*Pg		**Pb**	**19 17 44.9**	**0.0**
ABDR				⇑*e*Sg		**Sn**	**19 17 58.7**	**+0.7**
ABDR				IAML			19 17 59.2	
	comp=N,133nm,0.6s							
ABDR				IAML			19 17 59.5	
	comp=E,65nm,0.2s							
SC01	**Santiago de lo**	**0.98**	**283**	*i* P		**Pb**	**19 17 43.5**	**-1.7**
SC01				*e*S		**Sb**	**19 17 57.6**	**-0.1**
SC01				IAML			19 18 06.0	
	comp=Z,32nm,0.7s							
BANI	**BANI**	**1.02**	**217**	*e*Pg		**Pn**	**19 17 45.9**	**+0.2**
BANI				⇑*e*Sg		**Sn**	**19 18 00.6**	**+1.2**
BANI				IAML			19 18 02.0	
	comp=E,108nm,0.2s							
BANI	comp=N,110nm,0.1s			IAML			19 18 02.0	
PCDR	**Punta Cana, DR**	**1.44**	**119**	*i* P		**Pb**	**19 17 53.5**	**+0.5**
PCDR				IAML			19 18 21.1	
	comp=Z,71nm,1.2s							
SDDR	**Presa de Saban**	**1.51**	**261**	*i* P		**Pn**	**19 17 52.6**	**+0.2**
SDDR				IAML			19 18 21.9	
	comp=Z,8.7nm,1.2s							
PODR	**Polo**	**1.81**	**235**	*i* P		**Pb**	**19 17 58.8**	**-0.7**

IDC 27 19:19:16.4±7.7, 6°.04S×142°.26E, h0km, mb3.1/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=271.5km s-min=37.1km az=95.0, New Guinea

| Code | Station Name | Δ° | AZ° | Phase | ID | ISC | Time

PZH	**PanZhiHua**	**64.40**	**45**	P	**P**	**19 36 22.8**	**+3.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,120nm,6.5s						
ABKAR	**Akbulak array**	**70.01**	**2**	P	**P**	**19 36 54.4**	**-0.1**
ASAR	**Alice Springs**	**70.72**	**109**	P	**P**	**19 37 01.0**	**+1.4**
ASAR	**Alice Springs**	**70.72**	**109**	P	**P**	**19 37 01.2**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=258,slow=5.3,SNR=18						
	comp=Z,1.1nm,0.7s						
AS31	**Alice Springs**	**70.72**	**109**	P	**P**	**19 37 01.1**	**+1.4**
AS31				lAmb	lAmb	19 37 15.7	
	comp=Z,1.6nm,1.4s						
MAKZ	**Makanchi**	**71.29**	**18**	P	**P**	**19 37 02.5**	**0.0**
MAKZ				lAmb	lAmb	19 37 19.3	
	comp=Z,2.4nm,1.4s						
MKAR	**Makanchi Array**	**71.37**	**18**	P	**P**	**19 37 02.4**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=201,slow=9.2,SNR=6.0						
	comp=Z,0.4nm,0.8s						
WRA	**Warramunga Arr**	**72.11**	**105**	P	**P**	**19 37 09.3**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=259,slow=5.3,SNR=6.7						
	comp=Z,1.6nm,0.9s						
BVAR	**Borovoye Array**	**74.69**	**9**	P	**P**	**19 37 22.7**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=163,slow=5.4,SNR=8.7						
	comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**78.52**	**17**	P	**P**	**19 37 43.0**	**-1.0**
ZALV	**Zalesovo Beam**	**78.52**	**17**	P	**P**	**19 37 43.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=226,slow=3.9,SNR=5.5						
	comp=Z,0.3nm,0.4s						
HHC	**Hu-ho-hao-te**	**79.95**	**39**	*e*P	**P**	**19 37 53.0**	**+0.6**
HHC				sP	PcP	19 38 00.8	+1.0
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						

*IDC **27** 19:40:41.1±12.0, 38˚43N×20˚40E, h0km, mb3.5/3, mbtmp3.4/4, ML2.3/1, Error ellipse: s-maj=226.3km s-min=52.5km az=36.0*
*PDG **27** 19:40:47.5±0.2, 39˚14N×20˚52E, h22km, ML3.2/11, Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
*THE **27** 19:40:47.8, 39˚14N×20˚47E, h22km, ML2.9/8, Error ellipse: s-maj=1.2km s-min=0.4km az=258.0*
*ATH **27** 19:40:47.8, 39˚15N×20˚64E, h12km±1km, ML3.0/26, Manual Solution by A.Andreou This location: 2020/05/28 07:48:48 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 27 19:40:47.4±0.9, **39˚15N**±0˚02×**20˚58E**±0˚02, **h11**km±7km, **n91**, σ0**s71**/123, **mb3.5**/3, **1C-4D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRGA	**Parga**	**0.19**	**316**	P	**Pb**	**19 40 53.0**	**+0.1**
PRGA				S	**Sb**	**19 40 55.9**	**+1.5**
ARTB	**Arta**	**0.31**	**88**	P	**Pg**	**19 40 53.0**	**-0.7**
ART2	**Arta**	**0.33**	**90**	P	**Pg**	**19 40 53.2**	**-0.7**
ART2				S	**Sg**	**19 40 57.9**	**-0.4**
TSLK	**Tsoukalades, L**	**0.33**	**169**	P	**Pb**	**19 40 54.9**	**-0.2**
TSLK				S	**Sb**	**19 41 01.2**	**+0.8**
	2µm,0.4s						
TSLK	**Tsoukalades, L**	**0.33**	**169**	P	**Pb**	**19 40 55.0**	**-0.2**
TSLK				S	**Sb**	**19 40 59.4**	**-1.0**
LKD2	**Lefkada island**	**0.36**	**170**	P	**Pb**	**19 40 55.4**	**-0.4**
LKD2				S	**Sb**	**19 41 01.9**	**+0.4**
	3µm,0.4s						
LKD2	**Lefkada island**	**0.36**	**170**	P	**Pb**	**19 40 55.4**	**-0.4**
IGT	**Igoumenitsa**	**0.43**	**334**	P	**Pg**	**19 40 56.0**	**+0.2**
IGT				S	**Sb**	**19 41 02.8**	**-0.6**
	1µm,0.4s						
IGT	**Igoumenitsa**	**0.43**	**334**	P	**Pg**	**19 40 55.7**	**-0.2**
IGT				S	**Sb**	**19 41 03.0**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.44**	**167**	P	**Pg**	**19 40 56.5**	**+0.5**
NYDR				S	**Sb**	**19 41 04.1**	**+0.4**
	2µm,0.3s						
NYDR	**Nydri-Lefkada**	**0.44**	**167**	P	**Pg**	**19 40 56.5**	**+0.5**
NYDR				S	**Sb**	**19 41 02.8**	**-0.9**
DRAG	**Dragano-Lefkad**	**0.46**	**180**	P	**Pg**	**19 40 56.9**	**+0.5**
DRAG				S	**Sb**	**19 41 04.3**	**0.0**
	352nm,0.3s						
DRAG	**Dragano-Lefkad**	**0.46**	**180**	P	**Pg**	**19 40 56.7**	**+0.3**
DRAG				S	**Sg**	**19 41 03.3**	**+0.7**
VAS2	**Vassiliki, Lef**	**0.52**	**177**	P	**Pg**	**19 40 57.5**	**0.0**
VAS2				S	**Sb**	**19 41 05.6**	**-0.2**
EVGI	**Lefkada island**	**0.53**	**173**	P	**Pg**	**19 40 58.1**	**+0.4**
EVGI				S	**Sb**	**19 41 06.7**	**+0.5**
	2µm,0.4s						
EVGI	**Lefkada island**	**0.53**	**173**	P	**Pg**	**19 40 58.0**	**+0.4**
EVGI				S	**Sg**	**19 41 05.2**	**+0.5**
JAN	**Janina**	**0.55**	**23**	P	**Pb**	**19 40 59.8**	**+0.7**
JAN				S	**Sb**	**19 41 08.2**	**+1.2**
	2µm,0.3s						
JAN	**Janina**	**0.55**	**23**	P	**Pg**	**19 40 58.1**	**-0.1**
JAN				S	**Sg**	**19 41 05.3**	**-0.2**
FSK	**Fiskardo**	**0.69**	**181**	P	**Pg**	**19 41 00.5**	**-0.1**
FSK	**Fiskardo**	**0.69**	**181**	P	**Pg**	**19 41 00.3**	**-0.3**
KRK1	**kERKIRA**	**0.69**	**313**	P	**Pb**	**19 41 01.5**	**+0.1**
KASA	**Kassiopi**	**0.78**	**321**	P	**Pg**	**19 41 02.6**	**+0.2**
KEK	**Kerkira**	**0.83**	**314**	P	**Pg**	**19 41 02.1**	**-1.2**
KEK	**Kerkira**	**0.83**	**314**	P	**Pb**	**19 41 04.0**	**+0.3**
KEK				S	**Sn**	**19 41 16.0**	**-1.1**
SRN	**Sarande**	**0.86**	**329**	P	**Pb**	**19 41 03.4**	**-0.8**
KEF5	**Kardakata, Kep**	**0.87**	**186**	P	**Pn**	**19 41 05.2**	**-0.3**
PVO	**Paravola**	**0.91**	**125**	P	**Pb**	**19 41 04.8**	**-0.3**
PVO				S	**Sn**	**19 41 19.0**	**-0.2**
PVO	**Paravola**	**0.91**	**125**	P	**Pb**	**19 41 04.6**	**-0.5**
KEF3	**Kipouria, Keph**	**0.96**	**191**	P	**Pn**	**19 41 06.7**	**0.0**
KEF3				S	**Sg**	**19 41 18.4**	**+0.1**
VLS	**Valsamata**	**0.97**	**179**	P	**Pb**	**19 41 05.6**	**-0.5**
VLS				S	**Sg**	**19 41 19.1**	**+0.5**
	892nm,0.4s						
VLS	**Valsamata**	**0.97**	**179**	P	**Pb**	**19 41 05.8**	**-0.3**
ARG2	**Argostoli**	**0.97**	**184**	P	**Pn**	**19 41 06.9**	**+0.1**
EVR	**Evrytania**	**0.99**	**103**	P	**Pn**	**19 41 07.0**	**-0.2**
EVR	**Evrytania**	**0.99**	**103**	P	**Pn**	**19 41 07.0**	**-0.2**
LSK	**Leskovik**	**1.00**	**1**	P	**Pb**	**19 41 05.9**	**-0.9**
KPRO	**Kipourio**	**1.01**	**37**	P	**Pb**	**19 41 06.4**	**-0.5**
KPRO	**Kipourio**	**1.01**	**37**	P	**Pb**	**19 41 06.4**	**-0.5**
PSDA	**Pessada-Kefalo**	**1.03**	**180**	P	**Pb**	**19 41 06.9**	**-0.3**
PENT	**Pentalofos**	**1.14**	**22**	P	**Pb**	**19 41 08.6**	**-0.5**
ANX	**Ano Chora**	**1.19**	**117**	P	**Pn**	**19 41 09.7**	**-0.3**
THL	**Klokotos Trika**	**1.19**	**69**	P	**Pn**	**19 41 09.2**	**-0.7**
VVK	**Vomvokou**	**1.21**	**126**	P	**Pn**	**19 41 08.8**	**-1.3**
VVK				S	**Sb**	**19 41 24.8**	**-1.0**
MAKR	**Makrakomi, Fth**	**1.22**	**96**	P	**Pn**	**19 41 09.8**	**-0.5**
EFP	**Efpalio**	**1.26**	**124**	P	**Pb**	**19 41 10.8**	**-0.4**
RLS	**Riolos of Patr**	**1.29**	**147**	P	**Pn**	**19 41 11.1**	**-0.2**
NEST	**Nestorio**	**1.32**	**16**	P	**Pb**	**19 41 12.3**	**+0.1**
SERG	**Sergoula**	**1.37**	**122**	P	**Pb**	**19 41 13.1**	**+0.1**
AGG	**Agios Georgios**	**1.37**	**95**	P	**Pn**	**19 41 12.2**	**-0.3**
TYRN	**Tyrnavos**	**1.40**	**66**	P	**Pn**	**19 41 12.5**	**-0.3**
LTHK	**Lithakia**	**1.45**	**172**	P	**Pb**	**19 41 13.9**	**-0.4**
DRO	**Drossia**	**1.49**	**143**	P	**Pn**	**19 41 14.0**	**0.0**
KLV	**Kalavryta, Ach**	**1.65**	**131**	P	**Pb**	**19 41 16.9**	**-0.9**
AXAR	**Agios Charalam**	**1.67**	**102**	P	**Pb**	**19 41 17.1**	**-1.0**
FNA	**Florina**	**1.75**	**20**	P	**Pn**	**19 41 17.2**	**-0.4**
GUR	**Goura**	**1.84**	**131**	P	**Pn**	**19 41 19.6**	**+0.6**
SCTE	**Santa Cesarea**	**1.87**	**300**	P	**Pb**	**19 41 20.3**	**-1.3**
OHR	**Ohrid**	**1.97**	**5**	*i* Pn	**Pg**	**19 41 26.1**	**+1.0**
NEO	**Neokhori**	**2.06**	**85**	P	**Pn**	**19 41 21.7**	**-0.2**
VAY	**Valandovo**	**2.66**	**34**	*i* Pn	**Pb**	**19 41 36.1**	**+1.2**
KNT	**Kendrikon**	**2.69**	**41**	P	**Pn**	**19 41 30.3**	**-0.3**
SOH	**Sokhos**	**2.71**	**51**	P	**Pn**	**19 41 31.5**	**+0.6**
STIP	**Stip**	**2.83**	**25**	*i* Pn	**Pb**	**19 41 37.2**	**-0.6**
ULC	**Ulcinj**	**2.99**	**341**	*e*Pn	**Pn**	**19 41 35.0**	**+0.3**
ULC				*i* Sn	**Sn**	**19 42 10.5**	**-0.1**
SRS	**Serrai**	**3.04**	**49**	P	**Pn**	**19 41 35.1**	**-0.2**
KOKK	**Kokkinochori,**	**3.12**	**57**	P	**Pn**	**19 41 35.9**	**-0.5**
DRME	**Dracevica, Mon**	**3.22**	**341**	⇓*i* Pn	**Pn**	**19 41 38.2**	**+0.4**
DRME				*i* Sn	**Sn**	**19 42 16.2**	**+0.1**
BUM	**Brajici-Budva**	**3.40**	**338**	*e*Pn	**Pn**	**19 41 40.5**	**+0.1**
BUM				*i* Sn	**Sn**	**19 42 20.0**	**-0.7**
CEME	**Cevo**	**3.62**	**340**	⇓*i* Pn	**Pn**	**19 41 43.6**	**+0.2**
CEME				*i* Sn	**Sn**	**19 42 25.4**	**-0.8**
HCY	**Herceg Novi**	**3.66**	**335**	⇓*i* Pn	**Pn**	**19 41 43.6**	**-0.2**
HCY				*i* Sn	**Sn**	**19 42 25.4**	**-1.5**
IVA	**Berane**	**3.76**	**352**	*e*Pn	**Pn**	**19 41 46.5**	**+1.2**
IVA				*i* Sn	**Sn**	**19 42 28.3**	**-1.2**
KOME	**Kolasin**	**3.79**	**348**	⇓*i* Pn	**Pn**	**19 41 46.2**	**+0.5**
KOME				*i* Sn	**Sn**	**19 42 29.5**	**-0.8**
NKME	**Niksic**	**3.82**	**342**	*e*Pn	**Pn**	**19 41 46.5**	**+0.4**
NKME				*i* Sn	**Sn**	**19 42 29.7**	**-1.3**
DBRK	**Dubrovnik**	**3.97**	**333**	*e*Pn	**Pn**	**19 41 47.5**	**-0.6**
BRY	**Bratogost**	**4.05**	**338**	*e*Pn	**Pn**	**19 41 49.1**	**-0.3**
BRY				*i* Sn	**Sn**	**19 42 36.1**	**-0.9**
UPM	**Unac-Piva**	**4.24**	**343**	*e*Pn	**Pn**	**19 41 52.2**	**+0.1**
UPM				*i* Sn	**Sn**	**19 42 40.8**	**-0.9**
PLE	**Pljevlja**	**4.27**	**348**	⇓*i* Pn	**Pn**	**19 41 52.8**	**+0.4**
PLE				*i* Sn	**Sn**	**19 42 40.8**	**-1.5**
STON	**Ston**	**4.31**	**331**	*e*Pn	**Pn**	**19 41 52.3**	**-0.5**
LSTV	**Lastovo**	**4.57**	**324**	*e*Pn	**Pn**	**19 41 55.6**	**-0.8**
MAKA	**Makarska**	**4.93**	**328**	*e*Pn	**Pn**	**19 42 01.4**	**+0.1**
HVAR	**Hvar**	**5.09**	**324**	*e*Pn	**Pn**	**19 42 02.7**	**-0.8**
KLJV	**Kijevo**	**5.77**	**329**	*e*Pn	**Pn**	**19 42 12.8**	**-0.1**
ZIRJ	**Zirje**	**5.83**	**322**	*e*Pn	**Pn**	**19 42 13.4**	**-0.3**
MORI	**Morici**	**5.96**	**324**	*e*Pn	**Pn**	**19 42 15.7**	**+0.2**
DUGI	**Dugi Otok**	**6.37**	**321**	*e*Pn	**Pn**	**19 42 21.1**	**0.0**
UDBI	**Udbina**	**6.47**	**328**	*e*Pn	**Pn**	**19 42 23.4**	**+0.9**
VIRC	**Vir**	**6.59**	**323**	*e*Pn	**Pn**	**19 42 24.7**	**+0.6**
NVLJ	**Novalja**	**6.88**	**324**	*e*Pn	**Pn**	**19 42 28.2**	**+0.1**
BRTR	**Keskin Array B**	**10.12**	**83**	Pn	**Pn**	**19 43 14.8**	**+2.1**
	baz=267,slow=13,SNR=1.6						
	0.8nm,1.1s						
FINES	**FINESS Array B**	**22.58**	**7**	P	**P**	**19 45 50.4**	**+2.9**
	1.7nm,0.9s,baz=207,slow=8.8,SNR=1.6						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**44.77**	**59**	P	**P**	**19 49 00.2**	**-0.6**
	0.1nm,0.3s,baz=283,slow=7.5,SNR=12						
	0.1nm,0.3s						
ZALV	**Zalesovo Beam**	**45.02**	**49**	P	**P**	**19 49 02.2**	**-0.4**
	0.3nm,0.4s,baz=270,slow=6.9,SNR=2.0						
	0.3nm,0.4s						

IDC 27 19:43:23.5±9.4, **6˚03S×143˚00E, h0km, mb3.4**/1, **mbtmp3.2**/3, **ML2.8**/2, **Error ellipse: s-maj=328.9km s-min=38.0km az=96.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.19**	**211**	Pn	Pn	19 47 10.3	-2.2
	baz=34,slow=12,SNR=1.5						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**19.60**	**206**	P	Pn	19 47 54.5	-0.3
	0.1nm,0.3s,baz=34,slow=13,SNR=7.9						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**75.02**	**322**	P	P	19 55 07.0	0.0
	0.4nm,1.1s,baz=106,slow=5.1,SNR=2.3						
	0.4nm,1.1s						

*IDC **27** 19:47:52.1±1.2, 50˚75N×171˚03W, h0km, mb3.8/11, mbtmp3.8/13, ML3.3/2, Error ellipse: s-maj=34.4km s-min=20.2km az=2.0*
*NEIC **27** 19:47:53.3±2.6, 50˚80N±0˚09×170˚99W±0˚05, h10km±2km, mb4.0/56, ML3.8/8, ML3.3(AEIC), Error ellipse: s-maj=15.3km s-min=3.0km az=163.0*
*AEIC **27** 19:47:58±2.8, 50˚8N±0˚1×170˚95W±0˚08, h10km±7km, Error ellipse: s-maj=15.9km s-min=7.1km az=166.0*

ISC 27 19:47:55.7±0.8, **50˚91N**±0˚10×**171˚01W**±0˚05, **h23**km, **n103**, σ1**s43**/106, **mb4.0**/25, **South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**2.04**	**19**		**Pn**	**19 48 28.8**	**+0.2**
CLES	**Cleveland East**	**2.04**	**19**		**Sn**	**19 48 54.0**	**+0.8**
CLES	**Cleveland East**	**2.04**	**19**	IAML		19 49 02.6	
	comp=E,665nm,0.3s						
CLES				IAML		19 49 04.4	
	comp=N,927nm,1.7s						
CLCO	**Concord Point,**	**2.04**	**22**		**Pn**	**19 48 29.0**	**+0.4**
CLCO					**Sn**	**19 48 53.4**	**+0.1**
KOFP	**Korovin Flat P**	**2.37**	**307**		**Pn**	**19 48 33.8**	**+0.7**
ATKA	**Atka Island**	**2.38**	**304**		**Sn**	**19 49 00.5**	**-1.1**
ATKA	**Atka Island**	**2.38**	**304**		**Pn**	**19 48 33.4**	**+0.2**
KOKL	**Mount Kliuchef**	**2.44**	**307**		**Pn**	**19 48 34.9**	**+0.8**
NIKH	**Nikolski High**	**2.46**	**32**		**Pn**	**19 48 34.5**	**+0.2**
NIKH					**Sn**	**19 49 03.4**	**-0.2**
KOWE	**Korovin West**	**2.49**	**307**		**Pn**	**19 48 35.7**	**+0.9**
OKTU	**Okmok Mt. Tuli**	**3.08**	**35**		**Pn**	**19 48 42.9**	**0.0**
OKFG	**Magazine Ridge**	**3.15**	**36**		**Pn**	**19 48 43.9**	**+0.1**
OKFG					**Sn**	**19 49 19.0**	**-1.6**
GSMY	**Great Sitkin M**	**3.36**	**292**		**Pn**	**19 48 46.6**	**0.0**
GSTR	**Great Sitkin T**	**3.37**	**293**	Pn	**Pn**	**19 48 46.8**	**-0.1**
GSTD	**Great Sitkin T**	**3.41**	**292**		**Pn**	**19 48 47.6**	**+0.2**
GSTD					**Sn**	**19 49 26.1**	**-1.1**
ADK	**Adak**	**3.69**	**288**		**Pn**	**19 48 50.9**	**-0.3**
ADK	**Adak**	**3.69**	**288**		**Sn**	**19 49 31.7**	**-2.2**
ADK	**Adak**	**3.69**	**288**	IAML		19 49 32.6	
	comp=N,133nm,0.3s						
ADK				IAML		19 49 33.2	
	comp=N,133nm,0.2s						
MAPS	**Pakushin South**	**3.83**	**39**		**Pn**	**19 48 53.2**	**0.0**
MAPS					**Sn**	**19 49 35.8**	**-1.6**
KIWB	**Kanaga Island**	**3.96**	**286**	Pn	**Pn**	**19 48 54.7**	**-0.3**
MSW	**Makushin Switc**	**3.97**	**39**		**Pn**	**19 48 55.2**	**+0.1**
MNAT	**Makushin Natee**	**3.99**	**40**		**Pn**	**19 48 55.5**	**+0.2**
MNAT					**Sn**	**19 49 40.9**	**-0.4**
UNV	**Unalaska Valle**	**4.03**	**41**		**Pn**	**19 48 55.7**	**-0.2**
AKUT	**Akutan**	**4.54**	**43**	Pn	**Pn**	**19 49 02.2**	**-0.7**
AKUT				IAML		19 51 35.3	
	comp=E,110nm,3.8s						
CNBA	**Chernabura Isl**	**7.94**	**56**	Pn	**Pn**	**19 49 50.4**	**+0.8**
KDAK	**Kodiak Island**	**12.74**	**50**	Pn	**Pn**	**19 50 52.3**	**-2.8**
KDAK	**Kodiak Island**	**12.74**	**50**	Pn	**Pn**	**19 50 53.4**	**-1.7**
	comp=E,0.4nm,0.3s,baz=284,slow=7.4,SNR=2.0						
KDAK				Sn	**Sn**	**19 53 09.4**	**-6.6**
	comp=E,0.2nm,0.3s,baz=86,slow=19,SNR=2.3						
SYI	**Shuyak Island**	**13.19**	**47**	Pn	**Pn**	**19 50 59.8**	**-1.5**
CNPM	**China Poot**	**14.15**	**45**	Pn	**Pn**	**19 51 14.0**	**-0.5**
BRLK	**Bradley Lake**	**14.43**	**44**	Pn	**Pn**	**19 51 16.7**	**-1.5**
SUA	**Susitna One**	**15.38**	**39**	Pn	**Pn**	**19 51 28.2**	**-2.9**
SUA				lAmb	lAmb	19 52 07.8	
	comp=Z,6.4nm,1.2s						
H18K	**Honhosa River**	**15.72**	**20**	P	**P**	**19 51 42.2**	**+3.0**
H18K				lAmb	lAmb	19 51 43.9	
	comp=Z,9.9nm,1.1s						
CAST	**Castle Rocks**	**16.11**	**32**		**P**	**19 51 43.8**	**+0.3**
GHO	**Glory Hole Cre**	**16.28**	**40**	Pn	**Pn**	**19 51 42.8**	**+0.2**
SML	**Sawmill**	**16.54**	**40**	Pn	**Pn**	**19 51 44.4**	**-1.4**
HIN	**Hinchinbrook I**	**16.68**	**46**	Pn	**Pn**	**19 51 44.9**	**-2.7**
BPAW	**Bear Paw Mtn.**	**16.93**	**31**	Pn	**Pn**	**19 51 49.2**	**-1.5**
SCM	**Sheep Creek Mo**	**16.96**	**41**	Pn	**Pn**	**19 51 48.6**	**-2.6**
I21K	**Tanana**	**17.38**	**27**	Pn	**Pn**	**19 51 55.9**	**-0.4**
KLU	**Klutina**	**17.40**	**43**	Pn	**Pn**	**19 51 54.3**	**-2.4**
KLU				lAmb	lAmb	19 52 13.6	
	comp=Z,27nm,1.5s						
H21K	**Melozitna Rive**	**17.50**	**26**	Pn	**Pn**	**19 51 57.4**	**-0.4**
M24K	**Tolsona, Glenn**	**17.57**	**41**	Pn	**Pn**	**19 51 56.4**	**-2.4**
MLY	**Manley**	**17.64**	**29**	Pn	**Pn**	**19 51 57.4**	**-2.3**
E19K	**Redstone River**	**17.96**	**17**	Pn	**Pn**	**19 52 02.0**	**-1.4**
N25K	**Chitina, Valde**	**18.02**	**43**	Pn	**Pn**	**19 52 02.5**	**-1.9**
N25K				lAmb	lAmb	19 52 40.7	
	comp=Z,13nm,1.1s						
WRH	**Wood River Hil**	**18.14**	**33**	Pn	**Pn**	**19 52 04.2**	**-1.5**
GLB	**Gilahina Butte**	**18.30**	**44**	P	**P**	**19 52 05.9**	**-1.9**
GLB				lAmb	lAmb	19 52 12.9	
	comp=Z,19nm,1.3s						
CCB	**Clear Creek Bu**	**18.34**	**33**	P	**P**	**19 52 06.4**	**-1.7**
VRDI	**Verde Repeater**	**18.38**	**45**	P	**P**	**19 52 07.2**	**-1.5**
WAX	**Waxell Ridge**	**18.38**	**48**	P	**Pn**	**19 52 08.8**	**-0.1**
MDM	**Murphy Dome**	**18.40**	**31**	P	**P**	**19 52 08.4**	**-0.4**
D19K	**Kuna River**	**18.72**	**15**	P	**Pn**	**19 52 13.5**	**+0.6**
ILAR	**Eielson Array**	**18.73**	**33**	P	**P**	**19 52 12.8**	**+0.3**
ILAR	**Eielson Array**	**18.73**	**33**	P	**P**	**19 52 11.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=233,slow=8.9,SNR=9.8						
	comp=Z,1.2nm,0.7s						
GRNC	**Granite Creek**	**18.99**	**48**	P	**Pn**	**19 52 17.0**	**+0.7**
M26K	**Nabesna, AK**	**19.04**	**42**	P	**P**	**19 52 14.9**	**-0.9**
M26K				lAmb	lAmb	19 52 20.1	
	comp=Z,6.1nm,0.9s						
G23K	**Bananza Creek**	**19.04**	**26**		**Pn**	**19 52 17.3**	**+0.6**
H24K	**Noodor Dome**	**19.07**	**30**	P	**P**	**19 52 16.7**	**+0.5**
H24K				lAmb	lAmb	19 52 20.5	
	comp=Z,6.0nm,0.9s						
J25K	**Salcha River,**	**19.18**	**35**	P	**P**	**19 52 17.0**	**-0.4**
J25K				lAmb	lAmb	19 52 20.7	
	comp=Z,8.6nm,0.6s						
CTGM	**Chitina Glacie**	**19.26**	**47**	P	**Pn**	**19 52 21.0**	**+1.6**
PETK	**Petropavlovsk-**	**19.31**	**289**	P	**Pn**	**19 52 19.2**	**-0.8**
	comp=E,0.2nm,0.3s,baz=81,slow=10,SNR=5.3						
	comp=Z,2.1nm,0.6s						

SCRK	**Sand Creek**	**19.36**	**37**	P	**P**	**19 52 19.6**	**+0.1**
M27K	**Edge Creek, AK**	**19.50**	**43**	P	**Pn**	**19 52 23.0**	**+0.7**
M27K				lAmb	lAmb	19 52 30.3	
	comp=Z,4.7nm,0.7s						
G24K	**Hadweenzic Riv**	**19.77**	**28**		**Pn**	**19 52 25.9**	**+0.6**
G24K				lAmb	lAmb	19 52 28.9	
	comp=Z,8.2nm,0.8s						
J26L	**Joseph Creek**	**19.78**	**36**	P	**P**	**19 52 24.3**	**+0.3**
J26L				lAmb	lAmb	19 52 26.9	
	comp=Z,4.0nm,0.7s						
L27K	**Beaver Creek,**	**19.80**	**41**	P	**P**	**19 52 23.6**	**-0.6**
L27K				lAmb	lAmb	19 53 06.7	
	comp=Z,9.7nm,1.4s						
BCAR	**Beaver Creek A**	**19.82**	**41**	P	**Pn**	**19 52 25.3**	**-0.8**
D22K	**Ayikyak River**	**20.07**	**19**	P	**P**	**19 52 27.9**	**+0.8**
F24K	**Squaw Lake**	**20.21**	**26**	P	**P**	**19 52 28.4**	**-0.1**
I26K	**Coal Creek Min**	**20.35**	**34**	P	**P**	**19 52 30.2**	**+0.1**
FYU	**Fort Yukon**	**20.37**	**30**	P	Pn	19 52 31.5	-0.8
FYU				lAmb	lAmb	19 53 04.6	
	comp=Z,13nm,1.4s						
O29M	**Mount Kennedy**	**20.39**	**50**	P	Pn	19 52 34.0	+1.2
BILL	**Bilibino**	**20.47**	**335**	P	**P**	**19 52 32.6**	**+1.3**
EGAK	**Eagle**	**20.82**	**37**		**P**	**19 52 36.4**	**+1.2**
EGAK				lAmb	lAmb	19 52 40.1	
	comp=Z,13nm,1.4s						
M29M	**Somme Creek**	**21.02**	**44**	pP	**P**	**19 52 39.6**	**+2.1**
HYT	**Haines Junctio**	**21.02**	**49**	P	**P**	**19 52 38.3**	**+0.8**
HYT				lAmb	lAmb	19 52 48.0	
	comp=Z,10.0nm,0.9s						
BMAR	**Burnt Mountain**	**21.11**	**28**	P	**P**	**19 52 39.3**	**+1.0**
B22K	**Teshekpuk Lake**	**21.15**	**16**	P	**P**	**19 52 39.5**	**+0.8**
B22K				lAmb	lAmb	19 52 48.8	
	comp=Z,6.7nm,1.2s						
DAWY	**Dawson**	**21.21**	**40**	P	**P**	**19 52 42.0**	**+2.6**
DAWY				lAmb	lAmb	19 52 48.3	
	comp=Z,7.7nm,1.4s						
E25K	**Arctic Village**	**21.26**	**26**	P	**P**	**19 52 41.4**	**+1.5**
E25K				lAmb	lAmb	19 52 46.9	
	comp=Z,11nm,1.4s						
C23K	**Itkillik River**	**21.28**	**19**	P	**P**	**19 52 40.2**	**+0.2**
C23K				lAmb	lAmb	19 52 42.8	
	comp=Z,5.4nm,0.9s						
N30M	**Aishikik Lake**	**21.37**	**47**	P	**P**	**19 52 43.6**	**+2.5**
N30M				lAmb	lAmb	19 53 07.8	
	comp=Z,10nm,1.1s						
L29M	**L29M**	**21.38**	**43**	P	**P**	**19 52 44.2**	**+3.0**
L29M				lAmb	lAmb	19 52 55.2	
	comp=Z,9.5nm,1.2s						
I28M	**Miner Creek**	**21.59**	**36**		**P**	**19 52 44.7**	**+1.1**
I28M				lAmb	lAmb	19 52 48.6	
	comp=Z,5.6nm,0.7s						
K29M	**Barlow Dome**	**21.89**	**41**	P	**P**	**19 52 48.9**	**+2.1**
K29M				lAmb	lAmb	19 52 52.0	
	comp=Z,8.2nm,1.4s						
H29M	**Whitestone**	**22.52**	**35**	P	**P**	**19 52 54.2**	**+0.8**
J30M	**Hart River**	**22.64**	**40**	P	**P**	**19 52 55.0**	**+0.2**
J30M				lAmb	lAmb	19 53 33.5	
	comp=Z,6.6nm,1.4s						
I30M	**Mount Dempster**	**22.85**	**38**	P	**P**	**19 52 55.7**	**-1.3**
I30M				lAmb	lAmb	19 52 59.2	

RDJH Sn 19 48 55.5 +0.1
DFR Drift River 1.05 10 Pn 19 48 39.8 -0.2
RDT Redoubt 1.06 17 Pn 19 48 39.7 -0.4
BRLK Bradley Lake 1.11 79 Pn 19 48 39.9 -0.7
BRLK IAML 19 48 59.1
comp=N,144nm,0.4s
BRLK IAML 19 49 00.0
comp=E,146nm,0.3s
P18K Big Mountain, 1.13 262 Pn 19 48 39.8 -1.0
P18K Sn Sn 19 48 55.4 -1.6
O18K Koktuh Hills 1.14 286 Pn 19 48 40.3 -0.7
O18K Sn Sn 19 48 55.9 -1.2
O18K IAML 19 48 56.5
comp=N,80nm,0.7s
O18K IAML 19 48 56.7
comp=E,128nm,0.8s
KAPH Katmai Pasha 1.18 215 Pn 19 48 41.1 -0.4
BRSE Bradley Lake S 1.18 80 Pn 19 48 41.0 -0.5
KAHC Katmai Hardscr 1.37 229 Pn 19 48 43.2 -0.6
N19K Bonanza Creek 1.45 331 Pn 19 48 44.5 -0.2
N19K IAML 19 49 04.3
comp=N,54nm,0.9s
N19K IAML 19 49 04.5
comp=E,78nm,0.7s
CAPN Captain Cook N 1.54 37 Pn 19 48 47.2 +1.6
CAPN IAML 19 49 10.2
comp=N,228nm,0.7s
CAPN IAML 19 49 18.1
comp=E,233nm,1.2s
SPCR Spurr Chakacha 1.69 14 Pn 19 48 47.8 0.0
SLKM Skilak Lake 1.71 55 Pn 19 48 47.8 -0.1
SPBG Spurr Blockage 1.73 11 Pn 19 48 48.6 +0.2
SPCP Crater Peak Br 1.77 14 Pn 19 48 48.9 +0.1
P17K Kvichak River 1.78 259 Pn 19 48 48.6 -0.2
ACHA Angle Creek He 1.80 222 Pn 19 48 48.7 -0.5
KDAK Kodiak Island 1.80 172 Pn Pn 19 48 47.8 -1.3
KDAK IAML 19 49 11.1
comp=E,44nm,1.5s
KDAK IAML 19 49 11.5
comp=E,35nm,0.3s
KDAK Kodiak Island 1.80 172 Pg Pn 19 48 47.3 -1.8
comp=E,2.6nm,0.3s,baz=23,slow=8.4,SNR=30
KDAK Lg Lg 19 49 08.6
comp=E,5.9nm,0.3s,baz=323,slow=22,SNR=18
SPCG Spurr Capps Gl 1.81 16 Pn 19 48 49.4 +0.1
N18K Kilae Creek 1.81 309 Pn 19 48 48.8 -0.5
N18K IAML 19 49 11.9
comp=N,42nm,1.0s
N18K IAML 19 49 12.0
comp=E,37nm,0.8s
SPNN North Nagishla 1.82 5 Pn 19 48 49.6 +0.1
ANCK Angle Creek 1.87 224 Pn 19 48 49.7 -0.4
SEW Seward 1.89 72 Pn 19 48 50.1 -0.2
CNTC Contact Creek 1.97 230 Pn 19 48 50.9 -0.5
STLK Strandline Lak 2.03 17 Pn 19 48 52.4 +0.3
O17K Koliganek Bris 2.07 278 Pn 19 48 52.1 -0.4
FIS Fire Island 2.12 40 Pn Pn 19 48 54.1 +0.9
FIS IAML 19 49 28.8
comp=N,83nm,1.3s
FIS IAML 19 49 30.9
comp=E,68nm,1.3s
SUA Susitna One 2.22 30 Pn 19 48 55.1 +0.4
SUA IAML 19 49 23.4
comp=E,62nm,0.8s
SUA IAML 19 49 24.9
comp=N,46nm,0.7s
RC01 Rabbit Creek A 2.25 46 Pn 19 48 54.6 -0.3
RC01 IAML 19 49 23.1
comp=E,72nm,0.3s
RC01 IAML 19 49 25.0
comp=N,62nm,0.5s
N17K Nushagak Hills 2.29 297 Pn Pn 19 48 54.7 -0.8
M20K Styx River 2.33 359 Pn Pn 19 48 56.2 +0.1
OHAK Old Harbor 2.35 183 Pn Pn 19 48 54.4 -1.9
M18K Stony River 2.37 326 Pn 19 48 56.3 -0.3
M19K Big River Lodg 2.44 345 Pn Pn 19 48 57.2 -0.3
SKT Skwentna 2.54 16 Pn 19 48 58.8 0.0
O16K Kokwok River B 2.57 273 Pn Pn 19 48 58.9 -0.3
P16K Nushagak River 2.59 260 Pn 19 48 59.7 +0.2
L19K White Mountain 2.77 342 Pn 19 49 01.5 -0.4
PMR Palmer 2.81 42 Pn Pn 19 48 59.1 -3.2
PMR IAML 19 49 35.0
comp=N,22nm,0.5s
PMR IAML 19 49 35.3
comp=E,28nm,0.4s
M17K Holitna River 2.85 312 Pn Pn 19 49 02.3 -0.7
M17K IAML 19 49 51.8
comp=N,30nm,1.1s
M17K IAML 19 49 55.2
comp=E,27nm,1.4s
P23K Montague Islan 2.89 79 Pn 19 49 03.2 -0.2
KNK Knik Glacier 2.93 49 Pn Pn 19 49 02.9 -1.1
KNK IAML 19 49 39.2
comp=E,39nm,0.9s
KNK IAML 19 49 40.9
comp=N,44nm,0.5s
GHO Glory Hole Cre 3.00 41 Pn Pn 19 49 04.4 -0.6
GHO IAML 19 49 39.3
comp=N,44nm,0.3s
GHO IAML 19 49 39.8
comp=E,42nm,0.5s
N16K Nishlik Lake 3.02 290 Pn 19 49 05.3 +0.1
L18K Granite Mounta 3.21 328 Pn Pn 19 49 07.1 -0.6
SML Sawmill 3.23 44 Pn Pn 19 49 07.3 -0.7
SML IAML 19 49 44.4
comp=E,24nm,0.3s
SML IAML 19 49 45.8
comp=N,20nm,0.6s
GLI Glacier Island 3.25 63 Pn Pn 19 49 06.2 -2.0
GLI IAML 19 49 42.6
comp=N,40nm,1.0s
M16K Timber Creek 3.29 299 Pn Pn 19 49 08.4 -0.4
M16K IAML 19 50 03.8
comp=N,11nm,1.4s
HIN Hinchinbrook I 3.39 73 Pn Pn 19 49 08.6 -1.6
Q23K Middleton Isla 3.42 89 Pn Pn 19 49 09.6 -0.9
MID Middleton Isla 3.42 89 Pn Pn 19 49 09.6 -1.0
FID Port Fidalgo 3.49 67 Pn Pn 19 49 09.5 -2.0
N15K Kwethluk River 3.61 283 Pn Pn 19 49 12.1 -1.0
N15K IAML 19 50 13.1
comp=N,19nm,1.4s
N15K IAML 19 51 23.0
comp=E,15nm,1.4s
SCM Sheep Creek Mo 3.62 49 Pn Pn 19 49 12.5 -0.8
SCM IAML 19 49 57.6
comp=N,15nm,1.3s
SCM IAML 19 50 01.3
comp=E,20nm,0.7s
L17K Donlin 3.64 317 Pn 19 49 13.0 -0.5
TTA Tatalina 3.67 338 Pn Pn 19 49 12.8 -1.2
L16K Owhat River 3.83 307 Pn Pn 19 49 15.4 -0.7
K20K Telida 3.84 353 Pn Pn 19 49 16.1 -0.2
WAT7 Susitna Watana 3.86 30 19 49 16.6 0.0
CAST Castle Rocks 3.90 6 Pn Pn 19 49 16.3 -0.7
WAT1 Susitna Watana 3.93 32 19 49 17.2 -0.3
WAT6 Susitna Watana 3.98 38 Pn 19 49 17.8 -0.4
KLU Klutina 4.02 58 Pn Pn 19 49 17.5 -1.2
KLU IAML 19 50 05.3
comp=E,16nm,0.4s
K17K Iditarod 4.06 323 Pn Pn 19 49 18.8 -0.4
K17K IAML 19 50 10.7
comp=E,9.7nm,1.4s
K17K IAML 19 50 42.2
comp=N,8.3nm,0.8s
TRF Thorofare Moun 4.12 18 Pn Pn 19 49 20.0 -0.2
TRF IAML 19 50 08.8
comp=E,6.5nm,1.5s
TRF IAML 19 50 14.2
comp=N,9.0nm,1.2s
KTH Kantishna Hill 4.13 13 Pn Pn 19 49 19.7 -0.5
KTH IAML 19 50 53.3
comp=N,6.9nm,1.5s
KTH IAML 19 50 54.5
comp=E,7.2nm,1.5s
M24K Tolsona, Glenn 4.22 50 Pn Pn 19 49 20.9 -0.5
M24K IAML 19 50 30.5
comp=N,18nm,1.3s
M24K IAML 19 51 05.2
comp=E,20nm,1.5s
RAGM Ragged Mountai 4.29 75 Pn Pn 19 49 22.0 -0.3
J18K Innoko River 4.29 337 Pn Pn 19 49 22.1 -0.2
RND Reindeer 4.35 26 Pn 19 49 23.1 -0.1
RND IAML 19 50 15.8
comp=E,5.8nm,1.3s
RND IAML 19 50 18.2
comp=N,5.4nm,0.9s
BMRM Bremner River 4.43 68 Pn 19 49 23.8 -0.5
DHY Denali Highway 4.46 35 Pn Pn 19 49 23.6 -1.2
DHY IAML 19 50 16.1
comp=N,14nm,0.2s
DHY IAML 19 50 17.5
comp=E,14nm,0.5s
HMT Hamilton 4.49 76 Pn Pn 19 49 23.8 -1.1
J19K Poorman 4.61 346 Pn 19 49 25.6 -1.0
MCK McKinley 4.62 23 Pn 19 49 26.6 -0.2
N25K Chitina, Valde 4.64 60 Pn Pn 19 49 25.9 -1.2
N25K IAML 19 50 22.2
comp=E,7.5nm,1.0s
N25K IAML 19 51 06.5
comp=N,7.6nm,1.5s
BPAW Bear Paw Mtn. 4.66 11 Pn Pn 19 49 27.2 -0.1
BPAW IAML 19 50 25.3
comp=N,6.5nm,0.8s
BPAW IAML 19 50 26.4
comp=E,5.9nm,0.9s
J20K Nowinta River 4.66 354 Pn Pn 19 49 26.9 -0.4
BWN Browne 4.92 19 Pn Pn 19 49 30.8 -0.1
BWN IAML 19 50 37.6
comp=E,10nm,1.1s
GLB Gilahina Butte 4.94 64 Pn Pn 19 49 29.7 -1.5
GLB IAML 19 50 27.3
comp=N,11nm,0.5s
GLB IAML 19 50 28.4
comp=E,9.6nm,0.6s
GRIN Grindle Hills 4.95 77 Pn 19 49 30.9 -0.3
K15K Wolf Creek Mou 4.96 307 Pn Pn 19 49 31.5 +0.1
K15K IAML 19 50 24.7
comp=N,4.7nm,1.5s
K15K IAML 19 51 03.7
comp=E,6.2nm,1.3s
PAX Paxson 5.00 44 Pn 19 49 31.9 -0.1
VRDI Verde Repeater 5.04 67 Pn Pn 19 49 31.8 -0.9
VRDI IAML 19 50 50.1
comp=E,8.9nm,1.3s
CRQM Cirque 5.09 72 Pn Pn 19 49 32.8 -0.5
L14K Kuka Creek 5.09 295 Pn Pn 19 49 32.1 -1.1
L14K IAML 19 52 50.4
comp=E,12nm,1.4s
SNH Sunshine Point 5.18 79 Pn Pn 19 49 34.5 +0.1
WAX Waxell Ridge 5.19 76 Pn Pn 19 49 33.8 -0.8
J16K Anvik River 5.21 319 Pn Pn 19 49 34.2 -0.5
J16K IAML 19 50 39.7
comp=N,3.5nm,1.5s
J16K IAML 19 52 58.5
comp=E,4.1nm,1.4s
TGL Tana Glacier 5.24 72 Pn Pn 19 49 33.4 -1.9
MCARA McCarthy VSAT 5.28 65 Pn Pn 19 49 35.1 -0.6
NEA2 Nenana 5.38 19 Pn Pn 19 49 36.0 -1.1
WRH Wood River Hil 5.45 23 Pn Pn 19 49 37.2 -0.8
ISLE Juniper Island 5.46 74 Pn Pn 19 49 37.2 -1.1
MLY Manley 5.59 10 Pn Pn 19 49 40.1 +0.1
MESA MESA 5.62 79 Pn Pn 19 49 40.6 +0.1
HDA Harding Lake 5.65 28 Pn Pn 19 49 40.2 -0.5
M26K Nabesna, AK 5.66 55 Pn Pn 19 49 40.7 -0.2
I21K Tanana 5.66 5 Pn Pn 19 49 40.5 -0.3
CCB Clear Creek Bu 5.66 23 Pn Pn 19 49 40.0 -0.9
RIDG Independent Ri 5.73 39 Pn 19 49 42.3 +0.4
GRNC Granite Creek 5.76 73 Pn Pn 19 49 42.0 -0.5
SDPT Sand Point 5.82 227 Pn Pn 19 49 45.9 +2.8
BARN Barnard Glacie 5.85 70 Pn Pn 19 49 43.8 0.0
MDM Murphy Dome 5.86 20 Pn Pn 19 49 42.7 -0.9
IL31 5.97 26 Pn 19 49 43.9 -1.1
ILAR Eielson Array 5.97 26 Pn Pn 19 49 43.9 -1.1
ILAR Eielson Array 5.97 26 Pn Pn 19 49 43.8 -1.2
comp=E,0.3nm,0.3s,baz=206,slow=14,SNR=12
ILAR Sn Sn 19 50 47.2 -4.7
comp=E,0.2nm,0.3s,baz=205,slow=19,SNR=2.2
comp=E,0.3nm,0.3s
IL03 Eielson Array 5.98 26 Pn Pn 19 49 43.8 -1.4
CTGM Chitina Glacie 6.00 71 Pn Pn 19 49 45.0 -0.6
J14K Nanvaranak Lak 6.01 307 Pn Pn 19 49 44.6 -0.9
TABL Table Mountain 6.04 77 Pn Pn 19 49 45.9 -0.3
M27K Edge Creek, AK 6.12 58 Pn Pn 19 49 47.0 -0.3
H21K Melozitna Rive 6.12 1 Pn Pn 19 49 46.6 -0.5
H18K Honhosa River 6.13 338 Pn Pn 19 49 46.6 -0.6
LOGN Logan Glacier 6.14 73 Pn Pn 19 49 47.5 -0.1
POKR Poker Plat Res 6.15 23 Pn Pn 19 49 46.9 -0.7
SCRK Sand Creek 6.17 40 Pn Pn 19 49 46.6 -1.3
J25K Salcha River, 6.21 32 Pn Pn 19 49 46.4 -2.1
L27K Beaver Creek, 6.44 52 Pn Pn 19 49 49.8 -1.7
IMAR Indian Mountai 6.45 357 Pn Pn 19 49 51.1 -0.5
BCAR Beaver Creek A 6.46 52 Pn Pn 19 49 50.7 -1.1
PCA Pinnacle 6.47 80 Pn Pn 19 49 51.3 -0.6
J26L Joseph Creek 6.66 38 Pn Pn 19 49 53.1 -1.5
H24K Noodor Dome 6.73 18 Pn Pn 19 49 54.8 -0.7
PRP Porcupine Dome 6.91 27 Pn Pn 19 49 57.0 -1.0
G23K Bananza Creek 7.30 9 Pn Pn 19 50 03.2 0.0
F19K Shaleruckik Mo 7.60 346 Pn Pn 19 50 07.4 +0.2
EGAK Eagle 7.63 42 Pn Pn 19 50 07.3 -0.3
M29M Somme Creek 7.65 62 Pn Pn 19 50 07.8 -0.3
P29M Windy Craggy 7.77 83 Pn Pn 19 50 09.2 -0.3
HYT Haines Junctio 7.85 74 Pn Pn 19 50 10.4 -0.4
N30M Aishikik Lake 8.10 70 Pn Pn 19 50 13.1 -1.0
F24K Squaw Lake 8.31 14 Pn Pn 19 50 15.9 -1.0
M30M Minto, Yukon 8.43 62 Pn Pn 19 50 17.9 -0.8
I28M Miner Creek 8.45 40 Pn Pn 19 50 18.1 -0.8
O30N Mendenhall 8.54 75 Pn Pn 19 50 18.9 -1.2
E18K Tukpahlearik C 8.57 340 Pn Pn 19 50 21.8 +1.3
BMAR Bunt Mountain 8.74 22 Pn Pn 19 50 21.1 -1.7
J30M Hart River 9.30 50 Pn Pn 19 50 29.9 -0.6
P32M Atlin 9.80 82 Pn Pn 19 50 36.5 -0.8
P33M Teslin, Yukon 10.18 78 Pn Pn 19 50 41.8 -0.6
U33K Whale Pass 11.15 99 Pn Pn 19 50 54.2 -1.4
YKA Yellowknife Ar 18.66 64 P P 19 52 29.7 +0.3
comp=E,0.2nm,0.3s,baz=276,slow=10,SNR=4.1
comp=E,0.1nm,0.4s
TXAR Lajitas Array 44.85 110 P P 19 56 26.6 +2.5
comp=E,0.1nm,0.3s,baz=307,slow=7.8,SNR=2.2
comp=E,0.1nm,0.3s

*IDC **27** 19:50:50.4±2.0,50°.85N×171°.00W,h0km,mb3.8/8, mbtmp3.8/10,ML3.4/2,MS3.7/1,Error ellipse: s-maj=57.0km s-min=20.6km az=7.0*
*NEIC **27** 19:50:51.1±2.6,50°.8N±0°.1×170°.97W±0°.07,h15km±7km, mb4.0/54,ML3.6/8,ML3.2(AEIC),Error ellipse: s-maj=17.2km s-min=1.7km az=159.0*
*AEIC **27** 19:50:57.3±2.3,50°.9N±0°.1×171°.01W±0°.10,h10km±7km, Error ellipse: s-maj=19.0km s-min=7.2km az=163.0*

ISC 27 19:50:53.4±1.0,50°.9N±0°.1×171°.04W±0°.05,h23km,n106,
σ1§36/105,mb4.1/16,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**2.04**	**20**				**Pn**	**19 51 26.9**	**+0.8**
CLES						IAML		19 52 12.9	
comp=N,678nm,2.1s									
CLES	**Cleveland East**	**2.04**	**20**				**Sn**	**19 51 50.5**	**-0.4**
CLES	**Cleveland East**	**2.04**	**20**			IAML		19 51 41.5	
comp=E,366nm,2.1s									
CLCO	**Concord Point,**	**2.04**	**23**				**Pn**	**19 51 26.8**	**+0.6**
CLCO							**Sn**	**19 51 51.3**	**+0.3**
KOFP	**Korovin Flat P**	**2.34**	**307**				**Pn**	**19 51 31.3**	**+0.8**
ATKA	**Atka Island**	**2.35**	**304**				**Pn**	**19 51 30.7**	**+0.2**
ATKA							**Sn**	**19 51 58.0**	**-0.7**
KOKL	**Mount Kliuchef**	**2.42**	**307**				**Pn**	**19 51 32.5**	**+0.9**
NIKH	**Nikolski High**	**2.46**	**32**				**Pn**	**19 51 32.4**	**+0.4**
NIKH							**Sn**	**19 52 00.9**	**-0.4**
KOWE	**Korovin West**	**2.47**	**307**				**Pn**	**19 51 33.6**	**+1.3**
OKTU	**Okmok Mt. Tuli**	**3.08**	**36**				**Pn**	**19 51 40.9**	**+0.2**
OKFG	**Magazine Ridge**	**3.15**	**36**				**Pn**	**19 51 41.9**	**+0.3**
OKFG							**Sn**	**19 52 16.3**	**-2.1**
GSMY	**Great Sitkin M**	**3.33**	**292**				**Pn**	**19 51 44.3**	**+0.2**
GSTR	**Great Sitkin T**	**3.35**	**293**			Pn	**Pn**	**19 51 42.6**	**-1.8**
GSTD	**Great Sitkin T**	**3.39**	**292**				**Pn**	**19 51 45.4**	**+0.5**
GSTD							**Sn**	**19 52 23.5**	**-0.9**
ADK	**Adak**	**3.67**	**287**				**Pn**	**19 51 48.0**	**-0.5**
ADK							**Sn**	**19 52 29.0**	**-2.0**
ADK	**Adak**	**3.67**	**287**			IAML		19 52 43.0	
comp=E,119nm,4.1s									
ADK						IAML		19 53 28.4	
comp=E,84nm,3.0s									
MAPS	**Pakushin South**	**3.83**	**39**				**Pn**	**19 51 51.0**	**+0.1**
MGOD	**Makushin Gods**	**3.85**	**40**				**Pn**	**19 51 51.3**	**+0.1**
KIWB	**Kanaga Island**	**3.94**	**286**			Pn	**Pn**	**19 51 52.1**	**-0.3**
MNAT	**Makushin Natee**	**3.99**	**40**				**Pn**	**19 51 53.2**	**+0.1**

UNV Unalaska Valle 4.04 42 Pn 19 51 53.3 -0.4
UNV Sn 19 52 40.5 +0.4
ZRO Akutan Zero 4.43 42 Pn 19 51 59.8 +0.7
AKUT Akutan 4.55 43 Pn Pn 19 52 01.1 +0.4
SDPT Sand Point 7.75 51 Pn Pn 19 52 44.6 0.0
OHAK Old Harbor 12.17 52 Pn Pn 19 53 43.1 -1.9
P18K Big Mountain, 12.37 41 Pn Pn 19 53 46.3 -1.5
O18K Koktuh Hills 12.66 39 Pn Pn 19 53 51.2 -0.7
KDAK Kodiak Island 12.74 50 Pn Pn 19 53 50.8 -2.1
KDAK Kodiak Island 12.74 50 Pn Pn 19 53 50.5 -2.4
comp=E,0.6nm,0.3s,baz=242,slow=7.5,SNR=6.1
Q19K Cape Douglas, 12.79 44 Pn Pn 19 53 53.6 0.0
SYI Shuyak Island 13.20 47 Pn Pn 19 53 57.4 -1.8
SVW2 Sparrevohn 13.33 34 Pn Pn 19 54 00.4 -0.5
ANM Nome 14.00 10 Pn Pn 19 54 09.6 -0.5
RSO Redoubt South 14.01 40 Pn Pn 19 54 13.0 +2.6
CNPM China Poot 14.16 45 Pn Pn 19 54 09.1 -3.2
M19K Big River Lodg 14.30 33 Pn Pn 19 54 11.5 -2.6
L19K White Mountain 14.33 32 Pn Pn 19 54 12.4 -2.2
BRLK Bradley Lake 14.43 44 Pn Pn 19 54 13.7 -2.4
J18K Innoko River 14.72 26 Pn 19 54 19.1 -0.8
M20K Styx River 14.73 35 Pn Pn 19 54 19.8 -0.3
SUA Susitna One 15.38 39 Pn Pn 19 54 25.8 -3.1
SUA IAmb IAmb 19 54 54.5
comp=Z,8.8nm,1.1s
K20K Telida 15.43 30 Pn Pn 19 54 28.1 -1.2
K20K IAmb IAmb 19 54 37.5
comp=Z,16nm,1.4s
H18K Honhosa River 15.72 20 Pn 19 54 32.5 -0.6
H18K IAmb IAmb 19 54 41.3
comp=Z,14nm,1.0s
J20K Nowinta River 16.00 27 Pn Pn 19 54 36.4 -0.3
CAST Castle Rocks 16.11 32 Pn Pn 19 54 36.6 -1.5
KNK Knik Glacier 16.29 41 Pn Pn 19 54 38.7 -1.7
HIN Hinchinbrook I 16.68 46 Pn Pn 19 54 42.7 -2.7
SCM Sheep Creek Mo 16.97 41 Pn 19 54 46.4 -2.7
F19K Shaleruckik Mo 17.30 18 Pn Pn 19 54 51.0 -2.0
E18K Tukpahlearik C 17.35 14 Pn Pn 19 54 51.8 -1.9
I21K Tanana 17.38 27 Pn 19 54 51.0 -3.0
I21K IAmb IAmb 19 55 07.2
comp=Z,8.7nm,1.1s
KLU Klutina 17.40 43 Pn Pn 19 54 51.5 -3.0
KLU IAmb IAmb 19 55 19.7
comp=Z,10.0nm,1.1s
H21K Melozitna Rive 17.50 26 P 19 54 56.0 -0.5
M24K Tolsona, Glenn 17.58 41 Pn Pn 19 54 55.4 -1.2
C16K Lisburne Hills 17.63 7 Pn Pn 19 54 55.1 -2.0
MLY Manley 17.64 29 P Pn 19 54 56.6 -0.8
MLY IAmb IAmb 19 55 02.4
comp=Z,5.4nm,0.8s
E19K Redstone River 17.95 17 Pn Pn 19 54 59.7 -1.4
N25K Chitina, Valde 18.02 43 Pn Pn 19 54 59.6 -2.6
N25K IAmb IAmb 19 55 07.6
comp=Z,15nm,1.1s
GLB Gilahina Butte 18.31 44 P P 19 55 04.1 -1.5
GLB IAmb IAmb 19 55 09.7
comp=Z,8.3nm,0.8s
CRQM Cirque 18.36 47 P P 19 55 05.6 -0.7
VRDI Verde Repeater 18.38 45 P P 19 55 04.5 -2.0
VRDI IAmb IAmb 19 55 14.4
comp=Z,20nm,1.1s
C18K Utukok River 18.42 11 P P 19 55 05.3 -1.4
F21K Alatna River 18.55 22 P P 19 55 06.5 -1.6
D19K Kuna River 18.72 15 P P 19 55 08.7 -1.3
IL31 18.74 33 P P 19 55 07.7 -2.5
ILAR Eielson Array 18.74 33 P P 19 55 09.1 -1.1
comp=Z,0.2nm,0.3s,baz=219,slow=10,SNR=11
comp=Z,1.5nm,0.8s
RIDG Independent Ri 18.91 37 P P 19 55 10.3 -1.9
G23K Bananza Creek 19.04 26 P P 19 55 12.7 -0.8
G23K IAmb IAmb 19 55 19.3
comp=Z,4.5nm,0.8s
M26K Nabesna, AK 19.04 42 P P 19 55 13.2 -0.4
H24K Noodor Dome 19.07 30 P Pn 19 55 14.6 -0.2
H24K IAmb IAmb 19 55 17.6
comp=Z,5.5nm,0.8s
J25K Salcha River, 19.18 35 P P 19 55 14.9 -0.2
PETK Petropavlovsk- 19.29 289 P P 19 55 15.9 -0.5
comp=Z,0.3nm,0.3s,baz=102,slow=13,SNR=1.8
comp=Z,2.8nm,0.9s
SCRK Sand Creek 19.36 37 P P 19 55 16.3 -0.8
PRP Porcupine Dome 19.64 32 P P 19 55 20.4 +0.1
PRP IAmb IAmb 19 55 22.6
comp=Z,4.2nm,0.8s
G24K Hadweenzic Riv 19.77 28 P P 19 55 21.3 -0.1
G24K IAmb IAmb 19 55 26.0
comp=Z,6.7nm,0.8s
J26L Joseph Creek 19.78 36 P Pn 19 55 22.2 -1.1
J26L IAmb IAmb 19 55 25.8
comp=Z,5.8nm,0.7s
L27K Beaver Creek, 19.81 41 P P 19 55 21.2 -0.7
L27K IAmb IAmb 19 56 03.1
comp=Z,7.6nm,1.3s
D22K Ayikyak River 20.07 19 P Pn 19 55 25.4 -1.2
D22K IAmb IAmb 19 55 32.9
comp=Z,12nm,1.4s
F24K Squaw Lake 20.20 26 P P 19 55 25.9 -0.3
F24K IAmb IAmb 19 55 32.2
comp=Z,4.8nm,1.0s
B20K Meade River 20.23 14 P P 19 55 26.3 -0.1
B20K IAmb IAmb 19 55 30.1
comp=Z,6.0nm,1.1s
I26K Coal Creek Min 20.35 34 P P 19 55 27.3 -0.5
I26K IAmb IAmb 19 55 30.8
comp=Z,6.2nm,0.6s
BILL Bilibino 20.45 335 P P 19 55 29.2 +0.3
EGAK Eagle 20.82 37 P P 19 55 33.0 +0.1
EGAK IAmb IAmb 19 55 37.3
comp=Z,4.8nm,0.7s
M29M Somme Creek 21.02 44 P P 19 55 36.0 +0.7
M29M IAmb IAmb 19 55 41.7
comp=Z,8.1nm,0.8s
HYT Haines Junctio 21.03 49 P P 19 55 35.8 +0.4
E25K Arctic Village 21.26 26 IAmb IAmb 19 55 45.6
comp=Z,7.6nm,1.0s
C23K Itkillik River 21.28 19 P P 19 55 38.3 +0.5
C23K IAmb IAmb 19 55 39.8
comp=Z,5.6nm,0.8s
I28M Miner Creek 21.59 36 P P 19 55 42.3 +1.0
I28M IAmb IAmb 19 55 46.2
comp=Z,5.6nm,0.8s
D25K Kavik River 21.87 23 IAmb IAmb 19 55 49.5
comp=Z,3.3nm,0.8s
H29M Whitestone 22.52 35 P P 19 55 51.3 +0.2
I30M Mount Dempster 22.86 38 P P 19 55 54.9 +0.1
I30M IAmb IAmb 19 56 01.0
comp=Z,6.5nm,1.2s
E29M Blow River 23.73 30 P P 19 56 03.4 0.0
E29M IAmb IAmb 19 56 07.6
comp=Z,6.9nm,0.9s
G31M Satah River 24.30 35 P P 19 56 09.1 +0.5
INK Inuvik 25.13 32 P P 19 56 16.9 +0.8
INK IAmb IAmb 19 56 20.2
comp=Z,7.2nm,1.2s
YKA Yellowknife Ar 31.99 47 P P 19 57 18.7 +1.4
comp=Z,0.6nm,0.8s,baz=274,slow=9.5,SNR=9.1
comp=Z,0.6nm,0.8s
H11S1 WAKE ISLAND Hy 36.86 217 T T 20 37 34.3
baz=22
H11S2 WAKE ISLAND Hy 36.87 217 T T 20 37 33.2
baz=22
H11S3 WAKE ISLAND Hy 36.87 217 T T 20 37 34.0
baz=22
PDAR Pinedale Array 41.73 76 P P 19 58 41.0 +0.4
comp=Z,0.4nm,0.5s,baz=319,slow=3.2,SNR=5.4
PDAR LR LR 20 14 18.7
comp=Z,89nm,19.0s,baz=64,slow=34
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 53.84 87 P P 20 00 14.3 -0.1
comp=Z,0.3nm,0.5s,baz=311,slow=6.5,SNR=3.9
comp=Z,0.3nm,0.5s
KURBB Kurchatov Arra 62.87 318 P P 20 01 18.4 +1.3
comp=Z,0.7nm,0.2s,baz=46,slow=6.8,SNR=5.4
comp=Z,0.7nm,0.2s
MKAR Makanchi Array 64.04 313 P P 20 01 25.7 +0.8
comp=Z,0.5nm,0.8s,baz=46,slow=5.2,SNR=5.5
comp=Z,0.5nm,0.8s
BVAR Borovoye Array 64.27 324 P P 20 01 28.0 +1.7
comp=Z,2.2nm,0.8s,baz=44,slow=7.0,SNR=14
comp=Z,2.2nm,0.8s
BRVK Borovoye 64.28 324 P P 20 01 27.3 +0.9
FINES FINESS Array B 67.15 351 P P 20 01 46.1 +1.4
comp=Z,1.0nm,0.6s,baz=2.9,slow=3.8,SNR=3.9
comp=Z,1.0nm,0.6s
HFS Hagfors 69.24 357 P P 20 01 58.5 +0.7

comp=Z,2.0nm,0.8s,baz=5.7,slow=5.8,SNR=1.2
comp=Z,2.0nm,0.8s

IDC 27 19:59:19.4±1.7, 5°99S×142°96E, h0km, mb3.4/2, mbtmp3.5/5, ML3.6/2, Error ellipse: s-maj=49.3km s-min=30.6km az=78.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.37**	**129**	Pn	Pn	20 00 40.4	-0.4
	2.8nm,0.4s,baz=313,slow=11,SNR=2.3						
PMG				Sn	Sn	20 01 40.1	-3.2
	0.9nm,0.3s,baz=137,slow=23,SNR=6.7						
WRA	**Warramunga Arr**	**16.20**	**210**	Pn	Pn	20 03 06.6	-2.1
	0.2nm,0.3s,baz=32,slow=13,SNR=11						
WRA				Sn	Sn	20 05 55.4	-14
	0.2nm,0.3s,baz=42,slow=22,SNR=1.9						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**19.62**	**205**	P	Pn	20 03 50.5	-0.4
	0.3nm,0.3s,baz=33,slow=10,SNR=27						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**74.97**	**322**	P	P	20 11 02.2	-0.5
	0.1nm,0.3s,baz=111,slow=4.5,SNR=1.5						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**84.42**	**325**	P	P	20 11 54.5	+0.7
	0.5nm,0.7s,baz=105,slow=9.1,SNR=2.8						
	0.5nm,0.7s						

BJI ***27*** *20:10:59.3±0.0, 6°37S×143°46E, h10km, mb4.8/73, mB5.3/37, Ms4.7/13, Ms7 4.2/13*

IDC ***27*** *20:11:02.7±0.5, 6°12S×143°01E, h0km, mb4.8/20, mbtmp4.8/24, ML3.4/2, MS4.0/27, Error ellipse: s-maj=23.8km s-min=11.9km az=80.0*

MOS ***27*** *20:11:03.4±0.8, 6°08S×142°95E, h17km, mb5.1/37, Error ellipse: s-maj=10.5km s-min=5.4km az=113.7*

NEIC ***27*** *20:11:04.1, 6°21S×142°84E, h20km*

NEIC ***27*** *20:11:04.0±1.6, 6°20S±0°.06×142°83E±0°.07, h10km±1km, mb5.2/174, Mww5.1/13, Error ellipse: s-maj=11.2km s-min=10.6km az=130.0*

NEIC ***27*** *20:11:04.1, 6°21S×142°43E, h20km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16 Nm; Mrr=4.79; Mθθ=-3.24; Mφφ=-1.54; Mrθ=2.42; Mθφ=2.48; Mφr=-1.75; Fault plane solution: M0=5.74000×10^16 NP1: φs=125.72000°, δ60.70000°, λ90.16000°. NP2: φs=305.40000°, δ29.30000°, λ89.72000°. Principal axes: T 5.6265, Plg74.0000°, Azm36.0000°; N 0.2323, Plg0.0000°, Azm306.0000°; P -5.8588, Plg16.0000°, Azm216.0000°;*

DJA ***27*** *20:11:09.5±0.3, 6°S±2°×14°3E±°, h48km±3km, M4.9/56, mb5.2/56, mB5.4/39, MLv5.9/6, Mw(mB)4.8/39, MwMwp5.7/2, Mwp5.8/2*

GCMT ***27*** *20:11:09.1±0.2, 6°27S±0°.01×142°.74E±0°.02, h19km, MW5.1/114, Moment Tensor Solution. s46,c53; s114,c162; Duration: 0 Moment tensor: Scale 1016Nm; Mrr5.16±.25; Mθθ-3.30±.15; Mφφ-1.86±.17; Mrθ1.11±.28; Mθφ2.52±.09; Mφr-1.71±.37; Best double couple: M05.56700×1016 NP1:φs134.00000°, δ56.00000°, λ98.00000°. NP2:φs300.00000°, δ35.00000°, λ78.00000°. Principal axes: T 5.5880, Plg78.0000°, Azm72.0000°; N -0.0410, Plg7.0000°, Azm310.0000°; P -5.5460, Plg10.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 20:11:05.3±0.7, 6°28S±0°.04×142°84E±0°.04, h13km±3km, n711, σ1§45/524, mb5.2/170, MS4.1/31, 16C-6D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.89**	**302**	P	**Pn**	**20 11 38.8**	**+1.5**
MMPI	**Merauke**	**3.26**	**228**	P	**Pn**	**20 11 57.1**	**+1.0**
GENI	**Genyem**	**4.53**	**324**	P	**Pn**	**20 12 14.3**	**+0.8**
GENI	**Genyem**	**4.53**	**324**	P	**Pn**	**20 12 15.0**	**+1.5**
PMG	**Port Moresby**	**5.29**	**126**	Pn	**Pn**	**20 12 23.6**	**-0.4**
PMG	**Port Moresby**	**5.29**	**126**	P	**Pn**	**20 12 24.4**	**+0.4**
PMG	**Port Moresby**	**5.29**	**126**	P	**Pn**	**20 12 24.3**	**+0.3**
PMG	**Port Moresby**	**5.29**	**126**	*c* iP	**Pn**	**20 12 23.5**	**-0.5**
PMG	**Port Moresby**	**5.29**	**126**	Pn	**Pn**	**20 12 24.4**	**+0.3**
	18nm,0.3s,baz=338,slow=2.4,SNR=79						
PMG				Sn	**Sn**	**20 13 23.7**	**-1.1**
	27nm,0.3s,baz=234,slow=22,SNR=7.0						
PMG				LR	LR	20 15 05.8	
	comp=Z,2μm,19.1s,baz=273,slow=46						
	123nm,0.7s						
SMPI	**Sarmi**	**5.92**	**316**	P	**Pn**	**20 12 33.9**	**+1.2**
	488nm,0.9s,8μm2.8nm						
MANU	**Manus Island**	**6.17**	**47**	Pn	**Pn**	**20 12 36.4**	**+0.2**
MANU	**Manus Island**	**6.17**	**47**	P	**Pn**	**20 12 38.7**	**+2.5**
COEN	**Coen**	**7.64**	**178**	P	**Pn**	**20 12 58.7**	**+2.4**
	baz=7.7,SNR=8.3						
COEN	**Coen**	**7.64**	**178**		**Pn**	**20 12 57.3**	**+1.0**
COEN	**Coen**	**7.64**	**178**	P	**Pn**	**20 12 59.8**	**+3.5**
RABL	**Rabaul**	**9.52**	**78**		Pn	20 13 19.7	-2.4
RABL	**Rabaul**	**9.52**	**78**	P	Pn	20 13 27.1	+5.0
FAKI	**Fak Fak**	**11.07**	**287**	Pn	Pn	20 13 40.1	-3.2
FAKI	**Fak Fak**	**11.07**	**287**	P	**Pn**	**20 13 44.1**	**+0.7**
FAKI	**Fak Fak**	**11.07**	**287**	P	Pn	20 13 40.3	-3.1
	109nm,1.4s,973nm						
SAUI	**Saumlaki**	**11.57**	**261**	Pn	**Pn**	**20 13 49.3**	**-0.9**
SAUI	**Saumlaki**	**11.57**	**261**	P	**Pn**	**20 13 52.4**	**+2.1**
SAUI	**Saumlaki**	**11.57**	**261**	P	**Pn**	**20 13 50.0**	**-0.3**
	1μm,1.1s,9μm						
MTSU	**Mount Surprise**	**11.87**	**173**	P	**Pn**	**20 13 57.3**	**+3.0**
	baz=12,SNR=6.1						
MTSU	**Mount Surprise**	**11.87**	**173**	P	**Pn**	**20 13 56.9**	**+2.5**
KDU	**Kakadu**	**12.04**	**237**	P	**Pn**	**20 13 55.1**	**-1.5**
	baz=12,SNR=163						
KDU	**Kakadu**	**12.04**	**237**	P	**Pn**	**20 13 56.3**	**-0.3**
SWI	**Sorong**	**12.74**	**295**	P	Pn	20 14 02.8	-3.5
	88nm,0.8s,753nm						
BNDI	**Bandanaira**	**12.99**	**277**	P	**Pn**	**20 14 08.2**	**-1.5**
	267nm,0.9s,4μm						
MTN	**Manton Dam**	**13.25**	**240**	P	**Pn**	**20 14 11.5**	**-1.7**
	baz=13,SNR=71						
MTN	**Manton Dam**	**13.25**	**240**	Pn	Pn	20 14 10.3	-2.9
MTN	**Manton Dam**	**13.25**	**240**	P	**Pn**	**20 14 12.1**	**-1.1**
DRS	**Darwin Rock St**	**13.27**	**242**	P	**Pn**	**20 14 13.8**	**+0.4**
TV1H	**Townsville Har**	**13.47**	**164**	P	**Pn**	**20 14 19.9**	**+3.8**
CTA	**Charters Tower**	**14.12**	**167**	P	Pn	20 14 30.3	+5.2
CTA	**Charters Tower**	**14.12**	**167**	Pn	**Pn**	**20 14 27.1**	**+2.0**
	0.5nm,0.3s,baz=15,slow=10,SNR=3.8						
CTA				Lg	Lg	20 18 32.4	
	0.6nm,0.3s,baz=73,slow=19,SNR=5.6						
CTA				LR	LR	20 19 58.0	
	comp=Z,1μm,18.1s,baz=356,slow=38						
	5.5nm,0.7s						
CTAO	**Charters Tower**	**14.12**	**167**	P	**Pn**	**20 14 27.2**	**+2.1**
CTAO	**Charters Tower**	**14.12**	**167**	P	Pn	20 14 30.3	+5.2
CTAO	**Charters Tower**	**14.12**	**167**	P	**Pn**	**20 14 27.2**	**+2.1**
QIS	**Mount Isa**	**14.54**	**192**	P	**Pn**	**20 14 32.1**	**+1.3**
	baz=15,SNR=13						
QIS	**Mount Isa**	**14.54**	**192**	P	**Pn**	**20 14 34.2**	**+3.4**
WB0	**Warramunga Arr**	**15.72**	**211**	Pn	**Pn**	**20 14 46.4**	**-0.2**
WR0	**Warramunga Arr**	**15.81**	**210**		**Pn**	**20 14 46.7**	**-1.0**
WB2	**Warramunga Arr**	**15.89**	**210**	Pn	**Pn**	**20 14 47.5**	**-1.2**
WC3	**Warramunga Arr**	**15.89**	**210**	P	**Pn**	**20 14 48.0**	**-0.7**
	baz=16						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**20 14 46.0**	**-2.8**
WRA	**Warramunga Arr**	**15.89**	**211**	P	**Pn**	**20 14 46.0**	**-2.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
WRA	**Warramunga Arr**	**15.89**	**211**	Pn	**Pn**	**20 14 47.7**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=31,slow=13,SNR=31						
WRA				Sn	Sn	20 17 33.3	-12
	comp=Z,1.9nm,0.3s,baz=25,slow=21,SNR=4.6						
WRA				Lg	Lg	20 19 28.6	
	comp=Z,2.4nm,0.3s,baz=36,slow=27,SNR=6.3						
WRA				LR	LR	20 21 45.7	
	comp=Z,3μm,21.5s,baz=359,slow=40						
NLAI	**Namlea**	**15.97**	**280**	P	**Pn**	**20 14 49.4**	**-0.4**
	comp=Z,36nm,0.8s,comp=Z,2μm						
LBMI	**Labuha**	**16.30**	**290**	P	**Pn**	**20 14 55.4**	**+1.4**
	comp=Z,103nm,0.9s,comp=Z,2μm						
KNRA	**Kununurra**	**16.66**	**235**	P	**Pn**	**20 14 56.8**	**-1.9**
	baz=17						
KNRA	**Kununurra**	**16.66**	**235**	Pn	**Pn**	**20 14 56.2**	**-2.4**
KNRA				IAmb	IAmb	20 15 04.4	
	comp=Z,168nm,0.8s						
KNRA	**Kununurra**	**16.66**	**235**	P	**Pn**	**20 14 57.2**	**-1.5**
TNTI	**Ternate**	**16.96**	**294**	Pn	**Pn**	**20 15 00.2**	**-2.2**
TNTI	**Ternate**	**16.96**	**294**	P	**Pn**	**20 15 04.1**	**+1.7**
	comp=Z,37nm,1.0s,comp=Z,668nm						
HNR	**Honiara**	**17.23**	**102**	P	**Pn**	**20 15 05.2**	**-0.6**
HNR	**Honiara**	**17.23**	**102**	P	**Pn**	**20 15 05.2**	**-0.6**
HNR				pmax	pmax		
	comp=Z,67nm,0.9s						
SANI	**Sanata**	**17.32**	**283**	P	**Pn**	**20 15 06.7**	**-0.2**
SANI	**Sanata**	**17.32**	**283**	P	**Pn**	**20 15 04.8**	**-2.1**
	comp=Z,75nm,1.0s,comp=Z,745nm						
SOEI	**Soe**	**18.71**	**258**		**P**	**20 15 22.5**	**-1.2**
SOEI				IAmb	IAmb	20 15 33.6	
	comp=Z,131nm,1.1s						
SOEI	**Soe**	**18.71**	**258**	P	**Pn**	**20 15 27.2**	**+3.1**
SOEI	**Soe**	**18.71**	**258**	P	**P**	**20 15 25.0**	**+1.2**
	comp=Z,264nm,1.2s,comp=Z,3μm						
AS01	**Alice Springs**	**19.28**	**205**	P	**P**	**20 15 32.7**	**+2.8**
AS31	**Alice Springs**	**19.30**	**206**	Pn	**P**	**20 15 30.8**	**+0.6**
ASAR	**Alice Springs**	**19.31**	**206**		**P**	**20 15 31.1**	**+1.0**
ASAR	**Alice Springs**	**19.31**	**206**	P	**Pn**	**20 15 33.6**	**+2.4**
	comp=Z,150nm,0.7s,baz=32,slow=10,SNR=543						
ASAR				S	**Sn**	**20 19 00.5**	**-7.2**
	comp=Z,10nm,0.7s,baz=18,slow=28,SNR=5.9						
ASAR				Lg	Lg	20 21 17.8	
	comp=Z,0.2nm,0.3s,baz=20,slow=30,SNR=4.3						
ASAR				LR	LR	20 23 44.7	
	comp=Z,2μm,21.7s,baz=36,slow=39						
ASPA	**Alice Springs**	**19.31**	**206**	P	**P**	**20 15 32.7**	**+2.5**
	baz=19						
GUMO	**Guam**	**19.84**	**6**	P	**P**	**20 15 32.9**	**-3.1**
GUMO				IAmb	IAmb	20 15 39.1	
	comp=Z,198nm,1.0s						
GUMO	**Guam**	**19.84**	**6**	P	**P**	**20 15 33.4**	**-2.6**
	comp=Z,52nm,0.8s,baz=221,slow=20,SNR=1.6						
KMSI	**Cibinong**	**20.02**	**289**	P	**P**	**20 15 39.7**	**+1.8**
	comp=Z,484nm,1.0s,comp=Z,4μm						
BBSI	**Bau Bau**	**20.18**	**271**	P	**P**	**20 15 40.8**	**+1.1**
	comp=Z,70nm,1.1s,comp=Z,772nm						
PATS	**Pohnpei**	**20.20**	**50**	P	**P**	**20 15 41.2**	**+1.3**
	baz=20,SNR=4.4						
PATS	**Pohnpei**	**20.20**	**50**	P	**P**	**20 15 41.4**	**+1.4**
QLP	**Quilpie**	**20.23**	**176**	P	**P**	**20 15 42.2**	**+1.9**
	baz=20,SNR=6.0						
QLP	**Quilpie**	**20.23**	**176**	P	Pn	20 15 44.5	+2.3
FITZ	**Fitzroy Crossi**	**20.48**	**233**	P	**P**	**20 15 43.8**	**+0.8**
	baz=20,SNR=55						
FITZ	**Fitzroy Crossi**	**20.48**	**233**		**P**	**20 15 43.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.48**	**233**	P	**P**	**20 15 44.8**	**+1.8**
EIDS	**Eidsvold**	**20.56**	**158**	P	**P**	**20 15 46.2**	**+2.5**
	baz=21,SNR=8.6						
EIDS	**Eidsvold**	**20.56**	**158**		**P**	**20 15 42.7**	**-1.1**
EIDS				IAmb	IAmb	20 15 52.6	
	comp=Z,127nm,1.4s						
EIDS	**Eidsvold**	**20.56**	**158**	P	**P**	**20 15 46.8**	**+3.1**
MMRI	**Maumere**	**20.56**	**262**	P	**P**	**20 15 42.9**	**-0.9**
MMRI				IAmb	IAmb	20 15 54.8	
	comp=Z,94nm,1.1s						
MMRI	**Maumere**	**20.56**	**262**	P	**P**	**20 15 46.2**	**+2.3**
MMRI	**Maumere**	**20.56**	**262**	P	**P**	**20 15 43.7**	**-0.2**
	comp=Z,100nm,1.0s,comp=Z,1μm						
LUWI	**Luwuk**	**20.68**	**284**	P	**P**	**20 15 43.8**	**-1.4**
LUWI				IAmb	IAmb	20 15 52.7	
	comp=Z,113nm,0.9s						
LUWI	**Luwuk**	**20.68**	**284**	P	**P**	**20 15 48.6**	**+3.4**
LUWI	**Luwuk**	**20.68**	**284**	P	**P**	**20 15 46.1**	**+0.9**
	comp=Z,175nm,0.9s,comp=Z,2μm						
EDFI	**Ende, Flores**	**21.11**	**262**	P	**P**	**20 15 48.9**	**-1.0**
	comp=Z,74nm,1.0s,comp=Z,856nm						
INKA	**Innaminka**	**21.44**	**185**	P	**P**	**20 15 56.9**	**+3.7**
MRSI	**Marisa**	**21.91**	**287**	P	**P**	**20 15 58.2**	**-0.2**
	comp=Z,113nm,1.0s,comp=Z,1μm						
BASI	**Baing, Sumba**	**22.37**	**258**	P	**P**	**20 16 01.1**	**-2.3**
	comp=Z,277nm,0.9s,comp=Z,2μm						
OOD	**Oodlatta**	**22.45**	**197**	P	**P**	**20 16 06.3**	**+2.2**
BKSI	**Bulukumba**	**22.62**	**271**	P	**P**	**20 16 05.8**	**-0.2**
	comp=Z,103nm,1.0s,comp=Z,1μm						
KAPI	**Kappang**	**23.01**	**272**	P	**P**	**20 16 10.9**	**+0.8**
KAPI				IAmb	IAmb	20 16 19.3	
	comp=Z,114nm,0.9s						
KAPI	**Kappang**	**23.01**	**272**	*i* P	**P**	**20 16 11.7**	**+1.6**
KAPI				pmax	pmax		
	comp=Z,140nm,1.0s						
TTSI	**Tana Toraja**	**23.16**	**277**	P	**P**	**20 16 12.4**	**+0.7**
	comp=Z,84nm,0.9s,comp=Z,1μm						
TOLI2	**Tolitoli**	**23.21**	**288**	P	**P**	**20 16 10.6**	**-1.6**
TOLI2				IAmb	IAmb	20 16 20.1	
	comp=Z,106nm,1.2s						
TOLI2	**Tolitoli**	**23.21**	**288**	P	**P**	**20 16 12.9**	**+0.7**
WRKA	**Warakurna**	**23.28**	**215**	P	**P**	**20 16 13.4**	**+0.5**
	baz=23,SNR=78						
WRKA	**Warakurna**	**23.28**	**215**	P	**P**	**20 16 13.9**	**+1.1**
AULRC	**Lightning Ridg**	**23.53**	**169**	P	**P**	**20 16 16.3**	**+1.0**
MPSI	**Mapaga**	**23.82**	**285**	P	**P**	**20 16 16.9**	**-1.3**
	comp=Z,55nm,0.9s,comp=Z,829nm						
LCRK	**Leigh Creek**	**24.40**	**190**	P	**P**	**20 16 24.4**	**+0.7**
PLAI	**Plampang**	**24.97**	**263**	P	**P**	**20 16 28.7**	**-0.1**
PLAI	**Plampang**	**24.97**	**263**	P	**P**	**20 16 26.4**	**-2.4**
	comp=Z,73nm,0.9s,comp=Z,639nm						
KOUNC	**Koumac, New Ca**	**25.18**	**126**	P	**P**	**20 16 32.1**	**+1.5**
MULG	**Mulgathing**	**25.27**	**198**	P	**P**	**20 16 32.5**	**+1.2**
CMSA	**Cobar Meteorol**	**25.27**	**174**	P	**P**	**20 16 32.7**	**+1.4**
	baz=25,SNR=10						
CMSA	**Cobar Meteorol**	**25.27**	**174**	P	**P**	**20 16 32.3**	**+1.0**
ARMA	**Armidale**	**25.40**	**162**	P	**P**	**20 16 34.5**	**+1.9**
	baz=26,SNR=3.9						
ARMA	**Armidale**	**25.40**	**162**	P	**P**	**20 16 31.7**	**-0.9**
STKA	**Stephens Creek**	**25.49**	**182**	P	**P**	**20 16 33.5**	**+0.2**
	baz=26,SNR=27						
STKA	**Stephens Creek**	**25.49**	**182**	P	**P**	**20 16 32.6**	**-0.7**
STKA	**Stephens Creek**	**25.49**	**182**	P	**P**	**20 16 33.8**	**+0.5**
STKA	**Stephens Creek**	**25.49**	**182**	*i* P	**P**	**20 16 33.8**	**+0.5**
STKA	**Stephens Creek**	**25.49**	**182**	P	**P**	**20 16 33.5**	**+0.2**
	comp=Z,14nm,0.7s,baz=357,slow=8.3,SNR=24						
	comp=Z,14nm,0.7s						
TWSI	**Taliwang, Sumb**	**25.85**	**263**	P	**P**	**20 16 33.5**	**-3.2**
	comp=Z,27nm,0.8s						
BKB	**Balikpapan**	**26.35**	**280**	P	**P**	**20 16 37.5**	**-3.8**
BKB	**Balikpapan**	**26.35**	**280**	P	**P**	**20 16 44.6**	**+3.3**
AUDCS	**Dubbo College**	**26.38**	**169**	P	**P**	**20 16 44.9**	**+3.5**
MBWA	**Marble Bar**	**26.82**	**234**	P	**P**	**20 16 41.8**	**-3.7**
MBWA	**Marble Bar**	**26.82**	**234**	P	**P**	**20 16 48.6**	**+3.1**
PSA00	**Pilbara Seismi**	**26.94**	**233**	P	**P**	**20 16 44.4**	**-2.1**
PSA00	**Pilbara Seismi**	**26.94**	**233**	P	**P**	**20 16 43.1**	**-3.4**
PSA00				IAmb	IAmb	20 16 57.9	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**26.94**	**233**	P	**P**	**20 16 46.7**	**+0.2**
WHYH	**Whyalla**	**27.07**	**190**	P	**P**	**20 16 49.1**	**+1.6**
BBOO	**Buckleboo**	**27.14**	**193**	P	**P**	**20 16 48.2**	**0.0**
	baz=27,SNR=6.7						
BBOO	**Buckleboo**	**27.14**	**193**	P	**P**	**20 16 47.7**	**-0.6**
HTT	**Hallett**	**27.26**	**187**	P	**P**	**20 16 51.4**	**+2.1**
	baz=27,SNR=5.8						
HTT	**Hallett**	**27.26**	**187**	P	**P**	**20 16 51.4**	**+2.1**
SRBI	**Singaraja**	**27.46**	**265**	P	**P**	**20 16 49.2**	**-2.1**
	comp=Z,30nm,1.0s						
DZM	**Mont Dzumac**	**27.68**	**127**	P	**P**	**20 16 51.7**	**-1.6**
DZM	**Mont Dzumac**	**27.68**	**127**	P	**P**	**20 16 57.5**	**+4.2**
FORT	**Forrest**	**28.05**	**208**	P	**P**	**20 16 53.8**	**-2.5**
YNG	**Young**	**28.35**	**170**	P	**P**	**20 17 00.1**	**+1.0**
	baz=28,SNR=5.2						
YNG	**Young**	**28.35**	**170**	P	**P**	**20 17 02.4**	**+3.3**
JAGI	**Jajag, Banyuwa**	**28.53**	**264**	P	P	20 16 57.7	-3.1
JAGI				IAmb	IAmb	20 17 05.9	
	comp=Z,33nm,1.0s						
JAGI	**Jajag, Banyuwa**	**28.53**	**264**	P	**P**	**20 16 59.4**	**-1.5**
JAGI	**Jajag, Banyuwa**	**28.53**	**264**	P	P	20 16 56.4	-4.5
	comp=Z,36nm,1.2s						
TGY	**Tagaytay City**	**29.70**	**313**	LR	LR	20 29 29.7	
	comp=Z,105nm,20.2s,baz=107,slow=37						
BWJI	**Bawean**	**30.01**	**269**	P	**P**	**20 17 13.5**	**-0.5**
	comp=Z,222nm,1.3s,comp=Z,2μm						
PWJI	**Pagerwojo**	**30.84**	**265**	P	P	20 17 17.9	-3.4
	comp=Z,23nm,1.1s						
BRAT	**Ballarat**	**31.14**	**178**	P	**P**	**20 17 25.7**	**+2.0**
UGM	**Wanagama**	**32.10**	**265**	P	P	20 17 29.9	-2.6
UGM	**Wanagama**	**32.10**	**265**	P	P	20 17 30.6	-1.9
UGM	**Wanagama**	**32.10**	**265**	P	P	20 17 30.6	-1.9
	comp=Z,98nm,1.7s						
SMRI	**Semarang**	**32.18**	**267**	P	P	20 17 30.9	-2.3
KSM	**Kuching**	**33.38**	**282**	P	**P**	**20 17 45.2**	**+1.6**
KPJI	**Karang Pucung**	**33.68**	**266**	P	**P**	**20 17 45.2**	**-1.1**
	comp=Z,60nm,0.9s,comp=Z,737nm						
MORW	**Morawa**	**33.97**	**225**	P	**P**	**20 17 48.4**	**-0.3**
	baz=34,SNR=4.3						
MORW	**Morawa**	**33.97**	**225**	P	**P**	**20 17 46.9**	**-1.7**
MORW				IAmb	IAmb	20 18 56.6	
	comp=Z,35nm,1.3s						
CMJI	**Cimerak**	**34.16**	**265**	P	P	20 17 47.0	-3.4
	comp=Z,135nm,1.0s,comp=Z,902nm						
KLBR	**Kellerberrin**	**34.42**	**220**	P	**P**	**20 17 53.7**	**+1.2**
	baz=34						
BBJI	**Bungbulang**	**34.95**	**266**	P	**P**	**20 17 56.4**	**-1.0**
LEM	**Lembang**	**34.99**	**267**	P	**P**	**20 17 56.3**	**-1.5**
	comp=Z,62nm,0.9s						
CNJI	**Cibinong**	**35.47**	**266**	P	P	20 17 59.3	-2.5
	comp=Z,81nm,1.0s,comp=Z,608nm						
NWAO	**Narrogin (SRO)**	**35.64**	**219**	LR	LR	20 33 03.8	
	comp=Z,628nm,21.4s,baz=64,slow=37						
CBJI	**Citeko**	**35.76**	**268**	P	**P**	**20 18 04.0**	**-0.3**
	comp=Z,40nm,1.0s,comp=Z,2μm						
SKJI	**Sukabumi**	**36.04**	**267**	P	P	20 18 04.0	-2.7
	comp=Z,103nm,1.0s						
PPBI	**Pangkal Pinang**	**36.42**	**275**	P	**P**	**20 18 11.9**	**-1.5**
	comp=Z,33nm,1.2s,comp=Z,4μm						
XMI	**Christmas Isla**	**36.97**	**261**	P	**P**	**20 18 15.8**	**+1.2**
XMIS	**Christmas Isla**	**37.01**	**261**	P	**P**	**20 18 13.2**	**-1.8**
XMIS	**Christmas Isla**	**37.01**	**261**	P	**P**	**20 18 16.3**	**+1.3**
YHNB	**Yeheng**	**37.19**	**327**	P	**P**	**20 18 20.1**	**+3.7**
KASI	**Kota Agung**	**38.14**	**269**	P	P	20 18 21.6	-2.9
	comp=Z,31nm,1.0s						
LWLI	**Liwa**	**38.60**	**270**	P	**P**	**20 18 27.1**	**-1.5**
	comp=Z,87nm,0.9s,comp=Z,2μm						
TPRI	**Tanjung Pinang**	**38.91**	**279**	P	**P**	**20 18 30.4**	**-0.6**
QIZ	**Qiongzhong**	**41.10**	**308**	P	**P**	**20 18 49.3**	**+0.1**
QIZ				S	**S**	**20 25 02.3**	**+0.3**
QIZ				pmax	pmax		
	comp=Z,450nm,4.1s						
QIZ				LR	LR		
	comp=Z,220nm,20.2s						
QIZ				LR	LR		
	comp=Z,190nm,16.8s						
QIZ				LR	LR		
	comp=Z,190nm,16.8s						
INU	**Inuyama**	**41.77**	**353**		P	20 18 51.3	-3.0
BKNI	**Bangkinang**	**42.23**	**277**	P	P	20 18 56.2	-2.3
BKNI	**Bangkinang**	**42.23**	**277**	P	**P**	**20 19 00.9**	**+2.4**
MJAR	**Matsushiro Arr**	**42.82**	**355**	P	P	20 18 59.9	-3.0
	comp=Z,8.4nm,1.1s,baz=180,slow=7.8,SNR=7.7						
MJAR				PcP	**PcP**	**20 20 53.3**	**-0.8**
	comp=Z,5.5nm,1.2s,baz=164,slow=3.1,SNR=4.2						
MJAR				LR	LR	20 36 52.8	
	comp=Z,72nm,18.3s,baz=172,slow=36						
	comp=Z,8.4nm,1.1s						
MAJO	**Matsushiro**	**42.82**	**355**	P	P	20 19 00.4	-2.5
MAJO	**Matsushiro**	**42.82**	**355**	*i* P	P	20 19 00.6	-2.3
MAJO				pmax	pmax		
	comp=Z,23nm,1.3s						
MJB9	**Matsu-Tunnel**	**42.82**	**355**	P	P	20 19 00.7	-2.3
IPM	**Ipoh**	**43.09**	**283**	P	**P**	**20 19 05.2**	**-0.3**
TOZ	**Tahuroa Road**	**43.14**	**141**	P	**P**	**20 19 04.3**	**-1.2**
TOZ				IAmb	IAmb	20 19 21.4	
	comp=Z,74nm,1.5s						
HIZ	**Hauiti**	**43.23**	**143**	P	P	20 19 04.9	-1.4
JCZ	**Jackson Bay**	**43.98**	**153**	P	**P**	**20 19 14.5**	**+2.2**
NJ2	**Nanjing**	**44.45**	**330**	⇓P	**P**	**20 19 17.5**	**+1.4**
NJ2				pP	**pP**	**20 19 19.8**	**-1.0**
NJ2				sP	**sP**	**20 19 21.5**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,180nm,5.2s						
RTZ	**Ruatahuna**	**44.60**	**141**	P	P	20 19 15.8	-1.5
TUWZ	**Tuamarina**	**44.63**	**146**	P	P	20 19 15.7	-1.8
BKZ	**Black Stump Fm**	**44.63**	**142**	P	**P**	**20 19 16.7**	**-1.0**
TCW	**Tory Channel**	**44.67**	**146**	P	**P**	**20 19 17.3**	**-0.5**
LTZ	**Lake Taylor**	**44.69**	**149**	P	**P**	**20 19 17.3**	**-0.7**
MLZ	**Mavora Lakes**	**44.71**	**155**	P	**P**	**20 19 17.3**	**-0.8**
PSI	**Prapat**	**44.77**	**280**	P	**P**	**20 19 19.1**	**0.0**
RPZ	**Rata Peaks**	**44.77**	**151**	P	P	20 19 16.7	-1.9
RPZ				IAmb	IAmb	20 19 30.7	
	comp=Z,45nm,1.2s						
BSWZ	**Blackbirch Sta**	**44.79**	**147**	P	**P**	**20 19 17.6**	**-1.2**
MXZ	**Matakaoa Point**	**44.82**

HNS LR LR
comp=Z,190nm,20.7s
HNS LR LR
comp=Z,210nm,19.1s
SNY Shenyang 51.01 342 ⇑P **P** **20 20 06.0 -0.9**
SNY pmax pmax
comp=Z,6.0nm,0.8s
USA0B Ussuriysk Arra 51.19 350 P P 20 20 05.9 -2.3
USA0B Ussuriysk Arra 51.19 350 *i* P P 20 20 06.3 -1.9
USRK Ussuriysk Ar. 51.19 350 P P 20 20 06.5 -1.6
comp=Z,13nm,0.9s,baz=165,slow=7.8,SNR=13
comp=Z,13nm,0.9s
XAN Xi'an 51.35 324 P **P** **20 20 08.8 -0.9**
XAN pP sP 20 20 21.0 +5.1
XAN PP **PP** **20 22 04.0 -3.0**
XAN S **S** **20 27 26.5 -2.4**
XAN pmax pmax
comp=Z,18nm,1.4s
XAN pmax pmax
comp=Z,420nm,4.1s
PZH PanZhiHua 51.46 311 P **P** **20 20 11.3 +0.6**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,190nm,7.6s
MDJ Mudanjiang 52.05 348 P **P** **20 20 16.2 +1.6**
BJT Baijiatuau 52.22 334 P P 20 20 14.1 -1.9
BJT Baijiatuau 52.22 334 P **P** **20 20 17.2 +1.2**
BJT Baijiatuau 52.22 334 P P 20 20 14.1 -1.9
BJT pmax pmax
comp=Z,23nm,1.4s
BJI Beijing 52.24 334 P **P** **20 20 15.0 -1.1**
BJI pmax pmax
comp=Z,7.0nm,1.2s
CN2 Changchun 52.27 344 P **P** **20 20 16.0 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 52.58 317 P **P** **20 20 18.8 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
YSS Yuzh-Sakhalins 53.00 360 P P 20 20 19.6 -2.0
YSS IAmb IAmb 20 20 37.7
comp=Z,71nm,1.9s
YSS Yuzh-Sakhalins 53.00 360 P **P** **20 20 21.2 -0.4**
YSS Yuzh-Sakhalins 53.00 360 *e*P **P** **20 20 21.1 -0.5**
YSS *e*S **S** **20 27 47.6 -3.3**
YSS pmax pmax
comp=Z,10.0nm,0.7s
YSS MLR MLR
comp=Z,300nm,15.0s
TNCH TengChong 53.16 308 P **P** **20 20 24.3 +0.8**
TNCH S **S** **20 27 51.0 -3.3**
TNCH pmax pmax
comp=Z,31nm,1.1s
TNCH pmax pmax
comp=Z,210nm,7.0s
TNCH LR LR
comp=Z,130nm,17.8s
TNCH LR LR
comp=Z,120nm,20.1s
TNCH LR LR
comp=Z,140nm,20.3s
BNX BinXian 53.59 347 ⇓P P 20 20 25.0 -1.0
BNX pmax pmax
comp=Z,21nm,0.9s
BNX pmax pmax
comp=Z,88nm,3.8s
MND Mandalay 53.71 303 P **P** **20 20 28.0 +0.7**
HHC Hu-ho-hao-te 54.99 331 *e*P **P** **20 20 36.0 -0.4**
HHC pP pP 20 20 40.5 -0.7
HHC *e*S **S** **20 28 22.8 +4.5**
HHC ScS ScS 20 30 17.0 -8.7
HHC SS **SS** **20 31 57.5 -4.8**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC LR LR
comp=Z,120nm,15.3s
HHC LR LR
comp=Z,160nm,18.4s
HHC LR LR
comp=Z,150nm,16.4s
XLT XiLinHaoTe 55.49 337 *e*P **P** **20 20 39.5 -0.4**
XLT pP sP 20 20 49.0 +2.8
XLT S **S** **20 28 24.8 0.0**
XLT pmax pmax
comp=Z,6.0nm,0.8s
XLT pmax pmax
comp=Z,150nm,7.1s
XLT LR LR
comp=Z,280nm,23.8s
XLT LR LR
comp=Z,140nm,18.7s
BTO Baotou 55.55 330 *e*P **P** **20 20 43.0 +2.5**
BTO PP **PP** **20 22 49.5 +4.7**
BTO S **S** **20 28 29.5 +3.6**
BTO SS **SS** **20 32 10.5 -0.7**
BTO pmax pmax
comp=Z,14nm,0.9s
BTO pmax pmax
comp=Z,300nm,6.6s
BTO LR LR
comp=Z,340nm,20.6s
BTO LR LR
comp=Z,290nm,13.9s
BTO LR LR
comp=Z,440nm,17.7s
LZH Lanzhou 55.80 322 *e*P **P** **20 20 43.0 +0.6**
LZH sP sP 20 20 51.0 +2.4
LZH pmax pmax
comp=Z,20nm,1.3s
KLR Kul'dur 56.12 351 *i* P P 20 20 40.1 -4.2
KLR pmax pmax
comp=Z,10.0nm,1.0s
KLR Kul'dur 56.12 351 P P 20 20 43.1 -1.1
comp=Z,5.3nm,0.9s,baz=197,slow=2.5,SNR=18
KLR LR LR 20 43 06.7
comp=Z,65nm,18.7s,baz=164,slow=34
comp=Z,5.3nm,0.9s
TYV Tymovskoe 56.91 360 *e*P **P** **20 20 49.0 -0.8**
TYV pmax pmax
comp=Z,6.0nm,1.1s
TYV pmax pmax
comp=Z,100nm,4.9s
RAR Rarotonga 57.39 111 P P 20 20 52.2 -1.6
RAR Rarotonga 57.39 111 P P 20 20 52.3 -1.5
RAR pmax pmax
comp=Z,127nm,2.0s
HEH HeiHe 57.87 348 *e*P P 20 20 55.3 -1.3
HEH pmax pmax
comp=Z,9.0nm,1.0s
HEH pmax pmax
comp=Z,250nm,5.2s
HIA Hailar 58.88 343 *i* P P 20 21 01.5 -2.2
HIA pmax pmax
comp=Z,10.0nm,1.2s
GTA Gaotai 60.38 323 P **P** **20 21 14.8 +0.4**
GTA pP pP 20 21 21.3 +2.0
GTA pmax pmax
comp=Z,9.0nm,1.4s
PETK Petropavlovsk- 60.49 10 P P 20 21 12.9 -1.8
PETK Petropavlovsk- 60.49 10 P P 20 21 13.8 -1.0
comp=Z,12nm,0.9s,baz=187,slow=2.4,SNR=6.5
PETK LR LR 20 43 56.9
comp=Z,34nm,20.9s,baz=186,slow=33
comp=Z,12nm,0.9s
LSA Lhasa 61.14 309 P **P** **20 21 19.2 -1.0**
LSA Lhasa 61.14 309 P **P** **20 21 19.2 -1.0**
LSA pmax pmax
comp=Z,11nm,1.0s
ZEA Zeya 61.22 350 *e*P **P** **20 21 18.9 -0.8**
ZEA pmax pmax
comp=Z,20nm,1.1s
GOMU GeErMu 61.71 317 P **P** **20 21 23.8 -0.1**
GOMU pP pP 20 21 29.0 +0.2
GOMU sP sP 20 21 32.0 +1.9
GOMU pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 62.44 334 P **P** **20 21 27.2 -1.1**
ULN IAmb IAmb 20 21 30.1
comp=Z,51nm,1.9s
ULN Ulaanbaatar 62.44 334 *i* P **P** **20 21 27.4 -0.8**
ULN pmax pmax
comp=Z,22nm,1.9s
SONM Songino Array 62.71 333 P P 20 21 28.6 -1.4
comp=Z,4.3nm,0.9s,baz=149,slow=5.9,SNR=18
SONM LR LR 20 46 41.0
comp=Z,135nm,22.0s,baz=162,slow=34
SONM PKP2bc 20 50 41.3
comp=Z,0.4nm,0.6s,baz=318,slow=2.0,SNR=3.9
comp=Z,4.3nm,0.9s
PALK Pallekele 63.43 281 P **P** **20 21 34.2 -1.2**
PALK IAmb IAmb 20 21 50.1
comp=Z,21nm,1.1s
PALK Pallekele 63.43 281 P **P** **20 21 34.2 -1.2**
PALK pmax pmax
comp=Z,21nm,1.1s
CASY Casey 63.94 194 P **P** **20 21 37.2 -0.5**
OPA Opana 64.27 62 P P 20 21 38.9 -1.8
OPA Opana 64.27 62 P P 20 21 38.9 -1.8
OPA pmax pmax
comp=Z,649nm,1.8s
SHEM Shemya Is, Ala 64.50 20 LR LR 20 45 48.3
comp=Z,169nm,20.4s,baz=308,slow=32
MA2 Magadan 65.95 4 P **P** **20 21 50.0 -0.9**
MA2 IAmb IAmb 20 22 59.9
comp=Z,30nm,1.5s
MA2 Magadan 65.95 4*ce*P P 20 21 49.7 -1.1
MA2 pmax pmax
comp=Z,10.0nm,1.0s
MA2 Magadan 65.95 4 P P 20 21 49.8 -1.0
comp=Z,8.3nm,0.9s,baz=172,slow=5.5,SNR=6.1
comp=Z,8.3nm,0.9s
ZAK Zakamensk 65.97 333 *e*P **P** **20 21 50.2 -1.1**
ZAK pmax pmax
comp=Z,14nm,1.1s
PPT Papeete 66.79 106 LR LR 20 48 45.3
comp=Z,42nm,19.1s,baz=190,slow=34
YAK Yakutsk 68.87 353 *e*P P 20 22 14.8 +5.6
YAK *e**PP sP 20 22 25.0 +10
YAK *e* 20 24 46.8
YAK *e*S **S** **20 31 16.2 +3.5**
YAK *e**SS sS 20 31 38.0 +17
YAK *e*SS **SS** **20 35 42.5 +4.2**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,115nm,4.7s
YAK pmax pmax
comp=E,84nm,5.8s
YAK smax smax
comp=N,64nm,3.8s
YAK smax smax
comp=E,24nm,2.7s
YAK Yakutsk 68.87 353 LR LR 20 49 33.4
comp=E,53nm,21.7s,baz=118,slow=34
SEY Seymchan 69.40 5*ce*P P 20 22 10.6 -1.9
SEY pmax pmax
comp=Z,9.0nm,1.0s
SEY Seymchan 69.40 5 P P 20 22 11.5 -1.0
comp=Z,5.1nm,0.9s,baz=175,slow=5.1,SNR=12
comp=Z,5.1nm,0.9s
WMQ Urumqi 70.35 321 *e*P **P** **20 22 18.8 -0.1**
WMQ pmax pmax
comp=Z,18nm,1.5s
VNDA Vanda 71.91 176 P **P** **20 22 28.2 +0.6**
VNDA Vanda 71.91 176 P **P** **20 22 28.3 +0.6**
VNDA pmax pmax
comp=Z,11nm,1.2s
VNDA Vanda 71.91 176 P **P** **20 22 28.1 +0.4**
comp=Z,6.0nm,1.0s,baz=320,slow=6.7,SNR=11
comp=Z,6.0nm,1.0s
DGZ Jazzator, Alta 73.51 326 *i* P P 20 22 36.2 -1.7
DGZ pmax pmax
comp=Z,9.0nm,0.8s
ZSN Zaisan 73.86 323 *e*P **P** **20 22 38.6 -1.1**
baz=323
ZSN Zaisan 73.86 323 *e*P P 20 22 38.6 -1.2
MK31 Makanchi Array 75.11 322 P **P** **20 22 46.3 -0.8**
MK31 Makanchi Array 75.11 322*ce*P **P** **20 22 46.9 -0.2**
MKAR Makanchi Array 75.11 322 P P 20 22 45.7 -1.4
MKAR Makanchi Array 75.11 322 P **P** **20 22 46.9 -0.2**
comp=Z,11nm,0.9s,baz=111,slow=6.6,SNR=80
comp=Z,11nm,0.9s
MAKZ Makanchi 75.31 322 P P 20 22 46.8 -1.4
MAKZ IAmb IAmb 20 22 50.1
comp=Z,18nm,1.1s
MAKZ Makanchi 75.31 322 P P 20 22 46.8 -1.5
MAKZ pmax pmax
comp=Z,18nm,1.1s
SHLS Shalkode 75.41 317 *e*P P 20 22 46.3 -2.7
comp=Z,8.1nm,1.1s,baz=318
SHLS Shalkode 75.41 317 *e*P P 20 22 46.3 -2.7
SHLS pmax pmax
comp=Z,8.0nm,1.1s
FALS False Pass 75.45 29 P **P** **20 22 48.1 -0.7**
baz=236
UZB Uzynbulak 75.70 317 *e*P **P** **20 22 49.6 -1.2**
comp=Z,10.0nm,1.1s,baz=317
UZB Uzynbulak 75.70 317 *e*P **P** **20 22 49.5 -1.2**
UZB pmax pmax
comp=Z,10.0nm,1.1s
BILL Bilibino 75.97 9 P P 20 22 49.9 -1.6
BILL Bilibino 75.97 9⇑ *e*P **P** **20 22 50.8 -0.7**
BILL pmax pmax
comp=Z,11nm,2.5s
SATY Saty 76.08 317 *e*P **P** **20 22 52.3 -0.6**
comp=Z,10nm,1.4s,baz=317
SATY Saty 76.08 317 *e*P **P** **20 22 52.2 -0.6**
SATY pmax pmax
comp=Z,10.0nm,1.4s
ZHN Zhinishke 76.10 317 *e*P **P** **20 22 52.0 -1.0**
baz=317
ZHN Zhinishke 76.10 317 *e*P **P** **20 22 52.0 -1.0**
KSH Kashi 76.51 313 P **P** **20 22 56.8 +1.4**
KSH sP sP 20 23 05.5 +3.8
KSH pmax pmax
comp=Z,13nm,1.1s
NIL Nilore 76.74 307 P **P** **20 22 56.0 -0.7**
NIL Nilore 76.74 307 P **P** **20 22 56.0 -0.7**
NIL pmax pmax
comp=Z,34nm,0.7s
TDK Taldyqorghan 76.83 319 *e*P **P** **20 22 56.5 -0.4**
comp=Z,17nm,1.0s,baz=319
TDK Taldyqorghan 76.83 319 *e*P **P** **20 22 56.5 -0.4**
TDK pmax pmax
comp=Z,17nm,1.0s
MDOK Medeo 77.04 317 *e*P **P** **20 22 57.6 -0.8**
baz=317
MDOK Medeo 77.04 317 *e*P **P** **20 22 57.5 -0.8**
ZAA0 Zalesovo Array 77.08 329 P P 20 22 56.2 -1.9
ZALV Zalesovo Beam 77.08 329 P P 20 22 56.2 -1.9
ZALV Zalesovo Beam 77.08 329 P **P** **20 22 57.0 -1.1**
ZALV Zalesovo Beam 77.08 329 P **P** **20 22 57.0 -1.1**
comp=Z,5.3nm,0.8s,baz=107,slow=5.1,SNR=24
ZALV LR LR 20 57 10.0
comp=Z,56nm,19.7s,baz=124,slow=36
comp=Z,5.3nm,0.8s
SDPT Sand Point 77.14 29 P **P** **20 22 58.0 -0.4**
baz=238
KUU Kurty 77.79 317 *e*P **P** **20 23 01.3 -1.0**
baz=317
KUU Kurty 77.79 317 *e*P **P** **20 23 01.3 -1.0**
SEM Semipalatinsk 77.92 324 *e*P P 20 23 01.2 -1.9
baz=324
SEM Semipalatinsk 77.92 324 *e*P P 20 23 01.2 -2.0
TIXI Tiksi 78.32 356 P P 20 23 01.8 -2.8
TIXI Tiksi 78.32 356*ce*P P 20 23 02.3 -2.3
TIXI pmax pmax
comp=Z,8.0nm,2.5s
TIXI Tiksi 78.32 356 LR LR 20 57 24.1
comp=Z,36nm,19.5s,baz=202,slow=36
AAK Ala-Archa 78.62 316 P **P** **20 23 05.9 -1.2**
AAK Ala-Archa 78.62 316*ce*P **P** **20 23 06.6 -0.5**
AAK pmax pmax
comp=Z,8.0nm,1.3s
AAK Ala-Archa 78.62 316 LR LR 21 00 33.2
comp=Z,47nm,20.6s,baz=118,slow=38
M13K Dall Lake 78.64 24 P **P** **20 23 06.2 -0.4**
baz=235
O14K Tigyukauivet M 78.86 26 P P 20 23 07.0 -0.9
baz=237
KURK Kurchatov 78.99 324 P P 20 23 07.4 -1.4
KURK IAmb IAmb 20 23 10.3
comp=Z,20nm,1.1s
KURK Kurchatov 78.99 324*ce*P **P** **20 23 07.8 -1.0**
KURK pmax pmax
comp=Z,20nm,1.0s
KURBB Kurchatov Arra 79.00 324 P **P** **20 23 08.3 -0.5**
comp=Z,11nm,1.0s,baz=114,slow=4.8,SNR=60
comp=Z,11nm,1.0s
N14K Kuskokwak Cree 79.05 25 P P 20 23 07.9 -1.0
baz=236
M14K Bethel 79.40 24 P **P** **20 23 10.1 -0.7**
M14K IAmb IAmb 20 23 12.7
comp=Z,28nm,0.9s
M14K Bethel 79.40 24 P **P** **20 23 10.1 -0.7**
baz=236
L14K Kuka Creek 79.44 24 P P 20 23 09.8 -1.2
L14K IAmb IAmb 20 23 12.9
comp=Z,35nm,0.9s
L14K Kuka Creek 79.44 24 P **P** **20 23 10.5 -0.5**
baz=235
O15K Ungalikthiuk R 79.45 26 P **P** **20 23 10.8 -0.3**
baz=238
R16K Pilot Point 79.65 28 P **P** **20 23 11.8 -0.4**
baz=241
BTLS Baital 79.73 318 *e*P **P** **20 23 12.2 -0.8**
baz=318
BTLS Baital 79.73 318 *e*P **P** **20 23 12.1 -0.8**
N15K Kwethluk River 79.86 25 P **P** **20 23 13.3 0.0**
baz=238
M15K Kasigluk River 79.89 25 P **P** **20 23 12.8 -0.7**
baz=237
L15K Ungalak Mounta 80.11 24 P **P** **20 23 14.3 -0.3**
baz=236
TNA Tin City 80.14 19 P **P** **20 23 14.1 -0.6**
baz=230,SNR=7.4
KBL Kabul 80.35 306 P P 20 23 13.9 -2.9
KBL Kabul 80.35 306 P P 20 23 13.9 -2.9
KBL pmax pmax
comp=Z,7.0nm,0.8s
ANM Nome 80.36 20 P P 20 23 14.1 -1.8
ANM Nome 80.36 20 P **P** **20 23 15.4 -0.5**
baz=232
ANM Nome 80.36 20 P P 20 23 14.1 -1.8
ANM pmax pmax
comp=Z,17nm,1.2s
O16K Kokwok River B 80.42 26 IAmb IAmb 20 23 17.9
comp=Z,31nm,1.1s
O16K Kokwok River B 80.42 26 P **P** **20 23 16.5 +0.2**
baz=240
K15K Wolf Creek Mou 80.43 23 IAmb IAmb 20 23 18.3
comp=Z,31nm,0.9s
K15K Wolf Creek Mou 80.43 23 P **P** **20 23 16.7 +0.4**
baz=236
N16K Nishlik Lake 80.58 25 P **P** **20 23 17.0 -0.2**
baz=239
F14K Arctic Creek 80.60 19 P **P** **20 23 16.9 -0.2**
baz=231,SNR=12
Q17K Contact Creek 80.78 28 P P 20 23 17.5 -0.9
baz=242
M16K Timber Creek 80.78 25 P **P** **20 23 17.7 -0.6**
M16K IAmb IAmb 20 23 19.8
comp=Z,38nm,1.0s
M16K Timber Creek 80.78 25 P **P** **20 23 18.5 +0.2**
baz=239
DZA Taraz 80.91 315 *e*P **P** **20 23 18.6 -0.9**
baz=315
DZA Taraz 80.91 315 *e*P **P** **20 23 18.5 -0.9**
L16K Owhat River 80.93 24 P P 20 23 17.7 -1.3
L16K IAmb IAmb 20 23 20.7
comp=Z,22nm,1.0s
L16K Owhat River 80.93 24 P **P** **20 23 18.8 -0.2**
baz=238
O17K Koliganek Bris 80.95 26 P **P** **20 23 19.2 +0.1**
baz=241
G15K Niukluk 81.07 20 P **P** **20 23 19.6 -0.1**
baz=234,SNR=9.3
N17K Nushagak Hills 81.28 26 IAmb IAmb 20 23 23.1
comp=Z,25nm,0.9s
N17K Nushagak Hills 81.28 26 P **P** **20 23 21.5 +0.5**
baz=240
F15K North Star Dit 81.30 19 P **P** **20 23 21.0 +0.1**
baz=233
J16K Anvik River 81.33 22 IAmb IAmb 20 23 23.4
comp=Z,24nm,0.9s
J16K Anvik River 81.33 22 P **P** **20 23 21.3 +0.1**
baz=237
SIMJ Simiganj 81.42 310 P P 20 23 20.6 -1.7
SIMJ IAmb IAmb 20 23 28.6
comp=Z,22nm,1.0s
H16K Elim 81.49 21 P **P** **20 23 21.8 -0.1**
baz=235,SNR=15
KK31 Karatay Array 81.54 315 P P 20 23 21.0 -1.7
KK31 Karatay Array 81.54 315 P P 20 23 21.0 -1.8
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 81.54 315 P P 20 23 21.3 -1.5
KKAR Karatay Array 81.54 315 P P 20 23 21.3 -1.5
OHAK Old Harbor 81.55 30 P **P** **20 23 22.4 0.0**
baz=244
P18K Big Mountain, 81.61 27 P **P** **20 23 22.2 -0.5**
baz=242
IUG Iuzhnay 81.61 314 *e*P **P** **20 23 22.5 -0.8**
baz=314
IUG Iuzhnay 81.61 314 *e*P **P** **20 23 22.4 -0.8**
M17K Holitna River 81.61 25 IAmb IAmb 20 23 25.1
comp=Z,37nm,1.0s
M17K Holitna River 81.61 25 P **P** **20 23 23.2 +0.5**
baz=240
L17K Donlin 81.63 24 P **P** **20 23 23.0 +0.3**
baz=239
I17K Unalakleet 81.63 22 P **P** **20 23 22.0 -0.7**
I17K IAmb IAmb 20 23 25.0
comp=Z,28nm,0.9s
I17K Unalakleet 81.63 22 P **P** **20 23 23.1 +0.4**
baz=237,SNR=11
O18K Koktuh Hills 81.83 27 P **P** **20 23 24.0 +0.1**
baz=242
G16K Koyuk River 81.88 20 IAmb IAmb 20 23 25.8
comp=Z,24nm,1.0s
G16K Koyuk River 81.88 20 P **P** **20 23 24.1 +0.1**
baz=235
N18K Kilae Creek 81.92 26 P **P** **20 23 24.7 +0.3**
baz=242
K17K Iditarod 81.92 23 P **P** **20 23 24.9 +0.6**
baz=239,SNR=9.4
BRLS Borolday 82.00 315 *e*P **P** **20 23 24.4 -0.8**
baz=315
BRLS Borolday 82.00 315 *e*P **P** **20 23 24.3 -0.8**
KDAK Kodiak Island 82.13 29 LR LR 20 52 19.7
comp=Z,172nm,21.4s,baz=255,slow=30
SVW2 Sparrevohn 82.25 26 P P 20 23 24.0 -2.1
SVW2 IAmb IAmb 20 23 28.1
comp=Z,31nm,1.0s
BRZS Berezniki 82.25 322 *e*P **P** **20 23 25.7 -0.7**
comp=Z,8.4nm,1.1s,baz=322
BRZS Berezniki 82.25 322 *e*P **P** **20 23 25.6 -0.7**
BRZS pmax pmax
comp=Z,8.0nm,1.1s
L18K Granite Mounta 82.33 24 P **P** **20 23 26.2 -0.2**
L18K IAmb IAmb 20 23 28.5
comp=Z,17nm,0.9s
L18K Granite Mounta 82.33 24 P **P** **20 23 26.9 +0.5**
baz=241
M18K Stony River 82.33 25 P **P** **20 23 26.5 0.0**
baz=242
H17K Granite Mounta 82.49 21 P P 20 23 25.2 -2.0
H17K IAmb IAmb 20 23 29.1
comp=Z,22nm,0.9s
H17K Granite Mounta 82.49 21 P **P** **20 23 26.6 -0.6**
baz=238
G17K Kiwalik Mounta 82.53 21 P **P** **20 23 27.1 -0.3**
baz=237
N19K Bonanza Creek 82.59 26 P **P** **20 23 27.9 0.0**
baz=243
P19K Oil Pt 82.63 27 P **P** **20 23 28.2 0.0**
baz=244
C16K Lisburne Hills 82.65 17 P **P** **20 23 27.7 -0.2**
baz=232
F17K Baldwin Pennin 82.85 20 IAmb IAmb 20 23 30.2
comp=Z,15nm,0.9s
F17K Baldwin Pennin 82.85 20 P **P** **20 23 29.1 +0.1**
baz=236
J18K Innoko River 82.93 23 IAmb IAmb 20 23 30.4
comp=Z,14nm,1.1s
J18K Innoko River 82.93 23 P **P** **20 23 29.3 -0.2**
baz=241
TTA Tatalina 82.94 24 IAmb IAmb 20 23 48.8
comp=Z,26nm,1.4s
TTA Tatalina 82.94 24 P **P** **20 23 29.4 -0.3**
baz=241

D17K **Noatak River** 82.98 18 P P 20 23 30.1 +0.3
baz=234,SNR=23
E17K **Hotham Inlet** 83.02 19 P P 20 23 30.0 0.0
baz=236
L19K **White Mountain** 83.06 25 P P 20 23 29.6 -0.7
L19K IAmb IAmb 20 23 32.7
comp=Z,31nm,1.1s
L19K **White Mountain** 83.06 25 P P 20 23 30.6 +0.2
baz=242,SNR=9.9
M19K **Big River Lodg** 83.13 25 P P 20 23 30.5 -0.1
baz=243
H18K **Honhosa River** 83.16 21 P P 20 23 30.2 -0.5
baz=239
HOM **Homer** 83.37 28 P P 20 23 31.1 -0.7
baz=246
C17K **DeLong Mountai** 83.41 17 P P 20 23 31.8 -0.1
baz=234
G18K **Tagagawik** 83.44 21 P P 20 23 31.0 -1.2
G18K IAmb IAmb 20 23 33.5
comp=Z,17nm,1.0s
G18K **Tagagawik** 83.44 21 P P 20 23 31.9 -0.3
baz=239
F18K **Selawik** 83.47 20 P P 20 23 32.0 -0.2
baz=238
GCSA **Galena City Sc** 83.50 22 P P 20 23 31.7 -0.7
baz=240
L20K **Farewell, AK** 83.60 25 P P 20 23 33.1 +0.1
baz=243
E18K **Tukpahlearik C** 83.61 19 IAmb IAmb 20 23 34.6
comp=Z,15nm,0.9s
E18K **Tukpahlearik C** 83.61 19 P P 20 23 32.7 -0.2
baz=237
J19K **Poorman** 83.61 23 IAmb IAmb 20 23 34.9
comp=Z,21nm,1.1s
J19K **Poorman** 83.61 23 P P 20 23 33.2 +0.1
baz=242
M20K **Styx River** 83.65 25 P P 20 23 33.1 -0.4
baz=244,SNR=13
QSPA **South Pole Qui** 83.69 180 P P 20 23 33.5 -0.2
comp=Z,19nm,0.9s,baz=330,slow=1.7,SNR=25
QSPA LR LR 21 01 15.2
comp=Z,263nm,18.6s,baz=16,slow=36
comp=Z,19nm,0.9s
N20K **Mount Spurr** 83.76 26 P P 20 23 33.5 -0.5
baz=245
BRSE **Bradley Lake S** 83.82 28 P P 20 23 33.5 -0.7
baz=246
K20K **Telida** 83.92 24 P P 20 23 34.9 +0.2
baz=243
H19K **Roundabout Mou** 84.04 21 P P 20 23 35.4 +0.2
baz=241
CAPN **Captain Cook N** 84.05 27 P P 20 23 35.4 +0.1
baz=246
C18K **Utukok River** 84.11 18 P P 20 23 35.4 -0.2
baz=236
G19K **Purcell Mounta** 84.12 21 IAmb IAmb 20 23 37.4
comp=Z,20nm,1.0s
G19K **Purcell Mounta** 84.12 21 P P 20 23 35.9 +0.3
baz=240
F19K **Shaleruckik Mo** 84.23 20 P P 20 23 35.3 -0.8
baz=239
J20K **Nowinta River** 84.27 23 P P 20 23 35.7 -0.6
J20K IAmb IAmb 20 23 38.3
comp=Z,24nm,1.0s
J20K **Nowinta River** 84.27 23 P P 20 23 36.4 0.0
baz=243
NRIK **Noril'sk** 84.30 343 P P 20 23 35.2 -1.2
NRIK IAmb IAmb 20 23 37.7
comp=Z,24nm,0.9s
NRIK **Noril'sk** 84.30 343 *ce*P P 20 23 34.5 -1.9
NRIK pmax pmax
comp=Z,28nm,1.0s
NRIK **Noril'sk** 84.30 343 P P 20 23 35.0 -1.4
comp=Z,19nm,0.9s,baz=117,slow=4.9,SNR=29
comp=Z,19nm,0.9s
B18K **Kokolik River** 84.33 17 P P 20 23 36.8 +0.1
baz=235
SKT **Skwentna** 84.38 26 P P 20 23 36.2 -0.9
baz=246
I20K **Naaghedeneel** 84.42 22 P P 20 23 37.0 -0.2
baz=243
PPLA **Purkeypile** 84.49 25 P P 20 23 36.6 -1.1
baz=245
SUA **Susitna One** 84.51 26 IAmb IAmb 20 23 37.8
comp=Z,18nm,1.0s
SUA **Susitna One** 84.51 26 P P 20 23 36.7 -1.1
baz=246
SEW **Seward** 84.56 28 P P 20 23 37.3 -0.6
baz=248
BVAR **Borovoye Array** 84.58 325 P P 20 23 37.9 -0.3
comp=Z,52nm,0.9s,baz=112,slow=5.2,SNR=186
comp=Z,52nm,0.9s
O22K **Cooper Landing** 84.58 27 P P 20 23 37.5 -0.5
baz=247
H20K **Anotleneega Mo** 84.60 22 P P 20 23 38.0 -0.1
baz=242
FIS **Fire Island** 84.61 27 P P 20 23 36.6 -1.5
E19K **Redstone River** 84.73 20 P P 20 23 38.6 -0.1
baz=240
CAST **Castle Rocks** 84.75 24 IAmb IAmb 20 23 39.6
comp=Z,15nm,0.9s
CAST **Castle Rocks** 84.75 24 P P 20 23 38.1 -0.8
baz=245,SNR=12
RC01 **Rabbit Creek A** 84.81 27 P P 20 23 38.1 -1.1
baz=247,SNR=6.8
C19K **Lookout Ridge** 84.85 18 P P 20 23 39.3 0.0
baz=237
CHUM **Lake Minchumin** 84.86 24 P P 20 23 38.3 -1.0
baz=245,SNR=21
M22K **Willow** 84.90 26 P P 20 23 37.8 -1.8
M22K **Willow** 84.90 26 P P 20 23 38.8 -0.8
baz=247,SNR=6.3
D19K **Kuna River** 84.98 19 P P 20 23 39.9 -0.1
baz=239
A19K **Wainwright** 85.02 16 P P 20 23 40.1 0.0
baz=236
F20K **Avaraart Lake** 85.04 20 P P 20 23 40.0 -0.2
baz=241
CUT **Chulitna** 85.09 25 P P 20 23 40.3 -0.2
baz=247
IMAR **Indian Mountai** 85.24 22 P P 20 23 39.8 -1.5
PMR **Palmer** 85.27 26 P P 20 23 39.9 -1.5
PMR **Palmer** 85.27 26 P P 20 23 41.2 -0.3
baz=248,SNR=5.4
PMR **Palmer** 85.27 26 P P 20 23 39.9 -1.6
PMR pmax pmax
comp=Z,33nm,1.1s
KTH **Kantishna Hill** 85.29 24 IAmb IAmb 20 23 41.9
comp=Z,24nm,1.1s
GHO **Glory Hole Cre** 85.43 26 P P 20 23 41.1 -1.3
GHO IAmb IAmb 20 23 45.3
comp=Z,28nm,1.1s
H21K **Melozitna Rive** 85.44 22 IAmb IAmb 20 23 43.2
comp=Z,12nm,1.1s
H21K **Melozitna Rive** 85.44 22 P P 20 23 41.6 -0.7
baz=244
P23K **Montague Islan** 85.47 28 P P 20 23 41.8 -0.7
baz=249
E20K **Nigu River** 85.48 19 P P 20 23 42.3 -0.2
baz=241
BPAW **Bear Paw Mtn.** 85.48 24 P P 20 23 41.0 -1.6
BPAW IAmb IAmb 20 23 43.1
comp=Z,13nm,1.0s
BPAW **Bear Paw Mtn.** 85.48 24 P P 20 23 42.4 -0.2
baz=246
KNK **Knik Glacier** 85.50 27 P P 20 23 41.6 -1.1
KNK **Knik Glacier** 85.50 27 P P 20 23 42.6 -0.1
baz=248,SNR=7.0
TRF **Thorofare Moun** 85.50 24 IAmb IAmb 20 23 45.8
comp=Z,17nm,1.2s
TRF **Thorofare Moun** 85.50 24 P P 20 23 41.5 -1.3
baz=246
I21K **Tanana** 85.55 23 P P 20 23 42.9 +0.1
baz=245
D20K **Etivluk River** 85.56 19 P P 20 23 42.5 -0.3
baz=240
SML **Sawmill** 85.71 26 P P 20 23 42.2 -1.5
SML **Sawmill** 85.71 26 P P 20 23 42.9 -0.8
baz=248,SNR=8.6
F21K **Alatna River** 85.90 20 P P 20 23 44.1 -0.5
baz=243
MLY **Manley** 85.96 23 P P 20 23 43.3 -1.6
MLY IAmb IAmb 20 23 46.1
comp=Z,22nm,1.0s
MLY **Manley** 85.96 23 P P 20 23 44.3 -0.6
baz=246,SNR=19
M23K **Glacier View** 85.97 26 P P 20 23 44.2 -0.8
baz=249

WAT1 **Susitna Watana** 85.99 25 P P 20 23 44.3 -0.8
baz=248
B20K **Meade River** 86.05 17 IAmb IAmb 20 23 46.8
comp=Z,46nm,1.8s
B20K **Meade River** 86.05 17 P P 20 23 44.8 -0.4
baz=240
H22K **Ishtalitna Cre** 86.08 22 P P 20 23 45.2 -0.3
baz=245
BWN **Brone** 86.12 24 P P 20 23 44.1 -1.6
SCM **Sheep Creek Mo** 86.16 27 P P 20 23 45.0 -1.0
SCM **Sheep Creek Mo** 86.16 27 P P 20 23 45.4 -0.6
baz=249,SNR=5.4
SCM **Sheep Creek Mo** 86.16 27 P P 20 23 45.0 -1.0
SCM pmax pmax
comp=Z,43nm,1.1s
MCK **McKinley** 86.17 24 P P 20 23 44.7 -1.3
baz=248,SNR=9.8
WAT6 **Susitna Watana** 86.25 26 P P 20 23 45.5 -1.0
baz=249
E21K **Killik River** 86.29 19 P P 20 23 46.4 0.0
baz=243
C21K **Knifeblade Rid** 86.36 19 P P 20 23 46.8 0.0
baz=242
EYAK **Cordova Ski Ar** 86.44 28 P P 20 23 47.3 0.0
baz=251
NEA2 **Nenana** 86.45 24 IAmb IAmb 20 23 47.5
comp=Z,11nm,0.9s
NEA2 **Nenana** 86.45 24 P P 20 23 46.2 -1.0
baz=248,SNR=5.6
G22K **Bettles** 86.46 21 P P 20 23 46.9 -0.3
baz=245
I23K **Minto, Yukon-K** 86.55 23 IAmb IAmb 20 24 21.9
comp=Z,17nm,1.3s
I23K **Minto, Yukon-K** 86.55 23 P P 20 23 47.5 -0.3
baz=247
DHY **Denali Highway** 86.58 25 IAmb IAmb 20 23 49.1
comp=Z,20nm,0.8s
DHY **Denali Highway** 86.58 25 P P 20 23 47.6 -0.5
baz=249,SNR=8.5
KLU **Klutina** 86.67 27 P P 20 23 47.3 -1.2
KLU **Klutina** 86.67 27 P P 20 23 48.1 -0.5
baz=250,SNR=5.2
M24K **Tolsona, Glenn** 86.77 26 P P 20 23 48.5 -0.5
baz=250
KAIM **Kayak Island** 86.87 29 P P 20 23 49.0 -0.4
baz=252
A21K **Barrow** 86.87 16 P P 20 23 49.1 0.0
baz=240
E22K **Anaktuvuk Pass** 86.87 20 IAmb IAmb 20 23 51.6
comp=Z,11nm,0.8s
E22K **Anaktuvuk Pass** 86.87 20 P P 20 23 49.6 +0.3
baz=245
D22K **Ayikyak River** 86.91 19 P P 20 23 48.7 -0.7
D22K IAmb IAmb 20 24 00.5
comp=Z,17nm,1.1s
D22K **Ayikyak River** 86.91 19 P P 20 23 49.8 +0.3
baz=244
G23K **Bananza Creek** 86.91 22 P P 20 23 49.5 -0.1
baz=247
COLA **College** 87.04 24 P P 20 23 48.2 -1.9
COLA IAmb IAmb 20 23 49.6
comp=Z,18nm,0.8s
COLA **College** 87.04 24 P P 20 23 49.6 -0.5
baz=249
COLA **College** 87.04 24 P P 20 23 48.2 -1.9
COLA pmax pmax
comp=Z,18nm,0.8s
COLD **Coldfoot** 87.06 21 P P 20 23 49.9 -0.3
baz=246
BMRM **Bremner River** 87.11 28 P P 20 23 50.0 -0.6
baz=252
HDA **Harding Lake** 87.23 24 IAmb IAmb 20 23 52.9
comp=Z,13nm,0.9s
HDA **Harding Lake** 87.23 24 P P 20 23 49.5 -1.6
baz=250
POKR **Poker Plat Res** 87.29 23 P P 20 23 50.7 -0.7
baz=249
N25K **Chitina, Valde** 87.31 27 P P 20 23 51.1 -0.5
baz=252
HARP **HAARP** 87.31 26 P P 20 23 50.6 -1.0
baz=251
B22K **Teshekpuk Lake** 87.33 18 P P 20 23 49.8 -1.6
B22K **Teshekpuk Lake** 87.33 18 P P 20 23 51.2 -0.2
baz=243
PAX **Paxson** 87.36 26 P P 20 23 51.6 -0.3
baz=251
H24K **Noodor Dome** 87.38 23 IAmb IAmb 20 23 53.0
comp=Z,12nm,0.9s
H24K **Noodor Dome** 87.38 23 P P 20 23 51.5 -0.4
baz=249
IL31 87.39 24 P P 20 23 49.0 -2.8
IL31 IAmb IAmb 20 23 51.4
comp=Z,18nm,0.9s
ILAR **Eielson Array** 87.39 24 P P 20 23 49.2 -2.6
ILAR **Eielson Array** 87.39 24 P P 20 23 49.5 -2.4
comp=Z,16nm,0.9s,baz=257,slow=4.8,SNR=92
ILAR LR LR 20 54 48.4
comp=Z,90nm,21.8s,baz=248,slow=30
comp=Z,16nm,0.9s
K24K **Donnelly Dome** 87.51 25 P P 20 23 51.6 -0.9
baz=251
E23K **Chandalar** 87.59 20 P P 20 23 52.4 -0.5
baz=247
D23K **Nanushuk River** 87.60 19 P P 20 23 53.0 +0.2
baz=246
GLB **Gilahina Butte** 87.62 27 IAmb IAmb 20 23 53.8
comp=Z,18nm,1.0s
CRQE **Cirque** 87.75 28 P P 20 23 53.7 -0.2
baz=253
G24K **Hadweenzic Riv** 87.85 22 IAmb IAmb 20 23 55.8
comp=Z,22nm,1.1s
G24K **Hadweenzic Riv** 87.85 22 P P 20 23 53.7 -0.3
baz=249
RIDG **Independent Ri** 87.88 25 P P 20 23 52.3 -2.0
RIDG **Independent Ri** 87.88 25 P P 20 23 53.2 -1.2
baz=251,SNR=14
J25K **Salcha River,** 87.94 24 P P 20 23 53.5 -1.2
baz=251,SNR=19
MCARA **McCarthy VSAT** 87.96 28 P P 20 23 54.1 -0.6
baz=253
C23K **Itkillik River** 87.98 19 P P 20 23 54.6 0.0
baz=246
F24K **Squaw Lake** 88.00 21 P P 20 23 53.7 -1.1
baz=248
MESA **MESA** 88.12 29 P P 20 23 54.5 -1.2
baz=254
PRP **Porcupine Dome** 88.18 23 P P 20 23 54.3 -1.6
baz=251
D24K **Happy Valley** 88.29 19 P P 20 23 56.2 +0.2
baz=248
L26K **Log Cabin Wild** 88.30 26 IAmb IAmb 20 23 57.6
comp=Z,12nm,0.9s
L26K **Log Cabin Wild** 88.30 26 P P 20 23 56.1 -0.2
baz=253,SNR=6.4
SCRK **Sand Creek** 88.31 25 P P 20 23 54.6 -1.8
SCRK **Sand Creek** 88.31 25 P P 20 23 55.9 -0.5
baz=252,SNR=6.5
G25K **Bearman Lake** 88.38 22 P P 20 23 56.5 0.0
baz=250
C24K **Franklin Bluff** 88.54 19 P P 20 23 57.5 +0.3
baz=248
CTG **Chitna Glacier** 88.63 28 P P 20 23 57.9 -0.1
baz=255
FYU **Fort Yukon** 88.64 22 P P 20 23 56.6 -1.1
J26L **Joseph Creek** 88.65 25 IAmb IAmb 20 23 59.4
comp=Z,18nm,0.9s
J26L **Joseph Creek** 88.65 25 P P 20 23 57.8 -0.2
baz=253
M27K **Edge Creek, AK** 88.76 27 P P 20 23 57.5 -1.1
M27K IAmb IAmb 20 24 00.4
comp=Z,19nm,1.0s
M27K **Edge Creek, AK** 88.76 27 P P 20 23 58.7 0.0
baz=254
F25K **Christian Rive** 88.83 21 P P 20 23 59.2 +0.5
baz=251
PINM **Pinnacle** 88.92 29 P P 20 23 58.4 -0.9
baz=256
L27K **Beaver Creek,** 88.97 26 IAmb IAmb 20 24 01.2
comp=Z,22nm,1.1s
L27K **Beaver Creek,** 88.97 26 P P 20 23 59.1 -0.4
baz=254
BCAR **Beaver Creek A** 88.99 26 P P 20 23 59.1 -0.5
E25K **Arctic Village** 89.03 21 IAmb IAmb 20 24 01.9
comp=Z,15nm,1.0s
E25K **Arctic Village** 89.03 21 P P 20 23 59.5 -0.2
baz=251
I26K **Coal Creek Min** 89.06 24 P P 20 23 58.6 -1.2
baz=253

K27K **Chicken** 89.14 25 P P 20 23 59.9 -0.3
baz=254
BMAR **Burnt Mountain** 89.16 22 P P 20 24 00.3 +0.1
D25K **Kavik River** 89.16 20 P P 20 23 59.3 -1.0
D25K IAmb IAmb 20 24 02.9
comp=Z,9.1nm,0.8s
D25K **Kavik River** 89.16 20 P P 20 23 60.0 -0.3
baz=250
BVCY **Beaver Creek** 89.23 27 P P 20 24 00.6 -0.1
baz=255
PNL **Peninsula** 89.24 30 P P 20 23 59.7 -1.0
baz=256
YUK3 **Moose Creek** 89.25 28 P P 20 24 00.2 -0.9
baz=255,SNR=5.5
G26K **Porcupine Rive** 89.31 22 P P 20 24 01.6 +0.7
baz=252
F26K **Sheenjek River** 89.40 21 P P 20 24 01.8 +0.4
baz=252
GEYT **Alibeck** 89.67 308 P P 20 24 04.2 +0.9
GEYT **Alibeck** 89.67 308 P P 20 24 01.7 -1.6
comp=Z,2.8nm,1.0s,baz=111,slow=3.3,SNR=7.9
comp=Z,2.8nm,1.0s
EGAK **Eagle** 89.72 25 P P 20 24 01.4 -1.5
EGAK IAmb IAmb 20 24 04.8
comp=Z,23nm,1.1s
EGAK **Eagle** 89.72 25 P P 20 24 02.7 -0.2
baz=255
I27K **Kandik River** 89.76 24 P P 20 24 02.6 -0.5
baz=254
C26K **Camden Bay** 89.84 19 P P 20 24 03.5 +0.2
baz=251
H27K **Steamboat Moun** 89.96 23 P P 20 24 04.3 +0.2
baz=254
YUK4 **Talbot Arm** 89.99 28 P P 20 24 04.5 0.0
baz=257
ABKAR **Akbulak array** 90.09 319 P P 20 24 03.2 -1.8
DAWY **Dawson** 90.29 25 IAmb IAmb 20 24 07.4
comp=Z,19nm,1.1s
DAWY **Dawson** 90.29 25 P P 20 24 05.8 +0.2
baz=256,SNR=9.5
M29M **Somme Creek** 90.32 27 IAmb IAmb 20 24 07.6
comp=Z,11nm,0.9s
M29M **Somme Creek** 90.32 27 P P 20 24 05.2 -0.7
baz=257
I28M **Miner Creek** 90.39 24 IAmb IAmb 20 24 10.1
comp=Z,13nm,1.1s
I28M **Miner Creek** 90.39 24 P P 20 24 05.4 -0.8
baz=256
HYT **Haines Junctio** 90.42 29 P P 20 24 06.0 -0.4
baz=258
S31K **Pelican** 90.48 32 P P 20 24 06.3 -0.2
baz=259
L29M **L29M** 90.62 27 P P 20 24 06.7 -0.5
L29M **L29M** 90.62 27 P P 20 24 06.4 -0.8
baz=257,SNR=8.7
PLBC **Pleasant Camp** 90.70 30 P P 20 24 07.7 +0.1
baz=259
N30M **Aishikik Lake** 90.75 28 P P 20 24 07.3 -0.5
baz=258
J29N **Klondike Camp** 90.87 25 IAmb IAmb 20 24 56.5
comp=Z,69nm,0.3s
F28M **Old Crow** 90.95 22 P P 20 24 08.4 -0.2
baz=256
SVE **Sverdlovsk** 90.95 327 *e*P P 20 24 08.0 -0.8
SVE pmax pmax
comp=Z,11nm,1.4s
K29M **Barlow Dome** 91.04 26 IAmb IAmb 20 24 11.0
comp=Z,17nm,0.9s
K29M **Barlow Dome** 91.04 26 P P 20 24 08.8 -0.4
baz=258
O30N **Mendenhall** 91.08 29 P P 20 24 08.7 -0.8
baz=259
M30M **Minto, Yukon** 91.11 27 P P 20 24 08.2 -1.3
M30M IAmb IAmb 20 24 13.1
comp=Z,12nm,1.1s
M30M **Minto, Yukon** 91.11 27 P P 20 24 08.6 -0.8
baz=259
H29M **Whitestone** 91.20 23 P P 20 24 09.5 -0.2
baz=257
R32K **Eaglecrest** 91.43 32 P P 20 24 09.9 -1.1
baz=260
WHY **Whitehorse** 91.65 29 P P 20 24 10.7 -1.4
baz=260
J30M **Hart River** 91.70 25 IAmb IAmb 20 24 20.3
comp=Z,11nm,1.1s
J30M **Hart River** 91.70 25 P P 20 24 11.6 -0.7
baz=259,SNR=5.4
I30M **Mount Dempster** 91.80 25 P P 20 24 11.9 -0.8
I30M IAmb IAmb 20 24 15.1
comp=Z,9.6nm,0.9s
I30M **Mount Dempster** 91.80 25 P P 20 24 12.3 -0.4
baz=259
EPYK **Eagle Plains** 91.89 23 IAmb IAmb 20 24 14.2
comp=Z,16nm,1.0s
EPYK **Eagle Plains** 91.89 23 P P 20 24 12.8 -0.2
baz=259,SNR=7.3
ARU **Arti** 92.02 326 P P 20 24 11.2 -2.6
ARU IAmb IAmb 20 24 13.7
comp=Z,9.9nm,0.9s
ARU **Arti** 92.02 326 *ci*P P 20 24 11.9 -1.9
ARU 20 27 52.2
ARU S **SKSac** 20 34 44.6 -1.8
ARU pmax pmax
comp=Z,12nm,1.0s
ARU **Arti** 92.02 326 LR LR 21 06 08.8
comp=Z,43nm,21.1s,baz=102,slow=36
P32M **Atlin** 92.05 30 P P 20 24 12.9 -1.0
baz=261
M31M **Drury Creek, Y** 92.14 28 P P 20 24 13.1 -1.2
baz=261
G30M **tAoh Zraii Nji** 92.20 23 IAmb IAmb 20 24 15.7
comp=Z,10nm,1.1s
G30M **tAoh Zraii Nji** 92.20 23 P P 20 24 14.0 -0.4
baz=259
F30M **Barrier River** 92.48 22 P P 20 24 15.4 -0.3
baz=260
V35K **Ketchikan** 92.58 35 P P 20 24 15.9 -0.5
baz=263
FARO **Faro, Yukon** 92.63 28 P P 20 24 16.6 +0.1
baz=262
Q32M **Nakina River** 92.70 31 P P 20 24 16.4 -0.7
baz=262
ELIB **Princess Elisa** 92.83 196 *d*P P 20 24 17.5 0.0
G31M **Satah River** 92.94 23 P P 20 24 15.6 -2.2
G31M IAmb IAmb 20 24 18.6
comp=Z,12nm,1.1s
G31M **Satah River** 92.94 23 P P 20 24 17.6 -0.2
baz=261,SNR=5.7
S34M **Telegraph Cree** 93.16 32 P P 20 24 18.5 -0.5
baz=263
F31M **Tsiigehtchic** 93.23 23 P P 20 24 19.0 0.0
baz=262
INK **Inuvik** 93.43 22 P P 20 24 20.2 +0.2
baz=262
INK **Inuvik** 93.43 22 LR LR 21 06 50.0
comp=Z,50nm,18.1s,baz=176,slow=36
T35M **Bob Quinn** 93.53 33 P P 20 24 20.7 -0.1
baz=264
MMPY **Sheldon Lake,** 93.64 28 P P 20 24 21.6 +0.4
baz=264
DLBC **Dease Lake** 93.80 32 LR LR 21 07 17.1
comp=Z,87nm,18.7s,baz=286,slow=36
BBB **Bella Bella** 94.33 38 LR LR 20 57 50.1
comp=Z,74nm,21.1s,baz=298,slow=30
A36M **Sachs Harbour** 96.52 18 IAmb IAmb 20 24 35.5
comp=Z,5.7nm,0.8s
KIRV **Kirov** 97.10 328 *i* P P 20 24 35.8 -1.1
KIRV **Kirov** 97.10 328 LR LR 21 10 03.6
comp=Z,77nm,19.9s,baz=98,slow=36
YBH **Yreka Blue Hor** 97.46 49 LR LR 21 01 17.0
comp=Z,128nm,20.2s,baz=281,slow=31
BELG **Belogornoye** 98.12 322 *ci*P P 20 24 39.6 -2.1
BELG pmax pmax
comp=Z,5.0nm,0.9s
RAYN **Ar Rayn** 99.18 293 P Pdif 20 24 45.0 -2.2
RAYN **Ar Rayn** 99.18 293 P Pdif 20 24 45.1 -2.2
RAYN pmax pmax
comp=Z,4.0nm,1.0s
NVAR **Mina Array Bea** 100.81 52 P Pdif 20 24 54.2 -0.2
comp=Z,0.8nm,0.8s,baz=253,slow=6.6,SNR=4.5
YKA **Yellowknife Ar** 101.34 28 P Pdif 20 24 54.4 -1.4
comp=Z,1.0nm,1.0s,baz=280,slow=4.6,SNR=8.6
BMO **Blue Mountains** 101.39 46 Pdif Pdif 20 24 52.5 -4.1
BMO **Blue Mountains** 101.39 46 *i* P Pdif 20 24 52.5 -4.1
TXAR **Lajitas Array** 113.52 61 PKiKP PKiKP 20 29 42.4 -1.6
comp=Z,1.1nm,0.9s,baz=256,slow=2.1,SNR=5.7
TXAR PKKPbc PKKPbc 20 40 31.4 +3.0

comp=Z,1.3nm,1.0s,baz=110,slow=4.4,SNR=7.4

RONA	**Rosalia, Austr**	**118.68**	**322**	*e*PKP	**PKPdf**	**20 29 54.4**	**+1.1**
	comp=Z,3.8nm,0.8s							
CLL	**Collm**	**118.97**	**327**	*e*PKiKP	**PKPdf**	**20 29 54.0**	**+0.3**
CLL	**Collm**	**118.97**	**327**	*e*PKiKP	**PKPdf**	**20 29 54.0**	**+0.3**
S39A	**Bolivar**	**120.35**	**50**	PKPdf	**PKPdf**	**20 29 54.7**	**-2.1**
KBA	**Koelnbreinsper**	**120.76**	**322**	*e*PKiKP	**PKPdf**	**20 29 56.4**	**-1.1**
	comp=Z,2.9nm,0.9s							
LESA	**Schwarzleotal**	**121.00**	**323**	*e*PKiKP	**PKPdf**	**20 29 57.1**	**-0.8**
	comp=Z,2.5nm,0.9s							
ABTA	**Abfaltersbach**	**121.42**	**322**	*e*PKiKP	**PKPdf**	**20 29 57.9**	**-0.7**
	comp=Z,3.8nm,0.9s							
WTTA	**Wattenberg**	**121.70**	**323**	*e*PKiKP	**PKPdf**	**20 29 58.1**	**-1.2**
	comp=Z,5.6nm,0.9s							
WATA	**Walderalm**	**121.70**	**323**	*e*PKP	**PKPdf**	**20 29 57.5**	**-1.7**
	comp=Z,1.7nm,0.5s							
MOTA	**Moosalm**	**121.98**	**323**	*e*PKiKP	**PKPdf**	**20 29 59.0**	**-0.8**
	comp=Z,6.8nm,1.4s							
FETA	**Feichten**	**122.36**	**323**	*e*pPKP	**PKPdf**	**20 30 01.5**	**+0.9**
	comp=Z,5.5nm,1.1s							
SFIN	**Lafayette**	**123.98**	**45**	P	**PKPdf**	**20 30 02.8**	**-0.8**
	baz=294							
EKA	**Eskdalemuir Ar**	**124.06**	**337**	PKP	**PKPdf**	**20 30 01.0**	**-2.3**
	comp=Z,3.3nm,0.8s,baz=27,slow=3.9,SNR=3.6							
PLCA	**Paso Flores**	**124.06**	**150**	PKP	**PKPdf**	**20 30 04.5**	**+0.5**
	comp=Z,2.7nm,1.0s,baz=254,slow=3.6,SNR=2.8							
O48B	**Farmland**	**125.38**	**44**	P	**PKPdf**	**20 30 05.1**	**-1.2**
	baz=295							
P49A	**Miami Univ. Ec**	**126.00**	**45**	P	**PKPdf**	**20 30 06.9**	**-0.7**
	baz=295							
LRAL	**Lakeview Retre**	**126.69**	**53**	P	**PKPdf**	**20 30 08.6**	**-0.5**
	baz=289							
ACSO	**Alum Creek Sta**	**126.89**	**43**	P	**PKPdf**	**20 30 08.5**	**-0.8**
	baz=297							
M53A	**WI Miller and**	**127.86**	**41**	P	**PKPdf**	**20 30 10.3**	**-0.8**
	baz=300							
GOGA	**Godfrey**	**129.34**	**51**	P	**PKPdf**	**20 30 12.2**	**-1.9**
	baz=292							
LONY	**Lake Ozonia**	**129.78**	**34**	P	**PKPdf**	**20 30 12.5**	**-2.1**
	baz=308							
MCRA	**Macar, Loja**	**135.99**	**103**	*e*P	**PKPdf**	**20 30 28.0**	**+0.7**
TOA0	**Torodi Ar. Sit**	**141.13**	**283**	PKPdf	PKPdf	20 30 31.7	-4.8
TORD	**Torodi Ar. Bea**	**141.13**	**283**		PKPdf	20 30 31.4	-5.2
TORD	**Torodi Ar. Bea**	**141.13**	**283**	PKhKP	PKPpre	20 30 29.6	
	comp=Z,3.2nm,1.1s,baz=53,slow=3.7,SNR=10							
GUY2C	**Guyana, Caldas**	**141.98**	**90**	*e*P	**PKPdf**	**20 30 35.3**	**-3.4**
CPUP	**Villa Florida**	**142.14**	**150**	PKhKP	PKPpre	20 30 31.0	
	comp=Z,1.5nm,0.7s,baz=185,slow=2.9,SNR=3.0							
NORC	**Norcasia**	**142.49**	**89**	*e*P	**PKPdf**	**20 30 36.6**	**-2.5**
PTBC	**PUERTO BERRIO**	**142.94**	**87**	*e*P		20 30 34.7	
ROSC	**El Rosal**	**143.00**	**90**	PKP		20 30 37.4	
	comp=Z,7.3nm,0.4s,baz=288,slow=20,SNR=4.5							
SPBC	**San Pablo de B**	**143.29**	**89**	*e*P	PKPab	20 30 36.7	+0.3
BARC	**Barichara**	**144.21**	**87**	*e*P	**PKPab**	**20 30 40.0**	**-0.2**
RUSC	**La Rusia**	**144.28**	**89**	*e*P	**PKPab**	**20 30 40.1**	**-0.6**
CRJC	**Cerrejon, Guaj**	**144.39**	**80**	*e*P	**PKPab**	**20 30 40.7**	**+0.2**
PAMC	**Pamplona, Colo**	**144.70**	**86**	*e*P	**PKPab**	**20 30 41.9**	**-0.4**
URIC	**Uribia, Colomb**	**145.20**	**79**	*e*P	**PKPbc**	**20 30 44.7**	**+1.4**
TAMC	**Tame, Arauca**	**145.59**	**88**	*e*P	**PKPdf**	**20 30 45.6**	**+1.1**
TBTG	**Tabatinga, AM**	**145.69**	**107**		**PKPdf**	**20 30 43.5**	**-1.1**
SDV	**Santo Domingo**	**146.73**	**83**		**PKPdf**	**20 30 44.0**	**-2.6**
SDV	**Santo Domingo**	**146.73**	**83**	*e*P	**PKPdf**	**20 30 46.5**	**-0.1**
AQDB	**Aquidauana**	**147.77**	**146**		**PKPdf**	**20 30 48.9**	**+1.0**
KIC	**Kosan Boka**	**147.78**	**272**⇑	*e*PKP1	**PKPdf**	**20 30 51.1**	**+3.0**
	comp=Z,59nm,1.0s							
DBIC	**Dimbokro**	**147.90**	**273**		**PKPdf**	**20 30 50.0**	**+1.7**
DBIC	**Dimbokro**	**147.90**	**273**	PKPbc	PKPdf	**20 30 51.7**	**+3.4**
	comp=Z,32nm,1.0s,baz=86,slow=4.7,SNR=21							
LIC	**Lamto**	**148.06**	**272**⇑	*e*PKP1	**PKPdf**	**20 30 51.9**	**+3.3**
	comp=Z,94nm,1.0s							
TIC	**Toumodi**	**148.06**	**272**⇑	*e*PKP1	**PKPdf**	**20 30 51.8**	**+3.2**
	comp=Z,62nm,1.1s							
OBIP	**Obispado Ponce**	**148.99**	**65**		**PKPdf**	**20 30 50.8**	**+0.8**
CELP	**Cerrillos**	**149.01**	**65**		**PKPdf**	**20 30 51.2**	**+1.2**
PTLB	**Pontes e Lacer**	**149.34**	**135**		**PKPdf**	**20 30 51.6**	**+1.0**
GCPR	**Guaynabo City**	**149.38**	**64**		**PKPdf**	**20 30 52.5**	**+1.9**
IGPR	**InterUniversit**	**149.47**	**65**		**PKPdf**	**20 30 51.5**	**+0.8**
SAML	**Samuel**	**149.97**	**120**		**PKPdf**	**20 30 51.1**	**-0.6**
SAML	**Samuel**	**149.97**	**120**	PKHKP	PKPpre	20 30 51.1	
SAML	**Samuel**	**149.97**	**120**	*e*P	**PKPdf**	**20 30 52.0**	**+0.3**
VILB	**Vilhena**	**150.18**	**130**	PKPdf	**PKPdf**	**20 30 48.1**	**-3.9**
VILB					**pPKPdf**	**20 30 56.3**	**-0.6**
BOAV	**Boa Vista**	**156.39**	**98**	PKPdf	**PKPdf**	**20 30 56.9**	**-4.1**
BOAV	**Boa Vista**	**156.39**	**98**	*e*P	**PKPdf**	**20 31 01.2**	**+0.2**

JMA 27 20:15:03.1±0.3, 31°.5N±1°.0×142°.3E±°, h39km, MV3.7/25, FAR E OFF IZU ISLANDS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.88**	**306**	*e*P		Pn	20 15 48.1	+1.6
JHJ2				*e*S		Sn	20 16 21.4	+1.4
BSO1	**Boso 1**	**3.48**	**337**	P		Pn	20 15 56.7	+2.5
BSO3	**Boso 3**	**3.78**	**333**	*e*P		Pn	20 16 01.1	+2.5
BSO4	**Boso 4**	**4.01**	**332**	P		Pn	20 16 04.4	+2.5
CBIJ	**Chichi jima**	**4.35**	**185**	*e*P		Pn	20 16 08.8	+2.0
JOD2	**Odawara 2**	**4.81**	**323**	*e*P		Pn	20 16 14.9	+1.9
JHO	**Hitachi**	**5.42**	**342**	*e*P		Pn	20 16 23.5	+2.1
JHO				*e*S		Sn	20 17 21.3	-1.2
JRY	**Ryogami san**	**5.50**	**327**	P		Pn	20 16 25.4	+2.9
JAG	**Ashikaga**	**5.61**	**333**	P		Pn	20 16 26.5	+2.5

*IDC **27**.20:15:24.1±0.9, 6°.17S×142°.85E, h0km, mb4.1/15, mbtmp4.1/17, ML2.2/1, Error ellipse: s-maj=34.3km s-min=19.8km az=84.0*

ISC 27 20:15:29.0±0.7, 6°.2S±0°.1×142°.9E±0°.1, h35km, n17, σ0.95/18, mb4.0/15, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.28**	**127**	Pn		**Pn**	**20 16 47.1**	**+1.6**
	4.9nm,0.3s,baz=15,slow=18,SNR=2.0							
PMG				Sn		**Sn**	**20 17 43.8**	**-1.3**
	3.3nm,0.3s,baz=232,slow=17,SNR=6.2							
	42nm,0.6s							
ASAR	**Alice Springs**	**19.37**	**206**	P		**Pn**	**20 19 52.8**	**-0.5**
	22nm,0.8s,baz=32,slow=11,SNR=6.8							
STKA	**Stephens Creek**	**25.55**	**183**	P		**P**	**20 20 53.7**	**-1.0**
	8.4nm,1.0s,baz=344,slow=9.8,SNR=3.3							
	8.4nm,1.0s							
MJAR	**Matsushiro Arr**	**42.77**	**354**	P		**P**	**20 23 21.4**	**-1.9**
	1.9nm,0.8s,baz=187,slow=8.6,SNR=3.0							
	1.9nm,0.8s							
KSRS	**Korea Array**	**45.65**	**343**	P		**P**	**20 23 46.7**	**+0.4**
	1.5nm,0.7s,baz=165,slow=9.2,SNR=3.4							
	1.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**49.79**	**300**	P		**P**	**20 24 19.2**	**+0.4**
	0.7nm,0.8s,baz=129,slow=6.0,SNR=2.4							
	0.7nm,0.8s							
USRK	**Ussuriysk Ar.**	**51.15**	**350**	P		**P**	**20 24 27.4**	**-1.1**
	1.8nm,0.7s,baz=174,slow=7.2,SNR=3.8							
	1.8nm,0.7s							
KLR	**Kul'dur**	**56.08**	**351**	P		**P**	**20 25 05.0**	**+0.4**
	0.9nm,0.6s,baz=166,slow=4.2,SNR=3.2							
	0.9nm,0.6s							
PETK	**Petropavlovsk-**	**60.43**	**10**	P		**P**	**20 25 35.1**	**+0.1**
	3.8nm,0.9s,baz=180,slow=5.8,SNR=3.1							
	3.8nm,0.9s							
SONM	**Songino Array**	**62.69**	**333**	P		**P**	**20 25 50.5**	**0.0**
	0.3nm,0.5s,baz=113,slow=3.7,SNR=2.7							
	0.3nm,0.5s							
SEY	**Seymchan**	**69.35**	**5**	P		**P**	**20 26 33.6**	**+0.8**
	1.0nm,0.7s,baz=118,slow=15,SNR=2.3							
	1.0nm,0.7s							
MKAR	**Makanchi Array**	**75.11**	**322**	P		**P**	**20 27 07.6**	**0.0**
	2.1nm,1.1s,baz=124,slow=7.7,SNR=2.7							
	2.1nm,1.1s							
ZALV	**Zalesovo Beam**	**77.06**	**329**	P		**P**	**20 27 18.2**	**-0.3**
	0.6nm,0.6s,baz=120,slow=8.5,SNR=2.2							
	0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**78.99**	**324**	P		**P**	**20 27 29.6**	**+0.3**
	0.6nm,0.7s,baz=104,slow=3.9,SNR=2.8							
	0.6nm,0.7s							
NRIK	**Noril'sk**	**84.26**	**343**	P		**P**	**20 27 57.5**	**+0.8**
	1.6nm,0.5s,baz=118,slow=4.1,SNR=3.7							
	1.6nm,0.5s							
BVAR	**Borovoye Array**	**84.57**	**325**	P		**P**	**20 27 59.6**	**+1.0**
	5.1nm,0.9s,baz=108,slow=5.9,SNR=7.6							
	5.1nm,0.9s							
ILAR	**Eielson Array**	**87.32**	**24**	P		**P**	**20 28 12.1**	**0.0**
	2.4nm,0.7s,baz=257,slow=5.0,SNR=16							
	2.4nm,0.7s							

*IDC **27**.20:28:40.5±7.0, 0°.14N×89°.51W, h0km, mb3.6/4, mbtmp3.6/4, MS3.5/3, Error ellipse: s-maj=317.4km s-min=134.3km az=58.0*

IGQ 27 20:28:39±0.0, 0°.8S±0°.1×91°.1W±0°.1, h0km, Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VCH1	**Volcn Chico**	**0.06**	**29**	P		Pg	20 28 41.0	+0.8
VCH1				S		Sg	20 28 42.0	+1.0
PVIL	**Puerto Villami**	**0.20**	**123**	P		Pg	20 28 42.0	-0.9
PVIL				S		Sg	20 28 44.0	-1.5
FER2	**Fernandina2, P**	**0.47**	**322**	P		Pb	20 28 50.0	-0.1
ALCE	**Alcedo, Punta**	**0.93**	**295**	P		Pg	20 28 48.0	-8.9
ALCE				S		Sg	20 28 56.0	-13
CMIG	**Matias Romero**	**18.20**	**348**	LR		LR	20 38 07.5	
	comp=Z,68nm,20.7s,baz=196,slow=32							
TXAR	**Lajitas Array**	**32.31**	**339**	P		P	20 35 09.0	-1.0
	0.5nm,0.8s,baz=152,slow=9.1,SNR=4.9							
	0.5nm,0.8s							
SIV	**San Ignacio**	**33.24**	**119**	LR		LR	20 49 23.7	
	comp=Z,56nm,18.4s,baz=108,slow=38							
NVAR	**Mina Array Bea**	**46.40**	**330**	P		P	20 37 08.6	+0.9
	0.2nm,0.4s,baz=155,slow=6.7,SNR=1.6							
	0.2nm,0.4s							
PDAR	**Pinedale Array**	**46.47**	**341**	P		P	20 37 07.0	-1.1
	0.4nm,0.8s,baz=149,slow=7.5,SNR=3.5							
	0.4nm,0.8s							
NEW	**Newport**	**53.86**	**339**	LR		LR	20 59 33.7	
	comp=Z,164nm,19.7s,baz=286,slow=35							
ILAR	**Eielson Array**	**76.82**	**339**	P		P	20 40 32.2	-0.2
	0.8nm,0.7s,baz=134,slow=4.1,SNR=14							
	0.8nm,0.7s							

*IDC **27**.20:29:30.9±0.9, 6°.00S×142°.94E, h0km, mb4.1/7, mbtmp4.0/10, ML3.7/2, Error ellipse: s-maj=29.0km s-min=19.5km az=80.0*

ISC 27 20:29:35.9±0.8, 6°.28S±0°.09×142°.73E±0°.10, h35km, n10, σ1°.79/13, mb4.0/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.38**	**126**	Pn		**Pn**	**20 30 52.0**	**-1.6**
	3.2nm,0.3s,baz=293,slow=9.1,SNR=1.8							
PMG				Sn		**Sn**	**20 31 55.6**	**+1.2**
	1.2nm,0.3s,baz=295,slow=22,SNR=1.6							
WRA	**Warramunga Arr**	**15.84**	**210**	Pn		**P**	**20 33 18.5**	**-1.4**
	0.2nm,0.3s,baz=29,slow=13,SNR=2.2							
WRA				Sn		**Sn**	**20 36 09.7**	**-1.4**
	0.2nm,0.3s,baz=29,slow=24,SNR=2.4							
WRA				Lg		Lg	20 38 04.2	
	0.2nm,0.3s,baz=18,slow=25,SNR=2.7							
	1.0nm,0.6s							
ASAR	**Alice Springs**	**19.26**	**205**	P		**Pn**	**20 34 02.3**	**+3.4**
	0.3nm,0.3s,baz=34,slow=9.9,SNR=9.3							
ASAR				S		**S**	**20 37 32.4**	**-1.7**
	0.7nm,0.7s,baz=27,slow=27,SNR=3.4							
ASAR				Lg		Lg	20 39 54.4	
	baz=16,slow=29							
	2.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**49.69**	**301**	P		**P**	**20 38 23.9**	**-0.9**
	1.3nm,0.4s,baz=111,slow=7.0,SNR=8.7							
	1.3nm,0.4s							
MKAR	**Makanchi Array**	**75.05**	**322**	P		**P**	**20 41 15.0**	**+0.8**
	0.9nm,0.6s,baz=98,slow=7.5,SNR=13							
	0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**77.03**	**329**	P		**P**	**20 41 23.6**	**-1.6**
	0.6nm,0.6s,baz=115,slow=9.7,SNR=3.6							
	0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**78.94**	**324**	P		**P**	**20 41 36.1**	**+0.2**
	0.7nm,0.8s,baz=117,slow=4.5,SNR=6.7							
	0.7nm,0.8s							
QSPA	**South Pole Qui**	**83.69**	**180**	P		**P**	**20 42 02.7**	**+1.7**
	1.0nm,0.8s,baz=315,slow=2.9,SNR=2.5							
	1.0nm,0.8s							
BVAR	**Borovoye Array**	**84.52**	**325**	P		**P**	**20 42 06.2**	**+0.9**
	4.3nm,0.6s,baz=110,slow=6.4,SNR=27							
	4.3nm,0.6s							
ILAR	**Eielson Array**	**87.42**	**24**	P		**P**	**20 42 18.1**	**-1.3**
	0.8nm,0.7s,baz=259,slow=4.7,SNR=10							
	0.8nm,0.7s							

*IDC **27**.20:38:02.1±1.2, 6°.10S×143°.15E, h0km, mb4.0/3, mbtmp4.0/5, ML1.8/1, Error ellipse: s-maj=43.4km s-min=30.3km az=73.0*

ISC 27 20:38:06.5±1.0, 6°.5S±0°.1×142°.8E±0°.1, h35km, n6, σ2.82/8, mb4.0/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.21**	**124**	Pn		**Pn**	**20 39 20.9**	**-1.1**
	2.2nm,0.3s,baz=300,slow=20,SNR=6.2							
PMG				Sn		**Sn**	**20 40 22.3**	**+1.4**
	2.5nm,0.3s,baz=262,slow=21,SNR=2.6							
	8.6nm,0.4s							
WRA	**Warramunga Arr**	**15.68**	**211**	Pn		**P**	**20 41 46.5**	**-2.1**
	0.3nm,0.3s,baz=30,slow=13,SNR=10							
WRA				Sn		**Sn**	**20 44 35.0**	**-2.7**
	0.2nm,0.3s,baz=30,slow=23,SNR=2.7							
WRA				Lg		Lg	20 46 28.7	
	0.1nm,0.3s,baz=34,slow=26,SNR=1.9							
ASAR	**Alice Springs**	**19.09**	**206**	P		**Pn**	**20 42 31.8**	**+4.5**
	3.3nm,0.6s,baz=32,slow=11,SNR=29							
ASAR				Lg		Lg	20 48 18.8	
	0.1nm,0.3s,baz=27,slow=29,SNR=1.8							
MKAR	**Makanchi Array**	**75.25**	**322**	P		**P**	**20 49 46.5**	**+0.6**
	0.4nm,0.7s,baz=97,slow=6.8,SNR=5.1							
	0.4nm,0.7s							
BVAR	**Borovoye Array**	**84.72**	**325**	P		**P**	**20 50 37.9**	**+1.0**
	2.3nm,0.7s,baz=113,slow=8.0,SNR=16							
	2.3nm,0.7s							
ILAR	**Eielson Array**	**87.61**	**24**	P		**P**	**20 50 49.0**	**-1.9**
	0.8nm,0.8s,baz=251,slow=5.1,SNR=8.3							
	0.8nm,0.8s							

IDC 27 20:39:48.7±1.8, 6°.06S×143°.09E, h0km, mb3.8/3, mbtmp3.8/5, ML3.2/2, MS3.1/1, Error ellipse: s-maj=69.2km s-min=31.4km az=106.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.21**	**211**	Pn		Pn	20 43 36.9	-1.3
	0.1nm,0.3s,baz=31,slow=12,SNR=1.8							
	1.2nm,0.6s							
GUMO	**Guam**	**19.60**	**5**	LR		LR	20 51 43.6	
	comp=Z,58nm,21.0s,baz=72,slow=36							
ASAR	**Alice Springs**	**19.61**	**206**	P		P	20 44 19.2	+0.3
	0.3nm,0.3s,baz=32,slow=10,SNR=6.6							
	1.9nm,0.6s							
MKAR	**Makanchi Array**	**75.10**	**322**	P		P	20 51 33.2	+0.5
	0.3nm,0.7s,baz=100,slow=7.4,SNR=3.9							
	0.3nm,0.7s							
BVAR	**Borovoye Array**	**84.54**	**325**	P		P	20 52 23.9	+0.2
	1.5nm,0.9s,baz=99,slow=4.8,SNR=6.0							
	1.5nm,0.9s							
ILAR	**Eielson Array**	**87.08**	**24**	P		P	20 52 35.5	-0.6
	0.3nm,0.7s,baz=268,slow=4.4,SNR=5.0							
	0.3nm,0.7s							

*JMA **27**.20:41:20.0±0.1, 24°.1N±1°.1×122°.8E±0°.5, h18km±2km, MV2.5/13, NW OFF ISHIGAKIJIMA IS*
*TAP **27**.20:41:19.5, 24°.21N×122°.78E, h17km, ML2.7, D*

ISC 27 20:41:19.3±1.0, 24°.15N±0°.03×122°.80E±0°.02, h17km±8km, n87, σ0.88/153, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**24**	P		**Pg**	**20 41 26.2**	**0.0**
JYNG				*e*S		**Sb**	**20 41 30.8**	**-0.9**
YOJ	**Yonaguni jima**	**0.36**	**32**	*i* P		**Pb**	**20 41 26.9**	**-0.4**
	baz=46							
YOJ				*i* S		**Sb**	**20 41 32.0**	**-0.8**
	baz=46							
YOJ	**Yonaguni jima**	**0.36**	**32**	P		**Pb**	**20 41 27.0**	**-0.4**
YOJ				S		**Sb**	**20 41 31.9**	**-0.9**
EOS4	**EOS4**	**0.44**	**266**	*i* P		**Pg**	**20 41 28.0**	**-0.1**
	baz=262							
EOS4				*i* S		**Sg**	**20 41 34.4**	**+0.4**
	baz=262							
EOS3	**EOS3**	**0.46**	**287**	*i* P		**Pg**	**20 41 28.4**	**-0.1**
	baz=279							
EOS3				*i* S		**Sb**	**20 41 35.3**	**0.0**
	baz=279							
EOS2	**EOS2**	**0.58**	**297**	*i* P		**Pb**	**20 41 31.0**	**+0.1**
	baz=297							
EOS2				*i* S		**Sb**	**20 41 39.4**	**+0.5**
	baz=297							
IRIF	**Iriomote-Funau**	**0.87**	**78**	P		**Pb**	**20 41 36.0**	**0.0**
IRIF				S		**Sn**	**20 41 48.8**	**-0.2**
HATJ	**Hateruma jima**	**0.92**	**96**	P		**Pb**	**20 41 37.1**	**+0.2**
HATJ				*e*S		**Sg**	**20 41 50.3**	**+0.9**
ESAO	**Su ao**	**0.97**	**296**	*i* P		**Pb**	**20 41 36.9**	**-0.8**
	baz=306							
ESAO				*i* S		**Sn**	**20 41 51.5**	**0.0**
	baz=306							
EWUT	**Wuta**	**0.98**	**288**	*i* P		**Pb**	**20 41 37.1**	**-0.7**
	baz=285							
EWUT				*i* S		**Sb**	**20 41 50.2**	**-0.2**
	baz=285							
TWC	**Suao**	**0.98**	**298**	*i* P		**Pb**	**20 41 37.4**	**-0.5**
	baz=308							
TWC				*i* S		**Sb**	**20 41 49.7**	**-0.7**
	baz=308							
EAHA	**Aohua**	**0.98**	**280**	*i* P		**Pb**	**20 41 37.4**	**-0.5**
	baz=278							
EAHA				*i* S		**Sb**	**20 41 50.8**	**+0.2**
	baz=278							
ENA	**Nanau**	**1.00**	**286**	*i* P		**Pb**	**20 41 37.6**	**-0.6**
	baz=283							
ENA				*i* S		**Sb**	**20 41 50.6**	**-0.6**
	baz=283							
EGS		**1.05**	**311**	*i* S		**Sb**	**20 41 51.9**	**-0.6**
	baz=310							
ETL	**Fush Village**	**1.07**	**271**	P		**Pb**	**20 41 39.7**	**+0.3**
	baz=267							
ETL				S		**Sg**	**20 41 54.5**	**+0.2**
	baz=267							
NDS	**Dongshan**	**1.10**	**296**	*i* P		**Pn**	**20 41 40.0**	**+0.1**
	baz=304							
NDS				*i* S		**Sb**	**20 41 53.5**	**-0.3**
	baz=304							
NACB	**Ninganchiao**	**1.10**	**271**	*i* P		**Pn**	**20 41 40.3**	**+0.3**
	baz=249							
NACB				*i* S		**Sg**	**20 41 56.6**	**+1.6**
	baz=249							
TWD	**Chiawan**	**1.10**	**266**	*i* S		**Sn**	**20 41 54.9**	**+0.1**
	baz=263							
JKRS	**Kuro-shima**	**1.11**	**85**	P		**Pn**	**20 41 40.2**	**+0.2**
JKRS				S		**Sg**	**20 41 55.8**	**+0.5**
TWE	**Neicheng**	**1.18**	**299**	*i* P		**Pn**	**20 41 40.8**	**-0.2**
	baz=297							
TWE				*i* S		**Sn**	**20 41 56.0**	**-0.6**
	baz=297							
SHUL	**Shoufeng**	**1.19**	**252**	*i* P		**Pn**	**20 41 40.7**	**-0.5**
	baz=249							
SHUL				S		**Sb**	**20 41 56.9**	**+0.4**
	baz=249							
ETLH	**Xiulin Townshi**	**1.20**	**273**	*i* P		**Pn**	**20 41 41.4**	**-0.1**
	baz=270							
ETLH				*i* S		**Sg**	**20 41 58.4**	**0.0**
	baz=270							
TIPB	**Shuangxi**	**1.20**	**313**	*i* P		**Pg**	**20 41 42.2**	**-0.3**
	baz=312							
TIPB				*i* S		**Sn**	**20 41 56.9**	**-0.5**
	baz=312							
ETM	**Tongmen**	**1.21**	**261**	P		**Pn**	**20 41 41.0**	**-0.4**
	baz=258							
ETM				S		**Sb**	**20 41 57.0**	**-0.1**
	baz=258							
LATG	**Datong**	**1.22**	**288**	*i* P		**Pn**	**20 41 41.8**	**0.0**
	baz=286							
LATG				*i* S		**Sg**	**20 41 58.3**	**-0.6**
	baz=286							
ENTT	**Nioudou**	**1.22**	**294**	*i* P		**Pb**	**20 41 42.2**	**+0.1**
	baz=305							
ENTT				*i* S		**Sg**	**20 41 58.4**	**-0.6**
	baz=305							
JIJ	**Ishigaki jima**	**1.24**	**80**	P		**Pn**	**20 41 41.6**	**-0.4**
JIJ				*e*S		**Sb**	**20 41 58.0**	**-0.1**
NDT	**Datong Townshi**	**1.25**	**291**	*i* P		**Pb**	**20 41 42.5**	**0.0**
	baz=289							
NDT				*i* S		**Sb**	**20 41 58.2**	**-0.3**
	baz=289							
FUSB	**Fushanzhiwuyua**	**1.26**	**299**	*i* P		**Pb**	**20 41 42.9**	**+0.2**
	baz=311							
FUSB				*i* S		**Sb**	**20 41 57.7**	**-0.9**
	baz=311							
SXI1	**Grass Mountain**	**1.26**	**318**	*i* P		**Pn**	**20 41 41.6**	**-0.6**
	baz=331							
SXI1				*i* S		**Sg**	**20 41 59.1**	**-1.0**
	baz=331							
LXIB	**Xiulin Townshi**	**1.27**	**264**	*i* P		**Pn**	**20 41 42.6**	**+0.1**
	baz=261							
LXIB				*i* S		**Sb**	**20 41 58.9**	**-0.3**
	baz=261							
ESL	**Shilin**	**1.29**	**255**	S		**Sn**	**20 41 58.1**	**-1.5**
	baz=240							
NNSB	**Datong**	**1.32**	**282**	*i* P		**Pb**	**20 41 43.8**

NFF			*i*	S	**Sg**	**20 42 11.2**	**0.0**
	baz=286							
FULB	**Fuli**	**1.68 236**		P	**Pn**	**20 41 47.0**	**-0.9**
	baz=220							
LIOB	**Emei**	**1.70 287**	*i*	P	**Pb**	**20 41 51.0**	**+0.9**
	baz=272							
LIOB			*i*	S	**Sg**	**20 42 13.1**	**-1.0**
	baz=272							
NSTT	**Nanjuang**	**1.71 287**	*i*	P	**Pb**	**20 41 50.6**	**+0.3**
	baz=285							
SSLB	**Suanglung**	**1.73 258**	*i*	P	**Pn**	**20 41 49.4**	**+0.8**
	baz=256							
SSLB			*i*	S	**Sn**	**20 42 10.8**	**+0.5**
	baz=256							
WCS	**Beigang Elemen**	**1.73 267**	*i*	P	**Pn**	**20 41 49.9**	**+1.3**
	baz=265							
SMLT	**Sun Moon Lake**	**1.76 262**	*i*	P	**Pn**	**20 41 50.2**	**+1.1**
	baz=259							
EHD	**Haiduan**	**1.77 236**	*i*	P	**Pn**	**20 41 48.5**	**-0.8**
	baz=223							
EHD			*i*	S	**Sn**	**20 42 10.4**	**-1.0**
	baz=223							
TYC	**Yuchr**	**1.79 262**	*i*	P	**Pn**	**20 41 50.6**	**+1.2**
	baz=260							
TYC			*i*	S	**Sb**	**20 42 14.0**	**+0.1**
	baz=260							
JTJ	**Tarama**	**1.80 74**	*eP*		**Pn**	**20 41 51.0**	**+1.4**
JTJ			*eS*		**Sn**	**20 42 13.0**	**+0.9**
WHYT	**Xinyi Township**	**1.84 256**	*i*	P	**Pn**	**20 41 51.6**	**+1.4**
	baz=239							
WHYT				S	**Sb**	**20 42 16.0**	**+0.7**
	baz=239							
ELDTW	**Lidau**	**1.90 240**	*i*	P	**Pn**	**20 41 50.5**	**-0.6**
	baz=237							
ELDTW			*i*	S	**Sn**	**20 42 12.7**	**-1.8**
	baz=237							
LDUT	**Ludao**	**1.91 220**	*eP*		**Pn**	**20 41 49.9**	**-1.3**
	baz=218							
ALS	**Alishan**	**1.94 251**	*i*	P	**Pn**	**20 41 52.6**	**+0.9**
	baz=248							
ALS			*i*	S	**Sn**	**20 42 16.6**	**+0.7**
	baz=248							
TCU	**Taichung**	**1.94 270**		S	**Sb**	**20 42 20.1**	**+2.0**
	baz=268							
WNT	**Mingjian**	**1.95 262**	*i*	S	**Sb**	**20 42 18.5**	**0.0**
	baz=260							
LONT	**Longtian**	**1.97 231**	*i*	S	**Sn**	**20 42 16.1**	**-0.2**
	baz=219							
TWGBT	**Beinan**	**2.06 230**		S	**Sn**	**20 42 17.5**	**-1.1**
	baz=219							
STYH	**Taoyuan**	**2.10 243**	*i*	P	**Pn**	**20 41 54.4**	**+0.7**
	baz=230							
STYH			*i*	S	**Sn**	**20 42 20.4**	**+1.0**
	baz=230							
WCKO	**Fanlu**	**2.13 251**	*i*	P	**Pb**	**20 41 56.5**	**-1.0**
	baz=248							
WCKO			*i*	S	**Sb**	**20 42 23.3**	**-0.4**
	baz=248							
TPUB	**Ta-pu**	**2.16 247**	*i*	P	**Pn**	**20 41 56.2**	**+1.6**
	baz=245							
TPUB			*i*	S	**Sn**	**20 42 22.3**	**+1.2**
	baz=245							
CHN4	**Tsaushan**	**2.17 249**		P	**Pb**	**20 41 57.2**	**-1.0**
	baz=246							
CHN4			*i*	S	**Sb**	**20 42 24.8**	**-0.1**
	baz=246							
WTP	**Ta-pu**	**2.20 246**	*i*	P	**Pb**	**20 41 57.7**	**-1.0**
	baz=244							
WTP			*i*	S	**Sn**	**20 42 24.3**	**+2.4**
	baz=244							
WRL	**Guolierlin Hig**	**2.23 264**	*i*	P	**Pn**	**20 41 57.3**	**+1.8**
	baz=262							
WRL			*i*	S	**Sb**	**20 42 26.7**	**+0.2**
	baz=262							
WTK	**Tuku**	**2.25 259**	*eS*		**Sb**	**20 42 26.4**	**-0.8**
	baz=256							
CHN1	**Nanshi**	**2.29 246**	*i*	S	**Sb**	**20 42 27.3**	**-1.1**
	baz=243							
TWK	**Hsinying**	**2.29 248**		P	**Pn**	**20 41 58.3**	**+1.9**
	baz=245							
TWK			*i*	S	**Sb**	**20 42 27.2**	**-1.2**
	baz=245							
SGST	**Jiashian**	**2.30 243**		P	**Pn**	**20 41 58.3**	**+1.9**
	baz=229							
SGST			*i*	S	**Sb**	**20 42 27.3**	**-1.1**
	baz=229							
SNST	**Tainan City**	**2.31 247**	*eP*		**Pn**	**20 41 58.7**	**+2.2**
	baz=244							
SNST			*i*	S	**Sn**	**20 42 27.1**	**+2.6**
	baz=244							
TSMG	**Majia**	**2.45 234**	*eS*		**Sn**	**20 42 28.8**	**+0.7**
	baz=225							
EAST	**Anshuo**	**2.52 226**	*eP*		**Pn**	**20 41 58.8**	**-0.7**
	baz=224							
TSCK	**Chigu Township**	**2.68 249**	*i*	P	**Pn**	**20 42 04.4**	**+2.7**
	baz=246							
TSCK			*i*	S	**Sn**	**20 42 35.7**	**+1.8**
	baz=246							
PHUB	**P'eng-hu**	**3.02 258**		S	**Sn**	**20 42 43.4**	**+1.1**
	baz=257							
PNG	**Penghu**	**3.03 260**	*i*	S	**Sn**	**20 42 43.8**	**+1.4**
	baz=258							
VWUC	**VWUC**	**3.16 286**	*i*	P	**Pn**	**20 42 09.3**	**+1.0**
	baz=285							
VWUC			*i*	S	**Sn**	**20 42 45.4**	**-0.3**
	baz=285							

*IDC **27** 20:45:02.8±1.6, 6.45S×143.62E, h0km, mb3.4/2, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=42.6km s-min=27.2km az=62.0*

ISC 27 20:45:04.4±1.2, 6.5S±0.2×143.6E±0.1, h10km, n5, σ1s43/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.58**	**129**	Pn	**Pn**	**20 46 12.9**	**-0.9**
	3.6nm,0.4s,baz=285,slow=12,SNR=1.6						
PMG				Sn	**Sn**	**20 47 07.9**	**+0.9**
	1.1nm,0.3s,baz=236,slow=23,SNR=2.1						
WRA	**Warramunga Arr**	**16.08**	**213**	Pn	**Pn**	**20 48 49.4**	**-1.4**
	0.2nm,0.3s,baz=32,slow=12,SNR=5.5						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**19.42**	**208**	P	**P**	**20 49 32.7**	**+1.6**
	0.2nm,0.3s,baz=33,slow=10,SNR=15						
	4.2nm,0.8s						
MKAR	**Makanchi Array**	**75.74**	**322**	P	**P**	**20 56 50.4**	**-0.1**
	0.1nm,0.4s,baz=126,slow=6.5,SNR=4.2						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**85.19**	**325**	P	**P**	**20 57 41.2**	**+0.2**
	0.3nm,0.7s,baz=112,slow=5.5,SNR=2.2						
	0.3nm,0.7s						

NOU 27 20:56:42.4, 22.63S×171.93E, h0km, MLv4.2/6, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**3.79**	**287**	P	Pn	20 57 41.8	-0.3
PINNC	**Pines Island,**	**4.14**	**269**	P	Pn	20 57 46.7	-0.2
YATNC	**Mamie plateau,**	**4.70**	**276**	P	Pn	20 57 54.5	-0.1
OUENC	**Ouen Island, N**	**4.71**	**272**	P	Pn	20 57 54.6	-0.1
LIFNC	**LIFOU**	**4.74**	**292**	P	Pn	20 57 55.1	0.0
DZM	**Mont Dzumac**	**5.11**	**275**	P	Pn	20 58 00.3	0.0

*IDC **27** 20:58:05.8±1.2, 6.48S×142.90E, h0km, mb3.7/3, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=35.6km s-min=26.9km az=67.0*

ISC 27 20:58:10.5±1.0, 6.9S±0.1×142.60E±0.10, h35km, n6, σ2s48/8, mb3.6/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.18**	**120**	Pn	**Pn**	**20 59 25.3**	**-0.4**
	2.0nm,0.3s,baz=303,slow=12,SNR=1.9						
PMG				Sn	**Sn**	**21 00 25.0**	**+0.7**
	0.8nm,0.3s,baz=227,slow=22,SNR=1.7						
WRA	**Warramunga Arr**	**15.29**	**211**	Pn	**P**	**21 01 47.1**	**-1.2**
	0.1nm,0.3s,baz=31,slow=13,SNR=2.0						
WRA				Sn	**Sn**	**21 04 29.3**	**-2.9**
	baz=13,slow=35						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**18.69**	**206**	P	**Pn**	**21 02 30.2**	**+3.6**
	1.4nm,0.4s,baz=36,slow=8.4,SNR=21						
MKAR	**Makanchi Array**	**75.41**	**322**	P	**P**	**21 09 51.2**	**+0.4**
	0.3nm,0.8s,baz=132,slow=6.0,SNR=2.7						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**84.90**	**325**	P	**P**	**21 10 43.1**	**+1.3**
	0.9nm,0.8s,baz=103,slow=6.4,SNR=6.2						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**88.00**	**24**	P	**P**	**21 10 54.4**	**-2.3**
	0.3nm,0.8s,baz=255,slow=5.4,SNR=4.2						
	0.3nm,0.8s						

IDC 27 21:00:49.4±3.1, 33.29S×178.50W, h0km, mb3.9/2, mbtmp3.9/3, ML3.4/1, Error ellipse: s-maj=74.0km s-min=36.7km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.11**	**215**	Pn	Pn	21 02 21.4	+0.5
	1.0nm,0.3s,baz=353,slow=3.4,SNR=9.8						
URZ				Sn	Sn	21 03 30.7	-0.8
	0.8nm,0.3s,baz=120,slow=17,SNR=1.6						
	5.3nm,0.5s						
ASAR	**Alice Springs**	**42.62**	**270**	P	P	21 08 47.6	0.0
	1.3nm,0.7s,baz=108,slow=7.3,SNR=9.0						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	P	21 08 57.6	-0.2
	0.8nm,0.5s,baz=116,slow=7.8,SNR=5.3						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**147.69**	**338**	PKPbc	PKPbc	21 20 34.2	-0.9
	1.2nm,0.8s,baz=42,slow=2.3,SNR=5.4						

*MEX **27** 21:01:51.2±0.5, 15.44N×93.19W, h92km±5km, MD4.5*
*GCG **27** 21:01:55.7±0.6, 15.74N×92.85W, h35km±999km, MD4.3*

ISC 27 21:01:49.1±1.3, 15.38N±0.04×93.25W±0.03, h97km±10km, n43, σ2s78/78, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.32**	**6**	*eP*	**Pn**	**21 02 03.0**	**-0.5**
PCIG				*eS*	**Sn**	**21 02 12.9**	**-1.2**
PATR	**El Naranjo**	**1.02**	**105**	*eP*	**Pn**	**21 02 09.5**	**-0.2**
PATR				*eS*	**Sn**	**21 02 24.1**	**-1.1**
PAVE	**Pavencul**	**1.05**	**100**	*eP*	**Pn**	**21 02 10.1**	**0.0**
PAVE				*eS*	**Sn**	**21 02 25.1**	**-0.9**
THIG		**1.06**	**116**	*eP*	**Pn**	**21 02 10.1**	**+0.2**
THIG				*eS*	**Sn**	**21 02 25.0**	**-0.7**
CARR	**Arriaga**	**1.07**	**324**	*eP*	**Pn**	**21 02 11.5**	**+1.4**
CARR				*eS*	**Sn**	**21 02 26.9**	**+1.0**
CHUJ	**Union Juarez**	**1.14**	**104**	*eP*	**Pn**	**21 02 11.2**	**+0.1**
CHUJ				*eS*	**Sn**	**21 02 26.8**	**-1.0**
TGIG		**1.39**	**5**	*eP*	**Pn**	**21 02 14.1**	**+0.2**
TGIG				*eS*	**Sn**	**21 02 30.9**	**-1.9**
TGBT	**Tuxtla Gutierr**	**1.39**	**6**	*eP*	**Pn**	**21 02 14.2**	**+0.3**
TGBT				*eS*	**Sn**	**21 02 30.9**	**-1.7**
CCIG	**Comitan**	**1.40**	**50**	*eP*	**Pn**	**21 02 14.8**	**+0.7**
CCIG				*eS*	**Sn**	**21 02 33.3**	**+0.3**
SMSP	**San Marcos**	**1.48**	**106**	*eP*	Pn	21 02 10.7	-4.5
SMSP				*eS*	**Sn**	**21 02 34.4**	**-0.6**
HUEH	**Huehuetenango**	**1.69**	**92**	*eS*	**Sn**	**21 02 37.3**	**-2.3**
RTAL	**Retalhuleu**	**1.73**	**119**	*eS*	**Sn**	**21 02 38.5**	**-1.6**
STG3	**Santiaguito 3,**	**1.76**	**112**	*i* P	**Pn**	**21 02 20.6**	**+2.0**
STG3				*i* S	**Sn**	**21 02 42.8**	**+1.8**
NILT	**Santiago Nilte**	**1.76**	**312**	*eP*	**Pn**	**21 02 20.7**	**+2.2**
NILT				*eS*	**Sn**	**21 02 42.8**	**+1.9**
SULM	**Suchitepequez,**	**1.95**	**123**	*i* P	**Pn**	**21 02 25.4**	**+4.4**
CMIG	**Matias Romero**	**2.31**	**317**	*eP*	**Pn**	**21 02 26.8**	**+1.2**
CMIG				*eS*	**Sn**	**21 02 54.2**	**+0.6**
FUG	**Fuego 3**	**2.51**	**111**	*i* P	**Pn**	**21 02 32.6**	**+4.2**
VHSA	**Villahermosa**	**2.60**	**7**	*eP*	Pn	21 02 37.2	+7.7
VHSA				*eS*	**Sn**	**21 03 01.4**	**+0.9**
HUIG	**Huatulco**	**2.78**	**278**	*eP*	**Pn**	**21 02 32.2**	**+0.3**
HUIG				*eS*	**Sn**	**21 03 01.5**	**-3.2**
NEUV	**Arroyo Zacate**	**3.37**	**314**	*eP*	**Pn**	**21 02 41.0**	**+1.3**
NEUV				*eS*	**Sn**	**21 03 15.3**	**-3.5**
MRL	**Marmol**	**3.46**	**95**	*i* P	**Pn**	**21 02 43.3**	**+2.2**
MRL				*i* S	**Sn**	**21 03 20.7**	**-0.6**
PETF	**Flores**	**3.59**	**64**	*eP*	**Pn**	**21 02 43.3**	**+0.6**
PETF				*eS*	**Sn**	**21 03 21.7**	**-2.5**
PMUV	**Sontecomapan**	**3.62**	**331**	*eP*	**Pn**	**21 02 45.5**	**+2.4**
PMUV				*eS*	**Sn**	**21 03 20.6**	**-4.4**
VHO	**Vista Hermosa**	**3.74**	**297**	*eP*	**Pn**	**21 02 48.5**	**+3.5**
VHO				*eS*	**Sn**	**21 03 29.6**	**+1.4**
PEIG	**Puerto Escondi**	**3.80**	**280**	*eP*	**Pn**	**21 02 46.2**	**+0.6**
PEIG				*eS*	**Sn**	**21 03 27.1**	**-2.3**
SCIG	**Sabancuy**	**4.07**	**29**	*eP*	**Pn**	**21 02 49.6**	**+0.3**
SCIG				*eS*	**Sn**	**21 03 34.2**	**-1.7**
YOIG	**Yosondua**	**4.38**	**290**	*eP*	**Pn**	**21 02 56.4**	**+2.8**
YOIG				*eS*	**Sn**	**21 03 40.2**	**-3.5**
TOIG	**Toxpalan**	**4.54**	**307**	*eP*	**Pn**	**21 02 58.4**	**+2.7**
TOIG				*eS*	**Sn**	**21 03 49.3**	**+1.9**
TXIG	**Tlaxiaco**	**4.72**	**294**	*eP*	**Pn**	**21 03 01.2**	**+3.0**
TXIG				*eS*	**Sn**	**21 03 50.5**	**-1.4**
PNIG	**Pinotepa**	**4.80**	**283**	*eP*	**Pn**	**21 03 00.1**	**+1.0**
PNIG				*eS*	**Sn**	**21 03 49.0**	**-4.5**
HLIG	**Huajuapan de L**	**5.00**	**300**	*eP*	**Pn**	**21 03 06.6**	**+4.6**
HLIG				*eS*	**Sn**	**21 03 56.2**	**-2.4**
JAUV	**Jalcomulco**	**5.21**	**320**	*eP*	**Pn**	**21 03 04.3**	**-0.5**
JAUV				*eS*	**Sn**	**21 03 60.0**	**-3.7**
LVIG	**Laguna Verde**	**5.27**	**325**	*eP*	**Pn**	**21 03 05.0**	**+0.3**
LVIG				*eS*	**Sn**	**21 04 00.4**	**-4.4**
FTIG	**Fresnillo de T**	**5.31**	**299**	*eP*	**Pn**	**21 03 08.2**	**+2.1**
FTIG				*eS*	**Sn**	**21 04 07.3**	**+1.2**
MGIG	**Malinaltepec**	**5.49**	**290**	*eP*	**Pn**	**21 03 11.5**	**+2.9**
MGIG				*eS*	**Sn**	**21 04 09.1**	**-1.4**
TLIG	**Tlapa**	**5.54**	**294**	*eP*	Pn	21 03 14.2	+4.9
TLIG				*eS*	**Sn**	**21 04 07.1**	**-4.6**
CRIG	**Cruz Grande**	**5.81**	**284**	*eP*	**Pn**	**21 03 13.0**	**+0.2**
CRIG				*eS*	**Sn**	**21 04 13.1**	**-5.1**
PPM	**Popocatepetl**	**6.31**	**306**	*eP*	**Pn**	**21 03 21.2**	**+1.2**
PPM				*eS*	**Sn**	**21 04 39.3**	**+8.4**
YAIG	**Yautepec**	**6.55**	**303**	*eP*	**Pn**	**21 03 26.4**	**+3.4**
YAIG				*eS*	**Sn**	**21 04 29.4**	**-6.9**
MEIG	**Mezcala**	**6.61**	**293**	*eP*	**Pn**	**21 03 26.4**	**+2.7**
MEIG				*eS*	**Sn**	**21 04 35.7**	**-1.9**
PLIG	**Platanillo**	**6.69**	**297**	*eP*	**Pn**	**21 03 29.4**	**+4.5**
PLIG				*eS*	**Sn**	**21 04 36.4**	**-3.3**
CAIG	**El Cayaco**	**6.94**	**285**	*eP*	**Pn**	**21 03 30.3**	**+2.1**
ARIG	**Puente Sto Nin**	**7.38**	**294**	*eP*	**Pn**	**21 03 38.2**	**+4.1**
ARIG				*eS*	**Sn**	**21 04 51.1**	**-5.3**

*IDC **27** 21:03:22.9±2.3, 33.27S×178.61W, h0km, mb4.2/2, mbtmp4.2/3, ML3.9/1, Error ellipse: s-maj=60.4km s-min=34.5km az=123.0*
*WEL **27** 21:04:39.3, 38.3S±35.1×17.8E±3.1, h38km±25km, M2.1/9, ML2.4/12, MLv2.1/9, Error ellipse: s-maj=0.1km s-min=0.0km az=32.9*

ISC 27 21:03:25.2±2.1, 33.3S±0.2×178.9W±0.3, h10km, n21, σ2s96/20, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**5.23**	**210**	P	**Pn**	**21 04 46.2**	**+2.7**
PUZ	**Puketiti**	**5.32**	**205**	P	Pn	**21 04 47.7**	**+2.9**
RUGZ	**Raukumara Rang**	**5.45**	**210**	P	**Pn**	**21 04 48.6**	**+1.9**
TWGZ	**Tauwhareparae**	**5.52**	**206**	P	**Pn**	**21 04 50.8**	**+3.3**
WHRZ	**Whale Island**	**5.68**	**215**	P	**Pb**	**21 05 00.6**	**-3.8**
MWZ	**Matawai**	**5.83**	**209**	P	**Pn**	**21 04 52.7**	**+0.9**
URZ	**Urewera**	**5.94**	**212**	Pn	**Pn**	**21 04 54.5**	**+1.3**
	2.9nm,0.3s,baz=356,slow=3.1,SNR=18						
URZ				Sn	**Sn**	**21 06 03.0**	**+1.6**
	3.3nm,0.3s,baz=230,slow=19,SNR=2.4						
	6.8nm,0.3s						
URZ	**Urewera**	**5.94**	**212**	P	**Pn**	**21 04 54.8**	**+1.6**
MUGZ	**Murupara**	**6.28**	**213**	P	Pb	21 05 07.3	-7.3
SNGZ	**Shannon Statio**	**6.29**	**208**	P	**Pn**	**21 04 60.0**	**+1.9**
RTZ	**Ruatahuna**	**6.30**	**211**	P	**Pn**	**21 04 59.2**	**+1.0**
RAHZ	**Arahi**	**6.51**	**209**	P	**Pn**	**21 05 02.9**	**+1.8**
MTHZ	**Maungataniwha**	**6.55**	**211**	P	**Pn**	**21 05 03.6**	**+1.9**
NMHZ	**Naumai**	**6.78**	**210**	P	**Pn**	**21 05 06.5**	**+1.7**
KWHZ	**Kaweka Forest**	**7.21**	**210**	P	**Pn**	**21 05 10.6**	**-0.1**
KAHZ	**Kahuranaki**	**7.35**	**206**	P	**Pn**	**21 05 11.8**	**-0.7**
VRZ	**Vera Road**	**7.77**	**219**	P	Pn	21 05 26.7	+8.4
ASAR	**Alice Springs**	**42.28**	**270**	P	**P**	**21 11 20.4**	**+1.3**
	3.3nm,0.7s,baz=109,slow=7.4,SNR=30						
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**43.53**	**276**	P	**P**	**21 11 30.1**	**+0.9**
	1.6nm,0.4s,baz=117,slow=7.7,SNR=16						
	1.6nm,0.4s						
FINES	**FINESS Array B**	**147.53**	**338**	PKPbc	**PKPbc**	**21 23 07.3**	**-1.5**
	14nm,1.2s,baz=56,slow=4.4,SNR=11						
MMAI	**Mount Meron Ar**	**151.35**	**279**	PKPbc	**PKiKP**	**21 23 19.5**	**-0.3**
	1.2nm,0.5s,baz=72,slow=4.7,SNR=3.8						

MEX 27 21:11:38.2±0.7, 16.32N×97.77W, h5km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.35**	**282**	*eP*	Pg	21 11 44.5	-0.5
PNIG				*eS*	Sg	21 11 49.4	-0.2
YOIG	**Yosondua**	**0.57**	**22**	*eP*	Pg	21 11 49.0	-0.3
YOIG				*eS*	Sg	21 11 56.7	-0.2
PEIG	**Puerto Escondi**	**0.68**	**118**	*eP*	Pg	21 11 50.5	-0.8
PEIG				*eS*	Sg	21 11 59.7	-0.4
TXIG	**Tlaxiaco**	**0.93**	**0**	*eP*	Pg	21 11 54.5	-1.5
TXIG				*eS*	Sg	21 12 07.4	-0.7
MGIG	**Malinaltepec**	**1.23**	**318**	*eP*	Pg	21 11 59.7	-2.1
MGIG				*eS*	Sg	21 12 15.4	-2.3
CRIG	**Cruz Grande**	**1.37**	**288**	*eP*	Pn	21 11 59.6	-4.4
HLIG	**Huajuapan de L**	**1.50**	**359**	*eP*	Pn	21 12 05.0	-1.0
HLIG				*eS*	Sn	21 12 23.9	-2.2
FTIG	**Fresnillo de T**	**1.62**	**348**	*eP*	Pn	21 12 06.4	-1.1
FTIG				*eS*	Sn	21 12 26.2	-2.6

MEX 27 21:12:09.9±0.5, 16.48N×98.98W, h9km±6km, MD3.3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.29**	**331**	*eP*	Pg	21 12 15.3	-0.4
CRIG				*eS*	Sg	21 12 19.5	-0.1
CRIG	**Cruz Grande**	**0.29**	**331**	*eS*	Sg	21 12 19.5	-0.1
PNIG	**Pinotepa**	**0.82**	**96**	*eP*	Pg	21 12 23.0	-2.8
PNIG				*eS*	Sg	21 12 33.7	-2.9
DAIG	**Los Arroyos**	**0.84**	**310**	*eP*	Pg	21 12 24.4	-1.6
DAIG				*eS*	Sg	21 12 34.6	-2.4
YOIG	**Yosondua**	**1.43**	**75**	*eP*	Pn	21 12 33.9	-2.4
YOIG				*eS*	Sb	21 12 51.4	-3.9

IDC 27 21:14:10.5±7.8, 5.65S×142.29E, h0km, mb3.2/1, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=277.8km s-min=37.6km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.18**	**208**	Pn	Pn	21 17 57.5	-1.9
	baz=36,slow=13,SNR=2.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**19.65**	**203**	P	Pn	21 18 42.0	-0.4
	0.1nm,0.3s,baz=30,slow=12,SNR=6.5						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**74.28**	**322**	P	P	21 25 49.7	-0.1
	0.2nm,0.8s,baz=100,slow=6.1,SNR=1.7						
	0.2nm,0.8s						

*IDC **27** 21:17:46.0±0.8, 6.06S×142.96E, h0km, mb4.1/11, mbtmp4.1/14, ML4.1/1, MS3.5/1, Error ellipse: s-maj=26.9km s-min=17.3km az=86.0*
*NEIC **27** 21:17:47.5±1.6, 5.99S±0.10×142.93E±0.10, h10km±1km, mb4.3/16, Error ellipse: s-maj=18.5km s-min=13.8km az=44.0*

ISC 27 21:17:50.9±0.5, 6.15S±0.06×142.83E±0.06, h35km, n56, σ1s50/56, mb4.2/20, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.82**	**299**	P	**Pn**	**21 18 21.2**	**+1.3**
GENI	**Genyem**	**4.42**	**323**	P	Pn	21 19 01.1	+5.6
PMG	**Port Moresby**	**5.37**	**127**		**Pn**	**21 19 07.8**	**-0.8**
PMG	**Port Moresby**	**5.37**	**127**	Pn	**Pn**	**21 19 08.1**	**-0.5**
	10nm,0.4s,baz=320,slow=6.5,SNR=6.4						
PMG				Sn	**Sn**	**21 20 10.6**	**+1.3**
	8.6nm,0.3s,baz=216,slow=22,SNR=6.4						
COEN	**Coen**	**7.77**	**178**	Pn	**Pn**	**21 19 43.6**	**+2.0**
COEN	**Coen**	**7.77**	**178**	P	**Pn**	**21 19 45.5**	**+3.9**
FAKI	**Fak Fak**	**11.02**	**286**	Pn	**Pn**	**21 20 25.5**	**-0.7**
FAKI	**Fak Fak**	**11.02**	**286**	P	**Pn**	**21 20 28.1**	**+1.8**
SAUI	**Saumlaki**	**11.59**	**260**		**Pn**	**21 20 33.3**	**-0.6**
KDU	**Kakadu**	**12.10**	**237**	P	**Pn**	**21 20 40.6**	**-0.4**
MTN	**Manton Dam**	**13.31**	**239**		**Pn**	**21 20 56.4**	**-1.1**
MTN	**Manton Dam**	**13.31**	**239**	P	**Pn**	**21 20 57.1**	**-0.4**
DRS	**Darwin Rock St**	**13.32**	**241**	P	**Pn**	**21 20 57.9**	**+0.2**
CTA	**Charters Tower**	**14.25**	**167**	Lg	Lg	21 25 22.7	
	0.4nm,0.3s,baz=72,slow=5.4,SNR=1.6						
WB0	**Warramunga Arr**	**15.83**	**210**		**Pn**	**21 21 30.8**	**-0.5**
WB0				IAmb	IAmb	21 21 44.0	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**16.00**	**210**		**Pn**	**21 21 31.8**	**-1.7**
WRA	**Warramunga Arr**	**16.00**	**210**	Pn	**Pn**	**21 21 33.0**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=27,slow=13,SNR=27						
WRA				Sn	**Sn**	**21 24 24.8**	**-5.2**
	comp=Z,1.0nm,0.3s,baz=28,slow=23,SNR=5.6						
WRA				Lg	Lg	21 26 15.3	
	comp=Z,0.3nm,0.3s,baz=26,slow=25,SNR=5.7						
	comp=Z,1.4nm,0.4s						
KNRA	**Kununurra**	**16.73**	**234**		**Pn**	**21 21 41.3**	**-1.5**
KNRA	**Kununurra**	**16.73**	**234**	P	**Pn**	**21 21 43.1**	**+0.3**
SOEI	**Soe**	**18.73**	**258**		**P**	**21 22 06.0**	**-1.0**
SOEI				IAmb	IAmb	21 22 26.6	
	comp=Z,24nm,0.8s						
AS31	**Alice Springs**	**19.42**	**205**	

NIL Nilore 76.66 307 P P 21 29 37.6 -1.1
ZALV Zalesovo Beam 76.97 329 P P 21 29 38.5 -1.3
ZALV Zalesovo Beam 76.97 329 P P 21 29 39.8 -0.1
comp=Z,0.7nm,0.4s,baz=120,slow=5.2,SNR=4.9
comp=Z,0.7nm,0.4s
KURK Kurchatov 78.88 324 P P 21 29 50.4 -0.1
KURK IAmb IAmb 21 29 56.3
comp=Z,4.3nm,1.3s
KURBB Kurchatov Arra 78.89 324 P P 21 29 50.7 +0.1
comp=Z,0.7nm,0.7s,baz=111,slow=4.3,SNR=7.8
comp=Z,0.7nm,0.7s
KKAR Karatay Array 81.45 315 P P 21 30 04.5 -0.2
QSPA South Pole Qui 83.82 180 P P 21 30 17.3 +0.6
comp=Z,0.8nm,0.5s,baz=306,slow=1.4,SNR=1.7
comp=Z,0.8nm,0.5s
BVAR Borovoye Array 84.47 325 P P 21 30 20.8 +0.8
comp=Z,5.5nm,0.6s,baz=108,slow=7.1,SNR=39
comp=Z,5.5nm,0.6s
IMAR Indian Mountai 85.12 22 P P 21 30 22.9 -0.2
SML Sawmill 85.59 26 P P 21 30 25.0 -0.5
MLY Manley 85.85 23 P P 21 30 26.1 -0.6
MLY IAmb IAmb 21 30 32.7
comp=Z,2.9nm,1.0s
ILAR Eielson Array 87.27 24 P P 21 30 32.6 -1.0
comp=Z,1.2nm,0.7s,baz=262,slow=5.0,SNR=14
comp=Z,1.2nm,0.7s

IDC 27 21:31:56.2±8.5, 9°21S×147°23E, h0km, mb3.7/1, mbtmp3.5/3, ML3.3/2, Error ellipse: s-maj=263.2km s-min=38.3km az=109.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.41	228	Pn	Pn	21 35 48.5	+0.5
	0.1nm,0.3s,baz=50,slow=13,SNR=5.2						
	0.6nm,0.5s						
ASAR	Alice Springs	19.22	220	P	P	21 36 21.5	-0.5
	0.1nm,0.3s,baz=50,slow=8.4,SNR=7.5						
	0.6nm,0.7s						
MKAR	Makanchi Array	80.11	321	P	P	21 44 08.3	+0.1
	0.3nm,0.4s,baz=123,slow=7.6,SNR=10						
	0.3nm,0.4s						

IDC 27 21:38:09.0±1.8, 6°00S×142°51E, h0km, mb3.7/3, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=67.0km s-min=26.9km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.98	209	Pn	Pn	21 41 53.8	-1.6
	0.2nm,0.3s,baz=32,slow=11,SNR=2.8						
WRA				Sn	Sn	21 44 39.9	-14
	0.1nm,0.3s,baz=41,slow=23,SNR=1.5						
WRA				Lg	Lg	21 46 35.4	
	0.1nm,0.3s,baz=28,slow=37,SNR=1.5						
	0.4nm,0.4s						
ASAR	Alice Springs	19.43	204	P	Pn	21 42 38.0	-0.3
	0.2nm,0.3s,baz=32,slow=10.0,SNR=7.7						
	1.2nm,0.7s						
MKAR	Makanchi Array	74.69	322	P	P	21 49 51.6	+0.9
	0.2nm,0.6s,baz=108,slow=7.6,SNR=3.3						
	0.2nm,0.6s						
BVAR	Borovoye Array	84.16	325	P	P	21 50 42.4	+0.3
	0.6nm,0.6s,baz=94,slow=5.2,SNR=4.3						
	0.6nm,0.6s						
ILAR	Eielson Array	87.26	24	P	P	21 50 55.9	-1.3
	0.5nm,0.9s,baz=248,slow=4.8,SNR=3.5						
	0.5nm,0.9s						

AEIC 27 21:38:53.4±1.8, 51°39N×0°08W×178°81E±0°08, h53km±7km, Error ellipse: s-maj=11.9km s-min=7.2km az=187.0
NEIC 27 21:38:54.9±0.8, 51°42N±0°09W×178°79E±0°07, h42km±9km, mb3.6/5, ML3.1(AEIC), Error ellipse: s-maj=13.4km s-min=5.6km az=194.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.33	98		Pn	21 39 03.2	-0.3
AMKA					Sn	21 39 09.5	-0.1
LSSE	Little Sitkin	0.53	345		Pn	21 39 06.0	0.0
LSPA	Little Sitkin	0.55	346		Pn	21 39 06.2	-0.2
LSPA					Sn	21 39 15.0	+0.5
LSNW	Little Sitkin	0.57	343		Pn	21 39 06.3	-0.4
CESW	Semis' Southwe	0.68	45		Pn	21 39 07.9	-0.1
CETU	Semis' Tuman	0.70	39		Pn	21 39 08.1	-0.3
CERB	Semis' Cerberu	0.73	46		Pn	21 39 08.8	0.0
CERB					Sn	21 39 19.2	+0.4
CEAP	Semis' Anvil P	0.76	40		Pn	21 39 09.2	0.0
CEAP					Sn	21 39 19.6	+0.1
CEPE	Semis' Perret	0.77	44		Pn	21 39 09.2	0.0
GASW	Gareloi Southw	1.52	75		Sn	21 39 38.2	+0.3
TAFP	Tanaga Falls P	2.07	75		Pn	21 39 27.0	-0.1
TAFP					Sn	21 39 51.5	-0.1
ADK	Adak	2.86	79		Pn	21 39 36.9	-1.0
ADK					Sn	21 40 10.5	-0.6
GSMY	Great Sitkin M	3.27	77		Pn	21 39 43.6	+0.1
ATKA	Atka Island	4.42	77		Pn	21 39 59.3	-0.1
C16K	Lisburne Hills	18.58	19	P	Pn	21 43 08.8	+0.3
J20K	Nowinta River	19.07	38		Pn	21 43 14.6	+0.2
J20K				IAmb	IAmb	21 43 20.3	
	comp=Z,3.3nm,1.1s						
F19K	Shaleruckik Mo	19.37	28	P	Pn	21 43 17.6	-0.5
F19K				IAmb	IAmb	21 43 43.8	
	comp=Z,2.8nm,1.2s						
SUA	Susitna One	19.42	47	P	P	21 43 17.9	+0.5
SUA				IAmb	IAmb	21 43 47.0	
	comp=Z,9.8nm,1.2s						
BCAR	Beaver Creek A	23.88	46	P	P	21 44 03.2	-1.0
EGAK	Eagle	24.51	42	P	P	21 44 09.1	-0.8
MKAR	Makanchi Array	58.81	307	P	P	21 48 48.7	+0.1

IDC 27 21:52:01.2±0.7, 26°57S×114°50W, h0km, mb4.2/11, mbtmp4.2/11, MS3.8/28, Error ellipse: s-maj=32.0km s-min=19.3km az=62.0
NEIC 27 21:52:04.6±0.9, 26°5S±0°1×114°4W±0°2, h10km±1km, mb4.7/39, Error ellipse: s-maj=26.4km s-min=22.1km az=281.0
ISC 27 21:52:03.8±0.6, 26°5S±0°1×114°4W±0°1, h14km, n93, σ1°19/64, mb4.7/27, MS3.9/27, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	4.59	99	LR	LR	21 53 53.0	
	comp=Z,128nm,19.4s,baz=264,slow=24						
H03N2	Juan Fernandez	31.41	111	T	T	22 31 12.4	
	baz=277,slow=74,SNR=1403						
H03N3	Juan Fernandez	31.41	111	T	T	22 31 07.4	
	baz=277,slow=74,SNR=1681						
H03N1	Juan Fernandez	31.42	111	T	T	22 31 07.3	
	baz=277,slow=74,SNR=1970						
PPT	Papeete	33.69	278	LR	LR	22 08 18.3	
	comp=Z,262nm,18.3s,baz=180,slow=29						
NNA	Nana	38.14	75	LR	LR	22 10 53.6	
	comp=Z,103nm,19.1s,baz=244,slow=30						
LMEL	Las Melosas	38.69	112	P	P	21 59 28.3	+0.7
PLCA	Paso Flores	38.80	123	P	P	21 59 29.5	+1.2
PLCA				IAmb	IAmb	21 59 31.1	
	comp=Z,19nm,1.2s						
PLCA	Paso Flores	38.80	123	P	P	21 59 28.6	+0.3
	comp=Z,9.3nm,1.1s,baz=268,slow=11,SNR=9.6						
PLCA				LR	LR	22 11 11.8	
	comp=Z,84nm,19.8s,baz=146,slow=30						
	comp=Z,9.3nm,1.1s						
ATAH	Atahualpa	39.28	67	LR	LR	22 11 37.0	
	comp=Z,147nm,18.9s,baz=235,slow=30						
COHC	Cochancay	41.33	61	P	P	21 59 49.5	+0.1
LVC	Limon Verde	41.41	95	LR	LR	22 12 48.4	
	comp=Z,120nm,18.1s,baz=259,slow=30						
RAR	Rarotonga	41.65	267	LR	LR	22 13 02.5	
	comp=Z,73nm,21.5s,baz=76,slow=30						
AF01	San Pedro de A	41.98	96	P	P	21 59 54.4	-0.7
OTAV	Otavalo	43.65	58	P	P	22 00 08.7	-0.2
CZSB	Cruzeiro do Su	43.76	72	P	P	22 00 09.3	+0.1
CZSB				IAmb	IAmb	22 00 14.7	
	comp=Z,13nm,0.9s						
LPAZ	La Paz	44.08	86	P	P	22 00 11.9	-0.6
JTS	Las Juntas de	46.43	42	LR	LR	22 15 20.8	
	comp=Z,116nm,19.5s,baz=89,slow=30						
CMIG	Matias Romero	47.29	26	LR	LR	22 14 39.9	
	comp=Z,16nm,18.1s,baz=184,slow=29						
ETMB	Extrema	48.41	79	P	P	22 00 43.9	-1.9
ROSC	El Rosal	49.76	57	P	P	22 00 56.6	-0.1
ROSC				LR	LAmb	22 01 21.7	
	comp=Z,9.3nm,0.8s						
ROSC	El Rosal	49.76	57	LR	LR	22 18 35.3	
	comp=Z,185nm,18.1s,baz=200,slow=32						
LPIG	La Paz	50.45	5	LR	LR	22 17 24.8	
	comp=Z,94nm,18.2s,baz=143,slow=30						
SIV	San Ignacio	50.50	89	LR	LR	22 18 00.5	
	comp=Z,105nm,21.7s,baz=106,slow=31						
CPUP	Villa Florida	50.75	103	P	P	22 01 03.7	+0.1
CPUP				IAmb	IAmb	22 01 05.4	
	comp=Z,8.1nm,1.2s						
CPUP	Villa Florida	50.75	103	P	P	22 01 03.4	-0.3
	comp=Z,1.6nm,0.5s,baz=252,slow=8.0,SNR=4.3						
CPUP				LR	LR	22 18 16.0	
	comp=Z,85nm,21.6s,baz=238,slow=31						
	comp=Z,1.6nm,0.5s						
SAML	Samuel	51.47	80	P	P	22 01 09.3	+0.1
AQDB	Aquidauana	53.80	97	P	P	22 01 26.8	+0.4
AQDB				IAmb	IAmb	22 01 30.5	
	comp=Z,14nm,1.3s						
SDV	Santo Domingo	55.16	56	P	P	22 01 37.3	+0.8
SDV				IAmb	IAmb	22 01 44.0	
	comp=Z,7.9nm,1.0s						
SDV	Santo Domingo	55.16	56	LR	LR	22 21 10.1	
	comp=Z,102nm,21.3s,baz=255,slow=32						
TXAR	Lajitas Array	56.45	11	P	P	22 01 46.5	+1.2
	comp=Z,0.5nm,0.8s,baz=204,slow=8.8,SNR=2.6						
	comp=Z,0.5nm,0.8s						
BAUV	El Baul	57.15	58	P	P	22 01 50.3	-0.2
URZ	Urewera	57.83	240	LR	LR	22 20 52.0	
	comp=Z,179nm,20.4s,baz=126,slow=30						
JCT	Junction City	58.34	15	P	P	22 01 59.6	+1.0
121A	Cookes Peak, D	59.03	7	P	P	22 02 04.5	+1.1
121A				IAmb	IAmb	22 02 12.7	
	comp=Z,7.1nm,1.1s						
SN05	Snyder 5	60.42	13	P	P	22 02 13.4	+0.5
SN05				IAmb	IAmb	22 02 21.4	
	comp=Z,9.4nm,0.8s						
PCRV	Puerto La Cruz	60.54	60	LR	LR	22 24 38.8	
	comp=Z,98nm,18.8s,slow=32						
RPZ	Rata Peaks	61.39	233	LR	LR	22 25 01.1	
	comp=Z,93nm,18.3s,baz=106,slow=32						
ANMO	Albuquerque	61.56	7	LR	LR	22 23 00.5	
	comp=Z,35nm,21.0s,baz=244,slow=30						
Z35A	Perchaven, San	61.69	16	P	P	22 02 22.6	+1.2
BDFB	Brasilia	62.32	94	P	P	22 02 27.0	+0.7
	comp=Z,2.4nm,0.7s,baz=230,slow=12,SNR=3.9						
BDFB				LR	LR	22 26 35.4	
	comp=Z,104nm,18.1s,baz=310,slow=33						
	comp=Z,2.4nm,0.7s						
GWY	Greenwater Val	62.37	358	P	P	22 02 27.3	+1.2
VNDA	Vanda	62.98	194	P	P	22 02 31.9	+2.3
VNDA	Vanda	62.98	194	LR	LR	22 23 50.9	
	comp=Z,65nm,18.0s,baz=172,slow=30						
QSPA	South Pole Qui	63.68	180	P	P	22 02 33.9	-0.7
QSPA				IAmb	IAmb	22 02 42.9	
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	63.68	180	P	P	22 02 33.9	-0.7
	comp=Z,3.8nm,1.0s,baz=104,slow=3.0,SNR=5.4						
	comp=Z,3.8nm,1.0s						
CCUT	Cedar City	63.70	1	P	P	22 02 36.4	+1.3
CCUT				IAmb	IAmb	22 02 38.6	
	comp=Z,8.9nm,1.3s						
S11A	Rachel	63.80	359	P	P	22 02 37.1	+1.4
HMU	Henry Mountain	64.18	3	P	P	22 02 38.9	+0.7
HMU				IAmb	IAmb	22 02 49.6	
	comp=Z,7.0nm,1.2s						
TPH	Tonopah	64.27	358	P	P	22 02 40.3	+1.5
R11B	Troy Canyon, C	64.50	359	P	P	22 02 41.4	+1.1
R11B				IAmb	IAmb	22 02 43.9	
	comp=Z,5.6nm,1.3s						
NV11	Mina Array Sit	64.67	357	P	P	22 02 42.6	+1.3
NV11				IAmb	IAmb	22 02 47.7	
	comp=Z,8.1nm,1.1s						
NVAR	Mina Array Bea	64.68	357	P	P	22 02 42.7	+1.3
NVAR	Mina Array Bea	64.68	357	P	P	22 02 43.5	+2.1
	comp=Z,2.0nm,0.8s,baz=176,slow=8.8,SNR=12						
	comp=Z,2.0nm,0.8s						
DUG	Dugway, Tooele	66.35	1	P	P	22 02 53.5	+1.3
DUG				IAmb	IAmb	22 02 55.1	
	comp=Z,7.5nm,1.2s						
KSU1	Kansas State U	67.34	15	P	P	22 02 58.9	+0.6
MDP	Montagnes des	67.48	72	LR	LR	22 28 48.4	
	comp=Z,82nm,20.5s,baz=322,slow=33						
TKL	Tuckaleechee C	68.25	27	LR	LR	22 29 27.2	
	comp=Z,66nm,19.1s,baz=160,slow=33						
WVOR	Wild Horse Val	68.69	357	P	P	22 03 07.7	+0.8
WVOR				IAmb	IAmb	22 03 10.0	
	comp=Z,6.8nm,1.1s						
PD31	Pinedale Array	69.05	4	P	P	22 03 09.3	+0.1
PDAR	Pinedale Array	69.05	4	P	P	22 03 09.1	-0.2
PDAR	Pinedale Array	69.05	4	P	P	22 03 09.3	+0.1
	comp=Z,1.2nm,0.6s,baz=171,slow=6.7,SNR=7.7						
	comp=Z,1.2nm,0.6s						
K22A	Casper	69.17	6	P	P	22 03 10.9	+1.0
Q44A	Meyer Farm, Va	69.25	21	P	P	22 03 12.5	+2.3
HLID	Hailey	69.70	0	P	P	22 03 14.7	+1.5
HLID				IAmb	IAmb	22 03 15.9	
	comp=Z,5.3nm,0.9s						
YHL	Hebgen Lake	71.05	2	P	P	22 03 22.5	+0.9
DZM	Mont Dzumac	71.19	254	LR	LR	22 26 06.2	
	comp=Z,71nm,21.6s,baz=198,slow=29						
PLID	Pearl Lake	71.24	359	P	P	22 03 23.8	+1.2
PLID				IAmb	IAmb	22 03 28.0	
	comp=Z,9.8nm,1.5s						
G08A	Pilot Rock	71.55	357	P	P	22 03 25.7	+1.4
G08A				IAmb	IAmb	22 03 27.3	
	comp=Z,5.9nm,0.9s						
SADO	Sadowa	77.89	25	LR	LR	22 35 36.3	
	comp=Z,44nm,21.6s,baz=186,slow=34						
ULM	Lac du Bonnet	78.15	12	P	P	22 04 02.0	-0.2
	comp=Z,1.6nm,0.6s,baz=192,slow=8.1,SNR=4.0						
	comp=Z,1.6nm,0.6s						
EDM	Edmonton	79.37	1	P	P	22 04 09.8	+0.8
EDM				IAmb	IAmb	22 04 10.6	
	comp=Z,13nm,1.0s						
MAW	Mawson	86.18	179	LR	LR	22 38 03.2	
	comp=Z,83nm,21.3s,baz=217,slow=32						
STKA	Stephens Creek	87.20	236	LR	LR	22 36 43.9	
	comp=Z,64nm,18.6s,baz=199,slow=31						
H11S2	WAKE ISLAND Hy	88.61	291	T	T	23 43 12.5	
	baz=119,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	88.62	291	T	T	23 43 08.7	
	baz=119,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	88.63	291	T	T	23 43 11.4	
	baz=119,slow=76,SNR=38						
YKA	Yellowknife Ar	88.67	360	P	P	22 04 55.8	-0.3
	comp=Z,0.8nm,0.7s,baz=177,slow=5.0,SNR=15						
	comp=Z,0.8nm,0.7s						
H11N3	WAKE ISLAND Hy	89.02	293	T	T	23 43 43.5	
	baz=115,slow=78,SNR=8.6						
H11N1	WAKE ISLAND Hy	89.03	292	T	T	23 43 43.9	
	baz=115,slow=78,SNR=12						
H11N2	WAKE ISLAND Hy	89.04	293	T	T	23 43 43.2	
	baz=115,slow=78,SNR=8.2						
SCHQ	Schefferville	90.69	25	P	P	22 05 04.2	-1.6
	comp=Z,2.6nm,0.8s,baz=238,slow=5.5,SNR=3.8						
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	94.40	347	P	P	22 05 22.0	-0.6
	comp=Z,0.4nm,0.8s,baz=163,slow=6.6,SNR=5.0						
	comp=Z,0.4nm,0.8s						
FRB	Frobisher Bay	96.88	19	LR	LR	22 45 46.8	
	comp=Z,56nm,18.1s,baz=32,slow=33						
ASAR	Alice Springs	97.27	239	LR	LR	22 44 33.7	
	comp=Z,104nm,18.4s,baz=146,slow=32						
TORD	Torodi Ar. Bea	118.98	89	PKP	PKPdf	22 10 51.1	-1.8
	comp=Z,0.6nm,0.8s,baz=214,slow=1.6,SNR=3.9						
SONM	Songino Array	141.70	315	PKP	PKPdf	22 11 32.3	-2.6
	comp=Z,0.6nm,0.7s,baz=64,slow=3.4,SNR=2.4						
CMAR	Chiang Mai Arr	148.22	262	PKPbc	PKPbc	22 11 50.2	+0.1
	comp=Z,1.6nm,0.3s,baz=99,slow=1.2,SNR=14						
ZALV	Zalesovo Beam	149.09	338	PKPbc	PKPbc	22 11 50.5	-0.8
	comp=Z,3.5nm,0.7s,baz=28,slow=2.9,SNR=13						
BRTR	Keskin Array B	150.33	56	PKPbc	PKPbc	22 11 53.9	-1.1
	comp=Z,3.7nm,0.9s,baz=270,slow=2.5,SNR=11						
BVAR	Borovoye Array	153.25	354	PKP	PKPdf	22 11 52.2	-1.4
	comp=Z,0.4nm,0.6s,baz=14,slow=0.6,SNR=2.5						
BVAR				PKPbc	PKPbc	22 12 00.9	-0.2
	comp=Z,1.5nm,0.6s,baz=327,slow=1.8,SNR=10						
KURBB	Kurchatov Arra	153.94	341	PKP	PKPdf	22 11 53.9	-0.7
	comp=Z,0.4nm,0.9s,baz=23,slow=1.6,SNR=2.9						
KURBB				PKPbc	sPKPdf	22 12 01.4	+1.6
	comp=Z,1.8nm,0.9s,baz=20,slow=2.0,SNR=8.2						
KURBB				PKPab	PKPab	22 12 15.1	-0.6
	comp=Z,1.0nm,0.8s,baz=26,slow=3.8,SNR=6.0						
MKAR	Makanchi Array	155.79	331	PKP	PKPdf	22 11 56.3	-1.0
	comp=Z,1.1nm,1.1s,baz=52,slow=2.0,SNR=4.4						
MKAR				PKPbc	sPKPdf	22 12 06.0	+3.5
	comp=Z,0.7nm,0.9s,baz=46,slow=3.5,SNR=5.1						
MKAR				PKPab	PKPab	22 12 22.9	-1.0
	comp=Z,0.3nm,0.6s,baz=25,slow=2.7,SNR=4.3						

IDC 27 22:28:04.9±1.2, 6°26S×143°07E, h0km, mb3.9/3, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=32.3km s-min=24.0km az=83.0
ISC 27 22:28:09.5±1.0, 6°5S±0°1×142°9E±0°1, h35km, n6, σ2°36/8, mb3.9/3, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.10	125	Pn	Pn	22 29 21.7	-1.8
	3.2nm,0.3s,baz=292,slow=23,SNR=1.3						
PMG				Sn	Sn	22 30 23.0	+1.9
	1.1nm,0.3s,baz=222,slow=23,SNR=1.4						
WRA	Warramunga Arr	15.76	211	Pn	P	22 31 50.6	-1.9
	0.3nm,0.3s,baz=31,slow=13,SNR=12						
WRA				Sn	Sn	22 34 40.9	-1.7
	0.1nm,0.3s,baz=18,slow=19,SNR=2.3						
WRA				Lg	Lg	22 36 30.5	
	baz=32,slow=28,SNR=1.8						
	0.3nm,0.3s						
ASAR	Alice Springs	19.15	206	P	Pn	22 32 34.9	+3.7
	0.3nm,0.3s,baz=32,slow=9.9,SNR=17						
	2.4nm,0.8s						
MKAR	Makanchi Array	75.33	322	P	P	22 39 49.6	+0.2
	0.3nm,0.6s,baz=111,slow=7.5,SNR=5.5						
	0.3nm,0.6s						
BVAR	Borovoye Array	84.80	325	P	P	22 40 40.9	+0.5
	1.8nm,0.6s,baz=112,slow=6.9,SNR=13						
	1.8nm,0.6s						
ILAR	Eielson Array	87.54	24	P	P	22 40 53.0	-0.6
	0.5nm,0.7s,baz=245,slow=5.1,SNR=4.8						
	0.5nm,0.7s						

IDC 27 22:44:14.9±4.0, 15°54S×173°34W, h0km, mb3.5/4, mbtmp3.5/4, MS4.0/2, Error ellipse: s-maj=275.1km s-min=29.6km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	26.77	280	LR	LR	22 59 14.4	
	comp=Z,429nm,18.8s,baz=40,slow=34						
WRA	Warramunga Arr	49.87	257	P	P	22 53 09.9	-0.6
	0.2nm,0.7s,baz=91,slow=7.2,SNR=1.0						
	0.2nm,0.7s						
ASAR	Alice Springs	50.12	252	P	P	22 53 12.2	-0.2
	0.4nm,0.5s,baz=85,slow=7.4,SNR=5.0						
	0.4nm,0.5s						
NVAR	Mina Array Bea	74.39	42	P	P	22 55 55.0	-0.1
	0.4nm,0.5s,baz=235,slow=7.5,SNR=3.2						
	0.4nm,0.5s						
PDAR	Pinedale Array	82.33	42	P	P	22 56 38.6	-0.4
	0.4nm,0.7s,baz=231,slow=5.7,SNR=1.5						
	0.4nm,0.7s						
ILAR	Eielson Array	82.57	11	LR	LR	23 24 42.7	
	comp=Z,55nm,20.8s,baz=314,slow=29						
BRTR	Keskin Array B	146.30	321	PKPbc	PKPbc	23 03 58.2	+0.1
	0.9nm,0.8s,baz=29,slow=3.3,SNR=4.9						

DJA 27 22:51:43.0±0.3, 1°N±3°×12°2E±°, h24km±3km, M4.1/12, mb4.2/4, mB5.0/1, MLv4.0/12, Mw(mB)4.4/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.47	208	P	Pn	22 51 53.7	-0.5
MRSI				S	Sn	22 52 02.3	+0.6
KMSI	Cibinong	1.85	100	P	Pn	22 52 14.2	+1.0
LUWI	Luwuk	2.01	162	P	Pn	22 52 16.4	+0.9
MPSI	Mapaga	2.33	256	P	Pn	22 52 21.7	+1.9
TTSI	Tana Toraja	4.56	211	P	Pn	22 52 52.3	+1.8
SANI	Sanana	4.81	127	P	Pn	22 52 52.7	-1.3
LBMI	Labuha	5.55	106	P	Pn	22 53 02.0	-2.2
	21nm,0.6s,0.2nm						
NLAI	Namlea	6.42	130	P	Pn	22 53 17.1	+1.0
BKSI	Bulukumba	6.50	198	P	Pn	22 53 18.7	+1.5
	6.6nm,0.6s,0.0nm						
PLAI	Plampang	10.60	204	P	Pn	22 54 11.8	-1.7
TWSI	Taliwang, Sumb	10.91	209	P	Pn	22 54 15.3	-2.5

NEIC 27 22:55:24.2±0.8, 56°2N±0°1×149°9W±0°1, h21km±11km, ML3.0/26, ML3.1(AEIC), Error ellipse: s-maj=17.9km s-min=9.6km az=178.0
AEIC 27 22:55:26.4±1.0, 56°1N±0°1×149°8W±0°1, h6km±8km, Error ellipse: s-maj=17.5km s-min=9.7km az=170.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.25	302		Pn	22 55 58.7	-5.4
OHAK					Sn	22 56 24.3	-7.9
KDAK	Kodiak Island	2.30	320		Pn	22 55 59.9	-4.9
KDAK	Kodiak Island	2.30	320		Sn	22 56 25.9	-7.5
SYI	Shuyak Island	2.91	332		Pn	22 56 08.4	-4.8
SYI				IAML		22 57 25.9	
	comp=N,27nm,1.5s						
Q19K	Cape Douglas,	3.54	326	Pn	Pn	22 56 17.6	-4.3
Q19K				IAML		22 58 01.6	
	comp=N,99nm,1.4s						
CNPM	China Poot	3.55	348		Pn	22 56 16.8	-5.3
CNPM					Sn	22 56 57.3	-7.1
CNPM				IAML		22 56 59.5	
	comp=E,17nm,1.4s						
BRSE	Bradley Lake S	3.72	353		Pn	22 56 18.9	-5.4
CNTC	Contact Creek	3.98	306		Pn	22 56 23.4	-4.6
P19K	Oil Pt	4.04	334	Pn	Pn	22 56 24.2	-4.6
P19K				IAML		22 58 18.1	
	comp=E,43nm,0.9s						
P19K				IAML		22 58 36.5	
	comp=N,43nm,1.5s						
ILSW	Iliamna Southw	4.31	337	Pn	Pn	22 56 26.4	-6.2
ILSW				IAML		22 58 59.4	
	comp=E,15nm,1.5s						
ILSW				IAML		22 59 04.4	
	comp=N,14nm,1.3s						
P18K	Big Mountain,	4.42	321		Pn	22 56 29.1	-5.0
P18K				IAML		22 57 49.9	
	comp=E,6.9nm,1.4s						
P18K				IAML		22 58 22.6	
	comp=N,6.9nm,1.4s						
HIN	Hinchinbrook I	4.68	21		Pn	22 56 32.5	-5.1
HIN				IAML		22 59 33.0	
	comp=N,37nm,1.4s						
O18K	Kokt

MD4.7/40,MW4.5/40,E OFF FUKUSHIMA PREF
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
IDC 27 22:57:31.7±1.7,37°.56N×141°.84E,h50km±15km,mb4.1/28, mbtmp4.4/34,ML3.9/6,MS3.6/48,Error ellipse: s-maj=13.9km s-min=9.8km az=127.0
NEIC 27 22:57:32.5±1.2,37°.65N±0°.06×141°.67E±0°.07,h48km±6km, mb4.6/69,Error ellipse: s-maj=8.5km s-min=8.1km az=125.0
ISC 27 22:57:29.5±0.5,37°.49N±0°.03×141°.74E±0°.03,h33km±2km, h33km:pP-P,n485,σ1s46/415,mb4.5/7/45, 19C-11D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.70**	**260**	⇓P	**Pn**		**22 57 43.7**	**+0.5**
JFK				⇓S	**Sn**		**22 57 53.4**	**+0.5**
JFK	**Kawauchi**	**0.70**	**260**	A	A		22 57 43.7	
	comp=E,74nm,0.8s,comp=N,36nm,1.4s							
JMST	**Minamisoumatoc**	**0.72**	**289**	⇓P	**Pn**		**22 57 43.6**	**+0.2**
JMST				⇓S	**Sn**		**22 57 53.2**	**0.0**
JMST	**Minamisoumatoc**	**0.72**	**289**	A	A		22 57 43.6	
	comp=E,16nm,1.4s,comp=N,18nm,0.9s							
JMM	**Marumori**	**0.84**	**297**		**Pb**		**22 57 45.5**	**-0.3**
JMM				Sn	**Sn**		**22 57 56.1**	**-0.2**
JMM	**Marumori**	**0.84**	**297**	P	**Pb**		**22 57 46.0**	**+0.2**
JMM	**Marumori**	**0.84**	**297**	⇓*i*P	**Pb**		**22 57 45.5**	**-0.3**
JMM				⇓S	**Sn**		**22 57 56.4**	**+0.1**
JMM	**Marumori**	**0.84**	**297**	A	A		22 57 45.5	
	comp=E,11nm,1.6s,comp=N,26nm,1.1s							
ONAJ	**Iwakimizuishiy**	**0.85**	**243**	*i*P	**Pb**		**22 57 45.8**	**-0.1**
ONAJ				S	**Sn**		**22 57 56.4**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.85**	**243**	A	A		22 57 45.8	
	comp=E,123nm,0.3s,comp=N,77nm,0.4s							
JIKH	**Ishinomakibobu**	**0.85**	**345**	*i*P	**Pn**		**22 57 44.9**	**-0.3**
JIKH				S	**Sn**		**22 57 55.5**	**-1.0**
JIKH	**Ishinomakibobu**	**0.85**	**345**	A	A		22 57 44.9	
	comp=E,38nm,0.8s,comp=N,21nm,0.5s							
JIO	**Ouri**	**1.01**	**342**	*i*P	**Pn**		**22 57 47.3**	**-0.1**
JIO				S	**Sn**		**22 57 59.4**	**-1.2**
JIO	**Ouri**	**1.01**	**342**	A	A		22 57 47.3	
	comp=E,11nm,1.8s,comp=N,9.0nm,2.4s							
JFFD	**Fukushimafurud**	**1.02**	**248**	A	A		22 57 48.6	
	comp=E,39nm,0.5s,comp=N,27nm,0.5s							
JOTO	**OTAMA OYAMA**	**1.12**	**274**	*i*P	**Pb**		**22 57 50.4**	**0.0**
JOTO				S	**Sb**		**22 58 05.4**	**+0.6**
JOTO	**OTAMA OYAMA**	**1.12**	**274**	A	A		22 57 50.4	
	comp=E,59nm,1.1s,comp=N,46nm,0.5s							
JOU	**Okura**	**1.22**	**316**	*i*P	**Pb**		**22 57 51.1**	**-1.0**
JOU				*e*S	**Sb**		**22 58 07.0**	**-0.7**
JOU	**Okura**	**1.22**	**316**	A	A		22 57 51.1	
	comp=E,25nm,0.8s,comp=N,27nm,0.7s							
JHO	**Hitachi**	**1.28**	**227**	A	A		22 57 52.6	
	comp=E,7.0nm,0.3s,comp=N,9.0nm,0.7s							
JOFO	**Osakifurukawao**	**1.29**	**330**	A	A		22 57 51.6	
	comp=E,41nm,3.1s,comp=N,42nm,1.4s							
JKMT	**Kesennumamotoy**	**1.34**	**351**	A	A		22 57 52.1	
	comp=E,8.0nm,1.3s,comp=N,7.0nm,0.7s							
JYAR	**Yonezawaarcadi**	**1.34**	**289**	A	A		22 57 52.9	
	comp=E,34nm,0.9s,comp=N,29nm,0.8s							
JHYU	**Hitachinakayam**	**1.47**	**219**	A	A		22 57 55.5	
	comp=E,11nm,2.1s,comp=N,14nm,0.3s							
JYS	**Shirataka**	**1.52**	**299**	P	**Pb**		**22 57 56.2**	**-0.9**
JYS				S	**Sb**		**22 58 15.3**	**-0.6**
JYS	**Shirataka**	**1.52**	**299**	A	A		22 57 56.2	
	comp=E,17nm,1.5s,comp=N,14nm,1.3s							
JMK	**Ichinoseki**	**1.52**	**344**	*i*P	**Pn**		**22 57 54.9**	**+0.5**
JMK				S	**Sn**		**22 58 13.3**	**+0.4**
JMK	**Ichinoseki**	**1.52**	**344**	A	A		22 57 54.9	
	comp=E,12nm,1.8s,comp=N,9.0nm,0.7s							
JSB	**Shiboa**	**1.55**	**251**	A	A		22 57 56.2	
	comp=E,30nm,1.9s,comp=N,23nm,1.4s							
OFUJ	**Ofunato**	**1.59**	**358**	A	A		22 57 55.9	
	comp=E,7.0nm,0.8s,comp=N,7.0nm,0.8s							
JFY	**Yanaizu**	**1.62**	**268**	⇓*i*P	**Pb**		**22 57 57.4**	**-1.5**
JFY				⇓S	**Sb**		**22 58 17.8**	**-1.3**
JFY	**Yanaizu**	**1.62**	**268**	A	A		22 57 57.4	
	comp=E,5.0nm,3.1s,comp=N,5.0nm,1.0s							
JYT	**Yasato**	**1.77**	**225**	A	A		22 57 59.6	
	comp=E,24nm,0.3s,comp=N,15nm,0.4s							
JYK	**Kaneyama**	**1.80**	**323**	*i*P	**Pn**		**22 57 59.3**	**+1.1**
JYK				*e*S	**Sn**		**22 58 21.8**	**+2.0**
JYK	**Kaneyama**	**1.80**	**323**	A	A		22 57 59.3	
	comp=E,5.0nm,1.7s,comp=N,6.0nm,1.0s							
JIHU	**Itakohorinouch**	**1.81**	**213**	A	A		22 58 00.2	
	comp=E,36nm,0.9s,comp=N,35nm,1.9s							
JYA	**Atsumi**	**1.94**	**305**	A	A		22 58 01.4	
	comp=E,9.0nm,1.3s,comp=N,8.0nm,0.8s							
JOM	**Ohasama**	**2.01**	**350**	A	A		22 58 01.9	
	comp=E,8.0nm,0.6s,comp=N,7.0nm,0.7s							
JYYZ	**Yamagatayuza**	**2.09**	**317**	A	A		22 58 03.4	
	comp=E,10.0nm,2.0s,comp=N,16nm,2.3s							
JRG	**Rokugo**	**2.10**	**336**	A	A		22 58 03.2	
	comp=E,10.0nm,0.6s,comp=N,13nm,1.1s							
JSMT	**Sammumatsuo**	**2.12**	**213**	A	A		22 58 04.6	
	comp=E,21nm,0.9s,comp=N,19nm,1.3s							
JAG	**Ashikaga**	**2.12**	**241**	A	A		22 58 04.6	
	comp=E,3.0nm,1.3s,comp=N,5.0nm,4.1s							
JSZI	**Iwateshizukuis**	**2.33**	**345**	A	A		22 58 06.5	
	comp=E,13nm,1.0s,comp=N,11nm,1.7s							
JYW	**Yuwa**	**2.38**	**330**	A	A		22 58 07.3	
	comp=E,11nm,0.8s,comp=N,11nm,2.6s							
TOK	**Tokyo**	**2.41**	**222**	A	A		22 58 08.8	
	comp=E,24nm,0.7s,comp=N,20nm,0.7s							
JCN	**Nagara**	**2.41**	**212**	A	A		22 58 08.8	
	comp=E,19nm,2.3s,comp=N,18nm,3.7s							
JIZZ	**Izumozaki**	**2.41**	**272**	A	A		22 58 08.6	
	comp=E,9.0nm,1.4s,comp=N,10.0nm,4.6s							
JTH	**Tanohata**	**2.45**	**2**	A	A		22 58 08.1	
	comp=E,6.0nm,1.6s,comp=N,6.0nm,0.8s							
JKZ	**Kuzumaki**	**2.51**	**353**	A	A		22 58 09.1	
	comp=E,12nm,1.9s,comp=N,7.0nm,0.9s							
JHU	**Hanno**	**2.57**	**231**	A	A		22 58 11.1	
	comp=E,4.0nm,1.1s,comp=N,4.0nm,1.1s							
JKUC	**kamogawauchiur**	**2.64**	**209**	A	A		22 58 12.1	
	comp=E,11nm,3.0s,comp=N,9.0nm,2.8s							
JGK	**Kuni**	**2.65**	**251**	A	A		22 58 12.1	
	comp=E,5.0nm,1.1s,comp=N,6.0nm,2.6s							
JKEN	**Kujiedanarisaw**	**2.71**	**359**	A	A		22 58 11.8	
	comp=E,15nm,1.1s,comp=N,14nm,0.5s							
JSGW	**Sagamiharawaka**	**2.78**	**228**	A	A		22 58 14.1	
	comp=E,8.0nm,1.6s,comp=N,6.0nm,2.6s							
JSD	**Sado**	**2.81**	**280**	Pn	**Pn**		**22 58 13.7**	**+1.5**
JSD	**Sado**	**2.81**	**282**	P	Pb		22 58 14.4	-4.7
TATJ	**Tateyama 2**	**2.87**	**212**	A	A		22 58 15.4	
	comp=E,18nm,1.9s,comp=N,33nm,2.1s							
JJN	**Nakama**	**2.88**	**263**	A	A		22 58 15.2	
	comp=E,5.0nm,3.1s,comp=N,4.0nm,2.5s							
JANG	**Nango**	**2.89**	**357**	A	A		22 58 14.3	
	comp=E,5.0nm,3.1s,comp=N,5.0nm,2.3s							
MJAR	**Matsushiro Arr**	**2.98**	**253**	P	Pb		22 58 16.9	-5.1
	comp=N,4.2nm,0.3s,baz=71,slow=15,SNR=60							
MJAR				S		**Sb**	**22 58 54.3**	**-3.7**
	comp=N,115nm,0.4s,baz=201,slow=25,SNR=6.1							
MJAR				LR	LR		22 59 49.3	
	comp=N,1μm,18.7s,baz=11,slow=45 comp=N,151nm,0.8s							
MAJO	**Matsushiro**	**2.98**	**253**	Pn	**Pb**		**22 58 17.4**	**-4.6**
MAJO				Sn	**Sb**		**22 58 54.1**	**-3.9**
MAJO	**Matsushiro**	**2.98**	**253**	P	**Pb**		**22 58 18.2**	**-3.8**
MAJO	**Matsushiro**	**2.98**	**253**	*d*P	Pb		22 58 16.8	-5.2
MJB9	**Matsu-Tunnel**	**2.98**	**253**	Pn	**Pb**		**22 58 18.1**	**-3.9**
JNTW	**Noshirotokiwa**	**3.04**	**337**	A	A		22 58 16.8	
	comp=E,14nm,3.3s,comp=N,13nm,2.4s							
JOD2	**Odawara 2**	**3.09**	**225**	A	A		22 58 18.4	
	comp=E,6.0nm,1.9s,comp=N,7.0nm,1.5s							
JOG3	**Oga3**	**3.20**	**320**	A	A		22 58 14.2	
	comp=E,5.0nm,2.2s,comp=N,5.0nm,2.2s							
JYN	**Shimob**	**3.25**	**233**	A	A		22 58 20.9	
	comp=E,13nm,1.2s,comp=N,15nm,1.2s							
JTM	**Tenmabayashi**	**3.33**	**351**	Pn	**Pn**		**22 58 20.4**	**+1.1**
JTM	**Tenmabayashi**	**3.33**	**351**	P	**Pn**		**22 58 20.8**	**+1.5**
JHHS	**Hirosakihyakuz**	**3.34**	**342**	A	A		22 58 20.9	
	comp=E,7.0nm,3.9s,comp=N,8.0nm,3.8s							
JIM2	**Oshima 3**	**3.34**	**215**	A	A		22 58 22.1	
	comp=E,7.0nm,1.5s,comp=N,8.0nm,1.1s							
JHTM	**Izuhatsuma**	**3.36**	**222**	A	A		22 58 22.2	
	comp=E,15nm,1.0s,comp=N,15nm,1.0s							
JIZS	**Izushimoda**	**3.61**	**221**	A	A		22 58 25.9	
	comp=E,3.0nm,1.6s,comp=N,3.0nm,2.9s							
JSI2	**Shiura 2**	**3.71**	**344**	A	A		22 58 26.1	
	comp=E,4.0nm,1.7s,comp=N,3.0nm,2.3s							
SHZ3	**Shizuoka 3**	**3.74**	**231**	A	A		22 58 27.6	
	comp=E,4.0nm,1.3s,comp=N,5.0nm,1.0s							
JNY	**Yasuok**	**3.78**	**237**	A	A		22 58 28.2	
	comp=E,5.0nm,1.4s,comp=N,11nm,1.2s							
JAHD	**Aomorihigashid**	**3.79**	**355**	A	A		22 58 27.1	
	comp=E,11nm,2.7s,comp=N,11nm,1.8s							
JGF	**Kuroka**	**4.00**	**243**	Pn	**Pn**		**22 58 31.7**	**+3.2**
JGF	**Kuroka**	**4.00**	**243**	P	Pb		22 58 32.4	-7.0
JSG	**Sagara**	**4.02**	**227**		**Pn**		**22 58 31.8**	**+3.0**
JSG	**Sagara**	**4.02**	**227**	P	Pb		22 58 33.3	-6.4
JSR	**Shiriuchi**	**4.16**	**346**	A	A		22 58 32.5	
	comp=E,3.0nm,3.9s,comp=N,3.0nm,4.4s							
INU	**Inuyama**	**4.37**	**242**	Pn	**Pn**		**22 58 36.7**	**+3.2**
INU	**Inuyama**	**4.37**	**242**	P	Pb		22 58 38.3	-7.3
JHJ2	**Mitsune**	**4.64**	**200**	Pn	**Pn**		**22 58 39.0**	**+1.7**
JHJ2	**Mitsune**	**4.64**	**200**	P	**Pn**		**22 58 39.2**	**+1.9**
JHJ	**Hachijo jima 2**	**4.64**	**201**	P	**Pn**		**22 58 38.9**	**+1.6**
	comp=N,62nm,0.3s,baz=342,slow=23,SNR=29							
JHJ				S	**Sn**		**22 59 30.2**	**+0.1**
	comp=N,327nm,0.3s,baz=108,slow=23,SNR=11 comp=N,174nm,0.4s							
ERM	**Erimo**	**4.65**	**13**	Pn	**Pn**		**22 58 36.8**	**-0.6**
ERM	**Erimo**	**4.65**	**13**	P	**Pn**		**22 58 36.8**	**-0.6**
JEM	**Erimo**	**4.65**	**13**	P	**Pn**		**22 58 37.3**	**-0.1**
NMR	**Nemuro--Hokkai**	**6.61**	**26**	*e*P	**Pn**		**22 59 01.9**	**-2.4**
NMR				*e*S	Sn		23 00 10.5	-8.0
ASAJ	**Asahikawa**	**6.65**	**5**	P	**Pn**		**22 59 04.8**	**-0.1**
	comp=N,6.6nm,0.3s,baz=240,slow=8.1,SNR=24							
ASAJ				S	**Sn**		**23 00 19.4**	**-0.1**
	comp=N,91nm,0.8s,baz=150,slow=14,SNR=3.7 comp=N,23nm,0.4s							
JKA	**Kamikawa-asahi**	**6.65**	**5**	Pn	**Pn**		**22 59 04.6**	**-0.3**
RUSJ	**Misakicho**	**7.12**	**21**	*e*P	**Pn**		**22 59 10.0**	**-1.3**
RUSJ				*e*S	**Sn**		**23 00 27.8**	**-3.3**
YUK	**Yuzh-Kuril'sk**	**7.25**	**24**	*e*P	**Pn**		**22 59 11.6**	**-1.4**
YUK				*e*S	Sn		23 00 26.7	-7.4
YUK				pmax	pmax			
	comp=Z,414nm,0.3s							
YUK				pmax	pmax			
	comp=E,87nm,0.1s							
YUK				pmax	pmax			
	comp=N,259nm,0.3s							
JMN	**Monobe**	**7.42**	**242**		**Pn**		**22 59 18.6**	**+3.0**
JMN	**Monobe**	**7.42**	**242**	P	Pn		22 59 19.5	+4.0
SHO	**Shikotan**	**7.45**	**30**	*e*P	**Pn**		**22 59 13.5**	**-2.4**
SHO				*e*S	Sn		23 00 29.2	-10
SHO				pmax	pmax			
	comp=Z,37nm,0.3s							
SHO				pmax	pmax			
	comp=E,22nm,0.2s							
SHO				pmax	pmax			
	comp=N,14nm,0.3s							
TEY	**Ternei**	**8.47**	**334**	⇑*e*P	Pn		22 59 36.3	+6.4
TEY				pmax	pmax			
	comp=N,100nm,1.0s							
TEY				pmax	pmax			
	comp=E,100nm,1.0s							
TEY				pmax	pmax			
	comp=Z,100nm,1.0s							
TEY				pmax	pmax			
	comp=N,70nm,0.9s							
TEY				pmax	pmax			
	comp=E,40nm,0.9s							
TEY				pmax	pmax			
	comp=Z,80nm,0.9s							
KUR	**Kuril'sk**	**9.00**	**29**	*e*P	**Pn**		**22 59 35.9**	**-1.2**
KUR				*e*S	Sn		23 01 09.6	-7.6
KUR				pmax	pmax			
	comp=Z,66nm,0.5s							
KUR				smax	smax			
	comp=N,228nm,0.4s							
KUR				smax	smax			
	comp=E,138nm,0.4s							
YSS	**Yuzh-Sakhalins**	**9.49**	**4**		**Pn**		**22 59 42.7**	**-1.1**
YSS	**Yuzh-Sakhalins**	**9.49**	**4**	P	**Pn**		**22 59 44.1**	**+0.3**
YSS	**Yuzh-Sakhalins**	**9.49**	**4**	*e*P	**Pn**		**22 59 43.2**	**-0.6**
YSS				*e*S	**Sn**		**23 01 24.7**	**-4.5**
YSS				pmax	pmax			
	comp=Z,40nm,1.2s							
YSS				MLR	MLR			
	comp=N,200nm,15.0s							
YSS				MLR	MLR			
	comp=Z,500nm,15.0s							
YSS				MLR	MLR			
	comp=E,200nm,17.0s							
MSHR	**Mys Shultsa**	**9.58**	**305**	*i*P	**Pn**		**22 59 47.3**	**+2.3**
PSTR	**Posyet**	**9.84**	**305**	*i*P	**Pn**		**22 59 51.8**	**+3.2**
JNU	**Nakatsue**	**9.89**	**247**		Pn		22 59 53.2	+3.9
JNU	**Nakatsue**	**9.89**	**247**	P	Pn		22 59 53.6	+4.2
JNU	**Nakatsue**	**9.89**	**247**	P	Pn		22 59 53.9	+4.5
	comp=E,1.2nm,0.3s,baz=68,slow=13,SNR=13							
JNU				LR	LR		23 04 09.0	
	comp=E,359nm,19.8s,baz=66,slow=40 comp=E,50nm,1.0s							
USA0B	**Ussuriysk Arra**	**9.97**	**315**		**Pn**		**22 59 52.6**	**+2.2**
USA0B	**Ussuriysk Arra**	**9.97**	**315**	*i*P	**Pn**		**22 59 52.8**	**+2.4**
USRK	**Ussuriysk Ar.**	**9.97**	**315**		**Pn**		**22 59 52.9**	**+2.5**
USRK	**Ussuriysk Ar.**	**9.97**	**315**	P	**Pn**		**22 59 52.9**	**+2.5**
USRK	**Ussuriysk Ar.**	**9.97**	**315**	P	Pn		22 59 55.1	+4.7
	comp=E,21nm,0.7s,baz=129,slow=13,SNR=31							
USRK				LR	LR		23 03 29.4	
	comp=E,344nm,19.0s,baz=140,slow=36							
JCJ	**Chichijima**	**10.37**	**178**	P	Pn		22 59 50.6	-5.3
	comp=E,190nm,0.3s,baz=184,slow=2.2,SNR=38							
JCJ				S	Sn		23 01 37.8	-13
	comp=E,64nm,0.5s,baz=261,slow=23,SNR=1.8							
KSRS	**Korea Array**	**10.99**	**274**	P	Pn		23 00 11.1	+6.8
	comp=E,14nm,0.9s,baz=88,slow=14,SNR=28							
KSRS				LR	LR		23 04 09.4	
	comp=E,163nm,18.1s,baz=85,slow=36							
KSAR	**Wonju Array Be**	**11.02**	**274**	Pn	**Pn**		**23 00 08.0**	**+3.3**
KSAR	**Wonju Array Be**	**11.02**	**274**	P	**Pn**		**23 00 08.0**	**+3.3**
MDJ	**Mudanjiang**	**11.61**	**312**	P	Pn		23 00 18.0	+5.2
MDJ				pmax	pmax			
	comp=Z,4.0nm,0.6s							
MDJ				pmax	pmax			
	comp=Z,79nm,4.2s							
MDJ	**Mudanjiang**	**11.61**	**312**	Pn	**Pn**		**23 00 15.8**	**+3.0**
TYV	**Tymovskoe**	**13.39**	**2**	*e*P	**Pn**		**23 00 36.2**	**-0.8**
TYV				pmax	pmax			
	comp=Z,5.0nm,0.9s							
TYV				pmax	pmax			
	comp=Z,100nm,3.6s							
KLR	**Kul'dur**	**13.79**	**331**	*ce*P	**Pn**		**23 00 43.6**	**+1.1**
KLR				pmax	pmax			
	comp=Z,12nm,2.5s							
KLR	**Kul'dur**	**13.79**	**331**	P	**Pn**		**23 00 43.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=130,slow=11,SNR=8.4							
KLR				LR	LR		23 05 43.1	
	comp=Z,259nm,21.6s,baz=144,slow=36 comp=Z,2.6nm,0.7s							
ZEA	**Zeya**	**19.09**	**333**	*e*P	**P**		**23 01 49.1**	**-0.1**
ZEA				pmax	pmax			
	comp=N,20nm,0.8s							
ZEA				pmax	pmax			
	comp=Z,30nm,0.9s							
PETK	**Petropavlovsk-**	**19.16**	**30**	P	**P**		**23 01 50.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=212,slow=8.1,SNR=7.2							
PETK				LR	LR		23 08 59.5	
	comp=Z,83nm,21.1s,baz=217,slow=36 comp=Z,9.3nm,0.9s							
NJ2	**Nanjing**	**19.55**	**261**	*e*P	**Pn**		**23 01 55.8**	**-0.1**
NJ2				pP	**sP**		**23 02 04.3**	**-2.9**
NJ2				sP	**pP**		**23 02 06.8**	**+3.7**
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.6s							
TIA	**Tai'an**	**19.73**	**274**	P	**Pn**		**23 01 58.8**	**+0.8**
TIA				pmax	pmax			
	comp=Z,12nm,0.8s							
BJI	**Beijing**	**20.08**	**285**	P	**P**		**23 02 00.0**	**-0.1**
BJI				pmax	pmax			
	comp=Z,8.0nm,0.6s							
BJT	**Baijiatuau**	**20.09**	**285**	P	**P**		**23 02 00.3**	**+0.1**
BJT	**Baijiatuau**	**20.09**	**285**	P	**P**		**23 02 00.3**	**+0.1**
BJT				pmax	pmax			
	comp=Z,9.0nm,0.7s							
XLT	**XiLinHaoTe**	**20.44**	**296**	*e*P	**P**		**23 02 01.8**	**-2.3**
XLT				pP	sP		23 02 13.8	-3.1
XLT				sP	pP		23 02 21.5	+8.7
XLT				PP	**PnPn**		**23 02 25.3**	**+3.6**
XLT				S	**S**		**23 05 47.3**	**-3.9**
XLT				sS	Sn		23 05 56.3	+0.6
XLT				SS	**SnSn**		**23 06 10.3**	**-0.1**
XLT				pmax	pmax			
	comp=Z,15nm,1.2s							
XLT				pmax	pmax			
	comp=Z,110nm,4.7s							
XLT				LR	LR			
	comp=N,15nm,11.9s							
XLT				LR	LR			
	comp=E,140nm,17.4s							
XLT				LR	LR			
	comp=Z,160nm,12.3s							
HNS	**HongShan**	**21.45**	**278**	⇓P	**P**		**23 02 16.5**	**+1.7**
HNS				pmax	pmax			
	comp=Z,54nm,0.7s							
MA2	**Magadan**	**22.86**	**12**	P	**P**		**23 02 28.8**	**-0.9**
MA2				IAmb	IAmb		23 02 31.4	
	comp=Z,18nm,1.0s							
MA2	**Magadan**	**22.86**	**12**	*ce*P	**P**		**23 02 28.9**	**-0.9**
MA2				pmax	pmax			
	comp=Z,11nm,0.7s							
MA2	**Magadan**	**22.86**	**12**	P	**P**		**23 02 29.1**	**-0.6**
	comp=Z,12nm,0.8s,baz=203,slow=8.3,SNR=7.6							
MA2				LR	LR		23 11 20.8	
	comp=Z,70nm,20.9s,baz=152,slow=36 comp=Z,12nm,0.8s							
HHC	**Hu-ho-hao-te**	**23.58**	**288**	*e*P	**P**		**23 02 37.5**	**+0.2**
HHC				pP	pP		23 02 46.5	0.0
HHC				sP	sP		23 02 54.8	+4.4
HHC				pmax	pmax			
	comp=Z,3.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,76nm,4.9s							
LYN	**LuoYang**	**23.82**	**272**	⇑P	**P**		**23 02 39.5**	**0.0**
LYN				PP	**PnPn**		**23 03 10.5**	**+2.6**
LYN				S	**S**		**23 06 53.0**	**0.0**
LYN				pmax	pmax			
	comp=Z,22nm,0.6s							
LYN				LR	LR			
	comp=N,240nm,14.5s							
LYN				LR	LR			
	comp=Z,250nm,15.3s							
GUMO	**Guam**	**23.96**	**173**	LR	LR		23 11 53.7	
	comp=Z,39nm,20.6s,baz=40,slow=36							
YAK	**Yakutsk**	**25.69**	**347**	P	**P**		**23 02 54.9**	**-1.2**
YAK	**Yakutsk**	**25.69**	**347**	*c*P	**P**		**23 02 55.1**	**-1.1**
YAK				*e*PP	**pP**		**23 03 04.4**	**-1.2**
YAK				*e*			23 03 30.8	
YAK				*e*			23 06 25.1	
YAK				*e*S	**S**		**23 07 19.3**	**-3.0**
YAK				*e*SS	**sS**		**23 07 40.1**	**+2.1**
YAK				*e*			23 13 51.9	
YAK				pmax	pmax			
	comp=Z,55nm,1.0s							
YAK				pmax	pmax			
	comp=Z,213nm,5.4s							
YAK				smax	smax			
	comp=N,74nm,3.3s							
YAK				smax	smax			
	comp=E,69nm,3.8s							
YAK	**Yakutsk**	**25.69**	**347**	LR	LR		23 13 24.5	
	comp=E,211nm,18.6s,baz=148,slow=37							
SEY	**Seymchan**	**26.30**	**11**	*ce*P	**P**		**23 03 02.0**	**+0.3**
SEY				pmax	pmax			
	comp=Z,20nm,1.3s							
SEY	**Seymchan**	**26.30**	**11**	LR	LR		23 15 38.2	
	comp=Z,71nm,18.3s,baz=186,slow=42							
XAN	**Xi'an**	**26.78**	**273**	P	**P**		**23 03 06.8**	**+0.3**
XAN				pmax	pmax			
	comp=Z,24nm,0.7s							
BOD	**Bodaibo**	**27.29**	**327**	*e*P	**P**		**23 03 09.8**	**-0.9**
BOD				pmax	pmax			
	comp=Z,9.0nm,1.4s							
ULN	**Ulaanbaatar**	**27.32**	**303**	P	**P**		**23 03 11.0**	**-0.3**
ULN	**Ulaanbaatar**	**27.32**	**303**	*ce*P	**P**		**23 03 11.3**	**0.0**
ULN				pmax	pmax			
	comp=Z,8.0nm,1.0s							
ENH	**Enshi**	**27.64**	**265**	P	**P**		**23 03 13.8**	**-0.4**
ENH				IAmb	IAmb		23 03 20.9	
	comp=Z,12nm,0.7s							
SONM	**Songino Array**	**27.75**	**303**	P	**P**		**23 03 14.5**	**-0.7**
SONM	**Songino Array**	**27.75**	**303**	P	**P**		**23 03 16.0**	**+0.8**
	comp=Z,2.0nm,0.4s,baz=106,slow=8.9,SNR=15							
SONM				LR	LR		23 14 44.4	
	comp=Z,76nm,21.5s,baz=86,slow=37 comp=Z,2.0nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.16**	**122**	T	T		23 32 51.9	
	baz=315,slow=75,SNR=241							
H11N1	**WAKE ISLAND Hy**	**28.17**	**122**	T	T		23 32 50.4	
	baz=315,slow=75,SNR=255							
H11N3	**WAKE ISLAND Hy**	**28.18**	**122**	T	T		23 32 57.2	
	baz=315,slow=75,SNR=302							
H11S1	**WAKE ISLAND Hy**	**28.89**	**124**	T	T		23 33 48.6	
	baz=316,slow=76,SNR=49							
H11S3	**WAKE ISLAND Hy**	**28.89**	**124**	T	T		23 33 44.9	
	baz=316,slow=76,SNR=57							
H11S2	**WAKE ISLAND Hy**	**28.91**	**124**	T	T		23 33 51.8	
	baz=316,slow=76,SNR=38							
ZAK	**Zakamensk**	**30.20**	**308**	*e*P	**P**		**23 03 36.6**	**-0.2**
ZAK				pmax	pmax			
	comp

comp=Z,9.5nm,1.0s
ZALV Zalesovo Beam 41.80 312 P **P** **23 05 15.2 -0.6**
ZALV Zalesovo Beam 41.80 312 P **P** **23 05 16.0 +0.3**
comp=Z,4.0nm,0.7s,baz=90,slow=7.4,SNR=26
ZALV LR LR 23 23 10.0
comp=Z,96nm,18.9s,baz=137,slow=37
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 41.87 255 P **P** **23 05 18.6 +1.9**
comp=Z,0.8nm,0.3s,baz=51,slow=9.0,SNR=5.0
CMAR LR LR 23 24 07.9
comp=Z,42nm,18.6s,baz=55,slow=38
comp=Z,0.8nm,0.3s
C16K Lisburne Hills 42.18 26 P **P** **23 05 19.1 +0.5**
C16K IAmb IAmb 23 05 20.3
comp=Z,13nm,0.8s
C16K Lisburne Hills 42.18 26 P **P** **23 05 19.2 +0.6**
baz=251
H16K Elim 42.40 32 P **P** **23 05 21.4 +0.9**
baz=258
LSA Lhasa 42.43 275 P **P** **23 05 20.9 -0.8**
LSA Lhasa 42.43 275 P **P** **23 05 21.0 -0.8**
LSA pmax pmax
comp=Z,5.0nm,1.0s
D17K Noatak River 42.82 27 P **P** **23 05 25.0 +1.2**
baz=254,SNR=23
J16K Anvik River 42.87 34 P **P** **23 05 22.1 -2.1**
baz=261
I17K Unalakleet 42.92 33 P **P** **23 05 21.4 -3.3**
baz=260
NRIK Noril'sk 42.97 335 P **P** **23 05 23.9 -1.0**
NRIK IAmb IAmb 23 05 25.6
comp=Z,12nm,1.4s
NRIK Noril'sk 42.97 335*ce*P **P** **23 05 23.6 -1.4**
NRIK pmax pmax
comp=Z,9.0nm,1.4s
NRIK Noril'sk 42.97 335 P **P** **23 05 24.2 -0.8**
comp=Z,2.8nm,0.5s,baz=104,slow=10,SNR=3.6
comp=Z,2.8nm,0.5s
C17K DeLong Mountai 43.01 26 P **P** **23 05 26.5 +1.1**
baz=253
E17K Hotham Inlet 43.12 29 P **P** **23 05 27.9 +1.6**
baz=256
F17K Baldwin Pennin 43.20 30 P **P** **23 05 28.4 +1.5**
baz=257
G17K Kiwalik Mounta 43.24 31 P **P** **23 05 29.3 +2.0**
baz=259
M16K Timber Creek 43.36 38 P **P** **23 05 29.8 +1.5**
baz=265
H17K Granite Mounta 43.44 32 P **P** **23 05 31.2 +2.3**
baz=260
E18K Tukpahlearik C 43.67 28 P **P** **23 05 32.5 +1.9**
baz=257
O16K Kokwok River B 43.69 40 P **P** **23 05 32.8 +1.8**
baz=268
P16K Nushagak River 43.72 41 P **P** **23 05 33.4 +2.2**
baz=268
B18K Kokolik River 43.74 25 P **P** **23 05 32.6 +1.4**
baz=254,SNR=15
C18K Utukok River 43.75 26 P **P** **23 05 32.5 +1.0**
baz=255
L17K Donlin 43.77 36 P **P** **23 05 33.0 +1.3**
baz=265
K17K Iditarod 43.83 35 P **P** **23 05 34.0 +1.9**
baz=264
F18K Selawik 43.85 29 P **P** **23 05 33.9 +1.7**
baz=259,SNR=5.8
R16K Pilot Point 43.91 43 P **P** **23 05 34.1 +1.3**
baz=270
MKAR Makanchi Array 44.10 302 P **P** **23 05 34.2 -0.3**
MKAR Makanchi Array 44.10 302 *i* P **P** **23 05 34.5 0.0**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 44.10 302 P **P** **23 05 34.6 +0.1**
comp=Z,6.0nm,0.7s,baz=87,slow=9.6,SNR=88
comp=Z,6.0nm,0.7s
H18K Honhosa River 44.12 32 P **P** **23 05 35.4 +1.0**
H18K Honhosa River 44.12 32 P **P** **23 05 35.7 +1.3**
baz=262
M17K Holitna River 44.12 37 P **P** **23 05 36.3 +1.9**
baz=266
G18K Tagagawik 44.12 31 P **P** **23 05 35.9 +1.6**
baz=260
A19K Wainwright 44.22 24 P **P** **23 05 36.7 +1.6**
baz=254
MAKZ Makanchi 44.31 302 P **P** **23 05 36.1 -0.1**
MAKZ Makanchi 44.31 302 P **P** **23 05 36.1 -0.1**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
C19K Lookout Ridge 44.43 26 P **P** **23 05 38.5 +1.6**
baz=256,SNR=23
L18K Granite Mounta 44.53 36 P **P** **23 05 39.3 +1.6**
baz=266
F19K Shaleruckik Mo 44.63 29 P **P** **23 05 39.4 +1.0**
baz=260
G19K Purcell Mounta 44.79 30 P **P** **23 05 41.1 +1.4**
baz=262
Q17K Contact Creek 44.81 42 P **P** **23 05 41.1 +1.0**
baz=271
D19K Kuna River 44.82 27 P **P** **23 05 41.2 +1.2**
D19K Kuna River 44.82 27 P **P** **23 05 41.1 +1.1**
baz=258
N18K Kilae Creek 44.84 38 P **P** **23 05 41.5 +1.3**
baz=268
M18K Stony River 44.90 37 P **P** **23 05 42.2 +1.6**
baz=268
E19K Redstone River 44.95 29 P **P** **23 05 41.7 +0.7**
baz=260
H19K Roundabout Mou 44.97 31 P **P** **23 05 42.4 +1.3**
baz=263
J19K Poorman 45.16 34 P **P** **23 05 43.8 +1.2**
baz=265
L19K White Mountain 45.39 36 P **P** **23 05 46.4 +1.8**
baz=268
D20K Etivluk River 45.40 27 P **P** **23 05 46.0 +1.5**
baz=260
F20K Avaraart Lake 45.46 29 P **P** **23 05 47.0 +2.0**
baz=262
E20K Nigu River 45.48 27 P **P** **23 05 46.9 +1.7**
baz=260
N19K Bonanza Creek 45.53 38 P **P** **23 05 48.0 +2.2**
baz=270
H20K Anotleneega Mo 45.62 31 P **P** **23 05 47.7 +1.4**
baz=264
K20K Telida 45.80 34 P **P** **23 05 49.5 +1.7**
baz=267
J20K Nowinta River 45.82 33 P **P** **23 05 49.3 +1.5**
baz=266
KURK Kurchatov 45.86 308 P **P** **23 05 48.3 -0.1**
KURK Kurchatov 45.86 308*ce*P **P** **23 05 48.4 0.0**
KURK pmax pmax
comp=Z,16nm,0.7s
KURBB Kurchatov Arra 45.93 308 P **P** **23 05 48.8 -0.1**
comp=Z,8.0nm,0.4s,baz=83,slow=8.2,SNR=93
KURBB LR LR 23 25 52.1
comp=Z,97nm,18.2s,baz=174,slow=37
comp=Z,8.0nm,0.4s
IMAR Indian Mountai 46.13 31 P **P** **23 05 50.7 +0.4**
C21K Knifeblade Rid 46.13 26 P **P** **23 05 51.9 +1.6**
baz=261
E21K Killik River 46.32 27 P **P** **23 05 53.1 +1.3**
baz=262
F21K Alatna River 46.35 29 P **P** **23 05 53.7 +1.6**
baz=264
H21K Melozitna Rive 46.49 31 P **P** **23 05 54.4 +1.3**
baz=266
KDAK Kodiak Island 46.59 42 LR LR 23 25 41.3
comp=Z,86nm,20.9s,baz=251,slow=36
CHUM Lake Minchumin 46.61 34 P **P** **23 05 55.6 +1.5**
baz=268
CAST Castle Rocks 46.70 34 P **P** **23 05 55.7 +0.9**
CAST Castle Rocks 46.70 34 P **P** **23 05 56.5 +1.6**
baz=269
D22K Ayikyak River 46.84 27 P **P** **23 05 56.6 +0.7**
D22K Ayikyak River 46.84 27 P **P** **23 05 57.2 +1.3**
baz=263,SNR=9.8
PMG Port Moresby 46.92 173 LR LR 23 33 01.4
comp=Z,11nm,18.0s,baz=316,slow=45
HOM Homer 46.97 40 P **P** **23 05 58.4 +1.5**
baz=273
KAPI Kappang 46.99 211 P **P** **23 05 59.6 +2.0**
KAPI Kappang 46.99 211 P **P** **23 05 59.6 +2.0**
KAPI pmax pmax
comp=Z,14nm,1.0s
E22K Anaktuvuk Pass 47.08 28 P **P** **23 05 59.1 +1.4**
baz=265
H22K Ishtalitna Cre 47.09 31 P **P** **23 05 59.3 +1.4**
baz=267
G22K Bettles 47.10 30 P **P** **23 05 58.5 +0.7**
baz=266
BPAW Bear Paw Mtn. 47.20 34 P **P** **23 06 00.4 +1.7**
baz=269
MLY Manley 47.33 32 P **P** **23 06 00.0 +0.3**
MLY IAmb IAmb 23 06 15.4
comp=Z,7.9nm,1.3s
MLY Manley 47.33 32 P **P** **23 06 01.5 +1.7**
baz=269
SUA Susitna One 47.34 37 P **P** **23 06 00.2 +0.2**
SUA Susitna One 47.34 37 P **P** **23 06 01.7 +1.8**
baz=272
BRSE Bradley Lake S 47.42 39 P **P** **23 06 03.1 +2.6**
baz=274
TRF Thorofare Moun 47.51 34 P **P** **23 06 03.0 +1.7**
baz=271
D23K Nanushuk River 47.57 27 P **P** **23 06 03.4 +1.9**
baz=265
COLD Coldfoot 47.63 29 P **P** **23 06 03.8 +1.8**
baz=267
G23K Bananza Creek 47.67 30 P **P** **23 06 04.2 +1.8**
baz=268
C23K Itkillik River 47.67 26 P **P** **23 06 03.7 +1.4**
baz=264
PRZ Przheval'sk 47.80 297 P **P** **23 06 04.1 +0.2**
PRZ IAmb IAmb 23 06 27.9
comp=Z,11nm,1.1s
PRZ Przheval'sk 47.80 297 P **P** **23 06 04.1 +0.2**
PRZ pmax pmax
comp=Z,11nm,1.1s
RC01 Rabbit Creek A 47.84 38 P **P** **23 06 06.2 +2.5**
baz=273
E23K Chandalar 47.90 28 P **P** **23 06 05.7 +1.6**
baz=267
I23K Minto, Yukon-K 47.91 32 P **P** **23 06 06.6 +2.4**
baz=270
NEA2 Nenana 48.04 33 P **P** **23 06 06.7 +1.5**
baz=271
MCK McKinley 48.11 34 P **P** **23 06 06.6 +0.8**
baz=272
D24K Happy Valley 48.25 27 P **P** **23 06 08.7 +1.9**
baz=267
C24K Franklin Bluff 48.33 26 P **P** **23 06 08.5 +1.2**
baz=266
MDM Murphy Dome 48.39 32 P **P** **23 06 08.6 +0.6**
MDM IAmb IAmb 23 06 10.2
comp=Z,8.9nm,1.0s
TARG Taragay, Kyrgy 48.44 296 P **P** **23 06 09.4 +0.3**
TARG IAmb IAmb 23 06 12.1
comp=Z,5.1nm,0.8s
TARG Taragay, Kyrgy 48.44 296 P **P** **23 06 09.4 +0.3**
TARG pmax pmax
comp=Z,5.0nm,0.8s
SML Sawmill 48.47 37 P **P** **23 06 09.6 +0.9**
baz=274
H24K Noodor Dome 48.53 31 P **P** **23 06 10.3 +1.2**
baz=271
F24K Squaw Lake 48.53 29 P **P** **23 06 10.2 +1.2**
baz=269
G24K Hadweenzic Riv 48.69 30 P **P** **23 06 12.2 +2.0**
baz=270
WAT6 Susitna Watana 48.70 36 P **P** **23 06 12.0 +1.4**
baz=274
POKR Poker Plat Res 48.73 32 P **P** **23 06 11.2 +0.7**
POKR Poker Plat Res 48.73 32 P **P** **23 06 12.1 +1.6**
baz=272,SNR=5.1
M23K Glacier View 48.76 37 P **P** **23 06 13.2 +2.3**
baz=274
DHY Denali Highway 48.84 35 P **P** **23 06 13.1 +1.6**
baz=274
SCM Sheep Creek Mo 48.95 36 P **P** **23 06 12.9 +0.7**
SCM Sheep Creek Mo 48.95 36 P **P** **23 06 14.5 +2.2**
baz=275
SCM Sheep Creek Mo 48.95 36 P **P** **23 06 13.0 +0.7**
SCM pmax pmax
comp=Z,24nm,1.3s
HDA Harding Lake 48.96 33 P **P** **23 06 13.2 +0.9**
baz=273
IL31 48.97 33 P **P** **23 06 12.5 +0.2**
IL31 IAmb IAmb 23 06 13.6
comp=Z,5.0nm,0.7s
ILAR Eielson Array 48.97 33 P **P** **23 06 12.6 +0.2**
comp=Z,4.1nm,0.7s,baz=268,slow=6.4,SNR=55
comp=Z,4.1nm,0.7s
D25K Kavik River 49.13 27 P **P** **23 06 15.0 +1.4**
baz=269
G25K Bearman Lake 49.23 30 P **P** **23 06 16.2 +1.9**
baz=271
F25K Christian Rive 49.39 29 P **P** **23 06 17.4 +1.7**
baz=271
E25K Arctic Village 49.42 28 P **P** **23 06 17.6 +1.8**
baz=271,SNR=5.5
K24K Donnelly Dome 49.51 34 P **P** **23 06 17.4 +0.9**
baz=274
PRP Porcupine Dome 49.51 32 P **P** **23 06 17.6 +0.9**
baz=273
J25K Salcha River, 49.63 33 P **P** **23 06 18.2 +0.7**
baz=274
HNR Honiara 49.69 156 LR LR 23 26 23.6
comp=Z,670nm,20.4s,baz=336,slow=35
PAX Paxson 49.71 35 P **P** **23 06 18.5 +0.3**
baz=275
BMAR Burnt Mountain 49.81 29 P **P** **23 06 20.5 +1.7**
EYAK Cordova Ski Ar 49.83 38 P **P** **23 06 20.6 +1.6**
baz=277
HARP HAARP 49.91 36 P **P** **23 06 21.2 +1.6**
baz=276
F26K Sheenjek River 49.96 29 P **P** **23 06 22.2 +2.2**
baz=272,SNR=10
G26K Porcupine Rive 50.14 30 P **P** **23 06 23.2 +1.9**
baz=273
SCRK Sand Creek 50.28 34 P **P** **23 06 22.4 -0.1**
SCRK IAmb IAmb 23 06 23.9
comp=Z,7.0nm,0.9s
SCRK Sand Creek 50.28 34 P **P** **23 06 23.1 +0.6**
baz=276
BMRM Bremner River 50.34 37 P **P** **23 06 23.4 +0.5**
KSH Kashi 50.46 294 P **P** **23 06 28.5 +4.2**
KSH pP sP 23 06 39.8 +1.9
KSH pmax pmax
comp=Z,2.0nm,1.0s
BVAR Borovoye Array 50.46 312 P **P** **23 06 24.1 +0.2**
comp=Z,3.3nm,0.6s,baz=82,slow=8.0,SNR=26
BVAR LR LR 23 28 48.9
comp=Z,83nm,19.1s,baz=74,slow=37
comp=Z,3.3nm,0.6s
AAK Ala-Archa 50.51 298 P **P** **23 06 24.3 -0.3**
AAK Ala-Archa 50.51 298*ce*P **P** **23 06 24.5 -0.1**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 50.51 298 LR LR 23 28 52.5
comp=Z,111nm,19.7s,baz=70,slow=37
BRVK Borovoye 50.52 312 P **P** **23 06 23.9 -0.4**
BRVK IAmb IAmb 23 06 25.3
comp=Z,6.0nm,0.9s
BRVK Borovoye 50.52 312 *i* P **P** **23 06 24.6 +0.3**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
L26K Log Cabin Wild 50.67 35 P **P** **23 06 26.1 +0.7**
L26K IAmb IAmb 23 06 27.8
comp=Z,7.2nm,0.8s
L26K Log Cabin Wild 50.67 35 P **P** **23 06 26.6 +1.3**
baz=277
MCARA McCarthy VSAT 51.04 37 P **P** **23 06 29.7 +1.5**
baz=279
H27K Steamboat Moun 51.10 30 P **P** **23 06 30.3 +1.8**
baz=276
K27K Chicken 51.11 33 P **P** **23 06 30.6 +1.9**
baz=277
I27K Kandik River 51.13 31 P **P** **23 06 30.3 +1.5**
baz=276
L27K Beaver Creek, 51.35 35 P **P** **23 06 32.0 +1.5**
baz=278
BCAR Beaver Creek A 51.37 35 P **P** **23 06 30.5 -0.2**
EGAK Eagle 51.41 32 P **P** **23 06 31.5 +0.7**
EGAK IAmb IAmb 23 06 39.5
comp=Z,5.1nm,1.1s
M27K Edge Creek, AK 51.43 35 P **P** **23 06 33.3 +2.1**
baz=279
F28M Old Crow 51.60 29 P **P** **23 06 33.7 +1.4**
baz=276
E28M Babbage River 51.62 27 P **P** **23 06 34.1 +1.7**
baz=276
D28M Stokes Point 51.84 26 P **P** **23 06 35.5 +1.6**
baz=276
I28M Miner Creek 51.84 31 P **P** **23 06 35.9 +1.7**
baz=278
BVCY Beaver Creek 51.89 35 P **P** **23 06 36.2 +1.7**
baz=280
ARSB Arslanbob 52.00 297 P **P** **23 06 36.3 +0.5**
ARSB Arslanbob 52.00 297 P **P** **23 06 36.3 +0.5**
ARSB pmax pmax
comp=Z,2.0nm,1.0s
YUK3 Moose Creek 52.19 36 P **P** **23 06 38.9 +1.9**
baz=280
E29M Blow River 52.25 28 P **P** **23 06 39.3 +2.3**
baz=278
DAWY Dawson 52.28 33 P **P** **23 06 39.2 +1.8**
baz=280
H29M Whitestone 52.37 30 P **P** **23 06 39.9 +1.9**
baz=279
PINM Pinnacle 52.60 38 P **P** **23 06 42.8 +2.9**
baz=282
J29N Klondike Camp 52.72 32 P **P** **23 06 42.7 +2.1**
baz=280
M29M Somme Creek 52.98 35 P **P** **23 06 44.6 +1.9**
baz=282
EPYK Eagle Plains 53.00 30 P **P** **23 06 44.0 +1.3**
baz=280
L29M L29M 53.00 34 P **P** **23 06 45.1 +2.3**
baz=281
G30M tAoh Zraii Nji 53.09 29 P **P** **23 06 44.9 +1.6**
baz=280
KK31 Karatay Array 53.13 300 P **P** **23 06 43.7 -0.3**
KK31 IAmb IAmb 23 06 48.0
comp=Z,4.1nm,0.9s
KK31 Karatay Array 53.13 300 P **P** **23 06 43.7 -0.3**
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 53.13 300 P **P** **23 06 43.4 -0.6**
KKAR Karatay Array 53.13 300 P **P** **23 06 43.4 -0.6**
K29M Barlow Dome 53.13 33 P **P** **23 06 45.3 +1.5**
baz=281
F30M Barrier River 53.15 28 P **P** **23 06 44.9 +1.2**
baz=280
I30M Mount Dempster 53.35 31 P **P** **23 06 47.4 +2.0**
baz=281
O29M Mount Kennedy 53.38 38 P **P** **23 06 48.4 +2.7**
baz=283
J30M Hart River 53.50 32 P **P** **23 06 47.8 +1.4**
baz=282
M30M Minto, Yukon 53.71 35 P **P** **23 06 49.2 +1.3**
baz=283
HYT Haines Junctio 53.78 37 P **P** **23 06 50.9 +2.4**
baz=284
G31M Satah River 53.86 29 P **P** **23 06 50.1 +1.2**
baz=282
INK Inuvik 53.86 27 P **P** **23 06 49.2 +0.3**
INK IAmb IAmb 23 06 50.8
comp=Z,7.6nm,1.1s
INK Inuvik 53.86 27 P **P** **23 06 49.6 +0.7**
baz=281,SNR=5.4
INK Inuvik 53.86 27 P **P** **23 06 49.2 +0.3**
INK pmax pmax
comp=Z,8.0nm,1.1s
F31M Tsiigehtchic 53.95 28 P **P** **23 06 51.5 +2.0**
baz=282
BTK Batken 53.98 296 P **P** **23 06 50.2 -0.2**
BTK Batken 53.98 296 P **P** **23 06 50.2 -0.2**
BTK pmax pmax
comp=Z,2.0nm,0.9s
P30M Million Dollar 54.21 38 P **P** **23 06 54.3 +2.7**
baz=284
GSI Gunungsitoli 54.26 239 P **P** **23 06 53.4 +0.9**
NIL Nilore 54.72 288 P **P** **23 06 55.7 -0.1**
NIL IAmb IAmb 23 07 03.1
comp=Z,6.3nm,0.9s
NIL Nilore 54.72 288 P **P** **23 06 55.7 -0.1**
NIL pmax pmax
comp=Z,6.0nm,0.9s
M31M Drury Creek, Y 54.89 35 P **P** **23 06 58.4 +1.8**
baz=285
SVE Sverdlovsk 54.98 318 *e*P **P** **23 06 57.5 +0.3**
SVE pmax pmax
comp=Z,23nm,0.8s
FARO Faro, Yukon 55.35 35 P **P** **23 07 01.7 +1.8**
baz=286
A36M Sachs Harbour 55.74 22 P **P** **23 07 03.1 +0.7**
A36M Sachs Harbour 55.74 22 P **P** **23 07 04.3 +1.9**
baz=286,SNR=5.2
SIMJ Simiganj 55.82 295 P **P** **23 07 03.7 0.0**
SIMJ IAmb IAmb 23 07 04.8
comp=Z,6.7nm,0.8s
P33M Teslin, Yukon 56.17 37 P **P** **23 07 06.6 +0.8**
P33M Teslin, Yukon 56.17 37 P **P** **23 07 07.8 +2.0**
baz=288
ARU Arti 56.20 318 P **P** **23 07 05.6 -0.3**
ARU Arti 56.20 318*c i* P **P** **23 07 06.0 +0.1**
ARU *PP **sP** **23 07 19.6 -0.1**
ARU 23 09 11.5
ARU S **S** **23 14 53.3 +0.4**
ARU SS **SS** **23 18 39.4 +0.3**
ARU pmax pmax
comp=Z,19nm,0.7s
ARU Arti 56.20 318 LR LR 23 33 27.6
comp=Z,92nm,18.8s,baz=74,slow=38
C36M Paulatuk 56.91 25 P **P** **23 07 11.6 +0.8**
baz=289,SNR=11
CTA Charters Tower 57.42 175 LR LR 23 32 32.8
comp=Z,6.4nm,20.9s,baz=242,slow=36
KBL Kabul 57.50 291 P **P** **23 07 14.8 -1.0**
KBL IAmb IAmb 23 07 41.6
comp=Z,3.3nm,0.7s
KBL Kabul 57.50 291 P **P** **23 07 14.8 -1.0**
KBL pmax pmax
comp=Z,3.0nm,0.7s
WB2 Warramunga Arr 57.55 188 P **P** **23 07 16.2 +0.4**
WB2 IAmb IAmb 23 07 37.7
comp=Z,5.1nm,0.8s
WRA Warramunga Arr 57.55 188 P **P** **23 07 16.3 +0.4**
WRA Warramunga Arr 57.55 188 P **P** **23 07 16.3 +0.4**
WRA Warramunga Arr 57.55 188 P **P** **23 07 16.0 +0.2**
comp=Z,2.1nm,0.6s,baz=6.8,slow=7.5,SNR=7.4
comp=Z,2.1nm,0.6s
S34M Telegraph Cree 57.74 39 P **P** **23 07 19.5 +2.7**
baz=290
ABKAR Akbulak array 57.85 310 P **P** **23 07 17.4 -0.3**
ABKAR Akbulak array 57.85 310 P **P** **23 07 17.5 -0.2**
ABKAR IAmb IAmb 23 07 18.3
comp=Z,6.8nm,0.7s
TGTN Hyland Airport 57.86 34 P **P** **23 07 18.4 +0.7**
baz=290
V35K Ketchikan 58.40 42 P **P** **23 07 23.5 +2.1**
baz=291
AKTO Aktyubinsk 58.57 312 LR LR 23 33 14.9
comp=Z,53nm,19.6s,baz=201,slow=37
KIRV Kirov 60.05 323*ce*P **P** **23 07 33.1 +0.3**
KIRV Kirov 60.05 323 LR LR 23 34 44.4
comp=Z,48nm,18.5s,baz=63,slow=37
SPITS Spitsbergen Ar 60.13 349 LR LR 23 34 48.0
comp=Z,94nm,19.1s,baz=351,slow=37
ASAR Alice Springs 61.27 188 P **P** **23 07 41.7 +0.1**
comp=Z,1.6nm,0.8s,baz=22,slow=30,SNR=5.6
comp=Z,1.6nm,0.8s
MBWA Marble Bar 61.91 203 P **P** **23 07 46.2 +0.4**
RES Resolute Bay 62.09 15 P **P** **23 07 46.4 -0.1**
RES IAmb IAmb 23 07 47.3
comp=Z,7.0nm,0.8s
RES Resolute Bay 62.09 15 P **P** **23 07 46.4 -0.1**
RES pmax pmax
comp=Z,7.0nm,0.9s
PALK Pallekele 62.72 258 LR LR 23 37 56.5
comp=Z,36nm,18.5s,baz=206,slow=39
YKA Yellowknife Ar 63.28 30*ce*P **P** **23 07 54.5 -0.1**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 63.28 30 P **P** **23 07 54.3 -0.2**
comp=Z,1.5nm,0.7s,baz=302,slow=6.8,SNR=25
YKA LR LR 23 39 07.6
comp=Z,41nm,18.1s,baz=326,slow=40
comp=Z,1.5nm,0.7s
YKAB2 New Yellowknif 63.32 30 P **P** **23 07 54.6 -0.2**
KLMR Klimovskoe 63.51 328 *e*P P 23 07 46.0 -10
KLMR pmax pmax
comp=Z,18nm,1.6s
DZM Mont Dzumac 63.65 154 LR LR 23 33 47.9
comp=Z,61nm,20.6s,baz=201,slow=34
BELG Belogornoye 63.65 317 LR LR 23 37 28.7
comp=Z,50nm,18.8s,baz=12,slow=38
ARCES ARCESS Array B 63.66 339 P **P** **23 07 56.5 -0.5**
comp=Z,4.6nm,0.9s,baz=67,slow=9.5,SNR=4.9
ARCES LR LR 23 39 46.3
comp=Z,59nm,18.4s,baz=9.5,slow=40
comp=Z,4.6nm,0.9s
GEYT Alibeck 63.85 299 P **P** **23 08 00.8 +2.0**

comp=Z,1.2nm,0.7s,baz=326,slow=7.5,SNR=2.1
comp=Z,1.2nm,0.7s
NEEM North Greenlan 65.06 3 *i* P **P** **23 08 05.2 -1.2**
NEEM IAmb IAmb 23 08 07.6
comp=Z,9.8nm,1.0s
OBN Obninsk 67.89 323 *i* P **P** **23 08 23.1 -1.3**
OBN *i* 23 08 32.9
OBN *i* 23 08 50.2
OBN *i* 23 10 55.6
OBN pmax pmax
comp=Z,7.0nm,0.9s
FIA1 FINESS Array S 68.53 332 P **P** **23 08 28.1 -0.3**
FINES FINESS Array B 68.53 332 P **P** **23 08 28.4 +0.1**
FINES FINESS Array B 68.53 332 *i* P **P** **23 08 28.3 0.0**
FINES pmax pmax
comp=Z,11nm,0.7s
FINES FINESS Array B 68.53 332 P **P** **23 08 27.9 -0.4**
comp=Z,11nm,0.7s,baz=36,slow=9.3,SNR=26
FINES LR LR 23 39 11.3
comp=Z,43nm,19.5s,baz=42,slow=36
comp=Z,11nm,0.7s
STKA Stephens Creek 69.01 180 P **P** **23 08 31.7 +0.2**
comp=Z,2.9nm,0.9s,baz=352,slow=10,SNR=3.3
STKA LR LR 23 41 24.3
comp=Z,24nm,18.3s,baz=20,slow=38
comp=Z,2.9nm,0.9s
NEW Newport 69.62 44 P **P** **23 08 36.2 +0.8**
baz=304
PINE Pine Mountain 69.84 50 P **P** **23 08 38.0 +0.9**
PINE IAmb IAmb 23 08 39.8
comp=Z,8.2nm,0.8s
SUMG Summit 70.23 0 P **P** **23 08 39.0 -0.2**
SUMG IAmb IAmb 23 08 42.8
comp=Z,9.7nm,1.1s
SUMG Summit 70.23 0 P **P** **23 08 39.0 -0.2**
SUMG pmax pmax
comp=Z,10.0nm,1.1s
SUMG Summit 70.23 0 *i* P **P** **23 08 39.5 +0.3**
SUMG IAmb IAmb 23 08 41.5
comp=Z,8.2nm,1.0s
K05A Summer Lake 70.45 51 P **P** **23 08 41.9 +1.1**
K05A IAmb IAmb 23 08 43.1
comp=Z,9.6nm,1.0s
KBZ Khabaz 70.81 311 *ce* P **P** **23 08 42.4 -0.2**
KBZ pmax pmax
comp=Z,16nm,2.3s
KBZ Khabaz 70.81 311 P **P** **23 08 43.0 +0.4**
comp=Z,2.8nm,0.8s,baz=11,slow=5.2,SNR=7.1
KBZ LR LR 23 44 25.4
comp=Z,32nm,18.2s,baz=36,slow=40
comp=Z,2.8nm,0.8s
GNI Garni 71.65 307 LR LR 23 42 34.4
comp=Z,26nm,18.2s,baz=92,slow=38
UOSS Minazif 71.92 288 P **P** **23 08 49.7 0.0**
UOSS IAmb IAmb 23 09 00.1
comp=Z,3.3nm,0.7s
FFC Flin Flon 73.18 33 P **P** **23 08 56.7 0.0**
FFC IAmb IAmb 23 08 58.1
comp=Z,5.3nm,0.9s
FFC Flin Flon 73.18 33 P **P** **23 08 56.7 0.0**
FFC pmax pmax
comp=Z,5.0nm,0.9s
FCC Fort Churchill 73.48 27 P **P** **23 08 58.2 -0.1**
FCC IAmb IAmb 23 08 59.5
comp=Z,9.9nm,1.2s
FCC Fort Churchill 73.48 27 P **P** **23 08 58.2 -0.1**
FCC pmax pmax
comp=Z,10.0nm,1.2s
ICESG Greenland Ices 73.73 1 *e* P **P** **23 08 58.6 -1.5**
EGMT Eagleton 73.76 42 P **P** **23 09 01.0 +0.7**
baz=308
HFS Hagfors 73.78 336 P **P** **23 09 00.3 +0.2**
comp=Z,7.6nm,0.8s,baz=32,slow=10,SNR=24
HFS LR LR 23 44 18.8
comp=Z,134nm,18.3s,baz=33,slow=38
comp=Z,7.6nm,0.8s
NC204 NORSAR Array S 73.82 338 P **P** **23 09 00.6 +0.2**
NC204 IAmb IAmb 23 09 01.8
comp=Z,12nm,0.8s
NB2 NORSAR Subarra 73.87 337 P **P** **23 09 00.8 +0.1**
comp=Z,3.3nm,0.7s,baz=39,slow=6.2
NOA NORSAR Array B 73.87 337 P **P** **23 09 00.6 -0.2**
comp=Z,4.7nm,0.8s,baz=39,slow=5.8,SNR=16
NOA LR LR 23 45 10.8
comp=Z,61nm,20.0s,baz=45,slow=39
comp=Z,4.7nm,0.8s
HLID Hailey 73.87 47 P **P** **23 09 03.2 +2.0**
baz=307
AKASG Malin Array Be 74.10 322 P **P** **23 09 01.7 -0.4**
comp=Z,2.4nm,0.5s,baz=46,slow=5.8,SNR=19
AKASG LR LR 23 42 52.8
comp=Z,35nm,18.2s,baz=41,slow=37
comp=Z,2.4nm,0.5s
AKBB Malin Array Si 74.10 322 P **P** **23 09 01.9 -0.3**
AKBB IAmb IAmb 23 09 02.2
comp=Z,6.8nm,0.9s
AKBB Malin Array Si 74.10 322 *ce* P **P** **23 09 01.4 -0.7**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
BOZ Bozeman (W) 74.23 44 P **P** **23 09 03.6 +0.4**
BOZ IAmb IAmb 23 09 05.1
comp=Z,4.4nm,0.8s
BOZ Bozeman (W) 74.23 44 P **P** **23 09 04.7 +1.4**
baz=308
BOZ Bozeman (W) 74.23 44 P **P** **23 09 03.7 +0.4**
BOZ pmax pmax
comp=Z,4.0nm,0.9s
KVN Kaiserville 74.27 53 P **P** **23 09 04.0 +0.3**
KVN Kaiserville 74.27 53 P **P** **23 09 04.0 +0.3**
KVN pmax pmax
comp=Z,4.0nm,1.0s
NVAR Mina Array Bea 74.50 53 P **P** **23 09 06.0 +0.9**
NVAR Mina Array Bea 74.50 53 P **P** **23 09 05.5 +0.4**
comp=Z,1.8nm,0.7s,baz=289,slow=5.3,SNR=11
comp=Z,1.8nm,0.7s
SFJD Kangerlussuaq 75.41 5 LR LR 23 42 44.0
comp=Z,35nm,20.9s,baz=0.0,slow=36
H17A Grant Village 75.56 45 P **P** **23 09 14.0 +2.9**
baz=309
GRAC Grapevine Rang 75.95 54 P **P** **23 09 14.4 +1.2**
baz=307
FRB Frobisher Bay 76.27 13 LR LR 23 46 40.9
comp=Z,33nm,18.1s,baz=235,slow=39
R11B Troy Canyon, C 76.28 52 P **P** **23 09 15.9 +0.8**
baz=307
DUG Dugway, Tooele 76.86 49 P **P** **23 09 19.4 +1.0**
baz=308
PDAR Pinedale Array 77.16 46 P **P** **23 09 20.6 +0.5**
PDAR Pinedale Array 77.16 46 P **P** **23 09 20.2 +0.1**
comp=Z,1.4nm,0.6s,baz=298,slow=7.8,SNR=4.9
comp=Z,1.4nm,0.6s
BUR08 Bucovina Ar. S 78.11 322 P **P** **23 09 25.2 +0.1**
BRTR Keskin Array B 78.75 312 *ce* P **P** **23 09 29.7 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 78.75 312 P **P** **23 09 29.3 +0.4**
comp=Z,1.2nm,1.0s,baz=64,slow=6.6,SNR=4.9
comp=Z,1.2nm,1.0s
ULM Lac du Bonnet 78.98 34 P **P** **23 09 29.2 -0.6**
comp=Z,1.2nm,0.5s,baz=326,slow=8.8,SNR=4.0
comp=Z,1.2nm,0.5s
MLR Muntele Rosu 79.21 320 LR LR 23 47 57.3
comp=Z,103nm,18.2s,baz=358,slow=38
RAR Rarotonga 80.21 126 LR LR 23 46 07.2
comp=Z,59nm,18.2s,baz=323,slow=36
AGMN Agassiz Nation 80.41 35 P **P** **23 09 37.9 +0.3**
baz=317
RAYN Ar Rayn 80.73 292 P **P** **23 09 40.1 +0.3**
RAYN Ar Rayn 80.73 292 P **P** **23 09 40.1 +0.3**
RAYN pmax pmax
comp=Z,3.0nm,1.1s
CLL Collm 80.83 330 *i* P **P** **23 09 39.9 +0.1**
CLL *i* 23 09 50.1
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 80.83 330 *i* P **P** **23 09 39.9 +0.1**
comp=Z,5.0nm,0.8s
CLL *i* PcP **PcP** **23 09 47.4 +1.1**
CLL *i* x x 23 09 50.1
CLL *i* pP **sP** **23 09 54.5 +0.6**
MMAI Mount Meron Ar 81.92 305 P **P** **23 09 46.0 0.0**
comp=Z,2.7nm,0.8s,baz=44,slow=8.6,SNR=2.5
MMAI LR LR 23 49 08.3
comp=Z,34nm,20.9s,baz=42,slow=38
comp=Z,2.7nm,0.8s
KHC Kasperske Hory 82.29 329 *ce* P **P** **23 09 47.5 -0.1**
KHC pmax pmax

comp=Z,31nm,2.5s
GERES GERESS Array B 82.46 328 P **P** **23 09 48.1 -0.4**
comp=Z,1.2nm,0.6s,baz=17,slow=7.2,SNR=5.0
GERES LR LR 23 50 59.0
comp=Z,40nm,19.1s,baz=316,slow=39
comp=Z,1.2nm,0.6s
EYMN Ely 82.61 33 P **P** **23 09 49.3 0.0**
baz=320
T25A Trinidad 83.84 47 P **P** **23 09 56.5 +0.4**
baz=313
ANMO Albuquerque 84.09 50 P **P** **23 09 58.6 +1.2**
baz=312
SCHQ Schefferville 84.83 16 P **P** **23 10 00.2 -0.3**
comp=Z,2.5nm,0.8s,baz=4.4,slow=6.1,SNR=6.7
SCHQ LR LR 23 51 10.3
comp=Z,79nm,18.1s,baz=88,slow=38
comp=Z,2.5nm,0.8s
RPZ Rata Peaks 85.09 159 LR LR 23 43 21.0
comp=Z,43nm,19.1s,baz=274,slow=32
DAVOX Davos/Dischmat 85.67 329 LR LR 23 51 28.0
comp=Z,43nm,18.1s,baz=267,slow=38
TX31 Lajitas Ar. Si 89.64 53 P **P** **23 10 24.2 -0.1**
TX31 IAmb IAmb 23 10 25.8
comp=Z,1.8nm,0.7s
TXAR Lajitas Array 89.64 53 P **P** **23 10 24.6 +0.3**
comp=Z,1.2nm,0.6s,baz=310,slow=3.0,SNR=11
comp=Z,1.2nm,0.6s
MIAR Mount Ida 91.81 43 P **P** **23 10 34.5 +0.3**
baz=319
PKME Peaks-Kenny Pk 93.00 21 P **P** **23 10 38.8 -0.6**
baz=336
ESDC Sonseca Array 97.00 334 LR LR 23 59 40.4
comp=Z,113nm,18.6s,baz=326,slow=38

*IDC **27** 23:07:34.7±1.2, 19.°64N×75.°62W, h0km, mb3.5/6, mbtmp3.5/7, ML2.3/1, MS3.0/2, Error ellipse: s-maj=44.5km s-min=25.7km az=72.0*
*SSNC **27** 23:07:39.5±0.7, 19.°78N×75.°43W, h14km±4km, MD3.7, ML3.4, MW3.5*
*JSN **27** 23:07:40.4±0.3, 19.°95N×76.°18W, h15km, MD3.5*

IDC 27 23:07:37.5±0.9, 19.°71N±0.°05×75.°43W±0.°04, h23km±6km, n22, σ1°21/32, mb3.4/6, 1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTBY	**Guantanamo Bay**	**0.38**	**54**	*e* P	**Pb**	**23 07 45.9**	**+0.3**
GTBY				*e* S	**Sb**	**23 07 50.3**	**-0.8**
GTBY				IAML		23 07 51.7	
	comp=Z,4μm,0.3s						
GTBY				IAML		23 07 51.9	
	5μm,0.4s						
RCC	**Rio Carpintero**	**0.38**	**319**	*e* P	**Pb**	**23 07 45.5**	**-0.1**
GTMO	**Guantanamo**	**0.47**	**36**	*i* P	**Pb**	**23 07 47.2**	**+0.2**
MARVS	**Santiago de Cu**	**0.53**	**304**	*e* P	**Pb**	**23 07 48.4**	**+0.2**
MARVS				*e* S	**Sb**	**23 07 55.2**	**-0.1**
MARVS				IAML		23 07 55.7	
	comp=E,6μm,0.2s						
MARVS				IAML		23 07 55.7	
	comp=N,3μm,0.1s						
SABCS	**La Quijada**	**0.66**	**10**	*e* P	**Pb**	**23 07 49.6**	**-0.9**
SABCS				IAML		23 08 02.7	
	comp=E,4μm,0.5s						
SABCS				IAML		23 08 05.5	
	comp=N,3μm,0.6s						
CHIV	**Chivirico**	**0.96**	**286**	*e* P	**Pn**	**23 07 55.5**	**0.0**
CHIV				*e* S	**Sn**	**23 08 09.1**	**+0.6**
CHIV				IAML		23 08 12.0	
	comp=E,1μm,0.1s						
CHIV				IAML		23 08 12.6	
	comp=N,1μm,0.2s						
YAR	**Yar**	**1.09**	**307**	*e* P	**Pn**	**23 07 56.8**	**-0.6**
YAR				*e* S	**Sb**	**23 08 10.4**	**-1.1**
YAR				IAML		23 08 11.9	
	comp=E,436nm,0.2s						
YAR				IAML		23 08 12.2	
	comp=N,475nm,0.2s						
LMGC	**Las Mercedes**	**1.52**	**284**	*e* P	**Pn**	**23 08 03.6**	**+0.4**
LMGC				*e* S	**Sn**	**23 08 21.2**	**-1.1**
PILO	**Pilon**	**1.87**	**277**	*e* P	**Pn**	**23 08 08.2**	**+0.1**
PILO				*e* S	**Sn**	**23 08 29.0**	**-1.9**
GWJ	**Greenwich**	**2.03**	**217**	*i* P	**Pn**	**23 08 11.6**	**+1.1**
STH	**Stony Hill**	**2.08**	**219**	*i* P	**Pn**	**23 08 11.9**	**+0.9**
STH				*i* S	**Sn**	**23 08 35.5**	**-0.7**
HOJ	**Hope**	**2.10**	**217**	*i* P	**Pn**	**23 08 12.7**	**+1.5**
SDV	**Santo Domingo**	**11.71**	**156**	Pn	**Pn**	**23 10 23.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=304,slow=22,SNR=1.6						
SDV				Sn	**Sn**	**23 12 29.4**	**-4.3**
	comp=N,0.1nm,0.3s,baz=124,slow=22,SNR=1.0						
SDV				LR	LR	23 14 42.4	
	comp=N,45nm,18.3s,baz=329,slow=36						
	comp=N,0.6nm,0.3s						
TXAR	**Lajitas Array**	**27.36**	**296**	P	**P**	**23 13 21.6**	**+0.5**
	comp=N,0.1nm,0.4s,baz=106,slow=9.5,SNR=1.5						
	comp=N,0.1nm,0.4s						
NNA	**Nana**	**31.52**	**183**	LR	LR	23 29 23.0	
	comp=N,35nm,18.2s,baz=18,slow=42						
ULM	**Lac du Bonnet**	**34.54**	**337**	P	**P**	**23 14 24.4**	**+0.4**
	comp=N,1.8nm,0.9s,baz=131,slow=9.5,SNR=3.3						
	comp=N,1.8nm,0.9s						
SCHQ	**Schefferville**	**35.67**	**9**	P	**P**	**23 14 35.0**	**+1.2**
	comp=N,2.2nm,0.9s,baz=225,slow=9.8,SNR=4.4						
	comp=N,2.2nm,0.9s						
PDAR	**Pinedale Array**	**36.77**	**316**	P	**P**	**23 14 44.1**	**+0.6**
	comp=N,0.5nm,0.7s,baz=131,slow=8.8,SNR=6.2						
	comp=N,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**41.43**	**306**	P	**P**	**23 15 20.9**	**-1.7**
	comp=N,0.1nm,0.4s,baz=99,slow=5.8,SNR=1.4						
	comp=N,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**50.51**	**338**	P	**P**	**23 16 34.5**	**+1.0**
	comp=N,0.2nm,0.6s,baz=127,slow=8.1,SNR=3.8						
	comp=N,0.2nm,0.6s						
WRA	**Warramunga Arr**	**152.01**	**264**	PKP	**PKPdf**	**23 27 26.2**	**+1.1**
	comp=N,0.4nm,0.8s,baz=86,slow=2.9,SNR=2.7						
WRA				PKPbc	**PKiKP**	**23 27 32.0**	**+0.1**
	comp=N,0.8nm,0.6s,baz=88,slow=2.9,SNR=7.6						
ASAR	**Alice Springs**	**152.48**	**256**	PKP	**PKPdf**	**23 27 26.5**	**+0.9**
	comp=N,0.3nm,0.6s,baz=64,slow=1.8,SNR=1.6						
ASAR				PKPbc	**PKiKP**	**23 27 33.4**	**+0.5**
	comp=N,0.5nm,0.8s,baz=93,slow=1.9,SNR=5.7						
ASAR				PKPab	**sPKPbc**	**23 27 42.2**	**+0.5**
	comp=N,0.2nm,0.4s,baz=121,slow=3.1,SNR=4.1						

IDC 27 23:10:35.1±2.0, 6.°03S×140.°66E, h0km, mb3.5/2, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=92.4km s-min=33.6km az=103.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.13**	**203**	Pn	Pn	23 14 09.8	-0.5
	0.1nm,0.3s,baz=25,slow=12,SNR=4.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**18.70**	**200**	P	P	23 14 55.3	0.0
	0.1nm,0.3s,baz=27,slow=11,SNR=5.3						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**73.58**	**322**	P	P	23 22 10.3	+0.1
	0.4nm,0.8s,baz=123,slow=7.1,SNR=3.1						
	0.4nm,0.9s						
ILAR	**Eielson Array**	**88.04**	**24**	P	P	23 23 27.0	0.0
	0.3nm,1.0s,baz=255,slow=5.2,SNR=2.4						
	0.3nm,1.0s						

IDC 27 23:13:23.1±3.4, 6.°26S×142.°54E, h0km, mb3.3/1, mbtmp3.7/3, ML3.7/2, Error ellipse: s-maj=98.8km s-min=29.2km az=102.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.76**	**210**	Pn	Pn	23 17 05.2	-1.4
	0.3nm,0.3s,baz=30,slow=13,SNR=9.7						
WRA				Sn	Sn	23 20 00.6	-1.5
	baz=30,slow=28,SNR=1.9						
WRA				Lg	Lg	23 21 44.1	
	baz=34,slow=30						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**19.20**	**205**	P	Pn	23 17 49.9	+0.3
	0.2nm,0.3s,baz=34,slow=9.8,SNR=20						
	3.5nm,0.7s						
MKAR	**Makanchi Array**	**74.92**	**322**	P	P	23 25 05.9	-0.1
	0.2nm,0.7s,baz=114,slow=5.2,SNR=2.8						
	0.2nm,0.7s						

*IDC **27** 23:32:53.2±1.4, 10.°47N×140.°84E, h0km, mb3.7/7, mbtmp3.7/7, MS2.3/2, Error ellipse: s-maj=46.8km s-min=25.2km az=85.0*

ISC 27 23:32:59.0±1.3, 10.°4N±0.°2×140.°8E±0.°3, h40km, n15, σ0°78/7, mb3.6/7, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.05**	**51**	LR	LR	23 36 09.9	
	comp=Z,23nm,19.3s,baz=80,slow=39						
H11S3	**WAKE ISLAND Hy**	**26.26**	**69**	T	T	00 06 53.5	
	baz=256,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**26.28**	**69**	T	T	00 06 56.7	
	baz=256,slow=75,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**26.28**	**69**	T	T	00 06 53.7	
	baz=256,slow=75,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**26.77**	**67**	T	T	00 07 29.3	
	baz=254,slow=75,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**26.78**	**67**	T	T	00 07 30.6	
	baz=254,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**26.79**	**67**	T	T	00 07 39.5	
	baz=254,slow=75,SNR=9.5						
KSRS	**Korea Array**	**29.32**	**339**	LR	LR	23 49 14.8	
	comp=Z,8.6nm,19.6s,baz=350,slow=34						
WRA	**Warramunga Arr**	**30.85**	**192**	P	**P**	**23 39 11.1**	**-0.5**
	0.7nm,0.7s,baz=6.8,slow=9.4,SNR=3.0						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**34.55**	**191**	P	**P**	**23 39 44.3**	**+0.3**
	0.2nm,0.3s,baz=18,slow=8.9,SNR=1.3						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**41.27**	**286**	P	**P**	**23 40 41.5**	**+0.7**
	0.9nm,0.5s,baz=92,slow=6.1,SNR=5.1						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**61.10**	**318**	P	**P**	**23 43 08.4**	**-0.7**
	0.4nm,0.8s,baz=112,slow=7.0,SNR=3.7						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**64.55**	**321**	P	**P**	**23 43 31.0**	**-0.9**
	1.1nm,0.2s,baz=99,slow=5.7,SNR=2.1						
	1.1nm,0.2s						
BVAR	**Borovoye Array**	**69.99**	**323**	P	**P**	**23 44 06.5**	**+0.1**
	0.5nm,0.7s,baz=97,slow=6.0,SNR=2.5						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**73.10**	**25**	P	**P**	**23 44 25.3**	**+0.4**
	0.2nm,0.6s,baz=275,slow=6.2,SNR=1.9						
	0.2nm,0.6s						

IDC 27 23:34:17.0±3.1, 6.°28S×143.°16E, h0km, mb3.2/1, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=83.5km s-min=29.6km az=102.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.06**	**211**	Pn	Pn	23 38 03.1	-1.3
	0.2nm,0.3s,baz=34,slow=11,SNR=5.0						
WRA				Sn	Sn	23 41 03.9	+0.6
	0.1nm,0.3s,baz=28,slow=22,SNR=1.1						
WRA				Lg	Lg	23 42 46.1	
	baz=36,slow=27,SNR=4.3						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**19.45**	**206**	P	Pn	23 38 46.3	-0.1
	0.5nm,0.3s,baz=32,slow=11,SNR=33						
	3.6nm,0.6s						
MKAR	**Makanchi Array**	**75.31**	**322**	P	P	23 46 02.1	-0.1
	0.1nm,0.7s,baz=104,slow=4.6,SNR=2.1						
	0.1nm,0.7s						

*SJA **27** 23:36:11.9±0.7, 24.°26S×67.°30W, h194km±5km, ML3.9, MW3.8*
*IDC **27** 23:36:13.7±1.1, 24.°08S×67.°11W, h174km±10km, mb3.5/8, mbtmp3.9/13, Error ellipse: s-maj=16.2km s-min=14.4km az=29.0*
*GUC **27** 23:36:14.5±0.7, 24.°25S×67.°61W, h204km±9km, ML4.1*

ISC 27 23:36:13.3±0.7, 24.°23S±0.°03×67.°30W±0.°05, h179km±6km, n53, σ1°38/78, mb3.8/8, 12C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.50**	**328**	*i* P	**Pn**	**23 36 47.1**	**+1.4**
SLA	**San Lorenzo**	**1.71**	**107**	*e* P	**Pn**	**23 36 47.9**	**+0.4**
SLA				*e* S	**Sn**	**23 37 14.0**	**+0.1**
SLA				IAML		23 37 14.6	
	comp=Z,282nm,0.8s						
LVC	**Limon Verde**	**2.19**	**317**	*e* P	**Pn**	**23 36 53.3**	**+0.5**
LVC				*e* S	**Sn**	**23 37 23.8**	**+0.5**
LVC				IAML		23 37 25.4	
	comp=Z,291nm,0.2s						
LVC	**Limon Verde**	**2.19**	**317**	P	**Pn**	**23 36 53.6**	**+0.8**
	comp=Z,82nm,0.3s,baz=129,slow=7.9,SNR=371						
LVC				S	**Sn**	**23 37 23.5**	**+0.2**
	comp=Z,201nm,0.3s,baz=348,slow=20,SNR=58						
LVC	**Limon Verde**	**2.19**	**317**	⇑*i* P	**Pn**	**23 36 53.5**	**+0.7**
LVC				*i* S	**Sn**	**23 37 23.4**	**0.0**
FSA	**Cafayete**	**2.23**	**148**	*e* P	**Pn**	**23 36 53.0**	**0.0**
PB15	**IPOC Station P**	**2.23**	**297**	*e* P	**Pn**	**23 36 53.7**	**+0.7**
PB15				*e* S	**Sn**	**23 37 24.7**	**+0.8**
PB15	**IPOC Station P**	**2.23**	**297**	⇑*i* P	**Pn**	**23 36 53.9**	**+0.7**
PB15				*i* S	**Sn**	**23 37 24.0**	**0.0**
GO02	**Mina Guanaco**	**2.28**	**245**	*e* P	**Pn**	**23 36 53.8**	**+0.1**
GO02				*e* S	**Sn**	**23 37 24.6**	**-0.5**
GO02	**Mina Guanaco**	**2.28**	**245**	⇑*i* P	**Pn**	**23 36 53.8**	**+0.1**
GO02				*i* S	**Sn**	**23 37 24.1**	**-1.0**
GO02				IAML		23 37 25.3	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	**2.58**	**306**	*e* P	**Pn**	**23 36 57.6**	**+0.6**
PB06				*e* S	**Sn**	**23 37 30.6**	**-0.4**
PB06				IAML		23 37 31.9	
	comp=Z,471nm,0.3s						
PB06	**IPOC Station P**	**2.58**	**306**	⇑*i* P	**Pn**	**23 36 57.7**	**+0.6**
PB06				*i* S	**Sn**	**23 37 29.9**	**-1.1**
YJA	**Yavi**	**2.63**	**39**	*e* P	**Pn**	**23 36 58.9**	**+0.9**
PB14	**IPOC Station P**	**2.85**	**261**	*e* P	**Pn**	**23 37 00.1**	**-0.4**
PB14				*e* S	**Sn**	**23 37 35.3**	**-1.8**
PB14				IAML		23 37 39.1	
	comp=Z,244nm,0.4s						
PB14	**IPOC Station P**	**2.85**	**261**	⇑*i* P	**Pn**	**23 37 00.1**	**-0.4**
PB14				*i* S	**Sn**	**23 37 34.2**	**-2.9**
PB14				IAML		23 37 36.6	
	comp=E,314nm,0.5s						
PB09	**IPOC Station P**	**3.01**	**323**	*e* P	**Pn**	**23 37 03.3**	**+1.0**
PB09				*e* S	**Sn**	**23 37 40.8**	**+0.5**
PB09				IAML		23 37 40.9	
	comp=Z,253nm,0.4s						
PB09	**IPOC Station P**	**3.01**	**323**	⇑*i* P	**Pn**	**23 37 03.3**	**+1.0**
PB09				*i* S	**Sn**	**23 37 40.1**	**-0.3**
PB09				IAML		23 37 45.5	
	comp=E,279nm,0.5s						
AC02	**Maricunga**	**3.07**	**212**	*e* P	**Pn**	**23 37 03.6**	**+0.2**
AC02	**Maricunga**	**3.07**	**212**	⇑*e* P	**Pn**	**23 37 03.5**	**+0.2**
AC02				*e* S	**Sn**	**23 37 42.2**	**-0.1**
AHML	**Horco Molle**	**3.10**	**145**	*e* P	**Pn**	**23 37 03.1**	**-0.2**
PB04	**IPOC Station P**	**3.23**	**305**	*e* P	**Pn**	**23 37 05.0**	**+0.1**
PB04				*e* S	**Sn**	**23 37 44.0**	**-1.0**
PB04				IAML		23 37 46.0	
	comp=Z,416nm,0.2s						
PB04	**IPOC Station P**	**3.23**	**305**	⇑*i* P	**Pn**	**23 37 04.9**	**0.0**
PB04				*i* S	**Sn**	**23 37 42.8**	**-2.2**
PB07	**IPOC Station P**	**3.44**	**316**	*e* P	**Pn**	**23 37 07.8**	**+0.1**
PB07				*e* S	**Sn**	**23 37 48.0**	**-1.9**
PB07				IAML		23 37 49.2	
	comp=Z,394nm,0.5s						
PB07	**IPOC Station P**	**3.44**	**316**	⇑*i* P	**Pn**	**23 37 07.7**	**+0.1**
PB07				*i* S	**Sn**	**23 37 47.3**	**-2.6**
PB02	**IPOC Station P**	**3.76**	**320**	*e* P	**Pn**	**23 37 11.4**	**-0.1**
PB02				IAML		23 37 58.8	
	comp=Z,432nm,0.4s						
PB02	**IPOC Station P**	**3.76**	**320**	⇑*i* P	**Pn**	**23 37 11.2**	**-0.3**
PB02				*i* S	**Sn**	**23 37 53.8**	**-3.1**
PB01	**IPOC Station P**	**3.76**	**327**	*e* P	**Pn**	**23 37 11.4**	**-0.1**
PB01				IAML		23 37 59.1	
	comp=Z,158nm,0.2s						
PB01	**IPOC Station P**	**3.76**	**327**	⇑*i* P	**Pn**	**23 37 11.2**	**-0.3**
PB01				*i* S	**Sn**	**23 37 54.8**	**-2.1**
GO03	**Copiap**	**4.26**	**218**	*e* P	**Pn**	**23 37 16.4**	**-1.5**
GO03				*e* S	**Sn**	**23 38 05.5**	**-2.8**
PATCX	**Punta Patache**	**4.29**	**322**	*e* P	**Pn**	**23 37 17.7**	**-0.6**
PATCX				*e* S	**Sn**	**23 38 06.5**	**-2.6**
PB08	**IPOC Station P**	**4.42**	**337**	⇑*i* P	**Pn**	**23 37 20.6**	**+0.4**
PB08				*i* S	**Sn**	**23 38 10.5**	**-2.0**
TA01	**Diego Aracena**	**4.51**	**323**	*e* P	**Pn**	**23 37 20.6**	**-0.4**
TA01				IAML		23 38 33.6	
	comp=Z,53nm,0.5s						
GO01	**Chusmiza**	**4.87**	**339**	*e* P	**Pn**	**23 37 26.1**	**0.0**
PB11	**IPOC Station P**	**4.95**	**333**	*e* P	**Pn**	**23 37 26.0**	**-0.9**
PB11				IAML		23 38 24.0	

comp=Z,59nm,0.5s
ACLC CERRO LA CRUZ 5.18 177 *e*P **Pn 23 37 30.6 +0.8**
AC04 Llanos de Chal 5.21 220 *e*P **Pn 23 37 27.6 -2.4**
AC04 IAML 23 38 30.1
comp=Z,37nm,0.5s
AC05 El Transito 5.30 209 *e*P **Pn 23 37 29.6 -1.7**
AC05 IAML 23 38 31.7
comp=Z,34nm,1.2s
CPUP Villa Florida 9.27 105 P **Pn 23 38 20.8 -2.5**
comp=Z,1.2nm,0.6s,baz=278,slow=10,SNR=5.0
SIV San Ignacio 10.07 37 P **Pn 23 38 31.6 -2.4**
comp=Z,2.8nm,0.3s,baz=208,slow=8.7,SNR=23
SIV S **Sn 23 40 20.9 -5.2**
comp=Z,0.3nm,0.4s,baz=147,slow=22,SNR=1.0
PLCA Paso Flores 16.68 189 P **Pn 23 39 59.6 +2.7**
comp=Z,1.5nm,0.4s,baz=267,slow=11,SNR=1.6
BDFB Brasilia 20.03 68 P **P 23 40 31.4 -1.4**
comp=Z,2.3nm,0.4s,baz=217,slow=5.9,SNR=5.5
TXAR Lajitas Array 63.70 325 P **P 23 46 26.1 +0.2**
comp=Z,0.3nm,0.7s,baz=134,slow=10,SNR=2.6
comp=Z,0.3nm,0.7s
QSPA South Pole Qui 65.97 180 P **P 23 46 42.1 +1.9**
comp=Z,1.5nm,0.5s,baz=330,slow=0.8,SNR=18
comp=Z,1.5nm,0.5s
SADO Sadowa 69.51 351 P **P 23 47 02.5 +0.2**
comp=Z,7.2nm,0.9s,baz=259,slow=2.4,SNR=3.5
comp=Z,7.2nm,0.9s
TORD Torodi Ar. Bea 76.91 69 P **P 23 47 46.2 -0.1**
comp=Z,0.7nm,0.5s,baz=260,slow=5.6,SNR=7.3
comp=Z,0.7nm,0.5s
PDAR Pinedale Array 77.20 329 P **P 23 47 48.6 +1.0**
comp=Z,0.1nm,0.4s,baz=160,slow=2.9,SNR=1.5
comp=Z,0.1nm,0.4s
ULM Lac du Bonnet 78.36 342 P **P 23 47 53.7 +0.2**
comp=Z,1.1nm,0.4s,baz=203,slow=3.9,SNR=4.7
comp=Z,1.1nm,0.4s
SCHQ Schefferville 78.74 0 P **P 23 47 56.3 +0.8**
comp=Z,2.2nm,1.0s,baz=49,slow=17,SNR=2.0
comp=Z,2.2nm,1.0s
YKA Yellowknife Ar 94.24 340 P **P 23 49 11.7 +0.2**
comp=Z,0.2nm,0.5s,baz=135,slow=4.3,SNR=5.1
comp=Z,0.2nm,0.5s
ASAR Alice Springs 128.13 205 PKP **PKiKP 23 54 60.0 +0.5**
comp=Z,1.2nm,1.0s,baz=143,slow=2.5,SNR=4.2
WRA Warramunga Arr 131.29 208 PKP **PKPdf 23 55 05.8 +0.9**
comp=Z,0.5nm,0.5s,baz=158,slow=1.6,SNR=8.5
ZALV Zalesovo Beam 143.73 28 PKP **PKPdf 23 55 26.6 0.0**
comp=Z,1.0nm,0.4s,baz=318,slow=5.2,SNR=4.6
MKAR Makanchi Array 146.88 40 PKPbc **PKPbc 23 55 34.0 -0.5**
comp=Z,1.6nm,0.6s,baz=298,slow=3.5,SNR=21

IDC 27 23:40:32.1±6.7, 6°01S×141°43E, h0km, mb3.5/3, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=260.3km s-min=31.4km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.47**	**206**	Pn	Pn	23 44 12.2	+0.4
	0.1nm,0.3s,baz=30,slow=13,SNR=1.2						
WRA				Sn	Sn	23 47 01.7	-2.4
	baz=31,slow=27,SNR=1.8						
WRA				Lg	Lg	23 48 50.3	
	0.1nm,0.3s,baz=43,slow=32,SNR=1.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**18.99**	**202**	P	P	23 44 55.3	-0.1
	0.1nm,0.3s,baz=31,slow=11,SNR=11						
	2.3nm,0.9s						
MKAR	**Makanchi Array**	**74.03**	**322**	P	P	23 52 09.0	-0.8
	0.4nm,0.6s,baz=99,slow=7.1,SNR=5.3						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**77.96**	**325**	P	P	23 52 32.7	+0.5
	0.1nm,0.3s,baz=131,slow=5.1,SNR=1.8						
	0.1nm,0.3s						
BVAR	**Borovoye Array**	**83.55**	**325**	P	P	23 53 02.7	+0.7
	0.4nm,0.7s,baz=112,slow=6.4,SNR=3.9						
	0.4nm,0.7s						

IDC 27 23:44:33.5±4.2, 6°22S×142°72E, h0km, mb3.3/1, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=132.6km s-min=32.3km az=101.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.88**	**210**	Pn	Pn	23 48 18.7	0.0
	0.1nm,0.3s,baz=34,slow=12,SNR=1.9						
WRA				Lg	Lg	23 52 58.0	
	baz=32,slow=31,SNR=1.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.31**	**205**	P	P	23 49 00.5	+0.2
	baz=34,slow=12,SNR=4.1						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**75.00**	**322**	P	P	23 56 16.9	0.0
	0.3nm,0.8s,baz=119,slow=5.1,SNR=1.4						
	0.3nm,0.8s						

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*DJA **27** 23:45:11.5±0.3, 0°N±3°×10°E±°, h170km±4km, M4.2/14, mb4.5/6, mB5.1/2, MLv4.0/14, Mw(mB)4.4/2*
*IDC **27** 23:45:22.3±9.7, 0°.65N×100°.69E, h270km±93km, mb3.1/8, mbtmp3.8/9, Error ellipse: s-maj=75.7km s-min=19.4km az=54.0*

ISC 27 23:45:12.6±0.8, 0°.10N±0°.08×100°.09E±0°.09, h200km, n21, σ1§57/23, mb3.4/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKNI	**Bangkinang**	**0.98**	**77**	P	Pn	23 45 37.8	-4.4
BKNI				S	Sn	23 45 57.3	-7.8
SISI	**Saibi**	**1.73**	**215**	P	**Pn**	**23 45 48.3**	**-0.2**
SISI				S	**Sn**	**23 46 15.8**	**-0.7**
PBSI	**Pulau Batu**	**1.81**	**265**	P	**Pn**	**23 45 49.5**	**+0.2**
PBSI				S	**Sn**	**23 46 16.5**	**-1.2**
KRJI	**Kerinci**	**2.57**	**148**	P	**Pn**	**23 45 56.9**	**-0.6**
GSI	**Gunungsitoli**	**2.78**	**295**	P	**Pn**	**23 45 59.2**	**-0.6**
GSI				S	**Sn**	**23 46 33.9**	**-2.6**
PPSI	**Pulau Pagai**	**2.85**	**182**	P	**Pn**	**23 46 00.0**	**-0.5**
KCSI	**Kotacane, Aceh**	**4.11**	**326**	P	**Pn**	**23 46 13.3**	**-2.6**
SNSI	**Sinabang, Aceh**	**4.40**	**301**	P	**Pn**	**23 46 19.3**	**-0.2**
LHSI	**Lahat**	**5.20**	**139**	P	**Pn**	**23 46 29.5**	**-0.1**
	113nm,0.6s,0.4nm						
MNAI	**Manna**	**5.28**	**147**	P	**Pn**	**23 46 28.4**	**-2.2**
	86nm,0.8s,0.5nm						
MLSI	**Meulaboh, Aceh**	**5.54**	**318**	P	**Pn**	**23 46 32.2**	**-1.8**
	132nm,0.6s,3µm0.6nm						
KASI	**Kota Agung**	**7.11**	**142**	P	**Pn**	**23 46 51.4**	**-3.0**
CMAR	**Chiang Mai Arr**	**18.28**	**357**	P	**P**	**23 49 11.2**	**-0.4**
	0.8nm,0.3s,baz=180,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**39.01**	**123**	P	**P**	**23 52 21.6**	**+1.5**
	0.3nm,0.8s,baz=305,slow=8.9,SNR=5.0						
	0.3nm,0.8s						
SONM	**Songino Array**	**47.86**	**6**	P	**P**	**23 53 28.7**	**-1.8**
	0.3nm,0.4s,baz=202,slow=7.5,SNR=1.9						
	0.3nm,0.4s						
AAK	**Ala-Archa**	**48.19**	**335**	P	**P**	**23 53 34.8**	**+1.7**
	1.1nm,0.7s,baz=169,slow=6.6,SNR=9.0						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**49.05**	**344**	P	**P**	**23 53 39.8**	**+0.4**
	1.3nm,0.6s,baz=148,slow=7.9,SNR=23						
	1.3nm,0.6s						
KURBB	**Kurchatov Arra**	**53.58**	**343**	P	**P**	**23 54 13.1**	**+0.2**
	0.3nm,0.4s,baz=162,slow=6.7,SNR=6.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**55.13**	**349**	P	**P**	**23 54 24.0**	**-0.1**
	0.6nm,0.3s,baz=164,slow=7.5,SNR=5.9						
	0.6nm,0.3s						
BVAR	**Borovoye Array**	**58.26**	**339**	P	**P**	**23 54 46.1**	**0.0**
	1.5nm,0.6s,baz=143,slow=8.5,SNR=13						
	1.5nm,0.6s						
BRTR	**Keskin Array B**	**71.98**	**312**	P	**P**	**23 56 17.5**	**+2.6**
	0.7nm,0.9s,baz=98,slow=6.1,SNR=2.1						
	0.7nm,0.9s						

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*RHSSO **27** 23:52:11.8±0.6, 42°.63N×20°.07E, h5km±2km, ML2.1/10*
*TIR **27** 23:52:11.5, 42°.67N×19°.99E, h3km, Md2.5, Ml2.3*
*PDG **27** 23:52:13.3±0.1, 42°.63N×19°.86E, h12km, MD2.3/2, ML2.2/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
*BEO **27** 23:52:16.5±0.3, 42°.68N×20°.00E, h0km, ML1.8/10*

ISC 27 23:52:13.5±0.9, 42°.65N±0°.02×19°.88E±0°.02, h7km±7km, n51, σ1§55/93, 6C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVY	**Plav**	**0.08**	**133**	⇑*i* Pg	**Pg**	**23 52 15.7**	**+0.1**
PVY				*i* Sg	**Sg**	**23 52 17.2**	**+0.1**
IVA	**Berane**	**0.22**	**2**	⇓*i* Pg	**Pg**	**23 52 18.7**	**+0.7**
IVA				*i* Sg	**Sg**	**23 52 22.4**	**+1.4**
BCI	**Bajram Curri**	**0.32**	**154**	P	**Pg**	**23 52 18.8**	**-0.9**
	baz=168						
BCI				S	**Sg**	**23 52 23.4**	**-0.4**
	baz=168						
BCI				AMP			
	comp=N,3.6nm,0.2s,baz=168						
KOME	**Kolasin**	**0.34**	**307**	*e*Pg	**Pg**	**23 52 20.0**	**-0.1**
KOME				*i* Sg	**Sg**	**23 52 25.5**	**+0.9**
PUK	**Puka**	**0.61**	**179**	P	**Pg**	**23 52 24.4**	**-0.7**
	baz=187						
PUK				S	**Sg**	**23 52 33.0**	**-0.1**
	baz=187						
PUK				AMP			
	comp=N,0.7nm,0.3s,baz=187						
SJES	**Sjenica**	**0.62**	**6**	*e*Pg	**Pg**	**23 52 25.9**	**+0.5**
SJES				*e*Sg	**Sg**	**23 52 34.5**	**+1.0**
SJES	**Sjenica**	**0.62**	**6**	*e*Pg	**Pg**	**23 52 23.7**	**-1.7**
SJES				*e*Sg	**Sg**	**23 52 32.7**	**-0.8**
DRME	**Dracevica, Mon**	**0.69**	**228**	*e*Pg	**Pg**	**23 52 25.9**	**-0.9**
DRME				*i* Sg	**Sb**	**23 52 36.6**	**-1.0**
DRME	**Dracevica, Mon**	**0.69**	**228**	*e*Pg	**Pg**	**23 52 25.6**	**-1.2**
DRME				*e*Sg	**Sb**	**23 52 37.2**	**-0.4**
NKME	**Niksic**	**0.69**	**280**	⇑*i* Pg	**Pg**	**23 52 26.1**	**-0.8**
NKME				*i* Sg	**Sb**	**23 52 36.4**	**-1.3**
CEME	**Cevo**	**0.72**	**262**	⇑*i* Pg	**Pg**	**23 52 25.9**	**-1.4**
CEME				*i* Sg	**Sb**	**23 52 37.2**	**-1.2**
PLE	**Pljevlja**	**0.77**	**332**	*e*Pg	**Pg**	**23 52 27.9**	**-0.4**
PLE				*i* Sg	**Sg**	**23 52 38.9**	**+0.5**
BUM	**Brajici-Budva**	**0.81**	**245**	⇓*i* Pg	**Pg**	**23 52 28.1**	**-0.9**
BUM				*i* Sg	**Sb**	**23 52 40.4**	**-0.7**
ULC	**Ulcinj**	**0.83**	**215**	⇓*i* Pg	**Pg**	**23 52 28.5**	**-1.0**
ULC				*i* Sg	**Sb**	**23 52 41.1**	**-0.6**
UPM	**Unac-Piva**	**0.91**	**308**	*e*Pg	**Pg**	**23 52 30.2**	**-0.7**
UPM				*i* Sg	**Sn**	**23 52 44.6**	**-1.6**
IVAS	**Ivanjica**	**0.95**	**12**	*e*Pg	**Pg**	**23 52 31.3**	**-0.4**
IVAS				*e*Sg	**Sg**	**23 52 43.7**	**-0.3**
BRY	**Bratogost**	**1.02**	**285**	⇓*i* Pg	**Pg**	**23 52 32.1**	**-1.0**
BRY				*i* Sg	**Sn**	**23 52 48.1**	**-0.9**
BRY	**Bratogost**	**1.02**	**285**	⇑*i* Pg	**Pg**	**23 52 32.4**	**-0.7**
BRY				*e*Sg	**Sn**	**23 52 48.4**	**-0.6**
RUDO	**Rudo**	**1.04**	**339**	*e*Pg	**Pb**	**23 52 31.3**	**-2.5**
RUDO				*e*Sg	**Sb**	**23 52 46.6**	**-1.0**
HCY	**Herceg Novi**	**1.04**	**259**	⇑*i* Pg	**Pb**	**23 52 32.4**	**-1.5**
HCY				*i* Sg	**Sn**	**23 52 48.6**	**-0.8**
HCY	**Herceg Novi**	**1.04**	**259**	*e*Pg	**Pb**	**23 52 33.0**	**-0.9**
HCY				*e*Sg	**Sn**	**23 52 49.6**	**+0.2**
PHP	**Peshkopia**	**1.05**	**156**	P	**Pb**	**23 52 32.7**	**-1.3**
	baz=160						
PHP				S	**Sn**	**23 52 49.0**	**-0.6**
	baz=160						
SELS	**Selova**	**1.07**	**58**	*e*Pg	**Pb**	**23 52 34.1**	**-0.3**
SELS				*e*Sg	**Sb**	**23 52 48.3**	**-0.4**
KLINJ	**Klinje**	**1.08**	**299**	*e*Pg	**Pb**	**23 52 33.4**	**-1.2**
KLINJ				*e*Sg	**Sn**	**23 52 50.6**	**+0.1**
TREB	**Trebinje**	**1.13**	**274**	*e*Pg	**Pg**	**23 52 39.4**	**+4.2**
TREB				*e*Sg	**Sn**	**23 52 52.5**	**+1.0**
TREB	**Trebinje**	**1.13**	**274**	⇑*i* Pg	**Pb**	**23 52 34.3**	**-1.1**
TREB				*e*Sg	**Sn**	**23 52 52.3**	**+0.8**
BBLS	**Lazići**	**1.27**	**344**	*e*Pg	**Pn**	**23 52 37.0**	**-0.7**
BBLS				*e*Sg	**Sg**	**23 52 59.7**	**+5.5**
BBLS	**Lazići**	**1.27**	**344**	*e*Pg	**Pn**	**23 52 35.5**	**-2.2**
BBLS				*e*Sg	**Sb**	**23 52 53.5**	**-0.7**
DBRK	**Dubrovnik**	**1.28**	**271**	*e*Pg	**Pb**	**23 52 37.2**	**-0.7**
TIR	**Tirane**	**1.30**	**181**	P	**Pg**	**23 52 38.7**	**+0.3**
	baz=184						
TIR				S	**Sg**	**23 52 58.5**	**+3.3**
	baz=184						
TIR	**Tirane**	**1.30**	**181**	*e*Pg	**Pg**	**23 52 41.2**	**+2.8**
TIR				*e*Sg	**Sg**	**23 53 01.1**	**+5.8**
GRUS	**Gruza**	**1.38**	**26**	*e*Pg	**Pg**	**23 52 40.4**	**+0.4**
GRUS				*e*Sg	**Sg**	**23 53 01.2**	**+3.3**
DIVS	**Divibare**	**1.45**	**3**	*e*Pg	**Pg**	**23 52 41.5**	**+0.2**
DIVS				*e*Sg	**Sg**	**23 53 03.2**	**+3.0**
NEVS	**Nevesinje**	**1.46**	**297**	*e*Pn	**Pn**	**23 52 39.8**	**-0.5**
NEVS				*e*Sn	**Sg**	**23 53 01.5**	**+1.2**
HAPS	**Han Pijesak,Bl**	**1.59**	**335**	*e*Pn	**Pn**	**23 52 41.7**	**-0.4**
HAPS				*e*Sn	**Sb**	**23 53 03.5**	**-0.1**
TRUS	**Trudelj**	**1.62**	**14**	*e*Pg	**Pg**	**23 52 46.1**	**+1.5**
TRUS				*e*Sg	**Sg**	**23 53 06.6**	**+1.0**
STON	**Ston**	**1.62**	**279**	*e*Pn	**Pb**	**23 52 43.2**	**-0.5**
STON	**Ston**	**1.62**	**279**	*e*Pn	**Pb**	**23 52 42.2**	**-0.2**
STON				*e*Sn	**Sg**	**23 53 06.0**	**+0.4**
PRVS	**Prvonek**	**1.63**	**94**	*e*Pg	**Pb**	**23 52 43.2**	**-0.7**
PRVS				*e*Sg	**Sn**	**23 53 03.2**	**-0.6**
TEKS	**Tekeris**	**1.92**	**352**	*e*Pn	**Pn**	**23 52 45.7**	**-0.9**
TEKS				*e*Sn	**Sn**	**23 53 10.6**	**-0.3**
ZAGS	**Zajecar**	**2.08**	**55**	*e*Pg	**Pg**	**23 52 52.9**	**-0.4**
FNA	**Florina**	**2.17**	**149**	P	**Pb**	**23 52 52.0**	**-1.1**
	baz=150						
FNA				S	**Sg**	**23 53 23.2**	**-0.2**
	baz=150						
FNA				AMP			
	comp=E,0.0nm,0.5s,baz=150						
RICI	**Ricice**	**2.18**	**294**	*e*Pn	**Pb**	**23 52 53.6**	**+0.3**
RICI				Sn	**Sg**	**23 53 24.2**	**+0.6**
MAKA	**Makarska**	**2.19**	**288**	*e*Pn	**Pb**	**23 52 53.3**	**-0.2**
MAKA				Sn	**Sg**	**23 53 23.1**	**-0.9**
LSTV	**Lastovo**	**2.21**	**274**	*e*Pn	**Pb**	**23 52 53.1**	**-0.5**
FRGS	**Fruska Gora**	**2.51**	**359**	*e*Pn	**Pn**	**23 52 53.8**	**-0.9**
FRGS				*e*Sn	**Sn**	**23 53 25.0**	**-0.5**
HVAR	**Hvar**	**2.58**	**283**	*e*Pn	**Pb**	**23 52 58.1**	**-1.9**
MGRS	**Mrkonjic Grad**	**2.69**	**312**	*e*Sn	**Sn**	**23 53 31.4**	**+1.3**
ZIRJ	**Zirje**	**3.26**	**289**	*e*Pn	**Pn**	**23 53 07.5**	**+2.5**
DUGI	**Dugi Otok**	**3.77**	**293**	*e*Pn	**Pn**	**23 53 15.0**	**+3.0**
VIRC	**Vir**	**3.88**	**297**	*e*Pn	**Pn**	**23 53 16.7**	**+3.2**

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*BJI **27** 23:59:48.9±0.0, 6°.51S×143°.29E, h10km, mb4.5/51, mB5.0/21, Ms4.4/2, Ms7 4.2/3*
*MOS **27** 23:59:51.2±1.3, 6°.15S×142°.93E, h10km, mb4.9/21, Error ellipse: s-maj=12.1km s-min=7.7km az=114.0*
*IDC **27** 23:59:51.1±0.6, 6°.19S×142°.91E, h0km, mb4.4/16, mbtmp4.5/19, ML4.4/1, MS4.0/35, Error ellipse: s-maj=24.2km s-min=13.8km az=80.0*
*NEIC **27** 23:59:52.9±1.9, 6°.28S±0°.07×142°.99E±0°.06, h10km±1km, mb5.0/74, Error ellipse: s-maj=12.6km s-min=9.8km az=198.0*
*GCMT **27** 23:59:53.9±0.2, 6°.25S±0°.02×142°.83E±0°.02, h12km, MW5.0/101, Moment Tensor Solution. s29,c31; s101,c134; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.38±.06; Mθθ-1.04±.06; Mφφ-1.34±.06; Mrθ 1.15±.23; Mrφ 1.12±.05; Mθφ-2.11±.20; Best double couple: M=3.36000×10^16^ NP1:φs148.00000°, δ68.00000°, λ96.00000°. NP2:φs311.00000°, δ23.00000°, λ75.00000°. Principal axes: T 3.4180, Plg66.0000°, Azm69.0000°; N -0.1150, Plg6.0000°, Azm325.0000°; P -3.3030, Plg23.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **27** 23:59:55.4±1.2, 6°S±3°×14°3E±°, h25km±10km, M4.8/31, mb4.8/31, mB5.2/18, MLv5.4/6, Mw(mB)4.6/18, MwMwp4.8/1, Mwp5.1/1*

ISC 27 23:59:53.2±0.4, 6°32S±0°.05×142°93E±0°.05, h10km, n216, σ1§60/158, mb4.8/86, MS3.9/32, 10C-2D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.30**	**230**	P	**Pn**	**00 00 47.0**	**+2.0**
GENI	**Genyem**	**4.62**	**323**	P	**Pn**	**00 01 03.5**	**+0.4**
PMG	**Port Moresby**	**5.19**	**126**	Pn	**Pn**	**00 01 09.8**	**-1.1**
PMG	**Port Moresby**	**5.19**	**126**	*ce*P	**Pn**	**00 01 11.6**	**+0.7**
PMG				pmax	pmax		
	comp=Z,28nm,0.6s						
PMG	**Port Moresby**	**5.19**	**126**	Pn	**Pn**	**00 01 11.3**	**+0.4**
	comp=Z,24nm,0.3s,baz=356,slow=5.4,SNR=16						
PMG				Sn	**Sn**	**00 02 09.5**	**-1.4**
	comp=Z,4.9nm,0.3s,baz=13,slow=11,SNR=5.5						
SMPI	**Sarmi**	**6.02**	**315**	P	**Pn**	**00 01 22.9**	**+0.6**
	comp=Z,271nm,1.4s,comp=Z,8µmcomp=Z,4µmcomp=Z,1.3nm						
MANU	**Manus Island**	**6.14**	**46**	Pn	**Pn**	**00 01 24.3**	**+0.4**
COEN	**Coen**	**7.59**	**178**	Pn	**Pn**	**00 01 45.6**	**+1.7**
RABL	**Rabaul**	**9.44**	**77**	Pn	Pn	00 02 07.1	-2.2
FAKI	**Fak Fak**	**11.17**	**287**	Pn	**Pn**	**00 02 33.2**	**+0.1**
FAKI	**Fak Fak**	**11.17**	**287**	P	**Pn**	**00 02 32.8**	**-0.3**
	comp=Z,52nm,0.9s,comp=Z,687nm						
SAUI	**Saumlaki**	**11.66**	**261**	Pn	**Pn**	**00 02 39.4**	**-0.3**
SAUI	**Saumlaki**	**11.66**	**261**	P	**Pn**	**00 02 40.5**	**+0.8**
	comp=Z,352nm,0.8s,comp=Z,9µm						
KDU	**Kakadu**	**12.09**	**238**	P	**Pn**	**00 02 45.3**	**-0.4**
SWI	**Sorong**	**12.85**	**295**	P	Pn	00 02 51.3	-4.7
	comp=Z,33nm,0.6s,comp=Z,1µm						
MTN	**Manton Dam**	**13.31**	**240**	Pn	Pn	00 03 00.2	-2.1
MTN	**Manton Dam**	**13.31**	**240**	P	**Pn**	**00 03 01.3**	**-1.0**
DRS	**Darwin Rock St**	**13.33**	**242**	P	**Pn**	**00 03 02.0**	**-0.6**
CTA	**Charters Tower**	**14.06**	**167**	Pn	**Pn**	**00 03 16.7**	**+4.2**
	comp=Z,0.3nm,0.3s,baz=356,slow=13,SNR=3.1						
CTA				Lg	Lg	00 07 19.6	
	comp=Z,0.3nm,0.3s,baz=222,slow=22,SNR=2.0						
CTA				LR	LR	00 09 04.9	
	comp=Z,836nm,20.7s,baz=353,slow=39						
QIS	**Mount Isa**	**14.51**	**193**	P	**Pn**	**00 03 19.9**	**+1.1**
WB0	**Warramunga Arr**	**15.73**	**211**	Pn	**Pn**	**00 03 33.1**	**-1.9**
WR0	**Warramunga Arr**	**15.82**	**210**	Pn	**Pn**	**00 03 33.9**	**-2.2**
WR0				IAmb	IAmb	00 03 42.8	
	comp=Z,46nm,0.7s						
WRAB	**Tennant Creek**	**15.89**	**211**	Pn	**Pn**	**00 03 34.2**	**-2.9**
WRAB	**Tennant Creek**	**15.89**	**211**	P	**Pn**	**00 03 34.2**	**-2.9**
WRAB				pmax	pmax		
	comp=Z,83nm,1.4s						
WB2	**Warramunga Arr**	**15.90**	**211**	Pn	**Pn**	**00 03 34.5**	**-2.6**
WRA	**Warramunga Arr**	**15.90**	**211**	Pn	**Pn**	**00 03 36.0**	**-1.3**
WRA	**Warramunga Arr**	**15.90**	**211**	Pn	**Pn**	**00 03 36.0**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=33,slow=14,SNR=25						
WRA				Sn	**Sn**	**00 06 26.6**	**-7.2**
	comp=Z,1.1nm,0.3s,baz=26,slow=29,SNR=2.4						
WRA				Lg	Lg	00 08 12.8	
	baz=11,slow=29						
WRA				LR	LR	00 10 21.7	
	comp=Z,5µm,19.0s,baz=30,slow=39						
	comp=Z,8.9nm,0.6s						
KNRA	**Kununurra**	**16.71**	**235**	Pn	**Pn**	**00 03 45.8**	**-1.8**
KNRA				IAmb	IAmb	00 03 50.7	
	comp=Z,78nm,0.7s						
KNRA	**Kununurra**	**16.71**	**235**	P	**Pn**	**00 03 46.2**	**-1.4**
HNR	**Honiara**	**17.14**	**101**	P	**Pn**	**00 03 54.0**	**+1.1**
	comp=Z,733nm,0.3s,baz=121,slow=5.4,SNR=1.8						
SANI	**Sanana**	**17.42**	**283**	P	**Pn**	**00 03 59.3**	**+2.8**
	comp=Z,34nm,0.8s,comp=Z,715nm						
SOEI	**Soe**	**18.79**	**258**	P	**P**	**00 04 14.0**	**+1.0**
SOEI				IAmb	IAmb	00 04 24.6	
	comp=Z,66nm,0.6s						
SOEI	**Soe**	**18.79**	**258**	P	**P**	**00 04 14.7**	**+1.7**
	comp=Z,126nm,0.7s,comp=Z,2µm						
AS01	**Alice Springs**	**19.28**	**206**	P	**P**	**00 04 21.3**	**+3.0**
AS31	**Alice Springs**	**19.30**	**206**	P	**P**	**00 04 20.0**	**+1.5**
ASAR	**Alice Springs**	**19.31**	**206**	P	**P**	**00 04 19.8**	**+1.2**
ASAR	**Alice Springs**	**19.31**	**206**	P	**P**	**00 04 19.8**	**+1.2**
ASAR	**Alice Springs**	**19.31**	**206**	P	**P**	**00 04 21.0**	**+2.4**
	comp=Z,68nm,0.9s,baz=35,slow=9.5,SNR=78						
ASAR				S	**Sn**	**00 07 52.2**	**-4.1**
	comp=Z,4.5nm,0.7s,baz=19,slow=26,SNR=4.7						
ASAR				Lg	Lg	00 10 04.9	
	comp=Z,0.3nm,0.3s,baz=15,slow=32,SNR=4.1						
ASAR				LR	LR	00 12 28.9	
	comp=Z,3µm,18.5s,baz=34,slow=39						
GUMO	**Guam**	**19.88**	**6**	LR	LR	00 11 24.5	
	comp=Z,236nm,19.0s,baz=180,slow=35						
QLP	**Quilpie**	**20.18**	**177**	P	Pn	00 04 33.1	+3.1
BBSI	**Bau Bau**	**20.27**	**271**	P	**P**	**00 04 29.7**	**+0.6**
	comp=Z,23nm,0.9s,comp=Z,691nm						
EIDS	**Eidsvold**	**20.48**	**158**	P	**P**	**00 04 31.3**	**0.0**
FITZ	**Fitzroy Crossi**	**20.53**	**234**	P	**P**	**00 04 32.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**20.53**	**234**	P	**P**	**00 04 32.6**	**+0.7**
MMRI	**Maumere**	**20.64**	**262**	P	**P**	**00 04 33.3**	**+0.2**
LUWI	**Luwuk**	**20.78**	**284**	P	**P**	**00 04 35.2**	**+0.6**
LUWI				IAmb	IAmb	00 04 41.0	
	comp=Z,156nm,1.6s						
LUWI	**Luwuk**	**20.78**	**284**	P	**P**	**00 04 35.9**	**+1.2**
	comp=Z,103nm,1.1s,comp=Z,3µm						
GTOI	**Gorontalo**	**21.05**	**288**	P	**P**	**00 04 40.7**	**+3.1**
	comp=Z,30nm,1.1s,comp=Z,354nm						
EDFI	**Ende, Flores**	**21.19**	**262**	P	**P**	**00 04 39.1**	**-0.1**
	comp=Z,36nm,0.9s,comp=Z,632nm						
INKA	**Innaminka**	**21.40**	**185**	P	**P**	**00 04 45.2**	**+4.0**
MRSI	**Marisa**	**22.01**	**287**	P	**P**	**00 04 47.2**	**-0.7**
	comp=Z,22nm,1.1s						
OOD	**Oodnadatta**	**22.43**	**197**	P	**P**	**00 04 55.2**	**+2.9**
BASI	**Baing, Sumba**	**22.45**	**259**	P	**P**	**00 04 55.0**	**+2.4**
	comp=Z,127nm,0.8s,comp=Z,1µm						
BKSI	**Bulukumba**	**22.71**	**271**	P	**P**	**00 04 56.2**	**+0.8**
	comp=Z,44nm,1.1s,comp=Z,878nm						
KAPI	**Kappang**	**23.10**	**272**	P	**P**	**00 05 00.2**	**+0.8**
KAPI				IAmb	IAmb	00 05 06.7	

MSHR	**Mys Shultsa**	**49.84**	**349**	*ce*	P		P	00 08 44.4	-2.0
MSHR					pmax		pmax		
	comp=Z,25nm,2.5s								
CM31	**Chiang Mai Arr**	**49.88**	**300**		P		**P**	**00 08 46.7**	**-0.5**
CM31					IAmb		IAmb	00 08 50.5	
	comp=Z,15nm,1.4s								
CMAR	**Chiang Mai Arr**	**49.88**	**300**		P		**P**	**00 08 46.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**49.88**	**300**	*ce*	P		**P**	**00 08 48.2**	**+1.0**
CMAR					pmax		pmax		
	comp=Z,3.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**49.88**	**300**		P		P	00 08 45.5	-1.7
	comp=Z,2.5nm,0.5s,baz=124,slow=5.9,SNR=15								
CMAR					LR		LR	00 32 33.9	
	comp=Z,22nm,18.6s,baz=140,slow=39								
	comp=Z,2.5nm,0.5s								
KMI	**Kunming**	**50.05**	**310**	⇓	P		**P**	**00 08 50.5**	**+1.8**
KMI					pmax		pmax		
	comp=Z,12nm,0.9s								
ASAJ	**Asahikawa**	**50.21**	**360**		LR		LR	00 28 56.8	
	comp=Z,42nm,22.0s,baz=156,slow=35								
HNS	**HongShan**	**50.85**	**331**	⇓	P		**P**	**00 08 53.8**	**-0.4**
USA0B	**Ussuriysk Arra**	**51.25**	**350**		P		**P**	**00 08 55.8**	**-1.3**
USA0B					IAmb		IAmb	00 09 01.0	
	comp=Z,13nm,1.0s								
USA0B	**Ussuriysk Arra**	**51.25**	**350**	*i*	P		P	00 08 55.3	-1.8
USRK	**Ussuriysk Ar.**	**51.25**	**350**		P		**P**	**00 08 56.5**	**-0.6**
USRK	**Ussuriysk Ar.**	**51.25**	**350**		P		**P**	**00 08 56.5**	**-0.6**
USRK	**Ussuriysk Ar.**	**51.25**	**350**		P		**P**	**00 08 55.9**	**-1.2**
	comp=Z,6.6nm,0.9s,baz=168,slow=7.4,SNR=3.8								
USRK					LR		LR	00 28 25.6	
	comp=Z,94nm,20.5s,baz=167,slow=34								
	comp=Z,6.6nm,0.9s								
XAN	**Xi'an**	**51.45**	**324**		P		**P**	**00 08 57.5**	**-1.3**
XAN					pP		pP	00 09 03.5	+1.2
XAN					pmax		pmax		
	comp=Z,11nm,1.1s								
PZH	**PanZhiHua**	**51.56**	**311**		P		**P**	**00 09 01.5**	**+1.6**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.5s								
PZH					pmax		pmax		
	comp=Z,150nm,5.6s								
MDJ	**Mudanjiang**	**52.11**	**348**		P		**P**	**00 09 06.0**	**+2.5**
MDJ					pmax		pmax		
	comp=Z,8.0nm,1.0s								
MDJ					pmax		pmax		
	comp=Z,180nm,4.8s								
MDJ	**Mudanjiang**	**52.11**	**348**		P		**P**	**00 09 03.3**	**-0.2**
MDJ					pmax		pmax		
	comp=Z,4.0nm,1.8s								
MDJ					pmax		pmax		
	comp=Z,210nm,7.1s								
BJI	**Beijing**	**52.32**	**334**		P		**P**	**00 09 04.3**	**-0.8**
BJI					pmax		pmax		
	comp=Z,5.0nm,1.1s								
BJI					LR		LR		
	comp=Z,75nm,16.3s								
BJI					LR		LR		
	comp=Z,65nm,17.8s								
BJI					LR		LR		
	comp=Z,130nm,17.6s								
CD2	**Chengdu**	**52.67**	**317**		P		**P**	**00 09 09.0**	**+1.0**
CD2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
BNX	**BinXian**	**53.66**	**347**	⇑	P		**P**	**00 09 14.5**	**-0.4**
BNX					pmax		pmax		
	comp=Z,10.0nm,0.6s								
BNX					pmax		pmax		
	comp=Z,140nm,3.5s								
HHC	**Hu-ho-hao-te**	**55.07**	**331**	*e*	P		**P**	**00 09 27.3**	**+1.8**
HHC					pP		pP	00 09 32.0	+3.1
HHC					sP		sP	00 09 35.8	+5.6
HHC					pmax		pmax		
	comp=Z,7.0nm,0.6s								
HHC					pmax		pmax		
	comp=Z,86nm,4.2s								
LZH	**Lanzhou**	**55.89**	**322**	*e*	P		**P**	**00 09 33.0**	**+1.5**
LZH					pP		sP	00 09 41.3	+5.0
LZH					pmax		pmax		
	comp=Z,16nm,1.0s								
KLR	**Kul'dur**	**56.18**	**351**	*ce*	P		**P**	**00 09 31.8**	**-1.3**
KLR					pmax		pmax		
	comp=Z,8.0nm,1.3s								
KLR	**Kul'dur**	**56.18**	**351**		LR		LR	00 31 49.2	
	comp=Z,53nm,20.2s,baz=212,slow=34								
RAR	**Rarotonga**	**57.29**	**111**		LR		LR	00 31 48.4	
	comp=Z,77nm,21.6s,baz=268,slow=33								
HEH	**HeiHe**	**57.93**	**348**	*e*	P		P	00 09 38.8	-6.7
HEH					pmax		pmax		
	comp=Z,3.0nm,0.8s								
HEH					pmax		pmax		
	comp=Z,110nm,4.4s								
GTA	**Gaotai**	**60.47**	**323**		P		**P**	**00 10 04.3**	**+0.8**
GTA					pP		pP	00 10 09.5	+2.5
GTA					pmax		pmax		
	comp=Z,5.0nm,2.1s								
PETK	**Petropavlovsk-**	**60.52**	**10**		P		**P**	**00 10 02.4**	**-0.9**
	comp=Z,3.6nm,0.9s,baz=181,slow=7.2,SNR=2.8								
PETK					LR		LR	00 35 37.1	
	comp=Z,61nm,19.6s,baz=200,slow=36								
	comp=Z,3.6nm,0.9s								
ZEA	**Zeya**	**61.28**	**349**	*e*	P		**P**	**00 10 12.7**	**+4.2**
ZEA					pmax		pmax		
	comp=Z,10.0nm,0.9s								
GOMU	**GeErMu**	**61.81**	**317**		P		**P**	**00 10 13.0**	**+0.1**
GOMU					pP		pP	00 10 17.8	+1.4
GOMU					sP		sP	00 10 19.8	+2.0
GOMU					pmax		pmax		
	comp=Z,2.0nm,1.2s								
ULN	**Ulaanbaatar**	**62.52**	**334**		P		**P**	**00 10 16.4**	**-0.8**
ULN					IAmb		IAmb	00 10 28.6	
	comp=Z,24nm,1.9s								
ULN	**Ulaanbaatar**	**62.52**	**334**	*ce*	P		**P**	**00 10 16.5**	**-0.7**
ULN					pmax		pmax		
	comp=Z,8.0nm,1.7s								
SONM	**Songino Array**	**62.79**	**333**		P		**P**	**00 10 19.5**	**+0.5**
SONM					IAmb		IAmb	00 10 21.8	
	comp=Z,14nm,1.8s								
SONM	**Songino Array**	**62.79**	**333**		P		**P**	**00 10 19.5**	**+0.5**
SONM					pmax		pmax		
	comp=Z,14nm,1.8s								
SONM	**Songino Array**	**62.79**	**333**		P		**P**	**00 10 17.7**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=154,slow=5.5,SNR=7.1								
	comp=Z,1.2nm,0.8s								
PALK	**Palkekele**	**63.53**	**281**		LR		LR	00 41 15.3	
	comp=Z,73nm,20.3s,baz=213,slow=39								
SHEM	**Shemya Is, Ala**	**64.51**	**20**		LR		LR	00 32 21.7	
	comp=Z,298nm,21.1s,baz=106,slow=30								
MA2	**Magadan**	**65.98**	**4**		LR		LR	00 36 52.9	
	comp=Z,20nm,21.2s,baz=154,slow=34								
ZAK	**Zakamensk**	**66.05**	**333**	*e*	P		**P**	**00 10 38.9**	**-1.4**
ZAK					pmax		pmax		
	comp=Z,6.0nm,1.3s								
PPT	**Papeete**	**66.69**	**106**		LR		LR	00 36 05.3	
	comp=Z,73nm,21.9s,baz=232,slow=33								
HYB	**Hyderabad**	**67.80**	**292**	*e*	P		**P**	**00 10 52.5**	**+0.5**
HYB				*e*	PcP		**PcP**	**00 11 17.8**	**-0.9**
YAK	**Yakutsk**	**68.92**	**353**		LR		LR	00 39 27.8	
	comp=Z,52nm,19.5s,baz=109,slow=35								
SEY	**Seymchan**	**69.44**	**5**	*ce*	P		**P**	**00 11 00.0**	**-1.2**
SEY					pmax		pmax		
	comp=Z,4.0nm,1.0s								
SEY	**Seymchan**	**69.44**	**5**		LR		LR	00 39 12.1	
	comp=Z,55nm,20.9s,baz=322,slow=34								
WMQ	**Urumqi**	**70.44**	**321**	*e*	P		**P**	**00 11 08.8**	**+0.9**
WMQ					pmax		pmax		
	comp=Z,10.0nm,1.3s								
VNDA	**Vanda**	**71.86**	**176**		P		**P**	**00 11 16.8**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=340,slow=7.0,SNR=6.7								
VNDA					LR		LR	00 41 49.7	
	comp=Z,84nm,18.2s,baz=348,slow=35								
	comp=Z,0.9nm,0.6s								
DGZ	**Jazzator, Alta**	**73.60**	**326**	*i*	P		P	00 11 24.3	-2.5
DGZ					pmax		pmax		
	comp=Z,6.0nm,0.8s								
MKAR	**Makanchi Array**	**75.21**	**322**		P		**P**	**00 11 35.4**	**-0.7**
MKAR	**Makanchi Array**	**75.21**	**322**	*i*	P		**P**	**00 11 35.5**	**-0.6**
MKAR					pmax		pmax		
	comp=Z,2.0nm,0.5s								
MKAR	**Makanchi Array**	**75.21**	**322**		P		**P**	**00 11 35.6**	**-0.5**
	comp=Z,2.4nm,0.5s,baz=104,slow=7.3,SNR=26								
	comp=Z,2.4nm,0.5s								
MAKZ	**Makanchi**	**75.41**	**322**		P		**P**	**00 11 36.0**	**-1.2**
MAKZ					IAmb		IAmb	00 11 38.3	
	comp=Z,15nm,1.4s								
MAKZ	**Makanchi**	**75.41**	**322**		P		**P**	**00 11 36.0**	**-1.2**
MAKZ					pmax		pmax		
	comp=Z,15nm,1.4s								
KSH	**Kashi**	**76.61**	**313**		P		**P**	**00 11 46.5**	**+2.1**
KSH					pmax		pmax		
	comp=Z,4.0nm,0.9s								
NIL	**Nilore**	**76.84**	**307**		P		P	00 11 43.5	-2.2
NIL					IAmb		IAmb	00 11 46.7	
	comp=Z,12nm,0.6s								
NIL	**Nilore**	**76.84**	**307**		P		P	00 11 43.5	-2.2
NIL					pmax		pmax		
	comp=Z,12nm,0.6s								
ZAA0	**Zalesovo Array**	**77.17**	**329**		P		**P**	**00 11 45.4**	**-1.6**
ZALV	**Zalesovo Beam**	**77.17**	**329**		P		P	00 11 45.0	-2.0
ZALV	**Zalesovo Beam**	**77.17**	**329**	*i*	P		**P**	**00 11 46.0**	**-1.0**
ZALV					pmax		pmax		
	comp=Z,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**77.17**	**329**		P		P	00 11 44.7	-2.4
	comp=Z,1.2nm,0.5s,baz=107,slow=4.6,SNR=8.5								
ZALV					LR		LR	00 44 55.3	
	comp=Z,35nm,21.7s,baz=91,slow=35								
	comp=Z,1.2nm,0.5s								
TIXI	**Tiksi**	**78.37**	**355**		P		**P**	**00 11 52.5**	**-0.9**
TIXI	**Tiksi**	**78.37**	**355**	*i*	P		**P**	**00 11 52.6**	**-0.8**
TIXI					pmax		pmax		
	comp=Z,2.0nm,0.9s								
AAK	**Ala-Archa**	**78.71**	**316**		P		**P**	**00 11 54.9**	**-1.2**
AAK	**Ala-Archa**	**78.71**	**316**	*ce*	P		**P**	**00 11 57.6**	**+1.5**
AAK					pmax		pmax		
	comp=Z,6.0nm,1.3s								
KURK	**Kurchatov**	**79.08**	**324**		P		**P**	**00 11 57.7**	**0.0**
KURK	**Kurchatov**	**79.08**	**324**	*ce*	P		**P**	**00 11 58.5**	**+0.8**
KURK					pmax		pmax		
	comp=Z,13nm,1.7s								
KURBB	**Kurchatov Arra**	**79.09**	**324**		P		**P**	**00 11 57.0**	**-0.8**
	comp=Z,4.0nm,1.0s,baz=115,slow=4.6,SNR=12								
	comp=Z,4.0nm,1.0s								
MAW	**Mawson**	**80.40**	**203**		LR		LR	00 44 56.1	
	comp=Z,118nm,20.2s,baz=90,slow=34								
KBL	**Kabul**	**80.45**	**306**		P		P	00 12 04.0	-1.8
KBL	**Kabul**	**80.45**	**306**		P		P	00 12 04.0	-1.8
KBL					pmax		pmax		
	comp=Z,4.0nm,1.0s								
F15K	**North Star Dit**	**81.31**	**19**		P		**P**	**00 12 08.7**	**-0.8**
F15K					IAmb		IAmb	00 12 15.7	
	comp=Z,13nm,1.3s								
SIMJ	**Simiganj**	**81.52**	**310**		P		**P**	**00 12 10.1**	**-1.3**
KK31	**Karatay Array**	**81.64**	**315**		P		P	00 12 09.2	-2.5
KK31					IAmb		IAmb	00 12 15.2	
	comp=Z,20nm,1.8s								
KK31	**Karatay Array**	**81.64**	**315**		P		P	00 12 09.2	-2.5
KK31					pmax		pmax		
	comp=Z,20nm,1.8s								
KKAR	**Karatay Array**	**81.64**	**315**		P		P	00 12 09.7	-2.0
KKAR	**Karatay Array**	**81.64**	**315**		P		P	00 12 09.7	-2.0
C16K	**Lisburne Hills**	**82.67**	**17**		IAmb		IAmb	00 13 00.0	
	comp=Z,9.9nm,1.3s								
F17K	**Baldwin Pennin**	**82.86**	**20**		IAmb		IAmb	00 12 25.8	
	comp=Z,31nm,1.8s								
G18K	**Tagagawik**	**83.45**	**21**		IAmb		IAmb	00 13 28.5	
	comp=Z,18nm,1.6s								
E18K	**Tukpahlearik C**	**83.62**	**19**		IAmb		IAmb	00 12 25.0	
	comp=Z,23nm,1.7s								
QSPA	**South Pole Qui**	**83.65**	**180**		P		**P**	**00 12 21.5**	**-0.4**
QSPA					IAmb		IAmb	00 12 31.8	
	comp=Z,16nm,1.1s								
QSPA	**South Pole Qui**	**83.65**	**180**		P		**P**	**00 12 22.0**	**+0.1**
	comp=Z,4.7nm,0.7s,baz=286,slow=0.7,SNR=17								
QSPA					LR		LR	00 50 03.9	
	comp=Z,335nm,18.8s,baz=12,slow=36								
	comp=Z,4.7nm,0.7s								
C18K	**Utukok River**	**84.12**	**18**		IAmb		IAmb	00 12 46.9	
	comp=Z,15nm,1.4s								
G19K	**Purcell Mounta**	**84.13**	**21**		P		**P**	**00 12 23.1**	**-1.0**
G19K					IAmb		IAmb	00 12 25.9	
	comp=Z,14nm,1.4s								
NRIK	**Noril'sk**	**84.37**	**343**		P		**P**	**00 12 24.1**	**-1.2**
NRIK					IAmb		IAmb	00 12 34.2	
	comp=Z,10.0nm,1.1s								
NRIK	**Noril'sk**	**84.37**	**343**	*ce*	P		**P**	**00 12 24.4**	**-0.8**
NRIK					pmax		pmax		
	comp=Z,12nm,1.1s								
NRIK	**Noril'sk**	**84.37**	**343**		P		**P**	**00 12 24.0**	**-1.3**
	comp=Z,5.0nm,0.9s,baz=108,slow=5.3,SNR=8.1								
NRIK					LR		LR	00 49 21.4	
	comp=Z,50nm,21.1s,baz=135,slow=35								
	comp=Z,5.0nm,0.9s								
BVAR	**Borovoye Array**	**84.67**	**325**		P		**P**	**00 12 26.5**	**-0.6**
	comp=Z,13nm,0.7s,baz=110,slow=6.6,SNR=70								
	comp=Z,13nm,0.7s								
BRVK	**Borovoye**	**84.74**	**325**		P		**P**	**00 12 26.3**	**-1.2**
BRVK	**Borovoye**	**84.74**	**325**	*i*	P		**P**	**00 12 26.2**	**-1.2**
BRVK					pmax		pmax		
	comp=Z,21nm,1.4s								
E19K	**Redstone River**	**84.74**	**20**		IAmb		IAmb	00 12 33.5	
	comp=Z,10nm,1.1s								
C19K	**Lookout Ridge**	**84.86**	**18**		IAmb		IAmb	00 12 35.3	
	comp=Z,10nm,0.9s								
D19K	**Kuna River**	**84.99**	**18**		IAmb		IAmb	00 12 33.8	
	comp=Z,14nm,1.2s								
F20K	**Avaraart Lake**	**85.05**	**20**		IAmb		IAmb	00 12 30.2	
	comp=Z,28nm,2.0s								
RND	**Reindeer**	**86.08**	**25**		P		**P**	**00 12 32.4**	**-1.7**
RND	**Reindeer**	**86.08**	**25**		P		**P**	**00 12 32.4**	**-1.7**
RND					pmax		pmax		
	comp=Z,49nm,2.0s								
NEA2	**Nenana**	**86.45**	**24**		P		**P**	**00 12 34.4**	**-1.4**
DHY	**Denali Highway**	**86.58**	**25**		P		**P**	**00 12 35.3**	**-1.3**
D22K	**Ayikyak River**	**86.92**	**19**		IAmb		IAmb	00 12 40.6	
	comp=Z,6.3nm,0.7s								
CCB	**Clear Creek Bu**	**86.97**	**24**		P		P	00 12 36.5	-1.8
CCB					IAmb		IAmb	00 12 42.7	
	comp=Z,7.2nm,1.0s								
WSAR	**Wadi Sarin**	**87.25**	**294**		LR		LR	00 58 50.7	
	comp=Z,12nm,18.0s,baz=146,slow=41								
ILAR	**Eielson Array**	**87.39**	**24**		P		P	00 12 37.8	-2.5
	comp=Z,2.4nm,0.6s,baz=256,slow=4.6,SNR=35								
ILAR					LR		LR	00 47 35.5	
	comp=Z,91nm,21.1s,baz=248,slow=33								
	comp=Z,2.4nm,0.6s								
J25K	**Salcha River,**	**87.95**	**24**		IAmb		IAmb	00 12 42.9	
	comp=Z,15nm,1.4s								
F24K	**Squaw Lake**	**88.00**	**21**		IAmb		IAmb	00 13 11.7	
	comp=Z,13nm,1.3s								
FYU	**Fort Yukon**	**88.65**	**22**		P		**P**	**00 12 45.8**	**-0.5**
J26L	**Joseph Creek**	**88.65**	**25**		IAmb		IAmb	00 12 47.1	
	comp=Z,12nm,1.4s								
E25K	**Arctic Village**	**89.04**	**21**		IAmb		IAmb	00 12 54.9	
	comp=Z,6.4nm,1.1s								
D25K	**Kavik River**	**89.17**	**20**		IAmb		IAmb	00 12 52.1	
	comp=Z,23nm,1.9s								
GEYT	**Allbeck**	**89.77**	**308**		P		**P**	**00 12 52.2**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=90,slow=5.9,SNR=4.9								
	comp=Z,1.6nm,0.9s								
ABKAR	**Akbulak array**	**90.18**	**319**		P		P	00 12 51.7	-2.1
ABKAR					IAmb		IAmb	00 15 32.5	
	comp=Z,18nm,2.0s								
ARU	**Arti**	**92.11**	**326**		P		P	00 12 58.7	-3.9
ARU								00 16 37.7	
ARU					S		**SKSac**	**00 23 31.3**	**-4.5**
INK	**Inuvik**	**93.44**	**22**		LR		LR	00 49 45.7	
	comp=Z,102nm,21.7s,baz=354,slow=32								
BBB	**Bella Bella**	**94.31**	**38**		LR		LR	00 46 44.8	
	comp=Z,149nm,21.0s,baz=230,slow=30								
YBH	**Yreka Blue Hor**	**97.42**	**49**		LR		LR	00 49 57.9	
	comp=Z,206nm,20.9s,baz=280,slow=31								
SNAA	**Sanae**	**98.99**	**190**		LR		LR	01 01 14.7	
	comp=Z,133nm,18.1s,baz=148,slow=37								
NVAR	**Mina Array Bea**	**100.76**	**52**		P		**Pdif**	**00 13 42.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=278,slow=8.1,SNR=1.9								
YKA	**Yellowknife Ar**	**101.33**	**28**		P		**Pdif**	**00 13 43.1**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=277,slow=5.0,SNR=1.8								
GERES	**GERESS Array B**	**119.83**	**324**		PKP		**PKPdf**	**00 18 43.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=45,slow=4.3,SNR=2.0								
TKL	**Tuckaleechee C**	**128.22**	**49**		PKP		**PKPdf**	**00 18 59.9**	**-0.5**
	comp=Z,3.9nm,1.0s,baz=130,slow=7.6,SNR=1.9								
TORD	**Torodi Ar. Bea**	**141.24**	**283**		PKhKP		PKPpre	00 19 19.3	
	comp=Z,0.6nm,0.6s,baz=78,slow=4.2,SNR=3.1								
CPUP	**Villa Florida**	**142.05**	**150**		PKP		**PKPdf**	**00 19 26.6**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=194,slow=3.1,SNR=1.7								
DBIC	**Dimbokro**	**147.99**	**272**		PKPbc		**PKPdf**	**00 19 38.9**	**+1.9**
	comp=Z,9.0nm,1.0s,baz=106,slow=3.3,SNR=6.6								

*SOME **28** 00:05:53.1,41˚.88N×81˚.68E,h10km*
*NNC **28** 00:05:54.6±1.3,41˚.93N×81˚.67E,h0km,mb3.7,mpv3.4,*
Error ellipse: s-maj=9.8km s-min=7.6km az=174.0
ISC 28 00:05:56.1±2.3**,42˚.00N**±0˚.09×**81˚.61E**±0˚.06,**h4**km±14km,

n44,σ1$70/66,6C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.71**	**328**	P		**Pb**		**00 06 27.8**	**-0.4**
	12nm,0.2s								
KTMS				S		**Sg**		**00 06 53.0**	**+1.8**
	48nm,0.7s								
KTMS	**Ketmen**	**1.71**	**328**	*e*P		**Pb**		**00 06 27.8**	**-0.4**
	12nm,0.2s								
KTMS				*e*S		**Sg**		**00 06 53.0**	**+1.8**
	48nm,0.7s								
SHLS	**Shalkode**	**1.96**	**307**	Pg		**Pn**		**00 06 28.5**	**-1.7**
	47nm,0.2s								
SHLS				Lg		Lg		00 06 54.7	
	82nm,0.4s								
SHLS	**Shalkode**	**1.96**	**307**	*e*P		**Pn**		**00 06 28.2**	**-1.9**
	47nm,0.2s								
SHLS				*e*S		**Sn**		**00 06 53.4**	**-1.9**
	82nm,0.4s								
PDGK	**Podgornoye**	**2.05**	**311**	Pg		**Pb**		**00 06 33.2**	**-0.7**
	7.4nm,0.4s								
PDGK				Lg		Lg		00 07 02.3	
	13nm,0.5s								
PDGK	**Podgornoye**	**2.05**	**311**	⇑Pg		**Pb**		**00 06 32.9**	**-1.0**
	9.5nm,0.5s								
PDGK				⇑Lg		Lg		00 07 03.4	
	24nm,0.7s								
UZB	**Uzynbulak**	**2.23**	**302**	Pg		**Pb**		**00 06 37.1**	**+0.2**
	14nm,0.4s								
UZB				Lg		Lg		00 07 09.1	
	55nm,0.3s								
UZB	**Uzynbulak**	**2.23**	**302**	*e*P		**Pb**		**00 06 37.1**	**+0.2**
	14nm,0.4s								
UZB				*e*S		**Sg**		**00 07 09.1**	**+1.5**
	55nm,0.3s								
SATY	**Saty**	**2.59**	**295**	Pg		**Pb**		**00 06 42.9**	**-0.3**
	4.2nm,0.2s								
SATY				Lg		Lg		00 07 18.8	
	38nm,0.3s								
SATY	**Saty**	**2.59**	**295**	*e*P		**Pb**		**00 06 42.9**	**-0.3**
	4.2nm,0.2s								
SATY				*e*S		**Sg**		**00 07 18.8**	**-0.5**
	38nm,0.3s								
KPKS	**Kokpek**	**2.60**	**305**	Pg		**Pb**		**00 06 43.3**	**0.0**
	48nm,0.5s								
KPKS				Lg		Lg		00 07 19.3	
	49nm,0.3s								
KPKS	**Kokpek**	**2.60**	**305**	*e*P		**Pb**		**00 06 43.3**	**0.0**
	48nm,0.5s								
KPKS				*e*S		**Sg**		**00 07 19.3**	**-0.4**
	49nm,0.3s								
ZHN	**Zhinishke**	**2.62**	**298**	Pg		**Pb**		**00 06 43.2**	**-0.4**
	5.8nm,0.2s								
ZHN				Lg		Lg		00 07 19.7	
	59nm,0.2s								
ZHN	**Zhinishke**	**2.62**	**298**	*e*P		**Pb**		**00 06 43.2**	**-0.4**
	5.8nm,0.2s								
ZHN				*e*S		**Sg**		**00 07 19.7**	**-0.4**
	59nm,0.2s								
DJR	**Jarkent**	**2.68**	**331**	Pg		**Pb**		**00 06 44.0**	**-0.6**
	4.9nm,0.3s								
DJR				Lg		Lg		00 07 20.6	
	19nm,0.5s								
DJR	**Jarkent**	**2.68**	**331**	*e*P		**Pb**		**00 06 44.0**	**-0.6**
	4.9nm,0.3s								
DJR				*e*S		**Sb**		**00 07 20.6**	**+2.6**
	19nm,0.5s								
KURS	**Kuram**	**2.94**	**302**	Pg		**Pb**		**00 06 49.6**	**+0.6**
	2.7nm,0.5s								
KURS				Lg		Lg		00 07 30.4	
	8.5nm,0.5s								
KURS	**Kuram**	**2.94**	**302**	*e*P		**Pb**		**00 06 49.6**	**+0.6**
	2.7nm,0.5s								
KURS				*e*S		**Sg**		**00 07 30.4**	**0.0**
	8.5nm,0.5s								
KNOS	**Konyrlen**	**2.95**	**324**	Pg		**Pb**		**00 06 49.5**	**+0.2**
	7.9nm,0.3s								
KNOS				Lg		Lg		00 07 29.9	
	20nm,0.5s								
ARXS	**Arharly**	**3.54**	**310**	Pg		**Pb**		**00 06 59.8**	**+0.5**
	5.9nm,0.4s								
ARXS				Lg		Lg		00 07 47.6	
	11nm,0.5s								
ARXS	**Arharly**	**3.54**	**310**	*e*P		**Pb**		**00 06 59.8**	**+0.5**
	5.9nm,0.4s								
ARXS				*e*S		**Sg**		**00 07 47.6**	**-2.2**
	11nm,0.5s								
MDOK	**Medeo**	**3.56**	**291**	Pg		**Pb**		**00 06 59.5**	**-0.2**
MDOK				Pg		**Pb**		**00 06 59.7**	**0.0**
	3.1nm,0.4s								
MDOK				Lg		Lg		00 07 48.5	
	9.3nm,0.8s								
MDOK				Lg		Lg		00 07 48.9	
MDOK	**Medeo**	**3.56**	**291**	*e*P		**Pb**		**00 06 59.7**	**0.0**
	3.1nm,0.4s								
MDOK				*e*S		**Sg**		**00 07 48.5**	**-1.9**
	9.3nm,0.8s								
TNSS	**Tian-Shan**	**3.60**	**288**	Pg		**Pb**		**00

	1.8nm,0.3s							
MAKZ					⇓Lg	Lg	00 08 24.1	
	4.3nm,0.8s							
MK05	**Makanchi Array**	**4.82**	**6**	⇑Pn	**Pn**	**00 07 09.6**	**+0.2**	
	0.3nm,0.3s,baz=188,slow=12							
MK05					⇓Lg	Lg	00 08 24.5	
	2.8nm,0.6s,baz=182,slow=22							
ZSN	**Zaisan**	**5.92**	**22**	Pg	**Pb**	**00 07 40.7**	**+0.9**	
	2.1nm,0.4s							
ZSN					Lg	Lg	00 08 57.6	
	3.4nm,0.5s							
ZSN	**Zaisan**	**5.92**	**22**	*e*P	**Pb**	**00 07 42.2**	**+2.4**	
	1.4nm,0.3s							
ZSN					*e*S	**Sg**	**00 09 00.7**	**-5.5**
	3.4nm,0.5s							

IDC 28 00:17:59.1±6.2, 6°.17S×142°.49E, h0km, mb3.9/2, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=230.4km s-min=32.1km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.81**	**209**	Pn	Pn	00 21 41.5	-1.8
	0.1nm,0.3s,baz=30,slow=13,SNR=7.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.26**	**205**	P	Pn	00 22 25.9	-0.4
	0.1nm,0.3s,baz=33,slow=10,SNR=11						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**74.81**	**322**	P	P	00 29 41.9	+0.5
	0.7nm,0.7s,baz=106,slow=7.0,SNR=7.6						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**84.29**	**325**	P	P	00 30 32.4	-0.5
	1.1nm,0.6s,baz=111,slow=7.9,SNR=6.7						
	1.1nm,0.8s						

*IDC **28** 00:18:50.9±0.6, 6°.48S×143°.34E, h0km, mb4.5/15, mbtmp4.5/17, ML2.1/1, MS3.4/1, Error ellipse: s-maj=28.9km s-min=14.3km az=76.0*
*NEIC **28** 00:18:51.2±1.2, 6°.325±0°.05×143°.18E±0°.09, h10km±1km, mb4.8/57, Error ellipse: s-maj=16.6km s-min=4.5km az=63.0*
*DJA **28** 00:18:56.5±1.5, 7°S±4°×14°.3E±°, h26km±12km, M4.9/20, mB5.4/6, mb4.7/20, MLv5.1/5, Mw(mB)4.8/6*
ISC 28 00:18:55.2±0.4, 6°.46S±0°.05×143°.15E±0°.07, h35km, n129, σ2°.92/129, mb4.7/58, 2D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.39**	**234**	P	Pn	00 19 41.7	-4.0
GENI	**Genyem**	**4.86**	**322**	P	Pn	00 20 11.7	+5.8
	227nm,1.0s,5μm2.1nm						
PMG	**Port Moresby**	**4.93**	**127**	Pn	**Pn**	**00 20 05.3**	**-1.6**
PMG	**Port Moresby**	**4.93**	**127**	Pn	**Pn**	**00 20 06.0**	**-0.9**
	5.4nm,0.3s,baz=310,slow=12,SNR=17						
PMG				Sn	**Sn**	**00 21 01.1**	**-1.6**
	5.1nm,0.3s,baz=258,slow=19,SNR=8.6						
	26nm,0.4s						
SMPI	**Sarmi**	**6.27**	**315**	P	Pn	00 20 32.3	+7.0
	104nm,1.3s,0.5nm						
COEN	**Coen**	**7.45**	**180**	Pn	**Pn**	**00 20 41.4**	**-0.1**
FAKI	**Fak Fak**	**11.42**	**287**	Pn	**Pn**	**00 21 33.6**	**-2.4**
SAUI	**Saumlaki**	**11.86**	**262**	Pn	**Pn**	**00 21 40.5**	**-1.4**
SAUI	**Saumlaki**	**11.86**	**262**	P	**Pn**	**00 21 45.2**	**+3.3**
	183nm,1.2s						
BNDI	**Bandanaira**	**13.33**	**278**	P	**Pn**	**00 22 02.1**	**+0.1**
	79nm,1.0s,16μm						
MTN	**Manton Dam**	**13.44**	**241**	Pn	**Pn**	**00 22 02.3**	**-1.2**
CTA	**Charters Tower**	**13.88**	**168**	Lg	Lg	00 26 20.2	
	0.3nm,0.3s,baz=61,slow=19,SNR=3.6						
QIS	**Mount Isa**	**14.43**	**193**	P	**P**	**00 22 25.0**	**+1.6**
WB0	**Warramunga Arr**	**15.73**	**212**	Pn	**Pn**	**00 22 30.8**	**-3.5**
WR0	**Warramunga Arr**	**15.81**	**211**	Pn	**Pn**	**00 22 32.5**	**-2.8**
WRAB	**Tennant Creek**	**15.89**	**212**		**Pn**	**00 22 33.6**	**-2.7**
WB2	**Warramunga Arr**	**15.89**	**212**	Pn	**Pn**	**00 22 33.4**	**-3.0**
WRA	**Warramunga Arr**	**15.90**	**212**	Pn	**Pn**	**00 22 33.9**	**-2.6**
WRA	**Warramunga Arr**	**15.90**	**212**	Pn	**Pn**	**00 22 34.3**	**-2.2**
	0.3nm,0.3s,baz=34,slow=13,SNR=17						
WRA				Sn	Sn	00 25 19.7	-12
	0.2nm,0.3s,baz=41,slow=21,SNR=1.9						
WRA				Lg	Lg	00 27 16.3	
	0.4nm,0.3s,baz=38,slow=26,SNR=5.8						
NLAI	**Namlea**	**16.31**	**281**	P	**P**	**00 22 45.0**	**+0.7**
	17nm,1.5s						
KNRA	**Kununurra**	**16.82**	**236**	Pn	**Pn**	**00 22 46.0**	**-2.1**
KNRA				IAmb	IAmb	00 22 56.9	
	comp=Z,160nm,1.9s						
SANI	**Sanana**	**17.66**	**284**	P	**P**	**00 23 01.5**	**+2.1**
	comp=Z,44nm,1.6s,comp=Z,919nm						
SOEI	**Soe**	**18.98**	**259**	P	**P**	**00 23 11.2**	**-2.8**
SOEI				IAmb	IAmb	00 23 25.9	
	comp=Z,51nm,0.9s						
SOEI	**Soe**	**18.98**	**259**	P	**Pn**	**00 23 16.3**	**+1.5**
SOEI	**Soe**	**18.98**	**259**	P	**Pn**	**00 23 17.0**	**+2.2**
	comp=Z,66nm,0.8s						
AS01	**Alice Springs**	**19.26**	**206**	P	**Pn**	**00 23 19.3**	**+1.3**
AS31	**Alice Springs**	**19.28**	**207**	P	**P**	**00 23 18.0**	**+0.9**
ASAR	**Alice Springs**	**19.28**	**207**	P	**P**	**00 23 18.2**	**+1.1**
ASAR	**Alice Springs**	**19.28**	**207**	P	**Pn**	**00 23 18.8**	**+0.4**
	comp=Z,29nm,0.8s,baz=28,slow=10,SNR=55						
ASAR				S	**S**	**00 26 47.2**	**-6.4**
	comp=Z,1.8nm,0.8s,baz=227,slow=38,SNR=3.0						
ASAR				Lg	Lg	00 28 50.8	
	comp=Z,0.1nm,0.3s,baz=19,slow=29,SNR=4.7						
EIDS	**Eidsvold**	**20.27**	**159**	P	**P**	**00 23 29.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**20.63**	**234**	P	**P**	**00 23 32.4**	**+0.6**
FITZ				IAmb	IAmb	00 23 35.3	
	comp=Z,63nm,1.9s						
FITZ	**Fitzroy Crossi**	**20.63**	**234**	P	**P**	**00 23 33.2**	**+1.4**
MMRI	**Maumere**	**20.84**	**263**	P	**P**	**00 23 32.6**	**-1.6**
LUWI	**Luwuk**	**21.03**	**284**	P	**P**	**00 23 34.8**	**-1.4**
LUWI	**Luwuk**	**21.03**	**284**	P	**P**	**00 23 42.2**	**+6.0**
	comp=Z,61nm,1.5s,comp=Z,1μm						
EDFI	**Ende, Flores**	**21.39**	**263**	P	**P**	**00 23 42.4**	**+2.2**
	comp=Z,27nm,1.4s						
OOD	**Oodnadatta**	**22.37**	**198**	P	**P**	**00 23 52.5**	**+2.1**
WRKA	**Warakurna**	**23.31**	**216**	P	**P**	**00 24 01.8**	**+1.5**
KAPI	**Kappang**	**23.33**	**272**	P	**P**	**00 23 59.0**	**-1.5**
TTSI	**Tana Toraja**	**23.50**	**277**	P	**P**	**00 24 05.9**	**+3.8**
TOLI2	**Tolitoli**	**23.56**	**288**	P	**P**	**00 24 01.3**	**-1.5**
TOLI2				IAmb	IAmb	00 24 06.0	
	comp=Z,24nm,0.9s						
LCRK	**Leigh Creek**	**24.31**	**190**	P	**P**	**00 24 10.1**	**+0.5**
ARMA	**Armidale**	**25.13**	**163**	P	**P**	**00 24 17.0**	**-0.2**
ARMA				IAmb	IAmb	00 24 21.9	
	comp=Z,23nm,1.4s						
MULG	**Mulgathing**	**25.19**	**199**	P	**P**	**00 24 20.0**	**+2.4**
STKA	**Stephens Creek**	**25.33**	**183**	P	**P**	**00 24 18.7**	**-0.1**
STKA	**Stephens Creek**	**25.33**	**183**	P	**P**	**00 24 19.1**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=340,slow=11,SNR=5.9						
	comp=Z,5.3nm,0.8s						
BBOO	**Buckleboo**	**27.04**	**193**	P	**P**	**00 24 33.8**	**-0.5**
BBOO	**Buckleboo**	**27.04**	**193**	P	**P**	**00 24 36.7**	**+2.4**
FORT	**Forrest**	**28.03**	**208**	P	**P**	**00 24 44.5**	**+1.3**
FORT				IAmb	IAmb	00 25 40.9	
	comp=Z,28nm,0.9s						
FORT	**Forrest**	**28.03**	**208**	P	**P**	**00 24 44.2**	**+1.0**
WOLH	**Wollongong Har**	**28.71**	**167**	P	**P**	**00 24 52.0**	**+2.8**
	comp=Z,32nm,0.6s						
LEM	**Lembang**	**35.29**	**267**	LR	LR	00 43 17.4	
	comp=Z,67nm,21.8s,baz=128,slow=41						
MJAR	**Matsushiro Arr**	**43.03**	**354**	P	**P**	**00 26 53.6**	**+2.1**
	comp=Z,2.3nm,0.7s,baz=176,slow=9.1,SNR=4.8						
	comp=Z,2.3nm,0.7s						
NJ2	**Nanjing**	**44.76**	**330**	*e*P	**P**	**00 27 05.3**	**-0.2**
NJ2				sP	**pP**	**00 27 12.5**	**-3.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
RPSI	**Rantau Prapat**	**45.08**	**280**	P	**P**	**00 27 07.3**	**-1.1**
RPSI				IAmb	IAmb	00 27 19.4	
	comp=Z,13nm,1.2s						
KSRS	**Korea Array**	**45.94**	**343**	P	**P**	**00 27 16.3**	**+1.6**
	comp=Z,4.4nm,1.0s,baz=164,slow=9.5,SNR=8.0						
	comp=Z,4.4nm,1.0s						
KSAR	**Wonju Array Be**	**45.95**	**343**	P	**P**	**00 27 13.9**	**-0.8**
PHRA	**Phrae**	**49.06**	**301**	P	**P**	**00 27 39.1**	**-0.2**
LYN	**LuoYang**	**50.04**	**327**	*e*P	**P**	**00 27 48.0**	**+1.5**
LYN				sP	pP	00 27 53.5	-3.6
LYN				pmax	pmax		
	comp=Z,13nm,0.5s						
LYN				pmax	pmax		
	comp=Z,110nm,3.7s						
CMAR	**Chiang Mai Arr**	**50.14**	**300**	P	**P**	**00 27 45.3**	**-2.2**
CMAR	**Chiang Mai Arr**	**50.14**	**300**	P	**P**	**00 27 50.1**	**+2.5**
	comp=Z,0.8nm,0.3s,baz=124,slow=6.1,SNR=9.3						
	comp=Z,0.8nm,0.3s						
KMI	**Kunming**	**50.31**	**310**	⇓P	**P**	**00 27 52.3**	**+3.3**
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
HNS	**HongShan**	**51.08**	**331**	⇓P	**P**	**00 27 56.0**	**+1.7**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
USA0B	**Ussuriysk Arra**	**51.42**	**350**	P	**P**	**00 27 54.8**	**-2.0**
USRK	**Ussuriysk Ar.**	**51.42**	**350**	P	**P**	**00 27 54.5**	**-2.3**
USRK	**Ussuriysk Ar.**	**51.42**	**350**	P	**P**	**00 27 58.3**	**+1.5**
	comp=Z,3.6nm,0.7s,baz=168,slow=8.5,SNR=9.0						
	comp=Z,3.6nm,0.7s						
XAN	**Xi'an**	**51.69**	**323**	P	**P**	**00 28 00.3**	**+1.3**
XAN				pmax	pmax		
	comp=Z,13nm,1.4s						
PZH	**PanZhiHua**	**51.81**	**311**	P	**P**	**00 28 00.0**	**-0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,210nm,5.7s						
MDJ	**Mudanjiang**	**52.29**	**348**	P	**P**	**00 28 03.3**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,180nm,5.5s						
CN2	**Changchun**	**52.53**	**344**	*e*P	**P**	**00 28 02.5**	**-2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2	**Chengdu**	**52.92**	**317**	P	**P**	**00 28 10.3**	**+2.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**53.18**	**360**	P	**P**	**00 28 07.2**	**-2.5**
YSS				IAmb	IAmb	00 28 12.6	
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**55.30**	**331**	*e*P	**P**	**00 28 27.8**	**+2.3**
HHC				sP	pP	00 28 36.0	-0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,5.3s						
XLT	**XiLinHaoTe**	**55.78**	**337**	*e*P	**P**	**00 28 29.8**	**+1.0**
XLT				pmax	pmax		
	comp=Z,3.0nm,1.6s						
XLT				pmax	pmax		
	comp=Z,100nm,4.4s						
BTO	**Baotou**	**55.87**	**330**	*e*P	**P**	**00 28 31.8**	**+2.3**
BTO				pP	**pP**	**00 28 36.5**	**-3.8**
BTO				sP	**sP**	**00 28 38.8**	**-5.6**
BTO				PP	**PP**	**00 30 38.5**	**+4.0**
BTO				pmax	pmax		
	comp=Z,14nm,1.0s						
BTO				pmax	pmax		
	comp=Z,130nm,4.5s						
LZH	**Lanzhou**	**56.13**	**322**	*e*P	**P**	**00 28 34.0**	**+2.4**
LZH				sP	pP	00 28 40.8	-1.6
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HEH	**HeiHe**	**58.11**	**348**	*e*P	**P**	**00 28 46.3**	**+1.2**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HEH				pmax	pmax		
	comp=Z,220nm,5.9s						
PETK	**Petropavlovsk-**	**60.61**	**10**	P	**P**	**00 29 04.1**	**+1.8**
	comp=Z,7.9nm,1.0s,baz=187,slow=11,SNR=4.4						
	comp=Z,7.9nm,1.0s						
GTA	**Gaotai**	**60.71**	**322**	P	**P**	**00 29 05.8**	**+2.3**
GTA				sP	sP	00 29 17.3	-1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GOMU	**GeErMu**	**62.06**	**317**	P	**P**	**00 29 15.0**	**+2.1**
GOMU				pP	pP	00 29 18.3	-5.5
GOMU				sP	sP	00 29 20.3	-7.6
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	**Ulaanbaatar**	**62.74**	**333**	P	**P**	**00 29 14.2**	**-2.8**
SONM	**Songino Array**	**63.01**	**333**	P	**P**	**00 29 17.5**	**-1.3**
SONM	**Songino Array**	**63.01**	**333**	P	**P**	**00 29 21.1**	**+2.3**
	comp=Z,2.2nm,1.0s,baz=166,slow=6.1,SNR=8.5						
	comp=Z,2.2nm,1.0s						
MA2	**Magadan**	**66.11**	**4**	P	**P**	**00 29 37.1**	**-1.5**
WMQ	**Urumqi**	**70.69**	**321**	*e*P	**P**	**00 30 09.8**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
VNDA	**Vanda**	**71.71**	**176**	P	**P**	**00 30 13.8**	**+0.6**
	comp=Z,2.3nm,1.0s,baz=39,slow=6.5,SNR=1.7						
	comp=Z,2.3nm,1.0s						
MKAR	**Makanchi Array**	**75.45**	**322**	P	**P**	**00 30 35.9**	**+0.2**
MKAR	**Makanchi Array**	**75.45**	**322**	P	**P**	**00 30 37.6**	**+1.9**
	comp=Z,9.3nm,1.0s,baz=110,slow=6.6,SNR=38						
	comp=Z,9.3nm,1.0s						
MAKZ	**Makanchi**	**75.65**	**322**	P	**P**	**00 30 36.9**	**+0.1**
MAKZ				IAmb	IAmb	00 30 41.5	
	comp=Z,12nm,1.0s						
KSH	**Kashi**	**76.86**	**313**	P	**P**	**00 30 47.5**	**+3.4**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	**Nilore**	**77.10**	**307**	P	**P**	**00 30 45.1**	**-0.3**
NIL				IAmb	IAmb	00 30 48.4	
	comp=Z,9.5nm,0.8s						
ZAA0	**Zalesovo Array**	**77.40**	**329**	P	**P**	**00 30 45.1**	**-1.4**
ZALV	**Zalesovo Beam**	**77.40**	**329**	P	**P**	**00 30 45.7**	**-0.9**
ZALV	**Zalesovo Beam**	**77.40**	**329**	P	**P**	**00 30 47.2**	**+0.7**
	comp=Z,4.2nm,1.0s,baz=109,slow=4.4,SNR=11						
	comp=Z,4.2nm,1.0s						
AAK	**Ala-Archa**	**78.96**	**316**	P	**P**	**00 30 54.5**	**-1.2**
AAK				IAmb	IAmb	00 31 04.5	
	comp=Z,8.3nm,1.3s						
KURK	**Kurchatov**	**79.32**	**324**	P	**P**	**00 30 55.3**	**-2.0**
KURK				IAmb	IAmb	00 31 01.4	
	comp=Z,10nm,1.1s						
KURBB	**Kurchatov Arra**	**79.33**	**324**	P	**P**	**00 30 59.0**	**+1.7**
	comp=Z,5.8nm,1.1s,baz=114,slow=4.9,SNR=23						
	comp=Z,5.8nm,1.1s						
KBL	**Kabul**	**80.70**	**306**	P	**P**	**00 31 03.1**	**-2.3**
SIMJ	**Simiganj**	**81.78**	**310**	P	**P**	**00 31 09.3**	**-1.6**
SIMJ				IAmb	IAmb	00 31 15.7	
	comp=Z,12nm,1.1s						
KK31	**Karatay Array**	**81.89**	**315**	P	**P**	**00 31 10.2**	**-1.1**
KK31				IAmb	IAmb	00 31 13.9	
	comp=Z,19nm,1.9s						
KKAR	**Karatay Array**	**81.89**	**315**	P	**P**	**00 31 10.5**	**-0.7**
G16K	**Koyuk River**	**81.94**	**20**	P	**P**	**00 31 10.1**	**-0.9**
G16K				IAmb	IAmb	00 31 15.5	
	comp=Z,8.0nm,1.1s						
H17K	**Granite Mounta**	**82.54**	**21**	P	**P**	**00 31 11.4**	**-2.7**
H17K				IAmb	IAmb	00 31 18.7	
	comp=Z,9.9nm,1.0s						
G18K	**Tagagawik**	**83.50**	**21**	P	**P**	**00 31 18.9**	**-0.2**
QSPA	**South Pole Qui**	**83.51**	**180**	P	**P**	**00 31 20.1**	**+0.7**
QSPA				IAmb	IAmb	00 31 23.0	
	comp=Z,9.3nm,1.0s						
QSPA	**South Pole Qui**	**83.51**	**180**	P	**P**	**00 31 20.6**	**+1.2**
	comp=Z,6.1nm,0.8s,baz=323,slow=1.1,SNR=18						
	comp=Z,6.1nm,0.8s						
J19K	**Poorman**	**83.65**	**23**	P	**P**	**00 31 19.0**	**-0.9**
J19K				IAmb	IAmb	00 31 24.9	
	comp=Z,15nm,1.4s						
E18K	**Tukpahlearik C**	**83.68**	**19**	P	**P**	**00 31 19.2**	**-0.7**
E18K				IAmb	IAmb	00 31 24.3	
	comp=Z,6.7nm,1.0s						
H19K	**Roundabout Mou**	**84.10**	**21**	P	**P**	**00 31 20.7**	**-1.4**
G19K	**Purcell Mounta**	**84.18**	**21**	P	**P**	**00 31 22.8**	**+0.2**
G19K				IAmb	IAmb	00 31 27.1	
	comp=Z,7.4nm,1.0s						
J20K	**Nowinta River**	**84.31**	**23**	P	**P**	**00 31 22.4**	**-0.9**
NRIK	**Noril'sk**	**84.56**	**343**	P	**P**	**00 31 23.4**	**-1.0**
NRIK	**Noril'sk**	**84.56**	**343**	P	**P**	**00 31 26.0**	**+1.6**
	comp=Z,13nm,1.0s,baz=125,slow=5.1,SNR=20						
	comp=Z,13nm,1.0s						
E19K	**Redstone River**	**84.80**	**20**	P	**P**	**00 31 24.0**	**-1.7**
E19K				IAmb	IAmb	00 31 30.5	
	comp=Z,7.9nm,1.0s						
BVAR	**Borovoye Array**	**84.91**	**325**	P	**P**	**00 31 27.8**	**+1.3**
	comp=Z,13nm,0.9s,baz=104,slow=6.3,SNR=42						
	comp=Z,13nm,0.9s						
BRVK	**Borovoye**	**84.98**	**325**	P	**P**	**00 31 26.3**	**-0.5**
D19K	**Kuna River**	**85.05**	**18**	P	**P**	**00 31 26.4**	**-0.6**
D19K				IAmb	IAmb	00 31 31.0	
	comp=Z,6.2nm,1.1s						
RND	**Reindeer**	**86.11**	**25**	P	**P**	**00 31 30.9**	**-1.5**
RND				IAmb	IAmb	00 31 35.1	
	comp=Z,10.0nm,1.0s						
G23K	**Bananza Creek**	**86.97**	**21**	P	**P**	**00 31 35.6**	**-0.9**
G23K				IAmb	IAmb	00 31 40.6	
	comp=Z,4.6nm,1.0s						
D22K	**Ayikyak River**	**86.98**	**19**	P	**P**	**00 31 35.9**	**-0.6**
CCB	**Clear Creek Bu**	**87.01**	**24**	P	**P**	**00 31 34.6**	**-2.1**
CCB				IAmb	IAmb	00 31 39.2	
	comp=Z,11nm,1.1s						
IL31		**87.42**	**24**	P	**P**	**00 31 36.6**	**-2.0**
IL31				IAmb	IAmb	00 31 40.9	
	comp=Z,7.9nm,1.1s						
ILAR	**Eielson Array**	**87.42**	**24**	P	**P**	**00 31 37.7**	**-1.0**
ILAR	**Eielson Array**	**87.42**	**24**	P	**P**	**00 31 37.9**	**-0.8**
	comp=Z,3.6nm,0.9s,baz=258,slow=5.3,SNR=20						
	comp=Z,3.6nm,0.9s						
J25K	**Salcha River,**	**87.98**	**24**	P	**P**	**00 31 40.5**	**-0.9**
C23K	**Itkillik River**	**88.05**	**19**	P	**P**	**00 31 41.8**	**+0.2**
FYU	**Fort Yukon**	**88.69**	**22**	P	**P**	**00 31 43.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**141.48**	**283**	PKhKP	PKPpre	00 38 19.5	
	comp=Z,1.0nm,0.9s,baz=58,slow=3.4,SNR=5.1						
DBIC	**Dimbokro**	**148.22**	**272**	PKPbc	**PKiKP**	**00 38 40.6**	**+0.2**
	comp=Z,20nm,1.0s,baz=89,slow=3.1,SNR=16						

*ISN **28** 00:18:57.6±0.7, 34°.77N×45°.88E, h25km±252km, ML2.6*
*TEH **28** 00:18:58.4, 34°.81N×45°.87E, h8km±52km, ML2.9*
ISC 28 00:18:58.1±1.7, 34°.79N±0°.09×45°.93E±0°.06, h10km, n10, σ1°51/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.39**	**104**	Pg	**Pb**	**00 19 07.1**	**0.0**
KGS1	**Ghasr-e-Shirin**	**0.40**	**225**	Pg	**Pb**	**00 19 06.2**	**-1.1**
IGHG	**Ghaleghazi**	**0.70**	**131**	Pg	**Pn**	**00 19 13.1**	**-1.2**
ILIN	**Lien**	**0.86**	**81**	Pg	**Pn**	**00 19 16.1**	**-0.3**
KCHF	**Cheshme Sefid,**	**1.05**	**119**	Pg	**Pn**	**00 19 19.9**	**+0.8**
ILBA	**Ilam Banvizeh**	**1.19**	**169**	Pg	**Pg**	**00 19 21.9**	**+1.0**
IBZA	**Bozab**	**1.62**	**101**	Pg	**Pg**	**00 19 29.7**	**+0.5**
IBDR	**Badra**	**1.68**	**180**	*e*Pn	**Pg**	**00 19 29.5**	**-0.8**
IBDR				*e*Sn	**Sg**	**00 19 53.0**	**+1.0**
IBDR				AML	AML	00 20 00.4	
	comp=E,94nm,0.3s						
IBDR				AML	AML	00 20 02.2	
	comp=N,72nm,0.3s						
BHD	**Baghdad**	**1.99**	**221**	*e*Pn	**Pb**	**00 19 34.0**	**-0.4**
BHD				*e*Sn	**Sb**	**00 20 00.0**	**+0.8**
RAFI	**Al-Rafai**	**3.06**	**177**	*e*Pn	**Pn**	**00 19 49.0**	**+2.4**
RAFI				*e*Sn	**Sb**	**00 20 27.0**	**-3.1**
RAFI				AML	AML	00 20 35.7	
	comp=N,28nm,0.3s						
RAFI				AML	AML	00 20 42.8	
	comp=E,41nm,0.7s						

*SOME **28** 00:21:29.1, 41°.93N×81°.92E, h20km*
*NNC **28** 00:21:31.8±1.7, 41°.96N×81°.69E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=12.9km s-min=9.8km az=173.0*
ISC 28 00:21:35.3±2.5, 42°.0N±0°.1×81°.72E±0°.0, h28km±18km, n46, σ2°.72/68, 9C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.79**	**326**	P	**Pn**	**00 22 04.3**	**-0.2**
	10nm,0.2s						
KTMS				S	**Sb**	**00 22 29.8**	**+0.2**
	47nm,0.6s						
KTMS	**Ketmen**	**1.79**	**326**	*e*P	**Pn**	**00 22 04.3**	**-0.2**
	10nm,0.2s						
KTMS				*e*S	**Sb**	**00 22 29.8**	**+0.2**
	47nm,0.6s						
SHLS	**Shalkode**	**2.05**	**306**	Pg	**Pn**	**00 22 05.1**	**-2.9**
	49nm,0.2s						
SHLS				Lg	Lg	00 22 31.7	
	78nm,0.3s						
SHLS	**Shalkode**	**2.05**	**306**	*e*P	**Pn**	**00 22 05.1**	**-2.9**
	49nm,0.2s						
SHLS				*e*S	**Sn**	**00 22 31.7**	**-1.0**
	78nm,0.3s						
PDGK	**Podgornoye**	**2.13**	**310**	Pg	**Pn**	**00 22 09.7**	**+0.5**
	8.6nm,0.3s						
PDGK				Lg	Lg	00 22 40.0	
	12nm,0.3s						
PDGK	**Podgornoye**	**2.13**	**310**	⇓Pn	**Pn**	**00 22 09.3**	**+0.1**
	9.7nm,0.5s						
PDGK				⇑Sn	**Sb**	**00 22 40.1**	**+0.6**
	15nm,0.5s						
UZB	**Uzunbulak**	**2.31**	**302**	Pg	**Pb**	**00 22 13.5**	**-3.0**
	17nm,0.3s						
UZB				Lg	Lg	00 22 45.9	
	53nm,0.4s						
UZB	**Uzunbulak**	**2.31**	**302**	*e*P	**Pb**	**00 22 13.5**	**-3.0**
	17nm,0.3s						
UZB				*e*S	**Sb**	**00 22 45.9**	**+1.1**
	53nm,0.4s						
SATY	**Saty**	**2.68**	**295**	Pg	**Pb**	**00 22 19.2**	**-3.5**
	6.9nm,0.4s						
SATY				Lg	Lg	00 22 55.5	
	34nm,0.3s						
SATY	**Saty**	**2.68**	**295**	*e*P	**Pb**	**00 22 19.2**	**-3.5**
	6.9nm,0.4s						
SATY				*e*S	**Sb**	**00 22 55.5**	**+0.3**
	34nm,0.3s						
KPKS	**Kokpek**	**2.69**	**305**	Pg	**Pb**	**00 22 19.6**	**-3.3**
	43nm,0.3s						
KPKS				Lg	Lg	00 22 56.0	
	51nm,0.3s						
KPKS	**Kokpek**	**2.69**	**305**	*e*P	**Pb**	**00 22 19.6**	**-3.3**
	43nm,0.3s						
KPKS				*e*S	**Sb**	**00 22 56.0**	**+0.5**
	51nm,0.3s					

	6.6nm,0.1s								
TDK					*e*S		**Sb**	**00 23 34.7**	**+5.3**
	34nm,0.6s								
CHKK	**Chushkaly**	**3.95**	**300**		Pg		**Pb**	**00 22 43.0**	**-1.3**
	0.7nm,0.1s								
CHKK					Lg		Lg	00 23 36.0	
	6.8nm,0.4s								
CHKK	**Chushkaly**	**3.95**	**300**		*e*P		**Pb**	**00 22 43.0**	**-1.3**
	0.7nm,0.1s								
CHKK					*e*S		**Sb**	**00 23 36.0**	**+4.3**
	6.8nm,0.4s								
MTBS	**Maitube**	**4.08**	**288**		Pg		**Pb**	**00 22 42.6**	**-3.9**
	1.8nm,0.2s								
MTBS					Lg		Lg	00 23 35.6	
	4.0nm,0.4s								
MTBS	**Maitube**	**4.08**	**288**		*e*P		**Pb**	**00 22 44.6**	**-1.9**
	1.8nm,0.2s								
MTBS					*e*S		**Sb**	**00 23 38.6**	**+3.3**
	4.9nm,0.5s								
KTBS	**Karatobe**	**4.09**	**297**		Pg		**Pb**	**00 22 45.0**	**-1.7**
	3.3nm,0.4s								
KTBS					Lg		Lg	00 23 39.5	
	9.0nm,0.5s								
KTBS	**Karatobe**	**4.09**	**297**		*e*P		**Pb**	**00 22 45.0**	**-1.7**
	3.3nm,0.4s								
KTBS					*e*S		**Sb**	**00 23 39.5**	**+3.8**
	9.0nm,0.5s								
KST	**Kastek**	**4.39**	**286**		Pg		**Pb**	**00 22 50.7**	**-1.1**
	2.2nm,0.6s								
KST					Lg		Lg	00 23 49.2	
	5.1nm,0.6s								
KST	**Kastek**	**4.39**	**286**		*e*P		**Pb**	**00 22 50.7**	**-1.1**
	2.2nm,0.6s								
KST					*e*S		**Sb**	**00 23 49.2**	**+4.9**
	5.1nm,0.6s								
KUU	**Kurty**	**4.39**	**298**		Pg		**Pb**	**00 22 52.6**	**+0.8**
	2.0nm,0.5s								
KUU					Lg		Lg	00 23 52.7	
	9.1nm,0.7s								
KUU	**Kurty**	**4.39**	**298**		*e*P		**Pb**	**00 22 52.6**	**+0.8**
	2.0nm,0.5s								
KUU					*e*S		**Sb**	**00 23 52.7**	**+8.4**
	9.1nm,0.7s								
DGS	**Degeres**	**4.57**	**288**		Pg		**Pb**	**00 22 54.0**	**-0.9**
	1.6nm,0.4s								
DGS					Lg		Lg	00 23 54.9	
	13nm,0.8s								
DGS	**Degeres**	**4.57**	**288**		*e*P		**Pb**	**00 22 54.0**	**-0.9**
	1.6nm,0.4s								
DGS					*e*S		**Sb**	**00 23 54.9**	**+5.4**
	13nm,0.8s								
TKM2	**Tokmak 2**	**4.63**	**284**	⇑	Pn		Pn	00 22 48.5	+4.9
	1.7nm,0.6s								
TKM2				⇑	Pg		Pb	00 23 00.3	+4.4
	1.0nm,0.5s								
TKM2				⇑	Lg		Lg	00 23 57.5	
	3.5nm,0.6s								
KRBS	**Karabastau**	**4.77**	**293**		Pg		**Pb**	**00 22 57.1**	**-1.1**
	1.3nm,0.4s								
KRBS					Lg		Lg	00 24 00.2	
	2.1nm,0.3s								
KRBS	**Karabastau**	**4.77**	**293**		*e*P		**Pb**	**00 22 57.1**	**-1.1**
	1.3nm,0.4s								
KRBS					*e*S		**Sb**	**00 24 00.2**	**+5.1**
	2.1nm,0.3s								
MK05	**Makanchi Array**	**4.84**	**5**	⇑	Pn		**Pn**	**00 22 45.9**	**-0.5**
	0.2nm,0.2s,baz=193,slow=13								
MK05				⇑	Pg		**Pb**	**00 23 00.3**	**+0.9**
	0.5nm,0.4s,baz=166,slow=17								
MK05				⇓	Lg		Lg	00 23 59.7	
	1.6nm,0.5s,baz=186,slow=26								
MAKZ	**Makanchi**	**4.84**	**2**	⇑	Pn		**Pn**	**00 22 45.9**	**-0.5**
	2.1nm,0.4s								
MAKZ				⇑	Lg		Lg	00 23 59.7	
	1.7nm,0.5s								
ZSN	**Zaisan**	**5.92**	**21**		Pg		**Pb**	**00 23 17.3**	**-0.5**
	1.6nm,0.3s								
ZSN					Lg		Lg	00 24 35.4	
	7.6nm,1.3s								
ZSN	**Zaisan**	**5.92**	**21**		*e*P		**Pb**	**00 23 17.3**	**-0.5**
	1.6nm,0.3s								
ZSN					*e*S		Sb	00 24 35.4	+7.2
	7.6nm,1.3s								

*NEIC **28** 00:30:36.5±2.6,41.°95N±0.°05×126.°34W±0.°03,h10km±2km, ML3.2/76,ML3.3/13(NCEDC),Error ellipse: s-maj=9.4km s-min=3.0km az=194.0*
*NCEDC **28** 00:30:38.6±2.4,41.°93N±0.°04×126.°4W±0.°1,h23km±2km, Error ellipse: s-maj=13.5km s-min=5.5km az=254.0*
*IDC **28** 00:30:39.9±2.5,42.°07N×125.°99W,h0km,mb3.3/4, mbtmp3.3/8,ML3.2/4,MS3.0/7,Error ellipse: s-maj=42.8km s-min=17.4km az=46.0*

ISC 28 00:30:39.3±1.3,41.°94N±0.°04×126.°17W±0.°08,h10km,n70, σ1s76/64,mb3.4/4,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.47**	**79**		**Pn**	**00 31 03.9**	**-2.1**
KBO					**Sb**	**00 31 24.7**	**-0.9**
KEBM	**Edson Butte**	**1.65**	**55**	Pn	**Pn**	**00 31 05.7**	**-2.7**
KEBM				Sn	**Sn**	**00 31 27.5**	**-2.2**
KEBM				IAML		00 31 31.1	
	comp=E,279nm,1.6s						
KEBM				IAML		00 31 31.5	
	comp=N,330nm,1.0s						
KSXB	**Camp Six Broad**	**1.71**	**93**	Pn	**Pn**	**00 31 07.3**	**-2.1**
KRMB	**Red Mountain**	**1.74**	**103**	Pn	**Pn**	**00 31 08.0**	**-1.8**
KRMB				Sn	**Sn**	**00 31 30.9**	**-1.1**
KRPM	**Rodgers**	**1.79**	**115**	Pn	**Pn**	**00 31 08.3**	**-2.0**
KRPM				IAML		00 31 33.1	
	comp=E,175nm,0.9s						
KRPM				IAML		00 31 36.7	
	comp=N,154nm,2.0s						
L02F	**Cave Junction**	**1.94**	**84**	Pn	**Pn**	**00 31 10.6**	**-1.9**
JCC	**Jacoby Creek,**	**1.96**	**124**	Pn	**Pn**	**00 31 10.3**	**-2.3**
K02D	**Willamette Mer**	**2.00**	**67**	Pn	**Pn**	**00 31 11.3**	**-2.1**
KCTM	**Capetown**	**2.01**	**136**		**Pn**	**00 31 11.7**	**-1.6**
J01E	**Myrtle Point**	**2.06**	**53**	Pn	**Pn**	**00 31 12.0**	**-2.0**
J01E				IAML		00 31 40.0	
	comp=E,126nm,1.9s						
KHMM	**Horse Mountain**	**2.12**	**119**	Pn	**Pn**	**00 31 12.7**	**-2.2**
KHMM				IAML		00 31 47.2	
	comp=N,89nm,1.5s						
KHMM				IAML		00 31 58.2	
	comp=E,97nm,1.2s						
KMPM	**Mount Pierce**	**2.17**	**134**	Pn	**Pn**	**00 31 13.1**	**-2.4**
KSMM	**Slide Mountain**	**2.31**	**139**		**Pn**	**00 31 15.2**	**-2.4**
KCRM	**Chalk Rock**	**2.33**	**130**		**Pn**	**00 31 16.3**	**-1.5**
DBO	**Dodson Butte**	**2.46**	**60**	Pn	**Pn**	**00 31 18.3**	**-1.4**
DBO				IAML		00 31 53.7	
	comp=E,82nm,1.4s						
HUMO	**Hull Mountain**	**2.48**	**73**	Pn	**Pn**	**00 31 18.1**	**-1.7**
KMRM	**Mail Ridge**	**2.53**	**132**	Pn	**Pn**	**00 31 19.2**	**-1.4**
KMRM				IAML		00 31 54.2	
	comp=E,176nm,0.8s						
KMRM				IAML		00 31 55.5	
	comp=N,155nm,1.0s						
KHBM	**Hayfork Bally**	**2.56**	**119**		**Pn**	**00 31 19.8**	**-1.3**
YBH	**Yreka Blue Hor**	**2.59**	**93**	Pn	**Pn**	**00 31 20.9**	**-0.6**
YBH	**Yreka Blue Hor**	**2.59**	**93**	Pn	**Pn**	**00 31 21.6**	**+0.2**
	comp=N,3.2nm,0.3s,baz=277,slow=13,SNR=62						
YBH				LR	LR	00 32 05.7	
	comp=N,86nm,21.8s,baz=315,slow=35 comp=N,37nm,0.9s						
L04D	**Klamath Falls**	**2.89**	**83**	Pn	**Pn**	**00 31 25.0**	**-0.6**
L04D				IAML		00 31 54.7	
	comp=E,43nm,0.7s						
KCPM	**Cahto Peak**	**2.98**	**138**	Pn	**Pn**	**00 31 24.2**	**-2.6**
KCPM				IAML		00 32 02.0	
	comp=E,121nm,0.4s						
KCPM				IAML		00 32 15.6	
	comp=N,104nm,1.1s						
BUCK	**Buck Mountain**	**3.25**	**45**	Pn	**Pn**	**00 31 29.3**	**-1.1**
BUCK				IAML		00 32 17.6	
	comp=E,89nm,2.8s						
BUCK				IAML		00 32 19.8	
	comp=N,76nm,1.5s						
I04A	**Tendick Farm,**	**3.33**	**55**	Pn	**Pn**	**00 31 30.0**	**-1.4**
I04A				IAML		00 32 12.2	
	comp=N,45nm,1.4s						
I04A				IAML		00 32 17.7	
	comp=E,60nm,1.6s						
K04D	**Chiloquin, OR**	**3.35**	**77**	Pn	**Pn**	**00 31 28.5**	**-3.3**
K04D				IAML		00 33 38.9	
	comp=E,66nm,1.9s						
H04D	**Lebanon**	**3.60**	**43**	Pn	**Pn**	**00 31 31.6**	**-3.6**
H04D				IAML		00 32 01.3	
	comp=N,60nm,0.1s						
HEBO	**Mount Hebo**	**3.71**	**27**	Pn	**Pn**	**00 31 33.3**	**-3.5**
HOPS	**Hopland Field**	**3.77**	**140**	Pn	**Pn**	**00 31 35.4**	**-2.2**
J05D	**Fort Rock, OR**	**3.88**	**68**	Pn	**Pn**	**00 31 37.6**	**-1.6**
J05D				IAML		00 33 12.2	
	comp=N,23nm,4.7s						
J05D				IAML		00 33 19.6	
	comp=E,25nm,3.7s						
G03D	**McMinnville, O**	**3.89**	**32**	Pn	**Pn**	**00 31 38.1**	**-1.1**
K05A	**Summer Lake**	**3.99**	**77**	Pn	**Pn**	**00 31 40.4**	**-0.3**
K05A				IAML		00 33 21.8	
	comp=N,25nm,4.4s						
K05A				IAML		00 33 59.9	
	comp=E,28nm,4.4s						
H04A	**Detroit Lake**	**4.00**	**45**	Pn	**Pn**	**00 31 39.9**	**-0.7**
H04A				IAML		00 32 33.0	
	comp=N,23nm,0.6s						
H04A				IAML		00 32 34.8	
	comp=E,28nm,0.9s						
PINE	**Pine Mountain**	**4.27**	**63**	Pn	**Pn**	**00 31 43.9**	**-0.6**
PINE				IAML		00 32 40.6	
	comp=E,26nm,4.6s						
PINE				IAML		00 33 19.2	
	comp=N,25nm,4.7s						
I05D	**Terrebonne, OR**	**4.27**	**54**	Pn	**Pn**	**00 31 44.2**	**-0.2**
I05D				IAML		00 33 03.2	
	comp=E,30nm,2.1s						
ORV	**Oroville**	**4.27**	**122**	Pn	**Pn**	**00 31 42.2**	**-2.2**
ORV				IAML		00 32 37.2	
	comp=E,22nm,0.6s						
ORV				IAML		00 32 40.5	
	comp=N,22nm,0.8s						
F03A	**Seaside**	**4.41**	**24**	Pn	**Pn**	**00 31 43.7**	**-2.7**
MCCM	**Marconi Confer**	**4.55**	**145**	Pn	**Pn**	**00 31 46.6**	**-1.7**
F04A	**Amboy**	**4.82**	**33**	Pn	**Pn**	**00 31 51.6**	**-0.4**
F04A				IAML		00 32 49.5	
	comp=N,29nm,2.4s						
F04A				IAML		00 32 59.9	
	comp=E,28nm,2.5s						
AFDM	**Forest Hills D**	**4.96**	**125**	Pn	**Pn**	**00 31 51.9**	**-2.1**
AFDM				IAML		00 32 52.5	
	comp=E,13nm,4.3s						
AFDM				IAML		00 33 02.8	
	comp=N,11nm,2.4s						
E03A	**Lebam**	**4.97**	**21**	Pn	**Pn**	**00 31 53.1**	**-0.8**
G06A	**Carlson Farm,**	**5.20**	**49**	Pn	**Pn**	**00 31 57.6**	**+0.4**
G06A				IAML		00 33 03.0	
	comp=N,18nm,2.4s						
G06A				IAML		00 34 10.0	
	comp=E,20nm,4.7s						
I07A	**Izee**	**5.34**	**64**	Pn	**Pn**	**00 31 57.8**	**-1.3**
MPK	**Martis Peak**	**5.37**	**117**	Pn	**Pn**	**00 31 58.0**	**-1.7**
PAHR	**Pah Rah Range**	**5.61**	**111**	Pn	**Pn**	**00 32 02.1**	**-0.8**
LON	**Longmire**	**5.74**	**32**	Pn	**Pn**	**00 32 04.2**	**-0.4**
PNTR	**Pine Nut**	**5.76**	**117**	Pn	**Pn**	**00 32 04.6**	**-0.5**
CMB	**Columbia Colle**	**5.91**	**129**	Pn	**Pn**	**00 32 06.2**	**-0.7**
WAKR	**Walker**	**6.19**	**121**	Pn	**Pn**	**00 32 11.2**	**+0.2**
G08A	**Pilot Rock**	**6.21**	**55**	Pn	**Pn**	**00 32 10.8**	**-0.4**
LTY	**Liberty**	**6.61**	**35**	Pn	**Pn**	**00 32 16.9**	**+0.4**
KVN	**Kaiserville**	**6.79**	**112**	Pn	**Pn**	**00 32 19.6**	**+0.3**
NVAR	**Mina Array Bea**	**6.97**	**118**	Pn	**Pn**	**00 32 20.9**	**-0.8**
NVAR	**Mina Array Bea**	**6.97**	**118**	Pn	**Pn**	**00 32 22.4**	**+0.8**
	comp=E,0.3nm,0.3s,baz=299,slow=14,SNR=6.4						
NVAR				LR	LR	00 34 24.3	
	comp=E,40nm,18.3s,baz=278,slow=32 comp=E,0.7nm,0.6s						
BMO	**Blue Mountains**	**7.08**	**63**	Pn	**Pn**	**00 32 23.8**	**+0.7**
PLID	**Pearl Lake**	**8.03**	**64**	Pn	**Pn**	**00 32 35.8**	**-0.5**
ELK	**Elko**	**8.31**	**95**	Pn	**Pn**	**00 32 43.6**	**+3.5**
	comp=E,0.1nm,0.3s,baz=292,slow=14,SNR=14						
ELK				LR	LR	00 36 08.1	
	comp=E,215nm,21.3s,baz=313,slow=40 comp=E,2.1nm,0.7s						
NEW	**Newport**	**8.99**	**42**	LR	LR	00 36 12.4	
	comp=E,31nm,19.2s,baz=254,slow=38						
BBB	**Bella Bella**	**10.34**	**353**	LR	LR	00 36 16.3	
	comp=E,122nm,21.5s,baz=184,slow=33						
PDAR	**Pinedale Array**	**12.32**	**81**	Pn	**Pn**	**00 33 36.9**	**+1.9**
	baz=279,slow=8.1,SNR=3.6						
PDAR				LR	LR	00 38 51.2	
	comp=E,119nm,18.3s,baz=268,slow=40 comp=E,0.5nm,0.8s						
ANMO	**Albuquerque**	**16.93**	**108**	LR	LR	00 41 48.3	
	comp=E,106nm,18.9s,baz=32,slow=40						
YKA	**Yellowknife Ar**	**21.70**	**15**	P	**P**	**00 35 30.3**	**+0.1**
	comp=E,1.2nm,0.8s,baz=205,slow=12,SNR=16 comp=E,1.2nm,0.8s						
TXAR	**Lajitas Array**	**22.12**	**117**	P	**P**	**00 35 38.1**	**+3.1**
	comp=E,1.4nm,1.0s,baz=301,slow=9.8,SNR=6.5 comp=E,1.4nm,1.0s						
ULM	**Lac du Bonnet**	**22.47**	**58**	P	**P**	**00 35 38.5**	**0.0**
	comp=E,1.3nm,0.6s,baz=269,slow=13,SNR=6.1 comp=E,1.3nm,0.6s						
ILAR	**Eielson Array**	**25.75**	**340**	P	**P**	**00 36 11.1**	**+1.3**
	comp=E,0.4nm,0.9s,baz=159,slow=7.7,SNR=3.2 comp=E,0.4nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**60.08**	**270**	T	T	01 45 35.4	
	baz=52,slow=75,SNR=25						
H11N2	**WAKE ISLAND Hy**	**60.08**	**270**	T	T	01 45 35.6	
	baz=52,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**60.09**	**270**	T	T	01 45 36.2	
	baz=52,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**60.97**	**269**	T	T	01 46 35.0	
	baz=52,slow=75,SNR=95						
H11S2	**WAKE ISLAND Hy**	**60.98**	**269**	T	T	01 46 36.2	
	baz=52,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**60.99**	**269**	T	T	01 46 36.8	
	baz=52,slow=75,SNR=64						

*IDC **28** 00:31:21.0±0.6,28.°54S×178.°23W,h198km±5km,mb3.4/6, mbtmp4.0/6,MS3.1/1,Error ellipse: s-maj=23.6km s-min=21.3km az=87.0*

ISC 28 00:31:20.8±0.7,28.°5S±0.°2×178.°2W±0.°2,h198km,n22, σ0s76/20,mb3.7/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.81**	**160**	P	**Pn**	**00 31 49.8**	**+0.6**
	827nm,0.3s,baz=98,slow=7.7,SNR=28						
RAO				LR	LR	00 32 06.0	
	comp=Z,272nm,20.7s,baz=125,slow=60						
RAO				S	**Sn**	**00 32 11.3**	**+0.1**
	1μm,0.3s,baz=114,slow=22,SNR=8.5						
ASAR	**Alice Springs**	**43.05**	**265**	P	**P**	**00 39 01.5**	**+0.1**
	0.2nm,0.3s,baz=102,slow=7.7,SNR=2.1 0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.86**	**270**	P	**P**	**00 39 07.8**	**-0.1**
	0.4nm,0.3s,baz=110,slow=7.8,SNR=14 0.4nm,0.3s						
QSPA	**South Pole Qui**	**61.61**	**180**	P	**P**	**00 41 17.5**	**+0.3**
	1.5nm,0.6s,baz=66,slow=1.2,SNR=12 1.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**85.47**	**327**	P	**P**	**00 43 38.0**	**+2.0**
	2.2nm,0.8s,baz=104,slow=6.1,SNR=4.2 2.2nm,0.8s						
NVAR	**Mina Array Bea**	**86.98**	**43**	P	**P**	**00 43 44.3**	**+0.4**
	0.6nm,0.7s,baz=226,slow=7.4,SNR=4.3 0.6nm,0.7s						
KLR	**Kul'dur**	**89.29**	**330**	P	**P**	**00 43 54.4**	**+0.2**
	1.4nm,0.9s,baz=357,slow=1.3,SNR=5.7 1.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**92.58**	**289**	LR	LR	01 28 44.8	
	comp=Z,9.1nm,18.3s,baz=145,slow=37						
MKAR	**Makanchi Array**	**116.39**	**311**	PKP	**PKPdf**	**00 49 39.6**	**-1.1**
	0.4nm,0.4s,baz=207,slow=1.1,SNR=14						
KURBB	**Kurchatov Arra**	**119.62**	**314**	PKP	**PKPdf**	**00 49 45.8**	**-0.9**
	0.6nm,0.5s,baz=113,slow=1.8,SNR=7.7						
BVAR	**Borovoye Array**	**124.89**	**317**	PKP	**PKPdf**	**00 49 56.4**	**-0.4**
	1.5nm,0.5s,baz=138,slow=1.4,SNR=17						
ARCES	**ARCESS Array B**	**136.69**	**348**	PKP	**PKiKP**	**00 50 19.6**	**-0.9**
	2.4nm,0.8s,baz=26,slow=2.3,SNR=6.6						
FINES	**FINESS Array B**	**143.29**	**341**	PKhKP	PKPpre	00 50 27.6	
	0.9nm,0.3s,baz=48,slow=3.2,SNR=15						
KBZ	**Khabaz**	**143.86**	**306**	PKP	PKPbc	00 50 31.3	+0.7
	1.0nm,0.7s,baz=342,slow=3.2,SNR=4.4						
NB2	**NORSAR Subarra**	**146.84**	**352**	PKP	**PKPbc**	**00 50 38.9**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=10,slow=2.9						
NOA	**NORSAR Array B**	**146.84**	**352**	PKPbc	**PKPbc**	**00 50 39.1**	**0.0**
	comp=Z,0.5nm,0.6s,baz=67,slow=1.2,SNR=8.6						
HFS	**Hagfors**	**147.34**	**349**	PKPbc	**PKPbc**	**00 50 39.9**	**-0.6**
	comp=Z,5.4nm,0.6s,baz=100,slow=3.6,SNR=14						
AKASG	**Malin Array Be**	**149.65**	**325**	PKPbc	**PKPbc**	**00 50 46.4**	**-0.2**
	comp=Z,3.0nm,0.4s,baz=45,slow=3.0,SNR=17						
MMAI	**Mount Meron Ar**	**150.82**	**287**	PKPbc	**PKPbc**	**00 50 50.5**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=99,slow=3.9,SNR=5.0						
BRTR	**Keskin Array B**	**151.48**	**301**	PKPbc	**PKPbc**	**00 50 50.8**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=136,slow=4.2,SNR=5.8						
EKA	**Eskdalemuir Ar**	**152.94**	**6**	PKPab	**PKPab**	**00 51 05.8**	**-0.2**
	comp=Z,4.8nm,1.1s,baz=337,slow=3.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**164.73**	**180**	PKPab	**PKPab**	**00 51 57.2**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=165,slow=2.6,SNR=5.0						

*TEH **28** 00:39:53.7,33.°25N×47.°05E,h10km±86km,ML2.6*
*ISN **28** 00:39:54.3±0.6,33.°23N×47.°06E,h10km±3km,ML2.3*

ISC 28 00:39:53.6±1.0,33.°25N±0.°04×47.°03E±0.°04,h10km,n12, σ0s56/16,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.74**	**68**	Pg	**Pg**	**00 40 07.8**	**-0.1**
IKFM				Sg	**Sb**	**00 40 18.0**	**-0.8**
ILBA	**Ilam Banvizeh**	**0.78**	**299**	Pg	**Pg**	**00 40 08.5**	**-0.3**
IBDR	**Badra**	**0.93**	**262**	*e*Pg	**Pn**	**00 40 13.0**	**+0.2**
IBDR				*e*Sg	**Sn**	**00 40 26.0**	**-0.2**
KCHF	**Cheshme Sefid,**	**1.03**	**1**	Pg	**Pg**	**00 40 12.4**	**-1.0**
IGHG	**Ghaleghazi**	**1.15**	**341**	Pg	**Pn**	**00 40 16.2**	**+0.2**
IBZA	**Bozab**	**1.40**	**29**	Pg	**Pg**	**00 40 20.8**	**+0.2**
IDHR	**Dehrash**	**1.54**	**340**	Pg	**Pb**	**00 40 22.9**	**+0.4**
HSAM	**Samen**	**1.63**	**53**	Pg	**Pg**	**00 40 24.8**	**-0.1**
ILIN	**Lien**	**1.67**	**358**	Pg	**Pg**	**00 40 25.3**	**-0.4**
RAFI	**Al-Rafai**	**1.70**	**207**	*e*Pn	**Pg**	**00 40 26.0**	**-0.3**
RAFI				*e*Sn	**Sg**	**00 40 49.0**	**+0.6**
RAFI				AML	AML	00 40 52.4	
	comp=E,40nm,0.4s						
RAFI				AML	AML	00 40 58.1	
	comp=N,50nm,0.4s						
KGS1	**Ghasr-e-Shirin**	**1.73**	**317**	Pg	**Pb**	**00 40 26.2**	**+0.5**
BHD	**Baghdad**	**2.22**	**271**	*e*Pn	**Pb**	**00 40 33.0**	**-0.8**
BHD				*e*Sn	**Sb**	**00 41 02.0**	**+0.7**

*NEIC **28** 00:40:51.3±1.5,55.°92N±0.°10×149.°6W±0.°1,h8km±7km, ML3.5/36,ML3.4(AEIC),Error ellipse: s-maj=14.0km s-min=8.8km az=171.0*
*AEIC **28** 00:40:56.0±1.7,55.°90N±0.°10×149.°6W±0.°1,h11km±7km, Error ellipse: s-maj=13.9km s-min=8.9km az=173.0*

ISC 28 00:40:51.9±1.4,56.°03N±0.°09×149.°59W±0.°06,h10km, n135,σ1s28/148,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**2.37**	**302**		**Pn**	**00 41 30.6**	**-0.1**
OHAK					**Sn**	**00 41 57.4**	**-2.3**
OHAK	**Old Harbor**	**2.37**	**302**	P	**Pn**	**00 41 30.7**	**0.0**
	baz=122						
OHAK				S	**Sn**	**00 41 57.6**	**-2.2**
	baz=122						
KDAK	**Kodiak Island**	**2.40**	**318**	Pn	**Pn**	**00 41 31.5**	**+0.2**
KDAK				Sn	**Sn**	**00 41 59.2**	**-1.4**
SYI	**Shuyak Island**	**3.00**	**331**	Pn	**Pn**	**00 41 39.6**	**+0.2**
SYI				Sn	**Sn**	**00 42 15.4**	**+0.1**
Q20K	**Shuyak Island**	**3.00**	**331**	P	**Pn**	**00 41 40.3**	**+0.9**
	baz=150						
Q20K				S	**Sn**	**00 42 15.6**	**+0.2**
	baz=150						
CNPM	**China Poot**	**3.61**	**347**	Pn	**Pn**	**00 41 48.0**	**+0.1**
CNPM					**Sn**	**00 42 29.6**	**-1.0**
CNPM				IAML		00 42 32.7	
	comp=E,47nm,1.0s						
CNPM				IAML		00 42 34.1	
	comp=N,38nm,0.5s						
Q19K	**Cape Douglas,**	**3.64**	**325**	Pn	**Pn**	**00 41 49.4**	**+1.1**
Q19K				IAML		00 42 28.4	
	comp=E,131nm,1.5s						
Q19K				IAML		00 42 36.3	
	comp=N,102nm,0.9s						
Q19K	**Cape Douglas,**	**3.64**	**325**	P	**Pn**	**00 41 49.7**	**+1.5**
	baz=143						
BRSE	**Bradley Lake S**	**3.77**	**351**		**Pn**	**00 41 50.7**	**+0.6**
BRSE					**Sn**	**00 42 33.7**	**-0.7**
BRSE	**Bradley Lake S**	**3.77**	**351**	P	**Pn**	**00 41 50.7**	**+0.6**
	baz=171						
BRSE				S	**Sn**	**00 42 33.7**	**-0.7**
	baz=171						
BRLK	**Bradley Lake**	**3.81**	**350**	Pn	**Pn**	**00 41 50.9**	**+0.4**
BRLK				Sn	**Sn**	**00 42 32.4**	**-3.0**
BRLK				IAML		00 42 39.9	
	comp=E,25nm,0.5s						
BRLK				IAML		00 42 40.0	
	comp=N,23nm,1.1s						
Q23K	**Middleton Isla**	**3.83**	**26**	Pn	**Pn**	**00 41 50.0**	**-0.7**
Q23K	**Middleton Isla**	**3.83**	**26**	P	**Pn**	**00 41 51.5**	**+0.7**
	baz=208						
MID	**Middleton Isla**	**3.83**	**26**	Pn	**Pn**	**00 41 51.6**	**+0.9**
SEW	**Seward**	**4.09**	**1**		**Pn**	**00 41 54.8**	**+0.5**
SEW					**Sn**	**00 42 39.9**	**-2.2**
SEW	**Seward**	**4.09**	**1**	P	**Pn**	**00 41 54.8**	**+0.5**
	baz=181						
SEW				S	**Sn**	**00 42 39.9**	**-2.2**
	baz=181						
CNTC	**Contact Creek**	**4.09**	**306**		**Pn**	**00 41 55.8**	**+1.2**
Q17K	**Contact Creek**	**4.09**	**306**	P	**Pn**	**00 41 55.8**	**+1.2**
	baz=122						
P19K	**Oil Pt**	**4.12**	**333**	Pn	**Pn**	**00 41 55.8**	**+1.0**
P19K				IAML		00 42 48.2	
	comp=E,67nm,1.4s						
P19K				IAML		00 42 48.7	
	comp=N,50nm,0.4s						
P19K	**Oil Pt**	**4.12**	**333**	P	**Pn**	**00 41 56.3**	**+1.4**
	baz=151						
P23K	**

N18K	Kilae Creek	5.72	327	P		Pn	00 42 17.1 +0.4
	baz=143						
GHO	Glory Hole Cre	5.77	3	Pn		Pn	00 42 19.8 +2.2
O16K	Kokwok River B	5.78	312	Pn		Pn	00 42 18.4 +0.9
KLU	Klutina	5.80	18	Pn		Pn	00 42 19.0 +1.1
MESA	MESA	5.80	41	Pn		Pn	00 42 19.0 +0.9
CRQM	Cirque	5.83	33	Pn		Pn	00 42 19.9 +1.5
SML	Sawmill	5.83	6	Pn		Pn	00 42 19.8 +1.5
TGL	Tana Glacier	5.92	34	Pn		Pn	00 42 20.9 +1.3
SCM	Sheep Creek Mo	5.94	10	Pn		Pn	00 42 20.5 +0.7
ISLE	Juniper Island	5.97	37	Pn		Pn	00 42 21.1 +0.8
N17K	Nushagak Hills	6.03	322	Pn		Pn	00 42 21.5 +0.1
VRDI	Verde Repeater	6.12	29	Pn		Pn	00 42 23.5 +1.1
N25K	Chitina, Valde	6.16	23	Pn		Pn	00 42 24.1 +1.1
N25K	Chitina, Valde	6.16	23	P		Pn	00 42 24.4 +1.5
	baz=207						
KIAG	Kiagna River	6.20	35			Pn	00 42 25.0 +1.5
GLB	Gilahina Butte	6.20	27	Pn		Pn	00 42 24.7 +1.2
GRNC	Granite Creek	6.26	38	Pn		Pn	00 42 25.6 +1.3
TABL	Table Mountain	6.28	42	Pn		Pn	00 42 25.8 +1.2
O15K	Ungalikthiuk R	6.34	304			Pn	00 42 25.9 +0.7
O15K	Ungalikthiuk R	6.34	304	P		Pn	00 42 26.0 +0.7
	baz=116						
PTPK	Patty Peak	6.37	33			Pn	00 42 27.5 +1.7
M19K	Big River Lodg	6.39	339	Pn		Pn	00 42 26.1 +0.1
BARN	Barnard Glacie	6.53	36	Pn		Pn	00 42 29.4 +1.4
PNL	Peninsula	6.55	52			Pn	00 42 29.4 +1.3
PNL	Peninsula	6.55	52	P		Pn	00 42 29.4 +1.3
	baz=240						
CTGM	Chitina Glacie	6.57	38	Pn		Pn	00 42 29.6 +1.0
LOGN	Logan Glacier	6.59	40	Pn		Pn	00 42 29.6 +0.8
BCPM	Bancas Point	6.59	49	Pn		Pn	00 42 29.6 +0.9
L19K	White Mountain	6.74	338	Pn		Pn	00 42 30.6 -0.2
M17K	Holitna River	6.76	326	Pn		Pn	00 42 32.2 +1.2
N15K	Kwethluk River	6.94	311	Pn		Pn	00 42 35.0 +1.6
M16K	Timber Creek	7.00	319	Pn		Pn	00 42 35.9 +1.5
PN7A	Pavlof North-7	7.03	270				00 42 34.3 -0.6
O14K	Tigyukauivet M	7.05	302	Pn		Pn	00 42 36.3 +1.4
L18K	Granite Mounta	7.20	332	Pn		Pn	00 42 35.7 -1.4
O29M	Mount Kennedy	7.23	49			Pn	00 42 39.1 +1.6
O29M	Mount Kennedy	7.23	49	P		Pn	00 42 39.3 +1.8
	baz=238						
P29M	Windy Craggy	7.28	55	Pn		Pn	00 42 38.6 +0.4
P29M	Windy Craggy	7.28	55	P		Pn	00 42 39.3 +1.0
	baz=245						
RND	Reindeer	7.41	3	Pn		Pn	00 42 41.8 +1.8
M27K	Edge Creek, AK	7.47	29	Pn		Pn	00 42 43.0 +2.0
CAST	Castle Rocks	7.52	351	Pn		Pn	00 42 43.1 +1.7
S31K	Pelican	7.55	70	Pn		Pn	00 42 41.2 -0.6
L16K	Owhat River	7.65	322	Pn		Pn	00 42 43.8 +0.6
L16K	Owhat River	7.65	322	P		Pn	00 42 44.1 +0.9
	baz=134						
P30M	Million Dollar	7.85	53	Pn		Pn	00 42 46.6 +0.6
P30M	Million Dollar	7.85	53	P		Pn	00 42 47.5 +1.5
	baz=243						
HYT	Haines Junctio	7.95	48	Pn		Pn	00 42 47.7 +0.2
HYT	Haines Junctio	7.95	48	P		Pn	00 42 49.4 +1.8
	baz=237						
M14K	Bethel	8.03	311	Pn		Pn	00 42 50.1 +1.7
K17K	Iditarod	8.04	330	Pn		Pn	00 42 49.1 +0.6
L27K	Beaver Creek,	8.07	26	Pn		Pn	00 42 50.5 +1.5
BCAR	Beaver Creek A	8.09	26	Pn		Pn	00 42 51.2 +1.9
BPAW	Bear Paw Mtn.	8.12	356	Pn		Pn	00 42 49.8 0.0
ISLZ	Isanotski Laza	8.15	267			Pn	00 42 49.4 -0.7
BESE	Bessie Mountai	8.38	66	Pn		Pn	00 42 53.3 0.0
S32K	Killisnoo	8.38	74	Pn		Pn	00 42 51.4 -1.8
S32K	Killisnoo	8.38	74	P		Pn	00 42 52.7 -0.5
	baz=266						
N30M	Aishikik Lake	8.47	45	Pn		Pn	00 42 55.8 +1.3
M13K	Dall Lake	8.48	307	Pn		Pn	00 42 54.2 -0.4
R32K	Eaglecrest	8.50	68	Pn		Pn	00 42 53.8 -1.1
O30N	Mendenhall	8.53	51	Pn		Pn	00 42 56.6 +1.3
M29M	Somme Creek	8.59	37	Pn		Pn	00 42 57.7 +1.5
M29M	Somme Creek	8.59	37	P		Pn	00 42 58.2 +2.1
	baz=226						
L14K	Kuka Creek	8.64	313	Pn		Pn	00 42 58.8 +2.0
CCB	Clear Creek Bu	8.69	5	Pn		Pn	00 42 59.8 +2.3
K15K	Wolf Creek Mou	8.77	321	Pn		Pn	00 43 00.8 +2.2
J26L	Joseph Creek	9.00	17	Pn		Pn	00 43 04.1 +2.3
WHY	Whitehorse	9.01	53	Pn		Pn	00 43 03.3 +1.3
J16K	Anvik River	9.15	327	Pn		Pn	00 43 04.0 +0.3
L29M	L29M	9.16	35	Pn		Pn	00 43 06.2 +2.4
P32M	Atlin	9.19	61	Pn		Pn	00 43 05.3 +0.9
P32M	Atlin	9.19	61	P		Pn	00 43 05.6 +1.2
	baz=253						
U33K	Whale Pass	9.21	83	P		Pn	00 43 03.9 -0.7
	baz=276						
I21K	Tanana	9.25	354	Pn		Pn	00 43 06.9 +1.7
M30M	Minto, Yukon	9.25	40	Pn		Pn	00 43 06.4 +1.1
H21K	Melozitna Rive	9.78	352	Pn		Pn	00 43 13.8 +1.3
J14K	Nanvaranak Lak	9.78	319	Pn		Pn	00 43 13.5 +1.1
P33M	Teslin, Yukon	9.80	58	Pn		Pn	00 43 13.6 +0.7
P33M	Teslin, Yukon	9.80	58	P		Pn	00 43 12.5 -0.3
	baz=251						
K29M	Barlow Dome	9.88	33	Pn		Pn	00 43 15.7 +1.7
K29M	Barlow Dome	9.88	33	P		Pn	00 43 14.8 +0.9
	baz=223						
IMAR	Indian Mountai	10.19	350	Pn		Pn	00 43 19.3 +1.3
FARO	Faro, Yukon	10.38	47	Pn		Pn	00 43 23.1 +2.4
R33M	Jennings River	10.51	64	Pn		Pn	00 43 22.5 -0.1
G23K	Bananza Creek	10.72	359	Pn		Pn	00 43 26.0 +0.7
J30M	Hart River	10.78	32	Pn		Pn	00 43 29.7 +3.5

CATAC ***28*** *00:41:16.6±0.6, 11°.95N×87°.41W, h16km±4km, ML4.1*
UCR ***28*** *00:41:17.1±3.1, 12°.47N×87°.36W, h36km±384km, MW4.1*
IDC ***28*** *00:41:17.5±1.5, 12°.72N×86°.56W, h0km, mb3.6/5, mbtmp3.7/6, ML3.6/1, MS3.6/3, Error ellipse: s-maj=89.6km s-min=21.4km az=57.0*

ISC 28 00:41:16.7±3.0, 12°.11N±0°.03×87°.30W±0°.04, h3km±21km, n70, σ1°63/97, mb3.6/5, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.63**	**22**	*i* P	**Pb**	**00 41 30.0**	**-0.4**
CRIN				*i* S	**Sn**	**00 41 45.7**	**+2.4**
PKGN	**Cerro Pekin**	**0.64**	**29**	*i* P	**Pb**	**00 41 29.9**	**-0.5**
PKGN				*i* S	**Sn**	**00 41 45.2**	**+2.0**
TEL3	**Telica 3**	**0.64**	**44**	*i* P	**Pb**	**00 41 31.3**	**+0.9**
TEL3				IAML		00 41 53.6	
	comp=Z,6μm,1.0s						
HERN	**Volcan Telica**	**0.67**	**43**	*i* S	**Sn**	**00 41 45.6**	**+1.4**
ROCN	**Rota Cerro Neg**	**0.68**	**53**	*i* P	**Pb**	**00 41 29.4**	**-1.7**
CNGA	**Al SSO del Vol**	**0.69**	**57**	*i* S	**Sb**	**00 41 37.9**	**-3.6**
CNGN	**Cerro Negro**	**0.70**	**56**	*i* P	**Pb**	**00 41 31.9**	**+0.3**
CNGN				*i* S	**Sn**	**00 41 47.6**	**+2.7**
CNGN				IAML		00 41 55.9	
	comp=Z,5μm,1.0s						
MACN	**El Madrono**	**0.70**	**60**	*i* P	**Pb**	**00 41 32.9**	**+1.3**
MACN				*i* S	**Sn**	**00 41 47.7**	**+2.8**
MACN				IAML		00 41 53.1	
	comp=Z,3μm,1.0s						
POLN	**Al Sur del Vol**	**0.71**	**41**	*i* P	**Pn**	**00 41 34.1**	**+0.4**
POLN				IAML		00 41 45.9	
	comp=Z,7.3nm,1.0s						
POLN				*i* S	**Sn**	**00 41 46.0**	**+0.8**
LEVN	**Ruinas Leon Vi**	**0.72**	**66**	*i* P	**Pn**	**00 41 33.7**	**-0.1**
LEVN				*i* S	**Sn**	**00 41 47.1**	**+1.7**
LEVN				IAML		00 41 50.8	
	comp=Z,6μm,1.0s						
BC86	**Nagarote**	**0.73**	**78**	*i* P	**Pn**	**00 41 34.4**	**+0.5**
BC86				*i* S	**Sn**	**00 41 46.2**	**+0.6**
BC86				IAML		00 42 20.4	
	comp=Z,6μm,1.0s						
BC84	**Volcan Momotom**	**0.79**	**69**	*i* P	**Pn**	**00 41 35.2**	**+0.5**
BC84				*i* S	**Sn**	**00 41 47.8**	**+0.8**
BC84				IAML		00 42 29.6	
	comp=Z,5μm,1.0s						
MOMN	**Momotombo**	**0.80**	**68**	*i* P	**Pn**	**00 41 35.3**	**+0.5**
MOMN				*i* S	**Sn**	**00 41 47.9**	**+0.7**
MOMN				IAML		00 41 51.6	
	comp=Z,190nm,1.0s						
AMTN	**Mateare**	**0.85**	**82**	*i* P	**Pn**	**00 41 36.5**	**+0.9**
AMTN				*i* S	**Sn**	**00 41 49.6**	**+1.0**
AMTN				IAML		00 42 06.6	
	comp=Z,12μm,1.0s						
MOM2	**El Cardon**	**0.86**	**68**	*i* P	**Pn**	**00 41 36.2**	**+0.6**
MOM2				*i* S	**Sn**	**00 41 50.1**	**+1.4**
MOM2				IAML		00 41 58.7	
	comp=Z,3μm,1.0s						
SAPS	**Ciudad Sandino**	**0.87**	**86**	*i* P	**Pn**	**00 41 36.6**	**+0.7**
SAPS				*i* S	**Sn**	**00 41 51.1**	**+2.0**
SAPS				IAML		00 41 53.3	
	comp=Z,4μm,1.0s						
CSGN	**Cosiguina Volc**	**0.90**	**343**	*i* S	**Sb**	**00 41 46.7**	**-0.6**
APQ2	**Apoyeque**	**0.95**	**85**	*i* P	**Pb**	**00 41 36.9**	**+1.1**
APQ2				*i* S	**Sn**	**00 41 51.0**	**0.0**
APQ2				IAML		00 41 54.7	
	comp=Z,4μm,1.0s						
ABCN	**Banco Central**	**0.96**	**89**	*i* P	**Pb**	**00 41 36.8**	**+0.8**
ABCN				IAML		00 41 49.6	
	comp=Z,9μm,1.0s						
ABCN				*i* S	**Sn**	**00 41 50.6**	**-0.7**
MGA1	**Managua**	**1.02**	**88**	*i* P	**Pb**	**00 41 37.0**	**-0.1**
MGA1				*i* S	**Sn**	**00 41 53.7**	**+0.9**
MGA1				IAML		00 42 19.4	
	comp=Z,6μm,1.0s						
MAFN	**Magfor**	**1.03**	**91**	*i* P	**Pb**	**00 41 38.4**	**+1.2**
MAFN				*i* S	**Sn**	**00 41 53.7**	**+0.6**
MAFN				IAML		00 42 03.6	
	comp=Z,7μm,1.0s						
ADRN	**Diriamba**	**1.06**	**104**	*i* P	**Pb**	**00 41 38.1**	**+0.3**
ADRN				*i* S	**Sn**	**00 41 55.0**	**+1.1**
ADRN				IAML		00 41 58.6	
	comp=Z,8μm,1.0s						
BRAN	**Las Pilas**	**1.10**	**57**	*i* P	**Pn**	**00 41 36.5**	**-2.5**
BRAN				*i* S	**Sb**	**00 41 50.1**	**-3.1**
BRAN				IAML		00 41 55.0	
	comp=Z,4μm,1.0s						
LIMN	**Finca el Limon**	**1.31**	**44**	*i* P	**Pn**	**00 41 40.7**	**-1.3**
LIMN				*i* S	**Sb**	**00 42 03.3**	**+4.0**
MATN	**Matagalpa**	**1.57**	**59**	*i* P	**Pn**	**00 41 45.2**	**-0.3**
MATN				*i* S	**Sb**	**00 42 09.4**	**+2.8**
MATN				IAML		00 42 19.0	
	comp=Z,410nm,1.0s						
BOAB	**BOACO BROADBAN**	**1.63**	**78**	*i* P	**Pn**	**00 41 45.6**	**-0.6**
BOAB				*i* S	**Sb**	**00 42 09.7**	**+1.4**
BOAB				IAML		00 42 28.1	
	comp=Z,600nm,1.0s						
PACA	**Pacayal**	**1.68**	**324**	*i* P	**Pn**	**00 41 47.6**	**+0.5**
PACA				*i* S	**Sb**	**00 42 11.5**	**+1.5**
PACA				IAML		00 42 16.2	
	comp=Z,4μm,1.0s						
MORN	**Al O del Volca**	**1.71**	**109**	*i* P	**Pn**	**00 41 46.5**	**-0.9**
MORN				IAML		00 42 17.3	
	comp=Z,4μm,1.0s						
RCPN	**Sur Rio San Ju**	**1.83**	**40**	*i* P	**Pn**	**00 41 50.3**	**+1.1**
RCPN				*i* S	**Sb**	**00 42 15.0**	**+0.7**
RCPN				IAML		00 42 17.3	
	comp=Z,5.8nm,1.0s						
LCRUZ	**La Cruz**	**1.93**	**122**	*eP*	**Pn**	**00 41 50.6**	**+0.2**
LCRUZ				*eS*	**Sn**	**00 42 14.8**	**-0.4**
ACON	**Acoyapa**	**2.08**	**94**	*eP*	**Pn**	**00 41 51.0**	**-1.5**
HZTE	**Horizontes, Gu**	**2.17**	**130**	*eP*	**Pn**	**00 41 54.0**	**+0.2**
HZTE	**Horizontes, Gu**	**2.17**	**130**	*i* P	**Pn**	**00 41 55.4**	**+1.7**
HZTE				*i* S	**Sb**	**00 42 24.6**	**+0.7**
GB1A	**Borinquen Arri**	**2.26**	**124**	*eP*	**Pb**	**00 41 57.5**	**-0.8**
ALIBA	**Liberia Airpor**	**2.29**	**131**	*eP*	**Pn**	**00 41 57.6**	**+2.3**
ALIBA				*eS*	**Sb**	**00 42 29.4**	**+2.1**
GPS3	**Bodega del ICE**	**2.32**	**125**	*eP*	**Pn**	**00 41 57.3**	**+1.4**
DELF	**Filadelfia**	**2.38**	**134**	*eP*	**Pn**	**00 41 58.2**	**+1.7**
VMAR	**Armenia, Volca**	**2.50**	**121**	*eP*	**Pn**	**00 41 57.2**	**-1.1**
CUI	**Cuipilapa**	**2.54**	**124**	*eP*	**Pn**	**00 41 59.7**	**+0.8**
BAGA	**Bagaces**	**2.54**	**128**	*eP*	**Pn**	**00 42 00.7**	**+1.9**
PLVR	**Palo Verde**	**2.59**	**132**	*eP*	**Pb**	**00 42 02.6**	**-1.3**
PLVR				*eS*	**Sb**	**00 42 34.7**	**-1.5**
ACAL	**Aguas Claras**	**2.66**	**123**	*eP*	**Pn**	**00 42 00.6**	**+0.1**
NICO	**Nicoya**	**2.67**	**137**	*eP*	**Pn**	**00 42 03.4**	**+2.8**
VERA	**Finca Concepci**	**2.69**	**117**	*eP*	**Pn**	**00 42 00.3**	**-0.6**
CMARA	**Lajas Hojancha**	**2.77**	**138**	*eP*	**Pn**	**00 42 01.5**	**-0.6**
INDI	**Punta indio, G**	**2.84**	**142**	*eP*	**Pn**	**00 42 02.1**	**-0.9**
JTS	**Las Juntas de**	**2.93**	**128**	Pn	**Pn**	**00 42 04.6**	**+0.5**
	comp=Z,8.3nm,0.3s,baz=286,slow=8.5,SNR=17						
JTS				Sn	**Sn**	**00 42 41.3**	**+1.5**
	comp=Z,9.7nm,0.3s,baz=192,slow=5.7,SNR=5.0						
	comp=Z,37nm,0.4s						
JUNT	**Juntas**	**2.93**	**128**	*eP*	**Pn**	**00 42 05.2**	**+1.1**
MTEVE	**Monteverde**	**3.01**	**126**	*eP*	**Pn**	**00 42 07.7**	**+2.3**
CEDE	**Laguna Cedeo**	**3.01**	**122**	*eP*	**Pn**	**00 42 06.7**	**+1.4**
ARE1	**Arenal 1**	**3.01**	**123**	*eP*	**Pn**	**00 42 06.4**	**+1.0**
ARE1				*eS*	**Sb**	**00 42 45.2**	**-3.1**
VACR	**Volcan Arenal**	**3.04**	**122**	*eP*	**Pn**	**00 42 08.0**	**+2.3**
SOCE	**Pocosol**	**3.14**	**123**	*eP*	**Pn**	**00 42 08.3**	**+1.2**
CBL1	**Cabuya**	**3.31**	**139**	*eP*	**Pn**	**00 42 08.9**	**-0.5**
CPMI	**Catarata Coope**	**3.39**	**122**	*eP*	**Pn**	**00 42 10.5**	**-0.2**
JACO	**JACO, Garabito**	**3.55**	**133**	*eP*	**Pn**	**00 42 17.2**	**+4.4**
ABE2	**San Pablo**	**3.98**	**127**	*eP*	**Pn**	**00 42 18.5**	**-0.3**
VICA	**Volcano Irazu**	**3.99**	**122**	*eP*	**Pn**	**00 42 21.4**	**+2.2**
LCR2	**La Lucha 2**	**4.00**	**126**	*eP*	**Pn**	**00 42 21.3**	**+2.2**
ICR3	**Volcano Irazu**	**4.01**	**122**	*eP*	**Pn**	**00 42 21.3**	**+1.9**
CDM	**Cerro de Muert**	**4.30**	**126**	*eP*	**Pn**	**00 42 25.7**	**+2.3**
PEZE	**Perez Zeledon,**	**4.47**	**127**	*eP*	**Pn**	**00 42 27.9**	**+2.4**
DRK0	**Durika**	**4.88**	**125**	*eP*	**Pn**	**00 42 32.9**	**+1.7**
TEIG	**Tepich**	**9.12**	**353**	LR	LR	00 46 40.7	
	comp=Z,836nm,20.3s,baz=316,slow=42						
CMIG	**Matias Romero**	**8.86**	**305**	LR	LR	00 47 24.0	
	comp=Z,139nm,19.5s,baz=126,slow=40						
TXAR	**Lajitas Array**	**22.93**	**321**	P	**P**	**00 46 23.4**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=137,slow=9.6,SNR=16						
	comp=Z,2.8nm,0.8s						
PDAR	**Pinedale Array**	**36.14**	**332**	P	**P**	**00 48 20.2**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=130,slow=10,SNR=6.2						
	comp=Z,0.8nm,0.8s						
NVAR	**Mina Array Bea**	**38.05**	**319**	P	**P**	**00 48 37.8**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=118,slow=9.4,SNR=2.2						
	comp=Z,0.4nm,0.7s						
ULM	**Lac du Bonnet**	**38.68**	**351**	P	**P**	**00 48 38.2**	**-3.4**
	comp=Z,1.3nm,0.5s,baz=193,slow=5.6,SNR=2.9						
	comp=Z,1.3nm,0.5s						
YKA	**Yellowknife Ar**	**53.98**	**345**	P	**P**	**00 50 40.5**	**-1.1**
	comp=Z,0.3nm,0.9s,baz=138,slow=7.6,SNR=6.9						
YKA				LR	LR	01 14 28.2	
	comp=Z,84nm,18.6s,baz=318,slow=37						
	comp=Z,0.3nm,0.9s						

IDC ***28*** *00:47:59.5±1.8, 59°.29N×152°.89W, h86km±28km, mb3.8/3, mbtmp3.9/7, Error ellipse: s-maj=37.4km s-min=17.7km az=117.0*
NEIC ***28*** *00:47:59.9±1.1, 59°.26N±0°.03×152°.74W±0°.05, h96km±4km, Error ellipse: s-maj=4.9km s-min=3.0km az=46.0*
AEIC ***28*** *00:48:01.4±1.2, 59°.27N±0°.03×152°.72W±0°.06, h86km±3km, ML3.3, ML3.5/142(NEIC), Error ellipse: s-maj=4.7km s-min=3.7km az=224.0*

ISC 28 00:48:00.4±0.8, 59°.29N±0°.04×152°.71W±0°.04, h93km±6km, n318, σ0°67/335, mb4.3/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AU22	**Augustine Moun**	**0.34**	**283**		**Pn**	**00 48 14.3**	**-0.1**
AU22					**Sn**	**00 48 24.5**	**-0.3**
AUCH	**Augustine Cone**	**0.39**	**281**		**Pn**	**00 48 14.6**	**-0.1**
AUL	**Augustine Lava**	**0.39**	**284**		**Pn**	**00 48 14.6**	**-0.1**
AUL					**Sn**	**00 48 25.1**	**-0.2**
P19K	**Oil Pt**	**0.45**	**324**		**Pn**	**00 48 15.0**	**-0.1**
P19K					**Sn**	**00 48 24.8**	**-1.3**
P19K	**Oil Pt**	**0.45**	**324**	P	**Pn**	**00 48 15.1**	**-0.1**
	baz=146						
P19K				S	**Sn**	**00 48 25.9**	**-0.2**
	baz=146						
Q19K	**Cape Douglas,**	**0.61**	**233**	Pn	**Pn**	**00 48 15.9**	**-0.4**
Q19K				Sn	**Sn**	**00 48 27.0**	**-1.2**
Q19K				IAML		00 48 27.9	
	comp=N,2μm,0.6s						
Q19K	**Cape Douglas,**	**0.61**	**233**	P	**Pn**	**00 48 15.6**	**-0.7**
	baz=54						
Q19K				S	**Sn**	**00 48 27.4**	**-0.9**
	baz=54						
HOM	**Homer**	**0.65**	**55**	Pn	**Pn**	**00 48 17.2**	**+0.6**
HOM	**Homer**	**0.65**	**55**	P	**Pn**	**00 48 17.0**	**+0.3**
	baz=235						
Q20K	**Shuyak Island**	**0.70**	**167**	P	**Pn**	**00 48 16.8**	**-0.4**
	baz=346						
Q20K				S	**Sn**	**00 48 29.1**	**-0.6**
	baz=346						
SYI	**Shuyak Island**	**0.70**	**166**	Pn	**Pn**	**00 48 16.7**	**-0.4**
SYI				Sn	**Sn**	**00 48 28.6**	**-1.1**
ILSW	**Iliamna Southw**	**0.73**	**342**	Pn	**Pn**	**00 48 17.2**	**-0.3**
CNPM	**China Poot**	**0.79**	**72**	Pn	**Pn**	**00 48 18.5**	**+0.5**
CNPM				Sn	**Sn**	**00 48 31.1**	**-0.2**
CNPM				IAML		00 48 31.7	
	comp=E,2μm,0.3s						
Q20K	**Slope Mountain**	**0.79**	**3**		**Pn**	**00 48 18.6**	**+0.4**
Q20K	**Slope Mountain**	**0.79**	**3**	P	**Pn**	**00 48 18.6**	**+0.4**
	baz=184						
BRLK	**Bradley Lake**	**1.04**	**62**	Pn	**Pn**	**00 48 20.7**	**0.0**
BRLK				Sn	**Sn**	**00 48 35.0**	**-1.0**
BRLK				IAML		00 48 37.1	
	comp=E,1μm,0.2s						
BRSE	**Bradley Lake S**	**1.10**	**65**		**Pn**	**00 48 21.5**	**+0.1**
BRSE	**Bradley Lake S**	**1.10**	**65**	P	**Pn**	**00 48 21.5**	**+0.1**
	baz=246						
KAPH	**Katmai Pasha**	**1.10**	**231**		**Pn**	**00 48 21.2**	**-0.3**
RED	**Redoubt Volcan**	**1.13**	**358**		**Pn**	**00 48 21.7**	**-0.1**
RED					**Sn**	**00 48 37.8**	**-0.2**
RDSO	**Redoubt South**	**1.17**	**359**		**Pn**	**00 48 22.3**	**0.0**
RSO	**Redoubt South**	**1.17**	**359**	Pn	**Pn**	**00 48 22.5**	**0.0**
RDWB	**Redoubt West**	**1.20**	**357**		**Pn**	**00 48 22.6**	**-0.1**
O19K	**Port Alsworth**	**1.22**	**319**		**Pn**	**00 48 22.5**	**-0.3**
O19K					**Sn**	**00 48 38.4**	**-1.3**
O19K	**Port Alsworth**	**1.22**	**319**	P	**Pn**	**00 48 22.5**	**-0.3**
	baz=138						
O19K				S	**Sn**	**00 48 39.0**	**-0.7**
	baz=138						
NCT	**North Crescent**	**1.28**	**355**		**Pn**	**00 48 23.6**	**-0.1**
RDT	**Redoubt**	**1.29**	**7**		**Pn**	**00 48 23.6**	**-0.1**
P18K	**Big Mountain,**	**1.30**	**275**	Pn	**Pn**	**00 48 22.9**	**-0.9**
P18K	**Big Mountain,**	**1.30**	**275**	P	**Pn**	**00 48 22.9**	**-0.9**
	baz=94						
DFR	**Drift River**	**1.30**	**0**		**Pn**	**00 48 24.0**	**+0.1**
RDJH	**Redoubt Jeurge**	**1.30**	**358**		**Pn**	**00 48 24.0**	**0.0**
KAHC	**Katmai Hardscr**	**1.36**	**243**		**Pn**	**00 48 24.1**	**-0.5**
KAHC	**Katmai Hardscr**	**1.36**	**243**	P	**Pn**	**00 48 24.1**	**-0.5**
	baz=61						
O18K	**Koktuh Hills**	**1.39**	**295**	Pn	**Pn**	**00 48 24.6**	**-0.4**
O18K				Sn	**Sn**	**00 48 42.2**	**-1.3**
O18K				IAML		00 48 42.9	
	comp=N,669nm,0.6s						
O18K				IAML		00 48 43.0	
	comp=E,576nm,0.6s						
O18K	**Koktuh Hills**	**1.39**	**295**	P	**Pn**	**00 48 24.5**	**-0.4**
	baz=114						
O18K				S	**Sn**	**00 48 42.5**	**-1.0**
	baz=114						
KDAK	**Kodiak Island**	**1.52**	**178**	Pn	**Pn**	**00 48 25.5**	**-0.9**
KDAK				IAML		00 48 45.9	
	comp=E,979nm,0.5s						
KDAK				IAML		00 48 45.9	
	comp=E,914nm,0.3s						
KDAK	**Kodiak Island**	**1.52**	**178**	P	**Pn**	**00 48 25.5**	**-0.9**
	comp=E,136nm,0.4s,baz=26,slow=10,SNR=17						
KDAK				S	**Sn**	**00 48 44.5**	**-1.6**
	comp=E,261nm,0.5s,baz=142,slow=20,SNR=8.7						
KAKN	**Katmai Knife C**	**1.58**	**232**		**Pn**	**00 48 26.8**	**-0.6**
CAPN	**Captain Cook N**	**1.67**	**27**	Pn	**Pn**	**00 48 29.9**	**+1.6**
ACHA	**Angle Creek He**	**1.75**	**233**		**Pn**	**00 48 29.1**	**-0.4**
SLKM	**Skilak Lake**	**1.75**	**45**		**Pn**	**00 48 29.4**	**0.0**
N19K	**Bonanza Creek**	**1.77**	**330**	Pn	**Pn**	**00 48 29.9**	**+0.1**
N19K	**Bonanza Creek**	**1.77**	**330**	P	**Pn**	**00 48 29.8**	**+0.1**
	baz=150						
ANCK	**Angle Creek**	**1.82**	**234**		**Pn**	**00 48 30.1**	**-0.3**
SEW	**Seward**	**1.84**	**62**		**Pn**	**00 48 30.4**	**-0.1**
SEW	**Seward**	**1.84**	**62**	P	**Pn**	**00 48 30.5**	**0.0**
	baz=245						
O22K	**Cooper Landing**	**1.92**	**50**	Pn	**Pn**	**00 48 30.2**	**-1.3**
P17K	**Kvichak River**	**1.92**	**269**		**Pn**	**00 48 31.6**	**0.0**
P17K	**Kvichak River**	**1.92**	**269**	P	**Pn**	**00 48 31.6**	**0.0**
	baz=86						
N20K	**Mount Spurr**	**1.93**	**7**	P	**Pn**	**00 48 32.0**	**+0.2**
	baz=188						
SPCR	**Spurr Chakacha**	**1.93**	**7**		**Pn**	**00 48 32.0**	**+0.2**
CNTC	**Contact Creek**	**1.95**	**239**		**Pn**	**00 48 31.7**	**-0.4**
Q17K	**Contact Creek**	**1.95**	**239**	P	**Pn**	**00 48

GHO				IAML			00 49 39.7		
	comp=N,97nm,0.5s								
M17K	**Holitna River**	**3.16**	**314**	Pn		**Pn**	**00 48 46.8**	**-1.3**	
M17K				IAML			00 49 24.9		
	comp=N,110nm,0.7s								
M17K				IAML			00 49 44.8		
	comp=E,125nm,0.6s								
M17K	**Holitna River** baz=130	**3.16**	**314**	P		**Pn**	**00 48 47.8**	**-0.2**	
GLI	**Glacier Island**	**3.23**	**58**	Pn		**Pn**	**00 48 47.9**	**-1.1**	
GLI				IAML			00 49 24.9		
	comp=N,183nm,0.7s								
GLI	**Glacier Island** baz=243	**3.23**	**58**	P		**Pn**	**00 48 48.5**	**-0.5**	
L20K	**Farewell, AK**	**3.25**	**350**			**Pn**	**00 48 49.5**	**+0.2**	
L20K	**Farewell, AK** baz=170	**3.25**	**350**	P		**Pn**	**00 48 49.5**	**+0.2**	
N16K	**Nishlik Lake**	**3.28**	**294**			**Pn**	**00 48 49.6**	**0.0**	
N16K	**Nishlik Lake** baz=109	**3.28**	**294**	P		**Pn**	**00 48 49.6**	**0.0**	
HIN	**Hinchinbrook I**	**3.32**	**68**	Pn		**Pn**	**00 48 49.8**	**-0.4**	
HIN				IAML			00 49 29.1		
	comp=E,144nm,0.4s								
HIN				IAML			00 49 29.7		
	comp=N,187nm,0.8s								
SML	**Sawmill**	**3.32**	**39**	Pn		**Pn**	**00 48 50.1**	**-0.2**	
SML				IAML			00 49 35.8		
	comp=E,89nm,0.6s								
SML				IAML			00 49 55.7		
	comp=N,80nm,0.8s								
SML	**Sawmill** baz=222	**3.32**	**39**	P		**Pn**	**00 48 49.9**	**-0.3**	
FID	**Port Fidalgo**	**3.45**	**62**	Pn		**Pn**	**00 48 50.4**	**-1.5**	
FID				IAML			00 49 31.6		
	comp=N,137nm,0.3s								
FID				IAML			00 49 31.7		
	comp=E,180nm,0.4s								
M23K	**Glacier View**	**3.51**	**42**			**Pn**	**00 48 52.9**	**+0.1**	
M23K	**Glacier View** baz=226	**3.51**	**42**	P		**Pn**	**00 48 52.9**	**+0.1**	
L18K	**Granite Mounta**	**3.53**	**328**	Pn		**Pn**	**00 48 52.7**	**-0.2**	
L18K				IAML			00 49 50.0		
	comp=N,39nm,0.8s								
L18K	**Granite Mounta** baz=145	**3.53**	**328**	P		**Pn**	**00 48 52.8**	**-0.2**	
M16K	**Timber Creek**	**3.58**	**302**	Pn		**Pn**	**00 48 53.8**	**+0.2**	
M16K	**Timber Creek** baz=117	**3.58**	**302**	P		**Pn**	**00 48 53.7**	**+0.1**	
PPLA	**Purkeypile**	**3.62**	**4**	Pn		**Pn**	**00 48 54.8**	**+0.4**	
PPLA	**Purkeypile** baz=184	**3.62**	**4**	P		**Pn**	**00 48 55.1**	**+0.6**	
O15K	**Ungalikthiuk R**	**3.66**	**271**			**Pn**	**00 48 54.5**	**-0.2**	
O15K	**Ungalikthiuk R** baz=86	**3.66**	**271**	P		**Pn**	**00 48 54.5**	**-0.2**	
SCM	**Sheep Creek Mo**	**3.68**	**44**	Pn		**Pn**	**00 48 55.2**	**+0.1**	
SCM				IAML			00 49 39.3		
	comp=E,142nm,0.4s								
SCM				IAML			00 49 39.9		
	comp=N,98nm,0.9s								
SCM	**Sheep Creek Mo** baz=228	**3.68**	**44**	P		**Pn**	**00 48 55.0**	**-0.1**	
EYAK	**Cordova Ski Ar**	**3.72**	**67**	Pn		**Pn**	**00 48 54.9**	**-0.6**	
EYAK	**Cordova Ski Ar** baz=253	**3.72**	**67**	P		**Pn**	**00 48 55.4**	**-0.2**	
N15K	**Kwethluk River**	**3.84**	**286**	Pn		**Pn**	**00 48 57.9**	**+0.7**	
N15K				IAML			00 50 03.8		
	comp=E,34nm,1.3s								
N15K				IAML			00 50 15.2		
	comp=N,48nm,0.7s								
DIV	**Divide**	**3.92**	**59**	Pn		**Pn**	**00 48 57.9**	**-0.5**	
L17K	**Donlin**	**3.96**	**318**			**Pn**	**00 48 58.5**	**-0.2**	
L17K	**Donlin** baz=134	**3.96**	**318**	P		**Pn**	**00 48 58.5**	**-0.2**	
TTA	**Tatalina**	**3.99**	**338**	Pn		**Pn**	**00 48 58.9**	**-0.4**	
TTA	**Tatalina** baz=155	**3.99**	**338**	P		**Pn**	**00 48 59.0**	**-0.2**	
WAT7	**Susitna Watana**	**4.02**	**26**			**Pn**	**00 48 59.8**	**+0.1**	
KLU	**Klutina**	**4.02**	**54**	Pn		**Pn**	**00 48 59.7**	**0.0**	
KLU	**Klutina** baz=240	**4.02**	**54**	P		**Pn**	**00 48 59.8**	**0.0**	
WAT1	**Susitna Watana**	**4.08**	**28**			**Pn**	**00 49 00.5**	**0.0**	
WAT1	**Susitna Watana** baz=211	**4.08**	**28**	P		**Pn**	**00 49 00.5**	**0.0**	
WAT6	**Susitna Watana**	**4.09**	**34**			**Pn**	**00 49 00.5**	**-0.2**	
WAT6	**Susitna Watana** baz=218	**4.09**	**34**	P		**Pn**	**00 49 00.5**	**-0.2**	
K20K	**Telida**	**4.13**	**351**	Pn		**Pn**	**00 49 00.9**	**-0.3**	
K20K	**Telida** baz=170	**4.13**	**351**	P		**Pn**	**00 49 01.3**	**+0.1**	
L16K	**Owhat River**	**4.13**	**309**	Pn		**Pn**	**00 49 01.0**	**-0.2**	
L16K	**Owhat River** baz=123	**4.13**	**309**	P		**Pn**	**00 49 00.9**	**-0.2**	
CAST	**Castle Rocks**	**4.15**	**4**	Pn		**Pn**	**00 49 01.2**	**-0.2**	
CAST	**Castle Rocks** baz=184	**4.15**	**4**	P		**Pn**	**00 49 01.2**	**-0.2**	
RAGM	**Ragged Mountai**	**4.20**	**71**	Pn		**Pn**	**00 49 01.8**	**-0.3**	
RAGM				IAML			00 49 51.5		
	comp=E,95nm,0.4s								
GOAT	**Goat Mountain**	**4.22**	**69**			**Pn**	**00 49 02.3**	**0.0**	
KAIM	**Kayak Island**	**4.26**	**78**	Pn		**Pn**	**00 49 02.2**	**-0.6**	
M24K	**Tolsona, Glenn**	**4.27**	**46**	Pn		**Pn**	**00 49 03.2**	**+0.1**	
M24K				IAML			00 50 00.2		
	comp=N,78nm,0.9s								
M24K	**Tolsona, Glenn** baz=231	**4.27**	**46**	P		**Pn**	**00 49 03.5**	**+0.4**	
CHGN	**Chignik**	**4.28**	**228**	Pn		**Pn**	**00 49 01.9**	**-1.3**	
CHGN				IAML			00 51 41.6		
	comp=E,83nm,0.1s								
CHGN				IAML			00 51 42.9		
	comp=N,92nm,0.1s								
TRF	**Thorofare Moun**	**4.33**	**15**	Pn		**Pn**	**00 49 04.1**	**+0.1**	
TRF				IAML			00 49 56.6		
	comp=E,39nm,0.7s								
TRF				IAML			00 49 56.9		
	comp=N,54nm,0.5s								
TRF	**Thorofare Moun** baz=197	**4.33**	**15**	P		**Pn**	**00 49 04.5**	**+0.5**	
KTH	**Kantishna Hill**	**4.36**	**11**	Pn		**Pn**	**00 49 04.7**	**+0.5**	
KTH				IAML			00 50 16.6		
	comp=E,26nm,1.1s								
KTH				IAML			00 50 38.1		
	comp=N,29nm,1.0s								
K17K	**Iditarod**	**4.38**	**324**	Pn		**Pn**	**00 49 04.6**	**+0.1**	
K17K				IAML			00 50 10.3		
	comp=E,28nm,1.0s								
K17K				IAML			00 50 26.4		
	comp=N,25nm,1.3s								
K17K	**Iditarod** baz=139	**4.38**	**324**	P		**Pn**	**00 49 04.5**	**0.0**	
BMRM	**Bremner River**	**4.38**	**64**	Pn		**Pn**	**00 49 03.9**	**-0.7**	
BMRM	**Bremner River** baz=251	**4.38**	**64**	P		**Pn**	**00 49 04.6**	**-0.1**	
HMT	**Hamilton**	**4.39**	**73**	Pn		**Pn**	**00 49 04.5**	**-0.1**	
O14K	**Tigyukauivet M**	**4.39**	**273**	Pn		**Pn**	**00 49 05.7**	**+1.1**	
O14K				IAML			00 50 36.1		
	comp=E,27nm,1.5s								
O14K				IAML			00 50 54.0		
	comp=N,23nm,1.3s								
NICHA	**Nichawak Mount**	**4.52**	**74**			**Pn**	**00 49 06.7**	**+0.3**	
RND	**Reindeer**	**4.52**	**23**	Pn		**Pn**	**00 49 06.0**	**-0.5**	
RND				IAML			00 49 58.7		
	comp=E,28nm,0.5s								
RND				IAML			00 49 58.7		
	comp=N,23nm,0.7s								
DHY	**Denali Highway**	**4.59**	**32**	Pn		**Pn**	**00 49 07.6**	**+0.2**	
DHY				IAML			00 50 00.8		
	comp=N,35nm,0.4s								
DHY				IAML			00 50 01.7		
	comp=E,30nm,0.4s								
DHY	**Denali Highway** baz=216	**4.59**	**32**	P		**Pn**	**00 49 07.3**	**-0.1**	
SUCK	**Suckling Hills**	**4.59**	**76**	Pn		**Pn**	**00 49 07.0**	**-0.4**	
SUCK				IAML			00 49 51.5		
	comp=E,60nm,1.4s								
SUCK				IAML			00 50 06.2		
	comp=N,55nm,1.2s								
J18K	**Innoko River**	**4.61**	**337**	Pn		**Pn**	**00 49 07.3**	**-0.3**	
J18K	**Innoko River** baz=154	**4.61**	**337**	P		**Pn**	**00 49 07.4**	**-0.3**	
N25K	**Chitina, Valde**	**4.64**	**57**	Pn		**Pn**	**00 49 08.0**	**0.0**	
N25K				IAML			00 50 01.4		
	comp=N,46nm,0.5s								
N25K				IAML			00 50 01.4		
	comp=E,48nm,0.4s								
N25K	**Chitina, Valde** baz=243	**4.64**	**57**	P		**Pn**	**00 49 08.1**	**0.0**	
MCK	**McKinley**	**4.81**	**20**	Pn		**Pn**	**00 49 10.3**	**0.0**	
MCK	**McKinley** baz=204	**4.81**	**20**	P		**Pn**	**00 49 10.6**	**+0.3**	
HARP	**HAARP**	**4.83**	**47**			**Pn**	**00 49 10.8**	**+0.2**	
HARP	**HAARP** baz=233	**4.83**	**47**	P		**Pn**	**00 49 10.8**	**+0.2**	
GRIN	**Grindle Hills**	**4.84**	**74**			**Pn**	**00 49 11.1**	**+0.3**	
BPAW	**Bear Paw Mtn.**	**4.89**	**9**	Pn		**Pn**	**00 49 11.4**	**0.0**	
BPAW				IAML			00 50 08.2		
	comp=E,16nm,0.9s								
BPAW				IAML			00 50 09.7		
	comp=N,14nm,1.0s								
BPAW	**Bear Paw Mtn.** baz=190	**4.89**	**9**	P		**Pn**	**00 49 11.6**	**+0.2**	
KHIT	**Khitrov Hills**	**4.90**	**72**			**Pn**	**00 49 11.5**	**-0.2**	
GLB	**Gilahina Butte**	**4.91**	**60**	Pn		**Pn**	**00 49 11.5**	**-0.3**	
GLB				IAML			00 50 08.3		
	comp=E,30nm,0.5s								
GLB				IAML			00 50 09.3		
	comp=N,35nm,0.8s								
J19K	**Poorman**	**4.92**	**345**	Pn		**Pn**	**00 49 11.8**	**+0.1**	
J19K	**Poorman** baz=162	**4.92**	**345**	P		**Pn**	**00 49 11.9**	**+0.1**	
WACK	**Wrangell Chich**	**4.93**	**53**			**Pn**	**00 49 12.5**	**+0.4**	
J20K	**Nowinta River**	**4.95**	**353**	Pn		**Pn**	**00 49 12.1**	**-0.1**	
J20K				IAML			00 50 10.5		
	comp=E,16nm,1.0s								
J20K	**Nowinta River** baz=172	**4.95**	**353**	P		**Pn**	**00 49 12.3**	**+0.1**	
WASW	**Wrangell South**	**4.96**	**54**			**Pn**	**00 49 13.0**	**+0.3**	
VRDI	**Verde Repeater**	**5.00**	**63**	Pn		**Pn**	**00 49 12.6**	**-0.5**	
VRDI				IAML			00 50 12.1		
	comp=N,31nm,1.1s								
VRDI				IAML			00 50 13.0		
	comp=E,22nm,0.9s								
CRQM	**Cirque**	**5.02**	**69**	Pn		**Pn**	**00 49 13.2**	**-0.1**	
CRQM				IAML			00 50 11.1		
	comp=E,50nm,0.6s								
CRQE	**Cirque** baz=257	**5.04**	**69**	P		**Pn**	**00 49 13.3**	**-0.3**	
SNH	**Sunshine Point**	**5.07**	**76**	Pn		**Pn**	**00 49 14.2**	**+0.3**	
PAX	**Paxson**	**5.09**	**40**	Pn		**Pn**	**00 49 13.8**	**-0.3**	
PAX	**Paxson** baz=227	**5.09**	**40**	P		**Pn**	**00 49 14.4**	**+0.2**	
WAX	**Waxell Ridge**	**5.10**	**73**	Pn		**Pn**	**00 49 14.6**	**+0.3**	
BWN	**Browne**	**5.13**	**16**	Pn		**Pn**	**00 49 14.7**	**0.0**	
BWN				IAML			00 50 20.5		
	comp=N,33nm,1.2s								
BWN				IAML			00 51 00.6		
	comp=E,41nm,1.1s								
TGL	**Tana Glacier**	**5.17**	**69**	Pn		**Pn**	**00 49 14.6**	**-0.7**	
TGL				IAML			00 50 14.6		
	comp=N,35nm,1.2s								
TGL				IAML			00 50 19.2		
	comp=E,34nm,0.6s								
MCARA	**McCarthy VSAT**	**5.25**	**62**	Pn		**Pn**	**00 49 17.7**	**+1.5**	
K15K	**Wolf Creek Mou**	**5.27**	**309**	Pn		**Pn**	**00 49 15.7**	**-0.8**	
ISLE	**Juniper Island**	**5.37**	**71**	Pn		**Pn**	**00 49 18.2**	**+0.1**	
PTPK	**Patty Peak**	**5.44**	**65**			**Pn**	**00 49 19.5**	**+0.4**	
M13K	**Dall Lake**	**5.48**	**286**	Pn		**Pn**	**00 49 20.5**	**+1.1**	
MESA	**MESA**	**5.51**	**76**	Pn		**Pn**	**00 49 20.2**	**+0.2**	
MESA	**MESA** baz=265	**5.51**	**76**	P		**Pn**	**00 49 20.0**	**0.0**	
J16K	**Anvik River**	**5.52**	**320**	Pn		**Pn**	**00 49 19.4**	**-0.6**	
NEA2	**Nenana**	**5.59**	**16**	Pn		**Pn**	**00 49 20.1**	**-0.8**	
WRH	**Wood River Hil**	**5.63**	**21**	Pn		**Pn**	**00 49 20.6**	**-0.9**	
GRNC	**Granite Creek**	**5.68**	**71**	Pn		**Pn**	**00 49 22.4**	**0.0**	
BARN	**Barnard Glacie**	**5.79**	**67**	Pn		**Pn**	**00 49 24.6**	**+0.7**	
HDA	**Harding Lake**	**5.81**	**25**	Pn		**Pn**	**00 49 23.3**	**-0.6**	
HDA	**Harding Lake** baz=210	**5.81**	**25**	P		**Pn**	**00 49 23.8**	**-0.1**	
MLY	**Manley**	**5.83**	**8**	Pn		**Pn**	**00 49 24.1**	**-0.2**	
MLY	**Manley** baz=190	**5.83**	**8**	P		**Pn**	**00 49 23.9**	**-0.4**	
RIDG	**Independent Ri**	**5.83**	**37**	Pn		**Pn**	**00 49 24.6**	**+0.3**	
RIDG	**Independent Ri** baz=224	**5.83**	**37**	P		**Pn**	**00 49 24.6**	**+0.3**	
CCB	**Clear Creek Bu**	**5.85**	**21**	Pn		**Pn**	**00 49 23.3**	**-1.0**	
CNBA	**Chernabura Isl**	**5.85**	**223**	Pn		**Pn**	**00 49 23.1**	**-1.3**	
L26K	**Log Cabin Wild**	**5.87**	**46**	Pn		**Pn**	**00 49 26.0**	**+1.2**	
I21K	**Tanana**	**5.92**	**3**	Pn		**Pn**	**00 49 25.5**	**+0.2**	
I21K	**Tanana** baz=184	**5.92**	**3**	P		**Pn**	**00 49 25.6**	**+0.2**	
CTG	**Chitna Glacier** baz=258	**5.92**	**69**	P		**Pn**	**00 49 26.0**	**+0.5**	
CTGM	**Chitina Glacie**	**5.93**	**69**	Pn		**Pn**	**00 49 25.7**	**+0.1**	
TABL	**Table Mountain**	**5.94**	**74**	Pn		**Pn**	**00 49 26.4**	**+0.6**	
I17K	**Unalakleet**	**5.98**	**324**	Pn		**Pn**	**00 49 26.6**	**+0.4**	
COLA	**College**	**6.04**	**20**	Pn		**Pn**	**00 49 26.4**	**-0.6**	
LOGN	**Logan Glacier**	**6.06**	**70**	Pn		**Pn**	**00 49 27.2**	**-0.2**	
MDM	**Murphy Dome**	**6.06**	**18**	Pn		**Pn**	**00 49 26.4**	**-0.9**	
I23K	**Minto, Yukon-K**	**6.08**	**13**	Pn		**Pn**	**00 49 26.3**	**-1.2**	
I23K	**Minto, Yukon-K** baz=196	**6.08**	**13**	P		**Pn**	**00 49 27.3**	**-0.3**	
M27K	**Edge Creek, AK**	**6.12**	**55**	Pn		**Pn**	**00 49 28.7**	**+0.4**	
M27K	**Edge Creek, AK** baz=244	**6.12**	**55**	P		**Pn**	**00 49 28.6**	**+0.4**	
IL31		**6.14**	**24**	Pn		**Pn**	**00 49 28.0**	**-0.3**	
ILAR	**Eielson Array**	**6.14**	**24**	Pn		**Pn**	**00 49 27.4**	**-1.0**	
ILAR	**Eielson Array**	**6.14**	**24**	P		**Pn**	**00 49 27.4**	**-0.9**	
	comp=E,7.9nm,0.4s,baz=208,slow=14,SNR=139								
ILAR				S		**Sn**	**00 50 34.3**	**-2.7**	
	comp=E,2.6nm,0.5s,baz=210,slow=20,SNR=8.7								
SCRK	**Sand Creek** baz=225	**6.27**	**38**	P		**Pn**	**00 49 29.8**	**-0.4**	
H20K	**Anotleneega Mo**	**6.30**	**352**			**Pn**	**00 49 30.8**	**+0.1**	
H20K	**Anotleneega Mo** baz=170	**6.30**	**352**	P		**Pn**	**00 49 30.8**	**+0.1**	
J14K	**Nanvaranak Lak**	**6.31**	**308**	Pn		**Pn**	**00 49 32.6**	**+2.0**	
POKR	**Poker Plat Res**	**6.34**	**21**	Pn		**Pn**	**00 49 29.9**	**-1.3**	
POKR	**Poker Plat Res** baz=205	**6.34**	**21**	P		**Pn**	**00 49 30.8**	**-0.3**	
PCA	**Pinnacle**	**6.36**	**77**			**Pn**	**00 49 31.4**	**0.0**	
PINM	**Pinnacle** baz=268	**6.36**	**77**	P		**Pn**	**00 49 31.4**	**0.0**	
J25K	**Salcha River,**	**6.36**	**30**	Pn		**Pn**	**00 49 30.8**	**-0.6**	
J25K	**Salcha River,** baz=216	**6.36**	**30**	P		**Pn**	**00 49 31.0**	**-0.4**	
H21K	**Melozitna Rive**	**6.39**	**360**	Pn		**Pn**	**00 49 31.4**	**-0.4**	
H21K	**Melozitna Rive** baz=180	**6.39**	**360**	P		**Pn**	**00 49 31.2**	**-0.5**	
H18K	**Honhosa River**	**6.45**	**338**	Pn		**Pn**	**00 49 31.9**	**-0.6**	
H18K	**Honhosa River** baz=153	**6.45**	**338**	P		**Pn**	**00 49 32.5**	**-0.1**	
L27K	**Beaver Creek,**	**6.47**	**50**	Pn		**Pn**	**00 49 33.1**	**+0.1**	
L27K	**Beaver Creek,** baz=239	**6.47**	**50**	P		**Pn**	**00 49 33.7**	**+0.7**	
BCAR	**Beaver Creek A**	**6.49**	**50**	Pn		**Pn**	**00 49 33.7**	**+0.5**	
H19K	**Roundabout Mou**	**6.49**	**346**	Pn		**Pn**	**00 49 33.1**	**-0.1**	
H17K	**Granite Mounta**	**6.59**	**332**	Pn		**Pn**	**00 49 33.7**	**-0.8**	
H17K	**Granite Mounta** baz=146	**6.59**	**332**	P		**Pn**	**00 49 34.6**	**+0.1**	
H22K	**Ishtalitna Cre**	**6.65**	**5**			**Pn**	**00 49 35.0**	**-0.3**	
H22K	**Ishtalitna Cre** baz=186	**6.65**	**5**	P		**Pn**	**00 49 35.0**	**-0.3**	
IMAR	**Indian Mountai**	**6.73**	**356**	Pn		**Pn**	**00 49 36.0**	**-0.4**	
J26L	**Joseph Creek**	**6.77**	**36**	Pn		**Pn**	**00 49 37.1**	**0.0**	
J26L	**Joseph Creek** baz=224	**6.77**	**36**	P		**Pn**	**00 49 36.7**	**-0.4**	
PNL	**Peninsula**	**6.79**	**81**			**Pn**	**00 49 37.2**	**0.0**	
PNL	**Peninsula** baz=272	**6.79**	**81**	P		**Pn**	**00 49 37.2**	**0.0**	
H24K	**Noodor Dome**	**6.93**	**17**	Pn		**Pn**	**00 49 38.6**	**-0.6**	
H24K	**Noodor Dome** baz=201	**6.93**	**17**	P		**Pn**	**00 49 38.6**	**-0.6**	
K27K	**Chicken**	**6.94**	**42**	Pn		**Pn**	**00 49 38.8**	**-0.4**	
K27K	**Chicken** baz=232	**6.94**	**42**	P		**Pn**	**00 49 39.2**	**+0.1**	
PRP	**Porcupine Dome**	**7.08**	**25**	Pn		**Pn**	**00 49 40.4**	**-0.8**	
PRP	**Porcupine Dome** baz=211	**7.08**	**25**	P		**Pn**	**00 49 40.8**	**-0.4**	
G19K	**Purcell Mounta**	**7.16**	**346**	Pn		**Pn**	**00 49 41.7**	**-0.6**	
G18K	**Tagagawik**	**7.17**	**340**	Pn		**Pn**	**00 49 41.4**	**-1.0**	
O29M	**Mount Kennedy**	**7.20**	**76**	Pn		**Pn**	**00 49 43.5**	**+0.5**	
I26K	**Coal Creek Min**	**7.49**	**32**	Pn		**Pn**	**00 49 45.5**	**-1.2**	
I26K	**Coal Creek Min** baz=221	**7.49**	**32**	P		**Pn**	**00 49 46.3**	**-0.4**	
G23K	**Bananza Creek**	**7.54**	**8**	Pn		**Pn**	**00 49 46.9**	**-0.6**	
G23K	**Bananza Creek** baz=191	**7.54**	**8**	P		**Pn**	**00 49 46.9**	**-0.6**	
G16K	**Koyuk River**	**7.58**	**328**	Pn		**Pn**	**00 49 47.1**	**-0.9**	
M29M	**Somme Creek**	**7.63**	**59**	Pn		**Pn**	**00 49 49.4**	**+0.6**	
M29M	**Somme Creek** baz=252	**7.63**	**59**	P		**Pn**	**00 49 49.3**	**+0.5**	
P29M	**Windy Craggy**	**7.63**	**81**	Pn		**Pn**	**00 49 49.6**	**+0.9**	
EGAK	**Eagle**	**7.72**	**40**	Pn		**Pn**	**00 49 48.5**	**-1.3**	
HYT	**Haines Junctio**	**7.76**	**72**	Pn		**Pn**	**00 49 50.9**	**+0.3**	
G24K	**Hadweenzic Riv**	**7.80**	**15**	Pn		**Pn**	**00 49 49.2**	**-1.8**	
G24K	**Hadweenzic Riv** baz=200	**7.80**	**15**	P		**Pn**	**00 49 50.2**	**-0.8**	
F20K	**Avaraart Lake**	**7.90**	**351**	Pn		**Pn**	**00 49 52.1**	**-0.2**	
F19K	**Shaleruckik Mo**	**7.91**	**345**	Pn		**Pn**	**00 49 52.5**	**+0.2**	
DAWY	**Dawson**	**7.93**	**47**	Pn		**Pn**	**00 49 53.4**	**+0.7**	
F21K	**Alatna River**	**7.97**	**358**	Pn		**Pn**	**00 49 53.1**	**-0.1**	
F21K	**Alatna River** baz=177	**7.97**	**358**	P		**Pn**	**00 49 52.7**	**-0.5**	
ANM	**Nome**	**7.97**	**317**	Pn		**Pn**	**00 49 54.8**	**+1.5**	
L29M	**L29M**	**8.01**	**55**	Pn		**Pn**	**00 49 54.3**	**+0.5**	
N30M	**Aishikik Lake**	**8.04**	**68**	Pn		**Pn**	**00 49 53.8**	**-0.4**	
F17K	**Baldwin Pennin**	**8.16**	**335**	Pn		**Pn**	**00 49 55.4**	**-0.4**	
M30M	**Minto, Yukon**	**8.41**	**60**	Pn		**Pn**	**00 49 59.5**	**+0.1**	
F15K	**North Star Dit**	**8.47**	**324**	Pn		**Pn**	**00 50 00.5**	**+0.5**	
F24K	**Squaw Lake**	**8.53**	**13**	Pn		**Pn**	**00 50 00.2**	**-0.7**	
F24K	**Squaw Lake** baz=197	**8.53**	**13**	P		**Pn**	**00 50 00.2**	**-0.7**	
I28M	**Miner Creek**	**8.55**	**38**	Pn		**Pn**	**00 50 00.8**	**-0.4**	
K29M	**Barlow Dome**	**8.55**	**51**	Pn		**Pn**	**00 50 02.2**	**+0.9**	
J29N	**Klondike Camp**	**8.57**	**47**	Pn		**Pn**	**00 50 02.3**	**+0.8**	
E18K	**Tukpahlearik C**	**8.89**	**340**	Pn		**Pn**	**00 50 05.9**	**+0.2**	
BMAR	**Burnt Mountain**	**8.94**	**21**	Pn		**Pn**	**00 50 04.9**	**-1.5**	
WHY	**Whitehorse**	**9.04**	**74**	Pn		**Pn**	**00 50 07.5**	**-0.5**	
J30M	**Hart River**	**9.34**	**49**	Pn		**Pn**	**00 50 13.7**	**+1.6**	
E25K	**Arctic Village**	**9.40**	**17**	Pn		**Pn**	**00 50 10.2**	**-2.6**	
M31M	**Drury Creek, Y**	**9.42**	**64**	Pn		**Pn**	**00 50 12.9**	**-0.1**	
H29M	**Whitestone**	**9.54**	**37**	Pn		**Pn**	**00 50 12.9**	**-1.7**	
I30M	**Mount Dempster**	**9.64**	**45**	Pn		**Pn**	**00 50 16.7**	**+0.7**	
FARO	**Faro, Yukon**	**9.91**	**64**	Pn		**Pn**	**00 50 19.2**	**-0.5**	
C18K	**Utukok River**	**10.09**	**342**	Pn		**Pn**	**00 50 22.1**	**0.0**	
F28M	**Old Crow**	**10.11**	**29**	Pn		**Pn**	**00 50 22.8**	**+0.5**	
F28M	**Old Crow** baz=220	**10.11**	**29**	P		**Pn**	**00 50 21.6**	**-0.8**	
D25K	**Kavik River**	**10.43**	**12**	Pn		**Pn**	**00 50 27.1**	**+0.4**	
C16K	**Lisburne Hills**	**10.58**	**334**	Pn		**Pn**	**00 50 29.4**	**+0.8**	
MMPY	**Sheldon Lake,**	**10.92**	**63**	Pn		**Pn**	**00 50 34.8**	**+1.3**	
U33K	**Whale Pass**	**10.94**	**98**	Pn		**Pn**	**00 50 33.4**	**-0.3**	
R33M	**Jennings River**	**11.09**	**80**	Pn		**Pn**	**00 50 36.9**	**+1.1**	
E29M	**Blow River**	**11.18**	**29**	Pn		**Pn**	**00 50 36.7**	**-0.2**	
G31M	**Satah River**	**11.28**	**40**	Pn		**Pn**	**00 50 38.2**	**+0.1**	
F31M	**Tsiigehtchic**	**11.74**	**38**	Pn		**Pn**	**00 50 44.1**	**-0.2**	
DLBC	**Dease Lake**	**11.76**	**84**	Pn		**Pn**	**00 50 47.8**	**+3.0**	
DLBC	**Dease Lake**	**11.76**	**84**	P		**Pn**	**00 50 47.3**	**+2.5**	
	comp=E,1.3nm,0.3s,baz=258,slow=10,SNR=6.8								
INK	**Inuvik**	**12.32**	**35**	P		**Pn**	**00 50 52.4**	**+0.3**	
	comp=E,3.1nm,0.8s,baz=243,slow=13,SNR=6.6								
YKA	**Yellowknife Ar**	**18.62**	**64**	P		**P**	**00 52 11.0**	**+0.9**	
	comp=E,0.3nm,0.5s,baz=278,slow=10,SNR=8.0								
ARCES	**ARCESS Array B**	**51.46**	**1**	P		**P**	**00 56 54.8**	**-0.6**	
	comp=E,7.9nm,1.0s,baz=17,slow=7.0,SNR=1.3								
	comp=E,7.9nm,1.0s								
SONM	**Songino Array**	**55.33**	**306**	P		**P**	**00 57 24.5**	**+0.4**	
	comp=E,0.3nm,0.4s,baz=51,slow=9.4,SNR=2.3								
	comp=E,0.3nm,0.4s								
HFS	**Hagfors**	**60.44**	**8**	P		**P**	**00 57 58.6**	**-0.8**	
	comp=E,3.0nm,1.0s,baz=355,slow=5.1,SNR=4.8								
	comp=E,3.0nm,1.0s								

*IDC **28** 00:54:20.1±1.1,5°89S×143°01E,h0km,mb4.0/5, mbtmp4.1/7,ML1.7/1,MS3.4/10,Error ellipse: s-maj=39.0km s-min=24.2km az=63.0*

ISC 28 00:54:21.3±0.9,6°1S±0°1×142°8E±0°1,h10km,n17,
σ1ᵖ34/9,mb4.1/5,MS3.2/7,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.42**	**128**	Pn		**Pn**	**Pn**	**00 55 43.2**	**+0.9**
	1.6nm,0.3s,baz=337,slow=7.4,SNR=5.0								
PM

3.6nm,0.9s,baz=157,slow=1.6,SNR=3.7

*NORS **28** 00:56:48.8,41°.97N×45°.77E,h5km,MPVA3.3*
*MOS **28** 00:56:48.3,41°.99N×45°.81E,h22km,MPVA3.3*
*AZER **28** 00:56:49.2,41°.79N×45°.88E,h3km,ml2.1*
*DRS **28** 00:56:51.6,41°.97N×45°.85E,h18km*

ISC 28 00:56:49.2±1.0, 41°.96N±0°.02×45°.82E±0°.02, h16km±9km, n27,σ0s84/54, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKTA	**Zakatala**	**0.68**	**118**	P	**Pb**	**00 57 03.0**	**+0.3**
ZKTA				S	**Sn**	**00 57 13.2**	**-1.3**
XNZR	**Khunzakh**	**0.88**	**48**	*e*Pg	**Pg**	**00 57 06.2**	**-0.2**
XNZR				*e*Sg	**Sg**	**00 57 17.8**	**-0.3**
GNBR	**Gunib**	**0.96**	**63**	*e*Pg	**Pn**	**00 57 07.8**	**-0.3**
GNBR				*e*Sg	**Sn**	**00 57 20.9**	**-0.5**
QZX	**Qazax, Azerbai**	**0.96**	**201**	P	**Pb**	**00 57 07.5**	**+0.1**
QZX				S	**Sn**	**00 57 22.0**	**+0.7**
KMKR	**Kumukh**	**0.97**	**79**	*e*Pg	**Pn**	**00 57 08.5**	**+0.1**
KMKR				*e*Sg	**Sn**	**00 57 21.3**	**-0.6**
UNCR	**Uncukul**	**1.05**	**43**	*e*Pg	**Pg**	**00 57 09.9**	**+0.3**
UNCR				*e*Sg	**Sn**	**00 57 23.4**	**-0.3**
ARKR	**Arakani**	**1.09**	**53**	*e*Pg	**Pn**	**00 57 09.5**	**-0.3**
ARKR				*e*Sg	**Sg**	**00 57 23.8**	**-0.8**
GUDG	**Gudauri**	**1.12**	**298**	*e*Pg	**Pb**	**00 57 09.1**	**-1.2**
GUDG				*e*Sg	**Sb**	**00 57 24.1**	**-0.6**
GDB	**GEDABAY**	**1.23**	**182**	P	**Pn**	**00 57 11.9**	**-0.1**
GDB				S	**Sg**	**00 57 29.2**	**0.0**
DLMR	**Dylym**	**1.27**	**28**	*e*Pg	**Pg**	**00 57 13.7**	**0.0**
DLMR				*e*Sg	**Sg**	**00 57 30.2**	**0.0**
SEKA	**Sheki**	**1.28**	**125**	P	**Pg**	**00 57 13.4**	**-0.4**
SEKA				S	**Sg**	**00 57 32.7**	**+2.1**
BUJR	**Buynaksk**	**1.29**	**47**	*e*Pg	**Pg**	**00 57 13.5**	**-0.7**
BUJR				*e*Sg	**Sg**	**00 57 30.5**	**-0.5**
DBC	**Dubki**	**1.30**	**35**	*e*Pg	**Pb**	**00 57 13.4**	**0.0**
DBC				*e*Sg	**Sg**	**00 57 31.8**	**+0.5**
KMGR	**Komgaron**	**1.31**	**328**	*i* Pg	**Pb**	**00 57 13.7**	**+0.3**
KMGR				*e*Sg	**Sg**	**00 57 32.7**	**+1.2**
GANJ	**Ganja**	**1.36**	**164**	P	**Pb**	**00 57 14.6**	**+0.2**
GANJ				S	**Sg**	**00 57 33.4**	**+0.1**
LACR	**Lac**	**1.42**	**308**	*e*Pg	**Pn**	**00 57 14.2**	**-0.3**
LACR				*e*Sg	**Sb**	**00 57 33.4**	**0.0**
AKT	**Akhty**	**1.51**	**108**	*e*Pg	**Pg**	**00 57 17.8**	**-0.5**
AKT				*e*Sg	**Sg**	**00 57 37.9**	**-0.1**
ARNR	**Ardon**	**1.67**	**318**	*e*Pg	**Pb**	**00 57 20.1**	**+0.6**
ARNR				*e*Sg	**Sg**	**00 57 43.1**	**+0.2**
KORR	**Kora**	**1.72**	**312**	*e*Pg	**Pb**	**00 57 21.2**	**+0.8**
KORR				*e*Sg	**Sg**	**00 57 44.7**	**+0.1**
QBL	**Gabala**	**1.82**	**123**	Pn	**Pb**	**00 57 22.8**	**+0.6**
QBL				Sn	**Sg**	**00 57 49.5**	**+1.5**
DIGR	**Digorskoe uzhe**	**1.91**	**300**	*e*Pg	**Pb**	**00 57 23.0**	**-0.7**
DIGR				*e*Sg	**Sb**	**00 57 48.1**	**+0.8**
XNQ	**Khinaliq**	**1.91**	**113**	Pn	**Pb**	**00 57 24.2**	**+0.4**
XNQ				Sn	**Sg**	**00 57 52.0**	**+1.2**
LSNR	**Lesken**	**1.98**	**313**	*e*Pg	**Pb**	**00 57 25.2**	**+0.3**
LSNR				*e*Sg	**Sb**	**00 57 51.1**	**+1.9**
AGDM	**Agdam**	**2.09**	**152**	Pn	**Pb**	**00 57 26.4**	**-0.3**
AGDM				Sn	**Sg**	**00 57 55.3**	**-1.1**
IML	**Ismayilli**	**2.13**	**122**	Pn	**Pb**	**00 57 28.0**	**+0.6**
IML				Sn	**Sg**	**00 57 57.0**	**-0.6**
PQL	**Pirkuli**	**2.39**	**118**	Pn	**Pg**	**00 57 33.6**	**-1.5**
PQL				Sn	**Sg**	**00 58 05.6**	**-0.6**
SBZ	**Shahbuz**	**2.56**	**185**	Pn	**Pb**	**00 57 34.1**	**-0.8**
SBZ				Sn	**Sb**	**00 58 08.7**	**+2.5**

IDC 28 01:03:35.6±6.1, 5°.88S×141°.84E, h0km, mb3.7/2, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=232.4km s-min=32.8km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.76**	**207**	Pn	Pn	01 07 17.2	-2.0
	0.1nm,0.3s,baz=30,slow=13,SNR=1.1 0.8nm,0.5s						
ASAR	**Alice Springs**	**19.26**	**203**	P	Pn	01 08 03.1	+0.2
	0.4nm,0.3s,baz=33,slow=12,SNR=7.4 3.4nm,0.8s						
MKAR	**Makanchi Array**	**74.19**	**322**	P	P	01 15 14.7	+0.3
	0.1nm,0.4s,baz=104,slow=6.7,SNR=5.8 0.1nm,0.4s						
BVAR	**Borovoye Array**	**83.68**	**325**	P	P	01 16 05.8	-0.5
	1.4nm,0.9s,baz=108,slow=5.7,SNR=5.1 1.4nm,0.9s						

*NEIC **28** 01:17:12.8±1.2, 18°.85N±0°.09×145°.5E±0°.1, h231km±8km, mb4.4/97, Error ellipse: s-maj=15.4km s-min=12.7km az=53.0*
*IDC **28** 01:17:19.8±3.3, 18°.89N×145°.36E, h303km±32km, mb3.8/29, mbtmp4.5/31, Error ellipse: s-maj=13.5km s-min=12.2km az=94.0*

ISC 28 01:17:10.5±0.6, 18°.84N±0°.09×145°.49E±0°.09, h214km, n144, σ0s89/146, mb4.4/80, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**17.74**	**300**	Pn	**Pn**	**01 21 05.4**	**+0.6**
JOW	**Kunigami**	**17.74**	**300**	P	**Pn**	**01 21 06.0**	**+1.2**
	92nm,0.4s,baz=135,slow=11,SNR=22						
JGF	**Kuroka**	**18.18**	**338**	P	**P**	**01 21 08.1**	**+0.7**
JGF				IAmb	IAmb	01 21 10.1	
	comp=Z,10nm,0.7s						
MJAR	**Matsushiro Arr**	**18.77**	**341**	P	**Pn**	**01 21 16.9**	**+0.1**
	comp=Z,10nm,0.6s,baz=168,slow=9.1,SNR=24						
JMM	**Marumori**	**19.40**	**349**	P	**P**	**01 21 22.0**	**+1.6**
JSD	**Sado**	**20.14**	**343**	P	**P**	**01 21 28.5**	**+0.1**
JTM	**Tenmabayashi**	**22.20**	**351**	P	**P**	**01 21 50.0**	**+0.7**
YHNB	**Yeheng**	**23.12**	**289**	P	**P**	**01 21 58.1**	**+0.2**
ERM	**Erimo**	**23.19**	**356**	P	**P**	**01 22 00.4**	**+2.2**
ERM				IAmb	IAmb	01 22 03.6	
	comp=Z,13nm,1.1s						
SSLB	**Suanglung**	**23.37**	**286**	P	**P**	**01 22 02.3**	**+2.1**
KSRS	**Korea Array**	**24.09**	**324**	P	**P**	**01 22 06.5**	**0.0**
	comp=Z,2.2nm,0.6s,baz=142,slow=8.7,SNR=5.7 comp=Z,2.2nm,0.6s						
JKA	**Kamikawa-asahi**	**25.32**	**355**	P	**P**	**01 22 19.0**	**+1.5**
HEH	**HeiHe**	**34.51**	**339**	*e*P	**P**	**01 23 38.0**	**-0.2**
HEH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HEH				pmax	pmax		
	comp=Z,96nm,6.0s						
PETK	**Petropavlovsk-**	**35.50**	**13**	P	**P**	**01 23 47.9**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=167,slow=7.1,SNR=2.9 comp=Z,2.3nm,0.6s						
HHC	**Hu-ho-hao-te**	**36.37**	**314**	*e*P	**P**	**01 23 53.5**	**-0.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,5.4s						
WB0	**Warramunga Arr**	**39.88**	**196**	P	**P**	**01 24 23.8**	**+0.1**
WRAB	**Tennant Creek**	**40.05**	**196**	P	**P**	**01 24 25.1**	**0.0**
WB2	**Warramunga Arr**	**40.06**	**196**	P	**P**	**01 24 25.6**	**+0.4**
WRA	**Warramunga Arr**	**40.06**	**196**	P	**P**	**01 24 25.8**	**+0.5**
WRA	**Warramunga Arr**	**40.06**	**196**	P	**P**	**01 24 26.0**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=16,slow=9.0,SNR=15 comp=Z,3.5nm,0.7s						
PZH	**PanZhiHua**	**40.93**	**289**	P	**P**	**01 24 31.5**	**-1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.3s						
FITZ	**Fitzroy Crossi**	**41.57**	**209**	P	**P**	**01 24 38.5**	**+1.0**
SONM	**Songino Array**	**42.91**	**321**	P	**P**	**01 24 47.4**	**-0.9**
SONM	**Songino Array**	**42.91**	**321**	P	**P**	**01 24 47.9**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=138,slow=9.4,SNR=12 comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**43.73**	**195**	P	**P**	**01 24 55.6**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=17,slow=8.1,SNR=4.8 comp=Z,0.7nm,0.5s						
DZM	**Mont Dzumac**	**45.53**	**152**	P	**P**	**01 25 09.5**	**+0.4**
GOMU	**GeErMu**	**47.61**	**302**	P	**P**	**01 25 28.5**	**+2.9**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKUT	**Akutan**	**51.17**	**35**	P	**P**	**01 25 51.3**	**-0.3**
TIXI	**Tiksi**	**53.71**	**354**	P	**P**	**01 26 09.3**	**-0.7**
WMQ	**Urumqi**	**54.07**	**311**	*e*P	**P**	**01 26 14.5**	**+1.3**
WMQ				PP	PP	01 28 26.8	+10
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
SDPT	**Sand Point**	**54.47**	**35**	P	**P**	**01 26 16.3**	**+0.6**
M13K	**Dall Lake**	**55.01**	**28**	P	**P**	**01 26 21.4**	**+1.9**
O14K	**Tigyukauivet M**	**55.49**	**30**	P	**P**	**01 26 23.6**	**+0.6**
L14K	**Kuka Creek**	**55.71**	**27**	P	**P**	**01 26 25.4**	**+0.9**
L14K				IAmb	IAmb	01 26 26.6	
	comp=Z,13nm,0.9s						
M14K	**Bethel**	**55.78**	**28**	P	**P**	**01 26 25.9**	**+0.9**
J14K	**Nanvaranak Lak**	**55.98**	**26**	P	**P**	**01 26 26.7**	**+0.4**
J14K				IAmb	IAmb	01 26 27.6	
	comp=Z,16nm,1.4s						
ANM	**Nome**	**56.15**	**23**	P	**P**	**01 26 27.9**	**+0.3**
N15K	**Kwuluk River**	**56.39**	**29**	P	**P**	**01 26 30.1**	**+0.7**
K15K	**Wolf Creek Mou**	**56.61**	**27**	P	**P**	**01 26 30.9**	**0.0**
F15K	**North Star Dit**	**56.99**	**22**	P	**P**	**01 26 34.2**	**+0.7**
M16K	**Timber Creek**	**57.23**	**29**	P	**P**	**01 26 36.1**	**+0.8**
M16K				IAmb	IAmb	01 27 01.9	
	comp=Z,17nm,1.3s						
J16K	**Anvik River**	**57.42**	**26**	P	**P**	**01 26 37.0**	**+0.4**
J16K				IAmb	IAmb	01 26 38.8	
	comp=Z,7.2nm,0.7s						
I17K	**Unalakleet**	**57.64**	**25**	P	**P**	**01 26 38.9**	**+0.9**
I17K				IAmb	IAmb	01 26 40.7	
	comp=Z,14nm,1.3s						
ZAA0	**Zalesovo Array**	**57.79**	**322**	P	**P**	**01 26 38.0**	**-1.2**
ZALV	**Zalesovo Beam**	**57.79**	**322**	P	**P**	**01 26 37.6**	**-1.6**
ZALV	**Zalesovo Beam**	**57.79**	**322**	P	**P**	**01 26 38.4**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=106,slow=6.7,SNR=11						
ZALV				PcP	**PcP**	**01 27 28.6**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=90,slow=4.4,SNR=4.3 comp=Z,2.2nm,0.6s						
N17K	**Nushagak Hills**	**57.87**	**29**	P	**P**	**01 26 40.0**	**+0.3**
N17K				IAmb	IAmb	01 26 41.6	
	comp=Z,6.8nm,0.7s						
C16K	**Lisburne Hills**	**58.10**	**19**	P	**P**	**01 26 41.2**	**0.0**
C16K				IAmb	IAmb	01 26 42.6	
	comp=Z,6.7nm,0.8s						
MKAR	**Makanchi Array**	**58.23**	**314**	P	**P**	**01 26 42.1**	**-0.4**
MKAR	**Makanchi Array**	**58.23**	**314**	P	**P**	**01 26 42.6**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=89,slow=9.1,SNR=48						
MKAR				PcP	**pP**	**01 27 30.4**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=84,slow=5.0,SNR=2.4 comp=Z,3.3nm,0.6s						
H17K	**Granite Mounta**	**58.39**	**24**	P	**P**	**01 26 43.4**	**+0.1**
H17K				IAmb	IAmb	01 26 44.8	
	comp=Z,5.5nm,0.7s						
MAKZ	**Makanchi**	**58.44**	**314**	P	**P**	**01 26 43.3**	**-0.7**
MAKZ				IAmb	IAmb	01 26 45.1	
	comp=Z,4.7nm,0.7s						
N18K	**Kilae Creek**	**58.52**	**30**	P	**P**	**01 26 44.8**	**+0.6**
N18K				IAmb	IAmb	01 26 46.5	
	comp=Z,13nm,1.1s						
F17K	**Baldwin Pennin**	**58.56**	**22**	P	**P**	**01 26 45.1**	**+0.7**
F17K				IAmb	IAmb	01 26 45.8	
	comp=Z,6.6nm,0.7s						
H18K	**Honhosa River**	**59.08**	**24**	P	**P**	**01 26 48.3**	**+0.3**
H18K				IAmb	IAmb	01 26 49.1	
	comp=Z,5.2nm,0.6s						
E18K	**Tukpahlearik C**	**59.24**	**21**	P	**P**	**01 26 49.8**	**+0.7**
E18K				IAmb	IAmb	01 26 51.0	
	comp=Z,10.0nm,1.1s						
G18K	**Tagagawik**	**59.27**	**23**	P	**P**	**01 26 49.5**	**+0.2**
KDAK	**Kodiak Island**	**59.35**	**33**	P	**P**	**01 26 50.4**	**+0.4**
	comp=Z,9.2nm,0.9s,baz=315,slow=5.7,SNR=9.8 comp=Z,9.2nm,0.9s						
C18K	**Utukok River**	**59.61**	**20**	P	**P**	**01 26 51.9**	**+0.2**
C18K				IAmb	IAmb	01 26 52.9	
	comp=Z,4.8nm,0.7s						
J19K	**Poorman**	**59.75**	**26**	P	**P**	**01 26 52.9**	**+0.3**
J19K				IAmb	IAmb	01 26 54.3	
	comp=Z,6.6nm,0.9s						
G19K	**Purcell Mounta**	**59.96**	**23**	P	**P**	**01 26 53.9**	**-0.1**
G19K				IAmb	IAmb	01 26 55.6	
	comp=Z,5.9nm,0.8s						
C19K	**Lookout Ridge**	**60.34**	**20**	P	**P**	**01 26 57.2**	**+0.6**
J20K	**Nowinta River**	**60.42**	**26**	P	**P**	**01 26 57.5**	**+0.4**
D19K	**Kuna River**	**60.55**	**21**	P	**P**	**01 26 58.5**	**+0.4**
D19K				IAmb	IAmb	01 26 59.5	
	comp=Z,6.4nm,0.8s						
F20K	**Avaraart Lake**	**60.81**	**23**	P	**P**	**01 27 00.6**	**+0.9**
KURK	**Kurchatov**	**61.04**	**318**	P	**P**	**01 27 00.6**	**-0.9**
KURK				IAmb	IAmb	01 27 02.6	
	comp=Z,5.8nm,0.9s						
CAST	**Castle Rocks**	**61.06**	**27**	P	**P**	**01 27 02.3**	**+0.8**
KURBB	**Kurchatov Arra**	**61.09**	**318**	P	**P**	**01 27 01.1**	**-0.7**
	comp=Z,6.3nm,0.8s,baz=97,slow=7.3,SNR=31 comp=Z,6.3nm,0.8s						
IMAR	**Indian Mountai**	**61.17**	**24**	P	**P**	**01 27 02.8**	**+0.6**
NRIK	**Norilsk**	**61.41**	**340**	P	**P**	**01 27 03.2**	**-0.5**
	comp=Z,3.2nm,0.5s,baz=98,slow=9.1,SNR=8.8 comp=Z,3.2nm,0.5s						
H21K	**Melozitna Rive**	**61.43**	**25**	P	**P**	**01 27 04.7**	**+0.7**
H21K				IAmb	IAmb	01 27 05.5	
	comp=Z,4.3nm,0.8s						
I21K	**Tanana**	**61.62**	**25**	P	**P**	**01 27 05.9**	**+0.8**
I21K				IAmb	IAmb	01 27 06.7	
	comp=Z,5.0nm,0.6s						
BPAW	**Bear Paw Mtn.**	**61.72**	**27**	P	**P**	**01 27 06.4**	**+0.5**
MLY	**Manley**	**62.08**	**26**	P	**P**	**01 27 08.4**	**+0.1**
MLY				IAmb	IAmb	01 27 09.4	
	comp=Z,6.1nm,0.6s						
D22K	**Ayikyak River**	**62.54**	**21**	P	**P**	**01 27 11.6**	**+0.4**
KSH	**Kashi**	**62.63**	**305**	P	**P**	**01 27 16.0**	**+3.5**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
I23K	**Minto, Yukon-K**	**62.67**	**26**	P	**P**	**01 27 12.4**	**+0.3**
WRH	**Wood River Hil**	**63.04**	**26**	P	**P**	**01 27 13.9**	**-0.7**
WRH				IAmb	IAmb	01 27 15.0	
	comp=Z,4.0nm,0.7s						
MDM	**Murphy Dome**	**63.09**	**26**	P	**P**	**01 27 14.1**	**-0.8**
MDM				IAmb	IAmb	01 27 16.8	
	comp=Z,6.4nm,0.6s						
KLU	**Klutina**	**63.42**	**30**	P	**P**	**01 27 17.7**	**+0.4**
IL31		**63.61**	**26**	P	**P**	**01 27 17.4**	**-0.8**
IL31				IAmb	IAmb	01 27 18.1	
	comp=Z,4.3nm,0.8s						
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**01 27 16.8**	**-1.5**
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**01 27 17.3**	**-1.0**
	comp=Z,4.1nm,0.8s,baz=257,slow=4.9,SNR=42 comp=Z,4.1nm,0.8s						
G24K	**Hadweenzic Riv**	**63.80**	**24**	P	**P**	**01 27 19.6**	**0.0**
F24K	**Squaw Lake**	**63.85**	**23**	P	**P**	**01 27 20.1**	**+0.2**
RIDG	**Independent Ri**	**64.29**	**28**	P	**P**	**01 27 22.1**	**-0.8**
RIDG				IAmb	IAmb	01 27 23.8	
	comp=Z,9.0nm,0.8s						
SCRK	**Sand Creek**	**64.70**	**27**	P	**P**	**01 27 25.3**	**-0.3**
SCRK				IAmb	IAmb	01 27 26.6	
	comp=Z,7.1nm,1.0s						
E25K	**Arctic Village**	**64.84**	**23**	P	**P**	**01 27 27.4**	**+1.1**
E25K				IAmb	IAmb	01 27 28.6	
	comp=Z,8.2nm,1.3s						
J26L	**Joseph Creek**	**64.97**	**27**	P	**P**	**01 27 26.6**	**-0.7**
J26L				IAmb	IAmb	01 27 28.6	
	comp=Z,4.9nm,0.9s						
BMAR	**Burnt Mountain**	**65.07**	**24**	P	**P**	**01 27 28.6**	**+0.8**
GRNC	**Granite Creek**	**65.32**	**31**	P	**P**	**01 27 30.0**	**+0.2**
L27K	**Beaver Creek,**	**65.53**	**29**	P	**P**	**01 27 31.2**	**+0.3**
BCAR	**Beaver Creek A**	**65.56**	**29**	P	**P**	**01 27 31.3**	**+0.3**
BVAR	**Borovoye Array**	**66.25**	**320**	P	**P**	**01 27 35.2**	**-0.3**
	comp=Z,11nm,0.6s,baz=91,slow=7.4,SNR=63 comp=Z,11nm,0.6s						
BRVK	**Borovoye**	**66.31**	**320**	P	**P**	**01 27 35.1**	**-0.8**
BRVK				IAmb	IAmb	01 27 37.6	
	comp=Z,6.3nm,0.7s						
KK31	**Karatay Array**	**66.53**	**310**	P	**P**	**01 27 36.4**	**-1.1**
KK31				IAmb	IAmb	01 27 38.8	
	comp=Z,3.9nm,0.8s						
KKAR	**Karatay Array**	**66.53**	**310**	P	**P**	**01 27 36.9**	**-0.6**
I28M	**Miner Creek**	**66.62**	**26**	P	**P**	**01 27 37.8**	**0.0**
DAWY	**Dawson**	**66.72**	**28**	P	**P**	**01 27 38.1**	**-0.2**
F28M	**Old Crow**	**66.89**	**24**	P	**P**	**01 27 39.7**	**+0.4**
F28M				IAmb	IAmb	01 27 41.1	
	comp=Z,6.2nm,1.1s						
M29M	**Somme Creek**	**67.02**	**29**	P	**P**	**01 27 41.2**	**+0.8**
M29M				IAmb	IAmb	01 27 53.1	
	comp=Z,10nm,1.2s						
L29M	**L29M**	**67.22**	**29**	P	**P**	**01 27 41.8**	**+0.3**
L29M				IAmb	IAmb	01 27 44.0	
	comp=Z,8.1nm,0.9s						
P29M	**Windy Craggy**	**67.26**	**32**	P	**P**	**01 27 42.5**	**+0.7**
H29M	**Whitestone**	**67.33**	**25**	P	**P**	**01 27 42.1**	**-0.1**
HYT	**Haines Junctio**	**67.41**	**31**	P	**P**	**01 27 42.8**	**-0.1**
HYT				IAmb	IAmb	01 27 45.2	
	comp=Z,7.3nm,0.8s						
N30M	**Aishikik Lake**	**67.63**	**30**	P	**P**	**01 27 44.5**	**+0.4**
N30M				IAmb	IAmb	01 27 46.3	
	comp=Z,9.0nm,1.0s						
J30M	**Hart River**	**68.08**	**27**	P	**P**	**01 27 47.2**	**+0.2**
SIMJ	**Simiganj**	**68.10**	**305**	P	**P**	**01 27 46.2**	**-1.4**
SIMJ				IAmb	IAmb	01 27 48.7	
	comp=Z,4.8nm,0.9s						
M31M	**Drury Creek, Y**	**68.92**	**30**	P	**P**	**01 27 51.7**	**-0.4**
M31M				IAmb	IAmb	01 28 00.2	
	comp=Z,15nm,1.4s						
G31M	**Satah River**	**69.01**	**25**	P	**P**	**01 27 52.3**	**-0.1**
G31M				IAmb	IAmb	01 27 53.5	
	comp=Z,7.7nm,0.7s						
INK	**Inuvik**	**69.32**	**23**	P	**P**	**01 27 54.1**	**-0.3**
INK				IAmb	IAmb	01 27 55.2	
	comp=Z,6.9nm,0.9s						
INK	**Inuvik**	**69.32**	**23**	P	**P**	**01 27 54.2**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=249,slow=4.3,SNR=14 comp=Z,3.6nm,0.7s						
S34M	**Telegraph Cree**	**70.75**	**34**	P	**P**	**01 28 03.7**	**+0.4**
DLBC	**Dease Lake**	**71.28**	**34**	P	**P**	**01 28 07.8**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=220,slow=7.9,SNR=3.3 comp=Z,3.3nm,0.7s						
A36M	**Sachs Harbour**	**72.01**	**19**	P	**P**	**01 28 10.9**	**+0.4**
A36M				IAmb	IAmb	01 28 11.7	
	comp=Z,8.8nm,0.8s						
ABKAR	**Akbulak array**	**73.11**	**317**	P	**P**	**01 28 16.6**	**-0.8**
GEYT	**Alibeck**	**76.66**	**306**	P	**P**	**01 28 38.6**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=234,slow=5.0,SNR=4.4 comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**01 28 43.1**	**-1.6**
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**01 28 44.6**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=290,slow=5.6,SNR=38 comp=Z,2.6nm,0.7s						
LON	**Longmire**	**78.32**	**45**	P	**P**	**01 28 47.4**	**+0.3**
LON				IAmb	IAmb	01 29 08.0	
	comp=Z,7.0nm,1.2s						
SPITS	**Spitsbergen Ar**	**79.00**	**351**	P	**P**	**01 28 48.9**	**-1.3**
	comp=Z,21nm,1.1s,baz=86,slow=5.9,SNR=8.6 comp=Z,21nm,1.1s						
YBH	**Yreka Blue Hor**	**79.01**	**50**	P	**P**	**01 28 52.1**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=312,slow=6.5,SNR=6.9 comp=Z,3.8nm,0.9s						
RES	**Resolute Bay**	**79.34**	**14**	P	**P**	**01 28 51.3**	**-0.7**
RES	**Resolute Bay**	**79.34**	**14**	P	**P**	**01 28 52.1**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=336,slow=6.1,SNR=13 comp=Z,2.2nm,0.7s						
J05D	**Fort Rock, OR**	**79.64**	**48**	P	**P**	**01 28 54.0**	**-0.4**
J05D				IAmb	IAmb	01 28 56.8	
	comp=Z,6.6nm,0.9s						
PINE	**Pine Mountain**	**79.71**	**47**	P	**P**	**01 28 54.9**	**0.0**
K05A	**Summer Lake**	**80.04**	**48**	P	**P**	**01 28 56.3**	**-0.4**
K05A				IAmb	IAmb	01 28 59.2	
	comp=Z,5.3nm,0.7s						
NEW	**Newport**	**80.94**	**42**	P	**P**	**01 29 01.4**	**+0.3**
NEW				IAmb	IAmb	01 29 02.3	
	comp=Z,5.1nm,0.9s						
NEW	**Newport**	**80.94**	**42**	P	**P**	**01 29 01.2**	**0.0**
	comp=Z,4.1nm,0.8s,baz=266,slow=4.4,SNR=5.7 comp=Z,4.1nm,0.8s						
CMB	**Columbia Colle**	**81.77**	**53**	P	**P**	**01 29 06.0**	**+0.2**
CMB				IAmb	IAmb	01 29 07.1	
	comp=Z,4.5nm,0.8s						
PNTR	**Pine Nut**	**82.04**	**52**	P	**P**	**01 29 07.8**	**+0.4**
PNTR				IAmb	IAmb	01 29 10.8	
	comp=Z,6.1nm,0.7s						
ARCES	**ARCESS Array B**	**82.30**	**342**	P	**P**	**01 29 06.5**	**-1.3**
	comp=Z,6.2nm,1.0s,baz=70,slow=7.9,SNR=5.7 comp=Z,6.2nm,1.0s						
NVAR	**Mina Array Bea**	**83.21**	**52**	P	**P**	**01 29 13.6**	**+0.3**
NVAR	**Mina Array Bea**	**83.21**	**52**	P	**P**	**01 29 14.1**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=263,slow=6.2,SNR=45 comp=Z,5.1nm,0.7s						
ELK	**Elko**	**84.68**	**49**	P	**P**	**01 29 20.3**	**-0.4**
ELK				IAmb	IAmb	01 29 22.3	
	comp=Z,3.8nm,0.8s						
ELK	**Elko**	**84.68**	**49**	P	**P**	**01 29 21.1**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=286,slow=7.6,SNR=13 comp=Z,2.6nm,0.7s						
FINES	**FINESS Array B**	**86.68**	**335**	P	**P**	**01 29 27.6**	**-2.3**
	comp=Z,2.4nm,0.4s,baz=62,slow=4.8,SNR=27 comp=Z,2.4nm,0.4s						
PDAR	**Pinedale Array**	**87.87**	**45**	P	**P**	**01 29 35.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=235,slow=0.9,SNR=5.1 comp=Z,0.4nm,0.6s						
HFS	**Hagfors**	**92.18**	**338**	P	**P**	**01 29 52.9**	**-2.7**
	comp=Z,6.0nm,1.0s,baz=90,slow=4.7,SNR=7.1 comp=Z,6.0nm,1.0s						
NOA	**NORSAR Array B**	**92.38**	**340**	P	**P**	**01 29 55.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=50,slow=4.3,SNR=1.0 comp=Z,0.4nm,0.6s						
ULM	**Lac

IDC ***28*** *01:27:46.8±0.8, 62°.34N×149°.06W, h56km±7km, mb3.9/18, mbtmp4.1/23, MS3.4/16, Error ellipse: s-maj=13.1km s-min=7.9km az=101.0*

NEIC ***28*** *01:27:47.2±1.4, 62°.34N±0°.02×148°.73W±0°.05, h48km±4km, Error ellipse: s-maj=3.6km s-min=3.0km az=89.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=2.84; $M_{\theta\theta}$=3.60; $M_{\phi\phi}$=-0.76; $M_{r\theta}$=1.09; $M_{\theta\phi}$=0.59; $M_{\phi r}$=-1.00; Fault plane solution: M_o=3.65000×10^{15} NP1: ϕ_s=283.58000°, δ57.24000°, λ=-62.79000°. NP2:ϕ_s=60.04000°, δ41.59000°, λ=-125.40000°. Principal axes: T 3.8184, Plg8.0000°, Azm355.0000°; N -0.3606, Plg23.0000°, Azm88.0000°; P -3.4578, Plg66.0000°, Azm245.0000°;*

AEIC ***28*** *01:27:47.8±1.2, 62°.35N±0°.02×148°.73W±0°.05, h40km±5km, ML4.1, mb4.2/24(NEIC), ML4.3/196(NEIC), Mwr4.3/129(NEIC) Error ellipse: s-maj=3.6km s-min=2.9km az=92.0*

NEIC ***28*** *01:27:47.8, 62°.35N×148°.72W, h28km*

ISC 28 01:27:46.5±0.5, 62°.35N±0°.02×148°.77W±0°.03, h52km±5km, n530, σ1§18/552, mb4.2/44, MS3.4/14, 5C, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAT7	**Susitna Watana**	**0.48**	**356**		**Pn**	**01 27 57.6**	**-0.2**
WAT7					**Sn**	**01 28 06.1**	**+0.1**
WAT1	**Susitna Watana**	**0.49**	**12**		**Pn**	**01 27 57.5**	**-0.3**
WAT1					**Sn**	**01 28 05.9**	**-0.1**
WAT1	**Susitna Watana** baz=190	**0.49**	**12**	P	**Pn**	**01 27 57.5**	**-0.3**
WAT1				S	**Sn**	**01 28 05.9**	**-0.1**
WAT6	**Susitna Watana**	**0.53**	**64**		**Pn**	**01 27 57.8**	**-0.6**
WAT6					**Sn**	**01 28 06.3**	**-0.6**
WAT6	**Susitna Watana** baz=244	**0.53**	**64**	P	**Pn**	**01 27 57.8**	**-0.6**
WAT6				S	**Sn**	**01 28 06.3**	**-0.6**
SML	**Sawmill**	**0.58**	**159**		**Pn**	**01 27 58.4**	**-0.6**
SML					**Sn**	**01 28 07.5**	**-0.5**
SML	comp=E,27μm,0.9s			IAML		01 28 09.2	
SML	**Sawmill** baz=341	**0.58**	**159**	P	**Pn**	**01 27 58.5**	**-0.5**
SML				S	**Sn**	**01 28 07.8**	**-0.2**
GHO	**Glory Hole Cre**	**0.59**	**187**		**Pn**	**01 27 58.6**	**-0.4**
GHO					**Sn**	**01 28 07.5**	**-0.5**
GHO	comp=N,22μm,0.8s			IAML		01 28 08.8	
GHO	comp=E,19μm,0.5s			IAML		01 28 09.2	
CUT	**Chulitna**	**0.70**	**275**		**Pn**	**01 28 00.7**	**+0.3**
CUT					**Sn**	**01 28 11.0**	**+0.6**
CUT	comp=N,18μm,0.4s			IAML		01 28 11.8	
CUT	comp=E,21μm,0.6s			IAML		01 28 12.1	
CUT	**Chulitna** baz=94	**0.70**	**275**	P	**Pn**	**01 28 00.7**	**+0.3**
CUT	baz=94			S	**Sn**	**01 28 11.3**	**+1.0**
M23K	**Glacier View**	**0.74**	**138**		**Pn**	**01 28 00.2**	**-0.8**
M23K					**Sn**	**01 28 11.2**	**-0.3**
M23K	**Glacier View** baz=320	**0.74**	**138**	P	**Pn**	**01 28 00.2**	**-0.8**
PMR	**Palmer**	**0.78**	**193**		**Pn**	**01 28 01.0**	**-0.4**
PMR					**Sn**	**01 28 11.4**	**-0.7**
PMR	**Palmer**	**0.78**	**193**	P	**Pn**	**01 28 00.7**	**-0.7**
PMR	**Palmer** baz=14	**0.78**	**193**	P	**Pn**	**01 28 01.1**	**-0.4**
PMR	baz=14			S	**Sn**	**01 28 12.3**	**+0.1**
SCM	**Sheep Creek Mo**	**0.85**	**127**		**Pn**	**01 28 01.5**	**-0.9**
SCM				Sn	**Sn**	**01 28 13.3**	**-0.8**
SCM	comp=E,14μm,1.2s			IAML		01 28 15.9	
SCM	**Sheep Creek Mo** baz=309	**0.85**	**127**	P	**Pn**	**01 28 01.8**	**-0.7**
SCM	baz=309			S	**Sn**	**01 28 13.8**	**-0.3**
SCM	**Sheep Creek Mo**	**0.85**	**127**	P	**Pn**	**01 28 01.5**	**-0.9**
SCM						01 28 13.3	
M22K	**Willow**	**0.88**	**227**	Pn	**Pn**	**01 28 02.1**	**-0.5**
M22K	comp=E,13μm,0.6s			IAML		01 28 18.4	
M22K	**Willow** baz=47	**0.88**	**227**	P	**Pn**	**01 28 02.7**	**+0.1**
KNK	**Knik Glacier**	**0.95**	**171**	Pn	**Pn**	**01 28 03.6**	**-0.1**
KNK	**Knik Glacier** baz=352	**0.95**	**171**	P	**Pn**	**01 28 03.8**	**+0.1**
DHY	**Denali Highway**	**0.97**	**41**	Sn	**Sn**	**01 28 16.4**	**-0.4**
DHY	**Denali Highway** baz=221	**0.97**	**41**	P	**Pn**	**01 28 03.9**	**-0.2**
DHY	baz=221			S	**Sn**	**01 28 17.0**	**+0.2**
RND	**Reindeer**	**1.06**	**358**	Pn	**Pn**	**01 28 05.4**	**+0.3**
RND				Sn	**Sn**	**01 28 18.9**	**0.0**
RND	comp=E,8μm,0.2s			IAML		01 28 20.5	
RND	comp=N,12μm,1.2s			IAML		01 28 20.9	
RND	**Reindeer**	**1.06**	**358**	P	**Pn**	**01 28 05.4**	**+0.3**
RND						01 28 18.9	
M24K	**Tolsona, Glenn**	**1.24**	**100**	Pn	**Pn**	**01 28 08.0**	**+0.5**
M24K	comp=E,8μm,1.0s			IAML		01 28 28.4	
M24K	comp=N,6μm,0.8s			IAML		01 28 29.0	
M24K	**Tolsona, Glenn** baz=283	**1.24**	**100**	P	**Pn**	**01 28 08.3**	**+0.7**
SUA	**Susitna One** baz=46	**1.29**	**227**	P	**Pn**	**01 28 09.5**	**+1.1**
TRF	**Thorofare Moun**	**1.30**	**328**	Pn	**Pn**	**01 28 08.9**	**+0.4**
TRF	**Thorofare Moun** baz=146	**1.30**	**328**	P	**Pn**	**01 28 09.0**	**+0.4**
RC01	**Rabbit Creek A**	**1.35**	**200**	Sn	**Sn**	**01 28 27.9**	**+2.1**
RC01	**Rabbit Creek A** baz=20	**1.35**	**200**	P	**Pn**	**01 28 09.9**	**+0.9**
RC01	baz=20			S	**Sn**	**01 28 28.1**	**+2.3**
SKT	**Skwentna**	**1.35**	**255**	Pn	**Pn**	**01 28 09.7**	**+0.6**
SKT	comp=E,4μm,0.3s			IAML		01 28 30.7	
SKT	comp=N,5μm,0.2s			IAML		01 28 30.8	
SKT	**Skwentna** baz=73	**1.35**	**255**	P	**Pn**	**01 28 09.7**	**+0.6**
MCK	**McKinley**	**1.39**	**357**		**Sn**	**01 28 27.7**	**+0.9**
MCK	**McKinley**	**1.39**	**357**	Pn	**Pn**	**01 28 10.1**	**+0.5**
MCK	**McKinley** baz=176	**1.39**	**357**	P	**Pn**	**01 28 10.4**	**+0.9**
MCK	baz=176			S	**Sn**	**01 28 27.8**	**+1.0**
FIS	**Fire Island**	**1.40**	**210**	Pn	**Pn**	**01 28 11.3**	**+1.7**
KLU	**Klutina**	**1.60**	**121**	Pn	**Pn**	**01 28 12.8**	**+0.3**
KLU				Sn	**Sn**	**01 28 32.8**	**+0.8**
KLU	comp=N,6μm,0.7s			IAML		01 28 36.0	
KLU	comp=E,4μm,0.6s			IAML		01 28 37.1	
KLU	**Klutina** baz=304	**1.60**	**121**	P	**Pn**	**01 28 12.9**	**+0.4**
KLU	baz=304			S	**Sn**	**01 28 33.6**	**+1.6**
PAX	**Paxson**	**1.64**	**66**	Pn	**Pn**	**01 28 13.8**	**+0.8**
PAX	**Paxson** baz=249	**1.64**	**66**	P	**Pn**	**01 28 14.2**	**+1.1**
PAX	**Paxson**	**1.64**	**66**	P	**Pn**	**01 28 13.9**	**+0.8**
PPLA	**Purkeypile** baz=107	**1.67**	**291**	P	**Pn**	**01 28 14.3**	**+0.8**
GLI	**Glacier Island**	**1.68**	**151**	Pn	**Pn**	**01 28 13.9**	**+0.4**
GLI					**Sn**	**01 28 34.8**	**+0.9**
GLI	comp=N,6μm,0.5s			IAML		01 28 37.7	
GLI	**Glacier Island** baz=333	**1.68**	**151**	P	**Pn**	**01 28 14.0**	**+0.4**
GLI	baz=333			S	**Sn**	**01 28 35.7**	**+1.9**
HARP	**HAARP**	**1.68**	**87**		**Pn**	**01 28 14.7**	**+1.2**
HARP	**HAARP** baz=270	**1.68**	**87**	P	**Pn**	**01 28 15.0**	**+1.4**
STLK	**Strandline Lak**	**1.68**	**241**		**Pn**	**01 28 14.6**	**+1.0**
CAST	**Castle Rocks**	**1.86**	**307**	Pn	**Pn**	**01 28 16.3**	**+0.4**
CAST	**Castle Rocks**	**1.86**	**307**	P	**Pn**	**01 28 16.4**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.88**	**237**		**Pn**	**01 28 17.7**	**+1.4**
DIV	**Divide**	**1.88**	**129**	Pn	**Pn**	**01 28 15.9**	**-0.4**
O22K	**Cooper Landing**	**1.93**	**194**	Pn	**Pn**	**01 28 17.8**	**+0.8**
O22K	**Cooper Landing** baz=14	**1.93**	**194**	P	**Pn**	**01 28 18.3**	**+1.4**
SPCP	**Crater Peak Br**	**1.94**	**237**		**Pn**	**01 28 18.6**	**+1.4**
FID	**Port Fidalgo**	**1.95**	**145**	Pn	**Pn**	**01 28 17.2**	**+0.1**
FID	comp=E,4μm,0.5s			IAML		01 28 43.6	
FID	comp=N,4μm,0.4s			IAML		01 28 47.4	
CAPN	**Captain Cook N**	**1.96**	**217**	Pn	**Pn**	**01 28 19.6**	**+2.4**
SPCN	**Chakachatna No**	**1.98**	**237**		**Pn**	**01 28 19.2**	**+1.6**
SLKM	**Skilak Lake**	**1.98**	**201**		**Pn**	**01 28 18.3**	**+0.7**
K24K	**Donnelly Dome**	**1.99**	**42**		**Pn**	**01 28 20.2**	**+2.4**
N20K	**Mount Spurr** baz=54	**2.00**	**236**	P	**Pn**	**01 28 19.4**	**+1.5**
SPCR	**Spurr Chakacha**	**2.00**	**236**		**Pn**	**01 28 19.3**	**+1.3**
BPAW	**Bear Paw Mtn.** baz=149	**2.02**	**331**	P	**Pn**	**01 28 18.5**	**+0.3**
SPBG	**Spurr Blockage**	**2.03**	**239**		**Pn**	**01 28 19.9**	**+1.6**
M20K	**Styx River**	**2.10**	**259**	Pn	**Pn**	**01 28 20.4**	**+1.0**
M20K	comp=E,2μm,0.7s			IAML		01 28 48.8	
M20K	comp=N,2μm,1.1s			IAML		01 28 49.0	
M20K	**Styx River** baz=75	**2.10**	**259**	P	**Pn**	**01 28 21.0**	**+1.6**
N25K	**Chitina, Valde**	**2.11**	**109**	Pn	**Pn**	**01 28 20.0**	**+0.6**
N25K	comp=N,2μm,0.6s			IAML		01 28 51.8	
N25K	**Chitina, Valde** baz=293	**2.11**	**109**	P	**Pn**	**01 28 20.0**	**+0.6**
SPNN	**North Nagishla**	**2.11**	**244**		**Pn**	**01 28 21.0**	**+1.4**
WACK	**Wrangell Chich**	**2.12**	**98**		**Pn**	**01 28 20.8**	**+1.2**
WRH	**Wood River Hil**	**2.15**	**8**	Pn	**Pn**	**01 28 20.1**	**+0.2**
WASW	**Wrangell South**	**2.20**	**99**		**Pn**	**01 28 21.9**	**+1.1**
HDA	**Harding Lake**	**2.22**	**21**	Pn	**Pn**	**01 28 21.3**	**+0.5**
HDA	comp=E,2μm,0.2s			IAML		01 28 54.3	
HDA	comp=N,2μm,0.9s			IAML		01 29 04.4	
HDA	**Harding Lake** baz=202	**2.22**	**21**	P	**Pn**	**01 28 21.4**	**+0.5**
CHUM	**Lake Minchumin**	**2.23**	**315**		**Pn**	**01 28 21.6**	**+0.7**
CHUM	**Lake Minchumin** baz=132	**2.23**	**315**	P	**Pn**	**01 28 21.6**	**+0.7**
HIN	**Hinchinbrook I**	**2.25**	**150**	Pn	**Pn**	**01 28 21.6**	**+0.3**
HIN	comp=N,3μm,0.9s			IAML		01 29 07.3	
NEA2	**Nenana** baz=176	**2.25**	**357**	P	**Pn**	**01 28 21.4**	**+0.1**
RIDG	**Independent Ri**	**2.27**	**50**	Pn	**Pn**	**01 28 23.5**	**+1.9**
RIDG	comp=N,3μm,1.3s			IAML		01 28 53.7	
RIDG	**Independent Ri** baz=234	**2.27**	**50**	P	**Pn**	**01 28 23.7**	**+2.2**
SEW	**Seward**	**2.28**	**189**	Pn	**Pn**	**01 28 22.7**	**+1.0**
SEW	**Seward** baz=8.5	**2.28**	**189**	P	**Pn**	**01 28 23.5**	**+1.8**
EYAK	**Cordova Ski Ar**	**2.32**	**140**	Pn	**Pn**	**01 28 22.6**	**+0.4**
EYAK	**Cordova Ski Ar**	**2.32**	**140**	P	**Pn**	**01 28 22.8**	**+0.6**
EYAK	**Cordova Ski Ar** baz=323	**2.32**	**140**	P	**Pn**	**01 28 23.0**	**+0.8**
CCB	**Clear Creek Bu**	**2.34**	**10**	Pn	**Pn**	**01 28 22.6**	**0.0**
CCB	comp=E,1μm,0.9s			IAML		01 28 54.4	
L20K	**Farewell, AK**	**2.38**	**275**		**Pn**	**01 28 24.2**	**+1.1**
L20K	**Farewell, AK** baz=91	**2.38**	**275**	P	**Pn**	**01 28 24.2**	**+1.1**
BMRM	**Bremner River**	**2.42**	**123**	Pn	**Pn**	**01 28 23.6**	**-0.1**
BMRM	**Bremner River** baz=307	**2.42**	**123**	P	**Pn**	**01 28 23.8**	**+0.1**
P23K	**Montague Islan**	**2.45**	**164**		**Pn**	**01 28 24.1**	**+0.1**
P23K	**Montague Islan** baz=34	**2.45**	**164**	P	**Pn**	**01 28 24.7**	**+0.7**
RDT	**Redoubt**	**2.50**	**226**		**Pn**	**01 28 25.9**	**+1.2**
GLB	**Gilahina Butte**	**2.52**	**109**	Pn	**Pn**	**01 28 25.6**	**+0.6**
GLB	comp=N,2μm,0.8s			IAML		01 29 04.3	
COLA	**College**	**2.56**	**9**	Pn	**Pn**	**01 28 25.9**	**+0.4**
COLA	**College**	**2.56**	**9**	P	**Pn**	**01 28 25.8**	**+0.3**
COLA	**College**	**2.56**	**9**	P	**Pn**	**01 28 26.0**	**+0.4**
IL31		**2.57**	**18**	Pn	**Pn**	**01 28 25.7**	**+0.1**
ILAR	**Eielson Array**	**2.57**	**18**	Pn	**Pn**	**01 28 25.4**	**-0.3**
ILAR	**Eielson Array**	**2.57**	**18**	P	**Pn**	**01 28 25.8**	**+0.2**
ILAR	comp=N,90nm,0.3s,baz=200,slow=14,SNR=296			S	**Sn**	**01 28 58.7**	**+3.1**
DFR	**Drift River**	**2.58**	**229**		**Pn**	**01 28 27.2**	**+1.3**
L26K	**Log Cabin Wild**	**2.59**	**72**	Pn	**Pn**	**01 28 27.2**	**+1.3**
L26K	comp=E,1μm,0.6s			IAML		01 29 09.2	
L26K	comp=N,1μm,0.4s			IAML		01 29 15.8	
RDJH	**Redoubt Jeurge**	**2.62**	**229**		**Pn**	**01 28 27.9**	**+1.5**
MDM	**Murphy Dome**	**2.63**	**5**	Pn	**Pn**	**01 28 26.9**	**+0.4**
MDM	comp=N,795nm,0.6s			IAML		01 29 01.7	
GOAT	**Goat Mountain**	**2.63**	**131**		**Pn**	**01 28 26.6**	**+0.1**
K20K	**Telida**	**2.63**	**295**	Pn	**Pn**	**01 28 26.5**	**0.0**
K20K	comp=E,1μm,0.8s			IAML		01 29 01.0	
K20K	**Telida** baz=110	**2.63**	**295**	P	**Pn**	**01 28 27.2**	**+0.7**
M19K	**Big River Lodg** baz=78	**2.68**	**263**	P	**Pn**	**01 28 28.3**	**+1.2**
NCT	**North Crescent**	**2.69**	**230**		**Pn**	**01 28 28.7**	**+1.4**
RSO	**Redoubt South**	**2.70**	**227**	Pn	**Pn**	**01 28 29.0**	**+1.4**
RDSO	**Redoubt South**	**2.70**	**227**		**Pn**	**01 28 28.8**	**+1.2**
RDWB	**Redoubt West**	**2.71**	**228**		**Pn**	**01 28 29.1**	**+1.4**
SCRK	**Sand Creek**	**2.71**	**51**	Pn	**Pn**	**01 28 28.9**	**+1.1**
SCRK	comp=E,920nm,0.9s			IAML		01 29 07.4	
SCRK	comp=N,814nm,1.0s			IAML		01 29 14.5	
SCRK	**Sand Creek** baz=235	**2.71**	**51**	P	**Pn**	**01 28 28.8**	**+1.1**
J25K	**Salcha River,**	**2.73**	**32**	Pn	**Pn**	**01 28 29.2**	**+1.3**
J25K	comp=E,2μm,0.7s			IAML		01 29 04.3	
J25K	comp=N,1μm,0.4s			IAML		01 29 05.4	
J25K	**Salcha River,** baz=215	**2.73**	**32**	P	**Pn**	**01 28 28.7**	**+0.8**
RED	**Redoubt Volcan**	**2.73**	**227**		**Pn**	**01 28 29.5**	**+1.5**
VRDI	**Verde Repeater**	**2.77**	**112**	Pn	**Pn**	**01 28 29.1**	**+0.6**
VRDI	comp=E,777nm,0.8s			IAML		01 29 12.8	
VRDI	comp=N,798nm,1.0s			IAML		01 29 18.4	
RAGM	**Ragged Mountai**	**2.79**	**133**	Pn	**Pn**	**01 28 29.0**	**+0.4**
BRSE	**Bradley Lake S**	**2.79**	**201**		**Pn**	**01 28 29.3**	**+0.6**
BRSE	**Bradley Lake S** baz=20	**2.79**	**201**	P	**Pn**	**01 28 29.5**	**+0.8**
BRLK	**Bradley Lake**	**2.79**	**203**	Pn	**Pn**	**01 28 29.7**	**+1.0**
BRLK	comp=N,1μm,0.8s			IAML		01 29 09.6	
BRLK	comp=E,2μm,0.7s			IAML		01 29 11.2	
I23K	**Minto, Yukon-K**	**2.82**	**355**	Pn	**Pn**	**01 28 29.6**	**+0.6**
I23K	**Minto, Yukon-K** baz=174	**2.82**	**355**	P	**Pn**	**01 28 29.7**	**+0.6**
MLY	**Manley**	**2.83**	**343**	Pn	**Pn**	**01 28 29.7**	**+0.5**
MLY	**Manley** baz=161	**2.83**	**343**	P	**Pn**	**01 28 29.9**	**+0.6**
POKR	**Poker Plat Res**	**2.84**	**11**	Pn	**Pn**	**01 28 29.7**	**+0.4**
POKR	comp=N,999nm,0.6s			IAML		01 29 06.3	
POKR	**Poker Plat Res** baz=192	**2.84**	**11**	P	**Pn**	**01 28 29.8**	**+0.4**
L19K	**White Mountain** baz=84	**2.85**	**269**	P	**Pn**	**01 28 30.6**	**+1.0**
MCARA	**McCarthy VSAT**	**2.89**	**107**	Pn	**Pn**	**01 28 31.0**	**+1.0**
MCARA	comp=N,1μm,1.0s			IAML		01 29 21.8	
O20K	**Slope Mountain**	**2.94**	**221**		**Pn**	**01 28 32.6**	**+1.8**
O20K	**Slope Mountain** baz=38	**2.94**	**221**	P	**Pn**	**01 28 32.6**	**+1.8**
HMT	**Hamilton**	**2.97**	**131**	Pn	**Pn**	**01 28 31.1**	**-0.1**
J20K	**Nowinta River**	**3.04**	**309**	Pn	**Pn**	**01 28 32.6**	**+0.5**
J20K	comp=N,725nm,0.7s			IAML		01 29 12.1	
J20K	comp=E,599nm,0.7s			IAML		01 29 12.2	
J20K	**Nowinta River** baz=124	**3.04**	**309**	P	**Pn**	**01 28 32.9**	**+0.8**
CNPM	**China Poot**	**3.08**	**204**	Pn	**Pn**	**01 28 33.4**	**+0.7**
CNPM	comp=N,2μm,0.5s			IAML		01 29 20.2	
CRQM	**Cirque**	**3.13**	**118**	Pn	**Pn**	**01 28 34.3**	**+0.8**
N19K	**Bonanza Creek**	**3.14**	**243**	Pn	**Pn**	**01 28 34.5**	**+1.0**
N19K	comp=N,629nm,0.8s			IAML		01 29 33.1	
N19K	comp=E,513nm,1.0s			IAML		01 29 34.0	
N19K	**Bonanza Creek** baz=58	**3.14**	**243**	P	**Pn**	**01 28 34.8**	**+1.3**
NICHA	**Nichawak Mount**	**3.14**	**130**		**Pn**	**01 28 33.5**	**0.0**
CRQE	**Cirque** baz=303	**3.15**	**118**	P	**Pn**	**01 28 34.5**	**+0.7**
Q23K	**Middleton Isla**	**3.16**	**157**	Pn	**Pn**	**01 28 34.6**	**+0.9**
Q23K	comp=E,1μm,1.1s			IAML		01 29 28.8	
Q23K	comp=N,1μm,1.3s			IAML		01 29 35.7	
Q23K	**Middleton Isla** baz=339	**3.16**	**157**	P	**Pn**	**01 28 35.4**	**+1.7**
MID	**Middleton Isla**	**3.17**	**157**	Pn	**Pn**	**01 28 34.3**	**+0.5**
MID	comp=N,1μm,1.4s			IAML		01 29 35.7	
MID	comp=E,1μm,1.5s			IAML		01 29 46.1	
MID	**Middleton Isla**	**3.17**	**157**	P	**Pn**	**01 28 35.8**	**+2.0**
MID	**Middleton Isla**	**3.17**	**157**	P	**Pn**	**01 28 34.3**	**+0.5**
I21K	**Tanana**	**3.18**	**335**	Pn	**Pn**	**01 28 33.9**	**0.0**
I21K	**Tanana** baz=152	**3.18**	**335**	P	**Pn**	**01 28 34.8**	**+0.9**
J26L	**Joseph Creek**	**3.18**	**45**	Pn	**Pn**	**01 28 35.3**	**+1.2**
J26L	**Joseph Creek** baz=229	**3.18**	**45**	P	**Pn**	**01 28 35.7**	**+1.6**
ILSW	**Iliamna Southw**	**3.19**	**224**	Pn	**Pn**	**01 28 35.1**	**+0.9**
ILSW	comp=E,816nm,0.7s			IAML		01 29 14.9	
ILSW	comp=N,880nm,0.8s			IAML		01 29 21.8	
M27K	**Edge Creek, AK**	**3.21**	**87**	Pn	**Pn**	**01 28 35.4**	**+0.8**
M27K	**Edge Creek, AK** baz=273	**3.21**	**87**	P	**Pn**	**01 28 36.1**	**+1.5**
PTPK	**Patty Peak**	**3.21**	**109**		**Pn**	**01 28 35.1**	**+0.4**
KAIM	**Kayak Island**	**3.22**	**137**	Pn	**Pn**	**01 28 34.1**	**-0.4**
KAIM	comp=E,1μm,1.0s			IAML		01 29 26.9	
KAIM	comp=N,964nm,1.0s			IAML		01 29 34.0	
KAIM	**Kayak Island** baz=321	**3.22**	**137**	P	**Pn**	**01 28 34.5**	**-0.1**
TGL	**Tana Glacier**	**3.26**	**117**	Pn	**Pn**	**01 28 36.0**	**+0.7**
KHIT	**Khitrov Hills**	**3.27**	**123**		**Pn**	**01 28 35.5**	**+0.1**
L27K	**Beaver Creek,**	**3.27**	**74**	Pn	**Pn**	**01 28 35.9**	**+0.5**
L27K	comp=N,461nm,1.7s			IAML		01 29 28.9	
L27K	**Beaver Creek,** baz=260	**3.27**	**74**	P	**Pn**	**01 28 36.3**	**+1.0**
BCAR	**Beaver Creek A**	**3.29**	**74**	Pn	**Pn**	**01 28 35.8**	**+0.2**
SUCK	**Suckling Hills**	**3.33**	**131**	Pn	**Pn**	**01 28 35.8**	**-0.2**
SUCK	comp=E,922nm,1.1s			IAML		01 29 37.7	
GRIN	**Grindle Hills**	**3.35**	**126**		**Pn**	**01 28 36.5**	**+0.2**
KIAG	**Kiagna River**	**3.38**	**112**		**Pn**	**01 28 36.5**	**-0.4**
TTA	**Tatalina**	**3.40**	**283**	Pn	**Pn**	**01 28 37.9**	**+0.9**
TTA	**Tatalina**	**3.40**	**283**	P	**Pn**	**01 28 38.3**	**+1.3**
TTA	**Tatalina**	**3.40**	**283**	P	**Pn**	**01 28 37.9**	**+0.9**
WAX	**Waxell Ridge**	**3.42**	**121**	Pn	**Pn**	**01 28 37.4**	**-0.1**
O19K	**Port Alsworth**	**3.44**	**234**	Pn	**Pn**	**01 28 38.6**	**+1.0**
O19K	comp=N,1μm,0.5s			IAML		01 29 35.8	
O19K	comp=E,1μm,0.5s			IAML		01 29 40.1	
M18K	**Stony River**	**3.45**	**259**		**Pn**	**01 28 38.7**	**+1.1**
M18K	**Stony River** baz=72	**3.45**	**259**	P	**Pn**	**01 28 38.8**	**+1.2**
K27K	**Chicken**	**3.47**	**58**	Pn	**Pn**	**01 28 38.7**	**+0.7**
K27K	comp=N,538nm,1.1s			IAML		01 29 42.9	
K27K	**Chicken** baz=244	**3.47**	**58**	P	**Pn**	**01 28 39.0**	**+1.1**
BGLC	**Bering Glacier**	**3.47**	**128**		**Pn**	**01 28 38.8**	**+0.9**
P19K	**Oil Pt**	**3.47**	**221**	Pn	**Pn**	**01 28 39.2**	**+1.2**
P19K	**Oil Pt** baz=37	**3.47**	**221**	P	**Pn**	**01 28 39.5**	**+1.4**
SVW2	**Sparrevohn**	**3.48**	**252**	Pn	**Pn**	**01 28 38.9**	**+0.9**
SVW2	comp=E,408nm,0.9s			IAML		01 29 44.6	
SVW2	comp=N,499nm,0.9s			IAML		01 29 44.7	
SVW2	**Sparrevohn**	**3.48**	**252**	P	**Pn**	**01 28 39.0**	**+0.9**
PRP	**Porcupine Dome**	**3.48**	**23**	Pn	**Pn**	**01 28 38.7**	**+0.4**
PRP	comp=N,1μm,0.6s			IAML		01 29 24.1	
PRP	**Porcupine Dome** baz=205	**3.48**	**23**	P	**Pn**	**01 28 39.0**	**+0.7**
J19K	**Poorman**	**3.52**	**301**	Pn	**Pn**	**01 28 39.2**	**+0.6**
J19K	comp=N,426nm,1.0s			IAML		01 29 21.8	
J19K	comp=E,463nm,1.1s			IAML		01 29 23.2	
J19K	**Poorman** baz=115	**3.52**	**301**	P	**Pn**	**01 28 39.6**	**+1.0**
H24K	**Noodor Dome**	**3.52**	**6**	Pn	**Pn**	**01 28 39.2**	**+0.5**
H24K	**Noodor Dome** baz=186	**3.52**	**6**	P	**Pn**	**01 28 39.4**	**+0.7**
I20K	**Naaghedeneel**	**3.54**	**316**	Pn	**Pn**	**01 28 39.5**	**+0.6**
I20K	**Naaghedeneel** baz=131	**3.54**	**316**	P	**Pn**	**01 28 39.9**	**+1.0**
ISLE	**Juniper Island**	**3.55**	**117**	Pn	**Pn**	**01 28 39.1**	**-0.1**
ISLE	comp=E,903nm,1.0s			IAML		01 29 38.4	
SNH	**Sunshine Point**	**3.60**	**125**	Pn	**Pn**	**01 28 40.6**	**+0.9**
SNH	comp=E,1μm,1.8s			IAML		01 29 37.6	
BARN	**Barnard Glacie**	**3.62**	**108**	Pn	**Pn**	**01 28 40.8**	**+0.5**
BARN	comp=N,532nm,1.0s			IAML		01 29 39.2	
BARN	comp=E,523nm,0.8s			IAML		01 29 40.9	
BVCY	**Beaver Creek**	**3.68**	**86**		**Pn**	**01 28 41.3**	**+0.4**
BVCY	**Beaver Creek** baz=272	**3.68**	**86**	P	**Pn**	**01 28 41.3**	**+0.4**
L18K	**Granite Mounta**	**3.70**	**271**	Pn	**Pn**	**01 28 41.5**	**+0.4**
L18K	**Granite Mounta** baz=84	**3.70**	**271**	P	**Pn**	**01 28 42.3**	**+1.1**
BAGL	**Bagley Icefiel**	**3.71**	**117**		**Pn**	**01 28 41.2**	**-0.1**
GRNC	**Granite Creek**	**3.73**	**113**	Pn	**Pn**	**01 28 42.2**	**+0.4**
GRNC	comp=E,362nm,0.7s			IAML		01 29 40.0	
GRNC	comp=N,439nm,1.1s			IAML		01 29 45.3	
H22K	**Ishtalitna Cre**	**3.73**	**343**		**Pn**	**01 28 42.3**	**+0.7**
H22K	**Ishtalitna Cre** baz=161	**3.73**	**343**	P	**Pn**	**01 28 42.3**	**+0.7**
AU22	**Augustine Moun**	**3.74**	**219**		**Pn**	**01 28 43.3**	**+1.6**
AUL	**Augustine Lava**	**3.75**	**220**		**Pn**	**01 28 43.5**	**+1.6**
H21K	**Melozitna Rive**	**3.76**	**334**	Pn	**Pn**	**01 28 42.2**	**+0.3**
H21K	**Melozitna Rive** baz=150	**3.76**	**334**	P	**Pn**	**01 28 42.7**	**+0.7**
AUCH	**Augustine Cone**	**3.77**	**219**		**Pn**	**01 28 44.1**	**+2.0**
YUK2	**White River**	**3.77**	**95**		**Pn**	**01 28 43.4**	**+1.2**
N18K	**Kilae Creek**	**3.80**	**247**	Pn	**Pn**	**01 28 42.4**	**-0.1**
N18K	comp=E,305nm,0.8s			IAML		01 29 51.7	
N18K	comp=N,300nm,0.8s			IAML		01 29 55.1	
N18K	**Kilae Creek** baz=61	**3.80**	**247**	P	**Pn**	**01 28 43.2**	**+0.7**
J18K	**Innoko River**	**3.80**	**291**	Pn	**Pn**	**01 28 43.2**	**+0.6**
J18K	comp=N,317nm,0.8s			IAML		01 29 29.

baz=307
YUK3 Moose Creek 3.95 95 Pn 01 28 45.6 +0.9
YUK3 Moose Creek 3.95 95 P Pn 01 28 45.5 +0.7
baz=282
O18K Koktuh Hills 4.01 234 Pn Pn 01 28 46.2 +0.8
O18K IAML 01 30 00.9
comp=E,298nm,0.9s
O18K IAML 01 30 06.3
comp=N,362nm,0.9s
LOGN Logan Glacier 4.01 109 Pn Pn 01 28 46.4 +0.8
LOGN IAML 01 29 49.2
comp=N,452nm,0.9s
LOGN IAML 01 29 52.1
comp=E,410nm,1.3s
TABL Table Mountain 4.14 114 Pn Pn 01 28 47.6 +0.3
TABL IAML 01 29 55.0
comp=N,391nm,1.0s
TABL IAML 01 30 01.9
comp=E,367nm,1.0s
H20K Anotleneega Mo 4.15 322 Pn 01 28 48.0 +0.7
H20K Anotleneega Mo 4.15 322 P Pn 01 28 48.2 +0.9
baz=136
SYI Shuyak Island 4.16 207 Pn Pn 01 28 48.6 +1.2
SYI IAML 01 29 53.2
comp=N,486nm,0.9s
SYI IAML 01 29 55.9
comp=E,478nm,1.0s
Q20K Shuyak Island 4.16 207 P Pn 01 28 48.7 +1.2
baz=24
EGAK Eagle 4.18 51 Pn Pn 01 28 48.8 +1.1
EGAK Eagle 4.18 51 P Pn 01 28 48.9 +1.2
baz=238
Q19K Cape Douglas, 4.19 217 Pn Pn 01 28 48.9 +1.1
Q19K Cape Douglas, 4.19 217 P Pn 01 28 49.0 +1.1
baz=33
M17K Holitna River 4.21 261 Pn Pn 01 28 48.8 +0.6
M17K IAML 01 30 09.6
comp=E,634nm,1.0s
M17K Holitna River 4.21 261 P Pn 01 28 48.9 +0.8
baz=73
IMAR Indian Mountai 4.25 331 Pn Pn 01 28 49.2 +0.6
P18K Big Mountain, 4.33 230 Pn Pn 01 28 50.9 +1.0
P18K IAML 01 30 04.8
comp=N,209nm,0.8s
P18K Big Mountain, 4.33 230 P Pn 01 28 50.7 +0.8
baz=44
GCSA Galena City Sc 4.35 307 Pn 01 28 51.2 +1.2
GCSA Galena City Sc 4.35 307 P Pn 01 28 51.2 +1.2
baz=120
G24K Hadweenzic Riv 4.40 7 Pn Pn 01 28 51.0 +0.3
G24K Hadweenzic Riv 4.40 7 P Pn 01 28 51.6 +0.8
baz=188
G23K Bananza Creek 4.41 353 Pn Pn 01 28 50.9 +0.1
G23K Bananza Creek 4.41 353 P Pn 01 28 51.6 +0.8
baz=172
K17K Iditarod 4.43 279 P Pn 01 28 52.1 +1.0
baz=90
N17K Nushagak Hills 4.44 249 P Pn 01 28 51.3 +0.1
baz=62
SAMH Samovar Hills 4.46 116 Pn 01 28 52.1 +0.5
L17K Donlin 4.46 271 Pn 01 28 52.3 +0.7
L17K Donlin 4.46 271 P Pn 01 28 52.6 +1.0
baz=83
FYU Fort Yukon 4.50 18 Pn Pn 01 28 53.0 +1.0
FYU IAML 01 30 15.5
comp=N,388nm,1.5s
FYU IAML 01 30 16.1
comp=E,530nm,1.5s
I27K Kandik River 4.53 41 Pn 01 28 54.0 +1.4
I27K Kandik River 4.53 41 P Pn 01 28 54.0 +1.4
baz=227
DAWY Dawson 4.58 64 Pn Pn 01 28 54.2 +1.1
DAWY IAML 01 30 13.2
comp=E,229nm,1.4s
DAWY IAML 01 30 13.7
comp=N,290nm,1.5s
DAWY Dawson 4.58 64 P Pn 01 28 54.6 +1.4
baz=252
G25K Bearman Lake 4.58 13 Pn 01 28 54.1 +1.0
G25K Bearman Lake 4.58 13 P Pn 01 28 54.1 +1.0
baz=196
H19K Roundabout Mou 4.65 317 Pn Pn 01 28 54.8 +0.7
H19K Roundabout Mou 4.65 317 P Pn 01 28 55.0 +0.9
baz=130
PCA Pinnacle 4.69 115 Pn Pn 01 28 55.9 +1.1
PINM Pinnacle 4.70 115 P Pn 01 28 55.3 +0.5
baz=303
G22K Bettles 4.74 347 Pn 01 28 56.4 +1.2
G22K Bettles 4.74 347 P Pn 01 28 56.6 +1.3
baz=164
M29M Somme Creek 4.79 84 Pn Pn 01 28 56.9 +0.6
M29M Somme Creek 4.79 84 P Pn 01 28 57.3 +1.1
baz=273
O17K Koliganek Bris 4.80 241 Pn 01 28 57.1 +1.0
O17K Koliganek Bris 4.80 241 P Pn 01 28 57.1 +1.0
baz=54
P17K Kvichak River 4.92 233 Pn 01 28 59.0 +1.3
P17K Kvichak River 4.92 233 P Pn 01 28 59.0 +1.3
baz=47
COLD Coldfoot 4.93 353 Pn Pn 01 28 58.8 +0.8
COLD Coldfoot 4.93 353 P Pn 01 28 59.0 +1.0
baz=172
L29M L29M 4.95 76 Pn Pn 01 28 59.0 +0.7
L29M IAML 01 30 23.3
comp=N,304nm,1.3s
L29M IAML 01 30 27.7
comp=E,296nm,0.9s
L29M L29M 4.95 76 P Pn 01 28 59.5 +1.2
baz=266
KDAK Kodiak Island 4.97 204 Pn Pn 01 28 57.7 -0.7
KDAK IAML 01 30 19.7
comp=E,292nm,1.0s
KDAK Kodiak Island 4.97 204 eP Pn 01 28 57.7 -0.7
KDAK Kodiak Island 4.97 204 P Pn 01 28 58.1 -0.3
comp=E,11nm,0.3s,baz=68,slow=6.1,SNR=61
KDAK S Sn 01 29 52.1 -2.4
comp=E,79nm,0.5s,baz=289,slow=21,SNR=10
I28M Miner Creek 4.99 48 Pn Pn 01 28 59.5 +0.8
I28M IAML 01 30 28.9
comp=N,222nm,1.2s
I28M Miner Creek 4.99 48 P Pn 01 29 00.2 +1.4
baz=235
H27K Steamboat Moun 5.01 36 Pn 01 29 00.3 +1.3
H27K Steamboat Moun 5.01 36 P Pn 01 29 00.3 +1.3
baz=222
M16K Timber Creek 5.03 259 Pn Pn 01 28 59.4 0.0
M16K IAML 01 30 35.5
comp=N,134nm,1.5s
M16K Timber Creek 5.03 259 P Pn 01 29 00.2 +0.8
baz=70
BCPM Bancas Point 5.04 114 Pn Pn 01 28 59.5 +0.1
BCPM IAML 01 30 18.2
comp=E,277nm,1.3s
BCPM IAML 01 30 18.3
comp=N,338nm,1.1s
L16K Owhat River 5.08 267 P Pn 01 29 00.8 +0.8
baz=78
G26K Porcupine Rive 5.09 23 Pn 01 29 00.9 +0.9
G26K Porcupine Rive 5.09 23 P Pn 01 29 00.9 +0.9
baz=207
H18K Honhosa River 5.10 308 Pn Pn 01 29 01.5 +1.2
H18K Honhosa River 5.10 308 P Pn 01 29 01.5 +1.2
baz=119
KAKN Katmai Knife C 5.13 220 Pn 01 29 01.4 +0.6
N16K Nishlik Lake 5.16 253 Pn 01 29 01.9 +0.8
N16K Nishlik Lake 5.16 253 P Pn 01 29 01.9 +0.8
baz=64
J29N Klondike Camp 5.19 61 Pn Pn 01 29 02.7 +1.1
J29N IAML 01 30 39.1
comp=N,759nm,0.7s
J29N IAML 01 30 39.2
comp=E,703nm,0.7s
F24K Squaw Lake 5.20 4 Pn Pn 01 29 02.5 +0.8
F24K Squaw Lake 5.20 4 P Pn 01 29 02.7 +1.0
baz=184
G19K Purcell Mounta 5.25 320 Pn Pn 01 29 02.0 -0.4
G19K Purcell Mounta 5.25 320 P Pn 01 29 03.1 +0.7
baz=132
ACHA Angle Creek He 5.28 221 Pn 01 29 03.8 +0.9
F21K Alatna River 5.29 340 P Pn 01 29 03.9 +1.1
baz=155
PNL Peninsula 5.29 116 P Pn 01 29 04.3 +1.3
O16K Kokwok River B 5.32 243 Pn Pn 01 29 03.2 0.0
O16K IAML 01 30 41.4
comp=E,118nm,1.1s
O16K IAML 01 30 48.2
comp=N,126nm,1.0s
O16K Kokwok River B 5.32 243 P Pn 01 29 04.0 +0.7
baz=55
K29M Barlow Dome 5.32 69 Pn Pn 01 29 03.9 +0.4
K29M IAML 01 30 36.0
comp=N,175nm,0.8s
K29M Barlow Dome 5.32 69 P Pn 01 29 04.4 +0.9
baz=259
ANCK Angle Creek 5.34 222 Pn 01 29 04.6 +0.9
BMAR Burnt Mountain 5.40 17 Pn Pn 01 29 05.2 +0.8
CNTC Contact Creek 5.41 224 Pn 01 29 05.7 +1.0
Q17K Contact Creek 5.42 224 P Pn 01 29 05.7 +1.0
baz=38
F25K Christian Rive 5.43 13 Pn 01 29 05.5 +0.7
F25K Christian Rive 5.43 13 P Pn 01 29 05.5 +0.7
baz=195
J16K Anvik River 5.51 285 Pn Pn 01 29 06.3 +0.5
J16K Anvik River 5.51 285 P Pn 01 29 06.8 +0.9
baz=94
M30M Minto, Yukon 5.56 82 Pn Pn 01 29 07.6 +1.0
M30M Minto, Yukon 5.56 82 P Pn 01 29 07.2 +0.6
baz=273
F20K Avaraart Lake 5.58 331 Pn Pn 01 29 07.5 +0.7
F20K Avaraart Lake 5.58 331 P Pn 01 29 08.3 +1.6
baz=144
HYT Haines Junctio 5.59 101 Pn Pn 01 29 07.9 +0.7
N30M Aishikik Lake 5.59 94 Pn Pn 01 29 06.7 -0.4
N30M Aishikik Lake 5.59 94 P Pn 01 29 07.3 +0.2
baz=284
G18K Tagagawik 5.60 314 Pn Pn 01 29 08.1 +1.0
G18K Tagagawik 5.60 314 P Pn 01 29 08.4 +1.3
baz=125
H17K Granite Mounta 5.60 302 Pn 01 29 08.2 +1.1
H17K Granite Mounta 5.60 302 P Pn 01 29 08.6 +1.4
baz=112
P16K Nushagak River 5.62 238 Pn 01 29 08.8 +1.4
P16K Nushagak River 5.62 238 P Pn 01 29 08.8 +1.4
baz=50
I17K Unalakleet 5.63 291 Pn Pn 01 29 09.0 +1.5
I17K Unalakleet 5.63 291 P Pn 01 29 08.8 +1.3
baz=100
OHAK Old Harbor 5.63 206 Pn Pn 01 29 06.7 -0.8
OHAK Old Harbor 5.63 206 P Pn 01 29 07.0 -0.5
OHAK Old Harbor 5.63 206 P Pn 01 29 06.7 -0.8
baz=22
F26K Sheenjek River 5.71 18 Pn 01 29 09.4 +0.8
F26K Sheenjek River 5.71 18 P Pn 01 29 09.6 +0.9
baz=202
E23K Chandalar 5.74 357 Pn 01 29 10.4 +1.3
E23K Chandalar 5.74 357 P Pn 01 29 10.4 +1.3
baz=176
N15K Kwethluk River 5.89 253 P Pn 01 29 11.9 +0.8
baz=63
F19K Shaleruckik Mo 5.93 323 Pn Pn 01 29 12.2 +0.6
F19K Shaleruckik Mo 5.93 323 P Pn 01 29 12.5 +0.8
baz=135
M15K Kasigluk River 5.94 259 Pn 01 29 12.4 +0.6
M15K Kasigluk River 5.94 259 P Pn 01 29 12.6 +0.8
baz=69
E22K Anaktuvuk Pass 5.95 349 Pn Pn 01 29 13.0 +1.1
E25K Arctic Village 5.95 12 Pn Pn 01 29 12.8 +0.9
E25K Arctic Village 5.95 12 P Pn 01 29 12.6 +0.7
baz=194
K15K Wolf Creek Mou 5.95 275 Pn Pn 01 29 12.2 +0.3
K15K Wolf Creek Mou 5.95 275 P Pn 01 29 13.0 +1.1
baz=84
H29M Whitestone 5.96 45 Pn Pn 01 29 12.2 +0.2
H29M Whitestone 5.96 45 P Pn 01 29 13.0 +0.9
baz=234
J30M Hart River 6.00 63 Pn Pn 01 29 14.8 +2.1
J30M Hart River 6.00 63 P Pn 01 29 14.6 +1.8
baz=254
P29M Windy Craggy 6.02 112 Pn Pn 01 29 13.1 +0.2
P29M Windy Craggy 6.02 112 P Pn 01 29 13.4 +0.5
baz=302
L15K Ungalak Mounta 6.03 269 Pn 01 29 13.8 +0.8
L15K Ungalak Mounta 6.03 269 P Pn 01 29 13.9 +0.8
baz=78
G17K Kiwalik Mounta 6.12 306 Pn 01 29 15.4 +1.2
G17K Kiwalik Mounta 6.12 306 P Pn 01 29 15.4 +1.2
baz=116
P30M Million Dollar 6.12 106 Pn Pn 01 29 14.8 +0.4
P30M Million Dollar 6.12 106 P Pn 01 29 15.0 +0.7
baz=297
I30M Mount Dempster 6.20 57 Pn Pn 01 29 16.0 +0.6
E19K Redstone River 6.26 329 Pn Pn 01 29 16.9 +0.8
E19K Redstone River 6.26 329 P Pn 01 29 17.3 +1.2
baz=141
O30N Mendenhall 6.26 99 Pn Pn 01 29 16.6 +0.4
F18K Selawik 6.34 317 Pn Pn 01 29 18.5 +1.2
F18K Selawik 6.34 317 P Pn 01 29 18.5 +1.2
baz=127
H16K Elim 6.45 297 Pn 01 29 20.0 +1.2
H16K Elim 6.45 297 P Pn 01 29 20.0 +1.2
baz=105
F28M Old Crow 6.49 32 Pn Pn 01 29 20.1 +0.8
F28M Old Crow 6.49 32 P Pn 01 29 20.0 +0.8
baz=220
E21K Killik River 6.49 343 Pn Pn 01 29 20.8 +1.6
M14K Bethel 6.51 262 Pn Pn 01 29 20.5 +1.0
M14K Bethel 6.51 262 P Pn 01 29 20.4 +0.9
baz=70
EPYK Eagle Plains 6.60 47 P Pn 01 29 21.8 +1.0
baz=238
L14K Kuka Creek 6.66 267 Pn Pn 01 29 22.4 +0.8
L14K Kuka Creek 6.66 267 P Pn 01 29 23.2 +1.5
baz=75
D23K Nanushuk River 6.69 354 Pn 01 29 23.9 +1.9
E20K Nigu River 6.69 336 Pn 01 29 23.7 +1.6
M31M Drury Creek, Y 6.71 85 Pn Pn 01 29 23.0 +0.6
N14K Kuskokwak Cree 6.71 254 Pn Pn 01 29 23.0 +0.7
N14K Kuskokwak Cree 6.71 254 P Pn 01 29 23.0 +0.7
baz=63
G16K Koyuk River 6.73 303 Pn Pn 01 29 23.0 +0.5
D22K Ayíkyak River 6.75 348 Pn Pn 01 29 25.6 +2.7
F17K Baldwin Pennin 6.78 313 Pn Pn 01 29 24.3 +1.1
D24K Happy Valley 6.83 360 Pn Pn 01 29 25.4 +1.4
J14K Nanvaranak Lak 6.85 280 Pn Pn 01 29 25.0 +0.8
J14K Nanvaranak Lak 6.85 280 P Pn 01 29 25.4 +1.2
baz=87
WHY Whitehorse 6.86 98 Pn Pn 01 29 24.5 0.0
D25K Kavik River 7.07 7 Pn Pn 01 29 28.2 +0.9
G30M tAoh Zraii Nji 7.10 44 Pn Pn 01 29 27.6 -0.1
G30M tAoh Zraii Nji 7.10 44 P Pn 01 29 28.0 +0.3
baz=235
E18K Tukpahlearik C 7.15 320 Pn Pn 01 29 29.9 +1.6
E18K Tukpahlearik C 7.15 320 P Pn 01 29 30.0 +1.7
baz=130
D20K Etivluk River 7.16 336 Pn 01 29 30.1 +1.5
D20K Etivluk River 7.16 336 P Pn 01 29 30.3 +1.8
baz=149
SKAG Skagway 7.16 108 Pn Pn 01 29 27.7 -0.8
SKAG Skagway 7.16 108 P Pn 01 29 30.4 +1.9
FARO Faro, Yukon 7.19 84 Pn Pn 01 29 29.9 +0.9
C21K Knifeblade Rid 7.26 343 Pn 01 29 32.0 +2.1
C21K Knifeblade Rid 7.26 343 P Pn 01 29 32.0 +2.1
baz=157
G15K Niukluk 7.29 298 Pn 01 29 31.6 +1.4
G15K Niukluk 7.29 298 P Pn 01 29 31.4 +1.2
baz=104
D19K Kuna River 7.29 332 Pn Pn 01 29 31.0 +0.8
E17K Hotham Inlet 7.32 316 Pn 01 29 32.0 +1.3
C24K Franklin Bluff 7.40 0 Pn 01 29 33.5 +1.8
C24K Franklin Bluff 7.40 0 P Pn 01 29 33.5 +1.8
baz=180
C23K Itkillik River 7.55 355 Pn Pn 01 29 35.4 +1.6
E29M Blow River 7.56 32 Pn Pn 01 29 34.4 +0.5
E29M Blow River 7.56 32 P Pn 01 29 35.3 +1.4
baz=222
F30M Barrier River 7.61 41 Pn 01 29 34.9 +0.2
G31M Satah River 7.72 47 Pn Pn 01 29 35.9 -0.2
G31M Satah River 7.72 47 P Pn 01 29 36.8 +0.7
baz=240
F15K North Star Dit 7.73 303 Pn Pn 01 29 37.5 +1.2
F15K North Star Dit 7.73 303 P Pn 01 29 37.9 +1.6
baz=108
ANM Nome 7.76 294 Pn Pn 01 29 37.7 +1.1
ANM Nome 7.76 294 P Pn 01 29 38.5 +1.8
baz=99
ANM Nome 7.76 294 P Pn 01 29 37.7 +1.1
P32M Atlin 7.83 104 Pn Pn 01 29 37.5 -0.2
BESE Bessie Mountai 7.84 113 Pn Pn 01 29 38.4 +0.5
P33M Teslin, Yukon 7.97 98 Pn Pn 01 29 39.2 -0.5
D17K Noatak River 8.08 318 Pn 01 29 42.6 +1.7
baz=125
D17K Noatak River 8.08 318 P Pn 01 29 42.6 +1.7
baz=125
C19K Lookout Ridge 8.10 331 Pn Pn 01 29 43.3 +2.0
D28M Stokes Point 8.11 26 Pn 01 29 43.4 +2.0
C18K Utukok River 8.14 326 Pn Pn 01 29 42.5 +0.6
C18K Utukok River 8.14 326 P Pn 01 29 42.9 +0.9
baz=135
F31M Tsiigehtchic 8.16 45 Pn Pn 01 29 42.0 -0.1
F31M Tsiigehtchic 8.16 45 P Pn 01 29 41.8 -0.3
baz=238
R32K Eaglecrest 8.16 114 Pn Pn 01 29 42.2 -0.1
JIS Juneau Island 8.22 113 Pn Pn 01 29 42.8 -0.2
JIS Juneau Island 8.22 113 P Pn 01 29 43.3 +0.3
F14K Arctic Creek 8.34 300 Pn 01 29 46.3 +1.7
F14K Arctic Creek 8.34 300 P Pn 01 29 45.6 +1.0
baz=104
C17K DeLong Mountai 8.57 322 Pn 01 29 48.8 +1.1
C17K DeLong Mountai 8.57 322 P Pn 01 29 48.3 +0.5
baz=129
SIT Sitka 8.61 122 P Pn 01 29 49.5 +1.1
INK Inuvik 8.71 40 Pn Pn 01 29 50.3 +0.6
INK Inuvik 8.71 40 P Pn 01 29 50.6 +1.0
baz=234
INK Inuvik 8.71 40 P Pn 01 29 50.8 +1.1
comp=N,22nm,0.7s,baz=231,slow=16,SNR=60
INK S Sn 01 31 24.0 -2.3
comp=N,26nm,0.7s,baz=308,slow=12,SNR=7.8
INK LR LR 01 33 32.4
comp=N,227nm,20.7s,baz=182,slow=39
Q32M Nakina River 8.78 105 Pn Pn 01 29 51.0 +0.1
Q32M Nakina River 8.78 105 P Pn 01 29 50.8 -0.1
baz=300
TNA Tin City 9.01 299 Pn Pn 01 29 55.1 +1.4
TNA Tin City 9.01 299 P Pn 01 29 54.7 +1.0
baz=102
C16K Lisburne Hills 9.11 318 Pn 01 29 56.4 +1.3
S34M Telegraph Cree 9.84 109 Pn Pn 01 30 04.6 -0.6
DLBC Dease Lake 10.05 105 Pn Pn 01 30 08.4 +0.3
DLBC Dease Lake 10.05 105 P Pn 01 30 09.3 +1.2
comp=N,2.1nm,0.7s,baz=305,slow=12,SNR=1.9
T35M Bob Quinn 10.78 112 Pn Pn 01 30 18.2 +0.3
C36M Paulatuk 12.22 44 Pn Pn 01 30 35.3 -2.2
UNV Unalaska Valle 12.63 236 P Pn 01 30 43.8 +0.6
A36M Sachs Harbour 13.17 33 Pn Pn 01 30 49.3 -1.1
BBB Bella Bella 15.04 123 LR LR 01 37 01.4
comp=N,125nm,21.4s,baz=313,slow=37
YKA Yellowknife Ar 15.71 74 Pn Pn 01 31 25.0 +0.9
YKA Yellowknife Ar 15.71 74 P Pn 01 31 25.0 +0.9
YKA Yellowknife Ar 15.71 74 P Pn 01 31 24.4 +0.3
comp=N,0.6nm,0.6s,baz=286,slow=11,SNR=14
BILL Bilibino 19.31 307 P 01 32 06.7 -0.2
BILL Bilibino 19.31 307 *i* P 01 32 06.4 -0.5
RES Resolute Bay 22.21 35 P P 01 32 37.4 -0.6
RES Resolute Bay 22.21 35 P P 01 32 37.4 -0.6
RES pmax pmax
comp=Z,5.0nm,0.8s
NEW Newport 22.57 114 LR LR 01 41 40.5
comp=Z,127nm,18.3s,baz=312,slow=37
PLID Pearl Lake 25.55 117 P P 01 33 10.8 +0.4
PLID IAmb IAmb 01 33 43.1
comp=Z,7.7nm,1.4s
SEY Seymchan 26.24 298 *i* P P 01 33 14.0 -2.2
SEY pmax pmax
comp=Z,20nm,3.1s
FCC Fort Churchill 26.43 73 P P 01 33 18.2 +0.3
FCC Fort Churchill 26.43 73 P P 01 33 18.2 +0.3
FCC pmax pmax
comp=Z,4.0nm,1.0s
YHL Hebgen Lake 27.79 111 P P 01 33 32.3 +1.6
YHL IAmb IAmb 01 33 55.1
comp=Z,4.7nm,1.1s
RLMT Red Lodge 28.41 109 P P 01 33 36.3 +0.2
ELK Elko 29.48 121 LR LR 01 47 28.3
comp=Z,72nm,18.8s,baz=292,slow=40
PD31 Pinedale Array 30.16 112 P P 01 33 52.2 +0.6
PD31 IAmb IAmb 01 33 54.6
comp=Z,4.8nm,1.3s
PDAR Pinedale Array 30.16 112 P P 01 33 52.2 +0.6
PDAR Pinedale Array 30.16 112 P P 01 33 53.2 +1.6
comp=Z,1.4nm,0.9s,baz=317,slow=6.1,SNR=8.9
PDAR pP pP 01 34 07.0 +1.6
comp=Z,1.4nm,0.9s,baz=333,slow=5.6,SNR=6.4
PDAR LR LR 01 45 56.1
comp=Z,76nm,20.3s,baz=0.5,slow=36
comp=Z,1.4nm,0.9s
NVAR Mina Array Bea 30.31 128 P P 01 33 54.5 +1.6
NVAR Mina Array Bea 30.31 128 P P 01 33 55.2 +2.3
comp=Z,0.7nm,0.8s,baz=312,slow=7.5,SNR=5.8
comp=Z,0.7nm,0.8s
NV11 Mina Array Sit 30.36 128 P P 01 33 54.7 +1.4
ULM Lac du Bonnet 30.81 88 P P 01 33 56.2 -0.8
comp=Z,2.5nm,1.0s,baz=0.0,slow=8.1,SNR=3.8
comp=Z,2.5nm,1.0s
BSUT Blindstream Ca 31.48 116 P P 01 34 05.2 +1.8
BSUT IAmb IAmb 01 34 45.1
comp=Z,7.0nm,1.3s
RDMU Red Mountain 31.96 115 P P 01 34 09.5 +2.1
MSU Marysvale 32.61 120 P P 01 34 15.2 +2.0
MSU Marysvale 32.61 120 P P 01 34 15.2 +2.0
Q16A Castle Valley 32.68 118 P P 01 34 14.9 +1.2
Q16A IAmb IAmb 01 34 30.4
comp=Z,6.4nm,1.1s
SRU San Rafael Swe 32.78 117 P P 01 34 15.9 +1.3
SRU IAmb IAmb 01 34 31.0
comp=Z,6.1nm,1.1s
SRU San Rafael Swe 32.78 117 P P 01 34 15.9 +1.3
SRU pmax pmax
comp=Z,6.0nm,1.1s
FRB Frobisher Bay 34.16 51 LR LR 01 49 20.6
comp=Z,80nm,18.2s,baz=199,slow=38
SUMG Summit 37.38 28 P P 01 34 54.7 +0.7
SUMG Summit 37.38 28 P P 01 34 54.7 +0.7
SUMG pmax pmax
comp=Z,16nm,1.5s
SPITS Spitsbergen Ar 39.42 5 P P 01 35 10.2 -0.4
comp=Z,8.0nm,0.9s,baz=35,slow=8.0,SNR=7.1
comp=Z,8.0nm,0.9s
WMOK Wichita Mounta 41.52 108 P P 01 35 29.4 +0.9
WMOK IAmb IAmb 01 35 44.2
comp=Z,6.1nm,1.1s
WMOK Wichita Mounta 41.52 108 P P 01 35 29.4 +0.9
WMOK pmax pmax
comp=Z,6.0nm,1.1s
ZEA Zeya 42.22 298 *e*P P 01 35 33.1 -0.8
VHRN Van Horn 42.24 118 P P 01 35 36.4 +1.9
VHRN IAmb IAmb 01 35 51.6
comp=Z,4.0nm,0.8s
NRIK Noril'sk 42.68 334 *i* P P 01 35 35.5 -2.0
NRIK pmax pmax
comp=Z,14nm,2.8s
KLR Kul'dur 43.63 291 *i* P P 01 35 43.6 -1.8
KLR pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 44.06 117 P P 01 35 50.4 +1.3
comp=Z,1.4nm,1.0s,baz=350,slow=6.5,SNR=5.6
TXAR pP pP 01 36 05.1 +1.7
comp=Z,0.9nm,0.7s,baz=335,slow=5.5,SNR=5.1
comp=Z,1.4nm,1.0s
JMIC Jan Mayen 44.10 18 LR LR 01 57 12.6
comp=Z,34nm,19.3s,baz=226,slow=40
BRDY Brady 44.35 111 P P 01 35 54.8 +3.4
BRDY IAmb IAmb 01 36 06.8
comp=Z,3.6nm,0.8s
F64A Sherman 46.61 71 P P 01 36 12.2 +3.2
ARCES ARCESS Array B 48.34 3 P P 01 36 21.2 -1.0
comp=Z,6.9nm,1.0s,baz=6.3,slow=7.4,SNR=8.6
comp=Z,6.9nm,1.0s
HIA Hailar 48.67 299 *i* P P 01 36 23.2 -1.8
HIA pmax pmax
comp=Z,9.0nm,0.8s
MJAR Matsushiro Arr 50.65 275 P P 01 36 40.5 +0.3
comp=Z,1.4nm,0.7s,baz=0.3,slow=10.0,SNR=4.9
comp=Z,1.4nm,0.7s
KSRS Korea Array 54.63 284 LR LR 02 04 08.0
comp=Z,9.3nm,18.2s,baz=320,slow=40
ULN Ulaanbaatar 54.76 307 P P 01 37 11.0 +0.4
ULN Ulaanbaatar 54.76 307 *ce*P P 01 37 10.4 -0.2
ULN pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 55.03 307 P P 01 37 13.0 +0.6
SONM IAmb IAmb 01 37 13.9
comp=Z,3.1nm,0.9s
SONM Songino Array 55.03 307 P P 01 37 13.3 +0.9
comp=Z,2.4nm,0.7s,baz=24,slow=6.9,SNR=15
comp=Z,2.4nm,0.7s
FINES FINESS Array B 56.46 3 P P 01 37 21.2 -1.1

comp=Z,2.4nm,0.9s,baz=2.2,slow=8.2,SNR=8.0
comp=Z,2.4nm,0.9s
ZALV Zalesovo Beam 56.65 325 P **P** **01 37 22.8 -1.0**
comp=Z,2.1nm,0.6s,baz=24,slow=8.1,SNR=8.0
ZALV LR LR 02 04 13.5
comp=Z,38nm,19.1s,baz=248,slow=39
comp=Z,2.1nm,0.6s
HFS Hagfors 57.10 10 P **P** **01 37 26.1 -0.8**
comp=Z,4.0nm,1.0s,baz=343,slow=4.5,SNR=1.8
comp=Z,4.0nm,1.0s
KIRV Kirov 58.58 349 LR LR 02 06 38.8
comp=Z,31nm,18.5s,baz=274,slow=40
HHC Hu-ho-hao-te 58.88 299 *e*P **P** **01 37 44.0 +4.3**
HHC pP pP 01 37 50.5 -3.8
HHC sP sP 01 37 55.3 -5.0
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,100nm,5.0s
EKA Eskdalemuir Ar 59.60 22 P **P** **01 37 44.2 -0.2**
comp=Z,1.2nm,0.6s,baz=332,slow=5.5,SNR=5.9
EKA pP **pP** **01 37 59.0 +0.1**
comp=Z,3.5nm,0.9s,baz=329,slow=5.3,SNR=2.3
comp=Z,1.2nm,0.6s
ARU Arti 59.65 343*c i*P **P** **01 37 43.8 -0.9**
ARU 01 39 57.0
ARU S **S** **01 45 54.1 +3.3**
ARU SS **SS** **01 49 42.1 -3.8**
ARU pmax pmax
comp=Z,5.0nm,0.7s
DGZ Jazzator, Alta 59.72 321 *i*P **P** **01 37 44.3 -1.2**
DGZ pmax pmax
comp=Z,9.0nm,4.2s
BRVK Borovoye 60.88 334*ce*P **P** **01 37 51.6 -1.6**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
BVAR Borovoye Array 60.89 334 P **P** **01 37 52.5 -0.8**
comp=Z,2.1nm,0.6s,baz=42,slow=7.8,SNR=12
BVAR PcP **PcP** **01 38 36.2 -0.1**
comp=Z,0.7nm,0.5s,baz=21,slow=3.9,SNR=4.1
BVAR LR LR 02 07 16.6
comp=Z,49nm,18.7s,baz=345,slow=39
comp=Z,2.1nm,0.6s
KURK Kurchatov 61.18 328 *i*P **P** **01 37 52.7 -2.5**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 61.29 328 P **P** **01 37 54.1 -1.9**
comp=Z,0.8nm,0.6s,baz=30,slow=6.7,SNR=6.0
comp=Z,0.8nm,0.6s
OBN Obninsk 62.80 357 *e*P **P** **01 38 01.6 -4.3**
OBN *e* 01 38 40.9
OBN *e* 01 40 20.7
OBN pmax pmax
comp=Z,6.0nm,1.4s
MKAR Makanchi Array 63.82 323 P **P** **01 38 11.0 -1.9**
MKAR Makanchi Array 63.82 323*ce*P **P** **01 38 11.5 -1.4**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 63.82 323 P **P** **01 38 11.8 -1.2**
comp=Z,1.1nm,0.6s,baz=52,slow=6.4,SNR=8.6
comp=Z,1.1nm,0.6s
MAKZ Makanchi 63.89 324 P **P** **01 38 12.8 -0.6**
MAKZ IAmb IAmb 01 38 17.4
comp=Z,1.8nm,0.8s
MAKZ Makanchi 63.89 324 P **P** **01 38 12.8 -0.6**
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
BELG Belogornoye 64.87 349 *i*P **P** **01 38 16.2 -3.4**
BELG pmax pmax
comp=Z,2.0nm,0.9s
WMQ Urumqi 64.93 318 *e*P **P** **01 38 23.5 +3.2**
WMQ PcP **PcP** **01 38 59.0 +6.0**
WMQ pmax pmax
comp=Z,10.0nm,0.8s
AKTO Aktyubinsk 65.56 342 LR LR 02 09 55.8
comp=Z,26nm,18.4s,baz=156,slow=39
LZH Lanzhou 66.06 302 *e*P **P** **01 38 24.0 -3.8**
LZH pP pP 01 38 30.3 -12
LZH pmax pmax
comp=Z,11nm,0.9s
ABKAR Akbulak array 66.41 340 P **P** **01 38 28.5 -1.1**
GRA1 Grafenberg Arr 67.17 14 P **P** **01 38 31.2 -3.3**
GRF Grafenberg Arr 67.17 14 P **P** **01 38 31.2 -3.3**
GRF pmax pmax
comp=Z,21nm,1.4s
AKASG Malin Array Be 67.28 1 P **P** **01 38 34.2 -1.0**
comp=Z,0.5nm,0.4s,baz=3.5,slow=7.0,SNR=2.4
AKASG LR LR 02 11 03.3
comp=Z,22nm,19.1s,baz=30,slow=39
comp=Z,0.5nm,0.4s
AAK Ala-Archa 69.74 327*ce*P **P** **01 38 47.9 -2.9**
AAK pmax pmax
comp=Z,4.0nm,2.5s
AAK Ala-Archa 69.74 327 LR LR 02 12 38.6
comp=Z,36nm,18.2s,baz=358,slow=39
KKAR Karatay Array 70.26 330 P **P** **01 38 53.0 -0.8**
KKAR Karatay Array 70.26 330 P **P** **01 38 53.0 -0.8**
BURAR Bucovina Array 70.28 4 P **P** **01 38 52.9 -1.0**
KSH Kashi 72.29 325 P **P** **01 39 08.5 +2.3**
KSH pmax pmax
comp=Z,2.0nm,0.7s
MLR Muntele Rosu 72.42 4 LR LR 02 12 29.3
comp=Z,38nm,19.7s,baz=278,slow=37
NCK Nalchik 74.03 351 *i*P P 01 39 11.2 -5.2
NCK pmax pmax
comp=Z,6.0nm,0.9s
ESDC Sonseca Array 74.44 28 P **P** **01 39 19.4 +0.6**
comp=Z,2.4nm,0.8s,baz=341,slow=6.3,SNR=8.8
comp=Z,2.4nm,0.8s
GEYT Ailbeck 77.73 339 LR LR 02 20 20.6
comp=Z,15nm,18.6s,baz=118,slow=41
CMAR Chiang Mai Arr 83.66 298 P **P** **01 40 09.2 -0.2**
comp=Z,2.5nm,0.3s,baz=7.0,slow=5.9,SNR=18
comp=Z,2.5nm,0.3s
BOSA Boshof 146.03 9 PKPbc **PKPdf** **01 47 19.2 0.0**
comp=Z,2.1nm,0.6s,baz=338,slow=4.8,SNR=6.9
QSPA South Pole Qui 152.16 180 PKPbc **PKPbc** **01 47 34.0 -0.4**
comp=Z,1.7nm,0.9s,baz=32,slow=1.8,SNR=4.0
QSPA PKPab **PKPab** **01 47 44.2 -0.3**
comp=Z,1.6nm,0.8s,baz=30,slow=4.5,SNR=3.2

IDC 28 01:44:41.7±4.0, 6°24S×143°13E, h0km, mb3.7/2, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=138.6km s-min=33.9km az=97.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.08**	**211**	Pn	Pn	01 48 27.8	-1.6
	0.1nm,0.3s,baz=32,slow=11,SNR=2.4						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**19.47**	**206**	P	P	01 49 10.8	+0.5
	0.2nm,0.3s,baz=36,slow=10,SNR=9.3						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**75.26**	**322**	P	P	01 56 26.4	-0.3
	0.3nm,0.7s,baz=99,slow=8.9,SNR=2.6						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**84.71**	**325**	P	P	01 57 18.0	+0.4
	0.9nm,0.8s,baz=123,slow=5.3,SNR=4.3						
	0.9nm,0.8s						

*NEIC **28** 01:57:29.6±1.6, 56°4N±0°1×148°5W±0°1, h20km±10km, ML3.5/46, ML3.2(AEIC), Error ellipse: s-maj=16.1km s-min=8.7km az=170.0*
*AEIC **28** 01:57:32.7±1.9, 56°3N±0°1×148°4W±0°1, h12km±8km, Error ellipse: s-maj=15.5km s-min=9.3km az=174.0*
ISC 28 01:57:27.4±2.0, 56°4N±0°1×148°51W±0°06, h10km, n85, σ1§23/97, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.65**	**304**		**Pn**	**01 58 11.1**	**+1.1**
KDAK					**Sn**	**01 58 40.8**	**-1.4**
OHAK	**Old Harbor**	**2.77**	**290**	Pn	**Pn**	**01 58 12.5**	**+0.8**
OHAK				Sn	**Sn**	**01 58 42.9**	**-2.3**
OHAK	**Old Harbor**	**2.77**	**290**	P	**Pn**	**01 58 12.9**	**+1.2**
	baz=107						
OHAK				S	**Sn**	**01 58 43.4**	**-1.7**
	baz=107						
SYI	**Shuyak Island**	**3.08**	**319**	Pn	**Pn**	**01 58 17.9**	**+1.8**
SYI				Sn	**Sn**	**01 58 53.1**	**+0.1**
Q20K	**Shuyak Island**	**3.08**	**319**	P	**Pn**	**01 58 18.1**	**+2.0**
	baz=136						
Q20K				S	**Sn**	**01 58 53.5**	**+0.5**
	baz=136						

CNPM China Poot 3.50 337 Pn **Pn** **01 58 21.1 -0.7**
CNPM Sn **Sn** **01 59 02.6 -0.6**
BRSE Bradley Lake S 3.60 342 **Pn** **01 58 24.0 +0.8**
BRSE **Sn** **01 59 05.2 -0.5**
BRSE Bradley Lake S 3.60 342 P **Pn** **01 58 24.5 +1.3**
baz=160
BRSE S **Sn** **01 59 05.5 -0.2**
baz=160
BRLK Bradley Lake 3.65 341 Pn **Pn** **01 58 24.2 +0.3**
BRLK Sn **Sn** **01 59 06.3 -0.6**
P23K Montague Islan 3.70 9 **Pn** **01 58 25.4 +0.8**
P23K **Sn** **01 59 05.9 -2.3**
P23K Montague Islan 3.70 9 P **Pn** **01 58 25.4 +0.8**
baz=189
P23K S **Sn** **01 59 06.4 -1.8**
baz=189
Q19K Cape Douglas, 3.78 315 Pn **Pn** **01 58 26.0 +0.4**
Q19K IAML 02 00 38.7
comp=N,105nm,1.5s
Q19K Cape Douglas, 3.78 315 P **Pn** **01 58 26.9 +1.3**
baz=131
SEW Seward 3.79 353 Pn **Pn** **01 58 26.4 +0.5**
SEW Seward 3.79 353 P **Pn** **01 58 26.7 +0.9**
baz=172
KAKN Katmai Knife C 4.05 301 **Pn** **01 58 32.0 +2.5**
P19K Oil Pt 4.15 325 Pn **Pn** **01 58 32.1 +1.3**
P19K IAML 01 59 02.6
comp=E,59nm,2.5s
P19K IAML 02 01 14.4
comp=N,56nm,3.5s
HIN Hinchinbrook I 4.19 14 Pn **Pn** **01 58 31.8 +0.5**
HIN IAML 01 59 02.9
comp=N,92nm,2.4s
HIN IAML 01 59 45.8
comp=E,73nm,2.0s
SLKM Skilak Lake 4.26 349 **Pn** **01 58 33.4 +1.1**
SLKM **Sn** **01 59 21.1 -1.0**
SUCK Suckling Hills 4.49 32 Pn **Pn** **01 58 35.4 -0.1**
SUCK IAML 02 00 47.5
comp=E,83nm,2.5s
RAGM Ragged Mountai 4.52 25 Pn **Pn** **01 58 37.3 +1.4**
RAGM IAML 01 59 39.3
comp=E,70nm,3.0s
FID Port Fidalgo 4.54 13 Pn **Pn** **01 58 35.8 -0.2**
FID IAML 01 59 13.0
comp=E,47nm,1.4s
FID IAML 02 00 22.9
comp=N,40nm,2.0s
NICHA Nichawak Mount 4.57 30 **Pn** **01 58 38.1 +1.6**
HMT Hamilton 4.58 28 Pn **Pn** **01 58 36.8 +0.1**
HMT IAML 02 00 16.5
comp=N,66nm,3.7s
RSO Redoubt South 4.69 333 Pn **Pn** **01 58 39.0 +0.7**
P18K Big Mountain, 4.71 313 Pn **Pn** **01 58 38.6 +0.2**
P18K IAML 01 59 15.1
comp=E,30nm,3.4s
P18K Big Mountain, 4.71 313 P **Pn** **01 58 40.0 +1.6**
baz=128
BERG Berg Lake 4.78 30 Pn **Pn** **01 58 39.8 +0.4**
BERG IAML 01 59 43.7
comp=N,53nm,3.2s
BERG IAML 02 01 42.2
comp=E,67nm,4.5s
RC01 Rabbit Creek A 4.79 353 Pn **Pn** **01 58 41.2 +1.6**
RC01 IAML 02 00 35.2
comp=N,25nm,2.9s
RC01 IAML 02 00 38.6
comp=E,23nm,3.0s
GRIN Grindle Hills 4.79 33 **Pn** **01 58 41.1 +1.5**
SNH Sunshine Point 4.87 36 Pn **Pn** **01 58 41.8 +1.2**
FIS Fire Island 4.89 350 Pn **Pn** **01 58 39.3 -1.5**
KHIT Khitrov Hills 4.95 32 **Pn** **01 58 42.8 +1.0**
WAX Waxell Ridge 5.07 34 Pn **Pn** **01 58 43.6 +0.1**
CRQM Cirque 5.23 30 Pn **Pn** **01 58 46.3 +0.5**
CRQM IAML 02 01 51.8
comp=E,32nm,4.6s
CRQM IAML 02 02 11.9
comp=N,26nm,3.3s
CRQE Cirque 5.24 30 P **Pn** **01 58 47.1 +1.2**
baz=214
SUA Susitna One 5.25 348 Pn **Pn** **01 58 43.8 -2.2**
SUA IAML 02 00 13.6
comp=N,29nm,4.2s
SUA IAML 02 00 51.6
comp=E,36nm,3.9s
TGL Tana Glacier 5.32 32 Pn **Pn** **01 58 46.7 -0.3**
TGL IAML 02 00 02.6
comp=E,22nm,4.0s
TGL IAML 02 02 01.5
comp=N,29nm,4.5s
KLU Klutina 5.33 13 Pn **Pn** **01 58 47.8 +0.9**
KLU IAML 01 59 54.9
comp=E,16nm,4.2s
KLU IAML 02 02 08.2
comp=N,20nm,4.1s
ISLE Juniper Island 5.35 35 Pn **Pn** **01 58 47.7 +0.3**
ISLE IAML 01 59 43.6
comp=E,37nm,4.3s
GHO Glory Hole Cre 5.44 358 Pn **Pn** **01 58 49.3 +0.8**
N19K Bonanza Creek 5.45 328 Pn **Pn** **01 58 49.1 +0.3**
N19K Bonanza Creek 5.45 328 P **Pn** **01 58 50.3 +1.6**
baz=142
SML Sawmill 5.47 1 Pn **Pn** **01 58 50.6 +1.7**
VRDI Verde Repeater 5.55 26 Pn **Pn** **01 58 50.8 +0.7**
GRNC Granite Creek 5.64 36 Pn **Pn** **01 58 52.4 +1.1**
TABL Table Mountain 5.64 40 Pn **Pn** **01 58 53.0 +1.7**
N25K Chitina, Valde 5.64 19 Pn **Pn** **01 58 52.5 +1.2**
GLB Gilahina Butte 5.65 24 Pn **Pn** **01 58 52.2 +0.7**
PINM Pinnacle 5.75 46 P **Pn** **01 58 54.4 +1.6**
baz=232
PTPK Patty Peak 5.78 30 **Pn** **01 58 54.9 +1.7**
N18K Kilae Creek 5.81 321 Pn **Pn** **01 58 53.6 +0.1**
SKT Skwentna 5.85 346 Pn **Pn** **01 58 54.9 +0.8**
PNL Peninsula 5.87 52 **Pn** **01 58 55.7 +1.3**
PNL Peninsula 5.87 52 P **Pn** **01 58 55.7 +1.3**
baz=239
BARN Barnard Glacie 5.92 34 Pn **Pn** **01 58 55.7 +0.6**
BCPM Bancas Point 5.92 49 Pn **Pn** **01 58 54.7 -0.4**
CTGM Chitina Glacie 5.95 36 Pn **Pn** **01 58 56.3 +0.7**
LOGN Logan Glacier 5.96 38 Pn **Pn** **01 58 56.4 +0.7**
SVW2 Sparrevohn 6.01 325 Pn **Pn** **01 58 57.4 +1.1**
M20K Styx River 6.03 339 Pn **Pn** **01 58 58.2 +1.5**
O16K Kokwok River B 6.04 306 Pn **Pn** **01 58 58.2 +1.5**
N17K Nushagak Hills 6.18 316 Pn **Pn** **01 58 59.9 +1.3**
M19K Big River Lodg 6.33 334 Pn **Pn** **01 59 01.2 +0.5**
O29M Mount Kennedy 6.56 49 Pn **Pn** **01 59 02.4 -1.6**
O29M Mount Kennedy 6.56 49 P **Pn** **01 59 05.6 +1.7**
baz=236
P29M Windy Craggy 6.60 56 Pn **Pn** **01 59 04.7 +0.3**
P29M Windy Craggy 6.60 56 P **Pn** **01 59 05.4 +1.0**
baz=244
L19K White Mountain 6.69 334 Pn **Pn** **01 59 06.3 +0.7**
S31K Pelican 6.87 71 Pn **Pn** **01 59 07.3 -0.7**
S31K Pelican 6.87 71 P **Pn** **01 59 07.9 -0.2**
baz=261
M27K Edge Creek, AK 6.91 27 Pn **Pn** **01 59 08.0 -0.7**
M16K Timber Creek 7.18 315 Pn **Pn** **01 59 13.8 +1.5**
N15K Kwethluk River 7.21 307 Pn **Pn** **01 59 15.4 +2.8**
HYT Haines Junctio 7.29 48 Pn **Pn** **01 59 15.3 +1.4**
L16K Owhat River 7.79 318 Pn **Pn** **01 59 21.2 +0.5**
M29M Somme Creek 7.97 36 Pn **Pn** **01 59 24.7 +1.5**
K17K Iditarod 8.08 326 Pn **Pn** **01 59 25.0 +0.3**
WHY Whitehorse 8.33 53 Pn **Pn** **01 59 28.8 +0.5**
L29M L29M 8.56 33 Pn **Pn** **01 59 33.1 +1.9**
P33M Teslin, Yukon 9.12 58 Pn **Pn** **01 59 40.0 +1.0**
K29M Barlow Dome 9.29 32 Pn **Pn** **01 59 43.3 +2.0**
M31M Drury Creek, Y 9.29 45 Pn **Pn** **01 59 43.1 +1.8**
H21K Melozitna Rive 9.56 349 Pn **Pn** **01 59 46.5 +1.5**
R33M Jennings River 9.82 65 Pn **Pn** **01 59 47.6 -1.1**

*ISK **28** 02:12:29.7, 36°72N×38°99E, h19km, ML3.6/22*
*AFAD **28** 02:12:31.6±0.0, 36°87N×38°94E, h7km±1km, MW3.5*
ISC 28 02:12:32.1±1.1, 36°90N±0°03×38°94E±0°03, h11km±9km, n57, σ1§39/66, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SURC	**SANLIURFA_SURC**	**0.26**	**267**	P	**Pg**	**02 12 37.5**	**0.0**
SURC				*i* AML	AML	02 12 42.0	
	comp=N,5μm,0.3s						
SURC				S	**Sb**	**02 12 42.5**	**-1.0**
SURC				*i* AML	AML	02 12 43.0	
	comp=E,4μm,0.8s						
SANL	**SANLIURFA_Merk**	**0.28**	**8**	P	**Pg**	**02 12 37.8**	**-0.1**
SANL				*i* AML	AML	02 12 42.0	
	comp=N,5μm,0.3s						
SANL				S	**Sg**	**02 12 42.6**	**+0.9**
SANL				*i* AML	AML	02 12 43.0	
	comp=E,7μm,0.3s						
HANM	**anlurfa/Hi**	**0.69**	**356**	P	**Pg**	**02 12 45.4**	**0.0**
HANM				S	**Sg**	**02 12 55.3**	**+0.9**
HANM				*i* AML	AML	02 12 58.0	
	comp=N,2μm,0.4s						
HANM				*i* AML	AML	02 12 58.0	
	comp=E,781nm,0.6s						
ATAB	**Bozova**	**0.77**	**318**	P	**Pg**	**02 12 47.1**	**0.0**
ATAB				S	**Sb**	**02 12 58.7**	**+0.6**
ATAB				*i* AML	AML	02 12 59.0	
	comp=E,5μm,0.3s						
ATAB				*i* AML	AML	02 13 01.0	
	comp=N,3μm,0.2s						
NARI	**Adyaman-Kaht**	**1.00**	**352**	P	**Pg**	**02 12 51.1**	**-0.2**
NARI				S	**Sb**	**02 13 05.1**	**+0.5**
NARI				*i* AML	AML	02 13 06.0	
	comp=N,942nm,0.3s						
NARI				*i* AML	AML	02 13 07.0	
	comp=E,623nm,0.3s						
NZIP	**Nizip/Gaziante**	**1.02**	**279**	P	**Pg**	**02 12 50.9**	**-0.9**
NZIP				S	**Sb**	**02 13 05.9**	**+0.5**
NZIP				*i* AML	AML	02 13 07.0	
	comp=E,1μm,1.1s						
NZIP				*i* AML	AML	02 13 10.0	
	comp=N,1μm,0.3s						
AZEY	**Adyaman-Merk**	**1.07**	**329**	P	**Pg**	**02 12 52.3**	**-0.3**
AZEY				S	**Sn**	**02 13 08.1**	**+0.2**
AZEY				*i* AML	AML	02 13 12.0	
	comp=E,642nm,0.5s						
AZEY				*i* AML	AML	02 13 15.0	
	comp=N,593nm,0.3s						
GZT	**Gaziantep**	**1.19**	**293**	P	**Pg**	**02 12 53.7**	**-1.4**
GZT				S	**Sb**	**02 13 10.8**	**+0.5**
MAZI	**Mazidag**	**1.33**	**64**	Pn	**Pn**	**02 12 54.6**	**-2.2**
MAZI				Sn	**Sb**	**02 13 12.3**	**-2.0**
AKCA	**Adyaman/G¶l**	**1.34**	**312**	P	**Pn**	**02 12 55.2**	**-1.7**
AKCA				S	**Sn**	**02 13 16.4**	**+1.6**
DIYA	**Diyarbakir**	**1.39**	**42**	P	**Pn**	**02 12 56.9**	**-0.6**
DIYA				S	**Sb**	**02 13 16.4**	**+0.4**
GAZ	**Gaziantep**	**1.41**	**282**	Pn	**Pn**	**02 12 56.7**	**-1.1**
DYBB	**Diyarbakir**	**1.42**	**42**	Pn	**Pn**	**02 12 57.3**	**-0.7**
DYBB				Sn	**Sb**	**02 13 17.0**	**+0.1**
MAYA	**Malatya/Merkez**	**1.48**	**344**	P	**Pb**	**02 13 00.0**	**+0.2**
MAYA				S	**Sg**	**02 13 20.4**	**+0.5**
MAYA				*i* AML	AML	02 13 25.0	
	comp=N,509nm,0.7s						
MAYA				*i* AML	AML	02 13 25.0	
	comp=E,439nm,0.5s						
KHMN	**Narli-Kahraman**	**1.51**	**290**	Pn	**Pn**	**02 12 57.9**	**-1.2**
KMRS	**Kahramanmaras**	**1.74**	**291**	Pn	**Pn**	**02 13 00.7**	**-1.6**
DARE	**Darende-Malaty**	**2.03**	**326**	Pn	**Pn**	**02 13 06.6**	**+0.2**
ARPR	**Arapgir-MALATY**	**2.25**	**348**	Pn	**Pn**	**02 13 09.7**	**+0.3**
TAHT	**Tahtakopru-Hat**	**2.27**	**258**	Pn	**Pn**	**02 13 07.9**	**-1.7**
SARI	**SarD1z-Kayseri**	**2.51**	**308**	Pn	**Pn**	**02 13 12.0**	**-1.0**
KOZT	**Kozan**	**2.55**	**284**	Pn	**Pn**	**02 13 12.4**	**-1.1**
ILIC	**ilic-Erzincan**	**2.57**	**354**	Pn	**Pn**	**02 13 14.1**	**+0.3**
KARA	**Karaisali**	**3.13**	**278**	Pn	**Pn**	**02 13 20.9**	**-0.5**
BNN	**Bunyan**	**3.13**	**310**	Pn	**Pn**	**02 13 21.9**	**+0.4**
CMRD	**Camardi-Nigde**	**3.24**	**285**	Pn	**Pn**	**02 13 22.3**	**-0.7**
BEIL	**Beino**	**3.25**	**224**	*e*P	**Pn**	**02 13 23.0**	**0.0**
FKH	**Fakeheh**	**3.35**	**219**	*e*P	**Pn**	**02 13 27.3**	**+2.8**
HWQ	**Hawqa**	**3.57**	**224**	*e*P	**Pn**	**02 13 27.7**	**+0.1**
RSDY	**Resadiye-TOKAT**	**3.72**	**341**	Pn	**Pn**	**02 13 30.2**	**+0.7**
TOKT	**Tokat**	**3.90**	**332**	Pn	**Pn**	**02 13 32.3**	**+0.3**
ZAHL	**Zahle**	**3.92**	**220**	*e*P	**Pn**	**02 13 32.2**	**-0.2**
KOZK	**Kozakli-Nevseh**	**3.96**	**307**	Pn	**Pn**	**02 13 33.7**	**+0.8**
GULA	**Gulagac**	**4.00**	**293**	Pn	**Pn**	**02 13 33.9**	**+0.4**
BHL	**Bhannes**	**4.01**	**223**	*e*P	**Pn**	**02 13 34.4**	**+0.7**
DQRL	**Deir Qamar**	**4.21**	**222**	*e*P	**Pn**	**02 13 36.8**	**+0.5**
YESY	**Yesilyurt**	**4.23**	**284**	Pn	**Pn**	**02 13 36.7**	**0.0**
RCY	**Rachaya**	**4.24**	**218**	*e*P	**Pn**	**02 13 37.4**	**+0.6**
QRWL	**Qaraoun**	**4.27**	**220**	*e*P	**Pn**	**02 13 40.2**	**+3.0**
IKL	**Isikli**	**4.28**	**263**	Pn	**Pn**	**02 13 36.9**	**-0.3**
AKKU	**Akkuyu-Mersin**	**4.40**	**262**	Pn	**Pn**	**02 13 37.6**	**-1.3**
SHBL	**Chebaa**	**4.40**	**217**	*e*P	**Pn**	**02 13 39.2**	**+0.1**
NATI	**Neve Ativ**	**4.48**	**217**	P	**Pn**	**02 13 43.0**	**+3.1**
YAYX	**Yaylak**	**4.54**	**298**	Pn	**Pn**	**02 13 41.2**	**+0.3**
GEM	**Giv'at Ha'Em**	**4.55**	**217**	P	**Pb**	**02 13 50.8**	**-1.3**
SERE	**Sereflikochisa**	**4.72**	**297**	Pn	**Pn**	**02 13 45.4**	**+2.1**
MMA0	**Mount Meron ar**	**4.84**	**218**	P	**Pb**	**02 13 52.3**	**-4.7**
SHMJ	**Saham**	**4.91**	**213**	P	**Pb**	**02 13 59.5**	**+1.4**
ASF	**Jabal al Asfar**	**5.00**	**200**	P	**Pn**	**02 13 49.0**	**+1.8**
QRNJ	**Al-Qirein**	**5.33**	**212**	P	Pb	02 13 58.7	-6.5
OFRI	**`Ofer**	**5.36**	**218**	P	Pb	02 14 00.0	-5.9
HMDT	**Nahal Hemdat**	**5.42**	**212**	P	**Pn**	**02 13 53.3**	**+0.4**
BALJ	**Balqa**	**5.51**	**211**	P	**Pn**	**02 13 58.5**	**+4.3**
UJAP	**Al Uja**	**5.71**	**211**	P	Pb	02 14 04.6	-7.1
DSI	**Dead Sea**	**6.07**	**210**	P	Pb	02 14 11.6	-6.4
GHAJ	**Ghor Haditha**	**6.24**	**208**	P	**Pn**	**02 14 05.3**	**+1.2**
MSBI	**Mazada**	**6.31**	**209**	P	**Pb**	**02 14 20.8**	**-1.2**
KARJ	**KARJ**	**6.37**	**206**	P	**Pn**	**02 14 07.3**	**+1.3**

*IDC **28** 02:22:49.3±2.1, 6°84S×129°67E, h0km, mb4.1/1, mbtmp3.8/3, ML4.1/2, Error ellipse: s-maj=143.2km s-min=30.6km az=68.0*
ISC 28 02:23:05.3±1.5, 7°4S±0°1×129°85E±0°10, h150km, n8, σ1§76/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.56**	**113**	P	**Pn**	**02 23 36.2**	**+0.7**
DRS	**Darwin Rock St**	**5.13**	**168**	P	**Pn**	**02 24 22.3**	**+1.9**
MTN	**Manton Dam**	**5.58**	**167**	P	**Pn**	**02 24 28.2**	**+1.8**
SOEI	**Soe**	**6.00**	**246**	P	**Pn**	**02 24 33.2**	**+1.0**
KNRA	**Kununurra**	**8.32**	**187**	P	**Pn**	**02 25 03.6**	**+0.6**
WRA	**Warramunga Arr**	**13.23**	**161**	Pn	**Pn**	**02 26 06.4**	**-1.1**
	1.1nm,0.3s,baz=344,slow=13,SNR=40						
WRA				Sn	Sn	02 28 25.0	-8.9
	1.0nm,0.3s,baz=334,slow=22,SNR=12						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**16.66**	**167**	P	**Pn**	**02 26 51.3**	**+1.2**
	0.4nm,0.3s,baz=338,slow=9.0,SNR=9.9						
ASAR				S	**S**	**02 29 53.0**	**-2.4**
	0.3nm,0.3s,baz=354,slow=27,SNR=2.8						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**68.46**	**327**	P	**P**	**02 33 49.9**	**-1.3**
	0.8nm,0.4s,baz=138,slow=6.8,SNR=20						
	0.8nm,0.4s						

*BJI **28** 02:45:42.2±0.0, 6°00S×142°47E, h10km, mb5.7/88, mB6.4/81, Ms6.1/99, Ms7 5.8/97*
*IDC **28** 02:45:42.8±0.4, 5°99S×142°56E, h0km, mb5.5/28, mbtmp5.6/33, ML3.7/2, MS5.8/52, Error ellipse: s-maj=18.6km s-min=10.7km az=76.0*
*MOS **28** 02:45:43.0±1.0, 6°07S×142°58E, h17km, mb6.3/63, MS5.8/32, Error ellipse: s-maj=7.9km s-min=4.4km az=111.0*
*IPGP **28** 02:45:44.0, 6°17S×142°48E, h6km, Mw6.4, Fault plane solution: NP1:ϕs138.00000°, δ82.00000°, λ100.00000°. NP2:ϕs266.00000°, δ13.00000°, λ39.00000°.*
*NEIC **28** 02:45:44.5, 6°18S×142°58E, h16km, Moment Tensor Solution. Duration: 5s1 Moment tensor: Scale 10^18Nm; Mrr1.05; Mθθ-0.90; Mφφ-0.15; Mrθ0.88; Mrφ0.48; Mθφ-1.35; Fault plane solution: M0 1.94000×10^18 NP1: ϕs140.35000°, δ74.04000°, λ104.51000°. NP2: ϕs277.08000°, δ21.44000°, λ48.77000°. Principal axes: T 2.0104, Plg58.0000°, Azm70.0000°; N -0.1377, Plg14.0000°, Azm316.0000°; P -1.8727, Plg28.0000°, Azm219.0000°;*
*NEIC **28** 02:45:44.5, 6°18S×142°48E, h16km*
*NEIC **28** 02:45:44.6, 6°19S×142°48E, h10km*
*DJA **28** 02:45:44.1±0.1, 6°S±2°×14°2E±°, h10km, M6.2/120, mB6.6/115, mb5.9/120, MLv6.8/7, Mw(mB)6.4/115, MwMwp5.9/90, Mwpe6.0/90*
*NEIC **28** 02:45:45.4±2.1, 6°17S±0°07×142°47E±0°06, h16km±1km, mb6.3/345, Ms_20 6.1/1162, Mwb6.0/63, Mww6.1/33, Error ellipse: s-maj=11.3km s-min=10.2km az=177.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.43; Mθθ-0.67; Mφφ0.23; Mrθ0.68; Mθφ0.46; Mθr-0.92; Fault plane solution: M0 1.36000×10^18 NP1: ϕs142.27000°, δ78.82000°, λ113.76000°. NP2:*

ϕ_e256.04000°, δ26.12000°, λ26.13000°. *Principal axes: T 1.2780, Plg51.0000°, Azm79.0000°; N 0.1481, Plg23.0000°, Azm317.0000°; P -1.4262, Plg30.0000°, Azm213.0000°;*

GCMT **28** *02:45:50.4*±*0.1, 6°.25S*×*142°.40E, h12*km*, MW6.2/164, Moment Tensor Solution. s164,c377; s160,c544; Duration: 3*s*0 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*0.92*±*.01; M*$_{\theta\theta}$*-0.91*±*.01; M*$_{\phi\phi}$*-0.01*±*.01; M*$_{r\theta}$*1.41*±*.02; M*$_{\theta\phi}$*0.64*±*.01; M*$_{\phi r}$*-1.57*±*.02; Best double couple: M*$_o$*2.38300*×*10*^{18} *NP1:*ϕ_s*137.00000°,*δ*77.00000°,* λ*102.00000°. NP2:*ϕ_s*273.00000°,*δ*17.00000°,*λ*48.00000°. Principal axes: T 2.2990, Plg56.0000°, Azm61.0000°; N 0.1670, Plg11.0000°, Azm314.0000°; P -2.4660, Plg31.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 28 02:45:45.4±0.3,**6°.20S**±0°.03×**142°.50E**±0°.03,**h16**km±1km, **h17**km:**pP-P,n1932,**σ1**980**/1630,**mb6.2**/326,**MS6.1**/677, **72C-32D,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.57**	**306**	P	**Pn**	**02 46 12.8**	**+0.1**
MMPI	**Merauke**	**3.08**	**223**	P	**Pn**	**02 46 35.2**	**+1.8**
GENI	**Genyem**	**4.27**	**327**	P	**Pn**	**02 46 50.1**	**+0.3**
GENI	**Genyem**	**4.27**	**327**	P	**Pn**	**02 46 50.1**	**+0.3**
GENI				S	**Sn**	**02 47 40.5**	**+1.2**
PMG	**Port Moresby**	**5.61**	**125**	Pn	**Pn**	**02 47 07.0**	**-1.1**
PMG	**Port Moresby**	**5.61**	**125**	P	**Pn**	**02 47 07.3**	**-0.8**
PMG	**Port Moresby**	**5.61**	**125**	P	**Pn**	**02 47 08.5**	**+0.4**
PMG	**Port Moresby**	**5.61**	**125**	*ce*P	**Pn**	**02 47 06.5**	**-1.6**
PMG				pmax	pmax		
	comp=Z,1μm,1.0s						
PMG	**Port Moresby**	**5.61**	**125**	Pn	**Pn**	**02 47 06.7**	**-1.3**
	comp=Z,70nm,0.3s,baz=322,slow=7.0,SNR=134						
PMG				Sn	**Sn**	**02 48 12.4**	**+0.2**
	comp=Z,115nm,0.3s,baz=57,slow=23,SNR=9.6						
	comp=Z,1μm,0.9s						
SMPI	**Sarmi**	**5.64**	**318**	P	**Pn**	**02 47 09.7**	**+1.2**
	comp=Z,3μm,1.3s,comp=Z,137μmcomp=Z,129μmcomp=Z,46nm						
MANU	**Manus Island**	**6.37**	**50**	Pn	**Pn**	**02 47 18.4**	**-0.2**
MANU	**Manus Island**	**6.37**	**50**	P	**Pn**	**02 47 20.6**	**+2.0**
COEN	**Coen**	**7.74**	**175**	P	**Pn**	**02 47 38.8**	**+1.4**
	baz=7.9,SNR=96						
COEN	**Coen**	**7.74**	**175**	Pn	**Pn**	**02 47 38.1**	**+0.7**
COEN	**Coen**	**7.74**	**175**	P	**Pn**	**02 47 40.0**	**+2.6**
BULU	**Kimbe**	**7.80**	**86**	P	**Pn**	**02 47 40.6**	**+2.4**
KAVG	**Kavieng**	**9.02**	**67**	P	**Pn**	**02 47 56.9**	**+1.9**
I40PG	**Keravat**	**9.65**	**79**	I	I	03 43 50.0	
	baz=260,slow=312,SNR=0.8						
RABL	**Rabaul**	**9.82**	**79**	Pn	**Pn**	**02 48 06.6**	**+0.5**
RABL	**Rabaul**	**9.82**	**79**	P	**Pn**	**02 48 07.7**	**+1.6**
FAKI	**Fak Fak**	**10.73**	**287**	P	**Pn**	**02 48 16.4**	**-2.0**
FAKI	**Fak Fak**	**10.73**	**287**	P	**Pn**	**02 48 16.5**	**-2.0**
	comp=Z,1μm,1.2s,comp=Z,21μmcomp=Z,41μm						
SAUI	**Saumlaki**	**11.26**	**260**	Pn	**Pn**	**02 48 26.1**	**+0.4**
SAUI	**Saumlaki**	**11.26**	**260**	P	**Pn**	**02 48 26.3**	**+0.6**
KDU	**Kakadu**	**11.81**	**236**	P	**Pn**	**02 48 31.5**	**-1.7**
	baz=12,SNR=905						
KDU	**Kakadu**	**11.81**	**236**	P	**Pn**	**02 48 31.9**	**-1.3**
MTSU	**Mount Surprise**	**11.99**	**172**	P	**Pn**	**02 48 37.6**	**+1.8**
	baz=12,SNR=38						
MTSU	**Mount Surprise**	**11.99**	**172**	P	**Pn**	**02 48 38.5**	**+2.7**
SWI	**Sorong**	**12.41**	**295**	P	**Pn**	**02 48 39.4**	**-2.0**
	comp=Z,697nm,1.2s,comp=Z,16μmcomp=Z,21μm						
BNDI	**Bandaaira**	**12.65**	**277**	P	**Pn**	**02 48 44.8**	**0.0**
BNDI	**Bandanaira**	**12.65**	**277**	P	**Pn**	**02 48 43.4**	**-1.4**
	comp=Z,3μm,2.2s,comp=Z,60μmcomp=Z,43μm						
MTN	**Manton Dam**	**13.01**	**239**	P	**Pn**	**02 48 46.4**	**-3.2**
	baz=13,SNR=74						
MTN	**Manton Dam**	**13.01**	**239**	Pn	**Pn**	**02 48 47.0**	**-2.7**
MTN	**Manton Dam**	**13.01**	**239**	P	**Pn**	**02 48 48.4**	**-1.2**
DRS	**Darwin Rock St**	**13.02**	**241**	P	**Pn**	**02 48 49.0**	**-0.7**
TV1H	**Townsville Har**	**13.64**	**163**	P	**Pn**	**02 48 59.2**	**+1.0**
AUAYR	**Ayr State High**	**14.13**	**161**	P	**Pn**	**02 49 07.0**	**+2.1**
CTA	**Charters Tower**	**14.28**	**166**	P	**Pn**	**02 49 09.4**	**+2.4**
CTA	**Charters Tower**	**14.28**	**166**	Pn	**Pn**	**02 49 07.7**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=340,slow=13,SNR=18						
CTA				Lg	Lg	02 53 23.2	
	comp=Z,6.6nm,0.3s,baz=246,slow=22,SNR=6.7						
CTA				LR	LR	02 54 47.3	
	comp=Z,62μm,18.4s,baz=352,slow=38						
	comp=Z,58nm,1.3s						
CTAO	**Charters Tower**	**14.28**	**166**	Pn	**Pn**	**02 49 07.8**	**+0.9**
CTAO	**Charters Tower**	**14.28**	**166**	P	**Pn**	**02 49 09.4**	**+2.4**
CTAO	**Charters Tower**	**14.28**	**166**	P	**Pn**	**02 49 07.9**	**+0.9**
QIS	**Mount Isa**	**14.55**	**191**	P	**Pn**	**02 49 09.2**	**-1.5**
	baz=15,SNR=92						
QIS	**Mount Isa**	**14.55**	**191**	P	**Pn**	**02 49 10.5**	**-0.2**
WB0	**Warramunga Arr**	**15.62**	**210**	Pn	**Pn**	**02 49 21.3**	**-3.7**
NLAI	**Namlea**	**15.63**	**280**	P	**Pn**	**02 49 21.2**	**-3.9**
	comp=Z,260nm,1.4s,comp=Z,11μm						
WR0	**Warramunga Arr**	**15.71**	**209**	Pn	**Pn**	**02 49 22.2**	**-4.0**
I39PW	**PALAU INFRASON**	**15.79**	**330**	I	I	04 24 00.0	
	baz=151,slow=310,SNR=1.0						
WB2	**Warramunga Arr**	**15.79**	**209**	P	**Pn**	**02 49 23.8**	**-3.4**
	baz=16						
WB2	**Warramunga Arr**	**15.79**	**209**	Pn	**Pn**	**02 49 23.5**	**-3.7**
I07AU	**WARRAMUNGA INF**	**15.80**	**209**	Lg	Lg	02 53 55.7	
	baz=32,slow=26						
I07AU				I	I	04 15 30.0	
	baz=28,slow=315,SNR=2.3						
WRA	**Warramunga Arr**	**15.80**	**209**	Pn	**Pn**	**02 49 24.2**	**-3.1**
WRA	**Warramunga Arr**	**15.80**	**209**	P	**Pn**	**02 49 24.2**	**-3.1**
WRA				pmax	pmax		
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**15.80**	**209**	Pn	**Pn**	**02 49 23.2**	**-4.1**
	comp=Z,5.3nm,0.3s,baz=22,slow=13,SNR=59						
WRA				Sn	**Sn**	**02 52 13.4**	**-8.7**
	comp=Z,5.3nm,0.3s,baz=30,slow=24,SNR=5.1						
WRA				Lg	Lg	02 54 04.1	
	comp=Z,6.9nm,0.3s,baz=34,slow=25,SNR=5.9						
WRA				LR	LR	02 56 40.3	
	comp=Z,87μm,21.2s,baz=28,slow=41						
LBMI	**Labuha**	**15.96**	**290**	P	**Pn**	**02 49 27.8**	**-1.6**
	comp=Z,1μm,1.2s,comp=Z,27μm						
KNRA	**Kununurra**	**16.44**	**234**	P	**Pn**	**02 49 30.9**	**-4.6**
	baz=16						
KNRA	**Kununurra**	**16.44**	**234**	Pn	**Pn**	**02 49 31.3**	**-4.3**
KNRA	**Kununurra**	**16.44**	**234**	P	**Pn**	**02 49 35.6**	**+0.1**
TNTI	**Ternate**	**16.62**	**294**	Pn	**Pn**	**02 49 36.6**	**-1.3**
TNTI	**Ternate**	**16.62**	**294**	P	**Pn**	**02 49 37.6**	**-0.2**
TNTI	**Ternate**	**16.62**	**294**	P	**Pn**	**02 49 33.7**	**-4.1**
	comp=Z,440nm,1.2s,comp=Z,15μmcomp=Z,13μm						
SANI	**Sanana**	**16.98**	**283**	S	**S**	**02 53 03.7**	**+2.9**
SANI				P	**Pn**	**02 49 37.4**	**-4.9**
SANI	**Sanana**	**16.98**	**283**	P	**Pn**	**02 49 38.0**	**-4.3**
	comp=Z,398nm,1.0s,comp=Z,14μmcomp=Z,33μm						
HNR	**Honiara**	**17.58**	**102**		**Pn**	**02 49 49.5**	**-0.3**
HNR				IAmb	IAmb	02 49 56.2	
	comp=Z,4μm,1.4s						
HNR	**Honiara**	**17.58**	**102**	P	**P**	**02 49 51.3**	**+0.5**
HNR	**Honiara**	**17.58**	**102**	P	**Pn**	**02 49 49.5**	**-0.3**
HNR				pmax	pmax		
	comp=Z,4μm,1.4s						
HNR	**Honiara**	**17.58**	**102**	Pn	**Pn**	**02 49 47.6**	**-2.2**
	comp=Z,3μm,0.8s,baz=182,slow=4.6,SNR=21						
SOEI	**Soe**	**18.40**	**258**		**P**	**02 49 58.5**	**-1.5**
SOEI	**Soe**	**18.40**	**258**	P	**P**	**02 49 59.8**	**-0.2**
SOEI	**Soe**	**18.40**	**258**	S	**S**	**02 53 31.8**	**+1.8**
SOEI				P	**P**	**02 49 58.1**	**-1.9**
SOEI	**Soe**	**18.40**	**258**	P	**P**	**02 49 59.4**	**-0.6**
	comp=Z,4μm,1.1s,comp=Z,71μmcomp=Z,76μm						
RK1H	**Rockhampton Ha**	**18.74**	**157**	P	**Pn**	**02 50 06.1**	**+2.1**
AS31	**Alice Springs**	**19.23**	**205**	P	**P**	**02 50 09.4**	**+0.3**
ASAR	**Alice Springs**	**19.24**	**205**	P	**P**	**02 50 07.6**	**-1.4**
ASAR	**Alice Springs**	**19.24**	**205**	P	**Pn**	**02 50 09.8**	**-0.3**
	comp=Z,509nm,1.0s,baz=31,slow=8.3,SNR=365						
ASAR				S	**Sn**	**02 53 40.2**	**-5.3**
	comp=Z,72nm,0.7s,baz=17,slow=29,SNR=4.5						
ASAR				Lg	Lg	02 55 45.7	
	comp=Z,2.9nm,0.3s,baz=20,slow=28,SNR=2.2						
ASAR				LR	LR	02 58 30.6	
	comp=Z,171μm,20.8s,baz=33,slow=40						
ASAR				P3KPbc		03 24 39.0	
	comp=Z,1.8nm,1.0s,baz=187,slow=3.7,SNR=4.7						
GD1S	**Gladstone Soft**	**19.42**	**155**	P	**Pn**	**02 50 13.7**	**+1.5**
SGSI	**Sangihe**	**19.59**	**300**	P	**Pn**	**02 50 14.2**	**-0.1**
	comp=Z,1μm,1.8s,comp=Z,27μmcomp=Z,21μm						
KMSI	**Cibinong**	**19.68**	**289**	P	**Pn**	**02 50 15.0**	**-0.4**
	comp=Z,5μm,1.3s,comp=Z,45μmcomp=Z,28μm						
GUMO	**Guam**	**19.80**	**7**	P	**P**	**02 50 12.0**	**-3.2**
GUMO	**Guam**	**19.80**	**7**	P	**P**	**02 50 12.0**	**-3.2**
	comp=Z,641nm,1.1s,baz=193,slow=7.1,SNR=11						
GUMO				LR	LR	02 57 16.1	
	comp=Z,21μm,19.1s,baz=196,slow=35						
BBSI	**Bau Bau**	**19.84**	**271**	P	**P**	**02 50 16.0**	**+0.3**
	comp=Z,1μm,1.3s,comp=Z,29μmcomp=Z,51μm						
MMRI	**Maumere**	**20.24**	**262**	P	**P**	**02 50 18.3**	**-1.8**
MMRI	**Maumere**	**20.24**	**262**	P	**P**	**02 50 20.7**	**+0.6**
MMRI	**Maumere**	**20.24**	**262**	P	**P**	**02 50 18.9**	**-1.2**
	comp=Z,1μm,1.8s,comp=Z,40μmcomp=Z,57μm						
FITZ	**Fitzroy Crossi**	**20.26**	**233**	P	**P**	**02 50 20.2**	**-0.1**
	baz=20,SNR=190						
FITZ	**Fitzroy Crossi**	**20.26**	**233**	P	**P**	**02 50 19.5**	**-0.8**
FITZ				IAmb	IAmb	02 50 26.6	
	comp=Z,2μm,1.6s						
QLP	**Quilpie**	**20.34**	**176**	P	Pn	02 50 22.1	-1.0
	baz=20,SNR=28						
QLP	**Quilpie**	**20.34**	**176**	P	Pn	02 50 23.1	0.0
LUWI	**Luwuk**	**20.34**	**284**	P	**P**	**02 50 21.5**	**+0.3**
LUWI				IAmb	IAmb	02 50 32.9	
	comp=Z,1μm,1.1s						
LUWI	**Luwuk**	**20.34**	**284**	P	**P**	**02 50 21.7**	**+0.5**
LUWI	**Luwuk**	**20.34**	**284**	P	**P**	**02 50 19.7**	**-1.4**
LUWI				S	Sn	02 54 21.2	+8.9
LUWI	**Luwuk**	**20.34**	**284**	P	**P**	**02 50 20.4**	**-0.8**
	comp=Z,1μm,1.3s,comp=Z,28μmcomp=Z,56μm						
PATS	**Pohnpei**	**20.41**	**51**	P	**P**	**02 50 20.0**	**-1.9**
	baz=20,SNR=18						
PATS	**Pohnpei**	**20.41**	**51**	P	**P**	**02 50 21.0**	**-0.9**
PATS	**Pohnpei**	**20.41**	**51**	P	**P**	**02 50 20.6**	**-1.3**
GTOI	**Gorontalo**	**20.61**	**289**	P	Pn	02 50 25.5	-0.9
	comp=Z,466nm,1.1s,comp=Z,9μmcomp=Z,17μm						
EIDS	**Eidsvold**	**20.75**	**158**	P	**P**	**02 50 26.6**	**+1.0**
	baz=21,SNR=36						
EIDS	**Eidsvold**	**20.75**	**158**	P	**P**	**02 50 26.5**	**+1.0**
EIDS	**Eidsvold**	**20.75**	**158**	P	Pn	02 50 27.4	-0.6
RMQ	**Roma**	**21.04**	**164**	P	**P**	**02 50 30.9**	**+2.3**
	baz=21,SNR=14						
RMQ	**Roma**	**21.04**	**164**	P	**P**	**02 50 32.0**	**+3.4**
DAV	**Davao City (W)**	**21.42**	**308**	*i*P	P	02 50 40.0	+7.2
INKA	**Innaminka**	**21.49**	**184**	P	**P**	**02 50 35.0**	**+1.6**
MRSI	**Marisa**	**21.57**	**287**	P	**P**	**02 50 33.6**	**-0.8**
	comp=Z,782nm,1.3s,comp=Z,10μmcomp=Z,37μm						
BASI	**Baing, Sumba**	**22.06**	**258**	P	**P**	**02 50 38.7**	**-1.0**
	comp=Z,2μm,1.3s,comp=Z,44μmcomp=Z,65μm						
BKSI	**Bulukumba**	**22.29**	**271**	P	**P**	**02 50 42.1**	**0.0**
	comp=Z,2μm,1.1s,comp=Z,44μmcomp=Z,48μm						
OOD	**Oodnadatta**	**22.43**	**196**	P	**P**	**02 50 44.7**	**+1.1**
KAPI	**Kappang**	**22.67**	**272**	P	**P**	**02 50 45.7**	**-0.6**
KAPI	**Kappang**	**22.67**	**272**	*di*P	**P**	**02 50 46.5**	**+0.2**
KAPI				pmax	pmax		
	comp=Z,2μm,1.1s						
KAPI				MLR	MLR		
	comp=Z,25μm,23.0s						
TTSI	**Tana Toraja**	**22.82**	**277**	P	**P**	**02 50 47.5**	**-0.4**
	comp=Z,778nm,1.4s,comp=Z,38μmcomp=Z,34μm						
TOLI2	**Tolitoli**	**22.87**	**288**	P	**P**	**02 50 47.4**	**-1.0**
WRKA	**Warakurna**	**23.16**	**214**	P	**P**	**02 50 50.3**	**-0.9**
	baz=23,SNR=287						
WRKA	**Warakurna**	**23.16**	**214**	P	**P**	**02 50 50.8**	**-0.4**
AULRC	**Lightning Ridg**	**23.68**	**168**	P	**P**	**02 50 56.8**	**+0.5**
GC1S	**Gold Coast 1 S**	**24.21**	**156**	P	**P**	**02 51 04.7**	**+3.4**
LCRK	**Leigh Creek**	**24.46**	**189**	P	**P**	**02 51 03.4**	**-0.2**
PLAI	**Plampang**	**24.65**	**262**	P	**P**	**02 51 04.9**	**-0.6**
PLAI	**Plampang**	**24.65**	**262**	P	**P**	**02 51 02.7**	**-2.8**
	comp=Z,352nm,1.2s,comp=Z,8μmcomp=Z,17μm						
MULG	**Mulgathing**	**25.24**	**197**	P	**P**	**02 51 11.3**	**+0.6**
CMSA	**Cobar Meteorol**	**25.38**	**174**	P	**P**	**02 51 12.0**	**0.0**
	baz=26,SNR=68						
CMSA	**Cobar Meteorol**	**25.38**	**174**	P	**P**	**02 51 13.0**	**+1.0**
KOUNC	**Koumac, New Ca**	**25.49**	**126**	IAMs_20	IAMs_20	03 00 31.6	
	comp=Z,48μm,19.0s						
KOUNC	**Koumac, New Ca**	**25.49**	**126**	P	**P**	**02 51 14.2**	**+1.1**
TWSI	**Taliwang, Sumb**	**25.53**	**263**	P	**P**	**02 51 10.0**	**-3.5**
	comp=Z,113nm,0.9s,comp=Z,6μmcomp=Z,16μm						
STKA	**Stephens Creek**	**25.56**	**182**	P	**P**	**02 51 11.9**	**-1.6**
	baz=26,SNR=46						
STKA	**Stephens Creek**	**25.56**	**182**	P	**P**	**02 51 12.8**	**-0.7**
STKA	**Stephens Creek**	**25.56**	**182**	P	**P**	**02 51 13.2**	**-0.4**
STKA	**Stephens Creek**	**25.56**	**182**	*di*P	**P**	**02 51 12.0**	**-1.6**
STKA	**Stephens Creek**	**25.56**	**182**	P	**P**	**02 51 14.0**	**+0.5**
	comp=Z,38nm,0.6s,baz=348,slow=9.6,SNR=18						
STKA				LR	LR	03 01 54.1	
	comp=Z,35μm,20.1s,baz=355,slow=38						
	comp=Z,38nm,0.6s						
ARMA	**Armidale**	**25.57**	**161**	P	**P**	**02 51 14.4**	**+0.5**
	baz=26,SNR=24						
ARMA	**Armidale**	**25.57**	**161**	IAmb	IAmb	02 51 23.0	
	comp=Z,1μm,1.8s						
ARMA				IAMs_20	IAMs_20	03 03 05.5	
	comp=Z,66μm,18.0s						
ARMA	**Armidale**	**25.57**	**161**	P	**P**	**02 51 15.5**	**+1.6**
AUPHS	**Peel High Scho**	**25.99**	**163**	P	**P**	**02 51 19.0**	**+1.5**
BKB	**Balikpapan**	**26.01**	**280**	P	**P**	**02 51 18.6**	**+0.7**
BKB	**Balikpapan**	**26.01**	**280**	P	**P**	**02 51 19.6**	**+1.7**
	comp=Z,469nm,1.6s,comp=Z,16μmcomp=Z,42μm						
AUDCC	**Dubbo College**	**26.52**	**168**	P	**P**	**02 51 23.9**	**+1.6**
MBWA	**Marble Bar**	**26.60**	**234**	P	**P**	**02 51 21.6**	**-1.5**
MBWA				IAmb	IAmb	02 51 48.7	
	comp=Z,562nm,1.2s						
MBWA	**Marble Bar**	**26.60**	**234**	P	**P**	**02 51 22.7**	**-0.4**
PSAB2	**Pilbara Seismi**	**26.70**	**233**	IAMs_20	IAMs_20	03 02 39.7	
	comp=Z,80μm,21.0s						
PSAA2	**Pilbara Seismi**	**26.71**	**233**	IAMs_20	IAMs_20	03 02 40.1	
	comp=Z,78μm,21.0s						
PSA00	**Pilbara Seismi**	**26.72**	**233**	P	**P**	**02 51 23.8**	**-0.4**
PSA00				IAmb	IAmb	02 51 51.3	
	comp=Z,653nm,1.2s						
PSA00				IAMs_20	IAMs_20	03 02 40.2	
	comp=Z,80μm,22.0s						
PSA00	**Pilbara Seismi**	**26.72**	**233**	P	**P**	**02 51 23.0**	**-1.2**
PSAB3	**Pilbara Seismi**	**26.72**	**233**	IAMs_20	IAMs_20	03 02 40.3	
	comp=Z,82μm,22.0s						
PSAC1	**Pilbara Seismi**	**26.73**	**233**	IAMs_20	IAMs_20	03 02 41.5	
	comp=Z,83μm,22.0s						
PSAA1	**Pilbara Seismi**	**26.73**	**233**	IAMs_20	IAMs_20	03 02 40.5	
	comp=Z,79μm,21.0s						
PSAB1	**Pilbara Seismi**	**26.74**	**233**	IAMs_20	IAMs_20	03 02 41.7	
	comp=Z,71μm,21.0s						
PSAD3	**Pilbara Seismi**	**26.81**	**233**	IAMs_20	IAMs_20	03 02 43.6	
	comp=Z,79μm,21.0s						
WHYH	**Whyalla**	**27.09**	**189**	P	**P**	**02 51 27.7**	**+0.3**
SRBI	**Singaraja**	**27.14**	**264**	P	**P**	**02 51 24.5**	**-3.6**
	comp=Z,135nm,1.6s,comp=Z,7μmcomp=Z,16μm						
BBOO	**Buckleboo**	**27.15**	**192**	P	**P**	**02 51 27.1**	**-0.8**
	baz=27,SNR=14						
BBOO	**Buckleboo**	**27.15**	**192**	P	**P**	**02 51 27.4**	**-0.5**
BBOO				IAMs_20	IAMs_20	03 02 32.9	
	comp=Z,53μm,21.0s						
BBOO	**Buckleboo**	**27.15**	**192**	P	**P**	**02 51 28.3**	**+0.4**
HTT	**Hallett**	**27.30**	**187**	P	**P**	**02 51 31.1**	**+1.8**
	baz=28,SNR=14						
HTT	**Hallett**	**27.30**	**187**	P	**P**	**02 51 29.9**	**+0.6**
NTLH	**Newcastle Hard**	**27.91**	**163**	P	**P**	**02 51 36.2**	**+1.5**
FORT	**Forrest**	**27.96**	**207**	P	**P**	**02 51 34.1**	**-1.1**
	baz=28,SNR=7.2						
FORT	**Forrest**	**27.96**	**207**	P	**P**	**02 51 35.2**	**0.0**
FORT				IAMs_20	IAMs_20	03 02 31.3	
	comp=Z,57μm,21.0s						
FORT	**Forrest**	**27.96**	**207**	P	**P**	**02 51 36.0**	**+0.8**
DZM	**Mont Dzumac**	**28.00**	**127**	P	**P**	**02 51 35.5**	**-0.3**
DZM	**Mont Dzumac**	**28.00**	**127**	P	**P**	**02 51 35.8**	**0.0**
DZM	**Mont Dzumac**	**28.00**	**127**	*eP*	**P**	**02 51 36.2**	**+0.4**
	comp=Z,554nm,1.6s						
DZM				*e*LQ	LQ	02 57 40.2	
	comp=Z,40μm,27.4s						
DZM				*e*LR	LR	02 58 30.9	
	comp=Z,70μm,26.0s						
DZM	**Mont Dzumac**	**28.00**	**127**	LR	LR	03 03 19.4	
	comp=Z,29μm,19.4s,baz=319,slow=38						
LIFNC	**LIFOU**	**28.02**	**124**	P	**P**	**02 51 35.0**	**-0.8**
LIFNC				IAmb	IAmb	02 51 44.5	
	comp=Z,1μm,1.7s						
LIFNC				IAMs_20	IAMs_20	03 01 36.4	
	comp=Z,47μm,20.0s						
LIFNC	**LIFOU**	**28.02**	**124**	P	**P**	**02 51 37.2**	**+1.4**
MTKI	**Muara Teweh, K**	**28.04**	**280**	P	**P**	**02 51 36.7**	**+0.6**
MGCD	**Mangrove Creek**	**28.04**	**165**	P	**P**	**02 51 36.9**	**+1.0**
	baz=28,SNR=8.9						
MGCD	**Mangrove Creek**	**28.04**	**165**	P	**P**	**02 51 38.0**	**+2.1**
ABJI	**Asem Bagus**	**28.10**	**265**	P	**P**	**02 51 35.8**	**-0.9**
	comp=Z,159nm,1.4s,comp=Z,7μmcomp=Z,17μm						
ONTNC	**Ouen Toro**	**28.12**	**127**	P	**P**	**02 51 36.3**	**-0.5**
ONTNC	**Ouen Toro**	**28.12**	**127**	P	**P**	**02 51 37.9**	**+1.1**
JAGI	**Jajag, Banyuwa**	**28.21**	**264**	P	**P**	**02 51 38.3**	**+0.7**
JAGI	**Jajag, Banyuwa**	**28.21**	**264**	P	**P**	**02 51 34.1**	**-3.5**
	comp=Z,263nm,1.4s,comp=Z,6μmcomp=Z,11μm						
YATNC	**Mamie plateau,**	**28.35**	**126**	P	**P**	**02 51 40.3**	**+1.5**
SYDH	**Sydney Hard Ro**	**28.47**	**165**	P	**P**	**02 51 41.3**	**+1.6**
YNG	**Young**	**28.49**	**170**	P	**P**	**02 51 39.8**	**-0.1**
	baz=29,SNR=30						
YNG	**Young**	**28.49**	**170**	P	**P**	**02 51 41.2**	**+1.3**
OUENC	**Ouen Island, N**	**28.49**	**127**	P	**P**	**02 51 40.4**	**+0.3**
OUENC	**Ouen Island, N**	**28.49**	**127**	P	**P**	**02 51 42.9**	**+2.8**
RIV	**Riverview**	**28.64**	**165**	P	**P**	**02 51 43.2**	**+2.0**
BLJI	**Banyuglugur**	**28.73**	**265**	P	**P**	**02 51 40.8**	**-1.5**
	comp=Z,145nm,1.3s,comp=Z,5μmcomp=Z,16μm						
KKM	**Kota Kinabalu**	**28.92**	**294**	P	**P**	**02 51 44.5**	**+0.4**
KKM				IAmb	IAmb	02 51 50.5	
	comp=Z,584nm,1.6s						
KKM	**Kota Kinabalu**	**28.92**	**294**	P	**P**	**02 51 44.9**	**+0.8**
MARNC	**Mare, Loyalty**	**29.00**	**124**	P	**P**	**02 51 44.5**	**-0.1**
PINNC	**Pines Island,**	**29.07**	**127**	IAmb	IAmb	02 51 57.1	
	comp=Z,663nm,1.8s						
PINNC	**Pines Island,**	**29.07**	**127**	P	**P**	**02 51 45.9**	**+0.7**
WOLH	**Wollongong Har**	**29.12**	**166**	P	**P**	**02 51 47.5**	**+2.0**
TGY	**Tagaytay City**	**29.41**	**313**	LR	LR	03 03 22.2	
	comp=Z,5μm,21.5s,baz=112,slow=36						
CAN	**Canberra**	**29.59**	**169**	P	**P**	**02 51 49.8**	**0.0**
CAN	**Canberra**	**29.59**	**169**	P	**P**	**02 51 50.6**	**+0.8**
CAN	**Canberra**	**29.59**	**169**	P	**P**	**02 51 49.8**	**0.0**
CAN				pmax	pmax		
	comp=Z,321nm,1.5s						
CAN				MLR	MLR		
	comp=Z,82μm,18.0s						
CNB	**Canberra Magne**	**29.66**	**169**	P	**P**	**02 51 50.2**	**-0.1**
	baz=30,SNR=5.3						
CNB	**Canberra Magne**	**29.66**	**169**	P	**P**	**02 51 51.9**	**+1.6**
BWJI	**Bawean**	**29.68**	**269**	P	**P**	**02 51 52.2**	**+1.5**
	comp=Z,2μm,1.8s,comp=Z,29μmcomp=Z,14μm						
AUMAG	**Moama Anglican**	**29.83**	**176**	P	**P**	**02 51 55.2**	**+3.4**
ARPS	**Mount Arapiles**	**30.43**	**181**	P	**P**	**02 51 57.2**	**+0.1**
	baz=31,SNR=8.8						
ARPS	**Mount Arapiles**	**30.43**	**181**	P	**P**	**02 51 57.4**	**+0.3**
PWJI	**Pagerwojo**	**30.51**	**265**	P	**P**	**02 51 57.0**	**-1.1**
	comp=Z,140nm,1.3s,comp=Z,4μm						
MEEK	**Meekatharra**	**30.52**	**226**	P	**P**	**02 51 56.7**	**-1.3**
	baz=31,SNR=16						
MEEK	**Meekatharra**	**30.52**	**226**	P	**P**	**02 51 58.2**	**+0.2**
NGJI	**Ngawi**	**30.84**	**266**	P	**P**	**02 52 02.7**	**+1.7**
	comp=Z,145nm,1.4s,comp=Z,5μm						
BRAT	**Ballarat**	**31.23**	**178**	P	**P**	**02 52 06.0**	**+1.9**
TARA	**Tarawa**	**31.28**	**77**	IAMs_20	IAMs_20	03 05 10.8	
	comp=Z,33μm,18.0s						
MILA	**Mila**	**31.31**	**170**	P	**P**	**

FUNA	**Funafuti**	**36.45**	**96**	P	**P**	**02 52 51.2**	**+1.3**		
SSLB	**Suanglung**	**36.48**	**326**	P	**P**	**02 52 49.7**	**-0.3**		
PPBI	**Pangkal Pinang**	**36.48**	**275**	P	**P**	**02 52 50.9**	**+0.8**		
	comp=Z,330nm,2.2s,comp=Z,13µm								
XMI	**Christmas Isla**	**36.65**	**261**	P	**P**	**02 52 52.4**	**+0.8**		
XMIS	**Christmas Isla**	**36.69**	**261**	IAmb	IAmb	02 52 59.1			
	comp=Z,790nm,1.3s								
XMIS	**Christmas Isla**	**36.69**	**261**	P	**P**	**02 52 52.6**	**+0.7**		
RKGY	**Rocky Gully**	**36.81**	**216**	P	**P**	**02 52 55.4**	**+2.8**		
YHNB	**Yeheng**	**36.95**	**327**	P	**P**	**02 52 54.4**	**+0.4**		
TATO	**Taipei**	**37.13**	**327**	P	**P**	**02 52 54.9**	**-0.5**		
TATO	**Taipei**	**37.13**	**327**	P	**P**	**02 52 56.4**	**+1.0**		
PMBI	**Palembang**	**37.74**	**273**	P	**P**	**02 53 04.0**	**+3.1**		
PMBI	**Palembang**	**37.74**	**273**	P	**P**	**02 53 02.2**	**+1.4**		
	comp=Z,868nm,1.4s,comp=Z,23µm								
DGTI	**Dogotuki**	**37.81**	**109**	P	**P**	**02 53 01.3**	**0.0**		
KASI	**Kota Agung**	**37.81**	**269**	P	**P**	**02 52 59.1**	**-2.3**		
	comp=Z,124nm,2.0s,comp=Z,3µmcomp=Z,9µm								
TAVE	**Taveuni**	**38.22**	**109**	P	**P**	**02 53 05.3**	**+0.5**		
DSRI	**Dabo**	**38.27**	**277**	P	**P**	**02 53 05.7**	**+0.4**		
	comp=Z,214nm,1.9s,comp=Z,10µmcomp=Z,14µm								
LWLI	**Liwa**	**38.27**	**270**	P	**P**	**02 53 05.4**	**-0.1**		
	comp=Z,392nm,1.0s,comp=Z,9µm								
KNMB	**Chin-men Tao**	**38.49**	**323**	P	**P**	**02 53 06.4**	**-0.5**		
TPRI	**Tanjung Pinang**	**38.56**	**279**	P	**P**	**02 53 09.5**	**+1.7**		
	comp=Z,445nm,1.9s,comp=Z,11µmcomp=Z,11µm								
QZH	**Quanzhou**	**38.73**	**324**	⇑*i*P	**P**	**02 53 08.8**	**-0.1**		
QZH				S	**S**	**02 59 05.5**	**-0.1**		
QZH				pmax	pmax				
	comp=Z,2µm,2.9s								
QZH				LR	LR				
	comp=Z,10µm,17.7s								
QZH				LR	LR				
	comp=Z,12µm,22.4s								
QZH				LR	LR				
	comp=Z,12µm,18.6s								
LHSI	**Lahat**	**38.90**	**272**	P	**P**	**02 53 09.2**	**-1.4**		
	comp=Z,436nm,1.6s,comp=Z,15µm								
JMBI	**JAMBI**	**39.02**	**275**	P	**P**	**02 53 13.7**	**+2.1**		
	comp=Z,152nm,0.4s,comp=Z,10µm								
JHJ2	**Mitsune**	**39.18**	**356**	IAmb	IAmb	02 53 13.9			
	comp=Z,2µm,1.7s								
JHJ2	**Mitsune**	**39.18**	**356**	P	**P**	**02 53 13.2**	**+0.6**		
JHJ	**Hachijo jima 2**	**39.19**	**356**	LR	LR	03 06 25.1			
	comp=Z,23µm,21.4s,baz=190,slow=32								
MNAI	**Manna**	**39.42**	**271**	P	**P**	**02 53 16.6**	**+1.7**		
MNAI	**Manna**	**39.42**	**271**	P	**P**	**02 53 13.5**	**-1.4**		
	comp=Z,258nm,1.4s,comp=Z,15µmcomp=Z,11µm								
LKBA	**Tubou, Lakemba**	**39.56**	**111**	P	**P**	**02 53 16.7**	**+0.7**		
HKC	**Hong Kong Obse**	**39.65**	**316**	⇑P	**P**	**02 53 19.0**	**+2.4**		
HKPS	**Hong Kong Po S**	**39.65**	**316**	P	**P**	**02 53 18.5**	**+1.8**		
JMN	**Monobe**	**40.54**	**349**	IAMs_20	IAMs_20	03 07 04.5			
	comp=Z,31µm,20.0s								
JMN	**Monobe**	**40.54**	**349**	P	**P**	**02 53 23.5**	**-0.5**		
JMN	**Monobe**	**40.54**	**349**	P	**P**	**02 53 21.6**	**-2.4**		
JNU	**Nakatsue**	**40.63**	**345**	P	**P**	**02 53 23.8**	**-0.9**		
JNU	**Nakatsue**	**40.63**	**345**	P	**P**	**02 53 23.2**	**-1.5**		
JNU	**Nakatsue**	**40.63**	**345**	P	**P**	**02 53 22.5**	**-2.2**		
	comp=Z,59nm,0.8s,baz=125,slow=4.3,SNR=23								
JNU				LR	LR	03 09 24.3			
	comp=Z,7µm,19.4s,baz=154,slow=35								
	comp=Z,59nm,0.8s								
OUZ	**Omahuta**	**40.65**	**140**	P	**P**	**02 53 27.9**	**+3.0**		
GZH	**Guangzhou**	**40.74**	**317**	P	**P**	**02 53 25.0**	**-0.7**		
GZH				S	**S**	**02 59 37.8**	**+2.0**		
GZH				pmax	pmax				
	comp=Z,81nm,1.6s								
GZH				LR	LR				
	comp=Z,5µm,15.7s								
GZH				LR	LR				
	comp=Z,2µm,14.8s								
JIE	**Ise**	**40.74**	**353**	*e*P	**P**	**02 53 23.8**	**-1.8**		
QIZ	**Qiongzhong**	**40.79**	**309**	P	**P**	**02 53 26.8**	**+0.6**		
QIZ				pP	**pP**	**02 53 31.0**	**-0.5**		
QIZ				PP	**PP**	**02 55 01.5**	**+1.1**		
QIZ				PcS	**PcS**	**02 59 19.8**	**+1.4**		
QIZ				S	**S**	**02 59 39.0**	**+2.3**		
QIZ				pmax	pmax				
	comp=Z,110nm,1.9s								
QIZ				pmax	pmax				
	comp=Z,3µm,2.8s								
QIZ				LR	LR				
	comp=Z,7µm,11.2s								
QIZ				LR	LR				
	comp=Z,8µm,14.5s								
QIZ				LR	LR				
	comp=Z,9µm,16.8s								
JFU	**Fukue jima 2**	**40.80**	**342**	P	**P**	**02 53 26.1**	**+0.1**		
JSG	**Sagara**	**40.86**	**355**	P	**P**	**02 53 28.3**	**+1.8**		
JOD2	**Odawara 2**	**41.37**	**356**	P	**P**	**02 53 27.7**	**-3.0**		
INU	**Inuyama**	**41.65**	**353**	P	**P**	**02 53 31.1**	**-1.9**		
INU	**Inuyama**	**41.65**	**353**	P	**P**	**02 53 31.1**	**-1.9**		
JAD	**Aida**	**41.67**	**350**	P	**P**	**02 53 31.7**	**-1.5**		
JWT	**Wachi**	**41.80**	**351**	P	**P**	**02 53 31.8**	**-2.4**		
JGF	**Kuroka**	**41.86**	**354**	P	**P**	**02 53 32.9**	**-1.9**		
JGF	**Kuroka**	**41.86**	**354**	*e*P	**P**	**02 53 32.2**	**-2.6**		
BKNI	**Bangkinang**	**41.89**	**277**	P	**P**	**02 53 36.1**	**+0.7**		
BKNI	**Bangkinang**	**41.89**	**277**	P	**P**	**02 53 34.5**	**-0.9**		
BKNI				S	**S**	**02 59 54.2**	**+1.0**		
BKNI	**Bangkinang**	**41.89**	**277**	P	**P**	**02 53 35.4**	**0.0**		
	comp=Z,625nm,1.6s,comp=Z,14µmcomp=Z,16µm								
JRY	**Ryogami san**	**42.13**	**356**	P	**P**	**02 53 34.0**	**-3.0**		
SSE	**Sheshan**	**42.32**	**332**	P	**P**	**02 53 37.8**	**-0.7**		
SSE				S	**S**	**03 00 00.0**	**+1.0**		
SSE				pmax	pmax				
	comp=Z,83nm,1.1s								
SSE				pmax	pmax				
	comp=Z,2µm,3.5s								
SSE				LR	LR				
	comp=Z,4µm,19.3s								
SSE				LR	LR				
	comp=Z,6µm,19.7s								
JGN	**Niukaw**	**42.48**	**354**	P	**P**	**02 53 36.6**	**-3.3**		
PPSI	**Pulau Pagai**	**42.49**	**273**	P	**P**	**02 53 40.0**	**-0.3**		
	comp=Z,303nm,1.7s,comp=Z,11µm								
MJAR	**Matsushiro Arr**	**42.71**	**355**	P	**P**	**02 53 38.7**	**-2.9**		
	comp=Z,102nm,1.1s,baz=184,slow=8.4,SNR=41								
MJAR				LR	LR	03 09 36.3			
	comp=Z,11µm,20.0s,baz=166,slow=34								
	comp=Z,102nm,1.1s								
MAJO	**Matsushiro**	**42.71**	**355**	P	**P**	**02 53 38.7**	**-3.0**		
MAJO	**Matsushiro**	**42.71**	**355**	P	**P**	**02 53 39.4**	**-2.3**		
MAJO	**Matsushiro**	**42.71**	**355**	*c i*P	**P**	**02 53 38.4**	**-3.3**		
MAJO				pmax	pmax				
	comp=Z,257nm,1.2s								
MAT	**Matsushiro**	**42.71**	**355**	*e*P	**P**	**02 53 39.4**	**-2.2**		
IPM	**Ipoh**	**42.75**	**283**	IAmb	IAmb	02 53 49.6			
	comp=Z,679nm,1.7s								
IPM	**Ipoh**	**42.75**	**283**	P	**P**	**02 53 42.4**	**0.0**		
KULM	**Kulim**	**43.31**	**284**	P	**P**	**02 53 46.3**	**-0.6**		
TOZ	**Tahuroa Road**	**43.41**	**141**	P	**P**	**02 53 48.9**	**+1.6**		
TOZ				IAmb	IAmb	02 53 57.9			
	comp=Z,1µm,2.0s								
TOZ				IAMs_20	IAMs_20	03 12 01.4			
	comp=Z,28µm,19.0s								
SISI	**Saibi**	**43.57**	**275**	P	**P**	**02 53 48.4**	**-0.6**		
	comp=Z,238nm,2.7s,comp=Z,9µm								
RAO	**Raoul Island**	**43.80**	**126**	P	**P**	**02 53 52.6**	**+2.0**		
RAO	**Raoul Island**	**43.80**	**126**	LR	LR	03 11 52.9			
	comp=Z,9µm,18.2s,baz=304,slow=36								
JMM	**Marumori**	**43.87**	**358**	IAmb	IAmb	02 54 01.9			
	comp=Z,370nm,1.1s								
JMM	**Marumori**	**43.87**	**358**	P	**P**	**02 53 49.9**	**-1.1**		
JMM	**Marumori**	**43.87**	**358**	P	**P**	**02 53 49.0**	**-2.0**		
TKNZ	**Takaka Hill**	**44.07**	**147**	P	**P**	**02 53 53.3**	**+0.6**		
JSD	**Sado**	**44.19**	**355**	P	**P**	**02 53 51.4**	**-2.0**		
JSD				IAmb	IAmb	02 53 55.5			
	comp=Z,876nm,1.7s								
JSD	**Sado**	**44.19**	**355**	P	**P**	**02 53 51.9**	**-1.6**		
JSD	**Sado**	**44.19**	**355**	P	**P**	**02 53 51.5**	**-2.0**		
JCZ	**Jackson Bay**	**44.20**	**153**	P	**P**	**02 53 55.3**	**+1.5**		
NJ2	**Nanjing**	**44.22**	**331**	⇑P	**P**	**02 53 54.5**	**+0.6**		
NJ2				pP	**pP**	**02 53 59.5**	**+0.4**		
NJ2				sP	**sP**	**02 54 04.0**	**+2.8**		
NJ2				S	**S**	**03 00 29.3**	**+2.5**		
NJ2				sS	**sS**	**03 00 35.3**	**-0.2**		
NJ2				pmax	pmax				
	comp=Z,110nm,1.5s								
NJ2				LR	LR				
	comp=Z,6µm,21.8s								
NJ2				LR	LR				
	comp=Z,4µm,18.5s								
NJ2				LR	LR				
	comp=Z,11µm,19.0s								
GULI	**GuiLin**	**44.23**	**316**	P	**P**	**02 53 54.0**	**-0.1**		
GULI				S	**S**	**03 00 27.0**	**-0.2**		
GULI				pmax	pmax				
	comp=Z,220nm,1.9s								
GULI				LR	LR				
	comp=Z,12µm,20.6s								
GULI				LR	LR				
	comp=Z,12µm,20.6s								
GULI				LR	LR				
	comp=Z,11µm,20.1s								
RPSI	**Rantau Prapat**	**44.40**	**280**	P	**P**	**02 53 53.8**	**-1.9**		
RPSI				IAmb	IAmb	02 54 02.3			
	comp=Z,410nm,1.2s								
NNZ	**Nelson**	**44.42**	**146**	IAMs_20	IAMs_20	03 13 21.3			
	comp=Z,21µm,18.0s								
PSI	**Prapat**	**44.42**	**280**	P	**P**	**02 53 55.3**	**-0.7**		
PSI	**Prapat**	**44.42**	**280**	P	**P**	**02 53 53.8**	**-2.2**		
PSI				pmax	pmax				
	comp=Z,410nm,1.2s								
INZ	**Inchbonnie**	**44.47**	**149**	IAMs_20	IAMs_20	03 13 05.4			
	comp=Z,22µm,19.0s								
CNSH	**ChangSha**	**44.52**	**322**	⇓P	**P**	**02 53 57.3**	**+0.9**		
CNSH				S	**S**	**03 00 35.5**	**+4.1**		
CNSH				ScS	**SS**	**03 03 52.0**	**+0.6**		
CNSH				pmax	pmax				
	comp=Z,77nm,1.1s								
CNSH				LR	LR				
	comp=Z,6µm,15.4s								
CNSH				LR	LR				
	comp=Z,6µm,14.6s								
CNSH				LR	LR				
	comp=Z,8µm,21.4s								
THZ	**Tophouse**	**44.54**	**147**	IAMs_20	IAMs_20	03 11 43.5			
	comp=Z,27µm,18.0s								
PBSI	**Pulau Batu**	**44.55**	**276**	P	**P**	**02 53 54.8**	**-2.1**		
	comp=Z,293nm,2.7s,comp=Z,11µmcomp=Z,15µm								
TJN	**Taejon**	**44.67**	**343**	P	**P**	**02 53 56.7**	**-0.7**		
TJN	**Taejon**	**44.67**	**343**	*e*P	**P**	**02 53 56.0**	**-1.4**		
URZ	**Urewera**	**44.74**	**141**	P	**P**	**02 54 00.8**	**+2.8**		
URZ	**Urewera**	**44.74**	**141**	LR	LR	03 13 44.5			
	comp=Z,22µm,18.2s,baz=40,slow=38								
RTZ	**Ruatahuna**	**44.87**	**141**	IAmb	IAmb	02 54 08.3			
	comp=Z,1µm,1.9s								
RTZ				IAMs_20	IAMs_20	03 12 46.1			
	comp=Z,29µm,20.0s								
WKZ	**Wanaka**	**44.89**	**153**	IAMs_20	IAMs_20	03 11 53.6			
	comp=Z,21µm,19.0s								
BKZ	**Black Stump Fm**	**44.90**	**142**	IAMs_20	IAMs_20	03 13 26.0			
	comp=Z,20µm,19.0s								
BKZ	**Black Stump Fm**	**44.90**	**142**	P	**P**	**02 54 00.8**	**+1.4**		
TCW	**Tory Channel**	**44.92**	**146**	P	**P**	**02 54 00.1**	**+0.7**		
PYZ	**Puysegur Point**	**44.97**	**156**	IAMs_20	IAMs_20	03 10 48.6			
	comp=Z,21µm,19.0s								
PYZ	**Puysegur Point**	**44.97**	**156**	P	**P**	**02 54 02.2**	**+2.5**		
RPZ	**Rata Peaks**	**45.00**	**151**	IAMs_20	IAMs_20	03 11 19.4			
	comp=Z,30µm,19.0s								
RPZ	**Rata Peaks**	**45.00**	**151**	P	**P**	**02 54 01.7**	**+1.7**		
RPZ	**Rata Peaks**	**45.00**	**151**	LR	LR	03 11 39.9			
	comp=Z,29µm,18.5s,baz=308,slow=34								
MXZ	**Matakaoa Point**	**45.10**	**139**	P	**P**	**02 54 01.9**	**+1.0**		
MXZ				IAmb	IAmb	02 54 12.8			
	comp=Z,1µm,1.9s								
MXZ	**Matakaoa Point**	**45.10**	**139**	P	**P**	**02 54 03.1**	**+2.2**		
OXZ	**Oxford**	**45.20**	**150**	IAMs_20	IAMs_20	03 13 07.8			
	comp=Z,19µm,19.0s								
SNZO	**South Karori**	**45.22**	**146**	P	**P**	**02 54 02.1**	**+0.3**		
SNZO	**South Karori**	**45.22**	**146**	P	**P**	**02 54 03.5**	**+1.7**		
SRIT	**Nakonsritamara**	**45.23**	**289**	P	**P**	**02 54 03.8**	**+1.5**		
CMWZ	**Cape Campbell**	**45.24**	**146**	P	**P**	**02 54 02.7**	**+0.7**		
WHZ	**Wether Hill Ro**	**45.27**	**155**	IAmb	IAmb	02 54 11.4			
	comp=Z,458nm,1.9s								
MRZ	**Mangatainoka R**	**45.30**	**144**	IAmb	IAmb	02 54 10.9			
	comp=Z,495nm,1.7s								
MRZ				IAMs_20	IAMs_20	03 12 44.5			
	comp=Z,27µm,20.0s								
KHZ	**Kahutara**	**45.34**	**148**	P	**P**	**02 54 04.6**	**+1.9**		
SURA	**Surathani**	**45.38**	**289**	P	**P**	**02 54 03.8**	**+0.4**		
WHN	**Wuhan**	**45.41**	**325**	⇑*i*P	**P**	**02 54 05.3**	**+1.9**		
WHN				sP	**sP**	**02 54 10.3**	**-0.5**		
WHN				S	**S**	**03 00 48.3**	**+4.1**		
WHN				LR	LR				
	comp=Z,16µm,14.5s								
WHN				LR	LR				
	comp=Z,16µm,17.0s								
WHN				LR	LR				
	comp=Z,25µm,19.2s								
COCO	**West Island**	**45.43**	**259**	P	**P**	**02 54 04.3**	**+0.5**		
COCO	**West Island**	**45.43**	**259**	P	**P**	**02 54 04.3**	**+0.5**		
COCO				pmax	pmax				
	comp=Z,1µm,1.3s								
GVZ	**Greta Valley S**	**45.46**	**148**	IAMs_20	IAMs_20	03 11 50.6			
	comp=Z,30µm,19.0s								
JOM	**Ohasama**	**45.46**	**359**	P	**P**	**02 54 01.8**	**-1.8**		
GSI	**Gununguitoli**	**45.47**	**278**	P	**P**	**02 54 02.2**	**-2.0**		
GSI				IAmb	IAmb	02 54 09.2			
	comp=Z,790nm,1.8s								
GSI	**Gununguitoli**	**45.47**	**278**	P	**P**	**02 54 02.5**	**-1.7**		
	comp=Z,194nm,1.3s,comp=Z,6µmcomp=Z,18µm								
KSRS	**Korea Array**	**45.51**	**344**	P	**P**	**02 54 02.8**	**-1.3**		
	comp=Z,82nm,1.1s,baz=163,slow=8.6,SNR=69								
KSRS				LR	LR	03 11 00.1			
	comp=Z,7µm,21.6s,baz=140,slow=34								
	comp=Z,82nm,1.1s								
KS19	**Wonju Array Si**	**45.57**	**344**	IAmb	IAmb	02 54 07.5			
	comp=Z,694nm,1.8s								
AFI	**Afiamalu**	**45.60**	**103**	P	**P**	**02 54 05.6**	**+0.3**		
AFI				IAmb	IAmb	02 54 11.2			
	comp=Z,568nm,1.6s								
AFI	**Afiamalu**	**45.60**	**103**	P	**P**	**02 54 06.9**	**+1.6**		
AFI	**Afiamalu**	**45.60**	**103**	P	**P**	**02 54 05.6**	**+0.3**		
AFI				pmax	pmax				
	comp=Z,568nm,1.6s								
NAYO	**Nakonayok**	**45.66**	**297**	P	**P**	**02 54 06.3**	**+0.7**		
KCSI	**Kotacane, Aceh**	**45.70**	**281**	P	**P**	**02 54 03.5**	**-2.5**		
	comp=Z,173nm,2.6s,comp=Z,7µm								
BFZ	**Birch Farm**	**45.70**	**144**	IAmb	IAmb	02 54 14.0			
	comp=Z,922nm,2.0s								
BFZ				IAMs_20	IAMs_20	03 16 26.1			
	comp=Z,27µm,18.0s								
BFZ	**Birch Farm**	**45.70**	**144**	P	**P**	**02 54 07.7**	**+2.1**		
NONG	**Nongkai**	**45.71**	**303**	P	**P**	**02 54 07.2**	**+1.2**		
MQZ	**McQueen's Vall**	**45.79**	**149**	P	**P**	**02 54 06.3**	**+0.1**		
MQZ				IAmb	IAmb	02 54 15.0			
	comp=Z,796nm,1.9s								
MQZ				IAMs_20	IAMs_20	03 14 05.3			
	comp=Z,19µm,18.0s								
ODZ	**Otahua Downs**	**45.80**	**152**	IAMs_20	IAMs_20	03 11 54.6			
	comp=Z,17µm,18.0s								
INCN	**Inchon**	**45.91**	**342**	P	**P**	**02 54 06.7**	**-0.6**		
INCN	**Inchon**	**45.91**	**342**	P	**P**	**02 54 07.4**	**+0.1**		
INCN	**Inchon**	**45.91**	**342**	P	**P**	**02 54 06.7**	**-0.6**		
INCN				pmax	pmax				
	comp=Z,887nm,1.7s								
HJU	**Haeju**	**46.71**	**342**	P	**P**	**02 54 13.6**	**+0.1**		
HJU				S	**S**	**03 01 04.8**	**+2.3**		
HJU				AmB					
	comp=Z,9µm,3.2s								
JTM	**Tenmabayashi**	**46.77**	**359**	P	**P**	**02 54 12.3**	**-1.7**		
JTM	**Tenmabayashi**	**46.77**	**359**	*e*P	**P**	**02 54 10.9**	**-3.1**		
LHMI	**Lhok Sumawe**	**46.88**	**283**	P	**P**	**02 54 18.1**	**+2.8**		
LHMI	**Lhok Sumawe**	**46.88**	**283**	P	**P**	**02 54 16.1**	**+0.8**		
	comp=Z,584nm,1.4s,comp=Z,12µmcomp=Z,16µm								
SNSI	**Sinabang, Aceh**	**46.89**	**279**	P	**P**	**02 54 14.4**	**-1.0**		
	comp=Z,646nm,1.8s,comp=Z,13µmcomp=Z,13µm								
MLSI	**Meulaboh, Aceh**	**47.19**	**282**	P	**P**	**02 54 16.3**	**-1.4**		
	comp=Z,251nm,1.2s,comp=Z,4µm								
JOT	**Ohata**	**47.37**	**359**	*e*P	**P**	**02 54 16.9**	**-1.7**		
GYA	**Guiyang**	**47.55**	**315**	⇑*i*P	**P**	**02 54 21.8**	**+1.3**		
GYA				pP	pP	02 54 24.3	-1.5		
GYA				pmax	pmax				
	comp=Z,51nm,1.3s								
GYA				pmax	pmax				
	comp=Z,5µm,3.6s								
GYA				LR	LR				
	comp=Z,4µm,18.9s								
GYA				LR	LR				
	comp=Z,8µm,17.0s								
GYA				LR	LR				
	comp=Z,7µm,16.8s								
PYAG	**Pyongyang**	**47.62**	**342**	P	**P**	**02 54 20.5**	**-0.1**		
PYAG				S	**S**	**03 01 17.7**	**+2.1**		
PYAG				AmB					
	comp=Z,4µm,3.3s								
SRDT	**SRDT**	**47.63**	**296**	P	**P**	**02 54 23.2**	**+2.1**		
HHU	**Hamhung**	**47.93**	**344**	P	**P**	**02 54 21.7**	**-1.3**		
HHU				S	**S**	**03 01 20.8**	**+0.8**		
HHU				AmB					
	comp=Z,5µm,3.1s								
ERM	**Erimo**	**47.99**	**1**	P	**P**	**02 54 21.8**	**-1.6**		
ERM	**Erimo**	**47.99**	**1**	*ce*P	**P**	**02 54 20.5**	**-2.9**		
ERM				pmax	pmax				
	comp=Z,389nm,2.5s								
ERM				MLR	MLR				
	comp=Z,8µm,16.0s								
JEM	**Erimo**	**47.99**	**1**	P	**P**	**02 54 23.7**	**+0.3**		
JEM	**Erimo**	**47.99**	**1**	P	**P**	**02 54 22.4**	**-1.0**		
NIUE	**Niue**	**47.99**	**110**	P	**P**	**02 54 23.4**	**-0.5**		
NIUE	**Niue**	**47.99**	**110**	P	**P**	**02 54 25.7**	**+1.8**		
TIA	**Tai'an**	**48.44**	**332**	P	**P**	**02 54 26.3**	**-0.8**		
TIA				S	**S**	**03 01 27.5**	**+0.1**		
TIA				pmax	pmax				
	comp=Z,27nm,1.3s								
TIA				pmax	pmax				
	comp=Z,2µm,3.0s								
TIA				LR	LR				
	comp=Z,3µm,25.0s								
TIA				LR	LR				
	comp=Z,7µm,22.0s								
TIA				LR	LR				
	comp=Z,1µm,12.6s								
JSH	**Shimam**	**48.66**	**358**	P	**P**	**02 54 26.3**	**-2.3**		
JEW	**Eniwo**	**48.82**	**359**	P	**P**	**02 54 28.0**	**-1.8**		
DL2	**Dalian**	**48.88**	**338**	P	**P**	**02 54 29.0**	**-1.3**		
DL2				PcP	**PcP**	**02 55 56.0**	**+1.3**		
DL2				PP	**PP**	**02 56 20.0**	**-3.8**		
DL2				PcS	**PcS**	**02 59 49.5**	**-1.4**		
DL2				S	**S**	**03 01 32.8**	**-0.5**		
DL2				pmax	pmax				
	comp=Z,30nm,1.4s								
DL2				pmax	pmax				
	comp=Z,930nm,4.8s								
DL2				LR	LR				
	comp=Z,4µm,22.4s								
DL2				LR	LR				
	comp=Z,5µm,15.1s								
DL2				LR	LR				
	comp=Z,6µm,21.1s								
SUJ	**Sinuiju**	**48.98**	**342**	P	**P**	**02 54 29.9**	**-1.1**		
SUJ				S	**S**	**03 01 36.4**	**+1.8**		
SUJ				AmB					
	comp=Z,6µm,3.8s								
CRAI	**Chiangrai**	**49.04**	**303**	P	**P**	**02 54 31.9**	**-0.1**		
CRAI				IAmb	IAmb	02 54 39.2			
	comp=Z,352nm,1.4s								
CMAR	**Chiang Mai Arr**	**49.45**	**301**	P	**P**	**02 54 34.6**	**-0.5**		
CMAR	**Chiang Mai Arr**	**49.45**	**301**	*ce*P	**P**	**02 54 35.5**	**+0.4**		
CMAR				pmax	pmax				
	comp=Z,18nm,0.7s								
CMAR	**Chiang Mai Arr**	**49.45**	**301**	P	**P**	**02 54 35.3**	**+0.2**		
	comp=Z,17nm,0.7s,baz=119,slow=6.1,SNR=36								
CMAR				LR	LR	03 16 44.5			
	comp=Z,3µm,21.6s,baz=110,slow=38								
	comp=Z,17nm,0.7s								
LYN	**LuoYang**	**49.47**	**327**	⇑P	**P**	**02 54 34.5**	**-0.5**		
LYN				pP	pP	02 54 38.0	-2.3		
LYN				PP	**PP**	**02 56 26.0**	**-3.3**		
LYN				S	**S**	**03 01 43.3**	**+1.5**		
LYN				pmax	pmax				
	comp=Z,260nm,0.7s								
LYN				pmax	pmax				
	comp=Z,2µm,4.8s								
LYN				LR	LR				
	comp=Z,12µm,18.2s								
LYN				LR	LR				
	comp=Z,8µm,16.5s								
LYN				LR	LR				
	comp=Z,11µm,25.4s								
CHTO	**Chiang Mai**	**49.60**	**301**	P	**P**	**02 54 36.8**	**+0.5**		
MSHR	**Mys Shultsa**	**49.63**	**349**	*ce*P	**P**	**02 54 34.7**	**-1.4**		
MSHR				pmax	pmax				
	comp=Z,267nm,2.5s								
KMI	**Kunming**	**49.65**	**310**	⇑P	**P**	**02 54 38.5**	**+1.7**		
KMI				PcP	**PcP**	**02 55 54.5**	**-3.7**		
KMI				ScP	**ScP**	**02 59 49.0**	**-4.2**		
KMI				S	**S**	**03 01 46.5**	**+1.4**		
KMI				pmax	pmax				
	comp=Z,440nm,1.3s								
KMI				pmax	pmax				
	comp=Z,4µm,3.7s								
KMI				LR	LR				
	comp=Z,11µm,20.7s								
KMI				LR	LR				
	comp=Z,6µm,20.0s								
KMI				LR	LR				
	comp=Z,8µm,21.1s								
MCQ	**Macquarie Isla**	**49.96**	**168**	P	**P**	**02 54 39.8**	**+1.5**		
	baz=50,SNR=4.3								
MCQ	**Macquarie Isla**	**49.96**	**168**	P	**P**	**02 54 38.7**	**+0.3**		
MCQ				IAMs_20	IAMs_20	03 14 07.7			
	comp=Z,20µm,20.0s								
MCQ	**Macquarie Isla**	**49.96**	**168**	P	**P**	**02 54 41.4**	**+3.0**		
MCQ	**Macquarie Isla**	**49.96**	**168**	P	**P**	**02 54 38.7**	**+0.3**		
MCQ				pmax	pmax				
	comp=Z,2µm,1.6s								
JMP	**Maruseppu**	**49.98**	**1**	P	**P**	**02 54 36.5**	**-2.2**		
VLA	**Vladivostok**	**50.02**	**350**	*i* P	**P**	**02 54 38.3**	**-0.7**		
VLA				pmax	pmax				

XAN				LR	LR			
	comp=Z,7μm,17.0s							
XAN				LR	LR			
	comp=Z,10μm,17.7s							
PZH	**PanZhiHua**	**51.16**	**311**	P	**P**	**02**	**54**	**49.0 +0.9**
PZH				pP	**pP**	**02**	**54**	**52.0 -1.4**
PZH				sP	**sP**	**02**	**54**	**57.0 +1.6**
PZH				PcP	**PcP**	**02**	**55**	**59.5 -4.1**
PZH				ScP	**ScP**	**02**	**59**	**57.8 -1.8**
PZH				S	**S**	**03**	**02**	**07.5 +1.6**
PZH				ScS	**ScS**	**03**	**04**	**38.5 -0.1**
PZH				pmax	pmax			
	comp=Z,320nm,1.5s							
PZH				pmax	pmax			
	comp=Z,4μm,4.3s							
PZH				LR	LR			
	comp=Z,7μm,20.8s							
PZH				LR	LR			
	comp=Z,4μm,18.6s							
PZH				LR	LR			
	comp=Z,6μm,23.1s							
TEY	**Ternei**	**51.28**	**355**⇓	*e*P	**P**	**02**	**54**	**47.4 -1.0**
TEY				pmax	pmax			
	comp=N,20nm,1.8s							
TEY				pmax	pmax			
	comp=Z,30nm,1.8s							
TEY				pmax	pmax			
	comp=N,20nm,3.8s							
TEY				pmax	pmax			
	comp=Z,300nm,3.8s							
KUR	**Kuril'sk**	**51.42**	**5**	*e*P	**P**	**02**	**54**	**48.9 -0.6**
KUR						02	56	03.6
KUR				*i*		02	56	43.6
KUR				S	**S**	**03**	**02**	**09.2 +0.6**
KUR				pmax	pmax			
	comp=Z,4μm,3.6s							
KUR				pmax	pmax			
	comp=Z,671nm,2.0s							
KUR				MLR	MLR			
	comp=Z,4μm,18.0s							
KUR				MLR	MLR			
	comp=N,3μm,17.0s							
KUR				MLR	MLR			
	comp=E,2μm,18.0s							
CTZ	**Chatham Island**	**51.77**	**143**	IAMs_20	IAMs_20	03	16	23.8
	comp=Z,18μm,19.0s							
CTZ	**Chatham Island**	**51.77**	**143**	P	**P**	**02**	**54**	**54.4 +2.2**
MDJ	**Mudanjiang**	**51.90**	**348**	P	**P**	**02**	**54**	**51.3 -1.8**
MDJ				pP	pP	02	54	58.0 -0.5
MDJ				PcP	**PcP**	**02**	**56**	**04.3 -1.4**
MDJ				PcS	**PcS**	**03**	**00**	**03.3 -0.4**
MDJ				S	**S**	**03**	**02**	**12.0 -3.3**
MDJ				sS	pS	03	02	20.5 -1.2
MDJ				ScS	**ScS**	**03**	**04**	**40.5 -2.2**
MDJ				pmax	pmax			
	comp=Z,16nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,4μm,3.6s							
MDJ				LR	LR			
	comp=Z,10μm,19.9s							
MDJ				LR	LR			
	comp=Z,9μm,21.3s							
MDJ				LR	LR			
	comp=Z,20μm,21.6s							
MDJ	**Mudanjiang**	**51.90**	**348**	IAMs_20	IAMs_20	03	13	07.7
	comp=Z,16μm,21.0s							
TIY	**Taiyuan**	**51.90**	**330**	*e*P	**P**	**02**	**54**	**54.0 +0.6**
TIY				S	**S**	**03**	**02**	**17.3 +1.6**
TIY				pmax	pmax			
	comp=Z,90nm,1.8s							
TIY				pmax	pmax			
	comp=Z,2μm,3.7s							
TIY				LR	LR			
	comp=Z,7μm,17.9s							
TIY				LR	LR			
	comp=Z,4μm,18.6s							
TIY				LR	LR			
	comp=Z,7μm,18.6s							
BJT	**Baijiatuau**	**52.01**	**334**	IAmb	IAmb	02	55	07.2
	comp=Z,839nm,1.9s							
BJI	**Beijing**	**52.02**	**334**	P	**P**	**02**	**54**	**52.8 -1.3**
BJI				S	**S**	**03**	**02**	**17.5 +0.5**
BJI				pmax	pmax			
	comp=Z,120nm,1.4s							
BJI				pmax	pmax			
	comp=Z,2μm,3.5s							
BJI				LR	LR			
	comp=Z,5μm,18.9s							
BJI				LR	LR			
	comp=Z,6μm,18.8s							
BJI				LR	LR			
	comp=Z,7μm,18.3s							
CN2	**Changchun**	**52.10**	**344**	*e*P	**P**	**02**	**54**	**53.5 -1.2**
CN2				*es*P	pP	02	55	00.5 +0.5
CN2				PcP	**PcP**	**02**	**56**	**05.3 -1.2**
CN2				*e*S	**S**	**03**	**02**	**15.5 -2.6**
CN2				*e*SS	**SS**	**03**	**05**	**51.5 -4.2**
CN2				pmax	pmax			
	comp=Z,100nm,1.8s							
CN2				pmax	pmax			
	comp=Z,4μm,3.0s							
CN2				LR	LR			
	comp=Z,2μm,18.0s							
CN2				LR	LR			
	comp=Z,2μm,18.0s							
CN2				LR	LR			
	comp=Z,3μm,19.0s							
CD2	**Chengdu**	**52.29**	**317**	P	**P**	**02**	**54**	**56.5 +0.1**
CD2				pP	pP	02	54	58.0 -3.7
CD2				S	**S**	**03**	**02**	**24.3 +3.1**
CD2				pmax	pmax			
	comp=Z,150nm,0.7s							
CD2				pmax	pmax			
	comp=Z,1μm,4.4s							
CD2				LR	LR			
	comp=Z,5μm,16.2s							
CD2				LR	LR			
	comp=Z,3μm,13.6s							
CD2				LR	LR			
	comp=Z,7μm,17.9s							
JOHN	**Johnston Islan**	**52.62**	**64**	IAMs_20	IAMs_20	03	14	19.1
	comp=Z,24μm,21.0s							
TNCH	**TengChong**	**52.85**	**308**	P	**P**	**02**	**55**	**02.3 +1.5**
TNCH				pP	pP	02	55	04.5 -1.7
TNCH				sP	sP	02	55	07.5 -0.7
TNCH				PcP	**PcP**	**02**	**56**	**11.8 +1.8**
TNCH				PcS	**PcS**	**03**	**00**	**09.0 0.0**
TNCH				S	**S**	**03**	**02**	**29.3 -0.1**
TNCH				sS	pS	03	02	34.5 -1.3
TNCH				ScS	**ScS**	**03**	**04**	**49.3 -1.3**
TNCH				pmax	pmax			
	comp=Z,580nm,1.5s							
TNCH				pmax	pmax			
	comp=Z,5μm,3.7s							
TNCH				LR	LR			
	comp=Z,3μm,16.2s							
TNCH				LR	LR			
	comp=Z,2μm,13.2s							
TNCH				LR	LR			
	comp=Z,7μm,19.3s							
YSS	**Yuzh-Sakhalins**	**52.92**	**0**	P	**P**	**02**	**54**	**58.4 -2.2**
YSS	**Yuzh-Sakhalins**	**52.92**	**0**	P	**P**	**02**	**54**	**58.7 -1.9**
YSS	**Yuzh-Sakhalins**	**52.92**	**0**	*oe*P	**P**	**02**	**54**	**59.4 -1.2**
YSS				*e**SP	**pP**	**02**	**55**	**06.0 -0.1**
YSS				*e*S	**S**	**03**	**02**	**27.7 -1.4**
YSS				*e*PS	PKiKP	03	02	35.0 -13
YSS				*e*		03	04	49.6
YSS				pmax	pmax			
	comp=Z,4μm,9.6s							
YSS				pmax	pmax			
	comp=N,2μm,9.9s							
YSS				pmax	pmax			
	comp=Z,110nm,1.2s							
YSS				smax	smax			
	comp=E,2μm,7.1s							
MND	**Mandalay**	**53.39**	**303**	P	**P**	**02**	**55**	**05.5 +0.9**
BNX	**BinXian**	**53.44**	**347**	⇓P	**P**	**02**	**55**	**03.3 -1.2**
BNX				pP	**sP**	**02**	**55**	**13.5 +1.6**
BNX				sP	**pP**	**02**	**55**	**16.5 +6.7**
BNX				PP	**PP**	**02**	**57**	**07.5 +2.3**
BNX				S	**S**	**03**	**02**	**31.5 -4.8**
BNX				pmax	pmax			
	comp=E,32nm,1.0s							
BNX				pmax	pmax			
	comp=E,4μm,3.7s							
BNX				LR	LR			
	comp=E,6μm,20.6s							
BNX				LR	LR			
	comp=E,6μm,19.6s							
BNX				LR	LR			
	comp=E,10μm,18.6s							
HHC	**Hu-ho-hao-te**	**54.76**	**331**⇑	*i*P	**P**	**02**	**55**	**14.0 -0.4**
HHC				pP	pP	02	55	19.5 -0.3
HHC				S	**S**	**03**	**02**	**58.0 +3.5**
HHC				SS	**SS**	**03**	**06**	**36.5 -1.5**
HHC				pmax	pmax			
	comp=E,170nm,1.9s							
HHC				pmax	pmax			
	comp=E,3μm,3.7s							
HHC				LR	LR			
	comp=E,7μm,21.1s							
HHC				LR	LR			
	comp=E,2μm,21.1s							
HHC				LR	LR			
	comp=E,8μm,20.0s							
UGL	**Uglegorsk**	**55.05**	**360**	*e*P	**P**	**02**	**55**	**15.0 -1.1**
UGL				*e*S	**S**	**03**	**02**	**56.0 -1.8**
UGL				*e*SS	**ScS**	**03**	**04**	**58.8 -5.8**
UGL				*e*		03	08	36.7
UGL				pmax	pmax			
	comp=Z,230nm,1.7s							
UGL				pmax	pmax			
	comp=Z,4μm,4.0s							
UGL				pmax	pmax			
	comp=Z,2μm,6.0s							
UGL				smax	smax			
	comp=E,9μm,12.0s							
UGL				smax	smax			
	comp=N,4μm,11.0s							
XLT	**XiLinHaoTe**	**55.28**	**337**	*e*P	**P**	**02**	**55**	**18.0 -0.1**
XLT				S	**S**	**03**	**03**	**00.8 -0.6**
XLT				ScS	**ScS**	**03**	**05**	**07.8 +0.9**
XLT				pmax	pmax			
	comp=N,68nm,1.3s							
XLT				pmax	pmax			
	comp=N,2μm,4.0s							
XLT				LR	LR			
	comp=N,6μm,20.7s							
XLT				LR	LR			
	comp=N,5μm,19.4s							
BTO	**Baotou**	**55.32**	**330**	*e*P	**P**	**02**	**55**	**20.0 +1.6**
BTO				PP	**PP**	**02**	**57**	**25.5 +3.2**
BTO				S	**S**	**03**	**03**	**04.5 +2.5**
BTO				pmax	pmax			
	comp=N,240nm,1.8s							
BTO				pmax	pmax			
	comp=N,8μm,7.8s							
BTO				LR	LR			
	comp=N,15μm,18.4s							
BTO				LR	LR			
	comp=N,16μm,19.7s							
BTO				LR	LR			
	comp=N,26μm,19.6s							
LZH	**Lanzhou**	**55.53**	**322**	*e*P	**P**	**02**	**55**	**20.5 +0.4**
LZH				sP	sP	02	55	29.5 +1.9
LZH				PcP	**PcP**	**02**	**56**	**23.5 +3.5**
LZH				S	**S**	**03**	**03**	**08.3 +3.1**
LZH				SS	**SS**	**03**	**06**	**45.0 -5.5**
LZH				pmax	pmax			
	comp=N,280nm,1.3s							
LZH				pmax	pmax			
	comp=N,4μm,6.9s							
LZH				LR	LR			
	comp=N,7μm,18.2s							
LZH				LR	LR			
	comp=N,6μm,15.1s							
LZH				LR	LR			
	comp=N,8μm,18.2s							
KLR	**Kul'dur**	**55.99**	**352**	*ce*P	**P**	**02**	**55**	**21.7 -1.3**
KLR				pmax	pmax			
	comp=Z,580nm,2.5s							
KLR	**Kul'dur**	**55.99**	**352**	LR	LR	03	16	11.1
	comp=Z,10μm,21.9s,baz=170,slow=33							
LKP	**Lekhapani**	**56.08**	**309**	*e*P	**P**	**02**	**55**	**24.9 +0.9**
SAIH	**SAIHA**	**56.21**	**302**	*e*P	**P**	**02**	**55**	**26.8 +1.6**
SAIH				IAMs_20	IAMs_20	03	14	09.3
	comp=Z,3μm,19.5s							
IMP	**Imphal**	**56.42**	**305**	*e*P	**P**	**02**	**55**	**28.1 +1.6**
IMP				IAmb	IAmb	02	55	33.5
	comp=Z,782nm,1.6s							
IMP				IAMs_20	IAMs_20	03	14	43.1
	comp=Z,5μm,20.7s							
MOKO	**MOKOCHONG**	**56.64**	**307**	*e*P	**P**	**02**	**55**	**29.9 +1.7**
MOKO				IAmb	IAmb	02	55	35.4
	comp=Z,657nm,1.2s							
MOKO				IAMs_20	IAMs_20	03	14	58.5
	comp=Z,3μm,22.0s							
KOHI	**KOHIMA**	**56.69**	**306**	*e*P	**P**	**02**	**55**	**29.7 +1.1**
KOHI				IAmb	IAmb	02	55	35.4
	comp=Z,1μm,1.0s							
KOHI				IAMs_20	IAMs_20	03	14	28.6
	comp=Z,3μm,20.9s							
TYV	**Tymovskoe**	**56.83**	**0**	*e*P	**P**	**02**	**55**	**28.2 -0.7**
TYV				*e*S	**S**	**03**	**03**	**23.1 +1.6**
TYV				pmax	pmax			
	comp=Z,98nm,1.6s							
TYV				pmax	pmax			
	comp=Z,3μm,3.4s							
TYV				smax	smax			
	comp=N,7.0nm,1.9s							
TYV				smax	smax			
	comp=N,3μm,10.0s							
TYV				smax	smax			
	comp=E,7μm,10.0s							
DIBR	**DIBRUGARH**	**56.87**	**308**	*e*P	**P**	**02**	**55**	**30.8 +1.2**
AZL	**Aizawl**	**56.98**	**303**	*e*P	**P**	**02**	**55**	**30.8 +0.2**
AZL				IAmb	IAmb	02	55	38.2
	comp=Z,493nm,1.1s							
GRNR	**Gornyy**	**56.98**	**355**⇓	*i*P	**P**	**02**	**55**	**29.0 -1.0**
GRNR				pmax	pmax			
	comp=N,10.0nm,1.2s							
GRNR				pmax	pmax			
	comp=Z,20nm,1.0s							
JORH	**JORHAT**	**57.05**	**307**	*e*P	**P**	**02**	**55**	**32.3 +1.4**
ITAN	**ITANAGAR**	**57.65**	**307**	*e*P	**P**	**02**	**55**	**36.8 +1.6**
ITAN				IAMs_20	IAMs_20	03	14	56.4
	comp=Z,2μm,19.4s							
RAR	**Rarotonga**	**57.73**	**111**	P	**P**	**02**	**55**	**35.1 -0.7**
RAR				IAmb	IAmb	02	55	40.9
	comp=Z,739nm,1.9s							
RAR	**Rarotonga**	**57.73**	**111**	P	**P**	**02**	**55**	**36.5 +0.7**
RAR	**Rarotonga**	**57.73**	**111**	P	**P**	**02**	**55**	**35.1 -0.7**
RAR				pmax	pmax			
	comp=Z,739nm,1.9s							
RAR	**Rarotonga**	**57.73**	**111**	LR	LR	03	17	41.1
	comp=Z,3μm,21.7s,baz=272,slow=33							
HEH	**HeiHe**	**57.73**	**349**	*e*P	**P**	**02**	**55**	**33.0 -2.2**
HEH				pP	**pP**	**02**	**55**	**37.3 -3.3**
HEH				sP	**sP**	**02**	**55**	**39.5 -3.2**
HEH				PcP	**PcP**	**02**	**56**	**27.8 -0.2**
HEH				S	**S**	**03**	**03**	**32.5 -0.8**
HEH				sS	**pS**	**03**	**03**	**40.5 +0.6**
HEH				ScS	**ScS**	**03**	**05**	**21.5 -2.5**
HEH				pmax	pmax			
	comp=Z,210nm,1.2s							
HEH				pmax	pmax			
	comp=Z,4μm,3.6s							
HEH				LR	LR			
	comp=Z,10μm,21.8s							
HEH				LR	LR			
	comp=Z,9μm,18.3s							
HEH				LR	LR			
	comp=Z,18μm,23.1s							
ZIRO	**ZIRO**	**57.73**	**308**	*e*P	**P**	**02**	**55**	**38.4 +2.5**
ZIRO				IAmb	IAmb	02	55	44.1
	comp=Z,585nm,1.2s							
ZIRO				IAMs_20	IAMs_20	03	13	27.5
	comp=Z,2μm,18.6s							
BELO	**BELONIA**	**57.81**	**302**	*e*P	**P**	**02**	**55**	**39.4 +3.0**
SKR	**Severo-Kuril's**	**57.86**	**10**	*ce*P	**P**	**02**	**55**	**35.1 -1.0**
AGT	**Agartala**	**58.24**	**303**	*e*P	**P**	**02**	**55**	**43.4 +4.1**
HIA	**Hailar**	**58.70**	**343**	IAmb	IAmb	02	55	52.6
	comp=Z,356nm,1.7s							
HIA	**Hailar**	**58.70**	**343**	IAMs_20	IAMs_20	03	19	30.7
	comp=Z,13μm,19.0s							
HIA	**Hailar**	**58.70**	**343**	*c i*P	**P**	**02**	**55**	**41.1 -1.0**
HIA				pmax	pmax			
	comp=Z,218nm,1.7s							
NKL	**Nikolayevsk**	**59.14**	**359**	*e*P	**P**	**02**	**55**	**42.2 -2.8**
NKL				*e*S	**S**	**03**	**03**	**50.5 -1.1**
NKL				pmax	pmax			
	comp=E,558nm,1.2s							
NKL				pmax	pmax			
	comp=N,445nm,1.0s							
NKL				pmax	pmax			
	comp=Z,1μm,1.3s							
NKL				smax	smax			
	comp=E,947nm,3.2s							
NKL				smax	smax			
	comp=N,1μm,6.3s							
NKL				MLR	MLR			
	comp=E,34μm,17.0s							
NKL				MLR	MLR			
	comp=N,4μm,13.0s							
NKL				MLR	MLR			
	comp=Z,13μm,19.0s							
GTA	**Gaotai**	**60.11**	**323**	P	**P**	**02**	**55**	**52.3 +0.1**
GTA				pP	pP	02	55	58.3 +0.7
GTA				S	**S**	**03**	**04**	**07.3 +2.3**
GTA				sS	sS	03	04	17.8 +3.8
GTA				ScS	SKKSac	03	05	41.5 -0.8
GTA				pmax	pmax			
	comp=Z,17nm,1.4s							
GTA				pmax	pmax			
	comp=Z,3μm,6.7s							
GTA				LR	LR			
	comp=Z,3μm,19.7s							
GTA				LR	LR			
	comp=Z,2μm,15.0s							
GTA				LR	LR			
	comp=Z,4μm,18.1s							
PEA0B	**Petropavlovsk-**	**60.47**	**10**	IAmb	IAmb	02	55	59.5
	comp=Z,369nm,1.1s							
PEA0B	**Petropavlovsk-**	**60.47**	**10**	*ce*P	**P**	**02**	**55**	**52.0 -2.2**
PETK	**Petropavlovsk-**	**60.47**	**10**	P	**P**	**02**	**55**	**52.3 -2.0**
	comp=Z,111nm,1.0s,baz=182,slow=4.3,SNR=43							
PETK				LR	LR	03	22	06.9
	comp=Z,3μm,19.4s,baz=204,slow=36							
PETK				PKP2ab	**P'P'ab**	**03**	**25**	**33.1 -0.7**
	comp=Z,18nm,1.2s,baz=92,slow=4.5,SNR=5.4							
	comp=Z,111nm,1.0s							
XMAS	**Kiritimati**	**60.51**	**84**	P	**P**	**02**	**55**	**54.8 -0.5**
XMAS	**Kiritimati**	**60.51**	**84**	IAMs_20	IAMs_20	03	19	01.6
	comp=Z,17μm,20.0s							
XMAS	**Kiritimati**	**60.51**	**84**	P	**P**	**02**	**55**	**56.2 +0.9**
PET	**Petropavlovsk**	**60.57**	**11**	P	**P**	**02**	**55**	**52.8 -2.0**
PET				IAmb	IAmb	02	56	03.4
	comp=Z,188nm,1.2s							
PET	**Petropavlovsk**	**60.57**	**11**	P	**P**	**02**	**55**	**54.0 -0.8**
PET	**Petropavlovsk**	**60.57**	**11**	*e*P	**P**	**02**	**55**	**56.2 +1.4**
PET				*i* S	**S**	**03**	**04**	**11.8 +1.8**
PET				*e*		03	05	39.1
PET				pmax	pmax			
	comp=Z,178nm,1.2s							
PET				pmax	pmax			
	comp=Z,3μm,8.3s							
PET				pmax	pmax			
	comp=Z,3μm,7.6s							
PET				MLR	MLR			
	comp=Z,4μm,16.0s							
PET				MLR	MLR			
	comp=Z,5μm,15.0s							
LSA	**Lhasa**	**60.83**	**309**	P	**P**	**02**	**55**	**59.7 +1.9**
ZEA	**Zeya**	**61.08**	**350**	*e*P	**P**	**02**	**55**	**56.0 -2.4**
ZEA				*e*		02	55	57.1
ZEA				*e*		02	56	07.4
ZEA				*e*S	**S**	**03**	**04**	**18.2 +1.6**
ZEA				pmax	pmax			
	comp=N,110nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,210nm,1.1s							
ZEA				pmax	pmax			
	comp=E,400nm,3.7s							
ZEA				pmax	pmax			
	comp=Z,1μm,2.8s							
ZEA				smax	smax			
	comp=N,2μm,9.2s							
ZEA				smax	smax			
	comp=E,4μm,10.7s							
GOMU	**GeErMu**	**61.43**	**317**	P	**P**	**02**	**56**	**03.0 +1.4**
GOMU				S	**S**	**03**	**04**	**22.5 0.0**
GOMU				sS	sS	03	04	31.3 -0.1
GOMU				ScS	**SKKSac**	**03**	**05**	**48.8 -4.1**
GOMU				pmax	pmax			
	comp=E,44nm,1.9s							
GOMU				LR	LR			
	comp=E,2μm,19.1s							
GOMU				LR	LR			
	comp=E,4μm,18.6s							
GOMU				LR	LR			
	comp=E,6μm,18.0s							
GTK	**Tadong**	**61.82**	**305**	*e*P	**P**	**02**	**56**	**05.1 +0.9**
GTK				IAmb	IAmb	02	56	12.2
	comp=Z,341nm,1.1s							
ULN	**Ulaanbaatar**	**62.22**	**334**	P	**P**	**02**	**56**	**05.6 -0.8**
ULN	**Ulaanbaatar**	**62.22**	**334**	*ce*P	**P**	**02**	**56**	**05.9 -0.5**
ULN				pmax	pmax			
	comp=Z,398nm,2.5s							
ULN				MLR	MLR			
	comp=Z,7μm,19.0s							
SONM	**Songino Array**	**62.49**	**333**	P	**P**	**02**	**56**	**07.4 -0.7**
SONM				IAmb	IAmb	02	56	12.4
	comp=Z,392nm,1.8s							
SONM	**Songino Array**	**62.49**	**333**	P	**P**	**02**	**56**	**07.5 -0.7**
	comp=Z,18nm,0.9s,baz=153,slow=6.7,SNR=71							
SONM				LR	LR	03	22	53.0
	comp=Z,9μm,20.7s,baz=135,slow=36							
SONM				PKPPKP	**P'P'df**	**03**	**25**	**09.7 -1.7**
	comp=Z,1.6nm,1.0s,baz=225,slow=0.2,SNR=6.3							
SONM				PKP2bc	**P'P'bc**	**03**	**25**	**23.2 +4.1**
	comp=Z,6.0nm,1.2s,baz=285,slow=1.8,SNR=8.8							
	comp=Z,18nm,0.9s							
CIT	**Chita**	**63.05**	**340**	*e*P	**P**	**02**	**56**	**12.8 +1.1**
CIT				*e*		02	56	22.0
CIT				*e*		02	56	46.3
CIT				*e*		02	58	29.2
CIT				*e*		03	04	46.0
CIT				*e*		03	05	01.5
CIT				pmax	pmax			
	comp=Z,1μm,3.3s							
PALK	**Pallekele**	**63.09**	**281**	P	**P**	**02**	**56**	**13.5 +0.8**
PALK				IAmb	IAmb	02	56	20.7
	comp=Z,308nm,1.4s							
PALK	**Pallekele**	**63.09**	**281**	P	**P**	**02**	**56**	**13.5 +0.8**
PALK				pmax	pmax			
	comp=Z,308nm,1.5s							
PALK				MLR	MLR			
	comp=Z,5μm,21.0s							
PALK	**Pallekele**	**63.09**	**281**	LR	LR	03	27	07.9
	comp=Z,4μm,20.3s,baz=208,slow=39							
RAGD	**RAYAGADA**	**63.38**	**295**	*e*P	**P**	**02**	**56**	**15.2 +0.7**
RAGD				IAmb	IAmb	02	56	22.9
	comp=Z,450nm,1.3s							
MALK	**Mahakanadarawa**	**63.46**	**283**	P	**P**	**02**	**56**	**15.0 0.0**
MALK				S	**S**	**03**	**04**	**48.6 +0.6**
JHSG	**JHARSUGUGA**	**63.88**	**298**	*e*P	**P**	**02**	**56**	**18.4 +0.6**
JHSG				IAMs_20	IAMs_20	03	13	16.0
	comp=Z,2μm,18.7s							
CASY	**Casey**	**63.94**	**194**	P	**P**	**02**	**56**	**16.4 -0.9**
CASY				IAmb	IAmb	02	56	22.7
	comp=Z,327nm,1.4s							
HON	**Honolulu**	**64.42**	**63**	P	**P**	**02**	**56**	**21.7 +0.4**
HON	**Honolulu**	**64.42**	**63**	P	**P**	**02**	**56**	**21.7 +0.4**
HON				pmax	pmax			
	comp=Z,751nm,1.3s							
KIP	**Kipapa**	**64.44**	**63**	P	**P**	**02**	**56**	**20.5 -0.9**
KIP	**Kipapa**	**64.44**	**63**	P	**P**	**02**	**56**	**22.8 +1.4**
KIP	**Kipapa**	**64.44**	**63**	*i* P	**P**	**02**	**56**	**20.9 -0.5**
KIP				pmax	pmax			
	comp=Z,266nm,1.1s							
OPA	**Opana**	**64.53**	**63**	P	**P**	**02**	**56**	**22.4 +0.4**
OPA	**Opana**	**64.53**	**63**	P	**P**	**02**	**56**	**22.4 +0.4**
OPA				pmax	pmax			
	comp=Z,779nm,1.6s							
SHEM	**Shemya Is, Ala**	**64.54**	**21**	LR	LR	03	21	16.0
	comp=Z,5μm,19.5s,baz=212,slow=33							
VJD	**Vijayawada**	**65.19**	**291**	*e*P	**P**	**02**	**56**	**28.0 +1.7**
ZAK	**Zakamensk**	**65.75**	**334**	*e*P	**P**	**02**	**56**	**28.8 -0.7**
ZAK				pmax	pmax			
	comp=Z,196nm,1.3s							
KHLU	**Kahalu`u**	**65.79**	**65**	P	**P**	**02**	**56**	**29.9 -0.4**
HLK	**Haleakala**	**65.81**	**64**	IAMs_20	IAMs_20	03	20	30.6
	comp=Z,17μm,21.0s							
MA2	**Magadan**	**65.89**	**5**	P	**P**	**02**	**56**	**28.7 -1.4**
MA2				IAmb	IAmb	02	56	39.7
	comp=Z,128nm,0.9s							
MA2	**Magadan**	**65.89**	**5**	P	**P**	**02**	**56**	**29.0 -1.1**

MA2 **Magadan** **65.89** 5*ce*P **P** **02 56 28.3 -1.8**
MA2 pmax pmax
comp=Z,498nm,2.5s
MA2 **Magadan** **65.89** 5 P **P** **02 56 28.2 -1.8**
comp=Z,66nm,1.0s,baz=174,slow=6.7,SNR=16
MA2 LR LR 03 22 35.0
comp=Z,4µm,21.3s,baz=186,slow=34
comp=Z,66nm,1.0s
KHU **Kahuku** **65.95** 66 IAMs_20 IAMs_20 03 21 47.3
comp=Z,16µm,20.0s
HPAH **Hawaii Prepara** **66.09** 65 P **P** **02 56 31.7 -0.5**
HPAH IAmb IAmb 02 56 41.5
comp=Z,398nm,1.3s
POHA **Pohakuloa** **66.17** 65 P **P** **02 56 33.9 +1.0**
HMH **Humu'ula Sheep** **66.17** 66 P **P** **02 56 32.8 -0.2**
UWE **Uwekahuna** **66.29** 66 IAMs_20 IAMs_20 03 21 08.3
comp=Z,17µm,20.0s
OBL **Observatory Le** **66.30** 66 IAMs_20 IAMs_20 03 21 27.5
comp=Z,17µm,20.0s
KKO **Keanakako'i** **66.31** 66 IAMs_20 IAMs_20 03 21 28.8
comp=Z,16µm,20.0s
BYL **Byron's Ledge** **66.32** 66 IAMs_20 IAMs_20 03 22 27.0
comp=Z,15µm,19.0s
PUH **Pauahi** **66.34** 66 IAMs_20 IAMs_20 03 21 49.8
comp=Z,16µm,20.0s
SALM **Salem** **66.37** 286 *e*P **P** **02 56 37.2 +3.2**
SALM IAmb IAmb 02 56 42.6
comp=Z,235nm,1.2s
AIS **Amsterdam Isla** **66.47** 232 IAMs_20 IAMs_20 03 24 49.7
comp=Z,11µm,19.0s
IRK **Irkutsk** **66.70** 336 *e*P **P** **02 56 34.2 -1.2**
IRK *e*S **S** **03 05 31.4 +4.9**
IRK pmax pmax
comp=Z,779nm,3.2s
ALBI **Allahabad** **66.74** 301 *e*P **P** **02 56 38.5 +2.3**
KOD **Kodaikanal** **66.79** 284 *e*P **P** **02 56 39.4 +2.3**
KOD IAMs_20 IAMs_20 03 09 54.7
comp=Z,2µm,18.5s
PAE **Paea** **67.12** 106 *e*PKIKP **P** **02 56 40.9 +2.1**
comp=Z,75nm,1.5s
PPT **Papeete** **67.13** 106 P **P** **02 56 39.3 +0.4**
comp=Z,22nm,0.8s,baz=57,slow=4.2,SNR=6.7
PPT LR LR 03 22 16.7
comp=Z,6µm,21.2s,baz=266,slow=33
comp=Z,22nm,0.8s
PPT2 **Papeete2** **67.13** 106 *e*PKIKP **P** **02 56 41.3 +2.4**
comp=Z,146nm,1.4s
PPT2 *e*S **S** **03 05 31.2 -1.9**
comp=Z,610nm,19.8s
PPT2 *e*SS **SS** **03 09 55.6 +3.2**
comp=Z,7µm,25.5s
PPT2 *e*LQ LQ 03 14 08.3
comp=Z,32µm,32.5s
PPT2 *e*LR LR 03 16 56.0
comp=Z,8µm,23.0s
PPT2 *e*LR LR 03 16 57.5
comp=Z,10µm,22.2s
PPTF **Pamatai, Papee** **67.14** 106 P **P** **02 56 37.4 -1.6**
PPTF IAmb IAmb 02 57 09.7
comp=Z,242nm,1.4s
PPTF **Pamatai, Papee** **67.14** 106 P **P** **02 56 40.9 +1.9**
HYB **Hyderabad** **67.36** 292 *e*P **P** **02 56 42.1 +1.8**
HYB IVmB_BB 02 56 46.3
comp=Z,4µm,3.0s
HYB *es*P **sP** **02 56 46.8 -1.0**
HYB *e*PcP **PcP** **02 57 07.6 -0.3**
HYB *e*PP **PP** **02 59 09.7 +0.7**
HYB *e*S **S** **03 05 31.5 -4.3**
HYB *e*SS **SS** **03 10 02.5 +6.5**
TBI **Tubuai** **67.42** 113 *e*P **P** **02 56 41.5 +0.9**
comp=Z,429nm,1.5s
TBI *e*S S 03 05 21.0 -15
comp=Z,5µm,23.8s
TBI *e*SS **SS** **03 09 58.5 +2.0**
comp=Z,25µm,27.2s
TBI *e*LQ LQ 03 13 57.9
comp=Z,101µm,34.8s
TBI *e*LR LR 03 16 59.0
comp=Z,37µm,31.5s
TBI *e*LR LR 03 17 02.7
comp=Z,8µm,31.5s
TVO **Taravao** **67.44** 107 *e*PKIKP **P** **02 56 43.2 +2.3**
comp=Z,115nm,1.5s
ADK **Adak** **67.53** 26 P **P** **02 56 40.1 -0.5**
ADK **Adak** **67.53** 26 IAMs_20 IAMs_20 03 19 55.5
comp=Z,11µm,22.0s
ADK **Adak** **67.53** 26 P **P** **02 56 41.7 +1.1**
ADK **Adak** **67.53** 26 P **P** **02 56 40.1 -0.5**
ADK pmax pmax
comp=Z,722nm,1.6s
MOY **Mondy** **67.68** 334 *e*P **P** **02 56 42.3 +0.5**
MOY *e* 02 59 09.2
MOY pmax pmax
comp=Z,742nm,3.0s
BOD **Bodaibo** **67.85** 344 *e*P **P** **02 56 41.1 -1.5**
BOD pmax pmax
comp=Z,176nm,2.5s
GSTR **Great Sitkin T** **67.95** 26 P **P** **02 56 42.6 -0.7**
PMOR **Pomariorio Ree** **68.75** 104 *e*P **P** **02 56 51.4 +2.3**
comp=Z,214nm,1.2s
YAK **Yakutsk** **68.75** 354 P **P** **02 56 46.7 -1.4**
YAK **Yakutsk** **68.75** 354 *e*P **P** **02 56 47.4 -0.7**
YAK *e**PP **sP** **02 56 55.6 0.0**
YAK *e*S **S** **03 05 49.2 -1.4**
YAK *e* 03 06 41.3
YAK *e*SSS SSS 03 13 09.9
YAK pmax pmax
comp=Z,128nm,1.4s
YAK pmax pmax
comp=N,59nm,1.3s
YAK pmax pmax
comp=E,15nm,1.1s
YAK pmax pmax
comp=Z,575nm,3.0s
YAK pmax pmax
comp=N,494nm,2.8s
YAK smax smax
comp=E,7µm,7.2s
YAK smax smax
comp=N,2µm,5.9s
YAK **Yakutsk** **68.75** 354 LR LR 03 25 14.3
comp=N,3µm,20.2s,baz=164,slow=35
ATKA **Atka Island** **68.85** 27 IAmb IAmb 02 56 51.0
comp=Z,408nm,1.4s
ATKA IAMs_20 IAMs_20 03 21 19.6
comp=Z,13µm,22.0s
ATKA **Atka Island** **68.85** 27 P **P** **02 56 49.9 +1.0**
VAH **Vaihoa** **69.00** 104 *e*P **P** **02 56 51.6 +1.0**
comp=Z,80nm,1.1s
SEY **Seymchan** **69.35** 5*ce*P **P** **02 56 50.8 -1.0**
SEY pmax pmax
comp=Z,326nm,2.5s
SEY **Seymchan** **69.35** 5 P **P** **02 56 51.0 -0.8**
comp=Z,20nm,0.9s,baz=174,slow=5.7,SNR=42
SEY LR LR 03 24 54.9
comp=Z,5µm,21.3s,baz=192,slow=34
comp=Z,20nm,0.9s
DGAR **Diego Garcia** **69.50** 264 *i* P **P** **02 56 55.6 +1.8**
DGAR pmax pmax
comp=Z,314nm,1.2s
JHNI **Jhansi** **69.60** 300 *e*P **P** **02 56 53.2 -1.0**
AKL **Akola** **69.61** 295 *e*P **P** **02 56 56.5 +2.2**
AKL IAmb IAmb 02 57 01.4
comp=Z,217nm,1.0s
AKL IAMs_20 IAMs_20 03 14 02.5
comp=Z,1µm,18.1s
KAAM **Kaadhehdhoo** **69.69** 273 P **P** **02 56 54.1 -0.8**
KAAM IAmb IAmb 02 57 02.8
comp=Z,505nm,1.6s
WMQ **Urumqi** **70.08** 321 *e*P **P** **02 56 57.8 +0.9**
WMQ S **S** **03 06 11.0 +3.7**
WMQ sS sS 03 06 17.0 +0.7
WMQ SKS **SKSac** **03 06 50.5 -7.1**
WMQ pmax pmax
comp=Z,4µm,3.7s
WMQ LR LR
comp=Z,6µm,12.1s
WMQ LR LR
comp=Z,3µm,18.1s
WMQ LR LR
comp=Z,3µm,24.2s
CLES **Cleveland East** **71.24** 28 IAMs_20 IAMs_20 03 20 55.9
comp=Z,10µm,22.0s
KAD **Karad** **71.39** 290 *e*P **P** **02 57 06.1 +0.8**
KAD IAmb IAmb 02 57 15.4
comp=Z,435nm,1.5s

NDI **New Delhi** **71.70** 303 *e*P **P** **02 57 07.5 +0.5**
NIKH **Nikolski High** **71.83** 29 P **P** **02 57 06.8 -0.3**
NIKH **Nikolski High** **71.83** 29 P **P** **02 57 05.3 -1.9**
baz=232
NIKH S **S** **03 06 27.7 +0.7**
baz=232
VNDA **Vanda** **72.02** 176 P **P** **02 57 07.9 0.0**
VNDA **Vanda** **72.02** 176 P **P** **02 57 09.2 +1.2**
comp=Z,14nm,0.9s,baz=329,slow=6.2,SNR=46
VNDA LR LR 03 27 59.0
comp=Z,13µm,18.3s,baz=350,slow=35
comp=Z,14nm,0.9s
KUDL **Kundal** **72.15** 302 *e*P **P** **02 57 10.0 +0.4**
SBA **Scott Base** **72.73** 175 IAMs_20 IAMs_20 03 25 06.1
comp=Z,10µm,20.0s
BHK **Bhakra** **73.21** 305 *e*P **P** **02 57 18.0 +2.1**
AJM **Ajmer** **73.25** 300 *e*P **P** **02 57 18.0 +1.8**
AJM IAMs_20 IAMs_20 03 12 46.9
comp=Z,2µm,20.6s
DGZ **Jazzator, Alta** **73.26** 326*c* *i* P **P** **02 57 15.4 -0.6**
DGZ pmax pmax
comp=Z,180nm,1.2s
UNV **Unalaska Valle** **73.48** 29 P **P** **02 57 17.1 +0.2**
UNV **Unalaska Valle** **73.48** 29 P **P** **02 57 14.6 -2.4**
baz=234
UNV S **S** **03 06 45.0 -0.8**
baz=234
ZSN **Zaisan** **73.60** 323 *e*P **P** **02 57 16.9 -0.9**
comp=Z,534nm,3.4s,baz=323
ZSN **Zaisan** **73.60** 323 *e*P **P** **02 57 16.9 -0.9**
ZSN pmax pmax
comp=Z,534nm,3.4s
PAF **Port-aux-Franc** **73.80** 220 IAMs_20 IAMs_20 03 26 21.3
comp=Z,11µm,22.0s
P08K **Saint George I** **73.80** 25 P **P** **02 57 17.8 -1.0**
baz=230
P08K S **S** **03 06 52.6 +3.3**
baz=230
SPIA **Saint Paul Isl** **73.88** 25 P **P** **02 57 18.1 -1.1**
baz=229
AKUT **Akutan** **74.00** 29 P **P** **02 57 18.9 -1.1**
AKUT IAmb IAmb 02 57 28.9
comp=Z,581nm,1.4s
AKUT **Akutan** **74.00** 29 P **P** **02 57 21.2 +1.2**
THN **Thein Dam** **74.09** 306 *e*P **P** **02 57 22.6 +1.6**
KRAR **Krasnoyarsk** **74.16** 334 *i* P **P** **02 57 20.2 -0.7**
JMU **Jammu** **74.83** 306 *e*P **P** **02 57 27.9 +2.6**
MKAR **Makanchi Array** **74.85** 322 P **P** **02 57 24.6 -0.6**
MKAR **Makanchi Array** **74.85** 322 P **P** **02 57 24.7 -0.5**
comp=Z,41nm,0.7s,baz=101,slow=6.3,SNR=150
MKAR PKPPKP **P'P'df** **03 24 57.4 +6.1**
comp=Z,0.7nm,0.9s,baz=251,slow=2.2,SNR=5.5
MKAR LR LR 03 33 35.4
comp=Z,2µm,18.0s,baz=107,slow=38
comp=Z,41nm,0.7s
MAKZ **Makanchi** **75.05** 322 P **P** **02 57 25.6 -0.8**
MAKZ IAmb IAmb 02 57 33.1
comp=Z,250nm,1.2s
MAKZ **Makanchi** **75.05** 322 ⇑P **P** **02 57 26.7 +0.4**
SHLS **Shalkode** **75.12** 318 *e*P **P** **02 57 23.9 -3.2**
comp=Z,415nm,2.8s,baz=318
SHLS **Shalkode** **75.12** 318 *e*P **P** **02 57 23.8 -3.2**
SHLS pmax pmax
comp=Z,415nm,2.8s
PDGK **Podgornoye** **75.17** 318 P **P** **02 57 26.8 -0.5**
UZB **Uzynbulak** **75.42** 317 *e*P **P** **02 57 27.8 -1.0**
comp=Z,521nm,2.5s,baz=317
UZB **Uzynbulak** **75.42** 317 *e*P **P** **02 57 27.7 -1.0**
UZB pmax pmax
comp=Z,521nm,2.5s
FALS **False Pass** **75.54** 29 P **P** **02 57 26.0 -2.8**
baz=236
FALS S **S** **03 07 11.1 +2.4**
baz=236
TARG **Taragay, Kyrgy** **75.70** 316 IAmb IAmb 03 00 17.5
comp=Z,145nm,0.4s
SATY **Saty** **75.80** 317 *e*P **P** **02 57 30.2 -0.7**
comp=Z,325nm,1.8s,baz=317
SATY **Saty** **75.80** 317 *e*P **P** **02 57 30.1 -0.7**
SATY pmax pmax
comp=Z,325nm,1.8s
ZHN **Zhinishke** **75.82** 317 *e*P **P** **02 57 30.3 -0.7**
comp=Z,267nm,2.5s,baz=317
ZHN **Zhinishke** **75.82** 317 *e*P **P** **02 57 30.2 -0.7**
ZHN pmax pmax
comp=Z,508nm,3.7s
BILL **Bilibino** **75.94** 9 P **P** **02 57 29.4 -1.6**
BILL **Bilibino** **75.94** 9⇑*e*P **P** **02 57 28.1 -2.9**
BILL pmax pmax
comp=Z,216nm,2.5s
KSH **Kashi** **76.21** 313 P **P** **02 57 35.5 +2.2**
KSH pP pP 02 57 38.5 -0.3
KSH PP **PP** **03 00 22.8 -1.9**
KSH S **S** **03 07 17.5 +0.3**
KSH pmax pmax
comp=Z,110nm,1.5s
KSH pmax pmax
comp=Z,4µm,3.8s
KSH LR LR
comp=Z,4µm,17.9s
KSH LR LR
comp=Z,5µm,21.0s
KSH LR LR
comp=Z,7µm,21.3s
NIL **Nilore** **76.43** 307 P **P** **02 57 34.3 -0.3**
NIL IAmb IAmb 02 57 42.7
comp=Z,307nm,1.1s
NIL **Nilore** **76.43** 307 P **P** **02 57 34.3 -0.3**
NIL pmax pmax
comp=Z,307nm,1.1s
TDK **Taldyqorghan** **76.55** 319 *e*P **P** **02 57 34.3 -0.8**
baz=319
TDK **Taldyqorghan** **76.55** 319 *e*P **P** **02 57 34.2 -0.8**
JASL **Jaisalmer** **76.59** 299 *e*P P 02 57 41.6 +6.0
TAOE **Nuku Hiva Isla** **76.61** 98 *e*PKIKP P 02 57 29.3 -6.7
comp=Z,1µm,25.2s
TAOE *e*S **S** **03 07 25.1 +2.7**
comp=Z,2µm,30.7s
TAOE *e*SS **SS** **03 12 10.5 -7.5**
comp=Z,2µm,31.0s
TAOE *e*LQ LQ 03 18 06.4
comp=Z,6µm,32.7s
TAOE *e*LR LR 03 21 13.5
comp=Z,7µm,22.1s
ARXS **Arharly** **76.63** 318 *e*P **P** **02 57 35.1 -0.4**
MDOK **Medeo** **76.76** 317 *e*P **P** **02 57 35.0 -1.3**
baz=317
MDOK **Medeo** **76.76** 317 *e*P **P** **02 57 35.0 -1.3**
ZAA0 **Zalesovo Array** **76.84** 329 P **P** **02 57 35.0 -1.4**
ZALV **Zalesovo Beam** **76.84** 329 P **P** **02 57 34.8 -1.5**
ZALV **Zalesovo Beam** **76.84** 329 P **P** **02 57 34.8 -1.5**
ZALV **Zalesovo Beam** **76.84** 329 P **P** **02 57 34.6 -1.7**
comp=Z,22nm,0.6s,baz=113,slow=5.6,SNR=72
ZALV PKPPKP **P'P'df** **03 24 43.7 -3.4**
comp=Z,0.4nm,0.3s,baz=198,slow=0.5,SNR=3.7
ZALV LR LR 03 32 31.7
comp=Z,4µm,19.5s,baz=116,slow=37
comp=Z,22nm,0.6s
AAA **Alma-Ata** **76.86** 317 *e*P **P** **02 57 36.7 -0.2**
comp=Z,168nm,1.5s,baz=317
AAA **Alma-Ata** **76.86** 317 *e*P **P** **02 57 36.6 -0.2**
AAA pmax pmax
comp=Z,169nm,1.5s
ULHL **Ulahol** **76.98** 316 P **P** **02 57 39.9 +2.2**
SNR=29
CHKK **Chushkaly** **77.05** 318 *e*P **P** **02 57 36.8 -1.1**
baz=317
CHKK **Chushkaly** **77.05** 318 *e*P **P** **02 57 36.7 -1.1**
SDPT **Sand Point** **77.23** 29 P **P** **02 57 37.9 -0.6**
SDPT **Sand Point** **77.23** 29 P **P** **02 57 39.0 +0.5**
SDPT **Sand Point** **77.23** 29 P **P** **02 57 36.5 -2.0**
baz=239
SDPT S **S** **03 07 28.9 +1.5**
baz=239
CHNA **Chernabura Isl** **77.40** 30 P **P** **02 57 37.8 -1.7**
baz=240
CHNA S **S** **03 07 31.3 +2.0**
baz=240
KUU **Kurty** **77.50** 317 *e*P **P** **02 57 39.9 -0.5**
comp=Z,179nm,1.0s,baz=317
KUU **Kurty** **77.50** 317 *e*P **P** **02 57 39.8 -0.5**
KUU pmax pmax
comp=Z,179nm,1.0s
M11K **Mekoryuk** **77.55** 23 P **P** **02 57 38.6 -1.5**
baz=233
M11K S **S** **03 07 34.2 +3.7**
baz=233
TKM2 **Tokmak 2** **77.66** 316 P **P** **02 57 43.6 +2.1**
SNR=31
TKM2 **Tokmak 2** **77.66** 316 *i* P **P** **02 57 40.6 -0.9**
TKM2 pmax pmax
comp=Z,19nm,0.6s
ROCAM **Rodrigues Isla** **77.73** 251 IAMs_20 IAMs_20 03 28 21.6
comp=Z,11µm,21.0s
GAMB **Gambell** **77.77** 19 P **P** **02 57 40.2 -1.1**
baz=227,SNR=10
GAMB S **S** **03 07 36.2 +3.4**
baz=227
S14K **Fog Glacier** **78.16** 29 P **P** **02 57 42.8 -1.0**
baz=239
S14K S **S** **03 07 40.8 +3.2**
baz=239
UCH **Uchtor** **78.18** 315 P **P** **02 57 45.3 +0.6**
SNR=61
TIXI **Tiksi** **78.21** 356 P **P** **02 57 41.5 -2.2**
TIXI **Tiksi** **78.21** 356 ⇑P **P** **02 57 41.6 -2.0**
TIXI **Tiksi** **78.21** 356 LR LR 03 31 36.7
comp=Z,4µm,19.5s,baz=182,slow=35
CHMS **Chumysh** **78.27** 316 P **P** **02 57 45.1 +0.4**
SNR=26
AAK **Ala-Archa** **78.33** 316 P **P** **02 57 45.4 +0.2**
SNR=35
AAK **Ala-Archa** **78.33** 316 P **P** **02 57 44.5 -0.7**
AAK **Ala-Archa** **78.33** 316 P **P** **02 57 44.3 -0.8**
AAK **Ala-Archa** **78.33** 316*ce*P **P** **02 57 44.8 -0.3**
AAK pmax pmax
comp=Z,114nm,1.7s
AAK **Ala-Archa** **78.33** 316 P **P** **02 57 44.3 -0.8**
comp=Z,14nm,0.9s,baz=131,slow=5.5,SNR=30
comp=Z,14nm,0.9s
SGDS **Sogindy** **78.51** 316 *e*P **P** **02 57 45.1 -0.9**
comp=Z,304nm,3.0s,baz=316
SGDS **Sogindy** **78.51** 316 *e*P **P** **02 57 45.1 -0.9**
SGDS pmax pmax
comp=Z,304nm,3.0s
USP **Ospenovka** **78.54** 316 P **P** **02 57 45.9 -0.3**
SNR=67
M13K **Dall Lake** **78.71** 24 IAMs_20 IAMs_20 03 26 31.3
comp=Z,9µm,22.0s
M13K **Dall Lake** **78.71** 24 P **P** **02 57 45.2 -1.3**
baz=235
M13K S **S** **03 07 46.4 +3.3**
baz=235
CHGN **Chignik** **78.72** 29 IAmb IAmb 02 57 48.8
comp=Z,312nm,1.2s
CHGN **Chignik** **78.72** 29 P **P** **02 57 45.0 -1.7**
baz=240
KURK **Kurchatov** **78.73** 324 P **P** **02 57 46.0 -0.9**
KURK IAmb IAmb 02 57 55.2
comp=Z,661nm,1.8s
KURK **Kurchatov** **78.73** 324*ce*P **P** **02 57 46.5 -0.4**
KURK pmax pmax
comp=Z,314nm,1.7s
KURK MLR MLR
comp=Z,3µm,18.0s
KURBB **Kurchatov Arra** **78.74** 324 P **P** **02 57 45.6 -1.4**
comp=Z,38nm,1.0s,baz=116,slow=4.4,SNR=100
KURBB PKPPKP **P'P'df** **03 24 46.1 +2.0**
comp=Z,2.2nm,1.2s,baz=296,slow=2.8,SNR=5.3
KURBB LR LR 03 33 45.8
comp=Z,3µm,19.6s,baz=118,slow=37
comp=Z,38nm,1.0s
EKS2 **Erkin-Say** **78.83** 316 P **P** **02 57 48.4 +0.5**
SNR=41
O14K **Tigyukauivet M** **78.94** 26 P **P** **02 57 47.4 -0.5**
baz=237
O14K S **S** **03 07 46.2 +0.6**
baz=237
N14K **Kuskokwak Cree** **79.12** 25 P **P** **02 57 48.0 -0.9**
baz=237,SNR=9.2
N14K S **S** **03 07 49.7 +2.2**
baz=237
M14K **Bethel** **79.46** 24 P **P** **02 57 49.8 -0.9**
M14K IAMs_20 IAMs_20 03 27 06.3
comp=Z,9µm,22.0s
M14K **Bethel** **79.46** 24 P **P** **02 57 49.6 -1.1**
baz=236,SNR=25
M14K S **S** **03 07 50.8 -0.3**
baz=236
L14K **Kuka Creek** **79.50** 24 IAmb IAmb 02 58 01.6
comp=Z,672nm,1.7s
L14K **Kuka Creek** **79.50** 24 P **P** **02 57 49.9 -1.0**
baz=236
L14K S **S** **03 07 52.8 +1.3**
baz=236
O15K **Ungalikthiuk R** **79.52** 26 P **P** **02 57 50.0 -1.1**
baz=239
O15K S **S** **03 07 51.9 0.0**
baz=239
R16K **Pilot Point** **79.74** 28 P **P** **02 57 50.9 -1.3**
baz=241
N15K **Kwethluk River** **79.93** 25 IAmb IAmb 02 58 04.0
comp=Z,499nm,1.4s
N15K IAMs_20 IAMs_20 03 28 34.8
comp=Z,11µm,22.0s
N15K **Kwethluk River** **79.93** 25 P **P** **02 57 52.2 -1.1**
baz=238,SNR=19
N15K S **S** **03 07 56.9 +0.7**
baz=238
KBU **Kabul Universi** **79.95** 307 P **P** **02 57 53.0 -1.3**
M15K **Kasigluk River** **79.96** 25 P **P** **02 57 51.9 -1.5**
baz=238
M15K S **S** **03 07 56.0 -0.4**
baz=238
J14K **Nanvaranak Lak** **79.97** 22 IAmb IAmb 02 58 04.6
comp=Z,848nm,1.9s
J14K **Nanvaranak Lak** **79.97** 22 P **P** **02 57 52.7 -0.7**
baz=235,SNR=32
J14K S **S** **03 07 58.6 +2.2**
baz=235
KBL **Kabul** **80.03** 307 P **P** **02 57 53.4 -1.3**
KBL **Kabul** **80.03** 307 P **P** **02 57 53.4 -1.3**
KBL pmax pmax
comp=Z,148nm,1.5s
KBL MLR MLR
comp=Z,2µm,22.0s
L15K **Ungalak Mounta** **80.17** 24 P **P** **02 57 52.7 -1.8**
baz=237
L15K S **S** **03 07 59.6 +1.0**
baz=237
TNA **Tin City** **80.17** 19 P **P** **02 57 53.5 -0.9**
baz=230,SNR=40
TNA S **S** **03 07 59.3 +0.8**
baz=230
P16K **Nushagak River** **80.27** 27 P **P** **02 57 53.4 -1.7**
baz=240
P16K S **S** **03 08 00.8 +1.2**
baz=240
MAW **Mawson** **80.35** 202 LR LR 03 32 22.3
comp=Z,9µm,18.2s,baz=82,slow=35
ANM **Nome** **80.39** 20 IAmb IAmb 02 57 59.3
comp=Z,510nm,1.6s
ANM IAMs_20 IAMs_20 03 27 13.7
comp=Z,9µm,22.0s
ANM **Nome** **80.39** 20 P **P** **02 57 55.1 -0.7**
baz=233,SNR=63
ANM S **S** **03 08 03.3 +2.4**
baz=233
K15K **Wolf Creek Mou** **80.49** 23 IAmb IAmb 02 57 59.9
comp=Z,316nm,1.2s
K15K **Wolf Creek Mou** **80.49** 23 P **P** **02 57 55.3 -0.9**
baz=237
K15K S **S** **03 08 02.8 +0.8**
baz=237
O16K **Kokwok River B** **80.50** 26 IAmb IAmb 02 58 06.7
comp=Z,627nm,1.6s
O16K IAMs_20 IAMs_20 03 31 59.9
comp=Z,8µm,20.0s
O16K **Kokwok River B** **80.50** 26 P **P** **02 57 55.3 -1.1**
baz=240,SNR=27
O16K S **S** **03 08 02.8 +0.7**
baz=240
DZA **Taraz** **80.62** 315 *e*P **P** **02 57 56.8 -0.7**
baz=315
DZA **Taraz** **80.62** 315 *e*P **P** **02 57 56.7 -0.7**
F14K **Arctic Creek** **80.63** 19 P **P** **02 57 56.1 -0.9**
baz=232
F14K S **S** **03 08 03.9 +0.6**
baz=232
N16K **Nishlik Lake** **80.65** 25 P **P** **02 57 56.7 -0.5**
baz=239
N16K S **S** **03 08 06.5 +2.7**
baz=239
Q16K **King Salmon** **80.70** 28 P **P** **02 57 56.0 -1.5**

baz=242
M16K Timber Creek 80.85 25 IAMs_20 IAMs_20 03 29 03.1
comp=Z,10µm,21.0s
M16K Timber Creek 80.85 25 P **P** **02 57 58.0 -0.2**
baz=239,SNR=28
M16K S **S** **03 08 06.1 +0.3**
baz=239
Q17K Contact Creek 80.86 28 P **P** **02 57 56.8 -1.7**
baz=242,SNR=17
Q17K S **S** **03 08 05.1 -1.2**
baz=242
L16K Owhat River 81.00 24 P **P** **02 57 57.4 -1.6**
L16K IAmb IAmb 02 58 02.2
comp=Z,330nm,1.4s
L16K IAMs_20 IAMs_20 03 27 29.8
comp=Z,10µm,22.0s
L16K Owhat River 81.00 24 P **P** **02 57 57.9 -1.1**
baz=239,SNR=36
L16K S **S** **03 08 05.4 -1.8**
baz=239
O17K Koliganek Bris 81.03 26 P **P** **02 57 58.5 -0.7**
baz=241,SNR=97
O17K S **S** **03 08 08.8 +1.2**
baz=241
P17K Kvichak River 81.05 27 P **P** **02 57 57.2 -2.0**
baz=242
P17K S **S** **03 08 07.5 -0.3**
baz=242
G15K Niukluk 81.11 20 P **P** **02 57 58.4 -1.1**
baz=234
G15K S **S** **03 08 09.6 +1.3**
baz=234
SIMJ Simiganj 81.12 311 P **P** **02 57 59.4 -1.0**
SIMJ IAmb IAmb 02 58 08.1
comp=Z,213nm,1.1s
KK31 Karatay Array 81.25 315 IAmb IAmb 02 58 09.5
comp=Z,444nm,1.9s
KK31 Karatay Array 81.25 315 *i* P **P** **02 58 00.0 -0.8**
KKAR Karatay Array 81.25 315 P **P** **02 58 00.0 -0.8**
KKAR IAmb IAmb 02 58 09.5
comp=Z,441nm,1.9s
KKAR Karatay Array 81.25 315 P **P** **02 58 00.0 -0.8**
KKAR pmax pmax
comp=Z,441nm,1.9s
IUG luzhnay 81.32 314 *e*P **P** **02 58 00.7 -0.7**
comp=Z,838nm,3.2s,baz=314
IUG luzhnay 81.32 314 *e*P **P** **02 58 00.6 -0.7**
IUG pmax pmax
comp=Z,838nm,3.2s
F15K North Star Dit 81.33 19 P **P** **02 57 59.9 -0.8**
baz=233,SNR=74
F15K S **S** **03 08 12.2 +1.6**
baz=233
N17K Nushagak Hills 81.36 26 IAmb IAmb 02 58 04.8
comp=Z,273nm,1.3s
N17K IAMs_20 IAMs_20 03 28 46.6
comp=Z,9µm,22.0s
N17K Nushagak Hills 81.36 26 P **P** **02 58 00.6 -0.3**
baz=241,SNR=28
N17K S **S** **03 08 14.1 +3.0**
baz=241
J16K Anvik River 81.39 23 IAmb IAmb 02 58 12.2
comp=Z,539nm,1.5s
J16K Anvik River 81.39 23 P **P** **02 58 00.9 -0.2**
baz=237,SNR=64
J16K S **S** **03 08 15.4 +4.1**
baz=237
H16K Elim 81.53 21 P **P** **02 58 00.5 -1.3**
baz=236,SNR=78
H16K S **S** **03 08 14.0 +1.3**
baz=236
OTUK Ortayu 81.62 321 P **P** **02 58 01.8 -0.9**
OHAK Old Harbor 81.65 30 P **P** **02 58 01.5 -1.1**
OHAK IAmb IAmb 02 58 05.5
comp=Z,399nm,1.6s
OHAK Old Harbor 81.65 30 P **P** **02 58 02.6 +0.1**
OHAK Old Harbor 81.65 30 P **P** **02 58 01.4 -1.1**
baz=245,SNR=9.3
OHAK S **S** **03 08 16.0 +1.9**
baz=245
CHM Chimkent 81.67 314 *e*P **P** **02 58 02.5 -0.6**
baz=314
CHM Chimkent 81.67 314 *e*P **P** **02 58 02.4 -0.6**
I17K Unalakleet 81.68 22 IAMs_20 IAMs_20 03 28 06.8
comp=Z,8µm,22.0s
I17K Unalakleet 81.68 22 P **P** **02 58 01.8 -0.7**
baz=237,SNR=53
I17K S **S** **03 08 16.2 +2.0**
baz=237
M17K Holitna River 81.68 25 IAMs_20 IAMs_20 03 29 51.0
comp=Z,9µm,22.0s
M17K Holitna River 81.68 25 P **P** **02 58 02.2 -0.5**
baz=240,SNR=18
M17K S **S** **03 08 17.2 +2.9**
baz=240
P18K Big Mountain, 81.69 27 IAMs_20 IAMs_20 03 27 46.3
comp=Z,9µm,22.0s
P18K Big Mountain, 81.69 27 P **P** **02 58 00.4 -2.4**
baz=243,SNR=6.6
P18K S **S** **03 08 13.4 -1.3**
baz=243
L17K Donlin 81.69 24 P **P** **02 58 01.9 -0.8**
baz=240,SNR=26
L17K S **S** **03 08 14.5 0.0**
baz=240
BRLS Borolday 81.71 315 *e*P **P** **02 58 02.3 -1.0**
comp=Z,525nm,3.4s,baz=315
BRLS Borolday 81.71 315 *e*P **P** **02 58 02.2 -1.0**
BRLS pmax pmax
comp=Z,525nm,3.4s
O18K Koktuh Hills 81.91 27 P **P** **02 58 02.7 -1.2**
O18K IAMs_20 IAMs_20 03 30 34.1
comp=Z,8µm,20.0s
O18K Koktuh Hills 81.91 27 P **P** **02 58 02.1 -1.8**
baz=243
O18K S **S** **03 08 16.3 -0.6**
baz=243
G16K Koyuk River 81.92 20 IAmb IAmb 02 58 15.3
comp=Z,568nm,1.8s
G16K IAMs_20 IAMs_20 03 28 11.1
comp=Z,9µm,22.0s
G16K Koyuk River 81.92 20 P **P** **02 58 03.4 -0.5**
baz=236
G16K S **S** **03 08 18.5 +1.8**
baz=236
BRZS Berezniki 81.98 322 *e*P **P** **02 58 03.3 -1.2**
comp=Z,686nm,3.4s,baz=322
BRZS Berezniki 81.98 322 *e*P **P** **02 58 03.3 -1.2**
BRZS pmax pmax
comp=Z,686nm,3.4s
K17K Iditarod 81.98 24 IAMs_20 IAMs_20 03 28 11.9
comp=Z,10µm,22.0s
K17K Iditarod 81.98 24 P **P** **02 58 03.3 -0.9**
baz=240
K17K S **S** **03 08 19.6 +2.1**
baz=240
N18K Kilae Creek 81.99 26 IAMs_20 IAMs_20 03 29 05.3
comp=Z,9µm,21.0s
N18K Kilae Creek 81.99 26 P **P** **02 58 02.9 -1.4**
baz=242
N18K S **S** **03 08 20.0 +2.3**
baz=242
Q19K Cape Douglas, 82.21 28 IAMs_20 IAMs_20 03 28 04.2
comp=Z,8µm,22.0s
Q19K Cape Douglas, 82.21 28 P **P** **02 58 03.7 -1.8**
baz=244
Q19K S **S** **03 08 21.8 +1.8**
baz=244
KDAK Kodiak Island 82.23 29 P **P** **02 58 04.8 -0.8**
KDAK IAmb IAmb 02 58 08.5
comp=Z,327nm,1.4s
KDAK Kodiak Island 82.23 29 P **P** **02 58 04.7 -0.9**
baz=245
KDAK Kodiak Island 82.23 29*c i* P **P** **02 58 04.6 -0.9**
KDAK pmax pmax
comp=Z,359nm,1.5s
KDAK Kodiak Island 82.23 29 P **P** **02 58 05.2 -0.4**
comp=Z,70nm,1.1s,baz=287,slow=2.9,SNR=9.2
KDAK LR LR 03 32 51.1
comp=Z,4µm,19.1s,baz=261,slow=34
comp=Z,70nm,1.1s
SVW2 Sparrevohn 82.32 26 IAmb IAmb 02 58 09.6
comp=Z,286nm,1.4s
SVW2 IAMs_20 IAMs_20 03 30 19.6
comp=Z,8µm,20.0s
SVW2 Sparrevohn 82.32 26 P **P** **02 58 07.2 +1.2**
L18K Granite Mounta 82.39 24 IAMs_20 IAMs_20 03 28 45.8
comp=Z,11µm,22.0s
L18K Granite Mounta 82.39 24 P **P** **02 58 05.4 -0.9**
baz=241,SNR=34
L18K S **S** **03 08 23.5 +1.8**
baz=241
M18K Stony River 82.40 25 P **P** **02 58 05.6 -0.8**
baz=242
M18K S **S** **03 08 23.5 +1.7**
baz=242
O19K Port Alsworth 82.46 27 IAMs_20 IAMs_20 03 30 51.8
comp=Z,9µm,21.0s
O19K Port Alsworth 82.46 27 P **P** **02 58 04.5 -2.2**
baz=244
O19K S **S** **03 08 21.3 -1.1**
baz=244
H17K Granite Mounta 82.53 21 IAmb IAmb 02 58 10.6
comp=Z,416nm,1.4s
H17K Granite Mounta 82.53 21 P **P** **02 58 06.3 -0.8**
baz=238,SNR=63
H17K S **SKSac** **03 08 25.3 -2.0**
baz=238
G17K Kiwalik Mounta 82.58 21 P **P** **02 58 06.5 -0.8**
baz=237,SNR=108
G17K S **S** **03 08 25.5 +2.0**
baz=237
Q20K Shuyak Island 82.66 29 P **P** **02 58 06.2 -1.7**
baz=245
Q20K S **S** **03 08 24.9 +0.3**
baz=245
SYI Shuyak Island 82.67 29 IAmb IAmb 02 58 16.9
comp=Z,384nm,1.5s
SYI IAMs_20 IAMs_20 03 29 44.2
comp=Z,9µm,21.0s
N19K Bonanza Creek 82.67 26 IAmb IAmb 02 58 18.3
comp=Z,530nm,1.6s
N19K IAMs_20 IAMs_20 03 29 36.1
comp=Z,9µm,22.0s
N19K Bonanza Creek 82.67 26 P **P** **02 58 06.5 -1.4**
baz=243
N19K S **S** **03 08 24.2 -0.6**
baz=243
C16K Lisburne Hills 82.67 17 IAmb IAmb 02 58 19.6
comp=Z,304nm,1.6s
C16K Lisburne Hills 82.67 17 P **P** **02 58 06.2 -1.4**
baz=232
C16K S **S** **03 08 25.6 +1.4**
baz=232
P19K Oil Pt 82.72 27 IAmb IAmb 02 58 12.7
comp=Z,188nm,0.8s
P19K IAMs_20 IAMs_20 03 28 05.5
comp=Z,9µm,21.0s
P19K Oil Pt 82.72 27 P **P** **02 58 06.5 -1.6**
baz=244,SNR=12
P19K S **S** **03 08 25.5 +0.3**
baz=244
F17K Baldwin Pennin 82.89 20 IAMs_20 IAMs_20 03 28 28.8
comp=Z,8µm,22.0s
F17K Baldwin Pennin 82.89 20 P **P** **02 58 07.1 -1.7**
baz=236,SNR=42
F17K S **S** **03 08 27.5 +0.9**
baz=236
ILSW Iliamna Southw 82.90 27 IAmb IAmb 02 58 10.8
comp=Z,524nm,1.9s
J18K Innoko River 82.98 23 P **P** **02 58 07.8 -1.6**
J18K IAmb IAmb 02 58 12.4
comp=Z,238nm,1.4s
J18K IAMs_20 IAMs_20 03 28 31.4
comp=Z,8µm,22.0s
J18K Innoko River 82.98 23 P **P** **02 58 07.8 -1.6**
baz=241
J18K S **S** **03 08 27.2 -0.5**
baz=241
TTA Tatalina 83.01 24 IAmb IAmb 02 58 12.8
comp=Z,569nm,2.0s
TTA Tatalina 83.01 24 P **P** **02 58 10.0 +0.3**
TTA Tatalina 83.01 24 P **P** **02 58 08.5 -1.1**
baz=242,SNR=34
TTA S **S** **03 08 28.8 +0.7**
baz=242
D17K Noatak River 83.01 18 P **P** **02 58 08.5 -0.9**
baz=235
D17K S **SKSac** **03 08 29.9 -0.4**
baz=235
E17K Hotham Inlet 83.06 19 P **P** **02 58 08.7 -1.1**
baz=236
E17K S **SKSac** **03 08 30.5 -0.2**
baz=236
L19K White Mountain 83.13 25 IAMs_20 IAMs_20 03 30 25.4
comp=Z,8µm,21.0s
L19K White Mountain 83.13 25 P **P** **02 58 09.1 -1.1**
baz=243
L19K S **S** **03 08 29.4 +0.1**
baz=243
O20K Slope Mountain 83.18 27 P **P** **02 58 08.9 -1.7**
baz=245
M19K Big River Lodg 83.20 25 IAmb IAmb 02 58 14.2
comp=Z,237nm,1.4s
M19K IAMs_20 IAMs_20 03 31 09.1
comp=Z,9µm,20.0s
M19K Big River Lodg 83.20 25 P **P** **02 58 09.6 -1.0**
baz=243,SNR=26
M19K S **SKSac** **03 08 31.2 -0.6**
baz=243
H18K Honhosa River 83.21 21 IAmb IAmb 02 58 13.4
comp=Z,385nm,1.8s
H18K IAMs_20 IAMs_20 03 29 16.2
comp=Z,8µm,22.0s
H18K Honhosa River 83.21 21 P **P** **02 58 09.8 -0.8**
baz=239,SNR=38
H18K S **S** **03 08 29.8 -0.1**
baz=239
C17K DeLong Mountai 83.44 18 P **P** **02 58 10.5 -1.2**
baz=234
C17K S **S** **03 08 31.7 -0.4**
baz=234
HOM Homer 83.45 28 P **P** **02 58 09.8 -2.0**
baz=246
HOM S **S** **03 08 30.7 -1.9**
baz=246
G18K Tagagawik 83.48 21 IAmb IAmb 02 58 14.9
comp=Z,166nm,1.4s
G18K Tagagawik 83.48 21 P **P** **02 58 11.2 -0.8**
baz=239
G18K S **SKSac** **03 08 34.1 +0.5**
baz=239
F18K Selawik 83.51 20 P **P** **02 58 11.4 -0.7**
baz=238,SNR=28
F18K S **SKSac** **03 08 34.2 +0.6**
baz=238
GCSA Galena City Sc 83.55 22 P **P** **02 58 10.7 -1.5**
baz=241,SNR=36
GCSA S **SKSac** **03 08 35.1 +1.2**
baz=241
CNPM China Poot 83.59 28 IAMs_20 IAMs_20 03 28 58.5
comp=Z,10µm,22.0s
E18K Tukpahlearik C 83.64 19 IAmb IAmb 02 58 16.1
comp=Z,198nm,1.2s
E18K Tukpahlearik C 83.64 19 P **P** **02 58 12.1 -0.6**
baz=237
E18K S **SKSac** **03 08 35.2 +0.8**
baz=237
J19K Poorman 83.67 23 IAmb IAmb 02 58 16.3
comp=Z,492nm,1.7s
J19K Poorman 83.67 23 P **P** **02 58 12.2 -0.7**
baz=242
J19K S **SKSac** **03 08 35.7 +0.9**
baz=242
L20K Farewell, AK 83.67 25 P **P** **02 58 12.1 -0.9**
baz=244,SNR=49
L20K S **SKSac** **03 08 35.4 +0.4**
baz=244
M20K Styx River 83.72 25 IAMs_20 IAMs_20 03 31 04.3
comp=Z,8µm,20.0s
M20K Styx River 83.72 25 P **P** **02 58 12.3 -1.1**
baz=244
M20K S **SKSac** **03 08 36.4 +0.9**
baz=244
QSPA South Pole Qui 83.77 180 P **P** **02 58 13.5 -0.2**
QSPA IAmb IAmb 02 58 21.2
comp=Z,200nm,1.1s
QSPA South Pole Qui 83.77 180 P **P** **02 58 14.1 +0.5**
comp=Z,92nm,1.0s,baz=310,slow=1.3,SNR=105
QSPA PKKPbc **PKKPbc** **03 16 31.8 -1.6**
comp=Z,2.7nm,0.9s,baz=169,slow=1.8,SNR=5.1
QSPA LR LR 03 36 01.1
comp=Z,22µm,19.1s,baz=12,slow=36
comp=Z,92nm,1.0s
N20K Mount Spurr 83.83 26 P **P** **02 58 11.9 -2.0**
baz=245,SNR=14
N20K S **S** **03 08 38.0 +1.4**
baz=245
BRLK Bradley Lake 83.84 28 IAmb IAmb 02 58 23.6
comp=Z,519nm,2.0s
BRLK IAMs_20 IAMs_20 03 29 06.0
comp=Z,10µm,22.0s
BRSE Bradley Lake S 83.90 28 P **P** **02 58 12.6 -1.6**
baz=247,SNR=5.5
BRSE S **S** **03 08 39.0 +1.9**
baz=247
K20K Telida 83.99 24 IAmb IAmb 02 58 27.0
comp=Z,242nm,1.1s
K20K IAMs_20 IAMs_20 03 28 59.9
comp=Z,11µm,22.0s
K20K Telida 83.99 24 P **P** **02 58 14.0 -0.7**
baz=243,SNR=59
K20K S **S** **03 08 38.8 +0.9**
baz=243
H19K Roundabout Mou 84.09 21 P **P** **02 58 14.5 -0.5**
baz=241
H19K S **S** **03 08 40.4 +1.6**
baz=241
CAPN Captain Cook N 84.12 27 IAMs_20 IAMs_20 03 31 12.7
comp=Z,9µm,20.0s
CAPN Captain Cook N 84.12 27 P **P** **02 58 14.3 -1.0**
baz=246
NRIK Noril'sk 84.12 343 IAMs_20 IAMs_20 03 33 29.8
comp=Z,11µm,22.0s
NRIK Noril'sk 84.12 343*ce* P **P** **02 58 14.2 -1.0**
NRIK pmax pmax
comp=Z,399nm,1.3s
NRIK Noril'sk 84.12 343 P **P** **02 58 13.9 -1.3**
comp=Z,160nm,1.0s,baz=118,slow=5.5,SNR=57
NRIK LR LR 03 36 30.0
comp=Z,5µm,18.4s,baz=118,slow=36
comp=Z,160nm,1.0s
C18K Utukok River 84.14 18 IAmb IAmb 02 58 20.2
comp=Z,143nm,1.1s
C18K Utukok River 84.14 18 P **P** **02 58 14.1 -1.2**
baz=236
C18K S **S** **03 08 39.2 -0.1**
baz=236
G19K Purcell Mounta 84.16 21 IAmb IAmb 02 58 19.8
comp=Z,386nm,1.6s
G19K IAMs_20 IAMs_20 03 29 21.4
comp=Z,8µm,22.0s
G19K Purcell Mounta 84.16 21 P **P** **02 58 14.3 -1.2**
baz=240,SNR=110
G19K S **S** **03 08 40.4 +0.9**
baz=240
F19K Shaleruckik Mo 84.27 20 IAmb IAmb 02 58 18.9
comp=Z,248nm,1.4s
F19K IAMs_20 IAMs_20 03 29 35.2
comp=Z,8µm,22.0s
F19K Shaleruckik Mo 84.27 20 P **P** **02 58 14.4 -1.6**
baz=240,SNR=68
F19K S **S** **03 08 40.9 +0.4**
baz=240
BVA0 Borovoye Array 84.32 325 *i* P **P** **02 58 15.6 -0.9**
BVAR Borovoye Array 84.32 325 P **P** **02 58 15.9 -0.6**
comp=Z,127nm,0.7s,baz=108,slow=4.8,SNR=164
comp=Z,127nm,0.7s
J20K Nowinta River 84.33 23 IAMs_20 IAMs_20 03 29 13.8
comp=Z,8µm,22.0s
J20K Nowinta River 84.33 23 P **P** **02 58 15.1 -1.2**
baz=243
J20K S **S** **03 08 41.6 +0.4**
baz=243
B18K Kokolik River 84.36 17 P **P** **02 58 15.5 -0.8**
baz=236
B18K S **S** **03 08 41.4 +0.1**
baz=236
BRVK Borovoye 84.39 325 P **P** **02 58 15.7 -1.2**
BRVK Borovoye 84.39 325*ce* P **P** **02 58 16.5 -0.4**
BRVK pmax pmax
comp=Z,529nm,1.7s
BRVK MLR MLR
comp=Z,4µm,19.0s
SKT Skwentna 84.45 26 IAMs_20 IAMs_20 03 30 55.3
comp=Z,8µm,21.0s
SKT Skwentna 84.45 26 P **P** **02 58 14.5 -2.5**
baz=246,SNR=18
SKT S **SKSac** **03 08 37.9 -2.1**
baz=246
I20K Naaghedeneel 84.48 23 IAmb IAmb 02 58 31.4
comp=Z,241nm,1.2s
I20K Naaghedeneel 84.48 23 P **P** **02 58 16.4 -0.6**
baz=243
I20K S **S** **03 08 42.3 -0.3**
baz=243
PPLA Purkeypile 84.56 25 P **P** **02 58 16.1 -1.5**
baz=245,SNR=30
PPLA S **SKSac** **03 08 40.9 0.0**
baz=245
SUA Susitna One 84.58 26 IAMs_20 IAMs_20 03 29 41.8
comp=Z,7µm,21.0s
SUA Susitna One 84.58 26 P **P** **02 58 15.4 -2.4**
baz=247,SNR=31
SEW Seward 84.64 28 P **P** **02 58 15.9 -2.0**
baz=248,SNR=19
H20K Anotleneega Mo 84.65 22 P **P** **02 58 17.1 -0.9**
baz=242
O22K Cooper Landing 84.66 27 P **P** **02 58 15.6 -2.4**
O22K IAMs_20 IAMs_20 03 29 32.9
comp=Z,7µm,22.0s
O22K Cooper Landing 84.66 27 P **P** **02 58 15.5 -2.5**
baz=248,SNR=19
FIS Fire Island 84.69 27 IAMs_20 IAMs_20 03 32 02.7
comp=Z,8µm,21.0s
E19K Redstone River 84.77 20 IAmb IAmb 02 58 23.7
comp=Z,254nm,1.1s
E19K Redstone River 84.77 20 P **P** **02 58 17.7 -0.8**
baz=240
RER Riviere de l'E 84.78 249 IAMs_20 IAMs_20 03 33 22.6
comp=Z,8µm,20.0s
CAST Castle Rocks 84.82 24 IAmb IAmb 02 58 21.2
comp=Z,200nm,1.2s
CAST IAMs_20 IAMs_20 03 30 10.9
comp=Z,8µm,22.0s
CAST Castle Rocks 84.82 24 P **P** **02 58 17.0 -1.9**
baz=245,SNR=66
C19K Lookout Ridge 84.87 18 IAmb IAmb 02 58 26.1
comp=Z,273nm,1.1s
C19K Lookout Ridge 84.87 18 P **P** **02 58 18.6 -0.4**
baz=238
RC01 Rabbit Creek A 84.89 27 IAmb IAmb 02 58 23.8
comp=Z,234nm,1.0s
RC01 IAMs_20 IAMs_20 03 32 07.8
comp=Z,7µm,21.0s
RC01 Rabbit Creek A 84.89 27 P **P** **02 58 17.7 -1.5**
baz=248,SNR=57
CHUM Lake Minchumin 84.92 24 P **P** **02 58 18.2 -1.1**
baz=245,SNR=118
M22K Willow 84.97 26 P **P** **02 58 17.5 -2.0**
M22K IAMs_20 IAMs_20 03 29 54.1
comp=Z,7µm,21.0s
M22K Willow 84.97 26 P **P** **02 58 17.8 -1.8**
baz=247,SNR=32
D19K Kuna River 85.01 19 P **P** **02 58 18.1 -1.6**
D19K IAMs_20 IAMs_20 03 29 13.4
comp=Z,9µm,22.0s
D19K Kuna River 85.01 19 P **P** **02 58 18.6 -1.1**
baz=239
A19K Wainwright 85.04 17 P **P** **02 58 19.2 -0.5**
baz=236
F20K Avaraart Lake 85.08 20 IAmb IAmb 02 58 23.6
comp=Z,326nm,1.6s
F20K Avaraart Lake 85.08 20 P **P** **02 58 19.8 -0.2**
baz=242
CUT Chulitna 85.17 26 IAmb IAmb 02 58 22.9
comp=Z,308nm,1.1s
CUT IAMs_20 IAMs_20 03 30 57.2
comp=Z,9µm,22.0s
CUT Chulitna 85.17 26 P **P** **02 58 18.6 -1.9**
baz=247,SNR=22
IMAR Indian Mountai 85.29 22 P **P** **02 58 18.7 -2.4**
PMR Palmer 85.35 26 IAmb IAmb 02 58 26.0
comp=Z,132nm,1.0s
PMR IAMs_20 IAMs_20 03 31 00.0
comp=Z,8µm,21.0s
PMR Palmer 85.35 26 P **P** **02 58 20.5 -0.9**
PMR Palmer 85.35 26 P **P** **02 58 20.1 -1.3**
baz=248,SNR=22
KTH Kantishna Hill 85.35 24 IAmb IAmb 02 58 23.3
comp=Z,348nm,1.4s
KTH IAMs_20 IAMs_20 03 29 41.9
comp=Z,9µm,22.0s
HRA Herat 85.48 305 P **P** **02 58 23.6 +0.6**

HRA IAmb IAmb 02 58 32.8
comp=Z,376nm,1.8s
H21K Melozitna Rive 85.50 22 IAmb IAmb 02 58 31.8
comp=Z,358nm,1.9s
H21K Melozitna Rive 85.50 22 P **P 02 58 21.5 -0.7**
baz=244
GHO Glory Hole Cre 85.51 26 IAmb IAmb 02 58 24.7
comp=Z,306nm,1.4s
GHO IAMs_20 IAMs_20 03 31 04.2
comp=Z,9µm,21.0s
E20K Nigu River 85.51 19 P **P 02 58 21.3 -0.9**
baz=241,SNR=91
BPAW Bear Paw Mtn. 85.55 24 IAmb IAmb 02 58 24.7
comp=Z,476nm,1.9s
BPAW IAMs_20 IAMs_20 03 30 20.1
comp=Z,8µm,22.0s
BPAW Bear Paw Mtn. 85.55 24 P **P 02 58 20.6 -1.9**
baz=246,SNR=33
P23K Montague Islan 85.56 28 P **P 02 58 20.8 -1.8**
baz=250,SNR=11
TRF Thorofare Moun 85.57 25 IAmb IAmb 02 58 24.5
comp=Z,380nm,1.7s
TRF IAMs_20 IAMs_20 03 30 46.7
comp=Z,9µm,22.0s
TRF Thorofare Moun 85.57 25 P **P 02 58 20.2 -2.6**
baz=247,SNR=16
KNK Knik Glacier 85.58 27 P **P 02 58 21.5 -1.1**
KNK IAmb IAmb 02 58 26.1
comp=Z,215nm,1.1s
KNK IAMs_20 IAMs_20 03 37 58.2
comp=Z,7µm,20.0s
KNK Knik Glacier 85.58 27 P **P 02 58 21.6 -1.1**
baz=249,SNR=34
D20K Etivluk River 85.60 19 P **P 02 58 21.4 -1.2**
baz=241
I21K Tanana 85.60 23 IAmb IAmb 02 58 32.3
comp=Z,359nm,1.5s
I21K IAMs_20 IAMs_20 03 30 27.6
comp=Z,7µm,22.0s
I21K Tanana 85.60 23 P **P 02 58 22.3 -0.4**
baz=245
SML Sawmill 85.78 26 P **P 02 58 21.8 -2.0**
SML IAmb IAmb 02 58 37.0
comp=Z,281nm,1.1s
SML Sawmill 85.78 26 P **P 02 58 21.7 -2.1**
baz=249,SNR=49
Q23K Middleton Isla 85.87 29 P **P 02 58 23.2 -0.8**
baz=251
F21K Alatna River 85.94 21 P **P 02 58 23.2 -1.1**
baz=244,SNR=30
GLI Glacier Island 86.01 28 IAmb IAmb 02 58 27.2
comp=Z,348nm,1.3s
GLI Glacier Island 86.01 28 P **P 02 58 23.7 -1.1**
baz=250
MLY Manley 86.02 23 IAMs_20 IAMs_20 03 31 02.5
comp=Z,7µm,22.0s
MLY Manley 86.02 23 P **P 02 58 23.1 -1.7**
baz=246,SNR=63
M23K Glacier View 86.05 27 P **P 02 58 23.1 -1.9**
baz=249,SNR=20
WAT1 Susitna Watana 86.06 25 P **P 02 58 23.4 -1.7**
baz=248
HIN Hinchinbrook I 86.12 28 IAmb IAmb 02 58 30.0
comp=Z,195nm,1.0s
HIN IAMs_20 IAMs_20 03 38 28.5
comp=Z,6µm,19.0s
H22K Ishtalitna Cre 86.13 22 P **P 02 58 24.5 -0.8**
baz=246
RND Reindeer 86.15 25 IAmb IAmb 02 58 29.8
comp=Z,190nm,0.9s
RND IAMs_20 IAMs_20 03 31 16.0
comp=Z,9µm,22.0s
MCK McKinley 86.24 25 P **P 02 58 24.1 -1.8**
baz=248,SNR=78
SCM Sheep Creek Mo 86.24 27 P **P 02 58 24.6 -1.4**
baz=250,SNR=22
FID Port Fidalgo 86.25 28 IAmb IAmb 02 58 28.4
comp=Z,377nm,1.4s
WAT6 Susitna Watana 86.32 26 P **P 02 58 25.0 -1.5**
baz=249,SNR=32
E21K Killik River 86.32 19 P **P 02 58 25.2 -1.0**
baz=243
C21K Knifeblade Rid 86.39 19 P **P 02 58 26.1 -0.4**
baz=242
NEA2 Nenana 86.51 24 P **P 02 58 25.2 -2.0**
baz=248,SNR=34
G22K Bettles 86.51 21 P **P 02 58 26.2 -0.9**
baz=246
EYAK Cordova Ski Ar 86.52 28 P **P 02 58 28.3 +1.0**
EYAK Cordova Ski Ar 86.52 28 P **P 02 58 25.5 -1.8**
baz=251
I23K Minto, Yukon-K 86.60 23 IAmb IAmb 02 58 30.3
comp=Z,323nm,1.6s
I23K IAMs_20 IAMs_20 03 31 39.0
comp=Z,8µm,21.0s
I23K Minto, Yukon-K 86.60 23 P **P 02 58 25.7 -1.9**
baz=248,SNR=43
DHY Denali Highway 86.65 25 P **P 02 58 26.7 -1.5**
DHY IAmb IAmb 02 58 30.7
comp=Z,208nm,1.0s
DHY IAMs_20 IAMs_20 03 36 06.4
comp=Z,7µm,20.0s
DHY Denali Highway 86.65 25 P **P 02 58 26.6 -1.5**
baz=250,SNR=90
KLU Klutina 86.75 27 IAmb IAmb 02 58 38.7
comp=Z,415nm,1.7s
KLU IAMs_20 IAMs_20 03 30 37.2
comp=Z,10µm,22.0s
KLU Klutina 86.75 27 P **P 02 58 27.8 -0.8**
baz=251,SNR=28
WSAR Wadi Sarin 86.82 294 LR LR 03 39 33.8
comp=Z,2µm,21.1s,baz=113,slow=37
M24K Tolsona, Glenn 86.84 26 IAMs_20 IAMs_20 03 32 20.5
comp=Z,7µm,20.0s
M24K Tolsona, Glenn 86.84 26 P **P 02 58 28.3 -0.6**
baz=251,SNR=22
A21K Barrow 86.89 16 P **P 02 58 27.6 -1.2**
baz=240
E22K Anaktuvuk Pass 86.91 20 IAmb IAmb 02 58 33.8
comp=Z,150nm,1.1s
E22K Anaktuvuk Pass 86.91 20 P **P 02 58 28.3 -0.8**
baz=245
D22K Ayikyak River 86.94 19 IAMs_20 IAMs_20 03 31 11.7
comp=Z,8µm,22.0s
D22K Ayikyak River 86.94 19 P **P 02 58 28.9 -0.3**
baz=244
KAIM Kayak Island 86.96 29 P **P 02 58 27.7 -1.7**
baz=252
G23K Bananza Creek 86.96 22 IAmb IAmb 02 58 32.8
comp=Z,256nm,1.6s
G23K Bananza Creek 86.96 22 P **P 02 58 28.8 -0.6**
baz=247,SNR=55
MDM Murphy Dome 86.98 23 IAMs_20 IAMs_20 03 31 15.9
comp=Z,7µm,22.0s
RAGM Ragged Mountai 86.98 28 IAMs_20 IAMs_20 03 36 10.2
comp=Z,9µm,20.0s
COLA College 87.10 24 P **P 02 58 28.1 -1.9**
COLA IAmb IAmb 02 58 31.6
comp=Z,125nm,0.9s
COLA College 87.10 24 P **P 02 58 28.3 -1.7**
COLA College 87.10 24 P **P 02 58 28.2 -1.9**
baz=249
COLA College 87.10 24 ⇑P **P 02 58 28.0 -2.0**
COLD Coldfoot 87.10 21 P **P 02 58 29.5 -0.5**
baz=247,SNR=60
HMT Hamilton 87.16 28 IAMs_20 IAMs_20 03 36 04.0
comp=Z,9µm,20.0s
BMRM Bremner River 87.19 28 P **P 02 58 29.4 -1.2**
baz=252,SNR=26
HDA Harding Lake 87.30 24 P **P 02 58 28.9 -2.1**
baz=250,SNR=35
SUCK Suckling Hills 87.31 29 IAMs_20 IAMs_20 03 31 44.0
comp=Z,10µm,22.0s
POKR Poker Plat Res 87.35 23 IAmb IAmb 02 58 40.0
comp=Z,318nm,2.0s
POKR Poker Plat Res 87.35 23 P **P 02 58 29.3 -2.0**
baz=249,SNR=14
HARP HAARP 87.39 26 P **P 02 58 30.6 -0.9**
baz=252,SNR=10
N25K Chitina, Valde 87.39 27 P **P 02 58 30.5 -1.2**
baz=252,SNR=26
H24K Noodor Dome 87.43 23 IAMs_20 IAMs_20 03 34 54.9
comp=Z,8µm,20.0s
H24K Noodor Dome 87.43 23 P **P 02 58 30.4 -1.4**
baz=249
PAX Paxson 87.44 26 P **P 02 58 30.7 -1.1**
baz=251,SNR=34
IL31 87.45 24 P **P 02 58 28.6 -3.1**

ILAR Eielson Array 87.45 24 P **P 02 58 29.2 -2.5**
comp=Z,49nm,0.9s,baz=255,slow=2.9,SNR=128
ILAR PKKPbc **PKKPbc 03 16 23.1 -1.2**
comp=Z,0.8nm,0.7s,baz=335,slow=0.8,SNR=6.7
ILAR PKPPKP **P'P'df 03 24 32.1 +4.6**
comp=Z,0.4nm,1.0s,baz=9.5,slow=2.7,SNR=4.3
ILAR LR LR 03 33 32.2
comp=Z,3µm,21.8s,baz=249,slow=33
comp=Z,49nm,0.9s
BGLC Bering Glacier 87.56 29 P **P 02 58 31.5 -0.8**
baz=253
K24K Donnelly Dome 87.58 25 P **P 02 58 30.8 -1.6**
baz=251,SNR=23
D23K Nanushuk River 87.63 19 P **P 02 58 32.2 -0.3**
baz=246,SNR=426
D23K S **S 03 09 14.9 +1.4**
baz=246
E23K Chandalar 87.63 20 P **P 02 58 32.1 -0.6**
baz=247
E23K S **S 03 09 14.2 +0.5**
baz=247
GLB Gilahina Butte 87.70 27 IAmb IAmb 02 58 35.9
comp=Z,264nm,1.3s
SNH Sunshine Point 87.79 29 IAMs_20 IAMs_20 03 31 45.7
comp=Z,10µm,22.0s
VRDI Verde Repeater 87.80 28 IAmb IAmb 02 58 36.5
comp=Z,348nm,1.6s
CRQM Cirque 87.81 28 IAmb IAmb 02 58 37.5
comp=Z,202nm,0.9s
CRQM IAMs_20 IAMs_20 03 36 37.8
comp=Z,7µm,20.0s
CRQE Cirque 87.83 28 P **P 02 58 32.5 -1.4**
baz=253,SNR=15
CRQE S **S 03 09 15.8 -0.1**
baz=253
WAX Waxell Ridge 87.86 29 P **P 02 58 33.7 -0.3**
WAX IAMs_20 IAMs_20 03 32 34.5
comp=Z,8µm,22.0s
G24K Hadweenzic Riv 87.90 22 P **P 02 58 32.6 -1.3**
baz=249,SNR=120
G24K S **S 03 09 16.1 +0.1**
baz=249
RIDG Independent Ri 87.95 25 IAmb IAmb 02 58 40.3
comp=Z,248nm,1.1s
RIDG Independent Ri 87.95 25 P **P 02 58 32.9 -1.4**
baz=252,SNR=83
RIDG S **S 03 09 16.0 -0.7**
baz=252
J25K Salcha River, 88.01 24 IAMs_20 IAMs_20 03 33 50.3
comp=Z,7µm,21.0s
J25K Salcha River, 88.01 24 P **P 02 58 33.1 -1.5**
baz=251
J25K S **S 03 09 14.9 -2.5**
baz=251
C23K Itkillik River 88.01 19 P **P 02 58 33.7 -0.7**
baz=246
C23K S **S 03 09 16.7 -0.3**
baz=246
F24K Squaw Lake 88.04 21 P **P 02 58 33.7 -0.9**
baz=249
MCARA McCarthy VSAT 88.05 28 P **P 02 58 33.7 -1.0**
baz=253,SNR=12
MCARA S **S 03 09 17.2 -0.5**
baz=253
MESA MESA 88.22 29 P **P 02 58 35.6 -0.2**
MESA IAMs_20 IAMs_20 03 33 18.0
comp=Z,8µm,20.0s
MESA MESA 88.22 29 P **P 02 58 35.1 -0.7**
baz=254
MESA S **S 03 09 22.3 +2.5**
baz=254
PRP Porcupine Dome 88.24 23 P **P 02 58 35.8 +0.1**
baz=251,SNR=7.3
D24K Happy Valley 88.32 19 IAMs_20 IAMs_20 03 32 08.3
comp=Z,7µm,22.0s
D24K Happy Valley 88.32 19 P **P 02 58 35.4 -0.5**
baz=248
D24K S **S 03 09 19.9 -0.1**
baz=248
L26K Log Cabin Wild 88.37 26 IAmb IAmb 02 58 39.3
comp=Z,179nm,1.3s
L26K IAMs_20 IAMs_20 03 35 42.0
comp=Z,8µm,20.0s
L26K Log Cabin Wild 88.37 26 P **P 02 58 35.4 -0.9**
baz=253,SNR=22
L26K S **S 03 09 20.2 -0.6**
baz=253
SCRK Sand Creek 88.38 25 IAmb IAmb 02 58 39.1
comp=Z,223nm,1.4s
SCRK Sand Creek 88.38 25 P **P 02 58 35.1 -1.3**
baz=252,SNR=54
G25K Bearman Lake 88.43 22 P **P 02 58 35.7 -0.6**
baz=250,SNR=55
G25K S **S 03 09 21.1 +0.1**
baz=250
C24K Franklin Bluff 88.58 19 P **P 02 58 36.7 -0.3**
baz=248
C24K S **S 03 09 20.8 -1.6**
baz=248
TABL Table Mountain 88.67 29 IAmb IAmb 02 58 43.0
comp=Z,186nm,0.9s
TABL IAMs_20 IAMs_20 03 33 33.1
comp=Z,8µm,21.0s
FYU Fort Yukon 88.69 22 IAMs_20 IAMs_20 03 35 42.2
comp=Z,7µm,20.0s
CTG Chitna Glacier 88.72 28 P **P 02 58 37.1 -1.0**
baz=255,SNR=33
CTG S **S 03 09 23.2 -1.1**
baz=255
J26L Joseph Creek 88.72 25 IAMs_20 IAMs_20 03 34 24.0
comp=Z,8µm,22.0s
J26L Joseph Creek 88.72 25 P **P 02 58 37.1 -0.8**
baz=253
J26L S **S 03 09 23.5 -0.5**
baz=253
CTGM Chitina Glacie 88.72 28 P **P 02 58 36.9 -1.1**
M27K Edge Creek, AK 88.84 27 IAMs_20 IAMs_20 03 33 04.4
comp=Z,9µm,22.0s
M27K Edge Creek, AK 88.84 27 P **P 02 58 38.2 -0.4**
baz=254,SNR=49
M27K S **S 03 09 24.5 -1.0**
baz=254
LOGN Logan Glacier 88.84 28 IAmb IAmb 02 58 44.2
comp=Z,114nm,1.0s
SOHO SOHO 88.84 294 *i* P **P 02 58 40.4 +1.2**
SNR=14
F25K Christian Rive 88.88 21 P **P 02 58 38.4 -0.2**
baz=251,SNR=74
F25K S **S 03 09 25.7 +0.3**
baz=251
SHAO Shalim 88.94 288 *i* P **P 02 58 40.8 +0.9**
SNR=11
PINM Pinnacle 89.02 29 P **P 02 58 38.8 -0.6**
baz=256
PINM S **S 03 09 27.1 0.0**
baz=256
L27K Beaver Creek, 89.05 26 IAMs_20 IAMs_20 03 33 59.9
comp=Z,8µm,21.0s
L27K Beaver Creek, 89.05 26 P **P 02 58 39.0 -0.5**
baz=254
L27K S **S 03 09 26.2 -1.0**
baz=254
E25K Arctic Village 89.08 21 IAMs_20 IAMs_20 03 35 28.2
comp=Z,6µm,20.0s
E25K Arctic Village 89.08 21 P **P 02 58 39.0 -0.5**
baz=251,SNR=129
E25K S **S 03 09 26.3 -0.9**
baz=251
I26K Coal Creek Min 89.12 24 IAmb IAmb 02 58 42.2
comp=Z,179nm,1.4s
I26K Coal Creek Min 89.12 24 P **P 02 58 38.4 -1.3**
baz=253
I26K S **S 03 09 25.8 -1.9**
baz=253
D25K Kavik River 89.20 20 IAmb IAmb 02 58 43.2
comp=Z,452nm,1.8s
D25K Kavik River 89.20 20 P **P 02 58 39.3 -0.7**
baz=250
D25K S **S 03 09 28.3 -0.1**
baz=250
MDH Madha 89.20 295 *i* P **P 02 58 42.1 +1.2**
SNR=18
K27K Chicken 89.20 25 IAMs_20 IAMs_20 03 33 00.2
comp=Z,10µm,22.0s
K27K Chicken 89.20 25 P **P 02 58 39.9 -0.2**
baz=254
K27K S **S 03 09 28.3 -0.2**
baz=254

BMAR Burnt Mountain 89.21 22 P **P 02 58 39.2 -0.9**
UOSS Minazif 89.24 295 P **P 02 58 41.4 +0.2**
UOSS IAmb IAmb 02 58 49.0
comp=Z,231nm,2.0s
UOSS Minazif 89.24 295 P **P 02 58 41.7 +0.5**
HATD Hatta, Dubai 89.29 295 *i* P **P 02 58 42.3 +0.9**
SNR=33
BVCY Beaver Creek 89.31 27 P **P 02 58 40.5 -0.1**
baz=255,SNR=27
BVCY S **S 03 09 28.5 -1.2**
baz=255
MSFE Esma-Masafi 89.33 295 *i* P **P 02 58 42.2 +0.6**
SNR=15
YUK3 Moose Creek 89.33 28 P **P 02 58 40.5 -0.6**
baz=256,SNR=38
YUK3 S **S 03 09 28.9 -1.3**
baz=256
PNL Peninsula 89.33 30 P **P 02 58 41.8 +1.0**
PNL Peninsula 89.33 30 P **P 02 58 40.1 -0.8**
baz=257
PNL S **S 03 09 30.7 +0.8**
baz=257
ASHO Ashiyiah 89.34 295 *i* P **P 02 58 42.2 +0.6**
SNR=20
GEYT Alibeck 89.36 308 P **P 02 58 40.5 -0.9**
comp=Z,5.9nm,0.6s,baz=194,slow=0.6,SNR=18
GEYT PP **PP 03 02 17.9 +5.3**
comp=Z,34nm,1.2s,baz=87,slow=6.2,SNR=4.7
GEYT LR LR 03 40 56.1
comp=Z,3µm,21.8s,baz=104,slow=37
comp=Z,5.9nm,0.6s
G26K Porcupine Rive 89.36 22 P **P 02 58 40.6 -0.1**
baz=253
G26K S **S 03 09 31.2 +1.4**
baz=253
SHME Shamm 89.43 296 *i* P **P 02 58 42.4 +0.4**
SNR=17
F26K Sheenjek River 89.45 21 P **P 02 58 41.4 +0.2**
baz=252,SNR=186
F26K S **S 03 09 33.4 +2.6**
baz=252
ALNE Al Ain 89.54 294 *i* P **P 02 58 43.5 +0.9**
SNR=26
NAZ Nazwa, Dubai 89.73 295 *i* P **P 02 58 43.6 +0.2**
SNR=16
FAQ Al Faqa, Dubai 89.77 295 *i* P **P 02 58 43.8 +0.2**
SNR=20
EGAK Eagle 89.79 25 IAmb IAmb 02 58 46.6
comp=Z,148nm,1.1s
EGAK IAMs_20 IAMs_20 03 35 07.3
comp=Z,10µm,21.0s
EGAK Eagle 89.79 25 P **P 02 58 42.4 -0.4**
baz=255,SNR=49
EGAK S **S 03 09 34.6 +0.7**
baz=255
AB31 Akbulak array 89.81 319 *i* P **P 02 58 41.1 -2.1**
ABKAR Akbulak array 89.81 319 P **P 02 58 40.0 -3.2**
I27K Kandik River 89.82 24 P **P 02 58 42.6 -0.5**
baz=255
I27K S **S 03 09 34.4 +0.1**
baz=255
O29M Mount Kennedy 89.88 29 IAmb IAmb 02 58 46.9
comp=Z,204nm,1.4s
O29M IAMs_20 IAMs_20 03 37 35.0
comp=Z,6µm,20.0s
O29M Mount Kennedy 89.88 29 P **P 02 58 43.0 -0.5**
baz=257
O29M S **S 03 09 35.4 +0.2**
baz=257
ASUD Al Ashush, Dub 89.99 295 *i* P **P 02 58 46.0 +1.3**
SNR=10.0
H27K Steamboat Moun 90.02 23 P **P 02 58 43.3 -0.7**
baz=255,SNR=207
H27K S **S 03 09 37.8 +1.7**
baz=255
YUK4 Talbot Arm 90.08 28 P **P 02 58 44.1 -0.4**
baz=257,SNR=19
YUK4 S **S 03 09 38.4 +1.2**
baz=257
YUK6 Outpost Mounta 90.12 29 P **P 02 58 43.4 -1.4**
baz=258,SNR=5.6
YUK6 S **S 03 09 36.5 -1.1**
baz=258
P29M Windy Craggy 90.15 30 P **P 02 58 44.2 -0.4**
baz=258
P29M S **S 03 09 38.1 +0.5**
baz=258
DAWY Dawson 90.36 25 IAmb IAmb 02 58 49.7
comp=Z,307nm,1.4s
DAWY IAMs_20 IAMs_20 03 34 53.3
comp=Z,10µm,21.0s
DAWY Dawson 90.36 25 P **P 02 58 44.8 -0.7**
baz=257,SNR=117
DAWY S **S 03 09 41.2 +1.8**
baz=257
M29M Somme Creek 90.40 27 IAmb IAmb 02 58 49.2
comp=Z,215nm,1.5s
M29M IAMs_20 IAMs_20 03 32 54.7
comp=Z,11µm,22.0s
M29M Somme Creek 90.40 27 P **P 02 58 45.5 -0.4**
baz=258
M29M S **S 03 09 42.1 +2.2**
baz=258
I28M Miner Creek 90.46 24 IAmb IAmb 02 58 49.3
comp=Z,246nm,1.4s
I28M IAMs_20 IAMs_20 03 38 01.9
comp=Z,6µm,19.0s
I28M Miner Creek 90.46 24 P **P 02 58 45.1 -1.0**
baz=256
I28M S **S 03 09 40.6 +0.3**
baz=256
HYT Haines Junctio 90.51 29 P **P 02 58 45.4 -1.0**
HYT IAMs_20 IAMs_20 03 33 23.6
comp=Z,9µm,22.0s
HYT Haines Junctio 90.51 29 P **P 02 58 45.0 -1.4**
baz=258,SNR=19
HYT S **S 03 09 41.9 +0.9**
baz=258
S31K Pelican 90.59 32 P **P 02 58 46.0 -0.6**
baz=259
S31K S **S 03 09 42.9 +1.5**
baz=259
P30M Million Dollar 90.63 30 P **P 02 58 46.3 -0.6**
baz=259,SNR=5.1
P30M S **S 03 09 43.9 +1.9**
baz=259
L29M L29M 90.69 27 IAmb IAmb 02 58 53.2
comp=Z,123nm,0.9s
L29M IAMs_20 IAMs_20 03 34 22.5
comp=Z,6µm,20.0s
L29M L29M 90.69 27 P **P 02 58 46.8 -0.3**
baz=258
L29M S **S 03 09 44.2 +1.7**
baz=258
SVE Sverdlovsk 90.70 327 *de* P **P 02 58 46.4 -0.8**
SVE *e* 03 02 22.0
SVE *eS* **SKSac 03 09 19.1 +0.9**
SVE *e* 03 15 51.3
SVE pmax pmax
comp=Z,141nm,1.6s
SVE MLR MLR
comp=Z,4µm,21.0s
PLBC Pleasant Camp 90.80 30 P **P 02 58 47.1 -0.5**
baz=259
PLBC S **S 03 09 42.8 -0.6**
baz=259
SIT Sitka 90.91 33 P **P 02 58 47.7 -0.4**
baz=260
SIT S **S 03 09 45.1 +0.7**
baz=260
R31K City Hall, Gus 90.93 31 P **P 02 58 47.3 -0.8**
baz=260
R31K S **S 03 09 46.7 +2.1**
baz=260
J29N Klondike Camp 90.94 25 IAmb IAmb 02 59 00.3
comp=Z,319nm,1.8s
J29N IAMs_20 IAMs_20 03 35 12.9
comp=Z,9µm,21.0s
J29N Klondike Camp 90.94 25 P **P 02 58 48.3 0.0**
baz=258,SNR=30
J29N S **S 03 09 45.7 +0.9**
baz=258
F28M Old Crow 91.00 22 IAmb IAmb 02 58 51.9
comp=Z,178nm,1.7s
F28M IAMs_20 IAMs_20 03 33 33.2
comp=Z,9µm,22.0s
F28M Old Crow 91.00 22 P **P 02 58 47.8 -0.6**
baz=256,SNR=21

F28M					S	**S**	**03 09 47.0**	**+2.0**		
	baz=256									
K29M	**Barlow Dome**	**91.11**	**26**		IAmb	IAmb	02 58 53.4			
K29M	comp=Z,231nm,1.4s				IAMs_20	IAMs_20	03 33 26.5			
	comp=Z,10µm,22.0s									
K29M	**Barlow Dome**	**91.11**	**26**		P	**P**	**02 58 48.9**	**-0.3**		
K29M	baz=258,SNR=72				S	**S**	**03 09 46.1**	**-0.3**		
	baz=258									
O30N	**Mendenhall**	**91.18**	**29**		IAmb	IAmb	02 58 52.5			
O30N	comp=Z,153nm,1.5s				IAMs_20	IAMs_20	03 37 58.3			
	comp=Z,7µm,20.0s									
O30N	**Mendenhall**	**91.18**	**29**		P	**P**	**02 58 48.6**	**-0.8**		
O30N	baz=260,SNR=10				S	**S**	**03 09 47.8**	**+0.8**		
	baz=260									
M30M	**Minto, Yukon**	**91.19**	**27**		IAmb	IAmb	02 58 52.6			
	comp=Z,267nm,2.0s									
M30M	**Minto, Yukon**	**91.19**	**27**		P	**P**	**02 58 48.9**	**-0.6**		
M30M	baz=259,SNR=19				S	**S**	**03 09 47.8**	**+0.9**		
	baz=259									
AKTO	**Aktyubinsk**	**91.23**	**320**		P	**P**	**02 58 48.8**	**-1.0**		
AKTO	comp=Z,44nm,1.2s,baz=86,slow=4.9,SNR=28				LR	LR	03 40 10.1			
	comp=Z,2µm,20.5s,baz=88,slow=36									
	comp=Z,44nm,1.2s									
H29M	**Whitestone**	**91.26**	**23**		IAmb	IAmb	02 58 52.7			
	comp=Z,228nm,1.6s									
H29M	**Whitestone**	**91.26**	**23**		P	**P**	**02 58 49.1**	**-0.6**		
H29M	baz=258,SNR=31				S	**S**	**03 09 46.8**	**-0.7**		
	baz=258									
SKAG	**Skagway**	**91.32**	**30**		IAmb	IAmb	02 58 53.4			
SKAG	comp=Z,358nm,1.9s				IAMs_20	IAMs_20	03 34 18.2			
	comp=Z,6µm,20.0s									
SKAG	**Skagway**	**91.32**	**30**		P	**P**	**02 58 50.9**	**+0.9**		
SKAG	**Skagway**	**91.32**	**30**		P	**P**	**02 58 49.5**	**-0.5**		
SKAG	baz=260				S	**S**	**03 09 49.2**	**+1.1**		
	baz=260									
S32K	**Killisnoo**	**91.38**	**32**		IAmb	IAmb	02 59 02.7			
	comp=Z,265nm,1.8s									
S32K	**Killisnoo**	**91.38**	**32**		P	**P**	**02 58 49.9**	**-0.4**		
	baz=261									
R32K	**Eaglecrest**	**91.54**	**32**		P	**P**	**02 58 50.0**	**-1.0**		
R32K	baz=261				S	**S**	**03 09 50.9**	**+0.7**		
	baz=261									
JIS	**Juneau Island**	**91.61**	**32**		P	**P**	**02 58 52.9**	**+1.5**		
WHY	**Whitehorse**	**91.74**	**29**		IAMs_20	IAMs_20	03 36 16.3			
	comp=Z,7µm,20.0s									
WHY	**Whitehorse**	**91.74**	**29**		P	**P**	**02 58 51.0**	**-1.2**		
WHY	baz=261,SNR=9.1				S	**S**	**03 09 52.2**	**0.0**		
	baz=261									
J30M	**Hart River**	**91.77**	**25**		IAmb	IAmb	02 58 55.5			
	comp=Z,267nm,1.5s									
J30M	**Hart River**	**91.77**	**25**		P	**P**	**02 58 51.7**	**-0.5**		
J30M	baz=259				S	**S**	**03 09 52.3**	**0.0**		
	baz=259									
ARU	**Arti**	**91.77**	**326**		P	**P**	**02 58 49.4**	**-2.8**		
ARU					IAmb	IAmb	02 58 58.7			
	comp=Z,138nm,1.2s									
ARU	**Arti**	**91.77**	**326**	*c i*	P	**P**	**02 58 50.5**	**-1.7**		
ARU							03 02 30.6			
ARU					PPP	PPP	03 04 32.3			
ARU					S	**SKSac**	**03 09 23.4**	**-0.9**		
ARU					PS	**PnS**	**03 11 11.8**	**+7.1**		
ARU					pmax	pmax				
	comp=Z,158nm,1.6s									
ARU	**Arti**	**91.77**	**326**		P	**P**	**02 58 50.3**	**-1.9**		
ARU	comp=Z,25nm,0.6s,baz=116,slow=1.6,SNR=40				LR	LR	03 44 31.0			
	comp=Z,2µm,18.4s,baz=96,slow=38									
	comp=Z,25nm,0.6s									
MAYO	**Mayo, Yukon**	**91.78**	**26**		IAmb	IAmb	02 58 55.4			
	comp=Z,239nm,1.4s									
MAYO					IAMs_20	IAMs_20	03 34 44.0			
	comp=Z,9µm,21.0s									
MAYO	**Mayo, Yukon**	**91.78**	**26**		P	**P**	**02 58 51.3**	**-0.9**		
MAYO	baz=260				S	**S**	**03 09 50.9**	**-1.3**		
	baz=260									
D28M	**Stokes Point**	**91.80**	**20**		P	**P**	**02 58 51.4**	**-0.7**		
D28M	baz=257				S	**S**	**03 09 54.2**	**+2.1**		
	baz=257									
I30M	**Mount Dempster**	**91.87**	**25**		IAmb	IAmb	02 58 56.4			
	comp=Z,188nm,1.5s									
I30M	**Mount Dempster**	**91.87**	**25**		P	**P**	**02 58 51.9**	**-0.7**		
I30M	baz=259				S	**S**	**03 09 54.5**	**+1.3**		
	baz=259									
CRAG	**Craig**	**91.87**	**35**		IAMs_20	IAMs_20	03 39 06.1			
	comp=Z,10µm,20.0s									
CRAG	**Craig**	**91.87**	**35**		P	**P**	**02 58 51.8**	**-0.8**		
CRAG	baz=262				S	**S**	**03 09 57.1**	**+3.8**		
	baz=262									
E29M	**Blow River**	**91.90**	**21**		IAMs_20	IAMs_20	03 34 38.0			
	comp=Z,7µm,22.0s									
E29M	**Blow River**	**91.90**	**21**		P	**P**	**02 58 51.9**	**-0.6**		
E29M	baz=258				S	**S**	**03 09 56.1**	**+3.0**		
	baz=258									
EPYK	**Eagle Plains**	**91.94**	**23**		P	**P**	**02 58 51.6**	**-1.3**		
EPYK	baz=259,SNR=33				S	**S**	**03 09 53.8**	**+0.1**		
	baz=259									
U33K	**Whale Pass**	**91.97**	**34**		P	**P**	**02 58 51.4**	**-1.6**		
U33K	baz=262				S	**S**	**03 09 54.6**	**+0.6**		
	baz=262									
P32M	**Atlin**	**92.15**	**30**		IAMs_20	IAMs_20	03 35 21.2			
	comp=Z,7µm,20.0s									
P32M	**Atlin**	**92.15**	**30**		P	**P**	**02 58 53.1**	**-0.9**		
P32M	baz=262				S	**S**	**03 09 59.4**	**+3.6**		
	baz=262									
T33K	**Petersburg**	**92.16**	**33**		P	**P**	**02 58 52.9**	**-1.0**		
	baz=262									
M31M	**Drury Creek, Y**	**92.22**	**28**		IAMs_20	IAMs_20	03 38 37.9			
	comp=Z,7µm,20.0s									
M31M	**Drury Creek, Y**	**92.22**	**28**		P	**P**	**02 58 53.6**	**-0.6**		
M31M	baz=261,SNR=9.2				S	**S**	**03 10 02.2**	**+5.9**		
	baz=261									
G30M	**tAoh Zraii Nji**	**92.25**	**23**		IAMs_20	IAMs_20	03 34 42.4			
	comp=Z,9µm,22.0s									
G30M	**tAoh Zraii Nji**	**92.25**	**23**		P	**P**	**02 58 53.2**	**-1.1**		
G30M	baz=260,SNR=27				S	**S**	**03 09 59.5**	**+3.1**		
	baz=260									
FOMA	**Nahampoana Res**	**92.40**	**245**		IAMs_20	IAMs_20	03 37 54.0			
	comp=Z,7µm,20.0s									
WRAK	**Wrangell Islan**	**92.43**	**34**		P	**P**	**02 58 55.5**	**+0.3**		
WRAK	**Wrangell Islan**	**92.43**	**34**		P	**P**	**02 58 54.2**	**-1.1**		
WRAK	baz=263				S	**S**	**03 10 03.6**	**+5.3**		
	baz=263									
F30M	**Barrier River**	**92.53**	**22**		P	**P**	**02 58 54.6**	**-0.9**		
F30M	baz=260				S	**S**	**03 10 01.9**	**+3.1**		
	baz=260									
N32M	**Quiet Lake**	**92.69**	**29**		P	**P**	**02 58 55.5**	**-0.9**		
N32M	**Quiet Lake**	**92.69**	**29**		P	**P**	**02 58 55.5**	**-0.9**		
N32M	baz=262				S	**S**	**03 10 07.2**	**+6.7**		
	baz=262									
P33M	**Teslin, Yukon**	**92.69**	**30**		IAMs_20	IAMs_20	03 35 32.3			
	comp=Z,6µm,22.0s									
P33M	**Teslin, Yukon**	**92.69**	**30**		P	**P**	**02 58 55.7**	**-0.8**		
P33M	baz=262,SNR=6.2				S	**S**	**03 10 05.1**	**+4.4**		
	baz=262									
V35K	**Ketchikan**	**92.71**	**35**		IAmb	IAmb	02 59 00.5			
	comp=Z,155nm,1.6s									
V35K	**Ketchikan**	**92.71**	**35**		P	**P**	**02 58 55.6**	**-0.9**		
V35K	baz=263				S	**S**	**03 10 07.0**	**+6.2**		
	baz=263									
FARO	**Faro, Yukon**	**92.71**	**28**		P	**P**	**02 58 55.5**	**-0.9**		
	baz=262,SNR=19									
FARO					S	**S**	**03 10 05.5**	**+4.9**		
	baz=262									
Q32M	**Nakina River**	**92.80**	**31**		IAMs_20	IAMs_20	03 35 52.5			
	comp=Z,6µm,21.0s									
Q32M	**Nakina River**	**92.80**	**31**		P	**P**	**02 58 56.5**	**-0.7**		
Q32M	baz=263				S	**S**	**03 10 09.2**	**+7.2**		
	baz=263									
ELIB	**Princess Elisa**	**92.81**	**196**	*d*	P	**P**	**02 58 56.5**	**-0.4**		
	comp=Z,51nm,1.4s									
ELIB				*dx*		x	02 58 58.4			
VOI	**Vohitsoka**	**92.98**	**248**		IAMs_20	IAMs_20	03 38 02.8			
	comp=Z,9µm,20.0s									
G31M	**Satah River**	**93.00**	**23**		P	**P**	**02 58 55.9**	**-1.7**		
G31M	baz=261,SNR=25				S	**S**	**03 10 04.7**	**+1.8**		
	baz=261									
S34M	**Telegraph Cree**	**93.27**	**32**		IAMs_20	IAMs_20	03 35 11.9			
	comp=Z,7µm,21.0s									
S34M	**Telegraph Cree**	**93.27**	**32**		P	**P**	**02 58 58.3**	**-0.8**		
S34M	baz=264				S	**S**	**03 10 07.8**	**+2.1**		
	baz=264									
F31M	**Tsiigehtchic**	**93.28**	**23**		IAmb	IAmb	02 59 01.0			
	comp=Z,232nm,1.8s									
F31M					IAMs_20	IAMs_20	03 35 02.5			
	comp=Z,8µm,21.0s									
F31M	**Tsiigehtchic**	**93.28**	**23**		P	**P**	**02 58 57.6**	**-1.3**		
	baz=262,SNR=29									
F31M					S	**S**	**03 10 07.1**	**+1.7**		
	baz=262									
INK	**Inuvik**	**93.48**	**22**		P	**P**	**02 58 58.2**	**-1.6**		
INK					IAmb	IAmb	02 59 01.9			
	comp=Z,142nm,1.8s									
INK					IAMs_20	IAMs_20	03 35 15.8			
	comp=Z,6µm,22.0s									
INK	**Inuvik**	**93.48**	**22**		P	**P**	**02 58 58.6**	**-1.2**		
	baz=262,SNR=20									
INK					S	**S**	**03 10 09.4**	**+2.3**		
	baz=262									
INK	**Inuvik**	**93.48**	**22**		P	**P**	**02 58 58.2**	**-1.6**		
INK					pmax	pmax				
	comp=Z,142nm,1.8s									
INK	**Inuvik**	**93.48**	**22**		LR	LR	03 36 23.1			
	comp=Z,3µm,22.0s,baz=243,slow=33									
GRNB	**Grenville Isla**	**93.50**	**36**		P	**P**	**02 59 00.3**	**0.0**		
GRNB					IAmb	IAmb	02 59 04.3			
	comp=Z,134nm,1.6s									
R33M	**Jennings River**	**93.52**	**31**		P	**P**	**02 58 59.9**	**-0.5**		
R33M	baz=264				S	**S**	**03 10 11.7**	**+3.6**		
	baz=264									
T35M	**Bob Quinn**	**93.65**	**33**		IAMs_20	IAMs_20	03 36 36.9			
	comp=Z,9µm,19.0s									
T35M	**Bob Quinn**	**93.65**	**33**		P	**P**	**02 58 59.8**	**-1.1**		
	baz=264									
U35K	**Hyder**	**93.67**	**34**		P	**P**	**02 59 00.3**	**-0.6**		
	baz=264									
DLBC	**Dease Lake**	**93.91**	**32**		P	**P**	**02 59 00.9**	**-1.2**		
DLBC	**Dease Lake**	**93.91**	**32**		P	**P**	**02 59 01.2**	**-0.9**		
	baz=265									
DLBC	**Dease Lake**	**93.91**	**32**		P	**P**	**02 59 01.6**	**-0.5**		
	comp=Z,17nm,1.0s,baz=298,slow=1.1,SNR=9.2									
DLBC					LR	LR	03 34 24.0			
	comp=Z,3µm,20.9s,baz=277,slow=31									
	comp=Z,17nm,1.0s									
HOLB	**Holberg**	**94.34**	**40**		IAMs_20	IAMs_20	03 32 09.8			
	comp=Z,7µm,22.0s									
BBB	**Bella Bella**	**94.47**	**38**		LR	LR	03 38 57.6			
	comp=Z,6µm,18.1s,baz=260,slow=34									
WTLY	**Watson Lake, Y**	**94.68**	**30**		IAmb	IAmb	02 59 09.3			
	comp=Z,164nm,1.4s									
WTLY					IAMs_20	IAMs_20	03 36 29.9			
	comp=Z,7µm,21.0s									
WTLY	**Watson Lake, Y**	**94.68**	**30**		P	**P**	**02 59 04.4**	**-1.2**		
	baz=266,SNR=28									
WTLY					S	**S**	**03 10 23.1**	**+5.0**		
	baz=266									
TGTN	**Hyland Airport**	**95.03**	**29**		P	**P**	**02 59 06.3**	**-0.9**		
	baz=266									
CBB	**Campbell River**	**96.08**	**40**		IAMs_20	IAMs_20	03 34 08.7			
	comp=Z,7µm,22.0s									
KEBM	**Edson Butte**	**96.49**	**48**		IAMs_20	IAMs_20	03 37 31.4			
	comp=Z,6µm,19.0s									
NVL	**N'lazarevskaya**	**96.52**	**195**	*e*	P	**P**	**02 59 13.5**	**-0.2**		
NVL				*e*	S	**SKSac**	**03 09 48.0**	**-1.6**		
NVL				*e*	PS	**PS**	**03 11 57.2**	**+1.7**		
NVL					pmax	pmax				
	comp=Z,60nm,1.5s									
NVL					smax	smax				
	comp=N,2µm,14.0s									
NVL					MLR	MLR				
	comp=Z,17µm,19.0s									
KBO	**Bosley Butte**	**96.54**	**48**		IAMs_20	IAMs_20	03 37 33.8			
	comp=Z,6µm,20.0s									
KMPM	**Mount Pierce**	**96.55**	**50**		IAMs_20	IAMs_20	03 36 54.0			
	comp=Z,6µm,20.0s									
A36M	**Sachs Harbour**	**96.55**	**18**		P	**P**	**02 59 12.2**	**-1.6**		
	baz=270,SNR=21									
A36M					S	**S**	**03 10 37.9**	**+4.2**		
	baz=270									
JCC	**Jacoby Creek,**	**96.63**	**50**		IAMs_20	IAMs_20	03 34 13.3			
	comp=Z,8µm,22.0s									
KRPM	**Rodgers**	**96.65**	**49**		IAMs_20	IAMs_20	03 34 48.7			
	comp=Z,8µm,20.0s									
KRMB	**Red Mountain**	**96.75**	**49**		IAMs_20	IAMs_20	03 46 21.4			
	comp=Z,6µm,18.0s									
KSXB	**Camp Six Broad**	**96.79**	**49**		IAMs_20	IAMs_20	03 39 27.3			
	comp=Z,5µm,19.0s									
J01E	**Myrtle Point**	**96.80**	**47**		IAMs_20	IAMs_20	03 38 00.4			
	comp=Z,7µm,20.0s									
CLRS	**Cowichan Lake**	**96.84**	**42**		IAMs_20	IAMs_20	03 45 43.0			
	comp=Z,6µm,18.0s									
KMRM	**Mail Ridge**	**96.85**	**50**		IAMs_20	IAMs_20	03 36 49.1			
	comp=Z,6µm,20.0s									
KHMM	**Horse Mountain**	**96.86**	**50**		P	**P**	**02 59 15.1**	**-1.0**		
KHMM					IAmb	IAmb	02 59 20.7			
	comp=Z,194nm,1.7s									
KHMM					IAMs_20	IAMs_20	03 34 21.3			
	comp=Z,8µm,22.0s									
KIRV	**Kirov**	**96.86**	**328**	*ce*	P	**P**	**02 59 13.8**	**-1.6**		
KIRV	**Kirov**	**96.86**	**328**		P	**P**	**02 59 15.0**	**-0.4**		
	comp=Z,11nm,0.6s,baz=100,slow=2.9,SNR=13									
KIRV					LR	LR	03 44 60.0			
	comp=Z,3µm,19.1s,baz=95,slow=37									
	comp=Z,11nm,0.6s									
KCPM	**Cahto Peak**	**96.93**	**51**		IAMs_20	IAMs_20	03 37 10.2			
	comp=Z,6µm,20.0s									
C36M	**Paulatuk**	**96.97**	**21**		IAMs_20	IAMs_20	03 37 08.9			
	comp=Z,8µm,22.0s									
C36M	**Paulatuk**	**96.97**	**21**		P	**P**	**02 59 14.2**	**-1.5**		
	baz=271,SNR=8.7									
K02D	**Willamette Mer**	**96.98**	**48**		IAMs_20	IAMs_20	03 38 45.2			
	comp=Z,7µm,20.0s									
NLWA	**Neilton Lookou**	**96.98**	**43**		IAmb	IAmb	02 59 26.1			
	comp=Z,159nm,1.6s									
HEBO	**Mount Hebo**	**96.99**	**45**		IAMs_20	IAMs_20	03 34 42.4			
	comp=Z,8µm,22.0s									
RADR	**Rader Ridge**	**97.00**	**44**		IAMs_20	IAMs_20	03 39 21.4			
	comp=Z,6µm,20.0s									
L02F	**Cave Junction**	**97.03**	**48**		IAMs_20	IAMs_20	03 37 09.6			
	comp=Z,8µm,20.0s									
WISH	**Wishkah**	**97.04**	**43**		IAMs_20	IAMs_20	03 39 29.4			
	comp=Z,6µm,19.0s									
KOTAN	**Kotaneelee Air**	**97.05**	**30**		P	**P**	**02 59 15.0**	**-1.4**		
	baz=270									
E03A	**Lebam**	**97.16**	**44**		IAmb	IAmb	02 59 56.0			
	comp=Z,73nm,1.1s									
E03A					IAMs_20	IAMs_20	03 47 51.8			
	comp=Z,6µm,18.0s									
B04A	**Port Angeles**	**97.24**	**42**		IAMs_20	IAMs_20	03 35 54.7			
	comp=Z,6µm,20.0s									
I03D	**Drain, OR**	**97.24**	**47**		IAMs_20	IAMs_20	03 34 48.1			
	comp=Z,6µm,22.0s									
HOPS	**Hopland Field**	**97.30**	**52**		IAMs_20	IAMs_20	03 36 15.0			
	comp=Z,6µm,20.0s									
DBO	**Dodson Butte**	**97.30**	**47**		IAmb	IAmb	02 59 21.2			
	comp=Z,92nm,1.6s									
DBO					IAMs_20	IAMs_20	03 38 06.7			
	comp=Z,8µm,19.0s									
WRGLY	**Wrigley**	**97.32**	**27**		P	**P**	**02 59 16.0**	**-1.4**		
	baz=271									
G03D	**McMinnville, O**	**97.34**	**45**		IAMs_20	IAMs_20	03 35 03.6			
	comp=Z,8µm,21.0s									
FLDN	**Fort Liard**	**97.34**	**30**		P	**P**	**02 59 17.5**	**-0.1**		
	baz=270									
MCCM	**Marconi Confer**	**97.42**	**52**		IAMs_20	IAMs_20	03 34 43.3			
	comp=Z,9µm,22.0s									
HUMO	**Hull Mountain**	**97.50**	**48**		IAMs_20	IAMs_20	03 37 26.0			
	comp=Z,8µm,20.0s									
GDXM	**Geysers**	**97.51**	**52**		IAmb	IAmb	02 59 30.4			
	comp=Z,153nm,1.7s									
BUCK	**Buck Mountain**	**97.51**	**46**		IAmb	IAmb	02 59 22.4			
	comp=Z,161nm,1.5s									
BUCK					IAMs_20	IAMs_20	03 35 06.3			
	comp=Z,9µm,22.0s									
YBH	**Yreka Blue Hor**	**97.66**	**49**		P	**P**	**02 59 18.3**	**-1.3**		
YBH					IAmb	IAmb	02 59 23.0			
	comp=Z,84nm,1.6s									
YBH					IAMs_20	IAMs_20	03 35 00.3			
	comp=Z,8µm,22.0s									
YBH	**Yreka Blue Hor**	**97.66**	**49**		P	**P**	**02 59 18.3**	**-1.3**		
YBH					pmax	pmax				
	comp=Z,84nm,1.6s									
YBH	**Yreka Blue Hor**	**97.66**	**49**		LR	LR	03 35 22.8			
	comp=Z,6µm,21.9s,baz=292,slow=31									
H04D	**Lebanon**	**97.70**	**46**		IAmb	IAmb	02 59 23.0			
	comp=Z,165nm,1.5s									
H04D					IAMs_20	IAMs_20	03 35 13.2			
	comp=Z,8µm,22.0s									
TROLL	**Troll, Antarti**	**97.74**	**192**	⇑	P	**P**	**02 59 18.7**	**-0.8**		
	comp=Z,572nm,0.7s									
MAK	**Makhachkala**	**97.84**	**312**	*e*	P	**P**	**02 59 17.1**	**-3.2**		
MAK				*e*			03 03 12.7			
MAK				*e*	S	**SKSac**	**03 09 53.8**	**-3.6**		
MAK				*e*	SS	**SS**	**03 17 23.0**	**-4.1**		
MAK				*e*	SSS	SSS	03 21 09.5			
MAK					pmax	pmax				
	comp=Z,409nm,2.1s									
BELG	**Belogornoye**	**97.85**	**322**	*c i*	P	**P**	**02 59 17.3**	**-2.8**		
BELG					pmax	pmax				
	comp=Z,38nm,1.3s									
BELG	**Belogornoye**	**97.85**	**322**		P	**P**	**02 59 19.7**	**-0.4**		
	comp=Z,154nm,1.2s,baz=321,slow=1.0,SNR=19									
BELG					LR	LR	03 46 38.3			
	comp=Z,3µm,19.4s,baz=80,slow=37									
I04A	**Tendick Farm,**	**97.92**	**47**		IAmb	IAmb	02 59 23.5			
	comp=Z,105nm,1.5s									
I04A					IAMs_20	IAMs_20	03 35 08.1			
	comp=Z,7µm,22.0s									
F04A	**Amboy**	**97.95**	**45**		P	**P**	**02 59 18.6**	**-2.0**		
H04A	**Detroit Lake**	**98.09**	**46**		IAmb	IAmb	02 59 24.2			
	comp=Z,77nm,1.4s									
H04A					IAMs_20	IAMs_20	03 35 02.7			
	comp=Z,9µm,22.0s									
K04D	**Chiloquin, OR**	**98.38**	**48**		IAmb	IAmb	02 59 30.7			
	comp=Z,59nm,1.0s									
K04D					IAMs_20	IAMs_20	03 38 14.5			
	comp=Z,6µm,19.0s									
HOOD	**Mount Hood Mea**	**98.48**	**45**		IAmb	IAmb	02 59 36.7			
	comp=Z,61nm,1.1s									
HOOD					IAMs_20	IAMs_20	03 35 39.8			
	comp=Z,8µm,22.0s									
SAO	**San Andreas Ge**	**98.52**	**54**		P	Pdif	02 59 24.0	+0.5		
SAO					IAmb	IAmb	02 59 26.5			
	comp=Z,96nm,1.6s									
SAO	**San Andreas Ge**	**98.52**	**54**		P	Pdif	02 59 24.0	+0.5		
SAO					pmax	pmax				
	comp=Z,96nm,1.6s									
ORV	**Oroville**	**98.53**	**51**		IAmb	IAmb	02 59 26.1			
	comp=Z,128nm,1.9s									
I05D	**Terrebonne, OR**	**98.70**	**46**		IAmb	IAmb	02 59 27.3			
	comp=Z,147nm,1.5s									
I05D					IAMs_20	IAMs_20	03 42 38.6			
	comp=Z,6µm,19.0s									
G05A	**Wamic**	**98.72**	**45**		IAmb	IAmb	02 59 42.0			
	comp=Z,71nm,1.1s									
G05A					IAMs_20	IAMs_20	03 35 36.0			
	comp=Z,9µm,22.0s									
J05D	**Fort Rock, OR**	**98.77**	**47**		IAMs_20	IAMs_20	03 35 25.7			
	comp=Z,8µm,22.0s									
RAYN	**Ar Rayn**	**98.85**	**293**		P	**P**	**02 59 24.0**	**-1.3**		
RAYN	**Ar Rayn**	**98.85**	**293**	*i*	P	**P**	**02 59 25.1**	**-0.2**		
	SNR=16									
RAYN	**Ar Rayn**	**98.85**	**293**	⇑	P	Pdif	02 59 26.2	+0.9		
AFDM	**Forest Hills D**	**98.93**	**52**		IAmb	IAmb	02 59 28.3			
	comp=Z,92nm,1.6s									
AFDM					IAMs_20	IAMs_20	03 35 31.4			
	comp=Z,6µm,21.0s									
PINE	**Pine Mountain**	**98.98**	**47**		IAmb	IAmb	02 59 29.8			
	comp=Z,70nm,1.1s									
PINE					IAMs_20	IAMs_20	03 41 01.3			
	comp=Z,6µm,20.0s									
K05A	**Summer Lake**	**99.02**	**48**		IAmb	IAmb	02 59 29.2			
	comp=Z,162nm,1.8s									
K05A					IAMs_20	IAMs_20	03 39 04.3			
	comp=Z,6µm,20.0s									
SNAA	**Sanae**	**99.03**	**190**	⇑	P	**Pdif**	**02 59 25.2**	**0.0**		
	comp=Z,126nm,1.2s									
SNAA	**Sanae**	**99.03**	**190**	*i*	P	**Pdif**	**02 59 23.1**	**-2.1**		
SNAA					pmax	pmax				
	comp=Z,32nm,1.4s									
SNAA	**Sanae**	**99.03**	**190**		P	**Pdif**	**02 59 26.5**	**+1.3**		
	comp=Z,7.8nm,1.0s,baz=200,slow=8.3,SNR=4.9									
SNAA					LR	LR	03 44 46.2			
	comp=Z,11µm,18.2s,baz=144,slow=36									
	comp=Z,7.8nm,1.0s									
G06A	**Carlson Farm,**	**99.20**	**45**		IAMs_20	IAMs_20	03 36 12.8			
	comp=Z,8µm,22.0s									
CMB	**Columbia Colle**	**99.38**	**53**		IAMs_20	IAMs_20	03 35 23.3			
	comp=Z,7µm,20.0s									
MXC	**Moxie City**	**99.42**	**44**		P	**Pdif**	**02 59 27.1**	**-0.3**		
EMB	**Emerald Bay**	**99.61**	**52**		IAMs_20	IAMs_20	03 35 53.2			
	comp=Z,8µm,21.0s									
SMMC	**Simmler**

baz=270
GOF Gofitskoye 101.04 315 *ce*P **Pdif 02 59 36.0 +1.5**
FMP Fort Macarthur 101.06 57 Pdiff **Pdif 02 59 32.9 -2.0**
baz=270
TIN Tinemaha, Big 101.09 54 Pdiff **Pdif 02 59 33.0 -2.1**
baz=271
PASC Pasadena Art C 101.15 57 IAMs_20 IAMs_20 03 37 22.4
comp=Z,6µm,20.0s
KVN Kaiserville 101.17 52 IAMs_20 IAMs_20 03 40 23.5
comp=Z,5µm,19.0s
KBZ Khabaz 101.20 313 P **Pdif 02 59 35.7 +0.5**
comp=Z,3.3nm,1.0s,baz=353,slow=3.9,SNR=4.9
CWC Cottonwood Cre 101.22 54 Pdiff **Pdif 02 59 35.1 -0.7**
baz=271
EDW2 Edwards Air Fo 101.30 56 Pdiff **Pdif 02 59 35.5 -0.6**
baz=270
KIV Kislovodsk 101.34 313 *e*P **Pdif 02 59 35.2 -0.8**
KIV *e* 03 03 44.7
KIV *e*PPP PPP 03 05 57.6
KIV *e*SS SS 03 18 17.6 +1.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
YKAW3 Yellowknife Wh 101.41 27 IAMs_20 IAMs_20 03 40 35.6
comp=Z,9µm,22.0s
YKA Yellowknife Ar 101.42 27 P **Pdif 02 59 35.0 -0.8**
YKA Yellowknife Ar 101.42 27 P **Pdif 02 59 35.0 -0.8**
comp=Z,4.6nm,0.9s,baz=279,slow=4.8,SNR=26
YKA PP **PP 03 03 44.9 -0.4**
comp=Z,23nm,1.2s,baz=275,slow=7.5,SNR=17
YKA PKKPbc **PKKPbc 03 15 44.3 -2.6**
comp=Z,1.4nm,0.9s,baz=98,slow=3.1,SNR=8.0
YKAW1 Yellowknife Wh 101.48 28 IAMs_20 IAMs_20 03 39 51.5
comp=Z,10µm,22.0s
NEW Newport 101.50 42 IAMs_20 IAMs_20 03 43 50.5
comp=Z,5µm,20.0s
NEW Newport 101.50 42 Pdiff **Pdif 02 59 36.5 -0.1**
baz=274
LRMC Laurel Mtn Rad 101.55 55 Pdiff **Pdif 02 59 36.8 -0.4**
baz=271
VRH Novokhopyorsk 101.56 321 *e*P **Pdif 02 59 34.3 -2.4**
VRH *e* 03 03 43.9
VRH pmax pmax
comp=Z,40nm,1.1s
VRH pmax pmax
comp=Z,160nm,1.9s
F10A Beach Ranch, E 101.56 44 IAMs_20 IAMs_20 03 37 39.3
comp=Z,6µm,22.0s
BMO Blue Mountains 101.57 46 IAMs_20 IAMs_20 03 37 25.5
comp=Z,7µm,22.0s
BFSC Mount Baldy Ra 101.58 56 Pdiff **Pdif 02 59 37.1 -0.3**
baz=270
MPMC Manual Prospec 101.70 55 Pdiff **Pdif 02 59 37.6 -0.4**
baz=271
KLMR Klimovskoe 101.71 331 *e*P **Pdif 02 59 33.5 -3.6**
KLMR *e* 03 03 41.5
KLMR S **SKSac 03 10 12.9 -2.8**
KLMR pmax pmax
comp=Z,68nm,1.9s
KLMR MLR MLR
comp=Z,4µm,16.0s
MZP Montezuma Peak 101.76 53 IAMs_20 IAMs_20 03 38 42.2
comp=Z,6µm,21.0s
ELS Elsinore Mount 101.78 57 IAMs_20 IAMs_20 03 36 54.2
comp=Z,7µm,22.0s
GRAC Grapevine Rang 101.79 54 Pdiff **Pdif 02 59 37.7 -0.4**
baz=271
GMN Gold Mountain 101.87 53 IAMs_20 IAMs_20 03 39 08.1
comp=Z,7µm,21.0s
Q09A Carvers 101.89 52 IAMs_20 IAMs_20 03 37 28.6
comp=Z,7µm,21.0s
MURC Murrieta 101.97 57 Pdiff **Pdif 02 59 37.5 -1.6**
baz=270
109C Camp Elliot, M 102.06 58 IAMs_20 IAMs_20 03 42 27.5
comp=Z,7µm,20.0s
109C Camp Elliot, M 102.06 58 Pdiff **Pdif 02 59 38.7 -0.6**
baz=270
RRX Edison Barstow 102.12 56 Pdiff **Pdif 02 59 38.1 -1.5**
baz=271
BBRC Big Bear Solar 102.19 56 Pdiff **Pdif 02 59 40.0 -0.2**
baz=271
FURC Furnace Creek, 102.20 54 Pdiff **Pdif 02 59 39.3 -0.5**
baz=271
GSC Goldstone, Bar 102.27 55 IAMs_20 IAMs_20 03 37 20.1
comp=Z,7µm,22.0s
GSC Goldstone, Bar 102.27 55 Pdiff **Pdif 02 59 39.8 -0.6**
baz=271
GWY Greenwater Val 102.37 54 IAMs_20 IAMs_20 03 36 09.4
comp=Z,8µm,22.0s
CCX Cicese 102.44 59 IAMs_20 IAMs_20 03 36 33.7
comp=Z,6µm,22.0s
PLID Pearl Lake 102.48 45 IAMs_20 IAMs_20 03 37 31.6
comp=Z,6µm,22.0s
PFO Pinyon Flats O 102.59 57 IAMs_20 IAMs_20 03 38 48.7
comp=Z,6µm,20.0s
PFO Pinyon Flats O 102.59 57 Pdiff **Pdif 02 59 41.6 -0.2**
baz=271
TPFO Pinon Flats 102.59 57 Pdiff **Pdif 02 59 41.5 -0.4**
baz=271
MONP2 Monument Peak 102.63 58 Pdiff **Pdif 02 59 42.0 -0.1**
baz=271
PMD Palm Desert 102.66 57 IAMs_20 IAMs_20 03 38 52.3
comp=Z,6µm,19.0s
HEC Hector,Ludlow 102.67 56 Pdiff **Pdif 02 59 42.3 +0.2**
baz=271
SHOC Shoshone, Teco 102.69 55 Pdiff **Pdif 02 59 41.8 -0.3**
baz=272
MFID Camas Ranch 102.71 47 IAMs_20 IAMs_20 03 38 02.8
comp=Z,8µm,22.0s
IKP In-Ko-Pah, Jac 102.90 58 Pdiff **Pdif 02 59 43.3 +0.1**
baz=271
APA Apatity 102.94 338 ⇓*i*P **Pdif 02 59 43.6 +1.2**
APA *i* 03 03 55.8
APA pmax pmax
comp=Z,14nm,1.2s
APA MLR MLR
comp=Z,3µm,22.0s
BELC Belle Mtn. Jos 102.97 57 Pdiff **Pdif 02 59 44.0 +0.4**
baz=271
SMAI San Martin Ant 102.97 169 IAMs_20 IAMs_20 03 46 27.8
comp=Z,6µm,19.0s
TUQ Turquoise Moun 102.99 55 Pdiff **Pdif 02 59 44.1 +0.4**
baz=272
ESJX Sierra Juarez 103.04 59 IAMs_20 IAMs_20 03 39 10.8
comp=Z,6µm,21.0s
VORR Voronezh 103.08 322 *e*P **Pdif 02 59 42.8 -0.6**
VORR *e* 03 03 58.3
VORR pmax pmax
comp=Z,40nm,0.4s
VORR pmax pmax
comp=Z,20nm,1.0s
VORR MLR MLR
comp=Z,1µm,12.0s
VORD Divnogorie 103.11 321 *e*P **Pdif 02 59 42.5 -1.1**
VORD *e* 03 03 59.4
VORD pmax pmax
comp=Z,20nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD MLR MLR
comp=Z,1µm,13.0s
LPSR Galich'ya Gora 103.14 322 *e*P **Pdif 02 59 42.0 -1.7**
LPSR *e* 03 03 55.8
LPSR pmax pmax
comp=Z,120nm,1.5s
LPSR pmax pmax
comp=Z,30nm,1.1s
LPSR MLR MLR
comp=Z,3µm,22.0s
SWSC Sam W. Stewart 103.15 58 Pdiff **Pdif 02 59 44.1 -0.1**
baz=271
R11B Troy Canyon, C 103.16 52 IAMs_20 IAMs_20 03 38 30.2
comp=Z,8µm,21.0s
R11B Troy Canyon, C 103.16 52 Pdiff **Pdif 02 59 44.6 +0.2**
baz=273
VSR Storozhevoye 103.16 321 *e*P **Pdif 02 59 40.1 -3.7**
VSR *e* 03 03 57.7
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=Z,190nm,1.8s
VSR MLR MLR
comp=Z,3µm,18.0s
VTX Valle De La Tr 103.19 59 IAMs_20 IAMs_20 03 44 30.7
comp=Z,6µm,19.0s
GMRC Granite Mounta 103.22 56 Pdiff **Pdif 02 59 44.5 -0.1**
baz=272
BC3 Big Chuckawall 103.43 57 Pdiff **Pdif 02 59 44.9 -0.7**
baz=272
UABX UABC, Campus M 103.46 58 IAMs_20 IAMs_20 03 39 14.7
comp=Z,6µm,19.0s
MOS Moscow 103.47 326 *i* P **Pdif 02 59 45.0 0.0**
MOS *e* 03 03 58.8
MOS *e* 03 10 26.7
MOS *e*S **Sdif 03 11 30.4 -2.1**
MOS pmax pmax
comp=Z,71nm,1.7s
IRM Iron Mountain 103.67 56 Pdiff **Pdif 02 59 46.5 0.0**
baz=272
Q12A Willow Creek R 103.71 51 IAMs_20 IAMs_20 03 41 56.8
comp=Z,6µm,19.0s
HLID Hailey 103.72 47 Pdiff **Pdif 02 59 46.4 -0.4**
baz=275
V12A Nelson 103.85 55 IAMs_20 IAMs_20 03 37 28.9
comp=Z,8µm,22.0s
SFX San Felipe 104.00 60 IAMs_20 IAMs_20 03 44 36.0
comp=Z,6µm,18.0s
NEE2 Needles Airpor 104.08 56 Pdiff **Pdif 02 59 47.3 -1.0**
baz=272
KIBK Kibwezi 104.10 266 P **Pdif 02 59 53.7 +4.7**
KIBK PKP **PKiKP 03 04 05.5 -0.9**
RES Resolute Bay 104.23 13 Pdiff **Pdif 02 59 47.1 -0.9**
comp=Z,6.1nm,1.1s,baz=295,slow=6.9,SNR=8.5
RES PP **PP 03 04 05.4 -0.6**
comp=Z,4.0nm,0.9s,baz=297,slow=5.8,SNR=5.9
KEV Kevo 104.45 341 IAMs_20 IAMs_20 03 50 42.3
comp=Z,6µm,21.0s
PDMCI Parker Dam,Lak 104.49 56 Pdiff **Pdif 02 59 49.7 -0.4**
baz=272
FURI Furi 104.55 278 IAMs_20 IAMs_20 03 49 35.1
comp=Z,6µm,19.0s
W13A Hualapai Mount 104.67 55 IAMs_20 IAMs_20 03 39 05.5
comp=Z,5µm,22.0s
DILA Dilla 104.75 275 *e*P **Pdif 02 59 50.7 -1.2**
113A Mohawk Valley, 104.87 58 IAMs_20 IAMs_20 03 40 07.0
comp=Z,6µm,20.0s
ARCES ARCESS Array B 105.02 341 Pdiff **Pdif 02 59 51.6 -0.1**
comp=Z,12nm,0.9s,baz=54,slow=2.1,SNR=8.2
HVU Hansel Valley 105.08 49 IAMs_20 IAMs_20 03 53 13.7
comp=Z,5µm,18.0s
LCMT Little Creek M 105.08 53 IAMs_20 IAMs_20 03 38 12.3
comp=Z,8µm,22.0s
DUG Dugway, Tooele 105.19 50 Pdiff **Pdif 02 59 54.1 +0.8**
baz=275
KNB Kanab 105.42 53 IAMs_20 IAMs_20 03 38 45.2
comp=Z,7µm,21.0s
BOZ Bozeman (W) 105.50 44 IAMs_20 IAMs_20 03 46 53.4
comp=Z,5µm,20.0s
BOZ Bozeman (W) 105.50 44 Pdiff **Pdif 02 59 55.3 +0.7**
baz=277
214A Organ Pipe Nat 105.71 59 IAMs_20 IAMs_20 03 40 50.3
comp=Z,5µm,19.0s
214A Organ Pipe Nat 105.71 59 Pdiff **Pdif 02 59 56.3 +0.6**
baz=272
NLU North Lily Min 105.77 50 IAMs_20 IAMs_20 03 43 17.3
comp=Z,5µm,20.0s
YHL Hebgen Lake 105.91 45 IAMs_20 IAMs_20 03 41 47.3
comp=Z,6µm,21.0s
MPU Maple Canyon 106.11 50 IAMs_20 IAMs_20 03 43 38.1
comp=Z,5µm,20.0s
FXWY Fox Creek 106.17 46 IAMs_20 IAMs_20 03 40 39.3
comp=Z,6µm,21.0s
YFT Old Faithful 106.20 46 IAMs_20 IAMs_20 03 45 04.1
comp=Z,7µm,20.0s
AHID Auburn Hatcher 106.22 47 IAMs_20 IAMs_20 03 43 16.7
comp=Z,7µm,20.0s
TPAW Teton Pass 106.24 47 IAMs_20 IAMs_20 03 40 40.1
comp=Z,8µm,22.0s
YNM Yellowstone No 106.26 45 IAMs_20 IAMs_20 03 39 56.6
comp=Z,6µm,22.0s
YNR Norris Junctio 106.28 45 IAMs_20 IAMs_20 03 39 56.1
comp=Z,6µm,22.0s
MOOW Moose Ponds 106.36 46 IAMs_20 IAMs_20 03 40 01.3
comp=Z,7µm,22.0s
SRIG Santa Rosalia 106.36 63 IAMs_20 IAMs_20 03 40 04.0
comp=Z,8µm,22.0s
SNOW Snow King Moun 106.38 47 IAMs_20 IAMs_20 03 40 46.1
comp=Z,8µm,21.0s
H17A Grant Village 106.39 46 Pdiff **Pdif 02 59 58.7 0.0**
baz=278
EGMT Eagleton 106.43 42 IAMs_20 IAMs_20 03 43 45.9
comp=Z,5µm,21.0s
EGMT Eagleton 106.43 42 Pdiff **Pdif 02 59 58.8 +0.2**
baz=279
LOHW Long Hollow 106.47 46 IAMs_20 IAMs_20 03 40 38.4
comp=Z,8µm,22.0s
LKWY Lake 106.50 45 IAMs_20 IAMs_20 03 48 09.9
comp=Z,7µm,20.0s
PMSA Palmer Station 106.51 168 IAMs_20 IAMs_20 03 53 55.5
comp=Z,5µm,18.0s
Q16A Castle Valley 106.57 51 IAMs_20 IAMs_20 03 41 46.3
comp=Z,6µm,21.0s
WUAZ Wupatki 106.69 55 IAMs_20 IAMs_20 03 40 02.1
comp=Z,6µm,22.0s
WUAZ Wupatki 106.69 55 Pdiff **Pdif 02 59 58.1 -2.0**
baz=274
X16A Lo Mia Camp, P 106.72 56 IAMs_20 IAMs_20 03 41 55.8
comp=Z,6µm,20.0s
BNN Bunyan 106.83 309 IAMs_20 IAMs_20 03 53 04.7
comp=Z,6µm,22.0s
SRU San Rafael Swe 107.05 51 IAMs_20 IAMs_20 03 42 13.1
comp=Z,5µm,21.0s
P18A Preston Nutter 107.21 51 IAMs_20 IAMs_20 03 48 42.3
comp=Z,5µm,20.0s
RLMT Red Lodge 107.21 45 Pdiff **Pdif 03 00 01.2 -1.1**
baz=279
BW06 Boulder Array 107.34 47 Pdiff **Pdif 03 00 02.5 -0.4**
baz=278
PDAR Pinedale Array 107.34 47 Pdiff **Pdif 03 00 02.5 -0.4**
comp=Z,1.2nm,0.8s,baz=250,slow=4.3,SNR=9.2
PDAR PKiKP **PKiKP 03 04 12.7 +1.0**
comp=Z,0.5nm,0.6s,baz=242,slow=1.7,SNR=2.5
PDAR PP **PP 03 04 29.6 -0.7**
comp=Z,4.1nm,1.0s,baz=266,slow=5.4,SNR=7.6
PDAR PKKPbc **PKKPbc 03 15 31.0 +2.3**
comp=Z,1.4nm,1.1s,baz=111,slow=3.3,SNR=4.2
SIM Simferopol' 107.35 315 *i* P **Pdif 03 00 05.0 +2.4**
SIM *e* 03 04 33.0
SIM *e*SS SS 03 19 48.0 +10
SIM pmax pmax
comp=Z,35nm,14.0s
SIM pmax pmax
comp=Z,70nm,16.0s
SIM pmax pmax
comp=Z,700nm,6.3s
SIM pmax pmax
comp=N,3µm,13.0s
SIM MLR MLR
comp=Z,1µm,19.0s
TUC Tucson 107.41 58 IAMs_20 IAMs_20 03 41 43.2
comp=Z,7µm,20.0s
TUC Tucson 107.41 58 Pdiff **Pdif 03 00 03.9 +0.7**
baz=274
HSIG 107.44 62 IAMs_20 IAMs_20 03 47 06.5
comp=Z,5µm,20.0s
FINES FINESS Array B 107.86 333 Pdiff **Pdif 03 00 04.2 -0.2**
comp=Z,5.2nm,1.0s,baz=45,slow=0.6,SNR=3.4
FINES PKiKP **PKiKP 03 04 12.5 +0.7**
comp=Z,4.1nm,1.0s,baz=108,slow=4.5,SNR=2.8
X18A Snowflake 107.94 56 IAMs_20 IAMs_20 03 42 14.1
comp=Z,5µm,20.0s
W18A Petrified Fore 108.06 55 IAMs_20 IAMs_20 03 42 53.3
comp=Z,5µm,20.0s
W18A Petrified Fore 108.06 55 Pdiff **Pdif 03 00 06.0 -0.2**
baz=275
NEEM North Greenlan 108.43 3 *e*P **PKiKP 03 04 19.3 +6.4**
BRTR Keskin Array B 108.43 310 Pdiff **Pdif 03 00 09.4 +1.7**
comp=Z,1.0nm,0.9s,baz=13,slow=7.7,SNR=2.2
BRTR PP **PP 03 04 41.7 +3.4**
comp=Z,5.9nm,1.2s,baz=134,slow=4.2,SNR=3.7
O20A White River Ci 108.68 50 IAMs_20 IAMs_20 03 50 03.1
comp=Z,6µm,19.0s
O20A White River Ci 108.68 50 Pdiff **Pdif 03 00 08.5 -0.4**
baz=278
MVCO Mesa Verde 108.84 53 IAMs_20 IAMs_20 03 40 56.9
comp=Z,7µm,21.0s
MVCO Mesa Verde 108.84 53 Pdiff **Pdif 03 00 08.7 -1.1**
baz=277
LAO LASA Array 109.03 43 IAMs_20 IAMs_20 03 50 14.8
comp=Z,5µm,19.0s
LAO LASA Array 109.03 43 Pdiff **Pdif 03 00 11.1 +0.9**
baz=282
MNK Minsk 109.19 326 *i* Pdif **Pdif 03 00 06.6 -3.9**
MNK *i* Pdif **Pdif 03 00 06.6 -3.9**
baz=73
MNK *i* Pdif **Pdif 03 00 06.6 -3.9**
MNK *i* PKiKP **PKiKP 03 04 12.0 -2.5**
MNK *i* PKiKP **PKiKP 03 04 12.0 -2.5**
MNK *i* PKiKP **PKiKP 03 04 12.0 -2.5**
MNK *i* PP **PP 03 04 39.2 -3.8**
MNK *i* PPP PPP 03 06 57.7
MNK *i* SKS **SKSdf 03 11 25.2 -0.6**
MNK *i* SS **SS 03 20 03.5 +1.1**
MNK *i* SKKS **SKKSdf 03 22 43.1 -7.1**
MNK *i* SSS SSS 03 24 06.2
MNK *i* LQ LQ 03 41 09.2
MNK *i* LR LR 03 47 08.7
MNK *i* LRM MLR 03 53 20.6
comp=E,1µm,17.8s
MNK *i* LRM MLR 03 53 22.6
comp=Z,4µm,19.1s
MNK *i* LRM MLR 03 53 39.9
comp=N,2µm,16.9s
MNK Minsk 109.19 326 *i* P **Pdif 03 00 06.6 -3.9**
MNK *i* 03 04 39.2
MNK *i* PPP PPP 03 06 57.6
MNK *i* 03 11 25.2
MNK *i* SS SS 03 20 03.5 +1.1
MNK *i* SSS SSS 03 24 06.1
RWWY Rawlins 109.22 48 IAMs_20 IAMs_20 03 46 41.4
comp=Z,5µm,20.0s
AKASG Malin Array Be 109.43 322 Pdiff **Pdif 03 00 12.9 +1.3**
comp=Z,1.3nm,0.7s,baz=60,slow=4.5,SNR=9.8
AKASG PKiKP **PKiKP 03 04 16.0 +1.0**
comp=Z,0.6nm,0.5s,baz=66,slow=2.0,SNR=7.2
AKASG PP **PP 03 04 44.7 -0.2**
comp=Z,0.8nm,0.5s,baz=61,slow=6.2,SNR=5.3
AKASG PKKPbc **PKKPbc 03 15 21.1 -0.9**
comp=Z,0.2nm,0.3s,baz=264,slow=3.4,SNR=5.4
K22A Casper 109.57 47 IAMs_20 IAMs_20 03 44 56.4
comp=Z,5µm,20.0s
K22A Casper 109.57 47 Pdiff **Pdif 03 00 11.2 -1.6**
baz=280
FFC Flin Flon 109.62 34 IAMs_20 IAMs_20 03 43 50.5
comp=Z,7µm,21.0s
SMCO Snowmass 109.78 51 IAMs_20 IAMs_20 03 54 40.3
comp=Z,6µm,19.0s
121A Cookes Peak, D 109.92 58 Pdiff **Pdif 03 00 12.8 -1.8**
baz=276
N23A Red Feather La 110.29 49 Pdiff **Pdif 03 00 14.9 -1.2**
baz=280
BOSA Boshof 110.43 237 IAMs_20 IAMs_20 03 53 03.5
comp=Z,7µm,18.0s
BOSA Boshof 110.43 237 PKKPab PKKPab 03 15 29.1 -0.1
comp=Z,5.9nm,0.9s,baz=287,slow=6.6,SNR=5.1
KIS Kishinev 110.58 318 *e*PP **PP 03 04 59.0 +5.6**
KIS Kishinev 110.58 318 *e*PS PS 03 14 26.0 +2.0
KIS *e*L L 03 47 30.0
KIS LRM MLR 03 54 18.0
comp=Z,800nm,21.5s
PHWY Pilot Hill 110.59 48 IAMs_20 IAMs_20 03 47 53.4
comp=Z,5µm,19.0s
MILM Milestii Mici 110.61 318 ⇑P **PKiKP 03 04 19.1 +1.7**
MILM Milestii Mici 110.61 318 *e*PP **PP 03 04 58.0 +4.5**
comp=Z,770nm,3.2s
MILM Milestii Mici 110.61 318 *e*PS PS 03 14 27.0 +2.8
MILM *e*L L 03 45 39.0
MILM LRM MLR 03 54 24.0
comp=Z,2µm,19.5s
MILM Milestii Mici 110.61 318 ⇑PKiKP **PKiKP 03 04 19.1 +1.7**
SORM Soroca 110.62 319 ⇑P **PKiKP 03 04 18.2 +0.9**
SORM Soroca 110.62 319 ⇑PKiKP **PKiKP 03 04 18.2 +0.9**
ISCO Idaho Springs 110.72 50 IAMs_20 IAMs_20 03 51 30.2
comp=Z,6µm,20.0s
ISCO Idaho Springs 110.72 50 PKiKP **PKiKP 03 04 18.5 +0.2**
baz=280
ANMO Albuquerque 110.76 55 IAMs_20 IAMs_20 03 56 26.6
comp=Z,4µm,18.0s
ANMO Albuquerque 110.76 55 IAMs_20 IAMs_20 03 56 17.6
comp=Z,4µm,19.0s
ANMO Albuquerque 110.76 55 PKiKP **PKiKP 03 04 17.5 -0.8**
baz=277
PABE Paberze 111.00 328 IAMs_20 IAMs_20 03 53 27.4
comp=Z,5µm,21.0s
RSSD Black Hills 111.07 45 PKiKP **PKiKP 03 04 19.1 +0.5**
baz=282
EPT El Paso 111.07 58 IAMs_20 IAMs_20 03 44 10.3
comp=Z,4µm,20.0s
SDCO Great Sand Dun 111.14 52 PKiKP **PKiKP 03 04 19.0 0.0**
baz=279
Q24A Divide 111.22 51 IAMs_20 IAMs_20 03 50 30.4
comp=Z,4µm,19.0s
Q24A Divide 111.22 51 PKiKP **PKiKP 03 04 19.5 +0.3**
baz=280
TIRR Tirgusor 111.44 315 IAMs_20 IAMs_20 03 55 48.0
comp=Z,5µm,18.0s
LSZ Lusaka 111.53 251 IAMs_20 IAMs_20 03 49 01.7
comp=Z,6µm,20.0s
LSZ Lusaka 111.53 251 PKKPbc PKKPbc 03 15 16.5 +2.2
comp=Z,1.3nm,0.5s,baz=316,slow=5.2,SNR=4.0
SUW Suwalki 111.96 326 IAMs_20 IAMs_20 03 52 21.7
comp=Z,5µm,21.0s
MNTX Cornudas Mount 112.03 58 PKiKP **PKiKP 03 04 21.0 +0.4**
baz=276
T25A Trinidad 112.09 52 PKiKP **PKiKP 03 04 20.6 -0.2**
baz=279
TESR Tescani 112.15 318 ⇑P **PKiKP 03 04 21.7 +1.4**
HPIG 112.23 64 IAMs_20 IAMs_20 03 43 57.6
comp=Z,7µm,21.0s
VRI Vrincioaia 112.26 317 ⇑P **PKiKP 03 04 21.3 +0.7**
VRI Vrincioaia 112.26 317 ⇑PKiKP **PKiKP 03 04 21.3 +0.7**
SUR Sutherland 112.63 231 IAMs_20 IAMs_20 03 50 50.2
comp=Z,7µm,20.0s
NEHR Nehoiu 112.67 317 ⇑P **PKiKP 03 04 23.0 +1.7**
E28A Huff 112.76 42 IAMs_20 IAMs_20 03 47 44.4
comp=Z,5µm,20.0s
BURAR Bucovina Array 112.79 319 ⇑P **PKiKP 03 04 23.6 +2.0**
BURAR Bucovina Array 112.79 319 ⇑PKiKP **PKiKP 03 04 23.6 +2.0**
LVV L'vov 112.88 322 *i* PKiKP **PKiKP 03 04 23.6 +2.0**
LVV *e* 03 05 18.5
LVV *e* 03 10 59.9
LVV *e*PS **PS 03 14 40.8 -4.2**
LVV MLR MLR
comp=E,2µm,21.0s
LVV MLR MLR
comp=N,2µm,20.0s
LVV MLR MLR
comp=Z,1µm,20.0s
MLR Muntele Rosu 112.89 317 ⇑P **PKiKP 03 04 24.8 +2.9**
MLR Muntele Rosu 112.89 317 IAMs_20 IAMs_20 03 56 14.2
comp=Z,4µm,21.0s
MLR Muntele Rosu 112.89 317 ⇑PKiKP **PKiKP 03 04 24.8 +2.9**
MLR Muntele Rosu 112.89 317 PKiKP **PKiKP 03 04 23.2 +1.3**
baz=315,slow=4.3
MLR PP **PP 03 05 14.7 +4.6**
comp=Z,21nm,1.2s,baz=154,slow=2.5,SNR=6.0
MDND Maddock 113.11 40 PKiKP **PKiKP 03 04 22.6 +0.5**
baz=287
DOPR Dopca 113.14 318 ⇑P **PKiKP 03 04 24.7 +2.4**
KSCO Kaye Shedlock' 113.14 50 IAMs_20 IAMs_20 03 43 41.3
comp=Z,6µm,22.0s
KSCO Kaye Shedlock' 113.14 50 PKiKP **PKiKP 03 04 23.4 +0.8**
baz=281
OGNE Ogallala 113.19 48 IAMs_20 IAMs_20 03 49 09.4
comp=Z,5µm,20.0s
OGNE Ogallala 113.19 48 PKiKP **PKiKP 03 04 23.4 +0.8**
baz=282
ELND Elena 113.58 314 ⇓P **PKiKP 03 04 25.4 +2.3**
SUMG Summit 113.69 0 PP **PP 03 05 08.6 -6.4**
SUMG Summit 113.69 0 *i* P **PKiKP 03 04 28.0 +5.0**
TXAR Lajitas Array 113.77 61 *i* PKiKP **PKiKP 03 04 25.0 +0.9**
TXAR Lajitas Array 113.77 61 PKiKP **PKiKP 03 04 24.9 +0.9**
comp=Z,1.3nm,0.9s,baz=219,slow=0.8,SNR=7.8
TXAR PP **PP 03 05 15.1 -1.8**
comp=Z,1.8nm,0.9s,baz=258,slow=6.3,SNR=5.3
TXAR PKKPab **PKKPab 03 15 14.1 +0.5**
comp=Z,3.9nm,1.0s,baz=111,slow=5.0,SNR=11
HUMR Humele 113.80 316 ⇑P **PKiKP 03 04 25.5 +2.0**
ARR Arges 113.81 317 ⇓P **PKiKP 03 04 26.2 +2.5**
MSTX Muleshoe 113.91 56 IAMs_20 IAMs_20 03 44 10.1
comp=Z,5µm,22.0s
MSTX Muleshoe 113.91 56 PKiKP **PKiKP 03 04 24.0 -0.2**
baz=279
MG01 Puerto William 114.12 161 IAMs_20 IAMs_20 03 44 58.1
comp=Z,6µm,21.0s
KOLS Kolonicke sedl 114.25 321 *e*PKiKP **PKiKP 03 04 27.0 +2.7**
KOLS Kolonicke sedl 114.25 321 *e*PKP **PKiKP 03 04 27.0 +2.7**
NB2 NORSAR Subarra 114.39 336 PKPdf PKPdf 03 04 24.9 +0.7
comp=Z,8.3nm,1.0s,baz=54,slow=2.0
NB2 NORSAR Subarra 114.39 336 PKPdf PKPdf 03 04 24.9 +0.7
baz=54,slow=2.0

NOA	**NORSAR Array B**	**114.39**	**336**	PKP	PKPdf	03 04 24.7	+0.5
	comp=Z,0.5nm,0.6s,baz=49,slow=1.7,SNR=2.1						
NOA				PKKPab	**PKKPab**	**03 15 08.7**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=55,slow=3.4,SNR=3.3						
SUSD	**Miller**	**114.53**	**44**	IAMs_20	IAMs_20	03 57 28.2	
	comp=Z,4μm,19.0s						
SUSD	**Miller**	**114.53**	**44**	PKiKP	PKPdf	03 04 24.0	-1.0
	baz=286						
K30B	**Basset**	**114.54**	**46**	IAMs_20	IAMs_20	03 45 34.9	
	comp=Z,7μm,22.0s						
ULM	**Lac du Bonnet**	**114.64**	**37**	IAMs_20	IAMs_20	03 47 14.5	
	comp=Z,6μm,20.0s						
ULM	**Lac du Bonnet**	**114.64**	**37**	PKP	**PKiKP**	**03 04 24.8**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=298,slow=1.8,SNR=13						
ULM				PKKPbc	**PKKPbc**	**03 15 06.5**	**+1.8**
	comp=Z,1.0nm,0.5s,baz=129,slow=6.5,SNR=3.4						
AMTX	**Amarillo**	**114.65**	**55**	IAMs_20	IAMs_20	03 46 32.6	
	comp=Z,5μm,22.0s						
AMTX	**Amarillo**	**114.65**	**55**	PKiKP	PKPdf	03 04 25.4	-0.2
	baz=280						
DRGR		**114.67**	**319**	⇓P	PKPdf	03 04 27.2	+2.0
DRGR		**114.67**	**319**	⇓PKIKP	PKPdf	03 04 27.2	+2.0
CRVS	**Cervenica-Dubn**	**114.77**	**321**	*e*P	**Pdif**	**03 00 38.8**	**+3.3**
CRVS				*e*		03 05 32.1	
CRVS	**Cervenica-Dubn**	**114.77**	**321**	*e*PDIFF	**Pdif**	**03 00 38.8**	**+3.3**
CRVS	**Cervenica-Dubn**	**114.77**	**321**	*e*PKP	PKPdf	03 04 27.4	+2.1
CRVS				*e*PP	PP	03 05 32.1	+9.0
D32A	**Dogwood Acres,**	**115.00**	**40**	IAMs_20	IAMs_20	03 48 59.5	
	comp=Z,6μm,22.0s						
MG05	**Puerto Natales**	**115.03**	**157**	IAMs_20	IAMs_20	03 46 17.5	
	comp=Z,7μm,20.0s						
GZR	**Gura Zlata**	**115.06**	**318**	⇑P	**PKPdf**	**03 04 28.0**	**+2.0**
GZR	**Gura Zlata**	**115.06**	**318**	⇑PKIKP	**PKPdf**	**03 04 28.0**	**+2.0**
OJC	**Ojcow**	**115.30**	**323**	*e*Pdif	**Pdif**	**03 00 40.7**	**+2.9**
OJC				*e*PKiKP	**PKPdf**	**03 04 29.6**	**+3.4**
OJC				*e*SKKSac	**Sdif**	**03 13 13.8**	**+2.2**
OJC				*e*L	L	03 58 32.4	
	comp=Z,6μm,19.0s						
AGMN	**Agassiz Nation**	**115.34**	**39**	PKPdf	**PKiKP**	**03 04 25.4**	**-1.0**
AGMN				IAMs_20	IAMs_20	03 44 38.3	
	comp=Z,6μm,22.0s						
AGMN	**Agassiz Nation**	**115.34**	**39**	PKiKP	**PKPdf**	**03 04 26.5**	**+0.2**
	baz=291						
ZAIG	**Zacatecas**	**115.35**	**68**	IAMs_20	IAMs_20	03 43 53.3	
	comp=Z,7μm,22.0s						
MG02	**Cerro Sombrero**	**115.37**	**159**	IAMs_20	IAMs_20	03 44 42.3	
	comp=Z,5μm,20.0s						
SURR	**Surduc**	**115.38**	**318**	⇑P	**PKPdf**	**03 04 27.5**	**+1.0**
CBKS	**Cedar Bluff**	**115.39**	**50**	PKiKP	**PKPdf**	**03 04 27.1**	**+0.3**
	baz=283						
GO09	**Cerro Castillo**	**115.41**	**157**	IAMs_20	IAMs_20	03 46 28.7	
	comp=Z,6μm,20.0s						
HERR	**Herculane**	**115.45**	**317**	⇑P	**PKPdf**	**03 04 27.6**	**+0.9**
KECS	**Kecovo**	**115.52**	**321**	*e*P	**Pdif**	**03 00 43.4**	**+4.5**
KECS	**Kecovo**	**115.52**	**321**	*e*PDIFF	**Pdif**	**03 00 43.4**	**+4.5**
SIRR	**Siria**	**115.52**	**319**	⇓P	**PKPdf**	**03 04 28.8**	**+2.0**
BZS	**Buzias**	**115.76**	**318**	⇑P	**PKPdf**	**03 04 28.9**	**+1.6**
BZS	**Buzias**	**115.76**	**318**	⇑PKIKP	**PKPdf**	**03 04 28.9**	**+1.6**
KONO	**Kongsberg**	**115.86**	**336**	IAMs_20	IAMs_20	03 55 16.1	
	comp=Z,5μm,20.0s						
F33A	**5 Mile Ranch,**	**115.90**	**42**	IAMs_20	IAMs_20	03 53 07.3	
	comp=Z,5μm,20.0s						
BGNE	**Belgrade**	**115.93**	**47**	IAMs_20	IAMs_20	03 46 31.6	
	comp=Z,5μm,21.0s						
BGNE	**Belgrade**	**115.93**	**47**	PKiKP	**PKPdf**	**03 04 27.5**	**-0.3**
	baz=286						
MDVR	**Moldovita**	**115.96**	**317**	⇓P	**PKPdf**	**03 04 29.5**	**+1.8**
PSZ	**Piszkesteto**	**116.09**	**321**	⇓P	**PKPdf**	**03 04 29.9**	**+2.0**
PSZ	**Piszkesteto**	**116.09**	**321**	PKPdf	**PKPdf**	**03 04 28.0**	**0.0**
PSZ	**Piszkesteto**	**116.09**	**321**	⇓PKIKP	**PKPdf**	**03 04 29.9**	**+2.0**
ECSD	**EROS Data Cent**	**116.35**	**44**	IAMs_20	IAMs_20	03 49 06.4	
	comp=Z,5μm,21.0s						
DRIO	**Del Rio**	**116.39**	**60**	PKPdf	**PKPdf**	**03 04 27.2**	**-1.8**
OKC	**Ostrava-Krasne**	**116.43**	**323**	*e*SDIF	**Sdif**	**03 13 26.7**	**+5.8**
OKC				AMS	AMS	03 57 10.0	
	comp=Z,3μm,18.3s						
VYHS	**Vyhne**	**116.53**	**322**	*e*PKIKP	**PKiKP**	**03 04 30.4**	**+1.7**
VYHS				*e*		03 05 38.5	
VYHS	**Vyhne**	**116.53**	**322**	*e*PKP	**PKiKP**	**03 04 30.4**	**+1.7**
VYHS				*e*PP	**PP**	**03 05 38.5**	**+3.0**
N33A	**J Bar K, Exete**	**116.61**	**47**	IAMs_20	IAMs_20	03 52 55.9	
	comp=Z,5μm,20.0s						
ABTX	**Abilene, Hawle**	**116.71**	**57**	IAMs_20	IAMs_20	03 51 57.5	
	comp=Z,6μm,20.0s						
ABTX	**Abilene, Hawle**	**116.71**	**57**	PKiKP	**PKPdf**	**03 04 29.4**	**-0.2**
	baz=280						
MAUC	**Maruska**	**116.81**	**323**	*e*PKP	**PKiKP**	**03 04 31.3**	**+2.1**
MAUC				*ex*	x	03 04 36.1	
MAUC				*e*SDIF	**Sdif**	**03 13 31.9**	**+7.7**
MORC	**Moravsky Berou**	**116.81**	**323**	⇑P	**PKiKP**	**03 04 31.0**	**+1.8**
MORC	**Moravsky Berou**	**116.81**	**323**	IAMs_20	IAMs_20	03 57 52.3	
	comp=Z,5μm,20.0s						
MORC	**Moravsky Berou**	**116.81**	**323**	*e*PDIFF	**Pdif**	**03 00 43.7**	**-0.9**
MORC				*e*PKIKP	**PKiKP**	**03 04 30.6**	**+1.4**
MORC	**Moravsky Berou**	**116.81**	**323**	⇑PKIKP	**PKiKP**	**03 04 31.0**	**+1.8**
JCT	**Junction City**	**116.94**	**59**	PKiKP	**PKPdf**	**03 04 29.9**	**-0.1**
	baz=279						
RGN	**Rugen**	**116.95**	**330**	IAMs_20	IAMs_20	03 56 00.4	
	comp=Z,5μm,20.0s						
WMOK	**Wichita Mounta**	**117.02**	**54**	PKiKP	**PKPdf**	**03 04 29.7**	**-0.4**
	baz=282						
L34A	**Svendsen Farm,**	**117.04**	**46**	IAMs_20	IAMs_20	03 55 02.1	
	comp=Z,5μm,20.0s						
KSP	**Ksiaz**	**117.09**	**325**	*e*Pdif	**Pdif**	**03 00 48.7**	**+2.9**
KSP				*e*PKiKP	**PKiKP**	**03 04 31.5**	**+1.8**
KSP				*e*SKKSac	**Sdif**	**03 13 30.8**	**+4.3**
KSP				*e*L	L	03 55 47.3	
	comp=Z,5μm,22.3s						
JAVC	**Velka Javorina**	**117.10**	**322**	*e*PDIFF	**Pdif**	**03 00 44.7**	**-1.3**
JAVC				*e*PKIKP	**PKiKP**	**03 04 30.6**	**+0.8**
FRGS	**Fruska Gora**	**117.11**	**318**	⇓P	**PKiKP**	**03 04 31.9**	**+2.0**
KRLC	**Kraliky**	**117.13**	**324**	*e*PKP	**PKiKP**	**03 04 31.4**	**+1.6**
KRLC				*ep*PKP	**sPKPdf**	**03 04 36.6**	**-0.9**
KRLC				AMS	AMS	03 58 10.0	
	comp=Z,3μm,20.0s						
KRLC	**Kraliky**	**117.13**	**324**	*e*PKIKP	**PKiKP**	**03 04 31.4**	**+1.6**
KRLC				*e*		03 04 36.6	
KRLC				MLR	MLR		
	comp=Z,3μm,20.0s						
ICESG	**Greenland Ices**	**117.18**	**1**	*i* P	**PKPdf**	**03 04 29.4**	**-0.4**
OSTC	**Ostas**	**117.25**	**325**	*e*PKP	**PKiKP**	**03 04 31.0**	**+1.0**
OSTC				*e*SDIF	**Sdif**	**03 13 30.6**	**+2.7**
OSTC				AMS	AMS	03 57 40.0	
	comp=Z,4μm,19.6s						
OSTC	**Ostas**	**117.25**	**325**	*e*PKIKP	**PKiKP**	**03 04 31.0**	**+1.0**
OSTC				MLR	MLR		
	comp=Z,4μm,19.6s						
DPC	**Dobruska-Polom**	**117.28**	**324**	*e*PKP	**PKiKP**	**03 04 32.4**	**+2.3**
DPC				*e*SDIF	**Sdif**	**03 13 36.0**	**+7.8**
DPC				AMS	AMS	03 57 40.0	
	comp=Z,3μm,19.7s						
DPC	**Dobruska-Polom**	**117.28**	**324**	*e*PKIKP	**PKiKP**	**03 04 32.4**	**+2.3**
DPC				MLR	MLR		
	comp=Z,3μm,19.7s						
CHVC	**Chvalec**	**117.33**	**325**	*e*PKP	**PKiKP**	**03 04 32.1**	**+1.9**
CHVC				AMS	AMS	03 57 40.0	
	comp=Z,4μm,20.0s						
CHVC	**Chvalec**	**117.33**	**325**	*e*PKIKP	**PKiKP**	**03 04 32.1**	**+1.9**
CHVC				MLR	MLR		
	comp=Z,4μm,20.0s						
UPC	**Upice**	**117.39**	**325**	AMS	AMS	03 57 40.0	
	comp=Z,4μm,19.4s						
BRDY	**Brady**	**117.49**	**58**	PKPdf	**PKPdf**	**03 04 30.2**	**-0.8**
GO08	**Villa O'Higgin**	**117.49**	**154**	IAMs_20	IAMs_20	03 54 15.8	
	comp=Z,4μm,18.0s						
MORH	**Mrgy, Hungar**	**117.51**	**319**	⇑P	**PKiKP**	**03 04 32.2**	**+1.6**
MODS	**Modra-Piesok**	**117.54**	**322**	*e*PKIKP	**PKiKP**	**03 04 32.6**	**+2.0**
MODS	**Modra-Piesok**	**117.54**	**322**	*e*PKP	**PKiKP**	**03 04 32.6**	**+2.0**
VRAC	**Vranov**	**117.57**	**323**	⇓P	**PKiKP**	**03 04 33.6**	**+2.9**
VRAC	**Vranov**	**117.57**	**323**	*e*PDIFF	**Pdif**	**03 00 47.5**	**-0.5**
VRAC				*e*PKIKP	**PKiKP**	**03 04 31.5**	**+0.8**
VRAC	**Vranov**	**117.57**	**323**	⇓PKIKP	**PKiKP**	**03 04 33.6**	**+2.9**
VRAC	**Vranov**	**117.57**	**323**	PKP	**PKiKP**	**03 04 32.1**	**+1.4**
	comp=Z,4.9nm,1.0s,baz=351,slow=2.3,SNR=9.0						
833A	**Chaparral WMA,**	**117.61**	**61**	IAMs_20	IAMs_20	03 57 16.8	
	comp=Z,6μm,18.0s						
833A	**Chaparral WMA,**	**117.61**	**61**	PKiKP	**PKPdf**	**03 04 29.7**	**-1.6**
	baz=278						
KSU1	**Kansas State U**	**117.68**	**49**	PKiKP	**PKiKP**	**03 04 31.4**	**+0.2**
	baz=286						
F36A	**Milaca**	**117.71**	**41**	IAMs_20	IAMs_20	03 56 23.1	
	comp=Z,5μm,20.0s						
ZST	**Bratislava**	**117.72**	**322**	*e*PKIKP	**PKiKP**	**03 04 34.7**	**+3.7**
ZST	**Bratislava**	**117.72**	**322**	*e*PKP	**PKiKP**	**03 04 34.7**	**+3.7**
PLPT	**Palo Pinto**	**117.78**	**56**	PKPdf	**PKPdf**	**03 04 29.8**	**-1.7**
KRUC	**Moravsky**	**117.79**	**323**	*e*PDIFF	**Pdif**	**03 00 46.3**	**-2.6**
KRUC				*e*PKIKP	**PKiKP**	**03 04 31.4**	**+0.3**
OK029	**Liberty Lake**	**117.85**	**53**	IAMs_20	IAMs_20	03 58 03.1	
	comp=Z,5μm,20.0s						
N35A	**Tabor**	**117.90**	**47**	IAMs_20	IAMs_20	03 47 19.8	
	comp=Z,6μm,22.0s						
FW03	**Perrin-Whitt E**	**117.94**	**56**	IAMs_20	IAMs_20	03 52 54.9	
	comp=Z,4μm,19.0s						
FNO	**Franklin**	**118.01**	**53**	IAMs_20	IAMs_20	03 49 41.5	
	comp=Z,4μm,19.0s						
EYMN	**Ely**	**118.19**	**38**	PKiKP	**PKiKP**	**03 04 32.1**	**+0.2**
	baz=294						
PVCC	**Panska Ves**	**118.21**	**325**	AMS	AMS	03 56 00.0	
	comp=Z,4μm,19.8s						
TREC	**Trest**	**118.23**	**324**	AMS	AMS	03 59 00.0	
	comp=Z,3μm,19.6s						
FW07	**Weatherford**	**118.24**	**56**	IAMs_20	IAMs_20	03 53 41.8	
	comp=Z,5μm,20.0s						
T35A	**Sooner Cattle**	**118.32**	**51**	PKPdf	**PKPdf**	**03 04 31.6**	**-0.9**
GOPC	**GO Pecny, Ondr**	**118.36**	**324**	*e*PKP	**PKiKP**	**03 04 33.6**	**+1.4**
GOPC	**GO Pecny, Ondr**	**118.36**	**324**	*e*PKIKP	**PKiKP**	**03 04 33.6**	**+1.4**
EF01	**Eagle Ford 01**	**118.37**	**60**	IAMs_20	IAMs_20	03 46 57.8	
	comp=Z,5μm,21.0s						
AY03	**Cochrane**	**118.40**	**154**	IAMs_20	IAMs_20	03 52 53.9	
	comp=Z,4μm,19.0s						
BRG	**Berggiesshubel**	**118.40**	**326**	*e*PKP	**PKiKP**	**03 04 34.2**	**+1.9**
BRG				Amp		03 04 37.8	
	comp=Z,22nm,1.2s						
BRG	**Berggiesshubel**	**118.40**	**326**	PS	PS	03 15 44.0	+8.7
BRG	**Berggiesshubel**	**118.40**	**326**	*e*PKIKP	**PKiKP**	**03 04 34.1**	**+1.9**
BRG						03 05 50.7	
BRG				SS	SS	03 22 17.0	+13
BRG				pmax	pmax		
	comp=Z,22nm,1.2s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,53nm,1.6s						
BRG				pmax	pmax		
	comp=Z,24nm,1.4s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BRG	**Berggiesshubel**	**118.40**	**326**	*e*PKPdf	**PKiKP**	**03 04 33.8**	**+1.5**
	baz=60,slow=2.1						
SPMN	**Marine on St.**	**118.41**	**41**	IAMs_20	IAMs_20	03 59 06.8	
	comp=Z,4μm,18.0s						
SPMN	**Marine on St.**	**118.41**	**41**	PKiKP	**PKiKP**	**03 04 32.5**	**+0.1**
	baz=292						
RONA	**Rosalia, Austr**	**118.41**	**322**	*i* PKiKP	**PKiKP**	**03 04 33.6**	**+1.2**
	comp=Z,0.9nm,0.3s						
I37A	**Lemond, Waseca**	**118.45**	**43**	IAMs_20	IAMs_20	03 59 46.9	
	comp=Z,6μm,19.0s						
LOOK	**Love County**	**118.47**	**55**	IAMs_20	IAMs_20	03 58 08.8	
	comp=Z,6μm,20.0s						
RICC	**Richard**	**118.47**	**325**	AMS	AMS	03 58 40.0	
	comp=Z,5μm,19.1s						
PRU	**Pruhonice**	**118.47**	**325**	*e*PKP	**PKiKP**	**03 04 33.7**	**+1.3**
PRU				*ep*PKP	**sPKPdf**	**03 04 39.2**	**-0.8**
PRU				*e*SDIF	**Sdif**	**03 13 43.9**	**+5.9**
PRU				AMS	AMS	03 58 20.0	
	comp=Z,4μm,18.7s						
PRU	**Pruhonice**	**118.47**	**325**	*e*PKIKP	**PKiKP**	**03 04 33.7**	**+1.3**
PRU				*e*		03 04 39.2	
PRU				MLR	MLR		
	comp=Z,4μm,18.7s						
PRA	**Prague**	**118.50**	**325**	*e*PKP	**PKiKP**	**03 04 34.3**	**+1.9**
PRA				*e*SDIF	**Sdif**	**03 13 44.4**	**+6.2**
PRA				AMS	AMS	03 58 20.0	
	comp=Z,4μm,18.3s						
PRA	**Prague**	**118.50**	**325**	*e*PKIKP	**PKiKP**	**03 04 34.3**	**+1.9**
PRA				MLR	MLR		
	comp=Z,4μm,18.3s						
Z35A	**Perchaven, San**	**118.55**	**55**	IAMs_20	IAMs_20	03 53 11.0	
	comp=Z,5μm,19.0s						
CONA	**Conrad Observa**	**118.58**	**322**	*ep*PKP	**PKiKP**	**03 04 34.0**	**+1.2**
	comp=Z,3.0nm,0.8s						
WHTX	**Lake Whitney,**	**118.65**	**57**	IAMs_20	IAMs_20	03 53 05.9	
	comp=Z,5μm,20.0s						
WHTX	**Lake Whitney,**	**118.65**	**57**	PKiKP	**PKiKP**	**03 04 33.3**	**0.0**
	baz=281						
E38A	**The Farm, Brul**	**118.69**	**40**	IAMs_20	IAMs_20	03 51 23.9	
	comp=Z,5μm,19.0s						
CLL	**Collm**	**118.72**	**326**	IAMs_20	IAMs_20	03 55 51.5	
	comp=Z,4μm,22.0s						
CLL	**Collm**	**118.72**	**326**	*e*PKIKP	**PKiKP**	**03 04 34.0**	**+1.2**
CLL				*i*		03 04 39.6	
CLL				MLR	MLR		
	comp=Z,3μm,20.7s						
UNM	**Universidad Na**	**118.73**	**71**	IAMs_20	IAMs_20	03 51 43.2	
	comp=Z,6μm,19.0s						
435B	**Jarrell**	**118.77**	**58**	PKiKP	**PKiKP**	**03 04 34.1**	**+0.5**
	baz=281						
HSKC	**Hora Svate Kat**	**118.81**	**326**	AMS	AMS	03 58 40.0	
	comp=Z,5μm,18.0s						
KOGS	**Kog**	**118.95**	**320**	*e*PKPdf	**PKiKP**	**03 04 34.6**	**+1.2**
KVTX	**Kingsville**	**119.04**	**62**	IAMs_20	IAMs_20	03 54 01.7	
	comp=Z,5μm,19.0s						
ARSA	**Arzberg**	**119.08**	**321**	*i* pPKP	**PKiKP**	**03 04 34.9**	**+1.2**
	comp=Z,1.0nm,0.4s						
TUL3	**Leonard**	**119.13**	**52**	PKPdf	**PKPdf**	**03 04 33.7**	**-0.4**
TUL3	**Leonard**	**119.13**	**52**	PKiKP	**PKiKP**	**03 04 34.1**	**0.0**
	baz=285						
CKRC	**Cesky Krumlov**	**119.13**	**324**	*e*PKP	**PKiKP**	**03 04 35.5**	**+1.8**
CKRC				*e*SDIF	**Sdif**	**03 13 47.2**	**+3.6**
CKRC				AMS	AMS	03 56 10.0	
	comp=Z,3μm,22.2s						
CKRC	**Cesky Krumlov**	**119.13**	**324**	*e*PKIKP	**PKiKP**	**03 04 35.5**	**+1.8**
CKRC				MLR	MLR		
	comp=Z,3μm,22.2s						
FLTG	**Flechtingen**	**119.15**	**328**	*e*PKPdf	**PKiKP**	**03 04 35.4**	**+1.8**
	baz=60,slow=2.1						
SCIA	**State Center**	**119.30**	**45**	IAMs_20	IAMs_20	03 55 55.7	
	comp=Z,4μm,20.0s						
SCIA	**State Center**	**119.30**	**45**	PKiKP	**PKiKP**	**03 04 34.3**	**+0.1**
	baz=290						
K38A	**Parkersburg**	**119.36**	**44**	IAMs_20	IAMs_20	03 50 06.1	
	comp=Z,6μm,21.0s						
TLIG	**Tlapa**	**119.41**	**73**	IAMs_20	IAMs_20	03 48 48.2	
	comp=Z,6μm,20.0s						
KHC	**Kasperske Hory**	**119.42**	**324**	IAMs_20	IAMs_20	03 59 19.3	
	comp=Z,5μm,20.0s						
KHC	**Kasperske Hory**	**119.42**	**324**	*e*PKP	**PKiKP**	**03 04 35.7**	**+1.4**
KHC				*ep*PKP	**sPKPdf**	**03 04 41.0**	**-0.9**
KHC				*e*PP	**PP**	**03 05 51.5**	**-4.0**
KHC				*e*SDIF	**Sdif**	**03 13 49.7**	**+3.6**
KHC				*ex*	x	03 15 32.5	
KHC				AMS	AMS	03 58 50.0	
	comp=Z,4μm,19.9s						
KHC	**Kasperske Hory**	**119.42**	**324**	*e*PKIKP	**PKiKP**	**03 04 35.7**	**+1.4**
KHC				*e*		03 04 41.0	
KHC				*e*		03 05 51.5	
KHC				*e*		03 15 32.5	
KHC				MLR	MLR		
	comp=Z,4μm,19.9s						
TANN	**Tannenbergstha**	**119.45**	**326**	*e*PKPdf	**PKiKP**	**03 04 35.9**	**+1.6**
	baz=60,slow=2.1						
GEC2	**GERESS Array S**	**119.48**	**324**	*e*PKPdf	**PKiKP**	**03 04 36.2**	**+1.7**
	baz=60,slow=2.1						
GERES	**GERESS Array B**	**119.48**	**324**	PKPdf	**PKPdf**	**03 04 33.8**	**-0.7**
GERES	**GERESS Array B**	**119.48**	**324**	PKIKP	**PKPdf**	**03 04 33.8**	**-0.7**
GERES	**GERESS Array B**	**119.48**	**324**	PKP	**PKiKP**	**03 04 35.5**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=29,slow=3.0,SNR=12						
DY2G	**Dye2**	**119.52**	**4**	*i* P	**PKiKP**	**03 04 34.4**	**+0.1**
NKC	**Novy Kostel**	**119.55**	**326**	*e*PKP	**PKiKP**	**03 04 34.9**	**+0.4**
NKC				AMS	AMS	03 59 10.0	
	comp=Z,4μm,16.9s						
NKC	**Novy Kostel**	**119.55**	**326**	*e*PKIKP	**PKiKP**	**03 04 34.9**	**+0.4**
NKC				MLR	MLR		
	comp=Z,4μm,16.9s						
GCIS	**Gornji Cirnik**	**119.58**	**320**	*e*PKPdf	**PKiKP**	**03 04 36.5**	**+1.8**
MOA	**Molln**	**119.59**	**323**	*e*PKiKP	**PKiKP**	**03 04 35.5**	**+0.8**
	comp=Z,2.1nm,0.7s,SNR=7.3						
SOKA	**Soboth**	**119.62**	**321**	*e*PKiKP	**PKiKP**	**03 04 35.9**	**+1.1**
	comp=Z,3.3nm,0.8s,SNR=8.7						
NRDL	**Niedersach Rie**	**119.65**	**329**	*e*PKPdf	**PKiKP**	**03 04 36.3**	**+1.8**
	baz=60,slow=2.1						
EFI	**East Falkland**	**119.72**	**165**	IAMs_20	IAMs_20	04 01 09.8	
	comp=Z,4μm,20.0s						
X37A	**Clayton**	**119.79**	**54**	IAMs_20	IAMs_20	03 59 42.6	
	comp=Z,5μm,19.0s						
MOX	**Moxa**	**119.81**	**326**	*e*L	L	03 56 11.4	
	comp=Z,5μm,21.6s						
P38A	**Dawn**	**119.81**	**48**	IAMs_20	IAMs_20	03 56 37.5	
	comp=Z,5μm,20.0s						
WET	**Wettzell**	**119.82**	**324**	*e*PKPdf	**PKiKP**	**03 04 36.9**	**+1.8**
	baz=60,slow=2.1						
MANZ	**Manzenberg**	**119.86**	**325**	*e*PKPdf	**PKiKP**	**03 04 37.5**	**+2.3**
	baz=60,slow=2.1						
RETH	**Rethem/Aller,**	**119.90**	**329**	*e*PKPdf	**PKiKP**	**03 04 37.6**	**+2.6**
	baz=60,slow=2.1						
COYC	**Coyhaique**	**119.91**	**153**	IAMs_20	IAMs_20	03 47 16.9	
	comp=Z,4μm,21.0s						
237A	**Washetta, Mont**	**120.02**	**57**	IAMs_20	IAMs_20	03 50 17.1	
	comp=Z,4μm,21.0s						
BIOA	**Bad Ischl, Aus**	**120.04**	**323**	*e*PKiKP	**PKiKP**	**03 04 36.3**	**+0.8**
	comp=Z,1.2nm,0.3s,SNR=6.3						
G40A	**Rib Lake**	**120.09**	**40**	IAMs_20	IAMs_20	03 57 37.1	
	comp=Z,4μm,19.0s						
GTTG	**Gottingen**	**120.23**	**328**	*e*PKPdf	**PKiKP**	**03 04 38.4**	**+2.6**
	baz=60,slow=2.1						
CRNS	**Crni Vrh**	**120.36**	**321**	*e*PKPdf	**PKiKP**	**03 04 37.3**	**+1.0**
I40A	**Norwalk**	**120.36**	**42**	IAMs_20	IAMs_20	03 52 07.5	
	comp=Z,5μm,20.0s						
COWI	**Conover**	**120.42**	**39**	IAMs_20	IAMs_20	03 52 17.7	
	comp=Z,5μm,20.0s						
HHAR	**Hobbs**	**120.48**	**51**	PKPdf	**PKPdf**	**03 04 35.9**	**-0.8**
KBA	**Koelnbreinsper**	**120.49**	**322**	*i* PKiKP	**PKiKP**	**03 04 37.2**	**+0.5**
	comp=Z,1.5nm,0.6s						
GRF	**Grafenberg Arr**	**120.50**	**326**	*e*L	L	04 01 35.2	
	comp=Z,3μm,19.9s						
MYKA	**Terra Mystica**	**120.51**	**321**	*e*PKiKP	**PKiKP**	**03 04 37.0**	**+0.4**
	comp=Z,2.1nm,0.4s						
L40A	**Anamosa**	**120.64**	**44**	IAMs_20	IAMs_20	03 56 59.0	
	comp=Z,4μm,20.0s						
LESA	**Schwarzleotal**	**120.74**	**323**	*i* PKiKP	**PKiKP**	**03 04 37.7**	**+0.7**
	comp=Z,4.5nm,0.8s						
SABO	**M.te Sabotino**	**120.82**	**321**	IAMs_20	IAMs_20	04 05 37.9	
	comp=Z,2μm,20.0s						
P40A	**Paris**	**120.93**	**47**	IAMs_20	IAMs_20	03 57 30.0	
	comp=Z,5μm,19.0s						
IBBN	**Ibbenburen**	**120.96**	**329**	*e*PKPdf	**PKiKP**	**03 04 38.0**	**+0.9**
	baz=60,slow=2.1						
JFWS	**Jewell Farm**	**120.99**	**43**	PKPdf	**PKPdf**	**03 04 35.9**	**-1.5**
JFWS	**Jewell Farm**	**120.99**	**43**	IAMs_20	IAMs_20	04 01 06.2	
	comp=Z,4μm,19.0s						
JFWS	**Jewell Farm**	**120.99**	**43**	PKiKP	**PKPdf**	**03 04 37.3**	**-0.1**
	baz=293						
JFWS	**Jewell Farm**	**120.99**	**43**	PKIKP	**PKPdf**	**03 04 35.9**	**-1.5**
NATX	**Nacogdoches**	**121.03**	**57**	IAMs_20	IAMs_20	03 55 17.7	
	comp=Z,4μm,19.0s						
NATX	**Nacogdoches**	**121.03**	**57**	PKiKP	**PKiKP**	**03 04 37.9**	**0.0**
	baz=283						
ABTA	**Abfaltersbach**	**121.15**	**322**	*e*PKiKP	**PKiKP**	**03 04 38.3**	**+0.5**
	comp=Z,6.4nm,0.8s,SNR=6.5						
R40A	**Maddies Statio**	**121.16**	**49**	IAMs_20	IAMs_20	03 57 58.4	
	comp=Z,4μm,19.0s						
F42A	**Maple Grove Fa**	**121.20**	**39**	IAMs_20	IAMs_20	03 52 52.3	
	comp=Z,5μm,20.0s						
NUUK	**Nuuk**	**121.23**	**7**	*e*P	**PKiKP**	**03 04 41.4**	**+4.1**
MIAR	**Mount Ida**	**121.23**	**53**	IAMs_20	IAMs_20	03 50 36.8	
	comp=Z,6μm,21.

BCLA	**Clavier**	123.31	329	*d*PKP	**PKiKP**		03 04 44.0	+2.1	
Q44A	**Meyer Farm, Va**	123.35	47	IAMs_20	IAMs_20		03 56 29.2		
	comp=Z,4μm,19.0s								
BGES	**Gesves**	123.44	329	*d*PKP	**PKiKP**		03 04 44.8	+2.7	
CGM3	**Cape Girardeau**	123.44	49	IAMs_20	IAMs_20		03 54 56.8		
	comp=Z,5μm,21.0s								
143A	**Socs Landing,**	123.47	55	IAMs_20	IAMs_20		03 56 55.2		
	comp=Z,6μm,20.0s								
RCHB	**Rochefort**	123.50	328	*d*PKP	**PKiKP**		03 04 44.6	+2.4	
S44A	**Carbondale**	123.61	48	IAMs_20	IAMs_20		03 56 09.1		
	comp=Z,5μm,20.0s								
SIUC	**Southern Illin**	123.63	48	IAMs_20	IAMs_20		03 56 08.6		
	comp=Z,5μm,20.0s								
BMRD	**Maredsous**	123.65	329	*d*PKP	**PKiKP**		03 04 43.9	+1.3	
VLC	**Villacollemand**	123.67	320	PKP	**PKiKP**		03 04 46.4	+3.5	
GLMI	**Grayling**	123.83	39	IAMs_20	IAMs_20		03 54 40.9		
	comp=Z,6μm,20.0s								
GLMI	**Grayling**	123.83	39	PKiKP	**PKPdf**		03 04 41.8	-1.0	
	baz=299								
EKA	**Eskdalemuir Ar**	123.86	337	PKP	**PKiKP**		03 04 44.5	+1.8	
	comp=Z,6.2nm,0.9s,baz=29,slow=2.3,SNR=7.0								
DOU	**Dourbes**	123.86	329	*d*PKP	**PKiKP**		03 04 45.3	+2.4	
ESK	**Eskdalemuir**	123.89	337	IAMs_20	IAMs_20		04 00 32.3		
	comp=Z,5μm,20.0s								
LR05	**Currie**	123.93	148	IAMs_20	IAMs_20		03 50 37.9		
	comp=Z,4μm,21.0s								
MET	**Memphis--Engin**	123.94	52	IAMs_20	IAMs_20		03 52 39.2		
	comp=Z,5μm,20.0s								
L46A	**Eue Claire**	124.03	43	IAMs_20	IAMs_20		04 02 31.5		
	comp=Z,5μm,18.0s								
OLIL	**Olney**	124.08	47	IAMs_20	IAMs_20		03 56 42.5		
	comp=Z,4μm,20.0s								
SFIN	**Lafayette**	124.16	45	IAMs_20	IAMs_20		04 00 05.2		
	comp=Z,4μm,20.0s								
SFIN	**Lafayette**	124.16	45	PKiKP	**PKPdf**		03 04 43.1	-0.4	
	baz=294								
LR03	**Panguipulli**	124.19	148	IAMs_20	IAMs_20		03 50 45.8		
	comp=Z,4μm,20.0s								
T45A	**Paducah**	124.30	49	IAMs_20	IAMs_20		03 58 53.4		
	comp=Z,6μm,19.0s								
PLCA	**Paso Flores**	124.30	150	PKP	**PKiKP**		03 04 45.3	+1.0	
	comp=Z,7.6nm,0.9s,baz=219,slow=3.6,SNR=8.9								
PLCA				PKKPbc	**PKKPbc**		03 14 31.1	+2.1	
	comp=Z,4.1nm,1.1s,baz=37,slow=3.3,SNR=3.3								
VBMS	**Vicksburg**	124.32	55	IAMs_20	IAMs_20		03 56 59.9		
	comp=Z,5μm,20.0s								
VBMS	**Vicksburg**	124.32	55	PKiKP	**PKPdf**		03 04 44.1	0.0	
	baz=286								
P46A	**Rosedale**	124.38	46	IAMs_20	IAMs_20		04 03 19.3		
	comp=Z,5μm,19.0s								
J47A	**Sunmer**	124.45	41	IAMs_20	IAMs_20		03 51 53.5		
	comp=Z,6μm,22.0s								
IVI	**Ivigtut**	124.53	6	IAMs_20	IAMs_20		03 54 52.7		
	comp=Z,4μm,22.0s								
OXF	**Oxford**	124.54	52	IAMs_20	IAMs_20		04 05 36.2		
	comp=Z,4μm,18.0s								
OXF	**Oxford**	124.54	52	PKiKP	**PKPdf**		03 04 43.8	-0.7	
	baz=288								
Y45A	**Yeager Farm, C**	124.63	53	IAMs_20	IAMs_20		03 58 18.7		
	comp=Z,4μm,20.0s								
GO06	**Curarrehue**	124.69	148	IAMs_20	IAMs_20		03 51 13.8		
	comp=Z,4μm,21.0s								
NRS	**Narsarsuaq**	124.84	5	*i* P	**PKiKP**		03 04 44.5	0.0	
BLO	**Bloomington**	125.05	46	IAMs_20	IAMs_20		03 54 20.9		
	comp=Z,5μm,20.0s								
WVT	**Waverly**	125.22	50	PKPdf	**PKPdf**		03 04 44.1	-1.6	
WVT	**Waverly**	125.22	50	PKiKP	**PKPdf**		03 04 45.3	-0.4	
	baz=291								
WVT	**Waverly**	125.22	50	PKIKP	**PKPdf**		03 04 44.1	-1.6	
L48A	**N Adams**	125.30	42	IAMs_20	IAMs_20		03 55 17.2		
	comp=Z,5μm,21.0s								
I49A	**Point Hope**	125.39	39	IAMs_20	IAMs_20		03 50 37.1		
	comp=Z,5μm,22.0s								
346A	**Big Creek Wild**	125.41	56	IAMs_20	IAMs_20		04 00 22.8		
	comp=Z,4μm,20.0s								
PLAL	**Pickwick Lake**	125.42	51	IAMs_20	IAMs_20		03 52 26.6		
	comp=Z,4μm,21.0s								
T47A	**Sharon Grove**	125.46	48	IAMs_20	IAMs_20		03 53 44.2		
	comp=Z,5μm,20.0s								
BNI	**Bardonecchia**	125.53	323	IAMs_20	IAMs_20		04 02 50.1		
	comp=Z,5μm,20.0s								
O48B	**Farmland**	125.56	44	IAMs_20	IAMs_20		04 03 14.2		
	comp=Z,5μm,18.0s								
O48B	**Farmland**	125.56	44	PKiKP	**PKPdf**		03 04 45.9	-0.4	
	baz=296								
WCI	**Wyandotte Cave**	125.58	47	PKPdf	**PKPdf**		03 04 44.7	-1.6	
WCI	**Wyandotte Cave**	125.58	47	IAMs_20	IAMs_20		04 00 04.2		
	comp=Z,5μm,19.0s								
WCI	**Wyandotte Cave**	125.58	47	PKiKP	**PKPdf**		03 04 45.7	-0.6	
	baz=293								
WCI	**Wyandotte Cave**	125.58	47	PKIKP	**PKPdf**		03 04 44.7	-1.6	
WCI				MLR	MLR				
	comp=Z,5μm,19.0s								
AAM	**Ann Arbor**	125.65	41	IAMs_20	IAMs_20		03 55 20.2		
	comp=Z,6μm,20.0s								
AAM	**Ann Arbor**	125.65	41	PKiKP	**PKPdf**		03 04 45.9	-0.4	
	baz=296								
P48A	**Milroy**	125.71	45	IAMs_20	IAMs_20		04 04 54.3		
	comp=Z,5μm,18.0s								
BI05	**Punta Hualpn**	125.78	145	IAMs_20	IAMs_20		03 53 46.1		
	comp=Z,4μm,20.0s								
N49A	**Columbus Grove**	125.93	43	IAMs_20	IAMs_20		03 53 19.0		
	comp=Z,5μm,22.0s								
Z47A	**Carrollton**	126.01	53	IAMs_20	IAMs_20		03 58 14.3		
	comp=Z,5μm,20.0s								
SCHQ	**Schefferville**	126.08	21	PKPdf	**PKPdf**		03 04 46.4	-0.4	
SCHQ	**Schefferville**	126.08	21	PKP	**PKiKP**		03 04 48.0	+0.7	
	comp=Z,13nm,0.9s,baz=300,slow=2.3,SNR=13								
K50A	**Casco**	126.09	40	IAMs_20	IAMs_20		03 51 00.8		
	comp=Z,4μm,22.0s								
P49A	**Miami Univ. Ec**	126.17	45	IAMs_20	IAMs_20		03 57 11.6		
	comp=Z,5μm,21.0s								
P49A	**Miami Univ. Ec**	126.17	45	PKiKP	**PKPdf**		03 04 47.0	-0.5	
	baz=295								
X48A	**Hartselle**	126.40	51	IAMs_20	IAMs_20		04 02 28.5		
	comp=Z,3μm,19.0s								
M50A	**Fremont**	126.47	42	IAMs_20	IAMs_20		03 55 01.2		
	comp=Z,6μm,22.0s								
U49A	**Red Boiling Sp**	126.62	49	IAMs_20	IAMs_20		03 54 36.6		
	comp=Z,6μm,21.0s								
LRAL	**Lakeview Retre**	126.91	53	PKiKP	**PKPdf**		03 04 48.8	-0.3	
	baz=289								
ACSO	**Alum Creek Sta**	127.06	43	IAMs_20	IAMs_20		04 03 42.8		
	comp=Z,4μm,19.0s								
ACSO	**Alum Creek Sta**	127.06	43	PKiKP	**PKPdf**		03 04 48.7	-0.4	
	baz=298								
Y49A	**Blount Mountai**	127.10	52	PKPdf	**PKPdf**		03 04 48.1	-1.3	
Y49A				IAMs_20	IAMs_20		04 02 39.0		
	comp=Z,4μm,19.0s								
N51A	**Ashland**	127.15	42	IAMs_20	IAMs_20		04 02 24.1		
	comp=Z,5μm,20.0s								
P51A	**Williamsport**	127.35	44	IAMs_20	IAMs_20		04 01 32.5		
	comp=Z,6μm,20.0s								
Q51A	**Peebles**	127.35	45	IAMs_20	IAMs_20		04 08 58.8		
	comp=Z,5μm,18.0s								
BRAL	**Brewton**	127.45	55	IAMs_20	IAMs_20		03 57 42.8		
	comp=Z,3μm,20.0s								
BRAL	**Brewton**	127.45	55	PKiKP	**PKiKP**		03 04 50.7	0.0	
	baz=288								
FPAL	**Fort Paine**	127.48	51	PKPdf	**PKPdf**		03 04 48.3	-1.9	
FPAL				IAMs_20	IAMs_20		03 52 41.0		
	comp=Z,4μm,21.0s								
M52A	**Chesterland**	127.52	41	IAMs_20	IAMs_20		04 01 27.7		
	comp=Z,6μm,20.0s								
GO05	**Huala**	127.72	144	IAMs_20	IAMs_20		03 54 45.8		
	comp=Z,4μm,20.0s								
250A	**Grady**	127.84	54	IAMs_20	IAMs_20		03 59 34.8		
	comp=Z,4μm,20.0s								
O52A	**Adamsville**	127.89	43	IAMs_20	IAMs_20		03 54 19.8		
	comp=Z,3μm,20.0s								
P52A	**Corning**	127.92	43	IAMs_20	IAMs_20		04 04 17.5		
	comp=Z,5μm,19.0s								
P52A	**Corning**	127.92	43	PKiKP	**PKPdf**		03 04 50.8	0.0	
	baz=298								
KEST	**Kesra**	128.00	311	PKP	**PKiKP**		03 04 54.6	+2.8	
	comp=Z,36nm,1.2s,baz=122,slow=1.3,SNR=9.4								
M53A	**WI Miller and**	128.01	41	PKiKP	**PKPdf**		03 04 50.5	-0.4	
	baz=300								
X51A	**Calhoun**	128.05	50	IAMs_20	IAMs_20		03 52 58.0		
	comp=Z,6μm,21.0s								
ERPA	**Erie**	128.11	40	IAMs_20	IAMs_20		03 59 10.1		
	comp=Z,5μm,20.0s								
ERPA	**Erie**	128.11	40	PKiKP	**PKPdf**		03 04 50.5	-0.6	
	baz=302								
N53A	**Lisbon**	128.22	42	IAMs_20	IAMs_20		04 01 14.4		
	comp=Z,5μm,19.0s								
O53A	**New Philadelph**	128.25	42	PKiKP	**PKPdf**		03 04 51.0	-0.4	
	baz=299								
TZTN	**Tazewell**	128.26	48	PKiKP	**PKPdf**		03 04 51.6	0.0	
	baz=294								
P53A	**Whipple**	128.49	43	IAMs_20	IAMs_20		04 02 21.7		
	comp=Z,5μm,18.0s								
V52A	**Sevierville**	128.51	48	IAMs_20	IAMs_20		03 52 57.0		
	comp=Z,6μm,22.0s								
451A	**Vernon**	128.69	55	IAMs_20	IAMs_20		04 02 28.6		
	comp=Z,3μm,19.0s								
WVNY	**West Valley, N**	128.82	39	IAMs_20	IAMs_20		03 57 57.9		
	comp=Z,6μm,20.0s								
O54A	**Avella**	128.84	42	PKPdf	**PKiKP**		03 04 52.9	-0.3	
O54A				IAMs_20	IAMs_20		04 03 50.7		
	comp=Z,5μm,19.0s								
152A	**Waverly Hall**	128.84	53	IAMs_20	IAMs_20		04 01 59.2		
	comp=Z,4μm,20.0s								
TEIG	**Tepich**	128.84	69	IAMs_20	IAMs_20		04 02 38.2		
	comp=Z,5μm,18.0s								
Y52A	**Lilburn**	128.92	51	IAMs_20	IAMs_20		04 04 33.2		
	comp=Z,4μm,19.0s								
352A	**Blakely**	129.08	54	IAMs_20	IAMs_20		04 00 09.7		
	comp=Z,3μm,20.0s								
Q54A	**Coxs Mills**	129.11	44	IAMs_20	IAMs_20		04 03 22.1		
	comp=Z,5μm,20.0s								
MT09	**Talagante**	129.14	144	IAMs_20	IAMs_20		03 55 19.5		
	comp=Z,3μm,19.0s								
M55A	**Ridgway**	129.22	40	IAMs_20	IAMs_20		03 52 56.7		
	comp=Z,6μm,22.0s								
MT02	**Curacaví**	129.42	143	IAMs_20	IAMs_20		03 52 42.8		
	comp=Z,4μm,20.0s								
MCWV	**Mont Chateau**	129.45	42	PKiKP	**PKPdf**		03 04 53.9	+0.2	
	baz=300								
GOGA	**Godfrey**	129.55	51	PKiKP	**PKPdf**		03 04 54.2	+0.1	
	baz=292								
MT05	**Renca**	129.56	143	IAMs_20	IAMs_20		03 53 06.6		
	comp=Z,4μm,21.0s								
MT16	**CCHEN**	129.66	144	IAMs_20	IAMs_20		03 55 35.2		
	comp=Z,3μm,19.0s								
PEL	**Peldehue**	129.77	143	IAMs_20	IAMs_20		03 52 54.2		
	comp=Z,3μm,20.0s								
553A	**Crawfordville**	129.90	56	IAMs_20	IAMs_20		03 59 18.7		
	comp=Z,4μm,19.0s								
LONY	**Lake Ozonia**	129.90	34	IAMs_20	IAMs_20		03 59 27.9		
	comp=Z,3μm,20.0s								
LONY	**Lake Ozonia**	129.90	34	PKiKP	**PKPdf**		03 04 54.2	-0.3	
	baz=309								
R55A	**Marlinton**	129.94	44	IAMs_20	IAMs_20		04 05 22.1		
	comp=Z,5μm,19.0s								
VA03	**San Esteban**	130.12	143	IAMs_20	IAMs_20		03 55 31.3		
	comp=Z,3μm,20.0s								
LMQ	**La Malbaie**	130.16	29	PKPdf	**PKPdf**		03 04 53.9	-1.0	
TIGA	**Tifton**	130.17	54	IAMs_20	IAMs_20		04 01 07.5		
	comp=Z,5μm,20.0s								
TIGA	**Tifton**	130.17	54	PKiKP	**PKPdf**		03 04 54.9	-0.4	
	baz=290								
BLA	**Blacksburg**	130.23	45	IAMs_20	IAMs_20		04 01 33.0		
	comp=Z,5μm,20.0s								
BLA	**Blacksburg**	130.23	45	PKiKP	**PKPdf**		03 04 55.3	0.0	
	baz=298								
SSPA	**Standing Stone**	130.23	40	PKPdf	**PKPdf**		03 04 53.8	-1.4	
SSPA	**Standing Stone**	130.23	40	IAMs_20	IAMs_20		03 55 20.4		
	comp=Z,6μm,22.0s								
SSPA	**Standing Stone**	130.23	40	PKiKP	**PKPdf**		03 04 55.1	-0.1	
	baz=303								
KMSC	**Kings Mountain**	130.48	48	PKiKP	**PKPdf**		03 04 56.1	+0.3	
	baz=295								
NCB	**Newcomb**	130.51	35		**PKPdf**		03 04 55.0	-0.6	
BINY	**Binghamton**	130.54	37	PKiKP	**PKiKP**		03 04 56.3	-0.3	
	baz=306								
J59A	**Piesco**	130.66	35	IAMs_20	IAMs_20		04 01 15.2		
	comp=Z,5μm,20.0s								
P57A	**Homestead Farm**	130.76	42	IAMs_20	IAMs_20		04 01 03.5		
	comp=Z,5μm,20.0s								
N58A	**Sunbury**	130.87	39	IAMs_20	IAMs_20		03 54 55.1		
	comp=Z,6μm,22.0s								
CO06	**Fray Jorge**	130.88	140	IAMs_20	IAMs_20		03 52 40.0		
	comp=Z,4μm,20.0s								
CO02	**Combarbal**	130.93	141	IAMs_20	IAMs_20		03 52 42.0		
	comp=Z,4μm,21.0s								
CNGN	**Cerro Negro**	131.11	79	IAMs_20	IAMs_20		03 57 21.9		
	comp=Z,4μm,20.0s								
T57A	**Hurt**	131.15	45	IAMs_20	IAMs_20		04 02 30.4		
	comp=Z,5μm,20.0s								
CO03	**El Pedregal**	131.37	141	IAMs_20	IAMs_20		04 07 09.7		
	comp=Z,4μm,20.0s								
TRY	**Troy**	131.60	36	IAMs_20	IAMs_20		04 01 52.9		
	comp=Z,5μm,20.0s								
LBNH	**Lisbon**	131.61	33	PKiKP	**PKiKP**		03 04 58.3	-0.4	
	baz=311								
CO05	**La Serena**	131.65	140	IAMs_20	IAMs_20		03 53 23.2		
	comp=Z,4μm,20.0s								
456A	**Hilliard**	131.68	54	IAMs_20	IAMs_20		04 02 13.5		
	comp=Z,5μm,20.0s								
656A	**Willston**	131.73	56	IAMs_20	IAMs_20		04 00 23.1		
	comp=Z,4μm,20.0s								
J61A	**Chester**	131.84	34	IAMs_20	IAMs_20		03 58 15.3		
	comp=Z,5μm,20.0s								
CBN	**Corbin Frederi**	131.85	43	PKiKP	**PKPdf**		03 04 58.6	+0.3	
	baz=301								
WUPA	**West Chester U**	132.07	40	IAMs_20	IAMs_20		04 03 21.1		
	comp=Z,4μm,19.0s								
BOAB	**BOACO BROADBAN**	132.12	79	PKP	**PKPdf**		03 04 59.7	+0.3	
NHSC	**New Hope**	132.20	50	PKiKP	**PKPdf**		03 04 59.5	+0.4	
	baz=295								
HZTE	**Horizontes, Gu**	132.25	81	IAMs_20	IAMs_20		03 52 40.2		
	comp=Z,5μm,21.0s								
PKME	**Peaks-Kenny Pk**	132.28	30	PKiKP	**PKPdf**		03 04 59.1	+0.2	
	baz=315								
CO01	**Juntas del Tor**	132.33	141	IAMs_20	IAMs_20		03 53 37.3		
	comp=Z,4μm,20.0s								
L61B	**Northampton**	132.34	35	PKiKP	**PKPdf**		03 04 59.4	+0.3	
	baz=309								
K62A	**Royalston**	132.46	35	IAMs_20	IAMs_20		04 00 11.6		
	comp=Z,4μm,19.0s								
U59A	**Littleton**	132.49	45	IAMs_20	IAMs_20		04 07 30.9		
	comp=Z,5μm,19.0s								
PAL	**Palisades**	132.51	38	PKiKP	**PKPdf**		03 04 59.8	+0.3	
	baz=307								
LCO	**Las Campanas**	132.60	139	IAMs_20	IAMs_20		03 53 52.6		
	comp=Z,4μm,21.0s								
ACON	**Acoyapa**	132.62	79	IAMs_20	IAMs_20		03 57 52.0		
	comp=Z,5μm,21.0s								
QUA2	**Belchertown**	132.64	35	IAMs_20	IAMs_20		04 03 01.4		
	comp=Z,5μm,19.0s								
AC04	**Llanos de Chal**	132.89	138	IAMs_20	IAMs_20		03 53 30.5		
	comp=Z,3μm,21.0s								
HRV	**Adam Dziewonsk**	132.94	34	IAMs_20	IAMs_20		03 58 47.4		
	comp=Z,4μm,21.0s								
HRV	**Adam Dziewonsk**	132.94	34	PKiKP	**PKiKP**		03 05 01.1	-0.3	
	baz=311								
HRV	**Adam Dziewonsk**	132.94	34	⇓PKIKP	**PKiKP**		03 05 01.4	0.0	
CNNC	**Cliffs of the**	132.96	46	PKiKP	**PKiKP**		03 05 01.3	-0.3	
	baz=298								
AC05	**El Transito**	133.00	140	IAMs_20	IAMs_20		03 54 16.0		
	comp=Z,4μm,21.0s								
UCCT	**U. Connecticut**	133.02	36	IAMs_20	IAMs_20		04 04 17.5		
	comp=Z,5μm,20.0s								
DWPF	**Disney Wildern**	133.06	57	IAMs_20	IAMs_20		04 10 01.4		
	comp=Z,4μm,18.0s								
DWPF	**Disney Wildern**	133.06	57	PKiKP	**PKPdf**		03 05 01.4	+0.5	
	baz=289								
ARE1	**Arenal 1**	133.12	82	IAMs_20	IAMs_20		03 53 18.2		
	comp=Z,5μm,21.0s								
R61A	**Willards**	133.14	41	IAMs_20	IAMs_20		04 03 00.5		
	comp=Z,5μm,20.0s								
WES	**Weston**	133.16	34	IAMs_20	IAMs_20		04 00 15.0		
	comp=Z,5μm,20.0s								
SOR	**Soroa**	133.18	65	IAMs_20	IAMs_20		04 07 14.5		
	comp=Z,4μm,18.0s								
S61A	**Acmar**	133.27	42	IAMs_20	IAMs_20		04 02 25.0		
	comp=Z,4μm,19.0s								
ECHE	**Chera**	133.27	321	PKP	**PKiKP**		03 05 03.7	+1.5	
BCX	**Boston College**	133.27	34	IAMs_20	IAMs_20		03 58 57.1		
	comp=Z,5μm,21.0s								
COVE	**Coope Vega, Sa**	133.42	81	IAMs_20	IAMs_20		03 52 16.3		
	comp=Z,5μm,22.0s								
V61A	**Roper**	133.62	45	IAMs_20	IAMs_20		03 55 58.8		
	comp=Z,6μm,22.0s								
L64A	**Middleborough**	133.72	35	IAMs_20	IAMs_20		04 03 53.0		
	comp=Z,5μm,20.0s								
LCR2	**La Lucha 2**	133.83	82	IAMs_20	IAMs_20		03 52 47.2		
	comp=Z,5μm,22.0s								
GO03	**Copiap**	133.85	138	IAMs_20	IAMs_20		03 53 48.9		
	comp=Z,4μm,21.0s								
RIMA	**Rio Macho**	133.97	82	IAMs_20	IAMs_20		03 53 44.7		
	comp=Z,5μm,20.0s								
M65A	**Busby, Falmout**	134.07	35	PKiKP	**PKiKP**		03 05 03.5	-0.2	
	baz=311								
ETOB	**Tobarra**	134.19	320	PKP	**PKiKP**		03 05 09.6	+5.5	
061Z	**Ochoppi**	134.21	60	IAMs_20	IAMs_20		04 01 04.3		
	comp=Z,4μm,20.0s								
060A	**Indiantown**	134.31	58	IAMs_20	IAMs_20		04 01 43.6		
	comp=Z,3μm,20.0s								
CAMR	**Camarioca**	134.58	64	IAMs_20	IAMs_20		04 01 15.5		
	comp=Z,5μm,20.0s								
CDITO	**Canoas**	134.96	84	IAMs_20	IAMs_20		03 56 18.1		
	comp=Z,4μm,20.0s								
ES17	**SONSECA Array**	135.05	323	IAMs_20	IAMs_20		04 08 38.5		
	comp=Z,3μm,22.0s								
ESDC	**Sonseca Array**	135.06	323	PKP	**PKiKP**		03 05 06.4	+0.5	
	comp=Z,1.6nm,0.7s,baz=49,slow=1.9,SNR=4.2								
ESDC				PP	**PP**		03 07 37.4	-1.4	
	comp=Z,16nm,1.3s,baz=32,slow=5.9,SNR=6.5								
ES16	**SONSECA Array**	135.07	323	IAMs_20	IAMs_20		04 08 38.1		
	comp=Z,4μm,20.0s								
ES15	**SONSECA Array**	135.09	323	IAMs_20	IAMs_20		04 08 38.6		
	comp=Z,4μm,20.0s								
AC02	**Maricunga**	135.09	138	IAMs_20	IAMs_20		03 55 00.6		
	comp=Z,4μm,20.0s								
ES14	**SONSECA Array**	135.09	323	IAMs_20	IAMs_20		04 08 44.6		
	comp=Z,4μm,22.0s								
BRU2	**Volcan**	135.14	84	IAMs_20	IAMs_20		03 57 47.9		
	comp=Z,5μm,18.0s								
SALI	**Salinas**	135.78	100	IAMs_20	IAMs_20		04 07 27.8		
	comp=Z,5μm,18.0s								
MVO	**Moncorvo**	135.84	327	*e*SS	SS		03 25 46.8	+5.5	
MVO	**Moncorvo**	135.84	327	*e*LQ	LQ		03 53 38.5		
MVO				*e*LR	LR		03 56 49.7		
	comp=Z,4μm,18.0s								
GO02	**Mina Guanaco**	135.88	136	IAMs_20	IAMs_20		04 10 26.9		
	comp=Z,3μm,20.0s								
PGAV	**Gavieira, Arco**	135.94	328	*e*SS	SS		03 25 57.9	+15	
PGAV	**Gavieira, Arco**	135.94	328	*e*LQ	LQ		03 55 15.0		
PGAV				*e*LR	LR		04 00 49.3		
	comp=Z,3μm,22.0s								
ARNL	**Arenillas**	136.40	102	IAMs_20	IAMs_20		03 57 23.3		
	comp=Z,3μm,20.0s								
MTE	**Manteigas**	136.65	326	*e*SS	SS		03 26 06.3	+15	
MTE	**Manteigas**	136.65	326	*e*LQ	LQ		03 54 05.4		
MTE				*e*LR	LR		03 57 05.0		
	comp=Z,3μm,20.0s								
NNA	**Nana**	136.90	115	IAMs_20	IAMs_20		04 01 11.5		
	comp=Z,3μm,18.0s								
PCBR	**Castelo Branco**	136.99	326	*e*PKPdf	**PKiKP**		03 05 10.1	+0.4	
PB15	**IPOC Station P**	137.22	134	IAMs_20	IAMs_20		03 56 59.5		
	comp=Z,3μm,20.0s								
PMRV	**Marv??o**	137.22	325	*e*SS	SS		03 25 58.9	+1.0	
PMRV	**Marv??o**	137.22	325	*e*LQ	LQ		03 54 27.5		
PMRV				*e*LR	LR		03 56 32.3		
	comp=Z,3μm,20.0s								
PESTR	**Estremoz**	137.72	325	*e*PKPdf	**PKiKP**		03 05 15.7	+4.5	
PB07	**IPOC Station P**	137.83	132	PKP	**PKPdf**		03 05 07.5	-2.7	
PBAR	**Barrancos**	137.86	323	*e*PKPdf	**PKiKP**		03 05 15.7	+4.2

	9.3nm,0.3s,baz=247,slow=21,SNR=1.3						
PMG				Sn	**Sn**	03 00 03.4	-0.2
	7.2nm,0.3s,baz=208,slow=17,SNR=5.2						
WRA	**Warramunga Arr**	**15.86**	**210**	Pn	**Pn**	03 01 20.0	-1.4
	1.6nm,0.3s,baz=29,slow=13,SNR=5.3						
	13nm,0.8s						
ASAR	**Alice Springs**	**19.29**	**205**	P	**P**	03 02 04.2	+1.3
	1.0nm,0.3s,baz=36,slow=9.7,SNR=6.3						
	7.9nm,0.7s						
GUMO	**Guam**	**19.77**	**7**	LR	LR	03 09 27.8	
	comp=Z,3µm,19.6s,baz=200,slow=36						
MKAR	**Makanchi Array**	**74.89**	**322**	P	**P**	03 09 18.9	+0.6
	0.8nm,0.8s,baz=120,slow=7.7,SNR=2.8						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**84.36**	**325**	P	**P**	03 10 09.7	+0.1
	2.6nm,0.3s,baz=104,slow=6.3,SNR=5.0						
	2.6nm,0.9s						
ILAR	**Eielson Array**	**87.39**	**24**	P	**P**	03 10 23.4	-0.9
	0.6nm,0.6s,baz=262,slow=4.5,SNR=8.2						
	0.6nm,0.6s						

*NNC **28** 02:59:39.5±0.6, 42°.88N×78°.15E, h0km, mb3.7, mpv4.0, Error ellipse: s-maj=6.2km s-min=1.9km az=173.0*
*KRNET **28** 02:59:39.7±0.1, 42°.87N×78°.12E, h24km, mb3.6*
*SOME **28** 02:59:40.4, 42°.85N×78°.10E, h20km*
*KNET **28** 02:59:41.2±0.5, 42°.79N×77°.95E, h3km±3km, ml3.1, Error ellipse: s-maj=7.2km s-min=3.3km az=170.0*

ISC 28 02:59:39.7±1.1, 42°.85N±0°.02×78°.10E±0°.01, h4km±9km, n78, σ1s25/148, 23C-31D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SATY	**Saty**	**0.31**	**46**	P		**Pg**	**02 59 46.1**	**+0.4**
	615nm,0.1s							
SATY				S		**Sg**	**02 59 50.2**	**+0.4**
	7µm,0.1s							
SATY	**Saty**	**0.31**	**46**	*e*P		**Pg**	**02 59 46.1**	**+0.4**
	615nm,0.1s							
SATY				*e*S		**Sg**	**02 59 50.2**	**+0.4**
	7µm,0.1s							
SATY	**Saty**	**0.31**	**46**	*e*P		**Pg**	**02 59 46.1**	**+0.4**
	baz=48							
SATY				*e*S		**Sg**	**02 59 50.2**	**+0.4**
	baz=48							
ANVS	**Anan'yevo**	**0.33**	**259**	⇓*i*P		**Pb**	**02 59 47.4**	**-0.9**
	baz=56							
ANVS				⇓*i*S		**Sb**	**02 59 52.7**	**-1.3**
	baz=56							
ZHN	**Zhinishke**	**0.40**	**37**	P		**Pg**	**02 59 47.6**	**+0.1**
	475nm,0.2s							
ZHN				S		**Sg**	**02 59 53.1**	**+0.2**
	3µm,0.2s							
ZHN	**Zhinishke**	**0.40**	**37**	*e*P		**Pg**	**02 59 47.6**	**+0.1**
	475nm,0.2s							
ZHN				*e*S		**Sg**	**02 59 53.1**	**+0.2**
	3µm,0.2s							
ZHN	**Zhinishke**	**0.40**	**37**	*e*P		**Pg**	**02 59 47.7**	**+0.1**
	baz=38							
ZHN				*e*S		**Sg**	**02 59 53.1**	**+0.2**
	baz=38							
PRZ	**Przheval'sk**	**0.42**	**149**	⇓*i*P		**Pb**	**02 59 48.7**	**-1.2**
	baz=51							
PRZ				⇓*i*S		**Sb**	**02 59 55.0**	**-1.8**
	baz=51							
KURS	**Kuram**	**0.64**	**4**	P		**Pg**	**02 59 52.3**	**+0.2**
	25nm,0.1s							
KURS				S		**Sg**	**03 00 00.7**	**+0.2**
	506nm,0.3s							
KURS	**Kuram**	**0.64**	**4**	*e*P		**Pg**	**02 59 52.3**	**+0.2**
	25nm,0.1s							
KURS				*e*S		**Sg**	**03 00 00.7**	**+0.2**
	506nm,0.3s							
KURS	**Kuram**	**0.64**	**4**	*e*P		**Pg**	**02 59 52.3**	**+0.2**
	baz=3.0							
KURS				*e*S		**Sg**	**03 00 00.7**	**+0.2**
	baz=3.0							
UZB	**Uzynbulak**	**0.74**	**66**	P		**Pg**	**02 59 53.2**	**-0.7**
	42nm,0.1s							
UZB				S		**Sg**	**03 00 02.4**	**-1.1**
	760nm,0.2s							
UZB	**Uzynbulak**	**0.74**	**66**	*e*P		**Pg**	**02 59 53.2**	**-0.7**
	42nm,0.1s							
UZB				*e*S		**Sg**	**03 00 02.4**	**-1.1**
	760nm,0.2s							
KOTS	**Kotyrbulak**	**0.82**	**298**	P		**Pg**	**02 59 55.8**	**+0.2**
	220nm,0.2s							
KOTS				S		**Sg**	**03 00 06.6**	**+0.3**
	130nm,0.2s							
KOTS	**Kotyrbulak**	**0.82**	**298**	*e*P		**Pg**	**02 59 55.8**	**+0.2**
	220nm,0.2s							
KOTS				*e*S		**Sg**	**03 00 06.6**	**+0.3**
	130nm,0.2s							
KOTS	**Kotyrbulak**	**0.82**	**298**	*e*P		**Pg**	**02 59 55.8**	**+0.2**
	baz=97							
KOTS				*e*S		**Sg**	**03 00 06.6**	**+0.3**
	baz=97							
MDOK	**Medeo**	**0.84**	**293**	⇓P		**Pg**	**02 59 55.7**	**-0.1**
	18nm,0.4s							
MDOK				Pg		**Pg**	**02 59 55.9**	**+0.1**
	75nm,0.1s							
MDOK				Lg		Lg	03 00 06.9	
	76nm,0.2s							
MDOK				⇓S		**Sg**	**03 00 07.5**	**+0.8**
	51nm,0.4s							
MDOK	**Medeo**	**0.84**	**293**	*e*P		**Pg**	**02 59 55.9**	**+0.1**
	75nm,0.1s							
MDOK				*e*S		**Sg**	**03 00 06.9**	**+0.2**
	76nm,0.2s							
TNSS	**Tian-Shan**	**0.87**	**283**	P		**Pg**	**02 59 56.6**	**+0.2**
	50nm,0.1s							
TNSS				S		**Sg**	**03 00 08.6**	**+0.8**
	142nm,0.2s							
TNSS	**Tian-Shan**	**0.87**	**283**	*e*P		**Pg**	**02 59 56.6**	**+0.2**
	50nm,0.1s							
TNSS				*e*S		**Sg**	**03 00 08.6**	**+0.8**
	142nm,0.2s							
TNSS	**Tian-Shan**	**0.87**	**283**	*e*P		**Pg**	**02 59 56.6**	**+0.2**
	baz=82							
TNSS				*e*S		**Sg**	**03 00 08.6**	**+0.8**
	baz=82							
KNDC	**Almaty**	**0.91**	**294**	⇓P		**Pg**	**02 59 57.2**	**0.0**
	45nm,0.6s							
KNDC				⇓S		**Sb**	**03 00 10.7**	**-0.1**
	32nm,0.3s							
KDJ	**Kajisay**	**0.99**	**224**	⇓*i*P		**Pg**	**02 59 58.6**	**-0.1**
	baz=23							
KDJ				⇓*i*S		**Sg**	**03 00 11.9**	**+0.4**
	baz=23							
SHLS	**Shalkode**	**1.04**	**72**	P		**Pn**	**03 00 04.4**	**+3.1**
	104nm,0.2s							
SHLS				S		**Sn**	**03 00 21.6**	**+5.1**
	953nm,0.3s							
SHLS	**Shalkode**	**1.04**	**72**	*e*P		**Pn**	**03 00 04.4**	**+3.1**
	104nm,0.2s							
SHLS				*e*S		**Sn**	**03 00 21.6**	**+5.1**
	953nm,0.3s							
SHLS	**Shalkode**	**1.04**	**72**	*e*P		**Pn**	**03 00 04.4**	**+3.1**
	baz=77							
SHLS				*e*S		**Sn**	**03 00 21.6**	**+5.1**
	baz=77							
IZV	**Izvestkoviy**	**1.11**	**280**	P		**Pg**	**03 00 01.2**	**+0.2**
	28nm,0.1s							
IZV				S		**Sg**	**03 00 15.9**	**+0.5**
	309nm,0.2s							
IZV	**Izvestkoviy**	**1.11**	**280**	*e*P		**Pg**	**03 00 01.2**	**+0.2**
	28nm,0.1s							
IZV				*e*S		**Sg**	**03 00 15.9**	**+0.5**
	309nm,0.2s							
PDGK	**Podgornoye**	**1.12**	**64**	P		**Pg**	**02 59 59.9**	**-1.4**
	8.4nm,0.1s							
PDGK				S		**Sg**	**03 00 13.9**	**-2.0**
	109nm,0.3s							
PDGK	**Podgornoye**	**1.12**	**64**	⇑P		**Pg**	**02 59 59.5**	**-1.8**
	5.5nm,0.3s							
PDGK				⇑S		**Sg**	**03 00 14.0**	**-2.0**
	116nm,0.5s							
MTBS	**Maitube**	**1.26**	**284**	P		**Pg**	**03 00 03.9**	**0.0**
	45nm,0.3s							
MTBS				S		**Sb**	**03 00 20.7**	**-0.1**
	135nm,0.2s							
MTBS	**Maitube**	**1.26**	**284**	*e*P		**Pg**	**03 00 03.9**	**0.0**
	45nm,0.3s							
MTBS				*e*S		**Sb**	**03 00 20.7**	**-0.1**
	135nm,0.2s							
BLB	**Baldybastay**	**1.28**	**12**	P		**Pg**	**03 00 03.5**	**-0.8**
	74nm,0.1s							
BLB				S		**Sg**	**03 00 20.1**	**-0.8**
	204nm,0.1s							
CHKK	**Chushkaly**	**1.30**	**321**	P		**Pg**	**03 00 03.9**	**-0.7**
	146nm,0.2s							
CHKK				S		**Sg**	**03 00 20.6**	**-0.8**
	386nm,0.3s							
CHKK	**Chushkaly**	**1.30**	**321**	*e*P		**Pg**	**03 00 03.9**	**-0.7**
	146nm,0.2s							
CHKK				*e*S		**Sg**	**03 00 20.6**	**-0.8**
	386nm,0.3s							
KTBS	**Karatobe**	**1.35**	**310**	P		**Pn**	**03 00 05.0**	**-0.5**
	62nm,0.1s							
KTBS				S		**Sg**	**03 00 23.3**	**+0.1**
	56nm,0.2s							
KTBS	**Karatobe**	**1.35**	**310**	*e*P		**Pn**	**03 00 05.0**	**-0.5**
	62nm,0.1s							
KTBS				*e*S		**Sg**	**03 00 23.3**	**+0.1**
	56nm,0.2s							
ARXS	**Arharly**	**1.38**	**352**	P		**Pn**	**03 00 05.2**	**-0.7**
	106nm,0.1s							
ARXS				S		**Sg**	**03 00 23.4**	**-0.7**
	170nm,0.2s							
ARXS	**Arharly**	**1.38**	**352**	*e*P		**Pn**	**03 00 05.2**	**-0.7**
	106nm,0.1s							
ARXS				*e*S		**Sg**	**03 00 23.4**	**-0.7**
	170nm,0.2s							
ULHL	**Ulahol**	**1.50**	**247**	⇓P		**Pn**	**03 00 07.5**	**-0.3**
	56nm,0.3s,SNR=7.4							
ULHL				⇓S		**Sg**	**03 00 27.8**	**-0.2**
	168nm,0.2s							
ULHL	**Ulahol**	**1.50**	**247**	⇓*i*P		**Pn**	**03 00 07.4**	**-0.3**
	baz=46							
ULHL				⇓*i*S		**Sb**	**03 00 27.1**	**-0.7**
	baz=46							
KST	**Kastek**	**1.58**	**278**	P		**Pg**	**03 00 13.3**	**+3.2**
	17nm,0.4s							
KST				S		**Sg**	**03 00 36.6**	**+6.0**
	90nm,0.3s							
KST	**Kastek**	**1.58**	**278**	*e*P		**Pg**	**03 00 10.2**	**+0.1**
	9.9nm,0.8s							
KST				*e*S		**Sg**	**03 00 31.3**	**+0.7**
	49nm,0.2s							
BOOM	**Boomskoye usch**	**1.64**	**258**	⇓*i*P		**Pn**	**03 00 09.4**	**-0.1**
	baz=58							
BOOM				⇓*i*S		**Sn**	**03 00 31.2**	**+0.1**
	baz=58							
KUU	**Kurty**	**1.66**	**310**	P		**Pn**	**03 00 10.1**	**+0.3**
	80nm,0.3s							
KUU				S		**Sn**	**03 00 31.2**	**-0.3**
	272nm,0.2s							
KUU	**Kurty**	**1.66**	**310**	*e*P		**Pn**	**03 00 10.1**	**+0.3**
	80nm,0.3s							
KUU				*e*S		**Sn**	**03 00 31.2**	**-0.3**
	272nm,0.2s							
KTMS	**Ketmen**	**1.75**	**69**	P		**Pn**	**03 00 11.3**	**+0.2**
	10nm,0.2s							
KTMS				S		**Sn**	**03 00 33.3**	**-0.6**
	69nm,0.2s							
KTMS	**Ketmen**	**1.75**	**69**	*e*P		**Pn**	**03 00 11.3**	**+0.2**
	10nm,0.2s							
KTMS				*e*S		**Sn**	**03 00 33.3**	**-0.6**
	69nm,0.2s							
KTMS	**Ketmen**	**1.75**	**69**	*e*P		**Pn**	**03 00 11.3**	**+0.2**
	baz=70							
KTMS				*e*S		**Sn**	**03 00 33.3**	**-0.6**
	baz=70							
DGS	**Degeres**	**1.75**	**284**	P		**Pb**	**03 00 12.2**	**-0.4**
	29nm,0.2s							
DGS				S		**Sb**	**03 00 34.8**	**-0.2**
	168nm,0.4s							
DGS	**Degeres**	**1.75**	**284**	*e*P		**Pb**	**03 00 12.2**	**-0.4**
	29nm,0.2s							
DGS				*e*S		**Sb**	**03 00 34.8**	**-0.2**
	168nm,0.4s							
TKM2	**Tokmak 2**	**1.84**	**273**	⇑P		**Pb**	**03 00 13.7**	**-0.5**
	31nm,0.1s,SNR=60							
TKM2				⇓S		**Sg**	**03 00 39.3**	**+0.3**
	148nm,0.1s							
TKM2	**Tokmak 2**	**1.84**	**273**	⇓Pn		**Pb**	**03 00 13.7**	**-0.5**
	11nm,0.2s							
TKM2				⇓Sn		**Sg**	**03 00 38.9**	**-0.1**
	24nm,0.2s							
TKM2	**Tokmak 2**	**1.84**	**273**	⇓*i*P		**Pn**	**03 00 12.3**	**-0.1**
	baz=72							
TKM2				⇓*i*S		**Sn**	**03 00 36.3**	**0.0**
	baz=72							
DJR	**Jarkent**	**1.93**	**39**	P		**Pb**	**03 00 14.7**	**-0.8**
	6.8nm,0.1s							
DJR				S		**Sn**	**03 00 39.0**	**+0.8**
	102nm,0.2s							
DJR	**Jarkent**	**1.93**	**39**	*e*P		**Pb**	**03 00 14.7**	**-0.8**
	6.8nm,0.1s							
DJR				*e*S		**Sn**	**03 00 39.0**	**+0.8**
	102nm,0.2s							
NRN	**Naryn**	**2.11**	**229**	⇓*i*P		**Pn**	**03 00 16.4**	**+0.3**
	baz=29							
NRN				⇓*i*S		**Sn**	**03 00 43.3**	**+0.3**
	baz=29							
TDK	**Taldyqorghan**	**2.17**	**6**	Pg		**Pb**	**03 00 18.9**	**-0.7**
	57nm,0.3s							
TDK				Lg		Lg	03 00 46.5	
	406nm,0.3s							
TDK	**Taldyqorghan**	**2.17**	**6**	*e*P		**Pb**	**03 00 18.9**	**-0.7**
	57nm,0.3s							
TDK				*e*S		**Sb**	**03 00 46.5**	**-0.3**
	406nm,0.3s							
KBK	**Karagaybulak**	**2.33**	**266**	⇑P		**Pb**	**03 00 22.0**	**-0.5**
	21nm,0.2s							
KBK				⇑S		**Sb**	**03 00 52.7**	**+1.0**
	137nm,0.3s							
KBK	**Karagaybulak**	**2.33**	**266**	⇑*i*P		**Pn**	**03 00 19.1**	**0.0**
	baz=66							
KBK				⇑*i*S		**Sn**	**03 00 48.1**	**-0.2**
	baz=66							
CHMS	**Chumysh**	**2.47**	**275**	⇓P		**Pb**	**03 00 23.8**	**-0.9**
	14nm,0.2s,SNR=15							
CHMS				⇓S		**Sb**	**03 00 56.8**	**+1.3**
	47nm,0.2s							
CHMS	**Chumysh**	**2.47**	**275**	⇓*i*P		**Pn**	**03 00 20.9**	**+0.1**
	baz=74							
CHMS				⇓*i*S		**Sn**	**03 00 51.2**	**-0.2**
	baz=74							
FRU1	**Bishkek**	**2.56**	**270**	⇑*i*P		**Pn**	**03 00 22.3**	**+0.2**
	baz=70							
FRU1				⇑*i*S		**Sn**	**03 00 53.4**	**-0.3**
	baz=70							
SGDS	**Sogindy**	**2.61**	**285**	Pg		**Pb**	**03 00 26.7**	**-0.5**
	9.0nm,0.2s							
SGDS				Lg		Lg	03 00 59.4	
	52nm,0.3s							
AAK	**Ala-Archa**	**2.67**	**267**	⇑P		**Pb**	**03 00 26.4**	**-1.7**
	8.6nm,0.2s,SNR=17							
AAK	**Ala-Archa**	**2.67**	**267**	⇑*i*P		**Pn**	**03 00 23.7**	**0.0**
	baz=66							
AAK				⇑*i*S		**Sn**	**03 00 56.1**	**-0.5**
	baz=66							
USP	**Ospenovka**	**2.67**	**280**	⇓P		**Pn**	**03 00 25.8**	**+2.2**
	9.9nm,0.2s,SNR=7.7							
USP	**Ospenovka**	**2.67**	**280**	⇓*i*P		**Pn**	**03 00 23.7**	**0.0**
	baz=80							
USP				⇓*i*S		**Sn**	**03 00 56.1**	**-0.5**
	baz=80							
UCH	**Uchtor**	**2.72**	**258**	⇑*i*P		**Pn**	**03 00 24.7**	**0.0**
	baz=58							
UCH				⇑*i*S		**Sn**	**03 00 57.5**	**-0.9**
	baz=58							
ARLS	**Aral**	**2.97**	**252**	⇑*i*P		**Pn**	**03 00 27.9**	**+0.1**
	baz=51							
ARLS				⇑*i*S		**Sn**	**03 01 03.5**	**-0.5**
	baz=51							
EKS2	**Erkin-Say**	**3.19**	**268**	⇑*i*P		**Pn**	**03 00 31.1**	**+0.2**
	baz=68							
EKS2				⇑*i*S		**Sn**	**03 01 08.7**	**-0.8**
	baz=68							
MRKS	**Merke**	**3.59**	**270**	Pg		**Pb**	**03 00 45.7**	**+1.8**
	5.5nm,0.2s							
MRKS				Lg		Lg	03 01 32.3	
	33nm,0.3s							
MRKS	**Merke**	**3.59**	**270**	*e*P		**Pb**	**03 00 45.7**	**+1.8**
	5.5nm,0.2s							
MRKS				*e*S		**Sg**	**03 01 32.3**	**-2.8**
	33nm,0.3s							
MNAS	**Manas**	**4.14**	**267**	⇑*e*P		**Pn**	**03 00 44.2**	**+0.2**
	baz=67							
MNAS				⇑*e*S		**Sn**	**03 01 31.6**	**-1.4**
	baz=67							
MK31	**Makanchi Array**	**4.95**	**36**	⇑Pn		**Pn**	**03 00 55.3**	**+0.4**
	0.2nm,0.2s,baz=210,slow=14,SNR=9.7							
MK31				⇑Lg		Lg	03 02 11.3	
	1.4nm,0.3s,baz=101,slow=51,SNR=4.3							
KK31	**Karatay Array**	**5.58**	**275**	Pg		**Pg**	**03 01 26.7**	**+0.1**
	2.0nm,0.6s,baz=86,slow=16,SNR=5.2							
KK31				⇓Lg		Lg	03 02 34.7	
	3.1nm,0.5s,baz=97,slow=27,SNR=8.0							
OTUK	**Ortayu**	**6.75**	**325**	⇑Lg		Lg	03 03 10.7	
	7.3nm,0.7s							

*JMA **28** 03:05:34.2±0.1, 37°.5N±0°.4×141°.8E±0°.8, h38km±2km, MV4.0/39, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*IDC **28** 03:05:36.0±2.5, 37°.48N×141°.79E, h53km±24km, mb3.6/12, mbtmp3.9/15, ML3.5/3, Error ellipse: s-maj=22.8km s-min=21.2km az=111.0*

ISC 28 03:05:33.1±1.9, 37°.51N±0°.05×141°.78E±0°.08, h27km±13km, n34, σ0s93/35, mb3.8/12, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JFK	**Kawauchi**	**0.73**	**259**	P		**Pn**	**03 05 48.2**	**+0.4**
JFK				S		**Sn**	**03 05 57.6**	**-0.4**
JMST	**Minamisoumatoc**	**0.74**	**287**	⇓P		**Pn**	**03 05 48.0**	**+0.2**
JMST				⇓S		**Sb**	**03 05 57.6**	**+0.5**
JIKH	**Ishinomakikobu**	**0.84**	**343**	⇓P		**Pn**	**03 05 49.3**	**+0.1**
JMM	**Marumori**	**0.86**	**295**	⇓*i*P		**Pn**	**03 05 49.8**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.88**	**243**	*i* P		**Pn**	**03 05 50.1**	**+0.4**
ONAJ				S		**Sb**	**03 06 01.0**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.88**	**243**	A		A	03 05 50.1	
	comp=E,15nm,0.3s,comp=N,11nm,0.4s							
JIO	**Ouri**	**1.00**	**340**	⇓*i*P		**Pb**	**03 05 51.7**	**-0.1**
JIO				⇓S		**Sb**	**03 06 03.7**	**-1.0**
JOTO	**OTAMA OYAMA**	**1.15**	**273**	*i* P		**Pb**	**03 05 54.8**	**+0.5**
JOTO				S		**Sb**	**03 06 09.2**	**+0.4**
JOU	**Okura**	**1.23**	**315**	⇓*i*P		**Pb**	**03 05 55.3**	**-0.4**
JMK	**Ichinoseki**	**1.51**	**343**	⇓*i*P		**Pn**	**03 05 59.2**	**+0.9**
JYS	**Shirataka**	**1.53**	**298**	P		**Pb**	**03 06 00.4**	**-0.3**
JYS				S		**Sb**	**03 06 19.3**	**-0.4**
JFY	**Yanaizu**	**1.65**	**267**	P		**Pb**	**03 06 02.1**	**-0.8**
JFY				S		**Sb**	**03 06 22.2**	**-1.1**
MJAR	**Matsushiro Arr**	**3.01**	**252**	P		**Pn**	**03 06 22.4**	**+3.3**
	comp=N,0.7nm,0.3s,baz=84,slow=15,SNR=21							
MJAR				S		**Sb**	**03 07 01.3**	**-1.1**
	comp=N,8.2nm,0.4s,baz=76,slow=29,SNR=6.9							
	comp=N,3.4nm,0.3s							
JHJ	**Hachijo jima 2**	**4.67**	**201**	P		**Pn**	**03 06 42.4**	**+0.5**
	comp=N,24nm,0.3s,baz=142,slow=23,SNR=12							
JHJ				S		**Sn**	**03 07 33.8**	**-1.4**
	comp=N,54nm,0.2s,baz=114,slow=21,SNR=5.7							
	comp=N,46nm,0.3s							
ASAJ	**Asahikawa**	**6.63**	**5**	P		**Pn**	**03 07 10.5**	**+1.8**
	comp=N,1.6nm,0.3s,baz=224,slow=13,SNR=12							
	comp=N,3.8nm,0.3s							
USRK	**Ussuriysk Ar.**	**9.98**	**315**	P		Pn	03 08 01.4	+6.7
	comp=N,2.4nm,0.6s,baz=108,slow=12,SNR=6.3							
SONM	**Songino Array**	**27.77**	**303**	P		**P**	**03 11 20.4**	**+0.8**
	comp=N,0.3nm,0.5s,baz=111,slow=11,SNR=2.4							
	comp=N,0.3nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.15**	**122**	T		T	03 40 57.6	
	baz=315,slow=75,SNR=52							
H11N1	**WAKE ISLAND Hy**	**28.16**	**122**	T		T	03 40 55.9	
	baz=315,slow=75,SNR=49							
H11N3	**WAKE ISLAND Hy**	**28.16**	**122**	T		T	03 40 58.4	
	baz=315,slow=75,SNR=53							
H11S1	**WAKE ISLAND Hy**	**28.88**	**124**	T		T	03 41 53.2	
	baz=316,slow=76,SNR=47							
H11S3	**WAKE ISLAND Hy**	**28.88**	**124**	T		T	03 41 52.5	
	baz=316,slow=76,SNR=47							
H11S2	**WAKE ISLAND Hy**	**28.89**	**124**	T		T	03 41 50.9	
	baz=316,slow=76,SNR=37							
ZALV	**Zalesovo Beam**	**41.81**	**312**	P		**P**	**03 13 21.2**	**+1.0**
	comp=N,0.6nm,0.5s,baz=100,slow=8.1,SNR=1.6							
	comp=N,0.6nm,0.5s							
MKAR	**Makanchi Array**	**44.11**	**302**	P		**P**	**03 13 38.9**	**-0.1**
	comp=N,1.1nm,0.8s,baz=90,slow=9.6,SNR=7.7							
	comp=N,1.1nm,0.8s							
KURBB	**Kurchatov Arra**	**45.94**	**308**	P		**P**	**03 13 53.2**	**-0.2**
	comp=N,1.7nm,0.4s,baz=81,slow=7.9,SNR=16							
	comp=N,1.7nm,0.4s							
ILAR	**Eielson Array**	**48.94**	**33**	P		**P**	**03 14 16.9**	**+0.3**
	comp=N,0.5nm,0.7s,baz=263,slow=5.8,SNR=7.7							
	comp=N,0.5nm,0.7s							
BVAR	**Borovoye Array**	**50.47**	**312**	P		**P**	**03 14 27.6**	**-0.8**
	comp=N,0.6nm,0.4s,baz=70,slow=7.9,SNR=3.1							
	comp=N,0.6nm,0.4s							
WRA	**Warramunga Arr**	**57.57**	**188**	P		**P**	**03 15 19.8**	**-0.6**
	comp=N,0.4nm,0.6s,baz=5.6,slow=7.5,SNR=1.5							
	comp=N,0.4nm,0.6s							
FINES	**FINESS Array B**	**68.53**	**332**	P		**P**	**03 16 32.4**	**-0.4**
	comp=N,2.0nm,0.8s,baz=16,slow=8.7,SNR=4.0							
	comp=N,2.0nm,0.8s							
HFS	**Hagfors**	**73.78**	**336**	P		**P**	**03 17 04.6**	**+0.1**
	comp=N,2.4nm,0.7s,baz=62,slow=6.9,SNR=6.3							
	comp=N,2.4nm,0.7s							
NOA	**NORSAR Array B**	**73.86**	**337**	P		**P**	**03 17 04.4**	**-0.8**
	comp=N,1.1nm,0.9s,baz=2.5,slow=4.1,SNR=3.2							
	comp=N,1.1nm,0.9s							
PDAR	**Pinedale Array**	**77.13**	**46**	P		**P**	**03 17 24.0**	**-0.5**
	comp=N,0.6nm,0.8s,baz=27,slow=2.2,SNR=2.5							
	comp=N,0.6nm,0.8s							
TXAR	**Lajitas Array**	**89.60**	**53**	P		**P**	**03 18 29.1**	**+0.5**
	comp=N,0.3nm,0.6s,baz=293,slow=1.9,SNR=4.1							
	comp=N,0.3nm,0.6s							

IDC 28 03:11:58.2±1.9, 11°.91N×125°.85E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=202.5km s-min=22.5km az=66.0, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAR	**Alice Springs**	**36.22**	**167**	P		P	03 19 02.6	-0.4
	0.4nm,0.5s,baz=351,slow=8.1,SNR=5.7							
	0.4nm,0.5s							
STKA	**Stephens Creek**	**46.08**	**161**	P		P	03 20 24.4	+0.3
	3.5nm,0.9s,baz=346,slow=12,SNR=3.2							
	3.5nm,0.9s							
MKAR	**Makanchi Array**	**50.49**	**322**	P		P	03 20 58

BJI ***28*** *03:30:32.4±0.0, 6˙17S±143˙16E, h10km, mb4.7/62, mB5.5/14, Ms5.2/6, Ms7 5.0/6*
MOS ***28*** *03:30:34.2±0.9, 6˙11S×142˙61E, h10km, mb5.1/28, Error ellipse: s-maj=13.5km s-min=7.1km az=108.1*
IDC ***28*** *03:30:35.1±0.6, 6.07S×142.59E, h0km, mb4.6/18, mbtmp4.7/20, ML2.6/1, MS4.7/13, Error ellipse: s-maj=27.6km s-min=14.2km az=82.0*
NEIC ***28*** *03:30:36.3±1.3, 6˙17S±0.05×142˙46E±0˙07, h10km±1km, mb5.1/100, Error ellipse: s-maj=12.7km s-min=8.4km az=111.0*
DJA ***28*** *03:30:39.6±0.3, 6˚S±3˚×14˚2E±˚, h10km, M5.3/21, mb4.9/21, mB6.2/2, MLv5.5/5, Mw(mB)5.9/2, MwMwp6.8/1, Mwp6.7/1*
GCMT ***28*** *03:30:39.3±0.3, 6˚34S±0˚02×142˚30E±0˚03, h22km±1km, MW5.2/64, Moment Tensor Solution. s18,c20; s64,c87; Duration: 1ˢ0 Moment tensor: Scale 10¹⁶Nm; Mrr6.18±.61; Mθθ-4.42±.36; Mφφ-1.76±.34; Mrθ3.09±.45; Mθφ2.36±.17; Mφr-3.89±.60; Best double couple: M₀7.76700×10¹⁶ NP1:φ₁133.00000°, δ65.00000°, λ100.00000°. NP2:φ₂290.00000°, δ27.00000°, λ69.00000°. Principal axes: T 8.1040, Plg68.0000°, Azm63.0000°; N -0.6740, Plg9.0000°, Azm309.0000°; P -7.4290, Plg19.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 03:30:38.4±0.3, **6˚23S**±0˚04×**142˚60E**±0˚05, **h28**km, **n262,** σ1§**64**/250, **mb5.0**/100, **MS4.8**/9, **10C-3D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.13**	**224**	P	**Pn**	**03 31 28.3**	**+2.4**
GENI	**Genyem**	**4.34**	**326**	P	**Pn**	**03 31 43.9**	**+1.3**
PMG	**Port Moresby**	**5.52**	**125**	Pn	**Pn**	**03 31 59.8**	**+1.0**
PMG	**Port Moresby**	**5.52**	**125**	*i* P	**Pn**	**03 31 58.7**	**-0.1**
PMG	**Port Moresby**	**5.52**	**125**	Pn	**Pn**	**03 32 00.2**	**+1.5**
	13nm,0.3s,baz=315,slow=11,SNR=35						
PMG				Sn	**Sn**	**03 33 00.7**	**-0.6**
	43nm,0.3s,baz=95,slow=22,SNR=7.4						
PMG				LR	LR	03 34 52.8	
	comp=Z,3μm,19.3s,baz=268,slow=46						
	144nm,0.6s						
SMPI	**Sarmi**	**5.72**	**317**	P	**Pn**	**03 32 04.8**	**+3.2**
	279nm,1.3s,10μm2.0nm						
MANU	**Manus Island**	**6.32**	**49**	Pn	**Pn**	**03 32 10.9**	**+1.1**
MANU	**Manus Island**	**6.32**	**49**	P	**Pb**	**03 32 25.7**	**-2.0**
COEN	**Coen**	**7.71**	**176**	P	**Pn**	**03 32 32.4**	**+3.6**
	baz=7.8,SNR=4.7						
FAKI	**Fak Fak**	**10.82**	**287**		**Pn**	**03 33 08.9**	**-2.7**
FAKI	**Fak Fak**	**10.82**	**287**	P	**Pn**	**03 33 13.1**	**+1.5**
	86nm,0.8s						
SAUI	**Saumlaki**	**11.34**	**260**	Pn	**Pn**	**03 33 17.2**	**-1.5**
SAUI	**Saumlaki**	**11.34**	**260**	P	**Pn**	**03 33 20.5**	**+1.7**
	516nm,0.9s						
KDU	**Kakadu**	**11.87**	**237**	P	**Pn**	**03 33 24.7**	**-1.2**
	baz=12,SNR=23						
KDU	**Kakadu**	**11.87**	**237**	P	**Pn**	**03 33 24.7**	**-1.2**
SWI	**Sorong**	**12.50**	**295**	P	**Pn**	**03 33 33.9**	**-0.7**
	44nm,0.7s						
MTN	**Manton Dam**	**13.07**	**239**	P	**Pn**	**03 33 41.0**	**-1.4**
	baz=13,SNR=45						
MTN	**Manton Dam**	**13.07**	**239**	Pn	**Pn**	**03 33 41.2**	**-1.3**
MTN	**Manton Dam**	**13.07**	**239**	P	**Pn**	**03 33 41.1**	**-1.3**
DRS	**Darwin Rock St**	**13.08**	**241**	P	**Pn**	**03 33 41.8**	**-0.7**
CTA	**Charters Tower**	**14.23**	**166**	Pn	**P**	**03 34 04.4**	**-0.9**
	0.2nm,0.3s,baz=8.1,slow=14,SNR=2.0						
CTA				Lg	Lg	03 38 12.5	
	0.9nm,0.3s,baz=243,slow=16,SNR=4.5						
CTA				LR	LR	03 40 00.8	
	comp=Z,2μm,19.2s,baz=11,slow=39						
CTAO	**Charters Tower**	**14.23**	**166**	P	**P**	**03 34 03.5**	**-1.8**
QIS	**Mount Isa**	**14.54**	**191**	P	**Pn**	**03 34 05.6**	**+3.2**
	baz=15,SNR=6.6						
QIS	**Mount Isa**	**14.54**	**191**	P	**Pn**	**03 34 04.5**	**+2.0**
WB0	**Warramunga Arr**	**15.64**	**210**	Pn	**Pn**	**03 34 15.7**	**-1.4**
WRAB	**Tennant Creek**	**15.81**	**210**		**Pn**	**03 34 16.8**	**-2.4**
WRAB				IAmb	IAmb	03 34 26.7	
	comp=Z,138nm,1.5s						
WRAB	**Tennant Creek**	**15.81**	**210**	P	**Pn**	**03 34 16.8**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,138nm,1.5s						
WB2	**Warramunga Arr**	**15.81**	**210**	P	**Pn**	**03 34 17.5**	**-1.8**
	baz=16						
WB2	**Warramunga Arr**	**15.81**	**210**	Pn	**Pn**	**03 34 17.5**	**-1.8**
WB2				IAmb	IAmb	03 34 25.5	
	comp=Z,119nm,1.4s						
WRA	**Warramunga Arr**	**15.82**	**210**	Pn	**Pn**	**03 34 16.9**	**-2.5**
	comp=Z,2.4nm,0.3s,baz=19,slow=13,SNR=32						
WRA				Sn	**Sn**	**03 37 05.9**	**-8.1**
	comp=Z,1.2nm,0.3s,baz=28,slow=22,SNR=3.9						
WRA				Lg	Lg	03 38 51.5	
	comp=Z,1.8nm,0.3s,baz=34,slow=31,SNR=2.6						
WRA				LR	LR	03 41 08.9	
	comp=Z,9μm,20.5s,baz=34,slow=40						
LBMI	**Labuha**	**16.05**	**290**	P	P	03 34 35.0	+9.5
KNRA	**Kununurra**	**16.50**	**234**	P	**Pn**	**03 34 26.2**	**-1.9**
	baz=16						
KNRA	**Kununurra**	**16.50**	**234**	Pn	**Pn**	**03 34 25.7**	**-2.3**
KNRA				IAmb	IAmb	03 34 33.9	
	comp=Z,131nm,0.9s						
KNRA	**Kununurra**	**16.50**	**234**	P	**Pn**	**03 34 28.5**	**+0.4**
SANI	**Sanana**	**17.07**	**283**	P	**P**	**03 34 37.5**	**+0.7**
	comp=Z,26nm,0.7s						
SOEI	**Soe**	**18.48**	**258**		**P**	**03 34 49.5**	**-3.0**
SOEI				IAmb	IAmb	03 35 01.9	
	comp=Z,130nm,0.9s						
SOEI	**Soe**	**18.48**	**258**	P	**Pn**	**03 34 55.6**	**+2.8**
	comp=Z,229nm,1.1s						
AS01	**Alice Springs**	**19.23**	**205**	P	**Pn**	**03 35 02.2**	**+0.5**
	comp=Z,134nm,0.9s						
AS31	**Alice Springs**	**19.25**	**205**	P	**Pn**	**03 35 02.1**	**+0.2**
ASAR	**Alice Springs**	**19.25**	**205**	P	**P**	**03 35 01.3**	**+0.4**
ASAR	**Alice Springs**	**19.25**	**205**	P	**Pn**	**03 35 02.0**	**+0.1**
	comp=Z,53nm,0.8s,baz=34,slow=9.8,SNR=117						
ASAR				S	**Sn**	**03 38 31.9**	**-5.2**
	comp=Z,7.6nm,0.6s,baz=21,slow=27,SNR=5.4						
ASAR				Lg	Lg	03 40 31.5	
	baz=20,slow=28						
ASAR				LR	LR	03 43 26.3	
	comp=Z,3μm,19.5s,baz=19,slow=40						
ASPA	**Alice Springs**	**19.25**	**205**	P	**Pn**	**03 35 02.4**	**+0.4**
	baz=19						
KMSI	**Cibinong**	**19.77**	**289**	P	**Pn**	**03 35 13.0**	**+4.8**
	comp=Z,287nm,1.3s						
GUMO	**Guam**	**19.81**	**7**	LR	LR	03 41 36.4	
	comp=Z,661nm,20.5s,baz=168,slow=34						
BBSI	**Bau Bau**	**19.93**	**271**	P	Pn	03 35 28.1	+18
QLP	**Quilpie**	**20.30**	**176**	P	Pn	03 35 15.9	+1.6
	baz=20,SNR=52						
QLP	**Quilpie**	**20.30**	**176**	P	Pn	03 35 16.9	+2.5
FITZ	**Fitzroy Crossi**	**20.32**	**233**	P	Pn	03 35 13.6	-1.0
	baz=20,SNR=30						
FITZ	**Fitzroy Crossi**	**20.32**	**233**	P	**P**	**03 35 12.4**	**-0.1**
LUWI	**Luwuk**	**20.44**	**284**	P	Pn	03 35 21.2	+5.2
	comp=Z,87nm,0.9s						
EIDS	**Eidsvold**	**20.70**	**158**	P	Pn	03 35 23.0	+4.0
	baz=21,SNR=10						
EIDS	**Eidsvold**	**20.70**	**158**	P	Pn	03 35 18.8	-0.2
EIDS				IAmb	IAmb	03 35 28.4	
	comp=Z,152nm,1.4s						
EIDS	**Eidsvold**	**20.70**	**158**	P	Pn	03 35 23.0	+4.0
RMQ	**Roma**	**20.99**	**164**	P	**P**	**03 35 25.7**	**+6.0**
	baz=21						
MRSI	**Marisa**	**21.66**	**287**	P	P	03 35 46.9	+20
OOD	**Oodnadatta**	**22.43**	**196**	P	**P**	**03 35 38.2**	**+3.0**
KAPI	**Kappang**	**22.77**	**272**	P	**P**	**03 35 38.4**	**-0.5**
KAPI				IAmb	IAmb	03 35 46.7	
	comp=Z,60nm,1.0s						
KAPI	**Kappang**	**22.77**	**272**	*i* P	**P**	**03 35 40.1**	**+1.3**
KAPI				pmax	pmax		
	comp=Z,117nm,1.6s						
TOLI2	**Tolitoli**	**22.96**	**288**	P	**P**	**03 35 38.5**	**-2.4**
WRKA	**Warakurna**	**23.18**	**215**	P	**P**	**03 35 43.5**	**+0.4**
	baz=23,SNR=38						
WRKA	**Warakurna**	**23.18**	**215**	P	**P**	**03 35 43.7**	**+0.6**
LCRK	**Leigh Creek**	**24.45**	**189**	P	**P**	**03 35 59.0**	**+4.1**
PLAI	**Plampang**	**24.74**	**262**	P	P	03 36 12.3	+14
MULG	**Mulgathing**	**25.24**	**198**	P	**P**	**03 36 05.5**	**+3.3**
CMSA	**Cobar Meteorol**	**25.35**	**174**	P	**P**	**03 36 07.1**	**+4.0**
	baz=26						
KOUNC	**Koumac, New Ca**	**25.41**	**126**	P	**P**	**03 36 02.7**	**-1.1**
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**03 36 07.3**	**+2.4**
	baz=26,SNR=8.9						
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**03 36 04.9**	**+0.1**
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**03 36 08.5**	**+3.7**
STKA	**Stephens Creek**	**25.54**	**182**	*i* P	**P**	**03 36 05.6**	**+0.8**
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**03 36 06.1**	**+1.3**
	comp=Z,8.1nm,0.7s,baz=345,slow=9.3,SNR=9.7						
STKA				LR	LR	03 47 34.0	
	comp=Z,2μm,18.7s,baz=4.2,slow=40						
	comp=Z,8.1nm,0.7s						
MBWA	**Marble Bar**	**26.66**	**234**	P	**P**	**03 36 15.2**	**+0.1**
PSA00	**Pilbara Seismi**	**26.78**	**233**	P	**P**	**03 36 14.3**	**-1.9**
PSA00				IAmb	IAmb	03 36 24.7	
	comp=Z,111nm,2.0s						
PSA00	**Pilbara Seismi**	**26.78**	**233**	P	**P**	**03 36 15.6**	**-0.7**
PSA00				IAmb	IAmb	03 36 24.8	
	comp=Z,45nm,0.9s						
PSA00	**Pilbara Seismi**	**26.78**	**233**	P	**P**	**03 36 20.0**	**+3.8**
BBOO	**Buckleboo**	**27.14**	**192**	P	**P**	**03 36 23.2**	**+3.8**
HTT	**Hallett**	**27.28**	**187**	P	**P**	**03 36 24.9**	**+4.3**
	baz=27,SNR=5.3						
HTT	**Hallett**	**27.28**	**187**	P	**P**	**03 36 26.3**	**+5.6**
DZM	**Mont Dzumac**	**27.91**	**127**	P	**P**	**03 36 28.4**	**+1.9**
KMBL	**Kambalda**	**31.65**	**215**	P	**P**	**03 37 00.7**	**+1.3**
	baz=32						
JCJ	**Chichijima**	**33.13**	**359**	LR	LR	03 50 06.1	
	comp=Z,957nm,19.2s,baz=82,slow=36						
NWAO	**Narrogin (SRO)**	**35.53**	**218**	LR	LR	03 52 51.5	
	comp=Z,3μm,20.9s,baz=52,slow=38						
JNU	**Nakatsue**	**40.68**	**345**	P	**P**	**03 38 15.9**	**-0.6**
	comp=Z,15nm,0.9s,baz=156,slow=4.4,SNR=4.9						
	comp=Z,15nm,0.9s						
JGF	**Kuroka**	**41.89**	**354**	P	**P**	**03 38 25.1**	**-1.4**
MJAR	**Matsushiro Arr**	**42.74**	**355**	P	**P**	**03 38 31.8**	**-1.6**
	comp=Z,4.4nm,0.7s,baz=179,slow=8.2,SNR=11						
MJAR				LR	LR	03 54 35.1	
	comp=Z,494nm,18.4s,baz=179,slow=34						
	comp=Z,4.4nm,0.7s						
MAJO	**Matsushiro**	**42.74**	**355**	P	**P**	**03 38 32.0**	**-1.4**
MAJO	**Matsushiro**	**42.74**	**355**	P	**P**	**03 38 32.0**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,19nm,1.1s						
MJB9	**Matsu-Tunnel**	**42.74**	**355**	P	**P**	**03 38 33.1**	**-0.3**
NJ2	**Nanjing**	**44.28**	**331**	*eP*	**P**	**03 38 48.5**	**+2.7**
NJ2				pP	**pP**	**03 38 50.8**	**-3.7**
NJ2				pmax	pmax		
	comp=Z,18nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,550nm,3.5s						
RPSI	**Rantau Prapat**	**44.50**	**280**	P	**P**	**03 38 46.5**	**-1.3**
RPSI				IAmb	IAmb	03 38 50.7	
	comp=Z,24nm,1.3s						
PSI	**Prapat**	**44.52**	**280**	P	**P**	**03 38 46.5**	**-1.7**
PSI				pmax	pmax		
	comp=Z,24nm,1.3s						
URZ	**Urewera**	**44.66**	**141**	LR	LR	03 57 40.3	
	comp=Z,1μm,18.5s,baz=326,slow=36						
WHN	**Wuhan**	**45.48**	**325**	P	P	03 38 59.8	+4.4
WHN				sP	pP	03 39 04.3	+0.2
KSAR	**Wonju Array Be**	**45.56**	**344**	P	**P**	**03 38 55.5**	**-0.4**
KSAR	**Wonju Array Be**	**45.56**	**344**	P	**P**	**03 38 55.5**	**-0.4**
KSRS	**Korea Array**	**45.56**	**344**	P	**P**	**03 38 55.2**	**-0.6**
	comp=Z,13nm,1.1s,baz=162,slow=9.3,SNR=14						
	comp=Z,13nm,1.1s						
JTM	**Tenmabayashi**	**46.80**	**358**	P	**P**	**03 39 05.4**	**-0.2**
PHRA	**Phrae**	**48.46**	**301**	P	**P**	**03 39 16.3**	**-2.6**
CRAI	**Chiangrai**	**49.13**	**303**	P	**P**	**03 39 23.1**	**-1.0**
LYN	**LuoYang**	**49.54**	**327**	⇑P	**P**	**03 39 27.5**	**+0.6**
LYN				pP	pP	03 39 32.0	-3.6
LYN				sP	sP	03 39 34.5	-4.6
LYN				pmax	pmax		
	comp=Z,38nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.54**	**301**	P	**P**	**03 39 28.1**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=128,slow=5.8,SNR=3.0						
	comp=Z,2.4nm,0.3s						
ASAJ	**Asahikawa**	**50.11**	**0**	LR	LR	04 00 29.7	
	comp=Z,374nm,21.7s,baz=148,slow=36						
HNS	**HongShan**	**50.60**	**331**	⇑P	**P**	**03 39 35.0**	**+0.1**
HNS				pmax	pmax		
	comp=Z,17nm,1.2s						
USA0B	**Ussuriysk Arra**	**51.10**	**350**	P	**P**	**03 39 38.3**	**-0.2**
USA0B	**Ussuriysk Arra**	**51.10**	**350**	*i* P	**P**	**03 39 38.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**51.10**	**350**	P	**P**	**03 39 38.8**	**+0.3**
	comp=Z,6.4nm,0.7s,baz=167,slow=7.2,SNR=15						
	comp=Z,6.4nm,0.7s						
XAN	**Xi'an**	**51.17**	**324**	P	**P**	**03 39 40.0**	**+0.7**
XAN				pP	pP	03 39 44.5	-3.6
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
PZH	**PanZhiHua**	**51.24**	**311**	P	**P**	**03 39 40.5**	**+0.4**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,140nm,5.5s						
MDJ	**Mudanjiang**	**51.95**	**348**	P	**P**	**03 39 41.5**	**-3.3**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,370nm,8.2s						
BJT	**Baijiatuan**	**52.07**	**334**	P	**P**	**03 39 45.1**	**-0.8**
BJT	**Baijiatuan**	**52.07**	**334**	P	**P**	**03 39 45.1**	**-0.8**
BJT				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI	**Beijing**	**52.08**	**334**	P	**P**	**03 39 45.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CN2	**Changchun**	**52.15**	**344**	*eP*	**P**	**03 39 45.8**	**-0.6**
CN2				*es*P	pP	03 39 52.8	-2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	**52.37**	**317**	P	**P**	**03 39 49.5**	**+1.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS	**Yuzh-Sakhalins**	**52.95**	**0**	*eP*	**P**	**03 39 50.8**	**-1.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
BNX	**BinXian**	**53.48**	**347**	⇓P	**P**	**03 39 56.0**	**-0.2**
BNX				pmax	pmax		
	comp=Z,15nm,1.0s						
BNX				pmax	pmax		
	comp=Z,1μm,11.7s						
HHC	**Hu-ho-hao-te**	**54.83**	**331**	⇓P	**P**	**03 40 09.3**	**+3.1**
HHC				pP	pP	03 40 14.0	-1.1
HHC				sP	sP	03 40 17.0	-1.5
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				LR	LR		
	comp=Z,750nm,17.1s						
HHC				LR	LR		
	comp=Z,460nm,15.7s						
HHC				LR	LR		
	comp=Z,550nm,16.5s						
XLT	**XiLinHaoTe**	**55.34**	**337**	*eP*	**P**	**03 40 11.8**	**+1.9**
XLT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BTO	**Baotou**	**55.39**	**330**	*eP*	**P**	**03 40 12.5**	**+2.2**
BTO				pP	**pP**	**03 40 17.0**	**-2.1**
BTO				sP	**sP**	**03 40 19.5**	**-3.1**
BTO				PP	**PP**	**03 42 18.0**	**+3.6**
BTO				pmax	pmax		
	comp=Z,18nm,0.9s						
LZH	**Lanzhou**	**55.61**	**322**	*eP*	**P**	**03 40 13.8**	**+1.7**
LZH				pP	pP	03 40 20.0	-0.9
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
KLR	**Kul'dur**	**56.03**	**351**	*ce*P	**P**	**03 40 11.1**	**-3.5**
KLR				pmax	pmax		
	comp=Z,22nm,1.7s						
TYV	**Tymovskoe**	**56.86**	**0**	*eP*	**P**	**03 40 23.0**	**+2.6**
TYV				pmax	pmax		
	comp=Z,300nm,4.2s						
TYV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HEH	**HeiHe**	**57.77**	**349**	*eP*	**P**	**03 40 28.0**	**+1.1**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA	**Gaotai**	**60.19**	**323**	P	**P**	**03 40 45.3**	**+1.2**
GTA				pP	sP	03 40 57.0	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**60.48**	**10**	*i* P	**P**	**03 40 44.5**	**-1.1**
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**03 40 44.8**	**-0.8**
PETK	**Petropavlovsk-**	**60.48**	**10**	P	**P**	**03 40 45.9**	**+0.3**
	comp=Z,13nm,0.8s,baz=179,slow=5.1,SNR=11						
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**60.92**	**309**	P	**P**	**03 40 49.0**	**-0.7**
LSA				IAmb	IAmb	03 41 10.0	
	comp=Z,19nm,1.1s						
LSA	**Lhasa**	**60.92**	**309**	P	**P**	**03 40 49.0**	**-0.7**
LSA				pmax	pmax		
	comp=Z,19nm,1.1s						
ZEA	**Zeya**	**61.12**	**350**	*eP*	**P**	**03 40 50.5**	**+0.5**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
GOMU	**GeErMu**	**61.51**	**317**	P	**P**	**03 40 54.3**	**+0.8**
GOMU				pP	pP	03 40 59.0	-3.4
GOMU				sP	sP	03 41 01.3	-4.4
GOMU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**62.28**	**334**	P	**P**	**03 40 56.7**	**-1.5**
ULN				IAmb	IAmb	03 41 06.9	
	comp=Z,7.8nm,0.8s						
ULN	**Ulaanbaatar**	**62.28**	**334**	*i* P	**P**	**03 40 57.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONM	**Songino Array**	**62.55**	**333**	P	**P**	**03 40 59.8**	**-0.1**
SONM	**Songino Array**	**62.55**	**333**	P	**P**	**03 41 01.0**	**+1.1**
SONM	**Songino Array**	**62.55**	**333**	P	**P**	**03 41 01.0**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=154,slow=7.7,SNR=12						
	comp=Z,2.2nm,0.9s						
ZAK	**Zakamensk**	**65.81**	**334**	*eP*	**P**	**03 41 20.9**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
MA2	**Magadan**	**65.91**	**5**	*i* P	**P**	**03 41 21.7**	**+0.1**
MA2				pmax	pmax		
	comp=Z,14nm,1.0s						
MA2	**Magadan**	**65.91**	**5**	P	**P**	**03 41 22.8**	**+1.3**
	comp=Z,8.1nm,0.7s,baz=138,slow=5.5,SNR=4.3						
	comp=Z,8.1nm,0.7s						
HYB	**Hyderabad**	**67.45**	**292**	*eP*	**P**	**03 41 32.3**	**0.0**
BOD	**Bodaibo**	**67.90**	**344**	*eP*	**P**	**03 41 34.2**	**0.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.6s						
SEY	**Seymchan**	**69.37**	**5**	*ce*P	**P**	**03 41 42.4**	**-0.9**
SEY				pmax	pmax		
	comp=Z,12nm,2.5s						
SEY	**Seymchan**	**69.37**	**5**	P	**P**	**03 41 43.2**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=181,slow=2.9,SNR=7.1						
	comp=Z,3.5nm,0.8s						
WMQ	**Urumqi**	**70.16**	**321**	*eP*	**P**	**03 41 49.5**	**+0.8**
WMQ				pP	pP	03 41 55.5	-2.2
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
VNDA	**Vanda**	**71.98**	**176**	P	**P**	**03 42 00.2**	**+1.2**
VNDA				IAmb	IAmb	03 42 11.3	
	comp=Z,19nm,1.6s						
VNDA	**Vanda**	**71.98**	**176**	P	**P**	**03 42 01.8**	**+2.7**
	comp=Z,2.1nm,0.7s,baz=330,slow=5.7,SNR=13						
VNDA				LR	LR	04 11 44.6	
	comp=Z,541nm,18.9s,baz=256,slow=34						
	comp=Z,2.1nm,0.7s						
DGZ	**Jazzator, Alta**	**73.33**	**326**	P	**P**	**03 42 07.5**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MKAR	**Makanchi Array**	**74.92**	**322**	P	**P**	**03 42 16.8**	**-0.1**
MKAR	**Makanchi Array**	**74.92**	**322**	P	**P**	**03 42 17.6**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=115,slow=7.4,SNR=34						
	comp=Z,5.4nm,0.8s						
MAKZ	**Makanchi**	**75.12**	**322**	P	**P**	**03 42 18.4**	**+0.3**
MAKZ	**Makanchi**	**75.12**	**322**	P	**P**	**03 42 18.4**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
BILL	**Bilibino**	**75.96**	**9⇑**	*eP*	**P**	**03 42 23.0**	**+0.6**
BILL				pmax	pmax		
	comp=Z,12nm,2.5s						
KSH	**Kashi**	**76.30**	**313**	P	P	03 42 31.3	+6.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZAA0	**Zalesovo Array**	**76.91**	**329**	P	**P**	**03 42 26.9**	**-1.1**
ZALV	**Zalesovo Beam**	**76.91**	**329**	P	**P**	**03 42 26.9**	**-1.1**
ZALV	**Zalesovo Beam**	**76.91**	**329**	*i* P	**P**	**03 42 27.8**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**76.91**	**329**	P	**P**	**03 42 28.0**	**0.0**
	comp=Z,2.6nm,0.7s,baz=108,slow=4.8,SNR=9.0						
	comp=Z,2.6nm,0.7s						
BOOM	**Boomskoye usch**	**77.36**	**316**	P	**P**	**03 42 30.2**	**-0.9**
BOOM	**Boomskoye usch**	**77.36**	**316**	P	**P**	**03 42 30.2**	**-0.9**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIXI	**Tiksi**	**78.24**	**356**	*i* P	**P**	**03 42 34.4**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
AAK	**Ala-Archa**	**78.41**	**316**	P	**P**	**03 42 36.3**	**-0.7**
AAK	**Ala-Archa**	**78.41**	**316**	*ce*P	**P**	**03 42 36.4**	**-0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	**Kurchatov**	**78.80**	**324**	P	**P**	**03 42 38.8**	**+0.1**
KURK				IAmb	IAmb	03 42 40.3	
	comp=Z,19nm,1.3s						
KURK	**Kurchatov**	**78.80**	**324**	*ce*P	**P**	**03 42 39.3**	**+0.6**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURBB	**Kurchatov Arra**	**78.82**	**324**	P	**P**	**03 42 38.8**	**0.0**
	comp=Z,2.8nm,0.8s,baz=116,slow=4.8,SNR=20						
	comp=Z,2.8nm,0.8s						
L14K	**Kuka Creek**	**79.49**	**24**	P	**P**	**03 42 42.7**	**+0.6**
L14K				IAmb	IAmb	03 42 46.1	
	comp=Z,16nm,0.9s						
ANM	**Nome**	**80.39**	**20**	P	**P**	**03 42 47.1**	**+0.1**
ANM	**Nome**	**80.39**	**20**	P	**P**	**03 42 47.1**	**+0.1**

NRIK					pmax	pmax			
	comp=Z,21nm,1.0s								
NRIK	**Noril'sk**	**84.18**	**343**		P	**P**	**03 43 07.1**	**+0.4**	
	comp=Z,13nm,0.9s,baz=129,slow=5.3,SNR=14								
	comp=Z,13nm,0.9s								
F19K	**Shaleruckik Mo**	**84.27**	**20**		P	**P**	**03 43 07.8**	**+0.6**	
F19K					IAmb	IAmb	03 43 19.1		
	comp=Z,28nm,1.7s								
J20K	**Nowinta River**	**84.31**	**23**		P	**P**	**03 43 07.9**	**+0.4**	
J20K					IAmb	IAmb	03 43 11.4		
	comp=Z,15nm,1.2s								
BVAR	**Borovoye Array**	**84.39**	**325**		P	**P**	**03 43 09.1**	**+0.9**	
	comp=Z,19nm,0.8s,baz=107,slow=5.0,SNR=42								
	comp=Z,19nm,0.8s								
BRVK	**Borovoye**	**84.47**	**325**		P	**P**	**03 43 08.7**	**+0.2**	
BRVK	**Borovoye**	**84.47**	**325**	*ce*	P	**P**	**03 43 09.4**	**+0.9**	
BRVK					pmax	pmax			
	comp=Z,38nm,1.7s								
E19K	**Redstone River**	**84.76**	**20**		P	**P**	**03 43 09.9**	**+0.1**	
CAST	**Castle Rocks**	**84.81**	**24**		P	**P**	**03 43 09.9**	**-0.1**	
CAST					IAmb	IAmb	03 43 12.7		
	comp=Z,23nm,1.4s								
C19K	**Lookout Ridge**	**84.87**	**18**		P	**P**	**03 43 10.4**	**+0.1**	
C19K					IAmb	IAmb	03 43 27.9		
	comp=Z,11nm,0.9s								
D19K	**Kuna River**	**85.00**	**19**		P	**P**	**03 43 11.1**	**+0.1**	
D19K					IAmb	IAmb	03 43 38.2		
	comp=Z,14nm,1.2s								
F20K	**Avaraart Lake**	**85.07**	**20**		P	**P**	**03 43 11.9**	**+0.6**	
F20K					IAmb	IAmb	03 43 50.0		
	comp=Z,11nm,1.3s								
I21K	**Tanana**	**85.59**	**23**		P	**P**	**03 43 13.8**	**-0.1**	
I21K					IAmb	IAmb	03 43 52.5		
	comp=Z,14nm,1.3s								
MLY	**Manley**	**86.01**	**23**		P	**P**	**03 43 15.7**	**-0.4**	
MLY					IAmb	IAmb	03 43 17.0		
	comp=Z,11nm,1.2s								
RND	**Reindeer**	**86.13**	**25**		P	**P**	**03 43 16.3**	**-0.4**	
RND					IAmb	IAmb	03 43 17.1		
	comp=Z,12nm,0.9s								
RND	**Reindeer**	**86.13**	**25**		P	**P**	**03 43 16.3**	**-0.4**	
RND					pmax	pmax			
	comp=Z,12nm,0.9s								
SCM	**Sheep Creek Mo**	**86.22**	**27**		P	**P**	**03 43 17.6**	**+0.4**	
SCM	**Sheep Creek Mo**	**86.22**	**27**		P	**P**	**03 43 17.6**	**+0.4**	
SCM					pmax	pmax			
	comp=Z,28nm,1.0s								
NEA2	**Nenana**	**86.49**	**24**		P	**P**	**03 43 18.7**	**+0.3**	
NEA2					IAmb	IAmb	03 43 21.6		
	comp=Z,32nm,1.8s								
DHY	**Denali Highway**	**86.64**	**25**		P	**P**	**03 43 19.5**	**+0.1**	
DHY					IAmb	IAmb	03 43 24.8		
	comp=Z,12nm,0.9s								
WRH	**Wood River Hil**	**86.84**	**24**		P	**P**	**03 43 20.0**	**-0.1**	
WRH					IAmb	IAmb	03 43 40.0		
	comp=Z,21nm,1.4s								
E22K	**Anaktuvuk Pass**	**86.90**	**20**		P	**P**	**03 43 21.1**	**+0.7**	
E22K					IAmb	IAmb	03 43 25.1		
	comp=Z,11nm,1.1s								
D22K	**Ayikyak River**	**86.94**	**19**		P	**P**	**03 43 21.2**	**+0.7**	
G23K	**Bananza Creek**	**86.95**	**22**		P	**P**	**03 43 21.1**	**+0.4**	
CCB	**Clear Creek Bu**	**87.02**	**24**		P	**P**	**03 43 20.1**	**-0.8**	
CCB					IAmb	IAmb	03 43 22.9		
	comp=Z,11nm,0.8s								
HDA	**Harding Lake**	**87.28**	**24**		P	**P**	**03 43 22.3**	**+0.1**	
H24K	**Noodor Dome**	**87.42**	**23**		P	**P**	**03 43 23.3**	**+0.4**	
H24K					IAmb	IAmb	03 43 26.7		
	comp=Z,20nm,1.5s								
IL31		**87.43**	**24**		P	**P**	**03 43 21.7**	**-1.2**	
IL31					IAmb	IAmb	03 43 25.0		
	comp=Z,8.3nm,0.8s								
ILAR	**Eielson Array**	**87.43**	**24**		P	**P**	**03 43 21.7**	**-1.3**	
ILAR	**Eielson Array**	**87.43**	**24**		P	**P**	**03 43 22.1**	**-0.8**	
	comp=Z,5.3nm,0.7s,baz=256,slow=5.0,SNR=37								
	comp=Z,5.3nm,0.7s								
G24K	**Hadweenzic Riv**	**87.89**	**22**		P	**P**	**03 43 25.8**	**+0.6**	
RIDG	**Independent Ri**	**87.93**	**25**		P	**P**	**03 43 25.7**	**+0.2**	
J25K	**Salcha River,**	**88.00**	**24**		P	**P**	**03 43 25.9**	**+0.1**	
C23K	**Itkillik River**	**88.00**	**19**		P	**P**	**03 43 26.2**	**+0.6**	
F24K	**Squaw Lake**	**88.03**	**21**		P	**P**	**03 43 26.5**	**+0.6**	
F24K					IAmb	IAmb	03 43 27.7		
	comp=Z,15nm,1.2s								
D24K	**Happy Valley**	**88.32**	**19**		P	**P**	**03 43 28.2**	**+1.1**	
FYU	**Fort Yukon**	**88.68**	**22**		P	**P**	**03 43 30.1**	**+1.3**	
CTGM	**Chitina Glacie**	**88.70**	**28**		P	**P**	**03 43 29.6**	**+0.3**	
J26L	**Joseph Creek**	**88.70**	**25**		P	**P**	**03 43 29.4**	**+0.3**	
M27K	**Edge Creek, AK**	**88.82**	**27**		P	**P**	**03 43 30.7**	**+0.9**	
L27K	**Beaver Creek,**	**89.03**	**26**		P	**P**	**03 43 30.8**	**+0.2**	
L27K					IAmb	IAmb	03 43 32.1		
	comp=Z,13nm,1.2s								
BCAR	**Beaver Creek A**	**89.05**	**26**		P	**P**	**03 43 31.0**	**+0.2**	
E25K	**Arctic Village**	**89.07**	**21**		P	**P**	**03 43 31.4**	**+0.7**	
E25K					IAmb	IAmb	03 43 35.0		
	comp=Z,8.2nm,1.1s								
K27K	**Chicken**	**89.19**	**25**		P	**P**	**03 43 31.9**	**+0.6**	
K27K					IAmb	IAmb	03 43 33.9		
	comp=Z,17nm,1.1s								
BMAR	**Burnt Mountain**	**89.20**	**22**		P	**P**	**03 43 32.0**	**+0.7**	
GEYT	**Alibeck**	**89.44**	**308**		P	**P**	**03 43 33.2**	**+0.1**	
	comp=Z,1.8nm,0.7s,baz=210,slow=6.0,SNR=4.4								
	comp=Z,1.8nm,0.7s								
EGAK	**Eagle**	**89.77**	**25**		P	**P**	**03 43 34.4**	**+0.4**	
EGAK					IAmb	IAmb	03 43 35.1		
	comp=Z,16nm,1.2s								
ABKAR	**Akbulak array**	**89.89**	**319**		P	**P**	**03 43 34.2**	**-0.7**	
ABKAR	**Akbulak array**	**89.89**	**319**		P	**P**	**03 43 34.3**	**-0.6**	
ABKAR					IAmb	IAmb	03 43 37.4		
	comp=Z,5.4nm,1.2s								
DAWY	**Dawson**	**90.34**	**25**		P	**P**	**03 43 37.2**	**+0.4**	
M29M	**Somme Creek**	**90.38**	**27**		P	**P**	**03 43 36.5**	**-0.6**	
M29M					IAmb	IAmb	03 46 34.0		
	comp=Z,26nm,1.7s								
I28M	**Miner Creek**	**90.44**	**24**		P	**P**	**03 43 37.6**	**+0.3**	
I28M					IAmb	IAmb	03 43 40.8		
	comp=Z,16nm,1.4s								
K29M	**Barlow Dome**	**91.10**	**26**		P	**P**	**03 43 41.2**	**+0.8**	
K29M					IAmb	IAmb	03 43 41.8		
	comp=Z,19nm,1.4s								
ARU	**Arti**	**91.84**	**326**	*c*	*i* P	**P**	**03 43 41.8**	**-2.0**	
ARU							03 47 18.9		
ARU					S	**SKSac**	**03 54 13.7**	**-1.0**	
ARU					pmax	pmax			
	comp=Z,14nm,1.8s								
I30M	**Mount Dempster**	**91.85**	**25**		P	**P**	**03 43 44.1**	**+0.2**	
ELIB	**Princess Elisa**	**92.81**	**196**	*d*	P	**P**	**03 43 50.4**	**+2.1**	
NVAR	**Mina Array Bea**	**100.96**	**52**		P	**Pdif**	**03 44 25.9**	**-0.1**	
	comp=Z,0.4nm,0.7s,baz=247,slow=4.7,SNR=2.5								
YKA	**Yellowknife Ar**	**101.40**	**28**		P	**Pdif**	**03 44 26.7**	**-0.3**	
	comp=Z,0.3nm,0.7s,baz=280,slow=5.1,SNR=5.5								
OBN	**Obninsk**	**104.23**	**325**	*i*	P	**Pdif**	**03 44 39.5**	**-0.2**	
OBN				*e*			03 48 58.2		
OBN					pmax	pmax			
	comp=Z,3.0nm,0.9s								
ULM	**Lac du Bonnet**	**114.61**	**37**		PKP	PKPdf	03 49 19.1	+3.0	
	comp=Z,1.0nm,0.6s,baz=353,slow=5.2,SNR=2.8								
SOCE	**Pocosol**	**133.13**	**82**			**PKiKP**	**03 49 52.9**	**-0.9**	
TORD	**Torodi Ar. Bea**	**140.89**	**283**		PKP	**PKPdf**	**03 50 07.6**	**+0.7**	
	comp=Z,0.4nm,0.9s,baz=61,slow=4.2,SNR=3.6								
CPUP	**Villa Florida**	**142.31**	**150**		PKP	**PKiKP**	**03 50 11.8**	**-0.4**	
	comp=Z,3.3nm,1.1s,baz=253,slow=3.2,SNR=2.9								
SDV	**Santo Domingo**	**146.96**	**83**			**PKPdf**	**03 50 17.6**	**-0.2**	
ETMB	**Extrema**	**147.17**	**119**			**PKPbc**	**03 50 20.2**	**+0.1**	
TRCB	**Terra Rica**	**147.54**	**153**		PKPab	**PKiKP**	**03 50 23.2**	**0.0**	
DBIC	**Dimbokro**	**147.66**	**273**		PKPbc	**PKiKP**	**03 50 22.4**	**-1.1**	
	comp=Z,15nm,1.2s,baz=103,slow=2.6,SNR=7.1								
BAUV	**El Baul**	**149.52**	**83**		PKPab	**PKPab**	**03 50 31.3**	**0.0**	

*IDC **28** 03:38:43.4±2.5, 6°24'S×142°73'E, h0km, mb3.6/3, mbtmp3.7/4, Error ellipse: s-maj=86.4km s-min=51.2km az=116.0, New Guinea*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.88**	**210**	Pn	Pn	03 42 28.2	-0.2
	6.8nm,0.8s,baz=25,slow=13,SNR=1.4						
MKAR	**Makanchi Array**	**75.01**	**322**	P	P	03 50 27.5	+0.6
	0.2nm,0.6s,baz=136,slow=5.2,SNR=2.5						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**78.90**	**324**	P	P	03 50 48.5	-0.2
	0.3nm,0.7s,baz=97,slow=3.8,SNR=2.0						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**87.39**	**24**	P	P	03 51 32.0	-0.3
	0.4nm,0.7s,baz=249,slow=5.0,SNR=4.7						
	0.4nm,0.7s						

*IDC **28** 03:39:07.4±1.9, 6°21'S×142°81'E, h0km, mb3.7/5, mbtmp3.9/7, ML4.1/2, Error ellipse: s-maj=71.2km s-min=29.9km az=104.0*

ISC 28 03:39:08.8±1.8, 6°3'S±0°2×142°8'E±0°5, h10km, n7, σ1°13/7, mb3.7/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.88**	**210**	Pn	**Pn**	**03 42 51.2**	**-1.4**
	0.7nm,0.3s,baz=31,slow=14,SNR=5.0						
	2.9nm,0.5s						
ASAR	**Alice Springs**	**19.29**	**205**	P	**P**	**03 43 35.5**	**+1.5**
	0.8nm,0.3s,baz=31,slow=10,SNR=6.9						
	6.3nm,0.6s						
SONM	**Songino Array**	**62.70**	**333**	P	**P**	**03 49 34.4**	**+0.3**
	0.2nm,0.7s,baz=132,slow=4.1,SNR=1.8						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**75.11**	**322**	P	**P**	**03 50 50.4**	**-0.7**
	0.8nm,1.0s,baz=121,slow=5.6,SNR=3.0						
	0.8nm,1.0s						
KURBB	**Kurchatov Arra**	**79.00**	**324**	P	**P**	**03 51 13.1**	**+0.2**
	0.1nm,0.2s,baz=116,slow=4.2,SNR=2.5						
	0.1nm,0.2s						
BVAR	**Borovoye Array**	**84.57**	**325**	P	**P**	**03 51 42.7**	**+0.4**
	1.3nm,0.7s,baz=104,slow=6.1,SNR=4.7						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**03 51 55.6**	**-0.4**
	0.7nm,0.7s,baz=259,slow=4.7,SNR=6.9						
	0.7nm,0.7s						

*IDC **28** 03:46:26.9±1.4, 6°15S×143°26E, h0km, mb3.8/5, mbtmp4.0/6, ML4.6/1, Error ellipse: s-maj=62.5km s-min=29.7km az=94.0*

ISC 28 03:46:28.3±1.3, 6°2S±0°2×143°0E±0°4, h10km, n8, σ1°41/7, mb3.9/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**14.12**	**168**	Lg	Lg	03 54 10.4	
	0.9nm,0.3s,baz=249,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**16.03**	**211**	Pn	**Pn**	**03 50 12.6**	**-1.4**
	0.2nm,0.3s,baz=26,slow=13,SNR=1.7						
WRA				Sn	Sn	03 52 59.1	-13
	0.2nm,0.3s,baz=30,slow=23,SNR=2.6						
WRA				Lg	Lg	03 54 54.2	
	1.7nm,0.3s,baz=31,slow=12,SNR=39						
ASAR	**Alice Springs**	**19.43**	**206**	P	**Pn**	**03 50 57.1**	**+0.9**
ASAR				Lg	Lg	03 56 33.6	
	baz=18,slow=27,SNR=4.8						
	18nm,0.7s						
MKAR	**Makanchi Array**	**75.20**	**322**	P	**P**	**03 58 11.2**	**+0.1**
	0.2nm,0.5s,baz=113,slow=8.3,SNR=3.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**79.08**	**324**	P	**P**	**03 58 34.9**	**+2.0**
	0.1nm,0.3s,baz=117,slow=4.4,SNR=3.2						
	0.1nm,0.3s						
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**03 58 57.9**	**+0.5**
	1.5nm,0.9s,baz=306,slow=1.3,SNR=2.8						
	1.5nm,0.9s						
BVAR	**Borovoye Array**	**84.66**	**325**	P	**P**	**03 59 02.6**	**+0.4**
	2.3nm,0.7s,baz=116,slow=6.8,SNR=12						
	2.3nm,0.7s						
ILAR	**Eielson Array**	**87.27**	**24**	P	**P**	**03 59 14.1**	**-0.8**
	0.6nm,0.8s,baz=262,slow=5.1,SNR=8.6						
	0.6nm,0.8s						

*IDC **28** 03:49:44.9±7.3, 32°05S×179°22W, h45km±61km, mb4.1/2, mbtmp4.3/3, ML4.2/1, Error ellipse: s-maj=63.8km s-min=35.4km az=59.0*

*WEL **28** 03:49:49.3±0.5, 33°S±9°×17°9W±2°1, h130km±19km, M4.2/24, mB4.8/19, ML5.1/27, MLv4.8/24, Mw(mB)4.0/19, Error ellipse: s-maj=0.0km s-min=0.0km az=112.3, confirmed*

ISC 28 03:49:46.9±0.8, 32°39S±0°08×179°2W±0°2, h61km, n58, σ2°28/86, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.32**	**20**	P	**Pn**	**03 50 38.1**	**+1.7**
GLKZ				S	**Sn**	**03 51 16.9**	**+2.3**
MXZ	**Matakaoa Point**	**5.54**	**201**	P	**Pn**	**03 51 08.3**	**+1.6**
MXZ				S	**Sn**	**03 52 11.7**	**+2.6**
WMGZ	**Waiomatatini S**	**5.75**	**199**	P	**Pn**	**03 51 11.4**	**+1.8**
WMGZ				S	**Sn**	**03 52 13.8**	**-0.3**
HAZ	**Te Kaha**	**5.88**	**204**	P	**Pn**	**03 51 14.2**	**+2.8**
HAZ				S	**Sn**	**03 52 22.2**	**+4.7**
PKGZ	**Pakihiroa**	**5.91**	**201**	P	**Pn**	**03 51 14.1**	**+2.2**
PKGZ				S	**Sn**	**03 52 17.8**	**-0.4**
PUZ	**Puketiti**	**6.03**	**199**	P	**Pn**	**03 51 17.0**	**+3.6**
PUZ				S	**Sn**	**03 52 19.4**	**-1.7**
RUGZ	**Raukumara Rang**	**6.11**	**204**	P	**Pn**	**03 51 16.9**	**+2.2**
RUGZ				S	**Sn**	**03 52 24.0**	**+0.8**
TWGZ	**Tauwhareparae**	**6.20**	**201**	P	**Pn**	**03 51 19.3**	**+3.3**
TWGZ				S	**Sn**	**03 52 26.4**	**+0.9**
CNGZ	**Carnagh Statio**	**6.42**	**198**	P	**Pn**	**03 51 20.5**	**+1.6**
TKGZ	**Te Karaka**	**6.49**	**201**	P	Pn	03 51 24.5	+4.8
TKGZ				S	**Sn**	**03 52 32.7**	**+0.5**
MWZ	**Matawai**	**6.49**	**203**	P	**Pn**	**03 51 20.2**	**+0.4**
MWZ				S	**Sn**	**03 52 33.9**	**+1.4**
URZ	**Urewera**	**6.57**	**206**	P	**Pn**	**03 51 22.3**	**+1.5**
	4.0nm,0.3s,baz=353,slow=3.7,SNR=35						
URZ				S	**Sn**	**03 52 31.6**	**-2.8**
	11nm,0.3s,baz=254,slow=2.5,SNR=3.5						
	8.2nm,0.3s						
URZ	**Urewera**	**6.57**	**206**	P	**Pn**	**03 51 22.7**	**+1.9**
URZ				S	**Sn**	**03 52 35.9**	**+1.5**
RAGZ	**Rawiri**	**6.67**	**203**	P	Pn	03 51 27.3	+4.9
RAGZ				S	**Sn**	**03 52 38.2**	**+1.2**
RIGZ	**Rimuhau**	**6.76**	**200**	P	**Pn**	**03 51 23.5**	**0.0**
RIGZ				S	**Sn**	**03 52 37.1**	**-2.0**
MUGZ	**Murupara**	**6.89**	**207**	P	**Pn**	**03 51 29.7**	**+4.4**
PRGZ	**Paritu Road**	**6.92**	**199**	P	**Pn**	**03 51 29.8**	**+4.0**
RTZ	**Ruatahuna**	**6.93**	**205**	P	**Pn**	**03 51 28.4**	**+2.4**
SNGZ	**Shannon Statio**	**6.96**	**203**	P	**Pn**	**03 51 29.1**	**+2.9**
SNGZ				S	**Sn**	**03 52 44.4**	**+0.5**
MTHZ	**Maungataniwha**	**7.19**	**205**	P	**Pn**	**03 51 31.4**	**+1.9**
MTHZ				S	**Sn**	**03 52 50.3**	**+0.6**
WHHZ	**Waihua**	**7.26**	**202**	P	**Pn**	**03 51 28.6**	**-1.7**
WHHZ				S	**Sn**	**03 52 50.3**	**-1.0**
MRHZ	**Matea Rd**	**7.34**	**208**	P	**Pn**	**03 51 34.3**	**+2.8**
NMHZ	**Naumai**	**7.42**	**205**	P	**Pn**	**03 51 35.3**	**+2.6**
NMHZ				S	**Sn**	**03 52 57.3**	**+1.9**
ARHZ	**Aropaoanui**	**7.51**	**203**	P	**Pn**	**03 51 36.2**	**+2.5**
BKZ	**Black Stump Fm**	**7.60**	**206**	P	**Pn**	**03 51 37.9**	**+2.9**
MCHZ	**McNeill Hill**	**7.77**	**204**	P	**Pn**	**03 51 39.6**	**+2.2**
MCHZ				S	**Sn**	**03 53 03.3**	**-0.5**
KWHZ	**Kaweka Forest**	**7.85**	**205**	P	**Pn**	**03 51 38.3**	**-0.1**
NTVZ	**North Tongarir**	**7.87**	**210**	P	**Pn**	**03 51 42.4**	**+3.7**
TMVZ	**Te Maari**	**7.87**	**210**	P	**Pn**	**03 51 42.1**	**+3.3**
ETVZ	**East Tongariro**	**7.88**	**210**	P	**Pn**	**03 51 40.1**	**+1.1**
ETVZ				S	**Sn**	**03 53 07.8**	**+1.1**
OTVZ	**Oturere**	**7.92**	**210**	P	**Pn**	**03 51 42.8**	**+3.2**
OTVZ				S	**Sn**	**03 53 07.8**	**0.0**
KAHZ	**Kahuranaki**	**8.03**	**202**	P	**Pn**	**03 51 41.4**	**+0.5**
BHHZ	**Black Hill Sta**	**8.04**	**207**	P	**Pn**	**03 51 42.9**	**+1.8**
BHHZ				S	**Sn**	**03 53 10.2**	**-0.3**
KRHZ	**Kereru**	**8.06**	**205**	P	**Pn**	**03 51 41.9**	**+0.6**
KRHZ				S	**Sn**	**03 53 06.5**	**-4.5**
WNVZ	**Wahianoa**	**8.09**	**210**	P	**Pn**	**03 51 44.9**	**+3.1**
MOVZ	**Moawhango**	**8.09**	**209**	P	**Pn**	**03 51 44.0**	**+2.2**
MOVZ				S	**Sn**	**03 53 09.9**	**-1.9**
PXZ	**Pawanui**	**8.25**	**201**	P	**Pn**	**03 51 43.6**	**-0.3**
PXZ				S	**Sn**	**03 53 11.2**	**-4.2**
PNHZ	**Pukenui**	**8.36**	**205**	P	**Pn**	**03 51 45.7**	**+0.2**
PNHZ				S	**Sn**	**03 53 13.2**	**-5.1**
PRHZ	**Porangahau**	**8.53**	**202**	P	**Pn**	**03 51 47.9**	**+0.1**
PRHZ				S	**Sn**	**03 53 22.9**	**+0.4**
TSZ	**Takapari Road**	**8.58**	**206**	P	**Pn**	**03 51 48.2**	**-0.2**
TSZ				S	**Sn**	**03 53 20.4**	**-3.2**
PRWZ	**Pori Road**	**9.01**	**204**	P	**Pn**	**03 51 55.1**	**+0.8**
PRWZ				S	**Sn**	**03 53 30.9**	**-3.4**
BFZ	**Birch Farm**	**9.03**	**202**	P	**Pn**	**03 51 54.1**	**-0.5**
MRZ	**Mangatainoka R**	**9.24**	**205**	P	**Pn**	**03 51 56.4**	**-1.1**
MRZ				S	**Sn**	**03 53 34.3**	**-5.6**
HOWZ	**Holdsworth Sta**	**9.47**	**205**	P	**Pn**	**03 51 57.0**	**-3.7**
OGWZ	**Otaki Gorge**	**9.53**	**207**	P	**Pn**	**03 52 00.4**	**-1.0**
TMWZ	**Te Maipa**	**9.53**	**203**	P	**Pn**	**03 52 00.3**	**-1.2**
MTW	**Mount Morrison**	**9.71**	**204**	P	**Pn**	**03 52 01.8**	**-2.0**
MTW				S	Sn	03 53 43.8	-7.5
ASAR	**Alice Springs**	**41.99**	**270**	P	**P**	**03 57 32.5**	**+0.1**
	2.4nm,0.8s,baz=100,slow=8.1,SNR=6.2						
	2.4nm,0.8s						
QSPA	**South Pole Qui**	**57.72**	**180**	P	**P**	**03 59 33.5**	**+2.3**
	4.5nm,0.7s,baz=243,slow=0.3,SNR=30						
	4.5nm,0.7s						
MKAR	**Makanchi Array**	**118.23**	**310**	PKP	**PKPdf**	**04 08 25.4**	**-1.5**
	0.5nm,0.9s,baz=119,slow=2.2,SNR=3.1						
KURBB	**Kurchatov Arra**	**121.68**	**313**	PKP	**PKPdf**	**04 08 31.6**	**-1.8**
	0.8nm,0.8s,baz=92,slow=2.4,SNR=7.6						
BVAR	**Borovoye Array**	**127.07**	**315**	PKP	**PKPdf**	**04 08 43.0**	**-0.7**
	1.1nm,0.8s,baz=117,slow=2.3,SNR=4.7						
FINES	**FINESS Array B**	**146.62**	**338**	PKPbc	**PKPbc**	**04 09 20.0**	**-0.9**
	10nm,0.8s,baz=42,slow=4.3,SNR=24						
NB2	**NORSAR Subarra**	**150.54**	**350**	PKP	**PKPbc**	**04 09 30.3**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=17,slow=2.7						
NOA	**NORSAR Array B**	**150.54**	**350**	PKPbc	**PKiKP**	**04 09 30.5**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=17,slow=4.2,SNR=6.6						
HFS	**Hagfors**	**150.96**	**347**	PKPbc	**PKPbc**	**04 09 31.0**	**-1.0**
	comp=Z,4.8nm,0.8s,baz=88,slow=3.6,SNR=5.0						
AKASG	**Malin Array Be**	**152.18**	**320**	PKPbc	**PKPbc**	**04 09 33.9**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=55,slow=1.9,SNR=6.1						
BRTR	**Keskin Array B**	**152.54**	**295**	PKPbc	**PKPbc**	**04 09 34.4**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=132,slow=4.7,SNR=5.0						

*NEIC **28** 03:50:23.5±1.3, 18°57N±0°09×145°5E±0°2, h128km±8km, mb4.5/66, Error ellipse: s-maj=22.4km s-min=12.8km az=95.0*

*IDC **28** 03:50:24.2±0.9, 18°64N×145°57E, h141km±7km, mb3.5/11, mbtmp3.9/11, Error ellipse: s-maj=23.2km s-min=13.9km az=93.0*

ISC 28 03:50:24.9±0.5, 18°59N±0°07×145°5E±0°1, h150km, n89, σ0°94/87, mb4.4/45, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.01**	**187**	S	**Sn**	**03 52 36.2**	**+0.2**
	88nm,0.3s,baz=180,slow=20,SNR=1.7						
PATS	**Pohnpei**	**17.09**	**131**	P	**P**	**03 54 12.8**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**20.09**	**87**	T	T	04 15 52.4	
	baz=275,slow=75,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**20.10**	**87**	T	T	04 15 50.0	
	baz=275,slow=75,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**20.11**	**87**	T	T	04 15 49.9	
	baz=275,slow=75,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**20.24**	**83**	T	T	04 16 00.3	
	baz=271,slow=74,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**20.24**	**83**	T	T	04 16 03.7	
	baz=271						
H11N3	**WAKE ISLAND Hy**	**20.26**	**83**	T	T	04 16 06.6	
	baz=271,slow=74,SNR=5.5						
COEN	**Coen**	**32.43**	**184**	P	**P**	**03 56 40.4**	**-0.5**
COEN				IAmb	IAmb	03 57 03.9	
	comp=Z,5.3nm,0.8s						
MTN	**Manton Dam**	**34.30**	**205**	P	**P**	**03 56 56.6**	**-0.5**
KNRA	**Kununurra**	**37.83**	**207**	P	**P**	**03 57 28.8**	**+1.6**
CTA	**Charters Tower**	**38.45**	**179**	P	**P**	**03 57 33.6**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=351,slow=13,SNR=0.8						
	comp=Z,1.2nm,0.4s						
WB0	**Warramunga Arr**	**39.65**	**197**	P	**P**	**03 57 41.9**	**-0.4**
WB0				IAmb	IAmb	03 57 45.9	
	comp=Z,13nm,1.2s						
WR0	**Warramunga Arr**	**39.79**	**196**	P	**P**	**03 57 42.8**	**-0.7**
WR0				IAmb	IAmb	03 57 46.4	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**39.82**	**197**	P	**P**	**03 57 44.4**	**+0.7**
WRAB				IAmb	IAmb	03 57 45.7	
	comp=Z,22nm,1.4s						
WB2	**Warramunga Arr**	**39.83**	**197**	P	**P**	**03 57 42.1**	**-1.6**
WB2				IAmb	IAmb	03 57 46.4	
	comp=Z,18nm,1.2s						
WRA	**Warramunga Arr**	**39.83**	**197**	P	**P**	**03 57 42.5**	**-1.4**
WRA	**Warramunga Arr**	**39.83**	**197**	P	**P**	**03 57 43.9**	**+0.1**
	comp=Z,2.9nm,0

	comp=Z,6.3nm,1.3s						
MDM	**Murphy Dome**	**63.30**	**26**	P	**P**	**04 00 39.0**	**+1.5**
MDM				IAmb	IAmb	04 00 49.3	
	comp=Z,5.5nm,1.3s						
H24K	**Noodor Dome**	**63.66**	**25**	P	**P**	**04 00 40.5**	**+0.7**
H24K				IAmb	IAmb	04 01 09.8	
	comp=Z,4.9nm,1.3s						
ILAR	**Eielson Array**	**63.82**	**26**	P	**P**	**04 00 40.1**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=259,slow=5.5,SNR=9.0						
ILAR				pP	**pP**	**04 01 14.9**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=266,slow=6.2,SNR=2.8						
	comp=Z,1.1nm,0.8s						
G24K	**Hadweenzic Riv**	**64.02**	**24**	P	**P**	**04 00 42.9**	**+0.7**
G24K				IAmb	IAmb	04 00 44.5	
	comp=Z,8.8nm,1.4s						
J25K	**Salcha River,**	**64.43**	**27**	P	**P**	**04 00 44.5**	**-0.5**
J25K				IAmb	IAmb	04 01 19.4	
	comp=Z,6.9nm,1.5s						
MCARA	**McCarthy VSAT**	**64.98**	**30**	P	**P**	**04 00 49.5**	**+0.9**
E25K	**Arctic Village**	**65.06**	**23**	P	**P**	**04 00 48.3**	**-0.7**
E25K				IAmb	IAmb	04 01 29.4	
	comp=Z,6.2nm,1.4s						
BMAR	**Burnt Mountain**	**65.29**	**24**	P	**P**	**04 00 51.7**	**+1.3**
L27K	**Beaver Creek,**	**65.74**	**28**	P	**P**	**04 00 54.6**	**+1.2**
L27K				IAmb	IAmb	04 01 22.4	
	comp=Z,9.5nm,1.4s						
BCAR	**Beaver Creek A**	**65.76**	**28**	P	**P**	**04 00 54.2**	**+0.6**
EGAK	**Eagle**	**66.24**	**27**	P	**P**	**04 00 57.4**	**+0.9**
EGAK				IAmb	IAmb	04 01 01.3	
	comp=Z,10nm,1.4s						
BVAR	**Borovoye Array**	**66.44**	**320**	P	**P**	**04 00 58.6**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=94,slow=8.2,SNR=7.6						
BVAR				pP	**pwP**	**04 01 35.6**	**-2.1**
	comp=Z,1.7nm,0.9s,baz=78,slow=6.6,SNR=3.0						
	comp=Z,1.7nm,0.6s						
I28M	**Miner Creek**	**66.83**	**26**	P	**P**	**04 01 00.9**	**+0.5**
L29M	**L29M**	**67.42**	**29**	P	**P**	**04 01 05.3**	**+1.2**
L29M				IAmb	IAmb	04 01 07.2	
	comp=Z,5.1nm,1.0s						
H29M	**Whitestone**	**67.55**	**25**	P	**P**	**04 01 04.7**	**-0.1**
G31M	**Satah River**	**69.22**	**25**	P	**P**	**04 01 15.5**	**+0.4**
INK	**Inuvik**	**69.54**	**23**	P	**P**	**04 01 17.8**	**+0.8**
C36M	**Paulatuk**	**72.91**	**22**	P	**P**	**04 01 37.2**	**-0.1**
ABKAR	**Akbulak array**	**73.29**	**317**	P	**P**	**04 01 39.9**	**0.0**
ABKAR	**Akbulak array**	**73.29**	**317**	P	**P**	**04 01 40.1**	**+0.2**
C03A	**Quillayute Air**	**76.39**	**44**	P	**P**	**04 01 58.3**	**+0.6**
YKA	**Yellowknife Ar**	**78.17**	**28**	P	**P**	**04 02 07.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=292,slow=5.6,SNR=7.1						
YKA				pP	**pP**	**04 02 41.7**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=291,slow=5.3,SNR=3.1						
	comp=Z,0.5nm,0.7s						
RES	**Resolute Bay**	**79.57**	**14**	P	**P**	**04 02 14.9**	**+0.1**
J05D	**Fort Rock, OR**	**79.80**	**48**	P	**P**	**04 02 17.6**	**+0.7**
J05D				IAmb	IAmb	04 02 18.2	
	comp=Z,8.4nm,1.4s						
E07A	**Sunnyside**	**79.84**	**44**	P	**P**	**04 02 19.2**	**+2.4**
E07A				IAmb	IAmb	04 02 19.5	
	comp=Z,6.1nm,0.9s						
KVN	**Kaiserville**	**83.31**	**51**	P	**P**	**04 02 35.0**	**-0.4**
NVAR	**Mina Array Bea**	**83.35**	**52**	P	**P**	**04 02 35.4**	**-0.3**
NVAR	**Mina Array Bea**	**83.35**	**52**	P	**P**	**04 02 36.3**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=268,slow=6.4,SNR=7.4						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**86.90**	**335**	P	**P**	**04 02 51.9**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=70,slow=6.3,SNR=4.3						
	comp=Z,0.5nm,0.4s						

IDC 28 03:59:35.7±1.8, 6.15S×143.01E, h0km, mb3.9/3, mbtmp3.9/5, ML3.8/2, Error ellipse: s-maj=75.0km s-min=30.1km az=108.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.09**	**211**	Pn	Pn	04 03 21.3	-2.2
	0.4nm,0.3s,baz=30,slow=13,SNR=8.9						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**19.50**	**206**	P	Pn	04 04 05.4	-0.4
	0.3nm,0.3s,baz=36,slow=9.5,SNR=27						
	4.3nm,0.8s						
MKAR	**Makanchi Array**	**75.12**	**322**	P	P	04 11 19.9	+0.2
	1.0nm,1.1s,baz=104,slow=7.5,SNR=3.8						
	1.0nm,1.1s						
BVAR	**Borovoye Array**	**84.57**	**325**	P	P	04 12 11.0	+0.1
	1.2nm,0.6s,baz=107,slow=7.7,SNR=5.6						
	1.2nm,0.6s						
ILAR	**Eielson Array**	**87.20**	**24**	P	P	04 12 23.4	-0.2
	0.3nm,0.6s,baz=261,slow=4.5,SNR=8.3						
	0.3nm,0.6s						

*IDC **28** 04:05:19.4±0.9, 6.08S×142.69E, h0km, mb4.0/6, mbtmp4.0/8, ML2.1/1, Error ellipse: s-maj=37.9km s-min=22.9km az=63.0*

ISC 28 04:05:20.7±1.0, 6.2S±0.1×142.6E±0.1, h10km, n10, σ1s26/10, mb4.0/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.56**	**125**	Pn	**Pn**	**04 06 44.9**	**+1.4**
	3.9nm,0.3s,baz=314,slow=8.9,SNR=7.3						
PMG				Sn	**Sn**	**04 07 46.1**	**-1.4**
	4.1nm,0.3s,baz=223,slow=19,SNR=2.1						
	15nm,0.4s						
CTA	**Charters Tower**	**14.25**	**166**	Lg	Lg	04 12 57.0	
	0.2nm,0.3s,baz=233,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**15.81**	**210**	Pn	**Pn**	**04 09 01.9**	**-1.7**
	0.6nm,0.3s,baz=30,slow=14,SNR=13						
WRA				Sn	Sn	04 11 50.7	-8.3
	0.4nm,0.3s,baz=35,slow=24,SNR=5.2						
WRA				Lg	Lg	04 13 33.7	
	0.2nm,0.3s,baz=33,slow=30,SNR=2.0						
ASAR	**Alice Springs**	**19.24**	**205**	P	**Pn**	**04 09 47.5**	**+1.1**
	6.9nm,0.7s,baz=32,slow=9.5,SNR=24						
ASAR				S	Sn	04 13 13.6	-8.7
	2.0nm,0.7s,baz=22,slow=28,SNR=5.2						
ASAR				Lg	Lg	04 15 28.1	
	0.1nm,0.3s,baz=25,slow=27,SNR=2.5						
MKAR	**Makanchi Array**	**74.89**	**322**	P	**P**	**04 17 03.1**	**+1.3**
	0.7nm,0.7s,baz=116,slow=8.2,SNR=5.4						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**76.88**	**329**	P	**P**	**04 17 12.9**	**0.0**
	0.5nm,0.4s,baz=104,slow=6.1,SNR=2.3						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**78.78**	**324**	P	**P**	**04 17 23.3**	**-0.4**
	0.6nm,0.9s,baz=116,slow=4.4,SNR=3.2						
	0.6nm,0.9s						
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**04 17 50.3**	**+0.3**
	0.7nm,0.8s,baz=129,slow=0.6,SNR=1.5						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**84.36**	**325**	P	**P**	**04 17 53.4**	**+0.3**
	2.4nm,0.7s,baz=105,slow=5.2,SNR=8.7						
	2.4nm,0.7s						
ILAR	**Eielson Array**	**87.44**	**24**	P	**P**	**04 18 07.1**	**-1.0**
	1.2nm,0.8s,baz=257,slow=4.8,SNR=16						
	1.2nm,0.8s						

*JMA **28** 04:09:49.8±0.1, 24.2N±0.2×121.8E±0.2, h0km, MV3.2/11, TAIWAN REGION*

*TAP **28** 04:09:49.5, 24.20N×121.81E, h8km, ML3.6, C*

ISC 28 04:09:49.7±0.9, 24.19N±0.01×121.83E±0.02, h7km±7km, n151, σ0s93/291, 3C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.14**	**327**	P	**Pg**	**04 09 52.6**	**-0.1**
	baz=333						
EHP				eS	**Sg**	**04 09 55.3**	**+0.6**
	baz=333						
EAHA	**Aohua**	**0.16**	**331**	⇓P	**Pg**	**04 09 52.9**	**-0.1**
	baz=333						
EAHA				S	**Sg**	**04 09 55.6**	**+0.4**
	baz=333						
ETL	**Fush Village**	**0.19**	**260**	P	**Pg**	**04 09 53.5**	**0.0**
	baz=258						
ETL				S	**Sg**	**04 09 56.4**	**+0.4**
	baz=258						
NACB	**Ninganchiao**	**0.21**	**266**	⇑P	**Pg**	**04 09 53.8**	**-0.1**
	baz=264						
NACB				S	**Sg**	**04 09 56.8**	**0.0**
	baz=264						
TWD	**Chiawan**	**0.24**	**242**	⇑*i*P	**Pg**	**04 09 54.4**	**0.0**
	baz=250						
TWD				*i* S	**Sg**	**04 09 57.9**	**+0.4**
	baz=250						
ENA	**Nanau**	**0.25**	**342**	⇓*i*P	**Pg**	**04 09 54.6**	**-0.1**
	baz=344						
ENA				*i* S	**Sg**	**04 09 58.1**	**+0.1**
	baz=344						
EWUT	**Wuta**	**0.26**	**351**	P	**Pg**	**04 09 54.8**	**0.0**
	baz=350						
EWUT				S	**Sg**	**04 09 58.2**	**0.0**
	baz=350						
HWA	**Hwalien**	**0.29**	**223**	*e*P	**Pb**	**04 09 56.9**	**-0.4**
	baz=235						
ETLH	**Xiulin Townshi**	**0.31**	**273**	*e*P	**Pg**	**04 09 55.7**	**-0.2**
	baz=274						
ETM	**Tongmen**	**0.38**	**234**	P	**Pg**	**04 09 57.0**	**-0.1**
	baz=235						
ETM				*e*S	**Sg**	**04 10 02.9**	**+0.9**
	baz=235						
ESAO	**Su ao**	**0.38**	**3**	P	**Pg**	**04 09 57.0**	**-0.2**
	baz=357						
ESAO				S	**Sg**	**04 10 02.1**	**-0.2**
	baz=357						
LXIB	**Xiulin Townshi**	**0.41**	**246**	P	**Pg**	**04 09 57.4**	**-0.3**
	baz=248						
LXIB				S	**Sg**	**04 10 03.8**	**+0.6**
	baz=248						
TWC	**Suao**	**0.42**	**3**	⇓*i*P	**Pg**	**04 09 57.7**	**-0.1**
	baz=356						
TWC				*i* S	**Sg**	**04 10 03.5**	**+0.1**
	baz=356						
LATG	**Datong**	**0.44**	**322**	*e*P	**Pg**	**04 09 58.1**	**-0.1**
	baz=322						
NDS	**Dongshan**	**0.45**	**347**	⇓P	**Pg**	**04 09 58.5**	**0.0**
	baz=346						
NDS				S	**Sg**	**04 10 04.4**	**-0.1**
	baz=346						
SHUL	**Shoufeng**	**0.47**	**211**	P	**Pb**	**04 10 00.2**	**0.0**
	baz=215						
SHUL				*e*S	**Sb**	**04 10 07.9**	**+0.6**
	baz=215						
NNSB	**Datong**	**0.47**	**301**	⇓P	**Pg**	**04 09 58.7**	**0.0**
	baz=302						
NNSB				S	**Sg**	**04 10 04.6**	**-0.3**
	baz=302						
NNSH	**Datong**	**0.47**	**301**	⇓P	**Pg**	**04 09 58.8**	**0.0**
	baz=302						
NNSH				S	**Sg**	**04 10 04.8**	**-0.1**
	baz=302						
NNS	**Nan Shan**	**0.48**	**301**	*e*P	**Pg**	**04 09 59.0**	**-0.1**
	baz=303						
NNS				*i* S	**Sg**	**04 10 05.3**	**-0.1**
	baz=303						
NDT	**Datong Townshi**	**0.50**	**325**	*e*P	**Pg**	**04 09 59.5**	**+0.1**
	baz=327						
ENTT	**Nioudou**	**0.51**	**332**	*e*P	**Pg**	**04 09 59.5**	**+0.1**
	baz=333						
ENTT				*i* S	**Sg**	**04 10 06.7**	**+0.6**
	baz=333						
WHF	**Hehuan Shan**	**0.51**	**265**	*i* P	**Pg**	**04 09 59.7**	**+0.1**
	baz=266						
WHF				*i* S	**Sg**	**04 10 06.6**	**+0.2**
	baz=266						
ESL	**Shilin**	**0.52**	**224**	*i* P	**Pg**	**04 10 00.1**	**+0.4**
	baz=234						
ESL				*e*S	**Sb**	**04 10 08.9**	**+0.1**
	baz=234						
FUSS	**Fushou**	**0.53**	**276**	*e*P	**Pg**	**04 09 59.5**	**-0.6**
	baz=279						
TWE	**Neicheng**	**0.55**	**345**	⇓*i*P	**Pg**	**04 10 00.3**	**+0.1**
	baz=344						
TWE				*i* S	**Sg**	**04 10 07.6**	**+0.2**
	baz=344						
ILA	**Ilan**	**0.58**	**353**	*e*P	**Pb**	**04 10 01.8**	**-0.3**
	baz=344						
ILA				S	**Sb**	**04 10 09.5**	**-1.1**
	baz=344						
TWT	**Tachien**	**0.60**	**276**	*i* P	**Pb**	**04 10 01.7**	**-0.9**
	baz=277						
TWT				*i* S	**Sg**	**04 10 09.4**	**+0.4**
	baz=277						
FUSB	**Fushanzhiwuyua**	**0.61**	**339**	⇓P	**Pg**	**04 10 01.6**	**+0.1**
	baz=338						
FUSB				S	**Sg**	**04 10 09.2**	**-0.2**
	baz=338						
CHGB	**Renai**	**0.61**	**258**	P	**Pg**	**04 10 01.6**	**+0.1**
	baz=250						
CHGB				S	**Sg**	**04 10 09.5**	**+0.1**
	baz=250						
TDCB	**Techi**	**0.61**	**276**	P	**Pg**	**04 10 01.6**	**+0.1**
	baz=277						
TDCB				S	**Sg**	**04 10 08.8**	**-0.8**
	baz=277						
WARBT	**Fenglin Townsh**	**0.62**	**221**	P	**Pg**	**04 10 01.5**	**-0.1**
	baz=230						
WARBT				S	**Sb**	**04 10 10.6**	**-1.1**
	baz=230						
YHNB	**Yeheng**	**0.63**	**319**	⇓P	**Pg**	**04 10 02.0**	**+0.2**
	baz=319						
YHNB				S	**Sb**	**04 10 10.7**	**-1.4**
	baz=319						
EGFH	**Guangfu**	**0.63**	**215**	P	**Pb**	**04 10 02.5**	**-0.6**
	baz=227						
EGFH				S	**Sb**	**04 10 12.4**	**+0.3**
	baz=227						
OWD	**Renai**	**0.64**	**249**	P	**Pg**	**04 10 01.8**	**-0.2**
	baz=250						
OWD				S	**Sb**	**04 10 11.3**	**-1.1**
	baz=250						
NSK	**Sanguang**	**0.64**	**319**	⇓*i*P	**Pg**	**04 10 02.2**	**0.0**
	baz=319						
NSK				*i* S	**Sb**	**04 10 11.0**	**-1.5**
	baz=319						
NWLT	**Wulai**	**0.65**	**333**	⇓P	**Pg**	**04 10 02.4**	**0.0**
	baz=332						
NWLT				S	**Sg**	**04 10 10.7**	**-0.2**
	baz=332						
EGS		**0.66**	**9**	*i* P	**Pg**	**04 10 02.7**	**+0.3**
	baz=6.0						
EGS				*e*S	**Sg**	**04 10 10.8**	**-0.2**
	baz=6.0						
WUSB	**Renai**	**0.68**	**253**	P	**Pg**	**04 10 02.8**	**+0.1**
	baz=254						
WUSB				S	**Sb**	**04 10 12.2**	**-1.3**
	baz=254						
VWDT	**VWDT**	**0.76**	**235**	P	**Pb**	**04 10 05.0**	**-0.3**
	baz=238						
VWDT				S	**Sg**	**04 10 14.5**	**+0.2**
	baz=238						
TIPB	**Shuangxi**	**0.78**	**0**	*i* P	**Pg**	**04 10 04.6**	**-0.1**
	baz=356						
TIPB				S	**Sg**	**04 10 14.8**	**0.0**
	baz=356						
NFF	**Wufeng Townshi**	**0.78**	**304**	⇓P	**Pb**	**04 10 04.8**	**-0.8**
	baz=305						
NFF				S	**Sb**	**04 10 15.1**	**-1.4**
	baz=305						
HGSD	**Ruisui**	**0.79**	**208**	P	**Pb**	**04 10 05.7**	**+0.1**
	baz=200						
HGSD				*e*S	**Sn**	**04 10 18.2**	**-1.0**
	baz=200						
WHP	**Taichung City**	**0.81**	**276**	P	**Pb**	**04 10 05.6**	**-0.5**
	baz=278						
WHP				S	**Sb**	**04 10 16.4**	**-0.9**
	baz=278						
WPL	**Puli Township**	**0.81**	**258**	P	**Pg**	**04 10 05.3**	**0.0**
	baz=250						
WPL				S	**Sg**	**04 10 15.8**	**-0.1**
	baz=250						
TWA	**Mucha**	**0.82**	**344**	P	**Pg**	**04 10 05.5**	**+0.1**
	baz=332						
TWA				S	**Sg**	**04 10 15.9**	**-0.1**
	baz=332						
EHYH	**Wanrong**	**0.82**	**212**	P	**Pg**	**04 10 05.3**	**-0.1**
	baz=229						
EHYH				S	**Sn**	**04 10 19.7**	**-0.4**
	baz=229						
EHY	**Hungye**	**0.82**	**214**	*i* P	**Pg**	**04 10 05.4**	**0.0**
	baz=229						
EHY				S	**Sb**	**04 10 18.2**	**+0.6**
	baz=229						
TWB1	**Santiao Chiao**	**0.83**	**10**	*i* P	**Pg**	**04 10 04.9**	**-0.7**
	baz=6.0						
TWB1				*e*S	**Sg**	**04 10 16.3**	**-0.1**
	baz=6.0						
DPDB	**Guoxing**	**0.83**	**259**	P	**Pb**	**04 10 06.1**	**-0.5**
	baz=253						
DPDB				S	**Sb**	**04 10 17.0**	**-1.0**
	baz=253						
TATO	**Taipei**	**0.84**	**339**	P	**Pg**	**04 10 05.8**	**0.0**
	baz=337						
TATO				S	**Sg**	**04 10 16.8**	**0.0**
	baz=337						
WCS	**Beigang Elemen**	**0.84**	**261**	P	**Pb**	**04 10 06.0**	**-0.7**
	baz=254						
WCS				S	**Sg**	**04 10 16.8**	**-0.1**
	baz=254						
NJD	**Zhudong**	**0.86**	**309**	P	**Pn**	**04 10 07.6**	**-0.7**
	baz=310						
NJD				S	**Sn**	**04 10 20.1**	**-1.0**
	baz=310						
LIOB	**Emei**	**0.87**	**302**	*i* P	**Pb**	**04 10 06.9**	**-0.1**
	baz=303						
LIOB				*i* S	**Sb**	**04 10 18.6**	**-0.3**
	baz=303						
NSTT	**Nanjuang**	**0.87**	**300**	*i* P	**Pb**	**04 10 06.6**	**-0.5**
	baz=302						
NSTT				S	**Sb**	**04 10 17.8**	**-1.1**
	baz=302						
NWF	**Wu-fen Shan**	**0.88**	**357**	*i* P	**Pg**	**04 10 06.8**	**+0.2**
	baz=346						
NWF				*i* S	**Sg**	**04 10 18.3**	**+0.2**
	baz=346						
WFSB	**Wu-fen Shan**	**0.88**	**357**	P	**Pb**	**04 10 06.9**	**-0.4**
	baz=346						
WFSB				S	**Sg**	**04 10 18.4**	**+0.5**
	baz=346						
SSLB	**Suanglung**	**0.89**	**243**	⇑P	**Pg**	**04 10 06.5**	**-0.3**
	baz=256						
SSLB				*e*S	**Sg**	**04 10 18.1**	**-0.3**
	baz=256						
TAP	**Taipei**	**0.89**	**341**	*e*P	**Pb**	**04 10 07.2**	**-0.3**
	baz=339						
TAP				S	**Sb**	**04 10 19.1**	**-0.5**
	baz=339						
SMLT	**Sun Moon Lake**	**0.90**	**250**	*i* P	**Pb**	**04 10 07.1**	**-0.6**
	baz=253						
SMLT				*i* S	**Sb**	**04 10 19.0**	**-1.0**
	baz=253						
SXI1	**Grass Mountain**	**0.90**	**3**	P	**Pg**	**04 10 06.9**	**-0.1**
	baz=5.0						
SXI1				S	**Sb**	**04 10 20.2**	**+0.2**
	baz=5.0						
TYC	**Yuchr**	**0.93**	**252**	*i* P	**Pg**	**04 10 07.4**	**-0.1**
	baz=247						
TYC				S	**Sb**	**04 10 20.1**	**-0.5**
	baz=247						
YULB	**Yu-li**	**0.93**	**211**	P	**Pg**	**04 10 07.0**	**-0.5**
	baz=219						
YULB				*e*S	**Sb**	**04 10 20.9**	**+0.2**
	baz=219						
ECBN	**Changbin**	**0.94**	**202**	P	**Pg**	**04 10 07.5**	**-0.1**
	baz=206						
ECBN				*e*S	**Sn**	**04 10 23.0**	**+0.1**
	baz=206						
NTY	**Taoyuan**	**0.94**	**329**	*e*P	**Pn**	**04 10 08.9**	**-0.4**
	baz=328						
NTY				*e*S	**Sn**	**04 10 21.9**	**-1.1**
	baz=328						
HSN1	**Hsinchu**	**0.94**	**309**	P	**Pn**	**04 10 08.8**	**-0.5**
	baz=310						
HSN1				*e*S	**Sn**	**04 10 21.9**	**-1.1**
	baz=310						
TNOU	**National Taiwa**	**0.96**	**357**	P	**Pg**	**04 10 08.0**	**-0.1**
	baz=347						
TNOU				S	**Sg**	**04 10 20.1**	**-0.4**
	baz=347						
EYUL	**Yuli**	**0.96**	**209**	P	**Pb**	**04 10 09.0**	**+0.4**
	baz=232						
EYUL				*e*S	**Sb**	**04 10 22.7**	**+1.1**
	baz=232						
TWF1	**Yuli**	**0.96**	**210**	*i* P	**Pg**	**04 10 08.3**	**+0.1**
	baz=217						
TWF1				S	**Sb**	**04 10 22.4**	**+0.7**
	baz=217						
NCU	**National Centr**	**0.97**	**323**	*i* P	**Pn**	**04 10 09.2**	**-0.5**
	baz=323						
NCU				S	**Sn**	**04 10 23.4**	**-0.4**
	baz=323						
NCUH	**Zhongli**	**0.97**	**323**	P	**Pn**	**04 10 09.3**	**-0.4**
	baz=323						
NCUH				S	**Sn**	**04 10 24.7**	**+1.0**
	baz=323						
SBCB	**Hsinchu**	**0.97**	**308**	P	**Pb**	**04 10 08.7**	**-0.1**
	baz=309						
SBCB				*e*S	**Sb**	**04 10 22.2**	**+0.3**
	baz=309						
TWQ1	**Liyutan**	**0.97**	**280**	*i* P	**Pb**	**04 10 08.9**	**0.0**
	baz=281						
TWQ1				*i* S	**Sb**	**04 10 21.2**	**-0.8**
	baz=281						
TWS1	**Kuangyinshan**	**0.98**	**338**	*i* P	**Pb**	**04 10 09.3**	**+0.3**
	baz=336						
TWS1				S	**Sn**	**04 10 23.1**	**-0.9**
	baz=336						
YM01	**YM01**	**0.98**	**346**	P	**Pb**	**04 10 09.0**	**0.0**
	baz=344						
YM01				*e*S	**Sb**	**04 10 22.6**	**+0.3**
	baz=344						
HSN	**Hsinchu**	**0.99**	**308**	*i* P	**Pn**	**04 10 09.4**	**-0.6**
	baz=301						
HSN				S	**Sb**	**04 10 22.4**	**0.0**
	baz=301						
NMLH	**Miaoli**	**1.00**	**290**	P	**Pn**	**04 10 10.2**	**0.0**
	baz=292						
NMLH				*e*S	**Sn**	**04 10 23.7**	**-0.9**
	baz=292						
WHYT	**Xinyi Township**	**1.02**	**241**	P	**Pb**	**04 10 09.9**	**+0.3**
	baz=251						
WHYT				*e*S	**Sb**	**04 10 23.7**	**+0.5**
	baz=251						
YM08	**YM08**	**1.02**	**348**	P	**Pb**	**04 10 09.3**	**-0.4**
	baz=345						
YM08				*e*S	**Sb**	**04 10 23.0**	**-0.3**
	baz=345						
NTST	**Danshui**	**1.03**	**341**	P	**Pn**	**04 10 10.9**	**+0.4**
	baz=338						
NTST				S	**Sn**	**04 10 24.8**	**-0.4**
	baz=338						
ANP	**Anpu**	**1.03**	**344**	*i* P	**Pb**	**04 10 09.7**	**-0.2**
	baz=342						
ANP				*e*S	**Sg**	**04 10 22.0**	**-0.9**
	baz=342						
WWF	**Wufeng**	**1.04**	**262**	P	**Pn**	**04 10 10.8**	**+0.1**
	baz=258						
WWF				S	**Sn**	**04 10 28.3**	**+2.8**
	baz=258						
TCU	**Taichung**	**1.05**	**268**	*i* P	**Pn**	**04 10 12.2**	**+1.4**
	baz=270						
TCU				S	**Sn**	**04 10 27.0**	**+1.3**
	baz=270						
JYNG	**Yonaguni jima**	**1.05**	**76**	P	**Pb**	**04 10 11.1**	**+0.8**
WJS	**Zhushan**	**1.07**	**250**	P	**Pn**	**04 10 11.6**	**+0.5**
	baz=247						
WJS				S	**Sn**	**04 10 25.7**	**-0.4**
	baz=247						
CHKH	**Chenggong**	**1.07**	**202**	P	**Pg**	**04 10 09.6**	**-0.6**
	baz=207						
CHKH				S	**Sn**	**04 10 27.4**	**+1.3**
	baz=207						
NHW	**Xinwu Township**	**1.08**	**319**	*e*P	**Pb**	**04 10 10.3**	**-0.4**
	baz=319						
NHW				S	**Sn**	**04 10 27.4**	**+0.9**
	baz=319						
WNT1	**Nantou City**	**1.08**	**255**	P	**Pb**	**04 10 10.8**	**+0.1**
	baz=253						
WNT1				S	**Sn**	**04 10 28.9**	**+2.4**
	baz=253						
WNT	**Mingjian**	**1.09**	**254**	*i* P	**Pn**	**04 10 11.9**	**+0.6**
	baz=251						
WNT				*i* S	**Sn**	**04 10 26.2**	**-0.5**
	baz=251						
WDJ	**Dajia District**	**1.09**	**279**	P	**Pn**	**04 10 11.3**	**-0.1**
	baz=281						
WDJ				S	**Sn**	**04 10 28.1**	**+1.3**
	baz=281						
FULB	**Fuli**	**1.10**	**206**	*i* P	**Pg**	**04 10 10.2**	**-0.6**
	baz=228						
FULB				*e*S	**Sn**	**04 10 28.0**	**+0.9**
	baz=228						
TWY	**Chenhua**	**1.10**	**349**	*i* P	**Pb**	**04 10 11.3**	**+0.2**
	baz=338						
TWY				*e*S	**Sb**	**04 10 25.9**	**+0.2**
	baz=338						
YOJ	**Yonaguni jima**	**1.11**	**76**	P	**Pb**	**04 10 11.9**	**+0.6**
	baz=56

ALS			*i* S	**Sn**	04 10 28.3	-0.4			
	baz=238								
WCHH	**Zhanghua**	**1.16 265**	*e*P	**Pn**	04 10 13.2	+0.8			
	baz=268								
WCHH			S	**Sn**	04 10 30.0	+1.5			
	baz=268								
CHKT	**Chengkung**	**1.17 201**	*i* P	**Pg**	04 10 11.5	-0.6			
	baz=189								
CHKT			*e*S	**Sb**	04 10 27.9	+0.4			
	baz=189								
EHD	**Haiduan**	**1.18 209**	P	**Pg**	04 10 10.8	-1.5			
	baz=217								
EHD			S	**Sn**	04 10 28.8	-0.2			
	baz=217								
ECS	**Chishang**	**1.22 207**	P	**Pg**	04 10 12.6	-0.6			
	baz=216								
ECS			*e*S	**Sn**	04 10 30.5	+0.5			
	baz=216								
ELDTW	**Lidau**	**1.24 217**	*i* P	**Pg**	04 10 11.9	-1.6			
	baz=211								
ELDTW			S	**Sg**	04 10 29.4	-0.3			
	baz=211								
WGK	**Gukeng**	**1.26 247**	*i* P	**Pn**	04 10 14.7	+1.0			
	baz=251								
WGK			S	**Sn**	04 10 31.9	+1.0			
	baz=251								
WDLH	**Douliu**	**1.28 247**	P	**Pn**	04 10 15.3	+1.3			
	baz=252								
WDLH			S	**Sn**	04 10 33.2	+1.8			
	baz=252								
WCKO	**Fanlu**	**1.34 236**	P	**Pb**	04 10 16.1	+0.8			
	baz=242								
WCKO			S	**Sn**	04 10 34.7	+1.6			
	baz=242								
WRL	**Guolierlin Hig**	**1.35 258**	P	**Pg**	04 10 15.6	0.0			
	baz=278								
WRL			S	**Sn**	04 10 35.2	+2.0			
	baz=278								
RLNB	**Erlin**	**1.37 258**	*e*P	**Pg**	04 10 15.8	-0.2			
	baz=263								
RLNB			S	**Sn**	04 10 37.1	+3.5			
	baz=263								
STYH	**Taoyuan**	**1.40 224**	P	**Pn**	04 10 15.0	-0.6			
	baz=230								
STYH			S	**Sn**	04 10 35.9	+1.5			
	baz=230								
CHN4	**Tsaushan**	**1.40 234**	*i* P	**Pg**	04 10 16.7	+0.1			
	baz=239								
CHN4			*i* S	**Sn**	04 10 36.3	+1.8			
	baz=239								
WTK	**Tuku**	**1.41 249**	P	**Pg**	04 10 16.8	+0.2			
	baz=255								
WTK			S	**Sn**	04 10 36.7	+2.2			
	baz=255								
TPUB	**Ta-pu**	**1.41 231**	P	**Pg**	04 10 16.6	-0.1			
	baz=226								
TPUB			S	**Sn**	04 10 36.5	+1.8			
	baz=226								
STYT	**Tauyuan**	**1.42 224**	*i* P	**Pn**	04 10 12.0	-3.9			
	baz=230								
STYT			S	**Sn**	04 10 38.0	+3.1			
	baz=230								
LONT	**Longtian**	**1.43 207**	P	**Pn**	04 10 14.4	-1.7			
	baz=215								
LONT			*e*S	**Sb**	04 10 34.7	-0.4			
	baz=215								
PCYT	**Pengchaiyu**	**1.45 9**	*i* P	**Pn**	04 10 16.4	0.0			
	baz=1.0								
PCYT			*e*S	**Sg**	04 10 38.1	+1.7			
	baz=1.0								
WTP	**Ta-pu**	**1.45 230**	*i* P	**Pb**	04 10 17.1	0.0			
	baz=236								
WTP			*i* S	**Sg**	04 10 38.3	+1.8			
	baz=236								
TWG	**Pinlang**	**1.53 207**	*i* P	**Pn**	04 10 15.3	-2.1			
	baz=215								
TWG			*e*S	**Sn**	04 10 37.0	-0.5			
	baz=215								
TWGBT	**Beinan**	**1.53 207**	P	**Pn**	04 10 15.2	-2.2			
	baz=215								
TWGBT			*e*S	**Sn**	04 10 37.6	+0.1			
	baz=215								
TWK	**Hsinying**	**1.53 233**	*i* P	**Pb**	04 10 18.5	+0.1			
	baz=239								
TWK			S	**Sg**	04 10 40.3	+1.4			
	baz=239								
LDUT	**Ludao**	**1.54 192**	P	**Pn**	04 10 14.7	-3.0			
	baz=187								
LDUT			*e*S	**Sn**	04 10 35.7	-2.2			
	baz=187								
SNST	**Tainan City**	**1.55 232**	P	**Pg**	04 10 19.0	-0.4			
	baz=238								
SNST			S	**Sg**	04 10 41.5	+1.8			
	baz=238								
CHN1	**Nanshi**	**1.55 230**	*i* P	**Pg**	04 10 19.5	0.0			
	baz=236								
CHN1			*i* S	**Sg**	04 10 40.5	+0.9			
	baz=236								
WSF	**Szhu**	**1.57 250**	*e*P	**Pb**	04 10 19.0	0.0			
	baz=255								
WSF			S	**Sg**	04 10 41.4	+1.3			
	baz=255								
SGST	**Jiashian**	**1.58 226**	*i* P	**Pb**	04 10 19.0	-0.3			
	baz=232								
SGST			*i* S	**Sg**	04 10 41.7	+1.0			
	baz=232								
WSL	**Shuilin Townsh**	**1.61 246**	*e*P	**Pb**	04 10 19.6	-0.1			
	baz=251								
WSL			*e*S	**Sg**	04 10 42.2	+0.9			
	baz=251								
SLGT	**Liugui**	**1.61 222**	P	**Pb**	04 10 19.8	0.0			
	baz=230								
SLGT			S	**Sg**	04 10 41.7	+0.3			
	baz=230								
ICHU	**Yijhu**	**1.64 240**	P	**Pb**	04 10 19.9	-0.3			
	baz=247								
ICHU			S	**Sg**	04 10 45.1	+2.7			
	baz=247								
CHN8	**Yiju**	**1.70 241**	*e*P	**Pg**	04 10 21.6	-0.7			
	baz=247								
CHN8			S	**Sg**	04 10 45.0	+0.6			
	baz=247								
ECL	**Taimali**	**1.78 207**	*i* P	**Pn**	04 10 20.2	-0.6			
	baz=216								
ECL			*e*S	**Sn**	04 10 43.1	-0.6			
	baz=216								
SCST	**Cishan**	**1.78 224**	P	**Pb**	04 10 22.9	+0.2			
	baz=231								
SCST			S	**Sg**	04 10 48.0	+1.0			
	baz=231								
TSMG	**Majia**	**1.83 216**	P	**Pb**	04 10 22.9	-0.7			
	baz=226								
TSMG			S	**Sg**	04 10 47.8	-0.8			
	baz=226								
TSCK	**Chigu Township**	**1.90 237**	*e*P	**Pb**	04 10 23.9	-0.8			
	baz=245								
TSCK			S	**Sg**	04 10 49.6	-1.3			
	baz=245								
MASBT	**Mashibuluo**	**1.92 215**	P	**Pn**	04 10 23.8	+1.0			
	baz=225								
MASBT			S	**Sg**	04 10 50.1	-1.2			
	baz=225								
JKRS	**Kuro-shima**	**2.00 88**	*e*P	**Pb**	04 10 25.8	-0.5			
EAST	**Anshuo**	**2.01 207**	*i* P	**Pn**	04 10 25.3	+1.2			
	baz=216								
EAST			*e*S	**Sn**	04 10 50.9	+1.3			
	baz=216								
TAWH	**Dawu Township**	**2.03 205**	P	**Pn**	04 10 24.2	-0.1			
	baz=215								
TAWH			*e*S	**Sn**	04 10 50.0	0.0			
	baz=215								
SCZT	**Fangliau**	**2.12 212**	*i* P	**Pn**	04 10 26.4	+0.8			
	baz=222								
SCZT			S	**Sg**	04 10 56.6	-1.3			
	baz=222								
JIJ	**Ishigaki jima**	**2.12 85**	*e*P	**Pn**	04 10 26.1	+0.5			
LAY	**Lan-yu**	**2.16 187**	P	**Pn**	04 10 24.6	-1.5			
	baz=192								
PNG	**Penghu**	**2.17 254**	*i* P	**Pn**	04 10 26.7	+0.5			
	baz=259								
PNG			*i* S	**Sb**	04 10 55.5	-0.8			
	baz=259								
PHUB	**P'eng-hu**	**2.17 252**	P	**Pn**	04 10 26.4	+0.2			
	baz=257								
PHUB			S	**Sb**	04 10 54.8	-1.6			
	baz=257								
SLIU	**Shizi**	**2.18 206**	P	**Pn**	04 10 22.9	-3.5			
	baz=216								
SLIU			*e*S	**Sb**	04 10 56.9	+0.2			
	baz=216								
WDGT	**Dungji**	**2.19 245**	*i* P	**Pn**	04 10 26.6	+0.1			
	baz=251								
WDGT			S	**Sb**	04 10 56.9	-0.1			
	baz=251								
JISG	**Ishigakijimahi**	**2.30 80**	*e*P	**Pn**	04 10 28.4	+0.4			
VWUC	**VWUC**	**2.31 291**	P	**Pn**	04 10 27.9	-0.2			
	baz=293								
VWUC			S	**Sn**	04 10 56.7	0.0			
	baz=293								
VCHM	**Qimei**	**2.40 246**	P	**Pn**	04 10 30.1	+0.7			
	baz=236								
VCHM			S	**Sb**	04 11 01.4	-1.7			
	baz=236								
TWKBT	**Hengchun**	**2.42 203**	*e*P	**Pn**	04 10 30.5	+0.8			
	baz=214								
TWKBT			*e*S	**Sn**	04 11 00.7	+1.0			
	baz=214								
MATB	**Ma-tsu**	**2.59 319**	P	**Pn**	04 10 31.4	-0.7			
	baz=319								
MATB			*e*S	**Sn**	04 11 05.5	+1.7			
	baz=319								
PTMZ	**Houxiangcun**	**2.60 290**	P	**Pn**	04 10 32.0	-0.2			
	baz=292								
PTMZ			S	**Sn**	04 11 03.7	-0.4			
	baz=292								
LYJJ	**Jianjiangzhen**	**3.00 322**	P	**Pn**	04 10 38.5	+0.8			
	baz=321								
LYJJ			S	**Sn**	04 11 14.5	+0.6			
	baz=321								
KNM	**Kinmen**	**3.10 275**	P	**Pn**	04 10 40.6	+1.6			
	baz=277								
KNM			*e*S	**Sn**	04 11 19.0	+2.6			
	baz=277								
XPSS	**Dashiqiu**	**3.10 332**	P	**Pn**	04 10 39.0	0.0			
	baz=331								
XPSS			*e*S	**Sn**	04 11 18.5	+2.1			
	baz=331								
KNMB	**Chin-men Tao**	**3.15 276**	*e*P	**Pn**	04 10 39.7	0.0			
	baz=278								
KNMB			*e*S	**Sn**	04 11 17.2	-0.3			
	baz=278								
AXDP	**Jialang**	**3.58 282**	P	**Pn**	04 10 45.7	+0.1			
	baz=284								
AXDP			S	**Sn**	04 11 27.8	-0.4			
	baz=284								
ZPLA	**Ao Xicun**	**3.73 267**	P	**Pn**	04 10 47.8	0.0			
	baz=270								
ZPLA			*e*S	**Sn**	04 11 32.4	+0.4			
	baz=270								

IDC ***28*** *04:14:30.5±0.6,5.˚99S×142.˚69E, h0km, mb4.5/14, mbtmp4.5/16, ML2.6/1, Error ellipse: s-maj=29.5km s-min=14.2km az=76.0*
NEIC ***28*** *04:14:31.9±1.3, 6.˚11S±0.˚09×142.˚49E±0.˚09, h10km±1km, mb4.9/56, Error ellipse: s-maj=15.8km s-min=13.4km az=221.0*
DJA ***28*** *04:14:31.1±0.4, 6˚S±4˚×14˚2E±˚, h10km, M5.2/19, mB5.5/2, mb4.8/19, MLv5.4/5, Mw(mB)4.9/2*

ISC 28 04:14:34.2±0.4,**6˚24S**±0.˚05×**142˚47E**±0.˚06,**h28km**,**n139,** σ1**878**/143,**mb4.8**/52,**1C-2D**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.57**	**308**	P	P		**Pn**	**04 15 00.4**	**0.0**
MMPI	**Merauke**	**3.03**	**223**	P	P		**Pn**	**04 15 22.8**	**+2.4**
GENI	**Genyem**	**4.29**	**327**	P	P		**Pn**	**04 15 38.4**	**+0.7**
GENI	**Genyem**	**4.29**	**327**	P	P		**Pn**	**04 15 35.2**	**-2.5**
PMG	**Port Moresby**	**5.61**	**124**				**Pn**	**04 15 55.9**	**+0.1**
PMG	**Port Moresby**	**5.61**	**124**	P	P		**Pn**	**04 15 55.9**	**+0.1**
PMG	**Port Moresby**	**5.61**	**124**	Pn	Pn		**Pn**	**04 15 55.8**	**-0.1**
	11nm,0.3s,baz=316,slow=4.5,SNR=19								
PMG				Sn			**Sn**	**04 16 59.0**	**-0.4**
	12nm,0.3s,baz=139,slow=23,SNR=8.4								
	35nm,0.3s								
SMPI	**Sarmi**	**5.65**	**318**	P	P		**Pn**	**04 15 55.4**	**-1.0**
	186nm,1.3s,5μm1.0nm								
COEN	**Coen**	**7.70**	**175**	P	P		**Pn**	**04 16 25.3**	**+0.7**
	baz=7.8,SNR=8.4								
COEN	**Coen**	**7.70**	**175**	Pn	Pn		**Pn**	**04 16 26.0**	**+1.4**
FAKI	**Fak Fak**	**10.71**	**287**				**Pn**	**04 17 03.8**	**-2.1**
FAKI	**Fak Fak**	**10.71**	**287**	P	Pn		04	17 00.3	-5.6
	59nm,0.9s								
SAUI	**Saumlaki**	**11.22**	**260**	Pn	Pn		**04**	**17 12.9**	**0.0**
SAUI	**Saumlaki**	**11.22**	**260**	P	Pn		**04**	**17 12.9**	**0.0**
	403nm,0.9s								
KDU	**Kakadu**	**11.76**	**236**	P	Pn		**04**	**17 20.7**	**+0.4**
	baz=12,SNR=32								
KDU	**Kakadu**	**11.76**	**236**	P	Pn		**04**	**17 21.3**	**+1.0**
SWI	**Sorong**	**12.40**	**295**	P	Pn		**04**	**17 26.0**	**-3.0**
	45nm,0.6s								
MTN	**Manton Dam**	**12.96**	**239**	P	Pn		**04**	**17 36.8**	**+0.1**
	baz=13,SNR=13								
MTN	**Manton Dam**	**12.96**	**239**	Pn	Pn		**04**	**17 35.9**	**-0.8**
MTN	**Manton Dam**	**12.96**	**239**	P	Pn		**04**	**17 37.0**	**+0.3**
DRS	**Darwin Rock St**	**12.97**	**241**	P	Pn		**04**	**17 39.7**	**+2.9**
	65nm,0.6s								
CTA	**Charters Tower**	**14.25**	**165**	Lg	Lg		04	22 10.2	
	0.6nm,0.3s,baz=236,slow=21,SNR=6.1								
QIS	**Mount Isa**	**14.51**	**191**	P	Pn		**04**	**17 58.4**	**+0.6**
	baz=15,SNR=6.2								
WB0	**Warramunga Arr**	**15.57**	**210**	Pn	Pn		**04**	**18 12.9**	**+0.9**
WB0				IAmb	IAmb		04	18 21.1	
	comp=Z,141nm,1.9s								
WR0	**Warramunga Arr**	**15.67**	**209**	Pn	Pn		**04**	**18 13.1**	**-0.1**
WRAB	**Tennant Creek**	**15.74**	**209**				**Pn**	**04 18 12.9**	**-1.2**
WRAB				IAmb	IAmb		04	18 22.5	
	comp=Z,144nm,1.9s								
WB2	**Warramunga Arr**	**15.74**	**209**				**Pn**	**04 18 13.5**	**-0.8**
WC3	**Warramunga Arr**	**15.75**	**209**	P	Pn		**04**	**18 13.5**	**-0.8**
	baz=16								
WRA	**Warramunga Arr**	**15.75**	**209**				**Pn**	**04 18 13.7**	**-0.6**
WRA	**Warramunga Arr**	**15.75**	**209**	Pn	Pn		**04**	**18 13.5**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=26,slow=13,SNR=31								
WRA				Sn			**Sn**	**04 21 02.1**	**-6.0**
	comp=Z,1.0nm,0.3s,baz=22,slow=20,SNR=6.9								
WRA				Lg	Lg		04	22 50.7	
	comp=Z,0.7nm,0.3s,baz=31,slow=30,SNR=2.4								
KNRA	**Kununurra**	**16.39**	**234**	P	Pn		**04**	**18 21.4**	**-1.1**
	baz=16								
KNRA	**Kununurra**	**16.39**	**234**				**Pn**	**04 18 21.1**	**-1.4**
KNRA				IAmb	IAmb		04	18 29.1	
	comp=Z,105nm,1.2s								
KNRA	**Kununurra**	**16.39**	**234**	P	Pn		**04**	**18 23.6**	**+1.1**
TNTI	**Ternate**	**16.61**	**294**	Pn	Pn		**04**	**18 24.5**	**-0.8**
SOEI	**Soe**	**18.36**	**258**		P		**04**	**18 46.7**	**-0.4**
SOEI				IAmb	IAmb		04	18 57.5	
	comp=Z,104nm,0.8s								
SOEI	**Soe**	**18.36**	**258**	P	Pn		**04**	**18 48.4**	**+1.2**
	comp=Z,151nm,1.0s								
AS01	**Alice Springs**	**19.17**	**204**	P	Pn		**04**	**18 58.2**	**+1.4**
	comp=Z,46nm,1.0s								
AS31	**Alice Springs**	**19.19**	**205**	P	P		**04**	**18 56.6**	**+0.7**
ASAR	**Alice Springs**	**19.19**	**205**		P		**04**	**18 56.7**	**+0.7**
ASAR	**Alice Springs**	**19.19**	**205**	P	Pn		**04**	**18 58.6**	**+1.6**
	comp=Z,8.6nm,0.5s,baz=30,slow=10,SNR=28								
ASAR				S			**Sn**	**04 22 24.8**	**-6.6**
	comp=Z,6.6nm,0.6s,baz=19,slow=27,SNR=6.4								
ASAR				Lg	Lg		04	24 43.8	
	comp=Z,0.3nm,0.3s,baz=15,slow=31,SNR=4.1								
ASPA	**Alice Springs**	**19.19**	**205**	P			**04**	**18 57.0**	**+1.0**
	baz=19								
FITZ	**Fitzroy Crossi**	**20.22**	**233**	P	Pn		04	19 08.9	-0.3
	baz=20,SNR=9.6								
FITZ	**Fitzroy Crossi**	**20.22**	**233**		P		**04**	**19 07.7**	**+0.5**
QLP	**Quilpie**	**20.30**	**175**	P	P		**04**	**19 09.6**	**+1.6**
	baz=20,SNR=4.5								
QLP	**Quilpie**	**20.30**	**175**	P	Pn		04	19 11.1	+0.9
LUWI	**Luwuk**	**20.32**	**284**	P	P		**04**	**19 06.0**	**-2.4**
LUWI				IAmb	IAmb		04	19 20.4	
	comp=Z,32nm,0.7s								
LUWI	**Luwuk**	**20.32**	**284**	P	P		**04**	**19 05.9**	**-2.4**
	comp=Z,50nm,0.8s								
GTOI	**Gorontalo**	**20.59**	**289**	P	P		**04**	**19 11.3**	**0.0**
	comp=Z,20nm,0.8s								
EIDS	**Eidsvold**	**20.73**	**158**		P		**04**	**19 13.1**	**+0.3**
EDFI	**Ende, Flores**	**20.75**	**262**	P	P		**04**	**19 11.6**	**-1.6**
	comp=Z,33nm,1.0s								
BKSI	**Bulukumba**	**22.26**	**271**	P	P		**04**	**19 28.6**	**-0.6**
	comp=Z,43nm,0.8s								
OOD	**Oodnadatta**	**22.39**	**196**	P	P		**04**	**19 34.4**	**+3.9**
KAPI	**Kappang**	**22.64**	**272**	P	P		**04**	**19 33.6**	**+0.2**
KAPI				IAmb	IAmb		04	19 40.2	
	comp=Z,47nm,0.9s								
TOLI2	**Tolitoli**	**22.85**	**288**	P	P		**04**	**19 34.3**	**-1.3**
WRKA	**Warakurna**	**23.11**	**214**	P	P		**04**	**19 39.6**	**+1.5**
	baz=23,SNR=13								
WRKA	**Warakurna**	**23.11**	**214**	P	P		**04**	**19 40.8**	**+2.7**
LCRK	**Leigh Creek**	**24.41**	**189**	P	P		**04**	**19 52.6**	**+2.1**
MULG	**Mulgathing**	**25.20**	**197**	P	P		**04**	**20 01.0**	**+3.4**
STKA	**Stephens Creek**	**25.52**	**182**	P	P		**04**	**20 02.1**	**+1.6**
	baz=26,SNR=4.7								
STKA	**Stephens Creek**	**25.52**	**182**	P	P		**04**	**20 04.2**	**+3.6**
	comp=Z,9.1nm,0.8s,baz=354,slow=10.0,SNR=7.3								
	comp=Z,9.1nm,0.8s								
PSA00	**Pilbara Seismi**	**26.67**	**233**	P	P		**04**	**20 11.1**	**+0.1**
PSA00					IAmb		IAmb	04 20 18.9	
	comp=Z,48nm,1.1s								
NJ2	**Nanjing**	**44.23**	**331**	*e*P	P		**04**	**22 41.5**	**+0.3**
NJ2				sP	pP		**04**	**22 49.0**	**-0.8**
NJ2				pmax	pmax				
	comp=Z,9.0nm,0.5s								
RPSI	**Rantau Prapat**	**44.38**	**280**	P	P		**04**	**22 42.7**	**0.0**
WHN	**Wuhan**	**45.42**	**325**	P	P		**04**	**22 53.5**	**+2.8**
KSRS	**Korea Array**	**45.54**	**344**	P	P		**04**	**22 51.1**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=163,slow=9.0,SNR=9.9								
	comp=Z,5.6nm,0.9s								
GYA	**Guiyang**	**47.55**	**315**	P	P		**04**	**23 09.0**	**+1.3**
GYA				pmax	pmax				
	comp=Z,13nm,1.6s								
PHRA	**Phrae**	**48.37**	**301**	P	P		**04**	**23 13.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**49.44**	**301**	P	P		**04**	**23 23.1**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=125,slow=7.8,SNR=5.8								
	comp=Z,1.4nm,0.3s								
LYN	**LuoYang**	**49.48**	**327**	⇓P	P		**04**	**23 22.8**	**+0.5**
LYN				pP	pP		04	23 26.0	-4.9
LYN				pmax	pmax				
	comp=Z,36nm,0.7s								
LYN				pmax	pmax				
	comp=Z,240nm,6.1s								
HNS	**HongShan**	**50.56**	**331**	⇑P	P		**04**	**23 30.3**	**-0.1**
HNS				pmax	pmax				
	comp=Z,15nm,0.9s								
USA0B	**Ussuriysk Arra**	**51.09**	**350**	P	P		**04**	**23 32.3**	**-2.0**
USA0B				IAmb	IAmb		04	24 08.4	
	comp=Z,10nm,0.8s								
USRK	**Ussuriysk Ar.**	**51.09**	**350**	P	P		**04**	**23 32.7**	**-1.5**
USRK	**Ussuriysk Ar.**	**51.09**	**350**	P	P		**04**	**23 32.6**	**-1.7**
	comp=Z,8.2nm,0.9s,baz=168,slow=8.7,SNR=11								
	comp=Z,8.2nm,0.9s								
XAN	**Xi'an**	**51.11**	**324**	P	P		**04**	**23 33.5**	**-1.2**
XAN				sP	pP		04	23 42.0	-1.3
XAN				pmax	pmax				
	comp=Z,12nm,1.5s								
PZH	**PanZhiHua**	**51.16**	**311**	P	P		**04**	**23 36.0**	**+0.7**
PZH				pmax	pmax				
	comp=Z,10.0nm,1.1s								
PZH				pmax	pmax				
	comp=Z,50nm,3.9s								
MDJ	**Mudanjiang**	**51.93**	**348**	P	P		**04**	**23 41.0**	**+0.4**
MDJ				pP	pP		04	23 44.3	-5.0
MDJ				PcP	**PcP**		**04**	**24 46.5**	**-6.4**
MDJ				PcS	**PcS**		**04**	**28 45.5**	**-5.4**
MDJ				S	S		04	31 17.8	+16
MDJ				sS	sS		04	31 21.8	+5.7
MDJ				pmax	pmax				
	comp=Z,7.0nm,1.0s								
MDJ				AMB	AMB				
	comp=Z,140nm,5.5s								
MDJ				LR	LR				
	comp=N,490nm,15.5s								
MDJ				LR	LR				
	comp=E,380nm,16.5s								
MDJ				LR	LR				
	comp=Z,530nm,14.4s								
CD2	**Chengdu**	**52.30**	**317**	P	P		**04**	**23 44.5**	**+0.9**
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
BNX	**BinXian**	**53.47**	**347**	⇓P	P		**04**	**23 51.3**	**-0.6**
BNX				pmax	pmax				
	comp=Z,16nm,1.1s								
BNX				pmax	pmax				
	comp=Z,90nm,3.6s								
HHC	**Hu-ho-hao-te**	**54.78**	**332**	*e*P	P		**04**	**24 03.5**	**+1.8**
HHC				sP	pP		04	24 09.8	-0.7
HHC				pmax	pmax				
	comp=Z,18nm,0.6s								
HHC				LR	LR				
	comp=N,320nm,14.3s								
HHC				LR	LR				
	comp=Z,450nm,14.7s								
BTO	**Baotou**	**55.34**	**330**	*e*P	P		**04**	**24 09.3**	**+3.5**
BTO				pP	**pP**		**04**	**24 14.0**	**-0.5**
BTO				sP	**sP**		**04**	**24 16.3**	**-1.6**
BTO				PP	**PP**		**04**	**26 15.0**	**+5.2**
BTO				pmax	pmax				
	comp=Z,24nm,0.8s								
BTO				pmax	pmax				
	comp=Z,540nm,9.1s								
LZH	**Lanzhou**	**55.54**	**322**	*e*P	P		**04**	**24 08.5**	**+1.1**
LZH				pP	pP		04	24 13.0	-3.1
LZH				pmax	pmax				
	comp=Z,12nm,1.1s								
HEH	**HeiHe**	**57.76**	**349**	*e*P	P		04	24 17.0	-5.6
HEH				pmax	pmax				
	comp=Z,4.0nm,0.5s								
GTA	**Gaotai**	**60.12**	**323**	*e*P	P		**04**	**24 40.3**	**+0.8**
GTA				pP	pP		04	24 47.0	-1.2
GTA				pmax	pmax				
	comp=Z,4.0nm,1.4s								
PETK	**Petropavlovsk-**	**60.51**	**10**	P	P		**04**	**24 41.5**	**-0.2**
	comp=Z,10nm,0.9s,baz=189,slow=6.8,SNR=7.0								
	comp=Z,10nm,0.9s								
ULN	**Ulaanbaatar**	**62.24**	**334**	P	P		**04**	**24 52.1**	**-1.6**
ULN				IAmb	IAmb		04	24 58.4	
	comp=Z,4.6nm,0.7s								
SONM	**Songino Array**	**62.51**	**333**	P	P		**04**	**24 55.7**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=157,slow=7.8,SNR=9.9								
	comp=Z,1.6nm,0.8s								
WMQ	**Urumqi**	**70.09**	**321**	*e*P	P		**04**	**25 44.0**	**-0.1**
WMQ				PcP	**PcP**		**04**	**26 11.5**	**+5.5**
WMQ				pmax	pmax				
	comp=Z,16nm,1.1s								
VNDA	**Vanda**	**71.98**	**176**	P	P		**04**	**25 58.0**	**+3.1**
	comp=Z,0.7nm,0.6s,baz=352,slow=7.0,SNR=5.4								
	comp=Z,0.7nm,0.6s	

BVAR	Borovoye Array	84.33	325	P		P		04 27 04.4	+0.7
	comp=Z,15nm,0.7s,baz=104,slow=6.3,SNR=51								
	comp=Z,15nm,0.7s								
J20K	Nowinta River	84.37	23	P		P		04 27 03.7	+0.1
BRVK	Borovoye	84.41	325	P		P		04 27 04.2	+0.2
E19K	Redstone River	84.81	20	P		P		04 27 05.8	-0.1
E19K				IAmb		IAmb		04 27 06.8	
	comp=Z,5.7nm,0.8s								
C19K	Lookout Ridge	84.92	18	P		P		04 27 06.4	0.0
C19K				IAmb		IAmb		04 27 07.6	
	comp=Z,13nm,1.4s								
D19K	Kuna River	85.05	19	P		P		04 27 06.9	-0.2
D19K				IAmb		IAmb		04 27 19.7	
	comp=Z,6.0nm,1.0s								
F20K	Avaraart Lake	85.13	20	P		P		04 27 07.2	-0.1
MLY	Manley	86.07	23	P		P		04 27 11.7	-0.5
RND	Reindeer	86.20	25	P		P		04 27 11.3	-1.5
WRH	Wood River Hil	86.90	24	P		P		04 27 14.6	-1.6
E22K	Anaktuvuk Pass	86.96	20	P		P		04 27 16.5	0.0
E22K				IAmb		IAmb		04 27 29.9	
	comp=Z,4.4nm,0.8s								
D22K	Ayikyak River	86.99	19	P		P		04 27 16.3	-0.2
G23K	Bananza Creek	87.01	22	P		P		04 27 15.7	-1.0
G23K				IAmb		IAmb		04 30 04.3	
	comp=Z,18nm,1.8s								
CCB	Clear Creek Bu	87.08	24	P		P		04 27 15.4	-1.6
CCB				IAmb		IAmb		04 27 16.2	
	comp=Z,7.7nm,0.8s								
HDA	Harding Lake	87.34	24	P		P		04 27 16.6	-1.7
H24K	Noodor Dome	87.48	23	P		P		04 27 17.9	-1.2
H24K				IAmb		IAmb		04 28 02.0	
	comp=Z,9.5nm,1.4s								
IL31		87.49	24	P		P		04 27 17.3	-1.7
IL31				IAmb		IAmb		04 27 17.5	
	comp=Z,5.2nm,0.8s								
ILAR	Eielson Array	87.49	24	P		P		04 27 17.0	-2.1
ILAR	Eielson Array	87.49	24	P		P		04 27 17.1	-1.9
	comp=Z,4.0nm,0.6s,baz=258,slow=4.7,SNR=98								
	comp=Z,4.0nm,0.6s								
G24K	Hadweenzic Riv	87.94	22	P		P		04 27 21.1	-0.1
C23K	Itkillik River	88.06	19	P		P		04 27 21.7	+0.1
J25K	Salcha River,	88.06	24	P		P		04 27 20.5	-1.3
J25K				IAmb		IAmb		04 27 21.7	
	comp=Z,8.4nm,1.1s								
F24K	Squaw Lake	88.09	21	P		P		04 27 21.6	-0.3
F24K				IAmb		IAmb		04 27 22.9	
	comp=Z,5.0nm,0.8s								
D24K	Happy Valley	88.37	19	P		P		04 27 22.8	-0.4
K27K	Chicken	89.25	25	P		P		04 27 27.6	+0.2
K27K				IAmb		IAmb		04 27 28.5	
	comp=Z,6.3nm,0.8s								
BMAR	Burnt Mountain	89.26	22	P		P		04 27 27.9	+0.4
ABKAR	Akbulak array	89.82	319	P		P		04 27 29.7	-0.7
EGAK	Eagle	89.83	25	P		P		04 27 30.0	-0.1
DAWY	Dawson	90.40	25	P		P		04 27 32.6	-0.2
K29M	Barlow Dome	91.16	26	P		P		04 27 36.0	-0.5
K29M				IAmb		IAmb		04 27 37.1	
	comp=Z,5.4nm,0.9s								
GERES	GERESS Array B	119.49	324	PKP		PKiKP		04 33 22.2	+0.6
	comp=Z,0.7nm,0.7s,baz=44,slow=3.0,SNR=2.1								
TORD	Torodi Ar. Bea	140.77	283	PKhKP		PKPpre		04 33 58.3	
	comp=Z,0.8nm,1.0s,baz=46,slow=4.1,SNR=4.2								
DBIC	Dimbokro	147.54	273	PKPbc		PKPab		04 34 18.2	-0.9
	comp=Z,5.0nm,1.0s,baz=50,slow=2.8,SNR=5.6								

TAP ***28*** *04:22:51.7, 24.81N × 122.48E, h10km, ML2.9, D*
JMA ***28*** *04:22:52.1 ± 0.1, 25.1°N ± 1.1 × 122.5°E ± 0.3, h35km ± 1km, MV2.3/11, NW OFF ISHIGAKIJIMA IS*

ISC 28 04:22:50.0 ± 1.1, 24.85N ± 0.03 × 122.50E ± 0.02, h16 km ± 9km, n51, σ 0 61/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	289	*i* P			Pb	04 23 00.9	+0.7
TWB1	baz=294			*i* S			Sb	04 23 07.4	+0.2
EOS2	EOS2	0.49	210	P			Pb	04 23 00.3	+0.1
EOS2	baz=209			eS			Sg	04 23 07.0	+0.6
EGS		0.52	270	P			Pb	04 23 00.9	+0.2
JYNG	baz=273 Yonagunijimaku	0.56	134	P			Pb	04 23 01.9	+0.5
JYNG				eS			Sg	04 23 09.0	+0.3
EOS3	EOS3	0.58	197	P			Pb	04 23 02.0	+0.3
EOS3	baz=195			eS			Sb	04 23 10.0	+0.3
YOJ	baz=195 Yonaguni jima	0.60	130	P			Pb	04 23 02.7	+0.6
YOJ				S			Sg	04 23 10.4	+0.5
SXI1	Grass Mountain	0.62	293	*i* P			Pn	04 23 03.6	-0.6
SXI1	baz=297			*i* S			Sb	04 23 12.2	+1.2
TIPB	baz=297 Shuangxi	0.63	281	P			Pn	04 23 03.5	-0.7
TIPB	baz=285			S			Sb	04 23 12.1	+1.0
TWC	Suao	0.64	248	P			Pb	04 23 02.9	+0.1
TWC	baz=250			eS			Sb	04 23 11.6	+0.1
ESAO	Su ao	0.66	246	P			Pb	04 23 03.2	+0.2
ESAO	baz=247			eS			Sb	04 23 12.2	+0.3
NWF	Wu-fen Shan	0.69	289	P			Pn	04 23 04.7	-0.4
NWF	baz=292			S			Sb	04 23 14.3	+1.3
WFSB	Wu-fen Shan	0.69	289	P			Pn	04 23 04.8	-0.3
WFSB	baz=292			S			Sn	04 23 14.4	-1.0
TNOU	National Taiwa	0.73	294	P			Pn	04 23 05.0	-0.5
TNOU	baz=298			eS			Sb	04 23 15.0	+1.1
EOS4	EOS4	0.74	193	P			Pb	04 23 05.1	+0.8
EOS4	baz=191			S			Sb	04 23 14.9	+0.8
NDS	Dongshan	0.75	253	eP			Pb	04 23 05.1	+0.5
NDS	baz=255			S			Sb	04 23 15.1	+0.6
TWE	Neicheng	0.77	261	P			Pb	04 23 05.1	+0.1
TWE	baz=262			eS			Sb	04 23 15.3	+0.2
EWUT	baz=262 Wuta	0.77	239	eP			Pb	04 23 05.2	+0.2
EWUT	baz=240			eS			Sb	04 23 15.5	+0.2
ENA	baz=240 Nanau	0.81	239	P			Pb	04 23 05.6	-0.1
ENA	baz=239			S			Sg	04 23 16.3	-0.2
FUSB	baz=239 Fushanzhiwuyua	0.84	264	P			Pn	04 23 07.0	-0.2
FUSB	baz=266			eS			Sb	04 23 17.6	+0.4
EAHA	baz=266 Aohua	0.87	233	P			Pb	04 23 06.7	0.0
EAHA	baz=234			eS			Sg	04 23 17.8	-0.5
ENTT	baz=234 Nioudou	0.88	256	eP			Pb	04 23 07.2	+0.4
ENTT	baz=258			eS			Sb	04 23 19.4	+1.1
YM08	baz=258 YM08	0.89	292	eP			Pn	04 23 07.5	-0.3
YM08	baz=295			eS			Sn	04 23 20.5	0.0
YM01	baz=295 YM01	0.90	289	eP			Pn	04 23 07.9	-0.1
YM01	baz=292			S			Sn	04 23 19.9	-0.7
NWLT	baz=292 Wulai	0.91	266	P			Pn	04 23 08.1	0.0
NWLT	baz=267			S			Sb	04 23 20.1	+0.8
NDT	baz=267 Datong Townshi	0.93	255	eP			Pn	04 23 08.8	+0.4
	baz=256								
NDT				eS			Sb	04 23 20.5	+0.6
	baz=256								
LATG	Datong	0.94	251	P			Pb	04 23 08.3	+0.3
LATG	baz=252			eS			Sb	04 23 21.2	+1.0
	baz=252								
YHNB	Yeheng	1.04	260	P			Pn	04 23 10.1	+0.2
YHNB	baz=262			S			Sb	04 23 23.7	+0.6
	baz=262								
NSK	Sanguang	1.05	261	P			Pn	04 23 10.5	+0.4
NSK	baz=262			S			Sb	04 23 24.0	+0.5
	baz=262								
ETL	Fush Village	1.06	230	eP			Pb	04 23 09.7	-0.2
ETL	baz=230			eS			Sg	04 23 23.6	-0.7
	baz=230								
NACB	Ninganchiao	1.07	231	*i* P			Pb	04 23 09.9	-0.1
NACB	baz=231			eS			Sg	04 23 23.8	-0.8
	baz=231								
NNSB	Datong	1.10	248	P			Pn	04 23 11.1	+0.3
NNSB	baz=249			S			Sb	04 23 25.6	+0.7
	baz=249								
NNS	Nan Shan	1.11	249	P			Pn	04 23 11.5	+0.6
NNS	baz=249			S			Sg	04 23 25.3	-0.6
	baz=249								
TWD	Chiawan	1.13	227	eP			Pb	04 23 11.0	-0.1
TWD	baz=227			eS			Sb	04 23 25.3	-0.1
	baz=227								
ETLH	Xiulin Townshi	1.13	236	eP			Pb	04 23 11.3	+0.1
ETLH	baz=236			eS			Sb	04 23 26.2	+0.6
	baz=236								
ETM	Tongmen	1.27	227	eP			Pb	04 23 13.9	+0.3
ETM	baz=226			eS			Sb	04 23 30.4	+0.7
	baz=226								
NFF	Wufeng Townshi	1.28	261	eP			Pb	04 23 13.9	+0.2
NFF	baz=261			eS			Sg	04 23 31.0	-0.3
	baz=261								
LXIB	Xiulin Townshi	1.29	231	eP			Pb	04 23 14.2	+0.3
LXIB	baz=230			eS			Sb	04 23 30.9	+0.5
	baz=230								
FUSS	Fushou	1.29	243	P			Pg	04 23 14.7	-0.3
FUSS	baz=243			eS			Sg	04 23 31.3	-0.6
	baz=243								
NSTT	Nanjuang	1.38	261	eP			Pg	04 23 17.1	+0.5
	baz=262								
HATJ	Hateruma jima	1.43	123	eP			Pn	04 23 15.2	+0.1
HATJ				eS			Sn	04 23 31.0	-2.6
JKRS	Kuro-shima	1.50	114	eP			Pn	04 23 16.6	+0.4
JKRS				eS			Sn	04 23 34.0	-1.5
WARBT	Fenglin Townsh	1.52	222	P			Pg	04 23 18.6	-0.6
WARBT	baz=222			eS			Sn	04 23 36.6	+0.7
	baz=222								
WUSB	Renai	1.52	236	eP			Pb	04 23 18.1	+0.2
WUSB	baz=236			eS			Sn	04 23 36.9	+0.7
	baz=236								
WHP	Taichung City	1.53	248	eP			Pg	04 23 18.9	-0.5
WHP	baz=249			eS			Sg	04 23 38.7	-0.7
	baz=249								
JIJ	Ishigaki jima	1.57	108	eP			Pn	04 23 17.8	+0.6
VWDT	VWDT	1.65	229	eP			Pb	04 23 20.4	+0.4
VWDT	baz=229			eS			Sb	04 23 40.7	+0.1
	baz=229								
JISG	Ishigakijimahi	1.67	99	eP			Pb	04 23 20.2	-0.1
SMLT	Sun Moon Lake	1.75	237	eP			Pb	04 23 22.2	+0.4
SSLB	baz=237 Suanglung	1.77	234	eP			Pb	04 23 22.3	+0.4
SSLB	baz=233			eS			Sb	04 23 44.5	+0.6
TYC	baz=233 Yuchr	1.77	238	eP			Pb	04 23 22.2	+0.2
YULB	baz=238 Yu-li	1.82	217	eP			Pb	04 23 22.4	-0.6
YULB	baz=217			eS			Sn	04 23 43.5	+0.1
	baz=217								

IDC ***28*** *04:24:24.2 ± 0.8, 6.32S × 143.54E, h0km, mb4.2/10, mbtmp4.3/12, ML1.9/1, Error ellipse: s-maj=33.4km s-min=19.2km az=73.0*

ISC 28 04:24:25.6 ± 0.7, 6.45S ± 0.1 × 143.4E ± 0.1, h10 km, n16, σ 1 9 02/15, mb4.3/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.78	129	Pn			Pn	04 25 38.0	+0.3
PMG	4.1nm,0.3s,baz=310,slow=5.9,SNR=9.4			Sn			Sn	04 26 33.3	+0.1
	4.2nm,0.3s,baz=20,slow=11,SNR=4.4								
	26nm,0.5s								
CTA	Charters Tower	13.88	169	Lg			Lg	04 31 50.8	
	0.2nm,0.3s,baz=49,slow=20,SNR=1.6								
WRA	Warramunga Arr	16.07	212	Pn			Pn	04 28 10.2	-1.6
	1.2nm,0.3s,baz=22,slow=13,SNR=19								
WRA				Sn			Sn	04 30 58.7	-12
	0.7nm,0.3s,baz=28,slow=22,SNR=3.0								
WRA				Lg			Lg	04 32 57.4	
	0.5nm,0.3s,baz=32,slow=30,SNR=4.6								
ASAR	Alice Springs	19.43	207	P			Pn	04 28 55.4	+1.8
	14nm,0.7s,baz=31,slow=12,SNR=15								
ASAR				Lg			Lg	04 34 42.4	
	0.2nm,0.3s,baz=16,slow=30,SNR=4.1								
KLR	Kul'dur	56.34	351	P			P	04 34 06.6	-0.1
	1.5nm,0.8s,baz=137,slow=4.7,SNR=4.5								
	1.5nm,0.8s								
PETK	Petropavlovsk-	60.52	10	P			P	04 34 36.1	+0.2
	5.8nm,0.9s,baz=197,slow=7.1,SNR=6.5								
	5.8nm,0.9s								
SONM	Songino Array	63.07	333	P			P	04 34 54.4	+1.0
	0.8nm,0.8s,baz=155,slow=7.0,SNR=4.9								
	0.8nm,0.8s								
MKAR	Makanchi Array	75.56	322	P			P	04 36 11.2	+0.7
	1.6nm,0.7s,baz=106,slow=7.2,SNR=15								
	1.6nm,0.7s								
ZALV	Zalesovo Beam	77.47	329	P			P	04 36 20.9	-0.3
	1.1nm,0.7s,baz=98,slow=3.0,SNR=3.5								
	1.1nm,0.7s								
KURBB	Kurchatov Arra	79.43	324	P			P	04 36 31.8	-0.3
	1.4nm,0.9s,baz=113,slow=4.7,SNR=8.9								
	1.4nm,0.9s								
QSPA	South Pole Qui	83.56	180	P			P	04 36 53.8	-0.1
	1.9nm,0.6s,baz=155,slow=0.9,SNR=12								
	1.9nm,0.6s								
NRIK	Noril'sk	84.58	343	P			P	04 36 58.6	-0.2
	4.2nm,0.9s,baz=124,slow=5.7,SNR=4.1								
	4.2nm,0.9s								
BVAR	Borovoye Array	85.00	325	P			P	04 37 01.8	+0.5
	2.8nm,0.8s,baz=112,slow=6.6,SNR=11								
	2.8nm,0.8s								
ILAR	Eielson Array	87.28	24	P			P	04 37 11.1	-1.2
	2.8nm,0.9s,baz=257,slow=5.2,SNR=21								
	2.8nm,0.9s								
TORD	Torodi Ar. Bea	141.70	283	PKhKP		PKPpre		04 43 54.6	
	0.2nm,0.6s,baz=94,slow=3.0,SNR=2.1								
DBIC	Dimbokro	148.45	272	PKPbc		PKiKP		04 44 13.6	-1.7
	5.2nm,0.9s,baz=9.1,slow=1.4,SNR=5.8								

IDC ***28*** *04:38:34.8 ± 0.9, 6.09S × 142.62E, h0km, mb4.0/7, mbtmp4.1/10, ML4.2/2, MS4.0/1, Error ellipse: s-maj=38.1km s-min=21.8km az=78.0*
NEIC ***28*** *04:38:36.6 ± 1.6, 6.05S ± 0.09 × 142.49E ± 0.09, h10km ± 1km, mb4.6/24, Error ellipse: s-maj=16.2km s-min=14.6km az=39.0*

ISC 28 04:38:36.3 ± 0.7, 6.17S ± 0.08 × 142.46E ± 0.08, h10 km, n39, σ 1 8 28/40, mb4.5/14, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.66	125	Pn			Pn	04 40 00.8	+0.3
PMG	17nm,0.3s,baz=335,slow=10,SNR=9.9			Sn			Sn	04 41 03.1	-2.4
	9.3nm,0.3s,baz=239,slow=20,SNR=11								

COEN	Coen	7.77	175	Pn			Pn	04 40 32.0	+2.5
FAKI	Fak Fak	10.68	287	Pn			Pn	04 41 09.2	-0.3
MTN	Manton Dam	12.98	238	Pn			Pn	04 41 40.9	-0.1
WB0	Warramunga Arr	15.62	209	Pn			Pn	04 42 16.5	-0.2
WB0				IAmb			IAmb	04 42 26.9	
	comp=Z,15nm,1.1s								
WR0	Warramunga Arr	15.72	209	Pn			Pn	04 42 17.8	-0.1
WRAB	Tennant Creek	15.79	209	Pn			Pn	04 42 17.1	-1.7
WB2	Warramunga Arr	15.79	209	Pn			Pn	04 42 18.9	0.0
WRA	Warramunga Arr	15.80	209	Pn			Pn	04 42 20.0	+1.0
WRA	Warramunga Arr	15.80	209	Pn			Pn	04 42 18.6	-0.4
	comp=Z,0.9nm,0.3s,baz=26,slow=13,SNR=12								
WRA				Sn			Sn	04 45 02.8	-12
	comp=Z,0.2nm,0.3s,baz=29,slow=20,SNR=2.1								
WRA				Lg			Lg	04 46 58.8	
	comp=Z,0.4nm,0.3s,baz=34,slow=27,SNR=4.6								
	comp=Z,2.2nm,0.5s								
KNRA	Kununurra	16.42	234	Pn			Pn	04 42 27.1	+0.1
KNRA				IAmb			IAmb	04 42 40.4	
	comp=Z,14nm,0.7s								
SOEI	Soe	18.36	258				P	04 42 48.9	-2.5
SOEI				IAmb			IAmb	04 43 00.2	
	comp=Z,20nm,0.8s								
AS31	Alice Springs	19.24	204				Pn	04 43 03.4	+1.5
ASAR	Alice Springs	19.24	204	P			P	04 43 03.1	+2.1
	comp=Z,1.3nm,0.3s,baz=32,slow=10,SNR=57								
ASAR				S			Sn	04 46 33.6	-4.2
	comp=Z,1.5nm,0.5s,baz=22,slow=27,SNR=6.3								
ASAR				LR			LR	04 51 53.2	
	comp=Z,450nm,18.6s,baz=245,slow=41								
	comp=Z,7.9nm,0.6s								
FITZ	Fitzroy Crossi	20.24	233				Pn	04 43 14.3	+0.4
KAPI	Kappang	22.63	272	P			P	04 43 37.7	+0.1
KAPI				IAmb			IAmb	04 43 42.9	
	comp=Z,11nm,0.8s								
BBOO	Buckleboo	27.16	192	P			P	04 44 21.6	+1.6
CMAR	Chiang Mai Arr	49.40	301	P			P	04 47 25.6	-1.1
CHTO	Chiang Mai	49.55	301	P			P	04 47 26.8	-1.0
SONM	Songino Array	62.45	333	P			P	04 49 00.5	+0.7
	comp=Z,0.8nm,1.0s,baz=145,slow=5.3,SNR=2.2								
	comp=Z,0.8nm,1.0s								
MKAR	Makanchi Array	74.80	322	P			P	04 50 15.9	-0.9
MKAR	Makanchi Array	74.80	322	P			P	04 50 18.0	+1.1
	comp=Z,0.9nm,0.7s,baz=99,slow=7.5,SNR=8.6								
	comp=Z,0.9nm,0.7s								
ZALV	Zalesovo Beam	76.80	329	P			P	04 50 28.0	0.0
	comp=Z,0.5nm,0.4s,baz=108,slow=9.3,SNR=2.7								
	comp=Z,0.5nm,0.4s								
KURBB	Kurchatov Arra	78.70	324	P			P	04 50 38.2	-0.5
	comp=Z,0.7nm,0.8s,baz=118,slow=4.4,SNR=4.9								
	comp=Z,0.7nm,0.8s								
L14K	Kuka Creek	79.50	24	P			P	04 50 43.4	+0.6
L14K				IAmb			IAmb	04 50 53.6	
	comp=Z,13nm,1.1s								
K15K	Wolf Creek Mou	80.48	23	P			P	04 50 48.8	+0.5
O16K	Kokwok River B	80.50	26	P			P	04 50 48.6	+0.3
N17K	Nushagak Hills	81.35	26	P			P	04 50 53.0	+0.1
N17K				IAmb			IAmb	04 51 34.2	
	comp=Z,9.9nm,1.4s								
J16K	Anvik River	81.38	23	P			P	04 50 53.7	+0.7
J16K				IAmb			IAmb	04 51 31.6	
	comp=Z,11nm,1.4s								
H17K	Granite Mounta	82.52	21	P			P	04 50 59.1	+0.1
H17K				IAmb			IAmb	04 51 27.8	
	comp=Z,6.7nm,1.4s								
G18K	Tagagawik	83.48	21	P			P	04 51 03.8	-0.1
G18K				IAmb			IAmb	04 51 06.7	
	comp=Z,5.0nm,1.1s								
QSPA	South Pole Qui	83.80	180	P			P	04 51 06.3	+0.5
QSPA				IAmb			IAmb	04 51 24.0	
	comp=Z,6.2nm,1.4s								
QSPA	South Pole Qui	83.80	180	P			P	04 51 06.2	+0.5
	comp=Z,1.5nm,0.8s,baz=317,slow=0.4,SNR=7.5								
	comp=Z,1.5nm,0.8s								
BVAR	Borovoye Array	84.28	325	P			P	04 51 09.4	+1.2
	comp=Z,2.7nm,0.7s,baz=108,slow=4.8,SNR=14								
	comp=Z,2.7nm,0.7s								
RC01	Rabbit Creek A	84.89	27	P			P	04 51 10.3	-0.9
D19K	Kuna River	85.00	19	P			P	04 51 11.8	+0.2
D19K				IAmb			IAmb	04 51 14.4	
	comp=Z,8.5nm,1.4s								
IMAR	Indian Mountai	85.28	22	P			P	04 51 12.7	-0.4
SML	Sawmill	85.78	26	P			P	04 51 15.2	-0.5
ILAR	Eielson Array	87.44	24	P			P	04 51 22.2	-1.5
	comp=Z,1.1nm,0.6s,baz=257,slow=4.5,SNR=23								
	comp=Z,1.1nm,0.6s								

ATH ***28*** *04:38:49.8, 35.03N × 23.36E, h10km ± 3km, ML3.6/3, Error ellipse: s-maj=4.8km s-min=1.5km az=32.0*
THE ***28*** *04:38:50.4, 35.07N × 23.43E, h1km ± 2km, ML3.2/4, Error ellipse: s-maj=2.8km s-min=0.6km az=215.0*
IDC ***28*** *04:38:54.7 ± 4.3, 35.24N × 23.51E, h86km ± 43km, mb3.6/10, mbtmp3.8/12, Error ellipse: s-maj=25.8km s-min=19.9km az=134.0*
GII ***28*** *04:38:54.6 ± 0.2, 34.576N ± 0.002 × 24.030E ± 0.001, h10km, Mws3.4, confirmed*

ISC 28 04:38:48.4 ± 1.1, 34.96N ± 0.08 × 23.43E ± 0.07, h38 km ± 3km, n79, σ 2 53/84, mb3.9/10, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RODP	Rodopos	0.66	24	P			Pn	04 39 01.4	0.0
IMMV	Iera Moni Meta	0.68	42	P			Pn	04 39 02.1	+0.5
IMMV				S			Sn	04 39 11.0	+0.1
	6μm,0.5s								
IMMV	Iera Moni Meta	0.68	42	P			Pn	04 39 02.3	+0.7
IMMV				S			Sn	04 39 11.5	+0.6
IMMV				AML			AML	04 39 14.8	
	comp=N,12729μm,0.4s								
IMMV				AML			AML	04 39 19.9	
	comp=E,12171μm,0.6s								
CHAN	Chania	0.75	42	P			Pn	04 39 03.5	+1.0
CHAN				S			Sn	04 39 14.3	+1.6
CHAN				AML			AML	04 39 17.9	
	comp=N,24499μm,0.7s								
CHAN				AML			AML	04 39 18.2	
	comp=E,10606μm,0.7s								
ANKY	Antikythira Is	0.92	353	P			Pn	04 39 05.5	+0.7
ANKY				S			Sn	04 39 17.7	+1.0
	comp=E,4μm,0.4s								
ANKY	Antikythira Is	0.92	353	P			Pn	04 39 05.4	+0.7
ANKY				S			Sn	04 39 17.7	+1.0
ANKY				AML			AML	04 39 20.1	
	comp=N,9006μm,0.5s								
ANKY				AML			AML	04 39 20.9	
	comp=E,7865μm,0.4s								
PRNS	Prines Rethymn	0.97	65	P			Pn	04 39 06.8	+1.3
PRNS				S			Sn	04 39 19.4	+1.4
	comp=E,990nm,0.6s								
TMBK	Timbaki Herakl	1.10	84	P			Pn	04 39 11.4	+4.1
IDI	Anoyia	1.24	74	P			Pn	04 39 12.9	+3.6
IDI				S			Sn	04 39 30.8	+5.9
	comp=E,475nm,0.5s								
IDI	Anoyia	1.24	74	P			Pn	04 39 12.8	+3.6
MNVA	Monemvasia	1.76	350	P			Pn	04 39 22.0	+5.7
VLI	Veliai	1.80	347	P			Pn	04 39 20.2	+3.2
VLI	Veliai	1.80	347	P			Pn	04 39 19.2	+2.2
MHLO	Agia Marina, M	1.90	24	P			Pn	04 39 20.6	+2.3
SNT5	Nea Kammeni, S	2.16	47	P			Pn	04 39 24.1	+2.3
ZKR	Zakros	2.29	85	P			Pn	04 39 28.7	+5.0
YDRA	Hydra	2.39	1	P			Pn	04 39 27.6	+2.6
KRND	KRANIDI	2.43	355	P			Pn	04 39 28.5	+2.9
EPID	Epidavros	2.67	355	P			Pn	04 39 31.5	+2.6
APE	Apeiranthos	2.71	38	P			Pn	04 39 30.3	+0.9
PTL	Penteli	3.11	6	P			Pn	04 39 37.0	+2.1
KARP	Karpathos	3.11	78	P			Pn	04 39 38.2	+3.3
THAL	Thalero	3.14	349	P			Pn	04 39 40.0	+4.8
DION

BRTR	**Keskin Array B**	**9.42**	**57**	P	**Pn**	**04 41 05.3**	**+3.7**
	comp=E,0.5nm,0.5s,baz=284,slow=8.6,SNR=2.1						
RICI	**Ricice**	**9.82**	**332**	*e*Pn	**Pn**	**04 41 04.6**	**-2.4**
KZIT	**Kziot**	**10.06**	**111**	S	**Sn**	**04 42 58.0**	**-3.9**
KZIT	**Kziot**	**10.06**	**111**	P	**Pn**	**04 41 11.3**	**+1.0**
MMLI	**Mount Malkishu**	**10.30**	**101**	P	**Pn**	**04 41 15.3**	**+1.6**
MMLI	**Mount Malkishu**	**10.30**	**101**	S	**Sn**	**04 43 04.8**	**-3.0**
NATI	**Neve Ativ**	**10.34**	**96**	S	**Sn**	**04 43 06.6**	**-2.2**
NATI	**Neve Ativ**	**10.34**	**96**	P	**Pn**	**04 41 16.1**	**+2.0**
YTIR	**Yattir**	**10.43**	**107**	S	**Sn**	**04 43 07.4**	**-3.7**
YTIR	**Yattir**	**10.43**	**107**	P	**Pn**	**04 41 16.6**	**+1.1**
HMDT	**Nahal Hemdat**	**10.44**	**102**	S	**Sn**	**04 43 08.0**	**-3.2**
HMDT	**Nahal Hemdat**	**10.44**	**102**	P	**Pn**	**04 41 17.2**	**+1.7**
KIJV	**Kijevo**	**10.54**	**331**	*e*Pn	**Pn**	**04 41 14.5**	**-2.3**
DSI	**Dead Sea**	**10.56**	**105**	S	**Sn**	**04 43 10.8**	**-3.3**
DSI	**Dead Sea**	**10.56**	**105**	P	**Pn**	**04 41 17.7**	**+0.6**
MSBI	**Mazada**	**10.64**	**107**	S	**Sn**	**04 43 12.2**	**-3.8**
MSBI	**Mazada**	**10.64**	**107**	P	**Pn**	**04 41 19.2**	**+1.0**
KRMI	**Paran Flat**	**10.68**	**114**	S	**Sn**	**04 43 12.9**	**-4.2**
KRMI	**Paran Flat**	**10.68**	**114**	P	**Pn**	**04 41 20.1**	**+1.2**
PRNI	**Paran**	**10.78**	**112**	S	**Sn**	**04 43 15.3**	**-4.2**
PRNI	**Paran**	**10.78**	**112**	P	**Pn**	**04 41 21.1**	**+0.9**
HRFI	**Mount Harif**	**10.96**	**113**	S	**Sn**	**04 43 19.1**	**-4.8**
HRFI	**Mount Harif**	**10.96**	**113**	P	**Pn**	**04 41 23.5**	**+0.9**
MBRI	**Mt Berech**	**10.99**	**115**	P	**Pn**	**04 41 23.9**	**+0.8**
MBRI	**Mt Berech**	**10.99**	**115**	S	**Sn**	**04 43 20.7**	**-4.0**
EIL	**Elat**	**11.08**	**115**	P	**Pn**	**04 41 24.6**	**+0.4**
EIL	**Elat**	**11.08**	**115**	S	**Sn**	**04 43 22.3**	**-4.5**
DUGI	**Dugi Otok**	**11.10**	**327**	*e*Pn	**Pn**	**04 41 22.2**	**-2.3**
UDBI	**Udbina**	**11.23**	**331**	*e*Pn	**Pn**	**04 41 24.9**	**-1.4**
NVLJ	**Novalja**	**11.63**	**328**	*e*Pn	**Pn**	**04 41 29.8**	**-1.9**
AKASG	**Malin Array Be**	**16.29**	**13**	P	**Pn**	**04 42 33.5**	**-0.7**
	comp=E,0.2nm,0.3s,baz=210,slow=10.0,SNR=3.8						
HFS	**Hagfors**	**25.98**	**349**	P	**P**	**04 44 16.4**	**-0.8**
	comp=E,1.0nm,0.2s,baz=156,slow=10,SNR=17						
	comp=E,1.0nm,0.2s						
FINES	**FINESS Array B**	**26.56**	**3**	P	**P**	**04 44 20.7**	**-1.7**
	comp=E,2.7nm,1.0s,baz=168,slow=9.8,SNR=4.9						
	comp=E,2.7nm,1.0s						
NOA	**NORSAR Array B**	**27.26**	**347**	P	**P**	**04 44 28.0**	**-0.8**
	comp=E,0.1nm,0.3s,baz=160,slow=9.8,SNR=6.2						
	comp=E,0.1nm,0.3s						
EKA	**Eskdalemuir Ar**	**27.40**	**326**	P	**P**	**04 44 31.0**	**+0.9**
	comp=E,2.4nm,0.8s,baz=121,slow=8.3,SNR=4.0						
	comp=E,2.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.29**	**228**	P	**P**	**04 44 50.9**	**+3.7**
	comp=E,0.3nm,0.3s,baz=33,slow=8.8,SNR=11						
	comp=E,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**34.65**	**1**	P	**P**	**04 45 32.2**	**-1.6**
	comp=E,2.9nm,0.9s,baz=203,slow=10,SNR=6.0						
	comp=E,2.9nm,0.9s						
KURBB	**Kurchatov Arra**	**42.35**	**51**	P	**P**	**04 46 38.8**	**+0.2**
	comp=E,0.2nm,0.3s,baz=297,slow=8.2,SNR=1.7						
	comp=E,0.2nm,0.3s						
SPITS	**Spitsbergen Ar**	**43.43**	**358**	P	**P**	**04 46 46.9**	**-0.2**
	comp=E,21nm,1.1s,baz=140,slow=9.4,SNR=7.9						
	comp=E,21nm,1.1s						
MKAR	**Makanchi Array**	**45.07**	**56**	P	**P**	**04 46 59.6**	**-0.9**
	comp=E,0.3nm,0.3s,baz=268,slow=7.6,SNR=7.1						
	comp=E,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**46.17**	**46**	P	**P**	**04 47 08.4**	**-0.6**
	comp=E,0.6nm,0.3s,baz=270,slow=9.1,SNR=4.1						
	comp=E,0.6nm,0.3s						

*TRN **28** 04:44:60.0, 18°.14N×62°.85W, h31km, MD4.2, East of Anguilla.*
*NEIC **28** 04:45:02.2±1.7, 18°.03N±0°.09×62°.86W±0°.05, h30km±13km, ML3.5/44, Error ellipse: s-maj=14.1km s-min=1.0km az=207.0*
ISC 28 04:45:02.0±1.2, 18°.03N±0°.08×62°.89W±0°.05, h28km±8km, n44, σ0s99/55, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.18**	**277**	Pg		**Pb**	**04 45 07.6**	**-0.1**
SMRT				Sg		**Sb**	**04 45 11.8**	**+0.1**
SMRT	**St. Maarten**	**0.18**	**277**	*e*P		**Pb**	**04 45 07.7**	**-0.1**
SABA	**Saba**	**0.53**	**220**			**Pn**	**04 45 13.7**	**-0.1**
SABA						**Sn**	**04 45 21.9**	**0.0**
SABA				IAML			04 45 26.1	
	comp=N,4μm,0.4s							
SABA				IAML			04 45 26.4	
	comp=E,3μm,0.6s							
SABA	**Saba**	**0.53**	**220**	*e*P		**Pn**	**04 45 14.1**	**+0.3**
SEUS	**St. Eustatius**	**0.54**	**190**	Pn		**Pb**	**04 45 11.8**	**-1.3**
SEUS						**Sn**	**04 45 21.7**	**-0.4**
SEUS				IAML			04 45 26.9	
	comp=N,5μm,0.2s							
SEUS				IAML			04 45 27.5	
	comp=E,4μm,0.2s							
SEUS	**St. Eustatius**	**0.54**	**190**	*e*P		**Pn**	**04 45 14.2**	**+0.3**
ANDO	**Antigua, Disas**	**1.36**	**132**	*e*P		**Pn**	**04 45 24.5**	**-0.7**
ANDO				*e*S		**Sb**	**04 45 43.5**	**-0.2**
MBFL	**Flemmings, Mon**	**1.43**	**153**	*e*P		**Pn**	**04 45 25.6**	**-0.5**
MBFL				*e*S		**Sn**	**04 45 44.9**	**+0.9**
ANBD	**Bethesda, Anti**	**1.45**	**132**	*e*P		**Pn**	**04 45 25.5**	**-0.9**
ANBD				*e*S		**Sn**	**04 45 45.1**	**+0.6**
ABD	**La Joyeuse, An**	**2.04**	**139**	Pn		**Pn**	**04 45 33.0**	**-1.6**
ABD				IAML			04 46 11.2	
	comp=E,365nm,0.5s							
ABD				IAML			04 46 13.2	
	comp=N,254nm,0.5s							
ABD	**La Joyeuse, An**	**2.04**	**139**	*e*P		**Pn**	**04 45 34.4**	**-0.2**
ABD	**La Joyeuse, An**	**2.04**	**139**	*e*P		**Pn**	**04 45 35.2**	**+0.6**
ABD				*e*S		**Sn**	**04 45 59.7**	**+0.5**
GDHS	**Morne Mazeau,**	**2.05**	**148**	Pn		**Pn**	**04 45 33.4**	**-1.4**
GDSD	**La Dsirade Is**	**2.44**	**134**	Pn		**Pn**	**04 45 39.2**	**-0.8**
TDBA	**Terre de Bas,**	**2.48**	**151**	*e*P		**Pn**	**04 45 41.3**	**+0.7**
MAGL	**Barre de l'ile**	**2.58**	**143**	Pn		**Pn**	**04 45 41.6**	**-0.3**
MAGL				IAML			04 46 19.2	
	comp=N,207nm,0.3s							
MAGL				IAML			04 46 25.1	
	comp=E,257nm,0.3s							
MAGL	**Barre de l'ile**	**2.58**	**143**	*e*P		**Pn**	**04 45 41.9**	**0.0**
GCPR	**Guaynabo City**	**3.05**	**276**	Pn		**Pn**	**04 45 48.1**	**-0.4**
EMPR	**Esperanza - Ma**	**3.49**	**278**	Pn		**Pn**	**04 45 54.8**	**+0.3**
EMPR				IAML			04 47 48.1	
	comp=N,121nm,1.4s							
EMPR				IAML			04 47 52.9	
	comp=E,124nm,1.8s							
CELP	**Cerrillos**	**3.51**	**271**	Pn		**Pn**	**04 45 55.8**	**+0.9**
OBIP	**Obispado Ponce**	**3.54**	**271**	Pn		**Pn**	**04 45 54.0**	**-1.2**
SVN	**Savane Anatole**	**3.57**	**152**	Pn		**Pn**	**04 45 55.6**	**-0.1**
SVN	**Savane Anatole**	**3.57**	**152**	*e*P		**Pn**	**04 45 57.5**	**+1.8**
PCM	**Pelee Case Pet**	**3.58**	**153**	*e*P		**Pn**	**04 45 58.6**	**+2.9**
BAMF	**Morne Balai**	**3.60**	**152**	*e*P		**Pn**	**04 45 58.3**	**+2.1**
GBMF	**Grand Be**	**3.61**	**153**	*e*P		**Pn**	**04 45 58.6**	**+2.3**
UUPR	**Utuado, UPR, P**	**3.65**	**274**	Pn		**Pn**	**04 45 57.1**	**+0.3**
FDF	**Fort de France**	**3.68**	**153**	Pn		**Pn**	**04 45 57.3**	**+0.1**
FDF				IAML			04 46 41.0	
	comp=E,62nm,1.7s							
FDF				IAML			04 47 01.7	
	comp=N,69nm,1.7s							
FDF	**Fort de France**	**3.68**	**153**	*e*P		**Pn**	**04 45 57.8**	**+0.6**
FDF				*e*S		**Sn**	**04 46 41.1**	**+1.4**
AOPR	**Arecibo Observ**	**3.69**	**276**	Pn		**Pn**	**04 45 57.9**	**+0.6**
AOPR				IAML			04 46 50.1	
	comp=N,98nm,0.4s							
AOPR	**Arecibo Observ**	**3.69**	**276**	*e*P		**Pn**	**04 45 56.9**	**-0.4**
AOPR				*e*S		**Sn**	**04 46 39.4**	**-0.5**
ZAM	**Aeronautique**	**3.87**	**152**	*e*P		**Pn**	**04 46 01.8**	**+2.0**
LPMF	**Morne Lapointe**	**3.90**	**152**	*e*P		**Pn**	**04 46 00.1**	**0.0**
BIM	**Bigot**	**3.90**	**153**	Pn		**Pn**	**04 46 00.6**	**+0.3**
BIM				IAML			04 46 59.9	
	comp=E,70nm,1.4s							
BIM				IAML			04 47 23.6	
	comp=N,63nm,1.7s							
BIM	**Bigot**	**3.90**	**153**	*e*P		**Pn**	**04 46 00.8**	**+0.5**
MVM	**Montagne Vaucl**	**3.95**	**151**	*e*P		**Pn**	**04 46 02.3**	**+1.4**
MLPR	**Magueyes Islan**	**3.96**	**270**	Pn		**Pn**	**04 46 00.2**	**-0.7**
CRPR	**Cabo Rojo, PR**	**4.02**	**270**	Pn		**Pn**	**04 46 00.6**	**-1.2**
CRPR				IAML			04 47 49.3	
	comp=E,28nm,2.3s							
PRSN	**Puerto Rico Se**	**4.05**	**273**	Pn		**Pn**	**04 46 02.6**	**+0.3**
PRSN				IAML			04 46 55.1	
	comp=N,81nm,0.3s							
PRSN				IAML			04 47 14.5	
	comp=E,43nm,0.2s							
MPOM	**Morne Pois Mar**	**4.06**	**151**	Pn		**Pn**	**04 46 01.3**	**-1.1**
MPOM				IAML			04 46 59.6	
	comp=N,51nm,2.9s							
MPOM				IAML			04 47 48.5	
	comp=E,36nm,2.3s							
MPOM	**Morne Pois Mar**	**4.06**	**151**	*e*P		**Pn**	**04 46 02.9**	**+0.5**
MPOM				*e*S		**Sn**	**04 46 48.5**	**-0.6**
SLBI	**Saint Lucia, B**	**4.39**	**155**	*e*P		**Pn**	**04 46 07.5**	**+0.6**
SLBI				*e*S		**Sn**	**04 46 57.3**	**+0.2**
SLCP	**Castries, St.**	**4.39**	**155**	*e*S		**Sn**	**04 46 57.8**	**+0.5**
BAUV	**El Baul**	**10.33**	**210**	Pn		**Pn**	**04 47 27.6**	**-0.8**

*IDC **28** 04:53:18.4±2.4, 6°.23S×128°.27E, h305km±24km, mb3.4/5, mbtmp4.3/8, Error ellipse: s-maj=28.3km s-min=14.8km az=45.0*
*DJA **28** 04:53:18.1±0.3, 6°.S±3°×12°.9E±°, h322km±7km, M4.5/14, mb4.5/7, mB5.1/6, MLv4.5/14, Mw(mB)4.4/6*
*NEIC **28** 04:53:18.4±0.5, 5°.99S±0°.08×128°.72E±0°.09, h303km±10km, mb4.5/12, Error ellipse: s-maj=15.3km s-min=6.2km az=130.0*
ISC 28 04:53:18.2±0.5, 6°.05S±0°.06×128°.76E±0°.07, h300km, n70, σ1s50/73, mb4.2/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.90**	**37**	P		**Pn**	**04 54 06.3**	**+2.1**
BNDI	**Bandanaira**	**1.90**	**37**	P		**Pn**	**04 54 05.5**	**+1.3**
SAUI	**Saumlaki**	**3.17**	**127**	Pn		**Pn**	**04 54 17.7**	**+2.0**
SAUI	**Saumlaki**	**3.17**	**127**	P		**Pn**	**04 54 16.5**	**+0.8**
SAUI	**Saumlaki**	**3.17**	**127**	P		**Pn**	**04 54 17.3**	**+1.6**
NLAI	**Namlea**	**3.24**	**329**	P		Pn	04 54 21.6	+5.2
FAKI	**Fak Fak**	**4.66**	**48**	Pn		**Pn**	**04 54 31.8**	**-0.1**
FAKI	**Fak Fak**	**4.66**	**48**	P		**Pn**	**04 54 32.1**	**+0.2**
FAKI	**Fak Fak**	**4.66**	**48**	P		**Pn**	**04 54 31.7**	**-0.2**
SANI	**Sanana**	**4.84**	**325**	P		**Pn**	**04 54 36.1**	**+2.2**
SANI	**Sanana**	**4.84**	**325**	P		**Pn**	**04 54 34.6**	**+0.7**
LBMI	**Labuha**	**5.52**	**347**	P		**Pn**	**04 54 42.6**	**+0.7**
	85nm,0.9s,0.5nm							
SWI	**Sorong**	**5.72**	**26**	P		**Pn**	**04 54 43.8**	**-0.5**
	94nm,0.6s,4μm0.5nm							
SOEI	**Soe**	**5.78**	**230**	Pn		**Pn**	**04 54 46.1**	**+1.1**
SOEI	**Soe**	**5.78**	**230**	P		**Pn**	**04 54 46.3**	**+1.2**
SOEI	**Soe**	**5.78**	**230**	P		**Pn**	**04 54 46.2**	**+1.2**
	88nm,0.5s,4μm0.8nm							
DRS	**Darwin Rock St**	**6.69**	**162**	P		**Pn**	**04 54 57.1**	**+1.3**
MTN	**Manton Dam**	**7.15**	**161**	Pn		**Pn**	**04 55 01.7**	**+0.3**
MTN	**Manton Dam**	**7.15**	**161**	P		**Pn**	**04 55 01.7**	**+0.3**
EDFI	**Ende, Flores**	**7.51**	**249**	P		**Pn**	**04 55 07.0**	**+1.1**
	4.6nm,0.4s,618nm0.0nm							
KDU	**Kakadu**	**7.55**	**151**	P		**Pn**	**04 55 06.4**	**+0.1**
LUWI	**Luwuk**	**7.77**	**310**	P		**Pn**	**04 55 12.7**	**+3.6**
LUWI	**Luwuk**	**7.77**	**310**	P		**Pn**	**04 55 08.8**	**-0.3**
	27nm,0.4s,2μm0.1nm							
KNRA	**Kununurra**	**9.57**	**180**	Pn		**Pn**	**04 55 31.4**	**+0.3**
KNRA	**Kununurra**	**9.57**	**180**	P		**Pn**	**04 55 31.7**	**+0.6**
TOLI2	**Tolitoli**	**10.68**	**312**	P		**P**	**04 55 47.3**	**-0.2**
PLAI	**Plampang**	**11.23**	**255**	P		**Pn**	**04 55 51.5**	**0.0**
FITZ	**Fitzroy Crossi**	**12.36**	**194**			**Pn**	**04 56 04.5**	**-0.6**
WB0	**Warramunga Arr**	**14.70**	**159**	P		**P**	**04 56 32.1**	**0.0**
WRAB	**Tennant Creek**	**14.84**	**159**	P		**P**	**04 56 33.5**	**0.0**
WRA	**Warramunga Arr**	**14.84**	**159**	P		**P**	**04 56 32.8**	**-0.8**
WRA	**Warramunga Arr**	**14.84**	**159**	P		**P**	**04 56 33.7**	**+0.1**
	7.4nm,0.6s,baz=334,slow=13,SNR=73							
WB2	**Warramunga Arr**	**14.85**	**159**	P		**P**	**04 56 33.9**	**+0.3**
WR0	**Warramunga Arr**	**14.93**	**158**	P		**P**	**04 56 34.6**	**+0.1**
COEN	**Coen**	**16.22**	**120**	P		**P**	**04 56 48.8**	**+0.1**
COEN	**Coen**	**16.22**	**120**	P		**P**	**04 56 49.3**	**+0.5**
MBWA	**Marble Bar**	**17.39**	**209**	P		**P**	**04 57 01.0**	**-0.3**
MBWA						IAmb	IAmb	04 57 01.9
	comp=Z,20nm,0.8s							
PSA00	**Pilbara Seismi**	**17.68**	**208**	P		**P**	**04 57 04.5**	**0.0**
PSA00						IAmb	IAmb	04 57 47.7
	comp=Z,42nm,1.4s							
QIS	**Mount Isa**	**17.86**	**145**	P		**P**	**04 57 06.6**	**+0.1**
AS31	**Alice Springs**	**18.20**	**165**	P		**P**	**04 57 10.7**	**+0.5**
ASAR	**Alice Springs**	**18.20**	**165**	P		**P**	**04 57 10.3**	**+0.1**
ASAR	**Alice Springs**	**18.20**	**165**	P		**P**	**04 57 11.0**	**+0.8**
	comp=Z,9.5nm,0.5s,baz=344,slow=11,SNR=100							
ASAR						ScP	**ScP**	**05 04 32.0**	**-2.9**
	comp=Z,1.8nm,0.7s,baz=353,slow=2.0,SNR=12							
AS01	**Alice Springs**	**18.22**	**165**	P		**P**	**04 57 11.0**	**+0.7**
PMG	**Port Moresby**	**18.54**	**102**	P		**P**	**04 57 16.3**	**+2.6**
	comp=Z,12nm,0.6s,baz=233,slow=5.1,SNR=5.3							
WRKA	**Warakurna**	**18.89**	**181**	P		**P**	**04 57 17.5**	**0.0**
LEM	**Lembang**	**21.02**	**267**	P		P	04 57 32.9	-6.8
	comp=Z,38nm,0.5s,baz=135,slow=19,SNR=6.0							
	comp=Z,38nm,0.5s							
GIRL	**Giralia**	**21.65**	**219**	P		**P**	**04 57 45.8**	**+0.7**
CTAO	**Charters Tower**	**21.99**	**131**	P		**P**	**04 57 48.2**	**-0.1**
CTAO						IAmb	IAmb	04 58 29.3
	comp=Z,34nm,1.4s							
OOD	**Oodnadatta**	**22.61**	**164**	P		**P**	**04 57 53.5**	**-0.3**
MEEK	**Meekatharra**	**22.65**	**204**	P		**P**	**04 57 53.3**	**-0.9**
FORT	**Forrest**	**24.61**	**181**	P		**P**	**04 58 11.2**	**-0.7**
MULG	**Mulgathing**	**24.62**	**169**	P		**P**	**04 58 11.9**	**-0.1**
KMBL	**Kambalda**	**26.00**	**194**	P		**P**	**04 58 23.8**	**-0.6**
STKA	**Stephens Creek**	**28.36**	**157**	P		**P**	**04 58 45.2**	**-0.1**
STKA	**Stephens Creek**	**28.36**	**157**	P		**P**	**04 58 45.2**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=352,slow=14,SNR=3.3							
	comp=Z,1.2nm,0.4s							
CMSA	**Cobar Meteorol**	**29.91**	**150**	P		**P**	**04 58 59.1**	**+0.2**
ARMA	**Armidale**	**32.41**	**141**	P		**P**	**04 59 21.7**	**+0.8**
ARMA						IAmb	IAmb	04 59 50.2
	comp=Z,16nm,1.4s							
CMAR	**Chiang Mai Arr**	**38.18**	**310**	P		**P**	**05 00 08.9**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=144,slow=6.8,SNR=1.2							
	comp=Z,1.1nm,0.3s							
NJ2	**Nanjing**	**39.04**	**347**	*e*P		**P**	**05 00 17.3**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
MARNC	**Mare, Loyalty**	**40.96**	**116**	P		**P**	**05 00 32.3**	**-0.3**
PZH	**PanZhiHua**	**41.63**	**322**	P		**P**	**05 00 39.8**	**+1.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
PZH				pmax		pmax		
	comp=Z,120nm,6.0s							
HHC	**Hu-ho-hao-te**	**49.27**	**343**	*e*P		**P**	**05 01 37.8**	**+0.5**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,160nm,5.1s							
MDJ	**Mudanjiang**	**50.44**	**1**	P		**P**	**05 01 46.0**	**+0.2**
MDJ				PcP		**pP**	**05 02 51.3**	**+2.9**
MDJ				ScP		**ScP**	**05 06 18.0**	**-8.2**
MDJ				PcS		**PcS**	**05 06 57.5**	**+0.6**
MDJ				S		S	05 08 49.5	+14
MDJ				sS		sS	05 10 43.5	+18
MDJ				ScS		**ScS**	**05 11 02.3**	**-2.3**
MDJ				pmax		pmax		
	comp=Z,5.0nm,1.7s							
MDJ				pmax		pmax		
	comp=Z,250nm,5.8s							
MDJ				LR		LR		
	comp=N,310nm,18.5s							
MDJ				LR		LR		
	comp=E,470nm,20.3s							
MDJ				LR		LR		
	comp=Z,560nm,24.4s							
WMQ	**Urumqi**	**61.93**	**327**	*e*P		**P**	**05 03 08.0**	**+1.3**
MK31	**Makanchi Array**	**66.76**	**327**	P		**P**	**05 03 36.6**	**-1.1**
MKAR	**Makanchi Array**	**66.76**	**327**	P		**P**	**05 03 37.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=113,slow=8.9,SNR=8.0							
	comp=Z,0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**71.06**	**329**	P		**P**	**05 04 02.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=122,slow=5.2,SNR=2.0							
	comp=Z,0.2nm,0.3s							
M14K	**Bethel**	**85.32**	**27**	P		**P**	**05 05 20.9**	**-0.5**
M14K						IAmb	IAmb	05 05 40.7
	comp=Z,25nm,1.4s							
CLL	**Collm**	**110.65**	**323**	*e*PP		**PP**	**05 11 56.0**	**-0.8**
CPUP	**Villa Florida**	**147.28**	**170**	PKPbc		**PKPdf**	**05 12 26.5**	**+2.0**
	comp=Z,0.6nm,0.4s,baz=318,slow=3.0,SNR=3.5							

IDC 28 05:05:59.4±10.0, 27°.37S×22°.79E, h0km, mbtmp2.2/1, ML1.7/1, Error ellipse: s-maj=82.8km s-min=54.3km az=121.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.49**	**121**	I		I	05 23 20.0	
	0.1nm,0.9s,baz=299,slow=310,SNR=2.3							
BOSA	**Boshof**		**2.51**	**120**	Pn		Pn	05 06 42.1	+0.5
	0.1nm,0.3s,baz=300,slow=17,SNR=1.7							
BOSA					Sn		Sn	05 07 12.2	-0.7
	0.7nm,0.3s,baz=211,slow=16,SNR=12							
	0.6nm,0.3s							
I35NA	**TSUMEB INFRASO**	**9.45**	**328**	I		I	06 01 20.0	
	baz=151,slow=334,SNR=0.6							

*IDC **28** 05:09:45.3±0.8, 6°.15S×142°.78E, h0km, mb4.3/8, mbtmp4.3/10, ML2.2/1, MS4.3/5, Error ellipse: s-maj=34.6km s-min=19.1km az=75.0*
*NEIC **28** 05:09:48.1±1.8, 6°.49S±0°.09×142°.54E±0°.09, h10km±1km, mb4.7/29, Error ellipse: s-maj=17.8km s-min=13.2km az=44.0*
*DJA **28** 05:09:50.1±0.4, 6°.S±4°×14°.2E±°, h10km, M5.0/13, mB5.2/6, mb4.7/13, MLv5.4/5, Mw(mB)4.6/6*
ISC 28 05:09:51.1±0.5, 6°.40S±0°.05×142°.56E±0°.06, h35km, n75, σ1s83/69, mb4.5/23, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.74**	**310**	P		**Pn**	**05 10 16.2**	**-2.7**
MMPI	**Merauke**	**2.98**	**226**	P		**Pn**	**05 10 38.7**	**+2.9**
GENI	**Genyem**	**4.47**	**328**	P		**Pn**	**05 10 55.3**	**-1.1**
GENI	**Genyem**	**4.47**	**328**	P		**Pn**	**05 10 57.3**	**+0.9**
PMG	**Port Moresby**	**5.45**	**124**	Pn		**Pn**	**05 11 08.2**	**-1.6**
PMG	**Port Moresby**	**5.45**	**124**	P		**Pn**	**05 11 10.5**	**+0.6**
PMG	**Port Moresby**	**5.45**	**124**	Pn		**Pn**	**05 11 09.4**	**-0.5**
	5.2nm,0.3s,baz=333,slow=10.0,SNR=8.2							
PMG						Sn	**Sn**	**05 12 11.6**	**+0.2**
	5.5nm,0.3s,baz=301,slow=7.9,SNR=3.7							
	22nm,0.5s							
SMPI	**Sarmi**	**5.82**	**319**	P		**Pn**	**05 11 16.6**	**+1.6**
	150nm,1.2s,1.0nm							
COEN	**Coen**	**7.53**	**175**	Pn		**Pn**	**05 11 34.9**	**-3.6**
COEN	**Coen**	**7.53**	**175**	P		**Pn**	**05 11 41.2**	**+2.7**
FAKI	**Fak Fak**	**10.84**	**288**	Pn		**Pn**	**05 12 21.7**	**-2.2**
KDU	**Kakadu**	**11.74**	**237**	P		**Pn**	**05 12 35.6**	**-0.6**
MTN	**Manton Dam**	**12.95**	**240**	Pn		**Pn**	**05 12 50.4**	**-2.4**
MTN	**Manton Dam**	**12.95**	**240**	P		**Pn**	**05 12 52.0**	**-0.8**
DRS	**Darwin Rock St**	**12.96**	**242**	P		**Pn**	**05 12 52.5**	**-0.4**
CTA	**Charters Tower**	**14.07**	**166**	Lg		Lg	05 17 20.5	
	0.3nm,0.3s,baz=241,slow=19,SNR=2.8							
CTA						LR	LR	05 18 12.7	
	comp=Z,660nm,19.8s,baz=348,slow=36							
QIS	**Mount Isa**	**14.36**	**191**	P		**Pn**	**05 13 13.1**	**+1.1**
WB0	**Warramunga Arr**	**15.47**	**210**	Pn		**Pn**	**05 13 26.3**	**-0.6**
WB0						IAmb	IAmb	05 13 36.8	
	comp=Z,22nm,0.8s							
WR0	**Warramunga Arr**	**15.57**	**209**	Pn		**Pn**	**05 13 26.2**	**-1.9**
WR0						IAmb	IAmb	05 13 36.8	
	comp=Z,29nm,1.0s							
WRAB	**Tennant Creek**	**15.64**	**210**			**Pn**	**05 13 27.0**	**-1.9**
WB2	**Warramunga Arr**	**15.64**	**210**	Pn		**Pn**	**05 13 27.6**	**-1.5**
WRA	**Warramunga Arr**	**15.65**	**210**	Pn		**Pn**	**05 13 27.6**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=31,slow=13,SNR=30							
WRA						Sn	**Sn**	**05 16 15.4**	**-6.2**
	comp=Z,1.5nm,0.3s,baz=30,slow=22,SNR=4.7							
WRA						Lg	Lg	05 18 10.0	
	comp=Z,2.2nm,0.3s,baz=29,slow=31,SNR=5.4							
KNRA	**Kununurra**	**16.37**	**235**	Pn		**Pn**	**05 13 36.6**	**-1.7**
KNRA						IAmb	IAmb	05 13 47.0	
	comp=Z,88nm,1.1s							
KNRA	**Kununurra**	**16.37**	**235**	P		**Pn**	**05 13 38.3**	**0.0**
HNR	**Honiara**	**17.48**	**101**	LR		LR	05 18 34.2	
	com

F24K IAmb IAmb 05 22 48.7
comp=Z,3.5nm,1.1s

WEL 28 05:17:29.4±0.6, 45°S±3°×16°7E±°, h12km, M3.5/9, ML3.8/9, MLv3.5/9, Error ellipse: s-maj=0.0km s-min=0.0km az=116.1, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.24**	**217**	P	Pb	05 17 35.8	+0.1
DCZ				S	Sg	05 17 39.6	+1.6
TAFS	**Te Anau Fire S**	**0.29**	**120**	P	Pg	05 17 35.3	-0.1
MLZ	**Mavora Lakes**	**0.54**	**100**	P	Pg	05 17 40.4	+0.4
MSZ	**Milford Sound**	**0.72**	**34**	P	Pg	05 17 43.0	-0.4
MSZ				S	Sg	05 17 52.1	-0.7
MOSS	**Mossburn Schoo**	**0.73**	**123**	P	Pb	05 17 44.3	+0.1
MOSS				S	Sb	05 17 54.5	+0.4
WHZ	**Wether Hill Ro**	**0.74**	**147**	P	Pg	05 17 43.8	-0.1
WHZ				S	Sg	05 17 53.6	0.0
RRKS	**Rarakau**	**0.88**	**175**	P	Pb	05 17 47.1	+0.5
RRKS				S	Sn	05 17 59.6	-0.7
PYZ	**Puysegur Point**	**1.01**	**208**	P	Pb	05 17 47.6	-1.3
WKZ	**Wanaka**	**1.25**	**70**	P	Pb	05 17 53.0	-0.1
WKZ				S	Sb	05 18 09.1	-0.1
EAZ	**Earnscleugh**	**1.38**	**89**	P	Pn	05 17 54.7	+0.2
EAZ				S	Sn	05 18 12.5	-0.1
GODC	**Gore District**	**1.39**	**127**	P	Pn	05 17 54.0	-0.6
JCZ	**Jackson Bay**	**1.57**	**41**	P	Pn	05 17 57.6	+0.4
JCZ				S	Sb	05 18 18.1	-0.2
APZ	**The Paps**	**1.62**	**165**	P	Pn	05 17 57.8	-0.1
APZ				S	Sn	05 18 19.0	+0.4
MECS	**Makarora Emerg**	**1.69**	**53**	P	Pb	05 18 00.6	+0.1
TUZ	**Tuapeka**	**1.73**	**114**	P	Pn	05 17 59.9	+0.6
TUZ				S	Sn	05 18 21.9	+0.6
SYZ	**Scrubby Hill**	**1.77**	**136**	P	Pn	05 18 00.3	+0.5
SYZ				S	Sn	05 18 22.8	+0.5
LBZ	**Lake Benmore**	**2.19**	**67**	P	Pn	05 18 05.6	-0.1
ODZ	**Otahua Downs**	**2.33**	**86**	P	Pn	05 18 07.6	0.0
ODZ	**Otahua Downs**	**2.33**	**86**	P	Pn	05 18 07.6	0.0
HHSZ	**Highcliff Hill**	**2.35**	**106**	P	Pn	05 18 08.6	+0.8
HHSZ				S	Sn	05 18 35.9	-0.8
FOZ	**Fox Glacier**	**2.47**	**46**	P	Pn	05 18 10.9	+1.4
TMZ	**Timaru**	**2.74**	**72**	P	Pn	05 18 12.6	-0.6
TMZ				S	Sn	05 18 44.6	-1.7
GCSZ	**Gaunt Creek Bo**	**2.89**	**48**	P	Pn	05 18 17.4	+2.1
ARCZ	**Arundel**	**3.03**	**65**	P	Pn	05 18 16.2	-1.0
ARCZ				S	Sn	05 18 51.5	-1.9
RPZ	**Rata Peaks**	**3.07**	**61**	P	Pn	05 18 17.0	-0.7
WVZ	**Waitaha Valley**	**3.27**	**49**	P	Pn	05 18 22.2	+1.7
MHCZ	**Mount Hutt**	**3.48**	**61**	P	Pn	05 18 22.6	-0.8
INZ	**Inchbonnie**	**3.89**	**51**	P	Pn	05 18 32.0	+3.0
DSZ	**Denniston Nort**	**4.78**	**44**	P	Pn	05 18 42.4	+1.1
THZ	**Tophouse**	**5.34**	**51**	P	Pn	05 18 53.6	+4.6

*BJI **28** 05:22:07.1±0.0, 6°22S×143°23E, h10km, mb4.9/68, mB5.2/23, Ms4.8/19, Ms7 4.6/18*
*MOS **28** 05:22:09.8±0.8, 6°10S×142°62E, h10km, mb5.2/24, Error ellipse: s-maj=11.9km s-min=6.6km az=111.9*
*IDC **28** 05:22:10.1±0.5, 6°11S×142°69E, h0km, mb4.8/19, mbtmp4.9/21, ML2.5/1, MS4.1/5, Error ellipse: s-maj=24.8km s-min=12.0km az=78.0*
*NEIC **28** 05:22:12.1±2.2, 6°13S±0°07×142°51E±0°05, h10km±1km, mb5.1/146, Error ellipse: s-maj=12.4km s-min=9.1km az=357.0*
*DJA **28** 05:22:13.5±0.2, 6°S±3°×14°2E±°, h10km, M5.0/32, mB5.4/14, mb5.0/32, MLv5.4/6, Mw(mB)4.8/14*

ISC 28 05:22:14.3±0.3, 6°21S±0°04×142°55E±0°05, h28km, n505, σ1§24/455, mb5.1/134, MS4.5/10, 15C-6D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.61**	**305**	P	**Pn**	**05 22 41.2**	**+0.2**
TABU	**Tabubil**	**1.61**	**305**	P	**Pn**	**05 22 41.3**	**+0.2**
MMPI	**Merauke**	**3.10**	**224**	P	**Pn**	**05 23 03.0**	**+1.5**
GENI	**Genyem**	**4.30**	**326**	P	**Pn**	**05 23 19.1**	**+1.1**
GENI	**Genyem**	**4.30**	**326**	P	**Pn**	**05 23 18.8**	**+0.8**
GENI	**Genyem**	**4.30**	**326**	P	**Pn**	**05 23 18.8**	**+0.8**
PMG	**Port Moresby**	**5.56**	**125**	P	**Pn**	**05 23 35.3**	**-0.1**
PMG	**Port Moresby**	**5.56**	**125**	P	**Pn**	**05 23 35.2**	**-0.1**
PMG	**Port Moresby** 9.6nm,0.3s,baz=316,slow=10,SNR=24	**5.56**	**125**	Pn	**Pn**	**05 23 34.6**	**-0.7**
PMG	15nm,0.3s,baz=95,slow=22,SNR=8.9 126nm,0.7s			Sn	**Sn**	**05 24 36.0**	**-2.3**
SMPI	**Sarmi** 234nm,1.2s,5µm1.6nm	**5.67**	**317**	P	**Pn**	**05 23 37.8**	**+1.0**
MANU	**Manus Island**	**6.34**	**49**	Pn	**Pn**	**05 23 47.0**	**+1.0**
MANU	**Manus Island**	**6.34**	**49**	P	Pn	05 23 48.6	+2.6
COEN	**Coen** baz=7.7,SNR=6.5	**7.72**	**175**	P	**Pn**	**05 24 05.8**	**+0.7**
COEN	**Coen**	**7.72**	**175**	Pn	**Pn**	**05 24 07.5**	**+2.4**
COEN	**Coen**	**7.72**	**175**	P	**Pn**	**05 24 05.7**	**+0.7**
RABL	**Rabaul**	**9.78**	**79**	Pn	**Pn**	**05 24 32.8**	**-0.5**
FAKI	**Fak Fak**	**10.77**	**287**	Pn	**Pn**	**05 24 44.9**	**-1.9**
FAKI	**Fak Fak**	**10.77**	**287**	P	**Pn**	**05 24 46.9**	**+0.1**
FAKI	**Fak Fak**	**10.77**	**287**	P	**Pn**	**05 24 46.1**	**-0.7**
FAKI	**Fak Fak** 80nm,1.1s	**10.77**	**287**	P	Pn	05 24 42.4	-4.4
SAUI	**Saumlaki**	**11.30**	**260**		**Pn**	**05 24 53.5**	**-0.6**
SAUI	**Saumlaki**	**11.30**	**260**	P	**Pn**	**05 24 54.8**	**+0.7**
SAUI	**Saumlaki** 741nm,1.0s,24µm	**11.30**	**260**	P	**Pn**	**05 24 56.2**	**+2.1**
KDU	**Kakadu** baz=12,SNR=54	**11.84**	**236**	P	**Pn**	**05 24 59.3**	**-2.1**
KDU	**Kakadu**	**11.84**	**236**	P	**Pn**	**05 25 00.0**	**-1.4**
MTSU	**Mount Surprise** baz=12,SNR=4.8	**11.98**	**172**	P	**Pn**	**05 25 05.3**	**+1.9**
SWI	**Sorong** 54nm,0.7s	**12.45**	**295**	P	**Pn**	**05 25 09.7**	**-0.1**
BNDI	**Bandanaira** 180nm,2.3s	**12.70**	**277**	P	**Pn**	**05 25 13.8**	**+0.6**
MTN	**Manton Dam** baz=13,SNR=13	**13.04**	**239**	P	**Pn**	**05 25 15.3**	**-2.6**
MTN	**Manton Dam**	**13.04**	**239**	Pn	**Pn**	**05 25 15.4**	**-2.5**
DRS	**Darwin Rock St** 145nm,0.8s	**13.05**	**241**	P	**Pn**	**05 25 17.8**	**-0.2**
DRS	**Darwin Rock St**	**13.05**	**241**	P	**Pn**	**05 25 18.0**	**0.0**
CTA	**Charters Tower** baz=14	**14.26**	**166**	P	**Pn**	**05 25 36.6**	**+2.0**
CTA	**Charters Tower** 0.5nm,0.3s,baz=340,slow=10,SNR=7.5	**14.26**	**166**	Pn	**P**	**05 25 42.5**	**+1.1**
CTA	0.7nm,0.3s,baz=63,slow=24,SNR=4.9			Lg	Lg	05 29 46.2	
CTA	comp=Z,725nm,21.4s,baz=359,slow=38			LR	LR	05 31 18.9	
QIS	**Mount Isa** baz=15,SNR=7.3	**14.55**	**191**	P	**Pn**	**05 25 37.4**	**-1.0**
QIS	**Mount Isa**	**14.55**	**191**	P	**Pn**	**05 25 37.7**	**-0.7**
WB0	**Warramunga Arr**	**15.64**	**210**	Pn	**Pn**	**05 25 50.8**	**-2.1**
WB0	comp=Z,115nm,0.8s			IAmb	IAmb	05 25 59.8	
WR0	**Warramunga Arr**	**15.73**	**209**	Pn	**Pn**	**05 25 51.4**	**-2.7**
WR0	comp=Z,89nm,0.8s			IAmb	IAmb	05 25 59.7	
WRAB	**Tennant Creek**	**15.80**	**210**	Pn	**Pn**	**05 25 52.4**	**-2.6**
WRAB	**Tennant Creek**	**15.80**	**210**	P	**Pn**	**05 25 52.4**	**-2.6**
WRAB	comp=Z,68nm,1.0s			pmax	pmax		
WB2	**Warramunga Arr**	**15.80**	**210**	Pn	**Pn**	**05 25 52.2**	**-2.8**
WC3	**Warramunga Arr** baz=16	**15.81**	**209**	P	**Pn**	**05 25 53.1**	**-2.1**
WRA	**Warramunga Arr** comp=Z,3.0nm,0.3s,baz=30,slow=14,SNR=34	**15.81**	**210**	Pn	**Pn**	**05 25 51.1**	**-4.1**
WRA	comp=Z,1.9nm,0.3s,baz=31,slow=24,SNR=5.9			Sn	Sn	05 28 39.6	-10
WRA	comp=Z,1.6nm,0.3s,baz=33,slow=31,SNR=3.0			Lg	Lg	05 30 31.4	
KNRA	**Kununurra** baz=16	**16.47**	**234**	P	**Pn**	**05 26 00.8**	**-2.7**
KNRA	**Kununurra**	**16.47**	**234**	Pn	**Pn**	**05 25 59.9**	**-3.7**
KNRA	comp=Z,210nm,0.9s			IAmb	IAmb	05 26 09.8	
SANI	**Sanana**	**17.02**	**283**	P	**P**	**05 26 13.9**	**+1.7**
SANI	**Sanana** comp=Z,51nm,0.8s,comp=Z,594nm	**17.02**	**283**	P	**P**	**05 26 12.0**	**-0.2**
HNR	**Honiara**	**17.53**	**102**		**P**	**05 26 16.8**	**-1.0**
HNR	comp=Z,202nm,0.9s			IAmb	IAmb	05 26 26.3	
HNR	**Honiara**	**17.53**	**102**	P	**P**	**05 26 19.5**	**+1.7**
HNR	**Honiara**	**17.53**	**102**	P	**P**	**05 26 16.8**	**-1.0**
HNR	comp=Z,202nm,0.9s			pmax	pmax		
HNR	**Honiara**	**17.53**	**102**	P	**P**	**05 26 21.3**	**+3.5**
SOEI	**Soe** comp=Z,2µm,0.8s,baz=163,slow=12,SNR=3.0	**18.44**	**258**	P	**P**	**05 26 26.4**	**-1.6**
SOEI	**Soe**	**18.44**	**258**	P	**Pn**	**05 26 31.2**	**+3.0**
SOEI	**Soe** comp=Z,424nm,0.9s,comp=Z,3µm	**18.44**	**258**	P	**Pn**	**05 26 30.3**	**+2.1**
RK1H	**Rockhampton Ha**	**18.72**	**157**	P	**Pn**	**05 26 33.8**	**+2.5**
AS01	**Alice Springs** comp=Z,115nm,0.8s	**19.23**	**205**	P	**P**	**05 26 37.3**	**+0.8**
AS01	**Alice Springs** comp=Z,115nm,0.8s	**19.23**	**205**	P	**Pn**	**05 26 38.1**	**+0.6**
AS31	**Alice Springs**	**19.25**	**205**	P	**Pn**	**05 26 37.6**	**-0.1**
ASAR	**Alice Springs** comp=Z,67nm,0.7s,baz=31,slow=10,SNR=184	**19.25**	**205**	P	**P**	**05 26 36.4**	**-0.3**
ASAR	comp=Z,9.6nm,0.7s,baz=20,slow=27,SNR=5.1			S	**S**	**05 30 04.8**	**-8.3**
ASAR	comp=Z,2µm,21.7s,baz=351,slow=39			LR	LR	05 34 44.8	
ASPA	**Alice Springs** baz=19	**19.25**	**205**	P	**Pn**	**05 26 37.6**	**-0.2**
KMSI	**Cibinong**	**19.72**	**289**	P	Pn	05 26 59.1	+16
MMRI	**Maumere**	**20.28**	**262**	P	**P**	**05 26 46.4**	**-1.6**
MMRI	comp=Z,115nm,1.0s			IAmb	IAmb	05 26 51.9	
FITZ	**Fitzroy Crossi** baz=20,SNR=33	**20.29**	**233**	P	**P**	**05 26 48.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.29**	**233**	P	**P**	**05 26 47.3**	**-0.8**
QLP	**Quilpie** baz=20,SNR=65	**20.32**	**176**	P	Pn	05 26 50.4	-0.1
QLP	**Quilpie**	**20.32**	**176**	P	Pn	05 26 50.0	-0.5
QLP	**Quilpie**	**20.32**	**176**	P	Pn	05 26 51.6	+1.1
LUWI	**Luwuk**	**20.39**	**284**		**P**	**05 26 48.3**	**-0.9**
LUWI	**Luwuk**	**20.39**	**284**	P	Pn	05 26 51.5	+0.2
LUWI	**Luwuk** comp=Z,105nm,0.9s,comp=Z,2µm	**20.39**	**284**	P	Pn	05 26 51.7	+0.4
EIDS	**Eidsvold** baz=21,SNR=15	**20.73**	**158**	P	Pn	05 26 55.1	-0.2
EIDS	**Eidsvold**	**20.73**	**158**	P	Pn	05 26 53.4	-1.8
EIDS	comp=Z,83nm,1.0s			IAmb	IAmb	05 27 01.5	
EIDS	**Eidsvold**	**20.73**	**158**	P	Pn	05 26 55.6	+0.4
EDFI	**Ende, Flores** comp=Z,77nm,0.8s,comp=Z,739nm	**20.83**	**262**	P	**P**	**05 26 52.7**	**-1.4**
INKA	**Innaminka**	**21.48**	**184**	P	**P**	**05 27 03.4**	**+2.6**
BASI	**Baing, Sumba** comp=Z,212nm,1.0s,comp=Z,2µm	**22.10**	**258**	P	**P**	**05 27 08.2**	**+0.6**
BKSI	**Bulukumba** comp=Z,161nm,1.0s,comp=Z,1µm	**22.33**	**271**	P	**P**	**05 27 10.9**	**+0.8**
OOD	**Oodnadatta**	**22.43**	**196**	P	**P**	**05 27 12.7**	**+1.6**
OOD	**Oodnadatta**	**22.43**	**196**	P	**P**	**05 27 13.4**	**+2.3**
KAPI	**Kappang**	**22.72**	**272**	P	**P**	**05 27 13.9**	**-0.4**
KAPI	comp=Z,73nm,1.0s			IAmb	IAmb	05 27 19.9	
KAPI	**Kappang**	**22.72**	**272**	*d* iP	**P**	**05 27 15.1**	**+0.9**
TTSI	**Tana Toraja** comp=Z,83nm,1.1s	**22.87**	**277**	P	**P**	**05 27 19.9**	**+4.1**
TOLI2	**Tolitoli**	**22.91**	**288**	P	**P**	**05 27 15.3**	**-1.0**
TOLI2	**Tolitoli**	**22.91**	**288**	P	**P**	**05 27 18.2**	**+1.9**
WRKA	**Warakurna** baz=23,SNR=47	**23.17**	**215**	P	**P**	**05 27 18.7**	**-0.2**
WRKA	**Warakurna**	**23.17**	**215**	P	**P**	**05 27 18.7**	**-0.2**
WRKA	**Warakurna**	**23.17**	**215**	P	**P**	**05 27 18.9**	**0.0**
MPSI	**Magaga**	**23.52**	**285**	P	P	05 27 34.1	+12
AULRC	**Lightning Ridg**	**23.66**	**168**	P	**P**	**05 27 24.4**	**+0.9**
LCRK	**Leigh Creek**	**24.45**	**189**	P	**P**	**05 27 32.3**	**+1.4**
LCRK	**Leigh Creek**	**24.45**	**189**	P	**P**	**05 27 33.3**	**+2.4**
MULG	**Mulgathing**	**25.24**	**197**	P	**P**	**05 27 40.5**	**+2.5**
MULG	**Mulgathing**	**25.24**	**197**	P	**P**	**05 27 40.6**	**+2.5**
CMSA	**Cobar Meteorol** baz=26,SNR=6.7	**25.37**	**174**	P	**P**	**05 27 41.4**	**+2.2**
CMSA	**Cobar Meteorol**	**25.37**	**174**	P	**P**	**05 27 41.0**	**+1.8**
KOUNC	**Koumac, New Ca**	**25.45**	**126**	P	**P**	**05 27 41.0**	**+1.0**
KOUNC	**Koumac, New Ca**	**25.45**	**126**	P	**P**	**05 27 42.4**	**+2.3**
ARMA	**Armidale** baz=26,SNR=3.7	**25.55**	**162**	P	**P**	**05 27 42.6**	**+1.6**
STKA	**Stephens Creek** baz=26,SNR=12	**25.55**	**182**	P	**P**	**05 27 40.6**	**-0.2**
STKA	**Stephens Creek**	**25.55**	**182**	P	**P**	**05 27 42.2**	**+1.3**
STKA	**Stephens Creek** comp=Z,16nm,0.7s,baz=346,slow=9.2,SNR=16 comp=Z,16nm,0.7s	**25.55**	**182**	P	**P**	**05 27 40.8**	**0.0**
MBWA	**Marble Bar**	**26.63**	**234**	P	**P**	**05 27 50.5**	**-0.2**
MBWA	**Marble Bar**	**26.63**	**234**	P	**P**	**05 27 54.4**	**+3.6**
PSA00	**Pilbara Seismi**	**26.75**	**233**	P	**P**	**05 27 52.0**	**+0.1**
PSA00	**Pilbara Seismi**	**26.75**	**233**	P	**P**	**05 27 50.8**	**-1.1**
PSA00	comp=Z,31nm,0.9s			IAmb	IAmb	05 27 57.1	
PSA00	**Pilbara Seismi**	**26.75**	**233**	P	**P**	**05 27 52.0**	**+0.1**
PSA00	**Pilbara Seismi**	**26.75**	**233**	P	**P**	**05 27 54.6**	**+2.8**
BBOO	**Buckleboo** baz=27,SNR=5.3	**27.15**	**192**	P	**P**	**05 27 57.8**	**+2.5**
BBOO	**Buckleboo**	**27.15**	**192**	P	**P**	**05 27 55.0**	**-0.3**
BBOO	comp=Z,33nm,1.1s			IAmb	IAmb	05 27 59.9	
BBOO	**Buckleboo**	**27.15**	**192**	P	**P**	**05 27 56.9**	**+1.6**
HTT	**Hallett** baz=27,SNR=3.8	**27.30**	**187**	P	**P**	**05 27 58.0**	**+1.3**
DZM	**Mont Dzumac**	**27.96**	**127**	P	**P**	**05 28 03.9**	**+1.2**
FORT	**Forrest** baz=28	**27.97**	**207**	P	**P**	**05 28 03.1**	**+0.4**
FORT	**Forrest**	**27.97**	**207**	P	**P**	**05 28 04.2**	**+1.5**
KPJI	**Karang Pucung**	**33.40**	**266**	P	P	05 29 03.4	+13
CMJI	**Cimerak** comp=Z,35nm,0.9s	**33.88**	**265**	P	**P**	**05 28 55.4**	**+0.4**
CNJI	**Cibinong** comp=Z,22nm,1.0s	**35.18**	**266**	P	**P**	**05 29 05.7**	**-0.6**
YHNB	**Yeheng**	**36.98**	**327**	P	**P**	**05 29 21.0**	**-0.5**
YHNB	comp=Z,26nm,0.8s			IAmb	IAmb	05 29 25.8	
JNU	**Nakatsue** comp=Z,17nm,0.7s,baz=138,slow=3.6,SNR=7.7 comp=Z,17nm,0.7s	**40.65**	**345**	P	**P**	**05 29 50.6**	**-1.6**
QIZ	**Qiongzhong**	**40.83**	**309**	P	**P**	**05 29 53.5**	**-0.4**
QIZ				S	**S**	**05 36 06.0**	**+2.4**
QIZ				SS	**SS**	**05 39 07.0**	**+1.5**
QIZ	comp=Z,300nm,21.9s			LR	LR		
QIZ	comp=Z,270nm,20.2s			LR	LR		
QIZ	comp=Z,470nm,17.7s			LR	LR		
MJAR	**Matsushiro Arr** comp=Z,7.3nm,0.7s,baz=179,slow=8.4,SNR=7.9	**42.72**	**355**	P	**P**	**05 30 07.2**	**-1.9**
MJAR	comp=Z,302nm,18.6s,baz=19,slow=33 comp=Z,7.3nm,0.7s			LR	LR	05 45 54.8	
MAJO	**Matsushiro**	**42.72**	**355**	*i* P	**P**	**05 30 07.0**	**-2.1**
MAJO	comp=Z,27nm,1.7s			pmax	pmax		
NJ2	**Nanjing**	**44.25**	**331**	⇓P	**P**	**05 30 22.5**	**+1.1**
NJ2				sP	**sP**	**05 30 31.5**	**-2.1**
NJ2	comp=Z,24nm,0.7s			pmax	pmax		
NJ2	comp=Z,340nm,3.5s			pmax	pmax		
RPSI	**Rantau Prapat**	**44.45**	**280**	P	**P**	**05 30 22.8**	**-0.6**
PSI	**Prapat**	**44.47**	**280**	P	**P**	**05 30 22.8**	**-0.9**
PSI	comp=Z,19nm,0.9s			pmax	pmax		
TUWZ	**Tuamarina**	**44.85**	**146**	P	**P**	**05 30 25.2**	**-0.9**
WHN	**Wuhan**	**45.44**	**325**	P	P	05 30 35.3	+4.3
KSRS	**Korea Array** comp=Z,11nm,0.9s,baz=163,slow=10.0,SNR=19	**45.53**	**344**	P	**P**	**05 30 30.9**	**-0.6**
KSRS	comp=Z,96nm,22.0s,baz=170,slow=32 comp=Z,11nm,0.9s			LR	LR	05 46 50.3	
JTM	**Tenmabayashi**	**46.78**	**358**	P	**P**	**05 30 39.1**	**-2.2**
GYA	**Guiyang**	**47.59**	**315**	P	**P**	**05 30 49.5**	**+1.5**
GYA				pP	pP	05 30 53.5	-3.2
GYA	comp=Z,14nm,1.1s			pmax	pmax		
ENH	**Enshi**	**48.17**	**321**	P	**P**	**05 30 51.7**	**-0.7**
ENH	comp=Z,16nm,1.0s			IAmb	IAmb	05 30 53.7	
PHRA	**Phrae**	**48.41**	**301**	P	**P**	**05 30 53.1**	**-1.3**
CMAR	**Chiang Mai Arr** comp=Z,3.3nm,0.3s,baz=122,slow=5.6,SNR=17 comp=Z,3.3nm,0.3s	**49.49**	**301**	P	**P**	**05 31 03.8**	**+1.0**
LYN	**LuoYang**	**49.50**	**327**	⇓P	**P**	**05 31 03.3**	**+0.8**
LYN				pP	pP	05 31 06.5	-4.6
LYN				sP	sP	05 31 09.3	-5.4
LYN				S	**S**	**05 38 09.8**	**+1.3**
LYN	comp=Z,65nm,0.7s			pmax	pmax		
LYN	comp=Z,190nm,5.5s			pmax	pmax		
LYN	comp=Z,490nm,16.8s			LR	LR		
LYN	comp=Z,490nm,15.1s			LR	LR		
LYN	comp=Z,690nm,21.3s			LR	LR		
KMI	**Kunming**	**49.69**	**310**	⇑P	**P**	**05 31 06.8**	**+2.4**
KMI	comp=Z,15nm,1.2s			pmax	pmax		
JKA	**Kamikawa-asahi**	**50.09**	**0**	P	**P**	**05 31 06.6**	**-0.2**
JKA	comp=Z,16nm,0.8s			IAmb	IAmb	05 31 07.4	
ASAJ	**Asahikawa**	**50.09**	**0**	P	**P**	**05 31 06.6**	**-0.2**
ASAJ	comp=Z,16nm,0.8s			pmax	pmax		
ASAJ	**Asahikawa** comp=Z,14nm,0.7s,baz=231,slow=13,SNR=11 comp=Z,14nm,0.7s	**50.09**	**0**	P	**P**	**05 31 06.3**	**-0.5**
HNS	**HongShan**	**50.57**	**331**	⇓P	**P**	**05 31 11.0**	**+0.5**
HNS	comp=Z,27nm,1.1s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,17nm,0.7s,baz=182,slow=7.1,SNR=34 comp=Z,17nm,0.7s	**51.07**	**350**	P	**P**	**05 31 14.1**	**-0.1**
USA0B	**Ussuriysk Arra**	**51.07**	**350**	*c* iP	**P**	**05 31 13.8**	**-0.4**
XAN	**Xi'an**	**51.13**	**324**	P	**P**	**05 31 15.5**	**+0.6**
XAN	comp=Z,17nm,0.7s			pmax	pmax		
XAN	comp=Z,520nm,17.3s			LR	LR		
XAN	comp=Z,530nm,17.2s			LR	LR		
XAN	comp=Z,930nm,19.1s			LR	LR		
PZH	**PanZhiHua**	**51.19**	**311**	P	**P**	**05 31 16.8**	**+1.2**
PZH	comp=Z,20nm,1.1s			pmax	pmax		
PZH	comp=Z,80nm,4.1s			pmax	pmax		
MDJ	**Mudanjiang**	**51.92**	**348**	P	**P**	**05 31 20.3**	**-0.2**
MDJ				PcP	**PcP**	**05 32 35.3**	**+2.3**
MDJ				PP	**PP**	**05 33 15.3**	**-3.5**
MDJ				PcS	**PcS**	**05 36 33.0**	**+2.1**
MDJ				S	**S**	**05 38 40.0**	**-1.7**
MDJ				ScS	**ScS**	**05 41 11.3**	**+2.5**
MDJ				SS	**SS**	**05 42 17.0**	**-2.1**
MDJ	comp=Z,15nm,0.9s			pmax	pmax		
MDJ	comp=Z,170nm,7.2s			pmax	pmax		
MDJ	comp=Z,300nm,18.2s			LR	LR		
MDJ	comp=Z,460nm,16.1s			LR	LR		
MDJ	comp=Z,550nm,18.2s			LR	LR		
MDJ	**Mudanjiang**	**51.92**	**348**	P	**P**	**05 31 19.9**	**-0.7**
BJI	**Beijing**	**52.05**	**334**	P	**P**	**05 31 21.5**	**-0.1**
BJI	comp=Z,8.0nm,0.8s			pmax	pmax		
CN2	**Changchun**	**52.12**	**344**	*e* P	**P**	**05 31 21.5**	**-0.6**
CN2				*es* P	pP	05 31 28.5	-2.4
CN2				PcP	**PcP**	**05 32 33.3**	**-0.4**
CN2				*e* S	**S**	**05 38 43.8**	**-0.8**
CN2	comp=Z,10.0nm,0.7s			pmax	pmax		
CN2	comp=Z,160nm,17.0s			LR	LR		
CN2	comp=Z,160nm,17.0s			LR	LR		
CD2	**Chengdu**	**52.33**	**317**	P	**P**	**05 31 25.0**	**+1.1**
CD2				S	**S**	**05 38 51.5**	**+3.6**
CD2	comp=Z,20nm,0.5s			pmax	pmax		
TNCH	**TengChong**	**52.90**	**308**	*e* P	**P**	**05 31 30.3**	**+1.9**
TNCH				pP	pP	05 31 33.3	-3.8
TNCH	comp=Z,40nm,0.5s			pmax	pmax		
YSS	**Yuzh-Sakhalins**	**52.93**	**0**	*e* P	**P**	**05 31 27.6**	**-0.4**
YSS	comp=Z,20nm,1.2s			pmax	pmax		
BNX	**BinXian**	**53.46**	**347**	⇓P	**P**	**05 31 31.8**	**-0.1**
BNX	comp=Z,37nm,0.7s			pmax	pmax		
BNX	comp=Z,170nm,9.2s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**54.79**	**331**	⇑ *i* P	**P**	**05 31 42.8**	**+0.9**
HHC				pP	pP	05 31 45.8	-4.8
HHC				sP	sP	05 31 50.0	-4.2
HHC	comp=Z,19nm,0.7s			pmax	pmax		
HHC	comp=Z,110nm,4.9s			pmax	pmax		
HHC	comp=Z,350nm,15.7s			LR	LR		
HHC	comp=Z,300nm,14.9s			LR	LR		
HHC	comp=Z,470nm,18.4s			LR	LR		
BTO	**Baotou**	**55.35**	**330**	*e* P	**P**	**05 31 47.8**	**+1.9**
BTO				pP	**pP**	**05 31 52.3**	**-2.4**
BTO				sP	**sP**	**05 31 54.8**	**-3.4**
BTO				PP	**PP**	**05 33 53.5**	**+3.6**
BTO	comp=Z,32nm,0.8s			pmax	pmax		
LZH	**Lanzhou**	**55.57**	**322**	*e* P	**P**	**05 31 49.0**	**+1.4**
LZH				sP	pP	05 31 56.5	+0.1
LZH	comp=Z,17nm,1.1s			pmax	pmax		
KLR	**Kul'dur**	**56.01**	**351**	*c* eP	**P**	**05 31 50.1**	**-0.2**
KLR	comp=Z,27nm,1.7s			pmax	pmax		
KLR	**Kul'dur** comp=Z,11nm,0.7s,baz=185,slow=3.9,SNR=52 comp=Z,11nm,0.7s	**56.01**	**351**	P	**P**	**05 31 50.2**	**-0.2**
TYV	**Tymovskoe**	**56.84**	**0**	*e* P	**P**	**05 31 56.3**	**+0.1**
TYV				*es* S	**S**	**05 39 52.9**	**+5.1**
TYV	comp=Z,9.0nm,0.8s			pmax	pmax		
TYV	comp=Z,300nm,4.6s			pmax	pmax		
TYV	comp=N,100nm,6.0s			smax	smax		
TYV	comp=E,200nm,6.0s			smax	smax		
HEH	**HeiHe**	**57.74**	**349**	*e* P	**P**	**05 32 01.8**	**-0.8**
HEH	comp=E,13nm,0.8s			pmax	pmax		
GTA	**Gaotai**	**60.15**	**323**	P	**P**	**05 32 21.0**	**+1.3**
GTA				pP	sP	05 32 30.3	-1.8
GTA	comp=E,9.0nm,0.9s			pmax	pmax		
PEA0B	**Petropavlovsk-**	**60.47**	**10**	*c* eP	**P**	**05 32 21.1**	**-0.4**
PETK	**Petropavlovsk-** comp=E,35nm,0.9s,baz=179,slow=6.8,SNR=26 comp=E,35nm,0.9s	**60.47**	**10**	P	**P**	**05 32 20.9**	**-0.6**
ZEA	**Zeya**	**61.10**	**350**	*e* P	**P**	**05 32 25.7**	**0.0**
ZEA	comp=N,10.0nm,1.2s			pmax	pmax		
ZEA	comp=Z,30nm,0.9s			pmax	pmax		
GOMU	**GeErMu**	**61.46**	**317**	P	**P**	**05 32 31.5**	**+2.5**
GOMU				pP	pP	05 32 35.5	-2.4

MA2	**Magadan**	65.90		5	*ce*P		**P**	05 32 56.1	-1.3	
MA2					pmax		pmax			
	comp=Z,21nm,1.0s									
HYB	**Hyderabad**	67.41	292		*e*P		**P**	05 33 06.9	-1.0	
HYB					*e*PcP		**PcP**	05 33 34.5	-0.8	
HYB					*e*PP		**PP**	05 35 36.2	-0.5	
MOY	**Mondy**	67.71	333		*e*P		**P**	05 33 10.1	+0.9	
MOY					pmax		pmax			
	comp=Z,18nm,1.9s									
BOD	**Bodaibo**	67.87	344		*e*P		**P**	05 33 09.7	-0.2	
BOD					pmax		pmax			
	comp=Z,7.0nm,0.9s									
YAK	**Yakutsk**	68.76	354		*i* P		**P**	05 33 14.8	-0.6	
YAK					pmax		pmax			
	comp=Z,19nm,0.5s									
SEY	**Seymchan**	69.35		5	*i* P		**P**	05 33 18.3	-0.8	
SEY					pmax		pmax			
	comp=Z,8.0nm,0.8s									
WMQ	**Urumqi**	70.11	321		*e*P		**P**	05 33 24.5	+0.2	
WMQ					pP		pP	05 33 30.0	-3.2	
WMQ					pmax		pmax			
	comp=Z,17nm,1.3s									
VNDA	**Vanda**	72.00	176		P		**P**	05 33 36.6	+1.5	
	comp=Z,2.6nm,0.7s,baz=336,slow=6.5,SNR=13									
	comp=Z,2.6nm,0.7s									
DGZ	**Jazzator, Alta**	73.29	326		*i* P		**P**	05 33 43.2	-0.2	
DGZ					pmax		pmax			
	comp=Z,10.0nm,0.8s									
ZSN	**Zaisan**	73.63	323		*e*P		**P**	05 33 45.2	-0.1	
	baz=323									
ZSN	**Zaisan**	73.63	323		*e*P		**P**	05 33 45.1	-0.1	
MKAR	**Makanchi Array**	74.88	322		P		**P**	05 33 53.3	+0.7	
	comp=Z,8.5nm,0.8s,baz=111,slow=6.6,SNR=73									
	comp=Z,8.5nm,0.8s									
MAKZ	**Makanchi**	75.08	322		P		**P**	05 33 53.9	+0.2	
MAKZ	**Makanchi**	75.08	322		P		**P**	05 33 53.9	+0.2	
MAKZ					pmax		pmax			
	comp=Z,11nm,0.9s									
SHLS	**Shalkode**	75.16	318		*e*P		**P**	05 33 52.5	-2.0	
	baz=318									
SHLS	**Shalkode**	75.16	318		*e*P		**P**	05 33 52.4	-2.0	
UZB	**Uzynbulak**	75.45	317		*e*P		**P**	05 33 55.9	-0.3	
	baz=317									
UZB	**Uzynbulak**	75.45	317		*e*P		**P**	05 33 55.8	-0.3	
SATY	**Saty**	75.83	317		*e*P		**P**	05 33 57.6	-0.7	
	baz=317									
SATY	**Saty**	75.83	317		*e*P		**P**	05 33 57.6	-0.7	
BILL	**Bilibino**	75.95		9	*i* P		**P**	05 33 55.8	-2.4	
BILL					pmax		pmax			
	comp=Z,2.0nm,0.9s									
KSH	**Kashi**	76.25	313		P		**P**	05 34 03.0	+2.3	
KSH					pmax		pmax			
	comp=Z,7.0nm,0.8s									
KSH					LR		LR			
	comp=Z,330nm,13.1s									
KSH					LR		LR			
	comp=Z,370nm,15.8s									
KSH					LR		LR			
	comp=Z,280nm,16.1s									
TDK	**Taldyqorghan**	76.59	319		*e*P		**P**	05 34 02.5	0.0	
	baz=319									
TDK	**Taldyqorghan**	76.59	319		*e*P		**P**	05 34 02.4	0.0	
MDOK	**Medeo**	76.79	317		*e*P		**P**	05 34 03.8	0.0	
	baz=317									
MDOK	**Medeo**	76.79	317		*e*P		**P**	05 34 03.8	0.0	
ZALV	**Zalesovo Beam**	76.87	329		P		**P**	05 34 03.1	-0.6	
	comp=Z,3.6nm,0.7s,baz=116,slow=5.4,SNR=16									
	comp=Z,3.6nm,0.7s									
CHKK	**Chushkaly**	77.09	317		*e*P		**P**	05 34 05.1	-0.1	
	baz=317									
CHKK	**Chushkaly**	77.09	317		*e*P		**P**	05 34 05.1	-0.1	
M11K	**Mekoryuk**	77.54	23		P		**P**	05 34 08.3	+1.0	
	baz=233									
KUU	**Kurty**	77.54	317		*e*P		**P**	05 34 07.8	0.0	
	comp=Z,7.6nm,0.8s,baz=317									
KUU	**Kurty**	77.54	317		*e*P		**P**	05 34 07.8	0.0	
KUU					pmax		pmax			
	comp=Z,8.0nm,0.8s									
GAMB	**Gambell**	77.76		19	P		**P**	05 34 09.1	+0.7	
	baz=227									
S14K	**Fog Glacier**	78.14		29	P		**P**	05 34 11.1	+0.2	
	baz=239									
TIXI	**Tiksi**	78.22	356		P		**P**	05 34 09.1	-1.8	
TIXI	**Tiksi**	78.22	356		*ce*P		**P**	05 34 10.1	-0.8	
TIXI					pmax		pmax			
	comp=Z,3.0nm,0.6s									
AAK	**Ala-Archa**	78.36	316		P		**P**	05 34 12.6	0.0	
AAK	**Ala-Archa**	78.36	316		*ce*P		**P**	05 34 13.4	+0.8	
AAK					pmax		pmax			
	comp=Z,3.0nm,1.0s									
M13K	**Dall Lake**	78.70		24	P		**P**	05 34 14.4	+0.7	
	baz=235									
KURK	**Kurchatov**	78.76	324		P		**P**	05 34 13.9	-0.5	
KURK	**Kurchatov**	78.76	324		*ce*P		**P**	05 34 13.6	-0.7	
KURK					pmax		pmax			
	comp=Z,10.0nm,1.0s									
KURBB	**Kurchatov Arra**	78.78	324		P		**P**	05 34 14.8	+0.4	
	comp=Z,4.1nm,0.8s,baz=115,slow=4.5,SNR=32									
	comp=Z,4.1nm,0.8s									
O14K	**Tigyukauivet M**	78.93		26	P		**P**	05 34 15.3	+0.3	
	baz=237									
N14K	**Kuskokwak Cree**	79.11		25	P		**P**	05 34 16.3	+0.3	
	baz=237									
M14K	**Bethel**	79.45		24	P		**P**	05 34 18.3	+0.5	
	baz=236									
L14K	**Kuka Creek**	79.49		24	P		**P**	05 34 18.6	+0.5	
	baz=236									
O15K	**Ungalikthiuk R**	79.51		26	P		**P**	05 34 18.8	+0.6	
	baz=239									
R16K	**Pilot Point**	79.73		28	P		**P**	05 34 20.0	+0.6	
	baz=241									
N15K	**Kwethluk River**	79.92		25	IAmb		IAmb	05 34 22.0		
	comp=Z,26nm,0.9s									
N15K	**Kwethluk River**	79.92		25	P		**P**	05 34 21.2	+0.7	
	baz=238									
M15K	**Kasigluk River**	79.95		25	P		**P**	05 34 21.1	+0.5	
	baz=238									
J14K	**Nanvaranak Lak**	79.96		22	P		**P**	05 34 21.1	+0.5	
	baz=235									
L15K	**Ungalak Mounta**	80.16		24	P		**P**	05 34 22.1	+0.4	
	baz=237									
TNA	**Tin City**	80.17		19	P		**P**	05 34 22.0	+0.4	
	baz=230									
P16K	**Nushagak River**	80.25		27	P		**P**	05 34 22.9	+0.7	
	baz=240									
ANM	**Nome**	80.39		20	P		**P**	05 34 22.4	-0.5	
ANM	**Nome**	80.39		20	P		**P**	05 34 23.3	+0.4	
	baz=233,SNR=5.2									
ANM	**Nome**	80.39		20	P		**P**	05 34 22.4	-0.5	
ANM					pmax		pmax			
	comp=Z,8.0nm,1.0s									
K15K	**Wolf Creek Mou**	80.48		23	IAmb		IAmb	05 34 25.5		
	comp=Z,19nm,0.9s									
K15K	**Wolf Creek Mou**	80.48		23	P		**P**	05 34 24.0	+0.5	
	baz=237									
O16K	**Kokwok River B**	80.49		26	IAmb		IAmb	05 34 24.6		
	comp=Z,23nm,0.9s									
O16K	**Kokwok River B**	80.49		26	P		**P**	05 34 23.7	+0.2	
	baz=240									
F14K	**Arctic Creek**	80.63		19	P		**P**	05 34 24.7	+0.5	
	baz=232									
N16K	**Nishlik Lake**	80.64		25	P		**P**	05 34 25.1	+0.7	
	baz=239									
M16K	**Timber Creek**	80.84		25	IAmb		IAmb	05 34 27.0		
	comp=Z,23nm,0.8s									
M16K	**Timber Creek**	80.84		25	P		**P**	05 34 25.8	+0.4	
	baz=239									
Q17K	**Contact Creek**	80.85		28	P		**P**	05 34 25.1	-0.5	
	baz=242									
L16K	**Owhat River**	80.98		24	IAmb		IAmb	05 34 27.0		
	comp=Z,15nm,0.9s									
L16K	**Owhat River**	80.98		24	P		**P**	05 34 26.5	+0.3	
	baz=239									
O17K	**Koliganek Bris**	81.02		26	P		**P**	05 34 27.0	+0.6	
	baz=241									
G15K	**Niukluk**	81.11		20	P		**P**	05 34 27.1	+0.4	
	baz=234									
SIMJ	**Simiganj**	81.16	311		P		**P**	05 34 27.3	-0.5	
KK31	**Karatay Array**	81.29	315		P		**P**	05 34 28.2	0.0	
KK31	**Karatay Array**	81.29	315		P		**P**	05 34 28.2	0.0	
KK31					pmax		pmax			
	comp=Z,2.0nm,0.8s									
F15K	**North Star Dit**	81.33		19	IAmb		IAmb	05 34 40.4		
	comp=Z,22nm,1.5s									
F15K	**North Star Dit**	81.33		19	P		**P**	05 34 28.4	+0.5	
	baz=233									
N17K	**Nushagak Hills**	81.35		26	IAmb		IAmb	05 34 29.9		
	comp=Z,24nm,0.8s									
N17K	**Nushagak Hills**	81.35		26	P		**P**	05 34 28.9	+0.8	
	baz=241									
J16K	**Anvik River**	81.38		23	IAmb		IAmb	05 34 30.1		
	comp=Z,19nm,0.9s									
J16K	**Anvik River**	81.38		23	P		**P**	05 34 29.1	+0.9	
	baz=237									
H16K	**Elim**	81.53		21	P		**P**	05 34 29.3	+0.4	
	baz=236,SNR=11									
OHAK	**Old Harbor**	81.63		30	P		**P**	05 34 30.3	+0.6	
	baz=245									
M17K	**Holitna River**	81.67		25	P		**P**	05 34 30.5	+0.7	
	baz=240									
I17K	**Unalakleet**	81.67		22	IAmb		IAmb	05 34 31.7		
	comp=Z,20nm,1.1s									
I17K	**Unalakleet**	81.67		22	P		**P**	05 34 30.7	+1.0	
	baz=237,SNR=7.1									
P18K	**Big Mountain,**	81.68		27	P		**P**	05 34 29.4	-0.6	
	baz=243									
L17K	**Donlin**	81.68		24	P		**P**	05 34 30.4	+0.6	
	baz=240									
BRLS	**Boroldav**	81.74	315		*e*P		**P**	05 34 30.2	-0.5	
	baz=315									
BRLS	**Boroldav**	81.74	315		*e*P		**P**	05 34 30.1	-0.5	
G16K	**Koyuk River**	81.92		20	IAmb		IAmb	05 34 32.4		
	comp=Z,12nm,0.9s									
G16K	**Koyuk River**	81.92		20	P		**P**	05 34 31.7	+0.7	
	baz=236									
K17K	**Iditarod**	81.98		24	IAmb		IAmb	05 34 33.1		
	comp=Z,22nm,0.9s									
K17K	**Iditarod**	81.98		24	P		**P**	05 34 32.2	+0.8	
	baz=240									
N18K	**Kilae Creek**	81.98		26	IAmb		IAmb	05 34 33.1		
	comp=Z,18nm,0.9s									
N18K	**Kilae Creek**	81.98		26	P		**P**	05 34 32.0	+0.6	
	baz=242									
BRZS	**Berezniki**	82.02	322		*e*P		**P**	05 34 31.4	-0.5	
	baz=322									
BRZS	**Berezniki**	82.02	322		*e*P		**P**	05 34 31.4	-0.5	
Q19K	**Cape Douglas,**	82.20		28	P		**P**	05 34 33.2	+0.5	
	baz=244									
L18K	**Granite Mounta**	82.38		24	IAmb		IAmb	05 34 36.2		
	comp=Z,16nm,1.1s									
L18K	**Granite Mounta**	82.38		24	P		**P**	05 34 34.5	+1.0	
	baz=241									
M18K	**Stony River**	82.39		25	P		**P**	05 34 34.4	+0.9	
	baz=242									
O19K	**Port Alsworth**	82.45		27	P		**P**	05 34 34.8	+1.0	
	baz=244									
H17K	**Granite Mounta**	82.53		21	IAmb		IAmb	05 34 35.8		
	comp=Z,15nm,0.8s									
H17K	**Granite Mounta**	82.53		21	P		**P**	05 34 34.7	+0.5	
	baz=238									
G17K	**Kiwalik Mounta**	82.57		21	P		**P**	05 34 35.2	+0.8	
	baz=237									
N19K	**Bonanza Creek**	82.66		26	IAmb		IAmb	05 34 36.3		
	comp=Z,19nm,0.9s									
N19K	**Bonanza Creek**	82.66		26	P		**P**	05 34 35.3	+0.2	
	baz=243									
C16K	**Lisburne Hills**	82.67		17	P		**P**	05 34 35.1	+0.3	
	baz=232									
P19K	**Oil Pt**	82.70		27	P		**P**	05 34 34.6	-0.6	
	baz=244									
F17K	**Baldwin Pennin**	82.88		20	P		**P**	05 34 36.3	+0.3	
	baz=236									
J18K	**Innoko River**	82.98		23	P		**P**	05 34 36.9	+0.3	
	baz=241									
TTA	**Tatalina**	83.00		24	P		**P**	05 34 36.9	+0.1	
	baz=242									
D17K	**Noatak River**	83.01		18	P		**P**	05 34 37.1	+0.5	
	baz=235									
E17K	**Hotham Inlet**	83.05		19	P		**P**	05 34 37.4	+0.6	
	baz=236									
L19K	**White Mountain**	83.12		25	IAmb		IAmb	05 34 38.8		
	comp=Z,21nm,1.1s									
L19K	**White Mountain**	83.12		25	P		**P**	05 34 37.8	+0.4	
	baz=243									
M19K	**Big River Lodg**	83.19		25	P		**P**	05 34 38.4	+0.7	
	baz=243									
H18K	**Honhosa River**	83.20		21	P		**P**	05 34 37.7	0.0	
	baz=239									
C17K	**Delong Mountai**	83.43		18	P		**P**	05 34 39.3	+0.4	
	baz=234									
HOM	**Homer**	83.44		28	P		**P**	05 34 39.3	+0.3	
	baz=246									
G18K	**Tagagawik**	83.48		21	IAmb		IAmb	05 34 40.1		
	comp=Z,12nm,0.9s									
G18K	**Tagagawik**	83.48		21	P		**P**	05 34 38.9	-0.2	
	baz=239									
F18K	**Selawik**	83.51		20	P		**P**	05 34 38.8	-0.4	
	baz=238									
GCSA	**Galena City Sc**	83.54		22	P		**P**	05 34 39.4	0.0	
	baz=241,SNR=6.7									
E18K	**Tukpahlearik C**	83.64		19	IAmb		IAmb	05 34 41.3		
	comp=Z,10.0nm,0.8s									
E18K	**Tukpahlearik C**	83.64		19	P		**P**	05 34 40.2	+0.3	
	baz=237,SNR=16									
J19K	**Poorman**	83.66		23	IAmb		IAmb	05 34 41.5		
	comp=Z,9.6nm,0.9s									
J19K	**Poorman**	83.66		23	P		**P**	05 34 40.4	+0.3	
	baz=242,SNR=6.4									
L20K	**Farewell, AK**	83.66		25	P		**P**	05 34 40.3	+0.2	
	baz=244									
M20K	**Styx River**	83.71		25	IAmb		IAmb	05 34 41.7		
	comp=Z,17nm,0.8s									
M20K	**Styx River**	83.71		25	P		**P**	05 34 40.7	+0.2	
	baz=244									
QSPA	**South Pole Qui**	83.76	180		P		**P**	05 34 40.7	-0.1	
QSPA					IAmb		IAmb	05 34 43.7		
	comp=Z,18nm,1.1s									
QSPA	**South Pole Qui**	83.76	180		P		**P**	05 34 41.1	+0.3	
	comp=Z,13nm,0.9s,baz=312,slow=1.6,SNR=26									
	comp=Z,13nm,0.9s									
N20K	**Mount Spurr**	83.82		26	P		**P**	05 34 40.7	-0.4	
	baz=245									
BRSE	**Bradley Lake S**	83.89		28	P		**P**	05 34 41.3	-0.1	
	baz=247									
K20K	**Telida**	83.98		24	IAmb		IAmb	05 34 43.2		
	comp=Z,17nm,0.9s									
K20K	**Telida**	83.98		24	P		**P**	05 34 42.0	+0.2	
	baz=243									
H19K	**Roundabout Mou**	84.08		21	IAmb		IAmb	05 34 44.1		
	comp=Z,16nm,1.0s									
H19K	**Roundabout Mou**	84.08		21	P		**P**	05 34 42.5	+0.3	
	baz=241									
C18K	**Utukok River**	84.13		18	IAmb		IAmb	05 35 34.0		
	comp=Z,27nm,1.8s									
C18K	**Utukok River**	84.13		18	P		**P**	05 34 42.6	+0.1	
	baz=236									
NRIK	**Noril'sk**	84.15	343		*ce*P		**P**	05 34 41.9	-0.5	
NRIK					pmax		pmax			
	comp=Z,21nm,0.9s									
NRIK	**Noril'sk**	84.15	343		P		**P**	05 34 42.5	+0.1	
	comp=Z,20nm,0.9s,baz=119,slow=5.0,SNR=26									
	comp=Z,20nm,0.9s									
G19K	**Purcell Mounta**	84.16		21	IAmb		IAmb	05 34 44.0		
	comp=Z,11nm,1.0s									
G19K	**Purcell Mounta**	84.16		21	P		**P**	05 34 43.0	+0.4	
	baz=240									
F19K	**Shaleruckik Mo**	84.27		20	P		**P**	05 34 43.2	+0.1	
	baz=240									
J20K	**Nowinta River**	84.32		23	IAmb		IAmb	05 34 45.0		
	comp=Z,14nm,0.9s									
J20K	**Nowinta River**	84.32		23	P		**P**	05 34 44.1	+0.7	
	baz=243									
B18K	**Kokolik River**	84.35		17	P		**P**	05 34 44.3	+0.8	
	baz=236									
BVAR	**Borovoye Array**	84.36	325		P		**P**	05 34 44.4	+0.5	
	comp=Z,30nm,0.9s,baz=104,slow=6.3,SNR=84									
	comp=Z,30nm,0.9s									
BRVK	**Borovoye**	84.43	325		P		**P**	05 34 44.4	+0.2	
BRVK	**Borovoye**	84.43	325		*ce*P		**P**	05 34 45.0	+0.8	
BRVK					pmax		pmax			
	comp=Z,26nm,1.0s									
SKT	**Skwentna**	84.44		26	P		**P**	05 34 43.9	-0.3	
	baz=245									
PPLA	**Purkeypile**	84.55		25	P		**P**	05 34 44.1	-0.7	
	baz=245									
SUA	**Susitna One**	84.57		26	P		**P**	05 34 44.0	-0.9	
	baz=247									
SEW	**Seward**	84.63		28	P		**P**	05 34 44.8	-0.2	
	baz=248									
H20K	**Anotleneega Mo**	84.64		22	P		**P**	05 34 45.3	+0.3	
	baz=242,SNR=9.2									
O22K	**Cooper Landing**	84.65		27	P		**P**	05 34 45.1	0.0	
	baz=248									
E19K	**Redstone River**	84.76		20	IAmb		IAmb	05 34 49.9		
	comp=Z,15nm,0.8s									
E19K	**Redstone River**	84.76		20	P		**P**	05 34 45.9	+0.3	
	baz=240									
CAST	**Castle Rocks**	84.81		24	P		**P**	05 34 44.1	-1.9	
CAST					IAmb		IAmb	05 34 46.4		
	comp=Z,11nm,0.9s									
CAST	**Castle Rocks**	84.81		24	P		**P**	05 34 45.3	-0.7	
	baz=245,SNR=7.5									
C19K	**Lookout Ridge**	84.87		18	IAmb		IAmb	05 34 48.8		
	comp=Z,14nm,0.8s									
C19K	**Lookout Ridge**	84.87		18	P		**P**	05 34 46.6	+0.4	
	baz=238,SNR=14									
RC01	**Rabbit Creek A**	84.88		27	P		**P**	05 34 45.6	-0.8	
	baz=248,SNR=6.7									
CHUM	**Lake Minchumin**	84.91		24	P		**P**	05 34 46.4	0.0	
	baz=245,SNR=20									
M22K	**Willow**	84.96		26	P		**P**	05 34 45.6	-1.0	
	baz=247,SNR=5.1									
D19K	**Kuna River**	85.00		19	IAmb		IAmb	05 34 48.9		
	comp=Z,13nm,0.9s									
D19K	**Kuna River**	85.00		19	P		**P**	05 34 47.0	+0.1	
	baz=239,SNR=12									
A19K	**Wainwright**	85.04		17	P		**P**	05 34 47.4	+0.5	
	baz=236									
F20K	**Avaraart Lake**	85.08		20	P		**P**	05 34 47.7	+0.5	
	baz=242									
CUT	**Chulitna**	85.16		26	P		**P**	05 34 47.2	-0.5	
	baz=247									
PMR	**Palmer**	85.34		26	P		**P**	05 34 47.1	-1.5	
PMR	**Palmer**	85.34		26	P		**P**	05 34 47.9	-0.7	
	baz=248,SNR=6.2									
PMR	**Palmer**	85.34		26	P		**P**	05 34 47.1	-1.5	
PMR					pmax		pmax			
	comp=Z,19nm,0.9s									
KTH	**Kantishna Hill**	85.34		24	IAmb		IAmb	05 34 48.6		
	comp=Z,16nm,1.0s									
H21K	**Melozitna Rive**	85.49		22	P		**P**	05 34 49.1	-0.2	
	baz=244									
GHO	**Glory Hole Cre**	85.50		26	IAmb		IAmb	05 34 50.2		
	comp=Z,16nm,0.8s									
E20K	**Nigu River**	85.50		19	P		**P**	05 34 49.6	+0.2	
	baz=241									
BPAW	**Bear Paw Mtn.**	85.54		24	IAmb		IAmb	05 34 50.9		
	comp=Z,24nm,1.6s									
BPAW	**Bear Paw Mtn.**	85.54		24	P		**P**	05 34 48.8	-0.8	
	baz=246									
P23K	**Montague Islan**	85.55		28	P		**P**	05 34 49.4	-0.3	
	baz=250									
TRF	**Thorofare Moun**	85.56		25	P		**P**	05 34 49.3	-0.6	
	baz=247									
KNK	**Knik Glacier**	85.57		27	P		**P**	05 34 49.3	-0.5	
	baz=249,SNR=7.1									
D20K	**Etivluk River**	85.59		19	P		**P**	05 34 49.9	+0.1	
	baz=241,SNR=15									
I21K	**Tanana**	85.59		23	P		**P**	05 34 50.1	+0.3	
	baz=245									
SML	**Sawmill**	85.77		26	P		**P**	05 34 50.4	-0.4	
SML	**Sawmill**	85.77		26	P		**P**	05 34 50.5	-0.4	
	baz=249,SNR=5.1									
Q23K	**Middleton Isla**	85.86		29	P		**P**	05 34 51.3	+0.1	
	baz=251									
F21K	**Alatna River**	85.93		21	P		**P**	05 34 51.6	+0.1	
	baz=244									
GLI	**Glacier Island**	86.00		28	P		**P**	05 34 51.8	-0.2	
	baz=250									
MLY	**Manley**	86.01		23	IAmb		IAmb	05 34 53.2		
	comp=Z,14nm,0.9s									
MLY	**Manley**	86.01		23	P		**P**	05 34 51.7	-0.2	
	baz=246,SNR=14									
M23K	**Glacier View**	86.03		27	P		**P**	05 34 51.5	-0.6	
	baz=249									
WAT1	**Susitna Watana**	86.05		25	P		**P**	05 34 51.5	-0.7	
	baz=248									
H22K	**Ishtalitna Cre**	86.12		22	P		**P**	05 34 52.2	-0.2	
	baz=246									
SCM	**Sheep Creek Mo**	86.23		27	P		**P**	05 34 52.6	-0.6	
	baz=250									
MCK	**McKinley**	86.23		25	P		**P**	05 34 52.0	-1.1	
	baz=248,SNR=12									
WAT6	**Susitna Watana**	86.31		26	P		**P**	05 34 53.0	-0.7	
	baz=249,SNR=5.2									
E21K	**Killik River**	86.32		19	IAmb		IAmb	05 34 55.4		
	comp=Z,8.7nm,0.8s									
E21K	**Killik River**	86.32		19	P		**P**	05 34 53.5	+0.1	
	baz=243									
C21K	**Knifeblade Rid**	86.39		19	P		**P**	05 34 54.2	+0.5	
	baz=242									
NEA2	**Nenana**	86.50		24	P		**P**	05 34 54.1	-0.2	
	baz=248									
G22K	**Bettles**	86.50		21	P		**P**	05 34 54.1	-0.1	
	baz=246									
I23K	**Minto, Yukon-K**	86.59		23	IAmb		IAmb	05 38 09.9		
	comp=Z,35nm,1.9s									
I23K	**Minto, Yukon-K**	86.59		23	P		**P**	05 34 54.5	-0.2	
	baz=248									
DHY	**Denali Highway**	86.64		25	P		**P**	05 34 55.0	-0.3	
	baz=250,SNR=12									
KLU	**Klutina**	86.74		27	IAmb		IAmb	05 35 23.2		
	comp=Z,18nm,1.2s									
KLU	**Klutina**	86.74		27	P		**P**	05 34 55.4	-0.3	
	baz=251									
M24K	**Tolsona, Glenn**	86.83		26	P		**P**	05 34 56.1	0.0	

baz=253
D24K **Happy Valley** 88.32 19 P P 05 35 03.5 +0.6
baz=248,SNR=25
L26K **Log Cabin Wild** 88.36 26 IAmb IAmb 05 35 04.3
comp=Z,10nm,0.8s
L26K **Log Cabin Wild** 88.36 26 P P 05 35 03.4 0.0
baz=253,SNR=5.7
SCRK **Sand Creek** 88.37 25 P P 05 35 03.4 -0.1
baz=252
G25K **Bearman Lake** 88.42 22 P P 05 35 04.1 +0.6
baz=250
C24K **Franklin Bluff** 88.57 19 P P 05 35 04.8 +0.6
baz=248
CTG **Chitna Glacier** 88.70 28 P P 05 35 05.6 +0.4
baz=255,SNR=5.1
J26L **Joseph Creek** 88.71 25 IAmb IAmb 05 35 06.0
comp=Z,13nm,0.9s
J26L **Joseph Creek** 88.71 25 P P 05 35 05.2 +0.1
baz=253,SNR=11
M27K **Edge Creek, AK** 88.83 27 P P 05 35 05.9 +0.2
baz=254
F25K **Christian Rive** 88.87 21 P P 05 35 06.4 +0.7
baz=251
PINM **Pinnacle** 89.00 29 P P 05 35 07.1 +0.6
baz=256
L27K **Beaver Creek,** 89.04 26 IAmb IAmb 05 35 08.0
comp=Z,10nm,0.9s
L27K **Beaver Creek,** 89.04 26 P P 05 35 07.1 +0.5
baz=254
E25K **Arctic Village** 89.07 21 IAmb IAmb 05 35 08.5
comp=Z,10nm,0.9s
E25K **Arctic Village** 89.07 21 P P 05 35 07.3 +0.7
baz=251,SNR=7.8
I26K **Coal Creek Min** 89.11 24 P P 05 35 06.3 -0.5
baz=253
D25K **Kavik River** 89.19 20 P P 05 35 07.4 +0.2
baz=250,SNR=5.4
K27K **Chicken** 89.19 25 P P 05 35 08.2 +1.0
baz=254
BVCY **Beaver Creek** 89.30 27 P P 05 35 08.2 +0.4
baz=255,SNR=5.4
PNL **Peninsula** 89.32 30 P P 05 35 08.3 +0.4
baz=257
YUK3 **Moose Creek** 89.32 28 P P 05 35 08.2 +0.1
baz=256,SNR=5.8
G26K **Porcupine Rive** 89.35 22 P P 05 35 08.7 +0.8
baz=253
F26K **Sheenjek River** 89.44 21 P P 05 35 09.1 +0.7
baz=252
EGAK **Eagle** 89.78 25 IAmb IAmb 05 35 11.0
comp=Z,11nm,0.8s
EGAK **Eagle** 89.78 25 P P 05 35 10.0 0.0
baz=255,SNR=8.9
I27K **Kandik River** 89.81 24 P P 05 35 10.7 +0.6
baz=255,SNR=15
O29M **Mount Kennedy** 89.87 29 P P 05 35 11.0 +0.4
baz=257
H27K **Steamboat Moun** 90.01 23 P P 05 35 11.9 +0.8
baz=255
YUK4 **Talbot Arm** 90.06 28 P P 05 35 12.2 +0.6
baz=257,SNR=6.1
YUK5 **Outpost Mounta** 90.11 29 P P 05 35 12.0 +0.1
baz=258
P29M **Windy Craggy** 90.13 30 P P 05 35 12.3 +0.6
baz=258
DAWY **Dawson** 90.35 25 IAmb IAmb 05 35 14.1
comp=Z,13nm,0.9s
DAWY **Dawson** 90.35 25 P P 05 35 13.1 +0.4
baz=257,SNR=7.8
M29M **Somme Creek** 90.39 27 IAmb IAmb 05 35 14.3
comp=Z,12nm,0.8s
M29M **Somme Creek** 90.39 27 P P 05 35 13.4 +0.4
baz=258
I28M **Miner Creek** 90.45 24 IAmb IAmb 05 35 17.3
comp=Z,8.7nm,1.0s
I28M **Miner Creek** 90.45 24 P P 05 35 13.4 +0.2
baz=256
HYT **Haines Junctio** 90.50 29 IAmb IAmb 05 35 14.9
comp=Z,9.7nm,0.8s
HYT **Haines Junctio** 90.50 29 P P 05 35 13.7 +0.2
baz=258
L29M **L29M** 90.68 27 P P 05 35 14.9 +0.6
baz=258
J29N **Klondike Camp** 90.93 25 IAmb IAmb 05 35 27.7
comp=Z,35nm,1.8s
J29N **Klondike Camp** 90.93 25 P P 05 35 16.1 +0.7
baz=258
F28M **Old Crow** 90.99 22 P P 05 35 15.9 +0.3
baz=256
K29M **Barlow Dome** 91.10 26 IAmb IAmb 05 35 17.8
comp=Z,11nm,0.8s
K29M **Barlow Dome** 91.10 26 P P 05 35 16.7 +0.4
baz=258
O30N **Mendenhall** 91.16 29 P P 05 35 16.6 0.0
baz=260
M30M **Minto, Yukon** 91.17 27 P P 05 35 16.6 +0.1
baz=259
H29M **Whitestone** 91.25 23 P P 05 35 17.4 +0.6
baz=258
S32K **Killisnoo** 91.36 32 P P 05 35 18.0 +0.5
baz=261
R32K **Eaglecrest** 91.52 32 P P 05 35 18.2 0.0
baz=261
WHY **Whitehorse** 91.73 29 P P 05 35 19.9 +0.6
baz=261
J30M **Hart River** 91.76 25 IAmb IAmb 05 35 20.8
comp=Z,7.5nm,0.9s
J30M **Hart River** 91.76 25 P P 05 35 19.6 +0.3
baz=259
MAYO **Mayo, Yukon** 91.77 26 P P 05 35 20.2 +0.9
baz=260
ARU **Arti** 91.80 326 P P 05 35 17.9 -1.5
ARU IAmb IAmb 05 35 19.3
comp=Z,8.2nm,1.0s
ARU **Arti** 91.80 326 *c iP* P 05 35 18.0 -1.5
ARU 05 38 57.0
ARU S **SKSac** 05 45 50.5 +0.2
ARU SS **SS** 05 52 21.9 -4.8
ARU pmax pmax
comp=Z,9.0nm,1.0s
I30M **Mount Dempster** 91.86 25 IAmb IAmb 05 35 25.2
comp=Z,11nm,1.2s
I30M **Mount Dempster** 91.86 25 P P 05 35 19.9 +0.1
baz=259
EPYK **Eagle Plains** 91.94 23 IAmb IAmb 05 35 21.3
comp=Z,7.0nm,0.8s
EPYK **Eagle Plains** 91.94 23 P P 05 35 20.4 +0.4
baz=259
U33K **Whale Pass** 91.95 34 P P 05 35 21.0 +0.8
baz=262
M31M **Drury Creek, Y** 92.21 28 P P 05 35 22.1 +0.8
baz=261
G30M **tAoh Zraii Nji** 92.25 23 IAmb IAmb 05 35 50.6
comp=Z,9.7nm,1.2s
G30M **tAoh Zraii Nji** 92.25 23 P P 05 35 21.6 +0.2
baz=260
F30M **Barrier River** 92.52 22 P P 05 35 23.2 +0.6
baz=260
P33M **Teslin, Yukon** 92.67 30 P P 05 35 24.1 +0.5
baz=262
FARO **Faro, Yukon** 92.70 28 P P 05 35 24.2 +0.6
baz=262
Q32M **Nakina River** 92.79 31 P P 05 35 24.4 +0.1
baz=263
ELIB **Princess Elisa** 92.82 196 *d*P P 05 35 25.2 +1.0
comp=Z,4.0nm,1.2s
G31M **Satah River** 92.99 23 P P 05 35 25.3 +0.6
baz=261
S34M **Telegraph Cree** 93.26 32 P P 05 35 26.4 +0.2
baz=264
INK **Inuvik** 93.48 22 P P 05 35 26.7 -0.2
baz=262
INK **Inuvik** 93.48 22 P P 05 35 27.1 +0.1
comp=Z,0.9nm,0.8s,baz=248,slow=4.2,SNR=2.5
comp=Z,0.9nm,0.8s
R33M **Jennings River** 93.50 31 P P 05 35 27.8 +0.3
baz=264
T35M **Bob Quinn** 93.63 33 P P 05 35 28.2 +0.2
baz=264
U35K **Hyder** 93.65 34 P P 05 35 28.1 +0.1
baz=264
PINE **Pine Mountain** 98.96 47 P Pdif 05 35 53.0 +0.2
NVAR **Mina Array Bea** 100.99 52 P **Pdif** 05 36 02.5 +0.6
comp=Z,1.0nm,0.7s,baz=268,slow=4.7,SNR=8.1
YKA **Yellowknife Ar** 101.41 28 P **Pdif** 05 36 02.3 -0.6
comp=Z,0.6nm,0.8s,baz=279,slow=5.0,SNR=6.3
YKA PKKPbc **PKKPbc** 05 52 12.1 -2.0
comp=Z,0.2nm,0.7s,baz=91,slow=2.8,SNR=5.0

OBN **Obninsk** 104.19 325 *i* P **Pdif** 05 36 15.6 +0.2
OBN pmax pmax
comp=Z,5.0nm,0.9s
TXAR **Lajitas Array** 113.73 61 PKKPab PKKPab 05 51 43.1 +2.2
comp=Z,0.6nm,0.9s,baz=122,slow=3.3,SNR=5.5
FRB **Frobisher Bay** 118.35 15 PKP **PKPdf** 05 40 57.0 -1.7
comp=Z,1.3nm,0.8s,baz=45,slow=2.9,SNR=3.6
MIAR **Mount Ida** 121.20 53 P **PKPdf** 05 41 03.5 -1.7
baz=285
PLCA **Paso Flores** 124.27 150 PKP **PKiKP** 05 41 12.0 +0.7
comp=Z,2.2nm,1.1s,baz=222,slow=2.6,SNR=3.7
TORD **Torodi Ar. Bea** 140.84 283 PKhKP PKPpre 05 41 37.0
comp=Z,0.6nm,0.8s,baz=61,slow=3.4,SNR=3.9
TORD PKP **PKPdf** 05 41 42.5 -0.2
comp=Z,1.2nm,0.8s,baz=89,slow=3.4,SNR=6.4
CPUP **Villa Florida** 142.34 150 PKP **PKPdf** 05 41 44.5 -0.7
comp=Z,3.2nm,0.9s,baz=194,slow=4.2,SNR=3.2
ETMB **Extrema** 147.22 119 PKPbc **PKPab** 05 41 56.2 -1.6
KIC **Kosan Boka** 147.49 272 *e*PKIKP **PKPab** 05 42 00.0 +1.0
comp=Z,20nm,0.9s
DBIC **Dimbokro** 147.61 273 PKPbc **PKiKP** 05 41 57.9 -1.4
comp=Z,8.1nm,0.9s,baz=102,slow=6.9,SNR=8.3
LIC **Lamto** 147.77 272 *e*PKIKP **PKPab** 05 41 59.8 -0.3
comp=Z,28nm,0.8s
TIC **Toumodi** 147.77 273 *e*PKIKP **PKPab** 05 42 00.1 0.0
comp=Z,16nm,0.5s
BDFB **Brasilia** 155.90 154 PKPab **PKPab** 05 42 35.9 +2.2
comp=Z,2.7nm,0.7s,baz=180,slow=2.0,SNR=4.9

*IDC **28** 05:27:17.8±0.9,5˚.89S×142˚.87E, h0km, mb4.1/7, mbtmp4.3/9, ML3.4/2, Error ellipse: s-maj=38.6km s-min=21.7km az=59.0*
*NEIC **28** 05:27:20.0±0.5, 6˚.0S±0˚.1×142˚.7E±0˚.1, h10km±1km, mb4.6/16, Error ellipse: s-maj=21.4km s-min=15.8km az=37.0*
ISC 28 05:27:19.7±0.7,**6˚.04S**±0˚.10×**142˚.71E**±0˚.09,**h10**km,**n27,**
σ0s**89**/28,**mb4.5**/14,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.54**	**127**	Pn	**Pn**	**05 28 42.8**	**+0.6**
PMG	**Port Moresby**	**5.54**	**127**	Pn	**Pn**	**05 28 43.1**	**+0.8**
	15nm,0.3s,baz=358,slow=3.6,SNR=10						
PMG				Sn	**Sn**	**05 29 45.8**	**-0.2**
	24nm,0.3s,baz=234,slow=22,SNR=8.2						
	53nm,0.4s						
FAKI	**Fak Fak**	**10.88**	**286**	Pn	**Pn**	**05 29 55.5**	**-0.1**
WRAB	**Tennant Creek**	**16.03**	**210**	Pn	**Pn**	**05 31 05.6**	**+0.1**
WRA	**Warramunga Arr**	**16.04**	**210**	Pn	**Pn**	**05 31 03.2**	**-2.4**
	3.1nm,0.3s,baz=24,slow=12,SNR=6.4						
WRA				Lg	Lg	05 35 49.8	
	0.9nm,0.3s,baz=32,slow=26,SNR=2.9						
AS31	**Alice Springs**	**19.47**	**205**	P	**P**	**05 31 47.0**	**+0.1**
ASAR	**Alice Springs**	**19.47**	**205**	P	**P**	**05 31 47.7**	**+0.8**
	0.9nm,0.3s,baz=35,slow=9.1,SNR=3.0						
	22nm,0.8s						
EIDS	**Eidsvold**	**20.83**	**158**	P	**P**	**05 32 01.7**	**+0.1**
EIDS				IAmb	IAmb	05 32 16.7	
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	**25.73**	**182**	P	**P**	**05 32 49.7**	**-0.8**
PSA00	**Pilbara Seismi**	**26.98**	**233**	P	**P**	**05 33 03.3**	**+1.3**
PSA00				IAmb	IAmb	05 33 10.0	
	comp=Z,21nm,1.5s						
CMAR	**Chiang Mai Arr**	**49.55**	**300**	P	**P**	**05 36 12.5**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=97,slow=7.4,SNR=1.8						
	comp=Z,1.5nm,0.3s						
MKAR	**Makanchi Array**	**74.85**	**322**	P	**P**	**05 39 00.7**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=112,slow=8.1,SNR=4.8						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**76.81**	**329**	P	**P**	**05 39 10.0**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=134,slow=6.2,SNR=1.8						
	comp=Z,0.5nm,0.5s						
BOOM	**Boomskoye usch**	**77.30**	**316**	P	**P**	**05 39 14.8**	**0.0**
KURBB	**Kurchatov Arra**	**78.73**	**324**	P	**P**	**05 39 21.4**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=124,slow=5.0,SNR=1.7						
	comp=Z,0.3nm,0.5s						
O16K	**Kokwok River B**	**80.26**	**26**	P	**P**	**05 39 29.5**	**-1.0**
F15K	**North Star Dit**	**81.11**	**19**	P	**P**	**05 39 35.6**	**+0.6**
F15K				IAmb	IAmb	05 39 54.5	
	comp=Z,3.9nm,1.2s						
H17K	**Granite Mounta**	**82.31**	**21**	P	**P**	**05 39 41.2**	**-0.1**
H17K				IAmb	IAmb	05 39 59.2	
	comp=Z,6.2nm,1.1s						
QSPA	**South Pole Qui**	**83.93**	**180**	P	**P**	**05 39 49.5**	**-0.5**
QSPA	**South Pole Qui**	**83.93**	**180**	P	**P**	**05 39 50.1**	**+0.2**
	comp=Z,9.0nm,1.2s,baz=305,slow=1.3,SNR=7.3						
	comp=Z,9.0nm,1.2s						
BVAR	**Borovoye Array**	**84.31**	**325**	P	**P**	**05 39 52.1**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=123,slow=5.3,SNR=7.3						
	comp=Z,2.6nm,0.6s						
E19K	**Redstone River**	**84.55**	**20**	P	**P**	**05 39 52.6**	**-0.2**
E19K				IAmb	IAmb	05 40 19.7	
	comp=Z,4.0nm,1.1s						
D19K	**Kuna River**	**84.79**	**19**	P	**P**	**05 39 53.5**	**-0.6**
D19K				IAmb	IAmb	05 40 10.6	
	comp=Z,8.9nm,1.4s						
E22K	**Anaktuvuk Pass**	**86.69**	**20**	P	**P**	**05 40 03.3**	**-0.2**
E22K				IAmb	IAmb	05 40 12.5	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**87.22**	**24**	P	**P**	**05 40 04.3**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=259,slow=4.8,SNR=11						
	comp=Z,0.9nm,0.6s						
BARN	**Barnard Glacie**	**88.35**	**28**	P	**P**	**05 40 11.7**	**-0.1**
K29M	**Barlow Dome**	**90.88**	**26**	P	**P**	**05 40 23.4**	**-0.1**
K29M				IAmb	IAmb	05 40 32.6	
	comp=Z,2.7nm,1.1s						

IDC 28 05:38:16.4±19.0,**23˚.41S**×**179˚.60E**,**h663**km±205km,
mb2.9/4,**mbtmp4.0**/4, **Error ellipse: s-maj=162.3km s-min=32.8km az=56.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.11**	**270**	P	P	05 43 44.9	+0.2
	2.8nm,0.6s,baz=100,slow=12,SNR=5.3						
	2.8nm,0.6s						
ASAR	**Alice Springs**	**41.76**	**260**	P	P	05 45 11.3	+0.1
	0.7nm,0.5s,baz=97,slow=6.9,SNR=6.5						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**42.08**	**266**	P	P	05 45 13.7	0.0
	0.8nm,0.4s,baz=104,slow=8.4,SNR=31						
	0.8nm,0.4s						
QSPA	**South Pole Qui**	**66.67**	**180**	P	P	05 48 04.0	+0.2
	1.2nm,0.6s,baz=240,slow=0.9,SNR=13						
	1.2nm,0.6s						
HFS	**Hagfors**	**142.00**	**349**	PKP	PKPdf	05 56 32.8	-1.7
	4.7nm,1.8s,baz=72,slow=4.7,SNR=8.9						
AKASG	**Malin Array Be**	**144.36**	**327**	PKP	PKPdf	05 56 38.6	-0.3
	0.3nm,0.3s,baz=42,slow=4.0,SNR=3.3						

*TEH **28** 05:43:19.9, 34˚.88N×45˚.87E, h9km, ML2.3*
*ISN **28** 05:43:22.4±1.1, 34˚.83N×45˚.72E, h7km±18km, ML2.5*
ISC 28 05:43:20.8±1.1,**34˚.86N**±0˚.05×**45˚.85E**±0˚.04,**h10**km,**n9,**
σ0s**89**/12,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.41**	**212**	Pg	**Pg**	**05 43 28.2**	**-0.7**
KGS1				Sg	**Sb**	**05 43 36.0**	**-0.6**
IDHR	**Dehrash**	**0.47**	**110**	Pg	**Pg**	**05 43 29.2**	**-0.8**
IGHG	**Ghaleghazi**	**0.79**	**132**	Pg	**Pg**	**05 43 35.7**	**-0.4**
ILIN	**Lien**	**0.91**	**86**	Pg	**Pg**	**05 43 37.8**	**-0.6**
KCHF	**Cheshme Sefid,**	**1.14**	**120**	Pg	**Pb**	**05 43 42.3**	**-0.4**
ILBA	**Ilam Banvizeh**	**1.27**	**166**	Pg	**Pn**	**05 43 43.8**	**-0.8**
IKRK	**Kirkuk**	**1.35**	**294**	*e*Pg	**Pb**	**05 43 46.0**	**-0.2**
	baz=117						
IKRK				*e*Sg	**Sg**	**05 44 05.0**	**+0.7**
IBZA	**Bozab**	**1.70**	**103**	Pg	**Pn**	**05 43 52.2**	**+1.5**
IBDR	**Badra**	**1.75**	**178**	*e*Pn	**Pg**	**05 43 55.0**	**+0.7**
IBDR				*e*Sn	**Sg**	**05 44 18.0**	**+1.1**
IBDR				AML	AML	05 44 19.4	
	comp=N,74nm,0.4s						
IBDR				AML	AML	05 44 22.2	
	comp=E,48nm,0.5s						

IDC 28 05:43:57.1±1.9,**5˚.85S**×**142˚.34E**,**h0**km,**mb3.8**/2,
mbtmp3.8/4,**ML3.7**/2,**Error ellipse: s-maj=137.9km s-min=34.6km az=114.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.02**	**208**	Pn	Pn	05 47 42.4	-1.6
	0.2nm,0.3s,baz=29,slow=14,SNR=4.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**19.48**	**204**	P	Pn	05 48 27.8	+0.8
	0.7nm,0.3s,baz=32,slow=9.9,SNR=47						
	6.5nm,0.7s						
QSPA	**South Pole Qui**	**84.11**	**180**	P	P	05 56 28.8	-1.1
	1.3nm,1.0s,baz=340,slow=7.1,SNR=2.0						
	1.3nm,1.0s						
ILAR	**Eielson Array**	**87.20**	**24**	P	P	05 56 45.4	+0.3
	0.4nm,0.9s,baz=235,slow=4.3,SNR=2.5						
	0.4nm,0.9s						

IDC 28 05:51:53.6±7.9,**61˚.20S**×**159˚.22E**,**h0**km,**mb4.2**/3,
mbtmp4.1/4,**ML3.1**/1,**MS4.0**/22,**Error ellipse: s-maj=329.1km s-min=31.6km az=79.0,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**16.42**	**178**	Pn	P	05 55 47.1	-0.7
	0.1nm,0.3s,baz=0.1,slow=12,SNR=4.8						
	4.3nm,1.1s						
RPZ	**Rata Peaks**	**18.89**	**27**	LR	LR	06 02 46.5	
	comp=Z,691nm,18.1s,baz=198,slow=35						
URZ	**Urewera**	**25.54**	**34**	LR	LR	06 06 31.3	
	comp=Z,379nm,18.1s,baz=301,slow=34						
QSPA	**South Pole Qui**	**28.89**	**180**	LR	LR	06 08 53.6	
	comp=Z,241nm,19.4s,baz=21,slow=35						
STKA	**Stephens Creek**	**31.52**	**330**	LR	LR	06 08 54.9	
	comp=Z,598nm,18.8s,baz=89,slow=32						
RAO	**Raoul Island**	**35.39**	**36**	LR	LR	06 11 09.8	
	comp=Z,198nm,20.9s,baz=132,slow=33						
MAW	**Mawson**	**38.03**	**218**	LR	LR	06 15 21.4	
	comp=Z,402nm,18.2s,baz=106,slow=37						
NWAO	**Narrogin (SRO)**	**39.10**	**297**	LR	LR	06 12 38.6	
	comp=Z,309nm,19.6s,baz=49,slow=32						
ASAR	**Alice Springs**	**41.36**	**324**	P	P	05 59 41.9	+0.7
	3.7nm,1.1s,baz=156,slow=7.7,SNR=11						
	3.7nm,1.1s						
WRA	**Warramunga Arr**	**44.77**	**326**	P	P	06 00 08.1	-0.7
	3.7nm,1.2s,baz=166,slow=6.4,SNR=5.1						
	3.7nm,1.2s						
SNAA	**Sanae**	**46.82**	**188**	LR	LR	06 21 32.2	
	comp=Z,145nm,18.6s,baz=37,slow=38						
RAR	**Rarotonga**	**49.03**	**54**	LR	LR	06 17 50.3	
	comp=Z,98nm,19.8s,baz=236,slow=32						
PMSA	**Palmer Station**	**50.25**	**158**	LR	LR	06 18 58.6	
	comp=Z,163nm,20.7s,baz=198,slow=32						
HNR	**Honiara**	**51.67**	**1**	LR	LR	06 17 52.6	
	comp=Z,3μm,21.0s,baz=72,slow=30						
PPT	**Papeete**	**56.50**	**63**	LR	LR	06 19 33.1	
	comp=Z,104nm,20.3s,baz=216,slow=29						
LEM	**Lembang**	**66.30**	**302**	LR	LR	06 27 29.4	
	comp=Z,115nm,21.2s,baz=152,slow=32						
RPN	**Rapa Nui**	**67.30**	**105**	LR	LR	06 24 53.2	
	comp=Z,84nm,18.1s,baz=158,slow=29						
PLCA	**Paso Flores**	**70.66**	**142**	LR	LR	06 27 13.2	
	comp=Z,88nm,18.9s,baz=178,slow=30						
BOSA	**Boshof**	**83.03**	**220**	P	P	06 04 19.9	-0.9
	2.9nm,0.9s,baz=150,slow=8.1,SNR=3.1						
	2.9nm,0.9s						
LBTB	**Lobatse**	**86.28**	**221**	LR	LR	06 40 56.3	
	comp=Z,70nm,18.3s,baz=144,slow=34						
LVC	**Limon Verde**	**87.94**	**136**	LR	LR	06 35 04.1	
	comp=Z,63nm,21.1s,baz=198,slow=30						
PALK	**Pallekele**	**90.83**	**284**	LR	LR	06 37 25.5	
	comp=Z,93nm,20.6s,baz=239,slow=30						
CMAR	**Chiang Mai Arr**	**92.72**	**304**	LR	LR	06 45 10.6	
	comp=Z,40nm,19.3s,baz=160,slow=34						
TSUM	**Tsumeb**	**94.17**	**216**	LR	LR	06 46 53.6	
	comp=Z,106nm,18.9s,baz=148,slow=35						
NNA	**Nana**	**94.81**	**125**	LR	LR	06 39 06.1	
	comp=Z,54nm,19.3s,baz=192,slow=30						
SIV	**San Ignacio**	**96.64**	**141**	LR	LR	06 48 04.4	
	comp=Z,52nm,18.4s,baz=108,slow=35						
MJAR	**Matsushiro Arr**	**98.90**	**343**	LR	LR	06 48 21.6	
	comp=Z,35nm,19.6s,baz=195,slow=34						

*IDC **28** 05:59:51.4±4.3,3˚.08S×131˚.20E, h0km, mb3.4/2, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=296.5km s-min=30.8km az=72.0*
*DJA **28** 05:59:54.3±0.7,3˚.5S±5˚×13˚.1E±˚, h12km±7km, M3.1/6, MLv3.1/6*
ISC 28 05:59:56.6±1.2,**3˚.18S**±0˚.08×**130˚.8E**±0˚.1,**h35**km,**n6,**
σ1s**36**/6,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.49**	**80**	P	**Pn**	**06 00 21.2**	**+0.4**
BNDI	**Bandanaira**	**1.60**	**213**	P	**Pn**	**06 00 22.4**	**0.0**
SWI	**Sorong**	**2.35**	**12**	P	**Pn**	**06 00 31.9**	**-0.8**
WRA	**Warramunga Arr**	**17.02**	**169**	P	**Pn**	**06 03 50.3**	**-1.7**
	0.1nm,0.3s,baz=350,slow=11,SNR=1.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**20.59**	**172**	P	**P**	**06 04 33.0**	**+0.2**
	1.1nm,0.3s,baz=350,slow=11,SNR=19						
	1.1nm,0.3s						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**06 10 37.7**	**+1.3**
	0.1nm,0.4s,baz=125,slow=7.6,SNR=2.0						
	0.1nm,0.4s						

*NEIC **28** 06:04:21.7±0.7, 36˚.435N±0˚.010×98˚.82W±0˚.03, h10km±8km, Error ellipse: s-maj=3.3km s-min=1.4km az=99.0*
TUL 28 06:04:21.9±0.8,**36˚.46N**±0˚.02×**98˚.81W**±0˚.03,**h5**km±4km,
ML2.8, mb_Lg2.9/87(NEIC),**ML3.0**/14(NEIC),**Error ellipse: s-maj=3.2km s-min=1.7km az=120.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK038	**West end E0370**	**0.06**	**68**	Pg	Pg	06 04 23.8	+0.4
OK038				IAML		06 04 25.5	
	12μm,0.1s						
U32A	**Winter Ranch,**	**0.17**	**244**		Pg	06 04 25.5	+0.1
U32A				Sg	Sg	06 04 28.0	+0.3
U32A				IAML		06 04 29.0	
	comp=E,4μm,0.2s						
U32A				IAML		06 04 29.0	
	comp=N,3μm,0.3s						
OK035	**E0210 Rd and N**	**0.26**	**17**	Pg	Pg	06 04 27.5	+0.5
OK035				Sg	Sg	06 04 31.5	+1.0
OK035				IAML		06 04 36.3	
	comp=N,2μm,0.4s						
OK032	**Salt Plains WL**	**0.59**	**54**		Pg	06 04 33.4	+0.1
OK032				IAML		06 04 53.7	
	comp=N,781nm,0.2s						
ELIS	**Ellis County**	**0.63**	**232**		Pg	06 04 33.9	-0.1
ELIS				IAML		06 04 52.1	
	comp=E,788nm,0.3s						
CROK	**Carrier**	**0.67**	**86**	Pg	Pg	06 04 34.7	0.0
CROK				Sg	Sg	06 04 43.7	+0.3
CROK				IAML		06 04 51.4	
	comp=N,796nm,0.3s						
CROK				IAML		06 04 52.8	
	comp=E,529nm,0.3s						
CSTR	**Hydro, Custer**	**0.81**	**173**	Pg	Pg	06 04 37.4	-0.2
KAN14	**Manchester OK**	**0.84**	**53**		Pg	06 04 38.0	-0.1
GC02	**Grant County #**	**0.86**	**62**	Pg	Pg	06 04 38.1	-0.2
KAN10	**Anthony SW Sta**	**0.88**	**40**		Pg	06 04 39.1	+0.4
KAN05	**Bluff City Nor**	**0.99**	**49**		Pg	06 04 40.9	-0.1
KAN08	**Anthony NE Sta**	**1.02**	**41**	Pg	Pg	06 04 41.3	-0.2
KAN17	**Caldwell West**	**1.02**	**55**	Pg	Pg	06 04 41.2	-0.3
KAN12	**Harper NE Stat**	**1.06**	**38**	Pg	Pg	06 04 42.0	-0.2
KAN06	**Argonia West S**	**1.10**	**44**		Pg	06 04 42.6	-0.3
KAN09	**Caldwell North**	**1.17**	**54**		Pg	06 04 44.1	-0.3
KAN13	**South Haven SW**	**1.20**	**62**		Pg	06 04 44.3	-0.7
OK029	**Liberty Lake**	**1.28**	**121**		Pg	06 04 45.6	-0.8
BLOK	**Blackwell**	**1.32**	**76**		Pn	06 04 46.7	-0.3
ADOK	**Arcadia Dam**	**1.41**	**124**		Pn	06 04 47.8	-0.5
OK048	**Pawnee Station**	**1.50**	**91**		Pn	06 04 49.8	+0.3
OKCSW	**OKLAHOMA CITY**	**1.53**	**133**		Pn	06 04 49.7	-0.2
FNO	**Franklin**	**1.66**	**136**		Pn	06 04 51.9	+0.3
OK052	**Battle Ridge R**	**1.69**	**105**	Pg	Pn	06 04 52.7	+0.7
WMOK	**Wichita Mounta**	**1.71**	**179**		Pn	06 04 52.1	-0.4
SMWD	**Samnorwood**	**1.78**	**221**	Pn	Pn	06 04 53.8	+0.3
SMWD				IAmb_Lg		06 05 18.6	
	comp=Z,71nm,0.8s						
T35A	**Sooner Cattle**	**1.90**	**75**	IAmb_Lg		06 05 22.9	
	comp=Z,45nm,1.0s						
R32A	**Long Quarter,**	**1.96**	**2**	Pn	Pn	06 04 56.9	+1.0
DEOK	**Depew**	**1.97**	**107**		Pn	06 04 56.3	+0.4
X34A	**Smith Ranch, M**	**2.02**	**156**		Pb	06 04 58.0	-1.0
X34A				IAmb_Lg		06 05 30.1	

	comp=Z,72nm,0.7s						
W35A	**Tecumseh**	**2.04**	**129**	Pn	Pn	06 04 57.4	+0.5
CBKS	**Cedar Bluff**	**2.47**	**343**	Pn	Pb	06 05 05.0	-1.8
CBKS				lAmb_Lg		06 05 45.6	
	comp=Z,43nm,1.0s						
TUL3	**Leonard**	**2.50**	**102**	Pn	Pn	06 05 03.6	+0.3
WTFS	**Witchita Falls**	**2.70**	**174**		Pn	06 05 07.1	+1.2
AMTX	**Amarillo**	**2.82**	**237**		Pn	06 05 09.4	+1.7
KSU1	**Kansas State U**	**3.16**	**33**	Pn	Pn	06 05 12.6	+0.3
RTBA	**Rita Blanca**	**3.17**	**271**	Pn	Pn	06 05 12.9	+0.4
DKNS	**Dickens**	**3.28**	**213**		Pn	06 05 15.6	+1.6
APMT	**Aspermont**	**3.31**	**199**		Pn	06 05 15.1	+0.7
APMT				lAmb_Lg		06 06 15.2	
	comp=Z,24nm,0.8s						
U38A	**Gravette**	**3.56**	**89**	lAmb_Lg		06 06 20.3	
	comp=Z,34nm,0.8s						
FW06	**Azle**	**3.63**	**163**	lAmb_Lg		06 06 24.0	
	comp=Z,19nm,0.7s						
SN07	**Snyder 07**	**3.77**	**208**		Pn	06 05 23.2	+2.5
SN07				lAmb_Lg		06 06 27.9	
	comp=Z,32nm,0.8s						
ABTX	**Abilene, Hawle**	**3.89**	**190**	lAmb_Lg		06 06 25.6	
	comp=Z,22nm,0.8s						
SN05	**Snyder 5**	**3.96**	**206**	lAmb_Lg		06 06 29.8	
	comp=Z,30nm,0.7s						
POST	**Post**	**4.04**	**214**	lAmb_Lg		06 06 35.7	
	comp=Z,21nm,0.7s						
MSTX	**Muleshoe**	**4.09**	**234**	lAmb_Lg		06 06 34.7	
	comp=Z,22nm,0.9s						
FW14	**Alvarado**	**4.26**	**161**	lAmb_Lg		06 06 45.3	
	comp=Z,21nm,1.2s						
FW16	**Waxahatchie**	**4.27**	**158**	lAmb_Lg		06 06 47.9	
	comp=Z,19nm,0.7s						
TREL	**Terrell**	**4.34**	**148**	lAmb_Lg		06 06 50.1	
	comp=Z,26nm,0.7s						
Z38A	**Mt. Pleasant**	**4.48**	**134**	lAmb_Lg		06 06 49.2	
	comp=Z,19nm,0.8s						
S39A	**Bolivar**	**4.56**	**73**	lAmb_Lg		06 06 51.1	
	comp=Z,19nm,0.8s						
MIAR	**Mount Ida**	**4.67**	**113**	lAmb_Lg		06 06 58.8	
	comp=Z,18nm,0.8s						
OGNE	**Ogallala**	**5.14**	**332**	lAmb_Lg		06 07 12.6	
	comp=Z,20nm,0.8s						
P38A	**Dawn**	**5.23**	**51**		Pn	06 05 42.0	+1.2
P38A				lAmb_Lg		06 07 22.9	
	comp=Z,15nm,0.9s						
X40A	**Basin Creek Fa**	**5.26**	**110**	lAmb_Lg		06 07 19.7	
	comp=Z,12nm,0.8s						
MGMO	**Mountain Grove**	**5.29**	**81**	lAmb_Lg		06 07 14.9	
	comp=Z,18nm,1.0s						
WHAR	**Wooly Hollow**	**5.42**	**100**	lAmb_Lg		06 07 24.2	
	comp=Z,17nm,0.8s						
WLAR	**White Oak Lake**	**5.43**	**119**	lAmb_Lg		06 07 22.5	
	comp=Z,23nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.44**	**94**	lAmb_Lg		06 07 16.2	
	comp=Z,15nm,0.7s						
R40A	**Maddies Statio**	**5.52**	**69**	lAmb_Lg		06 07 23.0	
	comp=Z,15nm,0.8s						
UALR	**University of**	**5.53**	**106**	lAmb_Lg		06 07 24.1	
	comp=Z,13nm,0.8s						
Q24A	**Divide**	**5.62**	**298**	lAmb_Lg		06 07 23.4	
	comp=Z,16nm,0.7s						
435B	**Jarrell**	**5.75**	**169**	lAmb_Lg		06 07 24.6	
	comp=Z,19nm,0.8s						
OZNA	**Ozona**	**5.85**	**200**	Pn	Pn	06 05 49.7	+0.4
P40A	**Paris**	**6.16**	**58**	lAmb_Lg		06 07 45.7	
	comp=Z,15nm,0.7s						
LCAR	**Lake Charles**	**6.20**	**91**	lAmb_Lg		06 07 38.6	
	comp=Z,19nm,1.0s						
CCM	**Cathedral Cave**	**6.24**	**73**	lAmb_Lg		06 07 43.7	
	comp=Z,18nm,0.8s						
K30B	**Basset**	**6.24**	**355**	lAmb_Lg		06 07 45.4	
	comp=Z,20nm,0.7s						
FVM	**French Village**	**6.86**	**75**	lAmb_Lg		06 07 59.9	
	comp=Z,12nm,0.7s						
SCIA	**State Center**	**6.96**	**37**	lAmb_Lg		06 08 09.9	
	comp=Z,17nm,0.7s						
Y22D	**IRIS PASSCAL I**	**7.05**	**253**	lAmb_Lg		06 08 18.7	
	comp=Z,16nm,0.9s						
PHWY	**Pilot Hill**	**7.09**	**315**	lAmb_Lg		06 08 10.2	
	comp=Z,11nm,0.9s						
143A	**Socs Landing,**	**7.16**	**119**	lAmb_Lg		06 08 16.6	
	comp=Z,13nm,1.0s						
K38A	**Parkersburg**	**7.74**	**35**	lAmb_Lg		06 08 35.7	
	comp=Z,14nm,0.8s						
K22A	**Casper**	**8.59**	**318**	lAmb_Lg		06 09 07.2	
	comp=Z,6.9nm,0.8s						
JFWS	**Jewell Farm**	**9.22**	**43**	lAmb_Lg		06 09 33.9	
	comp=Z,9.3nm,0.7s						
TEIG	**Tepich**	**18.62**	**147**	lAmb_Lg		06 07 40.1	
	comp=Z,16nm,1.2s						

IDC 28 06:09:32.2±3.1, 54°41N×86°99E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=28.0km s-min=17.4km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**251**	I	I	06 18 00.0	
	baz=71,slow=334,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.36**	**251**	Pg	Pg	06 09 55.8	-2.4
	1.5nm,0.3s,baz=68,slow=9.4,SNR=12						
ZALV				Lg	Lg	06 10 15.4	
	0.9nm,0.3s,baz=66,slow=25,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.41**	**237**	Pn	Pn	06 11 09.3	+1.5
	0.1nm,0.3s,baz=55,slow=14,SNR=4.8						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**8.19**	**203**	Pn	Pn	06 11 33.4	+1.1
	0.1nm,0.3s,baz=24,slow=13,SNR=7.4						
MKAR				Sn	Sn	06 13 04.6	-0.9
	baz=23,slow=27,SNR=2.3						
MKAR				Lg	Lg	06 13 52.9	
	baz=25,slow=25,SNR=2.0						
	0.2nm,0.3s						

WEL 28 06:14:02.1±0.9, 38°S±7°×18°0W±°, h33km, M3.3/12, ML3.6/15, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=17.4, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.35**	**275**	P	Pn	06 14 24.4	-0.1
WMGZ				S	Sn	06 14 42.2	+0.9
PUZ	**Puketiti**	**1.47**	**265**	P	Pn	06 14 26.0	-0.2
PUZ				S	Sn	06 14 45.1	+0.8
MXZ	**Matakaoa Point**	**1.48**	**285**	P	Pn	06 14 26.0	-0.4
MXZ				S	Sn	06 14 44.4	-0.1
CNGZ	**Carnagh Statio**	**1.59**	**250**	P	Pn	06 14 28.3	+0.5
PKGZ	**Pakihiroa**	**1.61**	**272**	P	Pn	06 14 28.0	-0.2
PKGZ				S	Sn	06 14 48.8	+0.9
TWGZ	**Tauwhareparae**	**1.69**	**262**	P	Pn	06 14 29.5	+0.2
TWGZ				S	Sn	06 14 51.7	+1.7
HAZ	**Te Kaha**	**1.85**	**275**	P	Pn	06 14 31.3	-0.1
HAZ				S	Sn	06 14 53.6	-0.1
RUGZ	**Raukumara Rang**	**1.92**	**269**	P	Pn	06 14 32.2	-0.4
RIGZ	**Rimuhau**	**1.99**	**247**	P	Pn	06 14 33.9	+0.4
RIGZ				S	Sn	06 14 58.1	+0.8
PRGZ	**Paritu Road**	**2.00**	**240**	P	Pn	06 14 34.2	+0.7
MWZ	**Matawai**	**2.07**	**259**	P	Pn	06 14 34.4	-0.2
MWZ				S	Sn	06 14 59.3	+0.1
MHGZ	**Mahia Peninsul**	**2.10**	**235**	P	Pn	06 14 35.0	0.0
KNZ	**Kokohu**	**2.19**	**240**	P	Pn	06 14 36.0	-0.1
SNGZ	**Shannon Statio**	**2.33**	**248**	P	Pn	06 14 38.5	+0.4
SNGZ				S	Sn	06 15 07.4	+1.8
URZ	**Urewera**	**2.38**	**262**	P	Pn	06 14 39.2	+0.4
URZ				S	Sn	06 15 07.6	+0.7
RTZ	**Ruatahuna**	**2.55**	**254**	P	Pn	06 14 41.9	+0.8
RTZ				S	Sn	06 15 12.7	+1.6
MARZ	**Manawahe**	**2.71**	**268**	P	Pn	06 14 43.6	+0.3
MTHZ	**Maungataniwha**	**2.72**	**250**	P	Pn	06 14 44.1	+0.6
MTHZ				S	Sn	06 15 10.2	-5.0
ARHZ	**Aropaoanui**	**2.77**	**241**	P	Pn	06 14 44.8	+0.8
NMHZ	**Naumai**	**2.83**	**245**	P	Pn	06 14 45.3	+0.3
TARZ	**Mount Tarawera**	**2.86**	**263**	P	Pn	06 14 46.0	+0.6
TARZ				S	Sn	06 15 19.0	+0.3
MCHZ	**McNeill Hill**	**3.06**	**240**	P	Pn	06 14 49.4	+1.4
BKZ	**Black Stump Fm**	**3.08**	**246**	P	Pn	06 14 48.8	+0.3
BKZ				S	Sn	06 15 25.5	+1.3
KAHZ	**Kahuranaki**	**3.12**	**233**	P	Pn	06 14 48.9	-0.1
KWHZ	**Kaweka Forest**	**3.24**	**242**	P	Pn	06 14 50.9	+0.3
KRHZ	**Kereru**	**3.37**	**239**	P	Pn	06 14 53.1	+0.6
BHHZ	**Black Hill Sta**	**3.52**	**243**	P	Pn	06 14 54.1	-0.3
PNHZ	**Pukenui**	**3.62**	**236**	P	Pn	06 14 56.7	+0.8
TMVZ	**Te Maari**	**3.64**	**250**	P	Pn	06 14 56.5	+0.3
ETVZ	**East Tongariro**	**3.65**	**250**	P	Pn	06 14 56.7	+0.5
NTVZ	**North Tongarir**	**3.66**	**250**	P	Pn	06 14 56.8	+0.4
OTVZ	**Oturere**	**3.69**	**249**	P	Pn	06 14 57.1	+0.3
MOVZ	**Moawhango**	**3.71**	**246**	P	Pn	06 14 58.8	+1.8
NNVZ	**North Ngauruho**	**3.71**	**250**	P	Pn	06 14 58.9	+1.6
WNVZ	**Wahianoa**	**3.79**	**247**	P	Pn	06 14 58.6	+0.3
DVHZ	**Dannevirke**	**3.86**	**231**	P	Pn	06 14 58.8	-0.3
DVHZ				S	Sn	06 15 40.9	-2.4
MKAZ	**Moumakai**	**4.02**	**281**	P	Pn	06 15 01.1	-0.2
BFZ	**Birch Farm**	**4.05**	**226**	P	Pn	06 14 59.5	-2.2
MRZ	**Mangatainoka R**	**4.43**	**231**	P	Pn	06 15 05.1	-1.9
MRZ				S	Sn	06 15 55.0	-2.5
CTZ	**Chatham Island**	**6.29**	**158**	P	Pn	06 15 32.8	+0.4
CTZ				S	Sn	06 16 37.8	-5.3

*IDC **28** 06:15:10.3±3.8, 6°.79S×129°.85E, h127km±34km, mb4.3/13, mbtmp4.8/15, Error ellipse: s-maj=26.5km s-min=11.3km az=63.0*

*DJA **28** 06:15:14.4±0.2, 7°S±2°×13°0E±°, h155km±3km, M4.8/35, mB5.3/19, mb4.9/35, MLv5.3/13, Mw(mB)4.7/19*

*NEIC **28** 06:15:14.8±2.2, 6°.85S±0°.07×129°.75E±0°.07, h163km±7km, mb4.7/33, Error ellipse: s-maj=10.6km s-min=9.4km az=198.0*

ISC 28 06:15:14.6±0.3, 6°.96S±0°.05×129°.74E±0°.05, h163km, n167, σ1§54/174, mb4.6/32, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.85**	**123**	Pn	**Pn**	**06 15 51.0**	**+2.1**
SAUI	**Saumlaki**	**1.85**	**123**	P	**Pn**	**06 15 51.4**	**+2.5**
SAUI	**Saumlaki**	**1.85**	**123**	P	**Pn**	**06 15 51.0**	**+2.1**
BNDI	**Bandanaira**	**2.43**	**4**	P	**Pn**	**06 15 56.5**	**+0.9**
BNDI	**Bandanaira**	**2.43**	**4**	P	**Pn**	**06 15 55.7**	**+0.1**
NLAI	**Namlea**	**4.54**	**324**	P	**Pn**	**06 16 22.3**	**+0.1**
FAKI	**Fak Fak**	**4.73**	**32**	Pn	**Pn**	**06 16 22.4**	**-2.4**
FAKI	**Fak Fak**	**4.73**	**32**	P	**Pn**	**06 16 22.3**	**-2.4**
DRS	**Darwin Rock St**	**5.55**	**168**	P	**Pn**	**06 16 36.3**	**+0.7**
MTN	**Manton Dam**	**6.00**	**167**	P	**Pn**	**06 16 42.0**	**+0.4**
	baz=6.0,SNR=243						
MTN	**Manton Dam**	**6.00**	**167**	Pn	**Pn**	**06 16 42.0**	**+0.4**
MTN	**Manton Dam**	**6.00**	**167**	P	**Pn**	**06 16 41.8**	**+0.2**
SOEI	**Soe**	**6.09**	**242**	Pn	**Pn**	**06 16 42.9**	**+0.1**
SOEI	**Soe**	**6.09**	**242**	P	**Pn**	**06 16 42.8**	**+0.1**
SOEI	**Soe**	**6.09**	**242**	P	**Pn**	**06 16 42.8**	**+0.1**
	576nm,0.8s,4μm3.7nm						
SANI	**Sanana**	**6.15**	**322**	P	**Pn**	**06 16 44.4**	**+0.9**
SANI	**Sanana**	**6.15**	**322**	P	**Pn**	**06 16 43.2**	**-0.3**
	229nm,0.9s,2μm0.7nm						
SWI	**Sorong**	**6.24**	**14**	P	**Pn**	**06 16 41.7**	**-3.0**
	135nm,0.5s,6μm1.2nm						
KDU	**Kakadu**	**6.29**	**155**	P	**Pn**	**06 16 45.6**	**+0.2**
	baz=6.3,SNR=1000						
KDU	**Kakadu**	**6.29**	**155**	P	**Pn**	**06 16 45.5**	**+0.2**
LBMI	**Labuha**	**6.67**	**340**	P	**Pn**	**06 16 50.7**	**+0.3**
	1μm,0.9s,11μm3.8nm						
TNTI	**Ternate**	**8.04**	**343**		**Pn**	**06 17 07.7**	**-0.9**
TNTI	**Ternate**	**8.04**	**343**	P	**Pn**	**06 17 08.0**	**-0.6**
	115nm,0.9s						
EDFI	**Ende, Flores**	**8.17**	**257**	P	**Pn**	**06 17 10.2**	**-0.2**
	75nm,0.6s,838nm						
KNRA	**Kununurra**	**8.72**	**186**	P	**Pn**	**06 17 16.5**	**-1.0**
	baz=8.7						
KNRA	**Kununurra**	**8.72**	**186**	Pn	**Pn**	**06 17 16.6**	**-1.0**
KNRA	**Kununurra**	**8.72**	**186**	P	**Pn**	**06 17 16.5**	**-1.0**
LUWI	**Luwuk**	**9.10**	**310**	Pn	**Pn**	**06 17 23.7**	**+1.0**
LUWI	**Luwuk**	**9.10**	**310**	P	**Pn**	**06 17 24.3**	**+1.6**
	64nm,1.1s,2μm						
KMSI	**Cibinong**	**9.44**	**322**	P	**Pn**	**06 17 26.8**	**-0.3**
	277nm,1.3s						
BASI	**Baing, Sumba**	**9.62**	**250**	P	**Pn**	**06 17 27.5**	**-2.0**
	275nm,0.7s,3μm						
BKSI	**Bulukumba**	**9.70**	**279**	P	**Pn**	**06 17 30.5**	**-0.1**
	22nm,0.6s						
KAPI	**Kappang**	**10.12**	**280**	Pn	**Pn**	**06 17 36.3**	**+0.2**
MRSI	**Marisa**	**10.73**	**313**	P	**Pn**	**06 17 45.9**	**+1.8**
	138nm,0.9s,1μm						
GENI	**Genyem**	**11.26**	**68**	P	**Pn**	**06 17 53.7**	**+2.7**
	64nm,1.3s,5μm						
FITZ	**Fitzroy Crossi**	**11.77**	**199**	P	**Pn**	**06 17 55.1**	**-2.5**
	baz=12,SNR=163						
FITZ	**Fitzroy Crossi**	**11.77**	**199**	Pn	**Pn**	**06 17 55.5**	**-2.2**
PLAI	**Plampang**	**12.00**	**260**	P	**Pn**	**06 17 58.7**	**-1.9**
PLAI	**Plampang**	**12.00**	**260**	P	**Pn**	**06 17 58.4**	**-2.2**
	100nm,0.5s,1μm						
TOLI2	**Tolitoli**	**12.01**	**312**	Pn	**Pn**	**06 18 00.4**	**-0.3**
MPSI	**Mapaga**	**12.21**	**306**	P	**Pn**	**06 18 04.9**	**+1.6**
	9.1nm,0.8s						
TWSI	**Taliwang, Sumb**	**12.86**	**261**	P	**Pn**	**06 18 09.6**	**-2.1**
	44nm,0.8s,928nm						
WB0	**Warramunga Arr**	**13.51**	**161**	Pn	**Pn**	**06 18 17.9**	**-2.0**
WRAB	**Tennant Creek**	**13.65**	**161**		**Pn**	**06 18 19.8**	**-1.9**
WRA	**Warramunga Arr**	**13.65**	**161**	P	**Pn**	**06 18 19.2**	**-2.6**
	47nm,0.4s,baz=341,slow=13,SNR=268						
WRA				S	Sn	06 20 45.0	-8.4
	77nm,0.7s,baz=338,slow=22,SNR=9.3						
WB2	**Warramunga Arr**	**13.66**	**161**	P	**Pn**	**06 18 19.6**	**-2.2**
	baz=14						
WB2	**Warramunga Arr**	**13.66**	**161**	Pn	**Pn**	**06 18 19.6**	**-2.2**
WR0	**Warramunga Arr**	**13.74**	**161**	Pn	**Pn**	**06 18 20.8**	**-2.0**
SRBI	**Singaraja**	**14.45**	**265**	P	**Pn**	**06 18 31.2**	**-0.5**
	41nm,1.0s						
COEN	**Coen**	**14.92**	**119**	P	**Pn**	**06 18 37.4**	**-0.2**
	baz=15,SNR=27						
COEN	**Coen**	**14.92**	**119**	Pn	**Pn**	**06 18 36.8**	**-0.8**
ABJI	**Asem Bagus**	**15.40**	**266**	P	**Pn**	**06 18 42.7**	**-0.8**
	40nm,0.6s						
JAGI	**Jajag, Banyuwa**	**15.52**	**263**	Pn	**Pn**	**06 18 42.9**	**-2.1**
JAGI				lAmb	lAmb	06 18 45.9	
	comp=Z,34nm,0.6s						
JAGI	**Jajag, Banyuwa**	**15.52**	**263**	P	**Pn**	**06 18 44.2**	**-0.8**
JAGI	**Jajag, Banyuwa**	**15.52**	**263**	P	**Pn**	**06 18 42.9**	**-2.1**
	comp=Z,44nm,0.6s						
BLJI	**Banyuglugur**	**16.03**	**266**	P	**Pn**	**06 18 50.6**	**-0.7**
	comp=Z,73nm,0.9s						
QIS	**Mount Isa**	**16.55**	**146**	P	**P**	**06 18 57.8**	**+0.6**
	baz=17,SNR=81						
QIS	**Mount Isa**	**16.55**	**146**	P	**P**	**06 18 58.0**	**+0.7**
AS31	**Alice Springs**	**17.09**	**167**		**P**	**06 19 04.7**	**+1.6**
AS31				lAmb	lAmb	06 19 06.5	
	comp=Z,30nm,0.7s						
ASAR	**Alice Springs**	**17.09**	**167**	P	**P**	**06 19 04.0**	**+0.9**
	comp=Z,86nm,0.8s,baz=351,slow=12,SNR=453						
ASAR				S	**S**	**06 22 07.8**	**-5.2**
	comp=Z,7.9nm,0.7s,baz=356,slow=27,SNR=6.0						
ASPA	**Alice Springs**	**17.09**	**167**	P	**P**	**06 19 04.7**	**+1.6**
	baz=17						
AS01	**Alice Springs**	**17.09**	**167**	P	**P**	**06 19 04.7**	**+1.5**
MBWA	**Marble Bar**	**17.12**	**213**		**P**	**06 19 03.9**	**+0.5**
MBWA				lAmb	lAmb	06 19 21.3	
	comp=Z,36nm,1.0s						
MBWA	**Marble Bar**	**17.12**	**213**	P	**P**	**06 19 04.8**	**+1.4**
PSA00	**Pilbara Seismi**	**17.39**	**212**	P	**P**	**06 19 06.8**	**+0.4**
PSA00	**Pilbara Seismi**	**17.39**	**212**	P	**P**	**06 19 07.1**	**+0.7**
PSA00				lAmb	lAmb	06 19 08.6	
	comp=Z,22nm,0.9s						
PSA00	**Pilbara Seismi**	**17.39**	**212**	P	**P**	**06 19 08.2**	**+1.8**
PMG	**Port Moresby**	**17.41**	**99**	Pn	**P**	**06 19 07.5**	**+0.8**
PMG				lAmb	lAmb	06 19 30.5	
	comp=Z,18nm,0.7s						
PMG	**Port Moresby**	**17.41**	**99**	P	**P**	**06 19 07.5**	**+0.8**
	comp=Z,4.5nm,0.3s,baz=291,slow=8.6,SNR=1.3						
PMG				S	**S**	**06 22 16.2**	**-3.5**
	comp=Z,5.7nm,0.3s,baz=11,slow=23,SNR=6.1						
PWJI	**Pagerwojo**	**17.82**	**265**	P	**P**	**06 19 11.0**	**-0.1**
	comp=Z,36nm,0.7s						
WRKA	**Warakurna**	**18.03**	**184**	P	**P**	**06 19 14.9**	**+1.5**
	baz=18,SNR=209						
WRKA	**Warakurna**	**18.03**	**184**	P	**P**	**06 19 15.5**	**+2.1**
MTSU	**Mount Surprise**	**18.03**	**129**	P	**Pn**	**06 19 16.1**	**+0.8**
	baz=18,SNR=16						
UGM	**Wanagama**	**19.08**	**266**	P	**P**	**06 19 25.4**	**+0.4**
UGM				lAmb	lAmb	06 19 40.2	
	comp=Z,28nm,0.8s						
UGM	**Wanagama**	**19.08**	**266**	P	**Pn**	**06 19 26.7**	**-0.9**
SBUM	**Sibu**	**19.83**	**298**		**P**	**06 19 33.8**	**+0.8**
SBUM				lAmb	lAmb	06 19 35.7	
	comp=Z,27nm,0.6s						
KPJI	**Karang Pucung**	**20.65**	**268**	P	**P**	**06 19 40.3**	**-1.5**
	comp=Z,38nm,0.8s						
CTA	**Charters Tower**	**20.66**	**131**	P	**P**	**06 19 43.2**	**+1.4**
	baz=21						
CTA	**Charters Tower**	**20.66**	**131**	P	**P**	**06 19 40.1**	**-1.7**
	comp=Z,2.8nm,0.7s,baz=252,slow=6.4,SNR=1.9						
CTA				S	**S**	**06 23 20.1**	**-3.7**
	comp=Z,2.4nm,0.5s,baz=278,slow=15,SNR=1.3						
CTAO	**Charters Tower**	**20.66**	**131**	P	**P**	**06 19 41.0**	**-0.8**
CTAO				lAmb	lAmb	06 20 17.8	
	comp=Z,22nm,1.1s						
CMJI	**Cimerak**	**21.13**	**266**	P	**P**	**06 19 48.3**	**+1.4**
	comp=Z,37nm,0.7s						
OOD	**Oodnadatta**	**21.48**	**165**	P	**P**	**06 19 51.5**	**+1.1**
GIRL	**Giralia**	**21.59**	**222**	P	**P**	**06 19 52.9**	**+1.2**
	baz=22,SNR=6.8						
GIRL	**Giralia**	**21.59**	**222**	P	**P**	**06 19 53.2**	**+1.4**
GIRL	**Giralia**	**21.59**	**222**	P	**P**	**06 19 51.9**	**+0.1**
BBJI	**Bungbulang**	**21.92**	**267**	P	**P**	**06 19 55.6**	**+0.3**
LEM	**Lembang**	**21.96**	**269**	P	**P**	**06 19 54.9**	**-1.0**
	comp=Z,39nm,0.6s,baz=65,slow=10,SNR=5.8						
	comp=Z,39nm,0.6s						
MEEK	**Meekatharra**	**22.25**	**207**	P	**P**	**06 19 59.0**	**+0.6**
	baz=22,SNR=8.6						
MEEK	**Meekatharra**	**22.25**	**207**	P	**P**	**06 19 59.0**	**+0.6**
CNJI	**Cibinong**	**22.44**	**268**	P	**P**	**06 19 58.8**	**-1.5**
	comp=Z,70nm,1.1s						
INKA	**Innaminka**	**23.15**	**155**	P	**P**	**06 20 09.8**	**+3.1**
MULG	**Mulgathing**	**23.55**	**171**	P	**P**	**06 20 11.9**	**+1.6**
FORT	**Forrest**	**23.75**	**184**	P	**P**	**06 20 13.6**	**+1.5**
	baz=24,SNR=20						
FORT	**Forrest**	**23.75**	**184**	P	**P**	**06 20 14.2**	**+2.2**
FORT	**Forrest**	**23.75**	**184**	P	**P**	**06 20 15.1**	**+3.0**
QLP	**Quilpie**	**23.90**	**146**	P	**P**	**06 20 16.9**	**+3.4**
LCRK	**Leigh Creek**	**24.68**	**162**	P	**P**	**06 20 23.1**	**+2.5**
KMBL	**Kambalda**	**25.37**	**196**	P	**P**	**06 20 28.3**	**+1.5**
	baz=25,SNR=9.3						
KMBL	**Kambalda**	**25.37**	**196**	P	**P**	**06 20 27.9**	**+1.1**
MORW	**Morawa**	**25.51**	**209**	P	**P**	**06 20 28.8**	**+0.7**
	baz=26,SNR=4.0						
MORW	**Morawa**	**25.51**	**209**	P	**P**	**06 20 29.1**	**+1.0**
MORW				lAmb	lAmb	06 21 07.0	
	comp=Z,35nm,1.4s						
MORW	**Morawa**	**25.51**	**209**	P	**P**	**06 20 28.8**	**+0.7**
BBOO	**Buckleboo**	**26.38**	**168**	P	**P**	**06 20 37.2**	**+1.3**
	baz=26,SNR=12						
BBOO	**Buckleboo**	**26.38**	**168**	P	**P**	**06 20 36.6**	**+0.8**
BBOO	**Buckleboo**	**26.38**	**168**	P	**P**	**06 20 37.2**	**+1.3**
BLDU	**Ballidu**	**26.52**	**206**	P	**P**	**06 20 37.5**	**+0.4**
	baz=27,SNR=7.7						
BLDU	**Ballidu**	**26.52**	**206**	P	**P**	**06 20 38.7**	**+1.6**
KLBR	**Kellerberrin**	**26.95**	**203**	P	**P**	**06 20 42.1**	**+1.2**
	baz=27,SNR=12						
KLBR	**Kellerberrin**	**26.95**	**203**	P	**P**	**06 20 41.9**	**+1.0**
STKA	**Stephens Creek**	**27.15**	**157**	P	**P**	**06 20 44.2**	**+1.5**
	baz=27,SNR=10						
STKA	**Stephens Creek**	**27.15**	**157**	P	**P**	**06 20 44.3**	**+1.5**
STKA	**Stephens Creek**	**27.15**	**157**	P	**P**	**06 20 43.2**	**+0.5**
	comp=Z,6.3nm,0.6s,baz=332,slow=8.9,SNR=14						
	comp=Z,6.3nm,0.6s						
NWAO	**Narrogin (SRO)**	**28.33**	**203**	P	**P**	**06 20 54.5**	**+1.2**
	baz=28,SNR=6.4						
NWAO				P	**P**	**06 20 54.5**	**+1.2**
	baz=28,SNR=6.4						
NWAO	**Narrogin (SRO)**	**28.33**	**203**	P	**P**	**06 20 54.6**	**+1.4**
NWAO	**Narrogin (SRO)**	**28.33**	**203**	P	**P**	**06 20 54.2**	**+0.9**
NWAO	**Narrogin (SRO)**	**28.33**	**203**	P	**P**	**06 20 54.0**	**+0.8**
	comp=Z,9.0nm,0.6s,baz=32,slow=7.3,SNR=8.5						
	comp=Z,9.0nm,0.6s						
CMSA	**Cobar Meteorol**	**28.64**	**151**	P	**P**	**06 20 58.2**	**+2.2**
	baz=29,SNR=14						
CMSA	**Cobar Meteorol**	**28.64**	**151**	P	**P**	**06 20 58.1**	**+2.1**
ARPS	**Mount Arapiles**	**31.66**	**161**	P	**P**	**06 21 25.1**	**+2.5**
	baz=32,SNR=9.1						
ARPS	**Mount Arapiles**	**31.66**	**161**	P	**P**	**06 21 25.0**	**+2.5**
PHRA	**Phrae**	**38.57**	**311**	P	**P**	**06 22 21.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.51**	**310**	P	**P**	**06 22 28.8**	**-0.9**
	comp=Z,5.1nm,0.3s,baz=138,slow=7.6,SNR=5.6						
CMAR				PcP	**PcP**	**06 24 33

D19K	**Kuna River**	**89.98**	**21**	P	**P**	**06 27 54.8**	**-0.4**
ILAR	**Eielson Array**	**93.42**	**25**	P	**P**	**06 28 08.2**	**-3.0**
	comp=Z,0.6nm,0.8s,baz=273,slow=4.5,SNR=6.0						
	comp=Z,0.6nm,0.8s						
BELA	**Belgrano 2**	**94.84**	**183**	P	**P**	**06 28 17.7**	**+0.2**
I28M	**Miner Creek**	**96.41**	**25**	P	**P**	**06 28 25.0**	**+0.1**
I28M				IAmb	IAmb	06 29 06.0	
	comp=Z,3.6nm,1.2s						
YKA	**Yellowknife Ar**	**107.83**	**26**	PKiKP	**PKiKP**	**06 33 22.0**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=293,slow=2.1,SNR=6.4						
YKA				PKKPbc	**PKKPbc**	**06 44 35.9**	**-2.7**
	comp=Z,0.3nm,0.9s,baz=110,slow=3.1,SNR=4.8						
CLL	**Collm**	**111.97**	**323**	*i* PKiKP	**PKiKP**	**06 33 31.5**	**+1.1**
PDAR	**Pinedale Array**	**117.04**	**45**	PKP	**PKPdf**	**06 33 40.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=201,slow=0.9,SNR=7.7						
ULM	**Lac du Bonnet**	**122.55**	**33**	PKP	**PKPdf**	**06 33 50.4**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=2.4,slow=1.9,SNR=4.0						
TXAR	**Lajitas Array**	**125.13**	**59**	PKP	**PKPdf**	**06 33 55.9**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=277,slow=1.2,SNR=6.2						
ESDC	**Sonseca Array**	**127.30**	**315**	PKP	**PKPdf**	**06 33 59.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=55,slow=1.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**128.55**	**281**	PKP	**PKPdf**	**06 34 03.1**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=54,slow=3.1,SNR=14						
TORD				SKPbc	SKPbc	06 37 07.8	
	comp=Z,0.7nm,0.8s,baz=61,slow=3.5,SNR=3.8						
PLCA	**Paso Flores**	**129.00**	**160**	PKP	**PKPdf**	**06 34 03.7**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=190,slow=3.2,SNR=4.5						
SCHQ	**Scheffervill e**	**130.44**	**13**	SKPbc	**SKPab**	**06 37 13.8**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=350,slow=6.2,SNR=4.0						
DBIC	**Dimbokro**	**134.93**	**272**	PKP	**PKPdf**	**06 34 15.8**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=88,slow=4.2,SNR=4.4						
CPUP	**Villa Florida**	**146.20**	**169**	PKPbc	**PKPbc**	**06 34 36.7**	**+0.1**
	comp=Z,15nm,0.9s,baz=204,slow=2.6,SNR=35						
CPUP				PP	**PP**	**06 38 00.2**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=184,slow=3.4,SNR=3.6						

*SDD **28** 06:18:45.1±1.8, 19°.23N×70°.62W, h15km±22km, MD2.9, ML1.8, MW2.7*
*OSPL **28** 06:18:45.2±1.6, 19°.03N×70°.62W, h2km±9km, ML1.7*
ISC 28 06:18:43.8±1.5**, 19°.17N**±0°.04×**70°.65W**±0°.03**, h21**km±5km**, n10**, σ1°.16/20**, 12C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.27**	**343**	*i* P	**Pn**	**06 18 52.4**	**-0.2**
SC01				*e*S	**Sn**	**06 18 57.6**	**-0.4**
SC01				IAML		06 19 00.8	
	comp=Z,28nm,0.2s						
ABDR	**Alto Bandera**	**0.35**	**177**	⇑*e*Pg	**Pn**	**06 18 53.1**	**-1.0**
ABDR				⇓*e*Sg	**Sn**	**06 18 59.7**	**-0.9**
ABDR				IAML		06 19 00.4	
	comp=E,48nm,0.1s						
ABDR				IAML		06 19 00.7	
	comp=N,53nm,0.2s						
MADR	**Mao Valverde**	**0.59**	**313**	⇑*e*Pg	**Pb**	**06 18 54.9**	**-0.6**
MADR				⇑*e*Sg	**Sb**	**06 19 04.0**	**+0.6**
MADR				IAML		06 19 04.2	
	comp=N,91nm,0.4s						
MADR				IAML		06 19 06.7	
	comp=E,108nm,0.9s						
SDDR	**Presa de Saban**	**0.64**	**253**	⇑*e*Pg	**Pn**	**06 18 57.0**	**-0.6**
SDDR				⇑*e*Sg	**Sb**	**06 19 05.5**	**+0.6**
SDDR				IAML		06 19 06.1	
	comp=E,29nm,0.3s						
SDDR				IAML		06 19 08.1	
	comp=N,37nm,0.3s						
SDDR	**Presa de Saban**	**0.64**	**253**	*i* P	**Pb**	**06 18 56.5**	**+0.2**
SDDR				*e*S	**Sb**	**06 19 05.4**	**+0.6**
SDDR				IAML		06 19 08.3	
	comp=Z,40nm,0.2s						
BANI	**BANI**	**0.82**	**161**	⇑*e*Pg	**Pn**	**06 19 00.3**	**+0.1**
BANI				⇓*e*Sg	**Sn**	**06 19 11.6**	**-0.1**
BANI				IAML		06 19 12.0	
	comp=N,100nm,1.2s						
PODR	**Polo**	**1.16**	**211**	⇑*e*Pg	**Pb**	**06 19 06.6**	**+1.3**
PODR				IAML		06 19 18.2	
	comp=E,23nm,2.9s						
PODR				⇑*e*Sg	**Sn**	**06 19 23.0**	**+2.6**
PODR				IAML		06 19 44.8	
	comp=N,17nm,1.3s						
PODR	**Polo**	**1.16**	**211**	*i* P	**Pb**	**06 19 05.4**	**+0.1**
PODR				*e*S	**Sb**	**06 19 17.2**	**-2.8**
HATOM	**Hato Mayor del**	**1.25**	**107**	⇑*e*Pg	**Pb**	**06 19 06.4**	**-0.4**
HATOM				⇑*e*Sg	**Sb**	**06 19 22.5**	**0.0**
HATOM				IAML		06 19 24.8	
	comp=E,16nm,0.2s						
HATOM				IAML		06 19 25.7	
	comp=N,14nm,1.8s						
MIDR	**Miches**	**1.52**	**97**	⇑*e*Pg	**Pb**	**06 19 12.5**	**+1.3**
MIDR				⇑*e*Sg	**Sb**	**06 19 29.7**	**-0.3**
MIDR				IAML		06 19 33.8	
	comp=N,17nm,2.6s						
MIDR				IAML		06 19 34.7	
	comp=E,7.4nm,0.8s						

IDC 28 06:40:10.5±7.8**, 5°.67S**×**142°.10E, h0**km**, mb3.3**/1**, mbtmp3.3**/3**, ML3.1**/2**, Error ellipse: s-maj=275.9km s-min=37.2km az=94.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.07**	**207**	Pn	Pn	06 43 57.7	-0.4
	0.1nm,0.3s,baz=29,slow=13,SNR=2.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**19.56**	**203**	P	P	06 44 40.2	+0.2
	0.1nm,0.3s,baz=32,slow=11,SNR=8.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**74.18**	**322**	P	P	06 51 49.2	0.0
	0.2nm,0.6s,baz=108,slow=4.7,SNR=2.5						
	0.2nm,0.6s						

*NEIC **28** 06:43:01.4±0.9, 51°.45N×178°.40W±0°.03, h16km±6km, ML3.7(AEIC), Error ellipse: s-maj=7.6km s-min=2.4km az=183.0*
*AEIC **28** 06:43:02.3±1.5, 51°.60N±0°.03×178°.37W±0°.02, h5km±6km, Error ellipse: s-maj=3.9km s-min=1.6km az=175.0*
*IDC **28** 06:43:13.1±2.3, 50°.25N×176°.14W, h0km, mb3.3/5, mbtmp3.3/5, Error ellipse: s-maj=72.3km s-min=31.5km az=8.0*
ISC 28 06:43:02.7±1.6**, 51°.6N**±0°.2×**178°.35W**±0°.04**, h10**km**, n32, σ0°.75/24, mb3.5/4, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALAA	**Gareloi Lava P**	**0.33**	**307**		**Pg**	**06 43 09.4**	**+0.2**
GAEA	**Gareloi East**	**0.33**	**312**		**Pg**	**06 43 09.5**	**+0.2**
TASE	**Tanaga Southea**	**0.34**	**36**		**Pg**	**06 43 09.8**	**+0.4**
TAFL	**Tanaga Flats**	**0.34**	**56**		**Pg**	**06 43 10.2**	**+0.7**
GASW	**Gareloi Southw**	**0.38**	**305**		**Pg**	**06 43 10.1**	**-0.1**
GANO	**Gareloi North**	**0.38**	**313**		**Pg**	**06 43 10.0**	**-0.2**
TAPA	**Tanaga Point A**	**0.42**	**53**		**Pg**	**06 43 11.6**	**+0.6**
KIKV	**Kanaga Island**	**0.80**	**66**		**Pg**	**06 43 18.1**	**0.0**
KICM	**Kanaga Island**	**0.80**	**63**		**Pg**	**06 43 18.3**	**+0.2**
KIWB	**Kanaga Island**	**0.80**	**68**		**Pg**	**06 43 17.8**	**-0.3**
KIRH	**Kanaga Island**	**0.85**	**66**		**Pg**	**06 43 18.9**	**-0.2**
ADK	**Adak**	**1.09**	**72**		**Pb**	**06 43 22.3**	**-1.2**
ADK	**Adak**	**1.09**	**72**		**Sb**	**06 43 37.8**	**0.0**
GSCK	**Great Sitkin C**	**1.43**	**71**		**Pn**	**06 43 28.4**	**-0.3**
GSTD	**Great Sitkin T**	**1.46**	**69**		**Sn**	**06 43 48.3**	**0.0**
GSMY	**Great Sitkin M**	**1.50**	**71**		**Pn**	**06 43 29.4**	**-0.3**
ATKA	**Atka Island**	**2.65**	**74**		**Pn**	**06 43 45.9**	**+0.4**
ATKA					**Sn**	**06 44 18.4**	**+0.8**
KOKL	**Mount Kliuchef**	**2.68**	**72**		**Pn**	**06 43 45.8**	**-0.1**
KOFP	**Korovin Flat P**	**2.73**	**73**		**Pn**	**06 43 47.4**	**+0.9**
KOFP					**Sb**	**06 44 22.9**	**-2.2**
MAPS	**Pakushin South**	**7.29**	**68**		**Pn**	**06 44 50.2**	**+1.0**
MGOD	**Makushin Gods**	**7.33**	**68**		**Pn**	**06 44 50.0**	**+0.2**
ILAR	**Eielson Array**	**20.92**	**39**	P	P	06 47 59.2	+14
	0.7nm,1.0s,baz=240,slow=12,SNR=4.5						
	0.7nm,1.0s						
H11N2	**WAKE ISLAND Hy 33.82**	**206**		T	T	07 25 26.8	
	baz=17,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy 33.83**	**206**		T	T	07 25 26.2	
	baz=17,slow=76,SNR=43						
H11N1	**WAKE ISLAND Hy 33.84**	**206**		T	T	07 25 28.5	
	baz=17,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy 35.04**	**205**		T	T	07 27 00.2	
	baz=17,slow=76,SNR=87						
H11S2	**WAKE ISLAND Hy 35.05**	**205**		T	T	07 27 00.0	
	baz=17,slow=76,SNR=63						
H11S3	**WAKE ISLAND Hy 35.05**	**205**		T	T	07 27 01.5	
	baz=17,slow=76,SNR=58						
NVAR	**Mina Array Bea**	**43.25**	**83**	P	**P**	**06 51 05.4**	**+1.1**
	0.2nm,0.6s,baz=291,slow=7.6,SNR=1.4						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**45.99**	**73**	P	P	06 51 30.8	+4.7
	0.4nm,0.6s,baz=309,slow=5.4,SNR=4.5						
	0.4nm,0.6s						
SONM	**Songino Array**	**46.81**	**297**	P	P	06 51 58.7	+26
	0.4nm,0.7s,baz=52,slow=9.3,SNR=2.1						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**58.35**	**82**	P	P	06 53 02.0	+3.9
	0.2nm,0.6s,baz=316,slow=3.8,SNR=3.6						
	0.2nm,0.6s						

*JSN **28** 06:43:48.0±0.4, 21°.50N×79°.57W, h15km*
*SSNC **28** 06:43:51.0±2.8, 19°.07N×81°.08W, h120km±91km, MD3.8, ML3.6, MW3.5*
ISC 28 06:43:49.5±3.2**, 19°.0N**±0°.1×**81°.0W**±0°.2**, h10**km**, n10, σ1°.22/20, 1C, Cuba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGV	**Manicaragua**	**3.20**	**17**	*e*P	**Pn**	**06 44 39.2**	**-0.6**
MGV				*e*S	**Sn**	**06 45 18.4**	**+0.4**
MGV				IAML		06 45 21.2	
	comp=N,86nm,0.4s						
MGV				IAML		06 45 21.4	
	comp=E,86nm,0.2s						
PILO	**Pilon**	**3.48**	**75**	*e*P	**Pn**	**06 44 44.9**	**+1.1**
PILO				*e*S	**Sn**	**06 45 24.7**	**-0.5**
PILO				IAML		06 45 29.6	
	comp=E,87nm,0.2s						
PILO				IAML		06 45 30.1	
	comp=N,132nm,0.4s						
LMGC	**Las Mercedes**	**3.89**	**74**	*e*P	**Pn**	**06 44 51.0**	**+1.6**
LMGC				*e*S	**Sn**	**06 45 35.8**	**+0.7**
LMGC				IAML		06 45 40.8	
	comp=N,32nm,0.1s						
LMGC				IAML		06 45 41.0	
	comp=E,33nm,0.1s						
STH	**Stony Hill**	**4.07**	**103**	*i* P	**Pn**	**06 44 51.8**	**-0.1**
STH				*i* S	**Sn**	**06 45 39.7**	**-0.1**
HOJ	**Hope**	**4.14**	**104**	*i* P	**Pn**	**06 44 53.2**	**+0.2**
HOJ				*i* S	**Sn**	**06 45 41.7**	**+0.2**
CHIV	**Chivirico**	**4.41**	**77**	*e*P	**Pn**	**06 44 56.3**	**-0.2**
CHIV				*e*S	**Sn**	**06 45 45.9**	**-2.0**
MARVS	**Santiago de Cu**	**4.89**	**78**	*e*P	**Pn**	**06 45 03.0**	**-0.1**
MARVS				*e*S	**Sn**	**06 45 57.9**	**-1.9**
RCC	**Rio Carpintero**	**5.08**	**78**	*e*P	**Pn**	**06 45 06.5**	**+0.7**
RCC				*e*S	**Sn**	**06 46 04.1**	**-0.3**
RCC				IAML		06 46 12.0	
	comp=E,13nm,0.4s						
RCC				IAML		06 46 12.9	
	comp=N,14nm,0.5s						
PINC	**Pinares de May**	**5.10**	**73**	*e*P	**Pn**	**06 45 08.2**	**+2.3**
PINC				*e*S	**Sn**	**06 46 05.9**	**+1.0**
GTBY	**Guantanamo Bay**	**5.61**	**80**	*e*P	**Pn**	**06 45 13.3**	**+0.2**
GTBY				*e*S	**Sn**	**06 46 15.2**	**-2.4**

*IDC **28** 06:48:49.9±0.7, 2°.11N×126°.42E, h0km, mb4.2/11, mbtmp4.2/11, MS3.0/1, Error ellipse: s-maj=74.4km s-min=12.2km az=70.0*
*DJA **28** 06:48:54.8±0.5, 3°.1N±5°×12°.7E±°, h10km, M4.5/12, mb4.5/6, mbS.0/5, MLv4.5/12, Mw(mB)4.3/5*
*NEIC **28** 06:48:57.4±1.4, 2°.51N±0°.10×127°.08E±0°.09, h53km±9km, mb4.6/23, Error ellipse: s-maj=16.3km s-min=10.6km az=222.0*
ISC 28 06:48:57.9±0.5**, 2°.47N**±0°.05×**127°.14E**±0°.09**, h53**km**, n69, σ1°.63/74, mb4.5/22, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.71**	**172**	Pn	**Pn**	**06 49 25.1**	**-0.2**
TNTI	**Ternate**	**1.71**	**172**	P	**Pn**	**06 49 25.1**	**-0.2**
TNTI				S	**Sn**	**06 49 49.4**	**+3.5**
SGSI	**Sangihe**	**2.01**	**307**	P	**Pn**	**06 49 27.4**	**-2.1**
LBMI	**Labuha**	**3.11**	**173**	P	**Pn**	**06 49 46.0**	**+1.5**
KMSI	**Cibinong**	**3.68**	**239**	P	**Pn**	**06 49 53.3**	**+1.0**
GTOI	**Gorontalo**	**4.52**	**246**	P	**Pn**	**06 50 04.5**	**+0.7**
SANI	**Sanana**	**4.64**	**194**	P	**Pn**	**06 50 04.8**	**-0.7**
MRSI	**Marisa**	**5.57**	**249**	P	**Pn**	**06 50 19.3**	**+1.1**
	196nm,1.0s,2μm0.6nm						
LUWI	**Luwuk**	**5.59**	**231**	Pn	**Pn**	**06 50 18.1**	**-0.5**
LUWI	**Luwuk**	**5.59**	**231**	P	**Pn**	**06 50 18.8**	**+0.2**
	121nm,0.5s,3μm0.7nm						
NLAI	**Namlea**	**5.67**	**180**	P	**Pn**	**06 50 20.3**	**+0.6**
	51nm,1.2s,2μm0.3nm						
TOLI2	**Tolitoli**	**6.50**	**258**		**Pn**	**06 50 29.8**	**-1.3**
FAKI	**Fak Fak**	**7.40**	**136**	Pn	**Pn**	**06 50 44.4**	**+1.0**
FAKI	**Fak Fak**	**7.40**	**136**	P	**Pn**	**06 50 44.1**	**+0.7**
	35nm,1.1s,0.1nm						
MPSI	**Mapaga**	**7.55**	**254**	P	**Pn**	**06 50 45.4**	**0.0**
MTN	**Manton Dam**	**15.72**	**166**	P	**Pn**	**06 52 36.9**	**+0.8**
MTN	**Manton Dam**	**15.72**	**166**	P	P	**06 52 38.4**	**-0.8**
KNRA	**Kununurra**	**18.11**	**175**		**P**	**06 53 04.5**	**-1.0**
KNRA				IAmb	IAmb	06 53 08.2	
	comp=Z,36nm,0.7s						
KNRA	**Kununurra**	**18.11**	**175**	P	**P**	**06 53 04.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**20.50**	**184**	P	**P**	**06 53 30.8**	**-0.8**
GUMO	**Guam**	**20.71**	**57**	LR	LR	07 00 12.9	
	comp=Z,47nn,22.0s,baz=168,slow=32						
YULB	**Yu-li**	**21.55**	**345**	P	**P**	**06 53 40.1**	**-2.9**
YULB				IAmb	IAmb	06 54 11.6	
	comp=Z,27nm,1.2s						
COEN	**Coen**	**22.78**	**136**	P	**P**	**06 53 54.9**	**-1.4**
COEN				IAmb	IAmb	06 54 29.4	
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	**23.22**	**162**	P	**P**	**06 53 59.0**	**-1.6**
WB0				IAmb	IAmb	06 53 59.6	
	comp=Z,22nm,0.7s						
WRAB	**Tennant Creek**	**23.36**	**163**	P	**P**	**06 54 00.2**	**-1.7**
WRA	**Warramunga Arr**	**23.37**	**163**	P	**P**	**06 53 59.6**	**-2.4**
	comp=Z,30nm,0.7s,baz=340,slow=10,SNR=90						
WRA				S	**S**	**06 58 12.2**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=349,slow=16,SNR=2.5						
	comp=Z,30nm,0.7s						
WB2	**Warramunga Arr**	**23.37**	**163**	P	**P**	**06 54 00.5**	**-1.6**
WR0	**Warramunga Arr**	**23.45**	**162**	P	**P**	**06 54 01.2**	**-1.6**
WR0				IAmb	IAmb	06 54 01.9	
	comp=Z,27nm,0.8s						
MBWA	**Marble Bar**	**24.58**	**197**	P	**P**	**06 54 12.5**	**-0.6**
MBWA				IAmb	IAmb	06 54 20.7	
	comp=Z,14nm,1.1s						
MBWA	**Marble Bar**	**24.58**	**197**	P	**P**	**06 54 12.9**	**-0.2**
PSA00	**Pilbara Seismi**	**24.94**	**196**	P	**P**	**06 54 15.5**	**-0.9**
PSA00				IAmb	IAmb	06 54 17.4	
	comp=Z,28nm,1.1s						
PSA00	**Pilbara Seismi**	**24.94**	**196**	P	**P**	**06 54 15.8**	**-0.6**
AS31	**Alice Springs**	**26.80**	**166**	P	**P**	**06 54 32.1**	**-1.2**
ASAR	**Alice Springs**	**26.80**	**166**	P	**P**	**06 54 31.7**	**-1.6**
	comp=Z,4.6nm,0.6s,baz=349,slow=6.8,SNR=69						
	comp=Z,4.6nm,0.6s						
AS01	**Alice Springs**	**26.81**	**166**	P	**P**	**06 54 31.9**	**-1.5**
WRKA	**Warakurna**	**27.37**	**178**	P	**P**	**06 54 37.1**	**-1.3**
MEEK	**Meekatharra**	**30.09**	**195**	P	**P**	**06 55 02.1**	**-0.4**
OOD	**Oodnadatta**	**31.20**	**165**	P	**P**	**06 55 11.0**	**-1.2**
FORT	**Forrest**	**33.08**	**179**	P	**P**	**06 55 27.5**	**-1.2**
FORT	**Forrest**	**33.08**	**179**	P	**P**	**06 55 27.3**	**-1.4**
MORW	**Morawa**	**33.12**	**198**	P	**P**	**06 55 27.8**	**-1.3**
MORW	**Morawa**	**33.12**	**198**	P	**P**	**06 55 29.3**	**+0.2**
MULG	**Mulgathing**	**33.23**	**169**	P	**P**	**06 55 29.4**	**-0.7**
KMBL	**Kambalda**	**34.02**	**188**	P	**P**	**06 55 35.6**	**-1.3**
BLDU	**Ballidu**	**34.38**	**196**	P	**P**	**06 55 39.9**	**-0.1**
LCRK	**Leigh Creek**	**34.40**	**163**	P	**P**	**06 55 39.5**	**-0.7**
KLBR	**Kellerberrin**	**35.03**	**194**	P	**P**	**06 55 45.0**	**-0.7**
MUN	**Mundaring**	**35.80**	**196**	P	**P**	**06 55 52.7**	**+0.4**
BBOO	**Buckleboo**	**36.09**	**167**	P	**P**	**06 55 54.0**	**-0.8**
BBOO	**Buckleboo**	**36.09**	**167**	P	**P**	**06 55 53.4**	**-1.3**
NWAO	**Narrogin (SRO)**	**36.44**	**194**	P	**P**	**06 55 57.0**	**-0.6**
NWAO				IAmb	IAmb	06 55 58.3	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**36.82**	**159**	P	**P**	**06 55 60.0**	**-0.9**
STKA				IAmb	IAmb	06 56 01.2	
	comp=Z,4.4nm,0.9s						
STKA	**Stephens Creek**	**36.82**	**159**	P	**P**	**06 55 59.1**	**-1.8**
	comp=Z,13nm,0.8s,baz=332,slow=9.2,SNR=17						
	comp=Z,13nm,0.8s						
ARMA	**Armidale**	**40.20**	**146**	P	**P**	**06 56 29.1**	**-0.3**
ARMA				IAmb	IAmb	06 56 41.6	
	comp=Z,22nm,1.4s						
HHC	**Hu-ho-hao-te**	**40.71**	**342**	*e*P	**P**	**06 56 35.5**	**+1.9**
HHC				pP	sP	06 56 50.5	-2.1
HHC				PP	**PP**	**06 58 06.3**	**-2.0**
HHC				*e*S	**S**	**07 02 47.8**	**+7.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,87nm,6.1s						
HHC				LR	LR		
	comp=N,210nm,16.2s						
HHC				LR	LR		
	comp=E,110nm,18.6s						
HHC				LR	LR		
	comp=Z,120nm,12.9s						
BTO	**Baotou**	**41.00**	**340**	*e*P	**P**	**06 56 39.5**	**+3.6**
BTO				pP	**sP**	**06 56 54.8**	**-0.2**
BTO				sP	pwP	06 57 02.0	+10
BTO				PP	**PcP**	**06 58 37.8**	**+2.5**
BTO				pmax	pmax		
	comp=Z,14nm,0.7s						
BTO				pmax	pmax		
	comp=Z,540nm,4.6s						
USRK	**Ussuriysk Ar.**	**41.77**	**5**	P	**P**	**06 56 44.2**	**+2.1**
	comp=Z,1.8nm,0.6s,baz=182,slow=6.7,SNR=4.4						
	comp=Z,1.8nm,0.6s						
SONM	**Songino Array**	**48.61**	**341**	P	**P**	**06 57 36.5**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=161,slow=11,SNR=4.9						
	comp=Z,0.9nm,0.8s						
MK31	**Makanchi Array**	**58.82**	**325**	P	**P**	**06 58 50.3**	**-0.7**
MKAR	**Makanchi Array**	**58.82**	**325**	P	**P**	**06 58 49.2**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=120,slow=7.1,SNR=9.8						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**61.89**	**333**	P	**P**	**06 59 10.5**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=82,slow=5.0,SNR=2.2						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.01**	**328**	P	**P**	**06 59 18.2**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=127,slow=6.3,SNR=3.0						
	comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**63.02**	**328**	P	**P**	**06 59 18.4**	**-1.0**
KURK				IAmb	IAmb	06 59 43.6	
	comp=Z,5.4nm,0.9s						
BVAR	**Borovoye Array**	**68.59**	**327**	P	**P**	**06 59 54.2**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=130,slow=6.4,SNR=5.9						
	comp=Z,2.8nm,0.9s						
NRIK	**Noril'sk**	**71.74**	**346**	P	**P**	**07 00 15.0**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=141,slow=6.9,SNR=3.8						
	comp=Z,1.5nm,0.6s						
ABKAR	**Akbulak array**	**73.38**	**321**	P	**P**	**07 00 23.5**	**-0.8**
VNDA	**Vanda**	**82.14**	**173**	P	**P**	**07 01 12.3**	**-0.2**
VNDA				IAmb	IAmb	07 01 32.0	
	comp=Z,6.4nm,1.2s						
VNDA	**Vanda**	**82.14**	**173**	P	**P**	**07 01 11.8**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=38,slow=5.1,SNR=2.5						
	comp=Z,1.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**123.69**	**287**	PKP	**PKPdf**	**07 07 48.0**	**-2.8**
	comp=Z,0.3nm,0.8s,baz=343,slow=1.5,SNR=2.2						

IDC 28 07:00:00.8±3.3**, 53°.59N**×**87°.83E, h0**km**, mbtmp2.7**/2**, ML1.9**/1**, Error ellipse: s-maj=29.8km s-min=18.1km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**283**	I	I	07 12 20.0	
	baz=100,slow=343,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.82**	**283**	Pn	Pn	07 00 33.2	-0.2
	0.6nm,0.3s,baz=102,slow=15,SNR=8.1						
ZALV				Lg	Lg	07 00 58.5	
	1.3nm,0.3s,baz=95,slow=29,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.45**	**246**	Pn	Pn	07 01 37.6	+0.7
	baz=58,slow=15,SNR=1.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.67**	**210**	Pn	Pn	07 01 55.1	+1.4
	0.1nm,0.4s,baz=27,slow=14,SNR=1.0						
MKAR				Lg	Lg	07 04 00.7	
	baz=27,slow=29,SNR=2.5						

IDC 28 07:04:56.8±2.7**, 54°.17N**×**86°.29E, h0**km**, mbtmp2.6**/2**, ML2.1**/2**, Error ellipse: s-maj=20.7km s-min=12.1km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**256**	I	I	07 10 10.0	
	baz=76,slow=334,SNR=4.7						
ZALV	**Zalesovo Beam**	**0.90**	**256**	Pg	Pg	07 05 12.8	-1.2
	0.9nm,0.3s,baz=73,slow=16,SNR=8.6						
ZALV				Lg	Lg	07 05 27.1	
	2.1nm,0.3s,baz=76,slow=29,SNR=15						
KURBB	**Kurchatov Arra**	**5.93**	**236**	Pn	Pn	07 06 27.1	+1.2
	baz=50,slow=6.1,SNR=1.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	07 06 52.7	+1.0
	0.1nm,0.3s,baz=24,slow=12,SNR=4.9						
	0.1nm,0.3s						

IDC 28 07:06:32.3±3.5**, 54°.42N**×**

*IDC **28** 07:30:02.1±1.0,6.°19S×143.°01E, h0km, mb3.9/5, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=36.2km s-min=22.9km az=91.0*

ISC 28 07:30:03.5±0.9, 6.°4S±0.°1×142.°9E±0.°1, h10km, n8, σ2§26/10, mb4.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.17**	**125**	Pn	**Pn**	**07 31 21.6**	**+0.7**
	6.7nm,0.3s,baz=307,slow=15,SNR=4.3						
PMG				Sn	**Sn**	**07 32 19.2**	**-1.4**
	0.7nm,0.3s,baz=120,slow=8.5,SNR=3.1						
WRA	**Warramunga Arr**	**15.77**	**211**	Pn	**Pn**	**07 33 47.4**	**+1.5**
	0.2nm,0.3s,baz=31,slow=14,SNR=1.8						
WRA				Sn	**Sn**	**07 36 36.7**	**-4.2**
	0.4nm,0.3s,baz=31,slow=23,SNR=1.5						
WRA				Lg	Lg	07 38 33.1	
	0.2nm,0.3s,baz=33,slow=23,SNR=3.4						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**19.17**	**206**	P	**Pn**	**07 34 31.0**	**+2.7**
	0.7nm,0.3s,baz=33,slow=9.8,SNR=15						
	4.2nm,0.7s						
MKAR	**Makanchi Array**	**75.27**	**322**	P	**P**	**07 41 46.8**	**+0.1**
	0.4nm,0.7s,baz=111,slow=7.4,SNR=4.3						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**79.16**	**324**	P	**P**	**07 42 08.2**	**-0.3**
	0.5nm,0.8s,baz=120,slow=4.9,SNR=3.0						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**83.53**	**180**	P	**P**	**07 42 33.3**	**+1.7**
	0.8nm,0.8s,baz=142,slow=18,SNR=1.5						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**84.73**	**325**	P	**P**	**07 42 37.6**	**-0.2**
	2.4nm,0.6s,baz=108,slow=6.4,SNR=13						
	2.4nm,0.6s						
ILAR	**Eielson Array**	**87.52**	**24**	P	**P**	**07 42 49.5**	**-1.7**
	0.8nm,0.7s,baz=252,slow=4.9,SNR=9.5						
	0.8nm,0.7s						

*IDC **28** 07:33:48.1±1.1,50.°02N×78.°70E, h0km, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=9.0km s-min=7.1km az=39.0*
*NNC **28** 07:33:48.7±0.7,50.°04N×78.°51E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=6.4km s-min=3.7km az=83.0, Suspected Mining explosion.*

ISC 28 07:33:47.3±0.9, 49.°94N±0.°03×78.°58E±0.°04, h0km, n25, σ0§92/35, 18C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.64**	**356**	⇑P	**Pg**	**07 33 59.1**	**-0.5**
KUR07				⇓S	**Sg**	**07 34 07.7**	**-0.3**
KUR06	**Kurchatov Arra**	**0.66**	**357**	⇑P	**Pg**	**07 33 59.5**	**-0.5**
KUR06				⇑S	**Sg**	**07 34 07.7**	**-0.9**
KUR14	**Kurchatov Arra**	**0.67**	**1**	⇑P	**Pg**	**07 33 59.1**	**-1.1**
KUR14				⇑S	**Sg**	**07 34 07.6**	**-1.3**
KUR15	**Kurchatov Arra**	**0.68**	**359**	⇑P	**Pg**	**07 33 59.3**	**-0.9**
KUR15				⇓S	**Sg**	**07 34 08.1**	**-0.9**
KURBB	**Kurchatov Arra**	**0.68**	**357**	⇓P	**Pg**	**07 33 59.9**	**-0.4**
	13nm,0.2s						
KURBB				⇓S	**Sg**	**07 34 08.9**	**-0.3**
	35nm,0.5s						
KURBB	**Kurchatov Arra**	**0.68**	**357**	Pg	**Pg**	**07 33 59.7**	**-0.6**
	3.0nm,0.3s,baz=167,slow=19,SNR=20						
KURBB				Lg	Lg	07 34 09.1	
	2.7nm,0.3s,baz=170,slow=34,SNR=9.6						
KUR16	**Kurchatov Arra**	**0.69**	**356**	⇓P	**Pg**	**07 33 59.9**	**-0.6**
KUR16				⇓S	**Sg**	**07 34 08.9**	**-0.5**
KUR17	**Kurchatov Arra**	**0.69**	**354**	⇓P	**Pg**	**07 34 00.2**	**-0.4**
KUR17				⇑S	**Sg**	**07 34 09.6**	**0.0**
KUR05	**Kurchatov Arra**	**0.70**	**358**	⇑P	**Pg**	**07 34 00.0**	**-0.7**
KUR05				⇑S	**Sg**	**07 34 08.7**	**-1.1**
KUR04	**Kurchatov Arra**	**0.72**	**358**	⇑P	**Pg**	**07 34 00.5**	**-0.7**
KUR04				⇑S	**Sg**	**07 34 10.0**	**-0.4**
KURK	**Kurchatov**	**0.77**	**2**	⇑P	**Pg**	**07 34 01.2**	**-1.0**
	5.9nm,0.3s						
KURK				⇑S	**Sg**	**07 34 11.7**	**-0.5**
	8.3nm,0.4s						
SEM	**Semipalatinsk**	**1.17**	**66**	P	**Pn**	**07 34 13.5**	**+2.3**
	6.1nm,0.1s						
SEM				S	**Sn**	**07 34 28.4**	**+0.4**
	26nm,0.1s						
BRZS	**Berezniki**	**3.81**	**273**	Pg	**Pg**	**07 35 00.1**	**-0.2**
	5.5nm,0.3s						
BRZS				Lg	Lg	07 35 49.4	
	3.3nm,0.4s						
MAKZ	**Makanchi**	**3.87**	**143**	⇑Pg	**Pg**	**07 34 60.0**	**-1.5**
	0.2nm,0.2s						
MAKZ				⇑Lg	Lg	07 35 47.8	
	3.0nm,0.5s						
MK31	**Makanchi Array**	**4.01**	**140**	⇑Pg	**Pg**	**07 35 02.7**	**-1.4**
	0.1nm,0.1s,baz=328,slow=15,SNR=11						
MK31				⇑Lg	Lg	07 35 55.1	
	1.8nm,0.3s,baz=337,slow=28,SNR=9.0						
MKAR	**Makanchi Array**	**4.01**	**140**	Pn	**Pn**	**07 34 51.8**	**+1.8**
	0.4nm,0.3s,baz=327,slow=10,SNR=13						
MKAR				Lg	Lg	07 35 52.4	
	1.8nm,0.3s,baz=323,slow=26,SNR=8.0						
	0.3nm,0.3s						
OTUK	**Ortayu**	**4.04**	**250**	Pg	**Pg**	**07 35 12.1**	**-0.3**
	0.7nm,0.3s						
OTUK				Lg	Lg	07 36 09.2	
	1.6nm,0.3s						
OTUK	**Ortayu**	**4.04**	**250**	⇓Pg	**Pg**	**07 35 11.8**	**-0.6**
	0.7nm,0.5s						
OTUK				⇑Lg	Lg	07 36 10.6	
	2.0nm,0.5s						
KAPS	**Kapalarasan**	**4.69**	**173**	Pg	**Pg**	**07 35 15.9**	**-1.3**
	1.9nm,0.3s						
KAPS				Lg	Lg	07 36 16.1	
	4.7nm,0.5s						
ZALV	**Zalesovo Beam**	**5.56**	**41**	Pn	**Pn**	**07 35 12.3**	**+1.0**
	0.7nm,0.3s,baz=232,slow=14,SNR=8.2						
ZALV				Lg	Lg	07 36 42.0	
	0.3nm,0.3s,baz=225,slow=25,SNR=3.7						
	1.4nm,0.2s						
I46RU	**ZALESOVO INFRA**	**5.56**	**41**	I	I	08 10 30.0	
	baz=224,slow=328,SNR=10						
KNOS	**Konyrlen**	**5.60**	**176**	Lg	Lg	07 36 43.7	
	2.2nm,0.3s						
BVAR	**Borovoye Array**	**5.97**	**304**	Pn	**Pn**	**07 35 17.1**	**+0.2**
	baz=115,slow=13,SNR=2.9						
BVAR				Sn	**Sn**	**07 36 25.8**	**-0.3**
	baz=111,slow=20,SNR=4.0						
BVAR				Lg	Lg	07 36 56.8	
	baz=119,slow=27,SNR=2.8						
	0.3nm,0.3s						
KTBS	**Karatobe**	**6.37**	**192**	Pg	**Pg**	**07 35 48.9**	**-0.4**
	0.8nm,0.4s						
KTBS				Lg	Lg	07 37 12.2	
	3.2nm,0.3s						
PDGK	**Podgornoye**	**6.65**	**174**	Pg	**Pg**	**07 35 54.2**	**-0.4**
	0.3nm,0.5s						

IDC 28 07:43:19.4±6.6, 5.°96S×141.°91E, h0km, mb3.4/1, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=233.2km s-min=36.6km az=94.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.72**	**207**	Pn	Pn	07 47 00.6	-1.8
	0.2nm,0.3s,baz=30,slow=14,SNR=5.3						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**19.21**	**203**	P	Pn	07 47 45.7	-0.4
	0.3nm,0.3s,baz=30,slow=10,SNR=17						
	2.4nm,0.7s						
MKAR	**Makanchi Array**	**74.29**	**322**	P	P	07 54 58.9	+0.2
	0.4nm,1.0s,baz=106,slow=5.1,SNR=2.1						
	0.4nm,1.0s						

*IDC **28** 07:47:56.3±1.2,6.°10S×142.°64E, h0km, mb3.9/4, mbtmp3.9/7, ML4.0/2, MS3.1/3, Error ellipse: s-maj=35.7km s-min=22.4km az=98.0*

ISC 28 07:48:00.5±0.9, 6.°1S±0.°1×142.°70E±0.°08, h28km, n17, σ1§35/15, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.70**	**300**	P	**Pn**	**07 48 28.0**	**-0.4**
PMG	**Port Moresby**	**5.49**	**127**	Pn	**Pn**	**07 49 20.0**	**-0.4**
	12nm,0.7s,baz=293,slow=7.7,SNR=6.3						
PMG				Sn	**Sn**	**07 50 22.1**	**-0.5**
	1.2nm,0.3s,baz=352,slow=6.5,SNR=3.4						
KDU	**Kakadu**	**12.01**	**236**	P	**Pn**	**07 50 48.2**	**-1.7**
CTA	**Charters Tower**	**14.30**	**166**	Lg	Lg	07 55 34.6	
	0.1nm,0.3s,baz=258,slow=15,SNR=2.0						
WRA	**Warramunga Arr**	**15.96**	**210**	Pn	**Pn**	**07 51 40.6**	**-2.6**
	0.5nm,0.3s,baz=31,slow=12,SNR=14						
WRA				Sn	Sn	07 54 29.0	-10
	0.3nm,0.3s,baz=38,slow=24,SNR=3.1						
WRA				Lg	Lg	07 56 22.9	
	0.2nm,0.3s,baz=34,slow=27,SNR=5.0						
	2.2nm,0.8s						
KNRA	**Kununurra**	**16.64**	**234**	P	**Pn**	**07 51 51.1**	**-0.8**
AS01	**Alice Springs**	**19.36**	**205**	P	**Pn**	**07 52 25.7**	**+0.3**
ASAR	**Alice Springs**	**19.39**	**205**	P	**P**	**07 52 25.4**	**+1.0**
	0.5nm,0.3s,baz=32,slow=9.8,SNR=19						
ASAR				Sn	S	07 55 46.7	-16
	baz=29,slow=12,SNR=1.3						
ASAR				Lg	Lg	07 58 09.5	
	baz=27,slow=32						
ASAR				LR	LR	08 00 37.6	
	comp=Z,189nm,20.1s,baz=28,slow=39						
	4.1nm,0.8s						
GUMO	**Guam**	**19.70**	**6**	LR	LR	07 59 09.1	
	comp=Z,20nm,20.5s,baz=92,slow=34						
FITZ	**Fitzroy Crossi**	**20.47**	**233**	P	**P**	**07 52 37.0**	**+0.9**
OOD	**Oodnadatta**	**22.56**	**196**	P	**P**	**07 53 00.7**	**+2.2**
WRKA	**Warakurna**	**23.33**	**215**	P	**P**	**07 53 08.4**	**+1.8**
STKA	**Stephens Creek**	**25.64**	**182**	LR	LR	08 05 55.5	
	comp=Z,33nm,18.9s,baz=26,slow=42						
MKAR	**Makanchi Array**	**74.91**	**322**	P	**P**	**07 59 38.1**	**-0.8**
	0.7nm,1.0s,baz=125,slow=7.6,SNR=4.2						
	0.7nm,1.0s						
KURBB	**Kurchatov Arra**	**78.80**	**324**	P	**P**	**08 00 01.0**	**+0.3**
	0.3nm,0.7s,baz=110,slow=4.4,SNR=3.5						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**84.38**	**325**	P	**P**	**08 00 30.7**	**+0.6**
	2.2nm,0.9s,baz=104,slow=6.3,SNR=7.3						
	2.2nm,0.9s						
ILAR	**Eielson Array**	**87.30**	**24**	P	**P**	**08 00 44.5**	**+0.1**
	0.7nm,0.8s,baz=253,slow=4.8,SNR=7.5						
	0.7nm,0.8s						

IDC 28 07:49:24.9±3.1, 53.°48N×87.°67E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.9km s-min=15.7km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.76**	**287**	I	I	08 01 00.0	
	baz=104,slow=337,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.76**	**286**	Pg	Pn	07 49 56.9	+0.3
	0.9nm,0.3s,baz=102,slow=13,SNR=6.3						
ZALV				Lg	Lg	07 50 20.1	
	1.1nm,0.3s,baz=106,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.32**	**247**	Pn	Pn	07 50 59.9	+0.7
	0.1nm,0.3s,baz=64,slow=15,SNR=2.2						
KURBB				Lg	Lg	07 52 46.1	
	baz=60,slow=30,SNR=4.7						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.53**	**209**	Pn	Pn	07 51 17.1	+1.2
	0.2nm,0.3s,baz=31,slow=14,SNR=7.7						
MKAR				Lg	Lg	07 53 23.6	
	baz=32,slow=22,SNR=6.7						
	0.2nm,0.3s						

IDC 28 07:59:45.7±3.1, 54.°21N×86.°74E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.6km s-min=15.8km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.16**	**258**	I	I	08 08 00.0	
	baz=76,slow=335,SNR=10						
ZALV	**Zalesovo Beam**	**1.16**	**258**	Pg	Pg	08 00 06.5	-1.4
	2.7nm,0.3s,baz=74,slow=17,SNR=22						
ZALV				Lg	Lg	08 00 24.1	
	1.9nm,0.3s,baz=80,slow=33,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.17**	**238**	Pn	Pn	08 01 19.2	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=6.1						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.95**	**203**	Pn	Pn	08 01 43.5	+1.1
	0.1nm,0.3s,baz=26,slow=14,SNR=9.1						
	0.1nm,0.3s						

*DJA **28** 08:01:02.5±0.6,2.°N±4.°×12.°2E±.°, h10km, M4.2/7, MLv4.2/7*
*IDC **28** 08:01:08.0±1.0,2.°64N×122.°42E, h0km, mb3.8/6, mbtmp3.8/6, MS2.8/2, Error ellipse: s-maj=177.3km s-min=18.7km az=64.0*

ISC 28 08:01:03.6±1.0, 1.°67N±0.°08×122.°28E±0.°08, h10km, n14, σ0§99/10, mb3.8/6, MS2.9/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.23**	**196**	P	**Pg**	**08 01 28.2**	**+0.9**
GTOI	**Gorontalo**	**1.26**	**144**	P	**Pn**	**08 01 26.5**	**-0.8**
KMSI	**Cibinong**	**2.02**	**123**	P	**Pn**	**08 01 37.7**	**0.0**
KMSI				S	**Sn**	**08 02 03.8**	**+0.7**
MPSI	**Mapaga**	**2.72**	**241**	P	**Pn**	**08 01 47.0**	**-0.4**
LUWI	**Luwuk**	**2.74**	**170**	P	**Pb**	**08 01 50.9**	**-1.8**
LUWI				S	**Sb**	**08 02 27.5**	**+1.2**
WRA	**Warramunga Arr**	**24.52**	**152**	P	P	08 06 36.6	+13
	2.8nm,0.7s,baz=336,slow=9.7,SNR=8.6						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**27.61**	**156**	P	P	08 07 05.0	+14
	0.5nm,0.7s,baz=341,slow=11,SNR=4.6						
	0.5nm,0.7s						
JHJ	**Hachijo jima 2**	**35.34**	**26**	LR	LR	08 20 51.3	
	comp=Z,21nm,20.9s,baz=344,slow=34						
KSRS	**Korea Array**	**35.99**	**8**	LR	LR	08 23 06.8	
	comp=Z,13nm,19.5s,baz=260,slow=38						
STKA	**Stephens Creek**	**38.06**	**153**	P	P	08 08 34.8	+12
	2.7nm,0.7s,baz=326,slow=11,SNR=4.5						
	2.7nm,0.7s						
SONM	**Songino Array**	**48.00**	**346**	P	**P**	**08 09 42.9**	**0.0**
	0.3nm,0.5s,baz=160,slow=8.3,SNR=2.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**56.82**	**328**	P	**P**	**08 10 48.6**	**+0.4**
	0.4nm,0.6s,baz=125,slow=8.2,SNR=5.6						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**61.17**	**330**	P	**P**	**08 11 18.6**	**+0.2**
	0.7nm,0.8s,baz=136,slow=6.0,SNR=4.3						
	0.7nm,0.8s						
RPZ	**Rata Peaks**	**62.76**	**142**	LR	LR	08 39 05.6	
	comp=Z,245nm,19.3s,baz=38,slow=36						

IDC 28 08:09:30.3±3.4, 54.°37N×86.°62E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=28.7km s-min=17.0km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.14**	**249**	I	I	08 15 30.0	
	baz=65,slow=337,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.14**	**249**	Pg	Pg	08 09 51.3	-0.8
	0.6nm,0.3s,baz=69,slow=17,SNR=8.1						
ZALV				Lg	Lg	08 10 07.7	
	0.8nm,0.3s,baz=72,slow=25,SNR=5.3						
KURBB	**Kurchatov Arra**	**6.20**	**236**	Pn	Pn	08 11 04.3	+1.4
	0.1nm,0.3s,baz=44,slow=12,SNR=7.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.06**	**202**	Pn	Pn	08 11 28.6	0.0
	baz=25,slow=14,SNR=2.6						
	0.1nm,0.3s						

IDC 28 08:13:59.7±7.6, 5.°96S×141.°89E, h0km, mb3.5/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=284.8km s-min=31.9km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.72**	**207**	Pn	Pn	08 17 40.6	-2.1
	0.1nm,0.3s,baz=30,slow=13,SNR=2.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**19.21**	**203**	P	Pn	08 18 25.9	-0.4
	0.1nm,0.3s,baz=27,slow=10,SNR=6.3						
	1.1nm,0.8s						
SONM	**Songino Array**	**62.01**	**334**	P	P	08 24 20.4	-1.6
	0.2nm,0.4s,baz=134,slow=6.2,SNR=1.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**74.29**	**322**	P	P	08 25 40.5	+1.6
	0.5nm,0.9s,baz=101,slow=7.5,SNR=3.6						
	0.5nm,0.9s						

*IDC **28** 08:24:14.2±6.3,51.°73N×172.°23W, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=265.6km s-min=25.8km az=16.0*
*AEIC **28** 08:24:25.4±0.9,52.°1N±0.°3×171.°8W±0.°1, h38km±10km, Error ellipse: s-maj=44.0km s-min=3.5km az=166.0*
*NEIC **28** 08:24:25.2±1.0,52.°18N±0.°10×171.°83W±0.°08, h56km±37km, ML3.6/8, ML3.1(AEIC), Error ellipse: s-maj=14.9km s-min=5.4km az=161.0*

ISC 28 08:24:24.5±1.7, 52.°1N±0.°3×171.°80W±0.°07, h62km±15km, n40, σ0§57/37, mb3.6/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**1.38**	**57**		**Pn**	**08 24 47.3**	**-0.2**
CLES					**Sn**	**08 25 04.9**	**0.0**
KOSE	**Korovin Southe**	**1.41**	**282**		**Pn**	**08 24 48.0**	**0.0**
KOFP	**Korovin Flat P**	**1.43**	**279**		**Pn**	**08 24 48.4**	**+0.1**
CLCO	**Concord Point,**	**1.45**	**60**		**Pn**	**08 24 48.4**	**-0.1**
CLCO					**Sn**	**08 25 07.0**	**+0.3**
ATKA	**Atka Island**	**1.48**	**276**		**Pn**	**08 24 48.5**	**-0.4**
ATKA					**Sn**	**08 25 07.2**	**-0.1**
ATKA	**Atka Island**	**1.48**	**276**	P	**Pn**	**08 24 48.7**	**-0.2**
NIKH	**Nikolski High**	**2.01**	**62**		**Pn**	**08 24 55.5**	**-0.4**
NIKH					**Sn**	**08 25 19.4**	**-0.7**
NIKH	**Nikolski High**	**2.01**	**62**	P	**Pn**	**08 24 55.6**	**-0.4**
OKCE	**Okmok Cone E**	**2.59**	**57**		**Pn**	**08 25 04.6**	**+0.7**
OKNC	**Okmok New Cone**	**2.62**	**57**		**Pn**	**08 25 05.0**	**+0.6**
GSMY	**Great Sitkin M**	**2.63**	**271**		**Pn**	**08 25 04.9**	**+0.4**
GSTR	**Great Sitkin T**	**2.63**	**272**	Pn	**Pn**	**08 25 04.5**	**0.0**
OKRE	**Okmok R'deer P**	**2.63**	**55**		**Pn**	**08 25 05.1**	**+0.6**
GSTD	**Great Sitkin T**	**2.68**	**271**		**Sn**	**08 25 37.2**	**+0.6**
GSCK	**Great Sitkin C**	**2.69**	**270**		**Pn**	**08 25 05.7**	**+0.4**
OKFG	**Magazine Ridge**	**2.71**	**59**		**Pn**	**08 25 06.1**	**+0.5**
OKFG					**Sn**	**08 25 37.6**	**+0.4**
ADK	**Adak**	**3.03**	**268**		**Pn**	**08 25 10.1**	**+0.2**
ADK					**Sn**	**08 25 44.8**	**0.0**
ADK	**Adak**	**3.03**	**268**	IAML		08 25 46.6	
	276nm,0.2s						
ADK				IAML		08 25 46.9	
	248nm,0.3s						
ADK	**Adak**	**3.03**	**268**	P	**Pn**	**08 25 10.3**	**+0.4**
KIWB	**Kanaga Island**	**3.32**	**268**	Pn	**Pn**	**08 25 14.6**	**+0.7**
MAPS	**Pakushin South**	**3.41**	**58**		**Pn**	**08 25 15.0**	**-0.1**
MGOD	**Makushin Gods**	**3.44**	**58**		**Pn**	**08 25 15.3**	**-0.2**
MSW	**Makushin Switc**	**3.54**	**57**		**Pn**	**08 25 17.2**	**+0.2**
UNV	**Unalaska Valle**	**3.66**	**59**		**Pn**	**08 25 18.4**	**-0.1**
UNV	**Unalaska Valle**	**3.66**	**59**	P	**Pn**	**08 25 18.8**	**+0.3**
TASE	**Tanaga Southea**	**3.87**	**269**		**Pn**	**08 25 22.0**	**+0.6**
LVA	**Lava Point**	**4.05**	**57**		**Pn**	**08 25 24.8**	**+0.9**
AKUT	**Akutan**	**4.17**	**58**	Pn	**Pn**	**08 25 27.7**	**+2.1**
AKUT				IAML		08 26 15.9	
	comp=E,64nm,1.5s						
AKUT				IAML		08 27 43.2	
	comp=N,33nm,1.5s						
FALS	**False Pass**	**5.72**	**58**	P	**Pn**	**08 25 46.8**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**36.33**	**215**	T	T	09 09 45.8	
	baz=21,slow=75,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**36.33**	**215**	T	T	09 09 54.9	
	baz=21,slow=75,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**36.34**	**215**	T	T	09 09 47.5	
	baz=21,slow=75,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	09 11 15.6	
	baz=22						
H11S2	**WAKE ISLAND Hy**	**37.54**	**215**	T	T	09 11 15.6	
	baz=22						
H11S3	**WAKE ISLAND Hy**	**37.54**	**215**	T	T	09 11 15.6	
	baz=22						
PDAR	**Pinedale Array**	**41.92**	**77**	P	**P**	**08 32 09.0**	**0.0**
	comp=N,0.5nm,0.4s,baz=317,slow=3.3,SNR=9.4						
	comp=N,0.5nm,0.4s						
TXAR	**Lajitas Array**	**54.25**	**87**	P	**P**	**08 33 44.0**	**0.0**
	comp=N,0.4nm,0.5s,baz=292,slow=5.7,SNR=3.5						
	comp=N,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**61.69**	**317**	P	P	08 34 33.6	-2.0
	comp=N,0.3nm,0.6s,baz=37,slow=7.4,SNR=2.6						
	comp=N,0.3nm,0.6s						
MKAR	**Makanchi Array**	**62.90**	**312**	P	P	08 34 42.0	-1.9
	comp=N,0.1nm,0.3s,baz=49,slow=7.4,SNR=1.6						
	comp=N,0.1nm,0.3s						
BVAR	**Borovoye Array**	**63.05**	**323**	P	**P**	**08 34 44.0**	**-0.7**
	comp=N,0.3nm,0.4s,baz=25,slow=8.3,SNR=1.8						
	comp=N,0.3nm,0.4s						

*IDC **28** 08:28:35.9±0.8, 33.°59S×178.°56W, h0km, mb4.4/9, mbtmp4.5/11, ML5.0/2, MS3.7/11, Error ellipse: s-maj=24.2km s-min=20.6km az=123.0*
*NEIC **28** 08:28:37.4±1.7, 33.°74S±0.°10×178.°4W±0.°1, h10km±1km, mb4.6/26, Error ellipse: s-maj=20.5km s-min=15.7km az=69.0*

ISC 28 08:28:37.1±0.5, 33.°69S±0.°07×178.°50W±0.°08, h10km, n69, σ1§47/67, mb4.6/19, MS3.8/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.45**	**7**	Pn	**Pn**	**08 29 41.9**	**-2.7**
	95nm,0.3s,baz=127,slow=20,SNR=2.9						
RAO				Sn	Sn	08 30 27.7	-8.8
	150nm,0.3s,baz=108,slow=20,SNR=5.3						
	214nm,0.3s						
MXZ	**Matakaoa Point**	**4.66**	**213**		**Pn**	**08 29 48.9**	**+1.5**
URZ	**Urewera**	**5.79**	**217**	Pn	**Pn**	**08 30 02.9**	**0.0**
	28nm,0.3s,baz=37,slow=1.7,SNR=137						
URZ				Sn	**Sn**	**08 31 10.5**	**+1.2**
	23nm,0.3s,baz=342,slow=20,SNR=7.0						
	87nm,0.3s						
RTZ	**Ruatahuna**	**6.13**	**215**	Pn	**Pn**	**08 30 09.3**	**+1.6**
TOZ	**Tahuroa Road**	**6.33**	**229**	Pn	**Pn**	**08 30 13.1**	**+2.6**
BKZ	**Black Stump Fm**	**6.79**	**215**	Pn	**Pn**	**08 30 17.9**	**+1.0**
HIZ	**Hauiti**	**7.22**	**226**	Pn	**Pn**	**08 30 25.5**	**+2.9**
BFZ	**Birch Farm**	**8.14**	**209**	Pn	**Pn**	**08 30 35.1**	**-0.2**
PLWZ	**Palliser**	**9.29**	**210**	Pn	**Pn**	**08 30 50.1**	**-1.0**
CTZ

BBOO Buckleboo 37.78 258 P **P** **08 35 52.8 -0.6**
PMG Port Moresby 39.74 299 P **P** **08 36 10.0 0.0**
comp=Z,3.4nm,0.3s,baz=58,slow=9.5,SNR=4.0
comp=Z,3.4nm,0.3s
COEN Coen 39.88 290 P **P** **08 36 09.9 -1.3**
COEN IAmb IAmb 08 36 20.4
comp=Z,15nm,1.4s
AS31 Alice Springs 42.62 271 P **P** **08 36 33.8 +0.1**
ASAR Alice Springs 42.62 271 P **P** **08 36 33.2 -0.5**
ASAR Alice Springs 42.62 271 P **P** **08 36 33.5 -0.2**
comp=Z,6.7nm,0.7s,baz=112,slow=7.3,SNR=100
ASAR PcP **PcP** **08 38 25.4 -0.6**
comp=Z,1.2nm,0.5s,baz=118,slow=4.0,SNR=4.6
ASAR S **S** **08 42 50.4 -6.4**
comp=Z,1.3nm,1.0s,baz=119,slow=16,SNR=7.6
ASAR LR LR 08 53 50.4
comp=Z,96nm,18.1s,baz=166,slow=36
comp=Z,6.7nm,0.7s
WR0 Warramunga Arr 43.73 276 P **P** **08 36 42.6 -0.1**
WR0 IAmb IAmb 08 36 43.1
comp=Z,9.8nm,0.9s
WB2 Warramunga Arr 43.89 276 P **P** **08 36 43.9 -0.2**
WB2 IAmb IAmb 08 36 44.4
comp=Z,11nm,0.6s
WRAB Tennant Creek 43.90 276 P **P** **08 36 44.0 -0.1**
WRAB IAmb IAmb 08 36 44.4
comp=Z,10nm,0.8s
WRA Warramunga Arr 43.90 276 P **P** **08 36 43.8 -0.4**
WRA Warramunga Arr 43.90 276 P **P** **08 36 43.6 -0.5**
comp=Z,9.7nm,0.6s,baz=117,slow=8.0,SNR=75
WRA PcP **PcP** **08 38 29.8 -0.4**
comp=Z,1.2nm,0.6s,baz=108,slow=3.7,SNR=3.3
comp=Z,9.7nm,0.6s
WB0 Warramunga Arr 43.94 276 P **P** **08 36 44.2 -0.3**
WB0 IAmb IAmb 08 36 44.8
comp=Z,15nm,0.9s
VNDA Vanda 44.79 186 P **P** **08 36 50.3 -0.2**
VNDA IAmb IAmb 08 37 13.4
comp=Z,9.6nm,1.5s
FORT Forrest 44.88 258 P **P** **08 36 50.8 -1.0**
KNRA Kununurra 50.61 277 P **P** **08 37 36.2 -0.3**
KNRA IAmb IAmb 08 37 46.1
comp=Z,7.7nm,0.8s
FITZ Fitzroy Crossi 52.01 273 P **P** **08 37 46.5 -0.4**
CASY Casey 52.05 209 P **P** **08 37 46.3 -0.2**
QSPA South Pole Qui 56.43 180 P **P** **08 38 20.4 +1.7**
comp=Z,4.5nm,1.0s,baz=348,slow=7.0,SNR=5.4
comp=Z,4.5nm,1.0s
RPN Rapa Nui 59.02 104 LR LR 09 00 40.0
comp=Z,65nm,18.0s,baz=178,slow=33
BELA Belgrano 2 66.59 172 P **P** **08 39 27.1 +0.1**
BELA IAmb IAmb 08 40 01.9
comp=Z,5.4nm,1.2s
SNAA Sanae 74.89 179 P **P** **08 40 17.7 +0.1**
KSRS Korea Array 86.58 320 P **P** **08 41 21.2 +0.8**
comp=Z,1.6nm,0.8s,baz=142,slow=6.2,SNR=3.2
comp=Z,1.6nm,0.8s
LPIG La Paz 86.63 58 LR LR 09 13 47.8
comp=Z,54nm,19.2s,baz=211,slow=31
PETK Petropavlovsk- 88.89 346 P **P** **08 41 31.1 +0.1**
comp=Z,3.2nm,0.8s,baz=235,slow=12,SNR=4.2
comp=Z,3.2nm,0.8s
YBH Yreka Blue Hor 90.87 38 LR LR 09 15 01.6
comp=Z,38nm,21.0s,baz=196,slow=31
NVAR Mina Array Bea 90.93 43 P **P** **08 41 43.4 +2.0**
comp=Z,0.2nm,0.5s,baz=218,slow=4.2,SNR=2.6
comp=Z,0.2nm,0.5s
NNA Nana 92.92 106 LR LR 09 16 57.7
comp=Z,36nm,18.0s,baz=69,slow=31
GHO Glory Hole Cre 98.10 14 P **P** **08 42 12.2 -1.2**
NEW Newport 98.27 36 LR LR 09 20 09.5
comp=Z,81nm,18.7s,baz=232,slow=32
CAST Castle Rocks 99.04 12 P **Pdif** **08 42 18.5 +1.0**
KURBB Kurchatov Arra 123.01 312 PKP **PKPdf** **08 47 32.9 -0.4**
comp=Z,2.2nm,0.8s,baz=112,slow=1.7,SNR=6.9
AKTO Aktyubinsk 135.94 310 PKP **PKPdf** **08 47 58.1 +0.3**
comp=Z,1.2nm,0.5s,baz=115,slow=2.5,SNR=4.7
ARCES ARCESS Array B 141.69 347 PKP **PKPdf** **08 48 07.4 -0.3**
comp=Z,8.9nm,1.2s,baz=52,slow=4.7,SNR=1.0
KBZ Khabaz 146.48 300 PKPbc **PKPdf** **08 48 17.8 +1.0**
comp=Z,3.3nm,0.8s,baz=97,slow=4.0,SNR=7.5
FINES FINESS Array B 148.05 338 PKPbc **PKPbc** **08 48 21.5 -0.6**
comp=Z,5.8nm,0.5s,baz=37,slow=3.2,SNR=37
MMAI Mount Meron Ar 151.74 278 PKPbc **PKPbc** **08 48 32.8 +0.6**
comp=Z,10.0nm,0.7s,baz=80,slow=5.5,SNR=14
NB2 NORSAR Subarra151.92 350 PKP **PKPbc** **08 48 31.2 -0.4**
comp=Z,1.6nm,0.7s,baz=18,slow=2.6
NOA NORSAR Array B151.92 350 PKPbc **PKPbc** **08 48 31.0 -0.6**
comp=Z,1.6nm,0.6s,baz=14,slow=4.1,SNR=7.6
AKASG Malin Array Be 153.56 318 PKPbc **PKPbc** **08 48 34.6 -0.9**
comp=Z,0.8nm,0.5s,baz=61,slow=1.5,SNR=4.2
BRTR Keskin Array B 153.63 293 PKP **PKPdf** **08 48 27.3 -1.1**
comp=Z,0.6nm,0.6s,baz=29,slow=3.3,SNR=2.0
BRTR PKPbc **PKPbc** **08 48 35.7 -0.5**
comp=Z,2.0nm,0.8s,baz=157,slow=5.2,SNR=8.0
TORD Torodi Ar. Bea 159.55 181 PKPab **PKPab** **08 49 15.2 +0.6**
comp=Z,1.6nm,0.8s,baz=175,slow=3.4,SNR=7.3

IDC 28 08:38:08.2±3.4, 54°.16N×87°.45E, h0km, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=27.6km s-min=18.8km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.56**	**263**	I	I	08 47 25.0	
	0.1nm,1.1s,baz=84,slow=335,SNR=13						
ZALV	**Zalesovo Beam**	**1.56**	**263**	Pg	Pn	08 38 34.6	-2.6
	1.0nm,0.3s,baz=82,slow=16,SNR=12						
ZALV				Lg	Lg	08 38 57.9	
	0.9nm,0.3s,baz=80,slow=28,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.50**	**241**	Pn	Pn	08 39 47.1	+2.0
	baz=55,slow=13,SNR=2.1						
KURBB				Lg	Lg	08 41 35.9	
	baz=53,slow=29,SNR=2.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.07**	**206**	Pn	Pn	08 40 07.2	+0.7
	baz=24,slow=14,SNR=1.7						
MKAR				Lg	Lg	08 42 25.4	
	baz=21,slow=31						
	0.1nm,0.4s						

*NOU **28** 08:42:15.0, 41°.97S×174°.70E, h9km, MLv3.9/9, Cook Strait, New Zealand*
*WEL **28** 08:42:17.0±0.5, 42°.5S±5°×17°.4E±°, h21km±4km, M3.2/12, ML3.5/12, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=155.7, confirmed*
ISC 28 08:42:15.5±1.3, 41°.85S±0°.04×174°.54E±0°.03, h12km±10km, n88, σ1s00/99, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.27**	**291**	P	**Pb**	**08 42 23.2**	**+1.0**
CMWZ				S	**Sb**	**08 42 28.1**	**+1.4**
SEDS	**Seddon Fire St**	**0.39**	**296**	P	**Pb**	**08 42 24.6**	**+0.3**
SEDS				S	**Sg**	**08 42 29.8**	**+1.3**
BHW	**Baring Head**	**0.50**	**29**	P	**Pb**	**08 42 27.3**	**+1.1**
BHW				S	**Sb**	**08 42 34.7**	**+1.2**
BSWZ	**Blackbirch Sta**	**0.52**	**285**	P	**Pg**	**08 42 26.7**	**+1.1**
BSWZ				S	**Sg**	**08 42 33.7**	**+1.2**
SNZO	**South Karori**	**0.55**	**13**	P	**Pb**	**08 42 27.5**	**+0.5**
WNKS	**Wellington Kar**	**0.58**	**15**	P	**Pg**	**08 42 26.3**	**-0.5**
WNKS				S	**Sg**	**08 42 33.5**	**-1.0**
WEL	**Wellington**	**0.59**	**17**	P	**Pb**	**08 42 28.2**	**+0.5**
WEL				S	**Sb**	**08 42 36.4**	**+0.5**
MKVS	**Makara Village**	**0.59**	**12**	P	**Pg**	**08 42 26.7**	**-0.3**
TUWZ	**Tuamarina**	**0.61**	**313**	P	**Pg**	**08 42 27.3**	**-0.1**
TUWZ				S	**Sg**	**08 42 34.9**	**-0.6**
BWRS	**Waikakaho Road**	**0.63**	**310**	P	**Pg**	**08 42 27.7**	**0.0**
BWRS				S	**Sg**	**08 42 35.7**	**-0.3**
TCW	**Tory Channel**	**0.67**	**342**	P	**Pg**	**08 42 28.2**	**-0.2**
TCW				S	**Sg**	**08 42 36.1**	**-1.1**
PAWZ	**Paruwai Farm**	**0.81**	**55**	P	**Pn**	**08 42 32.7**	**0.0**
PAWZ				S	**Sn**	**08 42 44.5**	**-0.1**
CAW	**Cannon Point**	**0.84**	**28**	P	**Pn**	**08 42 32.6**	**-0.4**
CAW				S	**Sb**	**08 42 43.7**	**+0.6**
KHZ	**Kahutara**	**0.94**	**232**	P	**Pn**	**08 42 34.7**	**+0.3**
KHZ	**Kahutara**	**0.94**	**232**	P	**Pn**	**08 42 34.8**	**+0.3**
TRWZ	**Traveller**	**0.97**	**63**	P	**Pn**	**08 42 34.9**	**+0.1**
MTW	**Mount Morrison**	**0.99**	**47**	P	**Pg**	**08 42 35.0**	**+0.4**
KIW	**Kapiti Island**	**1.02**	**16**	P	**Pb**	**08 42 35.0**	**-0.1**
NNZ	**Nelson**	**1.08**	**305**	P	**Pb**	**08 42 34.8**	**-1.2**
OGWZ	**Otaki Gorge**	**1.13**	**25**	P	**Pb**	**08 42 36.7**	**-0.3**
DUWZ	**D'Urville Isla**	**1.14**	**336**	P	**Pb**	**08 42 35.9**	**-1.3**
HOWZ	**Holdsworth Sta**	**1.20**	**38**	P	**Pn**	**08 42 37.6**	**-0.4**
THZ	**Tophouse**	**1.23**	**273**	P	**Pn**	**08 42 37.5**	**-1.0**
TMWZ	**Te Maipa**	**1.25**	**54**	P	**Pn**	**08 42 38.5**	**-0.3**
MRNZ	**Matariki Terra**	**1.41**	**288**	P	**Pn**	**08 42 40.1**	**-0.9**
MRZ	**Mangatainoka R**	**1.42**	**34**	P	**Pn**	**08 42 40.5**	**-0.6**
TKNZ	**Takaka Hill**	**1.44**	**304**	P	**Pn**	**08 42 40.5**	**-0.9**
TIWZ	**Tintock**	**1.47**	**44**	P	**Pn**	**08 42 41.2**	**-0.6**
GVZ	**Greta Valley S**	**1.58**	**224**	P	**Pn**	**08 42 43.5**	**+0.2**
PRWZ	**Pori Road**	**1.68**	**40**	P	**Pn**	**08 42 44.0**	**-0.7**
POWZ	**Post Office Ro**	**1.72**	**33**	P	**Pn**	**08 42 44.8**	**-0.5**
BFZ	**Birch Farm**	**1.73**	**48**	P	**Pn**	**08 42 45.3**	**-0.1**
BFZ	**Birch Farm**	**1.73**	**48**	P	**Pn**	**08 42 44.4**	**-1.0**
OHWZ	**Ohakea**	**1.74**	**20**	P	**Pn**	**08 42 46.2**	**+0.8**
LTZ	**Lake Taylor**	**1.93**	**240**	P	**Pn**	**08 42 47.9**	**-0.2**
AMCZ	**Amberley**	**1.93**	**226**	P	**Pn**	**08 42 47.9**	**-0.2**
DVHZ	**Dannevirke**	**1.97**	**39**	P	**Pn**	**08 42 47.4**	**-1.3**
DSZ	**Dennistion Nort**	**2.05**	**272**	P	**Pn**	**08 42 49.5**	**-0.3**
TSZ	**Takapari Road**	**2.08**	**31**	P	**Pn**	**08 42 49.3**	**-1.0**
WAZ	**Wanganui**	**2.12**	**9**	P	**Pn**	**08 42 51.9**	**+1.2**
PNHZ	**Pukenui**	**2.30**	**34**	P	**Pn**	**08 42 52.2**	**-1.0**
MQZ	**McQueen's Vall**	**2.32**	**216**	P	**Pn**	**08 42 52.4**	**-1.1**
AKCZ	**Akaroa Harbour**	**2.35**	**210**	P	**Pn**	**08 42 53.4**	**-0.5**
OXZ	**Oxford**	**2.37**	**231**	P	**Pn**	**08 42 53.0**	**-1.1**
LREZ	**Lake Rotokare**	**2.39**	**357**	P	**Pb**	**08 42 56.8**	**-1.6**
INZ	**Inchbonnie**	**2.46**	**248**	P	**Pn**	**08 42 55.2**	**-0.2**
NMEZ	**Namu Road**	**2.48**	**348**	P	**Pb**	**08 42 58.9**	**-1.1**
PREZ	**Palmer Road**	**2.52**	**353**	P	**Pb**	**08 42 59.4**	**-1.2**
MTVZ	**Mangateitei**	**2.56**	**16**	P	**Pn**	**08 42 57.0**	**+0.2**
KHEZ	**Kahui Hut**	**2.58**	**351**	P	**Pn**	**08 42 59.7**	**-2.0**
KHEZ	**Kahui Hut**	**2.58**	**351**	P	**Pb**	**08 42 59.7**	**-2.0**
NEZ	**North Egmont**	**2.60**	**352**	P	**Pn**	**08 42 59.7**	**+2.4**
KRHZ	**Kereru**	**2.60**	**33**	P	**Pn**	**08 42 55.9**	**-1.5**
MOVZ	**Moawhango**	**2.60**	**21**	P	**Pb**	**08 43 02.0**	**-0.2**
BHHZ	**Black Hill Sta**	**2.62**	**27**	P	**Pb**	**08 43 02.5**	**0.0**
NBEZ	**Newall Road No**	**2.63**	**348**	P	**Pb**	**08 43 00.4**	**-2.1**
WNVZ	**Wahianoa**	**2.64**	**18**	P	**Pn**	**08 42 58.0**	**0.0**
TRVZ	**Turoa**	**2.66**	**17**	P	**Pn**	**08 42 58.5**	**+0.2**
DREZ	**Durham Road**	**2.67**	**354**	P	**Pn**	**08 43 00.9**	**+2.6**
WHVZ	**Whangaehu Hut**	**2.68**	**18**	P	**Pb**	**08 43 04.4**	**+0.8**
PKE	**Pukeiti**	**2.68**	**351**	P	**Pb**	**08 43 02.9**	**-0.5**
MAVZ	**Matarangi**	**2.69**	**17**	P	**Pb**	**08 43 04.1**	**+0.4**
FWVZ	**Far West T-bar**	**2.70**	**17**	P	**Pb**	**08 43 03.8**	**-0.1**
VRZ	**Vera Road**	**2.72**	**4**	P	**Pn**	**08 42 59.8**	**+0.8**
MHCZ	**Mount Hutt**	**2.77**	**231**	P	**Pn**	**08 42 58.6**	**-1.0**
NGZ	**Ngauruhoe**	**2.79**	**17**	P	**Pn**	**08 43 00.3**	**+0.3**
KWHZ	**Kaweka Forest**	**2.81**	**31**	P	**Pn**	**08 42 59.0**	**-1.3**
OTVZ	**Oturere**	**2.81**	**18**	P	**Pn**	**08 43 00.4**	**0.0**
NNVZ	**North Ngauruho**	**2.83**	**17**	P	**Pn**	**08 43 00.8**	**+0.1**
WTVZ	**West Tongariro**	**2.84**	**17**	P	**Pn**	**08 43 04.1**	**-2.1**
ETVZ	**East Tongariro**	**2.85**	**19**	P	**Pn**	**08 43 01.0**	**+0.2**
TMVZ	**Te Maari**	**2.87**	**18**	P	**Pn**	**08 43 01.0**	**-0.1**
NTVZ	**North Tongarir**	**2.88**	**18**	P	**Pn**	**08 43 01.3**	**+0.1**
WACZ	**Wakanui South**	**2.89**	**223**	P	**Pn**	**08 43 00.4**	**-0.8**
BKZ	**Black Stump Fm**	**3.06**	**30**	P	**Pn**	**08 43 04.9**	**+1.2**
RPZ	**Rata Peaks**	**3.18**	**233**	P	**Pn**	**08 43 04.7**	**-0.6**
RPZ	**Rata Peaks**	**3.18**	**233**	P	**Pn**	**08 43 04.7**	**-0.6**
ARCZ	**Arundel**	**3.25**	**229**	P	**Pn**	**08 43 05.5**	**-0.7**
HIZ	**Hauiti**	**3.34**	**4**	P	**Pn**	**08 43 08.0**	**+0.5**
HIZ	**Hauiti**	**3.34**	**4**	P	**Pn**	**08 43 08.0**	**+0.5**
TLZ	**Tolley Road**	**3.59**	**13**	P	**Pn**	**08 43 11.2**	**+0.2**
TMZ	**Timaru**	**3.62**	**224**	P	**Pn**	**08 43 10.5**	**-0.9**
LBZ	**Lake Benmore**	**4.08**	**230**	P	**Pn**	**08 43 17.8**	**+0.1**
ODZ	**Otahua Downs**	**4.28**	**220**	P	**Pn**	**08 43 19.5**	**-0.8**
ODZ	**Otahua Downs**	**4.28**	**220**	P	**Pn**	**08 43 19.2**	**-1.1**
CNGZ	**Carnagh Statio**	**4.38**	**41**	P	**Pn**	**08 43 25.4**	**+3.7**
SYZ	**Scrubby Hill**	**6.09**	**218**	P	**Pn**	**08 43 44.8**	**-0.4**
CTZ	**Chatham Island**	**6.77**	**109**	P	**Pn**	**08 43 55.3**	**+0.7**

*IDC **28** 08:43:42.3±1.0, 6°.19S×143°.59E, h0km, mb3.9/6, mbtmp3.9/9, ML2.7/2, MS3.3/4, Error ellipse: s-maj=40.4km s-min=23.4km az=81.0*
ISC 28 08:43:47.7±0.8, 6°.3S±0°.1×143°.7E±0°.1, h35km, n14, σ1s39/11, mb3.9/6, MS3.4/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.64**	**132**	Pn	**Pn**	**08 44 56.4**	**+1.0**
	2.2nm,0.3s,baz=306,slow=7.1,SNR=8.8						
PMG				Sn	**Sn**	**08 45 46.7**	**-1.4**
	2.3nm,0.3s,baz=213,slow=21,SNR=9.1						
	9.4nm,0.5s						
WRA	**Warramunga Arr**	**16.29**	**213**	Pn	**Pn**	**08 47 32.0**	**-2.0**
	0.1nm,0.3s,baz=29,slow=13,SNR=5.3						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**19.64**	**208**	P	**P**	**08 48 15.2**	**+1.7**
	6.1nm,0.7s,baz=36,slow=9.8,SNR=63						
ASAJ	**Asahikawa**	**50.20**	**359**	LR	LR	09 15 28.6	
	comp=Z,25nm,20.0s,baz=162,slow=38						
SONM	**Songino Array**	**63.10**	**333**	P	**P**	**08 54 12.2**	**+0.3**
	0.7nm,0.8s,baz=145,slow=10,SNR=2.4						
	0.7nm,0.8s						
PALK	**Pallekele**	**64.23**	**281**	LR	LR	09 25 09.7	
	comp=Z,38nm,19.3s,baz=246,slow=39						
MA2	**Magadan**	**65.92**	**4**	LR	LR	09 26 11.1	
	comp=Z,16nm,18.0s,baz=114,slow=39						
MKAR	**Makanchi Array**	**75.64**	**322**	P	**P**	**08 55 28.8**	**-0.5**
	0.6nm,0.6s,baz=116,slow=7.0,SNR=3.8						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**77.52**	**329**	P	**P**	**08 55 38.6**	**-1.2**
	0.3nm,0.5s,baz=140,slow=5.1,SNR=1.7						
	0.3nm,0.5s						
TIXI	**Tiksi**	**78.41**	**355**	LR	LR	09 29 22.4	
	comp=Z,24nm,21.2s,baz=37,slow=35						
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**08 56 12.8**	**+0.1**
	1.5nm,0.9s,baz=279,slow=3.4,SNR=2.5						
	1.5nm,0.9s						
BVAR	**Borovoye Array**	**85.07**	**325**	P	**P**	**08 56 19.9**	**+0.1**
	1.5nm,0.7s,baz=116,slow=6.6,SNR=6.6						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**87.09**	**24**	P	**P**	**08 56 29.0**	**-0.6**
	0.7nm,0.9s,baz=267,slow=4.7,SNR=5.5						
	0.7nm,0.9s						
DBIC	**Dimbokro**	**148.71**	**272**	PKPbc	**PKPdf**	**09 03 30.4**	**+1.8**
	3.6nm,0.9s,baz=78,slow=9.3,SNR=3.3						

NNC 28 08:45:06.1±3.5, 53°.93N×90°.84E, h0km, mb3.8, mpv3.5, 6C-7D, Error ellipse: s-maj=26.5km s-min=20.9km az=42.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.56**	**273**	⇑Pg	Pb	08 46 10.5	+0.6
	2.8nm,0.7s						
ZAA0				⇓Lg	Lg	08 46 59.2	
	7.3nm,0.7s						
KURK	**Kurchatov**	**8.15**	**252**	⇓Pn	Pn	08 47 06.5	+1.0
	4.0nm,0.8s						
KURK				⇓Sn	Sn	08 48 41.5	+3.2
	9.8nm,1.0s						
KURK				⇓Lg	Lg	08 49 27.2	
	61nm,0.9s						
KURBB	**Kurchatov Arra**	**8.24**	**251**	⇑Pn	Pn	08 47 07.4	+0.6
	5.4nm,0.6s						
KURBB				⇑Sn	Sn	08 48 39.2	-1.4
	38nm,0.8s						
KURBB				⇑Lg	Lg	08 49 28.9	
	34nm,0.7s						
MK31	**Makanchi Array**	**8.99**	**221**	Pn	Pn	08 47 17.5	+0.4
	0.8nm,0.6s,baz=33,slow=11,SNR=20						
MK31				⇑Sn	Sn	08 49 03.3	+4.3
	4.9nm,0.7s,baz=44,slow=23,SNR=5.1						
MK31				⇓Lg	Lg	08 49 45.6	
	28nm,1.1s,baz=38,slow=27,SNR=4.1						
MAKZ	**Makanchi**	**9.10**	**222**	⇑Pn	Pn	08 47 16.6	-2.0
	1.0nm,0.7s						
MAKZ				⇓Sn	Sn	08 49 04.0	+2.3
	5.9nm,0.8s						
MAKZ				⇓Lg	Lg	08 49 48.1	
	12nm,0.9s						

IDC 28 08:49:10.8±3.0, 54°.11N×86°.43E, h0km, mbtmp3.0/2, ML2.0/2, Error ellipse: s-maj=23.3km s-min=13.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**261**	I	I	08 54 30.0	
	baz=82,slow=331,SNR=2.3						
ZALV	**Zalesovo Beam**	**0.96**	**261**	Pg	Pg	08 49 27.6	-1.6
	0.7nm,0.3s,baz=80,slow=16,SNR=1.3						
ZALV				Lg	Lg	08 49 43.4	
	1.5nm,0.3s,baz=78,slow=30,SNR=5.2						
KURBB	**Kurchatov Arra**	**5.96**	**237**	Pn	Pn	08 50 41.1	+0.8
	baz=54,slow=13,SNR=0.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.78**	**201**	Pn	Pn	08 51 06.6	+1.3
	0.2nm,0.3s,baz=22,slow=24,SNR=0.8						
	0.5nm,0.4s						

IDC 28 09:00:12.2±3.2, 53°.56N×88°.11E, h0km, mbtmp2.9/2, ML2.3/1, Error ellipse: s-maj=28.5km s-min=17.4km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.99**	**283**	I	I	09 12 20.0	
	baz=102,slow=338,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.99**	**283**	Pn	Pb	09 00 48.6	-0.6
	1.6nm,0.3s,baz=99,slow=14,SNR=9.4						
ZALV				Lg	Lg	09 01 15.4	
	1.9nm,0.3s,baz=98,slow=26,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.59**	**247**	Pn	Pn	09 01 49.8	-0.5
	0.1nm,0.3s,baz=61,slow=14,SNR=3.5						
KURBB				Lg	Lg	09 03 39.8	
	baz=60,slow=32,SNR=1.3						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.73**	**211**	Pn	Pn	09 02 06.8	+0.8
	0.1nm,0.2s,baz=25,slow=12,SNR=7.0						
MKAR				Sn	Sn	09 03 35.9	+1.7
	0.1nm,0.3s,baz=32,slow=27,SNR=2.3						

*IDC **28** 09:16:08.4±1.1, 6°.17S×143°.24E, h0km, mb4.3/4, mbtmp4.2/6, ML1.6/1, Error ellipse: s-maj=35.5km s-min=24.2km az=68.0*
ISC 28 09:16:10.6±0.8, 6°.37S±0°.09×143°.08E±0°.09, h10km, n15, σ1s50/17, mb4.3/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**4.75**	**322**	P	**Pn**	**09 17 23.9**	**+1.6**
PMG	**Port Moresby**	**5.04**	**127**	P	**Pn**	**09 17 28.1**	**+1.8**
PMG	**Port Moresby**	**5.04**	**127**	P	**Pn**	**09 17 28.4**	**+2.1**
PMG	**Port Moresby**	**5.04**	**127**	Pn	**Pn**	**09 17 25.1**	**-1.3**
	1.7nm,0.3s,baz=296,slow=10,SNR=4.7						
PMG				Sn	**Sn**	**09 18 24.4**	**-0.3**
	0.9nm,0.3s,baz=329,slow=20,SNR=1.5						
	7.0nm,0.6s						
WRA	**Warramunga Arr**	**15.94**	**211**	Pn	**Pn**	**09 19 53.7**	**-1.4**
	0.5nm,0.3s,baz=31,slow=13,SNR=13						
WRA				Sn	Sn	09 22 44.6	-7.5
	0.2nm,0.3s,baz=22,slow=22,SNR=1.5						
WRA				Lg	Lg	09 24 38.2	
	baz=28,slow=28						
KNRA	**Kununurra**	**16.81**	**235**	P	**P**	**09 20 08.5**	**+0.1**
AS01	**Alice Springs**	**19.30**	**206**	P	**Pn**	**09 20 37.6**	**+0.6**
ASAR	**Alice Springs**	**19.32**	**206**	P	**Pn**	**09 20 37.8**	**+0.5**
	8.8nm,0.8s,baz=33,slow=9.8,SNR=51						
ASAR				S	**S**	**09 24 12.7**	**-2.4**
	0.2nm,0.5s,baz=20,slow=27,SNR=2.1						
ASAR				Lg	Lg	09 26 32.4	
	baz=21,slow=31,SNR=4.6						
FITZ	**Fitzroy Crossi**	**20.62**	**234**	P	**P**	**09 20 50.4**	**+0.1**
INKA	**Innaminka**	**21.37**	**186**	P	**P**	**09 20 59.7**	**+1.4**
WRKA	**Warakurna**	**23.34**	**216**	P	**P**	**09 21 20.5**	**+1.2**
MKAR	**Makanchi Array**	**75.34**	**322**	P	**P**	**09 27 52.7**	**-1.6**
	0.8nm,0.7s,baz=107,slow=6.7,SNR=8.6						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**79.22**	**324**	P	**P**	**09 28 16.2**	**+0.3**
	1.7nm,0.2s,baz=114,slow=4.9,SNR=5.0						
	1.7nm,0.2s						
BVAR	**Borovoye Array**	**84.79**	**325**	P	**P**	**09 28 44.7**	**-0.5**
	3.6nm,0.7s,baz=110,slow=7.0,SNR=16						
	3.6nm,0.7s						
ILAR	**Eielson Array**	**87.38**	**24**	P	**P**	**09 28 55.5**	**-2.3**
	0.5nm,0.7s,baz=260,slow=4.7,SNR=5.9						
	0.5nm,0.7s						

*UPA **28** 09:16:59.2±0.8, 8°.27N×82°.85W, h26km±4km, MD3.5, ML3.3*
*CATAC **28** 09:17:01.5±1.2, 8°.50N×84°.50W, h5km, ML2.5*
ISC 28 09:16:58.3±1.4, 8°.24N±0°.09×82°.84W±0°.05, h32km±9km, n14, σ0s56/24, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.05**	**231**	⇑*i*P	**Pb**	**09 17 03.5**	**-0.3**
PTPM				AMP		09 17 03.6	
	comp=Z,5μm,0.1s						
PTPM				*e*S	**Sb**	**09 17 07.5**	**+0.1**
DVD	**David**	**0.43**	**63**	*e*P	**Pn**	**09 17 08.6**	**+0.2**
DVD				*e*S	**Sb**	**09 17 14.7**	**+0.4**
LOCO3	**Loma Colorada,**	**0.45**	**68**	*e*P	**Pn**	**09 17 08.8**	**+0.2**
LOCO3				*e*S	**Sn**	**09 17 15.5**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.55**	**1**	*e*P	**Pn**	**09 17 10.1**	**-0.1**
MLIR3				*e*S	**Sn**	**09 17 18.2**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.56**	**37**	*e*P	**Pb**	**09 17 10.1**	**+0.1**
PTAR3				*e*S	**Sn**	**09 17 18.5**	**-0.1**
BCO2	**Palmira**	**0.57**	**33**	⇓*i*P	**Pb**	**09 17 10.1**	**0.0**
BCO2				*i*S	**

	comp=N,307nm,1.0s									
Q19K	**Cape Douglas,**	**3.77**	**323**		P		**Pn**	**09 45 11.4**	**+0.9**	
	baz=140									
Q23K	**Middleton Isla**	**3.79**	**23**				**Pn**	**09 45 10.7**	**+0.1**	
Q23K					IAML			09 46 28.6		
	comp=E,246nm,1.8s									
Q23K					IAML			09 47 44.2		
	comp=N,214nm,1.8s									
BRSE	**Bradley Lake S**	**3.84**	**349**				**Pn**	**09 45 11.1**	**-0.3**	
BRSE							**Sn**	**09 45 54.8**	**-1.8**	
BRSE	**Bradley Lake S**	**3.84**	**349**		P		**Pn**	**09 45 11.2**	**-0.3**	
	baz=167									
BRSE					S		**Sn**	**09 45 55.0**	**-1.6**	
	baz=167									
BRLK	**Bradley Lake**	**3.88**	**348**				**Pn**	**09 45 11.5**	**-0.5**	
BRLK					IAML			09 46 25.7		
	comp=E,53nm,1.9s									
HOM	**Homer**	**3.89**	**342**		Pn		**Pn**	**09 45 12.5**	**+0.4**	
KAKN	**Katmai Knife C**	**3.91**	**309**				**Pn**	**09 45 13.1**	**+0.7**	
SEW	**Seward**	**4.12**	**359**				**Pn**	**09 45 14.7**	**-0.6**	
SEW	**Seward**	**4.12**	**359**		P		**Pn**	**09 45 14.6**	**-0.6**	
	baz=178									
P23K	**Montague Islan**	**4.14**	**13**				**Pn**	**09 45 15.2**	**-0.3**	
P23K	**Montague Islan**	**4.14**	**13**		P		**Pn**	**09 45 15.4**	**-0.2**	
	baz=193									
P19K	**Oil Pt**	**4.24**	**332**		Pn		**Pn**	**09 45 17.3**	**+0.4**	
P19K					IAML			09 46 12.4		
	comp=E,135nm,0.6s									
P19K					IAML			09 46 13.3		
	comp=N,109nm,0.6s									
P19K	**Oil Pt**	**4.24**	**332**		P		**Pn**	**09 45 17.0**	**+0.1**	
	baz=148									
CNTC	**Contact Creek**	**4.26**	**305**				**Pn**	**09 45 18.1**	**+0.8**	
CNTC							**Sn**	**09 46 07.3**	**+0.2**	
Q17K	**Contact Creek**	**4.26**	**305**		P		**Pn**	**09 45 18.1**	**+0.8**	
	baz=120									
Q17K					S		**Sn**	**09 46 07.3**	**+0.2**	
	baz=120									
O20K	**Slope Mountain**	**4.47**	**338**				**Pn**	**09 45 20.5**	**+0.4**	
O22K	**Cooper Landing**	**4.51**	**357**		Pn		**Pn**	**09 45 21.1**	**+0.5**	
O22K					IAML			09 46 30.0		
	comp=E,154nm,0.8s									
SLKM	**Skilak Lake**	**4.56**	**354**				**Pn**	**09 45 20.8**	**-0.4**	
HIN	**Hinchinbrook I**	**4.66**	**17**		Pn		**Pn**	**09 45 22.6**	**-0.1**	
HIN					IAML			09 46 40.0		
	comp=E,95nm,1.5s									
HIN					IAML			09 48 07.8		
	comp=N,87nm,1.8s									
P18K	**Big Mountain,**	**4.67**	**319**		Pn		**Pn**	**09 45 22.9**	**+0.1**	
P18K	**Big Mountain,**	**4.67**	**319**		P		**Pn**	**09 45 22.6**	**-0.3**	
	baz=135									
KAIM	**Kayak Island**	**4.72**	**31**		Pn		**Pn**	**09 45 23.6**	**+0.1**	
KAIM					IAML			09 46 28.8		
	comp=E,136nm,1.7s									
KAIM					IAML			09 47 21.4		
	comp=N,128nm,1.6s									
KAIM	**Kayak Island**	**4.72**	**31**		P		**Pn**	**09 45 23.2**	**-0.3**	
	baz=214									
RSO	**Redoubt South**	**4.84**	**339**		Pn		**Pn**	**09 45 25.0**	**-0.4**	
CAPN	**Captain Cook N**	**4.89**	**349**		Pn		**Pn**	**09 45 24.8**	**-1.0**	
EYAK	**Cordova Ski Ar**	**4.93**	**21**				**Pn**	**09 45 27.0**	**+0.6**	
EYAK	**Cordova Ski Ar**	**4.93**	**21**		P		**Pn**	**09 45 27.4**	**+1.0**	
EYAK	**Cordova Ski Ar**	**4.93**	**21**		P		**Pn**	**09 45 27.0**	**+0.6**	
	baz=202									
O19K	**Port Alsworth**	**4.99**	**330**				**Pn**	**09 45 27.2**	**+0.1**	
FID	**Port Fidalgo**	**4.99**	**16**				**Pn**	**09 45 27.2**	**-0.1**	
FID					IAML			09 46 27.6		
	comp=N,41nm,1.3s									
FID					IAML			09 46 45.5		
	comp=E,51nm,1.6s									
O18K	**Koktuh Hills**	**5.00**	**323**		Pn		**Pn**	**09 45 28.0**	**+0.7**	
O18K					IAML			09 46 27.2		
	comp=N,67nm,0.8s									
O18K					IAML			09 46 28.8		
	comp=E,39nm,0.8s									
SUCK	**Suckling Hills**	**5.03**	**33**				**Pn**	**09 45 27.8**	**0.0**	
SUCK					IAML			09 46 44.1		
	comp=E,85nm,1.8s									
SUCK					IAML			09 47 35.1		
	comp=N,67nm,2.0s									
GLI	**Glacier Island**	**5.03**	**12**		Pn		**Pn**	**09 45 28.0**	**+0.2**	
GLI					IAML			09 46 48.6		
	comp=E,50nm,1.9s									
GLI					IAML			09 47 11.3		
	comp=N,38nm,1.6s									
HMT	**Hamilton**	**5.10**	**29**		Pn		**Pn**	**09 45 29.6**	**+0.9**	
NICHA	**Nichawak Mount**	**5.10**	**31**				**Pn**	**09 45 28.8**	**0.0**	
RC01	**Rabbit Creek A**	**5.12**	**357**		Pn		**Pn**	**09 45 28.5**	**-0.5**	
RC01					IAML			09 46 27.1		
	comp=E,38nm,1.7s									
RC01					IAML			09 46 31.7		
	comp=N,36nm,1.4s									
SNH	**Sunshine Point**	**5.41**	**36**		Pn		**Pn**	**09 45 33.9**	**+0.8**	
KNK	**Knik Glacier**	**5.45**	**4**		Pn		**Pn**	**09 45 33.9**	**+0.2**	
KNK	**Knik Glacier**	**5.45**	**4**		P		**Pn**	**09 45 33.8**	**+0.2**	
	baz=184									
SPCG	**Spurr Capps Gl**	**5.50**	**346**				**Pn**	**09 45 34.2**	**-0.2**	
N19K	**Bonanza Creek**	**5.55**	**333**				**Pn**	**09 45 34.6**	**-0.4**	
N19K	**Bonanza Creek**	**5.55**	**333**		P		**Pn**	**09 45 34.4**	**-0.7**	
	baz=148									
BMRM	**Bremner River**	**5.56**	**24**				**Pn**	**09 45 35.4**	**+0.4**	
BMRM	**Bremner River**	**5.56**	**24**		P		**Pn**	**09 45 35.1**	**0.0**	
	baz=207									
P16K	**Nushagak River**	**5.60**	**307**				**Pn**	**09 45 36.4**	**+0.9**	
P16K	**Nushagak River**	**5.60**	**307**		P		**Pn**	**09 45 36.4**	**+0.9**	
	baz=120									
PMR	**Palmer**	**5.62**	**1**		Pn		**Pn**	**09 45 36.5**	**+0.8**	
S14K	**Fog Glacier**	**5.75**	**277**		P		**Pn**	**09 45 38.1**	**+0.4**	
	baz=90									
VNFG	**Fog Glacier, M**	**5.75**	**277**				**Pn**	**09 45 37.4**	**-0.4**	
CRQM	**Cirque**	**5.76**	**32**				**Pn**	**09 45 38.3**	**+0.3**	
KLU	**Klutina**	**5.79**	**16**				**Pn**	**09 45 38.8**	**+0.6**	
KLU	**Klutina**	**5.79**	**16**		P		**Pn**	**09 45 38.5**	**+0.3**	
	baz=198									
GHO	**Glory Hole Cre**	**5.80**	**2**				**Pn**	**09 45 39.2**	**+0.8**	
N18K	**Kilae Creek**	**5.85**	**326**				**Pn**	**09 45 39.1**	**+0.1**	
SML	**Sawmill**	**5.85**	**4**				**Pn**	**09 45 40.0**	**+0.9**	
SML	**Sawmill**	**5.85**	**4**		P		**Pn**	**09 45 39.8**	**+0.7**	
	baz=184									
TGL	**Tana Glacier**	**5.86**	**33**				**Pn**	**09 45 39.3**	**+0.1**	
ISLE	**Juniper Island**	**5.89**	**35**				**Pn**	**09 45 40.2**	**+0.5**	
O16K	**Kokwok River B**	**5.94**	**311**		Pn		**Pn**	**09 45 40.8**	**+0.6**	
SCM	**Sheep Creek Mo**	**5.95**	**9**		Pn		**Pn**	**09 45 41.4**	**+1.0**	
CHNA	**Chernabura Isl**	**5.99**	**263**		P		**Pn**	**09 45 39.5**	**-1.4**	
	baz=76									
CNBA	**Chernabura Isl**	**5.99**	**263**				**Pn**	**09 45 39.3**	**-1.6**	
VRDI	**Verde Repeater**	**6.07**	**28**				**Pn**	**09 45 42.9**	**+0.7**	
SVW2	**Sparrevohn**	**6.09**	**330**		Pn		**Pn**	**09 45 42.2**	**-0.1**	
SKT	**Skwentna**	**6.12**	**350**		Pn		**Pn**	**09 45 43.8**	**+1.1**	
N25K	**Chitina, Valde**	**6.13**	**21**				**Pn**	**09 45 44.3**	**+1.4**	
N25K	**Chitina, Valde**	**6.13**	**21**		P		**Pn**	**09 45 43.0**	**+0.1**	
	baz=204									
N17K	**Nushagak Hills**	**6.17**	**321**		Pn		**Pn**	**09 45 43.6**	**+0.2**	
GRNC	**Granite Creek**	**6.18**	**37**				**Pn**	**09 45 44.0**	**+0.2**	
TABL	**Table Mountain**	**6.19**	**41**				**Pn**	**09 45 44.2**	**+0.3**	
PTPK	**Patty Peak**	**6.31**	**32**				**Pn**	**09 45 46.1**	**+0.6**	
PCA	**Pinnacle**	**6.31**	**46**				**Pn**	**09 45 46.0**	**+0.6**	
PINM	**Pinnacle**	**6.31**	**46**		P		**Pn**	**09 45 45.7**	**+0.2**	
	baz=232									
SDPT	**Sand Point**	**6.37**	**269**		Pn		**Pn**	**09 45 45.9**	**-0.2**	
SDPT	**Sand Point**	**6.37**	**269**		P		**Pn**	**09 45 45.8**	**-0.3**	
PNL	**Peninsula**	**6.43**	**51**				**Pn**	**09 45 47.1**	**+0.1**	
PNL	**Peninsula**	**6.43**	**51**		P		**Pn**	**09 45 47.9**	**+0.9**	
PNL	**Peninsula**	**6.43**	**51**		P		**Pn**	**09 45 47.1**	**+0.1**	
	baz=238									
BARN	**Barnard Glacie**	**6.46**	**35**		Pn		**Pn**	**09 45 48.0**	**+0.5**	
M18K	**Stony River**	**6.48**	**331**				**Pn**	**09 45 46.9**	**-0.7**	
M18K	**Stony River**	**6.48**	**331**		P		**Pn**	**09 45 46.9**	**-0.7**	
	baz=145									
M19K	**Big River Lodg**	**6.49**	**338**		Pn		**Pn**	**09 45 48.1**	**+0.3**	
CTGM	**Chitina Glacie**	**6.49**	**37**		Pn		**Pn**	**09 45 48.1**	**+0.2**	
LOGN	**Logan Glacier**	**6.51**	**38**				**Pn**	**09 45 47.9**	**-0.3**	
L19K	**White Mountain**	**6.84**	**337**		Pn		**Pn**	**09 45 52.8**	**+0.2**	
M17K	**Holitna River**	**6.89**	**325**		Pn		**Pn**	**09 45 54.0**	**+0.8**	
PS1A	**Pavlof South-1**	**7.07**	**271**				**Pn**	**09 45 54.6**	**-1.2**	
PVV	**Pavlof Volcano**	**7.10**	**270**				**Pn**	**09 45 55.3**	**-0.9**	
O29M	**Mount Kennedy**	**7.12**	**48**				**Pn**	**09 45 57.0**	**+0.5**	
O29M	**Mount Kennedy**	**7.12**	**48**		P		**Pn**	**09 45 56.6**	**+0.1**	
	baz=236									
M16K	**Timber Creek**	**7.15**	**319**		Pn		**Pn**	**09 45 57.6**	**+0.8**	
P29M	**Windy Craggy**	**7.16**	**55**				**Pn**	**09 45 57.2**	**+0.2**	
P29M	**Windy Craggy**	**7.16**	**55**		P		**Pn**	**09 45 56.7**	**-0.3**	
	baz=243									
DHY	**Denali Highway**	**7.17**	**7**		Pn		**Pn**	**09 45 58.1**	**+0.8**	

O14K	**Tigyukauivet M**	**7.22**	**302**		Pn		**Pn**	**09 45 58.6**	**+0.8**	
S31K	**Pelican**	**7.40**	**69**		P		**Pn**	**09 45 58.4**	**-1.7**	
	baz=259									
RND	**Reindeer**	**7.44**	**1**		Pn		**Pn**	**09 46 01.8**	**+0.9**	
KTH	**Kantishna Hill**	**7.63**	**354**		Pn		**Pn**	**09 46 05.2**	**+1.7**	
K20K	**Telida**	**7.77**	**344**		Pn		**Pn**	**09 46 05.8**	**+0.5**	
L16K	**Owhat River**	**7.79**	**322**		Pn		**Pn**	**09 46 06.3**	**+0.6**	
L27K	**Beaver Creek,**	**8.03**	**25**		Pn		**Pn**	**09 46 08.6**	**-0.4**	
FALS	**False Pass**	**8.13**	**268**				**Pn**	**09 46 08.6**	**-1.6**	
FALS	**False Pass**	**8.13**	**268**		P		**Pn**	**09 46 09.0**	**-1.2**	
FALS	**False Pass**	**8.13**	**268**		P		**Pn**	**09 46 08.5**	**-1.7**	
	baz=77									
K17K	**Iditarod**	**8.16**	**329**		Pn		**Pn**	**09 46 10.8**	**+0.1**	
BPAW	**Bear Paw Mtn.**	**8.18**	**355**		Pn		**Pn**	**09 46 10.9**	**0.0**	
S32K	**Killisnoo**	**8.22**	**74**		Pn		**Pn**	**09 46 10.0**	**-1.5**	
S32K	**Killisnoo**	**8.22**	**74**		P		**Pn**	**09 46 09.1**	**-2.4**	
	baz=265									
BESE	**Bessie Mountai**	**8.23**	**66**		Pn		**Pn**	**09 46 11.1**	**-0.6**	
SKAG	**Skagway**	**8.23**	**59**		Pn		**Pn**	**09 46 12.2**	**+0.6**	
SKAG	**Skagway**	**8.23**	**59**		P		**Pn**	**09 46 12.8**	**+1.2**	
ISLZ	**Isanotski Laza**	**8.32**	**267**				**Pn**	**09 46 11.7**	**-1.3**	
O30N	**Mendenhall**	**8.42**	**50**		Pn		**Pn**	**09 46 14.5**	**+0.3**	
JIS	**Juneau Island**	**8.42**	**68**		Pn		**Pn**	**09 46 13.6**	**-0.5**	
JIS	**Juneau Island**	**8.42**	**68**		P		**Pn**	**09 46 13.8**	**-0.4**	
M29M	**Somme Creek**	**8.51**	**36**		Pn		**Pn**	**09 46 16.7**	**+1.1**	
J20K	**Nowinta River**	**8.56**	**346**		Pn		**Pn**	**09 46 15.9**	**-0.3**	
J19K	**Poorman**	**8.63**	**341**		Pn		**Pn**	**09 46 16.5**	**-0.6**	
WESE	**West Dahl East**	**8.88**	**266**				**Pn**	**09 46 19.4**	**-1.3**	
ILAR	**Eielson Array**	**8.89**	**7**		Pn		**Pn**	**09 46 21.3**	**+0.7**	
	comp=N,0.3nm,0.3s,baz=190,slow=13,SNR=12									
ILAR						Sn	**Sn**	**09 47 59.4**	**-1.3**	
	comp=N,0.2nm,0.3s,baz=179,slow=24,SNR=4.4									
	comp=N,0.5nm,0.4s									
IL03	**Eielson Array**	**8.89**	**7**		Pn		**Pn**	**09 46 22.2**	**+1.5**	
WHY	**Whitehorse**	**8.89**	**52**		Pn		**Pn**	**09 46 20.7**	**-0.1**	
K15K	**Wolf Creek Mou**	**8.91**	**320**		Pn		**Pn**	**09 46 22.0**	**+1.1**	
MDM	**Murphy Dome**	**9.01**	**3**				**Pn**	**09 46 23.2**	**+0.9**	
U33K	**Whale Pass**	**9.04**	**83**		Pn		**Pn**	**09 46 20.4**	**-2.3**	
P32M	**Atlin**	**9.05**	**60**		Pn		**Pn**	**09 46 22.7**	**-0.3**	
L29M	**L29M**	**9.10**	**34**		Pn		**Pn**	**09 46 25.4**	**+1.9**	
I23K	**Minto, Yukon-K**	**9.19**	**360**		Pn		**Pn**	**09 46 25.5**	**+0.8**	
J16K	**Anvik River**	**9.28**	**327**		Pn		**Pn**	**09 46 26.5**	**+0.5**	
I21K	**Tanana**	**9.31**	**353**				**Pn**	**09 46 27.4**	**+1.0**	
P33M	**Teslin, Yukon**	**9.68**	**57**		Pn		**Pn**	**09 46 31.4**	**-0.2**	
PRP	**Porcupine Dome**	**9.73**	**9**		Pn		**Pn**	**09 46 31.9**	**-0.4**	
I17K	**Unalakleet**	**9.76**	**329**		Pn		**Pn**	**09 46 31.9**	**-0.6**	
H21K	**Melozitna Rive**	**9.85**	**351**				**Pn**	**09 46 34.4**	**+0.6**	
H21K	**Melozitna Rive**	**9.85**	**351**		P		**Pn**	**09 46 34.0**	**+0.2**	
	baz=168									
UNV	**Unalaska Valle**	**10.15**	**265**		Pn		**Pn**	**09 46 36.9**	**-1.0**	
UNV	**Unalaska Valle**	**10.15**	**265**		P		**Pn**	**09 46 37.1**	**-0.8**	
R33M	**Jennings River**	**10.37**	**63**		Pn		**Pn**	**09 46 41.1**	**+0.1**	
T35M	**Bob Quinn**	**10.57**	**77**		Pn		**Pn**	**09 46 42.2**	**-1.5**	
DLBC	**Dease Lake**	**10.72**	**69**		Pn		**Pn**	**09 46 42.0**	**+0.5**	
DLBC	**Dease Lake**	**10.72**	**69**		Pn		**Pn**	**09 46 46.0**	**+0.2**	
	comp=N,0.4nm,0.3s,baz=268,slow=9.6,SNR=9.6									
	comp=N,1.0nm,0.3s									
G23K	**Bananza Creek**	**10.76**	**358**		Pn		**Pn**	**09 46 46.6**	**+0.3**	
E19K	**Redstone River**	**12.09**	**345**		Pn		**Pn**	**09 47 05.7**	**+1.3**	
INK	**Inuvik**	**14.31**	**24**		Pn		**Pn**	**09 47 36.5**	**+1.8**	
	baz=200,slow=16,SNR=4.3									
	comp=N,1.7nm,0.9s									
C36M	**Paulatuk**	**17.49**	**30**		P		**Pn**	**09 48 16.2**	**+0.3**	
YKA	**Yellowknife Ar**	**18.70**	**55**		P		**Pn**	**09 48 31.1**	**+0.2**	
	baz=263,slow=11,SNR=12									
	comp=N,0.8nm,0.8s									
A36M	**Sachs Harbour**	**18.95**	**23**		P		**P**	**09 48 32.8**	**-0.3**	
A36M					IAmb		IAmb	09 48 44.7		
	comp=Z,5.7nm,0.8s									
NEW	**Newport**	**21.04**	**98**		P		**P**	**09 48 57.9**	**+1.7**	
	comp=Z,2.6nm,0.8s,baz=321,slow=5.6,SNR=5.8									
	comp=Z,2.6nm,0.8s									
PINE	**Pine Mountain**	**21.78**	**112**		P		**P**	**09 49 02.0**	**-2.2**	
J05D	**Fort Rock, OR**	**21.98**	**114**		P		**P**	**09 49 05.3**	**-1.1**	
J05D					IAmb		IAmb	09 49 13.3		
	comp=Z,6.1nm,1.0s									
I07A	**Izee**	**22.34**	**110**		P		**P**	**09 49 08.4**	**-1.8**	
I07A					IAmb		IAmb	09 49 12.2		
	comp=Z,2.2nm,0.8s									
YBH	**Yreka Blue Hor**	**22.37**	**118**		LR		LR	09 55 39.7		
	comp=Z,84nm,18.6s,baz=0.5,slow=31									
K05A	**Summer Lake**	**22.56**	**114**		P		**P**	**09 49 11.4**	**-1.2**	
K05A					IAmb		IAmb	09 49 26.0		
	comp=Z,3.9nm,1.0s									
LYMT	**Lyon Mountain**	**24.47**	**96**		P		**P**	**09 49 30.5**	**-1.0**	
NVAR	**Mina Array Bea**	**27.07**	**117**		P		**P**	**09 49 56.1**	**+1.0**	
	comp=Z,0.5nm,0.7s,baz=302,slow=9.2,SNR=5.3									
	comp=Z,0.5nm,0.7s									
PDAR	**Pinedale Array**	**28.61**	**101**		P		**P**	**09 50 08.8**	**0.0**	
	comp=Z,0.5nm,0.6s,baz=337,slow=3.5,SNR=7.1									
	comp=Z,0.5nm,0.6s									
SEY	**Seymchan**	**29.48**	**308**		LR		LR	10 03 43.3		
	comp=Z,45nm,19.9s,baz=304,slow=40									
H11N2	**WAKE ISLAND Hy**	**48.74**	**240**		T		T	10 45 27.2		
	baz=31,slow=76,SNR=88									
H11N3	**WAKE ISLAND Hy**	**48.74**	**240**		T		T	10 45 25.0		
	baz=31,slow=76,SNR=73									
H11N1	**WAKE ISLAND Hy**	**48.76**	**240**		T		T	10 45 28.7		
	baz=31,slow=76,SNR=86									
H11S1	**WAKE ISLAND Hy**	**49.88**	**240**		T		T	10 46 50.8		
	baz=31,slow=76,SNR=46									
H11S2	**WAKE ISLAND Hy**	**49.89**	**240**		T		T	10 46 53.0		
	baz=31,slow=76,SNR=40									
H11S3	**WAKE ISLAND Hy**	**49.90**	**240**		T		T	10 46 52.4		
	baz=31,slow=76,SNR=48									
MDJ	**Mudanjiang**	**50.14**	**293**		ScS		S	10 00 27.5	+8.7	
MDJ					pmax		pmax			
	comp=Z,17nm,1.4s									
MDJ					pmax		pmax			
	comp=Z,200nm,3.6s									
MDJ					LR		LR			
	comp=N,380nm,13.7s									
MDJ					LR		LR			
	comp=E,390nm,14.8s									
MDJ					LR		LR			
	comp=Z,620nm,17.2s									
SONM	**Songino Array**	**58.83**	**310**		P		**P**	**09 54 11.8**	**+1.1**	
	comp=Z,1.2nm,0.8s,baz=61,slow=7.0,SNR=6.1									
	comp=Z,1.2nm,0.8s									
JTS	**Las Juntas de**	**67.27**	**106**		LR		LR	10 27 54.0		
	comp=Z,37nm,18.3s,baz=344,slow=39									
MKAR	**Makanchi Array**	**68.83**	**325**		P		**P**	**09 55 17.2**	**+0.7**	
	comp=Z,0.6nm,0.5s,baz=26,slow=5.9,SNR=5.7									
	comp=Z,0.6nm,0.5s									
AKASG	**Malin Array Be**	**73.67**	**1**		P		**P**	**09 55 46.6**	**+1.0**	
	comp=Z,0.4nm,0.4s,baz=354,slow=6.4,SNR=2.3									
	comp=Z,0.4nm,0.4s									
RAR	**Rarotonga**	**77.41**	**190**		LR		LR	10 28 06.3		
	comp=Z,36nm,18.8s,baz=166,slow=34									
CMAR	**Chiang Mai Arr**	**86.42**	**298**		P		**P**	**09 56 55.3**	**+0.3**	
	comp=Z,0.9nm,0.3s,baz=4.9,slow=5.0,SNR=5.0									
	comp=Z,0.9nm,0.3s									

*IDC **28** 09:44:56.2±0.5,38˙.09N×144˙.76E, h0km, mb4.3/30, mbtmp4.3/37, ML3.7/7, MS3.5/24, Error ellipse: s-maj=14.1km s-min=11.8km az=155.0*

*MOS **28** 09:44:57.7±0.9,38˙.39N×144˙.69E, h11km, mb4.7/25, Error ellipse: s-maj=8.5km s-min=4.7km az=98.4*

*NEIC **28** 09:44:58.6±1.7,38˙.21N±0˙.07×144˙.6E±0˙.1, h10km±1km, mb4.6/135, Error ellipse: s-maj=14.5km s-min=10.3km az=117.0*

*JMA **28** 09:45:00.3±0.2,38˙.2N±0˙.7×144˙.5E±0˙.9, h52km, MV4.6/37, MW4.4/37, FAR E OFF NORTH HONSHU*

*NIED **28** 09:45:00.3, 38˙.21N×144˙.55E, h52km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-2.84; Mθθ0.75; Mφφ2.09; Mrθ1.40; Mθφ0.72; Mφr3.20; Fault plane solution: M₀4.37000×10¹⁵ NP1: φs204.00000°, δ72.00000°, λ-90.00000°. NP2:φs23.00000°, δ18.00000°, λ-90.00000°.*

ISC 28 09:45:00.5±0.8, 38˙.24N±0˙.05×144˙.76E±0˙.05, h26km±4km, n261, σ2§26/231, mb4.5/129, MS3.6/21, 15C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.56**	**290**	*i* P	**Pn**	**09 45 38.6**	**-1.8**
OFUJ				*eS*	**Sn**	**09 46 07.1**	**-3.6**
JIKH	**Ishinomakikobu**	**2.59**	**273**	P	**Pn**	**09 45 38.5**	**-2.4**
JIKH				S	**Sn**	**09 46 06.8**	**-4.7**
JKMT	**Kesennumamotoy**	**2.64**	**284**	*i* P	**Pn**	**09 45 39.4**	**-2.1**
JKMT				S	**Sn**	**09 46 08.4**	**-4.2**
MIYJ	**Miyakonagasawa**	**2.66**	**301**	*i* P	**Pn**	**09 45 39.8**	**-1.9**
MIYJ				S	**Sn**	**09 46 09.4**	**-3.6**
JMK	**Ichinoseki**	**2.86**	**286**	*i* P	**Pn**	**09 45 42.9**	**-1.6**
JMK				*eS*	**Sn**	**09 46 14.3**	**-3.9**
JOM	**Ohasama**	**2.98**	**296**	*i* P	**Pn**	**09 45 44.6**	**-1.4**
JOM				S	**Sn**	**09 46 18.0**	**-2.9**
JMM	**Marumori**	**3.15**	**264**	Pn	**Pn**	**09 45 46.1**	**-2.3**
JMM				Sn	**Sn**	**09 46 20.0**	**-5.3**
JMM	**Marumori**	**3.15**	**264**	P	**Pn**	**09 45 46.2**	**-2.3**
JOU	**Okura**	**3.23**	**274**	A	A	09 45 47.5	
	comp=N,3.0nm,0.7s						
JANG	**Nango**	**3.30**	**311**	P	**Pn**	**09 45 49.2**	**-1.3**
JANG				*eS*	**Sn**	**09 46 25.4**	**-3.5**
JRG	**Rokugo**	**3.42**	**291**	A	A	09 45 50.6	
	comp=E,2.0nm,2.2s						
JYK	**Kaneyama**	**3.52**	**283**	*i* P	**Pn**	**09 45 52.2**	**-1.3**
JYK				*eS*	**Sn**	**09 46 31.4**	**-2.9**
JOTO	**OTAMA OYAMA**	**3.56**	**260**	*i* P	**Pn**	**09 45 52.7**	**-1.6**
JOTO				S	**Sn**	**09 46 31.6**	**-3.9**
JTM	**Tenmabayashi**	**3.83**	**313**	Pn	**Pn**	**09 45 56.2**	**-1.6**
JTM				Sn	**Sn**	**09 46 39.4**	**-2.5**
JTM	**Tenmabayashi**	**3.83**	**313**	P	**Pn**	**09 45 56.6**	**-1.2**
ERM	**Erimo**	**3.97**	**342**		**Pn**	**09 45 59.2**	**-0.5**
ERM	**Erimo**	**3.97**	**342**	P	**Pn**	**09 45 59.4**	**-0.3**
ERM	**Erimo**	**3.97**	**342**	*ce*P	**Pn**	**09 45 59.1**	**-0.6**
ERM				pmax	pmax		
	comp=Z,56nm,0.7s						
JEM	**Erimo**	**3.97**	**342**	P	**Pn**	**09 45 59.4**	**-0.3**
JOT	**Ohata**	**4.25**	**319**	*e*P	**Pn**	**09 46 02.3**	**-1.2**
JOT				*eS*	**Sn**	**09 46 47.8**	**-4.4**
JCH	**Churui**	**4.50**	**347**	P	**Pn**	**09 46 05.9**	**-1.1**
JCH				S	**Sn**	**09 46 54.7**	**-3.8**
BSO1	**Boso 1**	**4.70**	**222**	*e*P	**Pn**	**09 46 06.2**	**-3.1**
BSO1				*eS*	**Sn**	**09 46 57.8**	**-4.9**
JSD	**Sado**	**5.13**	**270**		**Pn**	**09 46 14.4**	**-1.3**
JSD	**Sado**	**5.13**	**270**	P	**Pn**	**09 46 14.1**	**-1.6**
JRY	**Ryogami san**	**5.18**	**246**	P	**Pn**	**09 46 13.8**	**-2.6**
JRY				S	**Sn**	**09 47 09.0**	**-6.4**
NEM2	**Nemuro 2**	**5.18**	**8**	*i* P	**Pn**	**09 46 13.4**	**-2.9**
NEM2				*eS*	**Sn**	**09 47 08.3**	**-6.9**
NMR	**Nemuro--Hokkai**	**5.18**	**8**	⇓*i* P	**Pn**	**09 46 13.4**	**-3.0**
NMR				*eS*	**Sn**	**09 47 08.2**	**-7.1**
JOD2	**Odawara 2

PEA0B Petropavlovsk- 17.36 27 P **Pn** **09 49 01.4 +0.5**
PEA0B pmax pmax
comp=Z,35nm,1.2s
PETK Petropavlovsk- 17.36 27 P **Pn** **09 49 01.0 +0.1**
PETK Petropavlovsk- 17.36 27 P **Pn** **09 49 01.0 +0.1**
PETK Petropavlovsk- 17.36 27 P **P** **09 49 03.4 +1.3**
comp=Z,0.3nm,0.3s,baz=213,slow=11,SNR=6.9
comp=Z,9.5nm,0.8s
ZEA Zeya 19.62 328 *e*P **P** **09 49 26.4 -0.5**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
MA2 Magadan 21.70 8 P **P** **09 49 49.2 -0.1**
MA2 IAmb IAmb 09 49 53.0
comp=Z,14nm,0.7s
MA2 Magadan 21.70 8*ce*P **P** **09 49 49.0 -0.3**
MA2 pmax pmax
comp=Z,17nm,1.3s
MA2 Magadan 21.70 8 P **P** **09 49 50.9 +1.6**
comp=Z,12nm,0.6s,baz=200,slow=9.4,SNR=13
MA2 LR LR 09 59 29.1
comp=Z,41nm,18.3s,baz=105,slow=40
comp=Z,12nm,0.6s
NJ2 Nanjing 22.03 262 *e*P **P** **09 49 50.5 -2.5**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 pmax pmax
comp=Z,480nm,3.8s
GUMO Guam 24.55 180 LR LR 09 56 40.0
comp=Z,18nm,20.9s,baz=62,slow=29
SEY Seymchan 25.16 8 *i* P **P** **09 50 24.9 +1.5**
SEY pmax pmax
comp=Z,17nm,0.8s
YAK Yakutsk 25.57 343 P **P** **09 50 26.5 -0.7**
YAK Yakutsk 25.57 343 *e*P **P** **09 50 28.0 +0.9**
YAK pmax pmax
comp=Z,18nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.8s
YAK pmax pmax
comp=E,2.0nm,0.6s
YAK Yakutsk 25.57 343 P **P** **09 50 26.7 -0.4**
comp=E,16nm,0.3s,baz=58,slow=0.6,SNR=5.7
YAK LR LR 10 03 03.4
comp=E,63nm,18.3s,baz=172,slow=42
comp=E,16nm,0.3s
HHC Hu-ho-hao-te 25.65 286 *e*P **P** **09 50 27.3 -0.9**
HHC pP pP 09 50 31.5 -2.5
HHC *e*S **S** **09 54 51.0 -4.1**
HHC sS pS 09 54 57.8 -3.2
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,93nm,5.3s
HHC LR LR
comp=E,220nm,11.6s
HHC LR LR
comp=Z,310nm,12.9s
LYN LuoYang 26.18 272 ⇓P **P** **09 50 37.3 +4.4**
LYN pP pP 09 50 39.8 +1.0
LYN sP sP 09 50 42.5 +1.3
LYN PP **PnPn** **09 51 16.0 +4.1**
LYN pmax pmax
comp=Z,17nm,0.6s
LYN pmax pmax
comp=Z,120nm,3.9s
LYN LR LR
comp=N,280nm,3.2s
LYN LR LR
comp=E,350nm,3.8s
LYN LR LR
comp=Z,200nm,3.9s
H11N2 WAKE ISLAND Hy 26.62 128 T T 10 18 09.5
baz=319,slow=74,SNR=35
H11N1 WAKE ISLAND Hy 26.63 128 T T 10 18 17.2
baz=319,slow=74,SNR=24
H11N3 WAKE ISLAND Hy 26.64 128 T T 10 18 09.5
baz=319,slow=74,SNR=23
BTO Baotou 26.84 286 *e*P **P** **09 50 40.8 +1.8**
BTO pP **pP** **09 50 44.8 0.0**
BTO sP **sP** **09 50 47.5 +0.2**
BTO PP **PnPn** **09 51 25.5 +4.5**
BTO S **S** **09 55 19.3 +5.4**
BTO sS **sS** **09 55 24.0 +0.7**
BTO SS **SnSn** **09 56 27.3 +8.2**
BTO pmax pmax
comp=Z,14nm,0.6s
BTO pmax pmax
comp=Z,330nm,4.1s
BTO LR LR
comp=N,230nm,13.1s
BTO LR LR
comp=E,650nm,15.8s
BTO LR LR
comp=Z,560nm,16.8s
H11S1 WAKE ISLAND Hy 27.43 130 T T 10 19 17.1
baz=321
H11S3 WAKE ISLAND Hy 27.43 130 T T 10 19 23.9
baz=321
H11S2 WAKE ISLAND Hy 27.44 130 T T 10 19 14.8
baz=321
BOD Bodaibo 28.02 324 *e*P **P** **09 50 49.4 +0.2**
BOD pmax pmax
comp=Z,10.0nm,1.8s
ULN Ulaanbaatar 28.93 302 *i* P **P** **09 50 57.7 0.0**
ULN pmax pmax
comp=Z,2.0nm,0.9s
XAN Xi'an 29.13 273 P **P** **09 51 03.5 +4.1**
XAN pP sP 09 51 09.5 +1.8
XAN pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 29.37 302 P **P** **09 51 02.3 +0.8**
comp=Z,0.8nm,0.8s,baz=85,slow=7.7,SNR=5.9
SONM LR LR 10 03 19.2
comp=Z,95nm,18.1s,baz=92,slow=38
comp=Z,0.8nm,0.8s
BILL Bilibino 32.15 15 P **P** **09 51 25.9 +0.2**
BILL IAmb IAmb 09 51 26.8
comp=Z,5.7nm,0.8s
BILL Bilibino 32.15 15⇑ *e*P **P** **09 51 25.2 -0.5**
BILL pmax pmax
comp=Z,8.0nm,1.7s
LZH Lanzhou 32.49 279 *e*P **P** **09 51 27.0 -2.2**
LZH pP pP 09 51 35.0 -0.1
LZH pmax pmax
comp=Z,11nm,1.0s
TIXI Tiksi 34.46 351*ce*P **P** **09 51 45.2 -0.5**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
GTA Gaotai 34.76 286 *e*P **P** **09 51 51.8 +2.9**
GTA pP pwP 09 52 01.0 -1.3
GTA pmax pmax
comp=Z,3.0nm,1.1s
PZH PanZhiHua 37.86 265 P **P** **09 52 15.8 +0.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,90nm,6.9s
ANM Nome 39.19 32 P **P** **09 52 27.6 +1.6**
ANM Nome 39.19 32 P **P** **09 52 27.6 +1.6**
ANM pmax pmax
comp=Z,5.0nm,1.0s
M14K Bethel 39.81 38 P **P** **09 52 33.0 +1.8**
M14K IAmb IAmb 09 52 33.2
comp=Z,14nm,0.8s
C16K Lisburne Hills 40.46 26 P **P** **09 52 37.3 +0.8**
N15K Kwethluk River 40.65 39 P **P** **09 52 39.6 +1.4**
L16K Owhat River 41.15 37 P **P** **09 52 43.4 +1.1**
M16K Timber Creek 41.31 38 P **P** **09 52 45.0 +1.4**
M16K IAmb IAmb 09 52 45.8
comp=Z,18nm,1.2s
F17K Baldwin Pennin 41.37 29 P **P** **09 52 45.7 +1.7**
DGZ Jazzator, Alta 41.86 305 *i* P **P** **09 52 49.7 +1.2**
DGZ pmax pmax
comp=Z,4.0nm,0.7s
G18K Tagagawik 42.26 31 IAmb IAmb 09 52 53.3
comp=Z,11nm,1.2s
WMQ Urumqi 42.68 296 *e*P **P** **09 52 57.0 +1.9**
P18K Big Mountain, 43.03 40 P **P** **09 52 59.0 +1.3**
ZAA0 Zalesovo Array 43.09 312 P **P** **09 52 58.4 +0.1**
ZALV Zalesovo Beam 43.09 312 P **P** **09 52 58.0 -0.3**
ZALV Zalesovo Beam 43.09 312 P **P** **09 52 59.0 +0.8**
comp=Z,1.5nm,0.5s,baz=89,slow=7.5,SNR=5.4
ZALV PcP **PcP** **09 54 47.8 0.0**
comp=Z,3.0nm,0.6s,baz=72,slow=4.7,SNR=4.2
ZALV LR LR 10 11 24.3
comp=Z,82nm,20.4s,baz=104,slow=37
comp=Z,1.5nm,0.5s
E19K Redstone River 43.15 29 IAmb IAmb 09 53 00.6
comp=Z,6.9nm,0.7s
NRIK Noril'sk 43.31 334*ce*P **P** **09 52 58.2 -1.6**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
NRIK Noril'sk 43.31 334 P **P** **09 53 00.3 +0.4**
comp=Z,1.5nm,0.2s,baz=117,slow=6.8,SNR=2.5
comp=Z,1.5nm,0.2s
OHAK Old Harbor 44.06 44 P **P** **09 53 06.4 +0.4**
RSO Redoubt South 44.31 39 P **P** **09 53 09.5 +1.3**
CMAR Chiang Mai Arr 44.36 257 P **P** **09 53 09.6 +0.7**
comp=Z,0.5nm,0.3s,baz=46,slow=7.8,SNR=1.3
CMAR LR LR 10 12 48.5
comp=Z,34nm,19.0s,baz=85,slow=38
comp=Z,0.5nm,0.3s
KDAK Kodiak Island 44.42 43 P **P** **09 53 09.0 +0.1**
KDAK Kodiak Island 44.42 43 P **P** **09 53 09.0 +0.1**
KDAK pmax pmax
comp=Z,43nm,0.8s
D22K Ayikyak River 45.09 27 IAmb IAmb 09 53 16.2
comp=Z,3.6nm,0.6s
E22K Anaktuvuk Pass 45.30 28 IAmb IAmb 09 53 37.2
comp=Z,5.2nm,0.5s
MLY Manley 45.42 33 P **P** **09 53 18.4 +1.6**
MK31 Makanchi Array 45.74 302 P **P** **09 53 19.3 -0.3**
MK31 Makanchi Array 45.74 302*ce*P **P** **09 53 20.5 +0.9**
MKAR Makanchi Array 45.74 302 P **P** **09 53 19.4 -0.1**
MKAR Makanchi Array 45.74 302*ce*P **P** **09 53 20.2 +0.6**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 45.74 302 P **P** **09 53 19.7 +0.1**
comp=Z,2.9nm,0.8s,baz=85,slow=9.1,SNR=23
MKAR LR LR 10 13 08.2
comp=Z,78nm,20.1s,baz=72,slow=37
comp=Z,2.9nm,0.8s
MAKZ Makanchi 45.95 302 P **P** **09 53 21.1 -0.1**
MAKZ Makanchi 45.95 302 P **P** **09 53 21.1 -0.1**
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
C23K Itkillik River 45.97 26 IAmb IAmb 09 53 23.1
comp=Z,7.5nm,0.8s
SML Sawmill 46.44 37 P **P** **09 53 25.9 +1.0**
MDM Murphy Dome 46.48 33 P **P** **09 53 26.4 +1.2**
MDM IAmb IAmb 09 53 27.2
comp=Z,5.7nm,0.9s
IL31 47.05 33 IAmb IAmb 09 53 30.6
comp=Z,3.3nm,0.8s
ILAR Eielson Array 47.05 33 P **P** **09 53 29.9 +0.3**
comp=Z,1.9nm,0.7s,baz=262,slow=6.6,SNR=23
comp=Z,1.9nm,0.7s
KURK Kurchatov 47.29 308 P **P** **09 53 31.8 +0.2**
KURK IAmb IAmb 09 53 33.9
comp=Z,5.3nm,0.7s
KURK Kurchatov 47.29 308 P **P** **09 53 32.5 +0.9**
KURBB Kurchatov Arra 47.37 308 P **P** **09 53 32.5 +0.3**
comp=Z,4.2nm,0.6s,baz=82,slow=8.0,SNR=24
KURBB LR LR 10 15 27.3
comp=Z,48nm,18.0s,baz=174,slow=39
comp=Z,4.2nm,0.6s
BCAR Beaver Creek A 49.40 35 P **P** **09 53 49.5 +1.8**
DAWY Dawson 50.34 34 P **P** **09 53 55.8 +0.9**
E29M Blow River 50.48 28 IAmb IAmb 09 53 58.6
comp=Z,5.5nm,1.0s
K29M Barlow Dome 51.19 34 IAmb IAmb 09 54 03.9
comp=Z,7.3nm,0.9s
BOOM Boomskoye usch 51.30 298 IAmb IAmb 09 54 13.3
comp=Z,4.7nm,0.8s
BVAR Borovoye Array 51.73 312 P **P** **09 54 06.1 +0.7**
comp=Z,5.2nm,0.8s,baz=75,slow=8.5,SNR=19
BVAR LR LR 10 16 42.4
comp=Z,51nm,18.6s,baz=49,slow=37
comp=Z,5.2nm,0.8s
HYT Haines Junctio 51.74 38 P **P** **09 54 08.2 +2.6**
BRVK Borovoye 51.78 312 **P** **09 54 05.7 -0.1**
BRVK Borovoye 51.78 312*ce*P **P** **09 54 06.8 +1.0**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 52.10 28 P **P** **09 54 08.9 +1.0**
comp=Z,2.7nm,0.8s,baz=295,slow=7.3,SNR=5.9
comp=Z,2.7nm,0.8s
AAK Ala-Archa 52.25 299 LR LR 10 17 00.5
comp=Z,25nm,21.5s,baz=92,slow=37
MTN Manton Dam 52.39 197 P **P** **09 54 09.7 -1.0**
A36M Sachs Harbour 54.14 23 IAmb IAmb 09 54 26.1
comp=Z,3.9nm,0.8s
C36M Paulatuk 55.21 26 IAmb IAmb 09 54 32.2
comp=Z,4.4nm,0.7s
ARU Arti 57.22 319 P **P** **09 54 45.6 +0.4**
comp=Z,10nm,0.2s,baz=219,slow=5.1,SNR=4.6
ARU LR LR 10 21 49.6
comp=Z,72nm,18.4s,baz=3.0,slow=39
SIMJ Simiganj 57.64 296 P **P** **09 54 47.9 -0.8**
SIMJ IAmb IAmb 09 55 04.8
comp=Z,4.3nm,0.8s
WB0 Warramunga Arr 58.51 191 P **P** **09 54 53.1 -1.5**
WB0 IAmb IAmb 09 55 02.4
comp=Z,5.6nm,0.7s
WR0 Warramunga Arr 58.68 191 P **P** **09 54 54.2 -1.6**
WR0 IAmb IAmb 09 55 33.7
comp=Z,5.8nm,1.2s
WRAB Tennant Creek 58.68 191 P **P** **09 54 54.2 -1.6**
WRAB IAmb IAmb 09 55 04.0
comp=Z,4.4nm,0.7s
WRAB Tennant Creek 58.68 191 P **P** **09 54 54.2 -1.6**
WRAB pmax pmax
comp=Z,4.0nm,0.7s
WB2 Warramunga Arr 58.69 191 P **P** **09 54 54.5 -1.4**
WB2 IAmb IAmb 09 55 03.8
comp=Z,4.3nm,0.7s
WRA Warramunga Arr 58.69 191 P **P** **09 54 54.3 -1.6**
WRA Warramunga Arr 58.69 191 P **P** **09 54 53.9 -2.0**
comp=Z,2.5nm,0.6s,baz=12,slow=7.3,SNR=15
WRA PcP **PcP** **09 55 45.2 -0.5**
comp=Z,1.8nm,0.9s,baz=3.8,slow=4.0,SNR=5.0
comp=Z,2.5nm,0.6s
ABKAR Akbulak array 59.19 311 P **P** **09 54 58.1 -1.0**
AKTO Aktyubinsk 59.84 312 P **P** **09 55 02.8 -0.8**
comp=Z,3.4nm,0.9s,baz=72,slow=8.3,SNR=7.3
AKTO LR LR 10 22 11.7
comp=Z,45nm,19.8s,baz=41,slow=37
comp=Z,3.4nm,0.9s
NOR Nord 60.01 357 *i* P **P** **09 55 04.2 -0.1**
NOR IAmb IAmb 09 55 05.3
comp=Z,2.7nm,1.0s
RES Resolute Bay 60.76 15 P **P** **09 55 10.1 +0.6**
RES IAmb IAmb 09 55 10.7
comp=Z,4.2nm,0.8s
RES Resolute Bay 60.76 15 P **P** **09 55 10.1 +0.6**
RES pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 61.42 31*ce*P **P** **09 55 14.1 -0.1**
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 61.42 31 P **P** **09 55 14.2 +0.1**
comp=Z,1.9nm,0.9s,baz=300,slow=7.0,SNR=24
comp=Z,1.9nm,0.9s
ASAR Alice Springs 62.41 191 P **P** **09 55 20.0 -1.3**
comp=Z,1.5nm,0.9s,baz=11,slow=5.5,SNR=12
comp=Z,1.5nm,0.9s
DZM Mont Dzumac 63.35 157 LR LR 10 21 16.8
comp=Z,31nm,19.6s,baz=310,slow=34
NEEM North Greenlan 64.17 4 *i* P **P** **09 55 31.4 -1.3**
NEEM IAmb IAmb 09 55 33.4
comp=Z,4.7nm,0.8s
BELG Belogornoye 64.72 318 *i* P **P** **09 55 36.7 +0.5**
BELG pmax pmax
comp=Z,7.0nm,2.6s
GEYT Alibeck 65.56 300 P **P** **09 55 42.8 +0.8**
comp=Z,3.7nm,0.9s,baz=64,slow=17,SNR=4.5
comp=Z,3.7nm,0.9s
C09A Chrisman Ranch 67.00 47 IAmb IAmb 09 55 52.9
comp=Z,5.4nm,0.8s
NEW Newport 67.40 46 P **P** **09 55 54.0 +0.3**
NEW Newport 67.40 46 P **P** **09 55 54.1 +0.4**
comp=Z,5.0nm,1.1s,baz=315,slow=7.6,SNR=5.7
comp=Z,5.0nm,1.1s
YBH Yreka Blue Hor 67.50 54 P **P** **09 55 55.1 +0.7**
comp=Z,3.0nm,1.0s,baz=197,slow=2.0,SNR=5.7
comp=Z,3.0nm,1.0s
OBN Obninsk 68.70 324 *e*P **P** **09 56 02.6 +1.1**
OBN *e* 09 56 26.2
OBN *e* 09 58 28.9
OBN *e*PPP PPP 10 00 13.2
OBN pmax pmax
comp=Z,10.0nm,0.5s
FINES FINESS Array B 68.97 333 *i* P **P** **09 56 04.5 +1.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 68.97 333 P **P** **09 56 03.0 -0.2**
comp=Z,3.0nm,0.8s,baz=70,slow=8.3,SNR=5.9
comp=Z,3.0nm,0.8s
J08A Circle Bar Ran 69.27 51 IAmb IAmb 09 56 07.9
comp=Z,4.7nm,0.9s
SUMG Summit 69.46 1 *i* P **P** **09 56 06.0 -0.5**
SUMG IAmb IAmb 09 56 08.6
comp=Z,7.2nm,0.8s
CMB Columbia Colle 71.00 56 IAmb IAmb 09 56 18.3
comp=Z,4.6nm,0.9s
YERR Yerington 71.22 55 IAmb IAmb 09 56 19.8
comp=Z,4.9nm,1.0s
FFC Flin Flon 71.24 34 P **P** **09 56 17.5 +0.3**
FFC IAmb IAmb 09 56 18.6
comp=Z,5.6nm,0.9s
FFC Flin Flon 71.24 34 P **P** **09 56 17.5 +0.3**
FFC pmax pmax
comp=Z,6.0nm,0.9s
FCC Fort Churchill 71.72 28 IAmb IAmb 09 56 21.0
comp=Z,7.9nm,1.4s
KVN Kaiserville 71.91 54 IAmb IAmb 09 56 23.9
comp=Z,4.0nm,1.0s
KIV Kislovodsk 72.10 312 *e*P **P** **09 56 24.1 +1.4**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,27nm,18.0s
LHV Little Huntoon 72.11 55 IAmb IAmb 09 56 28.0
comp=Z,5.3nm,1.0s
KBZ Khabaz 72.11 312 P **P** **09 56 23.1 +0.5**
comp=Z,5.1nm,0.8s,baz=53,slow=1.5,SNR=12
comp=Z,5.1nm,0.8s
NVAR Mina Array Bea 72.13 55 P **P** **09 56 24.5 +1.4**
comp=Z,2.2nm,0.7s,baz=290,slow=6.4,SNR=20
comp=Z,2.2nm,0.7s
ICESG Greenland Ices 72.94 2 *i* P **P** **09 56 27.9 +0.4**
ICESG IAmb IAmb 09 56 29.4
comp=Z,10nm,0.8s
DSP Deep Springs 72.96 56 IAmb IAmb 09 56 30.4
comp=Z,5.3nm,1.1s
H17A Grant Village 73.33 46 IAmb IAmb 09 56 34.5
comp=Z,6.9nm,1.1s
FXWY Fox Creek 73.53 47 IAmb IAmb 09 56 34.1
comp=Z,3.8nm,0.8s
MOOW Moose Ponds 73.63 47 IAmb IAmb 09 56 34.5
comp=Z,5.3nm,1.1s
TPAW Teton Pass 73.67 47 IAmb IAmb 09 56 33.4
comp=Z,3.8nm,0.8s
HFS Hagfors 74.06 337 P **P** **09 56 34.3 +0.5**
comp=Z,4.1nm,1.0s,baz=35,slow=11,SNR=2.2
comp=Z,4.1nm,1.0s
NOA NORSAR Array B 74.08 338 P **P** **09 56 33.5 -0.4**
comp=Z,0.8nm,0.8s,baz=36,slow=2.7,SNR=2.0
comp=Z,0.8nm,0.8s
HWUT Hardware Ranch 74.45 49 IAmb IAmb 09 56 39.0
comp=Z,6.7nm,1.1s
QSM Queen of Sheba 74.49 56 IAmb IAmb 09 56 38.2
comp=Z,6.9nm,1.1s
GWY Greenwater Val 74.49 56 IAmb IAmb 09 56 38.7
comp=Z,4.6nm,0.9s
DUG Dugway, Tooele 74.55 51 IAmb IAmb 09 56 39.5
comp=Z,4.6nm,0.8s
PDAR Pinedale Array 74.92 47 P **P** **09 56 40.1 +0.7**
comp=Z,2.5nm,0.6s,baz=283,slow=1.9,SNR=34
comp=Z,2.5nm,0.6s
AKASG Malin Array Be 74.94 324 P **P** **09 56 39.3 +0.2**
comp=Z,2.6nm,0.7s,baz=43,slow=5.5,SNR=11
AKASG LR LR 10 33 18.5
comp=Z,70nm,19.4s,baz=33,slow=39
comp=Z,2.6nm,0.7s
AKBB Malin Array Si 74.94 324*ce*P **P** **09 56 38.5 -0.6**
AKBB pmax pmax
comp=Z,11nm,1.2s
CCUT Cedar City 75.81 53 IAmb IAmb 09 56 46.9
comp=Z,4.5nm,0.8s
SZCU Shurtz Canyon 75.95 53 IAmb IAmb 09 56 47.5
comp=Z,3.4nm,0.9s
LCMT Little Creek M 76.21 54 IAmb IAmb 09 56 49.1
comp=Z,4.0nm,0.8s
MTPU Mount Pierson 76.25 52 IAmb IAmb 09 56 49.9
comp=Z,4.1nm,0.8s
KNB Kanab 76.47 54 IAmb IAmb 09 56 50.9
comp=Z,5.1nm,0.9s
RWWY Rawlins 76.95 47 IAmb IAmb 09 56 51.2
comp=Z,5.2nm,0.8s
ULM Lac du Bonnet 77.02 35 IAmb IAmb 09 56 51.2
comp=Z,3.6nm,0.9s
ULM Lac du Bonnet 77.02 35 P **P** **09 56 50.8 -0.2**
comp=Z,2.9nm,0.8s,baz=305,slow=5.4,SNR=6.2
comp=Z,2.9nm,0.8s
U15A North Rim 77.17 54 IAmb IAmb 09 56 54.7
comp=Z,5.0nm,0.8s
Y14A Wickenburg 78.24 56 IAmb IAmb 09 57 00.0
comp=Z,4.9nm,0.9s
WUAZ Wupatki 78.32 54 IAmb IAmb 09 57 01.4
comp=Z,5.9nm,0.9s
AGMN Agassiz Nation 78.42 36 IAmb IAmb 09 56 59.4
comp=Z,5.8nm,1.0s
X16A Lo Mia Camp, P 78.96 55 IAmb IAmb 09 57 04.5
comp=Z,4.7nm,0.9s
B35A Bob, Littlefor 79.36 35 IAmb IAmb 09 57 04.6
comp=Z,4.8nm,0.9s
MLR Muntele Rosu 80.15 321 LR LR 10 35 54.2
comp=Z,61nm,18.1s,baz=35,slow=38
EYMN Ely 80.67 35 P **P** **09 57 11.8 +0.7**
EYMN IAmb IAmb 09 57 11.9
comp=Z,7.2nm,0.9s
ECSD EROS Data Cent 81.31 40 IAmb IAmb 09 57 15.4
comp=Z,4.3nm,0.8s
CLL Collm 81.34 332 *i* P **P** **09 57 14.7 +0.1**
CLL pmax pmax
comp=Z,12nm,1.2s
CLL Collm 81.34 332 *i* P **P** **09 57 14.7 +0.1**
comp=Z,12nm,1.2s
VRAC Vranov 81.52 329 LR LR 10 36 14.8
comp=Z,70nm,18.5s,baz=243,slow=38
T25A Trinidad 81.56 49 IAmb IAmb 09 57 18.3
comp=Z,5.3nm,1.1s
E38A The Farm, Brul 81.64 35 IAmb IAmb 09 57 16.7
comp=Z,5.7nm,0.7s
ANMO Albuquerque 81.77 52 P **P** **09 57 18.4 +1.0**
ANMO IAmb IAmb 09 57 20.2
comp=Z,4.0nm,1.0s
ANMO Albuquerque 81.77 52 P **P** **09 57 18.5 +1.0**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
MODS Modra-Piesok 81.96 328 *e*P **P** **09 57 18.9 +0.9**
MODS pmax pmax
comp=Z,15nm,1.0s
MODS Modra-Piesok 81.96 328 *e*P **P** **09 57 18.9 +0.9**
121A Cookes Peak, D 82.51 54 IAmb IAmb 09 57 23.5
comp=Z,6.8nm,1.1s
PPT Papeete 82.84 119 LR LR 10 28 47.5
comp=Z,67nm,20.5s,baz=304,slow=32
EKA Eskdalemuir Ar 82.84 342 P **P** **09 57 23.0 +0.6**
comp=Z,1.9nm,0.7s,baz=34,slow=5.3,SNR=1.9
comp=Z,1.9nm,0.7s
PPT2 Papeete2 82.85 119 *e*LR LR 10 23 13.5
comp=Z,66nm,23.0s
KHC Kasperske Hory 82.87 330*ce*P **P** **09 57 23.7 +1.0**
KHC pmax pmax
comp=Z,22nm,2.5s
RONA Rosalia, Austr 82.90 328 *e*pP **P** **09 57 24.3 +1.4**
comp=Z,1.9nm,0.3s
CONA Conrad Observa 82.90 328 *e*pP **P** **09 57 24.2 +1.3**
comp=Z,0.3nm,0.2s
RTBA Rita Blanca 83.03 49 IAmb IAmb 09 57 24.8
comp=Z,5.9nm,1.1s
GERES GERESS Array B 83.05 330 P **P** **09 57 24.1 +0.4**
comp=Z,1.1nm,0.7s,baz=23,slow=7.2,SNR=3.7
comp=Z,1.1nm,0.7s
MMAI Mount Meron Ar 83.40 307 P **P** **09 57 26.1 +0.3**
comp=Z,7.0nm,0.8s,baz=45,slow=8.6,SNR=5.9
comp=Z,7.0nm,0.8s
SOKA Soboth 84.24 328 *e*pP **P** **09 57 30.4 +0.5**
comp=Z,1.7nm,0.4s
ABTA Abfaltersbach 85.22 329 *e*P **P** **09 57 34.8 +0.1**
comp=Z,1.7nm,0.5s
RETA Reutte 85.30 331 *e*PcP **P** **09 57 36.0 +0.8**
comp=Z,3.5nm,0.6s
SMWD Samnorwood 85.41 48 IAmb IAmb 09 57 38.9
comp=Z,3.7nm,0.8s
VHRN Van Horn 85.45 54 IAmb IAmb 09 57 37.9
comp=Z,3.2nm,0.9s
PECS Pecos 85.77 53 IAmb IAmb 09 57 39.1
comp=Z,4.8nm,1.0s

P40A	**Paris**	**86.72**	**40**	IAmb	IAmb	09 57 43.2
	comp=Z,4.9nm,0.8s					
TX31	**Lajitas Ar. Si**	**87.27**	**54**	IAmb	IAmb	09 57 48.2
	comp=Z,2.6nm,0.9s					
TXAR	**Lajitas Array**	**87.27**	**54**	P	**P**	**09 57 45.4 +0.1**
	comp=Z,2.0nm,0.9s,baz=311,slow=2.7,SNR=15					
	comp=Z,2.0nm,0.9s					
CCM	**Cathedral Cave**	**88.24**	**41**	P	**P**	**09 57 49.6 0.0**
CCM	**Cathedral Cave**	**88.24**	**41**	P	**P**	**09 57 49.6 0.0**
CCM				pmax	pmax	
	comp=Z,7.0nm,1.0s					
MIAR	**Mount Ida**	**89.62**	**45**	IAmb	IAmb	09 57 57.3
	comp=Z,4.4nm,0.8s					
ESDC	**Sonseca Array**	**97.33 336**		LR	LR	10 50 48.8
	comp=Z,80nm,18.2s,baz=206,slow=41					
TORD	**Torodi Ar. Bea**	**118.28 318**		PKP	**PKPdf**	**10 03 45.0 -1.1**
	comp=Z,0.3nm,0.5s,baz=40,slow=2.7,SNR=2.7					

IDC 28 09:45:03.1±2.6, 54°24N×85°94E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=19.5km s-min=10.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.72**	**247**	I	I	09 49 29.2	
	baz=65,slow=327,SNR=4.5						
ZALV	**Zalesovo Beam**	**0.72**	**247**	Pg	Pg	09 45 15.7	-1.3
	1.1nm,0.3s,baz=66,slow=17,SNR=9.9						
ZALV				Lg	Lg	09 45 27.8	
	2.7nm,0.3s,baz=67,slow=30,SNR=5.6						
KURBB	**Kurchatov Arra**	**5.80**	**234**	Pn	Pn	09 46 31.5	+1.1
	0.1nm,0.3s,baz=50,slow=14,SNR=4.2						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.81**	**199**	Pn	Pn	09 46 59.2	+1.3
	0.3nm,0.3s,baz=22,slow=11,SNR=6.1						
MKAR				Lg	Lg	09 49 08.0	
	baz=23,slow=27,SNR=1.5						
	0.3nm,0.3s						

IDC 28 09:53:50.8±2.1, 5°60S×142°23E, h0km, mb3.4/1, mbtmp3.5/3, ML3.8/2, Error ellipse: s-maj=130.7km s-min=30.6km az=116.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.19**	**208**	Pn	Pn	09 57 39.2	-0.6
	0.4nm,0.3s,baz=23,slow=17,SNR=7.3						
WRA				Lg	Lg	10 02 23.8	
	0.1nm,0.3s,baz=32,slow=29,SNR=2.7						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**19.67**	**203**	Pn	Pn	09 58 23.9	+1.1
	0.2nm,0.3s,baz=33,slow=10.0,SNR=21						
	0.9nm,0.5s						
ILAR	**Eielson Array**	**87.01**	**24**	P	P	10 06 37.7	-0.1
	0.1nm,0.6s,baz=269,slow=5.1,SNR=4.2						
	0.1nm,0.6s						

*IDC **28** 09:55:27.8±1.1, 30°11N×87°66E, h0km, mb3.6/11, mbtmp3.7/13, ML3.9/2, MS3.7/4, Error ellipse: s-maj=31.3km s-min=21.9km az=56.0*
ISC 28 09:55:33.1±0.9, 30°2N±0°1×87°7E±0°2, h35km, n17, σ1°05/13, mb3.6/11, MS3.8/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.53**	**136**	Pn	**Pn**	**09 59 09.5**	**-0.1**
	0.7nm,0.3s,baz=324,slow=12,SNR=1.3						
	2.1nm,0.3s						
MKAR	**Makanchi Array**	**17.09**	**347**	P	**Pn**	**09 59 27.2**	**-1.9**
	0.1nm,0.3s,baz=159,slow=12,SNR=6.3						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**21.52**	**344**	P	**P**	**10 00 18.0**	**-1.0**
	1.5nm,1.0s,baz=161,slow=10,SNR=8.0						
	1.5nm,1.0s						
SONM	**Songino Array**	**22.71**	**34**	P	**P**	**10 00 32.9**	**+1.0**
	0.7nm,0.8s,baz=221,slow=12,SNR=6.6						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**23.81**	**356**	P	**P**	**10 00 43.8**	**+1.2**
	1.2nm,0.6s,baz=188,slow=9.0,SNR=6.3						
	1.2nm,0.6s						
BVAR	**Borovoye Array**	**26.08**	**336**	P	**P**	**10 01 04.8**	**+1.5**
	0.9nm,0.7s,baz=138,slow=11,SNR=5.1						
	0.9nm,0.7s						
KSRS	**Korea Array**	**33.98**	**67**	LR	LR	10 17 13.5	
	comp=Z,19nm,18.7s,baz=160,slow=38						
JHJ	**Hachijo jima 2**	**44.05**	**72**	LR	LR	10 24 21.7	
	comp=Z,38nm,20.7s,baz=41,slow=39						
BRTR	**Keskin Array B**	**44.73**	**297**	P	**P**	**10 03 43.9**	**+0.7**
	0.7nm,0.6s,baz=93,slow=11,SNR=2.4						
	0.7nm,0.6s						
AKASG	**Malin Array Be**	**47.61**	**313**	P	**P**	**10 04 05.5**	**0.0**
	0.3nm,0.4s,baz=77,slow=8.0,SNR=1.6						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**50.45**	**327**	P	**P**	**10 04 27.0**	**-0.1**
	2.2nm,0.9s,baz=108,slow=8.9,SNR=2.1						
	2.2nm,0.9s						
HFS	**Hagfors**	**56.45**	**325**	P	**P**	**10 05 10.4**	**-0.6**
	2.8nm,0.7s,baz=108,slow=9.3,SNR=2.1						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**69.54**	**135**	P	**P**	**10 06 37.8**	**-0.8**
	0.5nm,0.8s,baz=323,slow=6.0,SNR=4.3						
	0.5nm,0.8s						
MDT	**Midelt**	**76.08**	**300**	LR	LR	10 45 03.3	
	comp=Z,123nm,18.1s,baz=244,slow=39						
HNR	**Honiara**	**79.69**	**107**	LR	LR	10 42 00.3	
	comp=Z,222nm,19.8s,baz=200,slow=35						
TORD	**Torodi Ar. Bea**	**80.11**	**279**	P	**P**	**10 07 40.0**	**0.0**
	0.7nm,0.9s,baz=49,slow=4.8,SNR=4.1						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**85.89**	**10**	P	**P**	**10 08 09.5**	**+0.4**
	0.1nm,0.7s,baz=9.9,slow=5.0,SNR=4.4						
	0.1nm,0.7s						

*IDC **28** 09:59:32.7±2.9, 64°53N×31°44E, h0km, mbtmp3.3/4, ML2.1/4, Error ellipse: s-maj=44.3km s-min=11.1km az=109.0*
*HEL **28** 09:59:36.1±0.2, 64°78N×30°42E, h0km, ML2.0, Suspected explosion*
ISC 28 09:59:35.4±1.0, 64°79N±0°03×30°46E±0°06, h0km, n36, σ1°26/50, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.62**	**202**	PG	**Pg**	**09 59 46.7**	**-0.5**
RMF				MSG		09 59 55.3	
	comp=Z,29nm,0.2s						
KU6	**Riekki**	**1.26**	**349**	PG	**Pg**	**09 59 58.7**	**-0.9**
	baz=165						
KU6				MSG		10 00 14.5	
	comp=Z,12nm,0.2s						
KU6				SB	**Sb**	**10 00 16.9**	**+0.1**
MSF	**Maaselka**	**1.27**	**333**	PG	**Pg**	**09 59 59.3**	**-0.5**
	baz=154						
MSF				SN	**Sn**	**10 00 18.0**	**-0.2**
OLKF	**Oulanka, Finla**	**1.60**	**344**	PG	**Pn**	**10 00 04.8**	**-0.1**
OLKF				MSG		10 00 24.3	
	comp=Z,12nm,0.2s						
OLKF				SN	**Sg**	**10 00 29.1**	**+2.4**
NIF	**Nilsia**	**1.83**	**221**	PB	**Pn**	**10 00 06.2**	**-1.8**
	baz=39						
JOF	**Joensuu**	**1.92**	**168**	PG	**Pb**	**10 00 10.2**	**-1.0**
	baz=353						
OUL	**Oulu**	**1.97**	**281**	PG	**Pn**	**10 00 10.8**	**+0.9**
	baz=101						
OUL				SG	**Sb**	**10 00 37.4**	**+0.4**
RANF	**Ranua**	**1.97**	**310**	PG	**Pn**	**10 00 11.0**	**+1.0**
	baz=130						
RANF				SG	**Sg**	**10 00 38.4**	**-0.1**
OBF4	**Vikkela, Lumij**	**2.29**	**273**	PB	**Pn**	**10 00 15.1**	**+0.7**
	baz=93						
OBF4				MSG		10 00 43.5	
	comp=Z,10.0nm,0.2s						
OUF	**Merijarvi**	**2.51**	**263**	PN	**Pn**	**10 00 17.6**	**+0.3**
	baz=78						
OUF				MSG		10 00 49.4	
	comp=Z,11nm,0.2s						
OUF				SG	**Sb**	**10 00 52.6**	**0.0**
RNF	**Rovaniemi**	**2.59**	**317**	PN	**Pn**	**10 00 19.7**	**+1.2**
RNF				SG	**Sb**	**10 00 56.1**	**+1.1**
OBF0	**Syolatti, Pyha**	**2.70**	**267**	PB	**Pn**	**10 00 22.3**	**+2.4**
OBF0				MSG		10 00 54.9	
	comp=Z,8.1nm,0.2s						
OBF0				SG	**Sb**	**10 00 58.6**	**+0.6**
SUF	**Sumiainen**	**2.83**	**225**	PN	**Pn**	**10 00 22.4**	**+0.7**
SUF				MSG		10 00 58.8	
	comp=Z,3.6nm,0.2s						
TOF	**Tornio**	**2.87**	**300**	MSG		10 01 00.3	
	comp=Z,3.6nm,0.2s						
TOF				SG	**Sg**	**10 01 05.9**	**-1.6**
VRF	**Varrio**	**2.99**	**354**	PN	**Pn**	**10 00 24.5**	**+0.5**
	baz=178						
VRF				MSG		10 01 04.5	
	comp=Z,9.2nm,0.2s						
SGF	**Sodankyl**	**3.11**	**331**	PN	**Pn**	**10 00 26.6**	**+1.0**
SGF				SG	**Sb**	**10 01 10.0**	**+0.2**
KALU	**Kalix**	**3.17**	**293**	PN	**Pn**	**10 00 27.5**	**+1.1**
KALU				SG	**Sb**	**10 01 11.7**	**+0.1**
KAF	**Kangasniemi**	**3.27**	**217**	PN	**Pn**	**10 00 28.5**	**+0.6**
KAF				SN	**Sn**	**10 01 09.0**	**+1.6**
RUF	**Ruokolahti**	**3.45**	**192**	PN	**Pn**	**10 00 31.2**	**+1.0**
KLF	**Kolari**	**3.61**	**316**	PN	**Pn**	**10 00 33.3**	**+0.8**
KEF	**Keuruu**	**3.64**	**226**	PN	**Pn**	**10 00 33.0**	**+0.2**
	baz=42						
PAJU	**Pajala**	**3.76**	**310**	PN	**Pn**	**10 00 36.2**	**+1.7**
RAJF	**Raja-Jooseppi**	**3.80**	**348**	PN	**Pn**	**10 00 35.7**	**+0.6**
VAF	**Ylistaro**	**3.86**	**247**	PN	**Pn**	**10 00 36.4**	**+0.5**
FIA0	**FINESS Array S**	**3.91**	**213**	PN	**Pn**	**10 00 36.5**	**0.0**
FIA0				SN	**Sn**	**10 01 22.1**	**-0.9**
FINES	**FINESS Array B**	**3.91**	**213**	Pn	**Pn**	**10 00 34.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=36,slow=13,SNR=9.7						
FINES				Lg	Lg	10 01 34.7	
	comp=Z,1.5nm,0.3s,baz=37,slow=28,SNR=14						
	comp=Z,2.9nm,1.0s						
BURU	**Burvik**	**3.91**	**271**	PN	**Pn**	**10 00 36.1**	**-0.5**
BURU				SN	**Sn**	**10 01 24.7**	**+1.6**
UMAU	**Umeaa**	**4.35**	**262**	PN	**Pn**	**10 00 43.9**	**+1.3**
VJF	**Virojoki**	**4.47**	**199**	SG	**Sb**	**10 01 52.3**	**+3.2**
HEF	**Hetta**	**4.53**	**326**	SN	**Sn**	**10 01 35.9**	**-2.6**
KMNF	**Kaamanen**	**4.58**	**344**	PN	**Pn**	**10 00 46.2**	**+0.4**
LANU	**Lannavaara**	**4.72**	**318**	PN	**Pn**	**10 00 48.2**	**+0.5**
PVF	**Pernaja**	**4.76**	**209**	PN	**Pn**	**10 00 48.2**	**0.0**
PVF				SG	**Sb**	**10 01 58.9**	**+1.6**
ARCES	**ARCESS Array B**	**5.14**	**340**	Pn	**Pn**	**10 00 53.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=17						
	comp=Z,3.9nm,0.9s						
HFS	**Hagfors**	**9.05**	**247**	Pn	**Pn**	**10 01 45.0**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=5.3						
	comp=Z,5.5nm,1.0s						
NOA	**NORSAR Array B**	**9.53**	**256**	Pn	**Pn**	**10 01 51.7**	**-2.1**
	baz=82,slow=12,SNR=1.9						
	comp=Z,0.8nm,0.9s						

*HEL **28** 10:00:38.9±0.2, 68°21N×33°10E, h0km, ML1.9, Explosion*
KOLA 28 10:00:38.7, 68°14N×33°23E, h0km, ML2.1, Error ellipse: s-maj=2.3km s-min=1.6km az=80.0, Olenegorsk City, Mines, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.54**	**190**	P	Pg	10 00 47.9	-1.2
APA0				S	Sg	10 00 55.4	-0.6
APA	**Apatity**	**0.58**	**173**	P	Pg	10 00 48.6	-1.0
APA				S	Sg	10 00 56.2	-0.8
LVZ	**Lovozero**	**0.59**	**114**	P	Pg	10 00 49.0	-0.8
LVZ				S	Sg	10 00 57.9	+0.4
LVZ	**Lovozero**	**0.59**	**114**	PG	Pg	10 00 50.7	+0.8
TERR	**Teriberka**	**1.27**	**32**	P	Pg	10 01 00.7	-2.3
TERR				S	Sg	10 01 17.4	-2.0
VRF	**Varrio**	**1.42**	**256**	PG	Pn	10 01 03.9	-1.9
VRF				MSG		10 01 20.9	
	comp=Z,9.4nm,0.2s						
VRF				SB	Sg	10 01 22.4	-1.9
VRF	**Varrio**	**1.42**	**256**	SB	Pn	10 01 03.9	-1.9
RAJF	**Raja-Jooseppi**	**1.86**	**283**	PG	Pn	10 01 10.8	-0.9
RAJF				SG	Sn	10 01 34.6	-1.3
RAJF	**Raja-Jooseppi**	**1.86**	**283**	SG	Sn	10 01 34.6	-1.3
VADS	**Vadso**	**2.43**	**327**	P	Pn	10 01 19.0	-0.5
VADS				S	Sn	10 01 49.2	-0.6
KMNF	**Kaamanen**	**2.50**	**297**	PG	Pn	10 01 21.5	+1.0
KMNF				SG	Sn	10 01 53.4	+1.8
KMNF	**Kaamanen**	**2.50**	**297**	SB	Sn	10 01 53.4	+1.8
SGF	**Sodankyl**	**2.64**	**258**	SG	Sb	10 01 58.6	-1.2
KEV	**Kevo**	**2.77**	**309**	PB	Pn	10 01 25.3	+1.0
KEV				MSG		10 01 58.2	
	comp=Z,4.8nm,0.2s						
KEV				SG	Sb	10 02 01.4	-2.1
ARA0	**ARCESS Array S**	**3.13**	**300**	PN	Pn	10 01 28.5	-0.8
ARA0				SG	Sb	10 02 14.0	+0.1
ARCES	**ARCESS Array B**	**3.13**	**300**	P	Pn	10 01 28.9	-0.3
ARCES				S	Sn	10 02 06.5	-0.8
RNF	**Rovaniemi**	**3.19**	**245**	SN	Sn	10 02 08.9	+0.4
HEF	**Hetta**	**3.57**	**279**	PN	Pn	10 01 34.2	-1.0
KLF	**Kolari**	**3.65**	**260**	PN	Pn	10 01 34.6	-1.7
KTK1	**Kautokeino**	**3.77**	**288**	PN	Pn	10 01 37.6	-0.4
KIF	**Kilpisjarvi**	**4.64**	**287**	PN	Pn	10 01 49.8	-0.1
FAUS	**Fauske**	**6.85**	**272**	S	Sn	10 03 33.6	-5.1

*IDC **28** 10:02:52.6±0.7, 5°91S×142°81E, h0km, mb4.3/11, mbtmp4.2/14, ML3.9/1, MS3.4/5, Error ellipse: s-maj=28.1km s-min=15.0km az=80.0*
*NEIC **28** 10:02:56.2±1.5, 6°06S±0°08×142°30E±0°06, h10km±1km, mb4.2/18, Error ellipse: s-maj=14.9km s-min=7.9km az=28.0*
*DJA **28** 10:03:02.7±0.5, 6°S±3°×142°E±°, h10km, M4.8/9, mB5.5/2, mb4.6/9, MLv4.9/4, Mw(mB)4.9/2*
ISC 28 10:02:58.0±0.5, 6°11S±0°05×142°48E±0°07, h28km, n54, σ1°42/50, mb4.2/15, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**3.13**	**221**	P	**Pn**	**10 03 48.2**	**+2.6**
GENI	**Genyem**	**4.18**	**326**	P	**Pn**	**10 04 01.2**	**+1.2**
GENI				S	**Sn**	**10 04 48.6**	**+0.6**
SMPI	**Sarmi**	**5.55**	**317**	P	**Pn**	**10 04 20.7**	**+1.8**
	74nm,0.8s,1μm0.3nm						
PMG	**Port Moresby**	**5.68**	**126**		**Pn**	**10 04 20.4**	**-0.3**
PMG	**Port Moresby**	**5.68**	**126**	Pn	Pn	10 04 16.5	-4.1
	3.0nm,0.3s,baz=327,slow=9.9,SNR=4.7						
PMG				Sn	**Sn**	**10 05 22.2**	**-2.8**
	1.3nm,0.3s,baz=337,slow=14,SNR=3.6						
MANU	**Manus Island**	**6.33**	**51**		**Pn**	**10 04 30.5**	**+0.9**
COEN	**Coen**	**7.83**	**175**	Pn	**Pn**	**10 04 50.9**	**+0.6**
RABL	**Rabaul**	**9.83**	**79**	Pn	**Pn**	**10 05 18.9**	**+1.2**
FAKI	**Fak Fak**	**10.68**	**287**		Pn	10 05 25.6	-3.6
FAKI	**Fak Fak**	**10.68**	**287**	P	**Pn**	**10 05 28.8**	**-0.5**
	23nm,1.1s						
SWI	**Sorong**	**12.35**	**295**	P	**Pn**	**10 05 50.4**	**-1.7**
	21nm,0.6s						
MTN	**Manton Dam**	**13.04**	**238**	Pn	Pn	10 05 57.8	-3.8
CTA	**Charters Tower**	**14.37**	**166**	Lg	Lg	10 10 36.0	
	0.2nm,0.3s,baz=271,slow=15,SNR=1.5						
CTA				LR	LR	10 12 11.2	
	comp=Z,144nm,18.1s,baz=55,slow=38						
WB0	**Warramunga Arr**	**15.69**	**209**		**Pn**	**10 06 36.6**	**-0.7**
WB0				IAmb	IAmb	10 06 53.0	
	comp=Z,16nm,0.9s						
WR0	**Warramunga Arr**	**15.78**	**209**		**Pn**	**10 06 36.9**	**-1.6**
WR0				IAmb	IAmb	10 06 54.6	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**15.85**	**209**		**Pn**	**10 06 38.4**	**-1.0**
WRAB				IAmb	IAmb	10 06 54.8	
	comp=Z,14nm,0.8s						
WB2	**Warramunga Arr**	**15.86**	**209**		**Pn**	**10 06 37.9**	**-1.6**
WB2				IAmb	IAmb	10 06 54.0	
	comp=Z,13nm,0.7s						
WRA	**Warramunga Arr**	**15.87**	**209**	Pn	**Pn**	**10 06 38.3**	**-1.3**
WRA	**Warramunga Arr**	**15.87**	**209**	Pn	**Pn**	**10 06 39.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=29,slow=13,SNR=12						
WRA				Sn	Sn	10 09 24.3	-10
	comp=Z,0.6nm,0.3s,baz=22,slow=21,SNR=2.2						
WRA				Lg	Lg	10 11 28.5	
	comp=Z,0.7nm,0.3s,baz=37,slow=29,SNR=4.9						
	comp=Z,1.3nm,0.4s						
KNRA	**Kununurra**	**16.48**	**234**		**Pn**	**10 06 45.6**	**-1.8**
KNRA				IAmb	IAmb	10 07 02.6	
	comp=Z,26nm,0.7s						
SOEI	**Soe**	**18.40**	**257**	P	**P**	**10 07 06.6**	**-4.6**
SOEI	**Soe**	**18.40**	**257**	P	**Pn**	**10 07 14.0**	**+2.6**
AS31	**Alice Springs**	**19.31**	**204**		**P**	**10 07 20.9**	**-0.2**
AS31				IAmb	IAmb	10 07 35.7	
	comp=Z,6.6nm,0.6s						
ASAR	**Alice Springs**	**19.31**	**204**	P	**P**	**10 07 21.2**	**+0.1**
ASAR	**Alice Springs**	**19.31**	**204**	P	**P**	**10 07 23.5**	**+2.4**
	comp=Z,14nm,0.7s,baz=32,slow=10.0,SNR=100						
ASAR				S	**Sn**	**10 10 56.8**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=16,slow=27,SNR=5.2						
ASAR				Lg	Lg	10 13 18.9	
	comp=Z,0.1nm,0.3s,baz=19,slow=29,SNR=4.7						
ASAR				LR	LR	10 15 45.0	
	comp=Z,249nm,18.7s,baz=35,slow=39						
GUMO	**Guam**	**19.71**	**7**	LR	LR	10 14 27.7	
	comp=Z,25nm,18.6s,baz=132,slow=36						
FITZ	**Fitzroy Crossi**	**20.30**	**233**	P	**P**	**10 07 31.2**	**-0.7**
EIDS	**Eidsvold**	**20.85**	**158**	P	**P**	**10 07 39.6**	**+1.8**
EIDS				IAmb	IAmb	10 07 44.4	
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**25.65**	**182**	P	**P**	**10 08 26.4**	**+0.8**
STKA	**Stephens Creek**	**25.65**	**182**	P	**P**	**10 08 25.9**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=356,slow=9.4,SNR=4.8						
	comp=Z,1.7nm,0.5s						
NWAO	**Narrogin (SRO)**	**35.55**	**218**	LR	LR	10 25 17.7	
	comp=Z,79nm,19.1s,baz=98,slow=38						
TUWZ	**Tuamarina**	**44.97**	**146**	P	**P**	**10 11 12.3**	**+1.5**
RPZ	**Rata Peaks**	**45.09**	**151**	P	**P**	**10 11 12.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**49.38**	**301**	P	**P**	**10 11 45.0**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=127,slow=5.9,SNR=10.0						
	comp=Z,1.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.96**	**350**	P	**P**	**10 11 55.4**	**-1.7**
	comp=Z,1.5nm,0.7s,baz=185,slow=11,SNR=3.0						
	comp=Z,1.5nm,0.7s						
PZH	**PanZhiHua**	**51.08**	**311**	P	**P**	**10 11 59.8**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.2s						
HHC	**Hu-ho-hao-te**	**54.67**	**331**	*e*P	**P**	**10 12 25.0**	**+0.3**
HHC				sP	pP	10 12 36.5	+3.0
HHC				S	**S**	**10 20 04.0**	**+0.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,33nm,5.0s						
SONM	**Songino Array**	**62.40**	**333**	P	**P**	**10 13 18.7**	**+0.2**
SONM	**Songino Array**	**62.40**	**333**	P	**P**	**10 13 18.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=165,slow=6.0,SNR=1.8						
	comp=Z,0.3nm,0.5s						
WMQ	**Urumqi**	**69.99**	**321**	*e*P	**P**	**10 14 08.5**	**+1.2**
VNDA	**Vanda**	**72.11**	**176**	P	**P**	**10 14 20.9**	**+1.4**
VNDA				IAmb	IAmb	10 14 21.6	
	comp=Z,2.2nm,0.9s						
VNDA	**Vanda**	**72.11**	**176**	P	**P**	**10 14 20.0**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=295,slow=14,SNR=3.6						
	comp=Z,1.7nm,0.8s						
MK31	**Makanchi Array**	**74.76**	**322**	P	**P**	**10 14 35.1**	**-0.5**
MK31				IAmb	IAmb	10 14 43.8	
	comp=Z,3.1nm,1.1s						
MKAR	**Makanchi Array**	**74.76**	**322**	P	**P**	**10 14 35.6**	**0.0**
MKAR	**Makanchi Array**	**74.76**	**322**	P	**P**	**10 14 34.9**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=110,slow=6.7,SNR=12						
	comp=Z,1.1nm,0.7s						
MAKZ	**Makanchi**	**74.96**	**322**	P	**P**	**10 14 36.1**	**-0.7**
MAKZ				IAmb	IAmb	10 14 36.9	
	comp=Z,2.2nm,0.8s						
AAK	**Ala-Archa**	**78.24**	**316**	LR	LR	10 55 21.8	
	comp=Z,13nm,18.0s,baz=142,slow=40						
KURBB	**Kurchatov Arra**	**78.66**	**324**	P	**P**	**10 14 56.9**	**-0.6**
	comp=Z,4.6nm,0.2s,baz=115,slow=4.6,SNR=2.2						
	comp=Z,4.6nm,0.2s						
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**10 15 25.8**	**+0.7**
QSPA	**South Pole Qui**	**83.86**	**180**	P	**P**	**10 15 25.1**	**0.0**
	comp=Z,5.0nm,0.6s,baz=322,slow=0.8,SNR=43						
	comp=Z,5.0nm,0.6s						
NRIK	**Noril'sk**	**84.03**	**343**	P	**P**	**10 15 24.1**	**-1.5**
	comp=Z,1.4nm,0.4s,baz=109,slow=4.7,SNR=3.7						
	comp=Z,1.4nm,0.4s						
BVAR	**Borovoye Array**	**84.23**	**325**	P	**P**	**10 15 26.6**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=104,slow=6.3,SNR=20						
	comp=Z,4.7nm,0.8s						
ILAR	**Eielson Array**	**87.37**	**24**	P	P	10 15 39.3	-3.0
	comp=Z,0.8nm,0.6s,baz=261,slow=4.5,SNR=15						
	comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**140.75**	**283**	PKP	**PKPdf**	**10 22 25.7**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=85,slow=4.3,SNR=2.9						

*TAP **28** 10:16:17.1, 24°89N×122°38E, h155km±1km, ML3.2, CJMA **28** 10:16:17.8±0.2, 25°N±3°×122°5E±0°6, h138km±3km, MV2.4/13, NW OFF ISHIGAKIJIMA IS*
ISC 28 10:16:17.7±2.0, 25°0N±0°1×122°51E±0°03, h135km±13km, n37, σ0°60/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIPB	**Shuangxi**	**0.62**	**268**	*e*P	**Pn**	**10 16 38.1**	**0.0**
	baz=279						
TIPB				*e*S	**Sn**	**10 16 53.9**	**+0.3**
	baz=279						
EOS2	**EOS2**	**0.63**	**204**	*e*P	**Pn**	**10 16 38.2**	**+0.2**
	baz=201						
EOS2				*e*S	**Sn**	**10 16 54.4**	**+1.0**
	baz=201						
JYNG	**Yonagunijimaku**	**0.67**	**144**	*e*P	**Pn**	**10 16 38.3**	**-0.1**
TWC	**Suao**	**0.71**	**237**	*e*P	**Pn**	**10 16 38.4**	**-0.3**
	baz=239						
EOS3	**EOS3**	**0.73**	**194**	*e*P	**Pn**	**10 16 39.0**	**+0.3**
	baz=195						
EOS3				*e*S	**Sn**	**10 16 55.4**	**+0.8**
	baz=195						
NDS	**Dongshan**	**0.81**	**243**	*e*S	**Sn**	**10 16 55.5**	**-0.4**
	baz=247						
TWE	**Neicheng**	**0.81**	**250**	*e*S	**Sn**	**10 16 55.9**	**-0.1**
	baz=255						
EWUT

NSTT	**Nanjuang**	**1.42**	**255**	*eP*		**Pn**	**10 16 45.0**	**-0.3**
	baz=258							
NSTT				*eS*		**Sn**	**10 17 05.1**	**-1.1**
	baz=258							
CHGB	**Renai**	**1.53**	**233**	*eP*		**Pn**	**10 16 47.1**	**+0.3**
	baz=237							
CHGB				*eS*		**Sn**	**10 17 08.4**	**-0.5**
	baz=237							
JKRS	**Kuro-shima**	**1.56**	**119**	S		**Sn**	**10 17 09.0**	**0.0**
WHP	**Taichung City**	**1.59**	**244**	*eP*		**Pn**	**10 16 48.0**	**+0.7**
	baz=245							
WHP				*eS*		**Sn**	**10 17 10.0**	**+0.1**
	baz=245							
OWD	**Renai**	**1.60**	**230**	*eP*		**Pn**	**10 16 48.3**	**+0.9**
	baz=227							
OWD				*eS*		**Sn**	**10 17 09.3**	**-0.8**
	baz=227							
JIJ	**Ishigaki jima**	**1.61**	**113**	*eP*		**Pn**	**10 16 47.4**	**-0.1**
JIJ				S		**Sn**	**10 17 08.6**	**-1.5**
WUSB	**Renai**	**1.62**	**232**	*eP*		**Pn**	**10 16 48.1**	**+0.6**
	baz=238							
WUSB				*eS*		**Sn**	**10 17 10.2**	**-0.2**
	baz=238							
JISG	**Ishigakijimahi**	**1.69**	**104**	*eP*		**Pn**	**10 16 48.3**	**0.0**
JISG				S		**Sn**	**10 17 10.7**	**-0.8**
WCS	**Beigang Elemen**	**1.73**	**238**	*eP*		**Pn**	**10 16 49.0**	**+0.3**
	baz=244							
WCS				*eS*		**Sn**	**10 17 12.5**	**-0.1**
	baz=244							
JTJ	**Tarama**	**2.02**	**100**	P		**Pn**	**10 16 52.5**	**+0.3**
JTJ				*eS*		**Sn**	**10 17 18.2**	**-0.4**
JIRB	**Irabujima**	**2.42**	**93**	P		**Pn**	**10 16 58.0**	**+0.9**
JMJ2	**Miyako jima3**	**2.57**	**95**	P		**Pn**	**10 17 00.0**	**+1.0**

*NNC **28** 10:21:12.8±1.1,51.°70N×75.°33E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=16.9km s-min=6.6km az=19.0, Suspected Mining explosion.*

*IDC **28** 10:21:16.3±1.1,51.°56N×75.°44E, h0km, mbtmp2.5/3, ML1.9/3, Error ellipse: s-maj=23.5km s-min=8.4km az=29.0*

ISC 28 10:21:11.8±1.0,**51.°6N**±0.°1×**75.°02E**±0.°08,**h0km,n10,** σ1s**73**/9,**4C-4D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.40**	**111**	⇓Pg	**Pb**	**10 21 55.3**	**-0.6**
	2.3nm,0.3s						
KURBB				⇓Lg	Lg	10 22 25.8	
	22nm,0.6s						
KURBB	**Kurchatov Arra**	**2.40**	**111**	Pg	**Pb**	**10 21 55.6**	**-0.2**
	0.5nm,0.3s,baz=296,slow=18,SNR=13						
KURBB				Lg	Lg	10 22 24.3	
	0.3nm,0.3s,baz=297,slow=33,SNR=3.5						
KURK	**Kurchatov**	**2.42**	**109**	⇑Pg	**Pn**	**10 21 53.9**	**+1.3**
	2.6nm,0.6s						
KURK				⇑Lg	Lg	10 22 25.3	
	4.0nm,0.5s						
BVA0	**Borovoye Array**	**3.21**	**299**	⇓Pg	**Pg**	**10 22 13.5**	**+0.3**
	0.7nm,0.5s,baz=117,slow=16,SNR=4.0						
BVA0				⇓Lg	Lg	10 22 57.5	
	2.8nm,0.8s						
BVAR	**Borovoye Array**	**3.21**	**299**	Pn	**Pb**	**10 22 09.9**	**+0.3**
	baz=112,slow=11,SNR=5.0						
BVAR				Sn	**Sg**	**10 22 52.8**	**-1.9**
	0.1nm,0.3s,baz=109,slow=24,SNR=3.1						
	0.6nm,0.4s						
OTUK	**Ortayu**	**3.74**	**209**	⇑Lg	Lg	10 23 18.9	
	0.9nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.41**	**64**	I	I	10 56 30.0	
	baz=252,slow=343,SNR=6.0						
ZALV	**Zalesovo Beam**	**6.41**	**64**	Pn	**Pn**	**10 22 48.5**	**+1.0**
	0.2nm,0.3s,baz=259,slow=12,SNR=2.4						
ZALV				Lg	Lg	10 24 32.8	
	0.2nm,0.3s,baz=255,slow=27,SNR=2.5						
	0.6nm,0.4s						
MK31	**Makanchi Array**	**6.74**	**132**	⇑Lg	Lg	10 24 42.1	
	0.7nm,0.5s,baz=320,slow=24,SNR=5.4						
MKAR	**Makanchi Array**	**6.74**	**132**	Pn	**Pn**	**10 22 54.0**	**+2.1**
	0.1nm,0.3s,baz=312,slow=11,SNR=4.2						
MKAR				Sn	**Sn**	**10 24 06.8**	**-2.5**
	baz=313,slow=23,SNR=1.4						
MKAR				Lg	Lg	10 24 41.9	
	0.2nm,0.3s,baz=318,slow=29,SNR=5.8						
	0.2nm,0.5s						

*IDC **28** 10:29:55.1±1.2,34.°03N×44.°77E, h0km, mb3.9/8, mbtmp3.9/9, ML3.5/1, MS3.1/3, Error ellipse: s-maj=30.6km s-min=21.3km az=137.0*

*ISN **28** 10:29:56.2±1.4,34.°09N×45.°03E, h16km±7km, ML3.8*

*TEH **28** 10:29:56.2,34.°05N×45.°10E, h18km±34km, ML3.8*

*GII **28** 10:30:43.5±0.6,34.°05N×45.°04E, h20km, Mws4.5, confirmed*

ISC 28 10:29:55.4±1.4,**33.°98N**±0.°04×**44.°93E**±0.°03,**h3km**±10km, **n44,** σ0s**80**/41,**mb3.9**/7,**Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.76**	**46**	Pg	**Pg**	**10 30 09.2**	**-0.7**
BHD	**Baghdad**	**0.85**	**213**	*e*Pg	**Pn**	**10 30 15.0**	**+0.8**
BHD				*e*Sg	**Sn**	**10 30 27.0**	**-0.1**
BHD				AML	AML	10 30 35.3	
	comp=E,8μm,0.6s						
ILBA	**Ilam Banvizeh**	**1.12**	**108**	Pg	**Pg**	**10 30 16.4**	**-0.5**
IBDR	**Badra**	**1.21**	**136**	*e*Pg	**Pb**	**10 30 19.0**	**+0.2**
IBDR				*e*Sg	**Sg**	**10 30 35.0**	**+0.9**
IBDR				AML	AML	10 30 42.6	
	comp=N,1μm,0.6s						
IBDR				AML	AML	10 30 51.8	
	comp=E,1μm,0.2s						
IGHG	**Ghaleghazi**	**1.40**	**75**	Pg	**Pn**	**10 30 22.1**	**+0.1**
IKRK	**Kirkuk**	**1.50**	**341**	*e*Pn	**Pn**	**10 30 23.0**	**-0.2**
IKRK				*e*Sn	**Sb**	**10 30 44.0**	**+0.8**
KCHF	**Cheshme Sefid,**	**1.77**	**80**	Pg	**Pn**	**10 30 28.0**	**+0.9**
KCHF				Sg	**Sb**	**10 30 51.5**	**+0.1**
ILIN	**Lien**	**1.92**	**60**	Pg	**Pn**	**10 30 32.2**	**+1.0**
RAFI	**Al-Rafai**	**2.46**	**156**	*e*Pn	**Pn**	**10 30 38.0**	**+1.6**
RAFI				*e*Sn	**Sb**	**10 31 10.0**	**-1.0**
IKFM	**Kafar-mosalman**	**2.47**	**100**	Pn	**Pn**	**10 30 37.1**	**+0.5**
IBZA	**Bozab**	**2.48**	**78**	Pn	**Pn**	**10 30 37.3**	**+0.4**
IDOB	**Doab**	**2.71**	**93**	Pn	**Pn**	**10 30 40.2**	**+0.2**
MAHB	**Mahabad**	**2.85**	**13**	Pn	**Pn**	**10 30 42.4**	**+0.5**
HAGD	**Aghdareh**	**3.58**	**75**	Pn	**Pn**	**10 30 52.5**	**+0.5**
IHSH	**Hashtrud**	**3.82**	**29**	Pn	**Pn**	**10 30 56.3**	**+0.8**
IRAZ	**Razeghan**	**4.36**	**70**	Pn	**Pn**	**10 31 03.6**	**+0.9**
IHRS	**Heris**	**4.65**	**21**	Pn	**Pn**	**10 31 07.0**	**+0.3**
ZNGN	**Zangian**	**5.31**	**109**	Pn	**Pn**	**10 31 15.0**	**-0.9**
IKLH	**Kolahrood**	**5.58**	**95**	Pn	**Pn**	**10 31 19.8**	**+0.2**
KRSH	**Karshahi**	**5.99**	**88**	Pn	**Pn**	**10 31 25.6**	**+0.6**
IDMV	**Damavand**	**6.06**	**73**	Pn	**Pn**	**10 31 26.4**	**+0.3**
IZEF	**Zefreh**	**6.28**	**98**	Pn	**Pn**	**10 31 29.0**	**-0.2**
KLNJ	**Kolanjah**	**6.36**	**116**	Pn	**Pn**	**10 31 29.9**	**-0.5**
IRAM	**Ramesheh**	**6.63**	**107**	Pn	**Pn**	**10 31 33.8**	**-0.1**
KSHT	**Keshet**	**7.69**	**265**	S	**Sg**	**10 34 02.9**	**+0.7**
KSHT	**Keshet**	**7.69**	**265**	P	Pg	10 32 35.8	+13
GEM	**Giv'at Ha'Em**	**7.77**	**267**	S	**Sg**	**10 34 05.6**	**+0.7**
GEM	**Giv'at Ha'Em**	**7.77**	**267**	P	Pg	10 32 37.1	+13
MMA0B	**Mount Meron ar**	**8.02**	**266**	P	Pg	10 32 40.6	+12
HMDT	**Nahal Hemdat**	**8.08**	**260**	S	**Sg**	**10 34 14.4**	**-0.3**
HMDT	**Nahal Hemdat**	**8.08**	**260**	P	Pg	10 32 41.6	+11
MSBI	**Mazada**	**8.50**	**254**	P	Pg	10 32 48.8	+11
KRMI	**Paran Flat**	**9.48**	**249**	P	Pn	10 33 01.1	+48
EIL	**Elat**	**9.52**	**246**	LR	LR	10 36 27.0	
	comp=E,135nm,18.0s,baz=67,slow=42						
GEYT	**Alibeck**	**11.39**	**66**	LR	LR	10 37 44.8	
	comp=E,66nm,20.7s,baz=164,slow=41						
AKTO	**Aktyubinsk**	**19.04**	**26**	P	**P**	**10 34 18.9**	**+0.4**
	comp=E,0.2nm,0.3s,baz=203,slow=5.9,SNR=5.7						
	comp=E,1.7nm,0.6s						
AKASG	**Malin Array Be**	**20.27**	**330**	P	**P**	**10 34 31.1**	**-0.9**
	comp=E,1.8nm,0.6s,baz=137,slow=9.9,SNR=13						
	comp=E,1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**29.57**	**46**	P	**P**	**10 36 01.8**	**+0.5**
	comp=E,0.8nm,0.2s,baz=253,slow=9.1,SNR=6.2						
	comp=E,0.8nm,0.2s						
FINES	**FINESS Array B**	**30.03**	**342**	P	**P**	**10 36 04.0**	**-1.2**
	comp=E,1.7nm,0.9s,baz=139,slow=9.3,SNR=3.6						
	comp=E,1.7nm,0.9s						
MKAR	**Makanchi Array**	**30.90**	**54**	P	**P**	**10 36 13.1**	**-0.1**
	comp=E,0.5nm,0.6s,baz=248,slow=7.3,SNR=7.1						
	comp=E,0.5nm,0.6s						
HFS	**Hagfors**	**33.15**	**332**	P	**P**	**10 36 31.9**	**-0.8**
	comp=E,5.3nm,1.0s,baz=120,slow=16,SNR=2.7						
ZALV	**Zalesovo Beam**	**34.35**	**42**	P	**P**	**10 36 45.7**	**+2.5**
	comp=E,0.5nm,0.3s,baz=258,slow=7.2,SNR=2.0						
ZALV				LR	LR	10 51 08.3	
	comp=E,44nm,19.3s,baz=173,slow=37						
	comp=E,0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**44.32**	**253**	P	**P**	**10 38 06.2**	**-0.7**
	comp=E,1.1nm,1.1s,baz=43,slow=8.9,SNR=4.1						
	comp=E,1.1nm,1.1s						
BOSA	**Boshof**	**64.98**	**199**	P	**P**	**10 40 37.0**	**+0.3**
	comp=E,1.2nm,0.8s,baz=6.3,slow=9.2,SNR=2.1						
	comp=E,1.2nm,0.8s						

*IDC **28** 10:35:15.2±0.8,30.°05N×87.°67E, h0km, mb4.0/20, mbtmp4.0/22, ML3.6/2, MS3.2/16, Error ellipse: s-maj=23.1km s-min=15.5km az=50.0*

*NEIC **28** 10:35:16.5±1.1,30.°32N±0.°08×87.°38E±0.°09, h10km±1km, mb4.0/19, Error ellipse: s-maj=13.0km s-min=12.4km az=350.0*

*NDI **28** 10:35:17.5±2.8,30.°47N×87.°41E, h10km, ML3.3, MW4.1, mb4.0(NEIC)*

ISC 28 10:35:17.1±0.5,**30.°26N**±0.°06×**87.°52E**±0.°07,**h10km,n65,** σ1s**97**/58,**mb4.0**/23,**MS3.2**/14,**1D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**3.08**	**162**	*eP*	**Pn**	**10 36 09.4**	**+3.4**
GTK				*eS*	**Sb**	**10 36 48.8**	**-1.1**
GTK				IAML		10 37 03.9	
	comp=E,65nm,0.5s						
GTK				IAML		10 37 19.8	
	comp=E,139nm,0.8s						
LSA	**Lhasa**	**3.20**	**99**		**Pn**	**10 36 10.7**	**+2.8**
TAWA	**Tawang**	**4.64**	**124**	*e*P	Pn	10 36 33.0	+5.3
MOKO	**MOKOCHONG**	**7.31**	**121**	*e*P	**Pn**	**10 37 06.0**	**+1.9**
MOKO				*e*S	**Sn**	**10 38 27.8**	**+0.5**
MOKO				IAML		10 38 43.2	
	comp=E,39nm,0.8s						
MOKO				IAML		10 39 00.7	
	comp=E,26nm,0.6s						
KOHI	**KOHIMA**	**7.37**	**126**	*e*P	**Pn**	**10 37 06.6**	**+1.6**
KOHI				*e*S	**Sn**	**10 38 26.4**	**-2.4**
KOHI				IAML		10 38 40.6	
	comp=E,41nm,0.9s						
KOHI				IAML		10 38 49.4	
	comp=E,27nm,1.0s						
AZL	**Aizawl**	**7.96**	**143**	*e*P	**Pn**	**10 37 15.2**	**+2.1**
AZL				*e*S	**Sn**	**10 38 41.7**	**-1.7**
AZL				IAML		10 38 42.4	
	comp=E,9.6nm,0.3s						
AZL				IAML		10 38 48.8	
	comp=N,14nm,2.0s						
MND	**Mandalay**	**11.27**	**135**	Pn	**Pn**	**10 37 57.8**	**-0.4**
NIL	**Nilore**	**12.58**	**289**		**Pn**	**10 38 14.6**	**-1.6**
KSH	**Kashi**	**13.22**	**317**	P	P	10 38 28.3	-6.8
KSH				pmax	pmax		
	comp=E,4.0nm,0.6s						
TARG	**Taragay, Kyrgy**	**13.87**	**328**	Pn	**Pn**	**10 38 31.6**	**-2.6**
KMI	**Kunming**	**14.42**	**107**	⇓P	**Pn**	**10 38 45.5**	**+3.9**
KMI				pmax	pmax		
	comp=E,9.0nm,1.7s						
NRN	**Naryn**	**14.53**	**323**	Pn	**Pn**	**10 38 42.0**	**-1.1**
CRAI	**Chiangrai**	**15.31**	**128**	Pn	**Pn**	**10 38 53.9**	**+0.4**
CRAI				IAmb	IAmb	10 39 01.6	
	comp=E,11nm,1.2s						
BOOM	**Boomskoye usch**	**15.34**	**326**	Pn	**Pn**	**10 38 51.5**	**-2.4**
BOOM				IAmb	IAmb	10 39 03.8	
	comp=E,9.4nm,1.3s						
CHTO	**Chiang Mai**	**15.41**	**135**		**Pn**	**10 38 55.3**	**+0.6**
CHTO				IAmb	IAmb	10 39 01.9	
	comp=E,12nm,1.1s						
CM31	**Chiang Mai Arr**	**15.68**	**136**	Pn	**Pn**	**10 38 58.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**15.68**	**136**		**Pn**	**10 38 58.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**15.68**	**136**	Pn	**Pn**	**10 38 54.1**	**-4.2**
	comp=E,0.1nm,0.3s,baz=310,slow=12,SNR=14						
CMAR				LR	LR	10 44 46.6	
	comp=E,47nm,20.7s,baz=315,slow=37						
	comp=E,0.7nm,0.3s						
DRK	**Karamyk**	**15.83**	**310**	Pn	**Pn**	**10 38 56.9**	**-3.5**
DRK				IAmb	IAmb	10 39 07.7	
	comp=E,7.9nm,0.9s						
AAK	**Ala-Archa**	**16.17**	**323**	Pn	**Pn**	**10 39 02.0**	**-2.7**
KBL	**Kabul**	**16.18**	**290**		**Pn**	**10 39 01.4**	**-3.4**
KBL				IAmb	IAmb	10 39 13.1	
	comp=E,9.1nm,0.7s						
PHRA	**Phrae**	**16.45**	**133**		**Pn**	**10 39 08.1**	**-0.1**
BTK	**Batken**	**16.77**	**310**		**Pn**	**10 39 09.7**	**-2.6**
MK31	**Makanchi Array**	**17.00**	**348**	Pn	**Pn**	**10 39 12.9**	**-2.1**
MKAR	**Makanchi Array**	**17.00**	**348**	Pn	**Pn**	**10 39 13.0**	**-2.0**
MKAR	**Makanchi Array**	**17.00**	**348**	P	**P**	**10 39 15.7**	**-1.2**
	comp=E,0.1nm,0.3s,baz=155,slow=13,SNR=11						
MKAR				LR	LR	10 47 45.0	
	comp=E,24nm,19.1s,baz=146,slow=44						
	comp=E,1.3nm,0.7s						
MAKZ	**Makanchi**	**17.07**	**347**	P	**Pn**	**10 39 14.9**	**-1.0**
SIMJ	**Simiganj**	**17.39**	**304**		**Pn**	**10 39 17.3**	**-2.8**
ENH	**Enshi**	**18.97**	**84**	P	**P**	**10 39 38.8**	**0.0**
ENH				IAmb	IAmb	10 39 41.7	
	comp=E,12nm,1.2s						
KURBB	**Kurchatov Arra**	**21.43**	**344**	P	**P**	**10 40 06.5**	**+1.4**
	comp=E,2.0nm,0.5s,baz=159,slow=10,SNR=11						
	comp=E,2.0nm,0.5s						
KURK	**Kurchatov**	**21.49**	**344**	P	**P**	**10 40 04.8**	**-1.1**
KURK				IAmb	IAmb	10 40 08.5	
	comp=E,8.4nm,1.4s						
UBPT	**Khong Chiam**	**22.23**	**128**	P	**P**	**10 40 13.8**	**-0.3**
SONM	**Songino Array**	**22.76**	**34**	P	**P**	**10 40 19.8**	**+0.2**
SONM				IAmb	IAmb	10 40 23.2	
	comp=E,7.5nm,1.4s						
SONM	**Songino Array**	**22.76**	**34**	P	**P**	**10 40 19.8**	**+0.2**
	comp=E,2.1nm,0.9s,baz=230,slow=10.0,SNR=12						
	comp=E,2.1nm,0.9s						
ULN	**Ulaanbaatar**	**23.11**	**35**	P	**P**	**10 40 20.5**	**-2.8**
ULN				IAmb	IAmb	10 40 27.4	
	comp=E,9.9nm,1.5s						
PALK	**Pallekele**	**23.75**	**197**	LR	LR	10 50 29.3	
	comp=E,30nm,18.5s,baz=203,slow=39						
ZAA0	**Zalesovo Array**	**23.75**	**356**	P	**P**	**10 40 27.6**	**-1.9**
ZAA0				IAmb	IAmb	10 40 32.1	
	comp=E,6.7nm,1.2s						
ZALV	**Zalesovo Beam**	**23.75**	**356**		**P**	**10 40 27.8**	**-1.6**
ZALV	**Zalesovo Beam**	**23.75**	**356**	P	**P**	**10 40 31.9**	**+2.4**
	comp=E,3.3nm,0.8s,baz=188,slow=9.9,SNR=10						
	comp=E,3.3nm,0.8s						
BVAR	**Borovoye Array**	**25.97**	**336**	P	**P**	**10 40 52.0**	**+2.2**
	comp=E,1.4nm,0.6s,baz=133,slow=13,SNR=6.6						
	comp=E,1.4nm,0.6s						
AKTO	**Aktyubinsk**	**29.89**	**321**	P	**P**	**10 41 27.6**	**+2.8**
	comp=E,1.5nm,0.6s,baz=116,slow=3.0,SNR=4.6						
AKTO				LR	LR	10 54 50.6	
	comp=E,55nm,18.9s,baz=102,slow=39						
	comp=E,1.5nm,0.6s						
ARU	**Arti**	**33.12**	**331**	P	**P**	**10 41 54.3**	**+1.0**
	comp=E,5.1nm,0.2s,baz=240,slow=2.5,SNR=4.7						
ARU				LR	LR	10 57 02.3	
	comp=E,64nm,18.4s,baz=282,slow=39						
	comp=E,5.1nm,0.2s						
KSRS	**Korea Array**	**34.11**	**67**	LR	LR	10 56 52.2	
	comp=E,23nm,20.9s,baz=340,slow=38						
GNI	**Garni**	**36.02**	**298**	LR	LR	11 00 18.8	
	comp=E,29nm,18.4s,baz=204,slow=42						
USRK	**Ussuriysk Ar.**	**37.58**	**56**	LR	LR	10 59 18.6	
	comp=E,38nm,18.6s,baz=170,slow=38						
NRIK	**Noril'sk**	**39.12**	**0**	P	**P**	**10 42 45.6**	**+1.3**
	comp=E,1.2nm,0.5s,baz=170,slow=11,SNR=1.8						
	comp=E,1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**42.38**	**68**	LR	LR	11 01 02.1	
	comp=E,24nm,19.3s,baz=284,slow=36						
DAV	**Davao City (W)**	**42.48**	**115**	LR	LR	11 01 44.9	
	comp=E,25nm,20.2s,baz=164,slow=38						
BRTR	**Keskin Array B**	**44.56**	**297**	P	**P**	**10 43 31.8**	**+2.3**
	comp=E,0.7nm,0.6s,baz=88,slow=8.9,SNR=3.7						
	comp=E,0.7nm,0.6s						
ASAJ	**Asahikawa**	**45.20**	**56**	LR	LR	11 04 05.3	
	comp=E,39nm,19.5s,baz=339,slow=38						
EIL	**Elat**	**45.20**	**283**	LR	LR	11 04 33.6	
	comp=E,70nm,18.9s,baz=248,slow=39						
AKASG	**Malin Array Be**	**47.46**	**313**	P	**P**	**10 43 53.1**	**+1.2**
	comp=E,0.4nm,0.4s,baz=79,slow=7.3,SNR=7.4						
AKASG				LR	LR	11 03 52.5	
	comp=E,32nm,19.3s,baz=52,slow=36						
	comp=E,0.4nm,0.4s						
MLR	**Muntele Rosu**	**49.75**	**306**	P	**P**	**10 44 12.0**	**+2.1**
	comp=E,6.2nm,0.9s,baz=79,slow=7.7,SNR=3.4						
	comp=E,6.2nm,0.9s						
FINES	**FINESS Array B**	**50.32**	**327**	P	**P**	**10 44 15.6**	**+1.8**
	comp=E,2.9nm,0.8s,baz=116,slow=8.7,SNR=7.5						
FINES				LR	LR	11 06 52.7	
	comp=E,59nm,21.7s,baz=214,slow=38						
	comp=E,2.9nm,0.8s						
ARCES	**ARCESS Array B**	**52.25**	**337**	P	**P**	**10 44 29.6**	**+1.4**
	comp=E,4.1nm,0.8s,baz=101,slow=8.4,SNR=5.0						
	comp=E,4.1nm,0.8s						
PETK	**Petropavlovsk-**	**54.76**	**44**	P	**P**	**10 44 48.4**	**+1.6**
	comp=E,6.6nm,1.0s,baz=283,slow=13,SNR=3.5						
	comp=E,6.6nm,1.0s						
HFS	**Hagfors**	**56.31**	**325**	P	**P**	**10 44 57.5**	**-0.3**
	comp=E,3.7nm,0.7s,baz=99,slow=7.9,SNR=7.3						
	comp=E,3.7nm,0.7s						
NOA	**NORSAR Array B**	**57.47**	**326**	P	**P**	**10 45 07.4**	**+1.3**
	comp=E,1.9nm,0.8s,baz=88,slow=6.9,SNR=3.5						
NOA				LR	LR	11 12 33.4	
	comp=E,21nm,18.5s,baz=205,slow=39						
	comp=E,1.9nm,0.8s						
GERES	**GERESS Array B**	**57.61**	**311**	LR	LR	11 13 13.5	
	comp=E,57nm,19.7s,baz=316,slow=39						
WRA	**Warramunga Arr**	**67.23**	**132**	P	**P**	**10 46 10.3**	**-1.7**
	comp=E,1.3nm,1.1s,baz=330,slow=6.8,SNR=3.8						
	comp=E,1.3nm,1.1s						
ASAR	**Alice Springs**	**69.69**	**135**	P	**P**	**10 46 25.6**	**-1.7**
	comp=E,0.8nm,0.8s,baz=324,slow=6.9,SNR=8.5						
	comp=E,0.8nm,0.8s						
ILAR	**Eielson Array**	**76.28**	**21**	P	**P**	**10 47 05.9**	**+0.2**
	comp=E,0.5nm,1.0s,baz=307,slow=5.4,SNR=4.7						
	comp=E,0.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**79.94**	**279**	P	**P**	**10 47 27.4**	**+0.4**
	comp=E,1.9nm,0.8s,baz=42,slow=6.3,SNR=11						
	comp=E,1.9nm,0.8s						
YKA	**Yellowknife Ar**	**85.87**	**10**	P	**P**	**10 47 57.0**	**+0.1**
	comp=E,0.3nm,0.8s,baz=338,slow=4.9,SNR=6.8						
	comp=E,0.3nm,0.8s						
CPUP	**Villa Florida**	**148.88**	**268**	PKPbc	**PKPbc**	**10 55 04.3**	**-1.2**
	comp=E,1.7nm,0.7s,baz=69,slow=5.8,SNR=5.6						

*CNRM **28** 10:58:19.9,35.°49N×3.°93W, h15km, ML2.1*

*MDD **28** 10:58:21.1±0.8,35.°56N×3.°85W, h2km±5km, mb_Lg2.3/8, Error ellipse: s-maj=7.0km s-min=3.6km az=27.0*

*SFS **28** 10:58:24.2,35.°50N×3.°71W, h27km, ML2.5/6, ML2.8/6, MLv2.3/6*

ISC 28 10:58:19.2±1.0,**35.°49N**±0.°02×**3.°85W**±0.°03,**h11km**±9km, **n30,**σ1s**10**/45,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.28**	**196**	P	**Pg**	**10 58 25.3**	**+0.3**
PALE	**Palemas**	**0.28**	**196**	S	**Sg**	**10 58 29.2**	**+0.5**
GOG	**Mont Gurugu**	**0.74**	**111**	P	**Pn**	**10 58 35.7**	**+0.1**
GOG	**Mont Gurugu**	**0.74**	**111**	S	**Sn**	**10 58 47.1**	**+0.1**
EMEL	**Melilla**	**0.75**	**104**	Pg	**Pn**	**10 58 36.0**	**+0.3**
EMEL				Sg	**Sn**	**10 58 46.6**	**-0.4**
WMELI	**Melilla**	**0.75**	**103**	Pg	**Pn**	**10 58 35.8**	**+0.1**
WMELI				Sg	**Sb**	**10 58 45.1**	**+0.7**
EMLI	**Melilla**	**0.76**	**104**	Pg	**Pn**	**10 58 36.3**	**+0.6**
EMLI				Sg	**Sb**	**10 58 45.8**	**+1.2**
EALB	**Alboran**	**0.80**	**55**	Pg	**Pn**	**10 58 36.9**	**+0.5**
EALB				Sg	**Sn**	**10 58 47.1**	**-1.1**
EALB	**Alboran**	**0.80**	**55**	Pg	**Pn**	**10 58 35.9**	**-0.5**
EALB				Sg	**Sb**	**10 58 46.4**	**+0.5**
EALB				*i* Vmb_Lg		10 58 52.8	
AKLM	**AKL**	**0.97**	**181**	P	**Pg**	**10 58 38.2**	**+0.2**
CHAS	**Isla Isabel II**	**1.20**	**104**	Pn	**Pg**	**10 58 42.5**	**+0.3**
CHAS				Sn	**Sb**	**10 58 56.4**	**-0.9**
SMIR	**Smir Dam**	**1.27**	**279**	P	**Pn**	**10 58 42.3**	**-0.5**
SMIR	**Smir Dam**	**1.27**	**279**	S	**Sb**	**10 58 58.9**	**-0.4**
EMIJ	**Mijas**	**1.31**	**325**	Pn	**Pg**	**10 58 46.8**	**+2.4**
EMIJ	**Mijas**	**1.31**	**325**	Pg	**Pg**	**10 58 44.6**	**+0.2**
EMIJ				Sg	**Sn**	**10 59 00.5**	**-0.5**
EMIJ				*i* Vmb_Lg		10 59 08.3	
TAF	**Taforalt**	**1.35**	**119**	P	**Pg**	**10 58 45.1**	**-0.1**
ELGU	**Los Guajares,**	**1.39**	**7**	Pn	**Pg**	**10 58 46.1**	**+0.2**
ELGU				Sn	**Sg**	**10 59 03.0**	**-1.0**
ELGU	**Los Guajares,**	**1.39**	**7**	Pn	**Pb**	**10 58 44.6**	**-0.6**
ELGU				Sn	**Sb**	**10 59 01.9**	**-1.1**
ELGU				*i* Vmb_Lg		10 59 10.7	
JBK	**JBK**	**1.56**	**137**	P	**Pn**	**10 58 47.4**	**+0.5**
JBK	**JBK**	**1.56**	**137**	S	**Sn**	**10 59 06.8**	**-0.4**
EBER	**Berja**	**1.61**	**29**	Sn	**Sb**

mb4.0/18,ML4.4/56,ML4.1(AEIC),Error ellipse: s-maj=11.1km s-min=7.4km az=171.0
*MOS **28** 11:08:35.4≈0.9,56°55.55N×148°51.51W,h19km,mb4.8/19, Error ellipse: s-maj=17.9km s-min=6.5km az=100.5*
*AEIC **28** 11:08:38.8±1.2,56°39.39N±0.07×148°63.63W±0.10,h7km±5km, Error ellipse: s-maj=10.8km s-min=7.6km az=172.0*

ISC 28 11:08:34.7±0.5,56°40.40N±0.06×148°56.56W±0.04,h10km, n424,σ1♀17/415,mb4.6/52,MS3.5/30,14C-1D,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.60**	**304**	P↑P	**Pn**	**11 09 15.5**	**-1.2**
KDAK	**Kodiak Island**	**2.60**	**304**	Pn	**Pn**	**11 09 15.1**	**-1.6**
	16nm,0.3s,baz=130,slow=4.9,SNR=145						
KDAK				Sn	**Sn**	**11 09 44.8**	**-3.5**
	21nm,0.3s,baz=59,slow=19,SNR=14						
	40nm,0.2s						
OHAK	**Old Harbor**	**2.73**	**290**	Pn	**Pn**	**11 09 16.5**	**-1.9**
OHAK				Sn	**Sn**	**11 09 47.4**	**-4.1**
OHAK	**Old Harbor**	**2.73**	**290**	P	**Pn**	**11 09 16.6**	**-1.9**
OHAK	**Old Harbor**	**2.73**	**290**	P	**Pn**	**11 09 16.7**	**-1.8**
	baz=106						
OHAK				S	**Sn**	**11 09 47.2**	**-4.3**
	baz=106						
SYI	**Shuyak Island**	**3.03**	**319**		**Pn**	**11 09 22.1**	**-0.6**
SYI				Sn	**Sn**	**11 09 57.6**	**-1.4**
Q20K	**Shuyak Island**	**3.03**	**319**	P	**Pn**	**11 09 22.1**	**-0.6**
	baz=136						
Q20K				S	**Sn**	**11 09 57.0**	**-2.0**
	baz=136						
MID	**Middleton Isla**	**3.26**	**20**	Pn	**Pn**	**11 09 25.7**	**-0.1**
MID				IAML		11 10 03.1	
	comp=E,797nm,0.6s						
MID				IAML		11 10 04.3	
	comp=N,845nm,0.7s						
MID	**Middleton Isla**	**3.26**	**20**	P	**Pn**	**11 09 25.5**	**-0.3**
Q23K	**Middleton Isla**	**3.26**	**20**	Pn	**Pn**	**11 09 25.5**	**-0.3**
Q23K				IAML		11 10 04.3	
	comp=N,678nm,0.6s						
Q23K				IAML		11 10 04.4	
	comp=E,842nm,1.0s						
Q23K	**Middleton Isla**	**3.26**	**20**	P	**Pn**	**11 09 25.1**	**-0.7**
	baz=203						
Q23K				S	**Sn**	**11 10 02.1**	**-2.5**
	baz=203						
CNPM	**China Poot**	**3.44**	**337**		**Pn**	**11 09 28.1**	**-0.2**
BRSE	**Bradley Lake S**	**3.54**	**342**		**Pn**	**11 09 28.9**	**-0.8**
BRSE					**Sn**	**11 10 09.7**	**-2.0**
BRSE	**Bradley Lake S**	**3.54**	**342**	P	**Pn**	**11 09 28.9**	**-0.8**
	baz=161						
BRSE				S	**Sn**	**11 10 09.9**	**-1.8**
	baz=161						
BRLK	**Bradley Lake**	**3.59**	**341**		**Pn**	**11 09 29.7**	**-0.7**
HOM	**Homer**	**3.66**	**335**		**Pn**	**11 09 31.7**	**+0.5**
HOM				IAML		11 10 27.8	
	comp=N,908nm,0.8s						
P23K	**Montague Islan**	**3.66**	**9**		**Pn**	**11 09 30.8**	**-0.5**
P23K					**Sn**	**11 10 11.7**	**-2.8**
P23K	**Montague Islan**	**3.66**	**9**	P	**Pn**	**11 09 30.8**	**-0.5**
	baz=191						
P23K				S	**Sn**	**11 10 11.7**	**-2.8**
	baz=191						
Q19K	**Cape Douglas,**	**3.73**	**315**		**Pn**	**11 09 32.4**	**+0.1**
Q19K				IAML		11 10 30.2	
	comp=N,513nm,0.8s						
Q19K				IAML		11 10 40.7	
	comp=E,676nm,1.3s						
Q19K	**Cape Douglas,**	**3.73**	**315**	P	**Pn**	**11 09 31.4**	**-0.9**
	baz=131						
SEW	**Seward**	**3.75**	**353**		**Pn**	**11 09 32.0**	**-0.5**
SEW	**Seward**	**3.75**	**353**		**Sn**	**11 10 13.0**	**-3.5**
SEW	**Seward**	**3.75**	**353**	P	**Pn**	**11 09 31.6**	**-0.9**
	baz=173						
SEW				S	**Sn**	**11 10 13.3**	**-3.2**
	baz=173						
KAKN	**Katmai Knife C**	**4.00**	**301**		**Pn**	**11 09 35.7**	**-0.4**
ACHA	**Angle Creek He**	**4.09**	**299**		**Pn**	**11 09 37.4**	**0.0**
P19K	**Oil Pt**	**4.10**	**325**		**Pn**	**11 09 37.7**	**+0.3**
P19K				IAML		11 10 29.9	
	comp=N,658nm,0.5s						
P19K				IAML		11 10 32.5	
	comp=E,572nm,0.5s						
P19K	**Oil Pt**	**4.10**	**325**	P	**Pn**	**11 09 37.0**	**-0.3**
	baz=141						
P19K				S	**Sn**	**11 10 23.5**	**-1.9**
	baz=141						
O22K	**Cooper Landing**	**4.14**	**352**	Pn	**Pn**	**11 09 37.5**	**-0.4**
O22K	**Cooper Landing**	**4.14**	**352**	P	**Pn**	**11 09 37.4**	**-0.5**
	baz=172						
O22K				S	**Sn**	**11 10 23.5**	**-2.7**
	baz=172						
KAHC	**Katmai Hardscr**	**4.14**	**306**		**Pn**	**11 09 37.9**	**-0.2**
KAHC	**Katmai Hardscr**	**4.14**	**306**	P	**Pn**	**11 09 38.1**	**0.0**
	baz=121						
HIN	**Hinchinbrook I**	**4.15**	**14**		**Pn**	**11 09 37.9**	**-0.2**
KAIM	**Kayak Island**	**4.16**	**30**		**Pn**	**11 09 38.1**	**-0.1**
KAIM				IAML		11 10 31.6	
	comp=N,650nm,0.7s						
ANCK	**Angle Creek**	**4.17**	**298**		**Pn**	**11 09 38.7**	**+0.2**
SLKM	**Skilak Lake**	**4.21**	**349**		**Pn**	**11 09 38.2**	**-0.7**
O20K	**Slope Mountain**	**4.27**	**332**		**Pn**	**11 09 39.2**	**-0.6**
O20K	**Slope Mountain**	**4.27**	**332**	P	**Pn**	**11 09 39.8**	**0.0**
	baz=149						
CNTC	**Contact Creek**	**4.39**	**298**		**Pn**	**11 09 41.1**	**-0.4**
Q17K	**Contact Creek**	**4.39**	**298**	P	**Pn**	**11 09 41.1**	**-0.4**
	baz=112						
EYAK	**Cordova Ski Ar**	**4.41**	**18**		**Pn**	**11 09 41.8**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.41**	**18**	P	**Pn**	**11 09 42.0**	**+0.3**
EYAK	**Cordova Ski Ar**	**4.41**	**18**	P	**Pn**	**11 09 41.7**	**+0.1**
	baz=201						
SUCK	**Suckling Hills**	**4.47**	**32**		**Pn**	**11 09 42.6**	**+0.2**
SUCK				IAML		11 10 35.1	
	comp=N,392nm,0.5s						
SUCK				IAML		11 10 35.3	
	comp=E,348nm,0.6s						
FID	**Port Fidalgo**	**4.50**	**13**		**Pn**	**11 09 42.3**	**-0.5**
FID				IAML		11 10 33.1	
	comp=E,396nm,0.4s						
FID				IAML		11 10 38.4	
	comp=N,365nm,0.8s						
NICHA	**Nichawak Mount**	**4.54**	**30**		**Pn**	**11 09 43.5**	**0.0**
HMT	**Hamilton**	**4.55**	**28**		**Pn**	**11 09 43.7**	**+0.1**
GLI	**Glacier Island**	**4.56**	**9**		**Pn**	**11 09 43.5**	**-0.1**
GLI				IAML		11 10 35.5	
	comp=N,302nm,0.4s						
GLI				IAML		11 10 41.1	
	comp=E,389nm,0.6s						
GLI	**Glacier Island**	**4.56**	**9**	P	**Pn**	**11 09 43.4**	**-0.3**
	baz=191						
RSO	**Redoubt South**	**4.63**	**333**		**Pn**	**11 09 43.9**	**-1.0**
RDT	**Redoubt**	**4.65**	**336**		**Pn**	**11 09 43.7**	**-1.3**
GOAT	**Goat Mountain**	**4.65**	**24**		**Pn**	**11 09 45.1**	**+0.1**
P18K	**Big Mountain,**	**4.65**	**313**		**Pn**	**11 09 44.2**	**-0.8**
P18K	**Big Mountain,**	**4.65**	**313**	P	**Pn**	**11 09 43.9**	**-1.1**
	baz=128						
RDWB	**Redoubt West**	**4.67**	**333**		**Pn**	**11 09 44.3**	**-1.1**
DFR	**Drift River**	**4.73**	**334**		**Pn**	**11 09 44.8**	**-1.2**
RC01	**Rabbit Creek A**	**4.74**	**353**	Pn	**Pn**	**11 09 46.1**	**-0.1**
RC01				IAML		11 10 43.1	
	comp=N,260nm,0.5s						
RC01	**Rabbit Creek A**	**4.74**	**353**	P	**Pn**	**11 09 46.5**	**+0.3**
	baz=173						
BERG	**Berg Lake**	**4.75**	**31**		**Pn**	**11 09 46.4**	**+0.1**
RDJH	**Redoubt Jeurge**	**4.75**	**334**		**Pn**	**11 09 45.8**	**-0.7**
NCT	**North Crescent**	**4.76**	**333**		**Pn**	**11 09 45.6**	**-1.0**
GRIN	**Grindle Hills**	**4.77**	**33**		**Pn**	**11 09 46.8**	**+0.2**
SNH	**Sunshine Point**	**4.84**	**36**		**Pn**	**11 09 47.9**	**+0.2**
SNH				IAML		11 10 45.8	
	comp=E,262nm,0.8s						
SNH				IAML		11 11 03.5	
	comp=N,227nm,1.8s						
O19K	**Port Alsworth**	**4.87**	**324**		**Pn**	**11 09 47.4**	**-0.5**
O19K				IAML		11 10 51.4	
	comp=E,382nm,0.5s						
O19K				IAML		11 10 52.8	
	comp=N,396nm,0.5s						
O19K	**Port Alsworth**	**4.87**	**324**	P	**Pn**	**11 09 47.5**	**-0.4**
	baz=139						
KHIT	**Khitrov Hills**	**4.92**	**32**		**Pn**	**11 09 48.6**	**-0.2**
Q16K	**King Salmon**	**4.92**	**301**		**Pn**	**11 09 48.2**	**-0.5**
Q16K	**King Salmon**	**4.92**	**301**	P	**Pn**	**11 09 48.2**	**-0.5**
	baz=115						
O18K	**Koktuh Hills**	**4.94**	**317**		**Pn**	**11 09 48.3**	**-0.6**
O18K	**Koktuh Hills**	**4.94**	**317**	P	**Pn**	**11 09 48.6**	**-0.3**
	baz=132						
DIV	**Divide**	**4.96**	**16**		**Pn**	**11 09 49.1**	**-0.2**
BMRM	**Bremner River**	**5.02**	**23**		**Pn**	**11 09 50.2**	**+0.1**
BMRM	**Bremner River**	**5.02**	**23**	P	**Pn**	**11 09 50.5**	**+0.4**
	baz=206						
KNK	**Knik Glacier**	**5.03**	**1**		**Pn**	**11 09 50.3**	**+0.1**
KNK				IAML		11 10 49.7	
	comp=E,240nm,0.6s						
KNK				IAML		11 10 50.8	
	comp=N,175nm,0.7s						
KNK	**Knik Glacier**	**5.03**	**1**	P	**Pn**	**11 09 50.2**	**0.0**
	baz=181						
P17K	**Kvichak River**	**5.06**	**307**		**Pn**	**11 09 50.4**	**-0.2**
P17K	**Kvichak River**	**5.06**	**307**	P	**Pn**	**11 09 50.4**	**-0.2**
	baz=121						
MESA	**MESA**	**5.15**	**40**		**Pn**	**11 09 52.2**	**+0.2**
MESA				IAML		11 10 58.8	
	comp=E,197nm,0.9s						
MESA				IAML		11 11 07.7	
	comp=N,293nm,1.1s						
N20K	**Mount Spurr**	**5.17**	**340**	P	**Pn**	**11 09 52.2**	**0.0**
	baz=157						
SPCR	**Spurr Chakacha**	**5.17**	**340**		**Pn**	**11 09 51.2**	**-0.9**
SUA	**Susitna One**	**5.20**	**348**		**Pn**	**11 09 52.2**	**-0.5**
CRQM	**Cirque**	**5.21**	**31**		**Pn**	**11 09 53.2**	**+0.4**
CRQM				IAML		11 10 56.0	
	comp=E,312nm,0.5s						
PMR	**Palmer**	**5.22**	**357**	Pn	**Pn**	**11 09 52.3**	**-0.4**
PMR				IAML		11 10 53.1	
	comp=E,174nm,0.6s						
PMR				IAML		11 10 55.3	
	comp=N,181nm,0.6s						
PMR	**Palmer**	**5.22**	**357**	P	**Pn**	**11 09 52.7**	**0.0**
PMR	**Palmer**	**5.22**	**357**	P	**Pn**	**11 09 52.5**	**-0.2**
	baz=177						
CRQE	**Cirque**	**5.22**	**31**	P	**Pn**	**11 09 52.8**	**0.0**
	baz=216						
SPCG	**Spurr Capps Gl**	**5.22**	**341**		**Pn**	**11 09 52.5**	**-0.4**
SPCP	**Crater Peak Br**	**5.22**	**341**		**Pn**	**11 09 52.5**	**-0.5**
SPBG	**Spurr Blockage**	**5.26**	**339**		**Pn**	**11 09 52.9**	**-0.5**
KLU	**Klutina**	**5.29**	**14**		**Pn**	**11 09 54.1**	**+0.3**
KLU	**Klutina**	**5.29**	**14**	P	**Pn**	**11 09 54.0**	**+0.3**
	baz=196						
BAGL	**Bagley Icefiel**	**5.33**	**37**		**Pn**	**11 09 54.0**	**-0.2**
ISLE	**Juniper Island**	**5.33**	**35**		**Pn**	**11 09 54.5**	**+0.1**
STLK	**Strandline Lak**	**5.39**	**343**		**Pn**	**11 09 54.5**	**-0.6**
GHO	**Glory Hole Cre**	**5.39**	**358**		**Pn**	**11 09 55.4**	**+0.2**
N19K	**Bonanza Creek**	**5.40**	**327**		**Pn**	**11 09 54.4**	**-0.9**
SPNN	**North Nagishla**	**5.42**	**338**		**Pn**	**11 09 55.5**	**-0.2**
SML	**Sawmill**	**5.42**	**1**		**Pn**	**11 09 56.3**	**+0.7**
SML	**Sawmill**	**5.42**	**1**	P	**Pn**	**11 09 56.0**	**+0.4**
	baz=182						
M23K	**Glacier View**	**5.43**	**4**		**Pn**	**11 09 55.9**	**+0.3**
M23K	**Glacier View**	**5.43**	**4**	P	**Pn**	**11 09 56.2**	**+0.6**
	baz=185						
CHGN	**Chignik**	**5.48**	**273**	Pn	**Pn**	**11 09 55.5**	**-0.8**
SCM	**Sheep Creek Mo**	**5.49**	**6**		**Pn**	**11 09 57.7**	**+1.2**
SCM	**Sheep Creek Mo**	**5.49**	**6**	P	**Pn**	**11 09 57.0**	**+0.5**
	baz=188						
VRDI	**Verde Repeater**	**5.52**	**27**		**Pn**	**11 09 57.2**	**+0.1**
SAMH	**Samovar Hills**	**5.55**	**44**		**Pn**	**11 09 57.8**	**+0.4**
KIAG	**Kiagna River**	**5.57**	**33**		**Pn**	**11 09 57.6**	**-0.1**
N25K	**Chitina, Valde**	**5.61**	**20**		**Pn**	**11 09 58.9**	**+0.7**
N25K	**Chitina, Valde**	**5.61**	**20**	P	**Pn**	**11 09 58.6**	**+0.4**
	baz=203						
GRNC	**Granite Creek**	**5.62**	**37**		**Pn**	**11 09 58.4**	**0.0**
TABL	**Table Mountain**	**5.62**	**41**		**Pn**	**11 09 58.7**	**+0.2**
GLB	**Gilahina Butte**	**5.62**	**24**		**Pn**	**11 09 58.4**	**+0.1**
O17K	**Koliganek Bris**	**5.65**	**310**		**Pn**	**11 09 57.9**	**-0.7**
O17K	**Koliganek Bris**	**5.65**	**310**	P	**Pn**	**11 09 57.9**	**-0.7**
	baz=124						
P16K	**Nushagak River**	**5.70**	**301**		**Pn**	**11 09 59.1**	**-0.2**
P16K	**Nushagak River**	**5.70**	**301**	P	**Pn**	**11 09 59.1**	**-0.2**
	baz=114						
PCA	**Pinnacle**	**5.74**	**46**		**Pn**	**11 10 00.1**	**+0.1**
PINM	**Pinnacle**	**5.74**	**46**	P	**Pn**	**11 10 00.5**	**+0.5**
	baz=234						
PTPK	**Patty Peak**	**5.75**	**31**		**Pn**	**11 10 00.7**	**+0.4**
N18K	**Kilae Creek**	**5.75**	**321**		**Pn**	**11 09 59.3**	**-0.8**
MCARA	**McCarthy VSAT**	**5.76**	**28**		**Pn**	**11 10 00.9**	**+0.7**
MCARA	**McCarthy VSAT**	**5.76**	**28**	P	**Pn**	**11 10 00.6**	**+0.4**
	baz=212						
SKT	**Skwentna**	**5.80**	**346**		**Pn**	**11 10 00.8**	**+0.1**
SKT	**Skwentna**	**5.80**	**346**	P	**Pn**	**11 10 00.6**	**-0.1**
	baz=164						
M24K	**Tolsona, Glenn**	**5.85**	**11**		**Pn**	**11 10 02.5**	**+1.0**
M24K	**Tolsona, Glenn**	**5.85**	**11**	P	**Pn**	**11 10 02.0**	**+0.5**
	baz=193						
PNL	**Peninsula**	**5.87**	**52**		**Pn**	**11 10 01.7**	**+0.1**
PNL	**Peninsula**	**5.87**	**52**	P	**Pn**	**11 10 01.9**	**+0.3**
PNL	**Peninsula**	**5.87**	**52**	P	**Pn**	**11 10 01.7**	**+0.1**
	baz=240						
BARN	**Barnard Glacie**	**5.89**	**35**		**Pn**	**11 10 02.4**	**+0.2**
BCPM	**Bancas Point**	**5.91**	**49**		**Pn**	**11 10 02.6**	**+0.3**
CTG	**Chitna Glacier**	**5.92**	**36**	P	**Pn**	**11 10 02.5**	**0.0**
	baz=223						
CTGM	**Chitina Glacie**	**5.93**	**36**	Pn	**Pn**	**11 10 02.7**	**+0.1**
LOGN	**Logan Glacier**	**5.94**	**39**		**Pn**	**11 10 02.9**	**+0.1**
SVW2	**Sparrevohn**	**5.96**	**325**		**Pn**	**11 10 02.0**	**-0.9**
SVW2	**Sparrevohn**	**5.96**	**325**	P	**Pn**	**11 10 02.2**	**-0.7**
M20K	**Styx River**	**5.98**	**339**		**Pn**	**11 10 02.9**	**-0.4**
O16K	**Kokwok River B**	**5.99**	**306**		**Pn**	**11 10 02.8**	**-0.5**
WACK	**Wrangell Chich**	**6.01**	**19**		**Pn**	**11 10 04.5**	**+0.7**
CUT	**Chulitna**	**6.09**	**352**		**Pn**	**11 10 05.0**	**+0.4**
VNFG	**Fog Glacier, M**	**6.12**	**273**		**Pn**	**11 10 04.5**	**-0.6**
N17K	**Nushagak Hills**	**6.13**	**316**	Pn	**Pn**	**11 10 04.5**	**-0.7**
N17K	**Nushagak Hills**	**6.13**	**316**	P	**Pn**	**11 10 04.3**	**-0.9**
	baz=129						
WAT6	**Susitna Watana**	**6.21**	**4**		**Pn**	**11 10 06.8**	**+0.3**
WAT6	**Susitna Watana**	**6.21**	**4**	P	**Pn**	**11 10 06.8**	**+0.3**
	baz=185						
HARP	**HAARP**	**6.26**	**15**		**Pn**	**11 10 07.8**	**+0.7**
HARP	**HAARP**	**6.26**	**15**	P	**Pn**	**11 10 07.8**	**+0.7**
	baz=198						
M19K	**Big River Lodg**	**6.28**	**334**		**Pn**	**11 10 06.5**	**-0.8**
M19K	**Big River Lodg**	**6.28**	**334**	P	**Pn**	**11 10 06.3**	**-1.0**
	baz=149						
M18K	**Stony River**	**6.34**	**327**		**Pn**	**11 10 06.7**	**-1.3**
CNBA	**Chernabura Isl**	**6.45**	**260**		**Pn**	**11 10 07.6**	**-2.0**
WAT1	**Susitna Watana**	**6.45**	**0**		**Pn**	**11 10 09.9**	**+0.2**
WAT1	**Susitna Watana**	**6.45**	**0**	P	**Pn**	**11 10 09.9**	**+0.2**
	baz=180						
WAT7	**Susitna Watana**	**6.46**	**359**		**Pn**	**11 10 10.3**	**+0.6**
O29M	**Mount Kennedy**	**6.55**	**49**		**Pn**	**11 10 11.9**	**+0.8**
P29M	**Windy Craggy**	**6.60**	**56**		**Pn**	**11 10 11.5**	**-0.2**
L19K	**White Mountain**	**6.63**	**334**		**Pn**	**11 10 11.0**	**-1.2**
O15K	**Ungalikthiuk R**	**6.63**	**299**		**Pn**	**11 10 12.1**	**0.0**
O15K	**Ungalikthiuk R**	**6.63**	**299**	P	**Pn**	**11 10 12.1**	**0.0**
	baz=110						
L20K	**Farewell, AK**	**6.67**	**338**		**Pn**	**11 10 11.5**	**-1.2**
DHY	**Denali Highway**	**6.72**	**5**	Pn	**Pn**	**11 10 14.7**	**+1.2**
DHY	**Denali Highway**	**6.72**	**5**	P	**Pn**	**11 10 14.1**	**+0.6**
	baz=186						
N16K	**Nishlik Lake**	**6.74**	**312**		**Pn**	**11 10 12.8**	**-0.8**
PPLA	**Purkeypile**	**6.77**	**346**		**Pn**	**11 10 14.5**	**+0.4**
PPLA	**Purkeypile**	**6.77**	**346**	P	**Pn**	**11 10 14.7**	**+0.5**
	baz=163						
PAX	**Paxson**	**6.77**	**12**		**Pn**	**11 10 15.6**	**+1.4**
PAX	**Paxson**	**6.77**	**12**	P	**Pn**	**11 10 14.5**	**+0.4**
	baz=195						
SDPT	**Sand Point**	**6.79**	**266**		**Pn**	**11 10 12.9**	**-1.4**
SDPT	**Sand Point**	**6.79**	**266**	P	**Pn**	**11 10 12.8**	**-1.4**
SDPT	**Sand Point**	**6.79**	**266**	P	**Pn**	**11 10 12.8**	**-1.4**
	baz=76						
M17K	**Holitna River**	**6.80**	**321**	Pn	**Pn**	**11 10 13.9**	**-0.5**
M17K	**Holitna River**	**6.80**	**321**	P	**Pn**	**11 10 13.7**	**-0.7**
	baz=134						
S31K	**Pelican**	**6.88**	**72**		**Pn**	**11 10 13.0**	**-2.5**
S31K	**Pelican**	**6.88**	**72**	P	**Pn**	**11 10 13.4**	**-2.1**
	baz=262						
RND	**Reindeer**	**7.03**	**359**		**Pn**	**11 10 18.4**	**+0.8**
M16K	**Timber Creek**	**7.12**	**315**	Pn	**Pn**	**11 10 18.3**	**-0.6**
M16K	**Timber Creek**	**7.12**	**315**	P	**Pn**	**11 10 18.3**	**-0.6**
	baz=126						
TRF	**Thorofare Moun**	**7.13**	**354**		**Pn**	**11 10 19.8**	**+0.8**
TRF	**Thorofare Moun**	**7.13**	**354**	P	**Pn**	**11 10 19.2**	**+0.2**
	baz=173						
N15K	**Kwethluk River**	**7.15**	**307**		**Pn**	**11 10 19.7**	**+0.4**
N15K	**Kwethluk River**	**7.15**	**307**	P	**Pn**	**11 10 19.4**	**+0.1**
	baz=117						
L18K	**Granite Mounta**	**7.16**	**328**		**Pn**	**11 10 18.3**	**-1.1**
L18K	**Granite Mounta**	**7.16**	**328**	P	**Pn**	**11 10 18.9**	**-0.4**
	baz=141						
BVCY	**Beaver Creek**	**7.19**	**30**		**Pn**	**11 10 21.1**	**+1.2**
	baz=217						
CAST	**Castle Rocks**	**7.26**	**347**		**Pn**	**11 10 20.7**	**0.0**
CAST	**Castle Rocks**	**7.26**	**347**	P	**Pn**	**11 10 20.9**	**+0.2**
	baz=165						
KTH	**Kantishna Hill**	**7.27**	**352**		**Pn**	**11 10 21.6**	**+0.7**
HYT	**Haines Junctio**	**7.28**	**48**		**Pn**	**11 10 21.7**	**+0.6**
HYT	**Haines Junctio**	**7.28**	**48**	P	**Pn**	**11 10 22.0**	**+0.9**
	baz=237						
SIT	**Sitka**	**7.31**	**79**		**Pn**	**11 10 18.1**	**-3.4**
SIT	**Sitka**	**7.31**	**79**	P	**Pn**	**11 10 18.6**	**-2.8**
SIT	**Sitka**	**7.31**	**79**	P	**Pn**	**11 10 18.1**	**-3.4**
MCK	**McKinley**	**7.36**	**359**		**Pn**	**11 10 23.4**	**+1.3**
MCK	**McKinley**	**7.36**	**359**	P	**Pn**	**11 10 23.0**	**+0.9**
	baz=179						
MCK	**McKinley**	**7.36**	**359**	P	**Pn**	**11 10 23.4**	**+1.3**
O14K	**Tigyukauivet M**	**7.36**	**298**		**Pn**	**11 10 21.8**	**-0.3**
L27K	**Beaver Creek,**	**7.49**	**24**		**Pn**	**11 10 24.8**	**+0.9**
K20K	**Telida**	**7.51**	**341**		**Pn**	**11 10 23.3**	**-0.8**
BCAR	**Beaver Creek A**	**7.51**	**24**	Pn	**Pn**	**11 10 25.1**	**+1.0**
TTA	**Tatalina**	**7.55**	**333**	Pn	**Pn**	**11 10 23.8**	**-1.0**
TTA	**Tatalina**	**7.55**	**333**	P	**Pn**	**11 10 23.8**	**-1.0**
TTA	**Tatalina**	**7.55**	**333**	P	**Pn**	**11 10 23.8**	**-1.0**
	baz=147						
TTA	**Tatalina**	**7.55**	**333**	P	**Pn**	**11 10 23.8**	**-1.0**
K24K	**Donnelly Dome**	**7.56**	**9**		**Pn**	**11 10 25.5**	**+0.7**
K24K	**Donnelly Dome**	**7.56**	**9**	P	**Pn**	**11 10 25.5**	**+0.7**
	baz=192						
RIDG	**Independent Ri**	**7.59**	**13**		**Pn**	**11 10 25.9**	**+0.5**
L17K	**Donlin**	**7.61**	**323**		**Pn**	**11 10 24.1**	**-1.3**
PN7A	**Pavlof North-7**	**7.62**	**268**		**Pn**	**11 10 24.4**	**-1.3**
M15K	**Kasigluk River**	**7.66**	**309**		**Pn**	**11 10 25.5**	**-0.7**
SKAG	**Skagway**	**7.68**	**61**		**Pn**	**11 10 27.4**	**+0.9**
SKAG	**Skagway**	**7.68**	**61**	P	**Pn**	**11 10 26.7**	**+0.2**
BESE	**Bessie Mountai**	**7.70**	**68**		**Pn**	**11 10 26.5**	**-0.3**
S32K	**Killisnoo**	**7.73**	**76**		**Pn**	**11 10 26.0**	**-1.1**
S32K	**Killisnoo**	**7.73**	**76**	P	**Pn**	**11 10 25.8**	**-1.3**
	baz=268						
CHUM	**Lake Minchumin**	**7.74**	**348**		**Pn**	**11 10 26.8**	**-0.4**
L16K	**Owhat River**	**7.74**	**318**	Pn	**Pn**	**11 10 26.8**	**-0.5**
L16K	**Owhat River**	**7.74**	**318**	P	**Pn**	**11 10 26.6**	**-0.7**
	baz=129						
N14K	**Kuskokwak Cree**	**7.79**	**302**		**Pn**	**11 10 27.4**	**-0.4**
N14K	**Kuskokwak Cree**	**7.79**	**302**	P	**Pn**	**11 10 27.4**	**-0.4**
	baz=112						
BPAW	**Bear Paw Mtn.**	**7.82**	**352**		**Pn**	**11 10 28.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**7.82**	**352**	P	**Pn**	**11 10 28.5**	**+0.1**
	baz=170						
R32K	**Eaglecrest**	**7.83**	**70**	Pn	**Pn**	**11 10 28.5**	**0.0**
O30N	**Mendenhall**	**7.85**	**51**		**Pn**	**11 10 29.0**	**+0.2**
O30N	**Mendenhall**	**7.85**	**51**	P	**Pn**	**11 10 29.3**	**+0.5**
	baz=242						
JIS	**Juneau Island**	**7.90**	**70**		**Pn**	**11 10 28.9**	**-0.5**
JIS	**Juneau Island**	**7.90**	**70**	P	**Pn**	**11 10 29.0**	**-0.5**
SCRK	**Sand Creek**	**7.93**	**15**		**Pn**	**11 10 30.5**	**+0.5**
M29M	**Somme Creek**	**7.95**	**36**		**Pn**	**11 10 30.8**	**+0.5**
M29M	**Somme Creek**	**7.95**	**36**	P	**Pn**	**11 10 30.5**	**+0.2**
	baz=225						
K17K	**Iditarod**	**8.03**	**326**		**Pn**	**11 10 30.3**	**-0.9**
J16K	**Innoko River**	**8.18**	**333**		**Pn**	**11 10 32.7**	**-0.6**
J18K	**Innoko River**	**8.18**	**333**	P	**Pn**	**11 10 33.5**	**+0.1**
	baz=147						
NEA2	**Nenana**	**8.22**	**358**		**Pn**	**11 10 34.0**	**0.0**
J20K	**Nowinta River**	**8.28**	**343**		**Pn**	**11 10 34.9**	**+0.2**
J20K	**Nowinta River**	**8.28**	**343**	P	**Pn**	**11 10 34.7**	**0.0**
	baz=158						
CCB	**Clear Creek Bu**	**8.28**	**2**		**Pn**	**11 10 34.8**	**+0.1**
K27K	**Chicken**	**8.30**	**20**		**Pn**	**11 10 35.5**	**+0.5**
WHY	**Whitehorse**	**8.33**	**54**	Pn	**Pn**	**11 10 35.9**	**+0.4**
J19K	**Poorman**	**8.38**	**338**		**Pn**	**11 10 35.4**	**-0.8**
J25K	**Salcha River,**	**8.39**	**9**		**Pn**	**11 10 35.5**	**-0.7**
IL31		**8.44**	**5**	Pn	**Pn**	**11 10 36.9**	**0.0

C18K	**Utukok River**	**13.56**	**340**	Pn	**Pn**	**11 11 46.4**	**-0.5**
INK	**Inuvik**	**13.77**	**24**	Pn	Pn	11 11 38.6	-11
	comp=N,0.6nm,0.3s,baz=344,slow=32,SNR=14						
INK				LR	LR	11 17 30.3	
	comp=N,252nm,18.7s,baz=188,slow=39						
C16K	**Lisburne Hills**	**14.16**	**334**		**Pn**	**11 11 55.8**	**+0.8**
C36M	**Paulatuk**	**16.93**	**30**	Pn	**Pn**	**11 12 30.9**	**-0.4**
C36M				IAmb	IAmb	11 12 35.2	
	comp=Z,13nm,1.1s						
HILA	**High Level**	**17.01**	**70**	P	**Pn**	**11 12 31.5**	**-1.0**
YKA	**Yellowknife Ar**	**18.14**	**56**	P	**Pn**	**11 12 46.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=263,slow=10,SNR=14						
	comp=Z,0.8nm,0.8s						
A36M	**Sachs Harbour**	**18.41**	**23**	P	**P**	**11 12 49.1**	**-0.5**
B08A	**Colville Reser**	**19.45**	**102**	P	**P**	**11 12 59.0**	**-2.2**
MXC	**Moxie City**	**20.02**	**107**	P	**P**	**11 13 06.0**	**-1.5**
MXC				IAmb	IAmb	11 13 18.4	
	comp=Z,11nm,1.1s						
HOOD	**Mount Hood Mea**	**20.14**	**112**	P	**P**	**11 13 07.0**	**-1.9**
HOOD				IAmb	IAmb	11 13 25.5	
	comp=Z,10nm,1.1s						
NEW	**Newport**	**20.71**	**100**	LR	LR	11 19 50.9	
	comp=Z,110nm,21.6s,baz=301,slow=33						
F10A	**Beach Ranch, E**	**22.04**	**105**	P	**P**	**11 13 27.6**	**-1.8**
F10A				IAmb	IAmb	11 13 34.6	
	comp=Z,6.3nm,1.1s						
KRPM	**Rodgers**	**22.05**	**123**	P	**P**	**11 13 27.7**	**-1.7**
YBH	**Yreka Blue Hor**	**22.22**	**120**	P	**P**	**11 13 36.9**	**+5.6**
YBH	**Yreka Blue Hor**	**22.22**	**120**	LR	LR	11 19 58.8	
	comp=Z,192nm,18.5s,baz=340,slow=31						
BMO	**Blue Mountains**	**22.73**	**107**	P	**P**	**11 13 35.5**	**-1.3**
BMO				IAmb	IAmb	11 13 55.6	
	comp=Z,4.5nm,1.1s						
BMO	**Blue Mountains**	**22.73**	**107**	P	**P**	**11 13 35.5**	**-1.3**
J08A	**Circle Bar Ran**	**23.14**	**112**	P	**P**	**11 13 39.4**	**-1.7**
BILL	**Bilibino**	**23.42**	**318**	P	**P**	**11 13 42.2**	**-1.3**
BILL	**Bilibino**	**23.42**	**318**⇑	*eP*	**P**	**11 13 43.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,43nm,1.4s						
PAHR	**Pah Rah Range**	**25.39**	**119**	IAmb	IAmb	11 14 12.5	
	comp=Z,6.0nm,1.2s						
ELK	**Elko**	**26.70**	**112**	IAmb	IAmb	11 14 24.1	
	comp=Z,3.1nm,1.1s						
ELK	**Elko**	**26.70**	**112**	LR	LR	11 23 04.4	
	comp=Z,69nm,19.1s,baz=332,slow=33						
NVAR	**Mina Array Bea**	**26.91**	**119**	P	**P**	**11 14 16.2**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=311,slow=8.3,SNR=5.8						
	comp=Z,0.8nm,0.8s						
RES	**Resolute Bay**	**27.27**	**28**	LR	LR	11 25 42.0	
	comp=Z,185nm,18.8s,baz=254,slow=38						
PDAR	**Pinedale Array**	**28.30**	**102**	P	**P**	**11 14 27.9**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=310,slow=5.8,SNR=2.7						
PDAR				LR	LR	11 24 59.0	
	comp=Z,40nm,21.1s,baz=52,slow=35						
	comp=Z,0.4nm,0.7s						
SEY	**Seymchan**	**29.55**	**307**	*ceP*	**P**	**11 14 38.5**	**-0.6**
SEY				pmax	pmax		
	comp=Z,12nm,1.5s						
SEY	**Seymchan**	**29.55**	**307**	P	**P**	**11 14 39.2**	**+0.1**
	comp=Z,4.1nm,1.0s,baz=49,slow=19,SNR=5.8						
	comp=Z,4.1nm,1.0s						
MA2	**Magadan**	**31.34**	**301**	P	**P**	**11 14 55.3**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=85,slow=9.9,SNR=4.2						
MA2				LR	LR	11 28 05.4	
	comp=Z,84nm,19.9s,baz=97,slow=37						
	comp=Z,2.8nm,0.3s						
ULM	**Lac du Bonnet**	**31.39**	**79**	P	**P**	**11 14 56.0**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=262,slow=4.3,SNR=4.1						
	comp=Z,1.4nm,0.8s						
PFO	**Pinyon Flats O**	**31.68**	**122**	LR	LR	11 26 23.2	
	comp=Z,102nm,18.1s,baz=348,slow=34						
TULEG	**Thule**	**33.77**	**25**	*i* P	P	11 15 09.0	-6.9
TULEG				IAmb	IAmb	11 15 36.3	
	comp=Z,27nm,0.8s						
ANMO	**Albuquerque**	**35.63**	**109**	LR	LR	11 28 10.4	
	comp=Z,43nm,20.4s,baz=90,slow=33						
TIXI	**Tiksi**	**35.79**	**328**	P	**P**	**11 15 33.3**	**-0.1**
TIXI				IAmb	IAmb	11 15 35.5	
	comp=Z,5.3nm,1.1s						
TIXI	**Tiksi**	**35.79**	**328**	*ceP*	**P**	**11 15 34.3**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEEM	**North Greenlan**	**37.33**	**21**	*i* P	**P**	**11 15 45.4**	**-1.4**
NEEM				IAmb	IAmb	11 15 49.1	
	comp=Z,5.0nm,0.6s						
FRB	**Frobisher Bay**	**38.06**	**45**	LR	LR	11 31 35.5	
	comp=Z,229nm,19.2s,baz=350,slow=36						
YAK	**Yakutsk**	**39.59**	**313**	P	**P**	**11 16 05.6**	**-0.1**
	comp=Z,17nm,0.5s,baz=55,slow=0.2,SNR=3.3						
YAK				LR	LR	11 31 55.9	
	comp=Z,61nm,19.7s,baz=47,slow=35						
	comp=Z,17nm,0.5s						
WMOK	**Wichita Mounta**	**39.90**	**101**	P	**P**	**11 16 09.8**	**+1.2**
WMOK				IAmb	IAmb	11 16 11.3	
	comp=Z,2.6nm,1.0s						
WMOK	**Wichita Mounta**	**39.90**	**101**	P	**P**	**11 16 09.8**	**+1.2**
TXAR	**Lajitas Array**	**41.49**	**112**	P	**P**	**11 16 22.1**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=359,slow=6.5,SNR=4.3						
TXAR				PcP	**PcP**	**11 18 19.7**	**+0.3**
	comp=Z,0.4nm,1.0s,baz=336,slow=2.0,SNR=1.9						
TXAR				LR	LR	11 32 12.3	
	comp=Z,40nm,20.1s,baz=18,slow=34						
	comp=Z,0.7nm,1.0s						
LPIG	**La Paz**	**42.56**	**123**	LR	LR	11 31 42.9	
	comp=Z,54nm,18.6s,baz=323,slow=33						
SUMG	**Summit**	**42.69**	**25**	P	**P**	**11 16 31.4**	**-0.1**
SUMG	**Summit**	**42.69**	**25**	P	**P**	**11 16 31.4**	**-0.1**
SUMG	**Summit**	**42.69**	**25**	*i* P	**P**	**11 16 32.0**	**+0.5**
SUMG				IAmb	IAmb	11 16 33.2	
	comp=Z,10nm,0.9s						
SFJD	**Kangerlussuaq**	**42.77**	**35**	LR	LR	11 34 06.4	
	comp=Z,95nm,20.1s,baz=328,slow=36						
SCHQ	**Schefferville**	**43.59**	**56**	P	**P**	**11 16 39.2**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=306,slow=12,SNR=4.0						
	comp=Z,1.5nm,0.8s						
ASAJ	**Asahikawa**	**43.85**	**284**	LR	LR	11 37 39.9	
	comp=Z,33nm,18.0s,baz=28,slow=40						
ICESG	**Greenland Ices**	**44.67**	**29**	*i* P	**P**	**11 16 46.1**	**-1.3**
ICESG				IAmb	IAmb	11 16 49.7	
	comp=Z,3.5nm,0.6s						
ZEA	**Zeya**	**45.41**	**304**	*eP*	**P**	**11 16 53.4**	**+0.4**
KLR	**Kul'dur**	**46.14**	**297**	*ceP*	**P**	**11 16 59.1**	**+0.2**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	**Kul'dur**	**46.14**	**297**	P	**P**	**11 16 59.3**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=71,slow=5.7,SNR=19						
KLR				LR	LR	11 37 47.3	
	comp=Z,27nm,18.8s,baz=50,slow=38						
	comp=Z,2.7nm,0.6s						
SOEG	**Soedalen**	**47.45**	**27**	*i* P	**P**	**11 17 08.7**	**-0.2**
TKL	**Tuckaleechee C**	**47.52**	**87**	LR	LR	11 37 14.1	
	comp=Z,109nm,18.1s,baz=52,slow=36						
NRIK	**Noril'sk**	**48.16**	**337**	*ceP*	**P**	**11 17 15.6**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,22nm,1.5s						
NRIK	**Noril'sk**	**48.16**	**337**	P	**P**	**11 17 14.9**	**+0.6**
	comp=Z,9.5nm,0.8s,baz=50,slow=5.6,SNR=13						
	comp=Z,9.5nm,0.8s						
BOD	**Bodaibo**	**48.42**	**315**	*eP*	**P**	**11 17 17.2**	**+0.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**49.29**	**241**	T	T	12 10 31.0	
	baz=31,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	**49.30**	**241**	T	T	12 10 26.2	
	baz=31,slow=76,SNR=36						
H11N1	**WAKE ISLAND Hy**	**49.31**	**241**	T	T	12 10 29.5	
	baz=31,slow=76,SNR=35						
JMIC	**Jan Mayen**	**49.79**	**16**	LR	LR	11 42 54.5	
	comp=Z,28nm,18.5s,baz=43,slow=41						
H11S1	**WAKE ISLAND Hy**	**50.43**	**240**	T	T	12 11 52.9	
	baz=30,slow=76,SNR=44						
H11S2	**WAKE ISLAND Hy**	**50.44**	**240**	T	T	12 11 54.1	
	baz=30,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**50.45**	**240**	T	T	12 11 54.8	
	baz=30,slow=76,SNR=52						
ARCES	**ARCESS Array B**	**54.30**	**3**	P	**P**	**11 18 00.2**	**-0.2**
	comp=Z,8.8nm,1.0s,baz=8.9,slow=2.9,SNR=4.8						
	comp=Z,8.8nm,1.0s						
CMIG	**Matias Romero**	**56.10**	**112**	LR	LR	11 42 27.2	
	comp=Z,48nm,18.3s,baz=330,slow=36						
ULN	**Ulaanbaatar**	**58.57**	**310**	*ceP*	**P**	**11 18 32.1**	**+0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**58.87**	**311**	P	**P**	**11 18 34.6**	**+1.2**
	comp=Z,5.2nm,0.8s,baz=42,slow=6.1,SNR=34						
	comp=Z,5.2nm,0.8s						
ZALV	**Zalesovo Beam**	**61.68**	**327**	*i* P	**P**	**11 18 53.2**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	**Zalesovo Beam**	**61.68**	**327**	P	**P**	**11 18 53.0**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=30,slow=7.9,SNR=14						
	comp=Z,2.6nm,0.6s						
NOA	**NORSAR Array B**	**61.82**	**11**	P	**P**	**11 18 53.0**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=348,slow=6.5,SNR=3.8						
NOA				LR	LR	11 47 25.0	
	comp=Z,19nm,19.6s,baz=5.0,slow=38						
	comp=Z,1.1nm,0.7s						
HHC	**Hu-ho-hao-te**	**62.02**	**302**	*e*P	**P**	**11 18 55.0**	**0.0**
HHC				pP	sP	11 18 59.5	+1.9
HHC				PcP	PcP	11 19 44.0	+8.6
HHC				S	**S**	**11 27 17.5**	**-1.8**
HHC				ScS	**SKKSac**	**11 28 39.5**	**-7.3**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,56nm,4.4s						
FINES	**FINESS Array B**	**62.42**	**3**	*i* P	**P**	**11 18 58.0**	**+0.8**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**62.42**	**3**	P	**P**	**11 18 57.1**	**0.0**
	comp=Z,3.1nm,0.8s,baz=0.3,slow=8.4,SNR=10						
	comp=Z,3.1nm,0.8s						
KIRV	**Kirov**	**64.46**	**350**	*ceP*	**P**	**11 19 11.6**	**+0.9**
DGZ	**Jazzator, Alta**	**64.52**	**323**	*i* P	**P**	**11 19 12.7**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
EKA	**Eskdalemuir Ar**	**65.12**	**21**	P	**P**	**11 19 15.5**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=326,slow=7.3,SNR=3.8						
	comp=Z,3.2nm,0.8s						
ARU	**Arti**	**65.40**	**344**	*c i*P	**P**	**11 19 17.5**	**+0.6**
ARU						11 21 39.0	
ARU				S	**S**	**11 28 02.7**	**+2.0**
ARU				SS	**SS**	**11 32 14.7**	**+2.0**
ARU				pmax	pmax		
	comp=Z,39nm,1.6s						
ARU	**Arti**	**65.40**	**344**	LR	LR	11 49 52.6	
	comp=Z,47nm,19.3s,baz=333,slow=38						
KURK	**Kurchatov**	**66.33**	**329**	P	**P**	**11 19 23.8**	**+0.8**
BRVK	**Borovoye**	**66.34**	**336**	*ceP*	**P**	**11 19 22.9**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BVAR	**Borovoye Array**	**66.34**	**336**	P	**P**	**11 19 23.6**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=28,slow=6.7,SNR=18						
	comp=Z,3.5nm,0.7s						
KURBB	**Kurchatov Arra**	**66.44**	**329**	P	**P**	**11 19 23.8**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=29,slow=6.6,SNR=7.6						
	comp=Z,1.1nm,0.6s						
LYN	**LuoYang**	**66.56**	**297**	⇓P	**P**	**11 19 26.3**	**+1.6**
LYN				pmax	pmax		
	comp=Z,23nm,0.5s						
LYN				pmax	pmax		
	comp=Z,170nm,3.5s						
GTA	**Gaotai**	**68.48**	**309**	*eP*	**P**	**11 19 38.0**	**+1.1**
GTA				pP	pwP	11 19 46.0	+1.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
MK31	**Makanchi Array**	**68.73**	**325**	*ceP*	**P**	**11 19 38.7**	**+0.4**
MKAR	**Makanchi Array**	**68.73**	**325**	P	**P**	**11 19 38.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=42,slow=6.9,SNR=10.0						
	comp=Z,1.0nm,0.6s						
OBN	**Obninsk**	**68.77**	**357**	*eP*	**P**	**11 19 39.9**	**+1.7**
OBN				*e*		11 20 05.3	
OBN				*e*		11 22 10.3	
OBN				*e*PPP	PPP	11 23 51.0	
OBN				pmax	pmax		
	comp=Z,17nm,1.5s						
OBN				MLR	MLR		
	comp=Z,34nm,14.0s						
MNK	**Minsk**	**69.42**	**2**	*i* P	**P**	**11 19 41.2**	**-1.1**
MNK				*i*		11 22 15.0	
MNK				*i* PPP	PPP	11 23 55.5	
MNK				*i* S	**S**	**11 28 48.5**	**-0.5**
MNK				*i* SS	**SS**	**11 33 11.7**	**-3.1**
MNK				pmax	pmax		
	comp=E,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,28nm,0.9s						
MNK				pmax	pmax		
	comp=Z,19nm,0.9s						
LZH	**Lanzhou**	**69.43**	**304**	*eP*	**P**	**11 19 44.0**	**+1.0**
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
BELG	**Belogornoye**	**70.75**	**350**	*i* P	**P**	**11 19 51.3**	**+0.8**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AKASG	**Malin Array Be**	**73.25**	**1**	P	**P**	**11 20 06.0**	**+0.5**
	comp=Z,6.2nm,0.7s,baz=360,slow=5.9,SNR=15						
AKASG				LR	LR	11 55 17.2	
	comp=Z,51nm,18.9s,baz=93,slow=38						
	comp=Z,6.2nm,0.7s						
AKBB	**Malin Array Si**	**73.25**	**1**	*ceP*	**P**	**11 20 06.7**	**+1.2**
PPT	**Papeete**	**73.69**	**181**	LR	LR	11 43 09.6	
	comp=Z,58nm,19.7s,baz=314,slow=28						
PPT2	**Papeete2**	**73.71**	**181**	*e*LR	LR	11 42 32.5	
	comp=Z,85nm,23.0s						
PPT2				*e*LR	LR	11 42 38.5	
	comp=Z,132nm,26.0s						
VRAC	**Vranov**	**73.94**	**10**	LR	LR	11 54 25.5	
	comp=Z,27nm,18.9s,baz=296,slow=37						
GERES	**GERESS Array B**	**74.08**	**12**	P	**P**	**11 20 11.5**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=342,slow=5.2,SNR=2.9						
GERES				LR	LR	11 59 40.0	
	comp=Z,17nm,18.1s,baz=305,slow=41						
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**74.86**	**329**	*ceP*	**P**	**11 20 16.3**	**+1.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AAK	**Ala-Archa**	**74.86**	**329**	LR	LR	11 57 04.0	
	comp=Z,42nm,20.0s,baz=14,slow=39						
HNR	**Honiara**	**78.10**	**232**	LR	LR	11 49 15.2	
	comp=Z,720nm,19.9s,baz=202,slow=31						
PZH	**PanZhiHua**	**78.40**	**301**	P	**P**	**11 20 36.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
TBI	**Tubuai**	**79.44**	**181**	*e*LR	LR	11 45 11.6	
	comp=Z,400nm,27.8s						
KIV	**Kislovodsk**	**79.56**	**352**	*eP*	**P**	**11 20 42.5**	**+0.9**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,29nm,19.0s						
ESDC	**Sonseca Array**	**79.70**	**27**	P	**P**	**11 20 43.3**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=340,slow=5.6,SNR=4.9						
	comp=Z,1.8nm,0.7s						
KBZ	**Khabaz**	**79.77**	**352**	*ceP*	**P**	**11 20 43.7**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	**Khabaz**	**79.77**	**352**	P	**P**	**11 20 43.4**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=302,slow=4.2,SNR=11						
	comp=Z,4.2nm,0.8s						
SOC	**Sochi**	**80.14**	**354**	*eP*	**P**	**11 20 46.2**	**+1.6**
SOC				*e*		11 23 44.5	
SOC				*e*PPP	PPP	11 25 38.9	
SOC				*e*S	**S**	**11 30 52.9**	**+3.9**
SOC				*e*SS	**SS**	**11 36 00.4**	**+2.5**
DAV	**Davao City (W)**	**81.87**	**270**	LR	LR	11 54 22.3	
	comp=Z,35nm,19.7s,baz=282,slow=34						
GNI	**Garni**	**83.16**	**350**	LR	LR	12 04 28.5	
	comp=Z,23nm,18.1s,baz=346,slow=40						
GEYT	**Alibeck**	**83.34**	**339**	P	**P**	**11 21 02.3**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=46,slow=4.3,SNR=6.3						
	comp=Z,3.8nm,0.7s						
BRTR	**Keskin Array B**	**84.22**	**358**	*i* P	**P**	**11 21 07.8**	**+1.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**84.22**	**358**	P	**P**	**11 21 06.8**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=8.8,slow=3.7,SNR=7.1						
	comp=Z,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**86.58**	**299**	*i* P	**P**	**11 21 18.8**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**86.58**	**299**	P	**P**	**11 21 17.5**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=15,slow=5.1,SNR=11						
	comp=Z,1.4nm,0.4s						
QSPA	**South Pole Qui**	**146.19**	**180**	PKPbc	**PKPbc**	**11 28 13.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=231,slow=1.2,SNR=3.2						
BOSA	**Boshof**	**151.88**	**12**	PKPbc	**PKPbc**	**11 28 29.6**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=322,slow=0.9,SNR=7.7						

*IDC **28** 11:16:18.0±1.2,5.°88S×142.°66E,h0km,mb3.9/3,*

mbtmp3.9/5,ML1.7/1,MS3.4/1,Error ellipse: s-maj=35.7km s-min=25.6km az=73.0

ISC 28 11:16:22.4±0.9,5.°91S±0.°10×142.°60E±0.°09,h28km,n16, σ2ᵗ42/16,mb4.0/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.52**	**295**	P		P	**Pn**	**11 16 49.0**	**+1.3**
PMG	**Port Moresby**	**5.70**	**128**	Pn		Pn	**Pn**	**11 17 45.2**	**0.0**
	1.4nm,0.3s,baz=261,slow=18,SNR=3.0								
PMG				Sn		Sn	**Sn**	**11 18 48.1**	**-1.6**
	3.4nm,0.3s,baz=232,slow=18,SNR=2.6								
	7.4nm,0.5s								
COEN	**Coen**	**8.01**	**176**	P		P	**Pn**	**11 18 21.0**	**+4.0**
FAKI	**Fak Fak**	**10.74**	**286**	P		P	**Pn**	**11 18 54.7**	**+0.2**
MTSU	**Mount Surprise**	**12.26**	**172**	P		P	**Pn**	**11 19 18.9**	**+3.6**
DRS	**Darwin Rock St**	**13.24**	**240**	P		P	**Pn**	**11 19 25.9**	**-2.7**
WRA	**Warramunga Arr**	**16.09**	**209**	Pn		Pn	**Pn**	**11 20 02.1**	**-4.7**
	0.4nm,0.3s,baz=29,slow=13,SNR=16								
WRA				Sn		Sn	Sn	11 22 52.5	-12
	0.2nm,0.3s,baz=35,slow=22,SNR=2.3								
WRA				Lg		Lg	Lg	11 24 44.7	
	baz=32,slow=30,SNR=2.0								
KNRA	**Kununurra**	**16.69**	**233**	P		P	**Pn**	**11 20 11.3**	**-3.1**
AS01	**Alice Springs**	**19.52**	**204**	P		P	**Pn**	**11 20 47.9**	**+0.2**
ASAR	**Alice Springs**	**19.54**	**204**	P		P	**P**	**11 20 47.8**	**-0.1**
	4.4nm,0.9s,baz=34,slow=9.8,SNR=26								
ASAR				S		S	S	11 24 16.6	-11
	0.5nm,0.6s,baz=20,slow=26,SNR=4.9								
ASAR				Lg		Lg	Lg	11 26 39.9	
	baz=29,slow=31,SNR=2.1								
OOD	**Oodnadatta**	**22.73**	**196**	P		P	**P**	**11 21 24.0**	**+1.7**
WRKA	**Warakurna**	**23.44**	**214**	P		P	**P**	**11 21 28.7**	**-0.9**
RAR	**Rarotonga**	**57.74**	**111**	LR		LR	LR	11 47 03.0	
	comp=Z,38nm,21.2s,baz=278,slow=32								
MKAR	**Makanchi Array**	**74.68**	**322**	P		P	**P**	**11 27 59.9**	**+0.3**
	0.7nm,0.9s,baz=116,slow=6.6,SNR=3.9								
	0.7nm,0.9s								
BVAR	**Borovoye Array**	**84.15**	**325**	P		P	**P**	**11 28 51.0**	**+0.2**
	1.4nm,0.7s,baz=112,slow=6.4,SNR=5.7								
	1.4nm,0.7s								
ILAR	**Eielson Array**	**87.15**	**24**	P		P	**P**	**11 29 05.0**	**-0.5**
	0.7nm,0.8s,baz=263,slow=4.3,SNR=9.0								
	0.7nm,0.8s								

IDC 28 11:24:03.7±2.0,3.°63S×145.°52E,h0km,mb3.1/2, mbtmp3.2/3,ML3.4/1,Error ellipse: s-maj=144.3km s-min=32.6km az=118.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.55**	**213**	P		P	P	11 28 32.8	-0.4
	0.1nm,0.3s,baz=35,slow=10,SNR=6.3								
	0.8nm,0.8s								
ASAR	**Alice Springs**	**22.87**	**208**	P		P	P	11 29 08.8	-0.1
	0.3nm,0.8s,baz=38,slow=8.0,SNR=2.0								
	0.3nm,0.8s								
ILAR	**Eielson Array**	**83.90**	**23**	P		P	P	11 36 35.5	+0.3
	0.4nm,0.9s,baz=240,slow=7.1,SNR=2.6								
	0.4nm,0.9s								

*HLW **28** 11:26:11.6,34.°96N×29.°19E,h11km±32km,Ml4.1*
*GII **28** 11:26:16.6±0.2,34.°504N±0.°002×29.°583E±0.°001, h0km,Mws2.5,confirmed*

ISC 28 11:26:16.4±3.0,34.°7N±0.°2×29.°28E±0.°09,h35km,n21, σ1ᵗ30/22,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DB3	**El Dabaa**	**3.71**	**190**	P		P	**Pn**	**11 27 12.2**	**+1.0**
	baz=189								
DB3				S		S	**Sn**	**11 27 55.4**	**+1.7**
	baz=189								
SLUM	**Salum**	**4.68**	**228**	P		P	**Pn**	**11 27 21.1**	**-3.5**
	baz=226								
HNAT	**Natroun**	**5.18**	**167**	P		P	**Pn**	**11 27 31.0**	**-0.6**
	baz=166								
KOT	**Kottamia**	**5.23**	**155**	P		P	**Pn**	**11 27 33.2**	**+1.0**
	baz=155								
GEM	**Giv'at Ha'Em**	**5.51**	**104**	S		S	**Sn**	**11 28 38.3**	**+0.1**
GEM	**Giv'at Ha'Em**	**5.51**	**104**	P		P	**Pn**	**11 27 36.1**	**+0.1**
NATI	**Neve Ativ**	**5.55**	**103**	P		P	**Pn**	**11 27 36.9**	**+0.4**
NATI	**Neve Ativ**	**5.55**	**103**	S		S	**Sn**	**11 28 39.3**	**+0.1**
KSHT	**Keshet**	**5.70**	**106**	P		P	**Pn**	**11 27 39.0**	**+0.3**
KSHT	**Keshet**	**5.70**	**106**	S		S	**Sn**	**11 28 42.3**	**-0.6**
SUZ	**Suez**	**5.71**	**147**	P		P	**Pn**	**11 27 41.8**	**+3.0**
	baz=147								
DSI	**Dead Sea**	**6.00**	**120**	P		P	**Pn**	**11 27 43.0**	**+0.3**
KRMI	**Paran Flat**	**6.49**	**133**	P		P	**Pn**	**11 27 50.4**	**+0.9**
KRMI	**Paran Flat**	**6.49**	**133**	S		S	**Sn**	**11 29 01.8**	**-0.6**
PRNI	**Paran**	**6.50**	**130**	S		S	**Sn**	**11 29 01.4**	**-1.1**
PRNI	**Paran**	**6.50**	**130**	P		P	**Pn**	**11 27 49.6**	**0.0**
MBRI	**Mt Berech**	**6.84

0.4nm,0.8s
ASAR Alice Springs 73.38 199 P **P** **11 37 37.3 +1.5**
0.2nm,0.7s,baz=15,slow=5.8,SNR=2.2
0.2nm,0.7s
TXAR Lajitas Array 76.70 61 P **P** **11 37 56.3 +1.1**
0.1nm,0.5s,baz=297,slow=6.0,SNR=1.8
0.1nm,0.5s

*IDC **28** 11:35:12.6±0.6,5˚.90S×142˚.80E,h0km,mb4.6/15, mbtmp4.6/18,ML2.9/2,MS3.7/21,Error ellipse: s-maj=27.6km s-min=13.0km az=77.0*
*NEIC **28** 11:35:15.8±1.5,6˚.07S±0˚.05×142˚.48E±0˚.05,h10km±1km, mb4.8/97,Error ellipse: s-maj=12.0km s-min=3.2km az=225.0*
*DJA **28** 11:35:16.8±1.4,6˚S±3˚×14˚2E±˚,h13km±10km,M4.8/30, mB5.2/12,mb4.8/30,MLv5.2/5,Mw(mB)4.6/12*
ISC 28 11:35:17.8±0.3,**6˚13S**±0˚.04×**142˚.53E**±0˚.05,**h28**km,**n193,** σ1§**46**/159,**mb4.8**/84,**MS3.8**/19,**5C-5D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.15**	**222**	P	**Pn**	**11 36 07.5**	**+1.9**
MMPI				S	Sb	11 37 01.8	+11
GENI	**Genyem**	**4.23**	**326**	P	**Pn**	**11 36 21.0**	**+0.6**
GENI				S	**Sb**	**11 37 18.1**	**-4.0**
SMPI	**Sarmi**	**5.61**	**317**	P	**Pn**	**11 36 42.3**	**+3.0**
	312nm,1.1s,5μm1.6nm						
PMG	**Port Moresby**	**5.62**	**126**		**Pn**	**11 36 39.9**	**+0.4**
PMG	**Port Moresby**	**5.62**	**126**	Pn	**Pn**	**11 36 38.0**	**-1.6**
	6.6nm,0.3s,baz=318,slow=6.7,SNR=20						
PMG				Sn	**Sn**	**11 37 43.4**	**0.0**
	14nm,0.3s,baz=262,slow=19,SNR=6.8						
	26nm,0.4s						
MANU	**Manus Island**	**6.30**	**50**	Pn	**Pn**	**11 36 49.5**	**+0.6**
COEN	**Coen**	**7.81**	**175**		**Pn**	**11 37 10.6**	**+1.0**
RABL	**Rabaul**	**9.79**	**79**	Pn	**Pn**	**11 37 36.8**	**+0.1**
FAKI	**Fak Fak**	**10.73**	**287**	Pn	**Pn**	**11 37 48.5**	**-1.3**
FAKI	**Fak Fak**	**10.73**	**287**	P	**Pn**	**11 37 49.2**	**-0.5**
	82nm,0.8s,720nm						
SAUI	**Saumlaki**	**11.30**	**260**	Pn	**Pn**	**11 37 57.8**	**+0.3**
SAUI	**Saumlaki**	**11.30**	**260**	P	**Pn**	**11 37 58.6**	**+1.1**
	735nm,1.0s,8μm						
SWI	**Sorong**	**12.40**	**295**	P	**Pn**	**11 38 11.7**	**-0.9**
	62nm,0.8s						
BNDI	**Bandanaira**	**12.67**	**277**	P	**Pn**	**11 38 16.5**	**+0.2**
	166nm,1.2s						
MTN	**Manton Dam**	**13.07**	**238**	Pn	**Pn**	**11 38 20.4**	**-1.3**
MTN	**Manton Dam**	**13.07**	**238**	P	**Pn**	**11 38 21.3**	**-0.4**
DRS	**Darwin Rock St**	**13.07**	**241**	P	**Pn**	**11 38 22.4**	**+0.7**
CTA	**Charters Tower**	**14.34**	**166**	Pn	**Pn**	**11 38 37.5**	**-1.6**
	0.1nm,0.3s,baz=18,slow=20,SNR=0.7						
CTA				Lg	Lg	11 42 55.7	
	0.3nm,0.3s,baz=247,slow=22,SNR=2.3						
CTA				LR	LR	11 43 45.9	
	comp=Z,291nm,21.1s,baz=353,slow=35						
	1.3nm,0.8s						
CTAO	**Charters Tower**	**14.34**	**166**	Pn	**Pn**	**11 38 38.7**	**-0.4**
QIS	**Mount Isa**	**14.62**	**191**	P	**Pn**	**11 38 42.8**	**-0.1**
WB0	**Warramunga Arr**	**15.70**	**210**	Pn	**Pn**	**11 38 55.9**	**-1.2**
WB0				IAmb	IAmb	11 39 07.7	
	comp=Z,48nm,0.9s						
WR0	**Warramunga Arr**	**15.79**	**209**	Pn	**Pn**	**11 38 57.0**	**-1.3**
WR0				IAmb	IAmb	11 39 09.1	
	comp=Z,41nm,0.8s						
WRAB	**Tennant Creek**	**15.86**	**209**		**Pn**	**11 38 57.3**	**-1.9**
WB2	**Warramunga Arr**	**15.87**	**209**	Pn	**Pn**	**11 38 58.6**	**-0.7**
WRA	**Warramunga Arr**	**15.87**	**209**	Pn	**Pn**	**11 38 58.0**	**-1.4**
WRA	**Warramunga Arr**	**15.87**	**209**	Pn	**Pn**	**11 38 58.0**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=26,slow=13,SNR=31						
WRA				Sn	**Sn**	**11 41 50.1**	**-4.5**
	comp=Z,0.8nm,0.3s,baz=30,slow=23,SNR=5.0						
WRA				Lg	Lg	11 43 38.6	
	comp=Z,0.9nm,0.3s,baz=19,slow=28,SNR=6.3						
LBMI	**Labuha**	**15.96**	**289**	P	**Pn**	**11 39 01.2**	**+0.7**
	comp=Z,67nm,0.8s,comp=Z,1μm						
KNRA	**Kununurra**	**16.50**	**234**	Pn	**Pn**	**11 39 05.5**	**-2.0**
KNRA				IAmb	IAmb	11 39 15.4	
	comp=Z,103nm,0.9s						
KNRA	**Kununurra**	**16.50**	**234**	P	**Pn**	**11 39 06.2**	**-1.2**
SANI	**Sanana**	**16.99**	**283**	P	**Pn**	**11 39 11.3**	**-2.3**
	comp=Z,21nm,0.8s,comp=Z,525nm						
SOEI	**Soe**	**18.44**	**258**	P	**P**	**11 39 30.9**	**-0.5**
SOEI	**Soe**	**18.44**	**258**	P	**Pn**	**11 39 33.4**	**+1.8**
	comp=Z,321nm,1.1s,comp=Z,3μm						
AS31	**Alice Springs**	**19.31**	**205**		**Pn**	**11 39 42.7**	**+0.7**
ASAR	**Alice Springs**	**19.31**	**205**	P	**P**	**11 39 41.8**	**+0.9**
ASAR	**Alice Springs**	**19.31**	**205**	P	**Pn**	**11 39 42.9**	**+0.9**
	comp=Z,41nm,1.0s,baz=32,slow=10,SNR=79						
ASAR				S	**Sn**	**11 43 14.6**	**-3.3**
	comp=Z,4.8nm,0.8s,baz=16,slow=27,SNR=4.5						
ASAR				Lg	Lg	11 45 35.8	
	comp=Z,0.3nm,0.3s,baz=26,slow=30,SNR=2.6						
ASAR				LR	LR	11 48 00.9	
	comp=Z,911nm,21.1s,baz=36,slow=39						
GUMO	**Guam**	**19.73**	**7**	LR	LR	11 46 42.0	
	comp=Z,85nm,18.4s,baz=201,slow=35						
MMRI	**Maumere**	**20.28**	**262**	P	**P**	**11 39 51.4**	**0.0**
MMRI				IAmb	IAmb	11 40 20.4	
	comp=Z,78nm,1.1s						
MMRI	**Maumere**	**20.28**	**262**	P	Pn	11 39 54.3	+0.8
	comp=Z,64nm,1.3s,comp=Z,1μm						
FITZ	**Fitzroy Crossi**	**20.33**	**233**		**P**	**11 39 53.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**20.33**	**233**	P	**P**	**11 39 53.8**	**+1.9**
PATS	**Pohnpei**	**20.34**	**51**	P	**P**	**11 39 51.8**	**-0.3**
LUWI	**Luwuk**	**20.35**	**284**	P	**P**	**11 39 51.6**	**-0.6**
LUWI				IAmb	IAmb	11 40 14.5	
	comp=Z,65nm,0.9s						
GTOI	**Gorontalo**	**20.61**	**288**	P	**P**	**11 39 56.0**	**+1.0**
	comp=Z,26nm,1.4s,comp=Z,261nm						
EIDS	**Eidsvold**	**20.81**	**158**	P	**P**	**11 39 58.3**	**+1.2**
EDFI	**Ende, Flores**	**20.83**	**262**	P	**P**	**11 39 56.1**	**-1.4**
	comp=Z,37nm,1.2s						
MRSI	**Marisa**	**21.57**	**287**	P	**P**	**11 40 05.3**	**-0.1**
	comp=Z,32nm,1.1s						
BKSI	**Bulukumba**	**22.31**	**271**	P	**P**	**11 40 14.7**	**+1.4**
	comp=Z,99nm,1.0s,comp=Z,1μm						
OOD	**Oodnadatta**	**22.51**	**196**	P	**P**	**11 40 17.8**	**+2.5**
KAPI	**Kappang**	**22.70**	**272**	P	**P**	**11 40 17.2**	**-0.2**
TTSI	**Tana Toraja**	**22.84**	**277**	P	**P**	**11 40 20.8**	**+1.8**
	comp=Z,30nm,1.3s,comp=Z,1μm						
TOLI2	**Tolitoli**	**22.87**	**288**	P	**P**	**11 40 18.1**	**-1.2**
TOLI2				IAmb	IAmb	11 40 40.6	
	comp=Z,38nm,1.0s						
WRKA	**Warakurna**	**23.23**	**214**	P	**P**	**11 40 23.8**	**+0.9**
STKA	**Stephens Creek**	**25.63**	**182**	P	**P**	**11 40 46.0**	**+1.0**
STKA	**Stephens Creek**	**25.63**	**182**	P	**P**	**11 40 45.2**	**+0.2**
	comp=Z,6.0nm,0.9s,baz=9.7,slow=5.1,SNR=6.5						
STKA				Lg	Lg	11 48 56.5	
	comp=Z,0.1nm,0.3s,baz=123,slow=3.9,SNR=1.0						
STKA				LR	LR	11 51 17.4	
	comp=Z,262nm,19.3s,baz=355,slow=37						
	comp=Z,6.0nm,0.9s						
MBWA	**Marble Bar**	**26.66**	**234**	P	**P**	**11 40 54.8**	**+0.3**
MBWA				IAmb	IAmb	11 41 15.5	
	comp=Z,27nm,1.1s						
PSA00	**Pilbara Seismi**	**26.78**	**233**	P	**P**	**11 40 55.2**	**-0.4**
PSA00				IAmb	IAmb	11 41 01.4	
	comp=Z,36nm,1.1s						
BBOO	**Buckleboo**	**27.22**	**192**	P	**P**	**11 40 59.4**	**0.0**
DZM	**Mont Dzumac**	**28.02**	**127**	*e*LR	LR	11 48 22.5	
	comp=Z,417nm,24.3s						
JAGI	**Jajag, Banyuwa**	**28.24**	**264**	P	**P**	**11 41 06.9**	**-1.8**
JAGI				IAmb	IAmb	11 41 18.4	
	comp=Z,11nm,0.9s						
MARNC	**Mare, Loyalty**	**29.01**	**124**	P	**P**	**11 41 16.1**	**+0.6**
SBUM	**Sibu**	**31.44**	**285**	P	**P**	**11 41 36.5**	**-0.6**
MORW	**Morawa**	**33.87**	**224**	P	**P**	**11 41 58.5**	**+0.4**
MORW				IAmb	IAmb	11 41 59.5	
	comp=Z,12nm,1.1s						
LEM	**Lembang**	**34.69**	**267**	LR	LR	12 00 35.4	
	comp=Z,86nm,18.6s,baz=139,slow=44						
NWAO	**Narrogin (SRO)**	**35.56**	**218**	LR	LR	11 57 41.8	
	comp=Z,366nm,19.5s,baz=29,slow=38						
XMIS	**Christmas Isla**	**36.73**	**261**	P	**P**	**11 42 22.8**	**-0.2**
XMIS				IAmb	IAmb	11 42 26.2	
	comp=Z,28nm,1.1s						
MJAR	**Matsushiro Arr**	**42.64**	**355**	P	P	11 43 06.5	-5.3
	comp=Z,2.9nm,0.7s,baz=174,slow=8.7,SNR=8.8						
MJAR				LR	LR	11 59 01.4	
	comp=Z,59nm,18.8s,baz=140,slow=34						
MAJO	**Matsushiro**	**42.64**	**355**	P	**P**	**11 43 09.9**	**-1.9**
NJ2	**Nanjing**	**44.17**	**331**	*e*P	**P**	**11 43 25.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
URZ	**Urewera**	**44.77**	**141**	LR	LR	12 00 49.0	
	comp=Z,120nm,19.5s,baz=296,slow=34						
RPZ	**Rata Peaks**	**45.05**	**151**	LR	LR	12 02 47.8	
	comp=Z,103nm,19.8s,baz=307,slow=37						
KSRS	**Korea Array**	**45.45**	**344**	P	**P**	**11 43 30.6**	**-3.7**
	comp=Z,6.8nm,0.9s,baz=157,slow=9.6,SNR=10						
	comp=Z,6.8nm,0.9s						
GYA	**Guiyang**	**47.52**	**315**	⇑*i*P	**P**	**11 43 53.3**	**+2.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.9s						
ENH	**Enshi**	**48.09**	**321**	P	**P**	**11 43 53.9**	**-1.3**
PHRA	**Phrae**	**48.36**	**301**	P	**P**	**11 43 56.6**	**-0.9**
CRAI	**Chiangrai**	**49.02**	**303**	P	**P**	**11 44 01.1**	**-1.4**
LYN	**LuoYang**	**49.42**	**327**	⇑P	**P**	**11 44 05.8**	**+0.5**
LYN				pP	pP	11 44 10.5	-3.5
LYN				sP	sP	11 44 13.5	-4.0
LYN				pmax	pmax		
	comp=Z,37nm,0.8s						
LYN				pmax	pmax		
	comp=Z,480nm,4.1s						
CMAR	**Chiang Mai Arr**	**49.44**	**301**	P	**P**	**11 44 05.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**49.44**	**301**	P	**P**	**11 44 06.5**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=126,slow=6.1,SNR=15						
	comp=Z,3.3nm,0.9s						
CM31	**Chiang Mai Arr**	**49.44**	**301**	P	**P**	**11 44 04.9**	**-0.9**
CM31				IAmb	IAmb	11 44 10.1	
	comp=Z,9.9nm,1.1s						
CHTO	**Chiang Mai**	**49.59**	**301**	P	**P**	**11 44 06.1**	**-0.8**
KMI	**Kunming**	**49.62**	**310**	⇓P	**P**	**11 44 09.5**	**+2.2**
KMI				pmax	pmax		
	comp=Z,24nm,1.2s						
ASAJ	**Asahikawa**	**50.01**	**0**	LR	LR	12 10 33.2	
	comp=Z,19nm,18.2s,baz=160,slow=43						
HNS	**HongShan**	**50.49**	**331**	⇑P	**P**	**11 44 13.5**	**+0.1**
HNS				pmax	pmax		
	comp=Z,20nm,1.4s						
USRK	**Ussuriysk Ar.**	**50.99**	**350**	P	**P**	**11 44 15.9**	**-1.1**
USRK	**Ussuriysk Ar.**	**50.99**	**350**	P	**P**	**11 44 13.3**	**-3.7**
	comp=Z,13nm,1.1s,baz=154,slow=7.1,SNR=10						
USRK				LR	LR	12 05 06.4	
	comp=Z,22nm,18.9s,baz=91,slow=35						
	comp=Z,13nm,1.1s						
USA0B	**Ussuriysk Arra**	**50.99**	**350**	P	**P**	**11 44 16.9**	**-0.2**
USA0B				IAmb	IAmb	11 44 17.9	
	comp=Z,15nm,1.1s						
XAN	**Xi'an**	**51.05**	**324**	P	**P**	**11 44 18.3**	**+0.5**
XAN				pmax	pmax		
	comp=Z,23nm,1.4s						
PZH	**PanZhiHua**	**51.13**	**311**	P	**P**	**11 44 19.8**	**+1.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,220nm,5.1s						
MDJ	**Mudanjiang**	**51.84**	**348**	P	P	11 44 28.3	+4.9
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.2s						
BJT	**Baijiatuau**	**51.95**	**334**	P	**P**	**11 44 23.8**	**-0.5**
BJI	**Beijing**	**51.97**	**334**	P	**P**	**11 44 24.8**	**+0.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CN2	**Changchun**	**52.04**	**344**	*e*P	P	11 44 17.8	-7.1
CN2				*e*sP	pP	11 44 24.8	-9.0
CD2	**Chengdu**	**52.26**	**317**	P	**P**	**11 44 28.0**	**+1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
TNCH	**TengChong**	**52.83**	**308**	*e*P	**P**	**11 44 32.8**	**+1.4**
TNCH				pP	pP	11 44 35.8	-4.3
TNCH				pmax	pmax		
	comp=Z,27nm,0.4s						
TNCH				pmax	pmax		
	comp=Z,110nm,4.1s						
YSS	**Yuzh-Sakhalins**	**52.85**	**0**	P	**P**	**11 44 29.8**	**-1.0**
YSS				IAmb	IAmb	11 44 37.2	
	comp=Z,9.1nm,0.8s						
BNX	**BinXian**	**53.38**	**347**	⇓P	**P**	**11 44 34.5**	**-0.2**
BNX				pmax	pmax		
	comp=Z,21nm,1.2s						
BNX				pmax	pmax		
	comp=Z,200nm,4.4s						
HHC	**Hu-ho-hao-te**	**54.71**	**331**	⇓*i*P	**P**	**11 44 46.0**	**+1.3**
HHC				sP	pP	11 44 53.0	-0.5
HHC				*e*S	**S**	**11 52 30.5**	**+7.0**
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,150nm,16.7s						
BTO	**Baotou**	**55.27**	**330**	*e*P	**P**	**11 44 50.5**	**+1.7**
BTO				pP	**pP**	**11 44 55.3**	**-2.3**
BTO				sP	**sP**	**11 44 57.5**	**-3.5**
BTO				PP	**PP**	**11 46 56.5**	**+3.8**
BTO				pmax	pmax		
	comp=Z,29nm,1.2s						
BTO				pmax	pmax		
	comp=Z,350nm,5.1s						
LZH	**Lanzhou**	**55.49**	**322**	*e*P	**P**	**11 44 51.8**	**+1.2**
LZH				sP	pP	11 44 58.8	-0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
KLR	**Kul'dur**	**55.93**	**351**	LR	LR	12 06 11.7	
	comp=Z,12nm,19.4s,baz=160,slow=33						
HEH	**HeiHe**	**57.66**	**349**	*e*P	**P**	**11 45 04.5**	**-1.0**
HEH				pmax	pmax		
	comp=Z,11nm,1.1s						
HEH				pmax	pmax		
	comp=Z,190nm,4.4s						
GTA	**Gaotai**	**60.07**	**323**	P	**P**	**11 45 23.5**	**+0.9**
GTA				pP	pP	11 45 26.8	-4.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PEA0B	**Petropavlovsk-**	**60.40**	**10**	P	**P**	**11 45 24.1**	**-0.3**
PETK	**Petropavlovsk-**	**60.40**	**10**	P	**P**	**11 45 23.4**	**-1.0**
PETK	**Petropavlovsk-**	**60.40**	**10**	P	**P**	**11 45 21.9**	**-2.6**
	comp=Z,15nm,1.0s,baz=141,slow=5.0,SNR=7.2						
	comp=Z,15nm,1.0s						
LSA	**Lhasa**	**60.81**	**309**	P	**P**	**11 45 27.4**	**-0.9**
LSA				IAmb	IAmb	11 45 37.4	
	comp=Z,13nm,1.1s						
GOMU	**GeErMu**	**61.39**	**317**	P	**P**	**11 45 33.3**	**+1.3**
GOMU				pP	sP	11 45 58.8	+15
GOMU				sP	PcP	11 46 07.5	-6.6
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ULN	**Ulaanbaatar**	**62.17**	**334**	P	**P**	**11 45 37.0**	**+0.3**
ULN				IAmb	IAmb	11 45 40.8	
	comp=Z,6.2nm,1.0s						
SONM	**Songino Array**	**62.44**	**333**	P	**P**	**11 45 38.5**	**0.0**
SONM				IAmb	IAmb	11 45 41.1	
	comp=Z,5.5nm,1.1s						
SONM	**Songino Array**	**62.44**	**333**	P	**P**	**11 45 36.9**	**-1.6**
	comp=Z,4.8nm,1.1s,baz=158,slow=6.7,SNR=18						
	comp=Z,4.8nm,1.1s						
PALK	**Pallekele**	**63.10**	**281**	P	**P**	**11 45 42.9**	**-0.5**
PALK	**Pallekele**	**63.10**	**281**	LR	LR	12 16 16.2	
	comp=Z,36nm,19.6s,baz=214,slow=39						
MA2	**Magadan**	**65.82**	**5**	P	**P**	**11 45 59.9**	**-0.4**
MA2				IAmb	IAmb	11 46 09.5	
	comp=Z,7.4nm,1.0s						
PPT2	**Papeete2**	**67.12**	**106**	*e*LR	LR	12 06 26.5	
	comp=Z,48nm,22.0s						
KIWB	**Kanaga Island**	**67.23**	**26**	P	**P**	**11 46 09.3**	**-0.2**
YAK	**Yakutsk**	**68.68**	**354**	LR	LR	12 12 53.0	
	comp=Z,38nm,21.8s,baz=114,slow=33						
WMQ	**Urumqi**	**70.04**	**321**	*e*P	**P**	**11 46 28.5**	**+1.2**
WMQ				PcP	**PcP**	**11 46 52.0**	**+2.7**
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
VNDA	**Vanda**	**72.08**	**176**	P	**P**	**11 46 41.1**	**+2.1**
VNDA	**Vanda**	**72.08**	**176**	P	**P**	**11 46 40.3**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=349,slow=8.2,SNR=1.9						
VNDA				LR	LR	12 17 42.8	
	comp=Z,85nm,18.3s,baz=342,slow=35						
	comp=Z,0.9nm,0.7s						
ZSN	**Zaisan**	**73.56**	**323**	*e*P	**P**	**11 46 47.8**	**-0.5**
	baz=323						
MK31	**Makanchi Array**	**74.81**	**322**	P	**P**	**11 46 55.5**	**-0.1**
MK31				IAmb	IAmb	11 46 57.5	
	comp=Z,13nm,1.1s						
MKAR	**Makanchi Array**	**74.81**	**322**	P	**P**	**11 46 55.7**	**+0.1**
MKAR	**Makanchi Array**	**74.81**	**322**	P	**P**	**11 46 55.6**	**0.0**
	comp=Z,11nm,1.0s,baz=116,slow=6.9,SNR=60						
	comp=Z,11nm,1.0s						
MAKZ	**Makanchi**	**75.01**	**322**	P	**P**	**11 46 56.5**	**-0.3**
SHLS	**Shalkode**	**75.09**	**318**	*e*P	**P**	**11 46 55.8**	**-1.6**
	comp=Z,11nm,1.0s,baz=318						
UZB	**Uzynbulak**	**75.38**	**317**	*e*P	**P**	**11 46 59.4**	**+0.3**
	comp=Z,8.7nm,0.7s,baz=317						
PRZ	**Przheval'sk**	**75.55**	**317**		**P**	**11 47 00.6**	**+0.4**
SATY	**Saty**	**75.76**	**317**	*e*P	**P**	**11 47 01.1**	**-0.2**
	comp=Z,8.2nm,1.0s,baz=317						
KSH	**Kashi**	**76.18**	**313**	P	**P**	**11 47 06.3**	**+2.5**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	**Nilore**	**76.41**	**307**	P	**P**	**11 47 04.4**	**-0.7**
TDK	**Taldyqorghan**	**76.52**	**319**	*e*P	**P**	**11 47 05.3**	**-0.1**
	baz=319						
MDOK	**Medeo**	**76.72**	**317**	*e*P	**P**	**11 47 06.7**	**-0.1**
	baz=317						
ZAA0	**Zalesovo Array**	**76.80**	**329**	P	**P**	**11 47 06.3**	**-0.5**
ZAA0				IAmb	IAmb	11 47 09.4	
	comp=Z,7.9nm,1.1s						
ZALV	**Zalesovo Beam**	**76.80**	**329**	P	**P**	**11 47 06.1**	**-0.6**
ZALV	**Zalesovo Beam**	**76.80**	**329**	P	**P**	**11 47 06.0**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=104,slow=6.3,SNR=12						
	comp=Z,3.0nm,0.8s						
BOOM	**Boomskoye usch**	**77.24**	**316**	IAmb	IAmb	11 47 11.9	
	comp=Z,9.5nm,1.2s						
KUU	**Kurty**	**77.47**	**317**	*e*P	**P**	**11 47 10.6**	**-0.2**
	baz=317						
AAK	**Ala-Archa**	**78.30**	**316**	P	**P**	**11 47 15.9**	**+0.3**
SGDS	**Sogindy**	**78.48**	**316**	*e*P	**P**	**11 47 16.2**	**-0.2**
	baz=316						
KURK	**Kurchatov**	**78.69**	**324**	P	**P**	**11 47 17.7**	**+0.3**
KURK				IAmb	IAmb	11 47 18.8	
	comp=Z,17nm,1.1s						
KURBB	**Kurchatov Arra**	**78.70**	**324**	P	**P**	**11 47 17.3**	**-0.1**
	comp=Z,6.1nm,1.0s,baz=113,slow=4.8,SNR=28						
	comp=Z,6.1nm,1.0s						
ARSB	**Arslanbob**	**78.93**	**314**	P	**P**	**11 47 18.8**	**-0.4**
MAW	**Mawson**	**80.42**	**202**	LR	LR	12 21 15.6	
	comp=Z,63nm,18.6s,baz=261,slow=34						
DZA	**Taraz**	**80.58**	**315**	*e*P	**P**	**11 47 28.1**	**+0.2**
	baz=315						
SIMJ	**Simiganj**	**81.09**	**311**	P	**P**	**11 47 30.7**	**-0.1**
SIMJ				IAmb	IAmb	11 47 35.1	
	comp=Z,14nm,1.1s						
KK31	**Karatay Array**	**81.22**	**315**	P	**P**	**11 47 30.9**	**-0.4**
KKAR	**Karatay Array**	**81.22**	**315**	P	**P**	**11 47 31.0**	**-0.3**
BRLS	**Boroldday**	**81.67**	**315**	*e*P	**P**	**11 47 34.1**	**+0.4**
	baz=315						
G16K	**Koyuk River**	**81.85**	**20**	IAmb	IAmb	11 47 35.5	
	comp=Z,12nm,1.1s						
K17K	**Iditarod**	**81.91**	**24**	IAmb	IAmb	11 47 36.3	
	comp=Z,11nm,1.0s						
H17K	**Granite Mounta**	**82.46**	**21**	IAmb	IAmb	11 47 38.4	
	comp=Z,6.1nm,0.9s						
G18K	**Tagagawik**	**83.41**	**21**	IAmb	IAmb	11 47 42.7	
	comp=Z,4.6nm,0.9s						
E18K	**Tukpahlearik C**	**83.57**	**19**	IAmb	IAmb	11 47 43.9	
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**11 47 44.9**	**+0.2**
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**11 47 44.6**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=247,slow=23,SNR=18						
QSPA				LR	LR	12 26 10.5	
	comp=Z,158nm,18.1s,baz=76,slow=36						
	comp=Z,7.9nm,0.8s						
C18K	**Utukok River**	**84.06**	**18**	IAmb	IAmb	11 48 01.1	
	comp=Z,4.9nm,1.0s						
NRIK	**Noril'sk**	**84.06**	**343**	P	**P**	**11 47 45.3**	**-0.2**
NRIK	**Noril'sk**	**84.06**	**343**	P	**P**	**11 47 44.0**	**-1.5**
	comp=Z,11nm,0.9s,baz=124,slow=4.7,SNR=15						
	comp=Z,11nm,0.9s						
G19K	**Purcell Mounta**	**84.09**	**21**	IAmb	IAmb	11 47 53.5	
	comp=Z,5.7nm,1.1s						
J20K	**Nowinta River**	**84.25**	**23**	IAmb	IAmb	11 47 47.5	
	comp=Z,4.4nm,0.9s						
BVAR	**Borovoye Array**	**84.28**	**325**	P	**P**	**11 47 46.7**	**-0.2**
	comp=Z,21nm,0.9s,baz=106,slow=5.3,SNR=71						
	comp=Z,21nm,0.9s						
BRVK	**Borovoye**	**84.35**	**325**	P	**P**	**11 47 47.5**	**+0.2**
C19K	**Lookout Ridge**	**84.80**	**18**	IAmb	IAmb	11 47 51.4	
	comp=Z,7.6nm,0.9s						
D19K	**Kuna River**	**84.93**	**19**	IAmb	IAmb	11 47 51.2	
	comp=Z,10nm,1.1s						
F20K	**Avaraart Lake**	**85.00**	**20**	IAmb	IAmb	11 47 51.4	
	comp=Z,6.8nm,1.1s						
MLY	**Manley**	**85.94**	**23**	IAmb	IAmb	11 47 56.0	
	comp=Z,4.3nm,0.8s						
RND	**Reindeer**	**86.07**	**25**	IAmb	IAmb	11 47 55.5	
	comp=Z,11nm,1.0s						
WRH	**Wood River Hil**	**86.78**	**24**	P	**P**	**11 47 58.1**	**-1.0**
WRH				IAmb	IAmb	11 47 59.4	
	comp=Z,12nm,1.2s						
E22K	**Anaktuvuk Pass**	**86.83**	**20**	IAmb	IAmb	11 48 01.4	
	comp=Z,7.9nm,1.1s						
G23K	**Bananza Creek**	**86.89**	**22**	IAmb	IAmb	11 48 03.2	
	comp=Z,4.2nm,0.9s						
CCB	**Clear Creek Bu**	**86.96**	**24**	P	**P**	**11 47 59.0**	**-1.0**
IL31	

ASAR				LR	LR	12 02 02.0	
	comp=Z,98nm,18.9s,baz=353,slow=39						
SONM	**Songino Array**	**62.76**	**333**	P	**P**	**11 59 43.9**	**+1.4**
	0.1nm,0.3s,baz=154,slow=8.0,SNR=1.2						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**75.19**	**322**	P	**P**	**12 01 00.5**	**+0.6**
	0.6nm,0.7s,baz=126,slow=7.3,SNR=6.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**79.07**	**324**	P	**P**	**12 01 21.8**	**+0.3**
	0.2nm,0.3s,baz=107,slow=3.9,SNR=4.7						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**84.65**	**325**	P	**P**	**12 01 50.5**	**-0.3**
	2.9nm,0.8s,baz=112,slow=6.6,SNR=12						
	2.9nm,0.8s						
ILAR	**Eielson Array**	**87.29**	**24**	P	**P**	**12 02 01.9**	**-1.7**
	0.4nm,0.7s,baz=263,slow=4.8,SNR=6.7						
	0.4nm,0.7s						

HEL 28 11:58:01.7±0.5, 60.85N×29.08E, h0km, ML1.3, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.58**	**354**	PG	Pg	11 58 12.3	-0.4
RUF				SG	Sg	11 58 19.7	-0.5
RUF				MSG		11 58 20.1	
	comp=Z,4.4nm,0.2s						
VJF	**Virojoki**	**0.81**	**248**	PG	Pg	11 58 16.8	-0.5
VJF				MSG		11 58 27.1	
	comp=Z,3.1nm,0.2s						
VJF				SG	Sg	11 58 27.2	-0.6
FIA0	**FINESS Array S**	**1.57**	**293**	PG	Pn	11 58 29.4	-1.4
	baz=111						
FIA0				MSG		11 58 48.9	
	comp=Z,2.1nm,0.2s						
FIA0				SG	Sn	11 58 50.4	-1.5
PVF	**Pernaja**	**1.61**	**260**	PG	Pn	11 58 30.4	-1.0
PVF				MSG		11 58 50.2	
	comp=Z,2.0nm,0.2s						
PVF				SG	Sn	11 58 52.5	-0.4
KAF	**Kangasniemi**	**1.84**	**315**	PG	Pn	11 58 35.2	+0.7
KAF				MSG		11 58 56.4	
	comp=Z,1.8nm,0.2s						
KAF				SG	Sn	11 58 58.2	-0.2
JOF	**Joensuu**	**2.33**	**26**	PG	Pn	11 58 42.8	+1.6
	baz=204						
JOF				SG	Sb	11 59 12.8	-0.9
SUF	**Sumiainen**	**2.33**	**325**	MSG		11 59 10.6	
	comp=Z,1.1nm,0.2s						
SUF				SG	Sb	11 59 13.8	-0.1
MEF	**Metsahovi**	**2.40**	**257**	MSG		11 59 12.7	
	comp=Z,2.3nm,0.2s						
MEF				SG	Sb	11 59 15.7	-0.1
KEF	**Keuruu**	**2.41**	**305**	PG	Pn	11 58 43.7	+1.4
	baz=123						
KEF				MSG		11 59 13.0	
	comp=Z,0.6nm,0.2s						
KEF				SG	Sb	11 59 15.6	-0.5
VAF	**Ylistaro**	**3.74**	**309**	SG	Sg	11 59 58.7	-3.1

HEL 28 11:58:51.0±0.1, 64.11N×28.01E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.73**	**187**	SN	Sg	11 59 14.1	-0.2
NIF	**Nilsia**	**0.73**	**187**	PB	Pg	11 59 04.3	-0.6
	baz=4.0						
NIF				SG	Sg	11 59 14.1	-0.2
RMF	**Romuvaara**	**0.85**	**82**	PG	Pg	11 59 06.2	-1.1
RMF				MSG		11 59 17.4	
	comp=Z,1.3nm,0.2s						
OBF4	**Vikkela, Lumij**	**1.44**	**301**	PB	Pn	11 59 18.1	-0.3
OBF4	**Vikkela, Lumij**	**1.44**	**301**	PN	Pn	11 59 18.1	-0.3
	baz=116						
OBF4				MSG		11 59 34.3	
	comp=Z,0.7nm,0.2s						
OBF4				SN	Sn	11 59 38.3	+0.3
OUF	**Merijarvi**	**1.46**	**282**	PN	Pn	11 59 17.9	-0.6
	baz=94						
OUF				MSG		11 59 34.8	
	comp=Z,1.5nm,0.2s						
OUF				SN	Sg	11 59 37.4	-0.3
MSF	**Maaselka**	**1.86**	**13**	PG	Pn	11 59 24.5	+0.3
JOF	**Joensuu**	**1.90**	**127**	PG	Pn	11 59 25.1	+0.4
JOF				SG	Sn	11 59 49.5	+0.2
RANF	**Ranua**	**1.98**	**345**	PG	Pn	11 59 26.7	+0.9
	baz=166						
RANF				SG	Sb	11 59 53.3	+0.2
KU6	**Riekki**	**2.08**	**22**	PG	Pn	11 59 27.9	+0.7
KU6				MSG		11 59 52.9	
	comp=Z,0.4nm,0.2s						
KU6				SB	Sn	11 59 54.7	+0.9
OLKF	**Oulanka, Finla**	**2.30**	**14**	PG	Pn	11 59 31.7	+1.6
OLKF				MSG		11 59 58.9	
	comp=Z,0.4nm,0.2s						
OLKF				SG	Sb	12 00 02.2	0.0
TOF	**Tornio**	**2.52**	**323**	PN	Pn	11 59 32.2	-0.9
TOF				MSG		12 00 05.4	
	comp=Z,0.5nm,0.2s						
VAF	**Ylistaro**	**2.62**	**248**	MSG		12 00 08.2	
	comp=Z,0.6nm,0.2s						
VAF				SG	Sb	12 00 12.2	+0.9

*IDC **28** 11:59:59.9±0.8, 5.97S×142.64E, h0km, mb4.2/13, mbtmp4.2/15, ML2.0/1, Error ellipse: s-maj=28.6km s-min=18.1km az=76.0*
*NEIC **28** 12:00:03.4±2.0, 6.06S±0.05×142.26E±0.08, h10km±1km, mb4.4/28, Error ellipse: s-maj=13.4km s-min=7.7km az=91.0*
*DJA **28** 12:00:05.3±0.4, 6.3°S±3.4°×144.2E±°, h10km, M4.7/12, mB5.6/3, mb4.4/12, MLv4.7/4, Mw(mB)5.1/3*

ISC 28 12:00:05.0±0.4, 6.05S±0.05×142.44E±0.06, h28km, n81, σ2s12/79, mb4.4/26, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.43**	**302**	P	**Pb**	**12 00 30.4**	**-0.7**
MMPI	**Merauke**	**3.15**	**220**	P	**Pb**	**12 00 58.7**	**-1.7**
MMPI				S	**Sb**	**12 01 43.2**	**+4.8**
GENI	**Genyem**	**4.11**	**326**	P	**Pn**	**12 01 08.0**	**+2.0**
GENI	**Genyem**	**4.11**	**326**	P	**Pn**	**12 01 04.9**	**-1.1**
SMPI	**Sarmi**	**5.48**	**317**	P	**Pn**	**12 01 21.4**	**-3.4**
	90nm,1.0s,0.4nm						
PMG	**Port Moresby**	**5.75**	**126**	Pn	**Pn**	**12 01 29.4**	**+0.9**
PMG	**Port Moresby**	**5.75**	**126**	Pn	**Pn**	**12 01 26.4**	**-2.1**
	2.6nm,0.3s,baz=136,slow=22,SNR=6.8						
PMG				Sn	**Sn**	**12 02 29.7**	**-3.9**
	2.7nm,0.3s,baz=274,slow=20,SNR=6.8						
	6.3nm,0.4s						
MANU	**Manus Island**	**6.32**	**51**	Pn	**Pn**	**12 01 38.5**	**+2.1**
COEN	**Coen**	**7.90**	**175**		**Pn**	**12 01 58.4**	**+0.3**
RABL	**Rabaul**	**9.86**	**80**	Pn	**Pn**	**12 02 27.4**	**+2.4**
FAKI	**Fak Fak**	**10.62**	**287**	Pn	**Pn**	**12 02 32.0**	**-3.4**
FAKI	**Fak Fak**	**10.62**	**287**	P	**Pn**	**12 02 32.9**	**-2.5**
	24nm,1.0s,463nm						
SAUI	**Saumlaki**	**11.22**	**259**	Pn	**Pn**	**12 02 40.4**	**-3.2**
SAUI	**Saumlaki**	**11.22**	**259**	P	Pn	12 02 49.0	+5.4
SAUI	**Saumlaki**	**11.22**	**259**	P	**Pn**	**12 02 45.6**	**+2.0**
	191nm,1.0s						
KDU	**Kakadu**	**11.84**	**235**	P	**Pn**	**12 02 56.4**	**+4.3**
BNDI	**Bandanaira**	**12.57**	**276**	P	**Pn**	**12 02 59.2**	**-2.9**
	45nm,1.4s,24μm						
MTN	**Manton Dam**	**13.03**	**238**	Pn	**Pn**	**12 03 05.9**	**-2.6**
CTA	**Charters Tower**	**14.44**	**165**	Lg	Lg	12 07 38.0	
	0.2nm,0.3s,baz=320,slow=3.5,SNR=2.1						
CTAO	**Charters Tower**	**14.44**	**165**	Pn	**Pn**	**12 03 28.1**	**+0.4**
WB0	**Warramunga Arr**	**15.72**	**209**		**Pn**	**12 03 42.5**	**-2.2**
WB0				IAmb	IAmb	12 03 54.8	
	comp=Z,9.9nm,0.8s						
WR0	**Warramunga Arr**	**15.82**	**208**		**Pn**	**12 03 43.2**	**-2.7**
WR0				IAmb	IAmb	12 03 55.3	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**15.89**	**209**	Pn	**Pn**	**12 03 44.3**	**-2.5**
WRAB				IAmb	IAmb	12 03 54.7	
	comp=Z,14nm,1.1s						
WB2	**Warramunga Arr**	**15.89**	**209**	Pn	**Pn**	**12 03 44.4**	**-2.5**
WRA	**Warramunga Arr**	**15.90**	**209**		**Pn**	**12 03 44.3**	**-2.6**
WRA	**Warramunga Arr**	**15.90**	**209**	Pn	**Pn**	**12 03 41.2**	**-5.8**
	comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=24						
WRA				Sn	Sn	12 06 30.1	-12
	comp=Z,0.5nm,0.3s,baz=74,slow=21,SNR=1.3						
WRA				Lg	Lg	12 08 23.9	
	comp=Z,0.2nm,0.3s,baz=34,slow=29,SNR=5.3						
KNRA	**Kununurra**	**16.48**	**233**	Pn	**Pn**	**12 03 52.3**	**-2.0**
KNRA				IAmb	IAmb	12 04 03.2	
	comp=Z,48nm,0.9s						
KNRA	**Kununurra**	**16.48**	**233**	P	**P**	**12 03 59.2**	**+2.4**
SOEI	**Soe**	**18.37**	**257**	P	**P**	**12 04 16.1**	**-1.8**
SOEI	**Soe**	**18.37**	**257**	P	**Pn**	**12 04 22.1**	**+4.1**
SOEI	**Soe**	**18.37**	**257**	P	**Pn**	**12 04 18.9**	**+0.9**
	comp=Z,66nm,0.9s						
AS01	**Alice Springs**	**19.33**	**204**	P	**Pn**	**12 04 31.5**	**+2.0**
	comp=Z,20nm,1.1s						
AS31	**Alice Springs**	**19.35**	**204**	P	**P**	**12 04 27.9**	**-0.6**
ASAR	**Alice Springs**	**19.35**	**204**	P	**P**	**12 04 28.4**	**-0.1**
ASAR	**Alice Springs**	**19.35**	**204**	P	**Pn**	**12 04 29.4**	**-0.3**
	comp=Z,26nm,1.2s,baz=33,slow=10.0,SNR=55						
ASAR				S	S	12 07 52.8	-13
	comp=Z,0.8nm,0.9s,baz=16,slow=28,SNR=2.3						
ASAR				Lg	Lg	12 10 17.9	
	comp=Z,0.1nm,0.3s,baz=18,slow=28,SNR=4.4						
FITZ	**Fitzroy Crossi**	**20.30**	**232**		**P**	**12 04 37.4**	**-1.5**
FITZ	**Fitzroy Crossi**	**20.30**	**232**	P	Pn	12 04 42.2	+1.2
QLP	**Quilpie**	**20.50**	**175**	P	Pn	12 04 43.5	+0.3
GTOI	**Gorontalo**	**20.50**	**288**	P	Pn	12 04 41.7	-1.6
	comp=Z,9.8nm,0.8s						
EDFI	**Ende, Flores**	**20.75**	**261**	P	**P**	**12 04 42.2**	**-1.7**
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**20.92**	**158**	P	**P**	**12 04 46.9**	**+1.3**
OOD	**Oodnadatta**	**22.56**	**196**	P	**P**	**12 05 06.8**	**+3.7**
KAPI	**Kappang**	**22.60**	**271**	P	**P**	**12 05 01.6**	**-2.1**
KAPI				IAmb	IAmb	12 05 09.9	
	comp=Z,27nm,1.1s						
BBOO	**Buckleboo**	**27.29**	**192**	P	**P**	**12 05 46.8**	**-0.4**
CAN	**Canberra**	**29.75**	**169**	P	**P**	**12 06 09.5**	**+0.3**
MJAR	**Matsushiro Arr**	**42.55**	**355**	P	**P**	**12 07 56.2**	**-2.1**
	comp=Z,2.5nm,0.9s,baz=169,slow=9.9,SNR=4.3						
	comp=Z,2.5nm,0.9s						
KSRS	**Korea Array**	**45.34**	**344**	P	**P**	**12 08 19.7**	**-1.0**
	comp=Z,2.1nm,0.8s,baz=152,slow=8.8,SNR=4.2						
	comp=Z,2.1nm,0.8s						
CRAI	**Chiangrai**	**48.90**	**303**	P	**P**	**12 08 48.9**	**0.0**
CMAR	**Chiang Mai Arr**	**49.32**	**301**	P	**P**	**12 08 50.7**	**-1.4**
CMAR	**Chiang Mai Arr**	**49.32**	**301**	P	**P**	**12 08 51.7**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=117,slow=6.4,SNR=5.5						
	comp=Z,0.7nm,0.5s						
CHTO	**Chiang Mai**	**49.47**	**301**	P	**P**	**12 08 52.0**	**-1.2**
CHTO				IAmb	IAmb	12 08 59.8	
	comp=Z,1.5nm,0.7s						
MCQ	**Macquarie Isla**	**50.12**	**168**	P	**P**	**12 08 57.5**	**-0.1**
USA0B	**Ussuriysk Arra**	**50.89**	**350**	P	**P**	**12 09 03.1**	**-0.4**
USA0B				IAmb	IAmb	12 09 07.8	
	comp=Z,7.6nm,1.1s						
USRK	**Ussuriysk Ar.**	**50.89**	**350**	P	**P**	**12 09 03.0**	**-0.5**
USRK	**Ussuriysk Ar.**	**50.89**	**350**	P	**P**	**12 09 02.4**	**-1.2**
	comp=Z,3.5nm,0.9s,baz=171,slow=11,SNR=4.2						
	comp=Z,3.5nm,0.9s						
PZH	**PanZhiHua**	**51.01**	**311**	P	**P**	**12 09 05.8**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC	**Hu-ho-hao-te**	**54.59**	**331**	eP	**P**	**12 09 33.0**	**+1.9**
HHC				sP	pP	12 09 40.0	+0.1
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,4.1s						
GTA	**Gaotai**	**59.95**	**323**	eP	**P**	**12 10 10.3**	**+1.3**
GTA				pP	pP	12 10 14.3	-3.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PETK	**Petropavlovsk-**	**60.33**	**11**	P	**P**	**12 10 10.2**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=144,slow=6.7,SNR=6.2						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**62.32**	**333**	P	**P**	**12 10 26.1**	**+1.1**
SONM				IAmb	IAmb	12 10 27.4	
	comp=Z,2.1nm,1.1s						
SONM	**Songino Array**	**62.32**	**333**	P	**P**	**12 10 24.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=155,slow=5.1,SNR=6.4						
	comp=Z,0.9nm,0.8s						
WMQ	**Urumqi**	**69.92**	**321**	eP	**P**	**12 11 15.5**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VNDA	**Vanda**	**72.17**	**176**	P	**P**	**12 11 28.4**	**+1.6**
VNDA				IAmb	IAmb	12 11 36.8	
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**74.69**	**322**	P	**P**	**12 11 42.5**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=110,slow=7.1,SNR=29						
	comp=Z,3.9nm,0.9s						
MAKZ	**Makanchi**	**74.89**	**322**	P	**P**	**12 11 44.1**	**+0.8**
MAKZ				IAmb	IAmb	12 11 44.8	
	comp=Z,4.6nm,0.9s						
KSH	**Kashi**	**76.06**	**313**	P	**P**	**12 11 52.8**	**+2.5**
KSH				PcP	**sP**	**12 12 08.5**	**+5.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**76.68**	**329**	P	**P**	**12 11 52.6**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=130,slow=6.6,SNR=5.5						
	comp=Z,0.7nm,0.5s						
BOOM	**Boomskoye usch**	**77.12**	**316**	P	**P**	**12 11 57.0**	**+0.7**
BOOM				IAmb	IAmb	12 12 00.6	
	comp=Z,2.5nm,0.9s						
KURK	**Kurchatov**	**78.57**	**324**	P	**P**	**12 12 04.4**	**+0.5**
KURK				IAmb	IAmb	12 12 05.1	
	comp=Z,5.6nm,1.1s						
KURBB	**Kurchatov Arra**	**78.58**	**324**	P	**P**	**12 12 03.4**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=115,slow=4.4,SNR=10						
	comp=Z,1.8nm,0.9s						
ARSB	**Arslanbob**	**78.81**	**314**	P	**P**	**12 12 06.4**	**+0.7**
SIMJ	**Simiganj**	**80.97**	**311**	P	**P**	**12 12 17.1**	**-0.3**
SIMJ				IAmb	IAmb	12 12 18.8	
	comp=Z,4.3nm,0.9s						
KK31	**Karatay Array**	**81.10**	**315**	P	**P**	**12 12 18.1**	**+0.3**
KKAR	**Karatay Array**	**81.10**	**315**	P	**P**	**12 12 18.0**	**+0.1**
QSPA	**South Pole Qui**	**83.92**	**180**	P	**P**	**12 12 32.2**	**-0.1**
QSPA				IAmb	IAmb	12 12 36.6	
	comp=Z,3.1nm,0.9s						
QSPA	**South Pole Qui**	**83.92**	**180**	P	**P**	**12 12 31.8**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=19,slow=0.5,SNR=6.9						
	comp=Z,2.8nm,0.9s						
NRIK	**Noril'sk**	**83.96**	**343**	P	**P**	**12 12 32.5**	**+0.4**
NRIK	**Noril'sk**	**83.96**	**343**	P	**P**	**12 12 31.7**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=135,slow=4.4,SNR=7.6						
	comp=Z,4.1nm,0.7s						
BVAR	**Borovoye Array**	**84.16**	**325**	P	**P**	**12 12 33.4**	**-0.2**
	comp=Z,7.5nm,0.8s,baz=104,slow=6.3,SNR=29						
	comp=Z,7.5nm,0.8s						
BRVK	**Borovoye**	**84.23**	**325**	P	**P**	**12 12 34.4**	**+0.5**
ILAR	**Eielson Array**	**87.33**	**24**	P	**P**	**12 12 46.9**	**-2.2**
	comp=Z,1.5nm,0.8s,baz=261,slow=4.6,SNR=21						
	comp=Z,1.5nm,0.8s						

WEL 28 12:01:38.7±0.7, 34°S±6°×17°8W±1°2, h33km, M4.2/18, mB4.7/10, ML4.7/31, MLv4.4/18, Mw(mB)4.0/10, Error ellipse: s-maj=0.0km s-min=0.0km az=112.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.40**	**4**	P	Pn	12 02 41.3	-1.9
GLKZ				S	Sn	12 03 29.4	-3.9
MXZ	**Matakaoa Point**	**4.77**	**215**	P	Pn	12 02 49.5	+1.2
MXZ				S	Sn	12 03 42.2	-0.2
WMGZ	**Waiomatatini S**	**4.93**	**212**	P	Pn	12 02 52.2	+1.8
WMGZ				S	Sn	12 03 47.3	+0.9
PKGZ	**Pakihiroa**	**5.14**	**214**	P	Pn	12 02 52.6	-0.8
PKGZ				S	Sn	12 03 51.5	-0.1
HAZ	**Te Kaha**	**5.18**	**217**	P	Pn	12 02 54.2	+0.3
HAZ				S	Sn	12 03 52.3	-0.1
PUZ	**Puketiti**	**5.21**	**212**	P	Pn	12 02 56.1	+1.8
PUZ				S	Sn	12 03 53.9	+0.6
RUGZ	**Raukumara Rang**	**5.39**	**216**	P	Pn	12 02 56.7	-0.3
RUGZ				S	Sn	12 03 57.9	0.0
TWGZ	**Tauwhareparae**	**5.42**	**213**	P	Pn	12 02 59.1	+1.9
TWGZ				S	Sn	12 03 58.9	+0.5
CNGZ	**Carnagh Statio**	**5.58**	**210**	P	Pn	12 03 00.8	+1.5
MWZ	**Matawai**	**5.76**	**215**	P	Pn	12 03 00.5	-1.3
MWZ				S	Sn	12 04 05.7	-1.0
URZ	**Urewera**	**5.91**	**218**	P	Pn	12 03 04.2	+0.4
URZ				S	Sn	12 04 09.0	-1.3
RAGZ	**Rawiri**	**5.94**	**215**	P	Pn	12 03 05.2	+0.9
RIGZ	**Rimuhau**	**5.95**	**211**	P	Pn	12 03 05.2	+0.7
RIGZ				S	Sn	12 04 11.2	-0.3
PRGZ	**Paritu Road**	**6.09**	**209**	P	Pn	12 03 07.9	+1.6
PRGZ				S	Sn	12 04 14.4	-0.4
SNGZ	**Shannon Statio**	**6.21**	**213**	P	Pn	12 03 08.7	+0.7
SNGZ				S	Sn	12 04 17.2	-0.6
RTZ	**Ruatahuna**	**6.25**	**216**	P	Pn	12 03 08.6	0.0
KNZ	**Kokohu**	**6.26**	**210**	P	Pn	12 03 09.8	+1.2
MHGZ	**Mahia Peninsul**	**6.27**	**208**	P	Pn	12 03 11.1	+2.2
RAHZ	**Arahi**	**6.43**	**214**	P	Pn	12 03 12.2	+1.2
WCZ	**Waipu Caves**	**6.47**	**247**	P	Pn	12 03 17.0	+5.5
TOZ	**Tahuroa Road**	**6.48**	**229**	P	Pn	12 03 13.8	+2.2
MTHZ	**Maungataniwha**	**6.50**	**216**	P	Pn	12 03 12.1	+0.1
MTHZ				S	Sn	12 04 24.3	-0.7
ALRZ	**Allen Road**	**6.54**	**220**	P	Pn	12 03 13.3	+0.9
ALRZ				S	Sn	12 04 22.9	-2.9
NMHZ	**Naumai**	**6.71**	**215**	P	Pn	12 03 15.4	+0.5
NMHZ				S	Sn	12 04 29.8	-0.3
ARHZ	**Aropaoanui**	**6.75**	**213**	P	Pn	12 03 16.1	+0.7
OUZ	**Omahuta**	**6.88**	**255**	P	Pn	12 03 21.9	+4.7
BKZ	**Black Stump Fm**	**6.91**	**216**	P	Pn	12 03 17.4	-0.3
MCHZ	**McNeill Hill**	**7.03**	**214**	P	Pn	12 03 20.1	+0.8
KWHZ	**Kaweka Forest**	**7.15**	**215**	P	Pn	12 03 20.8	-0.1
KAHZ	**Kahuranaki**	**7.24**	**211**	P	Pn	12 03 21.4	-0.8
TMVZ	**Te Maari**	**7.28**	**220**	P	Pn	12 03 22.1	-0.6
NTVZ	**North Tongarir**	**7.28**	**220**	P	Pn	12 03 22.2	-0.6
ETVZ	**East Tongariro**	**7.29**	**220**	P	Pn	12 03 22.3	-0.6
OTVZ	**Oturere**	**7.33**	**220**	P	Pn	12 03 25.0	+1.4
BHHZ	**Black Hill Sta**	**7.37**	**216**	P	Pn	12 03 23.7	-0.3
WNVZ	**Wahianoa**	**7.49**	**219**	P	Pn	12 03 26.3	+0.6
TSZ	**Takapari Road**	**7.87**	**214**	P	Pn	12 03 29.1	-1.6
BFZ	**Birch Farm**	**8.24**	**210**	P	Pn	12 03 34.3	-1.6
MRZ	**Mangatainoka R**	**8.52**	**213**	P	Pn	12 03 37.4	-2.3

IDC 28 12:15:04.7±2.1, 6.11S×143.01E, h0km, mb3.7/3, mbtmp3.6/4, ML3.4/1, MS3.1/1, Error ellipse: s-maj=85.8km s-min=40.0km az=107.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.13**	**211**	Pn	Pn	12 18 49.9	-3.1
	0.1nm,0.3s,baz=28,slow=1.8						
ASAR	**Alice Springs**	**19.54**	**206**	P	P	12 19 33.9	-0.1
	0.1nm,0.3s,baz=33,slow=10,SNR=2.8						
	0.7nm,0.7s						
ASAJ	**Asahikawa**	**49.99**	**360**	LR	LR	12 50 27.4	
	comp=Z,17nm,18.1s,baz=76,slow=42						
MKAR	**Makanchi Array**	**75.09**	**322**	P	P	12 26 48.7	+0.1
	0.3nm,0.8s,baz=97,slow=4.2,SNR=2.8						
	0.3nm,0.8s						
BVAR	**Borovoye Array**	**84.54**	**325**	P	P	12 27 39.8	+0.1
	0.8nm,0.6s,baz=90,slow=5.9,SNR=3.8						
	0.8nm,0.6s						
ILAR	**Eielson Array**	**87.16**	**24**	P	P	12 27 52.4	-0.1
	0.3nm,0.7s,baz=258,slow=5.0,SNR=4.7						
	0.3nm,0.7s						

*IDC **28** 12:16:17.4±3.2, 18.80S×169.36E, h214km±26km, mb3.6/6, mbtmp4.1/7, Error ellipse: s-maj=32.5km s-min=29.7km az=113.0*
*NEIC **28** 12:16:18.5±1.1, 18.77S±0.09×169.27E±0.06, h212km±9km, mb4.1/14, Error ellipse: s-maj=14.3km s-min=6.1km az=209.0*
*NOU **28** 12:16:18.4, 18.80S×169.43E, h192km, ML4.1/11, Vanuatu Islands*

ISC 28 12:16:16.8±0.8, 18.73S±0.08×169.3E±0.1, h200km, n50, σ1s12/50, mb4.0/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**2.83**	**224**		**Pn**	**12 17 05.3**	**+0.9**
LIFNC				Sn	**Sn**	**12 17 40.8**	**-0.9**
LIFNC	**LIFOU**	**2.83**	**224**	P	**Pn**	**12 17 05.3**	**+0.9**
MARNC	**Mare, Loyalty**	**2.99**	**204**		**Pn**	**12 17 07.5**	**+1.2**
MARNC	**Mare, Loyalty**	**2.99**	**204**	P	**Pn**	**12 17 07.4**	**+1.1**
YATNC	**Mamie plateau,**	**4.02**	**214**	P	**Pn**	**12 17 19.1**	**+0.3**
PINNC	**Pines Island,**	**4.24**	**204**		**Pn**	**12 17 22.7**	**+1.1**
PINNC	**Pines Island,**	**4.24**	**204**	P	**Pn**	**12 17 23.0**	**+1.4**
DZM	**Mont Dzumac**	**4.28**	**219**		**Pn**	**12 17 23.7**	**+1.5**
DZM	**Mont Dzumac**	**4.28**	**219**	P	**Pn**	**12 17 23.9**	**+1.7**
DZM	**Mont Dzumac**	**4.28**	**219**	P	**Pn**	**12 17 23.9**	**+1.7**
	18nm,0.4s,baz=49,slow=18,SNR=11						
DZM				S	**Sn**	**12 18 14.3**	**+0.7**
	24nm,0.5s,baz=350,slow=21,SNR=3.7						
OUENC	**Ouen Island, N**	**4.34**	**212**		**Pn**	**12 17 24.3**	**+1.5**
OUENC	**Ouen Island, N**	**4.34**	**212**	P	**Pn**	**12 17 24.8**	**+1.9**
ONTNC	**Ouen Toro**	**4.46**	**217**		**Pn**	**12 17 26.0**	**+1.7**
ONTNC	**Ouen Toro**	**4.46**	**217**	P	**Pn**	**12 17 26.2**	**+1.9**
KOUNC	**Koumac, New Ca**	**5.08**	**248**		**Pn**	**12 17 34.1**	**+1.9**
KOUNC	**Koumac, New Ca**	**5.08**	**248**	P	**Pn**	**12 17 34.8**	**+2.6**
HNR	**Honiara**	**12.96**	**314**	Pn	**Pn**	**12 19 13.8**	**-0.2**
EIDS	**Eidsvold**	**18.14**	**245**	P	**P**	**12 20 13.6**	**-0.7**
EIDS				IAmb	IAmb

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**4.23**	**329**	P	Pn	12 18 23.1	+2.9
PMG	**Port Moresby**	**5.70**	**124**	Pn	**Pn**	**12 18 40.8**	**+0.4**
PMG	**Port Moresby**	**5.70**	**124**	Pn	**Pn**	**12 18 39.6**	**-0.7**
	2.9nm,0.3s,baz=297,slow=1.6,SNR=6.7						
PMG				Sn	**Sn**	**12 19 41.5**	**-4.4**
	3.4nm,0.3s,baz=230,slow=19,SNR=7.3 15nm,0.6s						
MANU	**Manus Island**	**6.49**	**50**		**Pn**	**12 18 51.3**	**+0.1**
MANU	**Manus Island**	**6.49**	**50**	P	**Pn**	**12 18 55.7**	**+4.5**
COEN	**Coen**	**7.72**	**174**	Pn	**Pn**	**12 19 09.3**	**+1.0**
RABL	**Rabaul**	**9.96**	**79**	Pn	**Pn**	**12 19 39.3**	**+0.4**
FAKI	**Fak Fak**	**10.61**	**288**		**Pn**	**12 19 44.2**	**-3.7**
SAUI	**Saumlaki**	**11.13**	**260**	Pn	**Pn**	**12 19 53.1**	**-1.8**
SAUI	**Saumlaki**	**11.13**	**260**	P	**Pn**	**12 19 58.3**	**+3.4**
KDU	**Kakadu**	**11.68**	**236**	P	**Pn**	**12 20 05.6**	**+3.1**
MTN	**Manton Dam**	**12.88**	**239**		**Pn**	**12 20 18.2**	**-0.8**
MTN	**Manton Dam**	**12.88**	**239**	P	**Pn**	**12 20 22.8**	**+3.8**
CTA	**Charters Tower**	**14.28**	**165**	Lg	Lg	12 24 50.0	
	0.1nm,0.3s,baz=79,slow=17,SNR=2.3						
WB0	**Warramunga Arr**	**15.54**	**209**	Pn	**Pn**	**12 20 55.2**	**+0.3**
WB0				IAmb	IAmb	12 21 08.8	
	comp=Z,12nm,0.7s						
WR0	**Warramunga Arr**	**15.63**	**208**		**Pn**	**12 20 57.1**	**+0.9**
WR0				IAmb	IAmb	12 21 09.2	
	comp=Z,15nm,0.8s						
WRAB	**Tennant Creek**	**15.70**	**209**		**Pn**	**12 20 56.0**	**-1.0**
WB2	**Warramunga Arr**	**15.71**	**209**	Pn	**Pn**	**12 20 57.8**	**+0.6**
WB2				IAmb	IAmb	12 21 07.2	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**15.71**	**209**	Pn	**Pn**	**12 20 57.7**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=30,slow=14,SNR=9.7						
WRA				Sn	**Sn**	**12 23 47.1**	**-4.4**
	comp=Z,0.4nm,0.3s,baz=41,slow=24,SNR=3.9						
WRA				Lg	Lg	12 25 38.7	
	comp=Z,0.2nm,0.3s,baz=27,slow=26,SNR=5.2						
KNRA	**Kununurra**	**16.32**	**234**	Pn	**Pn**	**12 21 03.9**	**-1.2**
KNRA				IAmb	IAmb	12 21 16.1	
	comp=Z,21nm,0.8s						
SOEI	**Soe**	**18.27**	**258**	P	**Pn**	**12 21 26.6**	**-3.0**
SOEI	**Soe**	**18.27**	**258**	P	**P**	**12 21 33.1**	**+3.3**
AS01	**Alice Springs**	**19.14**	**204**	P	**Pn**	**12 21 44.0**	**+4.0**
AS31	**Alice Springs**	**19.16**	**204**	P	**P**	**12 21 38.7**	**-0.7**
ASAR	**Alice Springs**	**19.16**	**204**	P	**P**	**12 21 39.7**	**+0.3**
ASAR	**Alice Springs**	**19.16**	**204**	P	**Pn**	**12 21 43.5**	**+3.3**
	comp=Z,12nm,0.9s,baz=32,slow=11,SNR=41						
ASAR				S	**Sn**	**12 25 13.0**	**-2.1**
	comp=Z,2.1nm,0.7s,baz=19,slow=28,SNR=5.8						
ASAR				Lg	Lg	12 27 34.0	
	comp=Z,0.1nm,0.3s,baz=27,slow=31,SNR=3.1						
FITZ	**Fitzroy Crossi**	**20.14**	**233**	P	**P**	**12 21 49.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**20.14**	**233**	P	Pn	12 21 54.3	+2.3
QLP	**Quilpie**	**20.32**	**175**	P	Pn	12 21 57.1	+3.1
KAPI	**Kappang**	**22.55**	**272**	P	**P**	**12 22 13.8**	**-2.3**
KAPI				IAmb	IAmb	12 22 24.2	
	comp=Z,22nm,1.1s						
WRKA	**Warakurna**	**23.06**	**214**	P	**P**	**12 22 24.7**	**+3.2**
AULRC	**Lightning Ridg**	**23.68**	**168**	P	**P**	**12 22 31.9**	**+4.4**
STKA	**Stephens Creek**	**25.53**	**182**	P	**P**	**12 22 45.1**	**+0.6**
STKA	**Stephens Creek**	**25.53**	**182**	P	**P**	**12 22 47.1**	**+2.6**
	comp=Z,2.8nm,0.9s,baz=343,slow=12,SNR=3.0						
	comp=Z,2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.35**	**301**	P	**P**	**12 26 07.9**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=127,slow=5.8,SNR=2.5						
	comp=Z,0.6nm,0.5s						
PZH	**PanZhiHua**	**51.08**	**311**	P	**P**	**12 26 21.0**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,5.2s						
HHC	**Hu-ho-hao-te**	**54.72**	**332**	*e*P	**P**	**12 26 47.5**	**+2.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
SONM	**Songino Array**	**62.46**	**333**	P	**P**	**12 27 39.2**	**0.0**
	comp=Z,0.6nm,0.8s,baz=166,slow=7.4,SNR=4.4						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**72.00**	**176**	P	**P**	**12 28 39.2**	**+0.1**
MK31	**Makanchi Array**	**74.79**	**322**	P	**P**	**12 28 54.7**	**-1.4**
MK31				IAmb	IAmb	12 28 57.8	
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	**74.79**	**322**	P	**P**	**12 28 54.7**	**-1.4**
MKAR	**Makanchi Array**	**74.79**	**322**	P	**P**	**12 28 56.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=114,slow=6.3,SNR=22						
	comp=Z,2.3nm,0.8s						
MAKZ	**Makanchi**	**74.99**	**322**	P	**P**	**12 28 55.1**	**-2.2**
MAKZ				IAmb	IAmb	12 28 58.8	
	comp=Z,2.9nm,0.8s						
ZALV	**Zalesovo Beam**	**76.80**	**329**	P	**P**	**12 29 06.4**	**-1.1**
ZALV	**Zalesovo Beam**	**76.80**	**329**	P	**P**	**12 29 06.8**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=124,slow=4.8,SNR=4.8						
	comp=Z,0.9nm,0.6s						
BOOM	**Boomskoye usch**	**77.20**	**316**	P	**P**	**12 29 08.7**	**-1.6**
BOOM				IAmb	IAmb	12 29 14.8	
	comp=Z,1.8nm,0.7s						
KURK	**Kurchatov**	**78.68**	**324**	P	**P**	**12 29 16.6**	**-1.4**
KURK				IAmb	IAmb	12 29 21.5	
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**78.69**	**324**	P	**P**	**12 29 17.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=113,slow=4.8,SNR=10						
	comp=Z,1.0nm,0.8s						
O16K	**Kokwok River B**	**80.58**	**26**	P	**P**	**12 29 27.1**	**-1.0**
QSPA	**South Pole Qui**	**83.74**	**180**	P	**P**	**12 29 46.3**	**+1.5**
QSPA	**South Pole Qui**	**83.74**	**180**	P	**P**	**12 29 46.0**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=277,slow=0.5,SNR=14						
	comp=Z,2.1nm,0.8s						
NRIK	**Noril'sk**	**84.11**	**343**	P	**P**	**12 29 45.9**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=76,slow=4.9,SNR=4.4						
	comp=Z,2.6nm,0.7s						
BVAR	**Borovoye Array**	**84.27**	**325**	P	**P**	**12 29 47.7**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=112,slow=6.6,SNR=23						
	comp=Z,5.4nm,0.8s						
ILAR	**Eielson Array**	**87.53**	**24**	P	**P**	**12 30 00.9**	**-2.5**
	comp=Z,2.0nm,0.7s,baz=257,slow=4.6,SNR=21						
	comp=Z,2.0nm,0.7s						

*IDC **28** 12:25:52.7±0.8,6.1S×143.07E,h0km,mb4.1/9, mbtmp4.1/11,ML1.7/1,MS3.6/3,Error ellipse: s-maj=32.6km s-min=17.6km az=74.0*
ISC 28 12:25:54.4±0.7,6.20S±0.09×142.94E±0.09,h10km,n24,
σ1°74/21,mb4.1/9,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.94**	**298**	P	**Pb**	**12 26 28.9**	**-1.0**
PMG	**Port Moresby**	**5.25**	**128**	Pn	**Pn**	**12 27 12.9**	**-0.1**
	1.7nm,0.3s,baz=278,slow=6.0,SNR=3.0						
PMG				Sn	**Sn**	**12 28 12.5**	**-1.2**
	1.5nm,0.3s,baz=228,slow=20,SNR=3.3 5.9nm,0.3s						
COEN	**Coen**	**7.71**	**178**	P	Pb	12 28 00.0	-8.3
CTA	**Charters Tower**	**14.17**	**167**	Lg	Lg	12 33 21.9	
	0.2nm,0.3s,baz=251,slow=20,SNR=2.0						
QIS	**Mount Isa**	**14.63**	**192**	P	**P**	**12 29 30.3**	**+2.3**
WRA	**Warramunga Arr**	**16.01**	**211**	Pn	**Pn**	**12 29 35.1**	**-4.8**
	0.2nm,0.3s,baz=30,slow=12,SNR=6.1						
WRA				Lg	Lg	12 34 22.9	
	baz=29,slow=27						
KNRA	**Kununurra**	**16.79**	**235**	P	**Pn**	**12 29 48.1**	**-1.7**
AS01	**Alice Springs**	**19.40**	**206**	P	**Pn**	**12 30 23.0**	**+1.1**
ASAR	**Alice Springs**	**19.42**	**206**	P	**Pn**	**12 30 22.7**	**+0.6**
	60nm,1.1s,baz=38,slow=9.9,SNR=31						
ASAR				Lg	Lg	12 36 14.1	
	baz=27,slow=31						
ASAR				LR	LR	12 38 30.8	
	comp=Z,226nm,21.2s,baz=24,slow=39						
FITZ	**Fitzroy Crossi**	**20.61**	**233**	P	**P**	**12 30 33.4**	**-0.5**
OOD	**Oodnadatta**	**22.55**	**197**	P	**P**	**12 30 56.2**	**+1.4**
WRKA	**Warakurna**	**23.40**	**215**	P	**P**	**12 31 04.3**	**+0.6**
LCRK	**Leigh Creek**	**24.52**	**190**	P	**P**	**12 31 16.6**	**+2.4**
STKA	**Stephens Creek**	**25.57**	**183**	P	**P**	**12 31 25.4**	**+1.7**
	3.0nm,0.8s,baz=346,slow=14,SNR=3.7 3.0nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.76**	**219**	LR	LR	12 48 23.0	
	comp=Z,125nm,19.7s,baz=86,slow=38						
URZ	**Urewera**	**44.46**	**141**	LR	LR	12 54 35.7	
	comp=Z,32nm,18.9s,baz=300,slow=39						
CMAR	**Chiang Mai Arr**	**49.83**	**300**	P	**P**	**12 34 49.1**	**+1.1**
	0.7nm,0.3s,baz=108,slow=5.8,SNR=1.8 0.7nm,0.3s						
SONM	**Songino Array**	**62.69**	**333**	P	**P**	**12 36 21.2**	**+1.6**
	0.2nm,0.5s,baz=154,slow=5.0,SNR=2.5 0.2nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**75.12**	**322**	P	**P**	**12 37 37.1**	**+0.3**
	1.3nm,0.9s,baz=109,slow=6.6,SNR=9.7 1.3nm,0.9s						
KURBB	**Kurchatov Arra**	**79.00**	**324**	P	**P**	**12 37 57.4**	**-1.1**
	0.8nm,0.9s,baz=114,slow=5.0,SNR=7.8 0.8nm,0.9s						
QSPA	**South Pole Qui**	**83.77**	**180**	P	**P**	**12 38 22.8**	**-0.9**
	1.2nm,0.6s,baz=296,slow=1.0,SNR=13 1.2nm,0.6s						
NRIK	**Noril'sk**	**84.25**	**343**	P	**P**	**12 38 24.8**	**-1.2**
	1.5nm,0.5s,baz=117,slow=5.9,SNR=4.2 1.5nm,0.5s						
BVAR	**Borovoye Array**	**84.57**	**325**	P	**P**	**12 38 27.7**	**-0.2**
	4.9nm,0.8s,baz=104,slow=6.3,SNR=18 4.9nm,0.8s						
ILAR	**Eielson Array**	**87.28**	**24**	P	**P**	**12 38 41.1**	**+0.1**
	1.2nm,0.9s,baz=263,slow=4.5,SNR=10 1.2nm,0.9s						

*IDC **28** 12:28:48.4±0.8,5.92S×142.78E,h0km,mb4.1/9, mbtmp4.2/11,ML2.1/1,Error ellipse: s-maj=32.0km s-min=19.2km az=69.0*
*NEIC **28** 12:28:50.9±1.6,5.97S±0.07×142.53E±0.08,h10km±1km, mb4.2/15,Error ellipse: s-maj=17.0km s-min=6.2km az=53.0*
ISC 28 12:28:52.5±0.6,6.15S±0.06×142.50E±0.07,h28km,n34,
σ2°18/36,mb4.2/11,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.64**	**125**	Pn	**Pn**	**12 30 15.4**	**+0.8**
PMG	**Port Moresby**	**5.64**	**125**	Pn	**Pn**	**12 30 14.3**	**-0.2**
	3.7nm,0.3s,baz=333,slow=6.8,SNR=1.8						
PMG				Sn	**Sn**	**12 31 17.8**	**-0.7**
	10nm,0.3s,baz=185,slow=21,SNR=12 16nm,0.5s						
MANU	**Manus Island**	**6.34**	**50**	Pn	**Pn**	**12 30 21.8**	**-2.4**
FAKI	**Fak Fak**	**10.71**	**287**	Pn	**Pn**	**12 31 23.2**	**-1.0**
SAUI	**Saumlaki**	**11.26**	**260**	Pn	**Pn**	**12 31 33.0**	**+1.2**
MTN	**Manton Dam**	**13.03**	**238**	Pn	**Pn**	**12 31 58.1**	**+2.1**
CTA	**Charters Tower**	**14.33**	**166**	Lg	Lg	12 36 27.9	
	0.1nm,0.3s,baz=252,slow=19,SNR=2.2						
WB0	**Warramunga Arr**	**15.67**	**209**	Pn	**Pn**	**12 32 34.5**	**+3.0**
WB0				IAmb	IAmb	12 32 58.8	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**15.76**	**209**		**Pn**	**12 32 32.8**	**+0.1**
WR0				IAmb	IAmb	12 32 53.3	
	comp=Z,21nm,1.0s						
WRAB	**Tennant Creek**	**15.83**	**209**		**Pn**	**12 32 35.1**	**+1.5**
WRAB				IAmb	IAmb	12 33 04.1	
	comp=Z,24nm,1.1s						
WB2	**Warramunga Arr**	**15.84**	**209**	Pn	**Pn**	**12 32 34.7**	**+1.0**
WB2				IAmb	IAmb	12 32 47.0	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**15.84**	**209**	Pn	**Pn**	**12 32 32.4**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=12						
WRA				Sn	**Sn**	**12 35 22.6**	**-6.1**
	comp=Z,0.8nm,0.3s,baz=144,slow=15,SNR=2.2						
WRA				Lg	Lg	12 37 15.7	
	comp=Z,0.2nm,0.3s,baz=131,slow=28,SNR=1.0						
KNRA	**Kununurra**	**16.47**	**234**		**Pn**	**12 32 41.6**	**-0.2**
KNRA				IAmb	IAmb	12 32 51.8	
	comp=Z,28nm,0.7s						
AS31	**Alice Springs**	**19.28**	**205**		**Pn**	**12 33 17.7**	**+1.3**
AS31				IAmb	IAmb	12 33 21.4	
	comp=Z,7.1nm,0.6s						
ASAR	**Alice Springs**	**19.28**	**205**		**Pn**	**12 33 17.7**	**+1.3**
ASAR	**Alice Springs**	**19.28**	**205**	P	**Pn**	**12 33 19.2**	**+2.7**
	comp=Z,23nm,0.7s,baz=30,slow=10,SNR=37						
ASAR				S	**S**	**12 36 44.4**	**-7.8**
	comp=Z,7.7nm,1.0s,baz=12,slow=32,SNR=4.3						
ASAR				Lg	Lg	12 39 11.8	
	comp=Z,0.1nm,0.3s,baz=22,slow=31,SNR=2.9						
FITZ	**Fitzroy Crossi**	**20.29**	**233**	P	**P**	**12 33 27.9**	**+1.6**
EIDS	**Eidsvold**	**20.81**	**158**	P	**P**	**12 33 33.5**	**+1.7**
EIDS				IAmb	IAmb	12 33 39.7	
	comp=Z,7.7nm,0.8s						
FORT	**Forrest**	**28.01**	**207**	P	**P**	**12 34 43.0**	**+1.8**
CMAR	**Chiang Mai Arr**	**49.42**	**301**	P	**P**	**12 37 41.5**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=121,slow=5.8,SNR=10						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**62.44**	**333**	P	**P**	**12 39 12.4**	**-0.9**
SONM	**Songino Array**	**62.44**	**333**	P	**P**	**12 39 14.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=144,slow=5.2,SNR=2.9						
	comp=Z,0.2nm,0.5s						
MK31	**Makanchi Array**	**74.80**	**322**	P	**P**	**12 40 30.0**	**-0.4**
MKAR	**Makanchi Array**	**74.80**	**322**	P	**P**	**12 40 30.9**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=116,slow=7.0,SNR=12						
	comp=Z,1.6nm,0.8s						
MAKZ	**Makanchi**	**75.00**	**322**	P	**P**	**12 40 32.6**	**+1.1**
MAKZ				IAmb	IAmb	12 40 33.5	
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**76.79**	**329**	P	**P**	**12 40 41.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=111,slow=8.2,SNR=2.0						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**78.70**	**324**	P	**P**	**12 40 51.8**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=114,slow=4.8,SNR=6.8						
	comp=Z,1.0nm,0.8s						
QSPA	**South Pole Qui**	**83.82**	**180**	P	**P**	**12 41 21.2**	**+1.9**
QSPA	**South Pole Qui**	**83.82**	**180**	P	**P**	**12 41 20.2**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=310,slow=1.0,SNR=21						
	comp=Z,3.5nm,0.7s						
NRIK	**Noril'sk**	**84.07**	**343**	P	**P**	**12 41 19.8**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=64,slow=2.8,SNR=3.0						
	comp=Z,1.2nm,0.4s						
BVAR	**Borovoye Array**	**84.28**	**325**	P	**P**	**12 41 22.4**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=114,slow=6.9,SNR=18						
	comp=Z,4.6nm,0.8s						
BRVK	**Borovoye**	**84.34**	**325**	P	**P**	**12 41 22.3**	**+0.2**
BRVK				IAmb	IAmb	12 41 24.1	
	comp=Z,5.3nm,0.9s						
ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**12 41 35.4**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=263,slow=4.7,SNR=13						
	comp=Z,1.2nm,0.7s						
DBIC	**Dimbokro**	**147.56**	**273**	PKPbc	**PKPbc**	**12 48 35.0**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=108,slow=3.5,SNR=3.9						

*IDC **28** 12:29:56.9±1.3,16.5N×98.11W,h0km,mb3.7/7, mbtmp3.6/11,ML3.7/4,MS3.6/16,Error ellipse: s-maj=25.7km s-min=16.8km az=30.0*
*NEIC **28** 12:29:58.6±1.8,16.28N±0.05×97.97W±0.03,h10km±1km, mb4.4/123,Md4.8/109(MEX),Error ellipse: s-maj=8.1km s-min=5.0km az=194.0*
*MEX **28** 12:30:02.7±1.3,16.40N×97.94W,h7km±8km,MD4.8*
ISC 28 12:30:00.5±0.7,16.32N±0.03×97.99W±0.02,h29km±5km,
n220,σ1°85/226,mb4.3/46,MS3.6/13,1C-1D,Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**300**		**Pb**	**12 30 06.0**	**-0.2**
PNIG					**Sb**	**12 30 09.3**	**-0.7**
PNIG	**Pinotepa**	**0.15**	**300**	*eP*	**Pb**	**12 30 06.0**	**-0.2**
	baz=89,slow=10						
PNIG				*i* S	**Sb**	**12 30 09.3**	**-0.7**
YOIG	**Yosondua**	**0.69**	**38**		**Pb**	**12 30 13.7**	**-0.5**
YOIG					**Sb**	**12 30 21.9**	**-1.5**
YOIG	**Yosondua**	**0.69**	**38**	*iP*	**Pb**	**12 30 13.7**	**-0.5**
	baz=224,slow=16						
YOIG				*e*S	**Sb**	**12 30 21.9**	**-1.5**
PEIG	**Puerto Escondi**	**0.87**	**111**		**Pn**	**12 30 16.7**	**-0.1**
PEIG					**Sb**	**12 30 28.5**	**+0.2**
PEIG	**Puerto Escondi**	**0.87**	**111**	*eP*	**Pn**	**12 30 16.7**	**-0.1**
PEIG				*e*S	**Sb**	**12 30 28.5**	**+0.2**
TXIG	**Tlaxiaco**	**0.95**	**13**		**Pb**	**12 30 17.9**	**-0.7**
TXIG					**Sb**	**12 30 29.8**	**-1.3**
TXIG	**Tlaxiaco**	**0.95**	**13**	*eP*	**Pb**	**12 30 17.9**	**-0.7**
TXIG				*e*S	**Sb**	**12 30 29.8**	**-1.3**
MGIG	**Malinaltepec**	**1.10**	**326**		**Pn**	**12 30 20.3**	**+0.2**
MGIG					**Sb**	**12 30 34.7**	**-0.3**
MGIG	**Malinaltepec**	**1.10**	**326**	*eP*	**Pn**	**12 30 20.3**	**+0.2**
MGIG				*i* S	**Sb**	**12 30 34.7**	**-0.3**
CRIG	**Cruz Grande**	**1.17**	**291**		**Pn**	**12 30 20.7**	**-0.2**
CRIG	**Cruz Grande**	**1.17**	**291**	*eP*	**Pn**	**12 30 20.7**	**-0.2**
TLIG	**Tlapa**	**1.36**	**336**		**Pb**	**12 30 24.7**	**-0.6**
TLIG				Sg	**Sb**	**12 30 41.9**	**-0.4**
VHO	**Vista Hermosa**	**1.42**	**58**	*eP*	**Pb**	**12 30 25.2**	**-1.2**
VHO				*e*S	**Sb**	**12 30 42.6**	**-1.6**
OXIG	**Oaxaca**	**1.42**	**58**		**Pb**	**12 30 25.2**	**-1.2**
OXIG					**Sb**	**12 30 42.6**	**-1.6**
HLIG	**Huajuapan de L**	**1.52**	**7**		**Pb**	**12 30 26.9**	**-1.2**
HLIG					**Sb**	**12 30 46.0**	**-1.0**
HLIG	**Huajuapan de L**	**1.52**	**7**	*eP*	**Pb**	**12 30 26.9**	**-1.2**
HLIG				*e*S	**Sb**	**12 30 46.0**	**-1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMTT	**Tlapaneco**	**1.57**	**340**		**Pn**	**12 30 27.4**	**+0.9**
HMTT					**Sn**	**12 30 45.3**	**-0.7**
HMTT	**Tlapaneco**	**1.57**	**340**	*eP*	**Pn**	**12 30 27.4**	**+0.9**
HMTT				*e*S	**Sn**	**12 30 45.3**	**-0.7**
FTIG	**Fresnillo de T**	**1.59**	**355**		**Pb**	**12 30 27.9**	**-1.3**
FTIG					**Sb**	**12 30 47.5**	**-1.5**
FTIG	**Fresnillo de T**	**1.59**	**355**	*i* P	**Pb**	**12 30 27.9**	**-1.3**
FTIG				*e*S	**Sb**	**12 30 47.5**	**-1.5**
DAIG	**Los Arroyos**	**1.74**	**294**		**Pn**	**12 30 28.8**	**0.0**
DAIG					**Sn**	**12 30 48.9**	**-1.0**
DAIG	**Los Arroyos**	**1.74**	**294**	*eP*	**Pn**	**12 30 28.8**	**0.0**
DAIG				*e*S	**Sn**	**12 30 48.9**	**-1.0**
VNTA	**La Mica**	**1.85**	**289**	*eP*	**Pn**	**12 30 30.5**	**+0.3**
HUIG	**Huatulco**	**1.89**	**107**		**Pn**	**12 30 31.4**	**+0.6**
HUIG					**Sn**	**12 30 52.5**	**-1.2**
HUIG	**Huatulco**	**1.89**	**107**	*eP*	**Pn**	**12 30 31.4**	**+0.6**
HUIG				*i* S	**Sn**	**12 30 52.5**	**-1.2**
ACP2	**Acapulco**	**1.90**	**287**		**Pn**	**12 30 30.5**	**-0.4**
ACP2					**Sn**	**12 30 53.2**	**-0.8**
ACP2	**Acapulco**	**1.90**	**287**	*eP*	**Pn**	**12 30 30.5**	**-0.4**
ACP2				*i* S	**Sn**	**12 30 53.2**	**-0.8**
TOIG	**Toxpalan**	**1.98**	**26**		**Pn**	**12 30 33.0**	**+0.8**
TOIG					**Sn**	**12 30 56.9**	**+0.9**
TOIG	**Toxpalan**	**1.98**	**26**	*eP*	**Pn**	**12 30 33.0**	**+0.8**
TOIG				*e*S	**Sn**	**12 30 56.9**	**+0.9**
TPIG	**Tehuac#an**	**2.18**	**16**		**Pn**	**12 30 36.2**	**+1.3**
TPIG					**Sb**	**12 31 04.4**	**-1.5**
TPIG	**Tehuac#an**	**2.18**	**16**	*eP*	**Pn**	**12 30 36.2**	**+1.3**
TPIG				*e*S	**Sb**	**12 31 04.4**	**-1.5**
MEIG	**Mezcala**	**2.23**	**316**		**Pb**	**12 30 37.9**	**-2.3**
MEIG					**Sn**	**12 31 03.7**	**+1.5**
MEIG	**Mezcala**	**2.23**	**316**	*eP*	**Pb**	**12 30 37.9**	**-2.3**
MEIG				*e*S	**Sn**	**12 31 03.7**	**+1.5**
CAIG	**El Cayaco**	**2.30**	**289**		**Pn**	**12 30 36.9**	**+0.5**
CAIG					**Sb**	**12 31 09.2**	**-0.1**
CAIG	**El Cayaco**	**2.30**	**289**	*eP*	**Pn**	**12 30 36.9**	**+0.5**
CAIG				*e*S	**Sb**	**12 31 09.2**	**-0.1**
ATYC	**Atoyac**	**2.50**	**291**	*i* P	**Pb**	**12 30 42.6**	**-2.2**
NEUV	**Arroyo Zacate**	**2.51**	**56**	*eP*	**Pn**	**12 30 40.5**	**+1.1**
NEUV				*i* S	**Sb**	**12 31 12.3**	**-3.1**
PLIG	**Platanillo**	**2.52**	**325**		**Pn**	**12 30 41.7**	**+2.2**
PLIG					**Sb**	**12 31 12.2**	**-3.5**
PLIG	**Platanillo**	**2.52**	**325**	*eP*	**Pn**	**12 30 41.7**	**+2.2**
PLIG				*e*S	**Sb**	**12 31 12.2**	**-3.5**
YAIG	**Yautepec**	**2.73**	**338**		**Pb**	**12 30 45.8**	**-2.9**
YAIG					**Pb**	**12 31 17.8**	**-4.1**
YAIG	**Yautepec**	**2.73**	**338**	*eP*	**Pb**	**12 30 45.8**	**-2.9**
YAIG				*e*S	**Sb**	**12 31 17.8**	**-4.1**
PPM	**Popocatepetl**	**2.80**	**348**	*eP*	**Pn**	**12 30 46.3**	**+2.5**
PPM				*e*S	**Sb**	**12 31 20.2**	**-4.1**
PPIG	**Popocatepetl**	**2.80**	**348**		**Pn**	**12 30 46.3**	**+2.5**
PPIG					**Sb**	**12 31 20.2**	**-4.1**
AMVM	**AMECAMECA**	**2.90**	**345**		**Pb**	**12 30 48.8**	**-2.9**
AMVM					**Sn**	**12 31 20.1**	**+1.1**
AMVM	**AMECAMECA**	**2.90**	**345**	*eP*	**Pb**	**12 30 48.8**	**-2.9**
AMVM				*e*S	**Sn**	**12 31 20.1**	**+1.1**
MPVM	**San Francisco**	**3.03**	**341**	*eP*	**Pn**	**12 30 48.9**	**+2.2**
MPVM				*e*S	**Sn**	**12 31 24.0**	**+1.9**
CMIG	**Matias Romero**	**3.08**	**75**		**Pn**	**12 30 47.3**	**+0.2**
CMIG					**Sn**	**12 31 23.5**	**+0.6**
CMIG	**Matias Romero**	**3.08**	**75**	Pn	**Pn**	**12 30 47.5**	**+0.4**
	17nm,0.3s,baz=251,slow=13,SNR=66						
CMIG				Sn	**Sn**	**12 31 23.7**	**+0.8**
	57nm

0.1nm,0.7s
TX31 Lajitas Ar. Si 13.97 339 Pn Pn 12 33 15.2 -1.4
JTS Las Juntas de 14.03 114 Pn Pn 12 33 14.7 -2.7
JTS Las Juntas de 14.03 114 Pn Pn 12 33 19.7 +2.3
1.0nm,0.3s,baz=321,slow=17,SNR=2.4
2.4nm,0.6s
SAND Sanderson 14.09 345 Pn Pn 12 33 18.7 +0.5
ARE1 Arenal 1 14.16 113 Pn 12 33 19.1 -0.1
JCT Junction City 14.20 354 Pn Pn 12 33 19.6 -0.1
OZNA Ozona 14.82 349 Pn Pn 12 33 27.8 -0.3
ALPN Alpine 14.92 341 Pn 12 33 30.5 +1.0
BRDY Brady 14.93 357 Pn Pn 12 33 29.6 +0.1
LCR2 La Lucha 2 15.11 114 Pn 12 33 31.5 -0.7
LCR2 IAmb IAmb 12 33 46.8
comp=Z,14nm,0.9s
RIMA Rio Macho 15.22 114 Pn 12 33 33.5 -0.1
RIMA IAmb IAmb 12 33 52.9
comp=Z,15nm,0.9s
MNHN Monahans 15.58 345 Pn 12 33 39.0 +0.9
WHTX Lake Whitney, 15.61 2 Pn 12 33 37.3 -1.2
WHTX IAmb IAmb 12 33 45.4
comp=Z,24nm,0.9s
237A Washetta, Mont 15.74 7 Pn 12 33 40.5 +0.4
237A IAmb IAmb 12 33 52.8
comp=Z,35nm,1.0s
FW13 Cleburne 15.97 2 Pn Pn 12 33 42.8 -0.3
FW14 Alvarado 16.03 2 Pn Pn 12 33 43.8 0.0
FW14 IAmb IAmb 12 34 06.0
comp=Z,22nm,0.5s
FW16 Waxahatchie 16.12 3 Pn Pn 12 33 44.5 -0.5
FW16 IAmb IAmb 12 33 59.4
comp=Z,26nm,0.7s
ODSA Odessa 16.27 346 P 12 33 48.9 -0.9
ABTX Abilene, Hawle 16.30 355 Pn P 12 33 48.8 -1.3
ABTX IAmb IAmb 12 33 53.7
comp=Z,29nm,0.8s
FW03 Perrin-Whitt E 16.65 360 IAmb IAmb 12 33 56.6
comp=Z,20nm,0.9s
SN07 Snyder 07 16.91 352 P P 12 33 56.1 -0.7
POST Post 16.98 350 Pn 12 33 56.3 +0.4
POST IAmb IAmb 12 34 01.4
comp=Z,29nm,0.8s
MSTX Muleshoe 18.10 347 P P 12 34 10.7 +0.7
X37A Clayton 18.35 7 IAmb IAmb 12 34 25.4
comp=Z,20nm,1.1s
WMOK Wichita Mounta 18.36 358 Pn 12 34 12.7 -0.2
MIAR Mount Ida 18.58 12 P P 12 34 15.2 -0.1
AMTX Amarillo 18.78 351 P P 12 34 17.3 -0.3
W35A Tecumseh 18.79 3 IAmb IAmb 12 34 30.7
comp=Z,15nm,0.8s
SMWD Samnorwood 18.82 354 P P 12 34 18.1 +0.2
DUN6 Lazy B Ranch 19.04 330 IAmb IAmb 12 34 25.4
comp=Z,16nm,0.9s
DEOK Depew 19.49 4 IAmb IAmb 12 34 36.5
comp=Z,16nm,0.9s
TUL3 Leonard 19.61 5 IAmb IAmb 12 34 32.3
comp=Z,19nm,1.1s
OK052 Battle Ridge R 19.63 3 P 12 34 26.1 -0.6
OK052 IAmb IAmb 12 34 42.2
comp=Z,19nm,0.8s
OK033 Mehan 19.67 3 P 12 34 26.8 -0.4
OK033 IAmb IAmb 12 34 40.8
comp=Z,20nm,0.8s
U32A Winter Ranch, 20.00 358 IAmb IAmb 12 34 34.5
comp=Z,17nm,0.7s
OK048 Pawnee Station 20.04 2 IAmb IAmb 12 34 44.2
comp=Z,13nm,0.7s
ANMO Albuquerque 20.04 339 P Pn 12 34 33.1 -0.2
ANMO Albuquerque 20.04 339 P P 12 34 30.7 -0.7
comp=Z,0.2nm,0.3s,baz=240,slow=14,SNR=5.5
ANMO LR LR 12 42 00.9
comp=Z,112nm,21.8s,baz=250,slow=36
comp=Z,0.7nm,0.5s
CROK Carrier 20.11 0 IAmb IAmb 12 34 38.8
comp=Z,17nm,0.9s
BLOK Blackwell 20.38 2 P 12 34 34.4 -0.5
BLOK IAmb IAmb 12 34 44.5
comp=Z,18nm,0.9s
OK032 Salt Plains WL 20.41 359 IAmb IAmb 12 34 52.1
comp=Z,19nm,1.1s
RTBA Rita Blanca 20.48 349 P Pn 12 34 37.9 -0.5
T35A Sooner Cattle 20.56 3 IAmb IAmb 12 34 49.5
comp=Z,18nm,0.8s
X48A Hartselle 20.56 27 IAmb IAmb 12 34 48.2
comp=Z,9.1nm,0.7s
LCAR Lake Charles 20.59 16 P P 12 34 37.0 -0.2
FPAL Fort Paine 21.28 29 IAmb IAmb 12 34 54.0
comp=Z,16nm,1.1s
MGMO Mountain Grove 21.36 13 P P 12 34 45.9 +0.3
MGMO IAmb IAmb 12 34 51.0
comp=Z,18nm,0.9s
PBMO Poplar Bluff 21.46 17 IAmb IAmb 12 34 50.9
comp=Z,19nm,0.7s
GOGA Godfrey 21.48 35 P P 12 34 46.9 +0.1
T25A Trinidad 21.50 346 IAmb IAmb 12 34 54.3
comp=Z,24nm,0.9s
T42A Van Buren 21.52 15 IAmb IAmb 12 34 53.8
comp=Z,10nm,0.9s
S39A Bolivar 21.69 10 IAmb IAmb 12 35 02.9
comp=Z,12nm,0.8s
X16A Lo Mia Camp, P 21.70 329 IAmb IAmb 12 35 03.3
comp=Z,9.8nm,0.9s
WVT Waverly 21.71 23 P P 12 34 49.3 +0.1
WVT IAmb IAmb 12 34 59.3
comp=Z,13nm,0.8s
V48A Smith Brothers 21.76 25 IAmb IAmb 12 34 51.2
comp=Z,12nm,0.8s
R32A Long Quarter, 22.03 358 IAmb IAmb 12 35 07.0
comp=Z,8.6nm,0.8s
Y14A Wickenburg 22.15 325 P P 12 34 57.2 +3.2
CGM3 Cape Girardeau 22.16 18 IAmb IAmb 12 35 04.3
comp=Z,18nm,1.2s
CLTN Cedars of Leba 22.26 26 IAmb IAmb 12 35 03.0
comp=Z,9.1nm,0.6s
CCM Cathedral Cave 22.46 14 P P 12 34 57.8 +0.6
CCM IAmb IAmb 12 35 12.0
comp=Z,16nm,0.9s
R40A Maddies Statio 22.46 12 IAmb IAmb 12 35 13.8
comp=Z,11nm,0.8s
WUAZ Wupatki 22.55 331 IAmb IAmb 12 35 20.6
comp=Z,9.4nm,0.9s
KSU1 Kansas State U 22.73 3 IAmb IAmb 12 35 11.1
comp=Z,17nm,1.0s
T47A Sharon Grove 22.74 23 IAmb IAmb 12 35 12.0
comp=Z,19nm,1.1s
HODGE Hodges 22.76 35 P P 12 34 59.8 -0.7
HODGE IAmb IAmb 12 35 10.4
comp=Z,16nm,0.9s
MVCO Mesa Verde 22.80 338 IAmb IAmb 12 35 12.3
comp=Z,13nm,1.1s
U49A Red Boiling Sp 22.85 26 IAmb IAmb 12 35 09.2
comp=Z,19nm,0.9s
P40A Paris 23.70 11 IAmb IAmb 12 35 26.2
comp=Z,14nm,0.8s
PV17 East Wray Mesa 23.91 338 P P 12 35 13.9 +1.8
PV17 IAmb IAmb 12 35 35.1
comp=Z,8.3nm,1.0s
KMSC Kings Mountain 23.95 35 IAmb IAmb 12 35 14.8
comp=Z,12nm,0.9s
SMCO Snowmass 24.09 343 IAmb IAmb 12 35 27.7
comp=Z,9.7nm,1.2s
WCI Wyandotte Cave 24.13 23 P P 12 35 14.6 +0.7
HMU Henry Mountain 24.29 335 IAmb IAmb 12 35 20.9
comp=Z,11nm,0.9s
ISCO Idaho Springs 24.32 346 IAmb IAmb 12 35 20.7
comp=Z,7.7nm,0.8s
V55A Taylorsville 24.54 34 IAmb IAmb 12 35 28.6
comp=Z,12nm,0.9s
MTPU Mount Pierson 24.99 333 IAmb IAmb 12 35 40.6
comp=Z,8.3nm,0.9s
SRU San Rafael Swe 25.22 337 IAmb IAmb 12 35 35.0
comp=Z,6.5nm,0.9s
N23A Red Feather La 25.44 346 IAmb IAmb 12 35 35.0
comp=Z,8.2nm,1.0s
P18A Preston Nutter 25.57 338 IAmb IAmb 12 35 40.2
comp=Z,11nm,1.1s
RDMU Red Mountain 26.17 340 IAmb IAmb 12 35 52.3
comp=Z,7.1nm,1.0s
K22A Casper 27.24 346 IAmb IAmb 12 35 52.9
comp=Z,6.9nm,1.1s
ECSD EROS Data Cent 27.35 2 IAmb IAmb 12 35 58.3
comp=Z,7.4nm,1.1s
PDAR Pinedale Array 28.16 342 P P 12 35 49.1 -1.3
comp=Z,0.2nm,0.4s,baz=144,slow=12,SNR=1.5
PDAR LR LR 12 46 19.8
comp=Z,92nm,21.4s,baz=155,slow=35
comp=Z,0.2nm,0.4s
NVAR Mina Array Bea 28.35 325 P P 12 35 50.0 -2.3
comp=Z,0.1nm,0.5s,baz=148,slow=8.6,SNR=1.4
NVAR LR LR 12 48 24.8
comp=Z,93nm,20.0s,baz=108,slow=40
comp=Z,0.1nm,0.5s
ELK Elko 28.56 332 LR LR 12 48 44.3
comp=Z,218nm,19.6s,baz=160,slow=40
F36A Milaca 29.69 6 IAmb IAmb 12 36 06.4
comp=Z,13nm,1.4s
WVOR Wild Horse Val 31.47 330 IAmb IAmb 12 36 37.9
comp=Z,7.2nm,1.2s
J08A Circle Bar Ran 32.10 331 IAmb IAmb 12 36 43.3
comp=Z,4.4nm,1.0s
ULM Lac du Bonnet 33.89 2 P P 12 36 39.4 -1.2
comp=Z,2.3nm,0.8s,baz=201,slow=5.3,SNR=4.8
comp=Z,2.3nm,0.8s
PGC Sidney 38.38 333 P P 12 37 23.1 +4.2
FFC Flin Flon 38.45 356 P P 12 37 21.4 +1.8
FFC IAmb IAmb 12 37 28.8
comp=Z,4.7nm,0.9s
FCC Fort Churchill 42.48 3 P P 12 37 53.7 +0.9
RPN Rapa Nui 44.57 194 LR LR 12 52 19.0
comp=Z,49nm,20.7s,baz=159,slow=30
SCHQ Schefferville 45.32 25 P P 12 38 15.1 -0.6
comp=Z,1.2nm,0.8s,baz=237,slow=17,SNR=2.1
SCHQ LR LR 12 59 04.7
comp=Z,56nm,21.6s,baz=208,slow=39
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 47.58 350 P P 12 38 32.1 -1.2
comp=Z,0.8nm,0.8s,baz=155,slow=7.1,SNR=12
YKA LR LR 12 59 58.9
comp=Z,61nm,18.8s,baz=256,slow=38
comp=Z,0.8nm,0.8s
DLBC Dease Lake 48.27 338 LR LR 13 01 00.3
comp=Z,176nm,19.8s,baz=146,slow=39
TAOE Nuku Hiva Isla 48.64 242 eLR LR 12 52 32.8
comp=Z,70nm,22.9s
H03N2 Juan Fernandez 52.72 160 T T 13 35 47.8
baz=338,slow=77,SNR=256
H03N1 Juan Fernandez 52.73 160 T T 13 35 49.0
baz=338,slow=77,SNR=359
H03N3 Juan Fernandez 52.73 160 T T 13 35 29.0
baz=338,slow=77,SNR=330
G31M Satah River 55.82 344 P P 12 39 35.9 +1.2
G31M IAmb IAmb 12 39 55.0
comp=Z,4.9nm,1.1s
RES Resolute Bay 58.40 1 LR LR 13 07 47.7
comp=Z,52nm,19.2s,baz=312,slow=39
ILAR Eielson Array 58.48 338 P P 12 39 54.1 +0.5
comp=Z,0.6nm,1.0s,baz=144,slow=3.3,SNR=4.8
comp=Z,0.6nm,1.0s
SFJD Kangerlussuaq 59.18 20 LR LR 13 07 08.5
comp=Z,74nm,20.1s,baz=197,slow=38
PPT Papeete 60.96 239 LR LR 13 00 43.1
comp=Z,70nm,21.8s,baz=42,slow=30
PPT2 Papeete2 60.97 239 eLR LR 12 58 16.0
comp=Z,66nm,25.8s
PLCA Paso Flores 62.22 157 P P 12 40 21.9 +2.4
comp=Z,2.9nm,0.9s,baz=356,slow=8.6,SNR=4.9
comp=Z,2.9nm,0.9s
TBI Tubuai 63.91 233 eLR LR 12 59 48.8
comp=Z,290nm,30.0s
BORG Borgarnes 69.68 26 LR LR 13 11 01.0
comp=Z,14nm,21.6s,baz=241,slow=35
SPITS Spitsbergen Ar 78.96 11 LR LR 13 17 56.1
comp=Z,30nm,19.6s,baz=256,slow=36

*IDC **28** 12:35:01.1±0.8,5.°98S×142.°68E,h0km,mb4.2/10, mbtmp4.2/12,ML1.8/1,MS3.3/3,Error ellipse: s-maj=32.3km s-min=19.2km az=72.0*
ISC 28 12:35:02.5±0.7,6.°19S±0.°09×142.°4E±0.°1,h10km,n15, σ1°42/15,mb4.2/10,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.66**	**125**	Pn	**Pn**	**Pn**	**12 36 27.3**	**+0.6**
	1.9nm,0.3s,baz=260,slow=5.4,SNR=3.0							
PMG				Sn		**Sn**	**12 37 31.5**	**-0.3**
	3.3nm,0.3s,baz=63,slow=23,SNR=6.8							
	4.9nm,0.4s							
CTA	**Charters Tower**	**14.30**	**165**	Lg		Lg	12 42 38.4	
	0.2nm,0.3s,baz=261,slow=17,SNR=1.3							
CTA				LR		LR	12 43 19.4	
	comp=Z,65nm,18.0s,baz=359,slow=34							
WRA	**Warramunga Arr**	**15.77**	**209**	Pn		**Pn**	**12 38 45.1**	**+0.2**
	baz=30,slow=13,SNR=1.5							
WRA				Sn		Sn	12 41 30.6	-9.3
	0.2nm,0.3s,baz=32,slow=23,SNR=2.3							
WRA				Lg		Lg	12 43 28.5	
	0.2nm,0.3s,baz=25,slow=34,SNR=1.2							
ASAR	**Alice Springs**	**19.22**	**204**	P		**Pn**	**12 39 29.9**	**+2.1**
	7.0nm,0.8s,baz=34,slow=9.7,SNR=8.8							
ASAR				Sn		**Sn**	**12 43 00.1**	**-3.3**
	0.2nm,0.3s,baz=18,slow=27,SNR=2.0							
ASAR				Lg		Lg	12 45 21.1	
	baz=29,slow=33							
ASAR				LR		LR	12 47 48.4	
	comp=Z,138nm,20.2s,baz=39,slow=39							
CMAR	**Chiang Mai Arr**	**49.40**	**301**	P		**P**	**12 43 54.3**	**+1.5**
	0.9nm,0.3s,baz=116,slow=6.1,SNR=2.0							
	0.9nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.04**	**350**	P		**P**	**12 44 04.1**	**-0.7**
	2.4nm,0.8s,baz=183,slow=11,SNR=4.3							
	2.4nm,0.8s							
SONM	**Songino Array**	**62.46**	**333**	P		**P**	**12 45 26.4**	**+0.3**
	0.6nm,0.7s,baz=149,slow=6.7,SNR=3.3							
	0.6nm,0.7s							
MKAR	**Makanchi Array**	**74.81**	**322**	P		**P**	**12 46 43.4**	**+0.3**
	2.6nm,0.9s,baz=111,slow=6.6,SNR=15							
	2.6nm,0.9s							
ZALV	**Zalesovo Beam**	**76.81**	**329**	P		**P**	**12 46 53.8**	**-0.6**
	0.7nm,0.5s,baz=116,slow=6.6,SNR=2.2							
	0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**78.70**	**324**	P		**P**	**12 47 04.2**	**-0.8**
	1.5nm,0.9s,baz=115,slow=4.8,SNR=7.8							
	1.5nm,0.9s							
QSPA	**South Pole Qui**	**83.78**	**180**	P		**P**	**12 47 33.0**	**+1.2**
	3.4nm,1.0s,baz=234,slow=1.0,SNR=10							
	3.4nm,1.0s							
NRIK	**Noril'sk**	**84.10**	**343**	P		**P**	**12 47 33.0**	**-0.2**
	2.4nm,0.6s,baz=101,slow=5.1,SNR=4.7							
	2.4nm,0.6s							
BVAR	**Borovoye Array**	**84.28**	**325**	P		**P**	**12 47 34.9**	**+0.4**
	5.7nm,0.8s,baz=107,slow=5.1,SNR=16							
	5.7nm,0.8s							
ILAR	**Eielson Array**	**87.47**	**24**	P		**P**	**12 47 48.2**	**-1.8**
	1.1nm,0.8s,baz=250,slow=4.9,SNR=14							
	1.1nm,0.8s							
ARU	**Arti**	**91.73**	**326**	LR		LR	13 32 40.3	
	comp=Z,19nm,18.6s,baz=68,slow=38							

*IDC **28** 12:41:10.1±1.1,33.°66N×88.°40E,h0km,mb3.6/5, mbtmp3.6/9,ML3.5/3,MS3.4/6,Error ellipse: s-maj=41.3km s-min=19.9km az=62.0*
ISC 28 12:41:11.4±1.0,33.°8N±0.°1×88.°5E±0.°2,h10km,n13, σ1°22/8,mb3.8/4,MS3.5/4,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.84**	**342**	Pn		**Pn**	**12 44 25.9**	**-1.6**
	0.1nm,0.3s,baz=144,slow=10.3,SNR=1.8							
	0.1nm,0.4s							
AAK	**Ala-Archa**	**14.11**	**313**	LR		LR	12 51 29.5	
	comp=Z,54nm,20.3s,baz=132,slow=44							
CMAR	**Chiang Mai Arr**	**17.89**	**146**	P		**P**	**12 45 19.7**	**-1.3**
	0.4nm,0.3s,baz=330,slow=11,SNR=2.2							
CMAR				LR		LR	12 52 16.6	
	comp=Z,38nm,18.2s,baz=325,slow=37							
	1.7nm,0.3s							
KURBB	**Kurchatov Arra**	**18.36**	**340**	P		**Pn**	**12 45 25.7**	**-0.2**
	baz=145,slow=12,SNR=11							
	1.7nm,0.9s							
SONM	**Songino Array**	**19.46**	**38**	P		**Pn**	**12 45 40.2**	**+0.7**
	0.7nm,0.8s,baz=223,slow=10.0,SNR=5.8							
ZALV	**Zalesovo Beam**	**20.34**	**354**	P		Pn	12 45 48.8	-0.9
	1.9nm,0.8s,baz=173,slow=13,SNR=8.0							
ZALV				LR		LR	12 54 53.8	
	comp=Z,81nm,18.9s,baz=246,slow=40							
	1.9nm,0.8s							
GEYT	**Alibeck**	**24.91**	**288**	LR		LR	12 58 24.5	
	comp=Z,78nm,18.6s,baz=70,slow=42							
DAV	**Davao City (W)**	**43.35**	**119**	LR		LR	13 09 57.9	
	comp=Z,131nm,19.1s,baz=130,slow=40							
NOA	**NORSAR Array B**	**55.07**	**325**	P		**P**	**12 50 44.4**	**+1.3**
	1.1nm,0.8s,baz=82,slow=7.1,SNR=2.8							
	1.1nm,0.8s							
DAVOX	**Davos/Dischmat**	**59.00**	**308**	LR		LR	13 21 56.8	
	comp=Z,95nm,21.3s,baz=253,slow=42							
WRA	**Warramunga Arr**	**69.01**	**134**	P		**P**	**12 52 16.9**	**-0.3**
	0.5nm,0.6s,baz=327,slow=6.7,SNR=5.9							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**71.62**	**137**	P		**P**	**12 52 34.2**	**+1.0**
	0.4nm,0.7s,baz=327,slow=5.7,SNR=2.0							
	0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**80.19**	**279**	P		**P**	**12 53 22.4**	**0.0**
	0.5nm,0.9s,baz=51,slow=5.6,SNR=2.1							
	0.5nm,0.9s							

*IDC **28** 12:44:32.6±1.9,30.°30N×87.°65E,h0km,mb3.5/7, mbtmp3.5/9,ML3.8/2,Error ellipse: s-maj=40.2km s-min=34.8km az=80.0*
ISC 28 12:44:37.5±1.2,30.°4N±0.°2×87.°7E±0.°2,h35km,n9,σ1°06/9, mb3.4/7,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.62**	**137**	Pn		**Pn**	**12 48 14.7**	**-0.5**
	0.6nm,0.3s,baz=322,slow=11,SNR=5.2							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**16.95**	**347**	Pn		**Pn**	**12 48 30.5**	**-1.3**
	baz=163,slow=12,SNR=2.0							
	0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**21.39**	**344**	P		**P**	**12 49 20.7**	**-1.2**
	0.9nm,1.0s,baz=172,slow=9.2,SNR=4.0							
	0.9nm,1.0s							
SONM	**Songino Array**	**22.57**	**34**	P		**P**	**12 49 35.2**	**+0.4**
	0.3nm,0.6s,baz=229,slow=13,SNR=2.6							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**23.67**	**356**	P		**P**	**12 49 46.9**	**+1.3**
	0.4nm,0.3s,baz=188,slow=7.3,SNR=1.9							
	0.4nm,0.3s							
BVAR	**Borovoye Array**	**25.96**	**336**	P		**P**	**12 50 06.5**	**0.0**
	0.5nm,0.5s,baz=156,slow=11,SNR=2.1							
	0.5nm,0.5s							
FINES	**FINESS Array B**	**50.35**	**327**	P		**P**	**12 53 31.8**	**+1.2**
	1.3nm,0.8s,baz=88,slow=9.0,SNR=1.5							
	1.3nm,0.8s							
NOA	**NORSAR Array B**	**57.50**	**326**	P		**P**	**12 54 23.3**	**+0.3**
	0.7nm,0.8s,baz=86,slow=7.5,SNR=1.5							
	0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**80.11**	**279**	P		**P**	**12 56 44.3**	**-0.1**
	0.6nm,0.8s,baz=38,slow=6.2,SNR=3.5							
	0.6nm,0.8s							

*IDC **28** 12:46:41.6±2.2,2.°63S×127.°79E,h0km,mb3.3/2, mbtmp3.5/3,ML4.0/1,Error ellipse: s-maj=176.3km s-min=27.3km az=67.0*
*DJA **28** 12:46:43.5±0.3,3.°5S±5.°×12.°7E±.°,h10km,M3.9/13,mb4.1/5, mB4.1/1,MLv3.8/13,Mw(mB)3.2/1*
ISC 28 12:46:43.0±0.9,2.°82S±0.°09×126.°70E±0.°08,h10km,n11, σ1°60/11,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.58**	**136**	P		**Pb**	**12 46 56.1**	**+0.9**
SANI	**Sanana**	**1.04**	**317**	P		**Pg**	**12 47 01.5**	**-1.6**
LBMI	**Labuha**	**2.31**	**20**	P		**Pn**	**12 47 21.4**	**+0.2**
BNDI	**Bandanaira**	**3.62**	**118**	P		**Pn**	**12 47 40.0**	**+0.9**
LUWI	**Luwuk**	**4.30**	**294**	P		**Pn**	**12 47 48.6**	**+0.1**
SWI	**Sorong**	**4.96**	**67**	P		**Pn**	**12 47 57.2**	**-0.4**
FAKI	**Fak Fak**	**5.55**	**91**	P		**Pn**	**12 48 04.3**	**-1.4**
	10nm,1.2s,0.1nm							
MPSI	**Mapaga**	**7.49**	**295**	P		**Pn**	**12 48 32.8**	**+0.5**
WRA	**Warramunga Arr**	**18.58**	**157**	P		**P**	**12 50 58.7**	**-1.7**
	0.5nm,0.3s,baz=342,slow=12,SNR=19							
	0.6nm,0.3s							
ASAR	**Alice Springs**	**21.86**	**162**	P		**P**	**12 51 34.5**	**-1.5**
	0.5nm,0.4s,baz=344,slow=12,SNR=10							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**62.95**	**327**	P		**P**	**12 57 12.8**	**+3.0**
	0.3nm,0.7s,baz=114,slow=6.5,SNR=4.3							
	0.3nm,0.7s							

*WEL **28** 12:49:45.0±1.0,39.°5S±3.°×17.°4E±.°,h15km±5km,M3.5/9, ML3.9/9,MLv3.5/9,Error ellipse: s-maj=0.0km s-min=0.0km az=127.5,confirmed*
*NOU **28** 12:49:45.7,39.°04S×174.°11E,h1km,MLv3.7/10,North Island, New Zealand*
ISC 28 12:49:45.1±0.9,39.°04S±0.°03×174.°10E±0.°03,h20km±5km, n140,σ1°23/149,North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NPCS	**New Plymouth C**	**0.03**	**221**	P		**Pg**	**12 49 48.2**	**-0.4**
NPCS				S		**Sg**	**12 49 50.7**	**-0.3**
DREZ	**Durham Road**	**0.17**	**152**	P		**Pg**	**12 49 49.6**	**-0.3**
DREZ				S		**Sg**	**12 49 52.7**	**-0.4**
PKE	**Pukeiti**	**0.18**	**209**	P		**Pg**	**12 49 50.1**	**+0.1**
PKE				S		**Sg**	**12 49 53.5**	**+0.2**
MHEZ	**Mangahewa**	**0.18**	**102**	P		**Pb**	**12 49 50.4**	**+0.7**
MHEZ				S		**Sb**	**12 49 53.8**	**+1.1**
NEZ	**North Egmont**	**0.23**	**181**	P		**Pg**	**12 49 50.6**	**-0.2**
NEZ				S		**Sg**	**12 49 54.3**	**-0.5**
KHEZ	**Kahui Hut**	**0.26**	**194**	P		**Pg**	**12 49 50.9**	**-0.4**
KHEZ	**Kahui Hut**	**0.26**	**194**	P		**Pg**	**12 49 51.0**	**-0.3**
KHEZ				S		**Sg**	**12 49 55.2**	**-0.3**
NBEZ	**Newall Road No**	**0.29**	**218**	P		**Pg**	**12 49 52.0**	**+0.3**
PREZ	**Palmer Road**	**0.31**	**171**	P		**Pg**	**12 49 52.0**	**0.0**
PREZ				S		**Sg**	**12 49 57.0**	**+0.3**
NMEZ	**Namu Road**	**0.41**	**205**	P		**Pg**	**12 49 53.8**	**0.0**
NMEZ				S		**Sg**	**12 50 00.3**	**+0.7**
OPSS	**Opunake Primar**	**0.45**	**205**	P		**Pg**	**12 49 53.2**	**-1.2**
OPSS				S		**Sg**	**12 50 00.4**	**-0.4**
LREZ	**Lake Rotokare**	**0.48**	**151**	P		**Pg**	**12 49 55.0**	**0.0**
VRZ	**Vera Road**	**0.52**	**100**	P		**Pb**	**12 49 55.7**	**+0.1**
HIZ	**Hauiti**	**0.79**	**49**	P		**Pb**	**12 50 01.0**	**+0.8**
HIZ	**Hauiti**	**0.79**	**49**	P		**Pb**	**12 50 01.1**	**+0.8**
WAZ	**Wanganui**	**0.99**	**136**	P		**Pb**	**12 50 03.6**	**0.0**
PKVZ	**Pokaka**	**1.00**	**105**	P		**Pb**	**12 50 03.7**	**-0.1**
TWVZ	**Taurewa**	**1.04**	**92**	P		**Pb**	**12 50 04.5**	**-0.1**
MTVZ	**Mangateitei**	**1.12**	**108**	P		**Pb**	**12 50 05.6**	**-0.3**
COVZ	**Chateau Observ**	**1.13**	**99**	P		**Pb**	**12 50 06.2**	**+0.1**
FWVZ	**Far West T-bar**	**1.15**	**101**	P		**Pb**	**12 50 06.2**	**-0.3**
TRVZ	**Turoa**	**1.16**	**103**	P		**Pb**	**12 50 06.4**	**-0.2**
MAVZ	**Matarangi**	**1.16**	**102**	P		**Pb**	**12 50 06.8**	**+0.1**
WTVZ	**West Tongariro**	**1.16**	**94**	P		**Pb**	**12 50 06.6**	**-0.1**
NGZ	**Ngauruhoe**	**1.18**	**97**	P		**Pb**	**12 50 06.8**	**-0.1**
WHVZ	**Whangaehu Hut**	**1.18**	**102**	P		**Pg**	**12 50 07.9**	**-0.2**
NNVZ	**North Ngauruho**	**1.18**	**95**	P		**Pb**	**12 50 07.0**	**-0.1**
WNVZ	**Wahianoa**	**1.20**	**104**	P		**Pb**	**12 50 07.2**	**-0.1**
KRVZ	**Karewarewa**	**1.20**	**93**	P		**Pg**	**12 50 07.7**	**-0.8**
SNVZ	**South Ngauruho**	**1.21**	**97**	P		**Pg**	**12 50 08.1**	**-0.5**
OTVZ	**Oturere**	**1.23**	**96**	P		**Pb**	**12 50 08.1**	**+0.3**
NTVZ	**North Tongarir**	**1.23**	**93**	P		**Pn**	**12 50 07.7**	**+0.4**
TUVZ	**Tukino**	**1.23**	**101**	P		**Pg**	**12 50 08.3**	**-0.7**
KATZ	**Kakaramea**	**1.25**	**88**	P		**Pg**	**12 50 08.7**	**-0.6**
TMVZ	**Te Maari**	**1.25**	**94**	P		**Pn**	**12 50 08.2**	**+0.5**
ETVZ	**East Tongariro**	**1.26**	**95**	P		**Pb**	**12 50 08.6**	**+0.3**
RATZ	**Rangitukua**	**1.32**	**83**	P		**Pg**	**12 50 09.7**	**-0.9**
WATZ	**Wairara**	**1.32**	**76**	P		**Pg**	**12 50 09.8**	**-0.9**
TLZ	**Tolley Road**	**1.33**	**58**	P		**Pn**	**12 50 09.4**	**+0.7**
MOVZ	**Moawhango**	**1.34**	**106**	P		**Pn**	**12 50 09.5**	**+0.7**
RITZ	**Rihia Road**	**1.37**	**88**	P		**Pg**	**12 50 10.9**	**-0.8**
KUTZ	**Kaahu Road**	**1.46**	**68**	P		**Pb**	**12 50 12.1**	**+0.5**
OHWZ	**Ohakea**	**1.50**	**141**	P		**Pb**	**12 50 12.5**	**+0.2**
WHTZ	**Whakaora**	**1.50**	**76**	P		**Pg**	**12 50 13.2**	**-0.8**
POIZ	**Poihipi**	**1.57**	**75**	P		**Pg**	**12 50 15.0**	**-0.4**
BHHZ	**Black Hill Sta**	**1.59**	**107**	P		**Pn**	**12 50 13.4**	**+1.1**
THQ2	**Tauhara North**	**1.66**	**78**	P		**Pg**	**12 50 16.7**	**-0.4**
WPRZ	**Whakapataratin**	**1.69**	**73**	P		**Pb**	**12 50 15.2**	**-0.4**
TOZ	**Tahuro

NGRZ	Ngongotaha	1.89	61	P	Pn	12 50 17.6	+1.3	
KIW	Kapiti Island	1.92	161	P	Pn	12 50 17.9	+1.1	
HLRZ	Highlands Stat	1.93	67	P	Pg	12 50 21.1	-1.2	
OGWZ	Otaki Gorge	1.96	155	P	Pn	12 50 19.2	+2.0	
KARZ	Kaharoa	1.97	60	P	Pn	12 50 19.0	+1.6	
MRZ	Mangatainoka R	1.98	145	P	Pb	12 50 19.7	-0.8	
OMRZ	Omania	2.01	63	P	Pg	12 50 22.5	-1.3	
AWAZ	Awhitu Peninsu	2.02	12	P	Pn	12 50 20.0	+2.0	
DVHZ	Dannevirke	2.03	129	P	Pb	12 50 21.0	-0.4	
MCHZ	McNeill Hill	2.06	102	P	Pb	12 50 23.0	+1.2	
WPHZ	Waipukurau	2.08	120	P	Pb	12 50 22.5	+0.3	
PRWZ	Pori Road	2.09	137	P	Pb	12 50 22.1	-0.3	
MKAZ	Moumakai	2.11	24	P	Pn	12 50 20.8	+1.5	
NMHZ	Naumai	2.11	92	P	Pb	12 50 22.5	-0.2	
WTAZ	Waiatarua	2.14	10	P	Pn	12 50 21.9	+2.2	
TGRZ	Tauranga	2.15	53	P	Pn	12 50 21.1	+1.3	
MTHZ	Maungataniwha	2.15	86	P	Pg	12 50 24.9	-1.5	
HOWZ	Holdsworth Sta	2.15	150	P	Pb	12 50 22.6	-0.8	
MUGZ	Murupara	2.16	76	P	Pb	12 50 22.6	-1.0	
TCW	Tory Channel	2.17	176	P	Pn	12 50 21.2	+1.0	
TKNZ	Takaka Hill	2.17	203	P	Pn	12 50 21.0	+0.7	
ETAZ	East Tamaki Re	2.18	18	P	Pn	12 50 22.3	+2.0	
CAW	Cannon Point	2.19	161	P	Pn	12 50 22.5	+2.0	
TIWZ	Tintock	2.21	142	P	Pb	12 50 23.9	-0.5	
HBAZ	Herne Bay Bore	2.24	13	P	Pg	12 50 27.0	-1.2	
NNZ	Nelson	2.24	194	P	Pn	12 50 21.5	+0.4	
ARHZ	Aropaoanui	2.26	97	P	Pb	12 50 24.7	-0.6	
KAHZ	Kahuranaki	2.28	110	P	Pb	12 50 25.7	0.0	
RTZ	Ruatahuna	2.29	80	P	Pb	12 50 25.7	-0.2	
RVAZ	Riverhead Bore	2.30	10	P	Pn	12 50 23.5	+1.6	
WEL	Wellington	2.30	167	P	Pn	12 50 23.7	+1.8	
PRHZ	Porangahau	2.31	123	P	Pb	12 50 25.7	-0.4	
SNZO	South Karori	2.31	169	P	Pn	12 50 24.3	+2.2	
ANWZ	Angora Road	2.32	128	P	Pb	12 50 26.5	+0.3	
BFZ	Birch Farm	2.33	135	P	Pb	12 50 25.0	-1.4	
BFZ	Birch Farm	2.33	135	P	Pn	12 50 24.5	+2.2	
RAHZ	Arahi	2.33	88	P	Pb	12 50 27.8	+1.3	
MBAZ	Motutapu North	2.35	16	P	Pn	12 50 24.4	+1.7	
MTW	Mount Morrison	2.37	153	P	Pb	12 50 26.2	-1.0	
WIAZ	Waiheke Island	2.39	20	P	Pn	12 50 25.0	+1.9	
TUWZ	Tuamarina	2.39	183	P	Pn	12 50 24.1	+1.0	
BHW	Baring Head	2.44	166	P	Pn	12 50 26.8	+2.9	
CPWZ	Castlepoint	2.47	140	P	Pb	12 50 28.0	-0.8	
TMWZ	Te Maipa	2.48	147	P	Pb	12 50 28.1	-1.0	
URZ	Urewera	2.48	73	P	Pn	12 50 26.9	+2.5	
URZ	Urewera	2.48	73	P	Pb	12 50 28.7	-0.4	
SNGZ	Shannon Statio	2.54	85	P	Pb	12 50 29.7	-0.4	
PAWZ	Paruwai Farm	2.55	157	P	Pb	12 50 29.3	-1.0	
MRNZ	Matariki Terra	2.57	203	P	Pn	12 50 26.2	+0.5	
RAGZ	Rawiri	2.65	79	P	Pb	12 50 31.8	-0.2	
TRWZ	Traveller	2.65	153	P	Pb	12 50 31.0	-0.9	
BSWZ	Blackbirch Sta	2.68	184	P	Pb	12 50 30.1	+3.0	
CMWZ	Cape Campbell	2.71	178	P	Pb	12 50 32.6	-0.4	
MWZ	Matawai	2.77	76	P	Pn	12 50 31.4	+2.9	
THZ	Tophouse	2.87	198	P	Pn	12 50 30.8	+1.0	
RIGZ	Rimuhau	2.88	84	P	Pb	12 50 34.4	-1.5	
GRZ	Great Barrier	2.99	22	P	Pn	12 50 32.8	+1.4	
RUGZ	Raukumara Rang	3.01	70	P	Pb	12 50 35.9	-2.2	
WCZ	Waipu Caves	3.10	4	P	Pn	12 50 34.7	+1.7	
TWGZ	Tauwhareparae	3.16	75	P	Pb	12 50 39.1	-1.6	
HAZ	Te Kaha	3.17	67	P	Pb	12 50 37.8	-2.9	
DSZ	Denniston Nort	3.22	212	P	Pn	12 50 34.9	+0.3	
KHZ	Kahutara	3.40	187	P	Pn	12 50 39.3	+2.3	
KHZ	Kahutara	3.40	187	P	Pn	12 50 39.0	+2.0	
WMGZ	Waiomatatini S	3.60	72	P	Pb	12 50 44.6	-3.6	
OUZ	Omahuta	3.83	354	P	Pn	12 50 45.5	+2.5	
OUZ	Omahuta	3.84	354	P	Pn	12 50 45.0	+2.0	
LTZ	Lake Taylor	3.99	200	P	Pn	12 50 47.0	+1.8	
INZ	Inchbonnie	4.20	208	P	Pn	12 50 48.9	+1.0	
OXZ	Oxford	4.56	199	P	Pn	12 50 54.2	+1.2	
WVZ	Waitaha Valley	4.76	211	P	Pn	12 50 56.3	+0.5	
WVZ				S	Sn	12 51 48.6	-1.9	
MQZ	McQueen's Vall	4.79	193	P	Pn	12 50 55.7	-0.4	
MHCZ	Mount Hutt	4.88	202	P	Pn	12 50 58.0	+0.7	
MHCZ				S	Sn	12 51 52.2	-1.0	
RPZ	Rata Peaks	5.20	205	P	Pn	12 51 05.4	+3.6	
TMZ	Timaru	5.82	202	P	Pn	12 51 10.3	0.0	
ODZ	Otahua Downs	6.53	202	P	Pn	12 51 22.8	+2.8	

*IDC **28** 12:52:38.4±0.8,5.°97S×142.°78E,h0km,mb4.1/10, mbtmp4.2/12,ML2.0/1,MS3.7/14,Error ellipse: s-maj=31.4km s-min=17.1km az=72.0*

*NEIC **28** 12:52:39.4±1.0,6.°38S±0.°04×142.°52E±0.°06,h10km±1km, mb4.4/28,Error ellipse: s-maj=12.3km s-min=4.6km az=299.0*

*DJA **28** 12:52:45.5±0.7,6°S±3°×14°2E±°,h62km±8km,M5.0/10, mb4.6/10,mB5.3/4,MLv5.3/4,Mw(mB)4.8/4,MwMwp5.3/1, Mwp5.5/1*

ISC 28 12:52:39.2±0.5,6.°37S±0.°05×142.°52E±0.°05,h10km,n86, σ2ş00/74,mb4.3/19,MS3.6/12,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TABU	Tabubil	1.69	310	P	Pn	12 53 08.3	-0.6
MMPI	Merauke	2.97	225	P	Pb	12 53 31.2	-1.0
MMPI				S	Sg	12 54 15.6	+0.9
GENI	Genyem	4.43	328	P	Pn	12 53 49.5	+3.0
GENI	Genyem	4.43	328	P	Pn	12 53 46.6	+0.1
GENI				S	Sn	12 54 37.4	-0.7
PMG	Port Moresby	5.50	124	Pn	Pn	12 54 01.1	0.0
PMG				Sn	Sn	12 55 06.4	+1.8
PMG	Port Moresby	5.50	124	Pn	Pn	12 54 02.9	+1.7
	3.1nm,0.3s,baz=356,slow=4.4,SNR=11						
PMG				Sn	Sn	12 55 05.8	+1.3
	10nm,0.3s,baz=270,slow=21,SNR=7.8						
	17nm,0.5s						
SMPI	Sarmi	5.78	319	P	Pn	12 54 05.8	+0.8
	93nm,1.1s,2µm0.8nm						
SMPI				S	Sn	12 55 08.5	-2.9
	93nm,1.1s,2µm0.8nm						
COEN	Coen	7.57	175	Pn	Pn	12 54 27.4	-2.2
COEN	Coen	7.57	175	P	Pn	12 54 38.9	+9.3
RABL	Rabaul	9.85	78	Pn	Pn	12 55 00.6	-0.4
FAKI	Fak Fak	10.79	288	Pn	Pn	12 55 12.9	-1.1
FAKI	Fak Fak	10.79	288	P	Pn	12 55 14.5	+0.5
FAKI	Fak Fak	10.79	288	P	Pn	12 55 12.5	-1.5
	37nm,1.3s						
SAUI	Saumlaki	11.25	261	P	Pn	12 55 23.4	+3.3
SAUI	Saumlaki	11.25	261	P	Pn	12 55 23.2	+3.1
	280nm,1.2s,9µm						
KDU	Kakadu	11.72	237	P	Pn	12 55 30.5	+3.8
MTN	Manton Dam	12.93	239	Pn	Pn	12 55 42.5	-0.7
MTN	Manton Dam	12.93	239	P	Pn	12 55 48.0	+4.8
CTA	Charters Tower	14.11	165	Lg	Lg	13 00 13.4	
	0.1nm,0.3s,baz=70,slow=22,SNR=1.5						
CTA				LR	LR	13 01 18.1	
	comp=Z,294nm,21.6s,baz=338,slow=36						
WB0	Warramunga Arr	15.48	210	Pn	Pn	12 56 17.7	-0.1
WB0				IAmb	IAmb	12 56 30.3	
	comp=Z,22nm,1.0s						
WR0	Warramunga Arr	15.57	209		Pn	12 56 18.4	-0.6
WRAB	Tennant Creek	15.64	210		Pn	12 56 19.7	-0.2
WRAB				IAmb	IAmb	12 56 47.2	
	comp=Z,21nm,0.9s						
WB2	Warramunga Arr	15.65	210	Pn	Pn	12 56 19.9	-0.2
WB2				IAmb	IAmb	12 56 33.9	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	15.66	210		Pn	12 56 19.4	-0.7
WRA	Warramunga Arr	15.66	210	Pn	Pn	12 56 21.4	+1.4
	comp=Z,0.9nm,0.3s,baz=30,slow=14,SNR=38						
WRA				Lg	Lg	13 01 03.3	
	comp=Z,0.1nm,0.3s,baz=34,slow=28,SNR=5.8						
KNRA	Kununurra	16.35	234	Pn	Pn	12 56 28.1	-1.0
KNRA				IAmb	IAmb	12 56 39.8	
	comp=Z,35nm,0.9s						
KNRA	Kununurra	16.35	234	P	P	12 56 34.2	+2.2
SOEI	Soe	18.38	258	P	Pn	12 56 54.1	-0.5
SOEI	Soe	18.38	258	P	P	12 56 58.3	+3.8
SOEI	Soe	18.38	258	P	P	12 56 59.1	+4.6
	comp=Z,66nm,1.0s,comp=Z,938nm						
AS01	Alice Springs	19.07	205	P	Pn	12 57 07.4	+4.7
AS31	Alice Springs	19.09	205	P	P	12 57 01.7	-0.5
ASAR	Alice Springs	19.09	205	P	P	12 57 01.5	-0.7
ASAR	Alice Springs	19.09	205	P	Pn	12 57 06.8	+3.8
	comp=Z,39nm,1.1s,baz=32,slow=11,SNR=58						
ASAR				Lg	Lg	13 02 59.7	
	baz=25,slow=29						
ASAR				LR	LR	13 05 12.4	
	comp=Z,718nm,19.4s,baz=18,slow=39						
SGSI	Sangihe	19.69	300	P	P	12 57 04.0	-4.8
	comp=Z,264nm,0.9s						
FITZ	Fitzroy Crossi	20.17	233	P	P	12 57 14.1	0.0
MMRI	Maumere	20.23	262	P	P	12 57 14.6	-0.1
MMRI				IAmb	IAmb	12 57 21.4	
	comp=Z,22nm,1.0s						
LUWI	Luwuk	20.40	284	P	P	12 57 16.4	-0.1
LUWI				IAmb	IAmb	12 57 41.4	
	comp=Z,28nm,1.0s						
EIDS	Eidsvold	20.59	157	P	P	12 57 17.4	-1.1
EIDS				IAmb	IAmb	12 57 38.7	
	comp=Z,14nm,1.1s						
EDFI	Ende, Flores	20.78	262	P	P	12 57 19.1	-1.7
INKA	Innaminka	21.32	184	P	P	12 57 34.7	+8.4
OOD	Oodnadatta	22.27	196	P	P	12 57 44.5	+7.9
KAPI	Kappang	22.70	272	P	P	12 57 40.5	-0.8
AULRC	Lightning Ridg	23.51	168	P	P	12 57 58.2	+8.8
KOUNC	Koumac, New Ca	25.38	126	P	P	12 58 06.0	-0.8
STKA	Stephens Creek	25.39	182	P	P	12 58 11.4	+4.5
	comp=Z,3.3nm,1.0s,baz=336,slow=12,SNR=2.2						
STKA				LR	LR	13 08 37.3	
	comp=Z,173nm,19.9s,baz=340,slow=37						
	comp=Z,3.3nm,1.0s						
BBOO	Buckleboo	26.98	192	P	P	12 58 21.0	-0.3
BBOO				IAmb	IAmb	12 58 33.9	
	comp=Z,4.7nm,0.9s						
DZM	Mont Dzumac	27.88	126	eLR	LR	13 05 23.7	
	comp=Z,171nm,22.6s						
LHI	Lord Howe Isla	29.42	150	P	P	12 58 41.8	-1.2
LEM	Lembang	34.67	267	LR	LR	13 16 52.5	
	comp=Z,86nm,21.2s,baz=60,slow=42						
RPZ	Rata Peaks	44.84	151	LR	LR	13 18 20.1	
	comp=Z,100nm,21.4s,baz=298,slow=34						
PHRA	Phrae	48.48	301	P	P	13 01 21.6	-0.8
CMAR	Chiang Mai Arr	49.55	301	P	P	13 01 30.1	-0.6
CMAR	Chiang Mai Arr	49.55	301	P	P	13 01 31.1	+0.3
	comp=Z,0.8nm,0.7s,baz=128,slow=6.8,SNR=8.4						
	comp=Z,0.8nm,0.7s						
CHTO	Chiang Mai	49.71	301	P	P	13 01 31.2	-0.7
PZH	PanZhiHua	51.28	311	P	P	13 01 47.5	+3.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,220nm,4.7s						
BJT	Baijiatuau	52.17	334	P	P	13 01 50.0	0.0
HHC	Hu-ho-hao-te	54.92	332	eP	P	13 02 13.5	+3.1
HHC				sP	sP	13 02 24.3	+9.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,97nm,4.9s						
KLR	Kul'dur	56.16	352	LR	LR	13 22 38.1	
	comp=Z,65nm,21.8s,baz=177,slow=32						
RAR	Rarotonga	57.65	111	LR	LR	13 24 17.0	
	comp=Z,40nm,21.6s,baz=278,slow=33						
PETK	Petropavlovsk-	60.64	10	LR	LR	13 32 40.6	
	comp=Z,29nm,18.1s,baz=71,slow=40						
LSA	Lhasa	60.95	309	P	P	13 02 52.2	-1.3
ULN	Ulaanbaatar	62.38	334	P	P	13 03 01.7	-0.7
ULN				IAmb	IAmb	13 03 07.5	
	comp=Z,3.6nm,0.9s						
SONM	Songino Array	62.65	333	P	P	13 03 04.0	-0.1
SONM	Songino Array	62.65	333	P	P	13 03 02.4	-1.7
	comp=Z,0.2nm,0.4s,baz=156,slow=7.2,SNR=1.6						
SONM				LR	LR	13 29 52.3	
	comp=Z,59nm,20.0s,baz=170,slow=36						
	comp=Z,0.2nm,0.4s						
PALK	Pallekele	63.14	281	LR	LR	13 34 43.0	
	comp=Z,40nm,18.8s,baz=214,slow=40						
PPT2	Papeete2	67.06	106	eLR	LR	13 23 49.0	
	comp=Z,76nm,23.8s						
TBI	Tubuai	67.33	113	eLR	LR	13 23 41.6	
	comp=Z,362nm,27.2s						
YAK	Yakutsk	68.92	354	LR	LR	13 30 17.7	
	comp=Z,50nm,22.0s,baz=307,slow=33						
WMQ	Urumqi	70.22	321	eP	P	13 03 55.0	+2.4
WMQ				PP	PP	13 06 38.5	+10
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VNDA	Vanda	71.84	176	LR	LR	13 33 58.9	
	comp=Z,85nm,19.3s,baz=10,slow=34						
MK31	Makanchi Array	74.99	322	P	P	13 04 20.4	-0.5
MK31				IAmb	IAmb	13 04 26.9	
	comp=Z,3.1nm,1.1s						
MKAR	Makanchi Array	74.99	322	P	P	13 04 20.4	-0.5
MKAR	Makanchi Array	74.99	322	P	P	13 04 21.9	+1.0
	comp=Z,1.8nm,0.8s,baz=107,slow=7.2,SNR=17						
	comp=Z,1.8nm,0.8s						
MAKZ	Makanchi	75.19	322	P	P	13 04 21.9	-0.2
MAKZ				IAmb	IAmb	13 04 27.9	
	comp=Z,5.1nm,1.1s						
ZALV	Zalesovo Beam	77.00	329	P	P	13 04 31.5	-0.6
ZALV	Zalesovo Beam	77.00	329	P	P	13 04 32.4	+0.3
	comp=Z,0.3nm,0.4s,baz=134,slow=8.2,SNR=3.8						
ZALV				LR	LR	13 39 13.2	
	comp=Z,30nm,19.5s,baz=208,slow=36						
	comp=Z,0.3nm,0.4s						
KURK	Kurchatov	78.88	324	P	P	13 04 42.3	-0.4
KURK				IAmb	IAmb	13 05 06.4	
	comp=Z,2.6nm,1.1s						
KURBB	Kurchatov Arra	78.89	324	P	P	13 04 43.8	+1.1
	comp=Z,1.7nm,1.0s,baz=115,slow=4.6,SNR=10						
	comp=Z,1.7nm,1.0s						
L16K	Owhat River	81.14	24	P	P	13 04 55.1	+0.5
L16K				IAmb	IAmb	13 05 05.0	
	comp=Z,2.9nm,1.0s						
QSPA	South Pole Qui	83.60	180	P	P	13 05 07.2	-0.5
QSPA				IAmb	IAmb	13 05 23.0	
	comp=Z,2.9nm,1.0s						
QSPA	South Pole Qui	83.60	180	P	P	13 05 11.0	+3.3
	comp=Z,2.3nm,0.8s,baz=70,slow=0.2,SNR=18						
	comp=Z,2.3nm,0.8s						
NRIK	Noril'sk	84.29	343	P	P	13 05 10.7	-0.2
	comp=Z,2.1nm,0.8s,baz=108,slow=4.9,SNR=2.0						
	comp=Z,2.1nm,0.8s						
BVAR	Borovoye Array	84.47	325	P	P	13 05 10.8	-1.4
	comp=Z,5.7nm,0.9s,baz=111,slow=5.8,SNR=18						
	comp=Z,5.7nm,0.9s						
WSAR	Wadi Sarin	86.90	294	LR	LR	13 46 57.1	
	comp=Z,25nm,21.7s,baz=154,slow=38						
ILAR	Eielson Array	87.60	24	P	P	13 05 24.9	-2.5
	comp=Z,1.3nm,0.7s,baz=260,slow=4.3,SNR=12						
	comp=Z,1.3nm,0.7s						

*IDC **28** 12:56:16.2±0.7,7.°11S×132.°05E,h0km,mb4.2/10, mbtmp4.2/13,ML4.3/2,MS3.5/2,Error ellipse: s-maj=47.0km s-min=16.3km az=68.0*

*DJA **28** 12:56:20.1±0.5,7°S±2°×13°2E±°,h98km±8km,M4.6/11, mB5.0/6,mb4.7/11,MLv4.8/10,Mw(mB)4.4/6*

ISC 28 12:56:21.0±0.6,7.°13S±0.°04×132.°13E±0.°08,h35km,n30, σ1ş96/31,mb4.3/12,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.18	224	P	Pn	12 56 41.5	+0.5
SAUI				S	Sn	12 56 59.2	+3.3
SAUI	Saumlaki	1.18	224	S	Pn	12 56 41.6	+0.5
	280nm,1.2s,9µm						
BNDI	Bandanaira	3.41	319	S	Sn	12 57 48.3	-2.7
FAKI	Fak Fak	4.19	2	P	Pn	12 57 22.7	+0.2
FAKI				S	Sn	12 58 09.8	-0.4
FAKI	Fak Fak	4.19	2	S	Pn	12 57 22.6	+0.1
	37nm,1.3s						
SWI	Sorong	6.29	352	P	Pn	12 57 50.8	-0.6
	74nm,0.7s,1µm0.4nm						
NLAI	Namlea	6.33	307	P	Pn	12 57 49.7	-2.2
	61nm,1.3s,0.2nm						
LBMI	Labuha	7.94	324	P	Pn	12 58 13.1	-0.9
	88nm,0.9s,1µm0.3nm						
SANI	Sanana	7.94	309	P	Pn	12 58 13.2	-0.8
	43nm,0.6s,644nm0.2nm						
SOEI	Soe	8.21	251	P	Pn	12 58 15.1	-2.7
	77nm,0.8s,5µm						
MMRI	Maumere	9.91	261	P	Pn	12 58 40.0	-1.2
WRA	Warramunga Arr	12.91	171	Pn	Pn	12 59 20.3	-1.9
	1.6nm,0.3s,baz=351,slow=13,SNR=7.8						
WRA				Sn	Sn	13 01 37.9	-6.8
	1.6nm,0.3s,baz=351,slow=20,SNR=2.6						
	5.8nm,0.6s						
PMG	Port Moresby	15.04	100	Pn	Pn	12 59 50.8	-0.3
	8.7nm,0.9s,baz=308,slow=17,SNR=1.9						
PMG				LR	LR	13 05 56.1	
	comp=Z,255nm,20.1s,baz=215,slow=38						
ASAR	Alice Springs	16.53	174	Pn	Pn	13 00 08.1	-2.2
	1.1nm,0.3s,baz=5.5,slow=8.3,SNR=12						
	4.2nm,0.6s						
STKA	Stephens Creek	26.15	162	P	P	13 01 52.2	+0.1
	2.1nm,0.7s,baz=328,slow=13,SNR=1.5						
	2.1nm,0.7s						
HNR	Honiara	27.61	97	LR	LR	13 13 00.5	
	comp=Z,2µm,18.1s,baz=244,slow=36						
CMAR	Chiang Mai Arr	41.46	308	P	P	13 04 04.1	-0.7
	1.0nm,0.3s,baz=140,slow=7.1,SNR=1.9						
	1.0nm,0.3s						
KSRS	Korea Array	44.53	355	LR	LR	13 24 57.2	
	comp=Z,32nm,19.1s,baz=160,slow=39						
HHC	Hu-ho-hao-te	51.36	340	eP	P	13 05 24.8	+2.5
HHC				pP	pP	13 05 31.5	-1.3
HHC				sP	sP	13 05 33.5	-3.4
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,150nm,4.6s						
SONM	Songino Array	59.26	340	P	P	13 06 19.7	+0.5
	comp=Z,1.7nm,0.7s,baz=157,slow=4.7,SNR=6.5						
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	69.51	326	P	P	13 07 26.9	+0.8
	comp=Z,3.9nm,0.6s,baz=122,slow=7.6,SNR=21						
	comp=Z,3.9nm,0.6s						
KSH	Kashi	69.56	317	P	P	13 07 29.0	+2.3
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	72.07	173	P	P	13 07 42.8	+1.6
	comp=Z,2.5nm,1.0s,baz=346,slow=4.2,SNR=3.3						
	comp=Z,2.5nm,1.0s						
ZALV	Zalesovo Beam	72.65	333	P	P	13 07 45.0	0.0
	comp=Z,2.8nm,0.7s,baz=120,slow=7.0,SNR=11						
	comp=Z,2.8nm,0.7s						
KURBB	Kurchatov Arra	73.74	328	P	P	13 07 51.1	-0.4
	comp=Z,2.0nm,0.6s,baz=128,slow=4.8,SNR=19						
	comp=Z,2.0nm,0.6s						
BVAR	Borovoye Array	79.31	327	P	P	13 08 23.2	+0.3
	comp=Z,2.7nm,0.8s,baz=124,slow=8.5,SNR=7.2						
	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	82.84	180	P	P	13 08 43.3	+1.5
	comp=Z,1.9nm,0.9s,baz=337,slow=1.0,SNR=4.2						
	comp=Z,1.9nm,0.9s						
ILAR	Eielson Array	92.57	25	P	P	13 09 28.8	+0.2
	comp=Z,0.3nm,0.8s,baz=260,slow=4.3,SNR=2.5						
	comp=Z,0.3nm,0.8s						
TXAR	Lajitas Array	123.17	60	PKP	PKiKP	13 15 16.0	+0.9
	comp=Z,0.5nm,1.1s,baz=241,slow=3.0,SNR=2.4						
CPUP	Villa Florida	145.49	165	PKPbc	PKPab	13 15 57.0	+0.5
	comp=Z,0.9nm,0.3s,baz=228,slow=6.9,SNR=3.5						

VIE 28 12:58:16.8±0.4,46.°68N×13.°83E,h0km,ml0.8/3,Error ellipse: s-maj=3.3km s-min=2.3km az=6.0,Suspected Mining explosion.,Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYKA	Terra Mystica	0.14	249	i Pg	Pg	12 58 19.5	0.0
	1.5nm,0.2s						
MYKA				i Sg	Sg	12 58 20.8	-0.4
	0.4nm,0.0s						
KBA	Koelnbreinsper	0.52	320	ePg	Pg	12 58 27.3	+0.6
	0.3nm,0.1s						
KBA				i Sg	Sg	12 58 34.0	+0.5
	0.2nm,0.1s						
OBKA	Obir	0.53	109	i Pg	Pg	12 58 27.9	+1.0
	0.3nm,0.1s						
OBKA				i Sg	Sg	12 58 33.4	-0.3
	1.1nm,0.2s						

ROM 28 12:59:07.2±0.2,46.°030N±0.°005×13.°71E±0.°02,h10km, ML1.1/8,Error ellipse: s-maj=1.4km s-min=0.6km az=272.0,Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SABO	M.te Sabotino	0.09	236	ePg	Pg	12 59 09.8	+0.1
SABO				eSg	Sg	12 59 11.3	-0.2
SABO	M.te Sabotino	0.09	236	P	Pg	12 59 09.8	+0.1
SABO				S	Sg	12 59 11.5	0.0
SABO				AML	AML		
	comp=E,1052µm,1.1s						
SABO				AML	AML		
	comp=N,1570µm,0.5s						
SABO				AML	AML		
	comp=E,270µm,1.1s						
SABO				AML	AML		
	comp=N,392µm,0.5s						
SABO				AML	AML		
	comp=E,858µm,0.3s						
SABO				AML	AML		
	comp=E,212µm,0.3s						
SABO				AML	AML		
	comp=N,301µm,0.2s						
SABO				AML	AML		
	comp=N,1150µm,0.5s						
DRE	Drenchia	0.15	343	ePg	Pg	12 59 10.7	0.0
COLI	Coloredo	0.25	295	ePg	Pg	12 59 12.7	+0.4
COLI				eSg	Sg	12 59 16.1	+0.3
VINO	Villanova	0.37	308	ePg	Pg	12 59 15.1	+0.5
VINO	Villanova	0.37	308	P	Pg	12 59 15.0	+0.4
VINO				S	Sb	12 59 21.1	-0.7
VINO				AML	AML		
	comp=E,30µm,0.2s						
VINO				AML	AML		
	comp=N,25µm,0.4s						
BAD	Bernadia	0.38	303	ePg	Pg	12 59 15.3

comp=Z,1.1nm,0.6s,baz=17,slow=27,SNR=1.2
ASAR Lg Lg 13 19 02.2
comp=Z,0.1nm,0.3s,baz=22,slow=27,SNR=4.0
EIDS Eidsvold 20.36 159 P **P** **13 13 23.5 +0.6**
EIDS IAmb IAmb 13 13 28.6
comp=Z,21nm,1.5s
FITZ Fitzroy Crossi 20.81 234 **P** **13 13 27.2 -0.6**
STKA Stephens Creek 25.48 183 P **P** **13 14 15.2 +0.8**
STKA Stephens Creek 25.48 183 P **P** **13 14 15.4 +0.9**
comp=Z,2.5nm,0.8s,baz=351,slow=13,SNR=2.2
comp=Z,2.5nm,0.8s
LIFNC LIFOU 27.31 124 P **P** **13 14 32.0 +0.8**
RTZ Ruatahuna 44.29 142 P **P** **13 16 58.4 +2.1**
CMAR Chiang Mai Arr 50.17 300 P **P** **13 17 41.7 -0.6**
comp=Z,0.6nm,0.4s,baz=116,slow=6.1,SNR=2.4
comp=Z,0.6nm,0.4s
PZH PanZhiHua 51.81 311 P **P** **13 17 57.5 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,70nm,4.7s
HHC Hu-ho-hao-te 55.23 331 *e*P **P** **13 18 19.5 -0.1**
HHC pP sP 13 18 24.0 -0.5
HHC sP pP 13 18 27.3 +4.2
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,150nm,5.2s
WMQ Urumqi 70.66 321 *e*P **P** **13 20 03.5 +1.4**
WMQ pP sP 13 20 07.5 +0.3
WMQ pmax pmax
comp=Z,12nm,3.7s
MKAR Makanchi Array 75.42 322 P **P** **13 20 29.9 -0.4**
MKAR Makanchi Array 75.42 322 P **P** **13 20 30.0 -0.2**
comp=Z,2.0nm,0.8s,baz=104,slow=7.2,SNR=18
comp=Z,2.0nm,0.8s
MAKZ Makanchi 75.62 322 P **P** **13 20 30.6 -0.8**
MAKZ IAmb IAmb 13 20 32.0
comp=Z,3.9nm,1.1s
KSH Kashi 76.86 313 P **P** **13 20 40.3 +1.6**
KSH pP sP 13 20 45.8 +2.0
KSH pmax pmax
comp=Z,3.0nm,1.1s
ZALV Zalesovo Beam 77.34 329 P **P** **13 20 39.8 -1.1**
comp=Z,0.3nm,0.3s,baz=131,slow=6.5,SNR=2.2
comp=Z,0.3nm,0.3s
BOOM Boomskoye usch 77.89 316 P **P** **13 20 44.0 -0.5**
BOOM IAmb IAmb 13 20 45.4
comp=Z,1.5nm,0.6s
KURBB Kurchatov Arra 79.29 324 P **P** **13 20 51.1 -0.6**
comp=Z,0.6nm,0.6s,baz=113,slow=4.7,SNR=7.2
comp=Z,0.6nm,0.6s
QSPA South Pole Qui 83.65 180 P **P** **13 21 14.2 -0.7**
QSPA IAmb IAmb 13 21 15.1
comp=Z,4.6nm,0.8s
QSPA South Pole Qui 83.65 180 P **P** **13 21 14.3 -0.5**
comp=Z,4.7nm,0.8s,baz=270,slow=2.0,SNR=50
comp=Z,4.7nm,0.8s
NRIK Noril'sk 84.46 343 P **P** **13 21 17.6 -1.0**
comp=Z,3.1nm,0.8s,baz=107,slow=6.2,SNR=5.3
comp=Z,3.1nm,0.8s
BVAR Borovoye Array 84.86 325 P **P** **13 21 20.9 -0.1**
comp=Z,3.2nm,0.8s,baz=106,slow=5.3,SNR=13
comp=Z,3.2nm,0.8s
KTH Kantishna Hill 85.14 24 P **P** **13 21 22.4 +0.2**
ILAR Eielson Array 87.25 24 P **P** **13 21 30.9 -1.6**
comp=Z,0.9nm,1.0s,baz=250,slow=6.0,SNR=4.1
comp=Z,0.9nm,1.0s
BMAR Burnt Mountain 89.04 22 P **P** **13 21 41.5 +0.4**
TORD Torodi Ar. Bea 141.57 283 PKhKP PKPpre 13 28 08.0
comp=Z,0.2nm,0.5s,baz=72,slow=4.7,SNR=1.4
DBIC Dimbokro 148.34 272 PKPbc **PKPbc** **13 28 33.8 -0.1**
comp=Z,5.9nm,0.8s,baz=94,slow=1.0,SNR=6.8

*CNRM **28** 13:28:58.4, 36˚.76N×8˚.74W, h8km, ML2.6*
*SFS **28** 13:29:01.6, 36˚.92N×8˚.76W, h16km, ML2.4/8, ML2.8/6, MLv2.2/8*
*MDD **28** 13:29:02.5±0.9, 37˚.00N×8˚.71W, h16km±3km, mb_Lg2.8/4, Error ellipse: s-maj=6.0km s-min=4.9km az=14.0*
*INMG **28** 13:29:02.4±1.4, 36˚.98N×8˚.75W, h18km±3km, ML2.2, Error ellipse: s-maj=4.7km s-min=2.8km az=77.0*
*IGIL **28** 13:29:02.7, 36˚.98N×8˚.75W, h23km, ML2.3*
ISC 28 13:28:59.1±1.3, 36˚.87N±0˚.04×8˚.87W±0˚.06, h27km±7km, n37, σ1§15/68, 1C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.26**	**7**	⇓*i*Pg	**Pb**	**13 29 06.6**	**+0.8**
PFVI				*e*Sg	**Sb**	**13 29 09.9**	**-0.5**
PFVI				A	A	13 29 10.3	
	217nm,0.2s						
PFVI	**Vila Bisbo**	**0.26**	**7**	Pg	**Pb**	**13 29 06.6**	**+0.8**
PFVI				Sg	**Sb**	**13 29 09.5**	**-0.9**
PFVI	**Vila Bisbo**	**0.26**	**7**	P	**Pb**	**13 29 06.0**	**+0.2**
PFVI	**Vila Bisbo**	**0.26**	**7**	S	**Sb**	**13 29 10.6**	**+0.2**
MORF	**Marmelete**	**0.47**	**22**	⇑*i*Pg	**Pb**	**13 29 09.3**	**+0.4**
MORF				*e*Sg	**Sb**	**13 29 14.3**	**-1.3**
MORF				A	A	13 29 15.0	
	98nm,0.2s						
MORF	**Marmelete**	**0.47**	**22**	*e*P	**Pb**	**13 29 09.3**	**+0.4**
MORF				*e*S	**Sb**	**13 29 14.2**	**-1.3**
MORF				IAML		13 29 15.8	
	comp=E,243nm,0.1s						
PTEO	**Sao Teotonio**	**0.68**	**10**	*e*Pg	**Pb**	**13 29 12.9**	**+0.5**
PTEO				*e*Sg	**Sb**	**13 29 20.5**	**-1.0**
PTEO				A	A	13 29 21.1	
	comp=E,105nm,0.2s						
PCVE	**Castro Verde**	**1.01**	**41**	*e*P	**Pb**	**13 29 17.8**	**-0.1**
PCVE				*e*S	**Sn**	**13 29 30.1**	**-0.6**
PCVE				A	A	13 29 31.1	
	comp=E,24nm,0.7s						
PCVE	**Castro Verde**	**1.01**	**41**	Pg	**Pb**	**13 29 17.8**	**-0.1**
PCVE				Sg	**Sn**	**13 29 29.7**	**-1.1**
PVAQ	**Vaqueiros**	**1.06**	**60**	*e*P	**Pn**	**13 29 18.8**	**+0.6**
PVAQ				*e*S	**Sn**	**13 29 32.0**	**-0.1**
PVAQ				A	A	13 29 33.7	
	comp=E,21nm,0.2s						
PVAQ	**Vaqueiros**	**1.06**	**60**	Pg	**Pn**	**13 29 18.7**	**+0.6**
PVAQ				Sg	**Sn**	**13 29 31.7**	**-0.3**
PVAQ	**Vaqueiros**	**1.06**	**60**	P	**Pb**	**13 29 18.6**	**-0.3**
MESJ	**Messejana**	**1.10**	**28**	*e*P	**Pb**	**13 29 18.9**	**-0.5**
MESJ				*e*S	**Sn**	**13 29 32.6**	**-0.3**
MESJ				A	A	13 29 33.1	
	comp=E,74nm,0.3s						
MESJ	**Messejana**	**1.10**	**28**	*e*P	**Pb**	**13 29 19.1**	**-0.3**
MESJ				*e*S	**Sb**	**13 29 32.0**	**-1.3**
MESJ				IAML		13 29 33.0	
	comp=N,76nm,0.3s						
PNCL	**Nicolau / Gran**	**1.27**	**12**	*e*P	**Pb**	**13 29 22.5**	**+0.2**
PNCL				*e*S	**Sn**	**13 29 37.3**	**+0.2**
PNCL				A	A	13 29 38.1	
	comp=N,47nm,0.2s						
PNCL	**Nicolau / Gran**	**1.27**	**12**	Pn	**Pn**	**13 29 22.3**	**+1.3**
PNCL				Sn	**Sb**	**13 29 36.8**	**-1.4**
EGRO	**El Granado**	**1.29**	**59**	Pn	**Pn**	**13 29 21.7**	**+0.4**
EGRO				Sn	**Sn**	**13 29 37.5**	**-0.1**
EGRO	**El Granado**	**1.29**	**59**	Pg	**Pn**	**13 29 21.7**	**+0.4**
EGRO				Sg	**Sn**	**13 29 37.1**	**-0.5**
EGRO				*i* Vmb_Lg		13 29 42.6	
PBEJ	**Beja**	**1.40**	**34**	*e*P	**Pn**	**13 29 23.9**	**+1.0**
PBEJ				*e*S	**Sb**	**13 29 41.0**	**-1.1**
PBEJ				A	A	13 29 44.4	
	comp=N,14nm,0.3s						
EVO	**Evora**	**1.79**	**22**	*e*Sg	**Sb**	**13 29 53.4**	**+0.1**
EVO				A	A	13 29 57.4	
	comp=N,25nm,0.1s						
EVO	**Evora**	**1.79**	**22**	Pn	**Pb**	**13 29 31.0**	**-0.2**
EVO				Sn	**Sb**	**13 29 52.0**	**-1.2**
PBAR	**Barrancos**	**1.95**	**48**	*e*Pn	**Pn**	**13 29 31.5**	**+1.1**
PBAR				*e*Sg	**Sb**	**13 29 59.6**	**+1.7**
PBAR				A	A	13 30 09.8	
	comp=N,6.4nm,0.4s						
PBAR	**Barrancos**	**1.95**	**48**	Pn	**Pn**	**13 29 31.4**	**+1.1**
PMAFR	**Mafra**	**2.11**	**351**	*e*Sg	**Sb**	**13 30 05.1**	**+2.8**
PESTR	**Estremoz**	**2.23**	**27**	*e*Sg	**Sb**	**13 30 07.2**	**+1.2**
PESTR				A	A	13 30 13.8	
	comp=N,8.0nm,0.8s						
PESTR	**Estremoz**	**2.23**	**27**	P	**Pb**	**13 29 37.3**	**-1.4**
PESTR	**Estremoz**	**2.23**	**27**	S	**Sb**	**13 30 05.8**	**-0.3**
PMTG	**Montargil**	**2.25**	**13**	*e*Pn	**Pn**	**13 29 35.5**	**+1.0**
PMTG				*e*Sn	**Sn**	**13 29 59.9**	**-1.5**
PMTG				*e*Sg	**Sb**	**13 30 06.4**	**-0.1**
PMTG				A	A	13 30 09.1	
	comp=N,18nm,0.1s						
EBAD	**Badajoz**	**2.39**	**37**	Pn	**Pn**	**13 29 37.7**	**+1.3**
EBAD				Pg	**Pb**	**13 29 41.2**	**-0.1**
EBAD				Sn	**Sn**	**13 30 03.7**	**-1.0**
EBAD				Sg	**Sb**	**13 30 10.0**	**-0.3**
EBAD				*i* Vmb_Lg		13 30 14.2	
PMRV	**Marv??o**	**2.81**	**24**	*e*Pn	**Pn**	**13 29 42.5**	**+0.3**
PMRV				*e*Sn	**Sn**	**13 30 13.4**	**-1.7**
PMRV				*e*Sg	**Sb**	**13 30 24.6**	**+2.2**
PMRV				A	A	13 30 26.8	
	comp=N,7.8nm,0.6s						
ECAB	**El Cabril**	**3.00**	**65**	Pn	**Pn**	**13 29 45.3**	**+0.5**
ECAB				Sn	**Sn**	**13 30 18.4**	**-1.4**
ECAB				Sg	**Sb**	**13 30 31.9**	**+4.0**
ECAB	**El Cabril**	**3.00**	**65**	Pn	**Pn**	**13 29 45.3**	**+0.5**
ECAB				Pg	**Pb**	**13 29 52.8**	**+1.1**
ECAB				Sn	**Sn**	**13 30 18.4**	**-1.4**
ECAB				Sg	**Sb**	**13 30 29.1**	**+1.2**
ECAB				*i* Vmb_Lg		13 30 35.4	
EADA	**Adamuz**	**3.65**	**68**	Pn	**Pn**	**13 29 54.4**	**+0.6**
EADA				Sn	**Sn**	**13 30 33.0**	**-3.0**
EADA				*i* Vmb_Lg		13 30 35.7	
MD31	**MD31**	**5.23**	**139**	P	**Pn**	**13 30 15.4**	**-0.2**
MD31	**MD31**	**5.23**	**139**	S	**Sn**	**13 31 14.2**	**-0.9**
MDT	**Midelt**	**5.35**	**138**	P	**Pn**	**13 30 16.6**	**-0.7**
MDT	**Midelt**	**5.35**	**138**	S	**Sn**	**13 31 17.9**	**-0.1**

*NNC **28** 13:30:49.9±7.3, 36˚.90N×70˚.78E, h0km, mb4.0, mpv4.0, Error ellipse: s-maj=74.2km s-min=42.2km az=153.0*
*IDC **28** 13:31:15.1±16.0, 37˚.71N×71˚.43E, h277km±136km, mb3.3/3, mbtmp3.8/7, MS3.1/1, Error ellipse: s-maj=169.4km s-min=83.9km az=171.0*
ISC 28 13:30:51.4±2.2, 36˚.6N±0˚.2×71˚.0E±0˚.1, h100km, n16, σ1§30/18, mb3.9/3, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.23**	**25**	P	**Pn**	**13 32 21.2**	**0.0**
	SNR=11						
EKS2	**Erkin-Say**	**6.40**	**19**	P	**Pn**	**13 32 24.1**	**+0.9**
	SNR=27						
KK31	**Karatay Array**	**6.47**	**357**	⇑P	**Pn**	**13 32 25.0**	**+0.9**
	6.2nm,0.3s,baz=188,slow=20,SNR=77						
KK31				⇓S	**Sn**	**13 33 35.2**	**-1.1**
	4.4nm,0.5s,baz=186,slow=26,SNR=7.4						
AAK	**Ala-Archa**	**6.59**	**23**	P	**Pn**	**13 32 26.5**	**+0.7**
	SNR=8.0						
USP	**Ospenovka**	**7.16**	**21**	P	**Pn**	**13 32 34.1**	**+0.6**
	SNR=10						
TKM2	**Tokmak 2**	**7.22**	**28**	P	**Pn**	**13 32 34.4**	**-0.1**
	SNR=9.6						
TKM2	**Tokmak 2**	**7.22**	**28**	⇑P	**Pn**	**13 32 34.0**	**-0.5**
	3.2nm,0.5s						
TKM2				⇓S	**Sn**	**13 33 56.7**	**+1.6**
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**13.21**	**36**	P	**P**	**13 33 59.9**	**-1.2**
	0.3nm,0.5s,baz=212,slow=10,SNR=7.3						
AB31	**Akbulak array**	**14.95**	**331**	⇑P	**P**	**13 34 17.1**	**-3.3**
	0.3nm,0.3s,baz=134,slow=8.9,SNR=34						
KURBB	**Kurchatov Arra**	**15.01**	**19**	P	**P**	**13 34 20.1**	**-0.9**
	1.9nm,0.2s,baz=207,slow=10,SNR=4.1						
BVAR	**Borovoye Array**	**16.39**	**359**	P	**P**	**13 34 36.1**	**-0.3**
	1.0nm,0.7s,baz=171,slow=10,SNR=5.6						
AKTO	**Aktyubinsk**	**16.64**	**330**	⇑P	**P**	**13 34 39.0**	**-0.1**
	2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**19.81**	**25**	P	**P**	**13 35 12.8**	**-0.9**
	0.9nm,0.4s,baz=225,slow=11,SNR=5.7						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**13 37 55.7**	**+1.9**
	1.6nm,0.8s,baz=110,slow=12,SNR=1.8						
	1.6nm,0.9s						
ARCES	**ARCESS Array B**	**41.01**	**338**	P	**P**	**13 38 24.5**	**+0.3**
	8.0nm,1.0s,baz=116,slow=8.4,SNR=3.7						
	8.0nm,1.0s						
NOA	**NORSAR Array B**	**44.25**	**323**	P	**P**	**13 38 51.5**	**+1.0**
	0.2nm,0.5s,baz=111,slow=9.1,SNR=1.7						
NOA				LR	LR	14 00 55.2	
	comp=Z,21nm,19.6s,baz=200,slow=41						
	0.2nm,0.5s						

*AEIC **28** 13:33:28.8±1.4, 53˚.21N±0˚.04×166˚.66W±0˚.06, h31km±7km, Error ellipse: s-maj=7.3km s-min=4.0km az=146.0*
NEIC 28 13:33:29.8±1.5, 53˚.22N±0˚.05×166˚.64W±0˚.07, h35km±21km, mb3.8/11, ML3.8/6, ML3.4(AEIC), Error ellipse: s-maj=8.2km s-min=4.3km az=147.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGOD	**Makushin Gods**	**0.60**	**346**		Pn	13 33 41.1	-0.7
MGOD					Sn	13 33 50.2	-0.1
MAPS	**Pakushin South**	**0.62**	**343**		Pn	13 33 41.1	-1.0
MAPS					Sn	13 33 50.8	-0.1
UNV	**Unalaska Valle**	**0.64**	**7**		Pn	13 33 41.2	-1.0
UNV					Sn	13 33 51.1	-0.1
MNAT	**Makushin Natee**	**0.67**	**358**		Pn	13 33 42.0	-0.8
MNAT					Sn	13 33 52.0	-0.1
MSW	**Makushin Switc**	**0.71**	**353**		Pn	13 33 42.6	-0.6
MSW					Sn	13 33 52.9	0.0
OKER	**Okmok East Rim**	**0.88**	**286**		Pn	13 33 45.2	-0.5
OKNC	**Okmok New Cone**	**0.93**	**286**		Pn	13 33 45.6	-0.6
OKNC					Sn	13 33 58.4	+0.1
OKCE	**Okmok Cone E**	**0.94**	**284**		Pn	13 33 46.1	-0.3
ZRO	**Akutan Zero**	**0.96**	**24**		Pn	13 33 46.1	-0.6
AKRB	**Akutan Reef Bi**	**0.98**	**20**		Pn	13 33 46.7	-0.3
AKRB					Sn	13 34 00.1	+0.6
AKBBA	**Akutan Broad B**	**0.98**	**25**		Pn	13 33 46.2	-0.7
AHB	**Akutan Harbor**	**1.03**	**28**		Pn	13 33 46.9	-0.7
AKLV	**Akutan Long Va**	**1.03**	**23**		Pn	13 33 47.0	-0.7
AKLV					Sn	13 34 00.7	-0.3
AKUT	**Akutan**	**1.06**	**29**		Pn	13 33 47.2	-0.7
AKUT				IAML		13 34 01.6	
	comp=E,1μm,0.3s						
AKGG	**Akutan Green G**	**1.06**	**21**		Pn	13 33 47.6	-0.5
AKSA	**Akutan Strait**	**1.08**	**31**		Pn	13 33 47.2	-1.1
AKSA					Sn	13 34 01.2	-0.8
NIKH	**Nikolski High**	**1.36**	**261**		Pn	13 33 51.7	-0.5
NIKH					Sn	13 34 09.0	0.0
WECS	**Westdahl Cape**	**1.72**	**39**		Pn	13 33 57.3	+0.1
WESE	**West Dahl East**	**1.75**	**43**		Pn	13 33 57.6	0.0
WEBT	**Westdahl Beart**	**1.77**	**38**		Pn	13 33 58.2	+0.3
CLCO	**Concord Point,**	**1.91**	**258**		Pn	13 34 00.2	+0.4
CLES	**Cleveland East**	**2.01**	**260**	Pn	Pn	13 34 00.6	-0.5
CLES				IAML		13 34 33.8	
	comp=N,1μm,0.4s						
SSLS	**Shishaldin Sou**	**2.16**	**45**		Pn	13 34 03.6	+0.3
ISLZ	**Isanotski Laza**	**2.30**	**48**		Pn	13 34 05.3	+0.2
ISNN	**Isanotski Nort**	**2.34**	**45**		Pn	13 34 06.4	+0.8
FALS	**False Pass**	**2.51**	**48**		Pn	13 34 08.7	+0.7
PN7A	**Pavlof North-7**	**3.51**	**49**		Pn	13 34 22.8	+1.0
SDPT	**Sand Point**	**4.20**	**57**	Pn	Pn	13 34 31.6	+0.5
SDPT				IAML		13 35 35.6	
	comp=N,90nm,3.0s						
SDPT				IAML		13 37 11.4	
	comp=E,126nm,2.9s						
O14K	**Tigyukauivet M**	**6.75**	**24**	Pn	Pn	13 35 06.8	+0.7
M11K	**Mekoryuk**	**7.19**	**2**		Pn	13 35 13.1	+0.8
M13K	**Dall Lake**	**7.44**	**13**	Pn	Pn	13 35 16.6	+1.0
N15K	**Kwethluk River**	**7.84**	**25**	Pn	Pn	13 35 21.3	+0.1
O16K	**Kokwok River B**	**7.95**	**33**	Pn	Pn	13 35 23.6	+0.9
M14K	**Bethel**	**7.97**	**17**	Pn	Pn	13 35 23.4	+0.5
L14K	**Kuka Creek**	**8.42**	**13**	Pn	Pn	13 35 29.0	-0.1
M16K	**Timber Creek**	**8.87**	**25**	Pn	Pn	13 35 34.5	-0.7
L16K	**Owhat River**	**9.34**	**21**	Pn	Pn	13 35 41.7	0.0
K15K	**Wolf Creek Mou**	**9.50**	**15**	Pn	Pn	13 35 44.6	+0.7
M17K	**Holitna River**	**9.59**	**28**	Pn	Pn	13 35 44.5	-0.5
ILSW	**Iliamna Southw**	**10.05**	**42**	Pn	Pn	13 35 50.0	-1.6
L18K	**Granite Mounta**	**10.46**	**26**	Pn	Pn	13 35 56.8	-0.3
K17K	**Iditarod**	**10.49**	**22**	Pn	Pn	13 35 57.1	-0.3
J16K	**Anvik River**	**10.58**	**15**	Pn	Pn	13 35 58.5	-0.1
L19K	**White Mountain**	**10.96**	**30**	Pn	Pn	13 36 03.3	-0.5
ANM	**Nome**	**11.40**	**3**	Pn	Pn	13 36 09.4	-0.5
G16K	**Koyuk River**	**12.41**	**8**	Pn	Pn	13 36 24.9	+1.4
F15K	**North Star Dit**	**12.57**	**4**	Pn	Pn	13 36 27.2	+1.4
SCM	**Sheep Creek Mo**	**13.45**	**42**	Pn	Pn	13 36 37.4	-0.4
KLU	**Klutina**	**13.86**	**45**	Pn	Pn	13 36 44.3	+0.8
ISLE	**Juniper Island**	**15.12**	**51**	Pn	Pn	13 37 01.3	+0.7
C16K	**Lisburne Hills**	**15.12**	**2**	Pn	Pn	13 37 01.7	+1.3
TABL	**Table Mountain**	**15.64**	**52**	Pn	Pn	13 37 07.3	-0.1
G23K	**Bananza Creek**	**15.80**	**25**		P	13 37 11.2	-1.6
G23K				IAmb	IAmb	13 37 37.9	
	comp=Z,6.9nm,1.4s						
O29M	**Mount Kennedy**	**16.84**	**54**	Pn	Pn	13 37 22.7	+0.1
O29M				IAmb	IAmb	13 37 54.5	
	comp=Z,26nm,1.4s						
HYT	**Haines Junctio**	**17.47**	**53**	Pn	Pn	13 37 29.0	-1.4
HYT				IAmb	IAmb	13 37 51.2	
	comp=Z,9.9nm,1.2s						
C23K	**Itkillik River**	**18.23**	**18**	P	Pn	13 37 40.2	+0.7
C23K				IAmb	IAmb	13 37 57.4	
	comp=Z,7.3nm,1.4s						
H29M	**Whitestone**	**19.07**	**36**	P	P	13 37 48.9	+0.1
M31M	**Drury Creek, Y**	**19.24**	**49**	P	P	13 37 50.6	0.0
M31M				IAmb	IAmb	13 37 52.3	
	comp=Z,14nm,1.5s						
P33M	**Teslin, Yukon**	**19.66**	**56**	P	P	13 37 55.2	-0.2
P33M				IAmb	IAmb	13 38 14.4	
	comp=Z,6.1nm,1.4s						
FARO	**Faro, Yukon**	**19.72**	**50**	P	P	13 37 56.7	+0.8
FARO				IAmb	IAmb	13 38 31.9	
	comp=Z,8.4nm,1.4s						

*BJI **28** 14:00:51.5±0.0, 6˚.16S×143˚.07E, h10km, mb4.8/56, mB5.3/24, Ms7 5.0/1*
*IDC **28** 14:00:54.1±0.6, 5˚.93S×142˚.71E, h0km, mb4.6/14, mbtmp4.8/17, ML2.2/1, MS3.7/14, Error ellipse: s-maj=25.8km s-min=14.7km az=72.0*
*NEIC **28** 14:00:56.2±2.3, 6˚.09S±0˚.07×142˚.46E±0˚.07, h10km±1km, mb4.9/59, Error ellipse: s-maj=12.5km s-min=11.4km az=175.0*
*DJA **28** 14:00:58.2±0.2, 6˚S±2˚×14˚2E±°, h10km, M4.6/28, mB5.0/12, mb4.8/28, MLv5.2/4, Mw(mB)4.3/12*
ISC 28 14:00:58.3±0.3, 6˚.16S±0˚.04×142˚.45E±0˚.05, h28km, n190, σ1§64/177, mb4.9/59, MS3.5/13, 3C-5D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABU	**Tabubil**	**1.51**	**306**	P	**Pb**	**14 01 24.2**	**-1.4**
MMPI	**Merauke**	**3.07**	**222**	S	**Sb**	**14 02 29.8**	**+0.4**
GENI	**Genyem**	**4.21**	**327**	P	**Pn**	**14 02 01.8**	**+1.1**
GENI	**Genyem**	**4.21**	**327**	P	**Pn**	**14 02 00.2**	**-0.5**
GENI				S	**Sn**	**14 02 49.3**	**+0.4**
SMPI	**Sarmi**	**5.57**	**318**	P	**Pn**	**14 02 19.5**	**+0.1**
	199nm,1.1s,2μm1.1nm						
PMG	**Port Moresby**	**5.67**	**125**	Pn	**Pn**	**14 02 20.1**	**-0.7**
PMG	**Port Moresby**	**5.67**	**125**	P	**Pn**	**14 02 20.6**	**-0.2**
PMG	**Port Moresby**	**5.67**	**125**	P	**Pn**	**14 02 20.8**	**0.0**
PMG	**Port Moresby**	**5.67**	**125**	Pn	**Pn**	**14 02 20.4**	**-0.4**
	4.7nm,0.3s,baz=20,slow=2.0,SNR=17						
PMG				Sn	**Sn**	**14 03 23.7**	**-1.4**
	9.0nm,0.3s,baz=251,slow=21,SNR=9.7						
	22nm,0.5s						
MANU	**Manus Island**	**6.39**	**50**	Pn	**Pn**	**14 02 31.4**	**+0.8**
COEN	**Coen**	**7.78**	**175**	P	**Pn**	**14 02 52.0**	**+2.3**
	baz=8.0						
COEN	**Coen**	**7.78**	**175**		**Pn**	**14 02 52.7**	**+2.9**
COEN	**Coen**	**7.78**	**175**	P	**Pn**	**14 02 50.5**	**+0.7**
RABL	**Rabaul**	**9.87**	**79**	Pn	**Pn**	**14 03 19.9**	**+1.4**
FAKI	**Fak Fak**	**10.66**	**287**	Pn	**Pn**	**14 03 28.8**	**-0.5**
FAKI	**Fak Fak**	**10.66**	**287**	P	**Pn**	**14 03 30.1**	**+0.8**
FAKI	**Fak Fak**	**10.66**	**287**	P	**Pn**	**14 03 27.5**	**-1.8**
	50nm,0.9s,766nm						
SAUI	**Saumlaki**	**11.21**	**260**	Pn	**Pn**	**14 03 38.3**	**+1.5**
SAUI	**Saumlaki**	**11.21**	**260**	P	**Pn**	**14 03 39.1**	**+2.3**
	677nm,1.2s,6μm						
KDU	**Kakadu**	**11.78**	**236**	P	**Pn**	**14 03 45.2**	**+0.6**
	baz=12,SNR=15						
MTSU	**Mount Surprise**	**12.04**	**171**	P	**Pn**	**14 03 51.7**	**+3.5**
	baz=12,SNR=4.9						
MTSU	**Mount Surprise**	**12.04**	**171**	P	**Pn**	**14 03 49.0**	**+0.8**
SWI	**Sorong**	**12.34**	**295**	P	**Pn**	**14 03 51.2**	**-1.1**
	31nm,1.0s						
BNDI	**Bandanaira**	**12.60**	**277**	P	**Pn**	**14 03 56.1**	**+0.4**
	142nm,1.1s						
MTN	**Manton Dam**	**12.98**	**238**	P	**Pn**	**14 04 00.5**	**-0.5**
	baz=13,SNR=61						
MTN	**Manton Dam**	**12.98**	**238**	Pn	**Pn**	**14 03 59.7**	**-1.3**
DRS	**Darwin Rock St**	**12.99**	**240**	P	**Pn**	**14 04 02.3**	**+1.2**
CTA	**Charters Tower**	**14.33**	**165**	P	**Pn**	**14 04 22.9**	**+3.4**
	baz=14						
CTA	**Charters Tower**	**14.33**	**165**	Lg	Lg	14 08 32.8	
	0.5nm,0.3s,baz=61,slow=23,SNR=6.0						
QIS	**Mount Isa**	**14.58**	**191**	P	**Pn**	**14 04 23.9**	**+1.1**
	baz=15,SNR=4.2						
QIS	**Mount Isa**	**14.58**	**191**	P	**Pn**	**14 04 23.9**	**+1.1**
WR0	**Warramunga Arr**	**15.72**	**209**		**Pn**	**14 04 36.5**	**-1.5**
WR0				IAmb	IAmb	14 04 45.1	
	comp=Z,41nm,0.7s						
WC3	**Warramunga Arr**	**15.80**	**209**	P	**Pn**	**14 04 38.3**	**-0.7**
	baz=16						
WRA	**Warramunga Arr**	**15.80**	**209**		**Pn**	**14 04 37.4**	**-1.6**
WRA	**Warramunga Arr**	**15.80**	**209**	Pn	**Pn**	**14 04 38.4**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=27,slow=13,SNR=37						
WRA				Sn	**Sn**	**14 07 26.7**	**-6.8**
	comp=Z,1.8nm,0.3s,baz=31,slow=24,SNR=6.6						
WRA				Lg	Lg	14 09 24.6	
	comp=Z,1.9nm,0.3s,baz=34,slow=27,SNR=6.3						
LBMI	**Labuha**	**15.89**	**290**	P	**P**	**14 04 41.4**	**-2.2**
	comp=Z,52nm,1.0s						
KNRA	**Kununurra**	**16.42**	**234**	P	**Pn**	**14 04 45.6**	**-1.3**
	baz=16						
KNRA	**Kununurra**	**16.42**	**234**	Pn	**Pn**	**14 04 45.3**	**-1

STKA	**Stephens Creek**	**25.60**	**182**	P		**P**	**14 06 28.3**	**+3.1**
	baz=26,SNR=7.8							
STKA	**Stephens Creek**	**25.60**	**182**	P		**P**	**14 06 27.3**	**+2.0**
STKA	**Stephens Creek**	**25.60**	**182**	P		**P**	**14 06 27.8**	**+2.6**
	comp=Z,8.6nm,0.9s,baz=342,slow=8.5,SNR=9.2							
STKA				Lg		Lg	14 14 33.8	
	comp=Z,0.1nm,0.3s,baz=17,slow=22,SNR=1.8							
STKA				LR		LR	14 16 57.5	
	comp=Z,145nm,19.2s,baz=5.7,slow=37							
	comp=Z,8.6nm,0.9s							
MBWA	**Marble Bar**	**26.58**	**234**	P		**P**	**14 06 36.7**	**+2.5**
MBWA				IAmb		IAmb	14 06 41.6	
	comp=Z,34nm,1.1s							
PSA00	**Pilbara Seismi**	**26.70**	**233**	P		**P**	**14 06 36.1**	**+0.8**
PSA00				IAmb		IAmb	14 06 42.7	
	comp=Z,46nm,1.2s							
PSA00	**Pilbara Seismi**	**26.70**	**233**	P		**P**	**14 06 37.3**	**+1.9**
BBOO	**Buckleboo**	**27.18**	**192**	P		**P**	**14 06 39.2**	**-0.3**
BBOO				IAmb		IAmb	14 06 40.9	
	comp=Z,52nm,1.4s							
FORT	**Forrest**	**27.97**	**207**	P		**P**	**14 06 48.2**	**+1.5**
DZM	**Mont Dzumac**	**28.06**	**127**	*e*S		**S**	**14 11 25.9**	**-5.1**
	comp=Z,74nm,22.9s							
DZM				*e*LR		LR	14 13 43.9	
	comp=Z,246nm,24.6s							
DZM	**Mont Dzumac**	**28.06**	**127**	LR		LR	14 17 43.5	
	comp=Z,161nm,21.1s,baz=256,slow=36							
KMBL	**Kambalda**	**31.62**	**215**	P		**P**	**14 07 20.1**	**+1.1**
	baz=32							
LEM	**Lembang**	**34.61**	**267**	LR		LR	14 26 34.6	
	comp=Z,49nm,18.4s,baz=324,slow=44							
NWAO	**Narrogin (SRO)**	**35.49**	**218**	LR		LR	14 23 14.2	
	comp=Z,302nm,19.0s,baz=178,slow=37							
YHNB	**Yeheng**	**36.88**	**327**	P		**P**	**14 08 04.1**	**-0.6**
MJAR	**Matsushiro Arr**	**42.66**	**355**	P		**P**	**14 08 49.5**	**-3.0**
	comp=Z,6.3nm,1.1s,baz=192,slow=7.3,SNR=4.9							
MJAR				LR		LR	14 24 30.8	
	comp=Z,31nm,21.5s,baz=148,slow=33							
	comp=Z,6.3nm,1.1s							
MAJO	**Matsushiro**	**42.66**	**355**	P		**P**	**14 08 54.1**	**+1.6**
MAJO				IAmb		IAmb	14 08 55.0	
	comp=Z,30nm,1.4s							
NJ2	**Nanjing**	**44.16**	**331**	*e*P		**P**	**14 09 06.5**	**+1.9**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.6s							
RPSI	**Rantau Prapat**	**44.34**	**280**	P		**P**	**14 09 06.7**	**+0.2**
URZ	**Urewera**	**44.80**	**141**	LR		LR	14 26 57.7	
	comp=Z,58nm,18.0s,baz=301,slow=35							
TUWZ	**Tuamarina**	**44.94**	**146**	P		**P**	**14 09 13.0**	**+2.1**
RPZ	**Rata Peaks**	**45.06**	**151**	LR		LR	14 28 19.0	
	comp=Z,114nm,18.4s,baz=265,slow=36							
KSRS	**Korea Array**	**45.46**	**344**	P		**P**	**14 09 14.7**	**-0.2**
	comp=Z,7.6nm,1.0s,baz=156,slow=8.7,SNR=9.4							
KSRS				LR		LR	14 26 05.7	
	comp=Z,26nm,21.3s,baz=160,slow=33							
	comp=Z,7.6nm,1.0s							
JTM	**Tenmabayashi**	**46.73**	**359**	P		**P**	**14 09 23.2**	**-1.7**
PHRA	**Phrae**	**48.30**	**301**	P		**P**	**14 09 38.4**	**+0.8**
CRAI	**Chiangrai**	**48.97**	**303**	P		**P**	**14 09 43.2**	**+0.5**
CM31	**Chiang Mai Arr**	**49.38**	**301**	P		**P**	**14 09 46.8**	**+0.9**
CM31				IAmb		IAmb	14 09 53.7	
	comp=Z,22nm,1.8s							
CMAR	**Chiang Mai Arr**	**49.38**	**301**	P		**P**	**14 09 46.8**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=123,slow=5.9,SNR=14							
	comp=Z,2.6nm,0.8s							
LYN	**LuoYang**	**49.41**	**327**	⇓P		**P**	**14 09 46.3**	**+0.6**
LYN				pP		pP	14 09 49.5	-4.9
LYN				sP		sP	14 09 52.0	-5.7
LYN				pmax		pmax		
	comp=Z,31nm,0.7s							
LYN				pmax		pmax		
	comp=Z,320nm,4.5s							
CHTO	**Chiang Mai**	**49.54**	**301**	P		**P**	**14 09 46.3**	**-0.7**
KMI	**Kunming**	**49.58**	**310**	⇓P		**P**	**14 09 49.8**	**+2.3**
KMI				pmax		pmax		
	comp=Z,16nm,1.4s							
JKA	**Kamikawa-asahi**	**50.04**	**0**	P		**P**	**14 09 49.2**	**-1.2**
HNS	**HongShan**	**50.48**	**331**	⇓P		**P**	**14 09 54.0**	**+0.2**
HNS				pmax		pmax		
	comp=Z,22nm,1.4s							
USA0B	**Ussuriysk Arra**	**51.01**	**350**	P		**P**	**14 09 56.6**	**-1.1**
USA0B				IAmb		IAmb	14 09 58.3	
	comp=Z,14nm,1.0s							
USRK	**Ussuriysk Ar.**	**51.01**	**350**	P		**P**	**14 09 56.8**	**-0.8**
USRK	**Ussuriysk Ar.**	**51.01**	**350**	P		**P**	**14 09 57.0**	**-0.7**
	comp=Z,6.8nm,0.8s,baz=162,slow=6.5,SNR=12							
	comp=Z,6.8nm,0.8s							
XAN	**Xi'an**	**51.03**	**324**	P		**P**	**14 09 58.0**	**-0.1**
XAN				pmax		pmax		
	comp=Z,19nm,1.5s							
PZH	**PanZhiHua**	**51.09**	**311**	P		**P**	**14 10 00.0**	**+1.2**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.1s							
PZH				pmax		pmax		
	comp=Z,140nm,5.1s							
MDJ	**Mudanjiang**	**51.85**	**348**	P		**P**	**14 10 07.3**	**+3.3**
MDJ				pP		pP	14 10 11.0	-1.8
MDJ				S		S	14 17 15.3	-9.4
MDJ				pmax		pmax		
	comp=Z,7.0nm,1.0s							
MDJ				pmax		pmax		
	comp=Z,380nm,5.0s							
CD2	**Chengdu**	**52.23**	**317**	P		**P**	**14 10 08.3**	**+1.2**
CD2				pmax		pmax		
	comp=Z,20nm,0.7s							
TNCH	**TengChong**	**52.79**	**308**	*e*P		**P**	**14 10 14.0**	**+2.4**
TNCH				pP		pP	14 10 17.0	-3.2
TNCH				pmax		pmax		
	comp=Z,14nm,1.0s							
YSS	**Yuzh-Sakhalins**	**52.88**	**0**	P		**P**	**14 10 09.9**	**-1.7**
YSS				IAmb		IAmb	14 10 16.3	
	comp=Z,8.2nm,0.7s							
BNX	**BinXian**	**53.39**	**347**	⇓P		**P**	**14 10 14.8**	**-0.6**
BNX				pmax		pmax		
	comp=Z,21nm,1.0s							
BNX				pmax		pmax		
	comp=Z,170nm,3.6s							
HHC	**Hu-ho-hao-te**	**54.70**	**332**	*e*P		**P**	**14 10 28.5**	**+3.3**
HHC				pP		pP	14 10 33.0	-0.9
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,55nm,3.6s							
BTO	**Baotou**	**55.26**	**330**	*e*P		**P**	**14 10 31.0**	**+1.8**
BTO				pP		**pP**	**14 10 35.8**	**-2.2**
BTO				sP		**sP**	**14 10 38.0**	**-3.3**
BTO				PP		**PP**	**14 12 37.0**	**+3.9**
BTO				pmax		pmax		
	comp=Z,25nm,1.3s							
BTO				pmax		pmax		
	comp=Z,380nm,5.5s							
LZH	**Lanzhou**	**55.47**	**322**	*e*P		**P**	**14 10 32.5**	**+1.6**
LZH				sP		pP	14 10 38.3	-1.4
LZH				pmax		pmax		
	comp=Z,18nm,1.2s							
KLR	**Kul'dur**	**55.95**	**352**	LR		LR	14 31 15.1	
	comp=Z,27nm,20.9s,baz=132,slow=33							
GTA	**Gaotai**	**60.05**	**323**	*e*P		**P**	**14 11 04.3**	**+1.3**
GTA				pP		pP	14 11 07.0	-4.8
GTA				pmax		pmax		
	comp=Z,7.0nm,1.0s							
PETK	**Petropavlovsk-**	**60.44**	**11**	P		**P**	**14 11 04.5**	**-0.8**
PETK	**Petropavlovsk-**	**60.44**	**11**	P		**P**	**14 11 04.0**	**-1.2**
	comp=Z,10nm,1.0s,baz=117,slow=3.5,SNR=4.8							
	comp=Z,10nm,1.0s							
ULN	**Ulaanbaatar**	**62.16**	**334**	P		**P**	**14 11 16.5**	**-0.7**
ULN				IAmb		IAmb	14 11 18.5	
	comp=Z,8.2nm,1.1s							
SONM	**Songino Array**	**62.43**	**333**	P		**P**	**14 11 16.5**	**-2.5**
SONM	**Songino Array**	**62.43**	**333**	P		**P**	**14 11 18.6**	**-0.4**
	comp=Z,720nm,0.6s,baz=151,slow=6.6,SNR=5.8							
PALK	**Pallekele**	**63.03**	**281**	LR		LR	14 41 31.8	
	comp=Z,29nm,19.5s,baz=215,slow=38							
PPT2	**Papeete2**	**67.19**	**106**	*e*LR		LR	14 32 08.9	
	comp=Z,38nm,22.5s							
PPT2				*e*LR		LR	14 32 12.4	
	comp=Z,105nm,25.5s							
YAK	**Yakutsk**	**68.70**	**354**	LR		LR	14 40 38.1	
	comp=Z,31nm,20.0s,baz=236,slow=35							
WMQ	**Urumqi**	**70.01**	**321**	*e*P		**P**	**14 12 08.5**	**+0.9**
WMQ				pmax		pmax		
	comp=Z,23nm,1.3s							
VNDA	**Vanda**	**72.06**	**176**	LR		LR	14 43 13.3	
	comp=Z,97nm,18.1s,baz=331,slow=35							
ZSN	**Zaisan**	**73.53**	**323**	*e*P		**P**	**14 12 28.6**	**0.0**
	baz=323							

MKAR	**Makanchi Array**	**74.78**	**322**	P		**P**	**14 12 36.1**	**+0.1**
MKAR	**Makanchi Array**	**74.78**	**322**	P		**P**	**14 12 36.6**	**+0.6**
	comp=Z,9.6nm,0.9s,baz=116,slow=6.9,SNR=62							
	comp=Z,9.6nm,0.9s							
MAKZ	**Makanchi**	**74.98**	**322**	P		**P**	**14 12 37.1**	**0.0**
MAKZ				IAmb		IAmb	14 12 41.4	
	comp=Z,15nm,1.0s							
SHLS	**Shalkode**	**75.06**	**318**	*e*P		**P**	**14 12 35.8**	**-2.0**
	comp=Z,6.5nm,0.8s,baz=318							
UZB	**Uzynbulak**	**75.35**	**317**	*e*P		**P**	**14 12 39.8**	**+0.3**
	baz=317							
KPKS	**Kokpek**	**75.70**	**318**	*e*P		**P**	**14 12 41.1**	**-0.4**
	baz=318							
SATY	**Saty**	**75.73**	**317**	*e*P		**P**	**14 12 41.2**	**-0.5**
	comp=Z,7.9nm,1.2s,baz=317							
TDK	**Taldyqorghan**	**76.49**	**319**	*e*P		**P**	**14 12 45.8**	**0.0**
	baz=319							
MDOK	**Medeo**	**76.69**	**317**	*e*P		**P**	**14 12 47.7**	**+0.6**
	baz=317							
TNSS	**Tian-Shan**	**76.71**	**317**	*e*P		**P**	**14 12 47.6**	**+0.1**
	baz=317							
ZAA0	**Zalesovo Array**	**76.78**	**329**	P		**P**	**14 12 46.2**	**-0.9**
ZALV	**Zalesovo Beam**	**76.78**	**329**	P		**P**	**14 12 46.0**	**-1.2**
ZALV	**Zalesovo Beam**	**76.78**	**329**	P		**P**	**14 12 46.4**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=108,slow=4.8,SNR=12							
	comp=Z,3.5nm,0.8s							
NRN	**Naryn**	**76.79**	**315**	P		**P**	**14 12 48.3**	**+0.4**
CHKK	**Chushkaly**	**76.99**	**318**	*e*P		**P**	**14 12 48.7**	**+0.1**
	baz=318							
KUU	**Kurty**	**77.44**	**317**	*e*P		**P**	**14 12 50.9**	**-0.3**
	comp=Z,13nm,1.1s,baz=317							
AAK	**Ala-Archa**	**78.26**	**316**	P		**P**	**14 12 55.8**	**-0.1**
AAK				IAmb		IAmb	14 13 02.5	
	comp=Z,19nm,1.9s							
SGDS	**Sogindy**	**78.44**	**317**	*e*P		**P**	**14 12 56.9**	**0.0**
	baz=316							
KURK	**Kurchatov**	**78.67**	**324**	P		**P**	**14 12 57.5**	**-0.3**
KURK				IAmb		IAmb	14 12 59.1	
	comp=Z,12nm,1.2s							
KURBB	**Kurchatov Arra**	**78.68**	**324**	P		**P**	**14 12 57.8**	**0.0**
	comp=Z,3.9nm,0.9s,baz=113,slow=4.8,SNR=23							
	comp=Z,3.9nm,0.9s							
BTLS	**Baital**	**79.38**	**318**	*e*P		**P**	**14 13 01.8**	**0.0**
	baz=318							
M14K	**Bethel**	**79.45**	**24**	P		**P**	**14 13 01.4**	**-0.3**
ANM	**Nome**	**80.38**	**20**	P		**P**	**14 13 06.5**	**-0.3**
DZA	**Taraz**	**80.55**	**315**	*e*P		**P**	**14 13 08.5**	**+0.3**
	baz=315							
L16K	**Owhat River**	**80.98**	**24**	P		**P**	**14 13 09.4**	**-0.6**
SIMJ	**Simiganj**	**81.05**	**311**	P		**P**	**14 13 10.9**	**-0.3**
SIMJ				IAmb		IAmb	14 13 15.9	
	comp=Z,11nm,0.8s							
KKAR	**Karatay Array**	**81.19**	**315**	P		**P**	**14 13 11.7**	**0.0**
IUG	**Iuzhnay**	**81.25**	**314**	*e*P		**P**	**14 13 12.5**	**+0.3**
	baz=314							
CHM	**Chimkent**	**81.61**	**314**	*e*P		**P**	**14 13 13.8**	**0.0**
	baz=314							
BRLS	**Borolday**	**81.64**	**315**	*e*P		**P**	**14 13 14.1**	**0.0**
	baz=315							
I17K	**Unalakleet**	**81.66**	**22**	P		**P**	**14 13 14.2**	**+0.6**
I17K				IAmb		IAmb	14 13 15.8	
	comp=Z,9.3nm,1.1s							
BRZS	**Berezniki**	**81.92**	**322**	*e*P		**P**	**14 13 14.8**	**-0.5**
	baz=322							
H17K	**Granite Mounta**	**82.52**	**21**	P		**P**	**14 13 18.0**	**-0.1**
H17K				IAmb		IAmb	14 13 19.3	
	comp=Z,8.0nm,0.9s							
G18K	**Tagagawik**	**83.47**	**21**	P		**P**	**14 13 22.3**	**-0.7**
QSPA	**South Pole Qui**	**83.81**	**180**	P		**P**	**14 13 25.8**	**+0.8**
	comp=Z,14nm,1.0s,baz=332,slow=0.8,SNR=24							
QSPA				LR		LR	14 52 02.0	
	comp=Z,132nm,18.4s,baz=231,slow=36							
	comp=Z,14nm,1.0s							
NRIK	**Noril'sk**	**84.07**	**343**	P		**P**	**14 13 25.9**	**-0.1**
NRIK	**Noril'sk**	**84.07**	**343**	P		**P**	**14 13 26.1**	**+0.1**
	comp=Z,9.2nm,0.9s,baz=115,slow=6.1,SNR=14							
	comp=Z,9.2nm,0.9s							
BVAR	**Borovoye Array**	**84.26**	**325**	P		**P**	**14 13 27.9**	**+0.5**
	comp=Z,17nm,0.8s,baz=106,slow=5.4,SNR=55							
	comp=Z,17nm,0.8s							
J20K	**Nowinta River**	**84.31**	**23**	P		**P**	**14 13 26.9**	**-0.4**
J20K				IAmb		IAmb	14 13 28.6	
	comp=Z,9.7nm,1.1s							
BRVK	**Borovoye**	**84.33**	**325**	P		**P**	**14 13 27.8**	**+0.1**
CAST	**Castle Rocks**	**84.81**	**24**	P		**P**	**14 13 28.8**	**-1.2**
CAST				IAmb		IAmb	14 13 30.0	
	comp=Z,10nm,1.1s							
MLY	**Manley**	**86.00**	**23**	P		**P**	**14 13 35.1**	**-0.8**
MLY				IAmb		IAmb	14 13 36.3	
	comp=Z,7.6nm,1.0s							
RND	**Reindeer**	**86.14**	**25**	P		**P**	**14 13 35.2**	**-1.4**
RND				IAmb		IAmb	14 13 38.3	
	comp=Z,11nm,1.0s							
DHY	**Denali Highway**	**86.64**	**25**	P		**P**	**14 13 38.6**	**-0.6**
DHY				IAmb		IAmb	14 13 39.5	
	comp=Z,16nm,1.1s							
WRH	**Wood River Hil**	**86.84**	**24**	P		**P**	**14 13 38.3**	**-1.6**
WRH				IAmb		IAmb	14 15 38.2	
	comp=Z,25nm,1.6s							
CCB	**Clear Creek Bu**	**87.02**	**24**	P		**P**	**14 13 38.9**	**-1.9**
CCB				IAmb		IAmb	14 13 40.1	
	comp=Z,7.3nm,0.8s							
IL31		**87.43**	**24**	P		**P**	**14 13 40.5**	**-2.3**
IL31				IAmb		IAmb	14 13 42.1	
	comp=Z,6.2nm,0.9s							
ILAR	**Eielson Array**	**87.43**	**24**	P		**P**	**14 13 41.0**	**-1.8**
ILAR	**Eielson Array**	**87.43**	**24**	P		**P**	**14 13 40.5**	**-2.3**
	comp=Z,4.2nm,0.8s,baz=254,slow=5.1,SNR=38							
	comp=Z,4.2nm,0.8s							
BARN	**Barnard Glacie**	**88.58**	**28**	P		**P**	**14 13 48.5**	**-0.1**
BMAR	**Burnt Mountain**	**89.19**	**22**	P		**P**	**14 13 51.5**	**+0.3**
GEYT	**Alibeck**	**89.29**	**308**	P		**P**	**14 13 51.4**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=151,slow=46,SNR=2.0							
	comp=Z,1.5nm,0.8s							
ABKAR	**Akbulak array**	**89.75**	**319**	P		**P**	**14 13 53.5**	**-0.6**
DAWY	**Dawson**	**90.35**	**25**	P		**P**	**14 13 56.5**	**-0.2**
DAWY				IAmb		IAmb	14 14 02.5	
	comp=Z,22nm,1.8s							
ELIB	**Princess Elisa**	**92.84**	**196**	*d*P		**P**	**14 14 08.6**	**+0.3**
	comp=Z,6.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**140.73**	**283**	PKhKP		PKPpre	14 20 22.7	
	comp=Z,1.7nm,1.0s,baz=49,slow=4.7,SNR=5.8							
CPUP	**Villa Florida**	**142.43**	**150**	PKP		**PKPdf**	**14 20 29.0**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=260,slow=6.2,SNR=1.4							
KIC	**Kosan Boka**	**147.39**	**272**	⇑*i*P		**PKiKP**	**14 20 46.4**	**+3.6**
	comp=Z,24nm,0.9s							
DBIC	**Dimbokro**	**147.51**	**273**	PKPbc		**PKPbc**	**14 20 41.5**	**+0.6**
	comp=Z,10nm,0.9s,baz=51,slow=6.0,SNR=5.4							
LIC	**Lamto**	**147.67**	**272**	⇑*e*P		**PKiKP**	**14 20 42.3**	**-1.1**
	comp=Z,22nm,0.9s							
TIC	**Toumodi**	**147.67**	**273**	⇑*e*P		**PKPab**	**14 20 45.3**	**+1.6**
	comp=Z,23nm,1.0s							

*NCEDC **28** 14:09:51.1±1.8, 40.41N±0.08×127.0W±0.1, h12km±2km, Error ellipse: s-maj=14.3km s-min=12.3km az=243.0*
NEIC 28 14:09:49.2±1.8,**40.39**N±0.08×**127.1W**±0.1,**h10**km±2km, **ML3.1**/48,**ML3.1**/6(NCEDC),**Error ellipse: s-maj=14.4km s-min=12.4km az=243.0,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**2.11**	**87**		Pn	14 10 24.6	+0.1
KCTM					Sn	14 10 50.9	+0.1
KMPM	**Mount Pierce**	**2.27**	**88**		Pn	14 10 26.9	0.0
KMPM	**Mount Pierce**	**2.27**	**88**		Sn	14 10 54.3	-0.7
KMPM	**Mount Pierce**	**2.27**	**88**	IAML		14 10 57.4	
	comp=N,138nm,0.7s						
KMPM				IAML		14 10 57.4	
	comp=E,160nm,0.7s						
JCC	**Jacoby Creek,**	**2.38**	**79**	Pn	Pn	14 10 27.6	-0.6
KRPM	**Rodgers**	**2.46**	**71**	Pn	Pn	14 10 28.4	-1.0
KRPM				IAML		14 11 10.5	
	comp=E,64nm,3.5s						
KRPM				IAML		14 11 22.5	
	comp=N,62nm,2.9s						
KCRM	**Chalk Rock**	**2.50**	**88**		Pn	14 10 30.0	-0.1
KCRM					Sn	14 11 00.0	-0.6
KMRM	**Mail Ridge**	**2.60**	**93**	Pn	Pn	14 10 31.6	+0.2
KMRM				IAML		14 11 05.6	
	comp=E,71nm,0.7s						
KMRM				IAML		14 11 05.9	
	comp=N,65nm,1.0s						
KHMM	**Horse Mountain**	**2.61**	**78**	Pn	Pn	14 10 30.6	-0.9
KHMM				IAML		14 11 06.5	
	comp=E,33nm,0.6s						
KHMM				IAML		14 11 06.9	
	comp=N,35nm,0.5s						
KRMB	**Red Mountain**	**2.67**	**64**	Pn	Pn	14 10 32.0	-0.4
KCPM	**Cahto Peak**	**2.79**	**103**		Pn	14 10 34.2	+0.2
KCPM				IAML		14 11 07.3	
	comp=N,106nm,0.6s						
KSXB	**Camp Six Broad**	**2.83**	**58**	Pn	Pn	14 10 33.7	-0.8
KBO	**Bosley Butte**	**2.83**	**49**	Pn	Pn	14 10 33.8	-0.8
KBO				IAML		14 11 19.5	
	comp=N,60nm,3.1s						
KBO				IAML		14 12 19.9	
	comp=E,77nm,2.5s						
KIPM	**Iron Peak**	**2.83**	**101**		Pn	14 10 35.2	+0.5
GTC	**Three Chop Rid**	**2.90**	**109**		Pn	14 10 35.3	-0.1
KOMM	**Orleans Mounta**	**2.91**	**71**		Pn	14 10 35.1	-0.5
KFPM	**Farley Peak**	**2.92**	**104**		Pn	14 10 36.5	+0.8
KHBM	**Hayfork Bally**	**2.97**	**83**		Pn	14 10 36.0	-0.5
KBNM	**Bluenose Ridge**	**3.03**	**98**		Pn	14 10 38.0	+0.6
DCMP	**DeCamp, Califo**	**3.03**	**106**		Pn	14 10 37.4	+0.1
GWRM	**Wonder Ranch**	**3.15**	**111**		Pn	14 10 38.8	-0.2
GGUM	**Gualala**	**3.17**	**118**		Pn	14 10 38.8	-0.4
L02F	**Cave Junction**	**3.17**	**56**		Pn	14 10 39.0	-0.2
KEBM	**Edson Butte**	**3.23**	**39**	Pn	Pn	14 10 39.4	-0.6
KEBM				IAML		14 11 50.4	
	comp=E,83nm,3.0s						
KEBM				IAML		14 12 05.6	
	comp=N,68nm,2.2s						
O02D	**Mt. Diablo Mer**	**3.30**	**92**		Pn	14 10 41.6	+0.5
GHMM	**Hull Mountain**	**3.33**	**104**		Pn	14 10 42.0	+0.6
HOPS	**Hopland Field**	**3.40**	**113**	Pn	Pn	14 10 42.0	-0.3
HOPS				IAML		14 11 36.7	
	comp=E,42nm,2.7s						
HOPS				IAML		14 12 47.5	
	comp=N,56nm,4.3s						
K02D	**Willamette Mer**	**3.46**	**47**		Pn	14 10 43.2	+0.1
K02D				IAML		14 11 17.2	
	comp=E,22nm,2.6s						
K02D				IAML		14 11 53.1	
	comp=N,18nm,4.5s						
YBH	**Yreka Blue Hor**	**3.58**	**67**	Pn	Pn	14 10 45.4	+0.5
J01E	**Myrtle Point**	**3.65**	**39**	Pn	Pn	14 10 44.5	-1.1
J01E				IAML		14 12 41.7	
	comp=N,46nm,2.7s						
HUMO	**Hull Mountain**	**3.82**	**53**	Pn	Pn	14 10 47.9	-0.2
MCCM	**Marconi Confer**	**3.97**	**123**	Pn	Pn	14 10 49.5	-0.5
L04D	**Klamath Falls**	**4.05**	**62**		Pn	14 10 53.1	+1.8
L04D				IAML		14 11 20.3	
	comp=E,36nm,4.5s						
L04D				IAML		14 12 32.2	
	comp=N,26nm,5.0s						
K04D	**Chiloquin, OR**	**4.59**	**59**		Pn	14 10 59.5	+0.7
BUCK	**Buck Mountain**	**4.88**	**37**	Pn	Pn	14 11 02.2	-0.4
AFDM	**Forest Hills D**	**4.94**	**105**		Pn	14 11 05.5	+2.0
AFDM				IAML		14 12 09.4	
	comp=N,6.5nm,4.8s						
AFDM				IAML		14 13 52.0	
	comp=E,8.0nm,5.0s						
K05A	**Summer Lake**	**5.21**	**61**	Pn	Pn	14 11 07.8	+0.5
K05A				IAML		14 12 45.1	
	comp=E,18nm,4.7s						
K05A				IAML		14 12 57.0	
	comp=N,16nm,4.5s						
J05D	**Fort Rock, OR**	**5.25**	**55**	Pn	Pn	14 11 08.8	+1.0
H04A	**Detroit Lake**	**5.62**	**39**	Pn	Pn	14 11 12.8	0.0
PINE	**Pine Mountain**	**5.71**	**51**	Pn	Pn	14 11 15.3	+1.2
SAO	**San Andreas Ge**	**5.72**	**127**	Pn	Pn	14 11 13.2	-0.9
PNTR	**Pine Nut**	**5.92**	**100**	Pn	Pn	14 11 20.1	+2.9
BBGB	**Big Mountain B**	**6.09**	**127**	Pn	Pn	14 11 19.1	-0.2
G05A	**Wamic**	**6.45**	**39**	Pn	Pn	14 11 25.6	+1.4
PMPB	**Monarch Peak**	**6.47**	**128**	Pn	Pn	14 11 23.7	-0.8
I07A	**Izee**	**6.74**	**54**	Pn	Pn	14 11 29.9	+1.7
MDPB	**Devils Postpil**	**6.82**	**111**		Pn	14 11 32.1	+2.6
LON	**Longmire**	**7.43**	**29**	Pn	Pn	14 11 39.3	+1.7
GNW	**Green Mountain**	**7.81**	**22**	Pn	Pn	14 11 42.6	-0.2
ISA	**Isabella, Lake**	**8.28**	**122**	Pn	Pn	14 11 51.0	+1.6
BMO	**Blue Mountains**	**8.48**	**55**	Pn	Pn	14 11 54.3	+2.1
GSC	**Goldstone, Bar**	**9.59**	**119**	Pn	Pn	14 12 09.6	+2.2

*IDC **28** 14:11:45.0±0.9, 37.65N×112.55W, h0km, mb3.6/1, mbtmp3.1/8,ML3.3/7,MS2.8/2, Error ellipse: s-maj=10.0km s-min=9.6km az=46.0*
*NEIC **28** 14:11:47.1±1.3, 37.66N±0.02×112.50W±0.02, h16km±5km, Error ellipse: s-maj=2.8km s-min=2.7km az=160.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.87; $M_{\theta\theta}$=0.64; $M_{\phi\phi}$=3.51; $M_{r\theta}$=1.52; $M_{r\phi}$=-0.31; $M_{\theta\phi}$=0.68; Fault plane solution: $M_0$3.65000×10^{14} NP1: ϕ_s151.95000°,δ57.30000°,λ-120.55000°. NP2: ϕ_s19.49000°,δ43.56000°,λ-51.62000°. Princip

SUU	**Santaquin Cany**	**2.25**	**14**			**Pn**	**14 12 26.2**	**+1.1**
Q12A	**Willow Creek R**	**2.27**	**307**	Pn		**Pn**	**14 12 25.1**	**-0.1**
Q12A				IAML			14 13 05.1	
	comp=N,860nm,0.8s							
Q12A				IAML			14 13 05.5	
	comp=E,584nm,1.0s							
NLU	**North Lily Min**	**2.28**	**8**	Pn		**Pn**	**14 12 26.0**	**+0.6**
NLU				IAML			14 13 01.5	
	comp=E,320nm,0.4s							
NLU				IAML			14 13 02.8	
	comp=N,187nm,0.5s							
WUAZ	**Wupatki**	**2.36**	**157**			**Pn**	**14 12 26.8**	**+0.3**
WUAZ	**Wupatki**	**2.36**	**157**	P		**Pn**	**14 12 26.7**	**+0.3**
	baz=337,SNR=154							
WUAZ				S		**Sb**	**14 12 58.1**	**-1.3**
	baz=337							
MPU	**Maple Canyon**	**2.41**	**16**			**Pn**	**14 12 27.3**	**+0.1**
EMUT	**Emma Park**	**2.49**	**31**			**Pb**	**14 12 30.5**	**-2.0**
DCM	**Dugout Coal Mi**	**2.49**	**36**			**Pg**	**14 12 34.0**	**-1.3**
DUG	**Dugway, Tooele**	**2.50**	**354**	Pn		**Pn**	**14 12 28.1**	**-0.4**
DUG				IAML			14 13 11.4	
	comp=N,179nm,0.8s							
DUG				IAML			14 13 11.5	
	comp=N,157nm,1.0s							
DUG	**Dugway, Tooele**	**2.50**	**354**	P		**Pn**	**14 12 28.1**	**-0.4**
	baz=175,SNR=49							
DUG				Sb		**Sg**	**14 13 07.6**	**-0.4**
	baz=175							
WTNK	**Soaring Height**	**2.51**	**234**			**Pn**	**14 12 28.0**	**-0.5**
R11B	**Troy Canyon, C**	**2.52**	**286**	Pn		**Pn**	**14 12 27.9**	**-0.8**
R11B	**Troy Canyon, C**	**2.52**	**286**	P		**Pn**	**14 12 28.0**	**-0.8**
	baz=105,SNR=223							
R11B				Sb		**Sg**	**14 13 06.2**	**-2.5**
	baz=105							
ROA	**Roan Cliffs**	**2.57**	**40**			**Pb**	**14 12 32.1**	**-1.8**
S11A	**Rachel**	**2.58**	**270**			**Pn**	**14 12 28.8**	**-0.7**
P18A	**Preston Nutter**	**2.61**	**42**			**Pn**	**14 12 31.0**	**+0.9**
P18A				IAML			14 13 11.4	
	comp=E,492nm,0.4s							
P18A				IAML			14 13 17.6	
	comp=N,281nm,0.7s							
ARGU	**Argyle Ridge**	**2.61**	**35**			**Pb**	**14 12 32.6**	**-2.0**
R19A	**Curley Farm, L**	**2.62**	**76**			**Pb**	**14 12 34.1**	**-0.7**
HTU	**Hoyt Peak**	**3.13**	**18**			**Pn**	**14 12 39.0**	**+1.7**
MVCO	**Mesa Verde**	**3.22**	**98**			**Pn**	**14 12 39.5**	**+1.1**
MVCO	**Mesa Verde**	**3.22**	**98**	P		**Pn**	**14 12 39.5**	**+1.1**
	baz=280,SNR=70							
MVCO				Sb		**Sg**	**14 13 27.7**	**-3.3**
	baz=280							
NEE2	**Needles Airpor**	**3.39**	**211**	P		**Pn**	**14 12 40.7**	**+0.2**
	baz=30							
NEE2				Sb		**Sb**	**14 13 29.7**	**+0.7**
	baz=30							
W18A	**Petrified Fore**	**3.41**	**138**	P		**Pn**	**14 12 42.1**	**+1.2**
	baz=319,SNR=17							
W18A				Sb		**Sb**	**14 13 31.9**	**+2.4**
	baz=319							
WCT	**Wildcat Mounta**	**3.42**	**256**			**Pn**	**14 12 40.3**	**-0.6**
SHOC	**Shoshone, Teco**	**3.52**	**241**	P		**Pn**	**14 12 42.3**	**-0.1**
	baz=58							
SHOC				Sb		**Sb**	**14 13 33.6**	**+0.7**
	baz=58							
TUQ	**Turquoise Moun**	**3.56**	**232**	P		**Pn**	**14 12 42.5**	**-0.5**
	baz=50,SNR=6.2							
PDMCI	**Parker Dam,Lak**	**3.64**	**202**	Pb		**Pb**	**14 12 51.4**	**-0.6**
	baz=21,SNR=17							
PDMCI				Sb		**Sb**	**14 13 37.6**	**+1.4**
	baz=21							
RDMU	**Red Mountain**	**3.66**	**38**			**Pn**	**14 12 45.0**	**+0.6**
RDMU				IAML			14 13 41.2	
	comp=N,95nm,0.7s							
RDMU				IAML			14 13 53.1	
	comp=E,133nm,0.7s							
GWY	**Greenwater Val**	**3.67**	**247**	Pn		**Pn**	**14 12 44.0**	**-0.5**
GWY				IAML			14 13 49.4	
	comp=N,65nm,0.8s							
GWY				IAML			14 13 51.8	
	comp=E,93nm,1.0s							
FURC	**Furnace Creek,**	**3.70**	**252**	P		**Pn**	**14 12 44.9**	**+0.2**
	baz=70,SNR=14							
FURC				Sb		**Sb**	**14 13 40.3**	**+2.4**
	baz=70							
ELK	**Elko**	**3.71**	**326**	Pn		**Pn**	**14 12 44.4**	**-0.7**
	comp=E,0.7nm,0.3s,baz=155,slow=8.3,SNR=14							
ELK				Pg		**Pg**	**14 12 56.8**	**-1.9**
	comp=E,1.6nm,0.3s,baz=148,slow=18,SNR=11							
ELK				Lg		Lg	14 13 42.2	
	comp=E,5.4nm,0.3s,baz=39,slow=23,SNR=14							
	comp=E,1.2nm,0.3s							
TPH	**Tonopah**	**3.76**	**277**			**Pn**	**14 12 45.2**	**-0.5**
X18A	**Snowflake**	**3.77**	**146**			**Pn**	**14 12 46.4**	**+0.4**
GMN	**Gold Mountain**	**3.81**	**265**			**Pn**	**14 12 46.2**	**-0.3**
GMN				IAML			14 13 59.4	
	comp=N,71nm,0.7s							
GMRC	**Granite Mounta**	**3.87**	**222**	P		**Pn**	**14 12 46.6**	**-0.6**
	baz=40,SNR=8.2							
GMRC				Sb		**Sb**	**14 13 45.9**	**+2.9**
	baz=40							
MZP	**Montezuma Peak**	**3.88**	**272**			**Pn**	**14 12 46.6**	**-0.8**
QSM	**Queen of Sheba**	**3.91**	**245**	Pn		**Pn**	**14 12 47.4**	**-0.3**
QSM				IAML			14 14 09.8	
	comp=E,55nm,0.9s							
QSM				IAML			14 14 12.3	
	comp=N,50nm,1.1s							
GRAC	**Grapevine Rang**	**3.94**	**261**	Pg		**Pg**	**14 13 00.7**	**-2.4**
	baz=79							
HWUT	**Hardware Ranch**	**3.97**	**10**	Pn		**Pn**	**14 12 51.1**	**+2.4**
O20A	**White River Ci**	**4.11**	**52**	Pn		**Pn**	**14 12 53.2**	**+2.6**
O20A	**White River Ci**	**4.11**	**52**	P		**Pn**	**14 12 52.3**	**+1.6**
	baz=235,SNR=9.0							
O20A				Sb		**Sb**	**14 13 54.3**	**+4.3**
	baz=235							
LCH	**Last Change Ra**	**4.12**	**265**			**Pn**	**14 12 50.1**	**-0.6**
LCH				IAML			14 14 13.9	
	comp=E,48nm,1.1s							
IRM	**Iron Mountain**	**4.14**	**212**	P		**Pn**	**14 12 50.8**	**0.0**
	baz=30							
IRM				Sb		**Sb**	**14 13 53.3**	**+2.8**
	baz=30							
GSC	**Goldstone, Bar**	**4.22**	**237**			**Pn**	**14 12 51.8**	**-0.2**
GSC				IAML			14 14 04.3	
	comp=N,58nm,1.0s							
GSC				IAML			14 14 07.8	
	comp=E,68nm,0.7s							
GSC	**Goldstone, Bar**	**4.22**	**237**	P		**Pn**	**14 12 51.7**	**-0.2**
	baz=54,SNR=7.3							
GSC				Sb		**Sb**	**14 13 55.9**	**+3.0**
	baz=54							
HEC	**Hector,Ludlow**	**4.22**	**228**	P		**Pn**	**14 12 51.4**	**-0.6**
	baz=46							
HEC				Sb		**Sb**	**14 13 56.4**	**+3.4**
	baz=46							
MPMC	**Manual Prospec**	**4.33**	**249**	P		**Pn**	**14 12 53.2**	**-0.4**
	baz=66,SNR=6.4							
MPMC				Sb		**Sb**	**14 13 59.4**	**+3.3**
	baz=66							
DSP	**Deep Springs**	**4.36**	**267**	Pn		**Pn**	**14 12 53.7**	**-0.1**
NV11	**Mina Array Sit**	**4.53**	**281**	Pn		**Pn**	**14 12 55.7**	**-0.6**
NV11				IAML			14 14 22.5	
	comp=E,37nm,1.1s							
SMCO	**Snowmass**	**4.58**	**70**			**Pn**	**14 12 59.2**	**+1.9**
KVN	**Kaiserville**	**4.61**	**289**	Pn		**Pn**	**14 12 57.5**	**+0.2**
KVN				IAML			14 14 15.0	
	comp=N,62nm,0.5s							
KVN				IAML			14 14 15.7	
	comp=E,61nm,0.6s							
CWC	**Cottonwood Cre**	**4.64**	**256**	P		**Pn**	**14 12 58.4**	**+0.5**
	baz=73							
NVAR	**Mina Array Bea**	**4.64**	**281**	Pn		**Pn**	**14 12 57.1**	**-0.8**
	comp=E,0.6nm,0.3s,baz=105,slow=13,SNR=16							
NVAR				Pg		**Pb**	**14 13 09.7**	**+0.6**
	comp=E,3.6nm,0.3s,baz=99,slow=14,SNR=33							
NVAR				Lg		Lg	14 14 10.9	
	baz=358,slow=40							
	comp=E,0.9nm,0.5s							
BELC	**Belle Mtn. Jos**	**4.66**	**219**	P		**Pn**	**14 12 57.8**	**-0.3**
	baz=36							
BELC				Sb		**Sb**	**14 14 09.9**	**+4.3**
	baz=36							
BC3	**Big Chuckawall**	**4.70**	**212**	P		**Pn**	**14 12 58.3**	**-0.3**
	baz=30							
BC3				Sb		**Sb**	**14 14 11.7**	**+5.0**
	baz=30							
LRMC	**Laurel Mtn Rad**	**4.72**	**244**	P		**Pn**	**14 12 58.8**	**-0.1**
	baz=61,SNR=5.1							
LHV	**Little Huntoon**	**4.78**	**278**			**Pn**	**14 12 59.4**	**-0.2**
LHV				IAML			14 14 27.1	
	comp=E,67nm,1.0s							
LHV				IAML			14 14 27.5	
	comp=N,75nm,0.7s							
BBRC	**Big Bear Solar**	**4.96**	**228**	P		**Pn**	**14 13 01.4**	**-0.9**
	baz=45							
PFO	**Pinyon Flats O**	**5.20**	**220**	Pn		**Pn**	**14 13 04.0**	**-1.5**
	comp=N,0.1nm,0.3s,baz=35,slow=17,SNR=1.9							
PFO				Lg		Lg	14 14 27.1	
	comp=N,0.5nm,0.3s,baz=76,slow=22,SNR=5.7							
PFO				LR		LR	14 15 19.3	
	comp=N,134nm,18.2s,baz=50,slow=42							
	comp=N,2.7nm,0.8s							
ISA	**Isabella, Lake**	**5.22**	**249**	P		**Pn**	**14 13 05.8**	**+0.1**
	baz=65							
EDW2	**Edwards Air Fo**	**5.25**	**239**	P		**Pn**	**14 13 06.2**	**0.0**
	baz=56							
BW06	**Boulder Array**	**5.54**	**23**	P		**Pn**	**14 13 12.1**	**+1.8**
	baz=205							
PD31	**Pinedale Array**	**5.54**	**23**	Pn		**Pn**	**14 13 12.5**	**+2.2**
PDAR	**Pinedale Array**	**5.54**	**23**	Pn		**Pn**	**14 13 11.4**	**+1.2**
	comp=N,0.5nm,0.3s,baz=209,slow=12,SNR=15							
PDAR				Pg		**Pg**	**14 13 29.7**	**-3.9**
	comp=N,1.2nm,0.3s,baz=198,slow=13,SNR=7.3							
PDAR				Lg		Lg	14 14 42.0	
	comp=N,1.6nm,0.3s,baz=187,slow=27,SNR=4.4							
PDAR				LR		LR	14 15 59.9	
	comp=N,65nm,19.3s,baz=174,slow=46							
	comp=N,3.1nm,0.9s							
SDCO	**Great Sand Dun**	**5.55**	**87**			**Pn**	**14 13 12.0**	**+1.6**
SDCO	**Great Sand Dun**	**5.55**	**87**	P		**Pn**	**14 13 12.2**	**+1.8**
	baz=271							
ANMO	**Albuquerque**	**5.60**	**118**	Pn		**Pn**	**14 13 12.0**	**+1.0**
ANMO	**Albuquerque**	**5.60**	**118**	P		**Pn**	**14 13 12.4**	**+1.4**
	baz=301							
ANMO	**Albuquerque**	**5.60**	**118**	Pn		**Pn**	**14 13 11.5**	**+0.5**
	comp=N,1.0nm,0.3s,baz=302,slow=9.8,SNR=17							
ANMO				Pg		**Pb**	**14 13 25.9**	**+0.5**
	comp=N,2.2nm,0.3s,baz=53,slow=9.6,SNR=10.0							
ANMO				Lg		Lg	14 14 39.5	
	comp=N,2.4nm,0.3s,baz=230,slow=16,SNR=4.8							
	comp=N,4.0nm,0.6s							
VES	**Vestal, Richgr**	**5.60**	**253**	P		**Pn**	**14 13 11.7**	**+0.8**
	baz=69							
PNTR	**Pine Nut**	**5.75**	**286**	Pn		**Pn**	**14 13 15.3**	**+2.2**
TPAW	**Teton Pass**	**5.90**	**11**			**Pn**	**14 13 18.2**	**+2.9**
BAR	**Barrett**	**6.06**	**216**	Pn		**Pn**	**14 13 17.0**	**-0.2**
K22A	**Casper**	**6.74**	**41**			**Pn**	**14 13 28.1**	**+1.5**
YBH	**Yreka Blue Hor**	**8.84**	**300**	Pn		**Pn**	**14 13 56.5**	**+1.1**
	comp=N,0.2nm,0.3s,baz=195,slow=15,SNR=1.9							
YBH				Lg		Lg	14 16 21.5	
	baz=307,slow=20,SNR=1.5							
	comp=N,0.6nm,0.3s							
TXAR	**Lajitas Array**	**11.12**	**136**	Pn		**Pn**	**14 14 29.2**	**+2.4**
	comp=N,0.1nm,0.3s,baz=320,slow=11,SNR=1.4							
TXAR				Pg			14 15 09.2	
	comp=N,0.1nm,0.3s,baz=39,slow=34,SNR=2.6							
TXAR				Lg		Lg	14 17 31.8	
	comp=N,0.1nm,0.3s,baz=347,slow=37,SNR=2.0							
	comp=N,0.1nm,0.4s							
YKA	**Yellowknife Ar**	**24.86**	**358**	P		**P**	**14 17 10.0**	**+0.1**
	comp=N,1.5nm,1.0s,baz=176,slow=9.8,SNR=19							
	comp=N,1.5nm,1.0s							

*JMA **28** 14:16:01.7±0.1, 24°.3N±0°.2×123°.8E±0°.2, h16km, MV3.2/10, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
ISC 28 14:16:01.7±0.9, 24°.23N±0°.05×123°.82E±0°.03, h17km±6km, n15, σ0°.46/23, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.13**	**321**	*i* P	**Pg**	**14 16 05.3**	**-0.2**
IRIF				S	**Sg**	**14 16 08.0**	**-0.1**
JKRS	**Kuro-shima**	**0.17**	**88**	*i* P	**Pg**	**14 16 06.2**	**+0.1**
JKRS				S	**Sg**	**14 16 09.3**	**+0.2**
HATJ	**Hateruma jima**	**0.18**	**184**	*i* P	**Pg**	**14 16 06.1**	**0.0**
HATJ				S	**Sg**	**14 16 09.3**	**+0.2**
JIJ	**Ishigaki jima**	**0.32**	**66**	*i* P	**Pg**	**14 16 08.2**	**-0.3**
JIJ				S	**Sg**	**14 16 12.9**	**-0.3**
JISG	**Ishigakijimahi**	**0.57**	**52**	*i* P	**Pg**	**14 16 12.6**	**-0.4**
JISG				S	**Sg**	**14 16 20.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.77**	**287**	P	**Pb**	**14 16 16.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.77**	**287**	*i* P	**Pb**	**14 16 16.4**	**-0.3**
YOJ				S	**Sg**	**14 16 26.9**	**-0.1**
JYNG	**Yonagunijimaku**	**0.83**	**285**	P	**Pb**	**14 16 17.4**	**-0.2**
JYNG				S	**Sb**	**14 16 28.5**	**+0.1**
JTJ	**Tarama**	**0.90**	**63**	P	**Pb**	**14 16 18.8**	**-0.2**
JTJ				S	**Sg**	**14 16 31.4**	**+0.3**
JMJ	**Miyako jima 2**	**1.46**	**66**	P	**Pb**	**14 16 28.6**	**+0.1**
NACB	**Ninganchiao**	**2.03**	**269**	P	**Pn**	**14 16 35.7**	**+0.5**
YHNB	**Yeheng**	**2.27**	**282**	P	**Pn**	**14 16 39.8**	**+1.3**
YULB	**Yu-li**	**2.46**	**251**	P	**Pn**	**14 16 40.8**	**-0.3**
SSLB	**Suanglung**	**2.66**	**261**	P	**Pn**	**14 16 44.5**	**+0.7**
TWGBT	**Beinan**	**2.88**	**241**	P	**Pn**	**14 16 46.0**	**-0.9**

IDC 28 14:16:24.2±2.2, 7°.50S×131°.45E, h0km, mb3.6/1, mbtmp3.4/3, ML3.2/2, MS4.4/1, Error ellipse: s-maj=98.6km s-min=26.0km az=73.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.68**	**168**	Pn	Pn	14 19 26.7	+0.7
	0.1nm,0.3s,baz=350,slow=13,SNR=5.4						
WRA				Sn	Sn	14 21 47.2	-0.9
	0.4nm,0.3s,baz=346,slow=24,SNR=5.8						
	1.2nm,1.0s						
ASAR	**Alice Springs**	**16.25**	**172**	Pn	Pn	14 20 15.2	+1.3
	0.1nm,0.3s,baz=353,slow=13,SNR=5.3						
ASAR				Sn	Sn	14 23 13.8	-1.3
	0.1nm,0.3s,baz=358,slow=25,SNR=4.2						
	0.2nm,0.3s						
HNR	**Honiara**	**28.25**	**96**	LR	LR	14 33 10.3	
	comp=Z,688nm,18.2s,baz=308,slow=36						
MKAR	**Makanchi Array**	**69.43**	**326**	P	P	14 27 34.2	-0.1
	0.2nm,0.4s,baz=111,slow=6.7,SNR=6.5						
	0.2nm,0.4s						

IDC 28 14:17:24.6±2.1, 5°.98S×142°.63E, h0km, mb3.3/1, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=50.3km s-min=35.2km az=71.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.63**	**127**	Pn	Pn	14 18 49.3	-0.3
	3.0nm,0.5s,baz=151,slow=23,SNR=2.0						
PMG				Sn	Sn	14 19 51.3	-3.7
	0.4nm,0.3s,baz=240,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**16.05**	**209**	Pn	Pn	14 21 11.3	-0.6
	baz=29,slow=12,SNR=1.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**19.49**	**205**	P	P	14 21 53.8	+0.3
	0.1nm,0.3s,baz=30,slow=10,SNR=4.6						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**74.75**	**322**	P	P	14 29 06.7	+0.1
	0.2nm,0.7s,baz=116,slow=5.6,SNR=2.1						
	0.2nm,0.7s						

*NEIC **28** 14:20:40.4±0.7, 19°.441N±0°.010×155°.408W±0°.008, h11km±2km, Error ellipse: s-maj=1.4km s-min=1.0km az=185.0*
HVO 28 14:20:40.4±0.6, 19°.422N±0°.010×155°.398W±0°.007, h8km±2km, ML3.0/22, ML2.8/50(NEIC), Error ellipse: s-maj=1.5km s-min=1.0km az=182.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLH	**Mauna Loa**	**0.07**	**9**	Pg	Pg	14 20 43.0	+0.4
MLH				IAML		14 20 45.1	
	comp=E,5μm,0.1s						
WRMHI	**West Rim**	**0.09**	**100**	Pg	Pg	14 20 43.3	+0.4
WRMHI				IAML		14 20 45.5	
	comp=N,5μm,0.1s						
UWE	**Uwekahuna**	**0.10**	**91**		Pg	14 20 43.4	+0.4
UWE	**Uwekahuna**	**0.10**	**91**	IAML		14 20 46.9	
	comp=N,3μm,0.3s						
UWE				IAML		14 20 47.0	
	comp=E,4μm,0.2s						
SDHHI	**Sand Hill**	**0.10**	**108**		Pg	14 20 43.4	+0.4
SDHHI					Sg	14 20 45.4	+0.7
SDHHI	**Sand Hill**	**0.10**	**108**	IAML		14 20 45.6	
	comp=N,14μm,0.2s						
SDHHI				IAML		14 20 45.6	
	comp=E,13μm,0.2s						
OBL	**Observatory Le**	**0.11**	**92**		Pg	14 20 43.4	+0.3
OBL	**Observatory Le**	**0.11**	**92**	IAML		14 20 47.0	
	comp=E,4μm,0.4s						
OBL				IAML		14 20 47.3	
	comp=N,4μm,0.2s						
NPH	**North Pit**	**0.11**	**95**		Pg	14 20 43.3	+0.3
NPH					Sg	14 20 45.4	+0.4
NPH	**North Pit**	**0.11**	**95**	IAML		14 20 45.5	
	comp=E,896nm,0.3s						
NPH				IAML		14 20 46.5	
	comp=N,2μm,0.2s						
UWB	**Uwekahuna B**	**0.11**	**89**		Pg	14 20 43.4	+0.3
UWB					Sg	14 20 45.5	+0.5
UWB	**Uwekahuna B**	**0.11**	**89**	IAML		14 20 45.6	
	comp=N,1μm,0.1s						
UWB				IAML		14 20 45.6	
	comp=E,1μm,0.1s						
RIM	**Rim**	**0.12**	**103**		Pg	14 20 43.6	+0.4
RIM	**Rim**	**0.12**	**103**	IAML		14 20 46.3	
	comp=E,3μm,0.5s						
RIM				IAML		14 20 47.8	
	comp=N,5μm,0.5s						
RSD	**Rainshed**	**0.12**	**70**		Pg	14 20 43.7	+0.5
RSD					Sg	14 20 46.8	+1.6
RSD	**Rainshed**	**0.12**	**70**	IAML		14 20 47.4	
	comp=N,4μm,0.3s						
RSD				IAML		14 20 47.8	
	comp=E,3μm,0.3s						
SBLHI	**Steaming Bluff**	**0.12**	**88**		Pg	14 20 43.6	+0.3
SBLHI				IAML		14 20 45.9	
	comp=E,3μm,0.1s						
SBLHI				IAML		14 20 46.0	
	comp=N,3μm,0.2s						
KKO	**Keanakako`i**	**0.13**	**101**		Pg	14 20 43.8	+0.5
KKO				IAML		14 20 46.2	
	comp=E,2μm,0.3s						
KKO				IAML		14 20 47.3	
	comp=N,3μm,0.4s						
HATHI	**Halema'uma'u T**	**0.13**	**90**	Pg	Pg	14 20 43.2	-0.1
HATHI				IAML		14 20 46.4	
	comp=E,2μm,0.2s						
BYL	**Byron's Ledge**	**0.13**	**94**		Pg	14 20 43.7	+0.4
HLP	**Hilina Pali**	**0.15**	**146**		Pg	14 20 44.2	+0.5
HLP					Sg	14 20 47.0	+1.0
HLP	**Hilina Pali**	**0.15**	**146**	IAML		14 20 47.1	
	comp=N,12μm,0.3s						
HLP				IAML		14 20 47.2	
	comp=E,10μm,0.2s						
PUH	**Pauahi**	**0.18**	**106**	Pg	Pg	14 20 44.3	+0.2
HTC	**Hot Caves**	**0.18**	**180**		Pg	14 20 44.6	+0.4
HMH	**Humu'ula Sheep**	**0.20**	**336**		Pg	14 20 45.0	+0.4
HMH					Sg	14 20 48.2	+0.8
HMH	**Humu'ula Sheep**	**0.20**	**336**	IAML		14 20 48.4	
	comp=N,5μm,0.2s						
HMH				IAML		14 20 48.4	
	comp=E,4μm,0.4s						
MWH	**Moku'aweowe**	**0.20**	**288**		Pg	14 20 44.9	+0.2
MWH	**Moku'aweowe**	**0.20**	**288**	IAML		14 20 48.6	
	comp=N,2μm,0.2s						
MWH				IAML		14 20 48.7	
	comp=E,2μm,0.3s						
MLOA	**Mauna Loa Obse**	**0.20**	**304**		Pg	14 20 45.0	+0.2
MLOA					Sg	14 20 48.2	+0.4
MLOA	**Mauna Loa Obse**	**0.20**	**304**	IAML		14 20 48.3	
	comp=N,6μm,0.3s						
MLOA				IAML		14 20 49.0	
	comp=E,4μm,0.1s						
KNHH	**Kane Nui o Ham**	**0.22**	**101**		Pg	14 20 45.0	+0.1
STCH	**Steam Cracks**	**0.26**	**98**		Pg	14 20 45.6	0.0
STCH	**Steam Cracks**	**0.26**	**98**	IAML		14 20 51.6	
	comp=E,1μm,0.1s						
STCH				IAML		14 20 51.6	
	comp=N,1μm,0.1s						
ALEP	**Alea Permanent**	**0.26**	**297**		Pg	14 20 45.8	0.0
ALEP					Sg	14 20 49.6	+0.2
KHU	**Kahuku**	**0.27**	**230**		Pg	14 20 45.7	-0.2
KHU					Sg	14 20 49.8	+0.2
KHU	**Kahuku**	**0.27**	**230**	IAML		14 20 49.9	
	comp=N,1μm,0.1s						
KHU				IAML		14 20 50.0	
	comp=E,1μm,0.4s						
NPOC	**North of Pu'u**	**0.27**	**96**		Pg	14 20 45.9	0.0
NPOC					Sb	14 20 51.5	-0.9
NPOC	**North of Pu'u**	**0.27**	**96**	IAML		14 20 51.5	
	comp=E,615nm,0.5s						
NPOC				IAML		14 20 52.2	
	comp=N,899nm,0.9s						
JCUZ	**Jacuzzi**	**0.28**	**98**		Pg	14 20 46.0	0.0
JCUZ					Sb	14 20 51.5	-1.1
JCUZ	**Jacuzzi**	**0.28**	**98**	IAML		14 20 52.3	
	comp=E,552nm,1.1s						
JCUZ				IAML		14 20 55.1	
	comp=N,492nm,0.8s						
POHA	**Pohakuloa**	**0.36**	**339**		Pg	14 20 47.3	-0.2
POHA					Sg	14 20 53.5	+1.3
HPO	**Honuapo**	**0.36**	**204**		Pg	14 20 48.3	+0.7
JOKA	**Jonika Flow**	**0.37**	**88**		Pg	14 20 47.4	-0.3
HUH	**Hualalai**	**0.49**	**302**		Pb	14 20 50.7	-0.7
CPH	**Captain Cook**	**0.50**	**278**		Pg	14 20 49.6	-0.4
KHLU	**Kahalu`u**	**0.50**	**290**		Pg	14 20 49.9	-0.2
KHLU					Sg	14 20 56.8	+0.2
KHLU	**Kahalu`u**	**0.50**	**290**	IAML		14 20 57.4	
	comp=N,1μm,0.2s						
KHLU				IAML		14 20 57.7	
	comp=E,838nm,0.1s						
HPAH	**Hawaii Prepara**	**0.67**	**335**	Pg	Pg	14 20 51.7	-1.6

*CATAC **28** 14:24:41.6±0.6, 12°.90N×87°.44W, h160km±4km, ML2.8*
*UCR **28** 14:24:43.2±3.4, 12°.73N×87°.23W, h172km±20km, MW3.5*
ISC 28 14:24:40.3±2.0, 12°.87N±0°.07×87°.45W±0°.07, h174km±12km, n31, σ1°.44/47, 2C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POTN	**Potosi Cosigui**	**0.14**	**336**	*i* P	**Pn**	**14 25 02.

RANC	**El Ranchito**	**0.99**	**304**	*i* P	**Pn**	**14 25 08.2**	**+0.7**
RANC				IAML		14 25 36.0	
	comp=Z,170nm,1.0s						
MOMN	**Momotombo**	**1.00**	**117**	*i* P	**Pn**	**14 25 07.4**	**-0.1**
MOMN				IAML		14 25 34.1	
	comp=Z,9.0nm,1.0s						
MOM2	**El Cardon**	**1.04**	**115**	*i* P	**Pn**	**14 25 07.3**	**-0.4**
MOM2				IAML		14 26 10.8	
	comp=Z,120nm,1.0s						
PACA	**Pacayal**	**1.04**	**305**	*i* P	**Pn**	**14 25 09.4**	**+1.6**
PACA				IAML		14 25 36.8	
	comp=Z,990nm,1.0s						
LIMN	**Finca el Limon**	**1.07**	**80**	*i* P	**Pn**	**14 25 07.8**	**-0.3**
LIMN				IAML		14 25 08.5	
	comp=Z,250nm,1.0s						
LIMN				*i* S	**Sn**	**14 25 28.2**	**-1.2**
COPN	**Copaltepe**	**1.08**	**129**	*i* P	**Pn**	**14 25 07.7**	**-0.4**
COPN				IAML		14 25 29.7	
	comp=Z,320nm,1.0s						
TGUH	**Tegucigalpa,Un**	**1.19**	**8**	*i* P	**Pn**	**14 25 09.7**	**+0.6**
TGUH				IAML		14 25 10.3	
	comp=Z,310nm,1.0s						
TGUH				*i* S	**Sn**	**14 25 30.1**	**-1.3**
YUSH	**Yuscaran**	**1.23**	**29**	*i* P	**Pn**	**14 25 09.6**	**+0.3**
MATN	**Matagalpa**	**1.49**	**88**	⇓*i*P	**Pn**	**14 25 12.0**	**+0.3**
BOAB	**BOACO BROADBAN**	**1.79**	**103**	*i* P	**Pn**	**14 25 15.1**	**+0.4**
BOAB				IAML		14 25 15.6	
	comp=Z,96nm,1.0s						
BOAB				*i* S	**Sn**	**14 25 40.4**	**-0.9**
HZTE	**Horizontes, Gu**	**2.81**	**140**	*e*P	**Pn**	**14 25 28.2**	**+1.8**
HZTE				*e*S	**Sn**	**14 26 01.6**	**-0.7**
ORTG	**Ortega, Santa**	**3.17**	**142**	⇑*i*P	**Pn**	**14 25 32.5**	**+1.6**
ORTG				*e*S	**Sn**	**14 26 08.1**	**-2.1**
PLVR	**Palo Verde**	**3.24**	**140**	*e*P	**Pn**	**14 25 33.6**	**+1.8**
JUD3	**Juan Diaz 3**	**3.28**	**145**	*e*P	**Pn**	**14 25 33.7**	**+1.5**
JUD3				*e*S	**Sn**	**14 26 09.3**	**-3.4**
INDI	**Punta indio, G**	**3.55**	**147**	⇑*i*P	**Pn**	**14 25 36.8**	**+1.3**
INDI				*e*S	**Sn**	**14 26 14.5**	**-4.1**
VACR	**Volcan Arenal**	**3.61**	**131**	*e*P	Pn	14 25 32.2	-4.2
LAFE	**Finca La Fe, P**	**3.94**	**141**	*e*P	**Pn**	**14 25 42.1**	**+1.7**

JMA 28 14:26:24.3±0.1, 24°.2N±0°.3×123°.8E±0°.3, h16km±1km, MV1.0/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.12**	**318**	P	Pg	14 26 27.9	-0.1
IRIF				S	Sg	14 26 30.6	+0.3
JKRS	**Kuro-shima**	**0.17**	**91**	P	Pg	14 26 28.6	+0.1
JKRS				S	Sb	14 26 32.0	-0.4
HATJ	**Hateruma jima**	**0.18**	**185**	P	Pg	14 26 28.6	-0.2
HATJ				S	Sg	14 26 31.8	+0.1
JIJ	**Ishigaki jima**	**0.32**	**67**	P	Pg	14 26 30.7	-0.2
JIJ				S	Sg	14 26 35.1	-0.3
JISG	**Ishigakijimahi**	**0.56**	**52**	P	Pg	14 26 35.4	-0.1
JISG				*e*S	Sg	14 26 43.1	+0.1
JTJ	**Tarama**	**0.90**	**63**	P	Pb	14 26 41.6	+0.1

TAP 28 14:27:03.6, 24°.1N×121°.67E, h9km, ML2.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.06**	**317**	*i* P	Pg	14 27 06.4	+0.7
	baz=316						
ETL				*i* S	Sg	14 27 07.8	+0.8
	baz=316						
TWD	**Chiawan**	**0.07**	**244**	*i* P	Pg	14 27 06.3	+0.6
	baz=242						
TWD				*i* S	Sg	14 27 07.8	+0.5
	baz=242						
NACB	**Ninganchiao**	**0.09**	**311**	P	Pg	14 27 06.6	+0.6
NACB	**Ninganchiao**	**0.09**	**311**	*i* P	Pg	14 27 06.7	+0.7
	baz=311						
NACB				*i* S	Sg	14 27 08.4	+0.8
	baz=311						
HWA	**Hwalien**	**0.15**	**204**	*i* P	Pg	14 27 07.8	+1.0
	baz=200						
ETLH	**Xiulin Townshi**	**0.20**	**299**	*i* P	Pg	14 27 08.6	+0.9
	baz=298						
ETLH				S	Sg	14 27 12.4	+1.9
	baz=298						
ETM	**Tongmen**	**0.22**	**228**	*i* P	Pg	14 27 08.7	+0.6
	baz=227						
EAHA	**Aohua**	**0.22**	**16**	*i* P	Pg	14 27 08.8	+0.7
	baz=16						
LXIB	**Xiulin Townshi**	**0.25**	**249**	*i* P	Pg	14 27 09.4	+0.7
	baz=248						
ENA	**Nanau**	**0.32**	**12**	*i* P	Pg	14 27 10.7	+0.7
	baz=13						
SHUL	**Shoufeng**	**0.34**	**197**	*i* P	Pb	14 27 12.1	+0.2
	baz=196						
EWUT	**Wuta**	**0.34**	**17**	*i* P	Pg	14 27 11.1	+0.7
	baz=16						
ESL	**Shilin**	**0.37**	**216**	*i* P	Pg	14 27 11.1	+0.2
	baz=214						
WHF	**Hehuan Shan**	**0.37**	**275**	*i* P	Pb	14 27 12.1	-0.5
	baz=274						
NNSB	**Datong**	**0.41**	**320**	*i* P	Pb	14 27 12.8	-0.3
	baz=320						
NNSB				*i* S	Sb	14 27 18.9	-0.7
	baz=320						
FUSS	**Fushou**	**0.41**	**289**	*i* P	Pb	14 27 12.9	-0.4
	baz=289						
NNS	**Nan Shan**	**0.42**	**320**	*i* P	Pb	14 27 13.0	-0.4
	baz=320						
NNS				*i* S	Sb	14 27 19.2	-0.8
	baz=320						
LATG	**Datong**	**0.44**	**343**	*i* P	Pb	14 27 13.2	-0.5
	baz=342						
LATG				*i* S	Sb	14 27 20.2	-0.3
	baz=342						
CHGB	**Renai**	**0.46**	**263**	*i* P	Pb	14 27 13.6	-0.4
	baz=263						
WARBT	**Fenglin Townsh**	**0.47**	**213**	*i* P	Pg	14 27 12.9	+0.1
	baz=213						
EGFH	**Guangfu**	**0.49**	**207**	P	Pg	14 27 13.8	+0.6
	baz=206						
NDT	**Datong Townshi**	**0.51**	**344**	*i* P	Pb	14 27 14.7	-0.1
	baz=343						
NDT				*i* S	Sb	14 27 22.2	-0.1
	baz=343						
WUSB	**Renai**	**0.52**	**257**	P	Pb	14 27 14.9	-0.1
	baz=256						
VWDT	**VWDT**	**0.60**	**234**	P	Pb	14 27 17.1	+0.7
	baz=233						
TWE	**Neicheng**	**0.60**	**360**	P	Pb	14 27 16.5	0.0
	baz=1.0						
YHNB	**Yeheng**	**0.62**	**334**	P	Pb	14 27 17.0	+0.3
YHNB	**Yeheng**	**0.62**	**334**	P	Pb	14 27 16.8	+0.1
	baz=334						
NSK	**Sanguang**	**0.63**	**333**	P	Pb	14 27 17.2	+0.3
	baz=333						
FUSB	**Fushanzhiwuyua**	**0.65**	**353**	P	Pb	14 27 17.4	+0.1
	baz=353						
HGSD	**Ruisui**	**0.66**	**200**	P	Pb	14 27 17.8	+0.4
	baz=200						
EHY	**Hungye**	**0.68**	**208**	P	Pg	14 27 17.1	+0.3
	baz=207						
SSLB	**Suanglung**	**0.73**	**244**	P	Pb	14 27 18.5	-0.1
SSLB	**Suanglung**	**0.73**	**244**	P	Pb	14 27 18.3	-0.2
	baz=243						
YULB	**Yu-li**	**0.79**	**206**	P	Pg	14 27 19.2	+0.3
YULB	**Yu-li**	**0.79**	**206**	P	Pg	14 27 19.1	+0.2
	baz=205						
TWGBT	**Beinan**	**1.40**	**203**	P	Pg	14 27 30.8	+0.3

*IDC **28** 14:30:35.0±0.8, 6°.10S×142°.67E, h0km, mb4.2/13, mbtmp4.2/15, ML1.8/1, MS3.2/4, Error ellipse: s-maj=33.2km s-min=17.4km az=81.0*
*NEIC **28** 14:30:36.1±1.8, 6°.4S±0°.1×142°.71E±0°.09, h10km±1km, mb4.2/14, Error ellipse: s-maj=20.9km s-min=13.0km az=208.0*

ISC 28 14:30:36.5±0.5, 6°.38S±0°.06×142°.53E±0°.06, h10km, n54, σ2§16/56, mb4.3/17, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABU	**Tabubil**	**1.71**	**310**	P	**Pn**	**14 31 06.6**	**+0.2**
PMG	**Port Moresby**	**5.48**	**124**	Pn	**Pn**	**14 31 57.4**	**-0.9**
PMG	**Port Moresby**	**5.48**	**124**	P	**Pn**	**14 32 00.1**	**+1.9**
PMG	**Port Moresby**	**5.48**	**124**	Pn	**Pn**	**14 31 59.6**	**+1.4**

	1.9nm,0.3s,baz=320,slow=11,SNR=11						
PMG				Sn	**Sn**	**14 33 00.5**	**-0.9**
	7.1nm,0.3s,baz=325,slow=16,SNR=9.3						
PMG				LR	LR	14 34 51.0	
	comp=Z,132nm,18.2s,baz=260,slow=46 13nm,0.5s						
COEN	**Coen**	**7.55**	**175**	Pn	**Pn**	**14 32 26.2**	**-0.5**
FAKI	**Fak Fak**	**10.81**	**288**	Pn	**Pn**	**14 33 12.7**	**+1.3**
FAKI	**Fak Fak**	**10.81**	**288**	P	**Pn**	**14 33 12.4**	**+1.0**
SAUI	**Saumlaki**	**11.26**	**261**	Pn	**Pn**	**14 33 20.4**	**+2.9**
KDU	**Kakadu**	**11.73**	**237**	P	**Pn**	**14 33 24.8**	**+0.8**
MTN	**Manton Dam**	**12.94**	**239**	Pn	**Pn**	**14 33 40.8**	**+0.3**
MTN	**Manton Dam**	**12.94**	**239**	P	**Pn**	**14 33 41.3**	**+0.7**
DRS	**Darwin Rock St**	**12.95**	**241**	P	**Pn**	**14 33 42.7**	**+2.0**
CTA	**Charters Tower**	**14.10**	**165**	Lg	Lg	14 38 11.1	
	0.1nm,0.3s,baz=69,slow=16,SNR=2.4						
CTA				LR	LR	14 38 58.6	
	comp=Z,93nm,20.8s,baz=292,slow=35						
QIS	**Mount Isa**	**14.38**	**191**	P	**Pn**	**14 34 02.5**	**+2.3**
WB0	**Warramunga Arr**	**15.48**	**210**	Pn	**Pn**	**14 34 15.1**	**+0.1**
WB0				IAmb	IAmb	14 34 25.3	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**15.57**	**209**	Pn	**Pn**	**14 34 15.4**	**-0.8**
WR0				IAmb	IAmb	14 34 40.8	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**15.64**	**210**	Pn	**Pn**	**14 34 16.6**	**-0.6**
WRAB				IAmb	IAmb	14 34 46.0	
	comp=Z,8.1nm,0.8s						
WB2	**Warramunga Arr**	**15.65**	**210**	Pn	**Pn**	**14 34 16.3**	**-0.9**
WB2				IAmb	IAmb	14 34 47.6	
	comp=Z,9.0nm,0.8s						
WRA	**Warramunga Arr**	**15.65**	**210**	Pn	**Pn**	**14 34 17.3**	**0.0**
WRA	**Warramunga Arr**	**15.65**	**210**	Pn	**Pn**	**14 34 17.9**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=22,slow=13,SNR=20						
WRA				Sn	**Sn**	**14 37 06.2**	**-4.7**
	comp=Z,0.4nm,0.3s,baz=33,slow=22,SNR=6.2						
WRA				Lg	Lg	14 38 56.9	
	comp=Z,0.4nm,0.3s,baz=41,slow=28,SNR=5.0						
KNRA	**Kununurra**	**16.36**	**234**	Pn	**Pn**	**14 34 25.8**	**-0.6**
KNRA				IAmb	IAmb	14 34 34.4	
	comp=Z,18nm,0.8s						
KNRA	**Kununurra**	**16.36**	**234**	P	**Pn**	**14 34 26.1**	**-0.3**
SOEI	**Soe**	**18.39**	**258**		**P**	**14 34 53.3**	**+1.4**
SOEI				IAmb	IAmb	14 35 07.3	
	comp=Z,31nm,0.9s						
SOEI	**Soe**	**18.39**	**258**	P	**P**	**14 34 48.0**	**-3.9**
AS31	**Alice Springs**	**19.08**	**205**	P	**P**	**14 34 59.9**	**+0.5**
ASAR	**Alice Springs**	**19.08**	**205**	P	**P**	**14 35 00.2**	**+0.8**
ASAR	**Alice Springs**	**19.08**	**205**	P	**Pn**	**14 35 03.1**	**+3.0**
	comp=Z,4.7nm,0.6s,baz=33,slow=9.8,SNR=57						
ASAR				S	**Sn**	**14 38 26.3**	**-7.9**
	comp=Z,0.9nm,0.7s,baz=3.8,slow=10,SNR=1.7						
ASAR				Lg	Lg	14 40 44.5	
	comp=Z,0.1nm,0.3s,baz=21,slow=29,SNR=5.0						
ASAR				LR	LR	14 43 09.1	
	comp=Z,299nm,21.4s,baz=14,slow=39						
FITZ	**Fitzroy Crossi**	**20.18**	**233**	P	**P**	**14 35 11.9**	**+0.5**
DAV	**Davao City (W)**	**21.55**	**308**	LR	LR	14 44 42.8	
	comp=Z,30nm,19.2s,baz=330,slow=39						
STKA	**Stephens Creek**	**25.38**	**182**	P	**P**	**14 36 07.2**	**+3.1**
	comp=Z,3.3nm,0.8s,baz=12,slow=9.4,SNR=4.7 comp=Z,3.3nm,0.8s						
MJAR	**Mushiro Arr**	**42.89**	**355**	P	**P**	**14 38 32.2**	**-3.1**
	comp=Z,1.8nm,0.9s,baz=189,slow=6.2,SNR=2.1 comp=Z,1.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.57**	**301**	P	**P**	**14 39 28.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**49.57**	**301**	P	**P**	**14 39 27.0**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=125,slow=4.5,SNR=1.4 comp=Z,0.5nm,0.4s						
USRK	**Ussuriysk Ar.**	**51.24**	**350**	P	**P**	**14 39 39.6**	**-0.7**
USRK	**Ussuriysk Ar.**	**51.24**	**350**	P	**P**	**14 39 38.2**	**-2.0**
	comp=Z,3.5nm,0.8s,baz=176,slow=8.1,SNR=6.3 comp=Z,3.5nm,0.8s						
PZH	**PanZhiHua**	**51.30**	**311**	P	**P**	**14 39 42.0**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,200nm,4.8s						
HHC	**Hu-ho-hao-te**	**54.93**	**332**	*e*P	**P**	**14 40 10.5**	**+2.7**
HHC				sP	sP	14 40 18.0	+5.7
HHC				PcP	**PcP**	**14 41 16.8**	**+7.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,75nm,4.9s						
PETK	**Petropavlovsk-**	**60.64**	**10**	P	**P**	**14 40 46.7**	**-0.8**
	comp=Z,8.9nm,0.9s,baz=225,slow=5.7,SNR=4.7 comp=Z,8.9nm,0.9s						
ULN	**Ulaanbaatar**	**62.40**	**334**	P	**P**	**14 40 59.8**	**+0.1**
ULN				IAmb	IAmb	14 41 02.2	
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**62.66**	**333**	P	**P**	**14 41 01.3**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=159,slow=5.0,SNR=3.6 comp=Z,0.7nm,0.8s						
MK31	**Makanchi Array**	**75.01**	**322**	P	**P**	**14 42 18.1**	**-0.2**
MKAR	**Makanchi Array**	**75.01**	**322**	P	**P**	**14 42 17.5**	**-0.7**
MKAR	**Makanchi Array**	**75.01**	**322**	P	**P**	**14 42 18.6**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=111,slow=6.8,SNR=24 comp=Z,2.4nm,0.9s						
MAKZ	**Makanchi**	**75.20**	**322**	P	**P**	**14 42 19.5**	**+0.1**
MAKZ				IAmb	IAmb	14 42 20.5	
	comp=Z,2.9nm,0.9s						
KSH	**Kashi**	**76.36**	**313**	P	**P**	**14 42 28.5**	**+2.2**
ZALV	**Zalesovo Beam**	**77.01**	**329**	P	**P**	**14 42 28.2**	**-1.2**
ZALV	**Zalesovo Beam**	**77.01**	**329**	P	**P**	**14 42 28.4**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=107,slow=3.6,SNR=4.5 comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**78.91**	**324**	P	**P**	**14 42 39.5**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=114,slow=4.4,SNR=8.4 comp=Z,1.2nm,0.8s						
QSPA	**South Pole Qui**	**83.59**	**180**	P	**P**	**14 43 05.9**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=354,slow=0.8,SNR=5.6 comp=Z,1.8nm,1.0s						
NRIK	**Noril'sk**	**84.31**	**343**	P	**P**	**14 43 06.8**	**-1.4**
	comp=Z,4.4nm,0.9s,baz=120,slow=5.2,SNR=6.9 comp=Z,4.4nm,0.9s						
BVAR	**Borovoye Array**	**84.48**	**325**	P	**P**	**14 43 09.4**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=104,slow=6.3,SNR=25 comp=Z,6.1nm,0.8s						
BRVK	**Borovoye**	**84.56**	**325**	P	**P**	**14 43 09.7**	**-0.2**
ILAR	**Eielson Array**	**87.60**	**24**	P	**P**	**14 43 22.5**	**-2.2**
	comp=Z,2.4nm,0.8s,baz=256,slow=4.9,SNR=23 comp=Z,2.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**140.86**	**283**	PKP	**PKPdf**	**14 50 05.8**	**-2.0**
	comp=Z,0.3nm,0.9s,baz=62,slow=3.4,SNR=2.2						

*NOU **28** 14:35:13.2, 21°.42S×169°.05E, h0km, MLv4.3/8, Southeast of Loyalty Islands*
*IDC **28** 14:35:16.2±0.9, 21°.52S×168°.93E, h0km, mb4.1/9, mbtmp4.1/10, ML3.7/1, MS3.0/1, Error ellipse: s-maj=31.3km s-min=22.6km az=144.0*
*NEIC **28** 14:35:19.2±2.4, 21°.47S±0°.07×168°.70E±0°.05, h10km±1km, mb4.4/12, Error ellipse: s-maj=11.5km s-min=8.0km az=2.0*

ISC 28 14:35:18.4±0.6, 21°.43S±0°.07×168°.75E±0°.07, h10km, n57, σ1§14/58, mb4.2/12, 1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**0.67**	**265**		**Pg**	**14 35 31.4**	**0.0**
MARNC	**Mare, Loyalty**	**0.67**	**265**	P	**Pg**	**14 35 31.6**	**+0.3**
LIFNC	**LIFOU**	**1.55**	**294**		**Pn**	**14 35 44.2**	**-1.8**
LIFNC	**LIFOU**	**1.55**	**294**	P	**Pn**	**14 35 44.8**	**-1.2**
PINNC	**Pines Island,**	**1.69**	**225**		**Pn**	**14 35 46.3**	**-1.6**
PINNC	**Pines Island,**	**1.69**	**225**	P	**Pn**	**14 35 46.6**	**-1.4**
YATNC	**Mamie plateau,**	**1.84**	**250**	P	**Pn**	**14 35 48.7**	**-1.3**
OUENC	**Ouen Island, N**	**2.03**	**240**		**Pn**	**14 35 51.8**	**-0.8**
OUENC	**Ouen Island, N**	**2.03**	**240**	P	**Pn**	**14 35 52.7**	**+0.1**
DZM	**Mont Dzumac**	**2.23**	**253**		**Pn**	**14 35 54.3**	**-1.2**
DZM	**Mont Dzumac**	**2.23**	**253**	P	**Pn**	**14 35 55.9**	**+0.3**
DZM	**Mont Dzumac**	**2.23**	**253**	Pn	**Pn**	**14 35 55.8**	**+0.2**
	17nm,0.3s,baz=221,slow=22,SNR=196						
DZM				LR	LR	14 36 19.2	
	comp=Z,296nm,18.0s,baz=76,slow=27						
DZM				Sn	**Sn**	**14 36 22.3**	**-1.0**
	100nm,0.3s,baz=330,slow=23,SNR=9.3 55nm,0.4s						
ONTNC	**Ouen Toro**	**2.30**	**247**		**Pn**	**14 35 55.7**	**-0.7**
ONTNC	**Ouen Toro**	**2.30**	**247**	P	**Pn**	**14 35 55.9**	**-0.5**
KOUNC	**Koumac, New Ca**	**4.26**	**281**	Pn	**Pn**	**14 36 23.0**	**-0.3**
KOUNC	**Koumac, New Ca**	**4.26**	**281**	P	**Pn**	**14 36 23.8**	**+0.5**
ARMA	**Armidale**	**17.79**	**236**	P	**Pn**	**14 39 26.0**	**-0.4**
RTZ	**Ruatahuna**	**18.54**	**159**	P	**P**	**14 39 34.7**	**-0.6**
RTZ				IAmb	IAmb	14 39 39.4	

	comp=Z,26nm,0.9s						
BKZ	**Black Stump Fm**	**18.89**	**161**	P	**Pn**	**14 39 40.8**	**+1.2**
BKZ				IAmb	IAmb	14 39 44.0	
	comp=Z,19nm,1.0s						
TKNZ	**Takaka Hill**	**19.87**	**171**	P	**Pn**	**14 39 51.4**	**+0.1**
MRZ	**Mangatainoka R**	**20.04**	**165**	P	**P**	**14 39 52.2**	**+0.7**
MRZ				IAmb	IAmb	14 39 53.3	
	comp=Z,32nm,1.2s						
TCW	**Tory Channel**	**20.27**	**168**	P	Pn	14 39 55.6	-0.5
KHZ	**Kahutara**	**21.31**	**170**	P	**P**	**14 40 07.6**	**+2.3**
KHZ				IAmb	IAmb	14 40 11.7	
	comp=Z,36nm,1.1s						
LBZ	**Lake Benmore**	**22.93**	**177**	P	**P**	**14 40 25.0**	**+2.4**
STKA	**Stephens Creek**	**26.34**	**241**	P	**P**	**14 40 55.6**	**+1.0**
STKA	**Stephens Creek**	**26.34**	**241**	P	**P**	**14 40 55.0**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=327,slow=8.9,SNR=3.2 comp=Z,2.8nm,0.8s						
WRA	**Warramunga Arr**	**32.19**	**266**	P	**P**	**14 41 45.0**	**-1.8**
WRA	**Warramunga Arr**	**32.19**	**266**	P	**P**	**14 41 45.9**	**-0.9**
	comp=Z,5.0nm,0.9s,baz=98,slow=9.0,SNR=4.9 comp=Z,5.0nm,0.9s						
ASAR	**Alice Springs**	**32.21**	**259**	P	**P**	**14 41 47.2**	**+0.2**
	comp=Z,7.2nm,0.9s,baz=86,slow=9.9,SNR=6.3 comp=Z,7.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.61**	**267**	P	**P**	**14 42 58.8**	**+0.1**
FITZ				IAmb	IAmb	14 43 02.0	
	comp=Z,5.4nm,0.9s						
NWAO	**Narrogin (SRO)**	**46.83**	**245**	P	**P**	**14 43 48.3**	**-0.4**
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**14 46 21.8**	**+0.1**
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**14 46 21.0**	**-0.7**
	comp=Z,4.1nm,0.9s,baz=22,slow=1.6,SNR=8.3 comp=Z,4.1nm,0.9s						
KLR	**Kul'dur**	**77.67**	**336**	P	**P**	**14 47 16.2**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=224,slow=1.5,SNR=4.3 comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.99**	**295**	P	**P**	**14 47 24.6**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=133,slow=4.6,SNR=10.0 comp=Z,1.2nm,0.8s						
BELA	**Belgrano 2**	**79.97**	**175**	P	**P**	**14 47 26.9**	**-0.5**
BELA				IAmb	IAmb	14 47 29.1	
	comp=Z,6.3nm,1.0s						
TROLL	**Troll, Antarti**	**86.33**	**184**	⇓P	**P**	**14 47 59.8**	**-0.7**
	comp=Z,298nm,0.8s						
SONM	**Songino Array**	**88.69**	**323**	P	**P**	**14 48 13.2**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=126,slow=5.8,SNR=4.7 comp=Z,0.6nm,0.6s						
NVAR	**Nuvar Array Bea**	**90.59**	**49**	P	**P**	**14 48 19.4**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=225,slow=11,SNR=4.6 comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**92.45**	**17**	P	**P**	**14 48 26.6**	**-2.4**
	comp=Z,0.3nm,0.8s,baz=236,slow=6.4,SNR=2.3 comp=Z,0.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**145.60**	**352**	PKPbc	**PKPdf**	**14 54 56.4**	**-0.3**
	comp=Z,6.9nm,1.0s,baz=32,slow=1.9,SNR=3.1						
RONA	**Rosalia, Austr**	**145.67**	**326**	*i* PKP	**PKPab**	**14 54 59.2**	**+1.5**
	comp=Z,5.7nm,1.2s						
CONA	**Conrad Observa**	**145.74**	**327**	*i* PKP	**PKPab**	**14 54 59.8**	**+1.7**
	comp=Z,8.6nm,1.2s						
CKRC	**Cesky Krumlov**	**145.90**	**329**	*e*PKP	**PKPab**	**14 55 00.2**	**+1.7**
KHC	**Kasperske Hory**	**146.02**	**330**	*e*PKP	**PKPab**	**14 55 00.1**	**+1.1**
GERES	**GERESS Array B**	**146.17**	**330**	PKPbc	**PKPdf**	**14 54 57.5**	**-0.5**
	comp=Z,5.6nm,0.8s,baz=41,slow=4.3,SNR=11						
SOKA	**Soboth**	**146.99**	**326**	*i* PKP	**PKPbc**	**14 55 02.4**	**+1.0**
	comp=Z,3.2nm,0.8s						
KBA	**Koelnbreinsper**	**147.58**	**328**	*i* PKP	**PKPbc**	**14 55 03.9**	**+0.8**
	comp=Z,6.5nm,1.0s						
LESA	**Schwarzleotal**	**147.66**	**329**	*i* PKP	**PKPbc**	**14 55 04.1**	**+0.9**
	comp=Z,4.8nm,0.6s						
ABTA	**Abfaltersbach**	**148.22**	**328**	*e*PKP	**PKPbc**	**14 55 05.4**	**+0.6**
	comp=Z,6.8nm,0.9s						
WTTA	**Wattenberg**	**148.27**	**330**	*e*PKP	**PKPbc**	**14 55 06.0**	**+1.0**
	comp=Z,1nm,1.1s						
MOTA	**Moosalm**	**148.46**	**330**	*e*PKP	**PKPbc**	**14 55 06.5**	**+1.0**
	comp=Z,12nm,1.3s						
SQTA	**Sankt Quirin**	**148.50**	**330**	*e*PKP	**PKPbc**	**14 55 06.6**	**+1.1**
	comp=Z,7.4nm,0.9s						
RETA	**Reutte**	**148.51**	**331**	*e*PKP	**PKPbc**	**14 55 06.5**	**+1.0**
	comp=Z,2.6nm,0.7s						
FETA	**Feichten**	**148.87**	**330**	*i* PKP	**PKPbc**	**14 55 07.7**	**+1.2**
	comp=Z,7.7nm,0.8s						
DAVA	**Damuels**	**149.06**	**331**	*e*PKP	**PKPbc**	**14 55 08.2**	**+1.2**
	comp=Z,10nm,1.2s						
TORD	**Torodi Ar. Bea**	**165.15**	**238**	PKP	**PKPdf**	**14 55 23.8**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=198,slow=0.5,SNR=2.2						
TORD				PKPab	**PKPab**	**14 56 19.9**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=56,slow=1.3,SNR=2.9						

*IDC **28** 14:45:18.6±0.5, 5°.96S×143°.05E, h0km, mb4.4/18, mbtmp4.5/20, ML2.5/1, MS3.9/8, Error ellipse: s-maj=26.4km s-min=12.6km az=78.0*
*NEIC **28** 14:45:21.2±2.2, 6°.09S±0°.

	comp=Z,48nm,0.9s						
SOEI	**Soe**	**18.71 258**	P	**Pn**	**14 49 42.0**	**+2.0**
SOEI	**Soe**	**18.71 258**	P	**P**	**14 49 39.6**	**0.0**
	comp=Z,203nm,1.0s,comp=Z,1µm						
AS01	**Alice Springs**	**19.43 205**	P	**Pn**	**14 49 49.9**	**+1.3**
AS31	**Alice Springs**	**19.45 205**	P	**Pn**	**14 49 50.1**	**+1.3**
AS31			IAmb	IAmb	14 49 52.4	
	comp=Z,27nm,0.8s						
ASAR	**Alice Springs**	**19.45 205**	P	**Pn**	**14 49 50.6**	**+1.8**
	comp=Z,92nm,0.8s,baz=34,slow=9.6,SNR=535						
ASAR			S	**Sn**	**14 53 19.4**	**-7.8**
	comp=Z,14nm,0.7s,baz=18,slow=28,SNR=7.9						
ASAR			Lg	Lg	14 55 33.4		
	baz=47,slow=12						
ASAR			LR	LR	14 58 01.6		
	comp=Z,2µm,18.0s,baz=47,slow=39						
KMSI	**Cibinong**	**19.92 289**	P	Pn	14 50 15.9	+22	
MMRI	**Maumere**	**20.55 262**	P	**P**	**14 49 59.4**	**-0.1**
MMRI			IAmb	IAmb	14 50 06.3		
	comp=Z,34nm,1.1s						
MMRI	**Maumere**	**20.55 262**	P	Pn	14 50 19.9	+18	
FITZ	**Fitzroy Crossi**	**20.56 233**	P	**P**	**14 50 00.1**	**+0.4**
LUWI	**Luwuk**	**20.60 283**	P	**P**	**14 50 00.9**	**+0.7**
LUWI			IAmb	IAmb	14 50 07.9		
	comp=Z,73nm,1.0s						
LUWI	**Luwuk**	**20.60 283**	P	**P**	**14 49 57.2**	**-3.0**
	comp=Z,83nm,1.0s,comp=Z,900nm						
EIDS	**Eidsvold**	**20.74 158**	P	**P**	**14 50 03.4**	**+1.9**
EIDS			IAmb	IAmb	14 50 08.1		
	comp=Z,23nm,0.8s						
EIDS	**Eidsvold**	**20.74 158**	P	Pn	14 50 04.4	+0.4	
GTOI	**Gorontalo**	**20.86 288**	P	**P**	**14 50 03.1**	**+0.2**
	comp=Z,38nm,0.8s,comp=Z,342nm						
DAV	**Davao City (W)**	**21.59 307**	LR	LR	14 59 06.4		
	comp=Z,87nm,19.1s,baz=144,slow=38						
INKA	**Innaminka**	**21.61 185**	P	**P**	**14 50 13.2**	**+2.2**
MRSI	**Marisa**	**21.82 287**	P	**P**	**14 50 15.9**	**+2.6**
	comp=Z,36nm,1.1s,comp=Z,1µm						
BKSI	**Bulukumba**	**22.58 271**	P	**P**	**14 50 22.7**	**+1.3**
	comp=Z,58nm,1.1s,comp=Z,600nm						
OOD	**Oodnadatta**	**22.61 197**	P	**P**	**14 50 23.2**	**+1.5**
KAPI	**Kappang**	**22.96 272**	P	**P**	**14 50 26.3**	**+0.8**
KAPI			IAmb	IAmb	14 50 29.5		
	comp=Z,43nm,0.8s						
TOLI2	**Tolitoli**	**23.12 287**	P	**P**	**14 50 26.9**	**-0.2**
TOLI2			IAmb	IAmb	14 50 30.1		
	comp=Z,34nm,0.8s						
TOLI2	**Tolitoli**	**23.12 287**	P	**P**	**14 50 27.9**	**+0.8**
WRKA	**Warakurna**	**23.41 215**	P	**P**	**14 50 30.3**	**+0.3**
LCRK	**Leigh Creek**	**24.60 190**	P	**P**	**14 50 41.3**	**+0.1**
KOUNC	**Koumac, New Ca**	**25.32 127**	P	**P**	**14 50 48.9**	**+1.2**
KOUNC			IAmb	IAmb	14 50 50.3		
	comp=Z,35nm,1.5s						
MULG	**Mulgathing**	**25.43 198**	P	**P**	**14 50 49.9**	**+1.3**
CMSA	**Cobar Meteorol**	**25.45 174**	P	**P**	**14 50 50.0**	**+1.1**
STKA	**Stephens Creek**	**25.67 182**	P	**P**	**14 50 50.8**	**-0.1**
STKA	**Stephens Creek**	**25.67 182**	P	**P**	**14 50 51.5**	**+0.7**
	comp=Z,6.9nm,0.7s,baz=353,slow=8.6,SNR=11						
STKA			Lg	Lg	14 59 01.6		
	comp=Z,0.4nm,0.3s,baz=253,slow=23,SNR=1.6						
	comp=Z,6.9nm,0.7s						
BBOO	**Buckleboo**	**27.31 192**	P	**P**	**14 51 05.9**	**+0.2**
DZM	**Mont Dzumac**	**27.82 127**	*e*P	P	14 51 19.6	+9.1	
	comp=Z,21nm,1.2s						
DZM			*e*S	**S**	**14 55 49.3**	**-4.5**
	comp=Z,292nm,22.4s						
DZM			*e*LR	LR	14 58 21.1		
	comp=Z,255nm,23.2s						
FORT	**Forrest**	**28.19 208**	P	**P**	**14 51 15.0**	**+1.5**
KPJI	**Karang Pucung**	**33.65 266**	P	**P**	**14 52 03.1**	**+1.2**
	comp=Z,34nm,1.0s						
LEM	**Lembang**	**34.96 267**	LR	LR	15 09 53.9		
	comp=Z,124nm,19.2s,baz=103,slow=42						
CNJI	**Cibinong**	**35.44 266**	P	**P**	**14 52 17.3**	**-0.1**
	comp=Z,46nm,1.1s,comp=Z,389nm						
JOW	**Kunigami**	**35.63 337**	LR	LR	15 04 15.8		
	comp=Z,134nm,21.4s,baz=226,slow=32						
YHNB	**Yeheng**	**37.02 327**	P	**P**	**14 52 29.8**	**-1.1**
MJAR	**Matsushiro Arr**	**42.63 355**	P	**P**	**14 53 14.2**	**-3.1**
	comp=Z,1.3nm,0.6s,baz=190,slow=8.1,SNR=2.2						
	comp=Z,1.3nm,0.6s						
JMM	**Marumori**	**43.77 358**	P	**P**	**14 53 25.5**	**-1.0**
NJ2	**Nanjing**	**44.27 330**	*e*P	**P**	**14 53 31.8**	**+1.2**
NJ2			pmax	pmax			
	comp=Z,5.0nm,0.5s						
RPSI	**Rantau Prapat**	**44.67 280**	P	**P**	**14 53 33.9**	**-0.3**
RPSI			IAmb	IAmb	14 53 35.3		
	comp=Z,15nm,1.1s						
TUWZ	**Tuamarina**	**44.80 147**	P	**P**	**14 53 35.2**	**+0.5**
KSRS	**Korea Array**	**45.49 343**	P	**P**	**14 53 39.5**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=157,slow=9.3,SNR=6.6						
KSRS			LR	LR	15 09 58.7		
	comp=Z,78nm,21.9s,baz=150,slow=33						
	comp=Z,1.9nm,0.4s						
GYA	**Guiyang**	**47.68 314**	P	**P**	**14 54 00.0**	**+2.2**
GYA			pmax	pmax			
	comp=Z,18nm,1.1s						
PHRA	**Phrae**	**48.57 301**	P	**P**	**14 54 05.0**	**+0.3**
CRAI	**Chiangrai**	**49.23 303**	P	**P**	**14 54 09.2**	**-0.5**
CM31	**Chiang Mai Arr**	**49.65 300**	P	**P**	**14 54 13.5**	**+0.6**
CM31			IAmb	IAmb	14 54 14.8		
	comp=Z,6.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**49.65 300**	P	**P**	**14 54 11.6**	**-1.3**
CMAR	**Chiang Mai Arr**	**49.65 300**	P	**P**	**14 54 13.8**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=121,slow=6.2,SNR=37						
	comp=Z,4.5nm,0.8s						
CHTO	**Chiang Mai**	**49.80 301**	P	**P**	**14 54 13.6**	**-0.5**
CHTO			IAmb	IAmb	14 54 15.7		
	comp=Z,5.9nm,0.9s						
KMI	**Kunming**	**49.80 310**	⇓P	**P**	**14 54 15.5**	**+1.2**
KMI			pmax	pmax			
	comp=Z,18nm,1.1s						
ASAJ	**Asahikawa**	**49.98 360**	P	**P**	**14 54 14.3**	**-0.6**
	comp=Z,4.1nm,0.8s,baz=284,slow=6.7,SNR=6.7						
	comp=Z,4.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.01 350**	P	**P**	**14 54 22.1**	**-0.6**
	comp=Z,4.1nm,0.8s,baz=168,slow=11,SNR=6.2						
USRK			LR	LR	15 12 44.1		
	comp=Z,78nm,21.2s,baz=149,slow=32						
	comp=Z,4.1nm,0.8s						
XAN	**Xi'an**	**51.19 324**	P	**P**	**14 54 24.8**	**+0.5**
XAN			pmax	pmax			
	comp=Z,11nm,1.1s						
PZH	**PanZhiHua**	**51.31 311**	P	**P**	**14 54 26.3**	**+0.8**
PZH			pmax	pmax			
	comp=Z,10.0nm,1.2s						
PZH			pmax	pmax			
	comp=Z,140nm,4.5s						
MDJ	**Mudanjiang**	**51.86 348**	P	P	14 54 37.3	+8.2	
MDJ			pmax	pmax			
	comp=Z,9.0nm,1.0s						
MDJ			pmax	pmax			
	comp=Z,300nm,4.5s						
BJI	**Beijing**	**52.06 334**	P	**P**	**14 54 31.0**	**+0.4**
BJI			pmax	pmax			
	comp=Z,6.0nm,0.9s						
CD2	**Chengdu**	**52.42 317**	P	**P**	**14 54 34.3**	**+0.7**
CD2			pmax	pmax			
	comp=Z,10.0nm,0.6s						
TNCH	**TengChong**	**53.02 308**	*e*P	**P**	**14 54 39.8**	**+1.4**
TNCH			pP	sP	14 54 43.3	-0.2	
TNCH			pmax	pmax			
	comp=Z,12nm,0.6s						
BNX	**BinXian**	**53.41 347**	⇓P	**P**	**14 54 40.0**	**-0.6**
BNX			pmax	pmax			
	comp=Z,13nm,1.2s						
BNX			pmax	pmax			
	comp=Z,260nm,3.7s						
HHC	**Hu-ho-hao-te**	**54.81 331**	*e*P	**P**	**14 54 53.5**	**+2.4**
HHC			pP	sP	14 54 58.3	+2.1	
HHC			sP	pP	14 55 01.5	+6.7	
HHC			PP	PP	14 57 04.0	+10	
HHC			pmax	pmax			
	comp=Z,15nm,0.5s						
HHC			pmax	pmax			
	comp=Z,110nm,5.2s						
LZH	**Lanzhou**	**55.63 322**	*e*P	**P**	**14 54 58.5**	**+1.4**
LZH			sP	sP	14 55 07.8	+5.5	
LZH			pmax	pmax			
	comp=Z,10.0nm,1.0s						
KLR	**Kul'dur**	**55.94 351**	P	**P**	**14 54 58.5**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=278,slow=4.1,SNR=5.5						
	comp=Z,0.8nm,0.4s						
RAR	**Rarotonga**	**57.49 111**	LR	LR	15 17 20.0		
	comp=Z,41nm,21.9s,baz=264,slow=34						
HEH	**HeiHe**	**57.68 348**	*e*P	**P**	**14 55 10.0**	**-1.2**
HEH			pmax	pmax			
	comp=Z,8.0nm,1.7s						
HEH			pmax	pmax			
	comp=Z,380nm,5.1s						
GTA	**Gaotai**	**60.21 323**	P	**P**	**14 55 30.3**	**+1.1**
GTA			pP	sP	14 55 38.8	+4.4	
GTA			pmax	pmax			
	comp=Z,5.0nm,1.1s						
PETK	**Petropavlovsk-**	**60.32 10**	P	**P**	**14 55 27.7**	**-1.8**
	comp=Z,3.2nm,0.8s,baz=170,slow=8.0,SNR=4.6						
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**62.53 333**	P	**P**	**14 55 44.7**	**0.0**
SONM			IAmb	IAmb	14 56 12.4		
	comp=Z,5.7nm,1.4s						
SONM	**Songino Array**	**62.53 333**	P	**P**	**14 55 43.9**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=158,slow=7.2,SNR=8.5						
	comp=Z,1.3nm,0.9s						
PPT2	**Papeete2**	**66.88 106**	*e*S	S	15 04 57.8	-9.2	
	comp=Z,81nm,31.5s						
PPT2	**Papeete2**	**66.88 106**	*e*LR	LR	15 15 31.1		
	comp=Z,135nm,26.8s						
PPT2			*e*LR	LR	15 15 39.8		
	comp=Z,154nm,31.8s						
TBI	**Tubuai**	**67.18 113**	*e*LR	LR	15 16 29.5		
	comp=Z,443nm,32.0s						
WMQ	**Urumqi**	**70.18 321**	*e*P	**P**	**14 56 32.8**	**-1.0**
WMQ			sP	sP	14 56 41.5	+2.5	
WMQ			pmax	pmax			
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**72.09 176**	P	**P**	**14 56 45.0**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=336,slow=6.2,SNR=5.7						
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	**74.95 322**	P	**P**	**14 57 02.1**	**0.0**
MKAR	**Makanchi Array**	**74.95 322**	P	**P**	**14 57 02.4**	**+0.3**
	comp=Z,2.4nm,0.5s,baz=94,slow=9.0,SNR=64						
	comp=Z,2.4nm,0.5s						
MAKZ	**Makanchi**	**75.15 322**	P	**P**	**14 57 02.7**	**-0.5**
MAKZ			IAmb	IAmb	14 57 04.6		
	comp=Z,12nm,1.1s						
KSH	**Kashi**	**76.36 313**	P	**P**	**14 57 12.5**	**+2.0**
KSH			PcP	**PcP**	**14 57 21.0**	**-1.3**
KSH			pmax	pmax			
	comp=Z,7.0nm,1.0s						
NIL	**Nilore**	**76.60 307**	P	**P**	**14 57 11.6**	**-0.3**
ZAA0	**Zalesovo Array**	**76.90 329**	P	**P**	**14 57 12.2**	**-0.9**
ZALV	**Zalesovo Beam**	**76.90 329**	P	**P**	**14 57 11.1**	**-2.0**
ZALV	**Zalesovo Beam**	**76.90 329**	P	**P**	**14 57 12.1**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=120,slow=5.8,SNR=7.6						
	comp=Z,0.9nm,0.4s						
TIXI	**Tiksi**	**78.13 356**	P	**P**	**14 57 18.7**	**-0.8**
AAK	**Ala-Archa**	**78.46 316**	P	**P**	**14 57 21.3**	**-0.9**
KURK	**Kurchatov**	**78.82 324**	P	**P**	**14 57 23.2**	**-0.5**
KURK			IAmb	IAmb	14 57 24.8		
	comp=Z,14nm,1.2s						
KURBB	**Kurchatov Arra**	**78.83 324**	P	**P**	**14 57 23.2**	**-0.6**
	comp=Z,3.4nm,1.0s,baz=116,slow=4.8,SNR=14						
	comp=Z,3.4nm,1.0s						
DRK	**Karamyk**	**79.41 312**	P	**P**	**14 57 27.9**	**+0.2**
MAW	**Mawson**	**80.56 202**	P	**P**	**14 57 34.1**	**+1.2**
	comp=Z,16nm,0.8s,baz=324,slow=18,SNR=1.6						
	comp=Z,16nm,0.8s						
SIMJ	**Simiganj**	**81.27 310**	P	**P**	**14 57 37.0**	**-0.6**
SIMJ			IAmb	IAmb	14 57 38.7		
	comp=Z,9.8nm,0.9s						
KK31	**Karatay Array**	**81.39 315**	P	**P**	**14 57 36.7**	**-1.2**
KK31			IAmb	IAmb	14 57 39.0		
	comp=Z,9.6nm,1.5s						
KKAR	**Karatay Array**	**81.39 315**	P	**P**	**14 57 37.3**	**-0.6**
J19K	**Poorman**	**83.46 23**	P	**P**	**14 57 48.0**	**-0.2**
QSPA	**South Pole Qui**	**83.87 180**	P	**P**	**14 57 49.9**	**-0.7**
QSPA	**South Pole Qui**	**83.87 180**	P	**P**	**14 57 50.1**	**-0.4**
	comp=Z,8.2nm,0.9s,baz=316,slow=1.4,SNR=38						
	comp=Z,8.2nm,0.9s						
H19K	**Roundabout Mou**	**83.89 21**	P	**P**	**14 57 48.3**	**-2.0**
G19K	**Purcell Mounta**	**83.96 21**	P	**P**	**14 57 50.4**	**-0.3**
G19K			IAmb	IAmb	14 58 05.9		
	comp=Z,16nm,1.4s						
NRIK	**Noril'sk**	**84.11 343**	P	**P**	**14 57 50.9**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=121,slow=5.2,SNR=7.8						
	comp=Z,5.7nm,0.9s						
BVAR	**Borovoye Array**	**84.41 325**	P	**P**	**14 57 53.3**	**0.0**
	comp=Z,18nm,0.9s,baz=104,slow=6.3,SNR=61						
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	**84.48 325**	P	**P**	**14 57 52.0**	**-1.6**
E19K	**Redstone River**	**84.58 20**	P	**P**	**14 57 53.6**	**-0.2**
E19K			IAmb	IAmb	14 58 04.2		
	comp=Z,16nm,1.4s						
CAST	**Castle Rocks**	**84.61 24**	P	**P**	**14 57 53.0**	**-1.1**
D19K	**Kuna River**	**84.82 19**	P	**P**	**14 57 55.0**	**-0.1**
D19K			IAmb	IAmb	14 58 05.6		
	comp=Z,10.0nm,1.1s						
D22K	**Ayikyak River**	**86.75 19**	P	**P**	**14 58 04.3**	**-0.3**
D22K			IAmb	IAmb	14 58 16.4		
	comp=Z,6.6nm,0.9s						
CCB	**Clear Creek Bu**	**86.82 24**	P	**P**	**14 58 03.1**	**-2.0**
CCB			IAmb	IAmb	14 58 33.0		
	comp=Z,7.7nm,1.1s						
ILAR	**Eielson Array**	**87.23 24**	P	**P**	**14 58 05.0**	**-2.1**
	comp=Z,3.4nm,0.8s,baz=255,slow=5.2,SNR=22						
	comp=Z,3.4nm,0.8s						
J25K	**Salcha River,**	**87.80 24**	P	**P**	**14 58 08.6**	**-1.2**
J25K			IAmb	IAmb	14 58 09.6		
	comp=Z,13nm,1.2s						
C23K	**Itkillik River**	**87.82 19**	P	**P**	**14 58 09.8**	**0.0**
K29M	**Barlow Dome**	**90.89 26**	P	**P**	**14 58 24.1**	**-0.4**
K29M			IAmb	IAmb	14 58 24.9		
	comp=Z,8.1nm,1.1s						
ELIB	**Princess Elisa**	**92.99 196**	*d*P	**P**	**14 58 34.3**	**+0.2**
	comp=Z,5.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**141.06 283**	PKhKP	PKPpre	15 04 45.8		
	comp=Z,1.0nm,0.9s,baz=74,slow=3.9,SNR=4.6						
SDV	**Santo Domingo**	**146.75 83**	PKPbc	**PKPdf**	**15 05 02.1**	**-0.5**
	comp=Z,7.4nm,0.8s,baz=123,slow=0.5,SNR=9.4						
KIC	**Kosan Boka**	**147.73 272**	⇑*i*PKP1	**PKPbc**	**15 05 07.2**	**+0.4**
	comp=Z,12nm,0.3s						
DBIC	**Dimbokro**	**147.85 273**	PKPbc	**PKPdf**	**15 05 05.8**	**+1.6**
	comp=Z,15nm,1.0s,baz=75,slow=2.8,SNR=12						
LIC	**Lamto**	**148.01 272**	⇑*i*PKP1	**PKPbc**	**15 05 07.8**	**+0.2**
	comp=Z,28nm,0.8s						
TIC	**Toumodi**	**148.01 273**	⇑*i*PKP1	**PKPbc**	**15 05 07.9**	**+0.3**
	comp=Z,4.0nm,0.3s						
BDFB	**Brasilia**	**155.89 154**	PKPab	**PKPab**	**15 05 42.6**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=221,slow=4.6,SNR=3.8						

IDC ***28*** *14:47:33.4±1.4, 9.°71S×152.°06E, h0km, mb4.0/7, mbtmp4.0/7, MS4.0/12, Error ellipse: s-maj=54.3km s-min=27.6km az=112.0*

ISC 28 14:47:36.1±1.1, 9.°7S±0.°2×152.°1E±0.°3, h17km, n18, σ0°51/8, mb4.0/7, MS4.1/12, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**22.19**	**229**	P	**P**	**14 52 31.9**	**+0.1**
	5.1nm,0.7s,baz=50,slow=10,SNR=2.5						
	5.1nm,0.7s						
STKA	**Stephens Creek**	**24.07**	**202**	P	**P**	**14 52 51.0**	**+0.2**
	5.5nm,0.7s,baz=327,slow=19,SNR=1.3						
	5.5nm,0.7s						
RPZ	**Rata Peaks**	**37.67**	**157**	LR	LR	15 09 15.2	
	comp=Z,308nm,20.4s,baz=320,slow=34						
NWAO	**Narrogin (SRO)**	**39.51**	**229**	LR	LR	15 10 30.7	
	comp=Z,371nm,19.9s,baz=90,slow=35						
MA2	**Magadan**	**69.09**	**359**	LR	LR	15 23 39.0	
	comp=Z,44nm,20.9s,baz=150,slow=31						
SONM	**Songino Array**	**70.12**	**329**	P	**P**	**14 58 48.0**	**+0.2**
	2.9nm,1.1s,baz=146,slow=5.5,SNR=8.1						
	2.9nm,1.1s						
SEY	**Seechan**	**72.45**	**0**	LR	LR	15 26 59.3	
	comp=Z,61nm,21.0s,baz=251,slow=33						
MAW	**Mawson**	**80.76**	**203**	LR	LR	15 32 03.3	
	comp=Z,153nm,20.7s,baz=136,slow=33						
TIXI	**Tiksi**	**82.67**	**353**	LR	LR	15 35 53.9	
	comp=Z,38nm,19.8s,baz=201,slow=35						
MKAR	**Makanchi Array**	**83.56**	**320**	P	**P**	**15 00 03.5**	**+0.1**
	0.8nm,0.7s,baz=112,slow=7.1,SNR=3.3						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**84.84**	**327**	P	**P**	**15 00 09.3**	**-0.4**
	0.7nm,0.6s,baz=108,slow=4.7,SNR=2.3						
ZALV				LR	LR	15 38 03.9	
	comp=Z,42nm,19.1s,baz=103,slow=36						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**86.98**	**22**	P	**P**	**15 00 20.7**	**+0.6**
	0.3nm,0.7s,baz=251,slow=4.7,SNR=1.5						
	0.3nm,0.7s						
BVAR	**Borovoye Array**	**92.73**	**323**	LR	LR	15 41 09.8	
	comp=Z,32nm,22.0s,baz=50,slow=35						
NVAR	**Mina Array Bea**	**95.69**	**52**	P	**P**	**15 01 01.4**	**-0.3**
	0.1nm,0.3s,baz=256,slow=7.3,SNR=2.0						
NVAR				LR	LR	15 36 34.3	
	comp=Z,160nm,21.2s,baz=276,slow=31						
	0.1nm,0.3s						
PFO	**Pinyon Flats O**	**96.54**	**57**	LR	LR	15 37 05.1	
	comp=Z,76nm,21.7s,baz=284,slow=31						
NEW	**Newport**	**97.72**	**42**	LR	LR	15 39 12.8	
	comp=Z,148nm,20.0s,baz=262,slow=32						
ELK	**Elko**	**98.31**	**50**	LR	LR	15 38 24.7	
	comp=Z,60nm,21.2s,baz=265,slow=31						
TORD	**Torodi Ar. Bea**	**150.76**	**279**	PKPbc	**PKPbc**	**15 07 27.9**	**-0.8**
	0.7nm,0.8s,baz=61,slow=3.2,SNR=3.2						

DJA 28 14:54:19.7±0.6, 1.°N±4.°×12.°2E±.°, h12km±3km, M3.9/6, MLv3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.86**	**143**	P	Pg	14 54 31.4	-4.9
GTOI				S	Sg	14 54 41.9	-5.6
MRSI	**Marisa**	**1.00**	**213**	P	Pb	14 54 38.8	-0.2
MRSI				S	Sb	14 54 52.5	+0.3
MRSI	**Marisa**	**1.00**	**213**	P	Pb	14 54 38.7	-0.3
KMSI	**Cibinong**	**1.66**	**116**	P	Pn	14 54 48.4	-0.3
KMSI				S	Sn	14 55 10.6	+0.6
KMSI	**Cibinong**	**1.66**	**116**	P	Pn	14 54 46.6	-2.1
LUWI	**Luwuk**	**2.36**	**173**	P	Pn	14 54 59.1	+0.8
LUWI				S	Sn	14 55 28.5	+1.2
LUWI	**Luwuk**	**2.36**	**173**	P	Pn	14 54 58.4	+0.1
MPSI	**Mapaga**	**2.77**	**249**	P	Pn	14 55 05.4	+1.5
MPSI				S	Sn	14 55 37.6	+0.3
MPSI	**Mapaga**	**2.77**	**249**	P	Pn	14 55 03.5	-0.4
TTSI	**Tana Toraja**	**5.09**	**212**	P	Pn	14 55 37.1	+1.2
	33nm,0.7s,1µm0.2nm						

IDC ***28*** *15:01:49.6±2.3, 2.°26S×128.°64E, h0km, mb3.2/2, mbtmp3.3/3, ML3.8/1, Error ellipse: s-maj=142.1km s-min=28.4km az=68.0*

DJA ***28*** *15:01:53.4±0.7, 3.°S±5.°×12.°7E±.°, h20km±8km, M3.8/11, mb4.0/4, mB4.2/1, MLv3.6/11, Mw(mB)3.2/1*

ISC 28 15:01:51.9±0.9, 2.°76S±0.°07×126.°73E±0.°06, h10km, n10, σ2°08/13, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.60**	**142**	P	**Pg**	**15 02 04.6**	**+1.0**
SANI	**Sanana**	**1.02**	**314**	P	**Pg**	**15 02 10.8**	**-0.8**
SANI				S	**Sg**	**15 02 23.7**	**-1.2**
LBMI	**Labuha**	**2.25**	**20**	P	**Pn**	**15 02 30.5**	**+1.3**
LBMI				S	**Sn**	**15 02 56.8**	**-0.2**
LUWI	**Luwuk**	**4.31**	**293**	P	**Pn**	**15 02 58.1**	**+0.6**
SWI	**Sorong**	**4.91**	**67**	P	**Pn**	**15 03 07.9**	**+2.1**
SWI				S	**Sn**	**15 04 00.3**	**-2.4**
FAKI	**Fak Fak**	**5.52**	**92**	P	**Pn**	**15 03 12.4**	**-1.8**
	31nm,1.2s,0.2nm						
MRSI	**Marisa**	**5.77**	**304**	P	**Pn**	**15 03 18.7**	**+1.1**
WRA	**Warramunga Arr**	**18.62**	**157**	P	**P**	**15 06 07.8**	**-2.1**
	0.3nm,0.3s,baz=342,slow=12,SNR=10						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**21.91**	**162**	P	**P**	**15 06 43.4**	**-2.1**
	0.4nm,0.4s,baz=344,slow=12,SNR=8.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.92**	**327**	P	**P**	**15 12 22.4**	**+3.8**
	0.1nm,0.5s,baz=123,slow=5.3,SNR=2.4						
	0.1nm,0.5s						

NEIC ***28*** *15:04:18.7±2.4, 53.°97S±0.°04×159.°4E±0.°1, h10km±1km, mb4.3/8, Error ellipse: s-maj=14.8km s-min=6.6km az=98.0*

IDC ***28*** *15:04:22.8±2.7, 53.°33S×158.°35E, h0km, mb4.0/3, mbtmp4.2/4, ML4.9/1, MS3.8/7, Error ellipse: s-maj=65.2km s-min=47.1km az=7.0*

ISC 28 15:04:18.5±0.6, 53.°94S±0.°07×159.°59E±0.°09, h10km, n75, σ2°25/61, mb4.1/5, MS3.6/7, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**0.67**	**213**	P	**Pg**	**15 04 29.9**	**-1.6**
	baz=0.6						
MCQ				S	**Sg**	**15 04 38.0**	**-2.3**
	baz=0.6						
MCQ	**Macquarie Isla**	**0.67**	**213**	Pg	**Pg**	**15 04 29.9**	**-1.6**
APZ	**The Paps**	**8.90**	**40**	P	**Pn**	**15 06 26.5**	**-0.7**
APZ				S	**Sn**	**15 08 02.1**	**-5.4**
PYZ	**Puysegur Point**	**9.01**	**33**	Pn	**Pn**	**15 06 27.9**	**-0.7**
PYZ	**Puysegur Point**	**9.01**	**33**	P	**Pn**	**15 06 27.6**	**-1.1**
PYZ				S	**Sn**	**15 08 11.0**	**+0.9**
ORPS	**Orepuki**	**9.28**	**38**	P	**Pn**	**15 06 32.0**	**-0.2**
RRKS	**Rarakau**	**9.30**	**36**	P	**Pn**	**15 06 33.7**	**+1.3**
SYZ	**Scrubby Hill**	**9.60**	**43**	P	**Pn**	**15 06 37.6**	**+1.0**
SYZ				S	**Sn**	**15 08 18.9**	**-5.6**
WHZ	**Wether Hill Ro**	**9.68**	**37**	Pn	**Pn**	**15 06 37.5**	**-0.3**
WHZ	**Wether Hill Ro**	**9.68**	**37**	P	**Pn**	**15 06 37.1**	**-0.7**
WHZ		

QSPA	**South Pole Qui**	**36.17 180**	P	**P**	**15 11 21.9**	**+1.0**
QSPA			IAmb	IAmb	15 11 40.5	
	comp=Z,7.4nm,1.4s					
NWAO	**Narrogin (SRO)**	**36.51 288**	LR	LR	15 22 07.9	
	comp=Z,107nm,20.1s,baz=220,slow=30					
H01W1	**Cape Leeuwin H**	**36.84 282**	T	T	15 50 00.0	
	baz=135,slow=76,SNR=1322					
H01W2	**Cape Leeuwin H**	**36.85 282**	T	T	15 50 00.6	
	baz=135,slow=76,SNR=1316					
H01W3	**Cape Leeuwin H**	**36.86 282**	T	T	15 50 01.3	
	baz=135,slow=76,SNR=821					
WRA	**Warramunga Arr**	**39.06 320**	P	**P**	**15 11 42.3**	**-3.2**
	comp=Z,3.5nm,1.1s,baz=151,slow=6.6,SNR=4.6					
	comp=Z,3.5nm,1.1s					
WRAB	**Tennant Creek**	**39.06 320**	P	**P**	**15 11 44.7**	**-0.8**
COEN	**Coen**	**41.94 336**	P	**P**	**15 12 11.3**	**+2.0**
COEN			IAmb	IAmb	15 12 30.2	
	comp=Z,7.1nm,1.1s					
HNR	**Honiara**	**44.39 1**	LR	LR	15 28 58.1	
	comp=Z,821nm,18.2s,baz=142,slow=34					
PMG	**Port Moresby**	**45.52 343**	LR	LR	15 30 03.3	
	comp=Z,95nm,18.1s,baz=230,slow=34					
PPT	**Papeete**	**53.26 67**	LR	LR	15 33 24.1	
	comp=Z,46nm,18.1s,baz=168,slow=32					
H04S2	**CROZET ISLANDS**	**62.40 228**	T	T	16 23 11.2	
	baz=140,slow=75,SNR=27					
H04S1	**CROZET ISLANDS**	**62.41 228**	T	T	16 23 18.4	
	baz=140,slow=75,SNR=30					
H04S3	**CROZET ISLANDS**	**62.42 228**	T	T	16 23 10.9	
	baz=140,slow=75,SNR=20					
H03S2	**Juan Fernandez**	**79.05 134**	T	T	16 44 22.9	
	baz=209,slow=74,SNR=177					
H03S1	**Juan Fernandez**	**79.05 134**	T	T	16 44 24.7	
	baz=209,slow=74,SNR=145					
H03S3	**Juan Fernandez**	**79.06 134**	T	T	16 44 27.4	
	baz=209,slow=74,SNR=206					
H03N3	**Juan Fernandez**	**79.37 134**	T	T	16 44 47.9	
	baz=217,slow=76,SNR=112					
H03N2	**Juan Fernandez**	**79.38 133**	T	T	16 44 44.1	
	baz=217,slow=76,SNR=148					
H03N1	**Juan Fernandez**	**79.39 134**	T	T	16 44 47.5	
	baz=217,slow=76,SNR=68					
SUR	**Sutherland**	**86.93 214**	LR	LR	15 53 54.4	
	comp=Z,70nm,18.4s,baz=165,slow=34					
FINES	**FINESS Array B**	**154.54 306**	PKPbc	**PKiKP**	**15 24 22.3**	**+4.3**
	comp=Z,1.0nm,0.8s,baz=104,slow=5.9,SNR=3.8					

*DJA **28** 15:05:03.7±0.8,8°S±7°×12°0E±°, h366km±9km, M3.3/8, MLv3.3/8*
*IDC **28** 15:05:07.8±26.0, 7°.24S×120°.82E, h463km±352km, mb2.4/2, mbtmp3.3/3, Error ellipse: s-maj=266.6km s-min=70.6km az=71.0*
ISC 28 15:05:01.0±1.1, 7°.6S±0°.1×120°.17E±0°.07, h400km, n10, σ2§15/15, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.89**	**127**	P	**Pn**	**15 05 55.2**	**-1.2**
EDFI				S	**S**	**15 06 36.7**	**-4.5**
BKSI	**Bulukumba**	**2.26**	**359**	P	**Pn**	**15 05 58.9**	**+0.2**
MMRI	**Maumere**	**2.30**	**117**	P	**Pn**	**15 05 58.3**	**-0.6**
MMRI				S	**S**	**15 06 42.8**	**-2.9**
BASI	**Baing, Sumba**	**2.64**	**171**	P	**Pn**	**15 06 03.1**	**+1.8**
BASI				S	**S**	**15 06 48.3**	**-1.8**
PLAI	**Plampang**	**2.66**	**243**	P	**Pn**	**15 06 01.6**	**+0.1**
PLAI				S	**S**	**15 06 49.0**	**-1.5**
TWSI	**Taliwang, Sumb**	**3.44**	**251**	P	**Pn**	**15 06 07.6**	**-0.4**
TWSI				S	**S**	**15 06 59.5**	**-2.7**
SOEI	**Soe**	**4.59**	**118**	P	**Pn**	**15 06 20.1**	**+1.2**
WRA	**Warramunga Arr**	**18.42**	**133**	P	**P**	**15 08 51.4**	**+1.3**
	1.1nm,0.6s,baz=312,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**20.71**	**142**	P	**P**	**15 09 14.2**	**+2.1**
	0.8nm,0.7s,baz=321,slow=8.6,SNR=16						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**63.76**	**332**	P	**P**	**15 14 53.1**	**+1.3**
	0.1nm,0.6s,baz=131,slow=6.5,SNR=1.9						
	0.1nm,0.6s						

*TUN **28** 15:05:46.9, 36°.58N×8°.57E, h10km, MD1.9*
CRAAG 28 15:05:37.5, 36°.62N×7°.21E, MI2.5, Algerie 11km NW Bouati-Mahmoud, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAH	**Djebel Manchou**	**0.17**	**88**	P	Pg	15 05 41.9	+1.2
CAEH	**'Ain El Ouahch**	**0.33**	**299**	P	Pb	15 05 45.4	-0.9
CBOS	**Bilal Ibnou Ra**	**0.74**	**284**	P	Pb	15 05 52.8	-0.5
GHAT	**Ghardimaou**	**0.89**	**98**	*i* P	Pg	15 05 53.1	-1.4
CBOGS	**Bougous**	**0.97**	**85**	P	Pg	15 05 51.1	-5.0
BLIT	**Baltah**	**1.40**	**86**	*i* P	Pn	15 05 56.1	-8.2
KRIT	**Krib**	**1.53**	**100**	*i* P	Pn	15 05 59.4	-6.7

IDC 28 15:06:52.5±53.0, 15°.31S×172°.17W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=1024.0km s-min=197.1km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**45.11**	**240**	P	P	15 15 10.9	+0.1
	0.7nm,0.4s,baz=90,slow=17,SNR=3.9						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**51.02**	**257**	P	P	15 15 56.4	-0.3
	0.7nm,0.8s,baz=94,slow=7.0,SNR=6.3						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**51.27**	**252**	P	P	15 15 58.5	-0.1
	3.7nm,0.6s,baz=90,slow=7.8,SNR=108						
	3.7nm,0.6s						

*IDC **28** 15:17:46.6±1.1, 6°.02S×142°.68E, h0km, mb3.8/5, mbtmp3.9/7, ML2.0/1, MS3.4/1, Error ellipse: s-maj=33.9km s-min=23.4km az=61.0*
ISC 28 15:17:47.9±0.9, 6°.3S±0°.1×142°.5E±0°.1, h10km, n10, σ2§02/10, mb3.7/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.57**	**124**	Pn	**Pn**	**15 19 12.2**	**+1.3**
	3.2nm,0.3s,baz=331,slow=13,SNR=16						
PMG				Sn	**Sn**	**15 20 13.9**	**-1.2**
	2.1nm,0.3s,baz=320,slow=9.9,SNR=3.8						
	7.6nm,0.3s						
CTA	**Charters Tower**	**14.18**	**165**	Lg	Lg	15 25 23.9	
	0.1nm,0.3s,baz=59,slow=16,SNR=2.6						
WRA	**Warramunga Arr**	**15.68**	**209**	Pn	**Pn**	**15 21 29.7**	**+0.6**
	0.5nm,0.3s,baz=29,slow=14,SNR=15						
WRA				Sn	**Sn**	**15 24 19.9**	**-3.2**
	0.2nm,0.3s,baz=42,slow=21,SNR=6.2						
WRA				Lg	Lg	15 26 13.1	
	0.2nm,0.3s,baz=32,slow=27,SNR=5.7						
ASAR	**Alice Springs**	**19.12**	**205**	P	**Pn**	**15 22 15.1**	**+3.0**
	5.0nm,0.7s,baz=33,slow=9.8,SNR=95						
ASAR				S	Sn	15 25 40.5	-6.0
	0.3nm,0.7s,baz=21,slow=27,SNR=2.8						
ASAR				Lg	Lg	15 28 03.8	
	0.1nm,0.3s,baz=16,slow=32,SNR=4.1						
NWAO	**Narrogin (SRO)**	**35.38**	**218**	LR	LR	15 40 31.3	
	comp=Z,60nm,19.5s,baz=237,slow=38						
CMAR	**Chiang Mai Arr**	**49.48**	**301**	P	**P**	**15 26 39.8**	**+0.9**
	0.2nm,0.3s,baz=114,slow=6.1,SNR=1.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**74.92**	**322**	P	**P**	**15 29 28.9**	**-0.3**
	0.9nm,0.9s,baz=117,slow=6.4,SNR=8.0						
	0.9nm,0.9s						
KURBB	**Kurchatov Arra**	**78.82**	**324**	P	**P**	**15 29 50.2**	**-0.8**
	0.4nm,0.6s,baz=111,slow=5.3,SNR=4.8						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**84.40**	**325**	P	**P**	**15 30 20.8**	**+0.3**
	2.5nm,0.9s,baz=112,slow=6.4,SNR=9.0						
	2.5nm,0.9s						
ILAR	**Eielson Array**	**87.56**	**24**	P	**P**	**15 30 33.9**	**-2.0**
	0.4nm,0.8s,baz=233,slow=5.5,SNR=4.2						
	0.4nm,0.8s						

KRSC 28 15:39:49.0±1.2, 55°.24N×166°.46E, h35km±6km, MI3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.28**	**263**	*e*P	Pn	15 39 57.1	+0.3
BKI				*e*S	Sn	15 40 02.3	-0.6
ZLN	**Zelenaya**	**3.30**	**286**	*e*P	Pn	15 40 41.9	+3.7
ZLN				*e*S	Sn	15 41 21.9	+5.7
BZGR	**Bezymyannyi-Gr**	**3.34**	**284**	*e*P	Pn	15 40 43.0	+4.2
BZGR				*e*S	Sn	15 41 23.3	+6.0
BZP	**Bezymyannyi-Pe**	**3.43**	**284**	*e*P	Pn	15 40 44.0	+4.0
BZMR	**Bezymyannaya**	**3.46**	**284**	*e*P	Pn	15 40 44.4	+4.0
BZWR	**Bezymyannyi-We**	**3.46**	**285**	*e*P	Pn	15 40 45.1	+4.7
TUMD	**Tumrok D**	**3.47**	**272**	*e*P	Pn	15 40 44.2	+3.7
TUMD				*e*S	Sn	15 41 25.8	+5.4
KRSR	**Krestovskiy**	**3.47**	**289**	*e*P	Pn	15 40 43.8	+3.2
KRSR				*e*S	Sn	15 41 24.0	+3.5
KIRR	**Kirishev**	**3.54**	**284**	*e*P	Pn	15 40 45.4	+3.8
KMNR	**Kamenistaya**	**3.58**	**281**	*e*P	Pn	15 40 46.0	+4.0
KPT	**Kopyto**	**3.61**	**284**	*e*P	Pn	15 40 46.5	+4.0
TUMR	**Tumrok**	**3.61**	**273**	*e*P	Pn	15 40 47.0	+4.5
KOZ	**Kozyrevsk**	**3.82**	**285**	*e*P	Pn	15 40 50.1	+4.9
ESO	**Esso**	**4.46**	**282**	*e*P	Pn	15 40 58.0	+4.0
SMAR	**Somma**	**4.91**	**249**	*e*P	Pn	15 41 05.0	+4.6
KRER	**Koryakskii**	**4.92**	**250**	*e*P	Pn	15 41 05.7	+5.1
KRER				*e*S	Sn	15 42 01.6	+5.4
AVH	**Avacha**	**4.94**	**250**	*e*P	Pn	15 41 05.9	+5.2
AVH				*e*S	Sn	15 42 00.5	+3.9
KRX	**Arik**	**4.95**	**251**	*e*P	Pn	15 41 05.5	+4.6
KRX				*e*S	Sn	15 42 01.2	+4.3
KOK	**Koryaka**	**4.98**	**250**	*e*P	Pn	15 41 06.0	+4.7
MTVR	**Mutnovka**	**5.62**	**244**	*e*P	Pn	15 41 14.6	+4.5

*ANF **28** 15:41:18.4±0.8, 32°.96N×115°.57W, h15km, ML2.5/8, Error ellipse: s-maj=6.6km s-min=2.3km az=125.0*
*ECX **28** 15:41:18.7±0.6, 32°.91N×115°.53W, h20km±1km, MD2.6, ML2.8*
ISC 28 15:41:18.0±0.9, 32°.90N±0°.03×115°.53W±0°.03, h18km±2km, n29, σ0§48/42, 11C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DREC	**Desert Rsrch C**	**0.12**	**146**	*i* P	**Pg**	**15 41 22.1**	**+0.2**
DREC				*i* S	**Sg**	**15 41 25.6**	**+1.1**
WEMD	**Westmorland, C**	**0.14**	**341**	*e*P	**Pg**	**15 41 22.4**	**+0.2**
COK2	**Cook Ranch 2**	**0.18**	**253**	⇑*i*P	**Pg**	**15 41 23.0**	**+0.4**
COK2				*i* S	**Sg**	**15 41 26.7**	**+0.8**
WESC	**Westside Schoo**	**0.23**	**230**	⇑*e*P	**Pb**	**15 41 23.7**	**+0.4**
SWSC	**Sam W. Stewart**	**0.23**	**280**	P	**Pb**	**15 41 23.6**	**+0.1**
	baz=99,SNR=75						
SWSC				S	**Sb**	**15 41 27.1**	**0.0**
	baz=99						
SWSC	**Sam W. Stewart**	**0.23**	**280**	⇑*i*P	**Pb**	**15 41 23.6**	**+0.1**
ICBC	**Inst. de Cultu**	**0.24**	**169**	*e*P	**Pb**	**15 41 23.8**	**+0.1**
UABX	**UABC, Campus M**	**0.28**	**165**	*e*P	**Pg**	**15 41 25.0**	**+0.8**
SGL	**Mount Signal**	**0.30**	**214**	⇓*i*P	**Pg**	**15 41 24.7**	**0.0**
COA	**Coachella**	**0.34**	**97**	⇑*i*P	**Pg**	**15 41 25.5**	**+0.3**
CRR	**Carrizo Plain**	**0.37**	**268**	⇑*i*P	**Pg**	**15 41 26.1**	**+0.2**
YUH2	**Yuha Desert**	**0.42**	**233**	⇑*e*P	**Pg**	**15 41 26.6**	**-0.1**
YUH2				*e*S	**Sg**	**15 41 33.2**	**+0.6**
EMSC	**East Mesa**	**0.48**	**110**	*e*P	**Pg**	**15 41 28.1**	**+0.3**
CPBX	**Cerro Prieto**	**0.52**	**159**	*e*P	**Pg**	**15 41 28.2**	**-0.3**
CPBX				*e*S	**Sg**	**15 41 35.5**	**0.0**
CPBX				IAML		15 41 38.2	
	comp=E,2μm,0.2s						
CPBX				⇓*e*		15 41 38.2	
CPBX				IAML		15 41 40.5	
	comp=N,2μm,0.2s						
CPBX				⇑*e*		15 41 40.5	
IKP	**In-Ko-Pah, Jac**	**0.55**	**243**	P	**Pb**	**15 41 29.4**	**+0.3**
	baz=62,SNR=26						
IKP				S	**Sg**	**15 41 36.8**	**+0.1**
	baz=62						
IKP	**In-Ko-Pah, Jac**	**0.55**	**243**	*e*P	**Pb**	**15 41 29.1**	**-0.1**
IKP				*e*S	**Sg**	**15 41 36.7**	**+0.1**
RMX	**La Rumorosa**	**0.55**	**237**	*e*P	**Pb**	**15 41 29.1**	**-0.1**
RMX				*e*S	**Sg**	**15 41 36.3**	**-0.4**
RMX				*e*		15 41 37.9	
RMX				IAML		15 41 38.0	
	comp=N,620nm,0.0s						
RMX				⇑*e*		15 41 38.2	
RMX				IAML		15 41 38.2	
	comp=E,798nm,0.3s						
SLH	**Sleepy Hollow**	**0.68**	**295**	*e*P	**Pb**	**15 41 30.9**	**-0.3**
BC3	**Big Chuckawall**	**0.75**	**5**	P	**Pb**	**15 41 32.5**	**-0.2**
	baz=184,SNR=61						
BC3				S	**Sb**	**15 41 42.4**	**-0.2**
	baz=184						
MONP2	**Monument Peak**	**0.76**	**269**	P	**Pb**	**15 41 32.5**	**-0.3**
	baz=89,SNR=39						
MONP2				S	**Sb**	**15 41 42.7**	**-0.1**
	baz=89						
MONP2	**Monument Peak**	**0.76**	**269**	*e*P	**Pb**	**15 41 32.4**	**-0.3**
MONP2				*e*S	**Sb**	**15 41 42.5**	**-0.2**
MONP2				IAML		15 41 43.8	
	comp=N,232nm,0.4s						
MONP2				⇑*e*		15 41 43.8	
MONP2				*e*		15 41 43.9	
MONP2				IAML		15 41 43.9	
	comp=E,116nm,0.2s						
RHX	**Rio Hardy**	**0.79**	**165**	*e*P	**Pb**	**15 41 32.5**	**-0.8**
ALAMX	**Rancho Alamar**	**0.91**	**190**	⇓*i*P	**Pb**	**15 41 34.8**	**-0.4**
ALAMX				*e*S	**Sb**	**15 41 46.7**	**-0.3**
ALAMX				⇑*e*		15 41 48.6	
ALAMX				IAML		15 41 48.6	
	comp=E,232nm,0.4s						
ALAMX				⇑*e*		15 41 48.9	
ALAMX				IAML		15 41 48.9	
	comp=N,194nm,0.3s						
PFO	**Pinyon Flats O**	**1.05**	**312**	P	**Pb**	**15 41 36.6**	**-1.3**
	baz=132,SNR=17						
PFO				S	**Sb**	**15 41 50.9**	**-0.4**
	baz=132						
SJX	**San Joaquin**	**1.20**	**198**	*e*P	Pn	15 41 35.9	-3.9
OLP	**Otay Lakes Par**	**1.22**	**256**	*e*P	**Pn**	**15 41 39.2**	**-1.0**
IRM	**Iron Mountain**	**1.29**	**14**	Pb	**Pn**	**15 41 41.5**	**+0.3**
	baz=194,SNR=12						
109C	**Camp Elliot, M**	**1.33**	**270**	Pb	**Pb**	**15 41 42.5**	**+0.1**
	baz=89						
109C				S	**Sn**	**15 41 59.3**	**+0.4**
	baz=89						
MURC	**Murrieta**	**1.56**	**297**	Pg	**Pb**	**15 41 47.3**	**+0.8**
	baz=116,SNR=10						

IDC 28 15:48:24.2±2.4, 30°.55S×178°.75W, h0km, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=59.8km s-min=21.7km az=140.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.48**	**29**	Pn	Pg	15 48 52.7	+0.1
	39nm,0.3s,baz=210,slow=24,SNR=1.3						
RAO				LR	LR	15 49 05.5	
	comp=Z,220nm,19.2s,baz=88,slow=28						
RAO				Sn	Sn	15 49 13.3	+1.1
	76nm,0.3s,baz=257,slow=23,SNR=2.6						
ASAR	**Alice Springs**	**42.45**	**267**	P	P	15 56 21.1	0.0
	1.2nm,0.5s,baz=105,slow=7.1,SNR=26						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**43.46**	**273**	P	P	15 56 29.4	+0.1
	1.1nm,0.4s,baz=112,slow=7.8,SNR=12						
	1.1nm,0.4s						
FINES	**FINESS Array B**	**145.06**	**339**	PKPbc	PKPbc	16 08 00.3	-1.8
	1.5nm,0.6s,baz=52,slow=2.3,SNR=2.6						

IDC 28 15:49:17.2±5.2, 7°.23S×141°.11E, h0km, mb3.2/1, mbtmp3.3/3, ML3.0/2, Error ellipse: s-maj=173.5km s-min=37.9km az=95.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.24**	**207**	Pn	Pn	15 52 41.6	+1.3
	baz=30,slow=14,SNR=1.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.75**	**202**	P	Pn	15 53 24.9	-1.0
	0.1nm,0.3s,baz=29,slow=12,SNR=14						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**74.81**	**322**	P	P	16 00 59.6	+0.1
	0.1nm,0.4s,baz=131,slow=7.7,SNR=1.7						
	0.1nm,0.4s						

IDC 28 15:50:10.4±2.1, 2°.37S×126°.97E, h0km, mb3.4/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=147.6km s-min=27.9km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.89**	**158**	P	P	15 54 32.6	0.0
	0.2nm,0.3s,baz=336,slow=11,SNR=8.5						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**22.21**	**163**	P	P	15 55 08.4	-0.2
	0.4nm,0.4s,baz=345,slow=12,SNR=14						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.72**	**327**	P	P	16 00 37.5	+0.2
	0.5nm,1.0s,baz=113,slow=5.2,SNR=2.9						
	0.5nm,1.0s						

*IDC **28** 15:53:11.6±0.8, 1°.10S×120°.77E, h0km, mb4.1/9, mbtmp4.1/9, MS3.4/14, Error ellipse: s-maj=99.1km s-min=14.5km az=59.0*
*DJA **28** 15:53:13.9±0.2, 2°.5S×12°0E±°, h10km, M4.7/16, mb4.7/7, mB5.8/1, MLv4.6/16, Mw(mB)5.4/1*
*NEIC **28** 15:53:16.0±1.3, 1°.42S±0°.01×120°.21E±0°.06, h28km±6km, mb4.6/22, Error ellipse: s-maj=9.3km s-min=1.5km az=85.0*
ISC 28 15:53:17.2±0.5, 1°.49S±0°.05×120°.18E±0°.05, h35km, n75, σ1§46/64, mb4.5/24, MS3.3/11, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.58**	**193**	P	**Pn**	**15 53 40.9**	**-1.8**
TTSI				S	**Sn**	**15 54 01.5**	**-0.5**
MPSI	**Mapaga**	**1.84**	**351**	P	**Pn**	**15 53 43.0**	**-3.3**
LUWI	**Luwuk**	**2.63**	**80**		**Pn**	**15 53 56.0**	**-1.1**
LUWI	**Luwuk**	**2.63**	**80**	P	**Pn**	**15 53 56.5**	**-0.6**
LUWI				S	**Sn**	**15 54 29.8**	**+2.0**
MRSI	**Marisa**	**2.63**	**42**	P	**Pn**	**15 53 57.1**	**-0.1**
TOLI2	**Tolitoli**	**2.66**	**13**	Pn	**Pn**	**15 53 56.2**	**-1.3**
BKB	**Balikpapan**	**3.29**	**274**	Pn	**Pn**	**15 54 04.4**	**-1.8**
BKB	**Balikpapan**	**3.29**	**274**	P	**Pn**	**15 54 04.5**	**-1.8**
BKB				S	**Sn**	**15 54 45.3**	**+1.0**
KAPI	**Kappang**	**3.52**	**187**	Pn	**Pn**	**15 54 11.0**	**+1.5**
GTOI	**Gorontalo**	**3.53**	**53**	P	**Pn**	**15 54 10.4**	**+0.9**
BKSI	**Bulukumba**	**3.80**	**181**	P	**Pn**	**15 54 13.3**	**0.0**
KMSI	**Cibinong**	**4.32**	**62**	P	**Pn**	**15 54 21.4**	**+1.0**
MTKI	**Muara Teweh, K**	**5.32**	**276**	P	**Pn**	**15 54 32.4**	**-1.7**
	87nm,0.5s,0.6nm						
SANI	**Sanana**	**5.83**	**96**	P	**Pn**	**15 54 38.6**	**-2.5**
	27nm,0.6s,0.2nm						
EDFI	**Ende, Flores**	**7.36**	**168**	P	**Pn**	**15 55 01.3**	**-1.0**
LBMI	**Labuha**	**7.37**	**83**	P	**Pn**	**15 55 00.7**	**-1.6**
	65nm,0.5s,0.9nm						
MMRI	**Maumere**	**7.38**	**164**	Pn	**Pn**	**15 55 02.3**	**-0.2**
KKM	**Kota Kinabalu**	**8.47**	**332**	Pn	**Pn**	**15 55 16.8**	**-0.7**
STKI	**Sintang**	**8.84**	**280**	P	**Pn**	**15 55 22.8**	**+0.2**
	17nm,0.8s,5μm0.4nm						
SOEI	**Soe**	**9.16**	**154**	Pn	**Pn**	**15 55 28.2**	**+1.3**
SOEI	**Soe**	**9.16**	**154**	P	Pn	15 55 36.1	+9.1
JAGI	**Jajag, Banyuwa**	**9.17**	**221**	Pn	**Pn**	**15 55 25.4**	**-1.6**
DAV	**Davao City (W)**	**10.07**	**32**	LR	LR	16 00 00.5	
	comp=Z,221nm,19.4s,baz=169,slow=43						
FAKI	**Fak Fak**	**12.14**	**97**	Pn	**Pn**	**15 56 06.5**	**-1.3**
LEM	**Lembang**	**13.60**	**247**	LR	LR	16 02 13.6	
	comp=Z,235nm,18.8s,baz=120,slow=38						
TGY	**Tagaytay City**	**15.51**	**3**	LR	LR	16 02 40.3	
	comp=Z,133nm,21.4s,baz=118,slow=38						
FITZ	**Fitzroy Crossi**	**17.35**	**162**		**P**	**15 57 17.4**	**-0.3**
KRJI	**Kerinci**	**18.72**	**268**	P	Pn	15 57 43.0	+9.3
SISI	**Saibi**	**21.09**	**270**	P	**P**	**15 58 01.6**	**+2.8**
	35nm,1.1s						
WB0	**Warramunga Arr**	**22.87**	**144**	P	**P**	**15 58 15.8**	**-2.0**
WB0				IAmb	IAmb	15 58 24.6	
	comp=Z,34nm,1.4s						
WRAB	**Tennant Creek**	**22.97**	**144**	P	**P**	**15 58 17.3**	**-1.6**
WRAB				IAmb	IAmb	15 58 24.9	
	comp=Z,46nm,1.5s						
WRA	**Warramunga Arr**	**22.98**	**144**	P	**P**	**15 58 17.4**	**-1.5**
WRA	**Warramunga Arr**	**22.98**	**144**	P	**P**	**15 58 17.6**	**-1.3**
	comp=Z,9.7nm,1.0s,baz=320,slow=12,SNR=18						
	comp=Z,9.7nm,1.0s						
WB2	**Warramunga Arr**	**22.98**	**144**	P	**P**	**15 58 16.8**	**-2.2**
WB2				IAmb	IAmb	15 58 21.1	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**23.11**	**144**	P	**P**	**15 58 18.9**	**-1.3**
AS31	**Alice Springs**	**25.74**	**150**	P	**P**	**15 58 44.5**	**-0.2**
ASAR	**Alice Springs**	**25.74**	**150**	P	**P**	**15 58 44.9**	**+0.2**
ASAR	**Alice Springs**	**25.74**	**150**	P	**P**	**15 58 44.4**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=330,slow=9.4,SNR=25						
ASAR				LR	LR	16 09 24.6	
	comp=Z,119nm,18.3s,baz=324,slow=38						
	comp=Z,2.0nm,0.6s						
PMG	**Port Moresby**	**27.96**	**107**	LR	LR	16 13 47.4	
	comp=Z,71nm,18.9s,baz=255,slow=45						
CMAR	**Chiang Mai Arr**	**28.80**	**314**	P	**P**	**15 59 13.4**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=133,slow=6.3,SNR=8.4						
CMAR				LR	LR	16 13 35.0	
	comp=Z,36nm,18.2s,baz=150,slow=42						
	comp=Z,0.9nm,0.7s						
FORT	**Forrest**	**30.07**	**166**	P	**P**	**15 59 22.8**	**-0.4**
NWAO	**Narrogin (SRO)**	**31.39**	**185**	LR	LR	16 13 04.9	
	comp=Z,61nm,18.7s,baz=210,slow=38						
CTA	**Charters Tower**	**31.48**	**128**	LR	LR	16 12 42.4	
	comp=Z,85nm,21.2s,baz=260,slow=38						
PZH	**PanZhiHua**	**33.04**	**329**	P	**P**	**15 59 52.0**	**+2.4**
NJ2	**Nanjing**	**33.39**	**358**	*e*P	**P**	**15 59 54.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
BBOO	**Buckleboo**	**34.54**	**156**	P	**P**	**16 00 01.9**	**-0.5**
JNU	**Nakatsue**	**35.88**	**15**	LR	LR	16 14 48.2	
	comp=Z,53nm,21.1s,baz=28,slow=37						
STKA	**Stephens Creek**	**36.35**	**148**	P	**P**	**16 00 17.6**	**-0.4**

comp=Z,9.4nm,1.4s
GYA0B ALIBECK ARRAY 69.24 312 P **P** **16 04 20.7 -0.1**
GYA0B IAmb IAmb 16 04 23.7
comp=Z,3.3nm,0.9s
ABKAR Akbulak array 72.21 323 P **P** **16 04 37.5 -1.1**
TIXI Tiksi 73.23 3 LR LR 16 40 02.7
comp=Z,44nm,18.2s,baz=200,slow=39

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*IDC **28** 15:54:43.4±1.2,3˚.16S×151˚.37E, h0km, mb3.5/4, mbtmp3.6/5, ML2.2/1, MS3.5/1, Error ellipse: s-maj=28.8km s-min=19.8km az=77.0*
ISC 28 15:54:48.4±1.1,3˚.2S±0˚.1×151˚.4E±0˚.1, h35km, n8, σ1§18/9, mb3.4/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.31**	**150**		Pn		**Pn**	**15 55 09.5**	**-0.8**
KRVT					Sn		**Sn**	**15 55 27.9**	**+1.2**
PMG	**Port Moresby**	**7.49**	**214**		Pn		**Pn**	**15 56 35.0**	**-0.3**
	2.1nm,0.3s,baz=66,slow=10.0,SNR=6.9								
PMG					Sn		**Sn**	**15 57 59.4**	**+0.4**
	1.2nm,0.3s,baz=172,slow=22,SNR=3.2								
	5.7nm,0.5s								
WRA	**Warramunga Arr**	**23.55**	**224**	P			**P**	**15 59 54.0**	**-1.9**
	0.9nm,0.4s,baz=50,slow=9.9,SNR=2.4								
	0.9nm,0.4s								
ASAR	**Alice Springs**	**26.48**	**218**	P			**P**	**16 00 23.4**	**+0.8**
	0.7nm,0.6s,baz=50,slow=9.1,SNR=4.5								
	0.7nm,0.6s								
ASAJ	**Asahikawa**	**47.72**	**351**	LR			LR	16 20 49.5	
	comp=Z,55nm,21.9s,baz=165,slow=33								
MKAR	**Makanchi Array**	**78.16**	**319**	P			**P**	**16 06 45.5**	**+1.2**
	0.2nm,0.7s,baz=106,slow=6.0,SNR=2.7								
	0.2nm,0.7s								
ILAR	**Eielson Array**	**81.19**	**22**	P			**P**	**16 06 59.6**	**-0.6**
	0.3nm,0.9s,baz=245,slow=5.8,SNR=1.7								
	0.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**148.43**	**290**	PKPbc			**PKPbc**	**16 14 32.6**	**+0.1**
	0.5nm,0.6s,baz=88,slow=2.0,SNR=5.8								

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*IDC **28** 15:58:53.1±1.0,5˚.87S×142˚.82E, h0km, mb3.7/7, mbtmp3.6/10, ML3.7/2, Error ellipse: s-maj=34.4km s-min=21.4km az=67.0*
ISC 28 15:58:54.6±0.8, 6˚.1S±0˚.1×142˚.6E±0˚.1, h10km, n11, σ2§41/12, mb3.7/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.61**	**126**		Pn		**Pn**	**16 00 16.8**	**-1.3**
	2.0nm,0.5s,baz=202,slow=21,SNR=1.3								
PMG					Sn		**Sn**	**16 01 24.2**	**+1.5**
	0.4nm,0.3s,baz=326,slow=15,SNR=1.6								
CTA	**Charters Tower**	**14.36**	**166**		Lg		Lg	16 06 32.3	
	0.1nm,0.3s,baz=14,slow=8.6,SNR=1.1								
WRA	**Warramunga Arr**	**15.92**	**209**		Pn		**Pn**	**16 02 40.7**	**+1.8**
	0.3nm,0.3s,baz=29,slow=13,SNR=3.5								
WRA					Sn		Sn	16 05 27.6	-8.0
	0.1nm,0.3s,baz=30,slow=25,SNR=2.0								
WRA					Lg		Lg	16 07 24.9	
	0.2nm,0.3s,baz=19,slow=27,SNR=5.7								
	0.7nm,0.4s								
ASAR	**Alice Springs**	**19.36**	**205**	P			**Pn**	**16 03 24.2**	**+2.6**
	0.3nm,0.3s,baz=34,slow=10,SNR=15								
ASAR					S		**S**	**16 06 54.2**	**-5.5**
	0.8nm,0.8s,baz=15,slow=27,SNR=1.5								
ASAR					Lg		Lg	16 09 20.0	
	baz=284,slow=32,SNR=1.6								
	1.4nm,0.5s								
CMAR	**Chiang Mai Arr**	**49.46**	**300**	P			**P**	**16 07 46.2**	**+0.7**
	0.4nm,0.4s,baz=111,slow=6.4,SNR=4.1								
	0.4nm,0.4s								
SONM	**Songino Array**	**62.43**	**333**	P			**P**	**16 09 17.8**	**-0.3**
	0.2nm,0.5s,baz=150,slow=3.2,SNR=2.1								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**74.81**	**322**	P			**P**	**16 10 35.2**	**-0.1**
	0.2nm,0.4s,baz=113,slow=5.2,SNR=4.0								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**78.70**	**324**	P			**P**	**16 10 58.1**	**+1.0**
	0.2nm,0.4s,baz=118,slow=3.9,SNR=2.2								
	0.2nm,0.4s								
QSPA	**South Pole Qui**	**83.87**	**180**	P			**P**	**16 11 26.2**	**+1.7**
	0.6nm,0.8s,baz=18,slow=2.1,SNR=3.7								
	0.6nm,0.8s								
BVAR	**Borovoye Array**	**84.28**	**325**	P			**P**	**16 11 26.2**	**-0.4**
	1.0nm,0.7s,baz=106,slow=4.8,SNR=6.5								
	1.0nm,0.7s								
ILAR	**Eielson Array**	**87.33**	**24**	P			**P**	**16 11 39.6**	**-1.9**
	0.4nm,0.7s,baz=255,slow=5.0,SNR=8.0								
	0.4nm,0.7s								

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*IDC **28** 16:06:53.2±0.9,6˚.18S×143˚.31E, h0km, mb3.9/9, mbtmp3.9/11, ML1.5/1, Error ellipse: s-maj=37.7km s-min=20.7km az=83.0*
ISC 28 16:06:54.4±0.7, 6˚.3S±0˚.1×143˚.2E±0˚.1, h10km, n12, σ1§32/13, mb4.0/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.96**	**129**		Pn		**Pn**	**16 08 10.7**	**+1.6**
	1.3nm,0.3s,baz=346,slow=4.6,SNR=6.4								
PMG					Sn		**Sn**	**16 09 04.7**	**-1.9**
	1.3nm,0.3s,baz=240,slow=20,SNR=8.4								
	6.3nm,0.6s								
WRA	**Warramunga Arr**	**16.10**	**212**		Pn		**Pn**	**16 10 39.0**	**-2.0**
	0.3nm,0.3s,baz=18,slow=13,SNR=4.8								
WRA					Sn		Sn	16 13 27.0	-13
	0.3nm,0.3s,baz=27,slow=23,SNR=1.2								
WRA					Lg		Lg	16 15 24.9	
	0.1nm,0.3s,baz=32,slow=38,SNR=1.9								
ASAR	**Alice Springs**	**19.48**	**207**	P			**Pn**	**16 11 24.4**	**+1.6**
	4.7nm,0.6s,baz=28,slow=13,SNR=36								
ASAR					Sn		S	16 14 49.5	-12
	0.1nm,0.3s,baz=20,slow=28,SNR=5.2								
ASAR					Lg		Lg	16 17 14.6	
	baz=19,slow=32,SNR=1.6								
PETK	**Petropavlovsk-**	**60.43**	**10**	P			**P**	**16 17 03.8**	**-0.2**
	3.6nm,0.8s,baz=191,slow=12,SNR=2.5								
	3.6nm,0.8s								
SONM	**Songino Array**	**62.90**	**333**	P			**P**	**16 17 20.1**	**-0.9**
	0.1nm,0.3s,baz=110,slow=7.8,SNR=1.1								
	0.1nm,0.3s								
MKAR	**Makanchi Array**	**75.37**	**322**	P			**P**	**16 18 39.2**	**+0.9**
	0.9nm,0.6s,baz=107,slow=7.1,SNR=12								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**77.30**	**329**	P			**P**	**16 18 47.9**	**-1.1**
	0.6nm,0.5s,baz=106,slow=9.4,SNR=3.7								
	0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**79.25**	**324**	P			**P**	**16 19 00.3**	**+0.4**
	0.3nm,0.5s,baz=106,slow=8.6,SNR=4.3								
	0.3nm,0.5s								
QSPA	**South Pole Qui**	**83.68**	**180**	P			**P**	**16 19 23.4**	**+0.1**
	1.0nm,0.7s,baz=292,slow=0.9,SNR=11								
	1.0nm,0.7s								
NRIK	**Noril'sk**	**84.42**	**343**	P			**P**	**16 19 27.4**	**+0.7**
	0.9nm,0.4s,baz=88,slow=2.5,SNR=2.3								
	0.9nm,0.4s								
BVAR	**Borovoye Array**	**84.82**	**325**	P			**P**	**16 19 30.2**	**+1.0**
	1.7nm,0.7s,baz=112,slow=6.8,SNR=8.5								
	1.7nm,0.7s								
ILAR	**Eielson Array**	**87.23**	**24**	P			**P**	**16 19 40.4**	**-0.5**
	0.3nm,0.7s,baz=255,slow=4.9,SNR=2.5								
	0.3nm,0.7s								

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*IDC **28** 16:15:35.7±0.7,57˚.89S×25˚.64W, h61km±5km, mb4.4/8, mbtmp4.7/10, MS3.7/13, Error ellipse: s-maj=17.5km s-min=14.6km az=93.0*
*NEIC **28** 16:15:35.3±2.2,57˚.9S±0˚.1×25˚.4W±0˚.1, h58km±5km, mb4.9/40, Error ellipse: s-maj=17.7km s-min=8.6km az=187.0*
ISC 28 16:15:34.7±0.4, 57˚.97S±0˚.06×25˚.36W±0˚.07, h57km±3km, h57km:pP-P, n342, σ1§25/342, mb4.9/25, MS3.7/12, 11C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.23**	**296**		Pn		**Pn**	**16 17 19.5**	**+1.9**
VNA1	**Neumayer--Stat**	**14.63**	**157**	⇑P			**Pn**	**16 18 60.0**	**+1.9**
	comp=Z,5.0nm,0.2s								
VNA3	**Neumayer Olymp**	**14.84**	**160**	⇑P			**Pn**	**16 19 02.7**	**+1.9**
	comp=Z,9.4nm,0.3s								
VNA3				⇓S			Sn	16 21 33.6	-10
	comp=Z,3.6nm,0.4s								
VNA2	**Neumayer--Watz**	**15.03**	**157**	⇑P			**Pn**	**16 19 05.6**	**+2.4**
	comp=Z,5.7nm,0.3s,baz=319,slow=13								
VNA2				⇑S			Sn	16 21 37.8	-10
	comp=Z,4.6nm,0.3s,baz=321,slow=26								
SNAA	**Sanae**	**16.57**	**155**				**P**	**16 19 24.8**	**+0.3**
SNAA	**Sanae**	**16.57**	**155**	⇑P			**P**	**16 19 25.7**	**+1.2**
	comp=Z,181nm,0.4s								
SNAA				⇑S			**Sn**	**16 22 18.1**	**-7.7**
	comp=Z,36nm,0.5s								
SNAA	**Sanae**	**16.57**	**155**	P			**P**	**16 19 25.2**	**+0.6**
	comp=Z,5.7nm,0.4s,baz=322,slow=16,SNR=26								
SNAA				S			**Sn**	**16 22 16.6**	**-9.1**
	comp=Z,1.1nm,0.4s,baz=224,slow=22,SNR=1.3								
TROLL	**Troll, Antarti**	**18.07**	**152**	⇑P			**Pn**	**16 19 43.8**	**+2.4**
	comp=Z,640nm,0.6s								
TROLL				⇑S			**Sn**	**16 22 53.0**	**-9.1**
	comp=Z,158nm,0.7s								
PMSA	**Palmer Station**	**19.48**	**233**	P			**Pn**	**16 19 58.0**	**-0.1**
PMSA	**Palmer Station**	**19.48**	**233**	P			**Pn**	**16 19 57.9**	**-0.1**
	comp=Z,36nm,0.8s,baz=69,slow=12,SNR=6.1								
PMSA					LR		LR	16 26 15.6	
	comp=Z,348nm,20.3s,baz=86,slow=33								
EFI	**East Falkland**	**19.72**	**274**	P			**P**	**16 19 59.2**	**0.0**
BELA	**Belgrano 2**	**20.24**	**186**	P			**P**	**16 20 05.4**	**+0.7**
BELA					IAmb		IAmb	16 20 10.8	
	comp=Z,24nm,0.7s								
MG02	**Cerro Sombrero**	**25.10**	**263**	P			**P**	**16 20 53.4**	**-0.3**
MG05	**Puerto Natales**	**27.40**	**263**	P			**P**	**16 21 14.6**	**+0.3**
QSPA	**South Pole Qui**	**32.27**	**180**	P			**P**	**16 21 59.3**	**+1.8**
	comp=Z,11nm,0.8s,baz=126,slow=16,SNR=51								
QSPA					PcP		**PcP**	**16 24 44.5**	**+0.3**
	comp=Z,3.8nm,1.0s,baz=270,slow=4.0,SNR=3.9								
QSPA					LR		LR	16 34 17.2	
	comp=Z,144nm,21.9s,baz=214,slow=35								
	comp=Z,11nm,0.8s								
QSPA	**South Pole Qui**	**32.27**	**180**	P			**P**	**16 21 59.6**	**+2.0**
QSPA					pP		**pwP**	**16 22 14.8**	**+0.2**
QSPA					sP		**sP**	**16 22 21.9**	**+4.3**
LL02	**Futaleuf**	**32.28**	**277**	P			**P**	**16 21 57.6**	**0.0**
PLTB	**Pedras Altas**	**32.53**	**311**	P			**P**	**16 21 58.4**	**-1.5**
PLTB					IAmb		IAmb	16 21 59.8	
	comp=Z,10nm,0.6s								
PLCA	**Paso Flores**	**33.34**	**281**	P			**P**	**16 22 06.4**	**-0.6**
PLCA	**Paso Flores**	**33.34**	**281**	P			**P**	**16 22 06.2**	**-0.8**
	comp=Z,6.5nm,0.8s,baz=141,slow=3.8,SNR=24								
PLCA					PcP		**PcP**	**16 24 47.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=162,slow=2.3,SNR=3.7								
PLCA					LR		LR	16 35 08.0	
	comp=Z,117nm,18.4s,baz=144,slow=35								
	comp=Z,6.5nm,0.8s								
PLCA	**Paso Flores**	**33.34**	**281**	P			**P**	**16 22 06.6**	**-0.5**
PLCA					PcP		**PcP**	**16 24 47.4**	**-0.1**
LR05	**Currie**	**34.47**	**280**	P			**P**	**16 22 15.5**	**-1.1**
LR05					IAmb		IAmb	16 22 17.1	
	comp=Z,14nm,0.7s								
ITQB	**Itaqui**	**35.59**	**309**	P			**P**	**16 22 25.2**	**-1.2**
ITQB					IAmb		IAmb	16 22 25.8	
	comp=Z,15nm,0.7s								
SPB	**Sao Paulo**	**37.83**	**326**	P			**P**	**16 22 45.3**	**-0.2**
SPB					IAmb		IAmb	16 22 47.6	
	comp=Z,18nm,0.8s								
CPUP	**Villa Florida**	**38.83**	**311**	P			**P**	**16 22 52.4**	**-1.5**
CPUP	**Villa Florida**	**38.83**	**311**	P			**P**	**16 22 52.1**	**-1.7**
	comp=Z,2.6nm,0.4s,baz=157,slow=9.0,SNR=9.0								
CPUP					PcP		**PcP**	**16 25 04.0**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=185,slow=3.1,SNR=5.3								
CPUP					LR		LR	16 37 31.6	
	comp=Z,68nm,20.1s,baz=143,slow=34								
	comp=Z,2.6nm,0.4s								
CPUP	**Villa Florida**	**38.83**	**311**	P			**P**	**16 22 52.6**	**-1.3**
CPUP					pP		**pP**	**16 23 08.2**	**+0.6**
CPUP					sP		**sP**	**16 23 13.9**	**+0.1**
CPUP					PcP		**PcP**	**16 25 04.3**	**+0.3**
MT09	**Talagante**	**38.86**	**288**		P		**P**	**16 22 52.5**	**-1.8**
MT09					IAmb		IAmb	16 23 08.4	
	comp=Z,29nm,1.6s								
MT02	**Curacav**	**39.35**	**289**		P		**P**	**16 22 56.3**	**-1.9**
MT02					IAmb		IAmb	16 23 00.6	
	comp=Z,14nm,1.1s								
SUR	**Sutherland**	**40.25**	**71**	P			**P**	**16 23 05.0**	**-0.9**
SUR					IAmb		IAmb	16 23 33.3	
	comp=Z,67nm,1.9s								
SUR	**Sutherland**	**40.25**	**71**	LR			LR	16 35 38.7	
	comp=Z,186nm,20.5s,baz=183,slow=30								
CO01	**Juntas del Tor**	**41.49**	**293**	P			**P**	**16 23 15.1**	**-1.1**
AC05	**El Transito**	**42.52**	**294**	P			**P**	**16 23 22.4**	**-2.0**
LCO	**Las Campanas**	**42.58**	**293**	P			**P**	**16 23 24.0**	**-1.1**
AQDB	**Aquidauana**	**43.49**	**317**	P			**P**	**16 23 30.0**	**-2.2**
VNDA	**Vanda**	**44.69**	**182**	P			**P**	**16 23 43.3**	**+2.1**
VNDA					IAmb		IAmb	16 23 44.7	
	comp=Z,13nm,0.9s								
VNDA	**Vanda**	**44.69**	**182**	P			**P**	**16 23 43.1**	**+2.0**
	comp=Z,9.9nm,0.8s,baz=186,slow=6.7,SNR=16								
	comp=Z,9.9nm,0.8s								
VNDA	**Vanda**	**44.69**	**182**	P			**P**	**16 23 43.6**	**+2.5**
VNDA					pP		**pwP**	**16 23 59.3**	**+0.7**
BDFB	**Brasilia**	**45.53**	**329**	P			**P**	**16 23 49.3**	**+0.7**
BDFB					IAmb		IAmb	16 23 50.4	
	comp=Z,14nm,0.7s								
BDFB	**Brasilia**	**45.53**	**329**	P			**P**	**16 23 48.8**	**+0.2**
	comp=Z,14nm,0.7s,baz=141,slow=5.2,SNR=18								
	comp=Z,14nm,0.7s								
BOSA	**Boshof**	**45.54**	**72**	P			**P**	**16 23 50.0**	**+1.4**
BOSA					IAmb		IAmb	16 23 56.9	
	comp=Z,22nm,1.7s								
BOSA	**Boshof**	**45.54**	**72**	P			**P**	**16 23 49.8**	**+1.2**
	comp=Z,4.2nm,0.9s,baz=202,slow=7.7,SNR=5.8								
BOSA					LR		LR	16 38 55.2	
	comp=Z,157nm,20.1s,baz=208,slow=31								
	comp=Z,4.2nm,0.9s								
CCD	**Concordia, Ant**	**45.60**	**169**	P			**P**	**16 23 50.3**	**+1.5**
CCD					pP		**pwP**	**16 24 06.3**	**-0.1**
H04S2	**CROZET ISLANDS**	**45.88**	**111**	T			T	17 14 23.1	
	baz=225,slow=75,SNR=35								
H04S3	**CROZET ISLANDS**	**45.89**	**111**	T			T	17 14 24.4	
	baz=225,slow=75,SNR=36								
H04S1	**CROZET ISLANDS**	**45.90**	**111**	T			T	17 14 24.8	
	baz=225,slow=75,SNR=40								
LVC	**Limon Verde**	**47.13**	**300**	LR			LR	16 45 35.4	
	comp=Z,30nm,19.4s,baz=102,slow=38								
PB09	**IPOC Station P**	**47.98**	**300**	P			**P**	**16 24 06.7**	**-1.1**
PB09					IAmb		IAmb	16 25 24.3	
	comp=Z,8.9nm,0.7s								
PTLB	**Pontes e Lacer**	**49.37**	**315**	P			**P**	**16 24 16.9**	**-1.3**
PTLB					IAmb		IAmb	16 24 19.4	
	comp=Z,15nm,0.8s								
H10S2	**ASCENSION HYDR**	**49.59**	**14**	T			T	17 18 54.3	
	baz=188,slow=74,SNR=46								
H10S3	**ASCENSION HYDR**	**49.60**	**14**	T			T	17 18 54.8	
	baz=32,slow=74,SNR=17								
TSUM	**Tsumeb**	**49.81**	**57**	LR			LR	16 40 34.7	
	comp=Z,72nm,21.5s,baz=151,slow=30								
H10N1	**ASCENSION HYDR**	**50.71**	**14**	T			T	17 20 19.7	
	baz=188,slow=75,SNR=11								
H10N3	**ASCENSION HYDR**	**50.71**	**14**	T			T	17 20 18.3	
	baz=188,slow=75,SNR=63								
H10N2	**ASCENSION HYDR**	**50.73**	**14**	T			T	17 20 18.7	
	baz=188,slow=75,SNR=52								
VILB	**Vilhena**	**52.06**	**315**	P			**P**	**16 24 36.5**	**-2.1**
SAML	**Samuel**	**56.86**	**314**	P			**P**	**16 25 11.8**	**-1.6**
ETMB	**Extrema**	**57.28**	**310**	P			**P**	**16 25 14.7**	**-1.6**
ETMB					IAmb		IAmb	16 25 16.9	
	comp=Z,5.8nm,0.8s								
LSZ	**Lusaka**	**58.19**	**66**	P			**P**	**16 25 24.1**	**+1.2**
LSZ					IAmb		IAmb	16 25 25.3	
	comp=Z,6.6nm,0.8s								
LSZ	**Lusaka**	**58.19**	**66**	LR			LR	16 46 04.4	
	comp=Z,127nm,21.1s,baz=182,slow=31								
NNA	**Nana**	**60.05**	**298**	LR			LR	16 50 02.0	
	comp=Z,40nm,21.5s,baz=160,slow=34								
LIC	**Lamto**	**66.07**	**22**	⇑*iP*			**P**	**16 26 16.6**	**+1.2**
	comp=Z,32nm,0.5s								
KIC	**Kosan Boka**	**66.26**	**22**	⇑*iP*			**P**	**16 26 17.8**	**+1.2**
	comp=Z,22nm,0.7s								
BOAV	**Boa Vista**	**66.41**	**321**	P			**P**	**16 26 15.9**	**-1.7**
BOAV					IAmb		IAmb	16 26 17.7	
	comp=Z,14nm,0.6s								
TIC	**Toumodi**	**66.48**	**22**	⇑*iP*			**P**	**16 26 19.2**	**+1.2**
	comp=Z,3.4nm,0.3s								
DBIC	**Dimbokro**	**66.54**	**22**	P			**P**	**16 26 18.9**	**+0.6**
DBIC					IAmb		IAmb	16 26 20.0	
	comp=Z,10nm,0.6s								
DBIC	**Dimbokro**	**66.54**	**22**	P			**P**	**16 26 19.2**	**+0.9**
	comp=Z,11nm,0.6s,baz=183,slow=6.1,SNR=14								
DBIC					pP		**pwP**	**16 26 35.4**	**-2.4**
	comp=Z,7.4nm,0.7s,baz=175,slow=3.6,SNR=5.6								
DBIC					LR		LR	16 47 58.3	
	comp=Z,59nm,19.9s,baz=260,slow=29								
	comp=Z,11nm,0.6s								
DBIC	**Dimbokro**	**66.54**	**22**	P			**P**	**16 26 19.4**	**+1.1**
DBIC					pP		**pwP**	**16 26 35.8**	**-2.0**
MPGF	**Montagnes des**	**66.62**	**330**	P			**P**	**16 26 19.0**	**+0.1**
MCRA	**Macar, Loja**	**68.17**	**299**	P			**P**	**16 26 27.2**	**-1.6**
COHC	**Cochancay**	**69.52**	**300**	P			**P**	**16 26 36.3**	**-0.8**
GARC	**Garzon, Huila**	**71.99**	**306**	*eP*			**P**	**16 26 50.1**	**-2.3**
MBAR	**Mbarara**	**72.18**	**61**	LR			LR	16 56 43.9	
	comp=Z,63nm,19.4s,baz=261,slow=34								
POPC	**Popayan, Colom**	**72.81**	**305**	*eP*			**P**	**16 26 56.0**	**-1.3**
JAMC	**Jamundi, Valle**	**73.42**	**306**	*eP*			**P**	**16 26 58.5**	**-2.3**
ORTC	**Ortega, Tolima**	**73.43**	**307**	*eP*			**P**	**16 26 59.8**	**-0.9**
TOA0	**Torodi Ar. Sit**	**74.27**	**27**	P			**P**	**16 27 06.8**	**+1.3**
TOA0					IAmb		IAmb	16 27 24.4	
	comp=Z,15nm,0.8s								
TORD	**Torodi Ar. Bea**	**74.27**	**27**	P			**P**	**16 27 06.3**	**+0.9**
TORD					IAmb		IAmb	16 27 24.3	
	comp=Z,14nm,0.8s								
TORD	**Torodi Ar. Bea**	**74.27**	**27**	P			**P**	**16 27 06.8**	**+1.3**
	comp=Z,7.6nm,0.5s,baz=199,slow=5.9,SNR=60								
TORD					pP		**pwP**	**16 27 23.4**	**-1.7**
	comp=Z,14nm,0.8s,baz=194,slow=5.2,SNR=9.8								
	comp=Z,7.6nm,0.5s								
GUY2C	**Guyana, Caldas**	**74.66**	**308**	*eP*			**P**	**16 27 06.7**	**-1.7**
NORC	**Norcasia**	**74.76**	**308**	*eP*			**P**	**16 27 04.4**	**-4.0**
PLMC	**San Jos del P**	**74.76**	**307**	*eP*			**P**	**16 27 06.4**	**-2.1**
BAUV	**El Baul**	**75.15**	**316**	P			**P**	**16 27 09.4**	**-1.2**
BAUV					IAmb		IAmb	16 27 11.8	
	comp=Z,18nm,0.9s								
GDHS	**Morne Mazeau,**	**79.85**	**325**	P			**P**	**16 27 37.3**	**+0.5**
PPT2	**Papeete2**	**91.82**	**232**	*eLR*			LR	16 58 12.2	
	comp=Z,200nm,26.8s								
PPT2				*eLR*			LR	16 58 12.7	
	comp=Z,163nm,29.0s								
PPT	**Papeete**	**91.83**	**232**	LR			LR	17 00 43.6	
	comp=Z,56nm,19.8s,baz=150,slow=30								
TXAR	**Lajitas Array**	**108.55**	**296**	PKiKP			**PKiKP**	**16 33 56.2**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=168,slow=6.4,SNR=3.9								
121A	**Cookes Peak, D**	**113.18**	**294**	P			**PKiKP**	**16 34 05.6**	**+0.4**
	baz=145								
KSU1	**Kansas State U**	**113.47**	**307**	P			**PKiKP**	**16 34 06.4**	**+1.1**
	baz=147								
T25A	**Trinidad**	**115.33**	**300**	P			**PKiKP**	**16 34 09.9**	**+0.7**
	baz=145								
SDCO	**Great Sand Dun**	**116.33**	**299**				**PKPdf**	**16 34 11.1**	**-0.1**
SDCO	**Great Sand Dun**	**116.33**	**299**	P			**PKiKP**	**16 34 12.1**	**+0.8**
	baz=144								
MVCO	**Mesa Verde**	**117.31**	**297**	P			**PKiKP**	**16 34 13.8**	**+0.7**
	baz=144								
SCHQ	**Schefferville**	**117.33**	**334**	PKP			**PKPdf**	**16 34 11.9**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=69,slow=4.9,SNR=4.0								
WUAZ	**Wupatki**	**117.33**	**294**	P			**PKiKP**	**16 34 13.8**	**+0.7**
	baz=143								
PDMCI	**Parker Dam,Lak**	**117.73**	**291**	P			**PKiKP**	**16 34 14.7**	**+1.0**
	baz=143								
BC3	**Big Chuckawall**	**117.87**	**289**	P			**PKiKP**	**16 34 15.1**	**+0.9**
	baz=143								
ISCO	**Idaho Springs**	**118.03**	**301**	P			**PKiKP**	**16 34 15.4**	**+0.9**
	baz=144								
IRM	**Iron Mountain**	**118.12**	**290**	P			**PKiKP**	**16 34 15.1**	**+0.6**
	baz=143								
TPFO	**Pinon Flats**	**118.34**	**289**	P			**PKiKP**	**16 34 15.6**	**+0.6**
	baz=143								
GMRC	**Granite Mounta**	**118.87**	**290**	P			**PKiKP**	**16 34 17.2**	**+1.1**
	baz=143								
HMU	**Henry Mountain**	**118.96**	**296**	PKPdf			**PKiKP**	**16 34 16.5**	**+0.2**
N23A	**Red Feather La**	**119.06**	**301**	P			**PKiKP**	**16 34 17.1**	**+0.7**
	baz=143								
BFSC	**Mount Baldy Ra**	**119.45**	**288**	P			**PKiKP**	**16 34 17.8**	**+0.6**
	baz=142								
O20A	**White River Ci**	**119.52**	**299**	PKPdf			**PKPdf**	**16 34 16.9**	**-0.3**
O20A	**White River Ci**	**119.52**	**299**	P			**PKiKP**	**16 34 17.7**	**+0.5**
	baz=143								
TUQ	**Turquoise Moun**	**119.52**

YKA PKP **PKPdf** 16 34 51.8 +0.1
comp=Z,7.8nm,0.9s,baz=128,slow=1.9,SNR=36
YKA pPKP sPKPdf 16 35 09.0 -4.2
comp=Z,3.7nm,0.7s,baz=130,slow=2.2,SNR=5.5
YKA PP **PP** 16 37 40.6 -1.9
comp=Z,0.1nm,0.5s,baz=119,slow=6.2,SNR=4.1
YKA SKPbc **SKPbc** 16 38 20.0 -0.7
comp=Z,0.5nm,0.8s,baz=127,slow=2.2,SNR=5.1
ZALV Zalesovo Beam 142.29 65 PKhKP PKPpre 16 34 54.5
comp=Z,0.8nm,0.5s,baz=321,slow=1.9,SNR=5.0
R32K Eaglecrest 144.18 301 P **PKiKP** 16 35 06.1 0.0
baz=121
P32M Atlin 144.48 304 P **PKPdf** 16 35 02.6 -0.4
baz=120
N32M Quiet Lake 144.95 306 P **PKPdf** 16 35 04.2 +0.4
baz=118
C36M Paulatuk 145.06 322 P **PKPdf** 16 35 03.9 +0.3
baz=118
SKAG Skagway 145.13 303 P **PKPdf** 16 35 04.7 +0.6
baz=119
WHY Whitehorse 145.50 305 P **PKPab** 16 35 05.6 +0.2
baz=118
FARO Faro, Yukon 145.56 308 P **PKPab** 16 35 06.9 +1.4
baz=116
M31M Drury Creek, Y 145.99 308 P **PKPab** 16 35 06.9 -0.2
baz=116
O30N Mendenhall 146.08 305 P **PKPab** 16 35 07.9 +0.4
baz=117
P30M Million Dollar 146.17 303 P **PKPab** 16 35 07.8 -0.1
baz=117
P29M Windy Craggy 146.29 302 P **PKPab** 16 35 08.3 -0.1
baz=117
A36M Sachs Harbour 146.37 326 P **PKPab** 16 35 08.4 +0.2
baz=108
HYT Haines Junctio 146.73 304 P **PKPab** 16 35 09.8 -0.4
baz=116
YUK6 Outpost Mounta 147.16 304 P **PKPbc** 16 35 10.9 +0.8
baz=115
M30M Minto, Yukon 147.16 307 P **PKPbc** 16 35 10.0 +0.2
baz=114
MAYO Mayo, Yukon 147.19 309 P **PKPbc** 16 35 10.0 +0.1
baz=113
H31M Peel River 147.40 314 P **PKPbc** 16 35 10.6 +0.3
baz=111
YUK4 Talbot Arm 147.45 305 P **PKPbc** 16 35 11.4 +0.5
baz=114
PINM Pinnacle 147.64 302 P **PKPbc** 16 35 11.9 +0.7
baz=115
F31M Tsiigehtchic 147.73 317 P **PKPbc** 16 35 11.2 +0.1
baz=109
J30M Hart River 147.74 311 P **PKPbc** 16 35 11.8 +0.4
baz=111
G31M Satah River 147.75 316 P **PKPbc** 16 35 11.7 +0.5
baz=109
M29M Somme Creek 147.82 307 P **PKPbc** 16 35 12.1 +0.4
baz=113
INK Inuvik 147.92 318 P **PKPbc** 16 35 12.0 +0.4
baz=108
YUK8 Steele Glacier 147.92 304 P **PKPbc** 16 35 12.8 +0.6
baz=114
L29M L29M 147.93 308 P **PKPbc** 16 35 12.5 +0.5
baz=112
K29M Barlow Dome 147.96 309 P **PKPbc** 16 35 12.4 +0.3
baz=112
I30M Mount Dempster 147.99 312 P **PKPbc** 16 35 12.7 +0.6
baz=110
YUK3 Moose Creek 148.42 305 P **PKPbc** 16 35 13.5 +0.1
baz=113
MESA MESA 148.44 301 P **PKiKP** 16 35 14.5 -0.5
baz=114
CTG Chitna Glacier 148.49 303 P **PKPbc** 16 35 14.1 +0.6
baz=114
EPYK Eagle Plains 148.50 314 P **PKPbc** 16 35 13.6 +0.3
baz=108
G30M tAoh Zraii Nji 148.50 315 P **PKPbc** 16 35 13.8 +0.6
baz=108
F30M Barrier River 148.53 317 P **PKPbc** 16 35 14.1 +0.8
baz=107
DAWY Dawson 148.81 309 P **PKPbc** 16 35 14.4 +0.2
baz=110,SNR=22
DAWY Dawson 148.81 309 P **PKPbc** 16 35 14.3 +0.2
BVCY Beaver Creek 148.84 306 P **PKPbc** 16 35 14.7 +0.5
baz=112,SNR=6.0
H29M Whitestone 149.09 313 P **PKPbc** 16 35 15.3 +0.6
baz=107
MOY Mondy 149.18 78 *eP* **PKiKP** 16 35 16.4 -0.3
M27K Edge Creek, AK 149.26 305 P **PKPbc** 16 35 16.0 +0.6
baz=111
MCARA McCarthy VSAT 149.41 303 P **PKiKP** 16 35 16.5 -0.3
baz=112
I28M Miner Creek 149.47 312 P **PKiKP** 16 35 16.6 -0.3
baz=107
L27K Beaver Creek, 149.49 307 P **PKiKP** 16 35 16.5 -0.4
baz=110
E29M Blow River 149.50 318 P **PKPbc** 16 35 15.8 +0.1
baz=104
EGAK Eagle 149.76 310 P **PKPbc** 16 35 16.8 +0.4
baz=108,SNR=6.6
SONM Songino Array 149.81 88 PKPbc **PKPbc** 16 35 17.9 +0.7
comp=Z,12nm,0.9s,baz=221,slow=3.3,SNR=12
NRIK Noril'sk 149.85 41 PKPbc **PKPbc** 16 35 16.7 +0.2
comp=Z,5.3nm,0.9s,baz=263,slow=0.7,SNR=9.5
K27K Chicken 149.91 308 P **PKiKP** 16 35 17.9 +0.2
baz=108
BMRM Bremner River 149.96 302 P **PKiKP** 16 35 18.0 0.0
baz=112,SNR=5.5
D28M Stokes Point 150.01 319 P **PKiKP** 16 35 17.5 -0.2
baz=102
F28M Old Crow 150.04 316 P **PKPbc** 16 35 17.5 +0.5
baz=104
L26K Log Cabin Wild 150.13 306 P **PKiKP** 16 35 18.2 0.0
baz=109
I27K Kandik River 150.19 311 P **PKiKP** 16 35 18.3 0.0
baz=106,SNR=34
N25K Chitina, Valde 150.19 303 P **PKiKP** 16 35 18.8 +0.4
baz=111,SNR=7.2
H27K Steamboat Moun 150.32 313 P **PKiKP** 16 35 18.6 +0.1
baz=105
EYAK Cordova Ski Ar 150.33 301 P **PKiKP** 16 35 18.9 +0.3
baz=112
J26L Joseph Creek 150.67 309 P **PKiKP** 16 35 19.6 +0.2
baz=106
SCRK Sand Creek 150.70 308 P **PKiKP** 16 35 19.9 +0.4
baz=107,SNR=36
HARP HAARP 150.71 304 P **PKiKP** 16 35 19.4 0.0
baz=109
I26K Coal Creek Min 150.73 311 P **PKiKP** 16 35 19.5 +0.1
baz=105
KLU Klutina 150.75 302 P **PKiKP** 16 35 20.1 +0.5
baz=110,SNR=12
P23K Montague Islan 150.89 299 P **PKiKP** 16 35 19.9 +0.1
baz=112
RIDG Independent Ri 150.99 307 P **PKiKP** 16 35 20.7 +0.7
baz=107,SNR=64
PAX Paxson 151.03 305 P **PKPbc** 16 35 19.9 +0.3
baz=108,SNR=19
M24K Tolsona, Glenn 151.06 303 P **PKiKP** 16 35 21.1 +0.9
baz=109,SNR=11
G26K Porcupine Rive 151.37 314 P **PKiKP** 16 35 21.0 +0.4
baz=102
K24K Donnelly Dome 151.41 307 P **PKiKP** 16 35 20.9 +0.1
baz=106,SNR=7.4
J25K Salcha River, 151.45 309 P **PKiKP** 16 35 21.1 +0.1
baz=105
SCM Sheep Creek Mo 151.49 303 P **PKiKP** 16 35 21.8 +0.6
baz=109,SNR=8.8
F26K Sheenjek River 151.65 315 P **PKiKP** 16 35 22.0 +0.8
baz=100
M23K Glacier View 151.66 302 P **PKiKP** 16 35 21.5 +0.1
baz=108,SNR=12
PRP Porcupine Dome 151.74 310 P **PKiKP** 16 35 21.7 +0.1
baz=103,SNR=24
KNK Knik Glacier 151.87 301 P **PKiKP** 16 35 22.1 +0.2
baz=109,SNR=6.8
SEW Seward 151.88 298 P **PKiKP** 16 35 22.2 +0.3
baz=110
DHY Denali Highway 151.89 305 P **PKiKP** 16 35 22.5 +0.5
baz=106,SNR=10
WAT6 Susitna Watana 151.91 304 P **PKiKP** 16 35 22.5 +0.4
baz=107,SNR=20
SML Sawmill 151.94 302 P **PKiKP** 16 35 22.2 +0.2
baz=108,SNR=12
HDA Harding Lake 152.06 308 P **PKPbc** 16 35 22.0 +0.2
baz=104,SNR=13
ILAR Eielson Array 152.12 309 PKPbc **PKiKP** 16 35 22.3 +0.1
comp=Z,38nm,0.9s,baz=280,slow=1.4,SNR=38
F25K Christian Rive 152.20 315 P **PKiKP** 16 35 23.3 +0.9
baz=99
G25K Bearman Lake 152.23 313 P **PKiKP** 16 35 23.4 +1.1
baz=100
PMR Palmer 152.23 301 P **PKiKP** 16 35 23.0 +0.5
baz=108
E25K Arctic Village 152.25 316 P **PKiKP** 16 35 23.1 +0.6
baz=98
E25K Arctic Village 152.25 316 P **PKiKP** 16 35 22.7 +0.2
WAT1 Susitna Watana 152.34 304 P **PKiKP** 16 35 23.1 +0.3
baz=106
RC01 Rabbit Creek A 152.35 300 P **PKiKP** 16 35 23.2 +0.4
baz=108,SNR=8.1
BRSE Bradley Lake S 152.37 297 P **PKiKP** 16 35 23.1 +0.2
baz=110
POKR Poker Plat Res 152.43 309 P **PKiKP** 16 35 22.9 0.0
baz=103
KDAK Kodiak Island 152.53 292 P **PKiKP** 16 35 23.4 +0.1
baz=113
COLA College 152.55 309 P **PKPbc** 16 35 22.9 +0.1
baz=103
OHAK Old Harbor 152.65 291 P **PKiKP** 16 35 23.6 +0.1
baz=114
D25K Kavik River 152.69 318 P **PKiKP** 16 35 23.5 +0.1
baz=95
M22K Willow 152.73 301 P **PKiKP** 16 35 24.0 +0.5
baz=107,SNR=7.0
MCK McKinley 152.74 306 P **PKiKP** 16 35 24.0 +0.5
baz=104,SNR=18
Q20K Shuyak Island 152.75 294 P **PKiKP** 16 35 24.3 +0.6
baz=112
G24K Hadweenzic Riv 152.75 313 P **PKiKP** 16 35 24.6 +1.1
baz=100
H24K Noodor Dome 152.76 311 P **PKiKP** 16 35 24.0 +0.4
baz=101
SUA Susitna One 152.93 301 P **PKiKP** 16 35 24.6 +0.5
baz=107,SNR=5.8
CUT Chulitna 152.98 303 P **PKiKP** 16 35 24.6 +0.6
baz=106
NEA2 Nenana 153.00 308 P **PKPbc** 16 35 23.9 0.0
baz=102,SNR=11
F24K Squaw Lake 153.04 314 P **PKiKP** 16 35 24.9 +0.8
baz=98
I23K Minto, Yukon-K 153.23 309 P **PKPbc** 16 35 24.4 +0.1
baz=101,SNR=5.6
TRF Thorofare Moun 153.26 305 P **PKiKP** 16 35 25.1 +0.3
baz=104,SNR=6.8
SKT Skwentna 153.43 302 P **PKiKP** 16 35 25.2 +0.1
baz=106,SNR=15
Q19K Cape Douglas, 153.47 294 P **PKiKP** 16 35 25.4 +0.2
baz=110
P19K Oil Pt 153.52 296 P **PKPbc** 16 35 25.2 0.0
baz=109
N20K Mount Spurr 153.52 300 P **PKPbc** 16 35 25.3 0.0
baz=107
C24K Franklin Bluff 153.53 319 P **PKiKP** 16 35 25.5 +0.5
baz=93
D24K Happy Valley 153.55 318 P **PKiKP** 16 35 25.5 +0.5
baz=94
BPAW Bear Paw Mtn. 153.71 306 P **PKiKP** 16 35 25.8 +0.2
baz=102,SNR=20
E23K Chandalar 153.75 315 P **PKiKP** 16 35 26.0 +0.3
baz=95
G23K Bananza Creek 153.76 312 P **PKiKP** 16 35 26.9 +1.3
baz=98
MLY Mley 153.78 308 P **PKiKP** 16 35 26.4 +0.7
baz=100,SNR=7.1
COLD Coldfoot 153.89 313 P **PKiKP** 16 35 26.8 +1.0
baz=96
PPLA Purkeypile 153.97 303 P **PKiKP** 16 35 26.6 +0.4
baz=104
CAST Castle Rocks 154.04 305 P **PKPbc** 16 35 26.2 0.0
baz=103,SNR=10
M20K Styx River 154.14 301 P **PKPbc** 16 35 26.6 +0.1
baz=105
H22K Ishtalitna Cre 154.19 310 P **PKiKP** 16 35 27.0 +0.5
baz=98
C23K Itkillik River 154.20 319 P **PKiKP** 16 35 27.0 +0.7
baz=91
D23K Nanushuk River 154.20 317 P **PKiKP** 16 35 27.1 +0.7
baz=92
O19K Port Alsworth 154.21 297 P **PKPbc** 16 35 26.5 -0.1
baz=108
CHUM Lake Minchumin 154.24 306 P **PKiKP** 16 35 26.7 +0.1
baz=102,SNR=7.5
I21K Tanana 154.33 309 P **PKiKP** 16 35 27.0 +0.2
baz=99
Q17K Contact Creek 154.34 292 P **PKPbc** 16 35 27.2 +0.1
baz=111
G22K Bettles 154.37 313 P **PKiKP** 16 35 27.6 +0.8
baz=96
P18K Big Mountain, 154.40 295 P **PKPbc** 16 35 27.1 0.0
baz=109
N19K Bonanza Creek 154.47 298 P **PKPbc** 16 35 27.2 -0.1
baz=106
O18K Koktuh Hills 154.53 296 P **PKiKP** 16 35 27.8 +0.5
baz=108
E22K Anaktuvuk Pass 154.58 315 P **PKiKP** 16 35 28.1 +0.8
baz=93
L20K Farewell, AK 154.62 302 P **PKiKP** 16 35 28.2 +0.7
baz=103
M19K Big River Lodg 154.72 301 P **PKiKP** 16 35 28.1 +0.4
H21K Melozitna Rive 154.74 310 P **PKiKP** 16 35 28.4 +0.8
baz=97
K20K Telida 154.90 304 P **PKiKP** 16 35 28.4 +0.4
baz=101
P17K Kvichak River 154.92 294 P **PKiKP** 16 35 29.2 +1.0
baz=108
D22K Ayikyak River 154.93 317 P **PKiKP** 16 35 28.9 +1.0
baz=91
F21K Alatna River 155.16 313 P PKPdf 16 35 29.5 +10
baz=94
M18K Stony River 155.28 299 P PKPdf 16 35 29.3 +9.5
baz=104
I20K Naaghedeneel 155.32 307 P PKPdf 16 35 30.0 +10
baz=98
O16K Kokwok River B 155.85 294 P **PKPab** 16 35 48.2 +0.3
baz=107
M17K Holitna River 156.01 299 P **PKPab** 16 35 48.8 +0.3
baz=103
F20K Avaraart Lake 156.03 313 P **PKPab** 16 35 48.8 +0.4
baz=92
J18K Innoko River 156.09 304 P **PKPab** 16 35 48.9 +0.1
baz=99
E20K Nigu River 156.22 316 P **PKPab** 16 35 50.2 +0.9
baz=89
H19K Roundabout Mou 156.23 309 P **PKPab** 16 35 50.4 +1.0
baz=95
GCSA Galena City Sc 156.34 307 P **PKPab** 16 35 50.7 +0.9
baz=96
D20K Etivluk River 156.36 317 P **PKPab** 16 35 50.5 +0.6
baz=87
N16K Nishlik Lake 156.42 296 P **PKPab** 16 35 51.4 +1.0
baz=104
M16K Timber Creek 156.64 297 P **PKPab** 16 35 52.4 +1.1
baz=103
K17K Iditarod 156.68 302 P **PKPab** 16 35 52.0 +0.7
baz=104
F19K Shaleruckik Mo 156.83 312 P **PKPab** 16 35 52.2 +0.3
baz=91
D19K Kuna River 156.92 316 P **PKPab** 16 35 53.1 +0.7
baz=86
H18K Honhosa River 157.00 308 P **PKPab** 16 35 54.0 +1.2
baz=94
L16K Owhat River 157.03 299 P **PKPab** 16 35 53.9 +1.0
baz=101
G18K Tagagawik 157.16 310 P **PKPab** 16 35 54.4 +1.0
baz=92
O14K Tigyukauivet M 157.31 292 P **PKPab** 16 35 54.6 +0.4
baz=106
C19K Lookout Ridge 157.40 318 P **PKPab** 16 35 55.8 +1.4
baz=84
F18K Selawik 157.58 311 P **PKPab** 16 35 56.1 +1.0
baz=89
H17K Granite Mounta 157.64 307 P **PKPab** 16 35 56.0 +0.5
baz=93
N14K Kuskokwak Cree 157.69 294 P **PKPab** 16 35 56.5 +0.8
baz=104
A19K Wainwright 157.75 321 P **PKPab** 16 35 57.2 +1.4
baz=79
J16K Anvik River 157.80 303 P **PKPab** 16 35 57.1 +0.9
baz=97
I17K Unalakleet 157.90 304 P **PKPab** 16 35 57.3 +0.7
baz=95
E18K Tukpahlearik C 157.92 314 P **PKPab** 16 35 57.1 +0.5
baz=86
L15K Ungalak Mounta 157.97 298 P **PKPab** 16 35 57.6 +0.6
baz=100
G17K Kiwalik Mounta 157.98 309 P **PKPab** 16 35 57.4 +0.5
baz=91
M14K Bethel 158.01 296 P **PKPab** 16 35 58.0 +0.8
baz=102
C18K Utukok River 158.03 317 P **PKPab** 16 35 58.3 +1.2
baz=83
K15K Wolf Creek Mou 158.09 300 P **PKPab** 16 35 58.4 +0.9
baz=98
B18K Kokolik River 158.15 319 P **PKPab** 16 35 59.0 +1.5
baz=80
F17K Baldwin Pennin 158.22 311 P **PKPab** 16 35 58.3 +0.4
baz=88
L14K Kuka Creek 158.47 297 P **PKPab** 16 35 59.6 +0.4
baz=100
H16K Elim 158.62 306 P **PKPab** 16 35 59.8 +0.1
baz=92
G16K Koyuk River 158.69 308 P **PKPab** 16 36 00.7 +0.7
baz=90
C17K DeLong Mountai 158.78 317 P **PKPab** 16 36 01.4 +1.0
baz=81
D17K Noatak River 158.85 315 P **PKPab** 16 36 01.7 +1.1
baz=83
G15K Niukluk 159.40 307 P **PKPab** 16 36 03.6 +0.5
baz=90
C16K Lisburne Hills 159.60 317 P **PKPab** 16 36 04.7 +0.8
baz=79
F15K North Star Dit 159.63 309 P **PKPab** 16 36 05.1 +1.0
baz=87
ANM Nome 159.97 306 P **PKPab** 16 36 06.0 +0.3
baz=89
USRK Ussuriysk Ar. 160.32 125 PKPab **PKPab** 16 36 08.1 +0.5
comp=Z,1.1nm,0.8s,baz=239,slow=8.3,SNR=2.8
F14K Arctic Creek 160.34 309 P **PKPab** 16 36 08.7 +1.5
baz=86
TNA Tin City 161.00 309 P **PKPab** 16 36 10.8 +0.8
baz=84
SPIA Saint Paul Isl 161.28 283 P **PKPab** 16 36 10.8 -0.7
baz=107
PETK Petropavlovsk- 174.82 201 PKPab **PKPab** 16 37 09.5 -1.9
comp=Z,4.0nm,1.0s,baz=117,slow=18,SNR=2.5

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*IDC **28** 16:17:16.2±1.2,0.78S×121.02E,h0km,mb3.5/6, mbtmp3.6/6,Error ellipse: s-maj=187.2km s-min=19.2km az=62.0*
*DJA **28** 16:17:17.6±0.3,1.1S±2.2×12.0E±.1,h10km,M4.0/9,MLv4.0/9*
ISC 28 16:17:17.6±1.0,1.45S±0.06×120.0E±0.1,h10km,n13, σ0.99/12,mb3.6/6,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.59**	**186**	P	Pn	16 17 44.9	-1.0
MPSI	**Mapaga**	**1.78**	**357**	P	Pn	16 17 46.6	-1.8
MPSI				S	**Sn**	**16 18 12.4**	**+1.3**
MRSI	**Marisa**	**2.73**	**46**	P	Pn	16 18 00.2	-1.3
MRSI				S	**Sn**	**16 18 34.7**	**+0.1**
LUWI	**Luwuk**	**2.81**	**82**	P	**Pn**	**16 18 03.5**	**+0.9**
GTOI	**Gorontalo**	**3.66**	**56**	P	**Pn**	**16 18 14.0**	**-0.3**
GTOI				S	**Sn**	**16 18 56.4**	**-1.2**
BKSI	**Bulukumba**	**3.85**	**178**	P	**Pn**	**16 18 16.3**	**-0.6**
BKSI				S	**Sn**	**16 19 03.0**	**+0.8**
KMSI	**Cibinong**	**4.47**	**63**	P	Pn	16 18 23.8	-1.6
WRA	**Warramunga Arr**	**23.12**	**144**	P	**P**	**16 22 23.6**	**-0.5**
	1.5nm,0.8s,baz=322,slow=11,SNR=6.8						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**25.88**	**150**	P	**P**	**16 22 51.3**	**+1.5**
	0.5nm,0.8s,baz=344,slow=14,SNR=7.7						
	0.5nm,0.8s						
STKA	**Stephens Creek**	**36.49**	**148**	P	**P**	**16 24 23.2**	**+0.1**
	3.4nm,1.1s,baz=337,slow=7.7,SNR=3.1						
	3.4nm,1.1s						
SONM	**Songino Array**	**50.50**	**348**	P	P	16 26 13.6	-2.4
	0.3nm,0.6s,baz=176,slow=6.8,SNR=1.9						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**58.32**	**330**	P	**P**	**16 27 11.7**	**-1.1**
	0.3nm,0.5s,baz=130,slow=8.8,SNR=3.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**62.75**	**332**	P	**P**	**16 27 42.8**	**-0.2**
	0.3nm,0.5s,baz=136,slow=6.4,SNR=3.1						
	0.3nm,0.5s						

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*ASRS **28** 16:19:06.0±0.3,51.2×9.3E±.1,h9km,MLh3.5/15,Error ellipse: s-maj=3.7km s-min=2.2km az=167.6,confirmed*
*IDC **28** 16:19:09.3±2.1,50.96N×92.90E,h0km,mbtmp2.6/4, ML2.3/4,Error ellipse: s-maj=32.9km s-min=16.8km az=17.0*
ISC 28 16:19:11.7±1.8,50.74N±0.05×92.92E±0.03,h10km±16km, n22,σ1.89/41,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZLR	**Kyzyl**	**1.37**	**44**	Pg	**Pb**	**16 19 37.9**	**+0.4**
KZLR				Sg	**Sg**	**16 19 55.9**	**+0.2**
ERNS	**Erzin**	**1.51**	**108**	Pg	**Pn**	**16 19 39.5**	**+0.7**
ERNS				Sg	**Sb**	**16 19 60.0**	**+1.0**
DJO	**Djoy, Khakassi**	**2.30**	**333**	Pg	**Pb**	**16 19 52.1**	**-1.2**
DJO				Sg	**Sb**	**16 20 21.8**	**-0.1**
CERR	**Cheremushki**	**2.32**	**337**	Pg	**Pb**	**16 19 52.4**	**-1.2**
CERR				Sg	**Sb**	**16 20 23.0**	**+0.9**
CUR	**Chagan-Uzun**	**2.99**	**259**	Pg	**Pn**	**16 19 59.9**	**+0.6**
CUR				Sg	**Sb**	**16 20 39.1**	**-2.6**
ULGR	**Ulagan, Altay**	**3.15**	**270**	Pg	**Pn**	**16 20 04.3**	**+2.8**
ULGR				Sg	**Sb**	**16 20 47.2**	**+0.8**
AKAR	**Aktash**	**3.41**	**265**	Pg	**Pn**	**16 20 05.6**	**+0.7**
AKAR				Sg	**Sb**	**16 20 53.8**	**+0.1**
CHBI	**Chibit, Altay**	**3.48**	**265**	Pg	**Pn**	**16 20 07.1**	**+1.1**
CHBI				Sg	**Sb**	**16 20 55.5**	**-0.3**
YALR	**Yailyu, Altay**	**3.49**	**289**	Pg	**Pn**	**16 20 07.7**	**+1.7**
YALR				Sg	**Sb**	**16 20 55.2**	**-0.7**
DGZ	**Jazzator, Alta**	**3.67**	**256**	Pg	**Pn**	**16 20 10.1**	**+1.5**
DGZ				Sg	**Sb**	**16 21 01.3**	**-0.1**
ARTR	**Artybash**	**3.70**	**289**	Pg	**Pn**	**16 20 11.9**	**+3.1**
ARTR				Sg	**Sb**	**16 21 03.3**	**+1.4**
TASR	**Tashtagol**	**3.73**	**305**	Pg	**Pb**	**16 20 18.1**	**+0.5**
TASR				Sg	**Sb**	**16 21 03.8**	**+1.0**
LUZB	**Luzhba, Kemero**	**3.83**	**321**	Pg	**Pb**	**16 20 19.2**	**-0.1**
LUZB				Sg	**Sb**	**16 21 06.3**	**+0.6**
MINR	**Mina**	**4.24**	**10**	Pg	**Pg**	**16 20 31.4**	**-1.5**
MINR				Sg	**Sg**	**16 21 31.0**	**+3.2**
ELDR	**Elanda**	**4.34**	**279**	Sg	**Sb**	**16 21 22.6**	**+2.1**
GALT	**Gorno-Altaysk,**	**4.54**	**288**	Pg	**Pb**	**16 20 30.8**	**-0.6**
GALT				Sg	**Sb**	**16 21 28.4**	**+2.3**
MOY	**Mondy**	**5.16**	**76**	Pg	**Pb**	**16 20 45.9**	**+3.8**
MOY				Sg	**Sg**	**16 21 54.3**	**-3.0**
UKR	**Ust'-Kan**	**5.17**	**275**	Pg	**Pb**	**16 20 43.8**	**+1.7**
UKR				Sg	**Sb**	**16 21 49.0**	**+4.8**
ZALV	**Zalesovo Beam**	**5.91**	**306**	Pn	**Pn**	**16 20 37.7**	**-1.5**
	0.1nm,0.3s,baz=122,slow=17,SNR=1.9						
ZALV				Pg	**Pb**	**16 20 54.9**	**+0.1**
	0.4nm,0.3s,baz=119,slow=17,SNR=7.6						
ZALV				Lg	Lg	16 22 10.2	
	0.5nm,0.3s,baz=130,slow=25,SNR=3.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.05**	**245**	Pn	**Pn**	**16 21 09.5**	**+0.8**
	0.2nm,0.3s,baz=53,slow=17,SNR=6.0						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**9.14**	**275**	Pn	**Pn**	**16 21 22.0**	**-1.5**
	baz=88,slow=6.6,SNR=1.8						
KURBB				Sn	**Sn**	**16 23 02.8**	**-3.5**
	baz=87,slow=18,SNR=4.3						
KURBB				Lg	Lg	16 23 50.7	
	baz=82,slow=33,SNR=4.8						
	0.1nm,0.4s						
SONM	**Songino Array**	**9.28**	**103**	Pn	**Pn**	**16 21 25.7**	**+0.2**
	baz=296,slow=14,SNR=1.5						
SONM				Lg	Lg	16 24 03.1	
	0.2nm,0.3s,baz=297,slow=30,SNR=13						
	0.1nm,0.5s						

IDC 28 16:21:16.0±5.6,6.08S×142.54E,h0km,mb3.5/2, mbtmp3.4/4,ML3.1/2,Error ellipse: s-maj=207.7km s-min=33.4km az=97.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.92**	**209**	Pn	Pn	16 24 59.7	-1.9
	0.1nm,0.3s,baz=29,slow=13,SNR=1.5						
WRA				Sn	Sn	16 27 46.3	-12
	0.1nm,0.3s,baz=31,slow=26,SNR=1.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.36**	**205**	P	Pn	16 25 44.0	-0.3
	0.1nm,0.3s,baz=34,slow=9.5,SNR=14						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**74.78**	**322**	P	P	16 32 59.2	+1.1

0.2nm,0.5s,baz=98,slow=7.7,SNR=3.7
0.2nm,0.5s
BVAR Borovoye Array 84.25 325 P P 16 33 48.2 -1.3
0.5nm,0.8s,baz=89,slow=5.9,SNR=2.3
0.5nm,0.8s

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*IDC **28** 16:21:52.7±0.5,22˚.46S×171˚.11E,h0km,mb4.4/19, mbtmp4.4/21,ML4.2/2,MS4.3/43,Error ellipse: s-maj=17.8km s-min=15.6km az=69.0*
*BJI **28** 16:21:54.0±0.0,22˚.40S×171˚.00E,h10km, mb4.9/36, mB5.4/18,Ms5.0/3,Ms7 4.6/4*
*NEIC **28** 16:21:55.8±1.8,22˚.4S±0˚.1×171˚.1E±0˚.1,h13km±4km, mb5.0/48,Error ellipse: s-maj=16.3km s-min=14.0km az=194.0*
*MOS **28** 16:21:56.7±1.3,22˚.04S×170˚.55E,h10km,mb5.0/17,Error ellipse: s-maj=18.9km s-min=12.6km az=26.8*
*GCMT **28** 16:22:00.8±0.2,22˚.67S±0˚.01×170˚.86E±0˚.01,h30km±1km, MW5.2/130,Moment Tensor Solution. s73,c99; s130,c204; Duration: 1ᵗ0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.11±.02; $M_{\theta\theta}$0.71±.02; $M_{\phi\phi}$-0.59±.01; $M_{r\theta}$0.29±.03; $M_{\theta\phi}$-0.26±.01; $M_{\phi r}$-0.21±.02; Best double couple: $M_0$0.78200×10^{17} NP1:ϕ_s145.00000°,δ89.00000°, λ26.00000°. NP2:ϕ_s55.00000°,δ64.00000°,λ179.00000°. Principal axes: T 0.8700, Plg19.0000°, Azm13.0000°; N -0.1770, Plg64.0000°, Azm148.0000°; P -0.6930, Plg17.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **28** 16:22:02.0,22˚.57S×170˚.74E,h43km,mb5.1/69, Southeast of Loyalty Islands*

ISC 28 16:21:59.0±0.3,22˚.51S±0˚.06×171˚.02E±0˚.06,h42km,n362, σ1ᵗ9ᵗ12/321,mb4.9/68,MS4.4/42,6C-9D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.96**	**290**		**Pn**	**16 22 41.6**	**-1.8**
MARNC	**Mare, Loyalty**	**2.96**	**290**	P	**Pn**	**16 22 42.3**	**-1.1**
PINNC	**Pines Island,**	**3.30**	**268**		**Pn**	**16 22 46.5**	**-1.6**
PINNC	**Pines Island,**	**3.30**	**268**	P	**Pn**	**16 22 47.6**	**-0.6**
YATNC	**Mamie plateau,**	**3.85**	**276**	P	**Pn**	**16 22 54.3**	**-1.4**
OUENC	**Ouen Island, N**	**3.86**	**271**		**Pn**	**16 22 54.2**	**-1.7**
OUENC	**Ouen Island, N**	**3.86**	**271**	P	**Pn**	**16 22 55.1**	**-0.8**
LIFNC	**LIFOU**	**3.92**	**295**		**Pn**	**16 22 54.3**	**-2.3**
LIFNC	**LIFOU**	**3.92**	**295**	P	**Pn**	**16 22 56.4**	**-0.2**
ONTNC	**Ouen Toro**	**4.23**	**272**		**Pn**	**16 22 59.3**	**-1.7**
ONTNC	**Ouen Toro**	**4.23**	**272**	P	**Pn**	**16 22 59.8**	**-1.1**
DZM	**Mont Dzumac**	**4.26**	**275**		**Pn**	**16 22 59.8**	**-1.6**
DZM	**Mont Dzumac**	**4.26**	**275**	P	**Pn**	**16 23 00.6**	**-0.8**
DZM	**Mont Dzumac**	**4.26**	**275**	*e*Pn	**Pn**	**16 22 58.7**	**-2.7**
	758nm,0.9s						
DZM				*e*Sn	**Sn**	**16 23 46.2**	**-3.7**
	2µm,1.3s						
DZM	**Mont Dzumac**	**4.26**	**275**	Pn	**Pn**	**16 23 00.5**	**-1.0**
	102nm,0.3s,baz=118,slow=8.7,SNR=7565						
DZM				Sn	**Sn**	**16 23 47.4**	**-2.6**
	140nm,0.3s,baz=168,slow=19,SNR=3.8						
DZM				LR	LR	16 24 33.2	
	comp=Z,3µm,19.9s,baz=202,slow=37						
	426nm,0.3s						
KOUNC	**Koumac, New Ca**	**6.56**	**286**	Pn	**Pn**	**16 23 32.2**	**-0.8**
KOUNC	**Koumac, New Ca**	**6.56**	**286**	P	**Pn**	**16 23 33.1**	**+0.1**
NFK	**Norfolk Island**	**7.07**	**202**	P	**Pn**	**16 23 37.5**	**-2.4**
	baz=7.2,SNR=38						
NFK	**Norfolk Island**	**7.07**	**202**	P	**Pn**	**16 23 40.0**	**+0.1**
YSA	**Yasawairara**	**8.47**	**48**	P	Pn	16 24 06.1	+7.0
DGTI	**Dogotuki**	**10.29**	**55**	P	Pn	16 24 30.8	+6.7
TAVE	**Taveuni**	**10.32**	**58**	P	Pn	16 24 32.6	+8.1
RAO	**Raoul Island**	**12.01**	**126**	LR	LR	16 28 22.5	
	comp=Z,2µm,21.3s,baz=344,slow=33						
OUZ	**Omahuta**	**12.86**	**170**	P	**Pn**	**16 24 59.9**	**+0.7**
TOZ	**Tahuroa Road**	**15.65**	**167**		**P**	**16 25 40.0**	**-0.1**
URZ	**Urewera**	**16.54**	**163**	Pn	**Pn**	**16 25 47.7**	**-0.2**
	0.1nm,0.3s,baz=336,slow=14,SNR=3.1						
URZ				LR	LR	16 30 56.5	
	comp=Z,2µm,18.2s,baz=80,slow=33						
	9.7nm,0.7s						
HNR	**Honiara**	**16.79**	**319**	P	**P**	**16 25 52.2**	**-0.7**
HNR				IAmb	IAmb	16 25 58.9	
	comp=Z,94nm,0.8s						
HNR	**Honiara**	**16.79**	**319**	P	**P**	**16 25 54.0**	**+1.1**
HNR	**Honiara**	**16.79**	**319**	P	**P**	**16 25 52.2**	**-0.7**
HNR				pmax	pmax		
	comp=Z,94nm,0.9s						
HNR	**Honiara**	**16.79**	**319**	Pn	**Pn**	**16 25 50.5**	**-0.7**
	comp=Z,46nm,0.3s,baz=209,slow=18,SNR=7.0						
HNR				LR	LR	16 29 58.7	
	comp=Z,1µm,20.9s,baz=140,slow=29						
RTZ	**Ruatahuna**	**16.84**	**164**	P	**P**	**16 25 53.6**	**+0.1**
BKZ	**Black Stump Fm**	**17.25**	**166**	P	**P**	**16 25 59.0**	**+1.2**
EIDS	**Eidsvold**	**18.44**	**257**	P	**Pn**	**16 26 13.6**	**+2.1**
	baz=19,SNR=6.1						
EIDS	**Eidsvold**	**18.44**	**257**		**Pn**	**16 26 11.6**	**+0.1**
EIDS	**Eidsvold**	**18.44**	**257**	P	**Pn**	**16 26 11.4**	**-0.1**
MRZ	**Mangatainoka R**	**18.50**	**169**	P	**P**	**16 26 11.6**	**0.0**
TCW	**Tory Channel**	**18.84**	**172**	P	**P**	**16 26 14.7**	**-0.7**
RK1H	**Rockhampton Ha**	**18.92**	**263**	P	**Pn**	**16 26 18.1**	**+0.8**
TUWZ	**Tuamarina**	**19.02**	**173**	P	**Pn**	**16 26 17.9**	**-0.5**
ARMA	**Armidale**	**19.04**	**242**	P	**Pn**	**16 26 19.6**	**+0.8**
	baz=19,SNR=4.0						
ARMA	**Armidale**	**19.04**	**242**		**Pn**	**16 26 18.8**	**0.0**
ARMA	**Armidale**	**19.04**	**242**	P	**Pn**	**16 26 18.8**	**0.0**
AUPHS	**Peel High Scho**	**19.87**	**240**	P	**Pn**	**16 26 28.8**	**+0.2**
MGCD	**Mangrove Creek**	**20.54**	**234**	P	**P**	**16 26 33.7**	**-0.2**
RMQ	**Roma**	**20.63**	**254**	P	Pn	16 26 37.1	-0.4
	baz=21,SNR=4.4						
RMQ	**Roma**	**20.63**	**254**	P	Pn	16 26 37.2	-0.4
SYDH	**Sydney Hard Ro**	**21.06**	**233**	P	**P**	**16 26 41.5**	**+2.0**
RPZ	**Rata Peaks**	**21.14**	**180**	P	**P**	**16 26 40.3**	**-0.1**
RPZ				IAmb	IAmb	16 26 55.0	
	comp=Z,54nm,0.9s						
RPZ	**Rata Peaks**	**21.14**	**180**	P	**P**	**16 26 41.0**	**+0.6**
	comp=Z,21nm,0.9s,baz=73,slow=19,SNR=3.5						
RPZ				LR	LR	16 34 13.7	
	comp=Z,2µm,18.2s,baz=1.5,slow=35						
	comp=Z,21nm,0.9s						
AULRC	**Lightning Ridg**	**21.80**	**247**	P	**P**	**16 26 49.0**	**+1.4**
LBZ	**Lake Benmore**	**21.83**	**182**	P	**P**	**16 26 49.2**	**+1.6**
AUDCS	**Dubbo College**	**22.07**	**239**	P	**P**	**16 26 50.9**	**+0.4**
AUAYR	**Ayr State High**	**22.22**	**273**	P	**P**	**16 26 54.3**	**+2.2**
YNG	**Young**	**23.05**	**234**	P	**P**	**16 27 00.9**	**+0.2**
CTA	**Charters Tower**	**23.19**	**271**	P	**P**	**16 27 03.4**	**+1.1**
CTA	**Charters Tower**	**23.19**	**271**	P	**P**	**16 27 02.9**	**+0.6**
	comp=Z,7.8nm,0.9s,baz=102,slow=9.4,SNR=5.7						
CTA				LR	LR	16 35 05.6	
	comp=Z,485nm,19.4s,baz=72,slow=34						
	comp=Z,7.8nm,0.9s						
CTAO	**Charters Tower**	**23.19**	**271**	P	**P**	**16 27 02.1**	**-0.2**
CTAO				IAmb	IAmb	16 27 12.6	
	comp=Z,36nm,1.1s						
CTAO	**Charters Tower**	**23.19**	**271**	P	**P**	**16 27 03.3**	**+1.0**
CTAO	**Charters Tower**	**23.19**	**271**	P	**P**	**16 27 02.1**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,36nm,1.1s						
MILA	**Mila**	**23.80**	**228**	P	**P**	**16 27 10.4**	**+2.4**
	baz=24,SNR=3.2						
AUSMG	**Snowy Mountain**	**23.85**	**229**	P	**P**	**16 27 10.0**	**+1.4**
CMSA	**Cobar Meteorol**	**24.24**	**243**	P	**P**	**16 27 13.1**	**+1.0**
	baz=24,SNR=43						
CMSA	**Cobar Meteorol**	**24.24**	**243**	P	**P**	**16 27 12.9**	**+0.8**
QLP	**Quilpie**	**24.68**	**255**	P	**P**	**16 27 17.0**	**+0.9**
	baz=25,SNR=9.6						
QLP	**Quilpie**	**24.68**	**255**	P	**P**	**16 27 16.7**	**+0.6**
MTSU	**Mount Surprise**	**25.40**	**275**	P	**P**	**16 27 24.1**	**+1.3**
	baz=26,SNR=24						
MTSU	**Mount Surprise**	**25.40**	**275**	P	**P**	**16 27 23.9**	**+1.2**
RABL	**Rabaul**	**25.79**	**312**	P	**P**	**16 27 25.4**	**-0.8**
RABL				IAmb	IAmb	16 27 35.1	
	comp=Z,33nm,0.6s						
BULU	**Kimbe**	**26.17**	**307**	P	**P**	**16 27 30.4**	**+0.7**
PMG	**Port Moresby**	**26.33**	**296**	P	**P**	**16 27 30.2**	**-0.9**
PMG				IAmb	IAmb	16 28 05.7	
	comp=Z,37nm,1.0s						
PMG	**Port Moresby**	**26.33**	**296**	P	**P**	**16 27 31.5**	**+0.4**
PMG	**Port Moresby**	**26.33**	**296**	*i* P	**P**	**16 27 30.7**	**-0.4**
PMG				pmax	pmax		
	comp=Z,20nm,0.8s						
PMG	**Port Moresby**	**26.33**	**296**	P	**P**	**16 27 31.0**	**-0.1**
	comp=Z,19nm,0.7s,baz=106,slow=3.7,SNR=6.6						
PMG				LR	LR	16 36 36.1	
	comp=Z,1µm,19.4s,baz=127,slow=34						
	comp=Z,19nm,0.7s						
STKA	**Stephens Creek**	**27.71**	**244**	P	**P**	**16 27 44.0**	**+0.6**
	baz=28,SNR=3.8						
STKA	**Stephens Creek**	**27.71**	**244**	P	**P**	**16 27 44.7**	**+1.3**
STKA	**Stephens Creek**	**27.71**	**244**	P	**P**	**16 27 44.2**	**+0.8**
STKA	**Stephens Creek**	**27.71**	**244**	*i* P	**P**	**16 27 47.2**	**+3.8**
STKA	**Stephens Creek**	**27.71**	**244**	P	**P**	**16 27 43.6**	**+0.2**
	comp=Z,3.7nm,1.0s,baz=106,slow=11,SNR=7.1						
STKA				LR	LR	16 37 58.9	
	comp=Z,323nm,18.2s,baz=72,slow=35						
	comp=Z,3.7nm,1.0s						
COEN	**Coen**	**27.74**	**283**	P	**P**	**16 27 45.6**	**+1.7**
	baz=28,SNR=11						
COEN	**Coen**	**27.74**	**283**	P	**P**	**16 27 44.6**	**+0.8**
COEN				IAmb	IAmb	16 27 46.6	
	comp=Z,46nm,1.0s						
COEN	**Coen**	**27.74**	**283**	P	**P**	**16 27 45.2**	**+1.3**
INKA	**Innaminka**	**27.86**	**253**	P	**P**	**16 27 46.0**	**+1.2**
OOD	**Oodnadatta**	**32.34**	**253**	P	**P**	**16 28 25.7**	**+1.3**
MULG	**Mulgathing**	**33.88**	**249**	P	**P**	**16 28 38.6**	**+0.7**
AS01	**Alice Springs**	**34.06**	**261**	P	**P**	**16 28 39.5**	**0.0**
AS31	**Alice Springs**	**34.10**	**261**	P	**P**	**16 28 39.1**	**-0.8**
ASAR	**Alice Springs**	**34.10**	**261**	P	**P**	**16 28 39.3**	**-0.6**
ASAR	**Alice Springs**	**34.10**	**261**	P	**P**	**16 28 39.3**	**-0.6**
ASAR	**Alice Springs**	**34.10**	**261**	P	**P**	**16 28 39.5**	**-0.5**
	comp=Z,12nm,0.9s,baz=86,slow=9.0,SNR=90						
	comp=Z,12nm,0.9s						
ASPA	**Alice Springs**	**34.10**	**261**	P	**P**	**16 28 39.7**	**-0.2**
	baz=34						
WRAB	**Tennant Creek**	**34.22**	**267**	P	**P**	**16 28 39.3**	**-1.7**
WRAB				IAmb	IAmb	16 28 58.1	
	comp=Z,25nm,1.5s						
WRAB	**Tennant Creek**	**34.22**	**267**	P	**P**	**16 28 39.3**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,25nm,1.5s						
WRA	**Warramunga Arr**	**34.23**	**267**	P	**P**	**16 28 39.2**	**-1.9**
WRA	**Warramunga Arr**	**34.23**	**267**	*e*P	P	16 28 46.6	+5.5
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**34.23**	**267**	P	**P**	**16 28 40.0**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=106,slow=8.7,SNR=12						
	comp=Z,1.2nm,0.4s						
TBI	**Tubuai**	**36.33**	**99**	*e*S	**S**	**16 34 30.8**	**-6.6**
	comp=Z,2µm,30.2s						
TBI				*e*LQ	LQ	16 37 14.6	
	comp=Z,2µm,26.2s						
TBI				*e*LR	LR	16 38 44.5	
	comp=Z,1µm,34.0s						
PPT2	**Papeete2**	**37.27**	**90**	*e*S	S	16 34 42.1	-10
	comp=Z,241nm,27.5s						
PPT2				*e*LQ	LQ	16 37 37.5	
	comp=Z,304nm,27.8s						
PPT2				*e*LR	LR	16 39 07.6	
	comp=Z,350nm,24.2s						
PPT2				*e*LR	LR	16 39 15.9	
	comp=Z,255nm,28.5s						
KDU	**Kakadu**	**37.92**	**278**	P	**P**	**16 29 12.9**	**+0.2**
	baz=38						
KDU	**Kakadu**	**37.92**	**278**	P	**P**	**16 29 12.8**	**+0.2**
WRKA	**Warakurna**	**39.06**	**258**	P	**P**	**16 29 22.6**	**+0.4**
	baz=39,SNR=6.5						
WRKA	**Warakurna**	**39.06**	**258**	P	**P**	**16 29 22.2**	**0.0**
MTN	**Manton Dam**	**39.09**	**277**	P	**P**	**16 29 21.2**	**-1.3**
MTN				IAmb	IAmb	16 29 43.4	
	comp=Z,17nm,0.8s						
MTN	**Manton Dam**	**39.09**	**277**	P	**P**	**16 29 22.2**	**-0.3**
KNRA	**Kununurra**	**40.40**	**272**	P	**P**	**16 29 33.2**	**-0.1**
	baz=41						
KNRA	**Kununurra**	**40.40**	**272**	P	**P**	**16 29 31.9**	**-1.5**
KNRA				IAmb	IAmb	16 29 34.2	
	comp=Z,33nm,0.9s						
KNRA	**Kununurra**	**40.40**	**272**	P	**P**	**16 29 33.4**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**42.16**	**354**	T	T	17 14 47.8	
	baz=0.8,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**42.16**	**354**	T	T	17 14 47.4	
	baz=0.8,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**42.18**	**354**	T	T	17 14 59.6	
	baz=0.8,slow=76,SNR=16						
FITZ	**Fitzroy Crossi**	**42.66**	**267**	P	**P**	**16 29 52.4**	**+0.6**
	baz=43,SNR=20						
FITZ	**Fitzroy Crossi**	**42.66**	**267**	P	**P**	**16 29 52.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**42.66**	**267**	P	**P**	**16 29 52.3**	**+0.5**
BNDI	**Bandanaira**	**43.58**	**288**	P	**P**	**16 29 58.7**	**-0.6**
BNDI	**Bandanaira**	**43.58**	**288**	P	**P**	**16 29 57.8**	**-1.5**
	comp=Z,86nm,1.1s						
SWI	**Sorong**	**44.23**	**294**	P	**P**	**16 30 04.3**	**-0.2**
	comp=Z,53nm,1.2s						
SOEI	**Soe**	**46.48**	**278**	P	**P**	**16 30 22.6**	**+0.1**
SOEI	**Soe**	**46.48**	**278**	P	**P**	**16 30 23.9**	**+1.4**
SOEI	**Soe**	**46.48**	**278**	P	**P**	**16 30 23.7**	**+1.2**
	comp=Z,39nm,1.1s						
NLAI	**Namlea**	**46.65**	**288**	P	**P**	**16 30 23.8**	**+0.1**
	comp=Z,24nm,1.1s						
MBWA	**Marble Bar**	**47.43**	**261**	P	**P**	**16 30 29.1**	**-0.6**
MBWA	**Marble Bar**	**47.43**	**261**	P	**P**	**16 30 29.9**	**+0.1**
LBMI	**Labuha**	**47.57**	**291**	P	**P**	**16 30 32.0**	**+1.2**
	comp=Z,44nm,1.1s						
MEEK	**Meekatharra**	**47.57**	**254**	P	**P**	**16 30 30.5**	**-0.2**
	baz=48,SNR=6.8						
MEEK	**Meekatharra**	**47.57**	**254**	P	**P**	**16 30 31.1**	**+0.3**
KLBR	**Kellerberrin**	**47.90**	**247**	P	**P**	**16 30 32.5**	**-0.8**
	baz=48,SNR=5.2						
KLBR	**Kellerberrin**	**47.90**	**247**	P	**P**	**16 30 33.0**	**-0.2**
SANI	**Sanana**	**48.19**	**288**	P	**P**	**16 30 36.1**	**+0.4**
SANI	**Sanana**	**48.19**	**288**	P	**P**	**16 30 34.6**	**-1.1**
	comp=Z,76nm,1.0s,comp=Z,574nm						
NWAO	**Narrogin (SRO)**	**48.28**	**245**	P	**P**	**16 30 36.1**	**-0.1**
	baz=48,SNR=4.5						
NWAO				P	**P**	**16 30 36.1**	**-0.1**
	baz=48,SNR=4.5						
NWAO	**Narrogin (SRO)**	**48.28**	**245**	LR	LR	16 50 54.5	
	comp=506nm,18.1s,baz=187,slow=36						
TAOE	**Nuku Hiva Isla**	**48.72**	**82**	*e*LR	LR	16 44 24.2	
	comp=Z,351nm,22.3s						
MMRI	**Maumere**	**48.75**	**278**	P	**P**	**16 30 39.7**	**-0.3**
MMRI				IAmb	IAmb	16 30 49.8	
	comp=Z,27nm,0.8s						
MMRI	**Maumere**	**48.75**	**278**	P	**P**	**16 30 40.6**	**+0.6**
MMRI	**Maumere**	**48.75**	**278**	P	**P**	**16 30 39.9**	**-0.1**
	comp=Z,43nm,1.0s						
MUN	**Mundaring**	**49.19**	**247**	P	**P**	**16 30 43.8**	**+0.6**
	baz=49						
EDFI	**Ende, Flores**	**49.21**	**278**	P	**P**	**16 30 43.4**	**-0.3**
	comp=Z,12nm,0.8s,comp=Z,971nm						
MORW	**Morawa**	**49.56**	**250**	P	**P**	**16 30 45.7**	**-0.4**
	baz=50,SNR=3.8						
BASI	**Baing, Sumba**	**49.70**	**276**	P	**P**	**16 30 47.8**	**+0.6**
	comp=Z,79nm,0.9s,comp=Z,2µm						
LUWI	**Luwuk**	**51.50**	**288**	P	**P**	**16 31 02.3**	**+1.5**
LUWI	**Luwuk**	**51.50**	**288**	P	**P**	**16 31 01.1**	**+0.3**
	comp=Z,73nm,0.9s,comp=Z,1µm						
KAPI	**Kappang**	**52.45**	**281**	P	**P**	**16 31 08.6**	**+0.7**
KAPI	**Kappang**	**52.45**	**281**	P	**P**	**16 31 08.6**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,60nm,1.3s						
PLAI	**Plampang**	**52.77**	**276**	P	**P**	**16 31 10.6**	**+0.3**
PLAI	**Plampang**	**52.77**	**276**	P	**P**	**16 31 09.8**	**-0.5**
TOLI2	**Tolitoli**	**54.27**	**289**		**P**	**16 31 20.1**	**-1.2**
TOLI2	**Tolitoli**	**54.27**	**289**	P	**P**	**16 31 21.0**	**-0.2**
VNDA	**Vanda**	**55.24**	**182**	P	**P**	**16 31 27.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=22,slow=19,SNR=1.4						
VNDA				LR	LR	16 52 14.1	
	comp=Z,465nm,18.7s,baz=17,slow=33						
	comp=Z,0.9nm,0.7s						
JAGI	**Jajag, Banyuwa**	**56.24**	**275**	P	**P**	**16 31 34.8**	**-0.7**
JAGI	**Jajag, Banyuwa**	**56.24**	**275**	P	**P**	**16 31 35.2**	**-0.3**
TGY	**Tagaytay City**	**61.08**	**302**	LR	LR	16 55 51.7	
	comp=Z,89nm,21.7s,baz=108,slow=33						
SBUM	**Sibu**	**62.45**	**285**	P	**P**	**16 32 18.3**	**-0.1**
SBUM				IAmb	IAmb	16 32 20.5	
	comp=Z,13nm,1.1s						
LEM	**Lembang**	**62.86**	**274**	LR	LR	16 58 20.0	
	comp=Z,286nm,20.8s,baz=130,slow=35						
JOW	**Kunigami**	**64.16**	**318**	LR	LR	16 57 59.2	
	comp=Z,169nm,20.1s,baz=58,slow=34						
MJA0	**Matsu Arr-Jizo**	**66.39**	**332**	*e*P	**P**	**16 32 45.7**	**+2.0**
MJA0				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**66.41**	**332**	P	**P**	**16 32 42.1**	**-1.7**
	comp=Z,1.2nm,0.5s,baz=148,slow=6.9,SNR=3.2						
MJAR				LR	LR	17 04 36.8	
	comp=Z,58nm,18.2s,baz=126,slow=39						
	comp=Z,1.2nm,0.5s						
SSLB	**Suanglung**	**66.98**	**310**	P	**P**	**16 32 46.3**	**-1.4**
JNU	**Nakatsue**	**67.28**	**324**	LR	LR	16 58 41.5	
	comp=Z,133nm,21.4s,baz=158,slow=33						
QSPA	**South Pole Qui**	**67.56**	**180**	P	**P**	**16 32 50.9**	**0.0**
	comp=Z,14nm,0.9s,baz=18,slow=1.8,SNR=39						
QSPA				LR	LR	17 00 15.5	
	comp=Z,245nm,18.1s,baz=28,slow=34						
	comp=Z,14nm,0.9s						
ASAJ	**Asahikawa**	**71.24**	**339**	LR	LR	17 00 23.7	
	comp=Z,158nm,21.6s,baz=162,slow=32						
RPN	**Rapa Nui**	**71.29**	**112**	LR	LR	16 56 59.2	
	comp=Z,186nm,18.9s,baz=220,slow=30						
KSRS	**Korea Array**	**72.13**	**325**	P	**P**	**16 33 20.8**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=151,slow=9.8,SNR=1.8						
KSRS				LR	LR	17 03 56.4	
	comp=Z,119nm,19.1s,baz=130,slow=35						
	comp=Z,1.2nm,0.9s						
QIZ	**Qiongzhong**	**72.64**	**300**	P	**P**	**16 33 22.5**	**-0.1**
QIZ				S	**SKiKP**	**16 42 51.8**	**-2.0**
QIZ				LR	LR		
	comp=Z,150nm,17.7s						
QIZ				LR	LR		
	comp=Z,240nm,16.8s						
QIZ				LR	LR		
	comp=Z,170nm,19.6s						
IPM	**Ipoh**	**73.39**	**282**	P	**P**	**16 33 27.2**	**0.0**
IPM				IAmb	IAmb	16 33 28.4	
	comp=Z,14nm,0.9s						
IPM	**Ipoh**	**73.39**	**282**	P	**P**	**16 33 27.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	**73.70**	**340**	*e*P	**P**	**16 33 31.5**	**+3.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
YSS				MLR	MLR		
	comp=N,300nm,17.0s						
RPSI	**Rantau Prapat**	**74.56**	**280**	P	**P**	**16 33 33.7**	**-0.4**
RPSI				IAmb	IAmb	16 33 35.1	
	comp=Z,18nm,1.2s						
PSI	**Prapat**	**74.60**	**280**	P	**P**	**16 33 33.7**	**-0.8**
PSI				pmax	pmax		
	comp=Z,18nm,1.2s						
SHEM	**Shemya Is, Ala**	**74.97**	**2**	LR	LR	17 02 19.1	
	comp=Z,294nm,19.1s,baz=265,slow=32						
GSI	**Gunungsitoli**	**75.23**	**278**	P	**P**	**16 33 38.7**	**+0.7**
GSI				IAmb	IAmb	16 33 39.6	
	comp=Z,17nm,0.9s						
GSI	**Gunungsitoli**	**75.23**	**278**	P	**P**	**16 33 39.1**	**+1.1**
USRK	**Ussuriysk Ar.**	**75.39**	**332**	P	**P**	**16 33 38.4**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=167,slow=7.2,SNR=1.7						
	comp=Z,1.4nm,1.0s						
MAW	**Mawson**	**76.04**	**202**	LR	LR	17 05 19.1	
	comp=Z,300nm,18.1s,baz=120,slow=34						
PETK	**Petropavlovsk-**	**76.19**	**352**	P	**P**	**16 33 41.0**	**-1.5**
	comp=Z,3.5nm,0.7s,baz=128,slow=9.5,SNR=2.5						
PETK				LR	LR	17 02 22.9	
	comp=Z,510nm,19.8s,baz=146,slow=32						
	comp=Z,3.5nm,0.7s						
SRIT	**Nakonsritamara**	**76.41**	**285**	P	**P**	**16 33 46.7**	**+2.0**
MDJ	**Mudanjiang**	**76.78**	**331**	P	P	16 33 54.0	+8.0
MDJ				pmax	pmax		
	comp=Z,11nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.5s						
CN2	**Changchun**	**78.11**	**328**	*e*P	**P**	**16 33 54.0**	**+0.5**
BELA	**Belgrano 2**	**78.70**	**175**	P	**P**	**16 33 55.1**	**-1.3**
BELA				IAmb	IAmb	16 34 17.8	
	comp=Z,12nm,1.0s						
ENH	**Enshi**	**79.03**	**309**	P	**P**	**16 33 58.0**	**-0.9**
ENH				IAmb	IAmb	16 33 59.8	
	comp=Z,16nm,1.0s						
ENH	**Enshi**	**79.03**	**309**	P	**P**	**16 33 58.9**	**0.0**
LYN	**LuoYang**	**79.44**	**314**	||P	**P**	**16 34 01.8**	**+0.8**
LYN				pmax	pmax		
	comp=Z,16nm,0.6s						
LYN				pmax	pmax		
	comp=Z,290nm,5.3s						
KLR	**Kul'dur**	**79.53**	**335**	*i* P	**P**	**16 34 01.2**	**+0.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KLR	**Kul'dur**	**79.53**	**335**	LR	LR	17 06 22.6	
	comp=Z,162nm,19.9s,baz=143,slow=34						
PHRA	**Phrae**	**80.29**	**295**	P	**P**	**16 34 05.2**	**-0.7**
CRAI	**Chiangrai**	**80.97**	**296**	P	**P**	**16 34 11.1**	**+1.5**
CRAI				IAmb	IAmb	16 34 12.3	
	comp=Z,25nm,1.7s						
CMAR	**Chiang Mai Arr**	**81.35**	**294**	P	**P**	**16 34 12.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**81.35**	**294**	*e*P	**P**	**16 34 13.6**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**

comp=Z,158nm,19.4s,baz=238,slow=31
LPIG La Paz 89.35 64 LR LR 17 06 29.0
comp=Z,115nm,20.9s,baz=214,slow=30
NVAR Mina Array Bea 89.74 48 P **P** **16 34 53.4 +0.2**
comp=Z,1.5nm,0.7s,baz=226,slow=7.3,SNR=7.3
NVAR LR LR 17 09 13.9
comp=Z,201nm,19.1s,baz=252,slow=32
comp=Z,1.5nm,0.7s
KVN Kaiserville 90.18 47 P **P** **16 34 55.3 +0.1**
KVN IAmb IAmb 16 35 30.0
comp=Z,5.2nm,1.0s
KVN Kaiserville 90.18 47 P **P** **16 34 55.3 +0.1**
KVN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 90.47 323 P **P** **16 34 56.0 -0.3**
ULN IAmb IAmb 16 34 57.7
comp=Z,20nm,1.4s
ULN Ulaanbaatar 90.47 323 ⇑*i* P **P** **16 34 55.8 -0.5**
ULN pmax pmax
comp=Z,8.0nm,1.3s
YAK Yakutsk 90.48 342 *i* P **P** **16 34 56.6 +0.8**
YAK pmax pmax
comp=Z,6.0nm,0.9s
YAK Yakutsk 90.48 342 LR LR 17 15 14.0
comp=Z,154nm,18.1s,baz=113,slow=35
GTA Gaotai 90.57 313 *e*P **P** **16 34 54.8 -2.1**
GTA sP pP 16 35 09.0 +0.5
GTA pmax pmax
comp=Z,2.0nm,1.3s
SONM Songino Array 90.82 322 P **P** **16 34 58.3 +0.4**
SONM IAmb IAmb 16 35 19.0
comp=Z,19nm,1.2s
SONM Songino Array 90.82 322 *e*P **P** **16 34 58.1 +0.2**
SONM pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 90.82 322 P **P** **16 34 57.9 0.0**
comp=Z,5.2nm,0.9s,baz=148,slow=4.4,SNR=26
SONM LR LR 17 13 23.7
comp=Z,69nm,21.9s,baz=154,slow=34
comp=Z,5.2nm,0.9s
BBB Bella Bella 91.31 33 LR LR 17 07 42.0
comp=Z,218nm,20.3s,baz=224,slow=30
ILAR Eielson Array 92.86 17 *e*P **P** **16 35 09.3 +2.5**
ILAR pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 92.86 17 P **P** **16 35 05.4 -1.4**
comp=Z,0.4nm,0.7s,baz=225,slow=4.6,SNR=6.6
ILAR LR LR 17 16 05.4
comp=Z,194nm,18.2s,baz=233,slow=35
comp=Z,0.4nm,0.7s
ELK Elko 92.92 47 LR LR 17 10 13.3
comp=Z,198nm,20.0s,baz=244,slow=31
PALK Pallekele 93.03 277 LR LR 17 19 28.8
comp=Z,133nm,18.5s,baz=230,slow=37
H03S2 Juan Fernandez 93.03 128 T T 18 18 18.2
baz=239,slow=74,SNR=3.5
H03S1 Juan Fernandez 93.05 128 T T 18 18 24.5
baz=239,slow=74,SNR=3.2
H03S3 Juan Fernandez 93.05 128 T T 18 18 20.7
baz=239,slow=74,SNR=3.3
U15A North Rim 93.06 52 P **P** **16 35 09.7 +0.9**
U15A IAmb IAmb 16 35 33.4
comp=Z,3.7nm,0.8s
H03N3 Juan Fernandez 93.22 128 T T 18 18 50.9
baz=239
H03N2 Juan Fernandez 93.23 128 T T 18 18 43.9
baz=239
H03N1 Juan Fernandez 93.24 128 T T 18 18 36.2
baz=239
M29M Somme Creek 93.65 21 P **P** **16 35 11.5 +0.9**
ZAK Zakamensk 93.91 324 *e*P **P** **16 35 11.7 -0.4**
ZAK pmax pmax
comp=Z,13nm,1.2s
L29M L29M 94.22 21 P **P** **16 35 11.6 -1.6**
EGAK Eagle 94.47 19 P **P** **16 35 15.6 +1.4**
EGAK IAmb IAmb 16 35 17.4
comp=Z,9.4nm,0.8s
PLCA Paso Flores 95.00 138 P **P** **16 35 17.9 +0.4**
comp=Z,3.7nm,1.2s,baz=297,slow=7.0,SNR=3.4
comp=Z,3.7nm,1.2s
NEW Newport 95.22 40 LR LR 17 14 07.2
comp=Z,152nm,18.1s,baz=244,slow=33
BMAR Burnt Mountain 95.52 16 P **P** **16 35 21.3 +2.3**
MOY Mondy 95.80 324 pmax pmax
comp=Z,20nm,1.8s
ANMO Albuquerque 96.79 55 LR LR 17 11 26.9
comp=Z,163nm,20.4s,baz=338,slow=31
TXAR Lajitas Array 96.87 61 P **P** **16 35 25.6 -0.5**
comp=Z,0.3nm,0.7s,baz=230,slow=7.0,SNR=2.2
TXAR LR LR 17 11 46.1
comp=Z,100nm,19.4s,baz=246,slow=31
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 97.62 47 LR LR 17 11 46.8
comp=Z,115nm,21.9s,baz=250,slow=31
INK Inuvik 99.12 18 LR LR 17 13 51.8
comp=Z,177nm,21.8s,baz=183,slow=32
CMIG Matias Romero 100.05 76 LR LR 17 14 16.5
comp=Z,41nm,18.0s,baz=199,slow=32
WMQ Urumqi 100.65 313 *e*P **Pdif** **16 35 45.5 +2.8**
BVAR Borovoye Array 113.98 319 PKiKP **PKiKP** **16 40 35.0 +1.8**
comp=Z,0.9nm,0.6s,baz=135,slow=1.1,SNR=3.6
ARU Arti 120.85 323 PKP **PKiKP** **16 40 48.1 +1.7**
comp=Z,3.3nm,0.6s,baz=19,slow=2.2,SNR=6.0
AKTO Aktyubinsk 121.58 316 PKP **PKPdf** **16 40 47.5 -0.4**
comp=Z,1.3nm,0.5s,baz=167,slow=3.7,SNR=2.8
SPITS Spitsbergen Ar 123.01 354 PKP **PKiKP** **16 40 50.3 +0.2**
comp=Z,9.5nm,0.9s,baz=0.0,slow=2.0,SNR=1.8
ARCES ARCESS Array B 128.64 345 *e*PKiKP **PKiKP** **16 41 03.4 +1.9**
ARCES pmax pmax
comp=Z,12nm,1.1s
ARCES ARCESS Array B 128.64 345 PKP **PKPdf** **16 41 00.3 -0.5**
comp=Z,12nm,1.1s,baz=38,slow=2.0,SNR=6.8
KBZ Khabaz 132.53 309 PKP **PKPdf** **16 41 09.5 +0.6**
comp=Z,1.4nm,0.9s,baz=144,slow=1.5,SNR=3.7
OBN Obninsk 133.13 326 *e*PKiKP **PKiKP** **16 41 12.0 +1.1**
OBN *e* 16 43 40.4
OBN *e*PPP PPP 16 46 26.9
OBN pmax pmax
comp=Z,3.0nm,1.1s
FINES FINESS Array B 134.23 337 *e*PKiKP **PKiKP** **16 41 12.9 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 134.23 337 PKP **PKPdf** **16 41 11.3 -0.3**
comp=Z,1.4nm,0.7s,baz=86,slow=2.7,SNR=3.7
AKASG Malin Array Be 139.10 323 *e*PKiKP **PKiKP** **16 41 27.9 +4.7**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 139.10 323 PKP **PKPdf** **16 41 21.5 +0.5**
comp=Z,0.2nm,0.4s,baz=117,slow=6.2,SNR=1.9
BRTR Keskin Array B 140.09 306 PKP **PKPdf** **16 41 24.2 +0.8**
comp=Z,0.6nm,0.8s,baz=143,slow=4.4,SNR=1.7
KOLS Kolonicke sedl 143.85 325 *e*PKiKP **PKiKP** **16 41 33.0 -0.1**
KOLS Kolonicke sedl 143.85 325 *e*PKP **PKiKP** **16 41 33.0 -0.1**
CRVS Cervenica-Dubn 144.30 325 *e*PKiKP **PKiKP** **16 41 34.0 0.0**
CRVS Cervenica-Dubn 144.30 325 *e*PKP **PKiKP** **16 41 34.0 0.0**
KECS Kecovo 145.07 325 *e*PKiKP **PKiKP** **16 41 34.3 -1.3**
KECS Kecovo 145.07 325 *e*PKP **PKiKP** **16 41 34.3 -1.3**
BSEG Bad Segeberg 145.39 340 *e*PKPbc **PKPab** **16 41 32.2 0.0**
baz=38,slow=1.6
MORC Moravsky Berou 145.71 329 **PKPdf** **16 41 32.4 -0.4**
MORC Moravsky Berou 145.71 329 *e*PKP **PKPbc** **16 41 33.4 +0.1**
MORC Moravsky Berou 145.71 329 PKP2 **PKPdf** **16 41 32.4 -0.4**
PSZ Piszkesteto 145.73 325 PKPdf **PKPdf** **16 41 33.0 0.0**
PSZ Piszkesteto 145.73 325 PKP2 **PKPdf** **16 41 33.0 0.0**
CHVC Chvalec 145.83 331 *e*PKP **PKPbc** **16 41 33.7 +0.1**
CHVC Chvalec 145.83 331 *e*PKP2 **PKPbc** **16 41 33.7 +0.1**
MAUC Maruska 145.85 328 *e*PKP **PKPab** **16 41 34.5 +0.3**
KRLC Kraliky 145.87 330 *e*PKP **PKPbc** **16 41 33.6 -0.1**
KRLC Kraliky 145.87 330 *e*PKP2 **PKPbc** **16 41 33.6 -0.1**
DPC Dobruska-Polom 145.88 331 *e*PKP **PKPdf** **16 41 33.3 +0.2**
DPC Dobruska-Polom 145.88 331 *e*PKP2 **PKPdf** **16 41 33.3 +0.2**
UPC Upice 145.91 331 *e*PKP **PKPab** **16 41 34.1 -0.2**
UPC Upice 145.91 331 *e*PKP2 **PKPab** **16 41 34.1 -0.2**
VYHS Vyhne 145.92 326 *e*PKiKP **PKPab** **16 41 35.0 +0.6**
VYHS Vyhne 145.92 326 *e*PKP **PKPab** **16 41 35.0 +0.6**
JAVC Velka Javorina 146.27 328 *e*PKP **PKPab** **16 41 36.5 +0.7**
FLTG Flechtingen 146.42 337 *e*PKPbc **PKPbc** **16 41 35.1 0.0**
baz=38,slow=1.6
VRAC Vranov 146.49 329 *e*PKP **PKPab** **16 41 36.1 -0.4**
PVCC Panska Ves 146.52 332 *e*PKP **PKPbc** **16 41 35.9 +0.3**
PVCC Panska Ves 146.52 332 *e*PKiKP **PKPbc** **16 41 35.9 +0.3**
BRG Berggiesshubel 146.53 333 Amp 16 41 36.8
comp=Z,12nm,0.9s
BRG Berggiesshubel 146.53 333 *i* PKiKP **PKPbc** **16 41 35.7 +0.2**
BRG pmax pmax
comp=Z,12nm,0.9s
BRG pmax pmax
comp=Z,12nm,0.8s
BRG Berggiesshubel 146.53 333 *i* PKP **PKPbc** **16 41 35.8 +0.2**
baz=38,slow=1.6
BRG Berggiesshubel 146.53 333 *i* PKP **PKPbc** **16 41 35.8 +0.2**
comp=Z,1.5nm,0.7s,baz=226,slow=7.3,SNR=7.3
CLL Collm 146.57 335 PKPdf **PKPdf** **16 41 33.9 -0.3**
CLL Collm 146.57 335 *i* PKIKP **PKPbc** **16 41 35.4 -0.3**
CLL pmax pmax
comp=Z,15nm,0.8s
CLL Collm 146.57 335 *e*SKPdf **SKiKP** **16 45 12.0 +0.6**
CLL Collm 146.57 335 *i* PKPbc **PKPbc** **16 41 35.4 -0.3**
comp=Z,15nm,0.8s
CLL Collm 146.57 335 *i* pPKPbc **PKiKP** **16 41 41.5 +3.0**
NRDL Niedersach Rie 146.67 339 *e*PKPbc **PKPbc** **16 41 36.1 +0.2**
baz=38,slow=1.6
KRUC Moravsky 146.75 329 *e*PKP **PKPbc** **16 41 36.3 0.0**
MODS Modra-Piesok 146.79 327 *e*PKP2 **PKPbc** **16 41 36.9 +0.4**
MODS Modra-Piesok 146.79 327 *e*PKP **PKPbc** **16 41 36.9 +0.4**
GOPC GO Pecny, Ondr 146.88 332 *e*PKP **PKPbc** **16 41 36.8 +0.1**
GOPC GO Pecny, Ondr 146.88 332 *e*PKIKP **PKPbc** **16 41 36.8 +0.1**
PRU Pruhonice 146.93 332 *e*PKP **PKPbc** **16 41 36.8 0.0**
PRU Pruhonice 146.93 332 *e*PKIKP **PKPbc** **16 41 36.8 0.0**
EKA Eskdalemuir Ar 146.94 354 PKPbc **PKPbc** **16 41 35.7 -0.9**
comp=Z,2.9nm,0.5s,baz=0.2,slow=3.2,SNR=14
HSKC Hora Svate Kat 146.94 334 *e*PKP **PKPab** **16 41 38.3 0.0**
NEUB Neuenburg 147.13 336 *e*PKPbc **PKPbc** **16 41 37.4 +0.1**
baz=38,slow=1.6
GTTG Gottingen 147.51 338 *e*PKPbc **PKPbc** **16 41 38.6 +0.3**
baz=38,slow=1.6
NKC Novy Kostel 147.63 334 *e*PKP **PKPbc** **16 41 39.0 +0.2**
NKC Novy Kostel 147.63 334 *e*PKP2 **PKPbc** **16 41 39.0 +0.2**
MOX Moxa 147.64 335 *e*PKPbc **PKPbc** **16 41 38.6 -0.1**
baz=38,slow=1.6
MOX *e*L L 17 39 10.6
comp=Z,113nm,21.2s
RONA Rosalia, Austr 147.73 327 *e*PKP **PKPbc** **16 41 39.6 +0.5**
comp=Z,8.8nm,0.9s,SNR=4.1
CONA Conrad Observa 147.79 328 *e*PKP **PKPbc** **16 41 40.1 +0.7**
comp=Z,15nm,1.6s
CKRC Cesky Krumlov 147.89 331 *e*PKP **PKPbc** **16 41 39.8 +0.3**
CKRC Cesky Krumlov 147.89 331 *e*PKP2 **PKPbc** **16 41 39.8 +0.3**
MANZ Manzenberg 147.96 334 *e*PKPbc **PKPbc** **16 41 39.7 +0.1**
baz=38,slow=1.6
KHC Kasperske Hory 147.99 332 **PKPbc** **16 41 39.1 -0.7**
KHC Kasperske Hory 147.99 332 *e*PKP **PKPbc** **16 41 40.1 +0.3**
KHC Kasperske Hory 147.99 332 *e*PKP2 **PKPbc** **16 41 40.1 +0.3**
GEC2 GERESS Array S 148.15 331 PKPbc **PKPdf** **16 41 38.6 +1.6**
GEC2 GERESS Array S 148.15 331 *e*PKPbc **PKPbc** **16 41 40.4 +0.1**
baz=38,slow=1.6
GERES GERESS Array B 148.15 331 PKPbc **PKPbc** **16 41 39.6 -0.7**
GERES GERESS Array B 148.15 331 PKPbc **PKPbc** **16 41 40.2 -0.1**
comp=Z,4.6nm,0.7s,baz=57,slow=4.9,SNR=11
ARSA Arzberg 148.42 327 *e*pPKP **PKiKP** **16 41 42.7 +0.1**
comp=Z,6.6nm,1.2s
GRF Grafenberg Arr 148.55 335 *e*PKPbc **PKPbc** **16 41 41.1 0.0**
baz=38,slow=1.6
GRF *e*L L 17 48 09.6
comp=Z,114nm,21.9s
FNA Florina 148.60 313 **PKPdf** **16 41 39.6 +1.6**
FNA Florina 148.60 313 PKIKP **PKPdf** **16 41 39.6 +1.6**
MOA Molln 148.61 329 *e*PKP **PKPbc** **16 41 41.4 0.0**
comp=Z,1.4nm,0.5s
SOKA Soboth 149.06 327 *e*PKP **PKPbc** **16 41 42.4 -0.3**
comp=Z,4.2nm,0.8s
LEGS Legarje 149.40 326 *i* PKPdf **PKPbc** **16 41 43.6 +0.2**
BTNL Ternell 149.59 341 *d*PKP **PKPbc** **16 41 43.6 -0.2**
KBA Koelnbreinsper 149.60 329 *i* PKP **PKPbc** **16 41 43.4 -0.7**
comp=Z,12nm,0.8s
MEM Membach 149.60 341 *d*PKP **PKPbc** **16 41 43.6 -0.2**
LESA Schwarzleotal 149.66 330 *i* PKP **PKPbc** **16 41 43.6 -0.5**
comp=Z,7.8nm,0.6s
VISS Visnje 149.75 326 *i* PKPdf **PKPbc** **16 41 44.3 0.0**
BSTI Sart Tilman 149.76 341 *d*PKP **PKPbc** **16 41 44.4 +0.2**
MYKA Terra Mystica 149.78 328 *i* PKP **PKPbc** **16 41 43.6 -0.9**
comp=Z,5.2nm,0.6s,SNR=6.7
BHOL Houvegnez 149.83 341 *d*PKP **PKiKP** **16 41 45.5 +0.1**
CRNS Crni Vrh 149.85 327 *i* PKPdf **PKPbc** **16 41 44.2 -0.4**
PRED Cave del Predi 149.95 328 PKPbc **PKPbc** **16 41 44.0 -0.8**
WATA Walderalm 150.22 331 *e*PKP **PKPbc** **16 41 45.4 -0.2**
comp=Z,9.0nm,0.7s
ABTA Abfaltersbach 150.23 329 *e*PKP **PKPbc** **16 41 45.0 -0.5**
comp=Z,9.1nm,0.7s,SNR=5.7
BMRD Maredsous 150.24 342 *d*PKP **PKPbc** **16 41 45.1 -0.2**
WTTA Wattenberg 150.25 331 *i* PKP **PKPbc** **16 41 45.5 -0.2**
comp=Z,18nm,1.2s
SABO M.te Sabotino 150.25 327 PKPbc **PKPbc** **16 41 44.0 -1.5**
WLF Walferdange 150.39 340 *d*PKP **PKPbc** **16 41 46.1 +0.4**
WLF Walferdange 150.39 340 *e*PKPbc **PKiKP** **16 41 46.3 -0.2**
baz=38,slow=1.6
MOTA Moosalm 150.43 332 *i* PKP **PKPbc** **16 41 45.8 -0.3**
comp=Z,12nm,0.7s,SNR=7.2
RETA Reutte 150.46 332 *i* PKP **PKPbc** **16 41 46.0 -0.1**
comp=Z,4.6nm,0.7s
SQTA Sankt Quirin 150.47 331 *i* PKP **PKPbc** **16 41 46.2 0.0**
comp=Z,16nm,0.7s,SNR=6.5
DOU Dourbes 150.47 342 *d*PKP **PKPbc** **16 41 45.8 -0.1**
STAL STALIGIAL 150.49 329 PKPbc **PKPbc** **16 41 44.9 -1.3**
CIMO Cimolais 150.59 329 **PKPbc** **16 41 44.8 -1.6**
FETA Feichten 150.84 332 *i* pPKP **PKPbc** **16 41 47.1 0.0**
comp=Z,14nm,0.9s
DAVA Damuels 151.00 333 *i* PKiKP **PKiKP** **16 41 48.9 +0.8**
comp=Z,26nm,1.2s
FUORN Ofenpass-Fuorn 151.35 332 PKPbc **PKPbc** **16 41 48.0 -0.5**
TUE Stuetta 151.86 333 PKPbc **PKPbc** **16 41 47.7 -1.9**
ESDC Sonseca Array 162.37 347 PKPab **PKPab** **16 42 41.9 -1.9**
comp=Z,0.7nm,0.8s,baz=9.9,slow=4.6,SNR=1.7
TORD Torodi Ar. Bea 166.22 229 PKP **PKPdf** **16 42 01.1 +0.7**
comp=Z,1.5nm,0.8s,baz=42,slow=2.5,SNR=5.6
TORD PKPab **PKPab** **16 43 02.1 +0.7**
comp=Z,2.0nm,1.0s,baz=46,slow=2.1,SNR=2.5

*MDD **28** 16:28:52.5±0.3, 37.°70N×1.°67W, h10km, mb_Lg2.1/10,*
Error ellipse: s-maj=3.7km s-min=2.1km az=129.0
*SFS **28** 16:28:53.3, 37.°69N×1.°63W, h0km, ML2.0/7, ML2.5/7,*
MLv1.8/7
ISC 28 16:28:52.4±0.9, 37.°70N±0.°03×1.°67W±0.°03, h7km±5km, n20,
σ059/40, 1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLOR	**Lorca, Murcia**	**0.04**	**206**	Pg	**Pg**	**16 28 53.9**	**-0.1**
TLOR				Sg	**Sg**	**16 28 55.3**	**+0.2**
TLOR	**Lorca, Murcia**	**0.04**	**206**	⇓Pg	**Pg**	**16 28 53.9**	**-0.1**
TLOR				Sg	**Sg**	**16 28 55.3**	**+0.2**
ELOR	**Lorca, Murcia**	**0.08**	**229**	Pg	**Pg**	**16 28 54.1**	**-0.4**
ELOR				Sg	**Sg**	**16 28 55.7**	**-0.2**
EZAR	**Zarzadilla de**	**0.18**	**353**	Pg	**Pg**	**16 28 55.4**	**-0.8**
EZAR				Sg	**Sg**	**16 28 58.3**	**-0.4**
EZAR				*i* Vmb_Lg		16 28 60.0	
EMUR	**La Murta**	**0.37**	**66**	Pg	**Pg**	**16 28 59.5**	**-0.1**
EMUR				Sg	**Sg**	**16 29 04.6**	**+0.1**
EMUR	**La Murta**	**0.37**	**66**	Pg	**Pg**	**16 28 59.5**	**-0.1**
EMUR				Sg	**Sg**	**16 29 04.6**	**+0.1**
EMUR				*i* Vmb_Lg		16 29 06.0	
E001A	**Albudeite (Mur**	**0.39**	**34**	Pg	**Pg**	**16 28 59.5**	**-0.5**
E001A				Sg	**Sg**	**16 29 05.5**	**+0.4**
E1002	**Yechar (Murcia**	**0.42**	**25**	Pg	**Pg**	**16 29 00.3**	**-0.3**
E1002				Sg	**Sg**	**16 29 06.5**	**+0.4**
CART	**Cartagena**	**0.54**	**101**	Pg	**Pg**	**16 29 02.8**	**0.0**
CART				Sg	**Sg**	**16 29 09.5**	**-0.3**
ENIJ	**Nijar**	**0.84**	**211**	Pg	**Pg**	**16 29 08.2**	**-0.4**
ENIJ				Sg	**Sg**	**16 29 19.9**	**+0.4**
ENIJ	**Nijar**	**0.84**	**211**	Pg	**Pg**	**16 29 08.2**	**-0.4**
ENIJ				Sg	**Sg**	**16 29 19.3**	**-0.2**
ENIJ				*i* Vmb_Lg		16 29 24.2	
ETOB	**Tobarra**	**0.95**	**6**	Pg	**Pg**	**16 29 10.1**	**-0.7**
ETOB				Sg	**Sg**	**16 29 23.8**	**+0.7**
ETOB	**Tobarra**	**0.95**	**6**	Pg	**Pg**	**16 29 11.5**	**+0.7**
ETOB				Sg	**Sb**	**16 29 24.4**	**+0.2**
ETOB				*i* Vmb_Lg		16 29 26.8	
EQES	**Quesada**	**1.12**	**276**	Pg	**Pg**	**16 29 14.0**	**0.0**
EQES				Sg	**Sg**	**16 29 28.4**	**-0.1**
EQES				*i* Vmb_Lg		16 29 33.8	
EBER	**Berja**	**1.26**	**231**	Pn	**Pg**	**16 29 17.0**	**+0.4**
EBER	**Berja**	**1.26**	**231**	Pg	**Pg**	**16 29 14.9**	**-1.7**
EBER				Sg	**Sg**	**16 29 33.0**	**0.0**
EBER				*i* Vmb_Lg		16 29 39.5	
EQUE	**Quentar**	**1.50**	**251**	Pg	**Pn**	**16 29 19.7**	**0.0**
EQUE				Sg	**Sg**	**16 29 41.3**	**+0.8**
EQUE				*i* Vmb_Lg		16 29 47.2	
EQTA	**Presa de Quent**	**1.50**	**252**	Pn	**Pb**	**16 29 21.1**	**+0.5**
EQTA				Sn	**Sg**	**16 29 41.1**	**+0.6**
EVIV	**Cofrentes, Val**	**1.63**	**15**	Pg	**Pn**	**16 29 22.0**	**+0.5**
EVIV				Sg	**Sn**	**16 29 42.9**	**+0.1**
EVIV				*i* Vmb_Lg		16 29 45.3	
ECHE	**Chera**	**1.97**	**16**	Pg	**Pb**	**16 29 28.1**	**-0.5**
ECHE				Sn	**Sn**	**16 29 49.6**	**-1.6**
ECHE				Sg	**Sb**	**16 29 54.5**	**+1.1**
ECHE				*i* Vmb_Lg		16 29 59.4	

DJA 28 16:31:19.0±0.6, 3.°S±3.°×13.°3E±.°, h34km±8km, M3.7/7,
mb4.0/2, mB5.3/1, MLv3.6/7, Mw(mB)4.7/1, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**0.66**	**326**	P	**Pb**	16 31 33.4	+1.1
FAKI				S	**Sb**	16 31 42.3	+1.0
BNDI	**Bandanaira**	**2.90**	**249**	P	**Pn**	16 32 02.8	0.0
SWI	**Sorong**	**2.92**	**332**	P	**Pn**	16 32 03.1	0.0
SWI				S	**Sn**	16 32 38.0	+0.9
NLAI	**Namlea**	**5.52**	**272**	P	**Pn**	16 32 38.6	-0.2
	9.8nm,0.6s,3μm0.1nm						
SANI	**Sanana**	**6.77**	**282**	P	**Pn**	16 32 56.7	+0.6

*SOME **28** 16:35:06.0, 38.°20N×76.°38E, h15km*
*NNC **28** 16:35:14.0±3.1, 38.°51N×76.°41E, h0km, mb4.3, mpv3.9,*
Error ellipse: s-maj=22.2km s-min=15.4km az=159.0
*IDC **28** 16:35:15.9±1.1, 38.°56N×76.°03E, h0km, mb3.7/7,*
mbtmp3.6/14, ML3.2/6, Error ellipse: s-maj=19.1km
s-min=14.5km az=89.0
ISC 28 16:35:17.2±0.8, 38.°62N±0.°05×76.°15E±0.°05, h10km, n40,
σ1997/51, mb3.6/7, 8C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.20**	**343**	P	**Pn**	**16 36 25.1**	**+3.6**
AAK	**Ala-Archa**	**4.20**	**343**	Pn	**Pn**	**16 36 25.1**	**+3.6**
	2.5nm,0.3s,baz=153,slow=8.6,SNR=8.3						
AAK				Pg	**Pb**	**16 36 31.7**	**+0.5**
	4.5nm,0.3s,baz=160,slow=8.3,SNR=17						
AAK				Sn	**Sb**	**16 37 16.7**	**-5.5**
	6.7nm,0.3s,baz=171,slow=19,SNR=4.3						
AAK				Lg	Lg	16 37 31.7	
	6.5nm,0.3s,baz=175,slow=20,SNR=6.6						
	4.2nm,0.3s						
TKM2	**Tokmak 2**	**4.31**	**355**	⇑Pg	**Pg**	**16 36 37.2**	**-2.6**
	26nm,0.5s						
TKM2				⇑Lg	Lg	16 37 34.8	
	48nm,0.6s						
KST	**Kastek**	**4.42**	**358**	Pg	**Pb**	**16 36 34.7**	**-0.2**
	19nm,0.7s						
KST				Lg	Lg	16 37 38.6	
	36nm,0.6s						
KST	**Kastek**	**4.42**	**358**	*e*P	**Pb**	**16 36 34.7**	**-0.2**
	19nm,0.7s						
KST				*e*S	**Sg**	**16 37 38.6**	**-0.4**
	36nm,0.6s						
MDOK	**Medeo**	**4.59**	**8**	⇑Pg	**Pg**	**16 36 41.8**	**-3.2**
	36nm,0.6s						
MDOK				⇑Lg	Lg	16 37 43.0	
	119nm,1.1s						
MDOK	**Medeo**	**4.59**	**8**	*e*P	**Pb**	**16 36 38.1**	**+0.3**
	11nm,0.5s						
MDOK				*e*S	**Sg**	**16 37 44.5**	**+0.1**
	72nm,0.8s						
DGS	**Degeres**	**4.62**	**357**	Pg	**Pb**	**16 36 39.6**	**+1.2**
	16nm,0.4s						
DGS				Lg	Lg	16 37 47.8	
	37nm,0.6s						
DGS	**Degeres**	**4.62**	**357**	*e*P	**Pb**	**16 36 39.6**	**+1.2**
	16nm,0.5s						
DGS				*e*S	**Sg**	**16 37 47.2**	**+1.6**
	38nm,0.6s						
KNDC	**Almaty**	**4.63**	**7**	⇑Pg	**Pg**	**16 36 42.7**	**-3.1**
	63nm,0.7s						
KNDC				⇓Lg	Lg	16 37 45.1	
	136nm,0.7s						
KOTS	**Kotyrbulak**	**4.66**	**9**	Pg	**Pb**	**16 36 40.2**	**+1.1**
	7.3nm,0.3s						
KOTS				Lg	Lg	16 37 48.1	
	78nm,0.6s						
KOTS	**Kotyrbulak**	**4.66**	**9**	*e*P	**Pb**	**16 36 39.0**	**-0.1**
	3.1nm,0.4s						
KOTS				*e*S	**Sg**	**16 37 45.9**	**-1.0**
	78nm,0.5s						
MRKS	**Merke**	**4.68**	**333**	Pg	**Pb**	**16 36 40.3**	**+1.0**
	2.8nm,0.4s						
MRKS				Lg	Lg	16 37 48.4	
	26nm,0.5s						
MRKS	**Merke**	**4.68**	**333**	*e*P	**Pb**	**16 36 40.3**	**+1.0**
	2.8nm,0.4s						
MRKS				*e*S	**Sg**	**16 37 48.4**	**+1.0**
	26nm,0.5s						
UZB	**Uzynbulak**	**5.02**	**25**	Pg	**Pb**	**16 36 45.5**	**+0.4**
	5.8nm,0.6s						
UZB				Lg	Lg	16 37 58.1	
	22nm,0.7s						
UZB	**Uzynbulak**	**5.02**	**25**	*e*P	**Pb**	**16 36 45.5**	**+0.4**
	6.0nm,0.3s						
UZB				*e*S	**Sg**	**16 37 57.2**	**-1.0**
	22nm,0.6s						
KURS	**Kuram**	**5.09**	**17**	Pg	**Pb**	**16 36 44.2**	**-2.2**
	4.7nm,0.6s						
KURS				Lg	Lg	16 37 55.6	
	10nm,0.9s						
KURS	**Kuram**	**5.09**	**17**	*e*P	**Pb**	**16 36 48.0**	**+1.6**
	4.5nm,0.5s						
KURS				*e*S	**Sg**	**16 38 01.6**	**+0.9**
	16nm,0.7s						
KTBS	**Karatobe**	**5.10**	**4**	Pg	**Pb**	**16 36 47.4**	**+0.9**
	6.0nm,0.3s						
KTBS				Lg	Lg	16 38 01.2	
	39nm,0.6s						
KTBS	**Karatobe**	**5.10**	**4**	*e*P	**Pb**	**16 36 49.1**	**+2.6**
	6.0nm,0.3s						
KTBS				*e*S	**Sg**	**16 38 03.1**	**+2.3**
	56nm,0.7s						
KUU	**Kurty**	**5.27**	**2**	Pg	**Pb**	**16 36 48.7**	**-0.6**
	4.8nm,0.4s						
KUU				Lg	Lg	16 38 02.8	
	29nm,0.7s						
KUU	**Kurty**	**5.27**	**2**	*e*P	**Pb**	**16 36 52.2**	**+2.9**
	4.7nm,0.3s						
KUU				*e*S	**Sg**	**16 38 08.9**	**+2.7**
	55nm,0.6s						
PDGK	**Podgornoye**	**5.34**	**27**	Pg	**Pb**	**16 36 50.9**	**+0.3**
	4.6nm,0.6s						
PDGK	**Podgornoye**	**5.34**	**27**	⇓Pg	**Pb**	**16 36 51.7**	**+1.1**
	8.8nm,0.4s						
PDGK				⇑Lg	Lg	16 38 05.9	
	42nm,0.7s						
KK31	**Karatay Array**	**6.18**	**318**	⇓Pn	Pn	16 36 53.6	+5.1
	1.3nm,0.3s,baz=127,slow=13,SNR=26						
KK31				⇑Sn	**Sn**	**16 38 04.6**	**+5.2**
	5.7nm,0.5s,baz=153,slow=18,SNR=3.6						
KK31				⇑Lg	Lg	16 38 36.1	
	7.2nm,0.5s,baz=132,slow=26,SNR=4.1						
BRLS	**Boroldoy**	**6.50**	**315**	Pg	Pb	16 37 13.7	+3.3
BRLS	**Boroldoy**	**6.50**	**315**	*e*P	Pb	16 37 13.7	+3.3
	3.2nm,0.2s						
BRLS				*e*S	**Sg**	**16 38 45.3**	**-0.5**
	7.1nm,0.4s						
MKAR	**Makanchi Array**	**9.33**	**27**	Pn	**Pn**	**16 37 33.7**	**+2.0**
	0.4nm,0.3s,baz=194,slow=12,SNR=17						
	0.6nm,0.4s						

2.1nm,0.7s,baz=69,slow=7.0,SNR=1.6
2.1nm,0.7s
SONM Songino Array 23.76 57 P **P** **16 40 30.8 +1.0**
1.0nm,0.6s,baz=250,slow=12,SNR=18
1.0nm,0.6s
CMAR Chiang Mai Arr 28.23 129 P **P** **16 41 11.7 +1.4**
0.3nm,0.4s,baz=313,slow=11,SNR=1.6
0.3nm,0.4s
FINES FINESS Array B 38.12 323 P **P** **16 42 37.0 +1.0**
1.7nm,0.9s,baz=116,slow=6.3,SNR=1.4
1.7nm,0.9s
ARCES ARCESS Array B 40.83 335 P **P** **16 43 00.3 +1.8**
4.1nm,1.0s,baz=102,slow=8.4,SNR=1.4
4.1nm,1.0s
ESDC Sonseca Array 60.06 299 P **P** **16 45 24.9 +0.5**
0.2nm,0.4s,baz=56,slow=6.2,SNR=1.1
0.2nm,0.4s
TORD Torodi Ar. Bea 69.82 271 P **P** **16 46 27.2 -0.9**
0.3nm,0.4s,baz=39,slow=5.5,SNR=3.1
0.3nm,0.4s

AFAD ***28*** *16:37:46.7±0.0,37.°54N×27.°24E,h12km,ML2.9*
ISK ***28*** *16:37:47.5,37.°54N×27.°25E,h8km,ML2.4/12*
ISC 28 16:37:47.2±0.8,37.°55N±0.°02×27.°25E±0.°02,h13km±5km, n28,σ0.°46/48,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDIM	**Aydin, Didim**	**0.09**	**182**	P	**Pg**	**16 37 49.9**	**-0.2**
DDIM				S	**Sg**	**16 37 51.6**	**-0.5**
DDIM				*i* AML	AML	16 37 54.0	
	comp=N,6μm,1.0s						
DDIM				*i* AML	AML	16 37 55.0	
	comp=Z,4μm,0.5s						
DDIM				*i* AML	AML	16 37 55.0	
	comp=E,9μm,0.4s						
GCAM	**G?zelcaml?**	**0.15**	**357**	P	**Pg**	**16 37 50.9**	**-0.1**
GCAM				S	**Sg**	**16 37 53.8**	**+0.2**
DIDI	**Didim-Aydin**	**0.17**	**181**	Pg	**Pg**	**16 37 51.3**	**+0.2**
DIDI				Sg	**Sg**	**16 37 54.7**	**+0.9**
YKAV	**Yalikavak-Bodr**	**0.42**	**176**	Pg	**Pb**	**16 37 56.0**	**-0.4**
YKAV				Sg	**Sb**	**16 38 02.3**	**-0.4**
BODT	**Bodrum**	**0.48**	**174**	Pg	**Pb**	**16 37 57.1**	**-0.4**
BODT				Sg	**Sb**	**16 38 04.4**	**-0.1**
MLSB	**Milas**	**0.49**	**120**	Pg	**Pb**	**16 37 57.3**	**-0.4**
MLSB				Sg	**Sb**	**16 38 04.8**	**+0.1**
BDRM	**Kayabasi**	**0.50**	**162**	P	**Pg**	**16 37 56.8**	**-0.3**
BDRM				S	**Sb**	**16 38 04.5**	**-0.6**
DGB	**zmir**	**0.58**	**331**	P	**Pg**	**16 37 58.6**	**0.0**
DGB				S	**Sg**	**16 38 06.7**	**+0.4**
GMLD	**Gumuldur**	**0.59**	**334**	Pg	**Pb**	**16 37 59.8**	**+0.4**
IZMR	**zmir-demi**	**0.81**	**43**	P	**Pg**	**16 38 02.8**	**-0.2**
IZMR				S	**Sg**	**16 38 13.8**	**+0.2**
BLCB	**Balcova**	**0.85**	**349**	Pg	**Pn**	**16 38 04.6**	**-0.3**
DAT	**Datca**	**0.86**	**162**	Pg	**Pb**	**16 38 04.1**	**+0.2**
DAT	**Datca**	**0.86**	**162**	P	**Pn**	**16 38 04.9**	**-0.1**
DAT				S	**Sn**	**16 38 18.3**	**+0.9**
YAZI	**Mula-Dat§a-**	**0.88**	**169**	P	**Pn**	**16 38 05.1**	**-0.1**
YAZI				S	**Sb**	**16 38 16.6**	**+0.7**
MULA	**Mugla, Merkez-**	**0.90**	**108**	P	**Pn**	**16 38 05.4**	**-0.2**
MULA				S	**Sg**	**16 38 16.4**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**0.91**	**320**	P	**Pg**	**16 38 03.8**	**-0.9**
ZEYE				S	**Sb**	**16 38 17.1**	**+0.3**
ZEYE				*i* AML	AML	16 38 19.0	
	comp=E,249nm,1.0s						
ZEYE				*i* AML	AML	16 38 20.0	
	comp=N,451nm,0.5s						
ESEN	**Aydn-Nazilli**	**0.91**	**74**	P	**Pg**	**16 38 04.4**	**-0.4**
ESEN				S	**Sg**	**16 38 15.5**	**-1.2**
URLA	**Izmir**	**0.96**	**328**	P	**Pg**	**16 38 05.7**	**-0.1**
URLA				S	**Sn**	**16 38 20.3**	**+0.4**
URLA				*i* AML	AML	16 38 23.0	
	comp=E,325nm,0.5s						
URLA				*i* AML	AML	16 38 25.0	
	comp=N,474nm,0.8s						
TURN	**Turunc**	**1.11**	**134**	P	**Pg**	**16 38 08.6**	**+0.1**
TURN				S	**Sn**	**16 38 24.1**	**+0.7**
KIRA	**zmir-Kiraz**	**1.12**	**54**	P	**Pb**	**16 38 08.5**	**+0.1**
KIRA				S	**Sg**	**16 38 23.5**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.33**	**93**	P	**Pb**	**16 38 12.1**	**+0.1**
TAVA				S	**Sg**	**16 38 30.4**	**+0.3**
DALY	**Dalyan (Mula)**	**1.34**	**122**	Pn	**Pg**	**16 38 13.0**	**+0.1**
DNIZ	**Denizli-Tavas-**	**1.43**	**86**	P	**Pn**	**16 38 11.7**	**-1.1**
DNIZ				S	**Sb**	**16 38 32.3**	**+0.6**
DNZT	**Denizli-Tavas-**	**1.44**	**100**	P	**Pg**	**16 38 15.3**	**+0.4**
DNZT				S	**Sb**	**16 38 32.4**	**+0.2**
APE	**Apeiranthos**	**1.45**	**251**	Pn	**Pg**	**16 38 14.6**	**-0.4**
ARG	**Arkhangelos**	**1.50**	**152**	Pn	**Pb**	**16 38 15.0**	**+0.1**
APMY	**Acipayam-Deniz**	**1.64**	**92**	Pn	**Pb**	**16 38 17.4**	**+0.2**
CAME	**Cameli-Denizli**	**1.75**	**109**	Pn	**Pb**	**16 38 18.9**	**-0.3**

SOME ***28*** *16:38:13.0,38.°73N×76.°43E,h15km*
NNC 28 16:38:15.7±1.9,38.°84N×76.°45E,h0km,mb4.1,mpv3.7, 5C-1D,Error ellipse: s-maj=16.3km s-min=12.8km az=91.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**4.13**	**351**	⇑Pg	Pb	16 39 30.3	+0.9
TKM2				⇑Lg	Lg	16 40 27.2	
	14nm,0.7s						
TNSS	**Tian-Shan**	**4.21**	**5**	Pg	Pb	16 39 33.0	+2.1
	6.5nm,0.4s						
TNSS				Lg	Lg	16 40 30.2	
	4.5nm,0.6s						
TNSS	**Tian-Shan**	**4.21**	**5**	*e*P	Pb	16 39 33.0	+2.1
	6.5nm,0.4s						
TNSS				*e*S	Sg	16 40 30.2	-0.7
	4.5nm,0.6s						
KST	**Kastek**	**4.21**	**355**	Pg	Pb	16 39 32.1	+1.3
	5.6nm,0.4s						
KST				Lg	Lg	16 40 28.9	
	11nm,0.6s						
KST	**Kastek**	**4.21**	**355**	*e*P	Pb	16 39 32.1	+1.3
	5.6nm,0.4s						
KST				*e*S	Sg	16 40 28.9	-2.1
	11nm,0.6s						
MTBS	**Maitube**	**4.28**	**360**	Pg	Pb	16 39 34.7	+2.7
	4.5nm,0.4s						
MTBS				Lg	Lg	16 40 32.6	
	4.7nm,0.5s						
MTBS	**Maitube**	**4.28**	**360**	*e*P	Pb	16 39 34.0	+2.0
	4.0nm,0.3s						
MTBS				*e*S	Sg	16 40 31.9	-1.4
	6.1nm,0.3s						
MDOK	**Medeo**	**4.34**	**6**	⇑Pg	Pb	16 39 33.9	+0.9
	8.4nm,0.6s						
MDOK				⇓Lg	Lg	16 40 34.4	
	21nm,0.8s						
CHMS	**Chumysh**	**4.35**	**343**	⇑Pg	Pg	16 39 36.3	-2.7
	6.3nm,0.6s						
CHMS				⇑Lg	Lg	16 40 33.0	
	11nm,0.6s						
MRKS	**Merke**	**4.60**	**329**	Pg	Pb	16 39 39.8	+2.3
	12nm,0.7s						
MRKS				Lg	Lg	16 40 41.9	
	10.0nm,0.5s						
MRKS	**Merke**	**4.60**	**329**	*e*P	Pb	16 39 39.8	+2.3
	12nm,0.7s						
MRKS				*e*S	Sg	16 40 41.9	-1.7
	10.0nm,0.5s						

ROM 28 16:38:41.4±0.1,42.°503N±0.°004×13.°402E±0.°004, h10km,ML1.2/14,2C-2D,Error ellipse: s-maj=0.4km s-min=0.3km az=164.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.03**	**9**	P	Pg	16 38 43.8	+0.3
CAMP				S	Sg	16 38 45.0	0.0
CAMP				AML	AML		
	comp=N,150μm,0.3s						
CAMP				AML	AML		
	comp=E,97μm,0.4s						
T1247	**Pizzolo (AQ)**	**0.10**	**232**	⇓P	Pg	16 38 44.5	+0.4
T1247				S	Sg	16 38 46.3	+0.3
GIGS	**Gran Sasso**	**0.13**	**113**	⇑P	Pg	16 38 45.2	+0.6
GIGS				S	Sg	16 38 47.6	+0.7
GIGS				AML	AML		
	comp=E,91μm,0.1s						
GIGS				AML	AML		
	comp=N,75μm,0.1s						
GIGS				AML	AML		
	comp=N,75μm,0.1s						
SMA1	**SAN MARTINO**	**0.14**	**339**	P	Pg	16 38 45.2	+0.5
SMA1				S	Sg	16 38 48.1	+1.1
SMA1				AML	AML		
	comp=E,108μm,1.0s						
SMA1				AML	AML		
	comp=N,86μm,1.2s						
SMA1				AML	AML		
	comp=N,86μm,0.8s						
SMA1				AML	AML		
	comp=E,108μm,1.0s						
RM33	**Pellescritta (**	**0.14**	**273**	⇑P	Pg	16 38 45.1	+0.4
RM33				S	Sg	16 38 47.4	+0.4
RM33				AML	AML		
	comp=E,224μm,0.3s						
RM33				AML	AML		
	comp=N,300μm,0.3s						
RM33				AML	AML		
	comp=E,224μm,0.3s						
TERO	**Teramo**	**0.19**	**51**	P	Pg	16 38 46.2	+0.7
TERO				S	Sg	16 38 49.4	+1.1
TERO				AML	AML		
	comp=N,73μm,0.3s						
TERO				AML	AML		
	comp=E,72μm,0.2s						
MTRA	**Matera**	**0.25**	**359**	P	Pg	16 38 47.2	+0.5
MTRA				S	Sg	16 38 51.2	+1.1
LNS1	**Leonessa**	**0.29**	**291**	P	Pg	16 38 47.9	+0.6
T1214	**Arquata del Tr**	**0.29**	**331**	P	Pg	16 38 48.1	+0.7
NRCA	**Norcia**	**0.39**	**327**	⇓P	Pg	16 38 49.6	+0.4
NRCA				S	Sb	16 38 55.6	-1.0
NRCA				AML	AML		
	comp=E,92μm,0.1s						
NRCA				AML	AML		
	comp=N,68μm,0.2s						
NRCA				AML	AML		
	comp=E,92μm,1.9s						
NRCA				AML	AML		
	comp=N,68μm,1.8s						
GAVE	**Gavelli**	**0.42**	**297**	P	Pg	16 38 50.1	+0.4

IDC ***28*** *16:45:54.6±0.7,37.°47N×73.°11E,h0km,mb4.0/20, mbtmp4.0/27,ML3.5/7,MS3.5/8,Error ellipse: s-maj=13.7km s-min=12.8km az=21.0*
MOS ***28*** *16:45:57.5±1.4,37.°61N×73.°04E,h23km,mb4.4/15,Error ellipse: s-maj=6.6km s-min=3.5km az=85.6*
NEIC ***28*** *16:45:59.0±1.6,37.°60N±0.°05×73.°07E±0.°07,h22km±5km, mb4.5/52,Error ellipse: s-maj=8.9km s-min=7.0km az=46.0*
NNC ***28*** *16:45:59.8±2.6,37.°77N×73.°04E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=26.2km s-min=16.1km az=164.0*
BJI ***28*** *16:46:01.9±0.0,37.°70N×73.°38E,h13km,mb4.5/27, mB4.9/13,ML4.1/5,Ms3.9/10,Ms7 3.7/10*
ISC 28 16:45:56.7±0.4,37.°54N±0.°04×72.°89E±0.°04,h10km,n227, σ2.°33/244,mb4.4/62,MS3.5/10,13C-12D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.12**	**336**		**Pn**	**16 46 33.3**	**+0.9**
BTK	**Batken**	**2.99**	**328**	Pn	**Pb**	**16 46 48.5**	**-1.5**
BTK	**Batken**	**2.99**	**328**	PN	**Pb**	**16 46 48.6**	**-1.5**
KSH	**Kashi**	**3.12**	**50**	Pn	**Pn**	**16 46 43.3**	**-2.7**
KSH				Sn	**Sn**	**16 47 14.8**	**-8.6**
KSH				smax	smax		
	comp=N,2μm,0.8s						
KSH				smax	smax		
	comp=E,2μm,0.9s						
SIMJ	**Simiganj**	**3.26**	**291**	Pn	**Pn**	**16 46 52.5**	**+4.5**
ARSB	**Arslanbob**	**3.78**	**1**	Pn	**Pn**	**16 46 56.6**	**+1.5**
ARSB	**Arslanbob**	**3.78**	**1**	PN	**Pn**	**16 46 56.6**	**+1.5**
NIL	**Nilore**	**3.89**	**176**	Pn	**Pn**	**16 46 59.1**	**+2.5**
NIL	**Nilore**	**3.89**	**176**	PN	**Pn**	**16 46 59.1**	**+2.5**
KBL	**Kabul**	**4.32**	**227**	Pn	**Pb**	**16 47 09.7**	**-3.2**
KBL	**Kabul**	**4.32**	**227**	PN	**Pb**	**16 47 09.7**	**-3.2**
NRN	**Naryn**	**4.57**	**31**	Pn	**Pn**	**16 47 07.7**	**+1.6**
NRN	**Naryn**	**4.57**	**31**	PN	**Pn**	**16 47 07.7**	**+1.6**
UCH	**Uchtor**	**4.84**	**14**	P	**Pn**	**16 47 14.0**	**+4.0**
	SNR=17						
JMU	**Jammu**	**5.09**	**161**	*e*P	Pn	16 47 18.2	+5.3
JMU				*e*S	**Sn**	**16 48 15.6**	**+3.9**
IUG	**Iuzhnay**	**5.10**	**335**	*e*P	**Pn**	**16 47 16.6**	**+3.4**
	baz=329						
IUG	**Iuzhnay**	**5.10**	**335**	*e*PN	**Pn**	**16 47 16.6**	**+3.4**
EKS2	**Erkin-Say**	**5.16**	**7**	P	**Pn**	**16 47 18.9**	**+4.8**
	SNR=6.4						
AAK	**Ala-Archa**	**5.24**	**13**	P	**Pn**	**16 47 19.0**	**+3.9**
	SNR=22						
AAK	**Ala-Archa**	**5.24**	**13**	Pn	**Pn**	**16 47 17.8**	**+2.6**
AAK	**Ala-Archa**	**5.24**	**13**	*i* PN	**Pn**	**16 47 15.1**	**0.0**
AAK	**Ala-Archa**	**5.24**	**13**	Pn	**Pn**	**16 47 18.3**	**+3.2**
	3.3nm,0.3s,baz=138,slow=5.6,SNR=28						
AAK				Sn	**Sn**	**16 48 19.4**	**+3.8**
	2.5nm,0.3s,baz=187,slow=17,SNR=1.2						
AAK				Lg	Lg	16 48 43.3	
	1.9nm,0.3s,baz=291,slow=18,SNR=1.8						
AAK				LR	LR	16 49 25.6	
	comp=Z,214nm,18.2s,baz=197,slow=40 8.0nm,0.4s						
KBK	**Karagaybulak**	**5.35**	**16**	P	**Pn**	**16 47 20.6**	**+3.9**
	SNR=11						
ULHL	**Ulahol**	**5.36**	**28**	P	**Pn**	**16 47 20.3**	**+3.5**
	SNR=10						
DZA	**Taraz**	**5.48**	**348**	*e*P	**Pn**	**16 47 20.7**	**+2.3**
	baz=344						
DZA	**Taraz**	**5.48**	**348**	*e*PN	**Pn**	**16 47 20.6**	**+2.3**
THN	**Thein Dam**	**5.60**	**155**	*e*P	**Pn**	**16 47 24.4**	**+4.5**
THN				*e*S	**Sn**	**16 48 29.5**	**+5.1**
THN				IAML		16 48 34.0	
	comp=N,120nm,0.6s						
CHMS	**Chumysh**	**5.63**	**14**	P	**Pn**	**16 47 24.4**	**+3.9**
	SNR=6.6						
TARG	**Taragay, Kyrgy**	**5.64**	**41**	Pn	**Pn**	**16 47 18.9**	**-2.1**
TARG	**Taragay, Kyrgy**	**5.64**	**41**	PN	**Pn**	**16 47 18.9**	**-2.1**
TKM2	**Tokmak 2**	**5.76**	**20**	P	**Pn**	**16 47 26.0**	**+3.7**
	SNR=15						
TKM2	**Tokmak 2**	**5.76**	**20**	⇑Pn	**Pn**	**16 47 24.9**	**+2.5**
	comp=N,9.2nm,0.7s						
TKM2				⇑Pg	**Pb**	**16 47 40.8**	**+3.6**
	comp=N,24nm,1.0s						
TKM2				⇓Lg	Lg	16 48 56.7	
	comp=N,87nm,1.4s						
TKM2	**Tokmak 2**	**5.76**	**20**	*i* PN	**Pn**	**16 47 24.8**	**+2.5**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KK31	**Karatay Array**	**5.84**	**343**	⇓Pn	**Pn**	**16 47 25.7**	**+2.3**
	comp=Z,2.8nm,0.3s,baz=160,slow=13,SNR=68						
KK31				⇓Sn	**Sn**	**16 48 33.3**	**+2.8**
	comp=Z,16nm,0.5s,baz=172,slow=23,SNR=4.8						
KK31	**Karatay Array**	**5.84**	**343**	Pn	**Pn**	**16 47 25.2**	**+1.9**
KK31	**Karatay Array**	**5.84**	**343**	*i* PN	**Pn**	**16 47 25.7**	**+2.3**
KK31						16 48 32.5	
KKAR	**Karatay Array**	**5.84**	**343**	Pn	**Pn**	**16 47 25.1**	**+1.7**
KKAR	**Karatay Array**	**5.84**	**343**	Pn	**Pn**	**16 47 25.0**	**+1.6**
KKAR	**Karatay Array**	**5.84**	**343**	PN	**Pn**	**16 47 25.1**	**+1.7**
USP	**Ospenovka**	**5.85**	**12**	P	**Pn**	**16 47 27.3**	**+3.9**
	SNR=6.6						
BRLS	**Boroldav**	**5.96**	**338**	*e*P	**Pn**	**16 47 25.1**	**+0.1**
	baz=330						
BRLS	**Boroldav**	**5.96**	**338**	*e*PN	**Pn**	**16 47 25.0**	**+0.1**
DHRM	**DHARAMSHALA**	**5.97**	**151**	*e*P	Pn	16 47 30.3	+4.9
DHRM				*e*S	**Sn**	**16 48 36.8**	**+2.8**
DHRM				IAML		16 48 50.8	
	comp=N,155nm,0.4s						
DHRM				IAML		16 48 52.5	
	comp=E,138nm,0.6s						
SGDS	**Sogindy**	**6.05**	**12**	*e*P	**Pn**	**16 47 27.4**	**+1.2**
	baz=12						
SGDS	**Sogindy**	**6.05**	**12**	*e*PN	**Pn**	**16 47 27.4**	**+1.2**
TNSS	**Tian-Shan**	**6.30**	**28**	*e*P	**Pn**	**16 47 31.2**	**+1.1**
	baz=30						
TNSS	**Tian-Shan**	**6.30**	**28**	*e*PN	**Pn**	**16 47 31.1**	**+1.1**
MDOK	**Medeo**	**6.45**	**28**	⇑Pn	**Pn**	**16 47 33.2**	**+1.4**
	comp=E,11nm,0.8s						
MDOK				⇓Pg	**Pb**	**16 47 50.3**	**+1.3**
	comp=E,24nm,0.7s						
MDOK				⇓Lg	Lg	16 49 15.7	
	comp=E,78nm,1.0s						
MDOK	**Medeo**	**6.45**	**28**	*e*P	**Pn**	**16 47 33.3**	**+1.4**
	baz=30						
MDOK	**Medeo**	**6.45**	**28**	PN	**Pn**	**16 47 33.2**	**+1.4**
MDOK						16 47 50.3	

KNDC	**Almaty**	**6.46**	**27**	⇓Pg	**Pb**	**16 47 53.4**	**+4.1**
	comp=E,48nm,0.6s						
KNDC				⇑Lg	Lg	16 49 14.1	
	comp=E,177nm,1.1s						
PRZ	**Przheval'sk**	**6.50**	**39**	Pn	**Pn**	**16 47 34.7**	**+2.2**
PRZ	**Przheval'sk**	**6.50**	**39**	PN	**Pn**	**16 47 34.7**	**+2.2**
BHK	**Bhakra**	**6.77**	**154**	*e*P	**Pn**	**16 47 38.8**	**+2.8**
BHK				*e*S	**Sn**	**16 48 57.4**	**+4.2**
BHK				IAML		16 49 08.0	
	comp=N,95nm,0.8s						
BHK				IAML		16 49 09.8	
	comp=E,56nm,0.5s						
KUU	**Kurty**	**6.86**	**21**	*e*P	**Pn**	**16 47 38.6**	**+1.3**
	comp=E,9.7nm,0.8s,baz=22						
KUU	**Kurty**	**6.86**	**21**	*e*PN	**Pn**	**16 47 38.6**	**+1.3**
KUU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SATY	**Saty**	**6.94**	**36**	*e*P	**Pn**	**16 47 40.2**	**+1.7**
	baz=39						
SATY	**Saty**	**6.94**	**36**	*e*PN	**Pn**	**16 47 40.1**	**+1.7**
CHKK	**Chushkaly**	**7.03**	**25**	*e*P	**Pn**	**16 47 41.2**	**+1.5**
	baz=27						
CHKK	**Chushkaly**	**7.03**	**25**	*e*PN	**Pn**	**16 47 41.1**	**+1.5**
UZB	**Uzunbulak**	**7.30**	**38**	*e*P	**Pn**	**16 47 45.2**	**+1.7**
	baz=41						
UZB	**Uzunbulak**	**7.30**	**38**	*e*PN	**Pn**	**16 47 45.1**	**+1.7**
SMLA	**Simla**	**7.31**	**150**	*e*P	**Pn**	**16 47 46.2**	**+2.8**
SMLA				*e*S	**Sn**	**16 49 07.1**	**+0.7**
SMLA				IAML		16 49 21.0	
	comp=N,97nm,0.7s						
SMLA				IAML		16 49 22.1	
	comp=E,125nm,0.6s						
SHLS	**Shalkode**	**7.52**	**40**	*e*P	**Pn**	**16 47 51.0**	**+4.4**
	baz=45						
SHLS	**Shalkode**	**7.52**	**40**	*e*P	**Pn**	**16 47 50.9**	**+4.4**
BTLS	**Baital**	**7.54**	**6**	*e*P	**Pn**	**16 47 47.4**	**+0.8**
	baz=5.4						
BTLS	**Baital**	**7.54**	**6**	*e*P	**Pn**	**16 47 47.4**	**+0.8**
PDGK	**Podgornoye**	**7.66**	**39**	⇑Pn	**Pn**	**16 47 49.4**	**+1.0**
	comp=E,13nm,0.9s						
PDGK				⇓Pg	Pb	16 48 15.8	+6.1
	comp=E,22nm,0.9s						
PDGK				⇓Lg	Lg	16 49 52.7	
	comp=E,84nm,1.2s						
PDGK	**Podgornoye**	**7.66**	**39**	P	**Pn**	**16 47 49.4**	**+1.0**
TDK	**Taldyqorghan**	**8.53**	**27**	*e*P	**Pn**	**16 48 00.7**	**+0.5**
	comp=E,10nm,0.8s,baz=29						
TDK	**Taldyqorghan**	**8.53**	**27**	*e*P	**Pn**	**16 48 00.7**	**+0.5**
TDK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NDI	**New Delhi**	**9.55**	**156**	*ex*	**Sn**	**16 50 02.9**	**+1.3**
NDI				IAML		16 50 10.2	
	comp=E,32nm,0.5s						
NDI				IAML		16 50 23.4	
	comp=E,21nm,0.4s						
KHET	**Khetri**	**9.75**	**165**	*e*P	**Pn**	**16 48 17.7**	**+0.7**
KHET				*e*S	**Sn**	**16 50 04.8**	**-1.8**
KUDL	**Kundal**	**9.85**	**161**	*e*P	**Pn**	**16 48 19.9**	**+1.6**
KUDL				*e*S	**Sn**	**16 50 06.2**	**-2.6**
PTH	**Pithoragarh**	**10.04**	**140**	*e*P	**Pn**	**16 48 23.5**	**+2.4**
PTH				*e*S	**Sn**	**16 50 08.7**	**-5.3**
LGTI	**Lohaghat**	**10.13**	**141**	*e*P	**Pn**	**16 48 23.4**	**+1.2**
LGTI				*e*S	**Sn**	**16 50 09.9**	**-6.0**
LGTI				IAML		16 50 17.9	
	comp=N,30nm,0.9s						
LGTI				IAML		16 50 22.5	
	comp=E,14nm,0.5s						
OTUK	**Ortayu**	**10.71**	**358**	⇓Pn	**Pn**	**16 48 29.7**	**-0.4**
	comp=E,6.0nm,1.2s						
OTUK				⇑Lg	Lg	16 51 34.6	
	comp=E,33nm,1.4s						
OTUK	**Ortayu**	**10.71**	**358**	P	**Pn**	**16 48 29.6**	**-0.4**
MAKZ	**Makanchi**	**11.44**	**33**	Pn	**Pn**	**16 48 40.7**	**+0.6**
MAKZ	**Makanchi**	**11.44**	**33**	P	**Pn**	**16 48 40.7**	**+0.6**
MK31	**Makanchi Array**	**11.57**	**34**	P	**Pn**	**16 48 41.3**	**-0.6**
MKAR	**Makanchi Array**	**11.57**	**34**	Pn	**Pn**	**16 48 41.4**	**-0.5**
MKAR	**Makanchi Array**	**11.57**	**34**	P	**Pn**	**16 48 41.4**	**-0.5**
MKAR	**Makanchi Array**	**11.57**	**34**	Pn	**Pn**	**16 48 42.8**	**+0.9**
	comp=E,0.1nm,0.3s,baz=214,slow=15,SNR=26						
	comp=E,2.9nm,0.9s						
MK05	**Makanchi Array**	**11.57**	**34**	⇓Pn	**Pn**	**16 48 41.3**	**-0.5**
GEYT	**Alibeck**	**11.71**	**276**	Pn	**Pn**	**16 48 45.2**	**+1.4**
GEYT	**Alibeck**	**11.71**	**276**	Pn	**Pn**	**16 48 44.9**	**+1.1**
	comp=E,2.3nm,0.3s,baz=113,slow=9.8,SNR=29						
GEYT				Sn	**Sn**	**16 50 54.8**	**+0.2**
	comp=E,0.5nm,0.3s,baz=129,slow=12,SNR=3.9						
GEYT				LR	LR	16 55 01.1	
	comp=E,282nm,18.4s,baz=116,slow=46 comp=E,9.4nm,0.6s						
GYA0	**ALIBECK ARRAY**	**11.71**	**276**	P	**Pn**	**16 48 45.5**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**11.71**	**276**	Pn	**Pn**	**16 48 45.5**	**+1.7**
BRZS	**Berezniki**	**12.44**	**359**	*e*P	**Pn**	**16 48 54.0**	**+0.3**
	baz=358						
BRZS	**Berezniki**	**12.44**	**359**	*e*P	**Pn**	**16 48 54.0**	**+0.3**
WMQ	**Urumqi**	**12.86**	**56**	*e*P	**Pn**	**16 48 59.3**	**-0.2**
WMQ				S	**Sn**	**16 51 24.8**	**+2.1**
WMQ				pmax	pmax		
	comp=E,10.0nm,0.7s						
WMQ				LR	LR		
	comp=E,480nm,9.5s						
JHNI	**Jhansi**	**12.96**	**157**	*e*P	**Pn**	**16 49 01.6**	**+0.6**
JHNI				*e*S	**Sn**	**16 51 20.7**	**-4.6**
KURBB	**Kurchatov Arra**	**13.68**	**15**	Pn	**Pn**	**16 49 08.8**	**-1.8**
	baz=203,slow=12,SNR=5.4						
KURBB				Lg	Lg	16 53 02.4	
	baz=248,slow=34,SNR=1.5 comp=E,0.8nm,0.7s						
KURK	**Kurchatov**	**13.79**	**15**	Pn	**Pn**	**16 49 12.4**	**+0.3**
KURK	**Kurchatov**	**13.79**	**15**	*ce*P	**Pn**	**16 49 10.4**	**-1.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AB31	**Akbulak array**	**15.00**	**325**	⇓P	**Pn**	**16 49 27.2**	**-1.4**
	comp=Z,2.8nm,0.6s,baz=135,slow=12,SNR=35						
AB31	**Akbulak array**	**15.00**	**325**	*e*P	**Pn**	**16 49 27.0**	**-1.6**
ABKAR	**Akbulak array**	**15.00**	**325**	Pn	**Pn**	**16 49 26.3**	**-2.2**
BVA0	**Borovoye Array**	**15.58**	**354**	⇓P	**P**	**16 49 40.6**	**0.0**
	comp=Z,9.2nm,0.9s,baz=165,slow=8.2,SNR=24						
BVA0	**Borovoye Array**	**15.58**	**354**	*i* P	**P**

GTA					LR	LR			
	comp=Z,170nm,13.9s								
GTA					LR	LR			
	comp=Z,160nm,14.3s								
GTA					LR	LR			
	comp=Z,200nm,13.5s								
ARU	**Arti**	**21.19**	**338**		P	**P**	**16 50 42.6**	**+0.5**
ARU	**Arti**	**21.19**	**338**	*c i*	P	**P**	**16 50 41.6**	**-0.5**
ARU							16 51 07.7	
ARU					S	**S**	**16 54 29.0**	**-8.6**
ARU					SS	**SnSn**	**16 55 10.6**	**+11**
ARU					pmax	pmax		
	comp=Z,13nm,1.1s								
ARU	**Arti**	**21.19**	**338**		P	**P**	**16 50 43.0**	**+0.9**
	comp=Z,4.2nm,0.7s,baz=118,slow=6.1,SNR=5.9								
	comp=Z,4.2nm,0.7s								
GNI	**Garni**	**22.05**	**286**		P	**P**	**16 50 53.0**	**+1.3**
GNI					IAmb	IAmb	16 51 03.2		
	comp=Z,27nm,1.1s								
GNI	**Garni**	**22.05**	**286**	*c e*	P	**P**	**16 50 57.5**	**+5.9**
GNI					pmax	pmax			
	comp=Z,31nm,1.7s								
NCK	**Nalchik**	**22.98**	**294**	*i*	P	**P**	**16 51 05.3**	**+3.9**
NCK					pmax	pmax			
	comp=Z,12nm,0.8s								
ONI	**Oni**	**23.03**	**292**		P	**P**	**16 51 04.3**	**+2.4**
ONI					IAmb	IAmb	16 51 20.6		
	comp=Z,11nm,0.9s								
ONI	**Oni**	**23.03**	**292**		P	**P**	**16 51 04.3**	**+2.4**
ONI					pmax	pmax			
	comp=Z,11nm,0.9s								
KBZ	**Khabaz**	**23.51**	**295**	*e*	P	**P**	**16 51 08.7**	**+2.1**
KBZ					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KBZ	**Khabaz**	**23.51**	**295**		P	**P**	**16 51 09.5**	**+2.9**
	comp=Z,3.1nm,1.0s,baz=118,slow=4.2,SNR=4.2								
KBZ					LR	LR	17 02 12.7		
	comp=Z,72nm,18.3s,baz=108,slow=41								
	comp=Z,3.1nm,1.0s								
NEUR	**Neytrino**	**23.61**	**293**	*i*	P	**P**	**16 51 12.7**	**+4.8**
NEUR					pmax	pmax			
	comp=Z,9.0nm,1.5s								
KIV	**Kislovodsk**	**23.68**	**295**	*e*	P	**P**	**16 51 11.1**	**+2.6**
KIV					*e*S	**S**	**16 55 17.1**	**-6.2**
KIV					pmax	pmax			
	comp=Z,4.0nm,1.0s								
KIV					MLR	MLR			
	comp=Z,43nm,14.0s								
MOY	**Mondy**	**24.30**	**45**	*e*	P	**P**	**16 51 15.0**	**+0.7**
LZH	**Lanzhou**	**24.77**	**84**	*e*	P	**P**	**16 51 20.0**	**+1.3**
LZH					pP	sP	16 51 27.5	+2.6
LZH					pmax	pmax			
	comp=Z,7.0nm,1.0s								
TNCH	**TengChong**	**25.11**	**112**		P	**P**	**16 51 23.3**	**+1.4**
TNCH					pP	sP	16 51 29.5	+1.4
TNCH					pmax	pmax			
	comp=Z,27nm,0.9s								
TNCH					pmax	pmax			
	comp=Z,170nm,4.0s								
ZAK	**Zakamensk**	**25.16**	**50**	*e*	P	**P**	**16 51 21.8**	**-0.3**
ZAK					pmax	pmax			
	comp=Z,8.0nm,1.1s								
KIRV	**Kirov**	**26.00**	**332**	*c e*	P	**P**	**16 51 27.6**	**-1.9**
SONM	**Songino Array**	**26.50**	**56**		P	**P**	**16 51 33.6**	**-0.6**
SONM	**Songino Array**	**26.50**	**56**	*e*	P	**P**	**16 51 34.8**	**+0.6**
SONM					pmax	pmax			
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**26.50**	**56**		P	**P**	**16 51 34.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=254,slow=10,SNR=21								
	comp=Z,2.4nm,0.8s								
PZH	**PanZhiHua**	**26.72**	**106**		P	**P**	**16 51 37.5**	**+1.1**
PZH					pmax	pmax			
	comp=Z,10.0nm,1.0s								
PZH					pmax	pmax			
	comp=Z,120nm,4.7s								
ULN	**Ulaanbaatar**	**26.94**	**57**		P	**P**	**16 51 37.3**	**-0.9**
ULN	**Ulaanbaatar**	**26.94**	**57**	*c e*	P	**P**	**16 51 37.9**	**-0.4**
ULN					pmax	pmax			
	comp=Z,3.0nm,1.3s								
ANN	**Anapa**	**27.50**	**297**	*e*	P	**P**	**16 51 45.9**	**+2.8**
ANN					*e*S	**S**	**16 56 19.4**	**-4.4**
ANN					pmax	pmax			
	comp=Z,41nm,1.0s								
CMAR	**Chiang Mai Arr**	**29.68**	**123**		P	**P**	**16 52 01.5**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=306,slow=9.9,SNR=2.7								
	comp=Z,0.4nm,0.7s								
HHC	**Hu-ho-hao-te**	**29.99**	**72**	*e*	P	**P**	**16 52 08.8**	**+3.4**
HHC					pP	sP	16 52 14.5	+2.9
HHC					sP	pP	16 52 18.5	+8.7
HHC					*e*S	**S**	**16 57 04.0**	**+0.7**
HHC					pmax	pmax			
	comp=Z,22nm,0.7s								
HHC					pmax	pmax			
	comp=Z,200nm,4.5s								
HHC					LR	LR			
	comp=Z,250nm,13.1s								
HHC					LR	LR			
	comp=Z,130nm,12.4s								
HHC					LR	LR			
	comp=Z,190nm,16.5s								
OBN	**Obninsk**	**30.17**	**317**	*e*	P	**P**	**16 52 07.0**	**+0.3**
OBN				*e*			16 53 08.9		
OBN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
OBN					MLR	MLR			
	comp=Z,40nm,14.0s								
BRTR	**Keskin Array B**	**30.58**	**286**	*e*	P	**P**	**16 52 15.5**	**+4.8**
BRTR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
BRTR	**Keskin Array B**	**30.58**	**286**		P	**P**	**16 52 13.4**	**+2.7**
	comp=Z,2.2nm,0.9s,baz=79,slow=6.5,SNR=7.5								
	comp=Z,2.2nm,0.9s								
EIL	**Elat**	**32.39**	**267**		LR	LR	17 08 28.7		
	comp=Z,91nm,19.9s,baz=247,slow=42								
NRIK	**Noril'sk**	**32.84**	**10**	*i*	P	**P**	**16 52 29.1**	**-1.0**
NRIK					pmax	pmax			
	comp=Z,2.0nm,0.6s								
NRIK	**Noril'sk**	**32.84**	**10**		P	**P**	**16 52 30.2**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=207,slow=9.7,SNR=5.0								
	comp=Z,2.6nm,0.9s								
AKASG	**Malin Array Be**	**33.50**	**307**		P	**P**	**16 52 37.5**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=114,slow=8.6,SNR=4.3								
AKASG					LR	LR	17 09 34.0		
	comp=Z,64nm,18.7s,baz=15,slow=42								
	comp=Z,0.4nm,0.5s								
NACGM	**Naroch**	**35.55**	**314**	*e*	P	**P**	**16 52 57.7**	**+4.0**
	comp=Z,7.0nm,0.8s,baz=99								
FINES	**FINESS Array B**	**37.48**	**325**		P	**P**	**16 53 10.8**	**+0.7**
	comp=Z,3.6nm,0.5s,baz=107,slow=11,SNR=4.0								
	comp=Z,3.6nm,0.5s								
NJ2	**Nanjing**	**37.85**	**84**	*e*	P	**P**	**16 53 12.0**	**-1.6**
NJ2					pmax	pmax			
	comp=Z,11nm,0.6s								
CN2	**Changchun**	**39.79**	**64**	*e*	P	**P**	**16 53 25.5**	**-4.2**
CN2					*es*P	sP	16 53 43.0	+7.1
HEH	**HeiHe**	**40.41**	**54**	*e*	P	**P**	**16 53 34.5**	**-0.3**
HEH					pmax	pmax			
	comp=Z,9.0nm,0.7s								
HEH					pmax	pmax			
	comp=Z,350nm,4.9s								
ARCES	**ARCESS Array B**	**40.77**	**337**		P	**P**	**16 53 37.6**	**0.0**
	comp=Z,8.2nm,1.0s,baz=116,slow=8.1,SNR=2.8								
	comp=Z,8.2nm,1.0s								
YAK	**Yakutsk**	**42.24**	**36**		P	**P**	**16 53 48.2**	**-1.4**
YAK					IAmb	IAmb	16 53 49.7		
	comp=Z,14nm,0.8s								
YAK	**Yakutsk**	**42.24**	**36**	*e*	P	**P**	**16 53 48.9**	**-0.7**
YAK					pmax	pmax			
	comp=Z,12nm,0.9s								
MDJ	**Mudanjiang**	**42.58**	**62**		P	**P**	**16 53 55.5**	**+2.9**
MDJ					pmax	pmax			
	comp=Z,6.0nm,1.2s								
MDJ					pmax	pmax			
	comp=Z,280nm,4.3s								
KSRS	**Korea Array**	**43.12**	**73**		LR	LR	17 13 48.7		
	comp=Z,54nm,18.0s,baz=55,slow=39								
HFS	**Hagfors**	**43.20**	**321**		P	**P**	**16 53 58.2**	**+0.7**
	comp=Z,5.4nm,0.6s,baz=96,slow=11,SNR=3.6								
	comp=Z,5.4nm,0.6s								
GERES	**GERESS Array B**	**43.58**	**305**		P	**P**	**16 54 02.0**	**+1.2**
GERES	**GERESS Array B**	**43.58**	**305**		P	**P**	**16 54 02.0**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=86,slow=9.3,SNR=1.2								
	comp=Z,0.4nm,0.4s								
CLL	**Collm**	**43.73**	**308**	*e*	P	**P**	**16 54 03.0**	**+1.1**
CLL					pmax	pmax			
	comp=Z,3.0nm,0.7s								
CLL	**Collm**	**43.73**	**308**	*e*	P	**P**	**16 54 03.0**	**+1.1**
	comp=Z,3.0nm,0.7s								
CLL					*e*PP	**PcP**	**16 55 49.0**	**+0.4**
CLL					*e*PPP	PPP	16 56 22.0		
CLL					*e*PPPP		16 56 29.0		
NB2	**NORSAR Subarra**	**44.47**	**322**		P	**P**	**16 54 08.0**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**44.47**	**322**		P	**P**	**16 54 07.3**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=101,slow=7.3,SNR=5.4								
	comp=Z,2.2nm,0.6s								
MJAR	**Matsushiro Arr**	**51.17**	**70**		P	**P**	**16 54 58.5**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=287,slow=11,SNR=3.0								
	comp=Z,1.7nm,0.7s								
EKA	**Eskdalemuir Ar**	**52.60**	**316**		P	**P**	**16 55 10.3**	**0.0**
	comp=Z,3.8nm,1.0s,baz=85,slow=7.9,SNR=1.9								
	comp=Z,3.8nm,1.0s								
ESDC	**Sonseca Array**	**58.31**	**298**		P	**P**	**16 55 52.1**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=47,slow=6.4,SNR=1.8								
	comp=Z,1.4nm,0.8s								
SUMG	**Summit**	**60.57**	**341**		P	**P**	**16 56 06.7**	**-0.6**
SUMG					IAmb	IAmb	16 56 15.4		
	comp=Z,2.7nm,0.8s								
SUMG	**Summit**	**60.57**	**341**		P	**P**	**16 56 06.7**	**-0.6**
SUMG					pmax	pmax			
	comp=Z,3.0nm,0.8s								
C16K	**Lisburne Hills**	**65.96**	**20**		P	**P**	**16 56 41.4**	**-1.1**
C18K	**Utukok River**	**66.81**	**19**		P	**P**	**16 56 47.5**	**-0.5**
C19K	**Lookout Ridge**	**66.88**	**18**		P	**P**	**16 56 48.5**	**0.0**
SHEM	**Shemya Is, Ala**	**67.19**	**40**		P	**P**	**16 56 48.9**	**-1.7**
	comp=Z,100nm,0.8s,baz=225,slow=5.7,SNR=1.7								
TORD	**Torodi Ar. Bea**	**67.25**	**269**		P	**P**	**16 56 52.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**67.25**	**269**		P	**P**	**16 56 51.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=47,slow=5.8,SNR=8.5								
	comp=Z,0.7nm,0.6s								
LSZ	**Lusaka**	**67.27**	**227**		LR	LR	17 26 34.0		
	comp=Z,117nm,20.8s,baz=153,slow=36								
D19K	**Kuna River**	**67.69**	**18**		P	**P**	**16 56 52.5**	**-1.2**
D19K					IAmb	IAmb	16 56 54.5		
	comp=Z,6.0nm,0.9s								
E18K	**Tukpahlearik C**	**67.85**	**20**		P	**P**	**16 56 54.4**	**-0.2**
F15K	**North Star Dit**	**67.92**	**22**		P	**P**	**16 56 53.6**	**-1.5**
F15K					IAmb	IAmb	16 56 59.5		
	comp=Z,5.6nm,1.2s								
C23K	**Itkillik River**	**68.33**	**15**		P	**P**	**16 56 57.9**	**+0.3**
F17K	**Baldwin Pennin**	**68.38**	**21**		P	**P**	**16 56 57.8**	**-0.2**
E22K	**Anaktuvuk Pass**	**69.45**	**16**		P	**P**	**16 57 04.5**	**-0.2**
E22K					IAmb	IAmb	16 57 05.0		
	comp=Z,3.2nm,0.9s								
G19K	**Purcell Mounta**	**69.73**	**19**		P	**P**	**16 57 06.0**	**-0.3**
G19K					IAmb	IAmb	16 57 07.0		
	comp=Z,4.6nm,1.1s								
A36M	**Sachs Harbour**	**70.02**	**6**		P	**P**	**16 57 08.3**	**+0.3**
H18K	**Honhosa River**	**70.14**	**21**		P	**P**	**16 57 08.4**	**-0.5**
IMAR	**Indian Mountai**	**70.72**	**18**		P	**P**	**16 57 11.4**	**-1.0**
F24K	**Squaw Lake**	**70.81**	**15**		P	**P**	**16 57 12.8**	**-0.2**
BMAR	**Burnt Mountain**	**71.57**	**14**		P	**P**	**16 57 17.8**	**+0.2**
G24K	**Hadweenzic Riv**	**71.59**	**16**		P	**P**	**16 57 17.4**	**-0.3**
G24K					IAmb	IAmb	16 57 24.2		
	comp=Z,5.6nm,1.2s								
E29M	**Blow River**	**71.90**	**12**		P	**P**	**16 57 20.0**	**+0.5**
J20K	**Nowinta River**	**72.05**	**20**		P	**P**	**16 57 19.3**	**-1.1**
J20K					IAmb	IAmb	16 57 20.2		
	comp=Z,8.1nm,1.5s								
H24K	**Noodor Dome**	**72.23**	**16**		P	**P**	**16 57 20.8**	**-0.8**
H24K					IAmb	IAmb	16 57 35.1		
	comp=Z,12nm,1.5s								
INK	**Inuvik**	**72.63**	**10**		P	**P**	**16 57 24.2**	**+0.4**
INK	**Inuvik**	**72.63**	**10**		P	**P**	**16 57 24.2**	**+0.4**
INK					pmax	pmax			
	comp=Z,11nm,1.3s								
K20K	**Telida**	**72.72**	**20**		P	**P**	**16 57 24.7**	**+0.2**
K20K					IAmb	IAmb	16 57 37.8		
	comp=Z,6.2nm,1.3s								
ILAR	**Eielson Array**	**73.36**	**17**	*e*	P	**P**	**16 57 27.4**	**-0.8**
ILAR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
ILAR	**Eielson Array**	**73.36**	**17**		P	**P**	**16 57 27.2**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=315,slow=4.7,SNR=17								
	comp=Z,1.6nm,0.9s								
G30M	**tAoh Zraii Nji**	**73.45**	**12**		P	**P**	**16 57 28.7**	**-0.1**
G30M					IAmb	IAmb	16 57 33.5		
	comp=Z,5.5nm,1.1s								
H29M	**Whitestone**	**73.79**	**13**		P	**P**	**16 57 30.4**	**-0.4**
G31M	**Satah River**	**73.81**	**11**		P	**P**	**16 57 30.2**	**-0.6**
G31M					IAmb	IAmb	16 57 34.9		
	comp=Z,4.5nm,1.1s								
I28M	**Miner Creek**	**74.21**	**14**		P	**P**	**16 57 32.7**	**-0.7**
I28M					IAmb	IAmb	16 57 34.0		
	comp=Z,3.1nm,0.8s								
KNRA	**Kununurra**	**74.53**	**124**		P	**P**	**16 57 35.4**	**-0.3**
SCRK	**Sand Creek**	**74.69**	**16**		P	**P**	**16 57 35.8**	**-0.5**
SCRK					IAmb	IAmb	16 57 58.3		
	comp=Z,8.2nm,1.5s								
I30M	**Mount Dempster**	**75.05**	**12**		P	**P**	**16 57 37.6**	**-0.7**
I30M					IAmb	IAmb	16 57 43.5		
	comp=Z,4.3nm,1.1s								
K27K	**Chicken**	**75.05**	**15**		P	**P**	**16 57 38.1**	**0.0**
K27K					IAmb	IAmb	16 58 07.6		
	comp=Z,5.2nm,1.4s								
SUA	**Susitna One**	**75.17**	**20**		P	**P**	**16 57 39.0**	**+0.1**
SML	**Sawmill**	**75.52**	**19**		P	**P**	**16 57 40.1**	**-0.8**
DAWY	**Dawson**	**75.55**	**14**		P	**P**	**16 57 40.9**	**-0.2**
DAWY					IAmb	IAmb	16 57 42.0		
	comp=Z,7.0nm,1.4s								
J30M	**Hart River**	**75.65**	**13**		P	**P**	**16 57 41.2**	**-0.6**
J30M					IAmb	IAmb	16 57 42.8		
	comp=Z,6.8nm,1.2s								
SCM	**Sheep Creek Mo**	**75.75**	**18**		P	**P**	**16 57 41.3**	**-1.0**
SCM	**Sheep Creek Mo**	**75.75**	**18**		P	**P**	**16 57 41.3**	**-1.0**
SCM					pmax	pmax			
	comp=Z,48nm,1.5s								
BCAR	**Beaver Creek A**	**75.97**	**15**		P	**P**	**16 57 43.0**	**-0.5**
K29M	**Barlow Dome**	**76.11**	**13**		P	**P**	**16 57 44.4**	**0.0**
K29M					IAmb	IAmb	16 57 44.8		
	comp=Z,5.8nm,1.3s								
M29M	**Somme Creek**	**77.20**	**14**		P	**P**	**16 57 50.7**	**+0.1**
YKA	**Yellowknife Ar**	**80.12**	**4**		P	**P**	**16 58 05.7**	**-0.8**
YKA	**Yellowknife Ar**	**80.12**	**4**	*e*	P	**P**	**16 58 06.4**	**-0.1**
YKA					pmax	pmax			
	comp=Z,3.0nm,0.8s								
YKA	**Yellowknife Ar**	**80.12**	**4**		P	**P**	**16 58 06.0**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=347,slow=5.6,SNR=41								
	comp=Z,2.5nm,0.8s								
WRA	**Warramunga Arr**	**81.27**	**123**	*e*	P	**P**	**16 58 13.6**	**+0.4**
WRA					pmax	pmax			
	comp=Z,1.0nm,0.6s								
WRA	**Warramunga Arr**	**81.27**	**123**		P	**P**	**16 58 12.1**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=322,slow=5.0,SNR=5.7								
	comp=Z,0.9nm,0.7s								
Q32M	**Nakina River**	**81.60**	**13**		P	**P**	**16 58 14.3**	**-0.4**
Q32M					IAmb	IAmb	16 58 49.6		
	comp=Z,9.9nm,1.2s								
S34M	**Telegraph Cree**	**82.79**	**13**		P	**P**	**16 58 21.2**	**+0.5**
S34M					IAmb	IAmb	16 58 57.5		
	comp=Z,7.4nm,1.1s								
ASAR	**Alice Springs**	**83.63**	**126**		P	**P**	**16 58 24.9**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=289,slow=2.7,SNR=3.4								
	comp=Z,0.4nm,0.7s								

*SJA **28** 16:49:00.6±0.6,29.˙06S×73.˙32W,h32km±19km, ML3.3, MW3.6*
*IDC **28** 16:49:06.5±0.8,29.˙21S×72.˙50W,h0km,mb3.7/5, mbtmp3.7/6,ML3.7/1,Error ellipse: s-maj=52.5km s-min=24.8km az=86.0*
*GUC **28** 16:49:10.7±0.5,29.˙25S×72.˙44W,h43km±2km, ML3.1*
ISC 28 16:49:06.1±1.9,**29.˙27S**±0.˙03×**72.˙51W**±0.˙06,**h3**km±10km, **n56,σ1§71/75,mb4.0/5,6C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.28**	**121**	*e*	P		**Pg**	**16 49 32.4**	**+1.7**
CO05				*e*	S		**Sg**	**16 49 48.9**	**+1.6**
CO05				IAML				16 49 52.5	
	comp=E,463nm,0.2s								
CO06	**Fray Jorge**	**1.59**	**152**	*i*	P		**Pb**	**16 49 35.6**	**-0.5**
CO06				*e*	S		**Sn**	**16 49 54.6**	**-1.6**
CO06				IAML				16 49 57.2	
	comp=N,315nm,0.1s								
LCO	**Las Campanas**	**1.60**	**81**	*i*	P		**Pg**	**16 49 36.9**	**+0.1**
LCO				*e*	S		**Sb**	**16 49 57.1**	**-0.1**
AC04	**Llanos de Chal**	**1.65**	**50**	*e*	P		**Pn**	**16 49 35.0**	**-0.9**
AC04				*e*	S		**Sn**	**16 49 55.0**	**-2.6**
GO04	**Tololo Observa**	**1.74**	**122**	*e*	P		**Pg**	**16 49 39.8**	**+0.4**
GO04				*e*	S		**Sg**	**16 50 02.4**	**+0.4**
GO04	**Tololo Observa**	**1.74**	**122**	*i*	P		**Pg**	**16 49 39.4**	**0.0**
GO04				*e*	S		**Sb**	**16 50 01.8**	**+0.7**
AC05	**El Transito**	**2.00**	**78**	*e*	P		**Pb**	**16 49 42.5**	**-0.8**
AC05				*e*	S		**Sb**	**16 50 07.9**	**-0.8**
AC05				IAML				16 50 11.1	
	comp=N,190nm,0.2s								
CO01	**Juntas del Tor**	**2.22**	**109**	*i*	P		**Pb**	**16 49 47.0**	**0.0**
CO01				*e*	S		**Sn**	**16 50 12.6**	**+0.6**
CO01				IAML				16 50 17.7	
	comp=N,145nm,0.5s								
CO03	**El Pedregal**	**2.22**	**135**	*e*	P		**Pb**	**16 49 46.6**	**-0.3**
CO03				IAML				16 50 43.4	
	comp=Z,41nm,0.9s								
CO03	**El Pedregal**	**2.22**	**135**	*i*	P		**Pb**	**16 49 45.8**	**-1.2**
CO03				*e*	S		**Sn**	**16 50 12.6**	**+0.6**
CO03				IAML				16 50 16.9	
	comp=E,363nm,0.3s								
CO02	**Combarbal**	**2.33**	**146**	*e*	P		**Pb**	**16 49 47.6**	**-1.2**
CO02				*e*	S		**Sb**	**16 50 16.4**	**-1.6**
CO02				IAML				16 50 17.3	
	comp=Z,198nm,0.1s								
CO02	**Combarbal**	**2.33**	**146**	*i*	P		**Pb**	**16 49 47.4**	**-1.4**
CO02				*e*	S		**Sn**	**16 50 15.2**	**+0.7**
GO03	**Copiap**	**2.61**	**51**	*e*	P		**Pn**	**16 49 50.0**	**+0.8**
GO03				*e*	S		**Sn**	**16 50 21.2**	**-0.2**
GO03	**Copiap**	**2.61**	**51**	*e*	P		**Pn**	**16 49 49.8**	**+0.6**
GO03				*e*	S		**Sn**	**16 50 20.0**	**-1.4**
AROD	**Rodeo**	**2.79**	**109**	*e*	P		**Pb**	**16 49 57.2**	**+0.5**
AROD				*e*	S		**Sb**	**16 50 33.4**	**+2.0**
ACDV	**Cuesta del Vie**	**3.08**	**108**	*e*	P		**Pb**	**16 50 02.2**	**+0.6**
ACDV				IAML				16 51 03.5	
	comp=Z,32nm,0.8s								
ACCO	**Cerro Coronel**	**3.27**	**115**	*e*	P		**Pb**	**16 50 05.2**	**+0.3**
ACCO				IAML				16 51 15.8	
	comp=Z,27nm,1.8s								
VA06	**Catapilco**	**3.44**	**163**	*e*	P		**Pn**	**16 50 01.3**	**+0.7**
VA06				*e*	S		**Sn**	**16 50 39.0**	**-2.8**
AC01	**Pan de Azucar**	**3.54**	**29**	*e*	P		**Pn**	**16 49 59.8**	**-2.2**
AC01				*e*	S		**Sn**	**16 50 39.3**	**-5.0**
RTLS	**Leoncito**	**3.75**	**133**	*e*	P		**Pb**	**16 50 10.8**	**-2.2**
RTLS				IAML				16 51 23.4	
	comp=Z,61nm,1.5s								
VCA	**Vinchina**	**3.81**	**83**	*e*	P		**Pb**	**16 50 12.6**	**-1.4**
VCA				IAML				16 51 33.0	
	comp=Z,25nm,0.9s								
AC02	**Maricunga**	**3.85**	**52**	*e*	P		**Pn**	**16 50 09.2**	**+2.6**
AC02				*e*	S		**Sn**	**16 50 53.6**	**+1.0**
AC02				IAML				16 50 56.6	
	comp=Z,35nm,0.3s								
AC02	**Maricunga**	**3.85**	**52**	*e*	P		**Pn**	**16 50 08.6**	**+1.9**
AC02				*e*	S		**Sn**	**16 50 52.9**	**+0.3**
VA03	**San Esteban**	**3.87**	**155**	*e*	P		**Pn**	**16 50 09.1**	**+2.6**
VA03				IAML				16 51 22.9	
	comp=Z,23nm,0.3s								
VA03	**San Esteban**	**3.87**	**155**	*e*	P		**Pn**	**16 50 08.9**	**+2.4**
VA03				*e*	S		**Sn**	**16 50 52.1**	**-0.4**
ROCH	**El Roble**	**3.91**	**161**	*e*	P		**Pn**	**16 50 08.4**	**+1.2**
ROCH				*e*	P		**Pn**	**16 50 09.2**	**+2.1**
ROCH				*e*	S		**Sn**	**16 50 51.2**	**-2.5**
ROC1	**El Roble**	**3.91**	**161**	*e*	P		**Pn**	**16 50 08.6**	**+1.4**
ROC1				*e*	S		**Sn**	**16 50 53.2**	**-0.6**
AUSP	**Uspallata**	**3.99**	**138**	*e*	P		**Pb**	**16 50 13.8**	**-3.3**
PEL	**Peldehue**	**4.17**	**158**	*e*	P		**Pn**	**16 50 13.3**	**+2.7**
PEL				*e*	S		**Sn**	**16 50 58.6**	**-1.2**
MT10	**Hacienda Santa**	**4.33**	**158**	*e*	P		**Pn**	**16 50 15.3**	**+2.4**
MT10				*e*	S		**Sn**	**16 51 02.7**	**-1.3**
TINO	**Tinogasta**	**4.50**	**76**	*e*	P		**Pg**	**16 50 33.2**	**+0.8**
ASAL	**Salagasta**	**4.57**	**137**	*e*	P		Pb	16 50 22.4	-4.6
ASAL				*e*	S		**Sb**	**16 51 19.0**	**-3.6**
ASAL				IAML				16 51 37.6	
	comp=Z,18nm,0.9s								
MT04	**Ro Olivares**	**4.59**	**154**	*e*	P		**Pn**	**16 50 20.1**	**+3.5**
MT04				*e*	S		**Sn**	**16 51 11.2**	**+0.6**
AVFE	**Valle Fertil**	**4.60**	**109**	*e*	P		Pb	16 50 22.4	-5.0
AVFE				IAML				16 51 52.6	
	comp=Z,12nm,1.0s								
MT09	**Talagante**	**4.68**	**164**	*e*	P		**Pn**	**16 50 19.4**	**+1.7**
ARCO	**CERRO ARCO**	**4.70**	**140**	*e*	P		Pn	16 50 05.8	-12
ARCO				IAML				16 51 55.8	
	comp=Z,46nm,0.6s								
MT12	**Pirque**	**4.75**	**160**	*e*	S		**Sn**	**16 51 11.9**	**-2.4**
MT13	**San Alfonso**	**4.85**	**157**	*e*	P		**Pn**	**16 50 22.9**	**+2.9**
MT13				*e*	S		**Sn**	**16 51 16.7**	**0.0**
GO02	**Mina Guanaco**	**4.85**	**33**	*e*	P

ADK				IAML		16 55 31.9		
	comp=E,111nm,1.4s							
ADK				IAML		16 55 32.9		
	comp=E,90nm,1.5s							
KIWB	**Kanaga Island**	**4.10**	**268**	Pn	**Pn**	**16 54 38.7**	**+0.1**	
O14K	**Tigyukauivet M**	**8.81**	**33**	Pn	**Pn**	**16 55 45.8**	**+2.6**	
N15K	**Kwethluk River**	**9.90**	**32**	Pn	**Pn**	**16 56 00.7**	**+2.6**	
O16K	**Kokwok River B**	**10.20**	**38**	Pn	**Pn**	**16 56 05.4**	**+3.3**	
N17K	**Nushagak Hills**	**11.16**	**36**	Pn	**Pn**	**16 56 16.7**	**+1.4**	
L16K	**Owhat River**	**11.29**	**26**	Pn	**Pn**	**16 56 19.5**	**+2.4**	
KDAK	**Kodiak Island**	**11.73**	**54**	Pn	**Pn**	**16 56 23.7**	**+0.6**	
	comp=E,0.2nm,0.3s,baz=287,slow=20,SNR=1.9							
	comp=E,26nm,1.2s							
K17K	**Iditarod**	**12.43**	**27**	Pn	**Pn**	**16 56 34.8**	**+2.1**	
L18K	**Granite Mounta**	**12.53**	**31**	Pn	**Pn**	**16 56 36.2**	**+2.2**	
L19K	**White Mountain**	**13.11**	**34**	Pn	**Pn**	**16 56 39.9**	**-2.2**	
PETK	**Petropavlovsk-**	**19.22**	**285**	P	**P**	**16 58 00.0**	**+0.6**	
	comp=E,0.2nm,0.3s,baz=82,slow=13,SNR=4.2							
	comp=E,4.3nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**36.85**	**217**	T	T	17 40 04.9		
	baz=23,slow=76,SNR=4.9							
H11N3	**WAKE ISLAND Hy**	**36.86**	**217**	T	T	17 40 02.9		
	baz=23,slow=76,SNR=6.3							
H11N1	**WAKE ISLAND Hy**	**36.87**	**217**	T	T	17 40 02.5		
	baz=23,slow=76,SNR=4.8							
H11S1	**WAKE ISLAND Hy**	**38.05**	**217**	T	T	17 41 54.4		
	baz=22,slow=76,SNR=55							
H11S2	**WAKE ISLAND Hy**	**38.06**	**217**	T	T	17 41 55.5		
	baz=22,slow=76,SNR=79							
H11S3	**WAKE ISLAND Hy**	**38.06**	**217**	T	T	17 41 55.7		
	baz=22,slow=76,SNR=44							
PDAR	**Pinedale Array**	**41.15**	**78**	P	**P**	**17 01 20.7**	**+1.2**	
	comp=E,0.6nm,0.7s,baz=308,slow=3.9,SNR=5.1							
	comp=E,0.6nm,0.7s							
SONM	**Songino Array**	**50.79**	**300**	P	**P**	**17 02 35.4**	**+0.1**	
	comp=E,0.3nm,0.5s,baz=57,slow=6.4,SNR=3.2							
	comp=E,0.3nm,0.5s							
SCHQ	**Scheferville**	**56.07**	**43**	LR	LR	17 28 43.2		
	comp=E,380nm,20.0s,baz=267,slow=38							
KURBB	**Kurchatov Arra**	**62.15**	**318**	P	**P**	**17 03 55.2**	**-0.7**	
	comp=E,0.4nm,0.7s,baz=44,slow=6.8,SNR=4.0							
	comp=E,0.4nm,0.7s							
MKAR	**Makanchi Array**	**63.42**	**313**	P	**P**	**17 04 03.0**	**-1.5**	
	comp=E,0.3nm,0.8s,baz=60,slow=8.5,SNR=2.9							
	comp=E,0.3nm,0.8s							
BVAR	**Borovoye Array**	**63.45**	**324**	P	**P**	**17 04 04.4**	**-0.1**	
	comp=E,0.6nm,0.5s,baz=40,slow=6.5,SNR=6.1							
	comp=E,0.6nm,0.5s							
FINES	**FINESS Array B**	**65.97**	**351**	P	**P**	**17 04 19.0**	**-1.7**	
	comp=E,4.4nm,1.1s,baz=354,slow=13,SNR=2.0							
	comp=E,4.4nm,1.1s							
HFS	**Hagfors**	**68.00**	**358**	P	**P**	**17 04 32.7**	**-1.0**	
	comp=E,4.1nm,0.9s,baz=56,slow=2.7,SNR=8.8							
	comp=E,4.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**75.96**	**282**	P	**P**	**17 05 22.3**	**+0.3**	
	comp=E,0.8nm,0.7s,baz=30,slow=6.2,SNR=7.2							
	comp=E,0.8nm,0.7s							
AKASG	**Malin Array Be**	**76.15**	**347**	LR	LR	17 42 37.3		
	comp=E,89nm,21.8s,baz=42,slow=39							
H03N2	**Juan Fernandez**	**116.52**	**111**	T	T	19 19 46.7		
	baz=318,slow=77,SNR=4.4							
H03N1	**Juan Fernandez**	**116.53**	**111**	T	T	19 19 47.9		
	baz=318,slow=77,SNR=8.5							
H03N3	**Juan Fernandez**	**116.53**	**111**	T	T	19 19 43.1		
	baz=318,slow=77,SNR=5.4							

*NNC **28** 17:11:23.9±21.0, 36°.90N×70°.07E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=253.5km s-min=161.1km az=125.0*

ISC 28 17:11:18.3±3.8, 36°.5N±0°.3×70°.5E±0°.2, h10km, n9, σ2s 79/10, 2C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.53**	**27**	P	**Pn**	**17 12 56.6**	**+1.8**
	SNR=12						
KK31	**Karatay Array**	**6.60**	**0**	P	**Pn**	**17 12 59.0**	**+3.6**
	0.9nm,0.3s,baz=177,slow=13,SNR=22						
KK31				⇑S	**Sn**	**17 14 08.7**	**-2.0**
	3.4nm,0.5s,baz=185,slow=22,SNR=7.4						
EKS2	**Erkin-Say**	**6.67**	**22**	P	**Pn**	**17 12 58.8**	**+2.4**
	SNR=9.9						
AAK	**Ala-Archa**	**6.88**	**26**	P	**Pn**	**17 13 01.1**	**+1.7**
	SNR=9.1						
ULHL	**Ulahol**	**7.28**	**36**	P	**Pn**	**17 13 05.5**	**+0.6**
	SNR=7.6						
USP	**Ospenovka**	**7.44**	**23**	P	**Pn**	**17 13 07.8**	**+0.9**
	SNR=7.5						
TKM2	**Tokmak 2**	**7.54**	**30**	P	**Pn**	**17 13 09.3**	**+0.9**
	SNR=14						
AB31	**Akbulak array**	**14.88**	**332**	⇓P	**Pn**	**17 14 48.8**	**+0.1**
	0.1nm,0.3s,baz=140,slow=12,SNR=8.7						
AKTO	**Aktyubinsk**	**16.57**	**331**	⇑P	**Pn**	**17 15 05.8**	**-4.9**
	0.8nm,0.5s						

*IDC **28** 17:15:47.1±1.0, 5°.00S×130°.93E, h0km, mb4.0/9, mbtmp4.1/11, ML4.3/2, MS3.4/3, Error ellipse: s-maj=63.3km s-min=18.5km az=64.0*

*DJA **28** 17:15:53.2±0.3, 5°.S×13°.1E°, h10km, M4.7/12, mb4.9/7, mB5.1/6, MLv4.8/12, Mw(mB)4.5/6*

*NEIC **28** 17:15:55.1±1.3, 4°.95S±0°.03×131°.3E±0°.1, h81km±13km, mb4.1/13, Error ellipse: s-maj=15.1km s-min=3.6km az=98.0*

ISC 28 17:15:53.1±0.5, 5°.02S±0°.04×131°.28E±0°.06, h50km, n71, σ2s 13/72, mb4.2/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.45**	**290**	P	**Pn**	**17 16 16.9**	**-0.1**
BNDI	**Bandanaira**	**1.45**	**290**	P	**Pn**	**17 16 16.7**	**-0.3**
FAKI	**Fak Fak**	**2.30**	**25**		**Pn**	**17 16 30.1**	**+1.4**
FAKI				Sn	**Sn**	**17 16 56.1**	**+0.4**
FAKI	**Fak Fak**	**2.30**	**25**	P	**Pn**	**17 16 30.3**	**+1.7**
FAKI	**Fak Fak**	**2.30**	**25**	P	**Pn**	**17 16 30.0**	**+1.4**
FAKI				S	**Sn**	**17 16 56.2**	**+0.5**
SAUI	**Saumlaki**	**2.95**	**180**	Pn	**Pn**	**17 16 41.1**	**+3.5**
SAUI				Sn	**Sn**	**17 17 14.9**	**+3.2**
SAUI	**Saumlaki**	**2.95**	**180**	P	**Pn**	**17 16 37.8**	**+0.3**
SAUI	**Saumlaki**	**2.95**	**180**	P	Pn	17 16 44.1	+6.6
SAUI				S	Sn	17 17 23.1	+11
SWI	**Sorong**	**4.12**	**360**	P	**Pn**	**17 16 53.4**	**-0.3**
NLAI	**Namlea**	**4.52**	**293**	P	**Pn**	**17 17 00.5**	**+1.3**
NLAI				S	**Sn**	**17 17 51.9**	**+1.4**
LBMI	**Labuha**	**5.75**	**319**	P	**Pn**	**17 17 15.8**	**-0.3**
	82nm,0.8s,1µm0.5nm						
SANI	**Sanana**	**6.04**	**299**	P	**Pn**	**17 17 18.6**	**-1.4**
SANI	**Sanana**	**6.04**	**299**	P	**Pn**	**17 17 18.1**	**-1.9**
KDU	**Kakadu**	**7.71**	**171**	P	**Pn**	**17 17 44.1**	**+1.2**
MTN	**Manton Dam**	**7.78**	**181**	Pn	**Pn**	**17 17 45.6**	**+1.8**
MTN	**Manton Dam**	**7.78**	**181**	P	**Pn**	**17 17 45.6**	**+1.8**
SOEI	**Soe**	**8.39**	**235**		**Pn**	**17 17 54.9**	**+2.5**
SOEI	**Soe**	**8.39**	**235**	P	**Pn**	**17 17 56.3**	**+3.9**
	88nm,1.2s,1µm						
MMRI	**Maumere**	**9.67**	**248**	Pn	**Pn**	**17 18 12.3**	**+2.6**
MMRI	**Maumere**	**9.67**	**248**	P	**Pn**	**17 18 13.9**	**+4.2**
	110nm,1.2s,1µm						
EDFI	**Ende, Flores**	**10.21**	**248**	P	**Pn**	**17 18 20.9**	**+3.6**
KNRA	**Kununurra**	**10.88**	**193**		**Pn**	**17 18 25.5**	**-0.7**
KNRA	**Kununurra**	**10.88**	**193**	P	**Pn**	**17 18 25.6**	**-0.7**
TOLI2	**Tolitoli**	**12.12**	**300**	Pn	**Pn**	**17 18 46.0**	**+2.7**
FITZ	**Fitzroy Crossi**	**14.12**	**203**	Pn	**Pn**	**17 19 06.4**	**-4.1**
FITZ	**Fitzroy Crossi**	**14.12**	**203**	P	**Pn**	**17 19 08.8**	**-1.7**
COEN	**Coen**	**14.71**	**128**	Pn	**Pn**	**17 19 18.4**	**+0.1**
COEN	**Coen**	**14.71**	**128**	P	**Pn**	**17 19 18.8**	**+0.4**
WB0	**Warramunga Arr**	**14.97**	**169**	Pn	**Pn**	**17 19 19.4**	**-2.4**
WB0				IAmb	IAmb	17 19 58.0	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**15.13**	**169**		**Pn**	**17 19 21.3**	**-2.4**
WRAB				IAmb	IAmb	17 19 41.3	
	comp=Z,9.3nm,0.9s						
WRA	**Warramunga Arr**	**15.13**	**169**		**Pn**	**17 19 22.1**	**-1.8**
WRA	**Warramunga Arr**	**15.13**	**169**	Pn	**Pn**	**17 19 21.9**	**-1.9**
	comp=Z,1.4nm,0.3s,baz=350,slow=14,SNR=34						
WRA				Sn	**Sn**	**17 22 03.5**	**-7.0**
	comp=Z,1.3nm,0.3s,baz=353,slow=22,SNR=10						
	comp=Z,2.2nm,0.5s						
WB2	**Warramunga Arr**	**15.14**	**169**	Pn	**Pn**	**17 19 21.5**	**-2.4**
WB2				IAmb	IAmb	17 19 41.4	
	comp=Z,11nm,0.9s						
WR0	**Warramunga Arr**	**15.19**	**168**	Pn	**Pn**	**17 19 24.1**	**-0.5**
WR0				IAmb	IAmb	17 19 47.0	
	comp=Z,8.0nm,0.6s						
MANU	**Manus Island**	**16.33**	**80**	P	**P**	**17 19 42.9**	**+1.5**
PMG	**Port Moresby**	**16.35**	**106**	LR	LR	17 26 36.8	
	comp=Z,84nm,19.7s,baz=258,slow=39						
JAGI	**Jajag, Banyuwa**	**17.35**	**258**		**Pn**	**17 19 50.9**	**-1.0**
JAGI				IAmb	IAmb	17 20 27.5	
	comp=Z,20nm,1.3s						
JAGI	**Jajag, Banyuwa**	**17.35**	**258**	P	**Pn**	**17 19 51.3**	**-0.6**
QIS	**Mount Isa**	**17.44**	**153**	P	**Pn**	**17 19 53.4**	**+0.4**
MTSU	**Mount Surprise**	**18.23**	**137**	P	**Pn**	**17 20 05.9**	**+3.1**
KKM	**Kota Kinabalu**	**18.62**	**306**	P	**P**	**17 20 07.1**	**+0.2**
AS31	**Alice Springs**	**18.71**	**172**	Pn	**Pn**	**17 20 09.2**	**+0.6**
ASAR	**Alice Springs**	**18.71**	**172**	Pn	**Pn**	**17 20 09.2**	**+0.6**
ASAR	**Alice Springs**	**18.71**	**172**	P	**Pn**	**17 20 09.8**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=351,slow=9.6,SNR=45						
ASAR				S	**Sn**	**17 23 29.6**	**-7.6**
	comp=Z,5.5nm,0.8s,baz=352,slow=27,SNR=6.0						
	comp=Z,5.4nm,0.8s						
AS01	**Alice Springs**	**18.72**	**172**	P	**Pn**	**17 20 09.7**	**+1.1**
MBWA	**Marble Bar**	**19.57**	**214**	P	**P**	**17 20 16.6**	**-0.5**
PSA00	**Pilbara Seismi**	**19.84**	**213**	P	**P**	**17 20 19.5**	**-0.5**
PSA00	**Pilbara Seismi**	**19.84**	**213**	P	**P**	**17 20 18.7**	**-1.3**
PSA00				IAmb	IAmb	17 20 20.5	
	comp=Z,9.2nm,0.9s						
WRKA	**Warakurna**	**20.11**	**188**	P	**P**	**17 20 24.0**	**+1.0**
SBUM	**Sibu**	**20.43**	**291**	P	**P**	**17 20 25.2**	**-1.3**
SBUM				IAmb	IAmb	17 20 26.5	
	comp=Z,6.1nm,0.8s						
CTA	**Charters Tower**	**20.90**	**137**	P	Pn	17 20 35.3	+0.7
	comp=Z,6.2nm,0.9s,baz=346,slow=7.3,SNR=2.7						
CTA				S	Sn	17 24 29.9	0.0
	comp=Z,4.2nm,0.9s,baz=339,slow=13,SNR=2.3						
	comp=Z,6.2nm,0.9s						
OOD	**Goodnadatta**	**23.04**	**170**	P	**P**	**17 20 55.4**	**+1.2**
LEM	**Lembang**	**23.60**	**264**	LR	LR	17 30 26.7	
	comp=Z,19nm,20.4s,baz=60,slow=38						
MEEK	**Meekatharra**	**24.67**	**208**	P	**P**	**17 21 10.2**	**+0.7**
MULG	**Mulgathing**	**25.27**	**174**	P	**P**	**17 21 17.0**	**+2.2**
FORT	**Forrest**	**25.81**	**186**	P	**P**	**17 21 20.4**	**+0.7**
LCRK	**Leigh Creek**	**26.13**	**166**	P	**P**	**17 21 24.0**	**+1.4**
KMBL	**Kambalda**	**27.66**	**198**	P	**P**	**17 21 36.6**	**+0.2**
STKA	**Stephens Creek**	**28.42**	**161**	P	**P**	**17 21 42.0**	**-1.1**
HNR	**Honiara**	**28.77**	**100**	LR	LR	17 34 09.7	
	comp=Z,571nm,18.0s,baz=316,slow=38						
BLDU	**Ballidu**	**28.93**	**207**	P	**P**	**17 21 48.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**39.50**	**307**	P	**P**	**17 23 19.1**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=139,slow=7.6,SNR=7.3						
	comp=Z,0.7nm,0.5s						
HHC	**Hu-ho-hao-te**	**49.09**	**340**	*e*P	**P**	**17 24 36.3**	**+0.6**
HHC				sP	pwP	17 25 05.3	+11
HHC				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC				pmax	pmax		
	comp=Z,200nm,5.0s						
SONM	**Songino Array**	**56.99**	**340**	P	**P**	**17 25 32.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=134,slow=8.3,SNR=2.3						
	comp=Z,0.3nm,0.5s						
WMQ	**Urumqi**	**62.46**	**326**	*e*P	**P**	**17 26 14.3**	**+2.9**
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**67.29**	**326**	P	**P**	**17 26 43.0**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=114,slow=7.8,SNR=30						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**70.39**	**333**	P	**P**	**17 27 01.7**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=147,slow=8.1,SNR=2.8						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**71.51**	**328**	P	**P**	**17 27 08.7**	**0.0**
	comp=Z,1.0nm,0.2s,baz=134,slow=5.4,SNR=8.8						
	comp=Z,1.0nm,0.2s						
WSAR	**Wadi Sarin**	**76.16**	**295**	P	**P**	**17 27 34.2**	**-2.3**
	comp=Z,2.9nm,0.7s,baz=90,slow=10,SNR=1.8						
	comp=Z,2.9nm,0.7s						
BVAR	**Borovoye Array**	**77.08**	**327**	P	**P**	**17 27 40.4**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=129,slow=4.2,SNR=4.8						
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**84.95**	**180**	P	**P**	**17 28 23.0**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=311,slow=21,SNR=6.2						
	comp=Z,1.4nm,0.8s						

*IDC **28** 17:27:02.9±0.7, 40°.19N×72°.50E, h0km, mb3.9/18, mbtmp3.9/26, ML3.1/8, Error ellipse: s-maj=13.4km s-min=8.4km az=139.0*

*MOS **28** 17:27:04.1±1.0, 40°.27N×72°.38E, h9km, mb4.3/9, Error ellipse: s-maj=6.1km s-min=3.5km az=68.1*

*KRNET **28** 17:27:05.9±0.1, 40°.34N×72°.46E, h17km, mb4.2*

*ISU **28** 17:27:06.2, 40°.31N×72°.42E, h10km*

*NEIC **28** 17:27:07.0±1.8, 40°.36N±0°.02×72°.45E±0°.05, h10km±1km, mb4.2/6, Error ellipse: s-maj=6.5km s-min=3.2km az=101.0*

*SOME **28** 17:27:08.1, 40°.55N×72°.57E, h0km*

*NNC **28** 17:27:09.9±1.2, 40°.58N×72°.51E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=10.6km s-min=4.4km az=3.0*

ISC 28 17:27:05.3±0.7, 40°.37N±0°.02×72°.41E±0°.01, h6km±4km, n241, σ2s 30/320, mb4.0/26, 38C-29D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.33**	**61**	*i* PG	**Pg**	**17 27 12.5**	**+0.7**
OHH				*i* S	**Sg**	**17 27 16.7**	**+0.5**
OHH	**Osh**	**0.33**	**61**	⇓*i*P	**Pg**	**17 27 12.5**	**+0.7**
	baz=54						
OHH				⇓*i*S	**Sg**	**17 27 16.7**	**+0.5**
	baz=54						
ANR	**Andizhan**	**0.39**	**355**	P	**Pb**	**17 27 15.7**	**+1.0**
ANR				S	**Sb**	**17 27 22.6**	**+1.6**
FRG	**Fergana**	**0.47**	**271**	P	**Pg**	**17 27 16.3**	**+1.8**
FRG				S	**Sb**	**17 27 23.9**	**+0.5**
CHMI	**Chimion**	**0.68**	**262**	P	**Pg**	**17 27 20.2**	**+1.8**
CHMI				S	**Sb**	**17 27 30.8**	**+1.4**
NAM	**Namangan**	**0.84**	**318**	P	**Pb**	**17 27 23.9**	**+1.5**
NAM				S	**Sn**	**17 27 37.2**	**+0.7**
SFK	**Sufi-Kurgan**	**0.91**	**112**	*i* PG	**Pg**	**17 27 22.2**	**-0.7**
SFK				*i* S	**Sg**	**17 27 33.7**	**-1.0**
SFK	**Sufi-Kurgan**	**0.91**	**112**	⇑*i*P	**Pg**	**17 27 22.2**	**-0.7**
	baz=12						
SFK				⇑*i*S	**Sg**	**17 27 33.7**	**-1.0**
	baz=12						
DRK	**Karamyk**	**1.00**	**208**		**Pg**	**17 27 25.9**	**+1.3**
DRK					**Sg**	**17 27 39.0**	**+1.4**
DRK	**Karamyk**	**1.00**	**208**	⇑*i*P	**Pg**	**17 27 24.7**	**+0.1**
	baz=10.0						
DRK				⇑*i*S	**Sg**	**17 27 38.1**	**+0.6**
	baz=10.0						
KSNS	**Kasansay**	**1.04**	**320**	P	**Pn**	**17 27 27.6**	**+1.1**
KSNS				S	**Sn**	**17 27 43.6**	**+2.2**
ARSB	**Arslanbob**	**1.05**	**24**		**Pg**	**17 27 26.5**	**+1.0**
ARSB	**Arslanbob**	**1.05**	**24**	PG	**Pg**	**17 27 26.5**	**+1.0**
ARSB	**Arslanbob**	**1.05**	**24**	⇓*i*P	**Pg**	**17 27 25.9**	**+0.4**
	baz=22						
ARSB				⇓*i*S	**Sg**	**17 27 40.0**	**+0.8**
	baz=22						
MINT	**Mingtut**	**1.10**	**276**	P	**Pg**	**17 27 28.0**	**+1.6**
MINT				S	**Sn**	**17 27 44.3**	**+1.5**
BTK	**Batken**	**1.25**	**256**	Pn	**Pn**	**17 27 29.7**	**+0.2**
BTK	**Batken**	**1.25**	**256**	PG	**Pn**	**17 27 29.7**	**+0.2**
BTK	**Batken**	**1.25**	**256**	⇓*i*P	**Pn**	**17 27 29.5**	**0.0**
	baz=58						
BTK				⇓*i*S	**Sb**	**17 27 46.7**	**+0.8**
	baz=58						
CHDK	**Chadak**	**1.40**	**296**	P	**Pn**	**17 27 33.0**	**+1.6**
CHDK				S	**Sn**	**17 27 52.8**	**+2.6**
ARK	**Arkit**	**1.47**	**347**	*i* PN	**Pn**	**17 27 33.5**	**+1.0**
ARK				*i* S	**Sg**	**17 27 53.6**	**+1.1**
ARK	**Arkit**	**1.47**	**347**	⇓*i*P	**Pn**	**17 27 33.5**	**+1.0**
	baz=46						
ARK				⇓*i*S	**Sg**	**17 27 53.6**	**+1.1**
	baz=46						
TRKS	**Terek-Say**	**1.51**	**321**	*i* PN	**Pn**	**17 27 33.4**	**+0.3**
TRKS				*i* S	**Sb**	**17 27 52.9**	**-0.3**
TRKS	**Terek-Say**	**1.51**	**321**	⇓*i*P	**Pn**	**17 27 33.4**	**+0.3**
	baz=19						
TRKS				⇓*i*S	**Sb**	**17 27 52.9**	**-0.3**
	baz=19						
ARLS	**Aral**	**2.08**	**44**	*i* PN	**Pn**	**17 27 42.4**	**+1.5**
ARLS				*i* S	**Sn**	**17 28 08.7**	**+1.4**
ARLS	**Aral**	**2.08**	**44**	⇑*i*P	**Pn**	**17 27 42.4**	**+1.5**
	baz=43						
ARLS				⇑*i*S	**Sn**	**17 28 08.7**	**+1.4**
	baz=43						
MNAS	**Manas**	**2.12**	**2**	*i* PN	**Pn**	**17 27 43.4**	**+1.9**
MNAS				*i* S	**Sb**	**17 28 10.6**	**-0.3**
MNAS	**Manas**	**2.12**	**2**	⇑*i*P	**Pn**	**17 27 43.4**	**+1.9**
	baz=1.0						
MNAS				⇑*i*S	**Sb**	**17 28 10.6**	**-0.3**
	baz=1.0						
CHMG	**Chimgan**	**2.17**	**304**	P	**Pb**	**17 27 45.3**	**+0.3**
CHMG				S	**Sg**	**17 28 15.2**	**+0.3**
PSK	**Pskem**	**2.19**	**316**	P	**Pb**	**17 27 45.8**	**+0.4**
PSK				S	**Sg**	**17 28 16.1**	**+0.5**
CHRV	**Charvak**	**2.25**	**305**	P	**Pb**	**17 27 46.6**	**+0.2**
CHRV				S	**Sg**	**17 28 17.7**	**0.0**
TGS	**TashGRES**	**2.43**	**297**	P	**Pb**	**17 27 50.5**	**+1.1**
TGS				S	**Sg**	**17 28 24.9**	**+1.6**
UCH	**Uchtor**	**2.44**	**40**	P	**Pn**	**17 27 48.8**	**+2.6**
	SNR=128						
UCH	**Uchtor**	**2.44**	**40**	*i* PN	**Pn**	**17 27 47.6**	**+1.4**
UCH				*i* S	**Sn**	**17 28 17.7**	**+1.0**
UCH	**Uchtor**	**2.44**	**40**	⇑*i*P	**Pn**	**17 27 47.6**	**+1.4**
	baz=39						
UCH				⇑*i*S	**Sn**	**17 28 17.7**	**+1.0**
	baz=39						
MRKS	**Merke**	**2.45**	**14**	Pg	**Pn**	**17 27 48.7**	**+2.7**
	21nm,0.4s						
MRKS				Lg	Lg	17 28 19.6	
	525nm,0.4s						
MRKS	**Merke**	**2.45**	**14**	*e*P	**Pb**	**17 27 50.0**	**0.0**
	18nm,0.2s						
MRKS				*e*S	**Sb**	**17 28 19.6**	**-0.8**
	525nm,0.4s						
EKS2	**Erkin-Say**	**2.51**	**24**	P	**Pn**	**17 27 49.7**	**+2.9**
	SNR=34						
EKS2	**Erkin-Say**	**2.51**	**24**	*i* PN	**Pn**	**17 27 48.7**	**+1.8**
EKS2				*i* S	**Sn**	**17 28 19.5**	**+1.6**
EKS2	**Erkin-Say**	**2.51**	**24**	⇑*i*P	**Pn**	**17 27 48.7**	**+1.8**
	baz=23						
EKS2				⇑*i*S	**Sn**	**17 28 19.5**	**+1.6**
	baz=23						
IUG	**luzhnay**	**2.52**	**316**	Pg	**Pg**	**17 27 53.6**	**-0.1**
	223nm,0.3s						
IUG				Lg	Lg	17 28 26.8	
	942nm,0.4s						
IUG	**luzhnay**	**2.52**	**316**	*e*P	**Pn**	**17 27 49.1**	**+2.1**
	baz=319						
IUG	**luzhnay**	**2.52**	**316**	*e*P	**Pg**	**17 27 53.6**	**-0.1**
	223nm,0.3s						
IUG				*e*S	**Sg**	**17 28 26.8**	**+0.4**
	942nm,0.4s						
IUG	**luzhnay**	**2.52**	**316**	*e*PN	**Pn**	**17 27 49.1**	**+2.1**
KUMR	**Kumaryk**	**2.54**	**291**	P	**Pn**	**17 27 50.6**	**+3.5**
KUMR				S	**Sb**	**17 28 25.0**	**+2.1**
TAS	**Tashkent**	**2.55**	**293**	P	**Pn**	**17 27 50.7**	**+3.5**
TAS				S	**Sb**	**17 28 25.3**	**+2.3**
DZA	**Taraz**	**2.65**	**343**	Pg	**Pb**	**17 27 55.4**	**+2.2**
	319nm,0.3s						
DZA				Lg	Lg	17 28 29.4	
	404nm,0.4s						
DZA	**Taraz**	**2.65**	**343**	*e*P	**Pn**	**17 27 50.6**	**+1.9**
	baz=343						
DZA	**Taraz**	**2.65**	**343**	*e*P	**Pb**	**17 27 55.4**	**+2.2**
	319nm,0.3s						
DZA				*e*S	**Sg**	**17 28 29.4**	**-1.0**
	640nm,0.2s						
DZA	**Taraz**	**2.65**	**343**	*e*PN	**Pn**	**17 27 50.5**	**+1.9**
YNGY	**Yangiyul**	**2.67**	**287**	P	**Pn**	**17 27 52.3**	**+3.5**
YNGY				S	**Sb**	**17 28 28.2**	**+1.8**
AAK	**Ala-Archa**	**2.76**	**34**	P	**Pn**	**17 27 53.2**	**+3.0**
	SNR=16						
AAK	**Ala-Archa**	**2.76**	**34**		**Pn**	**17 27 52.5**	**+2.2**
AAK	**Ala-Archa**	**2.76**	**34**	*i* PN	**Pn**	**17 27 53.3**	**+3.0**
AAK	**Ala-Archa**	**2.76**	**34**	Pn	**Pn**	**17 27 53.2**	**+3.0**
	6.0nm,0.3s,baz=200,slow=5.0,SNR=66						
AAK				Pg	**Pb**	**17 27 57.1**	**+2.0**
	44nm,0.3s,baz=194,slow=8.1,SNR=73						
AAK				Lg	Lg	17 28 31.9	
	74nm,0.3s,baz=151,slow=19,SNR=13						
	84nm,0.5s						
AAK	**Ala-Archa**	**2.76**	**34**	⇓*i*P	**Pn**	**17 27 52.0**	**+1.7**
	baz=33						
AAK				⇓*i*S	**Sn**	**17 28 25.5**	**+1.5**
	baz=33						
KSH	**Kashi**	**2.87**	**106**	Pn	**Pn**	**17 27 52.5**	**+0.7**
KSH				sP	Pb	17 27 56.3	-0.8
KSH				Sn	**Sn**	**17 28 26.3**	**-0.4**
KSH				pmax	pmax		
	comp=Z,17nm,0.6s						
KSH				smax	smax		
	comp=N,630nm,0.8s						
KSH				smax	smax	

TKM2 ⇓Pg **Pg** **17 28 12.4 +0.1**
comp=E,30nm,0.4s
TKM2 ⇓Lg Lg 17 28 53.7
comp=E,98nm,0.6s
TKM2 Tokmak 2 3.50 42 *i* PN **Pn** **17 28 03.1 +2.7**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s
TKM2 Tokmak 2 3.50 42⇑*i*P **Pn** **17 28 02.1 +1.6**
baz=41
TKM2 ⇑*i*S **Sn** **17 28 43.1 +0.8**
baz=41
SGDS Sogindy 3.50 28 Pg **Pb** **17 28 10.7 +2.9**
comp=Z,22nm,0.4s
SGDS Lg Lg 17 28 54.6
comp=Z,244nm,0.7s
SGDS Sogindy 3.50 28 *e*P **Pn** **17 28 01.7 +1.3**
baz=25
SGDS Sogindy 3.50 28 *e*PN **Pn** **17 28 01.7 +1.3**
DZI Dzhizak 3.52 267 P **Pn** **17 28 04.1 +3.6**
DZI S **Sb** **17 28 51.4 +0.5**
KST Kastek 3.77 44 Pg **Pb** **17 28 14.8 +2.4**
comp=Z,12nm,0.4s
KST Lg Lg 17 29 02.3
comp=Z,96nm,0.4s
KST Kastek 3.77 44 *e*P **Pb** **17 28 14.8 +2.4**
comp=Z,12nm,0.4s
KST *e*S **Sb** **17 29 02.3 +3.8**
comp=Z,96nm,0.4s
DGS Degeres 3.82 40 Pg **Pb** **17 28 16.1 +2.9**
comp=Z,78nm,0.7s
DGS Lg Lg 17 29 05.5
comp=Z,173nm,0.5s
DGS Degeres 3.82 40 *e*P **Pb** **17 28 15.0 +1.8**
comp=Z,27nm,0.7s
DGS *e*S **Sb** **17 29 02.7 +3.0**
comp=Z,80nm,0.7s
KDJ Kajisay 4.01 62 *i* PN **Pn** **17 28 09.2 +1.8**
KDJ *i* S **Sn** **17 28 55.2 +0.4**
KDJ Kajisay 4.01 62⇑*e*P **Pn** **17 28 09.2 +1.8**
baz=62
KDJ ⇑*i*S **Sn** **17 28 55.2 +0.4**
baz=62
MTBS Maitube 4.08 46 Pg **Pb** **17 28 21.0 +3.3**
comp=Z,12nm,0.7s
MTBS Lg Lg 17 29 13.2
comp=Z,61nm,0.5s
MTBS Maitube 4.08 46 *e*P **Pb** **17 28 19.9 +2.2**
comp=Z,6.4nm,0.4s
MTBS *e*S **Sb** **17 29 11.2 +3.9**
comp=Z,60nm,0.5s
SAM Samarkand 4.25 262 P **Pn** **17 28 14.4 +3.8**
SAM S **Sb** **17 29 12.8 +0.8**
TNSS Tian-Shan 4.32 50 Pg **Pb** **17 28 25.7 +3.8**
comp=Z,8.4nm,0.5s
TNSS Lg Lg 17 29 22.8
comp=Z,44nm,0.4s
TNSS Tian-Shan 4.32 50 *e*P **Pb** **17 28 24.9 +3.0**
comp=Z,5.2nm,0.4s
TNSS *e*S **Sb** **17 29 19.9 +5.4**
comp=Z,44nm,0.4s
AGL Agalyk 4.33 260 P **Pn** **17 28 15.5 +3.7**
AGL S **Sb** **17 29 16.1 +1.7**
AAA Alma-Ata 4.41 48 *e*P **Pn** **17 28 14.3 +1.4**
baz=45
AAA Alma-Ata 4.41 48 *e*PN **Pn** **17 28 14.2 +1.4**
KNDC Almaty 4.44 49 ⇑Pn **Pn** **17 28 16.0 +2.7**
comp=Z,37nm,0.6s
KNDC ⇓Pg **Pg** **17 28 31.4 +1.0**
comp=Z,64nm,0.6s
KNDC ⇑Lg Lg 17 29 23.2
comp=Z,188nm,0.7s
KNDC Almaty 4.44 49 PN **Pn** **17 28 16.0 +2.7**
KNDC 17 29 23.2
MDOK Medeo 4.46 50 ⇑Pn **Pn** **17 28 16.1 +2.5**
comp=Z,7.3nm,0.6s
MDOK Pg **Pb** **17 28 27.8 +3.8**
comp=Z,9.6nm,0.4s
MDOK ⇑Pg **Pg** **17 28 31.4 +0.7**
comp=Z,31nm,0.6s
MDOK ⇓Lg Lg 17 29 24.7
comp=Z,86nm,0.6s
MDOK Lg Lg 17 29 24.9
comp=Z,90nm,0.9s
MDOK Medeo 4.46 50 *e*P **Pn** **17 28 14.4 +0.8**
baz=46
MDOK Medeo 4.46 50 *e*P **Pb** **17 28 27.8 +3.8**
comp=Z,9.6nm,0.4s
MDOK *e*S **Sg** **17 29 24.9 -3.6**
comp=Z,90nm,0.9s
MDOK Medeo 4.46 50 PN **Pn** **17 28 16.1 +2.5**
MDOK 17 28 31.4
MDOK 17 29 24.6
KOTS Kotyrbulak 4.54 49 Pg **Pb** **17 28 27.9 +2.5**
comp=Z,14nm,0.5s
KOTS Lg Lg 17 29 25.7
comp=Z,181nm,0.8s
KOTS Kotyrbulak 4.54 49 *e*P **Pb** **17 28 27.9 +2.5**
comp=Z,14nm,0.5s
KOTS *e*S **Sb** **17 29 25.7 +5.2**
comp=Z,181nm,0.8s
BAYS Baysun 4.57 244 P **Pn** **17 28 18.8 +3.6**
BAYS S **Sb** **17 29 25.2 +3.7**
KUU Kurty 4.58 38 Pg **Pb** **17 28 29.3 +3.3**
comp=Z,13nm,0.4s
KUU Lg Lg 17 29 28.2
comp=Z,154nm,0.8s
KUU Kurty 4.58 38 *e*P **Pn** **17 28 16.3 +1.2**
baz=36
KUU Kurty 4.58 38 *e*P **Pb** **17 28 29.3 +3.3**
comp=Z,13nm,0.4s
KUU *e*S **Sg** **17 29 28.2 -4.2**
comp=Z,154nm,0.8s
KUU Kurty 4.58 38 *e*PN **Pn** **17 28 16.3 +1.2**
KTBS Karatobe 4.62 42 Pg **Pb** **17 28 29.5 +2.8**
comp=Z,12nm,0.7s
KTBS Lg Lg 17 29 28.3
comp=Z,98nm,0.4s
KTBS Karatobe 4.62 42 *e*P **Pb** **17 28 29.5 +2.8**
comp=Z,12nm,0.7s
KTBS *e*S **Sb** **17 29 28.3 +5.7**
comp=Z,98nm,0.4s
ANVS Anan'yevo 4.63 57 *i* PN **Pn** **17 28 17.5 +1.5**
ANVS *i* S **Sn** **17 29 09.8 -0.3**
ANVS Anan'yevo 4.63 57⇓*i*P **Pn** **17 28 17.5 +1.5**
baz=56
ANVS ⇓*i*S **Sn** **17 29 09.8 -0.3**
baz=56
BTLS Baital 4.83 14 Pg **Pb** **17 28 34.2 +4.0**
comp=Z,20nm,0.4s
BTLS Lg Lg 17 29 36.7
comp=Z,47nm,0.5s
BTLS Baital 4.83 14 *e*P **Pn** **17 28 21.5 +2.9**
baz=12
BTLS Baital 4.83 14 *e*P **Pb** **17 28 34.2 +4.0**
comp=Z,20nm,0.4s
BTLS *e*S **Sg** **17 29 36.7 -3.5**
comp=Z,47nm,0.5s
BTLS Baital 4.83 14 *e*PN **Pn** **17 28 21.4 +2.9**
CHKK Chushkaly 4.87 43 Pg **Pb** **17 28 35.1 +4.0**
comp=Z,10nm,0.5s
CHKK Lg Lg 17 29 37.9
comp=Z,32nm,0.5s
CHKK Chushkaly 4.87 43 *e*P **Pn** **17 28 20.2 +1.0**
baz=40
CHKK Chushkaly 4.87 43 *e*P **Pb** **17 28 35.1 +4.0**
comp=Z,10nm,0.5s
CHKK *e*S **Sg** **17 29 37.9 -3.9**
comp=Z,32nm,0.5s
CHKK Chushkaly 4.87 43 *e*PN **Pn** **17 28 20.2 +1.0**
PRZ Przheval'sk 4.98 63 Pn **Pn** **17 28 20.3 -0.5**
PRZ **Pb** **17 28 37.0 +4.0**
PRZ Przheval'sk 4.98 63⇑*e*P **Pn** **17 28 22.5 +1.7**
baz=62
PRZ ⇑*e*S **Sn** **17 29 18.1 -0.6**
baz=62
SATY Saty 5.23 57 Pg **Pb** **17 28 41.2 +3.8**
comp=Z,5.3nm,0.5s
SATY Lg Lg 17 29 48.2
comp=Z,30nm,0.6s
SATY Saty 5.23 57 *e*P **Pn** **17 28 24.7 +0.4**
baz=54
SATY Saty 5.23 57 *e*P **Pb** **17 28 41.2 +3.8**
comp=Z,5.3nm,0.5s
SATY *e*S **Sb** **17 29 48.2 +7.7**
comp=Z,30nm,0.6s
SATY Saty 5.23 57 *e*PN **Pn** **17 28 24.6 +0.4**
ZHN Zhinishke 5.31 56 Pg **Pb** **17 28 42.5 +3.9**
comp=Z,1.7nm,0.5s
ZHN Lg Lg 17 29 50.0
comp=Z,30nm,0.4s
ZHN Zhinishke 5.31 56 *e*P **Pn** **17 28 25.5 +0.2**
baz=53
ZHN Zhinishke 5.31 56 *e*P **Pb** **17 28 42.5 +3.9**
comp=Z,1.7nm,0.5s
ZHN *e*S **Sb** **17 29 50.0 +7.4**
comp=Z,30nm,0.4s
ZHN Zhinishke 5.31 56 *e*PN **Pn** **17 28 25.4 +0.2**
KURS Kuram 5.31 52 Pg **Pb** **17 28 43.0 +4.4**
comp=Z,7.4nm,0.8s
KURS Lg Lg 17 29 51.4
comp=Z,32nm,1.0s
KURS Kuram 5.31 52 *e*P **Pb** **17 28 43.0 +4.4**
comp=Z,7.4nm,0.8s
KURS *e*S **Sg** **17 29 51.4 -4.5**
comp=Z,32nm,1.0s
KPKS Kokpek 5.61 54 Pg Pb 17 28 49.1 +5.3
comp=Z,5.2nm,0.6s
KPKS Lg Lg 17 30 01.3
comp=Z,53nm,0.8s
KPKS Kokpek 5.61 54 *e*P Pb 17 28 49.1 +5.3
comp=Z,5.2nm,0.6s
KPKS *e*S **Sg** **17 30 01.3 -4.2**
comp=Z,53nm,0.8s
UZB Uzynbulak 5.67 59 Pg **Pb** **17 28 48.3 +3.5**
comp=Z,4.9nm,0.2s
UZB Lg Lg 17 30 00.0
comp=Z,21nm,0.6s
UZB Uzynbulak 5.67 59 *e*P **Pn** **17 28 30.2 -0.1**
baz=56
UZB Uzynbulak 5.67 59 *e*P Pb 17 28 50.0 +5.2
comp=Z,5.6nm,0.2s
UZB *e*S **Sg** **17 30 02.8 -4.8**
comp=Z,24nm,0.5s
UZB Uzynbulak 5.67 59 *e*PN **Pn** **17 28 30.2 -0.1**
SHLS Shalkode 5.97 60 *e*P **Pn** **17 28 38.7 +4.3**
baz=59
SHLS Shalkode 5.97 60 *e*PN **Pn** **17 28 38.6 +4.3**
PDGK Podgornoye 6.06 58 Pg Pb 17 28 57.4 +6.0
comp=Z,2.2nm,0.8s
PDGK Lg Lg 17 30 15.5
comp=Z,9.6nm,0.5s
PDGK Podgornoye 6.06 58 ⇑Pn **Pn** **17 28 36.7 +1.1**
comp=Z,4.4nm,0.7s
PDGK ⇑Pg Pb 17 28 58.3 +6.9
comp=Z,12nm,0.7s
PDGK ⇑Lg Lg 17 30 15.4
comp=Z,48nm,0.8s
PDGK Podgornoye 6.06 58 PN **Pn** **17 28 36.7 +1.1**
PDGK 17 28 58.3
KBL Kabul 6.40 206 **Pn** **17 28 44.3 +3.9**
KBL Kabul 6.40 206 PN **Pn** **17 28 44.3 +3.9**
TDK Taldyqorghan 6.40 42 Pg Pg 17 29 04.3 -3.6
TDK Lg Lg 17 30 28.0
TDK Taldyqorghan 6.40 42 *e*P **Pn** **17 28 41.4 +1.1**
baz=40
TDK Taldyqorghan 6.40 42 *e*P Pg 17 29 04.3 -3.6
comp=Z,11nm,0.1s
TDK *e*S **Sg** **17 30 28.0 -2.8**
comp=Z,66nm,0.3s
TDK Taldyqorghan 6.40 42 *e*PN **Pn** **17 28 41.3 +1.1**
NIL Nilore 6.74 174 Pn **Pn** **17 28 46.6 +1.8**
NIL Nilore 6.74 174 PN **Pn** **17 28 46.6 +1.8**
DJR Jarkent 6.75 52 Pg Pb 17 29 08.7 +5.5
comp=Z,3.8nm,0.7s
DJR Lg Lg 17 30 35.0
comp=Z,17nm,0.9s
DJR Jarkent 6.75 52 *e*P Pb 17 29 10.1 +7.0
comp=Z,1.7nm,0.2s
DJR *e*S **Sg** **17 30 37.2 -4.8**
comp=Z,18nm,0.6s
KAPS Kapalarasan 7.09 44 Pg Pb 17 29 15.4 +6.6
comp=Z,2.3nm,0.5s
KAPS Lg Lg 17 30 46.5
comp=Z,14nm,0.6s
KAPS Kapalarasan 7.09 44 *e*P Pb 17 29 15.4 +6.6
comp=Z,2.3nm,0.5s
KAPS *e*S **Sg** **17 30 46.5 -6.3**
comp=Z,14nm,0.6s
OTUK Ortayu 7.88 360 Pg Pg 17 29 30.8 -5.3
comp=Z,2.3nm,0.3s
OTUK Lg Lg 17 31 13.4
comp=Z,12nm,0.6s
OTUK Ortayu 7.88 360 ⇑Pn **Pn** **17 29 04.0 +3.5**
comp=Z,6.3nm,0.7s
OTUK ⇑Lg Lg 17 31 14.4
comp=Z,35nm,0.8s
OTUK Ortayu 7.88 360 P **Pn** **17 29 03.9 +3.5**
MAKZ Makanchi 9.46 44 Pn **Pn** **17 29 22.5 +0.3**
MAKZ Makanchi 9.46 44 P **Pn** **17 29 22.5 +0.3**
BRZS Berezniki 9.62 1 *e*P **Pn** **17 29 27.4 +3.2**
baz=0.7
BRZS Berezniki 9.62 1 *e*P **Pn** **17 29 27.4 +3.2**
MK31 Makanchi Array 9.62 45 **Pn** **17 29 25.3 +0.9**
MK31 Makanchi Array 9.62 45 P **Pn** **17 29 25.3 +0.9**
MKAR Makanchi Array 9.62 45 Pn **Pn** **17 29 24.9 +0.5**
MKAR Makanchi Array 9.62 45 P **Pn** **17 29 24.9 +0.5**
MKAR Makanchi Array 9.62 45 Pn **Pn** **17 29 25.5 +1.1**
comp=Z,0.1nm,0.3s,baz=231,slow=13,SNR=8.0
comp=Z,1.1nm,0.7s
HRA Herat 10.05 237 Pn **Pn** **17 29 29.5 -0.9**
KURBB Kurchatov Arra 11.12 21 Pn **Pn** **17 29 44.4 -0.3**
comp=Z,0.2nm,0.3s,baz=217,slow=12,SNR=3.1
KURBB Sn **Sn** **17 31 47.1 -2.1**
baz=199,slow=24,SNR=1.3
KURBB Lg Lg 17 32 54.5
comp=Z,0.1nm,0.3s,baz=216,slow=30,SNR=3.4
comp=Z,2.4nm,0.2s
KURK Kurchatov 11.22 21 *i* P **Pn** **17 29 49.6 +3.4**
GEYT Alibeck 11.36 262 Pn **Pn** **17 29 46.5 -1.7**
GEYT Alibeck 11.36 262 Pn **Pn** **17 29 46.6 -1.6**
comp=Z,0.5nm,0.3s,baz=83,slow=14,SNR=12
GEYT Sn **Sn** **17 31 49.2 -6.2**
comp=Z,0.6nm,0.3s,baz=60,slow=18,SNR=2.0
comp=Z,3.7nm,0.6s
GYA0B ALIBECK ARRAY 11.36 262 Pn **Pn** **17 29 46.4 -1.8**
WMQ Urumqi 11.87 68 *e*P **Pn** **17 29 58.5 +3.3**
AB31 Akbulak array 12.53 319 P **Pn** **17 30 02.2 -1.8**
comp=Z,1.4nm,0.5s,baz=126,slow=12,SNR=22
AB31 Akbulak array 12.53 319 P **Pn** **17 30 02.2 -1.8**
ABKAR Akbulak array 12.53 319 Pn **Pn** **17 30 02.5 -1.5**
ABKAR Akbulak array 12.53 319 Pn **Pn** **17 30 02.2 -1.8**
BVA0 Borovoye Array 12.74 354 ⇑P **Pn** **17 30 09.4 +2.5**
comp=Z,1.2nm,0.5s,baz=166,slow=12,SNR=4.3
BVAR Borovoye Array 12.74 354 Pn **Pn** **17 30 06.4 -0.5**
baz=161,slow=12,SNR=3.2
BVAR Sn Sn 17 32 38.8 +10
baz=166,slow=24,SNR=2.9
BVAR Lg Lg 17 33 49.2
baz=159,slow=26,SNR=1.9
comp=Z,0.7nm,0.5s
BRVK Borovoye 12.78 354 *i* P Pn 17 30 13.1 +5.7
BRVK pmax pmax
comp=Z,1.0nm,0.5s
DGZ Jazzator, Alta 14.12 44 *i* P **Pn** **17 30 29.2 +3.3**
DGZ pmax pmax
comp=Z,3.0nm,0.8s
AKTO Aktyubinsk 14.24 320 Pn **Pn** **17 30 26.6 -0.9**
comp=Z,0.1nm,0.3s,baz=115,slow=12,SNR=1.6
AKTO Sn **Sn** **17 32 59.2 -6.4**
comp=Z,0.3nm,0.3s,baz=217,slow=7.4,SNR=2.7
comp=Z,0.8nm,0.5s
ZAA0 Zalesovo Array 15.96 28 Pn **Pn** **17 30 48.9 -1.4**
ZALV Zalesovo Beam 15.96 28 **Pn** **17 30 50.5 +0.2**
ZALV Zalesovo Beam 15.96 28 *i* P **Pn** **17 30 51.2 +0.9**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 15.96 28 Pn **Pn** **17 30 49.5 -0.8**
comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=6.0
comp=Z,1.0nm,0.4s
ARU Arti 18.45 335 P **Pn** **17 31 21.4 -0.2**
comp=Z,0.4nm,0.3s,baz=85,slow=20,SNR=2.1
comp=Z,1.2nm,0.4s
GTA Gaotai 21.03 84 *e*P **P** **17 31 49.5 -0.4**
GTA pP sP 17 31 55.3 +2.5
GTA pmax pmax
comp=Z,2.0nm,1.5s
GNI Garni 21.09 278*ce*P **P** **17 31 52.5 +2.0**
GNI pmax pmax
comp=Z,10.0nm,1.3s
GNI Garni 21.09 278 P **P** **17 31 49.8 -0.8**
comp=Z,2.3nm,0.6s,baz=52,slow=21,SNR=1.6
comp=Z,2.3nm,0.6s
ONI Oni 21.76 285 P **P** **17 31 58.8 +1.1**
ONI IAmb IAmb 17 32 00.2
comp=Z,7.5nm,0.9s
ONI Oni 21.76 285 P **P** **17 31 58.8 +1.1**
ONI pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 22.11 288 P **P** **17 32 01.6 +0.3**
comp=Z,1.9nm,0.8s,baz=80,slow=5.4,SNR=2.4
comp=Z,1.9nm,0.8s
KIV Kislovodsk 22.26 289 *e*P **P** **17 32 02.4 -0.7**
KIV *e*S **S** **17 36 07.3 -1.1**
KIV pmax pmax
comp=Z,4.0nm,1.0s
LZH Lanzhou 24.99 90 *e*P P 17 32 22.8 -7.2
LZH pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 25.37 62 P **P** **17 32 32.6 -0.7**
comp=Z,0.3nm,0.4s,baz=283,slow=31,SNR=2.5
comp=Z,0.3nm,0.4s
ANN Anapa 26.00 291 *e*P P 17 32 31.5 -7.3
ANN pmax pmax
comp=Z,61nm,1.0s
PZH PanZhiHua 27.97 111 P **P** **17 32 58.3 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,5.2s
BR131 Keskin Array S 29.53 282 P **P** **17 33 09.9 -0.8**
BR131 IAmb IAmb 17 33 13.6
comp=Z,8.8nm,1.2s
BR131 Keskin Array S 29.53 282 P **P** **17 33 09.9 -0.8**
BR131 pmax pmax
comp=Z,9.0nm,1.3s
BRTR Keskin Array B 29.53 282 P **P** **17 33 10.4 -0.2**
BRTR Keskin Array B 29.53 282 P **P** **17 33 11.3 +0.7**
comp=Z,2.8nm,0.8s,baz=90,slow=8.1,SNR=13
comp=Z,2.8nm,0.8s
HHC Hu-ho-hao-te 29.57 76 *e*P **P** **17 33 08.8 -2.2**
HHC pP pP 17 33 14.5 +1.4
HHC pmax pmax
comp=Z,90nm,4.5s
AKASG Malin Array Be 31.55 304 P **P** **17 33 27.7 -0.5**
comp=Z,0.4nm,0.4s,baz=78,slow=7.4,SNR=12
comp=Z,0.4nm,0.4s
CMAR Chiang Mai Arr 31.59 126 P P 17 33 24.7 -4.2
comp=Z,0.2nm,0.5s,baz=297,slow=16,SNR=1.5
comp=Z,0.2nm,0.5s
FINES FINESS Array B 34.98 323 P **P** **17 33 58.0 0.0**
comp=Z,1.6nm,0.5s,baz=117,slow=10,SNR=10
comp=Z,1.6nm,0.5s
ZEA Zeya 38.71 51 *e*P **P** **17 34 30.4 +0.5**
YAK Yakutsk 40.21 38*ce*P **P** **17 34 41.4 -0.8**
YAK pmax pmax
comp=Z,6.0nm,1.0s
HFS Hagfors 40.79 319 P **P** **17 34 46.9 -0.2**
comp=Z,3.2nm,0.5s,baz=98,slow=11,SNR=25
comp=Z,3.2nm,0.5s
GERES GERESS Array B 41.71 302 P **P** **17 34 54.6 -0.3**
comp=Z,0.8nm,0.5s,baz=51,slow=14,SNR=2.6
comp=Z,0.8nm,0.5s
CLL Collm 41.73 306 *i* P **P** **17 34 54.6 -0.3**
CLL Collm 41.73 306 *e*P **P** **17 34 55.0 +0.1**
TIXI Tiksi 41.78 23 P **P** **17 34 54.9 -0.2**
TIXI IAmb IAmb 17 34 55.8
comp=Z,4.8nm,1.1s
TIXI Tiksi 41.78 23*ce*P **P** **17 34 54.4 -0.7**
TIXI pmax pmax
comp=Z,7.0nm,2.5s
NB2 NORSAR Subarra 42.03 320 P **P** **17 34 56.6 -0.7**
comp=Z,0.6nm,0.5s,baz=91,slow=8.6
NOA NORSAR Array B 42.03 320 P **P** **17 34 56.7 -0.6**
comp=Z,0.7nm,0.5s,baz=101,slow=7.3,SNR=4.3
comp=Z,0.7nm,0.5s
EKA Eskdalemuir Ar 50.34 314 P **P** **17 36 02.2 -0.5**
comp=Z,1.5nm,0.8s,baz=62,slow=9.0,SNR=1.2
comp=Z,1.5nm,0.8s
ESDC Sonseca Array 56.69 296 P **P** **17 36 49.1 -0.5**
comp=Z,0.5nm,0.4s,baz=61,slow=5.9,SNR=2.1
comp=Z,0.5nm,0.4s
TORD Torodi Ar. Bea 66.94 268 P **P** **17 37 57.4 -1.6**
comp=Z,0.9nm,0.4s,baz=57,slow=5.8,SNR=11
comp=Z,0.9nm,0.4s
ILAR Eielson Array 70.76 17 P **P** **17 38 21.0 -1.0**
comp=Z,0.6nm,0.8s,baz=322,slow=4.7,SNR=7.8
comp=Z,0.6nm,0.8s
DBIC Dimbokro 76.01 267 P **P** **17 38 52.3 -1.4**
comp=Z,2.8nm,0.8s,baz=128,slow=6.8,SNR=3.2
comp=Z,2.8nm,0.8s
YKA Yellowknife Ar 77.33 3 P **P** **17 38 59.8 -0.6**
comp=Z,0.9nm,0.7s,baz=349,slow=5.9,SNR=15
comp=Z,0.9nm,0.7s
WRA Warramunga Arr 83.14 123 P **P** **17 39 30.2 -2.1**
comp=Z,1.4nm,0.8s,baz=323,slow=4.9,SNR=7.6
comp=Z,1.4nm,0.8s
ASAR Alice Springs 85.60 126 P **P** **17 39 42.5 -2.2**
comp=Z,1.2nm,0.7s,baz=318,slow=5.0,SNR=14
comp=Z,1.2nm,0.7s
PLCA Paso Flores 151.98 257 PKPbc **PKPdf** **17 46 59.9 +5.3**
comp=Z,1.2nm,0.9s,baz=252,slow=11,SNR=2.1

VAO ***28*** *17:35:47.5±0.7,22.°15S×67.°43W,h141km±7km,mb4.5*
NEIC ***28*** *17:35:49.8±1.7,22.°29S±0.°03×67.°4W±0.°1,h213km±10km, mb4.3/6, Error ellipse: s-maj=16.7km s-min=4.0km az=93.0*
SJA ***28*** *17:35:49.3±0.5,22.°18S×67.°27W,h196km±6km,ML4.3, MW4.0*
IDC ***28*** *17:35:50.4±0.8,22.°16S×67.°06W,h158km±13km,mb4.1/3, mbtmp4.5/7, Error ellipse: s-maj=28.2km s-min=12.4km az=141.0*
GUC ***28*** *17:35:51.6±0.5,22.°25S×67.°53W,h208km±3km,ML4.4*
SCB ***28*** *17:35:51.9±1.4,22.°26S×67.°30W,h160km±12km,ML4.4/4, MW4.5, Error ellipse: s-maj=5.4km s-min=3.2km az=0.0*

ISC 28 17:35:50.1±0.6,22°20S±0.°04×67°28W±0.°04,h185km±7km, n155,σ1$56/189,mb4.3/4,15C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.12**	**228**			**Pn**	**17 36 21.0**	**+1.4**
AF01	**San Pedro de A**	**1.12**	**228**	*e*P		**Pn**	**17 36 19.7**	**+0.1**
AF01				*i* S		**Sn**	**17 36 44.1**	**+1.8**
LVC	**Limon Verde**	**1.56**	**254**			**Pn**	**17 36 24.4**	**+0.9**
LVC				Sn		**Sn**	**17 36 49.6**	**+0.3**
LVC	**Limon Verde**	**1.56**	**254**	*e*P		**Pn**	**17 36 24.2**	**+0.7**
LVC	**Limon Verde**	**1.56**	**254**	P		**Pn**	**17 36 24.5**	**+1.1**
	283nm,0.5s,baz=83,slow=3.7,SNR=843							
LVC				S		**Sn**	**17 36 49.4**	**+0.1**
	180nm,0.3s,baz=318,slow=22,SNR=81							
LVC	**Limon Verde**	**1.56**	**254**	⇑*i*P		**Pn**	**17 36 23.7**	**+0.2**
LVC				*e*S		**Sn**	**17 36 49.2**	**-0.1**
LVC				IAML			17 36 51.2	
	comp=Z,2μm,0.5s							
LVC	**Limon Verde**	**1.56**	**254**	Pg		**Pn**	**17 36 24.4**	**+0.9**
YJA	**Yavi**	**1.64**	**90**	*e*P		**Pn**	**17 36 25.3**	**+1.0**
YJA				*e*S		**Sn**	**17 36 50.9**	**+0.1**
MOCB	**Mochara**	**1.80**	**59**	Pg		**Pn**	**17 36 27.2**	**+1.3**
MOCB				Sg		**Sn**	**17 36 53.5**	**-0.1**
MOCB				IAML			17 36 54.7	
	2μm,0.7s							
PB09	**IPOC Station P**	**1.86**	**282**			**Pn**	**17 36 27.6**	**+1.4**
PB09	**IPOC Station P**	**1.86**	**282**	*e*P		**Pn**	**17 36 27.8**	**+1.5**
PB09	**IPOC Station P**	**1.86**	**282**	⇑*i*P		**Pn**	**17 36 27.8**	**+1.5**
PB09				*i* S		**Sn**	**17 36 54.9**	**+0.6**
PB09				IAML			17 36 56.7	
	comp=N,429nm,0.3s							
PB09	**IPOC Station P**	**1.86**	**282**	Pg		**Pn**	**17 36 27.7**	**+1.4**
PB06	**IPOC Station P**	**2.18**	**256**			**Pn**	**17 36 30.1**	**+0.5**
PB06	**IPOC Station P**	**2.18**	**256**	*e*P		**Pn**	**17 36 30.5**	**+0.9**
PB06				IAML			17 37 03.5	
	comp=Z,525nm,0.4s							
PB06	**IPOC Station P**	**2.18**	**256**	⇑*i*P		**Pn**	**17 36 30.1**	**+0.5**
PB06				*i* S		**Sn**	**17 36 59.6**	**-0.7**
PB06				IAML			17 37 03.4	
	comp=E,708nm,0.2s							
PB06	**IPOC Station P**	**2.18**	**256**	Pg		**Pn**	**17 36 30.2**	**+0.6**
PB15	**IPOC Station P**	**2.26**	**243**			**Pn**	**17 36 30.7**	**+0.1**
PB15				Sn		**Sn**	**17 37 02.1**	**+0.1**
PB15	**IPOC Station P**	**2.26**	**243**	*e*P		**Pn**	**17 36 31.1**	**+0.5**
PB15				*e*S		**Sn**	**17 37 02.4**	**+0.5**
PB15				IAML			17 37 05.5	
	comp=Z,4μm,0.3s							
PB15	**IPOC Station P**	**2.26**	**243**	⇑*i*P		**Pn**	**17 36 31.3**	**+0.7**
PB15				*i* S		**Sn**	**17 37 01.3**	**-0.7**
PB15	**IPOC Station P**	**2.26**	**243**	Pg		**Pn**	**17 36 30.9**	**+0.3**
PB15				Sg		**Sn**	**17 37 00.7**	**-1.3**
PB15				IAML			17 37 06.3	

comp=Z,8µm,0.4s
PB01 IPOC Station P 2.35 299 Pn 17 36 32.5 +1.0
PB01 IPOC Station P 2.35 299 *eP* **Pn 17 36 32.0 +0.5**
PB01 IAML 17 37 06.8
comp=Z,669nm,0.1s
PB01 IPOC Station P 2.35 299⇑ *iP* **Pn 17 36 32.5 +1.0**
PB01 *iS* **Sn 17 37 03.6 0.0**
PB01 IAML 17 37 06.5
comp=E,989nm,0.2s
PB01 IPOC Station P 2.35 299 Pg **Pn 17 36 32.8 +1.3**
PB01 Sg **Sn 17 37 03.4 -0.2**
PB01 IAML 17 37 08.6
comp=E,520nm,0.2s
PB07 IPOC Station P 2.46 280 Pn 17 36 33.4 +0.5
PB07 IPOC Station P 2.46 280 *eP* **Pn 17 36 33.4 +0.5**
PB07 IAML 17 37 10.2
comp=Z,563nm,0.2s
PB07 IPOC Station P 2.46 280⇑ *iP* **Pn 17 36 33.6 +0.8**
PB07 *iS* **Sn 17 37 04.9 -1.1**
PB07 IAML 17 37 09.9
comp=E,891nm,0.2s
PB07 IPOC Station P 2.46 280 Pg **Pn 17 36 33.8 +1.0**
AOVT TarijaAcel 2.48 75 Pg **Pn 17 36 34.0 +0.8**
PB02 IPOC Station P 2.58 289 Pn 17 36 34.7 +0.6
PB02 Sn **Sn 17 37 07.4 -1.0**
PB02 IPOC Station P 2.58 289 *eP* **Pn 17 36 35.0 +0.9**
PB02 IAML 17 37 13.0
comp=Z,1µm,0.3s
PB02 IPOC Station P 2.58 289⇑ *iP* **Pn 17 36 34.8 +0.6**
PB02 *iS* **Sn 17 37 07.9 -0.5**
PB02 IAML 17 37 11.1
comp=N,855nm,0.2s
PB02 IPOC Station P 2.58 289 Pg **Pn 17 36 35.2 +1.0**
PB02 Sg **Sn 17 37 07.2 -1.2**
PB02 IAML 17 37 11.2
comp=N,712nm,0.2s
PB04 IPOC Station P 2.66 267 Pn 17 36 35.2 +0.1
PB04 Sn **Sn 17 37 08.6 -1.5**
PB04 IPOC Station P 2.66 267 *eP* **Pn 17 36 35.8 +0.6**
PB04 *eS* **Sn 17 37 09.0 -1.1**
PB04 IAML 17 37 10.3
comp=Z,892nm,0.1s
PB04 IPOC Station P 2.66 267⇑ *iP* **Pn 17 36 35.5 +0.3**
PB04 *iS* **Sn 17 37 08.3 -1.8**
PB04 IAML 17 37 10.1
comp=E,944nm,0.2s
PB08 IPOC Station P 2.69 319 Pn 17 36 37.9 +2.1
PB08 Sn **Sn 17 37 13.2 +2.0**
PB08 IPOC Station P 2.69 319 *eP* **Pn 17 36 37.5 +1.7**
PB08 IAML 17 37 16.1
comp=Z,743nm,0.2s
PB08 IPOC Station P 2.69 319⇑ *iP* **Pn 17 36 38.0 +2.2**
PB08 *eS* **Sn 17 37 12.8 +1.7**
PB08 IAML 17 37 15.2
comp=E,1µm,0.2s
PB08 IPOC Station P 2.69 319 Pg **Pn 17 36 37.7 +2.0**
PX03 IPOC Station P 2.82 309 *eP* **Pn 17 36 37.7 +0.6**
PX03 *iS* **Sn 17 37 13.0 -0.6**
PX03 IAML 17 37 15.3
comp=N,2µm,0.4s
SLA San Lorenzo 3.00 147 *eP* **Pn 17 36 40.5 +1.4**
SLA *eS* **Sn 17 37 17.4 -0.1**
PATCX Punta Patache 3.00 297 Pn 17 36 39.5 +0.4
PATCX Punta Patache 3.00 297⇑ *iP* **Pn 17 36 39.7 +0.5**
PATCX *iS* **Sn 17 37 16.0 -1.3**
PATCX IAML 17 37 18.4
comp=E,1µm,0.4s
GO01 Chusmiza 3.08 324 Pn 17 36 42.3 +1.8
GO01 Chusmiza 3.08 324⇑ *iP* **Pn 17 36 42.5 +1.9**
GO01 *iS* **Sn 17 37 21.0 +1.2**
GO01 Chusmiza 3.08 324 Pg **Pn 17 36 42.5 +1.9**
TA01 Diego Aracena 3.15 300 Pn 17 36 40.9 0.0
TA01 Sn **Sn 17 37 18.6 -1.8**
TA01 Diego Aracena 3.15 300 *eP* **Pn 17 36 41.3 +0.5**
TA01 *eS* **Sn 17 37 19.7 -0.7**
TA01 IAML 17 37 20.3
comp=Z,483nm,0.3s
TA01 Diego Aracena 3.15 300⇑ *iP* **Pn 17 36 41.1 +0.3**
TA01 *iS* **Sn 17 37 19.1 -1.3**
TA01 IAML 17 37 20.6
comp=E,1µm,0.2s
TA02 Huaiquique 3.27 305 Pn 17 36 42.3 0.0
TA02 Huaiquique 3.27 305 *eP* **Pn 17 36 42.5 +0.1**
TA02 *eS* **Sn 17 37 22.3 -0.9**
TA02 IAML 17 37 28.0
comp=Z,997nm,0.1s
TA02 Huaiquique 3.27 305 *eP* **Pn 17 36 43.5 +1.1**
TA02 *iS* **Sn 17 37 21.0 -2.2**
PB11 IPOC Station P 3.28 317 Pn 17 36 43.3 +0.6
PB11 IPOC Station P 3.28 317 *eP* **Pn 17 36 42.8 +0.1**
PB11 IAML 17 37 29.2
comp=Z,665nm,0.3s
PB11 IPOC Station P 3.28 317⇑ *iP* **Pn 17 36 43.4 +0.7**
PB11 *iS* **Sn 17 37 22.9 -0.7**
PB11 IPOC Station P 3.28 317 Pg **Pn 17 36 43.7 +1.0**
GO02 Mina Guanaco 3.63 215 Pn 17 36 46.9 -0.2
GO02 Mina Guanaco 3.63 215 *eP* **Pn 17 36 47.7 +0.6**
GO02 *eS* **Sn 17 37 30.7 -1.0**
GO02 Mina Guanaco 3.63 215 *eP* **Pn 17 36 46.6 -0.4**
GO02 *iS* **Sn 17 37 29.8 -1.8**
GO02 Mina Guanaco 3.63 215 Pg **Pn 17 36 47.6 +0.6**
SOEO Opoqueri 3.66 351 Pg **Pn 17 36 50.6 +2.9**
PB14 IPOC Station P 3.75 229 Pn 17 36 48.7 +0.2
PB14 IPOC Station P 3.75 229⇑ *eP* **Pn 17 36 48.9 +0.3**
PB14 *eS* **Sn 17 37 31.2 -3.0**
PX02 IPOC Station P 4.22 319 *eP* **Pn 17 36 53.2 -1.2**
SOET ToroToro 4.29 19 Pg **Pn 17 36 56.9 +1.4**
PB16 IPOC Station P 4.37 331 Pn 17 36 58.5 +1.8
PB16 IPOC Station P 4.37 331 *eP* **Pn 17 36 58.6 +1.9**
PB16 IAML 17 37 53.8
comp=Z,158nm,0.5s
PB16 IPOC Station P 4.37 331⇑ *iP* **Pn 17 36 58.7 +1.9**
PB16 IPOC Station P 4.37 331 Pg **Pn 17 36 58.9 +2.2**
PB12 IPOC Station P 4.57 321 Pn **Pn 17 36 57.2 -1.5**
PB12 IPOC Station P 4.57 321 *eP* **Pn 17 36 58.2 -0.5**
PB12 IAML 17 37 56.8
comp=Z,291nm,0.6s
PB12 IPOC Station P 4.57 321 *eP* **Pn 17 36 57.9 -0.9**
PB12 *iS* **Sn 17 37 48.7 -3.9**
AC02 Maricunga 4.92 200 Pn **Pn 17 37 03.8 +0.3**
AC02 Maricunga 4.92 200 *eP* **Pn 17 37 04.2 +0.7**
AC01 Pan de Azucar 4.96 217 Pn **Pn 17 37 02.1 -1.7**
AC01 Pan de Azucar 4.96 217 *eP* **Pn 17 37 02.7 -1.1**
AC01 IAML 17 38 03.1
comp=Z,91nm,0.3s
SOEJ Jacaque 5.26 350 Pg **Pn 17 37 10.7 +2.5**
BBOE La Paz, Chanca 5.40 353 Pg **Pn 17 37 12.9 +3.0**
BBOD La Paz, Gloria 5.67 347 Pg **Pn 17 37 16.2 +2.7**
LPAZ La Paz 5.93 352 Pn **Pn 17 37 19.3 +2.3**
GO03 Copiap 6.00 206 Pn 17 37 15.4 -1.9
AC05 El Transito 7.14 202 Pn 17 37 29.3 -2.9
LCO Las Campanas 7.45 204 Pn **Pn 17 37 33.2 -3.2**
BBSD Serra de San D 8.02 53 *eP* **Pn 17 37 42.1 -1.7**
BBRB Robore, Bolivi 8.03 62 *eP* **Pn 17 37 40.8 -3.0**
VACA Villa Angela C 8.06 134 *eP* **Pn 17 37 44.6 +0.4**
CO01 Juntas del Tor 8.15 197 Pn 17 37 43.9 -1.7
SIV San Ignacio 8.52 45 P **Pn 17 37 48.9 -1.5**
comp=Z,100nm,0.4s,baz=231,slow=8.0,SNR=416
SIV S **Sn 17 39 19.4 -6.5**
comp=Z,20nm,0.3s,baz=313,slow=22,SNR=12
BBLB La Banda, Boli 8.70 68 *eP* **Pn 17 37 50.1 -2.5**
MURT Porto Murtinho 9.00 88 *eP* **Pn 17 37 54.5 -2.0**
CO03 El Pedregal 9.13 199 Pn 17 37 53.0 -5.4
CO06 Fray Jorge 9.30 204 Pn 17 37 55.6 -4.8
CO02 Combarbal 9.56 200 Pn 17 37 59.8 -4.2
CPUP Villa Florida 9.97 116 Pn **Pn 17 38 07.7 -1.5**
CPUP Villa Florida 9.97 116 P **Pn 17 38 08.7 -0.6**
comp=Z,3.6nm,0.5s,baz=290,slow=12,SNR=7.8
CPUP Villa Florida 9.97 116 *eP* **Pn 17 38 08.6 -0.6**
BDQN Bodoquena, MS 9.97 82 *eP* **Pn 17 38 07.5 -1.9**
CCRS Cacerres, MT, 10.10 63 *eP* **Pn 17 38 10.4 -0.5**
PTLB Pontes e Lacer 10.22 50 Pn **Pn 17 38 10.7 -1.9**
PTLB Pontes e Lacer 10.22 50 *eP* **Pn 17 38 11.1 -1.5**
VBST Vila Bela da S 10.28 43 *eP* **Pn 17 38 12.5 -0.8**
ANTJ Antonio Joao (10.46 91 *eP* **Pn 17 38 16.1 +0.4**
VA03 San Esteban 10.92 195 Pn 17 38 19.8 -1.8
AQDB Aquidauana 10.93 83 *eP* **Pn 17 38 22.8 +1.1**
VILB Vilhena 11.40 37 Pn **Pn 17 38 27.9 0.0**
VILB Vilhena 11.40 37 *eP* **Pn 17 38 28.4 +0.4**
PTET Porto Estrela 11.74 56 *eP* **Pn 17 38 32.0 -0.1**
AZCA Azaras, Argent 11.79 122 *eP* **Pn 17 38 33.7 +0.9**
MT13 San Alfonso 11.80 192 P **Pn 17 38 33.2 +0.2**

LMEL Las Melosas 11.89 192 P **Pn 17 38 35.2 +1.1**
RVDE Rio Verde (Bra 11.98 77 *eP* **Pn 17 38 35.4 +0.1**
MT09 Talagante 11.99 195 Pn 17 38 30.0 -5.4
BO04 La Punta 12.11 193 Pn 17 38 33.6 -3.3
ITQB Itaqui 12.14 130 *eP* **Pn 17 38 38.4 +1.3**
ETMB Extrema 12.35 5 *eP* **Pn 17 38 39.7 -0.3**
MCR1 Marechal Candi 12.38 103 *eP* **Pn 17 38 41.1 +0.8**
BO01 Tunca 12.60 195 Pn 17 38 38.9 -4.2
SALV Santo Antonio 12.62 62 *eP* **Pn 17 38 44.0 +0.5**
RPRD Ribas do Rio P 12.77 85 *eP* **Pn 17 38 46.6 +1.2**
JIR01 Jirau 12.82 11 *eP* **Pn 17 38 42.9 -3.0**
BO02 Sierra Bellavi 12.92 193 Pn 17 38 43.6 -3.5
UNIS Unistalda (Bra 12.96 124 *eP* **Pn 17 38 47.3 -0.4**
NBRS Nobres 13.44 56 *eP* **Pn 17 38 54.4 +0.6**
RODS Rosario do Sul 13.54 129 *eP* **Pn 17 38 55.7 +0.8**
SAML Samuel 13.75 17 P **Pn 17 38 55.2 -2.4**
SAML Samuel 13.75 17 *eP* **Pn 17 38 58.0 +0.3**
ML02 Panimavida 13.99 194 P **Pn 17 38 58.5 -2.0**
PTGB Pitanga 14.19 103 *eP* **P 17 39 05.4 +0.2**
ALGR Alto Alegre (B 14.45 120 *eP* **P 17 39 08.0 0.0**
PDRB Porto dos Gac 14.58 45 *eP* **Pn 17 39 06.8 -1.2**
ITAB Concordia 14.65 113 P **Pn 17 39 06.7 -2.0**
ITAB Concordia 14.65 113 *eP* **Pn 17 39 08.7 -0.1**
CPSB Cacapava Do Su 14.86 126 *eP* **P 17 39 12.4 0.0**
PCMB Pacaembu 14.88 91 *eP* **P 17 39 12.2 -0.6**
LDASE Londrina, Braz 14.96 98 *eP* **P 17 39 14.7 +1.0**
PLTB Pedras Altas 15.46 131 P **Pn 17 39 16.0 -2.7**
PLTB IAmb IAmb 17 39 21.2
comp=Z,10nm,1.1s
PLTB Pedras Altas 15.46 131 *eP* **P 17 39 20.1 +1.0**
ITRB Iturama 16.00 84 *eP* **Pn 17 39 28.7 +3.3**
TRQA Tornquist 16.45 165 P **P 17 39 26.1 -3.9**
PLCA Paso Flores 18.69 188 P **P 17 39 53.1 -1.4**
PLCA IAmb IAmb 17 39 57.0
comp=Z,7.2nm,0.8s
PLCA Paso Flores 18.69 188 P **Pn 17 39 56.4 -0.7**
comp=Z,4.3nm,0.8s,baz=9.1,slow=13,SNR=16
PLCA Paso Flores 18.69 188 *eP* **P 17 39 53.8 -0.7**
VAO Valinhos 18.78 96 *eP* **P 17 39 56.3 +0.7**
NPGB Novo Progresso 18.95 39 *eP* **P 17 39 57.5 -0.1**
BDFB Brasilia 19.35 74 P **P 17 40 02.1 +0.2**
BDFB IAmb IAmb 17 40 03.4
comp=Z,5.4nm,0.7s
BDFB Brasilia 19.35 74 P **P 17 40 02.9 +1.0**
comp=Z,5.0nm,0.6s,baz=259,slow=13,SNR=6.6
BDFB Brasilia 19.35 74 *eP* **P 17 40 02.6 +0.7**
MACA Manacapuru-AM 19.98 20 P **P 17 40 08.9 +0.4**
PMSA Palmer Station 42.62 178 P P 17 43 20.6 -7.2
PMSA IAmb IAmb 17 43 23.7
comp=Z,62nm,1.1s
QSPA South Pole Qui 68.00 180 P **P 17 46 32.5 +3.3**
comp=Z,1.6nm,0.5s,baz=176,slow=0.9,SNR=29
comp=Z,1.6nm,0.5s
TORD Torodi Ar. Bea 76.18 69 P **P 17 47 20.1 +1.7**
comp=Z,6.5nm,0.6s,baz=260,slow=4.9,SNR=41
comp=Z,6.5nm,0.6s
BOSA Boshof 81.79 117 P **P 17 47 51.0 +2.1**
comp=Z,1.7nm,0.5s,baz=248,slow=5.2,SNR=6.9
comp=Z,1.7nm,0.5s
MKAR Makanchi Array 145.28 38 PKPbc **PKiKP 17 55 09.2 -0.6**
comp=Z,0.4nm,0.7s,baz=308,slow=4.0,SNR=5.0

DJA 28 17:54:04.3±0.6, 11°S±9'×11°8E±°, h77km±45km, M3.7/8, mb3.6/5, MLv3.7/8, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**2.42**	**1**	P	Pn	17 54 43.5	+1.7
PLAI				S	Sn	17 55 10.5	+0.1
TWSI	**Taliwang, Sumb**	**2.64**	**341**	P	Pn	17 54 46.1	+1.3
TWSI				S	Sn	17 55 15.5	-0.4
SRBI	**Singaraja**	**4.01**	**322**	P	Pn	17 55 05.2	+1.8
SRBI				S	Sn	17 55 50.4	+1.1
JAGI	**Jajag, Banyuwa**	**4.49**	**308**	P	Pn	17 55 09.7	-0.2
JAGI				S	Sn	17 56 01.4	+0.6
EDFI	**Ende, Flores**	**4.63**	**58**	P	Pn	17 55 10.3	-1.6
MMRI	**Maumere**	**5.15**	**60**	P	Pn	17 55 17.9	-1.0
	13nm,0.9s,0.4nm						
GMJI	**Gumukmas**	**5.16**	**305**	P	Pn	17 55 20.0	+0.9
	5.4nm,1.2s						
GMJI				S	Sn	17 56 18.3	+0.9
	5.4nm,1.2s						
BKSI	**Bulukumba**	**6.36**	**22**	P	Pn	17 55 36.7	+1.3
	11nm,0.9s,0.0nm						
PWJI	**Pagerwojo**	**6.67**	**298**	P	Pn	17 55 40.8	+1.1
	12nm,2.8s,0.1nm						

IDC 28 17:59:41.9±1.6, 6°36S×143°10E, h0km, mb3.7/2, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=41.8km s-min=27.6km az=59.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.03**	**127**	Pn	Pn	18 00 58.8	+0.1
	2.4nm,0.5s,baz=348,slow=15,SNR=1.6						
PMG				Sn	Sn	18 01 57.4	-0.2
	1.6nm,0.3s,baz=211,slow=19,SNR=6.5						
WRA	**Warramunga Arr**	**15.96**	**211**	Pn	Pn	18 03 26.0	-2.0
	0.1nm,0.3s,baz=31,slow=13,SNR=2.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**19.34**	**206**	P	Pn	18 04 09.8	-0.3
	5.4nm,0.9s,baz=32,slow=10,SNR=47						
MKAR	**Makanchi Array**	**75.34**	**322**	P	P	18 11 26.9	-0.3
	0.5nm,1.1s,baz=112,slow=6.4,SNR=2.0						
	0.5nm,1.1s						
BVAR	**Borovoye Array**	**84.79**	**325**	P	P	18 12 18.7	+0.5
	0.5nm,0.5s,baz=72,slow=4.7,SNR=2.0						
	0.5nm,0.5s						

*IDC **28** 18:03:42.0±0.8, 6°27S×143°05E, h0km, mb4.2/12, mbtmp4.2/14, ML2.8/2, MS3.8/13, Error ellipse: s-maj=35.5km s-min=16.0km az=77.0*
*NEIC **28** 18:03:44.0±1.5, 6°39S±0°08×142°79E±0°07, h10km±1km, mb4.7/52, Error ellipse: s-maj=14.3km s-min=10.6km az=137.0*
*DJA **28** 18:03:46.9±0.3, 6°S±3'×14°3E±°, h10km, M4.8/15, mb4.4/15, mB5.2/3, MLv5.0/4, Mw(mB)4.5/3, MwMwp5.3/1, Mwp5.5/1*

ISC 28 18:03:47.2±0.5, 6°42S±0°05×142°84E±0°06, h35km, n119, σ1°34/110, mb4.5/34, MS3.7/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.17**	**230**	P	Pn	18 04 36.4	+1.7
GENI	**Genyem**	**4.64**	**325**	P	Pn	18 04 54.4	-0.5
GENI	**Genyem**	**4.64**	**325**	P	Pn	18 04 53.7	-1.2
PMG	**Port Moresby**	**5.21**	**125**		Pn	18 05 01.7	-0.9
PMG	**Port Moresby**	**5.21**	**125**	P	Pn	18 05 02.1	-0.6
PMG	**Port Moresby**	**5.21**	**125**	P	Pn	18 05 02.0	-0.6
PMG	**Port Moresby**	**5.21**	**125**	Pn	Pn	18 05 02.0	-0.6
	4.3nm,0.3s,baz=354,slow=2.2,SNR=26						
PMG				Sn	Sn	18 06 00.5	-1.0
	18nm,0.3s,baz=270,slow=19,SNR=13						
PMG				LR	LR	18 07 16.7	
	comp=Z,286nm,18.1s,baz=286,slow=42						
	52nm,0.6s						
SMPI	**Sarmi**	**6.03**	**317**	P	Pn	18 05 15.2	+1.2
	103nm,1.2s,0.6nm						
MANU	**Manus Island**	**6.27**	**46**		Pn	18 05 16.0	-1.3
COEN	**Coen**	**7.50**	**178**		Pn	18 05 33.5	-0.7
COEN	**Coen**	**7.50**	**178**	P	Pn	18 05 34.4	+0.2
RABL	**Rabaul**	**9.54**	**77**		Pn	18 06 03.0	+0.7
FAKI	**Fak Fak**	**11.11**	**288**	P	Pn	18 06 23.1	-0.7
SAUI	**Saumlaki**	**11.55**	**262**	Pn	Pn	18 06 25.4	-4.4
SAUI	**Saumlaki**	**11.55**	**262**	P	Pn	18 06 27.1	-2.7
	245nm,0.7s,3µm						
KDU	**Kakadu**	**11.97**	**238**	P	Pn	18 06 34.2	-1.2
MTN	**Manton Dam**	**13.19**	**240**		Pn	18 06 50.9	-1.2
MTN	**Manton Dam**	**13.19**	**240**	P	Pn	18 06 51.3	-0.8
DRS	**Darwin Rock St**	**13.20**	**242**	P	Pn	18 06 52.2	-0.1
CTA	**Charters Tower**	**13.98**	**167**	Pn	Pn	18 07 02.9	-0.2
	0.2nm,0.3s,baz=33,slow=7.3,SNR=1.7						
CTA				Lg	Lg	18 11 08.5	
	0.3nm,0.3s,baz=246,slow=20,SNR=1.2						
CTA				LR	LR	18 12 27.2	
	comp=Z,258nm,19.9s,baz=28,slow=37						
	8.4nm,1.1s						
QIS	**Mount Isa**	**14.40**	**192**	P	Pn	18 07 10.3	+1.6
WB0	**Warramunga Arr**	**15.60**	**211**		Pn	18 07 24.6	-0.1
WR0	**Warramunga Arr**	**15.69**	**210**		Pn	18 07 23.6	-2.1
WR0				IAmb	IAmb	18 07 32.5	
	comp=Z,28nm,0.7s						
WRAB	**Tennant Creek**	**15.76**	**211**		Pn	18 07 25.3	-1.4
WRAB				IAmb	IAmb	18 07 36.8	
	comp=Z,86nm,1.4s						
WB2	**Warramunga Arr**	**15.77**	**211**		Pn	18 07 25.3	-1.5
WRA	**Warramunga Arr**	**15.77**	**211**		Pn	18 07 25.1	-1.8
WRA	**Warramunga Arr**	**15.77**	**211**	Pn	Pn	18 07 25.2	-1.8
	comp=Z,1.5nm,0.3s,baz=30,slow=13,SNR=21						
WRA				Sn	Sn	18 10 19.4	-1.3
	comp=Z,0.7nm,0.3s,baz=25,slow=24,SNR=2.5						
WRA				Lg	Lg	18 12 06.3	
	comp=Z,1.0nm,0.3s,baz=23,slow=26,SNR=5.5						
KNRA	**Kununurra**	**16.59**	**235**	Pn	Pn	18 07 35.9	-1.3
KNRA				IAmb	IAmb	18 07 51.1	
	comp=Z,41nm,0.7s						
KNRA	**Kununurra**	**16.59**	**235**	P	Pn	18 07 36.8	-0.4
SANI	**Sanana**	**17.36**	**284**	P	Pn	18 07 47.0	+0.1
SOEI	**Soe**	**18.68**	**259**	P	P	18 08 01.2	-1.6
SOEI				IAmb	IAmb	18 08 27.8	
	comp=Z,54nm,1.0s						
SOEI	**Soe**	**18.68**	**259**	P	Pn	18 08 04.0	+0.7
AS01	**Alice Springs**	**19.16**	**206**	P	Pn	18 08 09.9	+1.0
AS31	**Alice Springs**	**19.18**	**206**		Pn	18 08 10.7	+1.6
AS31				IAmb	IAmb	18 08 13.2	
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**19.18**	**206**	P	Pn	18 08 10.1	+1.0
	comp=Z,58nm,0.6s,baz=32,slow=10,SNR=198						
ASAR				S	Sn	18 11 37.1	-6.1
	comp=Z,4.7nm,0.9s,baz=16,slow=28,SNR=4.8						
ASAR				Lg	Lg	18 13 52.9	
	comp=Z,0.3nm,0.3s,baz=19,slow=28,SNR=2.4						
ASAR				LR	LR	18 16 11.7	
	comp=Z,807nm,21.0s,baz=34,slow=39						
FITZ	**Fitzroy Crossi**	**20.40**	**234**	Pn	P	18 08 22.3	+1.0
FITZ	**Fitzroy Crossi**	**20.40**	**234**	P	Pn	18 08 23.0	-0.6
EIDS	**Eidsvold**	**20.43**	**158**	P	Pn	18 08 23.4	-0.4
EIDS				IAmb	IAmb	18 08 29.6	
	comp=Z,40nm,1.2s						
GTOI	**Gorontalo**	**21.00**	**289**	P	Pn	18 08 33.4	+2.8
	comp=Z,25nm,0.7s,comp=Z,262nm						
EDFI	**Ende, Flores**	**21.09**	**262**	P	P	18 08 30.7	+1.7
	comp=Z,14nm,1.2s						
INKA	**Innaminka**	**21.30**	**185**	P	P	18 08 32.5	+1.6
DAV	**Davao City (W)**	**21.82**	**308**	LR	LR	18 17 24.6	
	comp=Z,60nm,20.0s,baz=298,slow=38						
MRSI	**Marisa**	**21.96**	**287**	P	P	18 08 41.7	+3.6
	comp=Z,19nm,1.1s						
OOD	**Oodnadatta**	**22.32**	**197**	P	P	18 08 44.0	+2.1
KAPI	**Kappang**	**23.02**	**272**	P	P	18 08 49.3	-0.1
WRKA	**Warakurna**	**23.16**	**215**	P	P	18 08 52.2	+1.3
TOLI2	**Tolitoli**	**23.26**	**288**	P	P	18 08 51.8	0.0
TOLI2	**Tolitoli**	**23.26**	**288**	P	P	18 08 52.5	+0.7
MPSI	**Mapaga**	**23.86**	**286**	P	P	18 09 00.2	+2.6
	comp=Z,9.0nm,1.1s						
LCRK	**Leigh Creek**	**24.29**	**190**	P	P	18 09 02.9	+1.5
PLAI	**Plampang**	**24.95**	**263**	P	P	18 09 08.3	+0.6
KOUNC	**Koumac, New Ca**	**25.09**	**126**	P	P	18 09 10.4	+1.6
KOUNC				IAmb	IAmb	18 09 18.2	
	comp=Z,19nm,1.3s						
MULG	**Mulgathing**	**25.13**	**198**	P	P	18 09 10.5	+1.4
STKA	**Stephens Creek**	**25.35**	**182**	P	P	18 09 11.7	+0.6
STKA	**Stephens Creek**	**25.35**	**182**	P	P	18 09 12.7	+1.6
STKA	**Stephens Creek**	**25.35**	**182**	P	P	18 09 11.8	+0.7
	comp=Z,5.2nm,0.7s,baz=3.6,slow=9.4,SNR=8.1						
STKA				LR	LR	18 20 31.4	
	comp=Z,216nm,21.4s,baz=360,slow=40						
	comp=Z,5.2nm,0.7s						
BBOO	**Buckleboo**	**27.00**	**193**	P	P	18 09 27.9	+1.9
HTT	**Hallett**	**27.12**	**187**	P	P	18 09 29.2	+2.1
NWAO	**Narrogin (SRO)**	**35.53**	**219**	LR	LR	18 26 05.6	
	comp=Z,414nm,19.6s,baz=72,slow=38						
RPSI	**Rantau Prapat**	**44.77**	**280**	P	P	18 11 58.0	+0.1
RPSI				IAmb	IAmb	18 12 05.1	
	comp=Z,8.6nm,1.1s						
KSRS	**Korea Array**	**45.82**	**343**	P	P	18 12 04.8	-0.9
	comp=Z,2.0nm,0.9s,baz=162,slow=8.3,SNR=4.2						
	comp=Z,2.0nm,0.9s						
CRAI	**Chiangrai**	**49.44**	**303**	P	P	18 12 33.7	-0.5
CMAR	**Chiang Mai Arr**	**49.85**	**301**	P	P	18 12 35.5	-1.9
CMAR	**Chiang Mai Arr**	**49.85**	**301**	P	P	18 12 38.4	+1.0
	comp=Z,0.6nm,0.6s,baz=116,slow=6.0,SNR=5.1						
	comp=Z,0.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.33**	**350**	P	P	18 12 46.9	-1.2
	comp=Z,2.8nm,1.0s,baz=172,slow=12,SNR=2.7						
	comp=Z,2.8nm,1.0s						
KLR	**Kul'dur**	**56.26**	**351**	LR	LR	18 33 27.8	
	comp=Z,31nm,21.4s,baz=78,slow=32						
LSA	**Lhasa**	**61.23**	**309**	P	P	18 13 58.4	-1.3
LSA				IAmb	IAmb	18 14 22.3	
	comp=Z,5.9nm,1.4s						
SONM	**Songino Array**	**62.84**	**333**	P	P	18 14 09.9	+0.2
SONM	**Songino Array**	**62.84**	**333**	P	P	18 14 09.9	+0.2
	comp=Z,0.4nm,0.5s,baz=164,slow=6.4,SNR=3.6						
	comp=Z,0.4nm,0.5s						
PALK	**Pallekele**	**63.46**	**281**	LR	LR	18 45 08.6	
	comp=Z,32nm,19.3s,baz=244,slow=39						
YAK	**Yakutsk**	**69.01**	**353**	LR	LR	18 43 07.5	
	comp=Z,39nm,18.9s,baz=270,slow=34						
VNDA	**Vanda**	**71.77**	**176**	LR	LR	18 45 31.5	
	comp=Z,85nm,19.1s,baz=172,slow=35						
MK31	**Makanchi Array**	**75.23**	**322**	P	P	18 15 26.1	-0.4
MKAR	**Makanchi Array**	**75.23**	**322**	P	P	18 15 26.7	+0.2
MKAR	**Makanchi Array**	**75.23**	**322**	P	P	18 15 26.9	+0.5
	comp=Z,1.1nm,0.7s,baz=100,slow=8.8,SNR=15						
	comp=Z,1.1nm,0.7s						
MAKZ	**Makanchi**	**75.43**	**322**	P	P	18 15 27.6	0.0
MAKZ				IAmb	IAmb	18 15 34.0	
	comp=Z,7.2nm,1.2s						
PRZ	**Przheval'sk**	**75.97**	**317**	P	P	18 15 31.3	+0.3
PRZ				IAmb	IAmb	18 15 46.4	
	comp=Z,8.6nm,1.1s						
KSH	**Kashi**	**76.61**	**313**	P	P	18 15 41.0	+6.4
KSH				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NIL	**Nilore**	**76.83**	**307**	P	P	18 15 35.7	-0.2
NIL				IAmb	IAmb	18 15 52.5	
	comp=Z,9.3nm,1.1s						
ZAA0	**Zalesovo Array**	**77.20**	**329**	P	P	18 15 36.6	-0.9
ZALV	**Zalesovo Beam**	**77.20**	**329**	P	P	18 15 36.4	-1.1
ZALV	**Zalesovo Beam**	**77.20**	**329**	P	P	18 15 36.8	-0.7
	comp=Z,0.7nm,0.5s,baz=106,slow=6.4,SNR=5.1						
	comp=Z,0.7nm,0.5s						
NRN	**Naryn**	**77.25**	**315**	P	P	18 15 37.5	-1.0
AAK	**Ala-Archa**	**78.72**	**316**	P	P	18 15 46.0	-0.4
KURK	**Kurchatov**	**79.11**	**324**	P	P	18 15 48.3	+0.2
KURK				IAmb	IAmb	18 15 54.0	
	comp=Z,9.7nm,1.1s				

comp=Z,4.8nm,0.7s,baz=111,slow=8.1,SNR=17
comp=Z,4.8nm,0.7s

BRVK	**Borovoye**	**84.77**	**325**	P	**P**	**18 16 17.3**	**-0.5**
E19K	**Redstone River**	**84.86**	**20**	P	**P**	**18 16 17.5**	**-0.5**
E19K				IAmb	IAmb	18 16 27.3	

comp=Z,4.5nm,0.8s

C19K	**Lookout Ridge**	**84.98**	**18**	P	**P**	**18 16 18.3**	**-0.3**
IMAR	**Indian Mountai**	**85.37**	**22**	P	**P**	**18 16 20.7**	**+0.1**
D22K	**Ayikyak River**	**87.04**	**19**	P	**P**	**18 16 29.6**	**+0.9**
D22K				IAmb	IAmb	18 17 01.2	

comp=Z,4.6nm,1.1s

IL31		**87.51**	**24**	P	**P**	**18 16 31.2**	**+0.1**
IL31				IAmb	IAmb	18 16 38.6	

comp=Z,5.7nm,1.1s

ILAR	**Eielson Array**	**87.51**	**24**	P	**P**	**18 16 30.0**	**-1.1**
ILAR	**Eielson Array**	**87.51**	**24**	P	**P**	**18 16 29.8**	**-1.4**

comp=Z,0.9nm,0.6s,baz=259,slow=3.7,SNR=14
comp=Z,0.9nm,0.6s

J25K	**Salcha River,**	**88.07**	**24**	P	**P**	**18 16 35.2**	**+1.3**
J25K				IAmb	IAmb	18 16 45.0	

comp=Z,4.4nm,0.9s

C23K	**Itkillik River**	**88.11**	**19**	P	**P**	**18 16 33.5**	**-0.4**
F24K	**Squaw Lake**	**88.13**	**21**	P	**P**	**18 16 34.7**	**+0.6**
D24K	**Happy Valley**	**88.42**	**19**	P	**P**	**18 16 36.8**	**+1.5**
BCAR	**Beaver Creek A**	**89.12**	**26**	P	**P**	**18 16 39.2**	**+0.4**
INK	**Inuvik**	**93.56**	**22**	LR	LR	18 52 35.9	

comp=Z,34nm,21.6s,baz=168,slow=31

YBH	**Yreka Blue Hor**	**97.55**	**49**	LR	LR	18 54 47.8		

comp=Z,86nm,19.8s,baz=288,slow=32

TORD	**Torodi Ar. Bea**	**141.17**	**283**	PKhKP	PKPpre	18 23 09.2		

comp=Z,0.1nm,0.3s,baz=115,slow=37,SNR=2.3

TORD				PKP	**PKPdf**	**18 23 16.0**	**+0.9**	

comp=Z,0.2nm,0.5s,baz=77,slow=2.8,SNR=2.5

DBIC	**Dimbokro**	**147.91**	**272**	PKPbc	**PKiKP**	**18 23 31.1**	**-0.7**

comp=Z,2.5nm,0.5s,baz=86,slow=3.0,SNR=4.3

*IDC **28** 18:16:37.3±2.1, 5.57S×142.48E, h0km, mb3.5/1, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=51.2km s-min=34.6km az=113.0,* **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.01**	**130**	Pn	Pn	18 18 07.4	-0.1

2.1nm,0.3s,baz=258,slow=13,SNR=6.9

PMG			Sn	Sn	18 19 08.8	-8.3	

2.0nm,0.3s,baz=150,slow=11,SNR=6.4

WRA	**Warramunga Arr**	**16.33**	**208**	Pn	Pn	18 20 26.1	-2.1

0.3nm,0.3s,baz=29,slow=14,SNR=11
0.6nm,0.5s

ASAR	**Alice Springs**	**19.80**	**204**	P	Pn	18 21 10.3	-0.6

0.4nm,0.3s,baz=34,slow=9.0,SNR=33
0.9nm,0.4s

ILAR	**Eielson Array**	**86.89**	**24**	P	P	18 29 23.7	0.0

0.3nm,0.9s,baz=236,slow=6.4,SNR=1.8
0.3nm,0.9s

*NEIC **28** 18:27:58.2±1.7, 37.44N±0.02×115.09W±0.03, h6km±6km, Error ellipse: s-maj=4.3km s-min=1.6km az=119.0*

REN 28 18:27:58.4±1.9, 37.45N±0.02×115.09W±0.02, h4km±5km, ML2.5/24, mL2.3/82(NEIC), Error ellipse: s-maj=3.1km s-min=2.0km az=120.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRN	**Pahrange**	**0.05**	**140**		Pg	18 28 00.9	+1.2
S11A	**Rachel**	**0.56**	**291**		Pg	18 28 09.3	+0.3
S11A					Sg	18 28 16.9	+0.7
S11A	**Rachel**	**0.56**	**291**	IAML		18 28 17.8	

comp=N,155nm,0.6s

S11A				IAML		18 28 22.9	

comp=E,153nm,0.2s

CPY	**CP-1**	**0.93**	**236**		Pg	18 28 15.9	-0.2
SHPR	**Sheep Range**	**0.94**	**183**		Sb	18 28 30.8	+0.5
R11B	**Troy Canyon, C**	**0.98**	**337**	Pg	Pg	18 28 17.1	-0.1
R11B				IAML		18 28 33.0	

comp=E,123nm,0.5s

R11B				IAML		18 28 33.9	

comp=N,96nm,0.4s

ICU	**Indian Springs**	**0.98**	**107**		Pg	18 28 16.6	-0.5
MCY	**Mercury**	**1.05**	**222**		Pb	18 28 19.3	+0.1
NSP	**Numbskull Pass**	**1.15**	**232**		Pg	18 28 20.1	-0.3
WTNK	**Soaring Height**	**1.26**	**177**	Pg	Pg	18 28 21.4	-1.0
AMDNV	**Amargosa**	**1.38**	**224**		Pn	18 28 23.8	-0.6
CCUT	**Cedar City**	**1.38**	**85**		Pn	18 28 23.8	-0.9
WCT	**Wildcat Mounta**	**1.39**	**242**		Pn	18 28 23.1	-1.6
WCT				IAML		18 28 47.9	

comp=E,38nm,0.4s

PSUT	**Pine Spring**	**1.46**	**42**	Pn	Pn	18 28 25.1	-0.7
PSUT				IAML		18 28 56.8	

comp=E,30nm,0.7s

LCMT	**Little Creek M**	**1.54**	**106**		Pn	18 28 26.8	0.0
LCMT	**Little Creek M**	**1.54**	**106**	IAML		18 28 48.5	

comp=E,33nm,0.5s

LCMT				IAML		18 28 49.1	

comp=N,31nm,0.4s

Q12A	**Willow Creek R**	**1.60**	**7**		Pb	18 28 28.9	+0.2
Q12A	**Willow Creek R**	**1.60**	**7**	IAML		18 28 51.2	

comp=E,55nm,0.5s

SZCU	**Shurtz Canyon**	**1.60**	**84**		Pg	18 28 29.2	+0.2
SZCU	**Shurtz Canyon**	**1.60**	**84**	IAML		18 28 55.9	

comp=E,47nm,0.3s

SZCU				IAML		18 28 56.6	

comp=N,40nm,0.3s

SGV	**South Grapevin**	**1.62**	**254**		Pn	18 28 27.2	-0.7
FURC	**Furnace Creek,**	**1.72**	**236**		Pb	18 28 30.5	-0.1
V12A	**Nelson**	**1.73**	**173**		Pn	18 28 28.1	-1.2
V12A				IAML		18 28 53.6	

comp=E,25nm,0.9s

V12A				IAML		18 28 54.5	

comp=N,31nm,0.8s

GMN	**Gold Mountain**	**1.73**	**266**		Pb	18 28 30.4	-0.5
GMN	**Gold Mountain**	**1.73**	**266**	IAML		18 28 56.3	

comp=E,38nm,0.3s

GMN				IAML		18 28 58.0	

comp=N,43nm,0.5s

GWY	**Greenwater Val**	**1.79**	**226**		Pb	18 28 31.0	-0.8
GWY	**Greenwater Val**	**1.79**	**226**	IAML		18 29 03.3	

comp=E,30nm,1.1s

GWY				IAML		18 29 05.1	

comp=N,35nm,3.7s

TPH	**Tonopah**	**1.80**	**291**		Pn	18 28 29.3	-1.1
SHOC	**Shoshone, Teco**	**1.81**	**212**		Pg	18 28 33.4	+0.3
MZP	**Montezuma Peak**	**1.84**	**279**		Pn	18 28 29.9	-1.1
MZP	**Montezuma Peak**	**1.84**	**279**	IAML		18 28 58.1	

comp=N,26nm,0.7s

KNB	**Kanab**	**1.86**	**103**		Pb	18 28 32.5	-0.7
GRAC	**Grapevine Rang**	**1.87**	**257**		Pn	18 28 30.8	-0.5
LCH	**Last Change Ra**	**2.04**	**265**		Pn	18 28 34.0	+0.2
LCH	**Last Change Ra**	**2.04**	**265**	IAML		18 29 07.2	

comp=N,33nm,0.6s

QSM	**Queen of Sheba**	**2.06**	**224**		Pb	18 28 36.1	-0.2
QSM				IAML		18 29 06.7	

comp=E,17nm,3.8s

QSM				IAML		18 29 10.2	

comp=N,22nm,3.7s

TUQ	**Turquoise Moun**	**2.12**	**199**		Pb	18 28 37.3	-0.1
PKCU	**Pink Cliffs**	**2.21**	**89**		Pb	18 28 38.4	-0.8
PKCU				IAML		18 29 11.9	

comp=N,29nm,0.4s

DSP	**Deep Springs**	**2.29**	**269**		Pn	18 28 36.6	-0.3
DSP	**Deep Springs**	**2.29**	**269**	IAML		18 29 13.2	

comp=E,17nm,0.5s

MTPU	**Mount Pierson**	**2.38**	**75**		Pn	18 28 37.3	-1.2
MTPU				IAML		18 29 14.0	

comp=E,20nm,4.9s

MTPU				IAML		18 29 15.7	

comp=N,21nm,0.4s

TCRU	**Three Creeks R**	**2.39**	**60**		Pn	18 28 39.4	+0.8
TCRU				IAML		18 29 17.4	

comp=E,18nm,0.3s

TCRU				IAML		18 29 20.3	

comp=N,14nm,0.7s

U15A	**North Rim**	**2.47**	**114**		Pb	18 28 42.7	-0.7
U15A				IAML		18 29 16.0	

comp=E,18nm,0.9s

MVU	**Marysvale**	**2.51**	**64**		Pn	18 28 39.0	-1.3
MSU	**Marysvale**	**2.54**	**64**		Pn	18 28 38.5	-2.2
W13A	**Hualapai Mount**	**2.54**	**157**		Pn	18 28 40.0	-0.6
W13A				IAML		18 29 18.1	

comp=E,9.9nm,0.6s

NV11	**Mina Array Sit**	**2.61**	**293**		Pn	18 28 39.8	-1.7
NVAR	**Mina Array Bea**	**2.72**	**292**		Pn	18 28 41.8	-1.4
NV08	**Mina Array Sit**	**2.72**	**291**		Pn	18 28 42.6	-0.5
NV09	**Mina Array Sit**	**2.75**	**292**		Pn	18 28 43.0	-0.4
LHV	**Little Huntoon**	**2.81**	**288**	Pn	Pn	18 28 43.2	-1.0
LHV				IAML		18 29 08.5	

comp=N,15nm,4.9s

LHV				IAML		18 29 34.5	

comp=E,16nm,1.8s

KVN	**Kaiserville**	**2.86**	**305**		Pn	18 28 44.8	-0.2
KVN	**Kaiserville**	**2.86**	**305**	IAML		18 29 36.1	

comp=E,7.2nm,0.7s

RYN	**Ryan**	**2.95**	**295**		Pn	18 28 46.1	-0.2
RYN	**Ryan**	**2.95**	**295**	IAML		18 29 38.2	

comp=E,13nm,0.6s

RYN				IAML		18 29 42.3	

comp=N,10nm,0.5s

DUG	**Dugway, Tooele**	**3.27**	**32**		Pn	18 28 49.2	-1.4
DUG				IAML		18 29 45.0	

comp=N,10nm,3.6s

ELK	**Elko**	**3.29**	**358**		Pn	18 28 49.6	-1.4
BMN	**Battle Mountai**	**3.41**	**332**	Pn	Pn	18 28 51.5	-1.1
BMN				IAML		18 29 48.6	

comp=E,8.6nm,1.1s

BMN				IAML		18 29 50.9	

comp=N,7.6nm,0.6s

HMU	**Henry Mountain**	**3.49**	**81**	Pg	Pb	18 29 02.3	+1.5
WUAZ	**Wupatki**	**3.56**	**122**	Pg	Pb	18 29 01.6	-0.5
PNTR	**Pine Nut**	**3.91**	**296**	Pn	Pn	18 28 59.4	0.0

*IDC **28** 18:31:00.0±1.1, 6.02S×142.84E, h0km, mb3.6/5, mbtmp3.6/7, ML1.5/1, Error ellipse: s-maj=41.0km s-min=25.2km az=59.0*

ISC 28 18:31:04.8±0.9, 6.2S±0.1×142.7E±0.1, h35km, n8, σ1s03/9, mb3.7/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.47**	**126**	Pn	**Pn**	**18 32 24.0**	**+0.1**

1.1nm,0.3s,baz=180,slow=7.4,SNR=4.1

PMG				Sn	**Sn**	**18 33 26.0**	**+0.3**

2.0nm,0.3s,baz=253,slow=23,SNR=6.5
6.1nm,0.5s

WRA	**Warramunga Arr**	**15.86**	**210**	Pn	**Pn**	**18 34 44.4**	**-1.2**

0.2nm,0.3s,baz=27,slow=13,SNR=2.8

WRA				Lg	Lg	18 39 30.2	

baz=34,slow=26

ASAR	**Alice Springs**	**19.29**	**205**	P	**Pn**	**18 35 28.9**	**+0.8**

2.1nm,0.9s,baz=32,slow=11,SNR=18

SONM	**Songino Array**	**62.57**	**333**	P	**P**	**18 41 26.0**	**+0.6**

0.3nm,0.5s,baz=133,slow=6.6,SNR=1.8
0.3nm,0.5s

MKAR	**Makanchi Array**	**74.95**	**322**	P	**P**	**18 42 43.1**	**+0.6**

0.3nm,0.6s,baz=103,slow=6.5,SNR=2.9
0.3nm,0.6s

KURBB	**Kurchatov Arra**	**78.84**	**324**	P	**P**	**18 43 05.4**	**+1.2**

0.1nm,0.3s,baz=95,slow=5.7,SNR=2.3
0.1nm,0.3s

BVAR	**Borovoye Array**	**84.42**	**325**	P	**P**	**18 43 33.8**	**+0.1**

1.1nm,0.8s,baz=102,slow=3.5,SNR=4.4
1.1nm,0.8s

ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**18 43 46.8**	**-1.4**

0.4nm,0.7s,baz=265,slow=4.7,SNR=6.3
0.4nm,0.7s

*IDC **28** 18:32:30.8±1.6, 37.64N×73.07E, h0km, mb3.4/4, mbtmp3.4/8, ML3.1/4, MS2.6/1, Error ellipse: s-maj=26.5km s-min=25.3km az=87.0*

ISC 28 18:32:35.1±1.1, 37.5N±0.1×72.99E±0.08, h35km, n11, σ1s33/12, mb3.1/4, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.30**	**12**	Pn	**Pn**	**18 33 53.2**	**+1.2**

0.7nm,0.3s,baz=158,slow=7.5,SNR=11

AAK				Sn	**Sn**	**18 34 53.4**	**+1.6**

0.4nm,0.3s,baz=150,slow=12,SNR=1.3
1.6nm,0.5s

MKAR	**Makanchi Array**	**11.60**	**34**	Pn	**Pn**	**18 35 17.5**	**-0.6**

baz=213,slow=13,SNR=4.4
0.2nm,0.6s

GEYT	**Alibeck**	**11.79**	**277**	Pn	**Pn**	**18 35 22.2**	**+1.4**

0.4nm,0.3s,baz=103,slow=12,SNR=7.5

GEYT				Sn	**Sn**	**18 37 29.9**	**-1.3**

0.2nm,0.3s,baz=98,slow=26,SNR=2.6

GEYT				LR	LR	18 41 36.6	

comp=Z,25nm,18.3s,baz=344,slow=46
2.0nm,0.5s

KURBB	**Kurchatov Arra**	**13.74**	**15**	Lg	Lg	18 39 41.5	

baz=201,slow=30

BVAR	**Borovoye Array**	**15.67**	**354**	Pn	**Pn**	**18 36 13.1**	**0.0**

baz=161,slow=9.2,SNR=3.7

AKTO	**Aktyubinsk**	**16.82**	**325**	Pn	**P**	**18 36 29.1**	**-0.6**

0.2nm,0.3s,baz=118,slow=11,SNR=4.5

ZALV	**Zalesovo Beam**	**18.40**	**23**	P	**P**	**18 36 44.6**	**-2.4**

0.3nm,0.3s,baz=216,slow=11,SNR=8.5
1.2nm,0.5s

SONM	**Songino Array**	**26.48**	**56**	P	**P**	**18 38 09.3**	**+0.2**

0.1nm,0.5s,baz=258,slow=6.9,SNR=1.4
0.1nm,0.5s

CMAR	**Chiang Mai Arr**	**29.57**	**123**	P	**P**	**18 38 37.7**	**+0.9**

0.1nm,0.4s,baz=304,slow=9.8,SNR=1.3
0.1nm,0.4s

FINES	**FINESS Array B**	**37.60**	**325**	P	**P**	**18 39 46.0**	**0.0**

1.0nm,0.6s,baz=142,slow=9.6,SNR=7.3
1.0nm,0.6s

YKA	**Yellowknife Ar**	**80.20**	**4**	P	**P**	**18 44 40.5**	**-1.0**

0.2nm,0.6s,baz=349,slow=5.3,SNR=4.6
0.2nm,0.6s

*IDC **28** 18:33:58.2±1.1, 5.75S×142.76E, h0km, mb3.7/4, mbtmp3.7/7, ML3.8/2, Error ellipse: s-maj=37.4km s-min=24.5km az=73.0*

ISC 28 18:34:03.6±0.9, 5.8S±0.1×142.7E±0.1, h35km, n7, σ0s64/8, mb3.7/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.66**	**129**	Pn	**Pn**	**18 35 24.9**	**-0.4**

4.8nm,0.6s,baz=313,slow=14,SNR=1.8

PMG				Sn	**Sn**	**18 36 29.7**	**+0.5**

2.7nm,0.3s,baz=342,slow=20,SNR=5.9

WRA	**Warramunga Arr**	**16.23**	**209**	Pn	**Pn**	**18 37 48.5**	**-0.6**

0.4nm,0.3s,baz=29,slow=12,SNR=4.8

WRA				Lg	Lg	18 42 32.9	

baz=28,slow=29
0.9nm,0.4s

ASAR	**Alice Springs**	**19.67**	**205**	P	**P**	**18 38 30.0**	**+0.2**

0.3nm,0.3s,baz=32,slow=10,SNR=14

ASAR				Lg	Lg	18 44 23.5	

baz=18,slow=31
3.0nm,0.7s

MKAR	**Makanchi Array**	**74.68**	**322**	P	**P**	**18 45 39.6**	**-0.1**

0.1nm,0.5s,baz=101,slow=7.8,SNR=1.6
0.1nm,0.5s

BVAR	**Borovoye Array**	**84.14**	**325**	P	**P**	**18 46 31.8**	**+0.8**

0.4nm,0.5s,baz=112,slow=6.4,SNR=3.5
0.4nm,0.5s

QSPA	**South Pole Qui**	**84.14**	**180**	P	**P**	**18 46 31.3**	**+0.3**

3.0nm,1.1s,baz=0.0,slow=0.0,SNR=7.3
3.0nm,1.1s

ILAR	**Eielson Array**	**87.02**	**24**	P	**P**	**18 46 44.4**	**-0.7**

0.3nm,0.8s,baz=257,slow=4.8,SNR=4.5
0.3nm,0.8s

*IDC **28** 18:36:50.7±0.9, 5.89S×142.77E, h0km, mb3.8/8, mbtmp3.9/10, ML2.4/1, MS2.6/1, Error ellipse: s-maj=26.0km s-min=13.2km az=97.0*

*NEIC **28** 18:36:50.8±2.0, 5.9S±0.2×142.52E±0.06, h10km±2km, mb4.1/11, Error ellipse: s-maj=28.4km s-min=7.9km az=14.0*

ISC 28 18:36:51.8±0.7, 5.94S±0.08×142.57E±0.08, h10km, n35, σ1s74/34, mb3.8/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.71**	**127**		**Pn**	**18 38 16.7**	**+0.1**
PMG	**Port Moresby**	**5.71**	**127**	P	**Pn**	**18 38 17.2**	**+0.6**
PMG	**Port Moresby**	**5.71**	**127**	P	**Pn**	**18 38 17.1**	**+0.5**
PMG	**Port Moresby**	**5.71**	**127**	Pn	**Pn**	**18 38 15.9**	**-0.7**

7.0nm,0.3s,baz=36,slow=2.4,SNR=16

PMG				Sn	**Sn**	**18 39 20.3**	**-2.0**

4.0nm,0.3s,baz=330,slow=23,SNR=7.4

PMG				LR	LR	18 40 54.1	

comp=Z,57nm,18.7s,baz=238,slow=44
23nm,0.3s

BULU	**Kimbe**	**7.72**	**87**	P	Pn	18 38 34.0	-10
FAKI	**Fak Fak**	**10.71**	**286**	Pn	**Pn**	**18 39 22.0**	**-3.4**
SAUI	**Saumlaki**	**11.37**	**259**	Pn	**Pn**	**18 39 32.6**	**-1.7**
DRS	**Darwin Rock St**	**13.20**	**240**	P	**Pn**	**18 40 01.1**	**+1.8**
MTN	**Manton Dam**	**13.20**	**238**	Pn	**Pn**	**18 39 58.4**	**-1.0**
CTA	**Charters Tower**	**14.51**	**166**	Lg	Lg	18 44 33.2	

0.3nm,0.3s,baz=66,slow=16,SNR=1.4

WB0	**Warramunga Arr**	**15.88**	**209**	Pn	**Pn**	**18 40 32.5**	**-3.0**
WB0				IAmb	IAmb	18 40 46.1	

comp=Z,15nm,1.0s

WR0	**Warramunga Arr**	**15.97**	**209**	Pn	**Pn**	**18 40 34.1**	**-2.6**
WR0				IAmb	IAmb	18 40 47.6	

comp=Z,13nm,0.7s

WRAB	**Tennant Creek**	**16.04**	**209**	Pn	**Pn**	**18 40 36.5**	**-1.0**
WRAB				IAmb	IAmb	18 40 50.1	

comp=Z,21nm,1.3s

WB2	**Warramunga Arr**	**16.05**	**209**	Pn	**Pn**	**18 40 36.9**	**-0.8**
WB2				IAmb	IAmb	18 40 49.3	

comp=Z,14nm,0.9s

WRA	**Warramunga Arr**	**16.05**	**209**	Pn	**Pn**	**18 40 36.5**	**-1.2**
WRA	**Warramunga Arr**	**16.05**	**209**	Pn	**Pn**	**18 40 35.5**	**-2.3**

comp=Z,1.0nm,0.3s,baz=28,slow=14,SNR=9.1

WRA				Lg	Lg	18 45 22.4	

comp=Z,0.3nm,0.3s,baz=21,slow=30,SNR=4.9

KNRA	**Kununurra**	**16.64**	**233**	Pn	**Pn**	**18 40 43.0**	**-2.3**
KNRA				IAmb	IAmb	18 40 55.7	

comp=Z,23nm,0.9s

KNRA	**Kununurra**	**16.64**	**233**	P	**Pn**	**18 40 45.3**	**0.0**
SOEI	**Soe**	**18.52**	**257**	P	**P**	**18 41 07.0**	**-1.6**
AS01	**Alice Springs**	**19.48**	**204**	P	**Pn**	**18 41 20.9**	**+0.7**
AS31	**Alice Springs**	**19.49**	**204**		**Pn**	**18 41 19.9**	**-0.5**
AS31				IAmb	IAmb	18 41 23.2	

comp=Z,4.9nm,0.8s

ASAR	**Alice Springs**	**19.50**	**204**		**P**	**18 41 19.6**	**+0.4**
ASAR	**Alice Springs**	**19.50**	**204**	P	**Pn**	**18 41 21.1**	**+0.7**

comp=Z,13nm,0.7s,baz=32,slow=10.0,SNR=43

ASAR				S	**S**	**18 45 03.9**	**+4.3**

comp=Z,4.7nm,0.9s,baz=20,slow=28,SNR=4.9

ASAR				Lg	Lg	18 47 13.9	

comp=Z,0.1nm,0.3s,baz=23,slow=33,SNR=4.3

MMRI	**Maumere**	**20.34**	**261**	P	Pn	18 41 29.9	-0.6
FITZ	**Fitzroy Crossi**	**20.47**	**232**	P	**P**	**18 41 28.6**	**-1.2**
EIDS	**Eidsvold**	**20.97**	**158**	P	**P**	**18 41 33.6**	**-1.5**
EIDS				IAmb	IAmb	18 42 03.6	

comp=Z,12nm,1.4s

OOD	**Oodnadatta**	**22.69**	**196**	P	**P**	**18 41 55.0**	**+1.3**
STKA	**Stephens Creek**	**25.82**	**182**	P	**P**	**18 42 25.2**	**+1.9**

comp=Z,3.0nm,0.9s,baz=150,slow=8.1,SNR=2.8
comp=Z,3.0nm,0.9s

CMAR	**Chiang Mai Arr**	**49.38**	**300**	P	**P**	**18 45 42.6**	**+0.6**

comp=Z,0.5nm,0.7s,baz=119,slow=6.7,SNR=2.4
comp=Z,0.5nm,0.7s

SONM	**Songino Array**	**62.29**	**333**	P	**P**	**18 47 16.5**	**+2.3**

comp=Z,0.1nm,0.4s,baz=144,slow=5.2,SNR=1.7
comp=Z,0.1nm,0.4s

MKAR	**Makanchi Array**	**74.68**	**322**	P	**P**	**18 48 33.1**	**+1.4**

comp=Z,0.4nm,0.8s,baz=108,slow=6.9,SNR=4.0
comp=Z,0.4nm,0.8s

ZALV	**Zalesovo Beam**	**76.66**	**329**	P	**P**	**18 48 43.5**	**+0.7**

comp=Z,0.3nm,0.3s,baz=90,slow=1.4,SNR=1.8
comp=Z,0.3nm,0.3s

QSPA	**South Pole Qui**	**84.03**	**180**	P	**P**	**18 49 22.6**	**+0.2**

comp=Z,2.1nm,0.6s,baz=292,slow=1.1,SNR=15
comp=Z,2.1nm,0.6s

BVAR	**Borovoye Array**	**84.15**	**325**	P	**P**	**18 49 24.2**	**+1.1**

comp=Z,1.3nm,0.7s,baz=115,slow=7.0,SNR=6.4
comp=

comp=Z,9.1nm,0.7s,baz=282,slow=20,SNR=2.3
PMG S **S** **18 51 44.0 +1.5**
comp=Z,3.4nm,0.5s,baz=209,slow=17,SNR=1.6
MBWA Marble Bar 17.71 212 P **P** **18 48 32.8 +0.9**
MBWA Marble Bar 17.71 212 P **P** **18 48 33.2 +1.3**
AS31 Alice Springs 17.79 167 P **Pn** **18 48 34.6 -0.2**
ASAR Alice Springs 17.79 167 P **Pn** **18 48 34.3 -0.5**
ASAR Alice Springs 17.79 167 P **Pn** **18 48 34.9 +0.1**
comp=Z,127nm,0.5s,baz=349,slow=11,SNR=49
ASAR S **S** **18 51 44.1 -2.9**
comp=Z,8.4nm,0.6s,baz=349,slow=23,SNR=9.8
ASPA Alice Springs 17.79 167 P **Pn** **18 48 34.9 +0.1**
baz=18
AS01 Alice Springs 17.80 167 P **P** **18 48 34.1 +1.2**
comp=Z,225nm,0.7s
PSA00 Pilbara Seismi 17.99 211 **P** **18 48 36.1 +1.2**
PSA00 Pilbara Seismi 17.99 211 P **P** **18 48 35.2 +0.3**
PSA00 IAmb IAmb 18 48 37.8
comp=Z,16nm,0.8s
PSA00 Pilbara Seismi 17.99 211 P **P** **18 48 36.2 +1.2**
MANU Manus Island 18.08 77 P **Pn** **18 48 38.4 +0.1**
KKM Kota Kinabalu 18.18 312 P **P** **18 48 38.1 +1.0**
KKM IAmb IAmb 18 49 13.6
comp=Z,35nm,1.3s
MTSU Mount Surprise 18.51 131 P **Pn** **18 48 42.3 -1.0**
baz=19,SNR=17
WRKA Warakurna 18.75 184 P **P** **18 48 44.7 +1.6**
baz=19,SNR=156
WRKA Warakurna 18.75 184 P **P** **18 48 44.8 +1.7**
CTA Charters Tower 21.15 132 P **P** **18 49 10.5 +1.6**
CTA Charters Tower 21.15 132 P **P** **18 49 09.6 +0.8**
comp=Z,6.2nm,0.6s,baz=306,slow=12,SNR=9.2
comp=Z,6.2nm,0.6s
CTAO Charters Tower 21.15 132 P **P** **18 49 10.5 +1.6**
CTAO IAmb IAmb 18 49 11.9
comp=Z,36nm,1.4s
CTAO Charters Tower 21.15 132 P **P** **18 49 10.4 +1.5**
BBJI Bungbulang 21.94 266 P **P** **18 49 16.7 -0.3**
GIRL Giralia 22.12 221 P **P** **18 49 19.7 +1.1**
baz=22,SNR=8.0
GIRL Giralia 22.12 221 P **P** **18 49 19.4 +0.8**
GIRL Giralia 22.12 221 P **P** **18 49 19.9 +1.4**
OOD Oodnadatta 22.18 166 P **P** **18 49 19.7 +0.7**
RABL Rabaul 22.44 86 P **P** **18 49 21.0 -0.7**
RABL Rabaul 22.44 86 P **P** **18 49 23.2 +1.5**
MEEK Meekatharra 22.88 206 P **P** **18 49 25.6 +0.1**
baz=23,SNR=18
MEEK Meekatharra 22.88 206 P **P** **18 49 26.2 +0.7**
INKA Innaminka 23.81 155 P **P** **18 49 36.1 +2.2**
MULG Mulgathing 24.27 171 P **P** **18 49 38.7 +0.7**
FORT Forrest 24.47 183 P **P** **18 49 40.4 +0.7**
baz=25,SNR=15
FORT Forrest 24.47 183 P **P** **18 49 40.5 +0.7**
FORT Forrest 24.47 183 P **P** **18 49 40.5 +0.7**
LCRK Leigh Creek 25.38 163 P **P** **18 49 49.6 +1.6**
KMBL Kambalda 26.06 195 P **P** **18 49 54.6 +0.5**
baz=26,SNR=24
KMBL Kambalda 26.06 195 P **P** **18 49 54.8 +0.6**
MORW Morawa 26.13 208 P **P** **18 49 55.1 +0.2**
baz=26,SNR=12
MORW Morawa 26.13 208 P **P** **18 49 55.2 +0.4**
BBOO Buckleboo 27.09 168 P **P** **18 50 04.0 +0.6**
baz=27,SNR=12
BBOO Buckleboo 27.09 168 P **P** **18 50 03.9 +0.6**
BLDU Ballidu 27.16 205 P **P** **18 50 04.3 +0.3**
baz=27,SNR=15
BLDU Ballidu 27.16 205 P **P** **18 50 04.4 +0.4**
KLBR Kellerberrin 27.60 202 P **P** **18 50 08.4 +0.6**
baz=28,SNR=18
KLBR Kellerberrin 27.60 202 P **P** **18 50 08.5 +0.6**
STKA Stephens Creek 27.82 158 P **P** **18 50 12.2 +2.4**
baz=28,SNR=5.7
STKA Stephens Creek 27.82 158 P **P** **18 50 09.7 -0.2**
STKA Stephens Creek 27.82 158 P **P** **18 50 10.6 +0.7**
STKA Stephens Creek 27.82 158 P **P** **18 50 10.6 +0.7**
comp=Z,1.3nm,0.3s,baz=332,slow=8.2,SNR=8.7
comp=Z,1.3nm,0.3s
HTT Hallett 28.38 164 P **P** **18 50 16.7 +1.8**
baz=28,SNR=4.8
HTT Hallett 28.38 164 P **P** **18 50 15.6 +0.8**
MUN Mundaring 28.55 205 P **P** **18 50 16.8 +0.5**
baz=29,SNR=4.6
MUN Mundaring 28.55 205 P **P** **18 50 16.5 +0.1**
NWAO Narrogin (SRO) 28.99 202 P **P** **18 50 20.9 +0.7**
baz=29,SNR=8.1
NWAO P **P** **18 50 20.9 +0.7**
baz=29,SNR=8.1
NWAO Narrogin (SRO) 28.99 202 P **P** **18 50 20.7 +0.5**
CMSA Cobar Meteorol 29.28 151 P **P** **18 50 23.5 +0.7**
RKGY Rocky Gully 30.59 201 P **P** **18 50 36.6 +2.4**
baz=31
ARPS Mount Arapiles 32.35 162 P **P** **18 50 51.6 +1.9**
baz=32,SNR=7.6
ARPS Mount Arapiles 32.35 162 P **P** **18 50 50.4 +0.8**
DZM Mont Dzumac 38.79 118 P **P** **18 51 45.9 +1.1**
CMAR Chiang Mai Arr 39.03 310 P **P** **18 51 46.4 -0.3**
comp=Z,0.4nm,0.6s,baz=136,slow=7.2,SNR=6.3
comp=Z,0.4nm,0.6s
YATNC Mamie plateau, 39.18 117 P **P** **18 51 49.6 +1.7**
USRK Ussuriysk Ar. 50.24 2 P **P** **18 53 14.7 -0.2**
comp=Z,0.9nm,0.8s,baz=191,slow=8.1,SNR=1.6
comp=Z,0.9nm,0.8s
SONM Songino Array 57.63 342 P **P** **18 54 07.7 -0.7**
comp=Z,0.2nm,0.4s,baz=144,slow=7.5,SNR=2.0
SONM pP **pwP** **18 54 58.6 -0.3**
comp=Z,0.3nm,0.5s,baz=168,slow=3.9,SNR=1.6
comp=Z,0.2nm,0.4s
PETK Petropavlovsk- 63.69 18 P **P** **18 54 48.7 -0.4**
comp=Z,2.1nm,0.6s,baz=206,slow=7.1,SNR=6.0
comp=Z,2.1nm,0.6s
MK31 Makanchi Array 67.44 327 P **P** **18 55 12.5 -0.7**
MKAR Makanchi Array 67.44 327 **P** **18 55 12.8 -0.5**
MKAR Makanchi Array 67.44 327 P **P** **18 55 13.3 +0.1**
comp=Z,1.6nm,0.4s,baz=114,slow=8.7,SNR=52
MKAR pP **pwP** **18 56 04.5 -0.3**
comp=Z,0.3nm,0.3s,baz=113,slow=8.8,SNR=1.3
comp=Z,1.6nm,0.4s
MAKZ Makanchi 67.62 327 **P** **18 55 13.3 -1.0**
MAKZ IAmb IAmb 18 55 24.8
comp=Z,4.0nm,1.2s
YAK Yakutsk 68.07 360 P **P** **18 55 16.1 -0.6**
YAK IAmb IAmb 18 55 16.9
comp=Z,20nm,1.4s
AAK Ala-Archa 69.78 320 P **P** **18 55 28.1 +0.2**
ARSB Arslanbob 70.14 318 **P** **18 55 30.1 -0.1**
ZAA0 Zalesovo Array 70.78 334 P **P** **18 55 32.3 -1.2**
ZALV Zalesovo Beam 70.78 334 P **P** **18 55 32.8 -0.8**
ZALV Zalesovo Beam 70.78 334 P **P** **18 55 32.6 -1.0**
comp=Z,1.2nm,0.4s,baz=140,slow=5.6,SNR=6.2
ZALV pP **pwP** **18 56 25.0 -0.6**
comp=Z,0.3nm,0.3s,baz=346,slow=35,SNR=1.7
comp=Z,1.2nm,0.4s
KURBB Kurchatov Arra 71.72 328 P **P** **18 55 38.9 -0.3**
comp=Z,1.2nm,0.4s,baz=129,slow=5.0,SNR=20
KURBB pP **pwP** **18 56 30.4 -1.1**
comp=Z,1.0nm,0.7s,baz=130,slow=5.3,SNR=3.2
comp=Z,1.2nm,0.4s
SIMJ Simiganj 71.72 314 P **P** **18 55 39.1 -0.7**
SIMJ IAmb IAmb 18 55 40.5
comp=Z,3.4nm,1.0s
KURK Kurchatov 71.72 329 P **P** **18 55 38.7 -0.6**
KK31 Karatay Array 72.58 319 P **P** **18 55 43.1 -1.5**
KKAR Karatay Array 72.58 319 P **P** **18 55 44.2 -0.4**
KKAR Karatay Array 72.58 319 P **P** **18 55 43.2 -1.4**
KKAR IAmb IAmb 18 55 56.7
comp=Z,2.4nm,1.3s
BVAR Borovoye Array 77.27 328 P **P** **18 56 10.7 -0.5**
comp=Z,0.7nm,0.4s,baz=115,slow=7.2,SNR=11
BVAR pP **pwP** **18 57 03.9 -0.1**
comp=Z,0.6nm,0.7s,baz=230,slow=38,SNR=1.5
comp=Z,0.7nm,0.4s
GEYT Alibeck 79.51 310 P **P** **18 56 24.6 +0.8**
comp=Z,0.4nm,0.4s,baz=212,slow=4.4,SNR=1.3
comp=Z,0.4nm,0.4s
ABKAR Akbulak array 81.74 322 P **P** **18 56 34.3 -1.0**
QSPA South Pole Qui 83.74 180 P **P** **18 56 44.7 -0.8**
QSPA IAmb IAmb 18 56 47.4
comp=Z,6.0nm,1.4s
QSPA South Pole Qui 83.74 180 P **P** **18 56 45.0 -0.5**
comp=Z,1.1nm,1.0s,baz=76,slow=23,SNR=2.0
comp=Z,1.1nm,1.0s
N15K Kwethluk River 85.70 28 P **P** **18 56 54.4 -0.9**
N15K IAmb IAmb 18 57 29.4
comp=Z,19nm,1.4s
K15K Wolf Creek Mou 85.81 26 P **P** **18 56 54.8 -0.9**
K15K IAmb IAmb 18 57 04.0
comp=Z,21nm,1.4s
L16K Owhat River 86.51 27 P **P** **18 56 58.0 -1.1**
L16K IAmb IAmb 18 57 08.2
comp=Z,13nm,1.4s
M16K Timber Creek 86.52 28 **P** **18 56 58.7 -0.5**
J16K Anvik River 86.57 25 P **P** **18 56 59.3 -0.1**
J16K IAmb IAmb 18 57 42.9
comp=Z,7.4nm,1.3s
G16K Koyuk River 86.65 23 P **P** **18 56 59.5 -0.3**
G16K IAmb IAmb 18 57 39.1
comp=Z,11nm,1.4s
C16K Lisburne Hills 86.75 20 P **P** **18 56 58.8 -1.3**
K17K Iditarod 87.36 26 P **P** **18 57 02.4 -0.8**
K17K IAmb IAmb 18 57 36.7
comp=Z,24nm,1.5s
H17K Granite Mounta 87.44 24 P **P** **18 57 02.9 -0.6**
H17K IAmb IAmb 18 57 33.8
comp=Z,4.1nm,1.4s
L18K Granite Mounta 87.92 27 P **P** **18 57 05.3 -0.6**
L18K IAmb IAmb 18 57 07.8
comp=Z,14nm,1.5s
E18K Tukpahlearik C 88.06 21 P **P** **18 57 05.4 -1.0**
E18K IAmb IAmb 18 57 35.0
comp=Z,4.3nm,1.4s
J18K Innoko River 88.28 26 P **P** **18 57 06.3 -1.3**
J18K IAmb IAmb 18 57 34.2
comp=Z,6.4nm,1.4s
G19K Purcell Mounta 88.95 23 P **P** **18 57 09.8 -0.8**
E19K Redstone River 89.30 22 P **P** **18 57 10.6 -1.6**
D19K Kuna River 89.31 21 P **P** **18 57 11.1 -1.2**
D19K IAmb IAmb 18 57 27.9
comp=Z,5.0nm,1.4s
SML Sawmill 91.65 28 P **P** **18 57 21.1 -2.3**
RND Reindeer 91.70 26 P **P** **18 57 21.6 -2.0**
RND IAmb IAmb 18 57 57.1
comp=Z,14nm,1.5s
G23K Bananza Creek 91.84 23 P **P** **18 57 23.1 -1.0**
G23K IAmb IAmb 18 57 24.1
comp=Z,6.2nm,1.5s
ILAR Eielson Array 92.78 25 P **P** **18 57 25.7 -2.7**
comp=Z,0.3nm,0.6s,baz=242,slow=4.4,SNR=7.2
comp=Z,0.3nm,0.6s
BMAR Burnt Mountain 94.06 23 P **P** **18 57 33.4 -0.9**
K27K Chicken 94.77 26 P **P** **18 57 37.5 -0.1**
K27K IAmb IAmb 18 58 02.7
comp=Z,5.8nm,1.4s
BCAR Beaver Creek A 94.83 27 P **P** **18 57 37.4 -0.5**
I28M Miner Creek 95.77 25 P **P** **18 57 41.5 -0.8**
I28M IAmb IAmb 18 57 44.4
comp=Z,5.3nm,1.4s
E28M Babbage River 96.03 22 P **P** **18 57 41.7 -1.5**
E28M IAmb IAmb 18 58 22.0
comp=Z,1.8nm,1.3s
TXAR Lajitas Array 124.77 59 PKP **PKPdf** **19 03 16.2 +0.4**
comp=Z,0.3nm,0.5s,baz=183,slow=1.8,SNR=2.3
TORD Torodi Ar. Bea 128.38 282 PKP **PKPdf** **19 03 22.8 -0.1**
comp=Z,0.4nm,0.6s,baz=74,slow=3.4,SNR=3.0

*IDC **28** 19:00:14.8±0.7,6°.01S×142°.88E,h0km,mb4.3/13, mbtmp4.3/16,ML4.3/2,MS3.2/4,Error ellipse: s-maj=30.8km s-min=16.2km az=82.0*
*NEIC **28** 19:00:17.3±1.2,6°.14S±0°.09×142°.77E±0°.08,h13km±4km, mb4.7/93,Error ellipse: s-maj=12.7km s-min=11.6km az=206.0*
*DJA **28** 19:00:22.6±0.3,6°.S±3°×14°.2E±°,h10km,M4.8/10,mB5.4/3, mb4.6/10,MLv4.9/5,Mw(mB)4.8/3*
ISC 28 19:00:17.1±0.4,6°.17S±0°.05×142°.76E±0°.05,h10km,n157,
σ1s29/157,mb4.8/64,2D,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
TABU	**Tabubil**	**1.77**	**300**	P	**Pb**	**19 00 49.4**	**-0.3**
MMPI	**Merauke**	**3.28**	**226**	P	**Pn**	**19 01 11.5**	**+2.9**
MMPI				S	**Sg**	**19 02 02.1**	**-0.5**
GENI	**Genyem**	**4.39**	**324**	P	**Pn**	**19 01 25.8**	**+1.9**
GENI	**Genyem**	**4.39**	**324**	P	**Pn**	**19 01 25.0**	**+1.1**
PMG	**Port Moresby**	**5.42**	**127**		**Pn**	**19 01 39.3**	**+1.4**
PMG	**Port Moresby**	**5.42**	**127**	P	**Pn**	**19 01 39.8**	**+1.8**
PMG	**Port Moresby**	**5.42**	**127**	Pn	**Pn**	**19 01 38.9**	**+1.0**
	29nm,0.4s,baz=7.9,slow=2.3,SNR=37						
PMG				Sn	**Sn**	**19 02 40.2**	**-0.2**
	12nm,0.3s,baz=303,slow=23,SNR=7.1						
PMG				LR	LR	19 04 22.7	
	comp=Z,110nm,18.2s,baz=225,slow=46						
SMPI	**Sarmi**	**5.79**	**316**	P	**Pn**	**19 01 45.1**	**+1.9**
	73nm,1.1s,0.3nm						
SMPI				S	**Sn**	**19 02 51.6**	**+1.9**
	73nm,1.1s,0.3nm						
MANU	**Manus Island**	**6.16**	**48**		**Pn**	**19 01 49.1**	**+0.9**
COEN	**Coen**	**7.75**	**177**	Pn	**Pn**	**19 02 11.2**	**+1.2**
FAKI	**Fak Fak**	**10.96**	**287**	Pn	**Pn**	**19 02 53.8**	**-0.4**
FAKI	**Fak Fak**	**10.96**	**287**	P	**Pn**	**19 02 54.5**	**+0.3**
SAUI	**Saumlaki**	**11.52**	**260**		**Pn**	**19 03 02.6**	**+0.8**
SAUI	**Saumlaki**	**11.52**	**260**	P	**Pn**	**19 03 02.5**	**+0.8**
	184nm,0.8s,2μm						
KDU	**Kakadu**	**12.04**	**237**	P	**Pn**	**19 03 08.7**	**-0.1**
MTN	**Manton Dam**	**13.24**	**239**	Pn	**Pn**	**19 03 23.9**	**-1.5**
MTN	**Manton Dam**	**13.24**	**239**	P	**Pn**	**19 03 24.8**	**-0.6**
DRS	**Darwin Rock St**	**13.25**	**241**	P	**Pn**	**19 03 26.1**	**+0.6**
CTA	**Charters Tower**	**14.25**	**167**	Lg	Lg	19 07 45.9	
	0.2nm,0.3s,baz=84,slow=5.8,SNR=2.6						
CTA				LR	LR	19 09 26.5	
	comp=Z,98nm,21.3s,baz=68,slow=38						
QIS	**Mount Isa**	**14.63**	**192**	P	**Pn**	**19 03 45.9**	**+1.6**
WB0	**Warramunga Arr**	**15.78**	**210**		**Pn**	**19 03 59.0**	**-0.6**
WB0				IAmb	IAmb	19 04 24.9	
	comp=Z,44nm,1.2s						
WR0	**Warramunga Arr**	**15.87**	**209**		**Pn**	**19 03 59.6**	**-1.1**
WRAB	**Tennant Creek**	**15.94**	**210**		**Pn**	**19 04 00.3**	**-1.3**
WB2	**Warramunga Arr**	**15.95**	**210**	Pn	**Pn**	**19 04 01.1**	**-0.7**
WRA	**Warramunga Arr**	**15.95**	**210**		**Pn**	**19 04 00.3**	**-1.5**
WRA	**Warramunga Arr**	**15.95**	**210**	Pn	**Pn**	**19 04 01.7**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=28,slow=14,SNR=31						
WRA				Sn	Sn	19 06 48.0	-11
	comp=Z,0.4nm,0.3s,baz=30,slow=22,SNR=1.3						
WRA				Lg	Lg	19 08 34.1	
	baz=32,slow=29						
	comp=Z,2.0nm,0.4s						
KNRA	**Kununurra**	**16.67**	**234**	Pn	**Pn**	**19 04 09.5**	**-1.4**
KNRA				IAmb	IAmb	19 04 22.3	
	comp=Z,26nm,0.7s						
KNRA	**Kununurra**	**16.67**	**234**	P	**Pn**	**19 04 10.0**	**-1.0**
SOEI	**Soe**	**18.66**	**258**	P	**P**	**19 04 32.2**	**-3.2**
SOEI				IAmb	IAmb	19 05 11.5	
	comp=Z,30nm,0.8s						
SOEI	**Soe**	**18.66**	**258**	P	**Pn**	**19 04 38.4**	**+2.6**
	comp=Z,37nm,1.0s						
AS01	**Alice Springs**	**19.35**	**205**	P	**Pn**	**19 04 45.2**	**+1.2**
AS31	**Alice Springs**	**19.37**	**205**		**P**	**19 04 43.6**	**+0.4**
ASAR	**Alice Springs**	**19.37**	**205**		**P**	**19 04 42.1**	**-1.1**
ASAR	**Alice Springs**	**19.37**	**205**	P	**Pn**	**19 04 45.2**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=34,slow=10,SNR=74						
ASAR				S	**Sn**	**19 08 15.5**	**-6.2**
	comp=Z,1.9nm,0.6s,baz=18,slow=27,SNR=5.3						
ASAR				Lg	Lg	19 10 24.5	
	baz=19,slow=27						
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.49**	**233**	P	**P**	**19 04 55.3**	**-0.1**
EIDS	**Eidsvold**	**20.69**	**158**	P	**P**	**19 04 58.4**	**+0.9**
EDFI	**Ende, Flores**	**21.05**	**262**	P	**P**	**19 05 03.3**	**+1.7**
	comp=Z,7.8nm,0.8s						
DAV	**Davao City (W)**	**21.61**	**307**	LR	LR	19 15 04.9	
	comp=Z,39nm,18.2s,baz=36,slow=41						
OOD	**Oodnadatta**	**22.53**	**197**	P	**P**	**19 05 19.8**	**+2.5**
TOLI2	**Tolitoli**	**23.11**	**288**	P	**P**	**19 05 23.8**	**+0.3**
TOLI2	**Tolitoli**	**23.11**	**288**	P	**P**	**19 05 23.9**	**+0.5**
WRKA	**Warakurna**	**23.33**	**215**	P	**P**	**19 05 27.1**	**+1.5**
LCRK	**Leigh Creek**	**24.53**	**189**	P	**P**	**19 05 37.8**	**+0.9**
MULG	**Mulgathing**	**25.35**	**198**	P	**P**	**19 05 46.4**	**+2.1**
STKA	**Stephens Creek**	**25.60**	**182**	P	**P**	**19 05 47.8**	**+1.1**
	comp=Z,4.3nm,1.0s,baz=334,slow=11,SNR=3.9						
	comp=Z,4.3nm,1.0s						
PSA00	**Pilbara Seismi**	**26.94**	**233**	P	**P**	**19 05 59.6**	**+0.6**
PSA00				IAmb	IAmb	19 06 08.2	
	comp=Z,18nm,1.1s						
NJ2	**Nanjing**	**44.32**	**330**	*e*P	**P**	**19 08 28.8**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
RTZ	**Ruatahuna**	**44.73**	**141**	P	**P**	**19 08 32.3**	**+1.5**
KSRS	**Korea Array**	**45.55**	**343**	P	**P**	**19 08 35.5**	**-1.6**
	comp=Z,3.1nm,1.0s,baz=163,slow=8.9,SNR=4.5						
	comp=Z,3.1nm,1.0s						
JTM	**Tenmabayashi**	**46.75**	**358**	P	**P**	**19 08 44.8**	**-1.7**
PHRA	**Phrae**	**48.58**	**301**	P	**P**	**19 08 59.9**	**-1.2**
LYN	**LuoYang**	**49.58**	**327**	⇓P	**P**	**19 09 12.0**	**+3.4**
LYN				pP	sP	19 09 18.0	+4.5
LYN				sP	pP	19 09 20.0	+7.8
LYN				PP	**PP**	**19 11 02.8**	**-0.3**
LYN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LYN				pmax	pmax		
	comp=Z,280nm,4.2s						
CM31	**Chiang Mai Arr**	**49.66**	**300**	P	**P**	**19 09 09.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**49.66**	**300**	P	**P**	**19 09 08.3**	**-1.1**
CMAR	**Chiang Mai Arr**	**49.66**	**300**	P	**P**	**19 09 09.0**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=116,slow=6.1,SNR=17						
	comp=Z,1.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.07**	**350**	P	**P**	**19 09 18.7**	**-1.0**
USRK	**Ussuriysk Ar.**	**51.07**	**350**	P	**P**	**19 09 18.2**	**-1.4**
	comp=Z,3.6nm,0.9s,baz=174,slow=9.2,SNR=7.6						
	comp=Z,3.6nm,0.9s						
PZH	**PanZhiHua**	**51.33**	**311**	P	**P**	**19 09 24.0**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,4.8s						
MDJ	**Mudanjiang**	**51.92**	**348**	P	P	19 09 33.0	+7.0
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.5s						
BNX	**BinXian**	**53.47**	**347**	⇓P	**P**	**19 09 36.0**	**-1.5**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BNX				pmax	pmax		
	comp=Z,110nm,3.5s						
HHC	**Hu-ho-hao-te**	**54.86**	**331**	*e*P	**P**	**19 09 49.5**	**+1.7**
HHC				sP	sP	19 09 58.0	+5.2
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
LZH	**Lanzhou**	**55.67**	**322**	*e*P	**P**	**19 09 55.3**	**+1.5**
LZH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA	**Gaotai**	**60.24**	**323**	P	**P**	**19 10 26.0**	**+0.1**
GTA				pP	sP	19 10 34.5	+3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**60.40**	**10**	P	**P**	**19 10 24.4**	**-2.1**
	comp=Z,10nm,1.1s,baz=136,slow=6.2,SNR=4.4						
	comp=Z,10nm,1.1s						
LSA	**Lhasa**	**61.02**	**309**		**P**	**19 10 32.1**	**+0.4**
SONM	**Songino Array**	**62.58**	**333**	P	**P**	**19 10 40.6**	**-0.9**
SONM	**Songino Array**	**62.58**	**333**	P	**P**	**19 10 41.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=154,slow=9.0,SNR=4.4						
	comp=Z,0.4nm,0.4s						
WMQ	**Urumqi**	**70.22**	**321**	*e*P	**P**	**19 11 31.0**	**+0.5**
WMQ				pP	sP	19 11 38.0	+2.5
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
MKAR	**Makanchi Array**	**74.98**	**322**	P	**P**	**19 11 58.1**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=109,slow=7.1,SNR=23						
	comp=Z,1.7nm,0.6s						
MAKZ	**Makanchi**	**75.18**	**322**	P	**P**	**19 11 59.1**	**-0.8**
KSH	**Kashi**	**76.38**	**313**	P	**P**	**19 12 07.5**	**+0.5**
KSH				sP	PcP	19 12 17.0	-1.8
KSH				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NIL	**Nilore**	**76.62**	**307**	P	**P**	**19 12 07.7**	**-0.7**
NIL				IAmb	IAmb	19 12 09.2	
	comp=Z,8.2nm,0.8s						
ZALV	**Zalesovo Beam**	**76.95**	**329**	P	**P**	**19 12 07.7**	**-2.0**
ZALV	**Zalesovo Beam**	**76.95**	**329**	P	**P**	**19 12 08.3**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=124,slow=3.8,SNR=7.8						
	comp=Z,1.2nm,0.6s						
NRN	**Naryn**	**77.02**	**315**	P	**P**	**19 12 09.4**	**-1.4**
KURK	**Kurchatov**	**78.86**	**324**	P	**P**	**19 12 19.3**	**-1.2**
KURBB	**Kurchatov Arra**	**78.87**	**324**	P	**P**	**19 12 19.5**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=114,slow=4.7,SNR=13						
	comp=Z,1.1nm,0.6s						
L14K	**Kuka Creek**	**79.37**	**24**	P	**P**	**19 12 22.9**	**0.0**
L14K				IAmb	IAmb	19 12 23.2	
	comp=Z,8.9nm,0.8s						
O16K	**Kokwok River B**	**80.36**	**26**	P	**P**	**19 12 27.7**	**-0.7**
O16K				IAmb	IAmb	19 12 42.4	
	comp=Z,13nm,1.2s						
K15K	**Wolf Creek Mou**	**80.36**	**23**	P	**P**	**19 12 28.5**	**+0.1**
K15K				IAmb	IAmb	19 12 29.0	
	comp=Z,14nm,1.1s						
M16K	**Timber Creek**	**80.72**	**25**	P	**P**	**19 12 29.8**	**-0.5**
M16K				IAmb	IAmb	19 12 51.5	
	comp=Z,17nm,1.3s						
L16K	**Owhat River**	**80.86**	**24**	P	**P**	**19 12 29.8**	**-1.2**
L16K				IAmb	IAmb	19 12 44.7	
	comp=Z,12nm,1.2s						
CHGR	**Chuyangaron**	**81.18**	**311**	P	**P**	**19 12 31.1**	**-2.3**
CHGR				IAmb	IAmb	19 12 34.8	
	comp=Z,8.0nm,0.8s						
F15K	**North Star Dit**	**81.22**	**19**	P	**P**	**19 12 32.1**	**-0.8**
N17K	**Nushagak Hills**	**81.22**	**26**	P	**P**	**19 12 32.9**	**-0.1**
J16K	**Anvik River**	**81.26**	**22**	P	**P**	**19 12 33.3**	**+0.1**
SIMJ	**Simiganj**	**81.29**	**310**	P	**P**	**19 12 34.0**	**-0.1**
KKAR	**Karatay Array**	**81.41**	**315**	P	**P**	**19 12 33.5**	**-1.0**
M17K	**Holitna River**	**81.54**	**25**	P	**P**	**19 12 34.7**	**0.0**
M17K				IAmb	IAmb	19 12 35.9	
	comp=Z,12nm,1.1s						
G16K	**Koyuk River**	**81.81**	**20**	P	**P**	**19 12 35.4**	**-0.5**
N18K	**Kilae Creek**	**81.85**	**26**	P	**P**	**19 12 35.8**	**-0.6**
K17K	**Iditarod**	**81.85**	**24**	P	**P**	**19 12 36.3**	**0.0**
K17K				IAmb	IAmb	19 12 37.5	
	comp=Z,8.8nm,1.1s						
L18K	**Granite Mounta**	**82.26**	**24**	P	**P**	**19 12 38.1**	**-0.4**
L18K				IAmb	IAmb	19 13 21.6	
	comp=Z,9.7nm,1.4s						
H17K	**Granite Mounta**	**82.41**	**21**		**P**	**19 12 38.6**	**-0.6**
H17K				IAmb	IAmb	19 12 40.0	
	comp=Z,11nm,1.3s						
F17K	**Baldwin Pennin**	**82.77**	**20**	P	**P**	**19 12 40.6**	**-0.4**
F17K				IAmb	IAmb	19 13 01.1	
	comp=Z,12nm,1.5s						
J18K	**Innoko River**	**82.86**	**23**	P	**P**	**19 12 40.4**	**-1.1**
J18K				IAmb	IAmb	19 12 41.4	
	comp=Z,3.5nm,0.9s						
L19K	**White Mountain**	**83.00**	**25**	P	**P**	**19 12 41.7**	**-0.6**
L19K				IAmb	IAmb	19 13 01.9	
	comp=Z,6.8nm,1.1s						
G18K	**Tagagawik**	**83.37**	**21**	P	**P**	**19 12 43.1**	**-1.0**
G18K				IAmb	IAmb	19 13 03.9	
	comp=Z,7.8nm,1.5s						
CNPM	**China Poot**	**83.44**	**28**	P	**P**	**19 12 43.7**	**-1.0**
E18K	**Tukpahlearik C**	**83.53**	**19**	P	**P**	**19 12 44.4**	**-0.5**
E18K				IAmb	IAmb	19 13 08.9	
	comp=Z,9.0nm,1.4s						
J19K	**Poorman**	**83.54**	**23**	P	**P**	**19 12 44.3**	**-0.8**
M20K	**Styx River**	**83.59**	**25**	P	**P**	**19 12 44.7**	**-0.8**
QSPA	**South Pole Qui**	**83.80**	**180**	P	**P**	**19 12 46.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=38,slow=0.2,SNR=14						
	comp=Z,1.4nm,0.6s						
K20K	**Telida**	**83.86**	**24**	P	**P**	**19 12 46.0**	**-0.7**
K20K				IAmb	IAmb	19 13 00.7	
	comp=Z,7.2nm,1.2s						
C18K	**Utukok River**	**84.03**	**18**	P	**P**	**19 12 46.3**	**-1.3**
G19K	**Purcell Mounta**	**84.04**	**21**	P	**P**

MLY					IAmb	IAmb	19 12 57.2		
	comp=Z,3.7nm,0.8s								
RND	**Reindeer**	**86.01**	**25**	P		**P**	**19 12 55.8**	**-1.8**	
DHY	**Denali Highway**	**86.52**	**25**	P		**P**	**19 12 59.3**	**-0.9**	
DHY					IAmb	IAmb	19 12 59.8		
	comp=Z,6.1nm,0.8s								
WRH	**Wood River Hil**	**86.72**	**24**	P		**P**	**19 12 58.6**	**-2.4**	
WRH					IAmb	IAmb	19 13 00.1		
	comp=Z,9.2nm,1.3s								
E22K	**Anaktuvuk Pass**	**86.79**	**20**	P		**P**	**19 13 00.9**	**-0.5**	
E22K					IAmb	IAmb	19 13 02.4		
	comp=Z,3.4nm,0.7s								
D22K	**Ayikyak River**	**86.83**	**19**	P		**P**	**19 13 01.3**	**-0.2**	
D22K					IAmb	IAmb	19 13 06.7		
	comp=Z,8.5nm,1.2s								
G23K	**Bananza Creek**	**86.84**	**22**	P		**P**	**19 13 01.0**	**-0.6**	
CCB	**Clear Creek Bu**	**86.90**	**24**			**P**	**19 12 59.5**	**-2.4**	
CCB					IAmb	IAmb	19 13 00.5		
	comp=Z,5.0nm,0.7s								
B22K	**Teshekpuk Lake**	**87.25**	**18**	P		**P**	**19 13 02.8**	**-0.6**	
H24K	**Noodor Dome**	**87.31**	**23**	P		**P**	**19 13 02.8**	**-1.1**	
H24K					IAmb	IAmb	19 13 14.8		
	comp=Z,5.7nm,1.4s								
IL31		**87.31**	**24**	P		**P**	**19 13 01.5**	**-2.3**	
IL31					IAmb	IAmb	19 13 02.2		
	comp=Z,3.5nm,0.7s								
ILAR	**Eielson Array**	**87.31**	**24**	P		**P**	**19 13 01.4**	**-2.5**	
	comp=Z,3.0nm,0.7s,baz=258,slow=4.8,SNR=54								
	comp=Z,3.0nm,0.7s								
RIDG	**Independent Ri**	**87.81**	**25**	P		**P**	**19 13 05.5**	**-0.9**	
J25K	**Salcha River,**	**87.88**	**24**	P		**P**	**19 13 05.3**	**-1.4**	
J25K					IAmb	IAmb	19 13 06.0		
	comp=Z,4.9nm,1.0s								
C23K	**Itkillik River**	**87.90**	**19**	P		**P**	**19 13 06.4**	**-0.2**	
F24K	**Squaw Lake**	**87.92**	**21**	P		**P**	**19 13 06.0**	**-0.8**	
F24K					IAmb	IAmb	19 13 14.2		
	comp=Z,5.9nm,1.2s								
D24K	**Happy Valley**	**88.21**	**19**	P		**P**	**19 13 07.8**	**-0.2**	
BARN	**Barnard Glacie**	**88.44**	**28**	P		**P**	**19 13 09.3**	**-0.3**	
CTGM	**Chitina Glacie**	**88.57**	**28**	P		**P**	**19 13 09.9**	**-0.2**	
J26L	**Joseph Creek**	**88.58**	**25**	P		**P**	**19 13 09.6**	**-0.4**	
J26L					IAmb	IAmb	19 13 09.9		
	comp=Z,3.6nm,0.8s								
LOGN	**Logan Glacier**	**88.69**	**28**	P		**P**	**19 13 10.2**	**-0.6**	
M27K	**Edge Creek, AK**	**88.69**	**27**	P		**P**	**19 13 10.3**	**-0.4**	
BCAR	**Beaver Creek A**	**88.93**	**26**	P		**P**	**19 13 10.6**	**-1.1**	
E25K	**Arctic Village**	**88.95**	**21**	P		**P**	**19 13 11.2**	**-0.5**	
E25K					IAmb	IAmb	19 13 12.5		
	comp=Z,4.9nm,1.1s								
BMAR	**Burnt Mountain**	**89.09**	**22**	P		**P**	**19 13 12.2**	**-0.1**	
DAWY	**Dawson**	**90.22**	**25**	P		**P**	**19 13 17.0**	**-0.7**	
DAWY					IAmb	IAmb	19 13 18.0		
	comp=Z,4.0nm,0.9s								
M29M	**Somme Creek**	**90.26**	**27**	P		**P**	**19 13 17.4**	**-0.6**	
M29M					IAmb	IAmb	19 13 18.3		
	comp=Z,5.2nm,0.8s								
I28M	**Miner Creek**	**90.33**	**24**	P		**P**	**19 13 17.4**	**-0.8**	
I28M					IAmb	IAmb	19 13 48.5		
	comp=Z,4.6nm,1.2s								
HYT	**Haines Junctio**	**90.36**	**29**	P		**P**	**19 13 18.0**	**-0.5**	
L29M	**L29M**	**90.55**	**27**	P		**P**	**19 13 18.5**	**-0.8**	
L29M					IAmb	IAmb	19 13 25.2		
	comp=Z,6.1nm,1.1s								
K29M	**Barlow Dome**	**90.98**	**26**	P		**P**	**19 13 20.9**	**-0.4**	
K29M					IAmb	IAmb	19 13 21.5		
	comp=Z,3.2nm,0.7s								
O30N	**Mendenhall**	**91.03**	**29**	P		**P**	**19 13 20.5**	**-1.0**	
J30M	**Hart River**	**91.63**	**25**	P		**P**	**19 13 23.5**	**-0.9**	
I30M	**Mount Dempster**	**91.73**	**25**	P		**P**	**19 13 23.9**	**-1.0**	
G31M	**Satah River**	**92.87**	**23**	P		**P**	**19 13 28.8**	**-1.1**	
G31M					IAmb	IAmb	19 14 07.8		
	comp=Z,6.6nm,1.5s								
INK	**Inuvik**	**93.36**	**22**	LR		LR	19 48 03.1		
	comp=Z,37nm,21.5s,baz=190,slow=31								
TORD	**Torodi Ar. Bea**	**141.04**	**283**	PKhKP		PKPpre	19 19 44.1		
	comp=Z,0.5nm,0.8s,baz=84,slow=3.5,SNR=2.8								
SDV	**Santo Domingo**	**146.79**	**83**	PKPbc		**PKPdf**	**19 19 59.3**	**+0.2**	
ETMB	**Extrema**	**147.05**	**119**	PKPbc		**PKPdf**	**19 19 59.9**	**+0.6**	
DBIC	**Dimbokro**	**147.82**	**273**	PKPbc		**PKPdf**	**19 20 02.2**	**+1.6**	
	comp=Z,3.0nm,0.8s,baz=112,slow=11,SNR=3.4								

IDC 28 19:15:53.5±2.9, 33°62'S×178°77'W, h0km, mb3.8/2, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=68.6km s-min=35.4km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.71**	**215**	Pn	Pn	19 17 20.1	+0.6
	5.7nm,0.3s,baz=348,slow=4.3,SNR=17						
URZ				Sn	Sn	19 18 24.9	-0.9
	2.3nm,0.3s,baz=286,slow=20,SNR=2.3 12nm,0.3s						
ASAR	**Alice Springs**	**42.39**	**271**	P	P	19 23 49.8	-0.1
	0.9nm,0.7s,baz=114,slow=7.3,SNR=16 0.9nm,0.7s						
WRA	**Warramunga Arr**	**43.67**	**276**	P	P	19 24 00.3	0.0
	1.4nm,0.8s,baz=117,slow=7.9,SNR=7.9 1.4nm,0.8s						
FINES	**FINESS Array B**	**147.90**	**338**	PKPbc	PKPbc	19 35 38.9	-0.9
	0.9nm,0.5s,baz=64,slow=4.4,SNR=9.6						

*IDC **28** 19:20:19.1±2.3, 36°28N×70°30E, h192km±21km, mb3.4/14, mbtmp4.0/20, Error ellipse: s-maj=17.2km s-min=12.4km az=11.0*
*NEIC **28** 19:20:22.7±1.7, 36°52N±0°03×70°3E±0°1, h215km±10km, mb4.2/6, Error ellipse: s-maj=12.2km s-min=2.6km az=75.0*
*NNC **28** 19:20:27.5±4.9, 37°07N×70°14E, h204km±61km, mb3.5, mpv4.6, Error ellipse: s-maj=45.8km s-min=26.4km az=17.0*

ISC 28 19:20:19.9±0.5, 36°34N±0°05×70°32E±0°05, h200km, n76, σ1°97/89, mb3.7/13, 6C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.07**	**210**	Pn	**Pn**	**19 21 03.8**	**+4.4**
CHGR	**Chuyangaron**	**2.49**	**339**		**Pn**	**19 21 05.3**	**+1.6**
SIMJ	**Simiganj**	**2.54**	**336**		**Pn**	**19 21 05.8**	**+1.6**
GAR	**Garm**	**2.66**	**360**		**Pn**	**19 21 07.4**	**+1.8**
DRK	**Karamyk**	**3.35**	**20**	Pn	**Pn**	**19 21 15.9**	**+2.0**
NIL	**Nilore**	**3.60**	**137**	Pn	Pn	19 21 22.3	+5.4
BTK	**Batken**	**3.73**	**6**	Pn	**Pn**	**19 21 20.7**	**+2.4**
JMU	**Jammu**	**5.23**	**132**	*e*P	**Pn**	**19 21 36.4**	**-0.8**
JMU				*e*S	**Sn**	**19 22 38.8**	**+0.6**
ARSB	**Arslanbob**	**5.39**	**22**	Pn	**Pn**	**19 21 40.2**	**+0.8**
THN	**Thein Dam**	**5.92**	**130**	*e*P	**Pn**	**19 21 50.3**	**+4.2**
THN				*e*S	**Sn**	**19 22 57.5**	**+3.2**
THN				IAML		19 22 58.8	
	comp=E,209nm,0.4s						
THN				IAML		19 23 00.5	
	comp=N,202nm,0.4s						
THN				IAML		19 23 01.6	
	comp=N,202nm,0.5s						
DHRM	**DHARAMSHALA**	**6.41**	**128**	*e*P	**Pn**	**19 21 56.0**	**+3.3**
DHRM				*e*S	**Sn**	**19 23 08.1**	**+1.9**
DHRM				IAML		19 23 09.4	
	comp=N,441nm,0.5s						
DHRM				IAML		19 23 09.7	
	comp=E,370nm,0.3s						
UCH	**Uchtor**	**6.72**	**28**	P	**Pn**	**19 21 57.8**	**+1.0**
	SNR=45						
NRN	**Naryn**	**6.75**	**39**	Pn	**Pn**	**19 21 56.6**	**-0.4**
KK31	**Karatay Array**	**6.76**	**1**	⇓P	**Pn**	**19 21 57.1**	**+0.2**
	comp=E,4.9nm,0.3s,baz=178,slow=12,SNR=216						
KK31				S	Sn	19 23 02.7	-11
	comp=E,20nm,0.6s,baz=172,slow=23,SNR=8.8						
KK31	**Karatay Array**	**6.76**	**1**		**Pn**	**19 21 57.0**	**+0.2**
KKAR	**Karatay Array**	**6.76**	**1**		**Pn**	**19 21 56.9**	**+0.1**
KKAR	**Karatay Array**	**6.76**	**1**		**Pn**	**19 21 57.0**	**+0.1**
EKS2	**Erkin-Say**	**6.86**	**22**	P	**Pn**	**19 21 59.4**	**+1.1**
	SNR=55						
BHK	**Bhakra**	**7.06**	**132**	*e*P	**Pn**	**19 22 04.2**	**+3.3**
BHK				*e*S	**Sn**	**19 23 22.4**	**+1.4**
BHK				IAML		19 23 24.0	
	comp=E,161nm,0.4s						
BHK				IAML		19 23 24.7	
	comp=N,185nm,0.5s						
AAK	**Ala-Archa**	**7.07**	**26**	P	**Pn**	**19 22 02.3**	**+1.2**
	SNR=40						
AAK	**Ala-Archa**	**7.07**	**26**		**Pn**	**19 22 02.0**	**+1.0**
AAK	**Ala-Archa**	**7.07**	**26**	P	**Pn**	**19 22 02.2**	**+1.2**
	comp=N,24nm,0.4s,baz=168,slow=5.1,SNR=70						

AAK					S	**Sn**	**19 23 18.6**	**-2.8**	
	comp=N,31nm,0.6s,baz=320,slow=23,SNR=16								
KBK	**Karagaybulak**	**7.25**	**28**	P		**Pn**	**19 22 04.8**	**+1.4**	
	SNR=24								
FRU1	**Bishkek**	**7.27**	**26**			**Pn**	**19 22 04.8**	**+1.3**	
ULHL	**Ulahol**	**7.47**	**36**	P		**Pn**	**19 22 07.7**	**+1.4**	
	SNR=30								
CHMS	**Chumysh**	**7.48**	**26**	P		**Pn**	**19 22 06.9**	**+0.6**	
	SNR=22								
CHMS	**Chumysh**	**7.48**	**26**	⇓P		**Pn**	**19 22 06.5**	**+0.3**	
	comp=N,15nm,0.6s								
CHMS				⇓S		**Sn**	**19 23 28.3**	**-2.6**	
	comp=N,32nm,0.8s								
USP	**Ospenovka**	**7.63**	**24**	P		**Pn**	**19 22 08.4**	**+0.2**	
	SNR=25								
SMLA	**Simla**	**7.71**	**130**	*e*P		**Pn**	**19 22 12.4**	**+3.0**	
SMLA				*e*S		**Sn**	**19 23 36.6**	**+0.1**	
SMLA				IAML			19 23 40.1		
	comp=N,148nm,0.3s								
SMLA				IAML			19 23 42.2		
	comp=E,140nm,0.5s								
TKM2	**Tokmak 2**	**7.73**	**30**	P		**Pn**	**19 22 10.7**	**+1.0**	
	SNR=52								
TKM2	**Tokmak 2**	**7.73**	**30**	⇑P		**Pn**	**19 22 10.2**	**+0.5**	
	comp=E,32nm,0.7s								
TKM2				⇓S		**Sn**	**19 23 33.3**	**-3.9**	
	comp=E,21nm,0.9s								
TARG	**Taragay, Kyrgy**	**7.93**	**45**			**Pn**	**19 22 13.1**	**+0.6**	
MDOK	**Medeo**	**8.56**	**35**	⇑P		**Pn**	**19 22 21.0**	**+0.5**	
	comp=E,33nm,1.0s								
KNDC	**Almaty**	**8.56**	**35**	⇓P		**Pn**	**19 22 21.3**	**+0.9**	
	comp=E,111nm,0.9s								
PRZ	**Przheval'sk**	**8.76**	**43**	Pn		**Pn**	**19 22 24.6**	**+1.6**	
DDI	**Dehra Dun**	**8.82**	**131**	*e*S		**Sn**	**19 24 04.2**	**+1.2**	
DDI				IAML			19 24 05.4		
	comp=N,143nm,0.4s								
DDI				IAML			19 24 08.4		
	comp=E,141nm,0.5s								
KHET	**Khetri**	**9.46**	**149**	*e*P		**Pn**	**19 22 34.1**	**+2.0**	
KHET				*e*S		**Sn**	**19 24 15.5**	**-2.5**	
NDI	**New Delhi**	**9.60**	**141**	*e*P		**Pn**	**19 22 36.7**	**+2.8**	
NDI				*e*S		**Sn**	**19 24 17.5**	**-3.8**	
NDI				IAML			19 24 20.1		
	comp=E,31nm,0.4s								
NDI				IAML			19 24 22.8		
	comp=N,26nm,0.3s								
KUDL	**Kundal**	**9.70**	**146**	*e*P		**Pn**	**19 22 37.4**	**+2.2**	
KUDL				*e*S		**Sn**	**19 24 19.1**	**-4.6**	
GEYT	**Alibeck**	**9.87**	**283**	P		**Pn**	**19 22 37.5**	**+0.1**	
	comp=N,0.8nm,0.5s,baz=97,slow=12,SNR=5.8								
GEYT				S		**Sn**	**19 24 25.5**	**-2.3**	
	comp=N,2.4nm,0.5s,baz=91,slow=13,SNR=1.7								
PDGK	**Podgornoye**	**9.92**	**42**	⇑P		**Pn**	**19 22 38.4**	**+0.4**	
	comp=N,4.2nm,0.6s								
AJM	**Ajmer**	**10.50**	**158**	*e*P		**Pn**	**19 22 48.4**	**+2.8**	
AJM				IAML			19 24 46.5		
	comp=E,13nm,0.3s								
AJM				IAML			19 24 53.0		
	comp=E,9.7nm,0.4s								
PTH	**Pithoragarh**	**10.72**	**126**	*e*P		**Pn**	**19 22 49.9**	**+1.4**	
PTH				*e*S		**Sn**	**19 24 43.3**	**-5.0**	
LGTI	**Lohaghat**	**10.80**	**127**	*e*P		**Pn**	**19 22 50.5**	**+1.1**	
LGTI				*e*S		**Sn**	**19 24 43.2**	**-6.8**	
LGTI				IAML			19 24 49.8		
	comp=E,23nm,1.1s								
LGTI				IAML			19 24 51.0		
	comp=N,15nm,0.5s								
OTUK	**Ortayu**	**11.99**	**7**	⇑P		**Pn**	**19 23 03.7**	**-0.8**	
	comp=N,8.5nm,0.7s								
JHNI	**Jhansi**	**12.93**	**145**	*e*P		**P**	**19 23 20.6**	**+0.8**	
JHNI				*e*S		**S**	**19 25 36.0**	**-4.7**	
JHNI				IAML			19 25 38.2		
	comp=E,11nm,0.4s								
JHNI				IAML			19 25 39.6		
	comp=N,8.7nm,0.6s								
MAKZ	**Makanchi**	**13.61**	**36**	⇓P		**Pn**	**19 23 24.4**	**-0.4**	
	comp=N,7.1nm,0.5s								
MAKZ	**Makanchi**	**13.61**	**36**	Pn		**Pn**	**19 23 24.7**	**-0.1**	
MK31	**Makanchi Array**	**13.75**	**37**	⇑P		**Pn**	**19 23 26.8**	**+0.2**	
	comp=N,1.4nm,0.5s,baz=225,slow=10.0,SNR=34								
MKAR	**Makanchi Array**	**13.75**	**37**	P		**Pn**	**19 23 27.0**	**+0.5**	
	comp=N,2.6nm,0.7s,baz=228,slow=13,SNR=32								
AB31	**Akulak array**	**14.97**	**333**	⇓P		**Pn**	**19 23 40.1**	**-1.4**	
	comp=N,2.1nm,0.4s,baz=153,slow=12,SNR=119								
ABKAR	**Akbulak array**	**14.97**	**333**			**Pn**	**19 23 40.4**	**-1.1**	
KURBB	**Kurchatov Arra**	**15.46**	**20**	P		**Pn**	**19 23 46.9**	**-0.5**	
	comp=N,2.4nm,0.5s,baz=210,slow=10,SNR=25								
KURK	**Kurchatov**	**15.56**	**20**			**Pn**	**19 23 48.2**	**-0.5**	
AKL	**Akola**	**16.64**	**158**	*e*P		Pn	19 24 10.7	+8.8	
AKTO	**Aktyubinsk**	**16.65**	**332**	⇑P		**Pn**	**19 24 01.4**	**-0.4**	
	comp=N,9.1nm,0.8s								
AKTO	**Aktyubinsk**	**16.65**	**332**	P		**Pn**	**19 24 02.1**	**+0.3**	
	comp=N,13nm,0.8s,baz=144,slow=7.0,SNR=33								
BVA0	**Bovoye Array**	**16.68**	**0**	P		**Pn**	**19 24 02.1**	**0.0**	
	comp=N,3.6nm,0.4s,baz=150,slow=9.2,SNR=35								
BVAR	**Borovoye Array**	**16.68**	**0**	P		**Pn**	**19 24 02.2**	**+0.1**	
	comp=N,6.4nm,0.4s,baz=156,slow=10,SNR=34								
BRVK	**Borovoye**	**16.72**	**360**			**Pn**	**19 24 02.6**	**+0.1**	
BRVK				IAmb		IAmb	19 24 05.4		
	comp=Z,7.7nm,0.8s								
ZAA0	**Zalesovo Array**	**20.29**	**25**	P		**P**	**19 24 40.8**	**+0.8**	
ZAA0				IAmb		IAmb	19 24 47.1		
	comp=Z,3.2nm,0.6s								
ZALV	**Zalesovo Beam**	**20.29**	**25**	P		**P**	**19 24 40.7**	**+0.6**	
ZALV	**Zalesovo Beam**	**20.29**	**25**	P		**P**	**19 24 40.5**	**+0.5**	
	comp=Z,2.2nm,0.3s,baz=217,slow=10,SNR=18 comp=Z,2.2nm,0.3s								
ARU	**Arti**	**21.61**	**342**	P		**P**	**19 24 53.9**	**0.0**	
	comp=Z,1.1nm,0.3s,baz=167,slow=7.7,SNR=5.4 comp=Z,1.1nm,0.3s								
BELG	**Belogornoye**	**22.68**	**322**	P		**P**	**19 25 04.8**	**+0.9**	
	comp=Z,4.2nm,0.4s,baz=355,slow=1.6,SNR=7.5 comp=Z,4.2nm,0.4s								
SONM	**Songino Array**	**28.88**	**55**	P		**P**	**19 26 01.1**	**+1.2**	
	comp=Z,0.9nm,0.6s,baz=266,slow=9.4,SNR=8.5 comp=Z,0.9nm,0.6s								
CMAR	**Chiang Mai Arr**	**30.86**	**118**	P		**P**	**19 26 18.5**	**+0.9**	
	comp=Z,0.8nm,0.7s,baz=292,slow=7.7,SNR=9.5 comp=Z,0.8nm,0.7s								
NRIK	**Noril'sk**	**34.39**	**11**	P		**P**	**19 26 48.0**	**+0.6**	
	comp=Z,1.3nm,0.4s,baz=195,slow=2.7,SNR=2.1 comp=Z,1.3nm,0.4s								
HFS	**Hagfors**	**42.85**	**322**	P		**P**	**19 27 58.6**	**+0.6**	
	comp=Z,2.3nm,0.8s,baz=110,slow=13,SNR=1.8 comp=Z,2.3nm,0.8s								
KSRS	**Korea Array**	**45.45**	**71**	P		**P**	**19 28 19.4**	**+0.6**	
	comp=Z,0.5nm,0.5s,baz=280,slow=8.1,SNR=1.4 comp=Z,0.5nm,0.5s								
MJAR	**Matsushiro Arr**	**53.52**	**68**	P		**P**	**19 29 18.9**	**-1.0**	
	comp=Z,1.7nm,0.8s,baz=284,slow=8.6,SNR=2.1 comp=Z,1.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**65.16**	**268**	P		**P**	**19 30 38.9**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=38,slow=7.9,SNR=4.6 comp=Z,0.4nm,0.6s								
ILAR	**Eielson Array**	**75.08**	**16**	P		**P**	**19 31 39.3**	**0.0**	
	comp=Z,0.4nm,0.9s,baz=302,slow=5.2,SNR=2.1 comp=Z,0.4nm,0.9s								
YKA	**Yellowknife Ar**	**81.43**	**2**	P		**P**	**19 32 14.8**	**+0.8**	
	comp=Z,0.8nm,0.8s,baz=348,slow=5.4,SNR=14 comp=Z,0.8nm,0.8s								
WRA	**Warramunga Arr**	**82.38**	**121**	P		**P**	**19 32 18.2**	**-1.4**	
	comp=Z,1.4nm,0.8s,baz=320,slow=5.0,SNR=7.2 comp=Z,1.4nm,0.8s								
ASAR	**Alice Springs**	**84.62**	**124**	P		**P**	**19 32 30.8**	**-0.2**	
	comp=Z,0.9nm,0.7s,baz=312,slow=4.7,SNR=12 comp=Z,0.9nm,0.7s								

*HEL **28** 19:23:36.7±0.2, 67°79N×20°13E, h0km, ML1.9, Explosion*
*IDC **28** 19:23:37.2±1.1, 67°81N×20°50E, h0km, mbtmp3.2/4, ML2.2/4, Error ellipse: s-maj=17.7km s-min=6.7km az=120.0*
*UPP **28** 19:23:37.0±0.5, 67°82N×20°22E, h0km±2km, ML2.5, Confirmed Induced event*

ISC 28 19:23:37.1±0.8, 67°81N±0°02×20°24E±0°03, h0km, n35, σ1°10/56, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**14**	P	**Pg**	**19 23 39.9**	**0.0**
KUA				S	**Sg**	**19 23 41.9**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**273**	P	**Pg**	**19 23 41.7**	**-0.1**
KOVU	**Salmi**	**0.41**	**356**	P	**Pg**	**19 23 44.7**	**-0.3**
DUNU	**Dundret**	**0.70**	**169**	P	**Pg**	**19 23 50.4**	**-0.1**
LANU	**Lannavaara**	**0.70**	**70**	P	**Pg**	**19 23 50.3**	**-0.2**
LANU	**Lannavaara**	**0.70**	**70**	PG	**Pg**	**19 23 50.1**	**-0.4**

LANU					SG	**Sg**	**19 23 59.4**	**-0.3**	
MASU	**Masugnsbyn**	**0.76**	**117**		P	**Pg**	**19 23 51.5**	**-0.1**	
MASU					S	**Sg**	**19 24 02.6**	**+1.1**	
SALU	**Saltoluokta**	**0.79**	**238**		P	**Pg**	**19 23 51.9**	**-0.4**	
KIF	**Kilpisjarvi**	**1.22**	**10**		PG	**Pg**	**19 23 59.9**	**-0.5**	
KIF					MSG		19 24 15.3		
	comp=Z,17nm,0.2s								
KIF					SB	**Sb**	**19 24 18.1**	**+1.0**	
PAJU	**Pajala**	**1.36**	**124**		P	**Pg**	**19 24 02.2**	**-1.0**	
PAJU	**Pajala**	**1.36**	**124**		PG	**Pg**	**19 24 01.7**	**-1.4**	
	baz=301								
PAJU					SB	**Sg**	**19 24 20.5**	**-0.3**	
HEF	**Hetta**	**1.42**	**63**	*e*P		**Pn**	**19 24 02.6**	**-1.5**	
HEF	**Hetta**	**1.42**	**63**	PG		**Pn**	**19 24 02.9**	**-1.1**	
	baz=250								
HEF					MSG		19 24 20.5		
	comp=Z,7.3nm,0.2s								
HEF					SG	**Sg**	**19 24 22.0**	**-0.5**	
KLF	**Kolari**	**1.54**	**110**		PG	**Pn**	**19 24 05.3**	**-0.5**	
KLF					MSG		19 24 23.9		
	comp=Z,8.4nm,0.2s								
KLF					SN	**Sn**	**19 24 26.7**	**+0.2**	
KTK1	**Kautokeino**	**1.64**	**41**	*e*P		**Pn**	**19 24 07.1**	**0.0**	
KTK1	**Kautokeino**	**1.64**	**41**	PG		**Pn**	**19 24 06.7**	**-0.4**	
KTK1					SN	**Sb**	**19 24 29.6**	**+0.3**	
TRO	**Tromso**	**1.89**	**346**	PG		**Pn**	**19 24 10.7**	**+0.1**	
TRO					SN	**Sb**	**19 24 36.6**	**0.0**	
KALU	**Kalix**	**2.32**	**146**	PG		**Pn**	**19 24 17.4**	**+1.0**	
	baz=330								
KALU					SG	**Sb**	**19 24 48.2**	**-0.5**	
TOF	**Tornio**	**2.37**	**135**	PG		**Pn**	**19 24 18.7**	**+1.6**	
	baz=317								
TOF					MSG		19 24 47.4		
	comp=Z,7.7nm,0.2s								
TOF					SG	**Sb**	**19 24 50.7**	**+0.5**	
SGF	**Sodankyl**	**2.43**	**96**	PB		**Pn**	**19 24 18.7**	**+0.7**	
SGF					SG	**Sb**	**19 24 52.6**	**+0.4**	
RNF	**Rovaniemi**	**2.55**	**116**	PB		**Pn**	**19 24 21.2**	**+1.6**	
RNF					SG	**Sb**	**19 24 54.8**	**-0.7**	
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn		**Pn**	**19 24 20.5**	**+0.3**	
	comp=Z,0.7nm,0.3s,baz=228,slow=14,SNR=81								
ARCES				Lg		Lg	19 24 55.9		
	comp=Z,2.3nm,0.3s,baz=231,slow=24,SNR=19 comp=Z,1.8nm,0.2s								
KMNF	**Kaamanen**	**2.83**	**59**	PN		**Pn**	**19 24 23.7**	**+0.2**	
KMNF				SB		**Sn**	**19 24 60.0**	**+1.8**	
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PN		**Pn**	**19 24 27.0**	**-0.1**	
RAJF				SG		**Sb**	**19 25 10.7**	**-0.4**	
KEV	**Kevo**	**3.14**	**48**	PN		**Pn**	**19 24 28.4**	**+0.7**	
	baz=235								
KEV				SN		**Sn**	**19 25 06.5**	**+0.7**	
RANF	**Ranua**	**3.15**	**122**	PB		**Pn**	**19 24 29.2**	**+1.4**	
RANF				SG		**Sb**	**19 25 13.7**	**+1.0**	
BURU	**Burvik**	**3.28**	**171**	PB		**Pn**	**19 24 31.1**	**+1.5**	
BURU				SB		**Sn**	**19 25 11.9**	**+2.8**	
OUL	**Oulu**	**3.56**	**138**	PB		**Pn**	**19 24 36.3**	**+2.9**	
OUL				SG		**Sb**	**19 25 25.5**	**+1.1**	
VRF	**Varrio**	**3.56**	**87**	PN		**Pn**	**19 24 33.8**	**+0.3**	
OLKF	**Oulanka, Finla**	**3.89**	**108**	PN		**Pn**	**19 24 38.8**	**+0.8**	
MSF	**Maaselka**	**3.96**	**115**	PN		**Pn**	**19 24 40.3**	**+1.3**	
	baz=298								
KU6	**Riekki**	**4.20**	**111**	PN		**Pn**	**19 24 43.2**	**+0.9**	
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**	**19 25 18.0**	**-0.8**	
	comp=Z,0.1nm,0.3s,baz=345,slow=11,SNR=5.3								
FINES				Sn		**Sn**	**19 26 35.2**	**-2.4**	
	comp=Z,0.2nm,0.3s,baz=348,slow=25,SNR=5.6								
FINES				Lg		Lg	19 27 13.4		
	comp=Z,0.5nm,0.3s,baz=348,slow=27,SNR=7.7 comp=Z,2.9nm,1.0s								
NOA	**NORSAR Array B**	**7.83**	**214**	Pn		**Pn**	**19 25 30.9**	**-1.2**	
	baz=26,slow=12,SNR=4.2								
NOA				Lg		Lg	19 27 41.0		
	baz=146,slow=19,SNR=2.1 comp=Z,0.2nm,0.6s								
HFS	**Hagfors**	**8.22**	**204**	Pn		**Pn**	**19 25 36.5**	**-1.0**	
	comp=Z,0.1nm,0.3s,baz=9.

AKAR				Sg	**Sg**	19 34 17.6	+0.2	
ULGR	**Ulagan, Altay**	**4.76**	**112**	Pg	**Pg**	19 33 17.1	+0.1	
ULGR				Sg	**Sg**	19 34 20.0	+1.3	
LUZB	**Luzhba, Kemero**	**4.87**	**74**	Pn	**Pn**	19 32 59.5	-0.6	
LUZB				Pg	**Pg**	19 33 16.4	-2.7	
LUZB				Sg	**Sg**	19 34 22.6	+0.5	
DGZ	**Jazzator, Alta**	**4.97**	**123**	Pn	**Pn**	19 33 01.6	-0.1	
DGZ				Pg	**Pg**	19 33 21.7	+0.6	
DGZ				Sg	**Sg**	19 34 27.0	+1.5	
CUR	**Chagan-Uzun**	**5.23**	**116**	Pg	**Pg**	19 33 24.8	-1.3	
CUR				Sg	**Sg**	19 34 33.4	-0.4	
BRCR	**Berchikul'**	**5.27**	**52**	Pn	**Pn**	19 33 07.2	+1.6	
BRCR				Pg	**Pg**	19 33 25.0	-1.8	
BRCR				Sg	**Sg**	19 34 32.9	-2.0	
MAKZ	**Makanchi**	**5.83**	**173**	⇑Sn	**Sn**	19 34 17.5	-3.2	
	0.8nm,0.5s							
MAKZ				⇑Lg	Lg	19 34 50.2		
	2.4nm,0.7s							
MK31	**Makanchi Array**	**5.87**	**171**	Lg	Lg	19 34 46.8		
	2.9nm,0.7s,baz=357,slow=26,SNR=5.0							
DJO	**Djoy, Khakassi**	**6.21**	**84**	Sg	**Sg**	19 35 08.6	+3.5	
BVA0	**Borovoye Array**	**6.46**	**278**	⇓Sn	**Sn**	19 34 38.5	+2.3	
	0.4nm,0.3s,baz=92,slow=24,SNR=2.6							
BVA0				⇓Lg	Lg	19 35 08.0		
	0.6nm,0.5s							

*IDC **28** 19:40:30.4±1.3,50°.72N×170°.84W,h0km,mb3.7/10, mbtmp3.7/12,ML3.1/2,Error ellipse: s-maj=35.0km s-min=19.8km az=0.0*
*NEIC **28** 19:40:33.4±1.8,50°.9N±0°.1×171°.06W±0°.10,h15km±7km, mb3.9/41,ML3.6/8,ML3.3(AEIC),Error ellipse: s-maj=17.4km s-min=7.7km az=164.0*
*AEIC **28** 19:40:36.5±1.6,50°.8N±0°.1×170°.96W±0°.10,h10km±7km, Error ellipse: s-maj=18.5km s-min=7.5km az=163.0*

ISC 28 19:40:34.2±0.9,50°.84N±0°.10×171°.01W±0°.05,h23km,n84,
σ1§**21**/89,**mb3.9**/19,**South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**2.10**	**19**		**Sn**	**19 41 30.9**	**-2.4**
CLES	**Cleveland East**	**2.10**	**19**	Pn	**Pn**	**19 41 06.3**	**-1.6**
CLES				IAML		19 41 39.8	
	comp=E,580nm,0.8s						
CLCO	**Concord Point,**	**2.10**	**22**		**Pn**	**19 41 07.5**	**-0.5**
CLCO					**Sn**	**19 41 33.2**	**-0.2**
KOFP	**Korovin Flat P**	**2.41**	**308**		**Pn**	**19 41 12.3**	**+0.1**
ATKA	**Atka Island**	**2.41**	**306**		**Pn**	**19 41 11.8**	**-0.4**
ATKA					**Sn**	**19 41 39.9**	**-1.1**
KOSE	**Korovin Southe**	**2.42**	**310**		**Pn**	**19 41 12.8**	**+0.4**
KOKL	**Mount Kliuchef**	**2.48**	**308**		**Pn**	**19 41 13.1**	**-0.2**
OKTU	**Okmok Mt. Tuli**	**3.13**	**35**		**Pn**	**19 41 21.4**	**-0.8**
GSMY	**Great Sitkin M**	**3.38**	**293**		**Pn**	**19 41 24.8**	**-0.8**
GSTR	**Great Sitkin T**	**3.40**	**294**		**Pn**	**19 41 24.7**	**-1.2**
GSTD	**Great Sitkin T**	**3.44**	**293**		**Pn**	**19 41 25.9**	**-0.5**
GSTD					**Sn**	**19 42 04.3**	**-2.1**
ADAG	**Mount Adagdak**	**3.68**	**290**		**Pn**	**19 41 29.3**	**-0.5**
ADK	**Adak**	**3.71**	**289**		**Pn**	**19 41 29.3**	**-0.7**
ADK					**Sn**	**19 42 09.7**	**-3.3**
ADK	**Adak**	**3.71**	**289**	IAML		19 42 10.7	
	comp=E,115nm,0.3s						
MAPS	**Pakushin South**	**3.88**	**38**		**Pn**	**19 41 31.3**	**-1.1**
MAPS					**Sn**	**19 42 13.8**	**-3.4**
KIWB	**Kanaga Island**	**3.98**	**287**	Pn	**Pn**	**19 41 32.6**	**-1.3**
KIWB				Sn	**Sn**	**19 42 17.2**	**-2.5**
MSW	**Makushin Switc**	**4.02**	**38**		**Pn**	**19 41 33.6**	**-0.8**
MNAT	**Makushin Natee**	**4.04**	**39**		**Pn**	**19 41 33.6**	**-0.9**
UNV	**Unalaska Valle**	**4.08**	**41**		**Pn**	**19 41 34.1**	**-1.1**
ZRO	**Akutan Zero**	**4.48**	**41**		**Pn**	**19 41 40.9**	**+0.3**
TAFP	**Tanaga Falls P**	**4.50**	**286**		**Sn**	**19 42 30.5**	**-2.0**
TASE	**Tanaga Southea**	**4.52**	**285**		**Pn**	**19 41 41.6**	**+0.3**
AKUT	**Akutan**	**4.59**	**42**	Pn	**Pn**	**19 41 42.1**	**-0.1**
AKUT				IAML		19 42 45.9	
	comp=N,40nm,1.1s						
AKUT				IAML		19 43 05.5	
	comp=E,50nm,1.0s						
SDPT	**Sand Point**	**7.78**	**50**	Pn	**Pn**	**19 42 25.9**	**+0.1**
CNBA	**Chernabura Isl**	**7.98**	**56**	Pn	**Pn**	**19 42 27.1**	**-1.5**
CHGN	**Chignik**	**9.27**	**49**	Pn	**Pn**	**19 42 45.8**	**-0.5**
KDAK	**Kodiak Island**	**12.78**	**50**	Pn	**Pn**	**19 43 31.3**	**-3.0**
	comp=E,0.6nm,0.3s,baz=54,slow=8.5,SNR=1.0						
M19K	**Big River Lodg**	**14.35**	**33**	P	**P**	**19 44 02.2**	**-0.4**
J18K	**Innoko River**	**14.79**	**26**	P	**P**	**19 44 06.5**	**-1.0**
F15K	**North Star Dit**	**15.26**	**10**	P	**P**	**19 44 12.7**	**0.0**
F15K				IAmb	IAmb	19 44 17.4	
	comp=Z,6.5nm,1.2s						
H17K	**Granite Mounta**	**15.27**	**18**	P	**P**	**19 44 13.6**	**+0.8**
J19K	**Poorman**	**15.50**	**26**	Pn	**Pn**	**19 44 10.8**	**-0.4**
J19K				IAmb	IAmb	19 44 20.3	
	comp=Z,14nm,1.5s						
H18K	**Honhosa River**	**15.78**	**20**	P	**P**	**19 44 20.5**	**+2.0**
H18K				IAmb	IAmb	19 44 21.4	
	comp=Z,4.7nm,0.8s						
J20K	**Nowinta River**	**16.06**	**27**	P	**P**	**19 44 21.2**	**-0.4**
J20K				IAmb	IAmb	19 44 43.3	
	comp=Z,8.8nm,1.4s						
CAST	**Castle Rocks**	**16.16**	**32**	P	**P**	**19 44 24.1**	**+1.3**
G18K	**Tagagawik**	**16.37**	**18**	P	**P**	**19 44 24.9**	**0.0**
F19K	**Shaleruckik Mo**	**17.37**	**18**	P	**Pn**	**19 44 36.1**	**+1.4**
E18K	**Tukpahlearik C**	**17.42**	**13**		**Pn**	**19 44 35.2**	**-0.2**
H21K	**Meloziina Rive**	**17.56**	**25**		**Pn**	**19 44 36.8**	**-0.3**
MLY	**Manley**	**17.70**	**29**	P	**Pn**	**19 44 39.8**	**+0.9**
MLY				IAmb	IAmb	19 44 41.8	
	comp=Z,6.3nm,1.0s						
E19K	**Redstone River**	**18.02**	**17**		**Pn**	**19 44 43.8**	**+1.0**
I23K	**Minto, Yukon-K**	**18.21**	**30**		**Pn**	**19 44 43.7**	**-1.4**
I23K				IAmb	IAmb	19 45 17.8	
	comp=Z,11nm,1.5s						
C18K	**Utukok River**	**18.49**	**11**	P	**Pn**	**19 44 49.9**	**+1.4**
D19K	**Kuna River**	**18.79**	**15**	P	**P**	**19 44 51.6**	**-0.1**
ILAR	**Eielson Array**	**18.79**	**33**	P	**P**	**19 44 50.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=228,slow=9.3,SNR=11						
	comp=Z,1.2nm,0.7s						
RIDG	**Independent Ri**	**18.96**	**37**		**P**	**19 44 53.8**	**+0.2**
RIDG				IAmb	IAmb	19 45 01.1	
	comp=Z,13nm,1.5s						
G23K	**Bananza Creek**	**19.10**	**26**	P	**P**	**19 44 55.0**	**-0.1**
H24K	**Noodor Dome**	**19.13**	**30**	P	**P**	**19 44 55.3**	**-0.1**
H24K				IAmb	IAmb	19 44 58.4	
	comp=Z,4.4nm,0.8s						
J25K	**Salcha River,**	**19.23**	**34**	P	**P**	**19 44 55.7**	**-0.9**
CTGM	**Chitina Glacie**	**19.30**	**47**	P	**Pn**	**19 44 59.1**	**+0.6**
PETK	**Petropavlovsk-**	**19.34**	**289**	P	**P**	**19 44 59.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=81,slow=12,SNR=1.3						
	comp=Z,5.0nm,1.0s						
SCRK	**Sand Creek**	**19.41**	**37**	P	**P**	**19 44 57.9**	**-0.7**
SCRK				IAmb	IAmb	19 45 13.4	
	comp=Z,6.7nm,1.4s						
LOGN	**Logan Glacier**	**19.41**	**47**	P	**P**	**19 44 57.9**	**-0.7**
M27K	**Edge Creek, AK**	**19.55**	**43**	P	**P**	**19 44 59.8**	**-0.3**
M27K				IAmb	IAmb	19 45 04.0	
	comp=Z,5.1nm,0.8s						
J26L	**Joseph Creek**	**19.83**	**36**	P	**P**	**19 45 03.0**	**-0.1**
J26L				IAmb	IAmb	19 45 06.6	
	comp=Z,5.3nm,0.8s						
I26K	**Coal Creek Min**	**20.40**	**34**	P	**P**	**19 45 08.4**	**-0.8**
I26K				IAmb	IAmb	19 45 11.9	
	comp=Z,6.3nm,0.7s						
BILL	**Bilibino**	**20.53**	**336**	P	**P**	**19 45 12.2**	**+1.6**
P29M	**Windy Craggy**	**20.70**	**52**	P	**P**	**19 45 11.7**	**-0.9**
EGAK	**Eagle**	**20.87**	**37**	P	**P**	**19 45 12.8**	**-1.5**
EGAK				IAmb	IAmb	19 45 18.5	
	comp=Z,10.0nm,1.2s						
HYT	**Haines Junctio**	**21.06**	**49**	P	**P**	**19 45 19.0**	**+2.4**
HYT				IAmb	IAmb	19 45 23.2	
	comp=Z,6.7nm,0.8s						
M29M	**Somme Creek**	**21.07**	**44**	P	**P**	**19 45 18.6**	**+2.1**
M29M				IAmb	IAmb	19 45 53.8	
	comp=Z,4.5nm,1.0s						
BMAR	**Burnt Mountain**	**21.16**	**28**	P	**P**	**19 45 16.4**	**-1.1**
DAWY	**Dawson**	**21.26**	**39**	P	**P**	**19 45 18.6**	**+0.1**
C23K	**Itkillik River**	**21.34**	**19**	P	**P**	**19 45 19.5**	**+0.2**
C23K				IAmb	IAmb	19 45 20.1	
	comp=Z,7.8nm,1.4s						
N30M	**Aishikik Lake**	**21.41**	**47**	P	**P**	**19 45 21.7**	**+1.5**
L29M	**L29M**	**21.43**	**43**	P	**P**	**19 45 21.9**	**+1.5**
L29M				IAmb	IAmb	19 45 45.1	
	comp=Z,6.9nm,1.1s						
I28M	**Miner Creek**	**21.64**	**36**	P	**P**	**19 45 23.3**	**+0.6**
K29M	**Barlow Dome**	**21.94**	**41**	P	**P**	**19 45 27.4**	**+1.5**
K29M				IAmb	IAmb	19 45 33.9	
	comp=Z,3.9nm,1.2s						
H29M	**Whitestone**	**22.57**	**35**	P	**P**	**19 45 32.6**	**+0.1**
I30M	**Mount Dempster**	**22.90**	**38**	P	**P**	**19 45 36.1**	**-0.1**
I30M				IAmb	IAmb	19 45 37.4	
	comp=Z,3.1nm,0.9s						
E28M	**Babbage River**	**23.39**	**29**	P	**P**	**19 45 40.9**	**0.0**
E29M	**Blow River**	**23.79**	**30**	P	**P**	**19 45 46.5**	**+1.7**
E29M				IAmb	IAmb	19 45 48.9	
	comp=Z,6.8nm,1.2s						
G31M	**Satah River**	**24.36**	**35**	P	**P**	**19 45 50.3**	**+0.3**
G31M				IAmb	IAmb	19 46 29.2	
	comp=Z,4.1nm,1.2s						
YKA	**Yellowknife Ar**	**32.02**	**47**	P	**P**	**19 46 58.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=275,slow=8.8,SNR=8.6						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**41.73**	**76**	P	**P**	**19 48 20.4**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=322,slow=3.4,SNR=5.1						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**51.21**	**301**	P	**P**	**19 49 36.7**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=46,slow=6.2,SNR=2.7						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**53.83**	**87**	P	**P**	**19 49 54.8**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=293,slow=9.6,SNR=2.6						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**59.33**	**353**	P	**P**	**19 50 33.2**	**-0.4**
	comp=Z,11nm,1.0s,baz=28,slow=4.5,SNR=3.7						
KURBB	**Kurchatov Arra**	**62.94**	**318**	P	**P**	**19 50 59.3**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=44,slow=7.0,SNR=7.8						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**64.11**	**313**	P	**P**	**19 51 06.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=46,slow=6.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
BVAR	**Borovoye Array**	**64.34**	**324**	P	**P**	**19 51 08.7**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=43,slow=7.1,SNR=9.4						
	comp=Z,1.2nm,0.5s						
FINES	**FINESS Array B**	**67.23**	**351**	P	**P**	**19 51 27.2**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=298,slow=4.1,SNR=3.4						
	comp=Z,1.8nm,0.8s						
HFS	**Hagfors**	**69.31**	**357**	P	**P**	**19 51 40.0**	**+0.9**
	comp=Z,6.2nm,1.1s,baz=16,slow=2.2,SNR=6.4						
	comp=Z,6.2nm,1.1s						
ASAR	**Alice Springs**	**88.62**	**229**	P	**P**	**19 53 24.3**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=25,slow=4.9,SNR=4.6						
	comp=Z,0.3nm,0.8s						

*NEIC **28** 19:51:53.1±1.3,5°.20S±0°.08×129°.70E±0°.07,h200km±11km, mb4.3/28,Error ellipse: s-maj=14.4km s-min=6.5km az=138.0*
*DJA **28** 19:51:54.2±0.4,5°.S±4°×13°.0E±°,h211km±5km,M4.4/13, mB4.5/4,mb4.3/12,MLv4.7/13,Mw(mB)3.6/4*
*IDC **28** 19:51:56.1±2.5,5°.25S×129°.76E,h242km±24km,mb3.5/9, mbtmp4.2/12,Error ellipse: s-maj=25.2km s-min=9.4km az=71.0*

ISC 28 19:51:52.6±0.5,5°.18S±0°.06×129°.81E±0°.06,h200km,n94,
σ1§**50**/95,**mb4.0**/14,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.66**	**8**	P	**Pn**	**19 52 23.6**	**+3.2**
BNDI	**Bandanaira**	**0.66**	**8**	P	**Pn**	**19 52 23.6**	**+3.2**
SAUI	**Saumlaki**	**3.15**	**152**	Pn	**Pn**	**19 52 46.3**	**+2.2**
SAUI	**Saumlaki**	**3.15**	**152**	P	**Pn**	**19 52 45.5**	**+1.5**
SAUI	**Saumlaki**	**3.15**	**152**	P	**Pn**	**19 52 46.7**	**+2.7**
FAKI	**Fak Fak**	**3.31**	**47**	Pn	**Pn**	**19 52 47.2**	**+1.1**
FAKI	**Fak Fak**	**3.31**	**47**	P	**Pn**	**19 52 47.7**	**+1.7**
FAKI	**Fak Fak**	**3.31**	**47**	P	**Pn**	**19 52 47.1**	**+1.1**
NLAI	**Namlea**	**3.32**	**305**	P	**Pn**	**19 52 50.2**	**+4.1**
SWI	**Sorong**	**4.53**	**19**	P	**Pn**	**19 53 01.3**	**+0.2**
SANI	**Sanana**	**4.92**	**309**	P	**Pn**	**19 53 06.8**	**+0.8**
SANI	**Sanana**	**4.92**	**309**	P	**Pn**	**19 53 06.4**	**+0.4**
LBMI	**Labuha**	**5.07**	**333**	P	**Pn**	**19 53 10.9**	**+3.0**
	154nm,0.8s,2μm0.7nm						
SOEI	**Soe**	**7.13**	**230**	Pn	**Pn**	**19 53 34.2**	**-0.4**
SOEI	**Soe**	**7.13**	**230**	P	**Pn**	**19 53 35.1**	**+0.5**
SOEI	**Soe**	**7.13**	**230**	P	**Pn**	**19 53 36.2**	**+1.6**
	24nm,0.7s,0.3nm						
DRS	**Darwin Rock St**	**7.28**	**172**	P	**Pn**	**19 53 36.3**	**-0.2**
MTN	**Manton Dam**	**7.72**	**170**	Pn	**Pn**	**19 53 42.2**	**-0.1**
MTN	**Manton Dam**	**7.72**	**170**	P	**Pn**	**19 53 42.0**	**-0.3**
KDU	**Kakadu**	**7.91**	**161**	P	**Pn**	**19 53 44.7**	**0.0**
MMRI	**Maumere**	**8.26**	**245**	P	**Pn**	**19 53 53.6**	**+4.3**
	31nm,1.0s,0.1nm						
EDFI	**Ende, Flores**	**8.80**	**246**	P	**Pn**	**19 53 59.1**	**+2.7**
	26nm,0.9s,290nm0.1nm						
MRSI	**Marisa**	**9.66**	**305**	P	**Pn**	**19 54 09.0**	**+1.5**
	22nm,0.9s,393nm						
KNRA	**Kununurra**	**10.48**	**186**	Pn	**Pn**	**19 54 17.0**	**-1.1**
KNRA	**Kununurra**	**10.48**	**186**	P	**Pn**	**19 54 17.0**	**-1.1**
TOLI2	**Tolitoli**	**10.97**	**304**	P	**Pn**	**19 54 24.9**	**+0.5**
MPSI	**Mapaga**	**11.31**	**299**	P	**Pn**	**19 54 26.8**	**+2.1**
PLAI	**Plampang**	**12.48**	**252**	P	**Pn**	**19 54 43.0**	**-0.7**
PLAI	**Plampang**	**12.48**	**252**	P	**Pn**	**19 54 42.9**	**-0.7**
TWSI	**Taliwang, Sumb**	**13.31**	**254**	P	**P**	**19 54 58.0**	**+1.2**
	13nm,0.5s						
FITZ	**Fitzroy Crossi**	**13.47**	**197**	Pn	**Pn**	**19 54 55.3**	**-0.6**
SRBI	**Singaraja**	**14.78**	**258**	P	**P**	**19 55 16.0**	**+2.8**
	23nm,0.9s						
WB0	**Warramunga Arr**	**15.17**	**163**		**Pn**	**19 55 16.8**	**-0.2**
WB0				IAmb	IAmb	19 55 54.6	
	comp=Z,9.5nm,1.1s						
WRAB	**Tennant Creek**	**15.31**	**164**		**Pn**	**19 55 18.9**	**+0.1**
WRAB				IAmb	IAmb	19 55 24.3	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**15.32**	**164**		**Pn**	**19 55 18.6**	**-0.1**
WRA	**Warramunga Arr**	**15.32**	**164**	P	**Pn**	**19 55 18.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=339,slow=13,SNR=31						
WRA				S	S	19 57 58.5	-10
	comp=Z,1.2nm,0.2s,baz=327,slow=23,SNR=3.5						
WB2	**Warramunga Arr**	**15.32**	**164**		**Pn**	**19 55 18.7**	**-0.1**
WR0	**Warramunga Arr**	**15.39**	**163**		**Pn**	**19 55 19.7**	**0.0**
WR0				IAmb	IAmb	19 55 44.6	
	comp=Z,16nm,1.5s						
ABJI	**Asem Bagus**	**15.69**	**260**	P	**P**	**19 55 28.6**	**+5.4**
COEN	**Coen**	**15.79**	**124**	P	**P**	**19 55 25.6**	**+1.2**
COEN				IAmb	IAmb	19 56 09.0	
	comp=Z,14nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.88**	**257**	P	**P**	**19 55 23.1**	**-2.3**
JAGI				IAmb	IAmb	19 55 28.3	
	comp=Z,13nm,0.7s						
JAGI	**Jajag, Banyuwa**	**15.88**	**257**	P	**P**	**19 55 24.6**	**-0.8**
JAGI	**Jajag, Banyuwa**	**15.88**	**257**	P	**Pn**	**19 55 26.6**	**+0.9**
	comp=Z,17nm,0.4s						
KKM	**Kota Kinabalu**	**17.57**	**309**	P	**P**	**19 55 43.7**	**-0.2**
KKM	**Kota Kinabalu**	**17.57**	**309**	P	**Pn**	**19 55 44.7**	**-1.1**
PMG	**Port Moresby**	**17.71**	**105**	P	**P**	**19 55 47.6**	**+2.2**
PMG				IAmb	IAmb	19 55 53.2	
	comp=Z,19nm,0.7s						
PMG	**Port Moresby**	**17.71**	**105**	P	**P**	**19 55 47.5**	**+2.1**
	comp=Z,19nm,0.7s,baz=181,slow=20,SNR=1.8						
MANU	**Manus Island**	**17.80**	**81**	P	**P**	**19 55 48.6**	**+2.2**
QIS	**Mount Isa**	**18.01**	**149**	P	**P**	**19 55 50.0**	**+1.4**
MBWA	**Marble Bar**	**18.65**	**211**	P	**P**	**19 55 55.0**	**-0.5**
MBWA	**Marble Bar**	**18.65**	**211**	P	**P**	**19 55 55.6**	**+0.1**
AS31	**Alice Springs**	**18.80**	**168**	P	**P**	**19 55 58.0**	**+0.9**
AS31				IAmb	IAmb	19 55 59.0	
	comp=Z,7.4nm,0.6s						
ASAR	**Alice Springs**	**18.80**	**168**	P	**P**	**19 55 57.9**	**+0.8**
ASAR	**Alice Springs**	**18.80**	**168**	P	**P**	**19 55 58.3**	**+1.1**
	comp=Z,14nm,0.5s,baz=345,slow=11,SNR=376						
ASAR				S	**S**	**19 59 17.1**	**-3.4**
	comp=Z,3.4nm,0.9s,baz=349,slow=20,SNR=12						
ASAR				ScP	**ScP**	**20 03 27.2**	**-5.1**
	comp=Z,1.1nm,0.6s,baz=3.8,slow=2.0,SNR=5.5						
AS01	**Alice Springs**	**18.80**	**168**	P	**P**	**19 55 58.5**	**+1.3**
PSA00	**Pilbara Seismi**	**18.94**	**210**	P	**P**	**19 55 58.4**	**-0.3**
PSA00	**Pilbara Seismi**	**18.94**	**210**	P	**P**	**19 55 57.8**	**-0.9**
PSA00				IAmb	IAmb	19 55 59.4	
	comp=Z,27nm,1.0s						
PSA00	**Pilbara Seismi**	**18.94**	**210**	P	**P**	**19 55 58.8**	**+0.1**
SBUM	**Sibu**	**19.14**	**293**	P	**P**	**19 55 59.4**	**-1.5**
SBUM				IAmb	IAmb	19 56 06.4	
	comp=Z,4.6nm,0.8s						
UGM	**Wanagama**	**19.35**	**261**	P	**P**	**19 56 04.1**	**+0.9**
WRKA	**Warakurna**	**19.79**	**184**	P	**P**	**19 56 08.0**	**+0.1**
RABL	**Rabaul**	**22.30**	**88**	P	**P**	**19 56 33.5**	**-0.3**
GIRL	**Giralia**	**22.97**	**219**	P	**P**	**19 56 39.5**	**-0.3**
OOD	**Oodnadatta**	**23.17**	**167**	P	**P**	**19 56 42.0**	**+0.5**
MEEK	**Meekatharra**	**23.86**	**205**	P	**P**	**19 56 47.3**	**-0.6**
MULG	**Mulgathing**	**25.29**	**171**	P	**P**	**19 57 01.1**	**+0.4**
FORT	**Forrest**	**25.51**	**183**	P	**P**	**19 57 02.4**	**-0.4**
FORT				IAmb	IAmb	19 57 04.0	
	comp=Z,15nm,0.9s						
FORT	**Forrest**	**25.51**	**183**	P	**P**	**19 57 02.6**	**-0.1**
KMBL	**Kambalda**	**27.09**	**195**	P	**P**	**19 57 16.5**	**-0.4**
MORW	**Morawa**	**27.10**	**207**	P	**P**	**19 57 16.6**	**-0.4**
BBOO	**Buckleboo**	**28.10**	**169**	P	**P**	**19 57 26.1**	**+0.3**
BLDU	**Ballidu**	**28.14**	**204**	P	**P**	**19 57 25.8**	**-0.4**
KLBR	**Kellerberrin**	**28.60**	**202**	P	**P**	**19 57 30.1**	**-0.2**
STKA	**Stephens Creek**	**28.76**	**159**	P	**P**	**19 57 33.0**	**+1.3**
	comp=Z,2.9nm,1.0s,baz=129,slow=2.7,SNR=3.3						
	comp=Z,2.9nm,1.0s						
NWAO	**Narrogin (SRO)**	**29.99**	**201**	P	**P**	**19 57 42.4**	**-0.1**
UBPT	**Khong Chiam**	**31.54**	**311**	P	**P**	**19 57 56.2**	**-0.1**
UBPT				IAmb	IAmb	19 57 57.5	
	comp=Z,3.3nm,0.7s						
PHRA	**Phrae**	**37.47**	**310**	P	**P**	**19 58 47.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**38.44**	**308**	P	**P**	**19 58 54.6**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=136,slow=7.4,SNR=14						
	comp=Z,2.1nm,0.6s						
CHTO	**Chiang Mai**	**38.64**	**309**	P	**P**	**19 58 56.5**	**-0.5**
CHTO				IAmb	IAmb	19 58 57.7	
	comp=Z,4.3nm,0.8s						
MJAR	**Matsushiro Arr**	**42.24**	**10**	P	**P**	**19 59 25.2**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=186,slow=9.1,SNR=4.1						
	comp=Z,1.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**49.20**	**2**	P	**P**	**20 00 19.8**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=181,slow=8.3,SNR=6.3						
	comp=Z,1.8nm,0.7s						
LSA	**Lhasa**	**50.77**	**315**	P	**P**	**20 00 32.5**	**-0.7**
PETK	**Petropavlovsk-**	**62.67**	**19**	P	**P**	**20 01 55.2**	**-0.7**
	comp=Z,4.7nm,0.9s,baz=197,slow=5.2,SNR=1.9						
	comp=Z,4.7nm,0.9s						
KSH	**Kashi**	**66.56**	**317**	P	**P**	**20 02 22.3**	**+0.8**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	**Makanchi Array**	**66.61**	**326**	P	**P**	**20 02 21.2**	**-0.3**
MKAR	**Makanchi Array**	**66.61**	**326**	P	**P**	**20 02 21.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=118,slow=7.6,SNR=30						
	comp=Z,0.8nm,0.3s						
MAKZ	**Makanchi**	**66.79**	**326**	P	**P**	**20 02 22.3**	**-0.4**
AAK	**Ala-Archa**	**69.04**	**319**	P	**P**	**20 02 36.9**	**-0.1**
ZALV	**Zalesovo Beam**	**69.88**	**334**	P	**P**	**20 02 41.0**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=115,slow=6.8,SNR=2.5						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**70.87**	**328**	P	**P**	**20 02 47.1**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=128,slow=4.9,SNR=18						
	comp=Z,1.9nm,0.7s						
KK31	**Karatay Array**	**71.86**	**318**	P	**P**	**20 02 53.2**	**-0.6**
KKAR	**Karatay Array**	**71.86**	**318**	P	**P**	**20 02 53.0**	**-0.8**
BVAR	**Borovoye Array**	**76.44**	**328**	P	**P**	**20 03 19.7**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=124,slow=9.4,SNR=5.6						
	comp=Z,0.4nm,0.4s						
RAYN	**Ar Rayn**	**86.84**	**294**	P	**P**	**20 04 14.5**	**-0.6**
RAYN				IAmb	IAmb	20 04 15.3	
	comp=Z,2.6nm,0.6s						

*WEL **28** 19:55:45.8±0.9,32°.S±6°.×17°.8W±1°.6,h33km,M4.6/9, mB4.9/7,ML5.0/9,MLv4.9/9,Mw(mB)4.1/7,Error ellipse: s-maj=0.0km s-min=0.0km az=106.2,confirmed*
*NEIC **28** 19:55:46.5±0.6,31°.45S±0°.06×178°.1W±0°.2,h10km±1km, mb4.7/11,Error ellipse: s-maj=23.9km s-min=10.5km az=90.0*
*IDC **28** 19:55:51.1±2.6,31°.25S×178°.05W,h50km±23km,mb4.4/6, mbtmp4.7/6,MS3.3/7,Error ellipse: s-maj=25.1km s-min=18.2km az=119.0*

**ISC 28 19:55:48.4±0

WRA	Warramunga Arr	44.12	273	P		P	20 03 53.9	+0.3
WRA	Warramunga Arr	44.12	273	P		P	20 03 54.2	+0.5
	comp=Z,21nm,0.7s,baz=111,slow=8.0,SNR=60							
	comp=Z,21nm,0.7s							
WB0	Warramunga Arr	44.15	274	P		P	20 03 54.1	+0.3
QSPA	South Pole Qui	58.61	180	P		P	20 05 44.5	+2.8
QSPA	South Pole Qui	58.61	180	P		P	20 05 45.0	+3.3
	comp=Z,2.2nm,0.6s,baz=332,slow=0.4,SNR=8.5							
	comp=Z,2.2nm,0.6s							
LEM	Lembang	73.13	272	LR		LR	20 39 43.4	
	comp=Z,30nm,19.7s,baz=205,slow=36							
SNAA	Sanae	77.06	178	P		P	20 07 39.6	+2.1
	comp=Z,3.6nm,0.9s,baz=9.5,slow=8.7,SNR=3.1							
	comp=Z,3.6nm,0.9s							
H03S2	Juan Fernandez	79.88	123	T		T	21 36 30.0	
	baz=237,slow=74							
H03S1	Juan Fernandez	79.89	123	T		T	21 36 31.2	
	baz=237,slow=74							
H03S3	Juan Fernandez	79.90	123	T		T	21 36 31.3	
	baz=237,slow=74							
H03N3	Juan Fernandez	80.08	123	T		T	21 36 59.6	
	baz=240,slow=72,SNR=11							
H03N2	Juan Fernandez	80.08	123	T		T	21 36 59.8	
	baz=240,slow=72,SNR=9.4							
H03N1	Juan Fernandez	80.09	123	T		T	21 37 00.4	
	baz=240,slow=72,SNR=23							
MKAR	Makanchi Array	118.46	310	PKP		PKiKP	20 14 31.6	-0.4
	comp=Z,0.9nm,0.9s,baz=222,slow=1.6,SNR=5.5							
KURBB	Kurchatov Arra	121.82	313	PKP		PKiKP	20 14 38.0	-0.4
	comp=Z,1.6nm,0.7s,baz=109,slow=1.8,SNR=19							
BVAR	Borovoye Array	127.17	315	PKP		PKiKP	20 14 48.8	-0.2
	comp=Z,1.1nm,0.5s,baz=98,slow=2.6,SNR=8.0							
ARCES	ARCESS Array B	139.66	347	PKhKP		PKPpre	20 15 07.2	
	comp=Z,9.8nm,1.1s,baz=52,slow=1.5,SNR=2.3							
KBZ	Khabaz	145.69	303	PKPbc		PKPab	20 15 23.6	0.0
	comp=Z,1.7nm,1.0s,baz=16,SNR=2.8							
FIA1	FINESS Array S	146.16	339	PKPdf		PKPbc	20 15 23.8	-0.3
FINES	FINESS Array B	146.17	339	PKPdf		PKPbc	20 15 23.8	-0.3
FINES	FINESS Array B	146.17	339	PKPbc		PKPab	20 15 24.4	-0.4
	comp=Z,8.8nm,0.7s,baz=55,slow=3.3,SNR=30							
GURO	Guroymak-BITLI	146.65	293	PKPdf		PKPdf	20 15 24.9	0.0
NC303	NORSAR Array S	149.63	351	PKPdf		PKPbc	20 15 31.7	-1.8
NB2	NORSAR Subarra	149.83	351	PKP		PKiKP	20 15 34.8	-0.2
	comp=Z,1.1nm,0.6s,baz=16,slow=2.6							
NOA	NORSAR Array B	149.83	351	PKPbc		PKPbc	20 15 34.1	+0.1
	comp=Z,1.6nm,0.7s,baz=14,slow=4.1,SNR=5.7							
HFS	Hagfors	150.31	348	PKPbc		PKPbc	20 15 35.2	0.0
	comp=Z,3.4nm,0.8s,baz=98,slow=7.6,SNR=4.6							
ASF	Jabal al Asfar	150.40	281	PKPbc		PKiKP	20 15 37.8	+0.6
	comp=Z,1.3nm,0.5s,baz=321,slow=2.3,SNR=2.7							
EIL	Elat	151.60	275	PKPbc		PKiKP	20 15 39.8	+0.2
	comp=Z,3.1nm,0.6s,baz=34,slow=18,SNR=2.4							
MMAI	Mount Meron Ar	151.75	282	PKPbc		PKiKP	20 15 41.0	+1.1
	comp=Z,2.7nm,0.6s,baz=81,slow=5.2,SNR=7.1							
AKASG	Malin Array Be	152.15	321	PKPbc		PKiKP	20 15 39.6	-0.4
	comp=Z,2.1nm,0.6s,baz=54,slow=2.6,SNR=11							
BRTR	Keskin Array B	153.08	297	PKPbc		PKiKP	20 15 42.5	0.0
	comp=Z,0.5nm,0.5s,baz=123,slow=3.7,SNR=1.9							
TORD	Torodi Ar. Bea	161.73	179	PKPab		PKPab	20 16 32.6	+1.2
	comp=Z,0.7nm,0.6s,baz=156,slow=2.6,SNR=4.5							

IDC 28 20:02:22.4±1.4, 5.92°S×142.99°E, h0km, mb3.5/2, mbtmp3.7/5, ML3.4/1, MS3.6/1, Error ellipse: s-maj=33.7km s-min=25.8km az=90.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.39	130	Pn	Pn	20 03 44.4	+0.2
	3.1nm,0.4s,baz=310,slow=18,SNR=2.4						
PMG				Sn	Sn	20 04 47.2	+0.3
	0.9nm,0.3s,baz=171,slow=20,SNR=1.4						
WRA	Warramunga Arr	16.28	210	Pn	Pn	20 06 12.3	-0.3
	0.2nm,0.3s,baz=28,slow=11,SNR=3.9						
WRA				Lg	Lg	20 10 57.1	
	0.1nm,0.3s,baz=33,slow=31,SNR=2.9						
	1.6nm,1.0s						
ASAR	Alice Springs	19.69	205	P	P	20 06 54.0	+0.6
	9.5nm,0.9s,baz=33,slow=9.9,SNR=39						
ASAR				LR	LR	20 14 52.7	
	comp=Z,166nm,20.8s,baz=80,slow=38						
MKAR	Makanchi Array	74.93	322	P	P	20 14 06.0	+0.6
	0.3nm,0.7s,baz=103,slow=6.2,SNR=2.8						
	0.3nm,0.7s						
ILAR	Eielson Array	87.00	24	P	P	20 15 08.8	-0.6
	0.4nm,0.7s,baz=262,slow=5.3,SNR=4.5						
	0.4nm,0.7s						

*IDC **28** 20:05:56.7±1.3, 30.31N×52.16E, h0km, mb3.7/7, mbtmp3.7/11, ML3.7/4, MS3.4/2, Error ellipse: s-maj=27.7km s-min=20.9km az=2.0*
*TEH **28** 20:05:56.4, 30.42N×52.23E, h5km, ML3.0*
*OMAN **28** 20:06:02.1±0.2, 30.25N×52.29E, h35km±34km, mb3.8/15, ms2.3/1, Error ellipse: s-maj=9.0km s-min=4.3km az=346.0*
*DSN **28** 20:06:04.8±1.8, 29.59N×51.77E, h15km, ML3.5/5, Error ellipse: s-maj=65.3km s-min=14.6km az=43.0*

ISC 28 20:05:58.5±0.6, 30.35N±0.04×52.23E±0.04, h15km, n82, σ1s55/99, mb3.7/7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	Shiraz	0.75	161	Pg	Pb	20 06 13.4	0.0
KLNJ	Kolanjah	0.85	320	Pg	Pg	20 06 12.6	-2.5
KAZ2	Kazeron-Fars-I	0.89	214	Pg	Pn	20 06 16.5	0.0
IRAM	Ramesheh	1.46	5	Pg	Pn	20 06 22.8	-1.7
AHBU	AHRAM	1.69	209	Pg	Pg	20 06 30.8	-0.2
IBRJ	Brojen	1.76	332	Pg	Pn	20 06 29.4	+0.6
ISAD	Sadrabad	2.00	38	Pn	Pn	20 06 33.2	+1.2
QIR1	Qir	2.00	159	Pn	Pb	20 06 34.3	-0.3
IGAR	Gharneh	2.05	356	Pn	Pn	20 06 33.8	+1.0
DSBU	Dashti - Bushe	2.15	203	Pn	Pb	20 06 37.5	+0.2
JHRM	Jahrom	2.18	147	Pn	Pb	20 06 36.9	-0.9
IMEH	Mehriz	2.30	63	Pn	Pn	20 06 38.1	+2.0
JHBN	Jahan bin	2.30	325	Pn	Pn	20 06 38.2	+1.9
IPIR	Pirpir	2.59	334	Pn	Pn	20 06 42.3	+2.1
ICHK	Chekchek	2.65	4	Pn	Pn	20 06 42.6	+1.6
IKLH	Kolahrood	3.01	350	Pn	Pn	20 06 47.7	+1.8
ANAR	Anarak	3.10	24	Pn	Pn	20 06 48.5	+1.3
IBAF	Bafgh	3.12	66	Pn	Pn	20 06 49.4	+2.0
LAR1	LAR	3.27	144	Pn	Pn	20 06 52.0	+2.7
QAMS	Qamsar	3.45	348	Pn	Pn	20 06 53.8	+1.9
KRSH	Karshahi	3.61	359	Pn	Pn	20 06 55.4	+1.4
KHGB	Koh Gabri	3.67	89	Pn	Pn	20 06 57.0	+2.0
ISFB	Sefidab	3.99	0	Pn	Pn	20 07 00.0	+0.8
KRM1	Kerman Provinc	4.36	87	Pn	Pn	20 07 06.8	+2.3
SAKB	Bahrain	4.61	199	P	Pn	20 07 10.4	+2.8
SAKB				S	Sn	20 08 01.0	+0.2
SHMA	Al-Shehemyia	4.62	194	P	Pn	20 07 10.5	+2.8
	SNR=6.5						
IKFM	Kafar-mosalman	4.88	311	Pn	Pn	20 07 13.7	+2.3
HAGD	Aghdareh	5.16	331	Pn	Pn	20 07 17.4	+1.9
IDMV	Damavand	5.21	358	Pn	Pn	20 07 18.2	+1.9
IRAZ	Razeghan	5.40	340	Pn	Pn	20 07 20.5	+1.9
SHME	Shamm	5.50	140	P	Pn	20 07 24.0	+4.1
IBZA	Bozab	5.52	319	Pn	Pn	20 07 22.7	+2.2
BANOM	Banah	5.69	140	P	Pn	20 07 22.4	-0.1
BANOM				S	Sn	20 08 26.7	-1.0
SMRA	Abu-Samra	5.72	193	P	Pn	20 07 25.5	+2.5
SMRA				S	Sn	20 08 27.7	-0.7
NAZ	Nazwa, Dubai	6.15	149	P	Pn	20 07 30.5	+1.6
NAZ	Nazwa, Dubai	6.15	149	P	Pn	20 07 30.1	+1.3
MDH	Madha	6.19	143	P	Pn	20 07 30.3	+0.9
MDH				S	Sn	20 08 40.2	+0.3
MDH	Madha	6.19	143	P	Pn	20 07 30.3	+0.9
MDH				S	Sn	20 08 37.6	-2.4
KLST	Kelardasht - M	6.23	351	Pn	Pn	20 07 32.1	+2.0
AJN	Ajban	6.26	156	P	Pn	20 07 29.9	-0.5
SLWR	Sila	6.28	184	P	Pn	20 07 31.2	+0.7
ASUD	Al Ashush, Dub	6.33	153	P	Pn	20 07 32.6	+1.2
ASUD	Al Ashush, Dub	6.33	153	P	Pn	20 07 33.5	+2.2
ASUD				S	Sn	20 08 43.5	0.0
FAQ	Al Faqa, Dubai	6.33	151	P	Pn	20 07 32.4	+1.1
FAQ	Al Faqa, Dubai	6.33	151	P	Pn	20 07 32.4	+1.1
FAQ				S	Sn	20 08 41.8	-1.7
UOSS	Minazif	6.44	146	P	Pn	20 07 33.3	+0.5
UOSS				S	Sn	20 08 44.0	-2.0
UOSS	Minazif	6.44	146	P	Pn	20 07 33.5	+0.7
UOSS				S	Sn	20 08 44.5	-1.5
HATD	Hatta, Dubai	6.50	147	P	Pn	20 07 34.8	+1.0
HATD	Hatta, Dubai	6.50	147	P	Pn	20 07 34.8	+1.0
HATD				S	Sn	20 08 47.8	+0.1
ASHO	Ashiyiah	6.59	148	P	Pn	20 07 35.9	+1.0
	SNR=12						
ASHO				S	Sn	20 08 49.3	-0.6
JASK	Jask - Hormozg	6.69	131	P	Pn	20 07 36.8	+0.5
JASK				S	Sn	20 08 50.5	-1.7
ALNE	Al Ain	7.01	153	P	Pn	20 07 41.6	+0.9
	SNR=6.5						
ALNE				S	Sn	20 08 59.0	-1.2
SOHO	SOHO	7.28	147	P	Pn	20 07 44.3	-0.1
SOHO	SOHO	7.28	147	P	Pn	20 07 43.8	-0.6
SOHO				S	Sn	20 09 05.4	-1.4
ARQ	Araqi	7.97	150	P	Pn	20 07 54.3	+0.5
	SNR=12						
ARQ				S	Sn	20 09 22.1	-1.7
UMZA	Um Al Zommool	8.05	160	P	Pn	20 07 55.6	+0.7
UMZA				S	Sn	20 09 24.2	-1.5
BSY	Bisya	8.79	148	P	Pn	20 08 04.8	-0.3
BSY				S	Sn	20 09 42.9	-1.0
SMDO	Samad	8.93	143	P	Pn	20 08 07.1	-0.1
SMDO				S	Sn	20 09 45.7	-1.9
GEYT	Alibeck	8.99	31	Pn	Pn	20 08 10.9	+3.0
	0.2nm,0.3s,baz=207,slow=9.2,SNR=2.5						
	1.4nm,0.7s						
RAYN	Ar Rayn	9.07	223	P	Pn	20 08 09.5	+0.5
WSAR	Wadi Sarin	9.10	140	Pn	Pn	20 08 09.7	+0.3
	1.1nm,0.3s,baz=327,slow=5.7,SNR=28						
WSAR				Sn	Sn	20 09 46.8	-4.9
	0.4nm,0.3s,baz=201,slow=22,SNR=1.7						
	2.3nm,0.3s						
NGCH	Negor - Chabah	9.32	120	P	Pn	20 08 11.8	-0.5
JMDO	Jabal Madar	9.53	145	P	Pn	20 08 15.1	-0.2
WBK	Wadi Bani Khal	9.79	140	P	Pn	20 08 18.7	-0.2
	SNR=7.1						
JLN	Jalan Bani Buh	10.40	140	P	Pn	20 08 26.0	-1.2
MHTO	MHTO	10.66	150	P	Pn	20 08 29.4	-1.3
	SNR=5.2						
DQM	DQM	11.44	154	P	Pn	20 08 39.4	-1.9
DOK	Doka	11.81	171	P	Pn	20 08 45.5	-1.0
WHFO	Wadi Hawf	12.46	173	P	Pn	20 08 54.2	-1.2
DMTO	DMTO	12.82	168	P	Pn	20 08 59.8	-0.6
ABTO	Aybut	12.98	175	P	Pn	20 09 02.1	-0.4
ASF	Jabal al Asfar	13.24	282	Pn	Pn	20 09 04.6	-1.5
	0.3nm,0.3s,baz=202,slow=1.9,SNR=2.5						
	1.0nm,0.4s						
MMAI	Mount Meron Ar	14.57	285	Pn	Pn	20 09 25.6	+1.3
	0.7nm,0.3s,baz=91,slow=15,SNR=2.2						
	0.2nm,0.3s						
BVAR	Borovoye Array	26.26	25	P	P	20 11 34.0	+1.0
	1.0nm,0.7s,baz=216,slow=7.1,SNR=5.1						
	1.0nm,0.7s						
MKAR	Makanchi Array	28.44	46	P	P	20 11 54.2	+1.5
	0.3nm,0.8s,baz=238,slow=8.3,SNR=2.5						
	0.3nm,0.8s						
VRAC	Vranov	32.86	315	LR	LR	20 29 05.2	
	comp=Z,47nm,18.9s,baz=268,slow=42						
ZALV	Zalesovo Beam	33.28	35	P	P	20 12 35.5	+0.3
	0.5nm,0.4s,baz=230,slow=9.0,SNR=3.2						
	0.5nm,0.4s						
FINES	FINESS Array B	35.53	339	P	P	20 12 54.9	+0.3
	2.4nm,0.9s,baz=153,slow=9.4,SNR=1.9						
	2.4nm,0.9s						
HFS	Hagfors	39.31	331	P	P	20 13 26.9	+0.2
	2.6nm,0.8s,baz=134,slow=6.2,SNR=5.6						
	2.6nm,0.8s						
CMAR	Chiang Mai Arr	43.88	95	P	P	20 14 05.5	+0.8
	0.3nm,0.5s,baz=289,slow=8.2,SNR=3.5						
	0.3nm,0.5s						
TORD	Torodi Ar. Bea	49.54	261	P	P	20 14 49.2	+0.1
	0.7nm,0.8s,baz=52,slow=8.4,SNR=4.4						
	0.7nm,0.8s						
BBB	Bella Bella	97.82	0	LR	LR	21 12 15.1	
	comp=Z,25nm,18.6s,baz=32,slow=41						

*IDC **28** 20:14:22.5±2.2, 43.19N×105.18W, h0km, mb2.8/1, mbtmp3.1/4, ML2.3/2, MS2.8/5, Error ellipse: s-maj=45.1km s-min=11.5km az=155.0*
*NEIC **28** 20:14:23.6±1.5, 43.60N±0.04×105.24W±0.09, h0km±1km, ML3.3/77, Error ellipse: s-maj=11.0km s-min=5.1km az=109.0*

ISC 28 20:14:24.0±0.9, 43.60N±0.04×105.32W±0.03, h0km, n47, σ2s14/38, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.06	60	Pg	Pg	20 14 43.4	-1.0
K22A	Casper	1.30	223	Pg	Pg	20 14 49.0	+0.1
PHWY	Pilot Hill	2.30	183	Pn	Pn	20 15 04.2	+0.7
PHWY				IAML		20 15 50.5	
	112nm,0.7s						
RWWY	Rawlins	2.37	217	Pn	Pn	20 15 05.6	+1.2
RWWY				IAML		20 15 41.0	
	218nm,1.2s						
RWWY				IAML		20 15 45.3	
	206nm,1.1s						
N23A	Red Feather La	2.75	190	Pn	Pn	20 15 10.9	+1.3
N23A				IAML		20 15 58.5	
	comp=N,126nm,1.1s						
N23A				IAML		20 16 02.1	
	comp=E,119nm,1.2s						
BRIGG	Briggsdale	3.11	166	Pn	Pn	20 15 15.8	+1.4
LAO	LASA Array	3.15	349		Pn	20 15 16.8	+1.8
PD31	Pinedale Array	3.21	256	Pn	Pn	20 15 17.5	+1.6
PDAR	Pinedale Array	3.21	256	Pn	Pn	20 15 18.9	+3.0
PDAR	Pinedale Array	3.21	256	Pn	Pn	20 15 17.6	+1.6
	comp=E,3.2nm,0.4s,baz=76,slow=16,SNR=40						
PDAR				Lg	Lg	20 16 03.2	
	comp=E,10nm,0.3s,baz=80,slow=32,SNR=2.4						
PDAR				LR	LR	20 16 46.7	
	comp=E,140nm,18.8s,baz=100,slow=44						
RLMT	Red Lodge	3.21	300	Pn	Pn	20 15 17.2	+1.2
RLMT				IAML		20 16 19.7	
	comp=E,53nm,0.9s						
OGNE	Ogallala	3.61	136	Pg	Pb	20 15 29.0	+0.2
YMP	Mirror Lake Pl	3.66	290	Pn	Pn	20 15 24.0	+1.8
LKWY	Lake	3.78	286	Pn	Pb	20 15 30.5	-1.4
LKWY				IAML		20 15 50.1	
	comp=E,67nm,1.0s						
LKWY				IAML		20 16 36.0	
	comp=E,51nm,1.4s						
ISCO	Idaho Springs	3.81	183		Pn	20 15 27.0	+2.8
LOHW	Long Hollow	3.84	272		Pb	20 15 29.6	-3.1
H17A	Grant Village	3.87	284		Pb	20 15 31.0	-2.3
H17A				IAML		20 16 32.6	
	comp=N,41nm,1.3s						
H17A				IAML		20 16 39.0	
	comp=E,27nm,1.4s						
FLWY	Flagg Ranch	3.92	279		Pb	20 15 31.1	-3.1
FLWY				IAML		20 16 42.0	
	comp=E,46nm,1.4s						
MOOW	Moose Ponds	3.94	274		Pn	20 15 29.6	+3.6
SNOW	Snow King Moun	3.95	270	Pn	Pb	20 15 33.7	-1.0
SNOW				IAML		20 17 11.6	
	comp=E,56nm,1.3s						
YNR	Norris Junctio	4.01	288	Pn	Pn	20 15 28.3	+1.3
YNR				IAML		20 16 43.2	
	comp=E,28nm,1.3s						
REDW	Red Top Meadow	4.03	268		Pn	20 15 28.3	+1.0
YFT	Old Faithful	4.07	284	Pn	Pn	20 15 29.3	+1.6
YFT				IAML		20 16 40.9	
	comp=N,34nm,1.4s						
YFT				IAML		20 16 41.0	
	comp=E,30nm,1.4s						
TPAW	Teton Pass	4.09	270	Pn	Pn	20 15 30.4	+2.3
TPAW				IAML		20 16 50.9	
	comp=E,34nm,1.3s						
TPAW				IAML		20 16 54.9	
	comp=E,46nm,1.0s						
O20A	White River Ci	4.09	213	Pn	Pn	20 15 28.5	+0.4
FXWY	Fox Creek	4.14	272		Pn	20 15 31.7	+2.9
YHH	Holmes Hill	4.15	288	Pn	Pn	20 15 29.0	+0.1
K30B	Basset	4.28	101	Pg	Pg	20 15 43.8	-2.3
AHID	Auburn Hatcher	4.31	261		Pn	20 15 34.7	+3.7
AHID				IAML		20 16 48.1	
	comp=E,35nm,1.3s						
AHID				IAML		20 16 56.2	
	comp=E,40nm,1.4s						
RDMU	Red Mountain	4.38	228	IAML		20 16 56.0	
	comp=E,42nm,1.2s						
RDMU				IAML		20 17 32.2	
	comp=N,33nm,1.5s						
YHL	Hebgen Lake	4.39	289		Pb	20 15 38.4	-3.8
E28A	Huff	4.42	46	Pn	Pb	20 15 40.3	-2.3
SMCO	Snowmass	4.59	196	Pn	Pg	20 15 50.2	-1.9
SMCO				IAML		20 16 57.8	
	comp=N,27nm,1.3s						
SMCO				IAML		20 17 40.2	
	comp=N,36nm,1.2s						
BOZ	Bozeman (W)	4.93	296	IAML		20 17 20.4	
	comp=N,14nm,1.0s						
BOZ				IAML		20 18 11.0	
	comp=N,16nm,4.4s						
DGMT	Dagmar	4.93	9		Pb	20 15 51.0	-0.3
HWUT	Hardware Ranch	5.02	249	IAML		20 17 27.2	
	comp=N,26nm,1.2s						
BSUT	Blindstream Ca	5.08	235	IAML		20 17 18.2	
	comp=E,22nm,3.6s						
BSUT				IAML		20 17 19.5	
	comp=N,16nm,1.4s						
EGMT	Eagleton	5.40	327		Pn	20 15 48.0	+2.2
CTU	Camp Tracy	5.59	241		Pn	20 15 54.6	+5.9
LYMT	Lyon Mountain	5.96	307	Pn	Pn	20 15 55.2	+1.5
ELK	Elko	7.90	252	Pn	Pn	20 16 21.2	+0.9
	comp=N,0.1nm,0.3s,baz=200,slow=18,SNR=1.6						
ELK				Lg	Lg	20 18 31.0	
	comp=N,0.1nm,0.3s,baz=32,slow=17,SNR=1.4						
	comp=N,0.4nm,0.5s						
ANMO	Albuquerque	8.69	186	LR	LR	20 19 02.0	
	comp=N,37nm,21.8s,baz=104,slow=34						
I10CA	LAC DU BONNET	9.16	41	I	I	21 07 20.0	
	comp=N,0.1nm,1.3s,baz=222,slow=330,SNR=4.5						
ULM	Lac du Bonnet	9.27	41	Pn	Pn	20 16 37.8	-1.0
	comp=N,0.4nm,0.3s,baz=227,slow=10,SNR=3.0						
ULM				Lg	Lg	20 19 09.7	
	comp=N,0.3nm,0.3s,baz=120,slow=20,SNR=3.5						
ULM				LR	LR	20 20 47.2	
	comp=N,85nm,18.4s,baz=146,slow=40						
	comp=N,1.1nm,0.4s						
NEW	Newport	9.45	304	LR	LR	20 21 29.6	
	comp=N,48nm,19.3s,baz=100,slow=44						
TXAR	Lajitas Array	14.30	174	LR	LR	20 23 47.6	
	comp=N,49nm,19.3s,baz=8.5,slow=41						
YKA	Yellowknife Ar	19.69	347	P	Pn	20 18 59.5	+3.6
	comp=N,0.4nm,0.9s,baz=155,slow=10,SNR=3.2						
	comp=N,0.4nm,0.9s						

IDC 28 20:36:14.3±3.2, 6.17S×142.20E, h0km, mb3.7/2, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=106.7km s-min=24.9km az=101.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.68	208	Pn	Pn	20 39 55.8	-1.0
	0.3nm,0.3s,baz=32,slow=13,SNR=8.6						
WRA				Sn	Sn	20 42 42.4	-9.0
	0.1nm,0.3s,baz=24,slow=22,SNR=2.5						
WRA				Lg	Lg	20 44 28.5	
	0.1nm,0.3s,baz=32,slow=26,SNR=1.6						
	0.8nm,0.4s						
ASAR	Alice Springs	19.14	204	P	Pn	20 40 40.9	+0.8
	0.3nm,0.3s,baz=34,slow=9.9,SNR=46						
ASAR				S	Sn	20 44 09.6	-5.7
	0.2nm,0.5s,baz=22,slow=31,SNR=1.8						
ASAR				Lg	Lg	20 46 22.2	
	baz=27,slow=29,SNR=1.3						
	4.1nm,0.7s						
MKAR	Makanchi Array	74.63	322	P	P	20 47 55.9	+0.3
	0.6nm,0.9s,baz=104,slow=6.9,SNR=5.0						
	0.6nm,0.9s						
BVAR	Borovoye Array	84.12	325	P	P	20 48 46.5	-0.7
	0.4nm,0.5s,baz=96,slow=5.8,SNR=3.6						
	0.4nm,0.5s						

*IDC **28** 20:49:03.8±1.0, 52.00N×171.36E, h0km, mb3.9/15, mbtmp4.0/17, ML4.5/2, MS2.9/2, Error ellipse: s-maj=29.1km s-min=12.9km az=174.0*
*NEIC **28** 20:49:04.3±1.4, 51.6N±0.2×171.5E±0.1, h19km±7km, mb4.3/56, Error ellipse: s-maj=35.3km s-min=6.6km az=165.0*
*KRSC **28** 20:49:10.5±1.7, 52.08N×170.25E, h18km±69km, Ml4.4*

ISC 28 20:49:04.4±0.8, 51.8N±0.1×171.44E±0.07, h10km, n105, σ0s94/86, mb4.3/36, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	Shemya Is, Ala	1.87	60	Pn	Pn	20 49 36.0	-0.5
	127nm,0.3s,baz=162,slow=1.7,SNR=27						
SHEM				Sn	Sn	20 49 58.1	-2.0
	136nm,0.3s,baz=275,slow=21,SNR=16						
BKI	Bering	4.71	318	eS	Sn	20 51 02.3	-7.8
SPN	Mys Shipunski	7.10	285	eP	Pn	20 50 47.2	-1.1
SPN				eS	Sn	20 51 58.5	-10
TUMD	Tumrok D	7.41	302	eP	Pn	20 50 51.5	-1.0
TUMD				eS	Sn	20 52 06.6	-10
TUMR	Tumrok	7.57	302	eP	Pn	20 50 54.1	-0.8
TUMR				eS	Sn	20 52 10.6	-10
BZGR	Bezymyannyi-Gr	7.57	307	eP	Pn	20 50 55.1	+0.2
BZGR				eS	Sn	20 52 11.7	-9.0
BZP	Bezymyannyi-Pe	7.64	307	eP	Pn	20 50 54.9	-0.9
BZWR	Bezymyannyi-We	7.69	307	eP	Pn	20 50 56.1	-0.3
KMNR	Kamenistaya	7.72	305	eP	Pn	20 50 56.4	-0.5
SRKR	Sorokina	7.72	313	eS	Sn	20 52 16.1	-8.3
KRSR	Krestovskiy	7.77	309	eP	Pn	20 50 58.6	+1.0
KRSR				eS	Sn	20 52 18.5	-7.2
KPT	Kopyto	7.82	306	eP	Pn	20 50 58.8	+0.6
UGLR	Uglovaya	7.83	285	eP	Pn	20 50 58.3	0.0
UGLR				eS	Sn	20 52 17.6	-9.4
SMAR	Somma

	comp=Z,11nm,0.8s							
J19K	**Poorman**	**21.03**	**42**	P		**P**	**20 53 48.2**	**+0.2**
J19K				IAmb		IAmb	20 53 52.4	
	comp=Z,9.1nm,0.6s							
H19K	**Roundabout Mou**	**21.29**	**38**	P		**P**	**20 53 51.1**	**+0.4**
H19K				IAmb		IAmb	20 53 51.2	
	comp=Z,14nm,1.4s							
C18K	**Utukok River**	**21.34**	**28**	P		**P**	**20 53 51.4**	**0.0**
C18K				IAmb		IAmb	20 53 55.4	
	comp=Z,6.3nm,0.7s							
KDAK	**Kodiak Island**	**21.39**	**60**	P		**P**	**20 53 51.3**	**-0.5**
	comp=Z,11nm,0.4s,baz=300,slow=8.0,SNR=24							
KDAK				LR		LR	21 00 53.9	
	comp=Z,55nm,19.2s,baz=289,slow=33							
	comp=Z,11nm,0.4s							
J20K	**Nowinta River**	**21.70**	**42**	P		**P**	**20 53 56.0**	**+0.8**
J20K				IAmb		IAmb	20 53 59.1	
	comp=Z,8.5nm,0.7s							
C19K	**Lookout Ridge**	**22.08**	**28**			**P**	**20 53 59.6**	**+0.3**
D19K	**Kuna River**	**22.16**	**30**	P		**P**	**20 54 00.9**	**+0.7**
D19K				IAmb		IAmb	20 54 06.6	
	comp=Z,12nm,1.3s							
CAST	**Castle Rocks**	**22.37**	**45**	P		**P**	**20 54 01.9**	**-0.5**
IMAR	**Indian Mountai**	**22.49**	**38**	P		**P**	**20 54 04.2**	**+0.5**
H21K	**Melozitna Rive**	**22.73**	**39**			**P**	**20 54 06.4**	**+0.2**
H21K				IAmb		IAmb	20 54 09.1	
	comp=Z,11nm,0.8s							
G21K	**Allakaket**	**22.79**	**36**	P		**P**	**20 54 06.4**	**-0.4**
I23K	**Minto, Yukon-K**	**23.96**	**41**	IAmb		IAmb	20 54 23.0	
	comp=Z,5.4nm,0.7s							
E22K	**Anaktuvuk Pass**	**24.04**	**33**	IAmb		IAmb	20 54 20.7	
	comp=Z,5.7nm,0.6s							
D22K	**Ayikyak River**	**24.08**	**31**	IAmb		IAmb	20 54 21.2	
	comp=Z,6.6nm,0.8s							
G23K	**Bananza Creek**	**24.16**	**37**	IAmb		IAmb	20 54 22.6	
	comp=Z,6.8nm,0.6s							
WRH	**Wood River Hil**	**24.33**	**43**	IAmb		IAmb	20 54 24.2	
	comp=Z,6.2nm,0.7s							
COLA	**College**	**24.51**	**42**	P		**P**	**20 54 21.5**	**-2.1**
YAK	**Yakutsk**	**24.54**	**311**	P		**P**	**20 54 22.1**	**-1.7**
	comp=Z,8.3nm,0.6s,baz=121,slow=0.8,SNR=5.5							
YAK				LR		LR	21 02 58.4	
	comp=Z,17nm,20.4s,baz=154,slow=34							
	comp=Z,8.3nm,0.6s							
B22K	**Teshekpuk Lake**	**24.56**	**28**			**P**	**20 54 23.1**	**-0.8**
H24K	**Noodor Dome**	**24.73**	**40**	IAmb		IAmb	20 54 32.9	
	comp=Z,9.0nm,1.2s							
IL31		**24.89**	**43**	IAmb		IAmb	20 54 28.4	
	comp=Z,5.4nm,0.7s							
ILAR	**Eielson Array**	**24.89**	**43**	P		**P**	**20 54 26.6**	**-0.5**
	comp=Z,4.6nm,0.7s,baz=248,slow=8.6,SNR=21							
	comp=Z,4.6nm,0.7s							
J25K	**Salcha River,**	**25.51**	**43**			**P**	**20 54 31.5**	**-1.1**
J25K				IAmb		IAmb	20 54 34.6	
	comp=Z,13nm,1.4s							
PRP	**Porcupine Dome**	**25.61**	**41**	IAmb		IAmb	20 54 36.1	
	comp=Z,3.6nm,0.6s							
RIDG	**Independent Ri**	**25.61**	**45**	P		**P**	**20 54 33.3**	**-0.3**
RIDG				IAmb		IAmb	20 55 05.8	
	comp=Z,15nm,1.4s							
SCRK	**Sand Creek**	**26.02**	**45**			**P**	**20 54 37.1**	**-0.3**
E25K	**Arctic Village**	**26.23**	**35**	IAmb		IAmb	20 54 42.9	
	comp=Z,6.4nm,1.1s							
J26L	**Joseph Creek**	**26.26**	**44**			**P**	**20 54 38.5**	**-1.1**
K29M	**Barlow Dome**	**28.86**	**46**	IAmb		IAmb	20 55 05.7	
	comp=Z,5.9nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**32.22**	**188**	T		T	21 29 40.6	
	baz=5.2,slow=76,SNR=3.9							
H11N3	**WAKE ISLAND Hy**	**32.23**	**188**	T		T	21 29 40.8	
	baz=5.2,slow=76,SNR=8.3							
H11N1	**WAKE ISLAND Hy**	**32.24**	**188**	T		T	21 29 41.9	
	baz=5.2,slow=76,SNR=7.5							
H11S1	**WAKE ISLAND Hy**	**33.45**	**188**	T		T	21 31 15.9	
	baz=5.3,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**33.46**	**188**	T		T	21 31 16.9	
	baz=5.3,slow=76,SNR=12							
H11S2	**WAKE ISLAND Hy**	**33.46**	**188**	T		T	21 31 12.7	
	baz=5.3,slow=76,SNR=11							
YKA	**Yellowknife Ar**	**39.28**	**45**	P		**P**	**20 56 33.6**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=289,slow=8.2,SNR=13							
	comp=Z,0.9nm,0.6s							
SONM	**Songino Array**	**40.91**	**291**	P		**P**	**20 56 47.7**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=60,slow=7.4,SNR=12							
	comp=Z,1.1nm,0.6s							
NVAR	**Mina Array Bea**	**49.46**	**77**	P		**P**	**20 57 56.4**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=294,slow=8.8,SNR=3.5							
	comp=Z,0.5nm,0.8s							
PDAR	**Pinedale Array**	**51.85**	**67**	P		**P**	**20 58 13.6**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=305,slow=5.4,SNR=2.6							
	comp=Z,1.0nm,1.1s							
KURK	**Kurchatov**	**54.14**	**308**	P		**P**	**20 58 28.4**	**-0.9**
KURK				IAmb		IAmb	20 58 29.8	
	comp=Z,2.6nm,0.9s							
KURBB	**Kurchatov Arra**	**54.25**	**308**	P		**P**	**20 58 29.6**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=53,slow=7.3,SNR=11							
	comp=Z,1.8nm,0.6s							
MKAR	**Makanchi Array**	**54.83**	**303**	P		**P**	**20 58 33.4**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=56,slow=7.1,SNR=4.5							
MKAR				PcP		**PcP**	**20 59 37.1**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=36,slow=5.4,SNR=1.7							
	comp=Z,0.2nm,0.5s							
BVAR	**Borovoye Array**	**56.43**	**315**	P		**P**	**20 58 46.0**	**+0.2**
	comp=Z,6.0nm,1.0s,baz=52,slow=6.9,SNR=14							
BVAR				PcP		**PcP**	**20 59 43.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=2.3							
	comp=Z,6.0nm,1.0s							
BRVK	**Borovoye**	**56.46**	**315**	P		**P**	**20 58 45.9**	**-0.1**
BRVK				IAmb		IAmb	20 58 46.9	
	comp=Z,3.0nm,0.7s							
KK31	**Karatay Array**	**63.41**	**306**	P		**P**	**20 59 32.6**	**-1.4**
KK31				IAmb		IAmb	21 00 12.6	
	comp=Z,3.3nm,1.4s							
KKAR	**Karatay Array**	**63.41**	**306**	P		**P**	**20 59 32.6**	**-1.4**
KKAR				IAmb		IAmb	21 00 12.6	
	comp=Z,3.2nm,1.4s							
CMAR	**Chiang Mai Arr**	**64.92**	**268**	P		**P**	**20 59 45.5**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=45,slow=5.2,SNR=5.4							
	comp=Z,0.5nm,0.3s							
CCAR	**Cane Creek**	**68.01**	**63**	P		**P**	**21 00 02.5**	**-1.2**
AKASG	**Malin Array Be**	**72.96**	**336**	P		**P**	**21 00 33.8**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=25,slow=6.1,SNR=2.7							
	comp=Z,0.4nm,0.4s							
WRA	**Warramunga Arr**	**78.47**	**215**	P		**P**	**21 01 05.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=23,slow=7.2,SNR=1.6							
	comp=Z,0.4nm,0.7s							
BRTR	**Keskin Array B**	**81.70**	**328**	P		**P**	**21 01 23.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=22,slow=3.1,SNR=1.5							
	comp=Z,0.8nm,0.8s							
H03N2	**Juan Fernandez**	**127.18**	**99**	T		T	23 28 30.4	
	baz=314,slow=77,SNR=3.8							
H03N1	**Juan Fernandez**	**127.19**	**99**	T		T	23 28 28.4	
	baz=314,slow=77,SNR=4.4							
H03N3	**Juan Fernandez**	**127.20**	**99**	T		T	23 28 27.5	
	baz=314,slow=77,SNR=4.5							

IDC 28 20:49:19.1±2.0, 5.70S×143.30E, h0km, mb3.5/2, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=46.4km s-min=29.9km az=59.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.31**	**134**	Pn	Pn	20 50 39.5	-0.2
	3.7nm,0.5s,baz=267,slow=6.0,SNR=2.3						
PMG				Sn	Sn	20 51 43.8	+2.1
	0.8nm,0.3s,baz=16,slow=21,SNR=1.6						
WRA	**Warramunga Arr**	**16.63**	**211**	Pn	Pn	20 53 12.6	-1.2
	0.2nm,0.3s,baz=32,slow=12,SNR=4.9						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**20.03**	**206**	P	P	20 53 54.3	+0.5
	3.0nm,1.0s,baz=37,slow=10.0,SNR=22						
	3.0nm,1.0s						
MKAR	**Makanchi Array**	**74.95**	**322**	P	P	21 01 02.2	0.0
	0.4nm,1.0s,baz=117,slow=5.2,SNR=2.8						
	0.4nm,1.0s						

SJA 28 21:01:39.4±0.6, 23.94S×66.75W, h211km±7km, ML3.8, MW3.6, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.38**	**124**	*eP*	Pn	21 02 13.9	+0.7
YJA	**Yavi**	**2.10**	**33**	*eP*	Pn	21 02 21.3	+1.1
FSA	**Cafayete**	**2.27**	**162**	*eP*	Pn	21 02 22.4	+0.7
FSA				*eS*	S	21 02 53.6	-0.8
LVC	**Limon Verde**	**2.39**	**303**	*eP*	Pn	21 02 23.9	+0.7
PB15	**IPOC Station P**	**2.60**	**286**	*eP*	Pn	21 02 26.2	+0.8
PB15				*eS*	S	21 03 00.2	-0.6
PB15				IAML		21 03 05.1	
	comp=Z,921nm,0.2s						
GO02	**Mina Guanaco**	**2.86**	**244**	*eP*	Pn	21 02 29.0	+0.7
GO02				*eS*	S	21 03 06.2	+0.1
PB06	**IPOC Station P**	**2.87**	**295**	*eP*	Pn	21 02 28.8	+0.5
PB06				*eS*	S	21 03 05.2	-0.9
PB06				IAML		21 03 11.5	
	comp=Z,159nm,0.4s						
AHML	**Horco Molle**	**3.10**	**156**	*eP*	Pn	21 02 31.5	+0.6
PB09	**IPOC Station P**	**3.14**	**312**	*eP*	Pn	21 02 32.3	+0.8
PB09				*eS*	S	21 03 13.8	+2.1
PB09				IAML		21 03 14.9	
	comp=Z,96nm,0.2s						
PB14	**IPOC Station P**	**3.40**	**258**	*eP*	Pn	21 02 35.1	+0.4
PB14				*eS*	S	21 03 16.7	-0.8
PB14				IAML		21 03 17.6	
	comp=Z,134nm,0.2s						
PB04	**IPOC Station P**	**3.52**	**296**	*eP*	Pn	21 02 36.2	+0.3
PB04				*eS*	S	21 03 18.2	-1.6
PB04				IAML		21 03 21.6	
	comp=Z,167nm,0.3s						
AC02	**Maricunga**	**3.59**	**216**	*eP*	Pn	21 02 38.7	+1.6
PB07	**IPOC Station P**	**3.64**	**307**	*eP*	Pn	21 02 37.4	0.0
PB07				*eS*	S	21 03 21.5	-0.9
PB07				IAML		21 03 22.6	
	comp=Z,159nm,0.3s						
PB01	**IPOC Station P**	**3.84**	**318**	*eP*	Pn	21 02 39.7	0.0
PB01				IAML		21 03 58.8	
	comp=Z,174nm,0.1s						
AC01	**Pan de Azucar**	**4.12**	**237**	*eP*	Pn	21 02 42.3	-0.8
AC01				IAML		21 03 31.8	
	comp=Z,50nm,0.2s						
CYA	**Choya**	**4.56**	**169**	*eP*	Pn	21 02 49.9	+1.3
TA01	**Diego Aracena**	**4.62**	**316**	*eP*	Pn	21 02 48.8	-0.6
TA01				*eS*	S	21 03 42.8	-1.4
TA01				IAML		21 03 50.9	
	comp=Z,45nm,0.2s						
GO01	**Chusmiza**	**4.82**	**331**	*eP*	Pn	21 02 52.6	+0.3
PB11	**IPOC Station P**	**4.96**	**326**	*eP*	Pn	21 02 52.8	-1.0
PB11				IAML		21 03 55.7	
	comp=Z,57nm,0.3s						

IDC 28 21:05:21.0±5.0, 18.38N×45.91W, h0km, mb3.7/4, mbtmp3.7/4, MS3.6/28, Error ellipse: s-maj=208.0km s-min=34.9km az=22.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**19.88**	**248**	LR	LR	21 16 55.7	
	comp=Z,84nm,21.5s,slow=35						
SDV	**Santo Domingo**	**25.78**	**252**	LR	LR	21 22 01.5	
	comp=Z,95nm,19.5s,baz=76,slow=39						
BBTS	**Babate**	**28.39**	**93**	LR	LR	21 19 58.4	
	comp=Z,232nm,21.7s,baz=118,slow=31						
ROSC	**El Rosal**	**30.84**	**248**	LR	LR	21 27 14.7	
	comp=Z,87nm,18.0s,baz=88,slow=43						
TKL	**Tuckaleechee C**	**37.59**	**305**	LR	LR	21 26 40.5	
	comp=Z,57nm,18.8s,baz=123,slow=34						
SCHQ	**Schefferville**	**39.75**	**341**	LR	LR	21 27 12.8	
	comp=Z,68nm,21.7s,baz=165,slow=33						
TEIG	**Tepich**	**39.95**	**280**	LR	LR	21 26 57.4	
	comp=Z,653nm,20.6s,baz=192,slow=32						
H10N3	**ASCENSION HYDR**	**40.49**	**127**	T	T	21 55 55.2	
	baz=308,slow=74,SNR=17						
H10N2	**ASCENSION HYDR**	**40.49**	**127**	T	T	21 55 54.5	
	baz=308,slow=74,SNR=18						
H10N1	**ASCENSION HYDR**	**40.51**	**127**	T	T	21 55 47.7	
	baz=308,slow=74,SNR=23						
ATAH	**Atahualpa**	**40.87**	**235**	LR	LR	21 30 26.2	
	comp=Z,68nm,18.4s,baz=48,slow=37						
DBIC	**Dimbokro**	**41.63**	**101**	LR	LR	21 26 48.1	
	comp=Z,144nm,20.7s,baz=264,slow=31						
ESDC	**Sonseca Array**	**41.89**	**51**	LR	LR	21 26 58.2	
	comp=Z,111nm,19.0s,baz=218,slow=31						
NNA	**Nana**	**42.92**	**228**	LR	LR	21 32 03.3	
	comp=Z,50nm,18.3s,baz=30,slow=37						
TORD	**Torodi Ar. Bea**	**46.01**	**89**	P	P	21 13 46.3	-0.3
	0.6nm,0.9s,baz=270,slow=7.2,SNR=2.9						
TORD				LR	LR	21 30 22.8	
	comp=Z,108nm,21.4s,baz=319,slow=33						
	0.6nm,0.9s						
LVC	**Limon Verde**	**46.54**	**210**	LR	LR	21 34 33.0	
	comp=Z,28nm,18.7s,baz=360,slow=38						
CMIG	**Matias Romero**	**46.55**	**276**	LR	LR	21 33 09.1	
	comp=Z,21nm,20.1s,baz=180,slow=36						
TXAR	**Lajitas Array**	**53.48**	**293**	LR	LR	21 35 17.5	
	comp=Z,33nm,21.9s,baz=58,slow=34						
DAVOX	**Davos/Dischmat**	**53.51**	**45**	LR	LR	21 36 21.7	
	comp=Z,76nm,18.3s,baz=254,slow=35						
ANMO	**Albuquerque**	**55.78**	**300**	LR	LR	21 39 11.0	
	comp=Z,40nm,18.1s,baz=192,slow=36						
PDAR	**Pinedale Array**	**58.50**	**309**	P	P	21 15 18.9	-0.7
	0.9nm,1.0s,baz=89,slow=8.2,SNR=4.4						
PDAR				LR	LR	21 38 51.8	
	comp=Z,48nm,19.9s,baz=106,slow=34						
	0.9nm,1.0s						
ELK	**Elko**	**62.71**	**307**	LR	LR	21 40 04.5	
	comp=Z,42nm,21.7s,baz=90,slow=33						
YKA	**Yellowknife Ar**	**64.03**	**331**	P	P	21 15 55.8	-0.5
	0.3nm,0.7s,baz=96,slow=7.6,SNR=5.1						
	0.3nm,0.7s						
NEW	**Newport**	**64.05**	**315**	LR	LR	21 41 47.8	
	comp=Z,40nm,20.8s,baz=82,slow=34						
PFO	**Pinyon Flats O**	**64.11**	**299**	LR	LR	21 41 44.0	
	comp=Z,52nm,21.2s,baz=54,slow=34						
MLR	**Muntele Rosu**	**64.48**	**48**	LR	LR	21 43 34.3	
	comp=Z,46nm,18.8s,baz=274,slow=36						
YBH	**Yreka Blue Hor**	**68.27**	**308**	LR	LR	21 46 50.9	
	comp=Z,28nm,18.1s,baz=136,slow=36						
BBB	**Bella Bella**	**70.95**	**320**	LR	LR	21 46 55.6	
	comp=Z,53nm,18.7s,baz=32,slow=35						
EIL	**Elat**	**73.40**	**64**	LR	LR	21 48 08.4	
	comp=Z,34nm,21.9s,baz=245,slow=35						
KIRV	**Kirov**	**77.24**	**32**	LR	LR	21 47 17.2	
	comp=Z,49nm,18.8s,baz=285,slow=33						
ILAR	**Eielson Array**	**78.13**	**335**	P	P	21 17 22.8	+1.0
	1.9nm,0.9s,baz=68,slow=4.5,SNR=6.4						
	1.9nm,0.9s						
LSZ	**Lusaka**	**80.27**	**110**	LR	LR	21 46 51.0	
	comp=Z,47nm,20.3s,baz=228,slow=31						
LBTB	**Lobatse**	**81.87**	**120**	LR	LR	21 48 09.1	
	comp=Z,43nm,20.4s,baz=225,slow=31						

IDC 28 21:06:29.5±2.6, 6.06S×130.61E, h0km, mb3.3/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=149.0km s-min=34.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.27**	**166**	Pn	Pn	21 09 51.2	-1.8
	0.1nm,0.3s,baz=349,slow=13,SNR=1.6						
WRA				Sn	Sn	21 12 14.9	-17
	0.2nm,0.3s,baz=340,slow=22,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.79**	**170**	P	P	21 10 39.9	+0.3
	0.1nm,0.3s,baz=345,slow=10,SNR=4.5						
ASAR				S	Sn	21 13 45.0	-13
	0.3nm,0.4s,baz=360,slow=29,SNR=2.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**67.78**	**326**	P	P	21 17 29.2	0.0
	0.1nm,0.4s,baz=124,slow=7.5,SNR=2.3						
	0.1nm,0.4s						

*IDC **28** 21:07:11.8±3.1, 50.59N×171.01W, h0km, mb3.4/4, mbtmp3.4/5, ML3.4/1, MS3.0/1, Error ellipse: s-maj=82.0km s-min=30.2km az=1.0*
*NEIC **28** 21:07:14.5±1.4, 50.8N±0.1×170.97W±0.09, h15km±7km, mb3.8/16, ML3.6/8, ML3.5(AEIC), Error ellipse: s-maj=16.5km s-min=7.1km az=164.0*
*AEIC **28** 21:07:18.4±1.0, 50.8N±0.1×170.98W±0.08, h10km±6km, Error ellipse: s-maj=16.7km s-min=6.7km az=170.0*
ISC 28 21:07:16.3±1.3, 50.9N±0.1×171.02W±0.05, h23km, n59, σ0.80/55, mb3.4/4, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**2.03**	**20**		**Pn**	**21 07 48.9**	**-0.1**
CLCO	**Concord Point,**	**2.03**	**23**		**Sn**	**21 08 13.2**	**-0.5**
KOFP	**Korovin Flat P**	**2.35**	**306**		**Pn**	**21 07 53.8**	**+0.3**
ATKA	**Atka Island**	**2.36**	**304**		**Pn**	**21 07 53.6**	**0.0**
ATKA					**Sn**	**21 08 21.6**	**-0.2**
KOKL	**Mount Kliuchef**	**2.43**	**306**		**Pn**	**21 07 55.1**	**+0.4**
KOWE	**Korovin West**	**2.48**	**307**		**Pn**	**21 07 56.2**	**+0.9**
OKTU	**Okmok Mt. Tuli**	**3.07**	**35**		**Pn**	**21 08 03.1**	**-0.3**
OKFG	**Magazine Ridge**	**3.14**	**36**		**Pn**	**21 08 03.9**	**-0.4**
OKFG					**Sn**	**21 08 40.6**	**-0.5**
GSTR	**Great Sitkin T**	**3.36**	**292**	Pn	**Pn**	**21 08 06.9**	**-0.5**
GSCK	**Great Sitkin C**	**3.40**	**291**		**Pn**	**21 08 07.5**	**-0.3**
GSTD	**Great Sitkin T**	**3.40**	**291**		**Pn**	**21 08 07.8**	**-0.2**
GSTD					**Sn**	**21 08 46.3**	**-1.2**
ADK	**Adak**	**3.68**	**287**		**Pn**	**21 08 10.8**	**-0.8**
ADK					**Sn**	**21 08 52.2**	**-2.1**
ADK	**Adak**	**3.68**	**287**	IAML		21 08 53.2	
	74nm,0.3s						
ADK				IAML		21 08 54.3	
	80nm,0.8s						
MAPS	**Pakushin South**	**3.82**	**39**		**Pn**	**21 08 13.1**	**-0.5**
KIWB	**Kanaga Island**	**3.95**	**286**	Pn	**Pn**	**21 08 14.8**	**-0.7**
MSW	**Makushin Switc**	**3.96**	**39**		**Pn**	**21 08 15.4**	**-0.2**
MNAT	**Makushin Natee**	**3.98**	**40**		**Pn**	**21 08 15.9**	**+0.1**
UNV	**Unalaska Valle**	**4.03**	**42**		**Sn**	**21 09 01.9**	**-0.9**
AKBBA	**Akutan Broad B**	**4.45**	**42**		**Pn**	**21 08 22.9**	**+0.7**
TAFP	**Tanaga Falls P**	**4.47**	**285**		**Pn**	**21 08 22.7**	**+0.1**
TASE	**Tanaga Southea**	**4.49**	**284**		**Pn**	**21 08 23.1**	**+0.1**
AKUT	**Akutan**	**4.54**	**43**	Pn	**Pn**	**21 08 23.3**	**-0.2**
AKUT				IAML		21 10 29.8	
	comp=E,62nm,1.4s						
AKUT				IAML		21 10 30.5	
	comp=N,69nm,1.4s						
ISLZ	**Isanotski Laza**	**5.84**	**46**		**Pn**	**21 08 41.3**	**-0.1**
ISNN	**Isanotski Nort**	**5.88**	**45**		**Pn**	**21 08 42.2**	**+0.3**
PS1A	**Pavlof South-1**	**7.17**	**47**		**Pn**	**21 08 59.4**	**-0.1**
SDPT	**Sand Point**	**7.73**	**51**		**Pn**	**21 09 06.9**	**-0.4**
CNBA	**Chernabura Isl**	**7.94**	**56**		**Pn**	**21 09 09.3**	**-0.9**
KDAK	**Kodiak Island**	**12.73**	**50**	Pn	**Pn**	**21 10 13.4**	**-2.2**
F15K	**North Star Dit**	**15.19**	**10**		**P**	**21 10 52.9**	**-1.0**
F15K				IAmb	IAmb	21 10 57.9	
	comp=Z,4.4nm,1.1s						
H17K	**Granite Mounta**	**15.20**	**18**		**P**	**21 10 52.0**	**-2.0**
H17K				IAmb	IAmb	21 10 57.9	
	comp=Z,7.3nm,1.2s						
J19K	**Poorman**	**15.44**	**26**	Pn	**Pn**	**21 10 53.5**	**+1.3**
J19K				IAmb	IAmb	21 11 16.7	
	comp=Z,5.6nm,1.3s						
BPAW	**Bear Paw Mtn.**	**16.92**	**31**		**Pn**	**21 11 11.5**	**+0.2**
BPAW				IAmb	IAmb	21 11 23.2	
	comp=Z,14nm,1.5s						
H21K	**Melozitna Rive**	**17.49**	**26**		**Pn**	**21 11 18.9**	**+0.6**
GLB	**Gilahina Butte**	**18.29**	**44**		**Pn**	**21 11 27.1**	**-1.2**
GLB				IAmb	IAmb	21 11 32.5	
	comp=Z,8.0nm,1.0s						
D19K	**Kuna River**	**18.71**	**15**	P	**Pn**	**21 11 33.2**	**-0.1**
IL31		**18.73**	**33**	P	**P**	**21 11 33.0**	**+0.1**
ILAR	**Eielson Array**	**18.73**	**33**	P	**Pn**	**21 11 33.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=215,slow=9.9,SNR=10						
	comp=Z,1.2nm,0.9s						
G23K	**Bananza Creek**	**19.03**	**26**	P	**Pn**	**21 11 37.3**	**+0.1**
BARN	**Barnard Glacie**	**19.13**	**47**	P	**P**	**21 11 36.9**	**-0.7**
SCRK	**Sand Creek**	**19.35**	**37**	P	**P**	**21 11 39.4**	**-0.6**
SCRK				IAmb	IAmb	21 11 41.1	
	comp=Z,7.7nm,1.2s						
J26L	**Joseph Creek**	**19.77**	**36**	P	**P**	**21 11 44.2**	**-0.3**
J26L				IAmb	IAmb	21 11 46.3	
	comp=Z,3.9nm,0.8s						
BCAR	**Beaver Creek A**	**19.81**	**41**	P	**P**	**21 11 44.6**	**-0.3**
I26K	**Coal Creek Min**	**20.34**	**34**	P	**P**	**21 11 50.1**	**-0.5**
O29M	**Mount Kennedy**	**20.38**	**50**	P	**P**	**21 11 51.9**	**+0.6**
O29M				IAmb	IAmb	21 12 20.6	
	comp=Z,6.0nm,1.1s						
BILL	**Bilibino**	**20.45**	**335**	P	**P**	**21 11 51.6**	**-0.1**
P29M	**Windy Craggy**	**20.66**	**52**	P	**P**	**21 11 54.6**	**+0.4**
BMAR	**Burnt Mountain**	**21.09**	**29**	P	**P**	**21 11 59.4**	**+0.6**
YKA	**Yellowknife Ar**	**31.97**	**47**	P	**P**	**21 13 41.8**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=280,slow=6.9,SNR=5.7						
	comp=Z,0.3nm,0.7s						
YAK	**Yakutsk**	**33.37**	**313**	LR	LR	21 28 29.8	
	comp=Z,26nm,20.4s,baz=148,slow=38						
H11N2	**WAKE ISLAND Hy**	**35.68**	**217**	T	T	21 51 54.8	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**35.69**	**217**	T	T	21 51 53.1	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**35.70**	**217**	T	T	21 51 54.2	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**36.87**	**217**	T	T	21 53 26.0	
	baz=27						
H11S2	**WAKE ISLAND Hy**	**36.88**	**217**	T	T	21 53 21.3	
	baz=27						
H11S3	**WAKE ISLAND Hy**	**36.88**	**217**	T	T	21 53 26.6	
	baz=27						
PDAR	**Pined

CTA				Sn	Sn	21 20 07.0	-15	
	0.4nm,0.3s,baz=8.8,slow=8.2,SNR=2.5							
CTA				Lg	Lg	21 21 43.0		
	0.3nm,0.3s,baz=201,slow=1.6,SNR=2.2							
	4.5nm,0.9s							
WR0	**Warramunga Arr**	**15.85**	**210**		**Pn**	**21 18 03.5**	**-3.1**	
WR0				IAmb	IAmb	21 18 12.5		
	comp=Z,17nm,0.9s							
WRA	**Warramunga Arr**	**15.93**	**210**	Pn	**Pn**	**21 18 05.5**	**-2.3**	
WRA	**Warramunga Arr**	**15.93**	**210**	Pn	**Pn**	**21 18 06.9**	**-0.8**	
	comp=Z,0.6nm,0.3s,baz=29,slow=13,SNR=2.7							
WRA				Sn	Sn	21 20 50.7	-14	
	comp=Z,0.3nm,0.3s,baz=32,slow=27,SNR=5.1							
WRA				Lg	Lg	21 22 41.1		
	comp=Z,0.2nm,0.3s,baz=152,slow=22,SNR=1.6							
	comp=Z,1.8nm,0.5s							
KNRA	**Kununurra**	**16.69**	**235**		**Pn**	**21 18 15.4**	**-2.0**	
SOEI	**Soe**	**18.72**	**258**	P	**P**	**21 18 41.4**	**-0.9**	
SOEI	**Soe**	**18.72**	**258**	P	**Pn**	**21 18 48.0**	**+5.3**	
AS01	**Alice Springs**	**19.32**	**205**	P	**Pn**	**21 18 50.9**	**+1.0**	
AS31	**Alice Springs**	**19.34**	**205**		**P**	**21 18 48.9**	**-0.2**	
AS31				IAmb	IAmb	21 18 53.9		
	comp=Z,12nm,0.8s							
ASAR	**Alice Springs**	**19.35**	**205**		**Pn**	**21 18 49.6**	**-0.6**	
ASAR	**Alice Springs**	**19.35**	**205**	P	**Pn**	**21 18 51.2**	**+1.1**	
	comp=Z,2.9nm,0.3s,baz=32,slow=10,SNR=35							
ASAR				Lg	Lg	21 24 32.7		
	comp=Z,0.1nm,0.3s,baz=65,slow=38,SNR=1.4							
FITZ	**Fitzroy Crossi**	**20.51**	**233**	P	**P**	**21 19 01.3**	**-0.5**	
FITZ				IAmb	IAmb	21 19 04.0		
	comp=Z,3.6nm,0.6s							
FITZ	**Fitzroy Crossi**	**20.51**	**233**	P	Pn	21 19 03.3	-0.6	
INKA	**Innaminka**	**21.48**	**185**	P	**P**	**21 19 17.7**	**+5.5**	
OOD	**Oodnadatta**	**22.49**	**197**	P	**P**	**21 19 25.7**	**+2.7**	
TOLI2	**Tolitoli**	**23.20**	**288**	P	**P**	**21 19 30.5**	**-0.1**	
TOLI2				IAmb	IAmb	21 19 40.0		
	comp=Z,9.6nm,0.9s							
WRKA	**Warakurna**	**23.32**	**215**	P	**P**	**21 19 32.6**	**+0.9**	
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**21 19 52.7**	**+0.5**	
STKA	**Stephens Creek**	**25.54**	**182**	P	**P**	**21 19 51.2**	**-1.0**	
	comp=Z,3.8nm,0.7s,baz=14,slow=8.3,SNR=4.1							
	comp=Z,3.8nm,0.7s							
CMAR	**Chiang Mai Arr**	**49.75**	**300**	P	**P**	**21 23 16.7**	**+0.3**	
CMAR	**Chiang Mai Arr**	**49.75**	**300**	P	**P**	**21 23 16.2**	**-0.2**	
	comp=Z,0.8nm,0.3s,baz=238,slow=8.7,SNR=2.9							
	comp=Z,0.8nm,0.3s							
USRK	**Ussuriysk Ar.**	**51.15**	**350**	P	**P**	**21 23 25.4**	**-1.0**	
	comp=Z,1.3nm,0.7s,baz=172,slow=12,SNR=2.3							
	comp=Z,1.3nm,0.7s							
SONM	**Songino Array**	**62.67**	**333**	P	**P**	**21 24 49.0**	**+0.7**	
	comp=Z,0.3nm,0.7s,baz=154,slow=4.7,SNR=2.5							
	comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**	**75.08**	**322**	P	**P**	**21 26 05.2**	**-0.3**	
	comp=Z,0.2nm,0.5s,baz=96,slow=8.8,SNR=6.3							
	comp=Z,0.2nm,0.5s							
MAKZ	**Makanchi**	**75.28**	**322**	P	**P**	**21 26 06.6**	**0.0**	
MAKZ				IAmb	IAmb	21 26 26.5		
	comp=Z,4.4nm,1.5s							
ZALV	**Zalesovo Beam**	**77.04**	**329**	P	**P**	**21 26 15.4**	**-1.0**	
	comp=Z,0.3nm,0.4s,baz=93,slow=2.9,SNR=1.6							
	comp=Z,0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**78.97**	**324**	P	**P**	**21 26 27.0**	**-0.2**	
	comp=Z,0.2nm,0.2s,baz=114,slow=4.7,SNR=2.8							
	comp=Z,0.2nm,0.2s							
QSPA	**South Pole Qui**	**83.74**	**180**	P	**P**	**21 26 52.6**	**+0.1**	
	comp=Z,1.0nm,0.4s,baz=45,slow=4.3,SNR=2.6							
	comp=Z,1.0nm,0.4s							
BVAR	**Borovoye Array**	**84.54**	**325**	P	**P**	**21 26 57.7**	**+1.1**	
	comp=Z,1.8nm,0.7s,baz=104,slow=7.1,SNR=7.1							
	comp=Z,1.8nm,0.7s							
IMAR	**Indian Mountai**	**85.20**	**22**	P	**P**	**21 26 59.8**	**+0.2**	
E22K	**Anaktuvuk Pass**	**86.83**	**20**	P	**P**	**21 27 09.1**	**+1.3**	
E22K				IAmb	IAmb	21 27 21.1		
	comp=Z,1.9nm,1.0s							
G23K	**Bananza Creek**	**86.87**	**22**	P	**P**	**21 27 08.5**	**+0.5**	
G23K				IAmb	IAmb	21 27 17.5		
	comp=Z,3.3nm,1.1s							
ILAR	**Eielson Array**	**87.34**	**24**	P	**P**	**21 27 09.1**	**-1.2**	
ILAR	**Eielson Array**	**87.34**	**24**	P	**P**	**21 27 09.4**	**-0.8**	
	comp=Z,0.7nm,0.8s,baz=261,slow=4.6,SNR=6.9							
	comp=Z,0.7nm,0.8s							

*TEH **28** 21:24:13.9, 34°.64N×45°.54E, h13km±59km, ML2.9*
*ISN **28** 21:24:14.5±1.2, 34°.65N×45°.58E, h19km±7km, ML2.9*

ISC 28 21:24:14.4±1.1, **34°.65N**±0°.04×**45°.57E**±0°.04, **h9**km±8km, **n12**, σ0**88**/**19**, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	**Ghasr-e-Shirin**	**0.14**	**174**	Pg	**Pg**	**21 24 17.6**	**0.0**
KGS1				Sg	**Sg**	**21 24 20.4**	**+0.7**
IDHR	**Dehrash**	**0.68**	**85**	Pg	**Pg**	**21 24 27.2**	**-0.3**
IDHR				Sg	**Sb**	**21 24 37.6**	**-0.4**
IGHG	**Ghaleghazi**	**0.88**	**111**	Pg	**Pg**	**21 24 31.6**	**+0.2**
ILBA	**Ilam Banvizeh**	**1.15**	**152**	Pg	**Pn**	**21 24 35.1**	**-1.7**
ILIN	**Lien**	**1.18**	**76**	Pg	**Pg**	**21 24 36.9**	**-0.2**
IKRK	**Kirkuk**	**1.26**	**307**	*e*Pg	**Pn**	**21 24 37.0**	**-1.2**
IKRK				*e*Sg	**Sg**	**21 24 55.0**	**+0.1**
IKRK				AML	AML	21 25 02.2	
	comp=N,401nm,0.4s						
IKRK				AML	AML	21 25 07.4	
	comp=E,314nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.27**	**107**	Pg	**Pg**	**21 24 39.5**	**+0.7**
IBDR	**Badra**	**1.56**	**169**	*e*Pn	**Pb**	**21 24 43.0**	**-0.5**
IBDR				*e*Sn	**Sg**	**21 25 04.0**	**-0.7**
IBDR				AML	AML	21 25 12.8	
	comp=N,115nm,0.4s						
BHD	**Baghdad**	**1.69**	**216**	*e*Pn	**Pb**	**21 24 45.0**	**-0.7**
BHD				*e*Sn	**Sb**	**21 25 07.0**	**-0.1**
IBZA	**Bozab**	**1.90**	**95**	Pn	**Pb**	**21 24 49.5**	**+0.1**
MSL	**Mosul**	**2.66**	**312**	*e*Pn	**Pn**	**21 24 58.0**	**+0.5**
MSL				*e*Sn	**Sn**	**21 25 31.0**	**+1.1**
RAFI	**Al-Rafai**	**2.95**	**171**	*e*Pn	**Pn**	**21 25 03.0**	**+1.5**
RAFI				*e*Sn	**Sn**	**21 25 38.0**	**+1.0**

IDC 28 21:25:36.1±3.1, **6°.30S**×**150°.03E**, **h0**km, **mb3.4**/2, **mbtmp3.5**/3, **ML0.8**/1, **Error ellipse: s-maj=118.4km s-min=36.3km az=121.0**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.20**	**222**	Pn	Pn	21 26 40.4	-1.0
	0.4nm,0.3s,baz=49,slow=20,SNR=1.5						
PMG				Sn	Sn	21 27 34.6	+3.4
	9.7nm,0.3s,baz=136,slow=20,SNR=9.1						
	5.3nm,0.6s						
WRA	**Warramunga Arr**	**20.40**	**227**	P	P	21 30 14.8	-0.1
	2.3nm,0.7s,baz=52,slow=11,SNR=5.4						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**23.21**	**220**	P	P	21 30 44.9	0.0
	0.4nm,0.6s,baz=48,slow=10,SNR=1.3						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.08**	**285**	PKPbc	PKPbc	21 45 24.3	-0.6
	0.4nm,0.3s,baz=86,slow=2.7,SNR=13						

*TRN **28** 21:29:22.5, 17°.95N×62°.62W, h61km, MD4.2, North-east of Saint Barthelemy.*
*IDC **28** 21:29:24.1±4.2, 17°.72N×62°.90W, h79km±61km, mb3.1/4, mbtmp3.4/4, Error ellipse: s-maj=95.7km s-min=33.0km az=22.0*
*NEIC **28** 21:29:24.4±0.9, 17°.9N±0°.1×62°.70W±0°.10, h71km±9km, ML3.6/42, Error ellipse: s-maj=23.5km s-min=8.9km az=208.0*

ISC 28 21:29:24.3±0.9, **17°.85N**±0°.07×**62°.71W**±0°.06, **h71**km±7km, **n39**, σ0**77**/**52**, **mb3.5**/4, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRT	**St. Maarten**	**0.40**	**300**		**Pn**	**21 29 36.6**	**+0.3**
SMRT					**Sn**	**21 29 45.5**	**+0.4**
SEUS	**St. Eustatius**	**0.44**	**216**	Pn	**Pn**	**21 29 36.8**	**+0.2**
SEUS				Sn	**Sn**	**21 29 46.1**	**+0.4**
SABA	**Saba**	**0.56**	**246**	Pn	**Pn**	**21 29 37.9**	**+0.2**
SABA				Sn	**Sn**	**21 29 47.9**	**+0.2**
SABA				IAML		21 29 54.9	
	comp=N,3μm,0.3s						
ANDO	**Antigua, Disas**	**1.12**	**131**	*e*P	**Pn**	**21 29 44.2**	**-0.1**
ANDO				*e*S	**Sn**	**21 29 58.9**	**-0.3**
MBFL	**Flemmings, Mon**	**1.20**	**157**	*e*P	**Pn**	**21 29 45.6**	**+0.3**
MBFL				*e*S	**Sn**	**21 30 01.8**	**+0.7**
ANBD	**Bethesda, Anti**	**1.21**	**131**	*e*P	**Pn**	**21 29 45.2**	**-0.2**
ANBD				*e*S	**Sn**	**21 30 01.0**	**-0.2**
ABD	**La Joyeuse, An**	**1.80**	**139**	Pn	**Pn**	**21 29 53.0**	**-0.2**
ABD				IAML		21 30 22.9	
	comp=N,409nm,0.3s						
ABD				IAML		21 30 23.5	
	comp=E,448nm,0.8s						
ABD	**La Joyeuse, An**	**1.80**	**139**	*e*P	**Pn**	**21 29 53.7**	**+0.5**
ABD				*e*S	**Sn**	**21 30 15.7**	**+0.4**
GDHS	**Morne Mazeau,**	**1.81**	**150**	Pn	**Pn**	**21 29 53.1**	**-0.3**
GDSD	**La Dsirade Is**	**2.19**	**134**	Pn	**Pn**	**21 29 58.4**	**-0.2**
H05N1	**Guadeloupe/Mar**	**2.20**	**134**	P	**Pn**	**21 29 58.2**	**-0.5**
H05N1				S	**Sn**	**21 30 23.8**	**-1.0**
TBG	**Guadaloupe-3**	**2.23**	**153**	*e*P	**Pn**	**21 29 59.5**	**+0.4**
MAGL	**Barre de l'ile**	**2.33**	**144**	Pn	**Pn**	**21 30 00.8**	**+0.3**
MAGL				IAML		21 30 28.9	
	comp=E,412nm,0.3s						
MAGL				IAML		21 30 29.4	
	comp=N,352nm,0.5s						
HUMP	**Col San Antoni**	**3.00**	**276**	Pn	**Pn**	**21 30 10.2**	**+0.7**
HUMP				IAML		21 30 47.5	
	comp=N,278nm,0.2s						
HUMP				IAML		21 30 48.0	
	comp=E,323nm,0.2s						
IGPR	**InterUniversit**	**3.24**	**273**	Pn	**Pn**	**21 30 13.6**	**+0.9**
IGPR				IAML		21 30 55.6	
	comp=E,198nm,0.3s						
IGPR				IAML		21 30 58.0	
	comp=N,214nm,0.3s						
GCPR	**Guaynabo City**	**3.24**	**279**	Pn	**Pn**	**21 30 13.6**	**+0.8**
GCPR				IAML		21 30 53.3	
	comp=E,97nm,0.6s						
GCPR				IAML		21 30 55.3	
	comp=N,118nm,0.7s						
SVN	**Savane Anatole**	**3.34**	**153**	Pn	**Pn**	**21 30 14.2**	**+0.1**
FDF	**Fort de France**	**3.44**	**154**	Pn	**Pn**	**21 30 15.1**	**-0.5**
FDF				IAML		21 31 08.6	
	comp=N,86nm,0.8s						
FDF	**Fort de France**	**3.44**	**154**	*e*P	**Pn**	**21 30 16.2**	**+0.6**
FDF				*e*S	**Sn**	**21 30 56.7**	**+1.4**
ILAM	**Ilet Lapin Mar**	**3.53**	**150**	Pn	**Pn**	**21 30 15.2**	**-1.6**
ILAM				IAML		21 32 12.2	
	comp=E,136nm,0.4s						
ILAM				IAML		21 32 12.4	
	comp=N,106nm,0.6s						
BIM	**Bigot**	**3.67**	**154**	Pn	**Pn**	**21 30 19.1**	**+0.4**
BIM				IAML		21 31 33.6	
	comp=E,82nm,1.2s						
BIM				IAML		21 32 10.7	
	comp=N,68nm,1.2s						
CELP	**Cerrillos**	**3.69**	**274**	Pn	**Pn**	**21 30 19.9**	**+1.0**
CELP				IAML		21 31 07.6	
	comp=N,75nm,0.7s						
CELP				IAML		21 31 11.0	
	comp=E,58nm,0.7s						
OBIP	**Obispado Ponce**	**3.71**	**274**	Pn	**Pn**	**21 30 18.2**	**-1.0**
MPOM	**Morne Pois Mar**	**3.83**	**152**	Pn	**Pn**	**21 30 21.3**	**+0.5**
MPOM	**Morne Pois Mar**	**3.83**	**152**	*e*P	**Pn**	**21 30 21.6**	**+0.8**
MPOM				*e*S	**Sn**	**21 31 04.2**	**-0.4**
H05S1	**Guadeloupe/Mar**	**3.85**	**152**	P	**Pn**	**21 30 22.4**	**+1.3**
H05S1				S	**Sn**	**21 31 05.2**	**0.0**
AOPR	**Arecibo Observ**	**3.88**	**278**	Pn	**Pn**	**21 30 21.6**	**+0.1**
AOPR				IAML		21 31 08.9	
	comp=N,141nm,0.4s						
AOPR	**Arecibo Observ**	**3.88**	**278**	*e*P	**Pn**	**21 30 21.9**	**+0.4**
AOPR				*e*S	**Sn**	**21 31 07.4**	**+1.5**
MLPR	**Magueyes Islan**	**4.13**	**272**	Pn	**Pn**	**21 30 23.7**	**-1.1**
MLPR				IAML		21 31 11.2	
	comp=E,39nm,0.7s						
SLBI	**Saint Lucia, B**	**4.16**	**156**	*e*P	**Pn**	**21 30 25.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**4.19**	**273**	Pn	**Pn**	**21 30 25.6**	**-0.2**
AGPR	**Aguadilla, PR**	**4.23**	**279**	Pn	**Pn**	**21 30 26.7**	**+0.4**
AGPR				IAML		21 31 28.6	
	comp=N,110nm,1.2s						
AGPR				IAML		21 31 34.1	
	comp=E,102nm,1.8s						
SDDR	**Presa de Saban**	**8.22**	**279**	Pn	**Pn**	**21 31 20.6**	**-0.4**
SDDR	**Presa de Saban**	**8.22**	**279**	*e*P	**Pn**	**21 31 21.0**	**0.0**
SDDR				*e*S	**Sn**	**21 32 51.0**	**-1.3**
BAUV	**El Baul**	**10.26**	**211**	Pn	**Pn**	**21 31 47.1**	**-1.6**
ESDC	**Sonseca Array**	**54.89**	**54**	P	**P**	**21 38 49.4**	**+1.6**
	comp=E,0.5nm,0.8s,baz=273,slow=6.7,SNR=1.6						
	comp=E,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**57.13**	**334**	P	**P**	**21 39 02.5**	**-0.8**
	comp=E,0.5nm,0.8s,baz=113,slow=7.5,SNR=6.7						
	comp=E,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**61.98**	**84**	P	**P**	**21 39 37.0**	**-0.5**
	comp=E,0.2nm,0.6s,baz=300,slow=7.5,SNR=1.9						
	comp=E,0.2nm,0.6s						
ILAR	**Eielson Array**	**71.54**	**333**	P	**P**	**21 40 36.5**	**-1.0**
	comp=E,0.3nm,0.6s,baz=91,slow=4.1,SNR=5.7						
	comp=E,0.3nm,0.6s						

*IDC **28** 21:37:18.4±1.2, 35°.40N×22°.52E, h0km, mb3.8/16, mbtmp3.7/20, ML3.3/4, Error ellipse: s-maj=25.7km s-min=16.9km az=1.0*
*NEIC **28** 21:37:24.9±2.4, 35°.5N±0°.1×22°.44E±0°.04, h35km±2km, mb4.4/4, Error ellipse: s-maj=18.7km s-min=3.1km az=196.0*
*ATH **28** 21:37:25.0, 35°.38N×22°.49E, h9km±2km, ML3.3/4, Error ellipse: s-maj=2.9km s-min=1.5km az=54.0*
*THE **28** 21:37:26.2, 35°.37N×22°.46E, h32km±68km, ML3.3/3, Error ellipse: s-maj=68.3km s-min=2.7km az=55.0*

ISC 28 21:37:23.8±1.1, **35°.38N**±0°.07×**22°.44E**±0°.05, **h40**km±12km, **n113**, σ2**04**/**121**, **mb3.9**/**17**, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.85**	**55**	P	**Pn**	**21 37 40.4**	**+1.1**
ANKY				S	**Sn**	**21 37 51.6**	**+1.0**
	3μm,0.8s						
ANKY	**Antikythira Is**	**0.85**	**55**	P	**Pn**	**21 37 40.5**	**+1.1**
ANKY				S	**Sn**	**21 37 51.7**	**+1.0**
ANKY				AML	AML	21 37 53.5	
	comp=N,4905μm,0.7s						
ANKY				AML	AML	21 37 54.5	
	comp=E,6087μm,1.0s						
RODP	**Rodopos**	**1.09**	**80**	P	**Pn**	**21 37 45.3**	**+2.7**
RODP				S	**Sn**	**21 37 59.8**	**+3.3**
IMMV	**Iera Moni Meta**	**1.27**	**86**	P	**Pn**	**21 37 47.1**	**+2.2**
IMMV				S	**Sn**	**21 38 04.1**	**+3.4**
	comp=E,1μm,0.5s						
IMMV	**Iera Moni Meta**	**1.27**	**86**	P	**Pn**	**21 37 47.2**	**+2.3**
IMMV				S	**Sn**	**21 38 03.8**	**+3.1**
IMMV				AML	AML	21 38 11.4	
	comp=N,2188μm,0.4s						
IMMV				AML	AML	21 38 13.1	
	comp=E,2305μm,0.3s						
CHAN	**Chania**	**1.32**	**84**	P	**Pn**	**21 37 48.0**	**+2.3**
CHAN				S	**Sn**	**21 38 04.9**	**+2.9**
CHAN				AML	AML	21 38 11.7	
	comp=N,2925μm,0.6s						
CHAN				AML	AML	21 38 15.1	
	comp=E,2627μm,0.6s						
MNVA	**Monemvasia**	**1.39**	**20**	P	**Pn**	**21 37 50.2**	**+3.6**
VLI	**Veliai**	**1.39**	**17**	P	**Pn**	**21 37 49.0**	**+2.3**
VLI				S	**Sn**	**21 38 07.9**	**+4.0**
	comp=E,800nm,0.5s						
VLI	**Veliai**	**1.39**	**17**	P	**Pn**	**21 37 49.5**	**+2.8**
VLI				S	**Sn**	**21 38 08.0**	**+4.0**
VLI				AML	AML	21 38 10.7	
	comp=E,1721μm,0.6s						
VLI				AML	AML	21 38 12.3	
	comp=N,1474μm,0.4s						
GVD	**Gavdhos**	**1.46**	**111**	P	**Pn**	**21 37 50.4**	**+2.8**
PYL	**PYLOS**	**1.61**	**340**	P	**Pn**	**21 37 53.3**	**+3.6**
TMBK	**Timbaki Herakl**	**1.93**	**99**	P	**Pn**	**21 37 57.0**	**+2.9**
IDI	**Anoyia**	**2.01**	**92**	Pn	**Pn**	**21 37 57.5**	**+2.3**
IDI	**Anoyia**	**2.01**	**92**	P	**Pn**	**21 37 57.5**	**+2.3**
MHLO	**Agia Marina, M**	**2.06**	**50**	P	**Pn**	**21 37 59.1**	**+3.2**
KRND	**KRANIDI**	**2.08**	**16**	P	**Pn**	**21 37 58.5**	**+2.4**
KRND	**KRANIDI**	**2.08**	**16**	P	**Pn**	**21 37 58.9**	**+2.8**
GUR	**Goura**	**2.55**	**358**	P	**Pn**	**21 38 05.6**	**+2.9**
GUR	**Goura**	**2.55**	**358**	P	**Pn**	**21 38 06.3**	**+3.6**
THR6	**Thira Island,**	**2.59**	**67**	P	**Pn**	**21 38 04.1**	**+0.9**
THR3	**Thira Island,**	**2.62**	**66**	P	**Pn**	**21 38 04.2**	**+0.7**
DRO	**Drossia**	**2.63**	**347**	P	**Pn**	**21 38 07.0**	**+3.3**
CMBO	**Columbo, Santo**	**2.64**	**65**	P	**Pn**	**21 38 05.2**	**+1.3**
CMBO	**Columbo, Santo**	**2.64**	**65**	P	**Pn**	**21 38 05.8**	**+1.9**
KLV	**Kalavryta, Ach**	**2.67**	**355**	P	**Pn**	**21 38 07.7**	**+3.5**
LTK	**Loutraki**	**2.67**	**9**	P	**Pn**	**21 38 07.1**	**+2.8**
THR8	**Santorini-Mono**	**2.67**	**67**	P	**Pn**	**21 38 05.1**	**+0.8**
RLS	**Riolos of Patr**	**2.78**	**344**	P	**Pn**	**21 38 09.1**	**+3.4**
PTL	**Penteli**	**2.90**	**23**	P	**Pn**	**21 38 09.6**	**+2.2**
DION	**Dionisos Attik**	**2.95**	**24**	P	**Pn**	**21 38 10.1**	**+2.0**
ANX	**Ano Chora**	**3.23**	**353**	P	**Pn**	**21 38 15.1**	**+3.0**
AXAR	**Agios Charalam**	**3.38**	**3**	P	**Pn**	**21 38 15.9**	**+1.8**
EVR	**Evrytania**	**3.56**	**352**	P	Pn	21 38 21.4	+4.8
MAKR	**Makrakomi, Fth**	**3.63**	**356**	P	**Pn**	**21 38 20.8**	**+3.3**
AGG	**Agios Georgios**	**3.63**	**359**		**Pn**	**21 38 19.6**	**+2.1**
KARP	**Karpathos**	**3.86**	**86**	Pn	**Pn**	**21 38 20.7**	**+0.1**
NEO	**Neokhori**	**3.97**	**9**	P	**Pn**	**21 38 23.8**	**+1.7**
ARG	**Arkhangelos**	**4.70**	**78**	Pn	**Pn**	**21 38 32.2**	**+0.1**
LIT	**Litokhoron**	**4.71**	**1**	Pn	**Pn**	**21 38 32.9**	**+0.6**
KEK	**Kerkira**	**4.80**	**335**	Pn	**Pn**	**21 38 32.6**	**-1.0**
FNA	**Florina**	**5.46**	**352**		**Pn**	**21 38 43.7**	**+1.1**
SCTE	**Santa Cesarea**	**5.64**	**327**	Pn	**Pn**	**21 38 45.0**	**0.0**
TIP	**Timpagrande**	**5.90**	**312**	Pn	**Pn**	**21 38 49.5**	**+0.8**
CEL	**Celeste**	**5.98**	**301**	Pn	**Pn**	**21 38 50.9**	**+1.1**
ALN	**Alexandroupoli**	**6.20**	**26**	Pn	**Pn**	**21 38 53.3**	**+0.7**
ELL	**Elmali**	**6.21**	**75**	Pn	**Pn**	**21 38 53.7**	**+0.8**
RDO	**Rodhopi**	**6.25**	**22**	Pn	**Pn**	**21 38 52.6**	**-0.8**
TIR	**Tirane**	**6.29**	**342**	Pn	**Pn**	**21 38 53.3**	**-0.6**
STIP	**Stip**	**6.30**	**358**	*i* P	Pn	21 39 01.6	+7.4
SKO	**Skopje**	**6.63**	**354**	*i* P	**Pn**	**21 38 59.2**	**+0.6**
RAFF	**Raffo Rosso**	**6.77**	**288**	Pn	**Pn**	**21 39 02.1**	**+1.5**
VAE	**Valguarnera**	**6.80**	**290**	Pn	**Pn**	**21 38 59.0**	**-1.9**
	comp=N,0.5nm,0.3s,baz=261,slow=6.7,SNR=1.8						
VAE				Sn	**Sn**	**21 40 16.7**	**-0.4**
	comp=N,1.3nm,0.3s,baz=65,slow=13,SNR=2.1						
	comp=N,2.6nm,0.4s						
PUK	**Puka**	**6.94**	**344**	Pn	**Pn**	**21 39 02.6**	**-0.3**
CUC	**Castrocucco**	**6.98**	**313**	Pn	**Pn**	**21 39 04.8**	**+1.3**
DRME	**Dracevica, Mon**	**7.25**	**340**	*e*Pn	**Pn**	**21 39 05.8**	**-1.4**
HCY	**Herceg Novi**	**7.69**	**338**	*e*Pn	**Pn**	**21 39 11.3**	**-1.9**
TREB	**Trebinje**	**7.98**	**338**	*e*Pn	**Pn**	**21 39 15.9**	**-1.3**
BRY	**Bratogost**	**8.10**	**339**	*e*Pn	**Pn**	**21 39 17.3**	**-1.5**
SJES	**Sjenica**	**8.10**	**347**	*e*Pn	**Pn**	**21 39 15.5**	**-3.3**
UPM	**Unac-Piva**	**8.27**	**342**	*e*Pn	**Pn**	**21 39 20.5**	**-0.8**
STON	**Ston**	**8.33**	**335**	*e*Pn	**Pn**	**21 39 19.5**	**-2.4**
STON	**Ston**	**8.33**	**335**	*e*Pn	**Pn**	**21 39 19.3**	**-2.6**
LSTV	**Lastovo**	**8.54**	**331**	*e*Pn	**Pn**	**21 39 22.9**	**-1.9**
LSTV				Sn	Sn	21 40 49.5	-10
RUDO	**Rudo**	**8.56**	**345**	*e*Pn	**Pn**	**21 39 22.7**	**-2.4**
NEVS	**Nevesinje**	**8.59**	**338**	*e*Pn	**Pn**	**21 39 23.3**	**-2.2**
BBLS	**Lazići**	**8.79**	**346**	*e*Pn	**Pn**	**21 39 25.8**	**-2.5**
MAKA	**Makarska**	**8.94**	**334**	*e*Pn	**Pn**	**21 39 28.6**	**-1.6**
MAKA				Sn	Sn	21 40 59.8	-10
RICI	**Ricice**	**9.08**	**335**	*e*Pn	**Pn**	**21 39 30.4**	**-1.8**
HAPS	**Han Pijesak,BI**	**9.10**	**344**	*e*Pn	**Pn**	**21 39 30.0**	**-2.5**
TEKS	**Tekeris**	**9.42**	**347**	*e*Pn	**Pn**	**21 39 34.7**	**-2.2**
KIJV	**Kijevo**	**9.78**	**333**	*e*Pn	**Pn**	**21 39 40.5**	**-1.4**
ZIRJ	**Zirje**	**9.78**	**330**	*e*Pn	**Pn**	**21 39 39.8**	**-2.0**
BRTR	**Keskin Array B**	**9.89**	**61**	Pn	**Pn**	**21 39 44.7**	**+1.2**
	comp=N,0.1nm,0.3s,baz=241,slow=12,SNR=2.6						
	comp=N,0.8nm,0.7s						
MGRS	**Mrkonjic Grad**	**9.91**	**337**	*e*Pn	**Pn**	**21 39 44.2**	**+0.6**
MORI	**Morici**	**9.93**	**331**	*e*Pn	**Pn**	**21 39 42.9**	**-0.9**
MORI				Sn	Sn	21 41 24.7	-9.2
FRGS	**Fruska Gora**	**9.97**	**349**	*e*Pn	**Pn**	**21 39 42.9**	**-1.5**
A050A	**Klekovaca**	**10.15**	**335**	*e*Pn	**Pn**	**21 39 45.2**	**-1.8**
BLV	**Banja Luka**	**10.18**	**338**	*e*Pn	**Pn**	**21 39 45.9**	**-1.4**
UDBI	**Udbina**	**10.47**	**333**	*e*Pn	**Pn**	**21 39 51.3**	**+0.1**
A051A	**Mrakovica**	**10.50**	**338**	*e*Pn	**Pn**	**21 39 49.5**	**-2.2**
NVLJ	**Novalja**	**10.85**	**330**	*i* Pn	**Pn**	**21 39 53.4**	**-2.9**
MMAI	**Mount Meron Ar**	**11.00**	**99**	Pn	**Pn**	**21 39 55.0**	**-3.6**
	comp=N,0.6nm,0.

comp=Z,43nm,19.0s,baz=248,slow=38
CMIG Matias Romero 1.94 356 *e*P **Pn 21 48 59.6 -0.8**
CMIG *e*S **Sn 21 49 21.3 -2.8**
TGIG 2.26 44 Pn 21 49 05.1 +0.2
TGIG *i* S **Sn 21 49 33.1 +1.0**
TGIG 2.26 44 *e*P **Pn 21 49 05.1 +0.2**
TGIG *i* S **Sn 21 49 33.1 +1.0**
TGBT Tuxtla Gutierr 2.28 45 Pn 21 49 05.7 +0.5
TGBT **Sn 21 49 31.5 -1.0**
TGBT Tuxtla Gutierr 2.28 45 *e*P **Pn 21 49 05.7 +0.5**
TGBT *e*S **Sn 21 49 31.5 -1.0**
THIG 2.42 95 Pn 21 49 07.1 0.0
THIG **Sn 21 49 34.9 -1.1**
THIG 2.42 95 *e*P **Pn 21 49 07.1 0.0**
THIG *e*S **Sn 21 49 34.9 -1.1**
PATR El Naranjo 2.44 90 *e*P **Pn 21 49 07.2 -0.4**
PATR *i* S **Sn 21 49 35.2 -1.6**
PEIG Puerto Escondi 2.45 290 Pn 21 49 07.1 -0.5
PEIG Puerto Escondi 2.45 290 *e*P **Pn 21 49 07.1 -0.5**
PEIG *i* S **Sn 21 49 32.5 -4.4**
PAVE Pavencul 2.49 89 *e*P **Pn 21 49 08.4 +0.1**
PAVE *i* S **Sn 21 49 37.4 -0.7**
CHUJ Union Juarez 2.56 91 *e*P **Pn 21 49 09.2 0.0**
CHUJ *i* S **Sn 21 49 38.8 -1.0**
OXBJ Oaxaca 2.69 316 Pn 21 49 12.2 +1.3
OXBJ **Sn 21 49 42.9 0.0**
OXBJ Oaxaca 2.69 316 *i* P **Pn 21 49 12.2 +1.3**
OXBJ *i* S **Sn 21 49 42.9 0.0**
OXIG Oaxaca 2.70 315 Pn 21 49 12.4 +1.3
OXIG **Sn 21 49 42.4 -0.7**
VHO Vista Hermosa 2.70 315 *e*P **Pn 21 49 12.4 +1.3**
VHO *i* S **Sn 21 49 42.4 -0.7**
NEUV Arroyo Zacate 2.74 339 *e*P **Pn 21 49 11.2 -0.4**
NEUV *e*S **Sn 21 49 42.4 -1.5**
CCIG Comitan 2.76 66 Pn 21 49 13.0 +1.0
CCIG Comitan 2.76 66 *e*P **Pn 21 49 13.8 +1.8**
CCIG *i* S **Sn 21 49 46.4 +1.7**
TUIG Tuzandepetl 2.89 6 *e*P **Pn 21 49 12.7 -0.8**
TUIG *e*S **Sn 21 49 43.6 -3.9**
RTAL Retalhuleu 3.03 101 Pn **Pn 21 49 16.6 +1.1**
RTAL Retalhuleu 3.03 101 *e*P **Pb 21 49 20.5 -1.8**
RTAL *i* S **Sn 21 49 54.3 +3.4**
HUEH Huehuetenango 3.15 86 Pn 21 49 18.5 +1.2
HUEH Huehuetenango 3.15 86 *e*P **Pn 21 49 19.8 +2.5**
HUEH *i* S **Sn 21 49 57.2 +2.9**
YOIG Yosondua 3.17 303 Pn 21 49 19.0 +1.2
YOIG **Sn 21 49 53.3 -1.7**
YOIG Yosondua 3.17 303 *e*P **Pn 21 49 19.0 +1.2**
YOIG *e*S **Sn 21 49 53.3 -1.7**
PMUV Sontecomapan 3.40 354 *e*P **Pn 21 49 17.7 -3.0**
PMUV *i* S **Sn 21 49 56.6 -3.6**
PNIG Pinotepa 3.47 291 Pn 21 49 21.9 +0.3
PNIG Pinotepa 3.47 291 *i* P **Pn 21 49 21.9 +0.3**
PNIG *i* S **Sn 21 49 57.0 -5.0**
TXIG Tlaxiaco 3.57 306 Pn 21 49 24.7 +1.5
TXIG **Sn 21 50 03.5 -1.2**
TXIG Tlaxiaco 3.57 306 *e*P **Pn 21 49 24.7 +1.5**
TXIG *i* S **Sn 21 50 03.5 -1.2**
TOIG Toxpalan 3.67 323 Pn 21 49 26.7 +2.3
TOIG **Sn 21 50 07.2 +0.1**
TOIG Toxpalan 3.67 323 *e*P **Pn 21 49 26.7 +2.3**
TOIG *e*S **Sn 21 50 07.2 +0.1**
HLIG Huajuapan de L 3.96 313 Pn 21 49 30.7 +2.3
HLIG **Sn 21 50 12.9 -1.3**
HLIG Huajuapan de L 3.96 313 *i* P **Pn 21 49 30.7 +2.3**
HLIG *i* S **Sn 21 50 12.9 -1.3**
TPIG Tehuac#an 4.10 323 *i* P **Pb 21 49 42.3 +1.6**
TPIG *e*S **Sn 21 50 14.2 -3.5**
FTIG Fresnillo de T 4.24 311 Pn 21 49 34.8 +2.5
FTIG **Sn 21 50 18.9 -2.3**
FTIG Fresnillo de T 4.24 311 *e*P **Pn 21 49 34.8 +2.5**
FTIG *e*S **Sn 21 50 18.9 -2.3**
MGIG Malinaltepec 4.26 300 Pn 21 49 34.4 +1.8
MGIG Malinaltepec 4.26 300 *e*P **Pn 21 49 34.4 +1.8**
MGIG *e*S Sn 21 50 07.8 -14
TLIG Tlapa 4.37 304 Pn **Pn 21 49 34.7 +0.5**
TLIG Tlapa 4.37 304 *i* P **Pn 21 49 36.3 +2.2**
TLIG *e*S Sn 21 50 11.9 -12
CRIG Cruz Grande 4.49 291 Pn 21 49 36.0 +0.3
CRIG Cruz Grande 4.49 291 *i* P **Pn 21 49 36.0 +0.3**
CRIG *e*S **Sn 21 50 21.0 -6.2**
JAUV Jalcomulco 4.63 335 *e*P **Pn 21 49 36.8 -0.7**
JAUV *i* S **Sn 21 50 25.7 -4.9**
LVIG Laguna Verde 4.82 341 *i* P **Pn 21 49 42.2 +2.2**
LVIG *i* S **Sn 21 50 27.0 -8.2**
PETF Flores 5.02 69 Pn **Pn 21 49 43.0 +0.1**
PETF Flores 5.02 69 *e*P **Pn 21 49 43.8 +0.9**
PETF *i* S **Sn 21 50 38.1 -2.0**
DAIG Los Arroyos 5.06 292 Pn 21 49 44.4 +1.0
DAIG Los Arroyos 5.06 292 *e*P **Pn 21 49 44.4 +1.0**
DAIG *e*S Sn 21 50 22.2 -19
SCIG Sabancuy 5.11 41 *e*P **Pn 21 49 44.0 -0.1**
ESQI Esquipulas 5.27 96 Pn **Pn 21 49 47.5 +1.1**
MTO3 Montecristo 5.27 97 Pn **Pn 21 49 47.2 +0.7**
MEIG Mezcala 5.42 301 Pn 21 49 51.1 +2.7
MEIG Mezcala 5.42 301 *i* P **Pn 21 49 51.1 +2.7**
MEIG *e*S Sn 21 50 32.8 -17
CAIG El Cayaco 5.62 290 Pn 21 49 52.0 +0.8
CAIG El Cayaco 5.62 290 *e*P **Pn 21 49 52.0 +0.8**
CAIG *e*S Sn 21 50 36.6 -18
MZVM 5.87 314 *i* P **Pn 21 49 58.8 +4.3**
MZVM *i* S **Sn 21 51 04.4 +3.4**
AOVM Tlapan 5.98 314 *i* P **Pn 21 50 00.1 +3.6**
AOVM *i* S **Sn 21 51 10.7 +6.1**
ARIG Puente Sto Nin 6.20 301 *i* P **Pn 21 50 02.2 +3.1**
ARIG *i* S Sn 21 50 51.9 -17
TOVM TOLUCA 6.25 312 Sn 21 51 11.3 +0.4
TOVM TOLUCA 6.25 312 *i* P **Pn 21 50 03.9 +3.8**
TOVM *i* S **Sn 21 51 11.3 +0.4**
DHIG Demacu 6.55 322 Pn 21 50 04.8 +0.7
DEIG Demacu 6.55 322 *e*P **Pn 21 50 04.8 +0.7**
DEIG *i* S **Sn 21 51 24.2 +6.0**
ZIIG Zihuatanejo 6.89 292 Pn 21 50 10.8 +2.3
ZIIG Zihuatanejo 6.89 292 *i* P **Pn 21 50 10.8 +2.3**
ZIIG *i* S **Sn 21 51 20.1 -6.1**
MOIG Morelia 7.61 307 Pn **Pn 21 50 21.2 +2.5**
TEIG Tepich 7.98 50 Pn **Pn 21 50 22.1 -1.4**
ZAIG Zacatecas 10.58 317 Pn **Pn 21 50 58.8 -0.8**
DRIO Del Rio 15.20 340 Pn **Pn 21 52 01.4 -0.9**
435B Jarrell 15.78 351 Pn **Pn 21 52 09.5 -0.2**
TXAR Lajitas Array 16.34 331 Pn **Pn 21 52 17.8 +0.7**
TXAR Lajitas Array 16.34 331 Pn **P 21 52 18.5 -1.3**
0.1nm,0.3s,baz=156,slow=13,SNR=9.6
2.8nm,0.9s
TX31 Lajitas Ar. Si 16.34 331 Pn **Pn 21 52 17.2 +0.1**
BRDY Brady 16.53 347 Pn **Pn 21 52 19.1 -0.3**
BRDY IAmb IAmb 21 52 33.5
comp=Z,5.1nm,0.7s
WHTX Lake Whitney, 16.95 352 Pn **Pn 21 52 24.4 -0.2**
WHTX IAmb IAmb 21 52 37.3
comp=Z,10nm,0.7s
ALPN Alpine 17.21 333 Pn 21 52 28.4 +0.4
ALPN IAmb IAmb 21 52 30.6
comp=Z,6.9nm,0.7s
SGCY Sterling City 17.67 342 Pn **Pn 21 52 32.3 -1.4**
SGCY IAmb IAmb 21 53 00.7
comp=Z,9.4nm,0.8s
MNHN Monahans 17.70 337 Pn 21 52 34.0 -0.1
MNHN IAmb IAmb 21 52 43.3
comp=Z,4.9nm,0.8s
VHRN Van Horn 18.17 331 P 21 52 41.0 +0.8
APMT Aspermont 18.74 346 Pn 21 52 46.5 -0.2
APMT IAmb IAmb 21 53 05.7
comp=Z,7.1nm,0.7s
DKNS Dickens 19.26 344 P **P 21 52 51.8 -0.2**
DKNS IAmb IAmb 21 52 55.2
comp=Z,7.6nm,0.8s
SMWD Samnorwood 20.48 347 P **P 21 53 04.5 -0.7**
121A Cookes Peak, D 20.98 328 P **P 21 53 10.3 -0.4**
ANMO Albuquerque 22.35 334 LR LR 22 01 49.3
comp=Z,28nm,19.5s,baz=216,slow=36
TKL Tuckaleechee C 22.67 24 LR LR 22 01 50.2
comp=Z,62nm,21.5s,baz=163,slow=36
PFO Pinyon Flats O 26.89 317 LR LR 22 04 58.0
comp=Z,141nm,20.1s,baz=158,slow=37
NVAR Mina Array Bea 31.12 323 P **P 21 54 49.0 +2.9**
comp=Z,0.8nm,0.7s,baz=126,slow=9.3,SNR=6.6
NVAR LR LR 22 07 10.1
comp=Z,106nm,20.9s,baz=343,slow=36
comp=Z,0.8nm,0.7s
YBH Yreka Blue Hor 35.84 323 LR LR 22 12 17.7
comp=Z,88nm,18.4s,baz=163,slow=40
YKA Yellowknife Ar 49.33 348 P **P 21 57 16.2 +0.2**
comp=Z,0.3nm,0.5s,baz=154,slow=7.0,SNR=6.8
comp=Z,0.3nm,0.5s
ILAR Eielson Array 60.74 337 P **P 21 58 39.1 +0.7**
comp=Z,0.6nm,0.9s,baz=154,slow=5.4,SNR=4.4
comp=Z,0.6nm,0.9s
EKA Eskdalemuir Ar 78.60 36 P **P 22 00 28.3 -0.3**
comp=Z,1.5nm,0.6s,baz=275,slow=5.1,SNR=6.7
comp=Z,1.5nm,0.6s

AEIC ***28*** *21:58:10.2±2.3,51°.5N±0°.1×171°.63W±0°.08, h11km±6km, Error ellipse: s-maj=19.9km s-min=5.3km az=167.0*

NEIC 28 21:58:11.3±2.3,51°.9N±0°.1×171°.80W±0°.07, h45km±11km, mb4.0/12, ML3.5/8, ML3.2(AEIC)**, Error ellipse: s-maj=21.8km s-min=5.1km az=168.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.46**	**285**		Pn	21 58 35.1	-0.2
CLES	**Cleveland East**	**1.48**	**51**		Pn	21 58 34.4	-1.0
CLES					Sn	21 58 53.5	0.0
ATKA	**Atka Island**	**1.51**	**282**		Pn	21 58 35.0	-0.8
ATKA					Sn	21 58 53.9	-0.3
CLCO	**Concord Point,**	**1.54**	**55**		Pn	21 58 35.5	-0.8
CLCO					Sn	21 58 55.1	0.0
KOWE	**Korovin West**	**1.58**	**288**		Pn	21 58 37.3	+0.5
NIKH	**Nikolski High**	**2.09**	**58**		Pn	21 58 42.0	-1.8
GSTR	**Great Sitkin T**	**2.64**	**276**	Pn	Pn	21 58 52.3	+1.0
GSCK	**Great Sitkin C**	**2.70**	**274**		Pn	21 58 51.9	-0.2
OKTU	**Okmok Mt. Tuli**	**2.72**	**56**		Pn	21 58 51.5	-1.0
OKFG	**Magazine Ridge**	**2.80**	**56**		Pn	21 58 53.1	-0.5
ADK	**Adak**	**3.03**	**271**	Pn	Pn	21 58 57.1	+0.5
ADK				IAML		21 59 41.6	
	123nm,1.1s						
ADK				IAML		21 59 43.2	
	102nm,0.9s						
KIWB	**Kanaga Island**	**3.32**	**271**	Pn	Pn	21 59 02.0	+1.4
MAPS	**Pakushin South**	**3.50**	**55**		Pn	21 59 02.3	-0.8
MSW	**Makushin Switc**	**3.64**	**55**		Pn	21 59 04.3	-0.7
AKUT	**Akutan**	**4.26**	**56**	Pn	Pn	21 59 14.3	+0.7
AKUT				IAML		21 59 58.3	
	comp=N,58nm,1.4s						
AKUT				IAML		22 01 14.0	
	comp=E,83nm,1.5s						
O14K	**Tigyukauivet M**	**9.46**	**35**	Pn	Pn	22 00 25.1	+0.4
N15K	**Kwethluk River**	**10.53**	**34**	Pn	Pn	22 00 41.0	+1.6
O16K	**Kokwok River B**	**10.88**	**40**	Pn	Pn	22 00 45.7	+1.6
N17K	**Nushagak Hills**	**11.83**	**37**	Pn	Pn	22 00 57.5	+0.4
N19K	**Bonanza Creek**	**13.06**	**40**	Pn	Pn	22 01 14.2	+0.2
L18K	**Granite Mounta**	**13.16**	**32**	Pn	Pn	22 01 16.5	+1.3
VRDI	**Verde Repeater**	**18.04**	**48**	P	P	22 02 19.3	+0.7
VRDI				IAmb	IAmb	22 02 42.7	
	comp=Z,19nm,1.4s						
CRQM	**Cirque**	**18.05**	**49**	P	P	22 02 19.1	+0.6
J25K	**Salcha River,**	**18.65**	**37**	P	P	22 02 23.2	-1.8
BARN	**Barnard Glacie**	**18.83**	**49**	P	Pn	22 02 28.1	+0.1
CTGM	**Chitina Glacie**	**18.96**	**50**	P	Pn	22 02 29.2	-0.3
LOGN	**Logan Glacier**	**19.08**	**50**	P	P	22 02 30.3	+0.5
LOGN				IAmb	IAmb	22 02 54.0	
	comp=Z,11nm,1.0s						
O29M	**Mount Kennedy**	**20.14**	**52**	P	P	22 02 41.8	+0.3
O29M				IAmb	IAmb	22 02 44.4	
	comp=Z,2.5nm,0.7s						
BMAR	**Burnt Mountain**	**20.47**	**30**	P	P	22 02 44.6	-0.2
M29M	**Somme Creek**	**20.66**	**46**	P	P	22 02 48.3	+1.3
HYT	**Haines Junctio**	**20.75**	**51**	P	P	22 02 48.1	+0.1
HYT				IAmb	IAmb	22 03 15.0	
	comp=Z,13nm,1.3s						
N30M	**Aishikik Lake**	**21.07**	**50**	P	P	22 02 51.5	+0.1
H29M	**Whitestone**	**21.99**	**37**	P	P	22 02 59.5	-1.6
R33M	**Jennings River**	**23.89**	**56**	P	P	22 03 21.3	+0.8
R33M				IAmb	IAmb	22 03 32.1	
	comp=Z,3.8nm,1.1s						
PDAR	**Pinedale Array**	**41.96**	**77**	P	P	22 05 56.9	-0.8
KURK	**Kurchatov**	**61.70**	**317**	P	P	22 08 23.4	-0.9
MKAR	**Makanchi Array**	**63.02**	**312**	P	P	22 08 31.7	-1.6
BRVK	**Borovoye**	**63.20**	**323**	P	P	22 08 33.9	-0.4
ABKAR	**Akbulak array**	**70.01**	**327**	P	P	22 09 16.8	-1.0
ABKAR	**Akbulak array**	**70.01**	**327**	P	P	22 09 16.3	-1.5
ABKAR				IAmb	IAmb	22 09 21.6	
	comp=Z,2.9nm,1.4s						

IDC ***28*** *22:01:02.1±0.7, 17°.29N×46°.46W, h0km, mb4.0/16, mbtmp4.0/17, ML3.4/1, MS4.0/60, Error ellipse: s-maj=19.5km s-min=17.1km az=88.0*

GCMT ***28*** *22:01:03.4±0.2, 17°.55N±0°.03×46°.31W±0°.01, h14km±1km, MW4.8/99, Moment Tensor Solution. s22,c26; s99,c129; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.10±.14; Mθθ=0.15±.08; Mφφ=2.25±.09; Mrθ=0.20±.28; Mθφ=0.03±.06; Mφr=0.25±.17; Best double couple: M=2.20000×10¹⁶ NP1:φ=5.00000°, δ=49.00000°, λ=-82.00000°. NP2: φ=173.00000°, δ=42.00000°, λ=-99.00000°. Principal axes: T 2.2640, Plg3.0000°, Azm90.0000°; N -0.1280, Plg6.0000°, Azm180.0000°; P -2.1350, Plg83.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *22:01:05.4±1.6, 17°.30N±0°.08×46°.7W±0°.1, h10km±1km, mb4.6/35 Error ellipse: s-maj=17.7km s-min=13.8km az=77.0*

ISC 28 22:01:04.2±0.5,**17°.28N**±0°.08×**46°.60W**±0°.08,**h12**km,**n104,** σ1§**06**/54,**mb4.5**/32,**MS4.0**/60,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**13.48**	**207**	Pn	**Pn**	**22 04 15.7**	**+0.4**
	0.2nm,0.3s,baz=44,slow=16,SNR=1.9						
MDP				LR	LR	22 08 22.1	
	comp=Z,549nm,21.6s,baz=96,slow=32						
	8.5nm,0.8s						
H05S1	**Guadeloupe/Mar**	**13.99**	**260**	T	T	22 19 02.1	
	SNR=9.6						
GRGR	**Grenville**	**15.43**	**253**	Pn	**Pn**	**22 04 41.5**	**-0.4**
BOAV	**Boa Vista**	**20.15**	**224**		**P**	**22 05 39.8**	**+1.3**
SDD	**Santo Domingo**	**22.22**	**277**	P	**P**	**22 06 02.0**	**+1.3**
BAUV	**El Baul**	**22.45**	**251**	P	**P**	**22 06 03.3**	**0.0**
MACA	**Manacapuru-AM**	**24.62**	**216**	P	**P**	**22 06 24.1**	**-0.5**
MACA				IAmb	IAmb	22 06 31.1	
	comp=Z,10nm,0.8s						
SDV	**Santo Domingo**	**24.83**	**253**	P	**P**	**22 06 24.4**	**-2.4**
SDV	**Santo Domingo**	**24.83**	**253**	P	**P**	**22 06 27.5**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=141,slow=6.5,SNR=3.4						
SDV				LR	LR	22 15 21.7	
	comp=Z,325nm,21.8s,baz=80,slow=34						
	comp=Z,1.1nm,0.3s						
RCBR	**Riachuelo**	**25.28**	**154**	LR	LR	22 13 46.3	
	comp=Z,389nm,21.1s,baz=358,slow=30						
BBTS	**Babate**	**29.01**	**91**	LR	LR	22 15 21.2	
	comp=Z,925nm,18.9s,baz=162,slow=30						
ROSC	**El Rosal**	**29.83**	**249**	LR	LR	22 20 01.1	
	comp=Z,234nm,21.2s,baz=80,slow=38						
SAML	**Samuel**	**30.79**	**213**	P	**P**	**22 07 20.9**	**+1.0**
BDFB	**Brasilia**	**32.75**	**183**	LR	LR	22 20 24.7	
	comp=Z,176nm,19.9s,baz=341,slow=36						
ETMB	**Extrema**	**33.18**	**217**	P	**P**	**22 07 40.5**	**-0.4**
ETMB				IAmb	IAmb	22 07 44.9	
	comp=Z,5.7nm,0.9s						
OTAV	**Otavalo**	**35.63**	**245**	P	**P**	**22 08 03.7**	**+0.9**
OTAV				IAmb	IAmb	22 08 12.7	
	comp=Z,8.1nm,1.2s						
CZSB	**Cruzeiro do Su**	**35.83**	**228**	P	**P**	**22 08 04.7**	**+0.8**
SIV	**San Ignacio**	**36.01**	**204**	P	**P**	**22 08 05.2**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=190,slow=22,SNR=1.7						
SIV				LR	LR	22 22 09.3	
	comp=Z,211nm,19.4s,baz=52,slow=35						
	comp=Z,0.4nm,0.3s						
RIMA	**Rio Macho**	**36.94**	**263**	P	**P**	**22 08 11.5**	**-2.2**
RIMA				IAmb	IAmb	22 08 19.1	
	comp=Z,17nm,1.3s						
BOSC	**San Juan Bosco**	**37.46**	**240**	P	**P**	**22 08 17.6**	**-0.4**
TKL	**Tuckaleechee C**	**37.69**	**306**	LR	LR	22 20 42.8	
	comp=Z,304nm,21.8s,baz=112,slow=31						
SADO	**Sadowa**	**38.65**	**322**	LR	LR	22 20 57.9	
	comp=Z,228nm,21.1s,baz=125,slow=31						
MCRA	**Macar, Loja**	**39.34**	**240**	P	**P**	**22 08 33.4**	**-0.4**
TEIG	**Tepich**	**39.50**	**281**	LR	LR	22 22 43.9	
	comp=Z,2μm,21.3s,baz=194,slow=33						
ATAH	**Atahualpa**	**39.70**	**235**	LR	LR	22 25 21.2	
	comp=Z,233nm,20.6s,baz=42,slow=37						
H10N3	**ASCENSION HYDR**	**40.37**	**126**	T	T	22 51 33.1	
	baz=308,slow=75,SNR=33						
H10N2	**ASCENSION HYDR**	**40.37**	**126**	T	T	22 51 32.1	
	baz=308,slow=75,SNR=37						
H10N1	**ASCENSION HYDR**	**40.39**	**126**	T	T	22 51 34.4	
	baz=308,slow=75,SNR=45						
SCHQ	**Scheffer ville**	**40.58**	**342**	P	**P**	**22 08 44.0**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=143,slow=8.7,SNR=5.9						
SCHQ				LR	LR	22 22 47.5	
	comp=Z,162nm,20.0s,baz=180,slow=32						
	comp=Z,3.5nm,0.8s						
MDT	**Midelt**	**40.78**	**60**	LR	LR	22 23 10.0	
	comp=Z,181nm,18.3s,baz=268,slow=33						
NNA	**Nana**	**41.70**	**228**	LR	LR	22 25 31.6	
	comp=Z,222nm,21.6s,baz=25,slow=35						
DBIC	**Dimbokro**	**42.08**	**99**	P	**P**	**22 08 55.2**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=261,slow=9.3,SNR=2.1						
DBIC				LR	LR	22 23 05.9	
	comp=Z,531nm,20.2s,baz=262,slow=32						
	comp=Z,2.9nm,0.9s						
APG	**El Apazote**	**42.13**	**273**	LR	LR	22 28 05.5	
	comp=Z,9.4nm,18.7s,baz=104,slow=38						
ESDC	**Sonseca Array**	**43.09**	**50**	LR	LR	22 23 31.4	
	comp=Z,314nm,18.1s,baz=244,slow=31						
CPUP	**Villa Florida**	**44.59**	**194**	P	**P**	**22 09 17.4**	**+1.1**
	comp=Z,1.6nm,0.6s,baz=7.6,slow=8.0,SNR=2.5						
CPUP				LR	LR	22 28 47.0	
	comp=Z,111nm,18.4s,baz=28,slow=37						
	comp=Z,1.6nm,0.6s						
R40A	**Maddies Statio**	**44.96**	**307**	P	**P**	**22 09 19.2**	**-0.1**
R40A				IAmb	IAmb	22 09 28.5	
	comp=Z,13nm,1.2s						
LVC	**Limon Verde**	**45.26**	**210**	LR	LR	22 28 37.1	
	comp=Z,101nm,21.7s,baz=10,slow=36						
TOA0	**Torodi Ar. Sit**	**46.69**	**88**	P	**P**	**22 09 33.9**	**+0.6**
TOA0				IAmb	IAmb	22 09 43.3	
	comp=Z,8.3nm,1.3s						
TORD	**Torodi Ar. Bea**	**46.69**	**88**	P	**P**	**22 09 35.0**	**+1.7**
TORD				IAmb	IAmb	22 09 43.3	
	comp=Z,7.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**46.69**	**88**	P	**P**	**22 09 31.8**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=295,slow=8.5,SNR=3.8						
TORD				LR	LR	22 26 48.1	
	comp=Z,583nm,18.7s,baz=281,slow=33						
	comp=Z,1.0nm,0.9s						
OK033	**Mehan**	**48.15**	**303**	P	**P**	**22 09 44.0**	**-0.3**
BRDY	**Brady**	**49.33**	**297**	P	**P**	**22 09 52.9**	**-0.6**
833A	**Chaparral WMA,**	**49.56**	**293**	P	**P**	**22 09 54.3**	**-1.0**
F33A	**5 Mile Ranch,**	**49.97**	**316**	P	**P**	**22 09 57.5**	**-0.7**
F33A				IAmb	IAmb	22 10 07.7	
	comp=Z,14nm,1.4s						
BORG	**Borgarnes**	**50.41**	**14**	LR	LR	22 25 58.0	
	comp=Z,108nm,20.1s,baz=245,slow=30						
APMT	**Aspermont**	**50.43**	**299**	P	**P**	**22 10 01.2**	**-0.7**
APMT				IAmb	IAmb	22 10 11.1	
	comp=Z,13nm,1.3s						
AGMN	**Agassiz Nation**	**50.49**	**319**	P	**P**	**22 10 02.7**	**+0.6**
AGMN				IAmb	IAmb	22 10 10.3	
	comp=Z,11nm,1.4s						
ULM	**Lac du Bonnet**	**51.20**	**321**	P	**P**	**22 10 08.5**	**+1.1**
ULM	**Lac du Bonnet**	**51.20**	**321**	P	**P**	**22 10 06.2**	**-1.2**
	comp=Z,3.1nm,0.9s,baz=103,slow=4.3,SNR=3.4						
ULM				LR	LR	22 28 32.4	
	comp=Z,220nm,21.4s,baz=125,slow=32						
	comp=Z,3.1nm,0.9s						
KEST	**Kesra**	**52.63**	**58**	LR	LR	22 32 31.2	
	comp=Z,183nm,18.0s,baz=234,slow=36						
MSTX	**Muleshoe**	**52.68**	**300**	P	**P**	**22 10 17.8**	**-1.0**
MSTX				IAmb	IAmb	22 10 22.8	
	comp=Z,9.2nm,1.1s						
TXAR	**Lajitas Array**	**53.31**	**294**	LR	LR	22 34 01.3	
	comp=Z,72nm,18.7s,baz=62,slow=37						
FCC	**Fort Churchill**	**53.95**	**332**		**P**	**22 10 29.0**	**+1.4**
FCC				IAmb	IAmb	22 10 32.0	
	comp=Z,10.0nm,1.1s						
DAVOX	**Davos/Dischmat**	**54.75**	**45**	LR	LR	22 30 49.2	
	comp=Z,230nm,19.9s,baz=246,slow=33						
ISCO	**Idaho Springs**	**55.45**	**307**	P	**P**	**22 10 39.2**	**0.0**
ISCO				IAmb	IAmb	22 10 49.7	
	comp=Z,5.3nm,0.9s						
SUMG	**Summit**	**55.49**	**3**	*i* P	P	22 10 45.0	+5.9
ANMO	**Albuquerque**	**55.77**	**301**	LR	LR	22 31 56.4	
	comp=Z,290nm,21.6s,baz=194,slow=33						
CTI	**Castel Tesino**	**55.80**	**46**	P	**P**	**22 10 43.9**	**+2.5**
FFC	**Flin Flon**	**56.26**	**325**	P	**P**	**22 10 45.0**	**+0.6**
FFC				IAmb	IAmb	22 10 52.5	
	comp=Z,12nm,1.4s						
PRED	**Cave del Predi**	**57.18**	**46**	P	**P**	**22 10 52.0**	**+0.8**
PD31	**Pinedale Array**	**58.69**	**310**	P	**P**	**22 11 01.6**	**-0.5**
PD31				IAmb	IAmb	22 11 11.5	
	comp=Z,5.3nm,1.2s						
PDAR	**Pinedale Array**	**58.69**	**310**	P	**P**	**22 11 00.8**	**-1.2**
PDAR	**Pinedale Array**	**58.69**	**310**	P	**P**	**22 11 02.8**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=121,slow=7.6,SNR=6.7						
PDAR				LR	LR	22 33 49.1	
	comp=Z,172nm,21.6s,baz=113,slow=34						
	comp=Z,1.3nm,0.9s						
LPIG	**La Paz**	**59.56**	**288**	LR	LR	22 40 18.7	
	comp=Z,45nm,18.2s,baz=38,slow=40						
NOA	**NORSAR Array B**	**59.62**	**29**	P	**P**	**22 11 07.3**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=250,slow=6.7,SNR=1.4						
NOA				LR	LR	22 32 42.5	
	comp=Z,87nm,18.3s,baz=245,slow=32						
	comp=Z,1.3nm,1.0s						
HFS	**Hagfors**	**60.49**	**30**	P	**P**	**22 11 13.2**	**-0.6**
	comp=Z,4.4nm,0.9s,baz=126,slow=7.5,SNR=2.6						
HFS				LR	LR	22 34 08.9	
	comp=Z,71nm,19.3s,baz=256,slow=33						
	comp=Z,4.4nm,0.9s						
CCUT	**Cedar City**	**61.39**	**304**	P	**P**	**22 11 19.9**	**-0.8**
CCUT				IAmb	IAmb	22 11 31.1	
	comp=Z,4.9nm,1.0s						
PLCA	**Paso Flores**	**61.86**	**200**	P	**P**	**22 11 22.8**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=67,slow=13,SNR=1.4						
PLCA				LR	LR	22 38 53.2	
	comp=Z,93nm,21.9s,baz=37,slow=37						
	comp=Z,1.0nm,0.8s						
ELK	**Elko**	**62.85**	**307**	LR	LR	22 37 53.4	
	comp=Z,196nm,19.1s,baz=96,slow=35						
RES	**Resolute Bay**	**63.03**	**347**	LR	LR	22 36 35.0	
	comp=Z,65nm,20.4s,baz=208,slow=34						
PFO	**Pinyon Flats O**	**64.07**	**299**	LR	LR	22 37 42.2	
	comp=Z,234nm,21.7s,baz=76,slow=34						
NEW	**Newport**	**64

ILAR				LR	LR	22 47 45.1	
	comp=Z,59nm,18.3s,baz=90,slow=36						
	comp=Z,3.9nm,0.8s						
BELG	**Belogornoye**	**79.03**	**38**	LR	LR	22 45 57.9	
	comp=Z,97nm,18.3s,baz=188,slow=34						
GNI	**Garni**	**80.06**	**51**	LR	LR	22 48 28.9	
	comp=Z,34nm,19.4s,baz=266,slow=36						
LSZ	**Lusaka**	**80.52**	**109**	LR	LR	22 43 42.4	
	comp=Z,196nm,19.2s,baz=270,slow=32						
G21K	**Allakaket**	**80.84**	**337**	P	**P**	**22 13 18.8 +1.1**	
G21K				IAmb	IAmb	22 13 22.2	
	comp=Z,5.0nm,0.8s						
C18K	**Utukok River**	**82.58**	**340**	P	**P**	**22 13 27.9 +1.0**	
C18K				IAmb	IAmb	22 13 41.3	
	comp=Z,6.0nm,1.1s						
E18K	**Tukpahlearik C**	**82.97**	**339**	P	**P**	**22 13 29.4 +0.6**	
BOSA	**Boshof**	**83.06**	**123**	P	**P**	**22 13 30.6 +0.5**	
BOSA				IAmb	IAmb	22 13 52.9	
	comp=Z,7.0nm,1.4s						
BOSA	**Boshof**	**83.06**	**123**	P	**P**	**22 13 30.3 +0.2**	
	comp=Z,1.8nm,0.8s,baz=224,slow=1.7,SNR=3.5						
	comp=Z,1.8nm,0.8s						
KDAK	**Kodiak Island**	**83.78**	**329**	LR	LR	22 49 12.5	
	comp=Z,140nm,20.5s,baz=81,slow=34						
ARU	**Arti**	**83.87**	**33**	LR	LR	22 49 12.3	
	comp=Z,74nm,18.3s,baz=283,slow=34						
AKTO	**Aktyubinsk**	**85.82**	**38**	LR	LR	22 50 31.0	
	comp=Z,96nm,18.7s,baz=220,slow=35						
ATD	**Arta Tunnel**	**86.12**	**79**	LR	LR	22 51 58.6	
	comp=Z,12nm,19.0s,baz=290,slow=36						
BVAR	**Borovoye Array**	**91.52**	**33**	LR	LR	22 51 26.2	
	comp=Z,77nm,21.5s,baz=295,slow=33						
WSAR	**Wadi Sarin**	**96.60**	**63**	LR	LR	23 02 35.0	
	comp=Z,84nm,18.0s,baz=271,slow=38						
ZALV	**Zalesovo Beam**	**97.78**	**27**	LR	LR	22 55 16.2	
	comp=Z,28nm,20.7s,baz=308,slow=33						

ISC 28 22:19:04.0±1.0, **45°21'N**±0.03×**14°60E**±0.04, **h10**km±9km, **n12**, σ0**53**/21, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIY	**Rijeka**	**0.14**	**324**	*e*Pg	**Pg**	**22 19 06.9**	**-0.2**
RIY				Sg	**Sg**	**22 19 09.4**	**0.0**
GBRS	**Gornja Briga**	**0.35**	**25**	*i* Pg	**Pg**	**22 19 11.1**	**+0.1**
KNDS	**Knezji Dol**	**0.35**	**334**	*i* Pg	**Pg**	**22 19 10.9**	**-0.1**
KNDS				*i* Sg	**Sb**	**22 19 17.3**	**-0.8**
SMRN	**Sveta Marina**	**0.36**	**241**	Sg	**Sg**	**22 19 16.5**	**+0.7**
RABC	**Rab**	**0.48**	**164**	*e*Pg	**Pg**	**22 19 12.6**	**-0.6**
RABC				Sg	**Sg**	**22 19 20.2**	**+0.7**
CEY	**Cerknica**	**0.54**	**347**	*e*Pg	**Pg**	**22 19 14.6**	**+0.1**
CEY				*i* Sg	**Sb**	**22 19 23.7**	**+0.2**
CEY				IAML		22 19 25.5	
	comp=Z,2.5nm,0.2s						
BOJS	**Bojanci**	**0.54**	**57**	*e*Pg	**Pg**	**22 19 14.2**	**-0.3**
BOJS				*i* Sg	**Sg**	**22 19 22.4**	**+0.7**
BOJS				IAML		22 19 24.8	
	comp=Z,3.8nm,0.2s						
VISS	**Visnje**	**0.62**	**16**	*i* Pg	**Pg**	**22 19 15.4**	**-0.5**
VISS				*i* Sg	**Sb**	**22 19 25.0**	**-0.5**
VISS				IAML		22 19 27.2	
	comp=Z,1.7nm,0.1s						
NVLJ	**Novalja**	**0.68**	**163**	*e*Pg	**Pg**	**22 19 16.2**	**-0.8**
NVLJ				Sg	**Sb**	**22 19 26.5**	**-0.7**
OZLJ	**Ozalj**	**0.73**	**56**	*e*Pg	**Pb**	**22 19 18.7**	**0.0**
OZLJ				Sg	**Sg**	**22 19 27.9**	**+0.3**
UDBI	**Udbina**	**1.07**	**129**	*e*Pg	**Pb**	**22 19 24.8**	**+0.1**
UDBI				Sg	**Sn**	**22 19 40.4**	**+0.4**
DUGI	**Dugi Otok**	**1.26**	**165**	*e*Pg	**Pg**	**22 19 28.7**	**+0.6**

*IDC **28** 22:28:30.9±0.7, 6°19S×143°39E, h0km, mb4.3/13, mbtmp4.3/16, ML3.1/2, MS3.6/17, Error ellipse: s-maj=29.6km s-min=14.5km az=76.0*

*NEIC **28** 22:28:32.9±1.7, 6°21S±0°08×143°27E±0°08, h10km±1km, mb4.6/27, Error ellipse: s-maj=14.6km s-min=12.7km az=205.0*

*DJA **28** 22:28:40.5±0.7, 6°S±4°×14°E±°, h154km±6km, M5.0/9, mB5.3/2, mb4.4/9, MLv5.3/4, Mw(mB)4.7/2*

ISC 28 22:28:32.3±0.4, **6°22S**±0°05×**143°28E**±0°06, **h10**km, **n84**, σ1**972**/72, **mb4.6**/29, **MS3.7**/16, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.64**	**232**	P	**Pb**	**22 29 39.5**	**+2.7**
MMPI				S	**Sb**	**22 30 22.6**	**+1.6**
GENI	**Genyem**	**4.76**	**319**	P	**Pb**	**22 29 51.6**	**-4.2**
PMG	**Port Moresby**	**4.98**	**130**	Pn	**Pn**	**22 29 47.4**	**+0.3**
PMG	**Port Moresby**	**4.98**	**130**	Pn	**Pn**	**22 29 47.2**	**+0.1**
	16nm,0.3s,baz=332,slow=6.7,SNR=30						
PMG				Sn	**Sn**	**22 30 42.7**	**-2.1**
	13nm,0.3s,baz=234,slow=22,SNR=8.4						
	46nm,0.2s						
SMPI	**Sarmi**	**6.20**	**312**	P	Pn	22 30 10.5	+6.5
	58nm,1.0s,0.4nm						
COEN	**Coen**	**7.69**	**181**	Pn	**Pn**	**22 30 25.2**	**+0.8**
RABL	**Rabaul**	**9.07**	**78**	Pn	**Pn**	**22 30 43.0**	**-0.5**
FAKI	**Fak Fak**	**11.48**	**286**	Pn	**Pn**	**22 31 15.9**	**-0.5**
SAUI	**Saumlaki**	**12.02**	**261**	Pn	**Pn**	**22 31 22.0**	**-1.9**
MTN	**Manton Dam**	**13.67**	**240**	Pn	**Pn**	**22 31 44.2**	**-2.1**
CTA	**Charters Tower**	**14.08**	**168**	Pn	**Pn**	**22 31 51.2**	**-0.8**
	0.2nm,0.3s,baz=350,slow=11,SNR=1.5						
CTA				Lg	Lg	22 35 58.3	
	0.2nm,0.3s,baz=251,slow=22,SNR=2.3						
	3.8nm,0.9s						
WB0	**Warramunga Arr**	**16.00**	**212**	Pn	**Pn**	**22 32 15.8**	**-1.9**
WRA	**Warramunga Arr**	**16.17**	**212**	Pn	**Pn**	**22 32 17.1**	**-2.7**
WRA	**Warramunga Arr**	**16.17**	**212**	Pn	**Pn**	**22 32 18.4**	**-1.5**
	1.1nm,0.3s,baz=30,slow=13,SNR=18						
WRA				Sn	Sn	22 35 06.3	-13
	1.3nm,0.3s,baz=39,slow=24,SNR=5.1						
WRA				Lg	Lg	22 37 01.9	
	0.5nm,0.3s,baz=29,slow=26,SNR=1.8						
KNRA	**Kununurra**	**17.06**	**235**	Pn	**Pn**	**22 32 29.4**	**-1.7**
KNRA				IAmb	IAmb	22 32 47.2	
	comp=Z,26nm,0.7s						
SOEI	**Soe**	**19.15**	**258**	P	**P**	**22 32 56.5**	**+0.3**
SOEI				IAmb	IAmb	22 33 22.7	
	comp=Z,52nm,1.2s						
SOEI	**Soe**	**19.15**	**258**	P	**Pn**	**22 32 57.1**	**+0.1**
AS31	**Alice Springs**	**19.55**	**207**	P	**P**	**22 33 01.0**	**+0.6**
AS31				IAmb	IAmb	22 33 03.9	
	comp=Z,17nm,0.7s						
ASAR	**Alice Springs**	**19.55**	**207**	P	**Pn**	**22 33 02.4**	**+0.7**
	comp=Z,58nm,0.7s,baz=36,slow=9.7,SNR=385						
ASAR				Sn	**Sn**	**22 36 31.8**	**-10**
	comp=Z,0.5nm,0.3s,baz=18,slow=30,SNR=4.6						
ASAR				Lg	Lg	22 38 46.8	
	comp=Z,0.1nm,0.3s,baz=48,slow=21,SNR=4.3						
ASAR				LR	LR	22 41 12.2	
	comp=Z,352nm,19.1s,baz=30,slow=39						
EIDS	**Eidsvold**	**20.45**	**159**	P	**P**	**22 33 10.1**	**0.0**
FITZ	**Fitzroy Crossi**	**20.87**	**234**	P	**P**	**22 33 13.8**	**-1.0**
MMRI	**Maumere**	**21.00**	**262**	P	**P**	**22 33 15.8**	**-0.5**
MMRI				IAmb	IAmb	22 33 38.9	
	comp=Z,12nm,0.6s						
GTOI	**Gorontalo**	**21.35**	**288**	P	P	22 33 33.9	+14
EDFI	**Ende, Flores**	**21.55**	**262**	P	**P**	**22 33 20.7**	**-1.5**
DAV	**Davao City (W)**	**22.05**	**307**	LR	LR	22 42 05.8	
	comp=Z,58nm,18.9s,baz=98,slow=37						
KAPI	**Kappang**	**23.45**	**272**	P	**P**	**22 33 41.0**	**-1.2**
KAPI				IAmb	IAmb	22 33 59.1	
	comp=Z,19nm,1.0s						
TTSI	**Tana Toraja**	**23.60**	**277**	P	P	22 33 57.2	+14
TOLI2	**Tolitoli**	**23.61**	**287**	P	**P**	**22 33 43.9**	**+0.2**
STKA	**Stephens Creek**	**25.57**	**183**	P	**P**	**22 34 01.6**	**0.0**
STKA	**Stephens Creek**	**25.57**	**183**	P	**P**	**22 34 02.2**	**+0.6**
	comp=Z,4.8nm,0.8s,baz=3.6,slow=7.7,SNR=5.3						
STKA				LR	LR	22 45 22.5	
	comp=Z,239nm,18.9s,baz=16,slow=40						
	comp=Z,4.8nm,0.8s						
MBWA	**Marble Bar**	**27.21**	**235**	P	**P**	**22 34 16.5**	**-0.1**
MBWA				IAmb	IAmb	22 34 19.6	
	comp=Z,23nm,1.4s						
PSA00	**Pilbara Seismi**	**27.33**	**234**	P	**P**	**22 34 17.2**	**-0.4**
DZM	**Mont Dzumac**	**27.37**	**127**	P	**P**	**22 34 17.1**	**-0.9**
DZM				IAmb	IAmb	22 34 23.6	
	comp=Z,12nm,1.2s						
DZM	**Mont Dzumac**	**27.37**	**127**	*e*LR	LR	22 41 15.9	
	comp=Z,134nm,22.7s						
DZM	**Mont Dzumac**	**27.37**	**127**	LR	LR	22 44 01.4	
	comp=Z,106nm,19.9s,baz=356,slow=34						
LEM	**Lembang**	**35.44**	**267**	LR	LR	22 52 32.9	
	comp=Z,37nm,18.8s,baz=264,slow=41						

MJAR	**Matsushiro Arr**	**42.80**	**354**	P	**P**	**22 36 30.7**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=148,slow=7.2,SNR=1.2						
	comp=Z,1.3nm,0.6s						
URZ	**Urewera**	**44.23**	**141**	LR	LR	22 55 33.5	
	comp=Z,77nm,18.2s,baz=300,slow=37						
RTZ	**Ruatahuna**	**44.37**	**142**	P	**P**	**22 36 43.2**	**+0.1**
RPZ	**Rata Peaks**	**44.60**	**151**	LR	LR	22 53 53.6	
	comp=Z,80nm,19.2s,baz=237,slow=34						
NJ2	**Nanjing**	**44.62**	**330**	*e*P	**P**	**22 36 47.0**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,760nm,3.7s						
KSRS	**Korea Array**	**45.75**	**343**	LR	LR	22 53 29.0	
	comp=Z,31nm,21.4s,baz=135,slow=33						
LYN	**LuoYang**	**49.91**	**326**	*e*P	**P**	**22 37 27.0**	**+0.7**
LYN				pP	sP	22 37 32.5	+1.2
LYN				sP	pP	22 37 35.5	+5.6
LYN				pmax	pmax		
	comp=Z,11nm,0.5s						
LYN				pmax	pmax		
	comp=Z,280nm,4.3s						
CMAR	**Chiang Mai Arr**	**50.13**	**300**	P	**P**	**22 37 28.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**50.13**	**300**	P	**P**	**22 37 27.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=111,slow=4.9,SNR=1.6						
	comp=Z,0.3nm,0.3s						
USRK	**Ussuriysk Ar.**	**51.21**	**350**	P	**P**	**22 37 34.9**	**-1.1**
	comp=Z,2.2nm,0.9s,baz=183,slow=7.2,SNR=1.9						
USRK				LR	LR	22 58 00.0	
	comp=Z,23nm,20.9s,baz=67,slow=35						
	comp=Z,2.2nm,0.9s						
PZH	**PanZhiHua**	**51.75**	**311**	P	**P**	**22 37 44.0**	**+3.5**
PZH				smax	smax		
	comp=N,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,90nm,4.7s						
HHC	**Hu-ho-hao-te**	**55.15**	**331**	*e*P	**P**	**22 38 06.5**	**+1.3**
HHC				sP	sP	22 38 16.0	+5.7
HHC				PcP	**PcP**	**22 39 06.0**	**-0.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,71nm,5.9s						
RAR	**Rarotonga**	**56.99**	**111**	LR	LR	22 59 10.8	
	comp=Z,43nm,20.8s,baz=208,slow=32						
PETK	**Petropavlovsk-**	**60.35**	**10**	P	**P**	**22 38 42.0**	**+0.6**
	comp=Z,5.2nm,1.0s,baz=182,slow=4.0,SNR=1.3						
	comp=Z,5.2nm,1.0s						
SONM	**Songino Array**	**62.86**	**333**	P	**P**	**22 38 59.2**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=134,slow=6.2,SNR=2.0						
SONM				LR	LR	23 07 06.1	
	comp=Z,52nm,18.4s,baz=342,slow=37						
	comp=Z,0.4nm,0.7s						
PALK	**Pallekele**	**63.85**	**281**	LR	LR	23 10 38.8	
	comp=Z,92nm,20.4s,baz=10,slow=40						
PPT2	**Papeete2**	**66.38**	**106**	*e*LR	LR	22 59 24.7	
	comp=Z,76nm,23.0s						
WMQ	**Urumqi**	**70.58**	**321**	*e*P	**P**	**22 39 50.5**	**+2.6**
VNDA	**Vanda**	**71.94**	**176**	P	**P**	**22 39 55.9**	**+0.5**
VNDA				IAmb	IAmb	22 40 08.2	
	comp=Z,12nm,1.3s						
VNDA	**Vanda**	**71.94**	**176**	LR	LR	23 10 38.5	
	comp=Z,69nm,18.2s,baz=186,slow=35						
MKAR	**Makanchi Array**	**75.34**	**322**	P	**P**	**22 40 16.7**	**+0.6**
MKAR	**Makanchi Array**	**75.34**	**322**	P	**P**	**22 40 16.9**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=104,slow=7.4,SNR=33						
	comp=Z,2.4nm,0.7s						
MAKZ	**Makanchi**	**75.54**	**322**	P	**P**	**22 40 17.7**	**+0.5**
MAKZ				IAmb	IAmb	22 40 18.9	
	comp=Z,6.3nm,1.1s						
KSH	**Kashi**	**76.80**	**313**	P	**P**	**22 40 26.5**	**+1.9**
KSH				PcP	**PcP**	**22 40 38.0**	**+2.1**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NIL	**Nilore**	**77.06**	**306**	P	**P**	**22 40 26.2**	**+0.1**
ZALV	**Zalesovo Beam**	**77.26**	**329**	P	**P**	**22 40 26.0**	**-0.7**
ZALV	**Zalesovo Beam**	**77.26**	**329**	P	**P**	**22 40 26.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=97,slow=4.2,SNR=5.9						
	comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**79.20**	**324**	P	**P**	**22 40 37.9**	**+0.4**
KURK				IAmb	IAmb	22 40 55.2	
	comp=Z,4.0nm,1.1s						
KURBB	**Kurchatov Arra**	**79.22**	**324**	P	**P**	**22 40 38.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=115,slow=4.8,SNR=12						
	comp=Z,0.9nm,0.6s						
CHGR	**Chuyangaron**	**81.61**	**310**	P	**P**	**22 40 51.3**	**+0.4**
CHGR				IAmb	IAmb	22 40 52.2	
	comp=Z,6.8nm,0.7s						
SIMJ	**Simiganj**	**81.72**	**310**	P	**P**	**22 40 51.1**	**-0.4**
SIMJ				IAmb	IAmb	22 40 52.9	
	comp=Z,5.2nm,1.1s						
KKAR	**Karatay Array**	**81.81**	**315**	P	**P**	**22 40 51.6**	**-0.2**
K20K	**Telida**	**83.69**	**24**	P	**P**	**22 41 01.9**	**+0.8**
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**22 41 01.1**	**-0.4**
QSPA	**South Pole Qui**	**83.75**	**180**	P	**P**	**22 41 01.2**	**-0.4**
	comp=Z,13nm,0.8s,baz=315,slow=0.8,SNR=55						
QSPA				LR	LR	23 18 34.9	
	comp=Z,149nm,20.4s,baz=228,slow=36						
	comp=Z,13nm,0.8s						
NRIK	**Noril'sk**	**84.37**	**343**	P	**P**	**22 41 04.8**	**+0.3**
NRIK	**Noril'sk**	**84.37**	**343**	P	**P**	**22 41 05.0**	**+0.5**
	comp=Z,6.1nm,0.8s,baz=127,slow=4.5,SNR=12						
	comp=Z,6.1nm,0.8s						
CAST	**Castle Rocks**	**84.52**	**24**	P	**P**	**22 41 05.3**	**0.0**
CAST				IAmb	IAmb	22 41 15.1	
	comp=Z,5.3nm,1.0s						
BVAR	**Borovoye Array**	**84.79**	**325**	P	**P**	**22 41 07.7**	**+0.8**
	comp=Z,5.5nm,0.8s,baz=107,slow=6.3,SNR=27						
	comp=Z,5.5nm,0.8s						
BRVK	**Borovoye**	**84.86**	**325**	P	**P**	**22 41 07.3**	**0.0**
BRVK				IAmb	IAmb	22 41 09.3	
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	**87.15**	**24**	P	**P**	**22 41 17.1**	**-1.2**
	comp=Z,1.9nm,1.0s,baz=249,slow=4.7,SNR=8.6						
ILAR				LR	LR	23 15 47.0	
	comp=Z,39nm,19.6s,baz=256,slow=33						
	comp=Z,1.9nm,1.0s						
F24K	**Squaw Lake**	**87.78**	**21**	P	**P**	**22 41 23.2**	**+1.9**
F24K				IAmb	IAmb	22 41 31.7	
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**93.22**	**22**	LR	LR	23 17 14.0	
	comp=Z,43nm,21.0s,baz=360,slow=31						
YBH	**Yreka Blue Hor**	**97.09**	**49**	LR	LR	23 18 01.4	
	comp=Z,49nm,21.6s,baz=280,slow=31						
NVAR	**Mina Array Bea**	**100.42**	**52**	P	**Pdif**	**22 42 20.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=260,slow=6.3,SNR=4.6						
TORD	**Tomodi Ar. Bea**	**141.55**	**283**	PKhKP	PKPpre	22 47 59.1	
	comp=Z,0.4nm,0.7s,baz=62,slow=3.0,SNR=3.6						
CPUP	**Villa Florida**	**141.96**	**149**	PKP	**PKPdf**	**22 48 05.5**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=204,slow=5.0,SNR=3.8						
DBIC	**Dimbokro**	**148.34**	**273**	PKPbc	**PKPbc**	**22 48 20.9**	**+0.8**
	comp=Z,14nm,0.9s,baz=88,slow=1.4,SNR=14						

*NEIC **28** 22:44:05.3±1.4, 56°47N±0°08×148°5W±0°1, h23km±9km, ML3.7/54, ML3.4(AEIC), Error ellipse: s-maj=12.2km s-min=7.9km az=166.0*

*IDC **28** 22:44:06.4±1.4, 56°55N×148°04W, h0km, mb3.3/6, mbtmp3.4/10, ML3.4/4, MS3.1/3, Error ellipse: s-maj=27.4km s-min=22.4km az=28.0*

*AEIC **28** 22:44:08.6±1.4, 56°50N±0°08×148°46W±0°10, h12km±7km, Error ellipse: s-maj=11.5km s-min=7.5km az=170.0*

ISC 28 22:44:05.9±0.9, **56°61N**±0°07×**148°49W**±0°05, **h10**km, **n214**, σ1**933**/219, **mb3.6**/6, **MS3.1**/3, **Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**2.52**	**300**		**Pn**	**22 44 45.8**	**-1.2**
KDAK					**Sn**	**22 45 14.1**	**-3.6**
KDAK	**Kodiak Island**	**2.52**	**300**	Pn	**Pn**	**22 44 45.7**	**-1.2**
	6.2nm,0.3s,baz=122,slow=6.0,SNR=129						
KDAK				Sn	**Sn**	**22 45 14.6**	**-3.1**
	14nm,0.3s,baz=84,slow=23,SNR=17						
OHAK	**Old Harbor**	**2.70**	**285**		**Pn**	**22 44 47.5**	**-1.8**
OHAK					**Sn**	**22 45 17.9**	**-4.2**
OHAK	**Old Harbor**	**2.70**	**285**	P	**Pn**	**22 44 47.6**	**-1.8**
OHAK	**Old Harbor**	**2.70**	**285**	P	**Pn**	**22 44 47.6**	**-1.8**
	baz=103						
OHAK				S	**Sn**	**22 45 18.0**	**-4.1**
	baz=103						
SYI	**Shuyak Island**	**2.91**	**315**		**Pn**	**22 44 51.6**	**-0.6**
SYI					**Sn**	**22 45 25.8**	**-1.3**
Q20K	**Shuyak Island**	**2.91**	**315**	P	**Pn**	**22 44 51.2**	**-1.0**
	baz=133						
Q20K				S	**Sn**	**22 45 25.4**	**-1.7**
	baz=133						

Q23K	**Middleton Isla**	**3.05**	**21**		**Pn**	**22 44 53.1**	**-1.1**
Q23K				IAML		22 45 40.1	
	comp=N,240nm,1.1s						
Q23K				IAML		22 46 20.2	
	comp=E,261nm,1.2s						
Q23K	**Middleton Isla**	**3.05**	**21**	P	**Pn**	**22 44 53.2**	**-0.9**
	baz=202						
MID	**Middleton Isla**	**3.05**	**21**			**22 44 53.1**	**-1.0**
MID				IAML		22 46 34.2	
	comp=N,215nm,1.5s						
MID	**Middleton Isla**	**3.05**	**21**	P	**Pn**	**22 44 53.3**	**-0.9**
CNPM	**China Poot**	**3.27**	**335**		**Pn**	**22 44 56.6**	**-0.7**
CNPM					**Sn**	**22 45 34.4**	**-1.8**
BRSE	**Bradley Lake S**	**3.36**	**340**		**Pn**	**22 44 57.7**	**-0.8**
BRSE					**Sn**	**22 45 36.4**	**-2.0**
BRSE	**Bradley Lake S**	**3.36**	**340**	P	**Pn**	**22 44 57.7**	**-0.8**
	baz=159						
BRSE				S	**Sn**	**22 45 36.4**	**-2.0**
	baz=159						
BRLK	**Bradley Lake**	**3.41**	**339**		**Pn**	**22 44 58.1**	**-1.1**
BRLK					**Sn**	**22 45 37.4**	**-2.3**
BRLK				IAML		22 45 42.4	
	comp=E,88nm,0.6s						
P23K	**Montague Islan**	**3.45**	**9**		**Pn**	**22 44 59.0**	**-0.7**
P23K					**Sn**	**22 45 38.1**	**-2.5**
P23K	**Montague Islan**	**3.45**	**9**	P	**Pn**	**22 44 59.0**	**-0.7**
	baz=190						
P23K				S	**Sn**	**22 45 38.1**	**-2.5**
	baz=190						
SEW	**Seward**	**3.54**	**352**		**Pn**	**22 45 00.1**	**-0.8**
SEW	**Seward**	**3.54**	**352**	P	**Pn**	**22 45 00.1**	**-0.8**
	baz=171						
Q19K	**Cape Douglas,**	**3.61**	**312**		**Pn**	**22 45 01.9**	**0.0**
Q19K				IAML		22 46 00.3	
	comp=N,157nm,1.1s						
Q19K	**Cape Douglas,**	**3.61**	**312**	P	**Pn**	**22 45 02.0**	**0.0**
	baz=129						
KAKN	**Katmai Knife C**	**3.94**	**298**		**Pn**	**22 45 06.1**	**-0.3**
O22K	**Cooper Landing**	**3.94**	**351**	P	**Pn**	**22 45 06.2**	**-0.2**
	baz=170						
HIN	**Hinchinbrook I**	**3.94**	**14**		**Pn**	**22 45 06.0**	**-0.5**
HIN					**Sn**	**22 45 50.1**	**-2.6**
HIN				IAML		22 45 55.2	
	comp=E,126nm,1.4s						
P19K	**Oil Pt**	**3.96**	**323**		**Pn**	**22 45 06.5**	**-0.2**
P19K				IAML		22 45 56.4	
	comp=E,138nm,1.3s						
P19K	**Oil Pt**	**3.96**	**323**	P	**Pn**	**22 45 06.5**	**-0.2**
	baz=139						
KAIM	**Kayak Island**	**3.96**	**31**		**Pn**	**22 45 05.9**	**-0.8**
KAIM				IAML		22 45 57.8	
	comp=E,141nm,1.3s						
KAIM	**Kayak Island**	**3.96**	**31**	P	**Pn**	**22 45 05.8**	**-0.9**
	baz=214						
SLKM	**Skilak Lake**	**4.02**	**348**		**Sn**	**22 45 52.7**	**-1.9**
O20K	**Slope Mountain**	**4.11**	**330**		**Pn**	**22 45 08.2**	**-0.6**
O20K	**Slope Mountain**	**4.11**	**330**	P	**Pn**	**22 45 08.2**	**-0.6**
	baz=147						
ILSW	**Iliamna Southw**	**4.18**	**326**		**Pn**	**22 45 08.9**	**-1.0**
ILSW				IAML		22 45 59.9	
	comp=E,53nm,0.6s						
ILSW				IAML		22 46 03.6	
	comp=N,60nm,0.4s						
EYAK	**Cordova Ski Ar**	**4.21**	**19**		**Pn**	**22 45 09.6**	**-0.5**
EYAK	**Cordova Ski Ar**	**4.21**	**19**	P	**Pn**	**22 45 09.8**	**-0.2**
EYAK	**Cordova Ski Ar**	**4.21**	**19**	P	**Pn**	**22 45 09.7**	**-0.2**
	baz=200						
SUCK	**Suckling Hills**	**4.27**	**34**		**Pn**	**22 45 10.5**	**-0.4**
SUCK				IAML		22 45 59.6	
	comp=N,106nm,1.4s						
SUCK				IAML		22 46 02.5	
	comp=E,70nm,1.2s						
CNTC	**Contact Creek**	**4.33**	**296**		**Pn**	**22 45 11.6**	**-0.2**
Q17K	**Contact Creek**	**4.33**	**296**	P	**Pn**	**22 45 11.6**	**-0.2**
	baz=111						
HMT	**Hamilton**	**4.35**	**29**		**Pn**	**22 45 11.6**	**-0.4**
CAPN	**Captain Cook N**	**4.40**	**343**	Pn	**Pn**	**22 45 13.1**	**+0.4**
RED	**Redoubt Volcan**	**4.43**	**331**		**Pn**	**22 45 12.0**	**-1.2**
GOAT	**Goat Mountain**	**4.45**	**25**		**Pn**	**22 45 13.2**	**-0.2**
RSO	**Redoubt South**	**4.47**	**332**		**Pn**	**22 45 12.9**	**-1.0**
RDWB	**Redoubt West**	**4.51**	**331**		**Pn**	**22 45 13.6**	**-0.8**
RC01	**Rabbit Creek A**	**4.54**	**352**		**Pn**	**22 45 14.5**	**-0.2**
RC01				IAML		22 46 07.8	
	comp=N,69nm,0.4s						
RC01				IAML		22 46 12.4	
	comp=E,74nm,0.5s						
P18K	**Big Mountain,**	**4.54**	**311**		**Pn**	**22 45 13.9**	**-0.9**
P18K	**Big Mountain,**	**4.54**	**311**	P	**Pn**	**22 45 14.2**	**-0.6**
	baz=126						
BERG	**Berg Lake**	**4.55**	**31**	Pn	**

	baz=212							
PCA	Pinnacle	5.57	48		Pn	Pn	22 45 28.1	-0.7
PINM	Pinnacle baz=234	5.57	48	P	Pn	Pn	22 45 28.2	-0.6
SKT	Skwentna	5.61	345	Pn	Pn	Pn	22 45 28.9	-0.4
N18K	Kilae Creek	5.62	320		Pn	Pn	22 45 28.3	-1.2
N18K	Kilae Creek baz=134	5.62	320	P	Pn	Pn	22 45 28.5	-1.0
P16K	Nushagak River	5.63	300		Pn	Pn	22 45 29.2	-0.3
P16K	Nushagak River baz=112	5.63	300	P	Pn	Pn	22 45 29.2	-0.3
M24K	Tolsona, Glenn	5.64	11		Pn	Pn	22 45 30.5	+0.7
M24K	Tolsona, Glenn baz=193	5.64	11	P	Pn	Pn	22 45 29.9	0.0
PNL	Peninsula	5.71	54		Pn	Pn	22 45 30.2	-0.5
PNL	Peninsula	5.71	54	P	Pn	Pn	22 45 30.4	-0.3
PNL	Peninsula baz=240	5.71	54	P	Pn	Pn	22 45 30.2	-0.5
CTG	Chitna Glacier baz=223	5.74	37	P	Pn	Pn	22 45 30.6	-0.6
CTGM	Chitina Glacie	5.74	37		Pn	Pn	22 45 30.5	-0.8
M20K	Styx River	5.80	338		Pn	Pn	22 45 31.2	-0.9
M20K	Styx River baz=154	5.80	338	P	Pn	Pn	22 45 31.4	-0.7
O16K	Kokwok River B	5.91	304		Pn	Pn	22 45 32.9	-0.4
O16K	Kokwok River B baz=117	5.91	304	P	Pn	Pn	22 45 32.8	-0.6
WAT6	Susitna Watana	6.01	3		Pn	Pn	22 45 34.8	-0.2
WAT6	Susitna Watana baz=184	6.01	3	P	Pn	Pn	22 45 34.8	-0.2
N17K	Nushagak Hills baz=128	6.01	314	P	Pn	Pn	22 45 34.2	-0.7
M19K	Big River Lodg	6.11	333		Pn	Pn	22 45 35.1	-1.1
M19K	Big River Lodg baz=148	6.11	333	P	Pn	Pn	22 45 35.3	-1.0
M18K	Stony River	6.19	325		Pn	Pn	22 45 36.2	-1.1
M18K	Stony River baz=140	6.19	325	P	Pn	Pn	22 45 36.2	-1.1
WAT7	Susitna Watana	6.25	358		Pn	Pn	22 45 38.4	+0.2
O29M	Mount Kennedy	6.38	50		Pn	Pn	22 45 39.8	-0.3
O29M	Mount Kennedy baz=238	6.38	50	P	Pn	Pn	22 45 39.7	-0.4
P29M	Windy Craggy	6.45	58		Pn	Pn	22 45 39.6	-1.3
P29M	Windy Craggy baz=246	6.45	58	P	Pn	Pn	22 45 39.7	-1.2
L19K	White Mountain	6.47	332		Pn	Pn	22 45 40.0	-1.1
L19K	White Mountain baz=147	6.47	332	P	Pn	Pn	22 45 40.0	-1.1
L20K	Farewell, AK	6.50	337		Pn	Pn	22 45 40.4	-1.1
L20K	Farewell, AK baz=153	6.50	337	P	Pn	Pn	22 45 40.4	-1.1
DHY	Denali Highway	6.51	4		Pn	Pn	22 45 42.3	+0.4
DHY	Denali Highway baz=185	6.51	4	P	Pn	Pn	22 45 41.5	-0.4
CHNA	Chernabura Isl baz=71	6.52	259	P	Pn	Pn	22 45 39.9	-1.9
CNBA	Chernabura Isl	6.52	259		Pn	Pn	22 45 39.5	-2.3
PAX	Paxson	6.56	12		Pn	Pn	22 45 42.8	+0.3
PAX	Paxson baz=194	6.56	12	P	Pn	Pn	22 45 41.7	-0.8
M17K	Holitna River	6.67	320	Pn	Pn	Pn	22 45 43.2	-0.6
M27K	Edge Creek, AK	6.68	28	Pn	Pn	Pn	22 45 43.7	-0.4
S31K	Pelican	6.78	73		Pn	Pn	22 45 42.0	-3.4
S31K	Pelican baz=263	6.78	73	P	Pn	Pn	22 45 42.8	-2.5
RND	Reindeer	6.83	359	Pn	Pn	Pn	22 45 46.4	+0.3
SDPT	Sand Point	6.85	264	P	Pn	Pn	22 45 45.7	-0.6
TRF	Thorofare Moun	6.93	353	Pn	Pn	Pn	22 45 48.0	+0.5
M16K	Timber Creek	7.01	314	Pn	Pn	Pn	22 45 48.2	-0.3
L18K	Granite Mounta	7.01	327		Pn	Pn	22 45 47.0	-1.5
L18K	Granite Mounta baz=140	7.01	327	P	Pn	Pn	22 45 47.2	-1.3
P30M	Million Dollar	7.01	55		Pn	Pn	22 45 48.2	-0.4
P30M	Million Dollar baz=244	7.01	55	P	Pn	Pn	22 45 47.2	-1.4
N15K	Kwethluk River	7.07	305	Pn	Pn	Pn	22 45 49.2	-0.1
CAST	Castle Rocks	7.07	347		Pn	Pn	22 45 49.4	+0.1
KTH	Kantishna Hill	7.08	351	Pn	Pn	Pn	22 45 50.0	+0.5
HYT	Haines Junctio	7.11	49	Pn	Pn	Pn	22 45 49.7	-0.3
SIT	Sitka	7.24	81	P	Pn	Pn	22 45 49.8	-1.8
L27K	Beaver Creek,	7.29	25	Pn	Pn	Pn	22 45 51.6	-0.8
O14K	Tigyukauivet M	7.30	297	Pn	Pn	Pn	22 45 52.9	+0.4
BCAR	Beaver Creek A	7.30	25	Pn	Pn	Pn	22 45 52.0	-0.6
K20K	Telida	7.33	340	Pn	Pn	Pn	22 45 52.4	-0.5
RIDG	Independent Ri	7.38	13		Pn	Pn	22 45 53.7	0.0
SKAG	Skagway	7.55	62	Pn	Pn	Pn	22 45 54.9	-1.0
SKAG	Skagway	7.55	62	P	Pn	Pn	22 45 55.7	-0.2
BESE	Bessie Mountai	7.59	69		Pn	Pn	22 45 54.7	-1.8
L16K	Owhat River	7.62	317	Pn	Pn	Pn	22 45 55.8	-1.0
BPAW	Bear Paw Mtn.	7.62	352		Pn	Pn	22 45 56.4	-0.5
BPAW	Bear Paw Mtn. baz=170	7.62	352	P	Pn	Pn	22 45 56.7	-0.2
N30M	Aishikik Lake	7.63	46		Pn	Pn	22 45 56.8	-0.3
S32K	Killisnoo	7.64	78	Pn	Pn	Pn	22 45 53.5	-3.7
S32K	Killisnoo baz=269	7.64	78	P	Pn	Pn	22 45 54.9	-2.2
O30N	Mendenhall	7.69	52	Pn	Pn	Pn	22 45 57.0	-0.9
SCRK	Sand Creek	7.72	15		Pn	Pn	22 45 58.8	+0.4
M29M	Somme Creek	7.75	37	Pn	Pn	Pn	22 45 58.8	0.0
K17K	Iditarod	7.88	325	Pn	Pn	Pn	22 45 59.4	-1.1
WRH	Wood River Hil	7.89	1	Pn	Pn	Pn	22 46 00.6	0.0
CCB	Clear Creek Bu	8.07	2	Pn	Pn	Pn	22 46 02.9	-0.2
WHY	Whitehorse	8.18	55	Pn	Pn	Pn	22 46 03.1	-1.5
J25K	Salcha River,	8.18	9	Pn	Pn	Pn	22 46 03.5	-1.0
J19K	Poorman	8.21	337	Pn	Pn	Pn	22 46 03.9	-1.0
IL31		8.23	5		Pn	Pn	22 46 04.5	-0.7
ILAR	Eielson Array	8.23	5	Pn	Pn	Pn	22 46 03.5	-1.7
ILAR	Eielson Array comp=E,0.3nm,0.3s,baz=190,slow=13,SNR=12	8.23	5	Pn	Pn	Pn	22 46 05.2	-0.1
ILAR	comp=E,0.5nm,0.3s,baz=187,slow=22,SNR=10 comp=E,0.6nm,0.4s			Sn	Sn	Sn	22 47 34.1	-4.1
P32M	Atlin	8.38	63	Pn	Pn	Pn	22 46 05.6	-1.7
MLY	Manley	8.52	354		Pn	Pn	22 46 08.2	-1.1
MLY	Manley baz=172	8.52	354	P	Pn	Pn	22 46 09.1	-0.2
U33K	Whale Pass	8.55	87	Pn	Pn	Pn	22 46 05.1	-4.5
CRAG	Craig	8.68	91	Pn	Pn	Pn	22 46 07.4	-4.0
L14K	Kuka Creek	8.73	309	Pn	Pn	Pn	22 46 12.0	0.0
K15K	Wolf Creek Mou	8.74	316	Pn	Pn	Pn	22 46 11.5	-0.8
ISLZ	Isanotski Laza	8.81	264		Pn	Pn	22 46 11.6	-1.7
Q32M	Nakina River	8.98	68	Pn	Pn	Pn	22 46 14.4	-1.3
P33M	Teslin, Yukon	8.98	60	Pn	Pn	Pn	22 46 13.9	-1.7
J16K	Anvik River	9.03	323	Pn	Pn	Pn	22 46 14.5	-1.7
PRP	Porcupine Dome	9.06	8	Pn	Pn	Pn	22 46 16.3	-0.4
M31M	Drury Creek, Y	9.11	46	Pn	Pn	Pn	22 46 17.8	+0.5
H21K	Melozitna Rive	9.32	349	Pn	Pn	Pn	22 46 19.8	-0.3
R33M	Jennings River	9.71	66	Pn	Pn	Pn	22 46 24.6	-1.0
IMAR	Indian Mountai	9.74	347	Pn	Pn	Pn	22 46 25.5	-0.4
I28M	Miner Creek	9.78	21	Pn	Pn	Pn	22 46 26.7	+0.1
H18K	Honhosa River	9.82	335	Pn	Pn	Pn	22 46 25.6	-1.4
H17K	Granite Mounta	10.03	331	Pn	Pn	Pn	22 46 28.1	-1.8
DLBC	Dease Lake	10.10	72	Pn	Pn	Pn	22 46 29.2	-1.6
DLBC	Dease Lake comp=E,0.5nm,0.3s,baz=255,slow=6.5,SNR=9.0 comp=E,1.2nm,0.3s	10.10	72	Pn	Pn	Pn	22 46 29.4	-1.4
MMPY	Sheldon Lake,	10.58	48	Pn	Pn	Pn	22 46 37.5	0.0
UNV	Unalaska Valle	10.65	263	P	Pn	Pn	22 46 36.2	-2.2
H29M	Whitestone	10.78	22	Pn	Pn	Pn	22 46 40.2	+0.1
BMAR	Burnt Mountain	11.01	8	Pn	Pn	Pn	22 46 43.3	-0.1
F17K	Baldwin Pennin	11.56	334	Pn	Pn	Pn	22 46 50.7	-0.1
INK	Inuvik comp=E,0.1nm,0.3s,baz=203,slow=16,SNR=4.5 comp=E,1.8nm,0.8s	13.57	24	Pn	Pn	Pn	22 47 19.1	+1.0
YKA	Yellowknife Ar	17.99	57	P	Pn	Pn	22 48 14.6	-1.2
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=267,slow=11,SNR=14 comp=E,1.4nm,0.9s	17.99	57	P	P	P	22 48 16.7	+0.4
A36M	Sachs Harbour	18.21	23	P	Pn	Pn	22 48 17.5	-0.8
NEW	Newport comp=E,31nm,20.8s,baz=116,slow=35	20.71	100	LR	LR	LR	22 56 06.9	
NVAR	Mina Array Bea comp=E,0.1nm,0.3s,baz=287,slow=10,SNR=1.7 comp=E,0.1nm,0.3s	26.98	119	P	P	P	22 49 47.6	-0.2
RES	Resolute Bay comp=E,55nm,20.6s,baz=206,slow=34	27.07	28	LR	LR	LR	22 59 31.3	
H11N2	WAKE ISLAND Hy baz=31,slow=76,SNR=13	49.43	241	T	T	T	23 46 09.9	
H11N3	WAKE ISLAND Hy baz=31,slow=76,SNR=12	49.43	241	T	T	T	23 46 09.6	
H11N1	WAKE ISLAND Hy baz=31,slow=76,SNR=13	49.44	241	T	T	T	23 46 06.3	
H11S1	WAKE ISLAND Hy baz=30	50.57	240	T	T	T	23 47 31.0	
H11S2	WAKE ISLAND Hy baz=30,slow=74	50.58	240	T	T	T	23 47 34.8	
H11S3	WAKE ISLAND Hy baz=30,slow=74	50.59	240	T	T	T	23 47 33.8	
MJAR	Matsushiro Arr comp=E,25nm,18.5s,baz=14,slow=40	51.55	280	LR	LR	LR	23 19 01.2	
SONM	Songino Array comp=E,0.2nm,0.4s,baz=52,slow=7.5,SNR=2.3 comp=E,0.2nm,0.4s	58.77	310	P	P	P	22 54 08.2	+4.3
ZALV	Zalesovo Beam comp=E,0.4nm,0.6s,baz=35,slow=5.3,SNR=3.2 comp=E,0.4nm,0.6s	61.53	327	P	P	P	22 54 26.4	+3.9
BVAR	Borovoye Array comp=E,0.3nm,0.6s,baz=46,slow=4.2,SNR=1.6 comp=E,0.3nm,0.6s	66.17	336	P	P	P	22 54 55.9	+2.7
KURBB	Kurchatov Arra comp=E,0.1nm,0.4s,baz=30,slow=6.7,SNR=3.6 comp=E,0.1nm,0.4s	66.29	329	P	P	P	22 54 56.0	+2.1
MKAR	Makanchi Array comp=E,0.2nm,0.6s,baz=32,slow=6.3,SNR=2.1 comp=E,0.2nm,0.6s	68.58	325	P	P	P	22 55 11.7	+3.1

IDC 28 23:46:15.1±3.8, 6.50S×142.85E, h0km, mb3.5/1, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=118.2km s-min=27.2km az=103.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=31,slow=13,SNR=3.1	15.71	211	Pn	Pn	23 49 58.2	+0.2
WRA				Lg	Lg	23 54 32.2	
	baz=35,slow=27,SNR=1.7 0.7nm,0.8s						
ASAR	Alice Springs 0.2nm,0.3s,baz=34,slow=10,SNR=10	19.11	206	P	P	23 50 40.0	+0.2
ASAR				Lg	Lg	23 56 22.4	
	0.1nm,0.3s,baz=26,slow=30,SNR=1.9 1.0nm,0.7s						
MKAR	Makanchi Array 0.3nm,0.7s,baz=126,slow=6.2,SNR=5.5 0.3nm,0.7s	75.29	322	P	P	23 58 00.2	0.0

*ISN **28** 23:50:17.8±0.8, 34.36N×45.41E, h14km±5km, ML3.1*
*TEH **28** 23:50:18.2, 34.34N×45.43E, h10km±117km, ML2.9*
ISC 28 23:50:18.7±1.1, 34.35N±0.04×45.44E±0.04, h13km±9km, n11, σ0°83/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGS1	Ghasr-e-Shirin	0.20	40	Pg	Pb	23 50 23.6	-0.6
KGS1				Sg	Sg	23 50 27.4	+1.2
IDHR	Dehrash	0.86	66	Pg	Pg	23 50 34.4	-0.9
IDHR				Sg	Sb	23 50 47.3	+0.2
IGHG	Ghaleghazi	0.94	91	Pg	Pb	23 50 36.9	0.0
IGHG				Sg	Sn	23 50 51.4	+0.3
ILBA	Ilam Banvizeh	0.97	138	Pg	Pn	23 50 37.3	-0.8
IBDR	Badra	1.31	162	*e*Pg	Pn	23 50 42.0	-0.6
IBDR				*e*Sg	Sg	23 51 00.0	-0.8
KCHF	Cheshme Sefid,	1.33	93	Pg	Pg	23 50 44.5	+0.2
IKRK	Kirkuk	1.38	319	*e*Pn	Pb	23 50 44.0	-0.3
IKRK				*e*Sn	Sg	23 51 04.0	+0.8
IKRK				AML	AML	23 51 08.3	
	comp=E,370nm,0.5s						
IKRK				AML	AML	23 51 08.4	
	comp=N,310nm,0.5s						
BHD	Baghdad	1.39	219	*e*Pn	Pb	23 50 44.0	-0.5
BHD				*e*Sn	Sg	23 51 04.0	+0.4
BHD				AML	AML	23 51 10.7	
	comp=E,377nm,0.4s						
SDS1	Sardasht. Az.	1.79	1	Pn	Pg	23 50 52.4	-0.7
IBZA	Bozab	2.01	86	Pn	Pb	23 50 55.0	-0.2
RAFI	Al-Rafai	2.69	168	*e*Pn	Pn	23 51 03.0	+1.4
RAFI				*e*Sn	Sn	23 51 35.0	+1.1

NOU 28 23:55:23.5, 15.56S×167.67E, h0km, MLv4.1/4, Vanuatu Islands, Vanuatu Islands

ISC Computed Locations for February 2018

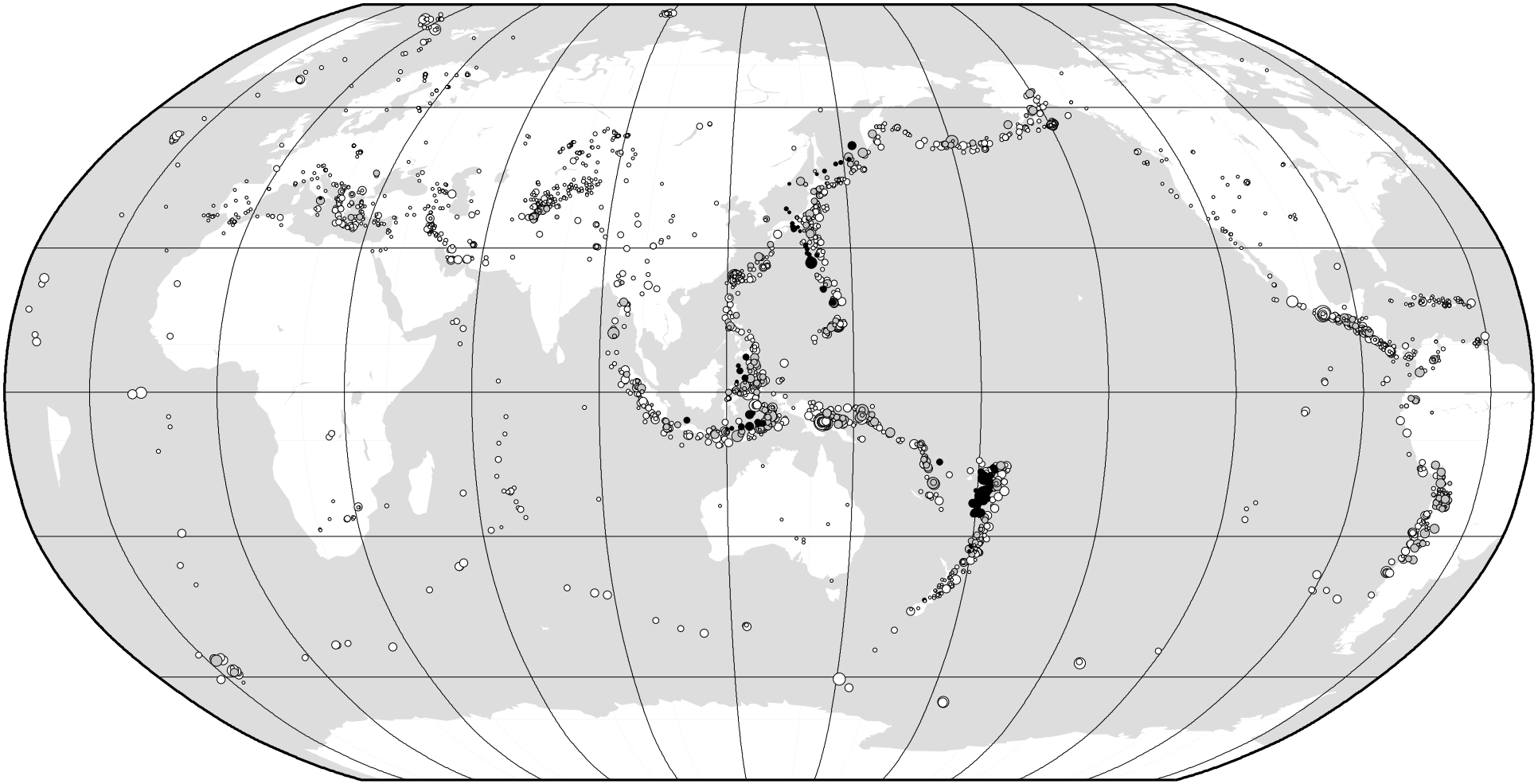

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

3525 Events